Lower Duwamish Waterway NPDES Inspection Sampling Support

Technical Memorandum

Final

Prepared for

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

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Appendix E
ConGlobal Industries

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

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

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E-1 Introduction and Background

Facility Name	**ConGlobal Industries**
Address	1 S Idaho Street Seattle, WA 98134
NPDES Permit Type	Industrial Stormwater General Permit
NPDES Permit No.	WAR010569
Permit Monitoring Requirements	Turbidity, pH, TSS, total zinc, total copper, oil sheen
SIC Code	4449 Water Transportation of Freight, NEC 7699 Repair Shops and Related Services, NEC
Inspection Date	April 23, 2013
Grab Samples	1 Solids Sample
Sample ID(s)	CG-MH-010-20130423-S
Solids Sample Analytes	Dioxins/furans, PCB Aroclors, SVOCs (including phthalates and PAHs), pesticides, metals, mercury, TOC, total solids, grain size
Split Sample with Facility	Yes

ConGlobal Industries, Inc. (ConGlobal Industries) covers approximately 23 acres. The northern portion of the facility is located at Port of Seattle Terminal 106, and the southern portion at Port of Seattle Terminal 108 (Farallon 2011). A facility map is presented on Figures E-1a and E-1b.

The facility is primarily covered with impervious surfaces (i.e., asphalt, concrete, buildings) with the exception of the ground surface in the Intermodal Equipment Storage Area at Terminal 108, which is covered with packed gravel (Figure E-1b). The facility consists of a main office building, main shop building, intermodal equipment storage and repair areas, and a fueling area. The main shop building is the largest building at the facility. Employee parking is located on the east side of the main office building. The main office building and employee parking area do not require Industrial Stormwater General Permit (ISGP) coverage (Farallon 2011).

E-1.1 Stormwater Conveyance and Treatment System

ConGlobal Industries has four drainage areas that discharge through outfalls to the Lower Duwamish Waterway (LDW) (Figure E-1a and Figure E-1b). Drainage Area 001 is located in the southern portion of Terminal 106 and includes catch basins that collect stormwater from the intermodal equipment storage areas and main shop building roof drains. Drainage Area 002 is located in the eastern portion of Terminal 108 and includes catch basins that collect stormwater from the Intermodal Equipment Repair Area. Drainage Area 003 is located on the central and western portion of Terminal 108 and includes catch basins that collect stormwater from the gravel Intermodal Storage Area. Drainage Area 004 is located on the northern portion of Terminal 106 and includes catch basins that collect stormwater from an intermodal equipment storage area (Farallon 2011). The facility is required to sample all four drainage areas each quarter for conventional benchmarks and a total suspended solids (TSS) effluent limit.

E-1.2 Recent Compliance History

Ecology previously completed a stormwater compliance inspection at ConGlobal Industries on November 15, 2012. The Ecology inspector reviewed the facility's Stormwater Pollution Prevention Plan (SWPPP) and Discharge Monitoring Report (DMR) data for previous years. ConGlobal Industries exceeded benchmark values for turbidity, total zinc, and total copper during three quarters of 2010 at all four outfall locations. The facility also violated TSS one or more times at outfalls 001, 002, and 003. The exceedances triggered a Level Three Corrective Action. ConGlobal Industries completed the Level Three Corrective Action by installing catch basin inserts fitted with absorbent media in high-traffic area catch basins. Since the 1st quarter of 2011, ConGlobal Industries has exceeded the TSS effluent limitation 24 times and the facility has failed to submit a DMR three times. For the four quarters of 2011, there were 24 exceedances for copper, zinc, and/or turbidity (Ecology 2012).

During the November 2012 inspection, Ecology identified the following permit violations:

- Discharge of polluting matter in waters prohibited.
- Violation of TSS effluent limitation.
- Failure to implement appropriate Level Three Corrective Actions for discharges 002, 003, and 004 by September 30, 2011.
- Failure to notify Ecology of permit violations.

On March 13, 2013, Ecology issued Notice of Penalty Docket No. 9718 to ConGlobal Industries for the above violations (Ecology 2013).

E-2 Inspection and Sampling

E-2.1 April 2013 Stormwater Compliance Inspection

On April 23, 2013, Ecology conducted a stormwater compliance inspection at ConGlobal Industries. Leidos assisted Ecology with the inspection and sampling of the facility's stormwater conveyance system. The inspection included investigating influent and effluent points at drainage structures, written and photographic documentation, and assessing whether the drainage structures contained sufficient sampleable material. The coordinates of sample locations were measured with a survey-quality global positioning system and plotted on Figure E-2 using geographic information system software. An inspection photographic log and field documentation are presented in Attachments E-1 and E-2, respectively

The field team inspected the following stormwater conveyance structures at ConGlobal Industries (Figure E-2): manhole 1 (MH-1), catch basin 5 (CB-5), catch basin 6 (CB-6), catch basin 7 (CB-7), catch basin 8 (CB-8), catch basin 10 (CB-10), catch basin 11 (CB-11), manhole 03 (MH-3), catch basin 4 (CB-4), manhole 20 (MH-20), catch basin 2 (CB-2), catch basin 15 (CB-15), catch basin 16 (CB-16), oil water separator at the intermodal equipment repair area (OWS), manhole 7 (MH-7), and manhole 10 (MH-010). No stormwater conveyance structures, with the exception of MH-010, contained sufficient sampleable material. A solids grab sample was collected from MH-010.

E-2.2 Stormwater Conveyance System Sampling

Ecology collected one solids sample from the stormwater conveyance system at ConGlobal Industries. Leidos provided a split sample to ConGlobal Industries. Laboratory analyses for the solids sample are listed on Table E-1. Analytical data are presented in Table E-2. Chain of custody forms and the laboratory reports are provided as Attachments E-3 and E-4, respectively.

Solids sample CB-MH-010-20130423-S was collected from MH-010, which is located in the Terminal 108 portion of the facility near the intermodal equipment storage area (Figure E-2, Attachment E-1). Location MH-010 receives stormwater from the majority of Terminal 108 and conveys the stormwater to Outfall 003. Outfall 003 discharges to the 12-foot diameter municipal storm drain line located under S Oregon Street. The sample was collected from the eastern portion of the manhole and is representative of storm drain solids in the Terminal 108 storm drain system. The sample consisted of gravel, cobble, and brown and black sand and silt. No odor was detected during sample collection. After multiple grab attempts, sufficient sample volume was obtained for all analyses with the exception of VOCs. Per discussion with Ecology, dioxin/furan analysis was requested for this sample.

E-3 Results

E-3.1 Chemical Analysis

Ecology collected one solids sample during the April 23, 2013 stormwater compliance inspection at ConGlobal Industries. No water samples were collected at ConGlobal Industries. Analytical methods, chemical results and regulatory criteria are presented in Tables E-1 and E-2.

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

E-3.2 Inspection Results and Permit Compliance

The Ecology inspection report was not available for review.

E-4 References

Ecology (Washington Department of Ecology). 2012. Stormwater Compliance Inspection Report, ConGlobal Industries, 1 South Idaho Street, Seattle, WA 98134. December 21, 2012.

Ecology. 2013. Notice of Penalty Incurred and Due, Penalty Docket No. 9718. March 12, 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.

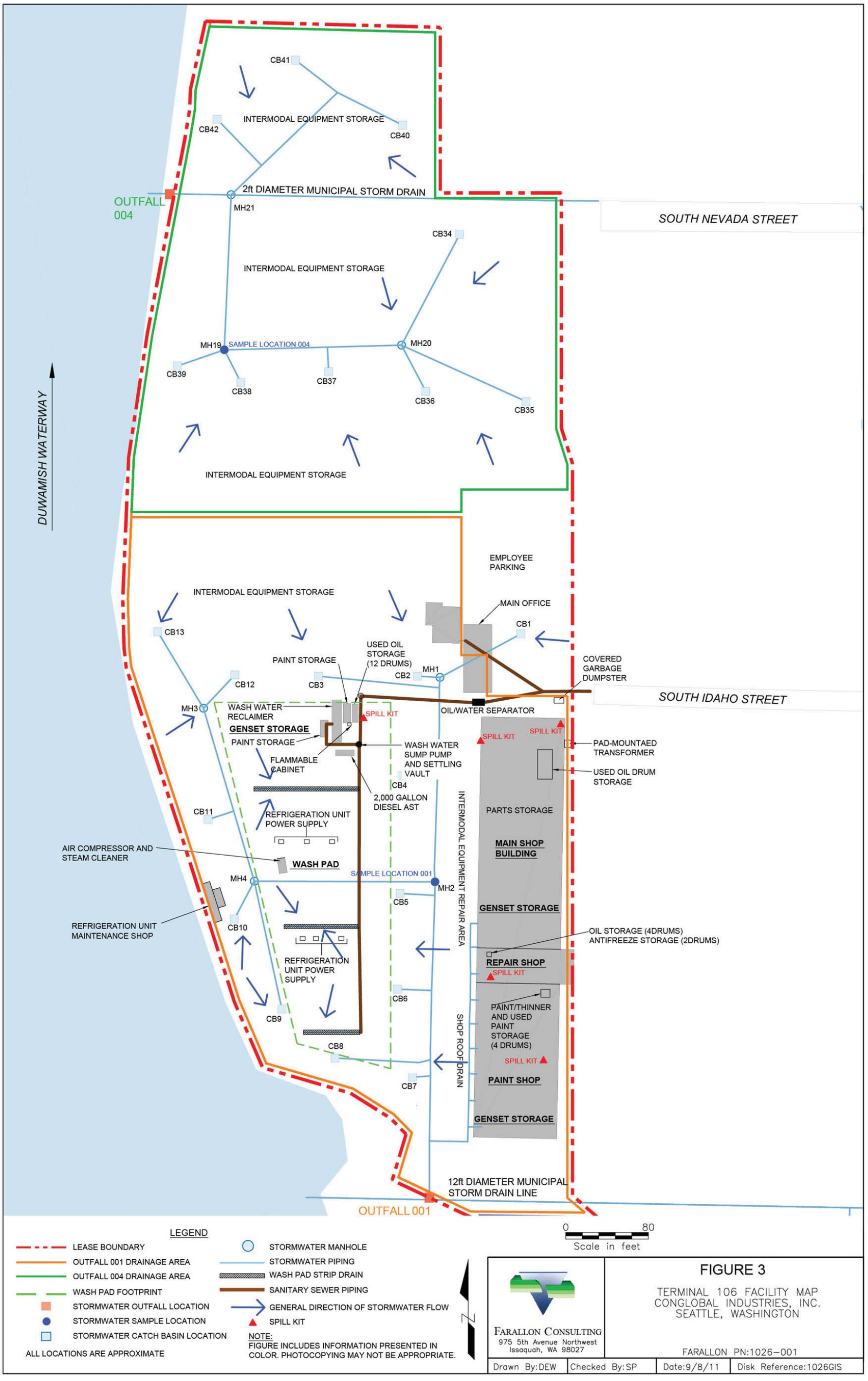
EPA, Office of Emergency and Remedial Response. January 2009. *Guidance for labeling externally validated laboratory analytical data for Superfund use.* EPA-540-R-08-005. Washington, DC.

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.

Farallon (Farallon Consulting). 2012. Stormwater Pollution Prevention Plan, Revision 3, ConGlobal Industries, Inc., Seattle, Washington. November 2011.

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

Figures



Source: Farallon 2011 [10457]

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Figure E–1a. ConGlobal Industries Facility SWPPP Map

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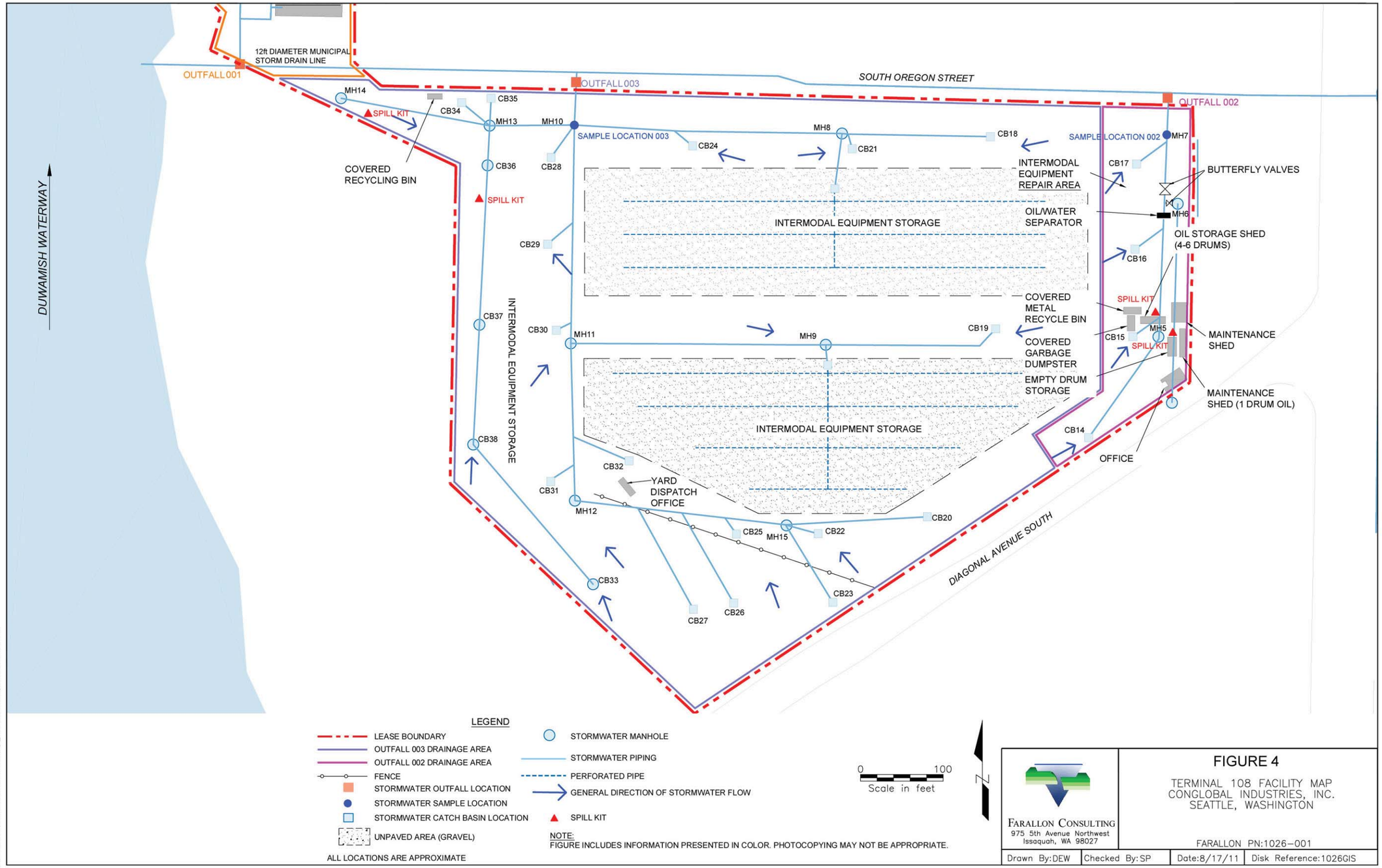

Source: Farallon 2011 [10457]

Figure E–1b. ConGlobal Industries Facility SWPPP Map

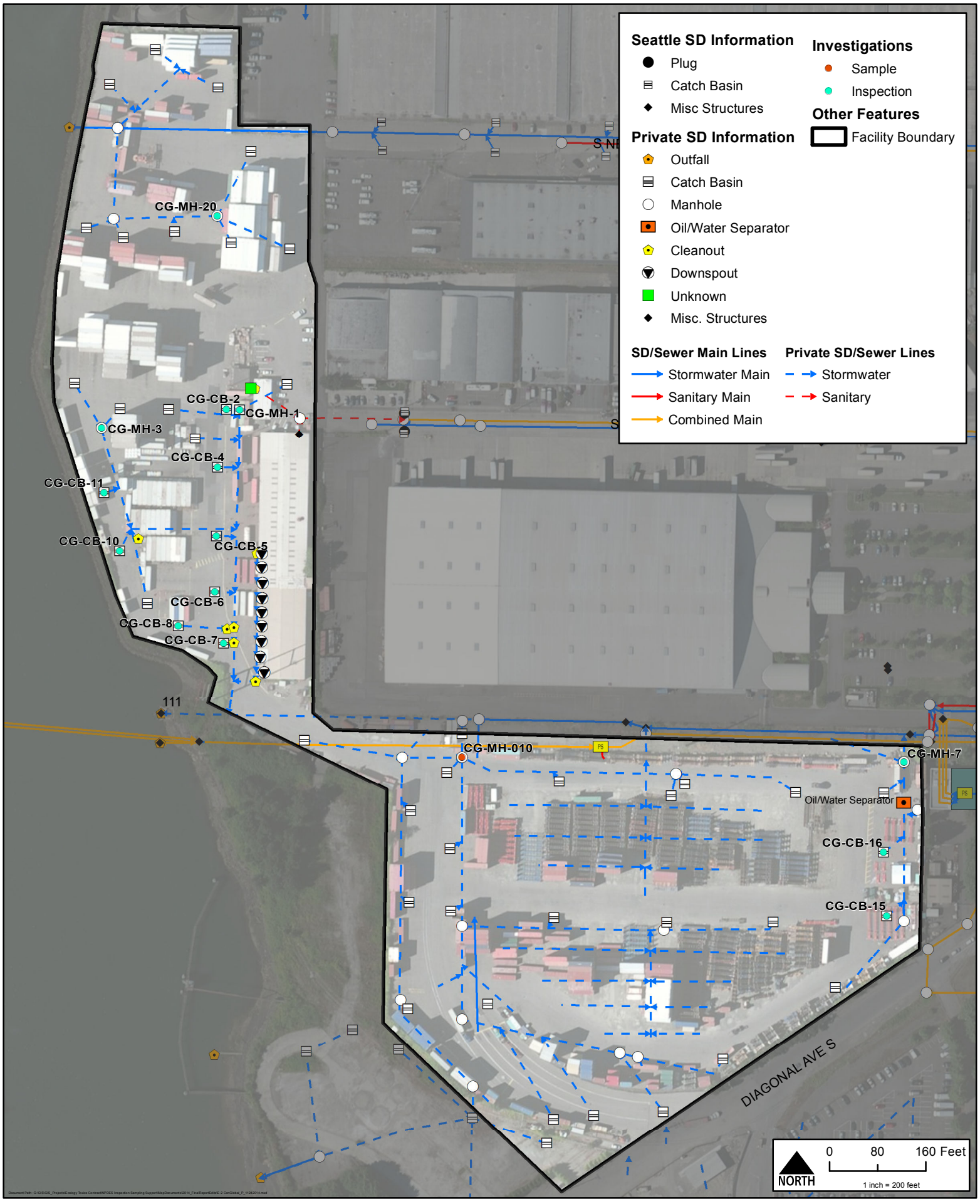

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Figure E–2. ConGlobal Industries Inspection and Sample Locations

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Tables

Table E-1. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: ConGlobal Industries

Location ID / Collection Date	CG-MH-010
Analyte	**4/23/2013**
Metals (Total) (mg/kg)	
Antimony	EPA200.8
Arsenic	EPA200.8
Beryllium	SW6010C
Cadmium	EPA200.8
Chromium	EPA200.8
Copper	SW6010C
Lead	EPA200.8
Mercury	SW7471A
Nickel	EPA200.8
Selenium	EPA200.8
Silver	EPA200.8
Thallium	EPA200.8
Zinc	SW6010C
PAHs (µg/kg)	
1-Methylnaphthalene	SW8270D
2-Chloronaphthalene	SW8270D
2-Methylnaphthalene	SW8270D
Acenaphthene	SW8270D
Acenaphthylene	SW8270D
Anthracene	SW8270D
Benzo(a)anthracene	SW8270D
Benzo(a)pyrene	SW8270D
Benzo(g,h,i)perylene	SW8270D
Chrysene	SW8270D
Dibenz(a,h)anthracene	SW8270DSIM
Dibenzofuran	SW8270D
Fluoranthene	SW8270D
Fluorene	SW8270D
Indeno(1,2,3-cd)pyrene	SW8270D
Naphthalene	SW8270D
Phenanthrene	SW8270D
Pyrene	SW8270D
Total Benzofluoranthenes	SW8270D
Total HPAHs	SW8270DSIM
Total LPAHs	SW8270D
Total PAHs	SW8270DSIM
cPAHs, nd RL*0	SW8270DSIM
cPAHs, nd RL*0.5	SW8270DSIM
cPAHs, nd RL*1	SW8270DSIM
Phthalates (µg/kg)	
bis(2-Ethylhexyl)phthalate	SW8270D
Butylbenzylphthalate	SW8270DSIM
Di-n-Butylphthalate	SW8270D
Diethylphthalate	SW8270DSIM

Table E-1. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: ConGlobal Industries

Location ID / Collection Date	CG-MH-010
Analyte	**4/23/2013**
Dimethylphthalate	SW8270DSIM
Di-n-Octyl phthalate	SW8270D
Phenols (µg/kg)	
2,4,5-Trichlorophenol	SW8270D
2,4,6-Trichlorophenol	SW8270D
2,4-Dichlorophenol	SW8270D
2,4-Dimethylphenol	SW8270DSIM
2,4-Dinitrophenol	SW8270D
2-Chlorophenol	SW8270D
2-Methylphenol	SW8270DSIM
2-Nitrophenol	SW8270D
4,6-Dinitro-2-Methylphenol	SW8270D
4-Chloro-3-methylphenol	SW8270D
4-Methylphenol	SW8270D
4-Nitrophenol	SW8270D
Pentachlorophenol	SW8270DSIM
Phenol	SW8270D
Other SVOCs (µg/kg)	
1,2,4-Trichlorobenzene	SW8270DSIM
1,2-Dichlorobenzene	SW8270DSIM
1,3-Dichlorobenzene	SW8270DSIM
1,4-Dichlorobenzene	SW8270DSIM
2,4-Dinitrotoluene	SW8270D
2,6-Dinitrotoluene	SW8270D
2-Nitroaniline	SW8270D
3,3'-Dichlorobenzidine	R
3-Nitroaniline	R
4-Bromophenyl-phenylether	SW8270D
4-Chloroaniline	R
4-Chlorophenyl-phenylether	SW8270D
4-Nitroaniline	SW8270D
Aniline	R
Benzoic Acid	SW8270D
Benzyl Alcohol	SW8270DSIM
2,2'-Oxybis(1-Chloropropane)	SW8270D
bis(2-Chloroethoxy) Methane	SW8270D
Bis-(2-Chloroethyl) Ether	SW8270D
Carbazole	SW8270D
Hexachlorobenzene	SW8081B
Hexachlorobutadiene	SW8081B
Hexachlorocyclopentadiene	R
Hexachloroethane	SW8270D
Isophorone	SW8270D
Nitrobenzene	SW8270D
N-Nitrosodimethylamine	SW8270DSIM

Table E-1. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: ConGlobal Industries

Location ID / Collection Date	CG-MH-010
Analyte	**4/23/2013**
N-Nitroso-Di-N-Propylamine	SW8270DSIM
N-Nitrosodiphenylamine	SW8270D
PCB Aroclors (µg/kg)	
PCB Aroclors	SW8082A
Pesticides (µg/kg)	
Pesticides	SW8081B
VOCs (µg/kg)	
VOCs	na
TPHs (mg/kg)	
Gasoline-Range Hydrocarbons	na
Diesel-Range Hydrocarbons	NWTPHD
Motor Oil-Range Hydrocarbons	NWTPHD
Dioxins and Furans (ng/kg)	
Dioxins and Furans	EPA 1613B
Grain size (%)	
Grain size	PSEP-PS
Conventionals (%)	
Total Organic Carbon	PLUMB81TC
Total Solids	SM2540B

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

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

Table E-2. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: ConGlobal Industries

Location ID			CG-MH-010		
Collection Date			4/23/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Metals (Total) (mg/kg)					
Antimony	--	--	< 0.3 UJ		
Arsenic	57	93	9.6		
Beryllium	--	--	< 0.4 U		
Cadmium	5.1	6.7	1.6		
Chromium	260	270	52 J		
Copper	390	390	116		
Lead	450	530	75.6		
Mercury	0.41	0.59	0.11		
Nickel	--	--	30.8		
Selenium	--	--	< 0.8 U		
Silver	6.1	6.1	< 0.3 U		
Thallium	--	--	< 0.3 U		
Zinc	410	960	**976**	2.4	1.0
PAHs (µg/kg)					
1-Methylnaphthalene	--	--	< 100 U		
2-Chloronaphthalene	--	--	< 100 U		
2-Methylnaphthalene	670	1,400	< 100 U		
Acenaphthene	500	730	< 100 U		
Acenaphthylene	1,300	1,300	< 100 U		
Anthracene	960	4,400	< 100 U		
Benzo(a)anthracene	1,300	1,600	150		
Benzo(a)pyrene	1,600	3,000	240		
Benzo(g,h,i)perylene	670	720	260 J		
Chrysene	1,400	2,800	430		
Dibenz(a,h)anthracene	230	540	75		
Dibenzofuran	540	700	< 100 U		
Fluoranthene	1,700	2,500	390		
Fluorene	540	1,000	< 100 U		
Indeno(1,2,3-cd)pyrene	600	690	140 J		
Naphthalene	2,100	2,400	60 J		
Phenanthrene	1,500	5,400	220		
Pyrene	2,600	3,300	610		
Total Benzofluoranthenes	3,200	3,600	470		
Total HPAHs	12,000	17,000	2,800 J		
Total LPAHs	5,200	13,000	280 J		
Total PAHs	--	--	3,000 J		
cPAHs, nd RL*0	1,000	--	330 J		
cPAHs, nd RL*0.5	1,000	--	330 J		
cPAHs, nd RL*1	1,000	--	330 J		
Phthalates (µg/kg)					
bis(2-Ethylhexyl)phthalate	1,300	1,900	**15,000**	12	7.9
Butylbenzylphthalate	63	900	**870**	14	

Table E-2. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: ConGlobal Industries

Location ID			CG-MH-010		
Collection Date			4/23/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Di-n-Butylphthalate	1,400	5,100	< 100 U		
Diethylphthalate	200	1,200	< 25 U		
Dimethylphthalate	71	160	29		
Di-n-Octyl phthalate	6,200	--	150 JN		
Phenols (µg/kg)					
2,4,5-Trichlorophenol	--	--	< 500 U		
2,4,6-Trichlorophenol	--	--	< 500 U		
2,4-Dichlorophenol	--	--	< 1,000 U		
2,4-Dimethylphenol	29	29	**< 100 U**		
2,4-Dinitrophenol	--	--	< 4,300 U		
2-Chlorophenol	--	--	< 100 U		
2-Methylphenol	63	63	< 25 U		
2-Nitrophenol	--	--	< 500 U		
4,6-Dinitro-2-Methylphenol	--	--	< 1,000 U		
4-Chloro-3-methylphenol	--	--	< 500 U		
4-Methylphenol	670	670	< 100 U		
4-Nitrophenol	--	--	< 500 U		
Pentachlorophenol	360	690	< 250 UJ		
Phenol	420	1,200	< 100 U		
Other SVOCs (µg/kg)					
1,2,4-Trichlorobenzene	31	51	< 25 U		
1,2-Dichlorobenzene	35	50	< 25 U		
1,3-Dichlorobenzene	--	--	< 25 U		
1,4-Dichlorobenzene	110	120	< 25 U		
2,4-Dinitrotoluene	--	--	< 500 U		
2,6-Dinitrotoluene	--	--	< 500 U		
2-Nitroaniline	--	--	< 500 U		
3,3'-Dichlorobenzidine	--	--	R		
3-Nitroaniline	--	--	R		
4-Bromophenyl-phenylether	--	--	< 100 U		
4-Chloroaniline	--	--	R		
4-Chlorophenyl-phenylether	--	--	< 100 U		
4-Nitroaniline	--	--	< 500 UJ		
Aniline	--	--	R		
Benzoic Acid	650	650	**< 2,000 UJ**		
Benzyl Alcohol	57	73	**< 100 U**		
2,2'-Oxybis(1-Chloropropane)	--	--	< 100 U		
bis(2-Chloroethoxy) Methane	--	--	< 100 U		
Bis-(2-Chloroethyl) Ether	--	--	< 100 U		
Carbazole	--	--	< 100 U		
Hexachlorobenzene	22	70	< 20 U		
Hexachlorobutadiene	11	120	**< 20 U**		
Hexachlorocyclopentadiene	--	--	R		

Table E-2. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: ConGlobal Industries

Location ID			CG-MH-010		
Collection Date			4/23/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Hexachloroethane	--	--	< 100 U		
Isophorone	--	--	< 100 U		
Nitrobenzene	--	--	< 100 U		
N-Nitrosodimethylamine	--	--	< 130 U		
N-Nitroso-Di-N-Propylamine	--	--	< 60 U		
N-Nitrosodiphenylamine	28	40	**85 J**	3.0	2.1
PCB Aroclors (µg/kg)					
Aroclor 1016	--	--	< 20 U		
Aroclor 1221	--	--	< 20 U		
Aroclor 1232	--	--	< 20 U		
Aroclor 1242	--	--	< 20 U		
Aroclor 1248	--	--	< 30 U		
Aroclor 1254	--	--	58		
Aroclor 1260	--	--	46		
Aroclor 1262	--	--	< 20 U		
Aroclor 1268	--	--	< 20 U		
Total PCB Aroclors	130	1,000	100		
Pesticides (µg/kg)					
4,4'-DDD	--	--	< 20 UJ		
4,4'-DDE	--	--	< 20 U		
4,4'-DDT	--	--	< 20 UJ		
Total DDTs	--	--	< 20 U		
Aldrin	--	--	< 10 U		
alpha-BHC	--	--	< 10 U		
beta-BHC	--	--	< 10 U		
cis-Chlordane	--	--	< 10 U		
delta-BHC	--	--	< 10 U		
Dieldrin	--	--	< 20 U		
Endosulfan I	--	--	< 10 U		
Endosulfan II	--	--	< 20 U		
Endosulfan Sulfate	--	--	< 20 UJ		
Endrin	--	--	< 20 UJ		
Endrin Aldehyde	--	--	< 20 UJ		
Endrin Ketone	--	--	< 20 UJ		
Heptachlor	--	--	< 10 UJ		
Heptachlor Epoxide	--	--	< 20 U		
gamma-BHC (Lindane)	--	--	< 10 U		
Methoxychlor	--	--	< 100 UJ		
Toxaphene	--	--	< 2,000 UJ		
trans-Chlordane	--	--	< 10 U		
Total aldrin/dieldrin	--	--	< 20 U		
Total Chlordane	--	--	< 10 U		

Table E-2. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: ConGlobal Industries

Location ID			CG-MH-010		
Collection Date			4/23/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
VOCs (µg/kg)					
1,1,1,2-Tetrachloroethane	--	--	na		
1,1,1-Trichloroethane	--	--	na		
1,1,2,2-Tetrachloroethane	--	--	na		
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	na		
1,1,2-Trichloroethane	--	--	na		
1,1-Dichloroethane	--	--	na		
1,1-Dichloroethene	--	--	na		
1,1-Dichloropropene	--	--	na		
1,2,3-Trichlorobenzene	--	--	na		
1,2,3-Trichloropropane	--	--	na		
1,2,4-Trimethylbenzene	--	--	na		
1,2-Dibromo-3-chloropropane	--	--	na		
1,2-Dibromoethane	--	--	na		
1,2-Dichloroethane	--	--	na		
1,2-Dichloropropane	--	--	na		
1,3,5-Trimethylbenzene	--	--	na		
1,3-Dichloropropane	--	--	na		
2,2-Dichloropropane	--	--	na		
2-Chloroethylvinylether	--	--	na		
2-Chlorotoluene	--	--	na		
2-Hexanone	--	--	na		
4-Chlorotoluene	--	--	na		
Acetone	--	--	na		
Acrolein	--	--	na		
Acrylonitrile	--	--	na		
Benzene	--	--	na		
Bromobenzene	--	--	na		
Bromochloromethane	--	--	na		
Bromoethane	--	--	na		
Bromoform	--	--	na		
Bromomethane	--	--	na		
Carbon Disulfide	--	--	na		
Carbon Tetrachloride	--	--	na		
Chlorobenzene	--	--	na		
Dibromochloromethane	--	--	na		
Chloroethane	--	--	na		
Chloroform	--	--	na		
Chloromethane	--	--	na		
cis-1,2-Dichloroethene	--	--	na		
cis-1,3-Dichloropropene	--	--	na		
Dibromomethane	--	--	na		
Bromodichloromethane	--	--	na		

Table E-2. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: ConGlobal Industries

Location ID			CG-MH-010		
Collection Date			4/23/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Dichlorodifluoromethane	--	--	na		
Ethylbenzene	--	--	na		
Isopropylbenzene	--	--	na		
m,p-Xylene	--	--	na		
2-Butanone	--	--	na		
Iodomethane	--	--	na		
4-Methyl-2-Pentanone (MIBK)	--	--	na		
Methyl tert-Butyl Ether	--	--	na		
Methylene Chloride	--	--	na		
n-Butylbenzene	--	--	na		
n-Propylbenzene	--	--	na		
o-Xylene	--	--	na		
4-Isopropyltoluene	--	--	na		
sec-Butylbenzene	--	--	na		
Styrene	--	--	na		
tert-Butylbenzene	--	--	na		
Tetrachloroethene	--	--	na		
Toluene	--	--	na		
Total Xylenes	--	--	na		
trans-1,2-Dichloroethene	--	--	na		
trans-1,3-Dichloropropene	--	--	na		
trans-1,4-Dichloro-2-butene	--	--	na		
Trichloroethene	--	--	na		
Trichlorofluoromethane	--	--	na		
Vinyl Acetate	--	--	na		
Vinyl Chloride	--	--	na		
TPH (mg/kg)					
Gasoline-Range Hydrocarbons	30/100	--	na		
Diesel-Range Hydrocarbons	2,000	--	1,500		
Motor Oil-Range Hydrocarbons	2,000	--	**5,800**	2.9	
Dioxins and Furans (ng/kg)					
2,3,7,8-TCDD	--	--	< 0.65 U		
1,2,3,7,8-PeCDD	--	--	3.31		
1,2,3,4,7,8-HxCDD	--	--	4.45		
1,2,3,6,7,8-HxCDD	--	--	11.6		
1,2,3,7,8,9-HxCDD	--	--	8.59		
1,2,3,4,6,7,8-HpCDD	--	--	248		
OCDD	--	--	1,770		
2,3,7,8-TCDF	--	--	4.38		
1,2,3,7,8-PeCDF	--	--	2.0 J		
2,3,4,7,8-PeCDF	--	--	2.75		
1,2,3,4,7,8-HxCDF	--	--	4.03 J		
1,2,3,6,7,8-HxCDF	--	--	3.51		

Table E-2. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: ConGlobal Industries

Location ID			CG-MH-010		
Collection Date			4/23/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
1,2,3,7,8,9-HxCDF	--	--	1.11		
2,3,4,6,7,8-HxCDF	--	--	5.2 J		
1,2,3,4,6,7,8-HpCDF	--	--	50.9		
1,2,3,4,7,8,9-HpCDF	--	--	3.28		
OCDF	--	--	162		
Dioxin/Furan TEQ, nd SDL*0	25	--	12.1 J		
Dioxin/Furan TEQ, nd SDL*0.5	25	--	12.4 J		
Dioxin/Furan TEQ, nd SDL*1	25	--	12.7 J		
Total TCDD	--	--	20.1 J		
Total TCDF	--	--	61.9 J		
Total PeCDD	--	--	30.4		
Total PeCDF	--	--	65.3 J		
Total HxCDD	--	--	121		
Total HxCDF	--	--	87.1 J		
Total HpCDD	--	--	565		
Total HpCDF	--	--	138		
Grain size (%)					
> 10 Phi Clay	--	--	9.1		
8-9 Phi Clay	--	--	7.5		
9-10 Phi Clay	--	--	2.9		
Very Fine Silt	--	--	9.4		
Fine Silt	--	--	6.0		
Medium Silt	--	--	4.5		
Coarse Silt	--	--	0.4		
Total Fines	--	--	39.8		
Very Fine Sand	--	--	4.9		
Fine Sand	--	--	7.4		
Medium Sand	--	--	12.1		
Coarse Sand	--	--	12.6		
Very Coarse Sand	--	--	15.5		
Gravel	--	--	7.8		
Conventionals (%)					
Total Organic Carbon	--	--	6.77		
Total Solids	--	--	61.78		

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

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

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

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

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

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

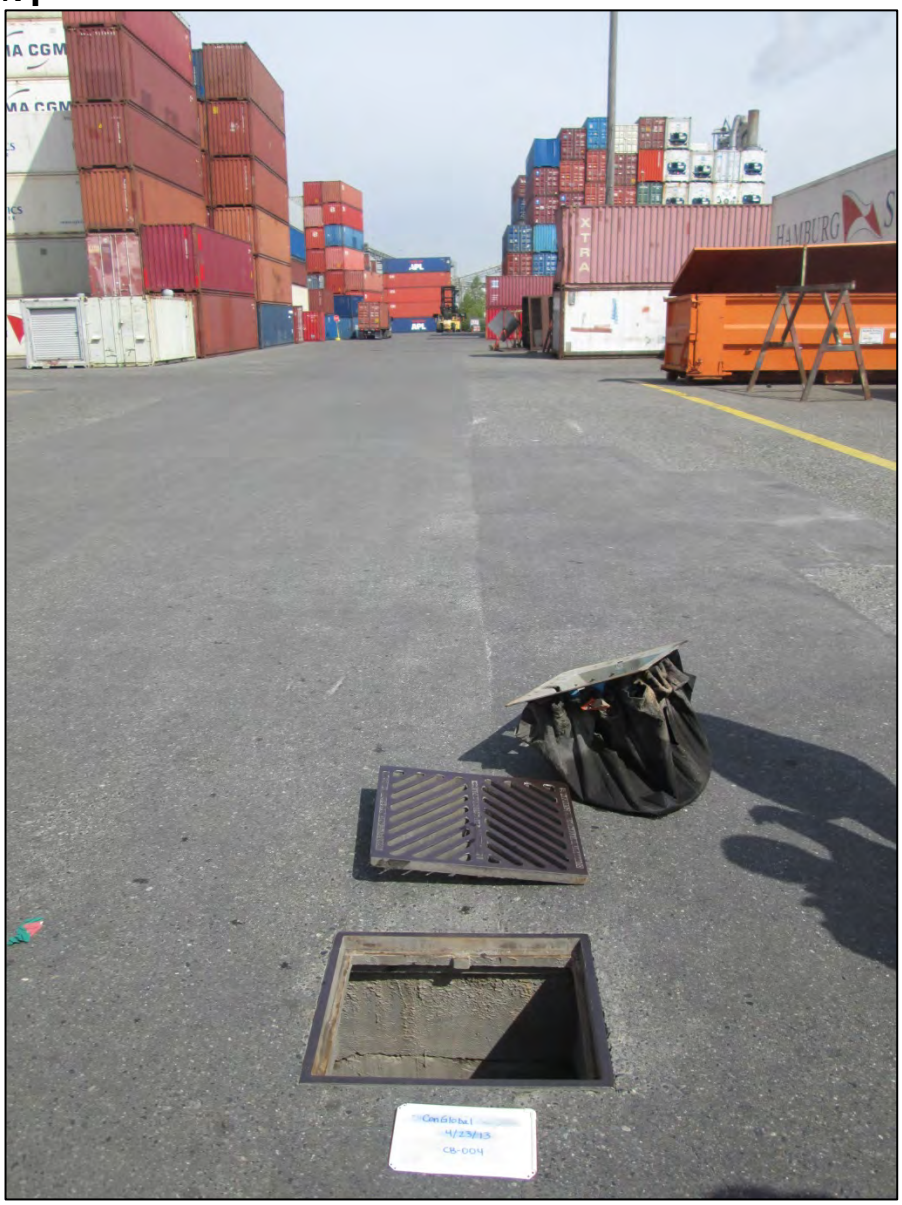
Table E-2. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs NPDES Inspection Sampling Support: ConGlobal Industries

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

Attachment E-1
Inspection Photographic Log

Conveyance Structure Information	
Structure Identification Number: CG-CB-05	**N↑** 
Structure Type: Catch Basin	
General Location: Southwestern portion of facility Terminal 106	
Characteristics: Metal zorb catch basin insert and filter sock 7.5 to bottom of structure	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Catch basin grate	
Volume Gauge: No	
Sample ID: No sample collected due to insufficient material volume available.	
Drainage Information:	
The catch basin is located in the intermodal equipment storage area of ConGlobal Industries at Terminal 106. CG-CB-05 is located on a tributary to the main drainage line at the facility which connects to the public storm drain line to the south. The public storm drain line discharges to the LDW.	**N↑** 

Conveyance Structure Information	
Structure Identification Number: CG-CB-11	**N↑** 
Structure Type: Catch Basin	
General Location: Western portion of facility Terminal 106	
Characteristics: Catch basin insert	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Catch basin grate	
Volume Gauge: No	
Sample ID: No sample collected due to insufficient material volume available.	
Drainage Information:	
The catch basin is located in the intermodal equipment storage area at Terminal 106 of ConGlobal Industries. CG-CB-11 is located on a tributary to the main drainage line at the facility which connects to the public storm drain line to the south. The public storm drain line discharges to the LDW.	**N↑** 

Conveyance Structure Information	
Structure Identification Number: CG-CB-04	N↑ 
Structure Type: Catch Basin	
General Location: Central portion of facility Terminal 106	
Characteristics: Catch basin insert 11 feet to bottom	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Catch basin grate	
Volume Gauge: No	
Sample ID: No sample collected due to insufficient material volume available.	
Drainage Information:	
The catch basin is located in the intermodal equipment storage area of ConGlobal Industries at Terminal 106. CG-CB-04 is located on a tributary to the main drainage line at the facility which connects to the public storm drain line to the south. The public storm drain line discharges to the LDW.	

Conveyance Structure Information	
Structure Identification Number: CG-MH-010	**N←**
Structure Type: Manhole	
General Location: North central portion of facility Terminal 108	
Characteristics: 11 feet to bottom of structure	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Sealed manhole cover	
Volume Gauge: No	
Sample ID: CG-MH-010-20130423-S	
Drainage Information	
Runoff from ConGlobal Industries at Terminal 108 is collected in catch basins and conveyed to CG-MH-010. CG-MH-010 is located in the intermodal equipment storage yard at Terminal 108. Stormwater is conveyed from CG-MH-010 to the public storm drain line to the north. The public storm drain line discharges to the LDW. Sediment traps were observed at the bottom of the structure.	**N↑**

Attachment E-2
Field Documentation

SAIC
From Science to Solutions

Sediment Collection Form

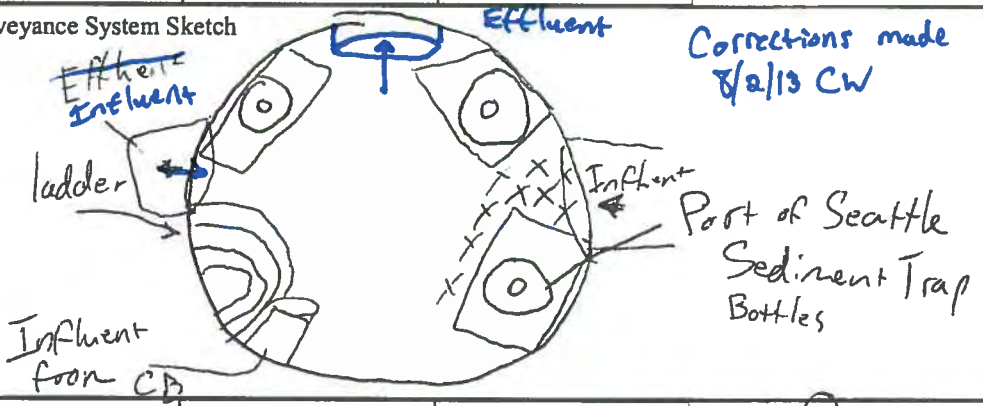
Project: NPDES Sampling Support **Location ID:** CG-MH-010

Facility Name: ConGlobal **Sample ID:** CG-MH-010-20130423-S

Sampled By: CW CM **Date:** 4 / 23 / 2013 **Time:** 1426

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

Conveyance System Sketch



Corrections made 8/2/13 CW

↑N

Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled (Y) / N
11 ft	10.5 ft	2-3 in	(Discrete) / Composite *(circle one)*

Sediment type:	***Sediment color:***	***Sediment Odor:***	***Comments:***
(Cobble)	Drab olive	None	X - Sample Grab 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: CG-MH-010

NOTES: Minimal Sample volume in MH.
First grab primarily Cobble + Gravel material
Was able to locate finer grained material in eastern portion of basin.
Paid special attention not to disturb Sediment traps in place 3 Sediment traps observed

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

4/23/13 Conglobal

0630 Arrive at field office, prep for day. Load truck

0730 MOB to Tullys - bathroom break
Depart Tullys

0800 Arrive at ConGlobal

0807 Bob Wright, Ken Waldo arrive at Site. Bob/Ken visit office to notify Conglobal of inspection. Jimmy Banks is Site Manager. Conglobal consultants- Farallon Consulting
Stacy Patterson
Port of Seattle was also notified
City inspectors were refused entry last month and have requested the following locns: CB-5 (main st.)
CB-10 (elevated Cu due to refrid.)
CB-15

0833 Arrival of Port of Seattle Consultant.
Ma H Prasek EA Engineering

0838 Meeting (tailgate) w/ BW, KW, CN, CW, MP

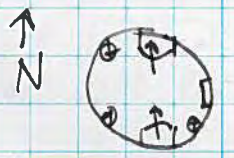
0849 H+S Mtg
- Waiting for ConGlobal Consultant to Arrive

0925 BW received phone call from Conglobal attorney. BW gave sampling info to attorney w/cw labelling bottles - CB-05, CB-10, CB-15 per City locn request

0949 Farallon Consultant arrives onsite (Conglobal consultant) Ryan

0956 Second Farallon personnel arrives onsite

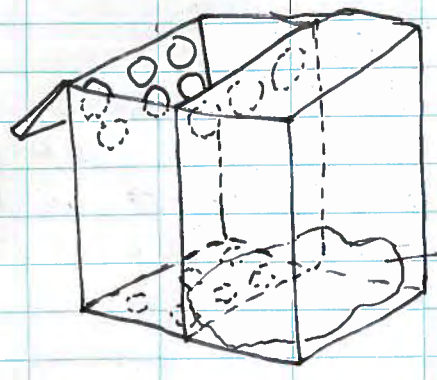
MOB to MH-001
WC = Approx ~6 inches standing water
negligable seds present
no flow
3 sediment traps present
DTB = 8' bgs



1027 MOB to CB-005 Heavy traffic
cracked lid
Metal body, Textile CB insert
Hard bottom
7.5' bgs
2.5' water

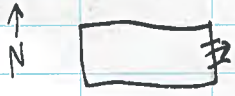
4/23/13 Conglobal

CB005 Filter insert - Custom made, metals, sediment treatment



MOB to CB-006
Blue Filter insert for sediment
standing water, no flow
DTB = 10' bgs . hard bottom
2.5' water column WC
no seds
single outlet east

MOB to CB-007
Blue Filter insert for sediment
standing water, no flow
DTB = 7' bgs hard bottom
WC = 1.5' WC
no seds single outlet east



1046 MOB to CB-008
wire frame, geotextile CB filter insert for sediment
Depth 7' bgs hard bottom
3.0' WC
no seds, no flow
single outlet east

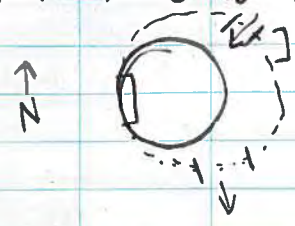
1051 MOB to CB-010 angled
wire frame geotextile CB filter insert for seds
DTB = 5.5' bgs hard bottom
WC = 3.0'
no seds single outlet N/E
no flow
Note 1: fractured concrete near/surround outlet pipe
Note 2: Adjacent/downgradient to refrid. cleaning pad

1100 MOB to CB-011
wire frame geotextile CB filter insert for seds
DTB = 5.5' bgs hard bottom
WC = 3.0'
single outlet east

4/23/13 ConGlobal

1108 Bob to check MH-003; reportedly looks clean.

1109 MOB to MH-003



DTB = 4.0' bgs hard bottom
WC = 4-5" no flow
single inlet NE
single outlet S-S/E

1115 MOB to CB-004
Custom CB Filter insert for creds

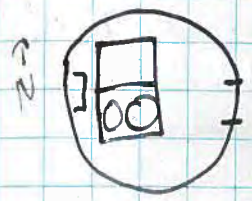
DTB = 5.5' bgs hard bottom
WC = 3.0' no flow
single outlet - E

MOB to MH-019
- Covered by Containers

MOB to MH-020

DTB = 6.5' bgs hard bottom
WC = 4" no flow

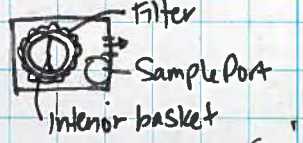
MOB to CB-002



Custom shorter version of CB filter insert for
DTB = 6.5' bgs hard bottom
WC = 2.0' no flow

2x2x1.5'
2 filter bag columns of media

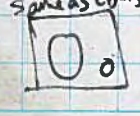
1140 Regroup for break. Decide to meet @ 1215
1225 MOB back to site
1231 MOB to T-10
1246 Arrive CB-15. Facility to move truck trailers from location



Visible sheen,
DTB = 7' bgs hard bottom
WC = 3.5 no flow
single outlet 45° elbow

O/W Sep.
Catch basin filter insert

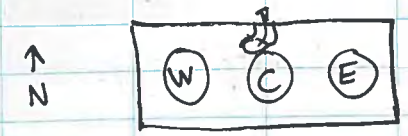
1302 MOB to CB-016



CB Filter insert
visible sheen
DTB = 7.5' bgs hard bottom
WC = 3.5' no flow
single outlet 45°

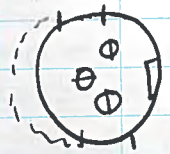
4/23/13 ConGlobal Sunny

1311 MOB to WS @ OF-002
plates blocking bottom.
Note: cracked 45° outlet pipe
unable to touch bottom due to obstruction



~~MOB to~~ ow

1325 MOB to MH-007 / OF-002
DTB = 6' bgs
WC = 3" no flow



ϕ sed trap (Port)

1336 MOB to MH-010

1402 Begin sediment sample collection
Facility has requested split samples
1426 Sample collection bottled

Sunny ConGlobal 4/23/13

1453 MOB to front office
Make copy of bottle list for Farallon

1501 Offsite for meeting to plan for tomorrow - Emerald Services. Parked along adjacent road.
1512 MOB offsite to Lab.
1528 Arrive @ ARI to submit samples
Short Mtg w/ Cheronne
1534 Depart ARI; MOB to field office
1553 Arrive @ Field office
Unload field truck.
Decon equipment
1635 Depart field office
End of Day

Attachment E-3
Chain of Custody Forms

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WN27	Turn-around Requested: 15 Day	Date: 4/23/13	
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1	
Client Contact: **Christine Nancarrow**		No. of Coolers: 1	Cooler Temps: 6.8
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers: CW CN		

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

Sample ID	Date	Time	Matrix	No. Containers	PCB Aroclors (EPA 8082)	SVOCs (EPA 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)	Notes/Comments
					Analysis Requested (Sediment Sample)											
CG-MH-010-20130423-5	4/23/13	1426	Sediment	4	1	0	7	6	8		3	3	4	5	4	4/23/13

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Please analyze in priority order by number. Do not dispose of any samples prior to written authorization by SAIC PM.	Printed Name: CNANCARROW	Printed Name: A. Voigtsdon	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 4/23/13 1533	Date & Time: 4/23/13 1533	Date & Time:	Date & Time:

Attachment E-4
Laboratory Reports

Note: Laboratory reports are included with digital files.

Table of Contents: ARI Job WN27

Client: SAIC

Project: 209977 NPDES Sampling Support

BC
Signature

May-14-2013
Date

Table of Contents: ARI Job WN27

Client: SAIC

Project: 209977 NPDES Sampling Support

BC
Signature

May-14-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 15, 2013

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

RE: Project: NPDES Sampling Support, 209977
ARI Job No.: WN27

Dear Christine:

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

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

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

Sincerely,

ANALYTICAL RESOURCES, INC.

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

cc: eFile WN27

Enclosures

Chain of Custody Documentation

ARI Job ID: WN27

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: [illegible]N27	Turn-around Requested: 15 Day	Date: 4/23/13	
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1	
Client Contact: **Christine Nancarrow**		No. of Coolers: 1	Cooler Temps: 6.8
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers: CW CN		

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

Sample ID	Date	Time	Matrix	No Containers	PCB Aroclors (EPA 8082)	SVOCs (EPA 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)	Notes/Comments
					Analysis Requested (Sediment Sample)											
CG-MH-06-20130423-S	4/23/13	1426	Sediment	4	1	2	7	6	8		3	3	4	5	89 CW 4/23/13	

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
Please analyze in priority order by number. Do not dispose of any samples prior to written authorization from SAIC PM.	Printed Name: CNANCARROW	Printed Name: A. Voigardson	Printed Name	Printed Name
	Company: SAIC	Company: ARI	Company	Company
	Date & Time: 4/23/13 1533	Date & Time: 4/23/13 1533	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

COC No(s) _____ (NA)

Assigned ARI Job No WN27

Project Name NPDES Sampling Support

Delivered by Fed-Ex UPS Courier Hand Delivered Other _____

Tracking No _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? (YES) NO AV

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) 6.8

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

Cooler Accepted by: AV Date 4/23/13 Time 1533

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES (NO)

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI. (NA) _____

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

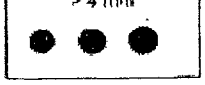
Samples Logged by: JM Date: 4/24/13 Time 1023

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

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

Additional Notes, Discrepancies, & Resolutions:

By: Date

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

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

WN27

Cooler Temperature Compliance Form

Cooler#: 1	Temperature(°C): 6.8	
Sample ID	**Bottle Count**	**Bottle Type**
All samples associated with this job were received at a temp greater than 6°C.		

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Completed by: JM Date: 4/24/13 Time: 1023

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WN27

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job No.: WN27

Sample Receipt

One sediment sample was received on April 23, 2013 under ARI job WN27. The cooler temperature measured by IR thermometer following ARI SOP was 6.8°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

Semivolatiles by SW8270D

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

Initial calibrations were within method requirements.

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

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

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

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

The LCS and LCSD percent recoveries were within control limits.

Several matrix spike and matrix spike duplicate percent recoveries were advisory control limits with wide RPDs for sample **CG-MH-010-20130423-S**. No corrective action is required for matrix QC.

SIM Semivolatiles by SW78270

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

Initial calibrations were within method requirements.

The continuing calibration fell outside the 20% control limit low for Pentachlorophenol. All detected results for this compound have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

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

The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory 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 further corrective action was taken.

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

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

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

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

Pesticides by SW8081

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

Initial calibrations were within method requirements.

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

Internal standard areas were within limits.

The surrogate percent recovery of Decachlorobiphenyl was outside the control limit high for the matrix spike of sample **CG-MH-010-20130423-S**. No corrective action is required for matrix QC.

The method blank was clean at the reporting limits.

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

Several matrix spike and matrix spike duplicate percent recoveries were advisory control limits with wide RPDs for sample **CG-MH-010-20130423-S**. No corrective action is required for matrix QC.

Aroclor PCBs by SW8082

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

Initial calibrations were within method requirements.

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

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

The surrogate percent recoveries were within control limits.

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

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

NWTPH-Dx

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

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

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

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

Metals and Mercury

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

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

The matrix spike percent recovery of antimony fell outside the control limits low for sample **CG-MH-010-20130423-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 were within control limits.

General Chemistry

The sample was prepared and analyzed within method recommended holding times.

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

The SRM percent recovery was within limits.

Geotechnical Parameters

A laboratory-specific case narrative follows this page.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: SAIC	**ARI Job No.:** WN27
Client Project: NPDES Sampling Support	**Client Project No.:** 209977

Case Narrative

1. One sample was submitted for analysis on April 24, 2013, and were in good condition.
2. The sample was submitted for grain size analysis by means of X-ray diffraction using a Sedigraph 5120. The values are calculated using Stokes' Law of sedimentation and Beer's law of extinction.
3. The sample was run in a single batch and one sample from another job was chosen for triplicate analysis.
4. The standard operating procedure calls for the sample to be measured on the #4 (4750 µm) sieve, down to the 1.0 µm particle size with the Sedigraph 5120. If there were no particles measured at these extremes, the data is not included in the report.
5. The sample contained a 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 sample or methods on this project.

Released by: Elizabeth Dobbs _____ Date: May 7, 2013
Technician

Reviewed by: Julianna Curtis _____ Date: 5/7/13
Geotechnical Laboratory Manager

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WN27
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CG-MH-010-20130423-S	WN27A	13-8552	Sediment	04/23/13 14:26	04/23/13 15:33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

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

* — Duplicate RPD is not within established control limits

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

N — Matrix Spike recovery not within established control limits

NA — Not Applicable, analyte not spiked

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

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

Organic Data

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

* — Flagged value is not within established control limits

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

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

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

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

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

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

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

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

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

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

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

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

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

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

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

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

Geotechnical Data

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

F Samples were frozen prior to particle size determination

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

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

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

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS, MS Control Limits (%)		RPD[2]
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	Full Scan	SIM	
Phenol	8.65	10	**20**	2.56	5	**5**	34 – 105	30 – 160	≤ 40
bis-(2-Chloroethyl)ether	3.35	10	**20**	--	--	--	36 – **100**	--	≤ 40
2-Chlorophenol	2.39	10	**20**	--	--	--	39 – **100**	--	≤ 40
1,3-Dichlorobenzene	2.63	10	**20**	1.31	2.5	**5**	40 – **100**	30 – **100**	≤ 40
1,4-Dichlorobenzene	2.86	10	**20**	1.19	2.5	**5**	39 – **100**	36 – **100**	≤ 40
1,2-Dichlorobenzene	2.50	10	**20**	1.10	2.5	**5**	40 – **100**	36 – **100**	≤ 40
Benzyl alcohol	6.09	10	**20**	7.04	10	**20**[3]	19 – 117	25 – 123	≤ 40
2,2'-oxy-*bis*-(1-Chloropropane)	3.76	10	**20**	--	--	--	32 – **100**	--	≤ 40
2-Methylphenol	5.25	10	**20**	1.81	2.5	**5**	28 – **100**	26 – **100**	≤ 40
Hexachloroethane	2.94	10	**20**	--	--	--	38 – **100**	--	≤ 40
N-Nitroso-di-n-propylamine	3.36	10	**20**	9.48	10	**12**[3]	34 – **100**	30 – 160	≤ 40
4-Methylphenol[6]	6.63	10	**20**	2.52	5	**10**	29 – 100	30 – 160	≤ 40
Nitrobenzene	4.06	10	**20**	--	--	--	36 – **100**	--	≤ 40
Isophorone	2.86	10	**20**	--	--	--	37 – 101	--	≤ 40
2-Nitrophenol	38.7	50	**100**	--	--	--	30 – 112	--	≤ 40
2,4-Dimethylphenol	3.46	20	**40**	2.89	10	**20**	**10 – 100**	10 – 103	≤ 40
bis-(2-Chloroethoxy)methane	2.00	10	**20**	--	--	--	39 – **100**	--	≤ 40
2,4-Dichlorophenol	21.5	100	**200**	--	--	--	28 – 112	--	≤ 40
1,2,4-Trichlorobenzene	3.48	10	**20**	1.86	2.5	**5**	35 – 103	35 – **100**	≤ 40
Naphthalene	2.76	10	**20**	--	--	--	43 – 100	--	≤ 40
Benzoic acid	101	200	**400**[5]	--	--	--	**10** – 107	--	≤ 40
4-Chloroaniline	22.3	135	**270**[4]	--	--	--	11 – **100**	--	≤ 40
Hexachlorobutadiene	4.57	10	**20**	0.96	2.5	**5**	37 – **100**	34 – **100**	≤ 40
4-Chloro-3-methylphenol	15.1	50	**100**	--	--	--	32 – 117	--	≤ 40
2-Methylnaphthalene	3.06	10	**20**	--	--	--	43 – **100**	--	≤ 40
Hexachlorocyclopentadiene	66.4	200	**400**[4]	--	--	--	**10** – 103	--	≤ 40
2,4,6-Trichlorophenol	22.4	50	**100**	--	--	--	30 – 113	--	≤ 40
2,4,5-Trichlorophenol	21.4	50	**100**	--	--	--	28 – 118	--	≤ 40
2-Chloronaphthalene	2.64	10	**20**	--	--	--	40 – **100**	--	≤ 40
2-Nitroaniline	18.4	50	**100**	--	--	--	31 – 126	--	≤ 40
Acenaphthylene	5.71	10	**20**	--	--	--	42 – 102	--	≤ 40
Dimethylphthalate	2.90	10	**20**	1.34	2.5	**5**	43 – 114	38 – 112	≤ 40
2,6-Dinitrotoluene	30.6	50	**100**	--	--	--	33 – 123	--	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS, MS Control Limits (%)		RPD[2]
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	Full Scan	SIM	
Acenaphthene	3.28	10	**20**	--	--	--	45 – **100**	--	≤ 40
3-Nitroaniline	22.5	50	**100**	--	--	--	22 – 113	--	≤ 40
2,4-Dinitrophenol	111	425	**850**[4]	--	--	--	**10** – 105	--	≤ 40
Dibenzofuran	4.10	10	**20**	--	--	--	43 – 103	--	≤ 40
4-Nitrophenol	34.7	50	**100**	--	--	--	15 – 138	--	≤ 40
2,4-Dinitrotoluene	19.5	50	**100**	--	--	--	35 – 127	--	≤ 40
Fluorene	4.35	10	**20**	--	--	--	45 – 107	--	≤ 40
4-Chlorophenyl-phenylether	5.29	10	**20**	--	--	--	32 – 116	--	≤ 40
Diethylphthalate	36.6	50	**50**[3]	3.26	5.0	**5.0**	50 – 120	55 – 104	≤ 40
4-Nitroaniline	37.9	50	**100**	--	--	--	24 – 125	--	≤ 40
4,6-Dinitro-2-methylphenol	21.2	100	**200**	--	--	--	24 – 119	--	≤ 40
N-Nitrosodiphenylamine	5.39	10	**20**	1.38	10	**20**	36 – 111	27 – 115	≤ 40
4-Bromophenyl-phenylether	5.03	10	**20**	--	--	--	39 – 114	--	≤ 40
Hexachlorobenzene	4.29	10	**20**	1.26	2.5	**5**	33 – 113	32 – 106	≤ 40
Pentachlorophenol	48.5	100	**200**[4]	14.3	25	**50**	16 – 120	26 – 106	≤ 40
Phenanthrene	3.64	10	**20**	--	--	--	49 – 112	--	≤ 40
Anthracene	4.50	10	**20**	--	--	--	45 – 106	--	≤ 40
Carbazole	2.69	10	**20**	--	--	--	43 – 135	--	≤ 40
Di-n-butylphthalate	8.16	10	**20**	--	--	--	48 – 126	--	≤ 40
Fluoranthene	2.91	10	**20**	--	--	--	53 – 118	--	≤ 40
Pyrene	1.94	10	**20**	--	--	--	48 – 121	--	≤ 40
Butylbenzylphthalate	6.14	10	**20**	2.89	5.0	**5**	45 – 132	32 – 142	≤ 40
Benzo(a)anthracene	3.29	10	**20**	--	--	--	49 – 115	--	≤ 40
3,3'-Dichlorobenzidine	17.8	75	**150**[4]	--	--	--	**10** – **100**	--	≤ 40
Chrysene	3.75	10	**20**	--	--	--	47 – 115	--	≤ 40
bis-(2-Ethylhexyl)phthalate	14.6	20	**25**[3]	--	--	--	34 – 130	--	≤ 40
Di-n-octylphthalate	5.84	10	**20**	--	--	--	28 – 124	--	≤ 40
Benzo(b)fluoranthene[7]	3.47	10	**20**	--	--	--	42 – 132	--	≤ 40
Benzo(k)fluoranthene[7]	4.18	10	**20**	--	--	--	39 – 129	--	≤ 40
Benzofluoranthene-Total[8]	6.67	20	**40**	--	--	--	30 – 160	--	≤ 40
Benzo(a)pyrene	5.45	10	**20**	--	--	--	42 – 113	--	≤ 40
Indeno(1,2,3-cd)pyrene	4.68	10	**20**	--	--	--	42 – 123	--	≤ 40
Dibenzo(a,h)anthracene	4.31	10	**20**	2.02	2.5	**5**	30 – 133	28 – 125	≤ 40
Benzo(g,h,i)perylene	4.40	10	**20**	--	--	--	38 – 126	--	≤ 40
N-Nitrosodimethylamine	14.1	50	**100**	3.15	13	**25**	17 – **100**	30 – 160	≤ 40
Aniline	40.0	270	**540**[4]	--	--	--	**10** – 134	--	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis			SIM Analysis			LCS, MS Control Limits (%)		RPD[2]
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	Full Scan	SIM	
Pyridine	32.7	75	**150**[4]	--	--	--	**10** – 147	--	≤ 40
1-Methylnaphthalene	2.68	10	**20**	--	--	--	42 – **100**	--	≤ 40
Azobenzene (1,2-DP-Hydrazine)	2.98	10	**20**	--	--	--	35 – 112	--	≤ 40
Retene [9]	4.01	10	**20**	--	--	--	30 – 160	--	≤ 40
Surrogate Standards									
2-Fluorophenol							32 – **100**	27 – **100**	≤ 40
Phenol-d_5							32 – 101	29 – **100**	≤ 40
2-Chlorophenol-d_4							36 – 101	31 – **100**	≤ 40
1,2-Dichlorobenzene-d_4							37 – **100**	32 – **100**	≤ 40
Nitrobenzene-d_5							33 –102	30 – **100**	≤ 40
2-Fluorobiphenyl							35 –101	35 – **100**	≤ 40
2,4,6-Tribromophenol							23 – 133	24 – 134	≤ 40
p-Terphenyl-d_{14}							42 – 124	37 – 111	≤ 40

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

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

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

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

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

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

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

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

(3) Method specified control limits.

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

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

4

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

Microwave (EPA Method 3546) Extraction using 12.5g (dry weight) sample with extract concentrated to 2.5 mL final volume. ARI Bench Sheet 3046F

LOD Spike level = LOQ Concentration

Analyte	DL[1,2] µg/kg	LOD[1] µg/kg	LOQ[1] µg/kg	LCS Control Limit[3,4]	Replicate RPD[5]
alpha-BHC	0.081	0.25	**0.5**	68 – 115	≤ 40
beta-BHC	0.139	0.25	**0.5**	60 – 126	≤ 40
gamma-BHC (Lindane)	0.048	0.25	**0.5**	68 – 134	≤ 40
delta-BHC	0.082	0.25	**0.5**	71 – 154	≤ 40
Heptachlor	0.132	0.25	**0.5**	66 – 115	≤ 40
Aldrin	0.055	0.25	**0.5**	66 – 115	≤ 40
Heptachlor Epoxide	0.085	0.25	**0.5**	65 – 127	≤ 40
trans-Chlordane (*beta*-Chlordane, *gamma*-Chlordane)	0.077	0.25	**0.5**	73 – 136	≤ 40
cis-Chlordane (*alpha*-chlordane)	0.051	0.25	**0.5**	77 – 124	≤ 40
Endosulfan I	0.072	0.25	**0.5**	28 – **100**	≤ 40
4,4'-DDE	0.124	0.5	**1.0**	71 – 149	≤ 40
Dieldrin	0.100	0.5	**1.0**	74 – 131	≤ 40
Endrin	0.215	0.5	**1.0**	72 – 135	≤ 40
Endosulfan II	0.116	0.5	**1.0**	37 – 110	≤ 40
4,4'-DDD	0.135	0.5	**1.0**	76 – 137	≤ 40
Endrin Aldehyde	0.218	0.5	**1.0**	38 – 109	≤ 40
4,4'-DDT	0.192	0.5	**1.0**	58 – 144	≤ 40
Endosulfan Sulfate	0.192	0.5	**1.0**	47 – 148	≤ 40
Endrin Ketone	0.119	0.5	**1.0**	29 – 165	≤ 40
Methoxychlor	0.698	2.5	**5.0**	65 – 123	≤ 40
Hexachlorobutadiene	0.138	0.5	**1.0**	43 – 104	≤ 40
Hexachlorobenzene	0.094	0.5	**1.0**	62 – 119	≤ 40
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
Tetrachloro-*m*-xylene (TCMX)			47 – 124	34 – 169	≤ 40
Decachlorobiphenyl			60 – 149	36 – 182	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation as defined in ARI SOP 1018S.
(2) MDL study QZ38
(3) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(4) Control limits calculated using all data from 1/1/12 through 7/31/12.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

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

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

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

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

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

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

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

Analysis Code	Analyte[5]	DL[1] ppm	LOD[1] ppm	LOQ[2] ppm	Spike % Recovery Control Limits[3]			RPD[4]
					LCS	MB/LCS Surrogate	Sample Surrogate	
HCIWVX	NWTPH-HCID – Water Samples	--	--	0.50 [7]	--	--	50-150	≤ 40
HCISVX	NWTPH-HCID – Solid Samples	--	--	50 [7]	--	--	50-150	
[illegible]								
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	
[illegible]								
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	
[illegible]								
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	
[illegible]								
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.28	2.5	5	60-108	50-150	50-150	≤ 40
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.06	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	1.57	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [10]	5	10	60-120 [6]	60-120	50-150	

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

Quality Control Parameters for Metals Analysis-ICP-OES EPA Methods 200.7 and 6010C

	Aqueous Samples[2]			Spike Recovery		RPD[5]	Solids[3]	Tissue[4]
Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ mg/kg	LOQ mg/kg
Aluminum	7.57	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Antimony	6.28	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Arsenic	3.33	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Barium	1.33	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Beryllium	0.16	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Boron	7.39	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Cadmium	0.18	0.5	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Calcium	11.27	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Chromium	1.24	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Cobalt	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Copper	0.92	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Iron	7.50	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Lead	1.55	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Magnesium	9.61	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Manganese	0.28	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Molybdenum	0.79	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Nickel	3.86	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Potassium	65.70	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Selenium	4.99	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Silicon	8.17	30	**60**	75 – 125	80 – 120	≤ 20	**(6)**	**(6)**
Silver	0.43	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Sodium	11.35	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Strontium	0.09	1.0	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Thallium	3.10	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Tin	1.41	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Titanium	2.11	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.01**
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 $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

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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: WN27

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CG-MH-010-20130423-S
SAMPLE

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MO
Reported: 08/19/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/01/13
Date Analyzed: 05/07/13 19:16
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.97 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 40.4%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	43	100	< 100 U
111-44-4	Bis-(2-Chloroethyl) Ether	17	100	< 100 U
95-57-8	2-Chlorophenol	13	100	< 100 U
541-73-1	1,3-Dichlorobenzene	13	100	< 100 U
106-46-7	1,4-Dichlorobenzene	14	100	< 100 U
100-51-6	Benzyl Alcohol	31	100	< 100 U
95-50-1	1,2-Dichlorobenzene	13	100	< 100 U
95-48-7	2-Methylphenol	26	100	< 100 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	100	< 100 U
106-44-5	4-Methylphenol	33	100	< 100 U
621-64-7	N-Nitroso-Di-N-Propylamine	17	100	< 100 U
67-72-1	Hexachloroethane	15	100	< 100 U
98-95-3	Nitrobenzene	20	100	< 100 U
78-59-1	Isophorone	14	100	< 100 U
88-75-5	2-Nitrophenol	190	500	< 500 U
105-67-9	2,4-Dimethylphenol	17	200	< 200 U
65-85-0	Benzoic Acid	510	2,000	< 2,000 U
111-91-1	bis(2-Chloroethoxy) Methane	10	100	< 100 U
120-83-2	2,4-Dichlorophenol	110	1,000	< 1,000 U
120-82-1	1,2,4-Trichlorobenzene	17	100	< 100 U
91-20-3	**Naphthalene**	**14**	**100**	**60 J**
106-47-8	4-Chloroaniline	110	1,400	< 1,400 U
87-68-3	Hexachlorobutadiene	23	100	< 100 U
59-50-7	4-Chloro-3-methylphenol	76	500	< 500 U
91-57-6	2-Methylnaphthalene	15	100	< 100 U
77-47-4	Hexachlorocyclopentadiene	330	2,000	< 2,000 U
88-06-2	2,4,6-Trichlorophenol	110	500	< 500 U
95-95-4	2,4,5-Trichlorophenol	110	500	< 500 U
91-58-7	2-Chloronaphthalene	13	100	< 100 U
88-74-4	2-Nitroaniline	92	500	< 500 U
131-11-3	Dimethylphthalate	15	100	< 100 U
208-96-8	Acenaphthylene	29	100	< 100 U
99-09-2	3-Nitroaniline	110	500	< 500 U
83-32-9	Acenaphthene	16	100	< 100 U
51-28-5	2,4-Dinitrophenol	560	4,300	< 4,300 U
100-02-7	4-Nitrophenol	170	500	< 500 U
132-64-9	Dibenzofuran	21	100	< 100 U
606-20-2	2,6-Dinitrotoluene	150	500	< 500 U
121-14-2	2,4-Dinitrotoluene	98	500	< 500 U
84-66-2	Diethylphthalate	180	250	< 250 U
7005-72-3	4-Chlorophenyl-phenylether	27	100	< 100 U
86-73-7	Fluorene	22	100	< 100 U
100-01-6	4-Nitroaniline	190	500	< 500 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CG-MH-010-20130423-S
SAMPLE

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Date Analyzed: 05/07/13 19:16

QC Report No: WN27-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	110	1,000	< 1,000 U
86-30-6	**N-Nitrosodiphenylamine**	**27**	**100**	**85 J**
101-55-3	4-Bromophenyl-phenylether	25	100	< 100 U
118-74-1	Hexachlorobenzene	22	100	< 100 U
87-86-5	Pentachlorophenol	240	1,000	< 1,000 U
85-01-8	**Phenanthrene**	**18**	**100**	**220**
86-74-8	Carbazole	14	100	< 100 U
120-12-7	Anthracene	23	100	< 100 U
84-74-2	Di-n-Butylphthalate	41	100	< 100 U
206-44-0	**Fluoranthene**	**15**	**100**	**390**
129-00-0	**Pyrene**	**9.7**	**100**	**610**
85-68-7	**Butylbenzylphthalate**	**31**	**100**	**670**
91-94-1	3,3'-Dichlorobenzidine	89	750	< 750 U
56-55-3	**Benzo(a)anthracene**	**17**	**100**	**150**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**73**	**130**	**15,000 EB**
218-01-9	**Chrysene**	**19**	**100**	**430**
117-84-0	**Di-n-Octyl phthalate**	**29**	**100**	**150 M**
50-32-8	**Benzo(a)pyrene**	**27**	**100**	**240**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**24**	**100**	**140**
53-70-3	**Dibenz(a,h)anthracene**	**22**	**100**	**65 J**
191-24-2	**Benzo(g,h,i)perylene**	**22**	**100**	**260**
62-53-3	Aniline	200	2,700	< 2,700 U
62-75-9	N-Nitrosodimethylamine	71	500	< 500 U
90-12-0	1-Methylnaphthalene	13	100	< 100 U
TOTBFA	**Total Benzofluoranthenes**	**14**	**200**	**470**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.0%	2-Fluorobiphenyl	69.6%
d14-p-Terphenyl	74.4%	d4-1,2-Dichlorobenzene	61.2%
d5-Phenol	64.8%	2-Fluorophenol	62.0%
2,4,6-Tribromophenol	74.8%	d4-2-Chlorophenol	66.8%

8/19/13

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CG-MH-010-20130423-S
DILUTION

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MDP
Reported: 08/19/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/01/13
Date Analyzed: 05/08/13 15:27
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.97 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 9.00
Percent Moisture: 40.4%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	130	300	< 300 U
111-44-4	Bis-(2-Chloroethyl) Ether	51	300	< 300 U
95-57-8	2-Chlorophenol	40	300	< 300 U
541-73-1	1,3-Dichlorobenzene	40	300	< 300 U
106-46-7	1,4-Dichlorobenzene	43	300	< 300 U
100-51-6	Benzyl Alcohol	92	300	< 300 U
95-50-1	1,2-Dichlorobenzene	38	300	< 300 U
95-48-7	2-Methylphenol	79	300	< 300 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	57	300	< 300 U
106-44-5	4-Methylphenol	100	300	< 300 U
621-64-7	N-Nitroso-Di-N-Propylamine	51	300	< 300 U
67-72-1	Hexachloroethane	44	300	< 300 U
98-95-3	Nitrobenzene	61	300	< 300 U
78-59-1	Isophorone	43	300	< 300 U
88-75-5	2-Nitrophenol	580	1,500	< 1,500 U
105-67-9	2,4-Dimethylphenol	52	600	< 600 U
65-85-0	Benzoic Acid	1500	6,000	< 6,000 U
111-91-1	bis(2-Chloroethoxy) Methane	30	300	< 300 U
120-83-2	2,4-Dichlorophenol	320	3,000	< 3,000 U
120-82-1	1,2,4-Trichlorobenzene	52	300	< 300 U
91-20-3	Naphthalene	42	300	< 300 U
106-47-8	4-Chloroaniline	340	4,100	< 4,100 U
87-68-3	Hexachlorobutadiene	69	300	< 300 U
59-50-7	4-Chloro-3-methylphenol	230	1,500	< 1,500 U
91-57-6	2-Methylnaphthalene	46	300	< 300 U
77-47-4	Hexachlorocyclopentadiene	1000	6,000	< 6,000 U
88-06-2	2,4,6-Trichlorophenol	340	1,500	< 1,500 U
95-95-4	2,4,5-Trichlorophenol	320	1,500	< 1,500 U
91-58-7	2-Chloronaphthalene	40	300	< 300 U
88-74-4	2-Nitroaniline	280	1,500	< 1,500 U
131-11-3	Dimethylphthalate	44	300	< 300 U
208-96-8	Acenaphthylene	86	300	< 300 U
99-09-2	3-Nitroaniline	340	1,500	< 1,500 U
83-32-9	Acenaphthene	49	300	< 300 U
51-28-5	2,4-Dinitrophenol	1700	13,000	< 13,000 U
100-02-7	4-Nitrophenol	520	1,500	< 1,500 U
132-64-9	Dibenzofuran	62	300	< 300 U
606-20-2	2,6-Dinitrotoluene	460	1,500	< 1,500 U
121-14-2	2,4-Dinitrotoluene	290	1,500	< 1,500 U
84-66-2	Diethylphthalate	550	750	< 750 U
7005-72-3	4-Chlorophenyl-phenylether	80	300	< 300 U
86-73-7	Fluorene	66	300	< 300 U
100-01-6	4-Nitroaniline	570	1,500	< 1,500 U

BC 8/21/13

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: CG-MH-010-20130423-S**
Extraction Method: SW3546 **DILUTION**

Lab Sample ID: WN27A QC Report No: WN27-SAIC
LIMS ID: 13-8552 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 05/08/13 15:27

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	320	3,000	< 3,000 U
86-30-6	N-Nitrosodiphenylamine	81	300	< 300 U
101-55-3	4-Bromophenyl-phenylether	76	300	< 300 U
118-74-1	Hexachlorobenzene	65	300	< 300 U
87-86-5	Pentachlorophenol	730	3,000	< 3,000 U
85-01-8	**Phenanthrene**	**55**	**300**	**260 J**
86-74-8	Carbazole	41	300	< 300 U
120-12-7	Anthracene	68	300	< 300 U
84-74-2	Di-n-Butylphthalate	120	300	< 300 U
206-44-0	**Fluoranthene**	**44**	**300**	**420**
129-00-0	**Pyrene**	**29**	**300**	**650**
85-68-7	**Butylbenzylphthalate**	**93**	**300**	**720**
91-94-1	3,3'-Dichlorobenzidine	270	2,300	< 2,300 U
56-55-3	**Benzo(a)anthracene**	**50**	**300**	**170 J**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**220**	**380**	**15,000 B**
218-01-9	**Chrysene**	**57**	**300**	**450**
117-84-0	Di-n-Octyl phthalate	88	300	< 300 U
50-32-8	**Benzo(a)pyrene**	**82**	**300**	**200 J**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**71**	**300**	**220 J**
53-70-3	**Dibenz(a,h)anthracene**	**65**	**300**	**110 J**
191-24-2	**Benzo(g,h,i)perylene**	**66**	**300**	**470**
62-53-3	Aniline	600	8,100	< 8,100 U
62-75-9	N-Nitrosodimethylamine	210	1,500	< 1,500 U
90-12-0	1-Methylnaphthalene	40	300	< 300 U
TOTBFA	**Total Benzofluoranthenes**	**41**	**600**	**510 J**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.4%	2-Fluorobiphenyl	68.4%
d14-p-Terphenyl	88.2%	d4-1,2-Dichlorobenzene	63.0%
d5-Phenol	57.6%	2-Fluorophenol	62.4%
2,4,6-Tribromophenol	75.6%	d4-2-Chlorophenol	63.6%

Be 8/11/13

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WN27-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-050113	56.8%	57.0%	71.0%	59.4%	57.3%	55.7%	56.4%	58.8%	0
LCS-050113	57.8%	57.0%	75.2%	56.8%	62.0%	58.8%	67.2%	59.2%	0
LCSD-050113	66.6%	65.4%	74.4%	65.8%	71.7%	68.3%	73.1%	68.0%	0
CG-MH-010-20130423	63.0%	69.6%	74.4%	61.2%	64.8%	62.0%	74.8%	66.8%	0
CG-MH-010-20130423 DL	59.4%	68.4%	88.2%	63.0%	57.6%	62.4%	75.6%	63.6%	0
CG-MH-010-20130423 MS	51.6%	56.4%	58.8%	49.2%	54.0%	50.8%	64.8%	54.4%	0
CG-MH-010-20130423 MSD	60.6%	66.6%	67.8%	57.6%	64.0%	60.0%	75.2%	64.4%	0

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

Prep Method: SW3546
Log Number Range: 13-8552 to 13-8552

BC 8/16/13

WN27: 33R

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: CG-MH-010-20130423-S
MS/MSD

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 08/15/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted MS/MSD: 05/01/13

Date Analyzed MS: 05/07/13 19:53
MSD: 05/07/13 20:30
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ
GPC Cleanup: Yes

Sample Amount MS: 5.98 g-dry-wt
MSD: 5.97 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 3.00
MSD: 3.00
Percent Moisture: 40.4 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	< 100 U	507	836	60.6%	573	838	68.4%	12.2%
Bis-(2-Chloroethyl) Ether	< 100 U	426	836	51.0%	538	838	64.2%	23.2%
2-Chlorophenol	< 100 U	401	836	48.0%	513	838	61.2%	24.5%
1,3-Dichlorobenzene	< 100 U	391	836	46.8%	497	838	59.3%	23.9%
1,4-Dichlorobenzene	< 100 U	421	836	50.4%	523	838	62.4%	21.6%
Benzyl Alcohol	< 100 U	472	836	56.5%	593	838	70.8%	22.7%
1,2-Dichlorobenzene	< 100 U	431	836	51.6%	548	838	65.4%	23.9%
2-Methylphenol	< 100 U	421	836	50.4%	538	838	64.2%	24.4%
2,2'-Oxybis(1-Chloropropane)	< 100 U	472	836	56.5%	598	838	71.4%	23.6%
4-Methylphenol	< 100 U	878	1670	52.6%	1120	1680	66.7%	24.2%
N-Nitroso-Di-N-Propylamine	< 100 U	547	836	65.4%	668	838	79.7%	19.9%
Hexachloroethane	< 100 U	411	836	49.2%	518	838	61.8%	23.0%
Nitrobenzene	< 100 U	446	836	53.3%	548	838	65.4%	20.5%
Isophorone	< 100 U	457	836	54.7%	553	838	66.0%	19.0%
2-Nitrophenol	< 500 U	421 J	836	50.4%	528	838	63.0%	22.6%
2,4-Dimethylphenol	< 200 U	1670	2510	66.5%	2080	2510	82.9%	21.9%
Benzoic Acid	< 2000 U	1870 J	4600	40.7%	1970 J	4610	42.7%	5.2%
bis(2-Chloroethoxy) Methane	< 100 U	512	836	61.2%	633	838	75.5%	21.1%
2,4-Dichlorophenol	< 1000 U	1320	2510	52.6%	1620	2510	64.5%	20.4%
1,2,4-Trichlorobenzene	< 100 U	482	836	57.7%	583	838	69.6%	19.0%
Naphthalene	60 J	487	836	51.1%	608	838	65.4%	22.1%
4-Chloroaniline	< 1400 U	< 1350 U	2510	NA	< 1360 U	2510	NA	NA
Hexachlorobutadiene	< 100 U	472	836	56.5%	583	838	69.6%	21.0%
4-Chloro-3-methylphenol	< 500 U	1720	2510	68.5%	2080	2510	82.9%	18.9%
2-Methylnaphthalene	< 100 U	537	836	64.2%	643	838	76.7%	18.0%
Hexachlorocyclopentadiene	< 2000 U	< 2010 U	2510	NA	< 2010 U	2510	NA	NA
2,4,6-Trichlorophenol	< 500 U	1560	2510	62.2%	1880	2510	74.9%	18.6%
2,4,5-Trichlorophenol	< 500 U	1590	2510	63.3%	1780	2510	70.9%	11.3%
2-Chloronaphthalene	< 100 U	517	836	61.8%	643	838	76.7%	21.7%
2-Nitroaniline	< 500 U	1800	2510	71.7%	2160	2510	86.1%	18.2%
Dimethylphthalate	< 100 U	587	836	70.2%	744	838	88.8%	23.6%
Acenaphthylene	< 100 U	502	836	60.0%	598	838	71.4%	17.5%
3-Nitroaniline	< 500 U	166 J	2510	6.6%	201 J	2510	8.0%	19.1%
Acenaphthene	< 100 U	517	836	61.8%	628	838	74.9%	19.4%
2,4-Dinitrophenol	< 4300 U	823 J	4600	17.9%	1200 J	4610	26.0%	37.3%
4-Nitrophenol	< 500 U	1280	2510	51.0%	1360	2510	54.2%	6.1%
Dibenzofuran	< 100 U	537	836	64.2%	658	838	78.5%	20.3%
2,6-Dinitrotoluene	< 500 U	1820	2510	72.5%	2140	2510	85.3%	16.2%
2,4-Dinitrotoluene	< 500 U	1790	2510	71.3%	2110	2510	84.1%	16.4%
Diethylphthalate	< 250 U	547	836	65.4%	658	838	78.5%	18.4%
4-Chlorophenyl-phenylether	< 100 U	542	836	64.8%	658	838	78.5%	19.3%
Fluorene	< 100 U	502	836	60.0%	653	838	77.9%	26.1%
4-Nitroaniline	< 500 U	< 502 U	2510	NA	467 J	2510	18.6%	NA
4,6-Dinitro-2-Methylphenol	< 1000 U	1660 Q	4600	36.1%	2100 Q	4610	45.6%	23.4%
N-Nitrosodiphenylamine	85 J	672	836	70.2%	764	838	81.0%	12.8%

BC 8/16/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: CG-MH-010-20130423-S
MS/MSD

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Date Analyzed MS: 05/07/13 19:53
MSD: 05/07/13 20:30

QC Report No: WN27-SAIC
Project: NPDES Sampling Support
209977

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
4-Bromophenyl-phenylether	< 100 U	507	836	60.6%	734	838	87.6%	36.6%
Hexachlorobenzene	< 100 U	457	836	54.7%	558	838	66.6%	19.9%
Pentachlorophenol	< 1000 U	1190 Q	2510	47.4%	1440 Q	2510	57.4%	19.0%
Phenanthrene	220	677	836	54.7%	774	838	66.1%	13.4%
Carbazole	< 100 U	702	836	84.0%	844	838	101%	18.4%
Anthracene	< 100 U	472	836	56.5%	588	838	70.2%	21.9%
Di-n-Butylphthalate	< 100 U	622	836	74.4%	693	838	82.7%	10.8%
Fluoranthene	390	753	836	43.4%	874	838	57.8%	14.9%
Pyrene	610	953	836	41.0%	1100	838	58.5%	14.3%
Butylbenzylphthalate	670	1020	836	41.9%	1140	838	56.1%	11.1%
3,3'-Dichlorobenzidine	< 750 U	< 753 U	2510	NA	< 754 U	2510	NA	NA
Benzo(a)anthracene	150	587	836	52.3%	698	838	65.4%	17.3%
bis(2-Ethylhexyl)phthalate	15000 EB	12700 EB	836	NA	13900 EB	838	NA	9.0%
Chrysene	430	828	836	47.6%	960	838	63.2%	14.8%
Di-n-Octyl phthalate	150 M	647	836	59.4%	709	838	66.7%	9.1%
Benzo(a)pyrene	240	612	836	44.5%	779	838	64.3%	24.0%
Indeno(1,2,3-cd)pyrene	140	395	836	30.5%	482	838	40.8%	19.8%
Dibenz(a,h)anthracene	65 J	366	836	36.0%	447	838	45.6%	19.9%
Benzo(g,h,i)perylene	260	446	836	22.2%	558	838	35.6%	22.3%
Aniline	< 2700 U	< 2710 U	2510	NA	< 2710 U	2510	NA	NA
N-Nitrosodimethylamine	< 500 U	978	2510	39.0%	1230	2510	49.0%	22.8%
1-Methylnaphthalene	< 100 U	552	836	66.0%	678	838	80.9%	20.5%
Total Benzofluoranthenes	470	1220	1670	44.9%	1570	1680	65.5%	25.1%

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.

QC 8/14/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: CG-MH-010-20130423-S**
Extraction Method: SW3546 **MATRIX SPIKE**

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MD
Reported: 08/19/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/01/13
Date Analyzed: 05/07/13 19:53
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.98 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 40.4%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	43	100	---
111-44-4	Bis-(2-Chloroethyl) Ether	17	100	---
95-57-8	2-Chlorophenol	13	100	---
541-73-1	1,3-Dichlorobenzene	13	100	---
106-46-7	1,4-Dichlorobenzene	14	100	---
100-51-6	Benzyl Alcohol	31	100	---
95-50-1	1,2-Dichlorobenzene	13	100	---
95-48-7	2-Methylphenol	26	100	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	100	---
106-44-5	4-Methylphenol	33	100	---
621-64-7	N-Nitroso-Di-N-Propylamine	17	100	---
67-72-1	Hexachloroethane	15	100	---
98-95-3	Nitrobenzene	20	100	---
78-59-1	Isophorone	14	100	---
88-75-5	2-Nitrophenol	190	500	---
105-67-9	2,4-Dimethylphenol	17	200	---
65-85-0	Benzoic Acid	510	2,000	---
111-91-1	bis(2-Chloroethoxy) Methane	10	100	---
120-83-2	2,4-Dichlorophenol	110	1,000	---
120-82-1	1,2,4-Trichlorobenzene	17	100	---
91-20-3	Naphthalene	14	100	---
106-47-8	4-Chloroaniline	110	1,400	---
87-68-3	Hexachlorobutadiene	23	100	---
59-50-7	4-Chloro-3-methylphenol	76	500	---
91-57-6	2-Methylnaphthalene	15	100	---
77-47-4	Hexachlorocyclopentadiene	330	2,000	---
88-06-2	2,4,6-Trichlorophenol	110	500	---
95-95-4	2,4,5-Trichlorophenol	110	500	---
91-58-7	2-Chloronaphthalene	13	100	---
88-74-4	2-Nitroaniline	92	500	---
131-11-3	Dimethylphthalate	15	100	---
208-96-8	Acenaphthylene	29	100	---
99-09-2	3-Nitroaniline	110	500	---
83-32-9	Acenaphthene	16	100	---
51-28-5	2,4-Dinitrophenol	560	4,300	---
100-02-7	4-Nitrophenol	170	500	---
132-64-9	Dibenzofuran	21	100	---
606-20-2	2,6-Dinitrotoluene	150	500	---
121-14-2	2,4-Dinitrotoluene	98	500	---
84-66-2	Diethylphthalate	180	250	---
7005-72-3	4-Chlorophenyl-phenylether	27	100	---
86-73-7	Fluorene	22	100	---
100-01-6	4-Nitroaniline	190	500	---

BC 8/19/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: CG-MH-010-20130423-S**
Extraction Method: SW3546 **MATRIX SPIKE**

Lab Sample ID: WN27A QC Report No: WN27-SAIC
LIMS ID: 13-8552 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 05/07/13 19:53

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	110	1,000	---
86-30-6	N-Nitrosodiphenylamine	27	100	---
101-55-3	4-Bromophenyl-phenylether	25	100	---
118-74-1	Hexachlorobenzene	22	100	---
87-86-5	Pentachlorophenol	240	1,000	---
85-01-8	Phenanthrene	18	100	---
86-74-8	Carbazole	13	100	---
120-12-7	Anthracene	23	100	---
84-74-2	Di-n-Butylphthalate	41	100	---
206-44-0	Fluoranthene	15	100	---
129-00-0	Pyrene	9.7	100	---
85-68-7	Butylbenzylphthalate	31	100	---
91-94-1	3,3'-Dichlorobenzidine	89	750	---
56-55-3	Benzo(a)anthracene	17	100	---
117-81-7	bis(2-Ethylhexyl)phthalate	73	120	---
218-01-9	Chrysene	19	100	---
117-84-0	Di-n-Octyl phthalate	29	100	---
50-32-8	Benzo(a)pyrene	27	100	---
193-39-5	Indeno(1,2,3-cd)pyrene	23	100	---
53-70-3	Dibenz(a,h)anthracene	22	100	---
191-24-2	Benzo(g,h,i)perylene	22	100	---
62-53-3	Aniline	200	2,700	---
62-75-9	N-Nitrosodimethylamine	71	500	---
90-12-0	1-Methylnaphthalene	13	100	---
TOTBFA	Total Benzofluoranthenes	14	200	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	51.6%	2-Fluorobiphenyl	56.4%
d14-p-Terphenyl	58.8%	d4-1,2-Dichlorobenzene	49.2%
d5-Phenol	54.0%	2-Fluorophenol	50.8%
2,4,6-Tribromophenol	64.8%	d4-2-Chlorophenol	54.4%

BL 8/14/13

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CG-MH-010-20130423-S
MATRIX SPIKE DUPLICATE

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MM
Reported: 08/19/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/01/13
Date Analyzed: 05/07/13 20:30
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.97 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 40.4%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	43	100	---
111-44-4	Bis-(2-Chloroethyl) Ether	17	100	---
95-57-8	2-Chlorophenol	13	100	---
541-73-1	1,3-Dichlorobenzene	13	100	---
106-46-7	1,4-Dichlorobenzene	14	100	---
100-51-6	Benzyl Alcohol	31	100	---
95-50-1	1,2-Dichlorobenzene	13	100	---
95-48-7	2-Methylphenol	26	100	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	100	---
106-44-5	4-Methylphenol	33	100	---
621-64-7	N-Nitroso-Di-N-Propylamine	17	100	---
67-72-1	Hexachloroethane	15	100	---
98-95-3	Nitrobenzene	20	100	---
78-59-1	Isophorone	14	100	---
88-75-5	2-Nitrophenol	190	500	---
105-67-9	2,4-Dimethylphenol	17	200	---
65-85-0	Benzoic Acid	510	2,000	---
111-91-1	bis(2-Chloroethoxy) Methane	10	100	---
120-83-2	2,4-Dichlorophenol	110	1,000	---
120-82-1	1,2,4-Trichlorobenzene	17	100	---
91-20-3	Naphthalene	14	100	---
106-47-8	4-Chloroaniline	110	1,400	---
87-68-3	Hexachlorobutadiene	23	100	---
59-50-7	4-Chloro-3-methylphenol	76	500	---
91-57-6	2-Methylnaphthalene	15	100	---
77-47-4	Hexachlorocyclopentadiene	330	2,000	---
88-06-2	2,4,6-Trichlorophenol	110	500	---
95-95-4	2,4,5-Trichlorophenol	110	500	---
91-58-7	2-Chloronaphthalene	13	100	---
88-74-4	2-Nitroaniline	92	500	---
131-11-3	Dimethylphthalate	15	100	---
208-96-8	Acenaphthylene	29	100	---
99-09-2	3-Nitroaniline	110	500	---
83-32-9	Acenaphthene	16	100	---
51-28-5	2,4-Dinitrophenol	560	4,300	---
100-02-7	4-Nitrophenol	170	500	---
132-64-9	Dibenzofuran	21	100	---
606-20-2	2,6-Dinitrotoluene	150	500	---
121-14-2	2,4-Dinitrotoluene	98	500	---
84-66-2	Diethylphthalate	180	250	---
7005-72-3	4-Chlorophenyl-phenylether	27	100	---
86-73-7	Fluorene	22	100	---
100-01-6	4-Nitroaniline	190	500	---

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: CG-MH-010-20130423-S**
Extraction Method: SW3546 **MATRIX SPIKE DUPLICATE**

Lab Sample ID: WN27A QC Report No: WN27-SAIC
LIMS ID: 13-8552 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 05/07/13 20:30

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	110	1,000	---
86-30-6	N-Nitrosodiphenylamine	27	100	---
101-55-3	4-Bromophenyl-phenylether	25	100	---
118-74-1	Hexachlorobenzene	22	100	---
87-86-5	Pentachlorophenol	240	1,000	---
85-01-8	Phenanthrene	18	100	---
86-74-8	Carbazole	14	100	---
120-12-7	Anthracene	23	100	---
84-74-2	Di-n-Butylphthalate	41	100	---
206-44-0	Fluoranthene	15	100	---
129-00-0	Pyrene	9.7	100	---
85-68-7	Butylbenzylphthalate	31	100	---
91-94-1	3,3'-Dichlorobenzidine	89	750	---
56-55-3	Benzo(a)anthracene	17	100	---
117-81-7	bis(2-Ethylhexyl)phthalate	73	130	---
218-01-9	Chrysene	19	100	---
117-84-0	Di-n-Octyl phthalate	29	100	---
50-32-8	Benzo(a)pyrene	27	100	---
193-39-5	Indeno(1,2,3-cd)pyrene	24	100	---
53-70-3	Dibenz(a,h)anthracene	22	100	---
191-24-2	Benzo(g,h,i)perylene	22	100	---
62-53-3	Aniline	200	2,700	---
62-75-9	N-Nitrosodimethylamine	71	500	---
90-12-0	1-Methylnaphthalene	13	100	---
TOTBFA	Total Benzofluoranthenes	14	200	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.6%	2-Fluorobiphenyl	66.6%
d14-p-Terphenyl	67.8%	d4-1,2-Dichlorobenzene	57.6%
d5-Phenol	64.0%	2-Fluorophenol	60.0%
2,4,6-Tribromophenol	75.2%	d4-2-Chlorophenol	64.4%

BC 8/19/13
WN27:00039

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: LCS-050113
LCS/LCSD

Lab Sample ID: LCS-050113
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 08/15/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted LCS/LCSD: 05/01/13

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

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

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

BL 8/16/13

Lab Sample ID: LCS-050113
LIMS ID: 13-8552
Matrix: Sediment
Date Analyzed LCS: 05/07/13 17:27
LCSD: 05/07/13 18:03

QC Report No: WN27-SAIC
Project: NPDES Sampling Support
209977

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

Semivolatile Surrogate Recovery

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

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

BL 8/6/13

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WN30MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: ANCHOR QEA, LLC

ARI Job No: WN31
Project: JELD-WEN

Lab File ID: WN30MBS1
Date Extracted: 05/01/13

Instrument ID: NT10
Date Analyzed: 05/07/13

Matrix: SOLID
Time Analyzed: 1650

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

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

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

Sample ID: MB-050113
METHOD BLANK

Lab Sample ID: MB-050113
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MJS
Reported: 08/19/13

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

Date Extracted: 05/01/13
Date Analyzed: 05/07/13 16:50
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.0 g
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	2.6	20	< 20 U
541-73-1	1,3-Dichlorobenzene	2.6	20	< 20 U
106-46-7	1,4-Dichlorobenzene	2.9	20	< 20 U
100-51-6	Benzyl Alcohol	6.1	20	< 20 U
95-50-1	1,2-Dichlorobenzene	2.5	20	< 20 U
95-48-7	2-Methylphenol	5.2	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.8	20	< 20 U
106-44-5	4-Methylphenol	6.6	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	3.4	20	< 20 U
67-72-1	Hexachloroethane	2.9	20	< 20 U
98-95-3	Nitrobenzene	4.1	20	< 20 U
78-59-1	Isophorone	2.9	20	< 20 U
88-75-5	2-Nitrophenol	39	100	< 100 U
105-67-9	2,4-Dimethylphenol	3.5	40	< 40 U
65-85-0	Benzoic Acid	100	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	2.0	20	< 20 U
120-83-2	2,4-Dichlorophenol	22	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	3.5	20	< 20 U
91-20-3	Naphthalene	2.8	20	< 20 U
106-47-8	4-Chloroaniline	22	270	< 270 U
87-68-3	Hexachlorobutadiene	4.6	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	15	100	< 100 U
91-57-6	2-Methylnaphthalene	3.1	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	66	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	22	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	21	100	< 100 U
91-58-7	2-Chloronaphthalene	2.6	20	< 20 U
88-74-4	2-Nitroaniline	18	100	< 100 U
131-11-3	Dimethylphthalate	2.9	20	< 20 U
208-96-8	Acenaphthylene	5.7	20	< 20 U
99-09-2	3-Nitroaniline	22	100	< 100 U
83-32-9	Acenaphthene	3.3	20	< 20 U
51-28-5	2,4-Dinitrophenol	110	850	< 850 U
100-02-7	4-Nitrophenol	35	100	< 100 U
132-64-9	Dibenzofuran	4.1	20	< 20 U
606-20-2	2,6-Dinitrotoluene	31	100	< 100 U
121-14-2	2,4-Dinitrotoluene	20	100	< 100 U
84-66-2	Diethylphthalate	37	50	< 50 U
7005-72-3	4-Chlorophenyl-phenylether	5.3	20	< 20 U
86-73-7	Fluorene	4.4	20	< 20 U
100-01-6	4-Nitroaniline	38	100	< 100 U

8/19/13

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: MB-050113 QC Report No: WN27-SAIC
LIMS ID: 13-8552 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 05/07/13 16:50

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

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

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

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

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

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

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0429A	IC0429A	04/29/13	1653
02		IC0429B	IC0429B	04/29/13	1730
03		IC0429C	IC0429C	04/29/13	1807
04		IC0429D	IC0429D	04/29/13	1844
05		IC0429E	IC0429E	04/29/13	1921
06		IC0429G	IC0429G	04/29/13	2034
07		IC0429I	IC0429I	04/29/13	2147
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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 05/07/13 DFTPP Injection Time: 1219

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.5
68	Less than 2.0% of mass 69	0.5 (1.7)1
69	Mass 69 relative abundance	32.6
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	10.0 - 80.0% of mass 198	44.7
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	26.5
365	Greater than 1.0% of mass 198	3.85
441	0.0 - 24.0% of mass 442	16.4 (15.3)2
442	50.0 - 200.0% of mass 198	107.3
443	15.0 - 24.0% of mass 442	20.5 (19.1)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0507	CC0507	05/07/13	1234
02	WN30MBS1	WN30MBS1	WN30MBS1	05/07/13	1650
03	WN30LCSS1	WN30LCSS1	WN30LCSS1	05/07/13	1727
04	WN30LCSDS1	WN30LCSDS1	WN30LCSDS1	05/07/13	1803
05	CG-MH-010-201304	WN27A	WN27A	05/07/13	1916
06	CG-MH-010-20130	WN27AMS	WN27AMS	05/07/13	1953
07	CG-MH-010-20130	WN27AMSD	WN27AMSD	05/07/13	2030
08	ES-TS-INF-201304	WN31A	WN31A	05/07/13	2106
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FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 05/08/13 DFTPP Injection Time: 1435

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.6
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Mass 69 relative abundance	33.2
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	45.7
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	27.8
365	Greater than 1.0% of mass 198	4.13
441	0.0 - 24.0% of mass 442	17.2 (15.3)2
442	50.0 - 200.0% of mass 198	112.9
443	15.0 - 24.0% of mass 442	21.7 (19.2)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0508	CC0508	05/08/13	1450
02	CG-MH-010-201304	WN27A	WN27A9	05/08/13	1527
03	ES-TS-INF-201304	WN31A	WN31A9	05/08/13	1603
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FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

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

FORM VI SV-1

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

(1) Cannot be seperated from Diphenylamine

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

FORM VI SV-2

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

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

FORM VI SV-3

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

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

FORM VII SV-3

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

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

FORM VII SV-1

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

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

FORM VII SV-3

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	45250	8.99	166754	11.64	106910	15.54
	UPPER LIMIT	90500		333508		213820	
	LOWER LIMIT	22625		83377		53455	
	CCAL	53304	8.13	196084	10.74	123166	14.57
	UPPER LIMIT		8.63		11.24		15.07
	LOWER LIMIT		7.63		10.24		14.07
01	WN30MBS1	45490	8.12	177750	10.73	109384	14.56
02	WN30LCSS1	43320	8.12	164232	10.73	103234	14.56
03	WN30LCSDS1	41011	8.12	153177	10.73	97637	14.56
04	CG-MH-010-20	37725	8.12	153422	10.73	98941	14.56
05	CG-MH-010-20	41218	8.12	160389	10.73	104861	14.56
06	CG-MH-010-20	36925	8.12	147667	10.73	96968	14.56
07	ES-TS-INF-20	40105	8.12	157068	10.73	95378	14.56
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	179783	18.82	192841	23.90	184310	26.35
	UPPER LIMIT	359566		385682		368620	
	LOWER LIMIT	89892		96420		92155	
	CCAL	216894	17.79	236097	22.99	207013	25.27
	UPPER LIMIT		18.29		23.49		25.77
	LOWER LIMIT		17.29		22.49		24.77
01	WN30MBS1	187454	17.79	194527	22.97	165936	25.26
02	WN30LCSS1	179602	17.79	195115	22.97	172204	25.26
03	WN30LCSDS1	169618	17.79	188414	22.97	167622	25.26
04	CG-MH-010-20	165938	17.79	151066	23.01	149092	25.33
05	CG-MH-010-20	174739	17.79	166399	23.02	160390	25.34
06	CG-MH-010-20	163337	17.79	155420	23.00	139410	25.32
07	ES-TS-INF-20	153652	17.79	165029	23.00	157251	25.31
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WN31

Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A

Ical Date: 04/29/13

Instrument ID: NT10

Cont. Cal Date: 05/07/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	229567	24.99				
	UPPER LIMIT	459134					
	LOWER LIMIT	114784					
	CCAL	290407	24.16				
	UPPER LIMIT		24.66				
	LOWER LIMIT		23.66				
01	WN30MBS1	232557	24.16				
02	WN30LCSS1	236239	24.16				
03	WN30LCSDS1	228678	24.16				
04	CG-MH-010-20	194771	24.19				
05	CG-MH-010-20	214048	24.22				
06	CG-MH-010-20	195600	24.19				
07	ES-TS-INF-20	206574	24.18				
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IS7 = Di-n-octylphthalate-d4

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	45250	8.99	166754	11.64	106910	15.54
	UPPER LIMIT	90500		333508		213820	
	LOWER LIMIT	22625		83377		53455	
	CCAL	54414	8.11	200917	10.70	129691	14.53
	UPPER LIMIT		8.61		11.20		15.03
	LOWER LIMIT		7.61		10.20		14.03
01	CG-MH-010-20	46508	8.10	180924	10.70	111784	14.53
02	ES-TS-INF-20	47698	8.10	177198	10.70	107487	14.52
03							
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

FORM VIII SV-1

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WN31 | Project: NPDES SAMPLING SUPPORT

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

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

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	ICAL MIDPT	179783		18.82		192841		23.90		184310		26.35	
	UPPER LIMIT	359566				385682				368620			
	LOWER LIMIT	89892				96420				92155			
	CCAL	221407		17.76		226704		22.94		203438		25.22	
	UPPER LIMIT			18.26				23.44				25.72	
	LOWER LIMIT			17.26				22.44				24.72	
01	CG-MH-010-20	188992		17.75		172453		22.94		166740		25.23	
02	ES-TS-INF-20	162964		17.75		168170		22.93		167173		25.22	
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WN31

Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A

Ical Date: 04/29/13

Instrument ID: NT10

Cont. Cal Date: 05/08/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	229567	24.99				
	UPPER LIMIT	459134					
	LOWER LIMIT	114784					
	CCAL	281343	24.11				
	UPPER LIMIT		24.61				
	LOWER LIMIT		23.61				
01	CG-MH-010-20	218441	24.12				
02	ES-TS-INF-20	220595	24.11				
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IS7 = Di-n-octylphthalate-d4

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

* Values outside of QC limits.

SIM Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WN27

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: CG-MH-010-20130423-S**
Extraction Method: SW3546 **SAMPLE**
Page 1 of 1

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/10/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/01/13
Date Analyzed: 05/07/13 19:16
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.97 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 40.4 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**10**	**25**	**75**
106-46-7	1,4-Dichlorobenzene	6.0	25	< 25 U
120-82-1	1,2,4-Trichlorobenzene	9.3	25	< 25 U
118-74-1	Hexachlorobenzene	6.3	25	< 25 U
87-68-3	Hexachlorobutadiene	4.8	25	< 25 U
131-11-3	**Dimethylphthalate**	**6.7**	**25**	**29**
84-66-2	Diethylphthalate	16	25	< 25 U
85-68-7	**Butylbenzylphthalate**	**15**	**25**	**870**
95-48-7	2-Methylphenol	9.1	25	< 25 U
105-67-9	2,4-Dimethylphenol	15	100	< 100 U
86-30-6	**N-Nitrosodiphenylamine**	**6.9**	**100**	**79 J**
100-51-6	Benzyl Alcohol	35	100	< 100 U
87-86-5	Pentachlorophenol	72	250	< 250 U
95-50-1	1,2-Dichlorobenzene	5.5	25	< 25 U
541-73-1	1,3-Dichlorobenzene	6.6	25	< 25 U
621-64-7	N-Nitroso-Di-N-Propylamine	48	60	< 60 U
62-75-9	N-Nitrosodimethylamine	16	130	< 130 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	62.4%
d14-p-Terphenyl	89.4%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WN27-SAIC
Project: NPDES Sampling Support
209977

Client ID	FPH	TER	TOT OUT
MB-050113	55.7%	69.8%	0
LCS-050113	58.0%	73.4%	0
LCSD-050113	67.1%	74.0%	0
CG-MH-010-20130423-S	62.4%	89.4%	0
CG-MH-010-20130423-S MS	50.8%	75.0%	0
CG-MH-010-20130423-S MSD	60.8%	67.2%	0

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

Prep Method: SW3546
Log Number Range: 13-8552 to 13-8552

FORM-II SIM SW8270

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: CG-MH-010-20130423-S**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/10/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted MS/MSD: 05/01/13

Date Analyzed MS: 05/07/13 19:53
MSD: 05/07/13 20:30
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ

Sample Amount MS: 5.98 g-dry-wt
MSD: 5.97 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 3.00
MSD: 3.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Dibenz(a,h)anthracene	75	348	836	32.7%	425	838	41.8%	19.9%
1,4-Dichlorobenzene	< 25 U	397	836	47.5%	494	838	58.9%	21.8%
1,2,4-Trichlorobenzene	< 25 U	470	836	56.2%	566	838	67.5%	18.5%
Hexachlorobenzene	< 25 U	448	836	53.6%	550	838	65.6%	20.4%
Hexachlorobutadiene	< 25 U	439	836	52.5%	553	838	66.0%	23.0%
Dimethylphthalate	29	565	836	64.1%	729	838	83.5%	25.3%
Diethylphthalate	< 25 U	687 B	836	82.2%	710 B	838	84.7%	3.3%
Butylbenzylphthalate	870	1160	836	34.7%	1330	838	54.9%	13.7%
2-Methylphenol	< 25 U	428	836	51.2%	526	838	62.8%	20.5%
2,4-Dimethylphenol	< 100 U	1490	2510	59.4%	1820	2510	72.5%	19.9%
N-Nitrosodiphenylamine	79 J	744	836	79.5%	915	838	99.8%	20.6%
Benzyl Alcohol	< 100 U	558	836	66.7%	607	838	72.4%	8.4%
Pentachlorophenol	< 250 U	1390 Q	2510	55.4%	1650 Q	2510	65.7%	17.1%
1,2-Dichlorobenzene	< 25 U	410	836	49.0%	514	838	61.3%	22.5%
1,3-Dichlorobenzene	< 25 U	386	836	46.2%	483	838	57.6%	22.3%
N-Nitroso-Di-N-Propylamine	< 60 U	508	836	60.8%	625	838	74.6%	20.7%
N-Nitrosodimethylamine	< 130 U	979	2510	39.0%	1200	2510	47.8%	20.3%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: CG-MH-010-20130423-S**
Extraction Method: SW3546 **MATRIX SPIKE**

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MV
Reported: 05/10/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/01/13
Date Analyzed: 05/07/13 19:53
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.98 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 40.4 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	10	25	---
106-46-7	1,4-Dichlorobenzene	6.0	25	---
120-82-1	1,2,4-Trichlorobenzene	9.3	25	---
118-74-1	Hexachlorobenzene	6.3	25	---
87-68-3	Hexachlorobutadiene	4.8	25	---
131-11-3	Dimethylphthalate	6.7	25	---
84-66-2	Diethylphthalate	16	25	---
85-68-7	Butylbenzylphthalate	14	25	---
95-48-7	2-Methylphenol	9.1	25	---
105-67-9	2,4-Dimethylphenol	14	100	---
86-30-6	N-Nitrosodiphenylamine	6.9	100	---
100-51-6	Benzyl Alcohol	35	100	---
87-86-5	Pentachlorophenol	72	250	---
95-50-1	1,2-Dichlorobenzene	5.5	25	---
541-73-1	1,3-Dichlorobenzene	6.6	25	---
621-64-7	N-Nitroso-Di-N-Propylamine	48	60	---
62-75-9	N-Nitrosodimethylamine	16	120	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	50.8%
d14-p-Terphenyl	75.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: CG-MH-010-20130423-S**
Extraction Method: SW3546 **MATRIX SPIKE DUP**

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/10/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/01/13
Date Analyzed: 05/07/13 20:30
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.97 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 40.4 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	10	25	---
106-46-7	1,4-Dichlorobenzene	6.0	25	---
120-82-1	1,2,4-Trichlorobenzene	9.3	25	---
118-74-1	Hexachlorobenzene	6.3	25	---
87-68-3	Hexachlorobutadiene	4.8	25	---
131-11-3	Dimethylphthalate	6.7	25	---
84-66-2	Diethylphthalate	16	25	---
85-68-7	Butylbenzylphthalate	15	25	---
95-48-7	2-Methylphenol	9.1	25	---
105-67-9	2,4-Dimethylphenol	15	100	---
86-30-6	N-Nitrosodiphenylamine	6.9	100	---
100-51-6	Benzyl Alcohol	35	100	---
87-86-5	Pentachlorophenol	72	250	---
95-50-1	1,2-Dichlorobenzene	5.5	25	---
541-73-1	1,3-Dichlorobenzene	6.6	25	---
621-64-7	N-Nitroso-Di-N-Propylamine	48	60	---
62-75-9	N-Nitrosodimethylamine	16	130	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	60.8%
d14-p-Terphenyl	67.2%

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: LCS-050113
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/10/13

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

Date Extracted: 05/01/13

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

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

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

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

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WN30MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: ANCHOR QEA, LLC

ARI Job No: WN31
Project: JELD-WEN

Lab File ID: WN30MBS1
Date Extracted: 05/01/13

Instrument ID: NT10
Date Analyzed: 05/07/13

Matrix: SOLID
Time Analyzed: 1650

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

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

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

Lab Sample ID: MB-050113
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/13

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

Date Extracted: 05/01/13
Date Analyzed: 05/07/13 16:50
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

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

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

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	55.7%
d14-p-Terphenyl	69.8%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

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

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

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0429A	IC0429A	04/29/13	1653
02		IC0429C	IC0429C	04/29/13	1807
03		IC0429D	IC0429D	04/29/13	1844
04		IC0429F	IC0429F	04/29/13	1957
05		IC0429G	IC0429G	04/29/13	2034
06		IC0429H	IC0429H	04/29/13	2111
07		IC0429I	IC0429I	04/29/13	2147
08					
09					
10					
11					
12					
13					
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15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 05/07/13 DFTPP Injection Time: 1219

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.5
68	Less than 2.0% of mass 69	0.5 (1.7)1
69	Mass 69 relative abundance	32.6
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	10.0 - 80.0% of mass 198	44.7
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	26.5
365	Greater than 1.0% of mass 198	3.85
441	0.0 - 24.0% of mass 442	16.4 (15.3)2
442	50.0 - 200.0% of mass 198	107.3
443	15.0 - 24.0% of mass 442	20.5 (19.1)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0507A	CC0507A	05/07/13	1310
02	WN30MBS1	WN30MBS1	WN30MBS1	05/07/13	1650
03	WN30LCSS1	WN30LCSS1	WN30LCSS1	05/07/13	1727
04	WN30LCSDS1	WN30LCSDS1	WN30LCSDS1	05/07/13	1803
05	CG-MH-010-201304	WN27A	WN27A	05/07/13	1916
06	CG-MH-010-20130	WN27AMS	WN27AMS	05/07/13	1953
07	CG-MH-010-20130	WN27AMSD	WN27AMSD	05/07/13	2030
08	ES-TS-INF-201304	WN31A	WN31A	05/07/13	2106
09					
10					
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12					
13					
14					
15					
16					
17					
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19					
20					
21					
22					

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

(1) Cannot be seperated from Diphenylamine

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

FORM VI SV-1

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	52658	8.98	192325	11.65	109274	15.54
	UPPER LIMIT	105316		384650		218548	
	LOWER LIMIT	26329		96162		54637	
	CCAL	56926	8.13	209171	10.73	117080	14.56
	UPPER LIMIT		8.63		11.23		15.06
	LOWER LIMIT		7.63		10.23		14.06
01	WN30MBS1	53803	8.13	206635	10.73	117783	14.56
02	WN30LCSS1	51689	8.12	189427	10.73	111234	14.56
03	WN30LCSDS1	48500	8.12	178583	10.72	105548	14.56
04	CG-MH-010-20	44455	8.13	180083	10.73	105963	14.56
05	CG-MH-010-20	48313	8.12	187744	10.73	112730	14.56
06	CG-MH-010-20	44166	8.13	171247	10.73	102716	14.56
07	ES-TS-INF-20	47115	8.13	182293	10.72	101406	14.56
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09							
10							
11							
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21							
22							
23							
24							
25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WN31 | Project: NPDES SAMPLING SUPPORT

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

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

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	203933	18.82	223647	23.90	211919	26.35
	UPPER LIMIT	407866		447294		423838	
	LOWER LIMIT	101966		111824		105960	
	CCAL	224897	17.79	250780	22.98	223069	25.26
	UPPER LIMIT		18.29		23.48		25.76
	LOWER LIMIT		17.29		22.48		24.76
01	WN30MBS1	224711	17.79	238578	22.98	204177	25.26
02	WN30LCSS1	212909	17.79	239074	22.98	211700	25.26
03	WN30LCSDS1	200471	17.79	226844	22.98	205354	25.26
04	CG-MH-010-20	194098	17.79	183569	23.01	179016	25.32
05	CG-MH-010-20	205606	17.80	199913	23.02	205001	25.35
06	CG-MH-010-20	190403	17.79	185948	23.01	172442	25.32
07	ES-TS-INF-20	175865	17.79	198466	23.01	192962	25.31
08							
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22							
23							
24							
25							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: WN27

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CG-MH-010-20130423-S**
Page 1 of 1

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/15/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 04/29/13
Date Analyzed: 05/07/13 23:32
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.1 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	0.81	0.65-0.89		0.990	4.38	
2,3,7,8-TCDD	0.55	0.65-0.89		0.990	0.650	EMPC
1,2,3,7,8-PeCDF	1.43	1.32-1.78		0.990	2.00	X
2,3,4,7,8-PeCDF	1.58	1.32-1.78		0.990	2.75	
1,2,3,7,8-PeCDD	1.56	1.32-1.78		0.990	3.31	
1,2,3,4,7,8-HxCDF	1.26	1.05-1.43		0.990	4.03	X
1,2,3,6,7,8-HxCDF	1.25	1.05-1.43		0.990	3.51	
2,3,4,6,7,8-HxCDF	1.22	1.05-1.43		0.990	5.20	X
1,2,3,7,8,9-HxCDF	1.18	1.05-1.43		0.990	1.11	
1,2,3,4,7,8-HxCDD	1.28	1.05-1.43		0.990	4.45	
1,2,3,6,7,8-HxCDD	1.19	1.05-1.43		0.990	11.6	
1,2,3,7,8,9-HxCDD	1.24	1.05-1.43		0.990	8.59	
1,2,3,4,6,7,8-HpCDF	1.02	0.88-1.20		0.990	50.9	
1,2,3,4,7,8,9-HpCDF	1.11	0.88-1.20		0.990	3.28	
1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20		0.990	248	
OCDF	0.87	0.76-1.02		1.98	162	
OCDD	0.89	0.76-1.02		1.98	1,770	

Homologue Group	EDL	RL	Result	
Total TCDF		0.990	61.9	EMPC
Total TCDD		0.990	20.1	EMPC
Total PeCDF		1.98	65.3	EMPC
Total PeCDD		0.990	30.4	
Total HxCDF		1.98	87.1	EMPC
Total HxCDD		1.98	121	
Total HpCDF		1.98	138	
Total HpCDD		1.98	565	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 12.7

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 12.7

Reported in pg/g

WN27:79R BE 5/15/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CG-MH-010-20130423-S**

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/09/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 04/29/13
Date Analyzed: 05/07/13 23:32
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 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	77.5	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	76.8	25-164	
13C-1,2,3,7,8-PeCDF	1.57	1.32-1.78	87.5	24-185	
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	91.6	21-178	
13C-1,2,3,7,8-PeCDD	1.59	1.32-1.78	85.1	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	91.8	26-152	
13C-1,2,3,6,7,8-HxCDF	0.53	0.43-0.59	87.4	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	82.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	87.7	29-147	
13C-1,2,3,4,7,8-HxCDD	1.29	1.05-1.43	82.2	32-141	
13C-1,2,3,6,7,8-HxCDD	1.21	1.05-1.43	78.3	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	63.7	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	65.3	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	61.9	23-140	
13C-OCDD	0.88	0.76-1.02	33.0	17-157	
37Cl4-2,3,7,8-TCDD			89.9	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

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

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

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

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

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

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

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

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

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

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

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

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

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

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

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

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

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

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

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

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

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

Reported in pg/g

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

Blank No.
WN27MB

Lab Name: ANALYTICAL RESOURCES, INC.
Contract: SAIC
Lab Code: WN27
Project: NPDES
Matrix: (Soil/Water/Ash/Tissue/Oil) SOIL
Lab Sample ID: WN27MBS
Sample wt/vol: 10 (g/ml) g
Lab File ID: 13050704
Water Sample Prep: (sep/spe)
Date Received: 23-APR-13
GC Column: RTX-DIOXIN2 ID: 0.25 mm
Date Extracted: 29-APR-13
Instrument ID: AUTOSPEC1
Date Analyzed: 07-MAY-13

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

ANALYTICAL RESOURCES INCORPORATED

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

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

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

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

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

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

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

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

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

Reported in pg/g

WN27:85R BC 5/15/13

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: MB-042913 QC Report No: WN27-SAIC
LIMS ID: 13-8552 Project: NPDES Sampling Support
Matrix: Sediment 209977
Data Release Authorized: Date Sampled: NA
Reported: 05/09/13 Date Received: NA

Date Extracted: 04/29/13 Sample Amount: 10.0 g-dry-wt
Date Analyzed: 05/07/13 16:33 Final Extract Volume: 20 uL
Instrument/Analyst: AS1/PK Dilution Factor: 1.00

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

Reported in Percent Recovery

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

Standard No.
CS3

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC
Lab Code: WN27 Project: NPDES
GC Column: RTX-DIOXIN2 ID: 0.25 mm Lab File ID: 13050702
Instrument ID: AUTOSPEC1 Date Analyzed: 07-MAY-13
Time Analyzed: 1444

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

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

Standard No.
TETRA ISC

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

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

1278-TCDD/2378-TCDD: 14.1

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

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

3467-TCDF/2378-TCDF: 14.1

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

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

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WN27 Project: NPDES

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

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

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

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

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

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

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

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

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

Labeled Compounds	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
13C-2378-TCDD	0.95	0.97	0.93	0.95	0.95	1.02	0.96	3.0	35.0
13C-12378-PeCDD	0.68	0.68	0.69	0.69	0.70	0.79	0.70	6.1	35.0
13C-123478-HxCDD	1.01	0.97	1.00	1.05	1.04	1.03	1.02	2.7	35.0
13C-123678-HxCDD	1.12	1.07	1.08	1.17	1.08	1.07	1.10	3.5	35.0
13C-1234678-HpCDD	0.80	0.83	0.86	0.84	0.82	0.82	0.83	2.7	35.0
13C-OCDD	0.72	0.77	0.81	0.74	0.75	0.83	0.77	5.3	35.0
13C-2378-TCDF	1.31	1.37	1.29	1.26	1.32	1.36	1.32	3.2	35.0
13C-12378-PeCDF	0.98	1.01	0.99	1.02	1.01	1.14	1.03	5.6	35.0
13C-23478-PeCDF	0.90	0.95	0.94	0.94	0.98	1.08	0.97	6.4	35.0
13C-123478-HxCDF	1.11	1.08	1.13	1.18	1.13	1.11	1.12	3.1	35.0
13C-123678-HxCDF	1.24	1.16	1.20	1.26	1.25	1.19	1.22	3.3	35.0
13C-234678-HxCDF	1.09	1.09	1.13	1.08	1.13	1.11	1.11	1.9	35.0
13C-123789-HxCDF	0.96	0.99	1.02	1.01	0.99	1.00	0.99	2.1	35.0
13C-1234678-HpCDF	0.89	0.89	0.91	0.91	0.89	0.89	0.90	1.2	35.0
13C-1234789-HpCDF	0.66	0.70	0.73	0.67	0.69	0.72	0.69	4.0	35.0

6DFB - Form VI-HR CDD-2

CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY

HIGH RESOLUTION

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

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

Labeled Compounds	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-2378-TCDD	332/334	0.77	0.77	0.76	0.78	0.76	0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	1.58	1.59	1.57	1.52	1.53	1.56		1.32 - 1.78
13C-123478-HxCDD	402/404	1.28	1.25	1.26	1.30	1.26	1.26		1.05 - 1.43
13C-123678-HxCDD	402/404	1.24	1.23	1.25	1.20	1.22	1.24		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.99	1.02	1.07	1.05	1.01	1.03		0.89 - 1.21
13C-OCDD	470/472	0.89	0.88	0.91	0.88	0.91	0.90		0.76 - 1.02
13C-2378-TCDF	316/318	0.78	0.76	0.77	0.77	0.78	0.77		0.65 - 0.89
13C-12378-PeCDF	352/354	1.54	1.58	1.57	1.53	1.54	1.55		1.32 - 1.78
13C-23478-PeCDF	352/354	1.55	1.49	1.51	1.53	1.55	1.54		1.32 - 1.78
13C-123478-HxCDF	384/386	0.51	0.51	0.51	0.51	0.51	0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	0.50	0.52	0.51	0.52	0.50	0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	0.53	0.51	0.52	0.52	0.51	0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	0.52	0.52	0.51	0.50	0.52	0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.43	0.44	0.45	0.45	0.44	0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.45	0.44	0.45	0.43	0.44	0.44		0.37 - 0.51

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

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

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

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

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.04	0 98	6.2		0 74		0.65 - 0 89
2378-TCDF	304/306	0 90	0 76	18.0		0 76		0 65 - 0 89
12378-PeCDF	340/342	0 90	0.84	7 8		1.54		1.32 - 1.78
12378-PeCDD	356/358	0 98	0 95	3 0		1.56		1.32 - 1.78
23478-PeCDF	340/342	0.93	0.85	9 4		1 53		1.32 - 1 78
123478-HxCDF	374/376	1.08	1 02	6 5		1.23		1.05 - 1.43
123678-HxCDF	374/376	1 06	1.01	4.3		1.22		1.05 - 1 43
123478-HxCDD	390/392	0.97	0 94	3 0		1.23		1.05 - 1.43
123678-HxCDD	390/392	0 89	0.88	0.2		1.24		1.05 - 1.43
123789-HxCDD	390/392	0.90	0 87	3 0		1.18		1 05 - 1.43
234678-HxCDF	374/376	1.11	1.03	8.2		1.25		1.05 - 1 43
123789-HxCDF	374/376	1.00	0 93	7 5		1 22		1 05 - 1 43
1234678-HpCDF	408/410	1 22	1.15	5.7		1.00		0.89 - 1.21
1234678-HpCDD	424/426	0.99	0 95	4 8		1 04		0.89 - 1 21
1234789-HpCDF	408/410	1.23	1 15	6 6		1 01		0.89 - 1 21
OCDD	458/460	0.97	0 97	-0.1		0.89		0 76 - 1 02
OCDF	442/444	1.15	0.96	19 2		0.91		0.76 - 1 02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.97	0 96	1.1		0 78		0.65 - 0 89
13C-12378-PeCDD	368/370	0 71	0.70	1 3		1.58		1 32 - 1.78
13C-123478-HxCDD	402/404	1.00	1.02	-1.4		1 29		1.05 - 1.43
13C-123678-HxCDD	402/404	1 13	1.10	3.2		1 24		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.85	0 83	2 7		1.05		0.89 - 1.21
13C-OCDD	470/472	0.75	0 77	-2.4		0.88		0 76 - 1.02
13C-2378-TCDF	316/318	1 51	1.32	14.3		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.15	1 03	12.1		1 55		1.32 - 1.78
13C-23478-PeCDF	352/354	1.09	0.97	12.8		1.55		1.32 - 1.78
13C-123478-HxCDF	384/386	1.24	1 12	10 2		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1 38	1 22	13.5		0.50		0 43 - 0 59
13C-234678-HxCDF	384/386	1.21	1.11	9.0		0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	1 15	0 99	15 8		0.53		0.43 - 0.59
13C-1234678-HpCDF	418/420	1 04	0 90	15.9		0.44		0 37 - 0.51
13C-1234789-HpCDF	418/420	0.79	0.69	13 5		0 43		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1.07	1 00	6.9		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.78		0.65 - 0 89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1 25		1.05 - 1.43

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

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

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

Target Analytes	RRT#	RT
2378-TCDD	1.00	26 36
2378-TCDF	1 00	25.73
12378-PeCDF	1.00	29.85
12378-PeCDD	1.00	31.46
23478-PeCDF	1.00	31.20
123478-HxCDF	1.00	34.87
123678-HxCDF	1.00	35.02
123478-HxCDD	1 00	36.10
123678-HxCDD	1.00	36.23
123789-HxCDD	1 01	36.66
234678-HxCDF	1.00	35.97
123789-HxCDF	1.00	37.11
1234678-HpCDF	1.00	39 16
1234678-HpCDD	1 00	40 93
1234789-HpCDF	1.00	41.80
OCDD	1 00	46.71
OCDF	1.01	46 97

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1 03	26 35
13C-12378-PeCDD	1 23	31.44
13C-123478-HxCDD	0 99	36 09
13C-123678-HxCDD	0.99	36.21
13C-1234678-HpCDD	1.12	40.91
13C-OCDD	1 27	46 69
13C-2378-TCDF	1.01	25 70
13C-12378-PeCDF	1 17	29.84
13C-23478-PeCDF	1 22	31 19
13C-123478-HxCDF	0.95	34 85
13C-123678-HxCDF	0 96	35.00
13C-234678-HxCDF	0 98	35.95
13C-123789-HxCDF	1 01	37.10
13C-1234678-HpCDF	1 07	39.15
13C-1234789-HpCDF	1 14	41.78

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1 03	26.36

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25 54
13C-123789-HxCDD	0 00	36.64

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

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

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

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.06	0 98	7 7		0 79		0.65 - 0 89
2378-TCDF	304/306	0.94	0.76	23 5	*	0.77		0.65 - 0.89
12378-PeCDF	340/342	0 94	0.84	12.4		1 56		1 32 - 1.78
12378-PeCDD	356/358	0 99	0 95	4 8		1 54		1.32 - 1.78
23478-PeCDF	340/342	0 96	0.85	12 8		1 54		1.32 - 1 78
123478-HxCDF	374/376	1.10	1.02	7 7		1 24		1.05 - 1 43
123678-HxCDF	374/376	1 07	1.01	5.6		1 24		1.05 - 1.43
123478-HxCDD	390/392	0 97	0.94	3 5		1.27		1.05 - 1.43
123678-HxCDD	390/392	0.90	0 88	1.4		1.21		1.05 - 1.43
123789-HxCDD	390/392	0 94	0.87	8.2		1.22		1.05 - 1.43
234678-HxCDF	374/376	1 14	1.03	11.2		1.24		1.05 - 1 43
123789-HxCDF	374/376	1 00	0.93	7 5		1 23		1.05 - 1.43
1234678-HpCDF	408/410	1 24	1 15	7 8		1.03		0.89 - 1 21
1234678-HpCDD	424/426	0 99	0 95	4.9		1 04		0.89 - 1 21
1234789-HpCDF	408/410	1 23	1.15	6.9		1 03		0.89 - 1.21
OCDD	458/460	0.98	0 97	0 8		0.89		0.76 - 1.02
OCDF	442/444	1.14	0.96	18 6		0 91		0 76 - 1 02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0 99	0.96	3.3		0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	0.84	0 70	19.1		1.58		1.32 - 1.78
13C-123478-HxCDD	402/404	1.00	1.02	-1 8		1.27		1.05 - 1 43
13C-123678-HxCDD	402/404	1.05	1.10	-4 1		1.23		1.05 - 1 43
13C-1234678-HpCDD	436/438	0.79	0 83	-4.4		1.04		0 89 - 1.21
13C-OCDD	470/472	0.63	0.77	-18 0		0 89		0 76 - 1 02
13C-2378-TCDF	316/318	1.52	1.32	15.7		0 78		0.65 - 0 89
13C-12378-PeCDF	352/354	1.29	1.03	25 8		1 57		1.32 - 1.78
13C-23478-PeCDF	352/354	1.27	0.97	31.1	*	1 58		1 32 - 1.78
13C-123478-HxCDF	384/386	1.20	1.12	6.5		0.52		0.43 - 0 59
13C-123678-HxCDF	384/386	1.25	1 22	3.2		0 53		0.43 - 0.59
13C-234678-HxCDF	384/386	1.14	1.11	3 1		0.53		0.43 - 0.59
13C-123789-HxCDF	384/386	1 13	0.99	13 3		0.53		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.91	0 90	1.6		0.44		0.37 - 0 51
13C-1234789-HpCDF	418/420	0 72	0.69	3 9		0 45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1 10	1 00	10.4		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.80		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1 23		1.05 - 1.43

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

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

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

Target Analytes	RRT#	RT
2378-TCDD	1.00	26 35
2378-TCDF	1 00	25 70
12378-PeCDF	1.00	29.84
12378-PeCDD	1.00	31 45
23478-PeCDF	1.00	31.19
123478-HxCDF	1 00	34 86
123678-HxCDF	1.00	35 01
123478-HxCDD	1.00	36 10
123678-HxCDD	1 00	36.22
123789-HxCDD	1.01	36.65
234678-HxCDF	1.00	35 96
123789-HxCDF	1 00	37.11
1234678-HpCDF	1.00	39 16
1234678-HpCDD	1.00	40 93
1234789-HpCDF	1 00	41.80
OCDD	1.00	46 71
OCDF	1.01	46.97

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26 33
13C-12378-PeCDD	1.23	31 43
13C-123478-HxCDD	0.98	36.08
13C-123678-HxCDD	0.99	36.21
13C-1234678-HpCDD	1.12	40.91
13C-OCDD	1.27 ·	46 68
13C-2378-TCDF	1.01	25 69
13C-12378-PeCDF	1.17	29.83
13C-23478-PeCDF	1 22	31 18
13C-123478-HxCDF	0 95	34.85
13C-123678-HxCDF	0 96	34 99
13C-234678-HxCDF	0 98	35.95
13C-123789-HxCDF	1.01	37 09
13C-1234678-HpCDF	1 07	39.15
13C-1234789-HpCDF	1 14	41 78

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

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25 51
13C-123789-HxCDD	0 00	36 64

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

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WN27

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD **Sample ID: CG-MH-010-20130423-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/13/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/03/13
Date Analyzed: 05/08/13 03:40
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 40.4%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	1.6	10	< 10 U
319-85-7	beta-BHC	2.8	10	< 10 U
319-86-8	delta-BHC	1.6	10	< 10 U
58-89-9	gamma-BHC (Lindane)	0.96	10	< 10 U
76-44-8	Heptachlor	2.6	10	< 10 U
309-00-2	Aldrin	1.1	10	< 10 U
1024-57-3	Heptachlor Epoxide	1.7	20	< 20 U
959-98-8	Endosulfan I	1.4	10	< 10 U
60-57-1	Dieldrin	2.0	20	< 20 U
72-55-9	4,4'-DDE	2.5	20	< 20 U
72-20-8	Endrin	4.3	20	< 20 U
33213-65-9	Endosulfan II	2.3	20	< 20 U
72-54-8	4,4'-DDD	2.7	20	< 20 U
1031-07-8	Endosulfan Sulfate	3.8	20	< 20 U
50-29-3	4,4'-DDT	3.8	20	< 20 U
72-43-5	Methoxychlor	14	100	< 100 U
53494-70-5	Endrin Ketone	2.4	20	< 20 U
7421-93-4	Endrin Aldehyde	4.4	20	< 20 U
5103-74-2	trans-Chlordane	1.5	10	< 10 U
5103-71-9	cis-Chlordane	1.0	10	< 10 U
8001-35-2	Toxaphene	690	2000	< 2,000 U
118-74-1	Hexachlorobenzene	1.9	20	< 20 U
87-68-3	Hexachlorobutadiene	2.8	20	< 20 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	73.5%
Tetrachlorometaxylene	67.0%

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

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD **Sample ID: CG-MH-010-20130423-S**
Extraction Method: SW3546 **DILUTION**

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/13/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

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

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 200
Silica Gel: Yes

Percent Moisture: 40.4%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	32	200	< 200 U
319-85-7	beta-BHC	56	200	< 200 U
319-86-8	delta-BHC	33	200	< 200 U
58-89-9	gamma-BHC (Lindane)	19	200	< 200 U
76-44-8	Heptachlor	53	200	< 200 U
309-00-2	Aldrin	22	200	< 200 U
1024-57-3	Heptachlor Epoxide	34	400	< 400 U
959-98-8	Endosulfan I	29	200	< 200 U
60-57-1	Dieldrin	40	400	< 400 U
72-55-9	4,4'-DDE	50	400	< 400 U
72-20-8	Endrin	86	400	< 400 U
33213-65-9	Endosulfan II	46	400	< 400 U
72-54-8	4,4'-DDD	54	400	< 400 U
1031-07-8	Endosulfan Sulfate	77	400	< 400 U
50-29-3	4,4'-DDT	77	400	< 400 U
72-43-5	Methoxychlor	280	2000	< 2,000 U
53494-70-5	Endrin Ketone	48	400	< 400 U
7421-93-4	Endrin Aldehyde	87	400	< 400 U
5103-74-2	trans-Chlordane	31	200	< 200 U
5103-71-9	cis-Chlordane	20	200	< 200 U
8001-35-2	Toxaphene	14000	40000	< 40,000 U
118-74-1	Hexachlorobenzene	38	400	< 400 U
87-68-3	Hexachlorobutadiene	55	400	< 400 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WN27-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-050313	89.5%	80.2%	0
LCS-050313	101%	84.8%	0
LCSD-050313	81.5%	73.8%	0
CG-MH-010-20130423-S	73.5%	67.0%	0
CG-MH-010-20130423-S DL	D	D	0
CG-MH-010-20130423-S MS	137%*	81.5%	1
CG-MH-010-20130423-S MSD	107%	62.0%	0

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

Prep Method: SW3546
Log Number Range: 13-8552 to 13-8552

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CG-MH-010-20130423-S
MS/MSD

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/13/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted MS/MSD: 05/03/13

Date Analyzed MS: 05/08/13 03:58
MSD: 05/08/13 04:15
Instrument/Analyst MS: ECD6/YZ
MSD: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount MS: 12.5 g-dry-wt
MSD: 12.5 g-dry-wt
Final Extract Volume MS: 5.0 mL
MSD: 5.0 mL
Dilution Factor MS: 10.0
MSD: 10.0
Silica Gel: Yes

Percent Moisture: 40.4%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
alpha-BHC	< 9.99	7.98 JP	3.99	200%	8.97 JP	3.99	225%	11.7%
beta-BHC	< 9.99	6.94 J	3.99	174%	7.46 JP	3.99	187%	7.2%
delta-BHC	< 9.99	17.8 JP	3.99	446%	9.21 JP	3.99	231%	63.6%
gamma-BHC (Lindane)	< 9.99	3.33 J	3.99	83.5%	4.82 JP	3.99	121%	36.6%
Heptachlor	< 9.99	3.25 J	3.99	81.5%	2.95 J	3.99	73.9%	9.7%
Aldrin	< 9.99	18.4 JP	3.99	461%	15.5 JP	3.99	388%	17.1%
Heptachlor Epoxide	< 20.0	7.10 J	3.99	NA	5.46 J	3.99	NA	26.1%
Endosulfan I	< 9.99	3.86 J	3.99	96.7%	3.30 J	3.99	82.7%	15.6%
Dieldrin	< 20.0	11.7 JP	7.98	147%	9.73 J	7.97	122%	18.4%
4,4'-DDE	< 20.0	10.2 JP	7.98	128%	10.3 JP	7.97	129%	1.0%
Endrin	< 20.0	5.75 J	7.98	72.1%	5.94 JP	7.97	74.5%	3.3%
Endosulfan II	< 20.0	10.4 J	7.98	130%	8.41 J	7.97	106%	21.2%
4,4'-DDD	< 20.0	8.58 J	7.98	108%	8.41 J	7.97	106%	2.0%
Endosulfan Sulfate	< 20.0	7.14 J	7.98	89.5%	7.10 J	7.97	89.1%	0.6%
4,4'-DDT	< 20.0	5.99 J	7.98	75.1%	4.78 J	7.97	60.0%	22.5%
Methoxychlor	< 99.9	45.1 JP	39.9	113%	38.0 JP	39.9	95.2%	17.1%
Endrin Ketone	< 20.0	20.0 JP	7.98	251%	24.6 JP	7.97	309%	20.6%
Endrin Aldehyde	< 20.0	5.07 JP	7.98	63.5%	4.39 JP	7.97	55.1%	14.4%
trans-Chlordane	< 9.99	11.5	3.99	288%	11.9	3.99	298%	3.4%
cis-Chlordane	< 9.99	12.4 P	3.99	311%	12.8 P	3.99	321%	3.2%
Hexachlorobenzene	< 20.0	8.62 J	3.99	NA	7.97 J	3.99	NA	7.8%
Hexachlorobutadiene	< 20.0	6.70 JP	3.99	NA	4.63 J	3.99	NA	36.5%

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 **Sample ID: CG-MH-010-20130423-S**
Extraction Method: SW3546 **MATRIX SPIKE**

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/13/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/03/13
Date Analyzed: 05/08/13 03:58
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 40.4%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	1.6	10	---
319-85-7	beta-BHC	2.8	10	---
319-86-8	delta-BHC	1.6	10	---
58-89-9	gamma-BHC (Lindane)	0.96	10	---
76-44-8	Heptachlor	2.6	10	---
309-00-2	Aldrin	1.1	10	---
1024-57-3	Heptachlor Epoxide	1.7	20	---
959-98-8	Endosulfan I	1.4	10	---
60-57-1	Dieldrin	2.0	20	---
72-55-9	4,4'-DDE	2.5	20	---
72-20-8	Endrin	4.3	20	---
33213-65-9	Endosulfan II	2.3	20	---
72-54-8	4,4'-DDD	2.7	20	---
1031-07-8	Endosulfan Sulfate	3.8	20	---
50-29-3	4,4'-DDT	3.8	20	---
72-43-5	Methoxychlor	14	100	---
53494-70-5	Endrin Ketone	2.4	20	---
7421-93-4	Endrin Aldehyde	4.3	20	---
5103-74-2	trans-Chlordane	1.5	10	---
5103-71-9	cis-Chlordane	1.0	10	---
8001-35-2	Toxaphene	690	2000	< 2,000 U
118-74-1	Hexachlorobenzene	1.9	20	---
87-68-3	Hexachlorobutadiene	2.8	20	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	137%
Tetrachlorometaxylene	81.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD **Sample ID: CG-MH-010-20130423-S**
Extraction Method: SW3546 **MATRIX SPIKE DUP**

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/13/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/03/13
Date Analyzed: 05/08/13 04:15
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 40.4%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	1.6	10	---
319-85-7	beta-BHC	2.8	10	---
319-86-8	delta-BHC	1.6	10	---
58-89-9	gamma-BHC (Lindane)	0.96	10	---
76-44-8	Heptachlor	2.6	10	---
309-00-2	Aldrin	1.1	10	---
1024-57-3	Heptachlor Epoxide	1.7	20	---
959-98-8	Endosulfan I	1.4	10	---
60-57-1	Dieldrin	2.0	20	---
72-55-9	4,4'-DDE	2.5	20	---
72-20-8	Endrin	4.3	20	---
33213-65-9	Endosulfan II	2.3	20	---
72-54-8	4,4'-DDD	2.7	20	---
1031-07-8	Endosulfan Sulfate	3.8	20	---
50-29-3	4,4'-DDT	3.8	20	---
72-43-5	Methoxychlor	14	100	---
53494-70-5	Endrin Ketone	2.4	20	---
7421-93-4	Endrin Aldehyde	4.3	20	---
5103-74-2	trans-Chlordane	1.5	10	---
5103-71-9	cis-Chlordane	1.0	10	---
8001-35-2	Toxaphene	690	2000	< 2,000 U
118-74-1	Hexachlorobenzene	1.9	20	---
87-68-3	Hexachlorobutadiene	2.8	20	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	107%
Tetrachlorometaxylene	62.0%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-050313
LCS/LCSD

Lab Sample ID: LCS-050313
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: mm
Reported: 05/13/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted LCS/LCSD: 05/03/13

Date Analyzed LCS: 05/08/13 02:46
LCSD: 05/08/13 05:27
Instrument/Analyst LCS: ECD6/YZ
LCSD: ECD6/YZ

Sample Amount LCS: 12.5 g-dry-wt
LCSD: 12.5 g-dry-wt
Final Extract Volume LCS: 2.5 mL
LCSD: 2.5 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	3.64	4.00	91.0%	3.02	4.00	75.5%	18.6%
beta-BHC	3.72	4.00	93.0%	2.80	4.00	70.0%	28.2%
delta-BHC	3.94	4.00	98.5%	3.00	4.00	75.0%	27.1%
gamma-BHC (Lindane)	3.88	4.00	97.0%	2.90	4.00	72.5%	28.9%
Heptachlor	3.80	4.00	95.0%	1.87	4.00	46.8%	68.1%
Aldrin	3.92	4.00	98.0%	2.82	4.00	70.5%	32.6%
Heptachlor Epoxide	4.26	4.00	106%	3.00	4.00	75.0%	34.7%
Endosulfan I	4.46	4.00	112%	3.12	4.00	78.0%	35.4%
Dieldrin	9.26	8.00	116%	6.28	8.00	78.5%	38.4%
4,4'-DDE	9.70	8.00	121%	7.46 P	8.00	93.2%	26.1%
Endrin	8.08	8.00	101%	4.64	8.00	58.0%	54.1%
Endosulfan II	7.96	8.00	99.5%	6.14	8.00	76.8%	25.8%
4,4'-DDD	8.24	8.00	103%	8.62	8.00	108%	4.5%
Endosulfan Sulfate	7.84	8.00	98.0%	5.52	8.00	69.0%	34.7%
4,4'-DDT	8.02	8.00	100%	2.56 P	8.00	32.0%	103%
Methoxychlor	36.6	40.0	91.5%	7.24	40.0	18.1%	134%
Endrin Ketone	7.74	8.00	96.8%	4.82	8.00	60.2%	46.5%
Endrin Aldehyde	5.98	8.00	74.8%	4.10	8.00	51.2%	37.3%
trans-Chlordane	4.34	4.00	108%	3.04	4.00	76.0%	35.2%
cis-Chlordane	4.34	4.00	108%	3.00	4.00	75.0%	36.5%
Hexachlorobenzene	3.50	4.00	87.5%	2.98	4.00	74.5%	16.0%
Hexachlorobutadiene	2.86	4.00	71.5%	2.76	4.00	69.0%	3.6%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	101%	81.5%
Tetrachlorometaxylene	84.8%	73.8%

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

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WN27MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WN27
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WN27MBS1
Lab File ID: 0507A052

Date Extracted: 05/03/13
Matrix: SOLID

Date Analyzed: 05/08/13
Instrument ID: ECD6

Time Analyzed: 0228
GC Columns: STX-CLP1/STX-CLP2

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WN27LCSS1	WN27LCSS1	05/08/13
02	CG-MH-010-20130423-	WN27A	05/08/13
03	CG-MH-010-20130 MS	WN27AMS	05/08/13
04	CG-MH-010-20130 MSD	WN27AMSD	05/08/13
05	ES-TS-INF-20130424-	WN31A	05/08/13
06	WN27LCSDS1	WN27LCSDS1	05/08/13
07	CG-MH-010-20130423-	WN27A	05/08/13
08	ES-TS-INF-20130424-	WN31A	05/08/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD **Sample ID: MB-050313**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-050313
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/13/13

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

Date Extracted: 05/03/13
Date Analyzed: 05/08/13 02:28
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	89.5%
Tetrachlorometaxylene	80.2%

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

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

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

COMPOUND	RT OF STANDARDS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	4.75	4.75	4.76	4.76	4.76	4.76	4.76	4.76	4.71	4.81
beta-BHC	5.18	5.18	5.18	5.19	5.19	5.19	5.18	5.18	5.13	5.23
delta-BHC	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.45	5.55
gamma-BHC (Lindane)	5.11	5.11	5.11	5.12	5.12	5.12	5.12	5.12	5.07	5.17
Heptachlor	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.53	5.63
Aldrin	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.87	5.97
Heptachlor epoxide b	6.47	6.47	6.47	6.47	6.48	6.48	6.48	6.47	6.43	6.53
Endosulfan I	6.86	6.86	6.86	6.86	6.86	6.86	6.86	6.86	6.81	6.91
Dieldrin	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.07	7.17
4,4'-DDE	6.92	6.92	6.92	6.92	6.92	6.92	6.92	6.92	6.87	6.97
Endrin	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.36	7.46
Endosulfan II	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.55	7.65
4,4'-DDD	7.46	7.46	7.46	7.46	7.46	7.46	7.46	7.46	7.41	7.51
Endosulfan sulfate	8.14	8.14	8.14	8.14	8.14	8.14	8.14	8.14	8.09	8.19
4,4'-DDT	7.74	7.74	7.75	7.74	7.75	7.75	7.75	7.75	7.70	7.80
Methoxychlor	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.28	8.38
Endrin ketone	8.63	8.63	8.63	8.63	8.63	8.63	8.63	8.63	8.58	8.68
Endrin aldehyde	7.89	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.85	7.95
gamma-Chlordane	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.61	6.71
alpha-Chlordane	6.79	6.79	6.79	6.79	6.80	6.80	6.80	6.79	6.75	6.85
Hexachlorobutadiene	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.45	2.55
Hexachlorobenzene	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.58	4.68
Tetrachloro-m-xylene	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.12	4.22
Decachlorobiphenyl	9.79	9.79	9.79	9.79	9.80	9.80	9.80	9.79	9.75	9.85

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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.: WN27 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

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

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

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

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

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

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 08-MAY-2013 01:35 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.235	127721
Endrin	6.748	6720234
4,4'-DDD	6.791	563753
4,4'-DDT	7.046	6423580
Endrin ketone	7.977	359836
Endrin aldehyde	7.332	264369

DDT Percent Breakdown = 9.7 %
((127721+563753) * 100)/(127721+563753+6423580)

Endrin Percent Breakdown = 8.5 %
((264369+359836) * 100)/(264369+359836+6720234)

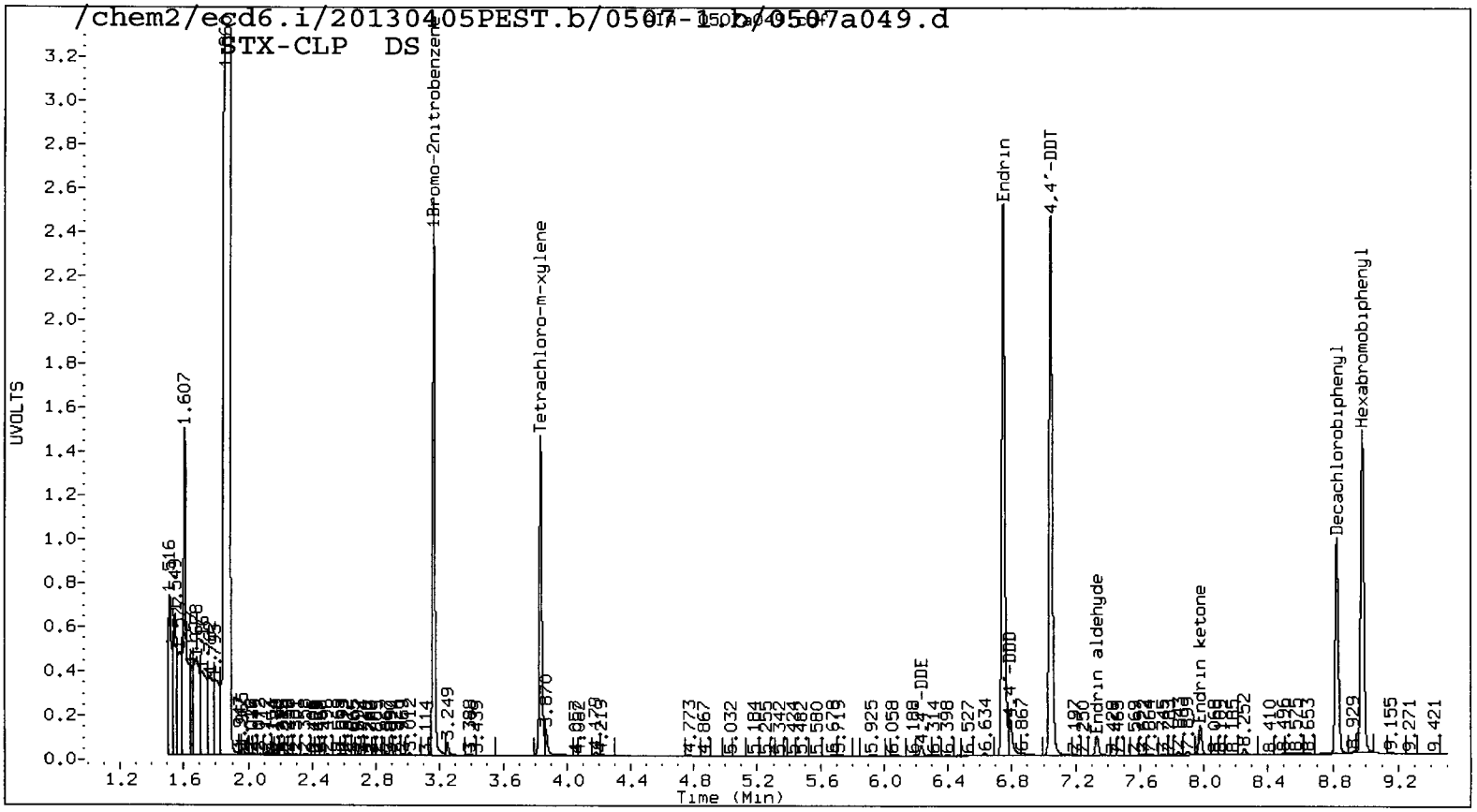
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.917	671676
Endrin	7.404	27290466
4,4'-DDD	7.455	2832165
4,4'-DDT	7.741	27119217
Endrin ketone	8.625	1057161
Endrin aldehyde	7.890	1197805

DDT Percent Breakdown = 11.4 %
((671676+2832165) * 100)/(671676+2832165+27119217)

Endrin Percent Breakdown = 7.6 %
((1197805+1057161) * 100)/(1197805+1057161+27290466)

Form VII Pest-1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7.480
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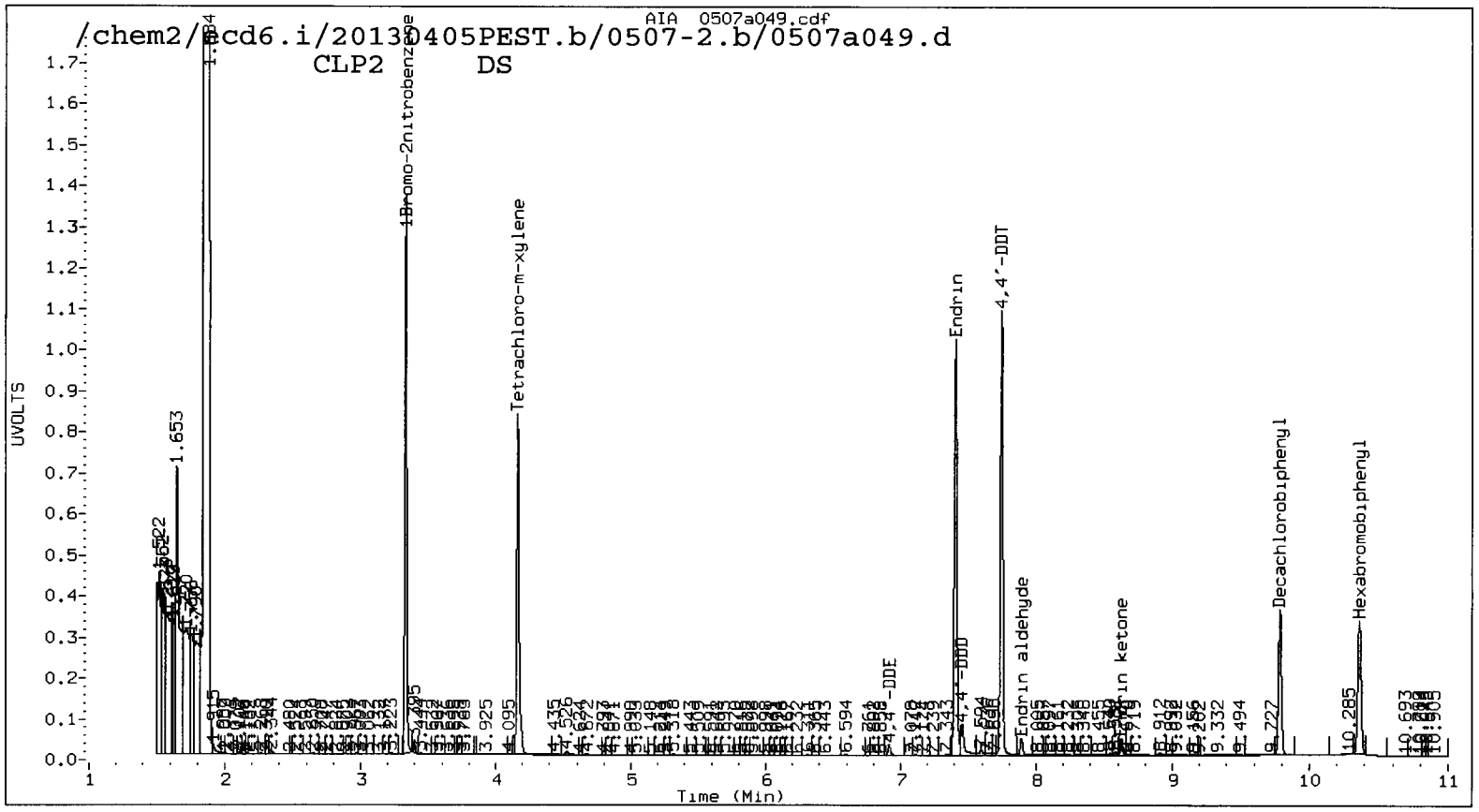
8.929
9.155
9.271
9.421
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
4,4'-DDE
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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9.332
9.494
9.722
10.285
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
4,4'-DDE
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/08/13,0153

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.33	4.28	4.38	19.8	20.0	-0.9
beta-BHC	4.69	4.64	4.74	18.5	20.0	-7.5
delta-BHC	4.86	4.81	4.91	18.7	20.0	-6.4
gamma-BHC (Lindane)	4.61	4.56	4.66	19.5	20.0	-2.7
Heptachlor	5.06	5.02	5.12	19.2	20.0	-3.8
Aldrin	5.35	5.31	5.41	19.1	20.0	-4.4
Heptachlor epoxide b	5.93	5.89	5.99	18.9	20.0	-5.3
Endosulfan I	6.30	6.26	6.36	18.5	20.0	-7.4
Dieldrin	6.53	6.49	6.59	38.9	40.0	-2.8
4,4'-DDE	6.23	6.18	6.28	37.1	40.0	-7.3
Endrin	6.75	6.71	6.81	36.7	40.0	-8.2
Endosulfan II	6.95	6.91	7.01	36.9	40.0	-7.7
4,4'-DDD	6.79	6.74	6.84	39.4	40.0	-1.4
Endosulfan sulfate	7.72	7.68	7.78	36.3	40.0	-9.2
4,4'-DDT	7.04	7.00	7.10	36.8	40.0	-8.1
Methoxychlor	7.47	7.42	7.52	164.9	200.0	-17.6
Endrin ketone	7.98	7.93	8.03	36.0	40.0	-10.0
Endrin aldehyde	7.33	7.29	7.39	35.2	40.0	-11.9
gamma-Chlordane	6.05	6.01	6.11	19.5	20.0	-2.6
alpha-Chlordane	6.17	6.13	6.23	18.9	20.0	-5.3
Hexachlorobutadiene	2.34	2.29	2.39	19.5	20.0	-2.5
Hexachlorobenzene	4.18	4.13	4.23	19.4	20.0	-2.9
Tetrachloro-m-xylene	3.83	3.79	3.89	37.9	40.0	-5.2
Decachlorobiphenyl	8.83	8.78	8.88	33.8	40.0	-15.4

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/08/13,0153

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
alpha-BHC	4.75	4.71	4.81	19.8	20.0	-1.2	
beta-BHC	5.18	5.13	5.23	19.2	20.0	-3.8	
delta-BHC	5.49	5.45	5.55	19.4	20.0	-2.8	
gamma-BHC (Lindane)	5.11	5.07	5.17	19.4	20.0	-3.1	
Heptachlor	5.58	5.53	5.63	19.5	20.0	-2.3	
Aldrin	5.91	5.87	5.97	20.4	20.0	2.0	
Heptachlor epoxide b	6.47	6.43	6.53	20.7	20.0	3.4	
Endosulfan I	6.85	6.81	6.91	21.5	20.0	7.4	
Dieldrin	7.11	7.07	7.17	42.4	40.0	6.0	
4,4'-DDE	6.91	6.87	6.97	42.7	40.0	6.9	
Endrin	7.40	7.36	7.46	33.4	40.0	-16.6	
Endosulfan II	7.59	7.55	7.65	33.8	40.0	-15.4	
4,4'-DDD	7.45	7.41	7.51	35.4	40.0	-11.5	
Endosulfan sulfate	8.13	8.09	8.19	32.7	40.0	-18.2	
4,4'-DDT	7.74	7.70	7.80	32.5	40.0	-18.7	
Methoxychlor	8.32	8.28	8.38	140.4	200.0	-29.8	<-
Endrin ketone	8.63	8.58	8.68	33.3	40.0	-16.6	
Endrin aldehyde	7.89	7.85	7.95	32.2	40.0	-19.5	
gamma-Chlordane	6.65	6.61	6.71	21.1	20.0	5.6	
alpha-Chlordane	6.79	6.75	6.85	21.2	20.0	5.9	
Hexachlorobutadiene	2.49	2.45	2.55	18.7	20.0	-6.3	
Hexachlorobenzene	4.63	4.58	4.68	20.9	20.0	4.5	
Tetrachloro-m-xylene	4.16	4.12	4.22	36.4	40.0	-8.9	
Decachlorobiphenyl	9.79	9.75	9.85	32.7	40.0	-18.3	

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 05/08/13,0211

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	7.00	6.96	7.06	3230	2500	29.2	<-
Toxaphene -2	7.06	7.01	7.11	3360	2500	34.4	<-
Toxaphene -3	7.31	7.27	7.37	3120	2500	24.8	<-
Toxaphene -4	7.64	7.59	7.69	3050	2500	22.0	<-
Toxaphene -5	7.68	7.63	7.73	3090	2500	23.6	<-
Toxaphene -6	7.96	7.92	8.02	3040	2500	21.6	<-

AVERAGE %D = 25.9

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 05/08/13,0211

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	7.34	7.29	7.39	2810	2500	12.4
Toxaphene -2	7.66	7.62	7.72	2680	2500	7.2
Toxaphene -3	7.89	7.85	7.95	2660	2500	6.4
Toxaphene -4	8.36	8.32	8.42	2580	2500	3.2
Toxaphene -5	8.40	8.36	8.46	2600	2500	4.0

AVERAGE %D = 6.6

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 08-MAY-2013 06:02 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.229	40019
Endrin	6.746	4342973
4,4'-DDD	6.786	2545846
4,4'-DDT	7.041	1465654
Endrin ketone	7.975	1347945
Endrin aldehyde	7.329	85655

DDT Percent Breakdown = 63.8 %
((40019+2545846) * 100)/(40019+2545846+1465654)

Endrin Percent Breakdown = 24.8 %
((85655+1347945) * 100)/(85655+1347945+4342973)

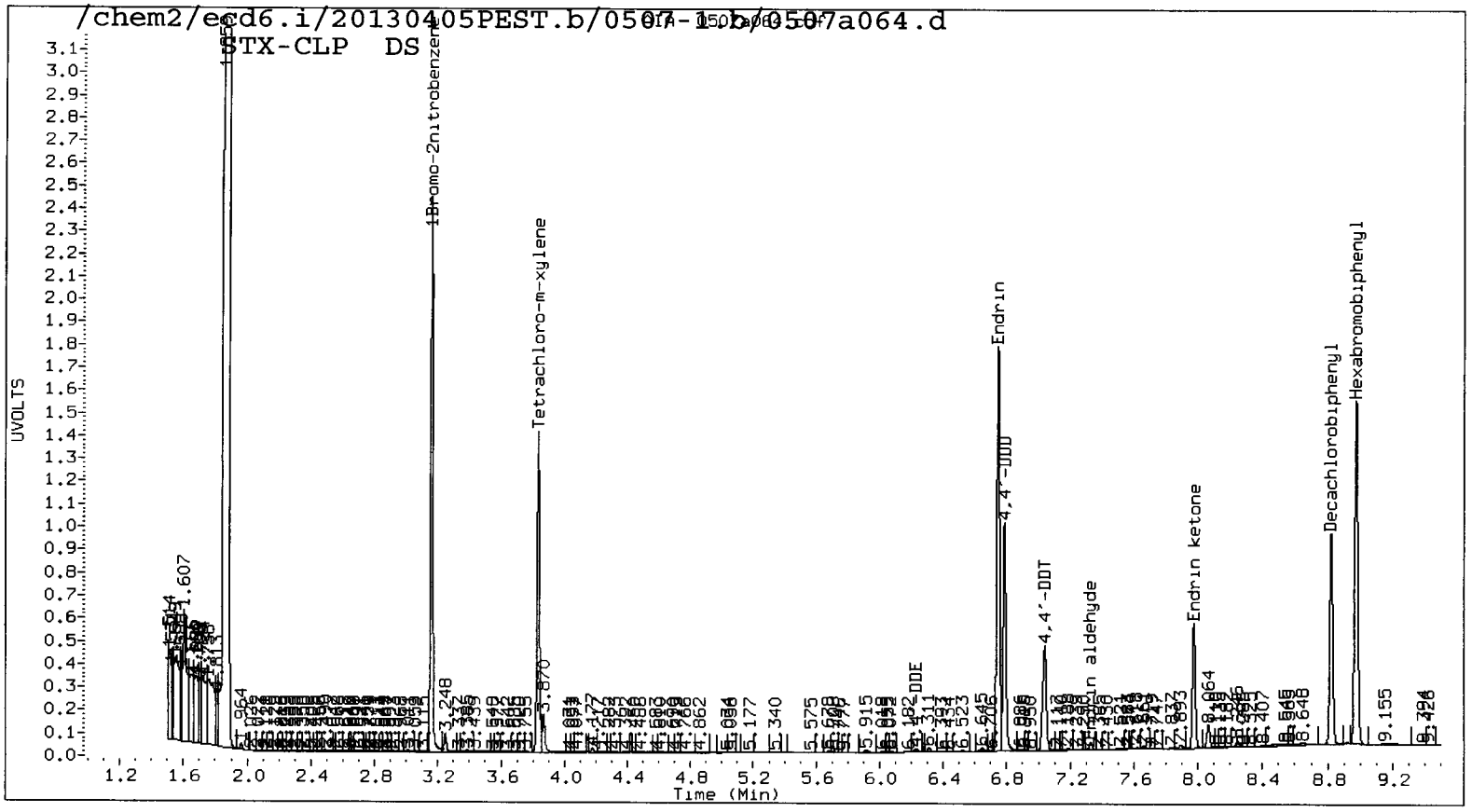
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.913	271320
Endrin	7.402	13480030
4,4'-DDD	7.452	8495876
4,4'-DDT	7.739	3358432
Endrin ketone	8.624	3218436
Endrin aldehyde	7.888	599635

DDT Percent Breakdown = 72.3 %
((271320+8495876) * 100)/(271320+8495876+3358432)

Endrin Percent Breakdown = 22.1 %
((599635+3218436) * 100)/(599635+3218436+13480030)

Form VII Pest-1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Endrin
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Endrin ketone
Decachlorobiphenyl
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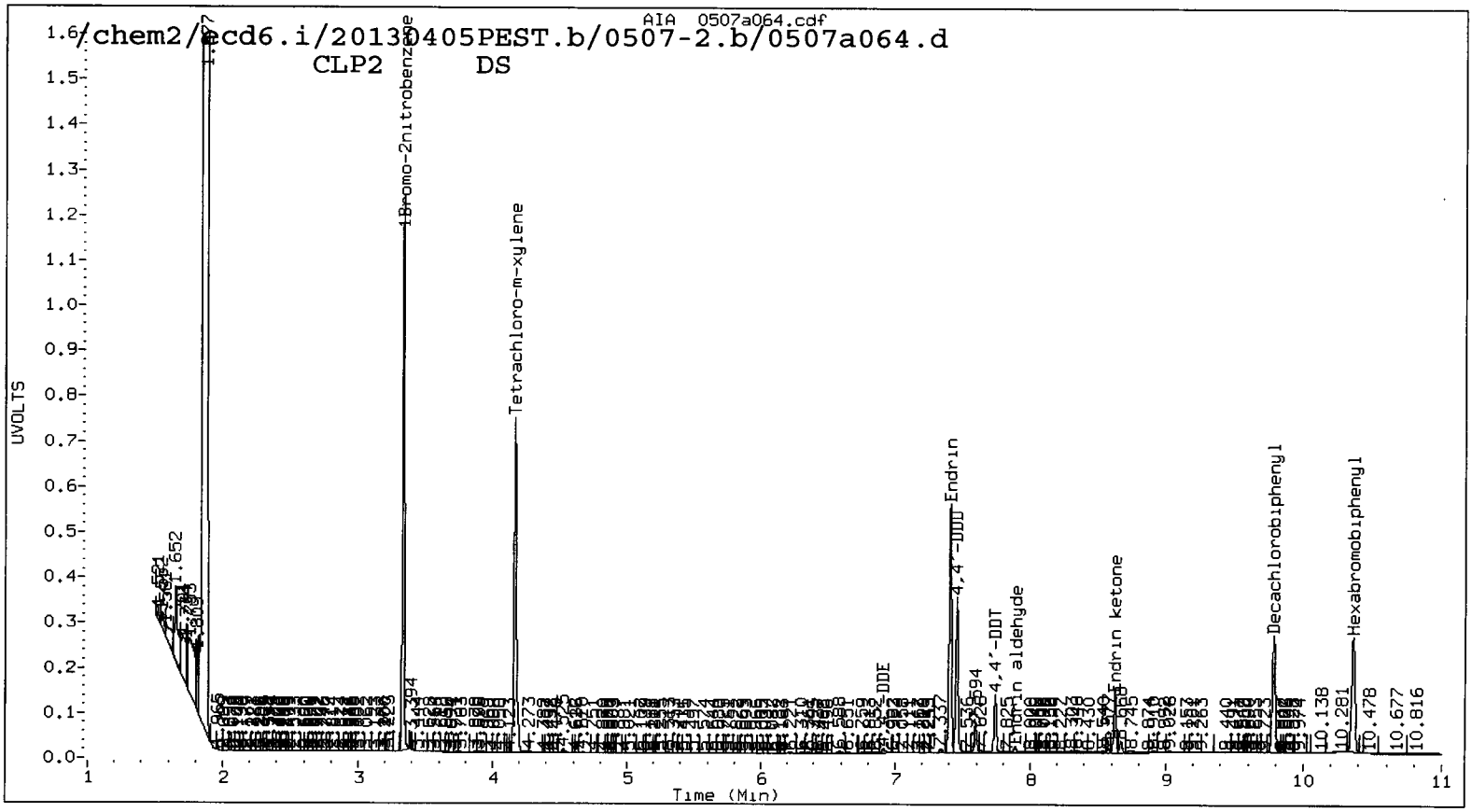
DDE
UVOLTS
Time (Min)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4,4'-DDD
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
DDE
UVOLTS
Time (Min)

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/08/13,0620

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
alpha-BHC	4.32	4.28	4.38	19.5	20.0	-2.3	
beta-BHC	4.69	4.64	4.74	17.1	20.0	-14.4	
delta-BHC	4.86	4.81	4.91	18.2	20.0	-8.8	
gamma-BHC (Lindane)	4.61	4.56	4.66	17.4	20.0	-12.8	
Heptachlor	5.06	5.02	5.12	11.5	20.0	-42.4	<-
Aldrin	5.35	5.31	5.41	19.1	20.0	-4.7	
Heptachlor epoxide b	5.93	5.89	5.99	18.1	20.0	-9.5	
Endosulfan I	6.30	6.26	6.36	18.5	20.0	-7.2	
Dieldrin	6.53	6.49	6.59	37.8	40.0	-5.4	
4,4'-DDE	6.23	6.18	6.28	37.4	40.0	-6.6	
Endrin	6.75	6.71	6.81	24.8	40.0	-38.0	<-
Endosulfan II	6.95	6.91	7.01	33.9	40.0	-15.1	
4,4'-DDD	6.78	6.74	6.84	48.5	40.0	21.1	<-
Endosulfan sulfate	7.72	7.68	7.78	31.5	40.0	-21.3	<-
4,4'-DDT	7.03	7.00	7.10	15.2	40.0	-62.0	<-
Methoxychlor	7.47	7.42	7.52	34.1	200.0	-82.9	<-
Endrin ketone	7.97	7.93	8.03	25.4	40.0	-36.6	<-
Endrin aldehyde	7.33	7.29	7.39	31.0	40.0	-22.5	<-
gamma-Chlordane	6.05	6.01	6.11	18.4	20.0	-8.0	
alpha-Chlordane	6.17	6.13	6.23	18.3	20.0	-8.6	
Hexachlorobutadiene	2.34	2.29	2.39	20.1	20.0	0.5	
Hexachlorobenzene	4.18	4.13	4.23	19.5	20.0	-2.4	
Tetrachloro-m-xylene	3.83	3.79	3.89	37.8	40.0	-5.5	
Decachlorobiphenyl	8.82	8.78	8.88	32.4	40.0	-19.1	

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/08/13,0620

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
alpha-BHC	4.75	4.71	4.81	19.2	20.0	-4.1	
beta-BHC	5.18	5.13	5.23	17.2	20.0	-13.8	
delta-BHC	5.50	5.45	5.55	18.1	20.0	-9.3	
gamma-BHC (Lindane)	5.11	5.07	5.17	16.7	20.0	-16.2	
Heptachlor	5.57	5.53	5.63	11.4	20.0	-43.0	<-
Aldrin	5.91	5.87	5.97	18.6	20.0	-7.0	
Heptachlor epoxide b	6.47	6.43	6.53	16.8	20.0	-16.2	
Endosulfan I	6.85	6.81	6.91	17.5	20.0	-12.4	
Dieldrin	7.11	7.07	7.17	35.6	40.0	-11.0	
4,4'-DDE	6.91	6.87	6.97	35.5	40.0	-11.2	
Endrin	7.40	7.36	7.46	21.5	40.0	-46.1	<-
Endosulfan II	7.59	7.55	7.65	34.9	40.0	-12.8	
4,4'-DDD	7.45	7.41	7.51	39.6	40.0	-1.0	
Endosulfan sulfate	8.13	8.09	8.19	26.3	40.0	-34.3	<-
4,4'-DDT	7.74	7.70	7.80	6.1	40.0	-84.8	<-
Methoxychlor	8.32	8.28	8.38	31.4	200.0	-84.3	<-
Endrin ketone	8.62	8.58	8.68	20.9	40.0	-47.8	<-
Endrin aldehyde	7.89	7.85	7.95	26.7	40.0	-33.2	<-
gamma-Chlordane	6.65	6.61	6.71	17.3	20.0	-13.7	
alpha-Chlordane	6.79	6.75	6.85	17.0	20.0	-15.0	
Hexachlorobutadiene	2.50	2.45	2.55	18.8	20.0	-6.2	
Hexachlorobenzene	4.63	4.58	4.68	20.7	20.0	3.3	
Tetrachloro-m-xylene	4.16	4.12	4.22	36.9	40.0	-7.7	
Decachlorobiphenyl	9.79	9.75	9.85	29.7	40.0	-25.8	<-

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 08-MAY-2013 17:15 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.232	109469
Endrin	6.747	6874336
4,4'-DDD	6.788	406244
4,4'-DDT	7.045	6622694
Endrin ketone	7.976	265307
Endrin aldehyde	7.330	151784

DDT Percent Breakdown = 7.2 %
((109469+406244) * 100)/(109469+406244+6622694)

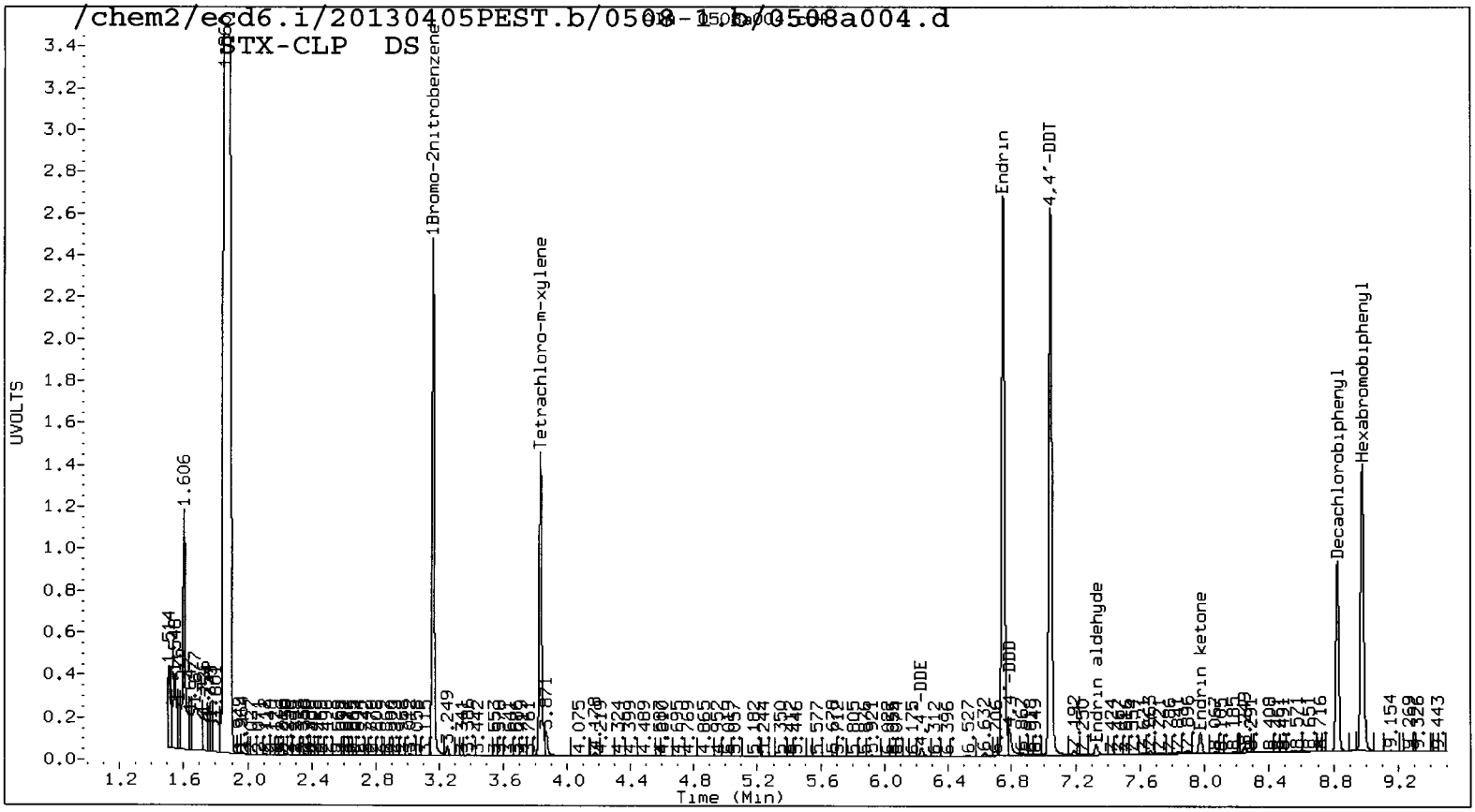
Endrin Percent Breakdown = 5.7 %
((151784+265307) * 100)/(151784+265307+6874336)

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

COMPOUND	RT	AREA
4,4'-DDE	6.915	598841
Endrin	7.402	25070437
4,4'-DDD	7.453	1815013
4,4'-DDT	7.741	24365782
Endrin ketone	8.625	894253
Endrin aldehyde	7.889	673881

DDT Percent Breakdown = 9.0 %
((598841+1815013) * 100)/(598841+1815013+24365782)

Endrin Percent Breakdown = 5.9 %
((673881+894253) * 100)/(673881+894253+25070437)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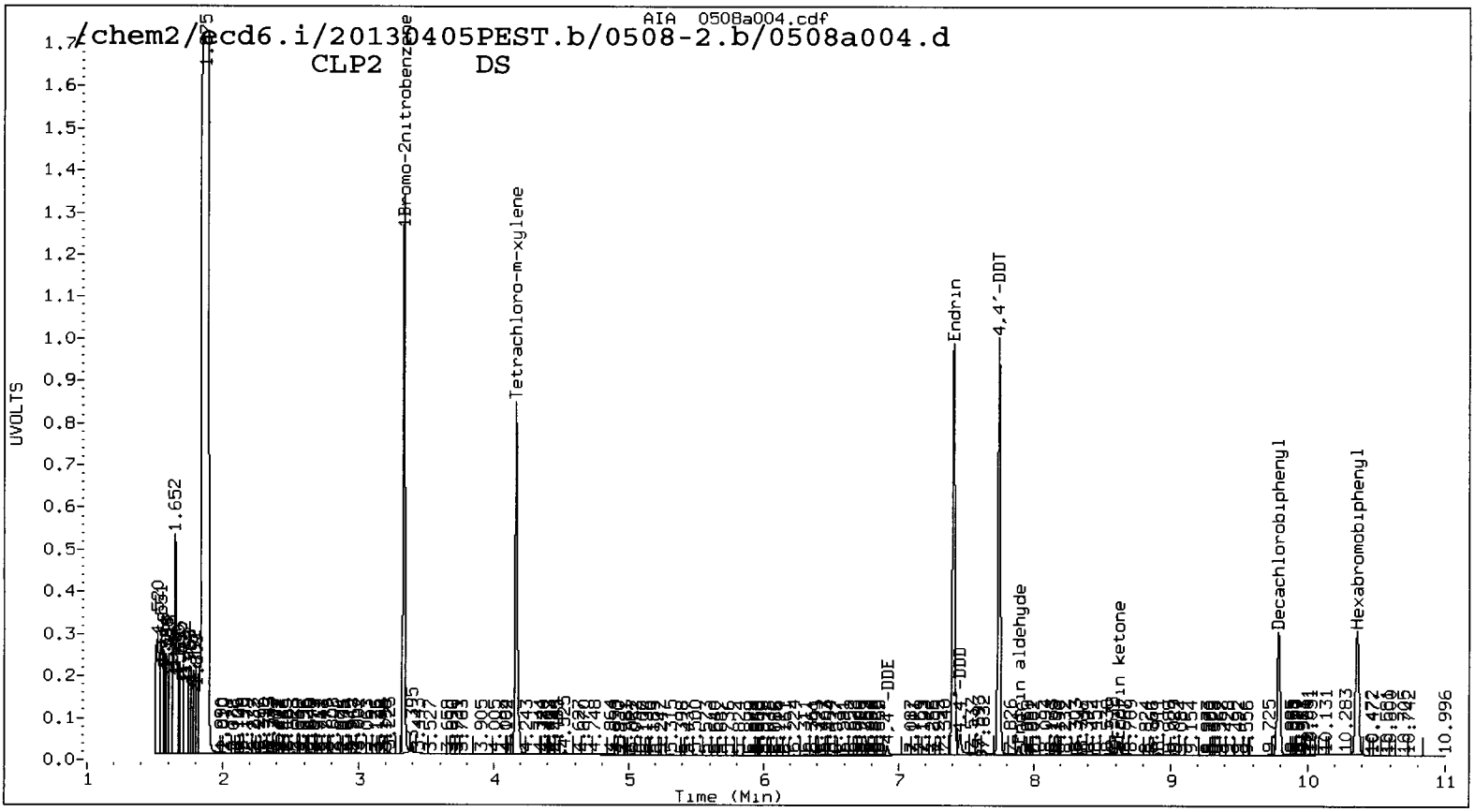
STX-CLP DS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.606
3.871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CLP2 DS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.652
10.996

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/08/13,1732

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.33	4.28	4.38	19.1	20.0	-4.7
beta-BHC	4.69	4.64	4.74	17.8	20.0	-11.2
delta-BHC	4.86	4.81	4.91	18.1	20.0	-9.4
gamma-BHC (Lindane)	4.61	4.56	4.66	18.8	20.0	-6.1
Heptachlor	5.06	5.02	5.12	19.0	20.0	-5.1
Aldrin	5.35	5.31	5.41	19.0	20.0	-5.0
Heptachlor epoxide b	5.93	5.89	5.99	18.4	20.0	-8.2
Endosulfan I	6.30	6.26	6.36	18.7	20.0	-6.5
Dieldrin	6.53	6.49	6.59	38.5	40.0	-3.8
4,4'-DDE	6.23	6.18	6.28	37.1	40.0	-7.3
Endrin	6.75	6.71	6.81	41.1	40.0	2.8
Endosulfan II	6.95	6.91	7.01	38.8	40.0	-3.0
4,4'-DDD	6.79	6.74	6.84	41.6	40.0	4.0
Endosulfan sulfate	7.72	7.68	7.78	36.7	40.0	-8.3
4,4'-DDT	7.04	7.00	7.10	39.5	40.0	-1.2
Methoxychlor	7.47	7.42	7.52	176.4	200.0	-11.8
Endrin ketone	7.98	7.93	8.03	35.9	40.0	-10.4
Endrin aldehyde	7.33	7.29	7.39	36.1	40.0	-9.7
gamma-Chlordane	6.05	6.01	6.11	19.0	20.0	-5.0
alpha-Chlordane	6.17	6.13	6.23	18.6	20.0	-6.9
Hexachlorobutadiene	2.34	2.29	2.39	19.0	20.0	-5.1
Hexachlorobenzene	4.18	4.13	4.23	19.3	20.0	-3.7
Tetrachloro-m-xylene	3.83	3.79	3.89	37.7	40.0	-5.6
Decachlorobiphenyl	8.82	8.78	8.88	34.2	40.0	-14.6

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/08/13,1732

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
alpha-BHC	4.75	4.71	4.81	18.7	20.0	-6.3	
beta-BHC	5.18	5.13	5.23	18.0	20.0	-9.8	
delta-BHC	5.50	5.45	5.55	18.8	20.0	-6.2	
gamma-BHC (Lindane)	5.11	5.07	5.17	18.2	20.0	-8.8	
Heptachlor	5.58	5.53	5.63	19.2	20.0	-4.2	
Aldrin	5.91	5.87	5.97	20.0	20.0	-0.2	
Heptachlor epoxide b	6.47	6.43	6.53	19.2	20.0	-3.8	
Endosulfan I	6.85	6.81	6.91	19.5	20.0	-2.7	
Dieldrin	7.11	7.07	7.17	37.3	40.0	-6.8	
4,4'-DDE	6.91	6.87	6.97	38.6	40.0	-3.4	
Endrin	7.40	7.36	7.46	33.7	40.0	-15.9	
Endosulfan II	7.59	7.55	7.65	32.0	40.0	-19.9	
4,4'-DDD	7.45	7.41	7.51	33.2	40.0	-17.0	
Endosulfan sulfate	8.13	8.09	8.19	30.5	40.0	-23.7	<-
4,4'-DDT	7.74	7.70	7.80	32.1	40.0	-19.7	
Methoxychlor	8.32	8.28	8.38	142.7	200.0	-28.6	<-
Endrin ketone	8.63	8.58	8.68	30.9	40.0	-22.8	<-
Endrin aldehyde	7.89	7.85	7.95	30.7	40.0	-23.4	<-
gamma-Chlordane	6.65	6.61	6.71	19.6	20.0	-1.9	
alpha-Chlordane	6.79	6.75	6.85	19.1	20.0	-4.4	
Hexachlorobutadiene	2.49	2.45	2.55	17.9	20.0	-10.6	
Hexachlorobenzene	4.63	4.58	4.68	20.5	20.0	2.4	
Tetrachloro-m-xylene	4.16	4.12	4.22	36.1	40.0	-9.6	
Decachlorobiphenyl	9.79	9.75	9.85	30.0	40.0	-25.1	<-

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 05/08/13,1750

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	7.00	6.96	7.06	3280	2500	31.2	<-
Toxaphene -2	7.06	7.01	7.11	3400	2500	36.0	<-
Toxaphene -3	7.31	7.27	7.37	3160	2500	26.4	<-
Toxaphene -4	7.64	7.59	7.69	3080	2500	23.2	<-
Toxaphene -5	7.68	7.63	7.73	3100	2500	24.0	<-
Toxaphene -6	7.96	7.92	8.02	3020	2500	20.8	<-

AVERAGE %D = 26.9

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 05/08/13,1750

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	7.34	7.29	7.39	2740	2500	9.6
Toxaphene -2	7.66	7.62	7.72	2660	2500	6.4
Toxaphene -3	7.89	7.85	7.95	2640	2500	5.6
Toxaphene -4	8.36	8.32	8.42	2470	2500	-1.2
Toxaphene -5	8.40	8.36	8.46	2500	2500	0.0

AVERAGE %D = 4.6

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 08-MAY-2013 18:44 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.232	97105
Endrin	6.747	6792102
4,4'-DDD	6.788	490449
4,4'-DDT	7.044	6112306
Endrin ketone	7.976	265129
Endrin aldehyde	7.330	90497

DDT Percent Breakdown = 8.8 %
((97105+490449) * 100)/(97105+490449+6112306)

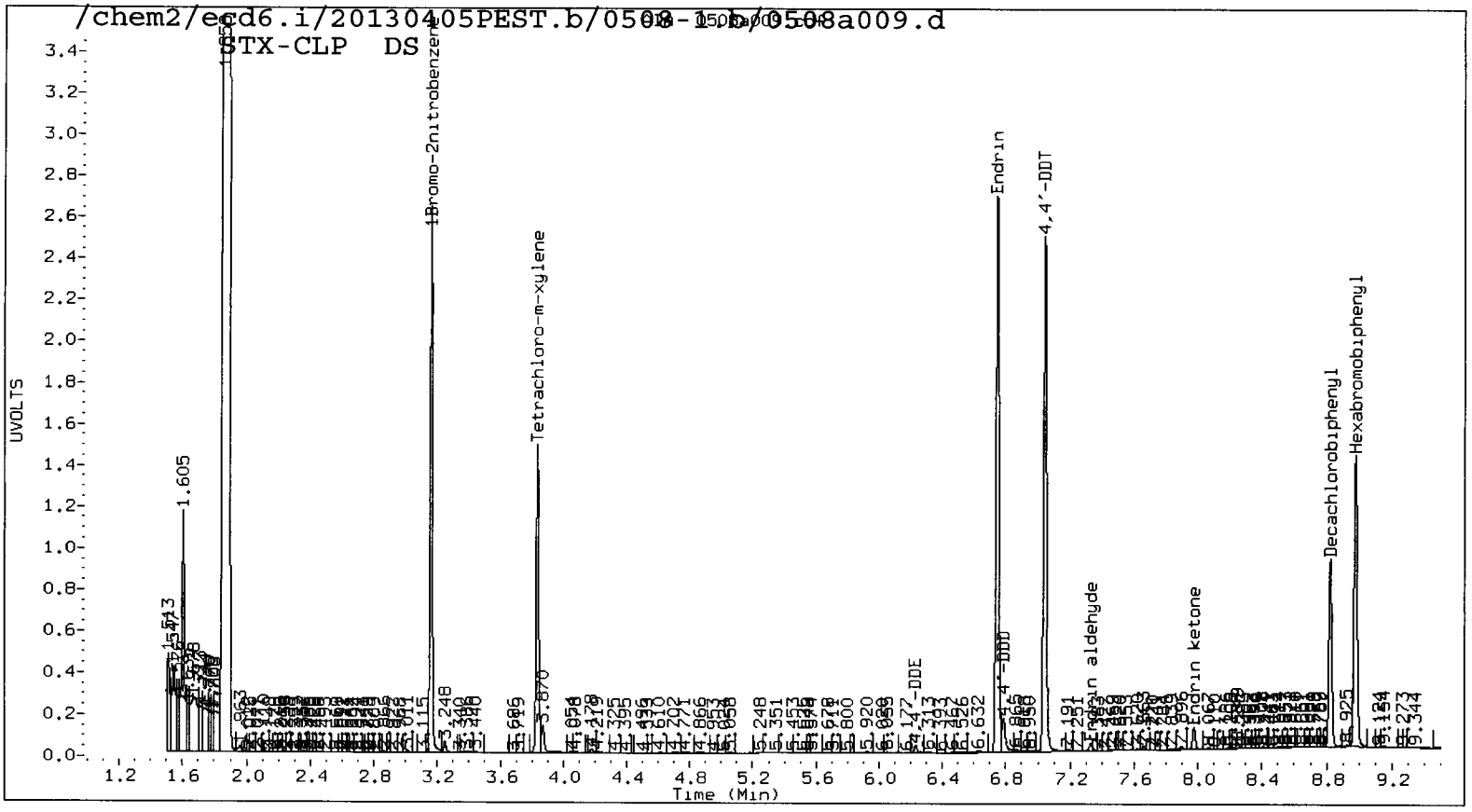
Endrin Percent Breakdown = 5.0 %
((90497+265129) * 100)/(90497+265129+6792102)

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

COMPOUND	RT	AREA
4,4'-DDE	6.915	452618
Endrin	7.403	20929994
4,4'-DDD	7.453	1890920
4,4'-DDT	7.740	18940049
Endrin ketone	8.625	864429
Endrin aldehyde	7.889	487930

DDT Percent Breakdown = 11.0 %
((452618+1890920) * 100)/(452618+1890920+18940049)

Endrin Percent Breakdown = 6.1 %
((487930+864429) * 100)/(487930+864429+20929994)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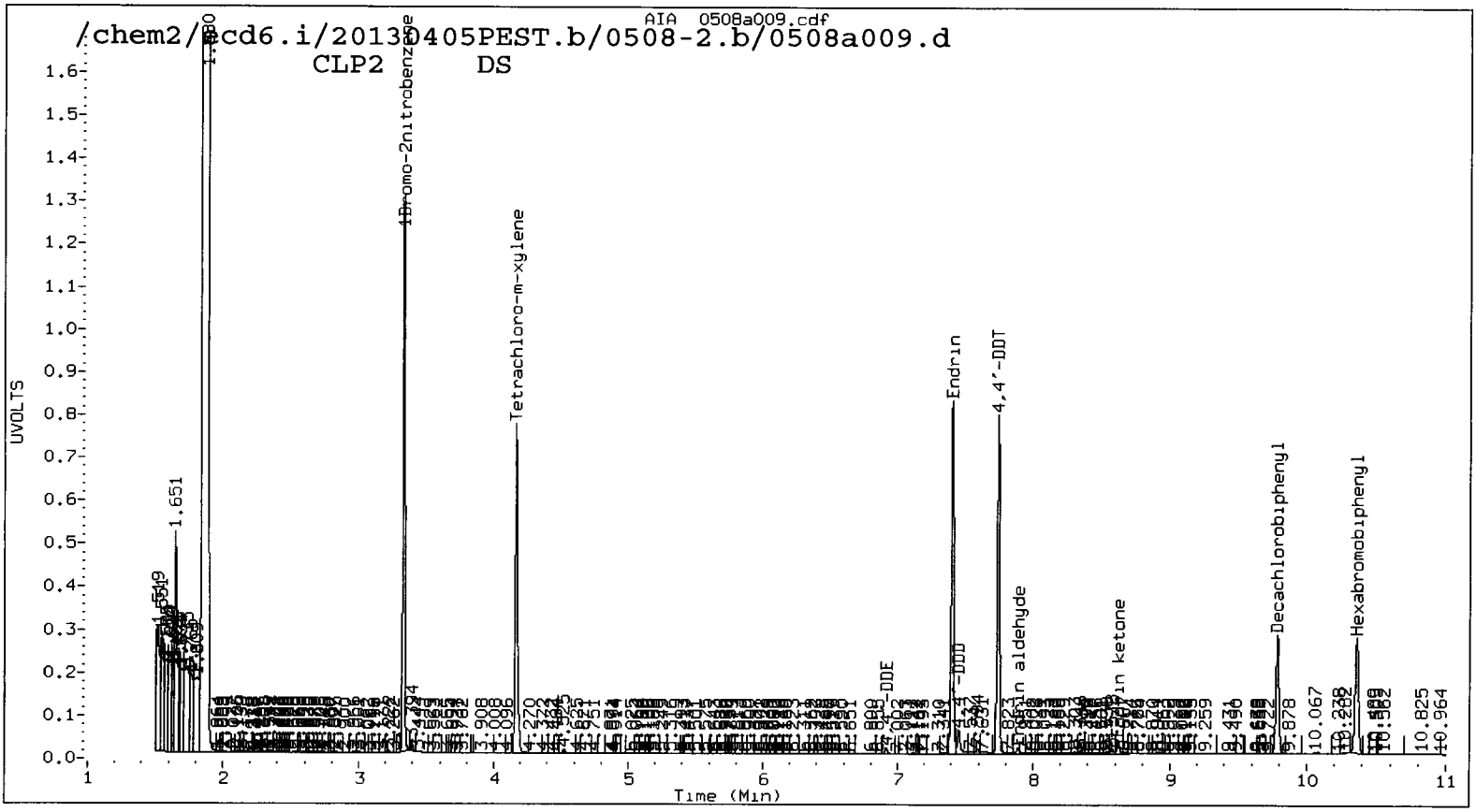
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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CLP2 DS
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/08/13,1901

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.32	4.28	4.38	19.0	20.0	-5.2
beta-BHC	4.69	4.64	4.74	17.3	20.0	-13.6
delta-BHC	4.86	4.81	4.91	17.5	20.0	-12.3
gamma-BHC (Lindane)	4.61	4.56	4.66	18.4	20.0	-8.0
Heptachlor	5.06	5.02	5.12	18.5	20.0	-7.2
Aldrin	5.35	5.31	5.41	18.6	20.0	-7.2
Heptachlor epoxide b	5.93	5.89	5.99	17.7	20.0	-11.3
Endosulfan I	6.30	6.26	6.36	18.0	20.0	-9.8
Dieldrin	6.53	6.49	6.59	36.5	40.0	-8.8
4,4'-DDE	6.23	6.18	6.28	36.4	40.0	-8.9
Endrin	6.75	6.71	6.81	41.0	40.0	2.4
Endosulfan II	6.95	6.91	7.01	37.9	40.0	-5.3
4,4'-DDD	6.79	6.74	6.84	41.9	40.0	4.8
Endosulfan sulfate	7.72	7.68	7.78	35.9	40.0	-10.2
4,4'-DDT	7.04	7.00	7.10	37.2	40.0	-6.9
Methoxychlor	7.47	7.42	7.52	171.8	200.0	-14.1
Endrin ketone	7.98	7.93	8.03	34.9	40.0	-12.6
Endrin aldehyde	7.33	7.29	7.39	35.3	40.0	-11.7
gamma-Chlordane	6.05	6.01	6.11	18.2	20.0	-8.8
alpha-Chlordane	6.17	6.13	6.23	17.8	20.0	-10.9
Hexachlorobutadiene	2.34	2.29	2.39	19.2	20.0	-4.0
Hexachlorobenzene	4.18	4.13	4.23	19.2	20.0	-4.0
Tetrachloro-m-xylene	3.83	3.79	3.89	37.6	40.0	-6.1
Decachlorobiphenyl	8.82	8.78	8.88	33.9	40.0	-15.4

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/08/13,1901

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
alpha-BHC	4.75	4.71	4.81	18.1	20.0	-9.4	
beta-BHC	5.18	5.13	5.23	17.2	20.0	-14.0	
delta-BHC	5.50	5.45	5.55	17.8	20.0	-10.8	
gamma-BHC (Lindane)	5.11	5.07	5.17	17.6	20.0	-12.0	
Heptachlor	5.57	5.53	5.63	18.2	20.0	-9.0	
Aldrin	5.91	5.87	5.97	18.5	20.0	-7.4	
Heptachlor epoxide b	6.47	6.43	6.53	17.9	20.0	-10.7	
Endosulfan I	6.85	6.81	6.91	18.0	20.0	-10.2	
Dieldrin	7.11	7.07	7.17	34.9	40.0	-12.7	
4,4'-DDE	6.91	6.87	6.97	35.8	40.0	-10.6	
Endrin	7.40	7.36	7.46	32.5	40.0	-18.8	
Endosulfan II	7.59	7.55	7.65	32.1	40.0	-19.6	
4,4'-DDD	7.45	7.41	7.51	32.5	40.0	-18.7	
Endosulfan sulfate	8.13	8.09	8.19	29.4	40.0	-26.5	<-
4,4'-DDT	7.74	7.70	7.80	29.6	40.0	-26.0	<-
Methoxychlor	8.32	8.28	8.38	139.6	200.0	-30.2	<-
Endrin ketone	8.63	8.58	8.68	29.7	40.0	-25.8	<-
Endrin aldehyde	7.89	7.85	7.95	28.6	40.0	-28.5	<-
gamma-Chlordane	6.65	6.61	6.71	17.9	20.0	-10.4	
alpha-Chlordane	6.79	6.75	6.85	17.5	20.0	-12.7	
Hexachlorobutadiene	2.49	2.45	2.55	18.0	20.0	-10.0	
Hexachlorobenzene	4.63	4.58	4.68	19.7	20.0	-1.4	
Tetrachloro-m-xylene	4.16	4.12	4.22	35.0	40.0	-12.4	
Decachlorobiphenyl	9.79	9.75	9.85	30.0	40.0	-25.1	<-

FORM VII PEST-2

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 05/08/13,1919

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	7.00	6.96	7.06	3190	2500	27.6	<-
Toxaphene -2	7.06	7.01	7.11	3350	2500	34.0	<-
Toxaphene -3	7.31	7.27	7.37	3100	2500	24.0	<-
Toxaphene -4	7.64	7.59	7.69	2960	2500	18.4	
Toxaphene -5	7.68	7.63	7.73	2920	2500	16.8	
Toxaphene -6	7.96	7.92	8.02	2800	2500	12.0	

AVERAGE %D = 22.1

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 05/08/13,1919

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	7.34	7.29	7.39	2660	2500	6.4
Toxaphene -2	7.66	7.62	7.72	2580	2500	3.2
Toxaphene -3	7.89	7.85	7.95	2480	2500	-0.8
Toxaphene -4	8.36	8.32	8.42	2290	2500	-8.4
Toxaphene -5	8.40	8.36	8.46	2290	2500	-8.4

AVERAGE %D = 5.4

FORM VII PEST-3

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	04/05/13	1247	5448520	3.165	4807902	8.980
02		INDAA	04/05/13	1305	6225835	3.164	5241456	8.979
03		INDAB	04/05/13	1323	6111022	3.164	5357211	8.979
04		INDAC	04/05/13	1341	5854383	3.165	5133358	8.979
05		INDAD	04/05/13	1358	5880001	3.165	5227384	8.979
06		INDAF	04/05/13	1417	4847986	3.165	4193877	8.980
07		INDAG	04/05/13	1435	5342959	3.165	4760154	8.980
08		TOXAPHENE	04/05/13	1528	5312805	3.165	4975008	8.979
09		DS	05/08/13	0135	4595896	3.161	4141527	8.980
10		INDAE	05/08/13	0153	5547890	3.161	5116989	8.981
11		TOXAPH	05/08/13	0211	4713362	3.160	4355363	8.981
12	WN27MBS1	WN27MBS1	05/08/13	0228	5310596	3.160	5089048	8.974
13	WN27LCSS1	WN27LCSS1	05/08/13	0246	5032757	3.160	4732756	8.973
14	CG-MH-010-20	WN27A	05/08/13	0340	5221608	3.160	4720201	8.985
15	CG-MH-010-20	WN27AMS	05/08/13	0358	5374608	3.160	5059646	8.987
16	CG-MH-010-20	WN27AMSD	05/08/13	0415	5186782	3.160	4786191	8.985
17	ES-TS-INF-20	WN31A	05/08/13	0433	6289988	3.161	4927135	9.020
18	WN27LCSDS1	WN27LCSDS1	05/08/13	0527	5599264	3.160	4869522	8.973
19		DS	05/08/13	0602	4412035	3.160	3963868	8.975
20		INDAE	05/08/13	0620	5388860	3.160	4973861	8.975
21		DS	05/08/13	1715	4452384	3.160	3730334	8.978
22		INDAE	05/08/13	1732	4606200	3.161	3886005	8.979
23		TOXAPH	05/08/13	1750	4148076	3.161	3606518	8.980
24	CG-MH-010-20	WN27A	05/08/13	1808	5104914	3.160	4349446	8.973
25	ES-TS-INF-20	WN31A	05/08/13	1826	5265221	3.160	4608412	8.975
26		DS	05/08/13	1844	4741068	3.160	3797112	8.978
27		INDAE	05/08/13	1901	4721528	3.160	3843165	8.980
28		TOXAPH	05/08/13	1919	4137986	3.160	3482863	8.981

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

* Indicates value outside QC Limits

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	04/05/13	1247	21702340	3.333	7681727	10.368
02		INDAA	04/05/13	1305	24741508	3.333	9038709	10.366
03		INDAB	04/05/13	1323	25491655	3.333	9687228	10.367
04		INDAC	04/05/13	1341	25508207	3.333	9574018	10.367
05		INDAD	04/05/13	1358	26036651	3.334	9979752	10.368
06		INDAF	04/05/13	1417	21952139	3.333	8109922	10.368
07		INDAG	04/05/13	1435	24214609	3.333	9338784	10.367
08		TOXAPHENE	04/05/13	1528	24507429	3.333	9646485	10.367
09		DS	05/08/13	0135	25110132	3.331	11246418	10.361
10		INDAE	05/08/13	0153	29986568	3.330	14091218	10.362
11		TOXAPH	05/08/13	0211	25685217	3.330	12281080	10.361
12	WN27MBS1	WN27MBS1	05/08/13	0228	27392372	3.331	14536366	10.357
13	WN27LCSS1	WN27LCSS1	05/08/13	0246	25467745	3.330	13272223	10.358
14	CG-MH-010-20	WN27A	05/08/13	0340	23190958	3.330	8139307	10.365
15	CG-MH-010-20	WN27AMS	05/08/13	0358	18765104	3.330	7938408	10.367
16	CG-MH-010-20	WN27AMSD	05/08/13	0415	18292648	3.330	8130197	10.367
17	ES-TS-INF-20	WN31A	05/08/13	0433	15376770	3.330	6962958	10.388
18	WN27LCSDS1	WN27LCSDS1	05/08/13	0527	26917886	3.330	9724485	10.359
19		DS	05/08/13	0602	22330803	3.330	8666855	10.359
20		INDAE	05/08/13	0620	27376233	3.331	11364621	10.359
21		DS	05/08/13	1715	24597709	3.330	10088401	10.360
22		INDAE	05/08/13	1732	24467634	3.331	10167501	10.360
23		TOXAPH	05/08/13	1750	21770088	3.331	9021897	10.361
24	CG-MH-010-20	WN27A	05/08/13	1808	26356724	3.330	10361445	10.358
25	ES-TS-INF-20	WN31A	05/08/13	1826	24219365	3.330	9865983	10.359
26		DS	05/08/13	1844	23624251	3.330	9120055	10.360
27		INDAE	05/08/13	1901	25124831	3.330	9725369	10.361
28		TOXAPH	05/08/13	1919	21752207	3.330	8713837	10.362

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

* Indicates value outside QC Limits

PCB Analysis
Report and Summary QC Forms

ARI Job ID: WN27

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CG-MH-010-20130423-S
SAMPLE

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/08/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/02/13
Date Analyzed: 05/06/13 21:23
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

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

Percent Moisture: 40.4%

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	30	< 30 Y
11097-69-1	**Aroclor 1254**	**1.4**	**4.0**	**53**
11096-82-5	**Aroclor 1260**	**1.4**	**4.0**	**54**
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	94.8%
Tetrachlorometaxylene	78.8%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CG-MH-010-20130423-S
DILUTION

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/08/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/02/13
Date Analyzed: 05/08/13 04:29
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 40.4%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	5.1	20	< 20 U
53469-21-9	Aroclor 1242	6.8	20	< 20 U
12672-29-6	Aroclor 1248	6.8	30	< 30 Y
11097-69-1	**Aroclor 1254**	**6.8**	**20**	**58**
11096-82-5	**Aroclor 1260**	**6.8**	**20**	**46**
11104-28-2	Aroclor 1221	6.8	20	< 20 U
11141-16-5	Aroclor 1232	6.8	20	< 20 U
37324-23-5	Aroclor 1262	6.8	20	< 20 U
11100-14-4	Aroclor 1268	6.8	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	128%
Tetrachlorometaxylene	96.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WN27-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-050213	84.8%	64-105	75.2%	54-100	0
LCS-050213	89.5%	64-105	87.8%	54-100	0
LCSD-050213	87.0%	64-105	79.0%	54-100	0
CG-MH-010-20130423-S	94.8%	37-128	78.8%	45-102	0
CG-MH-010-20130423-S DL	128%	37-128	96.5%	45-102	0
CG-MH-010-20130423-S MS	106%	35-133	89.5%	53-116	0
CG-MH-010-20130423-S MSD	102%	35-133	89.8%	53-116	0

Microwave (MARS) Control Limits PCBSMM
Prep Method: SW3546
Log Number Range: 13-8552 to 13-8552

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: CG-MH-010-20130423-S
MS/MSD

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/08/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted MS/MSD: 05/02/13

Date Analyzed MS: 05/06/13 21:43
MSD: 05/06/13 22:03
Instrument/Analyst MS: ECD5/JGR
MSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 12.5 g-dry-wt
MSD: 12.5 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: 40.4%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Aroclor 1016	< 4.0 U	88.3	100	88.3%	88.6	100	88.6%	0.3%
Aroclor 1260	54	149	100	95.0%	158	100	104%	5.9%

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: CG-MH-010-20130423-S
MATRIX SPIKE

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/08/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/02/13
Date Analyzed: 05/06/13 21:43
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

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

Percent Moisture: 40.4%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	---
53469-21-9	Aroclor 1242	1.4	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.4	100	< 100 Y
11097-69-1	**Aroclor 1254**	**1.4**	**4.0**	**74**
11096-82-5	Aroclor 1260	1.4	4.0	---
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	106%
Tetrachlorometaxylene	89.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CG-MH-010-20130423-S
MATRIX SPIKE DUP

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/08/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/02/13
Date Analyzed: 05/06/13 22:03
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

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

Percent Moisture: 40.4%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	---
53469-21-9	Aroclor 1242	1.4	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.4	100	< 100 Y
11097-69-1	**Aroclor 1254**	**1.4**	**4.0**	**79**
11096-82-5	Aroclor 1260	1.4	4.0	---
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	102%
Tetrachlorometaxylene	89.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: LCS-050213
LCS/LCSD

Lab Sample ID: LCS-050213
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/08/13

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

Date Extracted LCS/LCSD: 05/02/13

Date Analyzed LCS: 05/06/13 19:02
LCSD: 05/06/13 19:22
Instrument/Analyst LCS: ECD5/JGR
LCSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

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

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	86.4	101	85.5%	80.0	101	79.2%	7.7%
Aroclor 1260	85.8	101	85.0%	84.3	101	83.5%	1.8%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	89.5%	87.0%
Tetrachlorometaxylene	87.8%	79.0%

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

PCB METHOD BLANK SUMMARY

BLANK NO. WO14MBS1

Lab Name: ANALYTICAL RESOURCES INC — Client: USGS

ARI Job No.: WN27 — Project: GREEN RIVER TOXIC LO

Lab Sample ID: WO14MBS1 — Lab File ID: 0506A008

Date Extracted: 05/02/13 — Matrix: SOLID

Date Analyzed: 05/06/13 — Instrument ID: ECD5

Time Analyzed: 1842 — GC Columns: ZB5/ZB35

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WO14LCSS1	WO14LCSS1	05/06/13
02	WO14LCSDS1	WO14LCSDS1	05/06/13
03	CG-MH-010-20130423-	WN27A	05/06/13
04	CG-MH-010-20130 MS	WN27AMS	05/06/13
04	CG-MH-010-20130 MSD	WN27AMSD	05/06/13
05	ES-TS-INF-20130424-	WN31A	05/06/13
06	CG-MH-010-20130423-	WN27A	05/08/13
07	ES-TS-INF-20130424-	WN31A	05/08/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-050213
METHOD BLANK

Lab Sample ID: MB-050213
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/08/13

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

Date Extracted: 05/02/13
Date Analyzed: 05/06/13 18:42
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

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

Percent Moisture: NA

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

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	84.8%
Tetrachlorometaxylene	75.2%

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 04/16/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 4.31- 4.51	1.4492	1.3336	1.3448	1.2692	1.2337	1.1774	1.3013	7.4
DCB 12.73-12.93	1.5345	1.4214	1.2892	1.1151	1.0172	0.9367	1.2190	19.3

Aroclor-1016 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 5.96- 6.16	0.0395	0.0357	0.0363	0.0327	0.0306	0.0285	0.0339	11.9
2 6.37- 6.57	0.1294	0.1113	0.1126	0.1002	0.0938	0.0863	0.1056	14.6
3 6.52- 6.72	0.0556	0.0476	0.0500	0.0441	0.0412	0.0377	0.0460	14.0
4 6.63- 6.83	0.0370	0.0318	0.0358	0.0322	0.0301	0.0277	0.0324	10.7

AROCLOR AVERAGE %RSD = 12.8

Aroclor-1260 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 9.87-10.07	0.0531	0.0490	0.0464	0.0429	0.0390	0.0351	0.0443	15.0
2 10.19-10.39	0.0549	0.0489	0.0465	0.0433	0.0394	0.0356	0.0448	12.5
3 10.56-10.76	0.1288	0.1194	0.1132	0.1052	0.0959	0.0836	0.1077	11.2
4 10.96-11.16	0.0697	0.0621	0.0603	0.0568	0.0524	0.0478	0.0582	10.7
5 11.15-11.35	0.0376	0.0315	0.0321	0.0304	0.0280	0.0258	0.0309	11.1

AROCLOR AVERAGE %RSD = 12.1

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 04/16/13

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	4.32- 4.52	1.3119	1.1898	1.2125	1.1404	1.1255	1.0814	1.1769	6.9
DCB	13.11-13.31	1.3741	1.1837	1.1716	1.0462	0.9751	0.9054	1.1094	15.3

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	6.07- 6.27	0.0611	0.0511	0.0482	0.0424	0.0395	0.0362	0.0464	19.5
2	6.70- 6.90	0.1246	0.1050	0.1003	0.0892	0.0866	0.0805	0.0977	16.3
3	7.09- 7.29	0.0313	0.0270	0.0257	0.0240	0.0231	0.0217	0.0255	13.4
4	7.26- 7.46	0.0304	0.0255	0.0240	0.0217	0.0207	0.0192	0.0236	17.0

AROCLOR AVERAGE %RSD = 16.5

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	10.16-10.36	0.0577	0.0481	0.0459	0.0412	0.0385	0.0355	0.0445	18.0
2	10.61-10.81	0.0678	0.0577	0.0550	0.0500	0.0471	0.0437	0.0536	16.2
3	10.89-11.09	0.1387	0.1133	0.1090	0.0996	0.0943	0.0879	0.1071	16.8
4	11.41-11.61	0.0376	0.0326	0.0312	0.0288	0.0274	0.0256	0.0305	14.0

AROCLOR AVERAGE %RSD = 16.2

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 4.31- 4.51	1.2778	1.2769	1.3021	1.2444	1.1977	1.1434	1.2404	4.8
DCB 12.73-12.93	1.4525	1.2874	1.2269	1.1209	1.0641	1.0185	1.1950	13.5

Aroclor-1016 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 5.96- 6.16	0.0419	0.0392	0.0380	0.0346	0.0323	0.0304	0.0361	12.1
2 6.37- 6.57	0.1293	0.1202	0.1174	0.1063	0.0998	0.0934	0.1111	12.2
3 6.52- 6.72	0.0588	0.0546	0.0526	0.0473	0.0442	0.0411	0.0498	13.5
4 6.63- 6.83	0.0432	0.0407	0.0393	0.0352	0.0334	0.0312	0.0372	12.4

AROCLOR AVERAGE %RSD = 12.6

Aroclor-1260 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 9.87-10.07	0.0809	0.0714	0.0687	0.0624	0.0572	0.0524	0.0655	15.7
2 10.18-10.38	0.0749	0.0676	0.0659	0.0605	0.0560	0.0517	0.0628	11.1
3 10.56-10.76	0.1738	0.1618	0.1583	0.1468	0.1383	0.1296	0.1514	8.8
4 10.96-11.16	0.0842	0.0787	0.0766	0.0716	0.0683	0.0640	0.0739	8.2
5 11.15-11.35	0.0430	0.0421	0.0415	0.0388	0.0375	0.0354	0.0397	5.7

AROCLOR AVERAGE %RSD = 9.9

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

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

Aroclor-1016 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 6.06- 6.26	0.0514	0.0510	0.0486	0.0445	0.0410	0.0373	0.0456	12.5
2 6.70- 6.90	0.1117	0.1063	0.1043	0.0972	0.0916	0.0843	0.0992	10.2
3 7.08- 7.28	0.0278	0.0270	0.0274	0.0257	0.0247	0.0232	0.0259	6.9
4 7.26- 7.46	0.0276	0.0258	0.0256	0.0233	0.0223	0.0204	0.0242	10.9

AROCLOR AVERAGE %RSD = 10.1

Aroclor-1260 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 10.16-10.36	0.0846	0.0784	0.0760	0.0710	0.0656	0.0598	0.0726	12.4
2 10.61-10.81	0.0966	0.0905	0.0885	0.0844	0.0782	0.0718	0.0850	10.5
3 10.88-11.08	0.1687	0.1671	0.1641	0.1571	0.1479	0.1368	0.1569	7.9
4 11.40-11.60	0.0485	0.0457	0.0437	0.0415	0.0392	0.0366	0.0425	10.2

AROCLOR AVERAGE %RSD = 10.3

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 04/16/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	5.056	4.96- 5.16	0.03196
2	6.463	6.36- 6.56	0.01009
3	7.876	7.78- 7.98	0.01396

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.054	5.95- 6.15	0.01408
2	6.461	6.36- 6.56	0.04340
3	7.438	7.34- 7.54	0.02193
4	7.871	7.77- 7.97	0.02572

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.055	5.96- 6.16	0.02633
2	6.462	6.36- 6.56	0.08105
3	6.612	6.51- 6.71	0.03590
4	7.867	7.77- 7.97	0.04490

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.467	6.37- 6.57	0.05052
2	7.445	7.34- 7.54	0.05597
3	7.876	7.78- 7.98	0.07224
4	8.111	8.01- 8.21	0.05114

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 04/16/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.194	8.09- 8.29	0.07442
2	8.567	8.47- 8.67	0.04939
3	8.702	8.60- 8.80	0.09915
4	9.053	8.95- 9.15	0.10641
5	9.364	9.26- 9.46	0.04380

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.282	10.18-10.38	0.05136
2	10.659	10.56-10.76	0.13372
3	11.059	10.96-11.16	0.04748
4	11.247	11.15-11.35	0.05697
5	11.919	11.82-12.02	0.05591

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.174	11.07-11.27	0.13029
2	11.245	11.14-11.34	0.13012
3	11.631	11.53-11.73	0.11247
4	12.421	12.32-12.52	0.32821

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 04/16/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	3.689	3.59- 3.79	0.00835
2	5.088	4.99- 5.19	0.01307
3	5.340	5.24- 5.44	0.00790
4	5.455	5.35- 5.55	0.02385

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.161	6.06- 6.26	0.01989
2	6.797	6.70- 6.90	0.03907
3	7.007	6.91- 7.11	0.01634
4	8.237	8.14- 8.34	0.01338

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.161	6.06- 6.26	0.03437
2	6.798	6.70- 6.90	0.07332
3	7.005	6.91- 7.11	0.03073
4	8.233	8.13- 8.33	0.02528

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.800	6.70- 6.90	0.04475
2	7.707	7.61- 7.81	0.03673
3	8.239	8.14- 8.34	0.03780
4	8.583	8.48- 8.68	0.04936

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 04/16/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.297	8.20- 8.40	0.03682
2	8.474	8.37- 8.57	0.04547
3	8.995	8.89- 9.09	0.03515
4	9.146	9.05- 9.25	0.07596
5	9.930	9.83-10.03	0.04386

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.260	10.16-10.36	0.06622
2	10.711	10.61-10.81	0.05736
3	10.987	10.89-11.09	0.13232
4	11.567	11.47-11.67	0.08604
5	12.309	12.21-12.41	0.05172

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.506	11.41-11.61	0.13392
2	11.573	11.47-11.67	0.13215
3	11.969	11.87-12.07	0.10949
4	12.792	12.69-12.89	0.32319

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

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

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

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.059	5.96- 6.16	0.02881
2	6.467	6.37- 6.57	0.08837
3	6.617	6.52- 6.72	0.03943
4	7.873	7.77- 7.97	0.04869

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.463	6.36- 6.56	0.05630
2	7.440	7.34- 7.54	0.06332
3	7.872	7.77- 7.97	0.08051
4	8.108	8.01- 8.21	0.05614

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.190	8.09- 8.29	0.07461
2	8.561	8.46- 8.66	0.04925
3	8.698	8.60- 8.80	0.10267
4	9.050	8.95- 9.15	0.10574
5	9.360	9.26- 9.46	0.03999

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

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

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

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

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

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.164	6.06- 6.26	0.03645
2	6.801	6.70- 6.90	0.08006
3	7.010	6.91- 7.11	0.03345
4	8.237	8.14- 8.34	0.02802

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.798	6.70- 6.90	0.05013
2	7.704	7.60- 7.80	0.04157
3	8.236	8.14- 8.34	0.04304
4	8.581	8.48- 8.68	0.05593

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.297	8.20- 8.40	0.03879
2	8.473	8.37- 8.57	0.04792
3	8.995	8.89- 9.09	0.03671
4	9.145	9.05- 9.25	0.07862
5	9.931	9.83-10.03	0.04427

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

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

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1254 Time Analyzed :1802

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.19	8.09	8.29	244.8	250.0	-2.1
Aroclor-1254-2	8.56	8.47	8.67	223.2	250.0	-10.7
Aroclor-1254-3	8.69	8.60	8.80	273.9	250.0	9.6
Aroclor-1254-4	9.05	8.95	9.15	281.1	250.0	12.4
Aroclor-1254-5	9.36	9.26	9.46	274.9	250.0	10.0

AVERAGE %D = 9.0

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1254 Time Analyzed :1802

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.29	8.20	8.40	275.8	250.0	10.3
Aroclor-1254-2	8.47	8.37	8.57	277.2	250.0	10.9
Aroclor-1254-3	8.99	8.89	9.09	278.1	250.0	11.2
Aroclor-1254-4	9.14	9.05	9.25	248.9	250.0	-0.4
Aroclor-1254-5	9.93	9.83	10.03	286.7	250.0	14.7

AVERAGE %D = 9.5

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :1822

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.05	5.96	6.16	269.5	250.0	7.8
Aroclor-1016-2	6.46	6.37	6.57	269.5	250.0	7.8
Aroclor-1016-3	6.61	6.52	6.72	276.6	250.0	10.6
Aroclor-1016-4	6.72	6.63	6.83	289.9	250.0	16.0

AVERAGE %D = 10.6

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :1822

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.87	10.07	262.2	250.0	4.9
Aroclor-1260-2	10.28	10.19	10.39	251.3	250.0	0.5
Aroclor-1260-3	10.65	10.56	10.76	251.3	250.0	0.5
Aroclor-1260-4	11.05	10.96	11.16	244.0	250.0	-2.4
Aroclor-1260-5	11.24	11.15	11.35	250.4	250.0	0.2

AVERAGE %D = 1.7

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :1822

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.07	6.27	243.0	250.0	-2.8
Aroclor-1016-2	6.80	6.70	6.90	210.4	250.0	-15.8
Aroclor-1016-3	7.18	7.09	7.29	262.3	250.0	4.9
Aroclor-1016-4	7.35	7.26	7.46	254.4	250.0	1.8

AVERAGE %D = 6.3

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :1822

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	266.0	250.0	6.4
Aroclor-1260-2	10.71	10.61	10.81	276.6	250.0	10.6
Aroclor-1260-3	10.98	10.89	11.09	266.2	250.0	6.5
Aroclor-1260-4	11.50	11.41	11.61	277.3	250.0	10.9

AVERAGE %D = 8.6

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1242 Time Analyzed :2043

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.06	5.96	6.16	272.8	250.0	9.1
Aroclor-1242-2	6.46	6.36	6.56	274.8	250.0	9.9
Aroclor-1242-3	6.61	6.51	6.71	278.5	250.0	11.4
Aroclor-1242-4	7.87	7.77	7.97	274.9	250.0	10.0

AVERAGE %D = 10.1

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1242 Time Analyzed :2043

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.16	6.06	6.26	257.3	250.0	2.9
Aroclor-1242-2	6.80	6.70	6.90	220.7	250.0	-11.7
Aroclor-1242-3	7.01	6.91	7.11	263.4	250.0	5.4
Aroclor-1242-4	8.23	8.13	8.33	273.3	250.0	9.3

AVERAGE %D = 7.3

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2103

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.05	5.96	6.16	264.2	250.0	5.7
Aroclor-1016-2	6.46	6.37	6.57	268.0	250.0	7.2
Aroclor-1016-3	6.61	6.52	6.72	274.8	250.0	9.9
Aroclor-1016-4	6.72	6.63	6.83	288.3	250.0	15.3

AVERAGE %D = 9.5

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2103

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.87	10.07	257.5	250.0	3.0
Aroclor-1260-2	10.28	10.19	10.39	249.0	250.0	-0.4
Aroclor-1260-3	10.65	10.56	10.76	254.2	250.0	1.7
Aroclor-1260-4	11.05	10.96	11.16	245.4	250.0	-1.8
Aroclor-1260-5	11.24	11.15	11.35	258.7	250.0	3.5

AVERAGE %D = 2.1

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2103

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.07	6.27	239.5	250.0	-4.2
Aroclor-1016-2	6.80	6.70	6.90	207.9	250.0	-16.8
Aroclor-1016-3	7.18	7.09	7.29	258.6	250.0	3.4
Aroclor-1016-4	7.35	7.26	7.46	251.0	250.0	0.4

AVERAGE %D = 6.2

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2103

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	263.3	250.0	5.3
Aroclor-1260-2	10.71	10.61	10.81	273.0	250.0	9.2
Aroclor-1260-3	10.98	10.89	11.09	265.8	250.0	6.3
Aroclor-1260-4	11.50	11.41	11.61	275.1	250.0	10.0

AVERAGE %D = 7.7

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1248 Time Analyzed :2243

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Aroclor-1248-1	6.47	6.37	6.57	198.9	250.0	-20.4	
Aroclor-1248-2	7.44	7.34	7.54	171.3	250.0	-31.5	<-
Aroclor-1248-3	7.87	7.78	7.98	173.0	250.0	-30.8	<-
Aroclor-1248-4	8.11	8.01	8.21	174.1	250.0	-30.3	<-

AVERAGE %D = 28.2

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1248 Time Analyzed :2243

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Aroclor-1248-1	6.80	6.70	6.90	190.3	250.0	-23.9	
Aroclor-1248-2	7.71	7.61	7.81	180.9	250.0	-27.6	<-
Aroclor-1248-3	8.24	8.14	8.34	181.3	250.0	-27.5	<-
Aroclor-1248-4	8.58	8.48	8.68	168.2	250.0	-32.7	<-

AVERAGE %D = 27.9

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2303

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	209.9	250.0	-16.0
Aroclor-1016-2	6.47	6.37	6.57	212.4	250.0	-15.0
Aroclor-1016-3	6.62	6.52	6.72	204.8	250.0	-18.1
Aroclor-1016-4	6.73	6.63	6.83	207.8	250.0	-16.9

AVERAGE %D = 16.5

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2303

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.97	9.87	10.07	277.8	250.0	11.1
Aroclor-1260-2	10.29	10.19	10.39	282.7	250.0	13.1
Aroclor-1260-3	10.66	10.56	10.76	295.8	250.0	18.3
Aroclor-1260-4	11.06	10.96	11.16	255.4	250.0	2.1
Aroclor-1260-5	11.25	11.15	11.35	253.5	250.0	1.4

AVERAGE %D = 9.2

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2303

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Aroclor-1016-1	6.17	6.07	6.27	202.0	250.0	-19.2	
Aroclor-1016-2	6.80	6.70	6.90	184.9	250.0	-26.0	<-
Aroclor-1016-3	7.19	7.09	7.29	182.2	250.0	-27.1	<-
Aroclor-1016-4	7.36	7.26	7.46	175.8	250.0	-29.7	<-

AVERAGE %D = 25.5

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2303

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Aroclor-1260-1	10.26	10.16	10.36	314.6	250.0	25.8	<-
Aroclor-1260-2	10.71	10.61	10.81	324.2	250.0	29.7	<-
Aroclor-1260-3	10.99	10.89	11.09	302.7	250.0	21.1	
Aroclor-1260-4	11.51	11.41	11.61	287.3	250.0	14.9	

AVERAGE %D = 22.9

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1248 Time Analyzed :0348

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.46	6.36	6.56	241.4	250.0	-3.4
Aroclor-1248-2	7.44	7.34	7.54	223.0	250.0	-10.8
Aroclor-1248-3	7.87	7.77	7.97	219.8	250.0	-12.1
Aroclor-1248-4	8.11	8.01	8.21	217.8	250.0	-12.9

AVERAGE %D = 9.8

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1248 Time Analyzed :0348

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.80	6.70	6.90	242.8	250.0	-2.9
Aroclor-1248-2	7.70	7.60	7.80	234.0	250.0	-6.4
Aroclor-1248-3	8.24	8.14	8.34	229.5	250.0	-8.2
Aroclor-1248-4	8.58	8.48	8.68	222.6	250.0	-11.0

AVERAGE %D = 7.1

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0408

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	232.1	250.0	-7.2
Aroclor-1016-2	6.47	6.37	6.57	234.5	250.0	-6.2
Aroclor-1016-3	6.62	6.52	6.72	230.1	250.0	-7.9
Aroclor-1016-4	6.73	6.63	6.83	228.9	250.0	-8.4

AVERAGE %D = 7.4

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0408

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.97	9.87	10.07	199.9	250.0	-20.0
Aroclor-1260-2	10.28	10.18	10.38	197.8	250.0	-20.9
Aroclor-1260-3	10.66	10.56	10.76	205.8	250.0	-17.7
Aroclor-1260-4	11.06	10.96	11.16	206.3	250.0	-17.5
Aroclor-1260-5	11.25	11.15	11.35	205.4	250.0	-17.8

AVERAGE %D = 18.8

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0408

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	240.5	250.0	-3.8
Aroclor-1016-2	6.80	6.70	6.90	238.6	250.0	-4.6
Aroclor-1016-3	7.18	7.08	7.28	234.7	250.0	-6.1
Aroclor-1016-4	7.36	7.26	7.46	228.6	250.0	-8.6

AVERAGE %D = 5.8

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0408

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	212.9	250.0	-14.8
Aroclor-1260-2	10.71	10.61	10.81	213.8	250.0	-14.5
Aroclor-1260-3	10.98	10.88	11.08	222.5	250.0	-11.0
Aroclor-1260-4	11.50	11.40	11.60	220.7	250.0	-11.7

AVERAGE %D = 13.0

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1254 Time Analyzed :0630

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.19	8.09	8.29	206.4	250.0	-17.4
Aroclor-1254-2	8.56	8.46	8.66	199.5	250.0	-20.2
Aroclor-1254-3	8.70	8.60	8.80	201.0	250.0	-19.6
Aroclor-1254-4	9.05	8.95	9.15	201.6	250.0	-19.3
Aroclor-1254-5	9.36	9.26	9.46	197.6	250.0	-21.0

AVERAGE %D = 19.5

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1254 Time Analyzed :0630

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.30	8.20	8.40	212.7	250.0	-14.9
Aroclor-1254-2	8.47	8.37	8.57	213.1	250.0	-14.8
Aroclor-1254-3	8.99	8.89	9.09	204.1	250.0	-18.4
Aroclor-1254-4	9.15	9.05	9.25	203.8	250.0	-18.5
Aroclor-1254-5	9.93	9.83	10.03	200.9	250.0	-19.6

AVERAGE %D = 17.2

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0651

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	230.2	250.0	-7.9
Aroclor-1016-2	6.47	6.37	6.57	232.4	250.0	-7.0
Aroclor-1016-3	6.62	6.52	6.72	226.4	250.0	-9.4
Aroclor-1016-4	6.73	6.63	6.83	223.6	250.0	-10.6

AVERAGE %D = 8.7

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0651

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.97	9.87	10.07	189.6	250.0	-24.2
Aroclor-1260-2	10.28	10.18	10.38	187.8	250.0	-24.9
Aroclor-1260-3	10.66	10.56	10.76	194.9	250.0	-22.0
Aroclor-1260-4	11.06	10.96	11.16	194.7	250.0	-22.1
Aroclor-1260-5	11.25	11.15	11.35	192.7	250.0	-22.9

AVERAGE %D = 23.2

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0651

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	241.1	250.0	-3.6
Aroclor-1016-2	6.80	6.70	6.90	237.7	250.0	-4.9
Aroclor-1016-3	7.18	7.08	7.28	234.5	250.0	-6.2
Aroclor-1016-4	7.36	7.26	7.46	225.5	250.0	-9.8

AVERAGE %D = 6.1

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0651

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	204.3	250.0	-18.3
Aroclor-1260-2	10.71	10.61	10.81	208.8	250.0	-16.5
Aroclor-1260-3	10.98	10.88	11.08	217.6	250.0	-13.0
Aroclor-1260-4	11.50	11.40	11.60	215.1	250.0	-13.9

AVERAGE %D = 15.4

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

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

Init. Calib. Date: 04/16/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	48646950	2.242	81878684	13.191
	UPPER LIMIT	97293900	2.342	163757368	13.291
	LOWER LIMIT	24323475	2.142	40939342	13.091

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		IB	04/16/13	1345			40577*	13.198
02		AR1660 250	04/16/13	1405	48646950	2.242	81878684	13.191
03		AR1660 20	04/16/13	1425	50033552	2.242	86581362	13.190
04		AR1660 50	04/16/13	1445	50522404	2.241	88346709	13.190
05		AR1660 1000	04/16/13	1505	47829881	2.241	84747587	13.189
06		AR1660 100	04/16/13	1525	49491748	2.241	87022078	13.189
07		AR1660 500	04/16/13	1545	48471309	2.241	83893855	13.188
08		AR1242	04/16/13	1605	48740551	2.243	82526190	13.191
09		AR1248	04/16/13	1625	50911859	2.242	85659578	13.191
10		AR1254	04/16/13	1646	48930377	2.242	81889180	13.191
11		AR2162	04/16/13	1706	48787562	2.243	82562472	13.192
12		AR3268	04/16/13	1726	48833507	2.242	86055260	13.192
13	ZZZZZ	ZZZZZ	04/16/13	1746	51001242	2.242	88986803	13.191
14	ZZZZZ	ZZZZZ	04/16/13	1807	49939659	2.243	86667397	13.190
15	ZZZZZ	ZZZZZ	04/16/13	1827	50495612	2.242	87535490	13.191
16	ZZZZZ	ZZZZZ	04/16/13	1847	48414554	2.243	87556282	13.191
17	ZZZZZ	ZZZZZ	04/16/13	1907	50527664	2.241	87430012	13.191
18	ZZZZZ	ZZZZZ	04/16/13	1927	51740334	2.242	88870021	13.191
19		AR1254	05/06/13	1802	48419450	2.244	82802662	13.186
20		AR1660	05/06/13	1822	42607777	2.242	74194353	13.185
21	WO14MBS1	WO14MBS1	05/06/13	1842	55886984	2.243	96255452	13.185
22	WO14LCSS1	WO14LCSS1	05/06/13	1902	52490645	2.243	92004843	13.185
23	WO14LCSDS1	WO14LCSDS1	05/06/13	1922	56059074	2.244	96999147	13.185
24		AR1242	05/06/13	2043	48909239	2.245	81323597	13.186
25		AR1660	05/06/13	2103	44586778	2.243	76967556	13.185
26	CG-MH-010-20	WN27A	05/06/13	2123	52899222	2.247	60035869	13.208
27	CG-MH-010-20	WN27AMS	05/06/13	2143	50387145	2.249	48042336	13.206
28	CG-MH-010-20	WN27AMSD	05/06/13	2203	50682807	2.249	44241720	13.208
29	ES-TS-INF-20	WN31A	05/06/13	2223	48641408	2.254	45720799	13.252
30		AR1248	05/06/13	2243	59147946	2.251	51063965	13.193
31		AR1660	05/06/13	2303	43905947	2.252	37691491*	13.192

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

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

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

Init. Calib. Date: 04/16/13

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

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	14456526	2.719	16263628	14.072
				UPPER LIMIT	28913052	2.819	32527256	14.172
				LOWER LIMIT	7228263	2.619	8131814	13.972
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		IB	04/16/13	1345	26669*	2.726	32767*	14.064
02		AR1660 250	04/16/13	1405	14456526	2.719	16263628	14.072
03		AR1660 20	04/16/13	1425	14453887	2.721	16475546	14.074
04		AR1660 50	04/16/13	1445	14648372	2.719	16608531	14.074
05		AR1660 1000	04/16/13	1505	14373421	2.719	16751848	14.073
06		AR1660 100	04/16/13	1525	14814772	2.718	16888223	14.074
07		AR1660 500	04/16/13	1545	14695511	2.720	16865680	14.072
08		AR1242	04/16/13	1605	14577569	2.719	16939274	14.072
09		AR1248	04/16/13	1625	15380233	2.719	17640987	14.071
10		AR1254	04/16/13	1646	14676530	2.719	16779133	14.073
11		AR2162	04/16/13	1706	14371825	2.719	17005647	14.074
12		AR3268	04/16/13	1726	14519211	2.718	17039356	14.076
13	ZZZZZ	ZZZZZ	04/16/13	1746	15142458	2.719	17563296	14.074
14	ZZZZZ	ZZZZZ	04/16/13	1807	14906989	2.720	17073568	14.073
15	ZZZZZ	ZZZZZ	04/16/13	1827	14997960	2.719	17267294	14.074
16	ZZZZZ	ZZZZZ	04/16/13	1847	15086663	2.720	17274152	14.073
17	ZZZZZ	ZZZZZ	04/16/13	1907	14807065	2.718	17280448	14.074
18	ZZZZZ	ZZZZZ	04/16/13	1927	15260632	2.719	17569147	14.072
19		AR1254	05/06/13	1802	14233456	2.721	15559769	14.069
20		AR1660	05/06/13	1822	12690692	2.720	13855174	14.070
21	WO14MBS1	WO14MBS1	05/06/13	1842	16871793	2.721	18204310	14.070
22	WO14LCSS1	WO14LCSS1	05/06/13	1902	15566793	2.723	17329892	14.070
23	WO14LCSDS1	WO14LCSDS1	05/06/13	1922	16206025	2.722	18174342	14.069
24		AR1242	05/06/13	2043	14063095	2.721	14993516	14.069
25		AR1660	05/06/13	2103	12959627	2.721	14141138	14.069
26	CG-MH-010-20	WN27A	05/06/13	2123	16132918	2.724	12426771	14.081
27	CG-MH-010-20	WN27AMS	05/06/13	2143	15088103	2.725	9761622	14.083
28	CG-MH-010-20	WN27AMSD	05/06/13	2203	14914589	2.728	9296772	14.083
29	ES-TS-INF-20	WN31A	05/06/13	2223	14523544	2.732	9434284	14.114
30		AR1248	05/06/13	2243	17050048	2.727	9128992	14.075
31		AR1660	05/06/13	2303	12605877	2.728	6673150*	14.074

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

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

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

Init. Calib. Date: 05/07/13

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	48807947	2.249	51001521	13.191
02		0.25PPMAR166	05/07/13	1639	48977254	2.250	50004151	13.191
03		0.02PPMAR166	05/07/13	1659	49978735	2.250	50389911	13.191
04		0.05PPMAR166	05/07/13	1719	50752482	2.250	53170067	13.191
05		1PPMAR1660	05/07/13	1739	49361946	2.249	53269354	13.189
06		0.1PPMAR1660	05/07/13	1759	51692067	2.249	53692342	13.191
07		0.5PPMAR1660	05/07/13	1819	50537542	2.249	53291913	13.190
08		AR1242	05/07/13	1839	51594521	2.248	55145987	13.190
09		AR1248	05/07/13	1859	52790343	2.249	57162764	13.190
10		AR1254	05/07/13	1920	52930034	2.249	57859101	13.190
11		AR2162	05/07/13	1940	53739671	2.248	58323154	13.191
12		AR3268	05/07/13	2000	53262724	2.248	57460185	13.191
13	ZZZZZ	ZZZZZ	05/07/13	2021	54248541	2.248	60099807	13.190
14	ZZZZZ	ZZZZZ	05/07/13	2041	53651835	2.248	60660565	13.190
15	ZZZZZ	ZZZZZ	05/07/13	2101	53642771	2.248	58188446	13.191
16	ZZZZZ	ZZZZZ	05/07/13	2121	54355833	2.249	58930522	13.190
17	ZZZZZ	ZZZZZ	05/07/13	2142	54884040	2.249	58566252	13.190
18	ZZZZZ	ZZZZZ	05/07/13	2202	54747539	2.248	60316622	13.190
19		AR1248	05/08/13	0348	57636312	2.247	59113555	13.188
20		AR1660	05/08/13	0408	57225805	2.247	60264061	13.188
21	CG-MH-010-20	WN27A	05/08/13	0429	55268578	2.248	58552850	13.191
22	ES-TS-INF-20	WN31A	05/08/13	0530	49200228	2.249	51794064	13.206
23		AR1254	05/08/13	0630	57538144	2.247	56147205	13.189
24		AR1660	05/08/13	0651	57738341	2.247	59085325	13.188

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

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

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

Init. Calib. Date: 05/07/13

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

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	14839715	2.727	9345340	14.074
				UPPER LIMIT	29679430	2.827	18690680	14.174
				LOWER LIMIT	7419858	2.627	4672670	13.974
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	15184482	2.727	9588268	14.075
02		0.25PPMAR166	05/07/13	1639	14839715	2.727	9345340	14.074
03		0.02PPMAR166	05/07/13	1659	14776833	2.727	9354827	14.073
04		0.05PPMAR166	05/07/13	1719	15017003	2.726	9808139	14.073
05		1PPMAR1660	05/07/13	1739	14864205	2.727	9909484	14.072
06		0.1PPMAR1660	05/07/13	1759	15354151	2.725	9856374	14.073
07		0.5PPMAR1660	05/07/13	1819	14890872	2.725	9751846	14.073
08		AR1242	05/07/13	1839	15094795	2.728	10120992	14.073
09		AR1248	05/07/13	1859	15297537	2.725	10392760	14.073
10		AR1254	05/07/13	1920	15196733	2.725	10477901	14.072
11		AR2162	05/07/13	1940	15340978	2.724	10583916	14.072
12		AR3268	05/07/13	2000	15239954	2.725	10518547	14.073
13	ZZZZZ	ZZZZZ	05/07/13	2021	15658755	2.725	10888882	14.072
14	ZZZZZ	ZZZZZ	05/07/13	2041	15441440	2.724	10952020	14.072
15	ZZZZZ	ZZZZZ	05/07/13	2101	15360402	2.725	10510294	14.073
16	ZZZZZ	ZZZZZ	05/07/13	2121	15522820	2.725	10608758	14.073
17	ZZZZZ	ZZZZZ	05/07/13	2142	15378234	2.725	10470042	14.073
18	ZZZZZ	ZZZZZ	05/07/13	2202	15307215	2.724	10773388	14.074
19		AR1248	05/08/13	0348	15578403	2.723	9865366	14.071
20		AR1660	05/08/13	0408	15463967	2.723	9866019	14.071
21	CG-MH-010-20	WN27A	05/08/13	0429	15716950	2.723	10635473	14.073
22	ES-TS-INF-20	WN31A	05/08/13	0530	13559510	2.724	9519479	14.082
23		AR1254	05/08/13	0630	15370880	2.723	9337721	14.071
24		AR1660	05/08/13	0651	15320524	2.723	9330725	14.072

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

* Indicates value outside QC Limits

TPHD Analysis
Report and Summary QC Forms

ARI Job ID: WN27

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: WN27-SAIC
Project: NPDES Sampling Support
209977

Matrix: Sediment

Date Received: 04/23/13

Data Release Authorized: MW
Reported: 05/03/13

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-042613	Method Blank	04/30/13	1.0	Diesel	< 50 U	50	14
13-8552		FID4A		Motor Oil	< 100 U	100	25
				HC ID	---		
				o-Terphenyl	103%		
WN27A	CG-MH-010-20130423-S	04/30/13	5.0	**Diesel**	**1,800**	420	110
13-8552		FID4A		**Motor Oil**	**6,600**	840	210
				HC ID	DRO/MOTOR OIL		
				o-Terphenyl	80.3%		

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: WN27-SAIC
Project: NPDES Sampling Support
209977

Client ID	OTER	TOT OUT
042613MBS	103%	0
042613LCS	103%	0
CG-MH-010-20130423-S	80.3%	0
CG-MH-010-20130423-S MS	86.9%	0
CG-MH-010-20130423-S MSD	78.3%	0

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

Prep Method: SW3546
Log Number Range: 13-8552 to 13-8552

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CG-MH-010-20130423-S
MS/MSD

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/03/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted MS/MSD: 04/26/13

Date Analyzed MS: 04/30/13 17:09
MSD: 04/30/13 17:30
Instrument/Analyst MS: FID4A/JLW
MSD: FID4A/JLW

Sample Amount MS: 5.98 g-dry-wt
MSD: 5.98 g-dry-wt
Final Extract Volume MS: 10 mL
MSD: 10 mL
Dilution Factor MS: 5.00
MSD: 5.00
Percent Moisture: 40.4%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	1,800	4,440	2,510	105%	3,840	2,510	81.3%	14.5%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	86.9%	78.3%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID **Sample ID: LCS-042613**
Page 1 of 1 **LAB CONTROL**

Lab Sample ID: LCS-042613 QC Report No: WN27-SAIC
LIMS ID: 13-8552 Project: NPDES Sampling Support
Matrix: Sediment 209977
Data Release Authorized: Date Sampled: NA
Reported: 05/03/13 Date Received: NA

Date Extracted: 04/26/13 Sample Amount: 10.0 g-dry-wt
Date Analyzed: 04/30/13 16:28 Final Extract Volume: 10 mL
Instrument/Analyst: FID4A/JLW Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	1,460	1,500	97.3%

TPHD Surrogate Recovery

o-Terphenyl	103%

Results reported in mg/kg

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: WN27
Matrix: Sediment Project: NPDES Sampling Support
Date Received: 04/23/13 209977

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-8552-042613MB1	Method Blank	10.0 g	10.0 mL	-	04/26/13
13-8552-042613LCS1	Lab Control	10.0 g	10.0 mL	-	04/26/13
13-8552-WN27A	CG-MH-010-20130423-5.98 g		10.0 mL	D	04/26/13
13-8552-WN27AMS	CG-MH-010-20130423-5.98 g		10.0 mL	D	04/26/13
13-8552-WN27AMSD	CG-MH-010-20130423-5.98 g		10.0 mL	D	04/26/13

Basis: D=Dry Weight W=As Received

4

TPH METHOD BLANK SUMMARY

BLANK NO.

WN27MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

SDG No.: WN27

Project No.: NPDES SAMPLING SUPPORT

Date Extracted: 04/26/13

Matrix: SOLID

Date Analyzed : 04/30/13

Instrument ID : FID4A

Time Analyzed : 1607

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WN27LCSS1	WN27LCSS1	04/30/13
02	CG-MH-010-20	WN27A	04/30/13
03	CG-MH-010-20	WN27AMS	04/30/13
04	CG-MH-010-20	WN27AMSD	04/30/13
05	ES-TS-INF-20	WN31A	04/30/13
06			
07			
08			
09			
10			
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12			
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FORM IV TPH

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

Instrument: FID4A.I
Project: NPDES Sampling Support

Calibration Date: 13-APR-2013
SDG No.: WN27/WN31

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	15188	15021	14479	14279	14226	13910	14517	3.4
AK Diesel	17981	17836	17184	16948	16866	16485	17217	3.4
OR Diesel	18067	17904	17254	17021	16941	16562	17291	3.4
Cal Diesel	17937	17789	17145	16910	16821	16447	17175	3.4
o-Terph	20876	20737	19497	18356	18320	17911	19283	6.7

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

Quant Ranges : WA Diesel C12-C24 (3.908-7.326)
AK Diesel C10-C25 (2.967-7.574)
OR Diesel C10-C28 (2.967-8.269)
Cal Diesel C10-C24 (2.967-7.326)

Calibration Files	Analysis Time
0413a006.d	13-APR-2013 11:53
0413a007.d	13-APR-2013 12:13
0413a008.d	13-APR-2013 12:34
0413a009.d	13-APR-2013 12:54
0413a010.d	13-APR-2013 13:15
0413a011.d	13-APR-2013 13:35

6a
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

Instrument: FID4A.I
Project: NPDES Sampling Support

Calibration Date: 13-APR-2013
SDG No.: WN27/WN31

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	14286	14877	13594	13683	13271	11581	13549	8.3
Triac Surr	18499	18745	18903	18271	17525	17235	18196	3.7

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

Calibration Files	Analysis Time
0413a013.d	13-APR-2013 14:16
0413a014.d	13-APR-2013 14:36
0413a015.d	13-APR-2013 14:57
0413a016.d	13-APR-2013 15:17
0413a017.d	13-APR-2013 15:38
0413a018.d	13-APR-2013 15:58

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 13-APR-2013
Project: NPDES Sampling Supp

CCal Date: 30-APR-2013
SDG No.: WN27

Analysis Time: 15:26
Lab ID: DIESEL#2

Instrument: FID4A.I
Lab File Name: 0430a018.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	3730152	257.0	250	2.8	
AK102 (C10-C25)	4401823	255.7	250	2.3	
NASDies(C10-C24)	4385104	222.3	250	-11.1	
Terphenyl	941323	48.8	45	8.5	
Creos (C12-C22)	3588951	1644.9	250	557.9	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 13-APR-2013
Project: NPDES Sampling Supp

CCal Date: 30-APR-2013
SDG No.: WN27

Analysis Time: 15:46
Lab ID: MOIL#2

Instrument: FID4A.I
Lab File Name: 0430a019.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	6542031	480.9	500	-3.8
AK103 (C25-C36)	5678192	617.1	500	23.4
OR MOIL(C28-C40)	5105868	676.0	500	35.2
CRUDE(Tol-C40)	7656518	1013.7	500	102.7
n-Triacontane	904929	49.7	45	10.5

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

7a
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 13-APR-2013
Project: NPDES Sampling Supp

CCal Date: 30-APR-2013
SDG No.: WN27

Analysis Time: 18:11
Lab ID: DIESEL#3

Instrument: FID4A.I
Lab File Name: 0430a026.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	3776818	260.2	250	4.1	
AK102 (C10-C25)	4446816	258.3	250	3.3	
NASDies(C10-C24)	4430679	224.7	250	-10.1	
Terphenyl	947006	49.1	45	9.1	
Creos (C12-C22)	3640759	1668.6	250	567.4	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 13-APR-2013
Project: NPDES Sampling Supp

CCal Date: 30-APR-2013
SDG No.: WN27

Analysis Time: 18:32
Lab ID: MOIL#3

Instrument: FID4A.I
Lab File Name: 0430a027.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	6475200	476.0	500	-4.8
AK103 (C25-C36)	5605647	609.2	500	21.8
OR MOIL(C28-C40)	4956425	656.2	500	31.2
CRUDE(Tol-C40)	7472421	989.4	500	97.9
n-Triacontane	902281	49.6	45	10.2

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WN27 Project: NPDES SAMPLING SUPPORT

Instrument ID: FID4A GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.76 TRIAC: 8.58

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	04/30/13	0908	5.86*	8.77*
02	ZZZZZ	ZZZZZ	04/30/13	0928	5.86*	8.75*
03	ZZZZZ	ZZZZZ	04/30/13	0948	5.87*	8.76*
04		RT0430	04/30/13	1009	5.76	8.58
05	ZZZZZ	ZZZZZ	04/30/13	1029	5.76	8.58
06	ZZZZZ	ZZZZZ	04/30/13	1049	5.76	8.59
07	ZZZZZ	ZZZZZ	04/30/13	1110	5.75	8.58
08	ZZZZZ	ZZZZZ	04/30/13	1157	5.76	8.59
09	ZZZZZ	ZZZZZ	04/30/13	1217	5.76	8.58
10	ZZZZZ	ZZZZZ	04/30/13	1238	5.76	8.58
11	ZZZZZ	ZZZZZ	04/30/13	1259	5.75	8.58
12	ZZZZZ	ZZZZZ	04/30/13	1320	5.75	8.59
13	ZZZZZ	ZZZZZ	04/30/13	1341	5.75	8.58
14	ZZZZZ	ZZZZZ	04/30/13	1402	5.76	8.59
15	ZZZZZ	ZZZZZ	04/30/13	1423	5.76	8.60
16	ZZZZZ	ZZZZZ	04/30/13	1444	5.76	8.59
17	ZZZZZ	ZZZZZ	04/30/13	1505	5.76	8.60
18	NPDES SAMPLI	DIESEL#2	04/30/13	1526	5.77	8.58
19	NPDES SAMPLI	MOIL#2	04/30/13	1546	5.75	8.60
20	WN27MBS1	WN27MBS1	04/30/13	1607	5.77	8.60
21	WN27LCSS1	WN27LCSS1	04/30/13	1628	5.77	8.59
22	CG-MH-010-20	WN27A	04/30/13	1649	5.76	8.59
23	CG-MH-010-20	WN27AMS	04/30/13	1709	5.76	8.59
24	CG-MH-010-20	WN27AMSD	04/30/13	1730	5.76	8.59
25	ES-TS-INF-20	WN31A	04/30/13	1750	5.76	8.60
26	NPDES SAMPLI	DIESEL#3	04/30/13	1811	5.77	8.58
27	NPDES SAMPLI	MOIL#3	04/30/13	1832	5.76	8.61

QC LIMITS

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

* Values outside of QC limits.

FORM VIII TPH

8
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WN27/WN31 Project: SNPDES Sampling Support

Instrument ID: FID4A GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.86 TRIAC: 8.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	04/13/13	0947	5.87	8.70
02		RT0413	04/13/13	1007	5.86	8.70
03		IB0413	04/13/13	1027	5.86	8.69
04		DIESEL#1	04/13/13	1047	5.87	8.69
05		MOIL#1	04/13/13	1107	5.85	8.69
06		DIESEL50	04/13/13	1153	5.86	8.71
07		DIESEL100	04/13/13	1213	5.86	8.71
08		DIESEL250	04/13/13	1234	5.87	8.71
09		DIESEL500	04/13/13	1254	5.87	8.71
10		DIESEL1000	04/13/13	1315	5.88	8.71
11		DIESEL2500	04/13/13	1335	5.90	8.70
12		DIESELICV250	04/13/13	1356	5.86	8.70
13		MOIL100	04/13/13	1416	5.90	8.67
14		MOIL250	04/13/13	1436	5.90	8.68
15		MOIL500	04/13/13	1457	5.90	8.68
16		MOIL1000	04/13/13	1517	5.90	8.70
17		MOIL2500	04/13/13	1538	5.90	8.72
18		MOIL5000	04/13/13	1558	5.90	8.75
19		MOILICV500	04/13/13	1619	5.90	8.68

QC LIMITS

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

* Values outside of QC limits.

Metals Analysis
Report and Summary QC Forms

ARI Job ID: WN27

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN27

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
CG-MH-010-20130423	WN27A	13-8552	
CG-MH-010-20130423D	WN27ADUP	13-8552	
CG-MH-010-20130423S	WN27ASPK	13-8552	
PBS	WN27MB1	13-8552	
LCSS	WN27MB1SPK	13-8552	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 5/2/13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: CG-MH-010-20130423-S
SAMPLE

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/01/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Percent Total Solids: 58.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	04/25/13	200.8	04/30/13	7440-36-0	Antimony	0.021	0.3	0.3	U
3050B	04/25/13	200.8	04/30/13	**7440-38-2**	**Arsenic**	0.14	0.3	**9.6**	
3050B	04/25/13	6010C	04/30/13	7440-41-7	Beryllium	0.040	0.4	0.4	U
3050B	04/25/13	200.8	04/30/13	**7440-43-9**	**Cadmium**	0.019	0.2	**1.6**	
3050B	04/25/13	200.8	04/30/13	**7440-47-3**	**Chromium**	0.30	4	**52**	
3050B	04/25/13	6010C	04/30/13	**7440-50-8**	**Copper**	0.20	0.8	**116**	
3050B	04/25/13	200.8	04/30/13	**7439-92-1**	**Lead**	0.075	0.2	**75.6**	
CLP	04/25/13	7471A	04/26/13	**7439-97-6**	**Mercury**	0.0021	0.04	**0.11**	
3050B	04/25/13	200.8	04/30/13	**7440-02-0**	**Nickel**	0.078	0.8	**30.8**	
3050B	04/25/13	200.8	04/30/13	7782-49-2	Selenium	0.16	0.8	0.8	U
3050B	04/25/13	200.8	04/30/13	7440-22-4	Silver	0.013	0.3	0.3	U
3050B	04/25/13	200.8	04/30/13	7440-28-0	Thallium	0.0048	0.3	0.3	U
3050B	04/25/13	6010C	04/30/13	**7440-66-6**	**Zinc**	0.48	4	**976**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: CG-MH-010-20130423-S
MATRIX SPIKE

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/01/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.3 U	1.5	39.8	3.8%	N
Arsenic	200.8	9.6	47.2	39.8	94.5%	
Beryllium	6010C	0.4 U	73.8	79.9	92.4%	
Cadmium	200.8	1.6	40.0	39.8	96.5%	
Chromium	200.8	52	83	39.8	77.9%	
Copper	6010C	116	189	79.9	91.4%	
Lead	200.8	75.6	111	39.8	88.9%	
Mercury	7471A	0.11	0.57	0.400	115%	
Nickel	200.8	30.8	65.7	39.8	87.7%	
Selenium	200.8	0.8 U	116	127	91.3%	
Silver	200.8	0.3 U	36.6	39.8	92.0%	
Thallium	200.8	0.3 U	38.2	39.8	96.0%	
Zinc	6010C	976	991	79.9	18.8%	H

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: CG-MH-010-20130423-S
DUPLICATE

Lab Sample ID: WN27A
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/01/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/23/13
Date Received: 04/23/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Arsenic	200.8	9.6	8.9	7.6%	+/- 20%	
Beryllium	6010C	0.4 U	0.4 U	0.0%	+/- 0.4	L
Cadmium	200.8	1.6	1.5	6.5%	+/- 20%	
Chromium	200.8	52	46	12.2%	+/- 20%	
Copper	6010C	116	113	2.6%	+/- 20%	
Lead	200.8	75.6	80.8	6.6%	+/- 20%	
Mercury	7471A	0.11	0.14	24.0%	+/- 0.04	L
Nickel	200.8	30.8	31.7	2.9%	+/- 20%	
Selenium	200.8	0.8 U	0.8 U	0.0%	+/- 0.8	L
Silver	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Zinc	6010C	976	991	1.5%	+/- 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: WN27LCS
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/01/13

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

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	23.7	25.0	94.8%	
Arsenic	200.8	25.1	25.0	100%	
Beryllium	6010C	46.0	50.0	92.0%	
Cadmium	200.8	23.8	25.0	95.2%	
Chromium	200.8	23.4	25.0	93.6%	
Copper	6010C	47.9	50.0	95.8%	
Lead	200.8	24.4	25.0	97.6%	
Mercury	7471A	0.52	0.50	104%	
Nickel	200.8	23.6	25.0	94.4%	
Selenium	200.8	77.1	80.0	96.4%	
Silver	200.8	24.3	25.0	97.2%	
Thallium	200.8	24.7	25.0	98.8%	
Zinc	6010C	48	50	96.0%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: METHOD BLANK

Lab Sample ID: WN27MB
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/01/13

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

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	04/25/13	200.8	04/30/13	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	04/25/13	200.8	04/30/13	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	04/25/13	6010C	04/29/13	7440-41-7	Beryllium	0.010	0.1	0.1	U
3050B	04/25/13	200.8	04/30/13	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	04/25/13	200.8	04/30/13	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	04/25/13	6010C	04/29/13	7440-50-8	Copper	0.050	0.2	0.2	U
3050B	04/25/13	200.8	04/30/13	7439-92-1	Lead	0.047	0.1	0.1	U
CLP	04/25/13	7471A	04/26/13	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	04/25/13	200.8	04/30/13	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	04/25/13	200.8	04/30/13	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	04/25/13	200.8	04/30/13	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	04/25/13	200.8	04/30/13	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	04/25/13	6010C	04/29/13	7440-66-6	Zinc	0.12	1	1	U

Reported in mg/kg (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN27

UNITS:ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS043081	50.0	51.42	**102.8**	50.0	50.00	**100.0**	48.45	**96.9**	48.95	**97.9**	50.97	**101.9**	49.80	**99.6**
Arsenic	AS	PMS	MS043081	50.0	52.99	**106.0**	50.0	50.14	**100.3**	50.18	**100.4**	50.20	**100.4**	50.12	**100.2**	49.84	**99.7**
Beryllium	BE	ICP	IP042971	1000.0	1006.89	**100.7**	1000.0	968.48	**96.8**	977.49	**97.7**	974.06	**97.4**	971.29	**97.1**	968.85	**96.9**
Cadmium	CD	PMS	MS043081	50.0	50.51	**101.0**	50.0	49.20	**98.4**	50.01	**100.0**	49.93	**99.9**	49.82	**99.6**	50.95	**101.9**
Chromium	CR	PMS	MS043081	50.0	51.09	**102.2**	50.0	49.70	**99.4**	50.25	**100.5**	50.25	**100.5**	49.88	**99.8**	49.74	**99.5**
Copper	CU	ICP	IP042971	1000.0	1036.99	**103.7**	1000.0	1002.07	**100.2**	1023.40	**102.3**	992.22	**99.2**	1004.14	**100.4**	1001.86	**100.2**
Lead	PB	PMS	MS043081	50.0	52.84	**105.7**	50.0	50.38	**100.8**	51.56	**103.1**	50.96	**101.9**	51.55	**103.1**	51.16	**102.3**
Mercury	HG	CVA	HG042602	8.0	8.28	**103.5**	4.0	4.19	**104.8**	4.29	**107.3**	4.29	**107.3**				
Nickel	NI	PMS	MS043081	50.0	51.20	**102.4**	50.0	49.81	**99.6**	51.45	**102.9**	50.30	**100.6**	49.31	**98.6**	49.65	**99.3**
Selenium	SE	PMS	MS043081	80.0	81.22	**101.5**	50.0	50.67	**101.3**	53.63	**107.3**	52.98	**106.0**	51.08	**102.2**	51.43	**102.9**
Silver	AG	PMS	MS043081	50.0	51.62	**103.2**	50.0	49.91	**99.8**	49.92	**99.8**	49.48	**99.0**	50.32	**100.6**	50.25	**100.5**
Thallium	TL	PMS	MS043081	50.0	53.09	**106.2**	50.0	50.80	**101.6**	51.87	**103.7**	51.80	**103.6**	51.92	**103.8**	51.79	**103.6**
Zinc	ZN	ICP	IP042971	1000.0	1013.33	**101.3**	1000.0	995.65	**99.6**	1014.98	**101.5**	1008.00	**100.8**	992.12	**99.2**	1007.91	**100.8**

WN27 - 89201

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN27

UNITS:ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	PMS	MS043081	50.0	50.15	**100.3**	49.03	**98.1**	49.66	**99.3**						
Arsenic	AS	PMS	MS043081	50.0	50.16	**100.3**	50.59	**101.2**	50.52	**101.0**						
Beryllium	BE	ICP	IP042971	1000.0	968.56	**96.9**	950.00	**95.0**	976.18	**97.6**	953.93	**95.4**				
Cadmium	CD	PMS	MS043081	50.0	50.35	**100.7**	49.82	**99.6**	50.53	**101.1**						
Chromium	CR	PMS	MS043081	50.0	50.03	**100.1**	49.70	**99.4**	50.17	**100.3**						
Copper	CU	ICP	IP042971	1000.0	993.19	**99.3**	996.11	**99.6**	998.04	**99.8**	1000.57	**100.1**				
Lead	PB	PMS	MS043081	50.0	50.31	**100.6**	50.95	**101.9**	51.71	**103.4**						
Mercury	HG	CVA	HG042602	4.0												
Nickel	NI	PMS	MS043081	50.0	49.04	**98.1**	50.34	**100.7**	50.63	**101.3**						
Selenium	SE	PMS	MS043081	50.0	50.77	**101.5**	52.67	**105.3**	51.98	**104.0**						
Silver	AG	PMS	MS043081	50.0	50.24	**100.5**	49.71	**99.4**	49.96	**99.9**						
Thallium	TL	PMS	MS043081	50.0	51.24	**102.5**	51.30	**102.6**	52.16	**104.3**						
Zinc	ZN	ICP	IP042971	1000.0	1000.85	**100.1**	997.34	**99.7**	1009.34	**100.9**	995.60	**99.6**				

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN27

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Beryllium	BE	ICP	IP043071	1000.0	1019.42	**101.9**	1000.0	1013.47	**101.3**	1000.51	**100.1**	991.73	**99.2**	986.57	**98.7**	979.25	**97.9**
Copper	CU	ICP	IP043071	1000.0	1059.03	**105.9**	1000.0	1064.92	**106.5**	1059.43	**105.9**	1051.22	**105.1**	1048.82	**104.9**	1047.63	**104.8**
Zinc	ZN	ICP	IP043071	1000.0	1037.95	**103.8**	1000.0	1032.97	**103.3**	1029.57	**103.0**	1043.62	**104.4**	1032.78	**103.3**	1031.28	**103.1**

WN27 : 05205

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ug/L

SDG: WN27

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Beryllium	BE	ICP	IP043071	1000.0												
Copper	CU	ICP	IP043071	1000.0												
Zinc	ZN	ICP	IP043071	1000.0												

WN27 : 00207

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

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN27

UNITS: ug/L

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Antimony	SB	PMS	MS043081	0.2	0.19	**95.0**										
Arsenic	AS	PMS	MS043081	0.2	0.23	**115.0**										
Beryllium	BE	ICP	IP042971	1.0	0.93	**93.0**										
Cadmium	CD	PMS	MS043081	0.1	0.10	**100.0**										
Chromium	CR	PMS	MS043081	0.5	0.50	**100.0**										
Copper	CU	ICP	IP042971	2.0	1.76	**88.0**										
Lead	PB	PMS	MS043081	0.1	0.11	**110.0**										
Mercury	HG	CVA	HG042602	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS043081	0.5	0.49	**98.0**										
Selenium	SE	PMS	MS043081	0.5	0.51	**102.0**										
Silver	AG	PMS	MS043081	0.2	0.19	**95.0**										
Thallium	TL	PMS	MS043081	0.2	0.21	**105.0**										
Zinc	ZN	ICP	IP042971	10.0	9.20	**92.0**										

WN27 - 00208

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: WN27

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
Beryllium	BE	ICP	IP043071	1.0	1.00	**100.0**										
Copper	CU	ICP	IP043071	2.0	2.14	**107.0**										
Zinc	ZN	ICP	IP043071	10.0	10.52	**105.2**										

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: WN27

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS043081	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS043081	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Beryllium	BE	ICP	IP042971	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	CD	PMS	MS043081	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chromium	CR	PMS	MS043081	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	ICP	IP042971	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Lead	PB	PMS	MS043081	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Mercury	HG	CVA	HG042602	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U				
Nickel	NI	PMS	MS043081	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Selenium	SE	PMS	MS043081	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS043081	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Thallium	TL	PMS	MS043081	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	ICP	IP042971	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

WN27 : 0529

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN27

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Antimony	SB	PMS	MS043081	60.0	0.2	0.2	U	0.2	U	0.2	U						
Arsenic	AS	PMS	MS043081	10.0	0.2	0.2	U	0.2	U	0.2	U						
Beryllium	BE	ICP	IP042971	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U				
Cadmium	CD	PMS	MS043081	5.0	0.1	0.1	U	0.1	U	0.1	U						
Chromium	CR	PMS	MS043081	10.0	0.5	0.5	U	0.5	U	0.5	U						
Copper	CU	ICP	IP042971	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U				
Lead	PB	PMS	MS043081	3.0	0.1	0.1	U	0.1	U	0.1	U						
Mercury	HG	CVA	HG042602	0.2	0.1												
Nickel	NI	PMS	MS043081	40.0	0.5	0.5	U	0.5	U	0.5	U						
Selenium	SE	PMS	MS043081	5.0	0.5	0.5	U	0.5	U	0.5	U						
Silver	AG	PMS	MS043081	10.0	0.2	0.2	U	0.2	U	0.2	U						
Thallium	TL	PMS	MS043081	10.0	0.2	0.2	U	0.2	U	0.2	U						
Zinc	ZN	ICP	IP042971	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U				

WN27 : 09214

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ug/L

SDG: WN27

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Beryllium	BE	ICP	IP043071	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Copper	CU	ICP	IP043071	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	ZN	ICP	IP043071	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WN27

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Beryllium	BE	ICP	IP043071	5.0	1.0												
Copper	CU	ICP	IP043071	25.0	2.0												
Zinc	ZN	ICP	IP043071	20.0	10.0												

WN27 : 002139

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: IP042971

SDG: WN27

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	197046.7	196161.7	**98.1**						
Antimony		1000	-16.5	972.2	**97.2**						
Arsenic		1000	36.6	1031.1	**103.1**						
Barium		1000	-1.8	1024.7	**102.5**						
Beryllium		1000	0.0	975.1	**97.5**						
Boron			13.5	4.7							
Cadmium		1000	2.7	1023.7	**102.4**						
Calcium	100000	100000	98426.3	98242.9	**98.2**						
Chromium		1000	-2.1	1012.8	**101.3**						
Cobalt		1000	2.2	952.6	**95.3**						
Copper		1000	1.3	1014.7	**101.5**						
Iron	200000	200000	182435.7	182430.5	**91.2**						
Lead		1000	-9.1	947.1	**94.7**						
Magnesium	100000	100000	101867.9	97638.5	**97.6**						
Manganese		1000	0.1	938.5	**93.9**						
Molybdenum			5.0	5.4							
Nickel		1000	0.5	977.9	**97.8**						
Potassium			19.9	8.9							
Selenium		1000	-16.4	961.1	**96.1**						
Silicon			-0.2	0.2							
Silver		1000	-0.8	1060.9	**106.1**						
Sodium			10.2	7.3							
Strontium			4.0	4.0							
Thallium		1000	15.0	964.4	**96.4**						
Tin			-7.2	-8.3							
Titanium			5.7	5.3							
Vanadium		1000	2.1	964.8	**96.5**						
Zinc		1000	-0.8	960.2	**96.0**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS043081

SDG: WN27

INSTRUMENT ID: PE ELAN 6000

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.1	19.5	**97.5**						
Barium			0.0	0.1							
Cadmium		20	0.0	20.1	**100.5**						
Chromium		20	0.5	20.0	**100.0**						
Cobalt		20	0.0	19.4	**97.0**						
Copper		20	0.4	19.6	**98.0**						
Manganese		20	0.0	19.5	**97.5**						
Molybdenum	400	400	392.9	389.8	**97.5**						
Nickel		20	0.4	19.6	**98.0**						
Silver		20	0.0	19.7	**98.5**						
Vanadium			0.1	-0.3							
Zinc		20	1.3	20.3	**101.5**						

WN27 : 052115

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: IP043071

SDG: WN27

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	206210.2	213187.4	**106.6**						
Antimony		1000	-19.5	1005.6	**100.6**						
Arsenic		1000	39.1	1073.1	**107.3**						
Barium		1000	-5.8	1056.9	**105.7**						
Beryllium		1000	0.1	1005.9	**100.6**						
Boron			17.3	3.6							
Cadmium		1000	2.5	1071.6	**107.2**						
Calcium	100000	100000	102948.7	103322.8	**103.3**						
Chromium		1000	-1.4	1068.8	**106.9**						
Cobalt		1000	2.0	994.7	**99.5**						
Copper		1000	1.4	1066.3	**106.6**						
Iron	200000	200000	192529.3	199113.7	**99.6**						
Lead		1000	-10.9	980.2	**98.0**						
Magnesium	100000	100000	105939.1	106253.9	**106.3**						
Manganese		1000	0.0	1011.7	**101.2**						
Molybdenum			5.2	5.1							
Nickel		1000	0.7	1017.9	**101.8**						
Potassium			30.9	21.3							
Selenium		1000	-25.8	1006.5	**100.7**						
Silicon			2.2	-2.1							
Silver		1000	-0.8	1097.8	**109.8**						
Sodium			19.0	9.9							
Strontium			4.1	4.1							
Thallium		1000	19.3	991.2	**99.1**						
Tin			-8.4	-9.8							
Titanium			5.3	5.5							
Vanadium		1000	0.8	1009.4	**100.9**						
Zinc		1000	-0.7	1000.8	**100.1**						

WN27 S0216

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

ANALYSIS METHOD: PMS

SDG: WN27

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	CG-MH-010-20130423	WN27APOST	MS043081	495.46	B	1000.00	U	500	Sediment	**99.1**

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN27 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Antimony	SB	PMS	PE ELAN 6000 MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Beryllium	BE	ICP	OPTIMA ICP 2	313.04		5	1.0	4/1/2012	5000.0	1/22/2013
Cadmium	CD	PMS	PE ELAN 6000 MS	0.00		5	0.1	4/1/2012		
Chromium	CR	PMS	PE ELAN 6000 MS	0.00		10	0.5	4/1/2012		
Copper	CU	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2012	40000.0	1/22/2013
Lead	PB	PMS	PE ELAN 6000 MS	0.00		3	0.1	4/1/2012		
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	PMS	PE ELAN 6000 MS	0.00		40	0.5	4/1/2012		
Selenium	SE	PMS	PE ELAN 6000 MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Thallium	TL	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Zinc	ZN	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2012	100000.0	1/22/2013

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 1/22/2013

SDG: WN27

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: WN27

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

WN27 : 09229

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ANALYSIS METHOD: ICP

PROJECT: NPDES Sampling Suppo

ARI PREP CODE: SWC

SDG: WN27

PREPDATE: 4/25/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CG-MH-010-20130423	WN27A	1.076	0.0	50.0
CG-MH-010-20130423D	WN27ADUP	1.078	0.0	50.0
CG-MH-010-20130423S	WN27ASPK	1.075	0.0	50.0
PBS	WN27MB1	1.000	0.0	50.0
LCSS	WN27MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN27

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 4/25/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CG-MH-010-20130423	WN27A	1.081	0.0	50.0
CG-MH-010-20130423D	WN27ADUP	1.081	0.0	50.0
CG-MH-010-20130423S	WN27ASPK	1.080	0.0	50.0
PBS	WN27MB1	1.000	0.0	50.0
LCSS	WN27MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN27

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 4/25/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CG-MH-010-20130423	WN27A	0.217	0.0	50.0
CG-MH-010-20130423D	WN27ADUP	0.216	0.0	50.0
CG-MH-010-20130423S	WN27ASPK	0.215	0.0	50.0
PBS	WN27MB1	0.200	0.0	50.0
LCSW	WN27MB1SPK	0.200	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/29/2013

SDG: WN27 | RUNID: IP042971 | METHOD: ICP | END DATE: 4/29/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08441							X					X																		X
S2	S2	1.00	08482												X																		
S3	S3	1.00	08502							X																							X
S4	S4	1.00	08530																														
S5	S5	1.00	08552																														
ICV	ICV	1.00	09053							X					X																		X
ICB	ICB	1.00	09093							X					X																		X
CRI	CRII	1.00	09135							X					X																		X
ICSA	ICSAI	1.00	09181							X					X																		X
ICSAB	ICSABI	1.00	09222							X					X																		X
ZZZZZZ	HiPurQC7M	1.00	09275																														
ZZZZZZ	SPEXQC21	1.00	09320																														
ZZZZZZ	DICHECK	1.00	09362																														
CCV	CCV1	1.00	09404							X					X																		X
CCB	CCB1	1.00	09444							X					X																		X
ZZZZZZ	WN26MB	2.00	09490																														
ZZZZZZ	3031-13Chec	1.00	09531																														
ZZZZZZ	WN26ADUP	2.00	09570																														
ZZZZZZ	WN26A	2.00	10010																														
ZZZZZZ	WN26ASPK	2.00	10052																														
ZZZZZZ	WN26B	2.00	10092																														
ZZZZZZ	WN26C	2.00	10132																														
ZZZZZZ	WN26MBSPK	2.00	10173																														
CCV	CCV2	1.00	10213							X					X																		X
CCB	CCB2	1.00	10253							X					X																		X
ZZZZZZ	WM19MB	2.00	10295																														
ZZZZZZ	WM19MB	5.00	10340																														
ZZZZZZ	WM19F	5.00	10384																														
ZZZZZZ	WM19A	2.00	10431																														
CCV	CCV3	1.00	10473							X					X																		X
CCB	CCB3	1.00	10512							X					X																		X
ZZZZZZ	WN07MB1	1.00	10553																														
ZZZZZZ	WN07MB2	5.00	10595																														
ZZZZZZ	WN07WDUP	5.00	11042																														
ZZZZZZ	WN07W	5.00	11084																														

FORM XIV

WN27 : 09221

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/29/2013

SDG: WN27 | RUNID: IP042971 | METHOD: ICP | END DATE: 4/29/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WN07WSPK	5.00	11130																														
ZZZZZZ	WN07TDUP	1.00	11172																														
ZZZZZZ	WN07T	1.00	11213																														
ZZZZZZ	WN07TSPK	1.00	11255																														
ZZZZZZ	ZZZZZZ	1.00	11301																														
ZZZZZZ	WN07MB1SPK	1.00	11333																														
CCV	CCV4	1.00	11373							X					X																		X
CCB	CCB4	1.00	11413							X					X																		X
ZZZZZZ	WN59MB1	2.00	11455																														
ZZZZZZ	WN59ADUP	2.00	11501																														
ZZZZZZ	WN59A	2.00	11541																														
ZZZZZZ	WN59ASPK	2.00	11581																														
ZZZZZZ	WN59B	2.00	12003																														
ZZZZZZ	WN59C	2.00	12043																														
ZZZZZZ	WN59D	2.00	12083																														
ZZZZZZ	WM19F	10.00	12123																														
ZZZZZZ	WN59MB1SPK	2.00	12165																														
ZZZZZZ	WN59MB1SPD	2.00	12210																														
CCV	CCV5	1.00	12250							X					X																		X
CCB	CCB5	1.00	12290							X					X																		X
PBS	WN27MB1	2.00	12332																														
CG-MH-010-20130423D	WN27ADUP	2.00	12373																														
CG-MH-010-20130423	WN27A	2.00	12414																														
CG-MH-010-20130423S	WN27ASPK	2.00	12454																														
ZZZZZZ	ZZZZZZ	2.00	12494																														
LCSS	WN27MB1SPK	2.00	12525																														
CCV	CCV6	1.00	12565							X					X																		X
CCB	CCB6	1.00	13005							X					X																		X
ZZZZZZ	WN31MB1	2.00	13051																														
ZZZZZZ	WN31ADUP	2.00	13092																														
ZZZZZZ	WN31A	2.00	13133																														
ZZZZZZ	WN31ASPK	2.00	13173																														
ZZZZZZ	ZZZZZZ	2.00	13213																														
ZZZZZZ	WN31MB1SPK	2.00	13253																														
CCV	CCV7	1.00	13293							X					X																		X

FORM XIV

WN27 - 09225

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/29/2013

SDG: WN27 | RUNID: IP042971 | METHOD: ICP | END DATE: 4/29/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB7	1.00	13334							X					X																		X
ZZZZZZ	WN80MB	5.00	13375																														
ZZZZZZ	WN80ADUP	5.00	13423																														
ZZZZZZ	WN80A	5.00	13470																														
ZZZZZZ	WN80ASPK	5.00	13514																														
ZZZZZZ	WN80B	5.00	13561																														
CCV	CCV8	1.00	14004							X					X																		X
CCB	CCB8	1.00	14045							X					X																		X
PBS	WN27MB1	2.00	14090							X					X																		X
CG-MH-010-20130423D	WN27ADUP	2.00	14132																														
CG-MH-010-20130423	WN27A	2.00	14172																														
CG-MH-010-20130423S	WN27ASPK	2.00	14212																														
ZZZZZZ	ZZZZZZ	2.00	14243																														
LCSS	WN27MB1SPK	2.00	14273							X					X																		X
CCV	CCV9	1.00	14314							X					X																		X
CCB	CCB9	1.00	14354							X					X																		X

WN27 : 90229

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/30/2013

SDG: WN27 | RUNID: IP043071 | METHOD: ICP | END DATE: 4/30/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08300							X					X																		X
S2	S2	1.00	08342												X																		
S3	S3	1.00	08362							X																							X
S4	S4	1.00	08390																														
S5	S5	1.00	08411																														
ICV	ICV	1.00	08440							X					X																		X
ICB	ICB	1.00	08480							X					X																		X
CRI	CRII	1.00	08522							X					X																		X
ICSA	ICSAI	1.00	08563							X					X																		X
ICSAB	ICSABI	1.00	09005							X					X																		X
CCV	CCV1	1.00	09051							X					X																		X
CCB	CCB1	1.00	09091							X					X																		X
ZZZZZZ	WN88MB	2.00	09133																														
ZZZZZZ	WN88ADUP	2.00	09174																														
ZZZZZZ	WN88A	2.00	09215																														
ZZZZZZ	WN88ASPK	2.00	09255																														
ZZZZZZ	WN88B	2.00	09295																														
ZZZZZZ	WN88C	2.00	09335																														
ZZZZZZ	WN88D	2.00	09375																														
ZZZZZZ	WN88E	2.00	09420																														
ZZZZZZ	WN88F	2.00	09460																														
ZZZZZZ	WN88MBSPK	2.00	09500																														
CCV	CCV2	1.00	09540							X					X																		X
CCB	CCB2	1.00	09580							X					X																		X
ZZZZZZ	WN57MB	1.00	10022																														
ZZZZZZ	WN88E	5.00	10064																														
ZZZZZZ	WN88F	5.00	10104																														
ZZZZZZ	WN88G	2.00	10144																														
ZZZZZZ	WN57ADUP	1.00	10184																														
ZZZZZZ	WN57A	1.00	10230																														
ZZZZZZ	WN57ASPK	1.00	10272																														
ZZZZZZ	WN57MBSPK	1.00	10312																														
CCV	CCV3	1.00	10352							X					X																		X
CCB	CCB3	1.00	10392							X					X																		X
ZZZZZZ	WN51MB2	1.00	10434																														

FORM XIV

WN27 09227

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/30/2013

SDG: WN27 | RUNID: IP043071 | METHOD: ICP | END DATE: 4/30/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WN51MB3	1.00	10480																														
ZZZZZZ	WN51B	1.00	10521																														
ZZZZZZ	WN51C	1.00	10563																														
ZZZZZZ	WN51MB2SPK	1.00	11004																														
ZZZZZZ	WN51MB3SPK	1.00	11044																														
CCV	CCV4	1.00	11084							X					X																		X
CCB	CCB4	1.00	11125							X					X																		X
CG-MH-010-20130423D	WN27ADUP	5.00	11170							X					X																		X
CG-MH-010-20130423	WN27A	5.00	11210							X					X																		X
CG-MH-010-20130423S	WN27ASPK	5.00	11250							X					X																		X
ZZZZZZ	ZZZZZZ	5.00	11291																														
CCV	CCV5	1.00	11331							X					X																		X
CCB	CCB5	1.00	11371							X					X																		X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 4/30/2013

SDG: WN27 | RUNID: MS043081 METHOD: PMS | END DATE: 4/30/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09050		X		X					X		X									X	X	X	X				X			
S1	S1	1.00	09110		X		X					X		X									X	X	X	X				X			
S2	S2	1.00	09170		X		X					X		X									X	X	X	X				X			
S3	S3	1.00	09220		X		X					X		X									X	X	X	X				X			
S4	S4	1.00	09280		X		X					X		X									X	X	X	X				X			
ZZZZZZ	Rinse Sampl	1.00	09350																														
S0	S0	1.00	09420		X		X					X		X									X	X	X	X				X			
ZZZZZZ	ZZZZZZ	1.00	09470																														
ICV	MICV	1.00	09560		X		X					X		X									X	X	X	X				X			
ICB	ICB	1.00	10020		X		X					X		X									X	X	X	X				X			
CCV	MCCV1	1.00	10080		X		X					X		X									X	X	X	X				X			
CCB	CCB1	1.00	10140		X		X					X		X									X	X	X	X				X			
ZZZZZZ	ZZZZZZ	1.00	10190																														
S0	S0	1.00	10260		X		X					X		X									X	X	X	X				X			
CCV	MCCV2	1.00	10320		X		X					X		X									X	X	X	X				X			
CCB	CCB2	1.00	10380		X		X					X		X									X	X	X	X				X			
S0	S0	1.00	10460		X		X					X		X									X	X	X	X				X			
CCV	MCCV3	1.00	10540		X		X					X		X									X	X	X	X				X			
CCB	CCB3	1.00	11000		X		X					X		X									X	X	X	X				X			
CRI	MCRI	1.00	11060		X		X					X		X									X	X	X	X				X			
ICSA	ICSAI	1.00	11110		X		X					X		X									X	X	X	X				X			
ICSAB	ICSABI	1.00	11170		X		X					X		X									X	X	X	X				X			
ZZZZZZ	LR200	1.00	11230																														
ZZZZZZ	LR300	1.00	11290																														
CCV	MCCV4	1.00	11360		X		X					X		X									X	X	X	X				X			
CCB	CCB4	1.00	11420		X		X					X		X									X	X	X	X				X			
S0	S0	1.00	11530		X		X					X		X									X	X	X	X				X			
CCV	MCCV5	1.00	11590		X		X					X		X									X	X	X	X				X			
CCB	CCB5	1.00	12050		X		X					X		X									X	X	X	X				X			
PBS	WN27MB1	20.00	12100		X		X					X		X									X	X	X	X				X			
ZZZZZZ	WL69A	100.00	12160																														
ZZZZZZ	WL69B	100.00	12220																														
CG-MH-010-20130423D	WN27ADUP	20.00	12280		X		X					X											X	X	X	X				X			
CG-MH-010-20130423	WN27A	20.00	12340		X		X					X											X	X	X	X				X			
CG-MH-010-20130423S	WN27ASPK	20.00	12400		X		X					X											X	X	X	X				X			

FORM XIV

WN27 : 60229

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 4/30/2013

SDG: WN27 | RUNID: MS043081 | METHOD: PMS | END DATE: 4/30/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CG-MH-010-20130423A	WN27APOST	20.00	12460																						X								
LCSS	WN27MB1SPK	20.00	12520		X		X					X		X									X	X	X	X				X			
CCV	MCCV6	1.00	12580		X		X					X		X									X	X	X	X				X			
CCB	CCB6	1.00	13040		X		X					X		X									X	X	X	X				X			
S0	S0	1.00	13130		X		X					X		X									X	X	X	X				X			
CCV	MCCV7	1.00	13180		X		X					X		X									X	X	X	X				X			
CCB	CCB7	1.00	13250		X		X					X		X									X	X	X	X				X			
ZZZZZZ	WN31MB2	2.00	13300																														
CG-MH-010-20130423D	WN27ADUP	100.00	13360											X																			
CG-MH-010-20130423	WN27A	100.00	13420											X																			
CG-MH-010-20130423S	WN27ASPK	100.00	13480											X																			
ZZZZZZ	WN40B	2.00	13540																														
ZZZZZZ	WN31BDUP	2.00	14000																														
ZZZZZZ	WN31B	2.00	14060																														
ZZZZZZ	WN31BSPK	2.00	14120																														
ZZZZZZ	ZZZZZZ	2.00	14180																														
ZZZZZZ	WN31MB2SPK	2.00	14240																														
CCV	MCCV8	1.00	14300		X		X					X		X									X	X	X	X				X			
CCB	CCB8	1.00	14360		X		X					X		X									X	X	X	X				X			

WN27 : 062306

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 4/26/2013

SDG: WN27 | RUNID: HG042602 | METHOD: CVA | END DATE: 4/26/2013

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	11160														X																
S0.1	S0.1	1.00	11174														X																
S0.5	S0.5	1.00	11192														X																
S1	S1	1.00	11205														X																
S2	S2	1.00	11223														X																
S5	S5	1.00	11241														X																
S10	S10	1.00	11255														X																
ICV	AICV	1.00	11292														X																
ICB	ICB	1.00	11310														X																
CCV	ACCV1	1.00	11324														X																
CCB	CCB1	1.00	11342														X																
CRA	CRA	1.00	11355														X																
ZZZZZZ	WN31MB1	1.00	11373																														
ZZZZZZ	WN31MB1SPK	1.00	11391																														
ZZZZZZ	WN31A	1.00	11404																														
ZZZZZZ	WN31ADUP	1.00	11422																														
ZZZZZZ	WN31ASPK	1.00	11435																														
PBW	WN27MB1	1.00	11453														X																
LCSW	WN27MB1SPK	1.00	11471														X																
CG-MH-010-20130423	WN27A	1.00	11485														X																
CG-MH-010-20130423D	WN27ADUP	1.00	11502														X																
CCV	ACCV2	1.00	11520														X																
CCB	CCB2	1.00	11534														X																
CG-MH-010-20130423S	WN27ASPK	1.00	11552														X																
ZZZZZZ	WN20MB1	1.00	11570																														
ZZZZZZ	WN20MB1SPK	1.00	11583																														
ZZZZZZ	WN20MB1SPD	1.00	12001																														
ZZZZZZ	WN20A	1.00	12014																														
ZZZZZZ	WN20ADUP	1.00	12032																														
ZZZZZZ	WN20ASPK	1.00	12050																														
ZZZZZZ	WN20B	1.00	12063																														
ZZZZZZ	WN20C	1.00	12081																														
ZZZZZZ	WN20D	1.00	12095																														
CCV	ACCV3	1.00	12113														X																
CCB	CCB3	1.00	12131														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WN27

SAMPLE RESULTS-CONVENTIONALS
WN27-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/23/13
Date Received: 04/23/13

Client ID: CG-MH-010-20130423-S
ARI ID: 13-8552 WN27A

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/25/13 042513#1	SM2540B	Percent	0.01	61.78
Total Organic Carbon	04/26/13 042613#1	Plumb,1981	Percent	0.020	6.77

RL Analytical reporting limit
U Undetected at reported detection limit

LAB CONTROL RESULTS-CONVENTIONALS
WN27-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

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	04/26/13	Percent	0.100	0.100	100.0%

METHOD BLANK RESULTS-CONVENTIONALS
WN27-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

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

Analyte	Date	Units	Blank	QC ID
Total Solids	04/25/13	Percent	< 0.01 U	ICB
Total Organic Carbon	04/26/13	Percent	< 0.020 U	ICB

STANDARD REFERENCE RESULTS-CONVENTIONALS
WN27-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

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	04/26/13	Percent	2.65	2.99	88.6%

Geotechnical Analysis
Report and Summary QC Forms

ARI Job ID: WN27

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
CG-MH-010-20130423-S	100.0	94.5	92.2	76.7	64.1	52.0	44.6	39.8	39.4	34.9	28.9	19.5	12.0	9.1

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.

WN27

SAIC
NPDES Sampling Support
209977

Modified PSEP - Sieve/Sedigraph Method
Apparent Grain Size Distnbution 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
CG-MH-010-20130423-S	7.8	15.5	12.6	12.1	7.4	4.9	0.4	4.5	6.0	9.4	7.5	2.9	9.1	39.8

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

WN27

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.:	WN27-1

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
CG-MH-010-20130423-S	4/23/2013	5/1/2013	5/3/2013		7.9

* 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: WN27

Total Solids Targets-Extractions
Data By: Jim Hawk
Created: 4/25/13

Worklist: 8504
Analyst: JBH
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	WN27A	10.00	59.6	16.78

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 4/24/13

Worklist: 7859
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.	WN27A 13-8552 CG-MH-010-20130423-S	1.17	12.39	7.86	59.6	NR

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 4/24/13

Worklist: 7859
Analyst: AC
Comments:

Oven ID: Ø15

Balance ID: Bi3929880Ø2

Samples In: Date: 4-24-13 Time: 18:55 Temp: 103°C Analyst: AC

Samples Out: Date: 04/25/13 Time: 06:55 Temp: 100° Analyst: RR

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WN27A 13-8552 CG-MH-010-20130423-S	1.17	12.39	7.86		NR

Solids Data Entry Report Checked by: NB Date: 04/26/13
Date: 04/26/13 Data Analyst: DM

Solids Determination performed on 04/25/13 by CB

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
WN27	A	CG-MH-010-20130423-	0.986	10.133	6.309	58.19

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: 07 **Balance ID:** 068755

Samples in Oven: Date: 04-25-13 Time: 1205 Temp: 102°C Analyst: CB

Removed from Oven: Date: 4-26-13 Time: 0645 Temp: 101°C Analyst: DM

ARI Sample ID		Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
WN36	A	0.986	10.849	9.045	—	✓
"	B	0.976	10.787	7.459	—	✓
"	C	1.018	10.535	9.423	—	✓
WN31	A	0.973	10.424	4.694	—	✓
WN27	A	0.986	10.133	6.309	—	✓
			CB			
			4-25-13			

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN27

Incorporated
Analytical Chemists and Consultants

(8270D) BAN/SIM SVOA PSDDA-Soil/Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (5-20ppb)

ARI Job No(s) WN34, WN27, WN31 Page 1 of 1 Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID / Analyst/Date
	WN34 MBS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	YL 05/01/13
	SBS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 2 3 YL 05/01/13
	SBS Dup.	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C 1 2 3 4 5 6 Analyst/Date
	~~QLS~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
	~~QLS (SIM)~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 2 3 Analyst/Date
2	WN34 K	24.03	(1:1) Y / N	1mL	1mL		CSZ 5/2/13
2	WN27 A	10.01	(1:1) Y / N	1mL	1mL	See Analyst Notes	GPC Prep Filter (1:1)
2	AMS	10.03	(1:1) Y / N	1mL	1mL		CSZ 5/2/13 Analyst/Date
2	AMSD	10.02	(1:1) Y / N	1mL	1mL		
9	WN31 A	3.03	(1:1) Y / N	1mL	1mL		Post GPC KD 80-85°C 1 2 3 4 5 6
			(1:1) Y / N	1mL	1mL		Analyst/Date 05/03/13
			(1:1) Y / N	1mL	1mL	CSZ 5/3/13	
			(1:1) Y / N	1mL	1mL		TurboVap 1 2 3 CSZ 5/3/13 Analyst/Date
Analyst/Date	YL 05/01/13		CSZ 5/2/13	CSZ 5/3/13	CSZ 5/3/13		

(2093-4)

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (~~2084-3~~)	100/150µg/mL	50µL	7/02/13	YL	WW
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/24/14	YL	WW
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	YL	WW
Acid Spike	38(2091-4)	100/150µg/mL	50µL	2/28/14	YL	WW
~~QLS Spike (14 in Freezer)~~	~~14(~~ ~~)~~	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25(~~ ~~)~~	~~1µg/mL~~	~~50µL~~			

Extraction Time: 11:50 Balance ID: B1464261H

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (~~small~~ or large drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

A. Need Total Solids Y (N) **B: ~~Archive~~/Freeze (Y) / N** WN34 only

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN27 Client ID: SAIC

Parameter: BAN / Sim SVOA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)= A	AC 4-24-13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)= 5% sticks grass = A	
☐ 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/MS Analyst (Centrifuge#1 used for all Centrifugations) volume extracted reduced based on pre-screen.	SP 4/29/13

3056F

Revision 009
08/14/12

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WN27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 (NT-10) NT11 NT12

Curve Date(s): 04/29/13 Internal Standard ID 1998-2 Expiration 07/03/13

DFTPP Tune Meets Criteria?	(YES) / NO	Minimum Response Factors Met/	(YES) / NO
DDT Breakdown <20%?	(YES) / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	(YES) / NO	ICV Exceeding ±30%?	(YES) / NO
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	Linear Fits Used?	Benzidine (YES) / NO
Q flag applied?	YES / (NO)	Quadratic Fits Used?	(YES) / NO
Manual Integrations for ICal?	(YES) / NO	Calibration Points Dropped?	(YES) / NO
Spectral Library Updated?	(YES) / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	2072-1	6/31/13	Ultra	2055-1	12/05/13
	2073-1	6/31/13		2054-1	12/31/13
	2064-2	01/25/14		2053-2	08/13/13
	B000112	10/15/13			
	1998-4	7/02/13			

Detail problems, corrective actions and/or other pertinent information below:

Benzoic acid, 2,4 Dinitrophenol, 4 Nitrophenol, Benzidine
4,6 Dinitro-2-methylphenol - quadratic fit used.

- Low point of the curve dropped for Benzoic acid, 4 Nitrophenol, 2,4 Dinitrophenol, Carbazol Benzidine

Analyst: YZ **Date:** 5/3/13

Reviewer: VD **Date:** 5.4.13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/29/13 Analysis: ABN/SIM ABN Analyst: YZ

GC Program: ABN_2 Column No: ~~247358~~ 252945 Column Type: ~~ZB5 MSI~~

Instrument Tune (.U or .CT.): B122814 EM Voltage: ~~1625~~ 1650

Calibration File: DF0429 Curve Date: 04/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	~~2036-2~~ ~~2050~~ 1,2	2053-1
	~~2064-2~~ ~~1998-4~~	2064-1
	~~2068-2~~	2053-1
	2072-1 B000112	
	2073-1 1998-4	
	2064-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130429.b

	Time	Filename	LabID	ClientId	DF											
1	1637	df0429 d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1653	ic0429a.d	IC0429A		1	8 99	45250	11 64	166754	15 54	106910	18.82	179783	23.90	192841	26 35	184310	24.99	229567
3	1730	ic0429b d	IC0429B		1	8 99	36696	11 65	136283	15.55	88131	18.83	152272	23.90	162543	26.36	160177	25 00	211292
4	1807	ic0429c d	IC0429C		1	8.99	50456	11 64	186081	15.54	109826	18 81	184210	23.90	198580	26.34	178934	24 99	212453
5	1844	ic0429d d	IC0429D		1	8 98	44580	11 64	164171	15 54	101406	18.81	169929	23 90	185129	26 35	168300	25.00	198625
6	1921	ic0429e d	IC0429E		1	8.99	38285	11 65	142908	15 54	92187	18.82	160272	23 90	172225	26 36	166300	25.00	210890
7	2034	ic0429g d	IC0429G		1	8 99	36591	11 64	137898	15 54	87308	18 82	150153	23 90	164553	26 36	152859	25 00	178975
8	2147	ic0429i d	IC0429I		1	8 98	41602	11.64	157250	15 53	94337	18.81	159582	23.90	170666	26.35	157899	24.99	174102
9	2224	ic0429icv.d	IC0429ICV		1	8.98	41290	11 64	152009	15.53	95722	18 81	161863	23 90	175186	26.35	166766	24.99	197383

YZ 5/03/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	26.349	26.357	26.342	26.349	26.357	26.357	26.350	26.349	23.349-29.349	26.352	0.006
	78 Indeno(1,2,3-cd)pyrene	28.690	28.713	28.674	28.682	28.705	28.697	28.690	28.690	25.690-31.690	28.693	0.013
	79 Dibenzo(a,h)anthracene	28.713	28.737	28.698	28.705	28.729	28.721	28.698	28.713	25.713-31.713	28.714	0.015
	80 Benzo(g,h,i)perylene	29.373	29.405	29.358	29.358	29.389	29.381	29.350	29.373	26.373-32.373	29.373	0.020
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	4.366	4.389	4.382	4.366	4.374	4.351	4.366	4.366	1.366-7.366	4.371	0.013
	91 Aniline	8.414	8.421	8.406	8.406	8.414	8.406	8.406	8.414	5.414-11.414	8.410	0.006
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	21.542	21.549	21.542	21.542	21.549	21.541	21.542	21.542	18.542-24.542	21.544	0.004
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	22.316	22.316	22.308	22.316	22.323	22.315	22.316	22.316	19.316-25.316	22.316	0.004
	99 Perylene	26.396	26.411	26.388	26.396	26.411	26.403	26.388	26.396	23.396-29.396	26.399	0.010
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	4.382	4.389	4.420	4.397	4.374	4.374	4.397	4.382	1.382-7.382	4.390	0.016
	188 2,6-Dichlorophenol	11.874	11.890	11.866	11.866	11.882	11.866	11.867	11.874	8.874-14.874	11.873	0.009
	189 N-Nitrosomethylethylam	5.818	5.825	5.833	5.818	5.825	5.817	5.818	5.818	2.818-8.818	5.822	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0429a	ic0429b	ic0429c	ic0429d	ic0429e	ic0429g	ic0429i
INJ.DATE:	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013
INJ.TIME:	16:53	17:30	18:07	18:44	19:21	20:34	21:47

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.629	6.636	6.636	6.628	6.628	6.628	6.629	6.629	3.629-9.629	6.631	0.004
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.785	15.785-21.785	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.645	5.645-11.645	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.455	14.455-20.455	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.696	17.696-23.696	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.219	16.219-22.219	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.949	19.949-25.949	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.195	16.195-22.195	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.503	17.503-23.503	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.827	4.827-10.827	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.842	12.842-18.842	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 _____ Date: 5/3/13
Reviewer 2 _____ Date: 5.4.13

nt2860 - 2nM

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	24.994	25.002	24.994	25.002	25.002	25.002	24.995	24.994	21.994-27.994	24.999	0.004
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.571	12.571-18.571	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.447	8.447-14.447	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
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Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.252	7.252-13.252	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	16.346	16.354	16.338	16.338	16.346	16.346	16.338	16.346	13.346-19.346	16.344	0.006
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.761	13.761-19.761	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.923	13.923-19.923	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.085	11.085-17.085	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	17.103	17.118	17.095	17.095	17.111	17.103	17.095	17.103	14.103-20.103	17.103	0.009
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.324	14.324-20.324	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.115	12.115-18.115	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.270	12.270-18.270	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.519	13.519-19.519	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.019	10.019-16.019	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.095	11.095-17.095	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.118	11.118-17.118	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.572	8.572-14.572	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
	105 1-methylnaphthalene	13.437	13.437	13.429	13.429	13.437	13.429	13.430	13.437	10.437-16.437	13.433	0.004
	151 1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
	152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
	153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.642	24.642-30.642	+++++	+++++
	154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.953	22.953-28.953	+++++	+++++
	155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.750	24.750-30.750	+++++	+++++
	156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.464	23.464-29.464	+++++	+++++
	157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.099	24.099-30.099	+++++	+++++
	158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.513	21.513-27.513	+++++	+++++
	159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.132	22.132-28.132	+++++	+++++
	160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.528	16.528-22.528	+++++	+++++
	161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
	162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
	163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
	164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
	165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
	166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
	167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$	2 Phenol-d5	8.344	8.352	8.336	8.336	8.344	8.336	8.337	8.344	5.344-11.344	8.341	0.006
	3 Phenol	8.367	8.375	8.360	8.360	8.367	8.359	8.360	8.367	5.367-11.367	8.364	0.006
	4 Bis(2-Chloroethyl)ethe	8.522	8.530	8.522	8.522	8.529	8.522	8.522	8.522	5.522-11.522	8.524	0.004
$	5 2-Chlorophenol-d4	8.599	8.607	8.599	8.591	8.599	8.599	8.599	8.599	5.599-11.599	8.599	0.004

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.630	8.638	8.630	8.622	8.630	8.622	8.622	8.630	5.630-11.630	8.628	0.006
	7 1,3-Dichlorobenzene	8.917	8.917	8.917	8.909	8.917	8.916	8.909	8.917	5.917-11.917	8.914	0.004
*	8 1,4-Dichlorobenzene-d4	8.986	8.986	8.986	8.979	8.986	8.986	8.979	8.986	5.986-11.986	8.984	0.004
	9 1,4-Dichlorobenzene	9.017	9.017	9.017	9.010	9.017	9.017	9.018	9.017	6.017-12.017	9.016	0.003
$	10 1,2-Dichlorobenzene-d4	9.367	9.375	9.367	9.367	9.367	9.367	9.367	9.367	6.367-12.367	9.368	0.003
	11 Benzyl alcohol	9.289	9.305	9.289	9.289	9.297	9.289	9.289	9.289	6.289-12.289	9.292	0.006
	12 1,2-Dichlorobenzene	9.398	9.398	9.398	9.390	9.398	9.390	9.390	9.398	6.398-12.398	9.394	0.004
	13 2-Methylphenol	9.553	9.561	9.553	9.545	9.553	9.553	9.553	9.553	6.553-12.553	9.553	0.005
	14 2,2'-oxybis(1-Chloropr	9.623	9.623	9.623	9.623	9.623	9.623	9.623	9.623	6.623-12.623	9.623	0.000
	15 4-Methylphenol	9.848	9.856	9.840	9.840	9.848	9.840	9.840	9.848	6.848-12.848	9.845	0.006
	16 N-Nitroso-di-n-propyla	9.902	9.910	9.902	9.895	9.902	9.894	9.895	9.902	6.902-12.902	9.900	0.006
	17 Hexachloroethane	10.027	10.027	10.027	10.019	10.026	10.026	10.027	10.027	7.027-13.027	10.025	0.003
$	18 Nitrobenzene-d5	10.159	10.166	10.158	10.158	10.158	10.158	10.159	10.159	7.159-13.159	10.160	0.003
	19 Nitrobenzene	10.197	10.205	10.197	10.197	10.197	10.197	10.190	10.197	7.197-13.197	10.197	0.004
	20 Isophorone	10.686	10.709	10.686	10.686	10.694	10.686	10.686	10.686	7.686-13.686	10.691	0.009
	21 2-Nitrophenol	10.872	10.879	10.872	10.872	10.879	10.871	10.872	10.872	7.872-13.872	10.874	0.004
	22 2,4-Dimethylphenol	10.964	10.980	10.964	10.964	10.972	10.964	10.964	10.964	7.964-13.964	10.967	0.006
	23 Bis(2-Chloroethoxy)met	11.180	11.188	11.172	11.172	11.180	11.172	11.172	11.180	8.180-14.180	11.176	0.006
	24 Benzoic acid	11.226	11.280	11.064	11.110	11.303	11.164	11.080	11.226	8.226-14.226	11.175	0.096
	25 2,4-Dichlorophenol	11.365	11.380	11.365	11.365	11.372	11.365	11.365	11.365	8.365-14.365	11.368	0.006
	26 1,2,4-Trichlorobenzene	11.565	11.565	11.558	11.558	11.565	11.557	11.558	11.565	8.565-14.565	11.561	0.004
*	27 Naphthalene-d8	11.643	11.650	11.643	11.643	11.650	11.642	11.643	11.643	8.643-14.643	11.645	0.004
	28 Naphthalene	11.689	11.697	11.689	11.689	11.689	11.689	11.681	11.689	8.689-14.689	11.689	0.004
	29 4-Chloroaniline	11.859	11.874	11.851	11.851	11.859	11.851	11.843	11.859	8.859-14.859	11.855	0.010

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	12.098	12.106	12.106	12.098	12.106	12.098	12.099	12.098	9.098-15.098	12.102	0.004
	31 4-Chloro-3-methylpheno	12.919	12.927	12.911	12.911	12.919	12.911	12.911	12.919	9.919-15.919	12.915	0.006
	32 2-Methylnaphthalene	13.197	13.205	13.197	13.197	13.197	13.197	13.197	13.197	10.197-16.197	13.198	0.003
	33 Hexachlorocyclopentadi	13.716	13.716	13.708	13.708	13.716	13.716	13.708	13.716	10.716-16.716	13.712	0.004
	34 2,4,6-Trichlorophenol	13.878	13.894	13.878	13.878	13.886	13.878	13.879	13.878	10.878-16.878	13.882	0.006
	35 2,4,5-Trichlorophenol	13.956	13.964	13.956	13.956	13.956	13.956	13.948	13.956	10.956-16.956	13.956	0.004
$	36 2-Fluorobiphenyl	14.064	14.064	14.056	14.056	14.064	14.056	14.057	14.064	11.064-17.064	14.060	0.004
	37 2-Chloronaphthalene	14.265	14.273	14.258	14.257	14.265	14.265	14.258	14.265	11.265-17.265	14.263	0.006
	38 2-Nitroaniline	14.559	14.575	14.559	14.552	14.567	14.559	14.552	14.559	11.559-17.559	14.560	0.008
	39 Dimethylphthalate	15.055	15.070	15.047	15.055	15.062	15.055	15.047	15.055	12.055-18.055	15.056	0.008
	40 Acenaphthylene	15.202	15.202	15.194	15.194	15.194	15.194	15.194	15.202	12.202-18.202	15.196	0.004
	41 2,6-Dinitrotoluene	15.194	15.202	15.186	15.186	15.194	15.186	15.179	15.194	12.194-18.194	15.190	0.008
*	42 Acenaphthene-d10	15.542	15.550	15.542	15.542	15.542	15.542	15.535	15.542	12.542-18.542	15.542	0.004
	43 3-Nitroaniline	15.488	15.511	15.480	15.480	15.496	15.480	15.473	15.488	12.488-18.488	15.487	0.013
	44 Acenaphthene	15.612	15.619	15.612	15.612	15.612	15.611	15.604	15.612	12.612-18.612	15.612	0.004
	45 2,4-Dinitrophenol	15.712	15.743	15.712	15.704	15.727	15.712	15.705	15.712	12.712-18.712	15.717	0.014
	46 Dibenzofuran	15.967	15.983	15.959	15.967	15.975	15.967	15.960	15.967	12.967-18.967	15.968	0.008
	47 4-Nitrophenol	15.867	15.890	15.867	15.859	15.874	15.859	15.867	15.867	12.867-18.867	15.869	0.011
	48 2,4-Dinitrotoluene	16.060	16.075	16.052	16.052	16.068	16.052	16.052	16.060	13.060-19.060	16.059	0.009
	49 Fluorene	16.740	16.748	16.733	16.733	16.740	16.732	16.733	16.740	13.740-19.740	16.737	0.006
	50 Diethylphthalate	16.640	16.663	16.632	16.632	16.647	16.640	16.632	16.640	13.640-19.640	16.641	0.011
	51 4-Chlorophenyl-phenyle	16.756	16.756	16.748	16.756	16.756	16.756	16.748	16.756	13.756-19.756	16.754	0.004
	52 4-Nitroaniline	16.856	16.895	16.856	16.848	16.872	16.856	16.841	16.856	13.856-19.856	16.861	0.018
	53 4,6-Dinitro-2-methylph	16.964	16.995	16.949	16.949	16.972	16.956	16.949	16.964	13.964-19.964	16.962	0.017

Analytical Resources, Inc.
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Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	17.026	17.041	17.026	17.026	17.034	17.026	17.026	17.026	14.026-20.026	17.029	0.006
$	55 2,4,6-Tribromophenol	17.319	17.327	17.311	17.311	17.319	17.311	17.311	17.319	14.319-20.319	17.316	0.006
	56 4-Bromophenyl-phenylet	17.836	17.843	17.835	17.835	17.835	17.835	17.836	17.836	14.836-20.836	17.837	0.003
	57 Hexachlorobenzene	18.160	18.160	18.153	18.153	18.160	18.152	18.153	18.160	15.160-21.160	18.156	0.004
	58 Pentachlorophenol	18.555	18.563	18.547	18.547	18.555	18.547	18.548	18.555	15.555-21.555	18.552	0.006
*	59 Phenanthrene-d10	18.818	18.826	18.810	18.810	18.818	18.818	18.811	18.818	15.818-21.818	18.816	0.006
	60 Phenanthrene	18.865	18.872	18.857	18.857	18.865	18.864	18.857	18.865	15.865-21.865	18.862	0.006
	61 Anthracene	18.965	18.973	18.957	18.957	18.965	18.957	18.958	18.965	15.965-21.965	18.962	0.006
	62 Carbazole	19.313	19.321	19.313	19.313	19.321	19.313	19.314	19.313	16.313-22.313	19.316	0.004
	63 Di-n-butylphthalate	20.188	20.188	20.188	20.188	20.188	20.187	20.188	20.188	17.188-23.188	20.188	0.000
	64 Fluoranthene	21.286	21.286	21.279	21.278	21.286	21.286	21.279	21.286	18.286-24.286	21.283	0.004
	65 Pyrene	21.704	21.704	21.696	21.696	21.704	21.704	21.697	21.704	18.704-24.704	21.701	0.004
$	66 Terphenyl-d14	22.021	22.029	22.021	22.021	22.029	22.029	22.022	22.021	19.021-25.021	22.025	0.004
	67 Butylbenzylphthalate	22.974	22.974	22.966	22.974	22.974	22.974	22.974	22.974	19.974-25.974	22.973	0.003
	68 Benzo(a)anthracene	23.872	23.880	23.864	23.864	23.872	23.872	23.864	23.872	20.872-26.872	23.870	0.006
*	69 Chrysene-d12	23.895	23.903	23.895	23.895	23.903	23.903	23.895	23.895	20.895-26.895	23.898	0.004
	70 3,3'-Dichlorobenzidine	23.849	23.857	23.841	23.849	23.856	23.849	23.841	23.849	20.849-26.849	23.849	0.006
	71 Chrysene	23.942	23.949	23.934	23.942	23.949	23.941	23.934	23.942	20.942-26.942	23.942	0.006
	72 bis(2-Ethylhexyl)phtha	24.019	24.019	24.019	24.019	24.027	24.027	24.019	24.019	21.019-27.019	24.021	0.004
	73 Di-n-octylphthalate	25.010	25.010	25.002	25.010	25.018	25.017	25.002	25.010	22.010-28.010	25.010	0.006
	74 Benzo(b)fluoranthene	25.668	25.676	25.660	25.668	25.676	25.668	25.660	25.668	22.668-28.668	25.668	0.006
	75 Benzo(k)fluoranthene	25.707	25.722	25.699	25.707	25.714	25.714	25.699	25.707	22.707-28.707	25.709	0.009
	187 Total Benzofluoranthen	25.707	25.722	25.660	25.668	25.714	25.668	25.699	25.707	22.707-28.707	25.691	0.025
	76 Benzo(a)pyrene	26.249	26.257	26.241	26.241	26.256	26.249	26.241	26.249	23.249-29.249	26.248	0.007

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Average

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/ic0429c.d
Level 2: /chem1/nt10.i/20130429.b/ic0429i.d
Level 3: /chem1/nt10.i/20130429.b/ic0429d.d
Level 4: /chem1/nt10.i/20130429.b/ic0429g.d
Level 5: /chem1/nt10.i/20130429.b/ic0429a.d
Level 6: /chem1/nt10.i/20130429.b/ic0429e.d
Level 7: /chem1/nt10.i/20130429.b/ic0429b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
186 Carbaryl	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

MW7 : 29260

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.32264	1.26754	1.24075	1.27398	1.12394	1.24670						
	1.18447						AVRG		1.23715		5.24731	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

Analytical Resources, Inc.

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

MW2 69263

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.70389	0.59747	0.62527	0.63990	0.63292	0.66830						
	0.67337						AVRG		0.64873		5.46363	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

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Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
161 1,2,3-Trichloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
162 1,2,3,4-Tetrachloronapthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

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Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	2.07745	2.01663	1.99013	2.15135	2.00628	2.20020					
	2.03355						AVRG		2.06794		3.85914
4 Bis(2-Chloroethyl)ether	1.56929	1.53896	1.46972	1.55326	1.37664	1.50058					
	1.40120						AVRG		1.48709		5.05358

Analytical Resources, Inc.

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.55026	1.46704	1.47133	1.54154	1.50983	1.81549					
	1.80786						AVRG		1.59477		9.49947
7 1,3-Dichlorobenzene	1.69336	1.54473	1.58950	1.59956	1.55227	1.62846					
	1.59424						AVRG		1.60030		3.12454
9 1,4-Dichlorobenzene	1.71397	1.52647	1.51341	1.62532	1.53264	1.58116					
	1.54877						AVRG		1.57739		4.51793
11 Benzyl alcohol	0.85064	0.73516	0.83060	0.90072	0.88286	0.96932					
	0.91989						AVRG		0.86989		8.59920
12 1,2-Dichlorobenzene	1.62518	1.49204	1.50624	1.51578	1.45554	1.49728					
	1.47965						AVRG		1.51024		3.59480
13 2-Methylphenol	1.49001	1.40570	1.44998	1.54407	1.45837	1.56041					
	1.50801						AVRG		1.48808		3.66935
14 2,2'-oxybis(1-Chloropropane)	0.42611	0.44017	0.46397	0.48471	0.45795	0.47727					
	0.46264						AVRG		0.45898		4.42060

Analytical Resources, Inc.

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
15 4-Methylphenol	1.43729	1.35493	1.48973	1.59318	1.52748	1.67713					
	1.54128						AVRG		1.51729		6.88641
16 N-Nitroso-di-n-propylamine	0.95251	0.89419	0.87815	0.98621	0.88743	0.97695					
	0.92792						AVRG		0.92905		4.74330
17 Hexachloroethane	0.68931	0.65881	0.65446	0.68375	0.62023	0.66920					
	0.64417						AVRG		0.65999		3.59193
19 Nitrobenzene	0.39510	0.39280	0.38552	0.39982	0.36572	0.40371					
	0.38522						AVRG		0.38970		3.22892
20 Isophorone	0.71195	0.66432	0.67279	0.71065	0.68101	0.86242					
	0.82790						AVRG		0.73300		10.82033
21 2-Nitrophenol	0.20754	0.18635	0.20138	0.22080	0.22866	0.24164					
	0.24290						AVRG		0.21847		9.68506
22 2,4-Dimethylphenol	0.41192	0.37230	0.39344	0.41516	0.40245	0.42253					
	0.39424						AVRG		0.40172		4.20008

Analytical Resources, Inc.

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
23 Bis(2-Chloroethoxy)methane	0.44346	0.43452	0.43284	0.44204	0.41435	0.44041						
	0.41838						AVRG		0.43229		2.68164	
24 Benzoic acid	+++++	0.16051	0.25143	0.30891	0.33851	0.37356						
	0.37918						AVRG		0.30202		27.71646	<-
25 2,4-Dichlorophenol	0.31803	0.28833	0.38510	0.39343	0.39479	0.41768						
	0.39114						AVRG		0.36979		12.81889	
26 1,2,4-Trichlorobenzene	0.41240	0.34976	0.36404	0.35417	0.34495	0.35336						
	0.35130						AVRG		0.36143		6.42232	
28 Naphthalene	1.20528	1.00604	1.04043	1.06395	1.02045	1.07273						
	1.04570						AVRG		1.06494		6.20233	
29 4-Chloroaniline	0.42433	0.36449	0.40631	0.42348	0.42526	0.48932						
	0.38118						AVRG		0.41634		9.58081	
30 Hexachlorobutadiene	0.23345	0.19983	0.21390	0.20892	0.20729	0.22093						
	0.21857						AVRG		0.21470		5.08490	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.26343	0.27218	0.31153	0.34377	0.34343	0.37735					
	0.36548						AVRG		0.32531		13.65102
32 2-Methylnaphthalene	0.74054	0.67388	0.68178	0.70154	0.68736	0.73921					
	0.72726						AVRG		0.70737		3.96516
33 Hexachlorocyclopentadiene	0.44835	0.39323	0.41506	0.42533	0.44262	0.46660					
	0.48996						AVRG		0.44016		7.36429
34 2,4,6-Trichlorophenol	0.38934	0.36825	0.40727	0.42611	0.43278	0.45335					
	0.46998						AVRG		0.42101		8.44390
35 2,4,5-Trichlorophenol	0.35538	0.37249	0.41863	0.44267	0.45433	0.49279					
	0.50176						AVRG		0.43401		12.87553
37 2-Chloronaphthalene	1.25763	1.04782	1.06917	1.09796	1.07105	1.12488					
	1.11166						AVRG		1.11145		6.27651
38 2-Nitroaniline	0.20469	0.22227	0.26060	0.28971	0.28861	0.31072					
	0.30122						AVRG		0.26826		15.20234

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Analytical Resources, Inc.

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
39 Dimethylphthalate	1.36489	1.13508	1.17192	1.19054	1.15985	1.20823						
	1.17494						AVRG		1.20078		6.32260	
40 Acenaphthylene	2.08676	1.80273	1.83141	1.81650	1.77233	2.12941						
	1.75642						AVRG		1.88508		8.21819	
41 2,6-Dinitrotoluene	0.26069	0.25725	0.27537	0.29601	0.28450	0.30512						
	0.29050						AVRG		0.28135		6.35382	
43 3-Nitroaniline	0.20751	0.21366	0.25373	0.25128	0.24013	0.25105						
	0.20850						AVRG		0.23227		9.23578	
44 Acenaphthene	1.30679	1.09641	1.08357	1.13351	1.06627	1.13513						
	1.13044						AVRG		1.13602		7.04098	
45 2,4-Dinitrophenol	+++++	0.09212	0.14513	0.19634	0.23880	0.27206						
	0.28220						AVRG		0.20444		36.60389	<-
46 Dibenzofuran	1.67283	1.49829	1.51991	1.55200	1.47200	1.58360						
	1.57471						AVRG		1.55334		4.27158	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
47 4-Nitrophenol	+++++	0.07895	0.11479	0.15259	0.16439	0.18465						
	0.18270						AVRG		0.14635		28.48976	<-
48 2,4-Dinitrotoluene	0.30512	0.31097	0.36079	0.38342	0.37756	0.40613						
	0.39616						AVRG		0.36288		11.05203	
49 Fluorene	1.46413	1.26025	1.30008	1.33638	1.27146	1.34389						
	1.30199						AVRG		1.32546		5.15880	
50 Diethylphthalate	1.35396	1.14110	1.15749	1.20605	1.17048	1.22908						
	1.18817						AVRG		1.20662		5.91539	
51 4-Chlorophenyl-phenylether	0.73753	0.60252	0.61409	0.61582	0.59152	0.72584						
	0.67359						AVRG		0.65156		9.31141	
52 4-Nitroaniline	0.21006	0.19776	0.27062	0.24001	0.24443	0.27164						
	0.25433						AVRG		0.24126		11.76360	
53 4,6-Dinitro-2-methylphenol	0.10675	0.12341	0.16076	0.17466	0.18882	0.19809						
	0.19914						AVRG		0.16452		22.27885	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
54 N-Nitrosodiphenylamine	0.49563	0.42947	0.47333	0.47261	0.45791	0.46123					
	0.45114						AVRG		0.46304		4.45876
56 4-Bromophenyl-phenylether	0.22767	0.21687	0.23028	0.22247	0.22312	0.22955					
	0.23436						AVRG		0.22633		2.59516
57 Hexachlorobenzene	0.32278	0.25772	0.26649	0.25845	0.25551	0.26286					
	0.26660						AVRG		0.27006		8.75648
58 Pentachlorophenol	0.15515	0.14017	0.17294	0.19921	0.21130	0.22141					
	0.22676						AVRG		0.18956		17.84287
60 Phenanthrene	1.22947	1.01265	1.08610	1.06561	1.04600	1.09893					
	1.09863						AVRG		1.09106		6.27534
61 Anthracene	1.19624	1.06794	1.09848	1.10290	1.07915	1.13739					
	1.14221						AVRG		1.11776		3.95191
62 Carbazole	+++++	0.79964	0.83444	0.64299	0.47569	0.60549					
	0.71548						AVRG		0.67896		19.54874

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
63 Di-n-butylphthalate	1.23468	1.00016	1.09465	1.11547	1.14103	1.23687					
	1.25417						AVRG		1.15386		8.08770
64 Fluoranthene	1.35769	1.17978	1.24657	1.24812	1.27294	1.33427					
	1.34952						AVRG		1.28413		5.11850
65 Pyrene	1.37184	1.13560	1.19244	1.19696	1.22185	1.25931					
	1.28506						AVRG		1.23758		6.17908
67 Butylbenzylphthalate	0.42623	0.34242	0.41245	0.41654	0.43945	0.45663					
	0.46466						AVRG		0.42263		9.55905
68 Benzo(a)anthracene	1.25572	1.03482	1.09368	1.07381	1.09465	1.13986					
	1.14667						AVRG		1.11989		6.34024
70 3,3'-Dichlorobenzidine	0.51204	0.36539	0.40605	0.35790	0.38490	0.47001					
	0.48944						AVRG		0.42653		14.75318
71 Chrysene	1.17786	0.95330	0.94998	0.97296	0.97716	1.02164					
	1.04126						AVRG		1.01345		7.90157

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	1.04908	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92019		6.73684
73 Di-n-octylphthalate	1.05463	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92098		6.94061
74 Benzo(b)fluoranthene	1.35044	1.05465	1.09386	1.12584	1.21507	1.24210					
	1.23295						AVRG		1.18784		8.59752
75 Benzo(k)fluoranthene	1.42924	1.14868	1.24463	1.22609	1.13947	1.22473					
	1.34515						AVRG		1.25114		8.31220
187 Total Benzofluoranthenes	1.30881	1.05407	1.12671	1.11857	1.11816	1.16984					
	1.17534						AVRG		1.15307		6.89595
76 Benzo(a)pyrene	1.15104	0.87256	0.97331	0.97345	1.00238	1.05501					
	1.07592						AVRG		1.01481		8.78911
78 Indeno(1,2,3-cd)pyrene	1.18245	1.01361	1.10322	1.12112	1.20413	1.27168					
	1.28789						AVRG		1.16916		8.32633

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
79 Dibenzo(a,h)anthracene	0.92380	0.73303	0.85483	0.88584	0.92025	0.96990					
	0.99039						AVRG		0.89686		9.55761
80 Benzo(g,h,i)perylene	1.04564	0.90225	0.98911	0.99122	1.00081	1.07106					
	1.08082						AVRG		1.01156		6.05123
90 N-Nitrosodimethylamine	0.88097	0.87544	0.88313	0.96297	0.85634	0.99623					
	0.92370						AVRG		0.91125		5.67695
91 Aniline	4.00230	3.88308	3.89376	4.21542	3.95352	4.21183					
	3.92480						AVRG		4.01210		3.56908
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	8518	23877	29714	60043	110746					
	257371						QUAD	0.000e+00	8.17939	-1.16399	0.99615
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	5229	8851	20776	46252	111862	206286						
	402573						QUAD	0.000e+00	2.17724	-0.06444	0.99996	
99 Perylene	1.36017	1.09787	1.11603	1.09868	1.10144	1.16094						
	1.18529						AVRG		1.16006		8.15448	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.72677	0.80583	0.78852	0.86813	0.78009	0.84643						
	0.79117						AVRG		0.80099		5.76462	

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
188 2,6-Dichlorophenol	0.60097	0.54247	0.59080	0.60713	0.60866	0.63218						
	0.61259						AVRG		0.59926		4.67591	
189 N-Nitrosomethylethylamine	1.30866	1.29196	1.30579	1.43515	1.30380	1.45857						
	1.41072						AVRG		1.35923		5.31332	
$ 1 2-Fluorophenol	1.34097	1.36474	1.37344	1.45728	1.43245	1.53225						
	1.49284						AVRG		1.42771		4.99388	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.74449	1.70146	1.73037	1.88081	1.85833	2.05451						
	1.96238						AVRG		1.84748		7.08965	
$ 5 2-Chlorophenol-d4	1.48208	1.31763	1.34482	1.41250	1.38956	1.44002						
	1.43020						AVRG		1.40240		4.04486	
$ 10 1,2-Dichlorobenzene-d4	0.98938	1.00149	0.99695	1.02158	0.98109	1.04380						
	1.02722						AVRG		1.00879		2.24119	

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.42885	0.41732	0.41764	0.42993	0.40061	0.44115					
	0.41922						AVRG		0.42210		3.03179
$ 36 2-Fluorobiphenyl	1.56575	1.33869	1.34323	1.37457	1.33669	1.41362					
	1.40005						AVRG		1.39609		5.78874
$ 55 2,4,6-Tribromophenol	0.19995	0.17003	0.19549	0.21364	0.21873	0.24192					
	0.24098						AVRG		0.21154		12.14622
$ 66 Terphenyl-d14	0.89183	0.70027	0.75407	0.75999	0.76286	0.79419					
	0.78729						AVRG		0.77864		7.50175
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Cal Date : 30-Apr-2013 11:53 yev

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

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Cal Date : 30-Apr-2013 11:53 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/ic0429c.d
Level 2: /chem1/nt10.i/20130429.b/ic0429i.d
Level 3: /chem1/nt10.i/20130429.b/ic0429d.d
Level 4: /chem1/nt10.i/20130429.b/ic0429g.d
Level 5: /chem1/nt10.i/20130429.b/ic0429a.d
Level 6: /chem1/nt10.i/20130429.b/ic0429e.d
Level 7: /chem1/nt10.i/20130429.b/ic0429b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	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	0.26333 / 0.38141	0.25576	0.30846	0.32296	0.35171	0.37615	AVRG		0.32283		15.66985	
178 2-Benzyl-4-Chlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
119 7,12-Dimethylbenz(a)anthracen	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
118 Triphenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
117 Butyl Diphenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.32264	1.26754	1.24075	1.27398	1.12394	1.24670						
	1.18447						AVRG		1.23715		5.24731	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.70389	0.59747	0.62527	0.63990	0.63292	0.66830						
	0.67337						AVRG		0.64873		5.46363	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
161 1,2,3-Trichloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
162 1,2,3,4-Tetrachloronapthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00

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	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	2.07745	2.01663	1.99013	2.15135	2.00628	2.20020					
	2.03355						AVRG		2.06794		3.85914
4 Bis(2-Chloroethyl)ether	1.56929	1.53896	1.46972	1.55326	1.37664	1.50058					
	1.40120						AVRG		1.48709		5.05358

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6 2-Chlorophenol	1.55026	1.46704	1.47133	1.54154	1.50983	1.81549	1.80786	AVRG		1.59477		9.49947
7 1,3-Dichlorobenzene	1.69336	1.54473	1.58950	1.59956	1.55227	1.62846	1.59424	AVRG		1.60030		3.12454
9 1,4-Dichlorobenzene	1.71397	1.52647	1.51341	1.62532	1.53264	1.58116	1.54877	AVRG		1.57739		4.51793
11 Benzyl alcohol	0.85064	0.73516	0.83060	0.90072	0.88286	0.96932	0.91989	AVRG		0.86989		8.59920
12 1,2-Dichlorobenzene	1.62518	1.49204	1.50624	1.51578	1.45554	1.49728	1.47965	AVRG		1.51024		3.59480
13 2-Methylphenol	1.49001	1.40570	1.44998	1.54407	1.45837	1.56041	1.50801	AVRG		1.48808		3.66935
14 2,2'-oxybis(1-Chloropropane)	0.42611	0.44017	0.46397	0.48471	0.45795	0.47727	0.46264	AVRG		0.45898		4.42060

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15 4-Methylphenol	1.43729	1.35493	1.48973	1.59318	1.52748	1.67713	1.54128	AVRG		1.51729		6.88641
16 N-Nitroso-di-n-propylamine	0.95251	0.89419	0.87815	0.98621	0.88743	0.97695	0.92792	AVRG		0.92905		4.74330
17 Hexachloroethane	0.68931	0.65881	0.65446	0.68375	0.62023	0.66920	0.64417	AVRG		0.65999		3.59193
19 Nitrobenzene	0.39510	0.39280	0.38552	0.39982	0.36572	0.40371	0.38522	AVRG		0.38970		3.22892
20 Isophorone	0.71195	0.66432	0.67279	0.71065	0.68101	0.86242	0.82790	AVRG		0.73300		10.82033
21 2-Nitrophenol	0.20754	0.18635	0.20138	0.22080	0.22866	0.24164	0.24290	AVRG		0.21847		9.68506
22 2,4-Dimethylphenol	0.41192	0.37230	0.39344	0.41516	0.40245	0.42253	0.39424	AVRG		0.40172		4.20008

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	20 Level 7										
23 Bis(2-Chloroethoxy)methane	0.44346	0.43452	0.43284	0.44204	0.41435	0.44041					
	0.41838						AVRG		0.43229		2.68164
24 Benzoic acid	+++++	12620	41278	106496	282242	533852					
	1033515						QUAD	0.000e+00	2.88330	-0.03348	0.99937
25 2,4-Dichlorophenol	0.31803	0.28833	0.38510	0.39343	0.39479	0.41768					
	0.39114						AVRG		0.36979		12.81889
26 1,2,4-Trichlorobenzene	0.41240	0.34976	0.36404	0.35417	0.34495	0.35336					
	0.35130						AVRG		0.36143		6.42232
28 Naphthalene	1.20528	1.00604	1.04043	1.06395	1.02045	1.07273					
	1.04570						AVRG		1.06494		6.20233
29 4-Chloroaniline	0.42433	0.36449	0.40631	0.42348	0.42526	0.48932					
	0.38118						AVRG		0.41634		9.58081
30 Hexachlorobutadiene	0.23345	0.19983	0.21390	0.20892	0.20729	0.22093					
	0.21857						AVRG		0.21470		5.08490

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	20 Level 7										
31 4-Chloro-3-methylphenol	0.26343	0.27218	0.31153	0.34377	0.34343	0.37735					
	0.36548						AVRG		0.32531		13.65102
32 2-Methylnaphthalene	0.74054	0.67388	0.68178	0.70154	0.68736	0.73921					
	0.72726						AVRG		0.70737		3.96516
33 Hexachlorocyclopentadiene	0.44835	0.39323	0.41506	0.42533	0.44262	0.46660					
	0.48996						AVRG		0.44016		7.36429
34 2,4,6-Trichlorophenol	0.38934	0.36825	0.40727	0.42611	0.43278	0.45335					
	0.46998						AVRG		0.42101		8.44390
35 2,4,5-Trichlorophenol	0.35538	0.37249	0.41863	0.44267	0.45433	0.49279					
	0.50176						AVRG		0.43401		12.87553
37 2-Chloronaphthalene	1.25763	1.04782	1.06917	1.09796	1.07105	1.12488					
	1.11166						AVRG		1.11145		6.27651
38 2-Nitroaniline	0.20469	0.22227	0.26060	0.28971	0.28861	0.31072					
	0.30122						AVRG		0.26826		15.20234

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	20 Level 7										
39 Dimethylphthalate	1.36489	1.13508	1.17192	1.19054	1.15985	1.20823					
	1.17494						AVRG		1.20078		6.32260
40 Acenaphthylene	2.08676	1.80273	1.83141	1.81650	1.77233	2.12941					
	1.75642						AVRG		1.88508		8.21819
41 2,6-Dinitrotoluene	0.26069	0.25725	0.27537	0.29601	0.28450	0.30512					
	0.29050						AVRG		0.28135		6.35382
43 3-Nitroaniline	0.20751	0.21366	0.25373	0.25128	0.24013	0.25105					
	0.20850						AVRG		0.23227		9.23578
44 Acenaphthene	1.30679	1.09641	1.08357	1.13351	1.06627	1.13513					
	1.13044						AVRG		1.13602		7.04098
45 2,4-Dinitrophenol	+++++	4345	14717	42855	127651	250805					
	497418						QUAD	0.000e+00	4.08739	-0.09870	0.99880
46 Dibenzofuran	1.67283	1.49829	1.51991	1.55200	1.47200	1.58360					
	1.57471						AVRG		1.55334		4.27158

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	20 Level 7										
47 4-Nitrophenol	+++++	1862	5820	16653	43938	85112					
	161016						QUAD	0.000e+00	5.79130	-0.18557	0.99905
48 2,4-Dinitrotoluene	0.30512	0.31097	0.36079	0.38342	0.37756	0.40613					
	0.39616						AVRG		0.36288		11.05203
49 Fluorene	1.46413	1.26025	1.30008	1.33638	1.27146	1.34389					
	1.30199						AVRG		1.32546		5.15880
50 Diethylphthalate	1.35396	1.14110	1.15749	1.20605	1.17048	1.22908					
	1.18817						AVRG		1.20662		5.91539
51 4-Chlorophenyl-phenylether	0.73753	0.60252	0.61409	0.61582	0.59152	0.72584					
	0.67359						AVRG		0.65156		9.31141
52 4-Nitroaniline	0.21006	0.19776	0.27062	0.24001	0.24443	0.27164					
	0.25433						AVRG		0.24126		11.76360
53 4,6-Dinitro-2-methylphenol	3933	9847	27317	65565	169735	317489					
	606483						QUAD	0.000e+00	5.26585	-0.06370	0.99977

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	20 Level 7										
54 N-Nitrosodiphenylamine	0.49563	0.42947	0.47333	0.47261	0.45791	0.46123					
	0.45114						AVRG		0.46304		4.45876
56 4-Bromophenyl-phenylether	0.22767	0.21687	0.23028	0.22247	0.22312	0.22955					
	0.23436						AVRG		0.22633		2.59516
57 Hexachlorobenzene	0.32278	0.25772	0.26649	0.25845	0.25551	0.26286					
	0.26660						AVRG		0.27006		8.75648
58 Pentachlorophenol	0.15515	0.14017	0.17294	0.19921	0.21130	0.22141					
	0.22676						AVRG		0.18956		17.84287
60 Phenanthrene	1.22947	1.01265	1.08610	1.06561	1.04600	1.09893					
	1.09863						AVRG		1.09106		6.27534
61 Anthracene	1.19624	1.06794	1.09848	1.10290	1.07915	1.13739					
	1.14221						AVRG		1.11776		3.95191
62 Carbazole	+++++	0.79964	0.83444	0.64299	0.47569	0.60549					
	0.71548						AVRG		0.67896		19.54874

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	20 Level 7										
63 Di-n-butylphthalate	1.23468	1.00016	1.09465	1.11547	1.14103	1.23687					
	1.25417						AVRG		1.15386		8.08770
64 Fluoranthene	1.35769	1.17978	1.24657	1.24812	1.27294	1.33427					
	1.34952						AVRG		1.28413		5.11850
65 Pyrene	1.37184	1.13560	1.19244	1.19696	1.22185	1.25931					
	1.28506						AVRG		1.23758		6.17908
67 Butylbenzylphthalate	0.42623	0.34242	0.41245	0.41654	0.43945	0.45663					
	0.46466						AVRG		0.42263		9.55905
68 Benzo(a)anthracene	1.25572	1.03482	1.09368	1.07381	1.09465	1.13986					
	1.14667						AVRG		1.11989		6.34024
70 3,3'-Dichlorobenzidine	0.51204	0.36539	0.40605	0.35790	0.38490	0.47001					
	0.48944						AVRG		0.42653		14.75318
71 Chrysene	1.17786	0.95330	0.94998	0.97296	0.97716	1.02164					
	1.04126						AVRG		1.01345		7.90157

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	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	1.04908	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92019		6.73684
73 Di-n-octylphthalate	1.05463	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92098		6.94061
74 Benzo(b)fluoranthene	1.35044	1.05465	1.09386	1.12584	1.21507	1.24210					
	1.23295						AVRG		1.18784		8.59752
75 Benzo(k)fluoranthene	1.42924	1.14868	1.24463	1.22609	1.13947	1.22473					
	1.34515						AVRG		1.25114		8.31220
187 Total Benzofluoranthenes	1.30881	1.05407	1.12671	1.11857	1.11816	1.16984					
	1.17534						AVRG		1.15307		6.89595
76 Benzo(a)pyrene	1.15104	0.87256	0.97331	0.97345	1.00238	1.05501					
	1.07592						AVRG		1.01481		8.78911
78 Indeno(1,2,3-cd)pyrene	1.18245	1.01361	1.10322	1.12112	1.20413	1.27168					
	1.28789						AVRG		1.16916		8.32633

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	20 Level 7										
79 Dibenzo(a,h)anthracene	0.92380	0.73303	0.85483	0.88584	0.92025	0.96990					
	0.99039						AVRG		0.89686		9.55761
80 Benzo(g,h,i)perylene	1.04564	0.90225	0.98911	0.99122	1.00081	1.07106					
	1.08082						AVRG		1.01156		6.05123
90 N-Nitrosodimethylamine	0.88097	0.87544	0.88313	0.96297	0.85634	0.99623					
	0.92370						AVRG		0.91125		5.67695
91 Aniline	4.00230	3.88308	3.89376	4.21542	3.95352	4.21183					
	3.92480						AVRG		4.01210		3.56908
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	8518	23877	29714	60043	110746					
	257371						QUAD	0.000e+00	8.17939	-1.16399	0.99615
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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	20 Level 7											
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	0.52664	0.41489	0.44890	0.44972	0.46406	0.47911						
	0.49534						AVRG		0.46838		7.71935	
99 Perylene	1.36017	1.09787	1.11603	1.09868	1.10144	1.16094						
	1.18529						AVRG		1.16006		8.15448	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.72677	0.80583	0.78852	0.86813	0.78009	0.84643						
	0.79117						AVRG		0.80099		5.76462	

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	20 Level 7											
188 2,6-Dichlorophenol	0.60097	0.54247	0.59080	0.60713	0.60866	0.63218						
	0.61259						AVRG		0.59926		4.67591	
189 N-Nitrosomethylethylamine	1.30866	1.29196	1.30579	1.43515	1.30380	1.45857						
	1.41072						AVRG		1.35923		5.31332	
$ 1 2-Fluorophenol	1.34097	1.36474	1.37344	1.45728	1.43245	1.53225						
	1.49284						AVRG		1.42771		4.99388	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.74449	1.70146	1.73037	1.88081	1.85833	2.05451						
	1.96238						AVRG		1.84748		7.08965	
$ 5 2-Chlorophenol-d4	1.48208	1.31763	1.34482	1.41250	1.38956	1.44002						
	1.43020						AVRG		1.40240		4.04486	
$ 10 1,2-Dichlorobenzene-d4	0.98938	1.00149	0.99695	1.02158	0.98109	1.04380						
	1.02722						AVRG		1.00879		2.24119	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.42885	0.41732	0.41764	0.42993	0.40061	0.44115					
	0.41922						AVRG		0.42210		3.03179
$ 36 2-Fluorobiphenyl	1.56575	1.33869	1.34323	1.37457	1.33669	1.41362					
	1.40005						AVRG		1.39609		5.78874
$ 55 2,4,6-Tribromophenol	0.19995	0.17003	0.19549	0.21364	0.21873	0.24192					
	0.24098						AVRG		0.21154		12.14622
$ 66 Terphenyl-d14	0.89183	0.70027	0.75407	0.75999	0.76286	0.79419					
	0.78729						AVRG		0.77864		7.50175
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

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

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429a.d
Lab Smp Id: IC0429A
Inj Date : 29-APR-2013 16:53
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429A
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 16:53 Cal File: ic0429a.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.629	6.629	(0.738)	81023	5.00000	5.017
$	2 Phenol-d5	99	8.344	8.337	(0.929)	105112	5.00000	5.029
	3 Phenol	94	8.367	8.360	(0.931)	113480	5.00000	4.851
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	78597	5.00000	4.954
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	77866	5.00000	4.629
	6 2-Chlorophenol	128	8.630	8.622	(0.960)	85400	5.00000	4.734
	7 1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	87800	5.00000	4.850
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	45250	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	86690	5.00000	4.858
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	55493	5.00000	4.863
	12 1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	82329	5.00000	4.819
	11 Benzyl alcohol	108	9.289	9.289	(1.034)	49937	5.00000	5.075
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	25903	5.00000	4.989
	13 2-Methylphenol	108	9.553	9.553	(1.063)	82489	5.00000	4.900
	17 Hexachloroethane	117	10.027	10.027	(1.116)	35082	5.00000	4.699
	16 N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	50195	5.00000	4.776
	15 4-Methylphenol	108	9.848	9.840	(1.096)	86398	5.00000	5.034
$	18 Nitrobenzene-d5	82	10.159	10.159	(0.873)	83504	5.00000	4.745
	19 Nitrobenzene	77	10.197	10.190	(0.876)	76232	5.00000	4.692
	20 Isophorone	82	10.686	10.686	(0.918)	141952	5.00000	4.645
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	47662	5.00000	5.233
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	167774	10.0000	10.02
	23 Bis(2-Chloroethoxy)methane	93	11.180	11.172	(0.960)	86369	5.00000	4.793
	24 Benzoic acid	105	11.226	11.080	(0.964)	282242	20.0000	19.18
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	164580	10.0000	10.68
	26 1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	71903	5.00000	4.772
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	166754	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	212706	5.00000	4.791
	29 4-Chloroaniline	127	11.859	11.843	(1.019)	177286	10.0000	10.21
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	43209	5.00000	4.828
	31 4-Chloro-3-methylphenol	107	12.919	12.911	(1.110)	143169	10.0000	10.56
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	143274	5.00000	4.859
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	118300	10.0000	10.06
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	115672	10.0000	10.28
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	121431	10.0000	10.47
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.905)	178632	5.00000	4.787
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	143132	5.00000	4.818
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	77138	10.0000	10.76
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	154999	5.00000	4.830
	40 Acenaphthylene	152	15.202	15.194	(0.978)	236850	5.00000	4.701
	41 2,6-Dinitrotoluene	165	15.194	15.179	(0.978)	76040	10.0000	10.11
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	106910	4.00000	
	43 3-Nitroaniline	138	15.488	15.473	(0.997)	64182	10.0000	10.34
	44 Acenaphthene	153	15.612	15.604	(1.004)	142494	5.00000	4.693
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	127651	20.0000	18.96
	46 Dibenzofuran	168	15.967	15.960	(1.027)	196715	5.00000	4.738
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	43938	10.0000	9.395
	48 2,4-Dinitrotoluene	165	16.060	16.052	(1.033)	100913	10.0000	10.40
	50 Diethylphthalate	149	16.640	16.632	(1.071)	156420	5.00000	4.850
	49 Fluorene	166	16.740	16.733	(1.077)	169915	5.00000	4.796
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	79049	5.00000	4.539
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	65331	10.0000	10.13
	53 4,6-Dinitro-2-methylphenol	198	16.964	16.949	(0.901)	169735	20.0000	19.66
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	102905	5.00000	4.945
$	55 2,4,6-Tribromophenol	330	17.319	17.311	(1.114)	29230	5.00000	5.170
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	50141	5.00000	4.929
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	57420	5.00000	4.731
	58 Pentachlorophenol	266	18.555	18.548	(0.986)	94970	10.0000	11.15
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	179783	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.002)	235067	5.00000	4.794
	61 Anthracene	178	18.965	18.958	(1.008)	242517	5.00000	4.827
	62 Carbazole	167	19.313	19.314	(1.026)	106901	5.00000	3.503
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	256423	5.00000	4.944
	64 Fluoranthene	202	21.286	21.279	(1.131)	286067	5.00000	4.956
	65 Pyrene	202	21.704	21.697	(0.908)	294528	5.00000	4.936
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	183888	5.00000	4.899
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	105931	5.00000	5.199
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	263867	5.00000	4.887
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	192841	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	185563	10.0000	9.024
	71 Chrysene	228	23.942	23.934	(1.002)	235545	5.00000	4.821
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	144972	5.00000	4.750(M)
*	134 Di-n-octylphthalate-d4	153	24.994	24.995	(1.000)	229567	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.001)	250054	5.00000	4.731

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	279937	5.00000	5.115
	75 Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	262519	5.00000	4.554
	76 Benzo(a)pyrene	252	26.249	26.241	(0.996)	230935	5.00000	4.939
*	77 Perylene-d12	264	26.349	26.350	(1.000)	184310	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	277417	5.00000	5.150
	79 Dibenzo(a,h)anthracene	278	28.713	28.698	(1.090)	212015	5.00000	5.130
	80 Benzo(g,h,i)perylene	276	29.373	29.350	(1.115)	230573	5.00000	4.947
	90 N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	96874	10.0000	9.397
	91 Aniline	93	8.414	8.406	(0.936)	223621	5.00000	4.927
	93 Benzidine	184	21.542	21.542	(0.902)	60043	10.0000	9.736
	103 Pyridine	79	4.382	4.397	(0.488)	88248	10.0000	9.739
	105 1-methylnaphthalene	142	13.437	13.430	(1.154)	131928	5.00000	4.878
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.100)	150200	5.00000	4.542
	187 Total Benzofluoranthenes	252	25.707	25.699	(0.976)	515221	10.0000	9.694
	99 Perylene	252	26.396	26.388	(1.002)	253757	5.00000	4.747
	98 Retene	219	22.316	22.316	(0.934)	111862	5.00000	4.954
	120 2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	47002	5.00000	5.447
	188 2,6-Dichlorophenol	162	11.874	11.867	(1.020)	253741	10.0000	10.16
	189 N-Nitrosomethylethylamine	88	5.818	5.818	(0.647)	147492	10.0000	9.592

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429a.d
Lab Smp Id: IC0429A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	45250	0.00
27 Naphthalene-d8	166754	83377	333508	166754	0.00
42 Acenaphthene-d10	106910	53455	213820	106910	0.00
59 Phenanthrene-d10	179783	89892	359566	179783	0.00
69 Chrysene-d12	192841	96420	385682	192841	0.00
134 Di-n-octylphthala	229567	114784	459134	229567	0.00
77 Perylene-d12	184310	92155	368620	184310	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

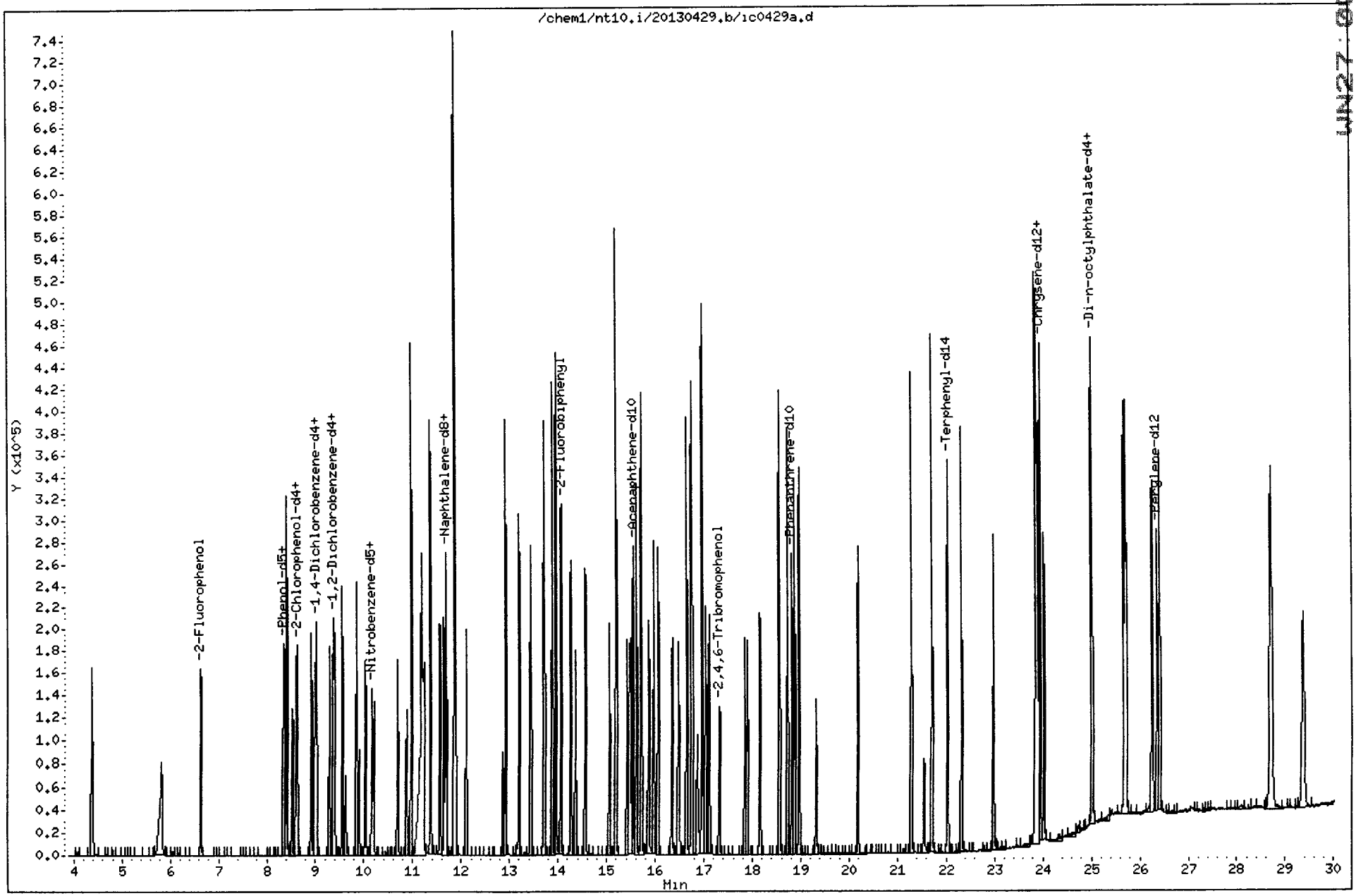
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429a.d
Date : 29-APR-2013 16:53
Client ID:
Sample Info: IC0429A

Instrument: nt10.i

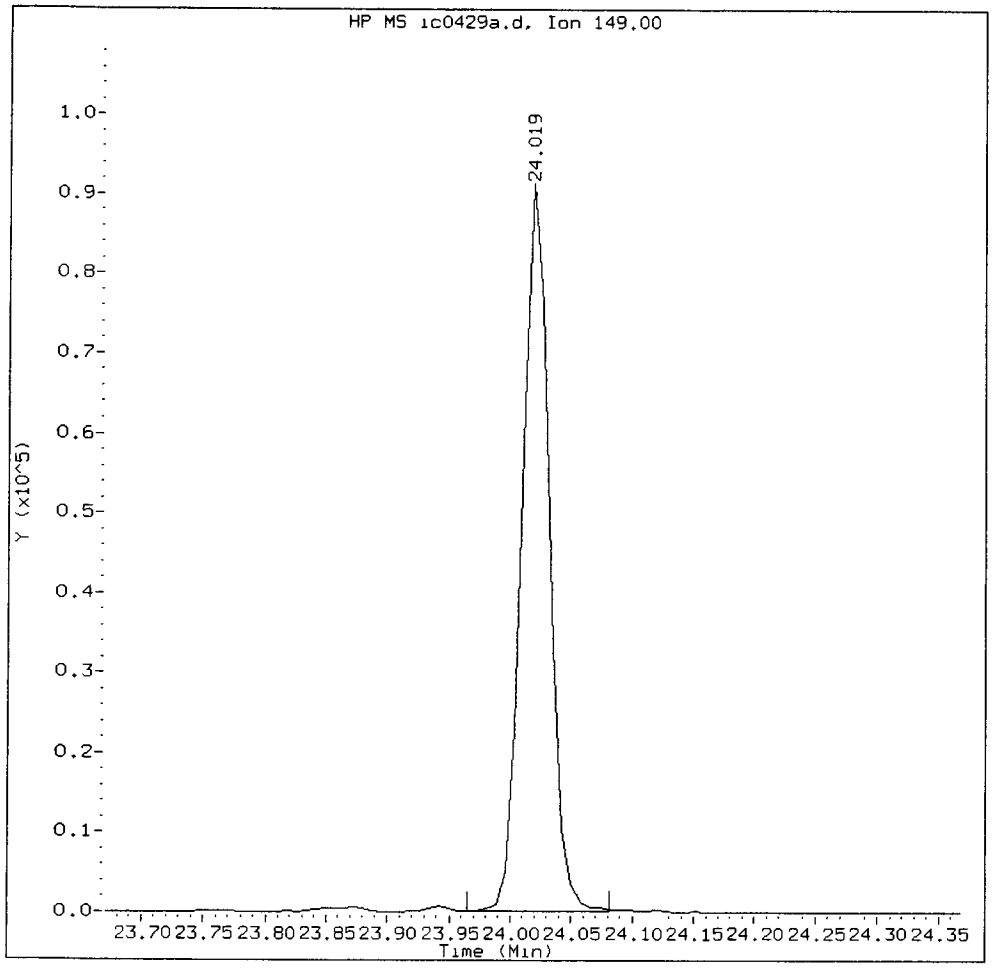
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429A, /chem1/nt10.i/20130429.b/ic0429a.d

bis(2-Ethylhexyl)phthalate Amount: 4.75 Area: 144972



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: VE Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429a.d

Lab ID: IC0429A, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429b.d
Lab Smp Id: IC0429B
Inj Date : 29-APR-2013 17:30
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429B
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 17:30 Cal File: ic0429b.d
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.636	6.629	(0.738)	273907	20.0000	20.91
$	2 Phenol-d5	99	8.352	8.337	(0.929)	360057	20.0000	21.24
	3 Phenol	94	8.375	8.360	(0.932)	373116	20.0000	19.67
$	5 2-Chlorophenol-d4	132	8.607	8.599	(0.958)	262414	20.0000	20.40
	4 Bis(2-Chloroethyl)ether	93	8.530	8.522	(0.949)	257095	20.0000	18.85
	6 2-Chlorophenol	128	8.638	8.622	(0.961)	331706	20.0000	22.67
	7 1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	292512	20.0000	19.92
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	36696	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	284169	20.0000	19.64
$	10 1,2-Dichlorobenzene-d4	152	9.375	9.367	(1.043)	188475	20.0000	20.37
	12 1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	271486	20.0000	19.59
	11 Benzyl alcohol	108	9.305	9.289	(1.035)	168782	20.0000	21.15
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	84885	20.0000	20.16
	13 2-Methylphenol	108	9.561	9.553	(1.064)	276689	20.0000	20.27
	17 Hexachloroethane	117	10.027	10.027	(1.116)	118193	20.0000	19.52
	16 N-Nitroso-di-n-propylamine	70	9.910	9.895	(1.103)	170255	20.0000	19.98
	15 4-Methylphenol	108	9.856	9.840	(1.097)	282794	20.0000	20.32
$	18 Nitrobenzene-d5	82	10.166	10.159	(0.873)	285663	20.0000	19.86
	19 Nitrobenzene	77	10.205	10.190	(0.876)	262495	20.0000	19.77
	20 Isophorone	82	10.709	10.686	(0.919)	564145	20.0000	22.59
	21 2-Nitrophenol	139	10.879	10.872	(0.934)	165519	20.0000	22.24
	22 2,4-Dimethylphenol	107	10.980	10.964	(0.942)	537286	40.0000	39.26
	23 Bis(2-Chloroethoxy)methane	93	11.188	11.172	(0.960)	285091	20.0000	19.36
	24 Benzoic acid	105	11.388	11.080	(0.977)	1043882	80.0000	79.78(M)
	25 2,4-Dichlorophenol	162	11.380	11.365	(0.977)	533058	40.0000	42.31
	26 1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	239383	20.0000	19.44
*	27 Naphthalene-d8	136	11.650	11.643	(1.000)	136283	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.697	11.681	(1.004)	712555	20.0000	19.64
	29 4-Chloroaniline	127	11.874	11.843	(1.019)	519478	40.0000	36.62
	30 Hexachlorobutadiene	225	12.106	12.099	(1.039)	148934	20.0000	20.36
	31 4-Chloro-3-methylphenol	107	12.927	12.911	(1.110)	498092	40.0000	44.94
	32 2-Methylnaphthalene	142	13.205	13.197	(1.133)	495565	20.0000	20.56
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	431807	40.0000	44.53
	34 2,4,6-Trichlorophenol	196	13.894	13.879	(0.894)	414194	40.0000	44.65
	35 2,4,5-Trichlorophenol	196	13.964	13.948	(0.898)	442203	40.0000	46.24
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.904)	616937	20.0000	20.06
	37 2-Chloronaphthalene	162	14.273	14.258	(0.918)	489858	20.0000	20.00
	38 2-Nitroaniline	65	14.575	14.552	(0.937)	265470	40.0000	44.92
	39 Dimethylphthalate	163	15.070	15.047	(0.969)	517745	20.0000	19.57
	40 Acenaphthylene	152	15.202	15.194	(0.978)	773977	20.0000	18.64
	41 2,6-Dinitrotoluene	165	15.202	15.179	(0.978)	256022	40.0000	41.30
*	42 Acenaphthene-d10	164	15.550	15.535	(1.000)	88131	4.00000	
	43 3-Nitroaniline	138	15.511	15.473	(0.998)	183750	40.0000	35.91
	44 Acenaphthene	153	15.619	15.604	(1.004)	498134	20.0000	19.90
	45 2,4-Dinitrophenol	184	15.743	15.705	(1.012)	497418	80.0000	79.70
	46 Dibenzofuran	168	15.983	15.960	(1.028)	693905	20.0000	20.28
	47 4-Nitrophenol	109	15.890	15.867	(1.022)	161016	40.0000	39.85
	48 2,4-Dinitrotoluene	165	16.075	16.052	(1.034)	349138	40.0000	43.67
	50 Diethylphthalate	149	16.663	16.632	(1.072)	523573	20.0000	19.69
	49 Fluorene	166	16.748	16.733	(1.077)	573728	20.0000	19.65
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	296820	20.0000	20.68
	52 4-Nitroaniline	138	16.895	16.841	(1.086)	224140	40.0000	42.17
	53 4,6-Dinitro-2-methylphenol	198	16.995	16.949	(0.903)	606483	80.0000	79.85
	54 N-Nitrosodiphenylamine	169	17.041	17.026	(0.905)	343477	20.0000	19.49
$	55 2,4,6-Tribromophenol	330	17.327	17.311	(1.114)	106190	20.0000	22.78
	56 4-Bromophenyl-phenylether	248	17.843	17.836	(0.948)	178429	20.0000	20.71
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	202975	20.0000	19.74
	58 Pentachlorophenol	266	18.563	18.548	(0.986)	345299	40.0000	47.85
*	59 Phenanthrene-d10	188	18.826	18.811	(1.000)	152272	4.00000	
	60 Phenanthrene	178	18.872	18.857	(1.002)	836454	20.0000	20.14
	61 Anthracene	178	18.973	18.958	(1.008)	869630	20.0000	20.44
	62 Carbazole	167	19.321	19.314	(1.026)	544741	20.0000	21.08
	63 Di-n-butylphthalate	149	20.188	20.188	(1.072)	954876	20.0000	21.74
	64 Fluoranthene	202	21.286	21.279	(1.131)	1027468	20.0000	21.02
	65 Pyrene	202	21.704	21.697	(0.908)	1044384	20.0000	20.77
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	639846	20.0000	20.22
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	377639	20.0000	21.99
	68 Benzo(a)anthracene	228	23.880	23.864	(0.999)	931914	20.0000	20.48
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	162543	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.857	23.841	(0.998)	795550	40.0000	45.90
	71 Chrysene	228	23.949	23.934	(1.002)	846249	20.0000	20.55
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	538822	20.0000	19.18(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	211292	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.000)	944988	20.0000	19.42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.676	25.660	(0.974)	987454	20.0000	20.76
	75 Benzo(k)fluoranthene	252	25.722	25.699	(0.976)	1077307	20.0000	21.50
	76 Benzo(a)pyrene	252	26.257	26.241	(0.996)	861687	20.0000	21.20
*	77 Perylene-d12	264	26.357	26.350	(1.000)	160177	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.713	28.690	(1.089)	1031455	20.0000	22.03
	79 Dibenzo(a,h)anthracene	278	28.737	28.698	(1.090)	793192	20.0000	22.09
	80 Benzo(g,h,i)perylene	276	29.405	29.350	(1.116)	865612	20.0000	21.37
	90 N-Nitrosodimethylamine	74	4.389	4.366	(0.488)	338961	40.0000	40.55
	91 Aniline	93	8.421	8.406	(0.937)	720123	20.0000	19.56
	93 Benzidine	184	21.549	21.542	(0.902)	257371	40.0000	40.13
	103 Pyridine	79	4.389	4.397	(0.488)	290326	40.0000	39.51
	105 1-methylnaphthalene	142	13.437	13.430	(1.153)	458844	20.0000	20.76
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.118	17.095	(1.101)	521942	20.0000	19.15
	187 Total Benzofluoranthenes	252	25.722	25.699	(0.976)	1886688	40.0000	40.85
	99 Perylene	252	26.411	26.388	(1.002)	949277	20.0000	20.43
	98 Retene	219	22.316	22.316	(0.934)	402573	20.0000	21.15
	120 2,3,4,6-Tetrachlorophenol	232	16.354	16.338	(1.052)	168064	20.0000	23.63
	188 2,6-Dichlorophenol	162	11.890	11.867	(1.021)	834861	40.0000	40.89
	189 N-Nitrosomethylethylamine	88	5.825	5.818	(0.648)	517676	40.0000	41.51

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429b.d
Lab Smp Id: IC0429B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	36696	-18.90
27 Naphthalene-d8	166754	83377	333508	136283	-18.27
42 Acenaphthene-d10	106910	53455	213820	88131	-17.57
59 Phenanthrene-d10	179783	89892	359566	152272	-15.30
69 Chrysene-d12	192841	96420	385682	162543	-15.71
134 Di-n-octylphthala	229567	114784	459134	211292	-7.96
77 Perylene-d12	184310	92155	368620	160177	-13.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.65	0.07
42 Acenaphthene-d10	15.54	15.04	16.04	15.55	0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.83	0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

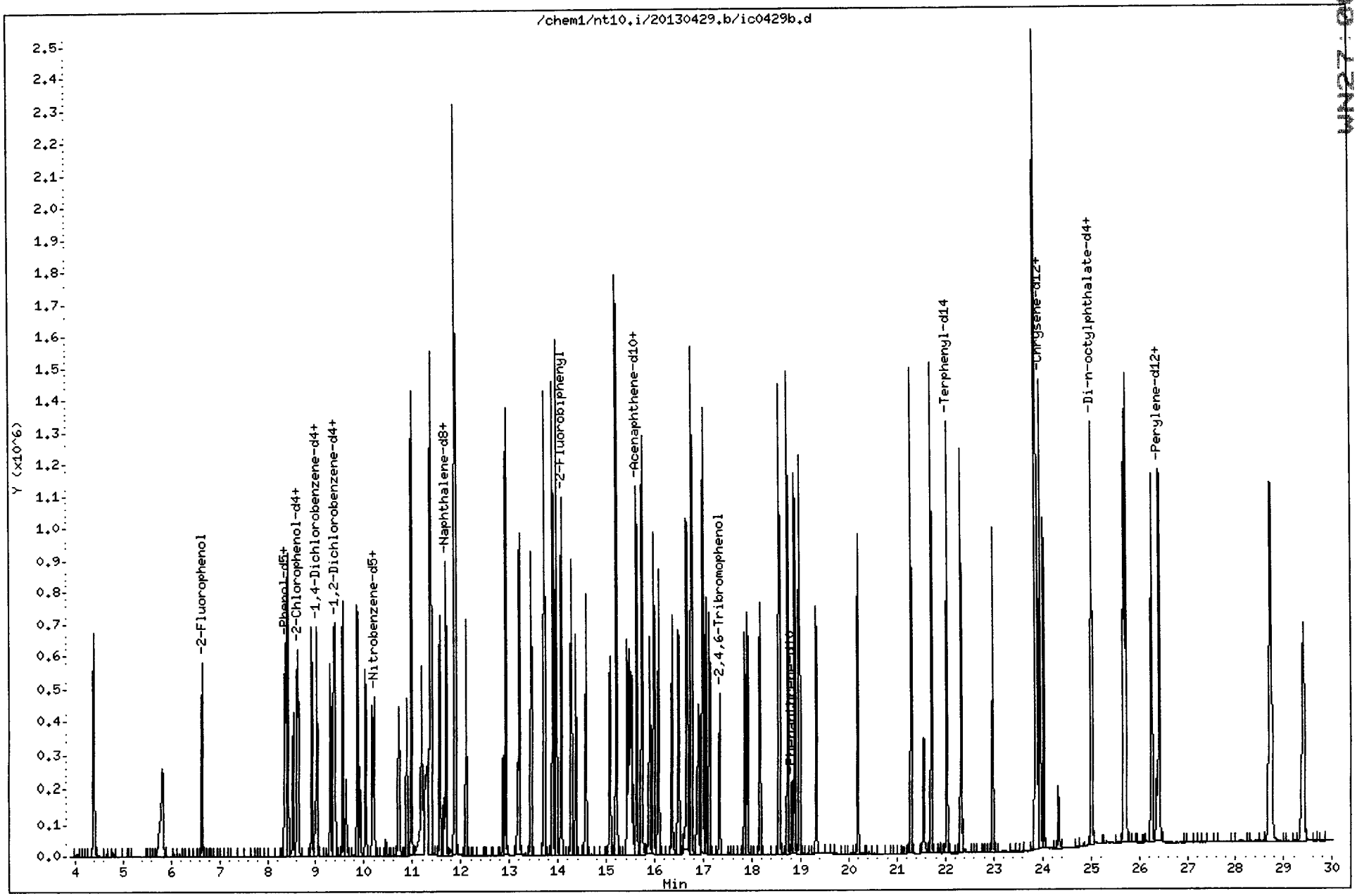
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429b.d
Date : 29-APR-2013 17:30
Client ID:
Sample Info: IC0429B

Instrument: nt10.i

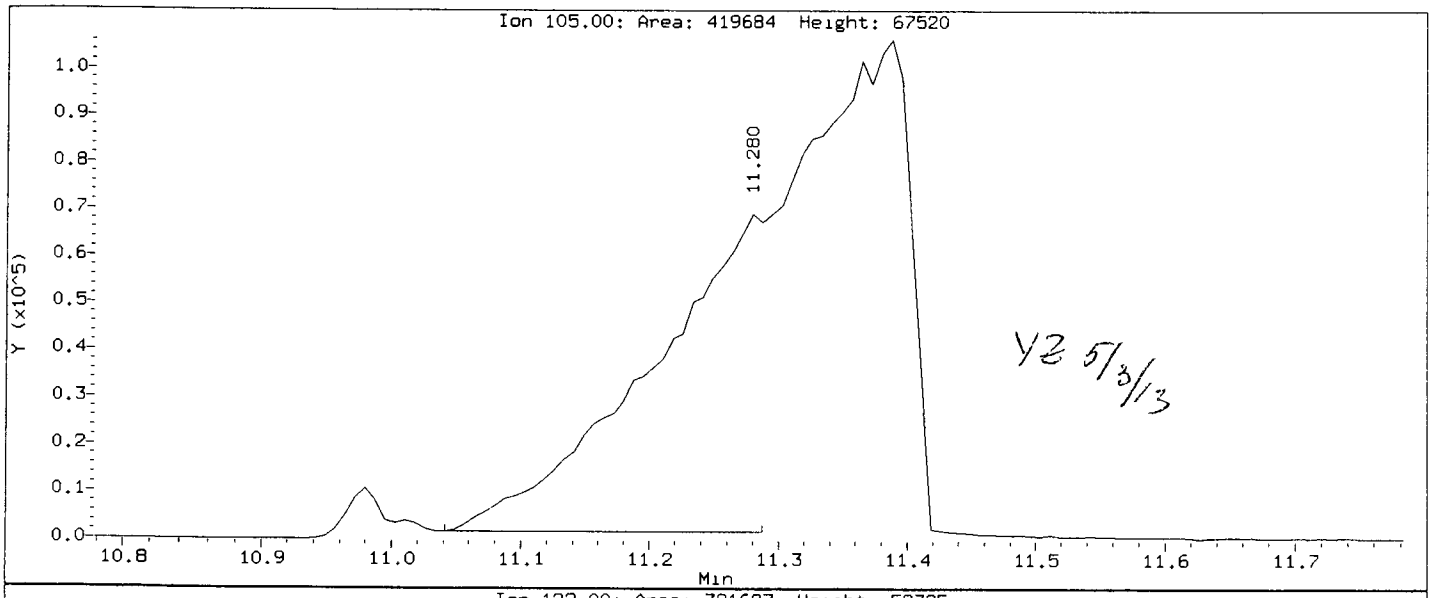
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi

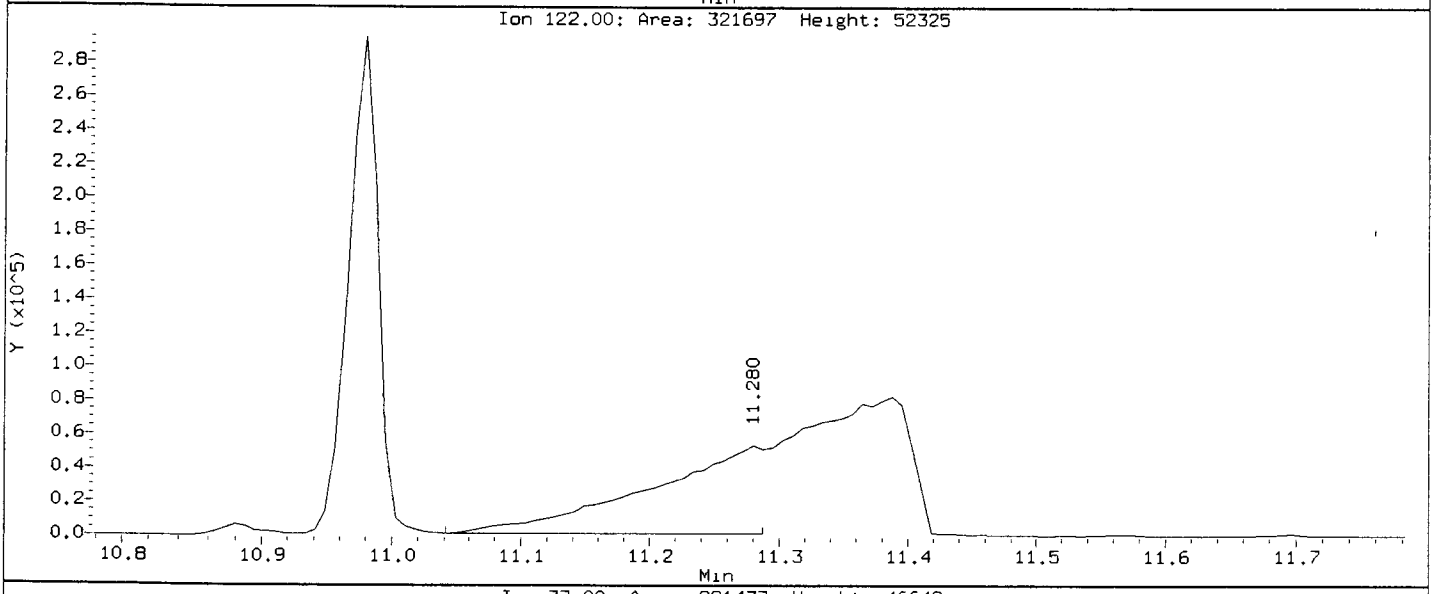


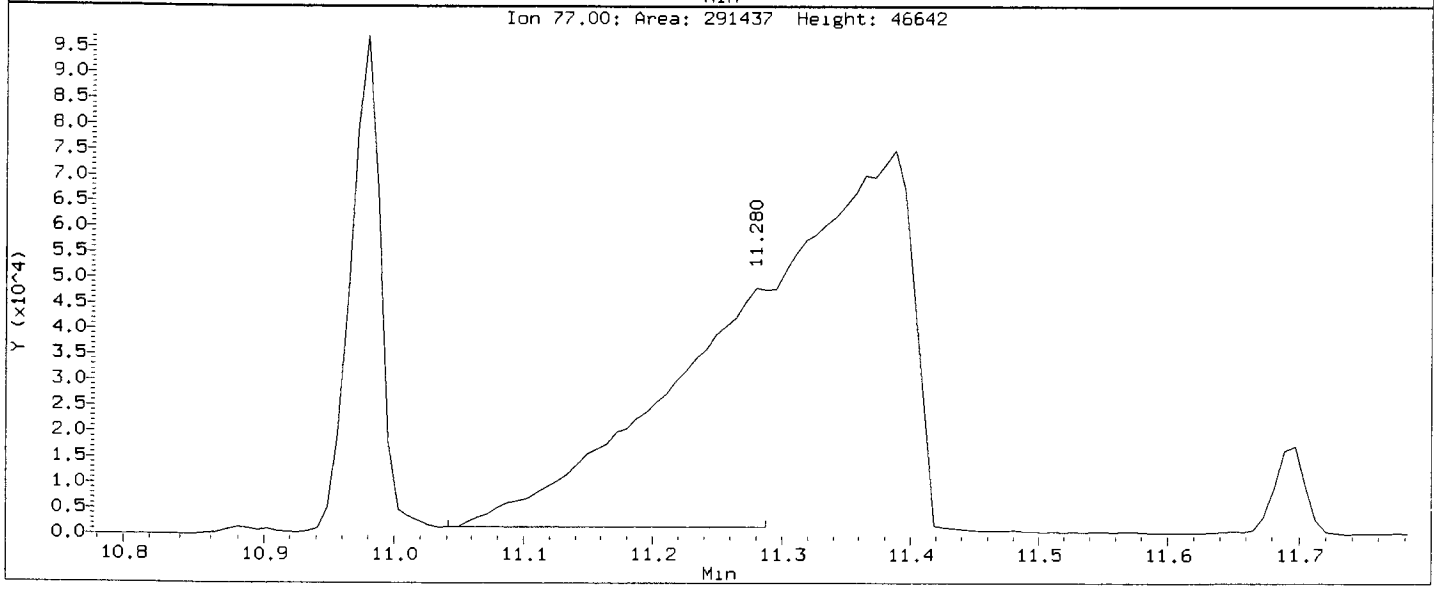
Data File: /chem1/nt10.1/20130429.b/1c0429b.d
Injection Date: 29-APR-2013 17:30
Instrument: nt10.1
Client Sample ID:

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



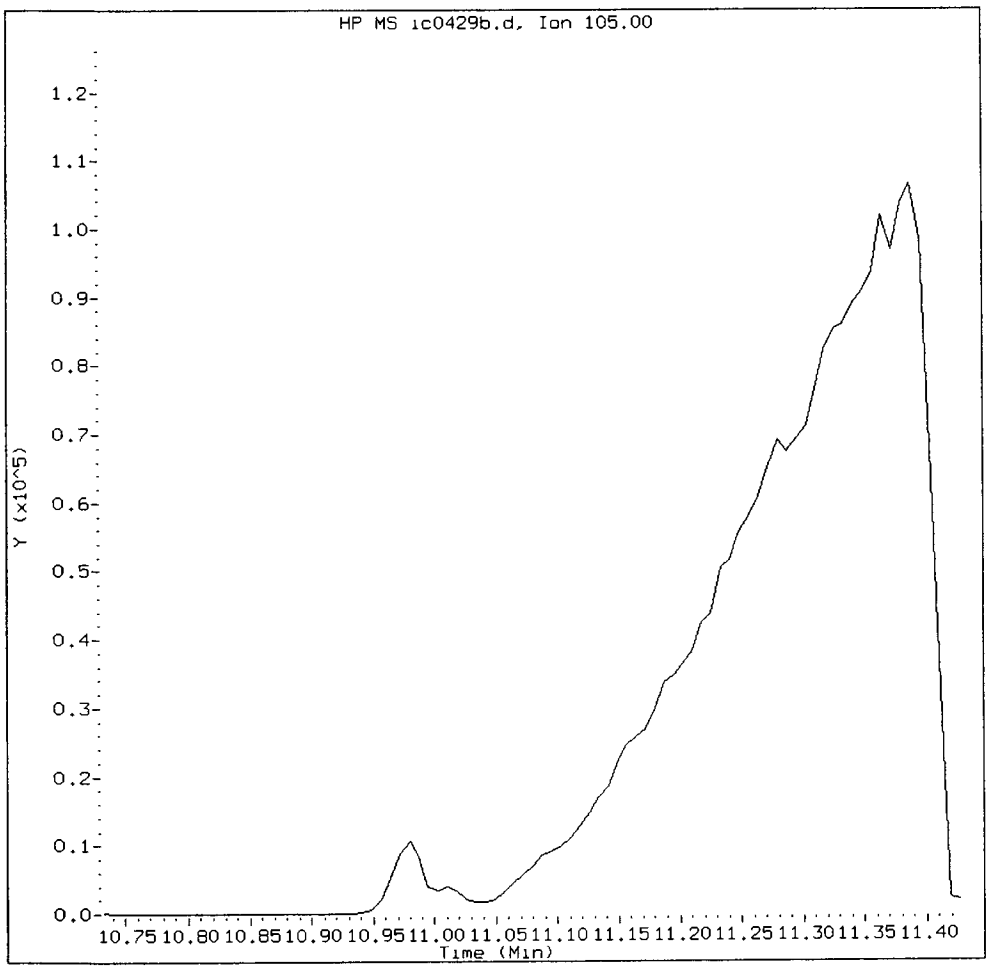
YZ 5/3/13





IC0429B, /chem1/nt10.i/20130429.b/ic0429b.d

Benzoic acid Amount: 79.78 Area: 1043882



MANUAL INTEGRATION for Benzoic acid

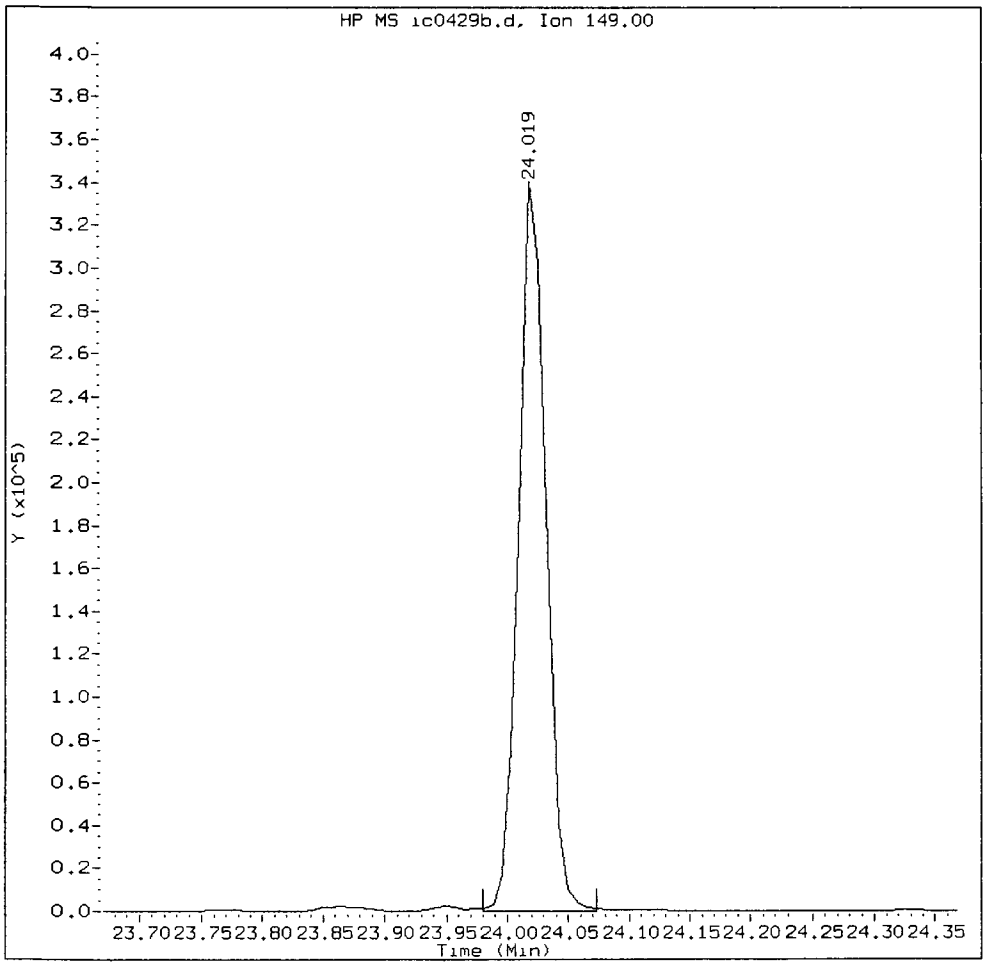
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/9/13

IC0429B, /chem1/nt10.i/20130429.b/ic0429b.d

bis(2-Ethylhexyl)phthalate Amount: 19.18 Area: 538822



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: _____ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429b.d

Lab ID: IC0429B, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
15.202	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429c.d
Lab Smp Id: IC0429C
Inj Date : 29-APR-2013 18:07
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429C
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:07 Cal File: ic0429c.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.636	6.629	(0.738)	3383	0.20000	0.1878
$	2 Phenol-d5	99	8.336	8.337	(0.928)	4401	0.20000	0.1889
	3 Phenol	94	8.360	8.360	(0.930)	5241	0.20000	0.2009
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	3739	0.20000	0.2114
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	3959	0.20000	0.2111
	6 2-Chlorophenol	128	8.630	8.622	(0.960)	3911	0.20000	0.1944
	7 1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	4272	0.20000	0.2116
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	50456	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	4324	0.20000	0.2173
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	2496	0.20000	0.1962
	12 1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	4100	0.20000	0.2152
	11 Benzyl alcohol	108	9.289	9.289	(1.034)	2146	0.20000	0.1956
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	1075	0.20000	0.1857
	13 2-Methylphenol	108	9.553	9.553	(1.063)	3759	0.20000	0.2003
	17 Hexachloroethane	117	10.027	10.027	(1.116)	1739	0.20000	0.2089
	16 N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	2403	0.20000	0.2051
	15 4-Methylphenol	108	9.840	9.840	(1.095)	3626	0.20000	0.1895
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.873)	3990	0.20000	0.2032
	19 Nitrobenzene	77	10.197	10.190	(0.876)	3676	0.20000	0.2028
	20 Isophorone	82	10.686	10.686	(0.918)	6624	0.20000	0.1943
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	1931	0.20000	0.1900
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	7665	0.40000	0.4102
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	4126	0.20000	0.2052
	24 Benzoic acid	105	11.064	11.080	(0.950)	4976	0.80000	0.3099
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	5918	0.40000	0.3440
	26 1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	3837	0.20000	0.2282
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	186081	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	11214	0.20000	0.2264
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	7896	0.40000	0.4077
	30 Hexachlorobutadiene	225	12.106	12.099	(1.040)	2172	0.20000	0.2175
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	4902	0.40000	0.3239
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	6890	0.20000	0.2094
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	4924	0.40000	0.4074
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	4276	0.40000	0.3699
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	3903	0.40000	0.3275
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	8598	0.20000	0.2243
	37 2-Chloronaphthalene	162	14.258	14.258	(0.917)	6906	0.20000	0.2263
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	2248	0.40000	0.3052
	39 Dimethylphthalate	163	15.047	15.047	(0.968)	7495	0.20000	0.2273
	40 Acenaphthylene	152	15.194	15.194	(0.978)	11459	0.20000	0.2214
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	2863	0.40000	0.3706
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	109826	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	2279	0.40000	0.3574(M)
	44 Acenaphthene	153	15.612	15.604	(1.004)	7176	0.20000	0.2301
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	1264	0.80000	0.1881
	46 Dibenzofuran	168	15.959	15.960	(1.027)	9186	0.20000	0.2154
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	600	0.40000	0.1265
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	3351	0.40000	0.3363
	50 Diethylphthalate	149	16.632	16.632	(1.070)	7435	0.20000	0.2244
	49 Fluorene	166	16.733	16.733	(1.077)	8040	0.20000	0.2209
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	4050	0.20000	0.2264
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	2307	0.40000	0.3483
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	3933	0.80000	0.4496
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	4565	0.20000	0.2141
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	1098	0.20000	0.1890
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	2097	0.20000	0.2012
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	2973	0.20000	0.2390
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	2858	0.40000	0.3274
*	59 Phenanthrene-d10	188	18.810	18.811	(1.000)	184210	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	11324	0.20000	0.2254
	61 Anthracene	178	18.957	18.958	(1.008)	11018	0.20000	0.2140
	62 Carbazole	167	19.313	19.314	(1.027)	8831	0.20000	0.2824
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	11372	0.20000	0.2140
	64 Fluoranthene	202	21.279	21.279	(1.131)	12505	0.20000	0.2115
	65 Pyrene	202	21.696	21.697	(0.908)	13621	0.20000	0.2217
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	8855	0.20000	0.2291
	67 Butylbenzylphthalate	149	22.966	22.974	(0.961)	4232	0.20000	0.2017
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	12468	0.20000	0.2243
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	198580	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	10168	0.40000	0.4802
	71 Chrysene	228	23.934	23.934	(1.002)	11695	0.20000	0.2324
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	6713	0.20000	0.2377(M)
*	134 Di-n-octylphthalate-d4	153	24.994	24.995	(1.000)	212453	4.00000	
	73 Di-n-octylphthalate	149	25.002	25.002	(1.000)	11203	0.20000	0.2290

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.660	25.660	(0.974)	12082	0.20000	0.2274
75	Benzo(k)fluoranthene	252	25.699	25.699	(0.976)	12787	0.20000	0.2285
76	Benzo(a)pyrene	252	26.241	26.241	(0.996)	10298	0.20000	0.2268
* 77	Perylene-d12	264	26.342	26.350	(1.000)	178934	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.674	28.690	(1.089)	10579	0.20000	0.2023
79	Dibenzo(a,h)anthracene	278	28.698	28.698	(1.089)	8265	0.20000	0.2060
80	Benzo(g,h,i)perylene	276	29.358	29.350	(1.115)	9355	0.20000	0.2067
90	N-Nitrosodimethylamine	74	4.382	4.366	(0.488)	4445	0.40000	0.3867
91	Aniline	93	8.406	8.406	(0.935)	10097	0.20000	0.1995
93	Benzidine	184	21.542	21.542	(0.902)	6811	0.40000	1.117
103	Pyridine	79	4.420	4.397	(0.492)	3667	0.40000	0.3629
105	1-methylnaphthalene	142	13.429	13.430	(1.153)	6549	0.20000	0.2170
111	Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	7263	0.20000	0.2138
187	Total Benzofluoranthenes	252	25.660	25.699	(0.974)	23419	0.40000	0.4539
99	Perylene	252	26.388	26.388	(1.002)	12169	0.20000	0.2345
98	Retene	219	22.308	22.316	(0.934)	5229	0.20000	0.2249
120	2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.051)	1446	0.20000	0.1631
188	2,6-Dichlorophenol	162	11.866	11.867	(1.019)	11183	0.40000	0.4011
189	N-Nitrosomethylethylamine	88	5.833	5.818	(0.649)	6603	0.40000	0.3851

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429c.d
Lab Smp Id: IC0429C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	50456	11.50
27 Naphthalene-d8	166754	83377	333508	186081	11.59
42 Acenaphthene-d10	106910	53455	213820	109826	2.73
59 Phenanthrene-d10	179783	89892	359566	184210	2.46
69 Chrysene-d12	192841	96420	385682	198580	2.98
134 Di-n-octylphthala	229567	114784	459134	212453	-7.45
77 Perylene-d12	184310	92155	368620	178934	-2.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.34	-0.03

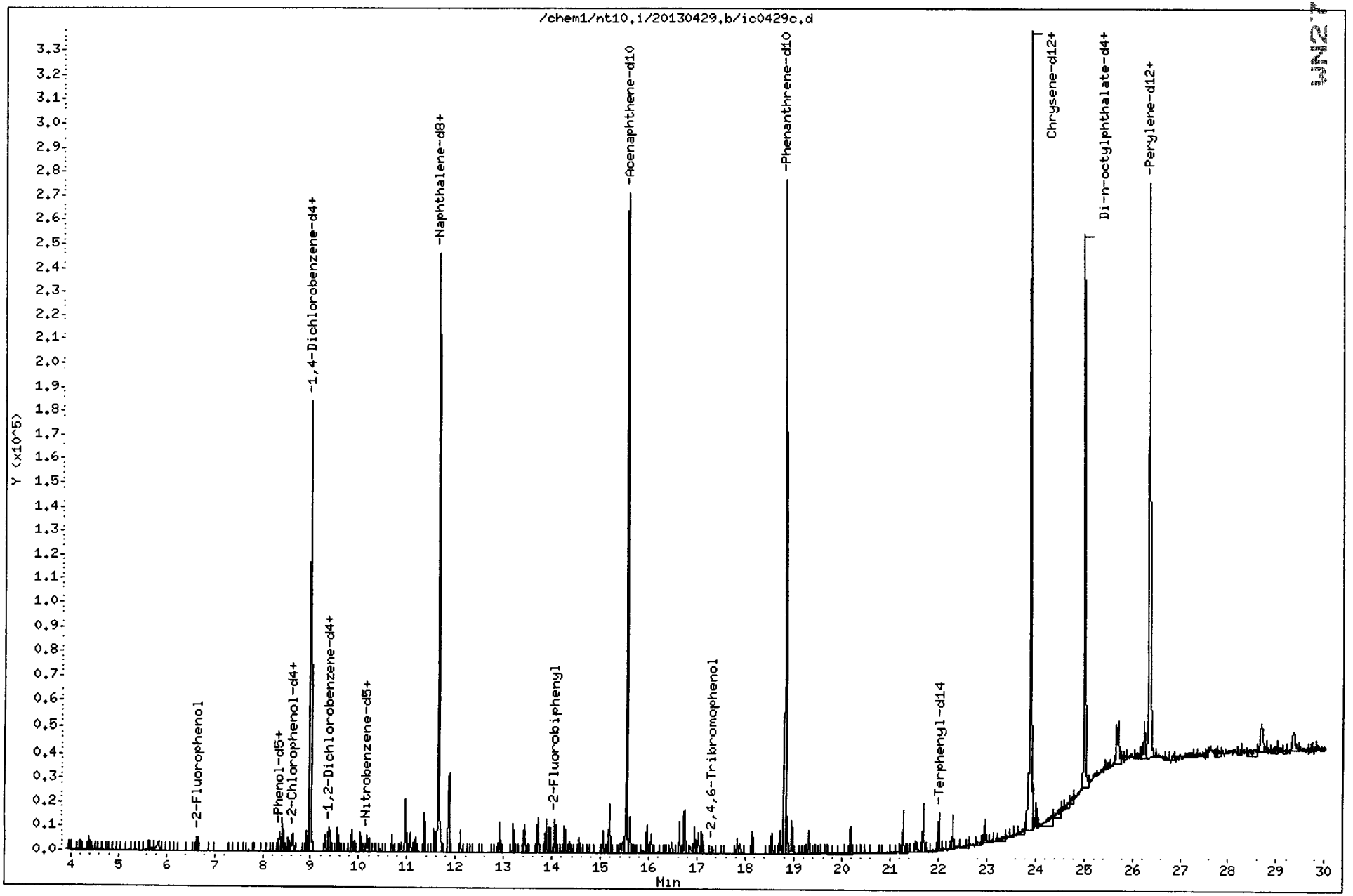
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429c.d
Date : 29-APR-2013 18:07
Client ID:
Sample Info: IC0429C

Instrument: nt10.i

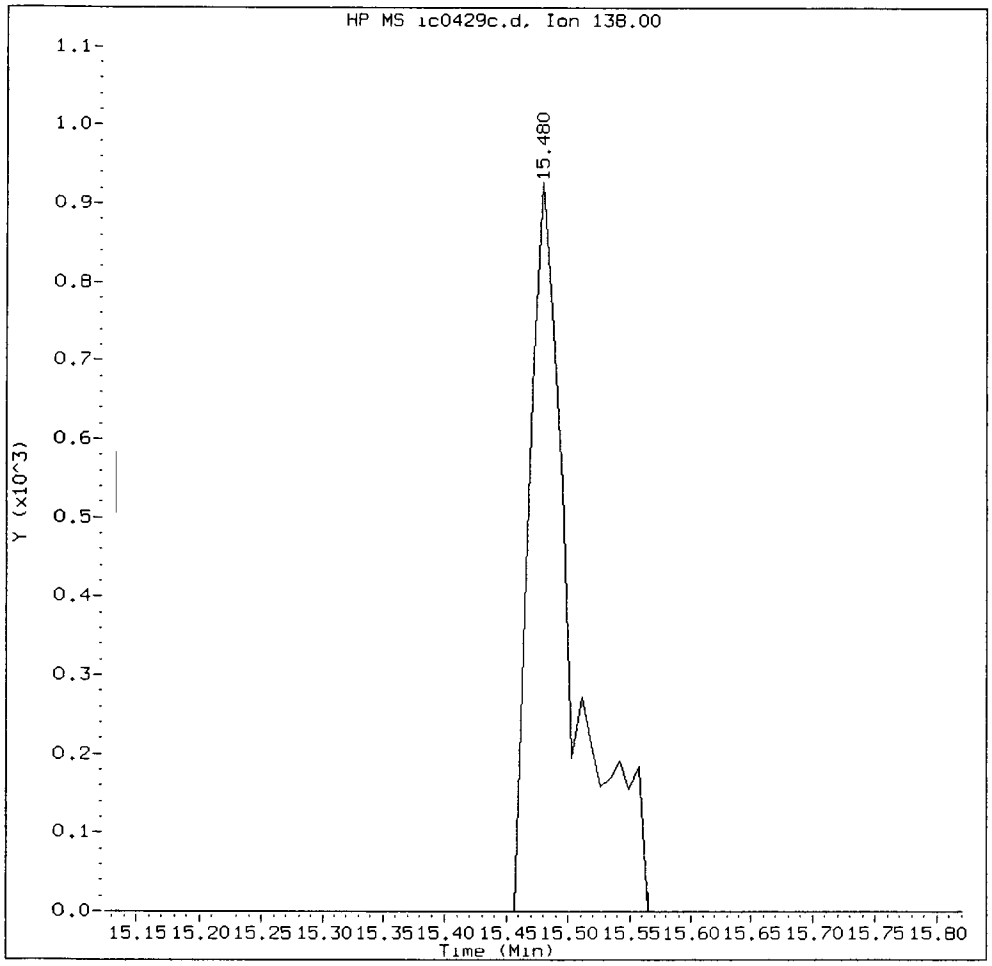
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429C, /chem1/nt10.i/20130429.b/ic0429c.d

3-Nitroaniline Amount: 0.36 Area: 2279



MANUAL INTEGRATION for 3-Nitroaniline

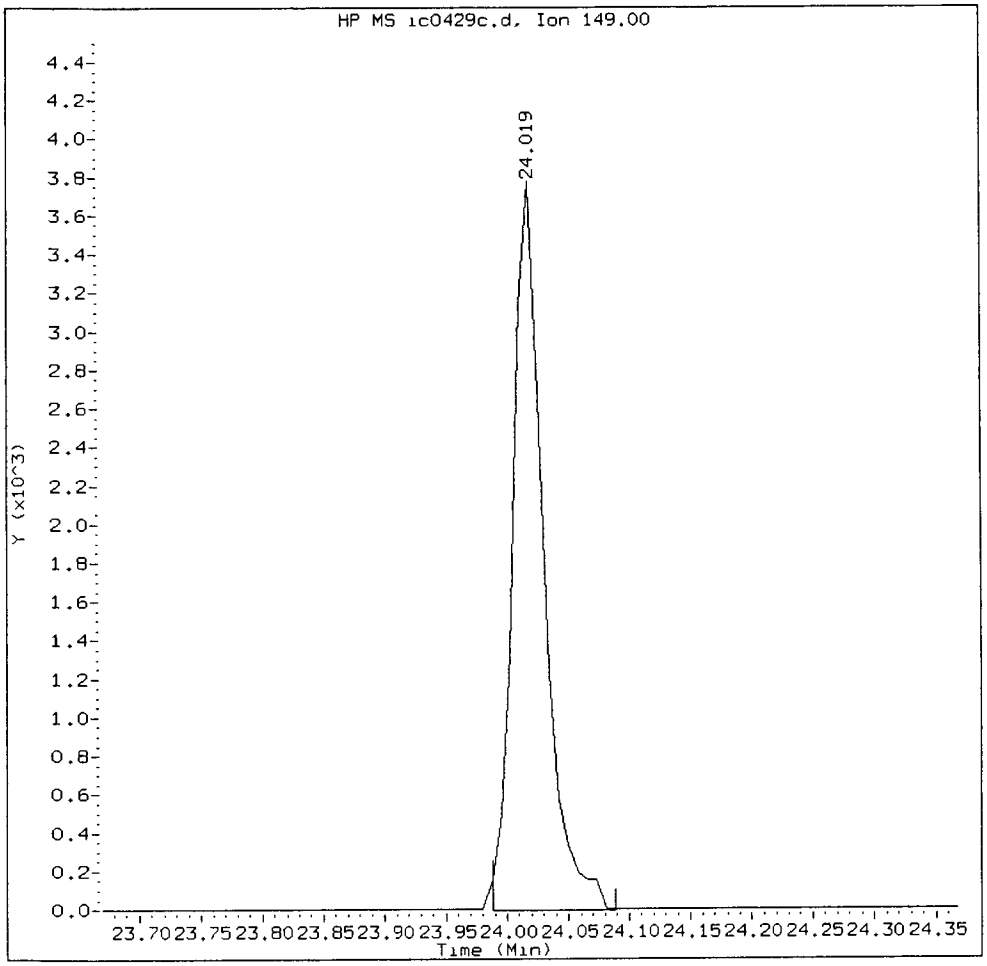
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB Date: 5/3/13

IC0429C, /chem1/nt10.i/20130429.b/ic0429c.d

bis(2-Ethylhexyl)phthalate Amount: 0.24 Area: 6713



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: YP Date: 5/2/5

CO-ELUTION SUMMARY FOR FILE - ic0429c.d

Lab ID: IC0429C, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429d.d
Lab Smp Id: IC0429D
Inj Date : 29-APR-2013 18:44
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429D
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:44 Cal File: ic0429d.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.628	6.629	(0.738)	15307	1.00000	0.9620
$	2 Phenol-d5	99	8.336	8.337	(0.928)	19285	1.00000	0.9366
	3 Phenol	94	8.360	8.360	(0.931)	22180	1.00000	0.9624
$	5 2-Chlorophenol-d4	132	8.591	8.599	(0.957)	14988	1.00000	0.9589
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	16380	1.00000	0.9883
	6 2-Chlorophenol	128	8.622	8.622	(0.960)	16398	1.00000	0.9226
	7 1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	17715	1.00000	0.9933
*	8 1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	44580	4.00000	
	9 1,4-Dichlorobenzene	146	9.010	9.018	(1.003)	16867	1.00000	0.9594
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.043)	11111	1.00000	0.9883
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	16787	1.00000	0.9973
	11 Benzyl alcohol	108	9.289	9.289	(1.035)	9257	1.00000	0.9548
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	5171	1.00000	1.011
	13 2-Methylphenol	108	9.545	9.553	(1.063)	16160	1.00000	0.9744
	17 Hexachloroethane	117	10.019	10.027	(1.116)	7294	1.00000	0.9916
	16 N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	9787	1.00000	0.9452
	15 4-Methylphenol	108	9.840	9.840	(1.096)	16603	1.00000	0.9818
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.873)	17141	1.00000	0.9894
	19 Nitrobenzene	77	10.197	10.190	(0.876)	15823	1.00000	0.9893
	20 Isophorone	82	10.686	10.686	(0.918)	27613	1.00000	0.9178
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	8265	1.00000	0.9218
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	32296	2.00000	1.959
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	17765	1.00000	1.001
	24 Benzoic acid	105	11.110	11.080	(0.954)	41278	4.00000	2.905
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	31611	2.00000	2.083
	26 1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	14941	1.00000	1.007
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	164171	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	42702	1.00000	0.9770
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	33352	2.00000	1.952
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	8779	1.00000	0.9963
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	25572	2.00000	1.915
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	27982	1.00000	0.9638
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	21045	2.00000	1.886
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	20650	2.00000	1.935
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	21226	2.00000	1.929
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	34053	1.00000	0.9621
	37 2-Chloronaphthalene	162	14.257	14.258	(0.917)	27105	1.00000	0.9620
	38 2-Nitroaniline	65	14.552	14.552	(0.936)	13213	2.00000	1.943
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	29710	1.00000	0.9760
	40 Acenaphthylene	152	15.194	15.194	(0.978)	46429	1.00000	0.9715
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	13962	2.00000	1.957
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	101406	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	12865	2.00000	2.185
	44 Acenaphthene	153	15.612	15.604	(1.004)	27470	1.00000	0.9538
	45 2,4-Dinitrophenol	184	15.704	15.705	(1.010)	14717	4.00000	2.364
	46 Dibenzofuran	168	15.967	15.960	(1.027)	38532	1.00000	0.9785
	47 4-Nitrophenol	109	15.859	15.867	(1.020)	5820	2.00000	1.327
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	18293	2.00000	1.988
	50 Diethylphthalate	149	16.632	16.632	(1.070)	29344	1.00000	0.9593
	49 Fluorene	166	16.733	16.733	(1.077)	32959	1.00000	0.9809
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	15568	1.00000	0.9425
	52 4-Nitroaniline	138	16.848	16.841	(1.084)	13721	2.00000	2.243
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	27317	4.00000	3.379
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	20108	1.00000	1.022
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	4956	1.00000	0.9242
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	9783	1.00000	1.017
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	11321	1.00000	0.9868
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	14694	2.00000	1.825
*	59 Phenanthrene-d10	188	18.810	18.811	(1.000)	169929	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	46140	1.00000	0.9955
	61 Anthracene	178	18.957	18.958	(1.008)	46666	1.00000	0.9828
	62 Carbazole	167	19.313	19.314	(1.027)	35449	1.00000	1.229
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	46503	1.00000	0.9487
	64 Fluoranthene	202	21.278	21.279	(1.131)	52957	1.00000	0.9708
	65 Pyrene	202	21.696	21.697	(0.908)	55189	1.00000	0.9635
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	34900	1.00000	0.9684
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	19089	1.00000	0.9759
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	50618	1.00000	0.9766
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	185129	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	37586	2.00000	1.904
	71 Chrysene	228	23.942	23.934	(1.002)	43967	1.00000	0.9374
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	26029	1.00000	0.9857(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	198625	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.000)	43269	1.00000	0.9461

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	46024	1.00000	0.9209
75	Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	52368	1.00000	0.9948
76	Benzo(a)pyrene	252	26.241	26.241	(0.996)	40952	1.00000	0.9591
* 77	Perylene-d12	264	26.349	26.350	(1.000)	168300	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.682	28.690	(1.089)	46418	1.00000	0.9436
79	Dibenzo(a,h)anthracene	278	28.705	28.698	(1.089)	35967	1.00000	0.9531
80	Benzo(g,h,i)perylene	276	29.358	29.350	(1.114)	41617	1.00000	0.9778
90	N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	19685	2.00000	1.938
91	Aniline	93	8.406	8.406	(0.936)	43396	1.00000	0.9705
93	Benzidine	184	21.542	21.542	(0.902)	23877	2.00000	4.142
103	Pyridine	79	4.397	4.397	(0.490)	17576	2.00000	1.969
105	1-methylnaphthalene	142	13.429	13.430	(1.153)	25663	1.00000	0.9638
111	Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	31455	1.00000	1.003
187	Total Benzofluoranthenes	252	25.668	25.699	(0.974)	94813	2.00000	1.954
99	Perylene	252	26.396	26.388	(1.002)	46957	1.00000	0.9620
98	Retene	219	22.316	22.316	(0.934)	20776	1.00000	0.9584
120	2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.051)	7820	1.00000	0.9555
188	2,6-Dichlorophenol	162	11.866	11.867	(1.019)	48496	2.00000	1.972
189	N-Nitrosomethylethylamine	88	5.818	5.818	(0.648)	29106	2.00000	1.921

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429d.d
Lab Smp Id: IC0429D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	44580	-1.48
27 Naphthalene-d8	166754	83377	333508	164171	-1.55
42 Acenaphthene-d10	106910	53455	213820	101406	-5.15
59 Phenanthrene-d10	179783	89892	359566	169929	-5.48
69 Chrysene-d12	192841	96420	385682	185129	-4.00
134 Di-n-octylphthala	229567	114784	459134	198625	-13.48
77 Perylene-d12	184310	92155	368620	168300	-8.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.09
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

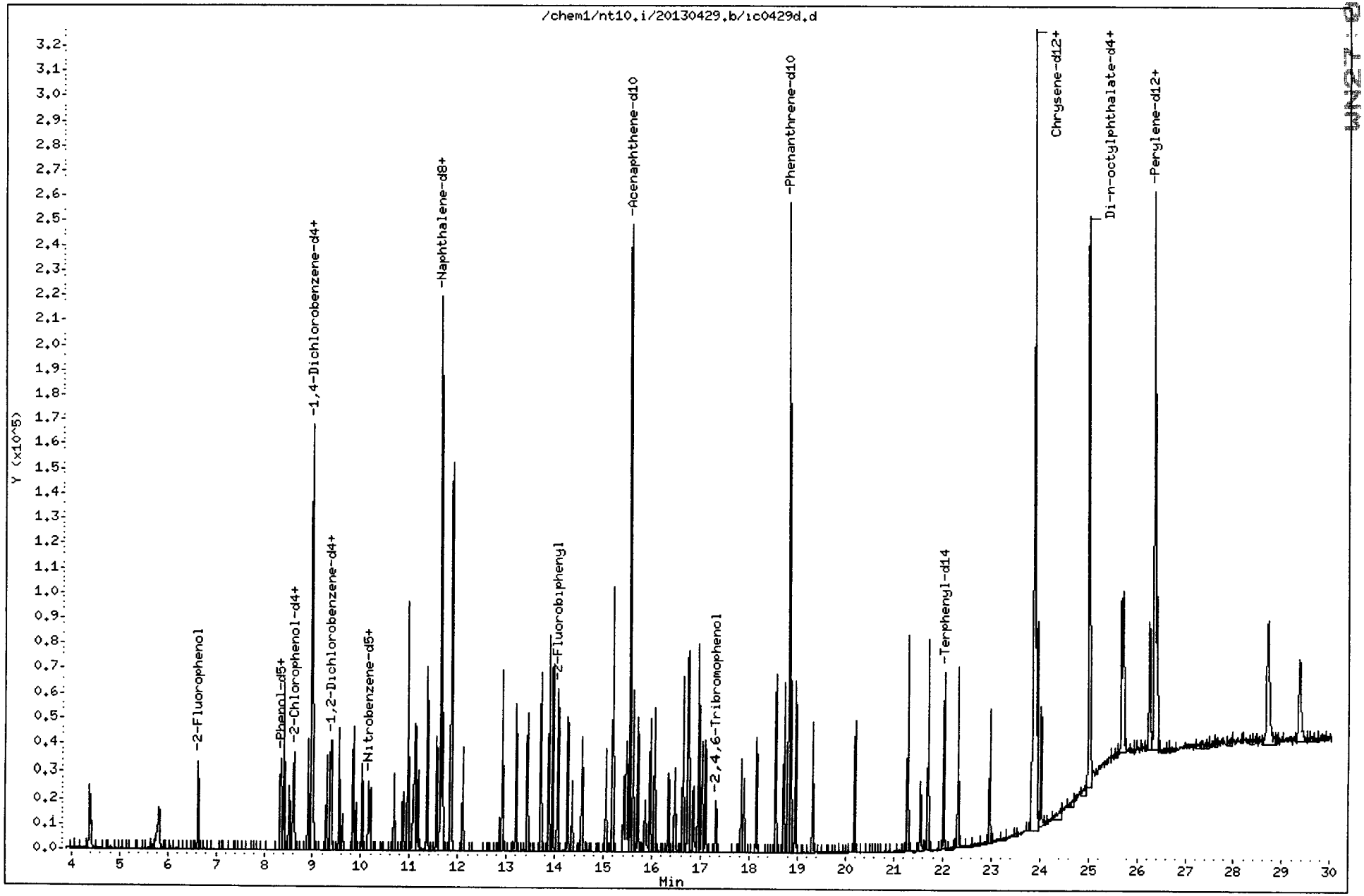
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429d.d
Date : 29-APR-2013 18:44
Client ID:
Sample Info: IC0429D

Instrument: nt10.i

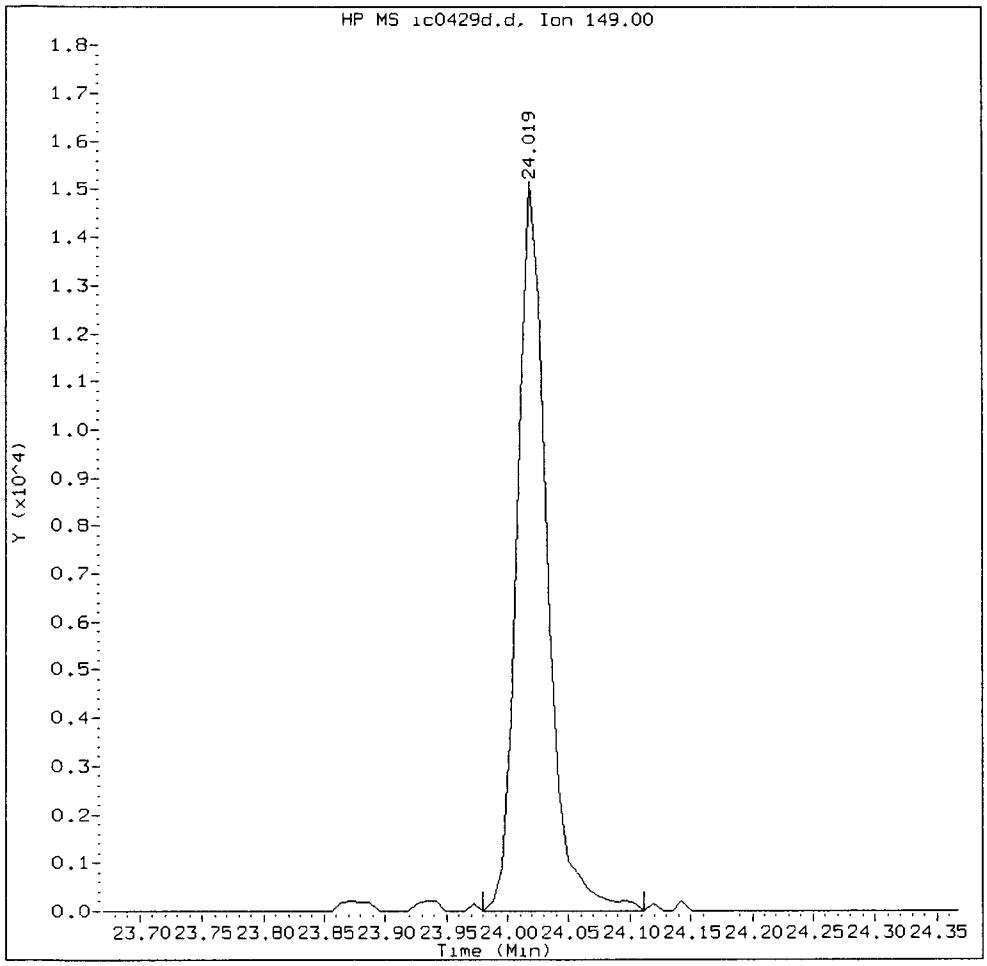
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429D, /chem1/nt10.i/20130429.b/ic0429d.d

bis(2-Ethylhexyl)phthalate Amount: 0.99 Area: 26029



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: VZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429d.d

Lab ID: IC0429D, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130429.b/ic0429e.d
Report Date: 03-May-2013 16:45

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429e.d
Lab Smp Id: IC0429E
Inj Date : 29-APR-2013 19:21
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429E
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 19:21 Cal File: ic0429e.d
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.628	6.629	(0.738)	146655	10.0000	10.73
$	2 Phenol-d5	99	8.344	8.337	(0.929)	196642	10.0000	11.12
	3 Phenol	94	8.367	8.360	(0.931)	210587	10.0000	10.64
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	137828	10.0000	10.27
	4 Bis(2-Chloroethyl)ether	93	8.529	8.522	(0.949)	143624	10.0000	10.09
	6 2-Chlorophenol	128	8.630	8.622	(0.960)	173765	10.0000	11.38
	7 1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	155864	10.0000	10.18
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	38285	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	151337	10.0000	10.02
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	99905	10.0000	10.35
	12 1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	143308	10.0000	9.914
	11 Benzyl alcohol	108	9.297	9.289	(1.035)	92776	10.0000	11.14
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	45681	10.0000	10.40
	13 2-Methylphenol	108	9.553	9.553	(1.063)	149351	10.0000	10.49
	17 Hexachloroethane	117	10.026	10.027	(1.116)	64051	10.0000	10.14
	16 N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	93506	10.0000	10.52
	15 4-Methylphenol	108	9.848	9.840	(1.096)	160522	10.0000	11.05
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.872)	157610	10.0000	10.45
	19 Nitrobenzene	77	10.197	10.190	(0.875)	144235	10.0000	10.36
	20 Isophorone	82	10.694	10.686	(0.918)	308116	10.0000	11.77
	21 2-Nitrophenol	139	10.879	10.872	(0.934)	86330	10.0000	11.06
	22 2,4-Dimethylphenol	107	10.972	10.964	(0.942)	301913	20.0000	21.04
	23 Bis(2-Chloroethoxy)methane	93	11.180	11.172	(0.960)	157345	10.0000	10.19
	24 Benzoic acid	105	11.303	11.080	(0.970)	533852	40.0000	41.16
	25 2,4-Dichlorophenol	162	11.372	11.365	(0.976)	298452	20.0000	22.59
	26 1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	126245	10.0000	9.777
*	27 Naphthalene-d8	136	11.650	11.643	(1.000)	142908	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.003)	383254	10.0000	10.07
	29 4-Chloroaniline	127	11.859	11.843	(1.018)	349641	20.0000	23.51
	30 Hexachlorobutadiene	225	12.106	12.099	(1.039)	78933	10.0000	10.29
	31 4-Chloro-3-methylphenol	107	12.919	12.911	(1.109)	269630	20.0000	23.20
	32 2-Methylnaphthalene	142	13.197	13.197	(1.133)	264096	10.0000	10.45
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	215070	20.0000	21.20
	34 2,4,6-Trichlorophenol	196	13.886	13.879	(0.893)	208965	20.0000	21.54
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	227145	20.0000	22.71
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.905)	325794	10.0000	10.13
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	259249	10.0000	10.12
	38 2-Nitroaniline	65	14.567	14.552	(0.937)	143221	20.0000	23.17
	39 Dimethylphthalate	163	15.062	15.047	(0.969)	278457	10.0000	10.06
	40 Acenaphthylene	152	15.194	15.194	(0.978)	490760	10.0000	11.30
	41 2,6-Dinitrotoluene	165	15.194	15.179	(0.978)	140641	20.0000	21.69
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	92187	4.00000	
	43 3-Nitroaniline	138	15.496	15.473	(0.997)	115718	20.0000	21.62
	44 Acenaphthene	153	15.612	15.604	(1.004)	261611	10.0000	9.992
	45 2,4-Dinitrophenol	184	15.727	15.705	(1.012)	250805	40.0000	41.56
	46 Dibenzofuran	168	15.975	15.960	(1.028)	364969	10.0000	10.19
	47 4-Nitrophenol	109	15.874	15.867	(1.021)	85112	20.0000	20.75
	48 2,4-Dinitrotoluene	165	16.068	16.052	(1.034)	187198	20.0000	22.38
	50 Diethylphthalate	149	16.647	16.632	(1.071)	283263	10.0000	10.19
	49 Fluorene	166	16.740	16.733	(1.077)	309724	10.0000	10.14
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	167282	10.0000	11.14
	52 4-Nitroaniline	138	16.872	16.841	(1.086)	125210	20.0000	22.52
	53 4,6-Dinitro-2-methylphenol	198	16.972	16.949	(0.902)	317489	40.0000	40.73
	54 N-Nitrosodiphenylamine	169	17.034	17.026	(0.905)	184807	10.0000	9.961
$	55 2,4,6-Tribromophenol	330	17.319	17.311	(1.114)	55755	10.0000	11.44
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	91977	10.0000	10.14
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	105323	10.0000	9.733
	58 Pentachlorophenol	266	18.555	18.548	(0.986)	177427	20.0000	23.36
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	160272	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.002)	440318	10.0000	10.07
	61 Anthracene	178	18.965	18.958	(1.008)	455728	10.0000	10.18
	62 Carbazole	167	19.321	19.314	(1.027)	242608	10.0000	8.918
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	495591	10.0000	10.72
	64 Fluoranthene	202	21.286	21.279	(1.131)	534614	10.0000	10.39
	65 Pyrene	202	21.704	21.697	(0.908)	542210	10.0000	10.18
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	341948	10.0000	10.20
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	196606	10.0000	10.80
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	490781	10.0000	10.18
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	172225	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.856	23.841	(0.998)	404734	20.0000	22.04
	71 Chrysene	228	23.949	23.934	(1.002)	439878	10.0000	10.08
	72 bis(2-Ethylhexyl)phthalate	149	24.027	24.019	(0.961)	275645	10.0000	9.831(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	210890	4.00000	
	73 Di-n-octylphthalate	149	25.018	25.002	(1.001)	477130	10.0000	9.826

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.676	25.660	(0.974)	516402	10.0000	10.46
75	Benzo(k)fluoranthene	252	25.714	25.699	(0.976)	509181	10.0000	9.789
76	Benzo(a)pyrene	252	26.256	26.241	(0.996)	438619	10.0000	10.40
* 77	Perylene-d12	264	26.357	26.350	(1.000)	166300	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.705	28.690	(1.089)	528701	10.0000	10.88
79	Dibenzo(a,h)anthracene	278	28.729	28.698	(1.090)	403235	10.0000	10.81
80	Benzo(g,h,i)perylene	276	29.389	29.350	(1.115)	445295	10.0000	10.59
90	N-Nitrosodimethylamine	74	4.374	4.366	(0.487)	190704	20.0000	21.87
91	Aniline	93	8.414	8.406	(0.936)	403125	10.0000	10.50
93	Benzidine	184	21.549	21.542	(0.902)	110746	20.0000	19.11
103	Pyridine	79	4.374	4.397	(0.487)	162027	20.0000	21.13
105	1-methylnaphthalene	142	13.437	13.430	(1.153)	238762	10.0000	10.30
111	Azobenzene (1,2-DP-Hydrazine)	77	17.111	17.095	(1.101)	287323	10.0000	10.08
187	Total Benzofluoranthenes	252	25.714	25.699	(0.976)	972720	20.0000	20.28
99	Perylene	252	26.411	26.388	(1.002)	482660	10.0000	10.01
98	Retene	219	22.323	22.316	(0.934)	206286	10.0000	10.23
120	2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	86691	10.0000	11.65
188	2,6-Dichlorophenol	162	11.882	11.867	(1.020)	451718	20.0000	21.10
189	N-Nitrosomethylethylamine	88	5.825	5.818	(0.648)	279207	20.0000	21.46

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429e.d
Lab Smp Id: IC0429E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	38285	-15.39
27 Naphthalene-d8	166754	83377	333508	142908	-14.30
42 Acenaphthene-d10	106910	53455	213820	92187	-13.77
59 Phenanthrene-d10	179783	89892	359566	160272	-10.85
69 Chrysene-d12	192841	96420	385682	172225	-10.69
134 Di-n-octylphthala	229567	114784	459134	210890	-8.14
77 Perylene-d12	184310	92155	368620	166300	-9.77

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.65	0.07
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

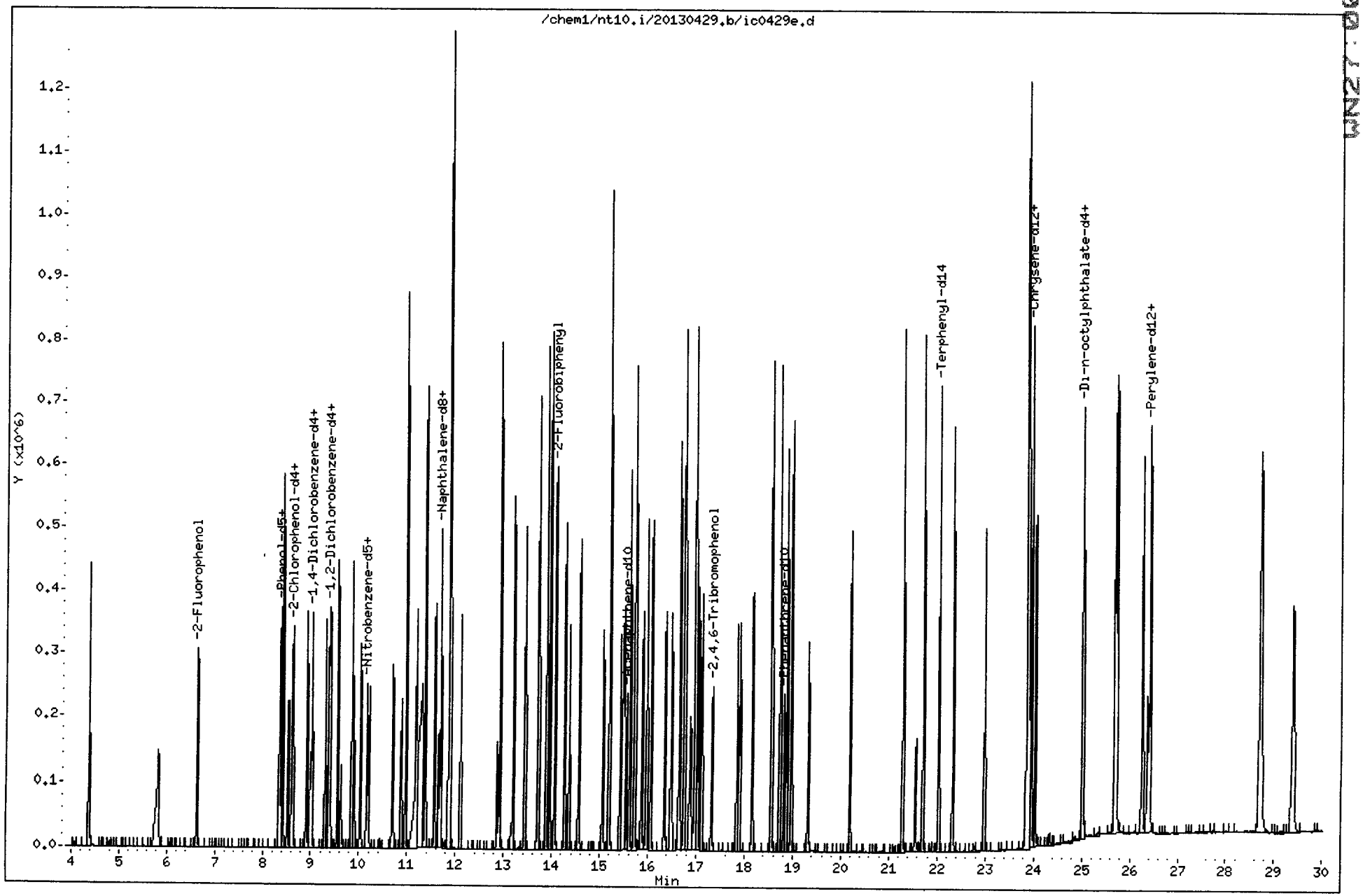
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429e.d
Date : 29-APR-2013 19:21
Client ID:
Sample Info: IC0429E

Instrument: nt10.i

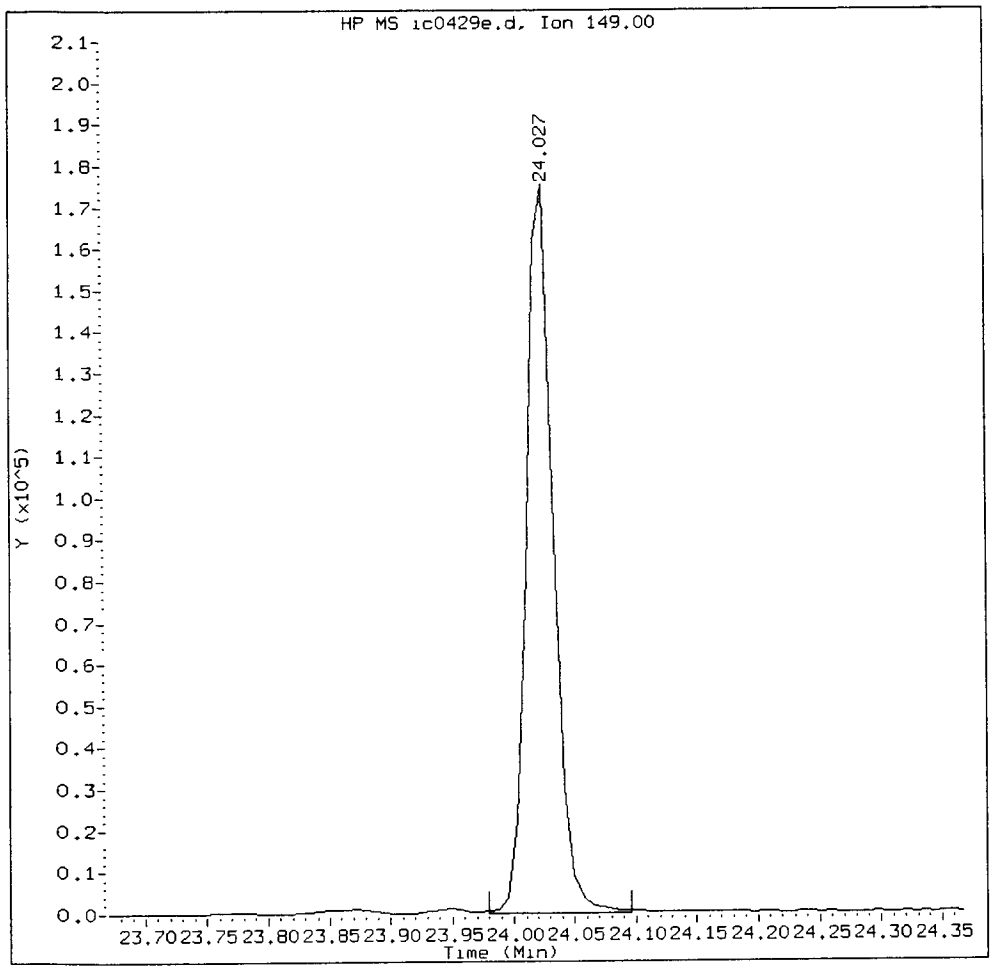
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429E, /chem1/nt10.i/20130429.b/ic0429e.d

bis(2-Ethylhexyl)phthalate Amount: 9.83 Area: 275645



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: _____ Date: _____

CO-ELUTION SUMMARY FOR FILE - ic0429e.d

Lab ID: IC0429E, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
15.194	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429g.d
Lab Smp Id: IC0429G
Inj Date : 29-APR-2013 20:34
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429G
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 20:34 Cal File: ic0429g.d
Als bottle: 8 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

YZ 5/3/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.628	6.629	(0.738)	33327	2.50000	2.552
$	2 Phenol-d5	99	8.336	8.337	(0.928)	43013	2.50000	2.545
	3 Phenol	94	8.359	8.360	(0.930)	49200	2.50000	2.601
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	32303	2.50000	2.518
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	35522	2.50000	2.611
	6 2-Chlorophenol	128	8.622	8.622	(0.959)	35254	2.50000	2.417
	7 1,3-Dichlorobenzene	146	8.916	8.909	(0.992)	36581	2.50000	2.499
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	36591	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	37170	2.50000	2.576
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	23363	2.50000	2.532
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.045)	34665	2.50000	2.509
	11 Benzyl alcohol	108	9.289	9.289	(1.034)	20599	2.50000	2.589
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	11085	2.50000	2.640
	13 2-Methylphenol	108	9.553	9.553	(1.063)	35312	2.50000	2.594
	17 Hexachloroethane	117	10.026	10.027	(1.116)	15637	2.50000	2.590
	16 N-Nitroso-di-n-propylamine	70	9.894	9.895	(1.101)	22554	2.50000	2.654
	15 4-Methylphenol	108	9.840	9.840	(1.095)	36435	2.50000	2.625
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.873)	37054	2.50000	2.546
	19 Nitrobenzene	77	10.197	10.190	(0.876)	34459	2.50000	2.565
	20 Isophorone	82	10.686	10.686	(0.918)	61248	2.50000	2.424
	21 2-Nitrophenol	139	10.871	10.872	(0.934)	19030	2.50000	2.527
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	71562	5.00000	5.167
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	38098	2.50000	2.556
	24 Benzoic acid	105	11.164	11.080	(0.959)	106496	10.0000	8.861
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	67816	5.00000	5.320
	26 1,2,4-Trichlorobenzene	180	11.557	11.558	(0.993)	30525	2.50000	2.450
*	27 Naphthalene-d8	136	11.642	11.643	(1.000)	137898	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	91698	2.50000	2.498
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	72996	5.00000	5.086
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	18006	2.50000	2.433
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	59257	5.00000	5.284
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	60463	2.50000	2.479
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	46418	5.00000	4.831
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	46504	5.00000	5.061
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	48311	5.00000	5.100
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	75007	2.50000	2.461
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	59913	2.50000	2.470
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	31617	5.00000	5.400
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	64965	2.50000	2.479
	40 Acenaphthylene	152	15.194	15.194	(0.978)	99122	2.50000	2.409
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	32305	5.00000	5.261
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	87308	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	27423	5.00000	5.409
	44 Acenaphthene	153	15.611	15.604	(1.004)	61853	2.50000	2.494
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	42855	10.0000	7.930
	46 Dibenzofuran	168	15.967	15.960	(1.027)	84689	2.50000	2.498
	47 4-Nitrophenol	109	15.859	15.867	(1.020)	16653	5.00000	4.391
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	41845	5.00000	5.283
	50 Diethylphthalate	149	16.640	16.632	(1.071)	65811	2.50000	2.499
	49 Fluorene	166	16.732	16.733	(1.077)	72923	2.50000	2.521
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	33604	2.50000	2.363
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	26194	5.00000	4.974
	53 4,6-Dinitro-2-methylphenol	198	16.956	16.949	(0.901)	65565	10.0000	9.149
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	44352	2.50000	2.552
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	11658	2.50000	2.525
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	20878	2.50000	2.457
	57 Hexachlorobenzene	284	18.152	18.153	(0.965)	24254	2.50000	2.393
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	37390	5.00000	5.254
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	150153	4.00000	
	60 Phenanthrene	178	18.864	18.857	(1.002)	100003	2.50000	2.442
	61 Anthracene	178	18.957	18.958	(1.007)	103502	2.50000	2.467
	62 Carbazole	167	19.313	19.314	(1.026)	60342	2.50000	2.368
	63 Di-n-butylphthalate	149	20.187	20.188	(1.073)	104682	2.50000	2.417
	64 Fluoranthene	202	21.286	21.279	(1.131)	117131	2.50000	2.430
	65 Pyrene	202	21.704	21.697	(0.908)	123102	2.50000	2.418
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	78162	2.50000	2.440
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	42839	2.50000	2.464
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	110437	2.50000	2.397
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	164553	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	73617	5.00000	4.195
	71 Chrysene	228	23.941	23.934	(1.002)	100065	2.50000	2.400
	72 bis(2-Ethylhexyl)phthalate	149	24.027	24.019	(0.961)	59748	2.50000	2.511(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	178975	4.00000	
	73 Di-n-octylphthalate	149	25.017	25.002	(1.001)	101315	2.50000	2.459

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	107559	2.50000	2.369
	75 Benzo(k)fluoranthene	252	25.714	25.699	(0.976)	117137	2.50000	2.450
	76 Benzo(a)pyrene	252	26.249	26.241	(0.996)	93000	2.50000	2.398
*	77 Perylene-d12	264	26.357	26.350	(1.000)	152859	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.697	28.690	(1.089)	107108	2.50000	2.397
	79 Dibenzo(a,h)anthracene	278	28.721	28.698	(1.090)	84630	2.50000	2.469
	80 Benzo(g,h,i)perylene	276	29.381	29.350	(1.115)	94698	2.50000	2.450
	90 N-Nitrosodimethylamine	74	4.351	4.366	(0.484)	44045	5.00000	5.284
	91 Aniline	93	8.406	8.406	(0.935)	96404	2.50000	2.627
	93 Benzidine	184	21.541	21.542	(0.901)	29714	5.00000	5.756
	103 Pyridine	79	4.374	4.397	(0.487)	39707	5.00000	5.419
	105 1-methylnaphthalene	142	13.429	13.430	(1.153)	55151	2.50000	2.466
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.100)	69518	2.50000	2.574
	187 Total Benzofluoranthenes	252	25.668	25.699	(0.974)	213730	5.00000	4.849
	99 Perylene	252	26.403	26.388	(1.002)	104964	2.50000	2.368
	98 Retene	219	22.315	22.316	(0.934)	46252	2.50000	2.400
	120 2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	17623	2.50000	2.501
	188 2,6-Dichlorophenol	162	11.866	11.867	(1.019)	104652	5.00000	5.066
	189 N-Nitrosomethylethylamine	88	5.817	5.818	(0.647)	65642	5.00000	5.279

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429g.d
Lab Smp Id: IC0429G
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	36591	-19.14
27 Naphthalene-d8	166754	83377	333508	137898	-17.30
42 Acenaphthene-d10	106910	53455	213820	87308	-18.34
59 Phenanthrene-d10	179783	89892	359566	150153	-16.48
69 Chrysene-d12	192841	96420	385682	164553	-14.67
134 Di-n-octylphthala	229567	114784	459134	178975	-22.04
77 Perylene-d12	184310	92155	368620	152859	-17.06

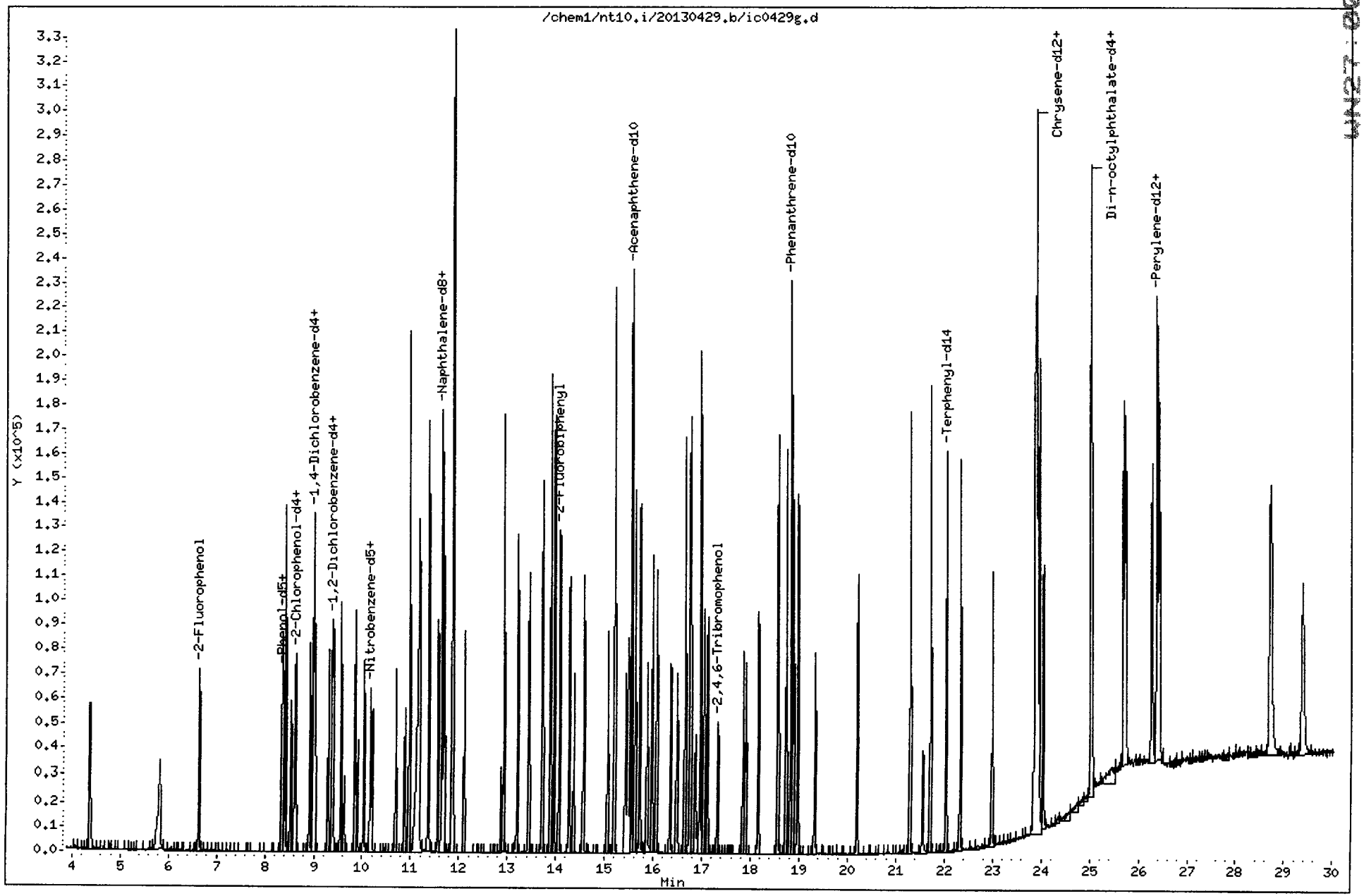
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

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

Data File: /chem1/nt10.i/20130429.b/ic0429g.d
Date : 29-APR-2013 20:34
Client ID:
Sample Info: IC0429G

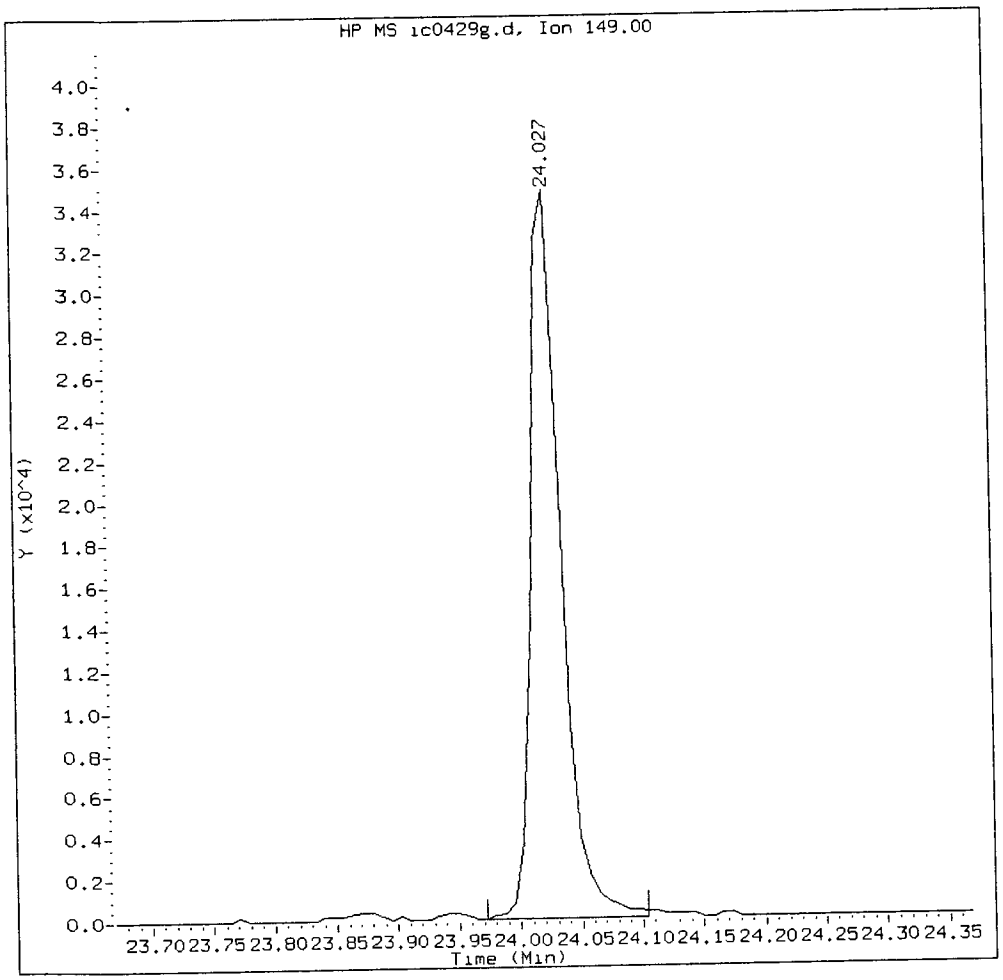
Instrument: nt10.i

Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0429G, /chem1/nt10.i/20130429.b/ic0429g.d

bis(2-Ethylhexyl)phthalate Amount: 2.51 Area: 59748



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: VS Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429g.d

Lab ID: IC0429G, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429i.d
Lab Smp Id: IC0429I
Inj Date : 29-APR-2013 21:47
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429I
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.629	6.629	(0.738)	7097	0.50000	0.4779
$ 2	Phenol-d5	99	8.337	8.337	(0.928)	8848	0.50000	0.4605
3	Phenol	94	8.360	8.360	(0.931)	10487	0.50000	0.4876
$ 5	2-Chlorophenol-d4	132	8.599	8.599	(0.958)	6852	0.50000	0.4698
4	Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	8003	0.50000	0.5174
6	2-Chlorophenol	128	8.622	8.622	(0.960)	7629	0.50000	0.4600
7	1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	8033	0.50000	0.4826
* 8	1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	41602	4.00000	
9	1,4-Dichlorobenzene	146	9.018	9.018	(1.004)	7938	0.50000	0.4839
$ 10	1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.043)	5208	0.50000	0.4964
12	1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	7759	0.50000	0.4940
11	Benzyl alcohol	108	9.289	9.289	(1.035)	3823	0.50000	0.4226
14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	2289	0.50000	0.4795
13	2-Methylphenol	108	9.553	9.553	(1.064)	7310	0.50000	0.4723
17	Hexachloroethane	117	10.027	10.027	(1.117)	3426	0.50000	0.4991
16	N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	4650	0.50000	0.4812
15	4-Methylphenol	108	9.840	9.840	(1.096)	7046	0.50000	0.4465
$ 18	Nitrobenzene-d5	82	10.159	10.159	(0.873)	8203	0.50000	0.4943
19	Nitrobenzene	77	10.190	10.190	(0.875)	7721	0.50000	0.5040
20	Isophorone	82	10.686	10.686	(0.918)	13058	0.50000	0.4531
21	2-Nitrophenol	139	10.872	10.872	(0.934)	3663	0.50000	0.4265
22	2,4-Dimethylphenol	107	10.964	10.964	(0.942)	14636	1.00000	0.9268
23	Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	8541	0.50000	0.5026
24	Benzoic acid	105	11.080	11.080	(0.952)	12620	2.00000	0.9294
25	2,4-Dichlorophenol	162	11.365	11.365	(0.976)	11335	1.00000	0.7797
26	1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	6875	0.50000	0.4839
* 27	Naphthalene-d8	136	11.643	11.643	(1.000)	157250	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.681	11.681	(1.003)	19775	0.50000	0.4723
	29 4-Chloroaniline	127	11.843	11.843	(1.017)	14329	1.00000	0.8755
	30 Hexachlorobutadiene	225	12.099	12.099	(1.039)	3928	0.50000	0.4654
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	10700	1.00000	0.8367
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	13246	0.50000	0.4763
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	9274	1.00000	0.8934
	34 2,4,6-Trichlorophenol	196	13.879	13.879	(0.893)	8685	1.00000	0.8747
	35 2,4,5-Trichlorophenol	196	13.948	13.948	(0.898)	8785	1.00000	0.8583
$	36 2-Fluorobiphenyl	172	14.057	14.057	(0.905)	15786	0.50000	0.4794
	37 2-Chloronaphthalene	162	14.258	14.258	(0.918)	12356	0.50000	0.4714
	38 2-Nitroaniline	65	14.552	14.552	(0.937)	5242	1.00000	0.8286
	39 Dimethylphthalate	163	15.047	15.047	(0.969)	13385	0.50000	0.4726
	40 Acenaphthylene	152	15.194	15.194	(0.978)	21258	0.50000	0.4782
	41 2,6-Dinitrotoluene	165	15.179	15.179	(0.977)	6067	1.00000	0.9143
*	42 Acenaphthene-d10	164	15.535	15.535	(1.000)	94337	4.00000	
	43 3-Nitroaniline	138	15.473	15.473	(0.996)	5039	1.00000	0.9199
	44 Acenaphthene	153	15.604	15.604	(1.004)	12929	0.50000	0.4826
	45 2,4-Dinitrophenol	184	15.705	15.705	(1.011)	4345	2.00000	0.7522
	46 Dibenzofuran	168	15.960	15.960	(1.027)	17668	0.50000	0.4823
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	1862	1.00000	0.4569
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	7334	1.00000	0.8570
	50 Diethylphthalate	149	16.632	16.632	(1.071)	13456	0.50000	0.4729
	49 Fluorene	166	16.733	16.733	(1.077)	14861	0.50000	0.4754
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	7105	0.50000	0.4624
	52 4-Nitroaniline	138	16.841	16.841	(1.084)	4664	1.00000	0.8197
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	9847	2.00000	1.299
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	8567	0.50000	0.4637
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	2005	0.50000	0.4019
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	4326	0.50000	0.4791
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	5141	0.50000	0.4772
	58 Pentachlorophenol	266	18.548	18.548	(0.986)	5592	1.00000	0.7394
*	59 Phenanthrene-d10	188	18.811	18.811	(1.000)	159582	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	20200	0.50000	0.4641
	61 Anthracene	178	18.958	18.958	(1.008)	21303	0.50000	0.4777
	62 Carbazole	167	19.314	19.314	(1.027)	15951	0.50000	0.5889
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	19951	0.50000	0.4334
	64 Fluoranthene	202	21.279	21.279	(1.131)	23534	0.50000	0.4594
	65 Pyrene	202	21.697	21.697	(0.908)	24226	0.50000	0.4588
$	66 Terphenyl-d14	244	22.022	22.022	(0.922)	14939	0.50000	0.4497
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	7305	0.50000	0.4051
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	22076	0.50000	0.4620
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	170666	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	15590	1.00000	0.8567
	71 Chrysene	228	23.934	23.934	(1.002)	20337	0.50000	0.4703
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	10757	0.50000	0.4647(M)
*	134 Di-n-octylphthalate-d4	153	24.995	24.995	(1.000)	174102	4.00000	
	73 Di-n-octylphthalate	149	25.002	25.002	(1.000)	20550	0.50000	0.5126

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.660	25.660	(0.974)	20816	0.50000	0.4439
	75 Benzo(k)fluoranthene	252	25.699	25.699	(0.975)	22672	0.50000	0.4591
	76 Benzo(a)pyrene	252	26.241	26.241	(0.996)	17222	0.50000	0.4299
*	77 Perylene-d12	264	26.350	26.350	(1.000)	157899	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	20006	0.50000	0.4335
	79 Dibenzo(a,h)anthracene	278	28.698	28.698	(1.089)	14468	0.50000	0.4087
	80 Benzo(g,h,i)perylene	276	29.350	29.350	(1.114)	17808	0.50000	0.4460
	90 N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	9105	1.00000	0.9607
	91 Aniline	93	8.406	8.406	(0.936)	20193	0.50000	0.4839
	93 Benzidine	184	21.542	21.542	(0.902)	8518	1.00000	1.621
	103 Pyridine	79	4.397	4.397	(0.490)	8381	1.00000	1.006
	105 1-methylnaphthalene	142	13.430	13.430	(1.153)	11744	0.50000	0.4605
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	14947	0.50000	0.5123
	187 Total Benzofluoranthenes	252	25.699	25.699	(0.975)	41609	1.00000	0.9139
	99 Perylene	252	26.388	26.388	(1.001)	21669	0.50000	0.4732
	98 Retene	219	22.316	22.316	(0.934)	8851	0.50000	0.4429
	120 2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.052)	3016	0.50000	0.3961
	188 2,6-Dichlorophenol	162	11.867	11.867	(1.019)	21326	1.00000	0.9052
	189 N-Nitrosomethylethylamine	88	5.818	5.818	(0.648)	13437	1.00000	0.9505

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem1/nt10.i/20130429.b/ic0429i.d
Report Date: 03-May-2013 16:45

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429i.d
Lab Smp Id: IC0429I
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41602	-8.06
27 Naphthalene-d8	166754	83377	333508	157250	-5.70
42 Acenaphthene-d10	106910	53455	213820	94337	-11.76
59 Phenanthrene-d10	179783	89892	359566	159582	-11.24
69 Chrysene-d12	192841	96420	385682	170666	-11.50
134 Di-n-octylphthala	229567	114784	459134	174102	-24.16
77 Perylene-d12	184310	92155	368620	157899	-14.33

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.08
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.53	-0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

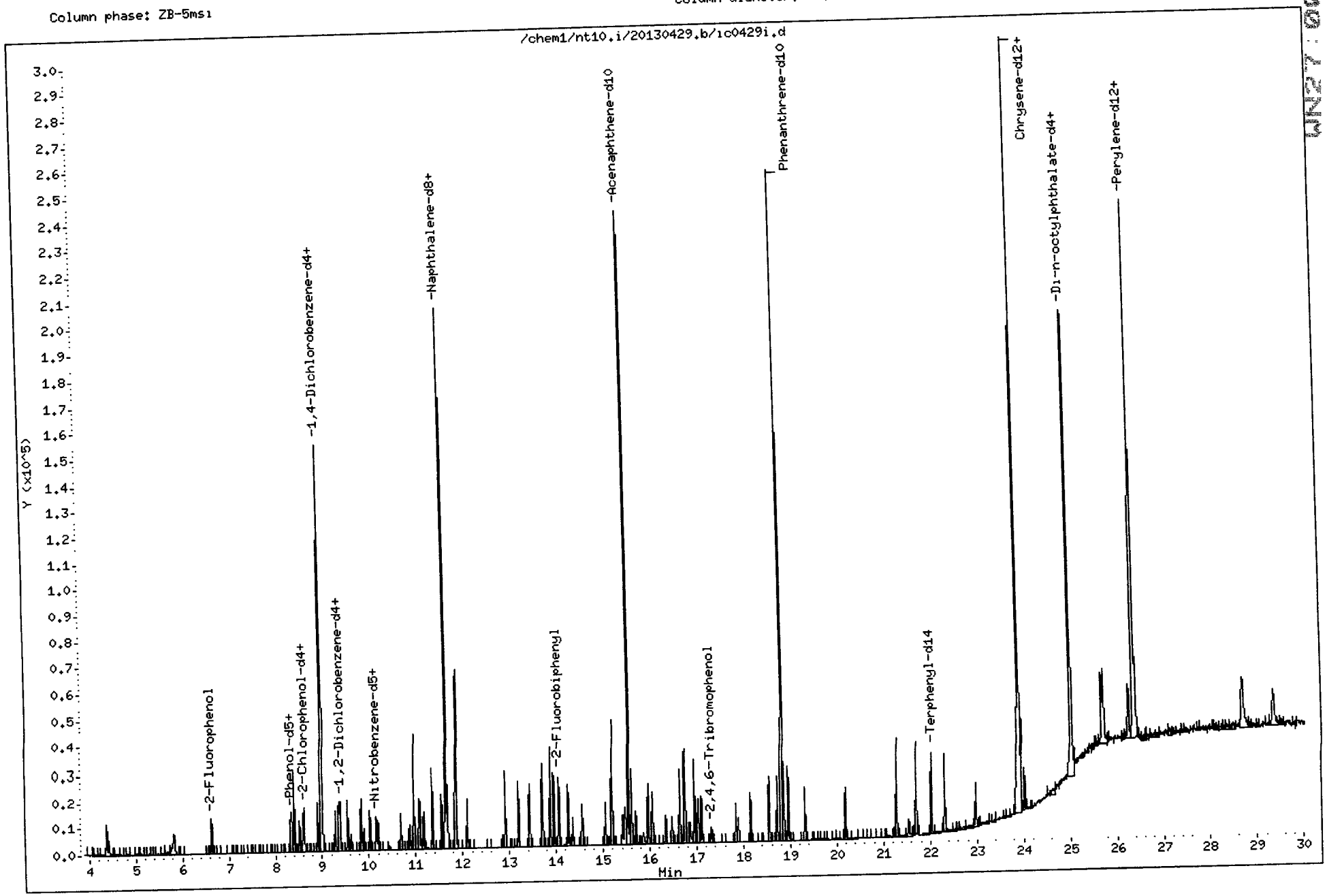
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429i.d
Date : 29-APR-2013 21:47
Client ID:
Sample Info: IC0429I

Instrument: nt10.i

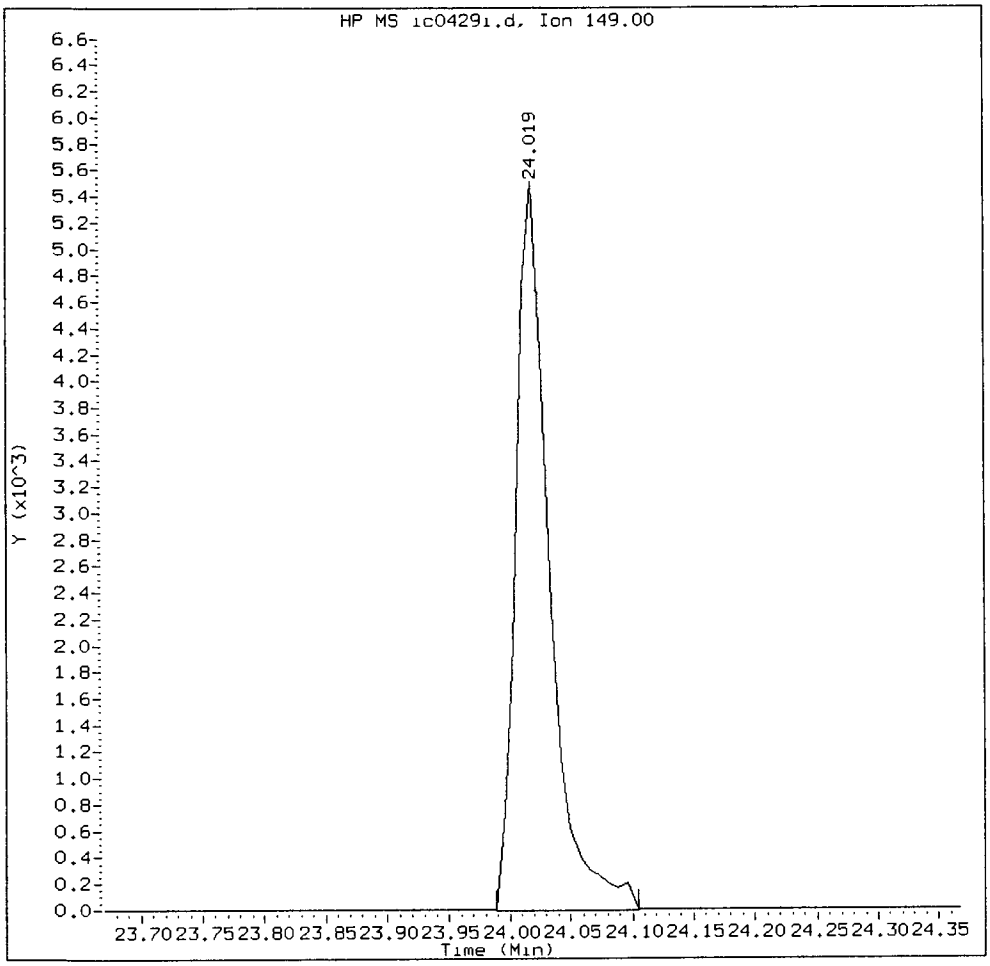
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5ms1



IC0429I, /chem1/nt10.i/20130429.b/ic0429i.d

bis(2-Ethylhexyl)phthalate Amount: 0.46 Area: 10757



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: YZ Date: 5/4/13

CO-ELUTION SUMMARY FOR FILE - ic0429i.d

Lab ID: IC0429I, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Report Date: 03-May-2013 16:45

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429icv.d
Lab Smp Id: IC0429ICV
Inj Date : 29-APR-2013 22:24
Operator : VTS/YZ
Smp Info : IC0429ICV
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev
Cal Date : 29-APR-2013 21:47
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i

YZ 5/31/13

Quant Type: ISTD
Cal File: ic0429i.d
QC Sample: LCS

Compound Sublist: PSDDAHDR.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	Compound Not Detected.					
	3 Phenol	94	8.360	8.360	(0.931)	111426	5.21984	5.220
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	81953	5.33870	5.339
	6 2-Chlorophenol	128	8.622	8.622	(0.960)	80570	4.89423	4.894
	7 1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	84507	5.11566	5.116
*	8 1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	41290	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.004)	84755	5.20517	5.205
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	79538	5.10200	5.102
	11 Benzyl alcohol	108	9.289	9.289	(1.035)	44014	4.90168	4.902
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	24983	5.27307	5.273
	13 2-Methylphenol	108	9.545	9.553	(1.063)	84376	5.49292	5.493
	17 Hexachloroethane	117	10.019	10.027	(1.116)	35524	5.21434	5.214
	16 N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	51945	5.41648	5.416
	15 4-Methylphenol	108	9.840	9.840	(1.096)	87603	5.59319	5.593
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	10.190	10.190	(0.875)	79523	5.36973	5.370
	20 Isophorone	82	10.686	10.686	(0.918)	173340	6.22278	6.223
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	42978	5.17676	5.177
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	164268	10.7602	10.76
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	90256	5.49412	5.494
	24 Benzoic acid	105	11.234	11.080	(0.965)	282915	21.0014	21.00
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	155797	11.0867	11.09
	26 1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	70353	5.12215	5.122
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	152009	4.00000	

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Report Date: 03-May-2013 16:45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	191530	4.73263	4.733
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	173412	10.9603	10.96
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	42367	5.19271	5.193
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	147122	11.9007	11.90
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	129228	4.80733	4.807
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	107971	10.2504	10.25
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	112509	11.1670	11.17
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	125520	12.0854	12.09
$	36 2-Fluorobiphenyl	172	Compound Not Detected.					
	37 2-Chloronaphthalene	162	14.258	14.258	(0.918)	142918	5.37333	5.373
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	73989	11.5256	11.53
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	152060	5.29173	5.292
	40 Acenaphthylene	152	15.194	15.194	(0.978)	207472	4.59913	4.599
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.978)	75138	11.1601	11.16
*	42 Acenaphthene-d10	164	15.534	15.535	(1.000)	95722	4.00000	
	43 3-Nitroaniline	138	15.488	15.473	(0.997)	71502	12.8642	12.86
	44 Acenaphthene	153	15.612	15.604	(1.005)	131114	4.82292	4.823
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	126391	20.8995	20.90
	46 Dibenzofuran	168	15.967	15.960	(1.028)	179601	4.83159	4.832
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	43830	10.4514	10.45
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	100486	11.5716	11.57
	50 Diethylphthalate	149	16.640	16.632	(1.071)	148426	5.14027	5.140
	49 Fluorene	166	16.733	16.733	(1.077)	152283	4.80101	4.801
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	77730	4.98522	4.985
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	68038	11.7844	11.78
	53 4,6-Dinitro-2-methylphenol	198	16.964	16.949	(0.902)	169347	21.7583	21.76
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	102490	5.46980	5.470
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	49463	5.40070	5.401
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	56636	5.18261	5.183
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	90998	11.8629	11.86
*	59 Phenanthrene-d10	188	18.811	18.811	(1.000)	161863	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.003)	216640	4.90686	4.907
	61 Anthracene	178	18.958	18.958	(1.008)	219969	4.86323	4.863
	62 Carbazole	167	19.313	19.314	(1.027)	146715	5.34003	5.340
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	259155	5.55031	5.550
	64 Fluoranthene	202	21.279	21.279	(1.131)	257141	4.94850	4.949
	65 Pyrene	202	21.696	21.697	(0.908)	264541	4.88069	4.881
$	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	106153	5.73506	5.735
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	240855	4.91069	4.911
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	175186	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	155141	8.30491	8.305
	71 Chrysene	228	23.942	23.934	(1.002)	214847	4.84048	4.840
	72 bis(2-Ethylhexyl)phthalate	149	25.010	24.019	(1.001)	242465	5.33975	5.340
*	134 Di-n-octylphthalate-d4	153	24.995	24.995	(1.000)	197383	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.001)	242465	5.33515	5.335

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
74	Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	227705	4.59796	4.598
75	Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	268725	5.15172	5.152
76	Benzo(a)pyrene	252	26.249	26.241	(0.996)	203839	4.81788	4.818
* 77	Perylene-d12	264	26.349	26.350	(1.000)	166766	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	251131	5.15203	5.152
79	Dibenzo(a,h)anthracene	278	28.713	28.698	(1.090)	191446	5.12002	5.120
80	Benzo(g,h,i)perylene	276	29.373	29.350	(1.115)	209597	4.96989	4.970
90	N-Nitrosodimethylamine	74	4.358	4.366	(0.485)	105643	11.2307	11.23
91	Aniline	93	8.406	8.406	(0.936)	203803	4.92093	4.921
93	Benzidine	184	21.542	21.542	(0.902)	86479	15.0162	15.02(R)
103	Pyridine	79	4.374	4.397	(0.487)	90444	10.9387	10.94
105	1-methylnaphthalene	142	13.430	13.430	(1.153)	118938	4.82444	4.824
111	Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.101)	163298	5.51577	5.516
187	Total Benzofluoranthenes	252	25.707	25.699	(0.976)	469919	9.77502	9.775
99	Perylene	252	26.404	26.388	(1.002)	212820	4.40032	4.400
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
188	2,6-Dichlorophenol	162	Compound Not Detected.					
189	N-Nitrosomethylethylamine	88	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Report Date: 03-May-2013 16:45

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429icv.d
Lab Smp Id: IC0429ICV
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41290	-8.75
27 Naphthalene-d8	166754	83377	333508	152009	-8.84
42 Acenaphthene-d10	106910	53455	213820	95722	-10.46
59 Phenanthrene-d10	179783	89892	359566	161863	-9.97
69 Chrysene-d12	192841	96420	385682	175186	-9.16
134 Di-n-octylphthala	229567	114784	459134	197383	-14.02
77 Perylene-d12	184310	92155	368620	166766	-9.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.09
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.53	-0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

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

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Report Date: 03-May-2013 16:45

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: NONE
Lab Smp Id: IC0429ICV
Level:
Data Type: MS DATA
SpikeList File: ICVS.spk
Sublist File: PSDDAHDR.sub
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Client SDG: 20130429
Fraction: SV

Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
3	Phenol	5.000	5.220	104.40	
4	Bis(2-Chloroethyl)	5.000	5.339	106.77	
6	2-Chlorophenol	5.000	4.894	97.88	
7	1,3-Dichlorobenzen	5.000	5.116	102.31	
9	1,4-Dichlorobenzen	5.000	5.205	104.10	
11	Benzyl alcohol	5.000	4.902	98.03	
12	1,2-Dichlorobenzen	5.000	5.102	102.04	
13	2-Methylphenol	5.000	5.493	109.86	
14	2,2'-oxybis(1-Chlo	5.000	5.273	105.46	
15	4-Methylphenol	5.000	5.593	111.86	
16	N-Nitroso-di-n-pro	5.000	5.416	108.33	
17	Hexachloroethane	5.000	5.214	104.29	
19	Nitrobenzene	5.000	5.370	107.39	
20	Isophorone	5.000	6.223	124.46	
21	2-Nitrophenol	5.000	5.177	103.54	
22	2,4-Dimethylphenol	10.00	10.76	107.60	
23	Bis(2-Chloroethoxy	5.000	5.494	109.88	
24	Benzoic acid	20.00	21.00	105.01	
25	2,4-Dichlorophenol	10.00	11.09	110.87	
26	1,2,4-Trichloroben	5.000	5.122	102.44	
28	Naphthalene	5.000	4.733	94.65	
29	4-Chloroaniline	10.00	10.96	109.60	
30	Hexachlorobutadien	5.000	5.193	103.85	
31	4-Chloro-3-methylp	10.00	11.90	119.01	
32	2-Methylnaphthalen	5.000	4.807	96.15	
33	Hexachlorocyclopen	10.00	10.25	102.50	
34	2,4,6-Trichlorophe	10.00	11.17	111.67	
35	2,4,5-Trichlorophe	10.00	12.09	120.85	
37	2-Chloronaphthalen	5.000	5.373	107.47	
38	2-Nitroaniline	10.00	11.53	115.26	
39	Dimethylphthalate	5.000	5.292	105.83	
40	Acenaphthylene	5.000	4.599	91.98	
41	2,6-Dinitrotoluene	10.00	11.16	111.60	

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
43	3-Nitroaniline	10.00	12.86	128.64	
44	Acenaphthene	5.000	4.823	96.46	
45	2,4-Dinitrophenol	20.00	20.90	104.50	
46	Dibenzofuran	5.000	4.832	96.63	
47	4-Nitrophenol	10.00	10.45	104.51	
48	2,4-Dinitrotoluene	10.00	11.57	115.72	
49	Fluorene	5.000	4.801	96.02	
50	Diethylphthalate	5.000	5.140	102.81	
51	4-Chlorophenyl-phe	5.000	4.985	99.70	
52	4-Nitroaniline	10.00	11.78	117.84	
53	4,6-Dinitro-2-meth	20.00	21.76	108.79	
54	N-Nitrosodiphenyla	5.000	5.470	109.40	
56	4-Bromophenyl-phen	5.000	5.401	108.01	
57	Hexachlorobenzene	5.000	5.183	103.65	
58	Pentachlorophenol	10.00	11.86	118.63	
60	Phenanthrene	5.000	4.907	98.14	
61	Anthracene	5.000	4.863	97.26	
63	Di-n-butylphthalat	5.000	5.550	111.01	
64	Fluoranthene	5.000	4.949	98.97	
65	Pyrene	5.000	4.881	97.61	
67	Butylbenzylphthala	5.000	5.735	114.70	
68	Benzo(a)anthracene	5.000	4.911	98.21	
70	3,3'-Dichlorobenzi	10.00	8.305	83.05	
71	Chrysene	5.000	4.840	96.81	
72	bis(2-Ethylhexyl)p	5.000	5.340	106.80	
73	Di-n-octylphthalat	5.000	5.335	106.70	
74	Benzo(b)fluoranthe	5.000	4.598	91.96	
75	Benzo(k)fluoranthe	5.000	5.152	103.03	
76	Benzo(a)pyrene	5.000	4.818	96.36	
78	Indeno(1,2,3-cd)py	5.000	5.152	103.04	
79	Dibenzo(a,h)anthra	5.000	5.120	102.40	
80	Benzo(g,h,i)peryle	5.000	4.970	99.40	
90	N-Nitrosodimethyla	10.00	11.23	112.31	
91	Aniline	5.000	4.921	98.42	
93	Benzidine	10.00	15.02	150.16*	
105	1-methylnaphthalen	5.000	4.824	96.49	
120	2,3,4,6-Tetrachlo	5.000	0.000	*	
151	1,2,4,5-Tetrachlo	5.000	0.000	*	
110	Tetrachloroguaiac	10.00	0.000	*	
109	3,4,5-Trichlorogu	5.000	0.000	*	
181	3,4,6-Trichlorogu	5.000	0.000	*	
108	4,5,6-Trichlorogu	5.000	0.000	*	
184	3,4-Dichloroguaia	5.000	0.000	*	
107	4,5-Dichloroguaia	10.00	0.000	*	
182	4,6-Dichloroguaia	10.00	0.000	*	
185	4-Chloroguaiacol	2.500	0.000	*	
106	Guaiacol	5.000	0.000	*	

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Report Date: 03-May-2013 16:45

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: NONE
Lab Smp Id: IC0429ICV
Level:
Data Type: MS DATA
SpikeList File: ICVS.spk
Sublist File: PSDDAHDR.sub
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Client SDG: 20130429
Fraction: SV

Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

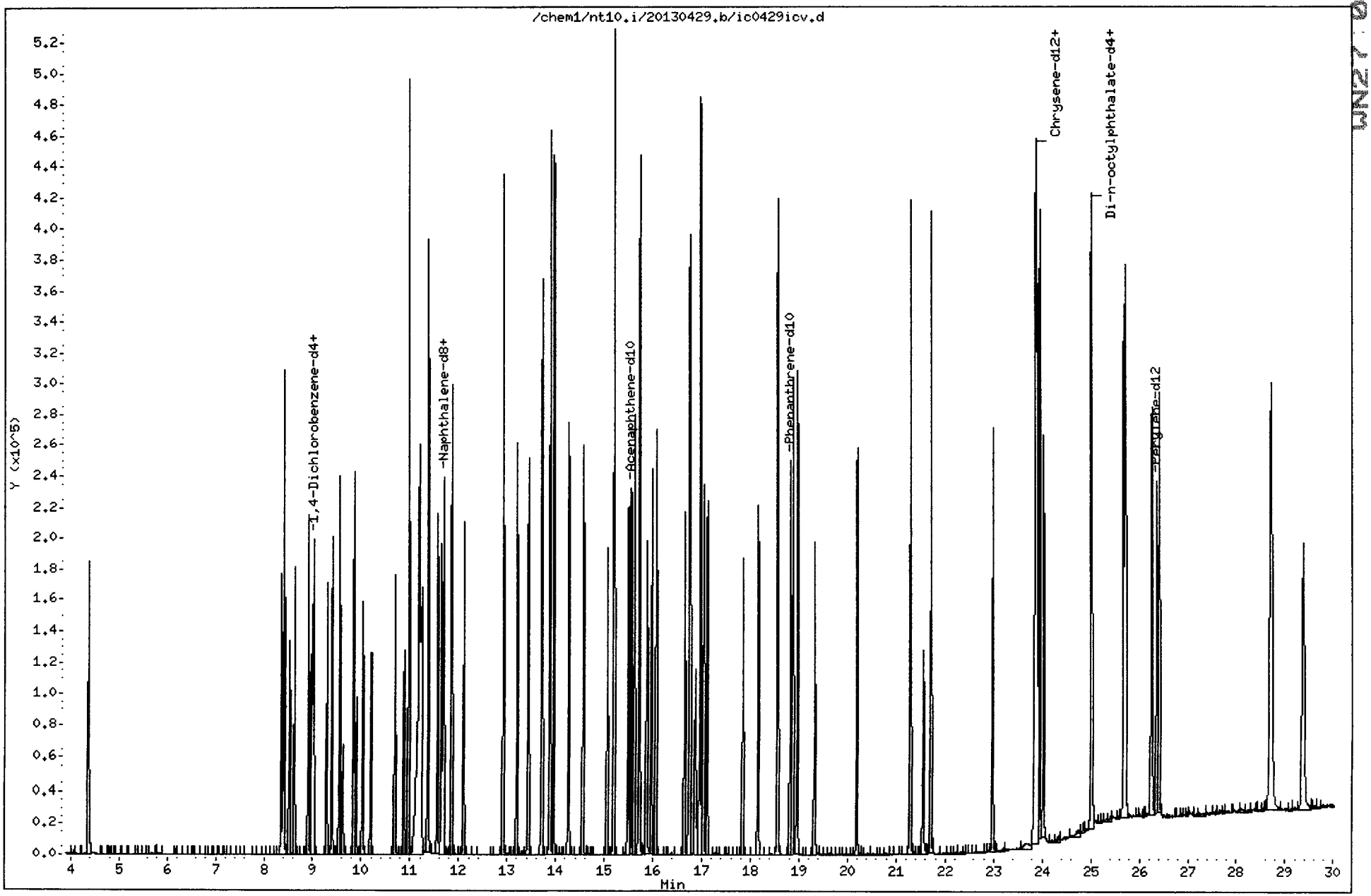
SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	7.500	0.000	*	
$ 2 Phenol-d5	7.500	0.000	*	
$ 5 2-Chlorophenol-d4	7.500	0.000	*	
$ 10 1,2-Dichlorobenze	5.000	0.000	*	
$ 18 Nitrobenzene-d5	5.000	0.000	*	
$ 36 2-Fluorobiphenyl	5.000	0.000	*	
$ 55 2,4,6-Tribromophe	7.500	0.000	*	
$ 66 Terphenyl-d14	5.000	0.000	*	

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Date : 29-APR-2013 22:24
Client ID:
Sample Info: IC0429ICV

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5ms1



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

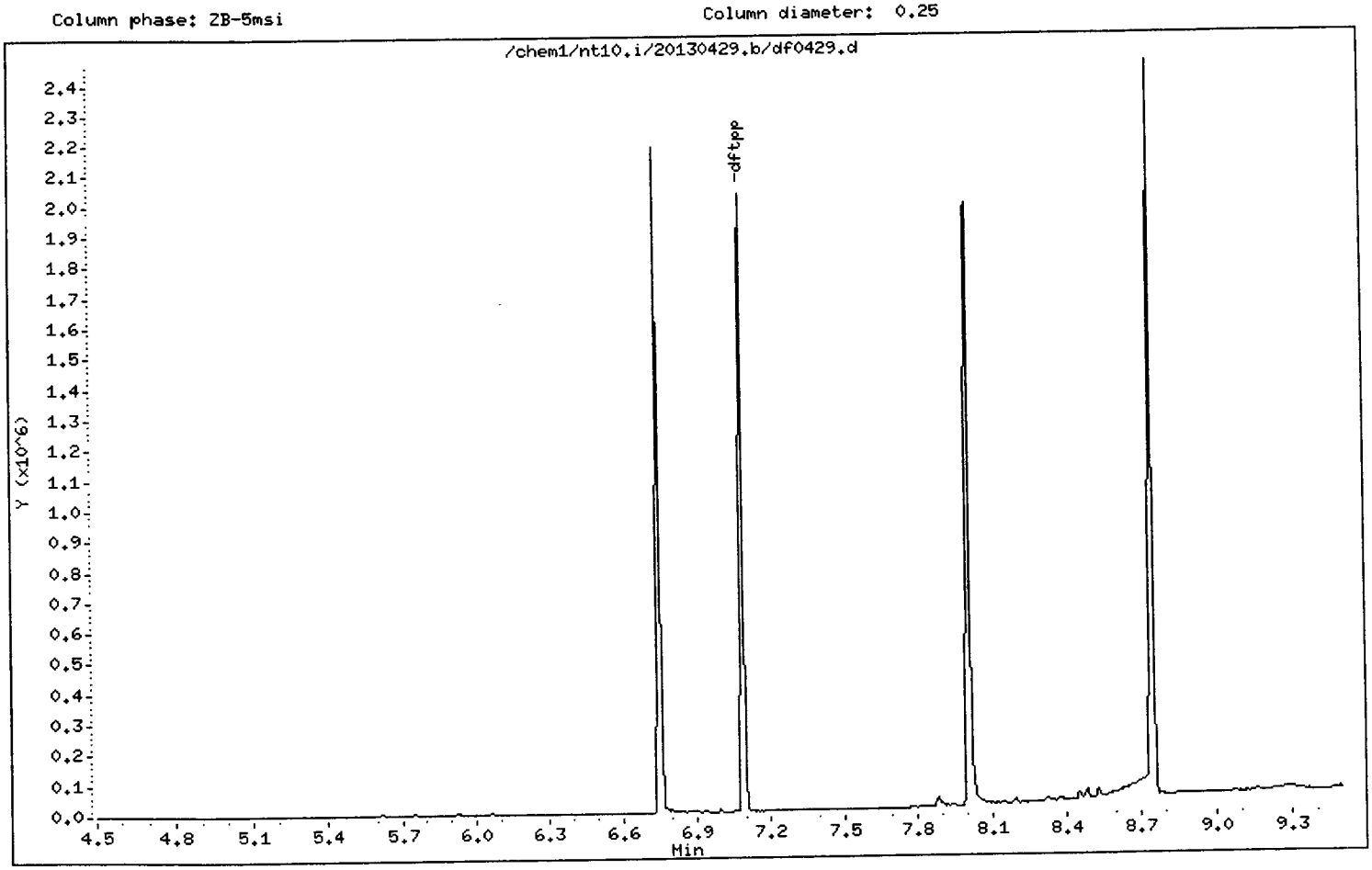
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

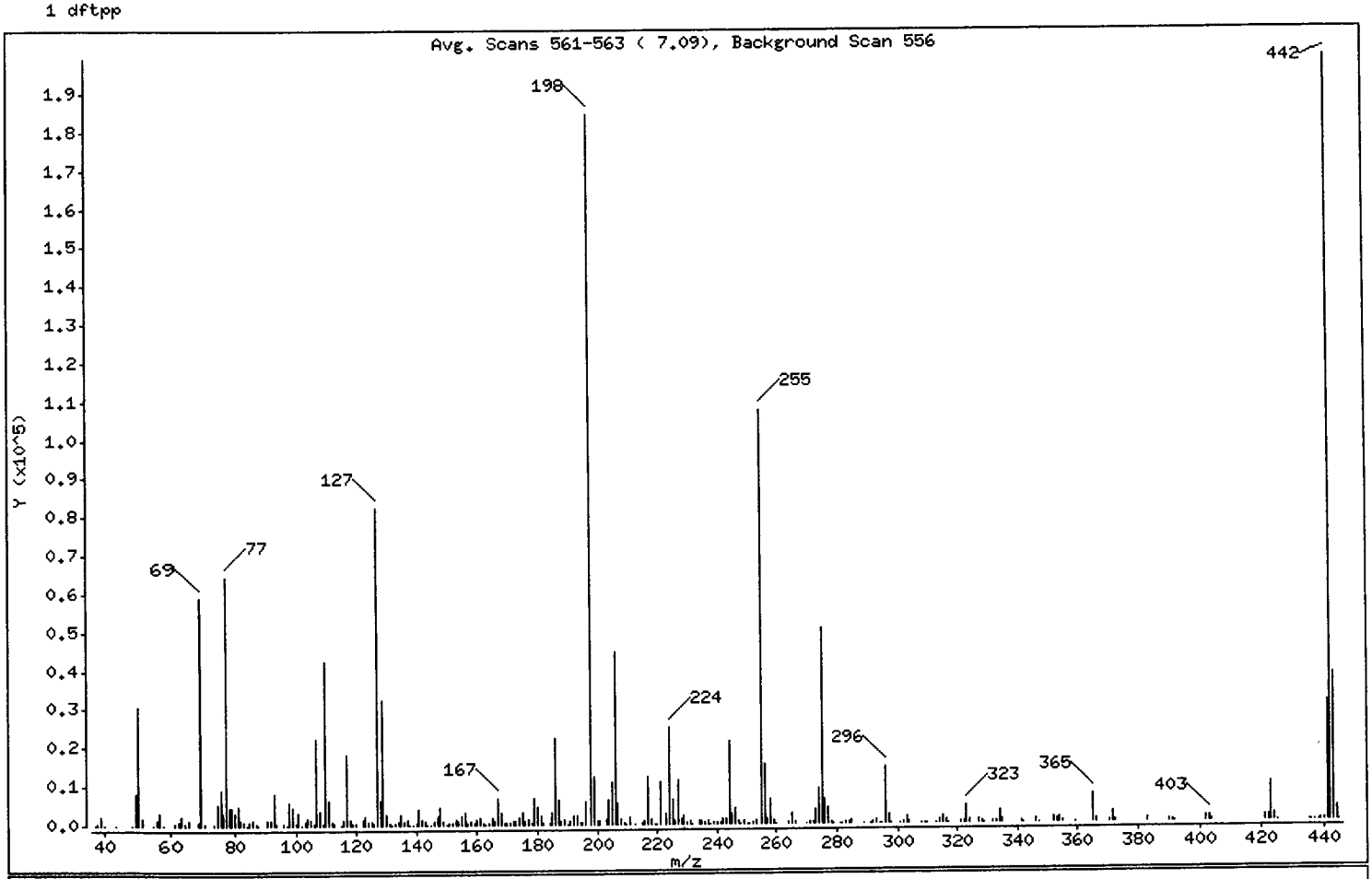
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	16.70
68	Less than 2.00% of mass 69	0.51 (1.60)
69	Mass 69 relative abundance	31.97
70	Less than 2.00% of mass 69	0.15 (0.46)
127	10.00 - 80.00% of mass 198	44.78
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	27.44
365	Greater than 1.00% of mass 198	4.00
441	0.01 - 24.00% of mass 442	16.80 (15.56)
442	50.00 - 200.00% of mass 198	107.98
443	15.00 - 24.00% of mass 442	20.84 (19.30)

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	119	128.00	6232	203.00	1259	289.00	149
38.00	415	129.00	32664	204.00	6492	291.00	55
39.00	2393	130.00	2738	205.00	11023	292.00	248
40.00	132	131.00	547	206.00	44808	293.00	944
44.00	78	132.00	207	207.00	5716	294.00	225
49.00	203	133.00	272	208.00	1602	295.00	86
50.00	8343	134.00	858	209.00	559	296.00	14604
51.00	30808	135.00	2801	210.00	130	297.00	2070
52.00	1637	136.00	916	211.00	1868	298.00	119
55.00	158	137.00	1248	213.00	64	301.00	172
56.00	1274	138.00	214	215.00	464	302.00	318
57.00	3130	139.00	128	216.00	999	303.00	1693
58.00	121	140.00	298	217.00	12350	304.00	431
61.00	576	141.00	4004	218.00	1562	308.00	140
62.00	758	142.00	1332	219.00	107	309.00	66
63.00	2110	143.00	918	220.00	86	310.00	122
64.00	365	144.00	184	221.00	10806	313.00	127
65.00	1151	145.00	229	223.00	2947	314.00	769
68.00	946	146.00	756	224.00	25312	315.00	1728
69.00	58984	147.00	2094	225.00	6355	316.00	922
70.00	271	148.00	4544	226.00	766	317.00	88
73.00	494	149.00	885	227.00	11288	321.00	436
74.00	5693	150.00	191	228.00	1533	322.00	230
75.00	9303	151.00	532	229.00	2272	323.00	4678
76.00	3182	152.00	251	230.00	340	324.00	920
77.00	64696	153.00	1367	231.00	1037	327.00	968
78.00	4399	154.00	1025	232.00	136	328.00	465
79.00	4595	155.00	2332	233.00	163	329.00	50
80.00	3355	156.00	3268	234.00	787	332.00	367
81.00	4879	157.00	652	235.00	849	333.00	490
82.00	1244	158.00	750	236.00	522	334.00	3152
83.00	1132	159.00	624	237.00	861	335.00	753
84.00	59	160.00	1324	238.00	117	341.00	568
85.00	783	161.00	1910	239.00	422	342.00	139
86.00	1346	162.00	596	240.00	404	346.00	1068

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	634	163.00	120	241.00	673	347.00	165
88.00	209	164.00	312	242.00	1491	352.00	1522
89.00	58	165.00	1684	243.00	1585	353.00	1048
91.00	1173	166.00	900	244.00	21560	354.00	1434
92.00	1265	167.00	7028	245.00	2828	355.00	307
93.00	8038	168.00	3167	246.00	4226	359.00	51
94.00	544	169.00	640	247.00	836	365.00	7383
96.00	486	170.00	289	248.00	173	366.00	950
97.00	173	171.00	367	249.00	766	370.00	83
98.00	5992	172.00	736	250.00	145	371.00	406
99.00	4376	173.00	984	251.00	198	372.00	2676
100.00	452	174.00	1650	252.00	278	373.00	680
101.00	3021	175.00	3419	253.00	722	383.00	692
102.00	131	176.00	1090	255.00	107624	384.00	117
103.00	907	177.00	1541	256.00	15761	390.00	337
104.00	1840	178.00	570	257.00	1160	391.00	291
105.00	1589	179.00	6738	258.00	6194	392.00	71
106.00	548	180.00	4416	259.00	1028	401.00	221
107.00	22656	181.00	2092	260.00	162	402.00	1163
108.00	3534	182.00	309	261.00	213	403.00	1545
109.00	609	183.00	166	264.00	253	404.00	599
110.00	42496	184.00	593	265.00	2547	421.00	1426
111.00	6272	185.00	3035	266.00	526	422.00	1250
112.00	744	186.00	22616	270.00	181	423.00	9992
113.00	246	187.00	6353	271.00	299	424.00	1966
115.00	56	188.00	695	272.00	416	425.00	183
116.00	1316	189.00	1391	273.00	3826	435.00	62
117.00	18496	190.00	224	274.00	8949	436.00	62
118.00	1424	191.00	864	275.00	50632	437.00	225
119.00	236	192.00	2063	276.00	6580	438.00	213
120.00	238	193.00	2223	277.00	4111	439.00	328
121.00	63	194.00	423	278.00	606	440.00	329
122.00	1437	195.00	416	279.00	122	441.00	31000
123.00	2280	196.00	5832	281.00	202	442.00	199232
124.00	999	198.00	184512	282.00	126	443.00	38448

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

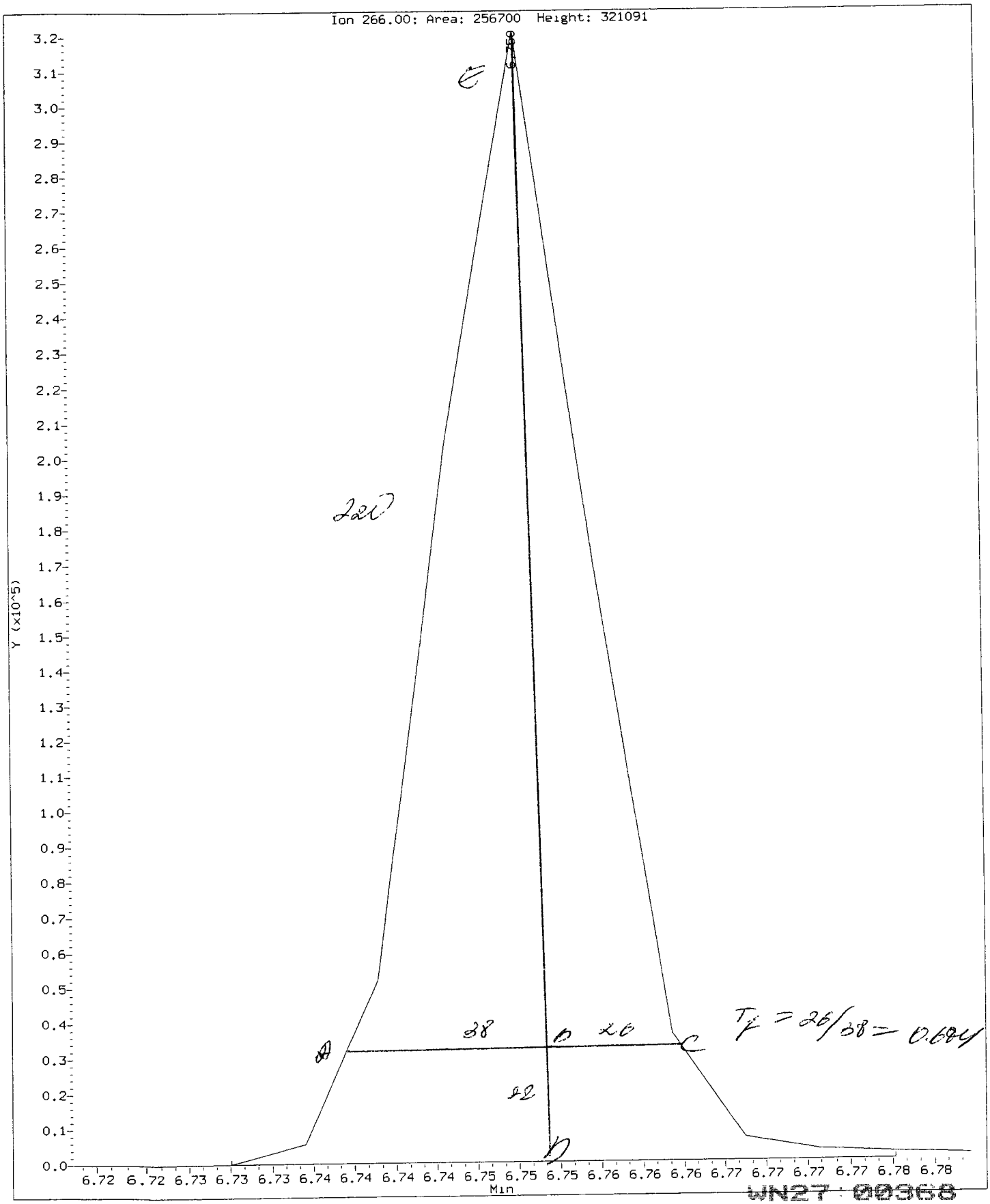
Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	975	199.00	12407	283.00	532	444.00	3455
126.00	347	200.00	963	284.00	335	445.00	131
127.00	82624	201.00	1058	285.00	774		

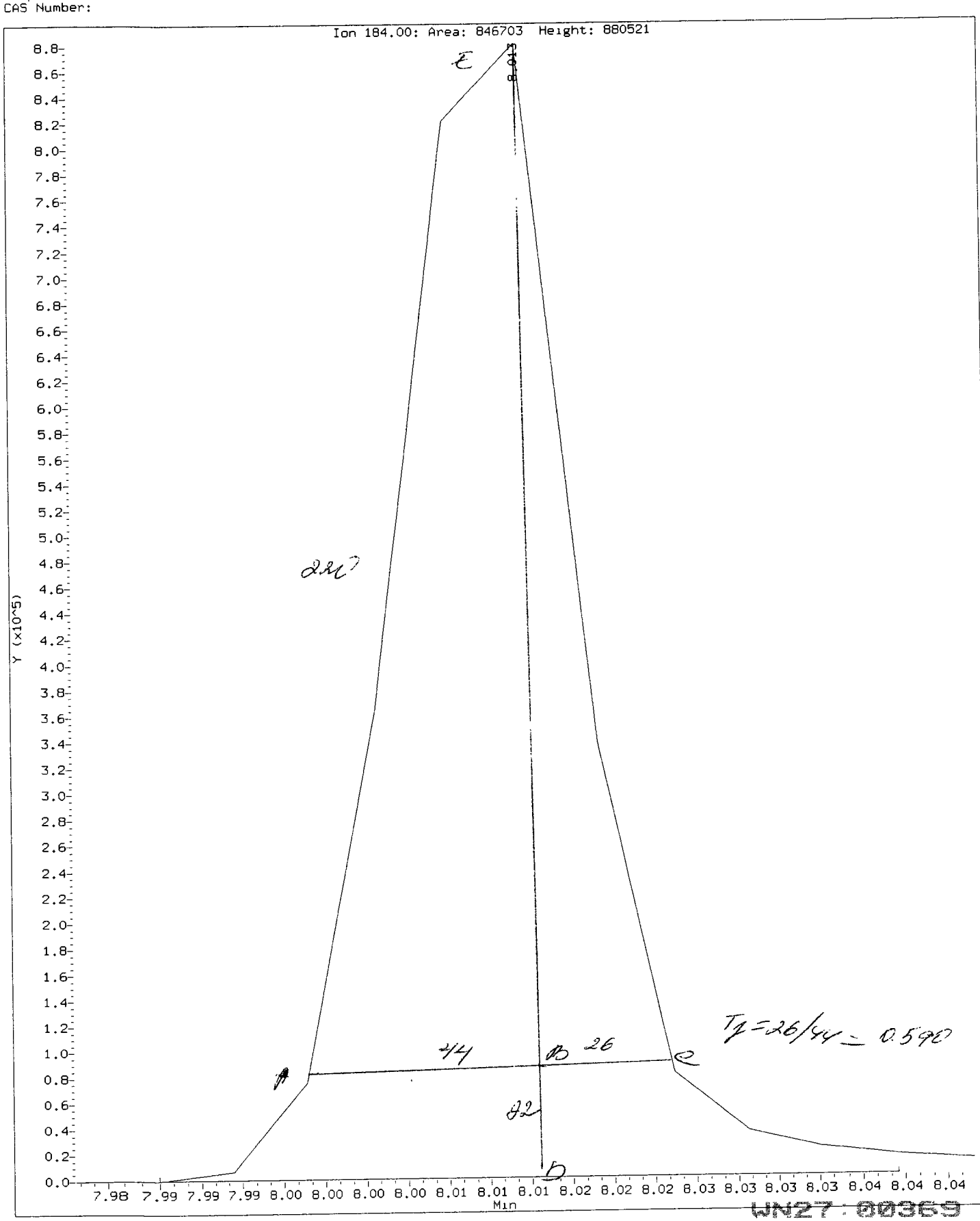
Data File: /chem1/nt10.1/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130429.b/ddt.b/df0429.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130429.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 29-APR-2013 16:37 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.750	256700
Benzidine	8.013	846703
4,4'-DDE	8.195	1804
4,4'-DDD	8.483	6740
4,4'-DDT	8.745	445165

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

$$\text{DDT Percent Breakdown} = \frac{(\ 1804 + 6740) * 100}{(\ 1804 + 6740 + 445165)}$$

DDT Percent Breakdown = 1.9 %

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN27

Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WN27 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 04/29/13 Analysis Start Date: 05/07/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ✓	Internal Standard within 50-200%?	Y / N / ✓
DDT Breakdown <20%?	Y / N / ✓	Retention Times within Windows?	Y / N / ✓
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / X
ICAL Q Flag applied?	Y / N / ✓	LCS / LCSD RPD ≤ 30%?	NA / X
CCAL Q flag applied?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / ✓
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ 30%?	NA / X
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / 3X, 9X
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / -

Detail problems, corrective actions and/or other pertinent information below.

Sample was re-run @ 9X dilution on 05/08/13

(Review 1) Analyst: [signature] **Date:** 5/9

(Review 2) Reviewer: [signature] **Date:** 5/10

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 5/07/13 Analysis: ABN/SIMABN Analyst: YZ

GC Program: ABN_2 Column No: 25 2945 Column Type: ZB5 ms

Instrument Tune (.U or .CT.): 130228.U EM Voltage: 1650

Calibration File: DF0507 Curve Date: 04/29/13 Injection Vol.: 1uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 B0001.M2	
	2073-1 1998-4	
	2004-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b

	Time	Filename	LabID	ClientId	DF													
1	1219	df0507.d	DFTPP	DFTPP	1	NO ISTDS FOUND												
2	1234	cc0507 d	CC0507		1	8.13	53304	10 74	196084	14.57	123166	17.79	216894	22.99	236097	25.27	207013	24.16	290407
3	1347	wo14mbs1.d	WO14MBS1		1	8 12	45966	10.73	180960	14.56	111267	17.79	189746	22.97	210537	25.26	179343	24.16	244069
4	1424	wo14lcss1.d	WO14LCSS1		1	8.12	41804	10.73	157611	14.57	104833	17.79	182190	22.98	204147	25.26	176406	24.16	242567
5	1500	wo14lcsds1.d	WO14LCSDS1		1	8.12	44349	10 73	165769	14.56	105520	17 79	185816	22.98	206612	25 26	180632	24.16	246940
6	1537	wo14a.d	WO14A		1	8.12	45310	10.73	175183	14.56	107052	17.79	179266	22.98	176892	25.27	163596	24.16	227155
7	1614	wo14b d	WO14B		1	8.12	44516	10.73	173669	14.57	104917	17 79	172197	22.98	168928	25.27	161255	24.16	220043
8	1650	wn30mbs1.d	WN30MBS1	WN30MBS1	1	8.12	45490	10.73	177750	14.56	109384	17.79	187454	22.97	196527	25.26	165936	24.16	232557
9	1727	wn30lcss1 d	WN30LCSS1	WN30LCSS1	1	8.12	43320	10.73	164232	14.56	103234	17.79	179602	22.97	195115	25.26	172204	24.16	236239
10	1803	wn30lcsds1.d	WN30LCSDS1	WN30LCSDS1	1	8.12	41011	10.73	153177	14.56	97637	17.79	169618	22.97	188414	25.26	167622	24.16	228678
11	1916	wn27a.d	WN27A	CG-MH-010-20	3	8.12	37725	10.73	153422	14.56	98941	17.79	165938	23.01	151066	25.33	149092	24.19	194771
12	1953	wn27ams.d	WN27AMS	CG-MH-010-20	3	8.12	41218	10.73	160389	14.56	104861	17.79	174739	23.02	166399	25.34	160390	24.22	214048
13	2030	wn27amsd.d	WN27AMSD	CG-MH-010-20	3	8.12	36925	10.73	147667	14.56	96968	17 79	163337	23.00	155420	25.32	139410	24.19	195600
14	1840	wn30k.d	WN30K	JW-EA02-SC05	1	8.12	41321	10.74	163460	14.57	104611	17.81	167294	23.04	161669	25.34	157326	24.22	208219
15	1916	wn27a.d	WN27A	CG-MH-010-20	3	8.12	37725	10.73	153422	14.56	98941	17.79	165938	23.01	151066	25.33	149092	24.19	194771
16	2106	wn31a.d	WN31A	ES-TS-INF-20	3	8.12	40105	10.73	157068	14.56	95378	17.79	153652	23.00	165029	25.31	157251	24.18	206574
17	2143	wp04mbs1.d	WP04MBS1	WP04MBS1	1	8.11	35923	10.72	145744	14.55	99658	17.78	154888	22.96	151725	25.26	144349	24.14	198476
18	2219	wp04lcss1.d	WP04LCSS1	WP04LCSS1	1	8.11	38610	10.72	145929	14 55	96241	17 78	164362	22.96	157718	25.25	146832	24 13	201872
19	2256	wp04a.d	WO04A	G-S-3	1	8.11	41484	10.71	162389	14.54	100764	17.77	170768	22.96	167105	25.24	154772	24.13	212943
20	2333	wn59d2.d	WN59D		6	8 12	39843	10.71	156668	14.54	99600	17 77	173823	22.96	161462	25.24	145328	24.13	208496

line must contain information or be lined out. Make all entries legible.
a new page for each QC period. Document All Maintenance Tasks In StarLIMS

YZ 5/8/13

F

book

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b

ARI Job No.: WN30 Method: ABN.m Instrument: nt10.i Date: 07-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1650	wn30mbs1.d	WN30MBS1	WN30MBS1	1	NO MANUAL INTEGRATION
1727	wn30lcss1.d	WN30LCSS1	WN30LCSS1	1	NO MANUAL INTEGRATION
1803	wn30lcsds1.d	WN30LCSDS1	WN30LCSDS1	1	NO MANUAL INTEGRATION
1916	wn27a.d	WN27A	CG-MH-010-	3	Di-n-octylphthalate, Dibenzo(a,h)anthracene,
1953	wn27ams.d	WN27AMS	CG-MH-010-	3	Di-n-octylphthalate, Dibenzo(a,h)anthracene,
2030	wn27amsd.d	WN27AMSD	CG-MH-010-	3	Di-n-octylphthalate, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenżo(a,h)anthracene,
2106	wn31a.d	WN31A	ES-TS-INF-	3	Benzo(a)anthracene, Di-n-octylphthalate, Indeno(1,2,3-cd)pyrene,
1527	wn27a9.d	WN27A	CG-MH-010-	9	Indeno(1,2,3-cd)pyrene,
1603	wn31a9.d	WN31A	ES-TS-INF-	9	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b

Instrument: nt10.i Date: 07-MAY-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 07-MAY-2013

Compound	%D
Benzoic acid	-28.6
3-Nitroaniline	22.5
2,4-Dinitrophenol	-38.6
4-Nitroaniline	20.4
4,6-Dinitro-2-methylphenol	-33.7
Pentachlorophenol	-31.4

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

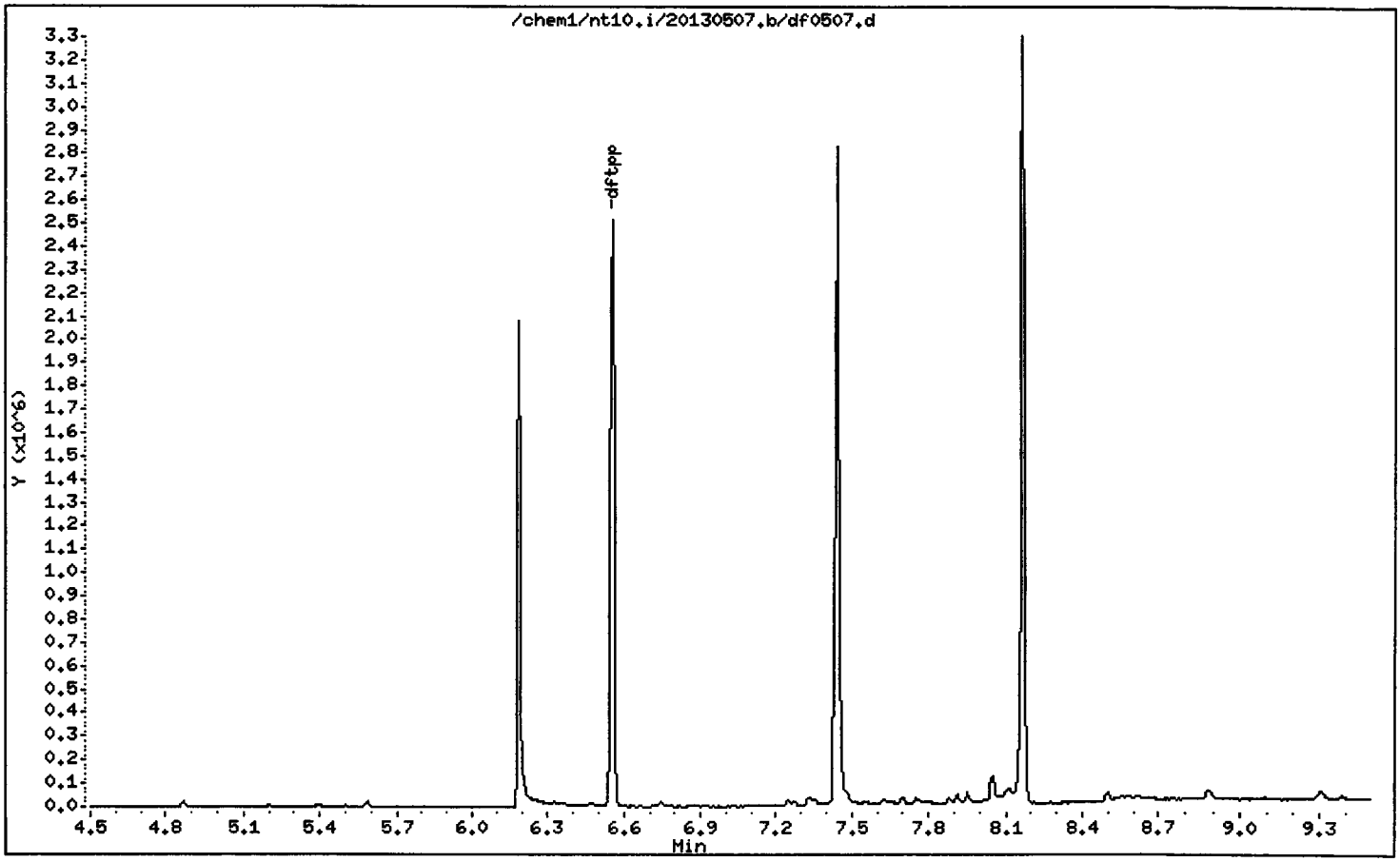
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

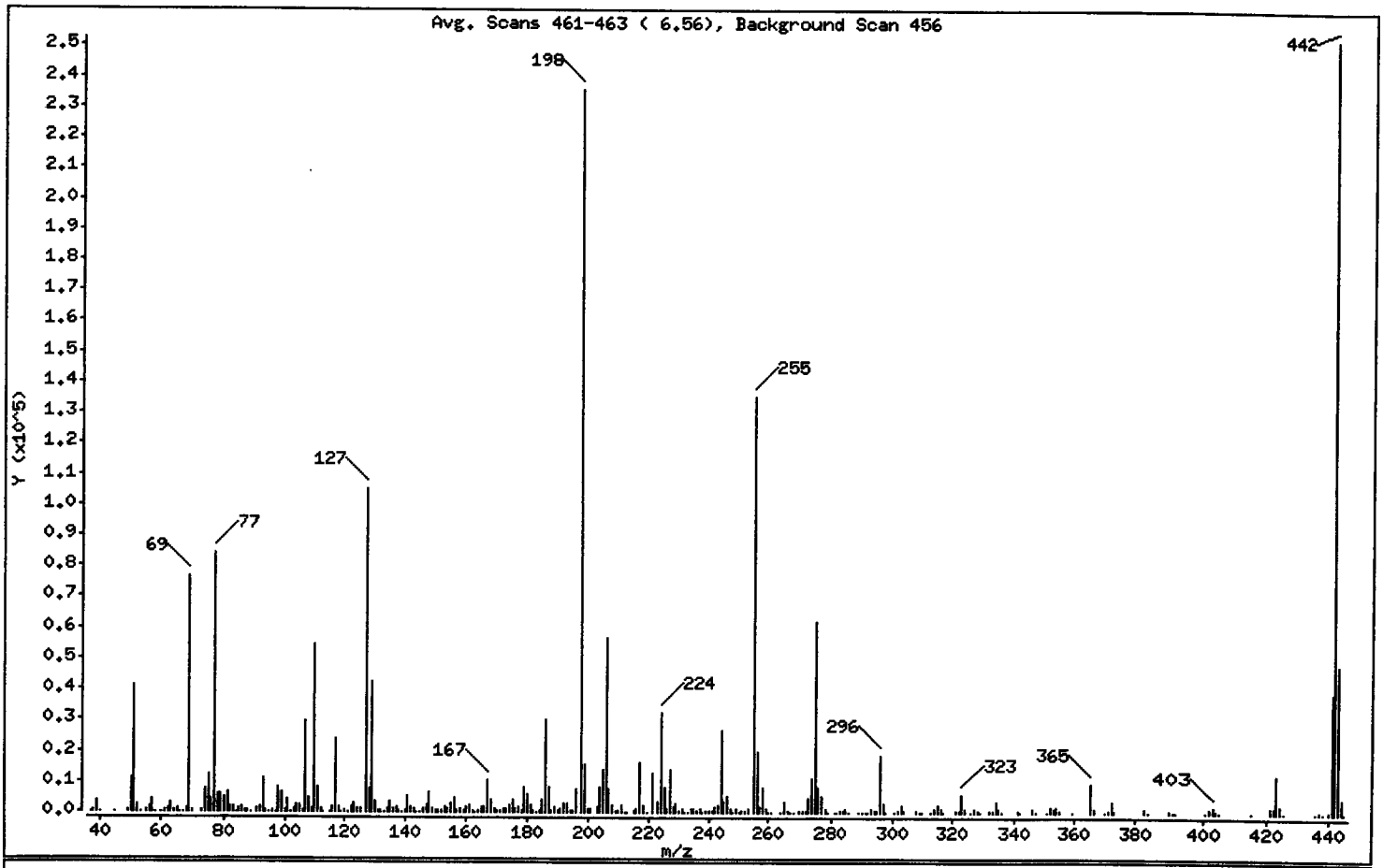
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.49
68	Less than 2.00% of mass 69	0.55 (1.68)
69	Mass 69 relative abundance	32.59
70	Less than 2.00% of mass 69	0.19 (0.60)
127	10.00 - 80.00% of mass 198	44.66
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.66
275	10.00 - 60.00% of mass 198	26.49
365	Greater than 1.00% of mass 198	3.85
441	0.01 - 24.00% of mass 442	16.45 (15.34)
442	50.00 - 200.00% of mass 198	107.26
443	15.00 - 24.00% of mass 442	20.48 (19.10)

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456

Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	165	127.00	105160	205.00	14065	291.00	68
38.00	541	128.00	7752	206.00	56872	292.00	264
39.00	3217	129.00	42416	207.00	7418	293.00	1209
40.00	147	130.00	3423	208.00	2073	294.00	308
45.00	50	131.00	712	209.00	493	295.00	342
49.00	348	132.00	392	210.00	649	296.00	18312
50.00	11161	133.00	235	211.00	2179	297.00	2673
51.00	41176	134.00	1318	212.00	90	298.00	188
52.00	2280	135.00	3367	213.00	115	301.00	277
53.00	57	136.00	1352	215.00	715	302.00	365
55.00	301	137.00	1539	216.00	1332	303.00	2162
56.00	1813	138.00	363	217.00	16327	304.00	538
57.00	4098	139.00	186	218.00	2040	308.00	295
58.00	169	140.00	541	219.00	190	309.00	131
60.00	30	141.00	5378	221.00	13051	310.00	154
61.00	838	142.00	1775	223.00	3684	313.00	206
62.00	965	143.00	1211	224.00	32464	314.00	947
63.00	2847	144.00	290	225.00	8230	315.00	2153
64.00	418	145.00	288	226.00	912	316.00	1225
65.00	1416	146.00	894	227.00	13707	317.00	149
66.00	51	147.00	2502	228.00	2031	321.00	688
67.00	72	148.00	6165	229.00	3030	322.00	351
68.00	1291	149.00	1165	230.00	444	323.00	5703
69.00	76744	150.00	292	231.00	1266	324.00	1065
70.00	457	151.00	649	232.00	236	326.00	137
73.00	432	152.00	342	233.00	246	327.00	1197
74.00	7451	153.00	1632	234.00	874	328.00	555
75.00	12036	154.00	1325	235.00	995	329.00	64
76.00	4044	155.00	3061	236.00	720	332.00	491
77.00	83968	156.00	4441	237.00	1095	333.00	662
78.00	5637	157.00	831	238.00	150	334.00	3759
79.00	5692	158.00	1013	239.00	606	335.00	948
80.00	4518	159.00	749	240.00	436	336.00	50
81.00	6259	160.00	1692	241.00	808	341.00	791
82.00	1687	161.00	2495	242.00	1850	342.00	161

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456

Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	1477	162.00	738	243.00	2192	346.00	1373
84.00	44	163.00	224	244.00	26544	347.00	233
85.00	1154	164.00	334	245.00	3604	351.00	175
86.00	1817	165.00	1952	246.00	5235	352.00	1921
87.00	817	166.00	1695	247.00	1018	353.00	1269
88.00	297	167.00	10680	248.00	282	354.00	1662
89.00	164	168.00	4218	249.00	965	355.00	370
91.00	1338	169.00	910	250.00	160	359.00	72
92.00	1663	170.00	397	251.00	307	365.00	9068
93.00	10827	171.00	504	252.00	333	366.00	1280
94.00	762	172.00	1038	253.00	926	370.00	224
95.00	205	173.00	1276	255.00	135040	371.00	578
96.00	418	174.00	2241	256.00	19728	372.00	3197
97.00	92	175.00	4219	257.00	1535	373.00	812
98.00	8120	176.00	1336	258.00	8246	383.00	962
99.00	6177	177.00	1989	259.00	1344	384.00	230
100.00	543	178.00	739	260.00	152	390.00	455
101.00	3998	179.00	8371	261.00	154	391.00	270
102.00	191	180.00	5645	264.00	228	392.00	266
103.00	1187	181.00	2604	265.00	3278	401.00	156
104.00	2428	182.00	455	266.00	542	402.00	1404
105.00	2176	183.00	290	267.00	51	403.00	1976
106.00	697	184.00	683	268.00	94	404.00	632
107.00	29376	185.00	4026	270.00	295	405.00	57
108.00	4701	186.00	29992	271.00	319	415.00	50
109.00	1004	187.00	8079	272.00	496	421.00	1847
110.00	54304	188.00	829	273.00	4553	422.00	1500
111.00	8140	189.00	1902	274.00	10985	423.00	12300
112.00	1092	190.00	312	275.00	62368	424.00	2395
113.00	262	191.00	937	276.00	8275	425.00	213
115.00	124	192.00	2653	277.00	5081	436.00	159
116.00	1667	193.00	3118	278.00	877	437.00	326
117.00	23744	194.00	633	279.00	162	438.00	233
118.00	1682	195.00	539	281.00	203	440.00	740
119.00	256	196.00	7352	282.00	74	441.00	38728

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456

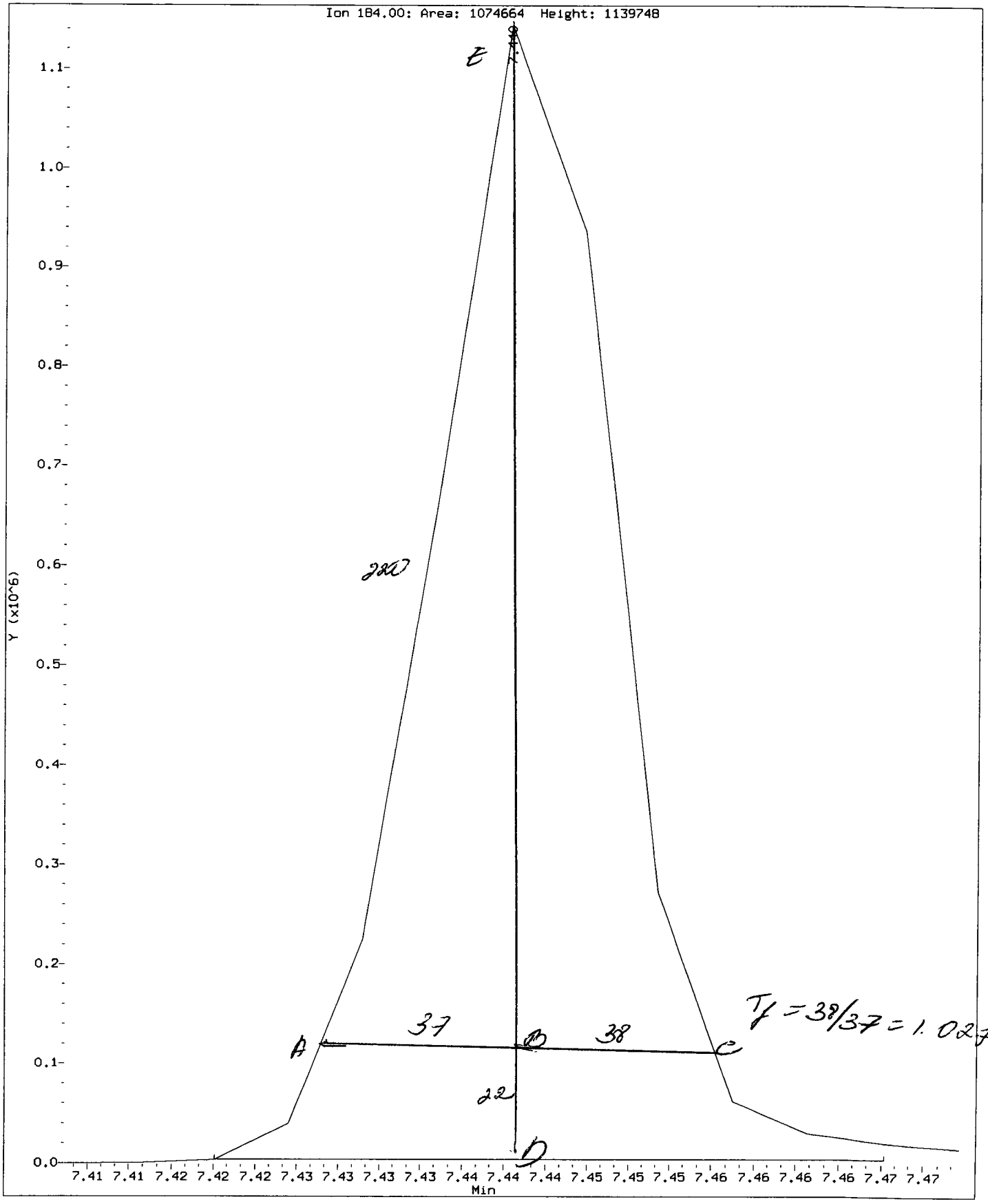
Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	477	198.00	235456	283.00	622	442.00	252544
121.00	231	199.00	15678	284.00	415	443.00	48232
122.00	1965	200.00	1247	285.00	987	444.00	4582
123.00	3125	201.00	1259	286.00	85	445.00	255
124.00	1325	203.00	1721	289.00	239		
125.00	1300	204.00	8312	290.00	141		

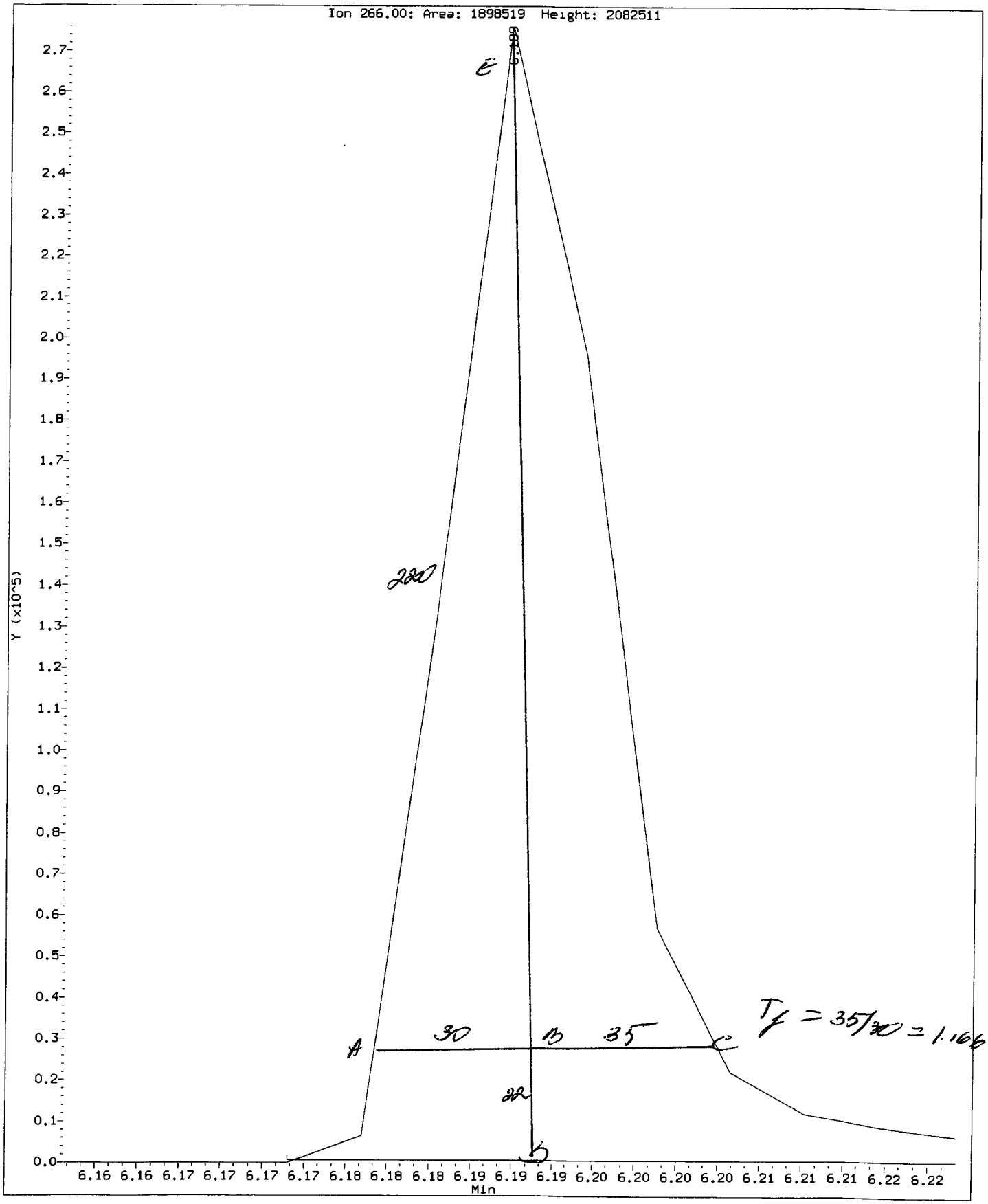
Data File: /chem1/nt10.1/20130507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2013 12:19
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Data File: /chem1/nt10.i/20130507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2013 12:19
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130507.b/ddt.b/df0507.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130507.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 07-MAY-2013 12:19 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.189	1898519
Benzidine	7.440	1074664
4,4'-DDE	7.628	1584
4,4'-DDD	7.954	6093
4,4'-DDT	8.168	617170

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

$$\text{DDT Percent Breakdown} = \frac{(1584 + 6093) * 100}{(1584 + 6093 + 617170)}$$

DDT Percent Breakdown = 1.2 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 07-MAY-2013 12:34
Lab File ID: cc0507.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0507 Quant Type: ISTD
Method: /chem1/nt10.i/20130507.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.42771	1.43243	1.43243	0.010	0.33080	20.00000	Averaged	
$ 2 Phenol-d5	1.84748	1.91642	1.91642	0.010	3.73160	20.00000	Averaged	
3 Phenol	2.06794	2.29115	2.29115	0.100	10.79346	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.40240	1.38158	1.38158	0.010	-1.48442	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.48709	1.38688	1.38688	0.700	-6.73870	20.00000	Averaged	
6 2-Chlorophenol	1.59477	1.47049	1.47049	0.800	-7.79248	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.60030	1.56039	1.56039	0.010	-2.49392	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.57739	1.53249	1.53249	0.010	-2.84640	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	1.00879	0.99668	0.99668	0.010	-1.19999	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.51024	1.47300	1.47300	0.010	-2.46606	20.00000	Averaged	
11 Benzyl alcohol	0.86989	0.93655	0.93655	0.010	7.66306	20.00000	Averaged	
14 2,2'-oxybis(1-Chloropropane	0.45898	0.44540	0.44540	0.010	-2.95798	20.00000	Averaged	
13 2-Methylphenol	1.48808	1.44783	1.44783	0.700	-2.70467	20.00000	Averaged	
17 Hexachloroethane	0.65999	0.64310	0.64310	0.300	-2.55909	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.92905	0.90639	0.90639	0.500	-2.43875	20.00000	Averaged	
15 4-Methylphenol	1.51729	1.51282	1.51282	0.600	-0.29467	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.42210	0.42109	0.42109	0.010	-0.23910	20.00000	Averaged	
19 Nitrobenzene	0.38970	0.38855	0.38855	0.200	-0.29462	20.00000	Averaged	
20 Isophorone	0.73300	0.71470	0.71470	0.300	-2.49750	20.00000	Averaged	
21 2-Nitrophenol	0.21847	0.23807	0.23807	0.100	8.97423	20.00000	Averaged	
22 2,4-Dimethylphenol	0.40172	0.43768	0.43768	0.200	8.95109	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.43229	0.43520	0.43520	0.050	0.67319	20.00000	Averaged	
24 Benzoic acid	14.27021	20.00000	0.25035	0.010	-28.64895	20.00000	Quadratic	<-
25 2,4-Dichlorophenol	0.36979	0.36151	0.36151	0.100	-2.23675	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.36143	0.34945	0.34945	0.010	-3.31262	20.00000	Averaged	
28 Naphthalene	1.06494	1.03373	1.03373	0.100	-2.93089	20.00000	Averaged	
29 4-Chloroaniline	0.41634	0.44037	0.44037	0.010	5.77318	20.00000	Averaged	
30 Hexachlorobutadiene	0.21470	0.21603	0.21603	0.010	0.61790	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.32531	0.35742	0.35742	0.200	9.87066	20.00000	Averaged	
32 2-Methylnaphthalene	0.70737	0.70780	0.70780	0.300	0.06131	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.44016	0.39375	0.39375	0.001	-10.54326	20.00000	Averaged	
34 2,4,6-Trichlorophenol	0.42101	0.41705	0.41705	0.200	-0.94136	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.43401	0.46584	0.46584	0.200	7.33349	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.39609	1.36646	1.36646	0.010	-2.12199	20.00000	Averaged	
37 2-Chloronaphthalene	1.11145	1.11117	1.11117	0.700	-0.02531	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 07-MAY-2013 12:34
Lab File ID: cc0507.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0507 Quant Type: ISTD
Method: /chem1/nt10.i/20130507.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.26826	0.31731	0.31731	0.010	18.28722	20.00000	Averaged	
39 Dimethylphthalate	1.20078	1.22682	1.22682	0.010	2.16864	20.00000	Averaged	
40 Acenaphthylene	1.88508	1.84322	1.84322	0.900	-2.22046	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.28135	0.29696	0.29696	0.100	5.54857	20.00000	Averaged	
43 3-Nitroaniline	0.23227	0.28459	0.28459	0.010	22.52705	20.00000	Averaged	<-
44 Acenaphthene	1.13602	1.13540	1.13540	0.100	-0.05461	20.00000	Averaged	
45 2,4-Dinitrophenol	12.28302	20.00000	0.15308	0.030	-38.58489	20.00000	Quadratic	<-
46 Dibenzofuran	1.55334	1.56166	1.56166	0.800	0.53620	20.00000	Averaged	
47 4-Nitrophenol	9.50478	10.00000	0.16634	0.010	-4.95219	20.00000	Quadratic	
48 2,4-Dinitrotoluene	0.36288	0.39749	0.39749	0.200	9.53799	20.00000	Averaged	
50 Diethylphthalate	1.20662	1.34108	1.34108	0.010	11.14357	20.00000	Averaged	
49 Fluorene	1.32546	1.29939	1.29939	0.100	-1.96647	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.65156	0.67615	0.67615	0.100	3.77499	20.00000	Averaged	
52 4-Nitroaniline	0.24126	0.29040	0.29040	0.010	20.36782	20.00000	Averaged	<-
53 4,6-Dinitro-2-methylphenol	13.25800	20.00000	0.12686	0.001	-33.70998	20.00000	Quadratic	<-
54 N-Nitrosodiphenylamine	0.46304	0.45872	0.45872	0.010	-0.93396	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.21154	0.20880	0.20880	0.010	-1.29399	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.22633	0.22655	0.22655	0.100	0.09852	20.00000	Averaged	
57 Hexachlorobenzene	0.27006	0.25382	0.25382	0.100	-6.01277	20.00000	Averaged	
58 Pentachlorophenol	0.18956	0.13012	0.13012	0.010	-31.35745	20.00000	Averaged	<-
60 Phenanthrene	1.09106	1.04631	1.04631	0.700	-4.10141	20.00000	Averaged	
61 Anthracene	1.11776	1.09931	1.09931	0.700	-1.65087	20.00000	Averaged	
62 Carbazole	0.67896	0.69637	0.69637	0.010	2.56418	20.00000	Averaged	
63 Di-n-butylphthalate	1.15386	1.21123	1.21123	0.010	4.97159	20.00000	Averaged	
64 Fluoranthene	1.28413	1.31646	1.31646	0.600	2.51807	20.00000	Averaged	
65 Pyrene	1.23758	1.24040	1.24040	0.600	0.22758	20.00000	Averaged	
$ 66 Terphenyl-d14	0.77864	0.75182	0.75182	0.010	-3.44493	20.00000	Averaged	
67 Butylbenzylphthalate	0.42263	0.47321	0.47321	0.010	11.96968	20.00000	Averaged	
68 Benzo(a)anthracene	1.11989	1.13485	1.13485	0.700	1.33576	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.42653	0.41797	0.41797	0.010	-2.00779	20.00000	Averaged	
71 Chrysene	1.01345	0.97569	0.97569	0.700	-3.72559	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.53180	0.52179	0.52179	0.010	-1.88156	20.00000	Averaged	
73 Di-n-octylphthalate	0.92098	0.86999	0.86999	0.010	-5.53702	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.18784	1.19890	1.19890	0.700	0.93116	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.25114	1.33226	1.33226	0.700	6.48354	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0507.d
Analysis Type:
Lab Sample ID: CC0507
Method: /chem1/nt10.i/20130507.b/ABN.m

Injection Date: 07-MAY-2013 12:34
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
76 Benzo(a)pyrene	1.01481	1.06177	1.06177	0.700	4.62723	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.16916	1.04792	1.04792	0.500	-10.36974	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.89686	0.96563	0.96563	0.400	7.66771	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.01156	1.04792	1.04792	0.500	3.59451	20.00000	Averaged
90 N-Nitrosodimethylamine	0.91125	0.88180	0.88180	0.010	-3.23205	20.00000	Averaged
91 Aniline	4.01210	4.23269	4.23269	0.010	5.49799	20.00000	Averaged
93 Benzidine	9.92027	10.00000	0.12702	0.010	-0.79732	20.00000	Quadratic
103 Pyridine	0.80099	0.77712	0.77712	0.010	-2.97995	20.00000	Averaged
105 1-methylnaphthalene	0.64873	0.64134	0.64134	0.010	-1.13922	20.00000	Averaged
111 Azobenzene (1,2-DP-Hydrazin	1.23715	1.19579	1.19579	0.010	-3.34271	20.00000	Averaged
187 Total Benzofluoranthenes	1.15343	1.17435	1.17435	0.010	1.81367	20.00000	Averaged
99 Perylene	1.16006	1.10494	1.10494	0.010	-4.75127	20.00000	Averaged
98 Retene	0.46838	0.48271	0.48271	0.010	3.05943	20.00000	Averaged
120 2,3,4,6-Tetrachlorophenol	0.32282	0.34236	0.34236	0.010	6.05164	20.00000	Averaged

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/8/13

Data file : /chem1/nt10.i/20130507.b/cc0507.d
Lab Smp Id: CC0507
Inj Date : 07-MAY-2013 12:34
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0507
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 08-May-2013 09:46 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.867	5.867	(0.722)	95443	5.00000	5.017
$	2 Phenol-d5	99	7.567	7.567	(0.931)	127691	5.00000	5.187
	3 Phenol	94	7.583	7.583	(0.932)	152659	5.00000	5.540
$	5 2-Chlorophenol-d4	132	7.760	7.760	(0.954)	92055	5.00000	4.926
	4 Bis(2-Chloroethyl)ether	93	7.706	7.706	(0.948)	92408	5.00000	4.663
	6 2-Chlorophenol	128	7.791	7.791	(0.958)	97979	5.00000	4.610
	7 1,3-Dichlorobenzene	146	8.055	8.055	(0.990)	103969	5.00000	4.875
*	8 1,4-Dichlorobenzene-d4	152	8.132	8.132	(1.000)	53304	4.00000	
	9 1,4-Dichlorobenzene	146	8.163	8.163	(1.004)	102110	5.00000	4.858
$	10 1,2-Dichlorobenzene-d4	152	8.497	8.497	(1.045)	66409	5.00000	4.940
	12 1,2-Dichlorobenzene	146-	8.528	8.528	(1.049)	98146	5.00000	4.877
	11 Benzyl alcohol	108	8.458	8.458	(1.040)	62402	5.00000	5.383
	14 2,2'-oxybis(1-Chloropropane)	121	8.784	8.784	(1.080)	29677	5.00000	4.852
	13 2-Methylphenol	108	8.738	8.738	(1.074)	96469	5.00000	4.865
	17 Hexachloroethane	117	9.141	9.141	(1.124)	42850	5.00000	4.872
	16 N-Nitroso-di-n-propylamine	70	9.056	9.056	(1.114)	60393	5.00000	4.878
	15 4-Methylphenol	108	9.033	9.033	(1.111)	100799	5.00000	4.985
$	18 Nitrobenzene-d5	82	9.289	9.289	(0.865)	103212	5.00000	4.988
	19 Nitrobenzene	77	9.320	9.320	(0.868)	95236	5.00000	4.985
	20 Isophorone	82	9.816	9.816	(0.914)	175176	5.00000	4.875
	21 2-Nitrophenol	139	9.987	9.987	(0.930)	58353	5.00000	5.449
	22 2,4-Dimethylphenol	107	10.126	10.126	(0.943)	214554	10.0000	10.90
	23 Bis(2-Chloroethoxy)methane	93	10.319	10.319	(0.961)	106669	5.00000	5.034
	24 Benzoic acid	105	10.450	10.450	(0.973)	245445	20.0000	14.27
	25 2,4-Dichlorophenol	162	10.488	10.488	(0.977)	177218	10.0000	9.776
	26 1,2,4-Trichlorobenzene	180	10.658	10.658	(0.993)	85653	5.00000	4.834
*	27 Naphthalene-d8	136	10.735	10.735	(1.000)	196084	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.774	10.774	(1.004)	253372	5.00000	4.853
	29 4-Chloroaniline	127	10.967	10.967	(1.022)	215876	10.0000	10.58
	30 Hexachlorobutadiene	225	11.199	11.199	(1.043)	52949	5.00000	5.031
	31 4-Chloro-3-methylphenol	107	12.042	12.042	(1.122)	175211	10.0000	10.99
	32 2-Methylnaphthalene	142	12.267	12.267	(1.143)	173485	5.00000	5.003
	33 Hexachlorocyclopentadiene	237	12.770	12.770	(0.877)	121243	10.0000	8.946
	34 2,4,6-Trichlorophenol	196	12.955	12.955	(0.889)	128416	10.0000	9.906
	35 2,4,5-Trichlorophenol	196	13.033	13.033	(0.895)	143438	10.0000	10.73
$	36 2-Fluorobiphenyl	172	13.126	13.126	(0.901)	210377	5.00000	4.894
	37 2-Chloronaphthalene	162	13.311	13.311	(0.914)	171073	5.00000	4.999
	38 2-Nitroaniline	65	13.629	13.629	(0.936)	97706	10.0000	11.83
	39 Dimethylphthalate	163	14.132	14.132	(0.970)	188878	5.00000	5.108
	40 Acenaphthylene	152	14.225	14.225	(0.977)	283778	5.00000	4.889
	41 2,6-Dinitrotoluene	165	14.256	14.256	(0.979)	91438	10.0000	10.55
*	42 Acenaphthene-d10	164	14.565	14.565	(1.000)	123166	4.00000	
	43 3-Nitroaniline	138	14.550	14.550	(0.999)	87629	10.0000	12.25
	44 Acenaphthene	153	14.635	14.635	(1.005)	174803	5.00000	4.997
	45 2,4-Dinitrophenol	184	14.774	14.774	(1.014)	94274	20.0000	12.28
	46 Dibenzofuran	168	14.990	14.990	(1.029)	240430	5.00000	5.027
	47 4-Nitrophenol	109	14.975	14.975	(1.028)	51218	10.0000	9.505
	48 2,4-Dinitrotoluene	165	15.114	15.114	(1.038)	122393	10.0000	10.95
	50 Diethylphthalate	149	15.709	15.709	(1.079)	206469	5.00000	5.557
	49 Fluorene	166	15.748	15.748	(1.081)	200051	5.00000	4.902
	51 4-Chlorophenyl-phenylether	204	15.787	15.787	(1.084)	104099	5.00000	5.189
	52 4-Nitroaniline	138	15.895	15.895	(1.091)	89420	10.0000	12.04
	53 4,6-Dinitro-2-methylphenol	198	16.003	16.003	(0.899)	137576	20.0000	13.26
	54 N-Nitrosodiphenylamine	169	16.064	16.064	(0.903)	124367	5.00000	4.953
$	55 2,4,6-Tribromophenol	330	16.326	16.326	(1.121)	32146	5.00000	4.935
	56 4-Bromophenyl-phenylether	248	16.851	16.851	(0.947)	61423	5.00000	5.005
	57 Hexachlorobenzene	284	17.144	17.144	(0.963)	68815	5.00000	4.699
	58 Pentachlorophenol	266	17.555	17.555	(0.987)	70556	10.0000	6.864
*	59 Phenanthrene-d10	188	17.794	17.794	(1.000)	216894	4.00000	
	60 Phenanthrene	178	17.849	17.849	(1.003)	283672	5.00000	4.795
	61 Anthracene	178	17.941	17.941	(1.008)	298041	5.00000	4.917
	62 Carbazole	167	18.336	18.336	(1.030)	188797	5.00000	5.128
	63 Di-n-butylphthalate	149	19.295	19.295	(1.084)	328385	5.00000	5.249
	64 Fluoranthene	202	20.348	20.348	(1.143)	356916	5.00000	5.126
	65 Pyrene	202	20.765	20.765	(0.903)	366067	5.00000	5.011
$	66 Terphenyl-d14	244	21.129	21.129	(0.919)	221878	5.00000	4.828
	67 Butylbenzylphthalate	149	22.112	22.112	(0.962)	139655	5.00000	5.598
	68 Benzo(a)anthracene	228	22.956	22.956	(0.999)	334917	5.00000	5.067
*	69 Chrysene-d12	240	22.987	22.987	(1.000)	236097	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.964	22.964	(0.999)	246703	10.0000	9.799
	71 Chrysene	228	23.026	23.026	(1.002)	287948	5.00000	4.814
	72 bis(2-Ethylhexyl)phthalate	149	23.189	23.189	(0.960)	189416	5.00000	4.906
*	134 Di-n-octylphthalate-d4	153	24.164	24.164	(1.000)	290407	4.00000	
	73 Di-n-octylphthalate	149	24.172	24.172	(1.000)	315813	5.00000	4.723

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	24.714	24.714	(0.978)	310236	5.00000	5.047
75	Benzo(k)fluoranthene	252	24.745	24.745	(0.979)	344744	5.00000	5.324
76	Benzo(a)pyrene	252	25.186	25.186	(0.997)	274749	5.00000	5.231
* 77	Perylene-d12	264	25.271	25.271	(1.000)	207013	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.613	27.613	(1.093)	271166	5.00000	4.482
79	Dibenzo(a,h)anthracene	278	27.116	27.116	(1.073)	249873	5.00000	5.383
80	Benzo(g,h,i)perylene	276	27.613	27.613	(1.093)	271166	5.00000	5.180
90	N-Nitrosodimethylamine	74	3.636	3.636	(0.447)	117509	10.0000	9.677
91	Aniline	93	7.583	7.583	(0.932)	282024	5.00000	5.275
93	Benzidine	184	20.642	20.642	(0.898)	74975	10.0000	9.920
103	Pyridine	79	3.636	3.636	(0.447)	103559	10.0000	9.702
105	1-methylnaphthalene	142	12.491	12.491	(1.164)	157196	5.00000	4.943
111	Azobenzene (1,2-DP-Hydrazine)	77	16.126	16.126	(1.107)	184101	5.00000	4.833(H)
187	Total Benzofluoranthenes	252	24.745	24.745	(0.979)	607766	10.0000	10.18
99	Perylene	252	25.310	25.310	(1.002)	285921	5.00000	4.762
98	Retene	219	21.415	21.415	(0.932)	142458	5.00000	5.153
120	2,3,4,6-Tetrachlorophenol	232	15.384	15.384	(1.056)	52709	5.00000	5.303

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0507.d
Lab Smp Id: CC0507
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info:

Calibration Date: 07-MAY-2013
Calibration Time: 11:17
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	53304	17.80
27 Naphthalene-d8	166754	83377	333508	196084	17.59
42 Acenaphthene-d10	106910	53455	213820	123166	15.21
59 Phenanthrene-d10	179783	89892	359566	216894	20.64
69 Chrysene-d12	192841	96420	385682	236097	22.43
134 Di-n-octylphthala	229567	114784	459134	290407	26.50
77 Perylene-d12	184310	92155	368620	207013	12.32

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.13	0.00
27 Naphthalene-d8	10.74	10.24	11.24	10.74	0.00
42 Acenaphthene-d10	14.57	14.07	15.07	14.57	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.99	22.49	23.49	22.99	0.00
134 Di-n-octylphthala	24.16	23.66	24.66	24.16	0.00
77 Perylene-d12	25.27	24.77	25.77	25.27	0.00

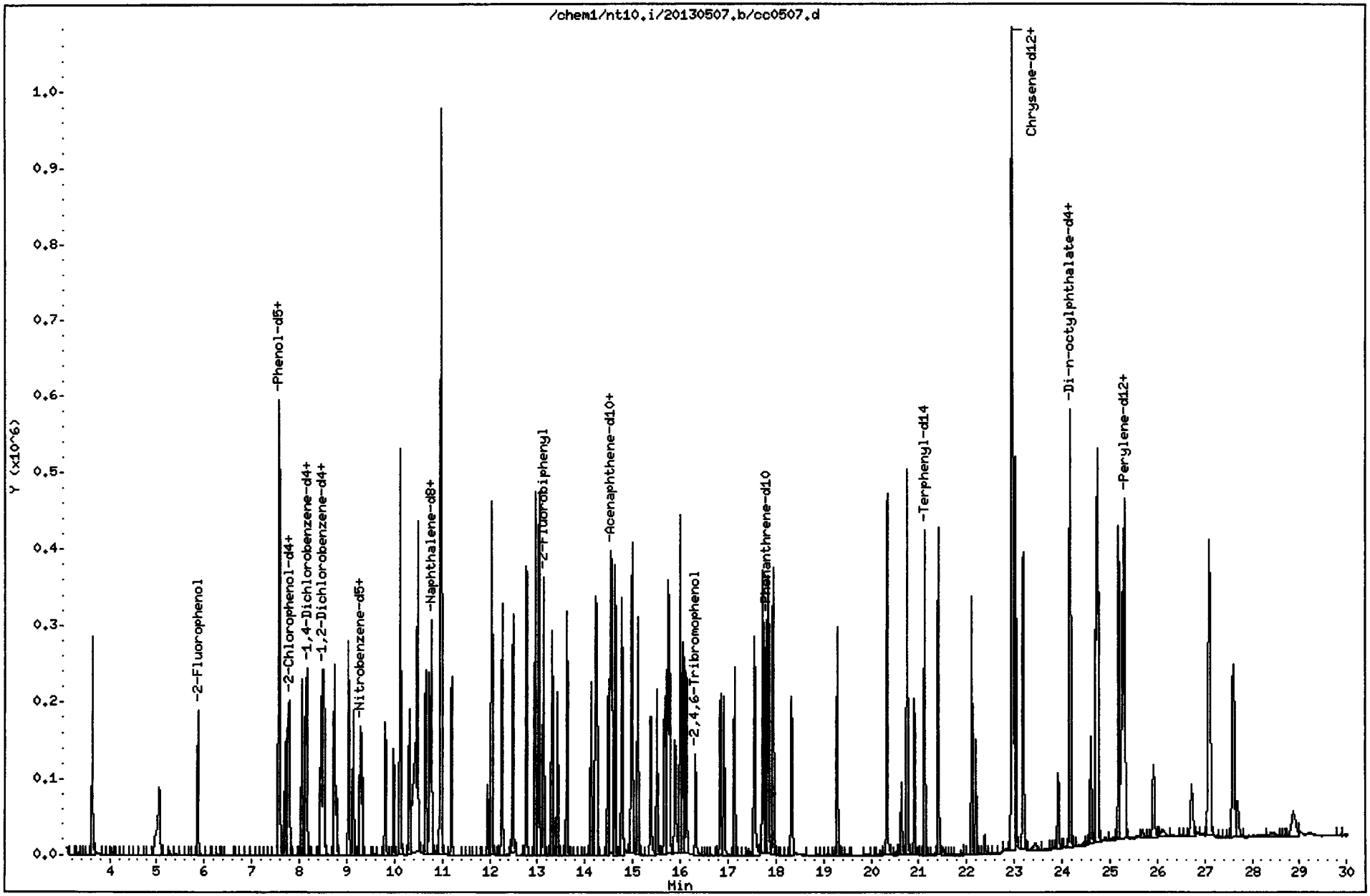
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130507.b/cc0507.d
Date : 07-MAY-2013 12:34
Client ID:
Sample Info: CC0507

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0507.d

Lab ID: CC0507, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS
27.613	Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/8/13

Data file : /chem1/nt10.i/20130507.b/wn30mbs1.d
Lab Smp Id: WN30MBS1 Client Smp ID: WN30MBS1
Inj Date : 07-MAY-2013 16:50
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN30MBS1
Misc Info : 13-8692
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 08-May-2013 10:54 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1	2-Fluorophenol	112	5.875	5.867	(0.723)	67853	4.17901	417.9
$ 2	Phenol-d5	99	7.560	7.567	(0.930)	90305	4.29810	429.8
3	Phenol	94	Compound Not Detected.					
$ 5	2-Chlorophenol-d4	132	7.753	7.760	(0.954)	70287	4.40703	440.7
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.124	8.132	(1.000)	45490	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	8.489	8.497	(1.045)	34124	2.97443	297.4
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.281	9.289	(0.865)	53283	2.84067	284.1
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.728	10.735	(1.000)	177750	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.118	13.126	(0.901)	108964	2.85415	285.4
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.557	14.565	(1.000)	109384	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.319	16.326	(1.121)	24470	4.23017	423.0
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.787	17.794	(1.000)	187454	4.00000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	21.121	21.129	(0.919)	134601	3.55459	355.5
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	22.972	22.987	(1.000)	194527	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	23.181	23.189	(0.960)	30897	0.99930	99.93(R)
*	134 Di-n-octylphthalate-d4	153	24.156	24.164	(1.000)	232557	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	25.263	25.271	(1.000)	165936	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	142	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					
	99 Perylene	252	Compound Not Detected.					
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn30mbs1.d
Lab Smp Id: WN30MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 12:34
Client Smp ID: WN30MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	45490	0.53
27 Naphthalene-d8	166754	83377	333508	177750	6.59
42 Acenaphthene-d10	106910	53455	213820	109384	2.31
59 Phenanthrene-d10	179783	89892	359566	187454	4.27
69 Chrysene-d12	192841	96420	385682	194527	0.87
134 Di-n-octylphthala	229567	114784	459134	232557	1.30
77 Perylene-d12	184310	92155	368620	165936	-9.97

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.10
27 Naphthalene-d8	10.74	10.24	11.24	10.73	-0.07
42 Acenaphthene-d10	14.57	14.07	15.07	14.56	-0.05
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	-0.04
69 Chrysene-d12	22.99	22.49	23.49	22.97	-0.07
134 Di-n-octylphthala	24.16	23.66	24.66	24.16	-0.03
77 Perylene-d12	25.27	24.77	25.77	25.26	-0.03

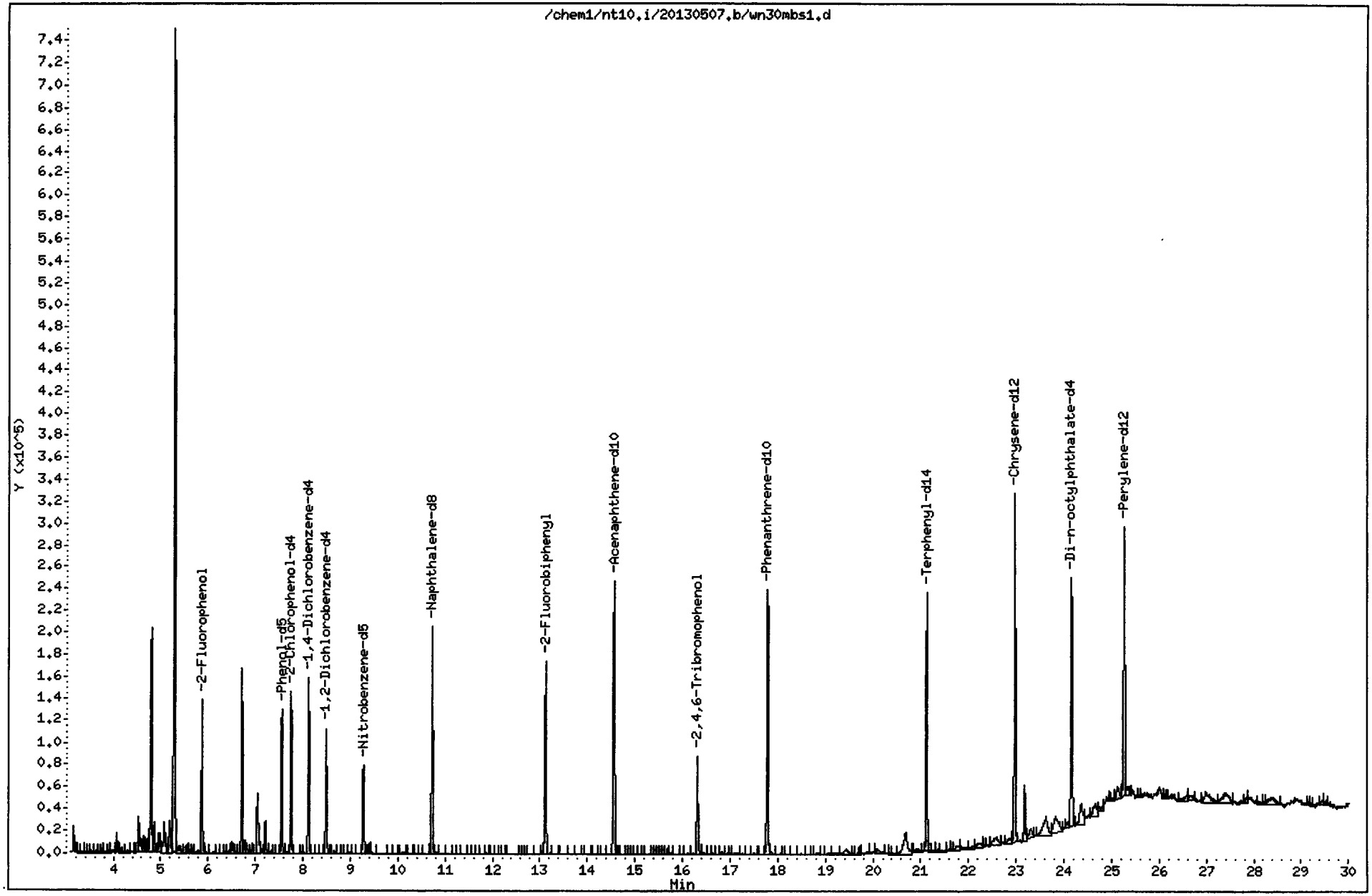
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	0.000	*	42-113
78 Indeno(1,2,3-cd)p	500.0	0.000	*	42-123
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-133
80 Benzo(g,h,i)peryl	500.0	0.000	*	38-126
105 1-methylnaphthale	500.0	0.000	*	42-100
187 Total Benzofluora	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	417.9	55.72	30-160
$ 2 Phenol-d5	750.0	429.8	57.31	30-160
$ 5 2-Chlorophenol-d4	750.0	440.7	58.76	30-160
$ 10 1,2-Dichlorobenzen	500.0	297.4	59.49	30-160
$ 18 Nitrobenzene-d5	500.0	284.1	56.81	30-160
$ 36 2-Fluorobiphenyl	500.0	285.4	57.08	30-160
$ 55 2,4,6-Tribromophen	750.0	423.0	56.40	30-160
$ 66 Terphenyl-d14	500.0	355.5	71.09	30-160

Data File: /chem1/nt10.i/20130507.b/wn30mbs1.d
Date : 07-MAY-2013 16:50
Client ID: WN30MBS1
Sample Info: WN30MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WN27 00398

Data File: /chem1/nt10.i/20130507.b/wn30mbs1.d

Date : 07-MAY-2013 16:50

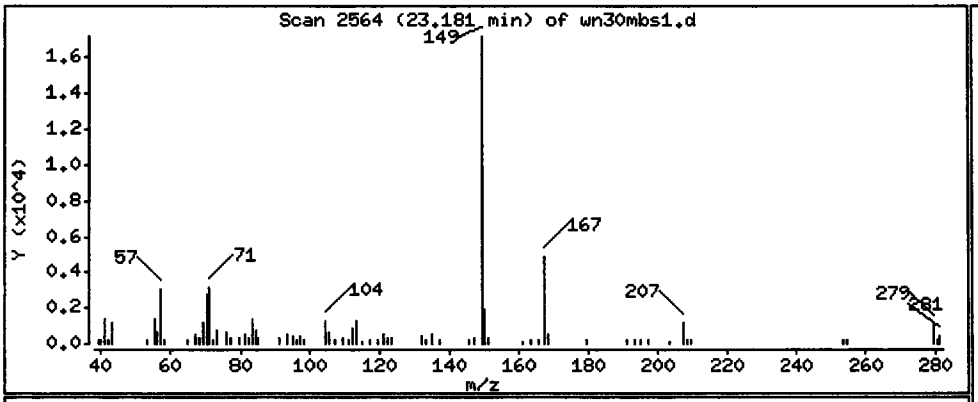
Client ID: WN30MBS1 Instrument: nt10.i

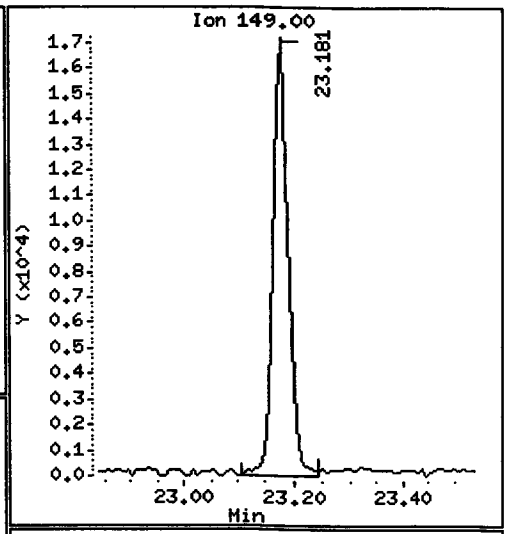
Sample Info: WN30MBS1

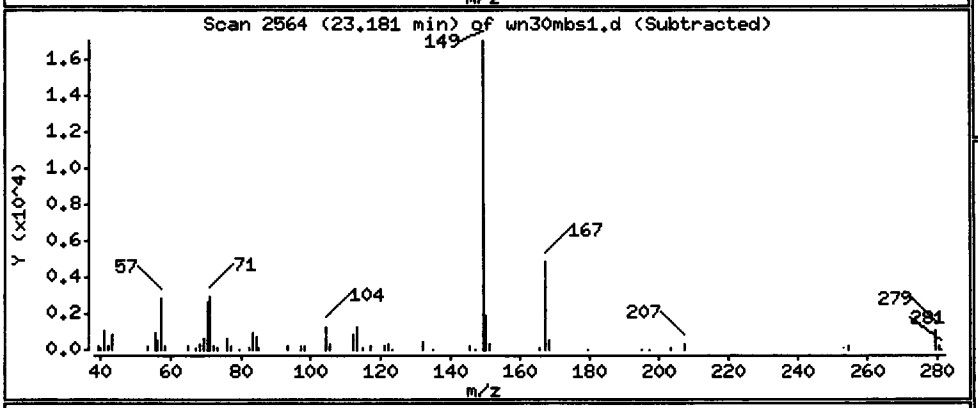
Volume Injected (uL): 1.0 Operator: VTS/YZ

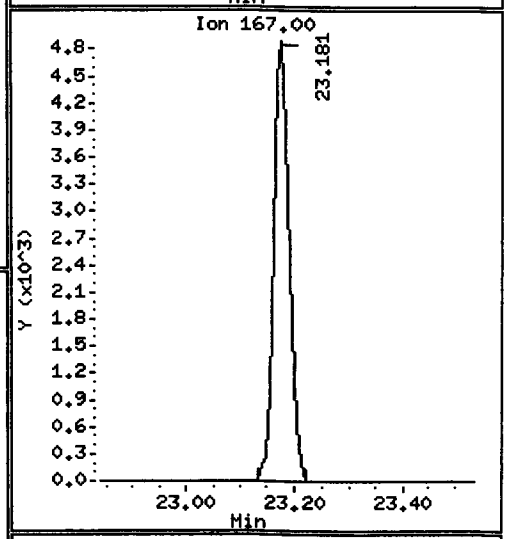
Column phase: ZB-5msi Column diameter: 0.25

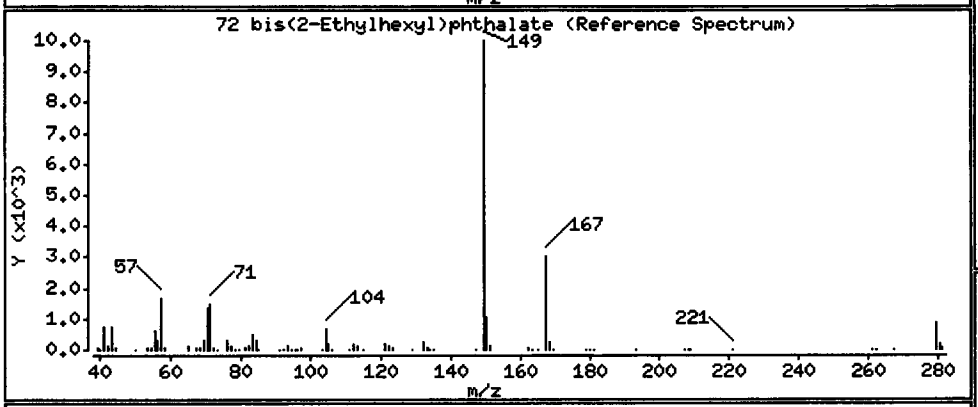
72 bis(2-Ethylhexyl)phthalate Concentration: 99.93 ug/kg

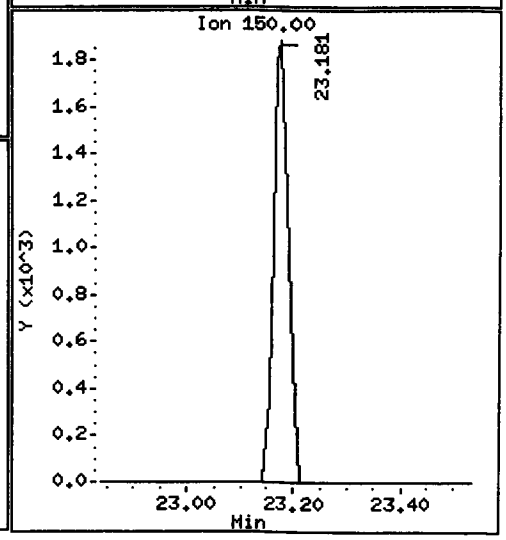


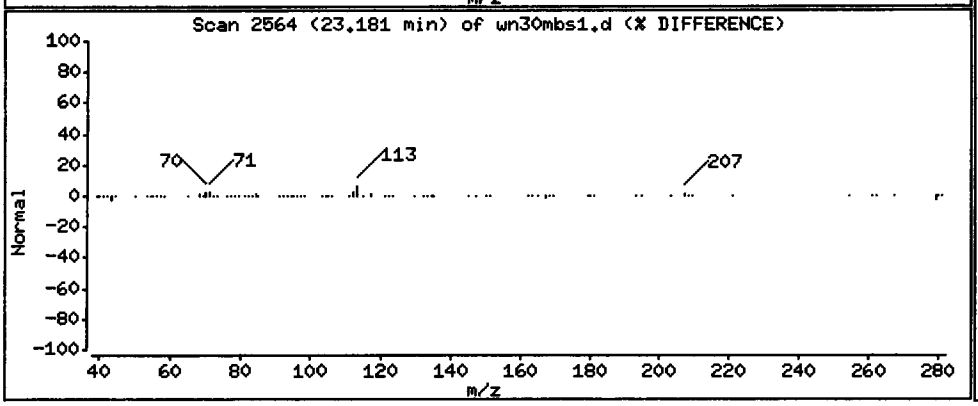












CO-ELUTION SUMMARY FOR FILE - wn30mbs1.d

Lab ID: WN30MBS1, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130507.b/wn30lcss1.d
Lab Smp Id: WN30LCSS1 Client Smp ID: WN30LCSS1
Inj Date : 07-MAY-2013 17:27
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN30LCSS1
Misc Info : 13-8692
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 08-May-2013 10:00 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.867	5.867	(0.723)	68242	4.41350	441.4
$	2 Phenol-d5	99	7.559	7.567	(0.931)	93037	4.64995	465.0
	3 Phenol	94	7.575	7.583	(0.933)	71580	3.19613	319.6
$	5 2-Chlorophenol-d4	132	7.753	7.760	(0.955)	67431	4.43975	444.0
	4 Bis(2-Chloroethyl)ether	93	7.691	7.706	(0.948)	48722	3.02523	302.5
	6 2-Chlorophenol	128	7.783	7.791	(0.959)	44508	2.57699	257.7
	7 1,3-Dichlorobenzene	146	8.047	8.055	(0.991)	49153	2.83608	283.6
*	8 1,4-Dichlorobenzene-d4	152	8.116	8.132	(1.000)	43320	4.00000	
	9 1,4-Dichlorobenzene	146	8.147	8.163	(1.004)	49023	2.86967	287.0
$	10 1,2-Dichlorobenzene-d4	152	8.489	8.497	(1.046)	30973	2.83501	283.5
	12 1,2-Dichlorobenzene	146	8.520	8.528	(1.050)	47220	2.88702	288.7
	11 Benzyl alcohol	108	8.450	8.458	(1.041)	30648	3.25321	325.3
	14 2,2'-oxybis(1-Chloropropane)	121	8.776	8.784	(1.081)	14689	2.95511	295.5
	13 2-Methylphenol	108	8.737	8.738	(1.077)	40493	2.51261	251.3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	9.133	9.141	(1.125)	20610	2.88343	288.3
	16 N-Nitroso-di-n-propylamine	70	9.048	9.056	(1.115)	31013	3.08231	308.2
	15 4-Methylphenol	108	9.032	9.033	(1.113)	86168	5.24384	524.4
$	18 Nitrobenzene-d5	82	9.281	9.289	(0.865)	50084	2.88990	289.0
	19 Nitrobenzene	77	9.312	9.320	(0.868)	48321	3.02001	302.0
	20 Isophorone	82	9.801	9.816	(0.914)	86422	2.87157	287.2
	21 2-Nitrophenol	139	9.979	9.987	(0.930)	22865	2.54910	254.9
	22 2,4-Dimethylphenol	107	10.118	10.126	(0.943)	112671	6.83111	683.1
	23 Bis(2-Chloroethoxy)methane	93	10.311	10.319	(0.961)	56126	3.16223	316.2
	24 Benzoic acid	105	10.404	10.450	(0.970)	136186	9.50737	950.7
	25 2,4-Dichlorophenol	162	10.481	10.488	(0.977)	117503	7.73929	773.9
	26 1,2,4-Trichlorobenzene	180	10.650	10.658	(0.993)	42923	2.89249	289.2
*	27 Naphthalene-d8	136	10.727	10.735	(1.000)	164232	4.00000	
	28 Naphthalene	128	10.766	10.774	(1.004)	116916	2.67393	267.4
	29 4-Chloroaniline	127	10.959	10.967	(1.022)	114406	6.69275	669.3
	30 Hexachlorobutadiene	225	11.191	11.199	(1.043)	24990	2.83490	283.5
	31 4-Chloro-3-methylphenol	107	12.042	12.042	(1.123)	135735	10.1624	1016
	32 2-Methylnaphthalene	142	12.259	12.267	(1.143)	83287	2.86771	286.8
	33 Hexachlorocyclopentadiene	237	12.770	12.770	(0.877)	68627	6.04115	604.1
	34 2,4,6-Trichlorophenol	196	12.955	12.955	(0.890)	94976	8.74088	874.1
	35 2,4,5-Trichlorophenol	196	13.025	13.033	(0.895)	105793	9.44487	944.5
$	36 2-Fluorobiphenyl	172	13.118	13.126	(0.901)	102778	2.85250	285.2
	37 2-Chloronaphthalene	162	13.304	13.311	(0.914)	86995	3.03278	303.3
	38 2-Nitroaniline	65	13.621	13.629	(0.936)	82849	11.9666	1197
	39 Dimethylphthalate	163	14.124	14.132	(0.970)	117553	3.79322	379.3
	40 Acenaphthylene	152	14.217	14.225	(0.977)	133891	2.75207	275.2
	41 2,6-Dinitrotoluene	165	14.248	14.256	(0.979)	81533	11.2286	1123
*	42 Acenaphthene-d10	164	14.557	14.565	(1.000)	103234	4.00000	
	43 3-Nitroaniline	138	14.542	14.550	(0.999)	71881	11.9913	1199
	44 Acenaphthene	153	14.627	14.635	(1.005)	83509	2.84830	284.8
	45 2,4-Dinitrophenol	184	14.766	14.774	(1.014)	57044	8.91374	891.4
	46 Dibenzofuran	168	14.982	14.990	(1.029)	121638	3.03418	303.4
	47 4-Nitrophenol	109	14.975	14.975	(1.029)	47245	10.4461	1045
	48 2,4-Dinitrotoluene	165	15.106	15.114	(1.038)	113789	12.1500	1215
	50 Diethylphthalate	149	15.709	15.709	(1.079)	120513	3.86992	387.0
	49 Fluorene	166	15.740	15.748	(1.081)	101420	2.96480	296.5
	51 4-Chlorophenyl-phenylether	204	15.779	15.787	(1.084)	51527	3.06421	306.4
	52 4-Nitroaniline	138	15.895	15.895	(1.092)	87775	14.0966	1410
	53 4,6-Dinitro-2-methylphenol	198	15.995	16.003	(0.899)	113963	13.2628	1326
	54 N-Nitrosodiphenylamine	169	16.064	16.064	(0.903)	78709	3.78574	378.6
$	55 2,4,6-Tribromophenol	330	16.319	16.326	(1.121)	27538	5.04414	504.4
	56 4-Bromophenyl-phenylether	248	16.843	16.851	(0.947)	34262	3.37144	337.1
	57 Hexachlorobenzene	284	17.136	17.144	(0.963)	35908	2.96131	296.1
	58 Pentachlorophenol	266	17.547	17.555	(0.986)	63193	7.42446	742.4
*	59 Phenanthrene-d10	188	17.794	17.794	(1.000)	179602	4.00000	
	60 Phenanthrene	178	17.841	17.849	(1.003)	167398	3.41706	341.7
	61 Anthracene	178	17.941	17.941	(1.008)	159254	3.17315	317.3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	18.328	18.336	(1.030)	161253	5.28950	529.0
63	Di-n-butylphthalate	149	19.287	19.295	(1.084)	217476	4.19765	419.8
64	Fluoranthene	202	20.340	20.348	(1.143)	212701	3.68901	368.9
65	Pyrene	202	20.757	20.765	(0.904)	214912	3.56006	356.0
$ 66	Terphenyl-d14	244	21.121	21.129	(0.919)	142835	3.76067	376.1
67	Butylbenzylphthalate	149	22.104	22.112	(0.962)	93396	4.53046	453.0
68	Benzo(a)anthracene	228	22.948	22.956	(0.999)	198997	3.64286	364.3
* 69	Chrysene-d12	240	22.972	22.987	(1.000)	195115	4.00000	
70	3,3'-Dichlorobenzidine	252	22.956	22.964	(0.999)	157915	7.58997	759.0
71	Chrysene	228	23.018	23.026	(1.002)	166520	3.36847	336.8
72	bis(2-Ethylhexyl)phthalate	149	23.181	23.189	(0.960)	126376	4.02369	402.4
* 134	Di-n-octylphthalate-d4	153	24.156	24.164	(1.000)	236239	4.00000	
73	Di-n-octylphthalate	149	24.164	24.172	(1.000)	207079	3.80709	380.7
74	Benzo(b)fluoranthene	252	24.706	24.714	(0.978)	185571	3.62884	362.9
75	Benzo(k)fluoranthene	252	24.737	24.745	(0.979)	189276	3.51403	351.4
76	Benzo(a)pyrene	252	25.178	25.186	(0.997)	149144	3.41381	341.4
* 77	Perylene-d12	264	25.263	25.271	(1.000)	172204	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.598	27.613	(1.092)	132282	2.62812	262.8
79	Dibenzo(a,h)anthracene	278	27.101	27.116	(1.073)	131887	3.41580	341.6
80	Benzo(g,h,i)perylene	276	27.598	27.613	(1.092)	132282	3.03757	303.8
90	N-Nitrosodimethylamine	74	3.666	3.636	(0.452)	77934	7.89694	789.7
91	Aniline	93	7.567	7.583	(0.932)	125242	2.88237	288.2
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.674	3.636	(0.453)	106417	12.2675	1227
105	1-methylnaphthalene	142	12.491	12.491	(1.164)	81177	3.04768	304.8
111	Azobenzene (1,2-DP-Hydrazine)	77	16.126	16.126	(1.108)	104000	3.25724	325.7
187	Total Benzofluoranthenes	252	24.737	24.745	(0.979)	349184	7.03199	703.2
99	Perylene	252	25.302	25.310	(1.002)	78186	1.56555	156.6
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	15.377	15.384	(1.056)	29064	3.48840	348.8

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn30lcss1.d
Lab Smp Id: WN30LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 12:34
Client Smp ID: WN30LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	43320	-4.27
27 Naphthalene-d8	166754	83377	333508	164232	-1.51
42 Acenaphthene-d10	106910	53455	213820	103234	-3.44
59 Phenanthrene-d10	179783	89892	359566	179602	-0.10
69 Chrysene-d12	192841	96420	385682	195115	1.18
134 Di-n-octylphthala	229567	114784	459134	236239	2.91
77 Perylene-d12	184310	92155	368620	172204	-6.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.19
27 Naphthalene-d8	10.74	10.24	11.24	10.73	-0.07
42 Acenaphthene-d10	14.57	14.07	15.07	14.56	-0.05
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.99	22.49	23.49	22.97	-0.07
134 Di-n-octylphthala	24.16	23.66	24.66	24.16	-0.03
77 Perylene-d12	25.27	24.77	25.77	25.26	-0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: WN30LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8692

Client SDG: WN30
Fraction: SV
Client Smp ID: WN30LCSS1
Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

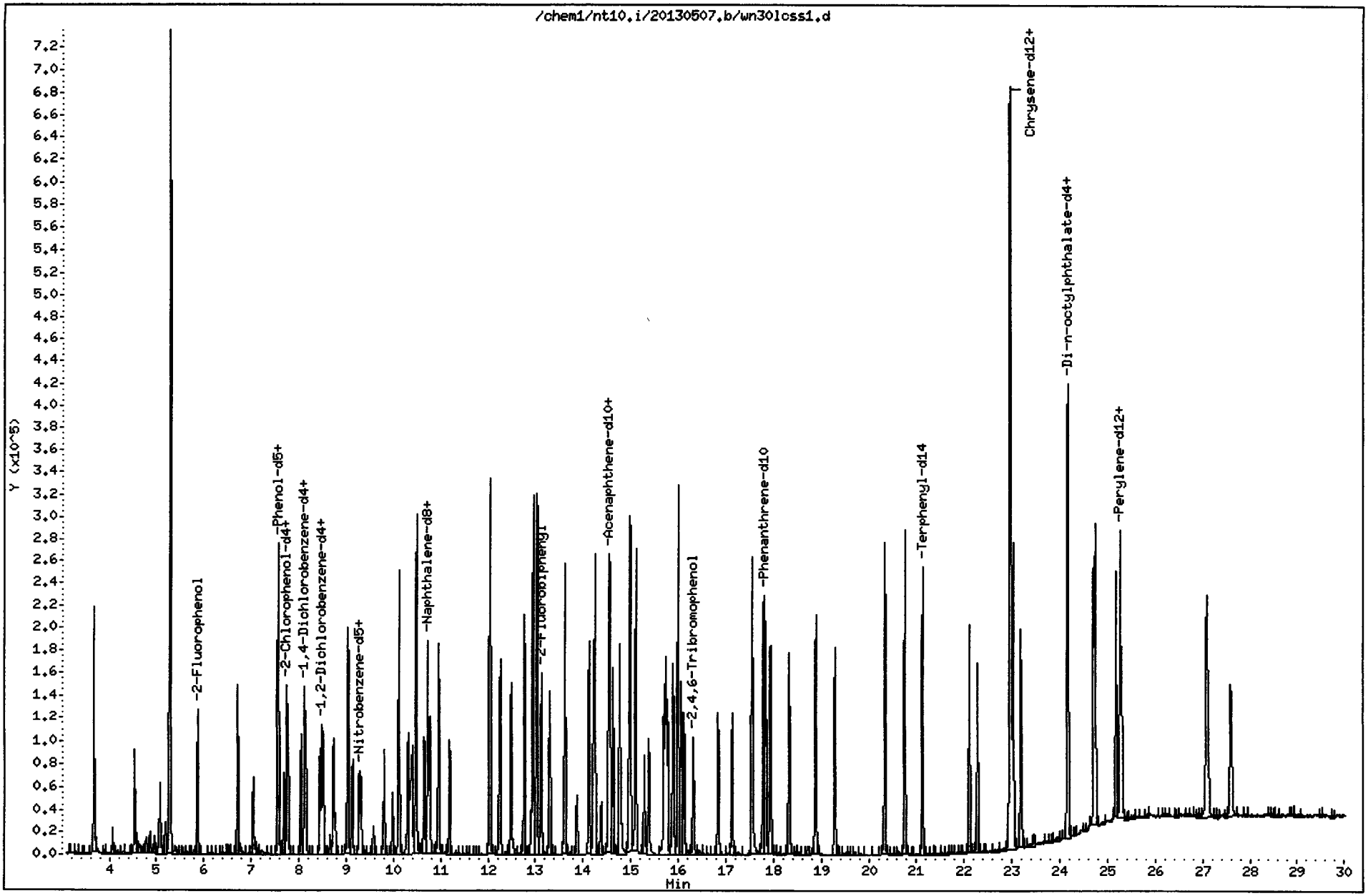
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	319.6	63.92	34-105
7	1,3-Dichlorobenzen	500.0	283.6	56.72	40-100
9	1,4-Dichlorobenzen	500.0	287.0	57.39	39-100
11	Benzyl alcohol	500.0	325.3	65.06	19-117
12	1,2-Dichlorobenzen	500.0	288.7	57.74	40-100
13	2-Methylphenol	500.0	251.3	50.25	28-100
15	4-Methylphenol	1000	524.4	52.44	29-100
17	Hexachloroethane	500.0	288.3	57.67	38-100
22	2,4-Dimethylphenol	1500	683.1	45.54	10-100
24	Benzoic acid	2750	950.7	34.57	10-107
26	1,2,4-Trichloroben	500.0	289.2	57.85	35-103
28	Naphthalene	500.0	267.4	53.48	43-100
30	Hexachlorobutadien	500.0	283.5	56.70	37-100
32	2-Methylnaphthalen	500.0	286.8	57.35	43-100
39	Dimethylphthalate	500.0	379.3	75.86	43-114
40	Acenaphthylene	500.0	275.2	55.04	42-102
44	Acenaphthene	500.0	284.8	56.97	45-100
46	Dibenzofuran	500.0	303.4	60.68	43-103
49	Fluorene	500.0	296.5	59.30	45-107
50	Diethylphthalate	500.0	387.0	77.40	50-120
54	N-Nitrosodiphenyla	500.0	378.6	75.71	36-111
57	Hexachlorobenzene	500.0	296.1	59.23	33-113
58	Pentachlorophenol	1500	742.4	49.50	16-120
60	Phenanthrene	500.0	341.7	68.34	49-112
61	Anthracene	500.0	317.3	63.46	45-106
63	Di-n-butylphthalat	500.0	419.8	83.95	48-126
64	Fluoranthene	500.0	368.9	73.78	53-118
65	Pyrene	500.0	356.0	71.20	48-121
67	Butylbenzylphthala	500.0	453.0	90.61	45-132
68	Benzo(a)anthracene	500.0	364.3	72.86	49-115
71	Chrysene	500.0	336.8	67.37	47-115
72	bis(2-Ethylhexyl)p	500.0	402.4	80.47	34-130
73	Di-n-octylphthalat	500.0	380.7	76.14	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	341.4	68.28	42-113
78 Indeno(1,2,3-cd)py	500.0	262.8	52.56	42-123
79 Dibenzo(a,h)anthra	500.0	341.6	68.32	30-133
80 Benzo(g,h,i)peryle	500.0	303.8	60.75	38-126
105 1-methylnaphthalen	500.0	304.8	60.95	42-100
187 Total Benzofluoran	1000	703.2	70.32	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	441.4	58.85	30-160
$ 2 Phenol-d5	750.0	465.0	62.00	30-160
$ 5 2-Chlorophenol-d4	750.0	444.0	59.20	30-160
$ 10 1,2-Dichlorobenzen	500.0	283.5	56.70	30-160
$ 18 Nitrobenzene-d5	500.0	289.0	57.80	30-160
$ 36 2-Fluorobiphenyl	500.0	285.2	57.05	30-160
$ 55 2,4,6-Tribromophen	750.0	504.4	67.26	30-160
$ 66 Terphenyl-d14	500.0	376.1	75.21	30-160

Data File: /chem1/nt10.i/20130507.b/wn30lcss1.d
Date : 07-MAY-2013 17:27
Client ID: WN30LCSS1
Sample Info: WN30LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wn30lcss1.d

Lab ID: WN30LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS
27.598	Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

YZ 5/8/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130507.b/wn30lcsds1.d
Lab Smp Id: WN30LCSDS1 Client Smp ID: WN30LCSDS1
Inj Date : 07-MAY-2013 18:03
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN30LCSDS1
Misc Info : 13-8692
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 08-May-2013 10:00 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 11 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
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	5.867	5.867	(0.723)	74930	5.11889	511.9
$	2 Phenol-d5	99	7.552	7.567	(0.930)	101943	5.38193	538.2
	3 Phenol	94	7.575	7.583	(0.933)	79283	3.73939	373.9
$	5 2-Chlorophenol-d4	132	7.753	7.760	(0.955)	73295	5.09755	509.8
	4 Bis(2-Chloroethyl)ether	93	7.691	7.706	(0.948)	54389	3.56724	356.7
	6 2-Chlorophenol	128	7.776	7.791	(0.958)	49679	3.03833	303.8
	7 1,3-Dichlorobenzene	146	8.047	8.055	(0.991)	53280	3.24729	324.7
*	8 1,4-Dichlorobenzene-d4	152	8.116	8.132	(1.000)	41011	4.00000	
	9 1,4-Dichlorobenzene	146	8.148	8.163	(1.004)	55483	3.43068	343.1
$	10 1,2-Dichlorobenzene-d4	152	8.489	8.497	(1.046)	33979	3.28526	328.5
	12 1,2-Dichlorobenzene	146	8.512	8.528	(1.049)	53153	3.43274	343.3
	11 Benzyl alcohol	108	8.442	8.458	(1.040)	34096	3.82297	382.3
	14 2,2'-oxybis(1-Chloropropane)	121	8.776	8.784	(1.081)	17309	3.67825	367.8
	13 2-Methylphenol	108	8.730	8.738	(1.076)	44318	2.90478	290.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	9.133	9.141	(1.125)	22944	3.39070	339.1
	16 N-Nitroso-di-n-propylamine	70	9.040	9.056	(1.114)	33301	3.49605	349.6
	15 4-Methylphenol	108	9.032	9.033	(1.113)	99713	6.40978	641.0
$	18 Nitrobenzene-d5	82	9.273	9.289	(0.864)	53800	3.32837	332.8
	19 Nitrobenzene	77	9.312	9.320	(0.868)	52348	3.50781	350.8
	20 Isophorone	82	9.801	9.816	(0.914)	95093	3.38773	338.8
	21 2-Nitrophenol	139	9.979	9.987	(0.930)	29493	3.52532	352.5
	22 2,4-Dimethylphenol	107	10.119	10.126	(0.943)	131888	8.57332	857.3
	23 Bis(2-Chloroethoxy)methane	93	10.303	10.319	(0.960)	62455	3.77278	377.3
	24 Benzoic acid	105	10.411	10.450	(0.971)	147675	11.0335	1103
	25 2,4-Dichlorophenol	162	10.481	10.488	(0.977)	141093	9.96373	996.4
	26 1,2,4-Trichlorobenzene	180	10.650	10.658	(0.993)	46900	3.38859	338.9
*	27 Naphthalene-d8	136	10.728	10.735	(1.000)	153177	4.00000	
	28 Naphthalene	128	10.766	10.774	(1.004)	132151	3.24050	324.0
	29 4-Chloroaniline	127	10.959	10.967	(1.022)	120974	7.58773	758.8
	30 Hexachlorobutadiene	225	11.191	11.199	(1.043)	28447	3.45997	346.0
	31 4-Chloro-3-methylphenol	107	12.042	12.042	(1.123)	147507	11.8408	1184
	32 2-Methylnaphthalene	142	12.259	12.267	(1.143)	95436	3.52318	352.3
	33 Hexachlorocyclopentadiene	237	12.770	12.770	(0.877)	79713	7.41928	741.9
	34 2,4,6-Trichlorophenol	196	12.948	12.955	(0.889)	104686	10.1868	1019
	35 2,4,5-Trichlorophenol	196	13.025	13.033	(0.895)	113222	10.6876	1069
$	36 2-Fluorobiphenyl	172	13.118	13.126	(0.901)	111280	3.26551	326.6
	37 2-Chloronaphthalene	162	13.304	13.311	(0.914)	97354	3.58847	358.8
	38 2-Nitroaniline	65	13.621	13.629	(0.936)	86490	13.2087	1321
	39 Dimethylphthalate	163	14.124	14.132	(0.970)	118613	4.04683	404.7
	40 Acenaphthylene	152	14.217	14.225	(0.977)	148955	3.23721	323.7
	41 2,6-Dinitrotoluene	165	14.248	14.256	(0.979)	83803	12.2029	1220
*	42 Acenaphthene-d10	164	14.557	14.565	(1.000)	97637	4.00000	
	43 3-Nitroaniline	138	14.534	14.550	(0.998)	70837	12.4946	1249
	44 Acenaphthene	153	14.627	14.635	(1.005)	92538	3.33719	333.7
	45 2,4-Dinitrophenol	184	14.766	14.774	(1.014)	57569	9.50283	950.3
	46 Dibenzofuran	168	14.982	14.990	(1.029)	137694	3.63158	363.2
	47 4-Nitrophenol	109	14.975	14.975	(1.029)	46977	10.9739	1097
	48 2,4-Dinitrotoluene	165	15.106	15.114	(1.038)	114778	12.9582	1296
	50 Diethylphthalate	149	15.701	15.709	(1.079)	119325	4.05142	405.1
	49 Fluorene	166	15.740	15.748	(1.081)	109936	3.39798	339.8
	51 4-Chlorophenyl-phenylether	204	15.779	15.787	(1.084)	55783	3.50747	350.7
	52 4-Nitroaniline	138	15.895	15.895	(1.092)	85065	14.4445	1444
	53 4,6-Dinitro-2-methylphenol	198	15.995	16.003	(0.899)	111948	13.7909	1379
	54 N-Nitrosodiphenylamine	169	16.057	16.064	(0.903)	79588	4.05334	405.3
$	55 2,4,6-Tribromophenol	330	16.319	16.326	(1.121)	28318	5.48436	548.4
	56 4-Bromophenyl-phenylether	248	16.843	16.851	(0.947)	36219	3.77380	377.4
	57 Hexachlorobenzene	284	17.136	17.144	(0.963)	37575	3.28118	328.1
	58 Pentachlorophenol	266	17.547	17.555	(0.986)	64127	7.97767	797.8
*	59 Phenanthrene-d10	188	17.787	17.794	(1.000)	169618	4.00000	
	60 Phenanthrene	178	17.833	17.849	(1.003)	170051	3.67553	367.6
	61 Anthracene	178	17.934	17.941	(1.008)	159281	3.36050	336.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	18.328	18.336	(1.030)	157949	5.48609	548.6
63	Di-n-butylphthalate	149	19.288	19.295	(1.084)	212402	4.34103	434.1
64	Fluoranthene	202	20.340	20.348	(1.144)	211033	3.87552	387.6
65	Pyrene	202	20.758	20.765	(0.904)	214800	3.68475	368.5
$ 66	Terphenyl-d14	244	21.121	21.129	(0.919)	136539	3.72276	372.3
67	Butylbenzylphthalate	149	22.104	22.112	(0.962)	94307	4.73735	473.7
68	Benzo(a)anthracene	228	22.941	22.956	(0.999)	195726	3.71041	371.0
* 69	Chrysene-d12	240	22.972	22.987	(1.000)	188414	4.00000	
70	3,3'-Dichlorobenzidine	252	22.948	22.964	(0.999)	154173	7.67366	767.4
71	Chrysene	228	23.018	23.026	(1.002)	164868	3.45367	345.4
72	bis(2-Ethylhexyl)phthalate	149	23.173	23.189	(0.959)	124298	4.08838	408.8
* 134	Di-n-octylphthalate-d4	153	24.156	24.164	(1.000)	228678	4.00000	
73	Di-n-octylphthalate	149	24.164	24.172	(1.000)	210909	4.00571	400.6
74	Benzo(b)fluoranthene	252	24.698	24.714	(0.978)	205002	4.11839	411.8
75	Benzo(k)fluoranthene	252	24.737	24.745	(0.979)	183931	3.50814	350.8
76	Benzo(a)pyrene	252	25.170	25.186	(0.997)	154505	3.63319	363.3
* 77	Perylene-d12	264	25.256	25.271	(1.000)	167622	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.598	27.613	(1.093)	132451	2.70341	270.3
79	Dibenzo(a,h)anthracene	278	27.101	27.116	(1.073)	130620	3.47546	347.5
80	Benzo(g,h,i)perylene	276	27.598	27.613	(1.093)	132451	3.12459	312.5
90	N-Nitrosodimethylamine	74	3.667	3.636	(0.452)	86416	9.24941	924.9
91	Aniline	93	7.567	7.583	(0.932)	130724	3.17792	317.8
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.674	3.636	(0.453)	120256	14.6433	1464
105	1-methylnaphthalene	142	12.483	12.491	(1.164)	91749	3.69320	369.3
111	Azobenzene (1,2-DP-Hydrazine)	77	16.126	16.126	(1.108)	108045	3.57791	357.8
187	Total Benzofluoranthenes	252	24.737	24.745	(0.979)	359607	7.43985	744.0
99	Perylene	252	25.294	25.310	(1.002)	79019	1.62548	162.5
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	15.377	15.384	(1.056)	30427	3.86134	386.1

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn30lcsds1.d
Lab Smp Id: WN30LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 12:34
Client Smp ID: WN30LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41011	-9.37
27 Naphthalene-d8	166754	83377	333508	153177	-8.14
42 Acenaphthene-d10	106910	53455	213820	97637	-8.67
59 Phenanthrene-d10	179783	89892	359566	169618	-5.65
69 Chrysene-d12	192841	96420	385682	188414	-2.30
134 Di-n-octylphthala	229567	114784	459134	228678	-0.39
77 Perylene-d12	184310	92155	368620	167622	-9.05

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.19
27 Naphthalene-d8	10.74	10.24	11.24	10.73	-0.07
42 Acenaphthene-d10	14.57	14.07	15.07	14.56	-0.05
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	-0.04
69 Chrysene-d12	22.99	22.49	23.49	22.97	-0.07
134 Di-n-octylphthala	24.16	23.66	24.66	24.16	-0.03
77 Perylene-d12	25.27	24.77	25.77	25.26	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Client SDG: WN30
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WN30LCSDS1
Client Smp ID: WN30LCSDS1
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: LCSD
SpikeList File: SHORTPSDDA.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8692

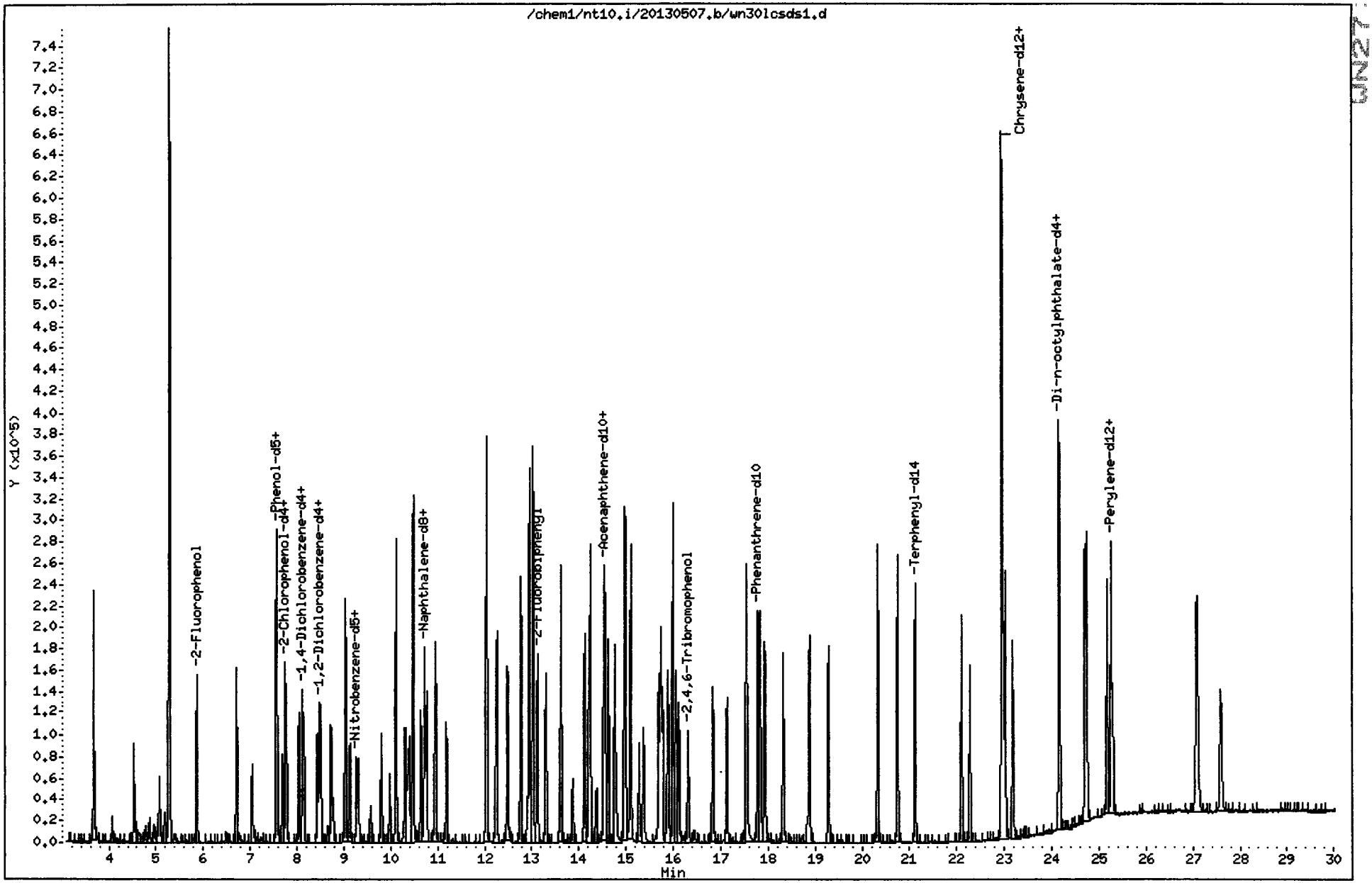
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	373.9	74.79	34-105
7	1,3-Dichlorobenzen	500.0	324.7	64.95	40-100
9	1,4-Dichlorobenzen	500.0	343.1	68.61	39-100
11	Benzyl alcohol	500.0	382.3	76.46	19-117
12	1,2-Dichlorobenzen	500.0	343.3	68.65	40-100
13	2-Methylphenol	500.0	290.5	58.10	28-100
15	4-Methylphenol	1000	641.0	64.10	29-100
17	Hexachloroethane	500.0	339.1	67.81	38-100
22	2,4-Dimethylphenol	1500	857.3	57.16	10-100
24	Benzoic acid	2750	1103	40.12	10-107
26	1,2,4-Trichloroben	500.0	338.9	67.77	35-103
28	Naphthalene	500.0	324.0	64.81	43-100
30	Hexachlorobutadien	500.0	346.0	69.20	37-100
32	2-Methylnaphthalen	500.0	352.3	70.46	43-100
39	Dimethylphthalate	500.0	404.7	80.94	43-114
40	Acenaphthylene	500.0	323.7	64.74	42-102
44	Acenaphthene	500.0	333.7	66.74	45-100
46	Dibenzofuran	500.0	363.2	72.63	43-103
49	Fluorene	500.0	339.8	67.96	45-107
50	Diethylphthalate	500.0	405.1	81.03	50-120
54	N-Nitrosodiphenyla	500.0	405.3	81.07	36-111
57	Hexachlorobenzene	500.0	328.1	65.62	33-113
58	Pentachlorophenol	1500	797.8	53.18	16-120
60	Phenanthrene	500.0	367.6	73.51	49-112
61	Anthracene	500.0	336.1	67.21	45-106
63	Di-n-butylphthalat	500.0	434.1	86.82	48-126
64	Fluoranthene	500.0	387.6	77.51	53-118
65	Pyrene	500.0	368.5	73.70	48-121
67	Butylbenzylphthala	500.0	473.7	94.75	45-132
68	Benzo(a)anthracene	500.0	371.0	74.21	49-115
71	Chrysene	500.0	345.4	69.07	47-115
72	bis(2-Ethylhexyl)p	500.0	408.8	81.77	34-130
73	Di-n-octylphthalat	500.0	400.6	80.11	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	363.3	72.66	42-113
78 Indeno(1,2,3-cd)py	500.0	270.3	54.07	42-123
79 Dibenzo(a,h)anthra	500.0	347.5	69.51	30-133
80 Benzo(g,h,i)peryle	500.0	312.5	62.49	38-126
105 1-methylnaphthalen	500.0	369.3	73.86	42-100
187 Total Benzofluoran	1000	744.0	74.40	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	511.9	68.25	30-160
$ 2 Phenol-d5	750.0	538.2	71.76	30-160
$ 5 2-Chlorophenol-d4	750.0	509.8	67.97	30-160
$ 10 1,2-Dichlorobenzen	500.0	328.5	65.71	30-160
$ 18 Nitrobenzene-d5	500.0	332.8	66.57	30-160
$ 36 2-Fluorobiphenyl	500.0	326.6	65.31	30-160
$ 55 2,4,6-Tribromophen	750.0	548.4	73.12	30-160
$ 66 Terphenyl-d14	500.0	372.3	74.46	30-160

Data File: /chem1/nt10.i/20130507.b/wn30lcsds1.d
Date : 07-MAY-2013 18:03
Client ID: WN30LCSDS1
Sample Info: WN30LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WN27 05/15

CO-ELUTION SUMMARY FOR FILE - wn30lcsds1.d

Lab ID: WN30LCSDS1, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS
27.598	Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc. YZ 8/14/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130507.b/wn27a.d
Lab Smp Id: WN27A Client Smp ID: CG-MH-010-20130423-
Inj Date : 07-MAY-2013 19:16
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN27A,3
Misc Info : 13-8552
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 14-Aug-2013 10:01 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 13
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	10.00000	Weight of sample extracted (g)
M	40.40000	% 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	5.883	5.867	(0.724)	20811	1.54555	778.0
$	2 Phenol-d5	99	7.559	7.567	(0.930)	28270	1.62247	816.7
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.753	7.760	(0.954)	22066	1.66833	839.8
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.124	8.132	(1.000)	37725	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.497	8.497	(1.046)	9661	1.01544	511.1
	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.					

WN27:417R BE 8/14/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.281	9.289	(0.865)	17004	1.05028	528.7
	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	10.727	10.735	(1.000)	153422	4.00000	
	28 Naphthalene	128	10.774	10.774	(1.004)	4942	0.12099	60.90
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.126	13.126	(0.901)	40038	1.15943	583.6
	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	14.565	14.565	(1.000)	98941	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	16.056	16.064	(0.902)	3189	0.16601	83.56
$	55 2,4,6-Tribromophenol	330	16.319	16.326	(1.120)	9767	1.86665	939.6
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.794	17.794	(1.000)	165938	4.00000	
	60 Phenanthrene	178	17.841	17.849	(1.003)	19409	0.42882	215.8
	61 Anthracene	178	Compound Not Detected.					

BC 8/16/13

	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	20.378	20.348	(1.145)	41058	0.77073	388.0
	65 Pyrene	202	20.781	20.765	(0.903)	56952	1.21851	613.3
$	66 Terphenyl-d14	244	21.144	21.129	(0.919)	36386	1.23734	622.8
	67 Butylbenzylphthalate	149	22.128	22.112	(0.962)	21390	1.34013	674.6
	68 Benzo(a)anthracene	228	22.987	22.956	(0.999)	12728	0.30094	151.5
*	69 Chrysene-d12	240	23.010	22.987	(1.000)	151066	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	23.049	23.026	(1.002)	32727	0.85506	430.4
	72 bis(2-Ethylhexyl)phthalate	149	23.212	23.189	(0.959)	781118	30.1650	15180
*	134 Di-n-octylphthalate-d4	153	24.195	24.164	(1.000)	194771	4.00000	
	73 Di-n-octylphthalate	149	24.218	24.172	(1.001)	13173	0.29374	147.9(M)
	74 Benzo(b)fluoranthene	252	24.760	24.714	(0.978)	38756	0.87536	440.6
	75 Benzo(k)fluoranthene	252	24.760	24.745	(0.978)	38756	0.83107	418.3
	76 Benzo(a)pyrene	252	25.232	25.186	(0.996)	17919	0.47374	238.5
*	77 Perylene-d12	264	25.325	25.271	(1.000)	149092	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	27.194	27.093	(1.074)	12052	0.27656	139.2(M)
	79 Dibenzo(a,h)anthracene	278	27.194	27.116	(1.074)	4308	0.12887	64.87(M)
	80 Benzo(g,h,i)perylene	276	27.714	27.613	(1.094)	19516	0.51761	260.5
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	142	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	24.760	24.745	(0.978)	39839	0.92666	466.4
	99 Perylene	252	25.356	25.310	(1.001)	9449	0.21853	110.0
	98 Retene	219	21.431	21.415	(0.931)	10809	0.61105	307.6
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

BC 8/16/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn27a.d
Lab Smp Id: WN27A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8552

Calibration Date: 07-MAY-2013
Calibration Time: 12:34
Client Smp ID: CG-MH-010-201304
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	37725	-16.63
27 Naphthalene-d8	166754	83377	333508	153422	-8.00
42 Acenaphthene-d10	106910	53455	213820	98941	-7.45
59 Phenanthrene-d10	179783	89892	359566	165938	-7.70
69 Chrysene-d12	192841	96420	385682	151066	-21.66
134 Di-n-octylphthala	229567	114784	459134	194771	-15.16
77 Perylene-d12	184310	92155	368620	149092	-19.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.10
27 Naphthalene-d8	10.74	10.24	11.24	10.73	-0.07
42 Acenaphthene-d10	14.57	14.07	15.07	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.99	22.49	23.49	23.01	0.10
134 Di-n-octylphthala	24.16	23.66	24.66	24.19	0.13
77 Perylene-d12	25.27	24.77	25.77	25.33	0.21

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

8/16/13

Analytical Resources, Inc.

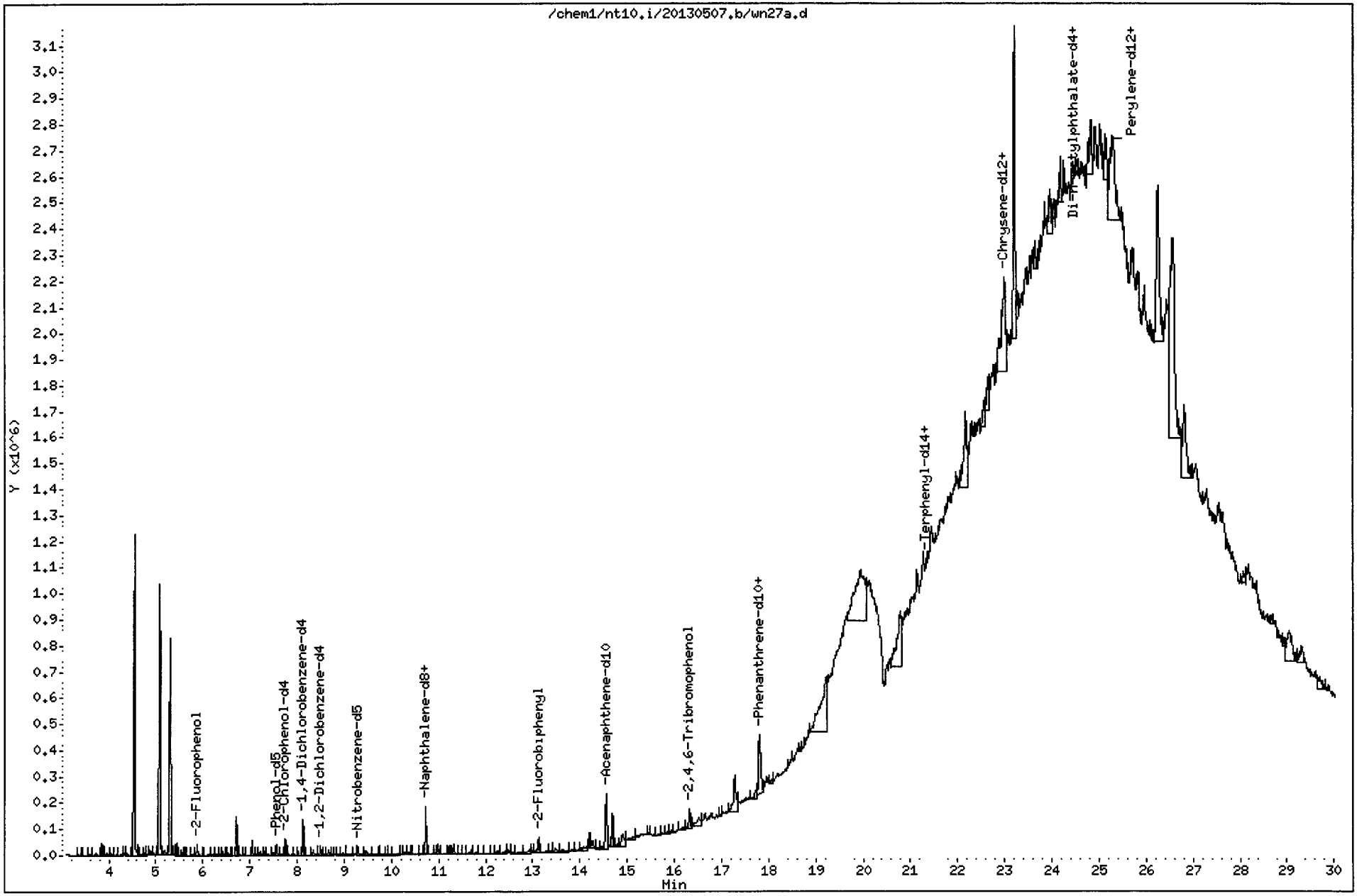
RECOVERY REPORT

Client Name: SAIC
Client SDG: WN27
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WN27A
Client Smp ID: CG-MH-010-20130423-
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SHORTPSDDA.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8552

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1258	778.0	61.82	30-160
$ 2 Phenol-d5	1258	816.7	64.90	30-160
$ 5 2-Chlorophenol-d4	1258	839.8	66.73	30-160
$ 10 1,2-Dichlorobenzen	838.9	511.1	60.93	30-160
$ 18 Nitrobenzene-d5	838.9	528.7	63.02	30-160
$ 36 2-Fluorobiphenyl	838.9	583.6	69.57	30-160
$ 55 2,4,6-Tribromophen	1258	939.6	74.67	30-160
$ 66 Terphenyl-d14	838.9	622.8	74.24	30-160

Data File: /chem1/nt10.i/20130507.b/wn27a.d
Date : 07-MAY-2013 19:16
Client ID: CG-MH-010-20130423-
Sample Info: WN27A,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

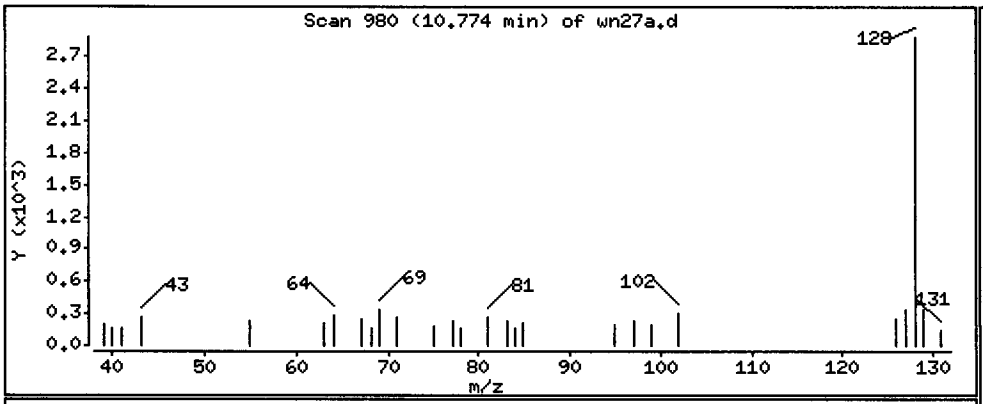
Operator: VTS/YZ

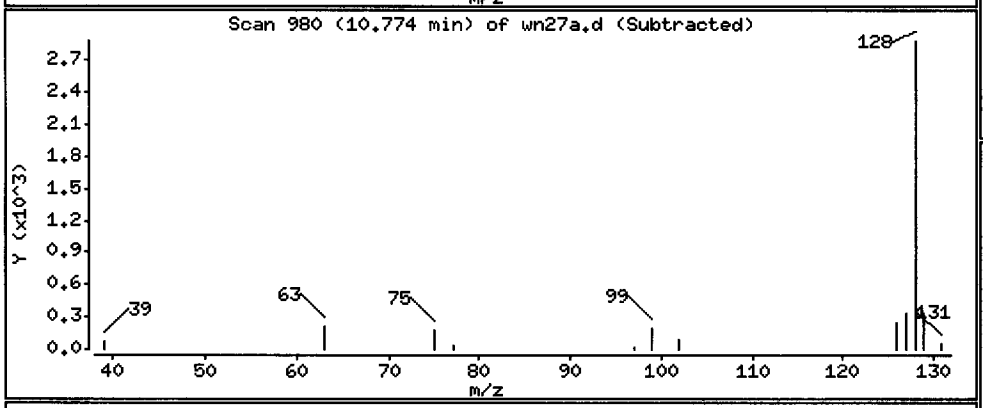
Column phase: ZB-5msi

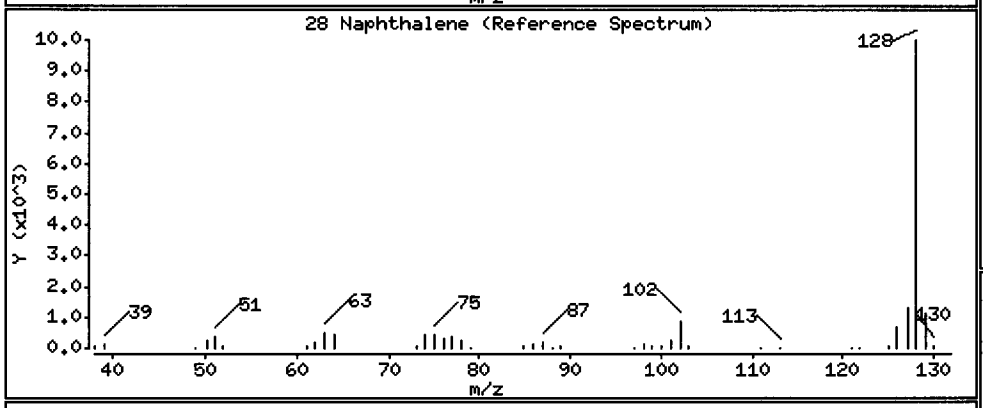
Column diameter: 0.25

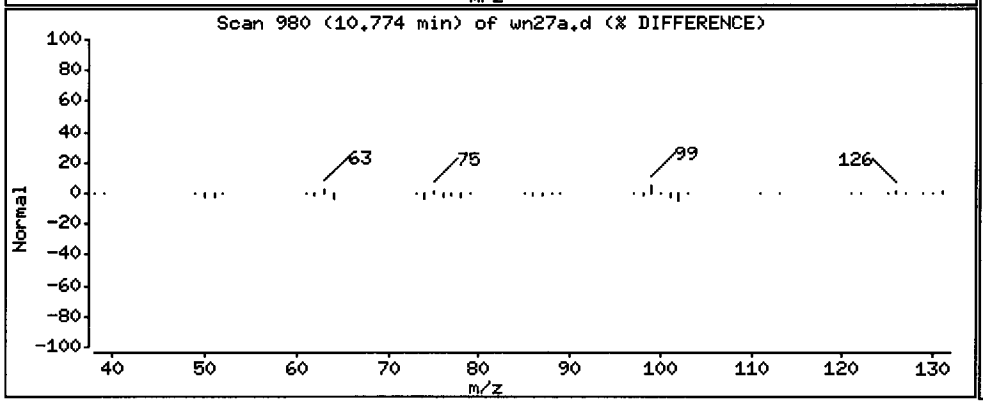
28 Naphthalene

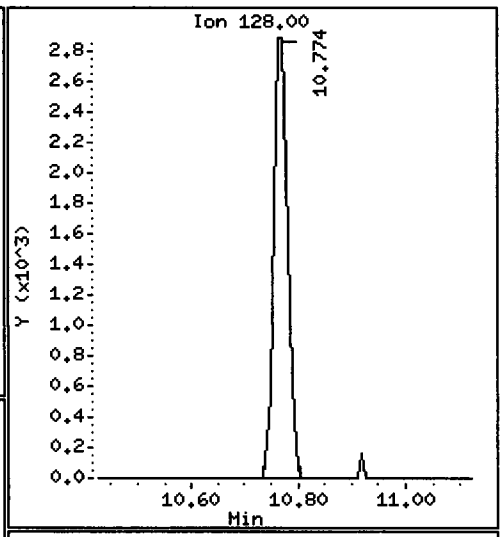
Concentration: 60.90 ug/kg

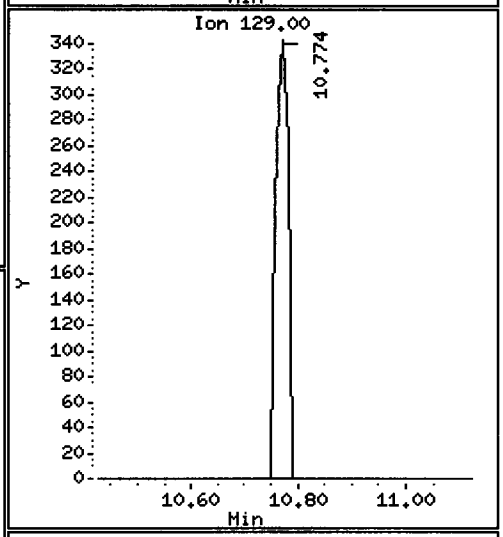


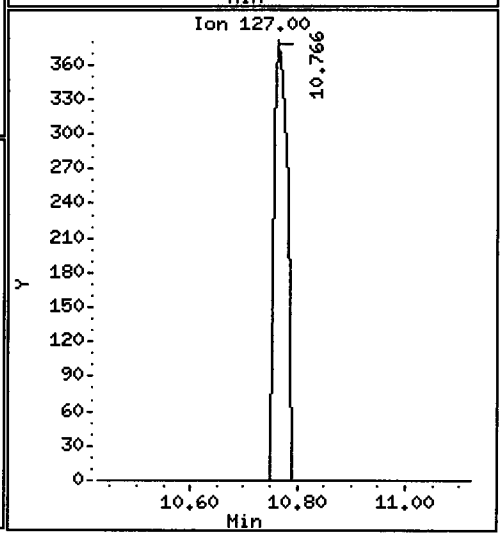












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

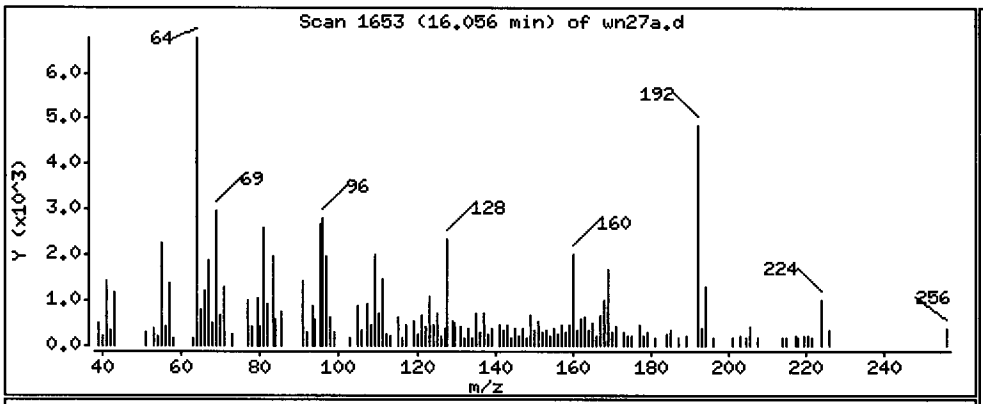
Operator: VTS/YZ

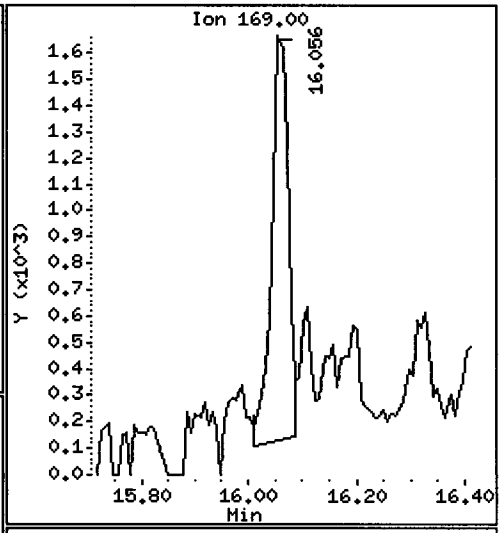
Column phase: ZB-5msi

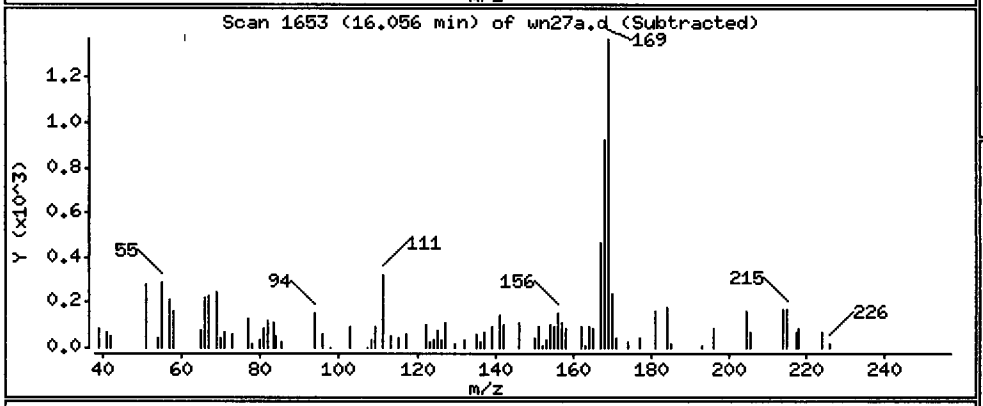
Column diameter: 0.25

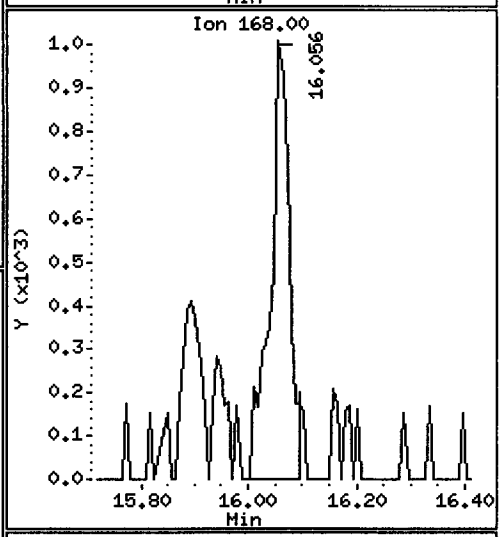
54 N-Nitrosodiphenylamine

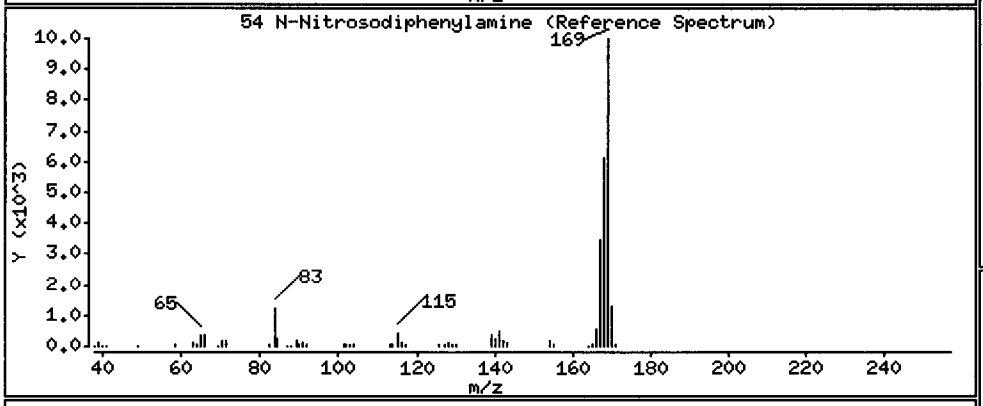
Concentration: 83.56 ug/kg

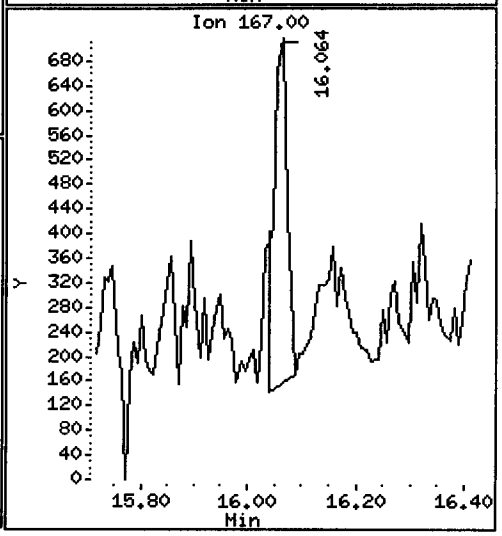


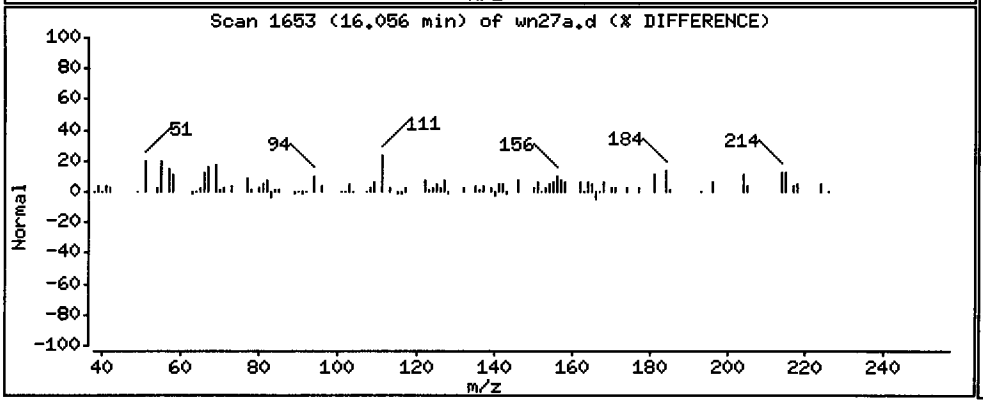












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

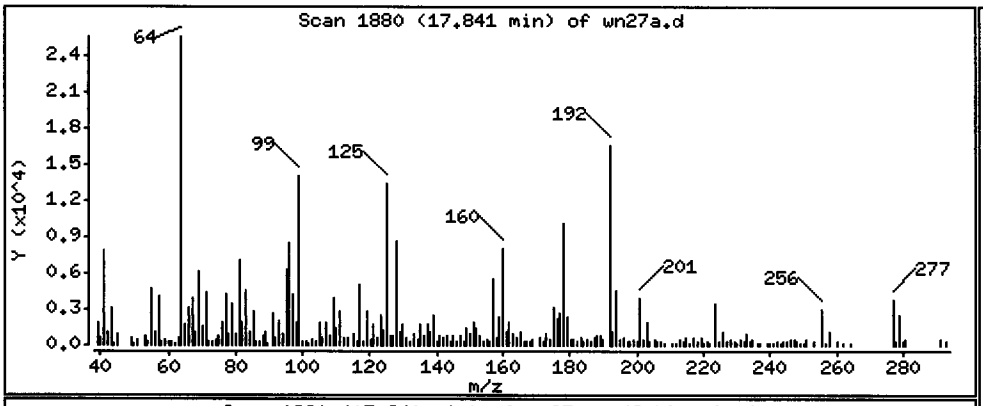
Operator: VTS/YZ

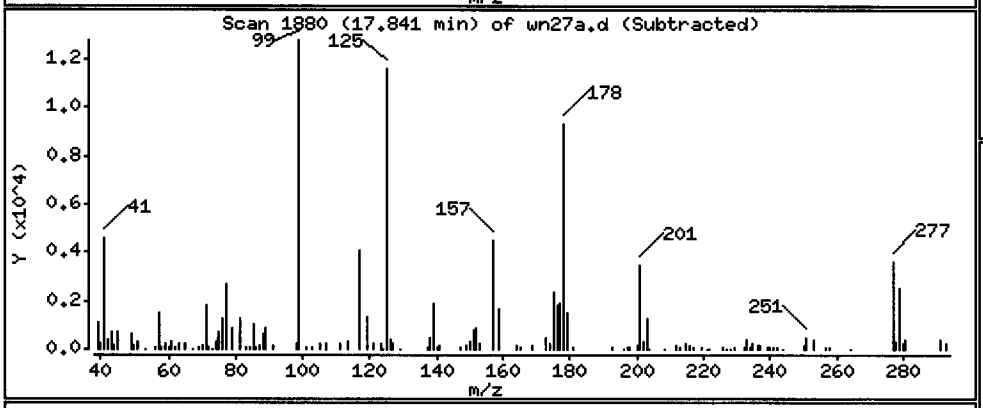
Column phase: ZB-5msi

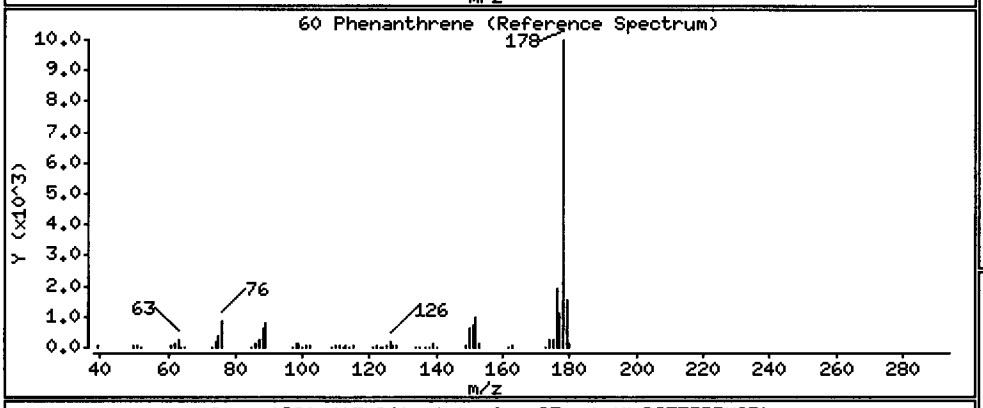
Column diameter: 0.25

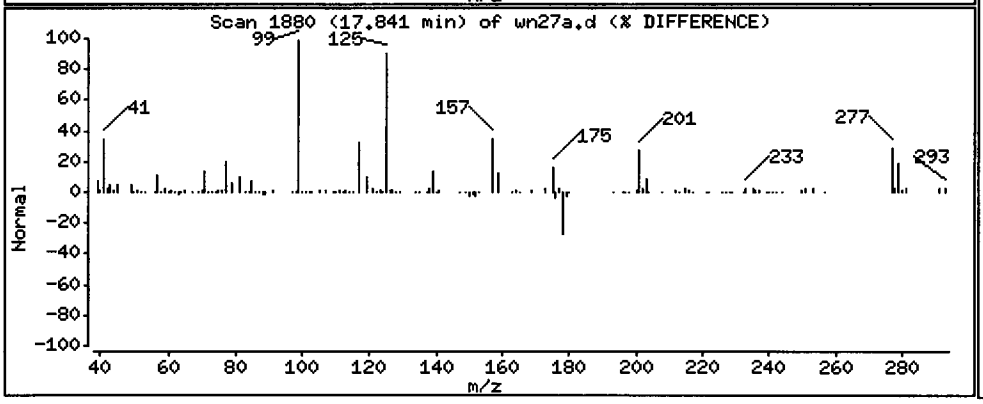
60 Phenanthrene

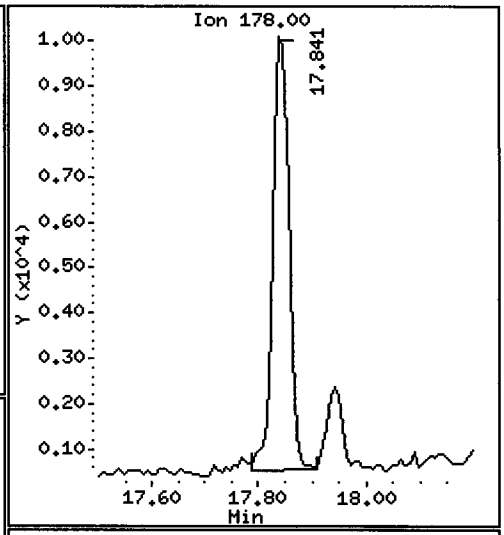
Concentration: 215.8 ug/kg

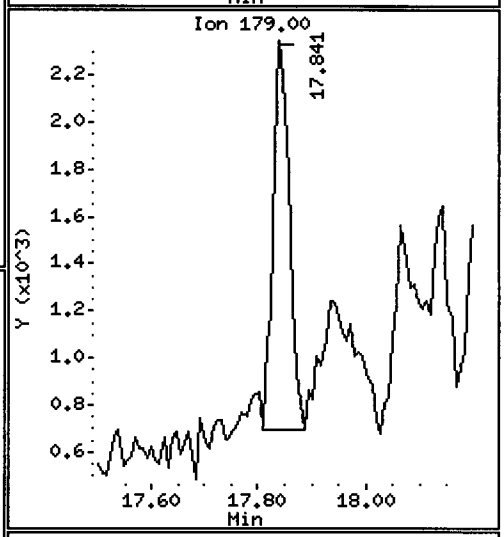


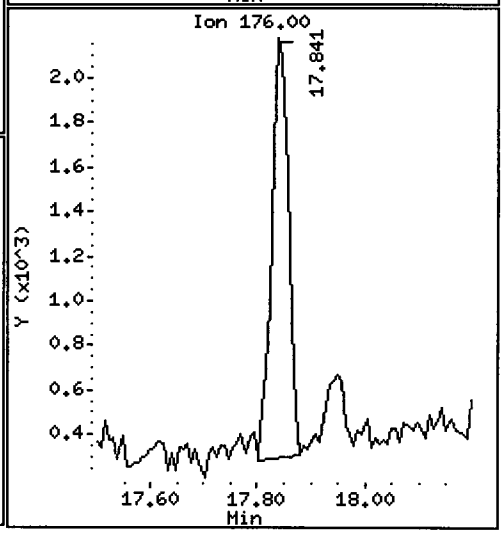












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

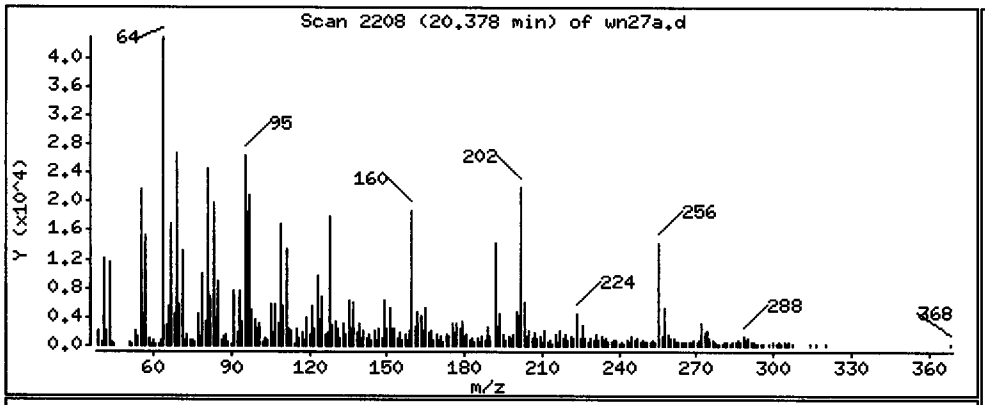
Operator: VTS/YZ

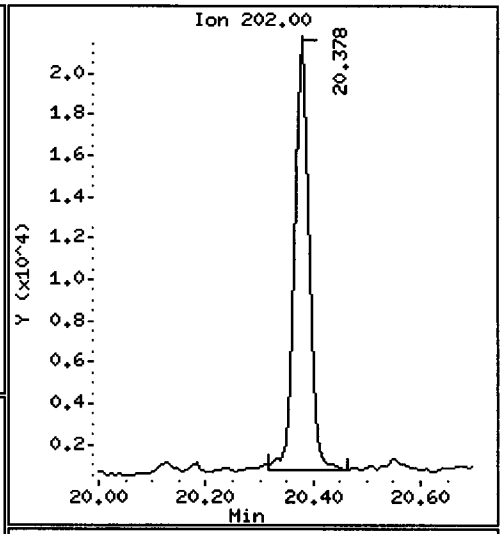
Column phase: ZB-5msi

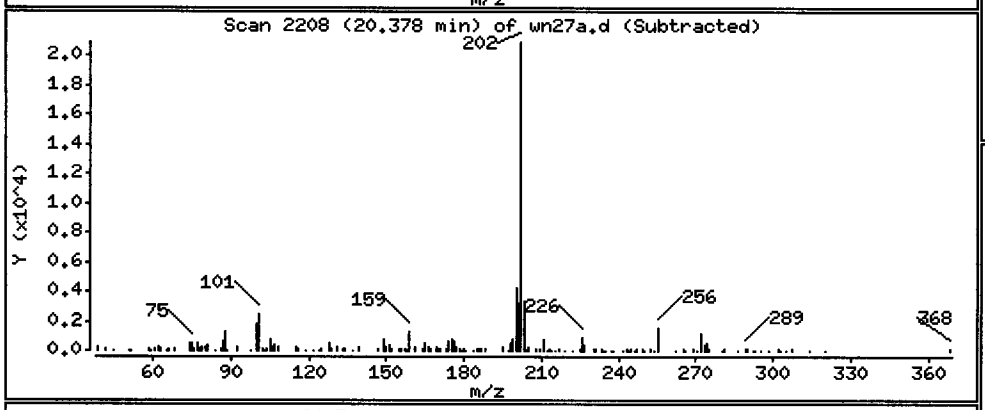
Column diameter: 0.25

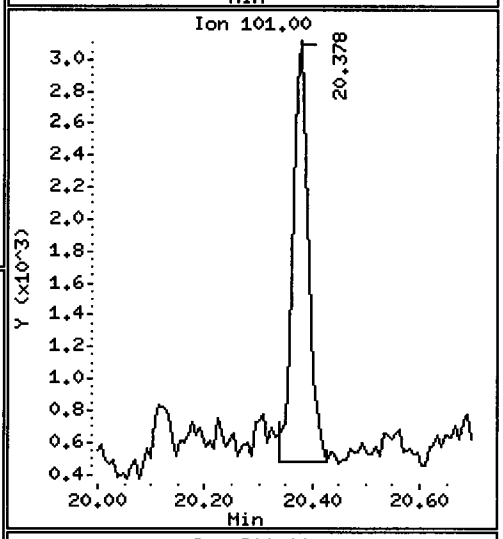
64 Fluoranthene

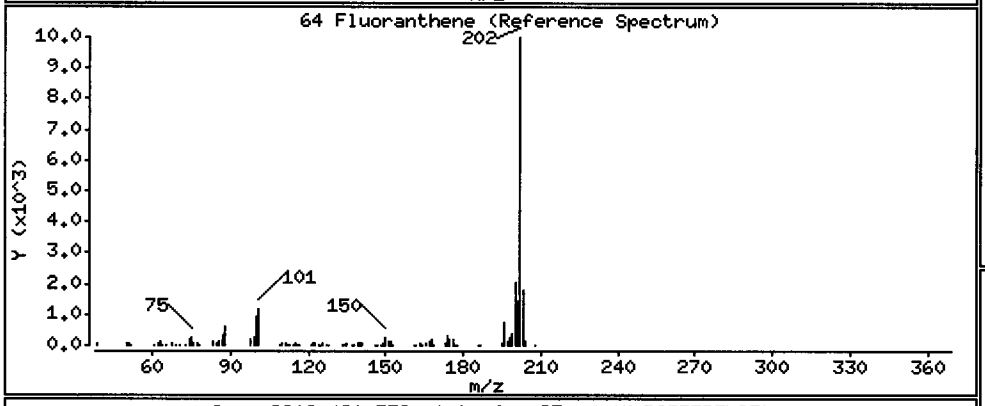
Concentration: 388.0 ug/kg

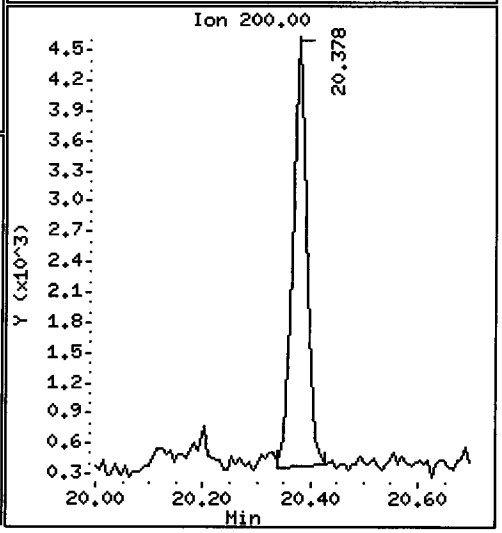


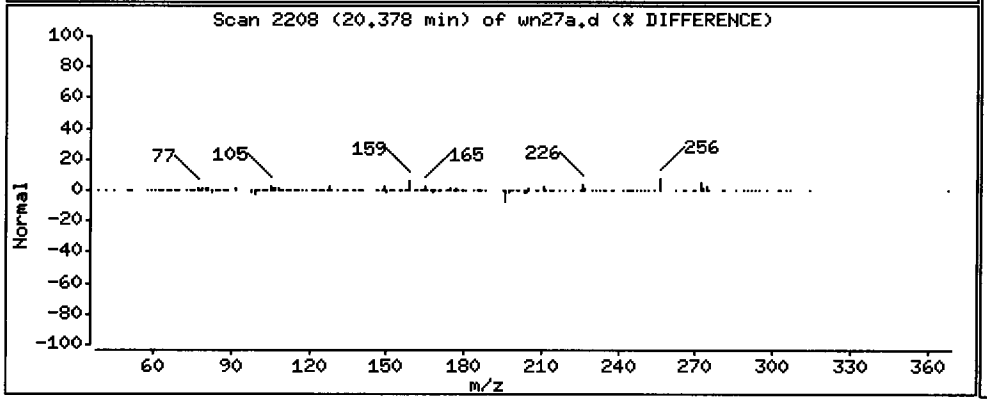












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

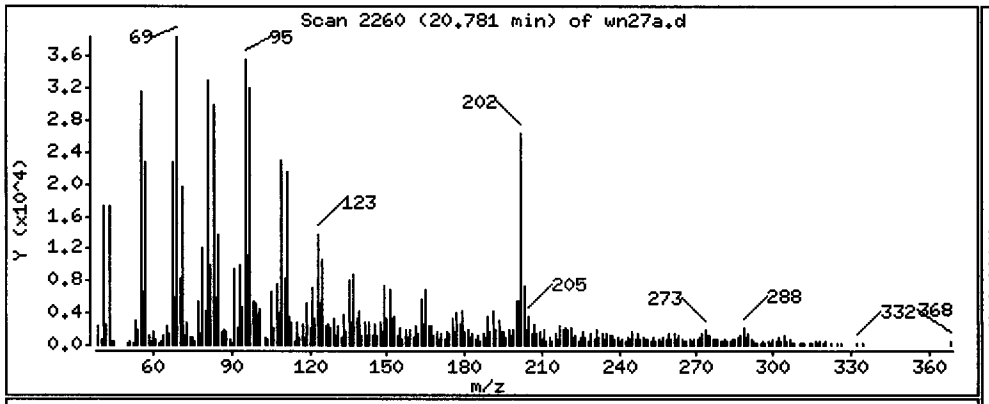
Operator: VTS/YZ

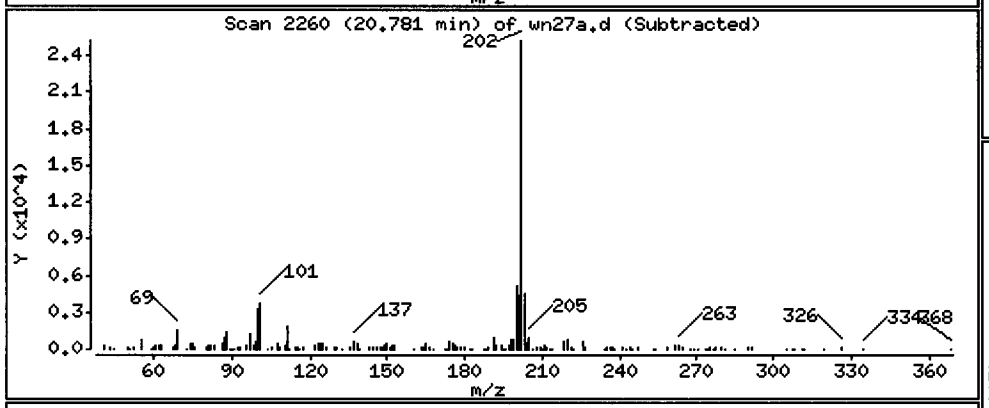
Column phase: ZB-5msi

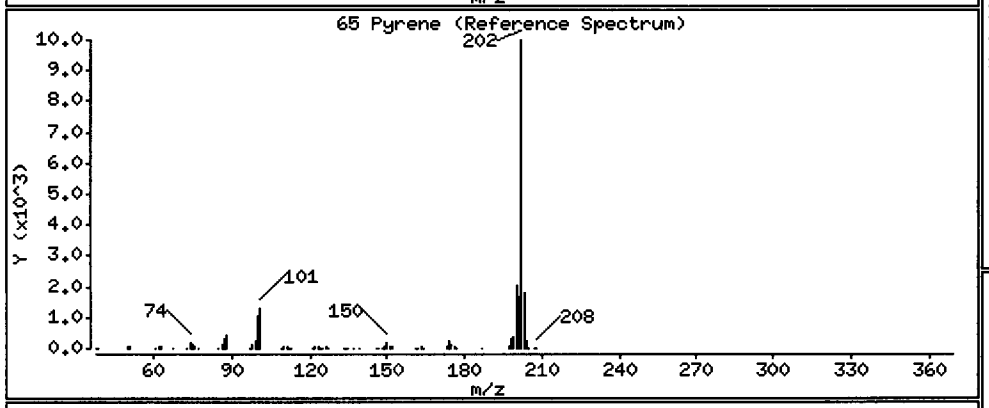
Column diameter: 0.25

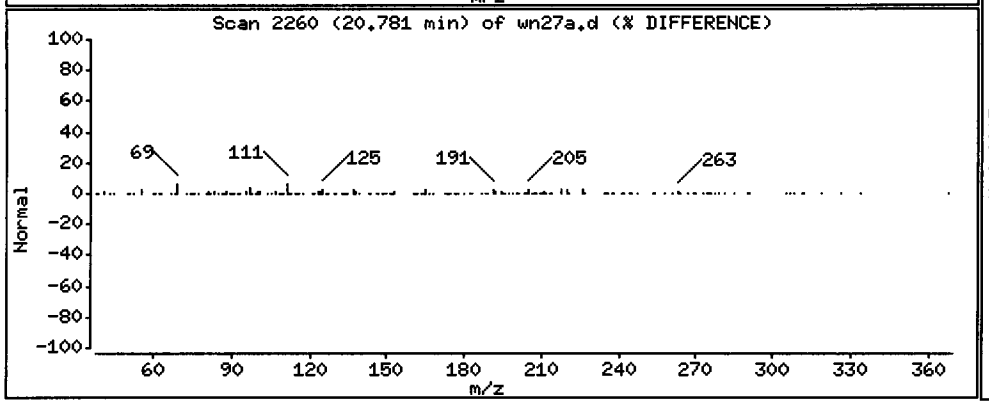
65 Pyrene

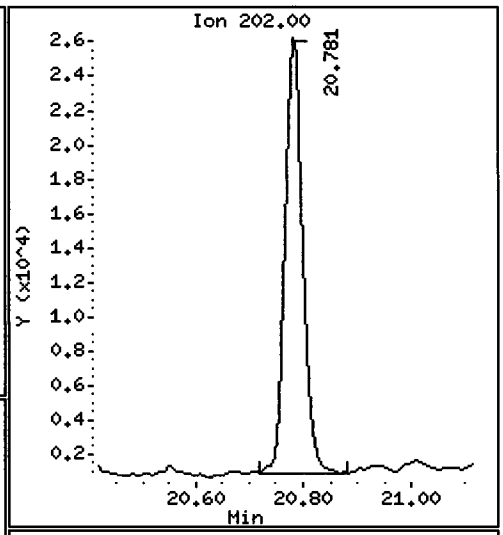
Concentration: 613.3 ug/kg

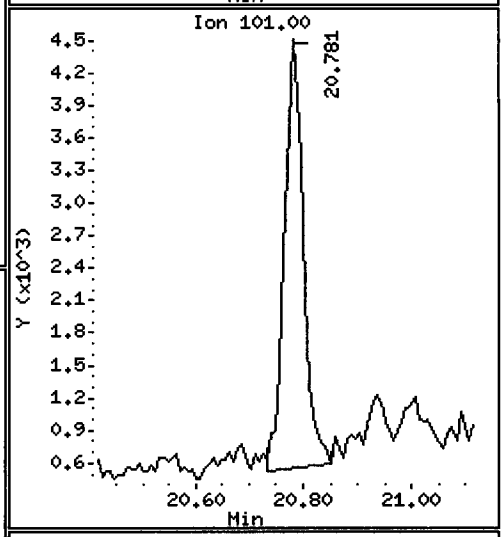


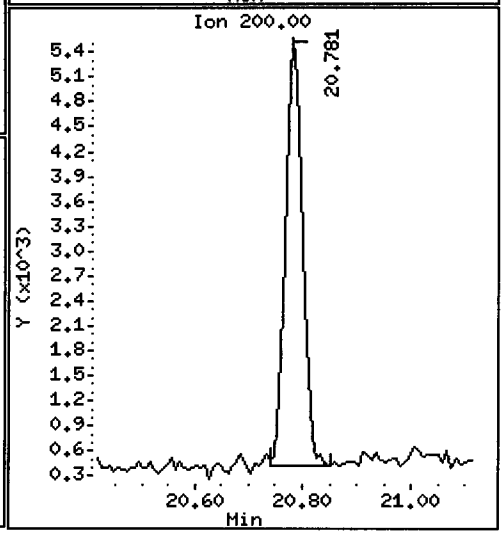












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

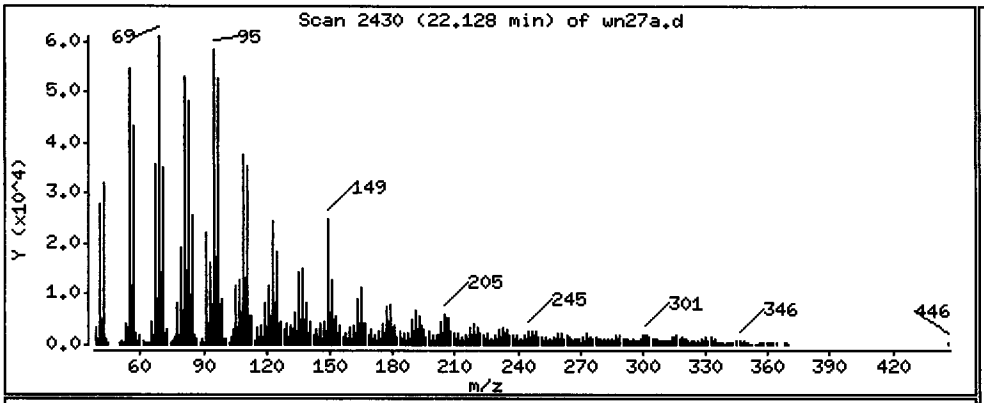
Operator: VTS/YZ

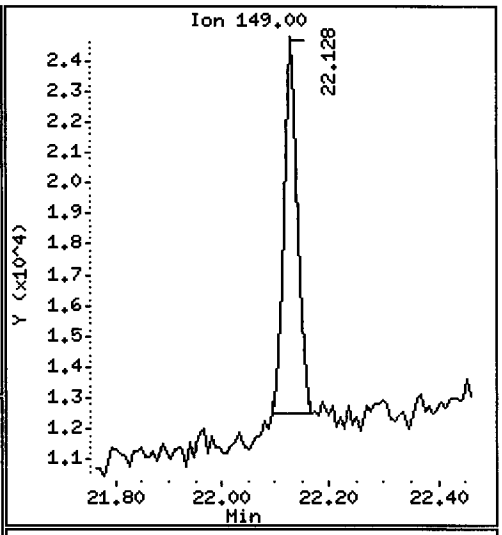
Column phase: ZB-5msi

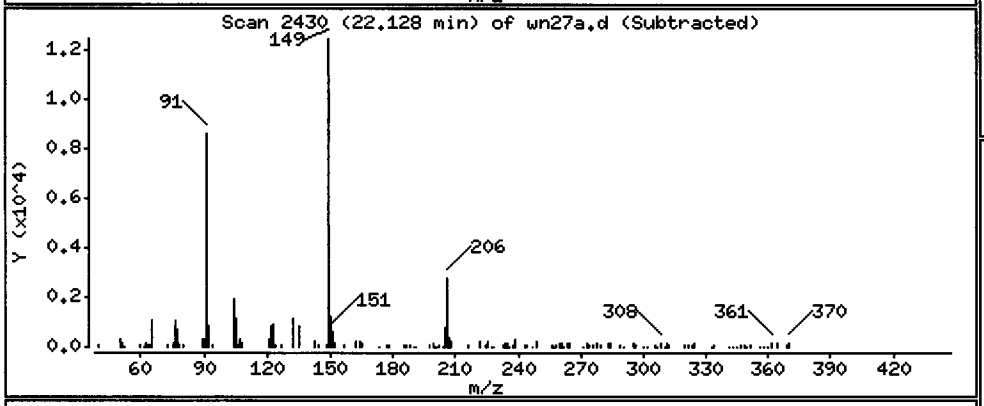
Column diameter: 0.25

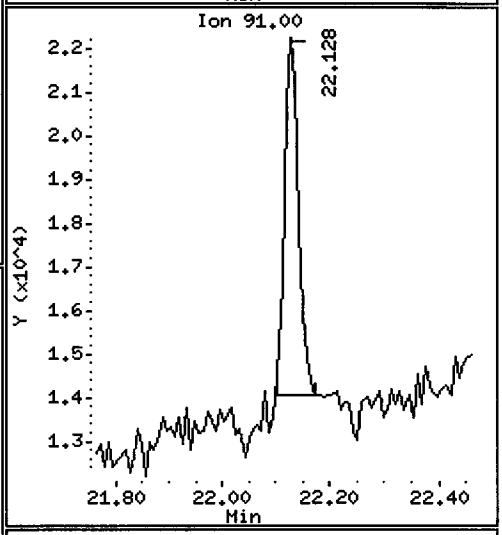
67 Butylbenzylphthalate

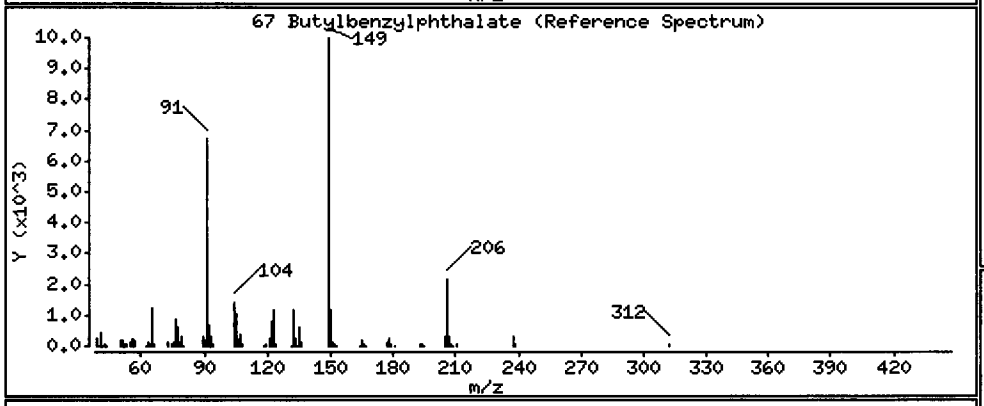
Concentration: 674.6 ug/kg

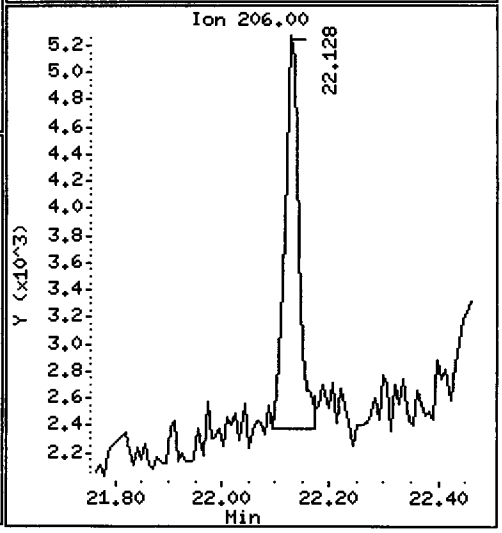


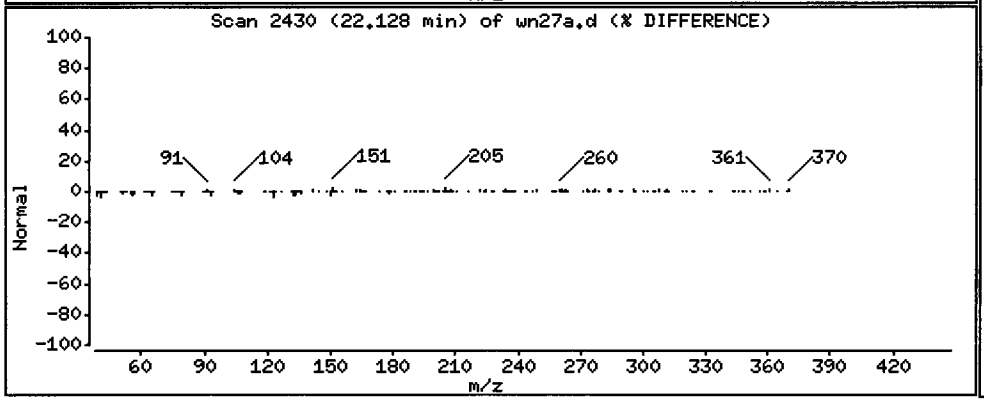












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

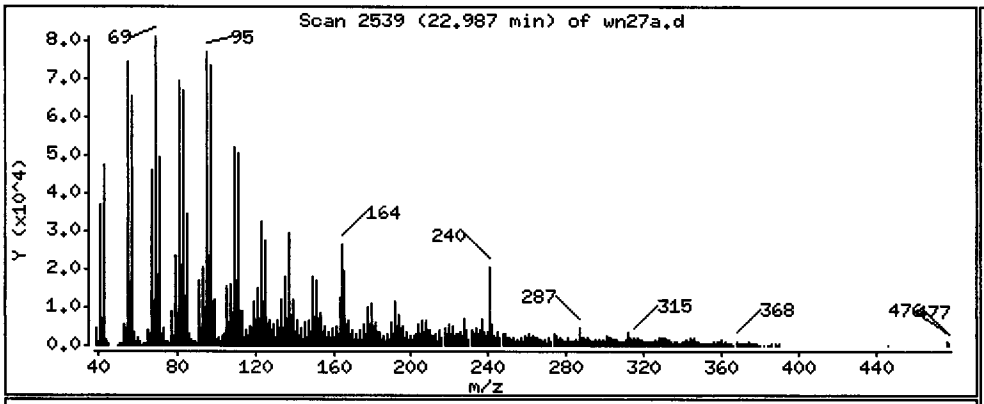
Operator: VTS/YZ

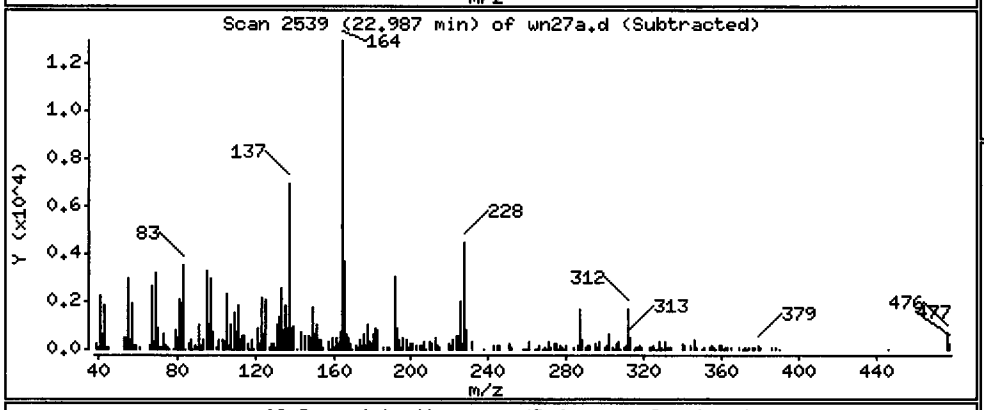
Column phase: ZB-5msi

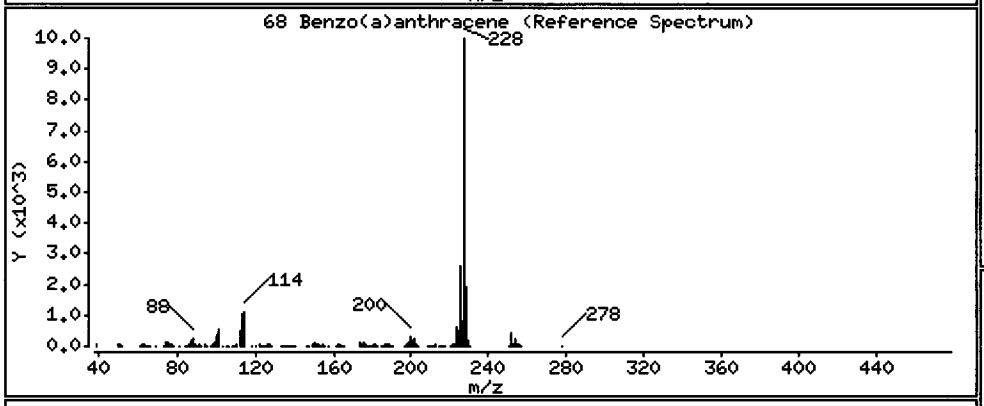
Column diameter: 0.25

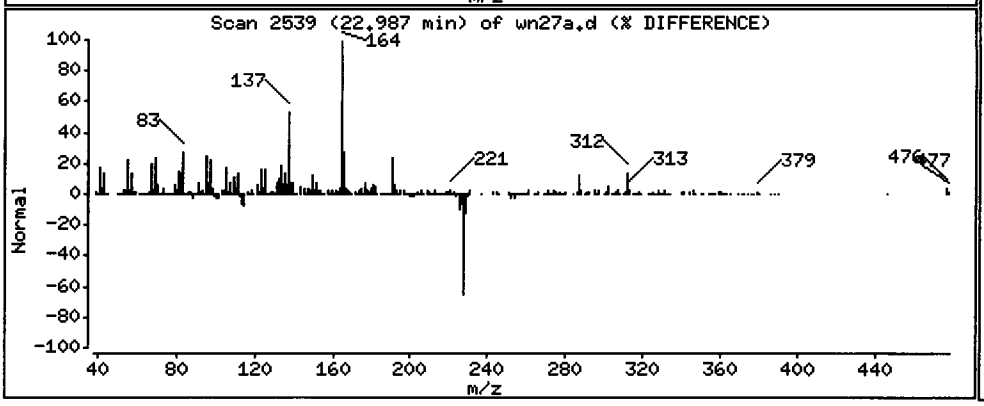
68 Benzo(a)anthracene

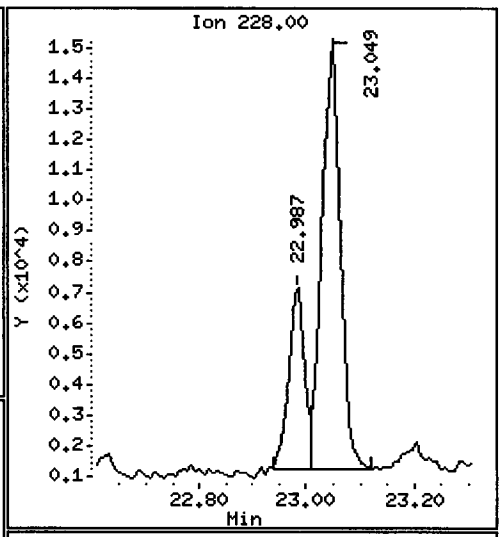
Concentration: 151.5 ug/kg

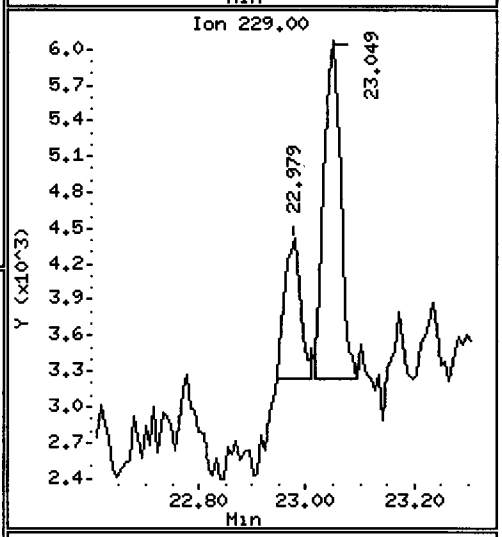


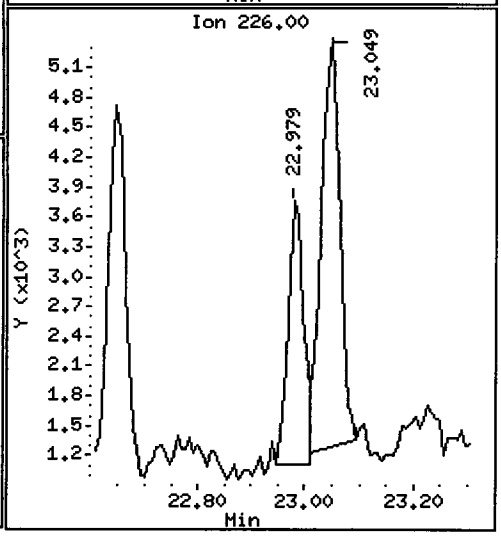












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

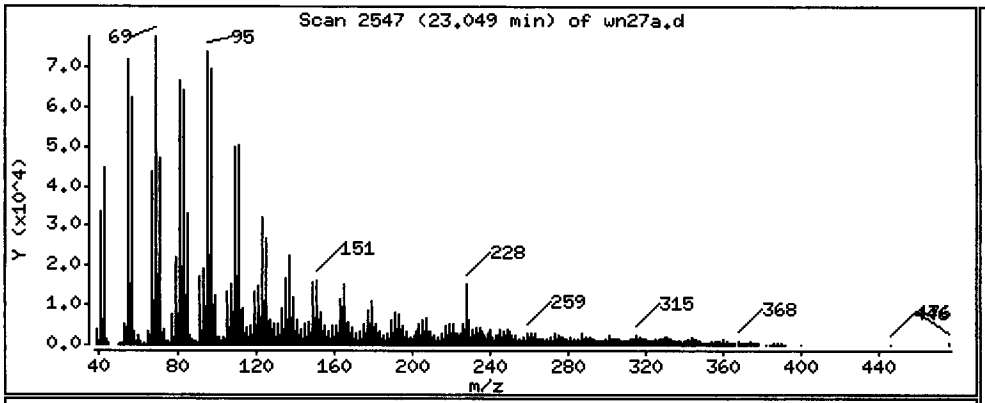
Operator: VTS/YZ

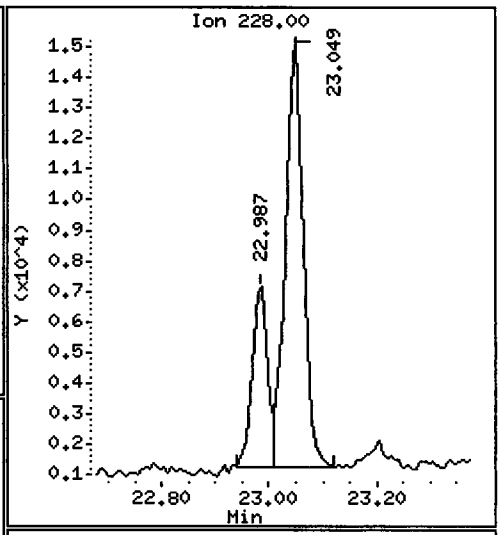
Column phase: ZB-5msi

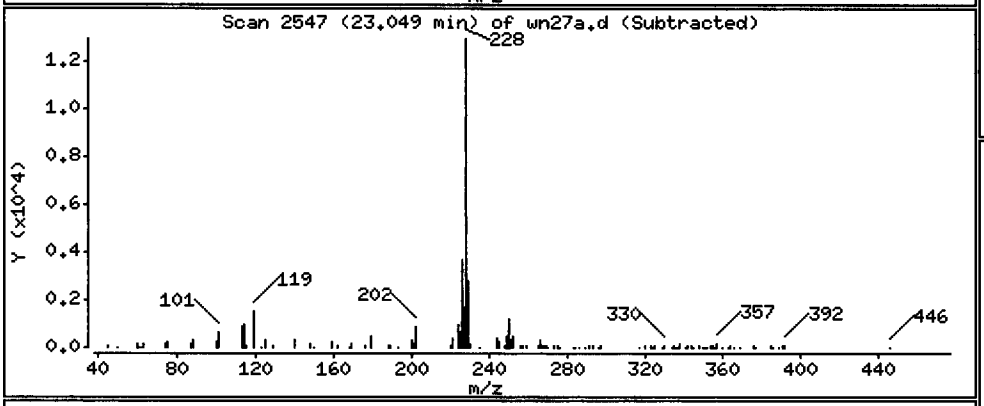
Column diameter: 0.25

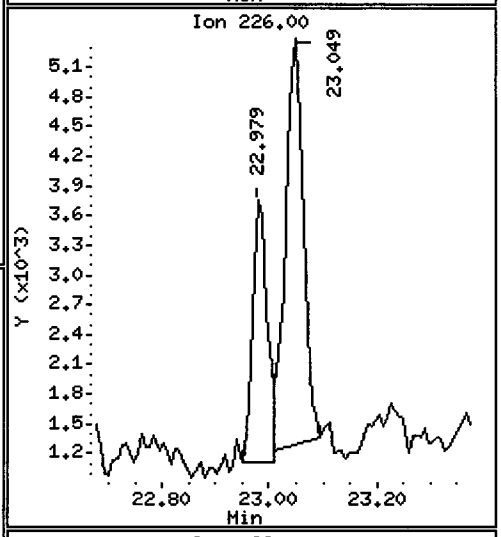
71 Chrysene

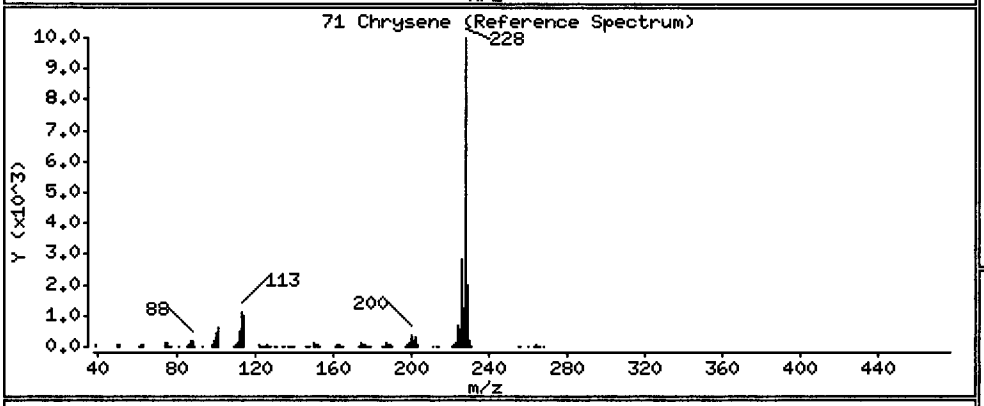
Concentration: 430.4 ug/kg

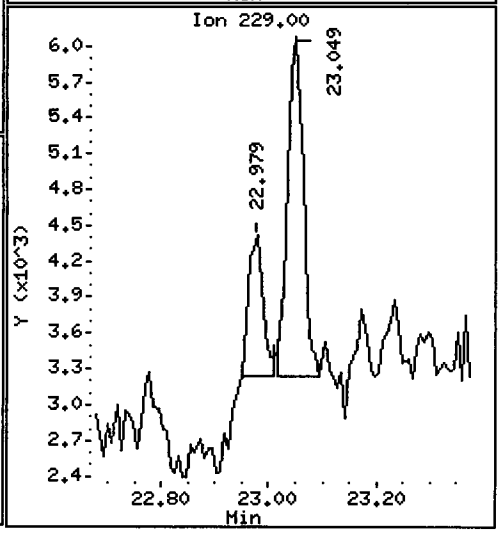


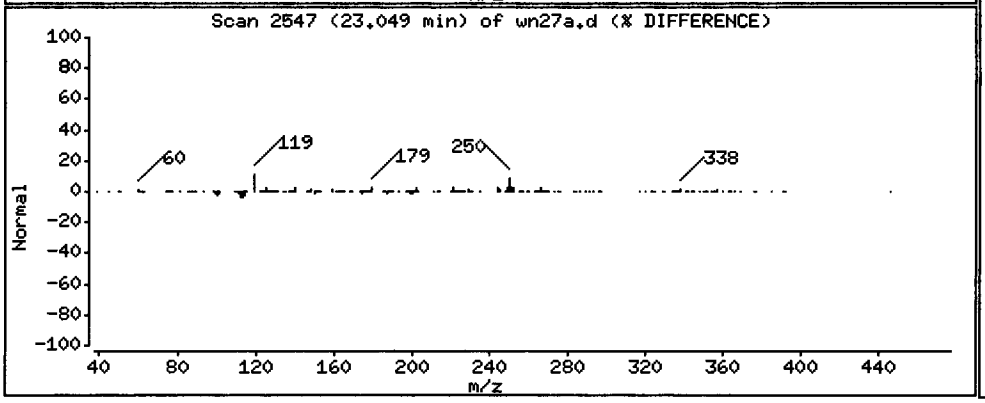












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

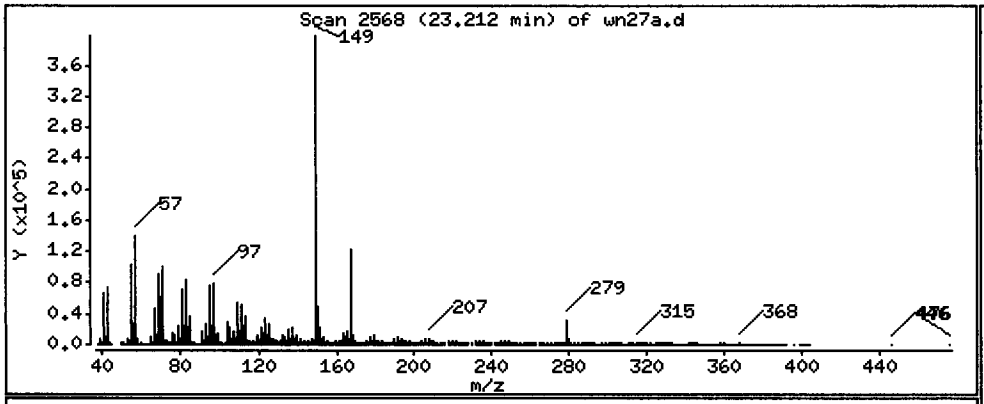
Operator: VTS/YZ

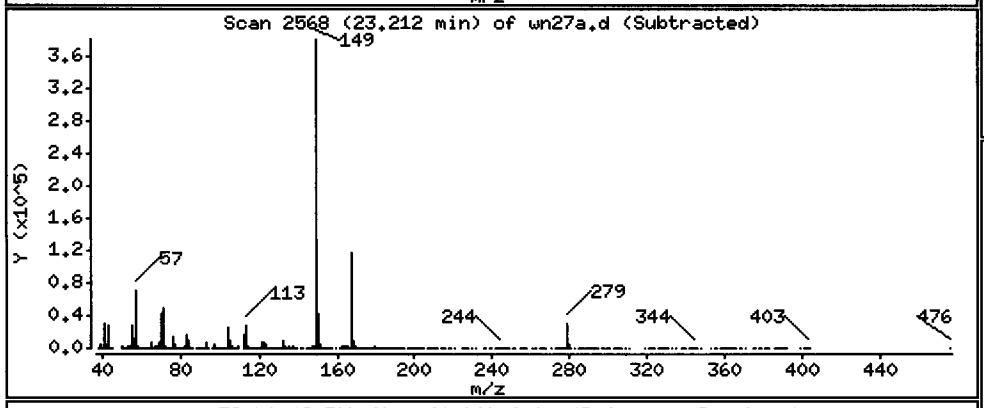
Column phase: ZB-5msi

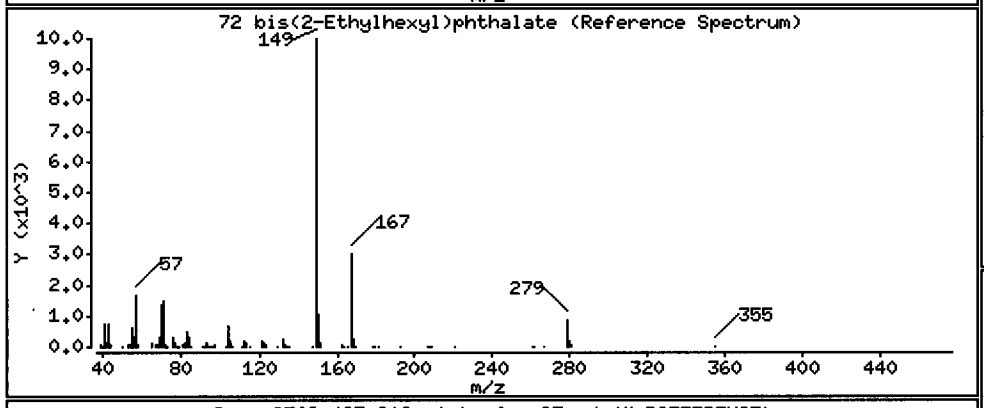
Column diameter: 0.25

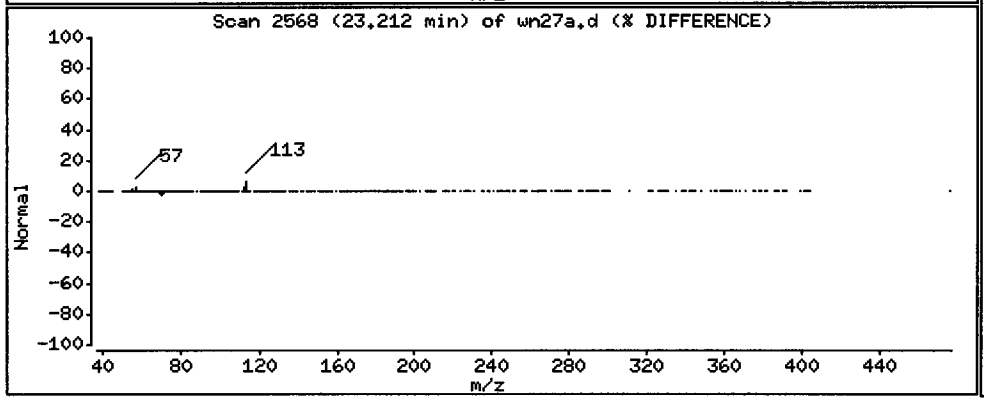
72 bis(2-Ethylhexyl)phthalate

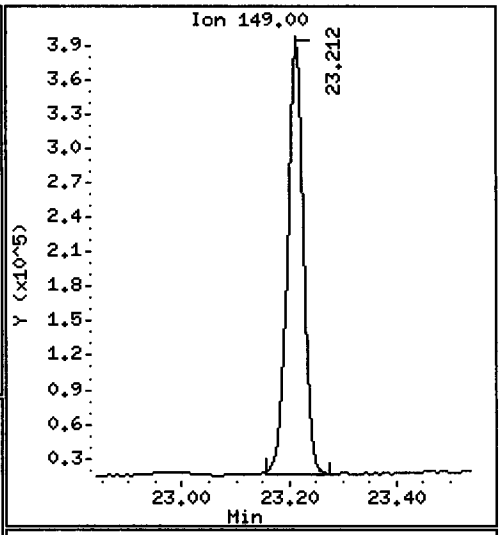
Concentration: 15180 ug/kg

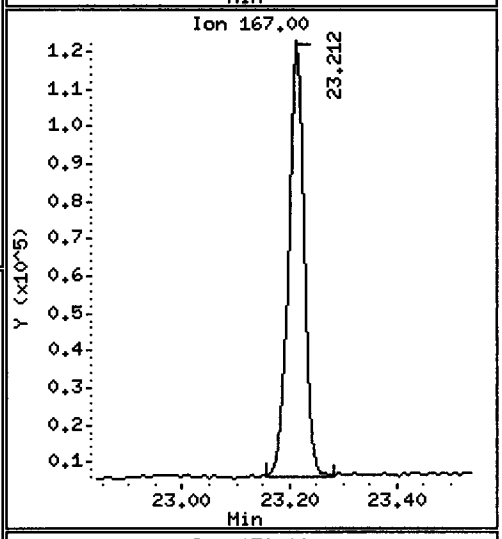


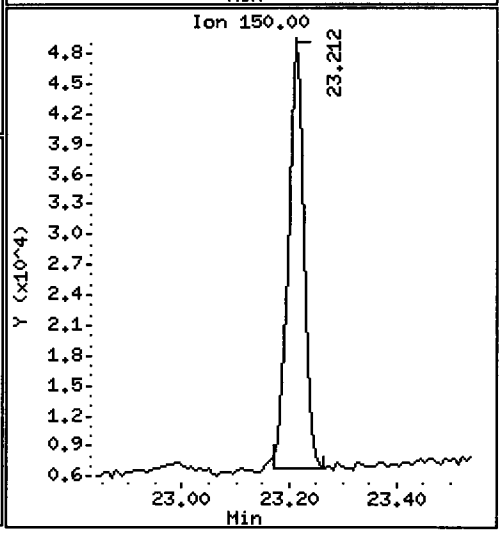












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

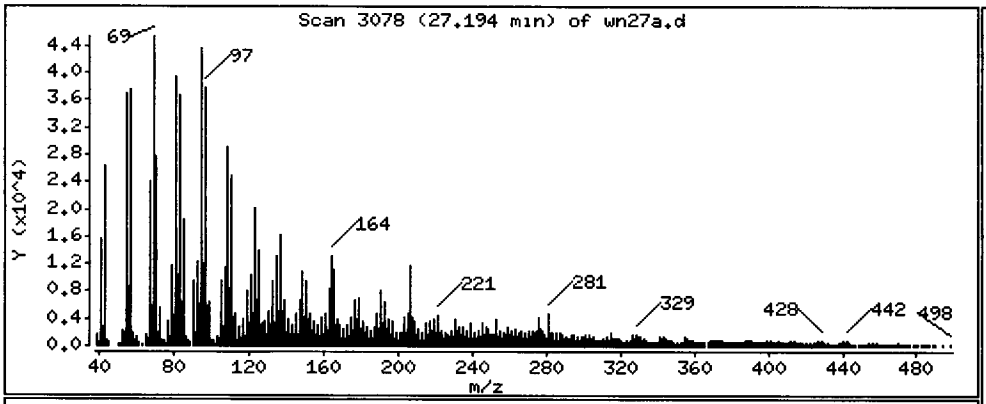
Operator: VTS/YZ

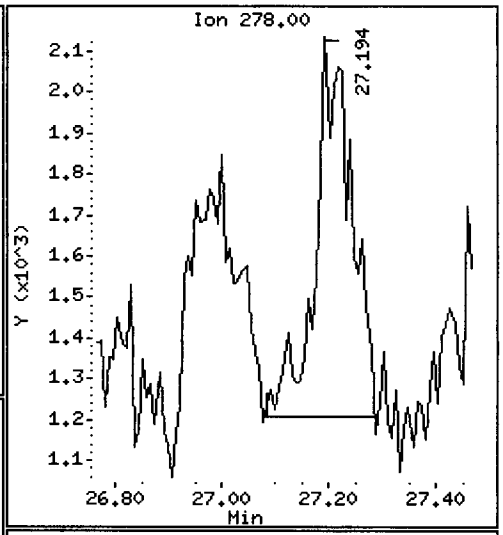
Column phase: ZB-5msi

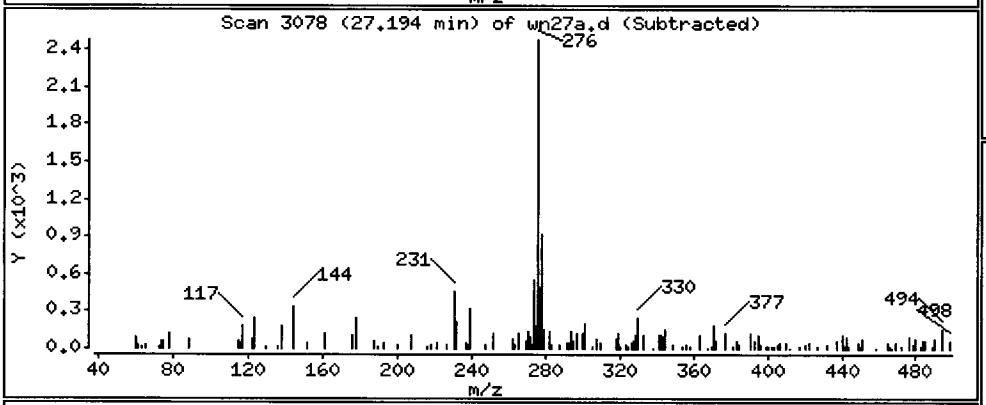
Column diameter: 0.25

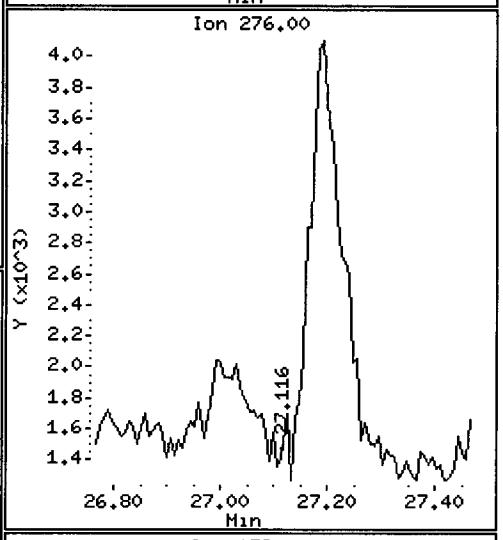
79 Dibenzo(a,h)anthracene

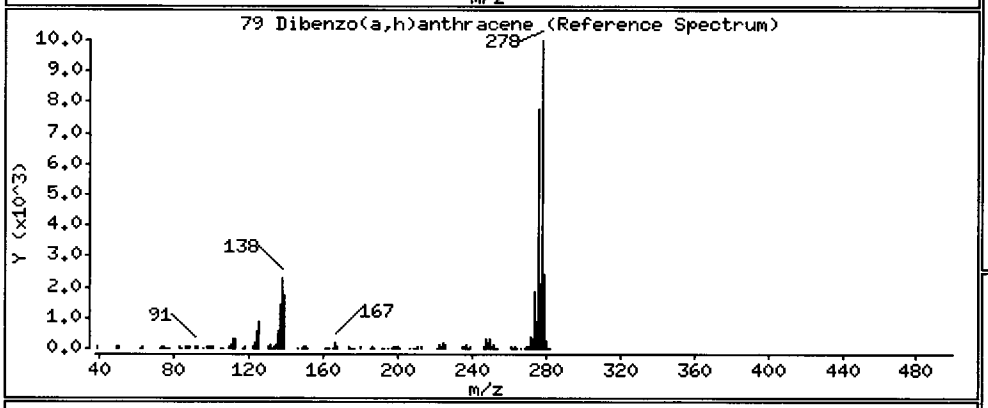
Concentration: 64.87 ug/kg

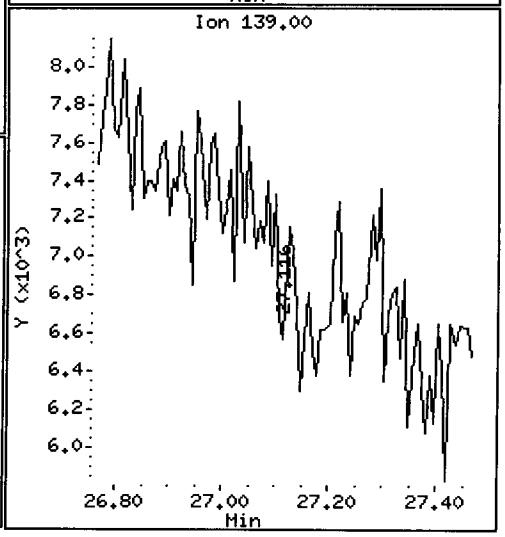


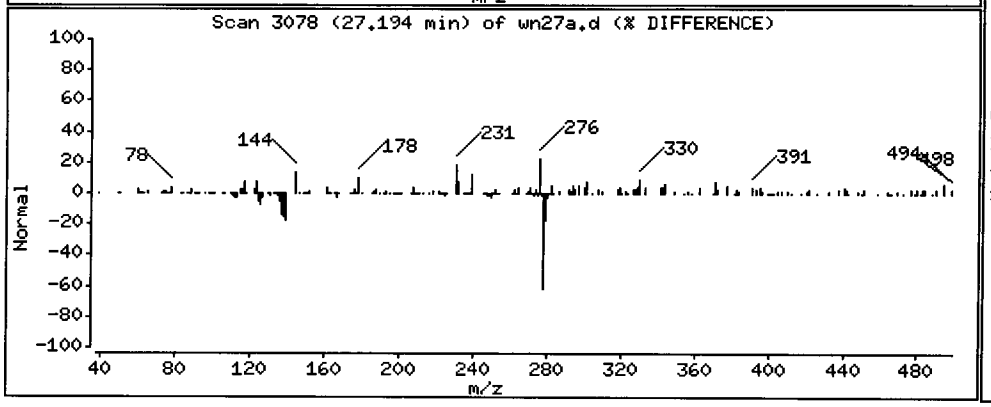












WN27-432R BC 8/16/13

Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

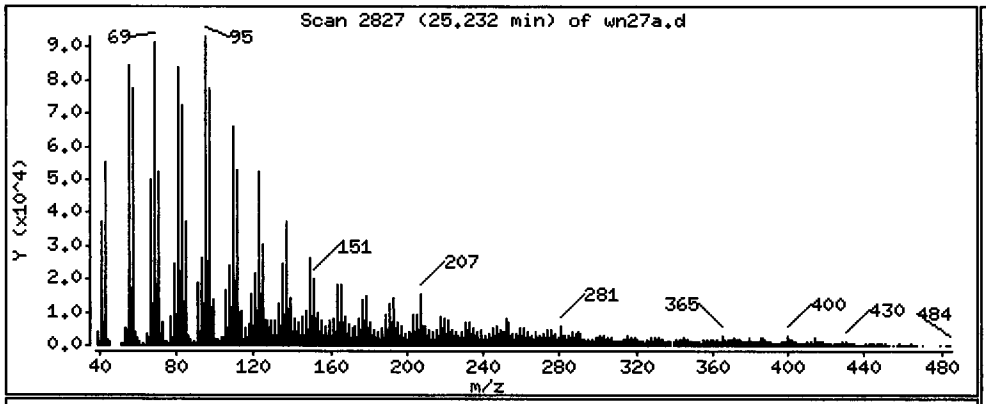
Operator: VTS/YZ

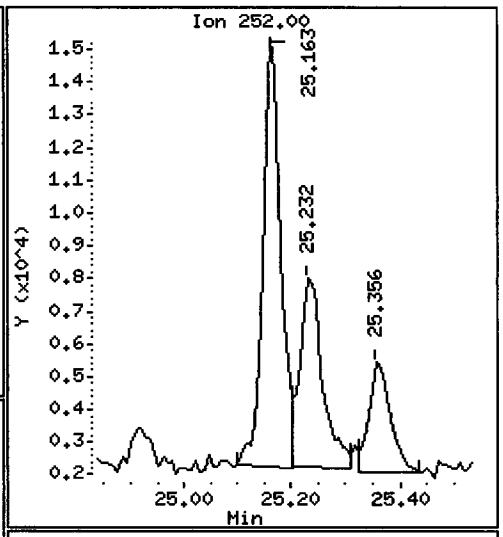
Column phase: ZB-5msi

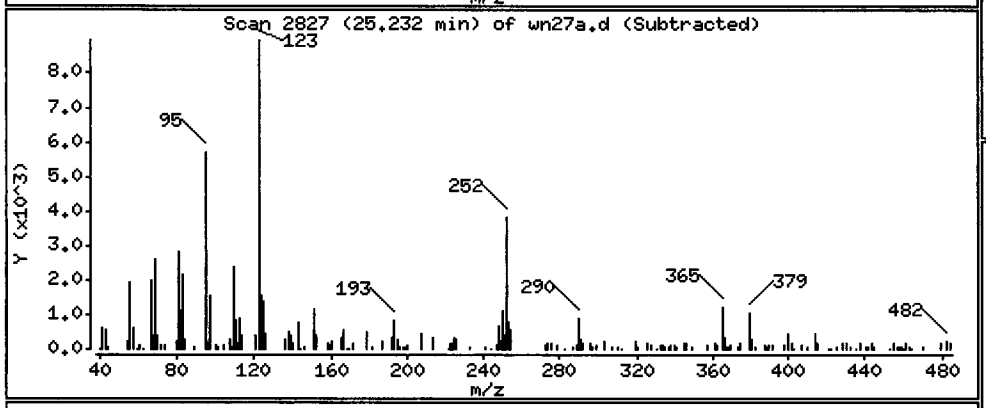
Column diameter: 0.25

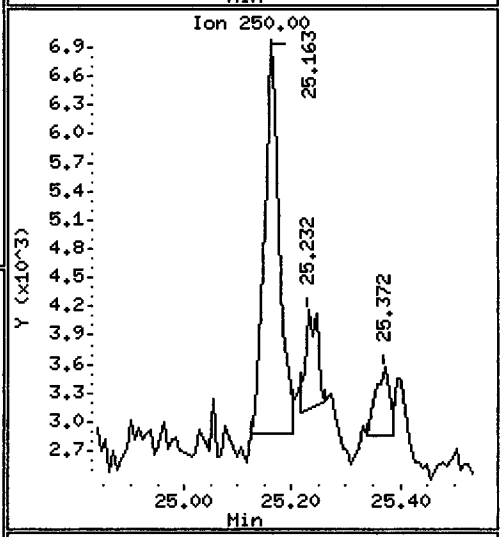
76 Benzo(a)pyrene

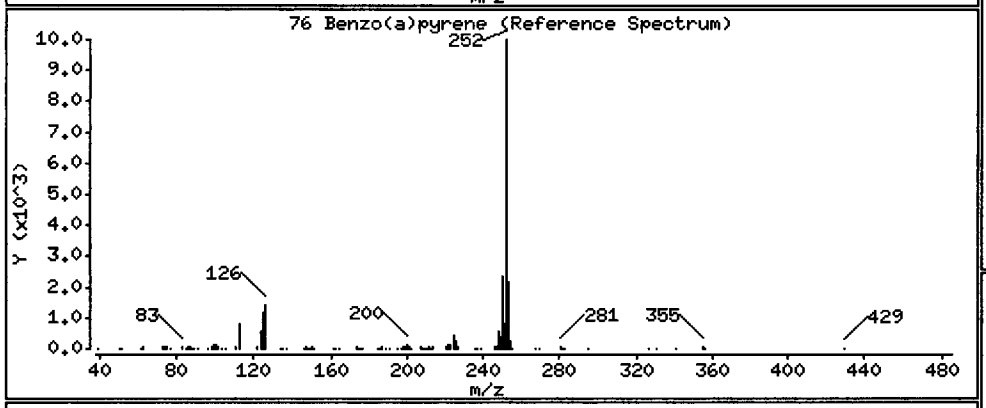
Concentration: 238.5 ug/kg

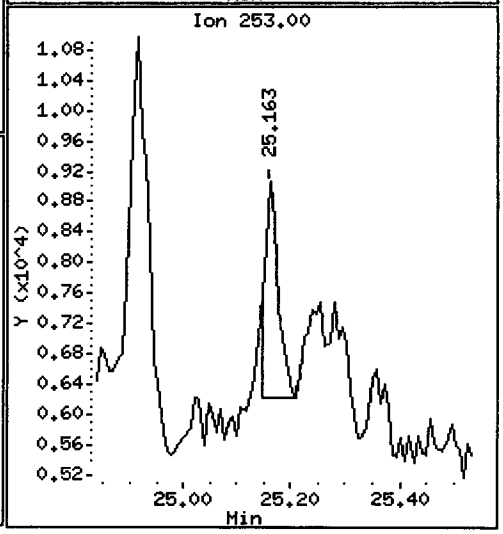


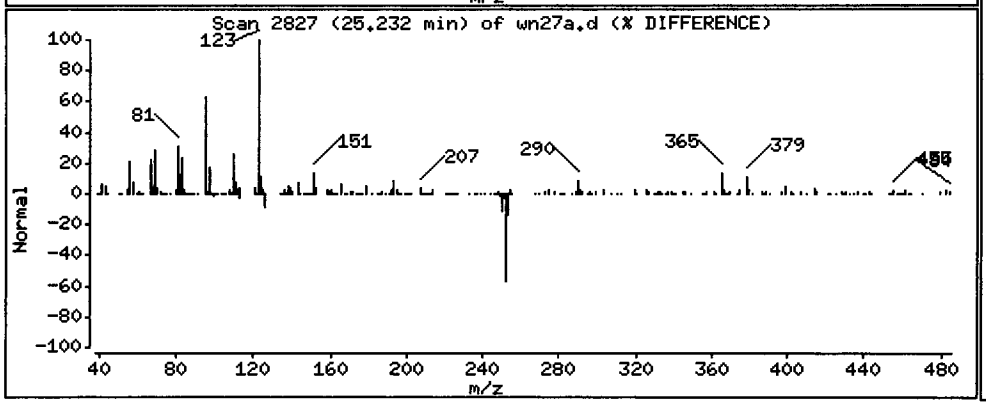












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CC-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

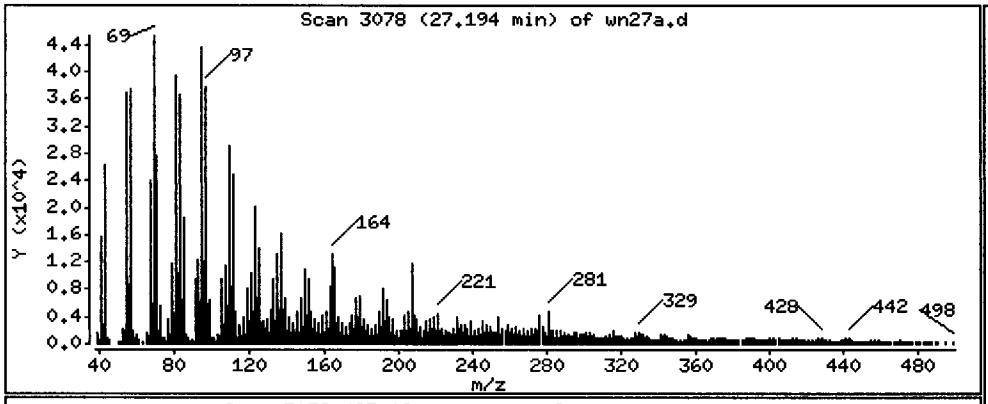
Operator: VTS/YZ

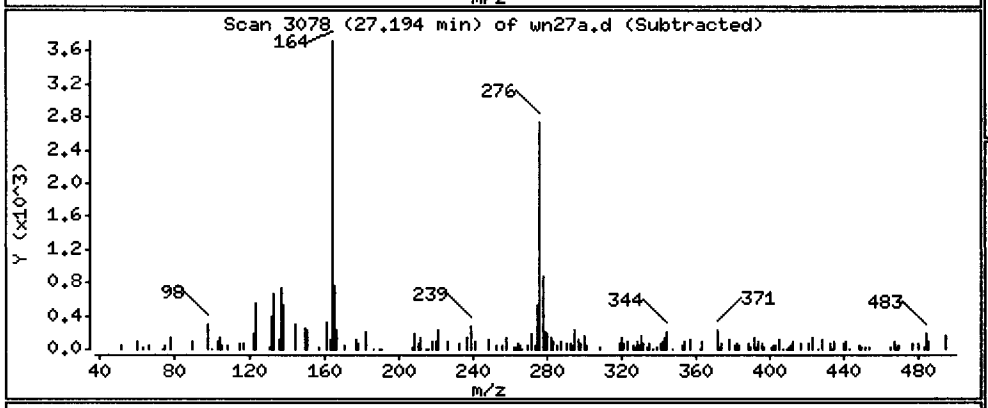
Column phase: ZB-5msi

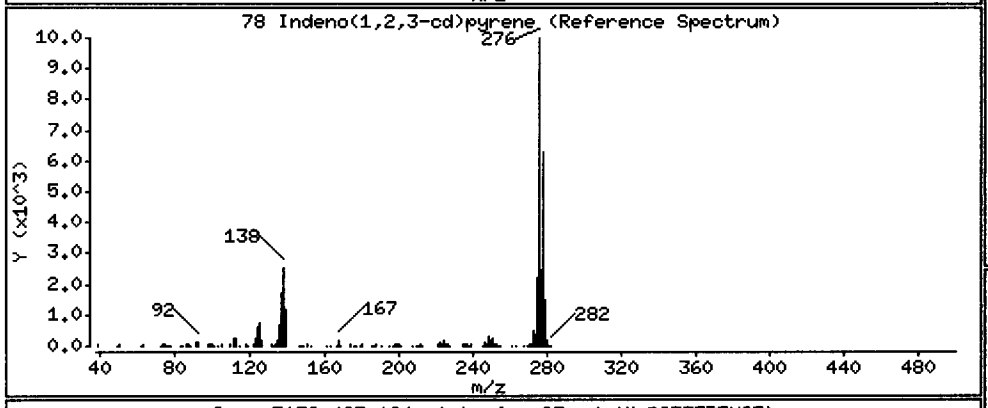
Column diameter: 0.25

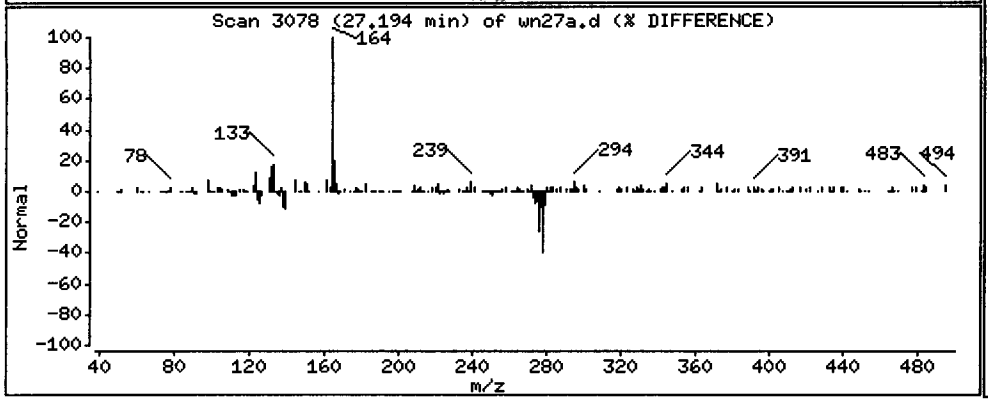
78 Indeno(1,2,3-cd)pyrene

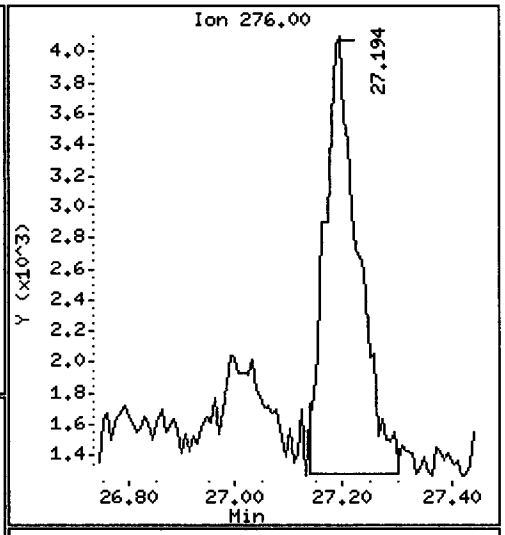
Concentration: 139.2 ug/kg

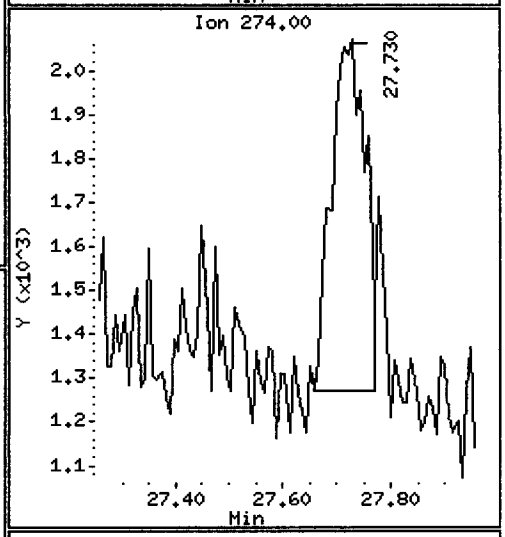


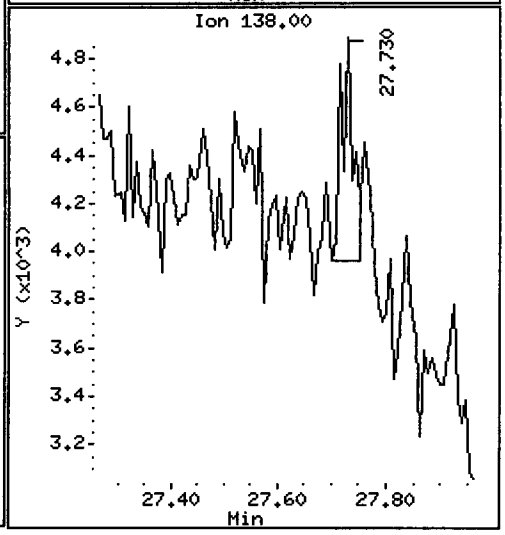












WN27: 434R BC 5/16/13

Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

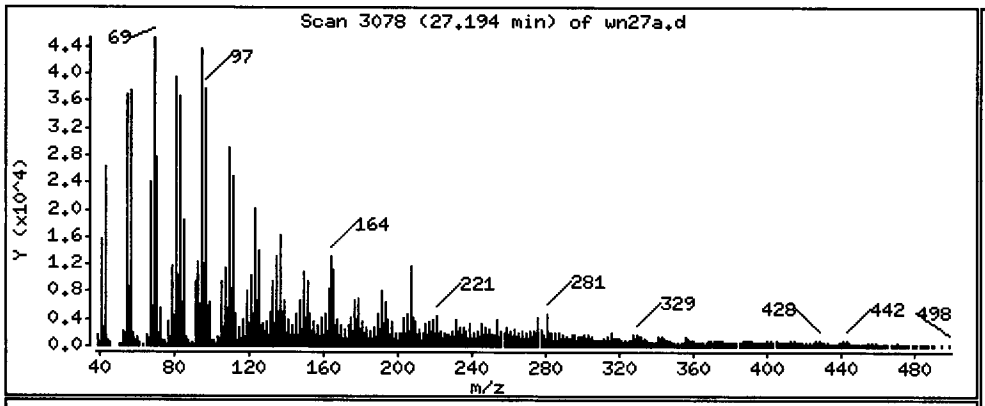
Operator: VTS/YZ

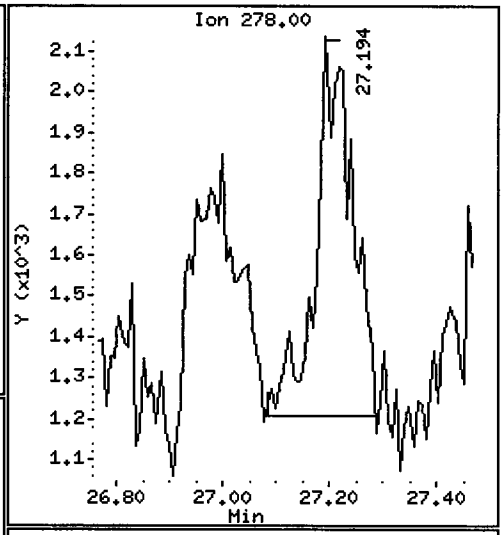
Column phase: ZB-5msi

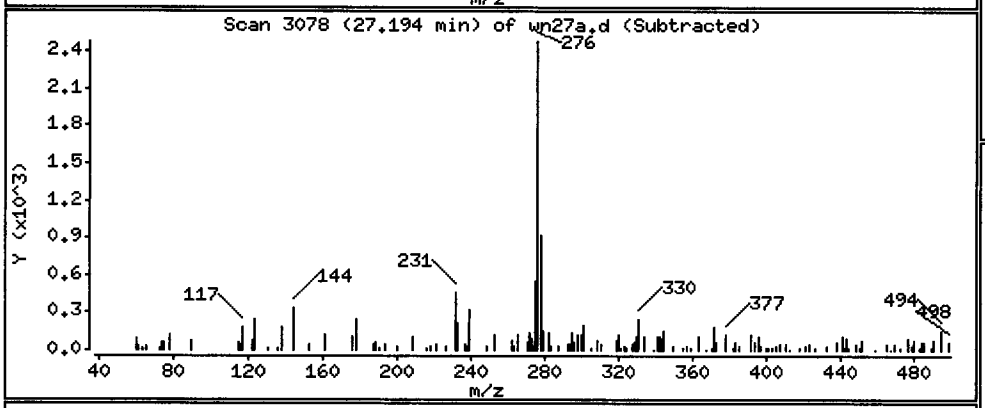
Column diameter: 0.25

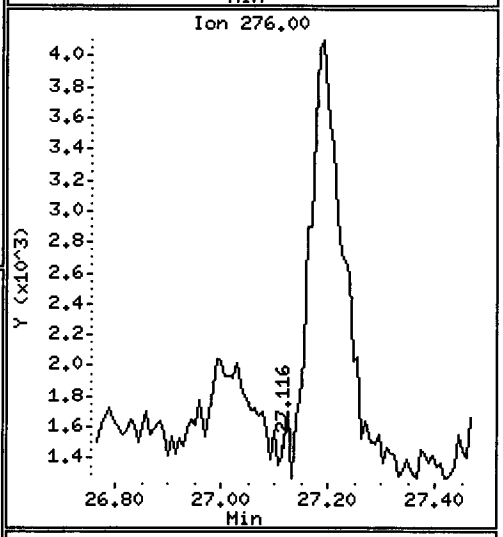
79 Dibenzo(a,h)anthracene

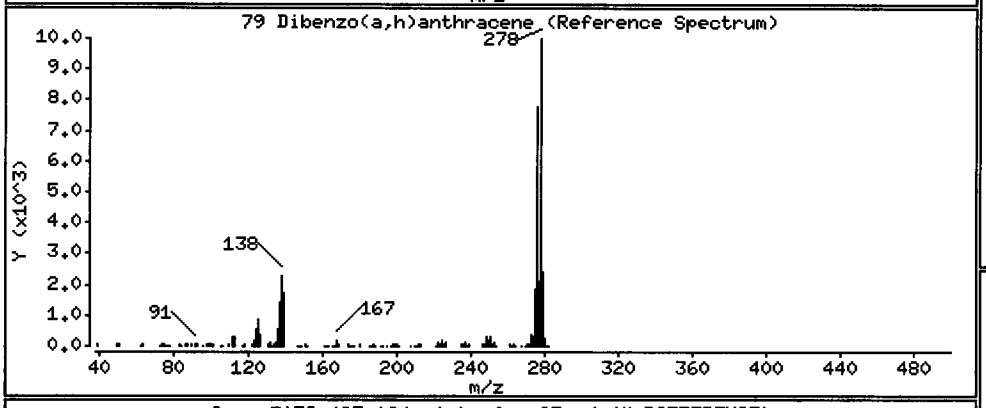
Concentration: 64.87 ug/kg

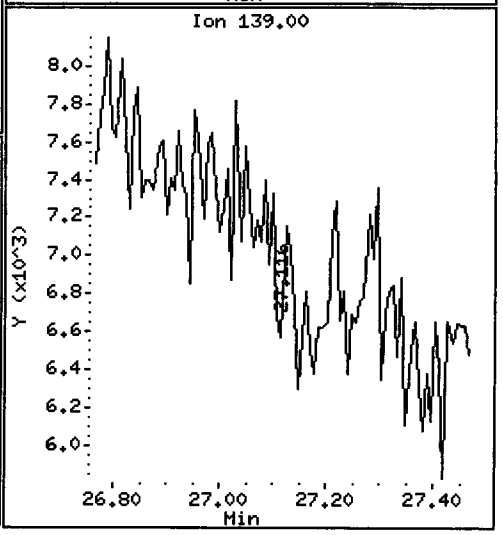


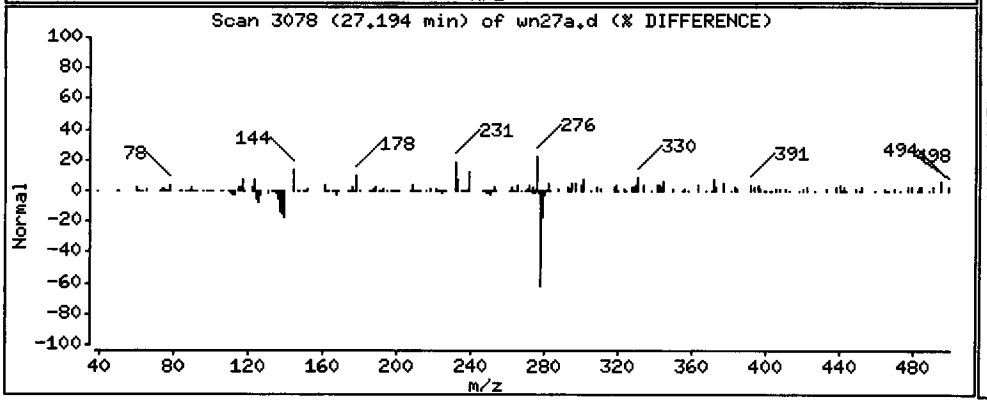












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

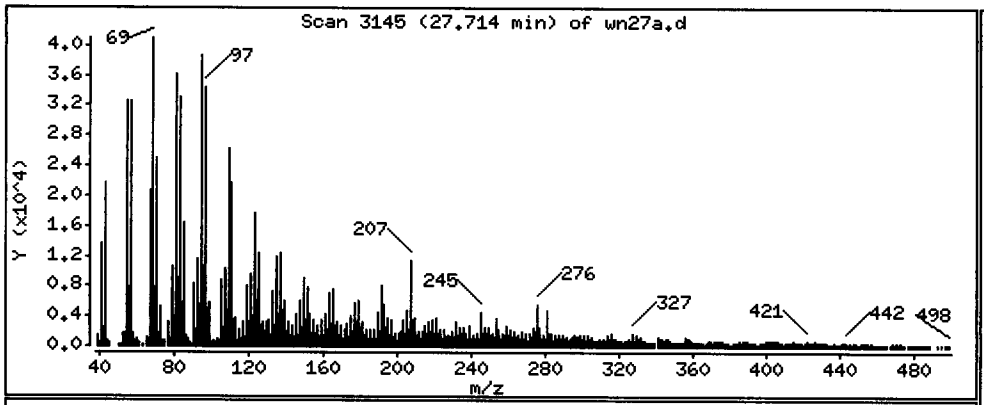
Operator: VTS/YZ

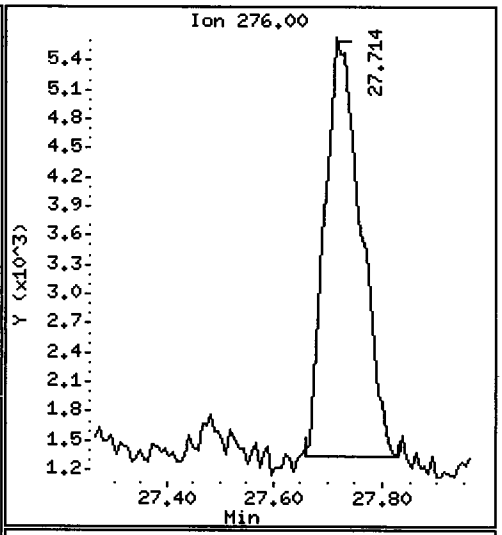
Column phase: ZB-5msi

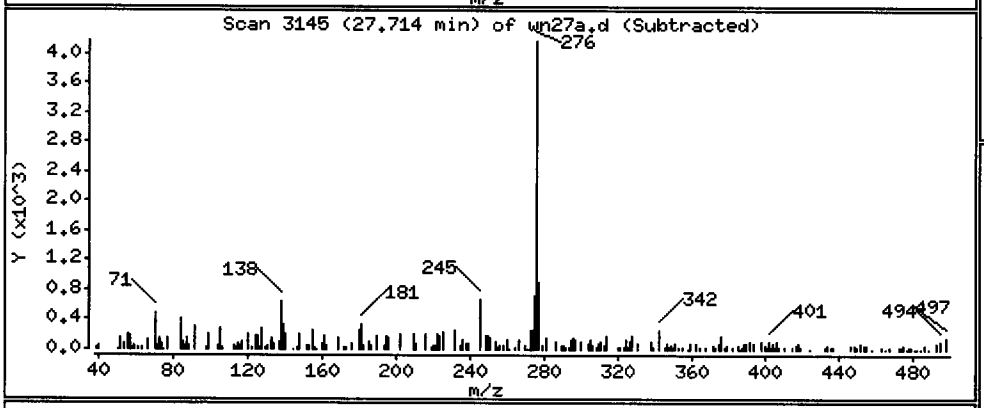
Column diameter: 0.25

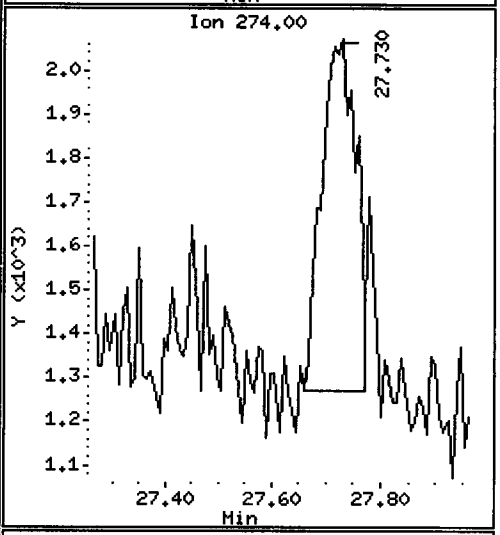
80 Benzo(g,h,i)perylene

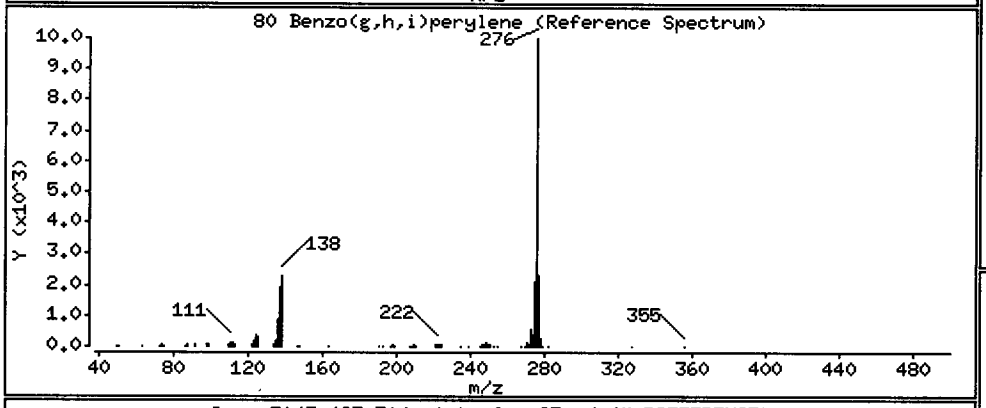
Concentration: 260.5 ug/kg

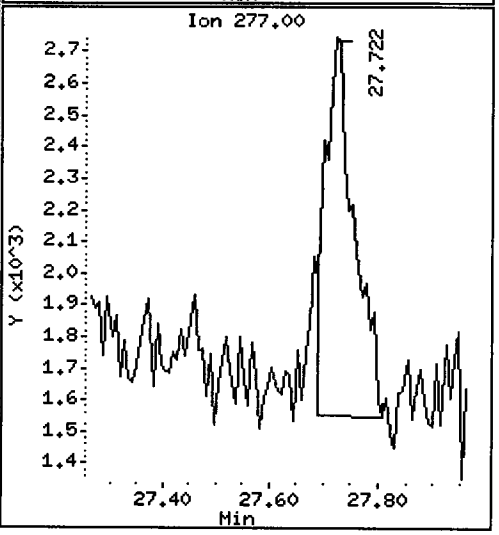


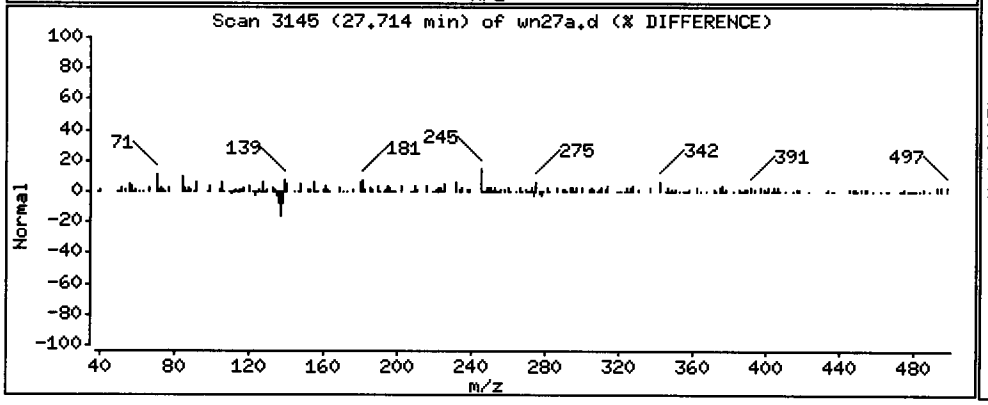












Data File: /chem1/nt10.i/20130507.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

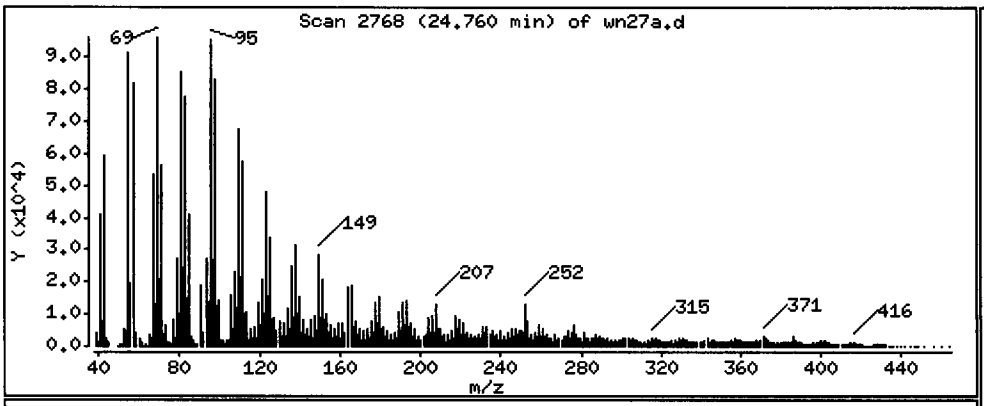
Operator: VTS/YZ

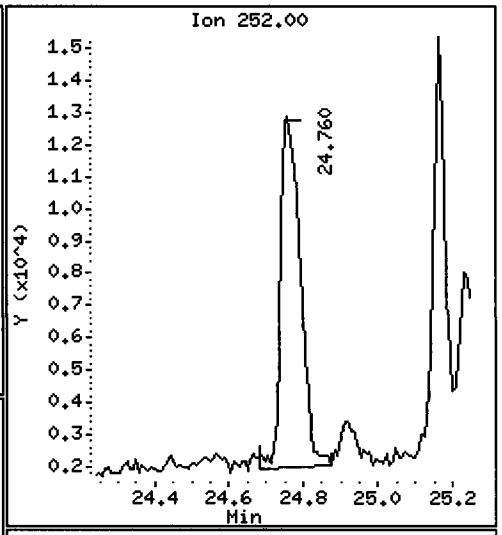
Column phase: ZB-5ms1

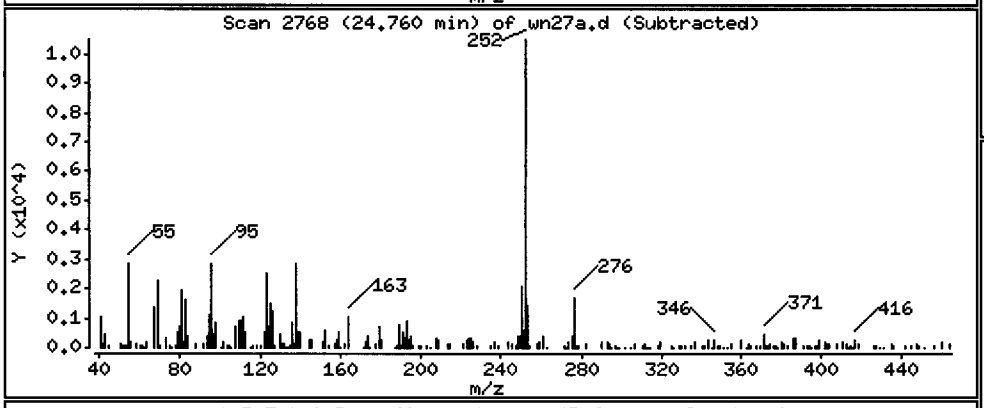
Column diameter: 0.25

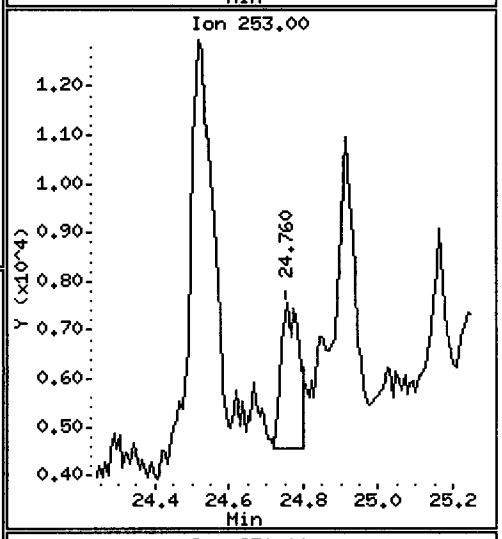
187 Total Benzofluoranthenes

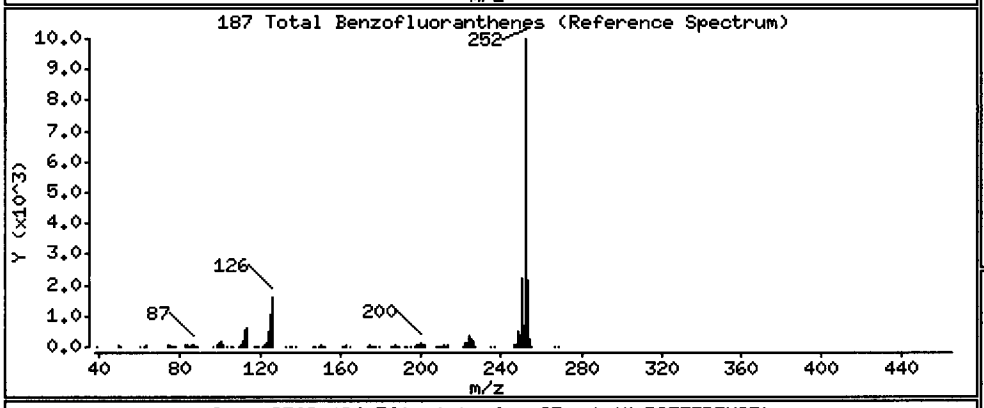
Concentration: 466.4 ug/kg

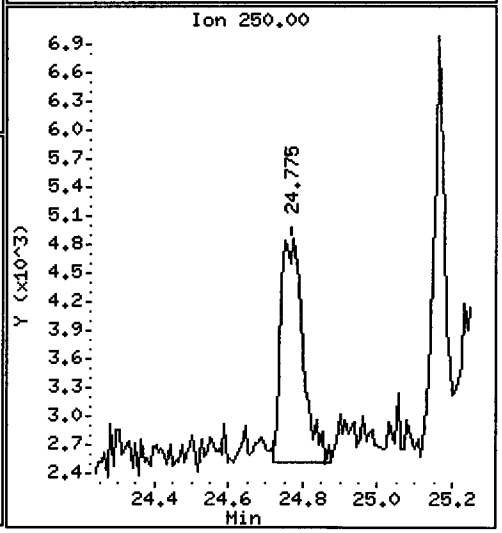


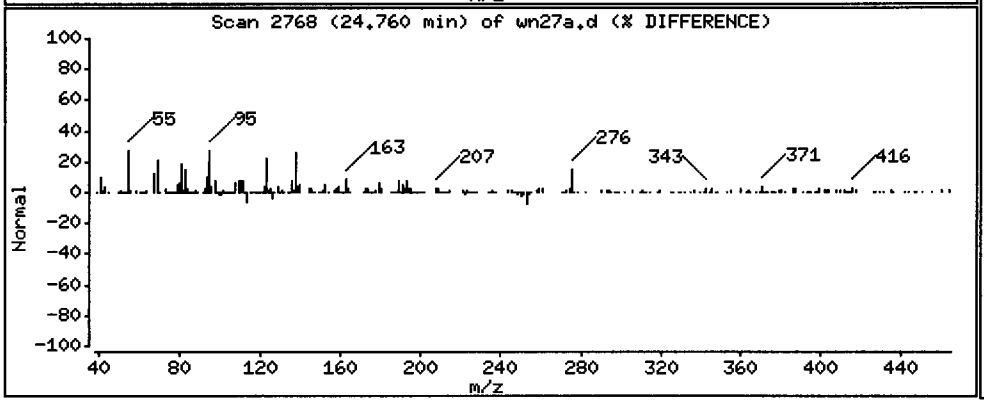






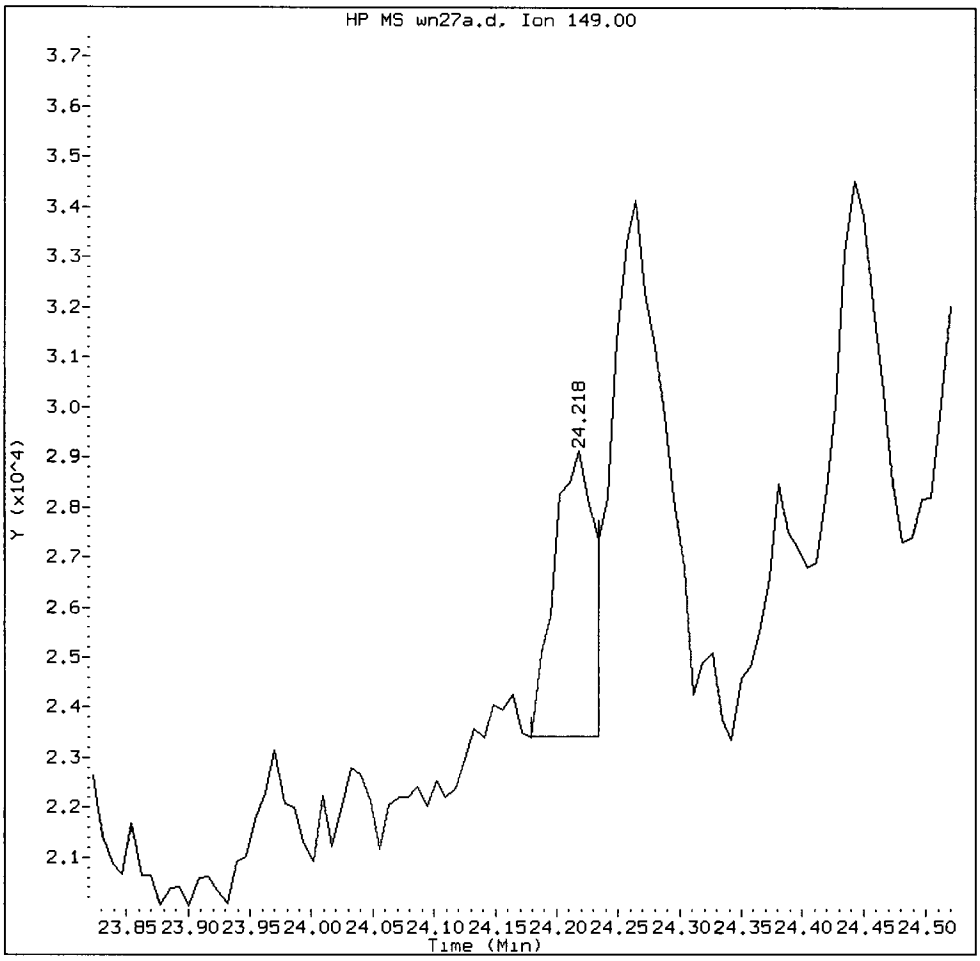






WN27A, /chem1/nt10.i/20130507.b/wn27a.d

Di-n-octylphthalate Amount: 0.29 Area: 13173



MANUAL INTEGRATION for Di-n-octylphthalate

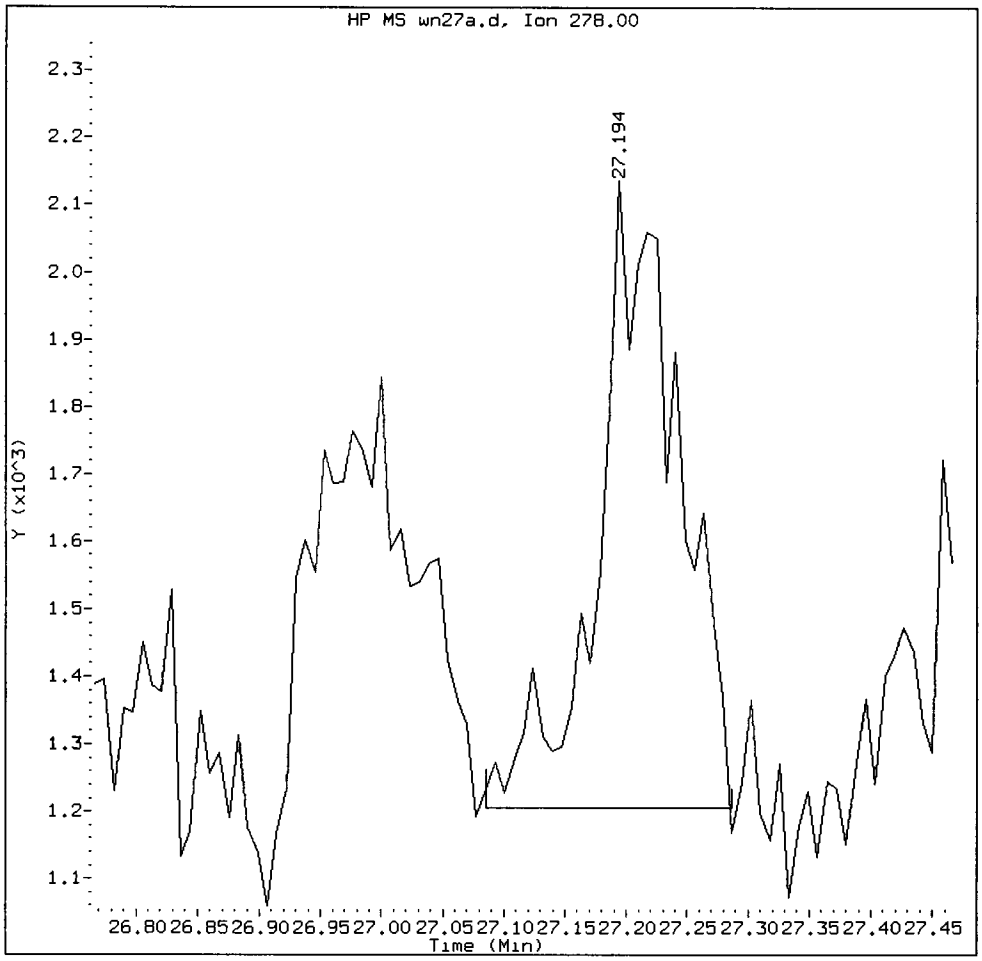
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/10/13

WN27A, /chem1/nt10.i/20130507.b/wn27a.d

Dibenzo(a,h)anthracene Amount: 0.13 Area: 4308



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

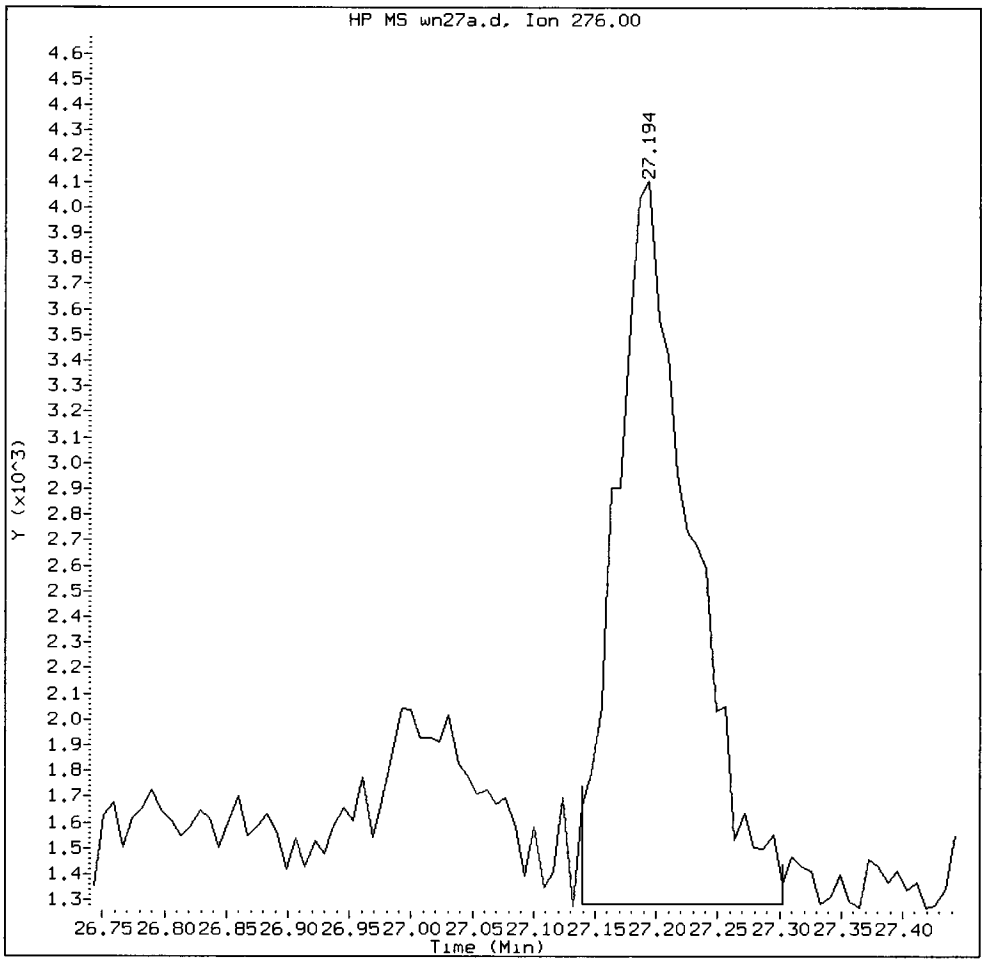
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/10/13

WN27A, /chem1/nt10.i/20130507.b/wn27a.d

Indeno(1,2,3-cd)pyrene Amount: 0.28 Area: 12052



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: JZ Date: 8/14/13

WN27 439A BC 8/16/13

CO-ELUTION SUMMARY FOR FILE - wn27a.d

Lab ID: WN27A, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS
24.760	Benzo(k)fluoranthene and Benzo(b)fluoranthene
27.194	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
27.194	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

WN27: 440R BL 8/14/13

Analytical Resources, Inc.

YZ 8/14/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130507.b/wn27ams.d
Lab Smp Id: WN27AMS Client Smp ID: CG-MH-010-20130 MS
Inj Date : 07-MAY-2013 19:53
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN27AMS,3
Misc Info : 13-8552
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 14-Aug-2013 10:01 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 14 QC Sample: MS
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	40.40000	% 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	5.883	5.867	(0.724)	18753	1.27469	641.6
$	2 Phenol-d5	99	7.567	7.567	(0.931)	25627	1.34614	677.6
	3 Phenol	94	7.590	7.583	(0.934)	21523	1.01004	508.4
$	5 2-Chlorophenol-d4	132	7.760	7.760	(0.955)	19635	1.35872	683.9
	4 Bis(2-Chloroethyl)ether	93	7.691	7.706	(0.947)	12996	0.84809	426.9
	6 2-Chlorophenol	128	7.783	7.791	(0.958)	13203	0.80343	404.4
	7 1,3-Dichlorobenzene	146	8.047	8.055	(0.990)	12897	0.78209	393.7
*	8 1,4-Dichlorobenzene-d4	152	8.124	8.132	(1.000)	41218	4.00000	
	9 1,4-Dichlorobenzene	146	8.155	8.163	(1.004)	13612	0.83744	421.5
$	10 1,2-Dichlorobenzene-d4	152	8.489	8.497	(1.045)	8520	0.81962	412.6
	12 1,2-Dichlorobenzene	146	8.520	8.528	(1.049)	13362	0.85861	432.2
	11 Benzyl alcohol	108	8.450	8.458	(1.040)	8408	0.93800	472.1
	14 2,2'-oxybis(1-Chloropropane)	121	8.768	8.784	(1.079)	4460	0.94301	474.7
	13 2-Methylphenol	108	8.737	8.738	(1.075)	12816	0.83579	420.7

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	9.133	9.141	(1.124)	5590	0.82195	413.7
	16 N-Nitroso-di-n-propylamine	70	9.048	9.056	(1.114)	10431	1.08958	548.4
	15 4-Methylphenol	108	9.040	9.033	(1.113)	27370	1.75057	881.2
$	18 Nitrobenzene-d5	82	9.273	9.289	(0.864)	14541	0.85914	432.5
	19 Nitrobenzene	77	9.312	9.320	(0.868)	13842	0.88584	445.9
	20 Isophorone	82	9.808	9.816	(0.914)	26819	0.91248	459.3
	21 2-Nitrophenol	139	9.979	9.987	(0.930)	7339	0.83779	421.7
	22 2,4-Dimethylphenol	107	10.126	10.126	(0.944)	53497	3.32118	1672
	23 Bis(2-Chloroethoxy)methane	93	10.311	10.319	(0.961)	17697	1.02097	513.9
	24 Benzoic acid	105	10.342	10.450	(0.964)	51811	3.72882	1877
	25 2,4-Dichlorophenol	162	10.488	10.488	(0.978)	39103	2.63721	1327
	26 1,2,4-Trichlorobenzene	180	10.650	10.658	(0.993)	13864	0.95665	481.5
*	27 Naphthalene-d8	136	10.727	10.735	(1.000)	160389	4.00000	
	28 Naphthalene	128	10.774	10.774	(1.004)	41464	0.97103	488.8
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	11.191	11.199	(1.043)	8118	0.94298	474.7
	31 4-Chloro-3-methylphenol	107	12.050	12.042	(1.123)	44578	3.41750	1720
	32 2-Methylnaphthalene	142	12.259	12.267	(1.143)	30233	1.06592	536.5
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	12.955	12.955	(0.889)	34278	3.10574	1563
	35 2,4,5-Trichlorophenol	196	13.040	13.033	(0.895)	36097	3.17263	1597
$	36 2-Fluorobiphenyl	172	13.126	13.126	(0.901)	34498	0.94260	474.5
	37 2-Chloronaphthalene	162	13.304	13.311	(0.913)	29882	1.02557	516.2
	38 2-Nitroaniline	65	13.621	13.629	(0.935)	25251	3.59064	1807
	39 Dimethylphthalate	163	14.124	14.132	(0.970)	36959	1.17410	591.0
	40 Acenaphthylene	152	14.217	14.225	(0.976)	49247	0.99654	501.6
	41 2,6-Dinitrotoluene	165	14.248	14.256	(0.978)	26800	3.63360	1829
*	42 Acenaphthene-d10	164	14.565	14.565	(1.000)	104861	4.00000	
	43 3-Nitroaniline	138	14.495	14.550	(0.995)	2027	0.33290	167.6
	44 Acenaphthene	153	14.627	14.635	(1.004)	30659	1.02948	518.2
	45 2,4-Dinitrophenol	184	14.766	14.774	(1.014)	10529	1.63767	824.3
	46 Dibenzofuran	168	14.982	14.990	(1.029)	43758	1.07458	540.9
	47 4-Nitrophenol	109	14.990	14.975	(1.029)	11609	2.55549	1286
	48 2,4-Dinitrotoluene	165	15.106	15.114	(1.037)	33994	3.57345	1799
	50 Diethylphthalate	149	15.694	15.709	(1.077)	34359	1.08622	546.8
	49 Fluorene	166	15.740	15.748	(1.081)	34847	1.00287	504.8
	51 4-Chlorophenyl-phenylether	204	15.779	15.787	(1.083)	18455	1.08046	543.9
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	15.995	16.003	(0.899)	27459	3.30367	1663
	54 N-Nitrosodiphenylamine	169	16.056	16.064	(0.902)	27161	1.34274	675.9
$	55 2,4,6-Tribromophenol	330	16.319	16.326	(1.120)	8981	1.61953	815.2
	56 4-Bromophenyl-phenylether	248	16.843	16.851	(0.947)	10001	1.01150	509.1
	57 Hexachlorobenzene	284	17.144	17.144	(0.963)	10679	0.90520	455.6
	58 Pentachlorophenol	266	17.554	17.555	(0.987)	19678	2.37628	1196
*	59 Phenanthrene-d10	188	17.794	17.794	(1.000)	174739	4.00000	
	60 Phenanthrene	178	17.841	17.849	(1.003)	64478	1.35280	680.9
	61 Anthracene	178	17.941	17.941	(1.008)	46084	0.94378	475.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	18.344	18.336	(1.031)	41573	1.40165	705.5
63	Di-n-butylphthalate	149	19.303	19.295	(1.085)	62553	1.24098	624.7
64	Fluoranthene	202	20.371	20.348	(1.145)	84014	1.49766	753.9
65	Pyrene	202	20.781	20.765	(0.903)	98033	1.90418	958.5
$ 66	Terphenyl-d14	244	21.144	21.129	(0.919)	31710	0.97896	492.8
67	Butylbenzylphthalate	149	22.135	22.112	(0.962)	35786	2.03548	1025
68	Benzo(a)anthracene	228	22.987	22.956	(0.999)	54513	1.17013	589.0
* 69	Chrysene-d12	240	23.018	22.987	(1.000)	166399	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.057	23.026	(1.002)	69665	1.65242	831.8
72	bis(2-Ethylhexyl)phthalate	149	23.227	23.189	(0.959)	719711	25.2905	12730(R)
* 134	Di-n-octylphthalate-d4	153	24.218	24.164	(1.000)	214048	4.00000	
73	Di-n-octylphthalate	149	24.226	24.172	(1.000)	63805	1.29465	651.7(M)
74	Benzo(b)fluoranthene	252	24.799	24.714	(0.979)	114555	2.40512	1211
75	Benzo(k)fluoranthene	252	24.799	24.745	(0.979)	114555	2.28344	1149
76	Benzo(a)pyrene	252	25.256	25.186	(0.997)	49608	1.21913	613.7
* 77	Perylene-d12	264	25.341	25.271	(1.000)	160390	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.202	27.093	(1.073)	36771	0.78436	394.8(M)
79	Dibenzo(a,h)anthracene	278	27.217	27.116	(1.074)	26419	0.73464	369.8(M)
80	Benzo(g,h,i)perylene	276	27.730	27.613	(1.094)	36291	0.89473	450.4
90	N-Nitrosodimethylamine	74	3.651	3.636	(0.449)	18290	1.94781	980.4
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.697	3.636	(0.455)	8860	1.07345	540.3
105	1-methylnaphthalene	142	12.483	12.491	(1.164)	28559	1.09790	552.6
111	Azobenzene (1,2-DP-Hydrazine)	77	16.118	16.126	(1.107)	34286	1.05716	532.1
187	Total Benzofluoranthenes	252	24.799	24.745	(0.979)	112865	2.44033	1228
99	Perylene	252	25.387	25.310	(1.002)	26186	0.56295	283.4
98	Retene	219	21.439	21.415	(0.931)	4110	0.21094	106.2(H)
120	2,3,4,6-Tetrachlorophenol	232	15.377	15.384	(1.056)	10003	1.18198	595.0

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn27ams.d
Lab Smp Id: WN27AMS
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8552

Calibration Date: 07-MAY-2013
Calibration Time: 12:34
Client Smp ID: CG-MH-010-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41218	-8.91
27 Naphthalene-d8	166754	83377	333508	160389	-3.82
42 Acenaphthene-d10	106910	53455	213820	104861	-1.92
59 Phenanthrene-d10	179783	89892	359566	174739	-2.81
69 Chrysene-d12	192841	96420	385682	166399	-13.71
134 Di-n-octylphthala	229567	114784	459134	214048	-6.76
77 Perylene-d12	184310	92155	368620	160390	-12.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.10
27 Naphthalene-d8	10.74	10.24	11.24	10.73	-0.07
42 Acenaphthene-d10	14.57	14.07	15.07	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.99	22.49	23.49	23.02	0.13
134 Di-n-octylphthala	24.16	23.66	24.66	24.22	0.22
77 Perylene-d12	25.27	24.77	25.77	25.34	0.28

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WN27AMS
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8552

Client SDG: WN27
Fraction: SV
Client Smp ID: CG-MH-010-20130 MS
Operator: VTS/YZ
SampleType: MS
Quant Type: ISTD

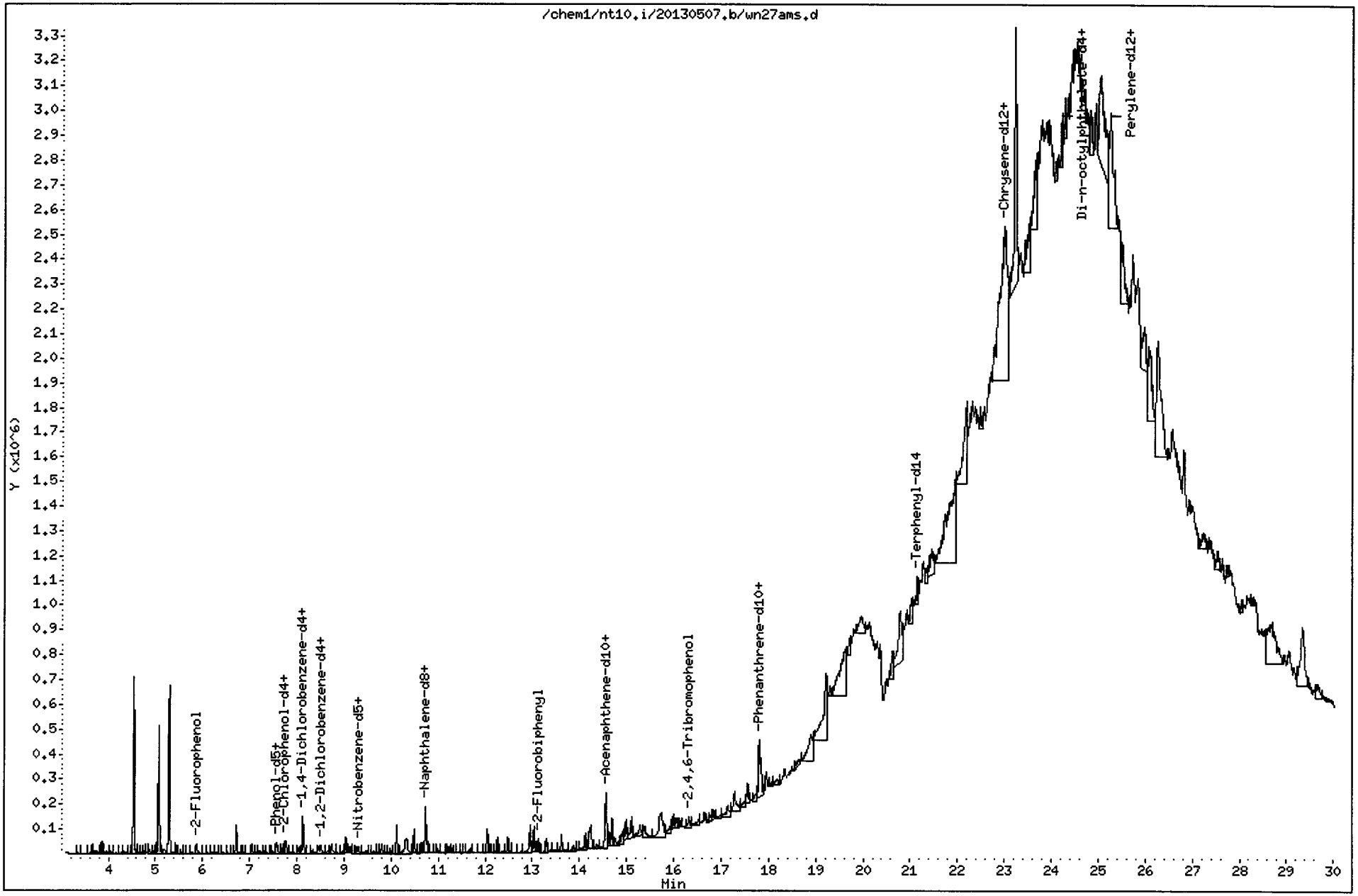
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	838.9	508.4	60.60	34-105
7	1,3-Dichlorobenzen	838.9	393.7	46.93	40-100
9	1,4-Dichlorobenzen	838.9	421.5	50.25	39-100
11	Benzyl alcohol	838.9	472.1	56.28	19-117
12	1,2-Dichlorobenzen	838.9	432.2	51.52	40-100
13	2-Methylphenol	838.9	420.7	50.15	28-100
15	4-Methylphenol	1678	881.2	52.52	29-100
17	Hexachloroethane	838.9	413.7	49.32	38-100
22	2,4-Dimethylphenol	2517	1672	66.42	10-100
24	Benzoic acid	4614	1877	40.68	10-107
26	1,2,4-Trichloroben	838.9	481.5	57.40	35-103
28	Naphthalene	838.9	488.8	58.26	43-100
30	Hexachlorobutadien	838.9	474.7	56.58	37-100
32	2-Methylnaphthalen	838.9	536.5	63.95	43-100
39	Dimethylphthalate	838.9	591.0	70.45	43-114
40	Acenaphthylene	838.9	501.6	59.79	42-102
44	Acenaphthene	838.9	518.2	61.77	45-100
46	Dibenzofuran	838.9	540.9	64.47	43-103
49	Fluorene	838.9	504.8	60.17	45-107
50	Diethylphthalate	838.9	546.8	65.17	50-120
54	N-Nitrosodiphenyla	838.9	675.9	80.56	36-111
57	Hexachlorobenzene	838.9	455.6	54.31	33-113
58	Pentachlorophenol	2517	1196	47.53	16-120
60	Phenanthrene	838.9	680.9	81.17	49-112
61	Anthracene	838.9	475.1	56.63	45-106
63	Di-n-butylphthalat	838.9	624.7	74.46	48-126
64	Fluoranthene	838.9	753.9	89.86	53-118
65	Pyrene	838.9	958.5	114.25	48-121
67	Butylbenzylphthala	838.9	1025	122.13	45-132
68	Benzo(a)anthracene	838.9	589.0	70.21	49-115
71	Chrysene	838.9	831.8	99.15	47-115
72	bis(2-Ethylhexyl)p	838.9	12730	1517.43*	34-130
73	Di-n-octylphthalat	838.9	651.7	77.68	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	838.9	613.7	73.15	42-113
78 Indeno(1,2,3-cd)py	838.9	394.8	47.06	42-123
79 Dibenzo(a,h)anthra	838.9	369.8	44.08	30-133
80 Benzo(g,h,i)peryle	838.9	450.4	53.68	38-126
105 1-methylnaphthalen	838.9	552.6	65.87	42-100
187 Total Benzofluoran	1678	1228	73.21	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1258	641.6	50.99	30-160
$ 2 Phenol-d5	1258	677.6	53.85	30-160
$ 5 2-Chlorophenol-d4	1258	683.9	54.35	30-160
$ 10 1,2-Dichlorobenzen	838.9	412.6	49.18	30-160
$ 18 Nitrobenzene-d5	838.9	432.5	51.55	30-160
$ 36 2-Fluorobiphenyl	838.9	474.5	56.56	30-160
$ 55 2,4,6-Tribromophen	1258	815.2	64.78	30-160
$ 66 Terphenyl-d14	838.9	492.8	58.74	30-160

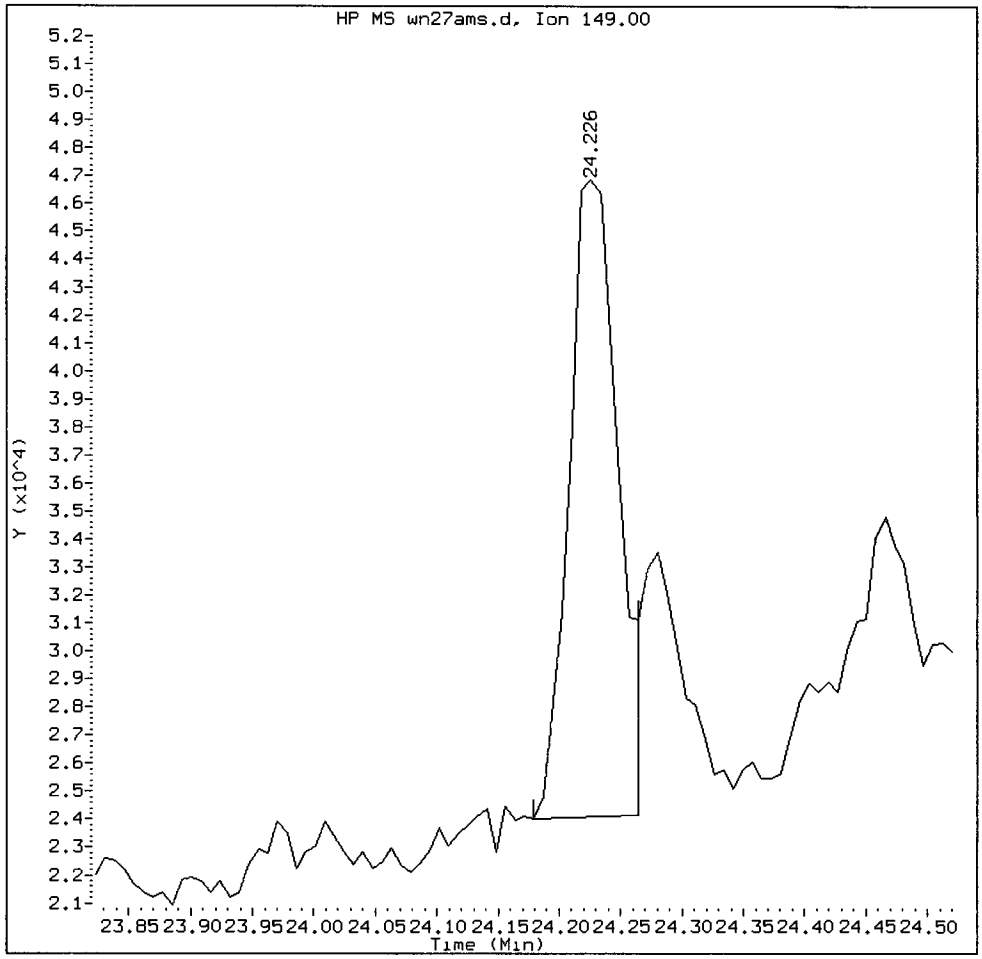
Data File: /chem1/nt10.i/20130507.b/wn27ams.d
Date : 07-MAY-2013 19:53
Client ID: CG-MH-010-20130 MS
Sample Info: WN27AMS,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WN27AMS, /chem1/nt10.i/20130507.b/wn27ams.d

Di-n-octylphthalate Amount: 1.29 Area: 63805



MANUAL INTEGRATION for Di-n-octylphthalate

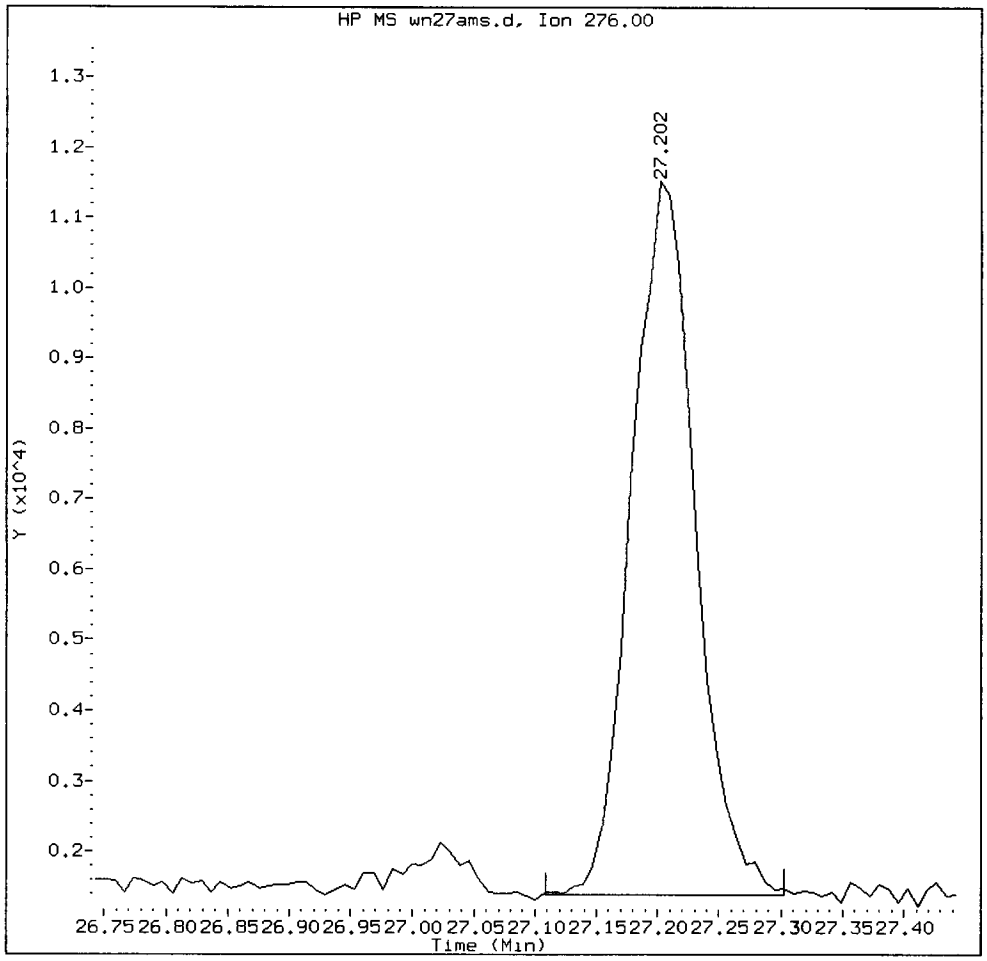
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/10/13

WN27AMS, /chem1/nt10.i/20130507.b/wn27ams.d

Indeno(1,2,3-cd)pyrene Amount: 0.78 Area: 36771



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

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

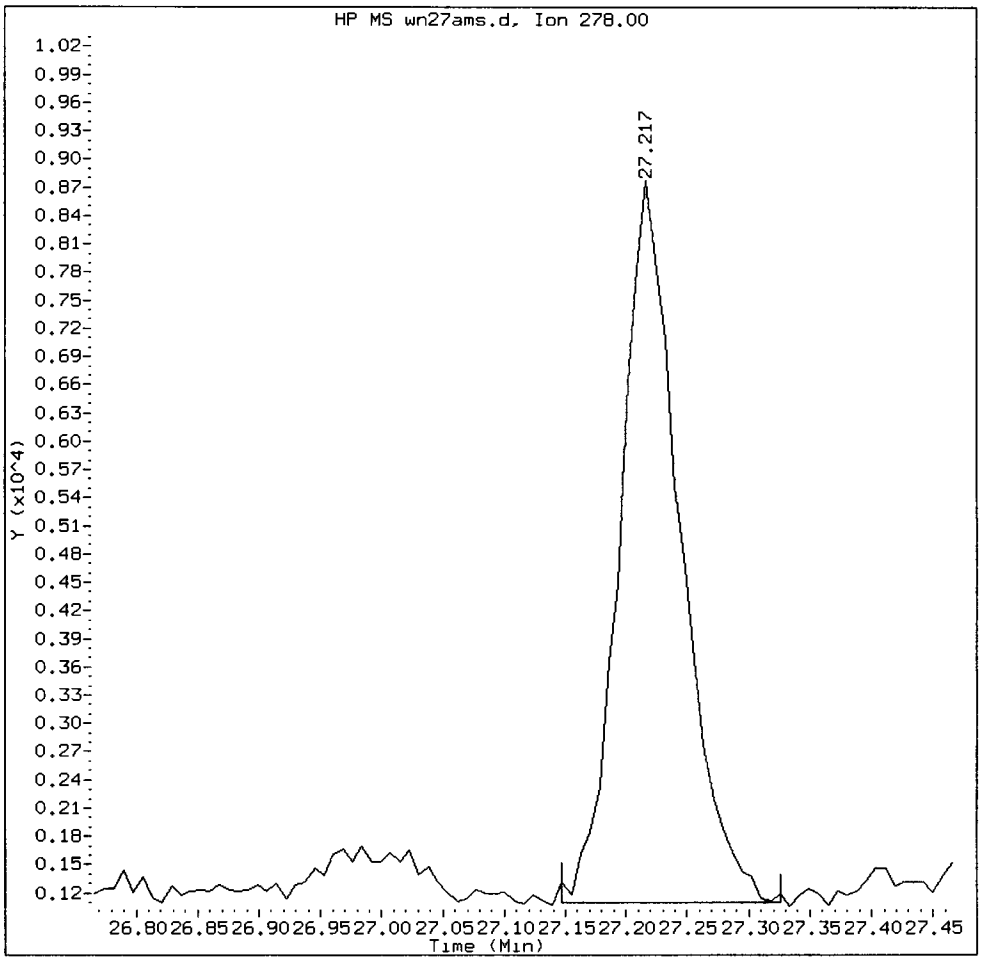
5. Other _____

Analyst: YZ Date: 8/14/13

WN27:448A # BC 8/16/13

WN27AMS, /chem1/nt10.i/20130507.b/wn27ams.d

Dibenzo(a,h)anthracene Amount: 0.73 Area: 26419



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other _____

Analyst: YZ Date: 5/10/13

CO-ELUTION SUMMARY FOR FILE - wn27ams.d

Lab ID: WN27AMS, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS
24.799	Benzo(k)fluoranthene and Benzo(b)fluoranthene

WN27: 45DR BC 8/16/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 8/14/13

Data file : /chem1/nt10.i/20130507.b/wn27amsd.d
Lab Smp Id: WN27AMSD Client Smp ID: CG-MH-010-20130 MSD
Inj Date : 07-MAY-2013 20:30
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN27AMSD,3
Misc Info : 13-8552
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 14-Aug-2013 10:01 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 15 QC Sample: MSD
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	40.40000	% 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	5.883	5.867	(0.724)	19713	1.49573	752.9
$	2 Phenol-d5	99	7.567	7.567	(0.931)	27335	1.60280	806.8
	3 Phenol	94	7.590	7.583	(0.934)	21666	1.13496	571.3
$	5 2-Chlorophenol-d4	132	7.760	7.760	(0.955)	20820	1.60823	809.5
	4 Bis(2-Chloroethyl)ether	93	7.699	7.706	(0.948)	14686	1.06981	538.5
	6 2-Chlorophenol	128	7.784	7.791	(0.958)	14952	1.01564	511.2
	7 1,3-Dichlorobenzene	146	8.054	8.055	(0.991)	14653	0.99189	499.3
*	8 1,4-Dichlorobenzene-d4	152	8.124	8.132	(1.000)	36925	4.00000	
	9 1,4-Dichlorobenzene	146	8.155	8.163	(1.004)	15196	1.04359	525.3
$	10 1,2-Dichlorobenzene-d4	152	8.489	8.497	(1.045)	8986	0.96495	485.7
	12 1,2-Dichlorobenzene	146	8.520	8.528	(1.049)	15253	1.09408	550.7
	11 Benzyl alcohol	108	8.450	8.458	(1.040)	9499	1.18292	595.4
	14 2,2'-oxybis(1-Chloropropane)	121	8.769	8.784	(1.079)	5037	1.18883	598.4
	13 2-Methylphenol	108	8.745	8.738	(1.076)	14722	1.07172	539.5
	17 Hexachloroethane	117	9.133	9.141	(1.124)	6247	1.02535	516.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
16	N-Nitroso-di-n-propylamine	70	9.048	9.056	(1.114)	11366	1.32528	667.1
15	4-Methylphenol	108	9.040	9.033	(1.113)	31132	2.22269	1119
$ 18	Nitrobenzene-d5	82	9.281	9.289	(0.865)	15775	1.01234	509.6
19	Nitrobenzene	77	9.312	9.320	(0.868)	15617	1.08553	546.4
20	Isophorone	82	9.801	9.816	(0.914)	29902	1.10502	556.2
21	2-Nitrophenol	139	9.979	9.987	(0.930)	8464	1.04946	528.3
22	2,4-Dimethylphenol	107	10.126	10.126	(0.944)	61334	4.13576	2082
23	Bis(2-Chloroethoxy)methane	93	10.304	10.319	(0.960)	20077	1.25807	633.3
24	Benzoic acid	105	10.342	10.450	(0.964)	50282	3.92963	1978
25	2,4-Dichlorophenol	162	10.488	10.488	(0.978)	44148	3.23398	1628
26	1,2,4-Trichlorobenzene	180	10.650	10.658	(0.993)	15538	1.16453	586.2
* 27	Naphthalene-d8	136	10.728	10.735	(1.000)	147667	4.00000	
28	Naphthalene	128	10.766	10.774	(1.004)	47479	1.20768	607.9
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	11.191	11.199	(1.043)	9225	1.16389	585.9
31	4-Chloro-3-methylphenol	107	12.050	12.042	(1.123)	49723	4.14034	2084
32	2-Methylnaphthalene	142	12.259	12.267	(1.143)	33535	1.28420	646.4
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					
34	2,4,6-Trichlorophenol	196	12.955	12.955	(0.890)	38162	3.73910	1882
35	2,4,5-Trichlorophenol	196	13.033	13.033	(0.895)	37325	3.54759	1786
$ 36	2-Fluorobiphenyl	172	13.118	13.126	(0.901)	37691	1.11367	560.6
37	2-Chloronaphthalene	162	13.304	13.311	(0.914)	34582	1.28349	646.0
38	2-Nitroaniline	65	13.621	13.629	(0.936)	27943	4.29687	2163
39	Dimethylphthalate	163	14.124	14.132	(0.970)	43175	1.48320	746.6
40	Acenaphthylene	152	14.217	14.225	(0.977)	54313	1.18852	598.2
41	2,6-Dinitrotoluene	165	14.248	14.256	(0.979)	29089	4.26498	2147
* 42	Acenaphthene-d10	164	14.557	14.565	(1.000)	96968	4.00000	
43	3-Nitroaniline	138	14.495	14.550	(0.996)	2244	0.39854	200.6(H)
44	Acenaphthene	153	14.627	14.635	(1.005)	34482	1.25210	630.3
45	2,4-Dinitrophenol	184	14.766	14.774	(1.014)	14145	2.37656	1196
46	Dibenzofuran	168	14.982	14.990	(1.029)	49172	1.30582	657.3
47	4-Nitrophenol	109	14.990	14.975	(1.030)	11364	2.70461	1361
48	2,4-Dinitrotoluene	165	15.106	15.114	(1.038)	36867	4.19091	2110
50	Diethylphthalate	149	15.694	15.709	(1.078)	38328	1.31032	659.6
49	Fluorene	166	15.740	15.748	(1.081)	41843	1.30223	655.5
51	4-Chlorophenyl-phenylether	204	15.779	15.787	(1.084)	20653	1.30756	658.2
52	4-Nitroaniline	138	15.918	15.895	(1.093)	5451	0.93200	469.1
53	4,6-Dinitro-2-methylphenol	198	15.987	16.003	(0.898)	32454	4.17510	2102
54	N-Nitrosodiphenylamine	169	16.057	16.064	(0.902)	28729	1.51940	764.8
$ 55	2,4,6-Tribromophenol	330	16.319	16.326	(1.121)	9616	1.87518	943.9
56	4-Bromophenyl-phenylether	248	16.843	16.851	(0.947)	13469	1.45735	733.6
57	Hexachlorobenzene	284	17.144	17.144	(0.963)	12242	1.11012	558.8
58	Pentachlorophenol	266	17.554	17.555	(0.987)	22251	2.87456	1447
* 59	Phenanthrene-d10	188	17.794	17.794	(1.000)	163337	4.00000	
60	Phenanthrene	178	17.841	17.849	(1.003)	68418	1.53567	773.0
61	Anthracene	178	17.941	17.941	(1.008)	53620	1.17477	591.3
62	Carbazole	167	18.336	18.336	(1.030)	46542	1.67872	845.0

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
63 Di-n-butylphthalate	149	19.295	19.295	(1.084)	64976	1.37903	694.1
64 Fluoranthene	202	20.371	20.348	(1.145)	91309	1.74133	876.5
65 Pyrene	202	20.781	20.765	(0.903)	105529	2.19458	1105(R)
$ 66 Terphenyl-d14	244	21.137	21.129	(0.919)	34238	1.13168	569.6
67 Butylbenzylphthalate	149	22.128	22.112	(0.962)	37198	2.26526	1140(R)
68 Benzo(a)anthracene	228	22.979	22.956	(0.999)	60666	1.39420	701.8
* 69 Chrysene-d12	240	23.003	22.987	(1.000)	155420	4.00000	
70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71 Chrysene	228	23.049	23.026	(1.002)	75041	1.90568	959.2
72 bis(2-Ethylhexyl)phthalate	149	23.204	23.189	(0.959)	721093	27.7290	13960(R)
* 134 Di-n-octylphthalate-d4	153	24.195	24.164	(1.000)	195600	4.00000	
73 Di-n-octylphthalate	149	24.203	24.172	(1.000)	63650	1.41331	711.4(M)
74 Benzo(b)fluoranthene	252	24.760	24.714	(0.978)	67544	1.63152	821.2
75 Benzo(k)fluoranthene	252	24.776	24.745	(0.979)	74818	1.71580	863.7(M)
76 Benzo(a)pyrene	252	25.232	25.186	(0.997)	54752	1.54804	779.2
* 77 Perylene-d12	264	25.318	25.271	(1.000)	139410	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	27.186	27.093	(1.074)	39021	0.95762	482.0(M)
79 Dibenzo(a,h)anthracene	278	27.194	27.116	(1.074)	27742	0.88752	446.7(M)
80 Benzo(g,h,i)perylene	276	27.714	27.613	(1.095)	39243	1.11311	560.3
90 N-Nitrosodimethylamine	74	3.651	3.636	(0.449)	20492	2.43604	1226
91 Aniline	93	Compound Not Detected.					
93 Benzidine	184	Compound Not Detected.					
103 Pyridine	79	3.682	3.636	(0.453)	16621	2.24786	1131
105 1-methylnaphthalene	142	12.491	12.491	(1.164)	32349	1.35074	679.9
111 Azobenzene (1,2-DP-Hydrazine)	77	16.118	16.126	(1.107)	36651	1.22207	615.1
187 Total Benzofluoranthenes	252	24.760	24.745	(0.978)	125527	3.12256	1572
99 Perylene	252	25.356	25.310	(1.002)	27922	0.69061	347.6
98 Retene	219	21.439	21.415	(0.932)	4775	0.26238	132.1(H)
120 2,3,4,6-Tetrachlorophenol	232	15.377	15.384	(1.056)	11500	1.46948	739.7

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn27amsd.d
Lab Smp Id: WN27AMSD
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8552

Calibration Date: 07-MAY-2013
Calibration Time: 12:34
Client Smp ID: CG-MH-010-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	36925	-18.40
27 Naphthalene-d8	166754	83377	333508	147667	-11.45
42 Acenaphthene-d10	106910	53455	213820	96968	-9.30
59 Phenanthrene-d10	179783	89892	359566	163337	-9.15
69 Chrysene-d12	192841	96420	385682	155420	-19.41
134 Di-n-octylphthala	229567	114784	459134	195600	-14.80
77 Perylene-d12	184310	92155	368620	139410	-24.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.10
27 Naphthalene-d8	10.74	10.24	11.24	10.73	-0.07
42 Acenaphthene-d10	14.57	14.07	15.07	14.56	-0.05
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.99	22.49	23.49	23.00	0.07
134 Di-n-octylphthala	24.16	23.66	24.66	24.19	0.13
77 Perylene-d12	25.27	24.77	25.77	25.32	0.18

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WN27AMSD
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8552

Client SDG: WN27
Fraction: SV
Client Smp ID: CG-MH-010-20130 MSD
Operator: VTS/YZ
SampleType: MSD
Quant Type: ISTD

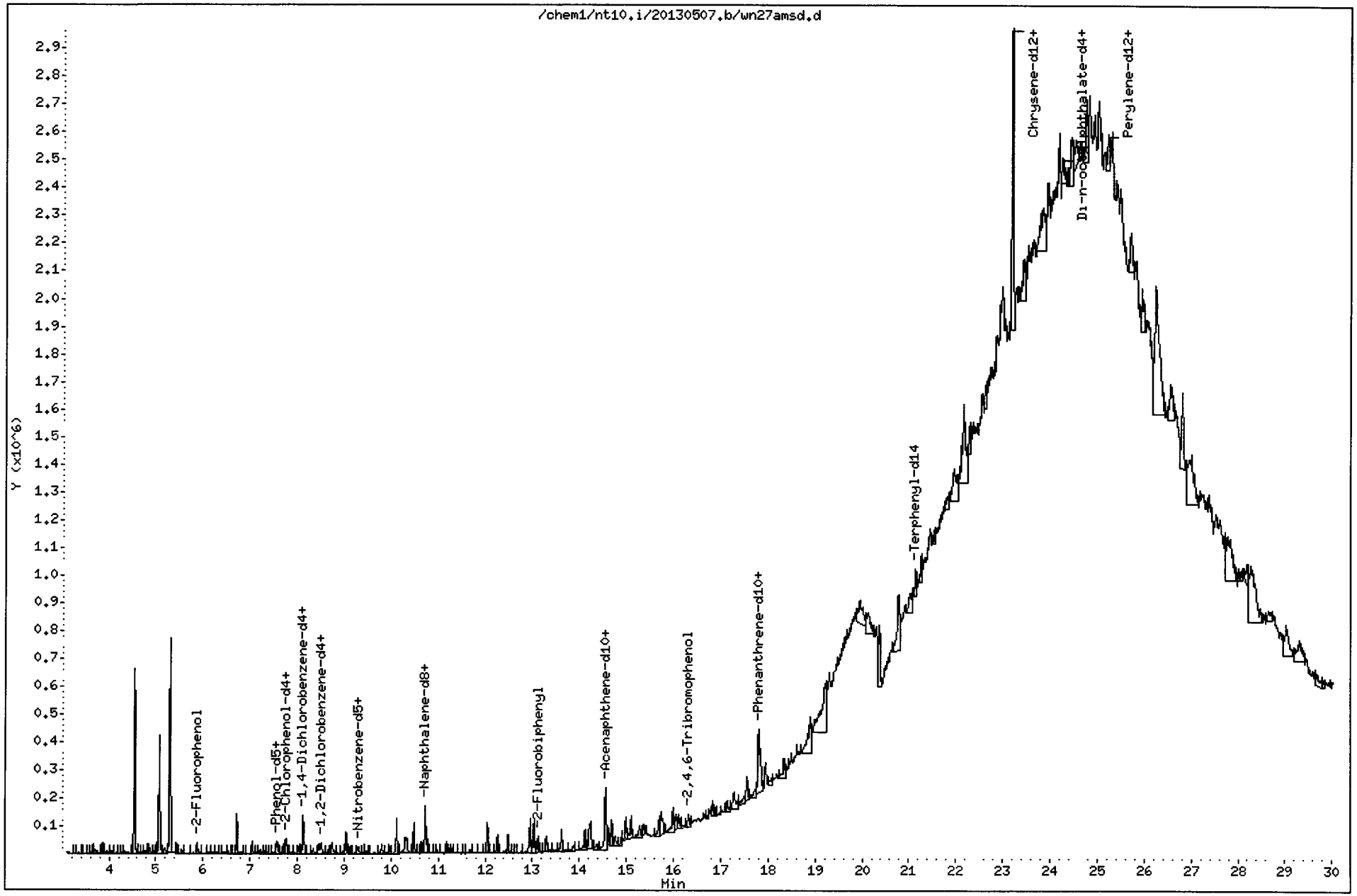
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	838.9	571.3	68.10	34-105
7 1,3-Dichlorobenzen	838.9	499.3	59.51	40-100
9 1,4-Dichlorobenzen	838.9	525.3	62.62	39-100
11 Benzyl alcohol	838.9	595.4	70.98	19-117
12 1,2-Dichlorobenzen	838.9	550.7	65.64	40-100
13 2-Methylphenol	838.9	539.5	64.30	28-100
15 4-Methylphenol	1678	1119	66.68	29-100
17 Hexachloroethane	838.9	516.1	61.52	38-100
22 2,4-Dimethylphenol	2517	2082	82.72	10-100
24 Benzoic acid	4614	1978	42.87	10-107
26 1,2,4-Trichloroben	838.9	586.2	69.87	35-103
28 Naphthalene	838.9	607.9	72.46	43-100
30 Hexachlorobutadien	838.9	585.9	69.83	37-100
32 2-Methylnaphthalen	838.9	646.4	77.05	43-100
39 Dimethylphthalate	838.9	746.6	88.99	43-114
40 Acenaphthylene	838.9	598.2	71.31	42-102
44 Acenaphthene	838.9	630.3	75.13	45-100
46 Dibenzofuran	838.9	657.3	78.35	43-103
49 Fluorene	838.9	655.5	78.13	45-107
50 Diethylphthalate	838.9	659.6	78.62	50-120
54 N-Nitrosodiphenyla	838.9	764.8	91.16	36-111
57 Hexachlorobenzene	838.9	558.8	66.61	33-113
58 Pentachlorophenol	2517	1447	57.49	16-120
60 Phenanthrene	838.9	773.0	92.14	49-112
61 Anthracene	838.9	591.3	70.49	45-106
63 Di-n-butylphthalat	838.9	694.1	82.74	48-126
64 Fluoranthene	838.9	876.5	104.48	53-118
65 Pyrene	838.9	1105	131.67*	48-121
67 Butylbenzylphthala	838.9	1140	135.92*	45-132
68 Benzo(a)anthracene	838.9	701.8	83.65	49-115
71 Chrysene	838.9	959.2	114.34	47-115
72 bis(2-Ethylhexyl)p	838.9	13960	1663.74*	34-130
73 Di-n-octylphthalat	838.9	711.4	84.80	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	838.9	779.2	92.88	42-113
78 Indeno(1,2,3-cd)py	838.9	482.0	57.46	42-123
79 Dibenzo(a,h)anthra	838.9	446.7	53.25	30-133
80 Benzo(g,h,i)peryle	838.9	560.3	66.79	38-126
105 1-methylnaphthalen	838.9	679.9	81.04	42-100
187 Total Benzofluoran	1678	1572	93.68	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1258	752.9	59.83	30-160
$ 2 Phenol-d5	1258	806.8	64.11	30-160
$ 5 2-Chlorophenol-d4	1258	809.5	64.33	30-160
$ 10 1,2-Dichlorobenzen	838.9	485.7	57.90	30-160
$ 18 Nitrobenzene-d5	838.9	509.6	60.74	30-160
$ 36 2-Fluorobiphenyl	838.9	560.6	66.82	30-160
$ 55 2,4,6-Tribromophen	1258	943.9	75.01	30-160
$ 66 Terphenyl-d14	838.9	569.6	67.90	30-160

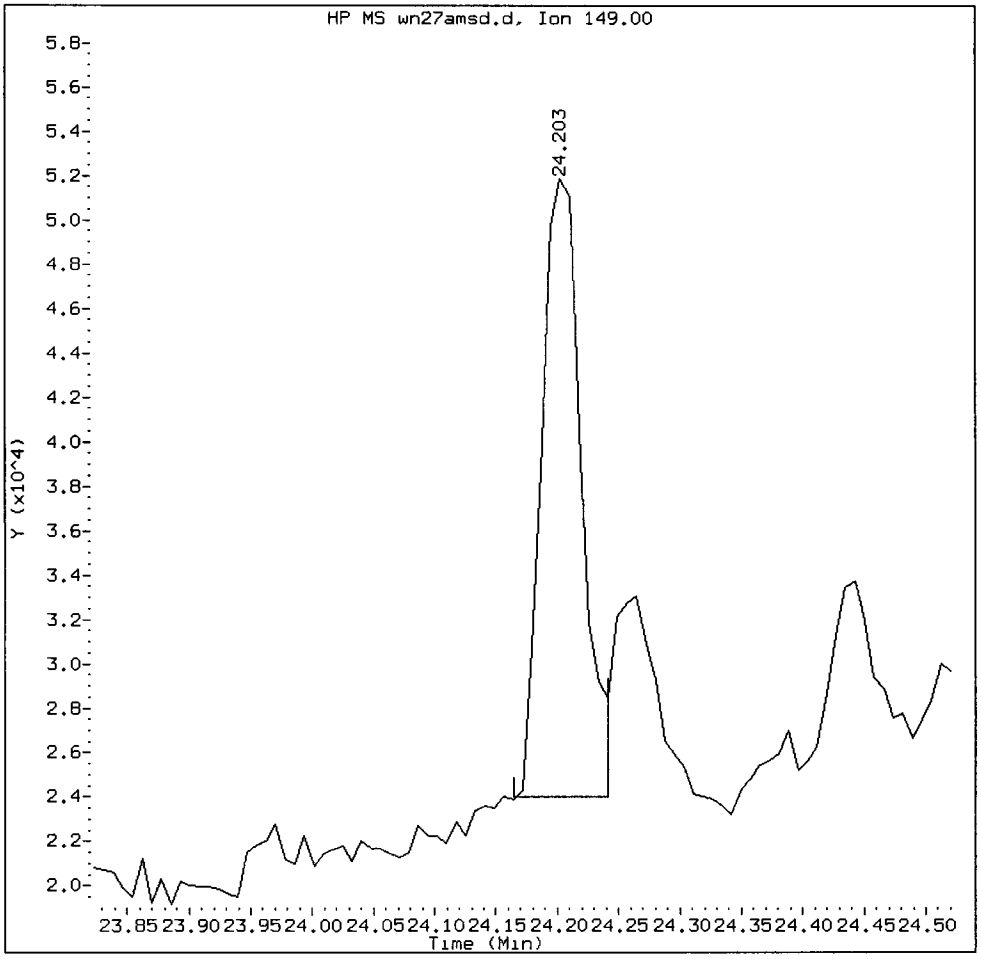
Data File: /chem1/nt10.i/20130507.b/wn27amsd.d
Date : 07-MAY-2013 20:30
Client ID: CG-MH-010-20130 MSD
Sample Info: WN27AMSD,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WN27AMSD, /chem1/nt10.i/20130507.b/wn27amsd.d

Di-n-octylphthalate Amount: 1.41 Area: 63650



MANUAL INTEGRATION for Di-n-octylphthalate

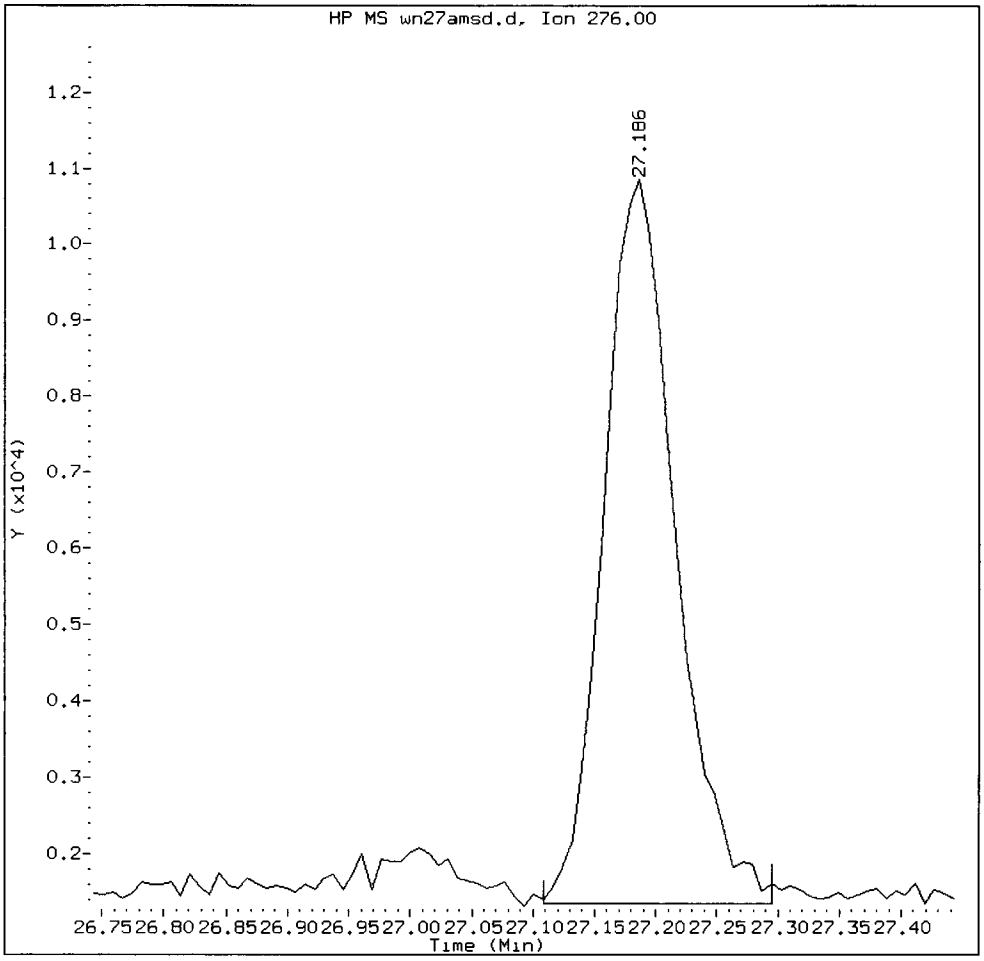
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/14/13

WN27AMSD, /chem1/nt10.i/20130507.b/wn27amsd.d

Indeno(1,2,3-cd)pyrene Amount: 0.96 Area: 39021



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

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

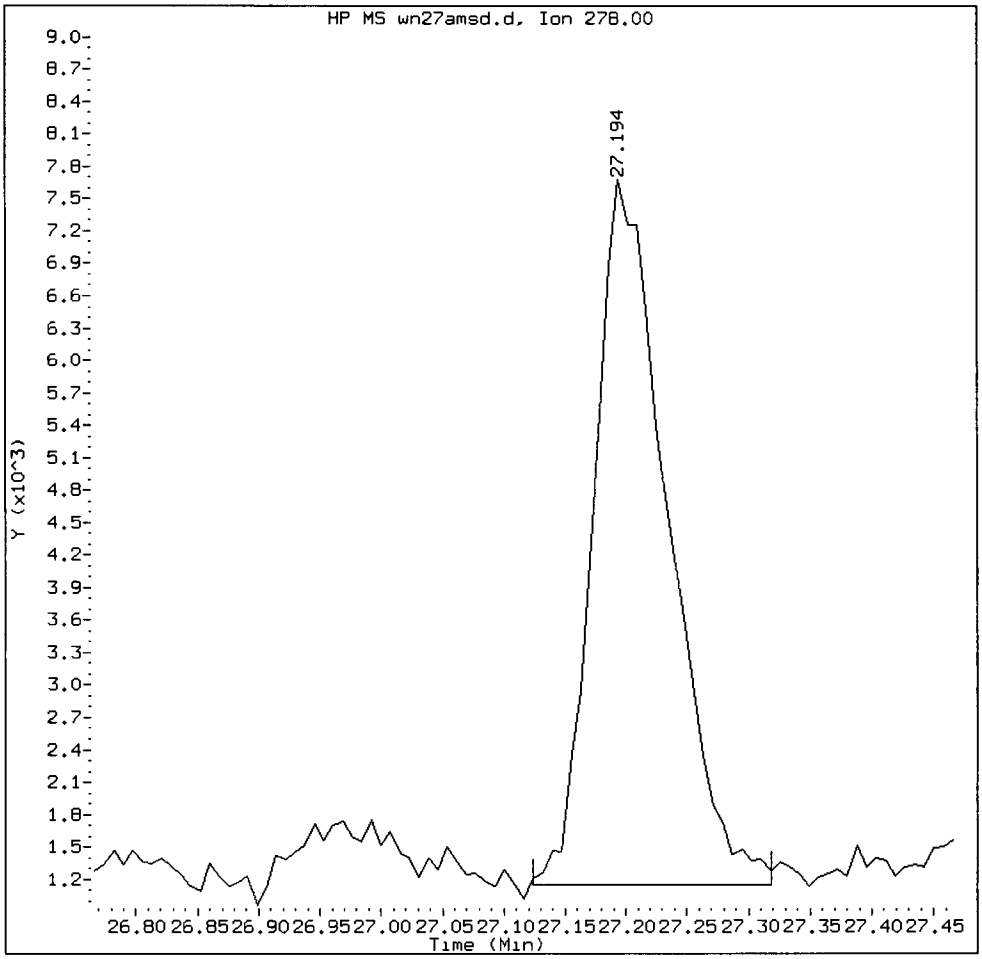
5. Other _____

Analyst: YZ Date: 8/14/13

DE
459R BC 8/6/13
WN27 ~~459A~~

WN27AMSD, /chem1/nt10.i/20130507.b/wn27amsd.d

Dibenzo(a,h)anthracene Amount: 0.89 Area: 27742



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other _____

Analyst: VZ 5/10/13 Date: 5/10/13

CO-ELUTION SUMMARY FOR FILE - wn27amsd.d

Lab ID: WN27AMSD, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

BC 8/16/13

WN27:4618

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 5/10/13 Analysis: ABN Analyst: YZ

GC Program: ABN_2 Column No: 252945 Column Type: ZB 5msi

Instrument Tune (.U or .CT.): 130284 EM Voltage: 1650

Calibration File: DF0508 Curve Date: 04/09/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 B000812	
	2073-1 1998-4.	
	2064-1	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130508.b

	Time	Filename	LabID	ClientId	DF											
1	1435	df0508.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1450	cc0508.d	CC0508		1	8.11	54414	10.70	200917	14.53	129691	17.76	221407	22.94	226704	25.22	203438	24.11	281343
3	1527	wn27a9.d	WN27A	CG-MH-010-20	9	8.10	46508	10.70	180924	14.53	111784	17.75	188992	22.94	172453	25.23	166740	24.12	218441
4	1603	wn31a9.d	WN31A	ES-TS-INF-20	9	8.10	47698	10.70	177198	14.52	107487	17.75	162964	22.93	168170	25.22	167173	24.11	220595

YZ 5/10/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130508.b

Instrument: nt10.i Date: 08-MAY-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 08-MAY-2013

Compound	%D
Carbazole	20.3
3,3'-Dichlorobenzidine	22.5

Data File: /chem1/nt10.i/20130508.b/df0508.d

Date : 08-MAY-2013 14:35

Client ID: DFTPP

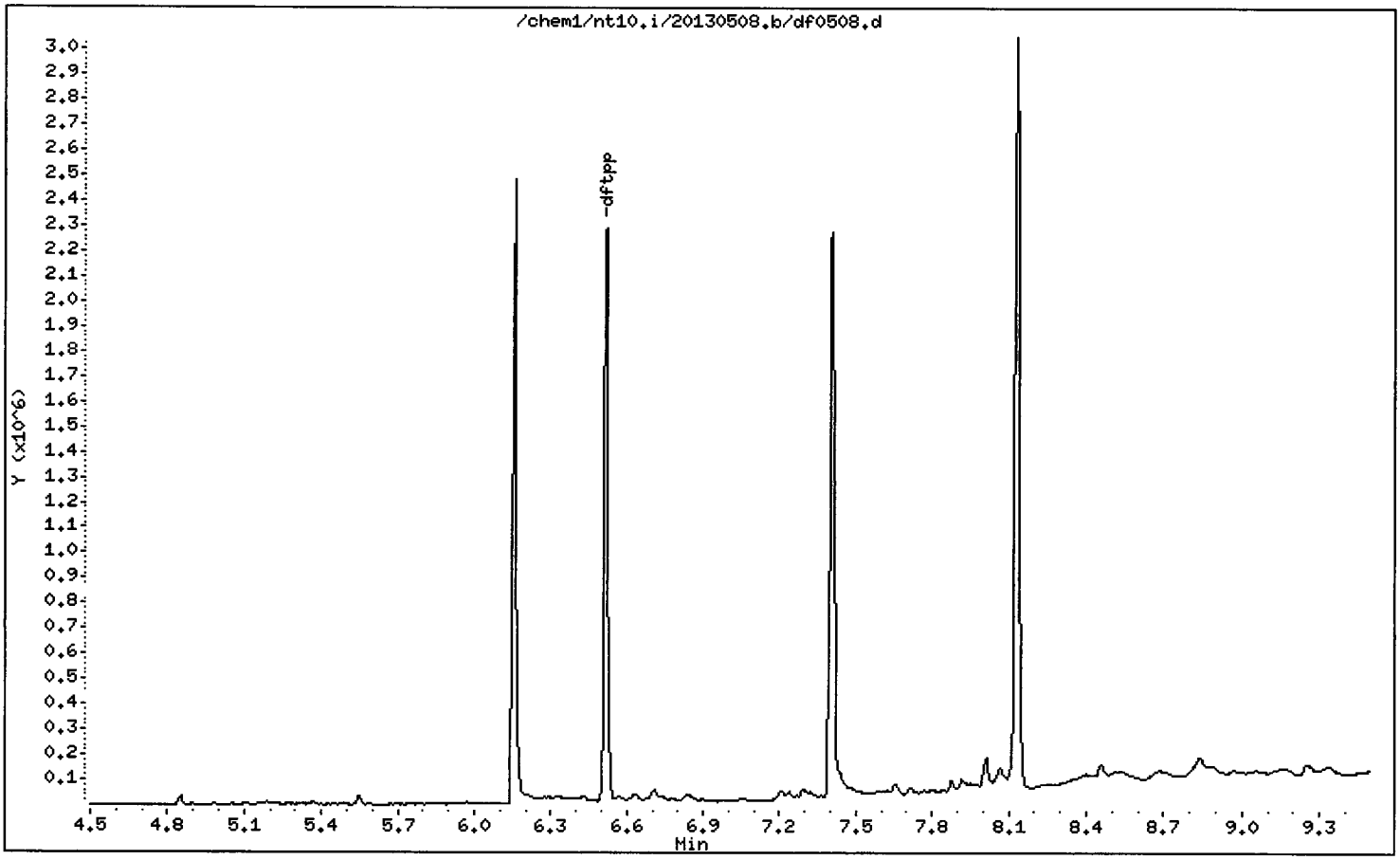
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130508.b/df0508.d

Date : 08-MAY-2013 14:35

Client ID: DFTPP

Instrument: nt10.i

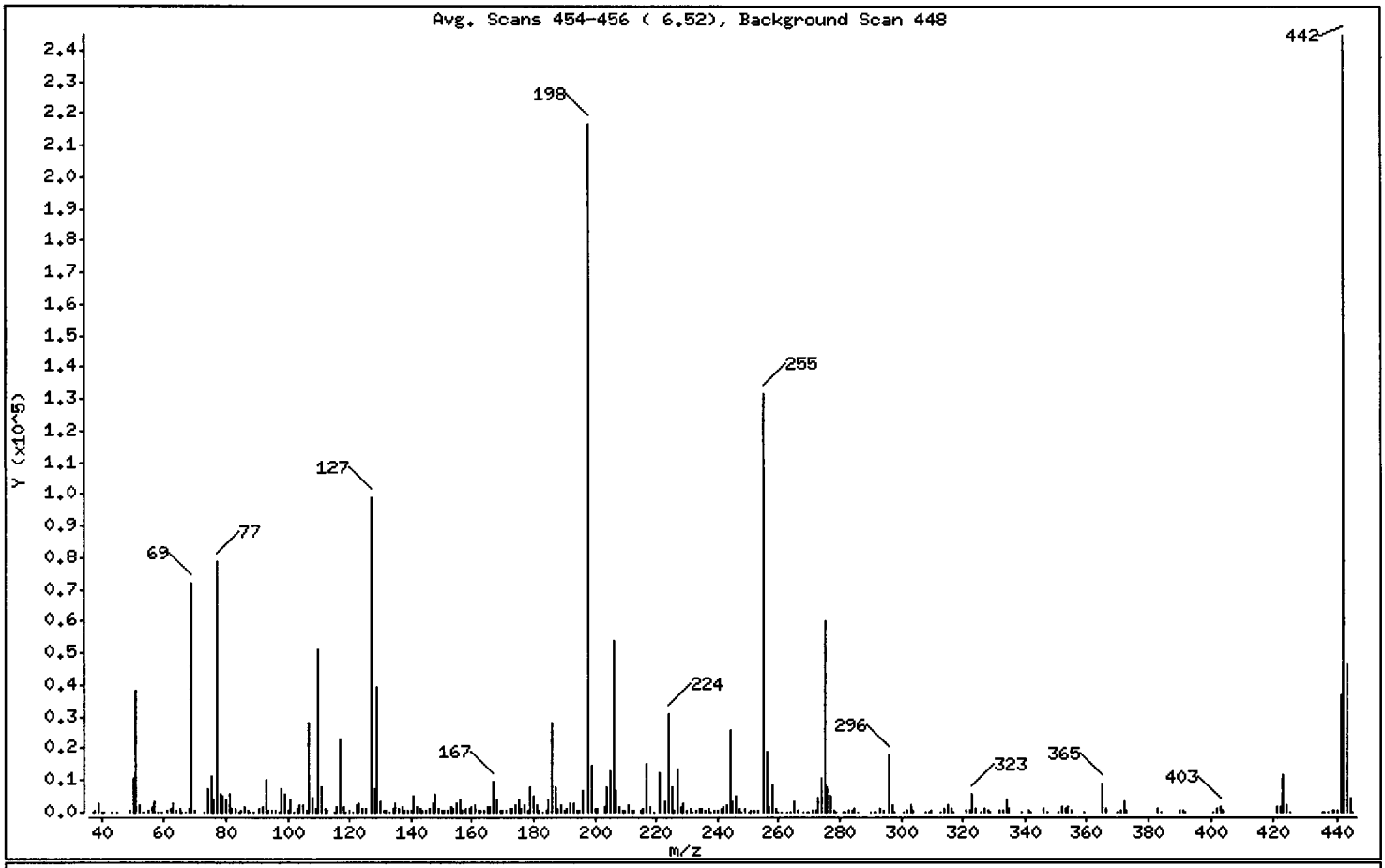
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.55
68	Less than 2.00% of mass 69	0.54 (1.63)
69	Mass 69 relative abundance	33.20
70	Less than 2.00% of mass 69	0.16 (0.50)
127	10.00 - 80.00% of mass 198	45.70
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.86
275	10.00 - 60.00% of mass 198	27.85
365	Greater than 1.00% of mass 198	4.13
441	0.01 - 24.00% of mass 442	17.24 (15.27)
442	50.00 - 200.00% of mass 198	112.88
443	15.00 - 24.00% of mass 442	21.65 (19.18)

Data File: /chem1/nt10.i/20130508.b/df0508.d

Date : 08-MAY-2013 14:35

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0508.d
Spectrum: Avg. Scans 454-456 (6.52), Background Scan 448
Location of Maximum: 442.00
Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	181	125.00	1378	205.00	13139	291.00	127
38.00	577	127.00	99200	206.00	54288	292.00	280
39.00	3001	128.00	7232	207.00	6983	293.00	1127
40.00	128	129.00	39688	208.00	1889	294.00	332
41.00	109	130.00	3544	209.00	758	296.00	18240
43.00	171	131.00	726	210.00	398	297.00	2492
45.00	60	132.00	439	211.00	2383	298.00	129
49.00	324	133.00	133	212.00	363	301.00	216
50.00	10500	134.00	1180	213.00	283	302.00	311
51.00	38104	135.00	2987	215.00	663	303.00	2092
52.00	2098	136.00	1333	216.00	1278	304.00	508
53.00	121	137.00	1421	217.00	15432	308.00	246
55.00	394	138.00	398	218.00	1961	309.00	114
56.00	1566	139.00	282	219.00	233	310.00	292
57.00	3625	140.00	507	221.00	12147	313.00	183
58.00	179	141.00	5164	223.00	3592	314.00	951
59.00	50	142.00	1638	224.00	31104	315.00	2130
61.00	785	143.00	1059	225.00	7945	316.00	1167
62.00	899	144.00	354	226.00	825	317.00	184
63.00	2743	145.00	375	227.00	13602	321.00	593
64.00	391	146.00	919	228.00	1890	322.00	353
65.00	1354	147.00	2592	229.00	2788	323.00	5659
66.00	163	148.00	5733	230.00	372	324.00	1062
67.00	9	149.00	1211	231.00	1163	326.00	55
68.00	1173	150.00	379	232.00	228	327.00	1243
69.00	72080	151.00	701	233.00	322	328.00	546
70.00	357	152.00	437	234.00	939	329.00	51
73.00	252	153.00	1657	235.00	1029	332.00	488
74.00	7192	154.00	1263	236.00	658	333.00	566
75.00	11347	155.00	2923	237.00	1196	334.00	3926
76.00	3738	156.00	4040	238.00	149	335.00	1017
77.00	78784	157.00	780	239.00	610	339.00	61
78.00	5387	158.00	890	240.00	412	341.00	765
79.00	5254	159.00	889	241.00	898	342.00	138
80.00	4042	160.00	1621	242.00	1676	346.00	1229

Date : 08-MAY-2013 14:35

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0508.d
Spectrum: Avg. Scans 454-456 (6.52), Background Scan 448
Location of Maximum: 442.00
Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	5806	161.00	2451	243.00	2061	347.00	263
82.00	1400	162.00	743	244.00	25872	351.00	120
83.00	1397	163.00	356	245.00	3426	352.00	1783
84.00	109	164.00	349	246.00	5199	353.00	1316
85.00	771	165.00	1962	247.00	1124	354.00	1706
86.00	1816	166.00	1518	248.00	190	355.00	414
87.00	718	167.00	9798	249.00	997	359.00	57
88.00	263	168.00	3866	250.00	211	365.00	8965
89.00	147	169.00	823	251.00	297	366.00	1260
91.00	1384	170.00	324	252.00	325	370.00	204
92.00	1663	171.00	544	253.00	799	371.00	504
93.00	10092	172.00	971	255.00	132032	372.00	3133
94.00	669	173.00	1308	256.00	19232	373.00	794
95.00	283	174.00	2187	257.00	1519	383.00	848
96.00	355	175.00	3938	258.00	8246	384.00	265
97.00	184	176.00	1251	259.00	1284	390.00	499
98.00	7485	177.00	2066	260.00	252	391.00	315
99.00	5637	178.00	674	261.00	214	392.00	214
100.00	571	179.00	7841	263.00	52	401.00	246
101.00	3871	180.00	5209	264.00	156	402.00	1212
102.00	169	181.00	2504	265.00	3137	403.00	1790
103.00	1203	182.00	433	266.00	458	404.00	671
104.00	2402	183.00	254	268.00	32	421.00	1752
105.00	2050	184.00	687	269.00	51	422.00	1581
106.00	761	185.00	4075	270.00	264	423.00	12097
107.00	28320	186.00	27896	271.00	328	424.00	2308
108.00	4294	187.00	7845	272.00	449	425.00	257
109.00	995	188.00	863	273.00	4508	435.00	157
110.00	51192	189.00	2000	274.00	10831	436.00	186
111.00	7773	190.00	354	275.00	60456	437.00	265
112.00	1052	191.00	987	276.00	7863	438.00	576
113.00	353	192.00	2641	277.00	5175	439.00	576
115.00	27	193.00	2788	278.00	774	440.00	662
116.00	1664	194.00	691	279.00	160	441.00	37416
117.00	23064	195.00	501	281.00	26	442.00	245056

Data File: /chem1/nt10.i/20130508.b/df0508.d

Date : 08-MAY-2013 14:35

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

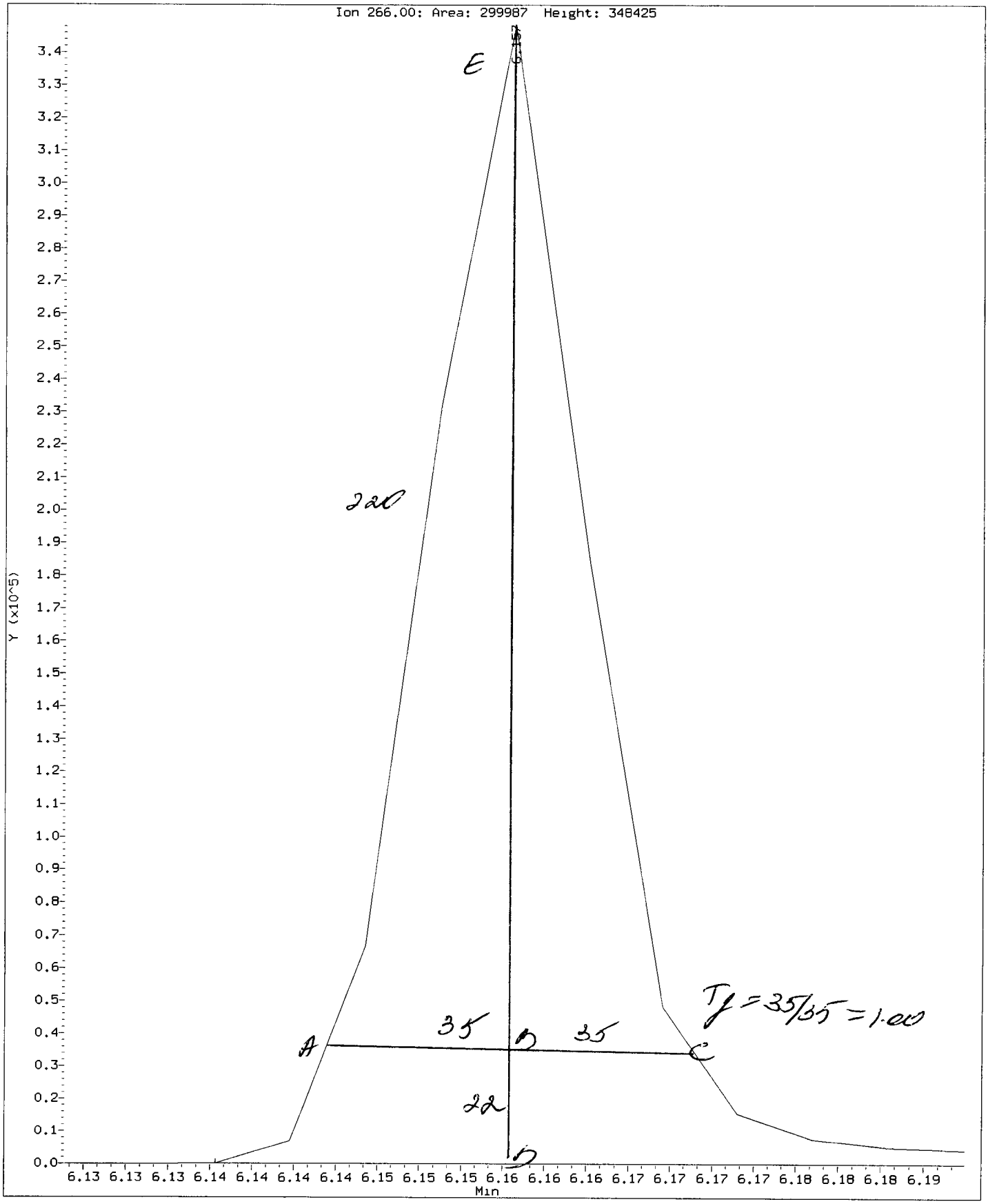
Column diameter: 0.25

Data File: df0508.d
Spectrum: Avg. Scans 454-456 (6.52), Background Scan 448
Location of Maximum: 442.00
Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	1567	196.00	6668	282.00	128	443.00	47008
119.00	183	198.00	217088	283.00	715	444.00	4302
120.00	379	199.00	14883	284.00	515	445.00	175
121.00	48	200.00	1255	285.00	968		
122.00	1972	201.00	1112	286.00	130		
123.00	2862	203.00	1591	289.00	239		
124.00	1387	204.00	7820	290.00	200		

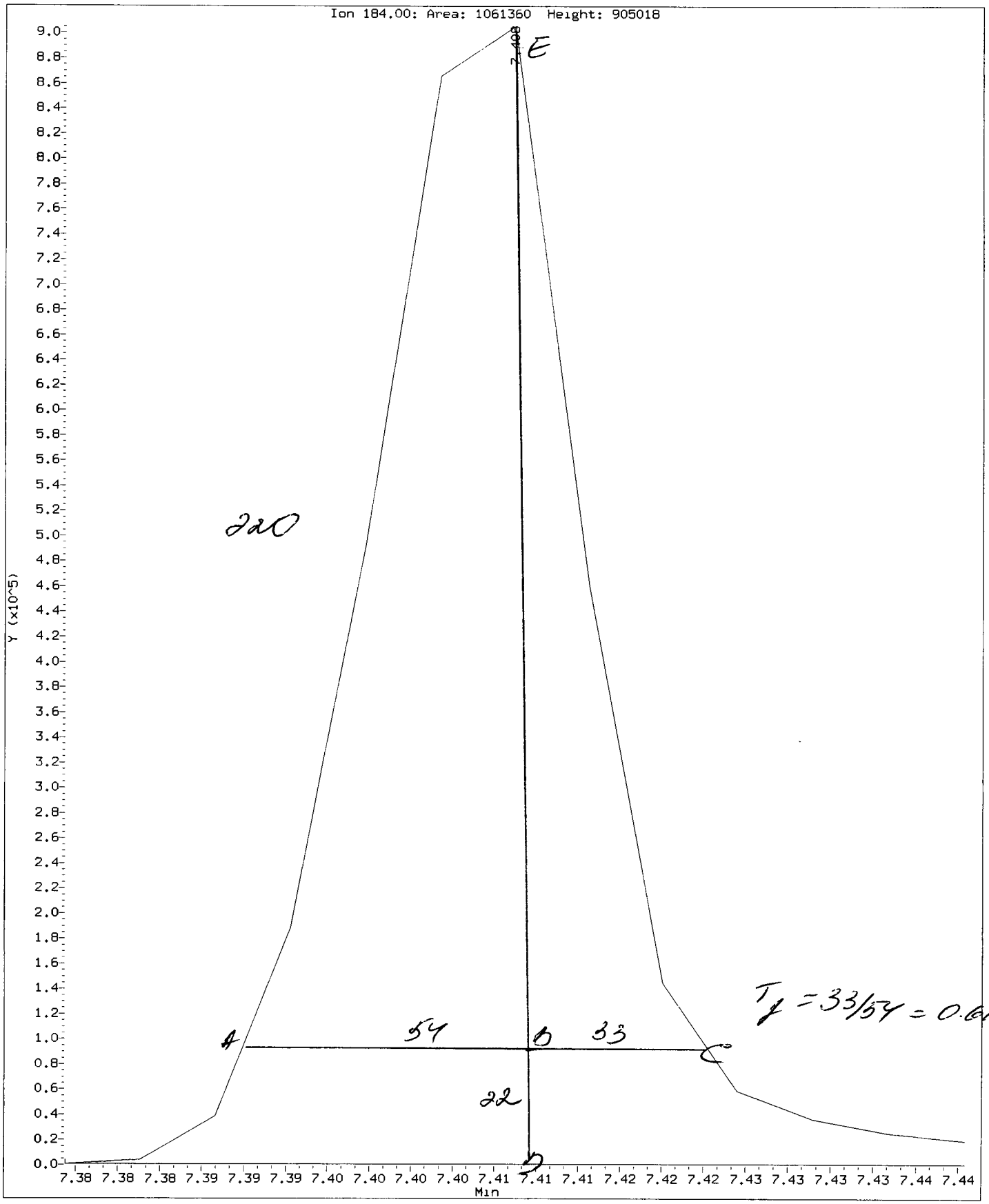
Data File: /chem1/nt10.1/20130508.b/ddt.b/df0508.d
Injection Date: 08-MAY-2013 14:35
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130508.b/ddt.b/df0508.d
Injection Date: 08-MAY-2013 14:35
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/20130508.b/ddt.b/df0508.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130508.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 08-MAY-2013 14:35 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.157	299987
Benzidine	7.408	1061360
4,4'-DDE	7.590	1394
4,4'-DDD	7.879	10230
4,4'-DDT	8.130	657617

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

$$\text{DDT Percent Breakdown} = \frac{(\ 1394 + 10230) * 100}{(\ 1394 + 10230 + 657617)}$$

DDT Percent Breakdown = 1.7 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 08-MAY-2013 14:50
Lab File ID: cc0508.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0508 Quant Type: ISTD
Method: /chem1/nt10.i/20130508.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.42771	1.42280	1.42280	0.010	-0.34399	20.00000	Averaged
$ 2 Phenol-d5	1.84748	1.83012	1.83012	0.010	-0.93959	20.00000	Averaged
3 Phenol	2.06794	2.18852	2.18852	0.100	5.83063	20.00000	Averaged
$ 5 2-Chlorophenol-d4	1.40240	1.39423	1.39423	0.010	-0.58288	20.00000	Averaged
4 Bis(2-Chloroethyl)ether	1.48709	1.39475	1.39475	0.700	-6.20961	20.00000	Averaged
6 2-Chlorophenol	1.59477	1.47605	1.47605	0.800	-7.44433	20.00000	Averaged
7 1,3-Dichlorobenzene	1.60030	1.57186	1.57186	0.010	-1.77708	20.00000	Averaged
9 1,4-Dichlorobenzene	1.57739	1.53386	1.53386	0.010	-2.75973	20.00000	Averaged
$ 10 1,2-Dichlorobenzene-d4	1.00879	1.01072	1.01072	0.010	0.19136	20.00000	Averaged
12 1,2-Dichlorobenzene	1.51024	1.48026	1.48026	0.010	-1.98519	20.00000	Averaged
11 Benzyl alcohol	0.86989	0.88935	0.88935	0.010	2.23737	20.00000	Averaged
14 2,2'-oxybis(1-Chloropropane	0.45898	0.47298	0.47298	0.010	3.05175	20.00000	Averaged
13 2-Methylphenol	1.48808	1.44017	1.44017	0.700	-3.21978	20.00000	Averaged
17 Hexachloroethane	0.65999	0.64514	0.64514	0.300	-2.25080	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.92905	0.92087	0.92087	0.500	-0.88068	20.00000	Averaged
15 4-Methylphenol	1.51729	1.46620	1.46620	0.600	-3.36703	20.00000	Averaged
$ 18 Nitrobenzene-d5	0.42210	0.41020	0.41020	0.010	-2.81964	20.00000	Averaged
19 Nitrobenzene	0.38970	0.36892	0.36892	0.200	-5.33205	20.00000	Averaged
20 Isophorone	0.73300	0.72155	0.72155	0.300	-1.56285	20.00000	Averaged
21 2-Nitrophenol	0.21847	0.22337	0.22337	0.100	2.24390	20.00000	Averaged
22 2,4-Dimethylphenol	0.40172	0.43489	0.43489	0.200	8.25645	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.43229	0.43410	0.43410	0.050	0.41922	20.00000	Averaged
24 Benzoic acid	16.59579	20.00000	0.29196	0.010	-17.02105	20.00000	Quadratic
25 2,4-Dichlorophenol	0.36979	0.32361	0.32361	0.100	-12.48690	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.36143	0.40809	0.40809	0.010	12.91154	20.00000	Averaged
28 Naphthalene	1.06494	1.05075	1.05075	0.100	-1.33219	20.00000	Averaged
29 4-Chloroaniline	0.41634	0.42939	0.42939	0.010	3.13518	20.00000	Averaged
30 Hexachlorobutadiene	0.21470	0.21703	0.21703	0.010	1.08649	20.00000	Averaged
31 4-Chloro-3-methylphenol	0.32531	0.35960	0.35960	0.200	10.54134	20.00000	Averaged
32 2-Methylnaphthalene	0.70737	0.70770	0.70770	0.300	0.04766	20.00000	Averaged
33 Hexachlorocyclopentadiene	0.44016	0.39249	0.39249	0.001	-10.83133	20.00000	Averaged
34 2,4,6-Trichlorophenol	0.42101	0.42459	0.42459	0.200	0.85001	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.43401	0.45269	0.45269	0.200	4.30450	20.00000	Averaged
$ 36 2-Fluorobiphenyl	1.39609	1.34086	1.34086	0.010	-3.95604	20.00000	Averaged
37 2-Chloronaphthalene	1.11145	1.09230	1.09230	0.700	-1.72335	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 08-MAY-2013 14:50
Lab File ID: cc0508.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0508 Quant Type: ISTD
Method: /chem1/nt10.i/20130508.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.26826	0.30237	0.30237	0.010	12.71778	20.00000	Averaged	
39 Dimethylphthalate	1.20078	1.18763	1.18763	0.010	-1.09483	20.00000	Averaged	
40 Acenaphthylene	1.88508	1.79603	1.79603	0.900	-4.72375	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.28135	0.29323	0.29323	0.100	4.22233	20.00000	Averaged	
43 3-Nitroaniline	0.23227	0.27624	0.27624	0.010	18.93469	20.00000	Averaged	
44 Acenaphthene	1.13602	1.08612	1.08612	0.100	-4.39215	20.00000	Averaged	
45 2,4-Dinitrophenol	17.31110	20.00000	0.21747	0.030	-13.44452	20.00000	Quadratic	
46 Dibenzofuran	1.55334	1.53078	1.53078	0.800	-1.45222	20.00000	Averaged	
47 4-Nitrophenol	9.21466	10.00000	0.16119	0.010	-7.85340	20.00000	Quadratic	
48 2,4-Dinitrotoluene	0.36288	0.39690	0.39690	0.200	9.37419	20.00000	Averaged	
50 Diethylphthalate	1.20662	1.37303	1.37303	0.010	13.79194	20.00000	Averaged	
49 Fluorene	1.32546	1.29287	1.29287	0.100	-2.45876	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.65156	0.59044	0.59044	0.100	-9.38007	20.00000	Averaged	
52 4-Nitroaniline	0.24126	0.25562	0.25562	0.010	5.95047	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	17.79011	20.00000	0.17068	0.001	-11.04946	20.00000	Quadratic	
54 N-Nitrosodiphenylamine	0.46304	0.46852	0.46852	0.010	1.18277	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.21154	0.22284	0.22284	0.010	5.34466	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.22633	0.22620	0.22620	0.100	-0.05921	20.00000	Averaged	
57 Hexachlorobenzene	0.27006	0.30466	0.30466	0.100	12.81357	20.00000	Averaged	
58 Pentachlorophenol	0.18956	0.15417	0.15417	0.010	-18.66860	20.00000	Averaged	
60 Phenanthrene	1.09106	1.05961	1.05961	0.700	-2.88222	20.00000	Averaged	
61 Anthracene	1.11776	1.10468	1.10468	0.700	-1.17035	20.00000	Averaged	
62 Carbazole	0.67896	0.81693	0.81693	0.010	20.32177	20.00000	Averaged	<-
63 Di-n-butylphthalate	1.15386	1.21917	1.21917	0.010	5.66001	20.00000	Averaged	
64 Fluoranthene	1.28413	1.29998	1.29998	0.600	1.23480	20.00000	Averaged	
65 Pyrene	1.23758	1.29891	1.29891	0.600	4.95608	20.00000	Averaged	
$ 66 Terphenyl-d14	0.77864	0.85619	0.85619	0.010	9.95966	20.00000	Averaged	
67 Butylbenzylphthalate	0.42263	0.47550	0.47550	0.010	12.50990	20.00000	Averaged	
68 Benzo(a)anthracene	1.11989	1.14127	1.14127	0.700	1.90962	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.42653	0.52270	0.52270	0.010	22.54511	20.00000	Averaged	<-
71 Chrysene	1.01345	0.97202	0.97202	0.700	-4.08795	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.53180	0.51546	0.51546	0.010	-3.07308	20.00000	Averaged	
73 Di-n-octylphthalate	0.92098	0.88398	0.88398	0.010	-4.01792	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.18784	1.17653	1.17653	0.700	-0.95278	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.25114	1.29155	1.29155	0.700	3.22982	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 08-MAY-2013 14:50
Lab File ID: cc0508.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0508 Quant Type: ISTD
Method: /chem1/nt10.i/20130508.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
76 Benzo(a)pyrene	1.01481	1.02475	1.02475	0.700	0.97996	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.16916	1.04542	1.04542	0.500	-10.58357	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.89686	0.98019	0.98019	0.400	9.29104	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.01156	1.04542	1.04542	0.500	3.34736	20.00000	Averaged
90 N-Nitrosodimethylamine	0.91125	0.86748	0.86748	0.010	-4.80402	20.00000	Averaged
91 Aniline	4.01210	4.10726	4.10726	0.010	2.37175	20.00000	Averaged
93 Benzidine	9.67924	10.00000	0.12379	0.010	-3.20764	20.00000	Quadratic
103 Pyridine	0.80099	0.74050	0.74050	0.010	-7.55178	20.00000	Averaged
105 1-methylnaphthalene	0.64873	0.65410	0.65410	0.010	0.82815	20.00000	Averaged
111 Azobenzene (1,2-DP-Hydrazin	1.23715	1.16907	1.16907	0.010	-5.50238	20.00000	Averaged
187 Total Benzofluoranthenes	1.15343	1.13642	1.13642	0.010	-1.47530	20.00000	Averaged
99 Perylene	1.16006	1.11893	1.11893	0.010	-3.54486	20.00000	Averaged
98 Retene	0.46838	0.50233	0.50233	0.010	7.24860	20.00000	Averaged
120 2,3,4,6-Tetrachlorophenol	0.32282	0.37183	0.37183	0.010	15.17950	20.00000	Averaged

Analytical Resources, Inc.

YZ 5/10/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130508.b/cc0508.d
Lab Smp Id: CC0508
Inj Date : 08-MAY-2013 14:50
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0508
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130508.b/ABN.m
Meth Date : 08-May-2013 16:24 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.867	5.867	(0.724)	96776	5.00000	4.983
$	2 Phenol-d5	99	7.552	7.552	(0.931)	124481	5.00000	4.953
	3 Phenol	94	7.575	7.575	(0.934)	148859	5.00000	5.292
$	5 2-Chlorophenol-d4	132	7.745	7.745	(0.955)	94833	5.00000	4.971
	4 Bis(2-Chloroethyl)ether	93	7.683	7.683	(0.948)	94868	5.00000	4.690
	6 2-Chlorophenol	128	7.776	7.776	(0.959)	100398	5.00000	4.628
	7 1,3-Dichlorobenzene	146	8.039	8.039	(0.991)	106915	5.00000	4.911
*	8 1,4-Dichlorobenzene-d4	152	8.109	8.109	(1.000)	54414	4.00000	
	9 1,4-Dichlorobenzene	146	8.140	8.140	(1.004)	104330	5.00000	4.862
$	10 1,2-Dichlorobenzene-d4	152	8.473	8.473	(1.045)	68747	5.00000	5.010
	12 1,2-Dichlorobenzene	146	8.504	8.504	(1.049)	100684	5.00000	4.901
	11 Benzyl alcohol	108	8.442	8.442	(1.041)	60491	5.00000	5.112
	14 2,2'-oxybis(1-Chloropropane)	121	8.761	8.761	(1.080)	32171	5.00000	5.153
	13 2-Methylphenol	108	8.722	8.722	(1.076)	97957	5.00000	4.839
	17 Hexachloroethane	117	9.118	9.118	(1.124)	43881	5.00000	4.887
	16 N-Nitroso-di-n-propylamine	70	9.032	9.032	(1.114)	62635	5.00000	4.956
	15 4-Methylphenol	108	9.017	9.017	(1.112)	99728	5.00000	4.832
$	18 Nitrobenzene-d5	82	9.265	9.265	(0.866)	103020	5.00000	4.859
	19 Nitrobenzene	77	9.296	9.296	(0.868)	92653	5.00000	4.733
	20 Isophorone	82	9.793	9.793	(0.915)	181214	5.00000	4.922
	21 2-Nitrophenol	139	9.964	9.964	(0.931)	56098	5.00000	5.112
	22 2,4-Dimethylphenol	107	10.103	10.103	(0.944)	218441	10.0000	10.83
	23 Bis(2-Chloroethoxy)methane	93	10.288	10.288	(0.961)	109022	5.00000	5.021
	24 Benzoic acid	105	10.442	10.442	(0.976)	293304	20.0000	16.60
	25 2,4-Dichlorophenol	162	10.465	10.465	(0.978)	162547	10.0000	8.751
	26 1,2,4-Trichlorobenzene	180	10.635	10.635	(0.994)	102491	5.00000	5.646
*	27 Naphthalene-d8	136	10.704	10.704	(1.000)	200917	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.751	10.751	(1.004)	263893	5.00000	4.933
	29 4-Chloroaniline	127	10.944	10.944	(1.022)	215680	10.0000	10.31
	30 Hexachlorobutadiene	225	11.168	11.168	(1.043)	54506	5.00000	5.054
	31 4-Chloro-3-methylphenol	107	12.027	12.027	(1.124)	180626	10.0000	11.05
	32 2-Methylnaphthalene	142	12.236	12.236	(1.143)	177737	5.00000	5.002
	33 Hexachlorocyclopentadiene	237	12.746	12.746	(0.877)	127255	10.0000	8.917
	34 2,4,6-Trichlorophenol	196	12.932	12.932	(0.890)	137664	10.0000	10.09
	35 2,4,5-Trichlorophenol	196	13.010	13.010	(0.895)	146774	10.0000	10.43
$	36 2-Fluorobiphenyl	172	13.095	13.095	(0.901)	217371	5.00000	4.802
	37 2-Chloronaphthalene	162	13.280	13.280	(0.914)	177076	5.00000	4.914
	38 2-Nitroaniline	65	13.598	13.598	(0.936)	98038	10.0000	11.27
	39 Dimethylphthalate	163	14.101	14.101	(0.970)	192531	5.00000	4.945
	40 Acenaphthylene	152	14.194	14.194	(0.977)	291162	5.00000	4.764
	41 2,6-Dinitrotoluene	165	14.225	14.225	(0.979)	95072	10.0000	10.42
*	42 Acenaphthene-d10	164	14.534	14.534	(1.000)	129691	4.00000	
	43 3-Nitroaniline	138	14.519	14.519	(0.999)	89566	10.0000	11.89
	44 Acenaphthene	153	14.604	14.604	(1.005)	176075	5.00000	4.780
	45 2,4-Dinitrophenol	184	14.743	14.743	(1.014)	141021	20.0000	17.31
	46 Dibenzofuran	168	14.959	14.959	(1.029)	248160	5.00000	4.927
	47 4-Nitrophenol	109	14.959	14.959	(1.029)	52263	10.0000	9.215
	48 2,4-Dinitrotoluene	165	15.083	15.083	(1.038)	128684	10.0000	10.94
	50 Diethylphthalate	149	15.670	15.670	(1.078)	222587	5.00000	5.690
	49 Fluorene	166	15.717	15.717	(1.081)	209591	5.00000	4.877
	51 4-Chlorophenyl-phenylether	204	15.748	15.748	(1.083)	95718	5.00000	4.531
	52 4-Nitroaniline	138	15.871	15.871	(1.092)	82879	10.0000	10.60
	53 4,6-Dinitro-2-methylphenol	198	15.972	15.972	(0.900)	188950	20.0000	17.79
	54 N-Nitrosodiphenylamine	169	16.033	16.033	(0.903)	129667	5.00000	5.059
$	55 2,4,6-Tribromophenol	330	16.288	16.288	(1.121)	36125	5.00000	5.267
	56 4-Bromophenyl-phenylether	248	16.812	16.812	(0.947)	62602	5.00000	4.997
	57 Hexachlorobenzene	284	17.105	17.105	(0.963)	84317	5.00000	5.641
	58 Pentachlorophenol	266	17.523	17.523	(0.987)	85338	10.0000	8.133
*	59 Phenanthrene-d10	188	17.756	17.756	(1.000)	221407	4.00000	
	60 Phenanthrene	178	17.810	17.810	(1.003)	293256	5.00000	4.856
	61 Anthracene	178	17.910	17.910	(1.009)	305729	5.00000	4.941
	62 Carbazole	167	18.297	18.297	(1.030)	226093	5.00000	6.016
	63 Di-n-butylphthalate	149	19.249	19.249	(1.084)	337416	5.00000	5.283
	64 Fluoranthene	202	20.301	20.301	(1.143)	359781	5.00000	5.062
	65 Pyrene	202	20.727	20.727	(0.903)	368086	5.00000	5.248
$	66 Terphenyl-d14	244	21.082	21.082	(0.919)	242628	5.00000	5.498
	67 Butylbenzylphthalate	149	22.066	22.066	(0.962)	134745	5.00000	5.625
	68 Benzo(a)anthracene	228	22.910	22.910	(0.999)	323413	5.00000	5.095
*	69 Chrysene-d12	240	22.941	22.941	(1.000)	226704	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.917	22.917	(0.999)	296242	10.0000	12.25
	71 Chrysene	228	22.979	22.979	(1.002)	275451	5.00000	4.796
	72 bis(2-Ethylhexyl)phthalate	149	23.134	23.134	(0.960)	181276	5.00000	4.846
*	134 Di-n-octylphthalate-d4	153	24.110	24.110	(1.000)	281343	4.00000	
	73 Di-n-octylphthalate	149	24.125	24.125	(1.001)	310877	5.00000	4.799

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	24.667	24.667	(0.978)	299187	5.00000	4.952
75	Benzo(k)fluoranthene	252	24.698	24.698	(0.979)	328438	5.00000	5.161
76	Benzo(a)pyrene	252	25.139	25.139	(0.997)	260592	5.00000	5.049
* 77	Perylene-d12	264	25.225	25.225	(1.000)	203438	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.543	27.543	(1.092)	265847	5.00000	4.471
79	Dibenzo(a,h)anthracene	278	27.046	27.046	(1.072)	249260	5.00000	5.465
80	Benzo(g,h,i)perylene	276	27.543	27.543	(1.092)	265847	5.00000	5.167
90	N-Nitrosodimethylamine	74	3.643	3.643	(0.449)	118008	10.0000	9.520
91	Aniline	93	7.560	7.560	(0.932)	279368	5.00000	5.119
93	Benzidine	184	20.603	20.603	(0.898)	70158	10.0000	9.679
103	Pyridine	79	3.651	3.651	(0.450)	100735	10.0000	9.245
105	1-methylnaphthalene	142	12.460	12.460	(1.164)	164276	5.00000	5.041
111	Azobenzene (1,2-DP-Hydrazine)	77	16.095	16.095	(1.107)	189523	5.00000	4.725
187	Total Benzofluoranthenes	252	24.698	24.698	(0.979)	577976	10.0000	9.852
99	Perylene	252	25.263	25.263	(1.002)	284542	5.00000	4.823
98	Retene	219	21.369	21.369	(0.931)	142350	5.00000	5.362
120	2,3,4,6-Tetrachlorophenol	232	15.353	15.353	(1.056)	60278	5.00000	5.759

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0508.d
Lab Smp Id: CC0508
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130508.b/ABN.m
Misc Info:

Calibration Date: 08-MAY-2013
Calibration Time: 14:50
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	54414	20.25
27 Naphthalene-d8	166754	83377	333508	200917	20.49
42 Acenaphthene-d10	106910	53455	213820	129691	21.31
59 Phenanthrene-d10	179783	89892	359566	221407	23.15
69 Chrysene-d12	192841	96420	385682	226704	17.56
134 Di-n-octylphthala	229567	114784	459134	281343	22.55
77 Perylene-d12	184310	92155	368620	203438	10.38

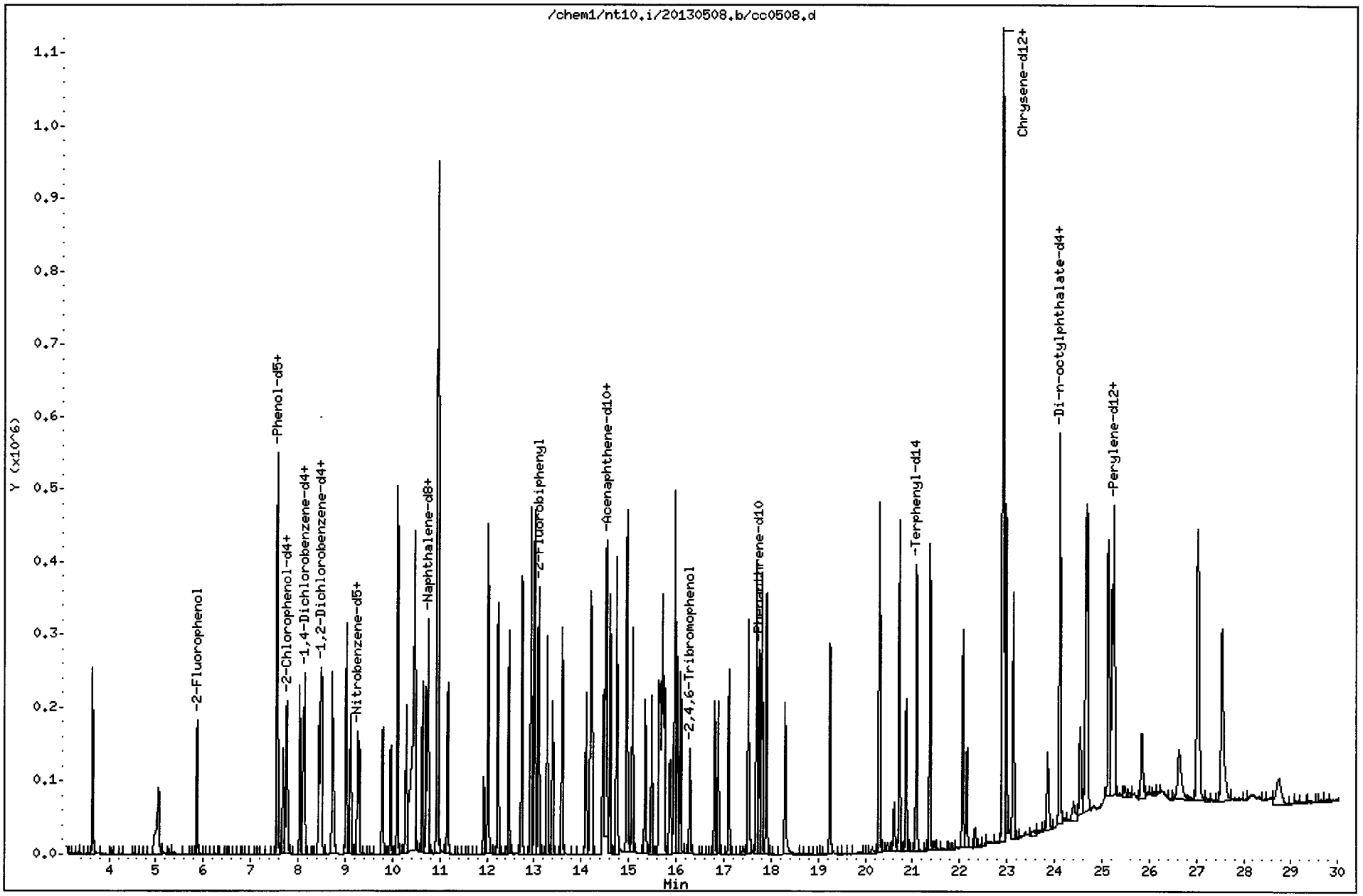
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.11	7.61	8.61	8.11	0.00
27 Naphthalene-d8	10.70	10.20	11.20	10.70	0.00
42 Acenaphthene-d10	14.53	14.03	15.03	14.53	0.00
59 Phenanthrene-d10	17.76	17.26	18.26	17.76	0.00
69 Chrysene-d12	22.94	22.44	23.44	22.94	0.00
134 Di-n-octylphthala	24.11	23.61	24.61	24.11	0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	0.00

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

Data File: /chem1/nt10.i/20130508.b/cc0508.d
Date : 08-MAY-2013 14:50
Client ID:
Sample Info: CC0508

Instrument: nt10.i

Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - cc0508.d

Lab ID: CC0508, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2013

RT	CO-ELUTION COMPOUNDS
27.543	Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene

YZ 8/14/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130508.b/wn27a9.d
Lab Smp Id: WN27A Client Smp ID: CG-MH-010-20130423-
Inj Date : 08-MAY-2013 15:27
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN27A,~~9~~
Misc Info : 13-8552
Comment : 1ul Injection
Method : /chem1/nt10.i/20130508.b/ABN.m
Meth Date : 14-Aug-2013 11:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 4
Dil Factor: 9.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	9.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	40.40000	% 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	5.867	5.867	(0.724)	8590	0.51747	781.4
$	2 Phenol-d5	99	7.551	7.552	(0.932)	10406	0.48444	731.5
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.737	7.745	(0.955)	8690	0.53294	804.8
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.101	8.109	(1.000)	46508	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.473	8.473	(1.046)	4127	0.35186	531.3
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.257	9.265	(0.865)	6350	0.33260	502.2
	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	10.704	10.704	(1.000)	180924	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.087	13.095	(0.901)	14800	0.37934	572.8
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.526	14.534	(1.000)	111784	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.280	16.288	(1.121)	3701	0.62606	945.4
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.747	17.756	(1.000)	188992	4.00000	
	60 Phenanthrene	178	17.802	17.810	(1.003)	8577	0.16638	251.2
	61 Anthracene	178	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	Compound Not Detected.					
63	Di-n-butylphthalate	149	Compound Not Detected.					
64	Fluoranthene	202	20.308	20.301	(1.144)	16712	0.27545	415.9
65	Pyrene	202	20.718	20.727	(0.903)	22926	0.42968	648.8
$ 66	Terphenyl-d14	244	21.082	21.082	(0.919)	16335	0.48660	734.8
67	Butylbenzylphthalate	149	22.065	22.066	(0.962)	8718	0.47847	722.5
68	Benzo(a)anthracene	228	22.917	22.910	(0.999)	5406	0.11197	169.1
* 69	Chrysene-d12	240	22.940	22.941	(1.000)	172453	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	22.979	22.979	(1.002)	13056	0.29881	451.2
72	bis(2-Ethylhexyl)phthalate	149	23.142	23.134	(0.960)	290038	9.98693	15080
* 134	Di-n-octylphthalate-d4	153	24.117	24.110	(1.000)	218441	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	24.682	24.667	(0.978)	15828	0.31966	482.7
75	Benzo(k)fluoranthene	252	24.682	24.698	(0.978)	15828	0.30349	458.3
76	Benzo(a)pyrene	252	25.147	25.139	(0.997)	5611	0.13264	200.3
* 77	Perylene-d12	264	25.232	25.225	(1.000)	166740	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.046	27.031	(1.072)	7243	0.14862	J 224.4(M)
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	27.574	27.543	(1.093)	13222	0.31356	473.5
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	24.682	24.698	(0.978)	16294	0.33889	511.7
99	Perylene	252	Compound Not Detected.					
98	Retene	219	21.369	21.369	(0.931)	4627	0.22913	346.0(H)
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn27a9.d
Lab Smp Id: WN27A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130508.b/ABN.m
Misc Info: 13-8552

Calibration Date: 08-MAY-2013
Calibration Time: 14:50
Client Smp ID: CG-MH-010-201304
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	46508	2.78
27 Naphthalene-d8	166754	83377	333508	180924	8.50
42 Acenaphthene-d10	106910	53455	213820	111784	4.56
59 Phenanthrene-d10	179783	89892	359566	188992	5.12
69 Chrysene-d12	192841	96420	385682	172453	-10.57
134 Di-n-octylphthala	229567	114784	459134	218441	-4.85
77 Perylene-d12	184310	92155	368620	166740	-9.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.11	7.61	8.61	8.10	-0.10
27 Naphthalene-d8	10.70	10.20	11.20	10.70	0.00
42 Acenaphthene-d10	14.53	14.03	15.03	14.53	-0.06
59 Phenanthrene-d10	17.76	17.26	18.26	17.75	-0.05
69 Chrysene-d12	22.94	22.44	23.44	22.94	0.00
134 Di-n-octylphthala	24.11	23.61	24.61	24.12	0.03
77 Perylene-d12	25.22	24.72	25.72	25.23	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

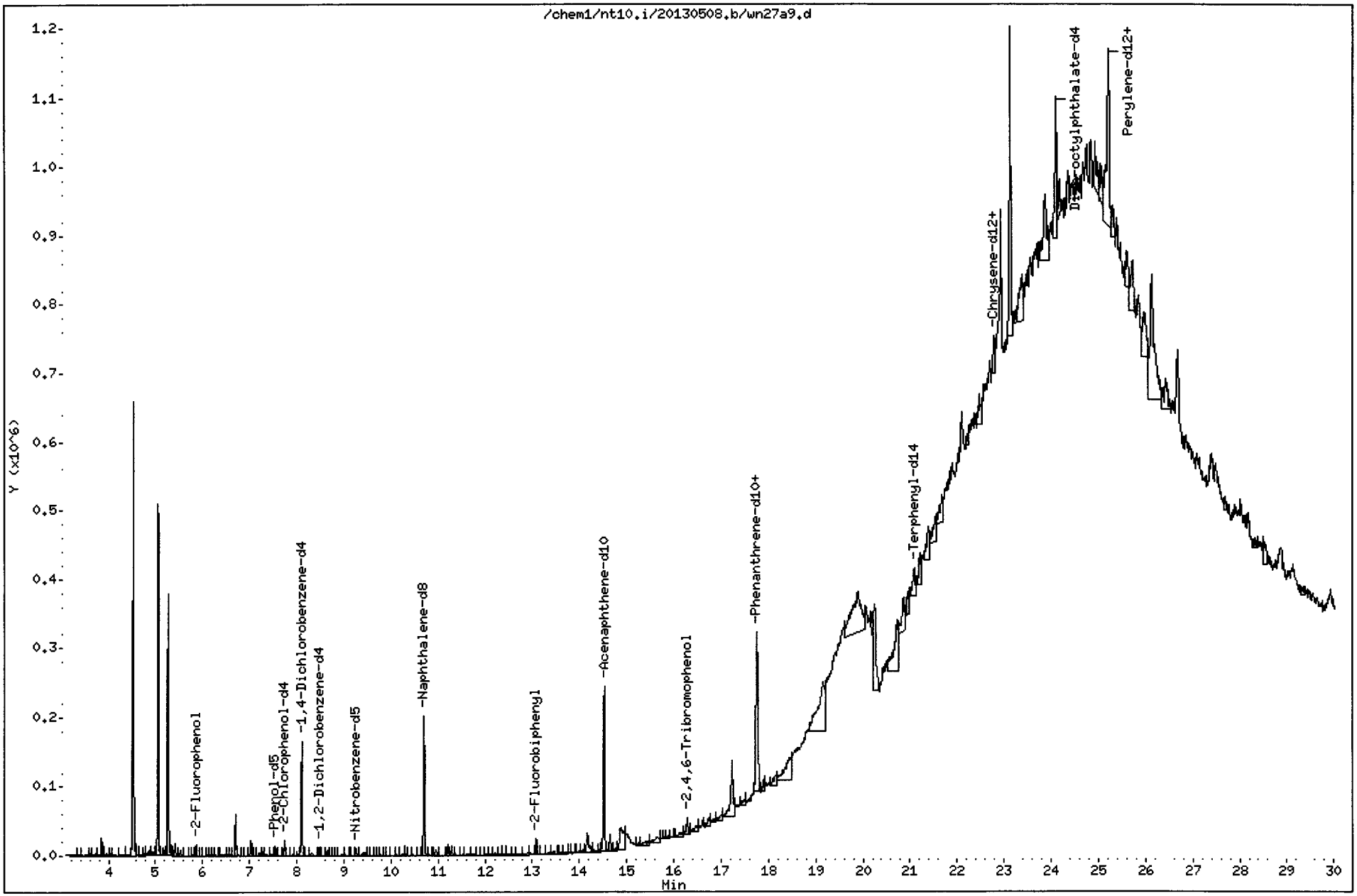
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WN27A
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130508.b/ABN.m
Misc Info: 13-8552

Client SDG: WN27
Fraction: SV
Client Smp ID: CG-MH-010-20130423-
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1258	781.4	62.10	30-160
$ 2 Phenol-d5	1258	731.5	58.13	30-160
$ 5 2-Chlorophenol-d4	1258	804.8	63.95	30-160
$ 10 1,2-Dichlorobenzen	838.9	531.3	63.33	30-160
$ 18 Nitrobenzene-d5	838.9	502.2	59.87	30-160
$ 36 2-Fluorobiphenyl	838.9	572.8	68.28	30-160
$ 55 2,4,6-Tribromophen	1258	945.4	75.13	30-160
$ 66 Terphenyl-d14	838.9	734.8	87.59	30-160

Data File: /chem1/nt10.i/20130508.b/wn27a9.d
Date : 08-MAY-2013 15:27
Client ID: CG-MH-010-20130423-
Sample Info: WN27A,9
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130508.b/wn27a9.d

Date : 08-MAY-2013 15:27

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,9

Volume Injected (uL): 1.0

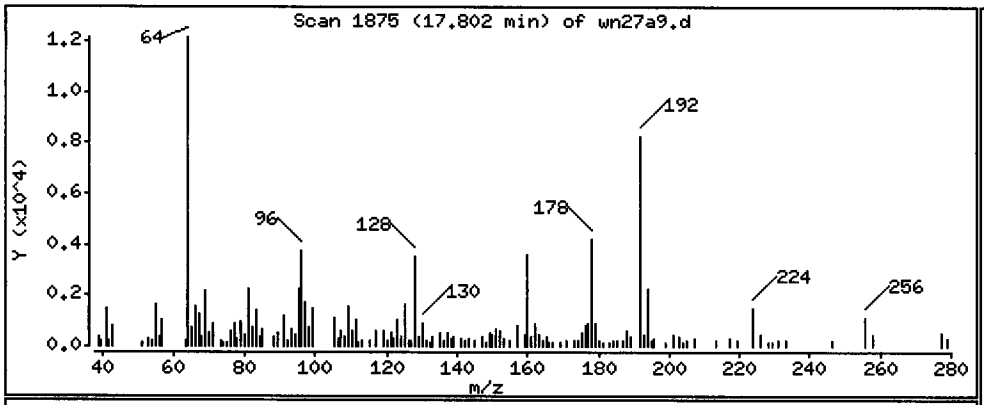
Operator: VTS/YZ

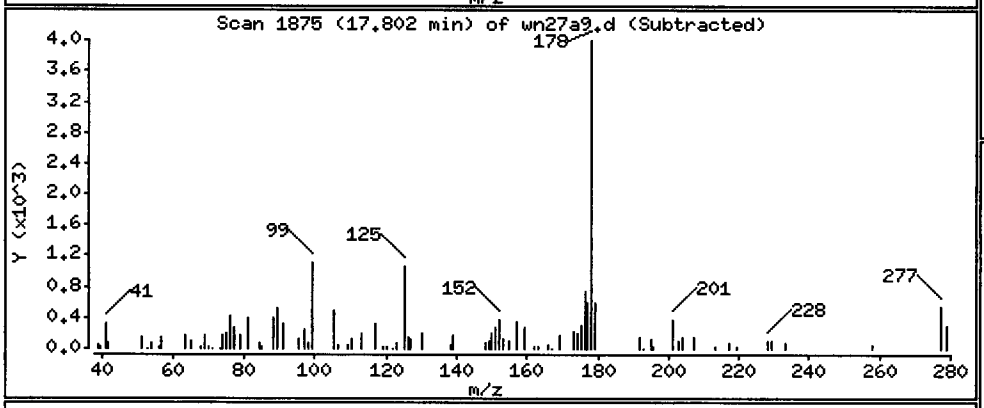
Column phase: ZB-5msi

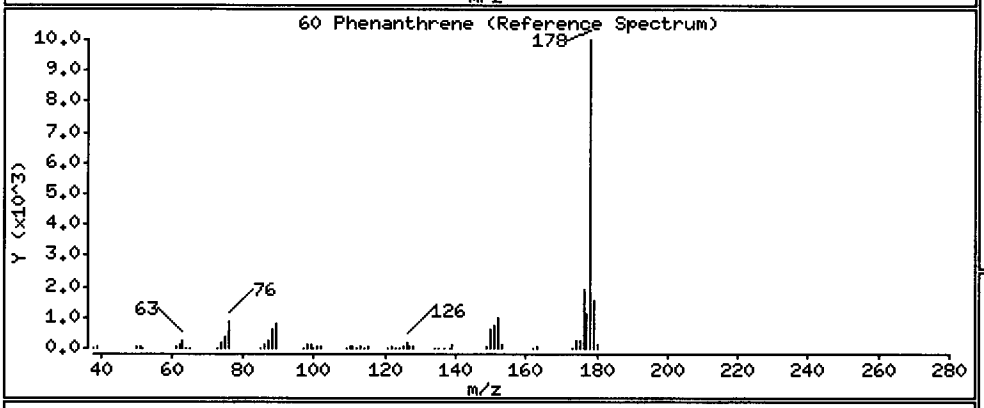
Column diameter: 0.25

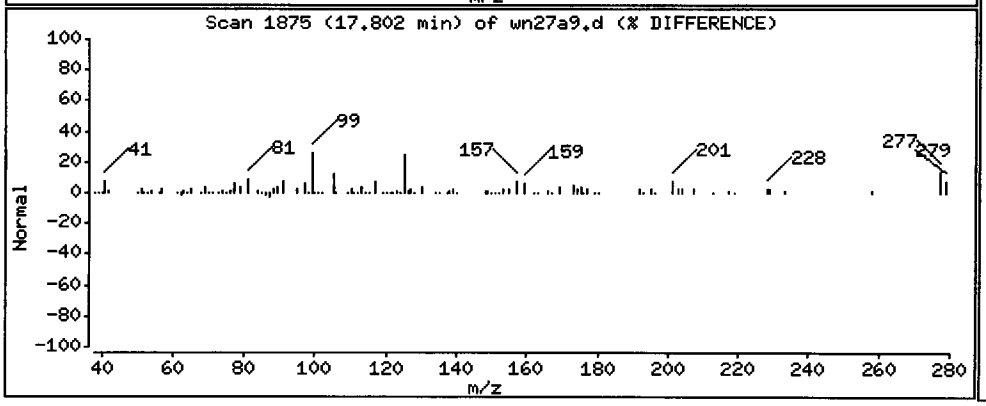
60 Phenanthrene

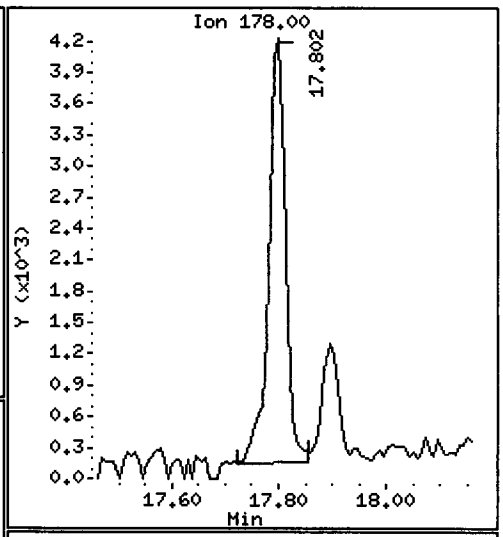
Concentration: 251.2 ug/kg

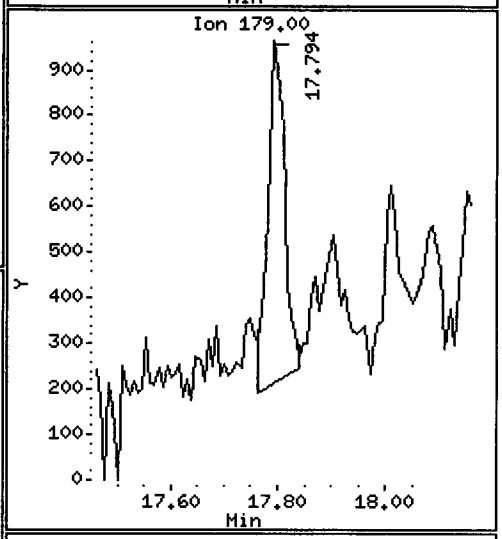


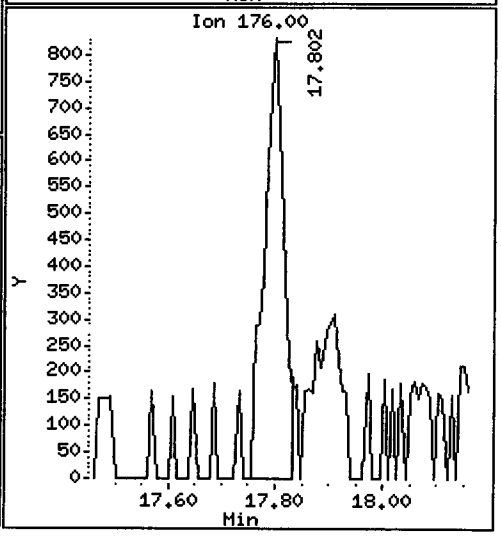












Data File: /chem1/nt10.i/20130508.b/wn27a9.d

Date : 08-MAY-2013 15:27

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,9

Volume Injected (uL): 1.0

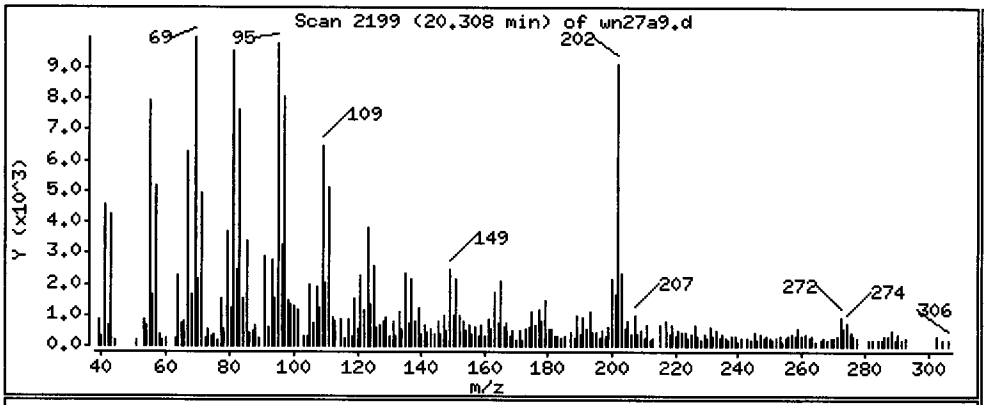
Operator: VTS/YZ

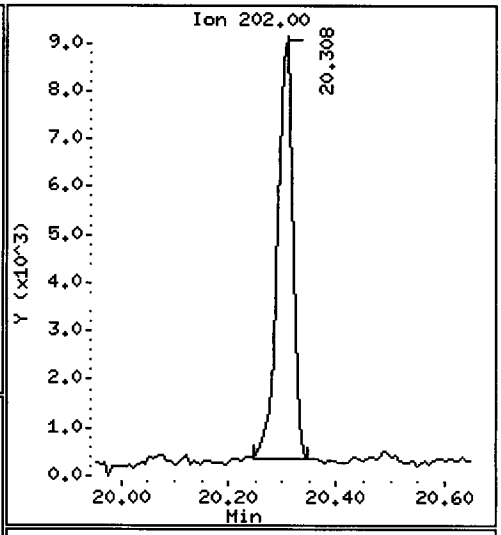
Column phase: ZB-5msi

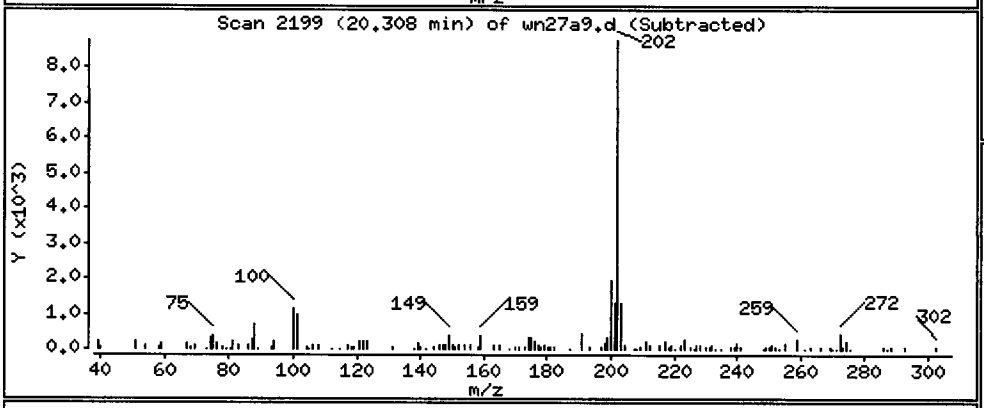
Column diameter: 0.25

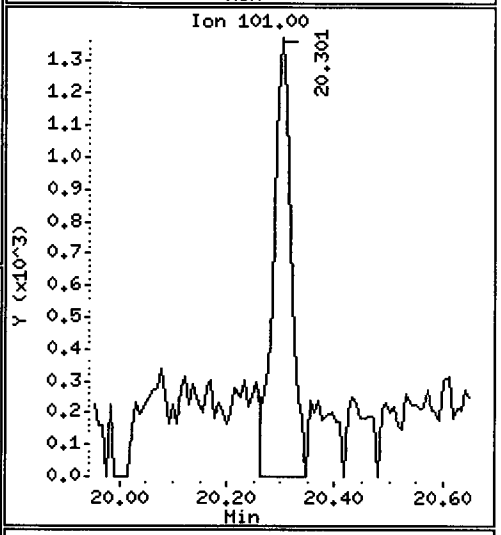
64 Fluoranthene

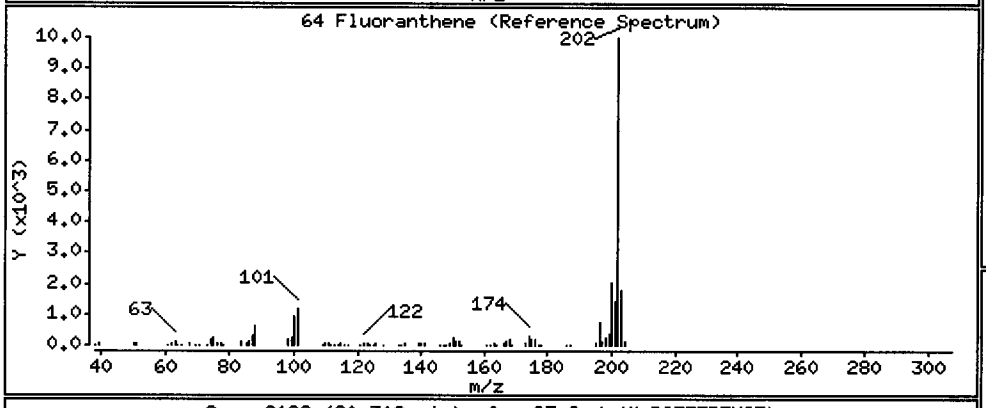
Concentration: 415.9 ug/kg

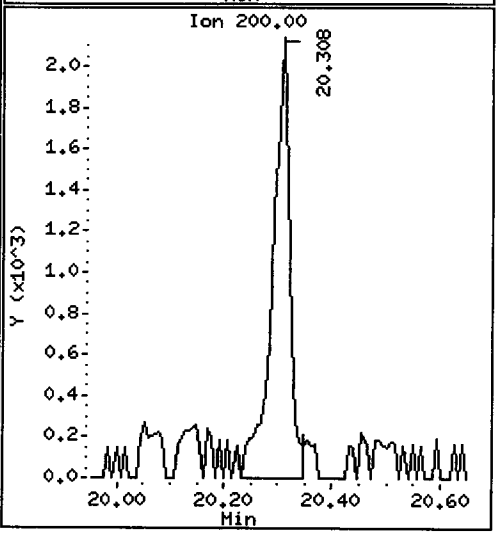


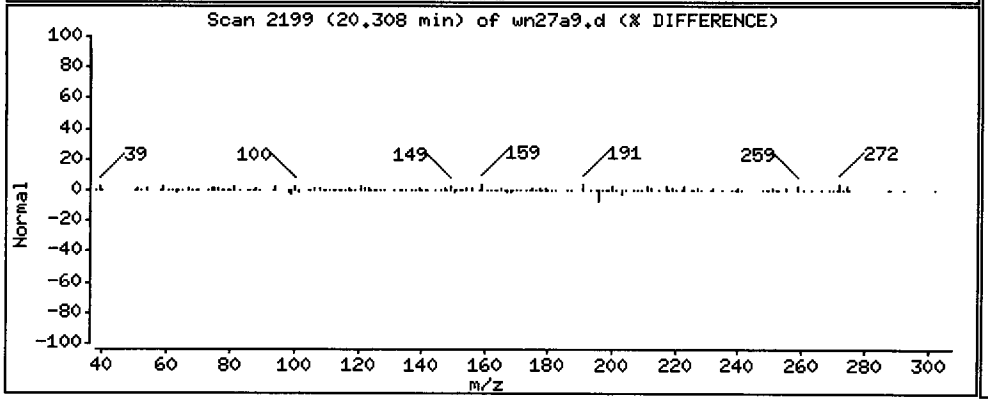












Data File: /chem1/nt10.i/20130508.b/wn27a9.d

Date : 08-MAY-2013 15:27

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,9

Volume Injected (uL): 1.0

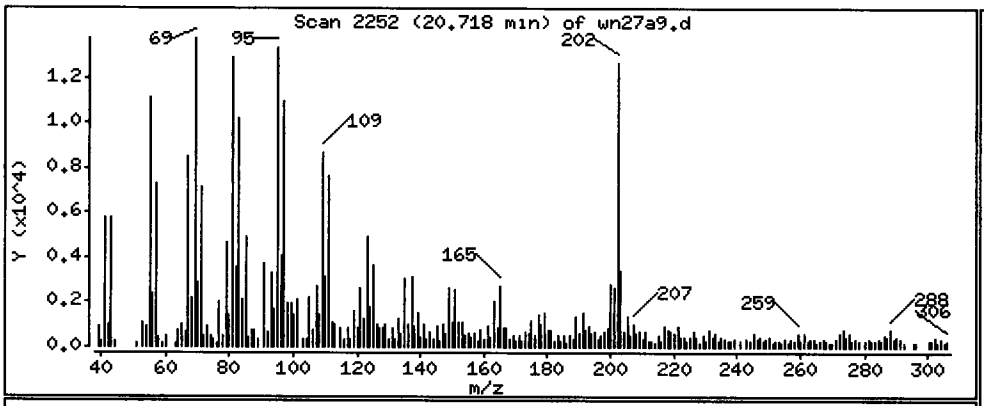
Operator: VTS/YZ

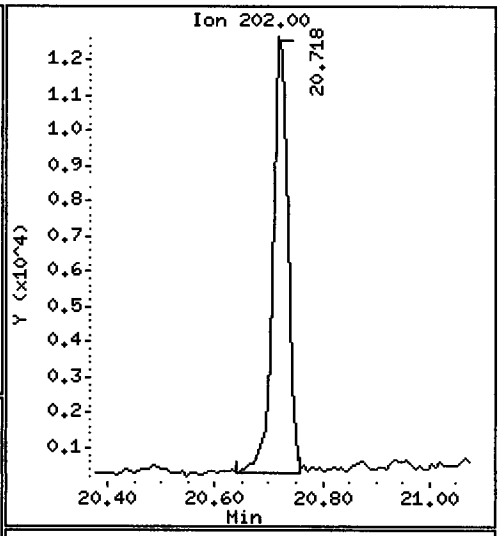
Column phase: ZB-5msi

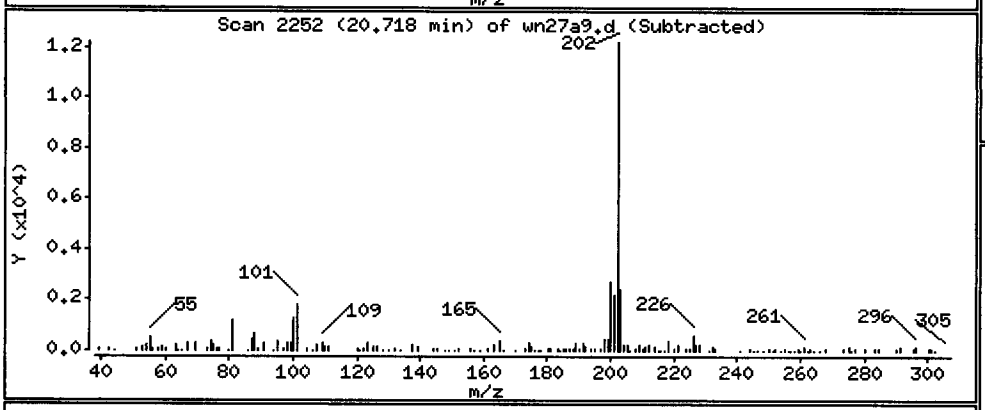
Column diameter: 0.25

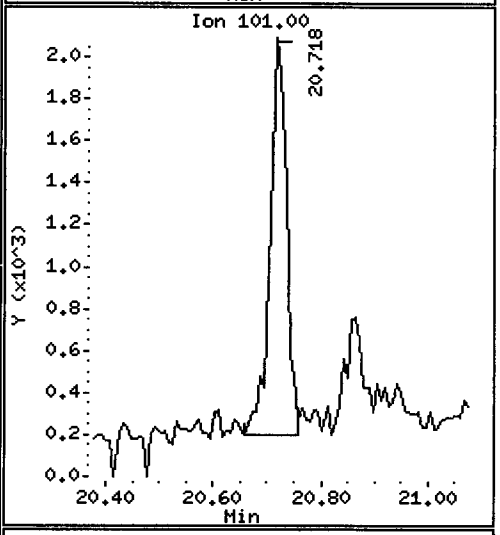
65 Pyrene

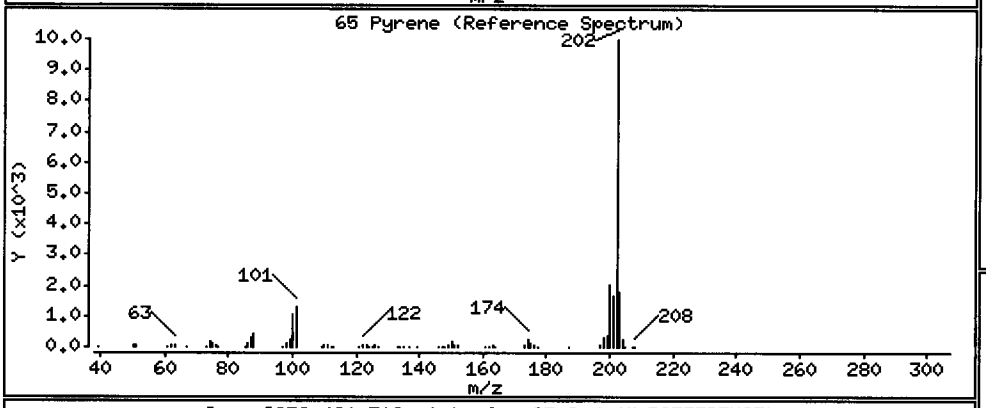
Concentration: 648.8 ug/kg

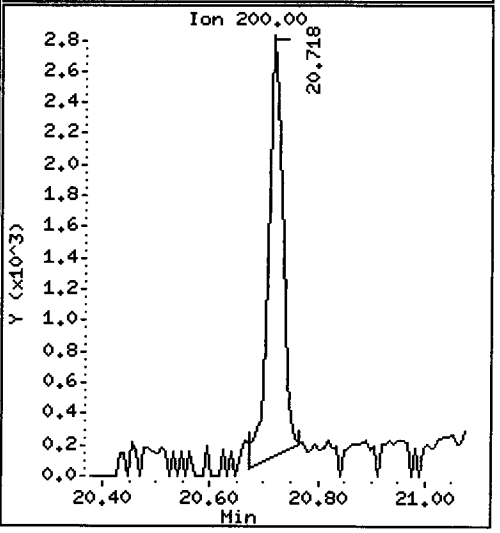


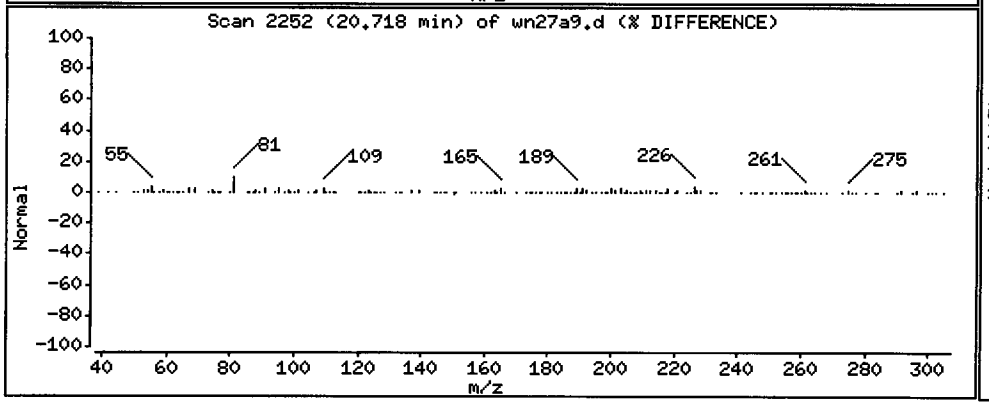












Data File: /chem1/nt10.i/20130508.b/wn27a9.d

Date : 08-MAY-2013 15:27

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,9

Volume Injected (uL): 1.0

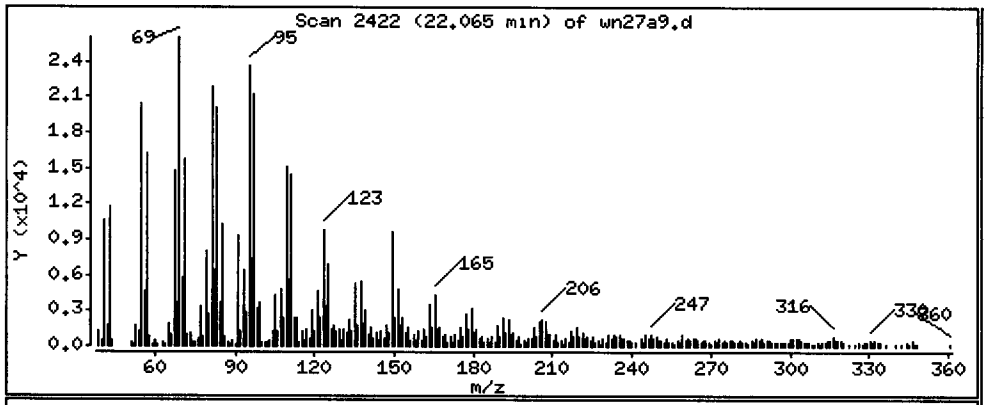
Operator: VTS/YZ

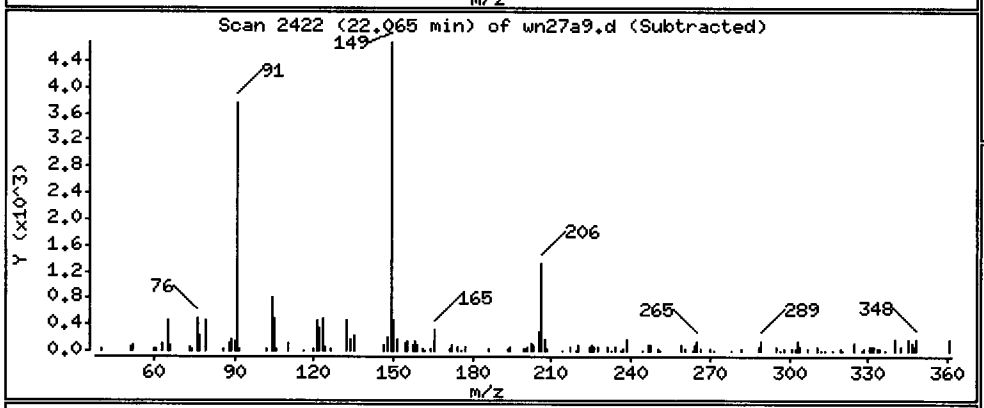
Column phase: ZB-5msi

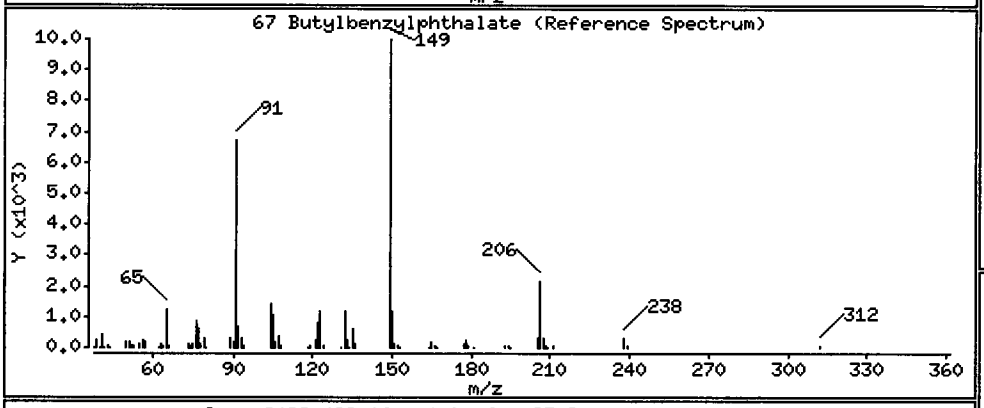
Column diameter: 0.25

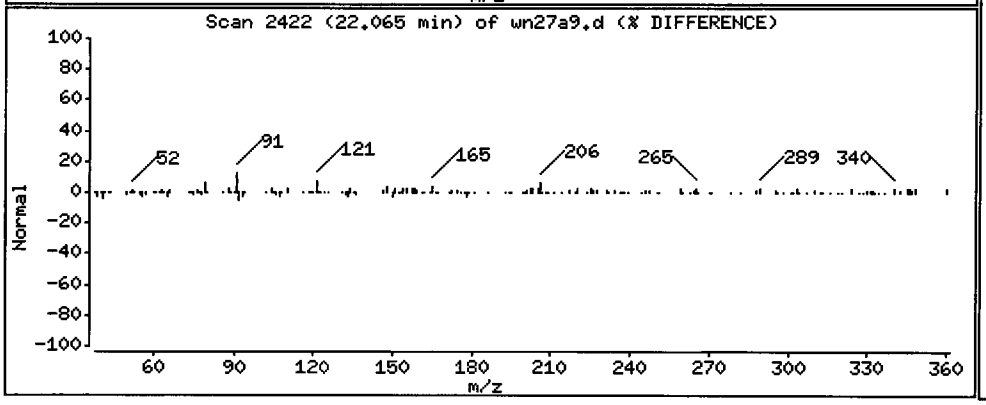
67 Butylbenzylphthalate

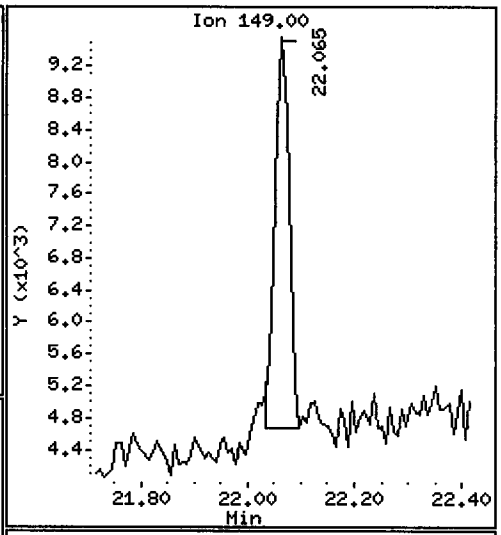
Concentration: 722.5 ug/kg

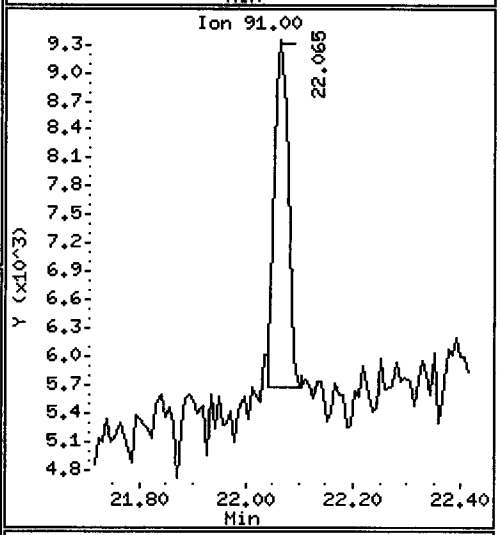


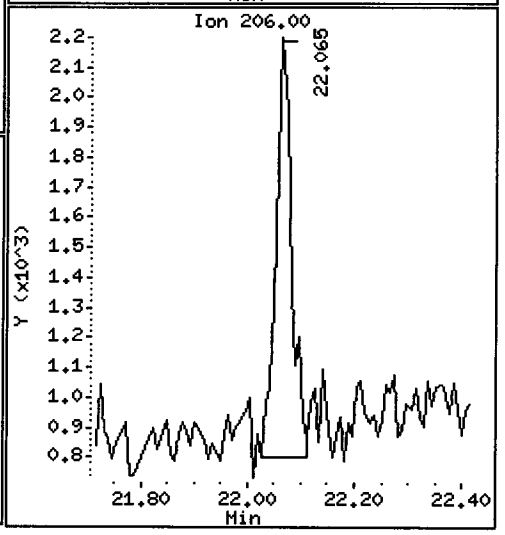












Data File: /chem1/nt10.i/20130508.b/wn27a9.d

Date : 08-MAY-2013 15:27

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,9

Volume Injected (uL): 1.0

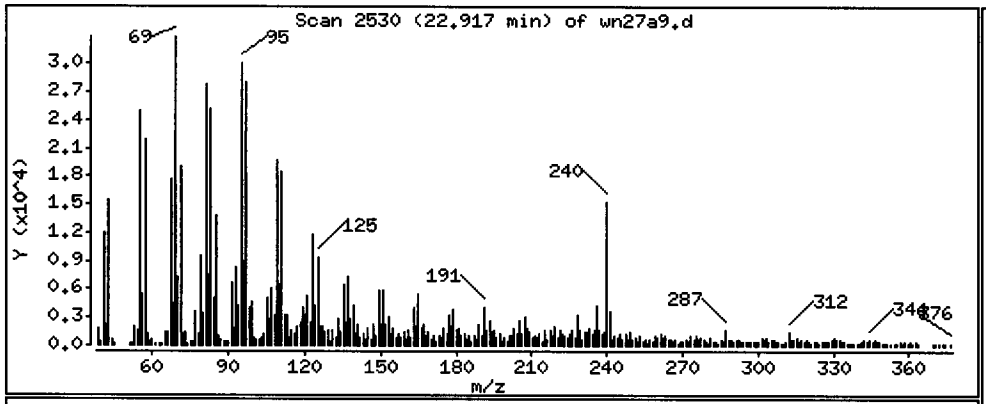
Operator: VTS/YZ

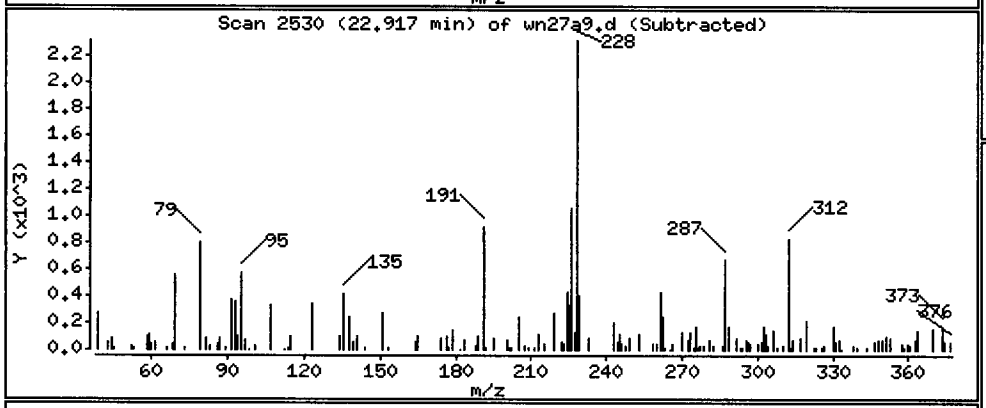
Column phase: ZB-5msi

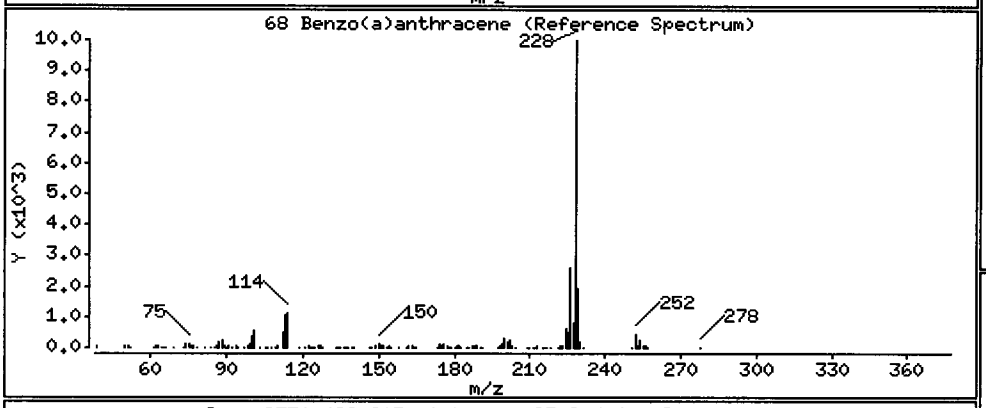
Column diameter: 0.25

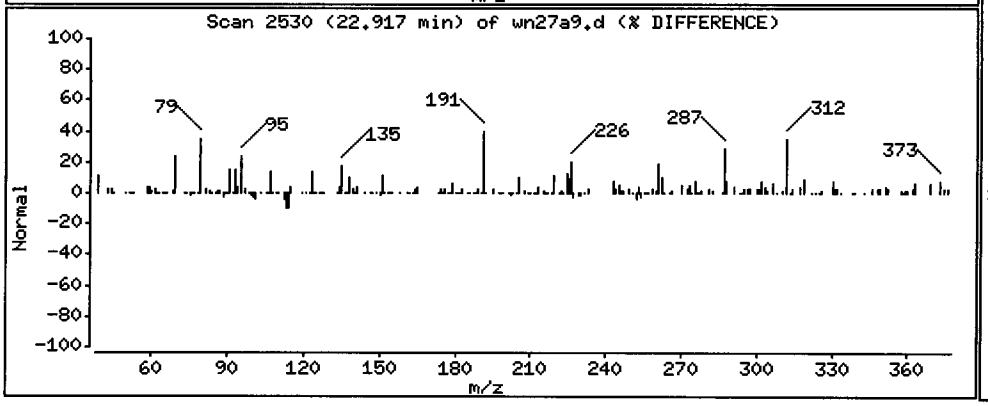
68 Benzo(a)anthracene

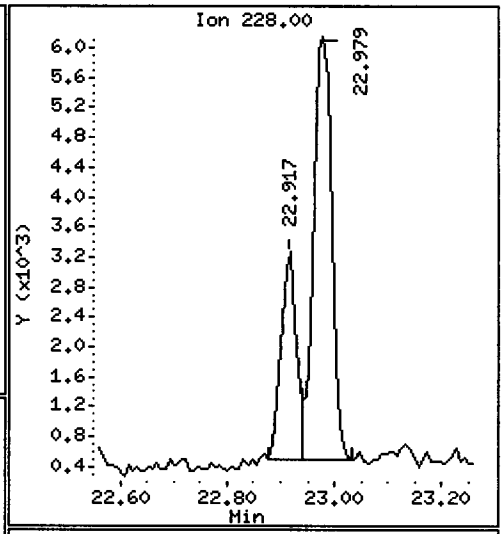
Concentration: 169.1 ug/kg

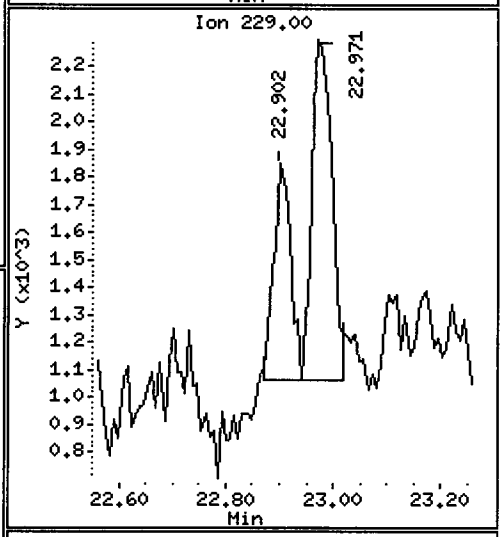


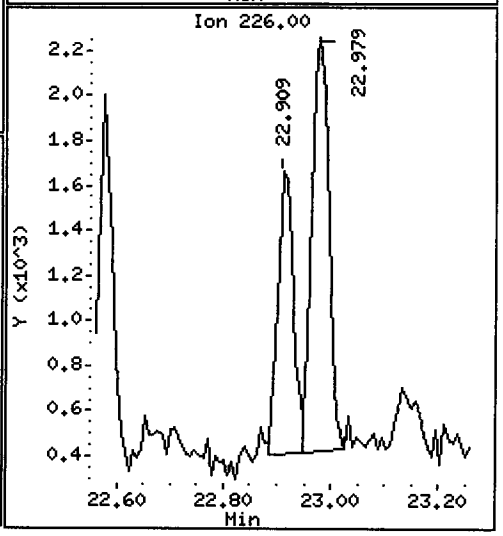












Data File: /chem1/nt10.i/20130508.b/wn27a9.d

Date : 08-MAY-2013 15:27

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,9

Volume Injected (uL): 1.0

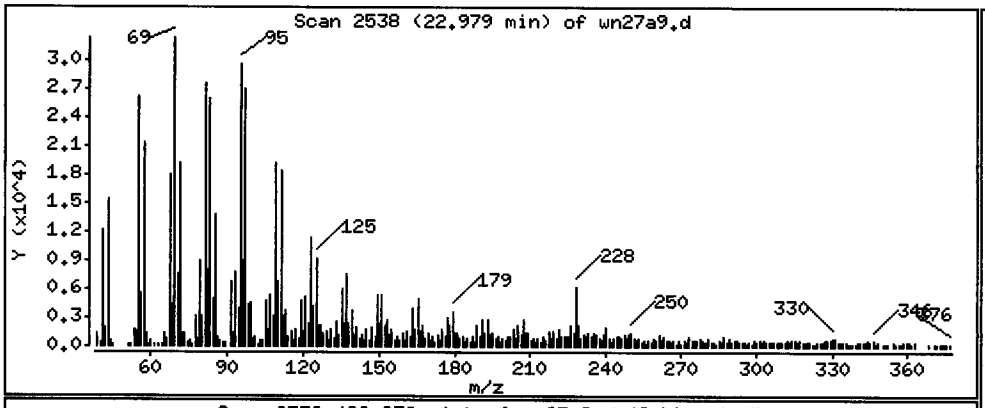
Operator: VTS/YZ

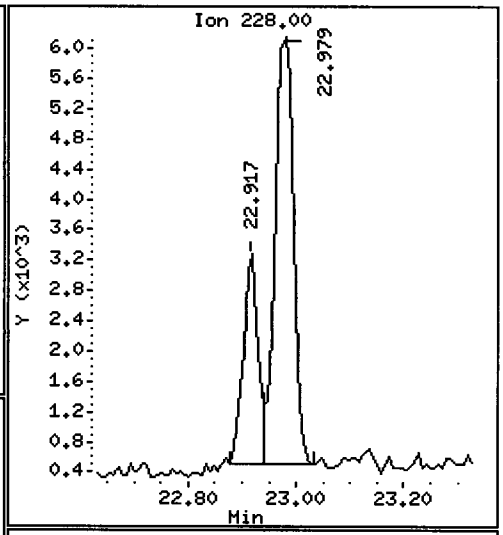
Column phase: ZB-5msi

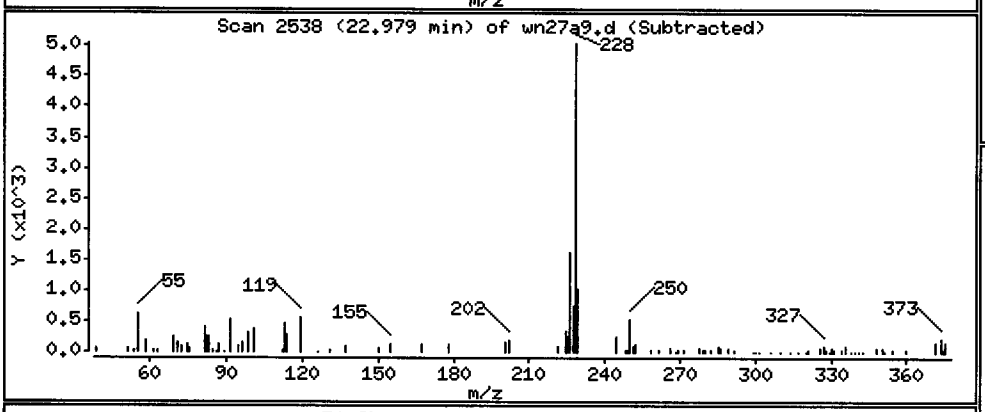
Column diameter: 0.25

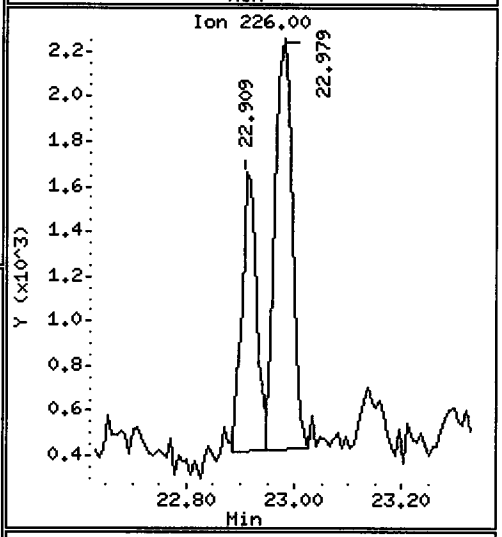
71 Chrysene

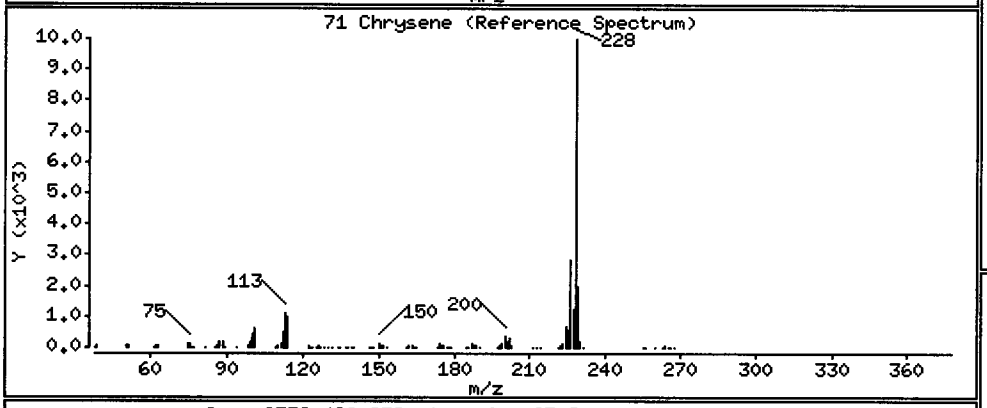
Concentration: 451.2 ug/kg

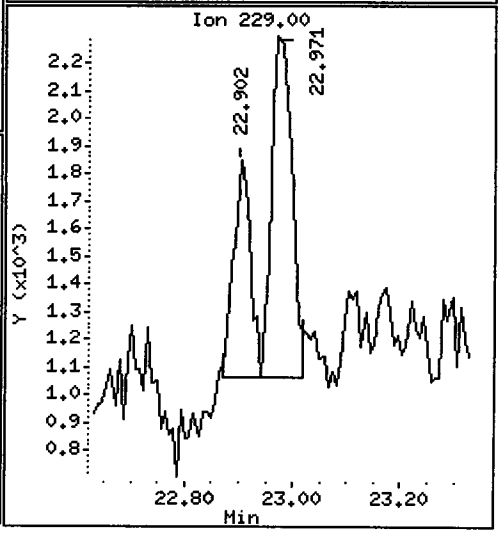


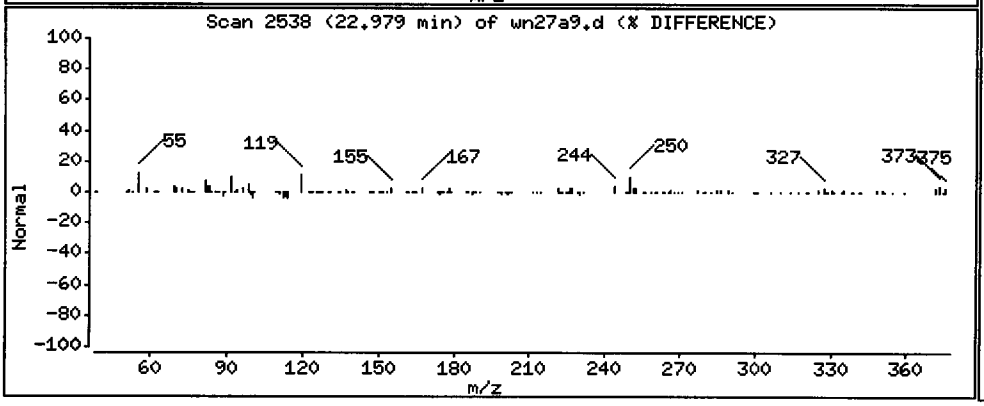












Data File: /chem1/nt10.i/20130508.b/wn27a9.d

Date : 08-MAY-2013 15:27

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,9

Volume Injected (uL): 1.0

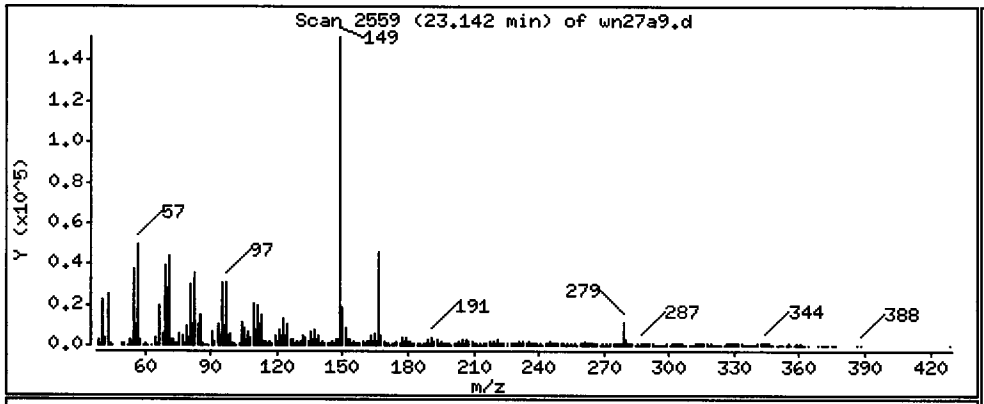
Operator: VTS/YZ

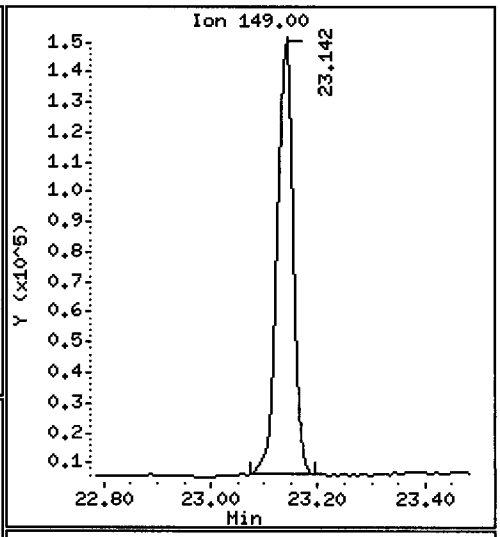
Column phase: ZB-5msi

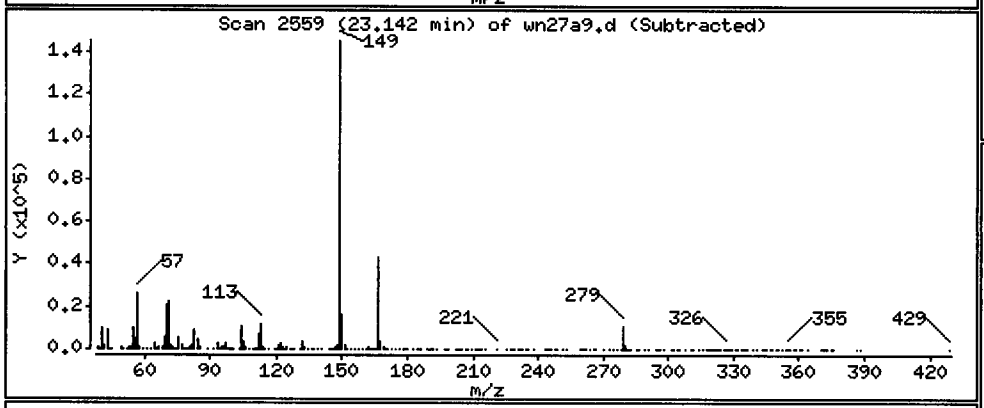
Column diameter: 0.25

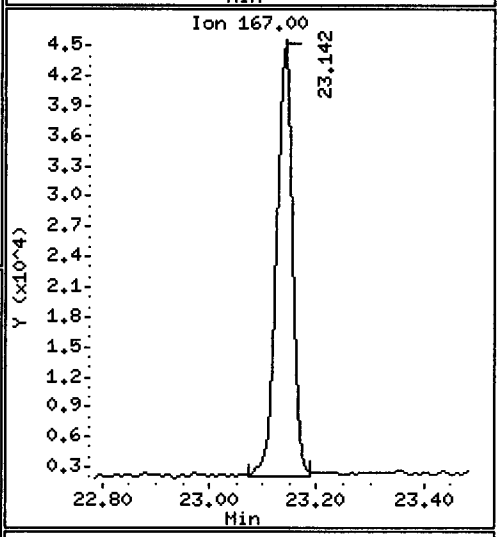
72 bis(2-Ethylhexyl)phthalate

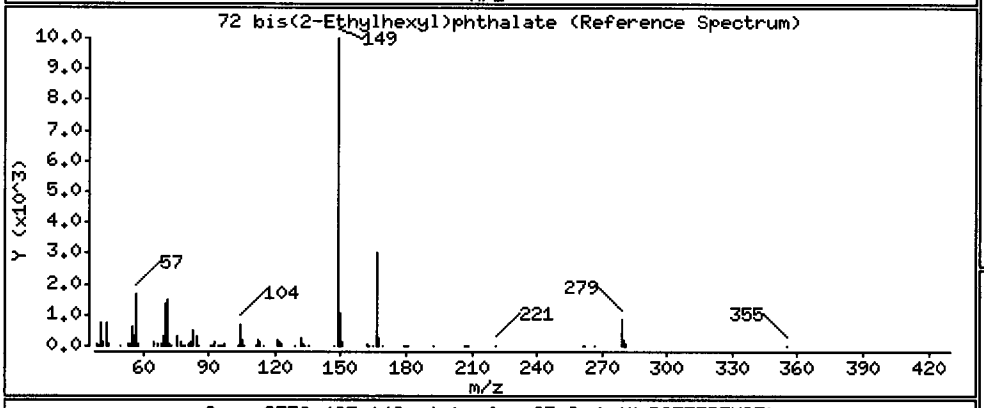
Concentration: 15080 ug/kg

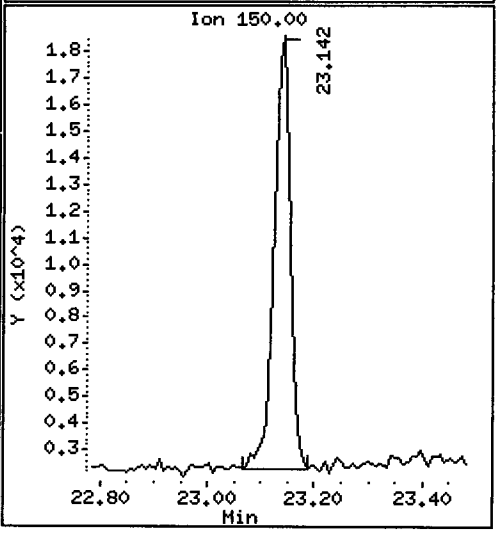


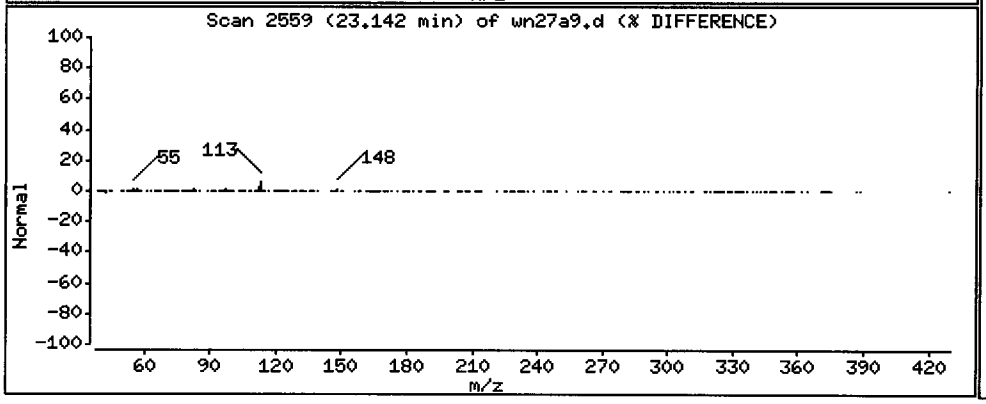












Data File: /chem1/nt10.i/20130508.b/wn27a9.d

Date : 08-MAY-2013 15:27

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,9

Volume Injected (uL): 1.0

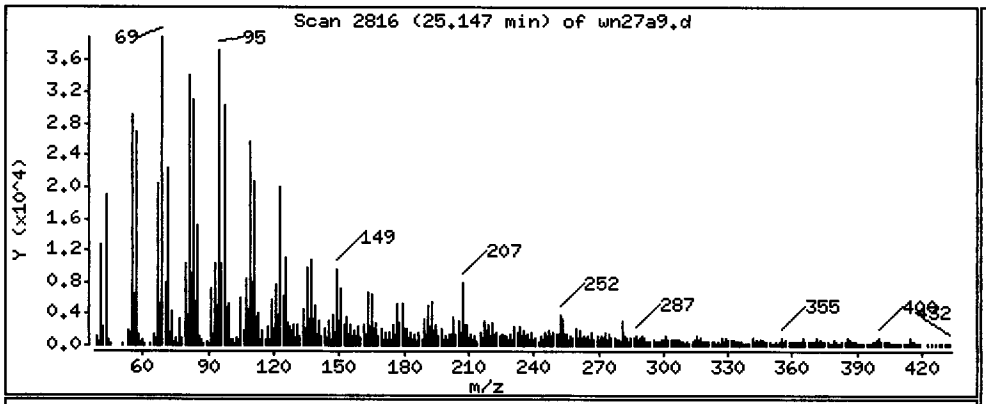
Operator: VTS/YZ

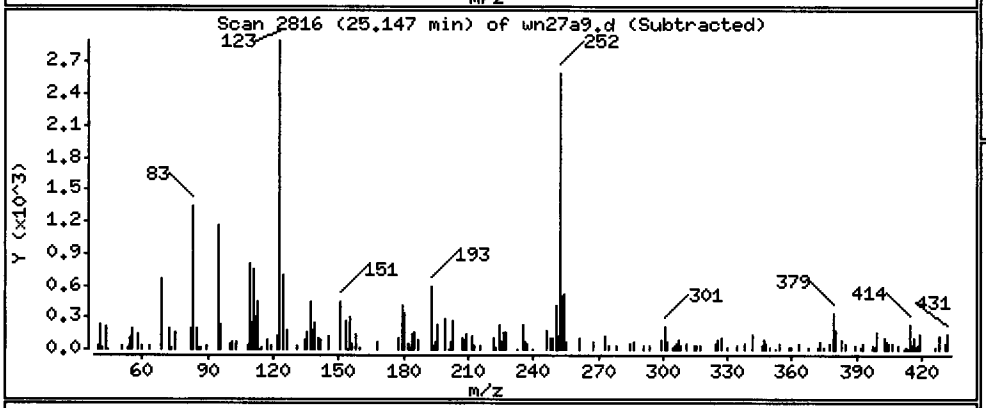
Column phase: ZB-5msi

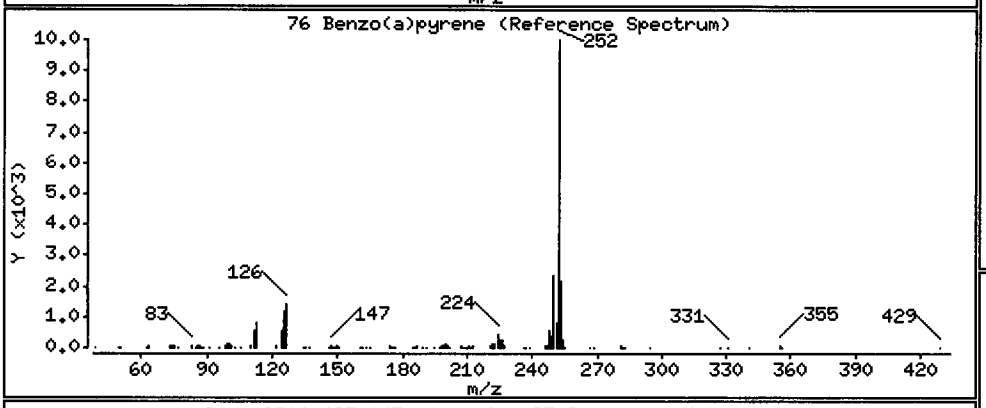
Column diameter: 0.25

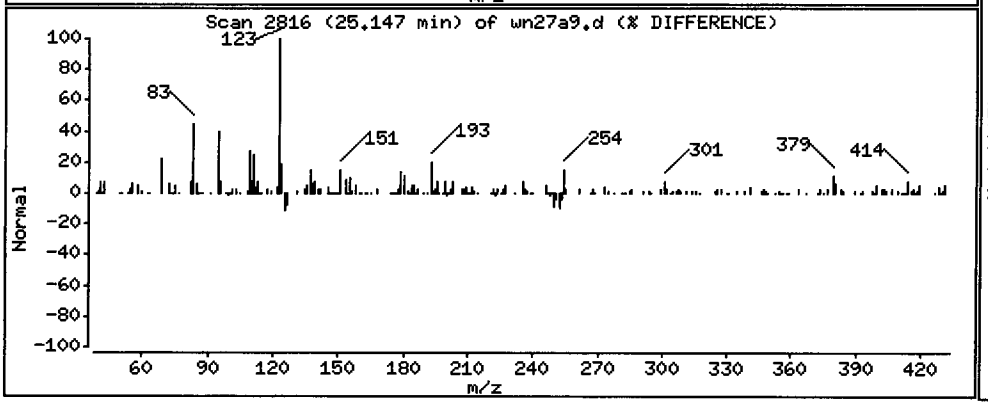
76 Benzo(a)pyrene

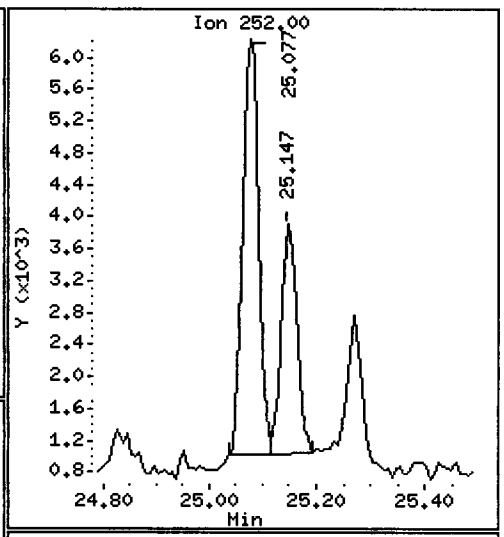
Concentration: 200.3 ug/kg

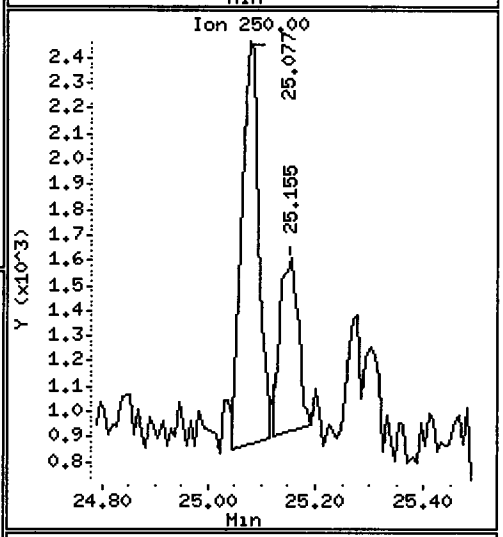


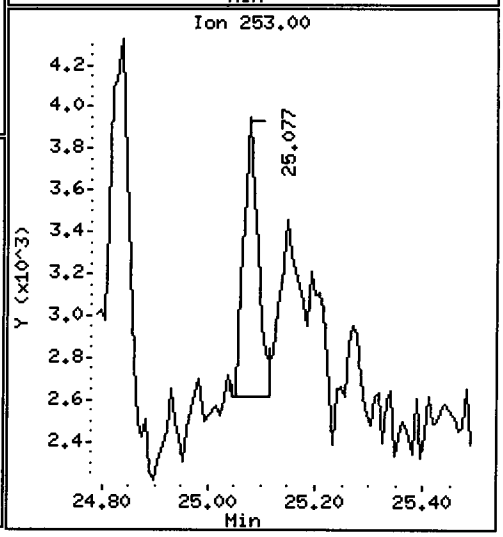












Data File: /chem1/nt10.i/20130508.b/wn27a9.d

Date : 08-MAY-2013 15:27

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,9

Volume Injected (uL): 1.0

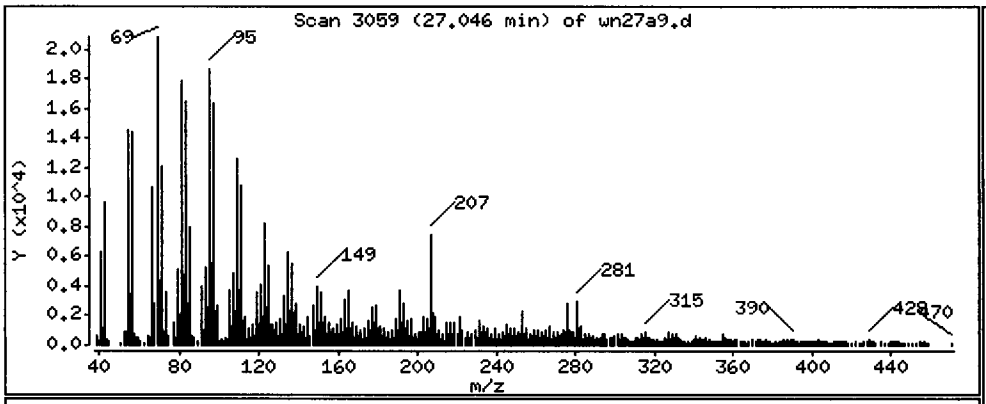
Operator: VTS/YZ

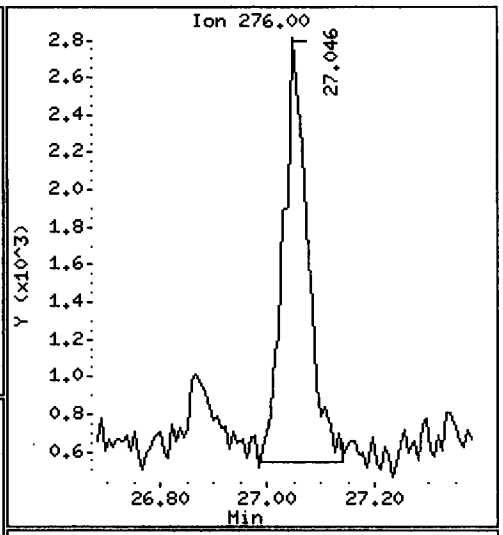
Column phase: ZB-5msi

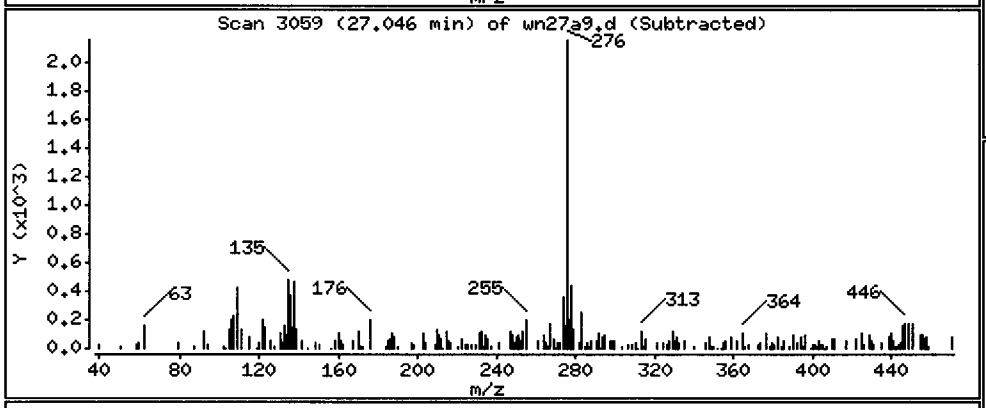
Column diameter: 0.25

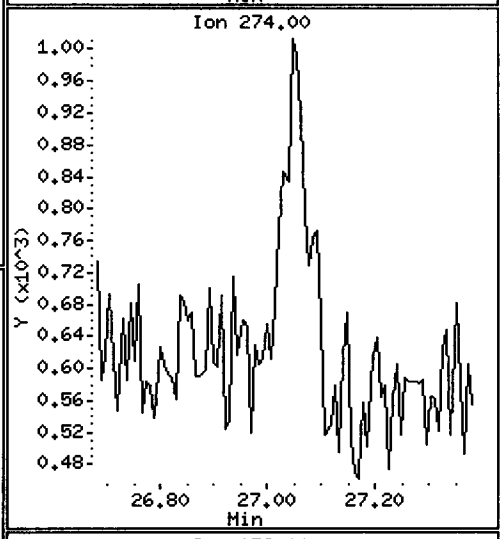
78 Indeno(1,2,3-cd)pyrene

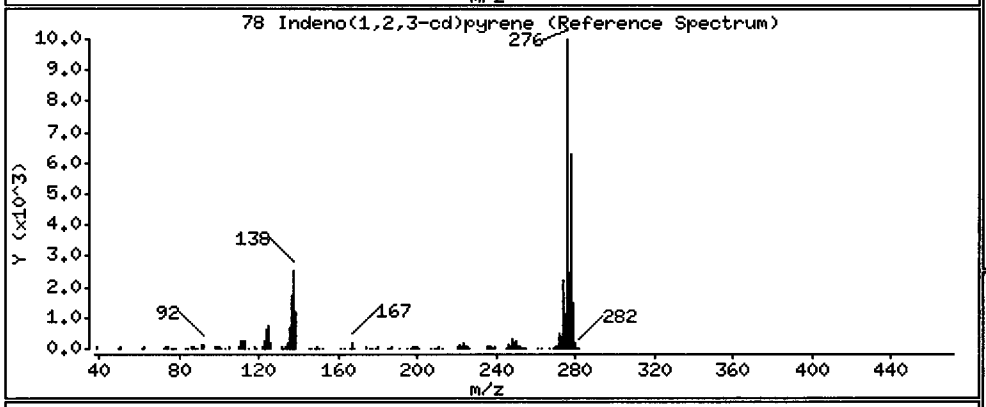
Concentration: 224.4 ug/kg

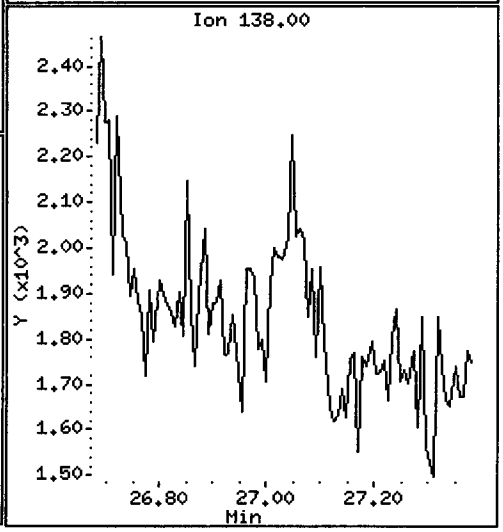


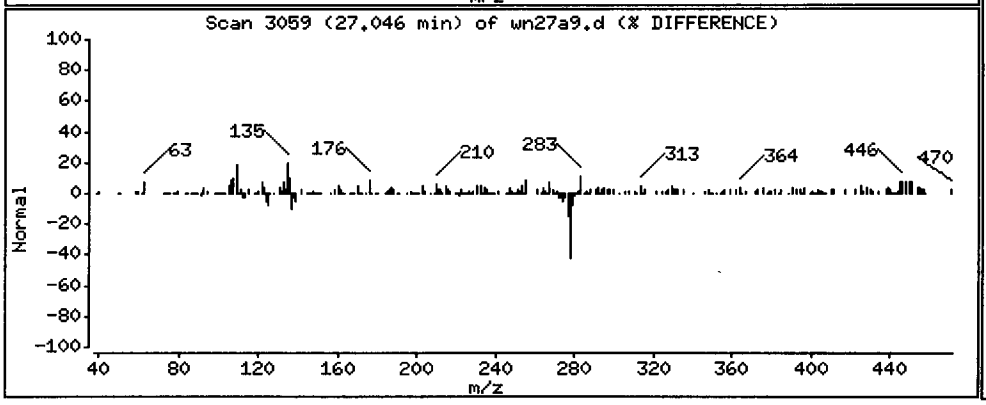












WN27: 495R Be 8/16/13

Data File: /chem1/nt10.i/20130508.b/wn27a9.d

Date : 08-MAY-2013 15:27

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,9

Volume Injected (uL): 1.0

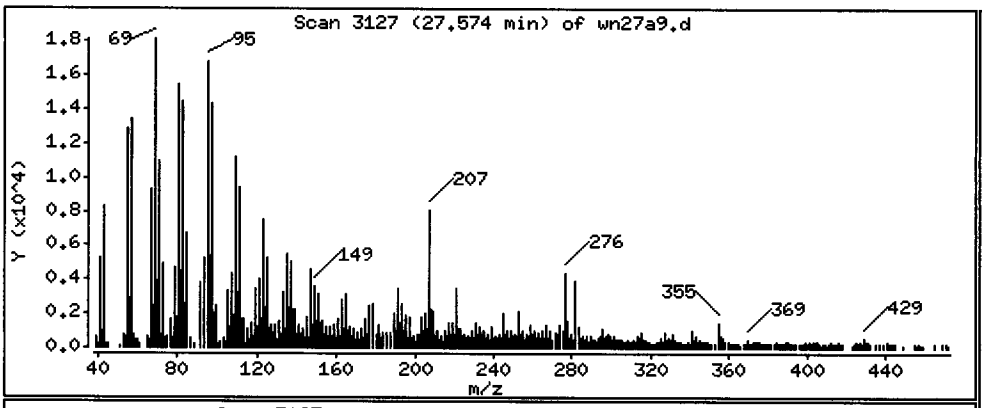
Operator: VTS/YZ

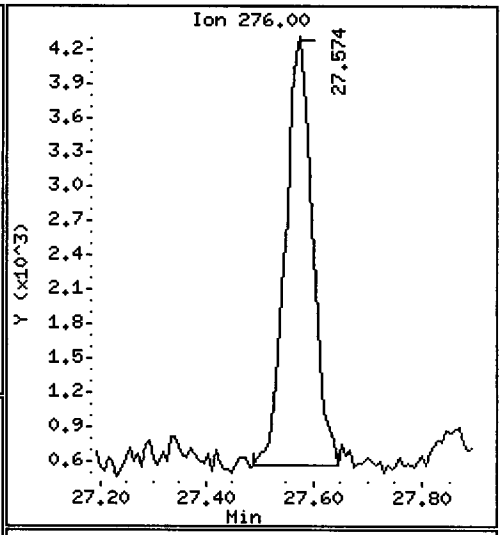
Column phase: ZB-5msi

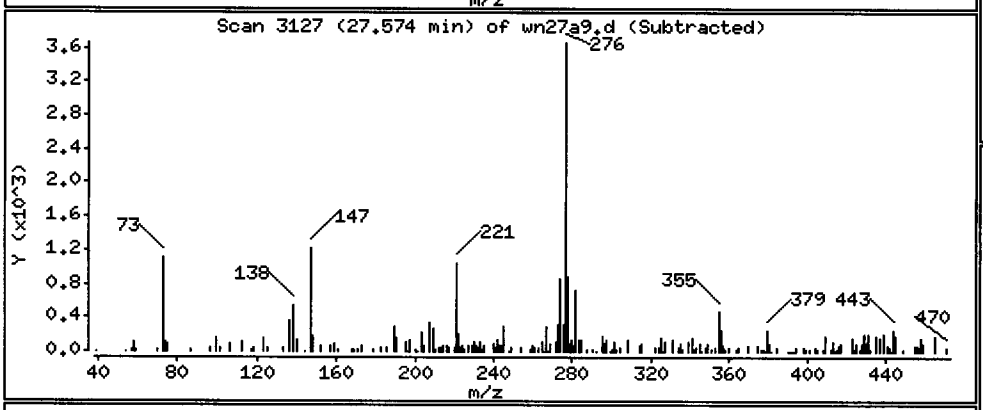
Column diameter: 0.25

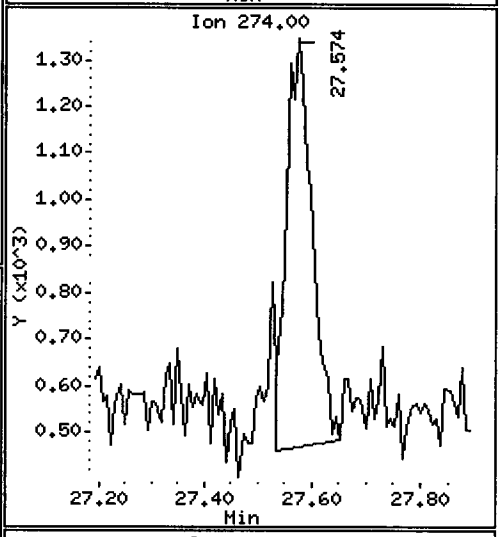
80 Benzo(g,h,i)perylene

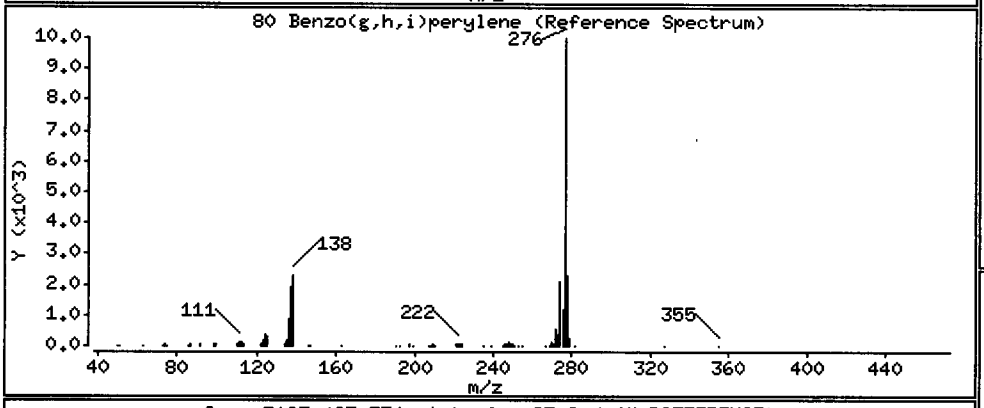
Concentration: 473.5 ug/kg

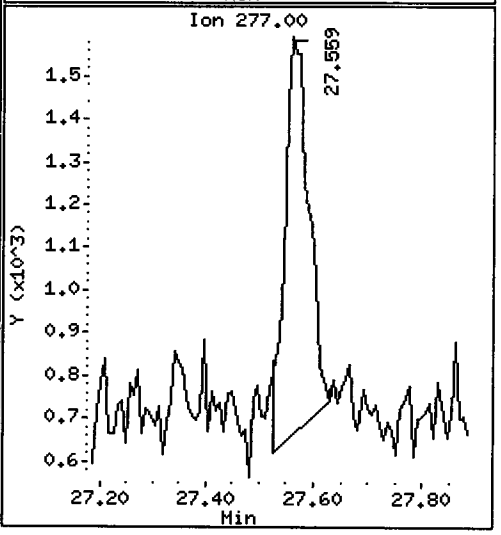


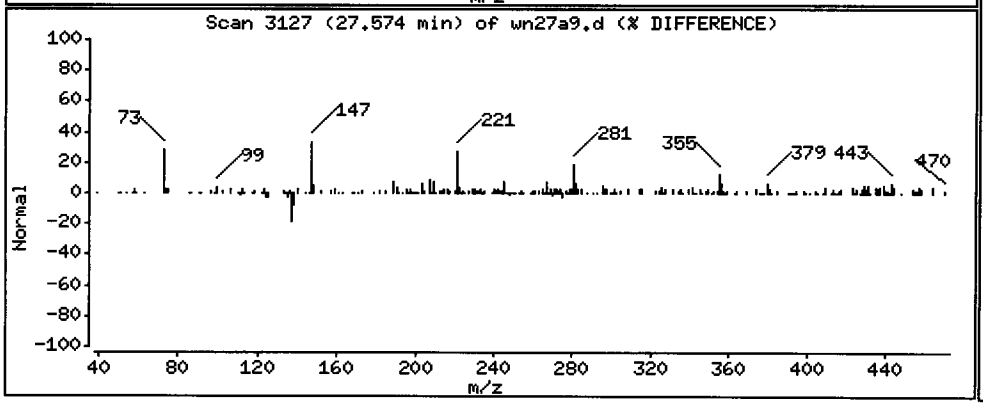












Data File: /chem1/nt10.i/20130508.b/wn27a9.d

Date : 08-MAY-2013 15:27

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,9

Volume Injected (uL): 1.0

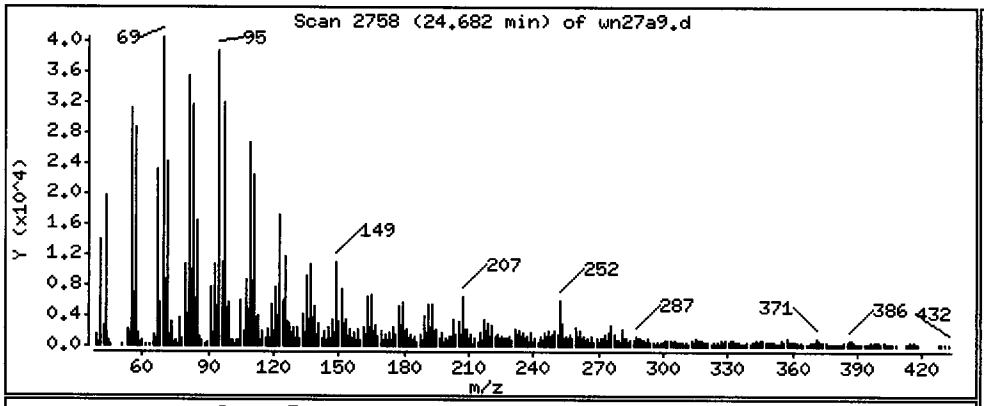
Operator: VTS/YZ

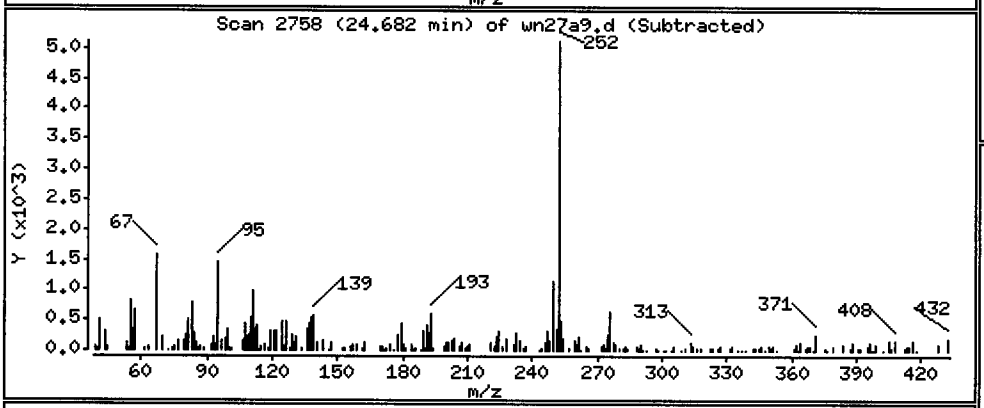
Column phase: ZB-5msi

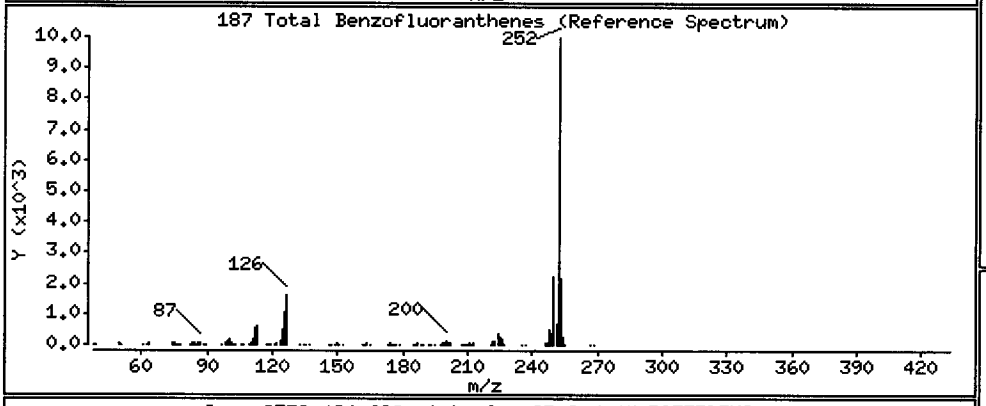
Column diameter: 0.25

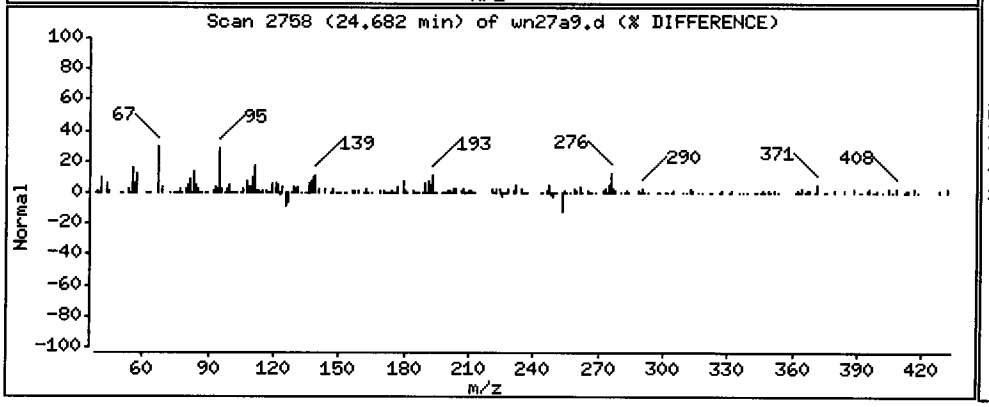
187 Total Benzofluoranthenes

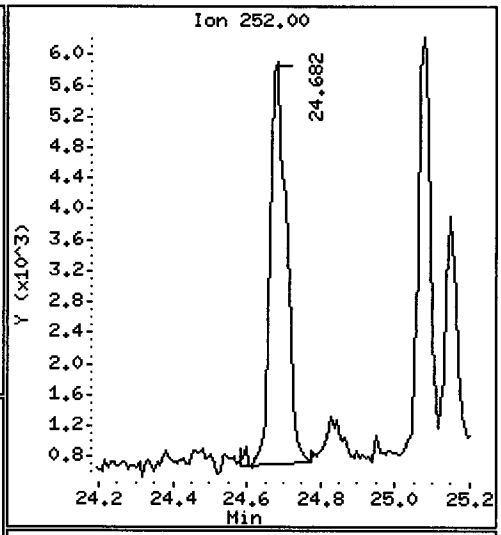
Concentration: 511.7 ug/kg

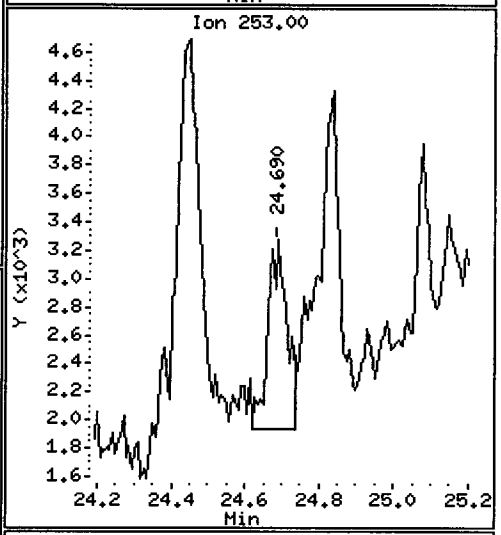


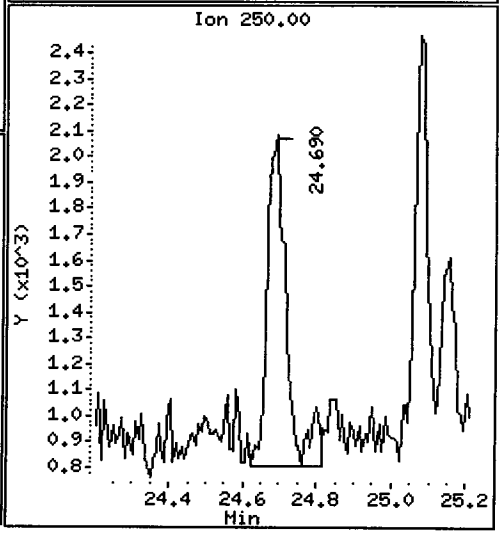






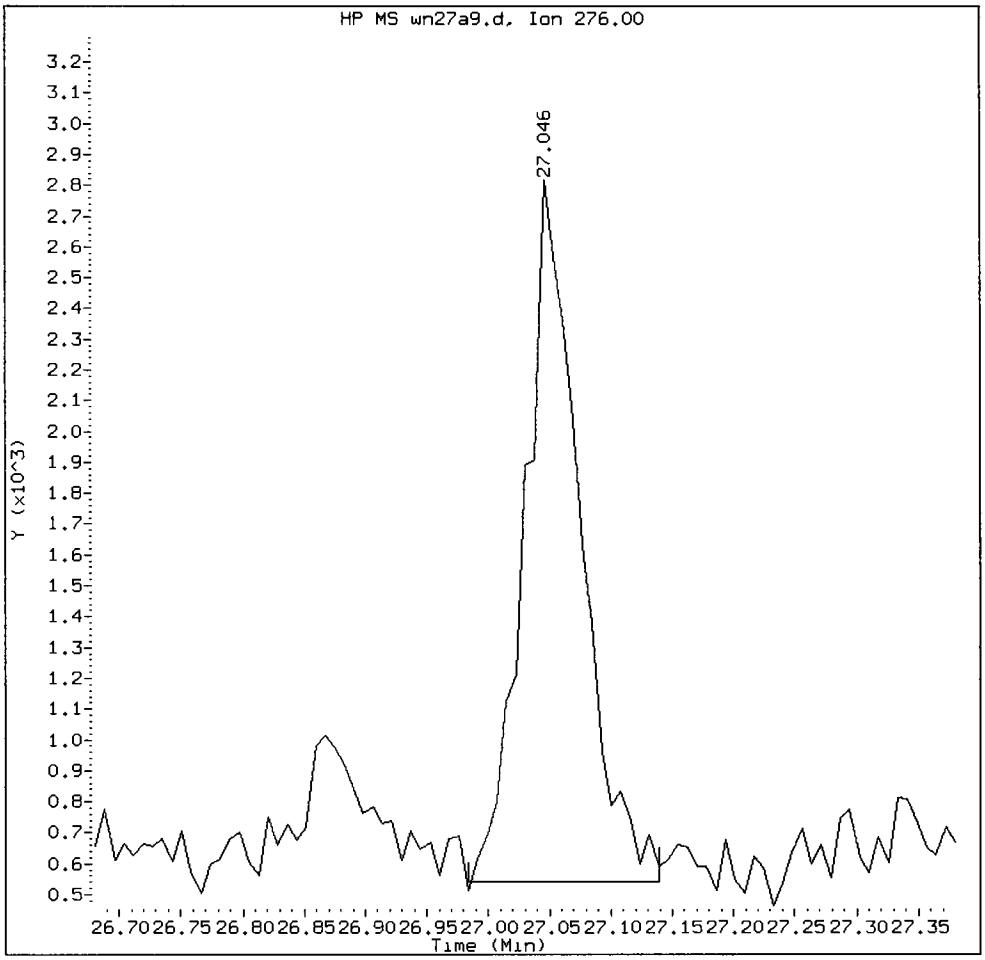






WN27A, /chem1/nt10.i/20130508.b/wn27a9.d

Indeno(1,2,3-cd)pyrene Amount: 0.15 Area: 7243



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: 9/14/13

WN27: 4982 BC 8/16/13

CO-ELUTION SUMMARY FOR FILE - wn27a9.d

Lab ID: WN27A, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2013

RT	CO-ELUTION COMPOUNDS
24.682	Benzo(k)fluoranthene and Benzo(b)fluoranthene

WN27: 499R BC 8/16/13

SIM Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN27

Incorporated
Analytical Chemists and Consultants

(8270D) BAN/SIM SVOA PSDDA–Soil/Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (5-20ppb)

ARI Job No(s) WN34, WN27, WN31 Page 1 of 1 Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID / Analyst/Date
	WN34 MBS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 2 3 — 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
	~~QLS~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
	~~QLS (SIM)~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 2 3 — Analyst/Date
2	WN34 K	24.03	(1:1) Y / N	1mL	1mL		CSZ 5/2/13
2	WN27 A	10.01	(1:1) Y / N	1mL	1mL	See Analyst Notes	GPC Prep Filter (1:1)
2	AMS	10.03	(1:1) Y / N	1mL	1mL		CSZ 5/2/13 — Analyst/Date
2	AMSd	10.02	(1:1) Y / N	1mL	1mL		
9	WN31 A	3.03	(1:1) Y / N	1mL	1mL		Post GPC KD 80-85°C 1 2 3 4 5 6 — Analyst/Date
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL	CSZ 5/3/13	
			(1:1) Y / N	1mL	1mL		TurboVap 1 2 3 — CSZ 5/3/13 Analyst/Date
Analyst/Date	YL 05/01/13		CSZ 5/2/13	CSZ 5/3/13	CSZ 5/3/13		

(2093-4)

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (~~2084-3~~)	100/150µg/mL	50µL	7/02/13	YL	WW
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/24/14	YL	WW
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	YL	WW
Acid Spike	38(2091-4)	100/150µg/mL	50µL	2/28/14	YL	WW
~~QLS Spike (14 in Freezer)~~	~~14(~~)	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25(~~)	~~1µg/mL~~	~~50µL~~			
Extraction Time: 11:50			Balance ID: B1464761A			

SPECIAL INSTRUCTIONS: 1 . Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (~~small~~ or large drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

A. Need Total Solids Y (N) **B. ~~Archive~~/Freeze (Y) / N** WN34 only

SIM Semivolatile Raw Data
Initial Calibration

ARI Job ID: WN27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) SIM **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 04/29/13 Internal Standard ID 1998-2 Expiration 07/03/13

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%? see Full Scan	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	2072-1	6/21/13	ucrq	20557	12/05/13
	2073-1	6/21/13	Full	2054-1	12/21/13
	2064-1	01/25/14	scan	2053-2	08/13/13
	B000112	10/15/13			
	1998-4	7/02/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: YB **Date:** 5/3/13

Reviewer: VD **Date:** 5.4.13

Analytical Resources Inc.: Organics Instrument Log
NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/29/13 Analysis: ABN/SIMABN Analyst: YZ

GC Program: ABN_2 Column No: 252945 Column Type: ZB5-MSI

Instrument Tune (.U or .CT.): B02284 EM Voltage: 1650

Calibration File: DF 0429 Curve Date: 04/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 B000112	
	2073-1 1998-4	
	2064-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130429.b

	Time	Filename	LabID	ClientId	DF									
1	1637	df0429.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1653	ic0429a.d	IC0429A		1	8.99	53090	11.65	194944	15.55	113450	18.82	212689	23.90	235045	26.35	227736
3	1807	ic0429c.d	IC0429C		1	8.98	58845	11.65	217141	15.54	121711	18.82	222131	23.89	244600	26.35	221779
4	1844	ic0429d.d	IC0429D		1	8.98	52658	11.65	192325	15.54	109274	18.82	203933	23.90	223647	26.35	211919
5	1957	ic0429f.d	IC0429F		1	8.98	52849	11.65	195311	15.54	106586	18.82	192165	23.90	215273	26.35	195976
6	2034	ic0429g.d	IC0429G		1	8.98	43709	11.65	160165	15.54	95179	18.82	178699	23.90	199199	26.36	191024
7	2111	ic0429h.d	IC0429H		1	8.98	51614	11.65	192559	15.54	107939	18.82	194268	23.89	211275	26.35	196007
8	2147	ic0429i.d	IC0429I		1	8.98	49468	11.64	182546	15.54	105486	18.82	191121	23.90	208500	26.35	197777

YZ 5/03/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0429a	ic0429c	ic0429d	ic0429f	ic0429g	ic0429h	ic0429i
INJ.DATE:	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013
INJ.TIME:	16:53	18:07	18:44	19:57	20:34	21:11	21:47

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	+++++	6.641	6.634	6.634	6.633	6.633	6.634	6.634	6.134-7.134	6.635	0.003
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.828	7.328-8.328	+++++	+++++
* 134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.900	16.400-17.400	+++++	+++++
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.954	29.454-30.454	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.752	23.252-24.252	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.717	27.217-28.217	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.796	19.296-20.296	+++++	+++++

Reviewer 1 _____ Date: 5/3/13
Reviewer 2 _____ Date: 5.4.13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
	107 4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
	105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
$	2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.886	6.386-7.386	+++++	+++++
	3 Phenol	8.365	8.365	8.357	8.365	8.364	8.365	8.365	8.365	7.865-8.865	8.364	0.003
	4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.268	7.768-8.768	+++++	+++++
$	5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.087	6.587-7.587	+++++	+++++
	6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.592	8.092-9.092	+++++	+++++
	7 1,3-Dichlorobenzene	8.914	8.914	8.914	8.914	8.914	8.914	8.914	8.914	8.414-9.414	8.914	0.000
*	8 1,4-Dichlorobenzene-d4	8.991	8.984	8.984	8.984	8.983	8.984	8.984	8.991	8.491-9.491	8.985	0.003
	9 1,4-Dichlorobenzene	9.015	9.015	9.015	9.015	9.015	9.015	9.015	9.015	8.515-9.515	9.015	0.000
$	10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.656	7.156-8.156	+++++	+++++
	11 Benzyl alcohol	9.294	9.294	9.286	9.294	9.294	9.294	9.294	9.294	8.794-9.794	9.293	0.003
	12 1,2-Dichlorobenzene	9.395	9.395	9.395	9.395	9.395	9.395	9.395	9.395	8.895-9.895	9.395	0.000
	13 2-Methylphenol	9.558	9.550	9.550	9.550	9.550	9.550	9.551	9.558	9.058-10.058	9.551	0.003
	14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.998	8.498-9.498	+++++	+++++
	15 4-Methylphenol	9.853	9.845	9.845	9.845	9.845	9.845	9.846	9.853	9.353-10.353	9.846	0.003
	16 N-Nitroso-di-n-propyla	9.900	9.900	9.900	9.900	9.899	9.899	9.900	9.900	9.400-10.400	9.900	0.000
	17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.363	8.863-9.863	+++++	+++++
$	18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.237	7.737-8.737	+++++	+++++
	19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.696	8.196-9.196	+++++	+++++
	20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.987	8.487-9.487	+++++	+++++
	21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	10.969	10.969	10.961	10.962	10.969	10.961	10.962	10.969	10.469-11.469	10.965	0.004
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.557	9.057-10.057	+++++	+++++
	24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.500	9.000-10.000	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.563	11.563	11.563	11.563	11.563	11.563	11.563	11.563	11.063-12.063	11.563	0.000
*	27 Naphthalene-d8	11.648	11.648	11.648	11.648	11.647	11.647	11.640	11.648	11.148-12.148	11.647	0.003
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.518	9.018-10.018	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.411-10.411	+++++	+++++
	30 Hexachlorobutadiene	12.103	12.103	12.103	12.104	12.103	12.103	12.104	12.103	11.603-12.603	12.103	0.000
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
	32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
	33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.194	10.694-11.694	+++++	+++++
	34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.019	10.519-11.519	+++++	+++++
	35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.386	10.886-11.886	+++++	+++++
$	36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.091	10.591-11.591	+++++	+++++
	37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.600	11.100-12.100	+++++	+++++
	38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.805	11.305-12.305	+++++	+++++
	39 Dimethylphthalate	15.060	15.052	15.052	15.052	15.060	15.052	15.052	15.060	14.560-15.560	15.054	0.004
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.232	11.732-12.732	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.177	11.677-12.677	+++++	+++++
*	42 Acenaphthene-d10	15.547	15.539	15.539	15.540	15.539	15.539	15.540	15.547	15.047-16.047	15.540	0.003
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.508	12.008-13.008	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.578	12.078-13.078	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.660	12.160-13.160	+++++	+++++
	46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.756	12.256-13.256	+++++	+++++
	47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.867	12.367-13.367	+++++	+++++
	48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.031	12.531-13.531	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.248	12.748-13.748	+++++	+++++
	50 Diethylphthalate	16.645	16.637	16.637	16.637	16.645	16.637	16.637	16.645	16.145-17.145	16.639	0.004
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	13.868-14.868	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.510	13.010-14.010	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.340	12.840-13.840	+++++	+++++
	54 N-Nitrosodiphenylamine	17.031	17.023	17.031	17.031	17.031	17.023	17.023	17.031	16.531-17.531	17.028	0.004
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.476	12.976-13.976	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.191	13.691-14.691	+++++	+++++
	57 Hexachlorobenzene	18.158	18.150	18.158	18.150	18.157	18.157	18.158	18.158	17.658-18.658	18.155	0.004
	58 Pentachlorophenol	18.552	18.545	18.552	18.553	18.552	18.552	18.553	18.552	18.052-19.052	18.551	0.003
*	59 Phenanthrene-d10	18.816	18.816	18.815	18.816	18.815	18.815	18.816	18.816	18.316-19.316	18.816	0.000
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.290	14.790-15.790	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.986	15.486-16.486	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.867	16.367-17.367	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.445	16.945-17.945	+++++	+++++
$	66 Terphenyl-d14	22.026	22.026	22.026	22.027	22.026	22.026	22.027	22.026	21.526-22.526	22.026	0.000
	67 Butylbenzylphthalate	22.979	22.971	22.979	22.979	22.979	22.971	22.971	22.979	22.479-23.479	22.975	0.004
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.250	18.750-19.750	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 69 Chrysene-d12	23.900	23.892	23.900	23.900	23.900	23.892	23.900	23.900	23.400-24.400	23.898	0.004
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.276	19.776-20.776	+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.339	19.839-20.839	+++++	+++++
72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.411	18.911-19.911	+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.324	19.824-20.824	+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.373	21.873-22.873	+++++	+++++
* 77 Perylene-d12	26.355	26.347	26.354	26.355	26.362	26.347	26.347	26.355	25.855-26.855	26.352	0.006
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.378	23.878-24.878	+++++	+++++
79 Dibenzo(a,h)anthracene	28.718	28.703	28.710	28.726	28.718	28.710	28.703	28.718	28.218-29.218	28.713	0.009
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.408	24.908-25.908	+++++	+++++
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$ 88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.597	16.097-17.097	+++++	+++++
90 N-Nitrosodimethylamine	4.371	4.387	4.371	4.387	4.356	4.386	4.371	4.371	3.871-4.871	4.376	0.012
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.413-8.413	+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.089	14.589-15.589	+++++	+++++
$ 95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Level 2: /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Level 3: /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Level 4: /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Level 5: /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Level 6: /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Level 7: /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
142 1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
3 Phenol	2.19342	1.93668	2.06101	1.92949	1.94728	2.08759		
	1.98249						2.01971	4.874
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 1,3-Dichlorobenzene	1.87553	1.75224	1.72793	1.58761	1.57264	1.59509	1.53900	1.66429	7.407
9 1,4-Dichlorobenzene	1.91943	1.70341	1.73949	1.57791	1.55213	1.57844	1.52865	1.65707	8.453
11 Benzyl alcohol	1.01421	0.92378	0.95981	0.91615	0.94937	1.02397	0.99327	0.96865	4.413
12 1,2-Dichlorobenzene	1.80136	1.61817	1.67423	1.49430	1.47632	1.51145	1.44728	1.57473	8.180
13 2-Methylphenol	1.59549	1.39187	1.48696	1.36428	1.39709	1.47085	1.40118	1.44396	5.556
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
15 4-Methylphenol	1.58792	1.37715	1.51721	1.38530	1.44358	1.52071	1.46089	1.47039	5.215
16 N-Nitroso-di-n-propylamine	0.91430	0.80598	0.85037	0.79906	0.80117	0.85017	0.78320	0.82918	5.500

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 2,4-Dimethylphenol	0.40571	0.35657	0.40416	0.37154	0.38512	0.40380	0.38544	0.38748	4.824
23 Bis(2-Chloroethoxy)methane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
26 1,2,4-Trichlorobenzene	0.44278	0.39385	0.40914	0.36326	0.36118	0.36604	0.34742	0.38338	8.776

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
30 Hexachlorobutadiene	0.27157	0.23723	0.24399	0.22079	0.21930	0.22590		
	0.21485						0.23337	8.466
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Dimethylphthalate	1.29548	1.18474	1.22635	1.06304	1.10760	1.11120	1.09034	1.15411	7.293
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Diethylphthalate	1.48913	1.22551	1.39412	1.18097	1.28213	1.30160	1.27512	1.30694	7.961
51 4-Chlorophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 4,6-Dinitro-2-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 N-Nitrosodiphenylamine	0.39424	0.38298	0.48476	0.43332	0.46296	0.45890	0.45294	0.43858	8.547
56 4-Bromophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 Hexachlorobenzene	0.37593	0.30103	0.32963	0.26764	0.27658	0.27272	0.27374	0.29961	13.400

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1 / 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
58 Pentachlorophenol	0.14488 / 0.22038	0.13785	0.18228	0.16591	0.19052	0.20510	0.17813	17.090
60 Phenanthrene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
61 Anthracene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
62 Carbazole	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
63 Di-n-butylphthalate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
64 Fluoranthene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
65 Pyrene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Butylbenzylphthalate	0.36122 / 0.41936	0.29118	0.41472	0.31985	0.38893	0.40240	0.37109	13.311
68 Benzo(a)anthracene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
79 Dibenzo(a,h)anthracene	0.97359	0.78303	0.98900	0.78861	0.87907	0.89559		
	0.93233						0.89160	9.207

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
90 N-Nitrosodimethylamine	0.90219	0.86023	0.85122	0.86270	0.83980	0.90195	0.81542	0.86193	3.667
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 2-Fluorophenol	1.51980	1.35157	1.44617	1.31204	1.36686	1.43403	1.39600	1.40378	4.930
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
$ 18 Nitrobenzene-d5	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 36 2-Fluorobiphenyl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 55 2,4,6-Tribromophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 66 Terphenyl-d14	0.56524 / 0.47799	0.46461	0.53843	0.44428	0.47993	0.47146	0.49170	8.830
$ 85 p-Cresol-d4	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 86 Anthracene-d10	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 87 Fluoranthene-d10	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 89 Diphenyl-d10	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
	5.000 Level 7							
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d
Lab Smp Id: IC0429A
Inj Date : 29-APR-2013 16:53
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:18 yev Quant Type: ISTD
Cal Date : 29-APR-2013 16:53 Cal File: ic0429a.d
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.634	6.634	(0.738)	92642	5.00000	4.972(M)
	3 Phenol	94	8.365	8.365	(0.930)	131563	5.00000	4.908
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.991)	102132	5.00000	4.624
*	8 1,4-Dichlorobenzene-d4	152	8.991	8.984	(1.000)	53090	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	101445	5.00000	4.613
	11 Benzyl alcohol	79	9.294	9.294	(1.034)	65916	5.00000	5.127
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.045)	96045	5.00000	4.595
	13 2-Methylphenol	108	9.558	9.551	(1.063)	92986	5.00000	4.852
	15 4-Methylphenol	108	9.853	9.846	(1.096)	96948	5.00000	4.968
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.101)	51975	5.00000	4.723
	22 2,4-Dimethylphenol	107	10.969	10.962	(0.942)	187850	10.0000	9.948
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	84659	5.00000	4.531
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	194944	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	52354	5.00000	4.603
	39 Dimethylphthalate	163	15.060	15.052	(0.969)	154624	5.00000	4.724
*	42 Acenaphthene-d10	162	15.547	15.540	(1.000)	113450	4.00000	
	50 Diethylphthalate	149	16.645	16.637	(1.071)	180828	5.00000	4.878
	54 N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	120418	5.00000	5.164
	57 Hexachlorobenzene	284	18.158	18.158	(0.965)	72778	5.00000	4.568
	58 Pentachlorophenol	266	18.552	18.553	(0.986)	117179	10.0000	12.37
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	212689	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	140436	5.00000	4.861
	67 Butylbenzylphthalate	149	22.979	22.971	(0.961)	123210	5.00000	5.650
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	235045	4.00000	
*	77 Perylene-d12	264	26.355	26.347	(1.000)	227736	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.718	28.703	(1.090)	265405	5.00000	5.228
	90 N-Nitrosodimethylamine	74	4.371	4.371	(0.486)	108227	10.0000	9.460

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429a.d
Lab Smp Id: IC0429A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	53090	0.82
27 Naphthalene-d8	192325	96162	384650	194944	1.36
42 Acenaphthene-d10	109274	54637	218548	113450	3.82
59 Phenanthrene-d10	203933	101966	407866	212689	4.29
69 Chrysene-d12	223647	111824	447294	235045	5.10
77 Perylene-d12	211919	105960	423838	227736	7.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.99	0.09
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.55	0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

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

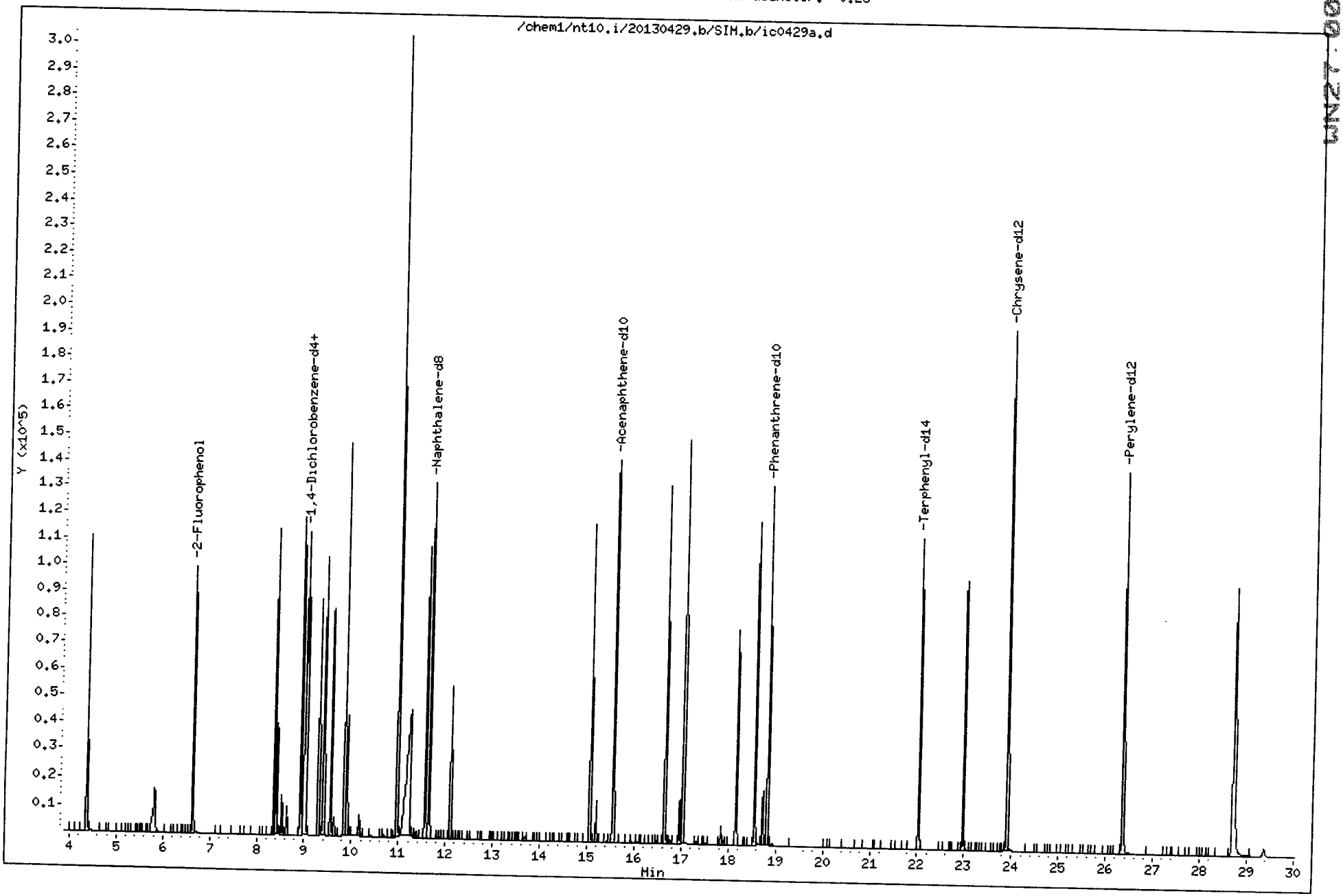
Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d
Date : 29-APR-2013 16:53
Client ID:
Sample Info: IC0429A

Column phase: ZB-5ms1

Instrument: nt10.i

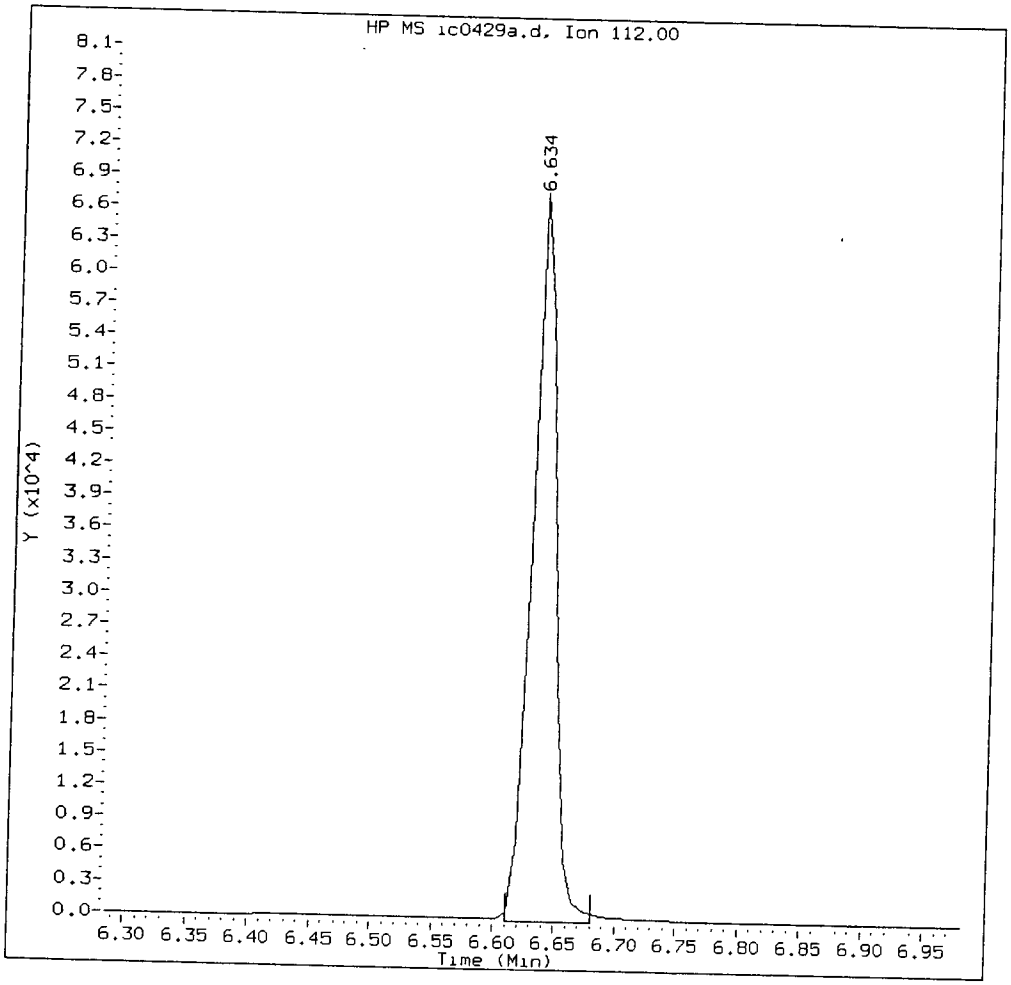
Operator: YZ
Column diameter: 0.25

WN27.00526



IC0429A, /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d

2-Fluorophenol Amount: 4.97 Area: 92642



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: 1/2 Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429a.d

Lab ID: IC0429A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Lab Smp Id: IC0429C
Inj Date : 29-APR-2013 18:07
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429C
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:07 Cal File: ic0429c.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.641	6.634	(0.739)	4255	0.20000	0.2058(M)
	3 Phenol	94	8.365	8.365	(0.931)	6064	0.20000	0.2041
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	5084	0.20000	0.2076
*	8 1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	58845	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	5118	0.20000	0.2099
	11 Benzyl alcohol	79	9.294	9.294	(1.035)	2824	0.20000	0.1982
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	4926	0.20000	0.2126
	13 2-Methylphenol	108	9.550	9.551	(1.063)	4375	0.20000	0.2060
	15 4-Methylphenol	108	9.845	9.846	(1.096)	4464	0.20000	0.2064
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	2502	0.20000	0.2051
	22 2,4-Dimethylphenol	107	10.969	10.962	(0.942)	8776	0.40000	0.4172
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	4442	0.20000	0.2134
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	217141	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	2649	0.20000	0.2091
	39 Dimethylphthalate	163	15.052	15.052	(0.969)	7463	0.20000	0.2125
*	42 Acenaphthene-d10	162	15.539	15.540	(1.000)	121711	4.00000	
	50 Diethylphthalate	149	16.637	16.637	(1.071)	8484	0.20000	0.2133
	54 N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	5384	0.20000	0.2211
	57 Hexachlorobenzene	284	18.150	18.158	(0.965)	3661	0.20000	0.2200
	58 Pentachlorophenol	266	18.545	18.553	(0.986)	4049	0.40000	0.3970
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	222131	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	6585	0.20000	0.2190
	67 Butylbenzylphthalate	149	22.971	22.971	(0.961)	5072	0.20000	0.2235
*	69 Chrysene-d12	240	23.892	23.900	(1.000)	244600	4.00000	
*	77 Perylene-d12	264	26.347	26.347	(1.000)	221779	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.703	28.703	(1.089)	10967	0.20000	0.2218
	90 N-Nitrosodimethylamine	74	4.387	4.371	(0.488)	5009	0.40000	0.3950

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429c.d
Lab Smp Id: IC0429C
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	58845	11.75
27 Naphthalene-d8	192325	96162	384650	217141	12.90
42 Acenaphthene-d10	109274	54637	218548	121711	11.38
59 Phenanthrene-d10	203933	101966	407866	222131	8.92
69 Chrysene-d12	223647	111824	447294	244600	9.37
77 Perylene-d12	211919	105960	423838	221779	4.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.89	-0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

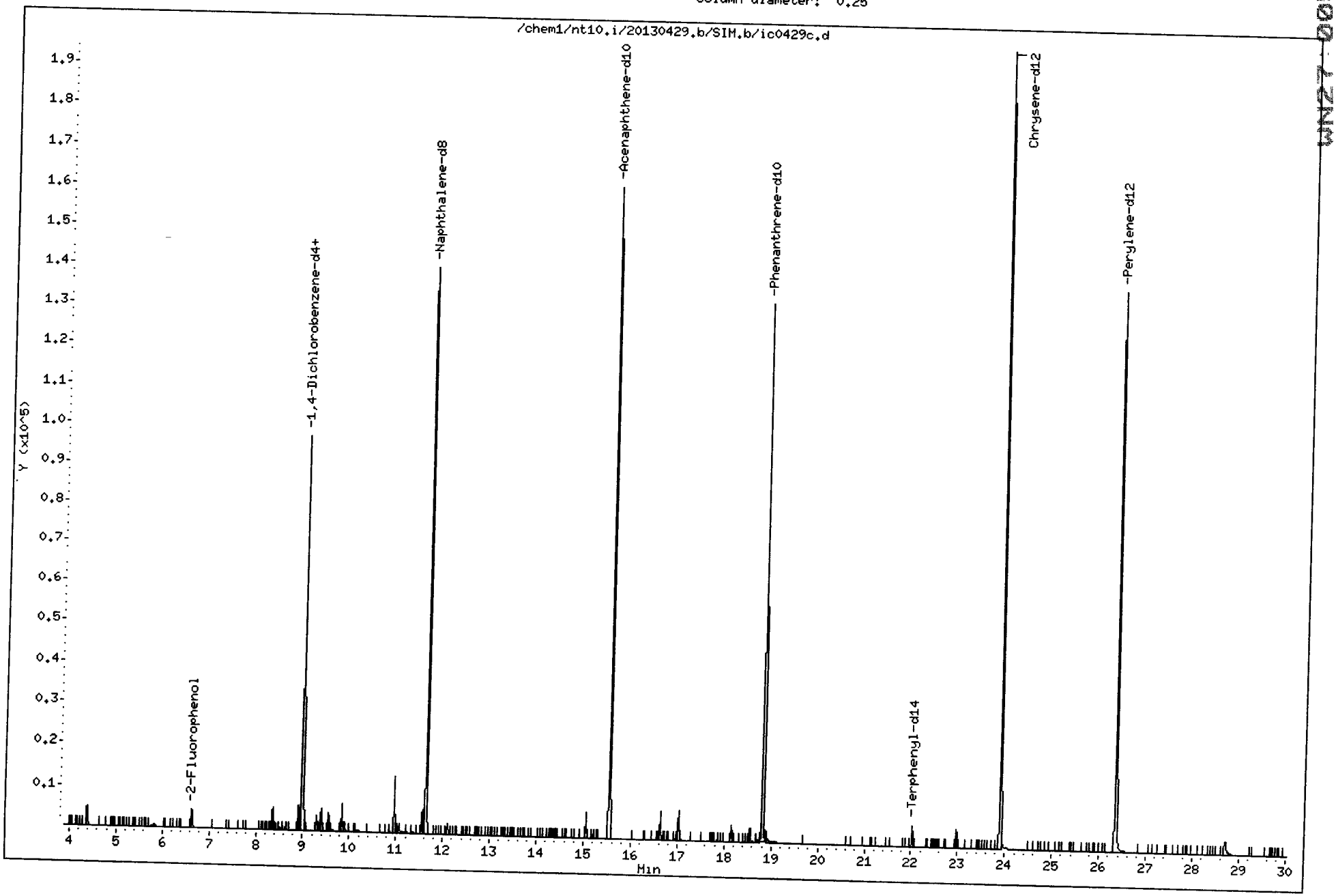
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Date : 29-APR-2013 18:07
Client ID:
Sample Info: IC0429C

Column phase: ZB-5ms1

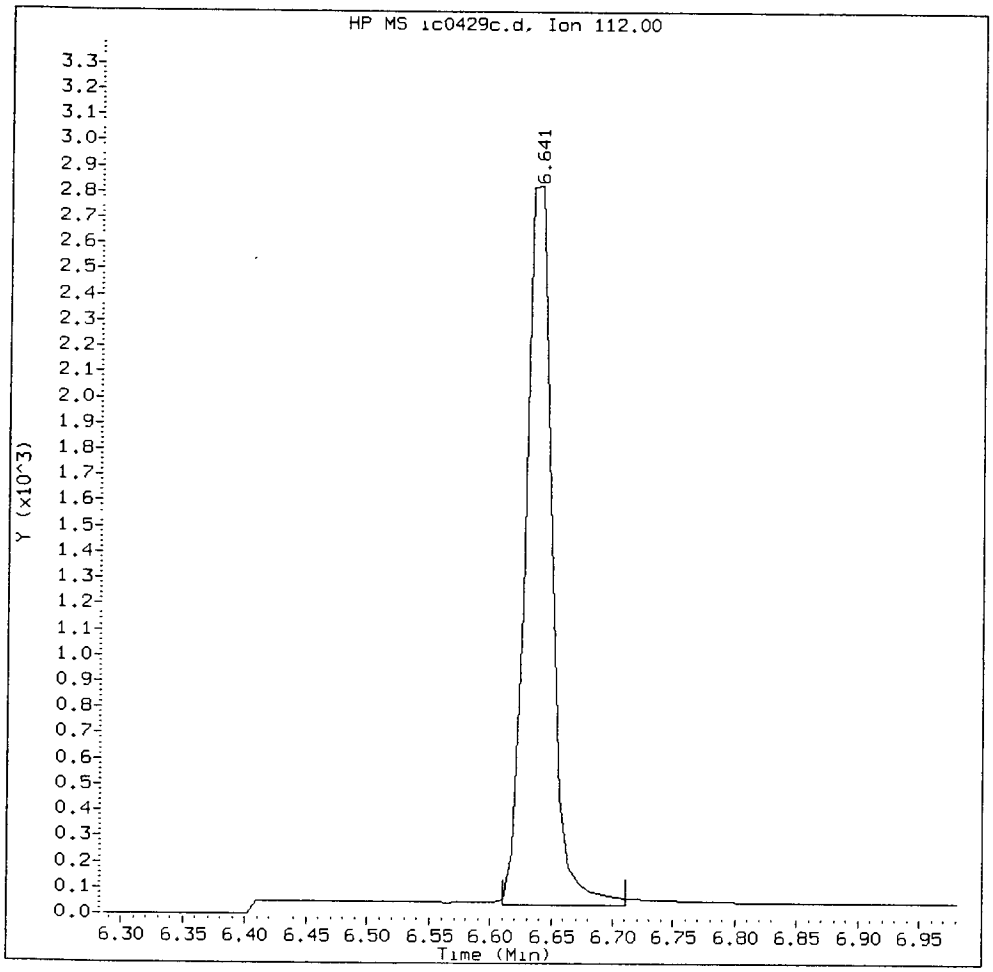
Instrument: nt10.1

Operator: YZ
Column diameter: 0.25



IC0429C, /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d

2-Fluorophenol Amount: 0.21 Area: 4255



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: 1/2 Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429c.d

Lab ID: IC0429C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/3/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Lab Smp Id: IC0429D
Inj Date : 29-APR-2013 18:44
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429D
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:44 Cal File: ic0429d.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.634	6.634	(0.738)	17994	1.00000	0.9728(M)
	3 Phenol	94	8.357	8.365	(0.930)	25635	1.00000	0.9641
*	8 1,4-Dichlorobenzene-d4	146	8.914	8.914	(0.992)	20703	1.00000	0.9449
	9 1,4-Dichlorobenzene	152	8.984	8.984	(1.000)	52658	4.00000	
	11 Benzyl alcohol	146	9.015	9.015	(1.003)	20433	1.00000	0.9367
	12 1,2-Dichlorobenzene	79	9.286	9.294	(1.034)	12498	1.00000	0.9801
	13 2-Methylphenol	146	9.395	9.395	(1.046)	19435	1.00000	0.9375
	15 4-Methylphenol	108	9.550	9.551	(1.063)	18392	1.00000	0.9675
	16 N-Nitroso-di-n-propylamine	108	9.845	9.846	(1.096)	19004	1.00000	0.9818
	22 2,4-Dimethylphenol	70	9.900	9.900	(1.102)	10547	1.00000	0.9662
	26 1,2,4-Trichlorobenzene	107	10.961	10.962	(0.941)	37034	2.00000	1.988
*	27 Naphthalene-d8	180	11.563	11.563	(0.993)	17366	1.00000	0.9421
	30 Hexachlorobutadiene	136	11.648	11.640	(1.000)	192325	4.00000	
	39 Dimethylphthalate	225	12.103	12.104	(1.039)	10544	1.00000	0.9397
*	42 Acenaphthene-d10	163	15.052	15.052	(0.969)	30258	1.00000	0.9597
	50 Diethylphthalate	162	15.539	15.540	(1.000)	109274	4.00000	
	54 N-Nitrosodiphenylamine	149	16.637	16.637	(1.071)	35026	1.00000	0.9810
	57 Hexachlorobenzene	169	17.031	17.023	(0.905)	23603	1.00000	1.056
	58 Pentachlorophenol	284	18.158	18.158	(0.965)	14101	1.00000	0.9231
*	59 Phenanthrene-d10	266	18.552	18.553	(0.986)	19427	2.00000	2.075
$	66 Terphenyl-d14	188	18.815	18.816	(1.000)	203933	4.00000	
	67 Butylbenzylphthalate	244	22.026	22.027	(0.922)	26834	1.00000	0.9761
*	69 Chrysene-d12	149	22.979	22.971	(0.961)	21746	1.00000	1.048
*	77 Perylene-d12	240	23.900	23.900	(1.000)	223647	4.00000	
	79 Dibenzo(a,h)anthracene	264	26.354	26.347	(1.000)	211919	4.00000	
	90 N-Nitrosodimethylamine	278	28.710	28.703	(1.089)	46573	1.00000	0.9859
		74	4.371	4.371	(0.487)	22111	2.00000	1.949

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429d.d
Lab Smp Id: IC0429D
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	52658	0.00
27 Naphthalene-d8	192325	96162	384650	192325	0.00
42 Acenaphthene-d10	109274	54637	218548	109274	0.00
59 Phenanthrene-d10	203933	101966	407866	203933	0.00
69 Chrysene-d12	223647	111824	447294	223647	0.00
77 Perylene-d12	211919	105960	423838	211919	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

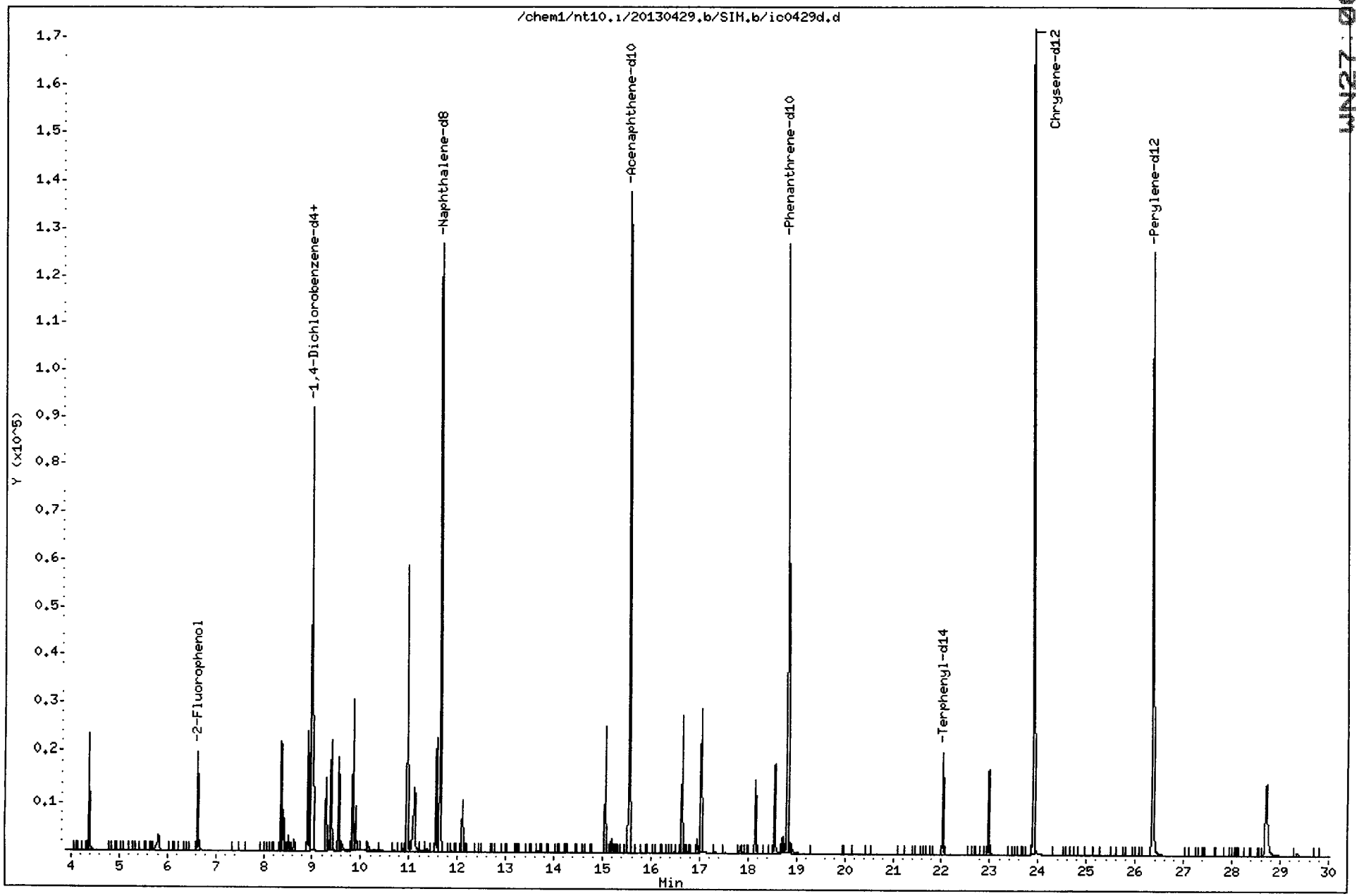
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.1/20130429.b/SIM.b/ic0429d.d
Date : 29-APR-2013 18:44
Client ID:
Sample Info: IC0429D

Instrument: nt10.1

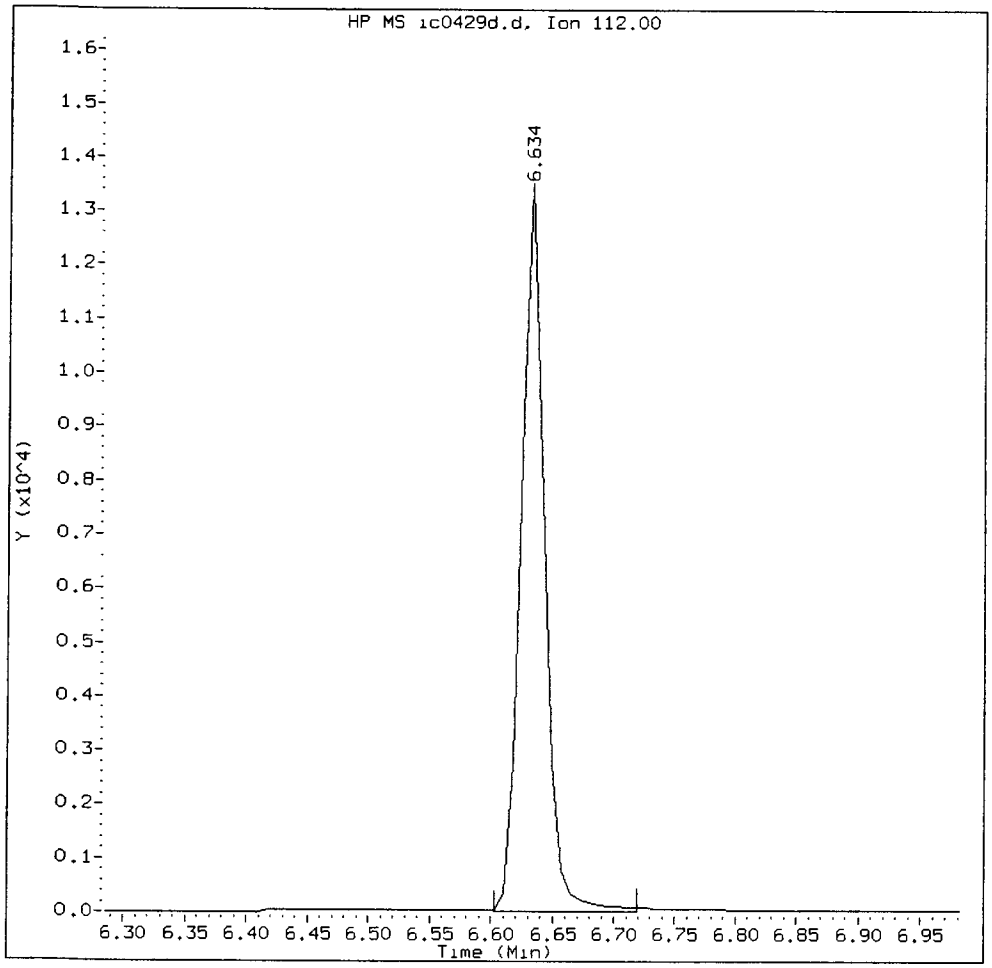
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429D, /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d

2-Fluorophenol Amount: 0.97 Area: 17994



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: KD Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429d.d

Lab ID: IC0429D, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Lab Smp Id: IC0429F
Inj Date : 29-APR-2013 19:57
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429F
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 19:57 Cal File: ic0429f.d
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.634	6.634	(0.738)	1004	0.05000	0.05408(M)
	3	Phenol	94	8.365	8.365	(0.931)	1449	0.05000	0.05430
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	1239	0.05000	0.05635(M)
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	52849	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	1268	0.05000	0.05792(M)
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	670	0.05000	0.05235(M)
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	1190	0.05000	0.05720
	13	2-Methylphenol	108	9.550	9.551	(1.063)	1054	0.05000	0.05525
	15	4-Methylphenol	108	9.845	9.846	(1.096)	1049	0.05000	0.05400
	16	N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	604	0.05000	0.05513(M)
	22	2,4-Dimethylphenol	107	10.962	10.962	(0.941)	1981	0.10000	0.1047
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	1081	0.05000	0.05775
*	27	Naphthalene-d8	136	11.648	11.640	(1.000)	195311	4.00000	
	30	Hexachlorobutadiene	225	12.104	12.104	(1.039)	663	0.05000	0.05818(M)
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	1726	0.05000	0.05612
*	42	Acenaphthene-d10	162	15.540	15.540	(1.000)	106586	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	1984	0.05000	0.05697
	54	N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	947	0.05000	0.04495(M)
	57	Hexachlorobenzene	284	18.150	18.158	(0.965)	903	0.05000	0.06274(M)
	58	Pentachlorophenol	266	18.553	18.553	(0.986)	696	0.10000	0.07888
*	59	Phenanthrene-d10	188	18.816	18.816	(1.000)	192165	4.00000	
$	66	Terphenyl-d14	244	22.027	22.027	(0.922)	1521	0.05000	0.05748
	67	Butylbenzylphthalate	149	22.979	22.971	(0.961)	972	0.05000	0.04867
*	69	Chrysene-d12	240	23.900	23.900	(1.000)	215273	4.00000	
*	77	Perylene-d12	264	26.355	26.347	(1.000)	195976	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.726	28.703	(1.090)	2385	0.05000	0.05460
	90	N-Nitrosodimethylamine	74	4.387	4.371	(0.488)	1192	0.10000	0.1047

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429f.d
Lab Smp Id: IC0429F
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	52849	0.36
27 Naphthalene-d8	192325	96162	384650	195311	1.55
42 Acenaphthene-d10	109274	54637	218548	106586	-2.46
59 Phenanthrene-d10	203933	101966	407866	192165	-5.77
69 Chrysene-d12	223647	111824	447294	215273	-3.74
77 Perylene-d12	211919	105960	423838	195976	-7.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

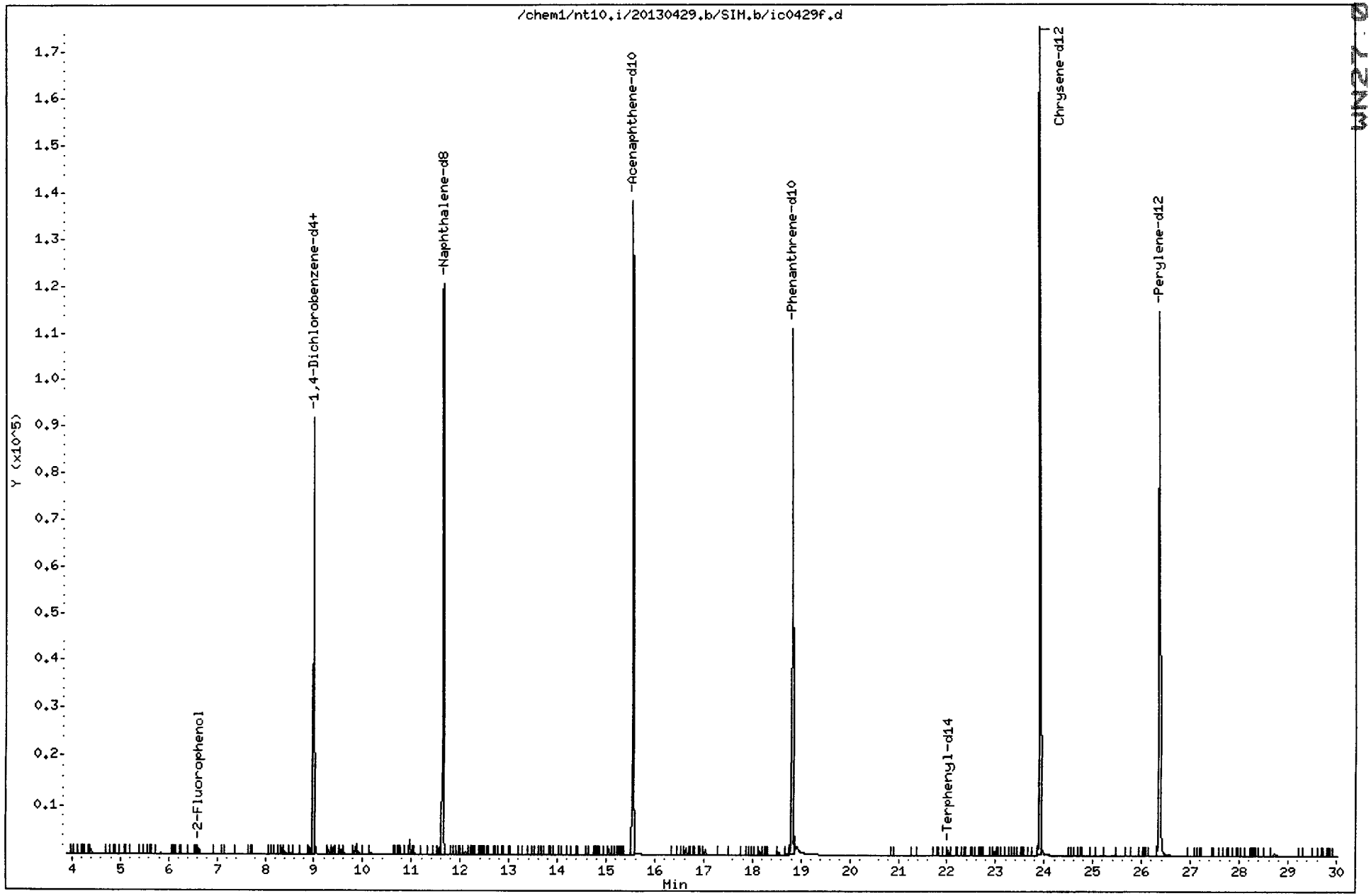
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Date : 29-APR-2013 19:57
Client ID:
Sample Info: IC0429F

Instrument: nt10.i

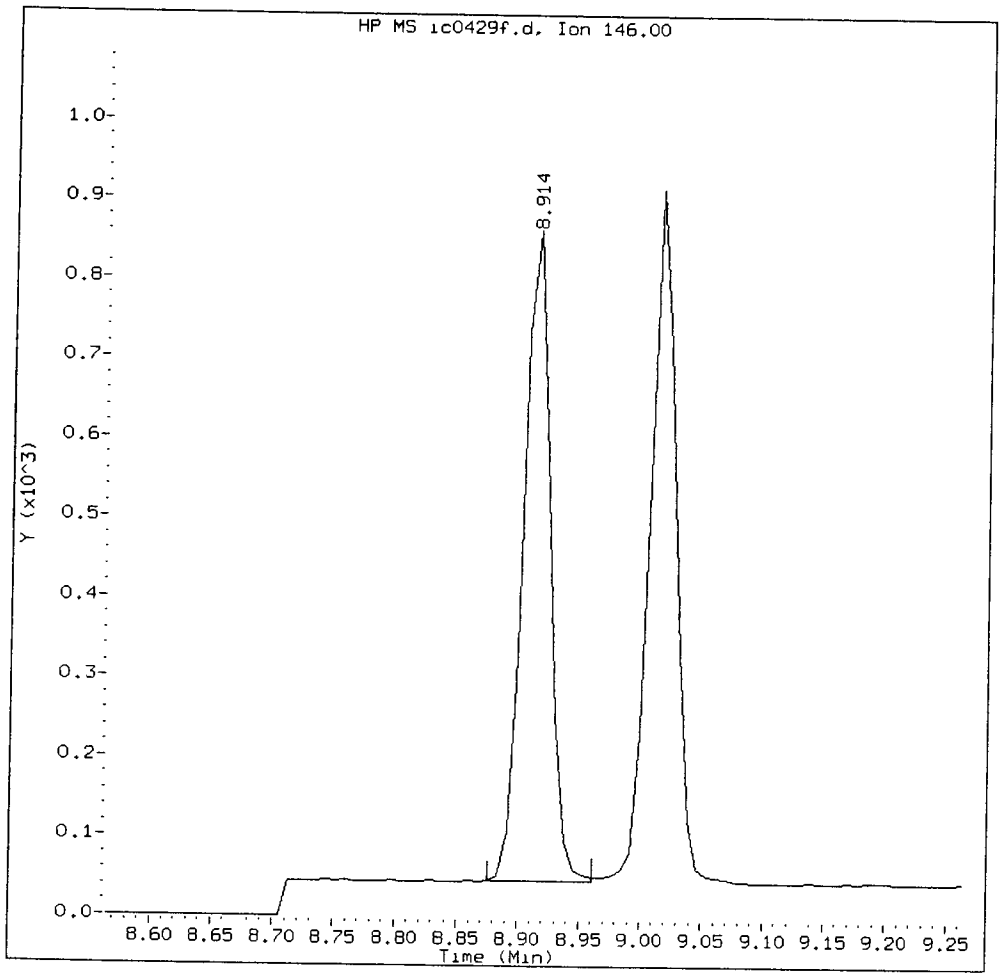
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

1,3-Dichlorobenzene Amount: 0.06 Area: 1239



MANUAL INTEGRATION for 1,3-Dichlorobenzene

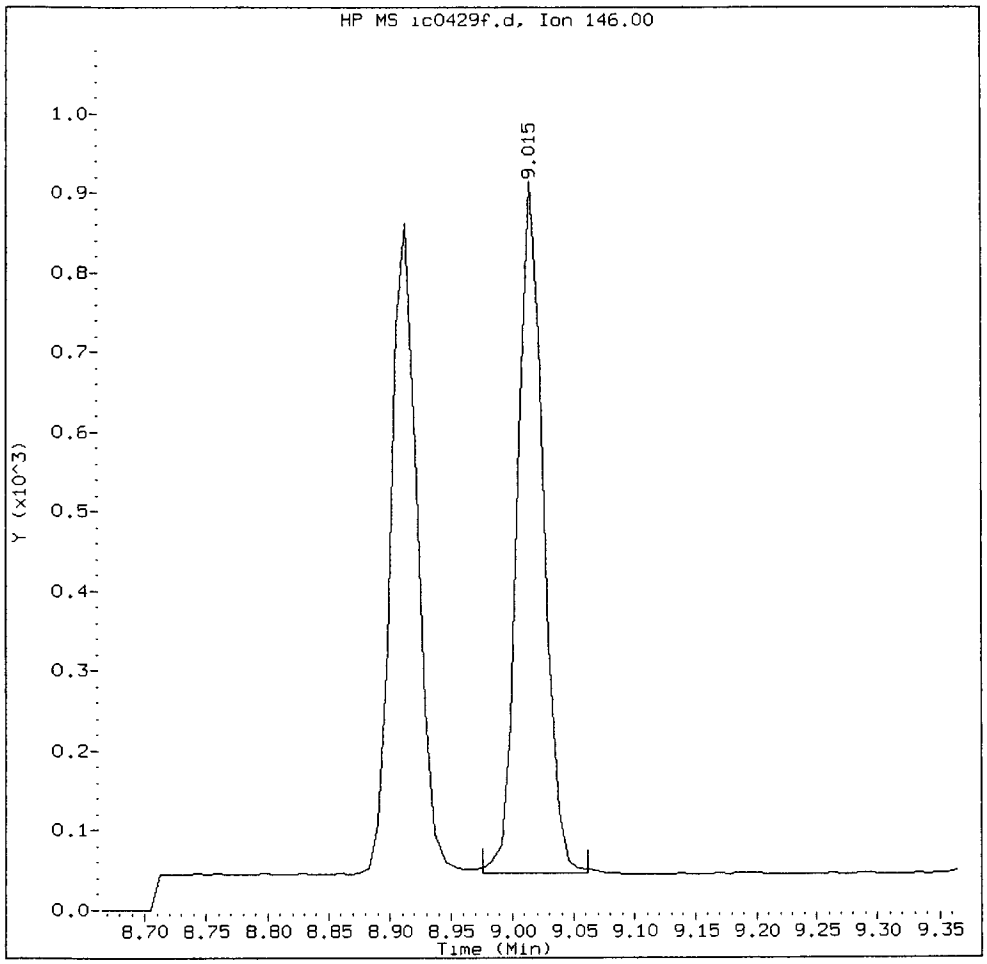
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VJ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

1,4-Dichlorobenzene Amount: 0.06 Area: 1268



MANUAL INTEGRATION for 1,4-Dichlorobenzene

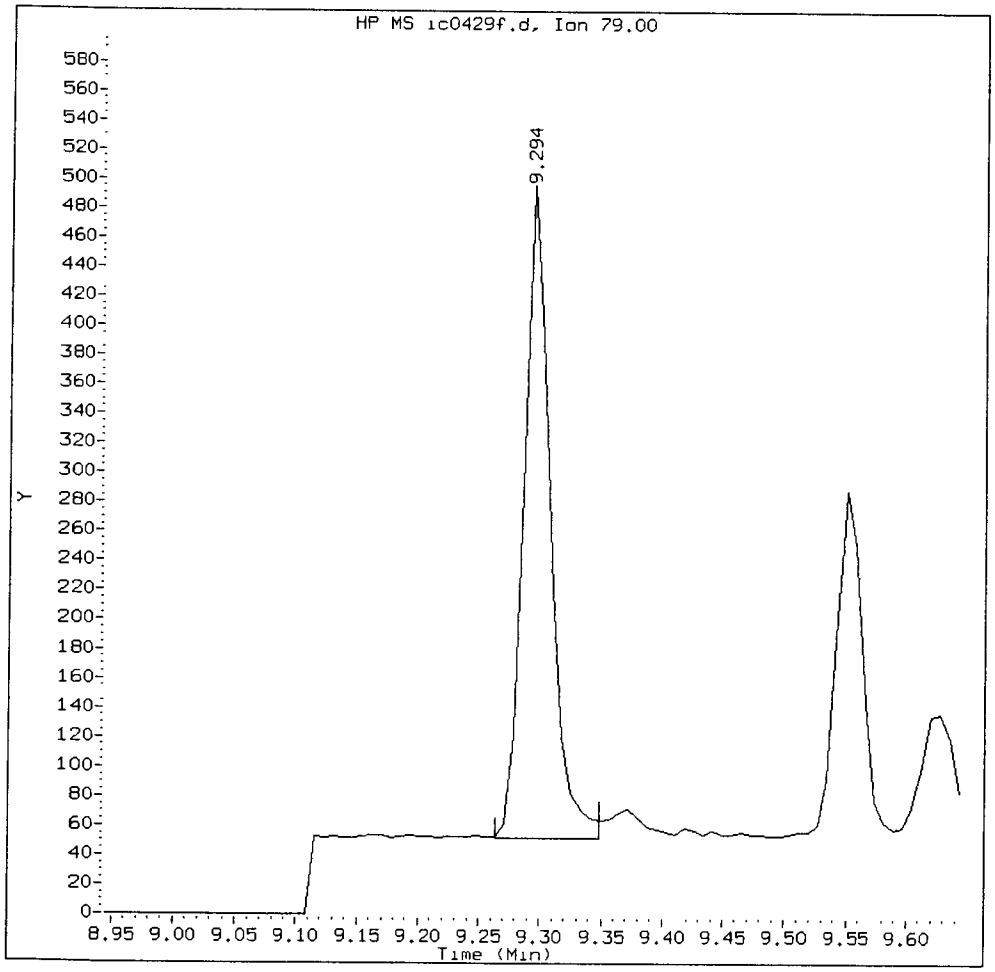
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/9/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Benzyl alcohol Amount: 0.05 Area: 670



MANUAL INTEGRATION for Benzyl alcohol

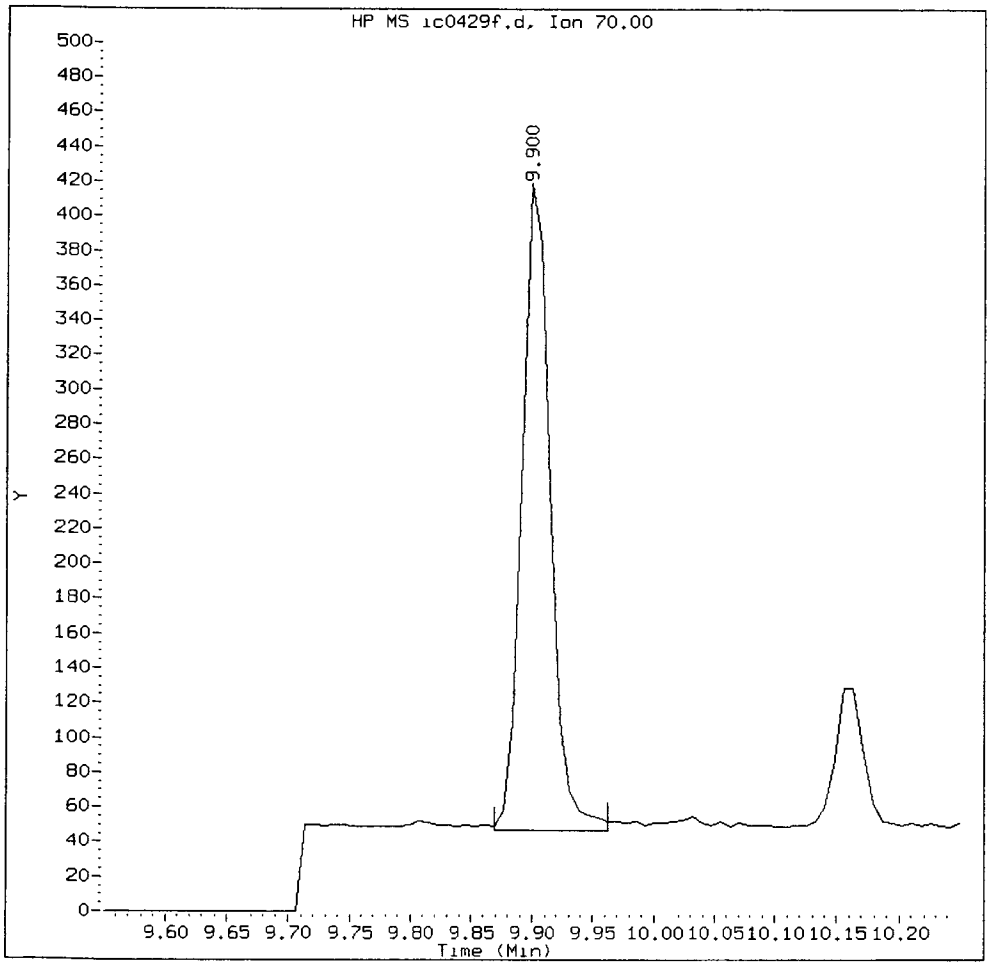
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

N-Nitroso-di-n-propylamine Amount: 0.06 Area: 604



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

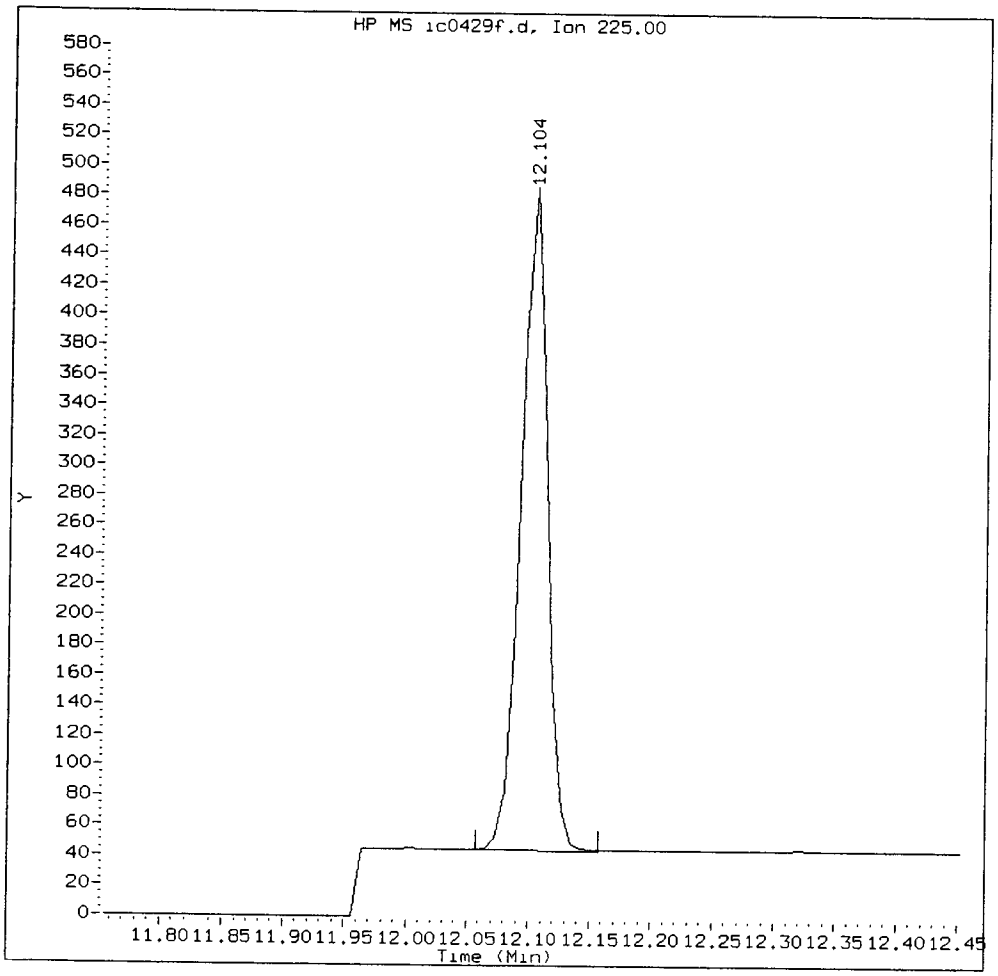
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Hexachlorobutadiene Amount: 0.06 Area: 663



MANUAL INTEGRATION for Hexachlorobutadiene

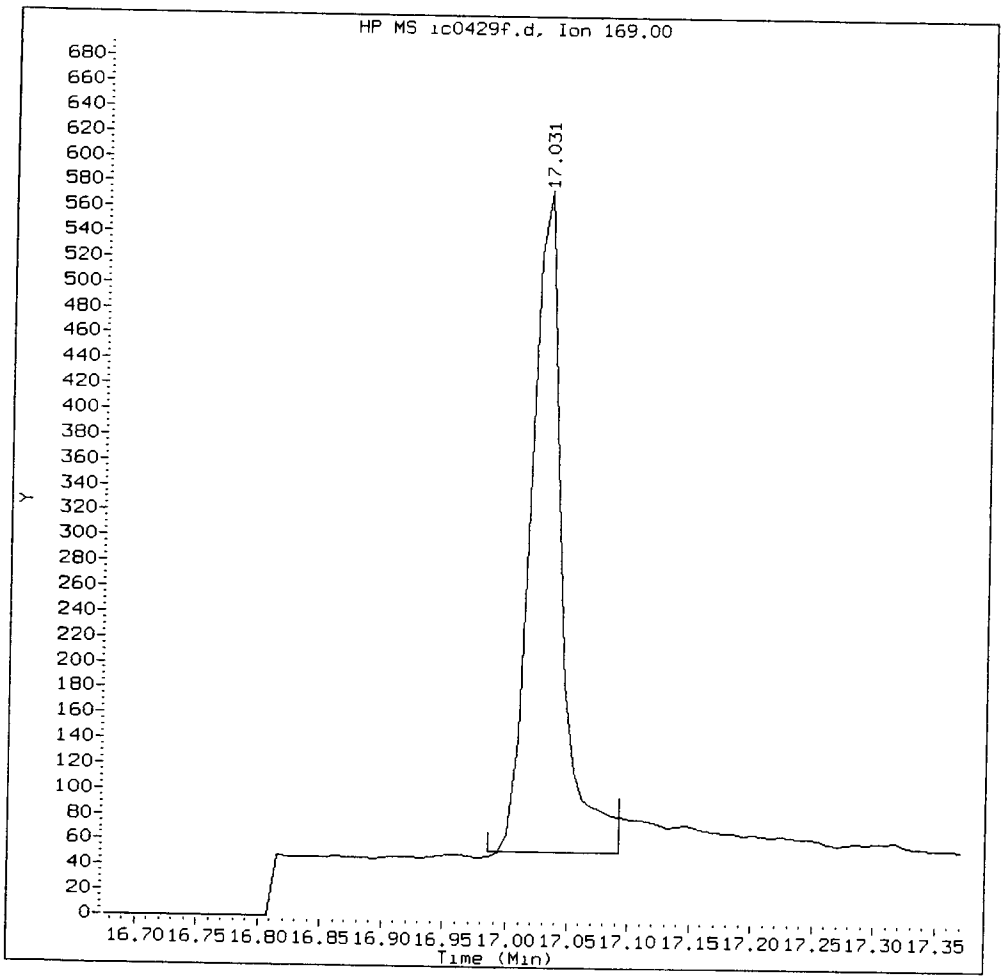
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

N-Nitrosodiphenylamine Amount: 0.04 Area: 947



MANUAL INTEGRATION for N-Nitrosodiphenylamine

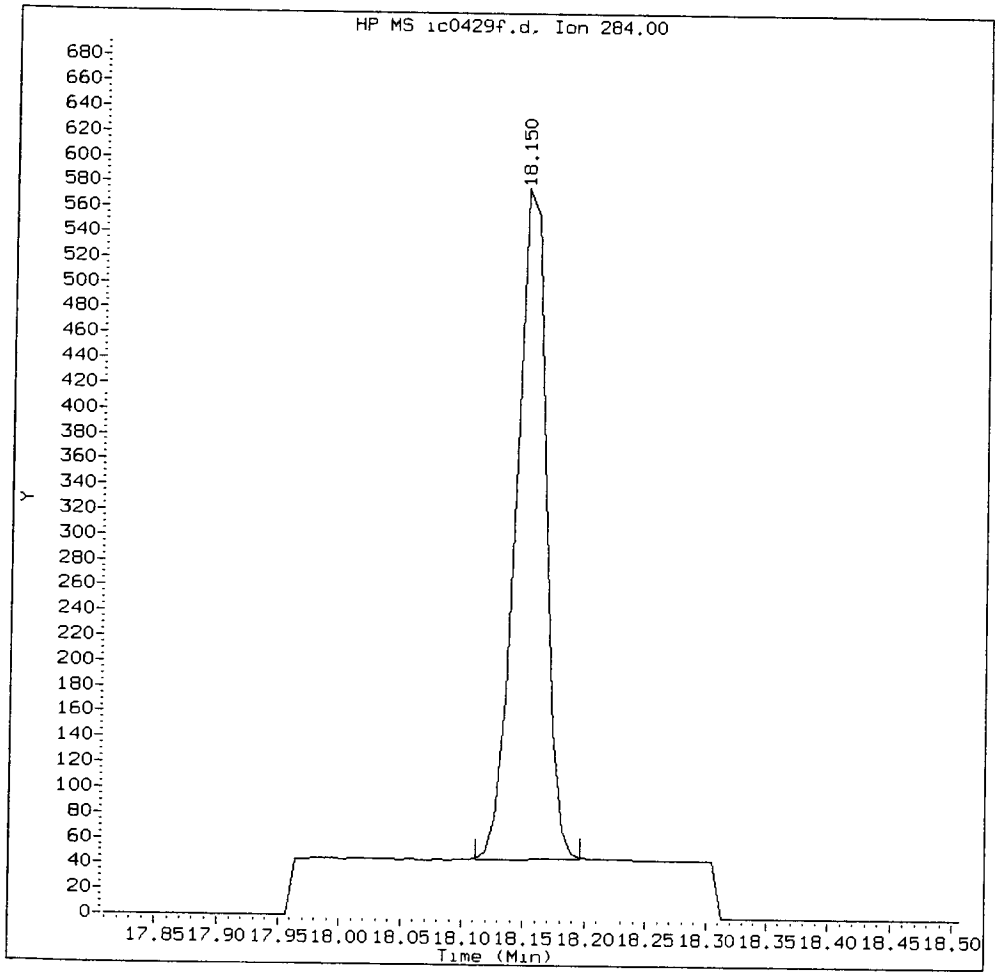
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Hexachlorobenzene Amount: 0.06 Area: 903



MANUAL INTEGRATION for Hexachlorobenzene

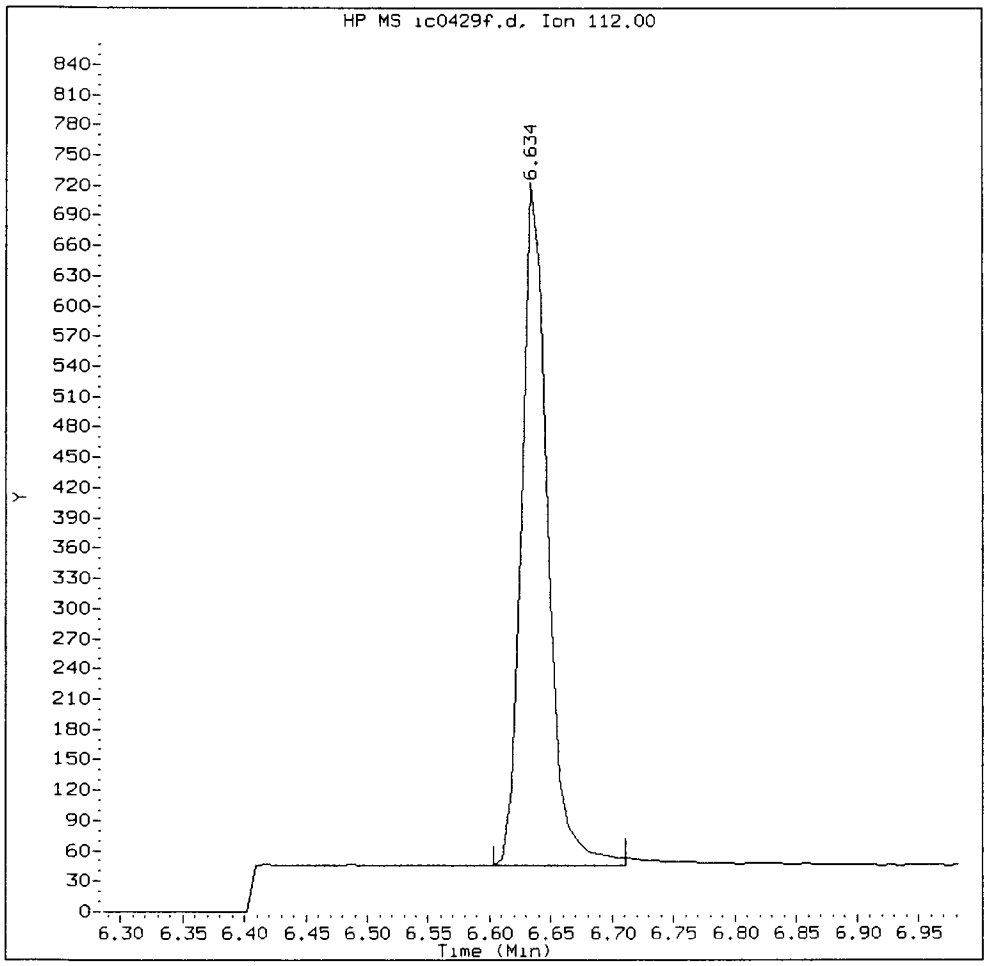
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/8/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

2-Fluorophenol Amount: 0.05 Area: 1004



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: KZ Date: 5/9/13

CO-ELUTION SUMMARY FOR FILE - ic0429f.d

Lab ID: IC0429F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Lab Smp Id: IC0429G
Inj Date : 29-APR-2013 20:34
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429G
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 20:34 Cal File: ic0429g.d
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.633	6.634	(0.738)	39175	2.50000	2.552(M)
	3	Phenol	94	8.364	8.365	(0.931)	57029	2.50000	2.584
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	43575	2.50000	2.396
*	8	1,4-Dichlorobenzene-d4	152	8.983	8.984	(1.000)	43709	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	43120	2.50000	2.381
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	27973	2.50000	2.643
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	41290	2.50000	2.400
	13	2-Methylphenol	108	9.550	9.551	(1.063)	40181	2.50000	2.547
	15	4-Methylphenol	108	9.845	9.846	(1.096)	41543	2.50000	2.586
	16	N-Nitroso-di-n-propylamine	70	9.899	9.900	(1.102)	23225	2.50000	2.563
	22	2,4-Dimethylphenol	107	10.969	10.962	(0.942)	80843	5.00000	5.211
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	36642	2.50000	2.387
*	27	Naphthalene-d8	136	11.647	11.640	(1.000)	160165	4.00000	
	30	Hexachlorobutadiene	225	12.103	12.104	(1.039)	22613	2.50000	2.420
	39	Dimethylphthalate	163	15.060	15.052	(0.969)	66102	2.50000	2.407
*	42	Acenaphthene-d10	162	15.539	15.540	(1.000)	95179	4.00000	
	50	Diethylphthalate	149	16.645	16.637	(1.071)	77428	2.50000	2.490
	54	N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	51253	2.50000	2.616
	57	Hexachlorobenzene	284	18.157	18.158	(0.965)	30459	2.50000	2.276
	58	Pentachlorophenol	266	18.552	18.553	(0.986)	45814	5.00000	5.583
*	59	Phenanthrene-d10	188	18.815	18.816	(1.000)	178699	4.00000	
$	66	Terphenyl-d14	244	22.026	22.027	(0.922)	58696	2.50000	2.397
	67	Butylbenzylphthalate	149	22.979	22.971	(0.961)	50099	2.50000	2.711
*	69	Chrysene-d12	240	23.900	23.900	(1.000)	199199	4.00000	
*	77	Perylene-d12	264	26.362	26.347	(1.000)	191024	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.718	28.703	(1.089)	106924	2.50000	2.511
	90	N-Nitrosodimethylamine	74	4.356	4.371	(0.485)	49279	5.00000	5.232

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429g.d
Lab Smp Id: IC0429G
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	43709	-16.99
27 Naphthalene-d8	192325	96162	384650	160165	-16.72
42 Acenaphthene-d10	109274	54637	218548	95179	-12.90
59 Phenanthrene-d10	203933	101966	407866	178699	-12.37
69 Chrysene-d12	223647	111824	447294	199199	-10.93
77 Perylene-d12	211919	105960	423838	191024	-9.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

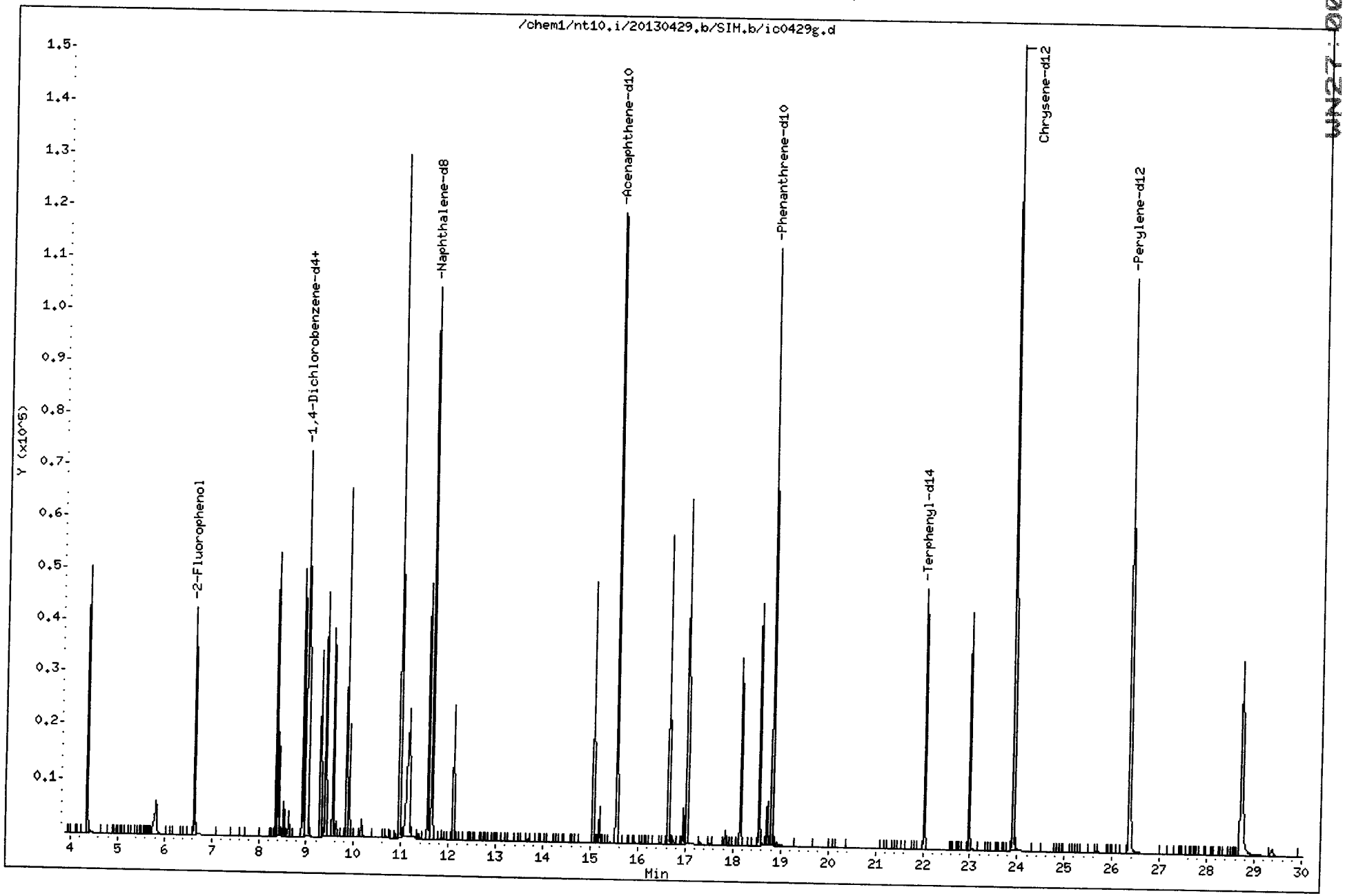
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Date : 29-APR-2013 20:34
Client ID:
Sample Info: IC0429G

Column phase: ZB-5msi

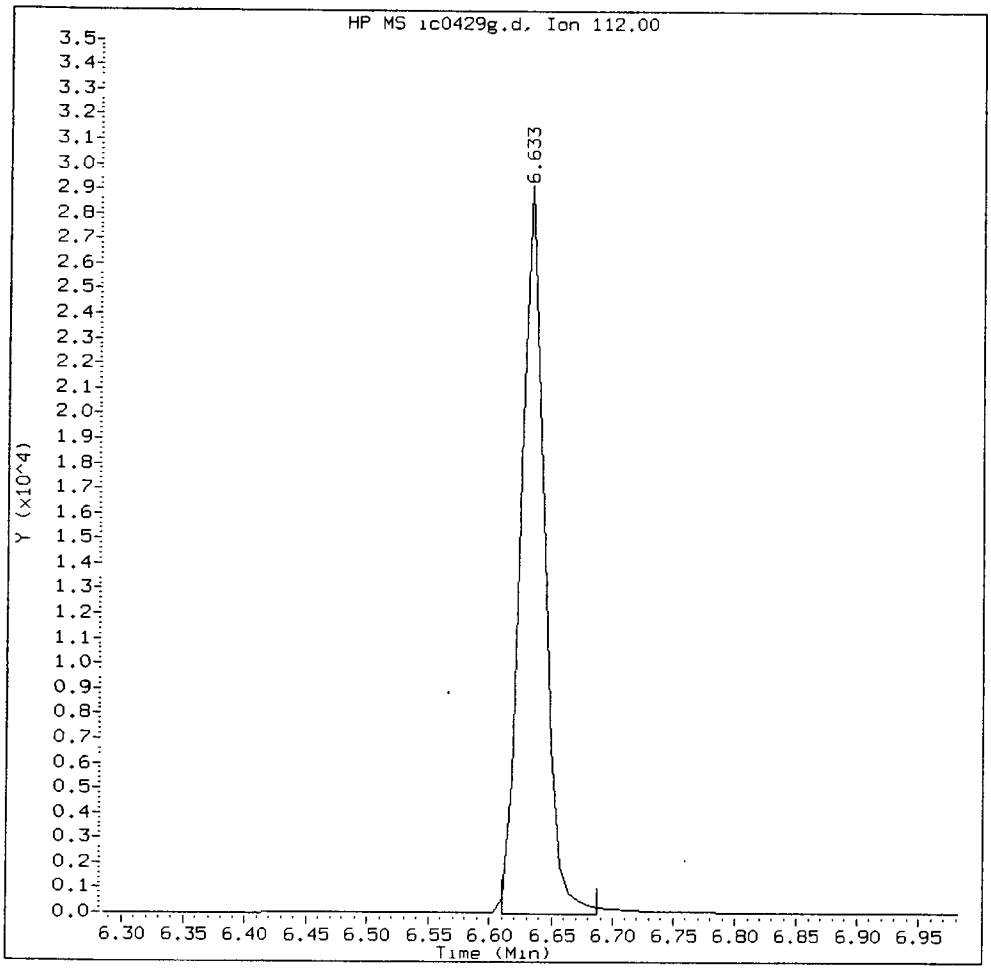
Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



IC0429G, /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d

2-Fluorophenol Amount: 2.55 Area: 39175



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: YZ Date: 5/3/17

CO-ELUTION SUMMARY FOR FILE - ic0429g.d

Lab ID: IC0429G, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Lab Smp Id: IC0429H
Inj Date : 29-APR-2013 21:11
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429H
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:11 Cal File: ic0429h.d
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 5/3/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.633	6.634	(0.738)	1744	0.10000	0.09619(M)
	3 Phenol	94	8.365	8.365	(0.931)	2499	0.10000	0.09589
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	2261	0.10000	0.1053
*	8 1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	51614	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	2198	0.10000	0.1028(M)
	11 Benzyl alcohol	79	9.294	9.294	(1.035)	1192	0.10000	0.09537
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	2088	0.10000	0.1028
	13 2-Methylphenol	108	9.550	9.551	(1.063)	1796	0.10000	0.09639
	15 4-Methylphenol	108	9.845	9.846	(1.096)	1777	0.10000	0.09366
	16 N-Nitroso-di-n-propylamine	70	9.899	9.900	(1.102)	1040	0.10000	0.09720
	22 2,4-Dimethylphenol	107	10.961	10.962	(0.941)	3433	0.20000	0.1840
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	1896	0.10000	0.1027(M)
*	27 Naphthalene-d8	136	11.647	11.640	(1.000)	192559	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	1142	0.10000	0.1017(M)
	39 Dimethylphthalate	163	15.052	15.052	(0.969)	3197	0.10000	0.1027
*	42 Acenaphthene-d10	162	15.539	15.540	(1.000)	107939	4.00000	
	50 Diethylphthalate	149	16.637	16.637	(1.071)	3307	0.10000	0.09377
	54 N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	1860	0.10000	0.08732
	57 Hexachlorobenzene	284	18.157	18.158	(0.965)	1462	0.10000	0.1005
	58 Pentachlorophenol	266	18.552	18.553	(0.986)	1339	0.20000	0.1501(M)
*	59 Phenanthrene-d10	188	18.815	18.816	(1.000)	194268	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	2454	0.10000	0.09449(M)
	67 Butylbenzylphthalate	149	22.971	22.971	(0.961)	1538	0.10000	0.07847
*	69 Chrysene-d12	240	23.892	23.900	(1.000)	211275	4.00000	
*	77 Perylene-d12	264	26.347	26.347	(1.000)	196007	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.710	28.703	(1.090)	3837	0.10000	0.08782
	90 N-Nitrosodimethylamine	74	4.386	4.371	(0.488)	2220	0.20000	0.1996

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429h.d
Lab Smp Id: IC0429H
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	51614	-1.98
27 Naphthalene-d8	192325	96162	384650	192559	0.12
42 Acenaphthene-d10	109274	54637	218548	107939	-1.22
59 Phenanthrene-d10	203933	101966	407866	194268	-4.74
69 Chrysene-d12	223647	111824	447294	211275	-5.53
77 Perylene-d12	211919	105960	423838	196007	-7.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.89	-0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

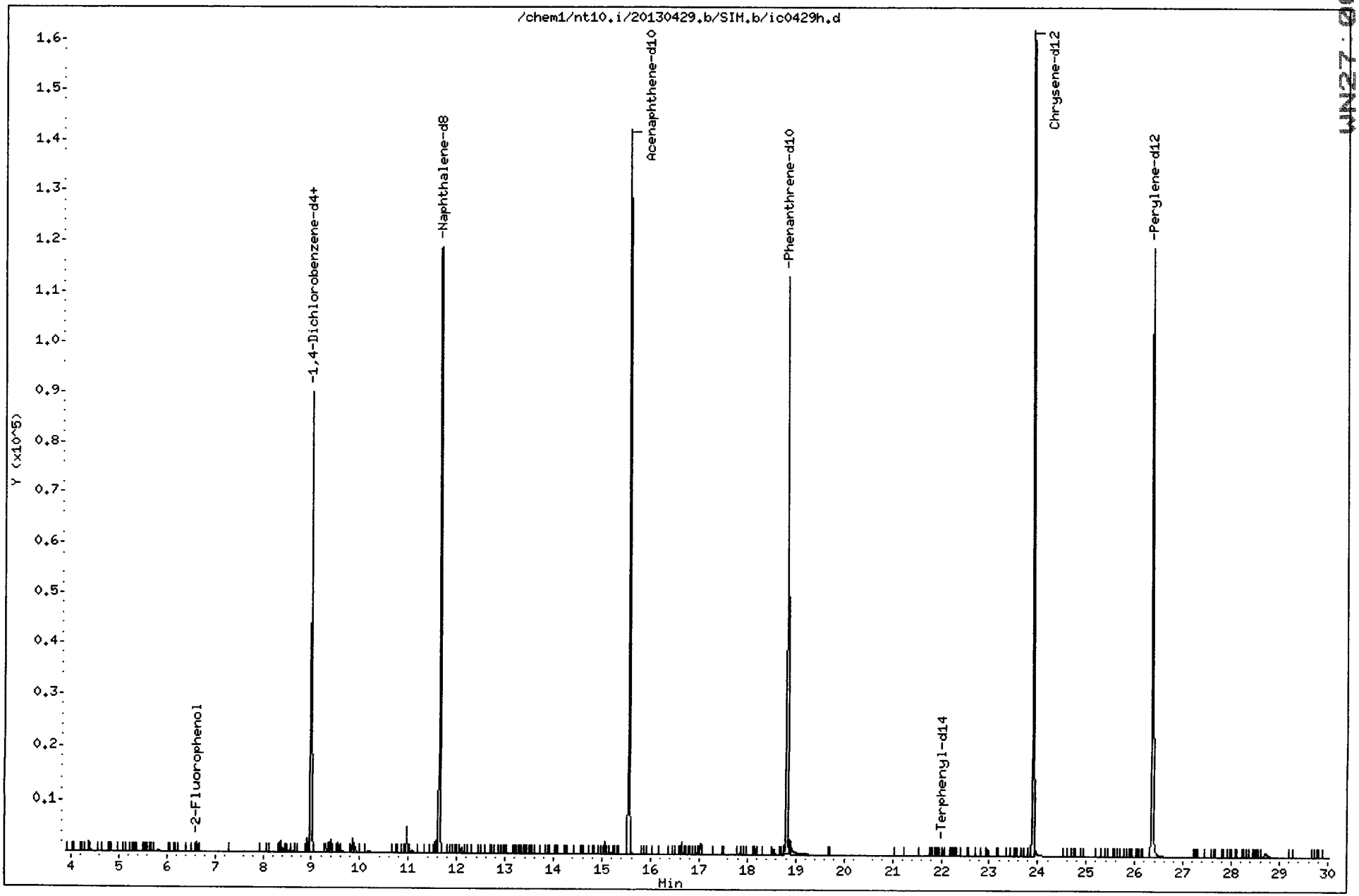
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Date : 29-APR-2013 21:11
Client ID:
Sample Info: IC0429H

Instrument: nt10.i

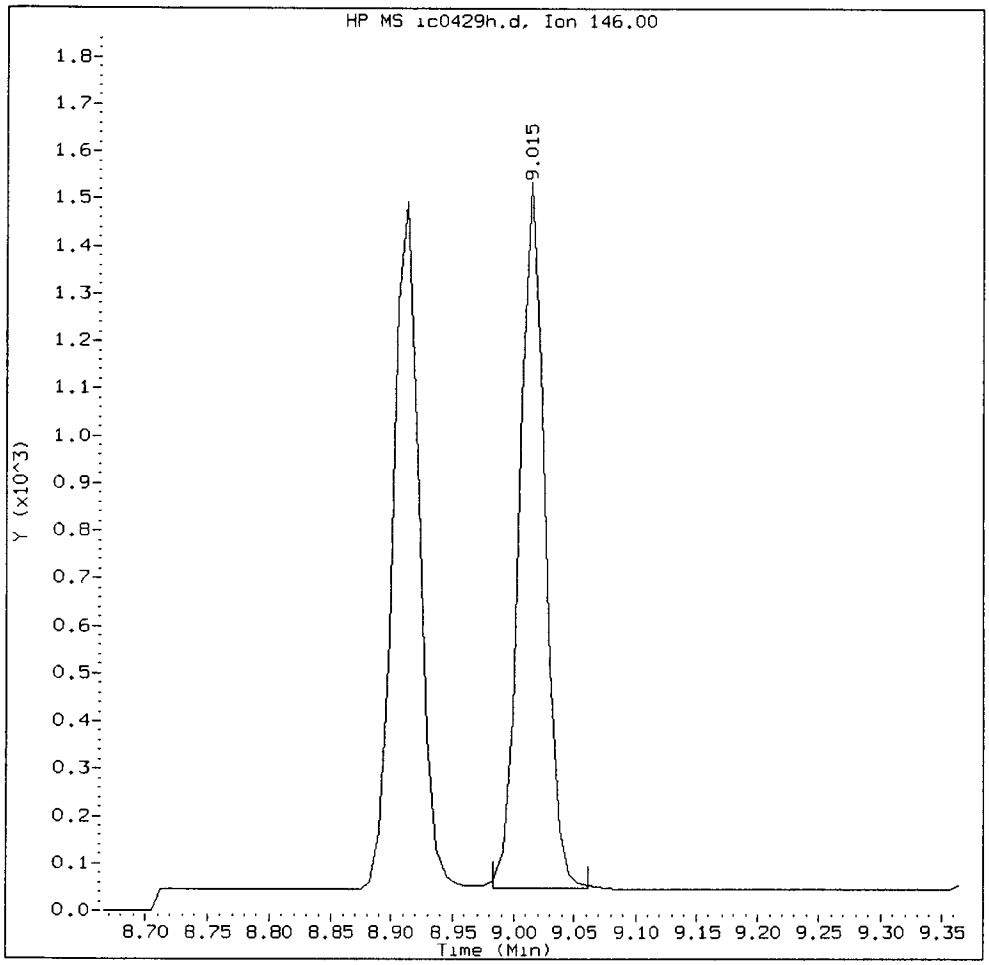
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

1,4-Dichlorobenzene Amount: 0.10 Area: 2198



MANUAL INTEGRATION for 1,4-Dichlorobenzene

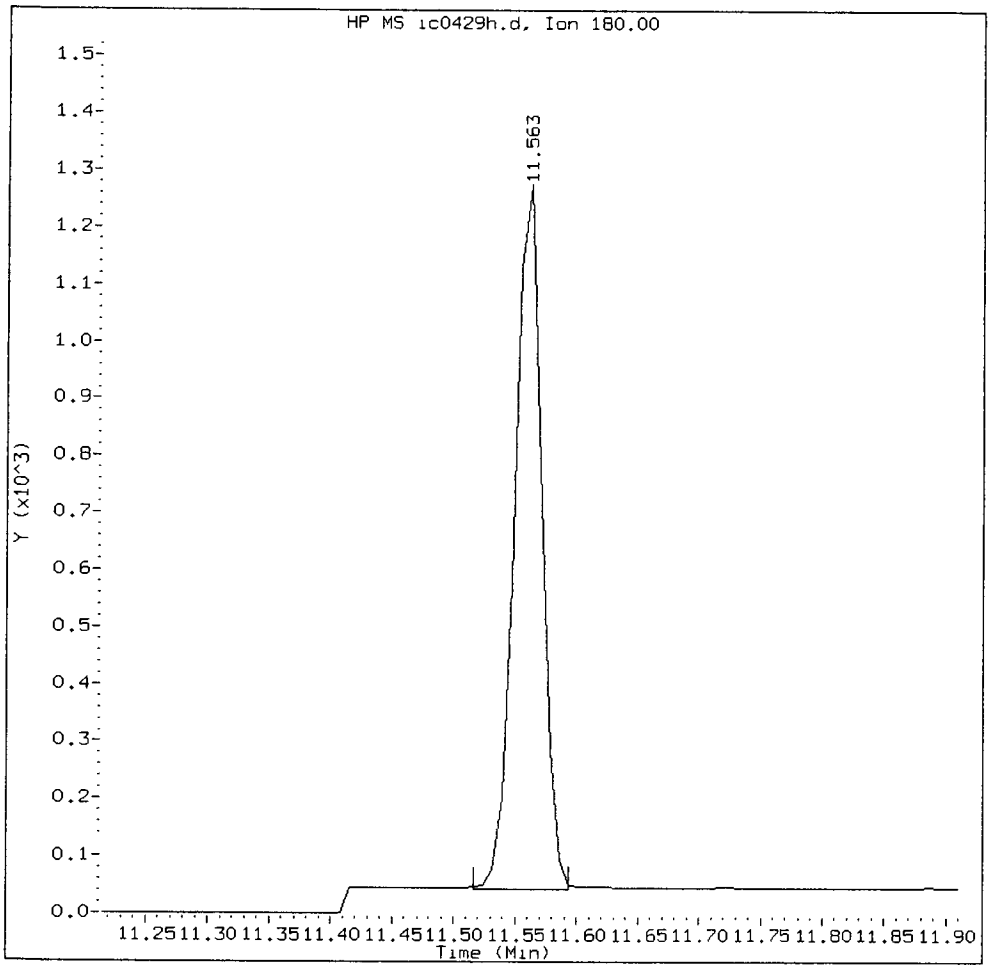
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

1,2,4-Trichlorobenzene Amount: 0.10 Area: 1896



MANUAL INTEGRATION for 1,2,4-Trichlorobenzene

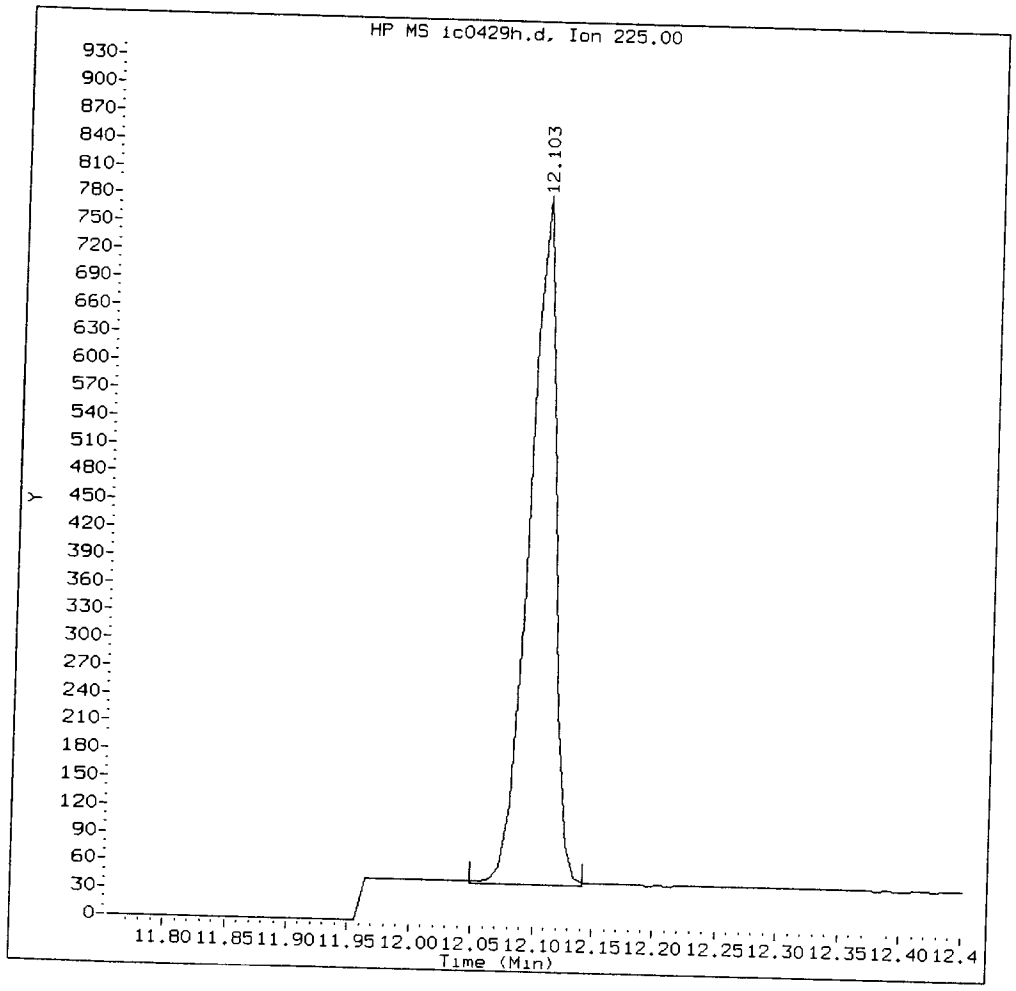
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VE Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Hexachlorobutadiene Amount: 0.10 Area: 1142



MANUAL INTEGRATION for Hexachlorobutadiene

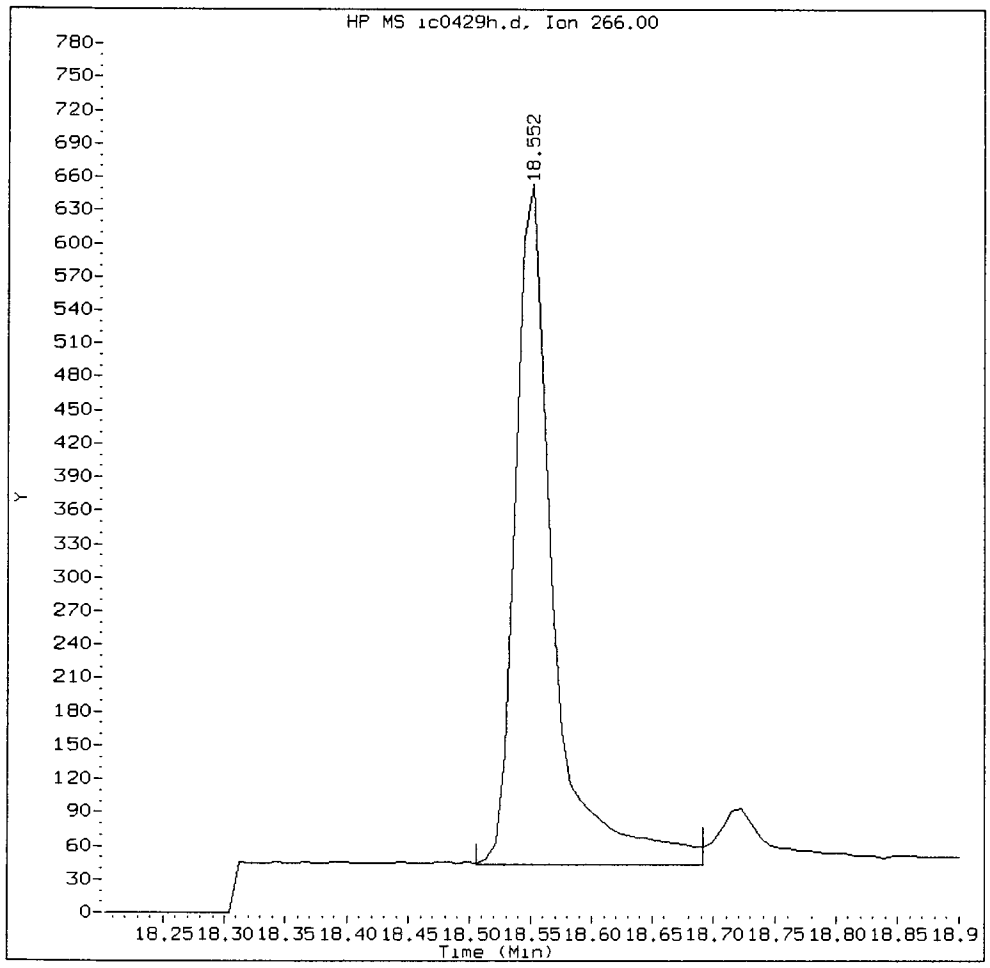
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Pentachlorophenol Amount: 0.15 Area: 1339



MANUAL INTEGRATION for Pentachlorophenol

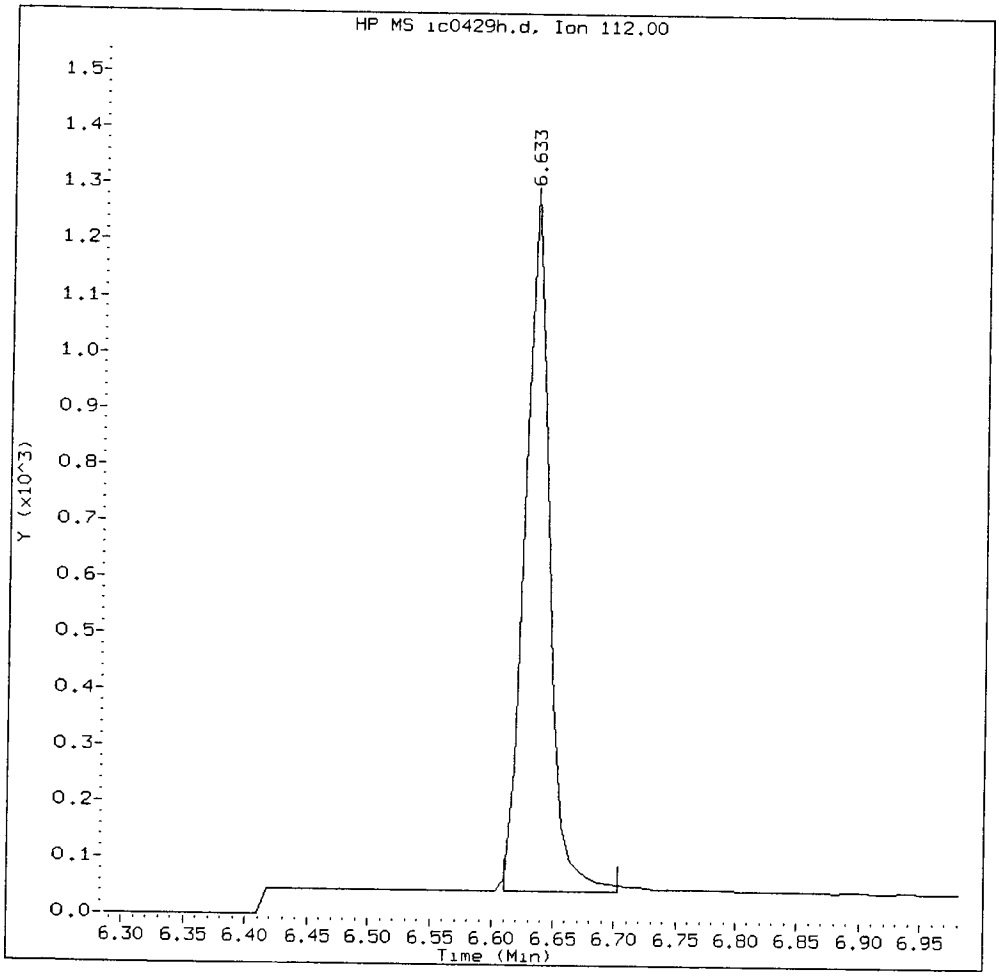
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/31/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

2-Fluorophenol Amount: 0.10 Area: 1744



MANUAL INTEGRATION for 2-Fluorophenol

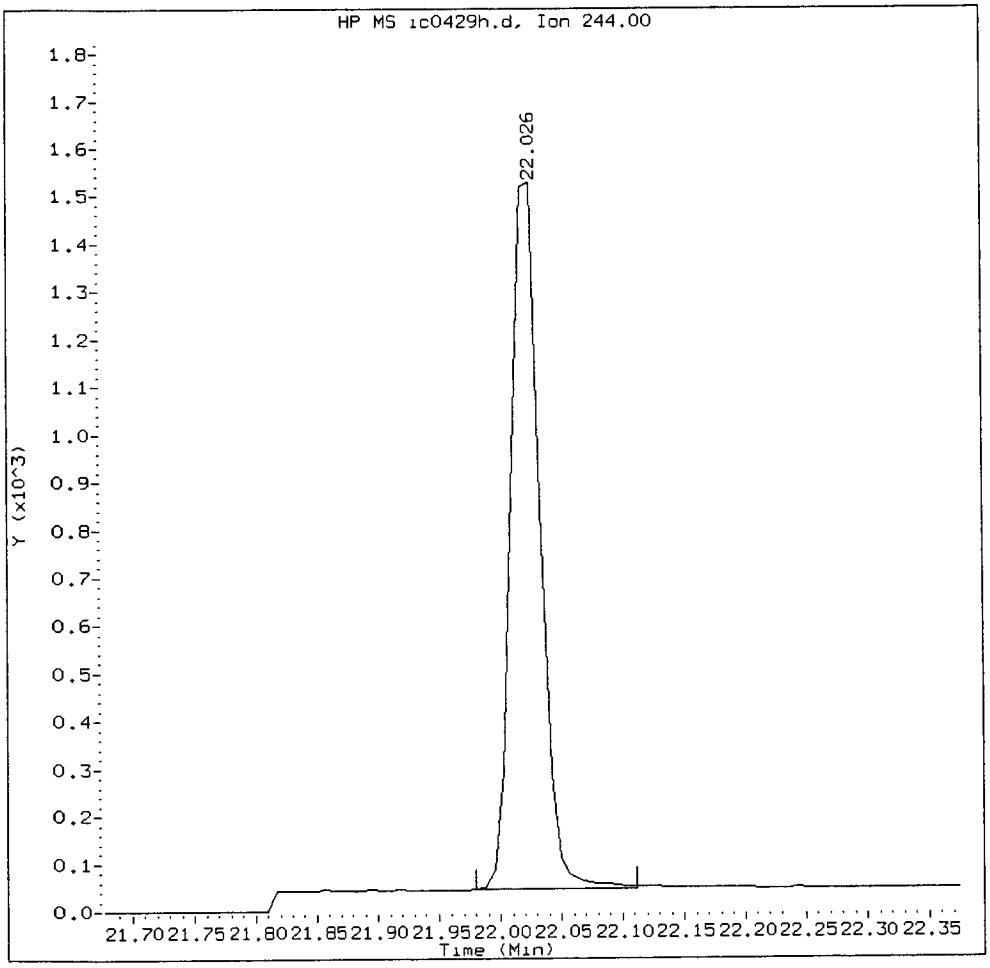
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VE Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Terphenyl-d14 Amount: 0.09 Area: 2454



MANUAL INTEGRATION for Terphenyl-d14

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

5. Other _____

Analyst: YZ Date: 7/6/13

CO-ELUTION SUMMARY FOR FILE - ic0429h.d

Lab ID: IC0429H, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Lab Smp Id: IC0429I
Inj Date : 29-APR-2013 21:47
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429I
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 5/3/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.634	6.634	(0.738)	8113	0.50000	0.4669(M)
	3 Phenol	94	8.365	8.365	(0.931)	11931	0.50000	0.4777
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	9817	0.50000	0.4770
*	8 1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	49468	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	9757	0.50000	0.4761
	11 Benzyl alcohol	79	9.294	9.294	(1.035)	5665	0.50000	0.4729
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	9240	0.50000	0.4745
	13 2-Methylphenol	108	9.551	9.551	(1.063)	8436	0.50000	0.4724
	15 4-Methylphenol	108	9.846	9.846	(1.096)	8566	0.50000	0.4711
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	4941	0.50000	0.4818
	22 2,4-Dimethylphenol	107	10.962	10.962	(0.942)	16956	1.00000	0.9589
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	8289	0.50000	0.4738
*	27 Naphthalene-d8	136	11.640	11.640	(1.000)	182546	4.00000	
	30 Hexachlorobutadiene	225	12.104	12.104	(1.040)	5038	0.50000	0.4730
	39 Dimethylphthalate	163	15.052	15.052	(0.969)	14017	0.50000	0.4605
*	42 Acenaphthene-d10	162	15.540	15.540	(1.000)	105486	4.00000	
	50 Diethylphthalate	149	16.637	16.637	(1.071)	15572	0.50000	0.4518
	54 N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	10352	0.50000	0.4940
	57 Hexachlorobenzene	284	18.158	18.158	(0.965)	6394	0.50000	0.4467
	58 Pentachlorophenol	266	18.553	18.553	(0.986)	7927	1.00000	0.9033
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	191121	4.00000	
$	66 Terphenyl-d14	244	22.027	22.027	(0.922)	11579	0.50000	0.4518
	67 Butylbenzylphthalate	149	22.971	22.971	(0.961)	8336	0.50000	0.4310
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	208500	4.00000	
*	77 Perylene-d12	264	26.347	26.347	(1.000)	197777	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.703	28.703	(1.089)	19496	0.50000	0.4422
	90 N-Nitrosodimethylamine	74	4.371	4.371	(0.487)	10669	1.00000	1.001

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429i.d
Lab Smp Id: IC0429I
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	49468	-6.06
27 Naphthalene-d8	192325	96162	384650	182546	-5.08
42 Acenaphthene-d10	109274	54637	218548	105486	-3.47
59 Phenanthrene-d10	203933	101966	407866	191121	-6.28
69 Chrysene-d12	223647	111824	447294	208500	-6.77
77 Perylene-d12	211919	105960	423838	197777	-6.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.64	-0.06
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

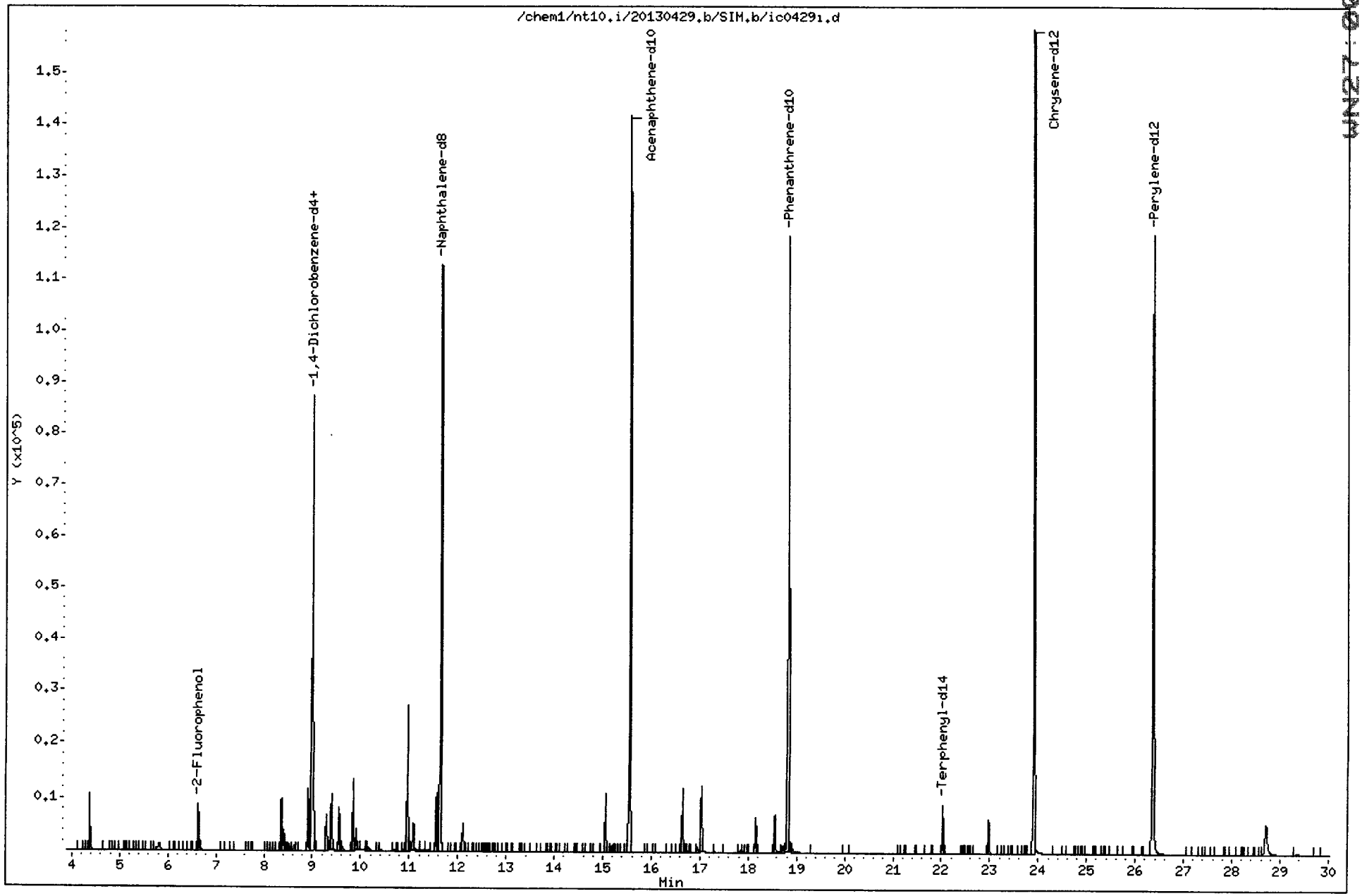
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Date : 29-APR-2013 21:47
Client ID:
Sample Info: IC0429I

Instrument: nt10.i

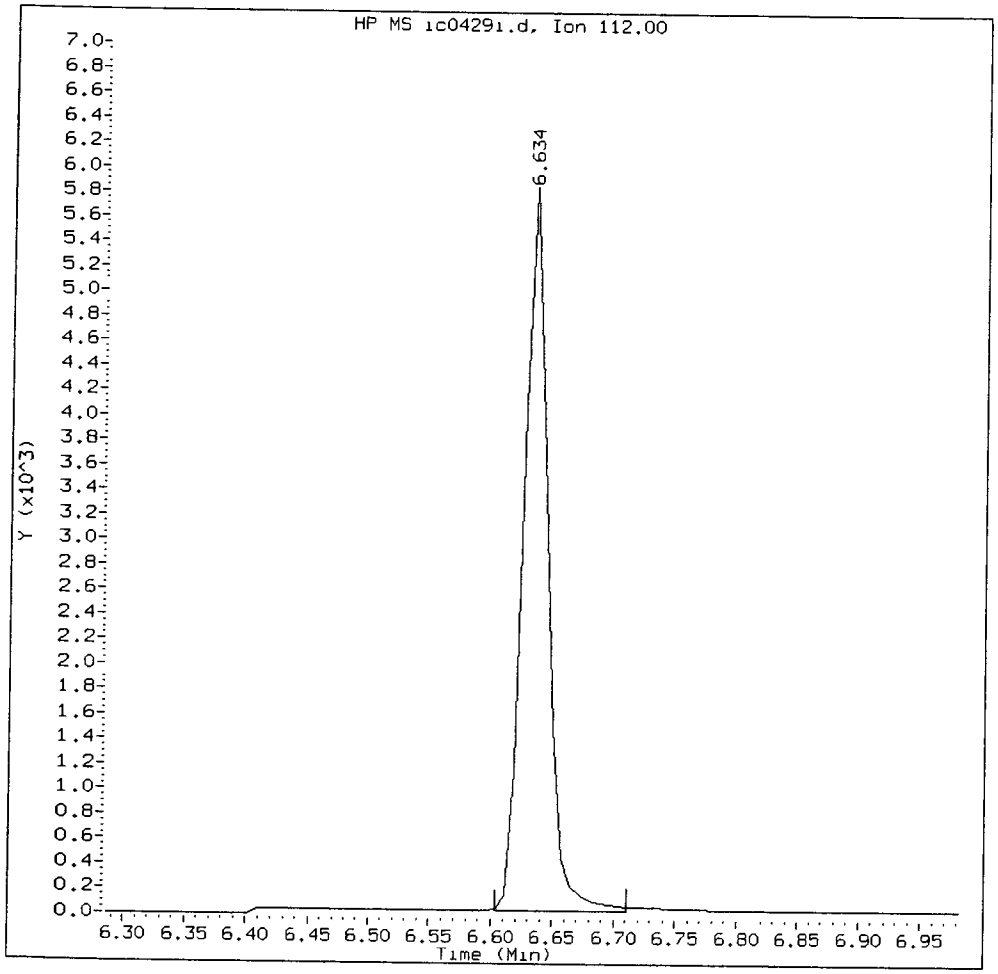
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429I, /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d

2-Fluorophenol Amount: 0.47 Area: 8113



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: YS Date: 5/31/13

CO-ELUTION SUMMARY FOR FILE - ic0429i.d

Lab ID: IC0429I, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

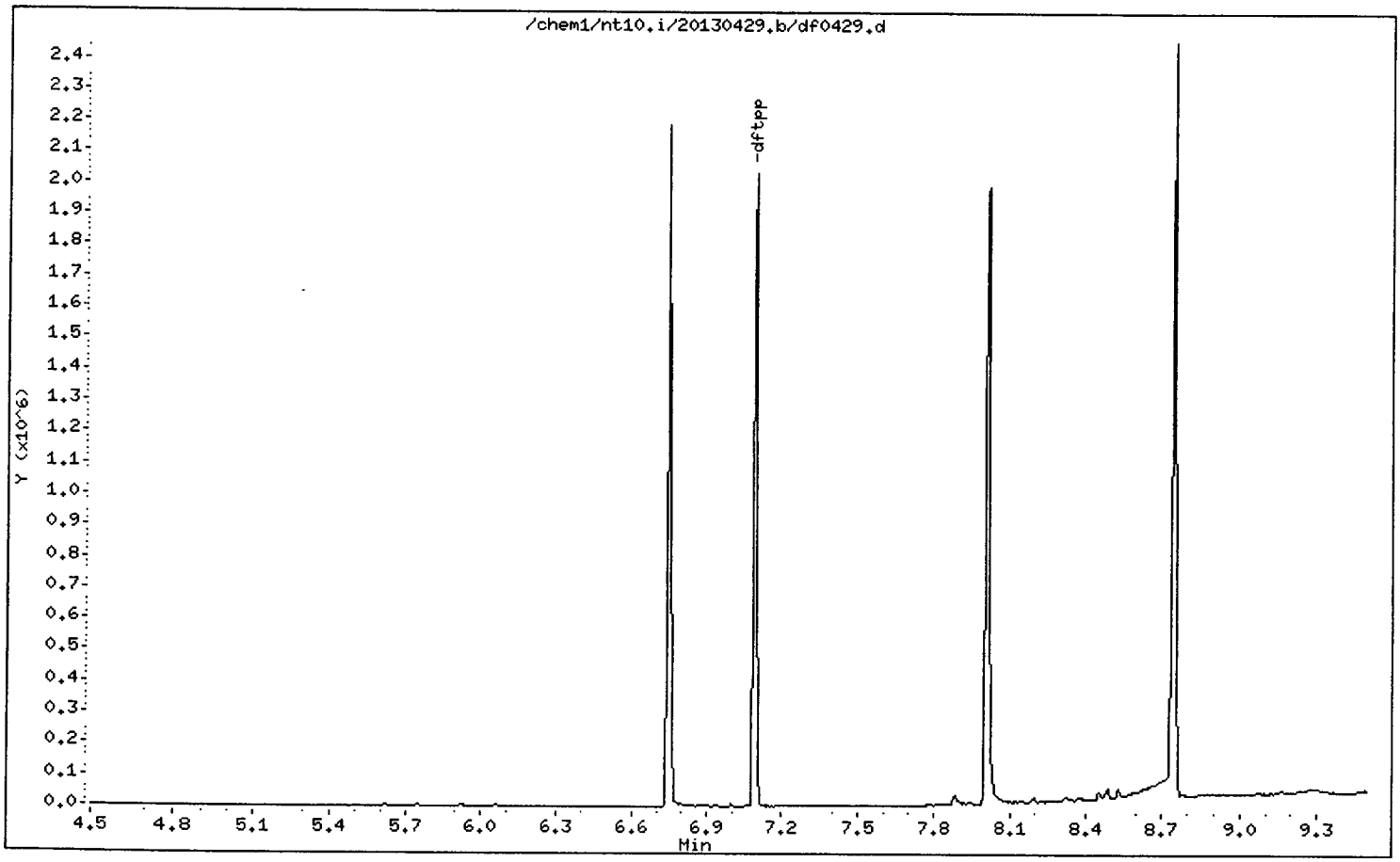
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

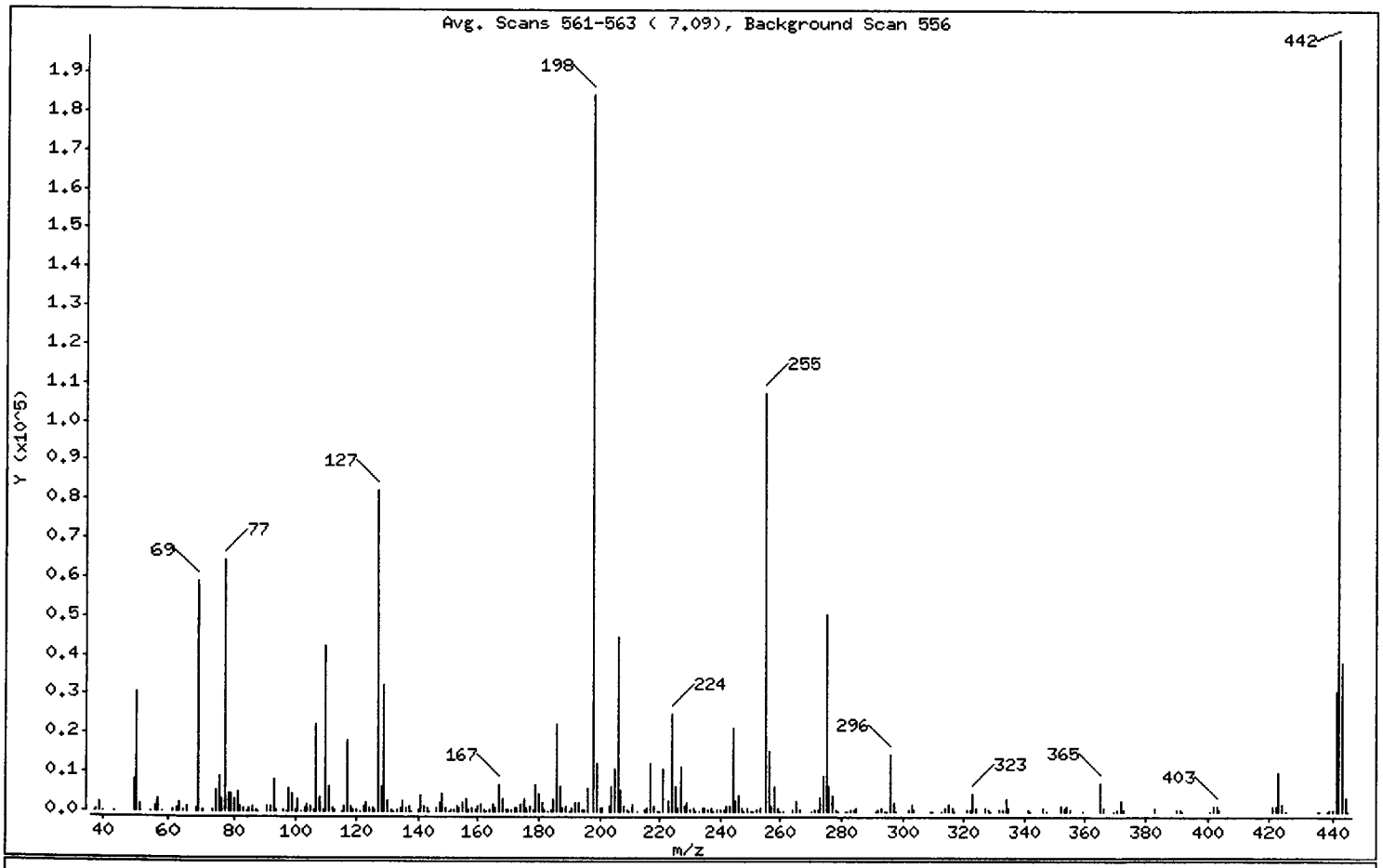
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	16.70
68	Less than 2.00% of mass 69	0.51 (1.60)
69	Mass 69 relative abundance	31.97
70	Less than 2.00% of mass 69	0.15 (0.46)
127	10.00 - 80.00% of mass 198	44.78
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	27.44
365	Greater than 1.00% of mass 198	4.00
441	0.01 - 24.00% of mass 442	16.80 (15.56)
442	50.00 - 200.00% of mass 198	107.98
443	15.00 - 24.00% of mass 442	20.84 (19.30)

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	119	128.00	6232	203.00	1259	289.00	149
38.00	415	129.00	32664	204.00	6492	291.00	55
39.00	2393	130.00	2738	205.00	11023	292.00	248
40.00	132	131.00	547	206.00	44808	293.00	944
44.00	78	132.00	207	207.00	5716	294.00	225
49.00	203	133.00	272	208.00	1602	295.00	86
50.00	8343	134.00	858	209.00	559	296.00	14604
51.00	30808	135.00	2801	210.00	130	297.00	2070
52.00	1637	136.00	916	211.00	1868	298.00	119
55.00	158	137.00	1248	213.00	64	301.00	172
56.00	1274	138.00	214	215.00	464	302.00	318
57.00	3130	139.00	128	216.00	999	303.00	1693
58.00	121	140.00	298	217.00	12350	304.00	431
61.00	576	141.00	4004	218.00	1562	308.00	140
62.00	758	142.00	1332	219.00	107	309.00	66
63.00	2110	143.00	918	220.00	86	310.00	122
64.00	365	144.00	184	221.00	10806	313.00	127
65.00	1151	145.00	229	223.00	2947	314.00	769
68.00	946	146.00	756	224.00	25312	315.00	1728
69.00	58984	147.00	2094	225.00	6355	316.00	922
70.00	271	148.00	4544	226.00	766	317.00	88
73.00	494	149.00	885	227.00	11288	321.00	436
74.00	5693	150.00	191	228.00	1533	322.00	230
75.00	9303	151.00	532	229.00	2272	323.00	4678
76.00	3182	152.00	251	230.00	340	324.00	920
77.00	64696	153.00	1367	231.00	1037	327.00	968
78.00	4399	154.00	1025	232.00	136	328.00	465
79.00	4595	155.00	2332	233.00	163	329.00	50
80.00	3355	156.00	3268	234.00	787	332.00	367
81.00	4879	157.00	652	235.00	849	333.00	490
82.00	1244	158.00	750	236.00	522	334.00	3152
83.00	1132	159.00	624	237.00	861	335.00	753
84.00	59	160.00	1324	238.00	117	341.00	568
85.00	783	161.00	1910	239.00	422	342.00	139
86.00	1346	162.00	596	240.00	404	346.00	1068

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	634	163.00	120	241.00	673	347.00	165
88.00	209	164.00	312	242.00	1491	352.00	1522
89.00	58	165.00	1684	243.00	1585	353.00	1048
91.00	1173	166.00	900	244.00	21560	354.00	1434
92.00	1265	167.00	7028	245.00	2828	355.00	307
93.00	8038	168.00	3167	246.00	4226	359.00	51
94.00	544	169.00	640	247.00	836	365.00	7383
96.00	486	170.00	289	248.00	173	366.00	950
97.00	173	171.00	367	249.00	766	370.00	83
98.00	5992	172.00	736	250.00	145	371.00	406
99.00	4376	173.00	984	251.00	198	372.00	2676
100.00	452	174.00	1650	252.00	278	373.00	680
101.00	3021	175.00	3419	253.00	722	383.00	692
102.00	131	176.00	1090	255.00	107624	384.00	117
103.00	907	177.00	1541	256.00	15761	390.00	337
104.00	1840	178.00	570	257.00	1160	391.00	291
105.00	1589	179.00	6738	258.00	6194	392.00	71
106.00	548	180.00	4416	259.00	1028	401.00	221
107.00	22656	181.00	2092	260.00	162	402.00	1163
108.00	3534	182.00	309	261.00	213	403.00	1545
109.00	609	183.00	166	264.00	253	404.00	599
110.00	42496	184.00	593	265.00	2547	421.00	1426
111.00	6272	185.00	3035	266.00	526	422.00	1250
112.00	744	186.00	22616	270.00	181	423.00	9992
113.00	246	187.00	6353	271.00	299	424.00	1966
115.00	56	188.00	695	272.00	416	425.00	183
116.00	1316	189.00	1391	273.00	3826	435.00	62
117.00	18496	190.00	224	274.00	8949	436.00	62
118.00	1424	191.00	864	275.00	50632	437.00	225
119.00	236	192.00	2063	276.00	6580	438.00	213
120.00	238	193.00	2223	277.00	4111	439.00	328
121.00	63	194.00	423	278.00	606	440.00	329
122.00	1437	195.00	416	279.00	122	441.00	31000
123.00	2280	196.00	5832	281.00	202	442.00	199232
124.00	999	198.00	184512	282.00	126	443.00	38448

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

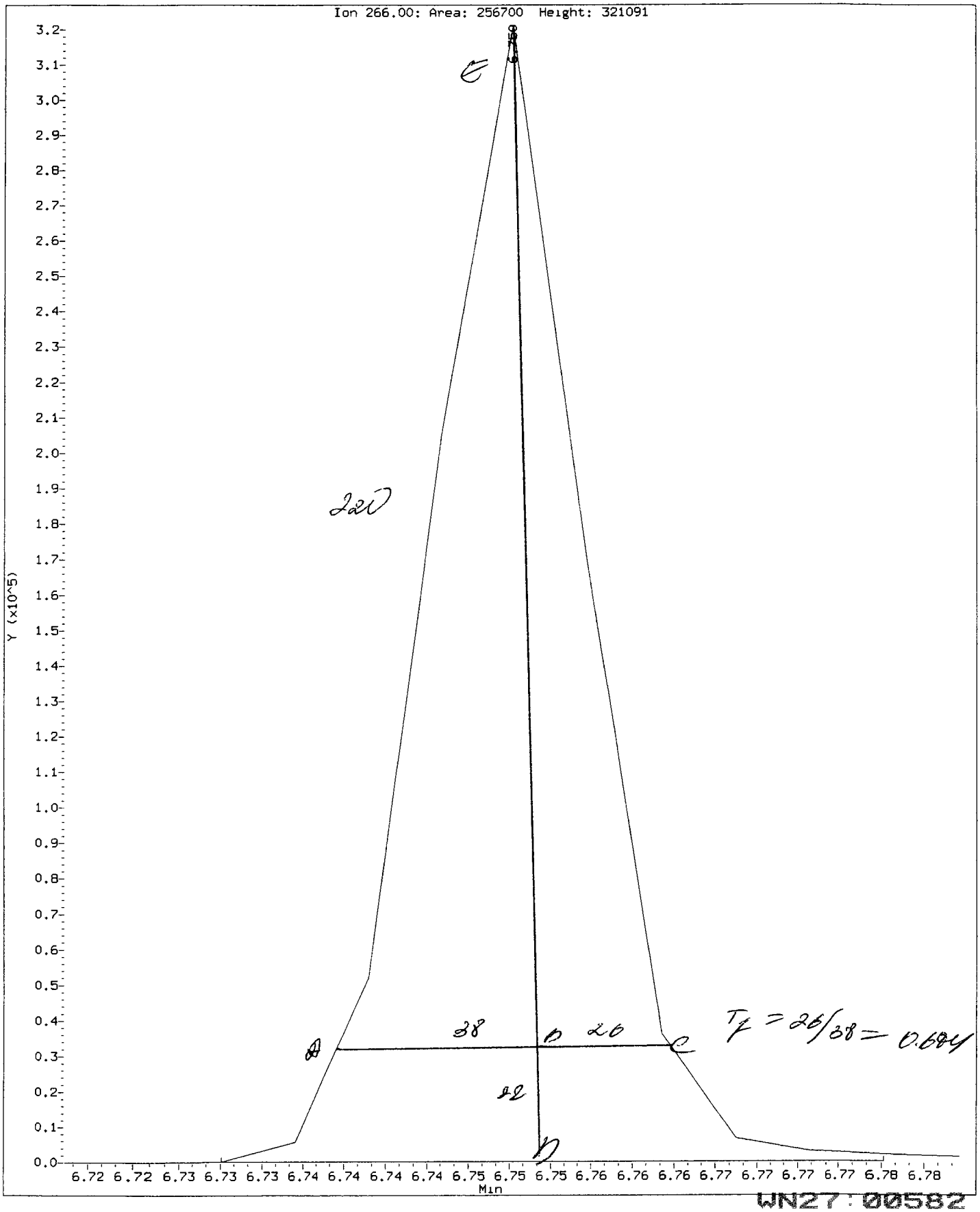
Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	975	199.00	12407	283.00	532	444.00	3455
126.00	347	200.00	963	284.00	335	445.00	131
127.00	82624	201.00	1058	285.00	774		

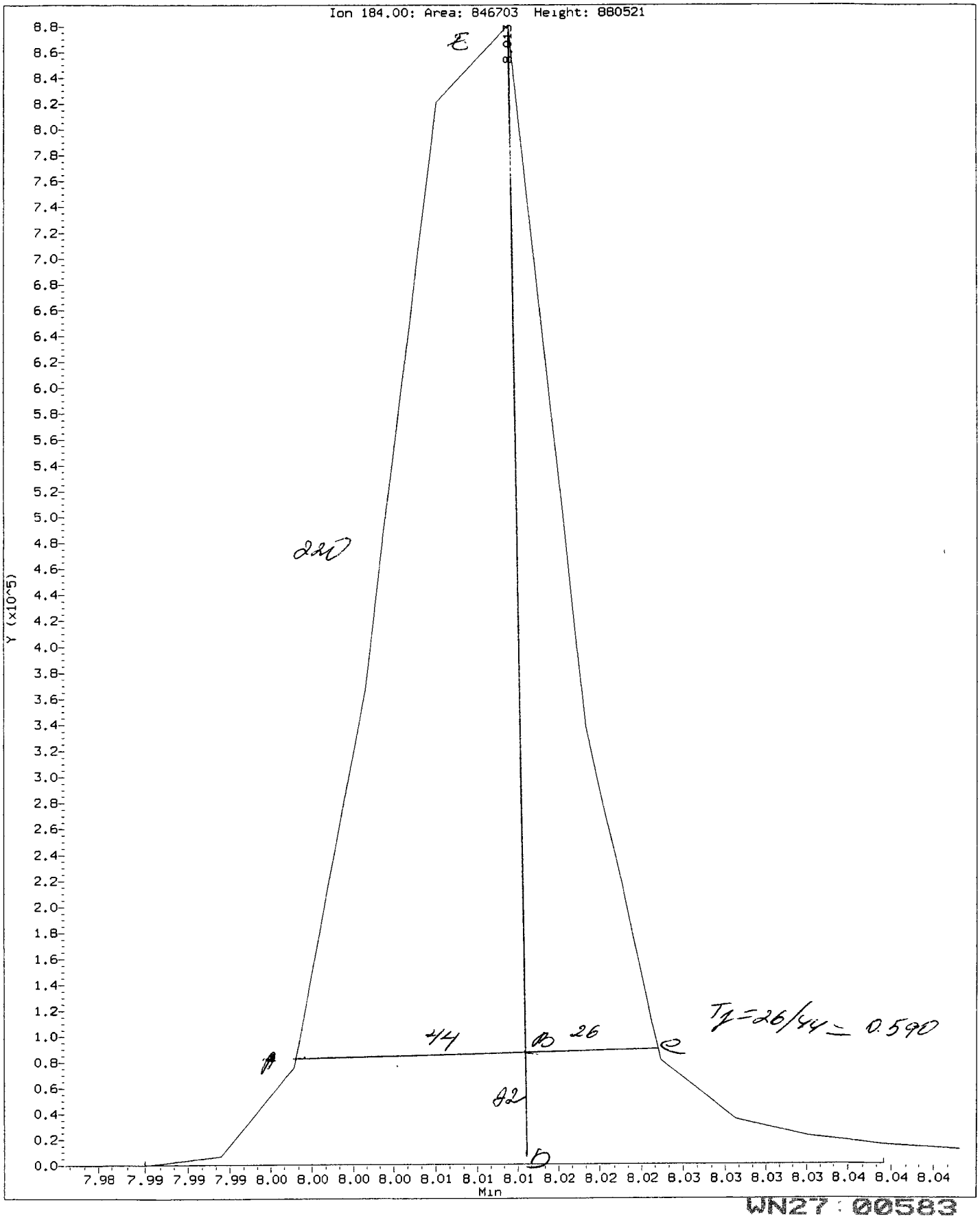
Data File: /chem1/nt10.1/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130429.b/ddt.b/df0429.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130429.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 29-APR-2013 16:37 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.750	256700
Benzidine	8.013	846703
4,4'-DDE	8.195	1804
4,4'-DDD	8.483	6740
4,4'-DDT	8.745	445165

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

$$\text{DDT Percent Breakdown} = \frac{(1804 + 6740) * 100}{(1804 + 6740 + 445165)}$$

DDT Percent Breakdown = 1.9 %

SIM Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN27

Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WN27 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 04/29/13 Analysis Start Date: 05/03/13

	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 / 3X
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	Y / (N) /

Detail problems, corrective actions and/or other pertinent information below.

(Review 1) Analyst: YZ **Date:** 5/10/13

(Review 2) Reviewer: [signature] **Date:** 5/11

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 05/07/13 Analysis: ABN/SIM ABN Analyst: YB

GC Program: ABN2 Column No: 252945 Column Type: 280 m31

Instrument Tune (.U or .CT.): 13022814 EM Voltage: 1650

Calibration File: DF0507 Curve Date: 04/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 B000112	
	2073-1 1998-4	
	2064-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b

	Time	Filename	LabID	ClientId	DF									
1	1219	df0507.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1310	cc0507a.d	CC0507A		1	8.13	56926	10.73	209171	14.56	117080	17.79	224897	22.98	250780	25.26	223069
3	1650	wn30mbs1 d	WN30MBS1	WN30MBS1	1	8 13	53803	10.73	206635	14 56	117783	17.79	224711	22.98	238578	25.26	204177
4	1727	wn30lcss1.d	WN30LCSS1	WN30LCSS1	1	8 12	51689	10.73	189427	14.56	111234	17.79	212909	22.98	239074	25.26	211700
5	1803	wn30lcsds1.d	WN30LCSDS1	WN30LCSDS1	1	8.12	48500	10.72	178583	14.56	105548	17.79	200471	22.98	226844	25.26	205354
6	1840	wn30k.d	WN30K	JW-EA02-SC05	1	8.13	49546	10.73	191408	14.57	112467	17.81	214537	23.05	197149	25.35	191970
7	1916	wn27a.d	WN27A	CG-MH-010-20	3	8.13	44455	10.73	180083	14.56	105963	17.79	194098	23.01	183569	25.32	179016
8	1953	wn27ams.d	WN27AMS	CG-MH-010-20	3	8.12	48313	10.73	187744	14.56	112730	17.80	205606	23.02	199913	25.35	205001
9	2030	wn27amsd.d	WN27AMSD	CG-MH-010-20	3	8.13	44166	10 73	171247	14.56	102716	17.79	190403	23.01	185948	25.32	172442
10	2106	wn31a.d	WN31A	ES-TS-INF-20	3	8.13	47115	10.72	182293	14.56	101406	17.79	175865	23.01	198466	25.31	192962

YE 5/8/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b/SIM.b

ARI Job No.: WN30 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 07-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1650	wn30mbs1.d	WN30MBS1	WN30MBS1	1	NO MANUAL INTEGRATION
1727	wn30lcss1.d	WN30LCSS1	WN30LCSS1	1	NO MANUAL INTEGRATION
1803	wn30lcsds1.d	WN30LCSDS1	WN30LCSDS1	1	NO MANUAL INTEGRATION
1916	wn27a.d	WN27A	CG-MH-010-	3	Benzyl alcohol, Dimethylphthalate, Diethylphthalate, N-Nitrosodiphenylamine, Dibenzo(a,h)anthracene,
1953	wn27ams.d	WN27AMS	CG-MH-010-	3	NO MANUAL INTEGRATION
2030	wn27amsd.d	WN27AMSD	CG-MH-010-	3	NO MANUAL INTEGRATION
2106	wn31a.d	WN31A	ES-TS-INF-	3	Benzyl alcohol, Dimethylphthalate, Diethylphthalate, Dibenzo(a,h)anthracene,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b/SIM.b

Instrument: nt10.i Date: 07-MAY-2013 Method: SIM.b/SIMABN2.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 07-MAY-2013

Compound	%D
Pentachlorophenol	-62.0

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

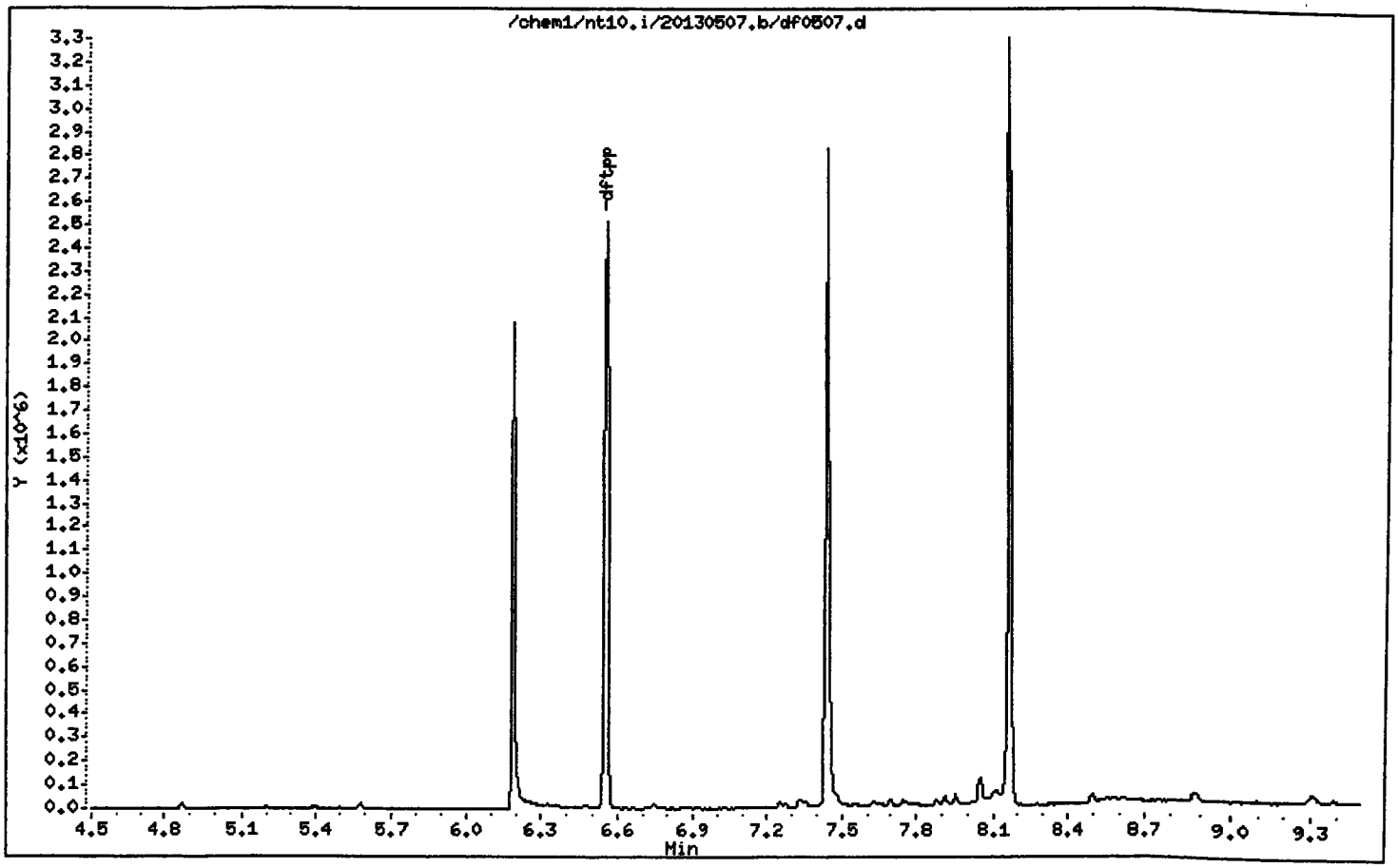
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

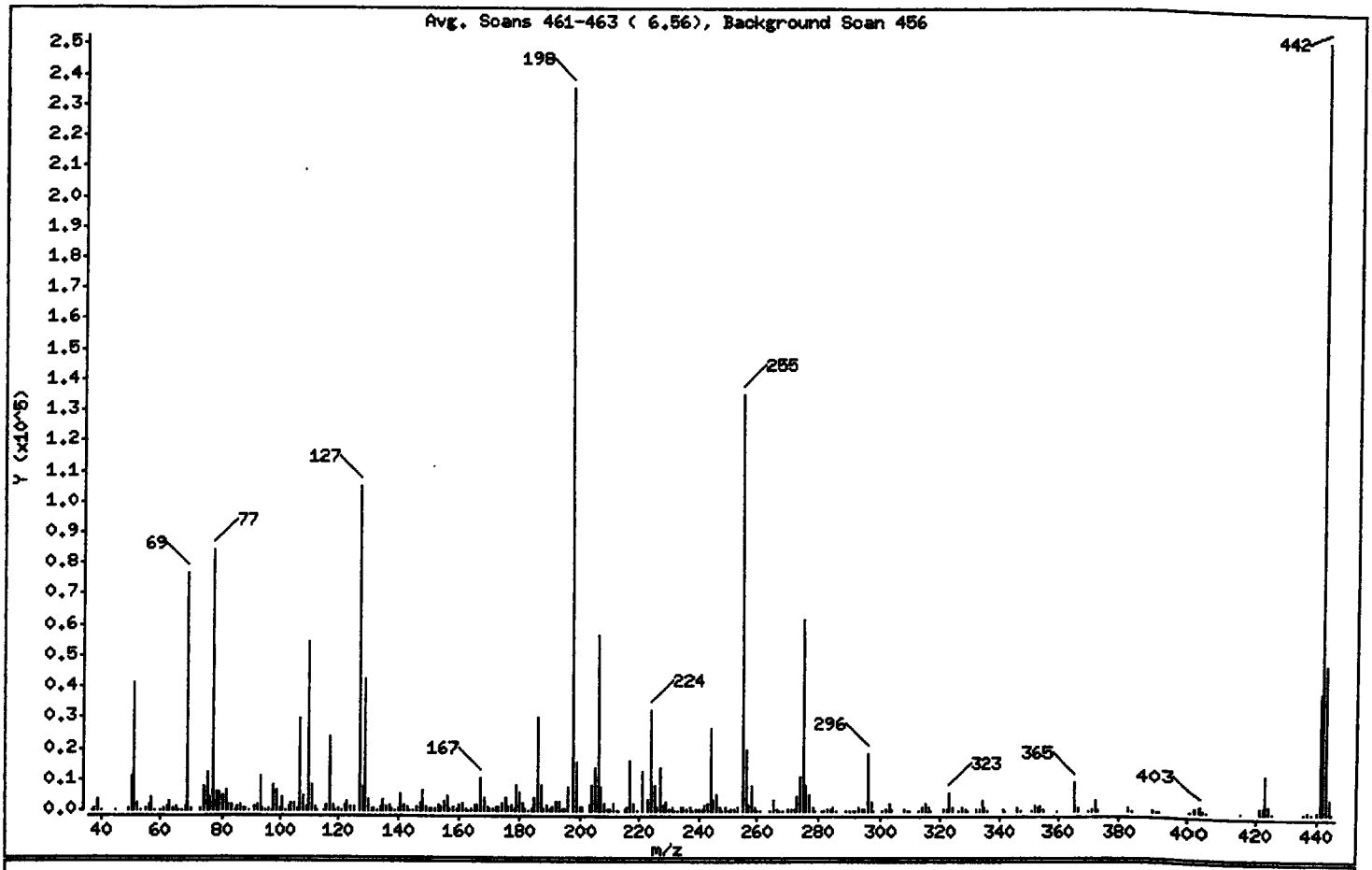
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.49
68	Less than 2.00% of mass 69	0.55 (1.68)
69	Mass 69 relative abundance	32.69
70	Less than 2.00% of mass 69	0.19 (0.60)
127	10.00 - 80.00% of mass 198	44.66
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.66
275	10.00 - 60.00% of mass 198	26.49
365	Greater than 1.00% of mass 198	3.85
441	0.01 - 24.00% of mass 442	16.45 (15.34)
442	50.00 - 200.00% of mass 198	107.26
443	15.00 - 24.00% of mass 442	20.48 (19.10)

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456

Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	165	127.00	105160	205.00	14065	291.00	68
38.00	541	128.00	7752	206.00	56872	292.00	264
39.00	3217	129.00	42416	207.00	7418	293.00	1209
40.00	147	130.00	3423	208.00	2073	294.00	308
45.00	50	131.00	712	209.00	493	295.00	342
49.00	348	132.00	392	210.00	649	296.00	18312
50.00	11161	133.00	235	211.00	2179	297.00	2673
51.00	41176	134.00	1318	212.00	90	298.00	188
52.00	2280	135.00	3367	213.00	115	301.00	277
53.00	57	136.00	1352	215.00	715	302.00	365
55.00	301	137.00	1539	216.00	1332	303.00	2162
56.00	1813	138.00	363	217.00	16327	304.00	538
57.00	4098	139.00	186	218.00	2040	308.00	295
58.00	169	140.00	541	219.00	190	309.00	131
60.00	30	141.00	5378	221.00	13051	310.00	154
61.00	838	142.00	1775	223.00	3684	313.00	206
62.00	965	143.00	1211	224.00	32464	314.00	947
63.00	2847	144.00	290	225.00	8230	315.00	2153
64.00	418	145.00	288	226.00	912	316.00	1225
65.00	1416	146.00	894	227.00	13707	317.00	149
66.00	51	147.00	2502	228.00	2031	321.00	688
67.00	72	148.00	6165	229.00	3030	322.00	351
68.00	1291	149.00	1165	230.00	444	323.00	5703
69.00	76744	150.00	292	231.00	1266	324.00	1065
70.00	457	151.00	649	232.00	236	326.00	137
73.00	432	152.00	342	233.00	246	327.00	1197
74.00	7451	153.00	1632	234.00	874	328.00	555
75.00	12036	154.00	1325	235.00	995	329.00	64
76.00	4044	155.00	3061	236.00	720	332.00	491
77.00	83968	156.00	4441	237.00	1095	333.00	662
78.00	5637	157.00	831	238.00	150	334.00	3759
79.00	5692	158.00	1013	239.00	606	335.00	948
80.00	4518	159.00	749	240.00	436	336.00	50
81.00	6259	160.00	1692	241.00	808	341.00	791
82.00	1687	161.00	2495	242.00	1850	342.00	161

Data File: /ohem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456

Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	1477	162.00	738	243.00	2192	346.00	1373
84.00	44	163.00	224	244.00	26544	347.00	233
85.00	1154	164.00	334	245.00	3604	351.00	175
86.00	1817	165.00	1952	246.00	5235	352.00	1921
87.00	817	166.00	1695	247.00	1018	353.00	1269
88.00	297	167.00	10680	248.00	282	354.00	1662
89.00	164	168.00	4218	249.00	965	355.00	370
91.00	1338	169.00	910	250.00	160	359.00	72
92.00	1663	170.00	397	251.00	307	365.00	9068
93.00	10827	171.00	504	252.00	333	366.00	1280
94.00	762	172.00	1038	253.00	926	370.00	224
95.00	205	173.00	1276	255.00	135040	371.00	578
96.00	418	174.00	2241	256.00	19728	372.00	3197
97.00	92	175.00	4219	257.00	1535	373.00	812
98.00	8120	176.00	1336	258.00	8246	383.00	962
99.00	6177	177.00	1989	259.00	1344	384.00	230
100.00	543	178.00	739	260.00	152	390.00	455
101.00	3998	179.00	8371	261.00	154	391.00	270
102.00	191	180.00	5645	264.00	228	392.00	266
103.00	1187	181.00	2604	265.00	3278	401.00	156
104.00	2428	182.00	455	266.00	542	402.00	1404
105.00	2176	183.00	290	267.00	51	403.00	1976
106.00	697	184.00	683	268.00	94	404.00	632
107.00	29376	185.00	4026	270.00	295	405.00	57
108.00	4701	186.00	29992	271.00	319	415.00	50
109.00	1004	187.00	8079	272.00	496	421.00	1847
110.00	54304	188.00	829	273.00	4553	422.00	1500
111.00	8140	189.00	1902	274.00	10985	423.00	12300
112.00	1092	190.00	312	275.00	62368	424.00	2395
113.00	262	191.00	937	276.00	8275	425.00	213
115.00	124	192.00	2653	277.00	5081	436.00	159
116.00	1667	193.00	3118	278.00	877	437.00	326
117.00	23744	194.00	633	279.00	162	438.00	233
118.00	1682	195.00	539	281.00	203	440.00	740
119.00	256	196.00	7352	282.00	74	441.00	38728

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

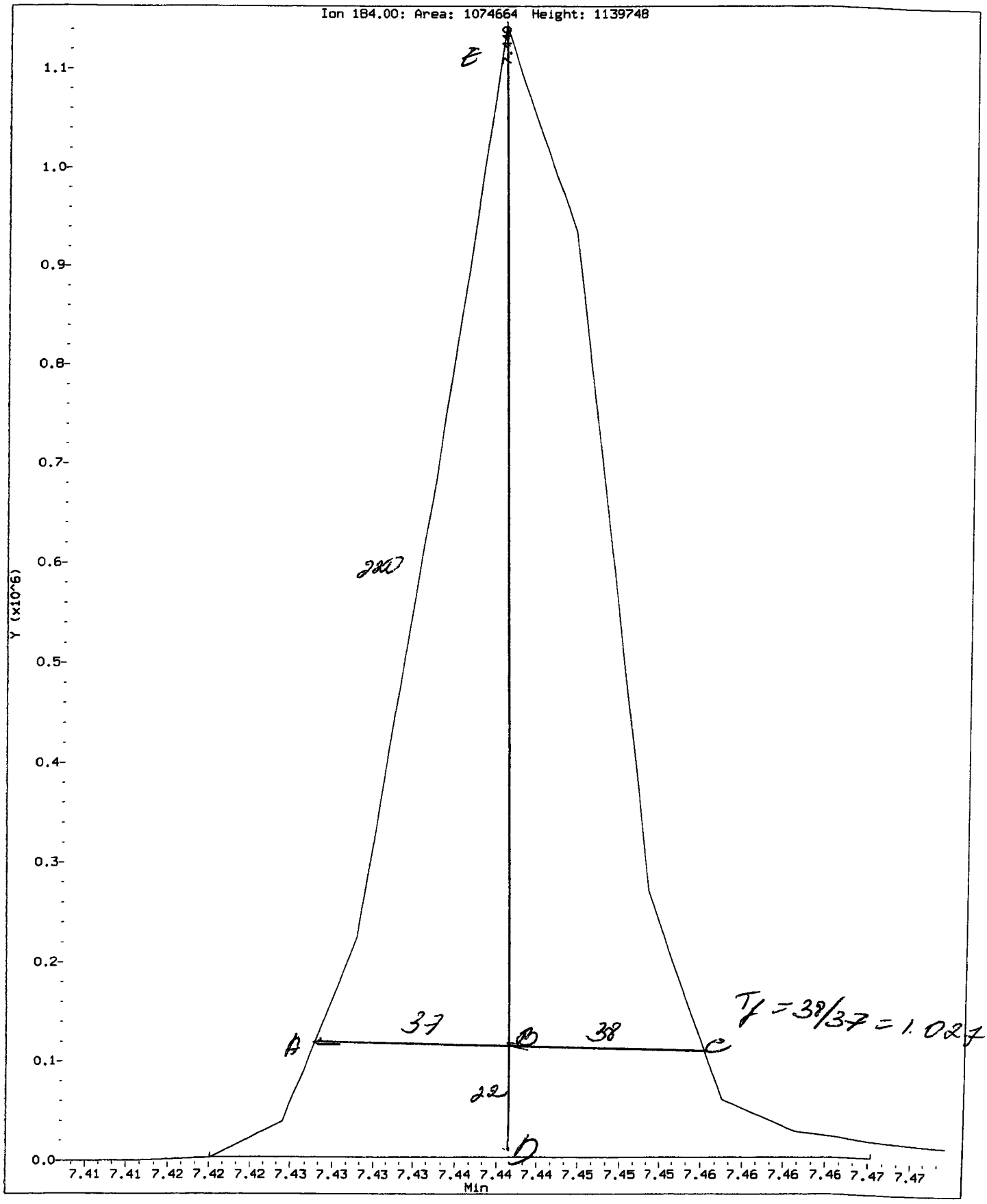
Column diameter: 0.25

Data File: df0507.d
Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456
Location of Maximum: 442.00
Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	477	198.00	235456	283.00	622	442.00	252544
121.00	231	199.00	15678	284.00	415	443.00	48232
122.00	1965	200.00	1247	285.00	987	444.00	4582
123.00	3125	201.00	1259	286.00	85	445.00	255
124.00	1325	203.00	1721	289.00	239		
125.00	1300	204.00	8312	290.00	141		

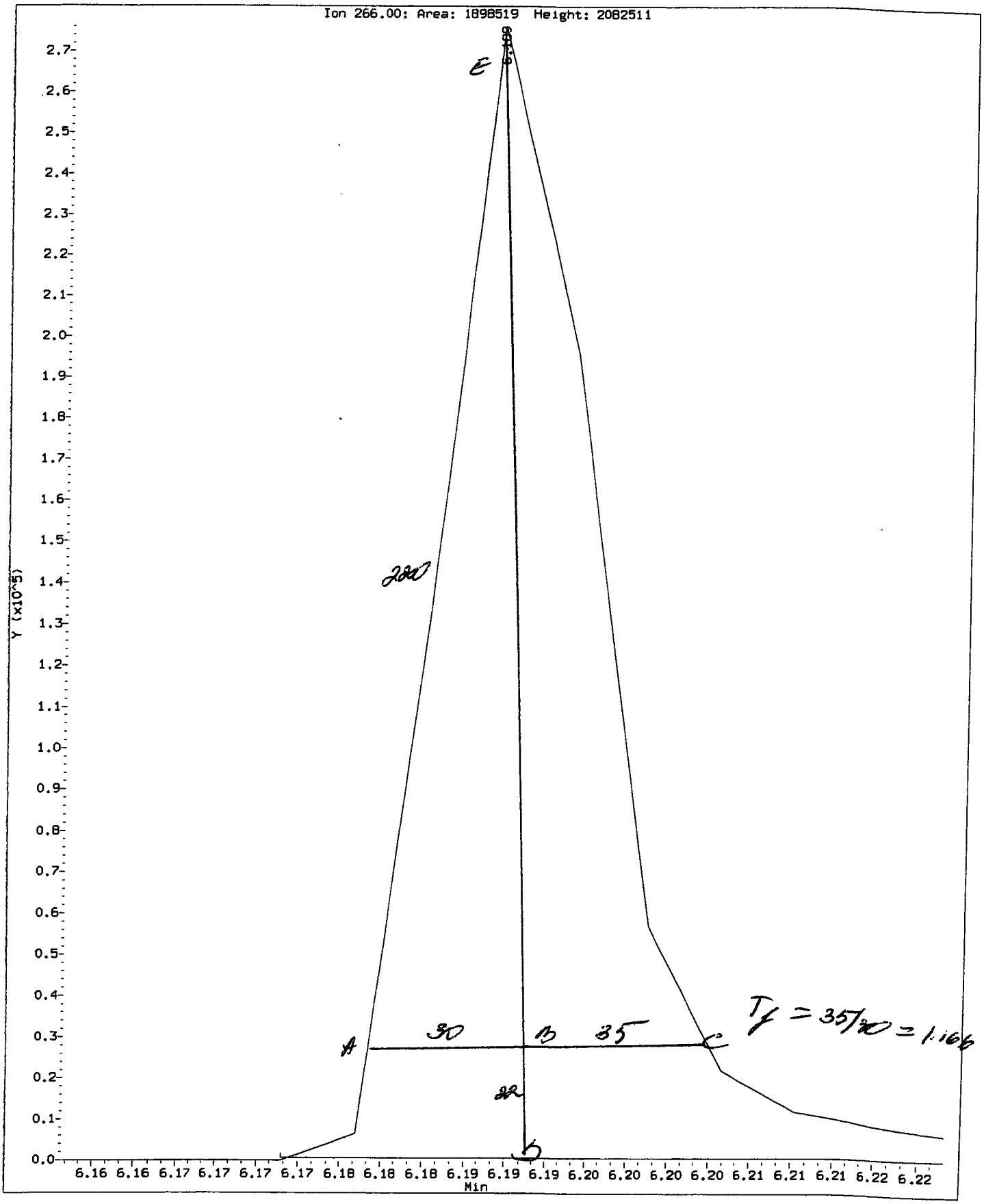
Data File: /chem1/nt10.i/20130507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2013 12:19
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Data File: /chem1/nt10.i/20130507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2013 12:19
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130507.b/ddt.b/df0507.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130507.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 07-MAY-2013 12:19 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.189	1898519
Benzidine	7.440	1074664
4,4'-DDE	7.628	1584
4,4'-DDD	7.954	6093
4,4'-DDT	8.168	617170

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

$$\text{DDT Percent Breakdown} = \frac{(1584 + 6093) * 100}{(1584 + 6093 + 617170)}$$

DDT Percent Breakdown = 1.2 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0507a.d
Analysis Type:
Lab Sample ID: CC0507A
Method: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m

Injection Date: 07-MAY-2013 13:10
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.40508	1.32305	0.010	-5.83795	20.00000	Averaged	
3 Phenol	2.01971	2.24952	0.010	11.37828	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.66429	1.55416	0.010	-6.61749	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.65707	1.55282	0.010	-6.29077	20.00000	Averaged	
11 Benzyl alcohol	0.96865	1.00875	0.010	4.13939	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.57473	1.46815	0.010	-6.76796	20.00000	Averaged	
13 2-Methylphenol	1.44396	1.42206	0.010	-1.51690	20.00000	Averaged	
15 4-Methylphenol	1.47039	1.46780	0.010	-0.17630	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.82918	0.79774	0.050	-3.79191	20.00000	Averaged	
22 2,4-Dimethylphenol	0.38748	0.38450	0.010	-0.76885	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.38338	0.36129	0.010	-5.76160	20.00000	Averaged	
30 Hexachlorobutadiene	0.23337	0.21726	0.010	-6.90534	20.00000	Averaged	
39 Dimethylphthalate	1.15411	1.13744	0.010	-1.44386	20.00000	Averaged	
50 Diethylphthalate	1.30694	1.32460	0.010	1.35113	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.43858	0.46885	0.010	6.90193	20.00000	Averaged	
57 Hexachlorobenzene	0.29961	0.27373	0.010	-8.63924	20.00000	Averaged	
58 Pentachlorophenol	0.17813	0.06765	0.005	-62.02286	20.00000	Averaged	<-
$ 66 Terphenyl-d14	0.49170	0.48449	0.010	-1.46756	20.00000	Averaged	
67 Butylbenzylphthalate	0.37109	0.42534	0.010	14.61907	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.89160	0.94025	0.010	5.45596	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.86193	0.76773	0.010	-10.92854	20.00000	Averaged	

Analytical Resources, Inc.

YZ 5/8/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130507.b/SIM.b/cc0507a.d
Lab Smp Id: CC0507A
Inj Date : 07-MAY-2013 13:10
Operator : YZ Inst ID: nt10.i
Smp Info : CC0507A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2013 09:24 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.865	5.865	(0.721)	18829	1.00000	0.9416
	3 Phenol	94	7.580	7.580	(0.932)	32014	1.00000	1.114
	7 1,3-Dichlorobenzene	146	8.052	8.052	(0.990)	22118	1.00000	0.9338
*	8 1,4-Dichlorobenzene-d4	152	8.129	8.129	(1.000)	56926	4.00000	
	9 1,4-Dichlorobenzene	146	8.160	8.160	(1.004)	22099	1.00000	0.9371
	11 Benzyl alcohol	79	8.455	8.455	(1.040)	14356	1.00000	1.041
	12 1,2-Dichlorobenzene	146	8.525	8.525	(1.049)	20894	1.00000	0.9323
	13 2-Methylphenol	108	8.735	8.735	(1.074)	20238	1.00000	0.9848
	15 4-Methylphenol	108	9.030	9.030	(1.111)	20889	1.00000	0.9982
	16 N-Nitroso-di-n-propylamine	70	9.045	9.045	(1.113)	11353	1.00000	0.9621
	22 2,4-Dimethylphenol	107	10.124	10.124	(0.943)	40213	2.00000	1.985
	26 1,2,4-Trichlorobenzene	180	10.656	10.656	(0.993)	18893	1.00000	0.9424
*	27 Naphthalene-d8	136	10.733	10.733	(1.000)	209171	4.00000	
	30 Hexachlorobutadiene	225	11.196	11.196	(1.043)	11361	1.00000	0.9309
	39 Dimethylphthalate	163	14.129	14.129	(0.970)	33293	1.00000	0.9856
*	42 Acenaphthene-d10	162	14.562	14.562	(1.000)	117080	4.00000	
	50 Diethylphthalate	149	15.699	15.699	(1.078)	38771	1.00000	1.014
	54 N-Nitrosodiphenylamine	169	16.062	16.062	(0.903)	26361	1.00000	1.069
	57 Hexachlorobenzene	284	17.142	17.142	(0.963)	15390	1.00000	0.9136
	58 Pentachlorophenol	266	17.560	17.560	(0.987)	7607	2.00000	0.7595 (M)
*	59 Phenanthrene-d10	188	17.792	17.792	(1.000)	224897	4.00000	
$	66 Terphenyl-d14	244	21.126	21.126	(0.919)	30375	1.00000	0.9853
	67 Butylbenzylphthalate	149	22.110	22.110	(0.962)	26667	1.00000	1.146
*	69 Chrysene-d12	240	22.977	22.977	(1.000)	250780	4.00000	
*	77 Perylene-d12	264	25.261	25.261	(1.000)	223069	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.098	27.098	(1.073)	52435	1.00000	1.055

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
90 N-Nitrosodimethylamine	74	3.641	3.641	(0.448)	21852	2.00000	1.781

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0507a.d
Lab Smp Id: CC0507A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 07-MAY-2013
Calibration Time: 13:10
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	56926	8.11
27 Naphthalene-d8	192325	96162	384650	209171	8.76
42 Acenaphthene-d10	109274	54637	218548	117080	7.14
59 Phenanthrene-d10	203933	101966	407866	224897	10.28
69 Chrysene-d12	223647	111824	447294	250780	12.13
77 Perylene-d12	211919	105960	423838	223069	5.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.13	0.00
27 Naphthalene-d8	10.73	10.23	11.23	10.73	0.00
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.98	22.48	23.48	22.98	0.00
77 Perylene-d12	25.26	24.76	25.76	25.26	0.00

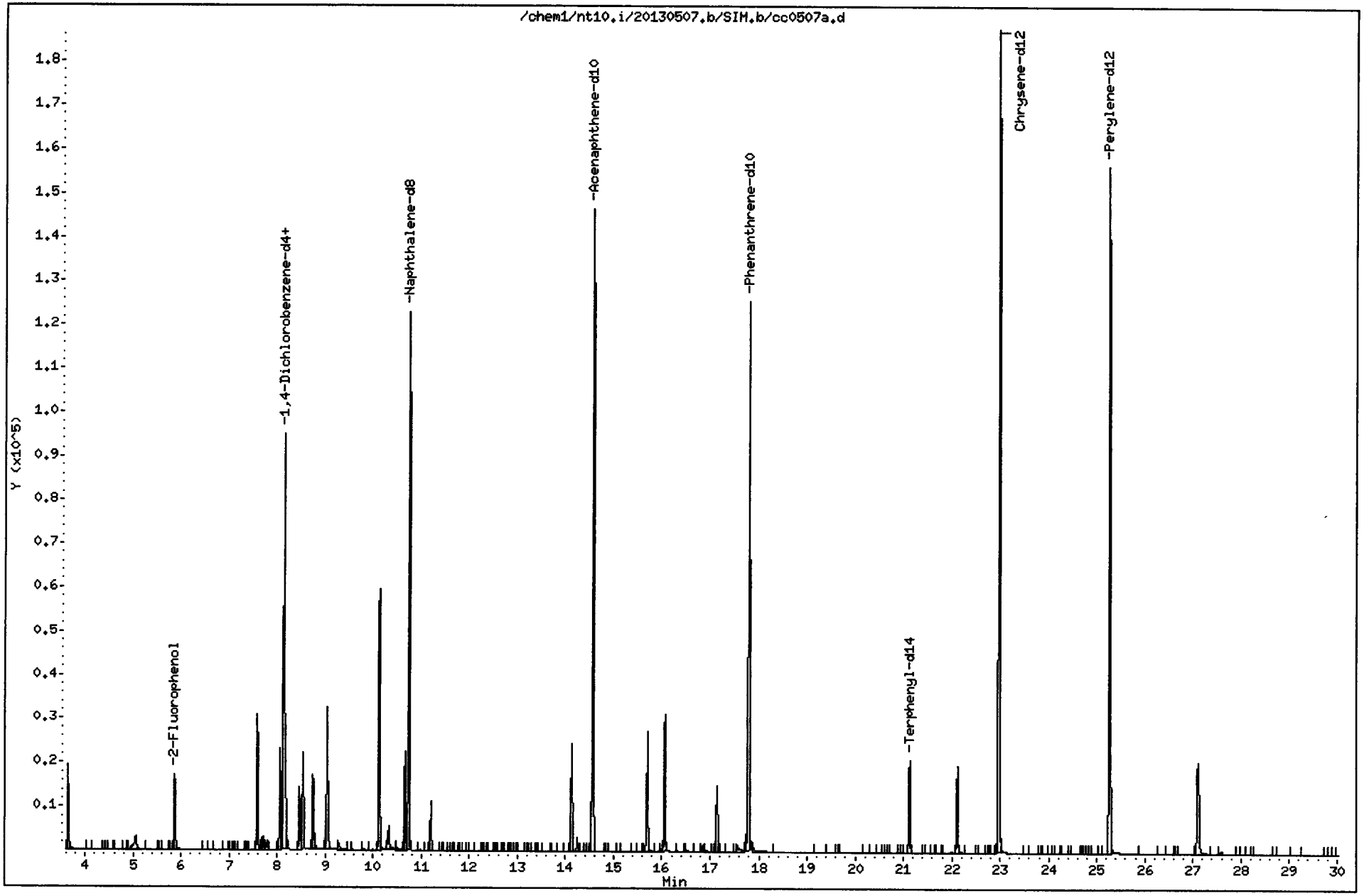
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130507.b/SIM.b/cc0507a.d
Date : 07-MAY-2013 13:10
Client ID:
Sample Info: CC0507A

Instrument: nt10.i

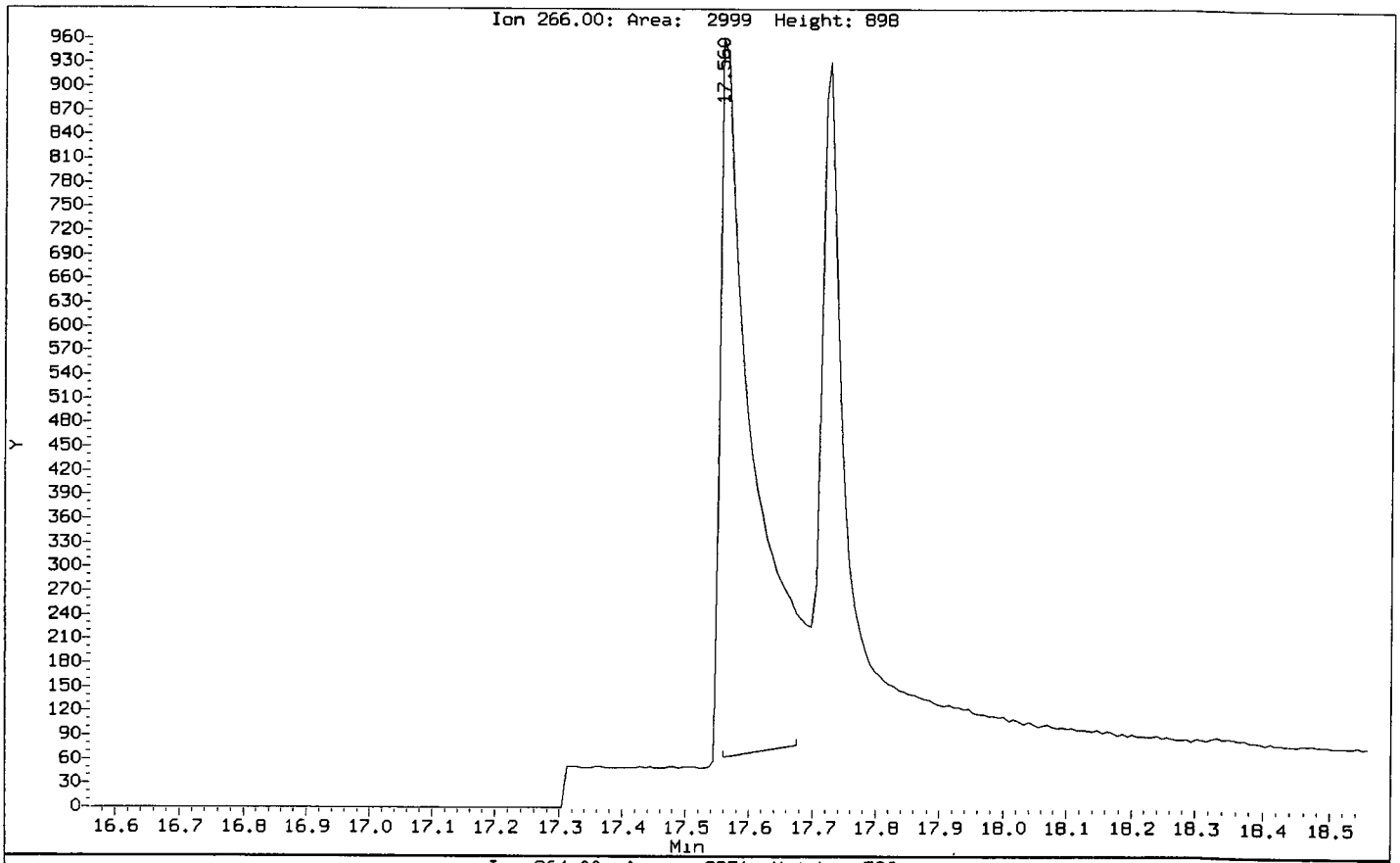
Operator: YZ
Column diameter: 0.25

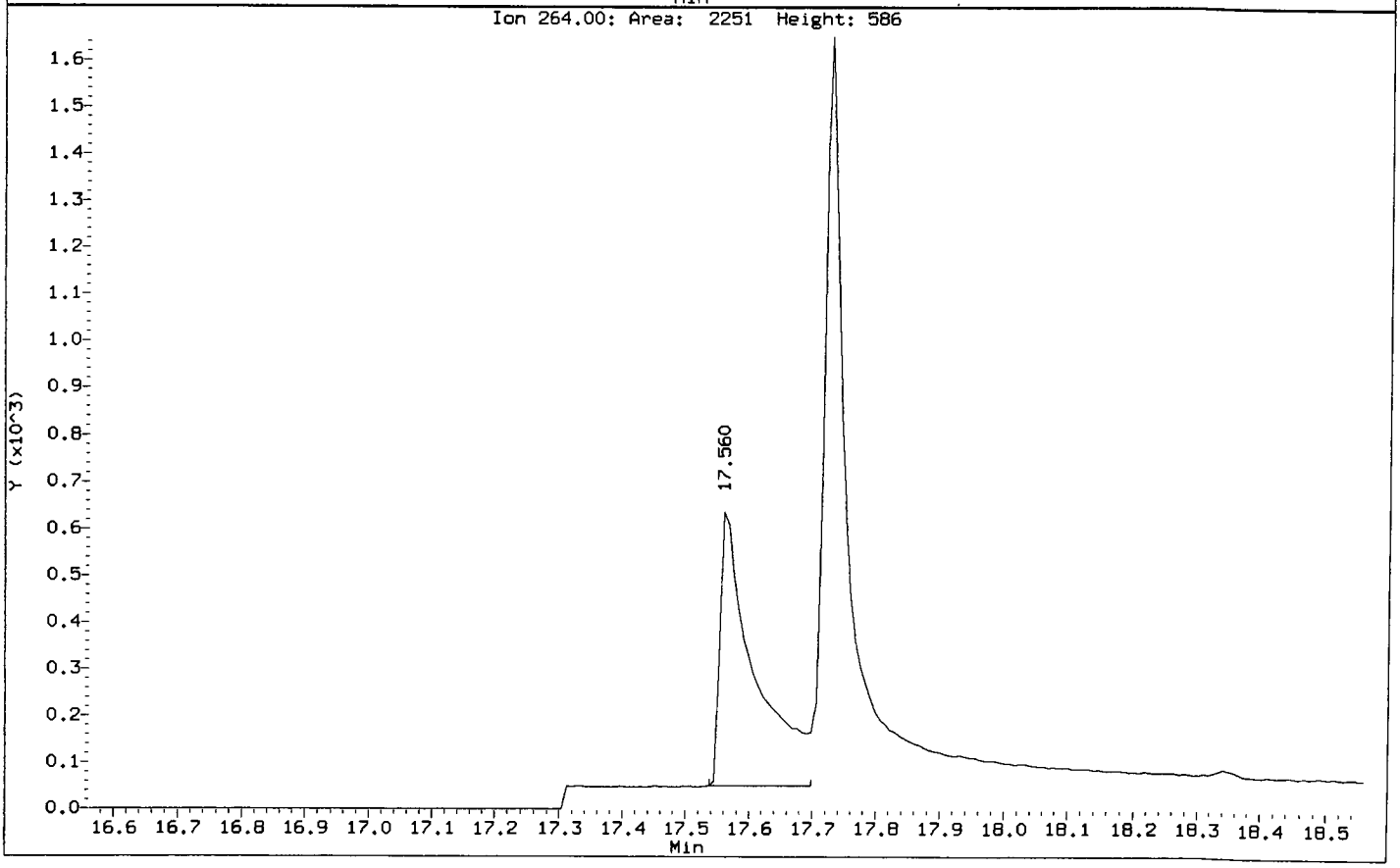
Column phase: ZB-5msi



Data File: /chem1/nt10.i/20130507.b/SIM.b/cc0507a.d
Injection Date: 07-MAY-2013 13:10
Instrument: nt10.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

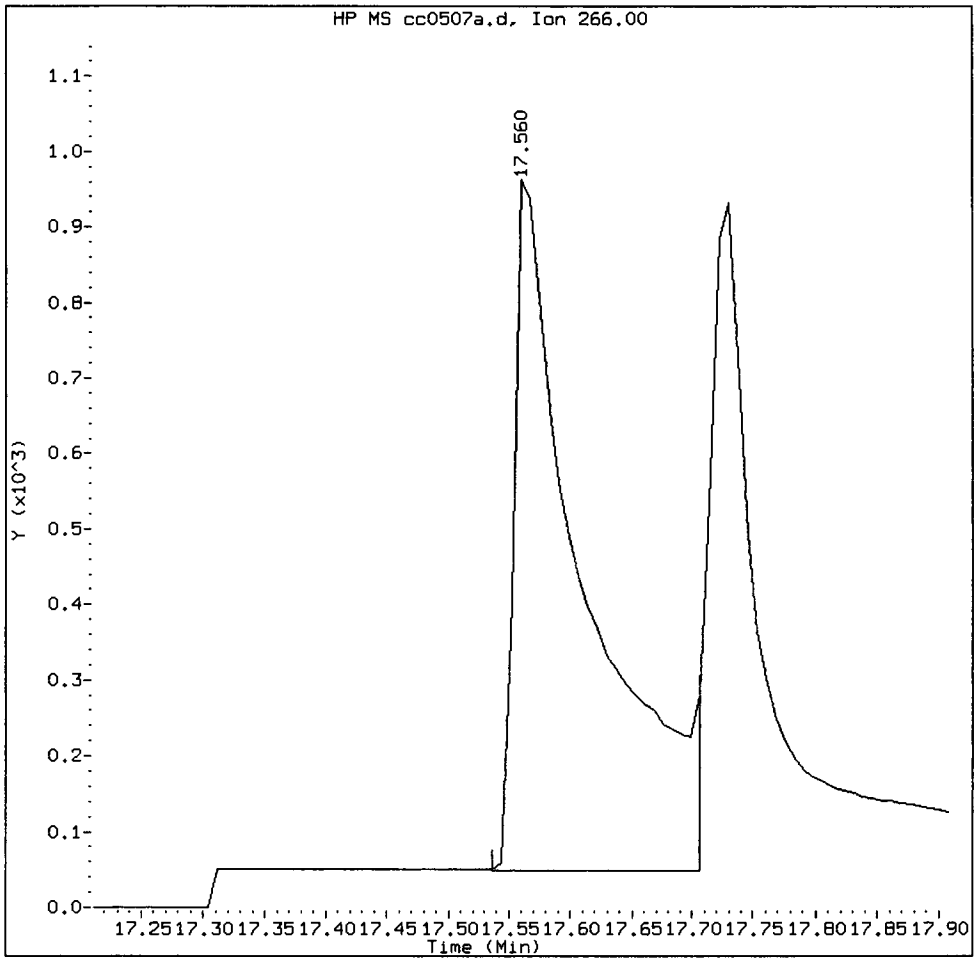




WN27 : 00603

CC0507A, /chem1/nt10.i/20130507.b/SIM.b/cc0507a.d

Pentachlorophenol Amount: 0.37 Area: 3691



MANUAL INTEGRATION for Pentachlorophenol

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

5. Other _____

Analyst: YZ Date: 5/8/13

CO-ELUTION SUMMARY FOR FILE - cc0507a.d

Lab ID: CC0507A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc. 5/9/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130507.b/SIM.b/wn30mbs1.d
Lab Smp Id: WN30MBS1 Client Smp ID: WN30MBS1
Inj Date : 07-MAY-2013 16:50
Operator : YZ Inst ID: nt10.i
Smp Info : WN30MBS1
Misc Info : 13-8692
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2013 09:32 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1	2-Fluorophenol	112	5.880	5.865	(0.723)	78979	4.17892	417.9
	3	Phenol	94	Compound Not Detected.					
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	8.129	8.129	(1.000)	53803	4.00000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	79	Compound Not Detected.					
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					
	15	4-Methylphenol	108	Compound Not Detected.					
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	Compound Not Detected.					
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27	Naphthalene-d8	136	10.733	10.733	(1.000)	206635	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
*	42 Acenaphthene-d10	162	14.562	14.562	(1.000)	117783	4.00000	
	50 Diethylphthalate	149	15.691	15.699	(1.077)	5459	0.14185	14.19(R)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.792	17.792	(1.000)	224711	4.00000	
$	66 Terphenyl-d14	244	21.126	21.126	(0.919)	102339	3.48953	349.0
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	22.977	22.977	(1.000)	238578	4.00000	
*	77 Perylene-d12	264	25.261	25.261	(1.000)	204177	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn30mbs1.d
Lab Smp Id: WN30MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 13:10
Client Smp ID: WN30MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	53803	2.17
27 Naphthalene-d8	192325	96162	384650	206635	7.44
42 Acenaphthene-d10	109274	54637	218548	117783	7.79
59 Phenanthrene-d10	203933	101966	407866	224711	10.19
69 Chrysene-d12	223647	111824	447294	238578	6.68
77 Perylene-d12	211919	105960	423838	204177	-3.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.13	0.00
27 Naphthalene-d8	10.73	10.23	11.23	10.73	0.00
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.98	22.48	23.48	22.98	0.00
77 Perylene-d12	25.26	24.76	25.76	25.26	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: WN30MBS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

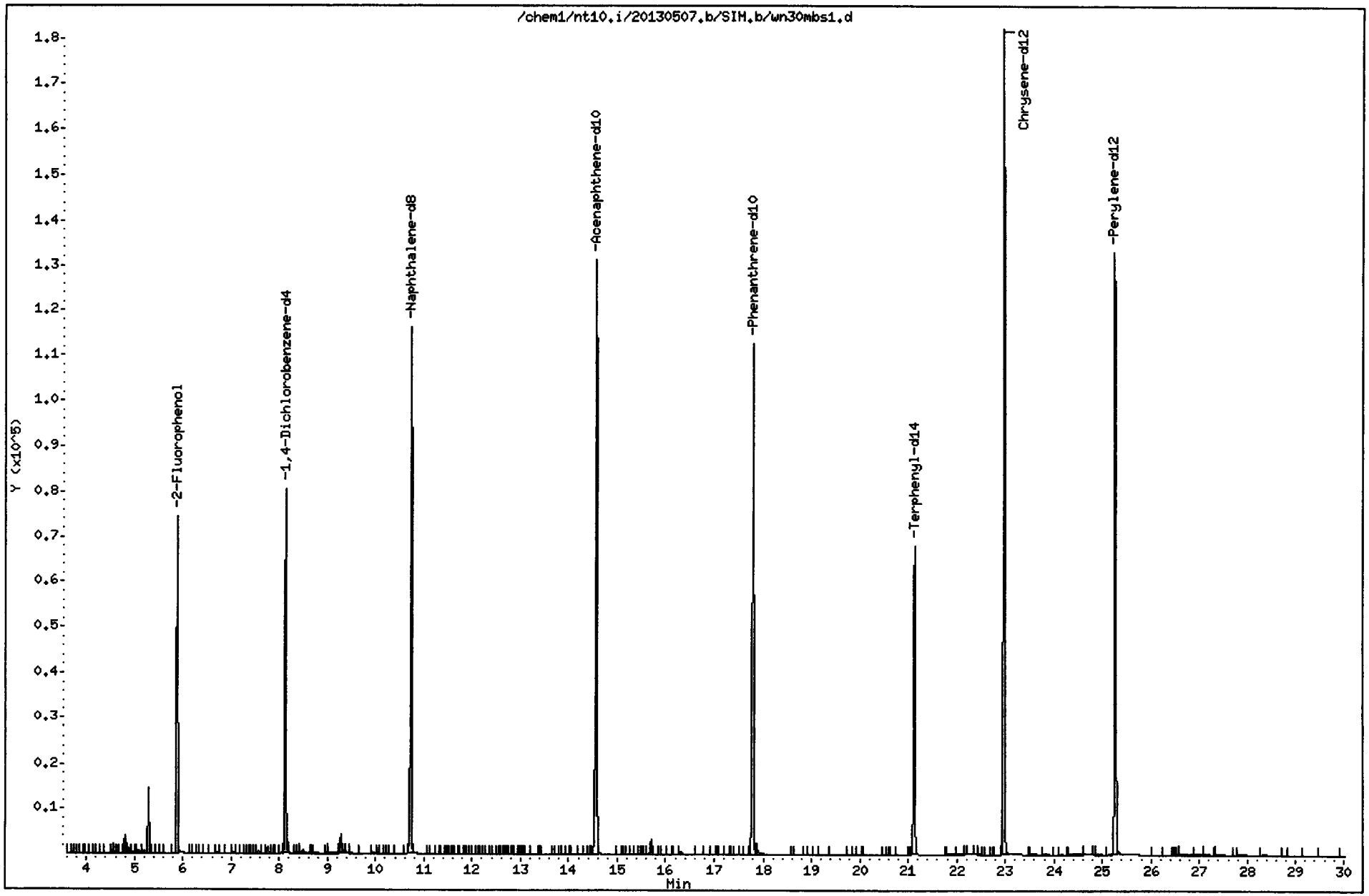
Client SDG: WN30
Fraction: SV
Client Smp ID: WN30MBS1
Operator: YZ
SampleType: BLANK
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	0.000	*	30-160
7	1,3-Dichlorobenze	500.0	0.000	*	30-160
9	1,4-Dichlorobenze	500.0	0.000	*	30-160
11	Benzyl alcohol	500.0	0.000	*	30-160
12	1,2-Dichlorobenze	500.0	0.000	*	30-160
13	2-Methylphenol	500.0	0.000	*	30-160
15	4-Methylphenol	1000	0.000	*	30-160
16	N-Nitroso-di-n-pr	500.0	0.000	*	30-160
22	2,4-Dimethylphenol	1000	0.000	*	30-160
26	1,2,4-Trichlorobe	500.0	0.000	*	30-160
30	Hexachlorobutadie	500.0	0.000	*	30-160
39	Dimethylphthalate	500.0	0.000	*	30-160
50	Diethylphthalate	500.0	14.19	2.84*	30-160
54	N-Nitrosodiphenyl	500.0	0.000	*	30-160
57	Hexachlorobenzene	500.0	0.000	*	30-160
58	Pentachlorophenol	1000	0.000	*	30-160
67	Butylbenzylphthal	500.0	0.000	*	30-160
79	Dibenzo(a,h)anthr	500.0	0.000	*	30-160
90	N-Nitrosodimethyl	1000	0.000	*	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	417.9	55.72	30-160
$ 66	Terphenyl-d14	500.0	349.0	69.79	30-160

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn30mbs1.d
Date : 07-MAY-2013 16:50
Client ID: WN30MBS1
Sample Info: WN30MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130507.b/SIM.b/wn30mbs1.d

Date : 07-MAY-2013 16:50

Client ID: WN30MBS1

Instrument: nt10.i

Sample Info: WN30MBS1

Volume Injected (uL): 1.0

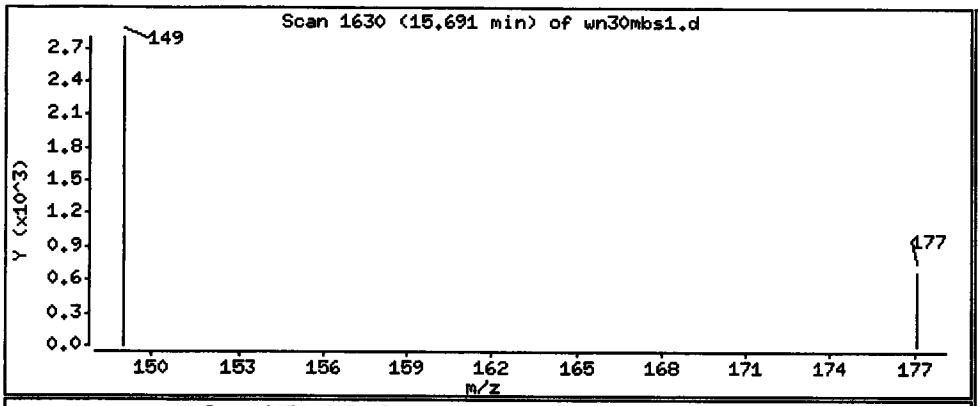
Operator: YZ

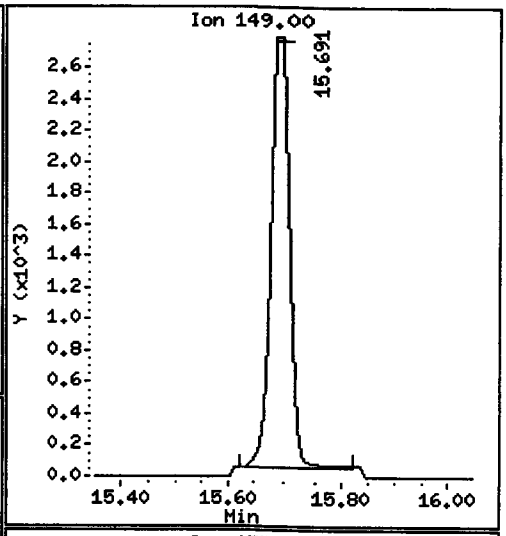
Column phase: ZB-5msi

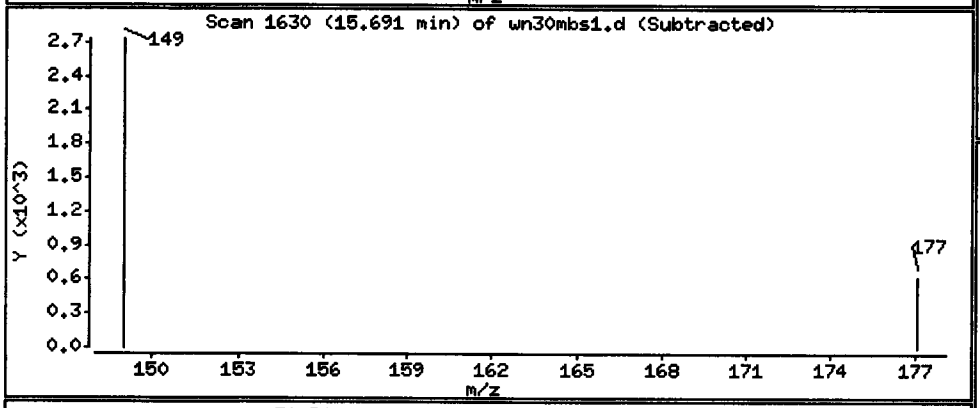
Column diameter: 0.25

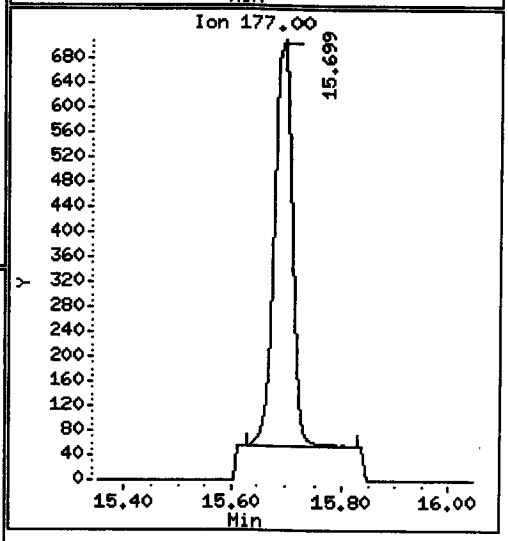
50 Diethylphthalate

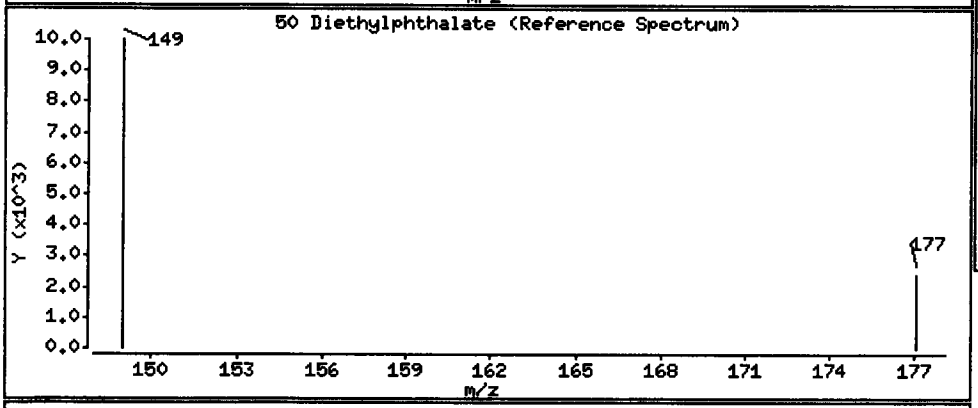
Concentration: 14.19 ug/kg

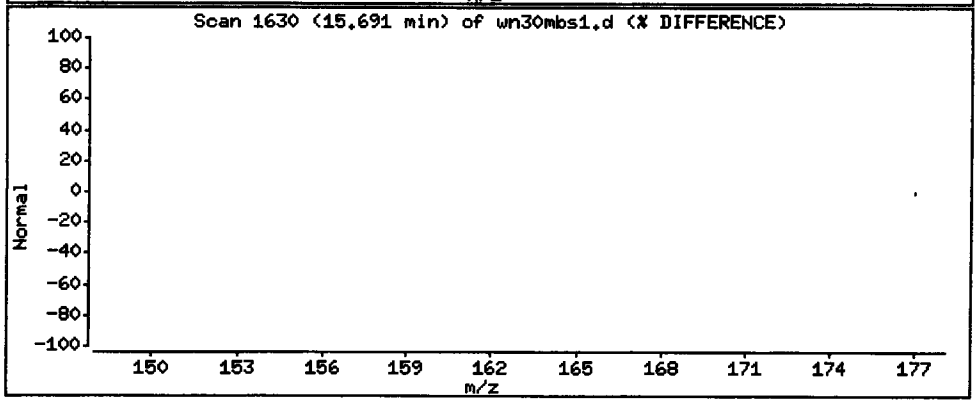












CO-ELUTION SUMMARY FOR FILE - wn30mbs1.d

Lab ID: WN30MBS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/10/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130507.b/SIM.b/wn30lcss1.d
Lab Smp Id: WN30LCSS1 Client Smp ID: WN30LCSS1
Inj Date : 07-MAY-2013 17:27
Operator : YZ Inst ID: nt10.i
Smp Info : WN30LCSS1
Misc Info : 13-8692
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2013 10:01 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1	2-Fluorophenol	112	5.872	5.865	(0.723)	79066	4.35463	435.5
	3	Phenol	94	7.580	7.580	(0.933)	82355	3.15546	315.5
	7	1,3-Dichlorobenzene	146	8.052	8.052	(0.991)	57537	2.67534	267.5
*	8	1,4-Dichlorobenzene-d4	152	8.121	8.129	(1.000)	51689	4.00000	
	9	1,4-Dichlorobenzene	146	8.153	8.160	(1.004)	57643	2.69196	269.2
	11	Benzyl alcohol	79	8.455	8.455	(1.041)	41550	3.31944	331.9
	12	1,2-Dichlorobenzene	146	8.517	8.525	(1.049)	55435	2.72421	272.4
	13	2-Methylphenol	108	8.735	8.735	(1.075)	46195	2.47572	247.6
	15	4-Methylphenol	108	9.037	9.030	(1.113)	100352	5.28147	528.1
	16	N-Nitroso-di-n-propylamine	70	9.045	9.045	(1.114)	31448	2.93499	293.5
	22	2,4-Dimethylphenol	107	10.124	10.124	(0.943)	114269	6.22730	622.7
	26	1,2,4-Trichlorobenzene	180	10.655	10.656	(0.993)	50408	2.77643	277.6
*	27	Naphthalene-d8	136	10.733	10.733	(1.000)	189427	4.00000	
	30	Hexachlorobutadiene	225	11.196	11.196	(1.043)	30308	2.74236	274.2

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.129	14.129	(0.970)	119297	3.71711	371.7
*	42 Acenaphthene-d10	162	14.562	14.562	(1.000)	111234	4.00000	
	50 Diethylphthalate	149	15.706	15.699	(1.079)	140452	3.86451	386.5
	54 N-Nitrosodiphenylamine	169	16.062	16.062	(0.903)	91857	3.93483	393.5
	57 Hexachlorobenzene	284	17.141	17.142	(0.963)	45120	2.82931	282.9
	58 Pentachlorophenol	266	17.552	17.560	(0.987)	85861	9.05575	905.6
*	59 Phenanthrene-d10	188	17.792	17.792	(1.000)	212909	4.00000	
$	66 Terphenyl-d14	244	21.126	21.126	(0.919)	107875	3.67066	367.1
	67 Butylbenzylphthalate	149	22.109	22.110	(0.962)	107648	4.85344	485.3
*	69 Chrysene-d12	240	22.977	22.977	(1.000)	239074	4.00000	
*	77 Perylene-d12	264	25.261	25.261	(1.000)	211700	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.106	27.098	(1.073)	162187	3.43704	343.7
	90 N-Nitrosodimethylamine	74	3.672	3.641	(0.452)	85788	7.70223	770.2

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn30lcss1.d
Lab Smp Id: WN30LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 13:10
Client Smp ID: WN30LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	51689	-1.84
27 Naphthalene-d8	192325	96162	384650	189427	-1.51
42 Acenaphthene-d10	109274	54637	218548	111234	1.79
59 Phenanthrene-d10	203933	101966	407866	212909	4.40
69 Chrysene-d12	223647	111824	447294	239074	6.90
77 Perylene-d12	211919	105960	423838	211700	-0.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.10
27 Naphthalene-d8	10.73	10.23	11.23	10.73	0.00
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.98	22.48	23.48	22.98	0.00
77 Perylene-d12	25.26	24.76	25.76	25.26	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: WN30LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

Client SDG: WN30
Fraction: SV
Client Smp ID: WN30LCSS1
Operator: YZ
SampleType: LCS
Quant Type: ISTD

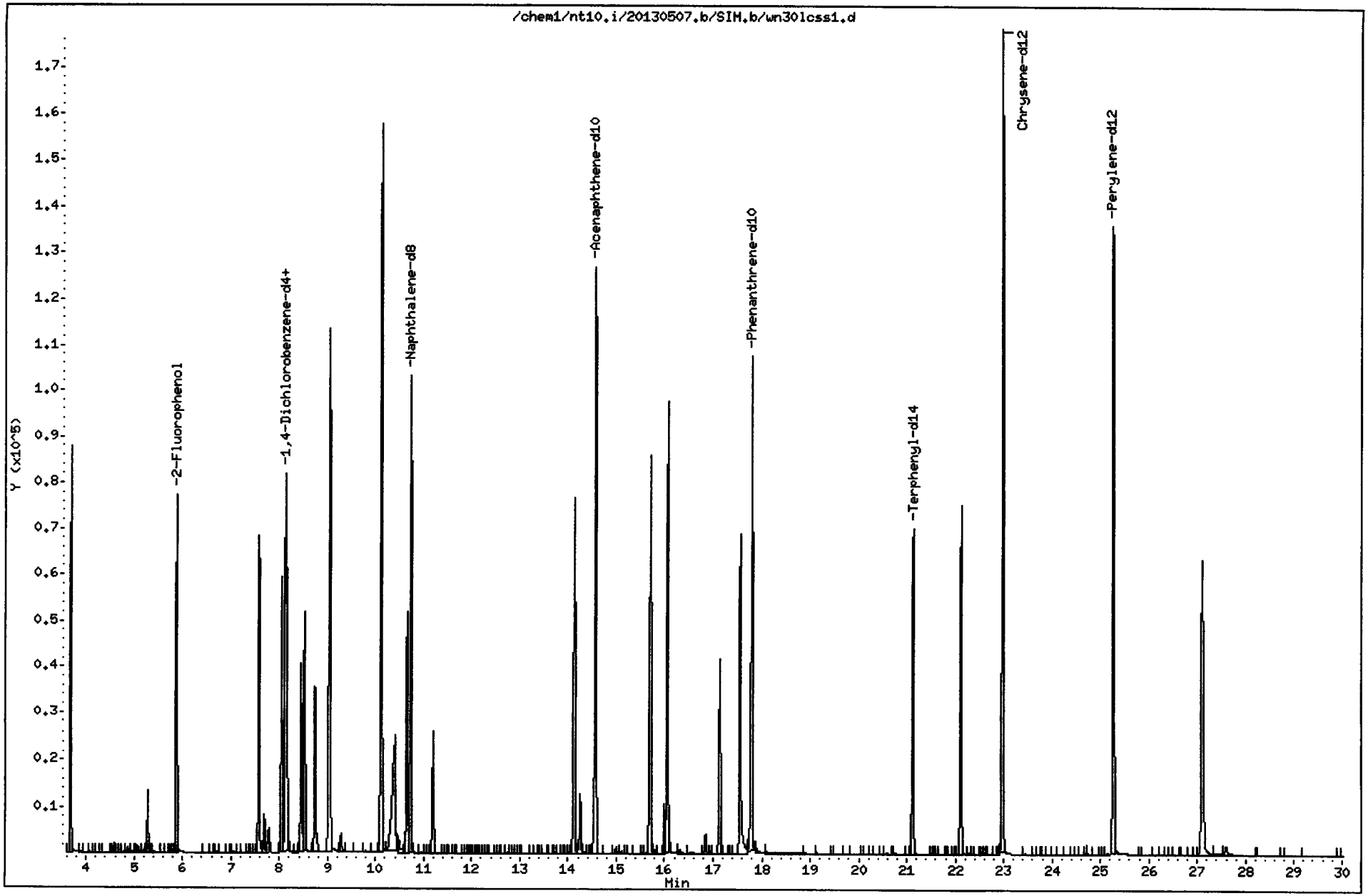
	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	315.5	63.11	30-160
7	1,3-Dichlorobenzen	500.0	267.5	53.51	30-160
9	1,4-Dichlorobenzen	500.0	269.2	53.84	30-160
11	Benzyl alcohol	500.0	331.9	66.39	30-160
12	1,2-Dichlorobenzen	500.0	272.4	54.48	30-160
13	2-Methylphenol	500.0	247.6	49.51	30-160
15	4-Methylphenol	1000	528.1	52.81	30-160
16	N-Nitroso-di-n-pro	500.0	293.5	58.70	30-160
22	2,4-Dimethylphenol	1000	622.7	62.27	30-160
26	1,2,4-Trichloroben	500.0	277.6	55.53	30-160
30	Hexachlorobutadien	500.0	274.2	54.85	30-160
39	Dimethylphthalate	500.0	371.7	74.34	30-160
50	Diethylphthalate	500.0	386.5	77.29	30-160
54	N-Nitrosodiphenyla	500.0	393.5	78.70	30-160
57	Hexachlorobenzene	500.0	282.9	56.59	30-160
58	Pentachlorophenol	1000	905.6	90.56	30-160
67	Butylbenzylphthala	500.0	485.3	97.07	30-160
79	Dibenzo(a,h)anthra	500.0	343.7	68.74	30-160
90	N-Nitrosodimethyla	1000	770.2	77.02	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	435.5	58.06	30-160
$ 66	Terphenyl-d14	500.0	367.1	73.41	30-160

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn30lcss1.d
Date : 07-MAY-2013 17:27
Client ID: WN30LCSS1
Sample Info: WN30LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25

WN27 : 00517



CO-ELUTION SUMMARY FOR FILE - wn30lcss1.d

Lab ID: WN30LCSS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/10/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130507.b/SIM.b/wn30lcsds1.d
Lab Smp Id: WN30LCSDS1 Client Smp ID: WN30LCSDS1
Inj Date : 07-MAY-2013 18:03
Operator : YZ Inst ID: nt10.i
Smp Info : WN30LCSDS1
Misc Info : 13-8692
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2013 10:01 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 11 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.872	5.865	(0.723)	85775	5.03475	503.5
	3 Phenol	94	7.580	7.580	(0.933)	91980	3.75598	375.6
	7 1,3-Dichlorobenzene	146	8.044	8.052	(0.990)	63945	3.16880	316.9
*	8 1,4-Dichlorobenzene-d4	152	8.122	8.129	(1.000)	48500	4.00000	
	9 1,4-Dichlorobenzene	146	8.153	8.160	(1.004)	64413	3.20592	320.6
	11 Benzyl alcohol	79	8.447	8.455	(1.040)	46260	3.93873	393.9
	12 1,2-Dichlorobenzene	146	8.517	8.525	(1.049)	61967	3.24544	324.5
	13 2-Methylphenol	108	8.735	8.735	(1.075)	51731	2.95470	295.5
	15 4-Methylphenol	108	9.037	9.030	(1.113)	112052	6.28499	628.5
	16 N-Nitroso-di-n-propylamine	70	9.045	9.045	(1.114)	34981	3.47938	347.9
	22 2,4-Dimethylphenol	107	10.116	10.124	(0.943)	131548	7.60426	760.4
	26 1,2,4-Trichlorobenzene	180	10.655	10.656	(0.994)	56696	3.31238	331.2
*	27 Naphthalene-d8	136	10.725	10.733	(1.000)	178583	4.00000	
	30 Hexachlorobutadiene	225	11.196	11.196	(1.044)	33925	3.25604	325.6

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.129	14.129	(0.970)	120076	3.94294	394.3
*	42 Acenaphthene-d10	162	14.562	14.562	(1.000)	105548	4.00000	
	50 Diethylphthalate	149	15.706	15.699	(1.079)	139660	4.04973	405.0
	54 N-Nitrosodiphenylamine	169	16.062	16.062	(0.903)	93917	4.27268	427.3
	57 Hexachlorobenzene	284	17.141	17.142	(0.963)	47468	3.16122	316.1
	58 Pentachlorophenol	266	17.552	17.560	(0.987)	83964	9.40511	940.5
*	59 Phenanthrene-d10	188	17.792	17.792	(1.000)	200471	4.00000	
$	66 Terphenyl-d14	244	21.126	21.126	(0.919)	103058	3.69582	369.6
	67 Butylbenzylphthalate	149	22.110	22.110	(0.962)	106588	5.06473	506.5
*	69 Chrysene-d12	240	22.977	22.977	(1.000)	226844	4.00000	
*	77 Perylene-d12	264	25.261	25.261	(1.000)	205354	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.098	27.098	(1.073)	162758	3.55573	355.6
	90 N-Nitrosodimethylamine	74	3.672	3.641	(0.452)	95317	9.12046	912.0

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn30lcsds1.d
Lab Smp Id: WN30LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 13:10
Client Smp ID: WN30LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	48500	-7.90
27 Naphthalene-d8	192325	96162	384650	178583	-7.15
42 Acenaphthene-d10	109274	54637	218548	105548	-3.41
59 Phenanthrene-d10	203933	101966	407866	200471	-1.70
69 Chrysene-d12	223647	111824	447294	226844	1.43
77 Perylene-d12	211919	105960	423838	205354	-3.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.10
27 Naphthalene-d8	10.73	10.23	11.23	10.72	-0.07
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.98	22.48	23.48	22.98	0.00
77 Perylene-d12	25.26	24.76	25.76	25.26	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: WN30LCSDS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

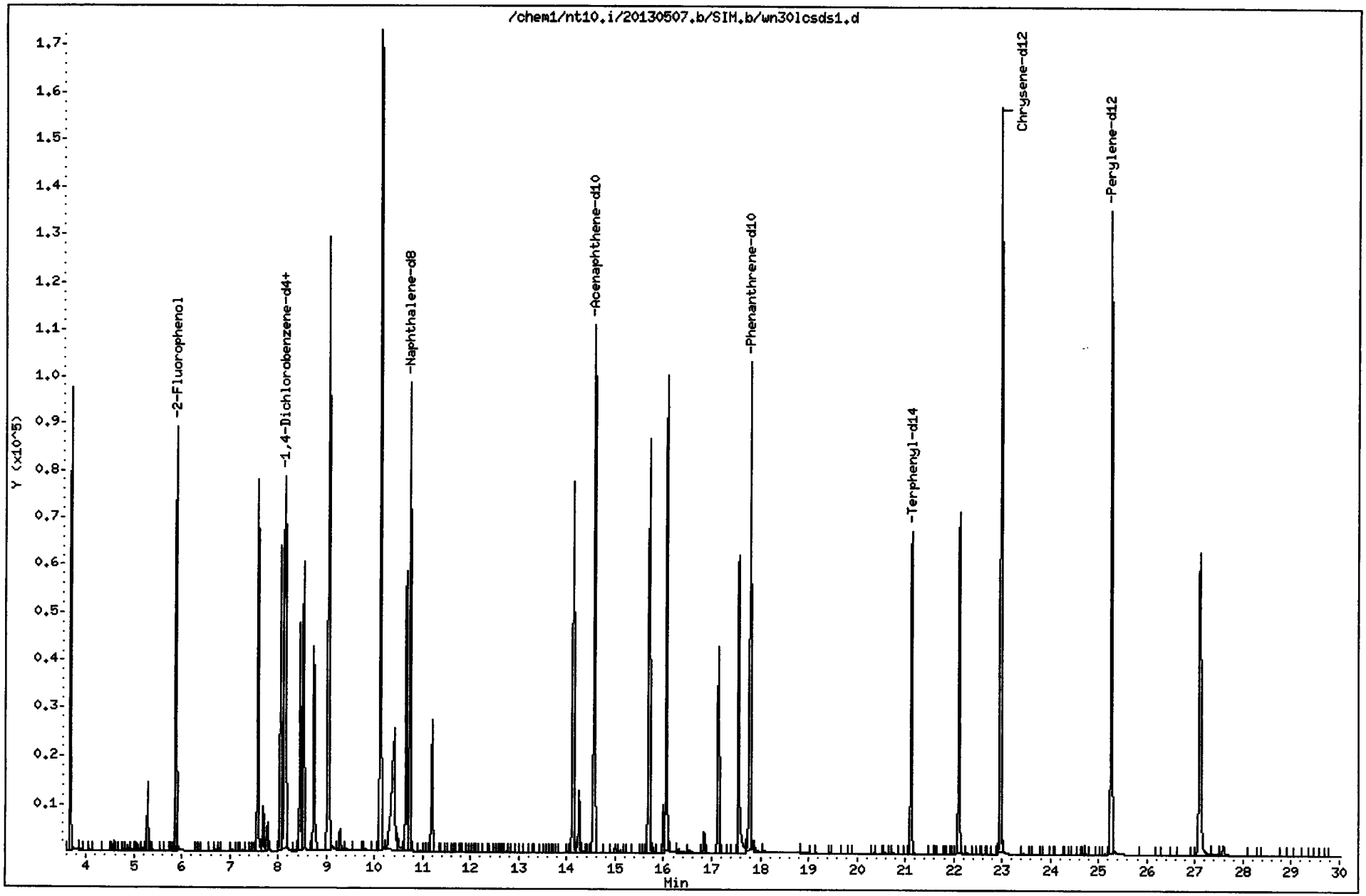
Client SDG: WN30
Fraction: SV
Client Smp ID: WN30LCSDS1
Operator: YZ
SampleType: LCSD
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	375.6	75.12	30-160
7	1,3-Dichlorobenzen	500.0	316.9	63.38	30-160
9	1,4-Dichlorobenzen	500.0	320.6	64.12	30-160
11	Benzyl alcohol	500.0	393.9	78.77	30-160
12	1,2-Dichlorobenzen	500.0	324.5	64.91	30-160
13	2-Methylphenol	500.0	295.5	59.09	30-160
15	4-Methylphenol	1000	628.5	62.85	30-160
16	N-Nitroso-di-n-pro	500.0	347.9	69.59	30-160
22	2,4-Dimethylphenol	1000	760.4	76.04	30-160
26	1,2,4-Trichloroben	500.0	331.2	66.25	30-160
30	Hexachlorobutadien	500.0	325.6	65.12	30-160
39	Dimethylphthalate	500.0	394.3	78.86	30-160
50	Diethylphthalate	500.0	405.0	80.99	30-160
54	N-Nitrosodiphenyla	500.0	427.3	85.45	30-160
57	Hexachlorobenzene	500.0	316.1	63.22	30-160
58	Pentachlorophenol	1000	940.5	94.05	30-160
67	Butylbenzylphthala	500.0	506.5	101.29	30-160
79	Dibenzo(a,h)anthra	500.0	355.6	71.11	30-160
90	N-Nitrosodimethyla	1000	912.0	91.20	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	503.5	67.13	30-160
$ 66	Terphenyl-d14	500.0	369.6	73.92	30-160

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn30lcsds1.d
Date : 07-MAY-2013 18:03
Client ID: WN30LCSDS1
Sample Info: WN30LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wn30lcsds1.d

Lab ID: WN30LCSDS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

12 5/10/13

Data file : /chem1/nt10.i/20130507.b/SIM.b/wn27ams.d
Lab Smp Id: WN27AMS Client Smp ID: CG-MH-010-20130 MS
Inj Date : 07-MAY-2013 19:53
Operator : YZ Inst ID: nt10.i
Smp Info : WN27AMS,3
Misc Info : 13-8552
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2013 12:12 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 14 QC Sample: MS
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.03000	Weight of sample extracted (g)
M	40.40000	% 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	5.888	5.865	(0.725)	21571	1.27106	637.9
	3 Phenol	94	7.588	7.580	(0.934)	23583	0.96673	485.2
	7 1,3-Dichlorobenzene	146	8.052	8.052	(0.991)	15468	0.76949	386.2
*	8 1,4-Dichlorobenzene-d4	152	8.121	8.129	(1.000)	48313	4.00000	
	9 1,4-Dichlorobenzene	146	8.152	8.160	(1.004)	15838	0.79133	397.1
	11 Benzyl alcohol	79	8.455	8.455	(1.041)	13004	1.11149	557.8
	12 1,2-Dichlorobenzene	146	8.517	8.525	(1.049)	15542	0.81714	410.1
	13 2-Methylphenol	108	8.742	8.735	(1.076)	14900	0.85433	428.7
	15 4-Methylphenol	108	9.045	9.030	(1.114)	31939	1.79839	902.5
	16 N-Nitroso-di-n-propylamine	70	9.045	9.045	(1.114)	10136	1.01208	507.9
	22 2,4-Dimethylphenol	107	10.123	10.124	(0.943)	54092	2.97427	1493
	26 1,2,4-Trichlorobenzene	180	10.655	10.656	(0.993)	16839	0.93579	469.6
*	27 Naphthalene-d8	136	10.732	10.733	(1.000)	187744	4.00000	
	30 Hexachlorobutadiene	225	11.196	11.196	(1.043)	9591	0.87560	439.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.129	14.129	(0.970)	36669	1.12739	565.8
*	42 Acenaphthene-d10	162	14.562	14.562	(1.000)	112730	4.00000	
	50 Diethylphthalate	149	15.699	15.699	(1.078)	50447	1.36962	687.3
	54 N-Nitrosodiphenylamine	169	16.061	16.062	(0.902)	33460	1.48422	744.9
	57 Hexachlorobenzene	284	17.141	17.142	(0.963)	13774	0.89439	448.9
	58 Pentachlorophenol	266	17.559	17.560	(0.987)	25293	2.76240	1386
*	59 Phenanthrene-d10	188	17.799	17.792	(1.000)	205606	4.00000	
$	66 Terphenyl-d14	244	21.149	21.126	(0.919)	30755	1.25150	628.1
	67 Butylbenzylphthalate	149	22.140	22.110	(0.962)	43019	2.31950	1164
*	69 Chrysene-d12	240	23.015	22.977	(1.000)	199913	4.00000	
*	77 Perylene-d12	264	25.346	25.261	(1.000)	205001	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.214	27.098	(1.074)	31730	0.69439	348.5
	90 N-Nitrosodimethylamine	74	3.656	3.641	(0.450)	20327	1.95253	979.9

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn27ams.d
Lab Smp Id: WN27AMS
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8552

Calibration Date: 07-MAY-2013
Calibration Time: 13:10
Client Smp ID: CG-MH-010-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	48313	-8.25
27 Naphthalene-d8	192325	96162	384650	187744	-2.38
42 Acenaphthene-d10	109274	54637	218548	112730	3.16
59 Phenanthrene-d10	203933	101966	407866	205606	0.82
69 Chrysene-d12	223647	111824	447294	199913	-10.61
77 Perylene-d12	211919	105960	423838	205001	-3.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.10
27 Naphthalene-d8	10.73	10.23	11.23	10.73	0.00
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.80	0.04
69 Chrysene-d12	22.98	22.48	23.48	23.02	0.17
77 Perylene-d12	25.26	24.76	25.76	25.35	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

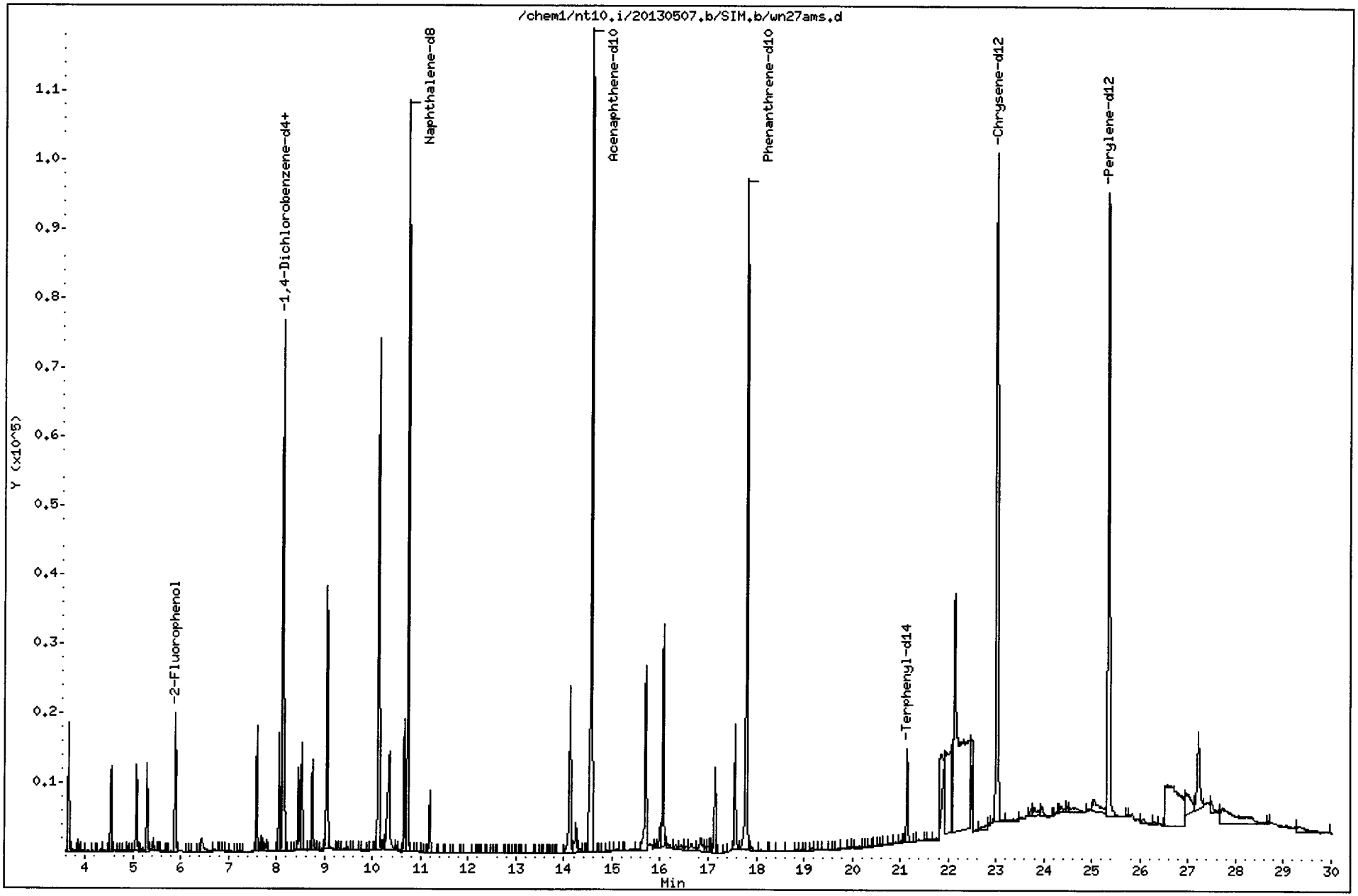
Client Name: SAIC
Client SDG: WN27
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WN27AMS
Client Smp ID: CG-MH-010-20130 MS
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: MS
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8552

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	836.4	485.2	58.00	30-160
7	1,3-Dichlorobenzen	836.4	386.2	46.17	30-160
9	1,4-Dichlorobenzen	836.4	397.1	47.48	30-160
11	Benzyl alcohol	836.4	557.8	66.69	30-160
12	1,2-Dichlorobenzen	836.4	410.1	49.03	30-160
13	2-Methylphenol	836.4	428.7	51.26	30-160
15	4-Methylphenol	1673	902.5	53.95	30-160
16	N-Nitroso-di-n-pro	836.4	507.9	60.72	30-160
22	2,4-Dimethylphenol	1673	1493	89.23	30-160
26	1,2,4-Trichloroben	836.4	469.6	56.15	30-160
30	Hexachlorobutadien	836.4	439.4	52.54	30-160
39	Dimethylphthalate	836.4	565.8	67.64	30-160
50	Diethylphthalate	836.4	687.3	82.18	30-160
54	N-Nitrosodiphenyla	836.4	744.9	89.05	30-160
57	Hexachlorobenzene	836.4	448.9	53.66	30-160
58	Pentachlorophenol	1673	1386	82.87	30-160
67	Butylbenzylphthala	836.4	1164	139.17	30-160
79	Dibenzo(a,h)anthra	836.4	348.5	41.66	30-160
90	N-Nitrosodimethyla	1673	979.9	58.58	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	1255	637.9	50.84	30-160
$ 66	Terphenyl-d14	836.4	628.1	75.09	30-160

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27ams.d
Date : 07-MAY-2013 19:53
Client ID: CG-MH-010-20130 MS
Sample Info: WN27AMS,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



WN27 : 005125

CO-ELUTION SUMMARY FOR FILE - wn27ams.d

Lab ID: WN27AMS, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc. YZ 5/14/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130507.b/SIM.b/wn27amsd.d
Lab Smp Id: WN27AMSD Client Smp ID: CG-MH-010-20130 MSD
Inj Date : 07-MAY-2013 20:30
Operator : YZ Inst ID: nt10.i
Smp Info : WN27AMSD,3
Misc Info : 13-8552
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2013 12:12 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 15 QC Sample: MS
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.02000	Weight of sample extracted (g)
M	40.40000	% 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	5.888	5.865	(0.724)	23647	1.52422	765.7
	3 Phenol	94	7.596	7.580	(0.934)	24140	1.08248	543.8
	7 1,3-Dichlorobenzene	146	8.052	8.052	(0.990)	17663	0.96118	482.9
*	8 1,4-Dichlorobenzene-d4	152	8.129	8.129	(1.000)	44166	4.00000	
	9 1,4-Dichlorobenzene	146	8.153	8.160	(1.003)	17985	0.98298	493.8
	11 Benzyl alcohol	79	8.455	8.455	(1.040)	12910	1.20706	606.4
	12 1,2-Dichlorobenzene	146	8.525	8.525	(1.049)	17763	1.02160	513.2
	13 2-Methylphenol	108	8.743	8.735	(1.075)	16690	1.04682	525.9
	15 4-Methylphenol	108	9.045	9.030	(1.113)	36399	2.24196	1126
	16 N-Nitroso-di-n-propylamine	70	9.045	9.045	(1.113)	11389	1.24397	624.9
	22 2,4-Dimethylphenol	107	10.124	10.124	(0.943)	60137	3.62520	1821
	26 1,2,4-Trichlorobenzene	180	10.655	10.656	(0.993)	18504	1.12738	566.3
*	27 Naphthalene-d8	136	10.733	10.733	(1.000)	171247	4.00000	
	30 Hexachlorobutadiene	225	11.188	11.196	(1.042)	10994	1.10038	552.8

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.129	14.129	(0.970)	43001	1.45095	728.9
*	42 Acenaphthene-d10	162	14.562	14.562	(1.000)	102716	4.00000	
	50 Diethylphthalate	149	15.699	15.699	(1.078)	47393	1.41215	709.4
	54 N-Nitrosodiphenylamine	169	16.062	16.062	(0.903)	38000	1.82019	914.4
	57 Hexachlorobenzene	284	17.142	17.142	(0.963)	15609	1.09448	549.8
	58 Pentachlorophenol	266	17.552	17.560	(0.987)	27868	3.28666	1651
*	59 Phenanthrene-d10	188	17.792	17.792	(1.000)	190403	4.00000	
$	66 Terphenyl-d14	244	21.142	21.126	(0.919)	25691	1.12395	564.6
	67 Butylbenzylphthalate	149	22.125	22.110	(0.962)	45497	2.63734	1325
*	69 Chrysene-d12	240	23.008	22.977	(1.000)	185948	4.00000	
*	77 Perylene-d12	264	25.323	25.261	(1.000)	172442	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.199	27.098	(1.074)	32514	0.84589	424.9
	90 N-Nitrosodimethylamine	74	3.656	3.641	(0.450)	22789	2.39456	1203

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn27amsd.d
Lab Smp Id: WN27AMSD
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Calibration Date: 07-MAY-2013
Calibration Time: 13:10
Client Smp ID: CG-MH-010-20130
Level: LOW
Sample Type: Sediment
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8552

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	44166	-16.13
27 Naphthalene-d8	192325	96162	384650	171247	-10.96
42 Acenaphthene-d10	109274	54637	218548	102716	-6.00
59 Phenanthrene-d10	203933	101966	407866	190403	-6.63
69 Chrysene-d12	223647	111824	447294	185948	-16.86
77 Perylene-d12	211919	105960	423838	172442	-18.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.13	0.00
27 Naphthalene-d8	10.73	10.23	11.23	10.73	0.00
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.98	22.48	23.48	23.01	0.13
77 Perylene-d12	25.26	24.76	25.76	25.32	0.24

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

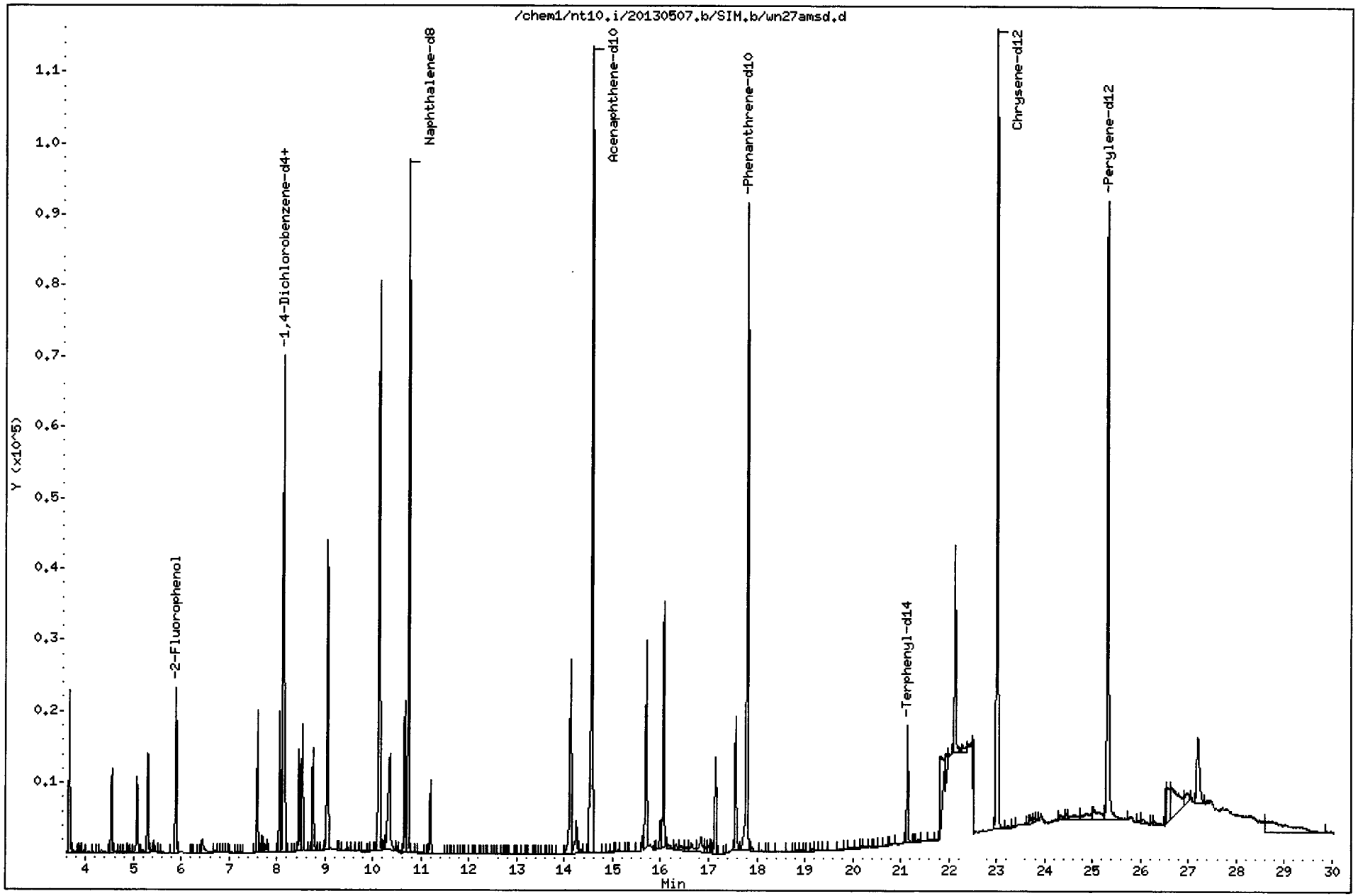
Client Name: SAIC
Client SDG: WN27
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WN27AMSD
Client Smp ID: CG-MH-010-20130 MSD
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: MS
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8552

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	837.3	543.8	64.95	30-160
7	1,3-Dichlorobenzen	837.3	482.9	57.67	30-160
9	1,4-Dichlorobenzen	837.3	493.8	58.98	30-160
11	Benzyl alcohol	837.3	606.4	72.42	30-160
12	1,2-Dichlorobenzen	837.3	513.2	61.30	30-160
13	2-Methylphenol	837.3	525.9	62.81	30-160
15	4-Methylphenol	1675	1126	67.26	30-160
16	N-Nitroso-di-n-pro	837.3	624.9	74.64	30-160
22	2,4-Dimethylphenol	1675	1821	108.76	30-160
26	1,2,4-Trichloroben	837.3	566.3	67.64	30-160
30	Hexachlorobutadien	837.3	552.8	66.02	30-160
39	Dimethylphthalate	837.3	728.9	87.06	30-160
50	Diethylphthalate	837.3	709.4	84.73	30-160
54	N-Nitrosodiphenyla	837.3	914.4	109.21	30-160
57	Hexachlorobenzene	837.3	549.8	65.67	30-160
58	Pentachlorophenol	1675	1651	98.60	30-160
67	Butylbenzylphthala	837.3	1325	158.24	30-160
79	Dibenzo(a,h)anthra	837.3	424.9	50.75	30-160
90	N-Nitrosodimethyla	1675	1203	71.84	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	1256	765.7	60.97	30-160
$ 66	Terphenyl-d14	837.3	564.6	67.44	30-160

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27amsd.d
Date : 07-MAY-2013 20:30
Client ID: CG-MH-010-20130 MSD
Sample Info: WN27AMSD,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wn27amsd.d

Lab ID: WN27AMSD, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc. YZ 5/14/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130507.b/SIM.b/wn27a.d
Lab Smp Id: WN27A Client Smp ID: CG-MH-010-20130423-
Inj Date : 07-MAY-2013 19:16
Operator : YZ Inst ID: nt10.i
Smp Info : WN27A,3
Misc Info : 13-8552
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2013 09:32 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 13
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	10.02000	Weight of sample extracted (g)
M	40.40000	% 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	5.888	5.865	(0.724)	24303	1.55632	781.8
	3 Phenol	94	7.595	7.580	(0.934)	2859	0.12737	63.98
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.129	8.129	(1.000)	44455	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	8.455	8.455	(1.040)	712	0.06614	33.22(M)
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	9.037	9.030	(1.112)	1891	0.11572	58.13
	16 N-Nitroso-di-n-propylamine	70	8.968	9.045	(1.103)	602	0.06533	32.82(H)
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.733	10.733	(1.000)	180083	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	14.129	14.129	(0.970)	1748	0.05717	28.72(M)
*	42 Acenaphthene-d10	162	14.562	14.562	(1.000)	105963	4.00000	
	50 Diethylphthalate	149	15.699	15.699	(1.078)	1061	0.03065 J	15.39(M)
	54 N-Nitrosodiphenylamine	169	16.061	16.062	(0.903)	3357	0.15774	79.24(M)
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.792	17.792	(1.000)	194098	4.00000	
$	66 Terphenyl-d14	244	21.149	21.126	(0.919)	33536	1.48617	746.6
	67 Butylbenzylphthalate	149	22.133	22.110	(0.962)	29614	1.73889	873.5
*	69 Chrysene-d12	240	23.008	22.977	(1.000)	183569	4.00000	
*	77 Perylene-d12	264	25.323	25.261	(1.000)	179016	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.214	27.098	(1.075)	6002	0.15042	75.56(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: wn27a.d
Lab Smp Id: WN27A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8552

Calibration Date: 07-MAY-2013
Calibration Time: 13:10
Client Smp ID: CG-MH-010-201304
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	44455	-15.58
27 Naphthalene-d8	192325	96162	384650	180083	-6.37
42 Acenaphthene-d10	109274	54637	218548	105963	-3.03
59 Phenanthrene-d10	203933	101966	407866	194098	-4.82
69 Chrysene-d12	223647	111824	447294	183569	-17.92
77 Perylene-d12	211919	105960	423838	179016	-15.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.13	0.00
27 Naphthalene-d8	10.73	10.23	11.23	10.73	0.00
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.98	22.48	23.48	23.01	0.13
77 Perylene-d12	25.26	24.76	25.76	25.32	0.24

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

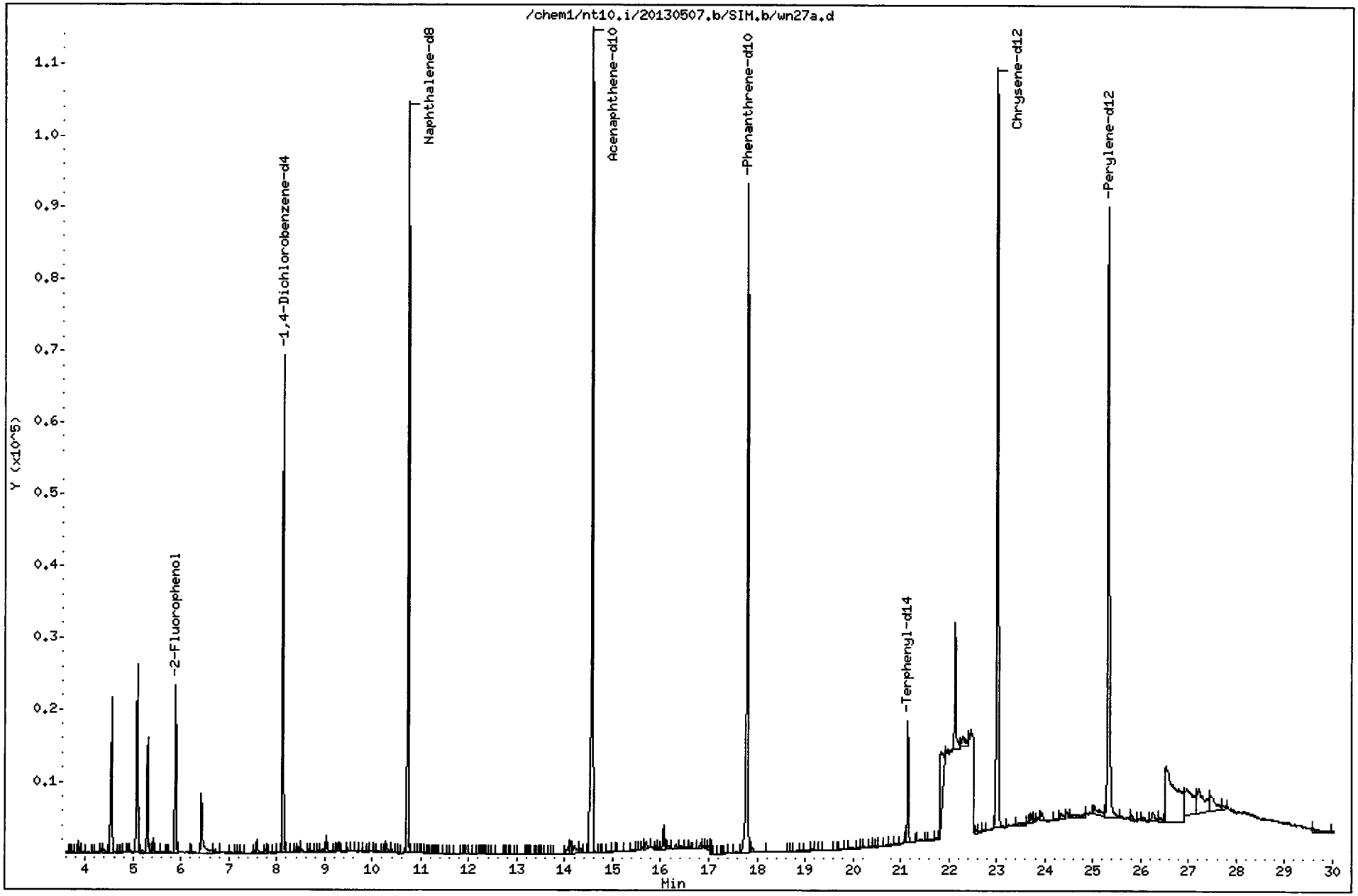
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WN27A
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8552

Client SDG: WN27
Fraction: SV
Client Smp ID: CG-MH-010-20130423-
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1256	781.8	62.25	30-160
$ 66 Terphenyl-d14	837.3	746.6	89.17	30-160

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d
Date : 07-MAY-2013 19:16
Client ID: CG-MH-010-20130423-
Sample Info: WN27A,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



WN27 00511

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

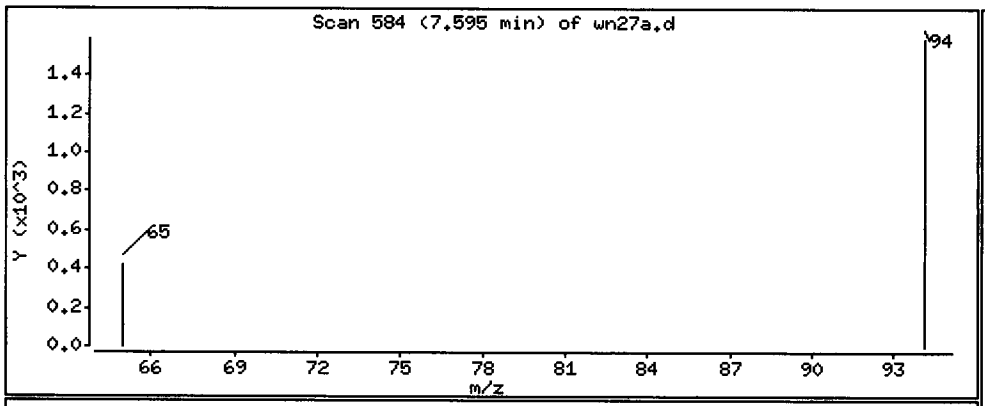
Operator: YZ

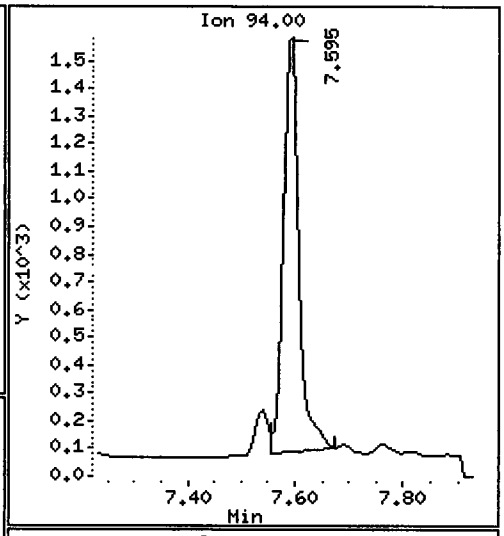
Column phase: ZB-5msi

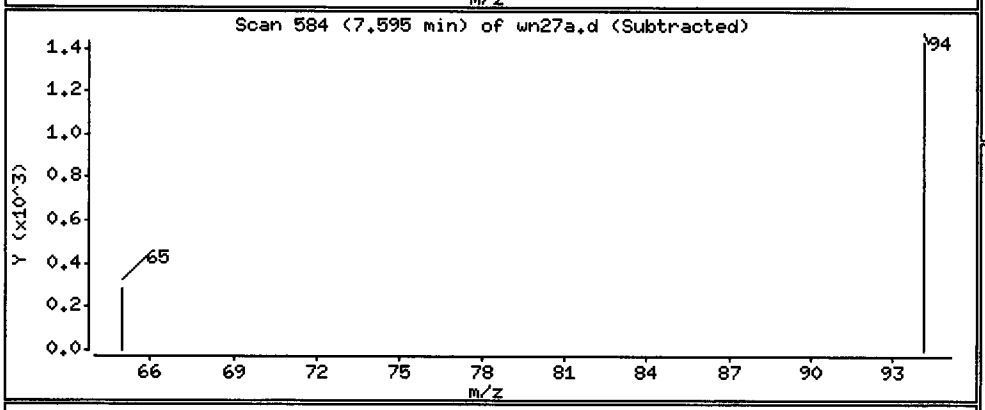
Column diameter: 0.25

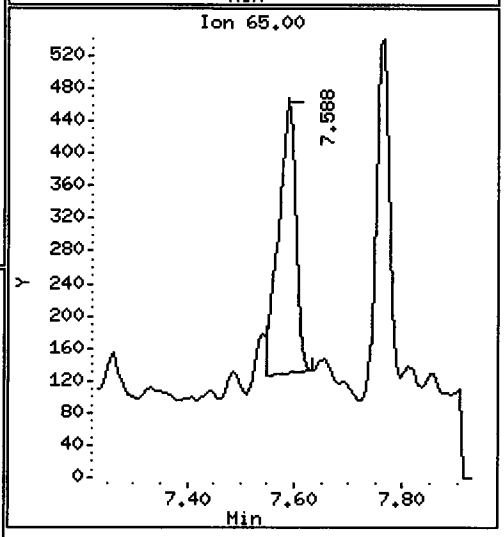
3 Phenol

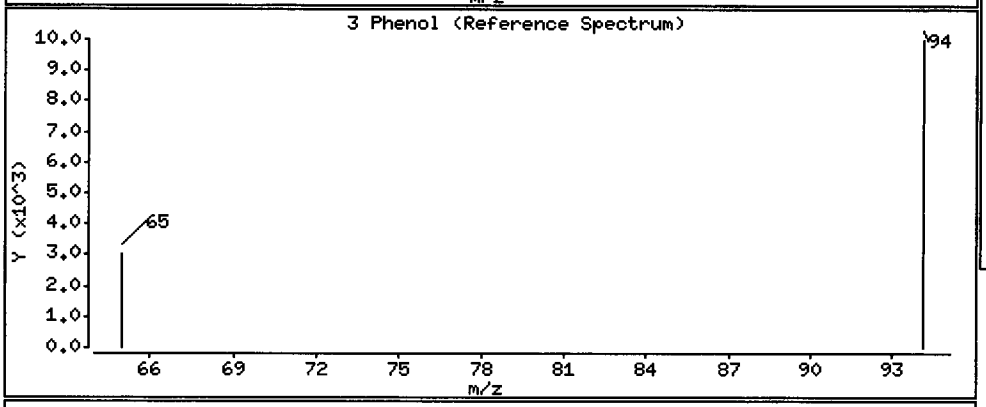
Concentration: 63.98 ug/kg

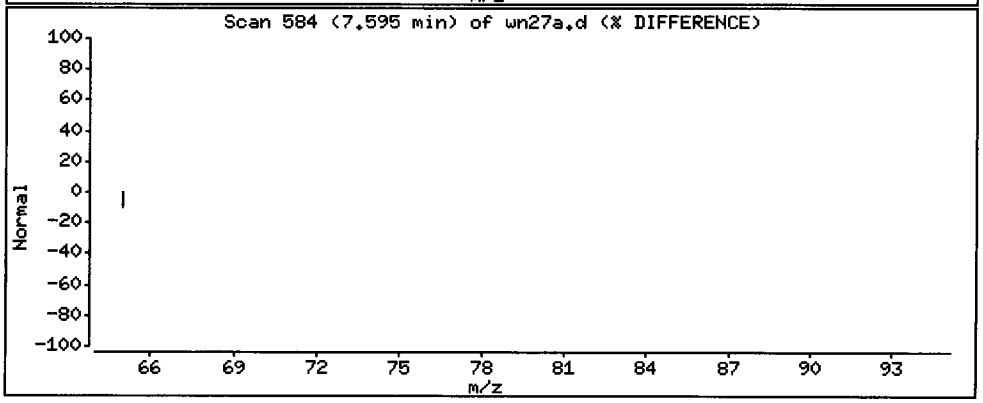












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

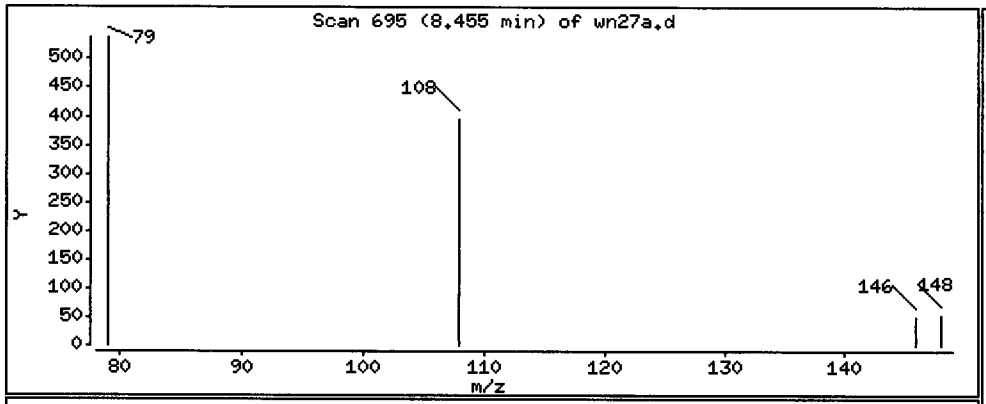
Operator: YZ

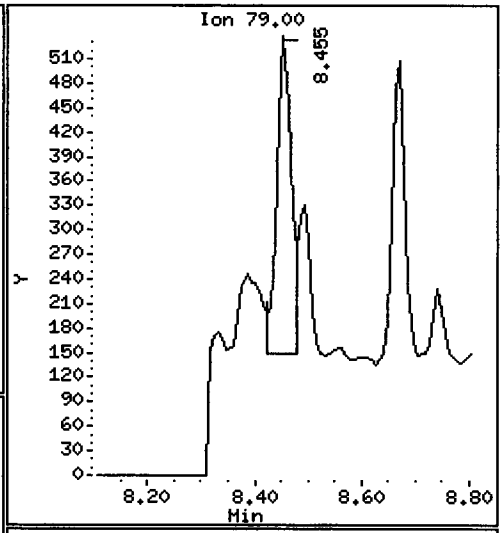
Column phase: ZB-5msi

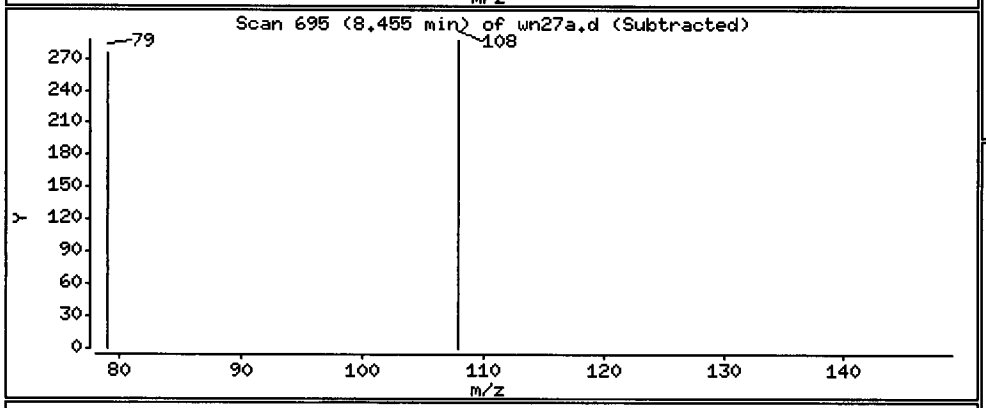
Column diameter: 0.25

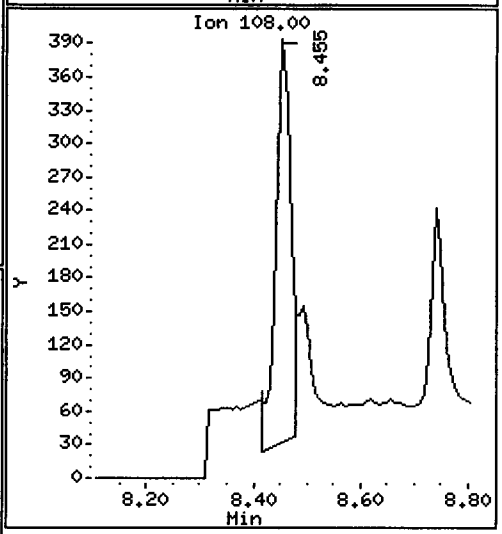
11 Benzyl alcohol

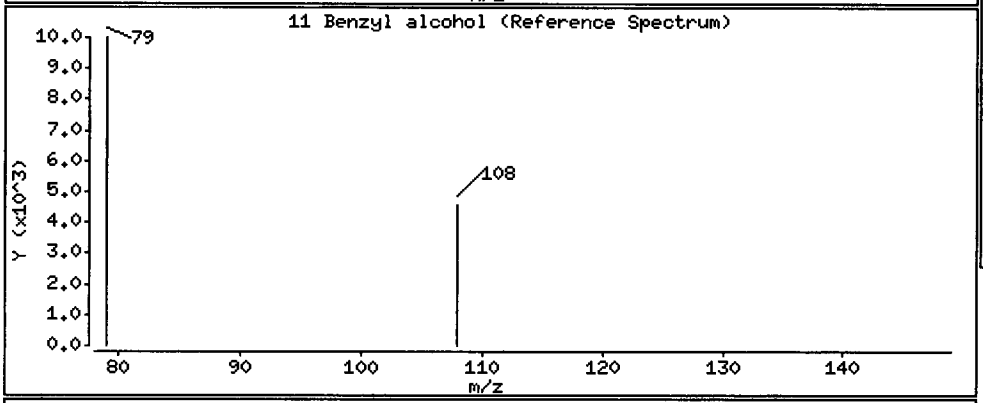
Concentration: 33.22 ug/kg

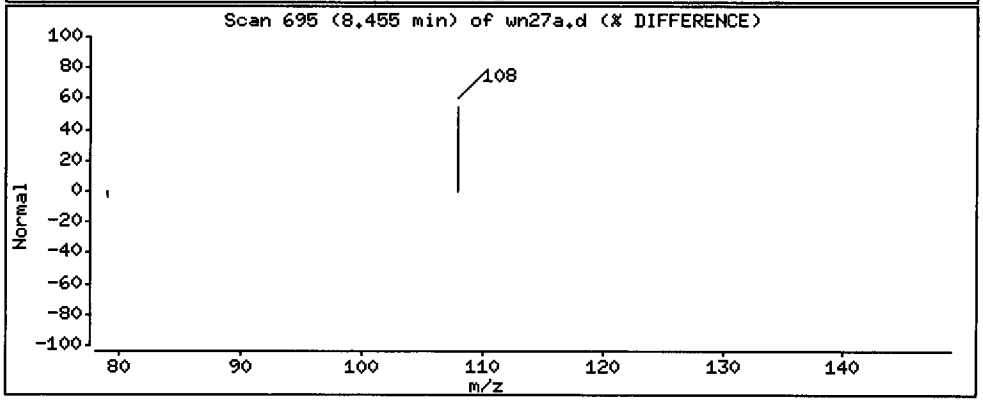












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

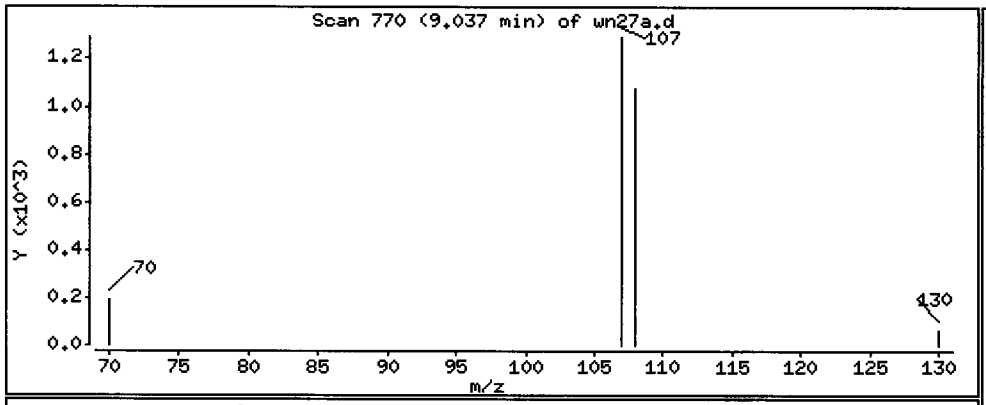
Operator: YZ

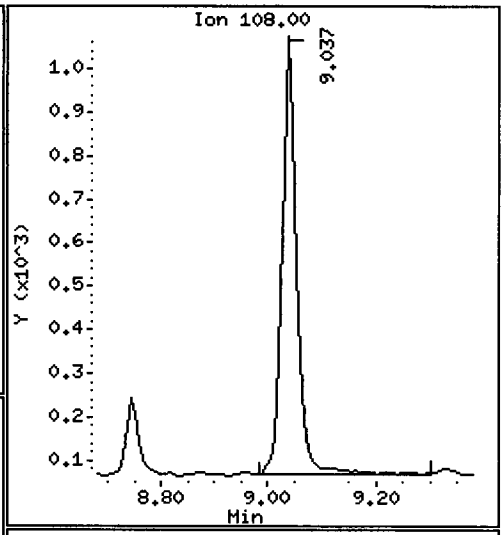
Column phase: ZB-5msi

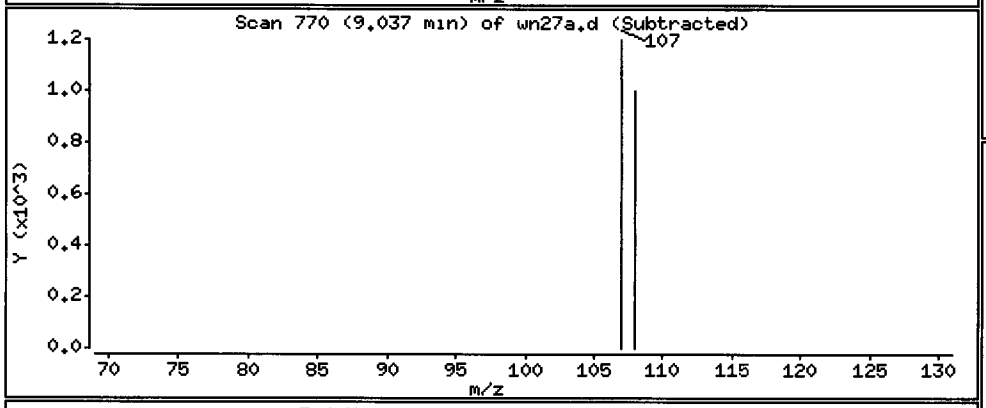
Column diameter: 0.25

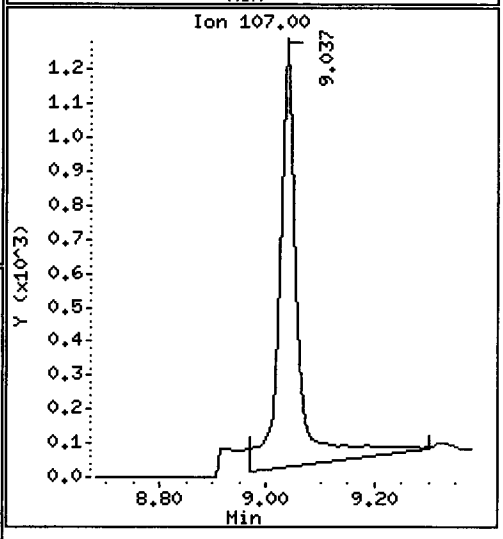
15 4-Methylphenol

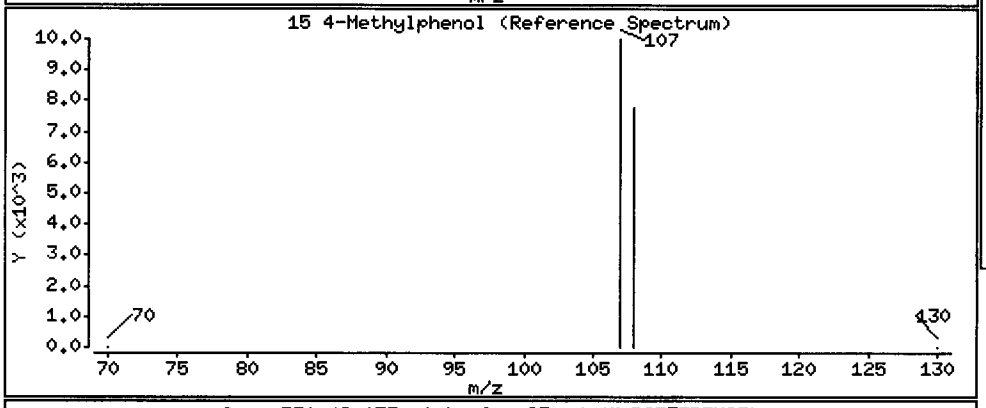
Concentration: 58.13 ug/kg

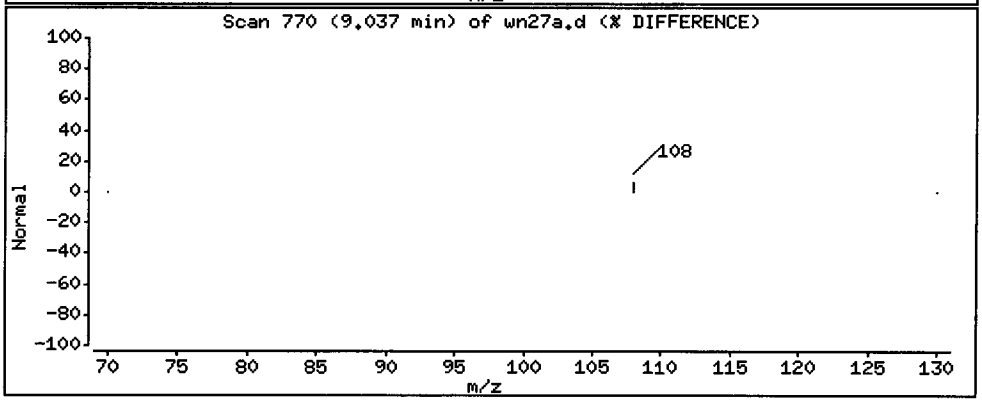












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

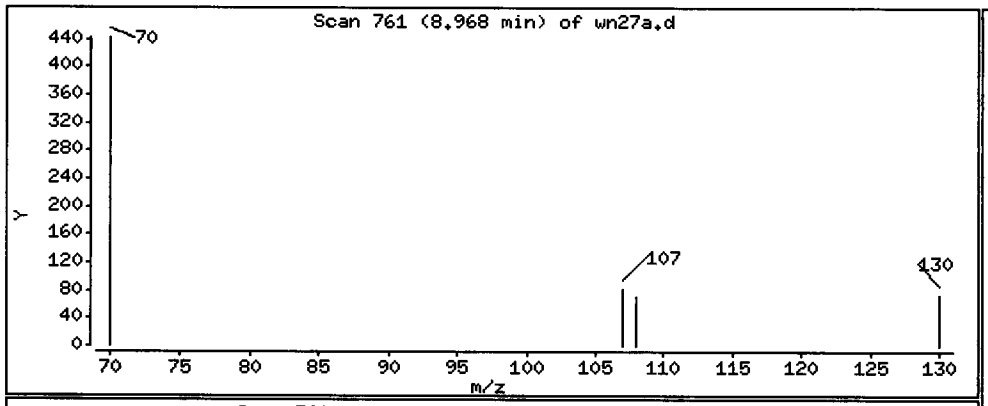
Operator: YZ

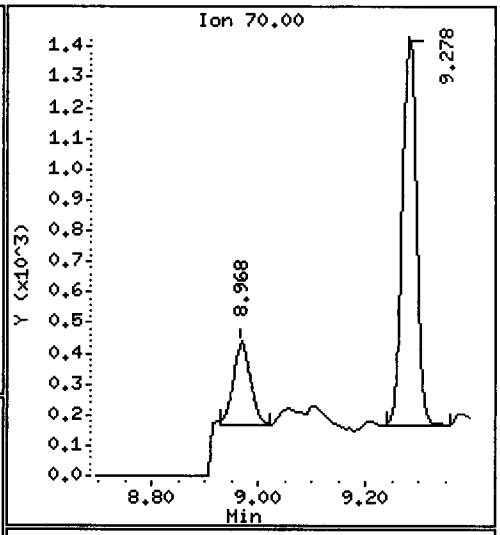
Column phase: ZB-5msi

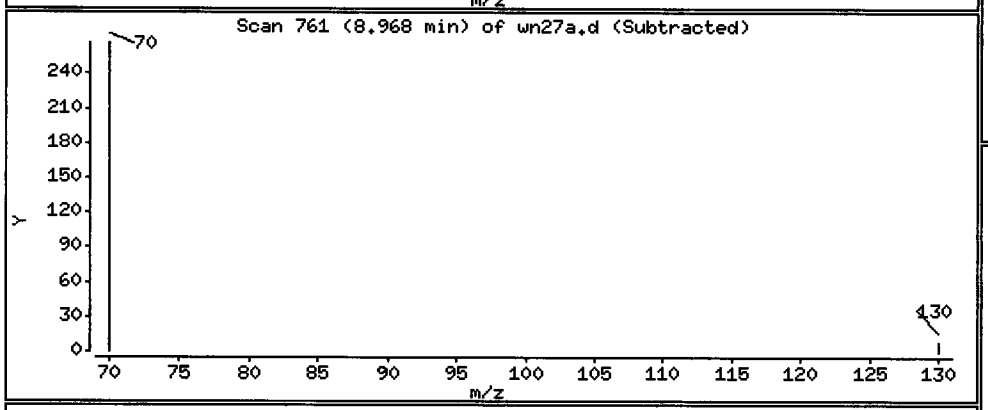
Column diameter: 0.25

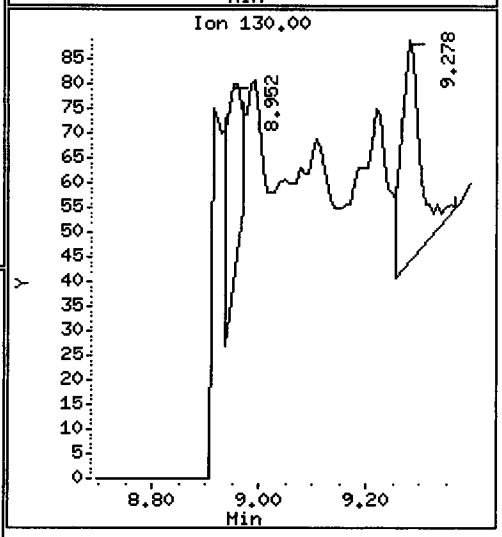
16 N-Nitroso-di-n-propylamine

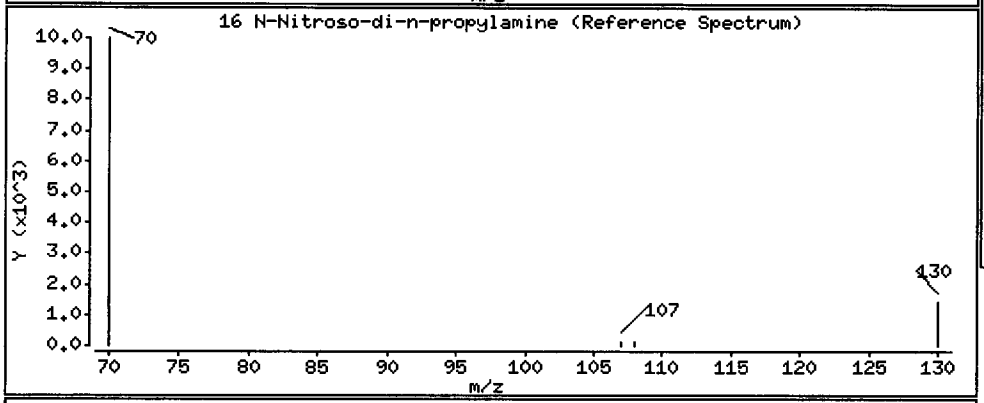
Concentration: 32.82 ug/kg

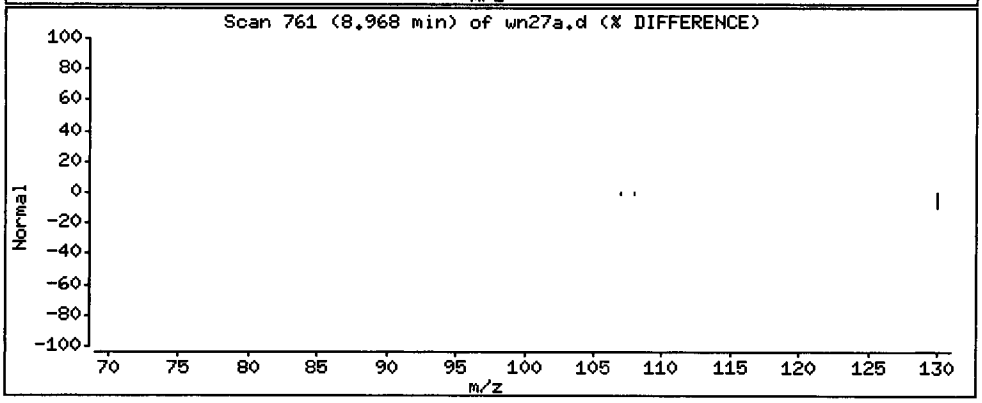












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

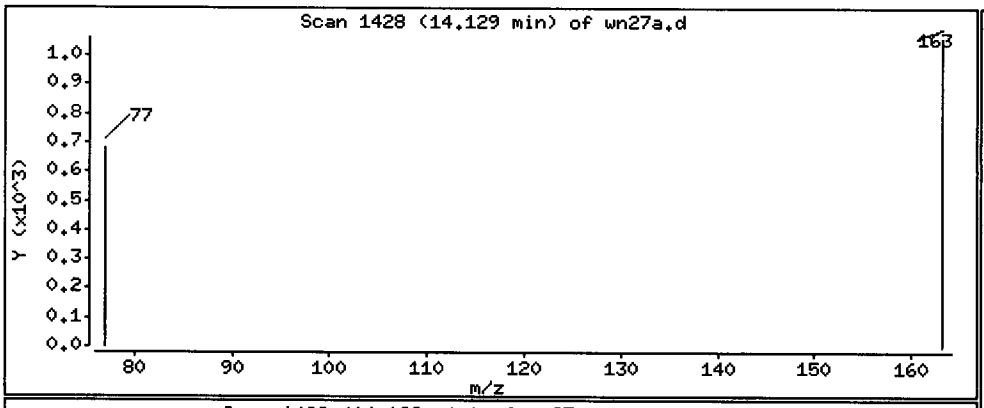
Operator: YZ

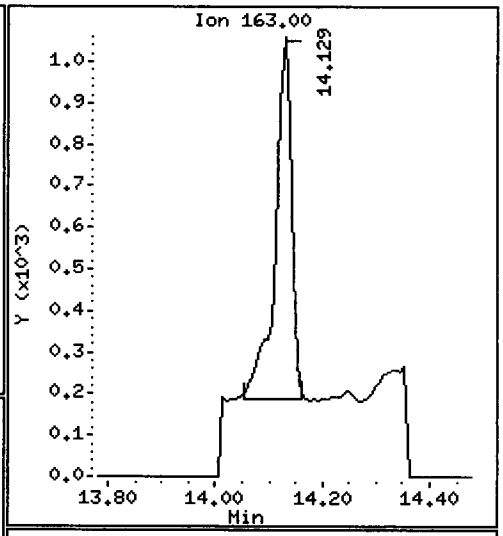
Column phase: ZB-5msi

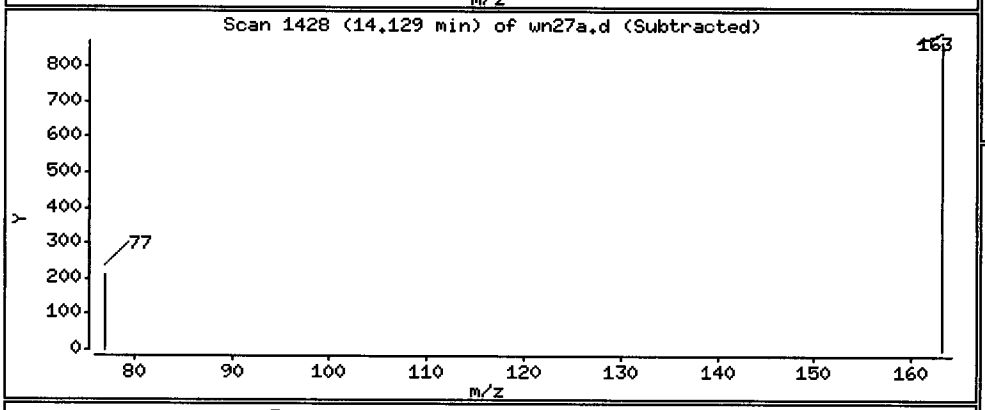
Column diameter: 0.25

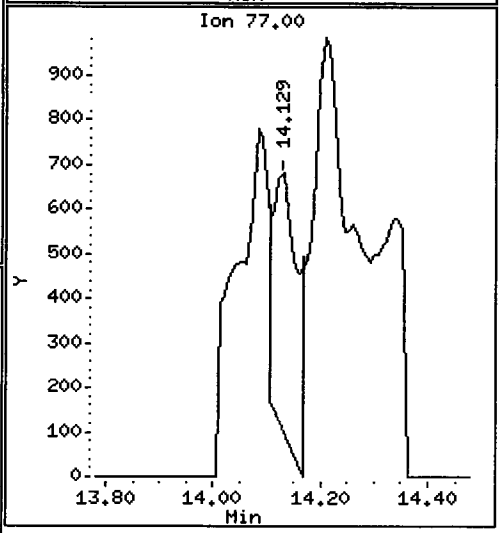
39 Dimethylphthalate

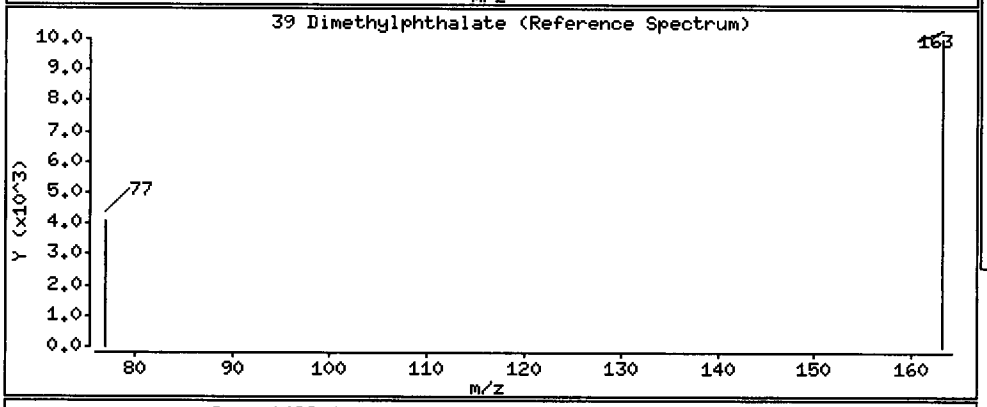
Concentration: 28.72 ug/kg

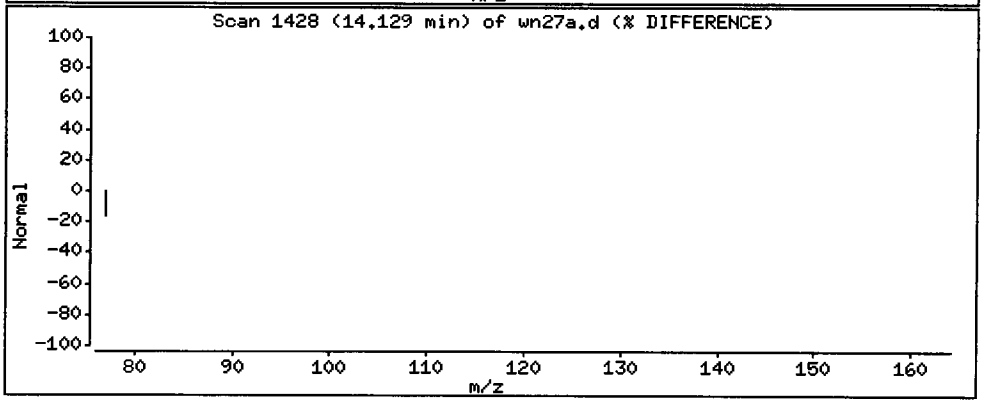












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

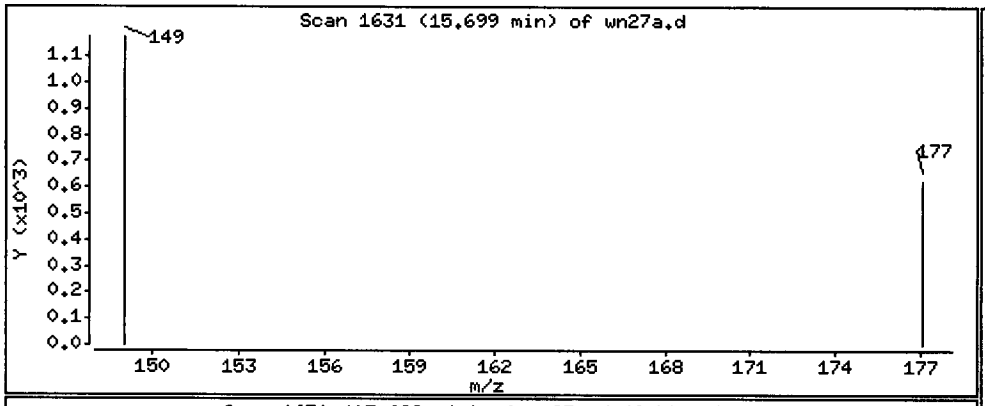
Operator: YZ

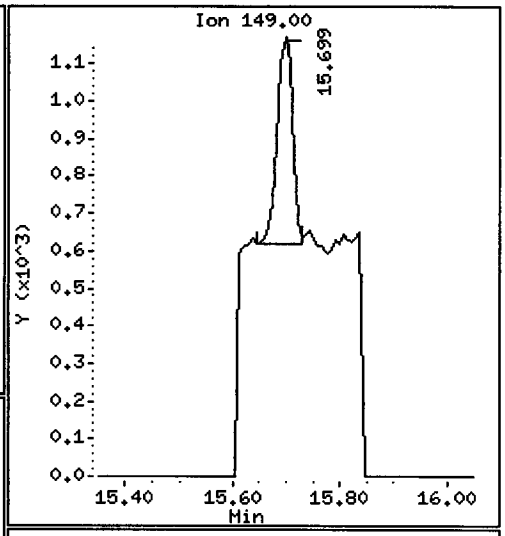
Column phase: ZB-5msi

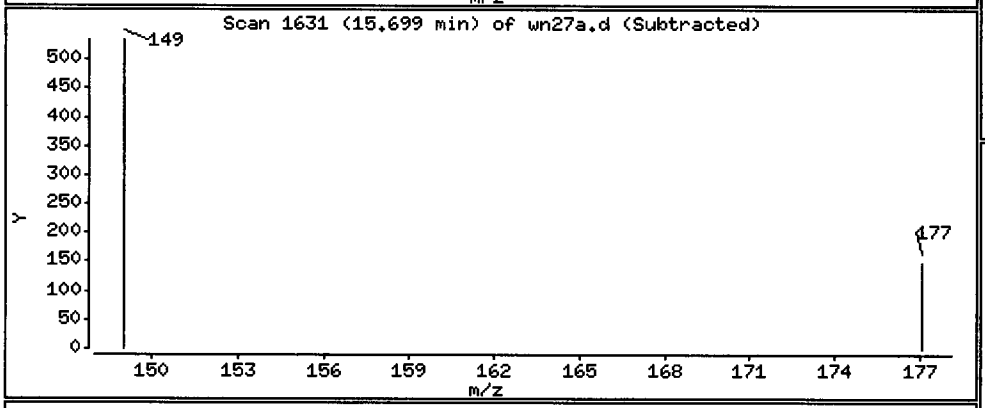
Column diameter: 0.25

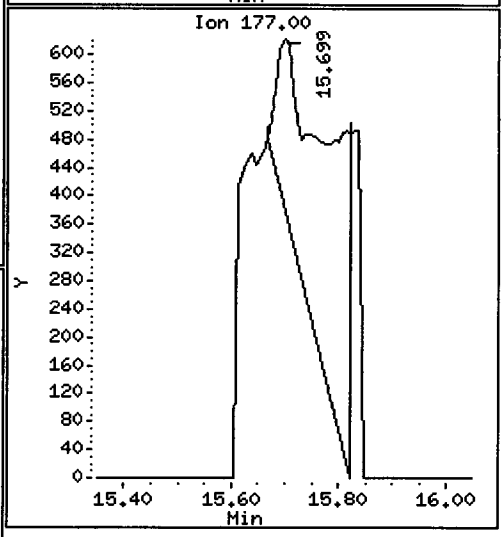
50 Diethylphthalate

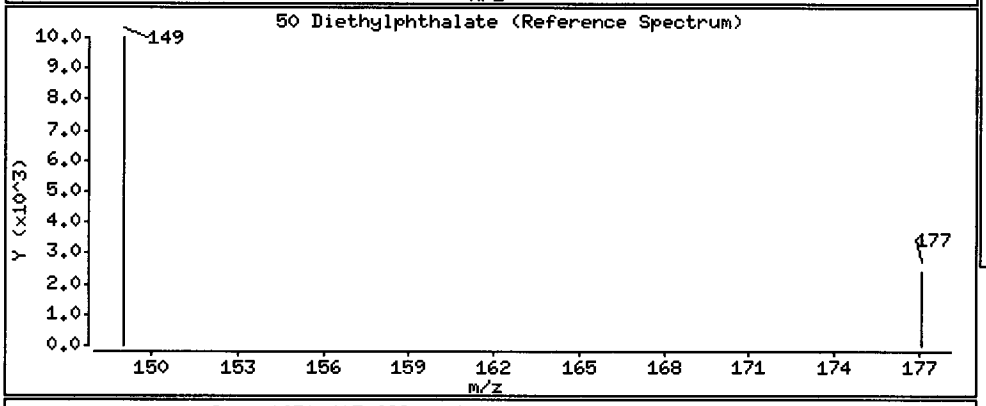
Concentration: 15.39 ug/kg

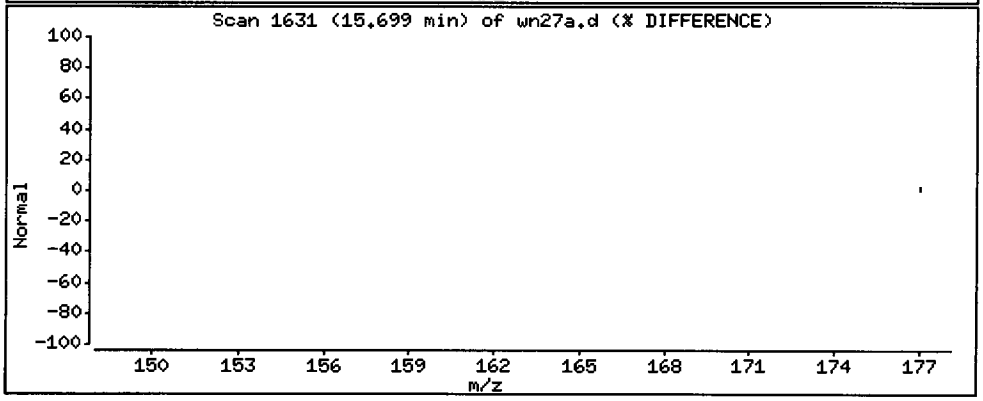












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

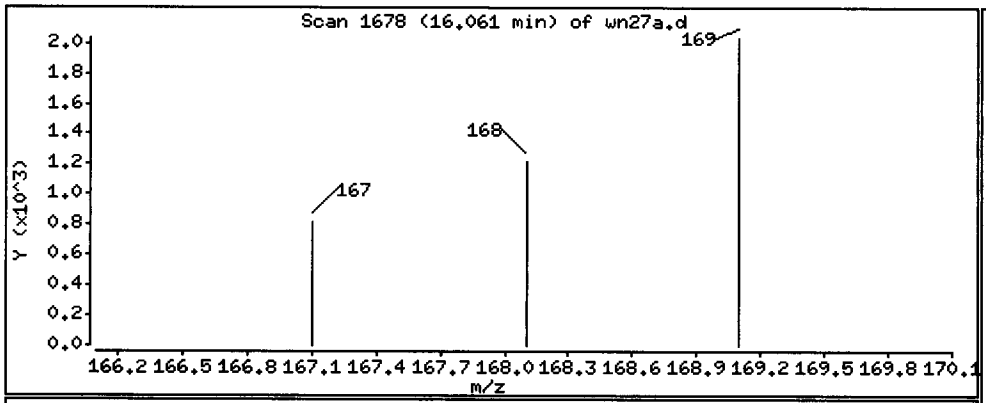
Operator: YZ

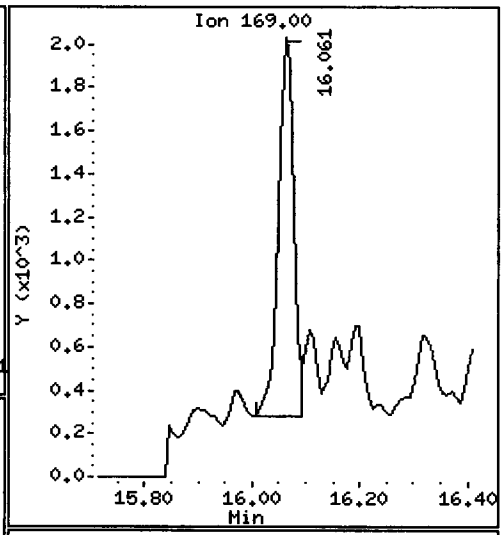
Column phase: ZB-5msi

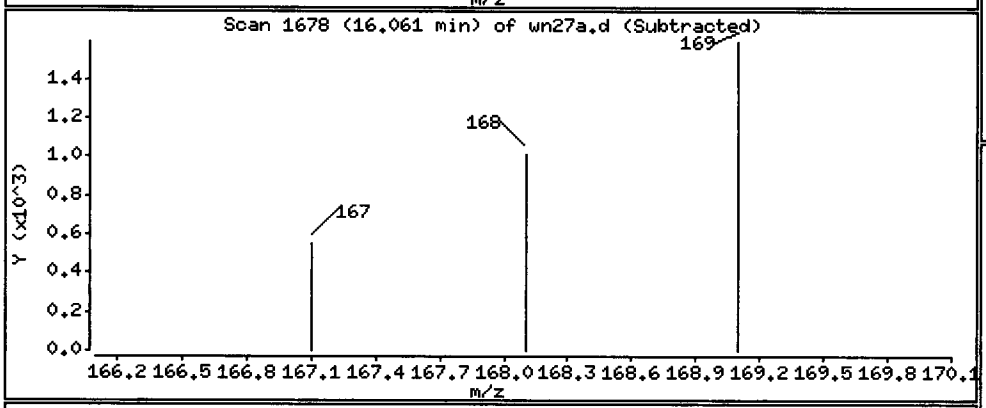
Column diameter: 0.25

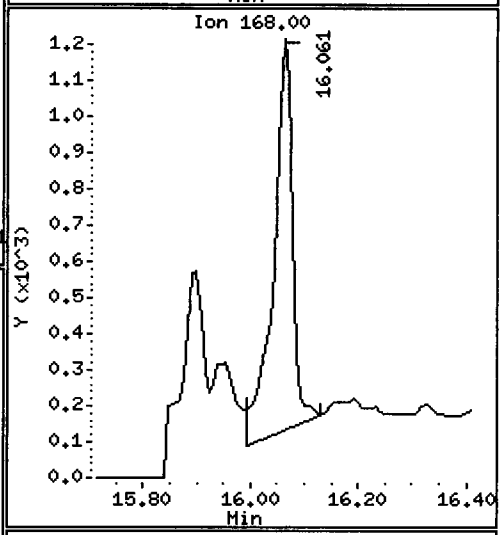
54 N-Nitrosodiphenylamine

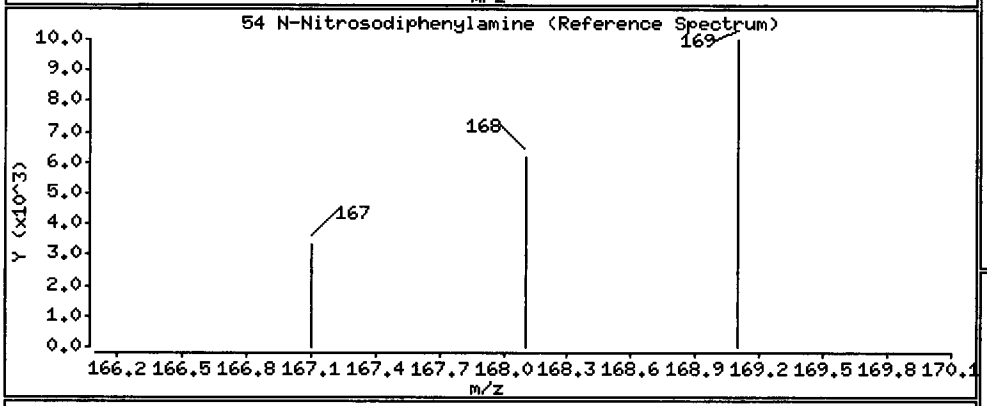
Concentration: 79.24 ug/kg

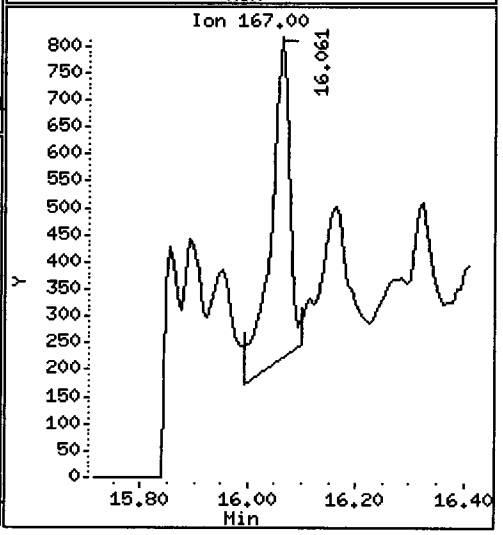


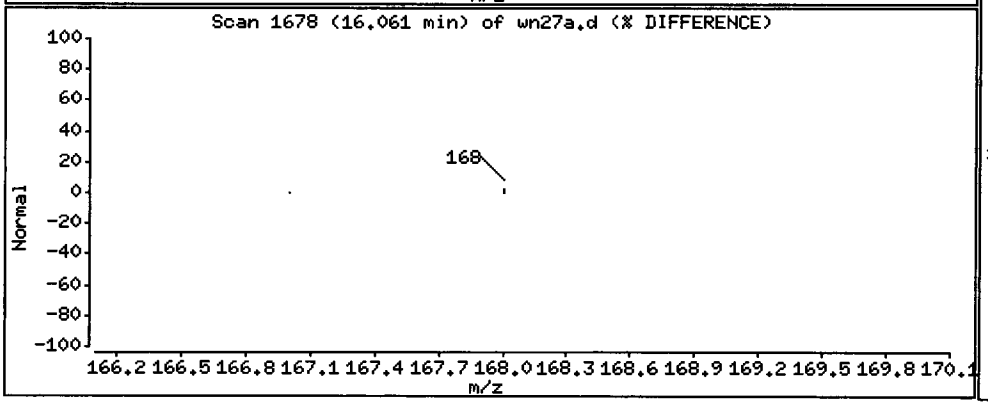












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

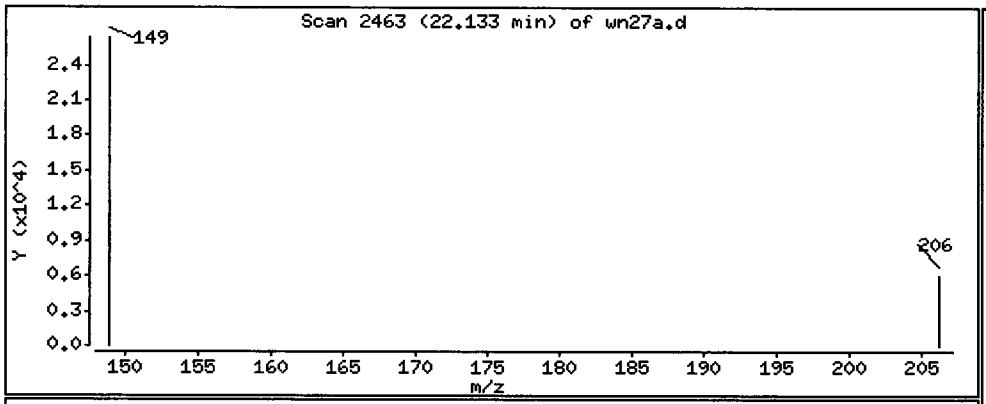
Operator: YZ

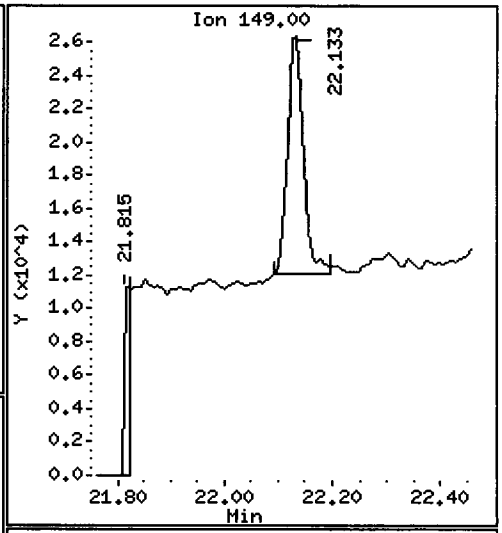
Column phase: ZB-5msi

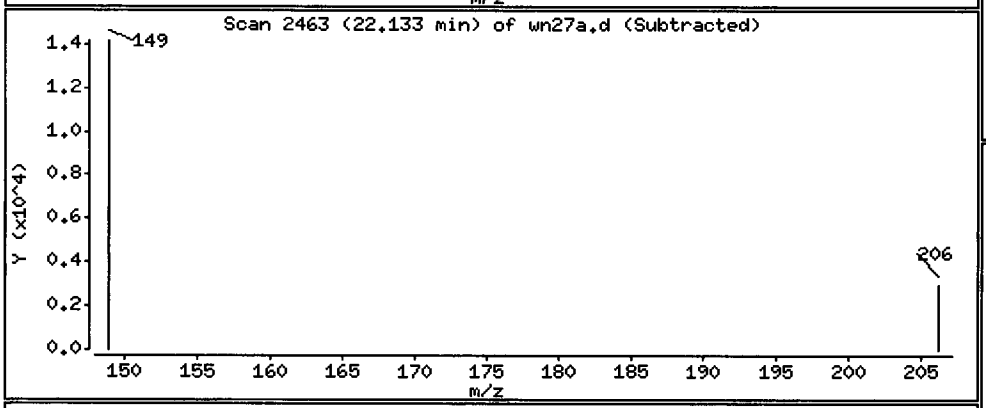
Column diameter: 0.25

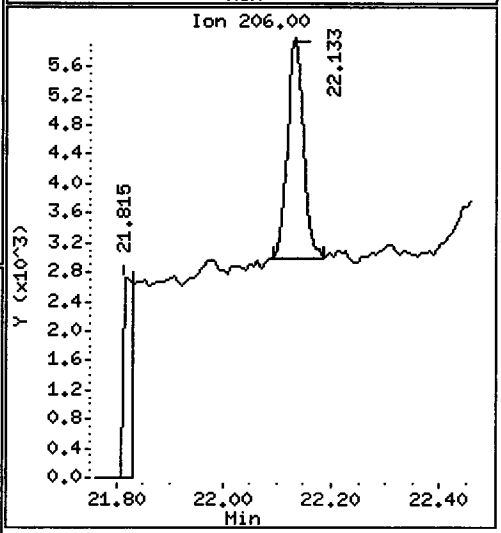
67 Butylbenzylphthalate

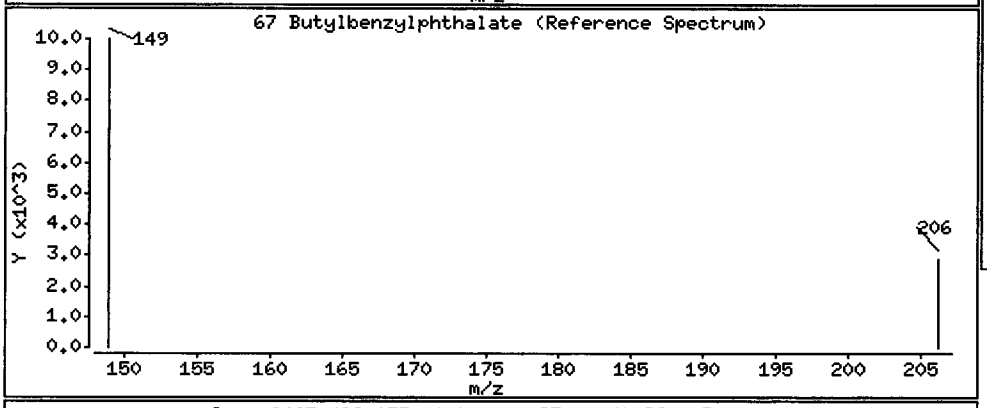
Concentration: 873.5 ug/kg

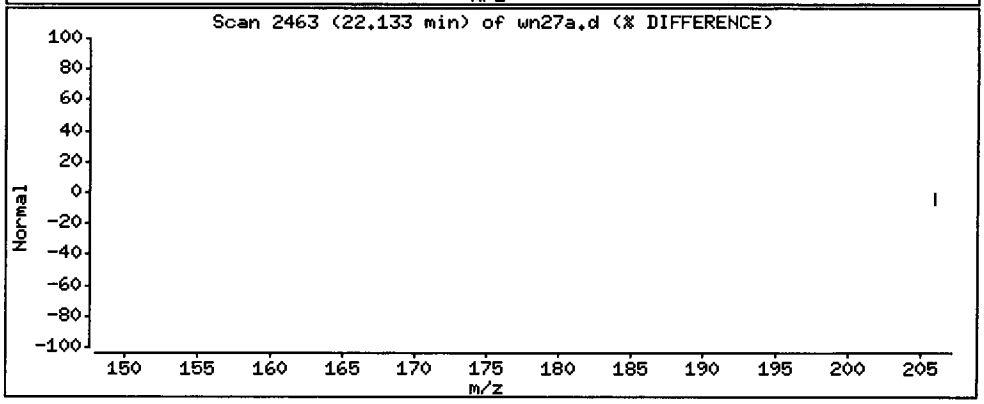












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Date : 07-MAY-2013 19:16

Client ID: CG-MH-010-20130423-

Instrument: nt10.i

Sample Info: WN27A,3

Volume Injected (uL): 1.0

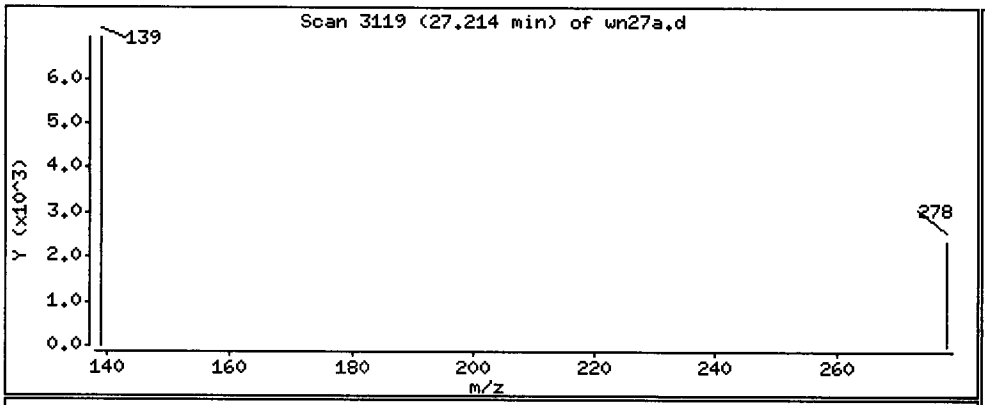
Operator: YZ

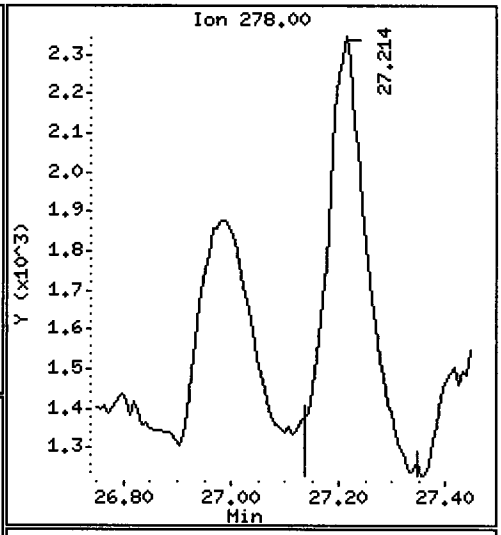
Column phase: ZB-5msi

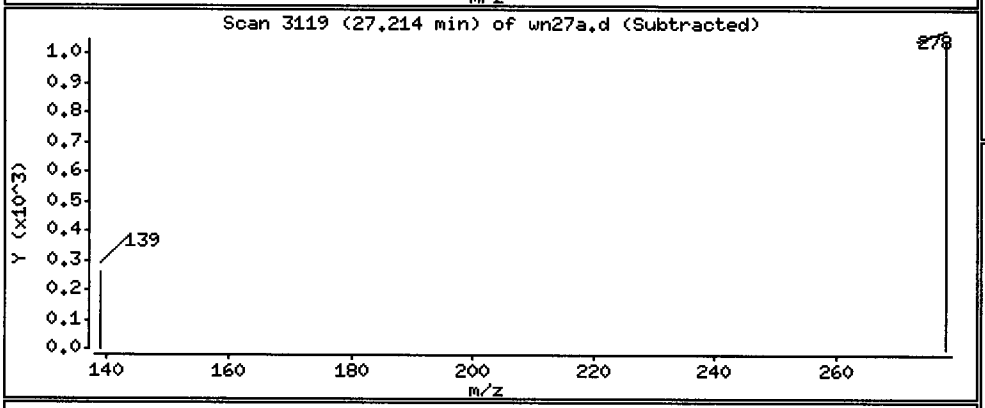
Column diameter: 0.25

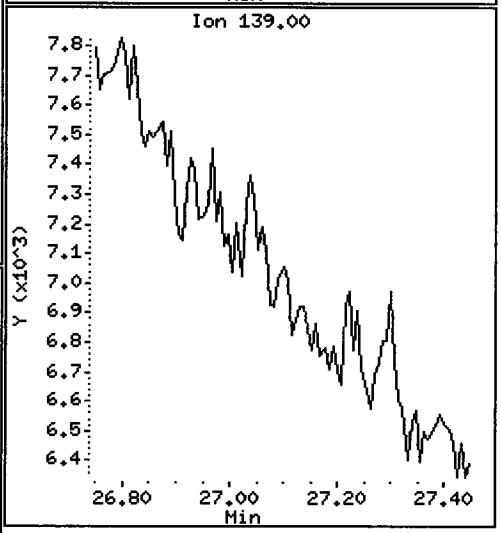
79 Dibenzo(a,h)anthracene

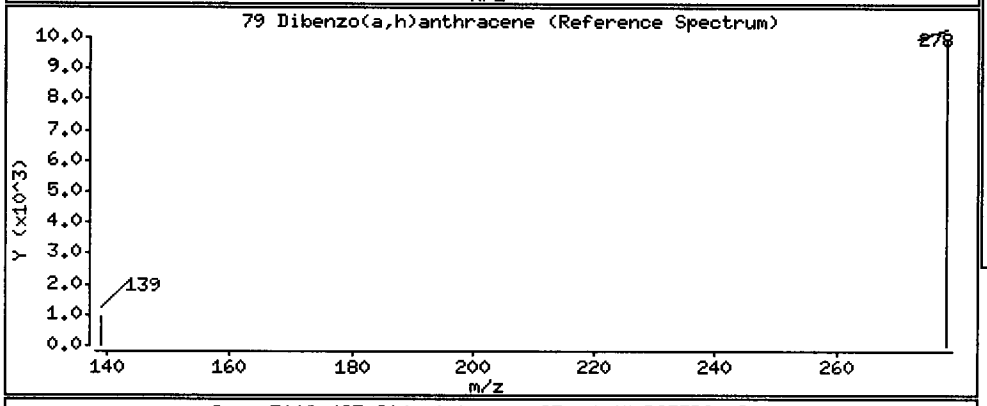
Concentration: 75.56 ug/kg

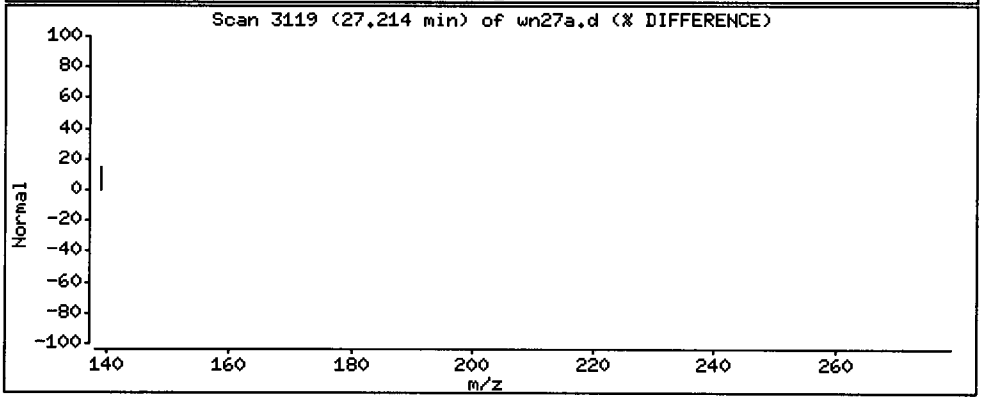






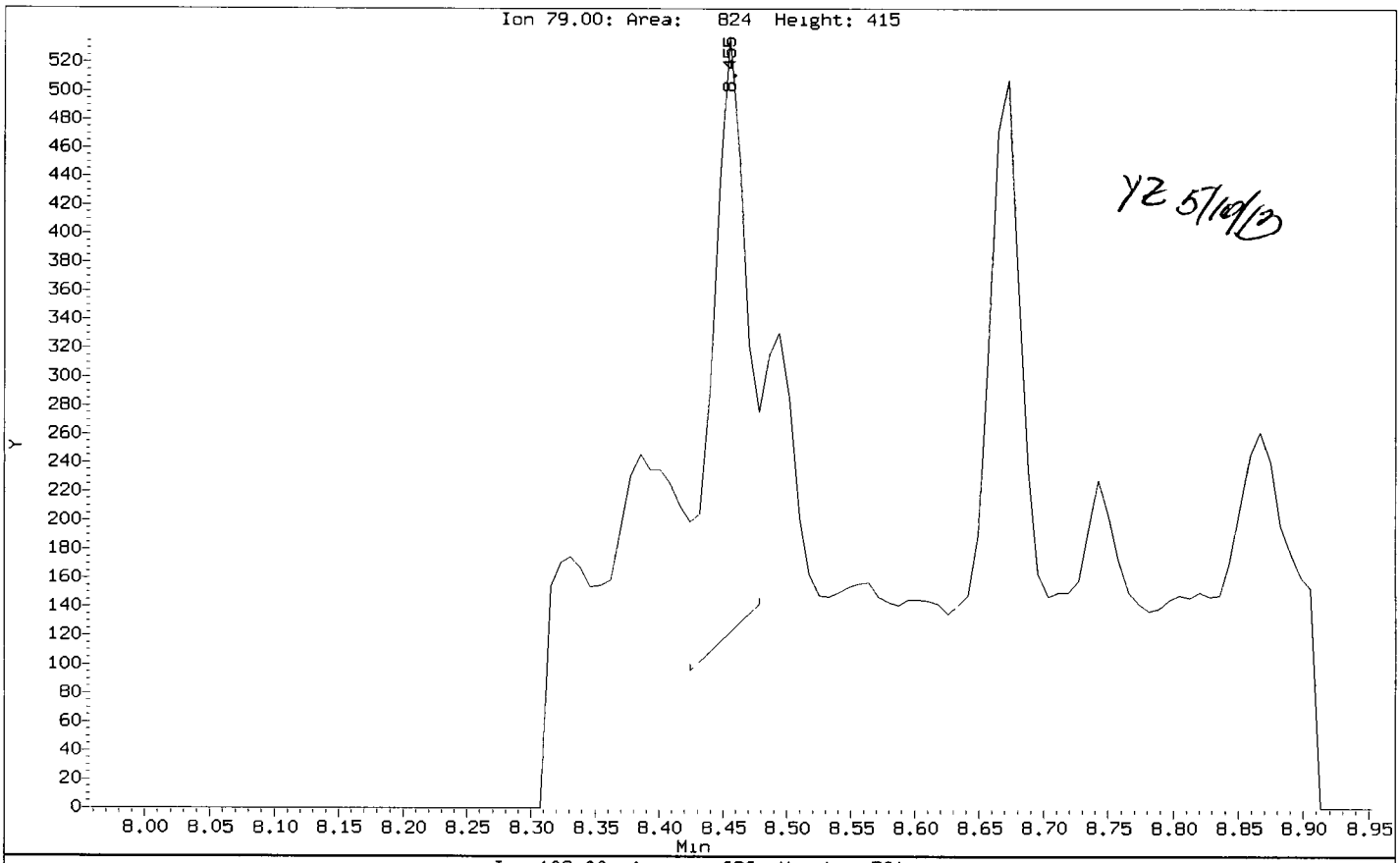




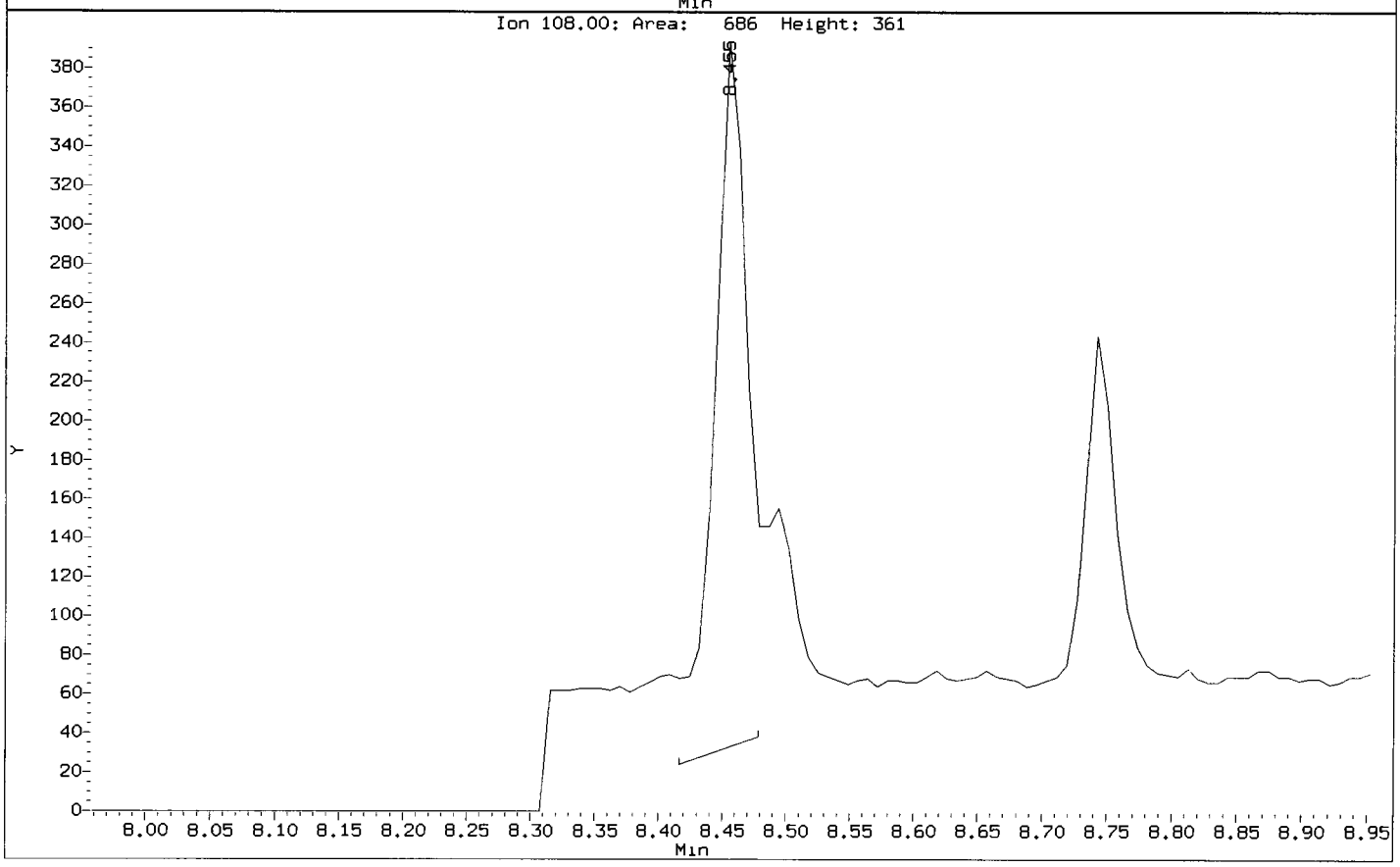


Data File: /chem1/nt10.1/20130507.b/SIM.b/wn27a.d
Injection Date: 07-MAY-2013 19:16
Instrument: nt10.1
Client Sample ID: CG-MH-010-20130423-

Compound: Benzyl alcohol
CAS Number: 100-51-6

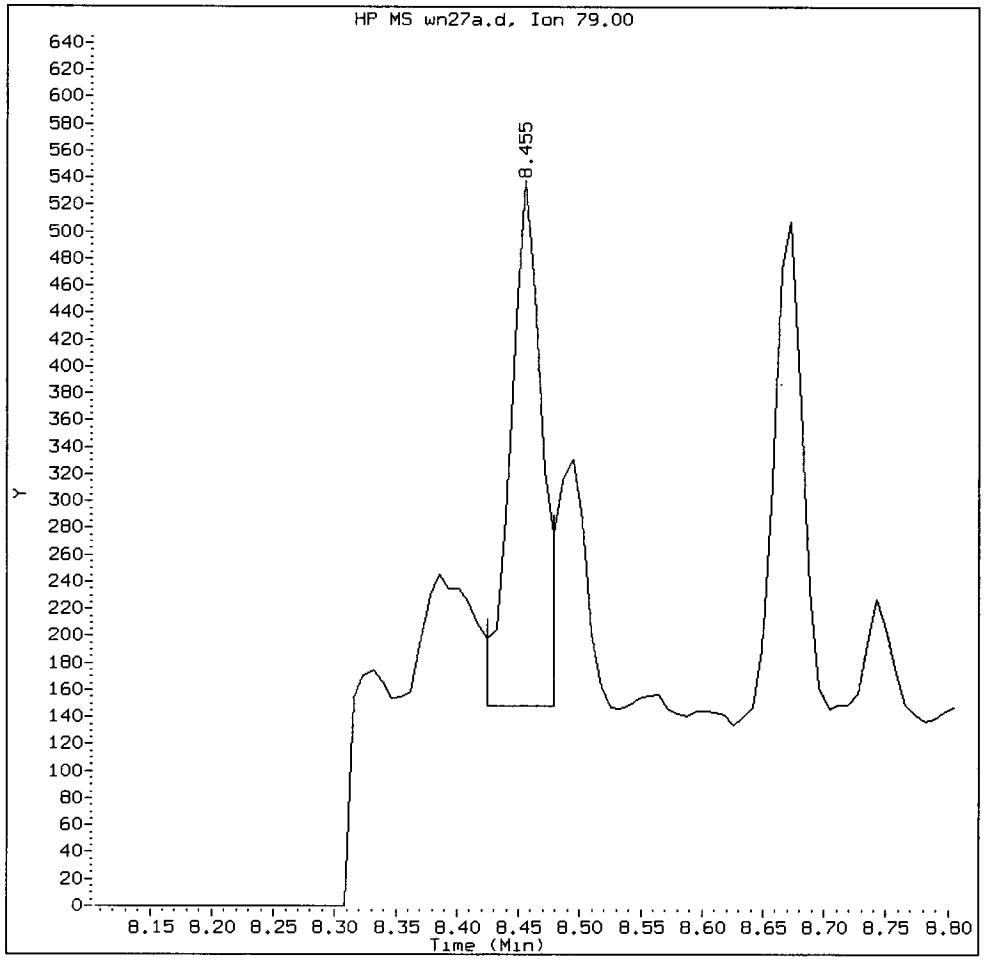


YZ 5/10/13



WN27A, /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Benzyl alcohol Amount: 0.07 Area: 712



MANUAL INTEGRATION for Benzyl alcohol

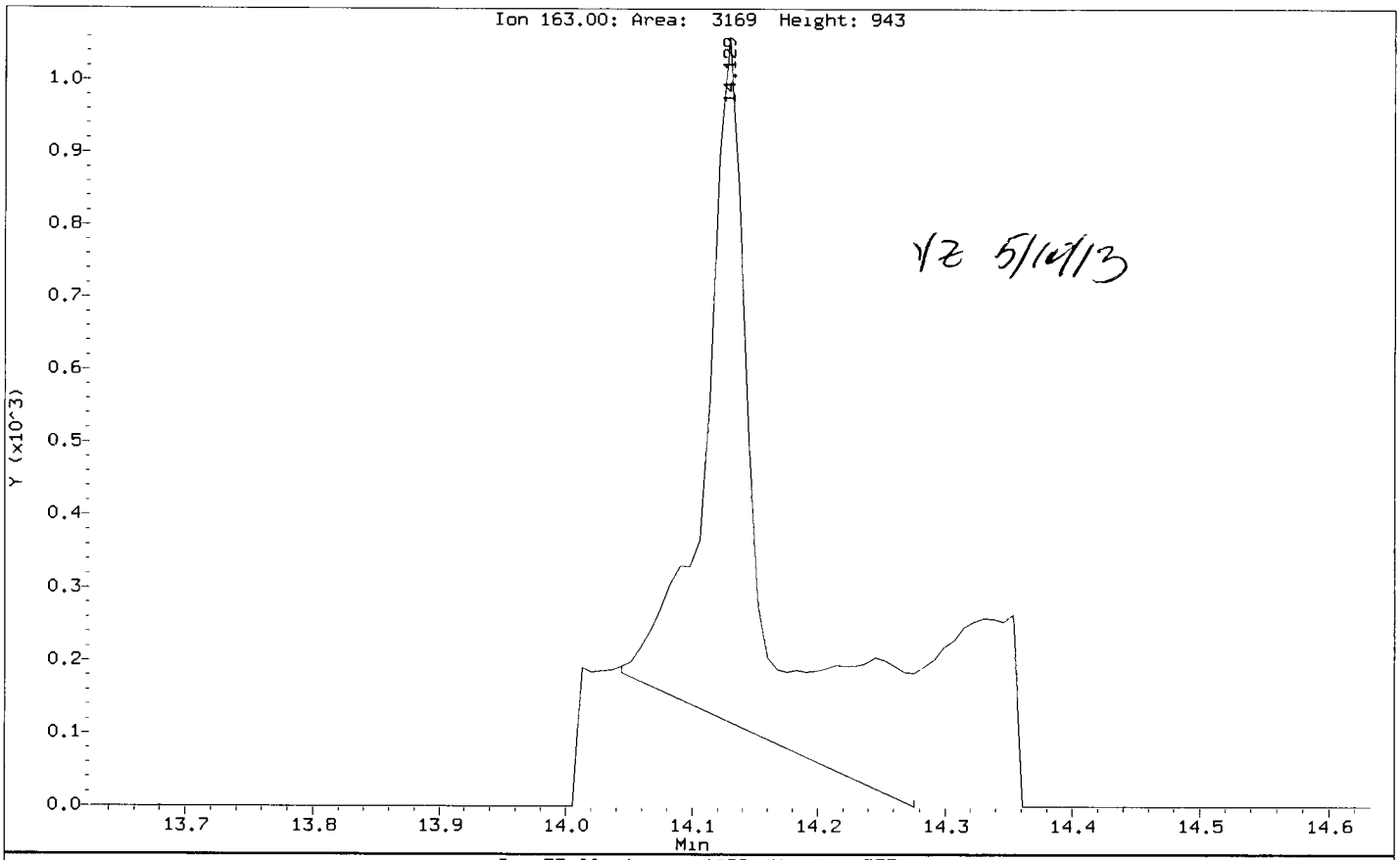
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

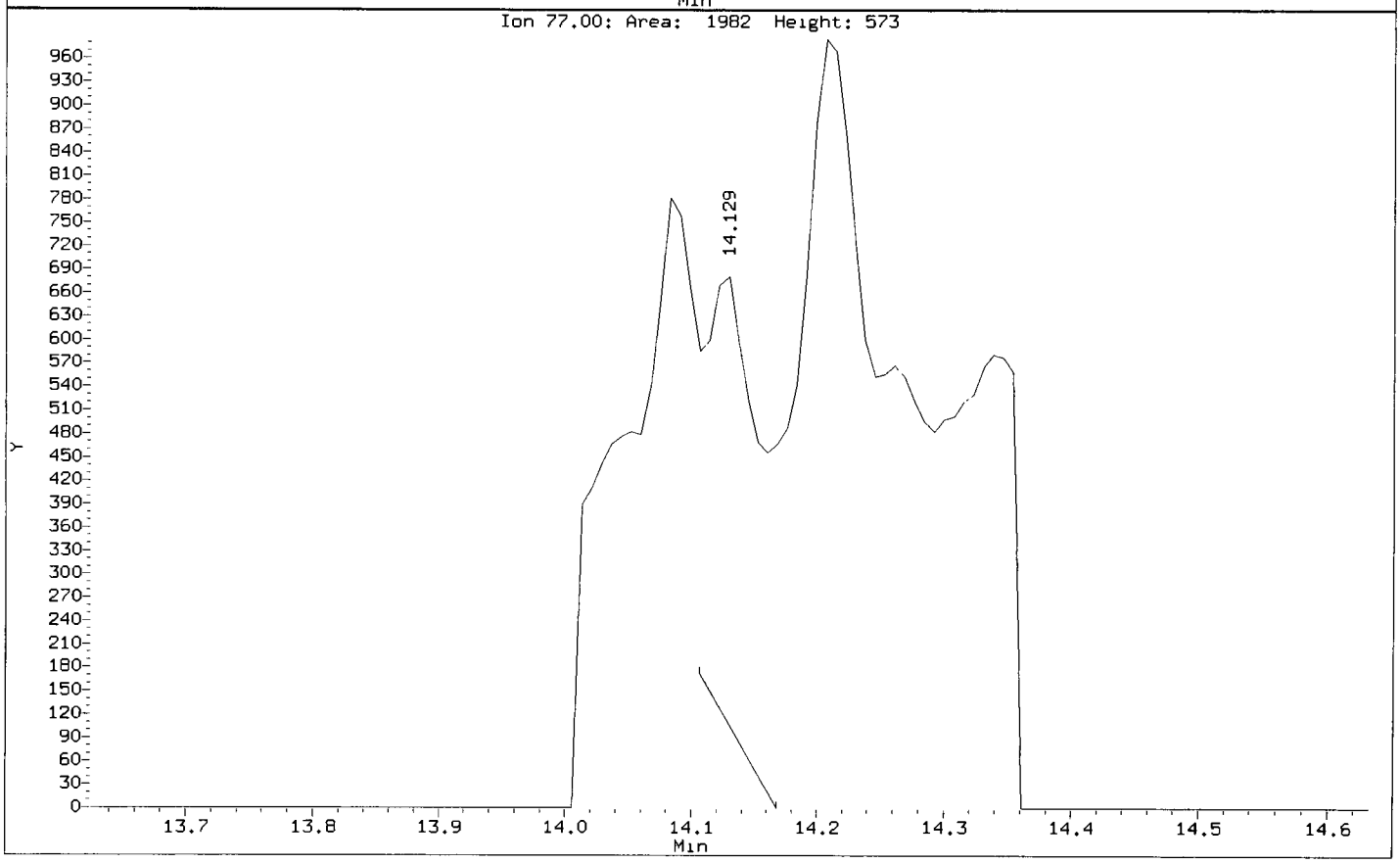
Analyst: YZ Date: 5/10/13

Data File: /chem1/nt10.1/20130507.b/SIM.b/wn27a.d
Injection Date: 07-MAY-2013 19:16
Instrument: nt10.1
Client Sample ID: CG-MH-010-20130423-

Compound: Dimethylphthalate
CAS Number: 131-11-3

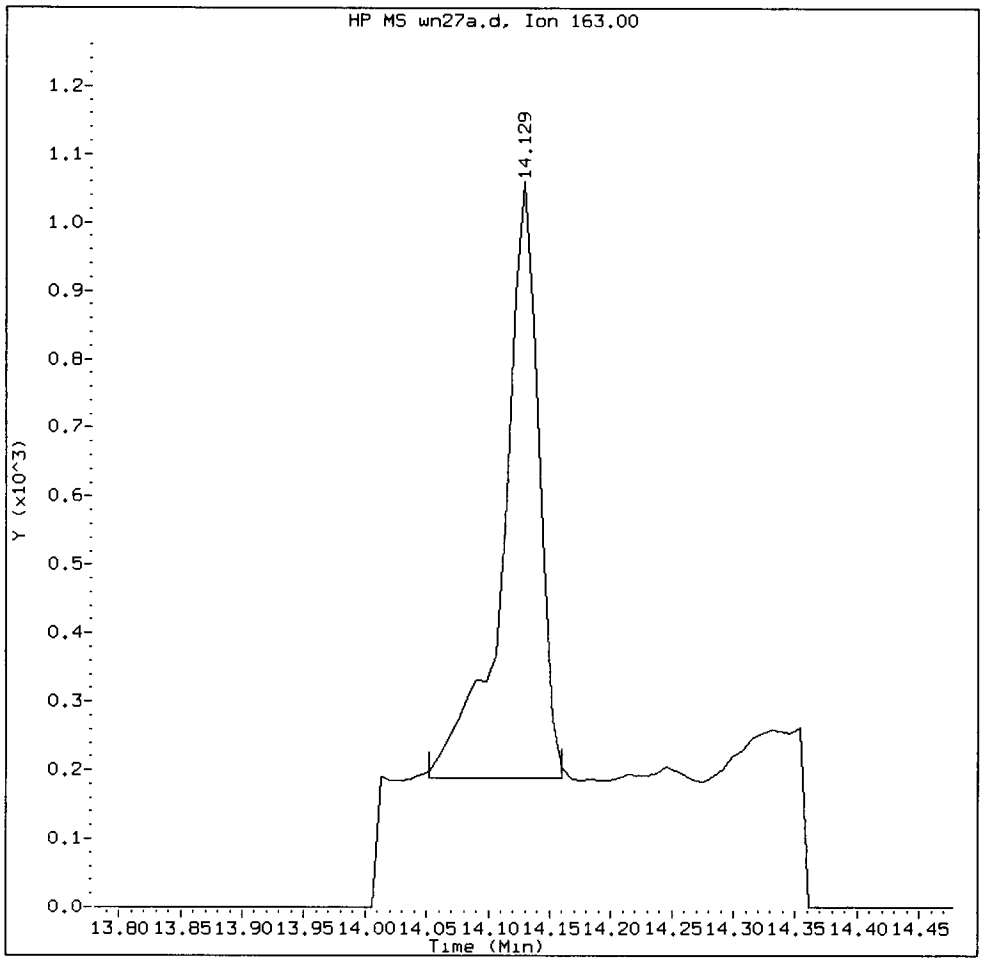


YZ 5/14/13



WN27A, /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Dimethylphthalate Amount: 0.06 Area: 1748



MANUAL INTEGRATION for Dimethylphthalate

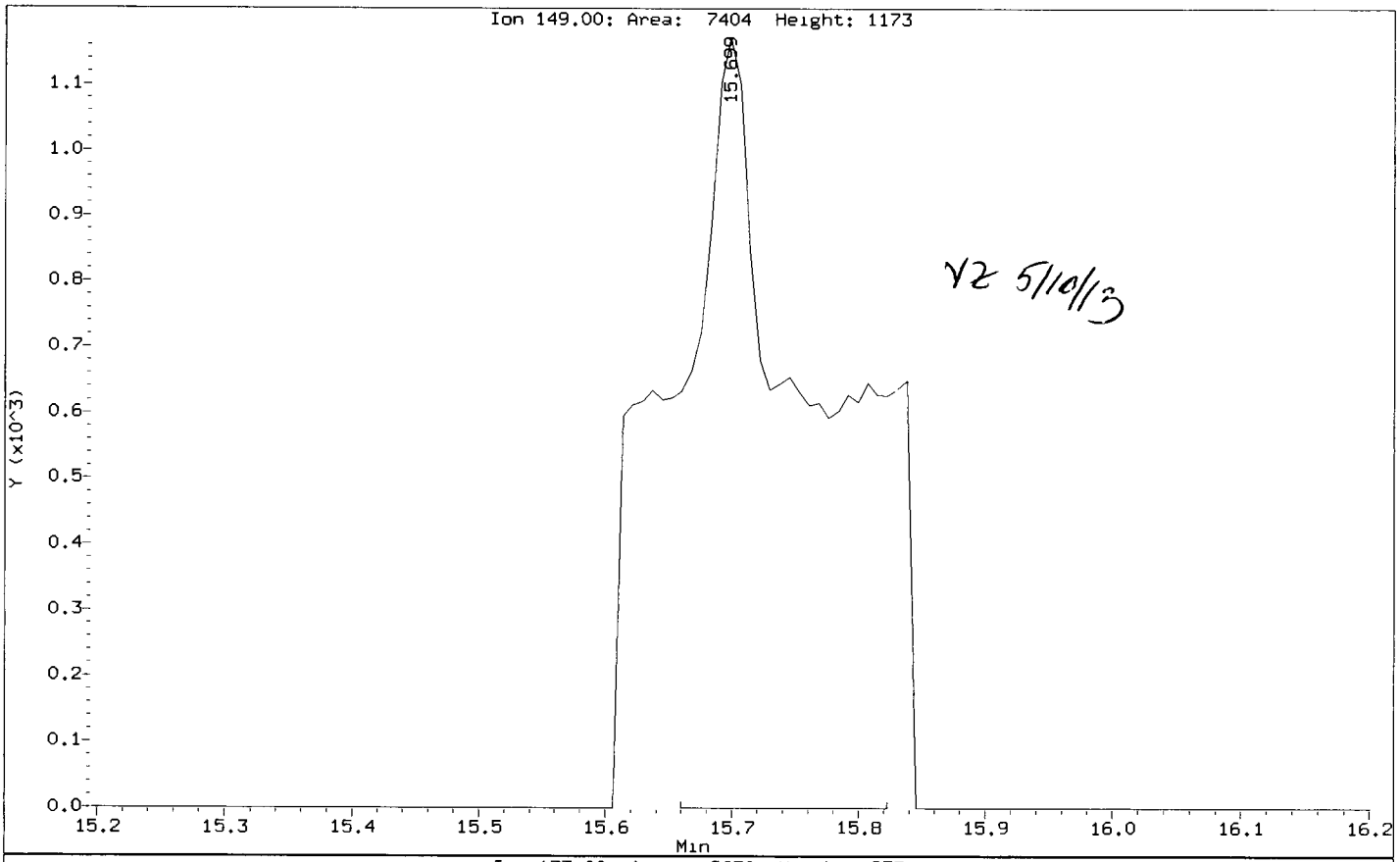
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

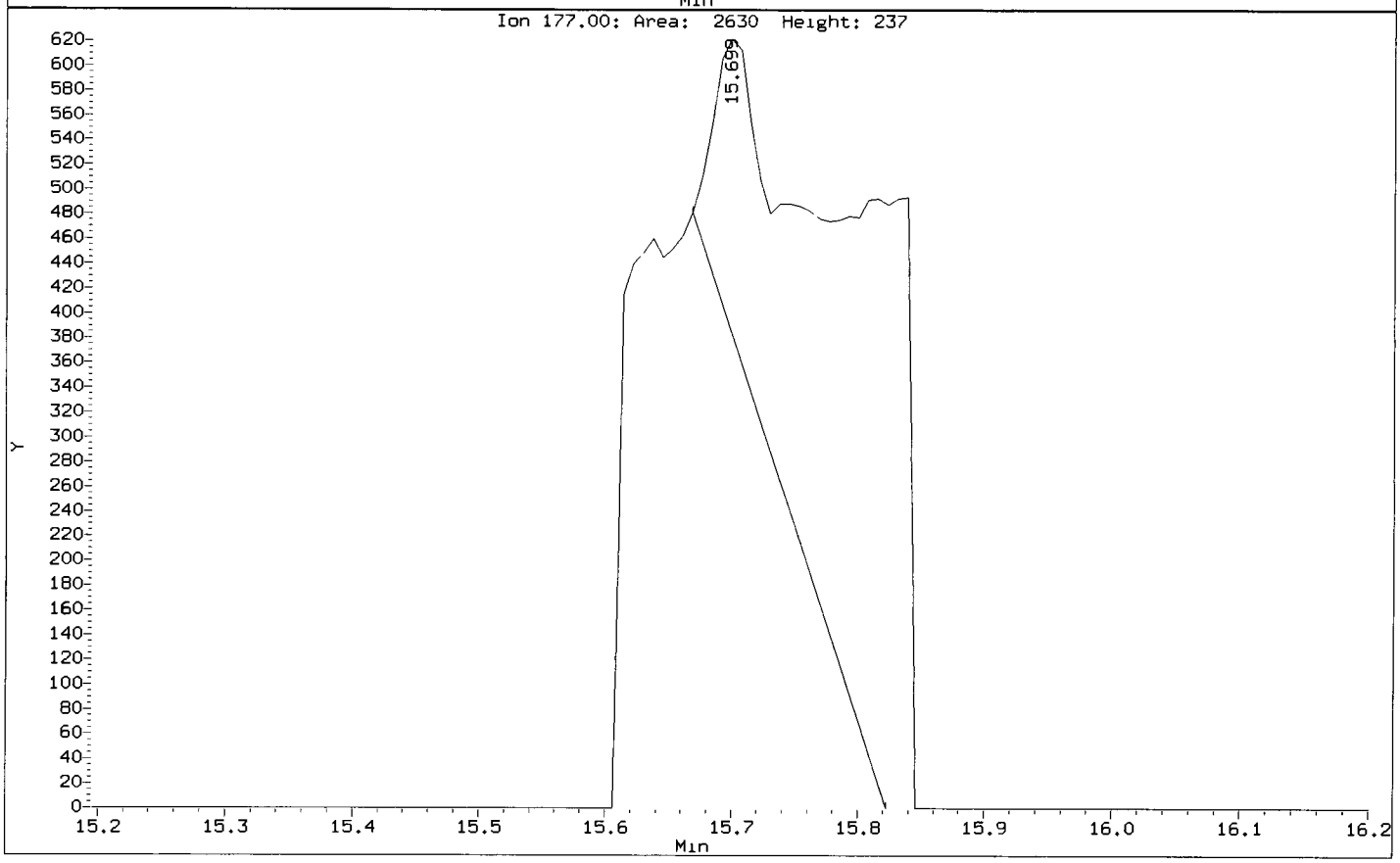
Analyst: VZ Date: 5/16/13

Data File: /chem1/nt10.1/20130507.b/SIM.b/wn27a.d
Injection Date: 07-MAY-2013 19:16
Instrument: nt10.1
Client Sample ID: CG-MH-010-20130423-

Compound: Diethylphthalate
CAS Number: 84-66-2

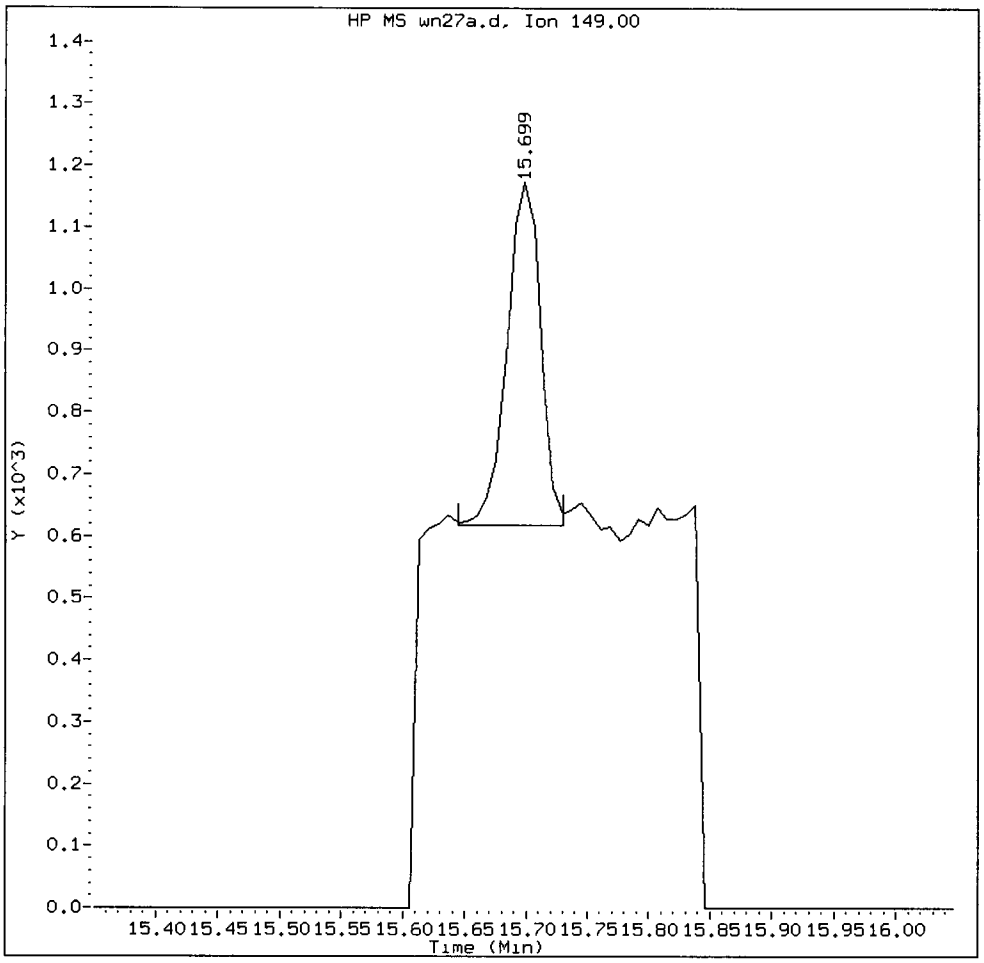


YZ 5/10/13



WN27A, /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Diethylphthalate Amount: 0.03 Area: 1061



MANUAL INTEGRATION for Diethylphthalate

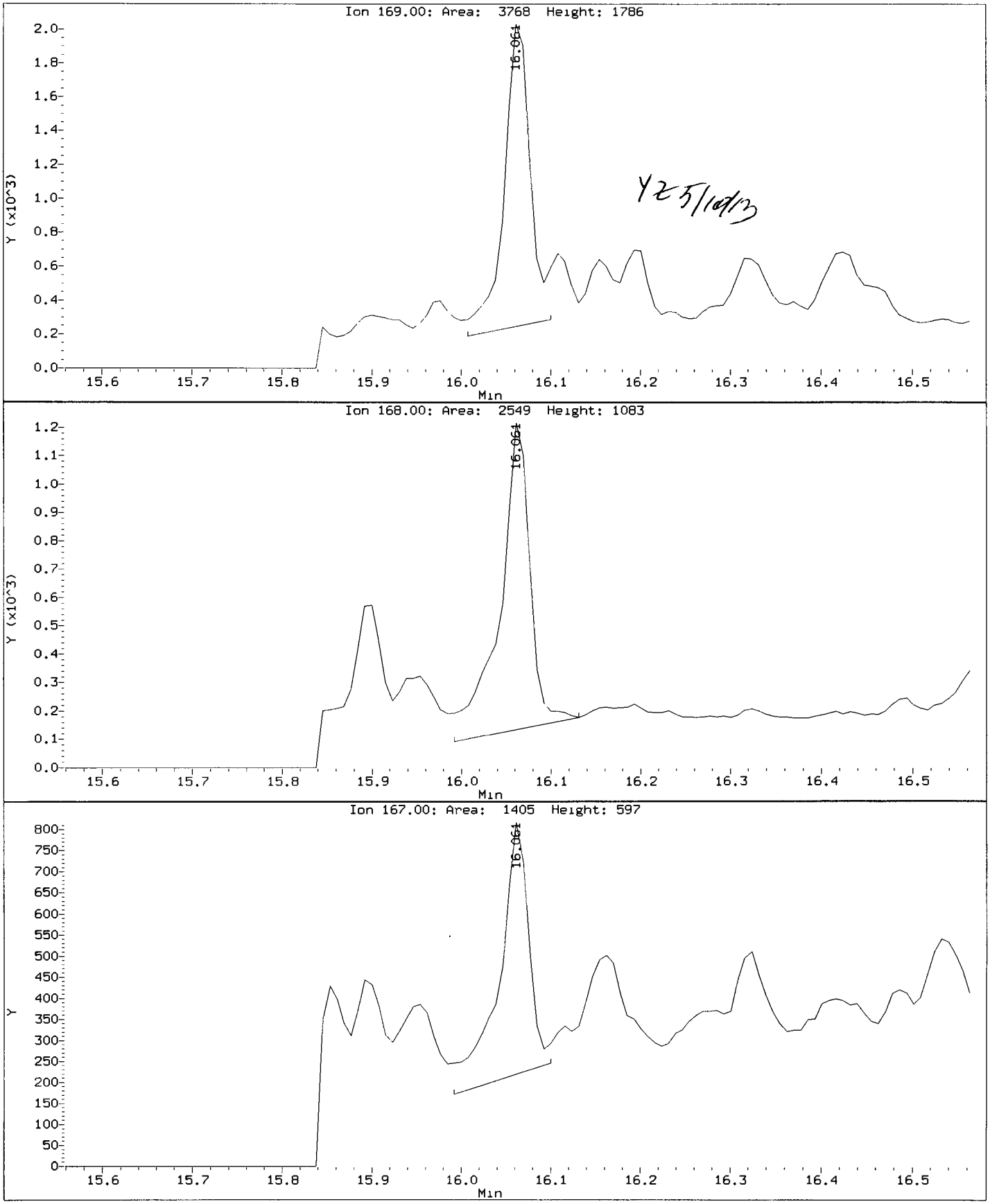
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/10/13

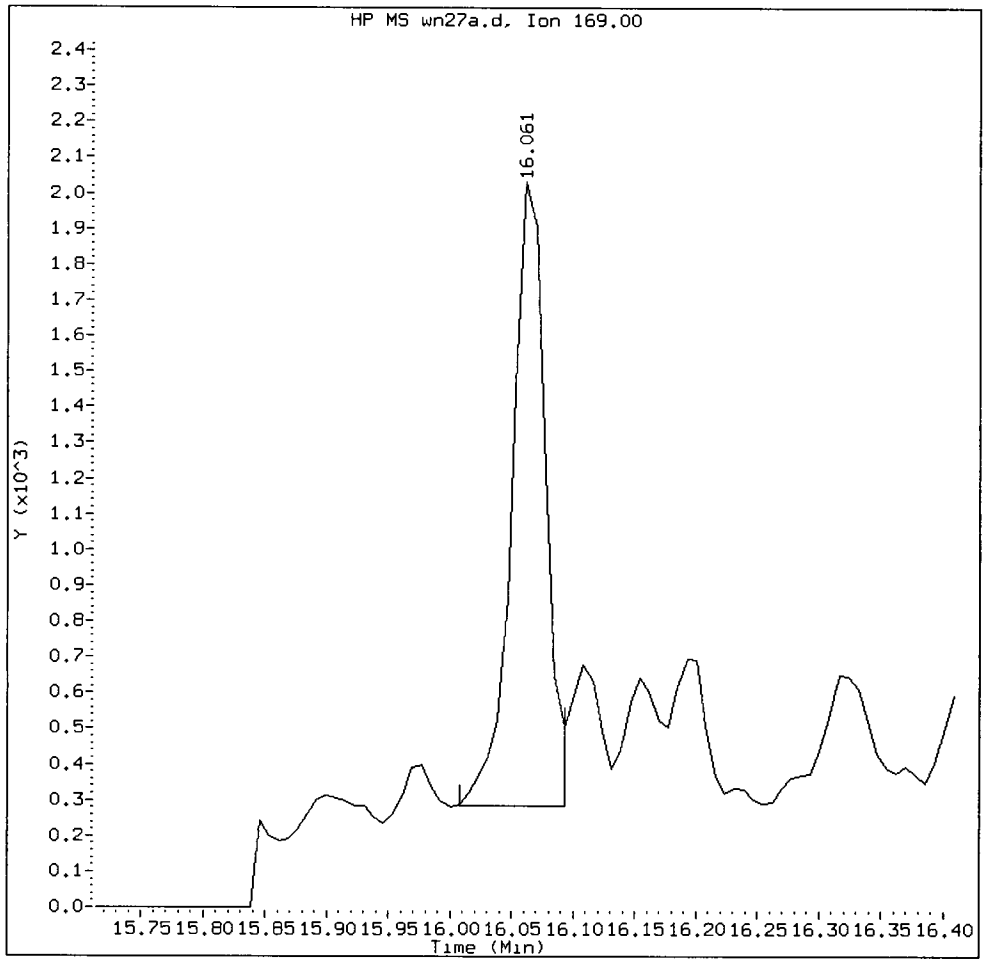
Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d
Injection Date: 07-MAY-2013 19:16
Instrument: nt10.i
Client Sample ID: CG-MH-010-20130423-

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



WN27A, /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

N-Nitrosodiphenylamine Amount: 0.16 Area: 3357



MANUAL INTEGRATION for N-Nitrosodiphenylamine

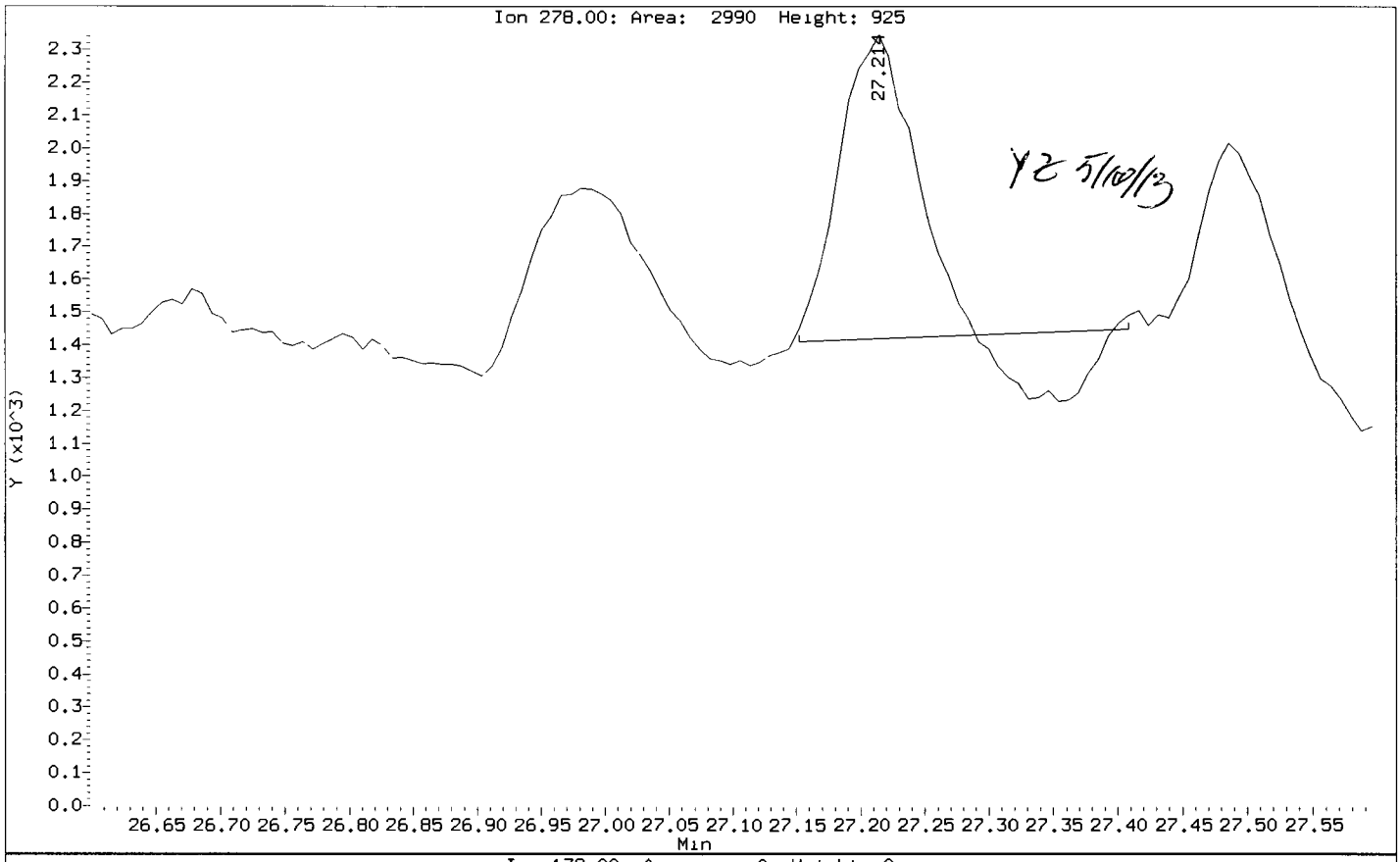
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

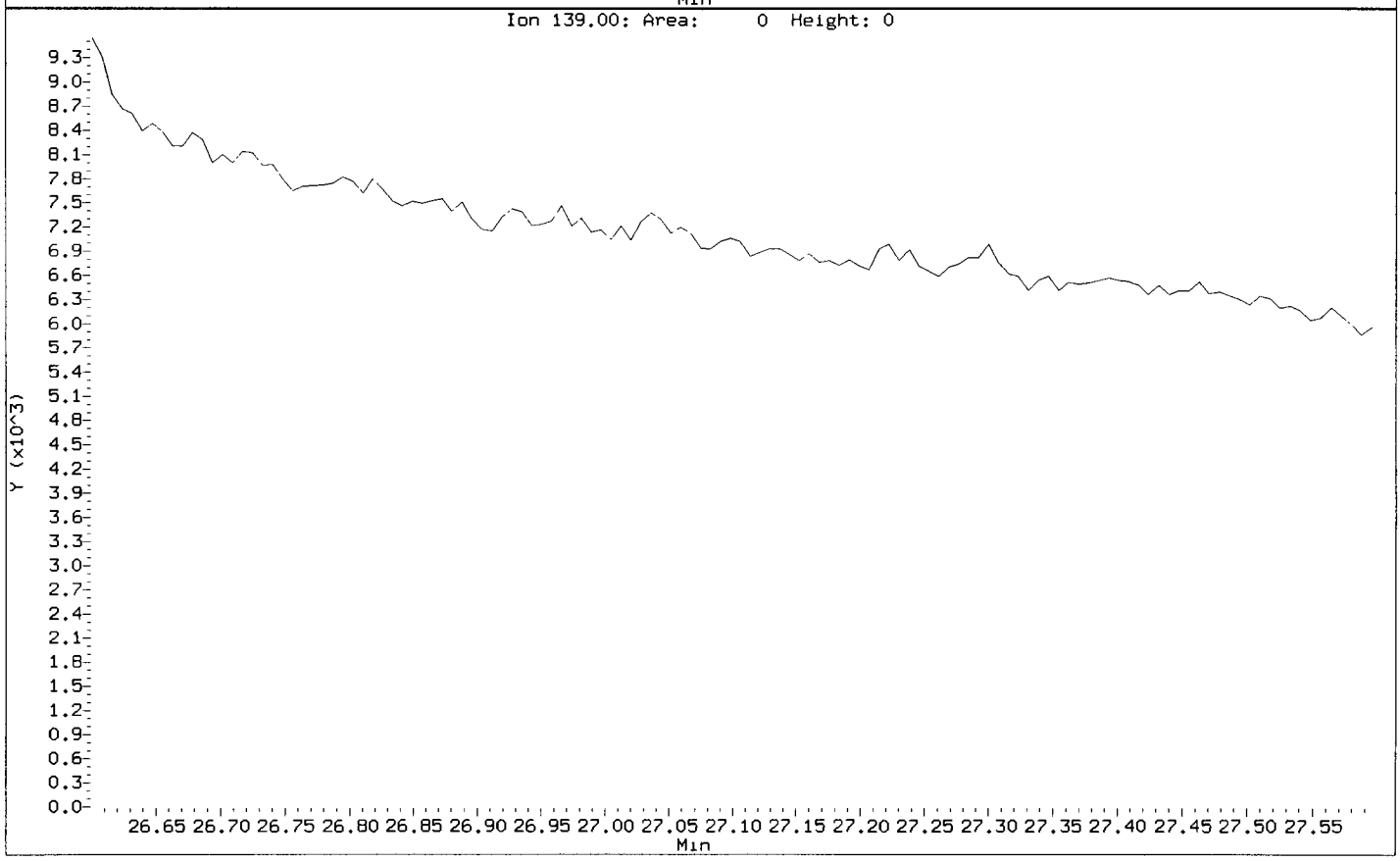
5. Other _____

Analyst: VZ Date: 5/10/13

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn27a.d
Injection Date: 07-MAY-2013 19:16
Instrument: nt10.i
Client Sample ID: CG-MH-010-20130423-

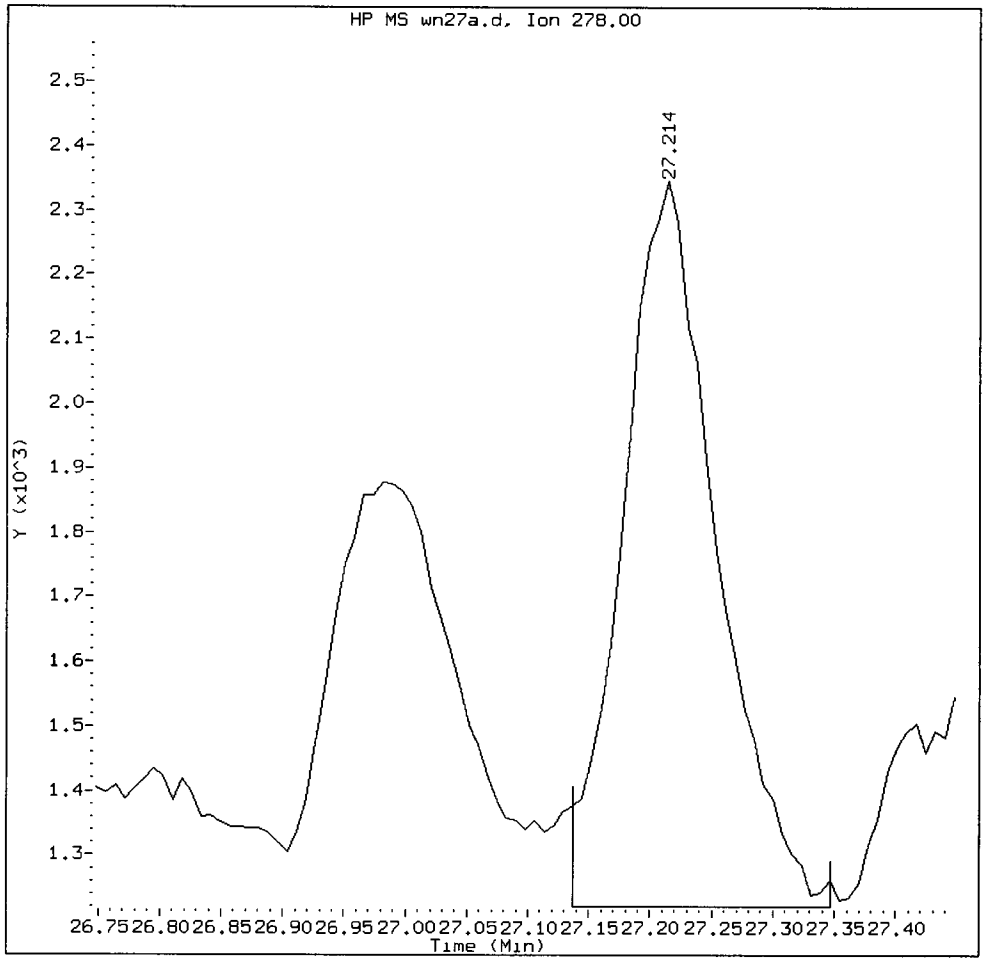
Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3





WN27A, /chem1/nt10.i/20130507.b/SIM.b/wn27a.d

Dibenzo(a,h)anthracene Amount: 0.15 Area: 6002



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other _____

Analyst: YZ Date: 5/10/13

CO-ELUTION SUMMARY FOR FILE - wn27a.d

Lab ID: WN27A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Dioxin Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin / Furan Bench Sheet EPA Methods 8290A & 1613B
Solid Samples

ARI Job No(s) WM89, WN27, WN31

Matrix (circle one)	Soil	Sediment	Oil	Tissue
Extraction Method	Start Time/Date:		End Time/Date:	
Soxhlet	12:55	4/29/13	05:13	4/30/13

Reagent / Standard	NA	ID / Lot Number	Initials	Date
Analytical Balance		SN 24650344	PD	4/29/13
Purified Sand		I5025	PD	4/29/13
Toluene		I8142	PD	4/29/13
Hexane		I8023	PD	4/30/13
CH_2Cl_2		I7981	PD	5/1/13
H_2SO_4		I8156	PD	4/30/13
Na_2SO_4		I8040	PD	5/1/13
Glasswool		5/18/12	PD	5/1/13
10 % $AgNO_3$	✓			
Basic Silica		H104	PD	5/1/13
Acid Silica		H143	PD	5/1/13
0% Silica		I8035/I8035	PD/PD	4/29/13 5/1/13
Activated Florisil		G989	PD	5/1/13
Dual Carbon Column	✓			
Other (PAR SRM)		I8152	PD	4/29/13
Nonane		I5167	PD	5/1/13

Bottle ID	ARI Sample ID	Sample Weight (eq to dry wt)	Roto Vap 45 °C	Final Vol.	H20 Trap Vol (mL)	Comments
4/29/13	WM89MB	10.00g	(1) 2	10uL	0.3	
↓	↓ OPR	10.00g	1 (2)	10uL	0.3	
~~QLS~~	~~QLS~~	~~10.00g~~	~~1 / 2~~	~~10uL~~		
	WM89SRM	10.03	(1) 2	10uL	2.0	
4	A	12.59	1 (2)	10uL	3.2	
	B	13.41	(1) 2	10uL	3.8	
↓	C	12.86	1 (2)	10uL	3.6	
6	D	14.44	(1) 2	10uL	4.8	
4	↓ E	14.54	1 (2)	10uL	5.0	
3	WN27A	16.95	(1) 2	10uL	7.0	
10	WN31A	25.23	1 (2)	10uL	15.2	
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
Prep Analyst/Date		PD 4/29/13	PD 4/30/13	PD 5/1/13	PD 4/30/13	

Reagent / Standard	Vol	ID / Lot Number	Solution Conc.	Expiration Date	Initials	Date	Witness
Recovery Standard	1.0 mL	2089-4	2/4ng/mL	4/5/14	M	4/29/13	PD
Ongoing Precision /Recovery	20 µL	2069-3	10/50/100ng/mL	2/6/14	M	4/29/13	PD
~~QLS Standard~~	~~10 µL~~	~~211~~	~~0.5/2.5/5ng/mL~~				
Clean-up Standard	1.0 mL	2090-1	0.8ng/mL	4/5/14	PDx2	5/1/13	PD
Internal Standard	10 µL		200ng/mL				

Supervisor Review: [signature] 5/1/13

Bench Sheet No.: 00035

Verify Client ID	
Analyst/Date	PD 4/29/13
Acid Clean	(Y)N
Analyst/Date	PD 4/30/13
Silica-Florisil	(Y)N
Analyst/Date	PD 5/1/13

WN27, WN31 3396

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN27 Client ID: SAIC

Parameter: Dioxin 1613B Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)= A	AC 4-24-13
☐ Standing Water Homogenized (Shared samples)=	↓
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)= 5% sticks - A	
☐ Oily, obvious fuel/sulfur odors=	
☑ Other (Details)= Split A befor Acid wash due to black extract.	PD 4/30/13
Double Acid silica Fo. A due to brown turbid extract.	PD 5/1/13
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

Dioxin Raw Data
Initial Calibration

ARI Job ID: WN27

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 HxF, OCDF, TD in CSL.

(Review 1)Analyst: _____ **Date:** 3/13/13

(Review 2)Reviewer: _____ **Date:** _____

WN27 : 00666

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 3/12/13 Analysis: Dioxins Analyst: JH

GC Program: 8290C Column No: I7819 Column Type: RTX Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): diox130312_1-5 Detector Voltage: 350

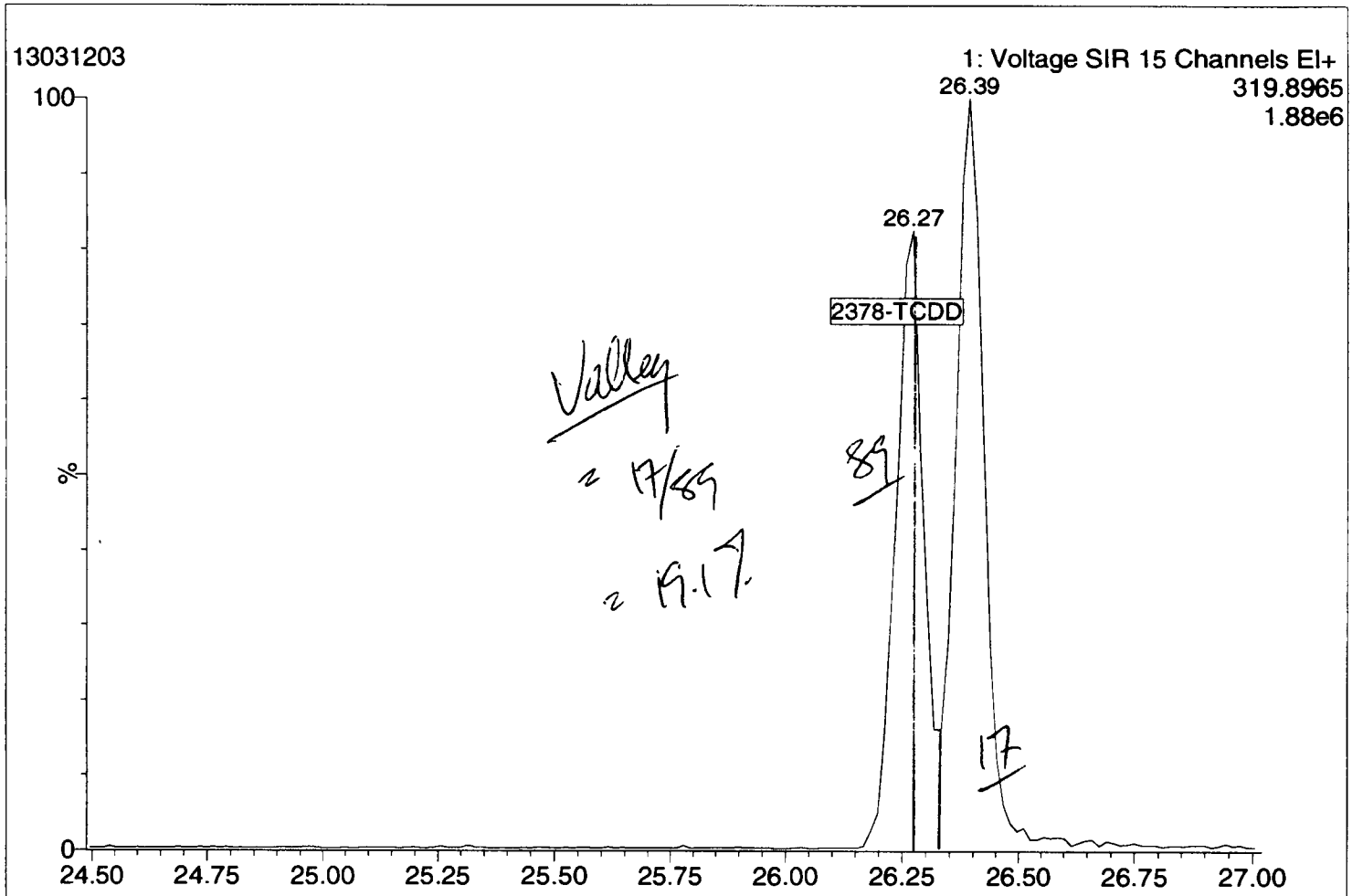
Resolution Check Files: 12:15, 22:03 Curve Date: 3/12/13

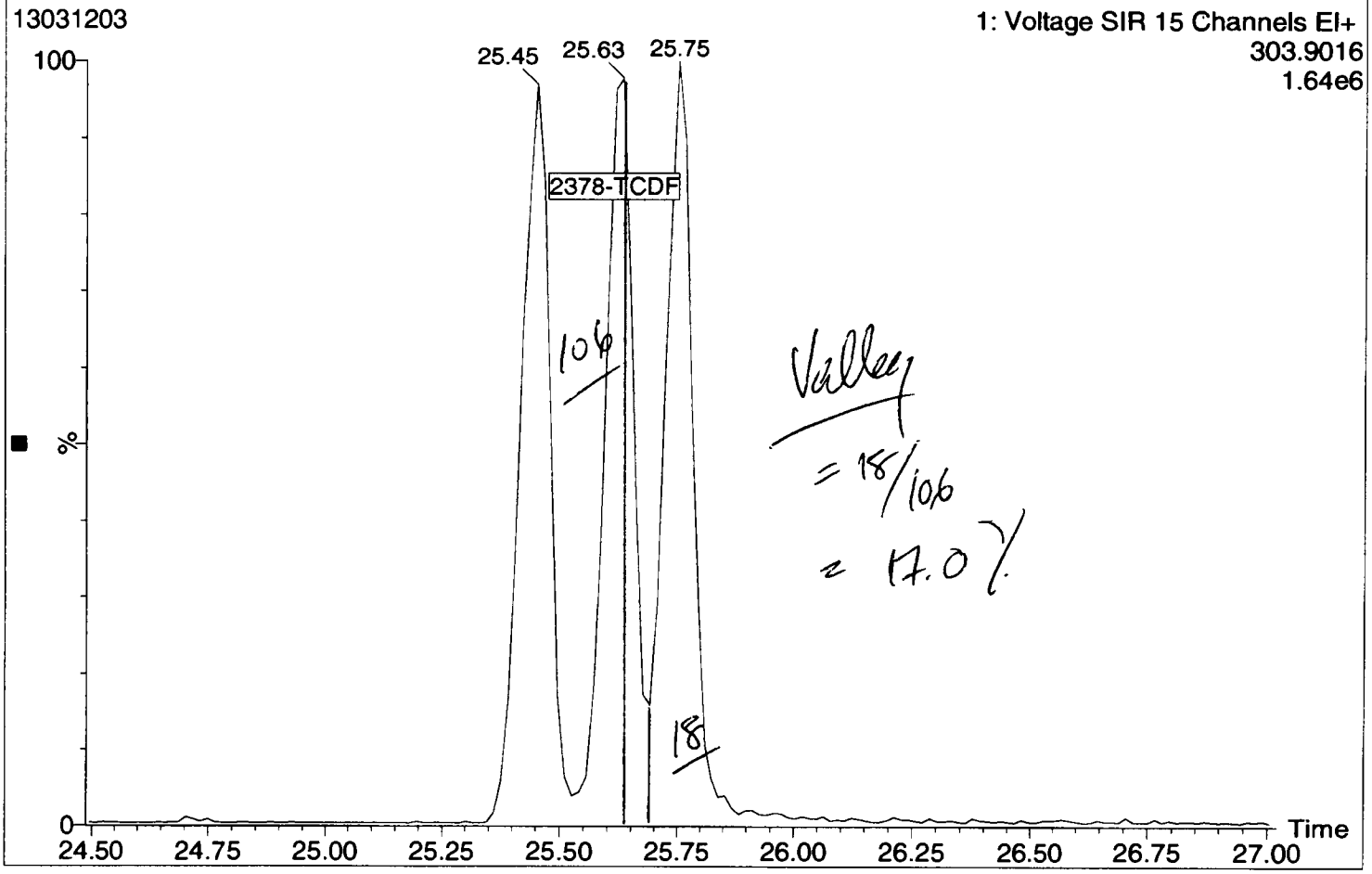
IS/SS	Ical/Ccal	LCS/ICV
I7908	I7908 I7972	

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
100
%
0
24.50
24.75
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00
Valley
= 17/85
= 19.1%
85
17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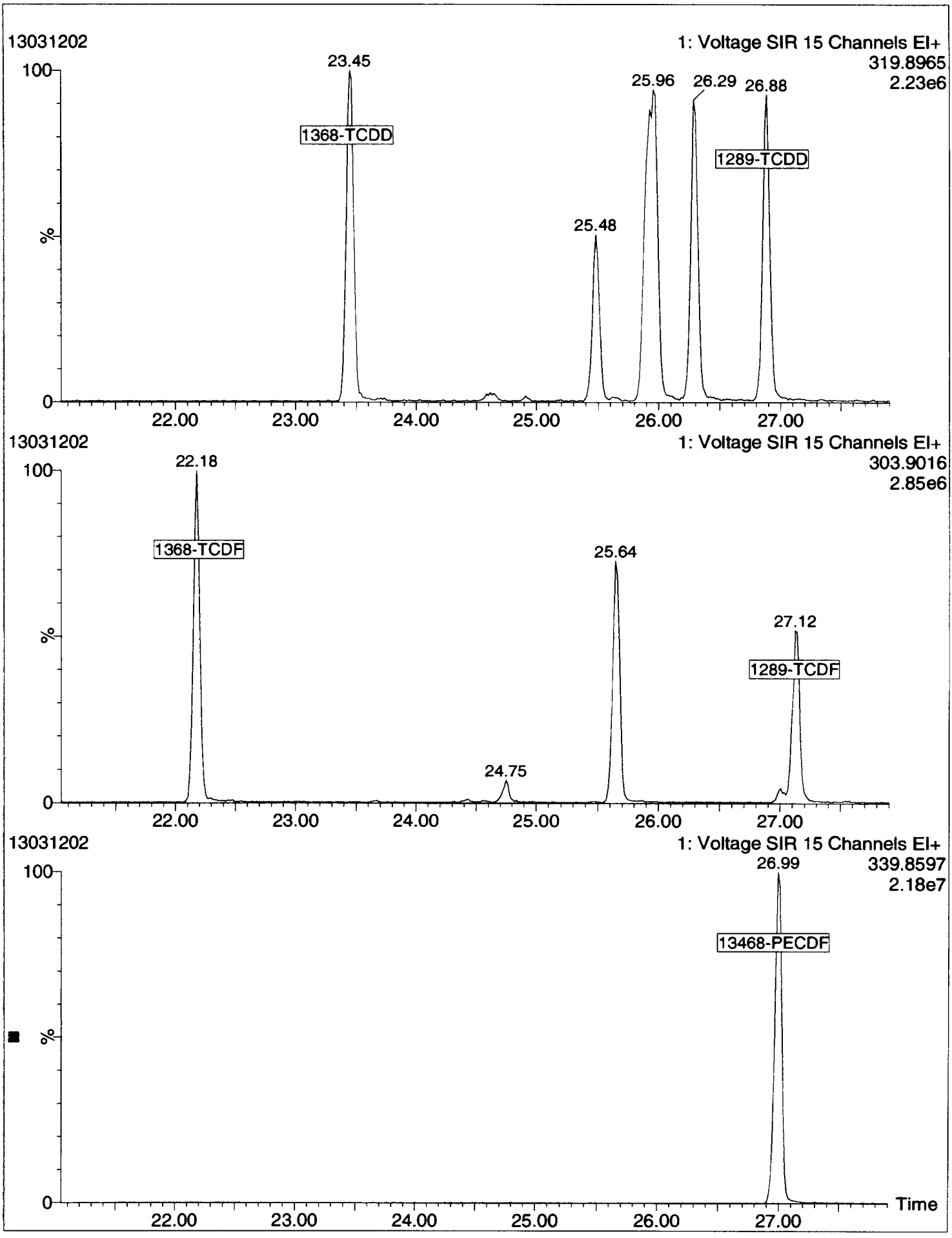
303.9016
1.64e6
25.45
25.63
25.75
2378-TCDF
100
%
0
Time
24.50
24.75
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00
106
18
Valley
= 18/106
= 17.0%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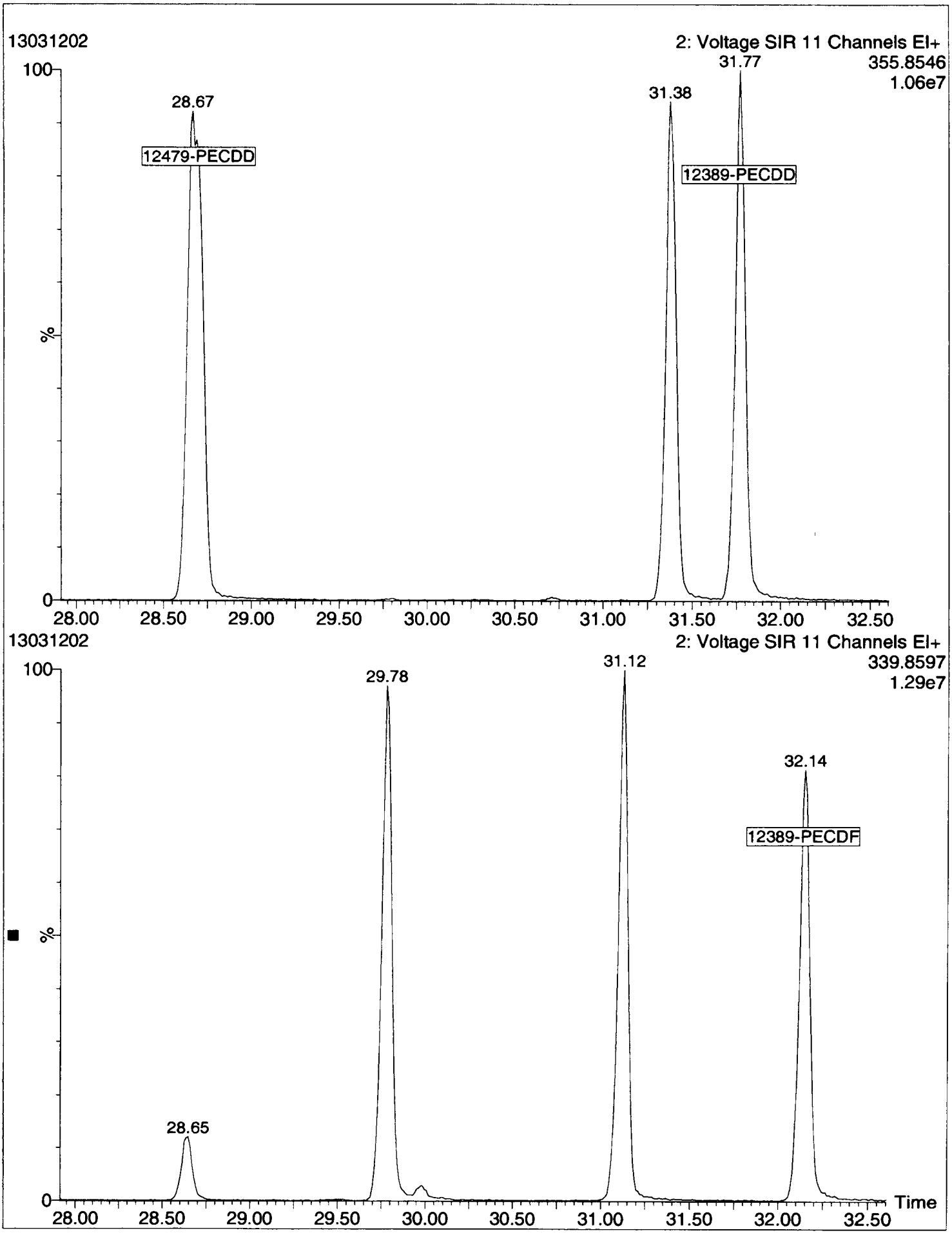
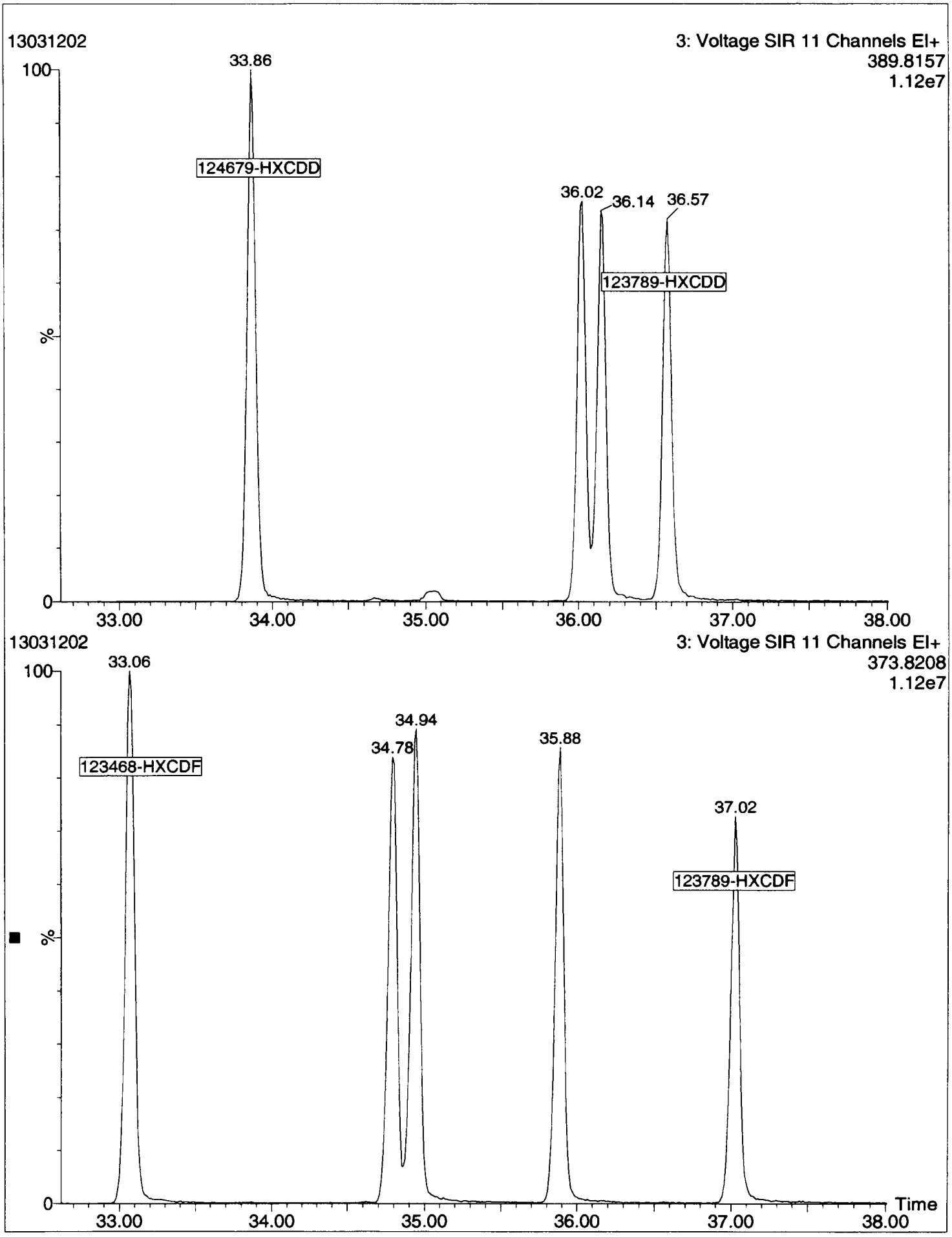
2.23e6
100
%
0
23.45
1368-TCDD
25.48
25.96
26.29
26.88
1289-TCDD
22.00
23.00
24.00
25.00
26.00
27.00
13031202
1: Voltage SIR 15 Channels EI+
303.9016
2.85e6
100
%
0
22.18
1368-TCDF
24.75
25.64
27.12
1289-TCDF
22.00
23.00
24.00
25.00
26.00
27.00
13031202
1: Voltage SIR 15 Channels EI+
339.8597
2.18e7
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
Time
28.00
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50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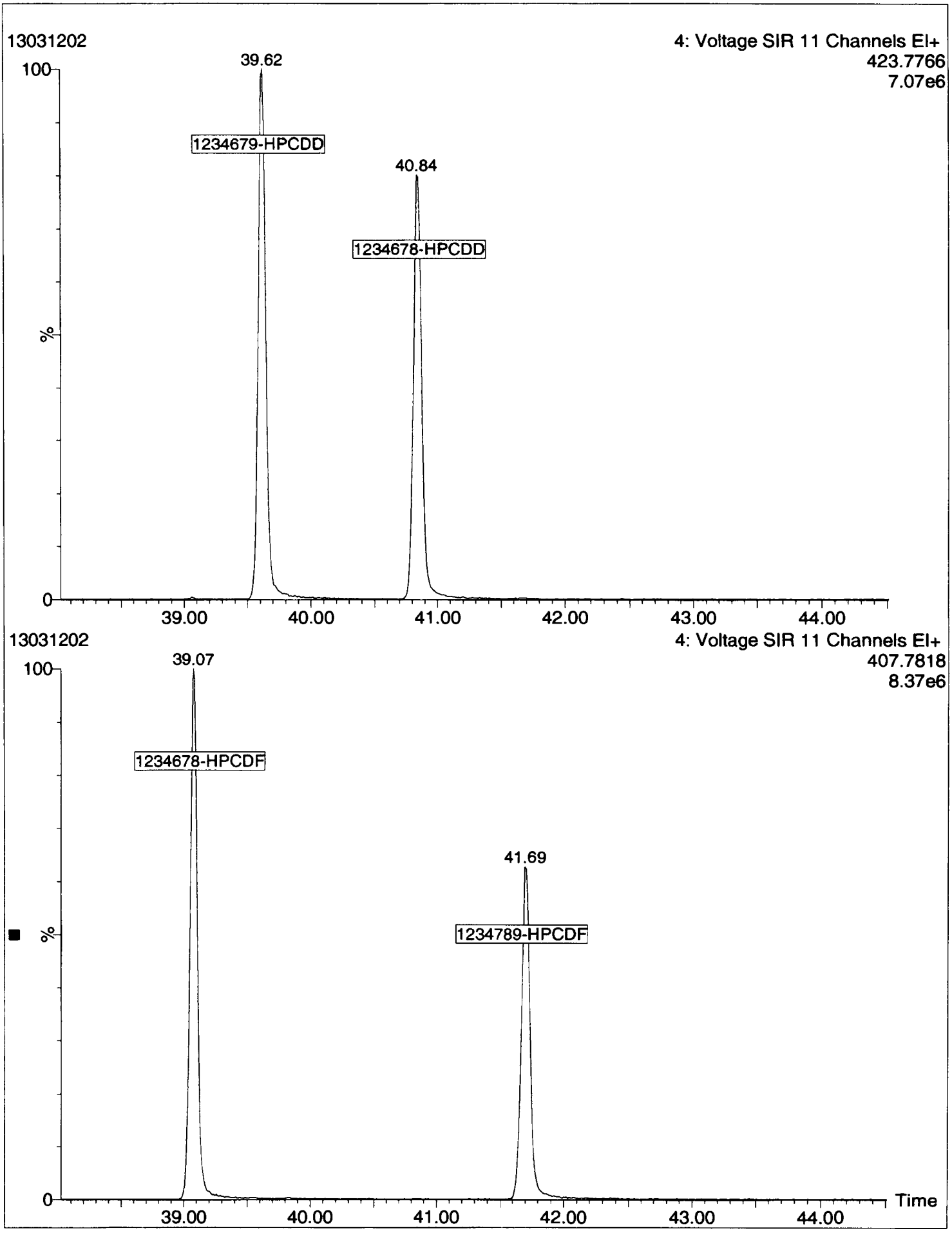
3: Voltage SIR 11 Channels EI+
389.8157
1.12e7
100
33.86
124679-HXCDD
36.02
36.14
36.57
123789-HXCDD
%
0
33.00
34.00
35.00
36.00
37.00
38.00
13031202
3: Voltage SIR 11 Channels EI+
373.8208
1.12e7
100
33.06
123468-HXCDF
34.94
34.78
35.88
37.02
123789-HXCDF
%
0
Time
33.00
34.00
35.00
36.00
37.00
38.00


13031202
4: Voltage SIR 11 Channels EI+
423.7766
7.07e6
39.62
1234679-HPCDD
40.84
1234678-HPCDD
100
%
0
39.00
40.00
41.00
42.00
43.00
44.00
13031202
4: Voltage SIR 11 Channels EI+
407.7818
8.37e6
39.07
1234678-HPCDF
41.69
1234789-HPCDF
100
%
0
Time
39.00
40.00
41.00
42.00
43.00
44.00

Identity Audit Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
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Printed: Wednesday, March 13, 2013 10:44:55 Pacific Daylight Time

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Process Integrate		
Process Calibrate		
Process Quantify		
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Peak modified	Sample:13031204, Compound:HF, RT:34.771	1
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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
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Pre modification peak	Sample:13031204, Compound:TD, RT:26.272	1
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Pre modification peak	Sample:13031204, Compound:TD, RT:26.287	1
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Peak deleted	Sample:13031204, Compound:PP, RT:26.989	1
Peak deleted	Sample:13031204, Compound:PD, RT:30.048	1
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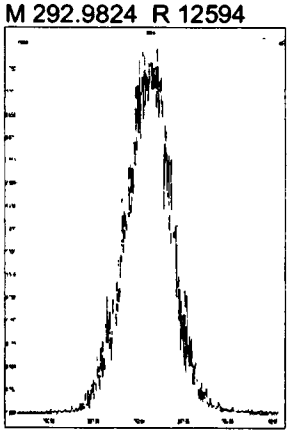

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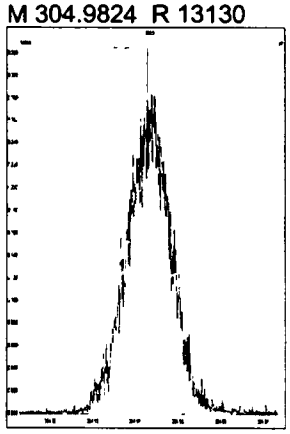

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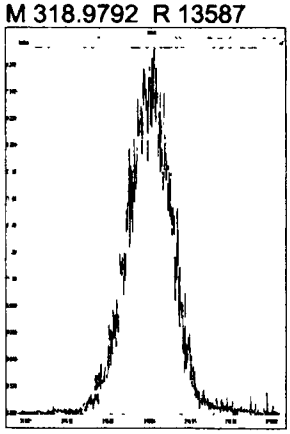

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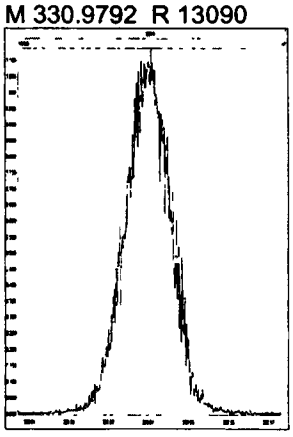

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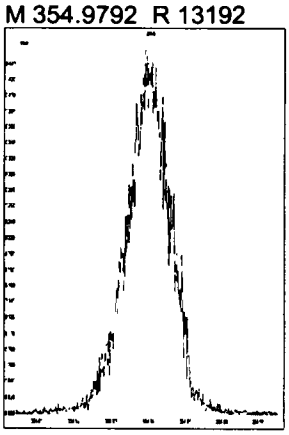

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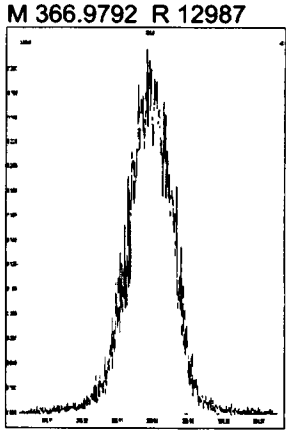

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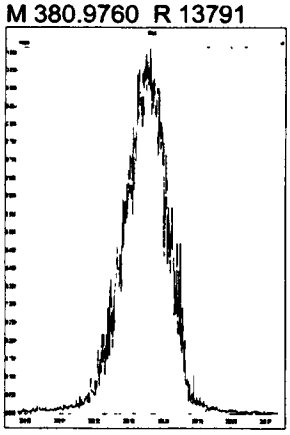

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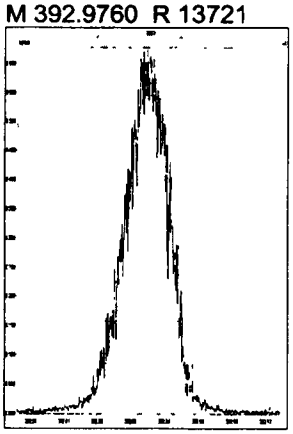

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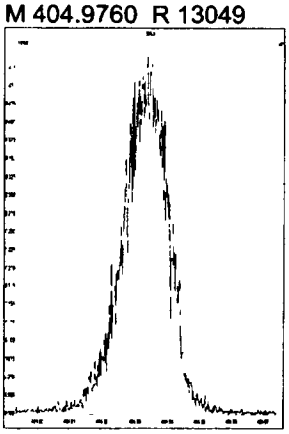

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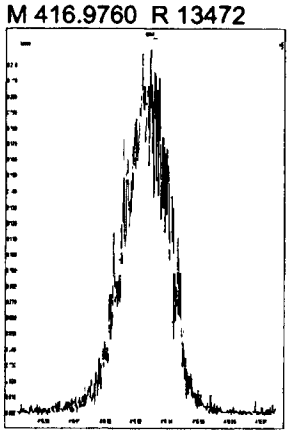

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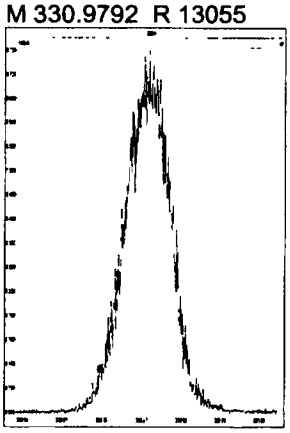

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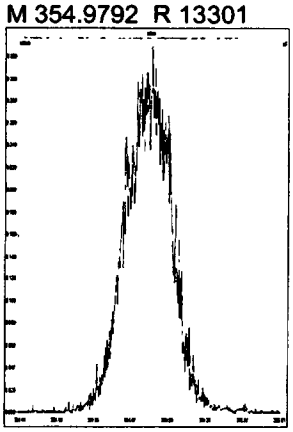
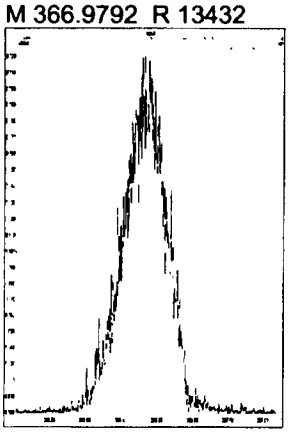


M 366.9792 R 13432



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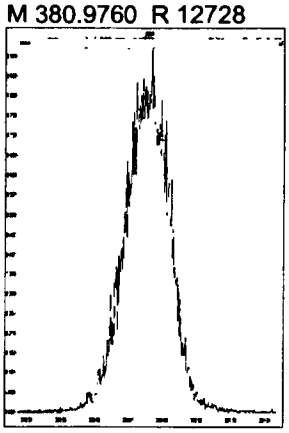

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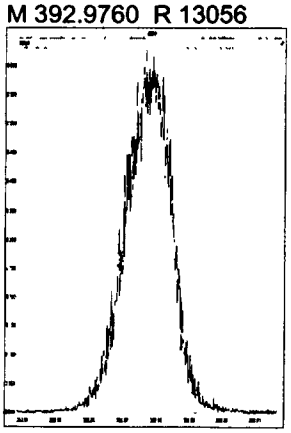

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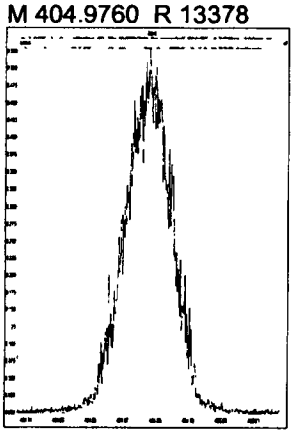

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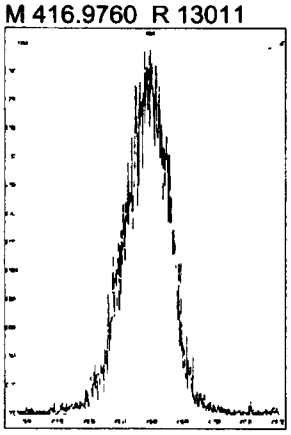

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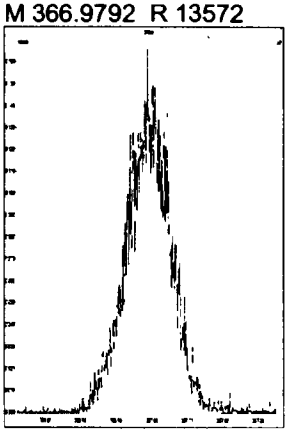

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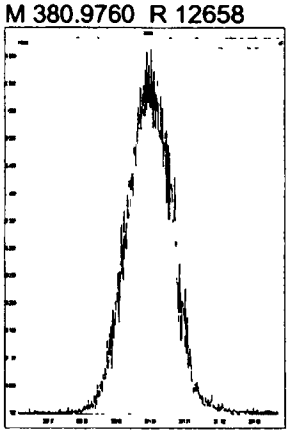

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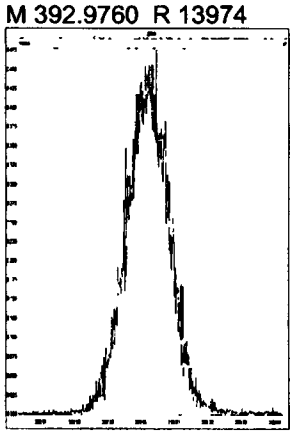

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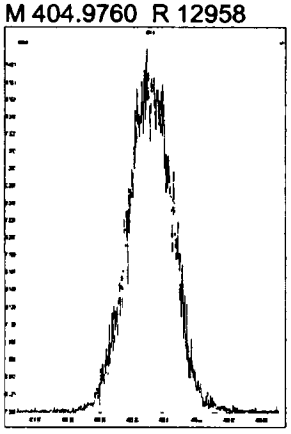

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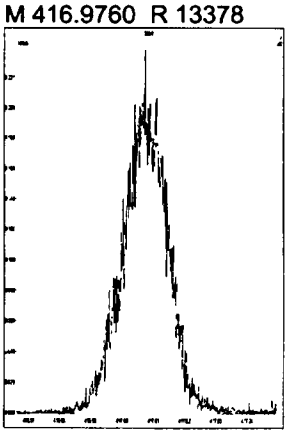

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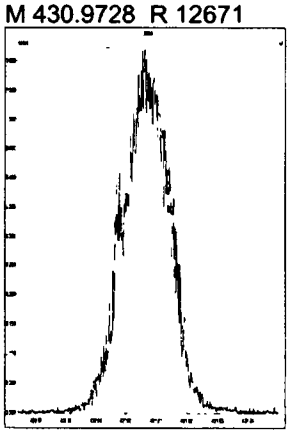

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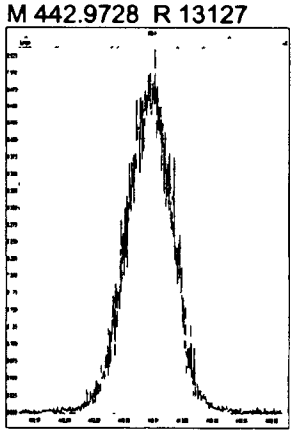

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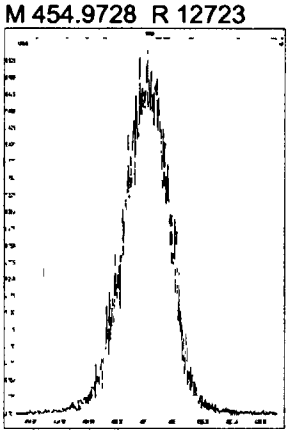

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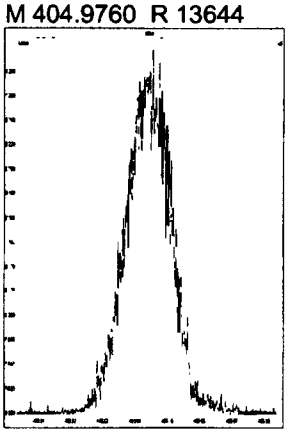

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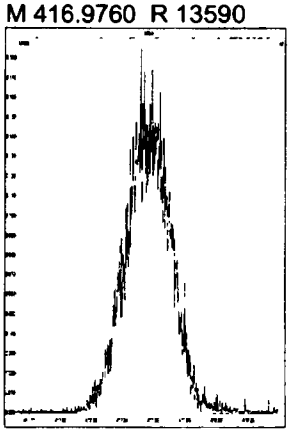

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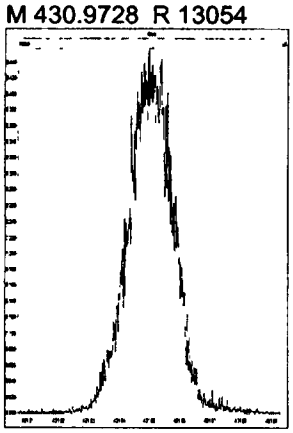

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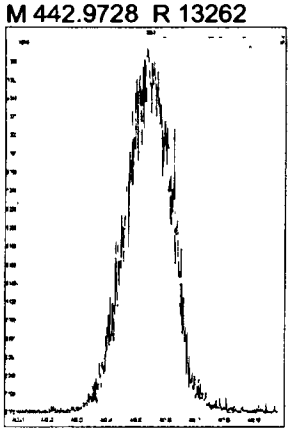

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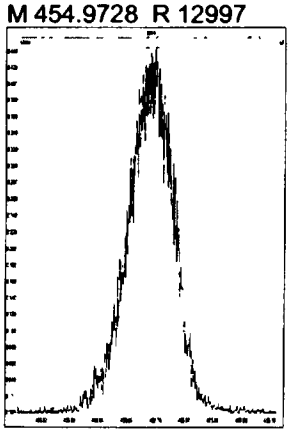

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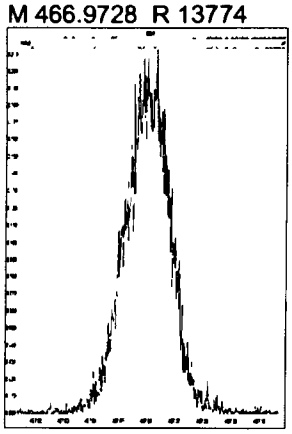

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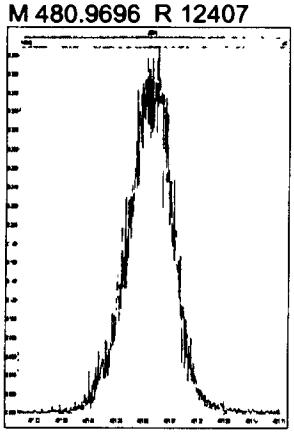

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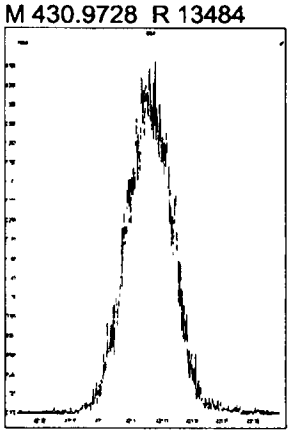

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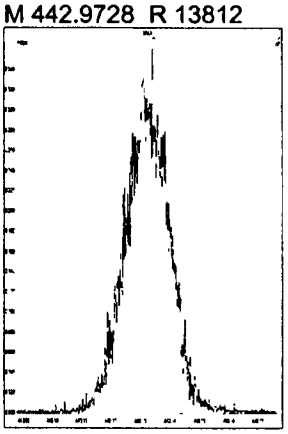

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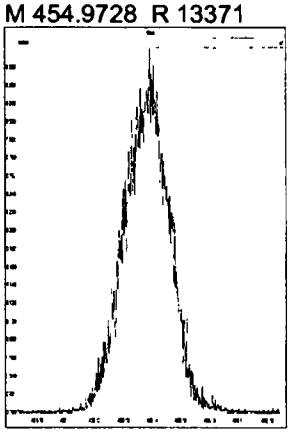

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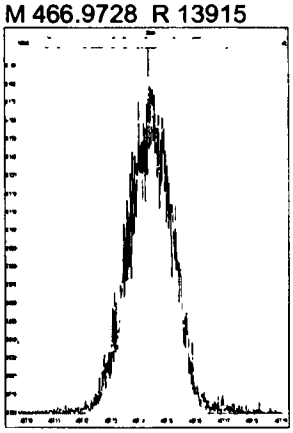

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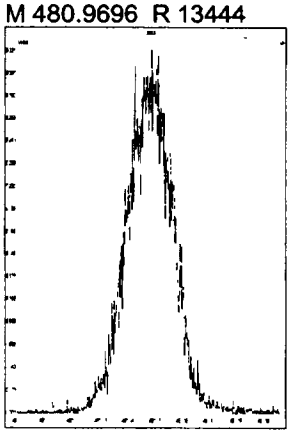

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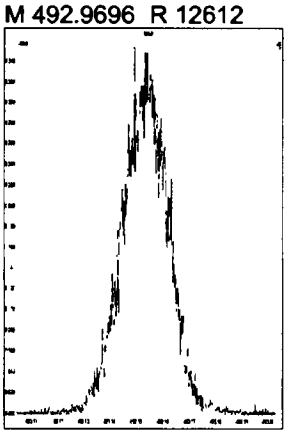

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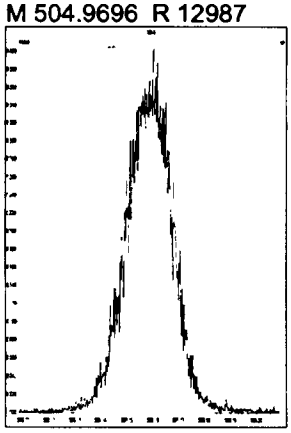

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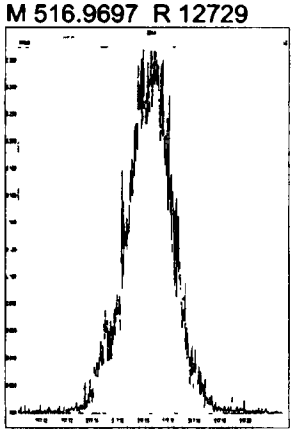

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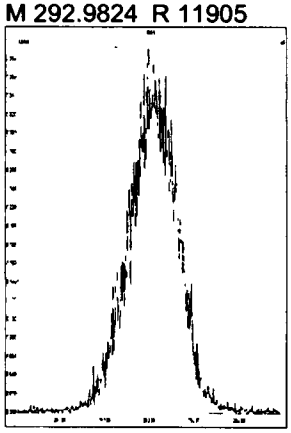

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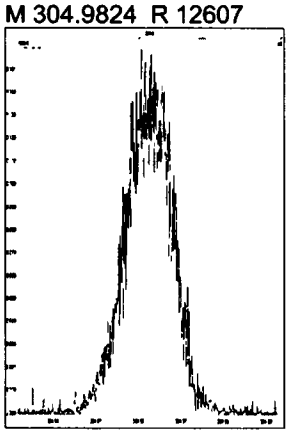
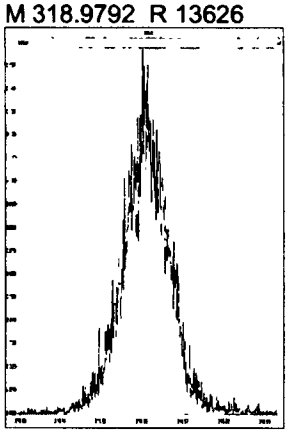


M 318.9792 R 13626



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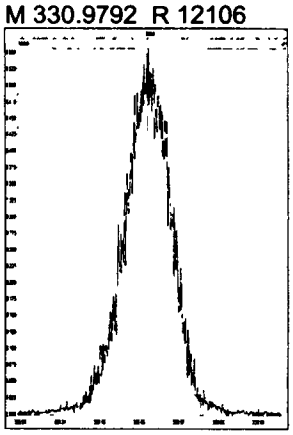

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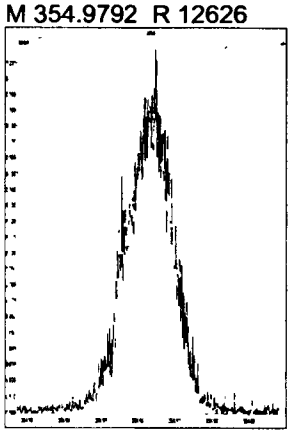

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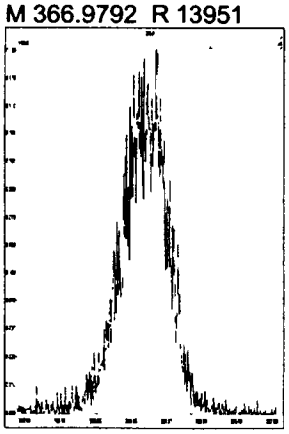

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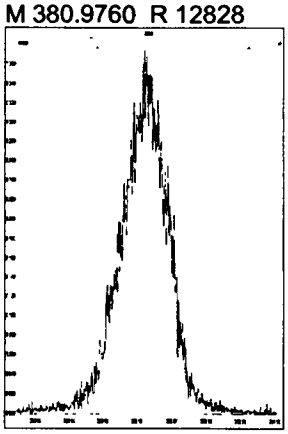

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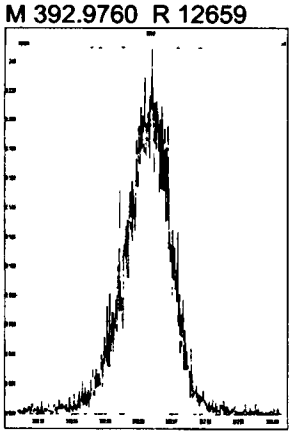

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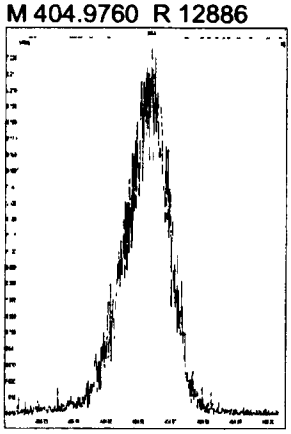

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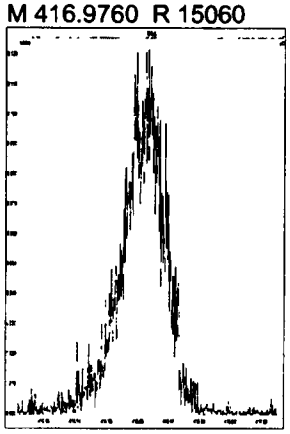

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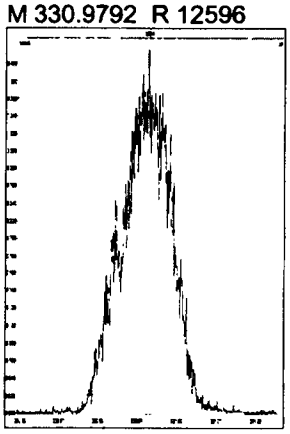

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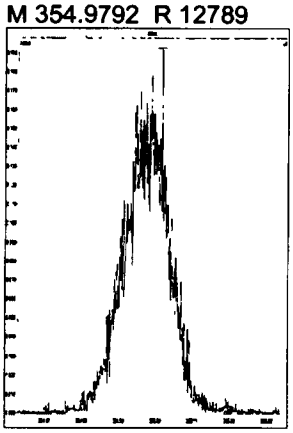

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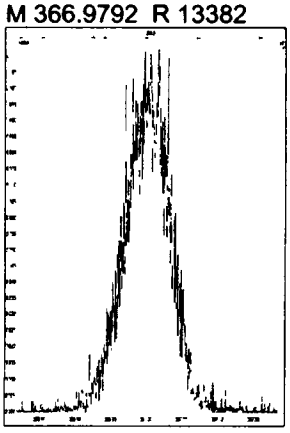

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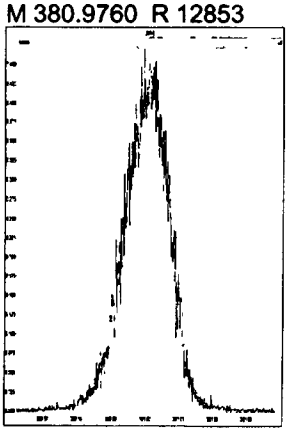

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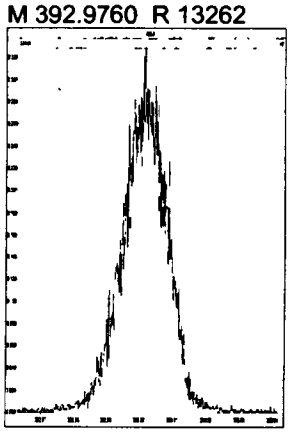

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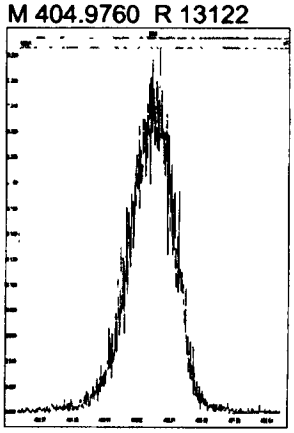

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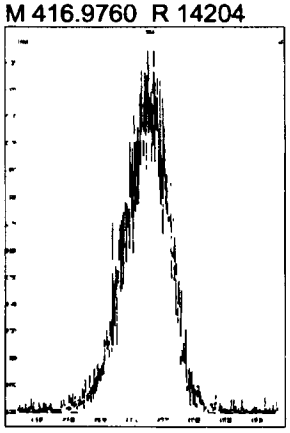

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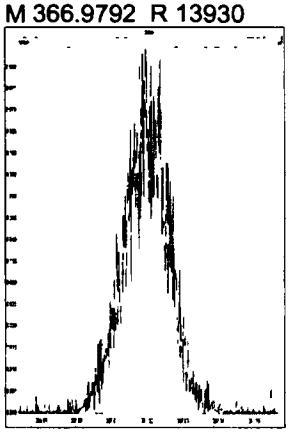

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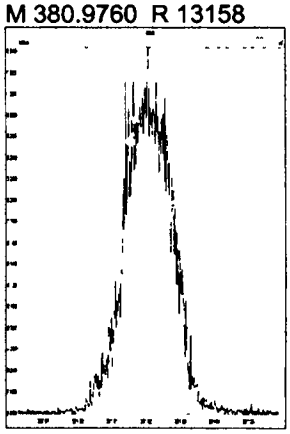

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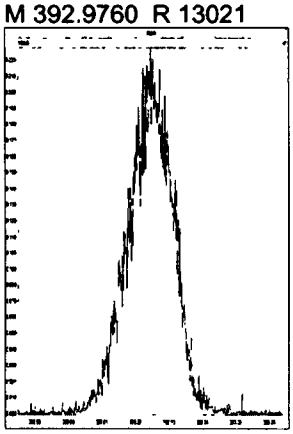
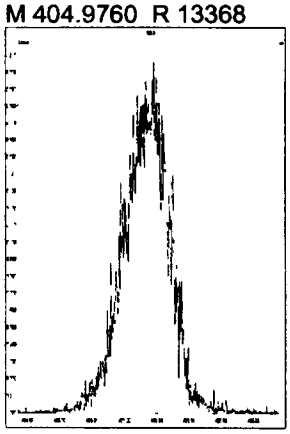
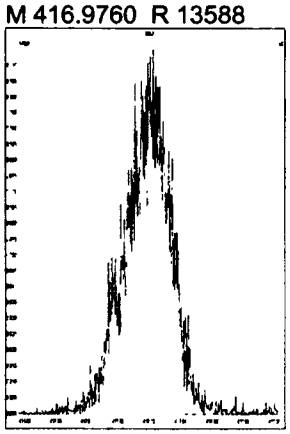


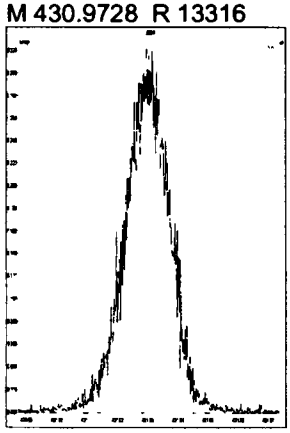
M 404.9760 R 13368



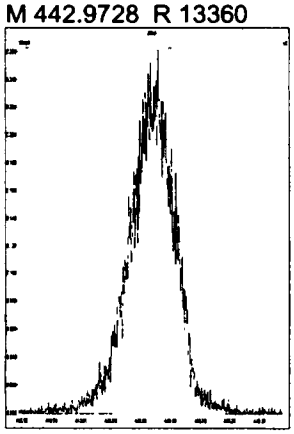
M 416.9760 R 13588



M 430.9728 R 13316



M 442.9728 R 13360



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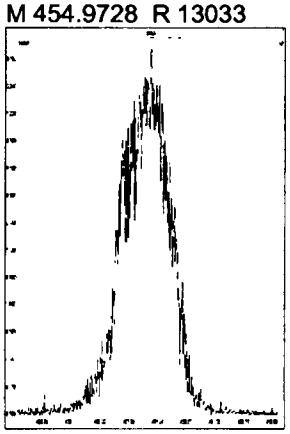

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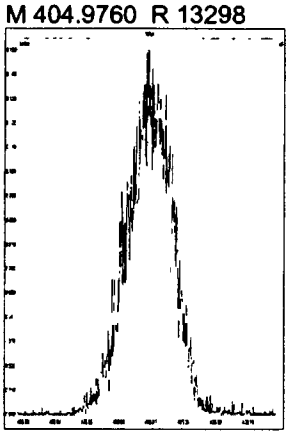
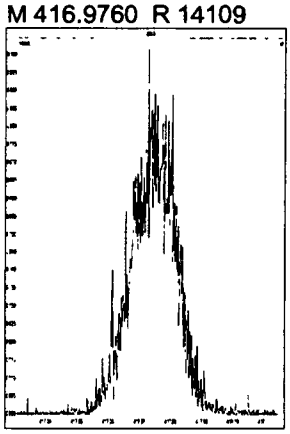


M 416.9760 R 14109



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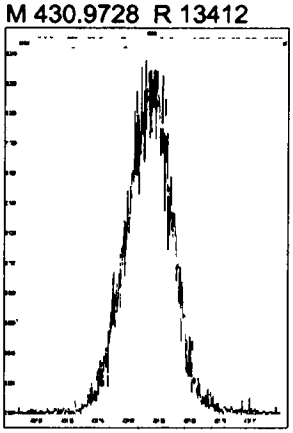
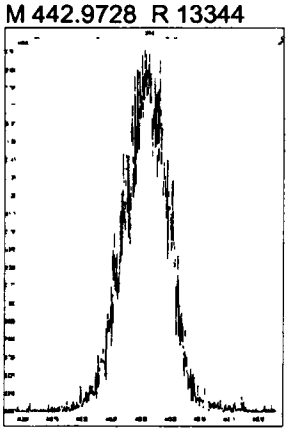
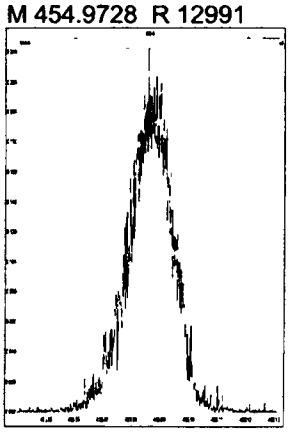


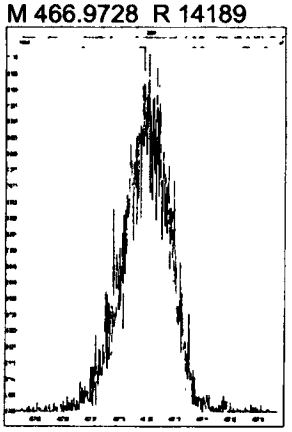
M 442.9728 R 13344



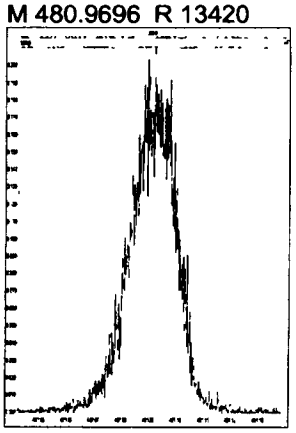
M 454.9728 R 12991



M 466.9728 R 14189



M 480.9696 R 13420



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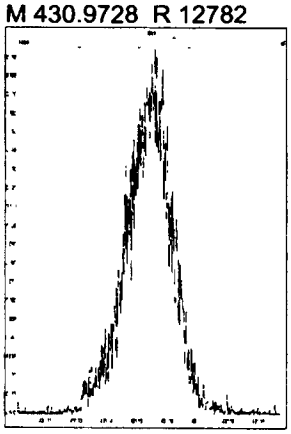
M 430.9728 R 12782



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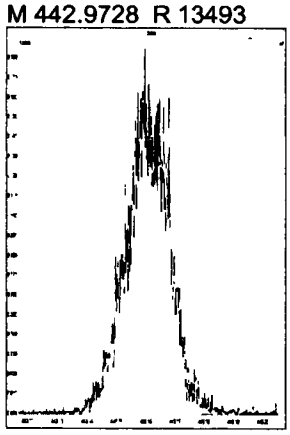
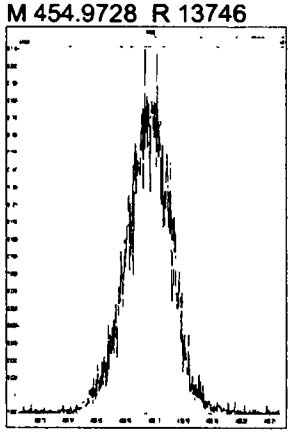
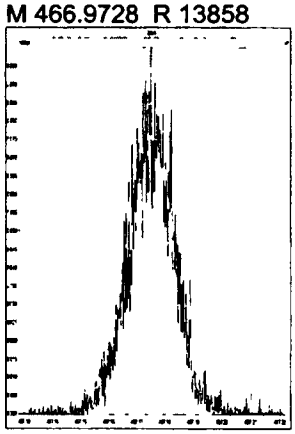


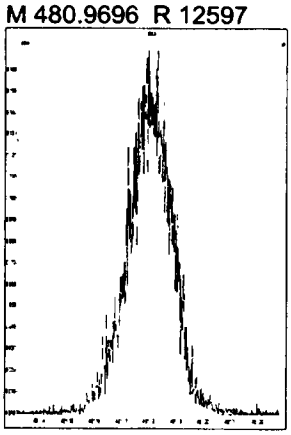
M 454.9728 R 13746



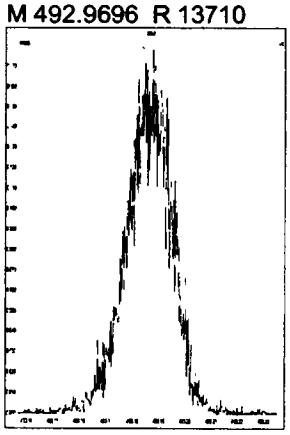
M 466.9728 R 13858



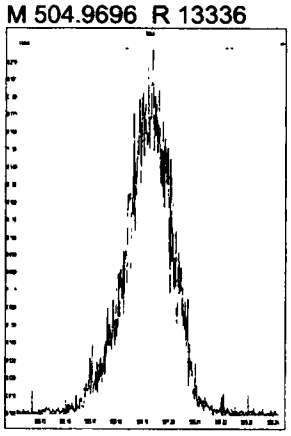
M 480.9696 R 12597



M 492.9696 R 13710



M 504.9696 R 13336



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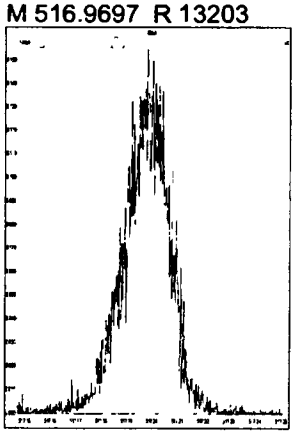

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Printed: Wednesday, March 13, 2013 10:42:20 Pacific Daylight Time

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

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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

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
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ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

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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							
	FUNCTION2 PFK			2.08e4							0.000
	FUNCTION3 PFK			0.00e0							
	FUNCTION4 PFK			1.47e6							
	FUNCTION5 PFK			2.01e5							
	FUNCTION1 HXCDPE			9.78e1							0.000
	FUNCTION1 HPCDPE			6.65e2							0.000
	FUNCTION2 HPCDPE			3.68e2							0.000
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Calibration: 13 Mar 2013 10:38:15

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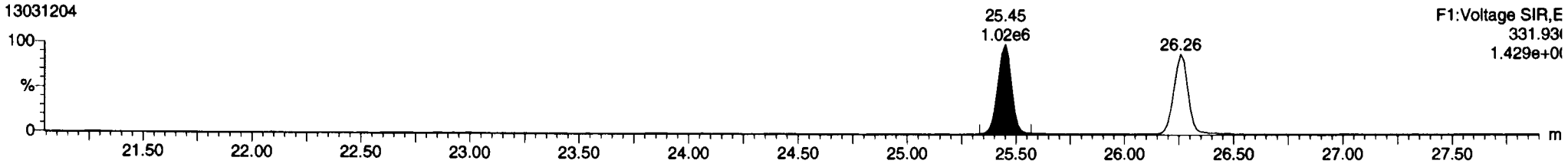
13C-1234-TCDD



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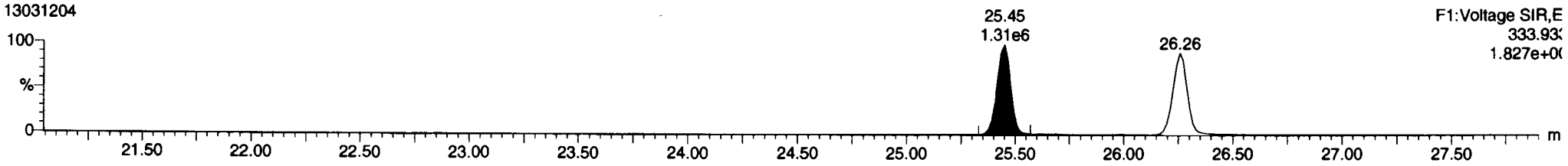

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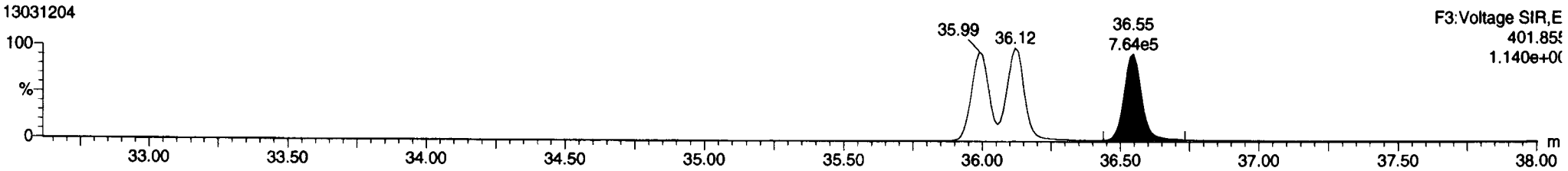

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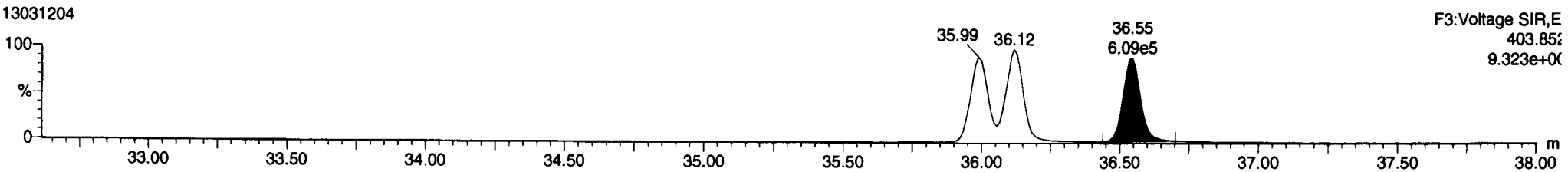

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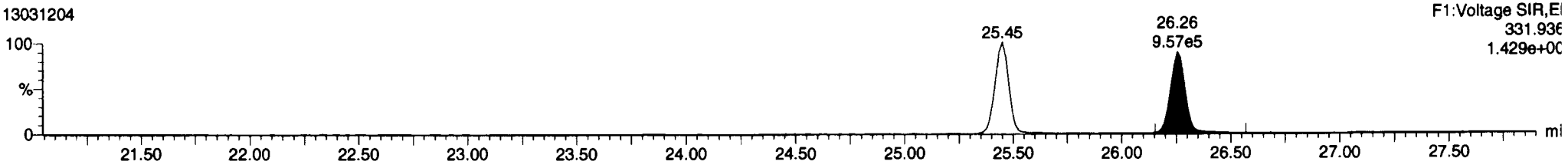
13C-2378-TCDD



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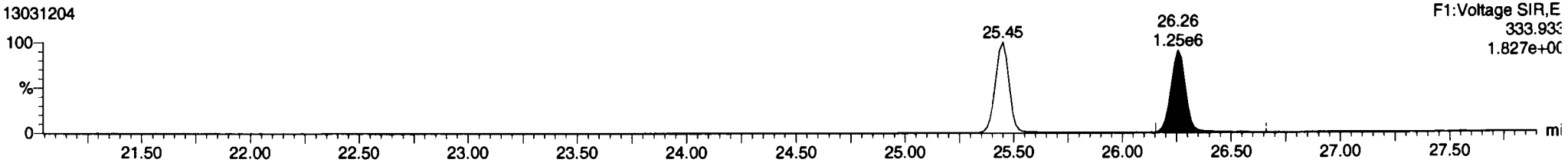

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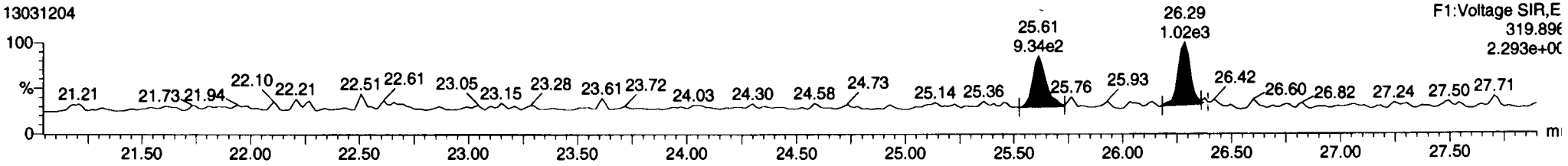
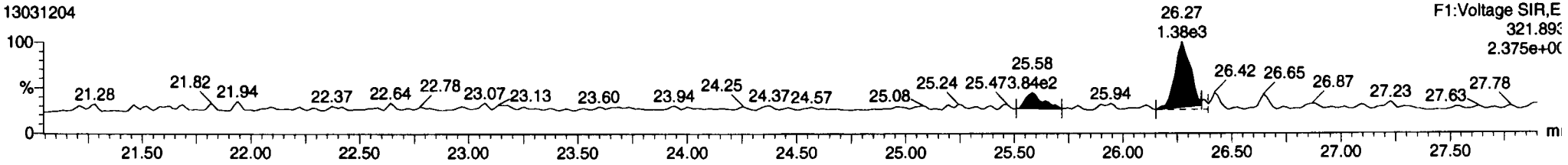
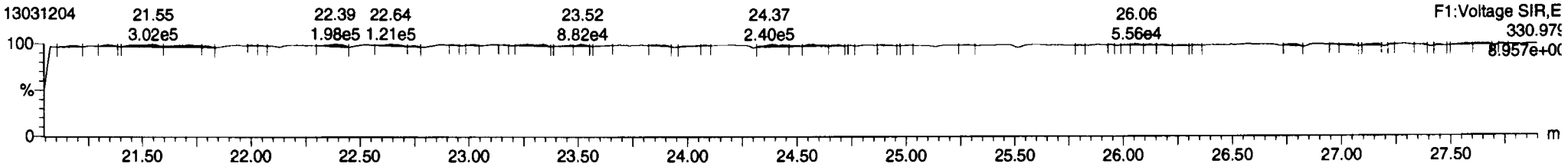


Total-tetradioxins



FUNCTION1 PFK



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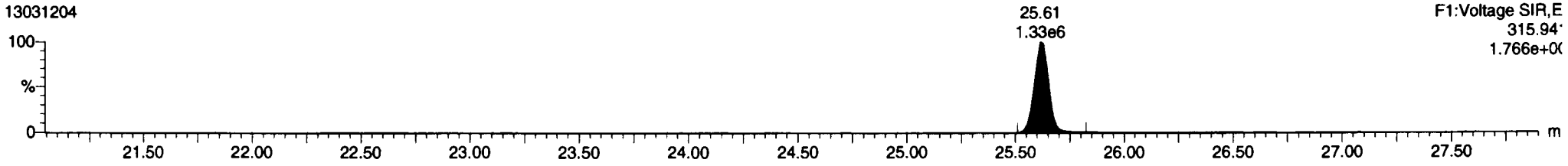
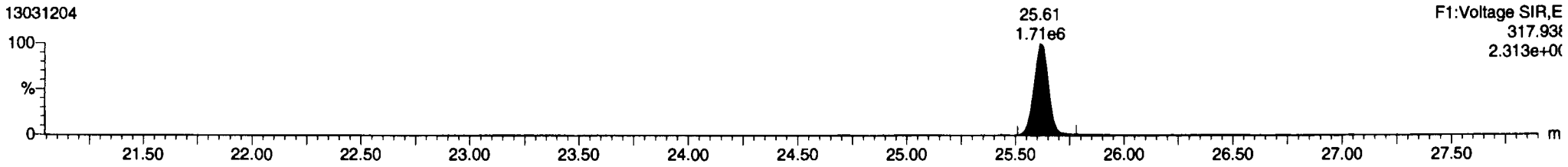
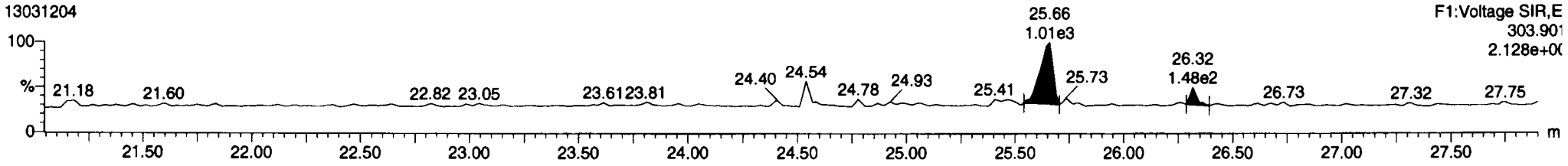
13C-2378-TCDF



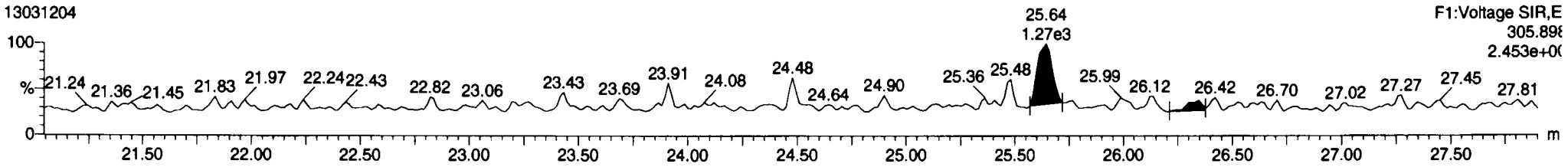
13C-2378-TCDF



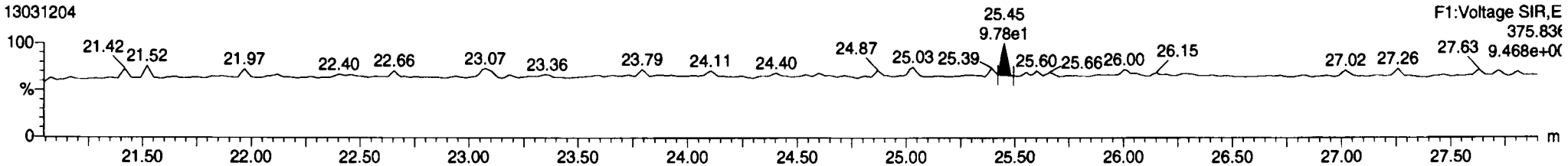
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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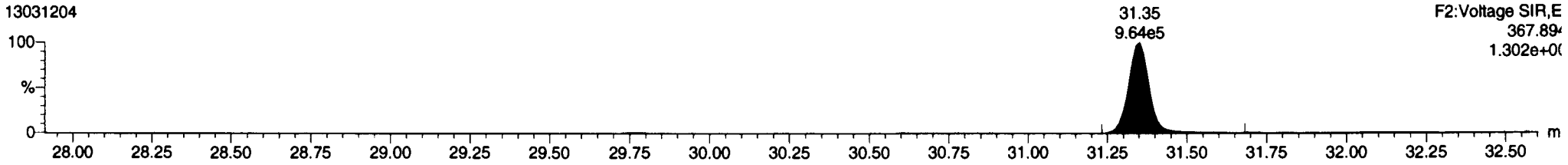
ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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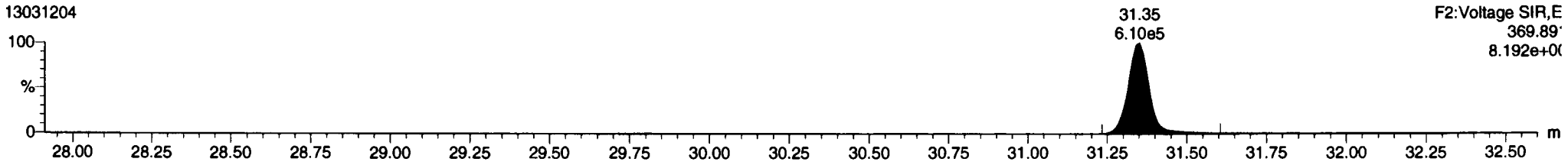
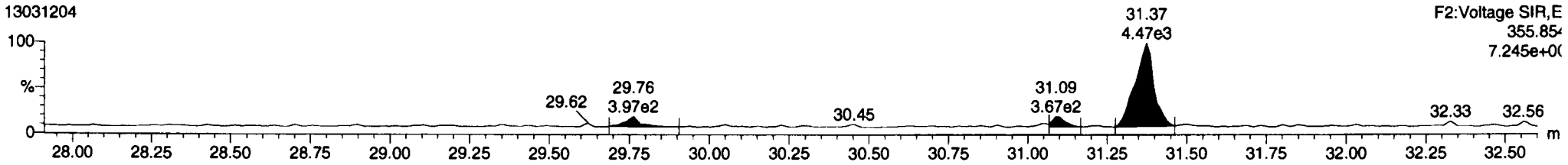
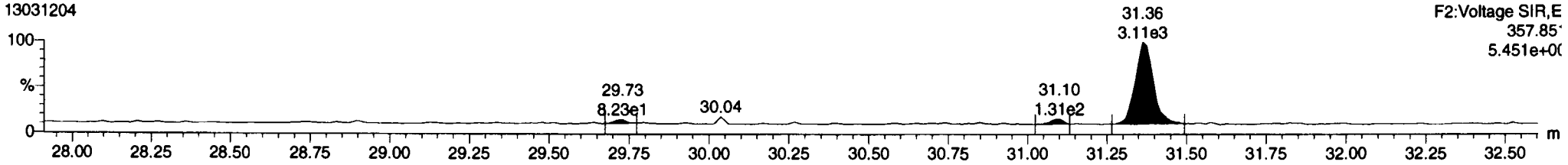


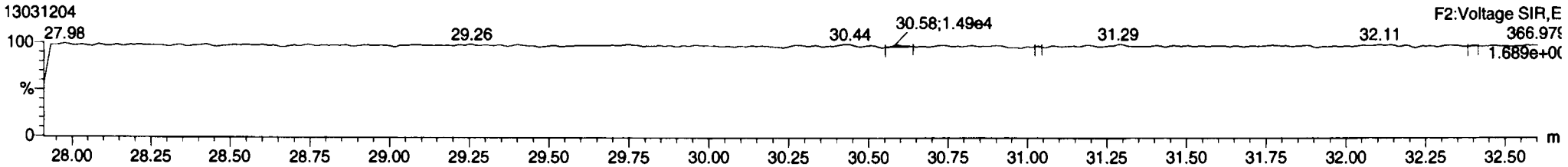
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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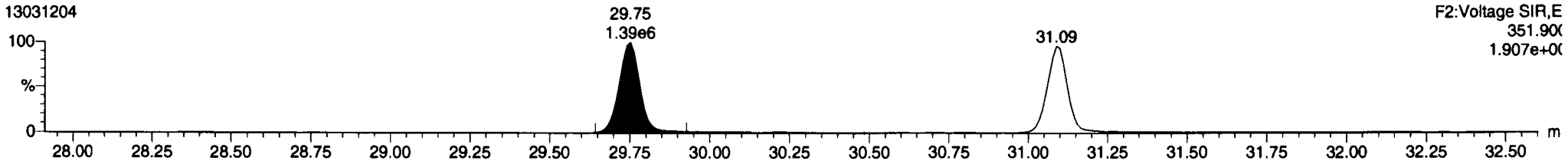
13C-12378-PeCDF



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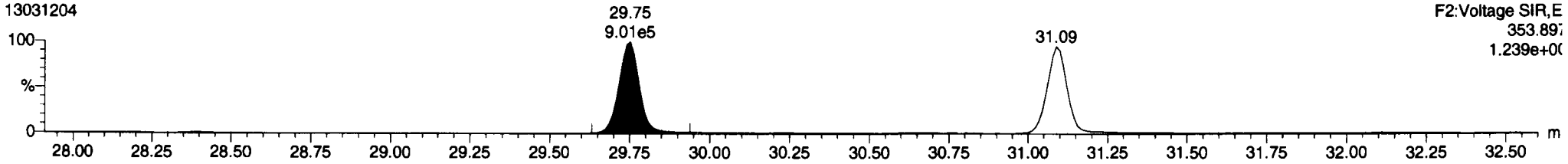

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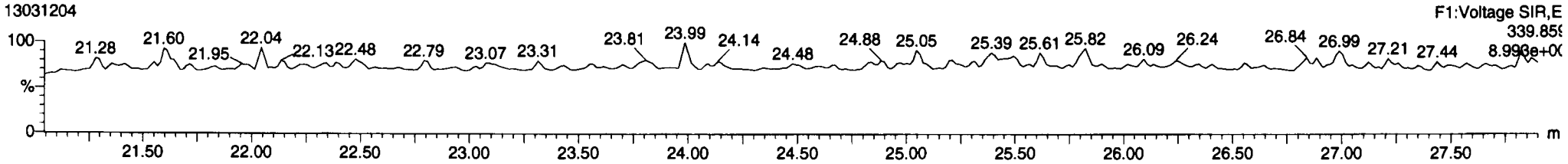
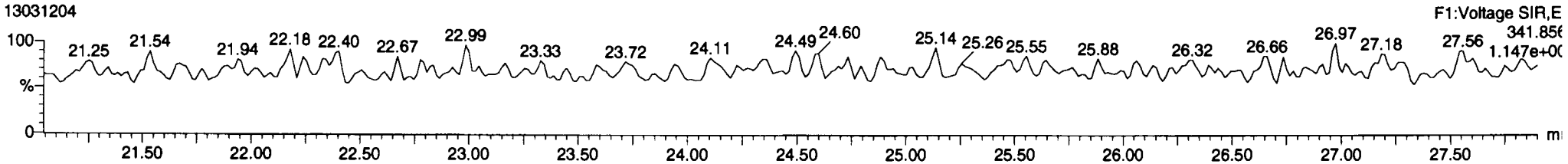
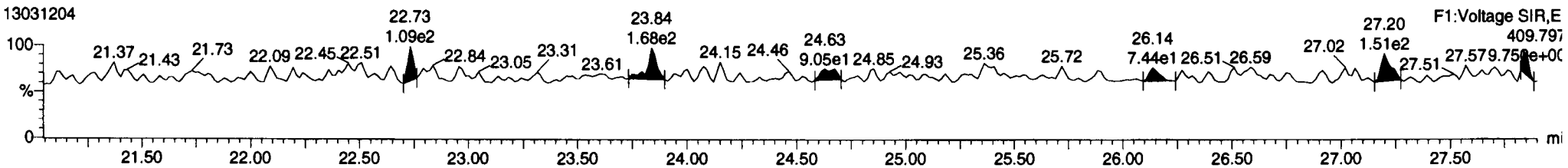


Total-penta1



FUNCTION1 HPCDPE



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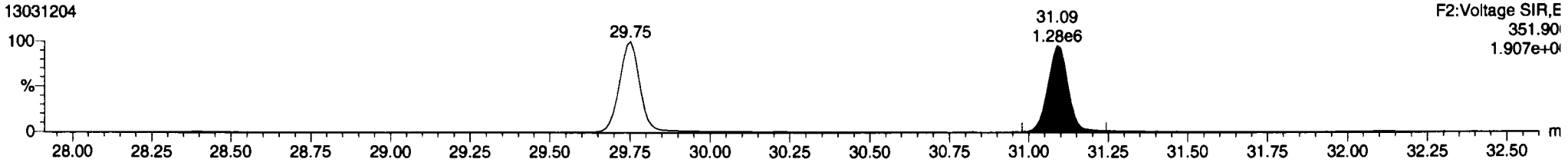
13C-23478-PeCDF



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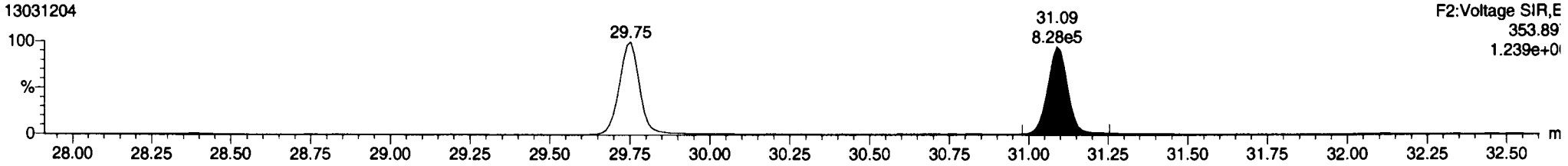
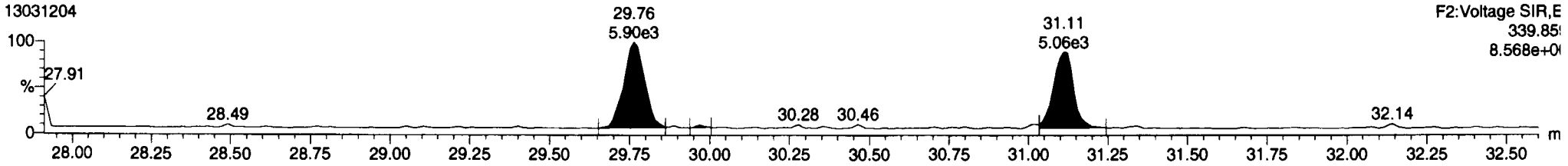
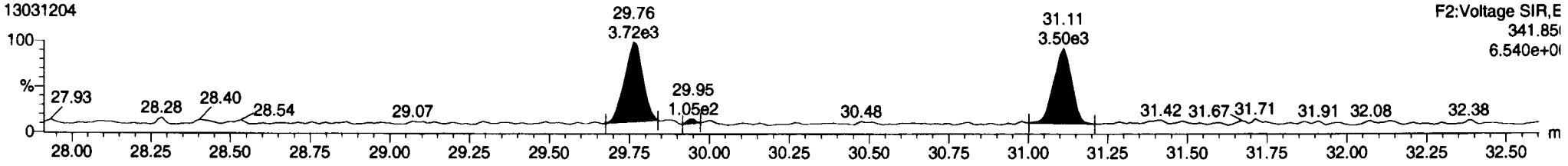


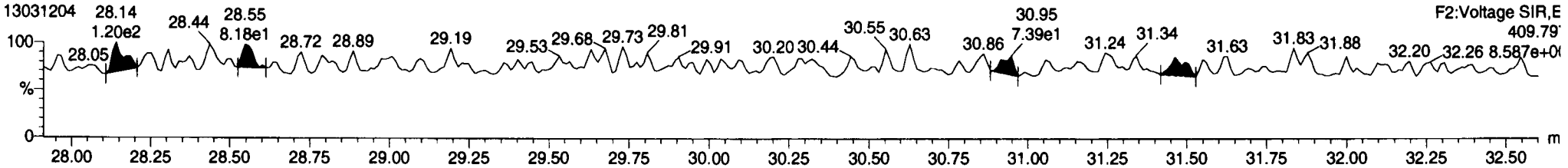
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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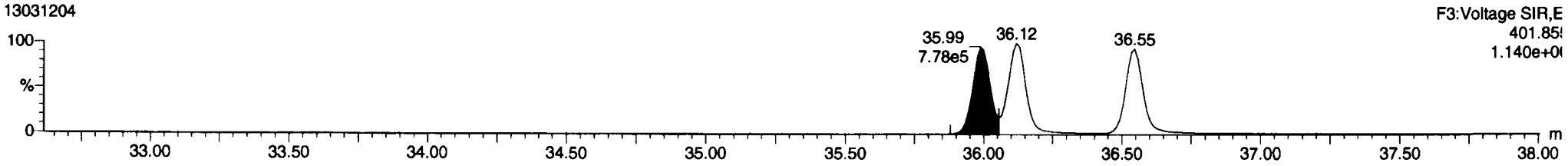
13C-123478-HxCDD



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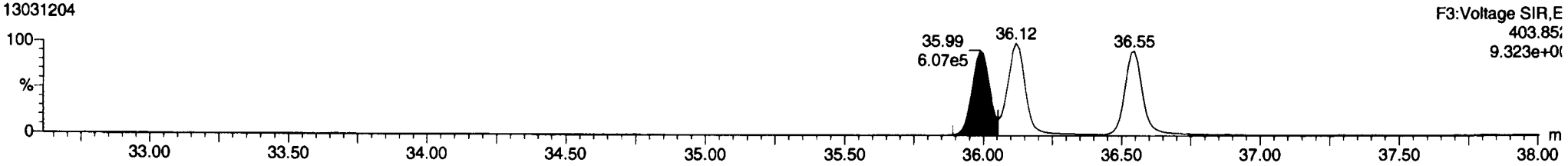
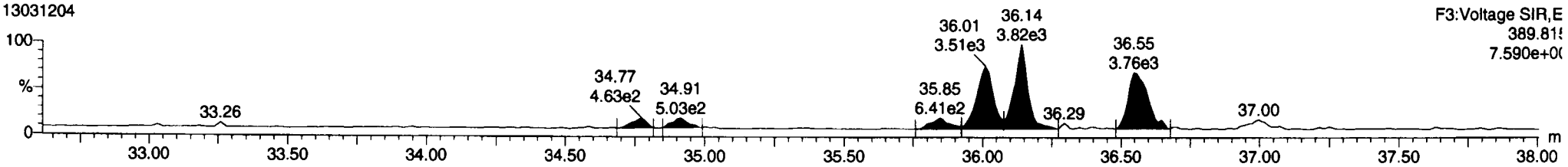
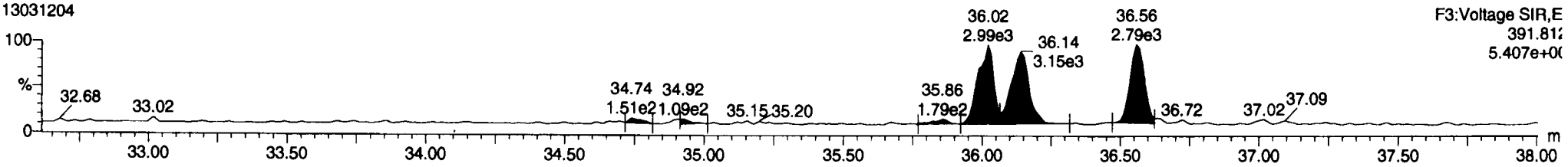


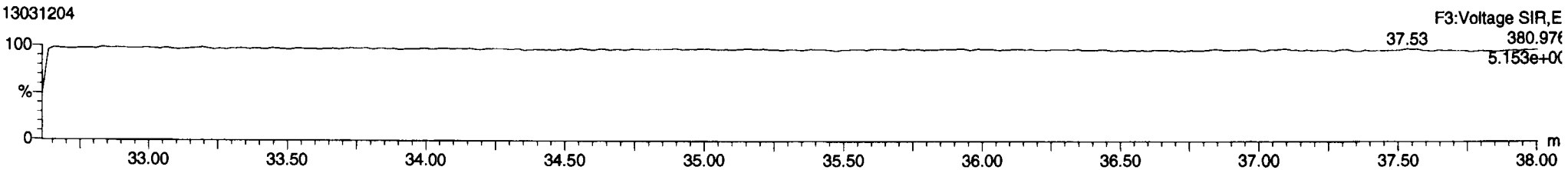
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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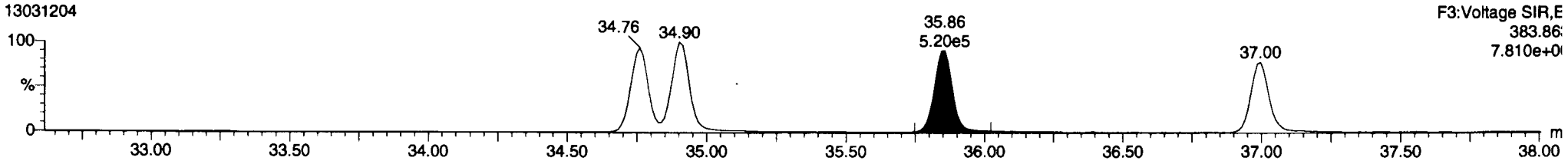
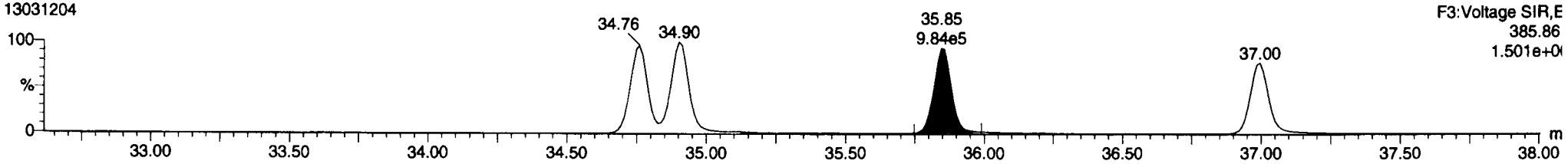
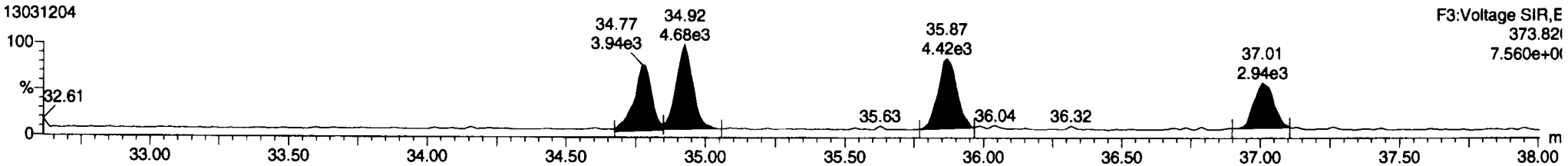
13C-234678-HxCDF



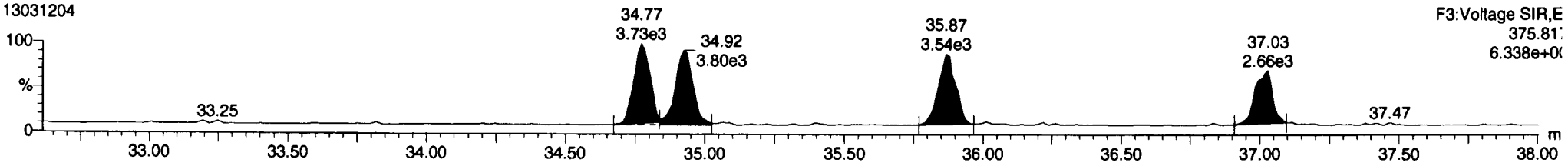
13C-234678-HxCDF



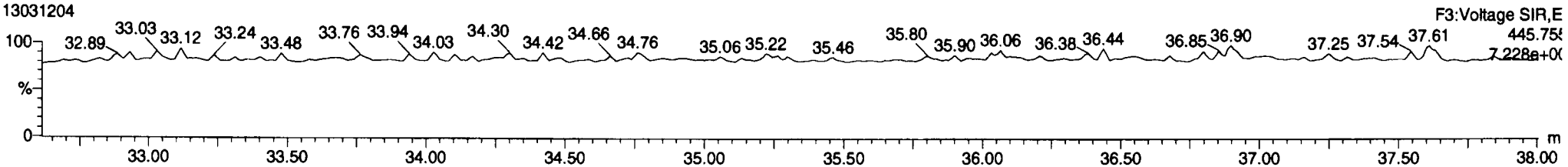
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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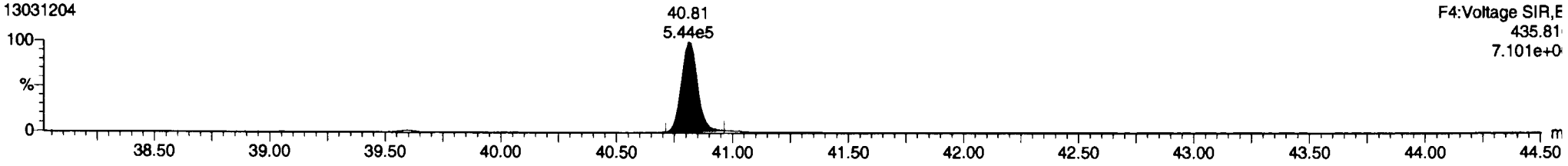
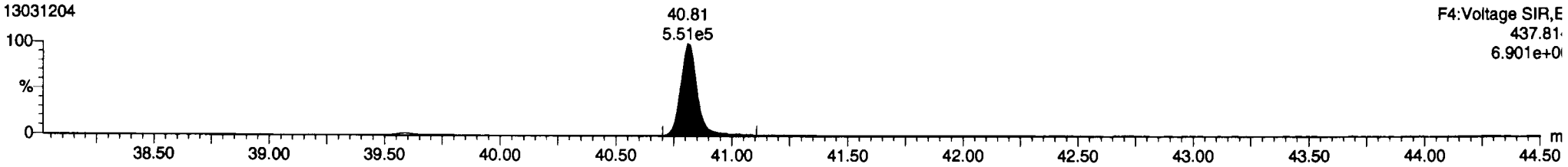
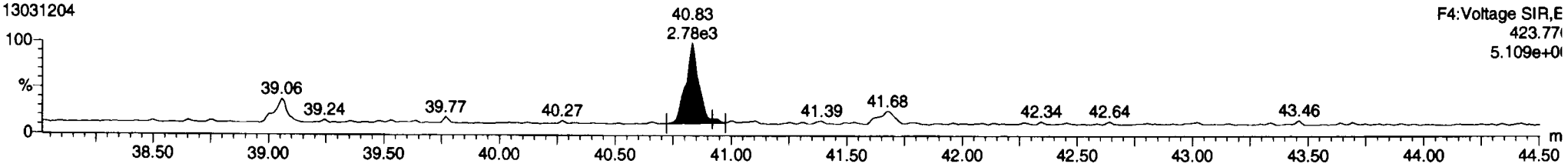
13C-1234678-HpCDD



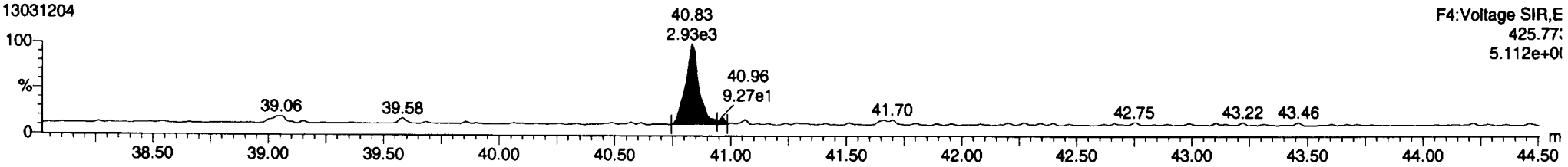
13C-1234678-HpCDD



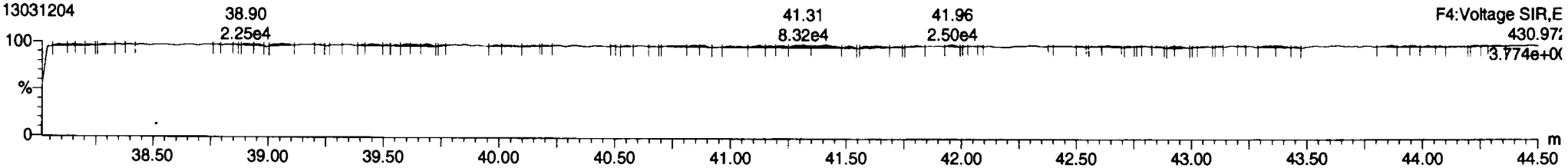
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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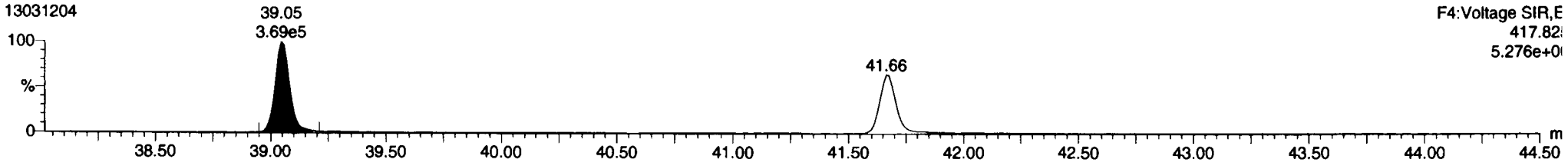
13C-1234678-HpCDF



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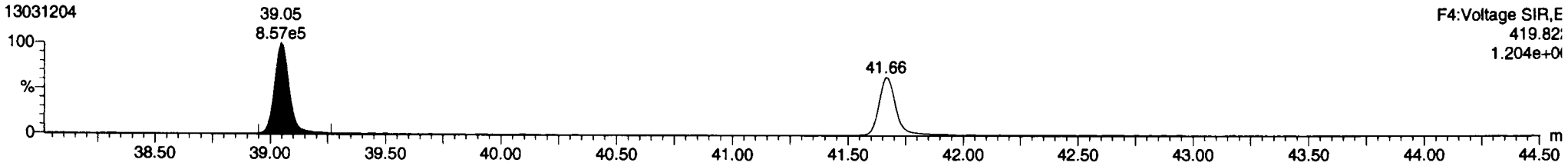
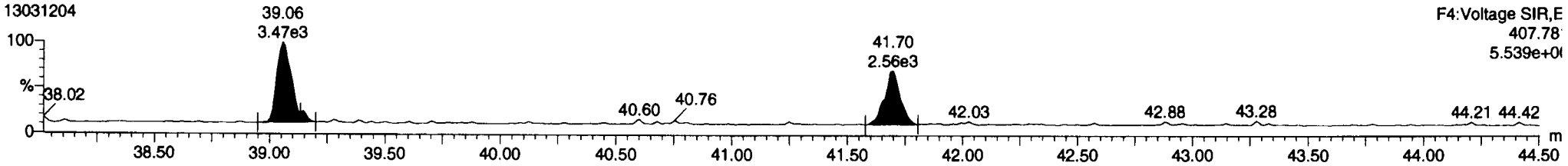
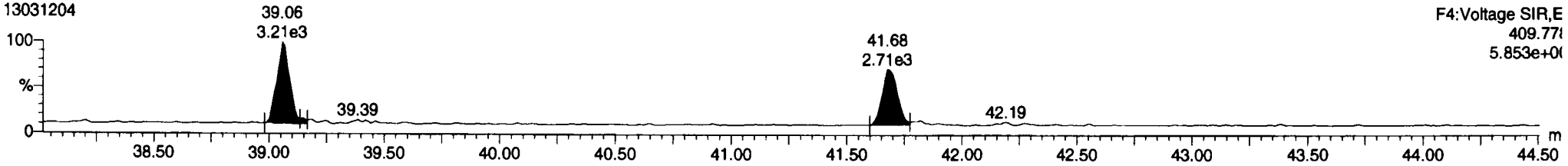


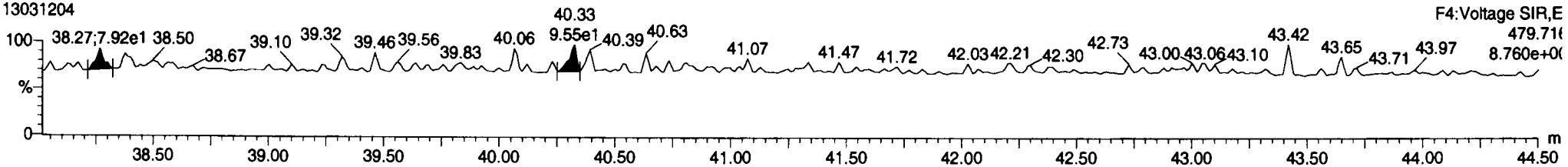
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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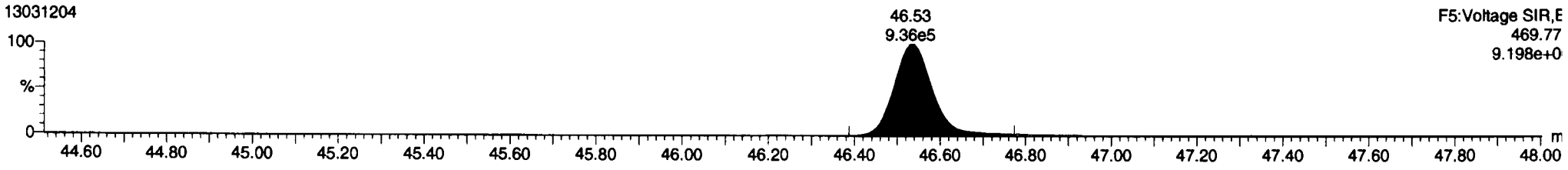
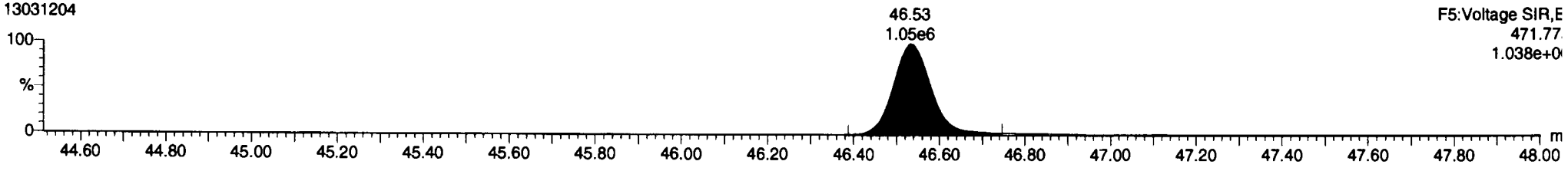
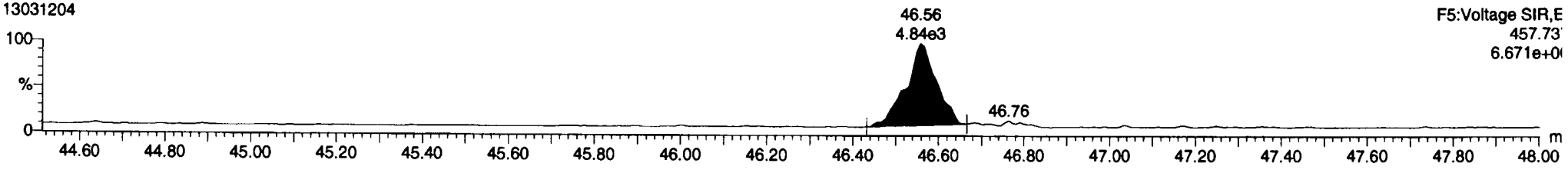
13C-OCDD



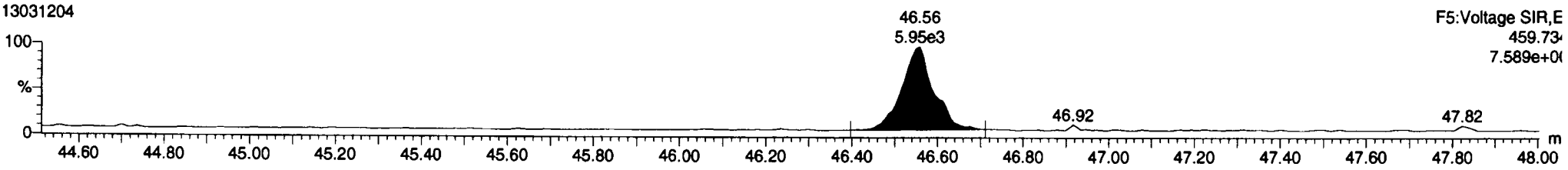
13C-OCDD



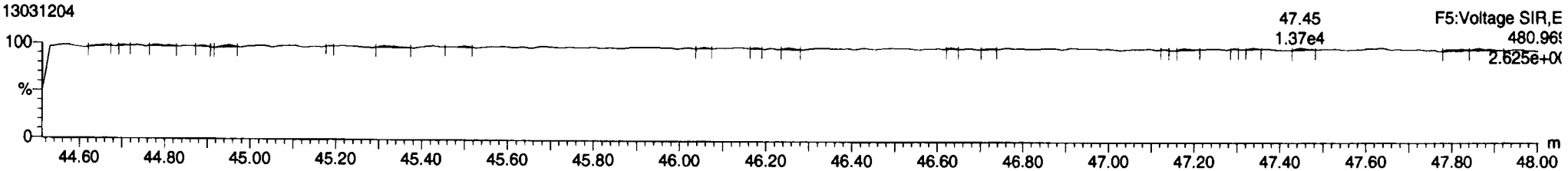
OCDD



OCDD



FUNCTION5 PFK



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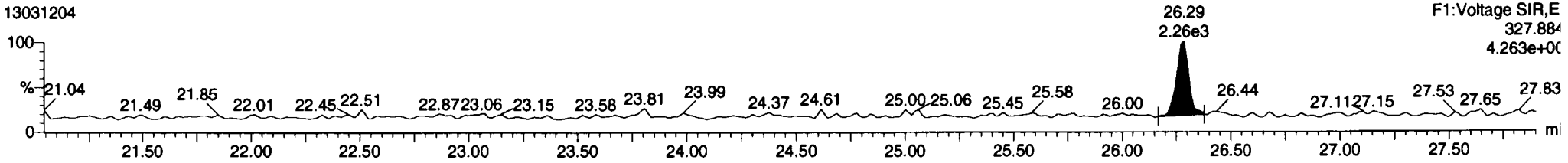
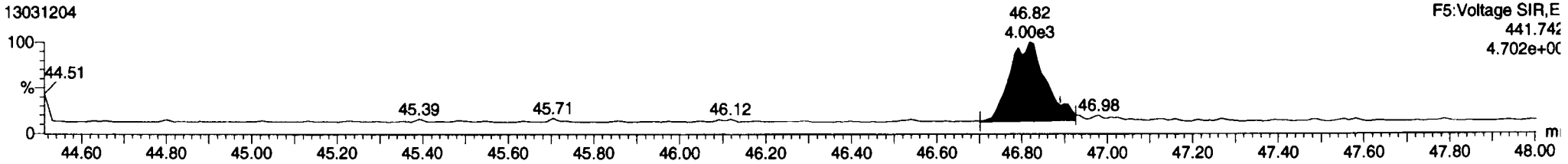
Printed: Wednesday, March 13, 2013 10:42:20 Pacific Daylight Time

ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

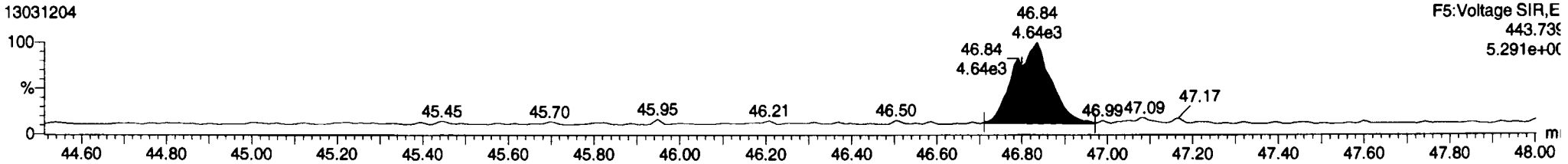
37CL-2378-TCDD



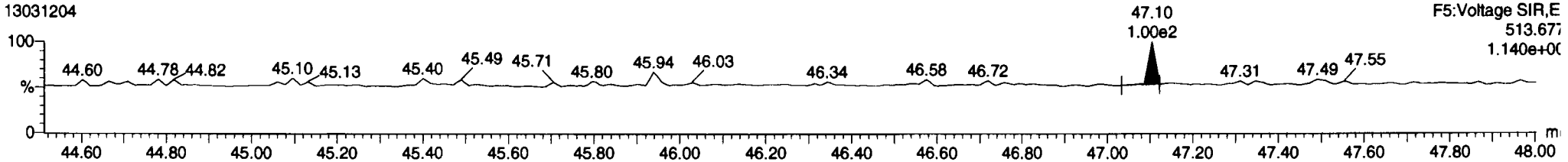
OCDF



OCDF



FUNCTION5 DCDPE



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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

ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

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[redacted]	12378-PeCDF	29.764	1.001	4.54e4	3.11e4	0.836	1.459	1.550	335.7	NO	2.480	2.480
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[redacted]	2378-TCDD	26.272	1.001	6.90e3	9.52e3	0.980	0.725	0.770	82.3	NO	0.475	0.475
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[redacted]	123478-HxCDD	36.001	1.000	2.87e4	2.43e4	0.941	1.180	1.240	232.6	NO	2.563	2.563
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[redacted]	OCDD	46.553	1.000	3.90e4	4.44e4	0.969	0.879	0.890	277.8	NO	4.951	4.951
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[redacted]	13C-123478-HxCDF	34.752	0.951	8.17e5	1.61e6	1.123	0.507	0.510	2075.2	NO		95.896
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[redacted]	13C-1234678-HpCDF	39.048	1.069	6.11e5	1.39e6	0.896	0.438	0.440	2376.0	NO		99.142
[redacted]	13C-1234789-HpCDF	41.668	1.140	4.81e5	1.10e6	0.693	0.438	0.440	1640.5	NO		100.914
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[redacted]

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

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	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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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

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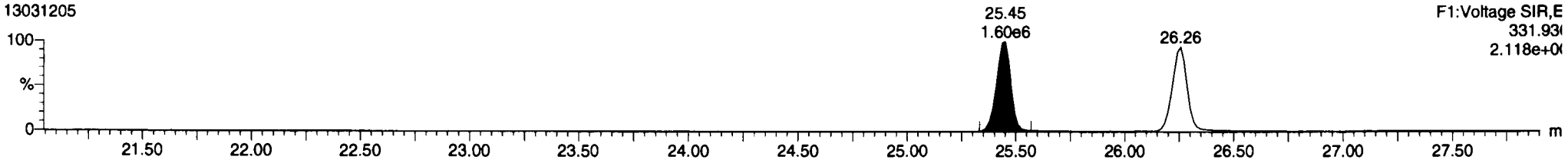
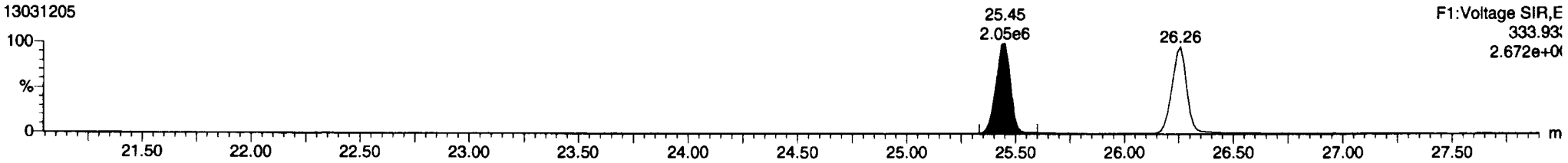
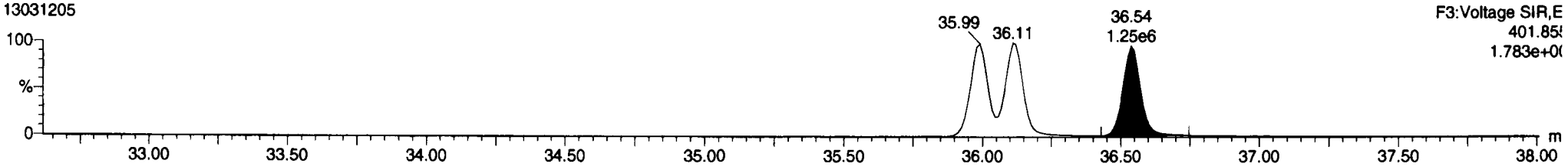
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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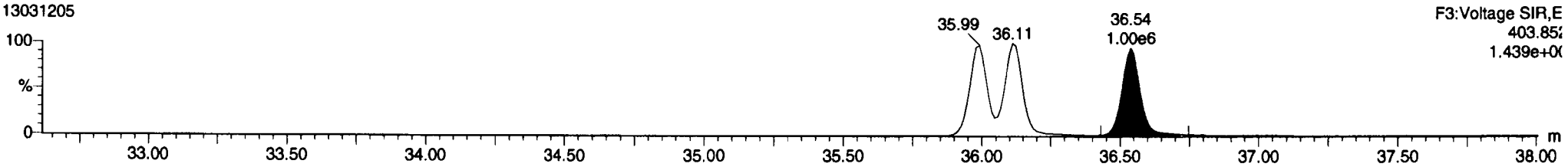

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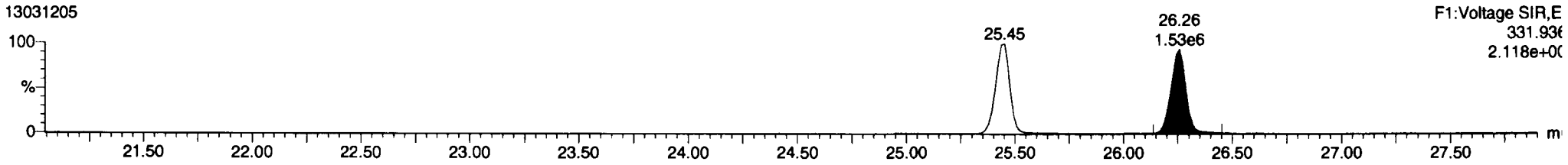
13C-2378-TCDD



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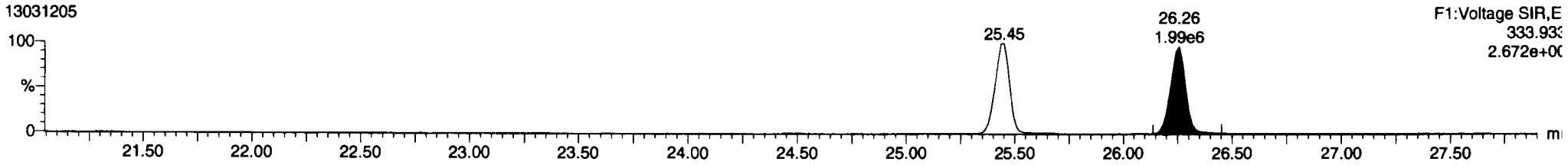
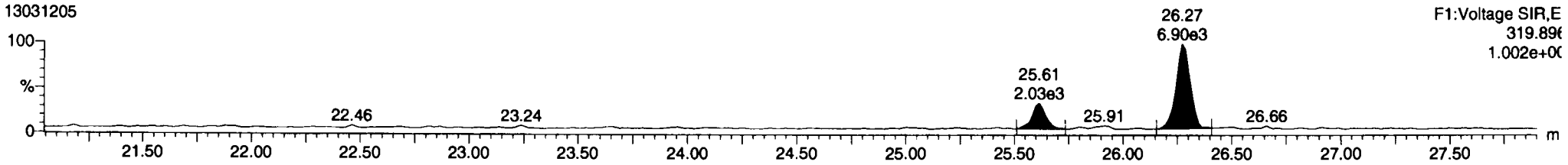
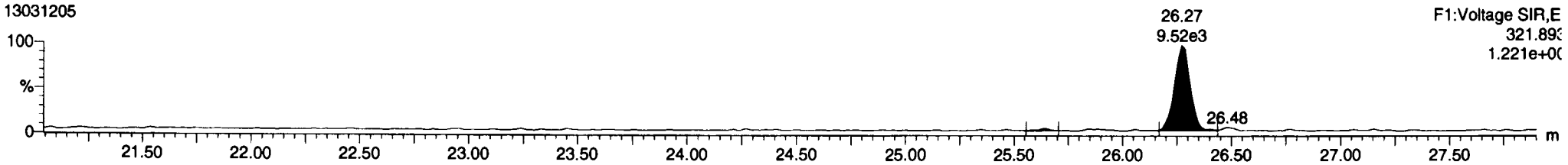


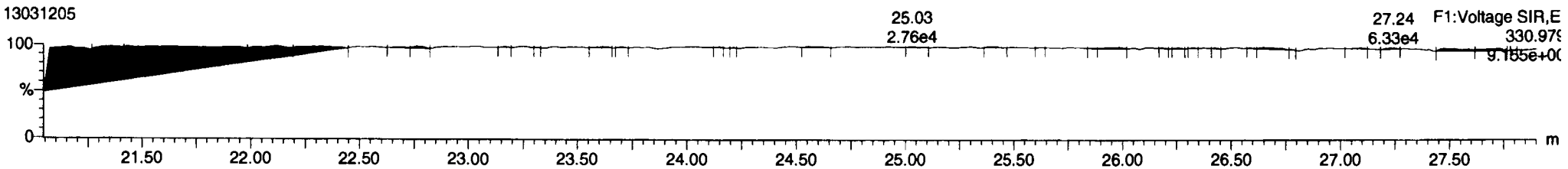
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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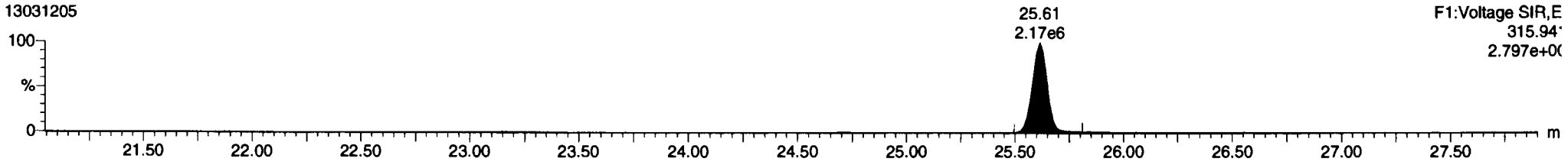
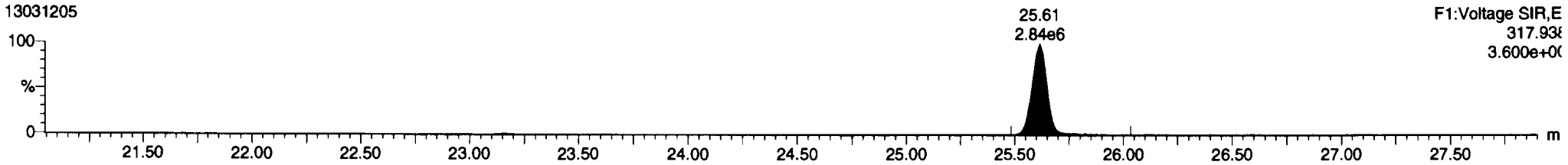
ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

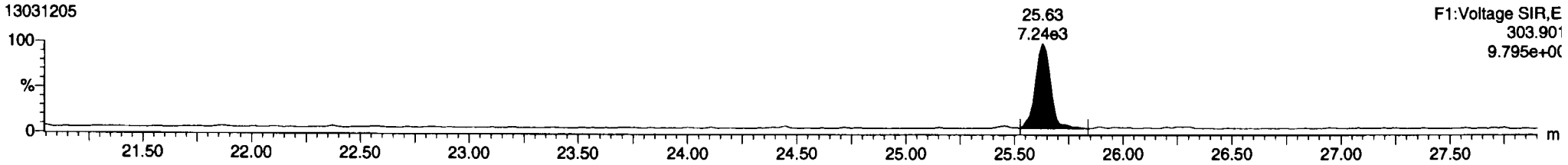
13C-2378-TCDF



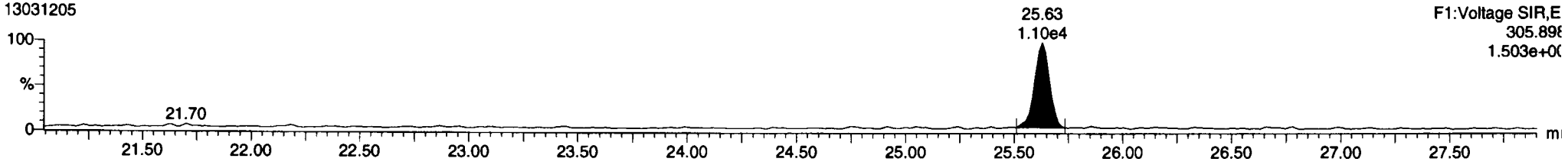
13C-2378-TCDF



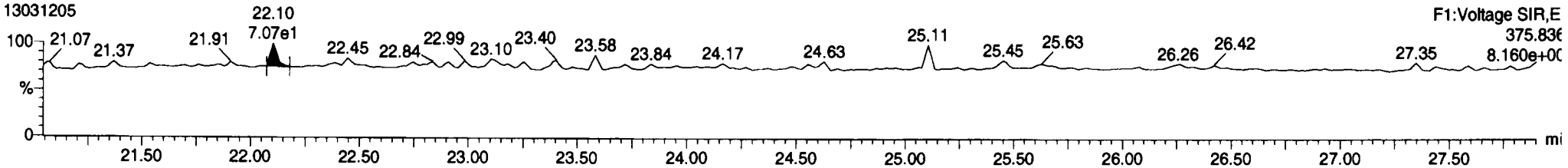
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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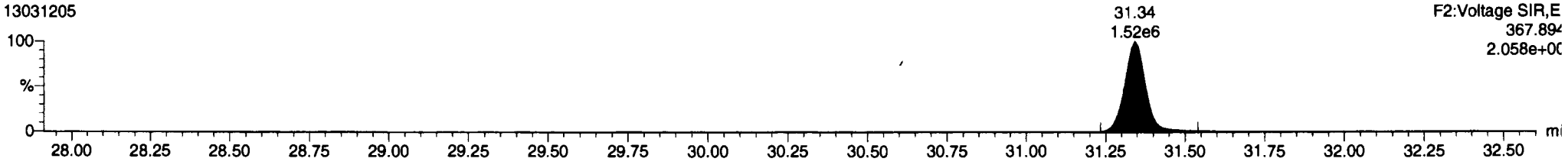
13C-12378-PeCDD



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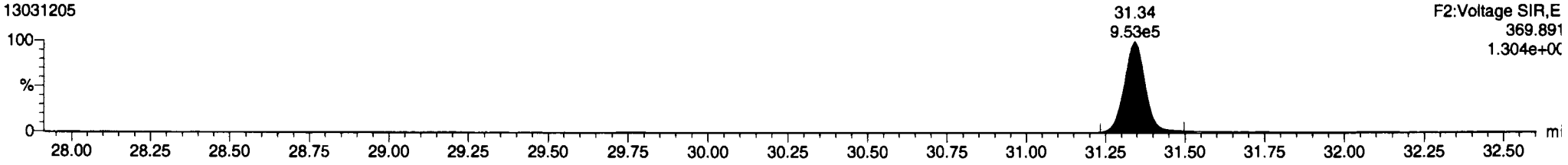
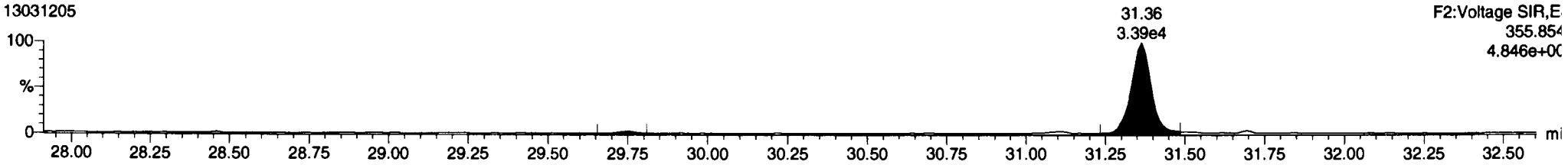
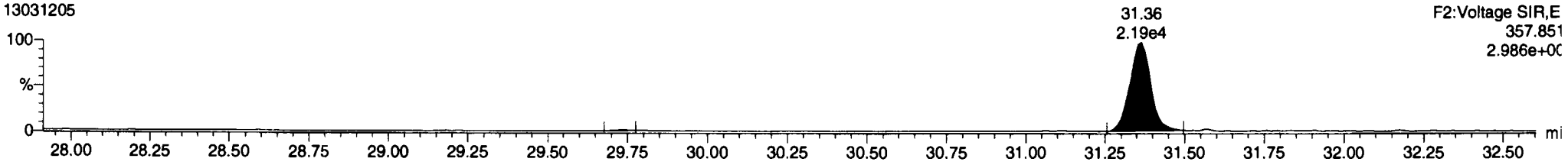


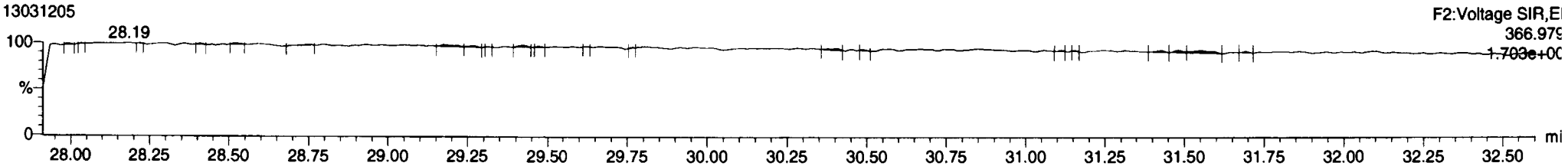
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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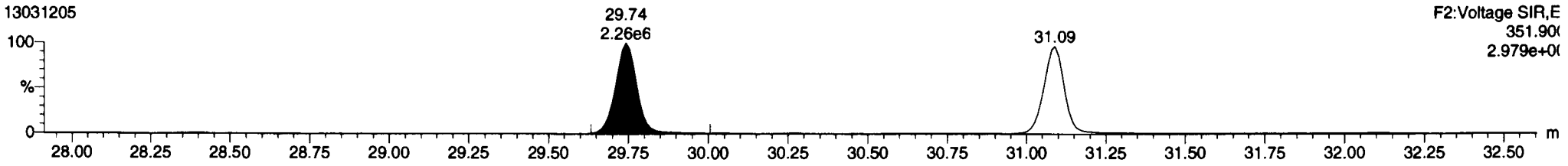
13C-12378-PeCDF



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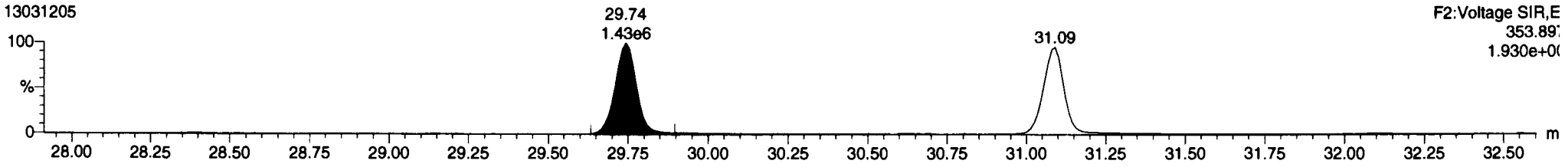
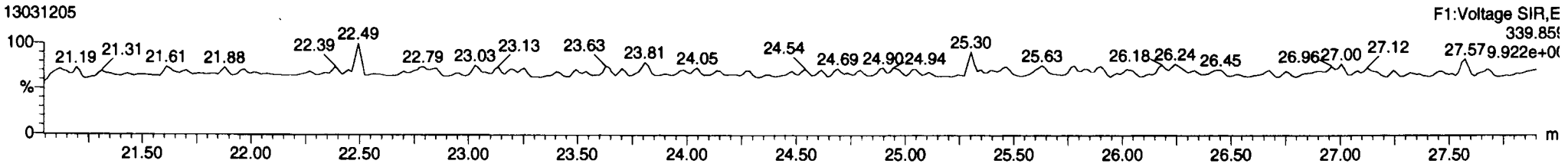


Total-penta1



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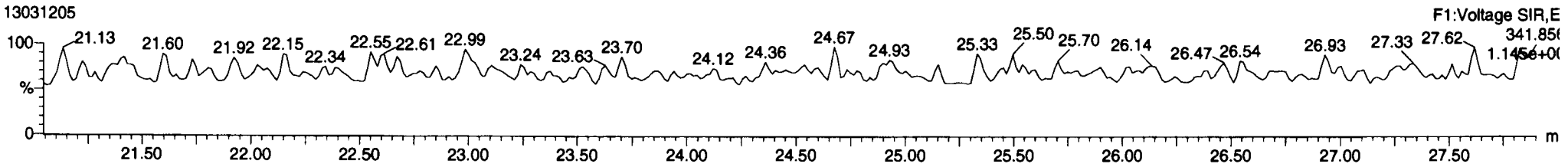
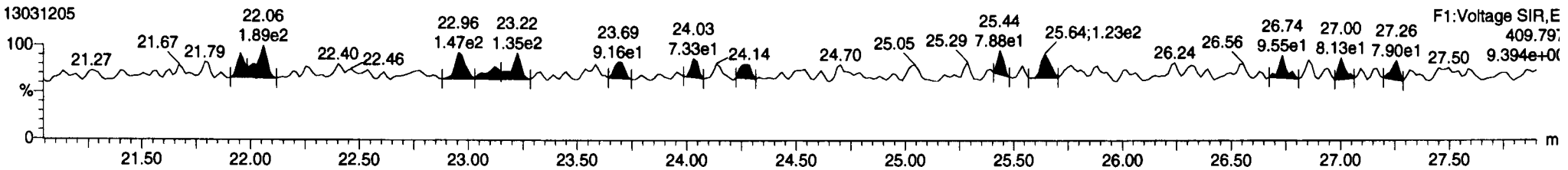


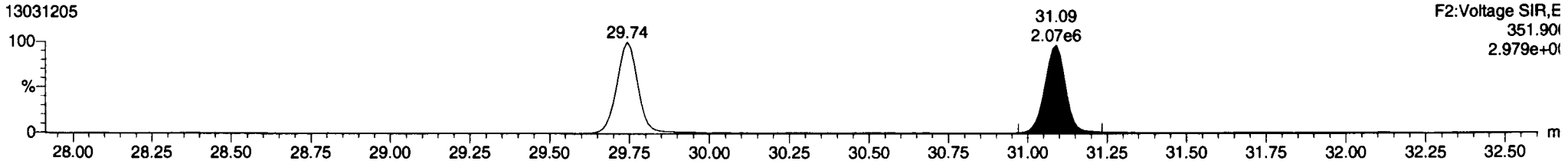
FUNCTION1 HPCDPE



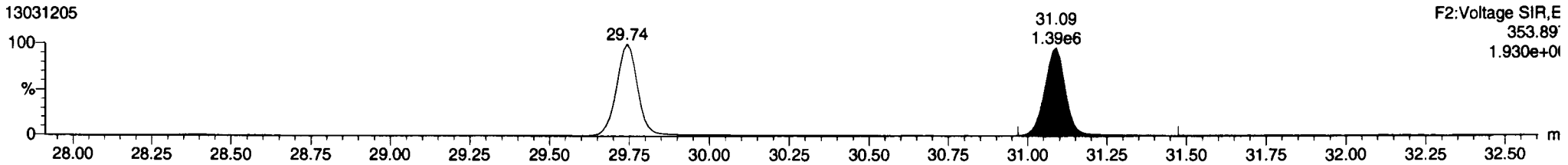
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:30 Pacific Daylight Time

ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

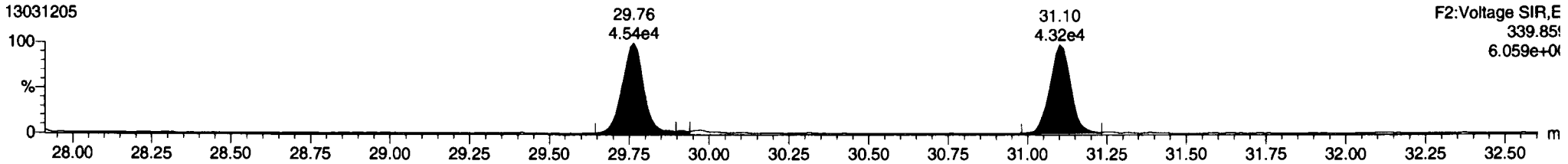
13C-23478-PeCDF



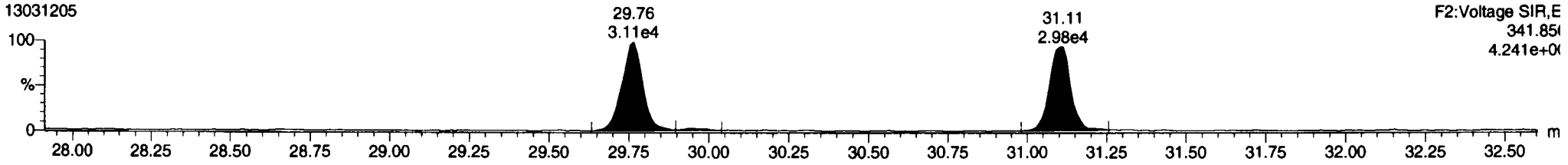
13C-23478-PeCDF



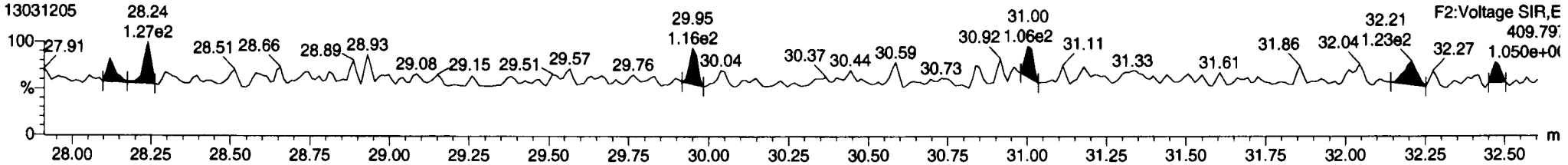
Total-pentafurans



Total-pentafurans



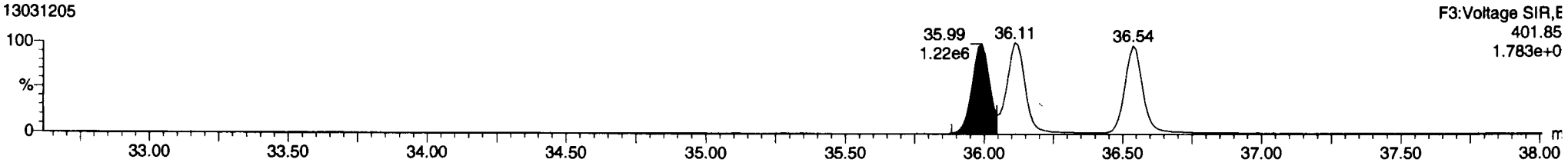
FUNCTION2 HPCDPE



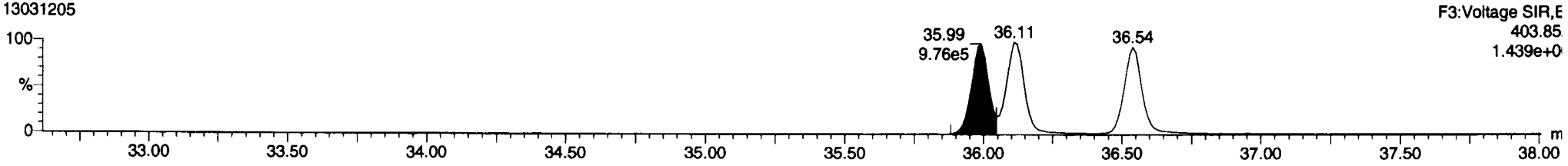
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:30 Pacific Daylight Time

ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

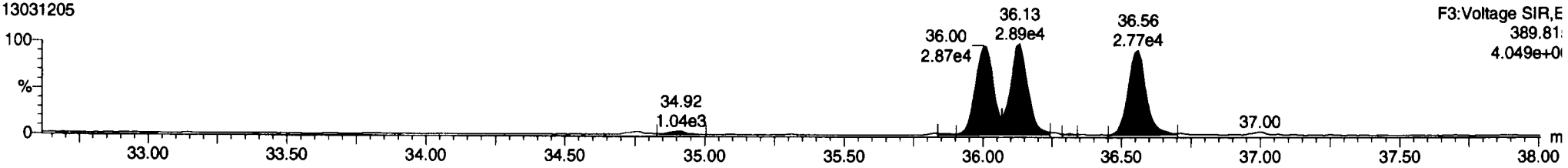
13C-123478-HxCDD



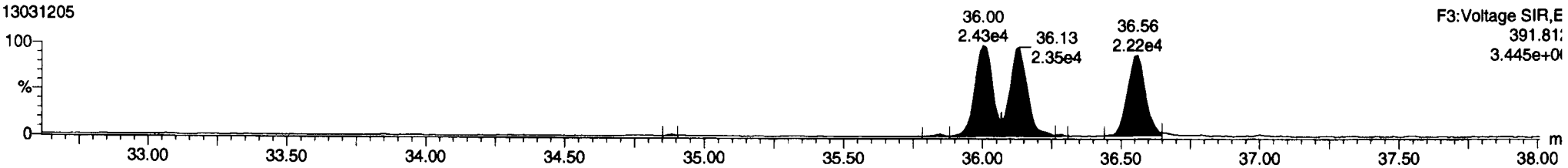
13C-123478-HxCDD



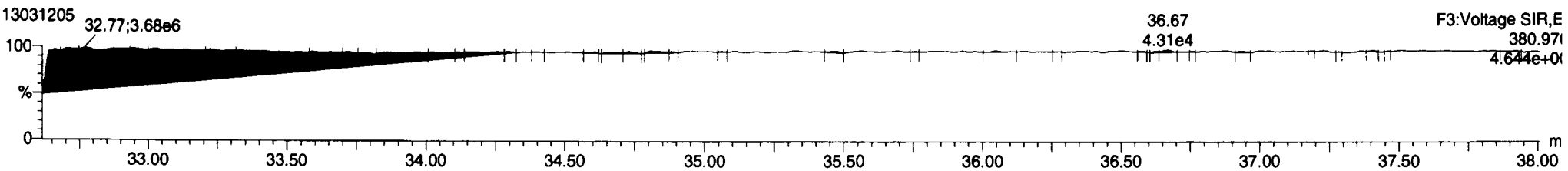
Total-hexadioxins



Total-hexadioxins



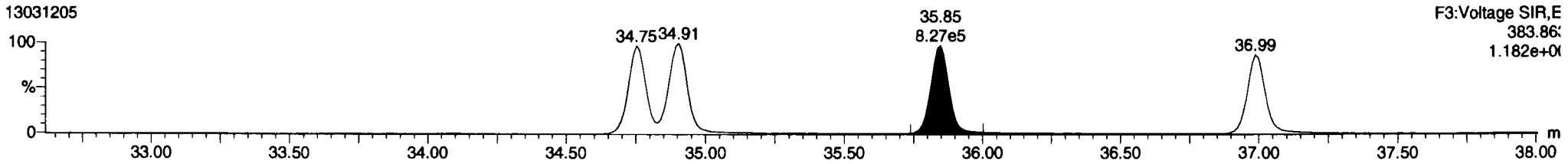
FUNCTION3 PFK



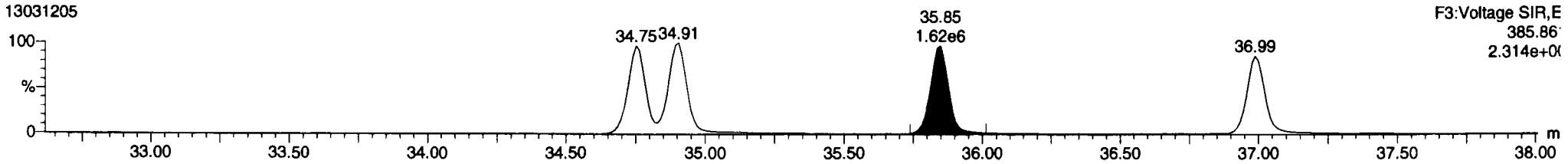
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:30 Pacific Daylight Time

ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

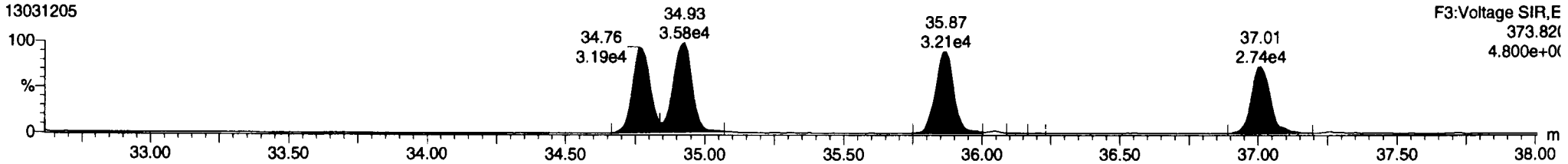
13C-234678-HxCDF



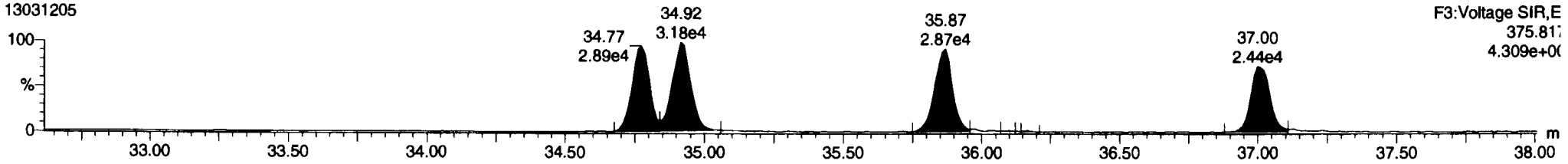
13C-234678-HxCDF



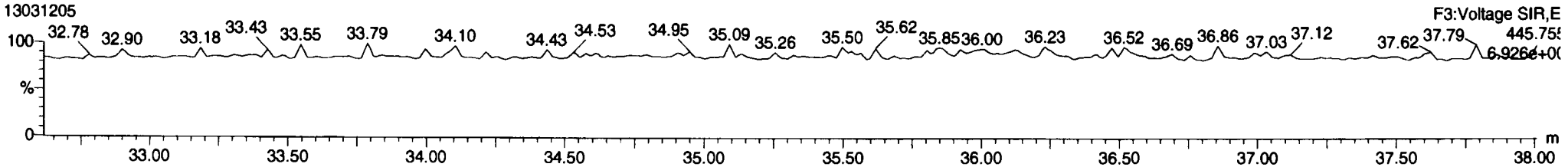
Total-hexafurans



Total-hexafurans



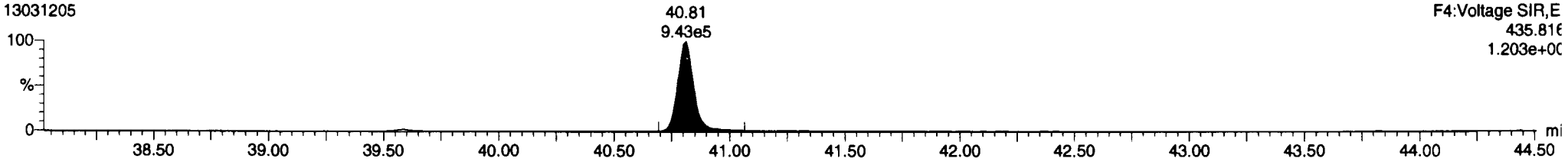
FUNCTION3 OCDPE



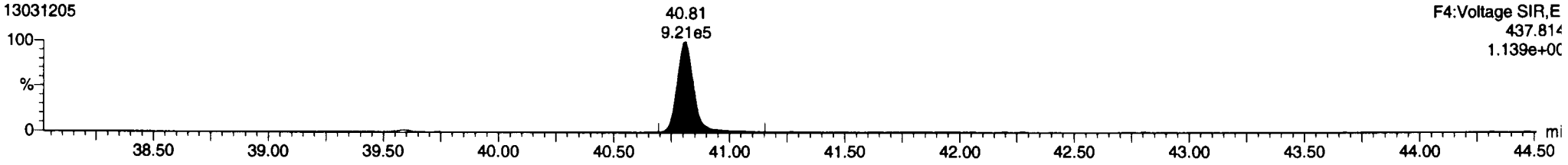
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:30 Pacific Daylight Time

ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

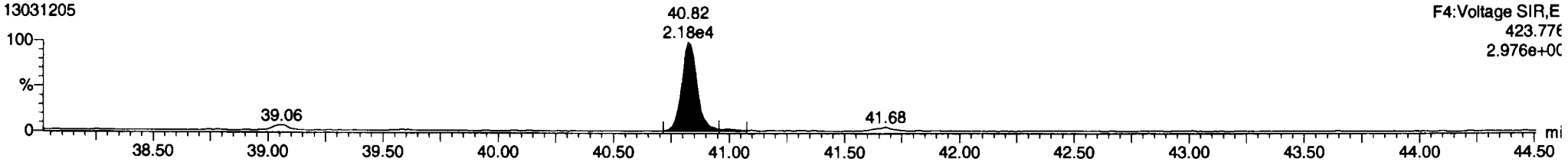
13C-1234678-HpCDD



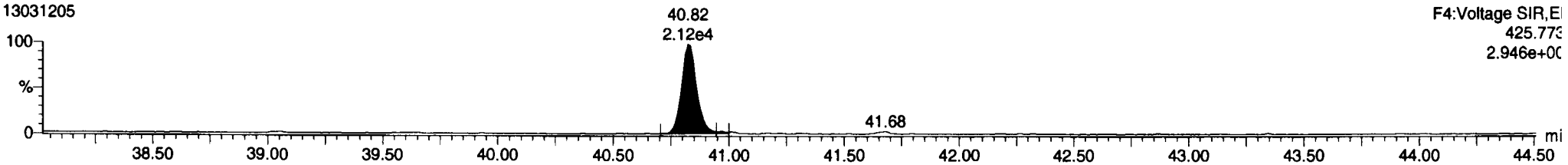
13C-1234678-HpCDD



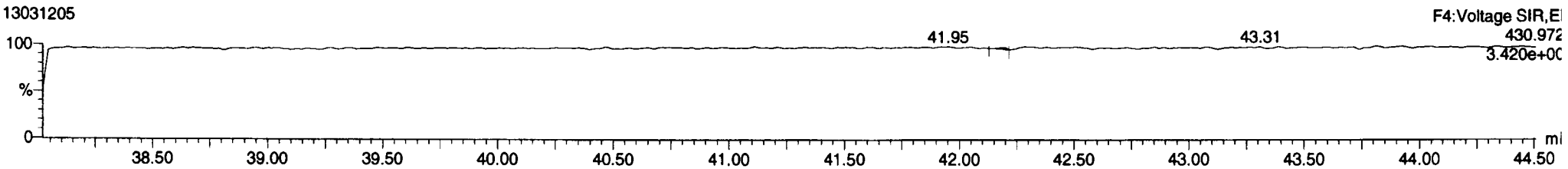
Total-heptadioxins



Total-heptadioxins



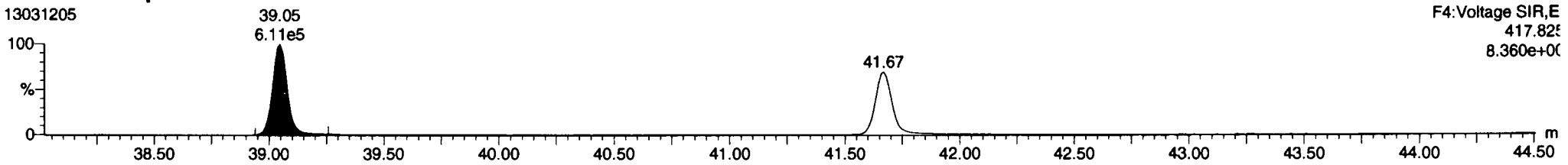
FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:30 Pacific Daylight Time

ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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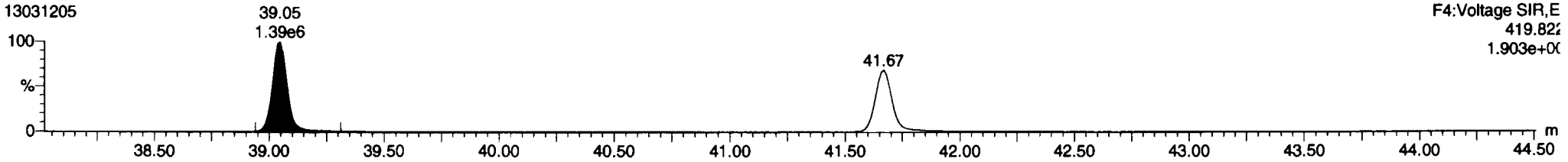
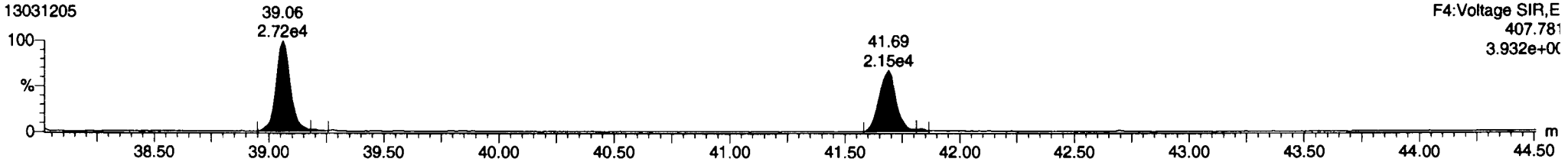
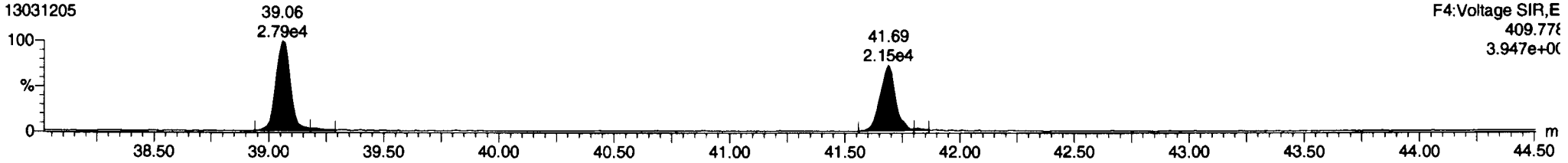


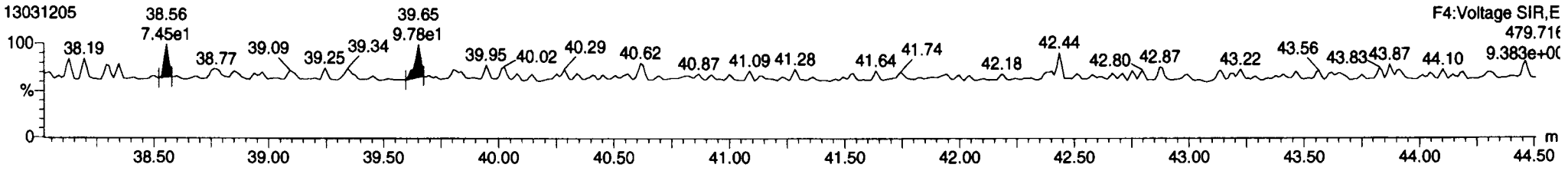
Total-heptafurans



Total-heptafurans



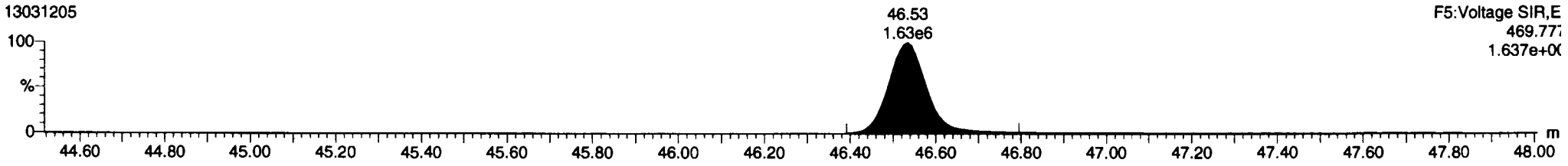
FUNCTION4 NCDPE



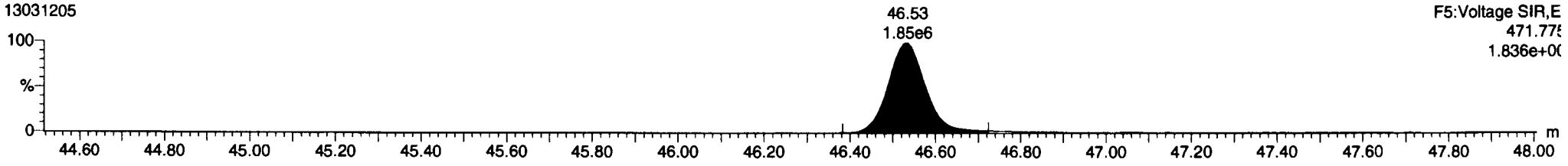
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:30 Pacific Daylight Time

ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

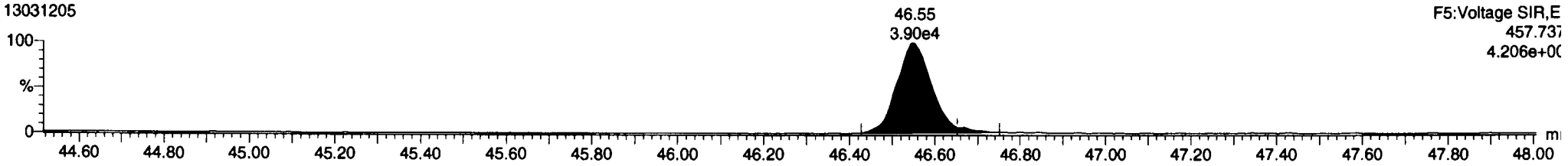
13C-OCDD



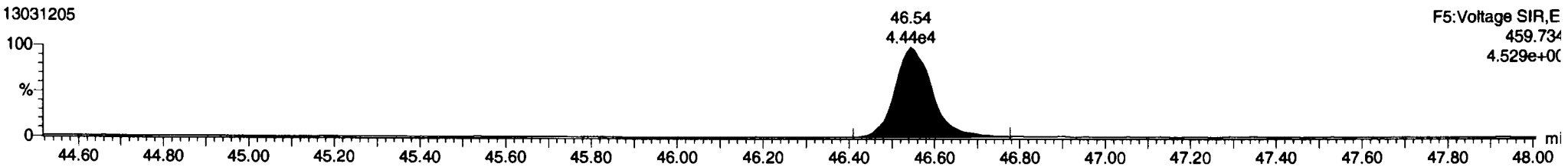
13C-OCDD



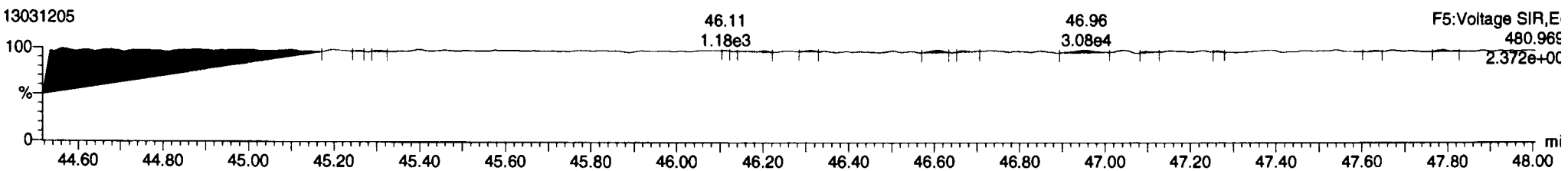
OCDD



OCDD



FUNCTION5 PFK



Dataset: P:\DIOXIN6290.PRO\130312IC.qld
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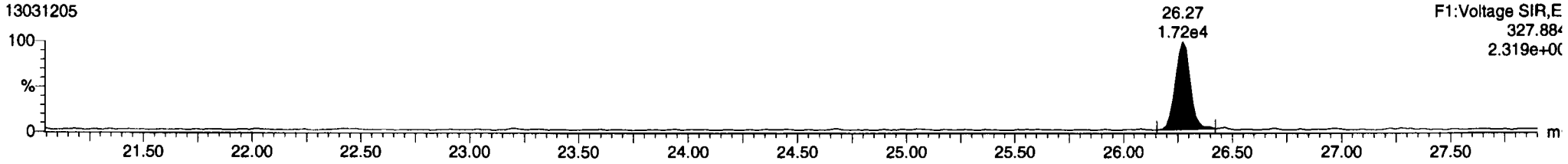
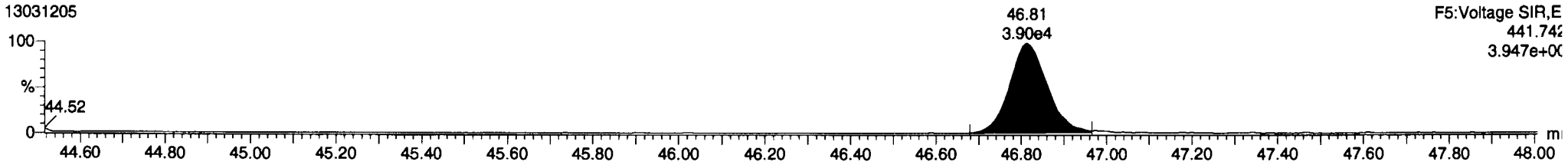
Printed: Wednesday, March 13, 2013 10:42:30 Pacific Daylight Time

ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

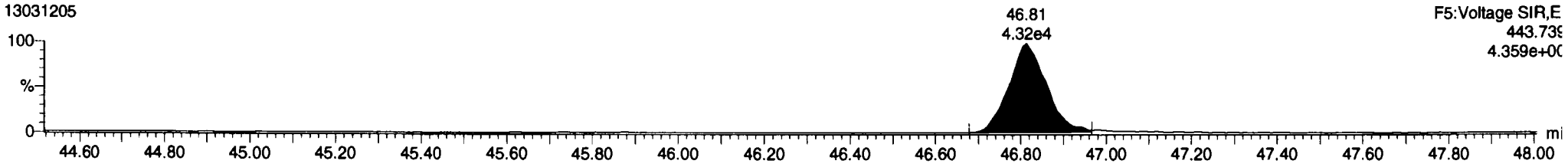
37CL-2378-TCDD



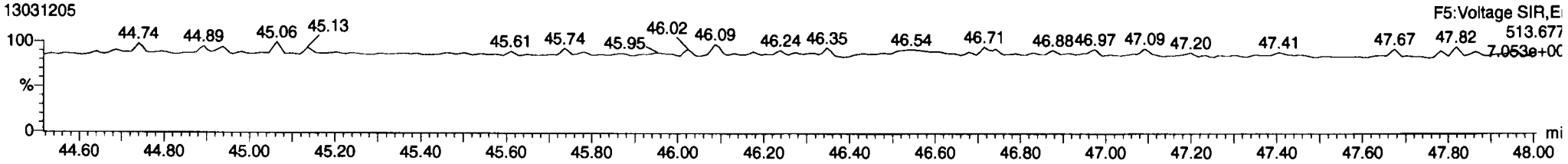
OCDF



OCDF



FUNCTION5 DCDPE



Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

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	12378-PeCDF	29.764	1.001	1.36e5	9.17e4	0.836	1.484	1.550	783.7	NO	9.780	9.780
	23478-PeCDF	31.101	1.000	1.34e5	9.12e4	0.851	1.468	1.550	781.9	NO	9.946	9.946
	123478-HxCDF	34.773	1.001	1.06e5	8.92e4	1.017	1.191	1.240	656.0	NO	9.913	9.913
	234678-HxCDF	35.869	1.001	1.04e5	8.92e4	1.027	1.170	1.240	643.1	NO	9.646	9.646
	123678-HxCDF	34.916	1.000	1.15e5	9.79e4	1.013	1.170	1.240	689.9	NO	10.163	10.163
	123789-HxCDF	37.009	1.001	8.77e4	7.42e4	0.929	1.183	1.240	529.5	NO	9.874	9.874
	1234678-HpCDF	39.059	1.000	9.28e4	8.82e4	1.151	1.052	1.050	539.9	NO	9.990	9.990
	1234789-HpCDF	41.690	1.001	6.83e4	7.31e4	1.149	0.935	1.050	346.0	NO	9.843	9.843
	OCDF	46.822	1.006	1.22e5	1.44e5	0.963	0.844	0.890	583.3	NO	19.891	19.891
	2378-TCDD	26.272	1.001	2.25e4	2.87e4	0.980	0.786	0.770	285.1	NO	1.976	1.976
	12378-PeCDD	31.364	1.001	1.11e5	7.20e4	0.948	1.547	1.550	693.9	NO	9.965	9.965
	123478-HxCDD	36.001	1.000	8.71e4	7.31e4	0.941	1.191	1.240	548.5	NO	9.888	9.888
	123678-HxCDD	36.132	1.001	9.07e4	7.39e4	0.884	1.226	1.240	571.8	NO	9.991	9.991
	123789-HxCDD	36.560	1.012	8.98e4	7.20e4	0.870	1.247	1.240	548.8	NO	10.381	10.381
	1234678-HpCDD	40.824	1.000	6.92e4	6.79e4	0.948	1.019	1.050	530.6	NO	9.705	9.705
	OCDD	46.543	1.000	1.18e5	1.40e5	0.969	0.844	0.890	638.2	NO	19.203	19.203
	13C-2378-TCDF	25.615	1.007	1.58e6	2.06e6	1.318	0.769	0.770	5539.5	NO		97.693
	13C-12378-PeCDF	29.742	1.169	1.70e6	1.08e6	1.026	1.575	1.550	3914.8	NO		96.048
	13C-23478-PeCDF	31.090	1.222	1.60e6	1.06e6	0.966	1.514	1.550	3761.5	NO		97.350
	13C-123478-HxCDF	34.751	0.951	6.53e5	1.29e6	1.123	0.508	0.510	2177.5	NO		100.216
	13C-123678-HxCDF	34.905	0.955	7.01e5	1.36e6	1.216	0.515	0.510	2277.3	NO		98.470
	13C-234678-HxCDF	35.847	0.981	6.72e5	1.28e6	1.106	0.525	0.510	2205.6	NO		102.512
	13C-123789-HxCDF	36.987	1.012	5.96e5	1.17e6	0.995	0.510	0.510	1940.1	NO		102.861
	13C-1234678-HpCDF	39.048	1.069	4.86e5	1.09e6	0.896	0.446	0.440	1831.1	NO		101.939
	13C-1234789-HpCDF	41.668	1.140	3.86e5	8.64e5	0.693	0.447	0.440	1292.7	NO		104.581
	13C-1234-TCDD	25.435	0.000	1.23e6	1.60e6	1.000	0.772	0.770	2997.0	NO		100.000
	13C-2378-TCDD	26.242	1.032	1.14e6	1.50e6	0.961	0.763	0.770	2646.2	NO		97.243
	13C-12378-PeCDD	31.342	1.232	1.18e6	7.56e5	0.703	1.568	1.550	4688.5	NO		97.573
	13C-123478-HxCDD	35.990	0.985	9.61e5	7.60e5	1.016	1.264	1.240	3626.0	NO		98.277
	13C-123678-HxCDD	36.110	0.988	1.04e6	8.27e5	1.098	1.254	1.240	3791.8	NO		98.434
	13C-1234678-HpCDD	40.813	1.117	7.70e5	7.20e5	0.828	1.070	1.050	3026.5	NO		104.402
	13C-OCDD	46.535	1.274	1.32e6	1.45e6	0.770	0.912	0.890	3755.0	NO		209.376

UNZ7 - 00763

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
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ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

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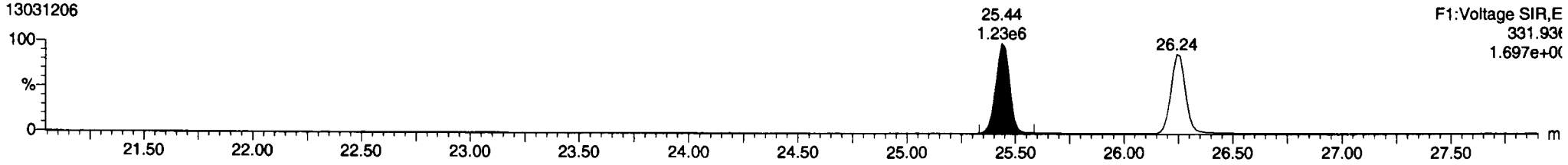
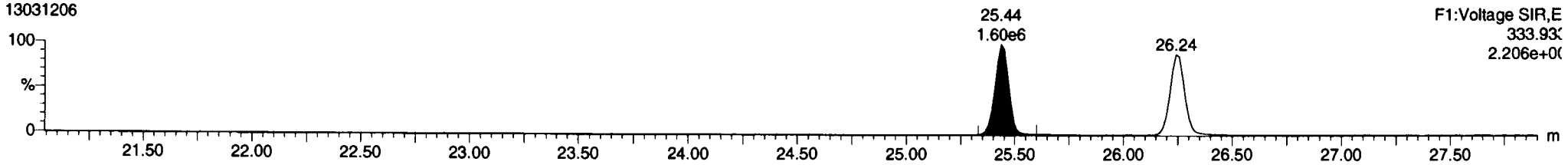
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

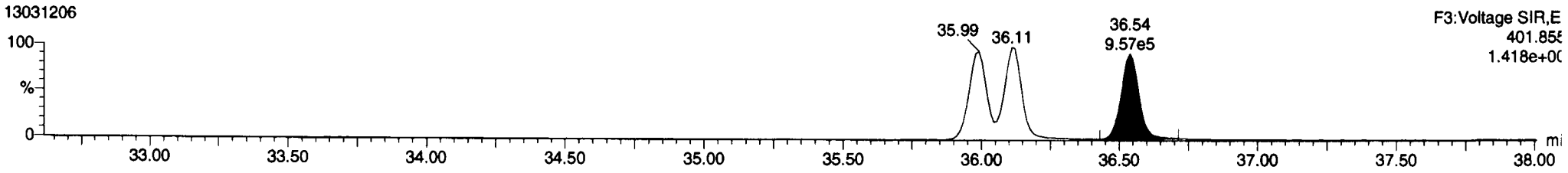
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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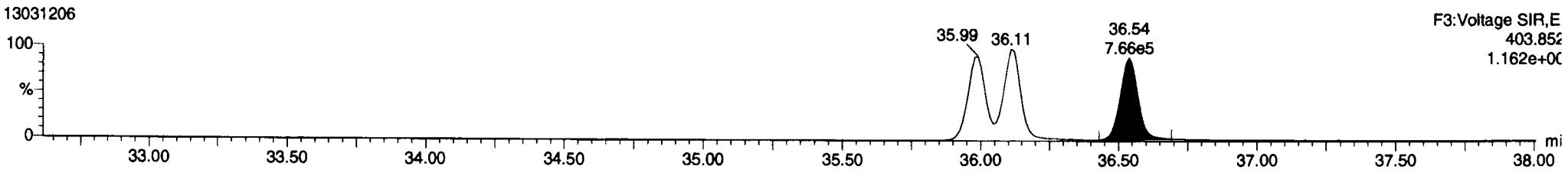

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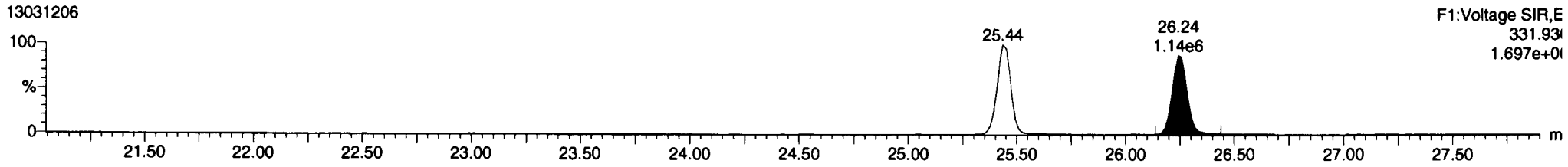
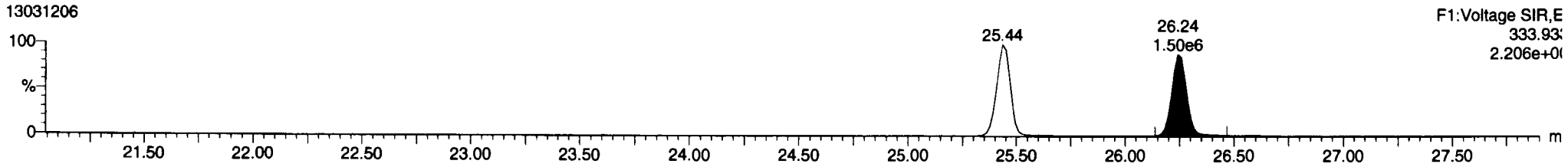
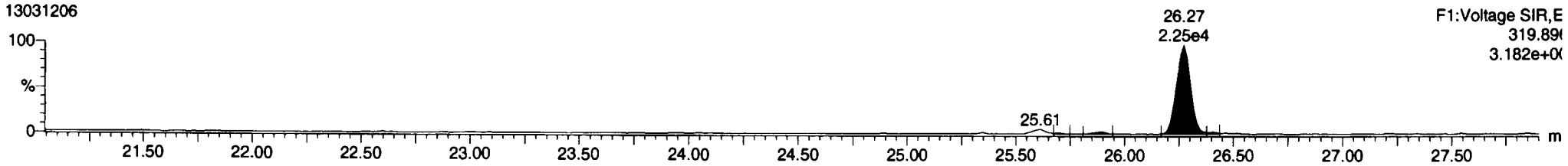
13C-2378-TCDD



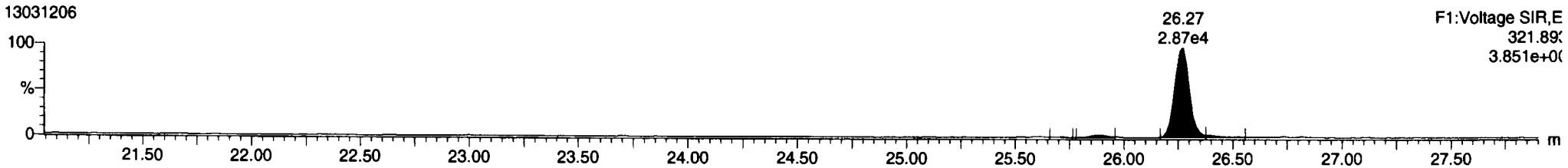
13C-2378-TCDD



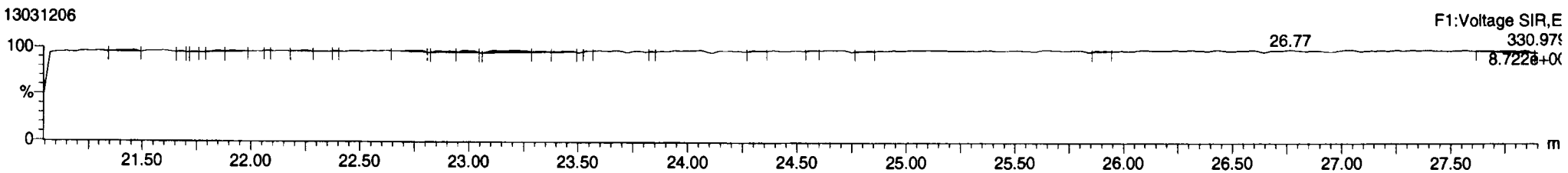
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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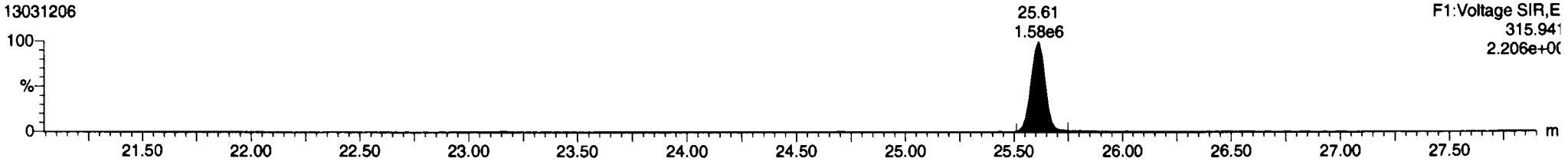
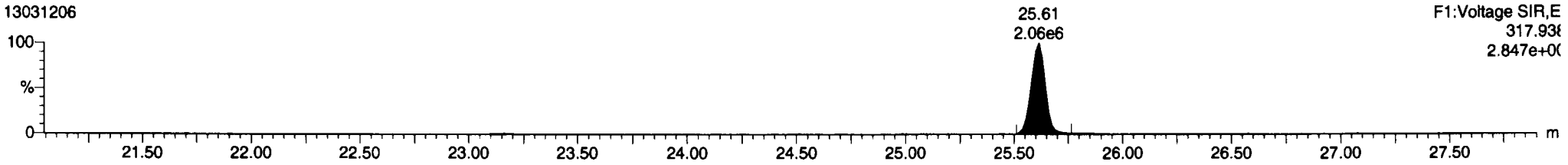
ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

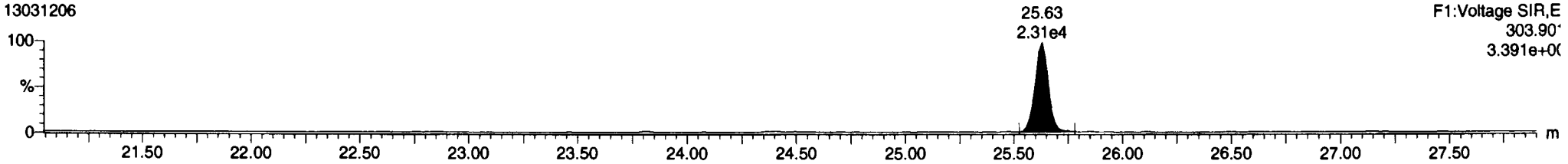
13C-2378-TCDF



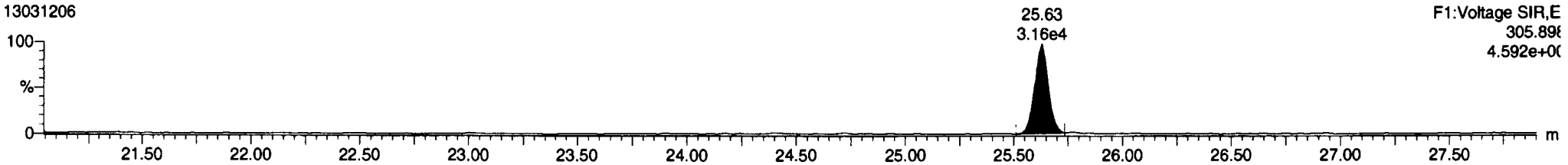
13C-2378-TCDF



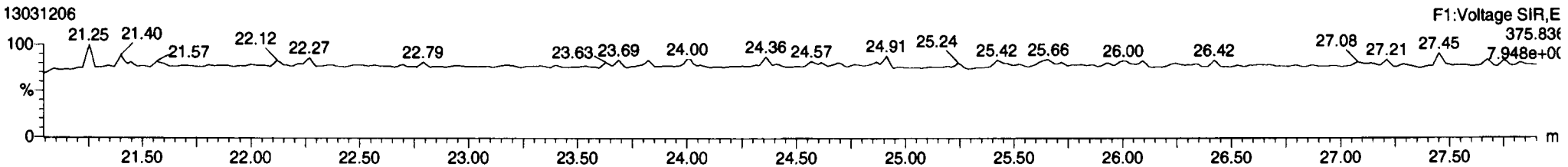
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
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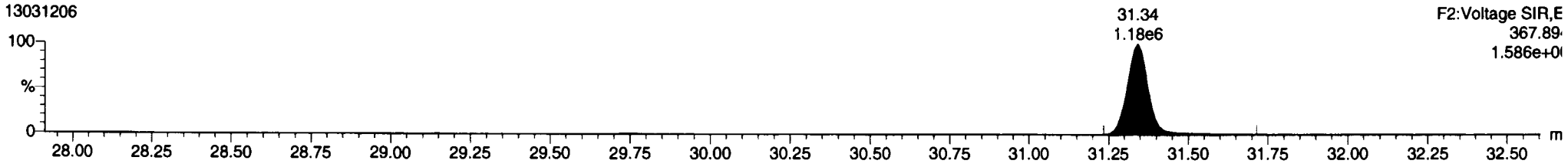
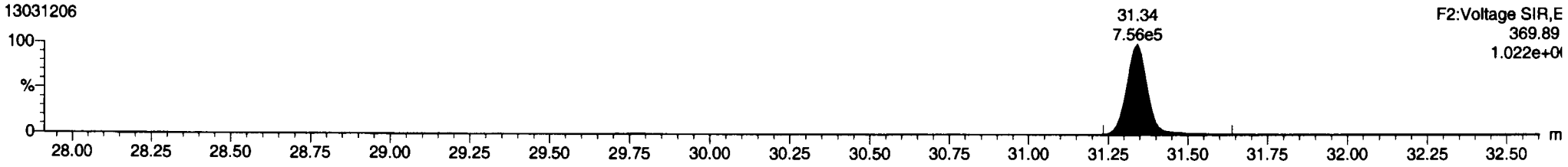
ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

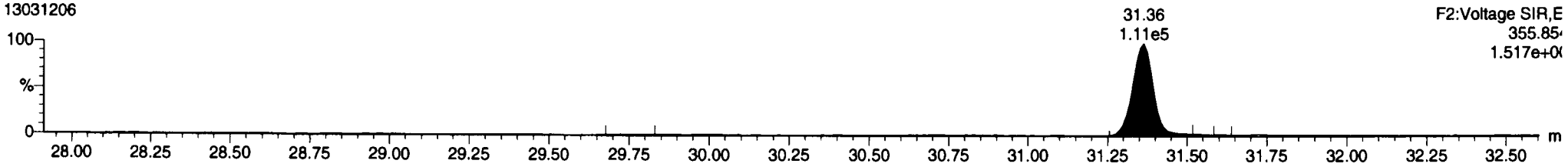
13C-12378-PeCDD



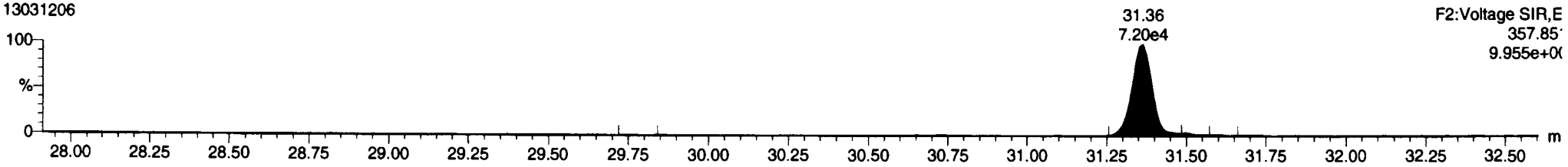
13C-12378-PeCDD



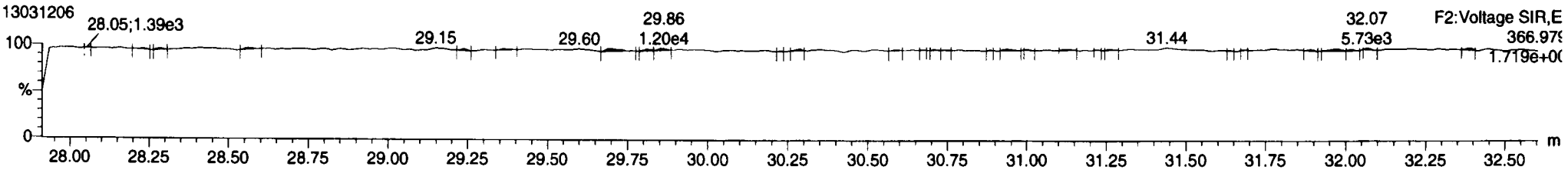
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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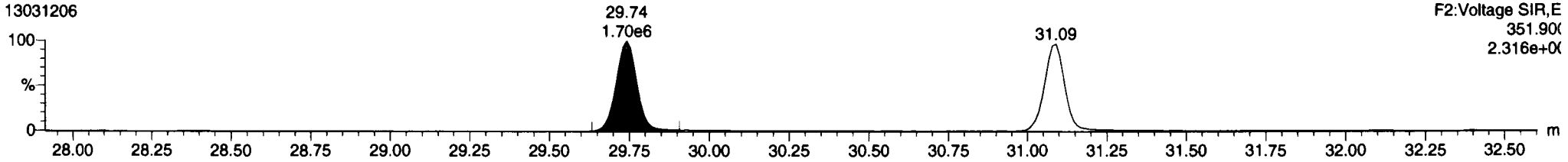
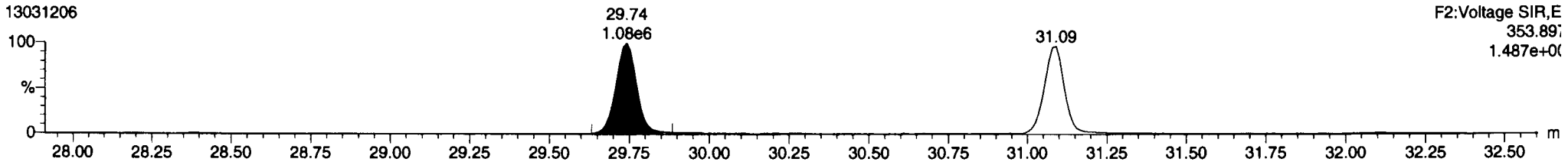
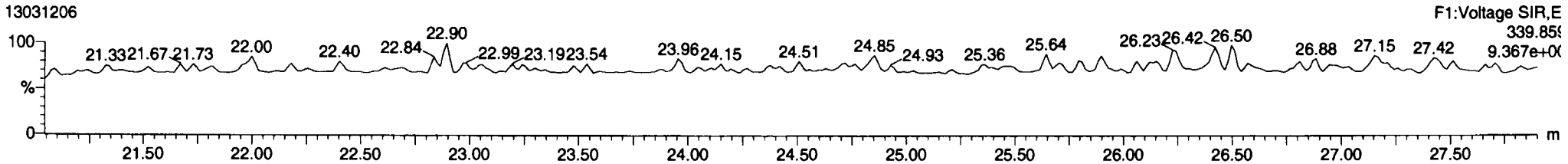
13C-12378-PeCDF



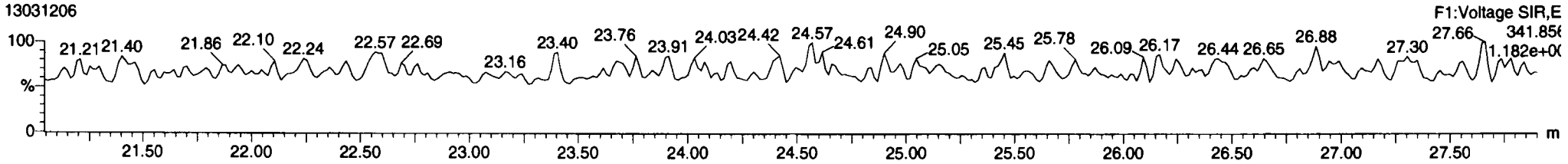
13C-12378-PeCDF



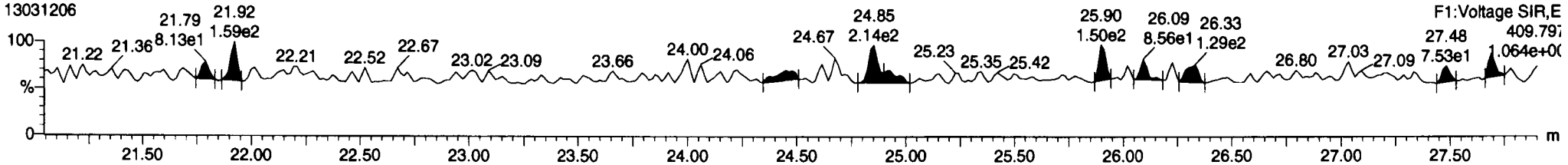
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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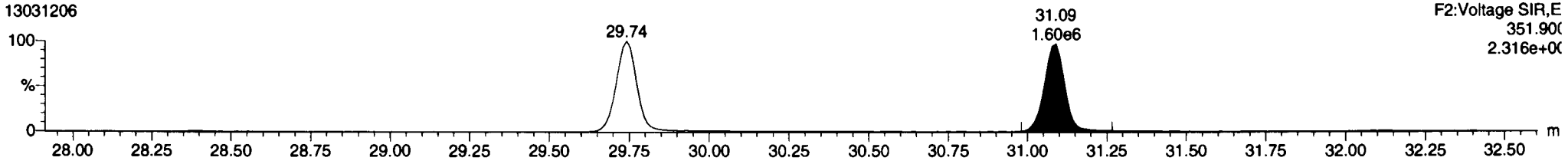
13C-23478-PeCDF



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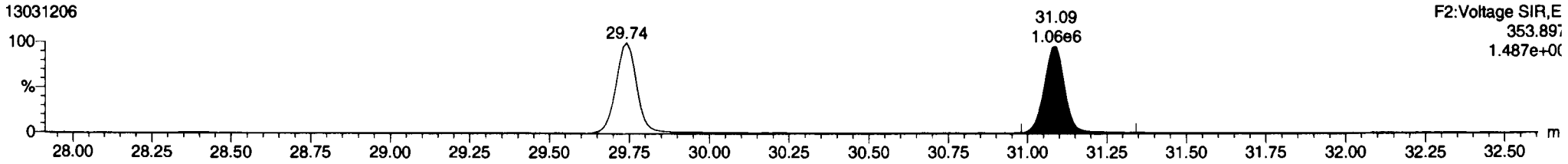
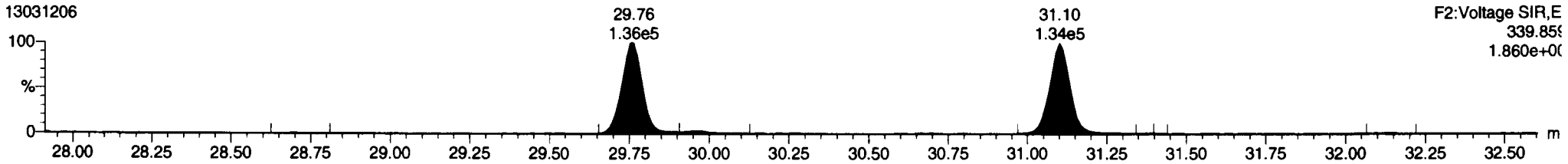


Total-pentafurans



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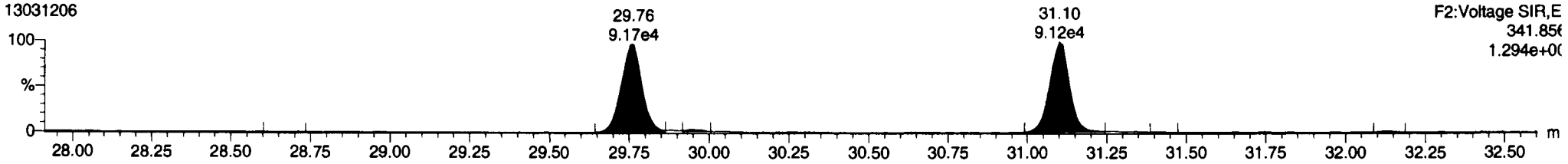
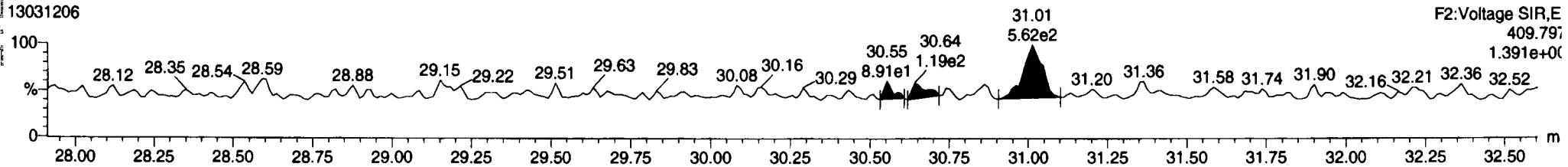


FUNCTION2 HPCDPE



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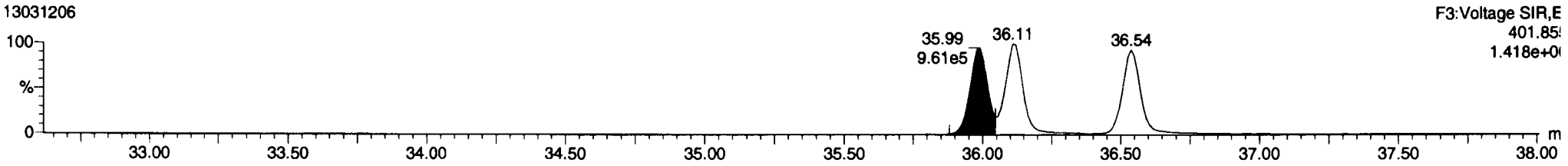
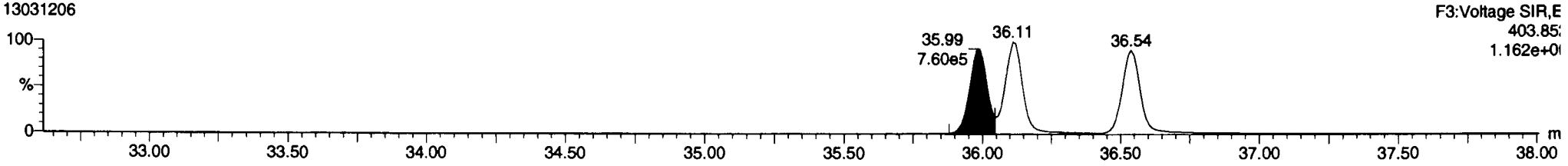
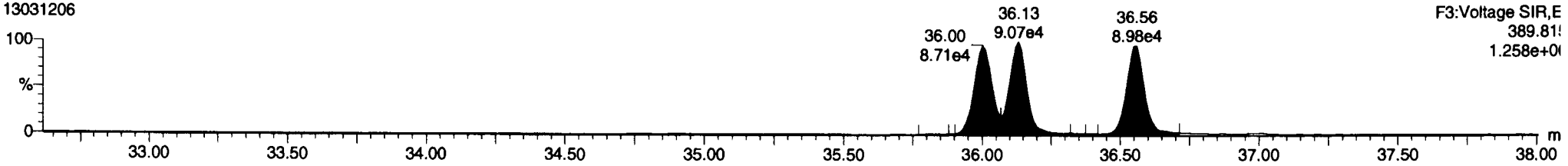
13C-123478-HxCDD



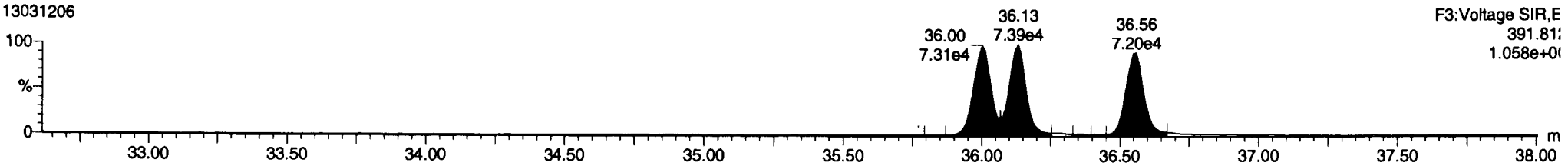
13C-123478-HxCDD



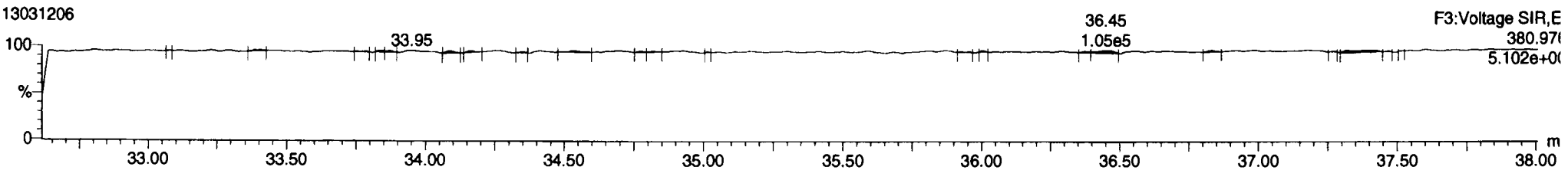
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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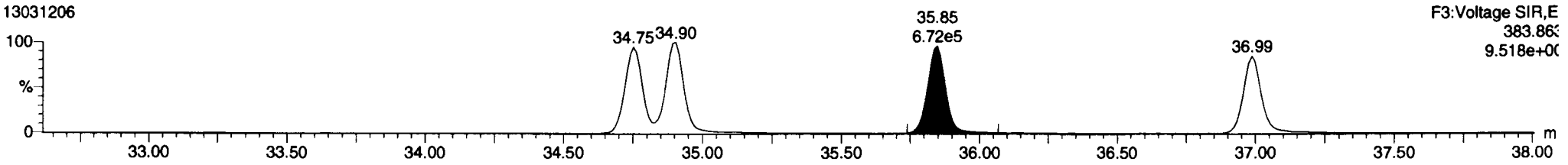
13C-234678-HxCDF



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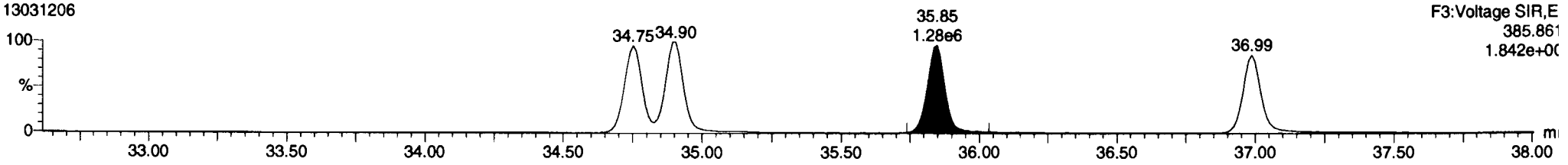
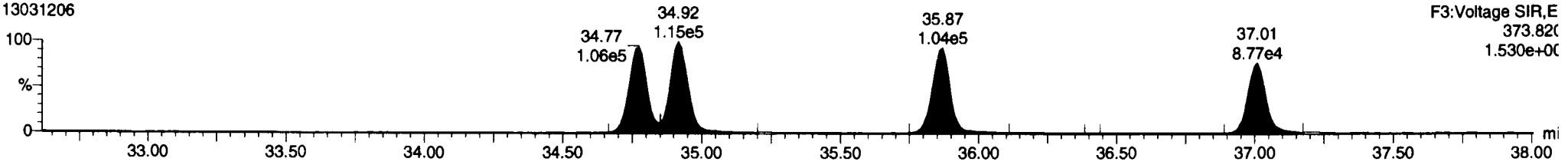
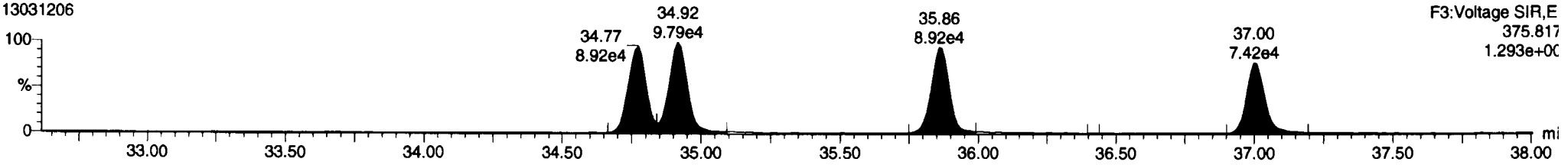


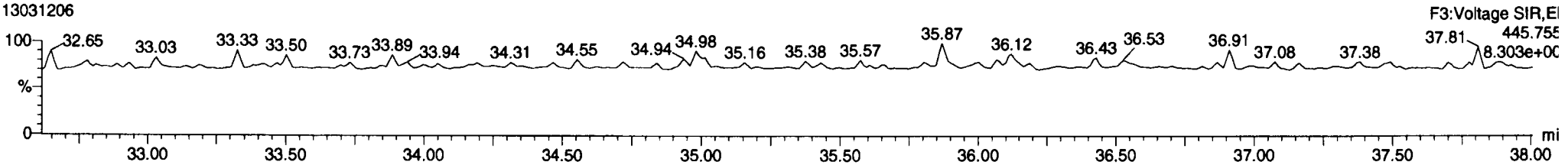
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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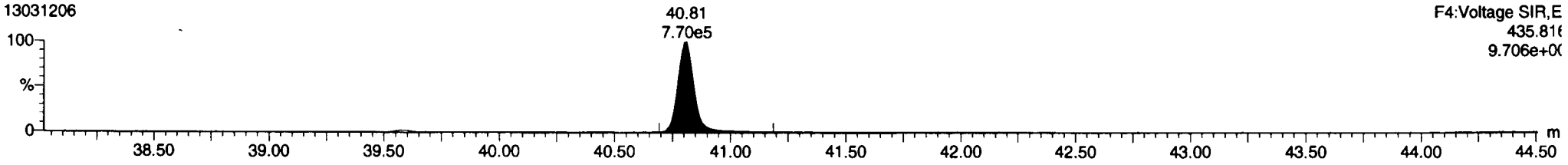
Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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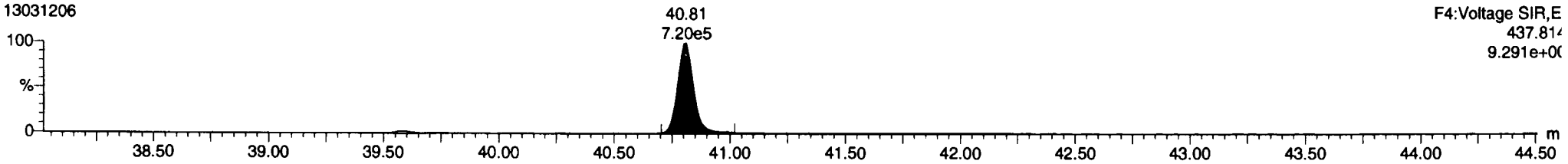

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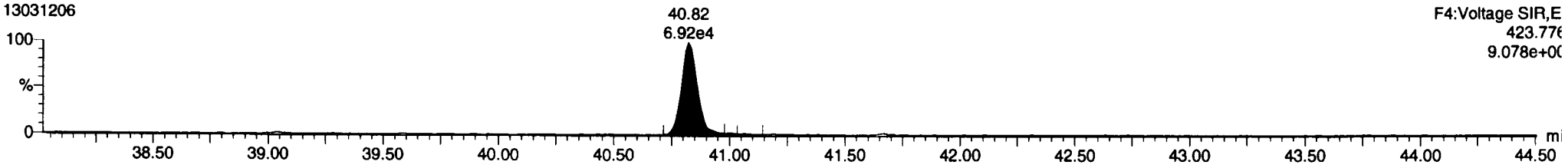

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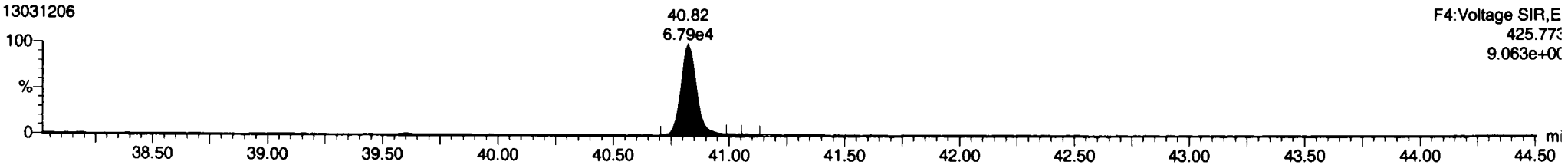
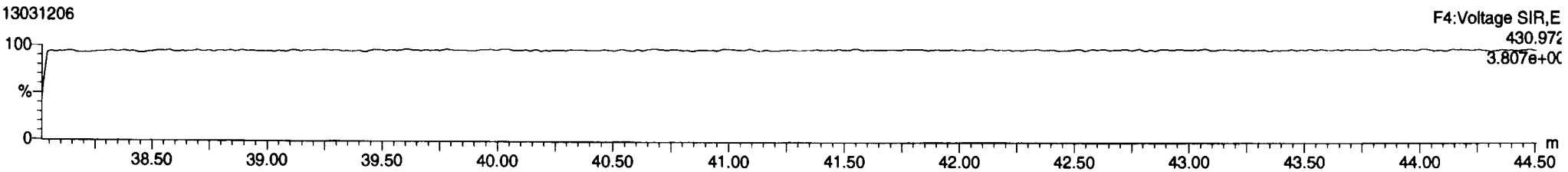


FUNCTION4 PFK



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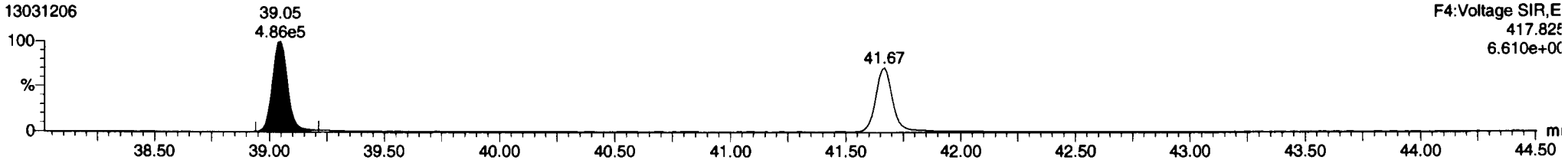

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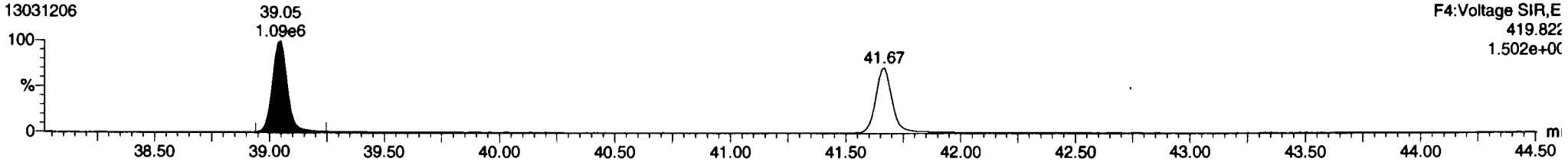

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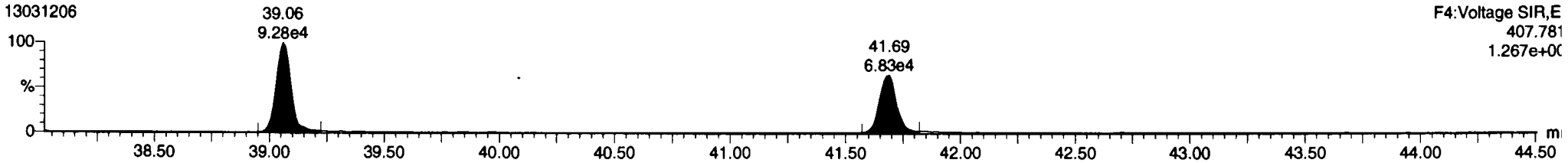

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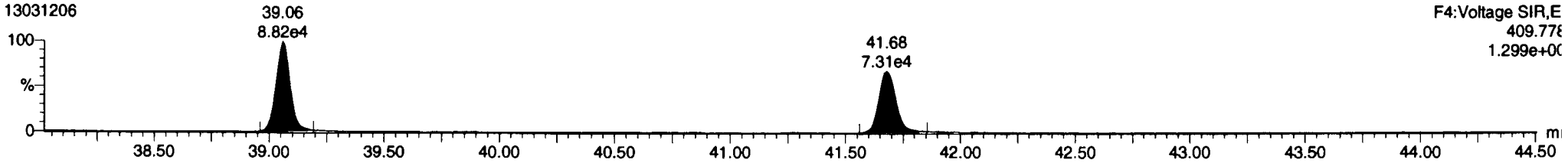
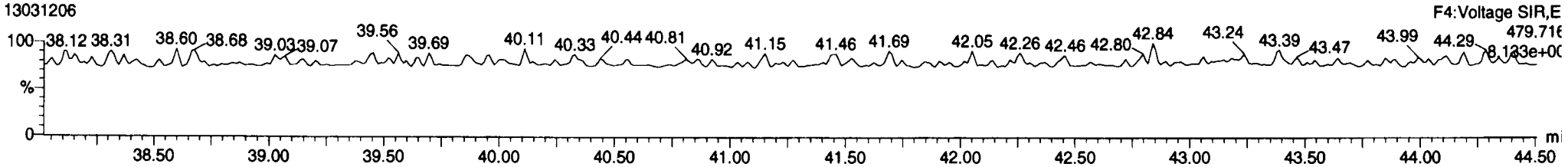


FUNCTION4 NCDPE



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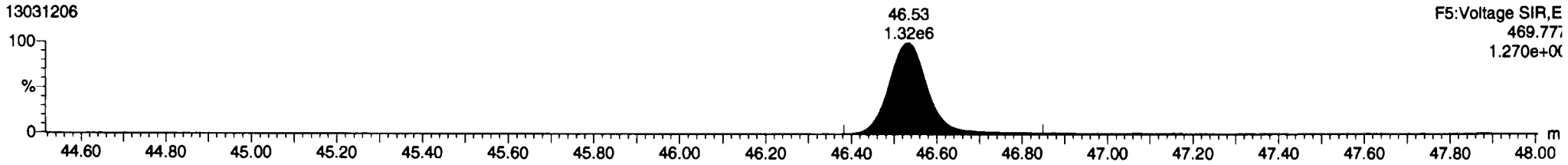
ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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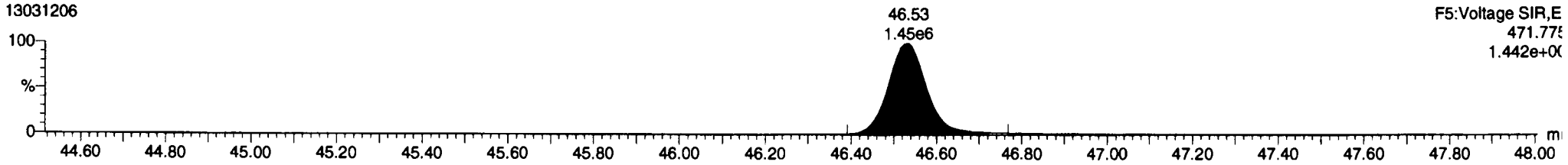
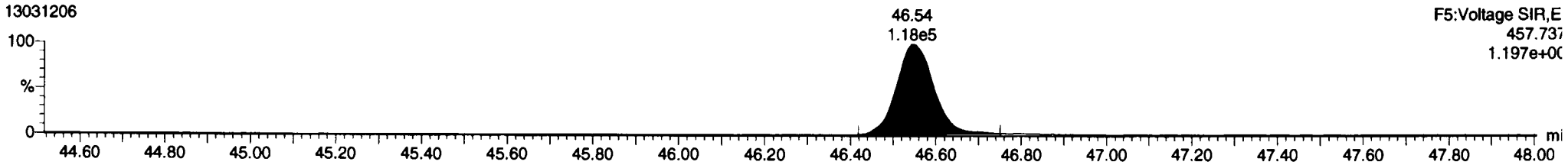


OCDD



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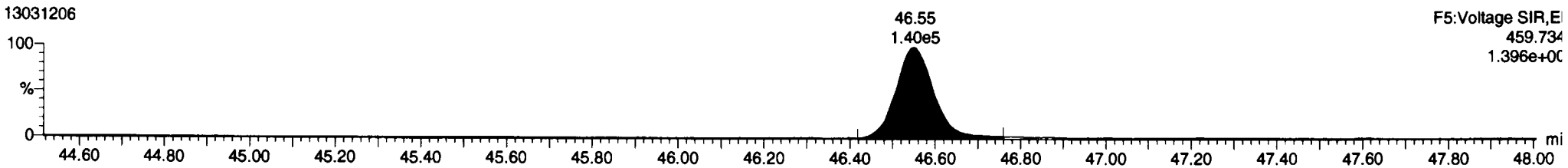
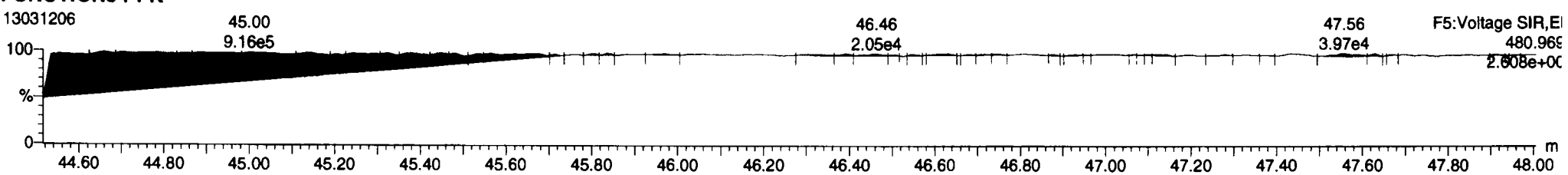


FUNCTION5 PFK



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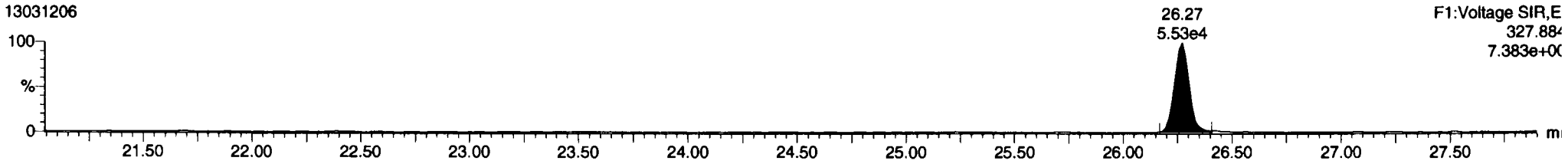
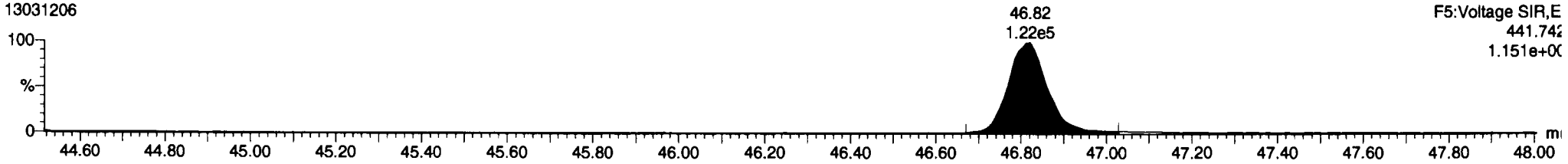
ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



OCDF



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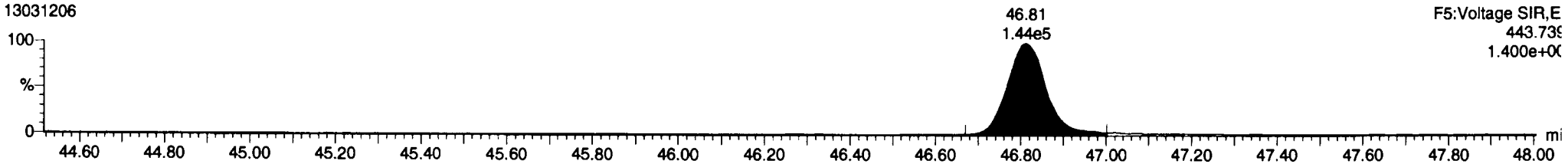
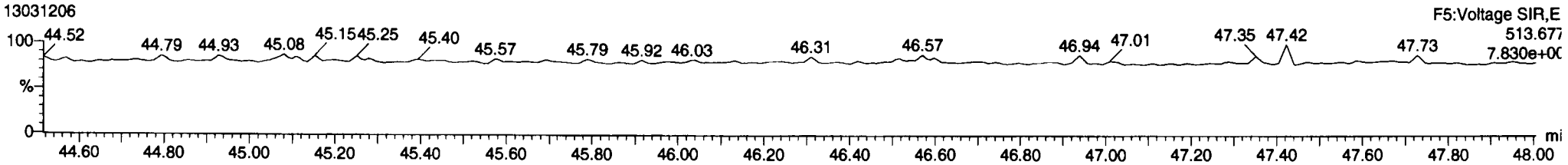


FUNCTION5 DCDPE



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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: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

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[redacted]	OCDD	46.553	1.000	4.09e5	4.66e5	0.969	0.877	0.890	1511.3	NO	94.063	94.063
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[redacted]	13C-12378-PeCDD	31.343	1.232	9.43e5	6.21e5	0.703	1.518	1.550	2418.8	NO		98.059
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[redacted]	13C-1234678-HpCDD	40.813	1.117	5.55e5	5.31e5	0.828	1.046	1.050	2486.5	NO		101.321
[redacted]	13C-OCDD	46.535	1.274	9.01e5	1.02e6	0.770	0.884	0.890	1703.4	NO		192.749

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
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ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

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	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							

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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
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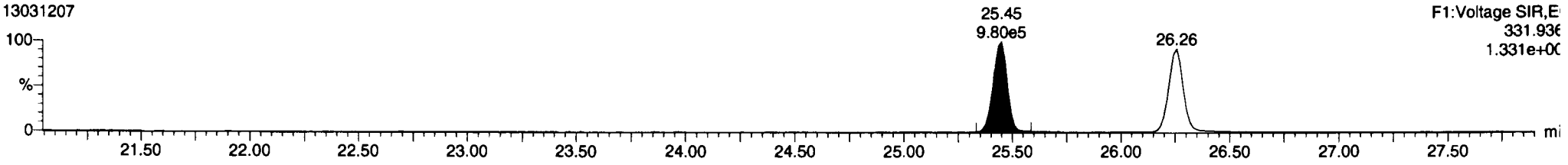
13C-1234-TCDD



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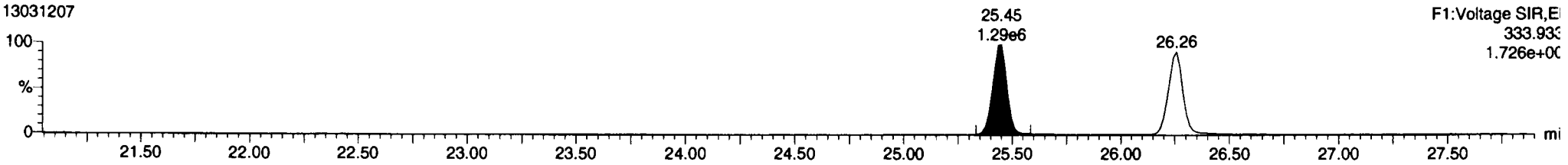

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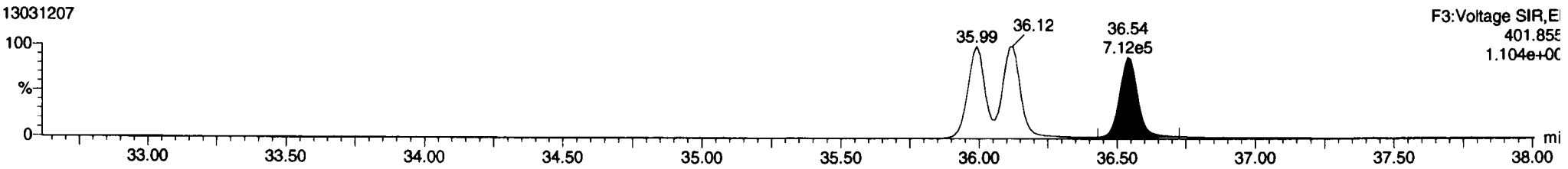

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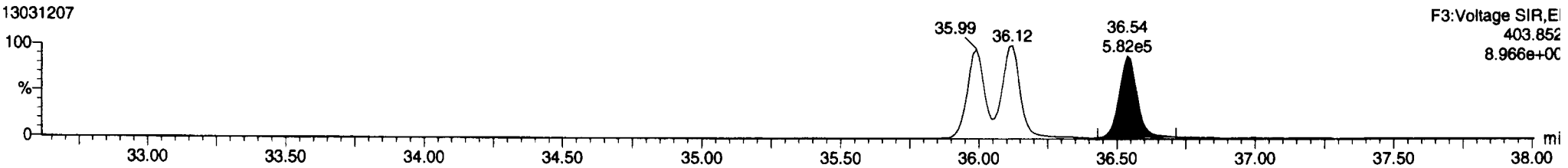

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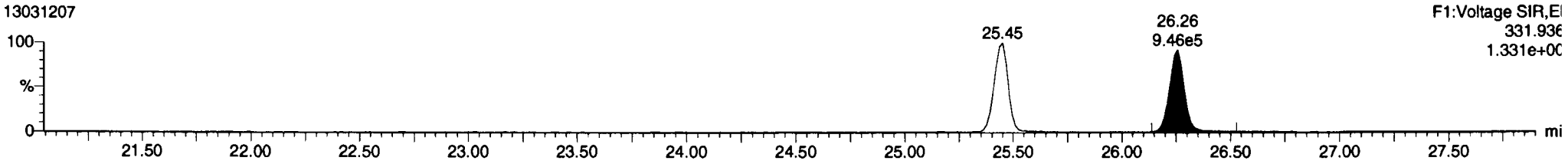
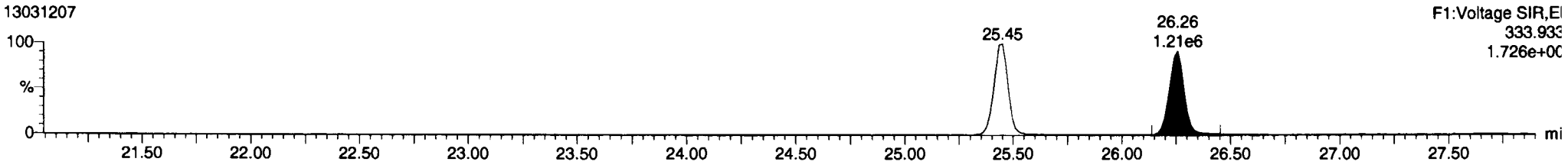
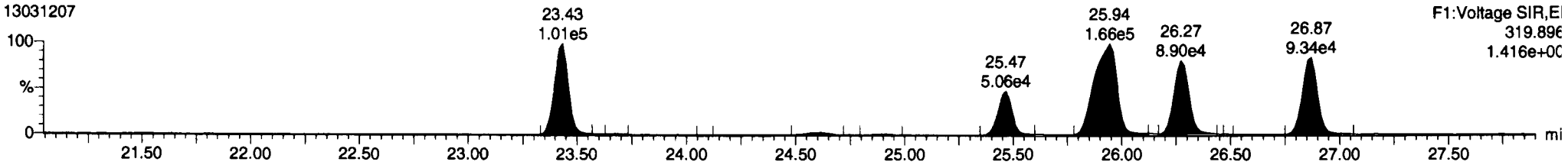
13C-2378-TCDD



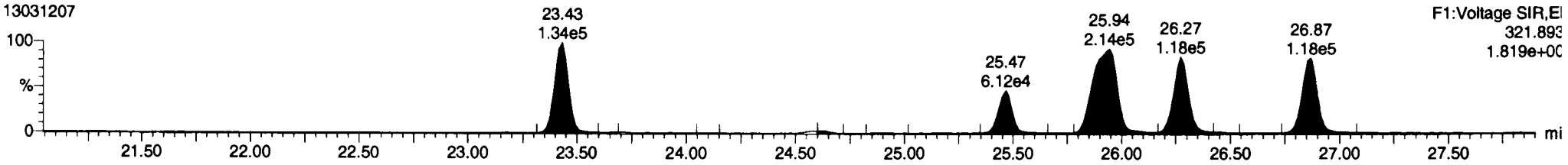
13C-2378-TCDD



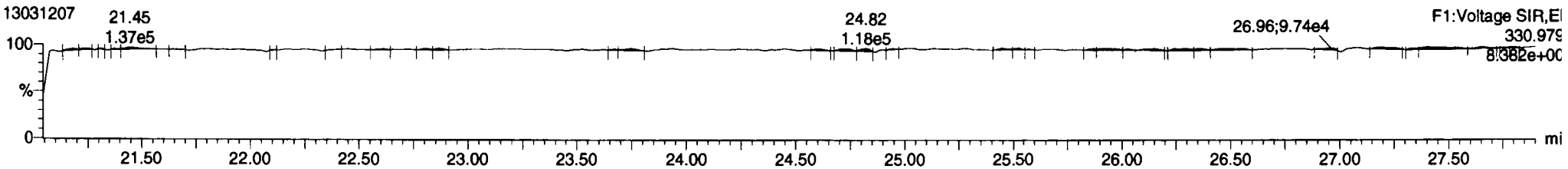
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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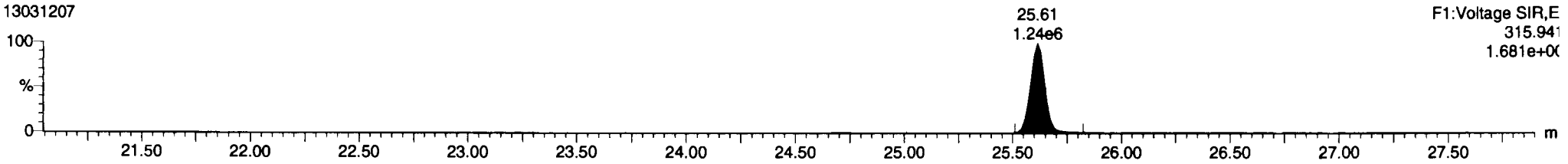
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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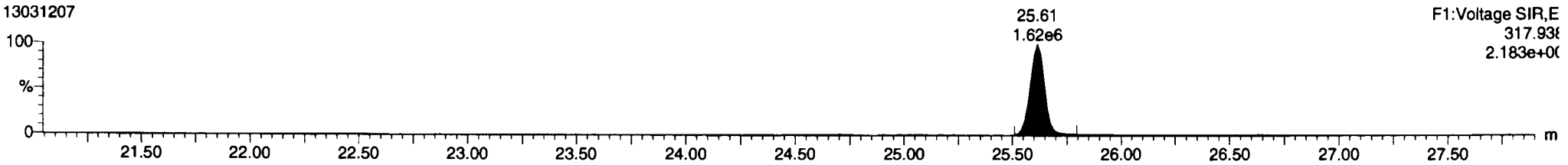
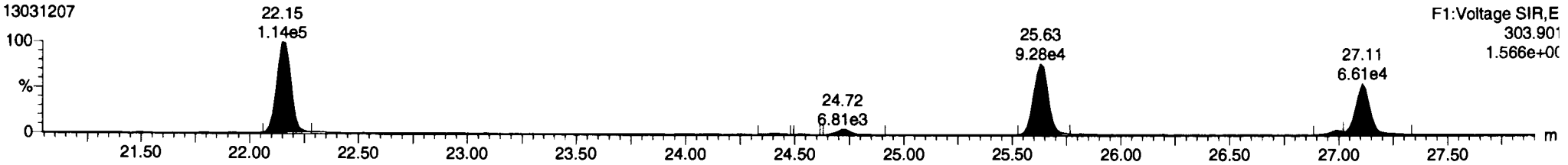
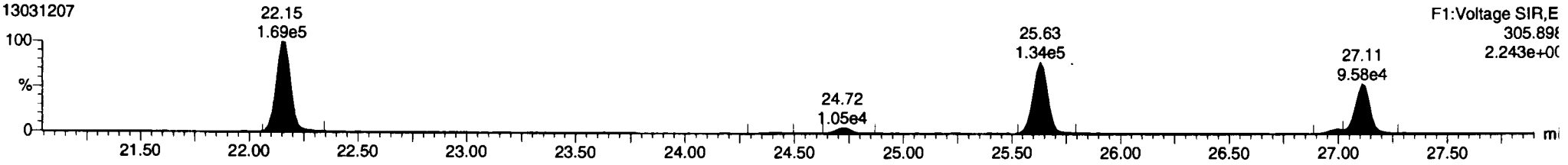


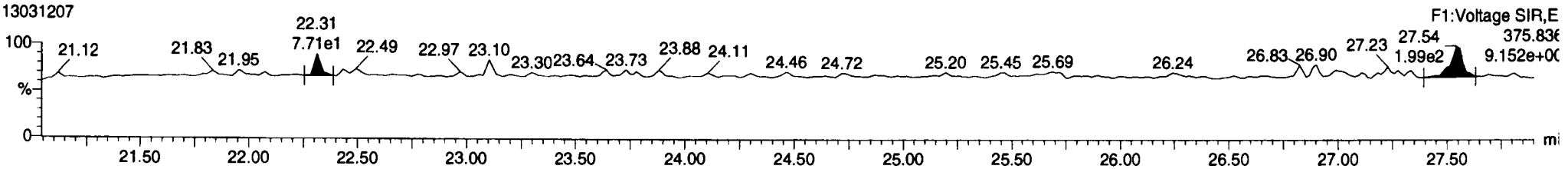
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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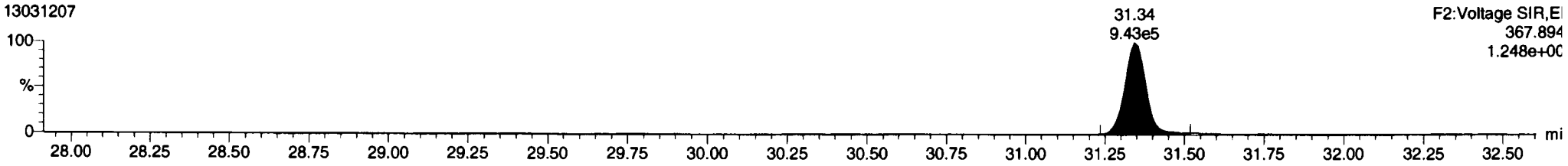
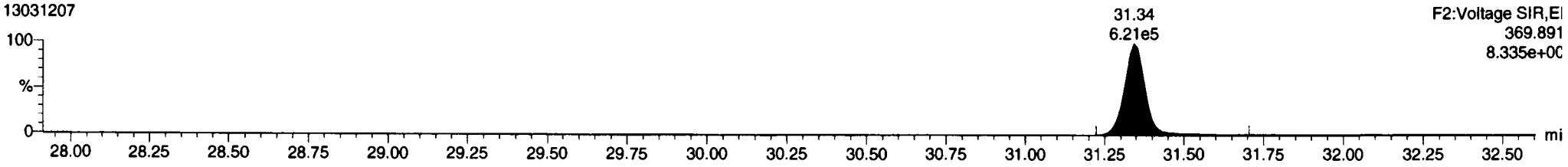
ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

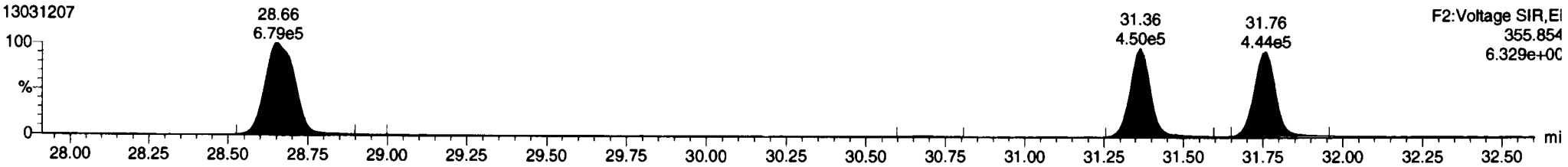
13C-12378-PeCDD



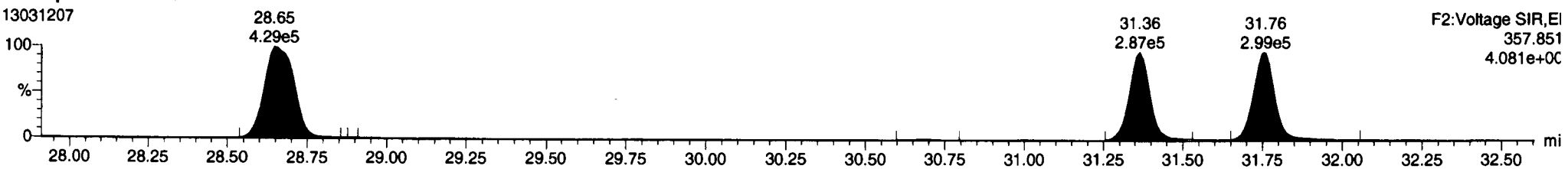
13C-12378-PeCDD



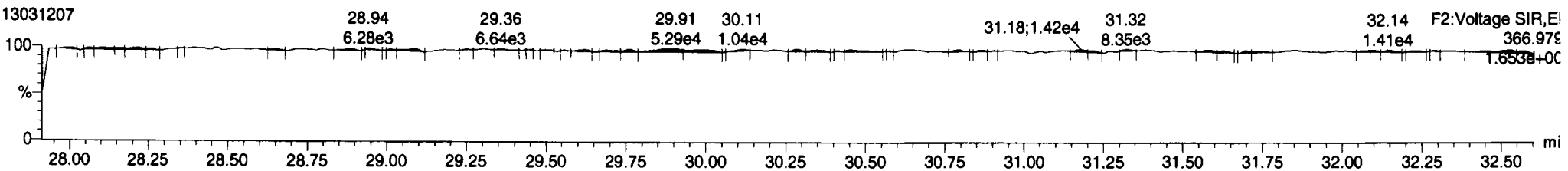
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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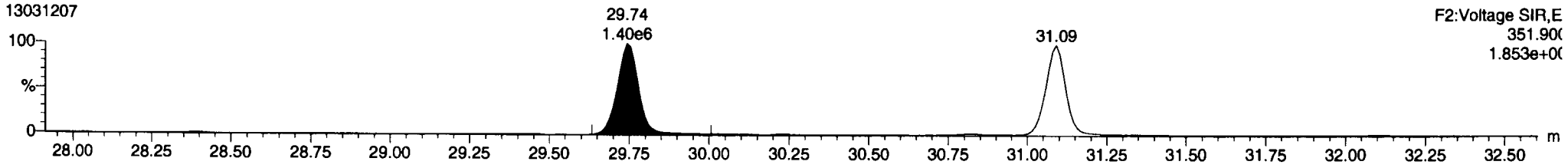
13C-12378-PeCDF



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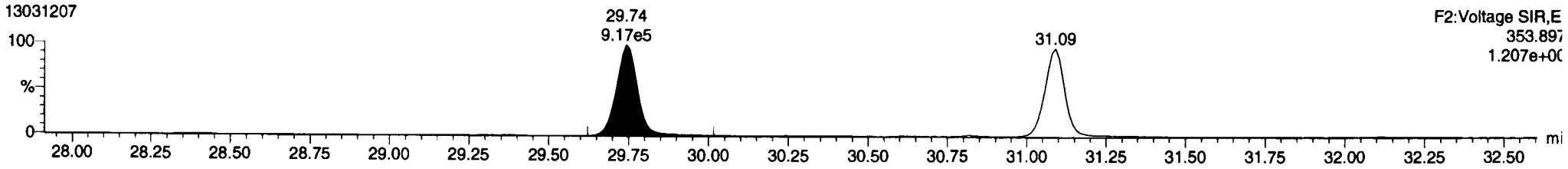
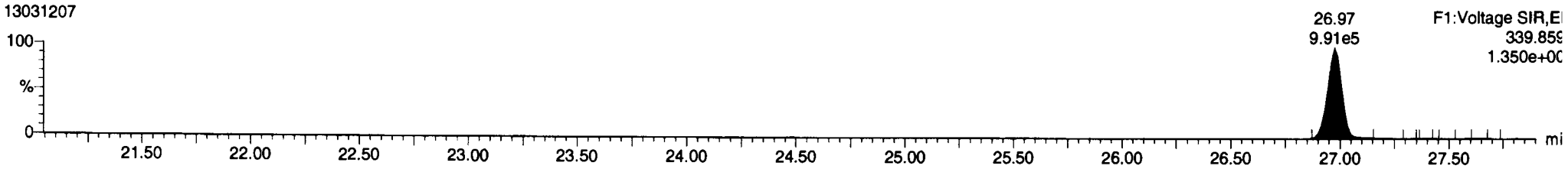
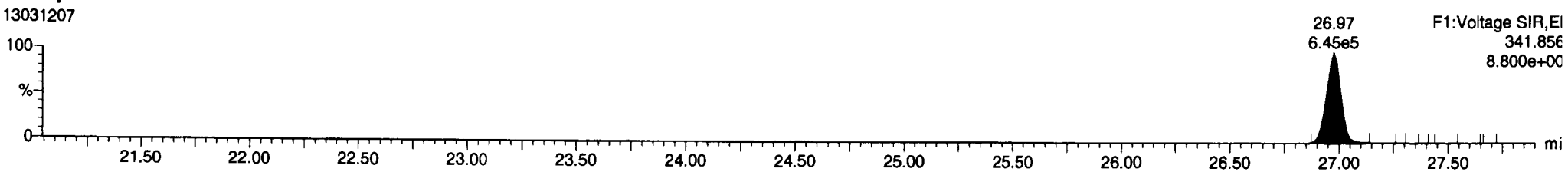


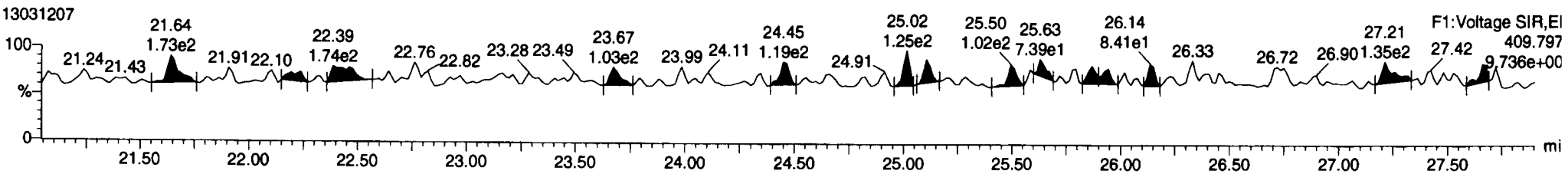
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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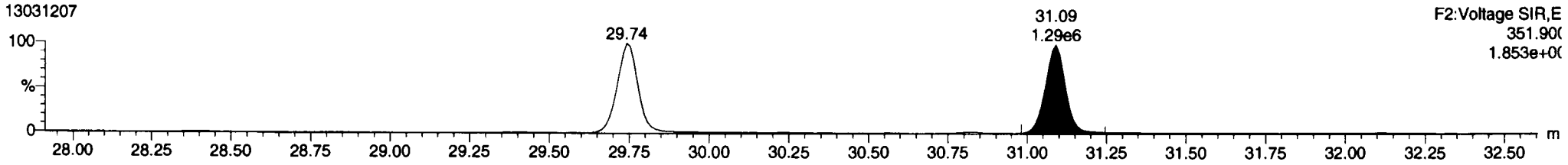
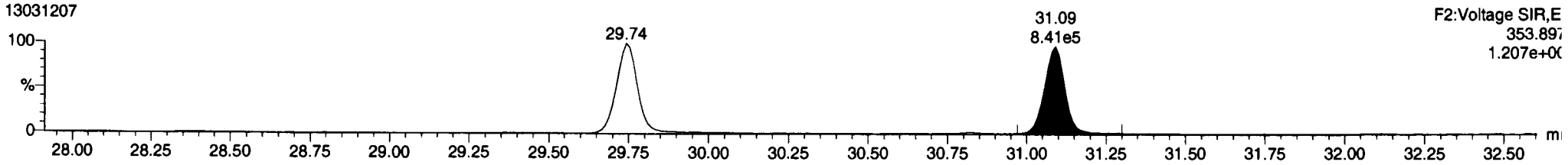
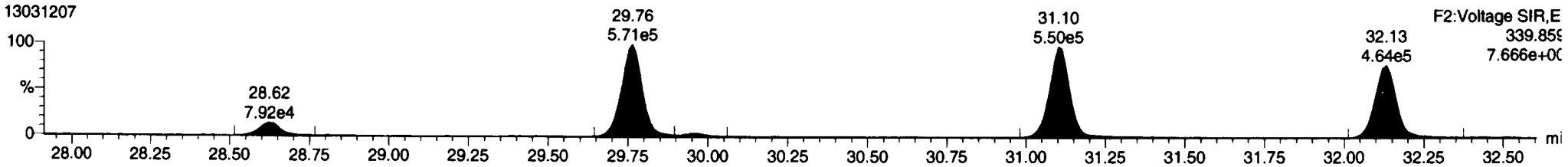
13C-23478-PeCDF



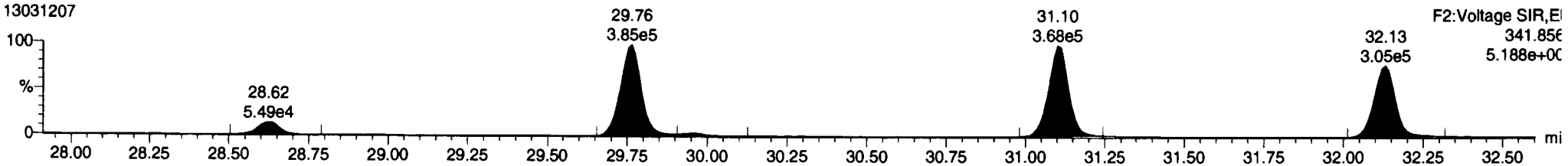
13C-23478-PeCDF



Total-pentafurans



Total-pentafurans



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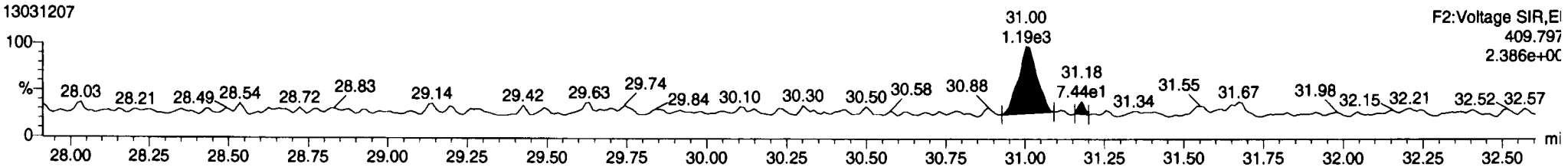

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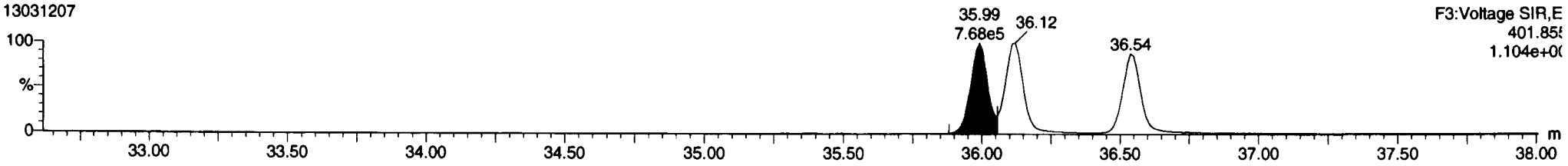
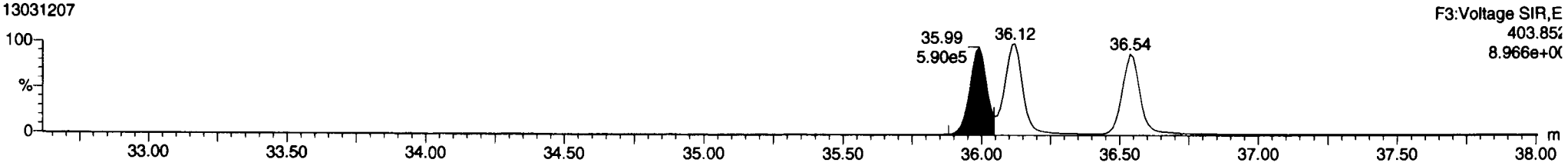
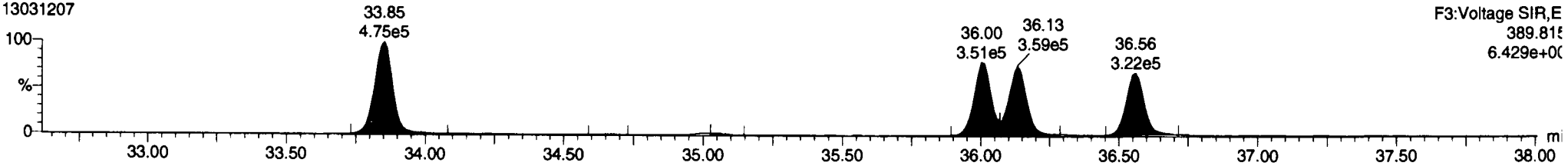
13C-123478-HxCDD



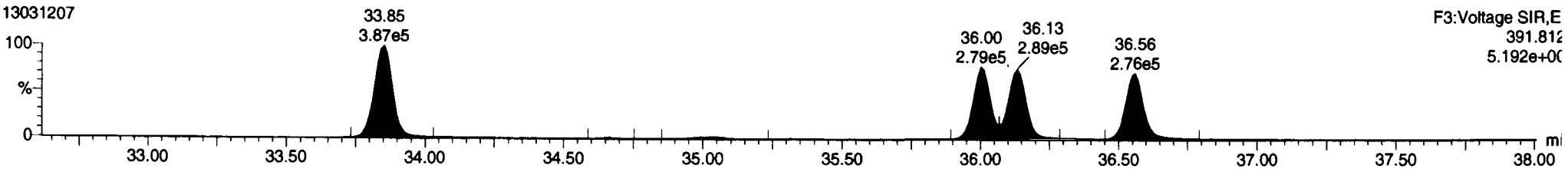
13C-123478-HxCDD



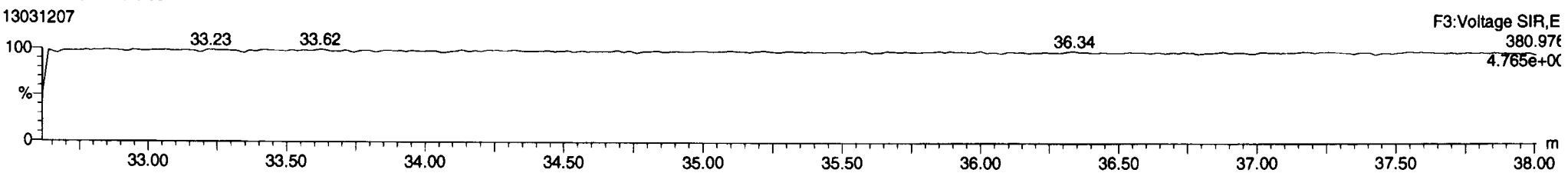
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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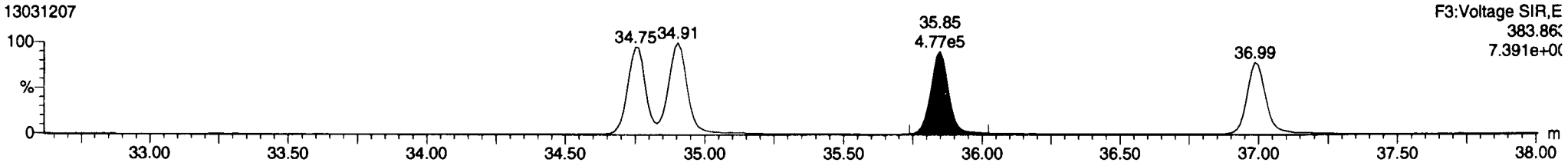
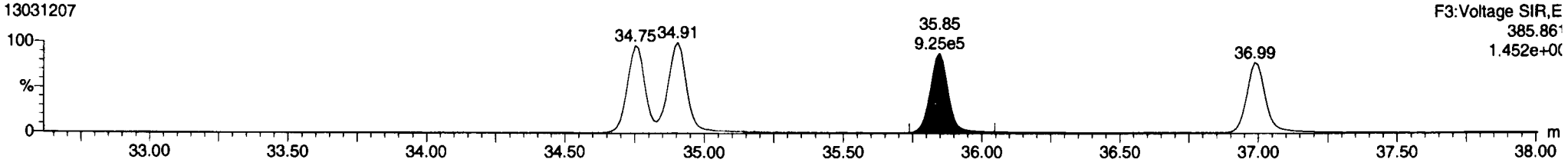
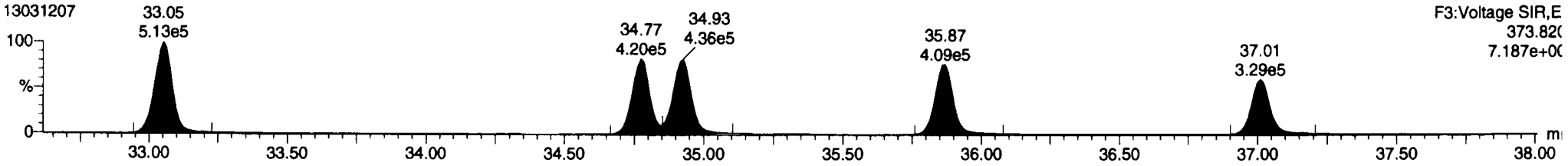
13C-234678-HxCDF



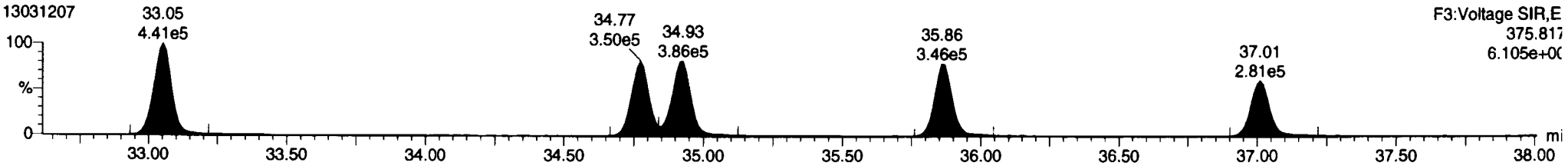
13C-234678-HxCDF



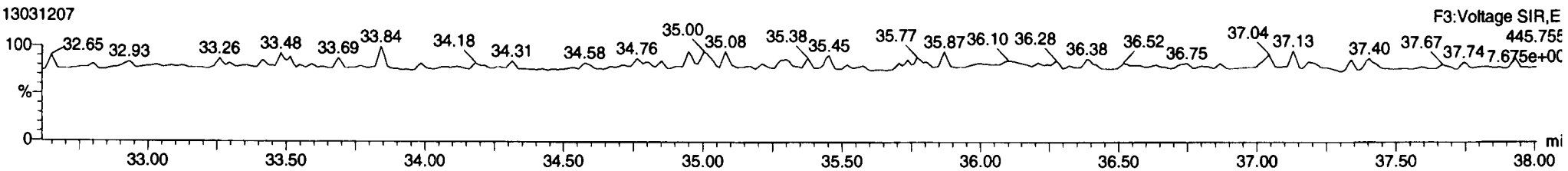
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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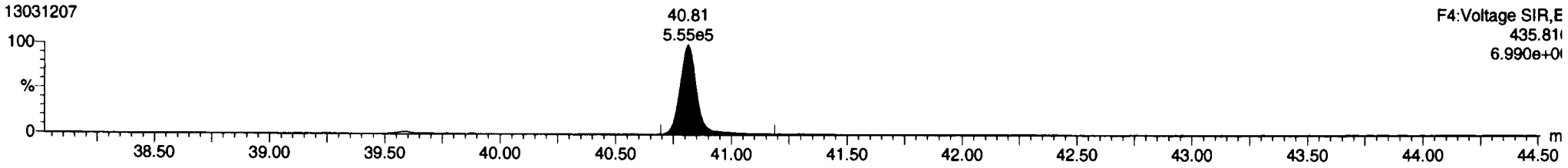
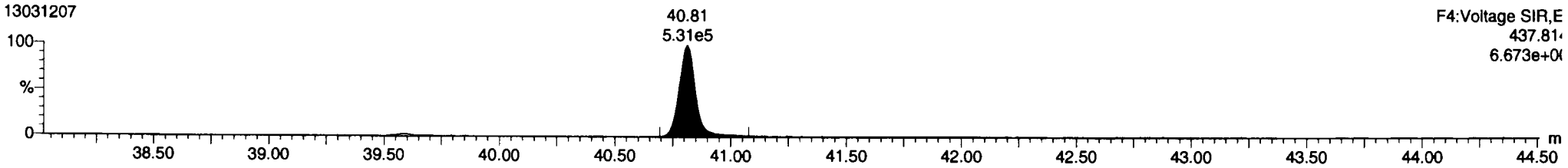
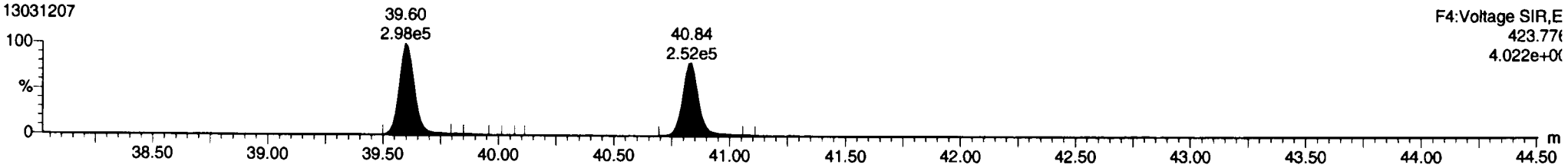
13C-1234678-HpCDD



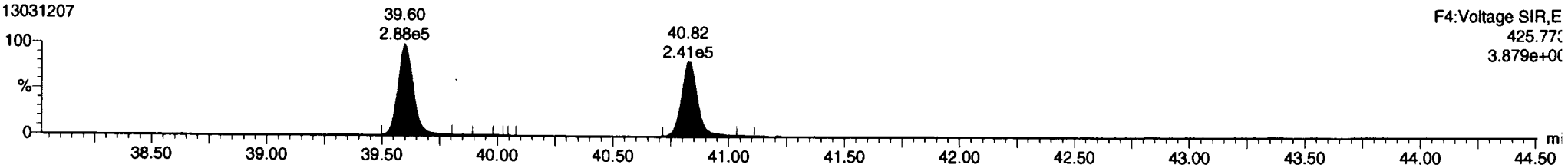
13C-1234678-HpCDD



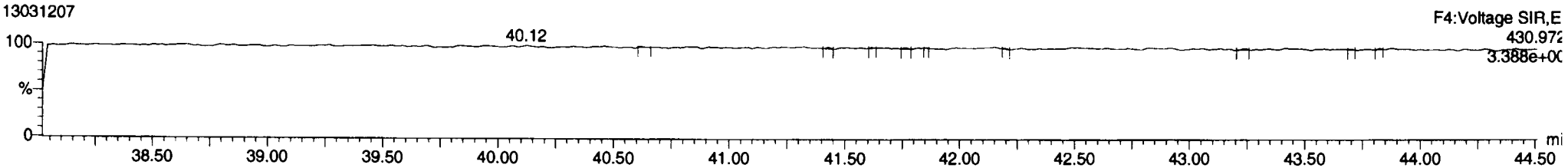
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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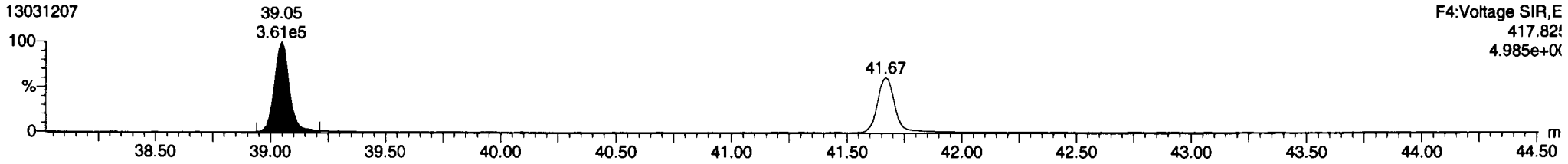
13C-1234678-HpCDF



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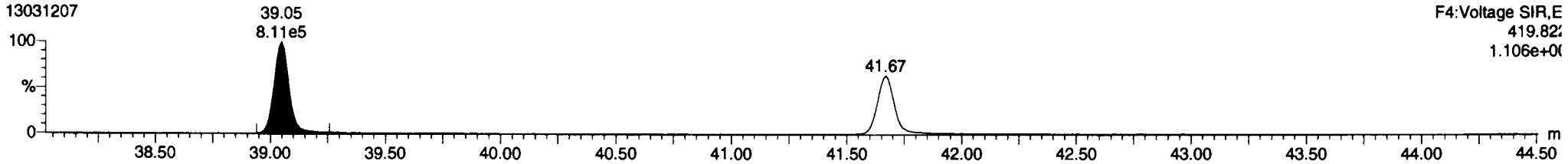
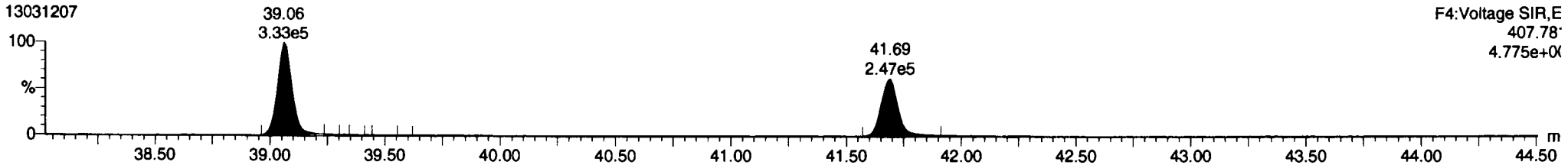
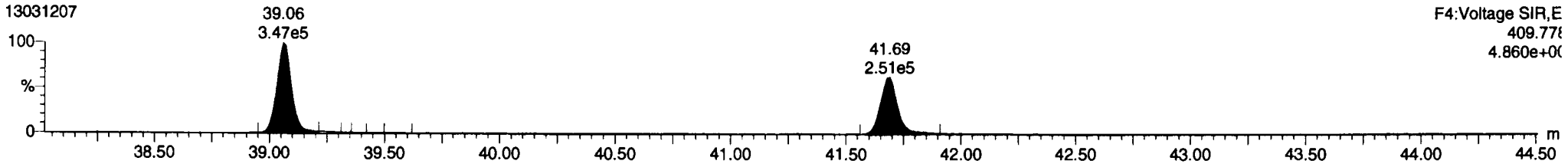


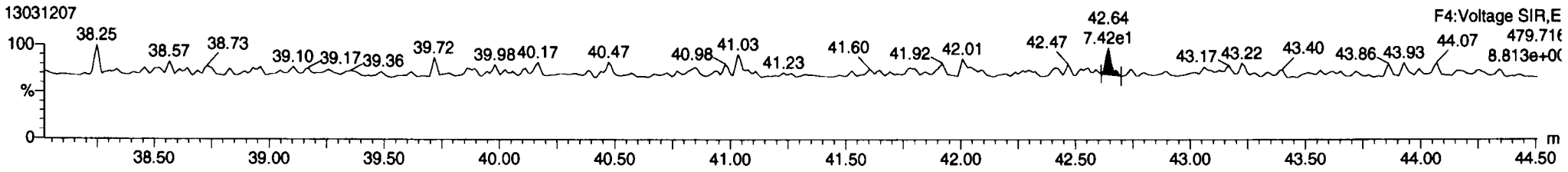
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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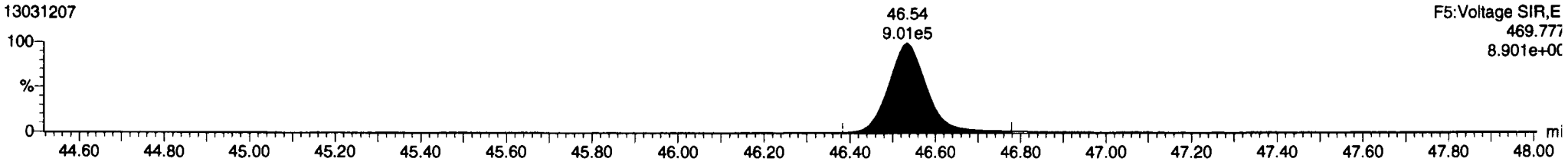
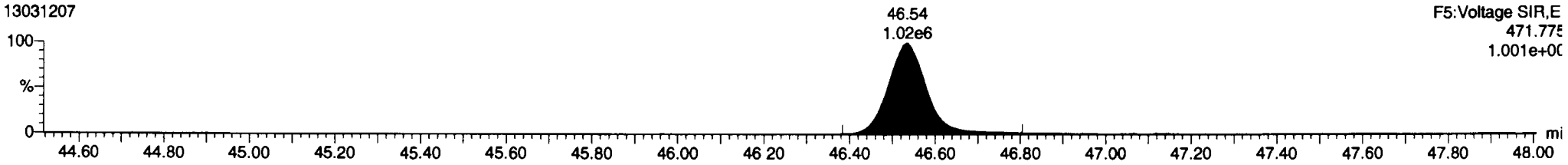
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

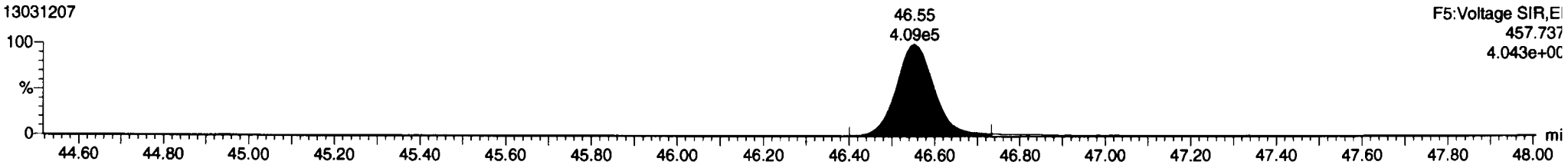
13C-OCDD



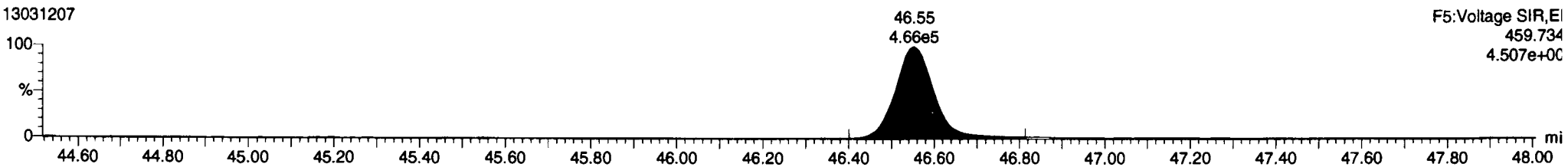
13C-OCDD



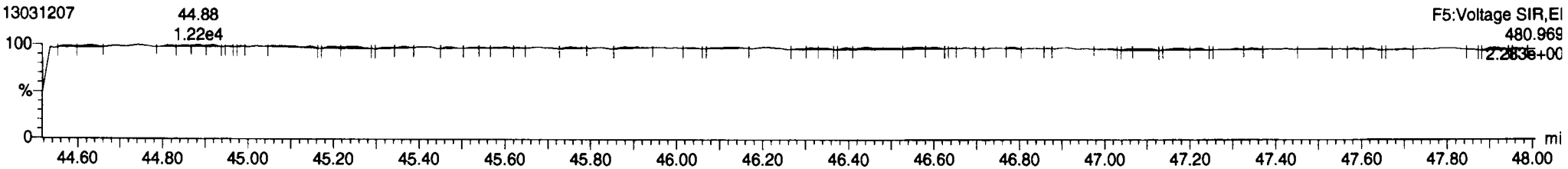
OCDD



OCDD



FUNCTION5 PFK



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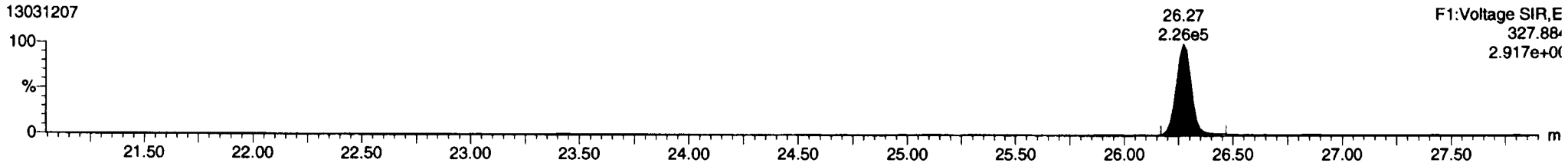
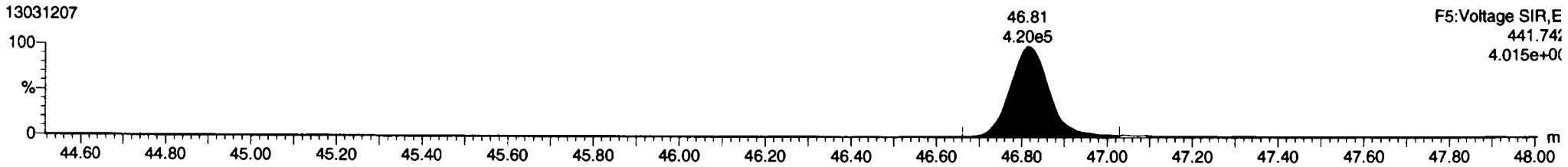
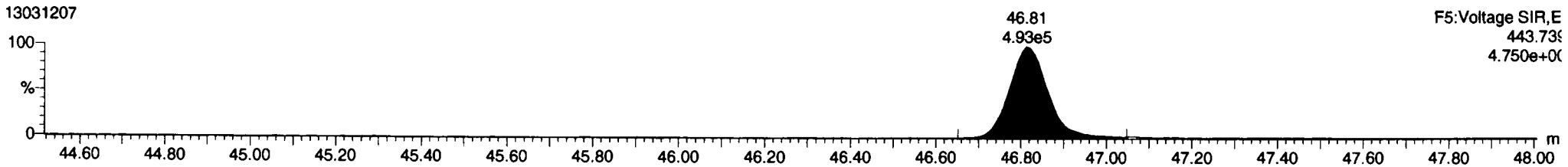
37CL-2378-TCDD



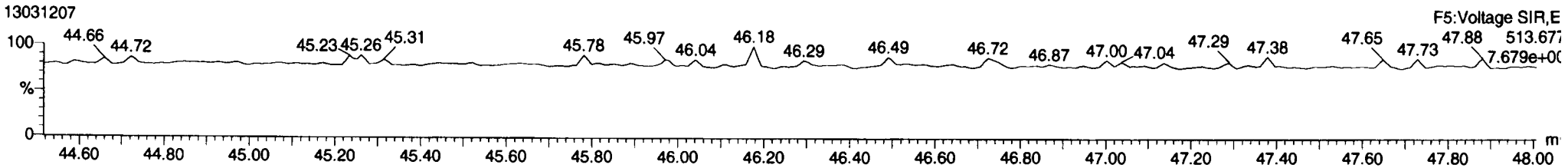
OCDF



OCDF



FUNCTION5 DCDPE



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

	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
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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

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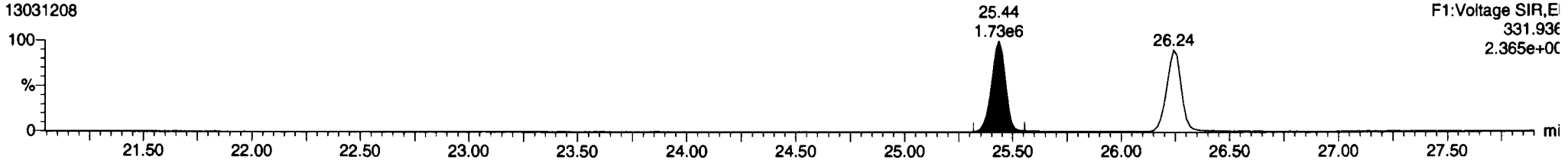
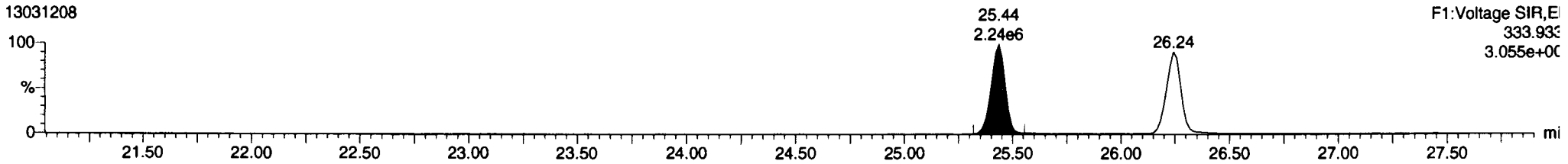
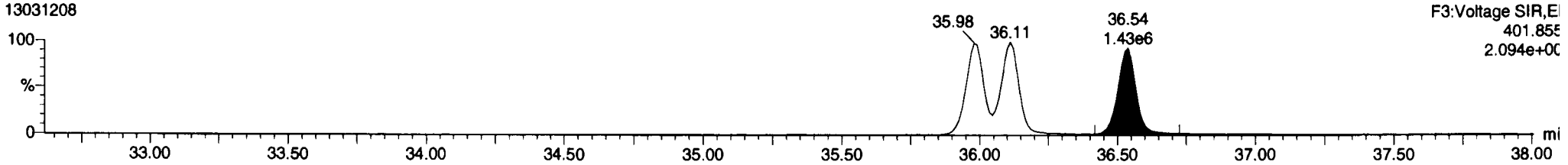
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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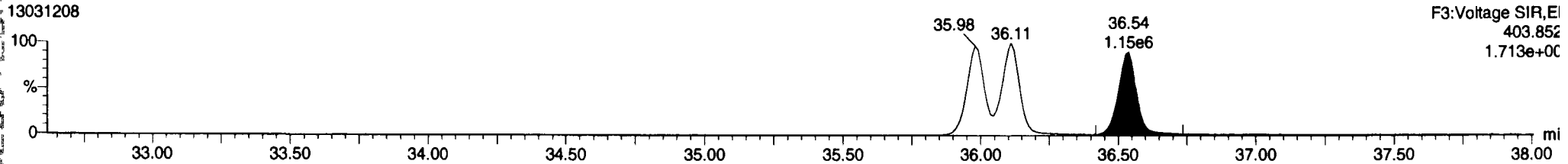

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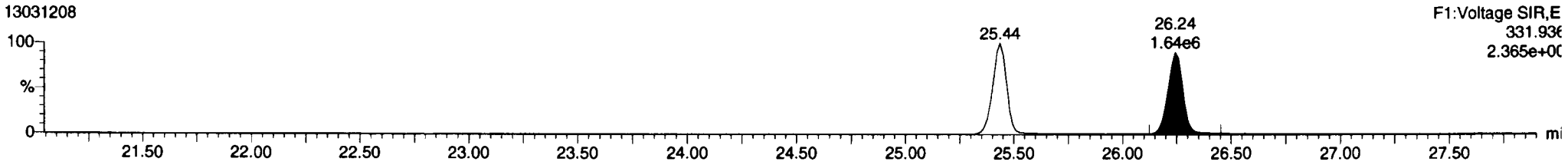
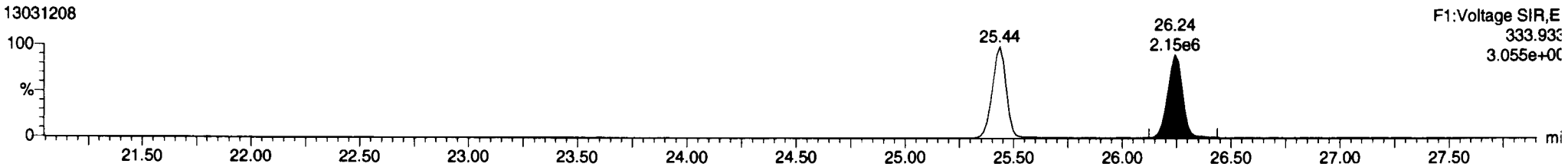
ID: CS4, Name: 13031208, Date: 12-Mar-2013, Time: 18:29:32, Conditions: AUTOSPEC01, User: pk

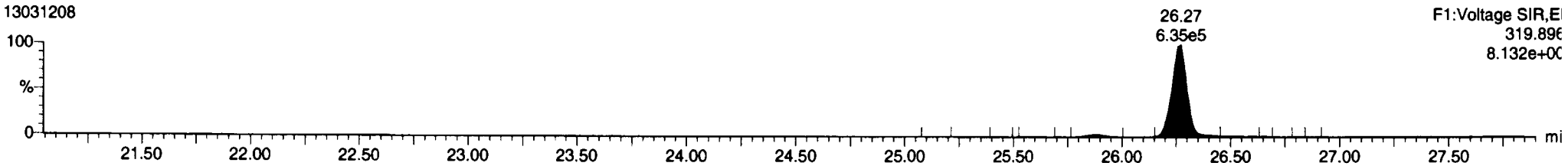
13C-2378-TCDD



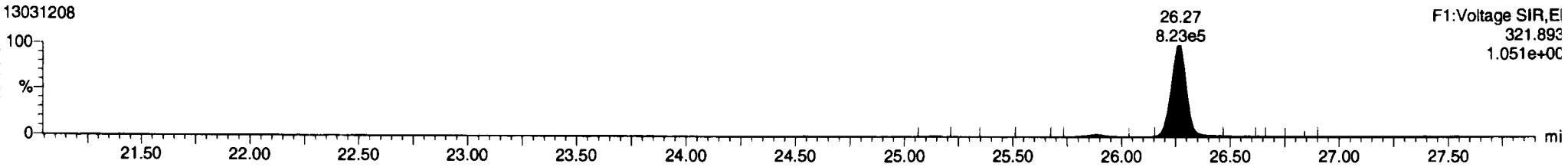
13C-2378-TCDD



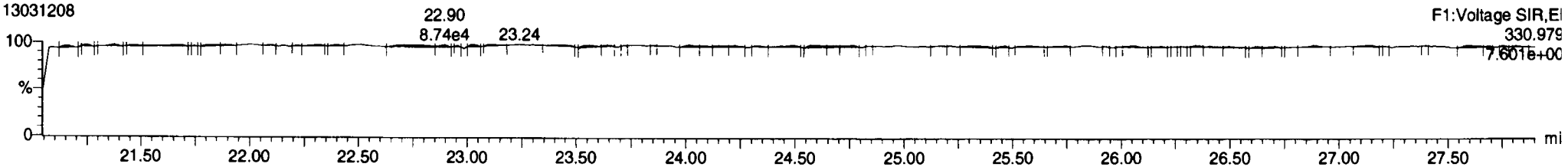
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



Dataset: P:\DIOXIN8290.PRO\130312IC.qld
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Printed: Wednesday, March 13, 2013 10:43:00 Pacific Daylight Time

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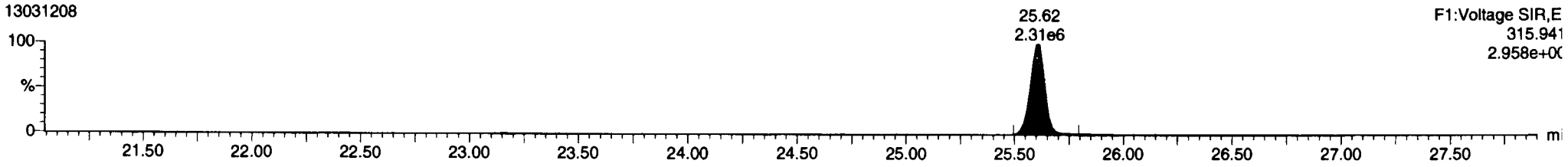
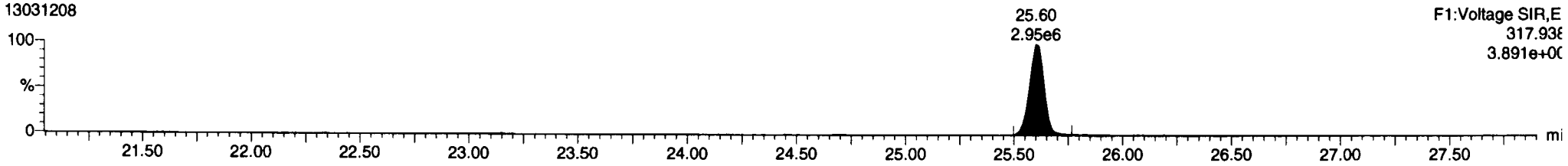
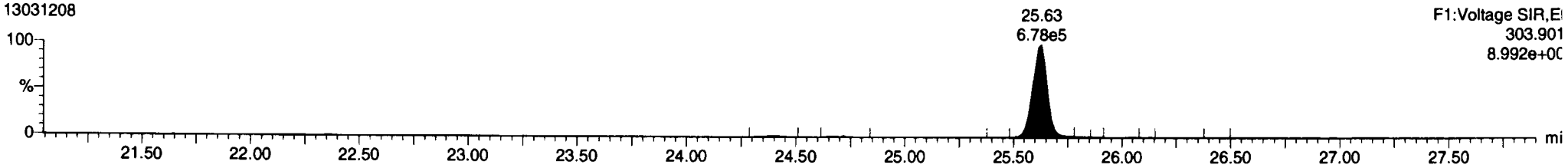
13C-2378-TCDF



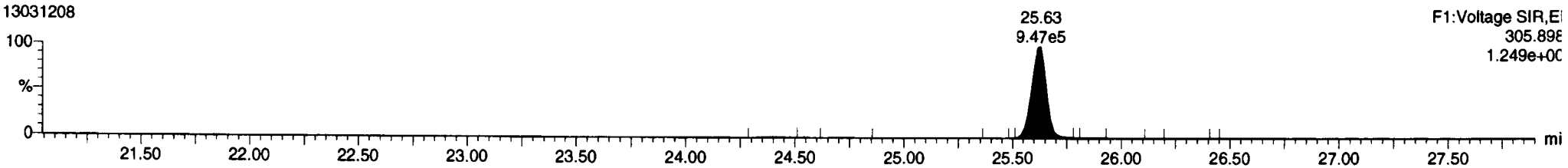
13C-2378-TCDF



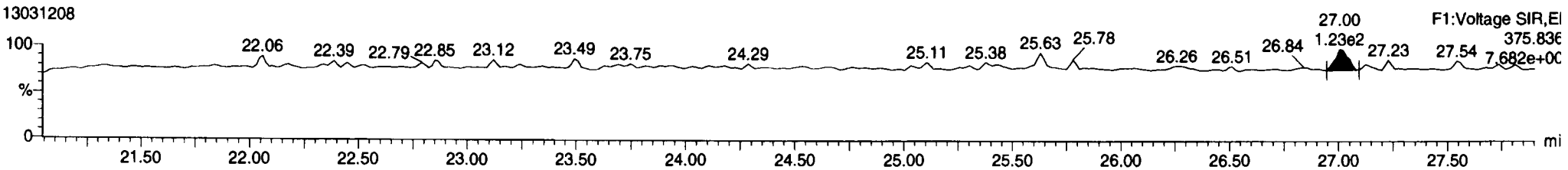
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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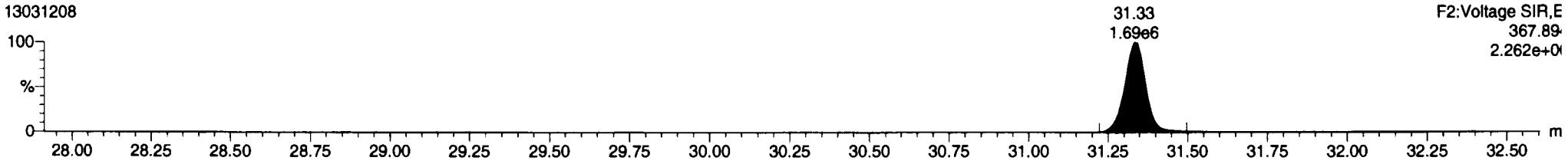
13C-12378-PeCDD



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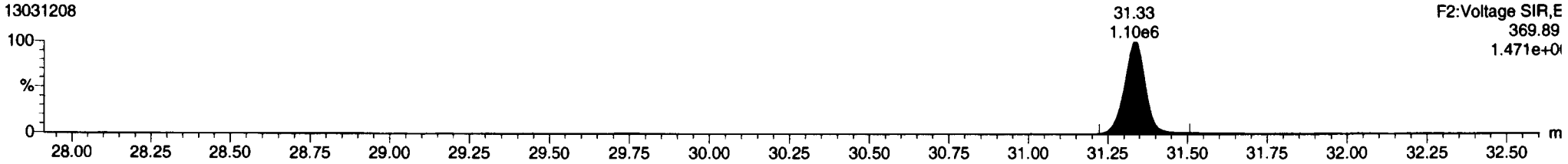
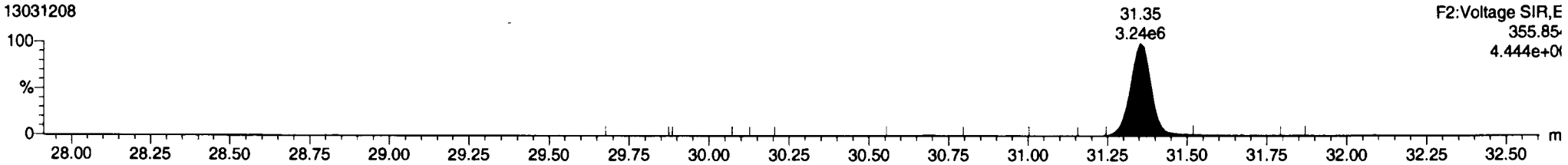
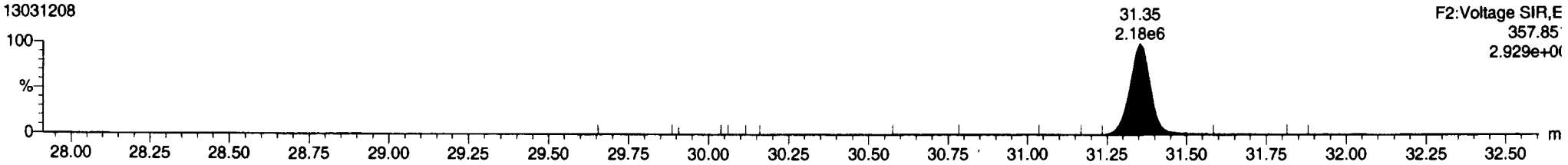


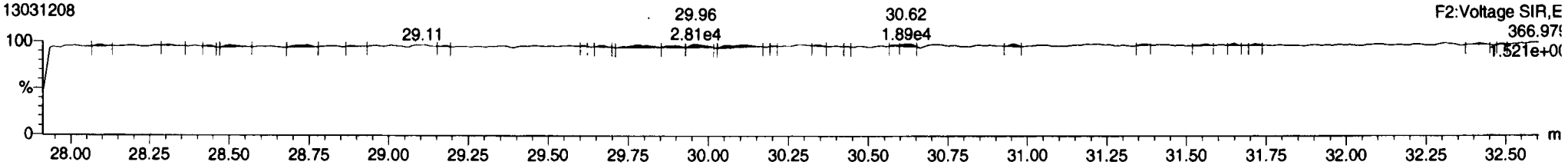
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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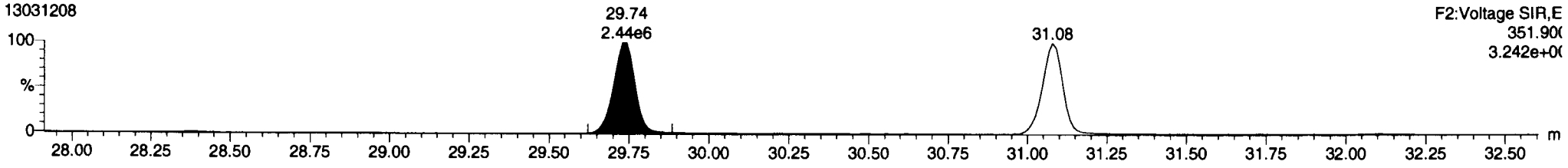
13C-12378-PeCDF



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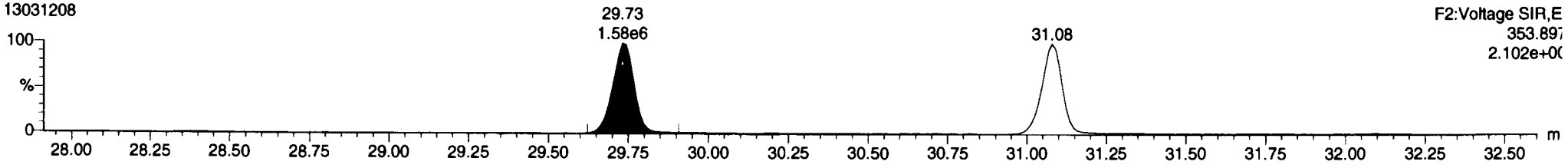

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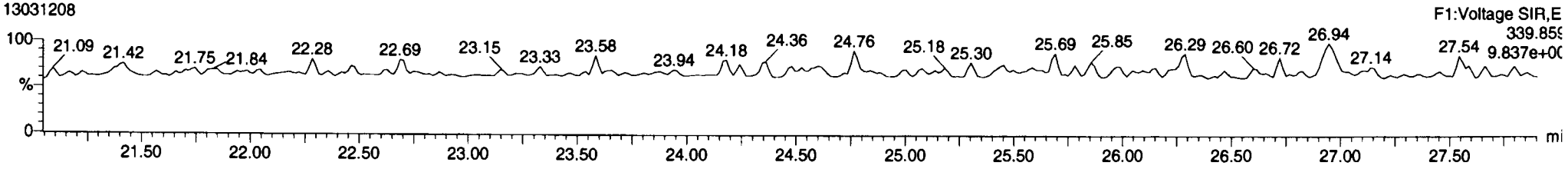

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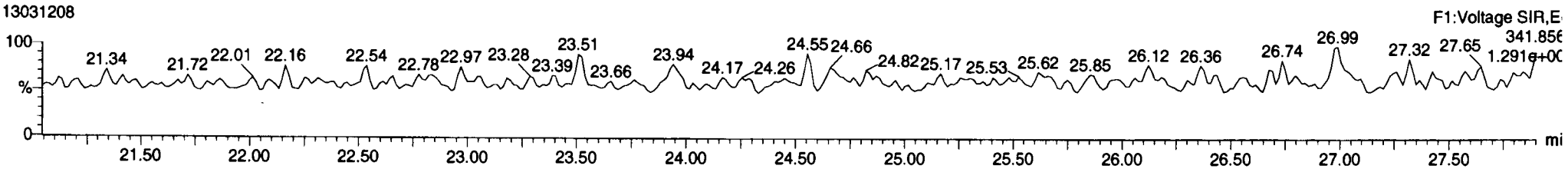

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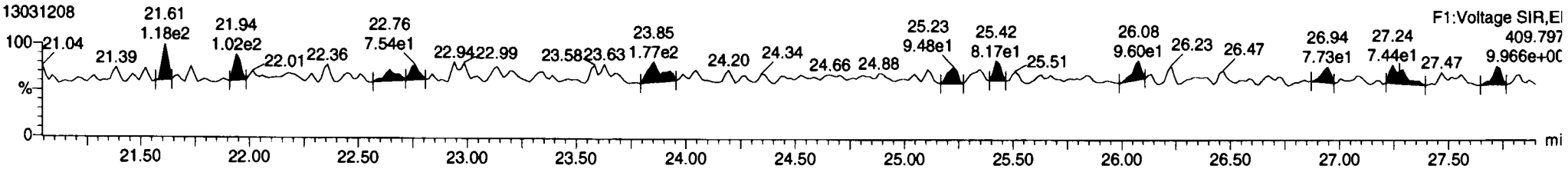

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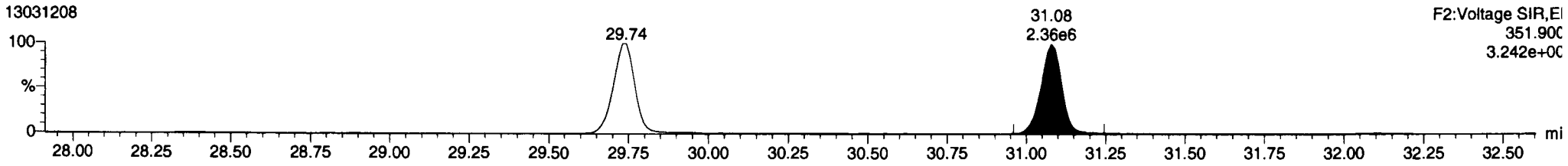
13C-23478-PeCDF



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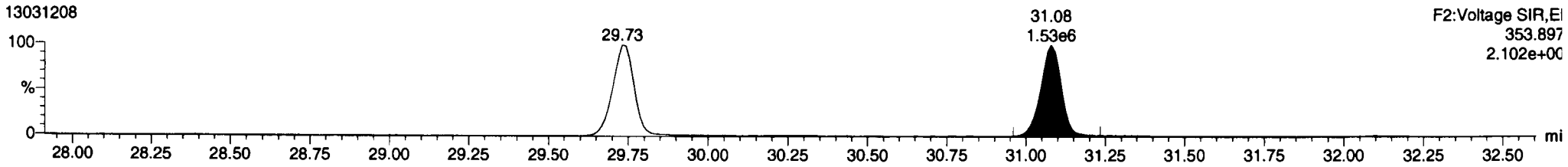

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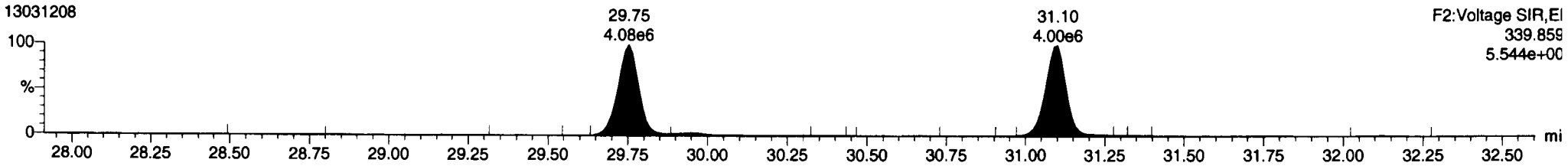

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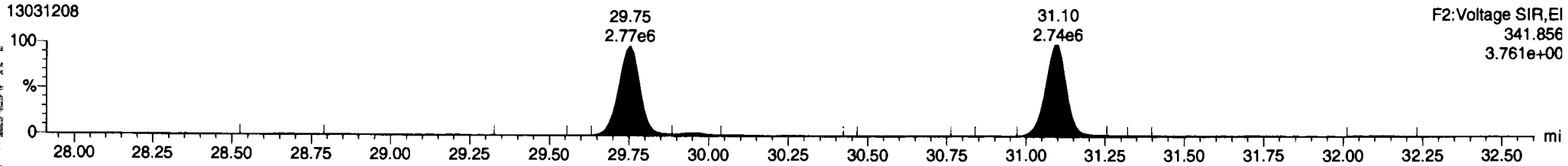

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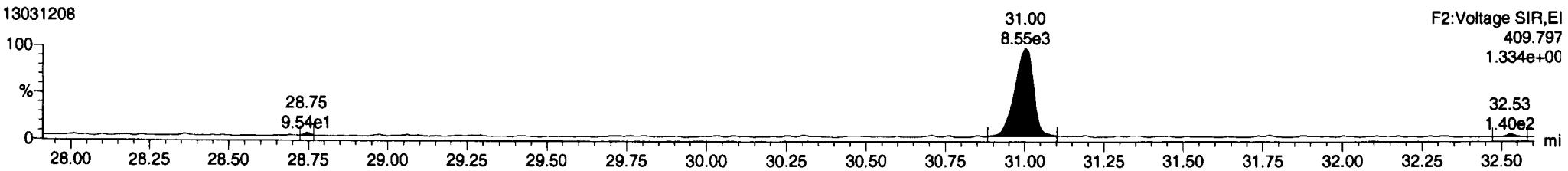

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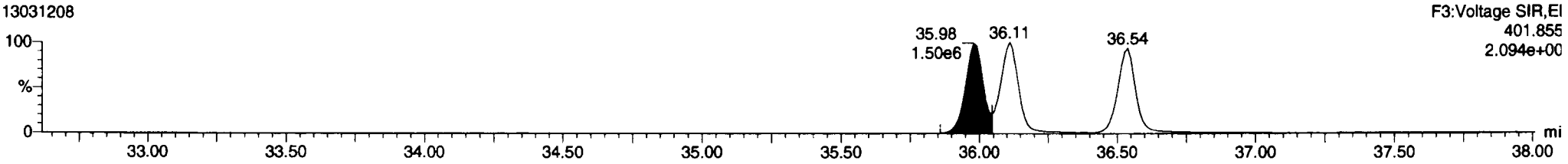
13C-123478-HxCDD



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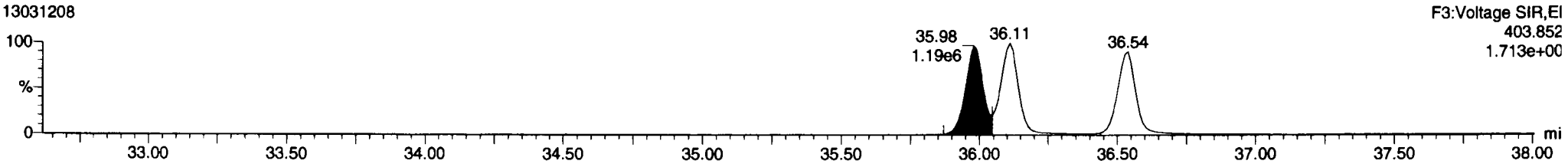
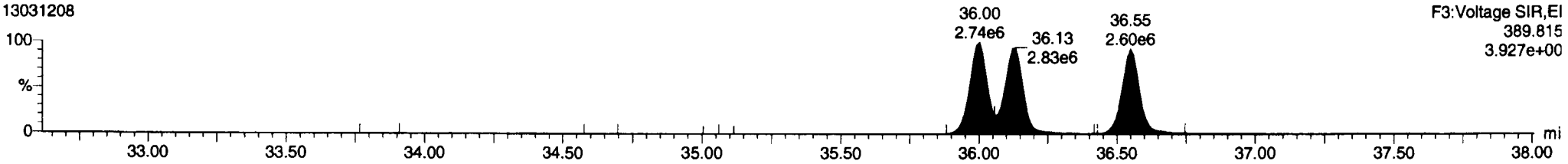
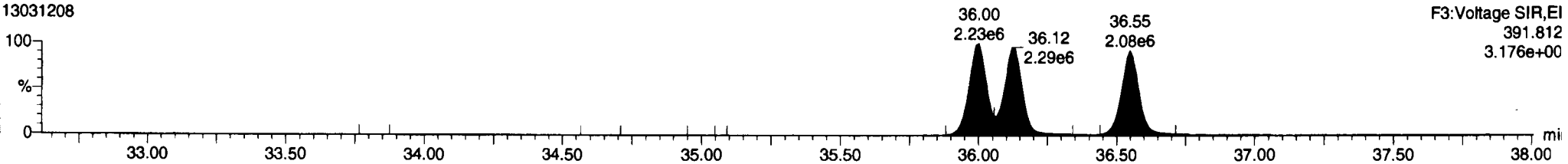


Total-hexadioxins



Total-hexadioxins



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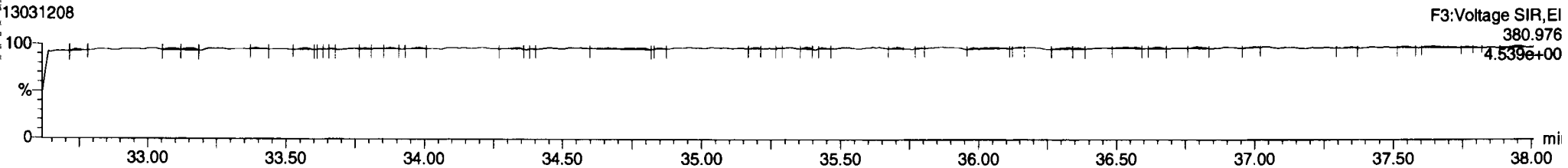

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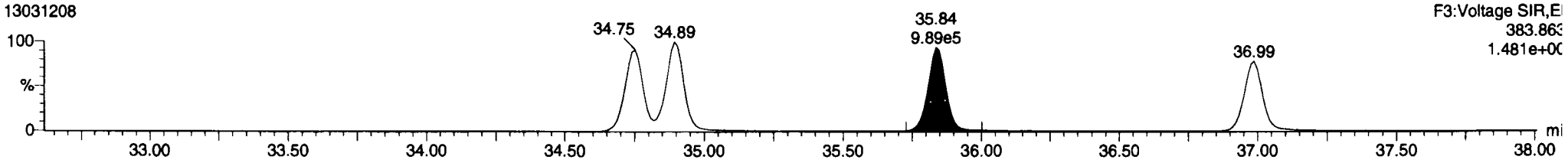
13C-234678-HxCDF



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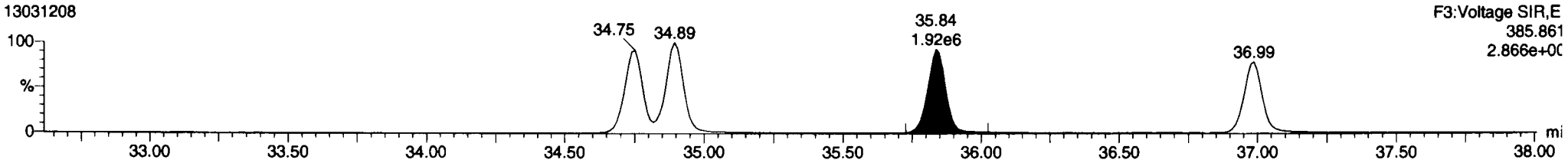
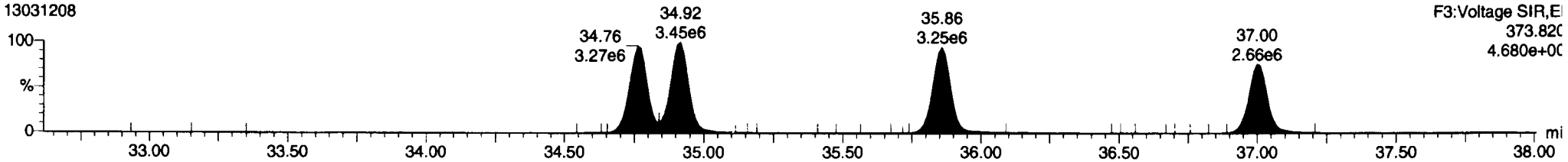


Total-hexafurans



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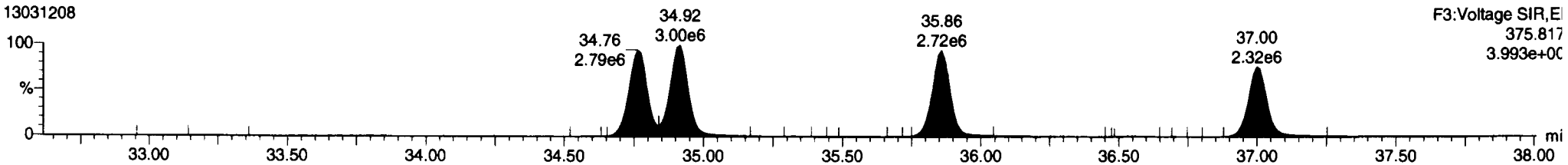
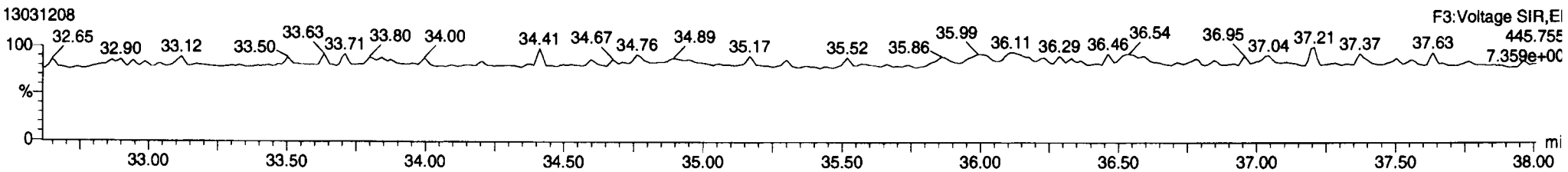


FUNCTION3 OCDPE



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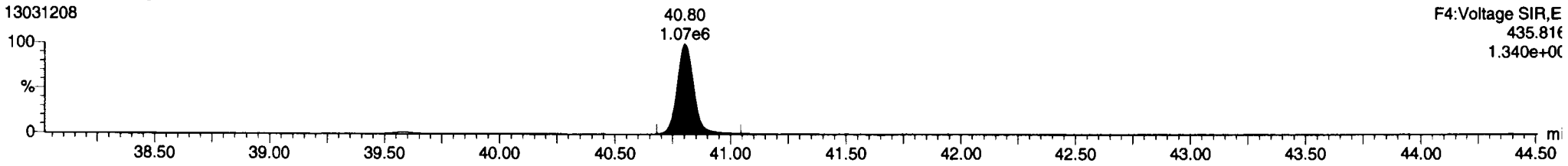
13C-1234678-HpCDD



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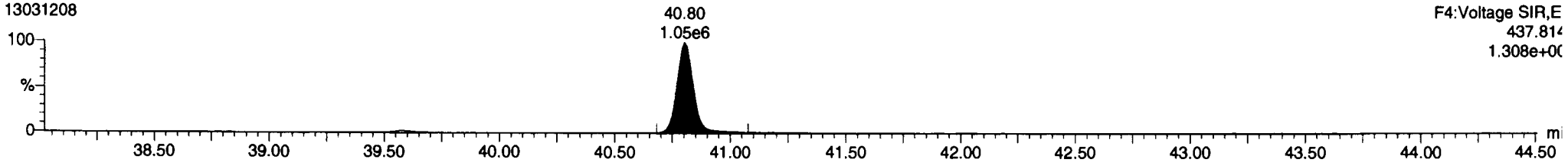

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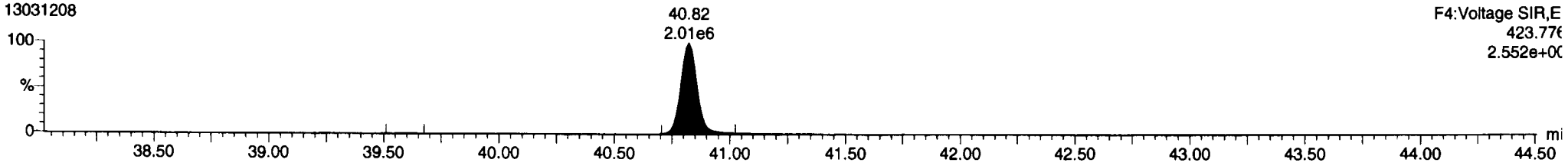

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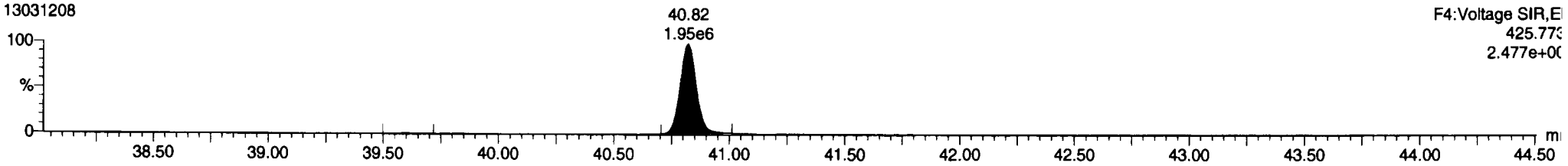
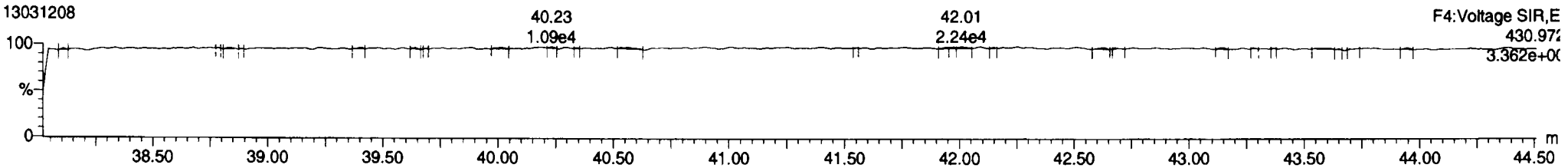


FUNCTION4 PFK



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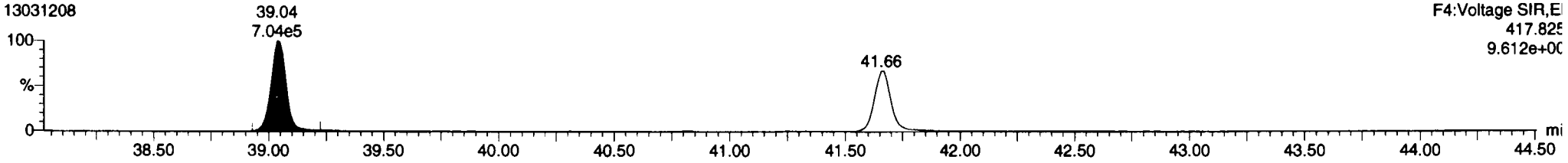
13C-1234678-HpCDF



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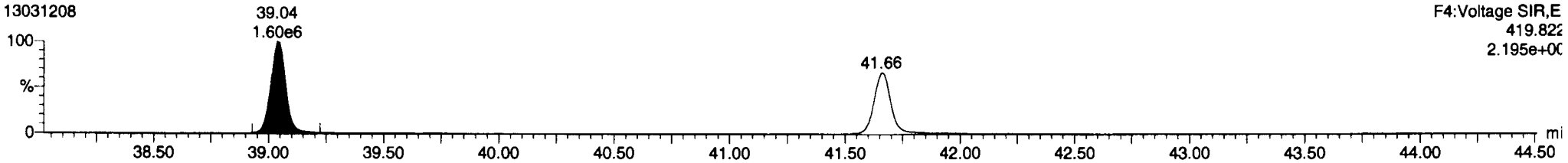
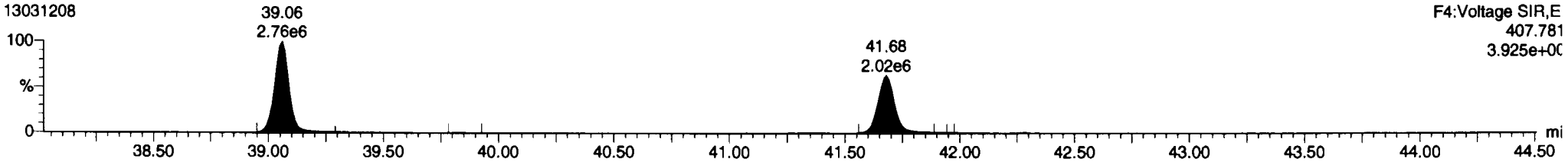


Total-heptafurans



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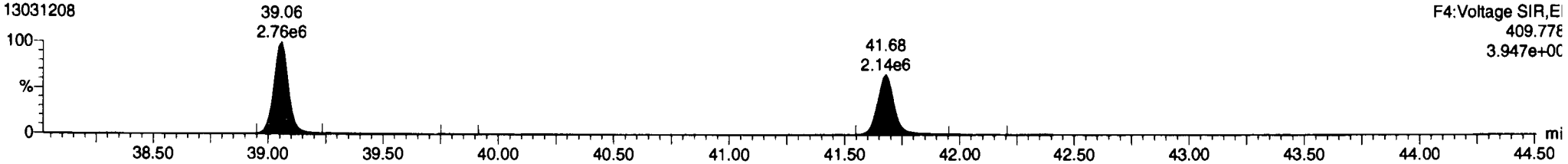
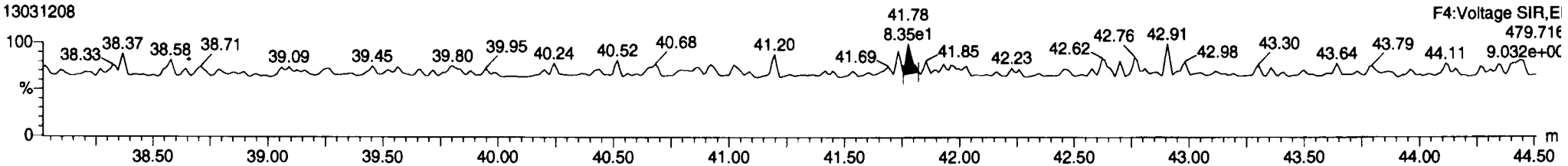


FUNCTION4 NCDPE



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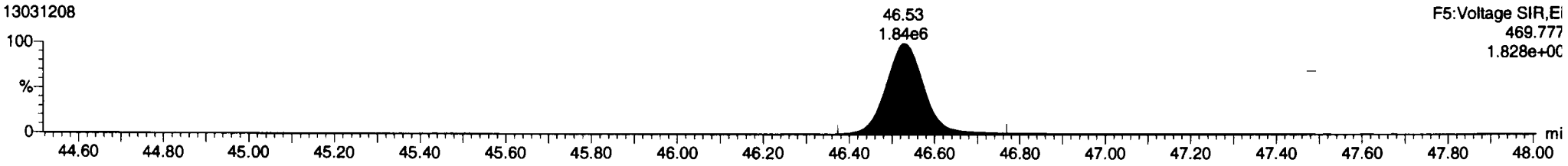
13C-OCDD



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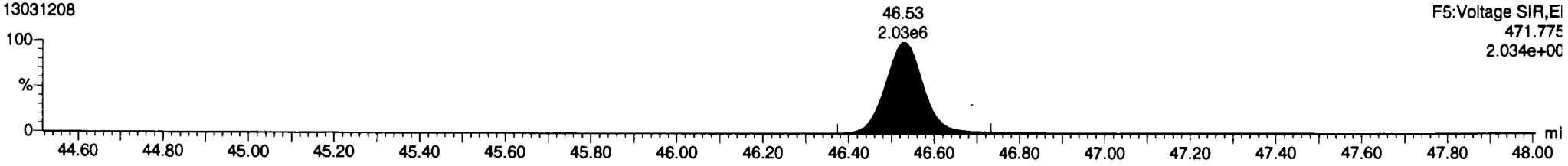
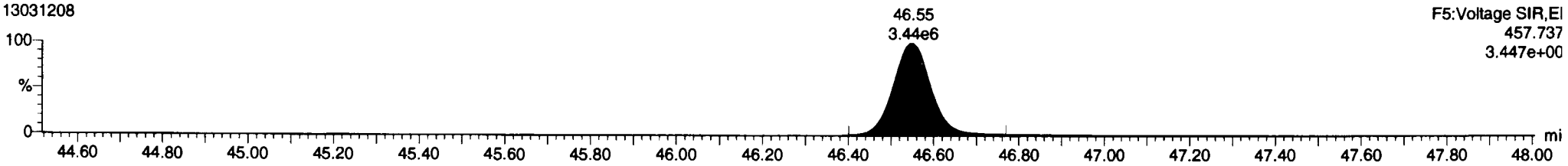


OCDD



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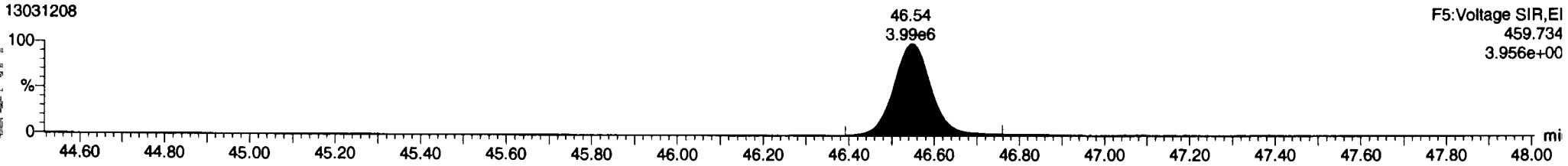
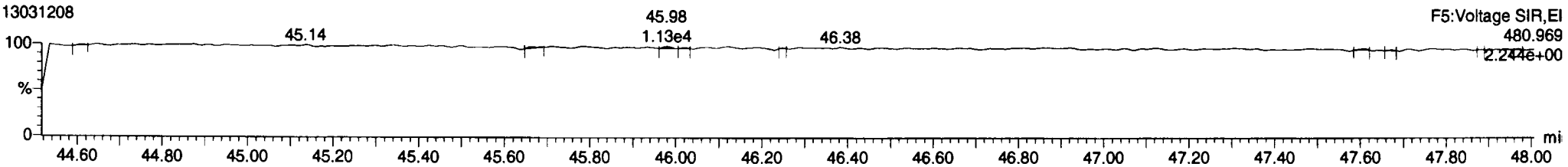


FUNCTION5 PFK



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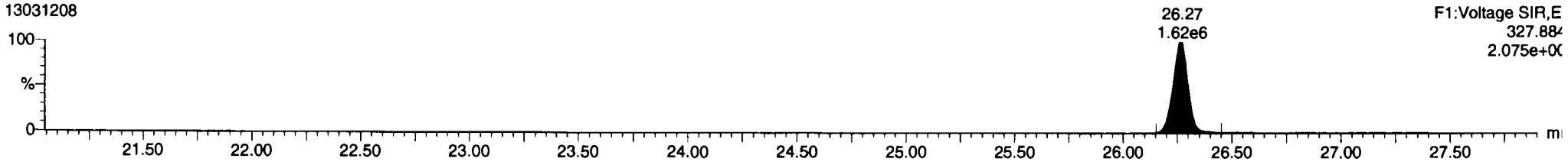
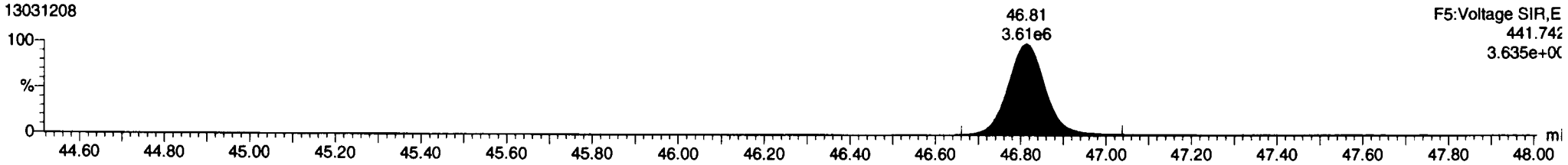
37CL-2378-TCDD



OCDF



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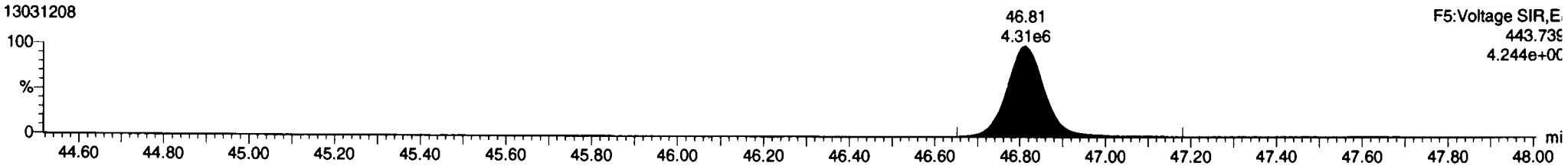
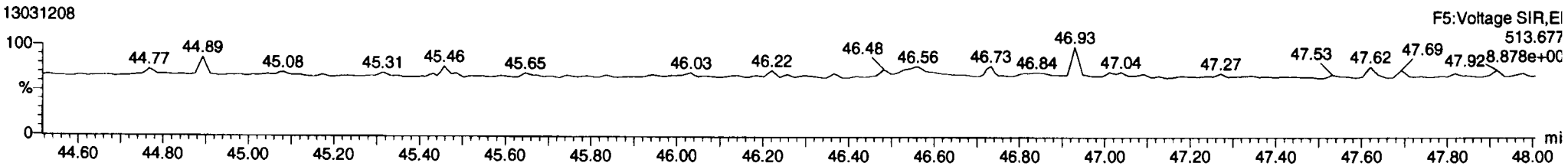


FUNCTION5 DCDPE



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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

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	12378-PeCDF	29.753	1.000	2.93e7	1.97e7	0.836	1.485	1.550	19007.1	NO	1021.788	1021.788
	23478-PeCDF	31.102	1.001	2.84e7	1.92e7	0.851	1.478	1.550	18887.7	NO	1026.824	1026.824
	123478-HxCDF	34.763	1.000	2.28e7	1.95e7	1.017	1.170	1.240	39395.9	NO	1030.963	1030.963
	234678-HxCDF	35.859	1.001	2.23e7	1.88e7	1.027	1.183	1.240	39054.6	NO	987.020	987.020
	123678-HxCDF	34.916	1.001	2.37e7	2.01e7	1.013	1.180	1.240	41348.2	NO	995.527	995.527
	123789-HxCDF	37.010	1.001	1.92e7	1.62e7	0.929	1.185	1.240	33147.0	NO	1044.268	1044.268
	1234678-HpCDF	39.059	1.000	1.93e7	1.96e7	1.151	0.984	1.050	23020.1	NO	1047.820	1047.820
	1234789-HpCDF	41.679	1.000	1.54e7	1.57e7	1.149	0.983	1.050	16211.0	NO	1030.089	1030.089
	OCDF	46.822	1.006	2.87e7	3.36e7	0.963	0.854	0.890	56522.2	NO	2144.187	2144.187
	2378-TCDD	26.272	1.001	4.35e6	5.61e6	0.980	0.775	0.770	25775.5	NO	198.613	198.613
	12378-PeCDD	31.354	1.000	2.32e7	1.51e7	0.948	1.537	1.550	79805.4	NO	1016.325	1016.325
	123478-HxCDD	36.001	1.000	1.98e7	1.61e7	0.941	1.231	1.240	37321.6	NO	1018.718	1018.718
	123678-HxCDD	36.133	1.001	1.88e7	1.53e7	0.884	1.232	1.240	36096.7	NO	992.028	992.028
	123789-HxCDD	36.549	1.012	1.82e7	1.49e7	0.870	1.225	1.240	34211.2	NO	999.146	999.146
	1234678-HpCDD	40.824	1.000	1.46e7	1.42e7	0.948	1.027	1.050	17934.4	NO	1013.399	1013.399
	OCDD	46.562	1.000	2.69e7	3.15e7	0.969	0.853	0.890	31916.5	NO	1996.347	1996.347
	13C-2378-TCDF	25.615	1.007	2.98e6	3.85e6	1.318	0.774	0.770	8989.5	NO		102.936
	13C-12378-PeCDF	29.742	1.169	3.49e6	2.25e6	1.026	1.554	1.550	8635.3	NO		110.996
	13C-23478-PeCDF	31.080	1.222	3.31e6	2.14e6	0.966	1.544	1.550	8316.1	NO		112.127
	13C-123478-HxCDF	34.752	0.951	1.36e6	2.67e6	1.123	0.507	0.510	3468.5	NO		98.632
	13C-123678-HxCDF	34.894	0.955	1.48e6	2.86e6	1.216	0.517	0.510	3632.1	NO		98.061
	13C-234678-HxCDF	35.837	0.981	1.37e6	2.69e6	1.106	0.508	0.510	3456.7	NO		100.760
	13C-123789-HxCDF	36.988	1.012	1.24e6	2.40e6	0.995	0.515	0.510	3112.7	NO		100.585
	13C-1234678-HpCDF	39.048	1.069	9.92e5	2.23e6	0.896	0.445	0.440	4372.7	NO		98.833
	13C-1234789-HpCDF	41.668	1.140	8.05e5	1.82e6	0.693	0.442	0.440	3070.0	NO		104.206
	13C-1234-TCDD	25.436	0.000	2.20e6	2.84e6	1.000	0.773	0.770	5485.2	NO		100.000
	13C-2378-TCDD	26.243	1.032	2.23e6	2.88e6	0.961	0.773	0.770	5481.6	NO		105.658
	13C-12378-PeCDD	31.343	1.232	2.42e6	1.55e6	0.703	1.557	1.550	11285.4	NO		112.050
	13C-123478-HxCDD	35.990	0.985	2.08e6	1.65e6	1.016	1.261	1.240	6011.1	NO		101.093
	13C-123678-HxCDD	36.111	0.988	2.15e6	1.74e6	1.098	1.236	1.240	6296.2	NO		97.177
	13C-1234678-HpCDD	40.813	1.117	1.52e6	1.47e6	0.828	1.033	1.050	5516.0	NO		99.286
	13C-OCDD	46.544	1.274	2.86e6	3.17e6	0.770	0.901	0.890	7189.6	NO		215.358

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
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ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

	13C-123789-HxCDD	36.539	0.000	2.00e6	1.63e6	1.000	1.227	1.240	6011.4	NO	100.000
	Total-tetrafurans			4.54e6		0.763					209.710
	Total-penta1			3.17e2							0.010
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	Total-hexafurans			8.80e7		0.997					4062.694
	Total-heptafurans			3.47e7		1.150					2079.515
	Total-Furans			2.15e8		0.970					10592.762
	Total-tetradioxins			4.46e6		0.980					203.859
	Total-pentadioxins			2.32e7		0.948					1018.763
	Total-hexadioxins			5.68e7		0.898					3010.241
	Total-heptadioxins			1.46e7		0.948					1017.095
	Total-Dioxins			1.26e8		0.934					7246.440
	Total-TEQ			3.41e8							17839.201
	37CL-2378-TCDD	26.272	1.033	1.09e7		0.999			41777.3		217.645
	FUNCTION1 PFK			3.29e7							
	FUNCTION2 PFK			3.08e5							0.000
	FUNCTION3 PFK			0.00e0							
	FUNCTION4 PFK			4.93e5							
	FUNCTION5 PFK			6.21e4							
	FUNCTION1 HXCDPE			3.88e2							0.000
	FUNCTION1 HPCDPE			3.89e2							0.000
	FUNCTION2 HPCDPE			5.38e4							0.000
	FUNCTION3 OCDPE			1.87e3							0.000
	FUNCTION4 NCDPE			3.38e2							0.000
	FUNCTION5 DCDPE			8.23e2							0.000

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
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Calibration: 13 Mar 2013 10:38:15

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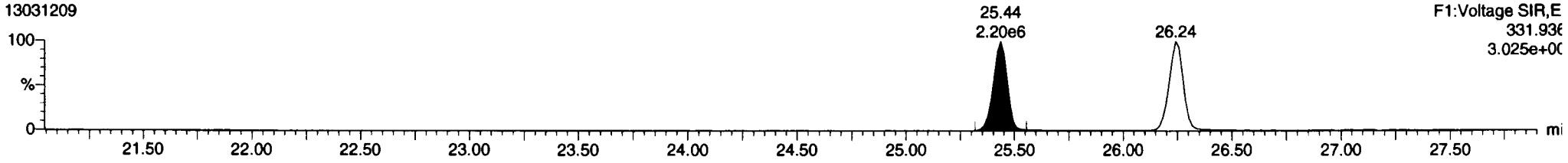
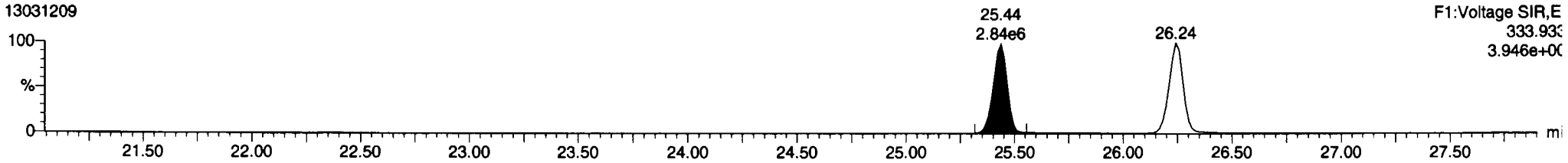
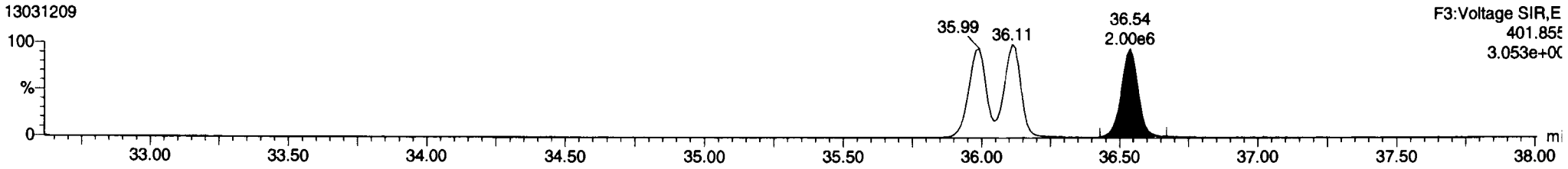
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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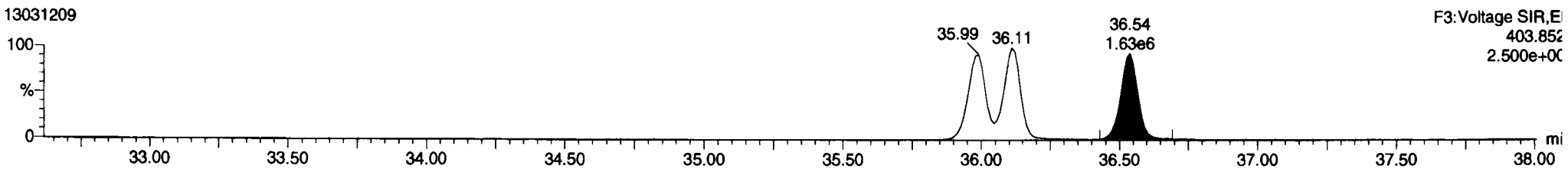

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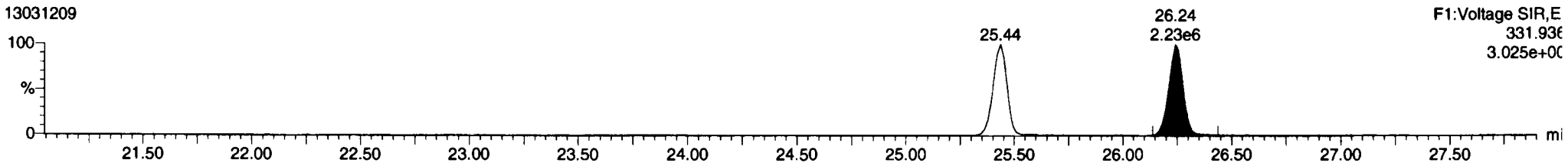
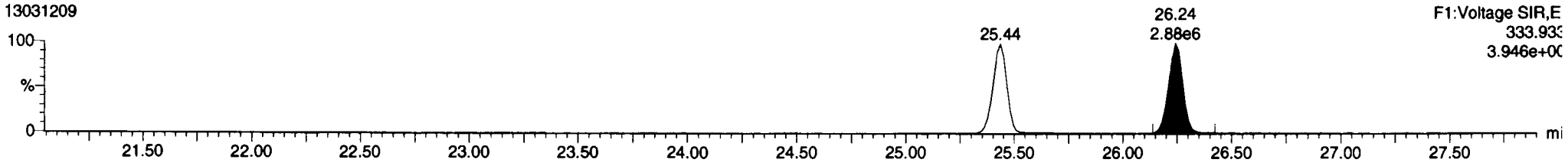
ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

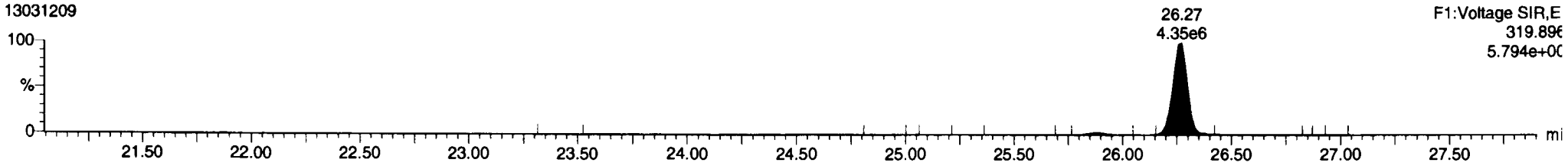
13C-2378-TCDD



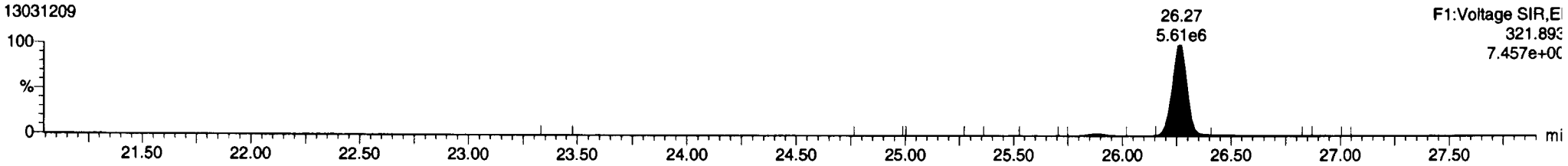
13C-2378-TCDD



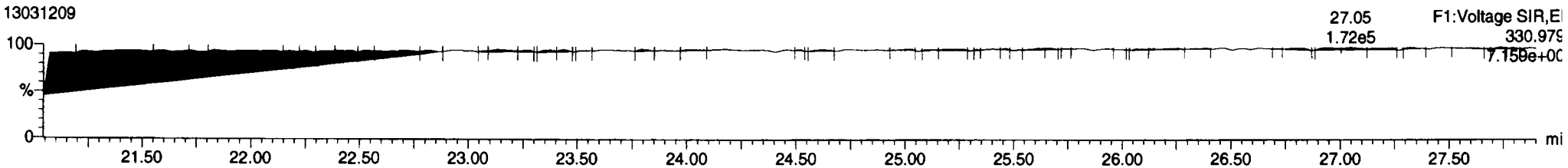
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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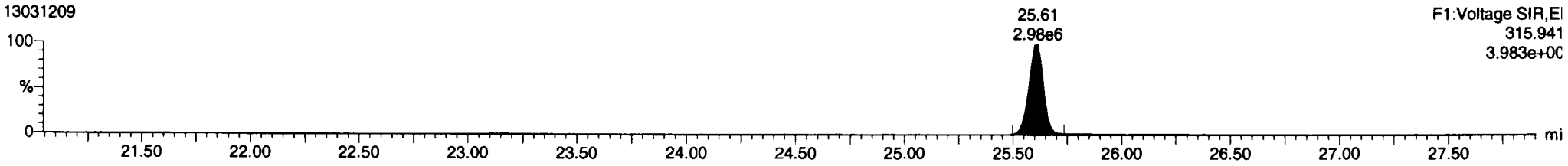
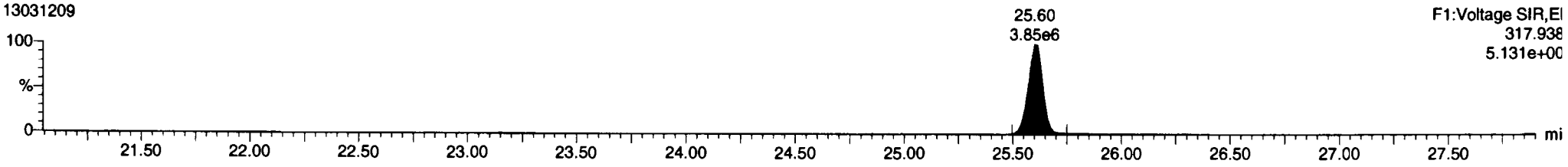
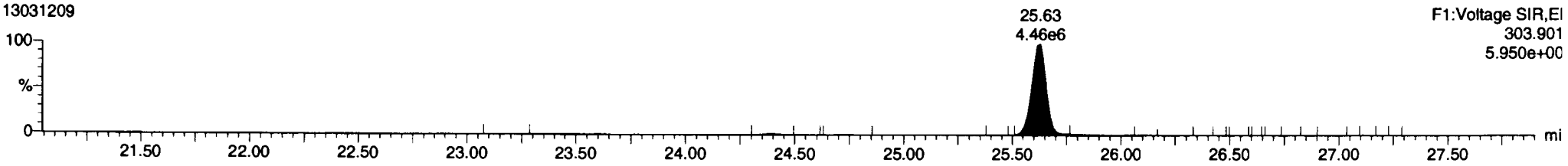
13C-2378-TCDF



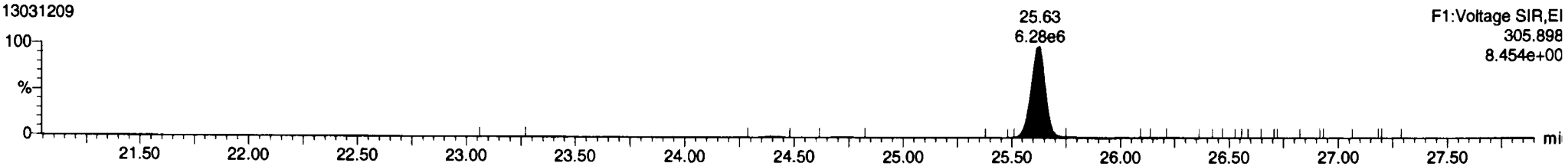
13C-2378-TCDF



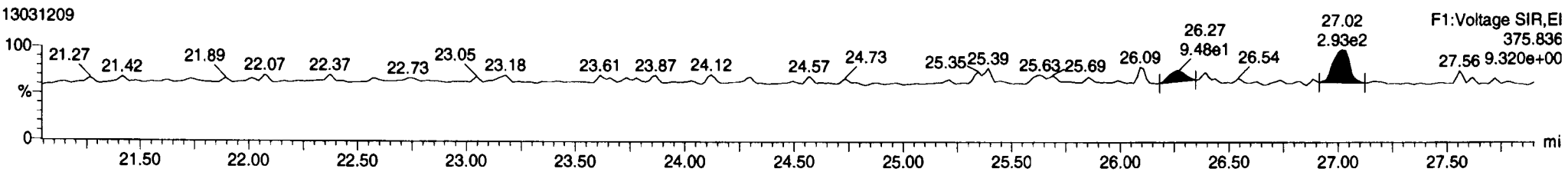
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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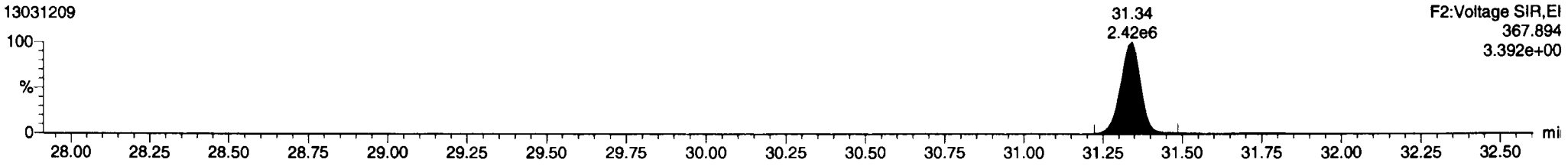
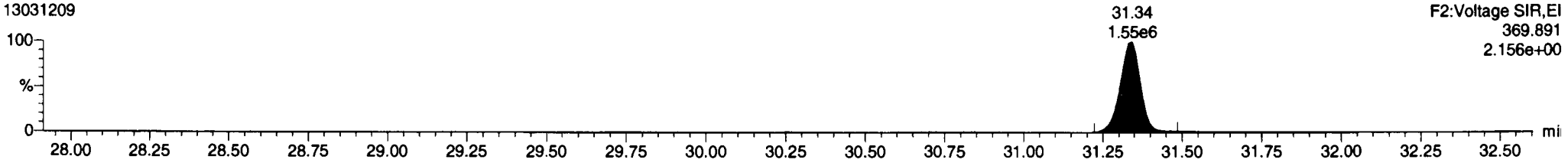
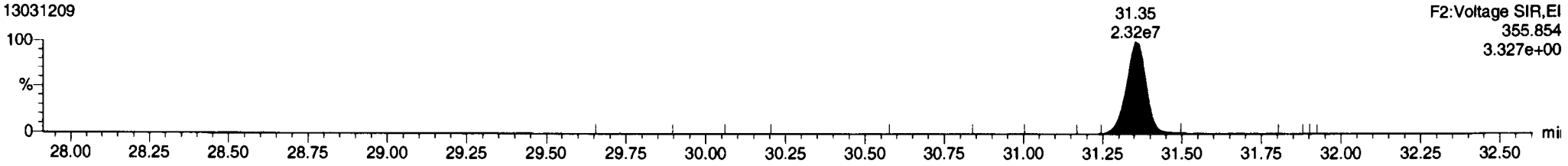
13C-12378-PeCDD



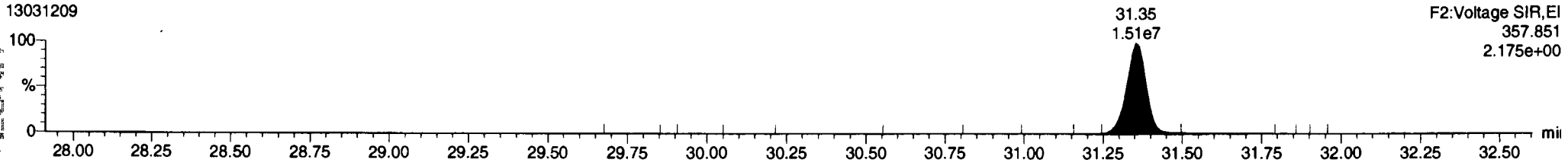
13C-12378-PeCDD



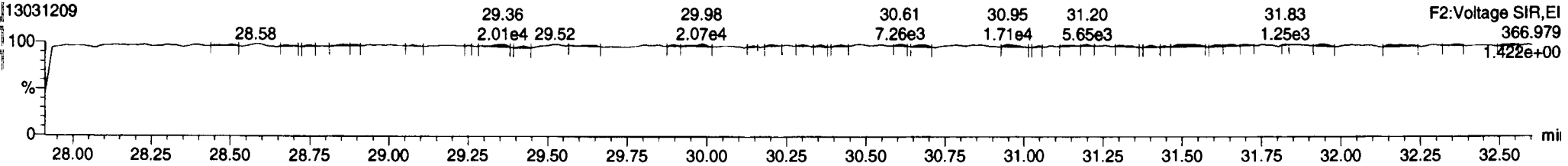
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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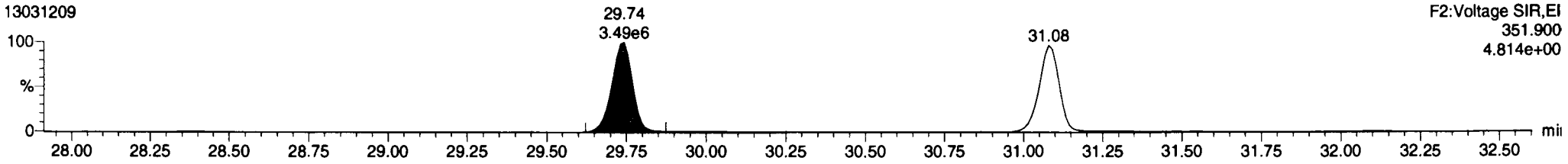
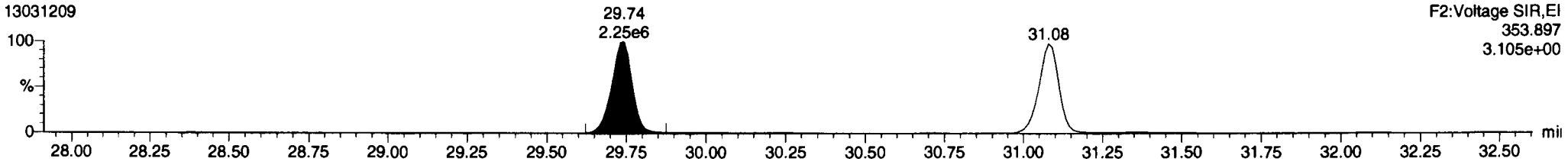
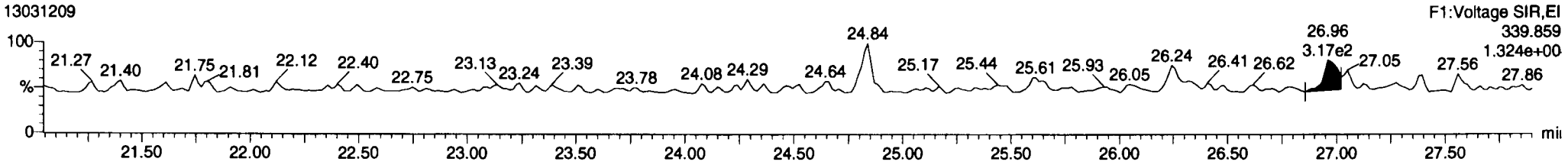
13C-12378-PeCDF



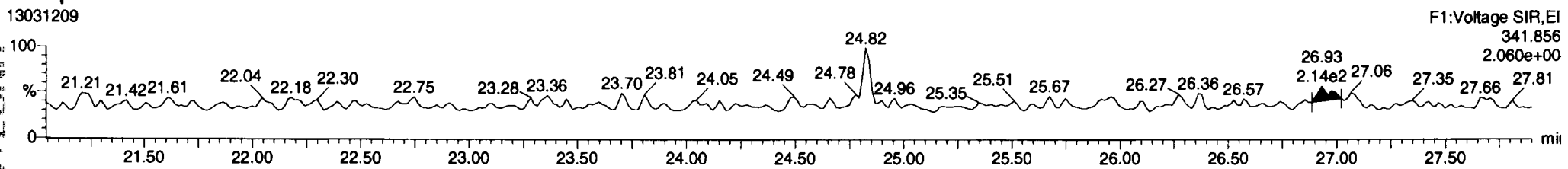
13C-12378-PeCDF



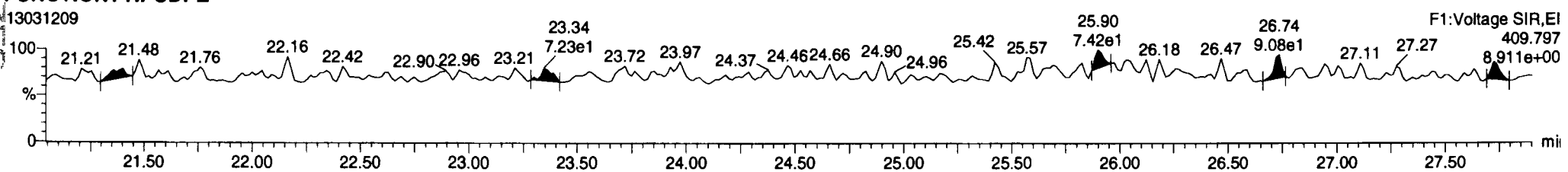
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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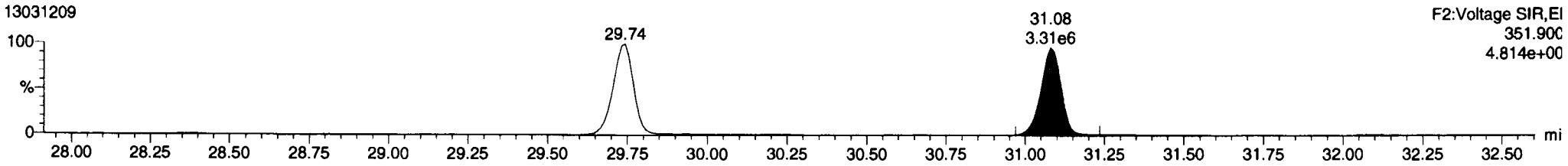
13C-23478-PeCDF



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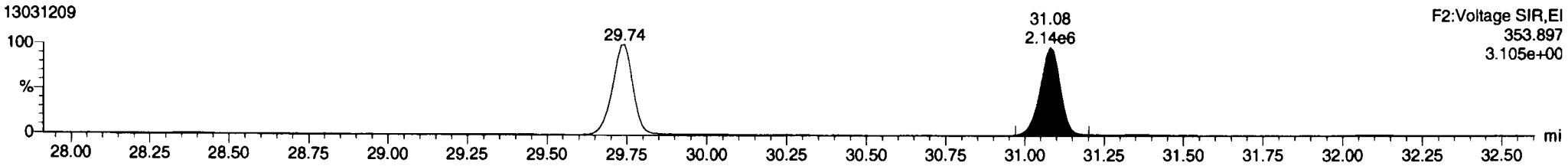
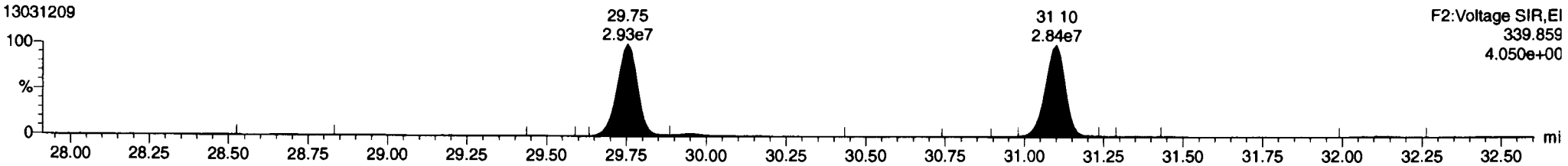
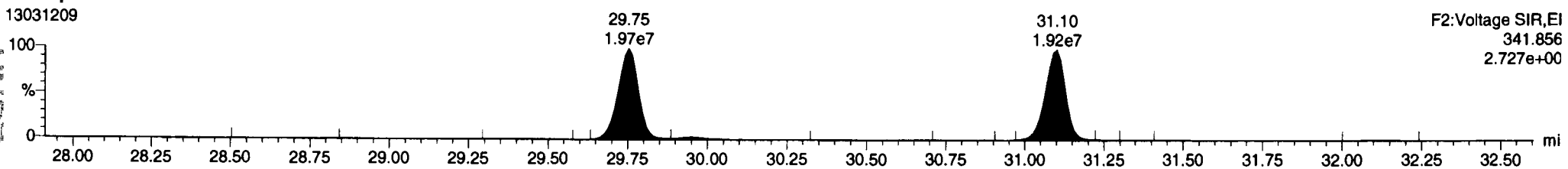


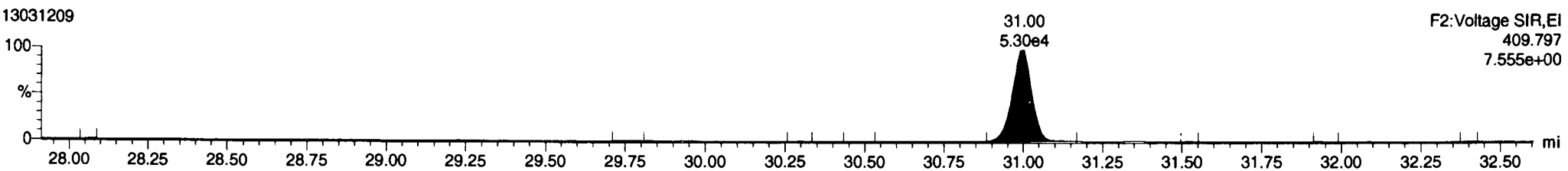
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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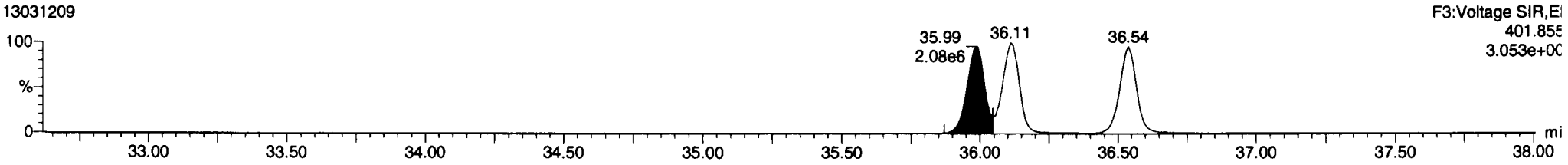
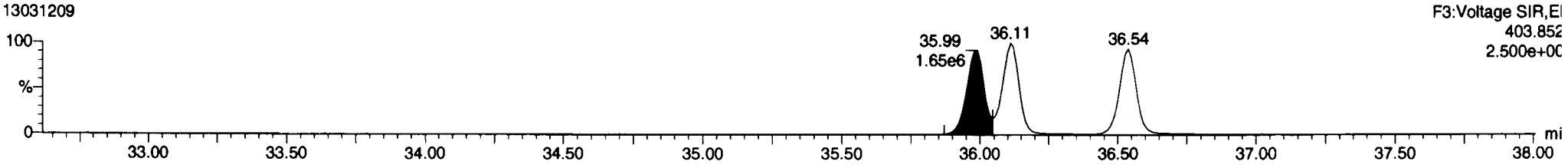
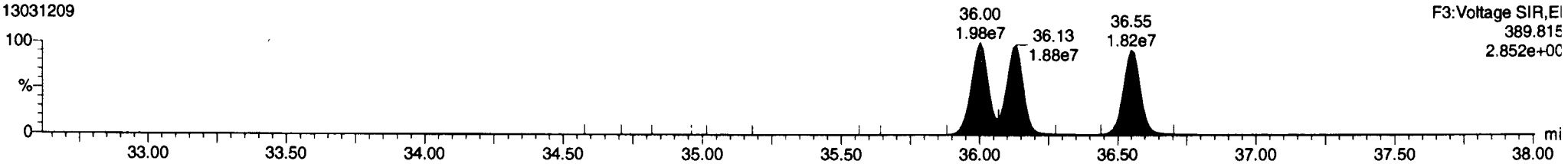
13C-123478-HxCDD



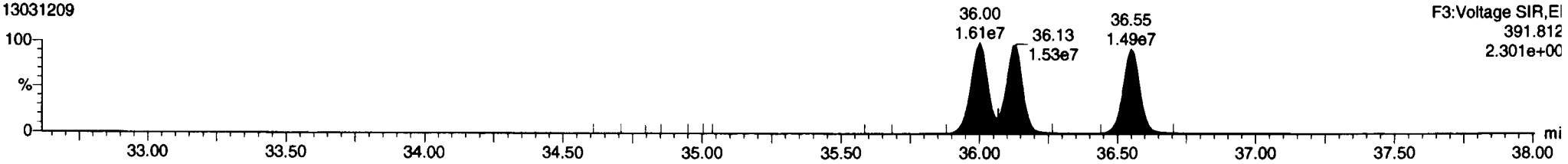
13C-123478-HxCDD



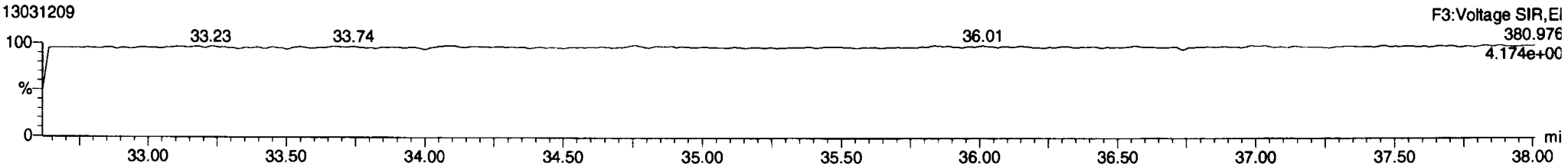
Total-hexadioxins



Total-hexadioxins



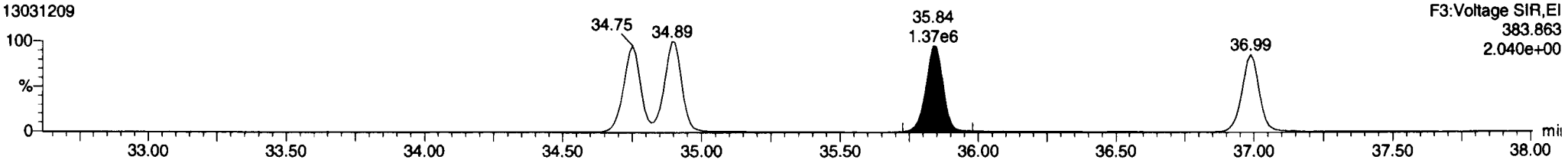
FUNCTION3 PFK



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



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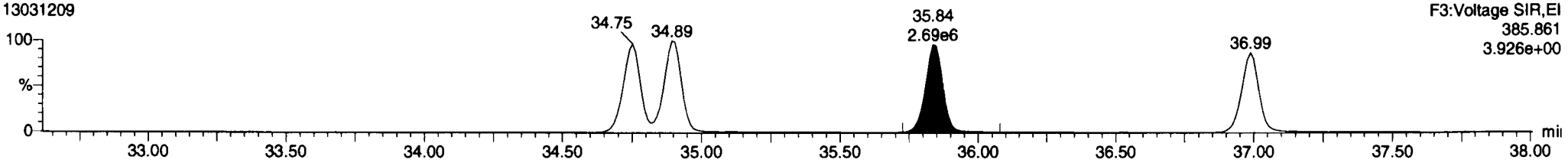
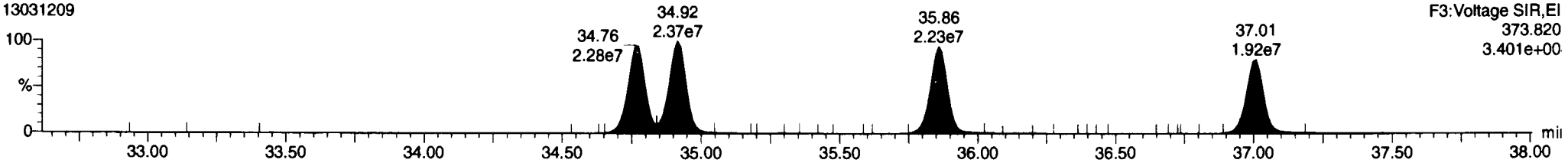
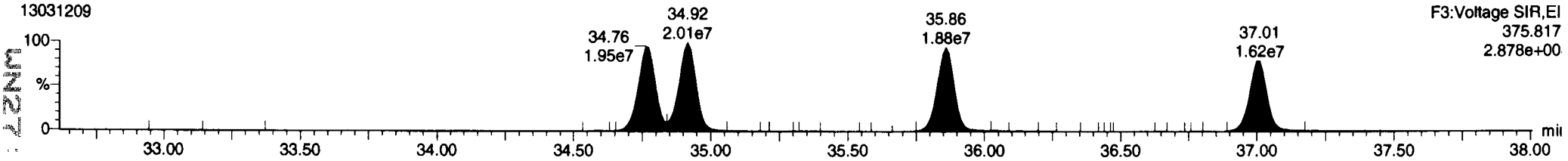


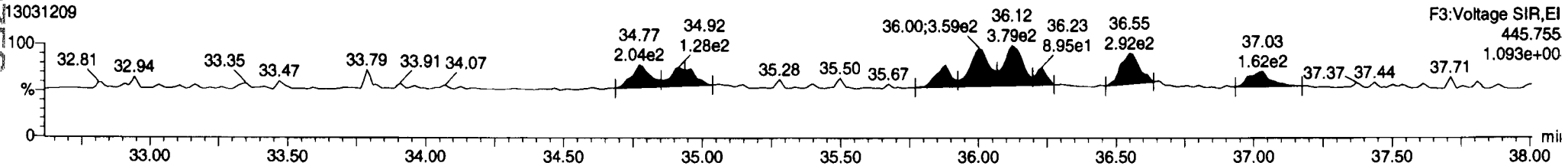
Total-hexafurans



Total-hexafurans



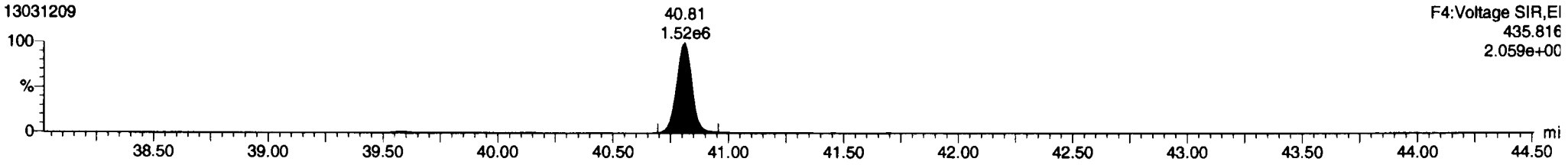
FUNCTION3 OCDPE



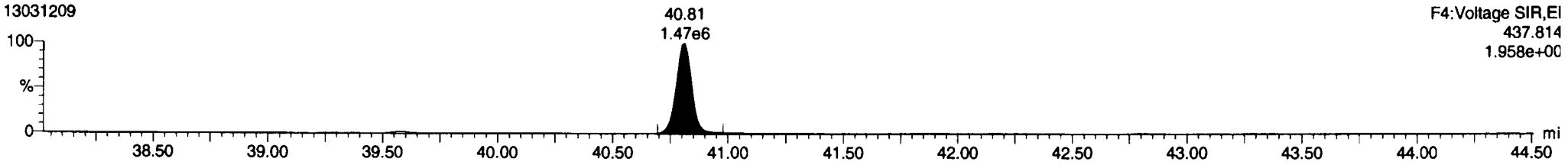
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:10 Pacific Daylight Time

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

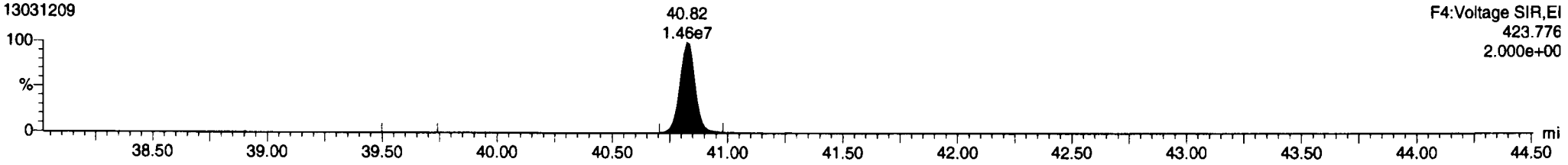
13C-1234678-HpCDD



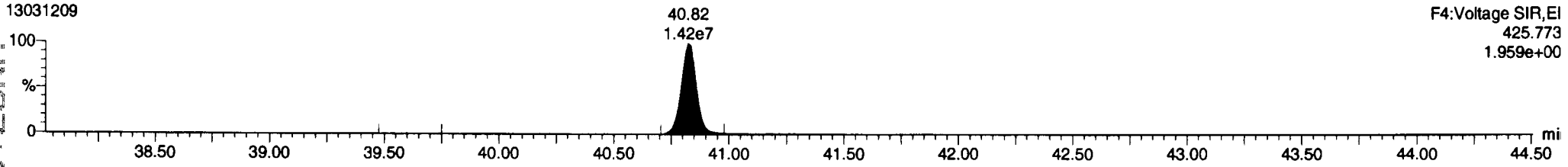
13C-1234678-HpCDD



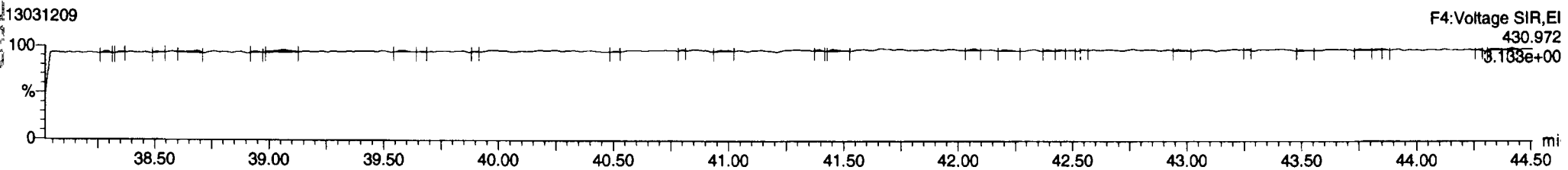
Total-heptadioxins



Total-heptadioxins



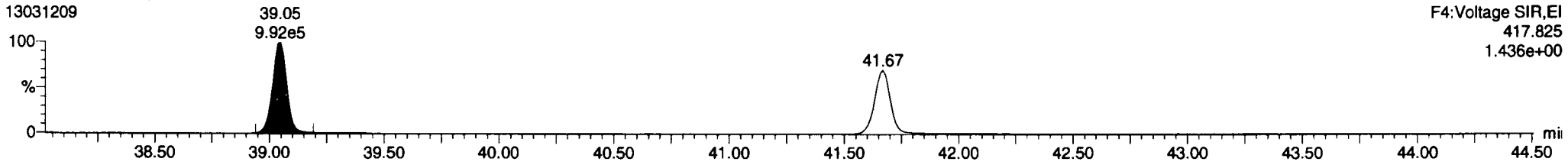
FUNCTION4 PFK



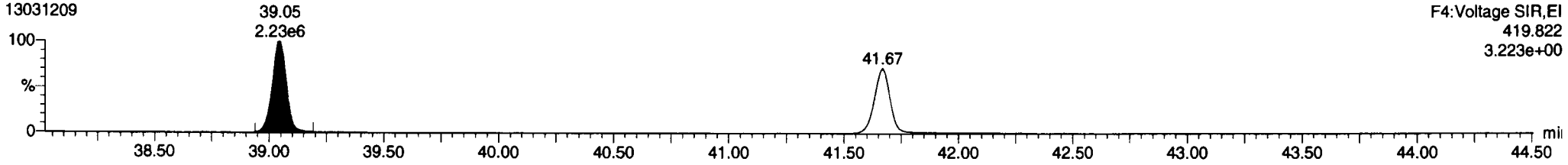
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:10 Pacific Daylight Time

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

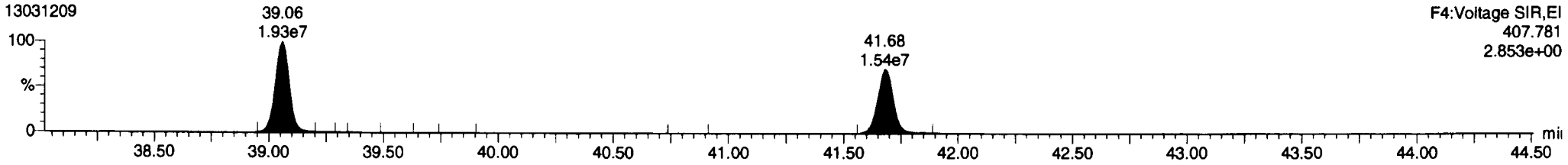
13C-1234678-HpCDF



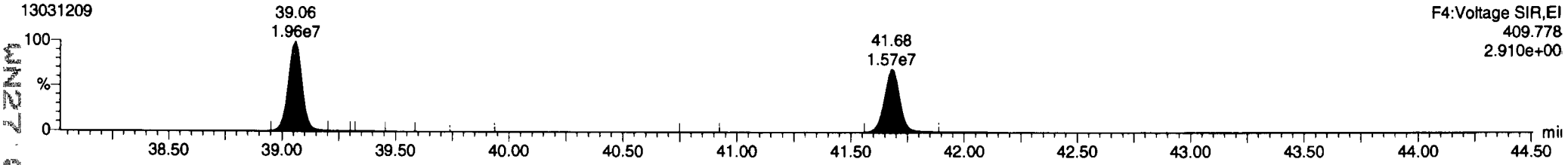
13C-1234678-HpCDF



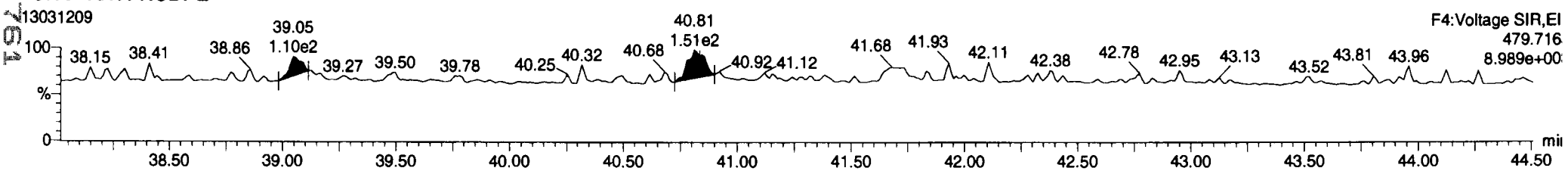
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
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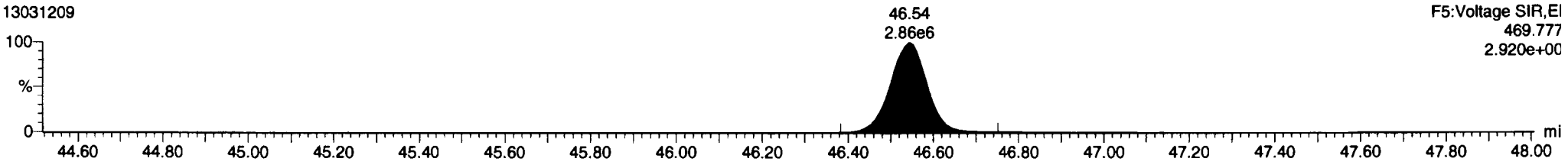
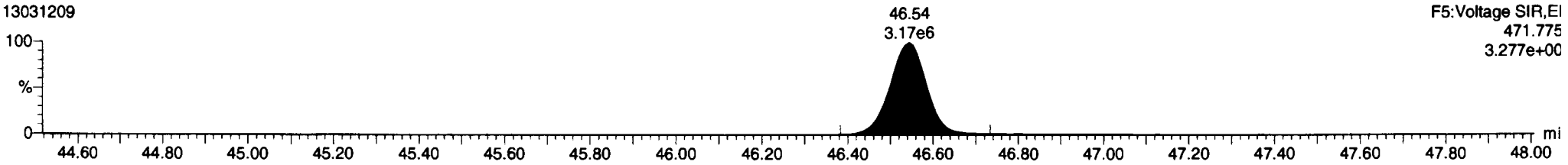
ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

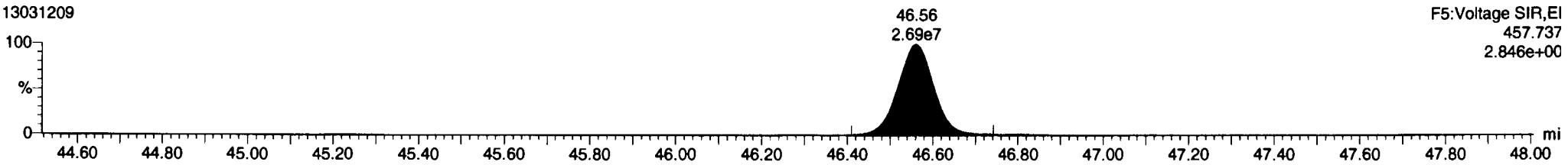
13C-OCDD



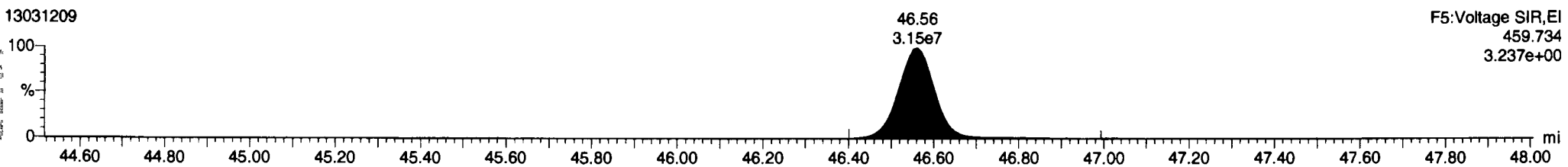
13C-OCDD



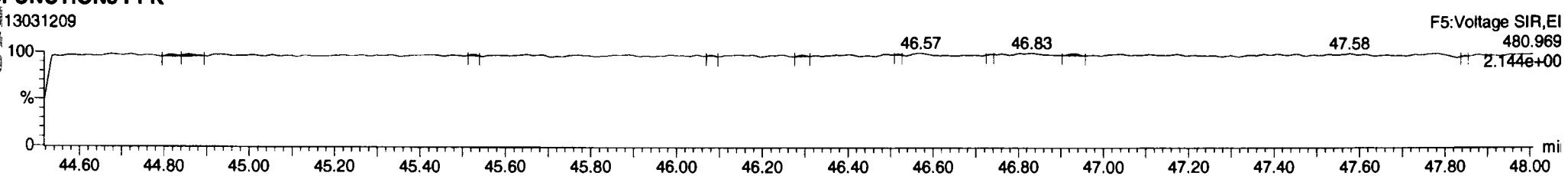
OCDD



OCDD



FUNCTION5 PFK



Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
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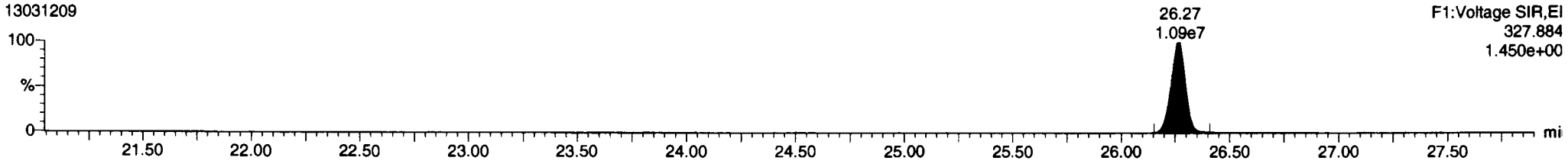
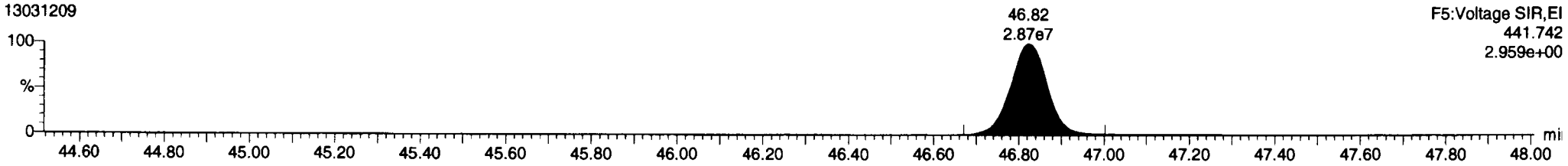
ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

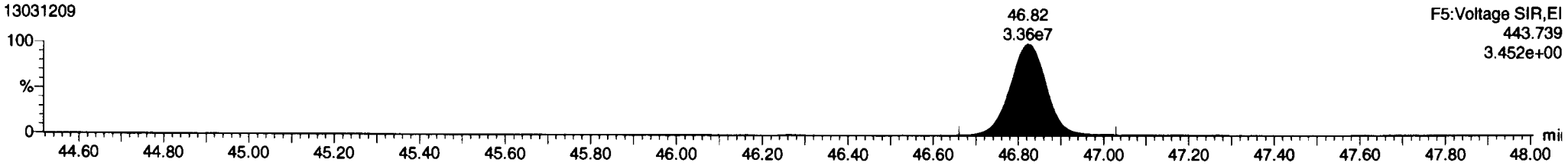
37CL-2378-TCDD



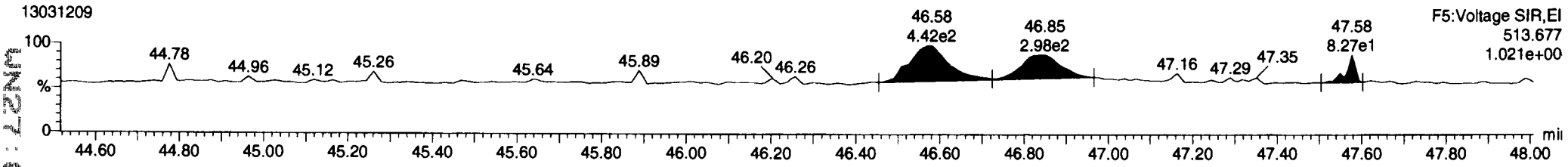
OCDF



OCDF



FUNCTION5 DCDPE



CS5_08 - 12NM

Dataset: P:\DIOXIN8290.PRO\130312ICV.qld
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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

[redacted]	2378-TCDF	25.630	1.001	1.71e5	2.36e5	0.763	0.723	0.770	1573.2	NO	10.747	10.747
[redacted]	12378-PeCDF	29.754	1.000	1.06e6	7.17e5	0.836	1.484	1.550	2493.5	NO	55.364	55.364
[redacted]	23478-PeCDF	31.102	1.000	9.61e5	6.40e5	0.851	1.501	1.550	2394.0	NO	50.626	50.626
[redacted]	123478-HxCDF	34.774	1.001	8.02e5	6.86e5	1.017	1.168	1.240	1223.4	NO	54.833	54.833
[redacted]	234678-HxCDF	35.859	1.000	7.62e5	6.46e5	1.027	1.180	1.240	1152.1	NO	51.048	51.048
[redacted]	123678-HxCDF	34.917	1.000	8.50e5	7.20e5	1.013	1.181	1.240	1300.6	NO	50.908	50.908
[redacted]	123789-HxCDF	37.010	1.001	6.79e5	5.86e5	0.929	1.160	1.240	1006.9	NO	59.547	59.547
[redacted]	1234678-HpCDF	39.060	1.000	6.28e5	6.36e5	1.151	0.988	1.050	2407.5	NO	54.179	54.179
[redacted]	1234789-HpCDF	41.680	1.000	4.93e5	5.00e5	1.149	0.987	1.050	1567.1	NO	51.814	51.814
[redacted]	OCDF	46.823	1.006	8.40e5	9.70e5	0.963	0.866	0.890	2569.5	NO	111.981	111.981
[redacted]	2378-TCDD	26.272	1.001	1.68e5	2.19e5	0.980	0.768	0.770	1546.5	NO	9.894	9.894
[redacted]	12378-PeCDD	31.365	1.001	8.19e5	5.32e5	0.948	1.541	1.550	4109.6	NO	47.573	47.573
[redacted]	123478-HxCDD	36.001	1.000	6.52e5	5.33e5	0.941	1.224	1.240	2684.5	NO	51.793	51.793
[redacted]	123678-HxCDD	36.133	1.001	6.50e5	5.40e5	0.884	1.205	1.240	2622.9	NO	55.825	55.825
[redacted]	123789-HxCDD	36.561	1.012	6.65e5	5.45e5	0.870	1.220	1.240	2589.3	NO	57.452	57.452
[redacted]	1234678-HpCDD	40.825	1.000	5.01e5	4.79e5	0.948	1.045	1.050	2020.5	NO	49.665	49.665
[redacted]	OCDD	46.554	1.000	8.12e5	9.38e5	0.969	0.865	0.890	1491.9	NO	107.590	107.590
[redacted]	13C-2378-TCDF	25.615	1.007	2.17e6	2.79e6	1.318	0.776	0.770	6012.4	NO		88.881
[redacted]	13C-12378-PeCDF	29.743	1.169	2.34e6	1.51e6	1.026	1.544	1.550	4578.2	NO		88.695
[redacted]	13C-23478-PeCDF	31.091	1.222	2.25e6	1.46e6	0.966	1.544	1.550	4557.1	NO		90.875
[redacted]	13C-123478-HxCDF	34.752	0.951	9.15e5	1.75e6	1.123	0.522	0.510	1438.1	NO		93.749
[redacted]	13C-123678-HxCDF	34.905	0.955	1.03e6	2.02e6	1.216	0.509	0.510	1593.1	NO		98.793
[redacted]	13C-234678-HxCDF	35.848	0.981	9.28e5	1.76e6	1.106	0.528	0.510	1451.3	NO		95.770
[redacted]	13C-123789-HxCDF	36.988	1.012	7.79e5	1.51e6	0.995	0.517	0.510	1203.4	NO		90.630
[redacted]	13C-1234678-HpCDF	39.049	1.069	6.27e5	1.40e6	0.896	0.449	0.440	2687.8	NO		89.250
[redacted]	13C-1234789-HpCDF	41.669	1.140	5.10e5	1.16e6	0.693	0.441	0.440	1865.4	NO		94.914
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[redacted]	13C-2378-TCDD	26.243	1.032	1.75e6	2.25e6	0.961	0.777	0.770	4265.7	NO		98.110
[redacted]	13C-12378-PeCDD	31.343	1.232	1.82e6	1.17e6	0.703	1.549	1.550	4466.5	NO		100.618
[redacted]	13C-123478-HxCDD	35.991	0.985	1.35e6	1.08e6	1.016	1.241	1.240	3180.6	NO		94.421
[redacted]	13C-123678-HxCDD	36.111	0.988	1.34e6	1.07e6	1.098	1.257	1.240	3042.0	NO		86.586
[redacted]	13C-1234678-HpCDD	40.814	1.117	1.06e6	1.02e6	0.828	1.048	1.050	4009.8	NO		99.117
[redacted]	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
[redacted]	Total-penta1			2.82e2								0.016
[redacted]	Total-pentafurans			2.06e6		0.844						107.775
[redacted]	Total-hexafurans			3 10e6		0.997						216.539
[redacted]	Total-heptafurans			1.13e6		1.150						106.306
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[redacted]	Total-TEQ			1.16e7								934.247
[redacted]	37CL-2378-TCDD	26.272	1.033	4.13e5		0.999			2227.2			9.771
[redacted]	FUNCTION1 PFK			8.37e4								
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[redacted]	FUNCTION1 HXCDPE			2.53e2								0.000
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Dataset: P:\DIOXIN8290.PRO\130312ICV.qld
Last Altered: Wednesday, March 13, 2013 11:12:18 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 11:17:54 Pacific Daylight Time

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

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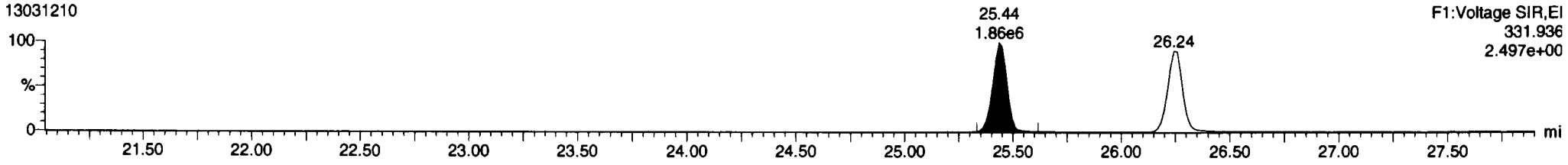
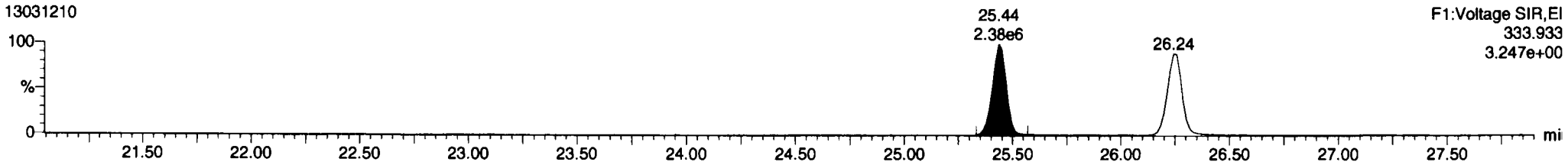
13C-1234-TCDD



13C-1234-TCDD



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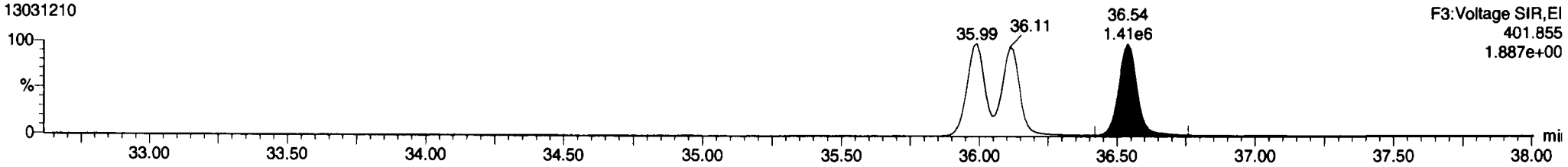

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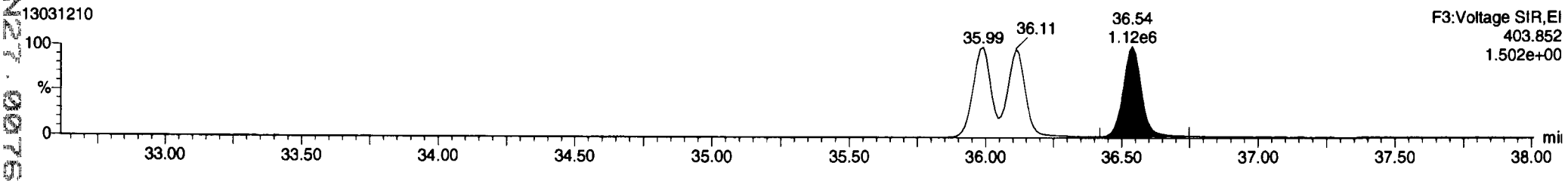

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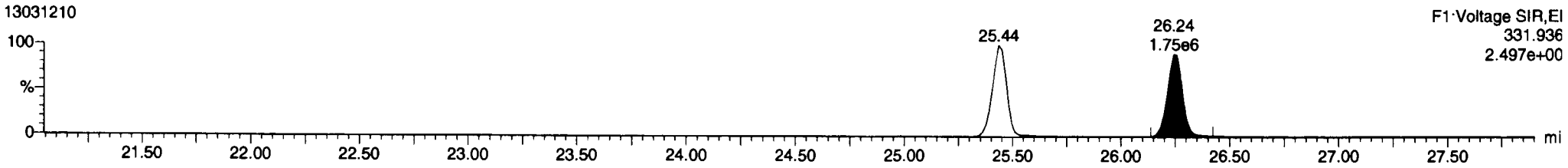
13C-2378-TCDD



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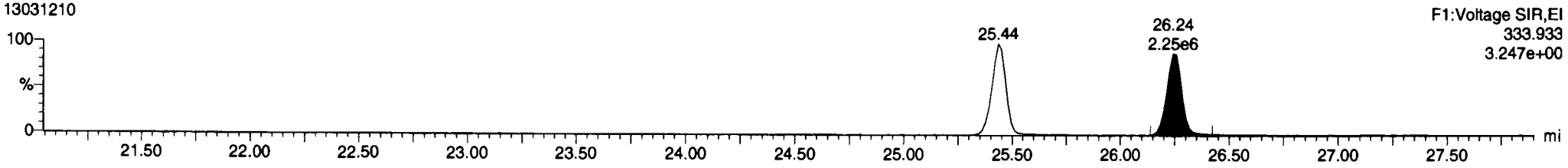
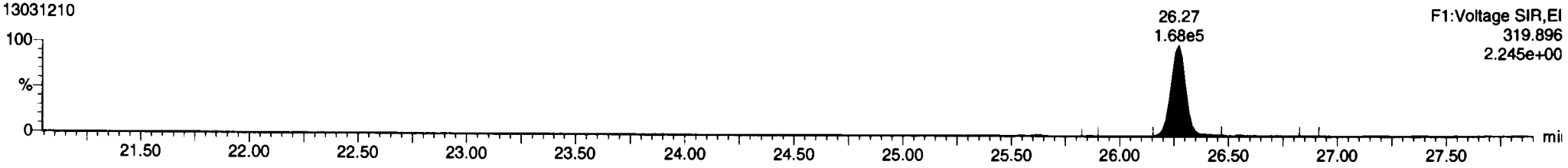
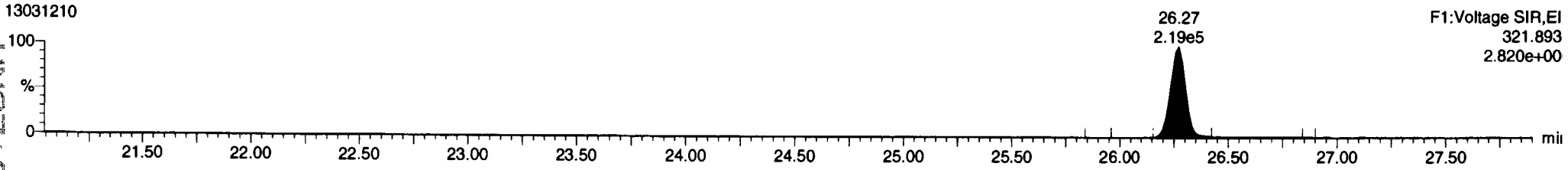


Total-tetradioxins



Total-tetradioxins



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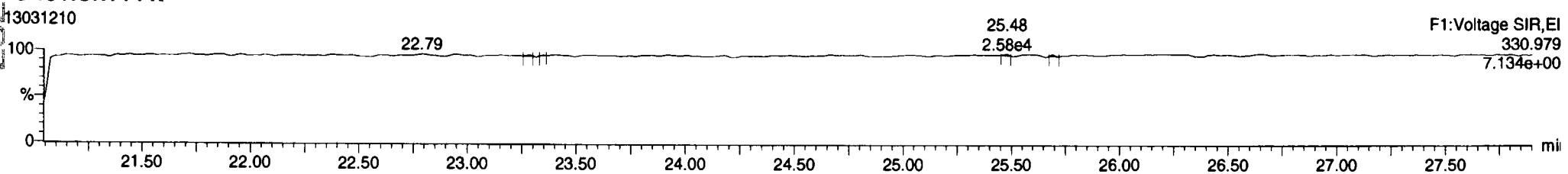

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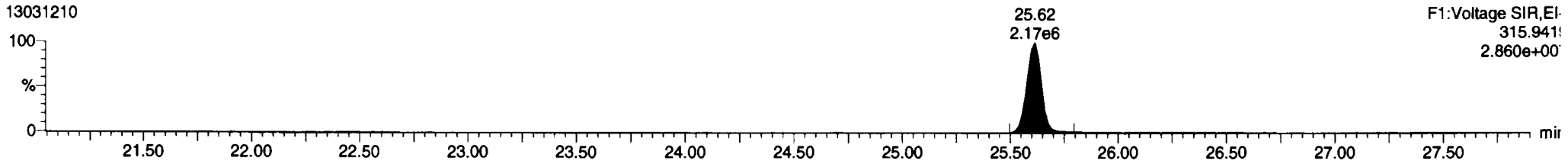
13C-2378-TCDF



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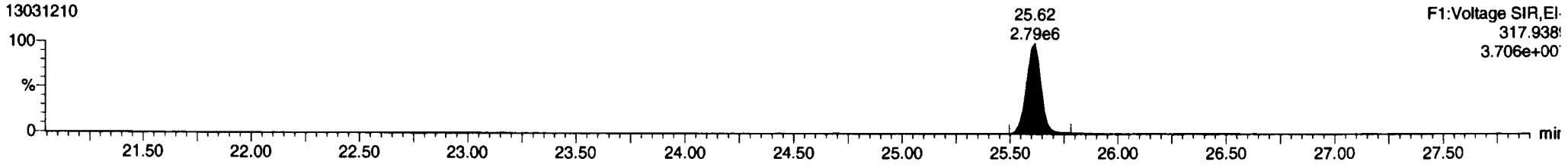
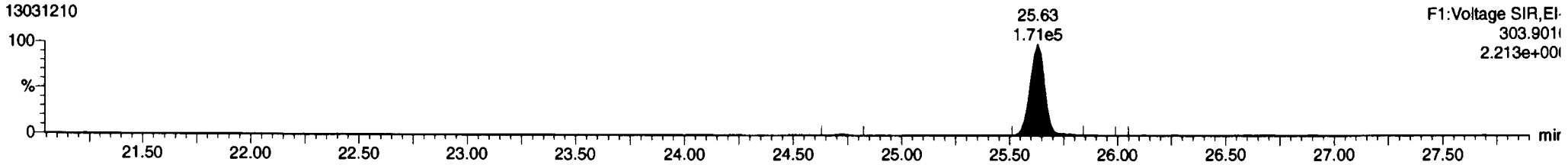
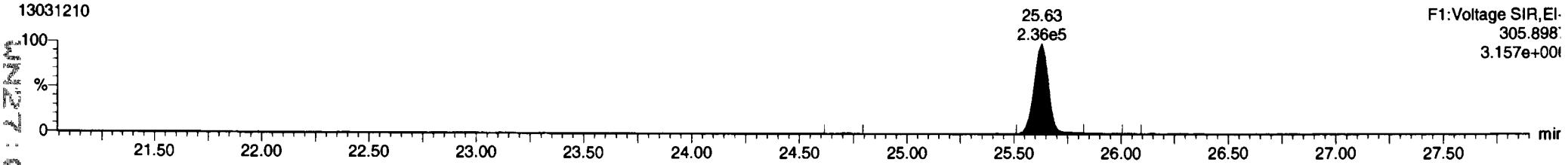


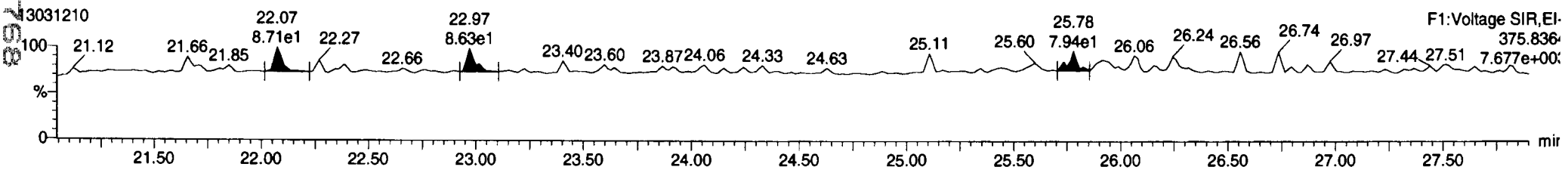
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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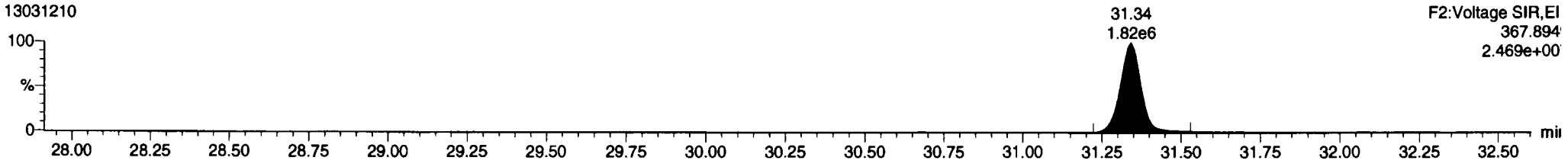
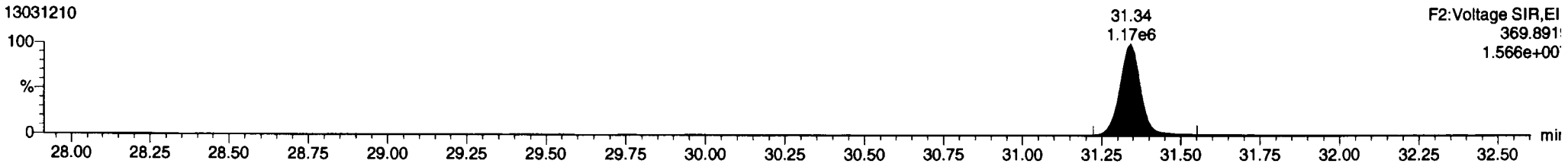
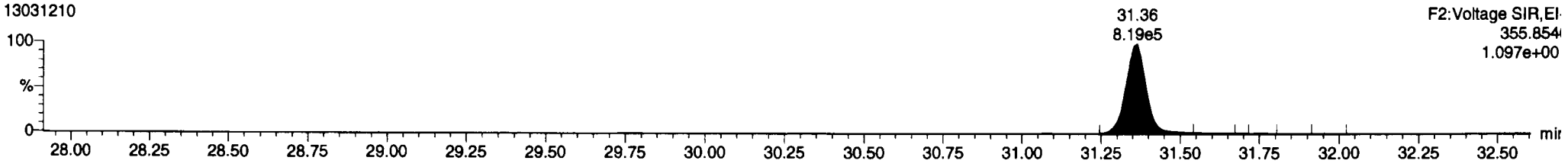
13C-12378-PeCDD



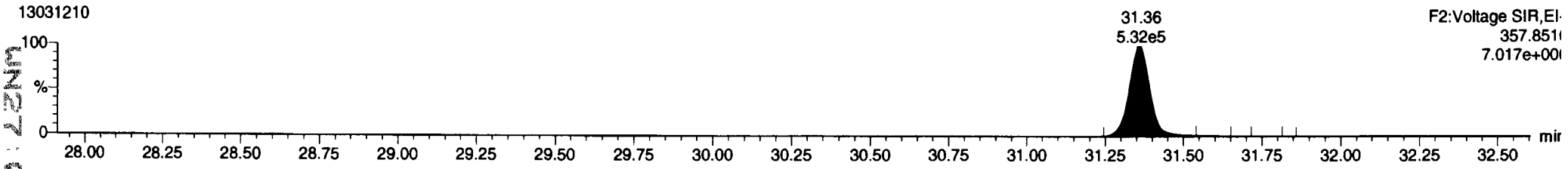
13C-12378-PeCDD



Total-pentadioxins



Total-pentadioxins



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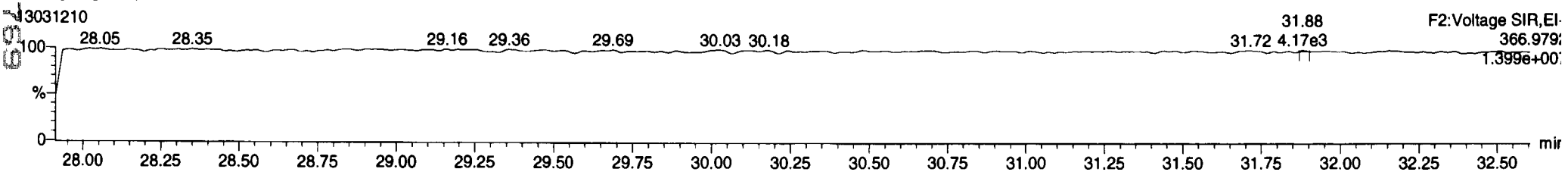

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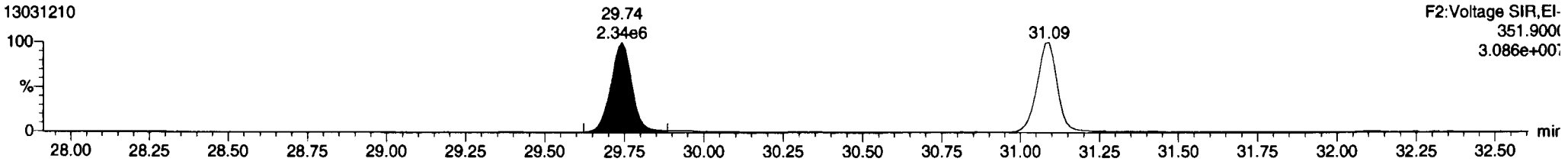
13C-12378-PeCDF



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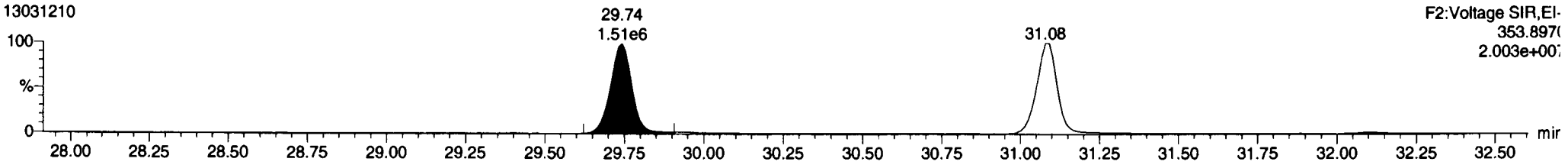
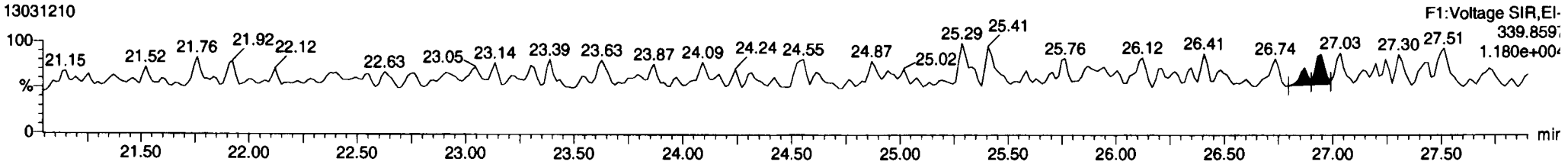
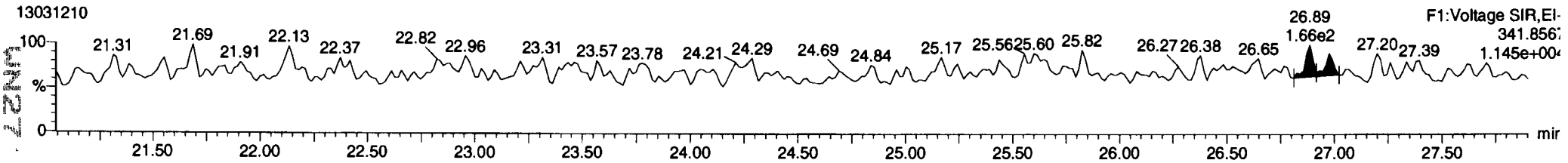


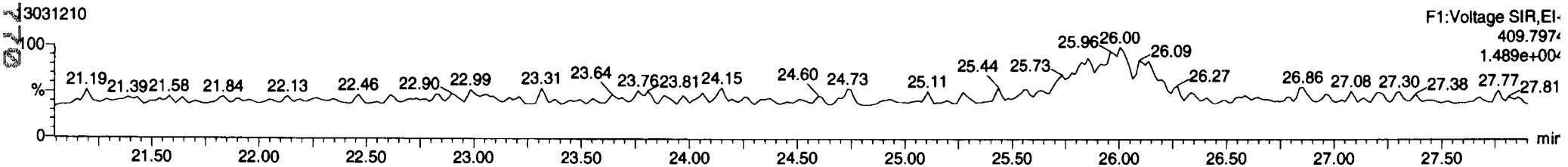
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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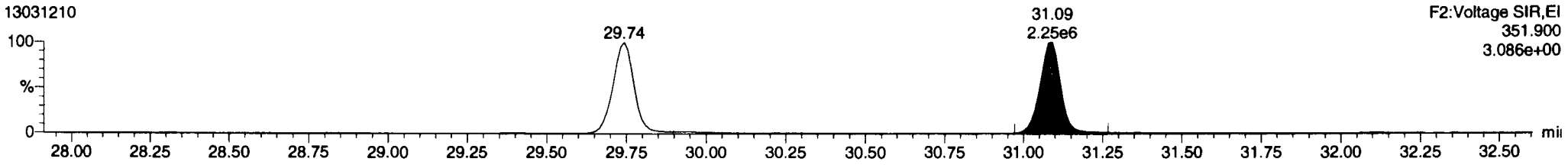
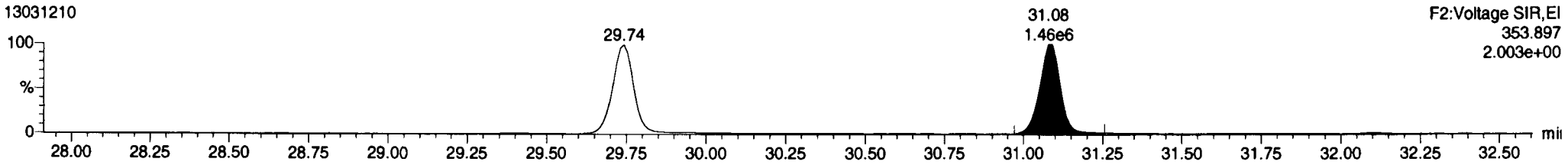
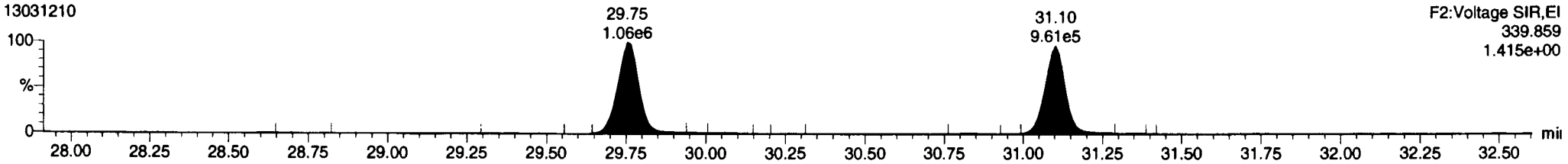
13C-23478-PeCDF



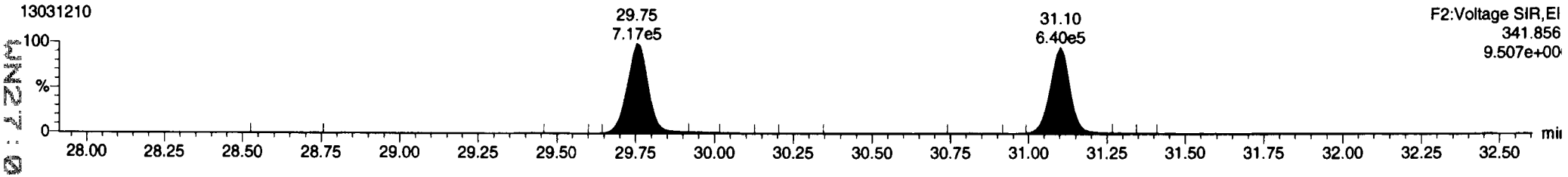
13C-23478-PeCDF



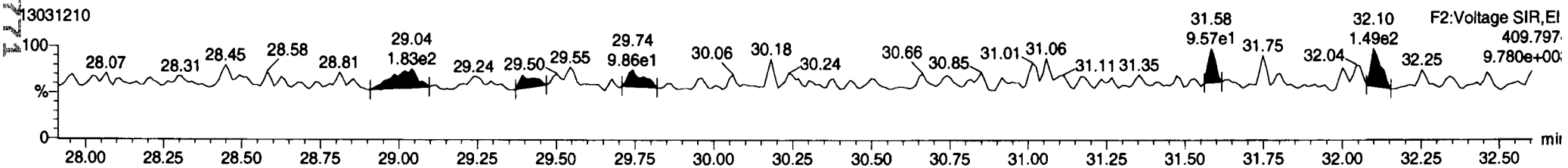
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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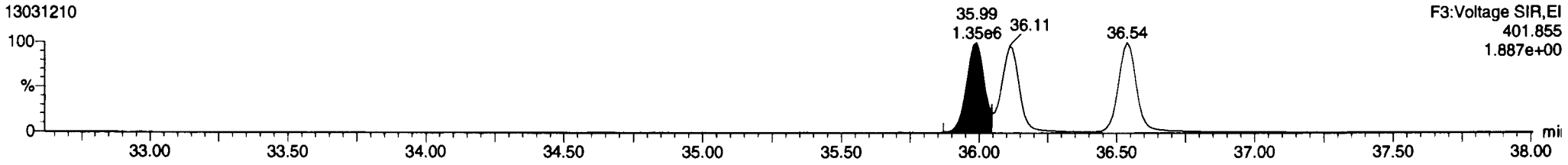
13C-123478-HxCDD



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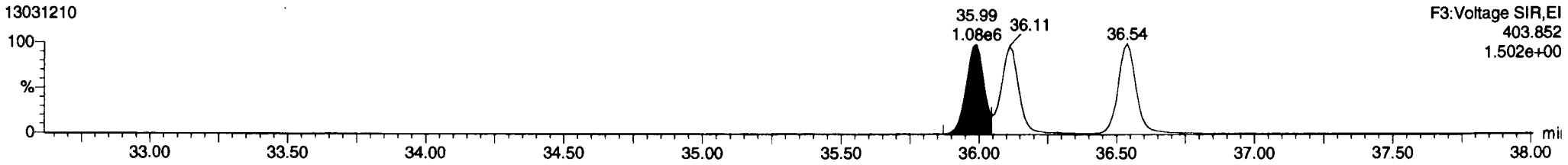
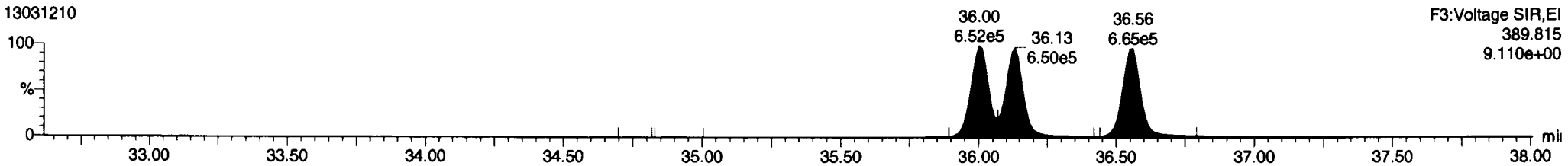
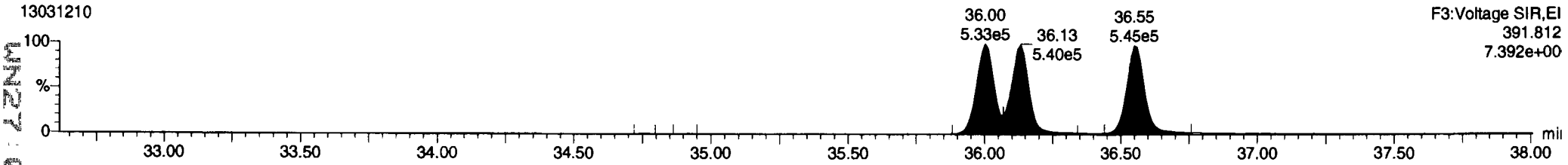


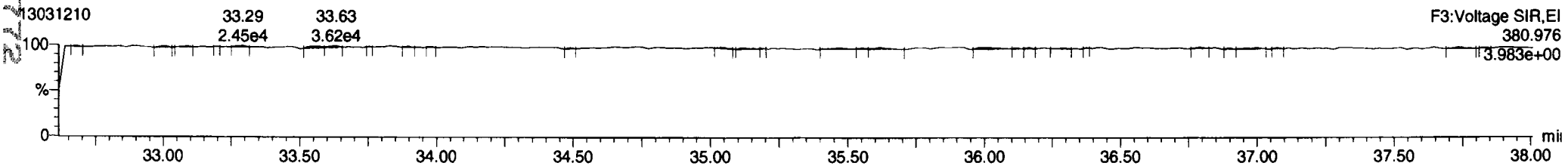
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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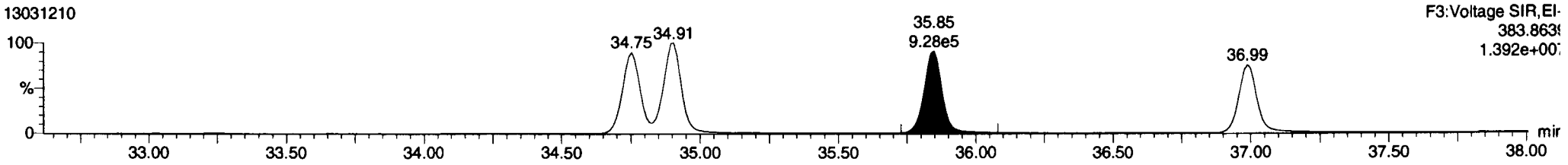
13C-234678-HxCDF



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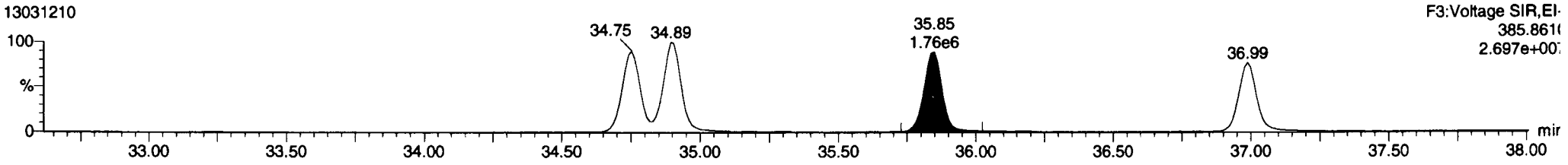
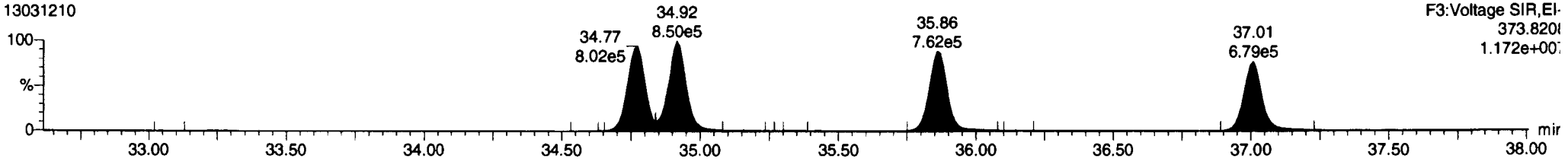


Total-hexafurans



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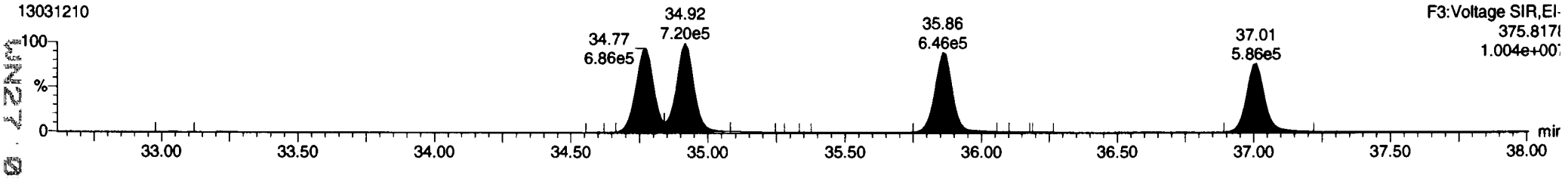
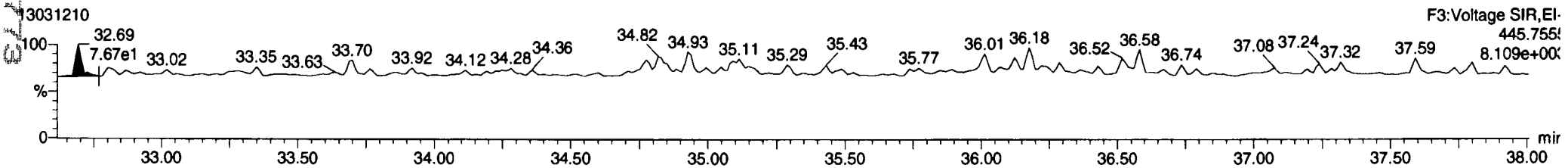


FUNCTION3 OCDPE



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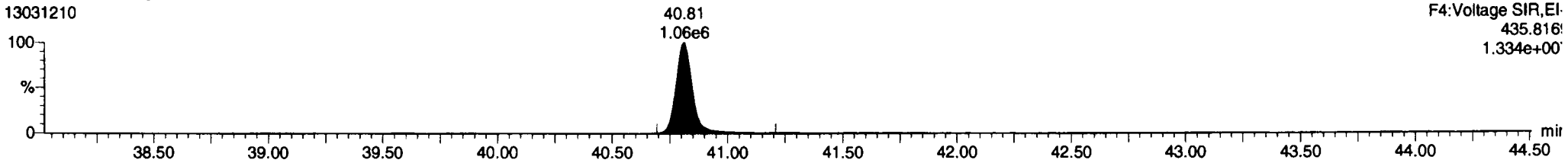
13C-1234678-HpCDD



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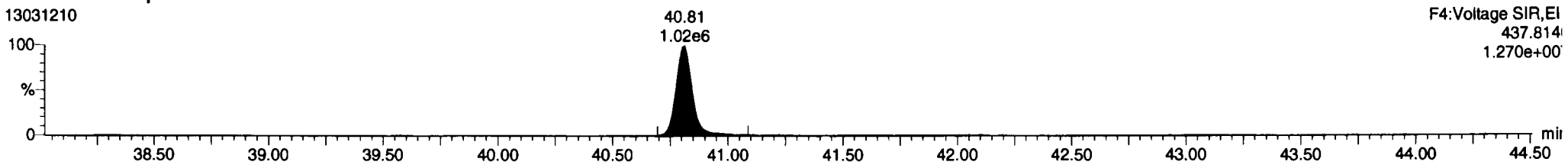
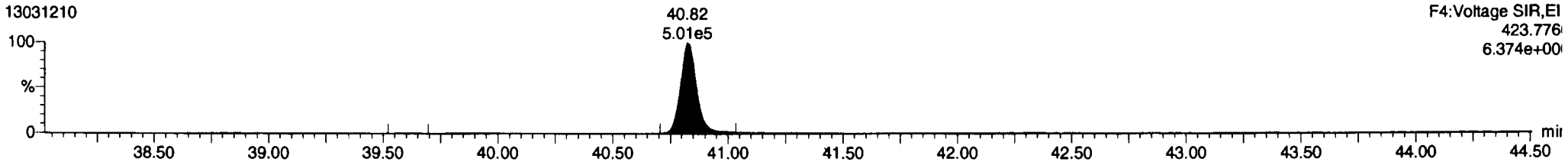
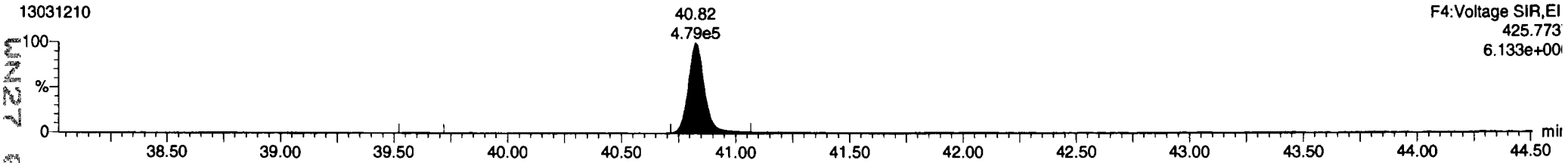


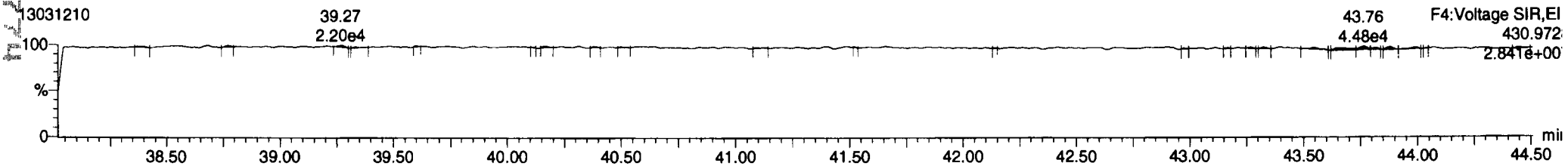
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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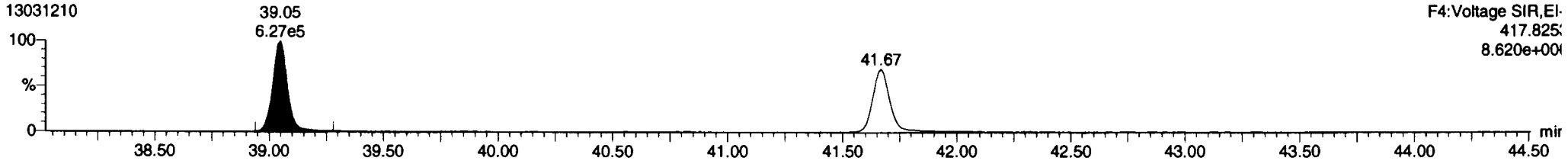

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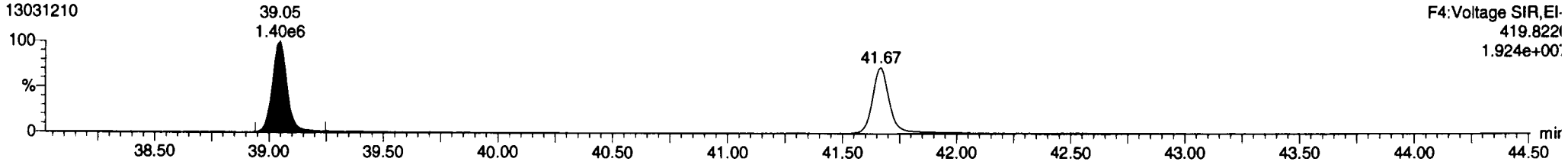

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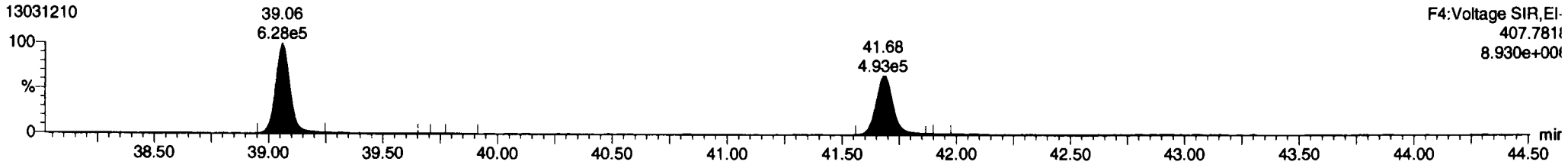

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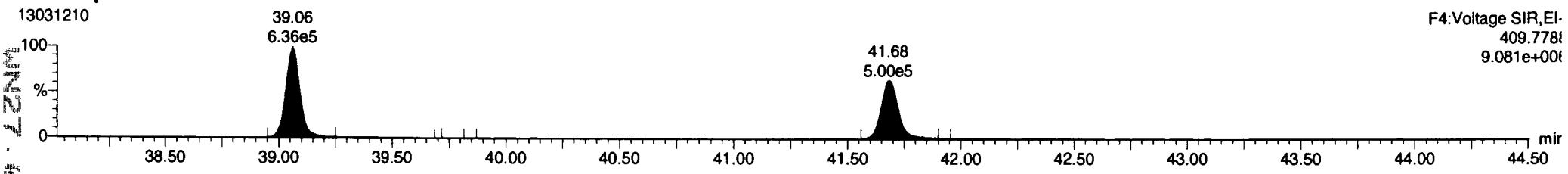

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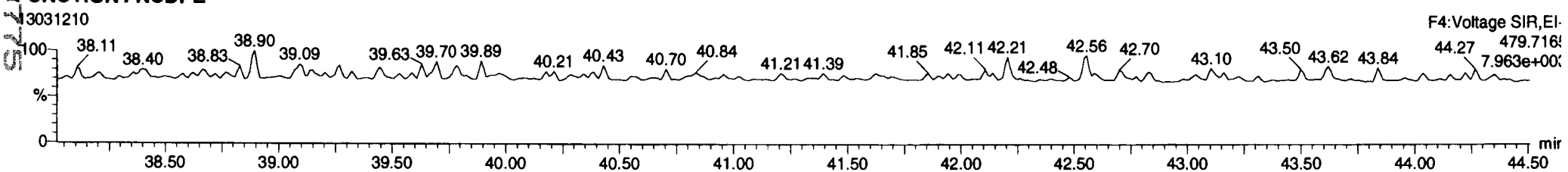

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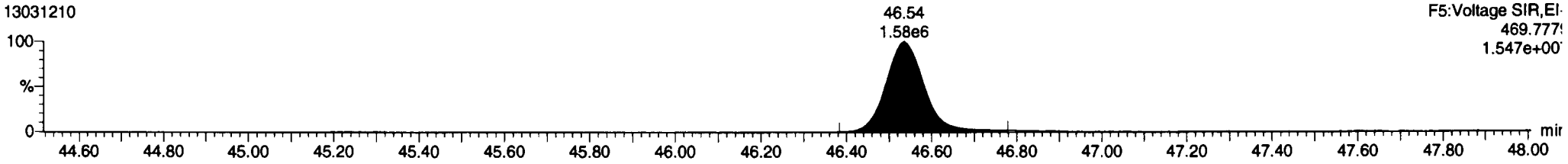
ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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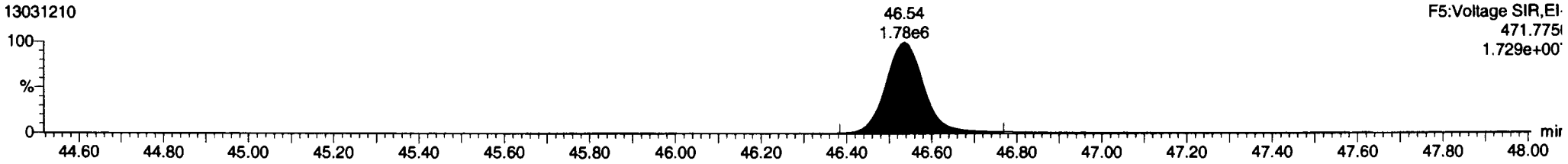

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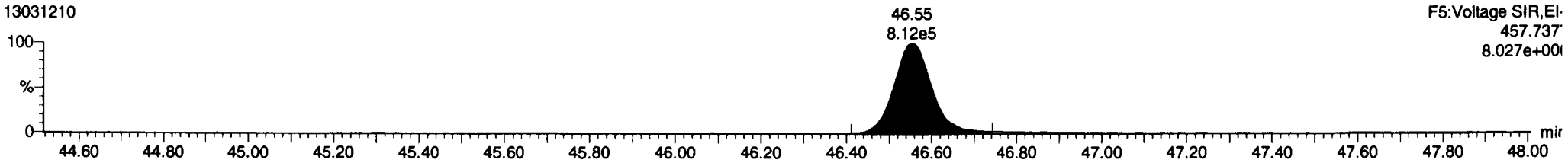

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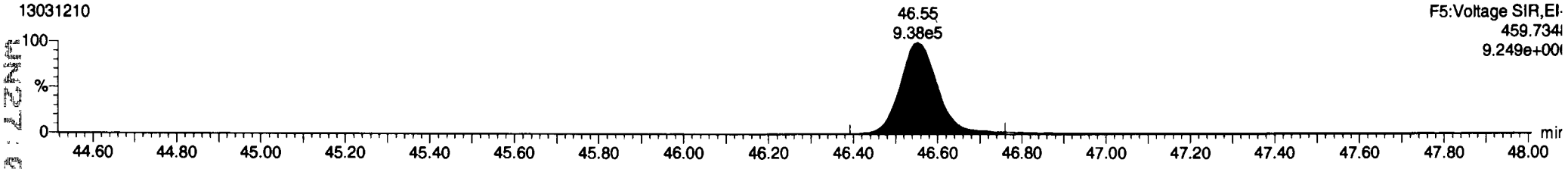

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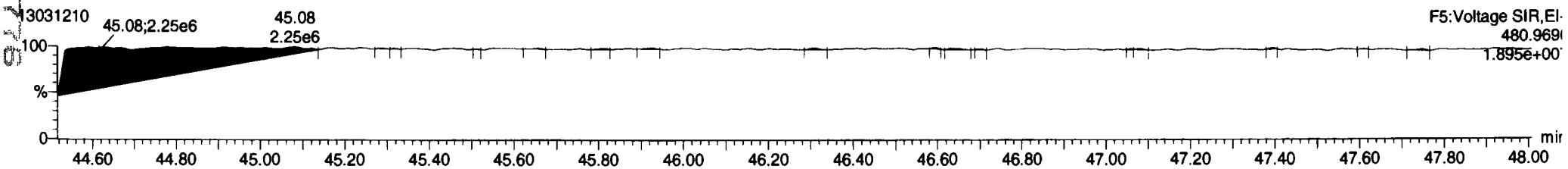

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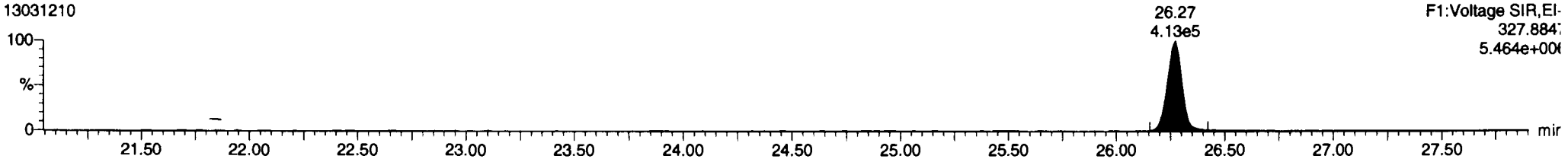
37CL-2378-TCDD



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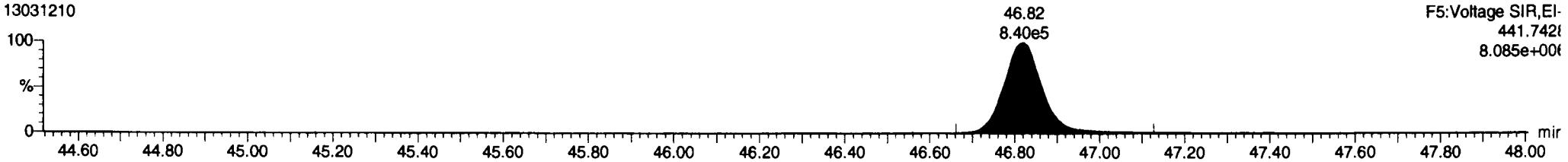

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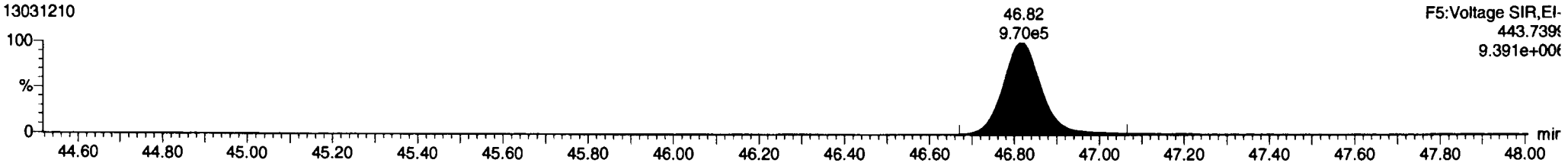
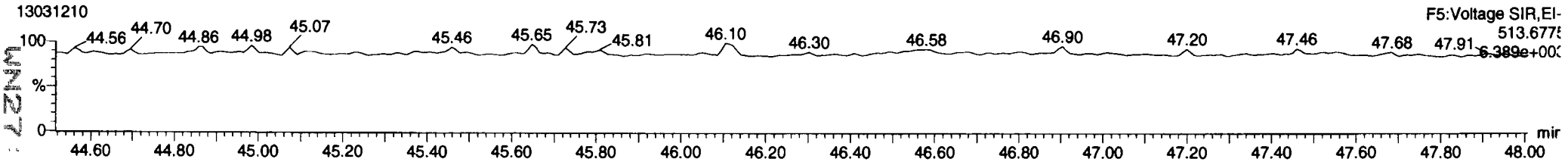


FUNCTION5 DCDPE



Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: WN27, WN31 Client ID: SAIC

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Curve Date: 3/12/13 Analysis Start Date: 5/7/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	Y / N / ✓	Signal / Noise ≥ 2.5?	Y / N / ✓
TCDD / TCDF Resolution ≤ 25%	Y / N / ✓	Extraction STD Limits Met?	Y / N / ✓
PCDF Windows Verified	Y / N / ✓	Cleanup STD Limits Met?	Y / N / ✓
CCV Meets %D Limits?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCV Ion Ratios within Limits?	Y / N / ✓	OPR Recovery Limits Met?	Y / N / ✓
CCV RRT within Limits?	Y / N / ✓	Values Exceeding Curve Range?	Y / N / ✓
Manual Integrations for Samples?	Y / N / ✓	Samples Diluted?	Y (N) (OCDD)
Special Analysis Request?	Y / N / ✓	Duplicate Sample RPD ≤ 25%?	NA / ✓

Detail problems, corrective actions and/or other pertinent information below:

In closing ccal, TCDF high by 3% and PF label high by 1% from method limits. But closing cals NOT required by method. For info only.

(Review 1)Analyst: [signature] **Date:** 5/8/13

(Review 2)Reviewer: [signature] **Date:** 5/9

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 5/7/13 Analysis: Dioxins Analyst: JH

GC Program: 8290C Column No: I7819 Column Type: MX-Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): 13050601-5 Detector Voltage: 350

Resolution Check Files: M141, 02:17 Curve Date:

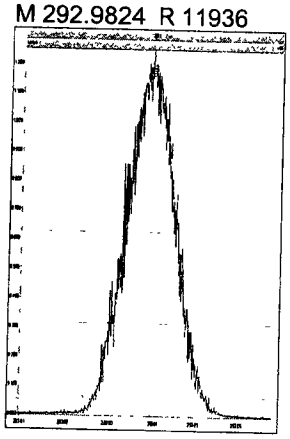
IS/SS	Ical/Ccal	LCS/ICV
I8144	I7708 M972	

1	07-May-13	14:44:08	13050702	CS3
2	07-May-13	15:43:15	13050703	ISC01
3	07-May-13	16:33:25	13050704	WM89MBS
4	07-May-13	17:25:39	13050705	WM89OPR
5	07-May-13	18:18:00	13050706	WM89SRM
6	07-May-13	19:10:15	13050707	WM89A
7	07-May-13	20:02.41	13050708	WM89B
8	07-May-13	20:54:56	13050709	WM89C
9	07-May-13	21:47:16	13050710	WM89D
10	07-May-13	22:39:31	13050711	WM89E
11	07-May-13	23:32:06	13050712	WN27A
12	08-May-13	00:24:21	13050713	WN31A
13	08-May-13	01:16:42	13050714	CS3
14	08-May-13	02:17:10	13050715	0 SI
15	08-May-13	03:07:28	13050716	ACID SI
16	08-May-13	03:59:43	13050717	BASIC SI

JH 5/8/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

M 292.9824 R 11936



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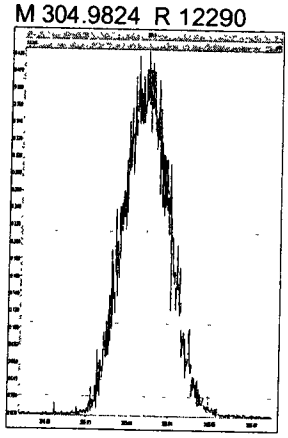

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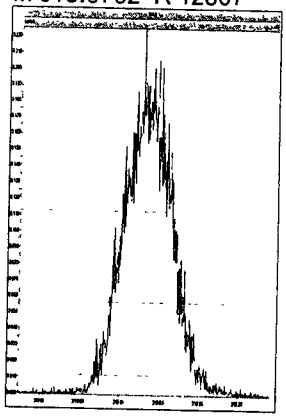

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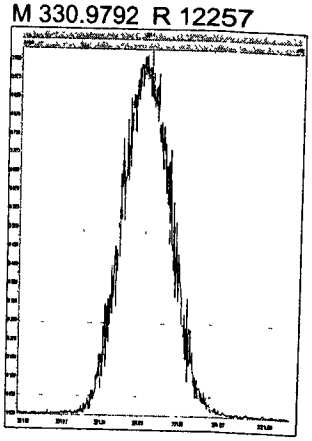

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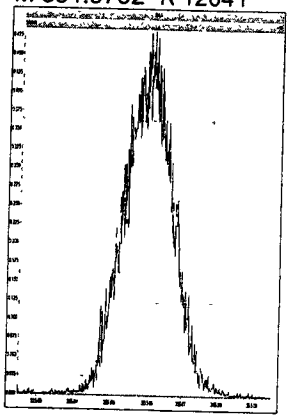

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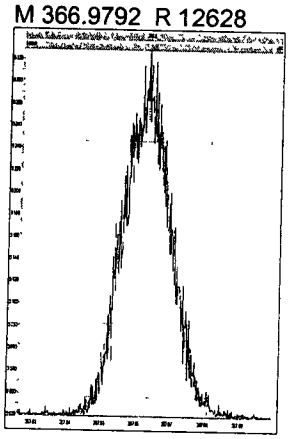

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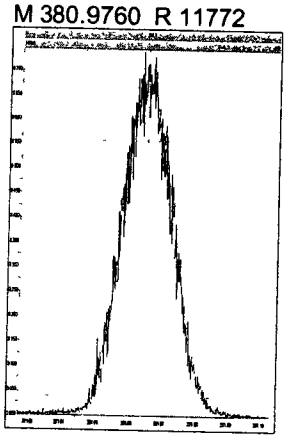

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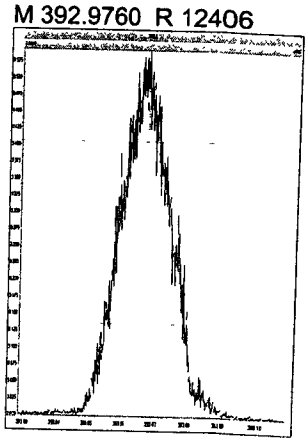

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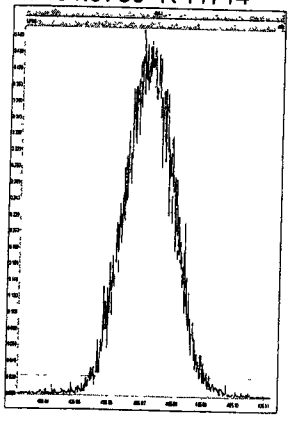

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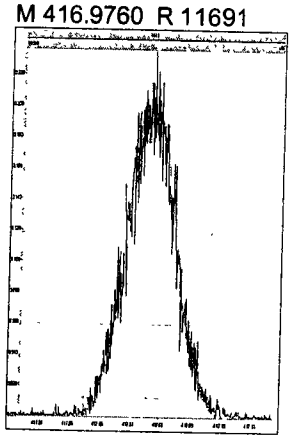

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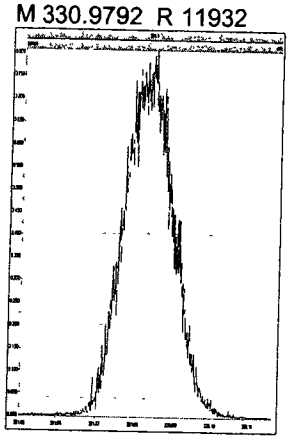

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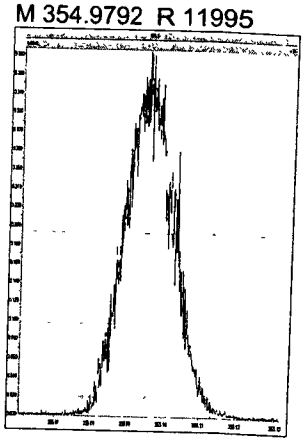

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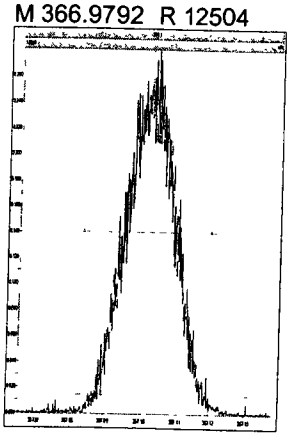

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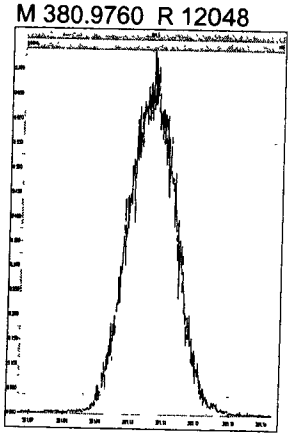

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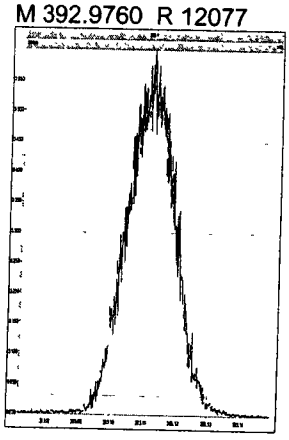

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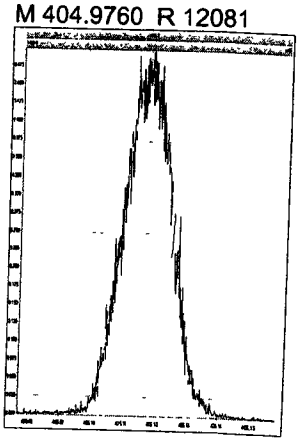

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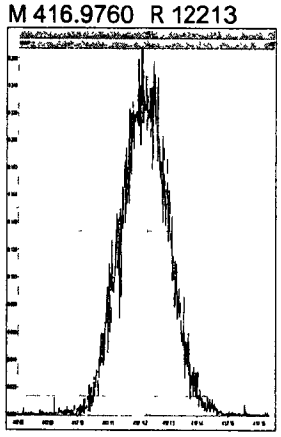

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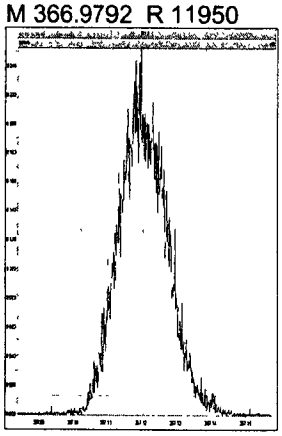

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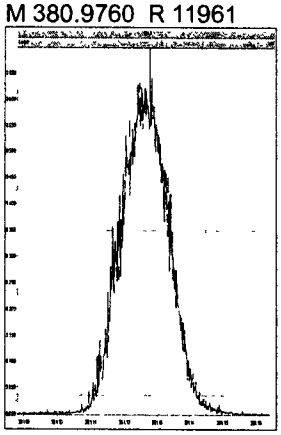

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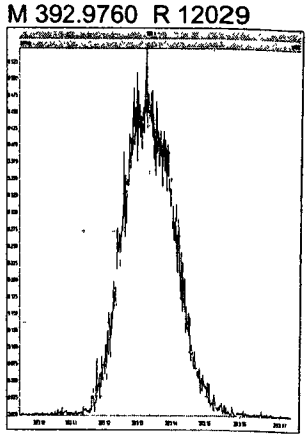

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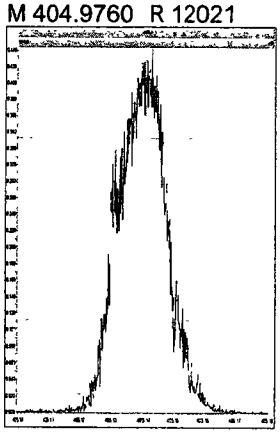

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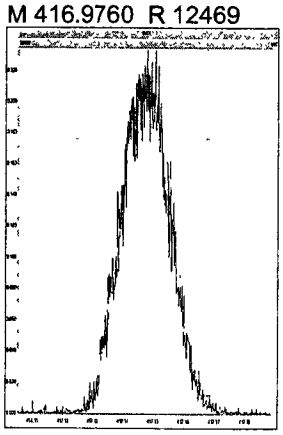

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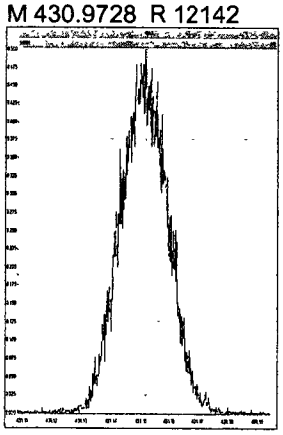

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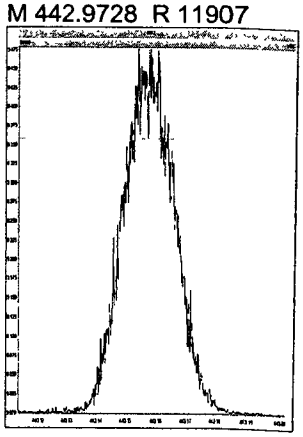

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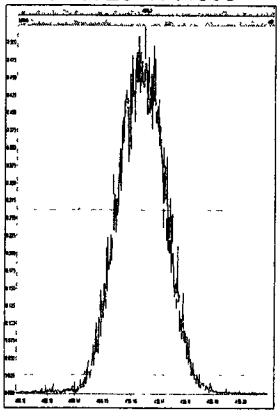

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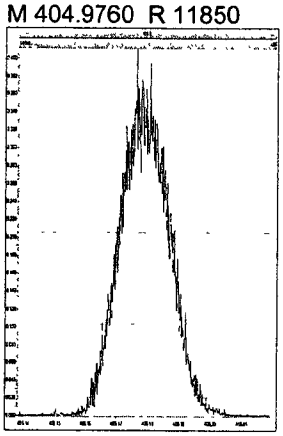

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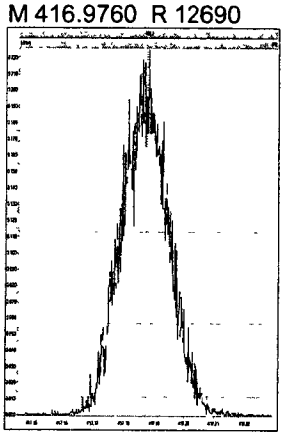
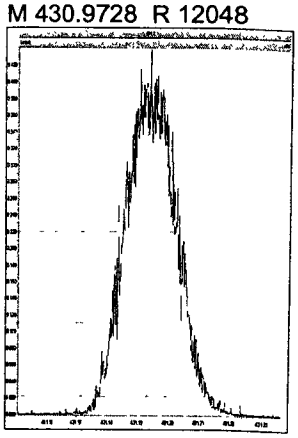
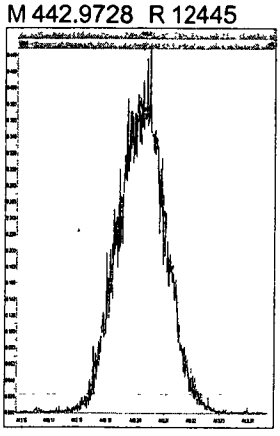


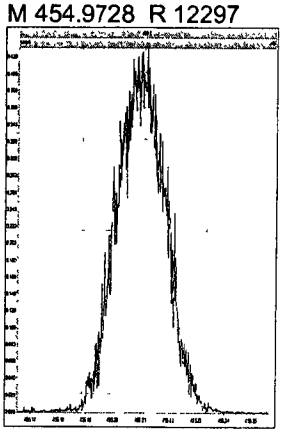
M 430.9728 R 12048



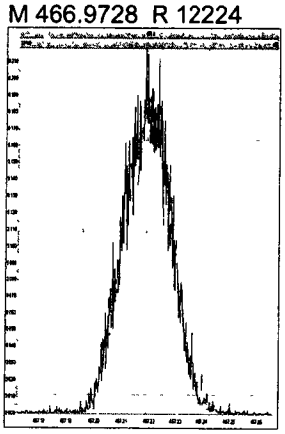
M 442.9728 R 12445



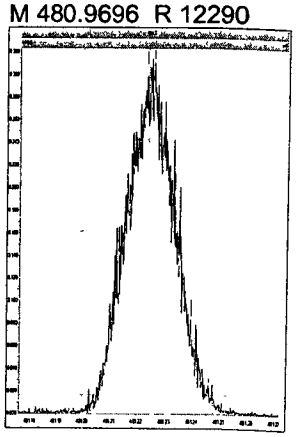
M 454.9728 R 12297



M 466.9728 R 12224

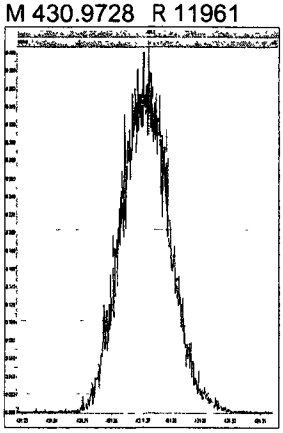


M 480.9696 R 12290

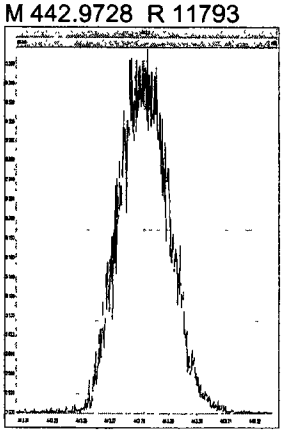


Printed: Tuesday, May 07, 2013 14:41:04 Pacific Daylight Time

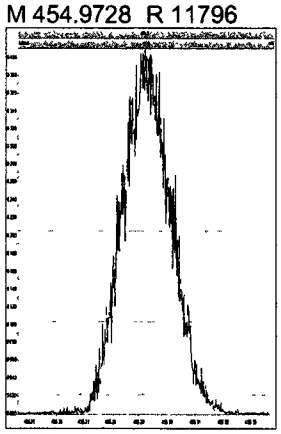
M 430.9728 R 11961



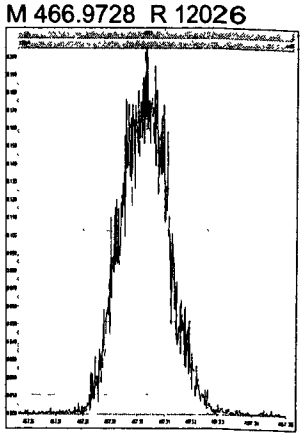
M 442.9728 R 11793



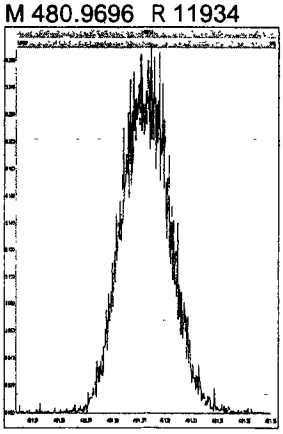
M 454.9728 R 11796



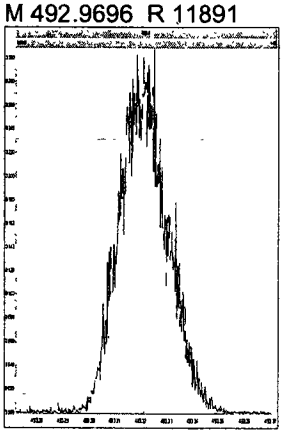
M 466.9728 R 12026



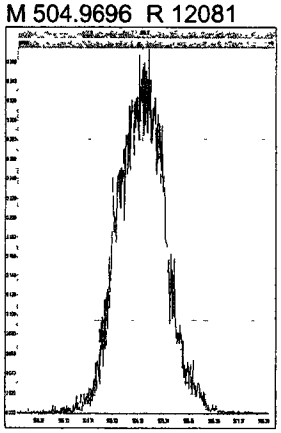
M 480.9696 R 11934



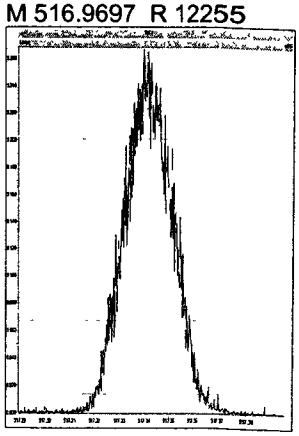
M 492.9696 R 11891

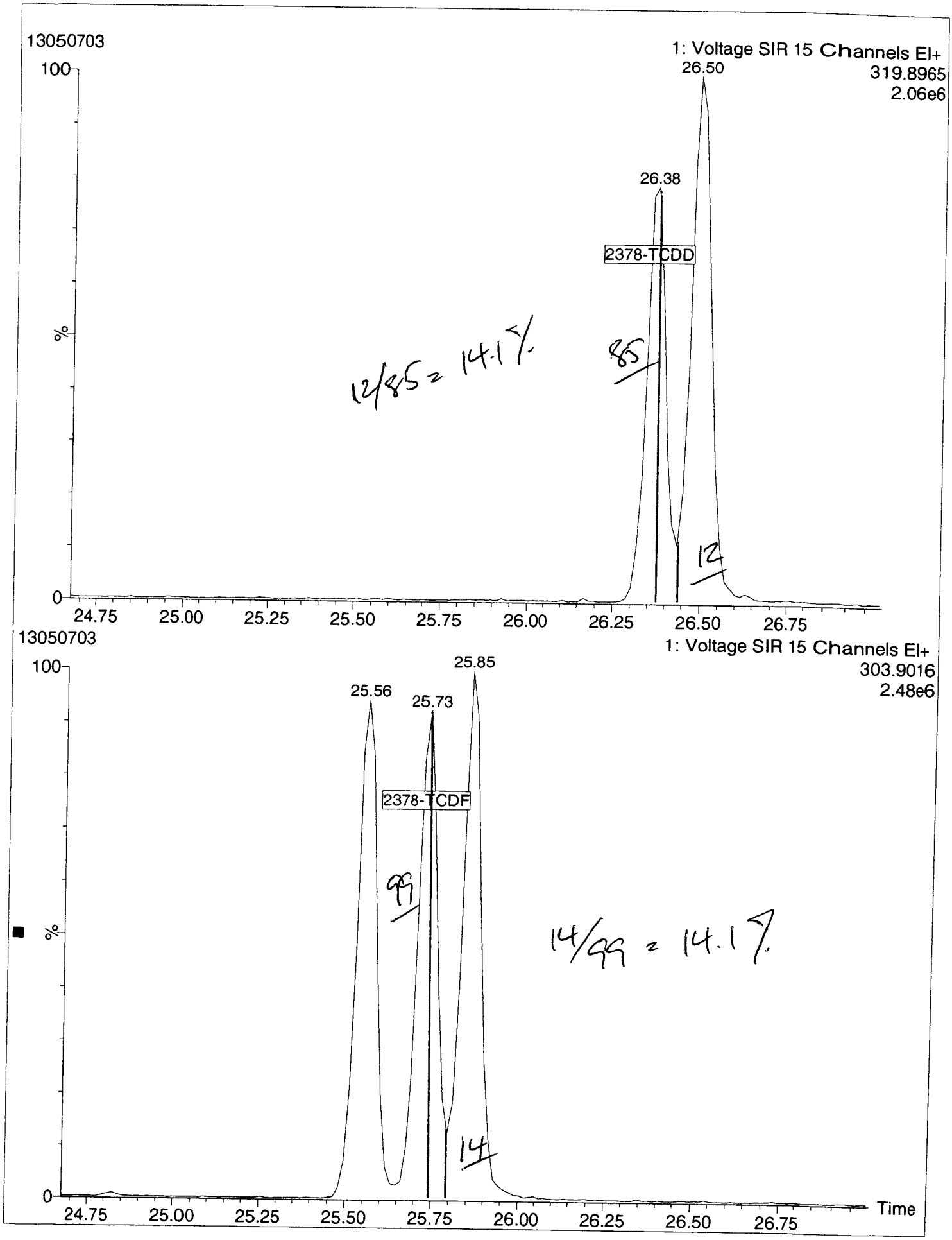


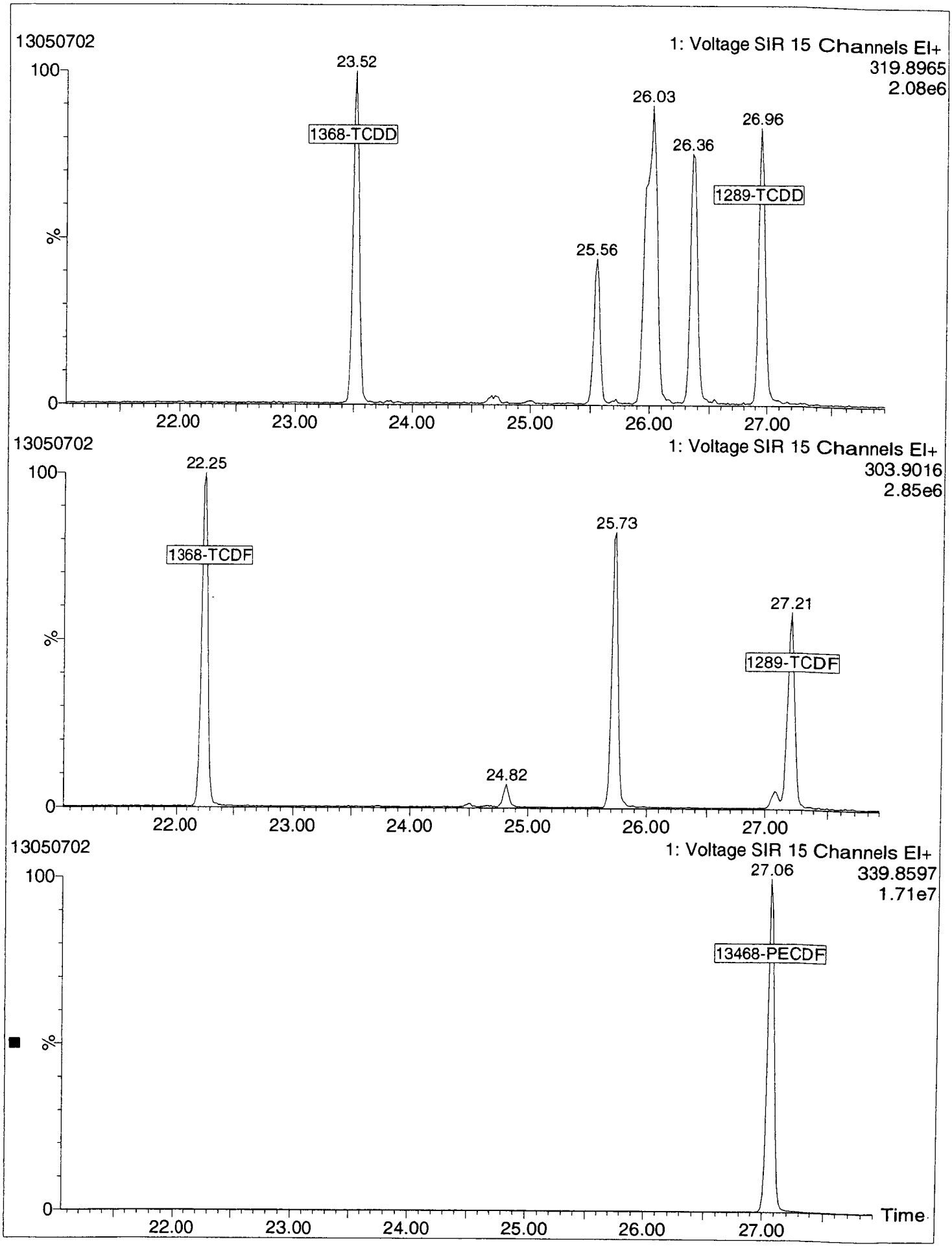
M 504.9696 R 12081

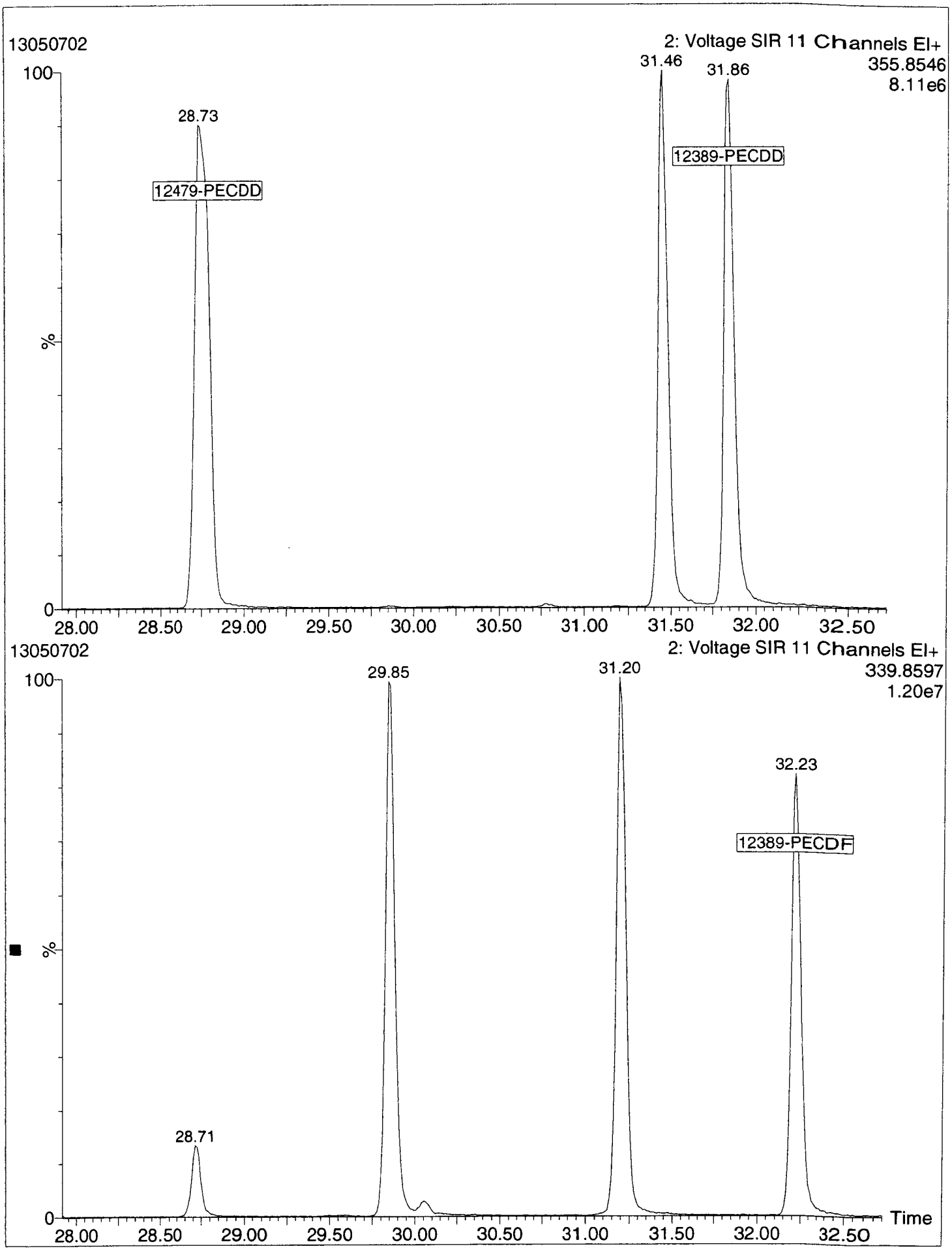


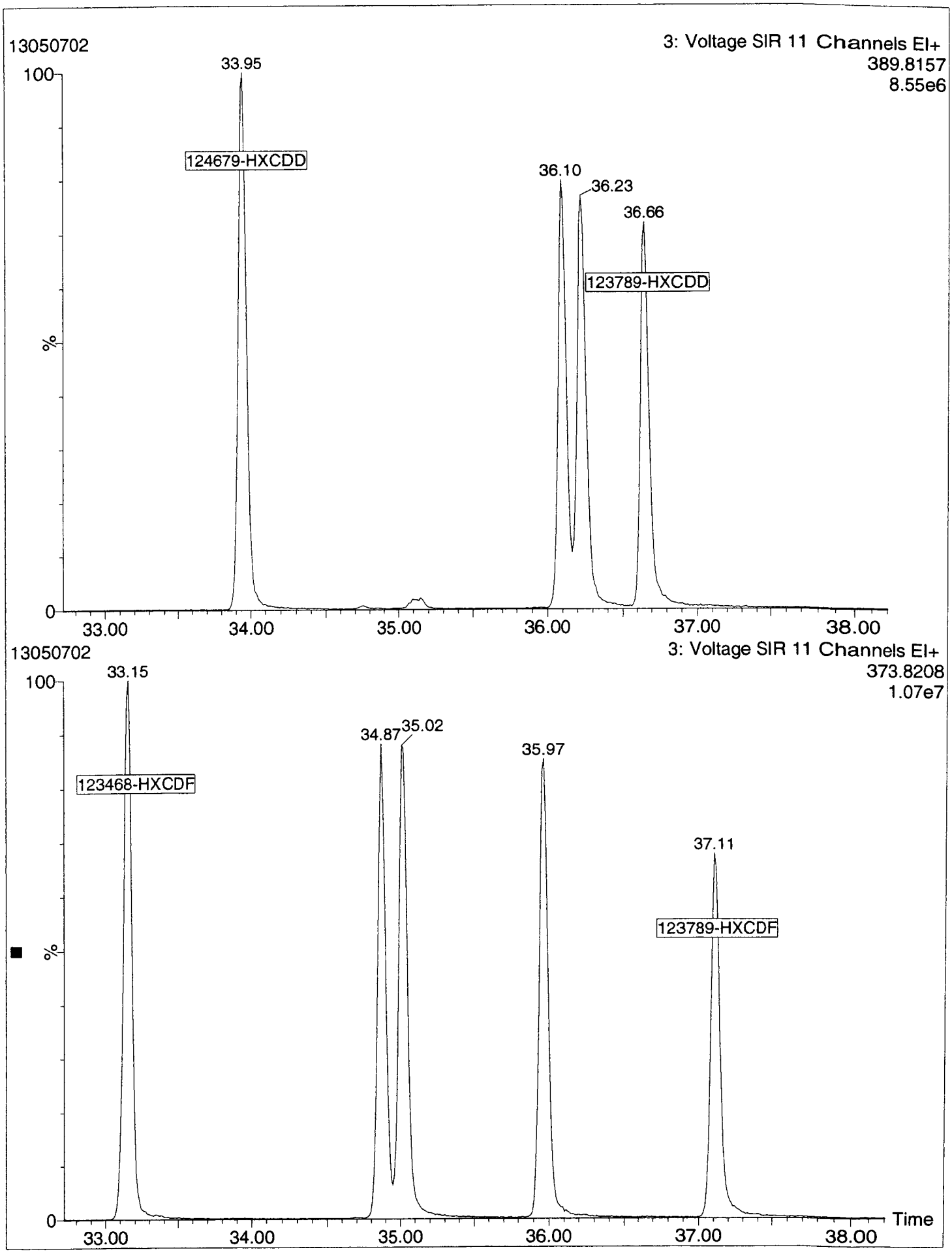
M 516.9697 R 12255

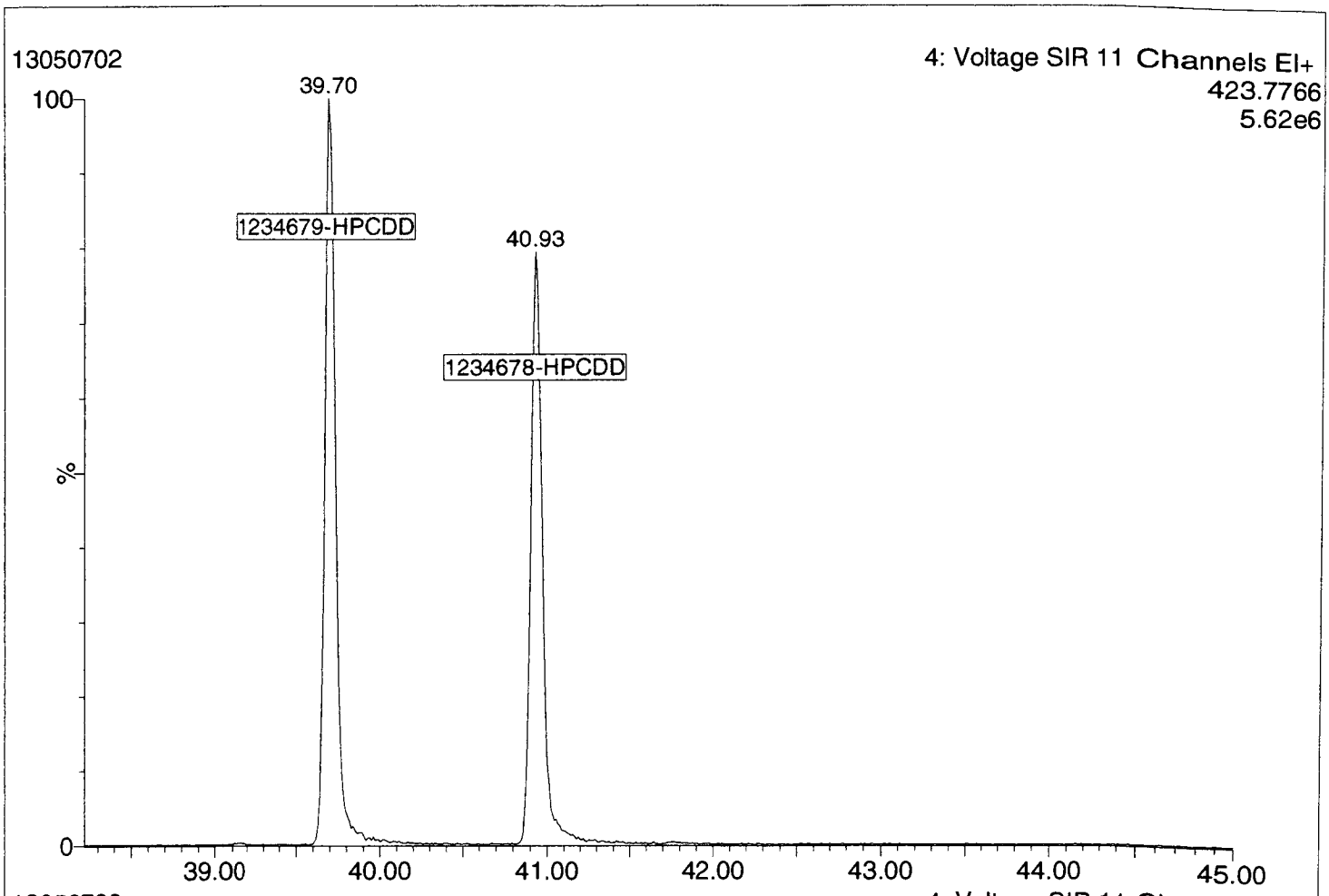


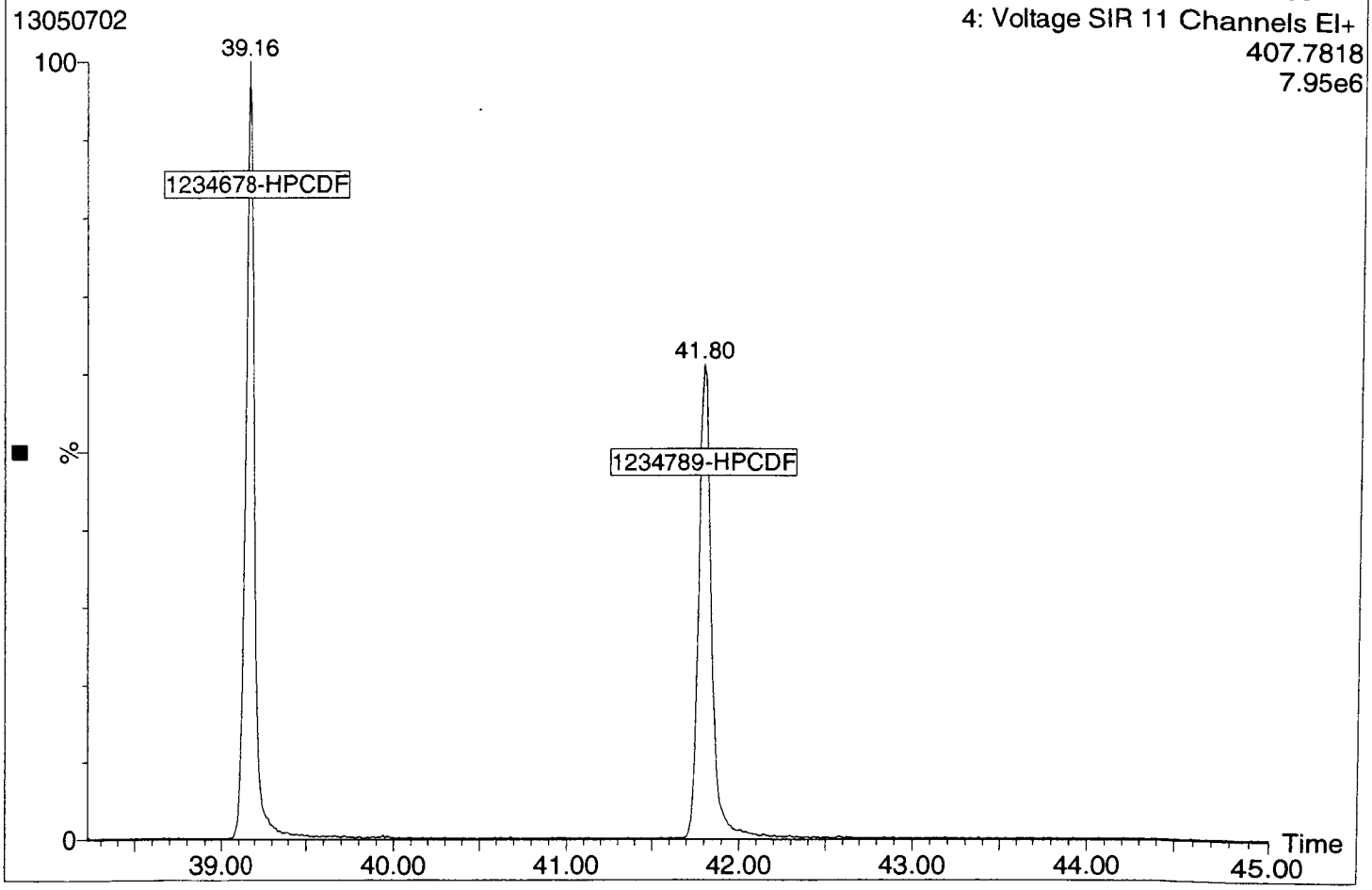

13050703
1: Voltage SIR 15 Channels EI+
319.8965
2.06e6
26.50
26.38
2378-TCDD
100
%
0
12/85 = 14.1%
85
12
24.75
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
13050703
1: Voltage SIR 15 Channels EI+
303.9016
2.48e6
25.85
25.56
25.73
2378-TCDF
99
14
14/99 = 14.1%
Time


13050702
1: Voltage SIR 15 Channels EI+
319.8965
2.08e6
100
%
0
23.52
1368-TCDD
26.03
26.96
26.36
1289-TCDD
25.56
22.00
23.00
24.00
25.00
26.00
27.00
13050702
1: Voltage SIR 15 Channels EI+
303.9016
2.85e6
100
%
0
22.25
1368-TCDF
25.73
27.21
1289-TCDF
24.82
22.00
23.00
24.00
25.00
26.00
27.00
13050702
1: Voltage SIR 15 Channels EI+
339.8597
1.71e7
100
%
0
27.06
13468-PECDF
Time
22.00
23.00
24.00
25.00
26.00
27.00


13050702
2: Voltage SIR 11 Channels EI+
355.8546
8.11e6
100
%
0
28.73
12479-PECDD
31.46
31.86
12389-PECDD
28.00
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
13050702
2: Voltage SIR 11 Channels EI+
339.8597
1.20e7
100
%
0
28.71
29.85
31.20
32.23
12389-PECDF
Time
28.00
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50


13050702
3: Voltage SIR 11 Channels EI+
389.8157
8.55e6
100
%
0
33.95
124679-HXCDD
36.10
36.23
36.66
123789-HXCDD
33.00
34.00
35.00
36.00
37.00
38.00
13050702
3: Voltage SIR 11 Channels EI+
373.8208
1.07e7
100
%
0
33.15
123468-HXCDF
34.87
35.02
35.97
37.11
123789-HXCDF
Time
33.00
34.00
35.00
36.00
37.00
38.00


13050702
4: Voltage SIR 11 Channels EI+
423.7766
5.62e6
100
%
0
39.70
1234679-HPCDD
40.93
1234678-HPCDD
39.00
40.00
41.00
42.00
43.00
44.00
45.00


13050702
4: Voltage SIR 11 Channels EI+
407.7818
7.95e6
100
%
0
39.16
1234678-HPCDF
41.80
1234789-HPCDF
Time
39.00
40.00
41.00
42.00
43.00
44.00
45.00

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: CS3, Name: 13050702, Date: 07-May-2013, Time: 14:44:08, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Area	Response	RRF	Dalta	Ratio	S/N	Ref	Conc	Dev
2378-TCDF	25.735	1.001	1.45e5	1.90e5	0.763	0.764	0 770	980.3	NO	11.801	11.801
12378-PeCDF	29.852	1.000	7.75e5	5.04e5	0.836	1.538	1.550	3146.6	NO	53.917	53.917
23478-PeCDF	31.201	1.000	7.59e5	4.94e5	0.851	1.535	1.550	3117.7	NO	54.723	54.723
123478-HxCDF	34.873	1.001	5.98e5	4.86e5	1.017	1.230	1.240	1402.3	NO	53.266	53.266
234678-HxCDF	35.969	1.001	6.01e5	4.82e5	1 027	1.247	1.240	1381.2	NO	54.082	54.082
123678-HxCDF	35.015	1 000	6.47e5	5.31e5	1.013	1 218	1.240	1420.7	NO	52 150	52.150
123789-HxCDF	37 109	1.000	5.11e5	4.19e5	0.929	1.220	1.240	1092.0	NO	53.738	53.738
1234678-HpCDF	39.159	1.000	5.12e5	5.10e5	1.151	1.004	1.050	2409.7	NO	52.865	52.865
1234789-HpCDF	41.801	1.000	3.91e5	3.89e5	1.149	1.006	1.050	1523.5	NO	53.308	53.308
OCDF	46.966	1.006	6.65e5	7.29e5	0.963	0.912	0 890	1391.0	NO	119.205	119.205
2378-TCDD	26.362	1.001	1.06e5	1.43e5	0.980	0.743	0.770	627.6	NO	10.619	10.619
12378-PeCDD	31.464	1.001	5 24e5	3.35e5	0.948	1.565	1 550	2271.1	NO	51.501	51.501
123478-HxCDD	36.101	1.000	4.33e5	3.52e5	0.941	1.229	1.240	1712.2	NO	51.514	51.514
123678-HxCDD	36.232	1.001	4.49e5	3.63e5	0.884	1.237	1.240	1669.4	NO	50.113	50.113
123789-HxCDD	36.660	1.012	4.18e5	3.56e5	0.870	1.176	1.240	1536.1	NO	51.501	51.501
1234678-HpCDD	40.935	1.000	3.49e5	3.34e5	0.948	1.044	1.050	1476.2	NO	52.414	52.414
OCDD	46.706	1.000	5.55e5	6.22e5	0.969	0.892	0.890	1917.7	NO	99.918	99.918
13C-2378-TCDF	25.705	1.006	1.63e6	2.09e6	1.318	0.777	0.770	7256.8	NO		114.303
13C-12378-PeCDF	29.841	1.168	1.73e6	1.11e6	1.026	1.554	1.550	4238.0	NO		112.058
13C-23478-PeCDF	31.190	1.221	1.63e6	1.06e6	0.966	1.548	1.550	4082.2	NO		112.794
13C-123478-HxCDF	34.851	0.951	6.82e5	1.32e6	1.123	0.517	0.510	2177.2	NO		110.201
13C-123678-HxCDF	35.005	0.955	7.43e5	1.49e6	1.216	0.499	0.510	2287.9	NO		113.488
13C-234678-HxCDF	35.947	0.981	6.60e5	1.29e6	1.106	0.512	0.510	2082.3	NO		109.040
13C-123789-HxCDF	37.098	1.013	6.47e5	1.22e6	0.995	0.532	0.510	1861.0	NO		115.817
13C-1234678-HpCDF	39.148	1.069	5.15e5	1.16e6	0.896	0.442	0.440	2345.1	NO		115.864
13C-1234789-HpCDF	41.779	1.140	3.85e5	8.88e5	0.693	0.433	0.440	1518.0	NO		113.539
13C-1234-TCDD	25.541	0.000	1.08e6	1.39e6	1.000	0.782	0.770	3319.7	NO		100.000
13C-2378-TCDD	26.347	1.032	1.05e6	1.35e6	0.961	0.784	0.770	3152.1	NO		101.148
13C-12378-PeCDD	31.442	1.231	1.08e6	6.83e5	0.703	1.576	1.550	3160.7	NO		101.346
13C-123478-HxCDD	36.090	0.985	9.14e5	7.06e5	1.016	1.293	1.240	4983 2	NO		98.631
13C-123678-HxCDD	36.210	0.988	1.02e6	8.18e5	1.098	1.241	1.240	5245.3	NO		103.245
13C-1234678-HpCDD	40 913	1.117	7 04e5	6.71e5	0 828	1 050	1.050	2470.5	NO		102.695
13C-OCDD	46.688	1.274	1.14e6	1.29e6	0.770	0.881	0.890	3307.1	NO		195.129

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Last Altered: Wednesday, May 08, 2013 15:02:02 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 16:01:23 Pacific Daylight Time

ID: CS3, Name: 13050702, Date: 07-May-2013, Time: 14:44:08, Conditions: AUTOSPEC01, User: pk

Name	RT	Dev RT	Peak Area	Int Area	RRF	Ratio	Ratio LL	S/N	EMPCV	Dev RRF	Conc
13C-123789-HxCDD	36 638	0.000	8.97e5	7.20e5	1 000	1.246	1.240	4719.3	NO		100 000
Total-tetrafurans			4.50e5		0 763						36.559
Total-penta1			1.06e6								68.938
Total-pentafurans			2.33e6		0.844						164.660
Total-hexafurans			3.05e6		0.997						276.586
Total-heptafurans			9.09e5		1.150						106.974
Total-Furans			8.46e6		0.970						772.936
Total-tetradioxins			5.97e5		0.980						58.077
Total-pentadioxins			1.80e6		0.948						178.053
Total-hexadioxins			1.87e6		0.898						219.560
Total-heptadioxins			7.47e5		0.948						113.110
Total-Dioxins			5.57e6		0.934						668.718
Total-TEQ			1.40e7								1441.655
37CL-2378-TCDD	26.362	1.032	2.64e5		0.999			1714.1			10.688
FUNCTION1 PFK			1.98e6								
FUNCTION2 PFK			3.97e5								0.000
FUNCTION3 PFK			4.82e5								0.000
FUNCTION4 PFK			1.02e6								
FUNCTION5 PFK			3.68e5								
FUNCTION1 HXCDPE			1 91e2								0.000
FUNCTION1 HPCDPE			2.34e3								0 000
FUNCTION2 HPCDPE			1.57e3								0.000
FUNCTION3 OCDPE			7.93e1								0.000
FUNCTION4 NCDPE			5.73e2								0.000
FUNCTION5 DCDPE			0.00e0								

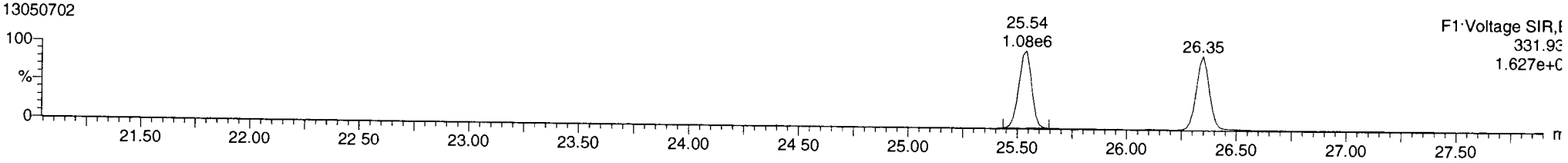
Dataset: P:\DIOXIN8290.PRO\130507OPEN.qld
Last Altered: Wednesday, May 08, 2013 15:02:02 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 16:01:23 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: CS3, Name: 13050702, Date: 07-May-2013, Time: 14:44:08, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD

13050702



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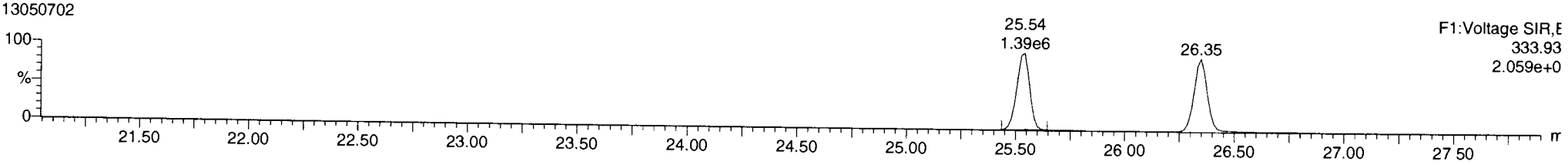
13050702



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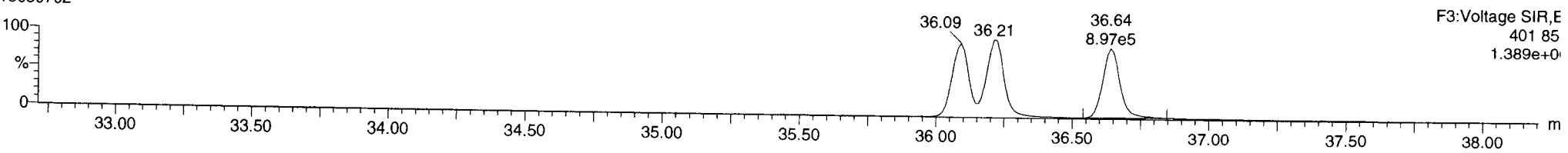
13050702



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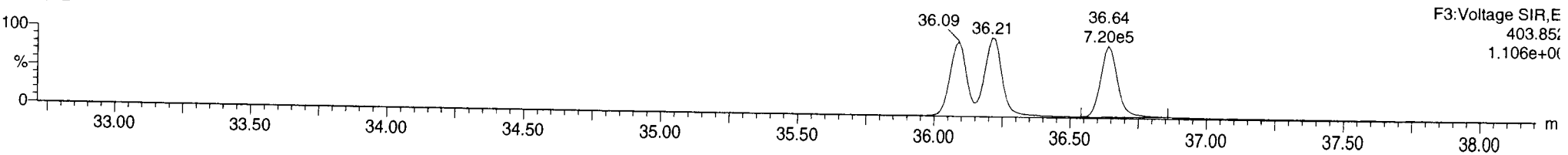

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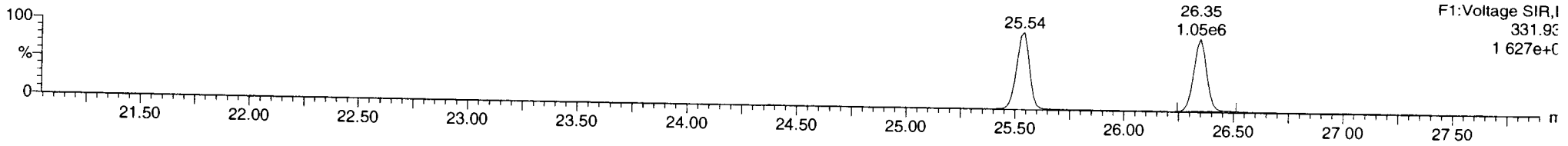
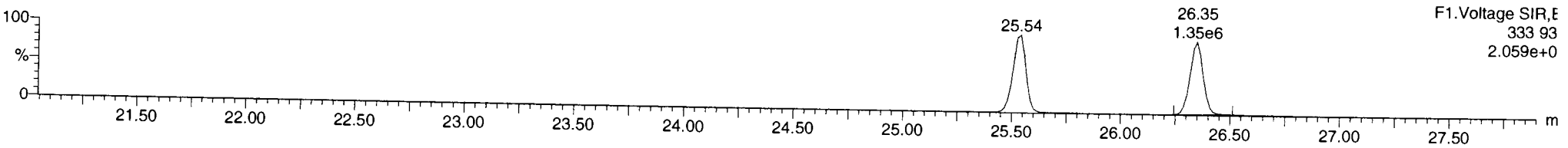
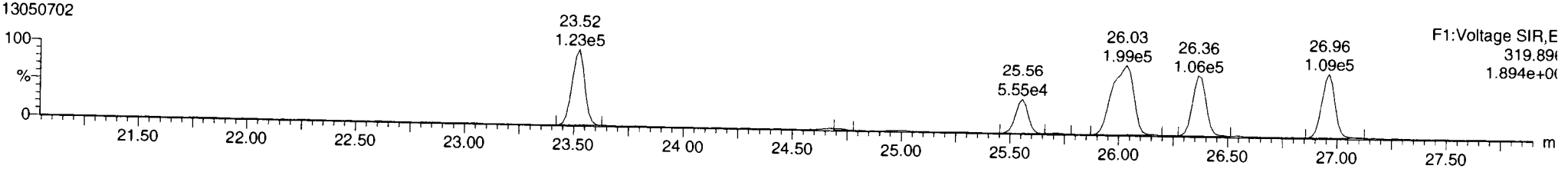
13050702



13C-2378-TCDD
13050702



Total-tetradioxins
13050702



Total-tetradioxins
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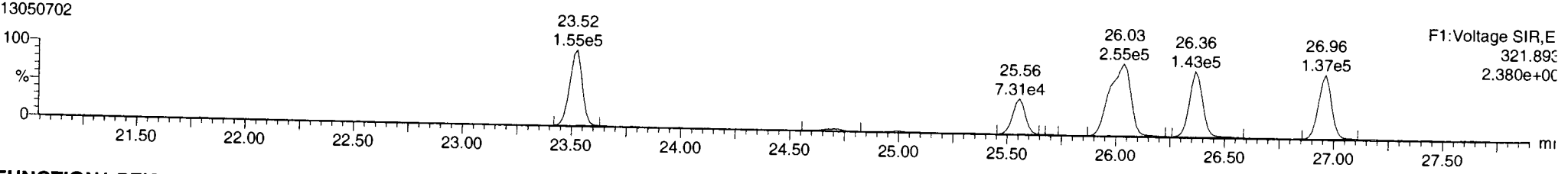

FUNCTION1 PFK
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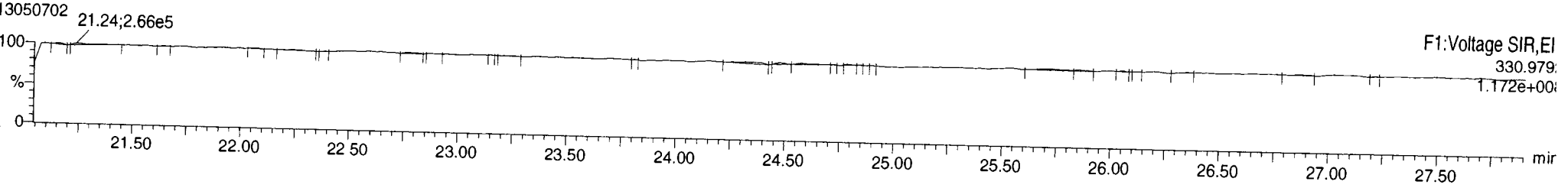

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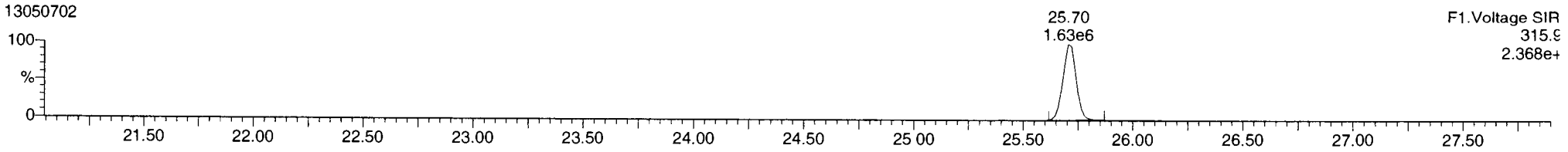
13C-2378-TCDF



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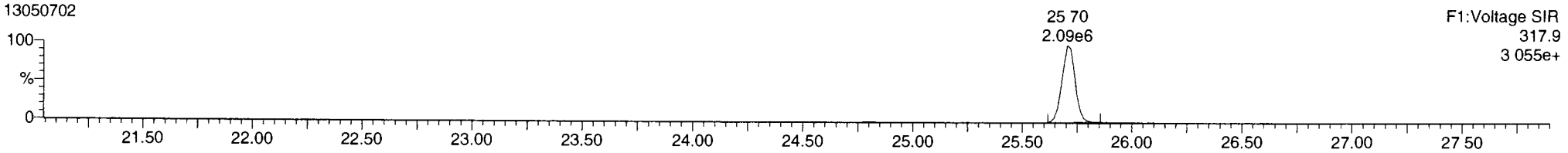
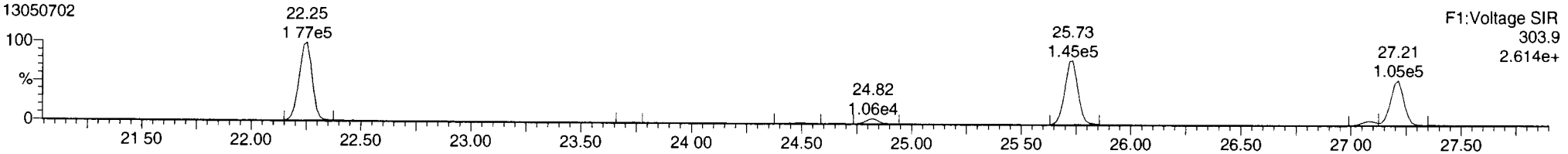
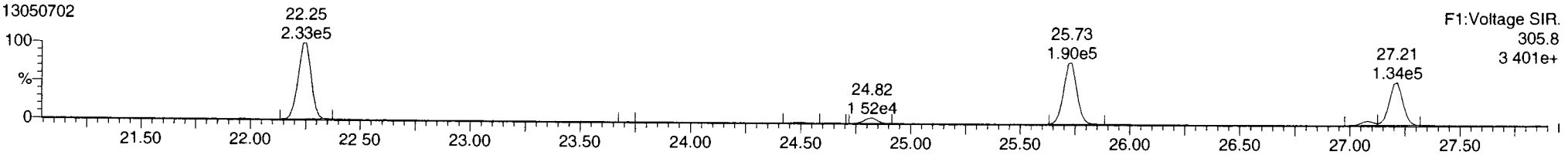


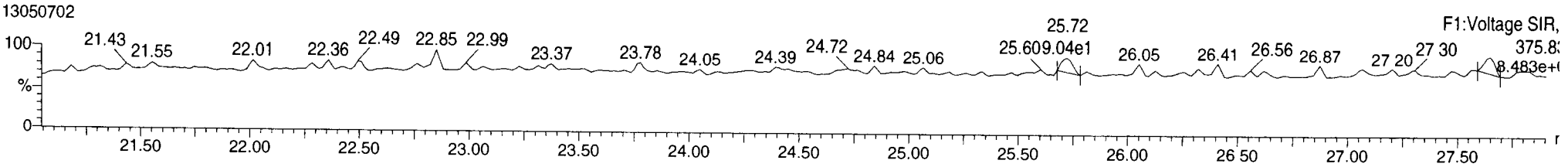
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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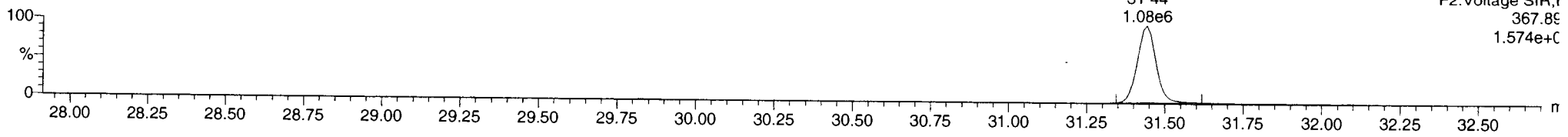
13C-12378-PeCDD

13050702



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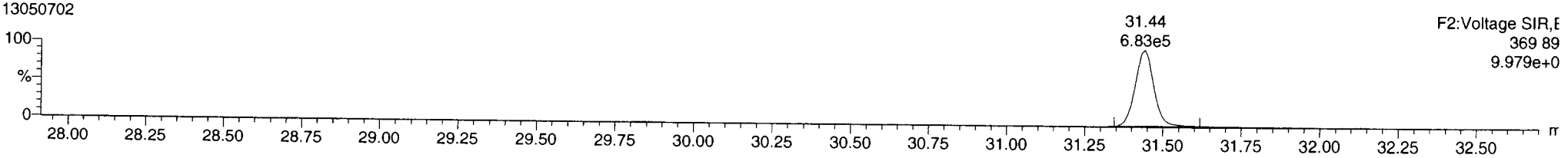

Total-pentadioxins

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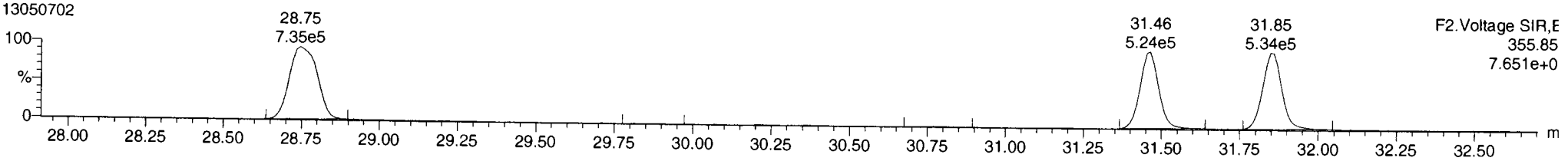

Total-pentadioxins

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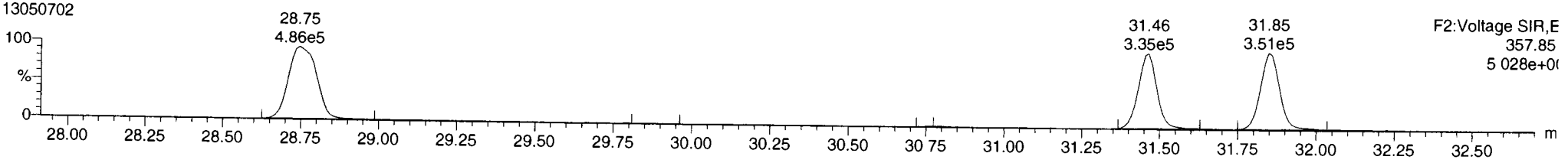

FUNCTION2 PFK

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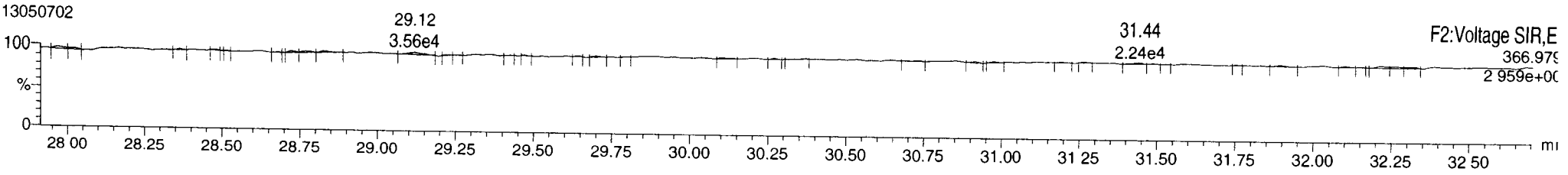

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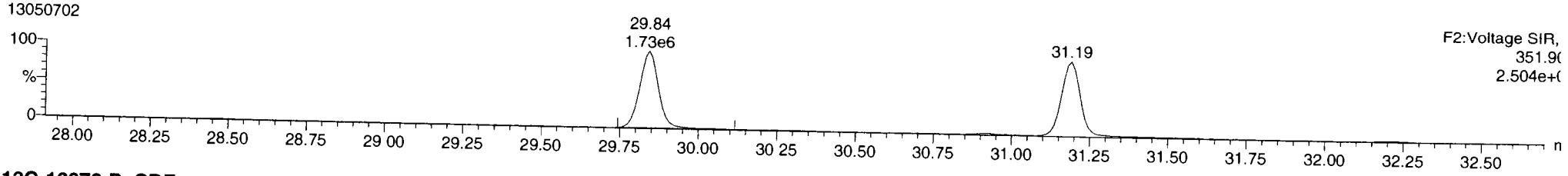
13C-12378-PeCDF

13050702



13C-12378-PeCDF

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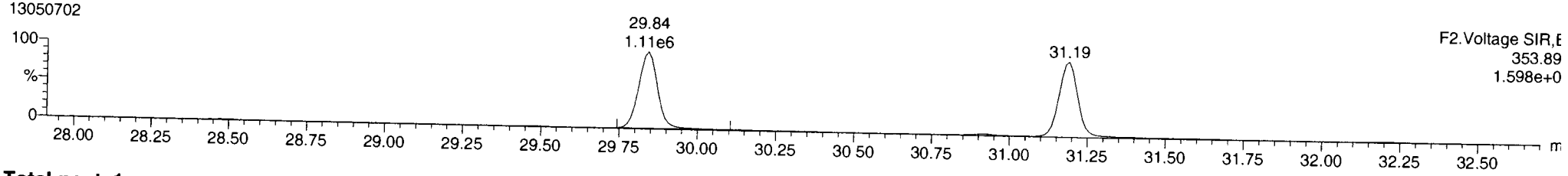

Total-penta1

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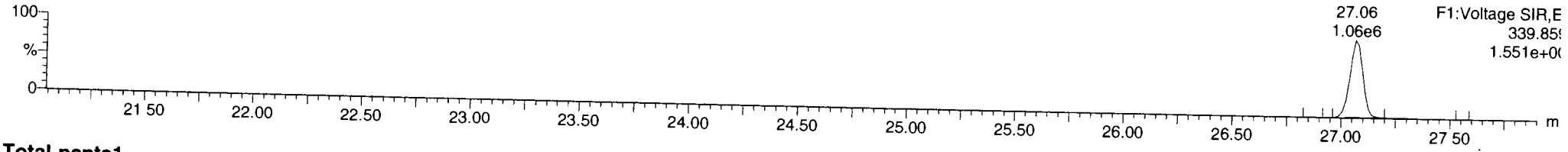
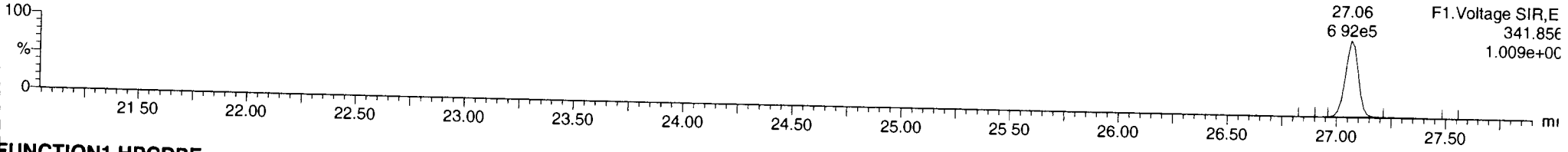


Total-penta1

13050702



FUNCTION1 HPCDPE

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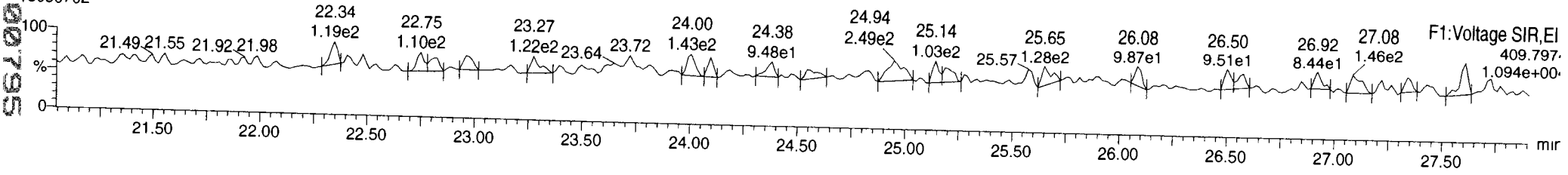

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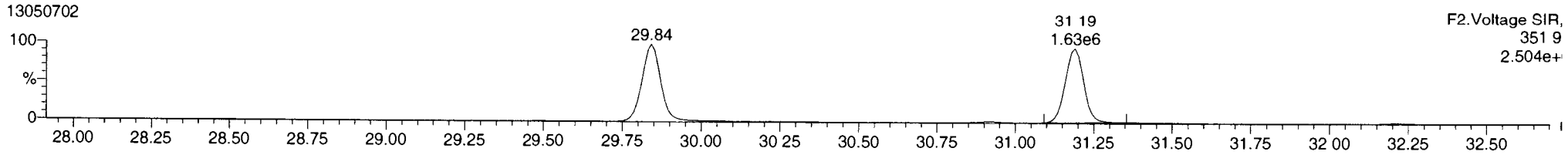
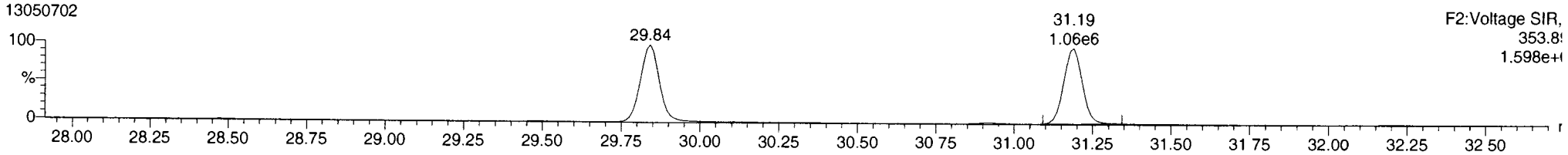
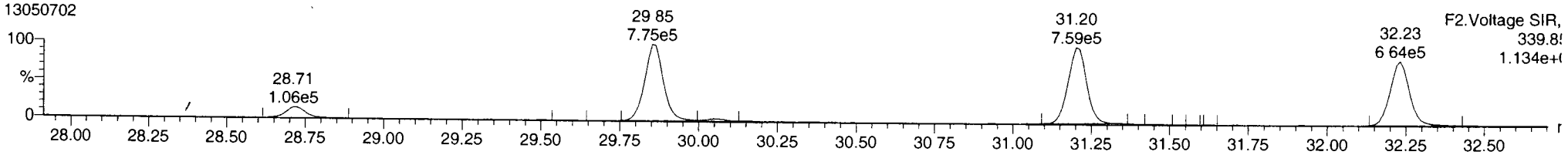
13C-23478-PeCDF



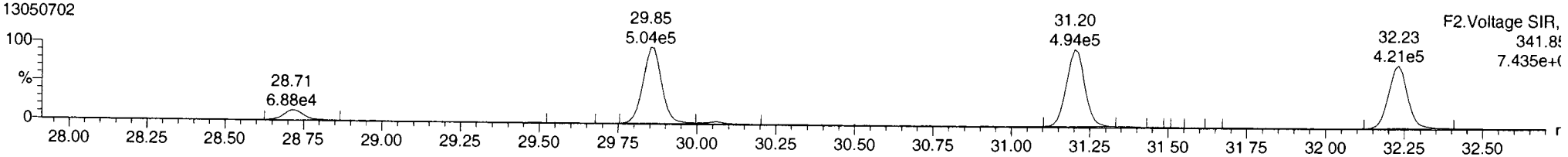
13C-23478-PeCDF



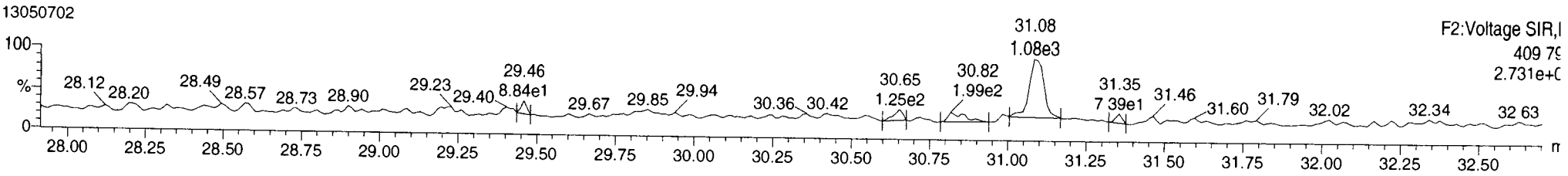
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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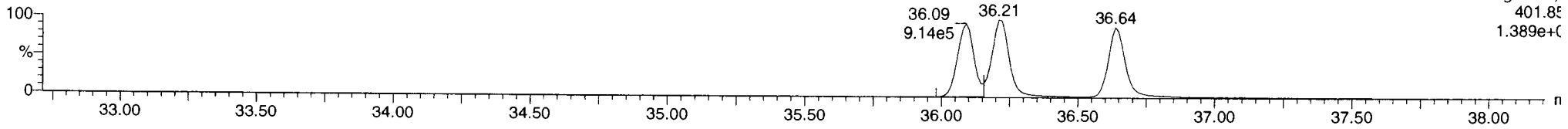
13C-123478-HxCDD

13050702



13C-123478-HxCDD

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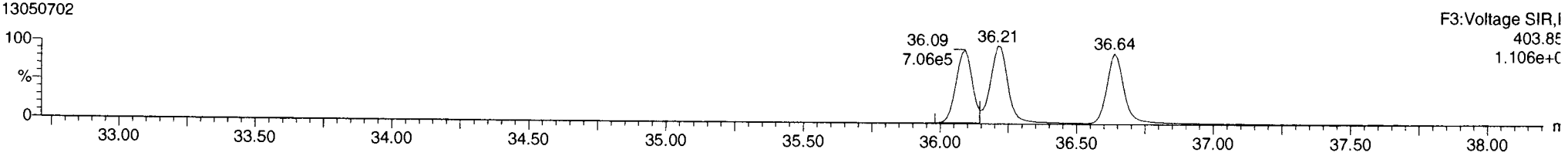

Total-hexadioxins

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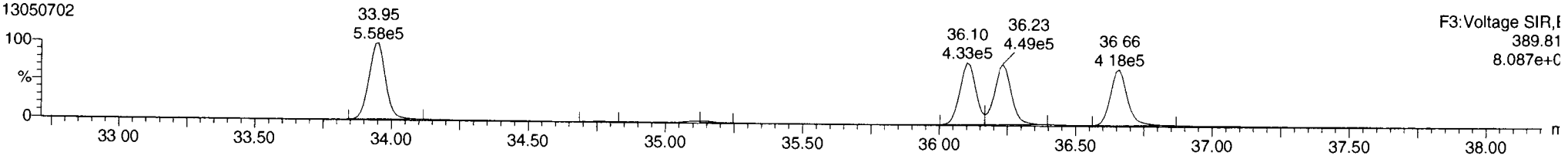

Total-hexadioxins

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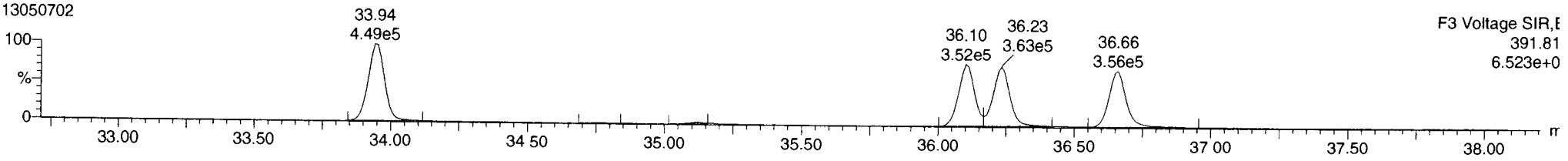

FUNCTION3 PFK

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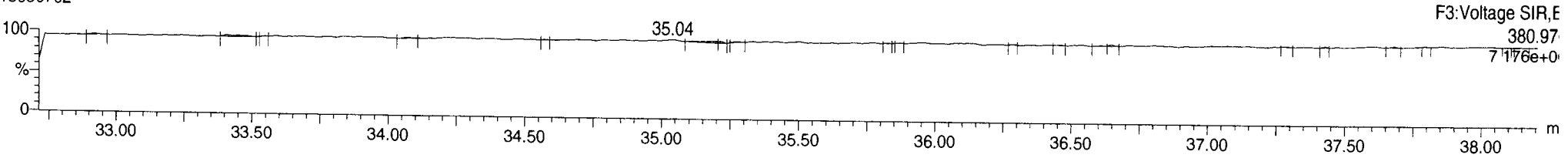

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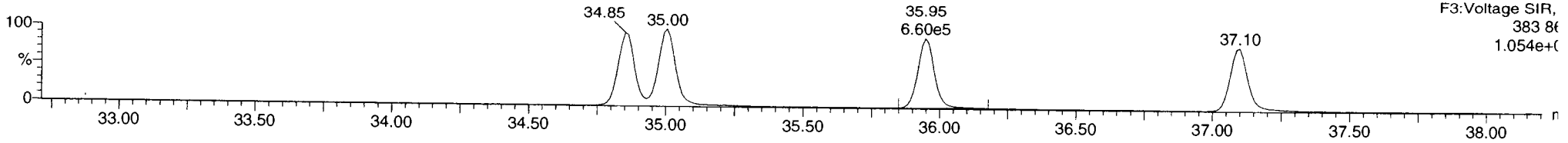
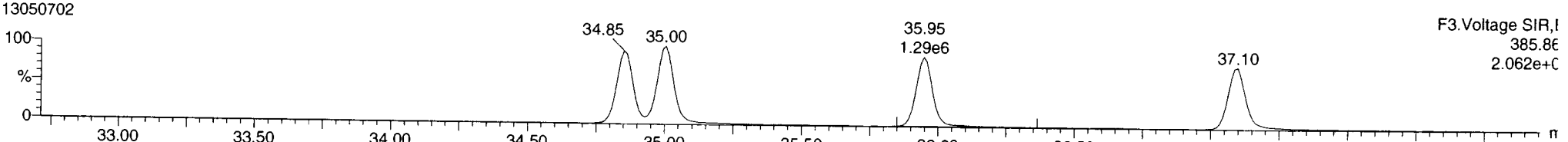
13C-234678-HxCDF

13050702



13C-234678-HxCDF

13050702



Total-hexafurans

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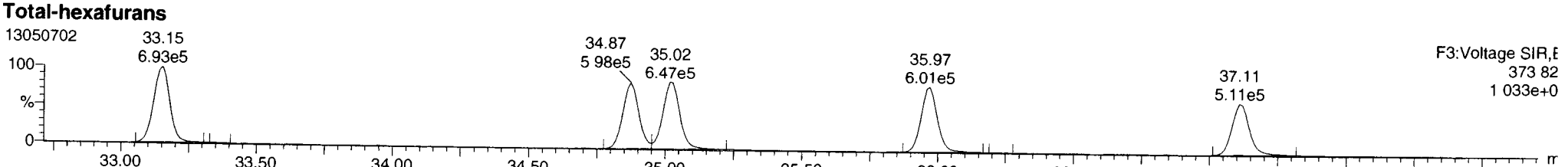

Total-hexafurans

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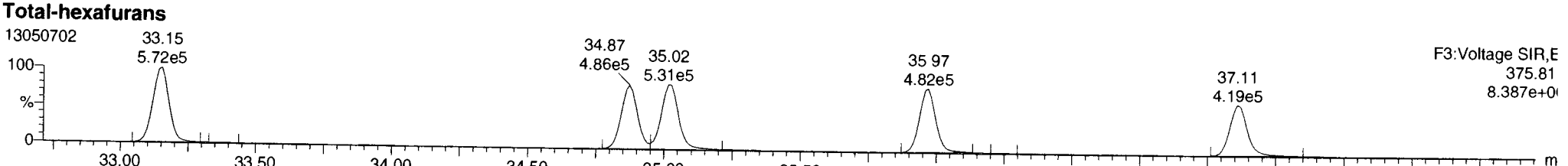

FUNCTION3 OCDPE

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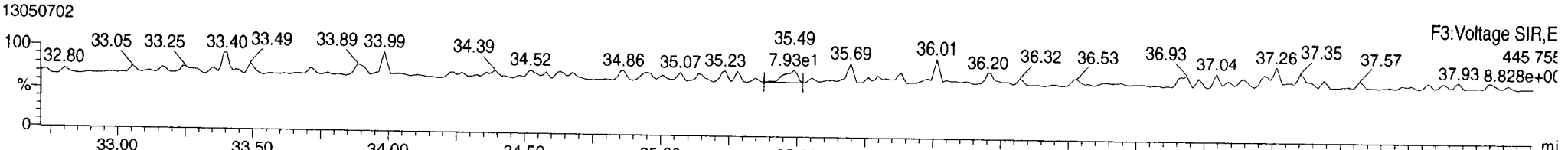

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13C-1234678-HpCDD

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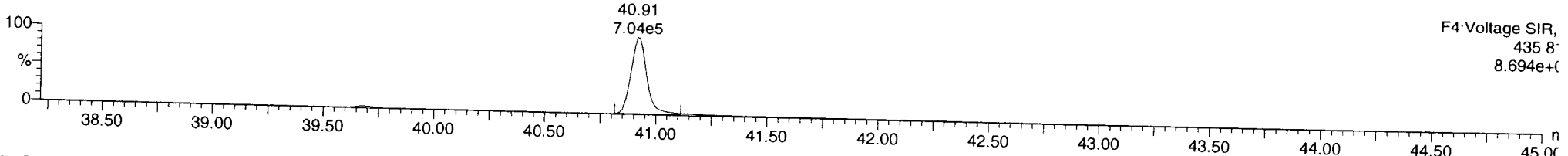

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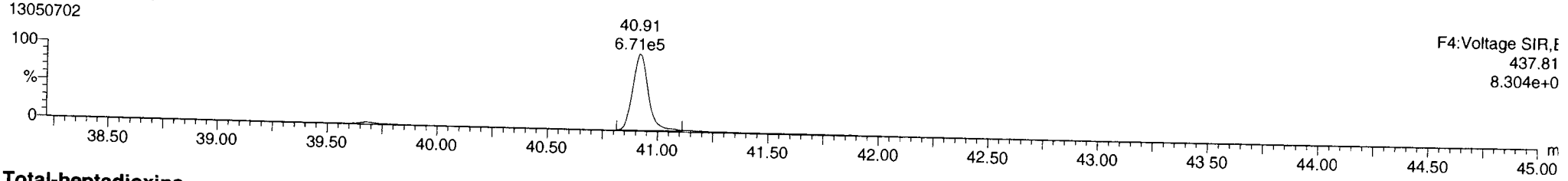

Total-heptadioxins

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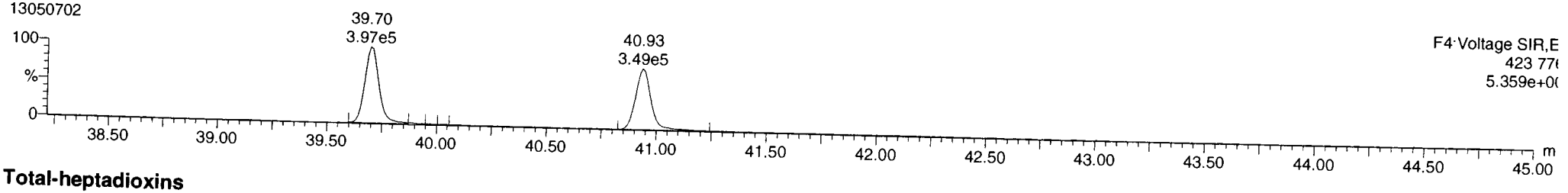

Total-heptadioxins

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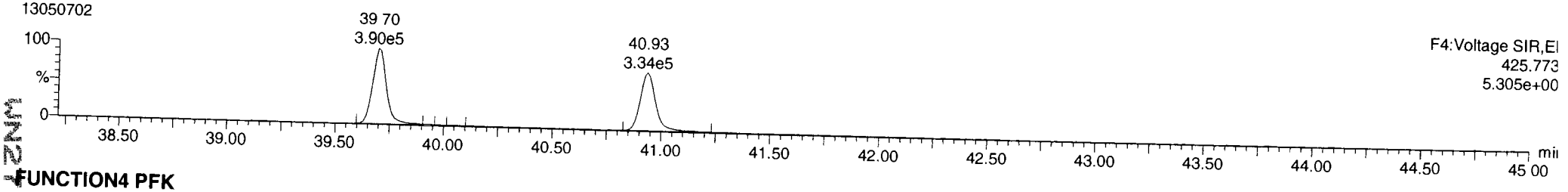
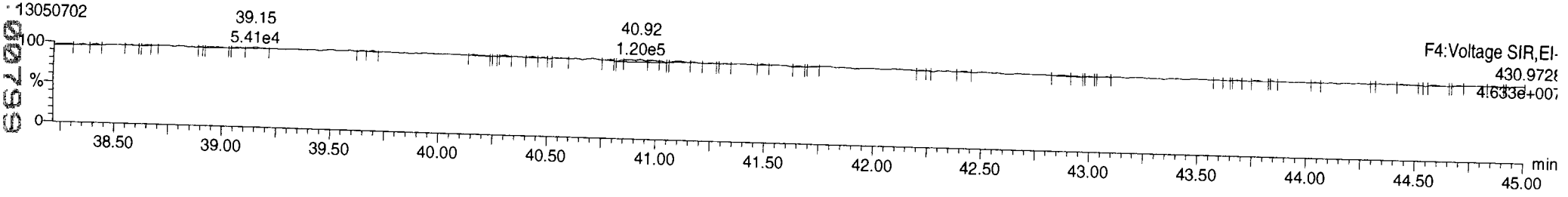


FUNCTION4 PFK

13050702



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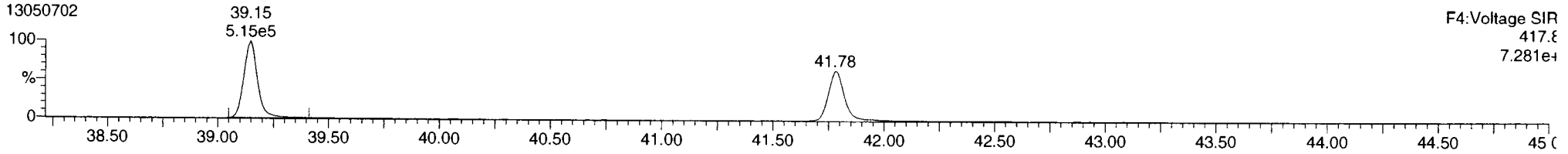

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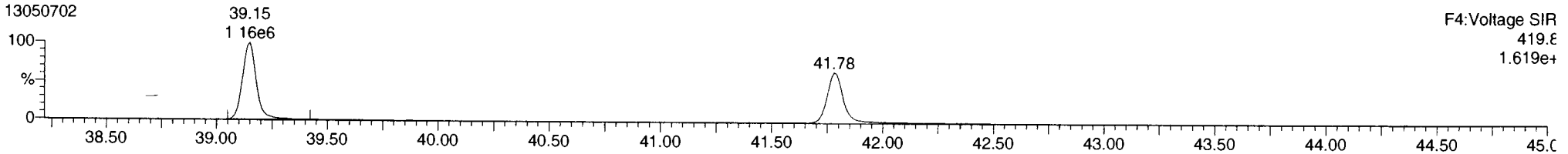
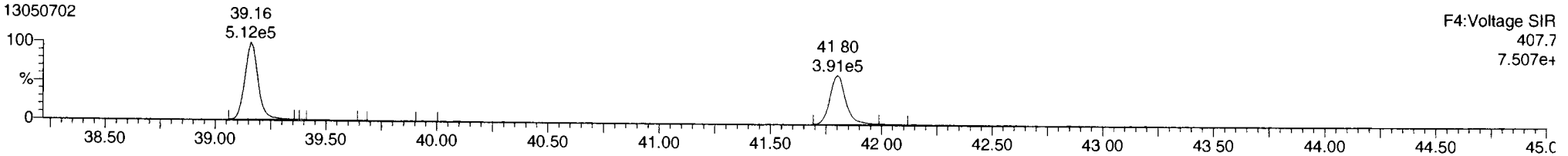
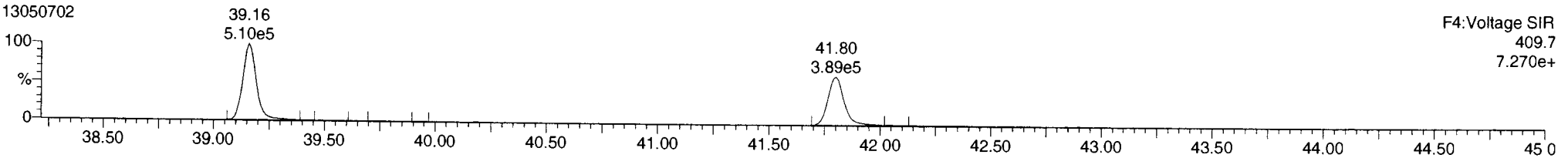


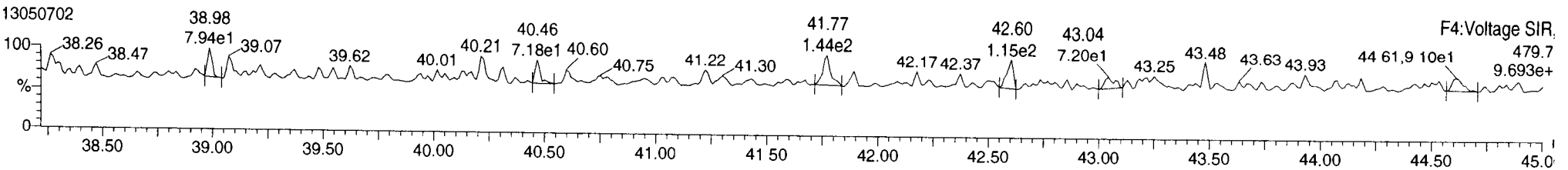
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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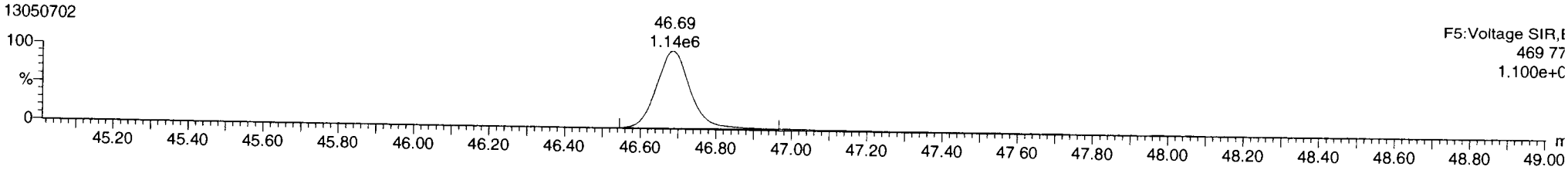
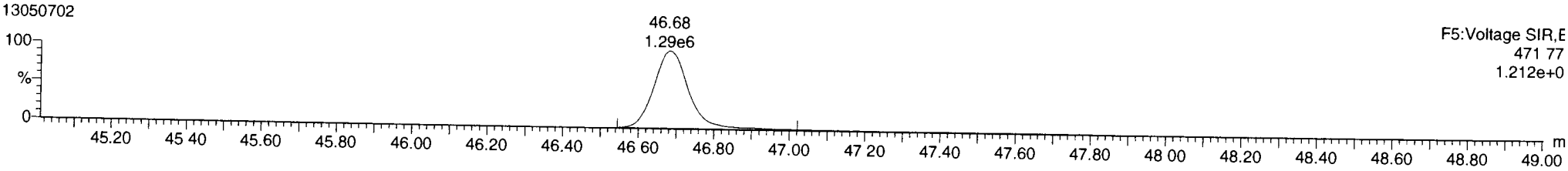
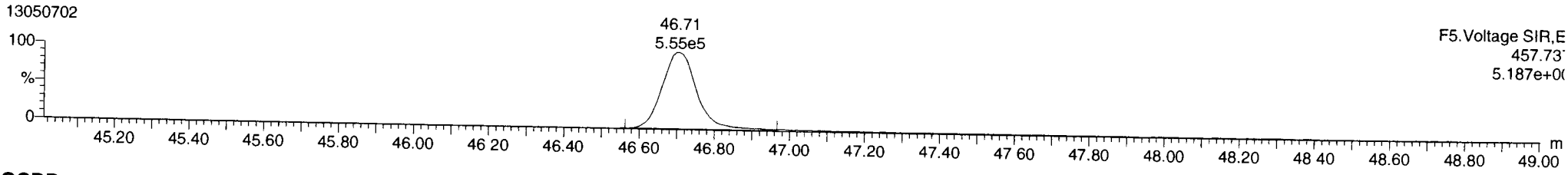
13C-OCDD



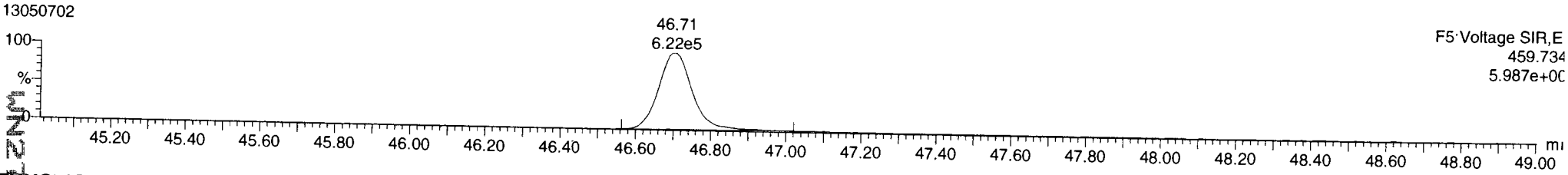
13C-OCDD



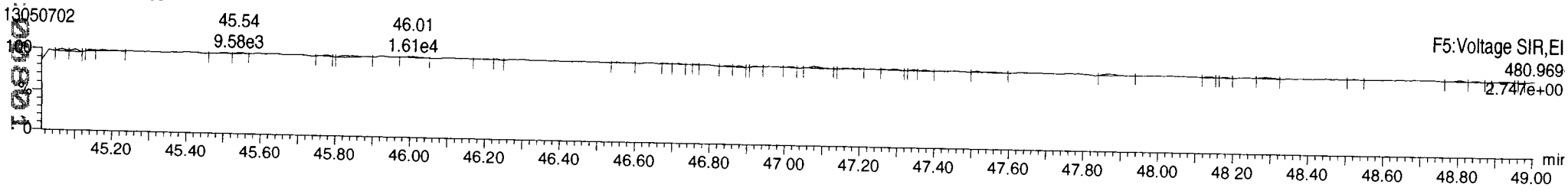
OCDD



OCDD



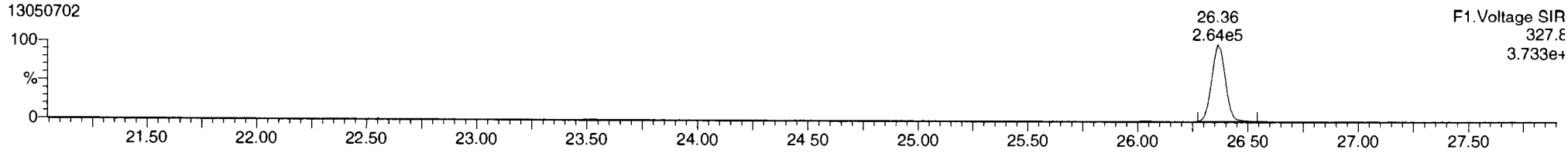
FUNCTION5 PFK



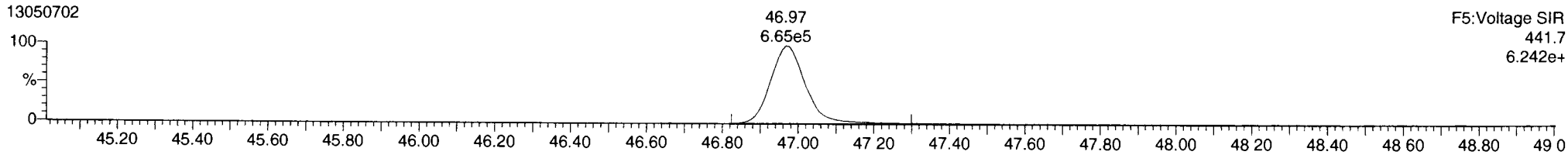
Dataset: P:\DIOXIN8290.PRO\130507OPEN.qld
Last Altered: Wednesday, May 08, 2013 15:02:02 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 16:01:23 Pacific Daylight Time

ID: CS3, Name: 13050702, Date: 07-May-2013, Time: 14:44:08, Conditions: AUTOSPEC01, User: pk

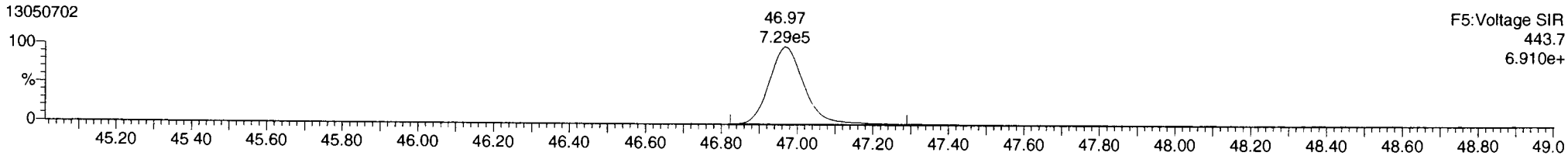
37CL-2378-TCDD



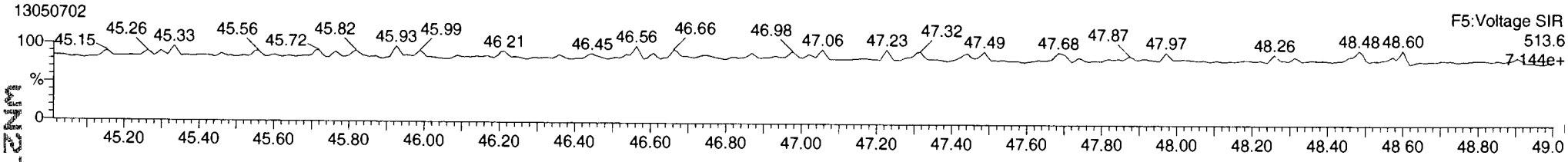
OCDF



OCDF



FUNCTION5 DCDPE



ARI
CDD/CDF EDL DATA
HIGH RESOLUTION

Lab.Sample ID: WM89MBS
Lab.File ID: 13050704
Date Analysed: 07-May-13

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	26.33	0.0873	0.0300	
12378-PeCDD	356/358	31.45	0.0208	0.0160	
123478-HxCDD	390/392	0.00			0.020
123678-HxCDD	390/392	0.00			0.020
123789-HxCDD	390/392	0.00			0.021
1234678-HpCDD	424/426	40.91	0.104	0.0830	
OCDD	458/460	46.67	1.04		
2378-TCDF	304/306	25.70	0.0388		
12378-PeCDF	340/342	29.85	0.0412	0.0380	
23478-PeCDF	340/342	31.20	0.0371	0.0220	
123478-HxCDF	374/376	34.85	0.0279	0.0210	
234678-HxCDF	374/376	0.00			0.016
123678-HxCDF	374/376	0.00			0.013
123789-HxCDF	374/376	0.00			0.020
1234678-HpCDF	408/410	0.00			0.022
1234789-HpCDF	408/410	0.00			0.035
OCDF	442/444	46.98	0.0593	0.0350	

Note: EDLs are on column values. Final EDL values are corrected for final volume of the extract (normally 20ul) and amount of sample extracted.

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 10:52:15 Pacific Daylight Time

5/8/13

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

2378-TCDF	25.705	1.001	4.96e2	7.14e2	0.763	0.695	0.770	6.1	1178	2978	7.13e3	1.16e4	NO	0.039	0.039
12378-PeCDF	29.852	1.001	5.59e2	4.43e2	0.836	1.262	1.550	9.8	958	1889	9.40e3	6.60e3	YES	0.038	0.041
23478-PeCDF	31.200	1.001	2.98e2	5.26e2	0.851	0.566	1.550	6.0	958	1889	5.71e3	8.84e3	YES	0.022	0.037
123478-HxCDF	34.850	1.000	3.67e2	1.89e2	1.017	1.939	1.240	5.7	1137	612	6.52e3	3.94e3	YES	0.021	0.028
234678-HxCDF					1.027		1.240		1137	612					
123678-HxCDF					1.013		1.240		1137	612					
123789-HxCDF					0.929		1.240		1137	612					
1234678-HpCDF					1.151		1.050		1261	922					
1234789-HpCDF					1.149		1.050		1261	922					
OCDF	46.983	1.007	1.55e2	4.01e2	0.963	0.386	0.890	6.3	691	1355	4.32e3	7.63e3	YES	0.035	0.059
2378-TCDD	26.332	1.001	3.46e2	1.95e3	0.980	0.178	0.770	3.4	2033	2893	6.89e3	2.91e4	YES	0.030	0.087
12378-PeCDD	31.452	1.001	1.69e2	1.90e2	0.948	0.887	1.550	3.4	1493	729	5.03e3	2.90e3	YES	0.016	0.021
123478-HxCDD					0.941		1.240		872	1087					
123678-HxCDD					0.884		1.240		872	1087					
123789-HxCDD					0.870		1.240		872	1087					
1234678-HpCDD	40.912	1.000	5.70e2	8.31e2	0.948	0.686	1.050	12.1	1070	1326	1.29e4	1.15e4	YES	0.083	0.104
OCDD	46.669	1.000	4.79e3	5.00e3	0.969	0.956	0.890	56.1	913	1261	5.12e4	5.40e4	NO	1.038	1.038
13C-2378-TCDF	25.690	1.007	1.78e6	2.30e6	1.318	0.774	0.770	6382.3	4047	3389	2.58e7	3.31e7	NO		93.969
13C-12378-PeCDF	29.819	1.169	1.78e6	1.13e6	1.026	1.580	1.550	5307.9	4792	3592	2.54e7	1.60e7	NO		85.866
13C-23478-PeCDF	31.167	1.222	1.59e6	1.02e6	0.966	1.561	1.550	4904.9	4792	3592	2.35e7	1.50e7	NO		81.690
13C-123478-HxCDF	34.839	0.951	6.62e5	1.30e6	1.123	0.510	0.510	2815.5	3498	6756	9.85e6	1.91e7	NO		88.690
13C-123678-HxCDF	34.982	0.955	7.76e5	1.48e6	1.216	0.524	0.510	3150.8	3498	6756	1.10e7	2.09e7	NO		94.347
13C-234678-HxCDF	35.935	0.981	6.42e5	1.23e6	1.106	0.523	0.510	2656.7	3498	6756	9.29e6	1.76e7	NO		85.939
13C-123789-HxCDF	37.075	1.012	5.83e5	1.13e6	0.995	0.516	0.510	2303.7	3498	6756	8.06e6	1.54e7	NO		87.414
13C-1234678-HpCDF	39.125	1.068	4.56e5	1.02e6	0.896	0.449	0.440	3277.8	2035	4448	6.67e6	1.47e7	NO		83.506
13C-1234789-HpCDF	41.767	1.140	3.49e5	7.73e5	0.693	0.451	0.440	2093.0	2035	4448	4.26e6	9.46e6	NO		82.200
13C-1234-TCDD	25.510	0.000	1.46e6	1.84e6	1.000	0.797	0.770	4128.6	5185	2325	2.14e7	2.71e7	NO		100.000
13C-2378-TCDD	26.317	1.032	1.17e6	1.51e6	0.961	0.774	0.770	3207.8	5185	2325	1.66e7	2.16e7	NO		84.459
13C-12378-PeCDD	31.420	1.232	1.12e6	7.07e5	0.703	1.580	1.550	4563.2	3546	2530	1.62e7	1.02e7	NO		78.545
13C-123478-HxCDD	36.067	0.985	9.70e5	7.69e5	1.016	1.261	1.240	4961.0	2866	3407	1.42e7	1.14e7	NO		86.986
13C-123678-HxCDD	36.198	0.988	1.08e6	8.46e5	1.098	1.279	1.240	5293.6	2866	3407	1.52e7	1.21e7	NO		89.188
13C-1234678-HpCDD	40.901	1.117	7.26e5	6.94e5	0.828	1.046	1.050	3501.9	2681	2900	9.39e6	8.96e6	NO		87.073
13C-OCDD	46.669	1.274	9.19e5	1.03e6	0.770	0.896	0.890	2309.1	3930	3457	9.08e6	1.00e7	NO		128.391

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	36.626	0.000	1.08e6	8.87e5	1.000	1.220	1.240	5431.0	2866	3407	1.56e7	1.25e7	NO	100.000
Total-tetrafurans			4.96e2		0.763				1178		7.13e3			0.039
Total-penta1			0.00e0						843		0.00e0			
Total-pentafurans			9.84e2		0.844				958		1.86e4			0.093
Total-hexafurans			3.67e2		0.997				1137		6.52e3			0.028
Total-heptafurans			4.63e2		1.150				1261		8.84e3			0.060
Total-Furans			2.46e3		0.970				1178		4.54e4			0.279
Total-tetradioxins			3.46e2		0.980				2033		6.89e3			0.087
Total-pentadioxins			7.85e2		0.948				1493		1.62e4			0.063
Total-hexadioxins			9.83e2		0.898				872		1.96e4			0.088
Total-heptadioxins			1.08e3		0.948				1070		2.21e4			0.180
Total-Dioxins			8.71e3		0.934				2033		1.30e5			1.523
Total-TEQ			1.12e4						2033		1.75e5			1.802
37CL-2378-TCDD	26.347	1.033	1.21e6		0.999			8791.5	1954		1.72e7			36.783
FUNCTION1 PFK			1.56e8						953288		4.50e8			
FUNCTION2 PFK			6.43e4						288154		1.35e6			0.000
FUNCTION3 PFK			2.32e7						559507		2.74e8			0.000
FUNCTION4 PFK			3.58e5						398506		1.21e7			
FUNCTION5 PFK			2.09e5						275365		7.62e6			
FUNCTION1 HXCDPE			1.02e2						587		2.08e3			0.000
FUNCTION1 HPCDPE			8.72e2						929		1.87e4			0.000
FUNCTION2 HPCDPE			9.18e2						1285		2.99e4			0.000
FUNCTION3 OCDPE			1.52e2						660		4.53e3			0.000
FUNCTION4 NCDPE			4.66e2						851		1.51e4			0.000
FUNCTION5 DCDPE			0.00e0						270		0.00e0			

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 10:52:15 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

TF

1	2378-TCDF	303.9016	25.70	1209.373	0.763	0.039	0.039	0.69	0.77	NO	6.1

PP

PF

3	23478-PeCDF	339.8597	31.20	823.385	0.851	0.037	0.022	0.57	1.55	YES	6.0
2	12378-PeCDF	339.8597	29.85	1001.558	0.836	0.041	0.038	1.26	1.55	YES	9.8
37	Total-pentafurans	339.8597	29.46	342.049	0.844	0.015		0.60	1.55	YES	3.7

HF

4	123478-HxCDF	373.8208	34.85	555.562	1.017	0.028	0.021	1.94	1.24	YES	5.7

HPF

39	Total-heptafurans	407.7818	39.94	895.107	1.150	0.060		1.07	1.05	NO	7.0

Furans,TF,PP,PF,HF,HPF,OF

1	2378-TCDF	303.9016	25.70	1209.373	0.763	0.039	0.039	0.69	0.77	NO	6.1
3	23478-PeCDF	339.8597	31.20	823.385	0.851	0.037	0.022	0.57	1.55	YES	6.0
2	12378-PeCDF	339.8597	29.85	1001.558	0.836	0.041	0.038	1.26	1.55	YES	9.8
37	Total-pentafurans	339.8597	29.46	342.049	0.844	0.015		0.60	1.55	YES	3.7
4	123478-HxCDF	373.8208	34.85	555.562	1.017	0.028	0.021	1.94	1.24	YES	5.7
39	Total-heptafurans	407.7818	39.94	895.107	1.150	0.060		1.07	1.05	NO	7.0
10	OCDF	441.7428	46.98	555.865	0.963	0.059	0.035	0.39	0.89	YES	6.3

TD

11	2378-TCDD	319.8965	26.33	2293.106	0.980	0.087	0.030	0.18	0.77	YES	3.4

PD

12	12378-PeCDD	355.8546	31.45	359.194	0.948	0.021	0.016	0.89	1.55	YES	3.4
42	Total-pentadioxins	355.8546	31.18	738.907	0.948	0.043		5.03	1.55	YES	7.5

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

HD

	43 Total-hexadioxins	389.8157	33.93	262.624	0.898	0.016		1.17	1.24	NO	3.0
	43 Total-hexadioxins	389.8157	35.16	307.429	0.898	0.019		0.86	1.24	YES	6.5
	43 Total-hexadioxins	389.8157	34.98	882.721	0.898	0.054		3.79	1.24	YES	13.0

HPD

	44 Total-heptadioxins	423.7766	39.69	1028.028	0.948	0.076		1.00	1.05	NO	8.6
	16 1234678-HpCDD	423.7766	40.91	1401.482	0.948	0.104	0.083	0.69	1.05	YES	12.1

Dioxins,TD,PD,HD,HPD,OD

	45 Total-Dioxins	319.8965	23.02	336.387	0.934	0.013		3.60	0.77	YES	1.5
	45 Total-Dioxins	319.8965	22.57	308.211	0.934	0.012		0.36	0.77	YES	0.9
	45 Total-Dioxins	319.8965	22.12	273.549	0.934	0.011		0.91	0.77	YES	1.5
	45 Total-Dioxins	319.8965	21.79	422.808	0.934	0.017		0.49	0.77	YES	1.2
	11 2378-TCDD	319.8965	26.33	2293.106	0.980	0.087	0.030	0.18	0.77	YES	3.4
	45 Total-Dioxins	319.8965	27.59	287.480	0.934	0.011		0.60	0.77	YES	1.5
	43 Total-hexadioxins	389.8157	33.93	262.624	0.898	0.016		1.17	1.24	NO	3.0
	12 12378-PeCDD	355.8546	31.45	359.194	0.948	0.021	0.016	0.89	1.55	YES	3.4
	42 Total-pentadioxins	355.8546	31.18	738.907	0.948	0.043		5.03	1.55	YES	7.5
	43 Total-hexadioxins	389.8157	35.16	307.429	0.898	0.019		0.86	1.24	YES	6.5
	43 Total-hexadioxins	389.8157	34.98	882.721	0.898	0.054		3.79	1.24	YES	13.0
	44 Total-heptadioxins	423.7766	39.69	1028.028	0.948	0.076		1.00	1.05	NO	8.6
	17 OCDD	457.7377	46.67	9789.461	0.969	1.038	1.038	0.96	0.89	NO	56.1
	16 1234678-HpCDD	423.7766	40.91	1401.482	0.948	0.104	0.083	0.69	1.05	YES	12.1

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	1	2378-TCDF	303.9016	25.70	1209.373	0.763	0.039	0.039	0.69	0.77	NO	6.1
	3	23478-PeCDF	339.8597	31.20	823.385	0.851	0.037	0.022	0.57	1.55	YES	6.0
	2	12378-PeCDF	339.8597	29.85	1001.558	0.836	0.041	0.038	1.26	1.55	YES	9.8
	37	Total-pentafurans	339.8597	29.46	342.049	0.844	0.015		0.60	1.55	YES	3.7
	4	123478-HxCDF	373.8208	34.85	555.562	1.017	0.028	0.021	1.94	1.24	YES	5.7
	39	Total-heptafurans	407.7818	39.94	895.107	1.150	0.060		1.07	1.05	NO	7.0
	10	OCDF	441.7428	46.98	555.865	0.963	0.059	0.035	0.39	0.89	YES	6.3
	45	Total-Dioxins	319.8965	23.02	336.387	0.934	0.013		3.60	0.77	YES	1.5
	45	Total-Dioxins	319.8965	22.57	308.211	0.934	0.012		0.36	0.77	YES	0.9
	45	Total-Dioxins	319.8965	22.12	273.549	0.934	0.011		0.91	0.77	YES	1.5
	45	Total-Dioxins	319.8965	21.79	422.808	0.934	0.017		0.49	0.77	YES	1.2
	11	2378-TCDD	319.8965	26.33	2293.106	0.980	0.087	0.030	0.18	0.77	YES	3.4
	45	Total-Dioxins	319.8965	27.59	287.480	0.934	0.011		0.60	0.77	YES	1.5
	43	Total-hexadioxins	389.8157	33.93	262.624	0.898	0.016		1.17	1.24	NO	3.0
	12	12378-PeCDD	355.8546	31.45	359.194	0.948	0.021	0.016	0.89	1.55	YES	3.4
	42	Total-pentadioxins	355.8546	31.18	738.907	0.948	0.043		5.03	1.55	YES	7.5
	43	Total-hexadioxins	389.8157	35.16	307.429	0.898	0.019		0.86	1.24	YES	6.5
	43	Total-hexadioxins	389.8157	34.98	882.721	0.898	0.054		3.79	1.24	YES	13.0
	44	Total-heptadioxins	423.7766	39.69	1028.028	0.948	0.076		1.00	1.05	NO	8.6
	17	OCDD	457.7377	46.67	9789.461	0.969	1.038	1.038	0.96	0.89	NO	56.1
	16	1234678-HpCDD	423.7766	40.91	1401.482	0.948	0.104	0.083	0.69	1.05	YES	12.1

PFK1

	48	FUNCTION1 PFK	330.9792	22.63	0.000						60.1
	48	FUNCTION1 PFK	330.9792	22.52	0.000						62.4
	48	FUNCTION1 PFK	330.9792	22.28	0.000						69.9
	48	FUNCTION1 PFK	330.9792	21.57	0.000						70.4
	48	FUNCTION1 PFK	330.9792	21.18	0.000						64.8
	48	FUNCTION1 PFK	330.9792	27.48	0.000						1.1
	48	FUNCTION1 PFK	330.9792	25.67	0.000						1.9
	48	FUNCTION1 PFK	330.9792	24.52	0.000						11.6
	48	FUNCTION1 PFK	330.9792	23.78	0.000						34.8
	48	FUNCTION1 PFK	330.9792	23.73	0.000						36.4
	48	FUNCTION1 PFK	330.9792	22.72	0.000						58.7

PFK2

	49	FUNCTION2 PFK	366.9792	27.96	0.000	0.000					4.7

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PFK3

[redacted]	50 FUNCTION3 PFK	380.9760	33.28	0.000	0.000					31.5
[redacted]	50 FUNCTION3 PFK	380.9760	33.20	0.000	0.000					34.1
[redacted]	50 FUNCTION3 PFK	380.9760	33.02	0.000	0.000					41.0
[redacted]	50 FUNCTION3 PFK	380.9760	33.00	0.000	0.000					40.9
[redacted]	50 FUNCTION3 PFK	380.9760	32.88	0.000	0.000					42.4
[redacted]	50 FUNCTION3 PFK	380.9760	32.81	0.000	0.000					43.6
[redacted]	50 FUNCTION3 PFK	380.9760	32.77	0.000	0.000					46.8
[redacted]	50 FUNCTION3 PFK	380.9760	35.10	0.000	0.000					0.8
[redacted]	50 FUNCTION3 PFK	380.9760	35.00	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	34.96	0.000	0.000					1.2
[redacted]	50 FUNCTION3 PFK	380.9760	34.59	0.000	0.000					0.4
[redacted]	50 FUNCTION3 PFK	380.9760	34.47	0.000	0.000					0.7
[redacted]	50 FUNCTION3 PFK	380.9760	34.30	0.000	0.000					2.9
[redacted]	50 FUNCTION3 PFK	380.9760	34.24	0.000	0.000					4.9
[redacted]	50 FUNCTION3 PFK	380.9760	34.12	0.000	0.000					9.3
[redacted]	50 FUNCTION3 PFK	380.9760	34.10	0.000	0.000					8.6
[redacted]	50 FUNCTION3 PFK	380.9760	34.01	0.000	0.000					11.4
[redacted]	50 FUNCTION3 PFK	380.9760	33.98	0.000	0.000					11.6
[redacted]	50 FUNCTION3 PFK	380.9760	33.86	0.000	0.000					16.2
[redacted]	50 FUNCTION3 PFK	380.9760	33.81	0.000	0.000					17.8
[redacted]	50 FUNCTION3 PFK	380.9760	33.73	0.000	0.000					19.7
[redacted]	50 FUNCTION3 PFK	380.9760	33.47	0.000	0.000					27.0
[redacted]	50 FUNCTION3 PFK	380.9760	33.34	0.000	0.000					30.2
[redacted]	50 FUNCTION3 PFK	380.9760	36.90	0.000	0.000					1.3
[redacted]	50 FUNCTION3 PFK	380.9760	36.76	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	36.70	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	36.51	0.000	0.000					2.8
[redacted]	50 FUNCTION3 PFK	380.9760	36.40	0.000	0.000					0.5
[redacted]	50 FUNCTION3 PFK	380.9760	36.20	0.000	0.000					0.8
[redacted]	50 FUNCTION3 PFK	380.9760	36.11	0.000	0.000					1.9
[redacted]	50 FUNCTION3 PFK	380.9760	35.81	0.000	0.000					1.3
[redacted]	50 FUNCTION3 PFK	380.9760	35.77	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	35.72	0.000	0.000					2.1
[redacted]	50 FUNCTION3 PFK	380.9760	35.68	0.000	0.000					1.7
[redacted]	50 FUNCTION3 PFK	380.9760	35.60	0.000	0.000					2.0
[redacted]	50 FUNCTION3 PFK	380.9760	35.55	0.000	0.000					1.9
[redacted]	50 FUNCTION3 PFK	380.9760	35.46	0.000	0.000					1.9
[redacted]	50 FUNCTION3 PFK	380.9760	35.42	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	35.26	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	38.13	0.000	0.000					2.0
[redacted]	50 FUNCTION3 PFK	380.9760	38.09	0.000	0.000					2.6
[redacted]	50 FUNCTION3 PFK	380.9760	38.00	0.000	0.000					2.3
[redacted]	50 FUNCTION3 PFK	380.9760	37.66	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	37.54	0.000	0.000					1.8
[redacted]	50 FUNCTION3 PFK	380.9760	37.44	0.000	0.000					2.6
[redacted]	50 FUNCTION3 PFK	380.9760	37.31	0.000	0.000					1.5
[redacted]	50 FUNCTION3 PFK	380.9760	37.24	0.000	0.000					1.3
[redacted]	50 FUNCTION3 PFK	380.9760	37.14	0.000	0.000					1.2
[redacted]	50 FUNCTION3 PFK	380.9760	37.06	0.000	0.000					1.9

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PFK3

	50 FUNCTION3 PFK	380.9760	36.98	0.000	0.000					1.6
	50 FUNCTION3 PFK	380.9760	36.93	0.000	0.000					1.4

PFK4

	51 FUNCTION4 PFK	430.9728	38.42	0.000						2.0
	51 FUNCTION4 PFK	430.9728	38.37	0.000						1.5
	51 FUNCTION4 PFK	430.9728	38.30	0.000						1.7
	51 FUNCTION4 PFK	430.9728	43.70	0.000						1.2
	51 FUNCTION4 PFK	430.9728	42.72	0.000						0.5
	51 FUNCTION4 PFK	430.9728	42.68	0.000						0.7
	51 FUNCTION4 PFK	430.9728	42.37	0.000						0.8
	51 FUNCTION4 PFK	430.9728	42.04	0.000						1.6
	51 FUNCTION4 PFK	430.9728	41.47	0.000						0.8
	51 FUNCTION4 PFK	430.9728	41.43	0.000						0.9
	51 FUNCTION4 PFK	430.9728	41.36	0.000						1.2
	51 FUNCTION4 PFK	430.9728	41.20	0.000						1.0
	51 FUNCTION4 PFK	430.9728	41.07	0.000						1.7
	51 FUNCTION4 PFK	430.9728	41.01	0.000						0.5
	51 FUNCTION4 PFK	430.9728	39.97	0.000						1.5
	51 FUNCTION4 PFK	430.9728	39.91	0.000						1.7
	51 FUNCTION4 PFK	430.9728	39.85	0.000						0.6
	51 FUNCTION4 PFK	430.9728	39.77	0.000						1.4
	51 FUNCTION4 PFK	430.9728	39.64	0.000						1.7
	51 FUNCTION4 PFK	430.9728	44.96	0.000						0.8
	51 FUNCTION4 PFK	430.9728	44.79	0.000						0.6
	51 FUNCTION4 PFK	430.9728	44.75	0.000						0.9
	51 FUNCTION4 PFK	430.9728	44.69	0.000						1.9
	51 FUNCTION4 PFK	430.9728	43.96	0.000						0.6
	51 FUNCTION4 PFK	430.9728	43.90	0.000						1.8
	51 FUNCTION4 PFK	430.9728	43.84	0.000						1.0

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PFK5

	52	FUNCTION5 PFK	480.9696	46.04	0.000					1.2
	52	FUNCTION5 PFK	480.9696	45.83	0.000					1.5
	52	FUNCTION5 PFK	480.9696	45.78	0.000					0.6
	52	FUNCTION5 PFK	480.9696	45.67	0.000					1.5
	52	FUNCTION5 PFK	480.9696	45.63	0.000					1.0
	52	FUNCTION5 PFK	480.9696	45.28	0.000					1.1
	52	FUNCTION5 PFK	480.9696	45.19	0.000					0.4
	52	FUNCTION5 PFK	480.9696	45.08	0.000					1.6
	52	FUNCTION5 PFK	480.9696	48.63	0.000					1.5
	52	FUNCTION5 PFK	480.9696	48.49	0.000					0.9
	52	FUNCTION5 PFK	480.9696	48.04	0.000					1.0
	52	FUNCTION5 PFK	480.9696	47.86	0.000					0.8
	52	FUNCTION5 PFK	480.9696	47.70	0.000					1.6
	52	FUNCTION5 PFK	480.9696	47.64	0.000					1.7
	52	FUNCTION5 PFK	480.9696	47.42	0.000					0.9
	52	FUNCTION5 PFK	480.9696	47.34	0.000					1.2
	52	FUNCTION5 PFK	480.9696	46.89	0.000					1.0
	52	FUNCTION5 PFK	480.9696	46.76	0.000					1.2
	52	FUNCTION5 PFK	480.9696	46.63	0.000					1.0
	52	FUNCTION5 PFK	480.9696	46.57	0.000					1.4
	52	FUNCTION5 PFK	480.9696	46.51	0.000					1.2
	52	FUNCTION5 PFK	480.9696	46.46	0.000					0.8
	52	FUNCTION5 PFK	480.9696	46.27	0.000					0.8
	52	FUNCTION5 PFK	480.9696	46.17	0.000					0.9
	52	FUNCTION5 PFK	480.9696	48.82	0.000					0.8

ETHERS1

	53	FUNCTION1 HXCD...	375.8364	23.60	0.000	0.000				3.5

ETHERS2

	54	FUNCTION1 HPCD...	409.7974	27.60	0.000	0.000				2.0
	54	FUNCTION1 HPCD...	409.7974	27.48	0.000	0.000				2.0
	54	FUNCTION1 HPCD...	409.7974	26.65	0.000	0.000				1.5
	54	FUNCTION1 HPCD...	409.7974	24.32	0.000	0.000				2.4
	54	FUNCTION1 HPCD...	409.7974	24.00	0.000	0.000				1.8
	54	FUNCTION1 HPCD...	409.7974	23.84	0.000	0.000				1.3
	54	FUNCTION1 HPCD...	409.7974	22.61	0.000	0.000				3.4
	54	FUNCTION1 HPCD...	409.7974	22.09	0.000	0.000				2.3
	54	FUNCTION1 HPCD...	409.7974	22.04	0.000	0.000				1.4
	54	FUNCTION1 HPCD...	409.7974	21.63	0.000	0.000				2.0

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ETHERS3

	#	Name	Mass	RT	Abs Resp	RRF M...	Amount	EMPC	% Ratio	% Ratio...	% R...	S/N
[redacted]	55	FUNCTION2 HPCD...	409.7974	28.08	0.000	0.000						2.4
[redacted]	55	FUNCTION2 HPCD...	409.7974	32.67	0.000	0.000						3.4
[redacted]	55	FUNCTION2 HPCD...	409.7974	32.07	0.000	0.000						1.8
[redacted]	55	FUNCTION2 HPCD...	409.7974	31.54	0.000	0.000						2.4
[redacted]	55	FUNCTION2 HPCD...	409.7974	30.61	0.000	0.000						2.9
[redacted]	55	FUNCTION2 HPCD...	409.7974	30.09	0.000	0.000						2.3
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.79	0.000	0.000						2.1
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.41	0.000	0.000						2.7
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.22	0.000	0.000						2.4
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.00	0.000	0.000						1.1

ETHERS4

	#	Name	Mass	RT	Abs Resp	RRF M...	Amount	EMPC	% Ratio	% Ratio...	% R...	S/N
[redacted]	56	FUNCTION3 OCDPE	445.7555	37.83	0.000	0.000						3.3
[redacted]	56	FUNCTION3 OCDPE	445.7555	32.95	0.000	0.000						3.6

ETHERS5

	#	Name	Mass	RT	Abs Resp	RRF M...	Amount	EMPC	% Ratio	% Ratio...	% R...	S/N
[redacted]	57	FUNCTION4 NCDPE	479.7165	41.30	0.000	0.000						2.5
[redacted]	57	FUNCTION4 NCDPE	479.7165	40.24	0.000	0.000						3.1
[redacted]	57	FUNCTION4 NCDPE	479.7165	38.51	0.000	0.000						2.0
[redacted]	57	FUNCTION4 NCDPE	479.7165	44.08	0.000	0.000						3.2
[redacted]	57	FUNCTION4 NCDPE	479.7165	43.87	0.000	0.000						3.5
[redacted]	57	FUNCTION4 NCDPE	479.7165	41.91	0.000	0.000						3.4

ETHERS6

	#	Name	Mass	RT	Abs Resp	RRF M...	Amount	EMPC	% Ratio	% Ratio...	% R...	S/N
[redacted]												

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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

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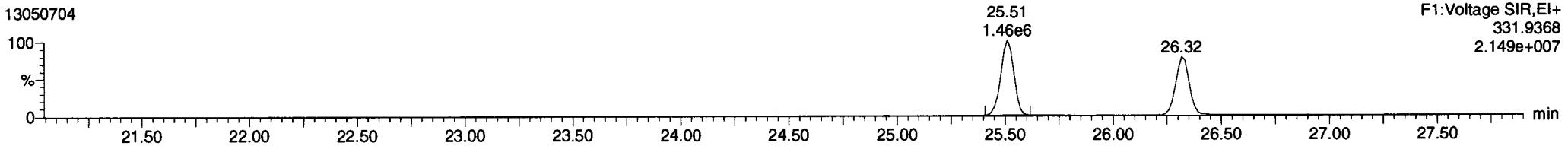
13C-1234-TCDD



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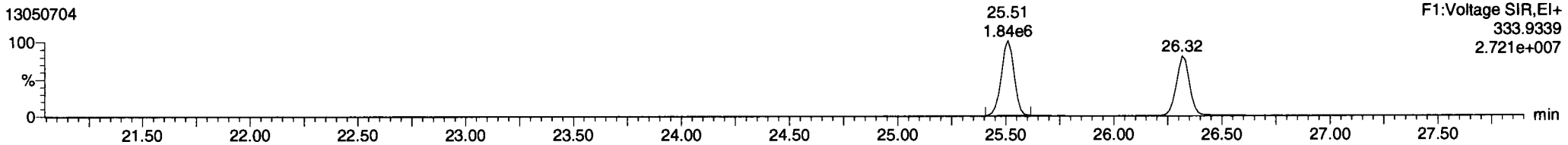

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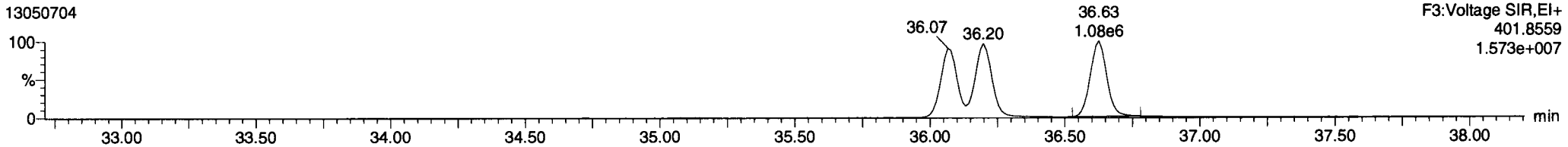

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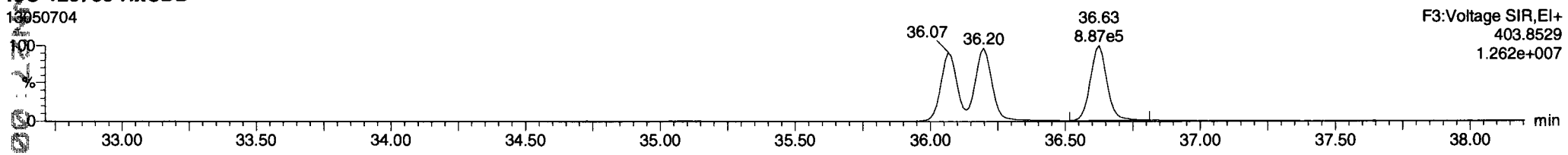

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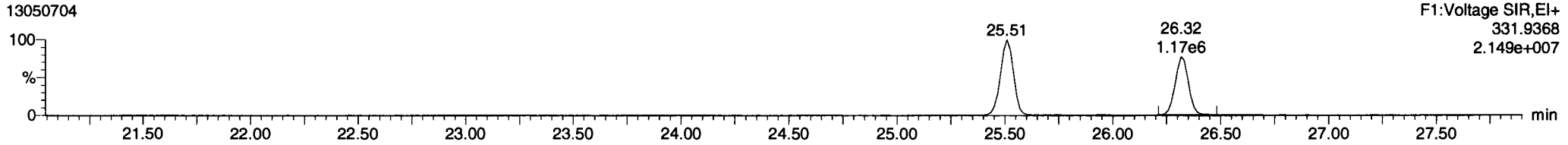
13C-2378-TCDD



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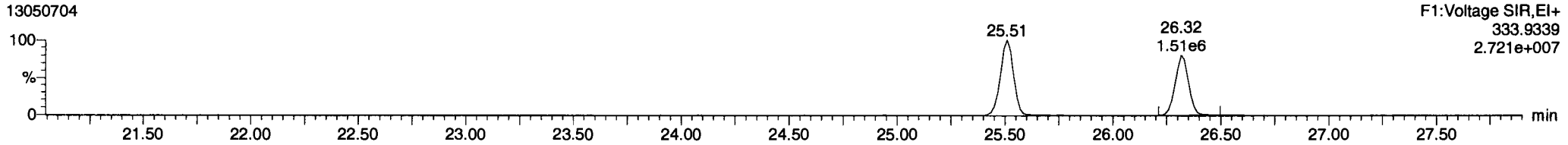

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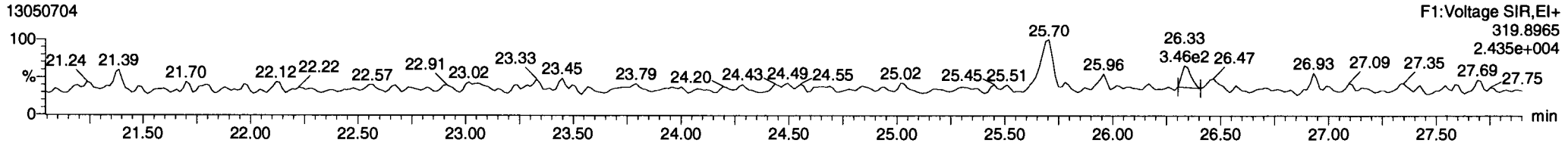

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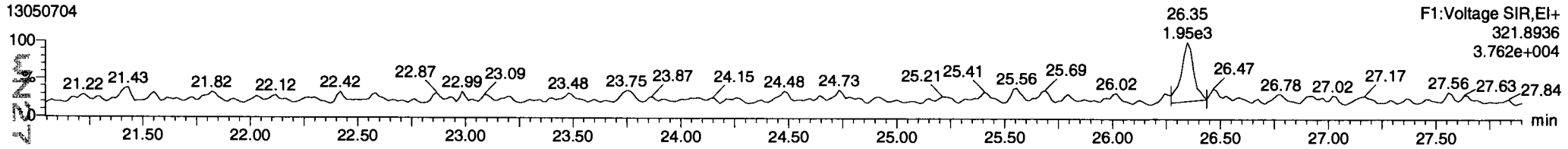
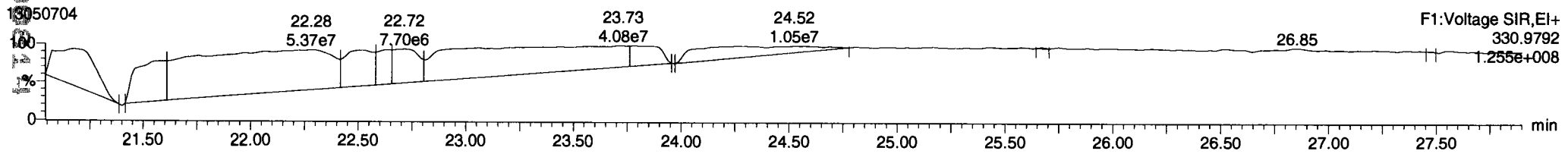


FUNCTION1 PFK



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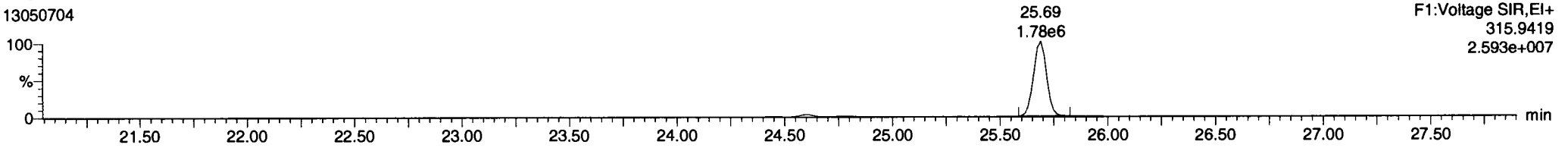
13C-2378-TCDF



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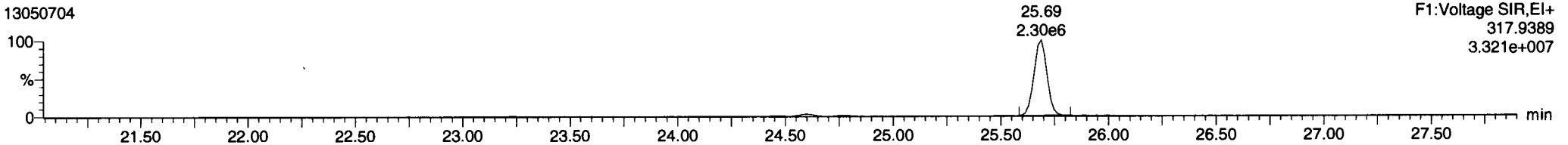

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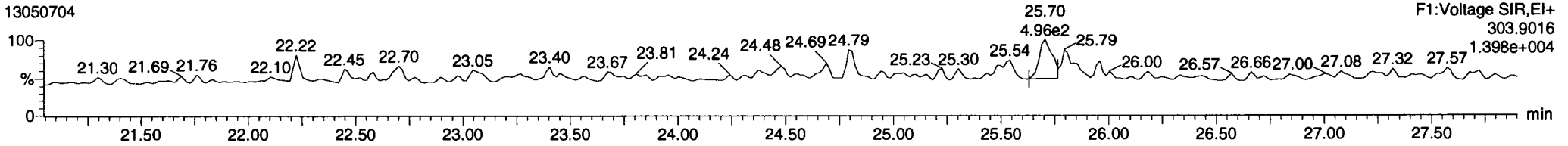
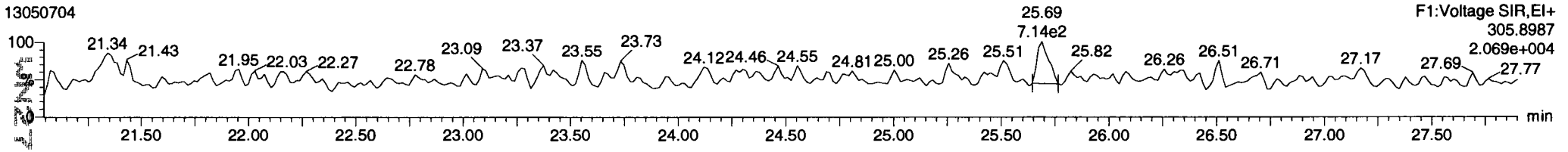
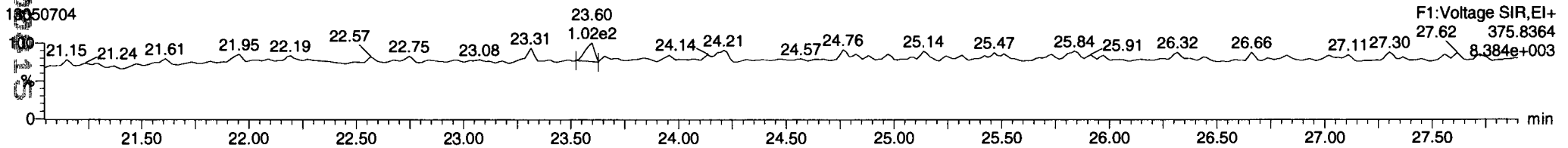


Total-tetrafurans



FUNCTION1 HXCDPE



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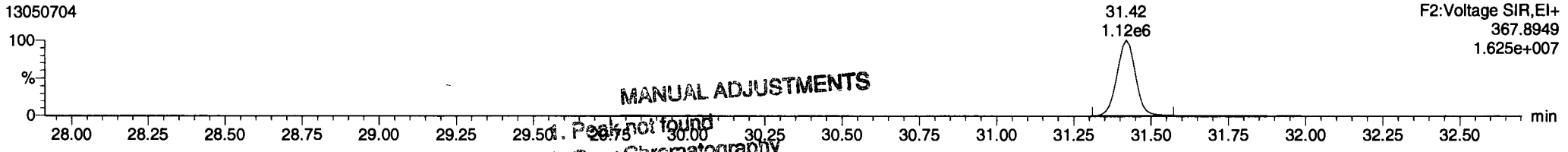
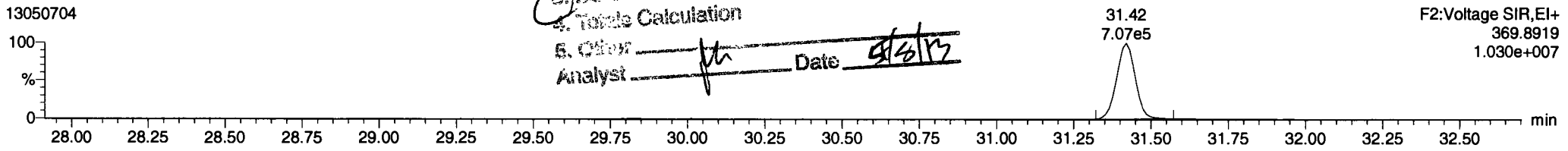
13C-12378-PeCDD

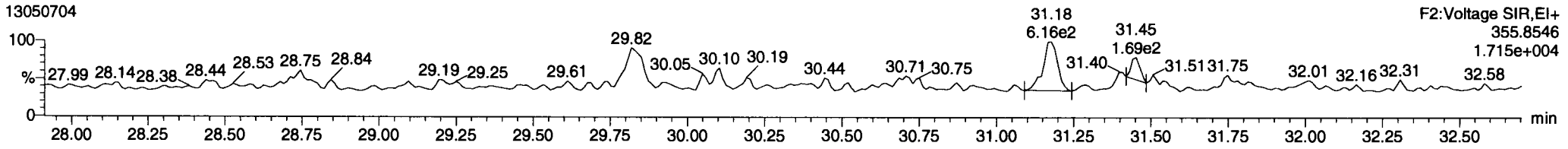


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst Date 5/8/13

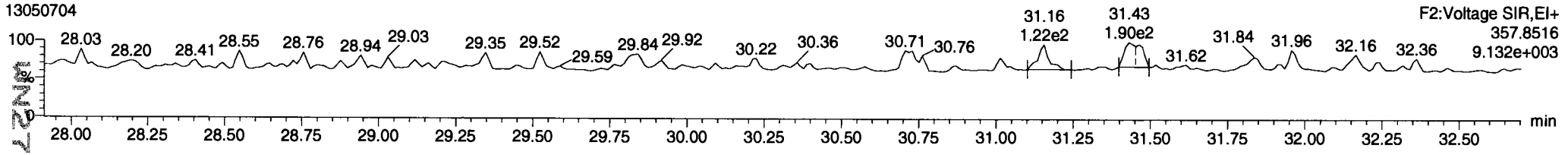
13C-12378-PeCDD



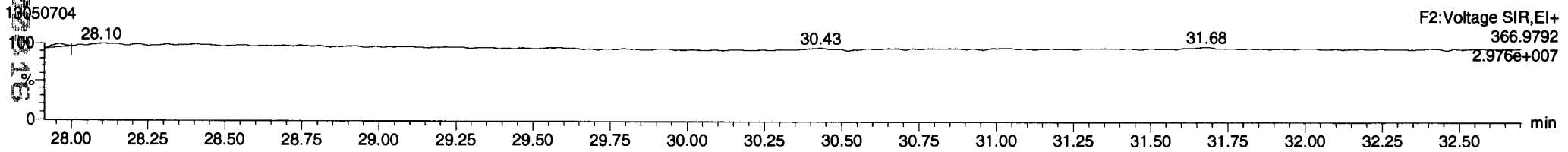
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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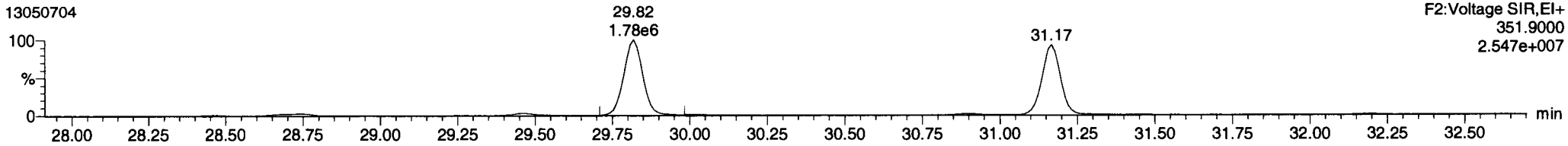
13C-12378-PeCDF



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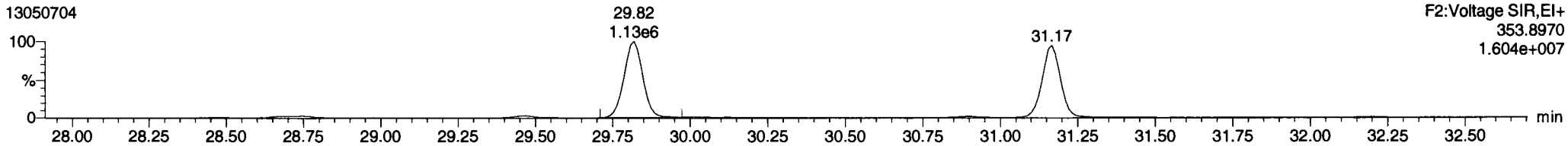
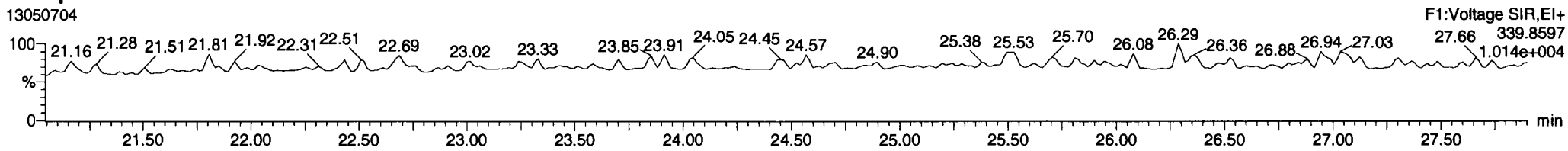
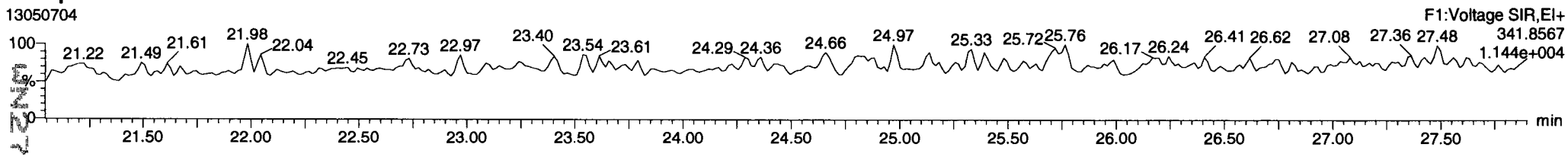


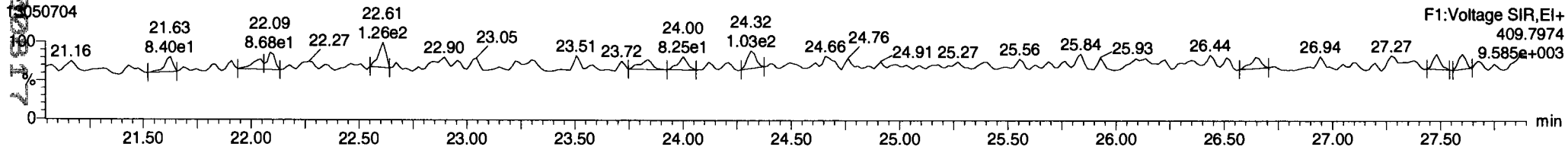
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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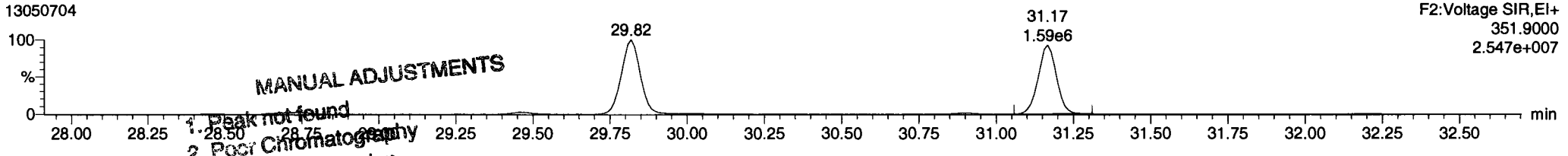
13C-23478-PeCDF



MANUAL ADJUSTMENTS
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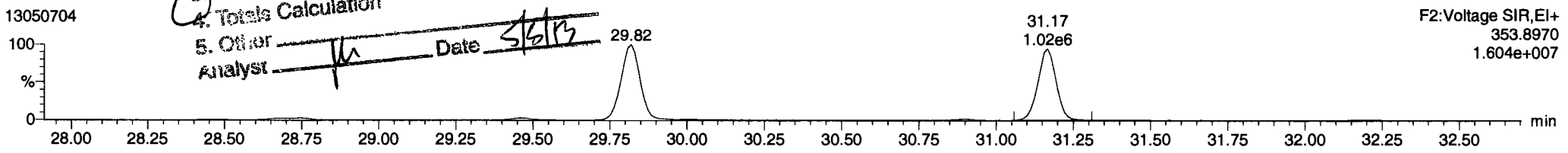
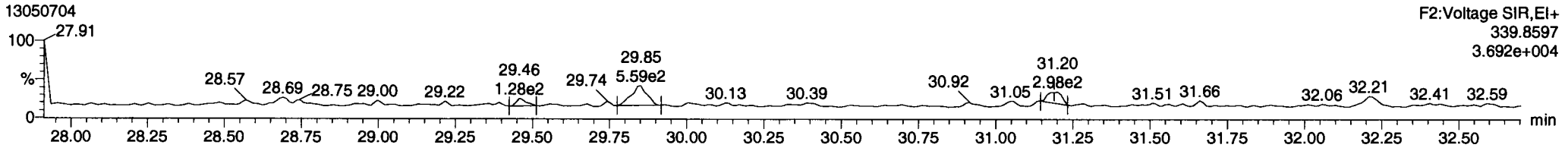
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst _____ Date 5/6/13

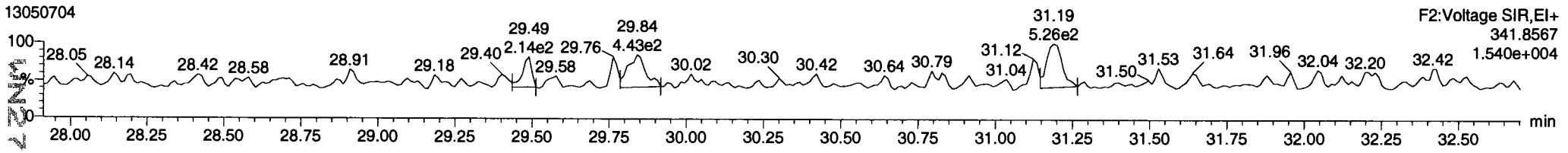
13C-23478-PeCDF



Total-pentafurans



Total-pentafurans



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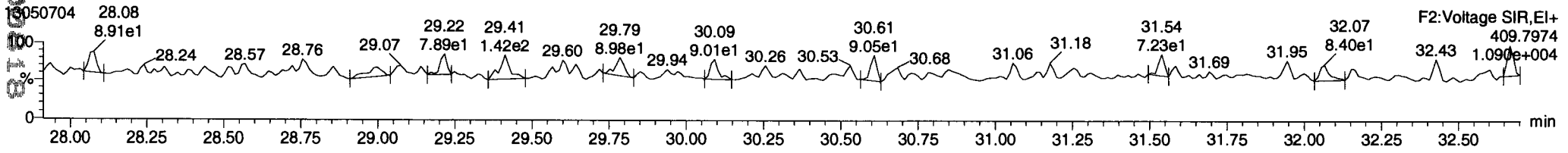

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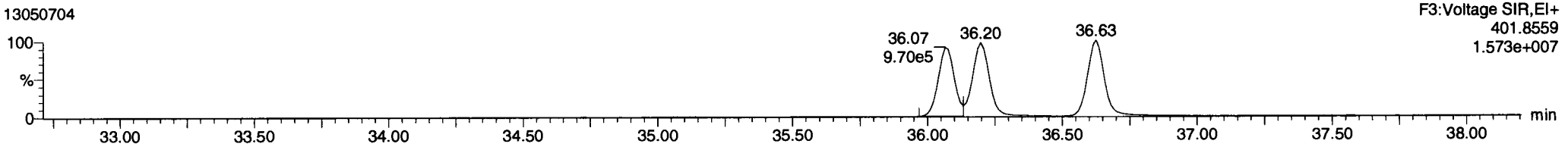
13C-123478-HxCDD



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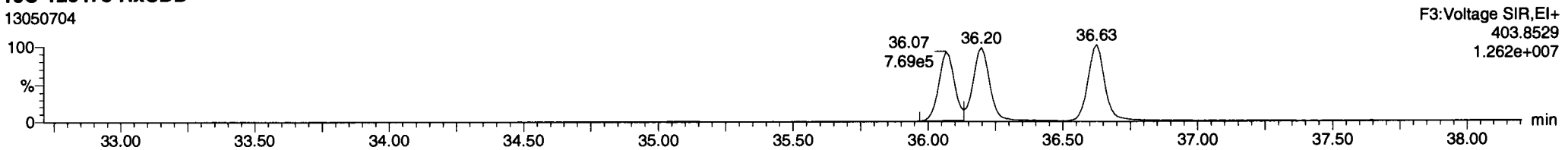
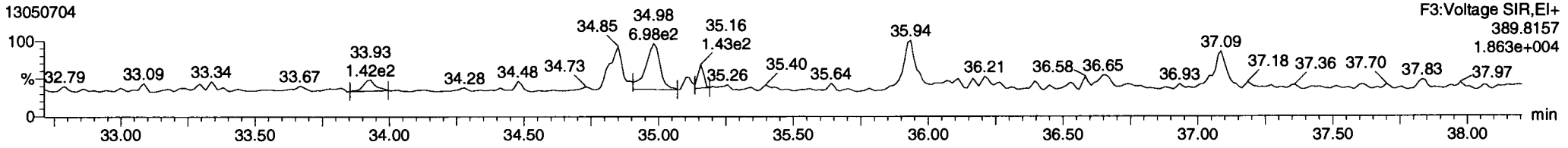
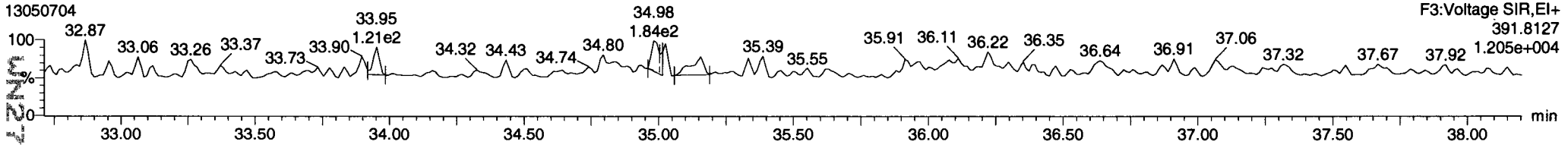


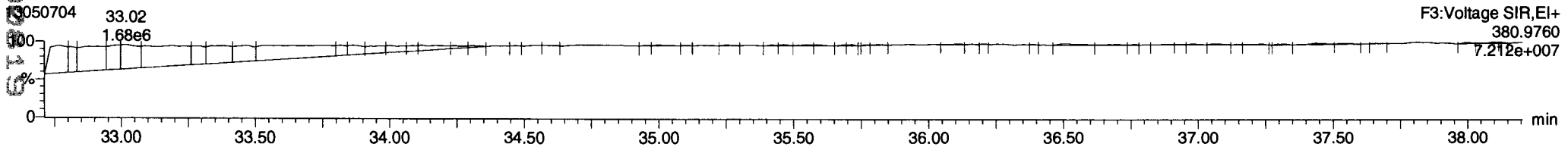
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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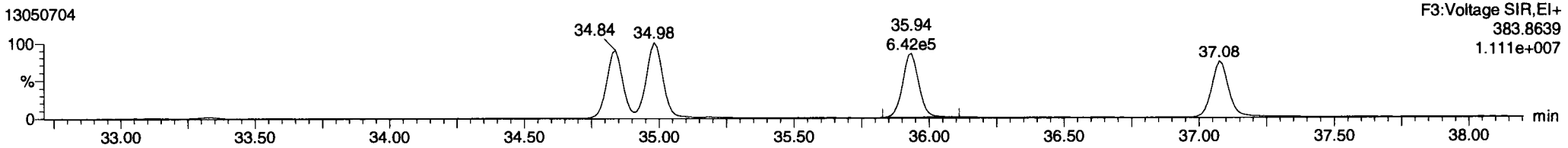
13C-234678-HxCDF



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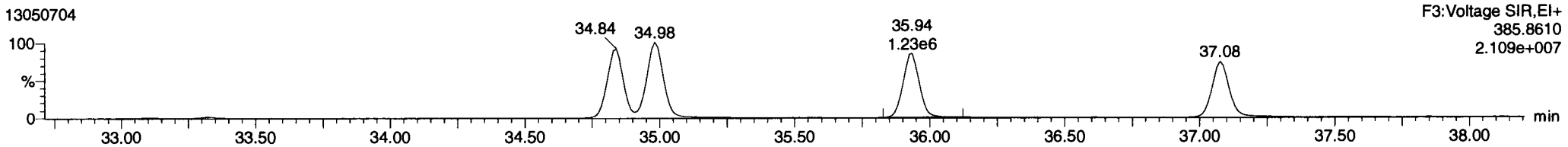
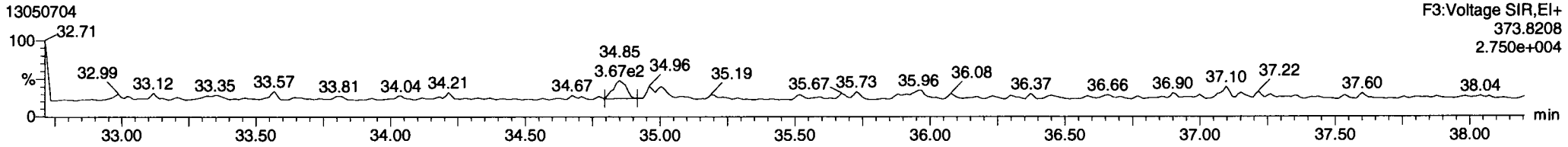
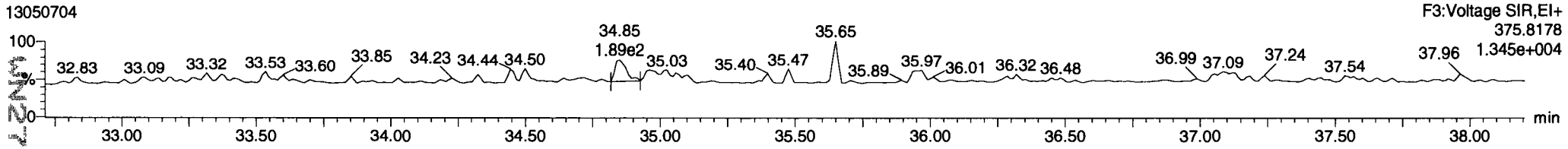


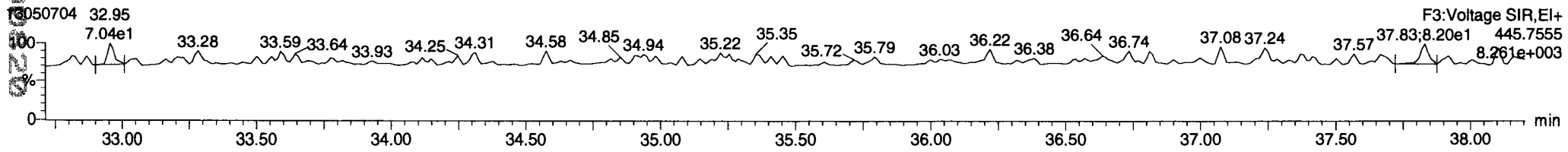
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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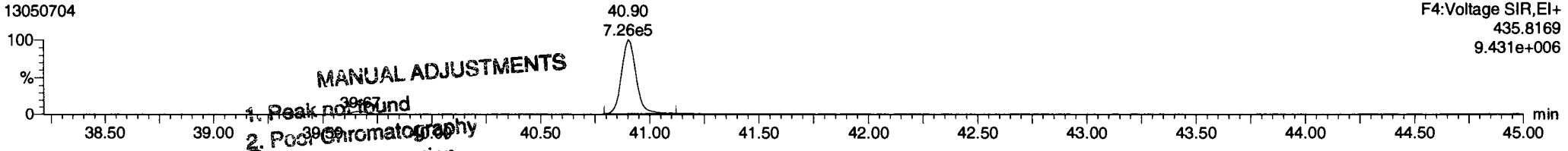
13C-1234678-HpCDD



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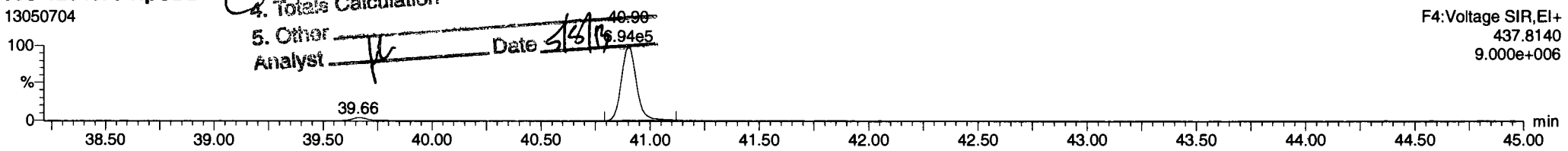
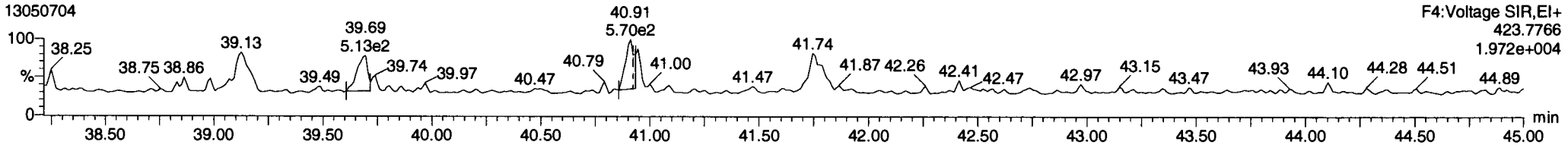
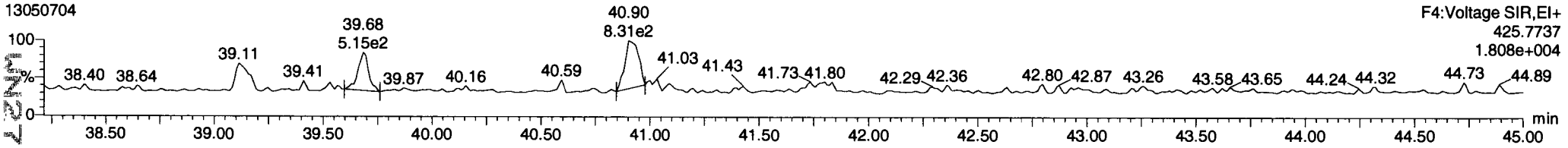


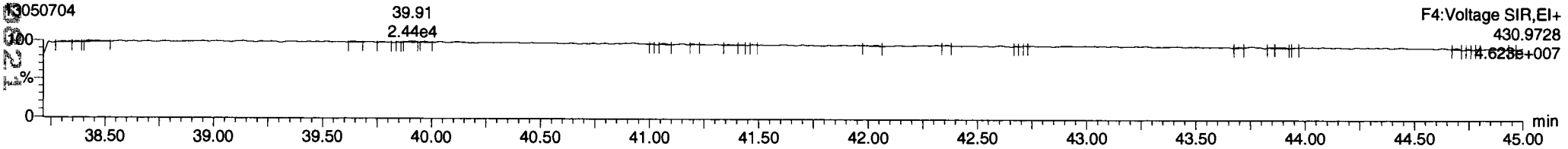
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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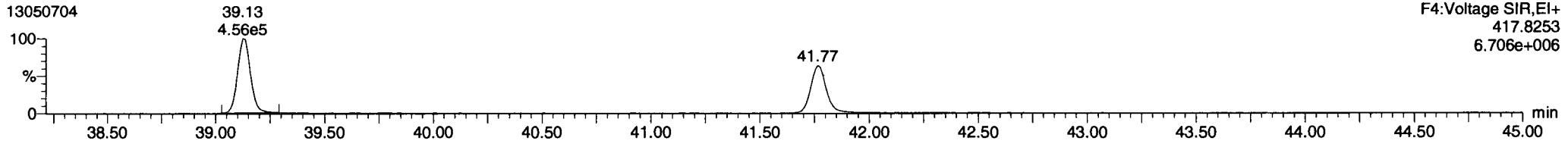

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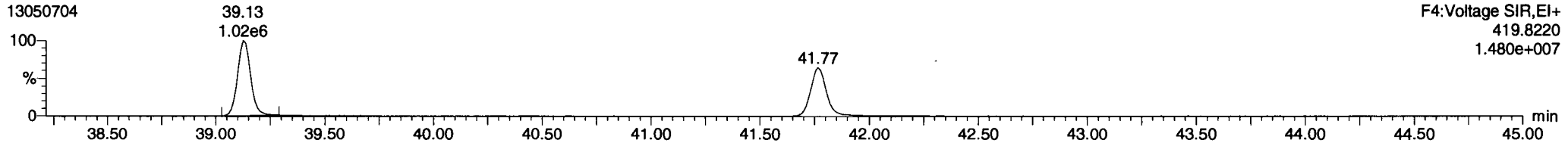
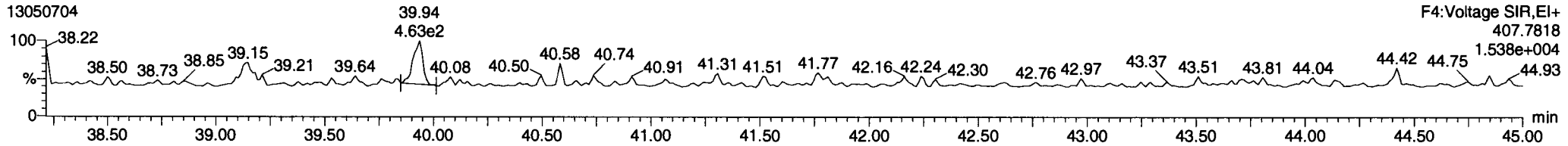


Total-heptafurans



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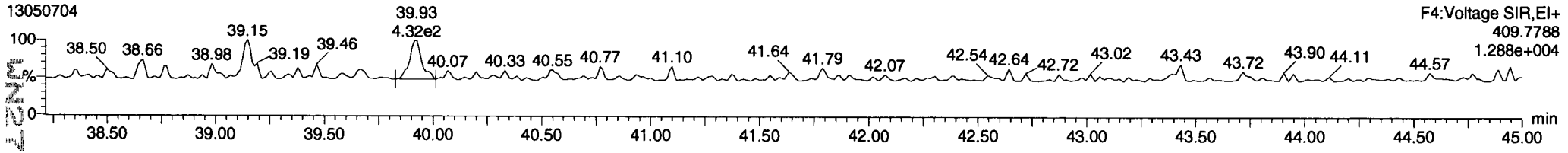

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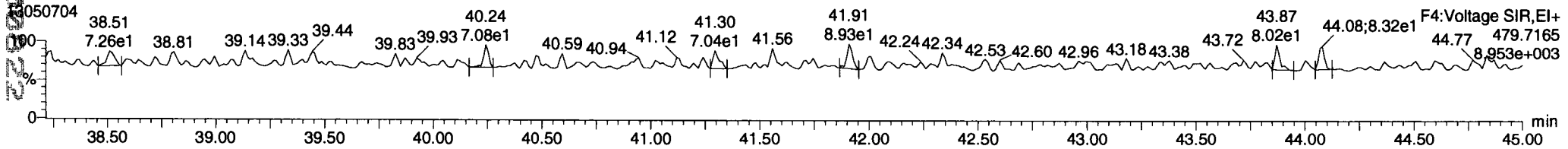

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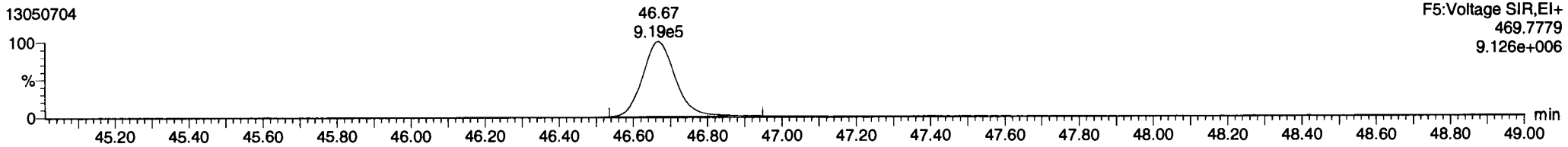
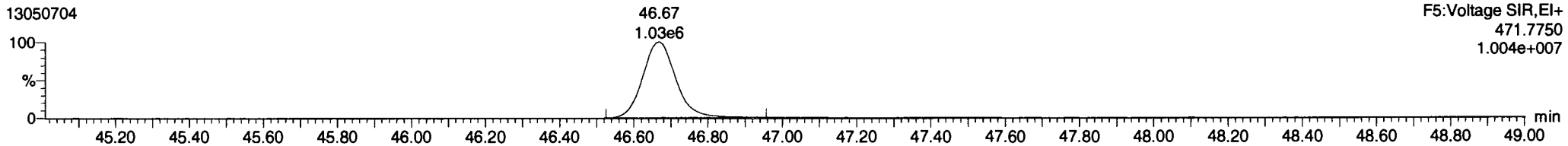
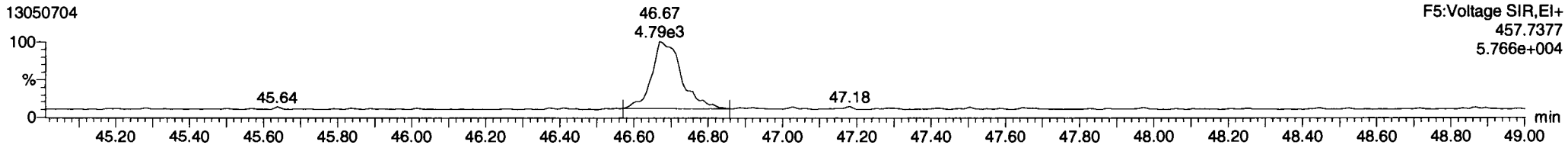
13C-OCDD



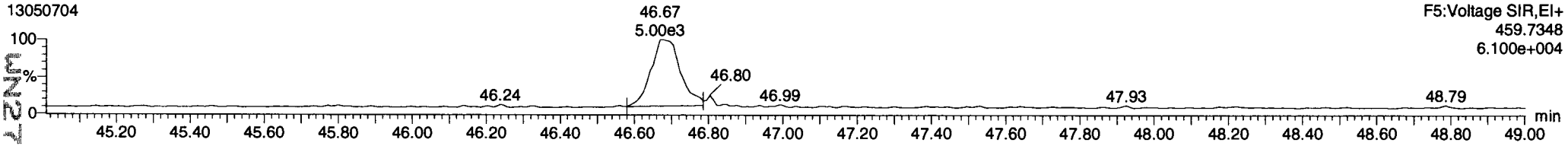
13C-OCDD



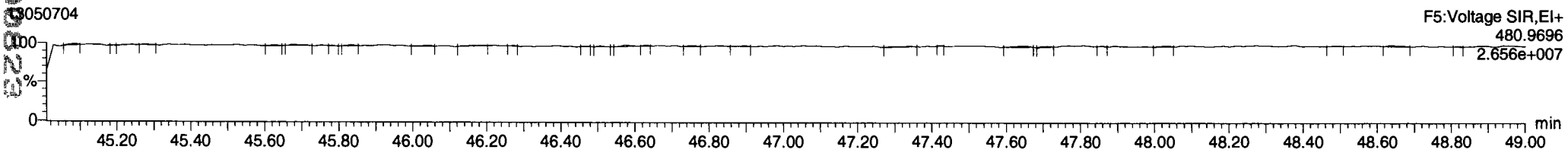
OCDD



OCDD



FUNCTION5 PFK



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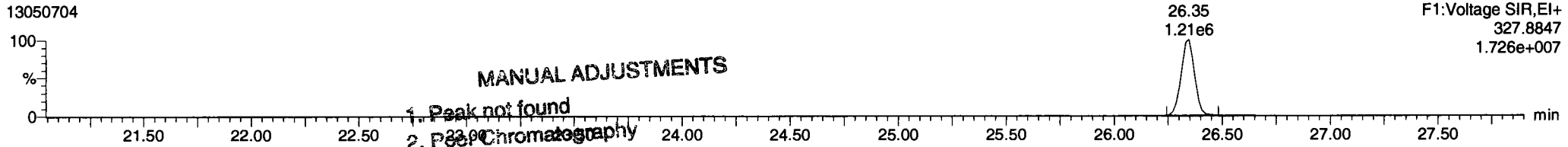
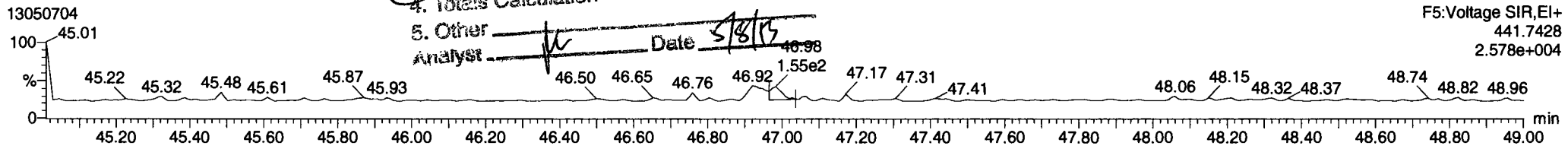
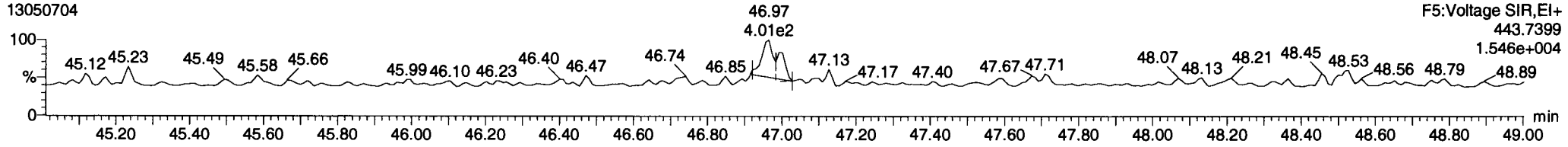
37CL-2378-TCDD



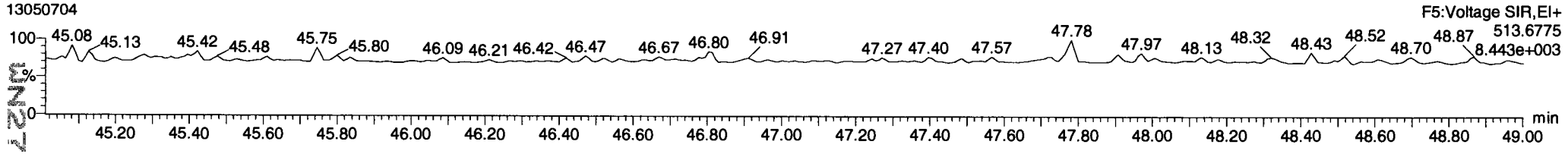
OCDF



OCDF



FUNCTION5 DCDPE



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5/8/13

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

Name															
2378-TCDF	25.705	1.001	1.72e5	2.23e5	0.763	0.772	0.770	2190.3	1145	2485	2.51e6	3.26e6	NO	12.917	12.917
12378-PeCDF	29.841	1.001	7.56e5	5.12e5	0.836	1.477	1.550	3718.2	3023	6222	1.12e7	7.34e6	NO	56.543	56.543
23478-PeCDF	31.189	1.001	6.92e5	4.52e5	0.851	1.529	1.550	3379.5	3023	6222	1.02e7	6.59e6	NO	56.277	56.277
123478-HxCDF	34.861	1.001	5.18e5	4.26e5	1.017	1.217	1.240	2073.5	3640	3078	7.55e6	6.16e6	NO	53.746	53.746
234678-HxCDF	35.958	1.001	5.29e5	4.22e5	1.027	1.253	1.240	2077.4	3640	3078	7.56e6	6.06e6	NO	55.997	55.997
123678-HxCDF	35.004	1.000	5.89e5	4.78e5	1.013	1.231	1.240	2346.6	3640	3078	8.54e6	6.91e6	NO	53.927	53.927
123789-HxCDF	37.097	1.000	4.24e5	3.35e5	0.929	1.265	1.240	1684.4	3640	3078	6.13e6	4.82e6	NO	54.795	54.795
1234678-HpCDF	39.147	1.000	4.93e5	4.81e5	1.151	1.026	1.050	2466.0	2972	2386	7.33e6	7.13e6	NO	65.967	65.967
1234789-HpCDF	41.789	1.001	3.20e5	3.13e5	1.149	1.022	1.050	1368.0	2972	2386	4.07e6	3.91e6	NO	54.118	54.118
OCDF	46.957	1.006	4.36e5	4.87e5	0.963	0.894	0.890	1972.7	2131	2360	4.20e6	4.68e6	NO	109.531	109.531
2378-TCDD	26.347	1.001	1.11e5	1.47e5	0.980	0.753	0.770	918.2	1713	2894	1.57e6	2.09e6	NO	10.839	10.839
12378-PeCDD	31.441	1.001	5.06e5	3.36e5	0.948	1.505	1.550	4395.8	1722	1362	7.57e6	4.92e6	NO	53.470	53.470
123478-HxCDD	36.089	1.000	4.13e5	3.36e5	0.941	1.229	1.240	2202.6	2796	2242	6.16e6	5.03e6	NO	52.698	52.698
123678-HxCDD	36.221	1.001	4.12e5	3.39e5	0.884	1.218	1.240	2162.9	2796	2242	6.05e6	4.85e6	NO	50.248	50.248
123789-HxCDD	36.648	1.012	4.01e5	3.21e5	0.870	1.248	1.240	2024.3	2796	2242	5.66e6	4.62e6	NO	51.891	51.891
1234678-HpCDD	40.923	1.001	3.14e5	3.07e5	0.948	1.025	1.050	1828.8	2233	2106	4.08e6	4.08e6	NO	53.104	53.104
OCDD	46.688	1.000	4.03e5	4.60e5	0.969	0.876	0.890	1802.4	2238	2157	4.03e6	4.56e6	NO	101.728	101.728
13C-2378-TCDF	25.690	1.007	1.76e6	2.26e6	1.318	0.777	0.770	8210.6	3104	3068	2.55e7	3.28e7	NO		99.961
13C-12378-PeCDF	29.819	1.169	1.63e6	1.05e6	1.026	1.552	1.550	7426.9	3200	4213	2.38e7	1.53e7	NO		85.780
13C-23478-PeCDF	31.167	1.222	1.46e6	9.25e5	0.966	1.582	1.550	6664.0	3200	4213	2.13e7	1.35e7	NO		81.074
13C-123478-HxCDF	34.840	0.951	5.90e5	1.14e6	1.123	0.519	0.510	2532.8	3412	4077	8.64e6	1.68e7	NO		88.712
13C-123678-HxCDF	34.993	0.955	6.71e5	1.28e6	1.216	0.524	0.510	2796.4	3412	4077	9.54e6	1.83e7	NO		92.603
13C-234678-HxCDF	35.936	0.981	5.64e5	1.09e6	1.106	0.518	0.510	2448.9	3412	4077	8.35e6	1.59e7	NO		86.177
13C-123789-HxCDF	37.086	1.013	5.15e5	9.75e5	0.995	0.528	0.510	2102.7	3412	4077	7.17e6	1.39e7	NO		86.337
13C-1234678-HpCDF	39.136	1.069	3.92e5	8.90e5	0.896	0.441	0.440	2123.4	2735	3222	5.81e6	1.31e7	NO		82.524
13C-1234789-HpCDF	41.767	1.140	3.10e5	7.08e5	0.693	0.438	0.440	1417.2	2735	3222	3.88e6	8.75e6	NO		84.643
13C-1234-TCDD	25.510	0.000	1.36e6	1.69e6	1.000	0.800	0.770	3750.2	5260	3430	1.97e7	2.47e7	NO		100.000
13C-2378-TCDD	26.332	1.032	1.07e6	1.36e6	0.961	0.787	0.770	2825.6	5260	3430	1.49e7	1.88e7	NO		82.847
13C-12378-PeCDD	31.420	1.232	1.02e6	6.45e5	0.703	1.578	1.550	4087.6	3700	2040	1.51e7	9.60e6	NO		77.452
13C-123478-HxCDD	36.078	0.985	8.39e5	6.72e5	1.016	1.250	1.240	3982.0	3060	3922	1.22e7	9.87e6	NO		85.765
13C-123678-HxCDD	36.199	0.988	9.44e5	7.47e5	1.098	1.264	1.240	4299.4	3060	3922	1.32e7	1.06e7	NO		88.732
13C-1234678-HpCDD	40.901	1.117	6.32e5	6.01e5	0.828	1.050	1.050	3000.3	2771	2808	8.32e6	7.99e6	NO		85.823
13C-OCDD	46.670	1.274	8.27e5	9.23e5	0.770	0.895	0.890	3246.0	2517	2911	8.17e6	9.23e6	NO		131.090

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13C-123789-HxCDD	36.626	0.000	9.57e5	7.77e5	1.000	1.231	1.240	4573.7	3060	3922	1.40e7	1.14e7	NO	100.000
Total-tetrafurans			2.00e5		0.763				1145		2.89e6			14.959
Total-penta1			0.00e0						710		0.00e0			
Total-pentafurans			1.52e6		0.844				3023		2.25e7			118.663
Total-hexafurans			2.08e6		0.997				3640		3.00e7			220.472
Total-heptafurans			8.21e5		1.150				2972		1.15e7			121.197
Total-Furans			5.05e6		0.970				1145		7.12e7			584.821
Total-tetradioxins			1.15e5		0.980				1713		1.63e6			11.266
Total-pentadioxins			5.13e5		0.948				1722		7.67e6			54.246
Total-hexadioxins			1.23e6		0.898				2796		1.79e7			154.992
Total-heptadioxins			3.23e5		0.948				2233		4.22e6			54.516
Total-Dioxins			2.58e6		0.934				1713		3.54e7			376.748
Total-TEQ			7.63e6						1713		1.07e8			961.569
37CL-2378-TCDD	26.347	1.033	1.10e6		0.999			8555.6	1856		1.59e7			36.159
FUNCTION1 PFK			5.20e7						1053113		3.81e8			
FUNCTION2 PFK			0.00e0						255538		0.00e0			
FUNCTION3 PFK			9.40e6						484605		1.13e8			0.000
FUNCTION4 PFK			2.49e5						364866		8.35e6			
FUNCTION5 PFK			3.81e4						254829		9.03e5			
FUNCTION1 HXCDPE			0.00e0						407		0.00e0			
FUNCTION1 HPCDPE			1.11e3						758		1.76e4			0.000
FUNCTION2 HPCDPE			1.80e2						1036		3.73e3			0.000
FUNCTION3 OCDPE			1.41e2						642		5.10e3			0.000
FUNCTION4 NCDPE			4.57e2						1105		1.32e4			0.000
FUNCTION5 DCDPE			0.00e0						405		0.00e0			

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

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TF

	35	Total-tetrafurans	303.9016	24.81	11536.023	0.763	0.376		0.74	0.77	NO	56.3
	35	Total-tetrafurans	303.9016	24.61	39721.574	0.763	1.296		0.76	0.77	NO	218.6
	35	Total-tetrafurans	303.9016	24.48	6978.742	0.763	0.228		0.71	0.77	NO	32.0
	35	Total-tetrafurans	303.9016	23.24	1943.656	0.763	0.063		0.61	0.77	YES	7.3
	1	2378-TCDF	303.9016	25.70	395836.562	0.763	12.917	12.917	0.77	0.77	NO	2190.3
	35	Total-tetrafurans	303.9016	25.53	2399.804	0.763	0.078		1.89	0.77	YES	18.7

PP

PF

	3	23478-PeCDF	339.8597	31.19	1143931.688	0.851	56.277	56.277	1.53	1.55	NO	3379.5
	37	Total-pentafurans	339.8597	30.92	2365.072	0.844	0.111		1.40	1.55	NO	6.0
	37	Total-pentafurans	339.8597	30.15	2293.147	0.844	0.107		0.41	1.55	YES	7.5
	37	Total-pentafurans	339.8597	30.04	29040.178	0.844	1.358		0.93	1.55	YES	72.3
	2	12378-PeCDF	339.8597	29.84	1268523.657	0.836	56.543	56.543	1.48	1.55	NO	3718.2
	37	Total-pentafurans	339.8597	29.48	30266.052	0.844	1.415		1.46	1.55	NO	80.1
	37	Total-pentafurans	339.8597	28.77	26984.885	0.844	1.261		1.64	1.55	NO	90.3
	37	Total-pentafurans	339.8597	28.71	23582.529	0.844	1.102		1.38	1.55	NO	71.0
	37	Total-pentafurans	339.8597	32.21	10454.701	0.844	0.489		1.34	1.55	NO	26.8

HF

	38	Total-hexafurans	373.8208	36.30	975.151	0.997	0.057		3.55	1.24	YES	3.9
	5	234678-HxCDF	373.8208	35.96	950541.501	1.027	55.997	55.997	1.25	1.24	NO	2077.4
	38	Total-hexafurans	373.8208	35.56	1489.916	0.997	0.088		0.91	1.24	YES	4.1
	6	123678-HxCDF	373.8208	35.00	1066613.969	1.013	53.927	53.927	1.23	1.24	NO	2346.6
	4	123478-HxCDF	373.8208	34.86	944422.156	1.017	53.746	53.746	1.22	1.24	NO	2073.5
	38	Total-hexafurans	373.8208	34.71	1836.573	0.997	0.108		0.93	1.24	YES	3.8
	38	Total-hexafurans	373.8208	33.34	21299.909	0.997	1.253		1.26	1.24	NO	43.6
	38	Total-hexafurans	373.8208	33.13	8506.410	0.997	0.500		1.13	1.24	NO	17.6
	7	123789-HxCDF	373.8208	37.10	758523.407	0.929	54.795	54.795	1.27	1.24	NO	1684.4

HPF

	9	1234789-HpCDF	407.7818	41.79	632963.344	1.149	54.118	54.118	1.02	1.05	NO	1368.0
	39	Total-heptafurans	407.7818	39.94	8487.559	1.150	0.642		1.14	1.05	NO	20.3
	39	Total-heptafurans	407.7818	39.63	6214.146	1.150	0.470		1.16	1.05	NO	15.2
	8	1234678-HpCDF	407.7818	39.15	973607.094	1.151	65.967	65.967	1.03	1.05	NO	2466.0

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Furans,TF,PP,PF,HF,HPF,OF

	35 Total-tetrafurans	303.9016	24.81	11536.023	0.763	0.376		0.74	0.77	NO	56.3
	35 Total-tetrafurans	303.9016	24.61	39721.574	0.763	1.296		0.76	0.77	NO	218.6
	35 Total-tetrafurans	303.9016	24.48	6978.742	0.763	0.228		0.71	0.77	NO	32.0
	35 Total-tetrafurans	303.9016	23.24	1943.656	0.763	0.063		0.61	0.77	YES	7.3
	1 2378-TCDF	303.9016	25.70	395836.562	0.763	12.917	12.917	0.77	0.77	NO	2190.3
	35 Total-tetrafurans	303.9016	25.53	2399.804	0.763	0.078		1.89	0.77	YES	18.7
	3 23478-PeCDF	339.8597	31.19	1143931.688	0.851	56.277	56.277	1.53	1.55	NO	3379.5
	37 Total-pentafurans	339.8597	30.92	2365.072	0.844	0.111		1.40	1.55	NO	6.0
	37 Total-pentafurans	339.8597	30.15	2293.147	0.844	0.107		0.41	1.55	YES	7.5
	37 Total-pentafurans	339.8597	30.04	29040.178	0.844	1.358		0.93	1.55	YES	72.3
	2 12378-PeCDF	339.8597	29.84	1268523.657	0.836	56.543	56.543	1.48	1.55	NO	3718.2
	37 Total-pentafurans	339.8597	29.48	30266.052	0.844	1.415		1.46	1.55	NO	80.1
	37 Total-pentafurans	339.8597	28.77	26984.885	0.844	1.261		1.64	1.55	NO	90.3
	37 Total-pentafurans	339.8597	28.71	23582.529	0.844	1.102		1.38	1.55	NO	71.0
	37 Total-pentafurans	339.8597	32.21	10454.701	0.844	0.489		1.34	1.55	NO	26.8
	38 Total-hexafurans	373.8208	36.30	975.151	0.997	0.057		3.55	1.24	YES	3.9
	5 234678-HxCDF	373.8208	35.96	950541.501	1.027	55.997	55.997	1.25	1.24	NO	2077.4
	38 Total-hexafurans	373.8208	35.56	1489.916	0.997	0.088		0.91	1.24	YES	4.1
	6 123678-HxCDF	373.8208	35.00	1066613.969	1.013	53.927	53.927	1.23	1.24	NO	2346.6
	4 123478-HxCDF	373.8208	34.86	944422.156	1.017	53.746	53.746	1.22	1.24	NO	2073.5
	38 Total-hexafurans	373.8208	34.71	1836.573	0.997	0.108		0.93	1.24	YES	3.8
	38 Total-hexafurans	373.8208	33.34	21299.909	0.997	1.253		1.26	1.24	NO	43.6
	38 Total-hexafurans	373.8208	33.13	8506.410	0.997	0.500		1.13	1.24	NO	17.6
	7 123789-HxCDF	373.8208	37.10	758523.407	0.929	54.795	54.795	1.27	1.24	NO	1684.4
	9 1234789-HpCDF	407.7818	41.79	632963.344	1.149	54.118	54.118	1.02	1.05	NO	1368.0
	39 Total-heptafurans	407.7818	39.94	8487.559	1.150	0.642		1.14	1.05	NO	20.3
	39 Total-heptafurans	407.7818	39.63	6214.146	1.150	0.470		1.16	1.05	NO	15.2
	8 1234678-HpCDF	407.7818	39.15	973607.094	1.151	65.967	65.967	1.03	1.05	NO	2466.0
	10 OCDF	441.7428	46.96	923286.281	0.963	109.531	109....	0.89	0.89	NO	1972.7

TD

	11 2378-TCDD	319.8965	26.35	258014.211	0.980	10.839	10.839	0.75	0.77	NO	918.2
	41 Total-tetradioxins	319.8965	25.96	8636.630	0.980	0.363		0.79	0.77	NO	30.4
	41 Total-tetradioxins	319.8965	24.94	1517.773	0.980	0.064		0.69	0.77	NO	5.4

PD

	42 Total-pentadioxins	355.8546	31.84	1631.366	0.948	0.104		0.78	1.55	YES	7.7
	12 12378-PeCDD	355.8546	31.44	842456.344	0.948	53.470	53.470	1.51	1.55	NO	4395.8
	42 Total-pentadioxins	355.8546	30.76	2116.923	0.948	0.134		1.17	1.55	YES	8.2
	42 Total-pentadioxins	355.8546	30.20	2496.671	0.948	0.158		1.50	1.55	NO	12.1
	42 Total-pentadioxins	355.8546	30.08	3178.123	0.948	0.202		1.77	1.55	NO	17.5
	42 Total-pentadioxins	355.8546	29.84	2812.465	0.948	0.179		1.92	1.55	YES	15.3

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 10:53:59 Pacific Daylight Time

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HD

	43 Total-hexadioxins	389.8157	35.08	2229.400	0.898	0.155		0.49	1.24	YES	6.2
	15 123789-HxCDD	389.8157	36.65	722503.344	0.870	51.891	51.891	1.25	1.24	NO	2024.3
	14 123678-HxCDD	389.8157	36.22	750962.188	0.884	50.248	50.248	1.22	1.24	NO	2162.9
	13 123478-HxCDD	389.8157	36.09	749377.125	0.941	52.698	52.698	1.23	1.24	NO	2202.6

HPD

	16 1234678-HpCDD	423.7766	40.92	620715.876	0.948	53.104	53.104	1.02	1.05	NO	1828.8
	44 Total-heptadioxins	423.7766	39.68	16503.367	0.948	1.412		1.08	1.05	NO	59.4

Dioxins,TD,PD,HD,HPD,OD

	11 2378-TCDD	319.8965	26.35	258014.211	0.980	10.839	10.839	0.75	0.77	NO	918.2
	41 Total-tetradioxins	319.8965	25.96	8636.630	0.980	0.363		0.79	0.77	NO	30.4
	41 Total-tetradioxins	319.8965	24.94	1517.773	0.980	0.064		0.69	0.77	NO	5.4
	42 Total-pentadioxins	355.8546	31.84	1631.366	0.948	0.104		0.78	1.55	YES	7.7
	12 12378-PeCDD	355.8546	31.44	842456.344	0.948	53.470	53.470	1.51	1.55	NO	4395.8
	42 Total-pentadioxins	355.8546	30.76	2116.923	0.948	0.134		1.17	1.55	YES	8.2
	42 Total-pentadioxins	355.8546	30.20	2496.671	0.948	0.158		1.50	1.55	NO	12.1
	42 Total-pentadioxins	355.8546	30.08	3178.123	0.948	0.202		1.77	1.55	NO	17.5
	42 Total-pentadioxins	355.8546	29.84	2812.465	0.948	0.179		1.92	1.55	YES	15.3
	43 Total-hexadioxins	389.8157	35.08	2229.400	0.898	0.155		0.49	1.24	YES	6.2
	15 123789-HxCDD	389.8157	36.65	722503.344	0.870	51.891	51.891	1.25	1.24	NO	2024.3
	14 123678-HxCDD	389.8157	36.22	750962.188	0.884	50.248	50.248	1.22	1.24	NO	2162.9
	13 123478-HxCDD	389.8157	36.09	749377.125	0.941	52.698	52.698	1.23	1.24	NO	2202.6
	16 1234678-HpCDD	423.7766	40.92	620715.876	0.948	53.104	53.104	1.02	1.05	NO	1828.8
	44 Total-heptadioxins	423.7766	39.68	16503.367	0.948	1.412		1.08	1.05	NO	59.4
	17 OCDD	457.7377	46.69	862906.282	0.969	101.728	101....	0.88	0.89	NO	1802.4

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TotalTEQ,Furans,Dioxins

	35 Total-tetrafurans	303.9016	24.81	11536.023	0.763	0.376		0.74	0.77	NO	56.3
	35 Total-tetrafurans	303.9016	24.61	39721.574	0.763	1.296		0.76	0.77	NO	218.6
	35 Total-tetrafurans	303.9016	24.48	6978.742	0.763	0.228		0.71	0.77	NO	32.0
	35 Total-tetrafurans	303.9016	23.24	1943.656	0.763	0.063		0.61	0.77	YES	7.3
	1 2378-TCDF	303.9016	25.70	395836.562	0.763	12.917	12.917	0.77	0.77	NO	2190.3
	35 Total-tetrafurans	303.9016	25.53	2399.804	0.763	0.078		1.89	0.77	YES	18.7
	3 23478-PeCDF	339.8597	31.19	1143931.688	0.851	56.277	56.277	1.53	1.55	NO	3379.5
	37 Total-pentafurans	339.8597	30.92	2365.072	0.844	0.111		1.40	1.55	NO	6.0
	37 Total-pentafurans	339.8597	30.15	2293.147	0.844	0.107		0.41	1.55	YES	7.5
	37 Total-pentafurans	339.8597	30.04	29040.178	0.844	1.358		0.93	1.55	YES	72.3
	2 12378-PeCDF	339.8597	29.84	1268523.657	0.836	56.543	56.543	1.48	1.55	NO	3718.2
	37 Total-pentafurans	339.8597	29.48	30266.052	0.844	1.415		1.46	1.55	NO	80.1
	37 Total-pentafurans	339.8597	28.77	26984.885	0.844	1.261		1.64	1.55	NO	90.3
	37 Total-pentafurans	339.8597	28.71	23582.529	0.844	1.102		1.38	1.55	NO	71.0
	37 Total-pentafurans	339.8597	32.21	10454.701	0.844	0.489		1.34	1.55	NO	26.8
	38 Total-hexafurans	373.8208	36.30	975.151	0.997	0.057		3.55	1.24	YES	3.9
	5 234678-HxCDF	373.8208	35.96	950541.501	1.027	55.997	55.997	1.25	1.24	NO	2077.4
	38 Total-hexafurans	373.8208	35.56	1489.916	0.997	0.088		0.91	1.24	YES	4.1
	6 123678-HxCDF	373.8208	35.00	1066613.969	1.013	53.927	53.927	1.23	1.24	NO	2346.6
	4 123478-HxCDF	373.8208	34.86	944422.156	1.017	53.746	53.746	1.22	1.24	NO	2073.5
	38 Total-hexafurans	373.8208	34.71	1836.573	0.997	0.108		0.93	1.24	YES	3.8
	38 Total-hexafurans	373.8208	33.34	21299.909	0.997	1.253		1.26	1.24	NO	43.6
	38 Total-hexafurans	373.8208	33.13	8506.410	0.997	0.500		1.13	1.24	NO	17.6
	7 123789-HxCDF	373.8208	37.10	758523.407	0.929	54.795	54.795	1.27	1.24	NO	1684.4
	9 1234789-HpCDF	407.7818	41.79	632963.344	1.149	54.118	54.118	1.02	1.05	NO	1368.0
	39 Total-heptafurans	407.7818	39.94	8487.559	1.150	0.642		1.14	1.05	NO	20.3
	39 Total-heptafurans	407.7818	39.63	6214.146	1.150	0.470		1.16	1.05	NO	15.2
	8 1234678-HpCDF	407.7818	39.15	973607.094	1.151	65.967	65.967	1.03	1.05	NO	2466.0
	10 OCDF	441.7428	46.96	923286.281	0.963	109.531	109....	0.89	0.89	NO	1972.7
	11 2378-TCDD	319.8965	26.35	258014.211	0.980	10.839	10.839	0.75	0.77	NO	918.2
	41 Total-tetradioxins	319.8965	25.96	8636.630	0.980	0.363		0.79	0.77	NO	30.4
	41 Total-tetradioxins	319.8965	24.94	1517.773	0.980	0.064		0.69	0.77	NO	5.4
	42 Total-pentadioxins	355.8546	31.84	1631.366	0.948	0.104		0.78	1.55	YES	7.7
	12 12378-PeCDD	355.8546	31.44	842456.344	0.948	53.470	53.470	1.51	1.55	NO	4395.8
	42 Total-pentadioxins	355.8546	30.76	2116.923	0.948	0.134		1.17	1.55	YES	8.2
	42 Total-pentadioxins	355.8546	30.20	2496.671	0.948	0.158		1.50	1.55	NO	12.1
	42 Total-pentadioxins	355.8546	30.08	3178.123	0.948	0.202		1.77	1.55	NO	17.5
	42 Total-pentadioxins	355.8546	29.84	2812.465	0.948	0.179		1.92	1.55	YES	15.3
	43 Total-hexadioxins	389.8157	35.08	2229.400	0.898	0.155		0.49	1.24	YES	6.2
	15 123789-HxCDD	389.8157	36.65	722503.344	0.870	51.891	51.891	1.25	1.24	NO	2024.3
	14 123678-HxCDD	389.8157	36.22	750962.188	0.884	50.248	50.248	1.22	1.24	NO	2162.9
	13 123478-HxCDD	389.8157	36.09	749377.125	0.941	52.698	52.698	1.23	1.24	NO	2202.6
	16 1234678-HpCDD	423.7766	40.92	620715.876	0.948	53.104	53.104	1.02	1.05	NO	1828.8
	44 Total-heptadioxins	423.7766	39.68	16503.367	0.948	1.412		1.08	1.05	NO	59.4
	17 OCDD	457.7377	46.69	862906.282	0.969	101.728	101....	0.88	0.89	NO	1802.4

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PFK1

	48 FUNCTION1 PFK	330.9792	22.60	0.000						15.9
	48 FUNCTION1 PFK	330.9792	22.40	0.000						20.7
	48 FUNCTION1 PFK	330.9792	22.37	0.000						19.5
	48 FUNCTION1 PFK	330.9792	22.01	0.000						25.7
	48 FUNCTION1 PFK	330.9792	21.89	0.000						27.4
	48 FUNCTION1 PFK	330.9792	21.70	0.000						30.0
	48 FUNCTION1 PFK	330.9792	21.55	0.000						29.4
	48 FUNCTION1 PFK	330.9792	21.19	0.000						34.1
	48 FUNCTION1 PFK	330.9792	21.10	0.000						34.4
	48 FUNCTION1 PFK	330.9792	26.65	0.000						1.1
	48 FUNCTION1 PFK	330.9792	26.53	0.000						5.0
	48 FUNCTION1 PFK	330.9792	26.23	0.000						3.7
	48 FUNCTION1 PFK	330.9792	25.61	0.000						1.8
	48 FUNCTION1 PFK	330.9792	25.20	0.000						4.0
	48 FUNCTION1 PFK	330.9792	25.06	0.000						1.6
	48 FUNCTION1 PFK	330.9792	24.87	0.000						2.4
	48 FUNCTION1 PFK	330.9792	24.81	0.000						2.6
	48 FUNCTION1 PFK	330.9792	24.55	0.000						1.1
	48 FUNCTION1 PFK	330.9792	24.39	0.000						3.4
	48 FUNCTION1 PFK	330.9792	24.02	0.000						4.2
	48 FUNCTION1 PFK	330.9792	23.91	0.000						6.2
	48 FUNCTION1 PFK	330.9792	23.15	0.000						8.0
	48 FUNCTION1 PFK	330.9792	22.82	0.000						12.6
	48 FUNCTION1 PFK	330.9792	22.79	0.000						12.9
	48 FUNCTION1 PFK	330.9792	22.72	0.000						12.5
	48 FUNCTION1 PFK	330.9792	27.59	0.000						6.4
	48 FUNCTION1 PFK	330.9792	27.54	0.000						7.0
	48 FUNCTION1 PFK	330.9792	27.39	0.000						5.0
	48 FUNCTION1 PFK	330.9792	27.23	0.000						4.9
	48 FUNCTION1 PFK	330.9792	26.89	0.000						5.8
	48 FUNCTION1 PFK	330.9792	26.84	0.000						6.0
	48 FUNCTION1 PFK	330.9792	26.75	0.000						6.5

PFK2

ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

PFK3

[redacted]	50 FUNCTION3 PFK	380.9760	33.44	0.000	0.000					4.2
[redacted]	50 FUNCTION3 PFK	380.9760	33.36	0.000	0.000					8.3
[redacted]	50 FUNCTION3 PFK	380.9760	33.18	0.000	0.000					19.0
[redacted]	50 FUNCTION3 PFK	380.9760	33.01	0.000	0.000					29.7
[redacted]	50 FUNCTION3 PFK	380.9760	32.89	0.000	0.000					35.3
[redacted]	50 FUNCTION3 PFK	380.9760	32.86	0.000	0.000					36.3
[redacted]	50 FUNCTION3 PFK	380.9760	32.79	0.000	0.000					41.4
[redacted]	50 FUNCTION3 PFK	380.9760	34.87	0.000	0.000					1.5
[redacted]	50 FUNCTION3 PFK	380.9760	34.64	0.000	0.000					1.2
[redacted]	50 FUNCTION3 PFK	380.9760	34.61	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	34.51	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	34.41	0.000	0.000					2.1
[redacted]	50 FUNCTION3 PFK	380.9760	34.35	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	34.27	0.000	0.000					1.5
[redacted]	50 FUNCTION3 PFK	380.9760	34.11	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	34.02	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	33.96	0.000	0.000					2.8
[redacted]	50 FUNCTION3 PFK	380.9760	33.92	0.000	0.000					2.3
[redacted]	50 FUNCTION3 PFK	380.9760	33.89	0.000	0.000					1.7
[redacted]	50 FUNCTION3 PFK	380.9760	33.82	0.000	0.000					2.0
[redacted]	50 FUNCTION3 PFK	380.9760	33.78	0.000	0.000					2.1
[redacted]	50 FUNCTION3 PFK	380.9760	33.68	0.000	0.000					2.2
[redacted]	50 FUNCTION3 PFK	380.9760	33.60	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	37.06	0.000	0.000					0.7
[redacted]	50 FUNCTION3 PFK	380.9760	36.85	0.000	0.000					1.2
[redacted]	50 FUNCTION3 PFK	380.9760	36.78	0.000	0.000					0.6
[redacted]	50 FUNCTION3 PFK	380.9760	36.63	0.000	0.000					2.6
[redacted]	50 FUNCTION3 PFK	380.9760	36.56	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	36.32	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	36.26	0.000	0.000					1.2
[redacted]	50 FUNCTION3 PFK	380.9760	36.22	0.000	0.000					2.2
[redacted]	50 FUNCTION3 PFK	380.9760	36.11	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	36.07	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	35.96	0.000	0.000					1.3
[redacted]	50 FUNCTION3 PFK	380.9760	35.90	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	35.85	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	35.52	0.000	0.000					1.3
[redacted]	50 FUNCTION3 PFK	380.9760	35.27	0.000	0.000					0.4
[redacted]	50 FUNCTION3 PFK	380.9760	35.00	0.000	0.000					2.0
[redacted]	50 FUNCTION3 PFK	380.9760	38.16	0.000	0.000					0.8
[redacted]	50 FUNCTION3 PFK	380.9760	38.07	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	37.91	0.000	0.000					0.4
[redacted]	50 FUNCTION3 PFK	380.9760	37.71	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	37.65	0.000	0.000					0.6
[redacted]	50 FUNCTION3 PFK	380.9760	37.60	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	37.56	0.000	0.000					0.8
[redacted]	50 FUNCTION3 PFK	380.9760	37.45	0.000	0.000					0.8
[redacted]	50 FUNCTION3 PFK	380.9760	37.42	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	37.21	0.000	0.000					1.1

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PFK4

	51	FUNCTION4 PFK	430.9728	39.30	0.000						1.0
	51	FUNCTION4 PFK	430.9728	38.92	0.000						1.4
	51	FUNCTION4 PFK	430.9728	38.86	0.000						0.7
	51	FUNCTION4 PFK	430.9728	38.43	0.000						1.8
	51	FUNCTION4 PFK	430.9728	38.33	0.000						0.6
	51	FUNCTION4 PFK	430.9728	44.89	0.000						0.8
	51	FUNCTION4 PFK	430.9728	44.66	0.000						2.1
	51	FUNCTION4 PFK	430.9728	44.47	0.000						1.6
	51	FUNCTION4 PFK	430.9728	44.12	0.000						1.4
	51	FUNCTION4 PFK	430.9728	43.66	0.000						1.2
	51	FUNCTION4 PFK	430.9728	43.02	0.000						0.8
	51	FUNCTION4 PFK	430.9728	42.40	0.000						0.9
	51	FUNCTION4 PFK	430.9728	42.28	0.000						0.8
	51	FUNCTION4 PFK	430.9728	42.07	0.000						1.0
	51	FUNCTION4 PFK	430.9728	41.80	0.000						0.9
	51	FUNCTION4 PFK	430.9728	41.59	0.000						1.3
	51	FUNCTION4 PFK	430.9728	41.41	0.000						1.6
	51	FUNCTION4 PFK	430.9728	41.10	0.000						0.8
	51	FUNCTION4 PFK	430.9728	41.01	0.000						1.4
	51	FUNCTION4 PFK	430.9728	40.67	0.000						0.5

PFK5

	52	FUNCTION5 PFK	480.9696	48.43	0.000						1.4
	52	FUNCTION5 PFK	480.9696	47.92	0.000						2.2

ETHERS1

ETHERS2

	54	FUNCTION1 HPCD...	409.7974	26.84	0.000	0.000					2.4
	54	FUNCTION1 HPCD...	409.7974	26.11	0.000	0.000					2.1
	54	FUNCTION1 HPCD...	409.7974	26.02	0.000	0.000					3.0
	54	FUNCTION1 HPCD...	409.7974	25.30	0.000	0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	23.87	0.000	0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	23.75	0.000	0.000					1.6
	54	FUNCTION1 HPCD...	409.7974	23.30	0.000	0.000					2.3
	54	FUNCTION1 HPCD...	409.7974	22.19	0.000	0.000					2.8
	54	FUNCTION1 HPCD...	409.7974	22.04	0.000	0.000					2.2
	54	FUNCTION1 HPCD...	409.7974	21.88	0.000	0.000					3.3

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ETHERS3

	#	Name	Mass	RT	Area	Ref M...	Conc	EMPC	T. Resp.	T. Ratio	T. R...	S/N
	55	FUNCTION2 HPCD...	409.7974	32.19	0.000		0.000					1.7
	55	FUNCTION2 HPCD...	409.7974	32.59	0.000		0.000					1.9

ETHERS4

	#	Name	Mass	RT	Area	Ref M...	Conc	EMPC	T. Resp.	T. Ratio	T. R...	S/N
	56	FUNCTION3 OCDPE	445.7555	36.49	0.000		0.000					4.5
	56	FUNCTION3 OCDPE	445.7555	33.39	0.000		0.000					3.4

ETHERS5

	#	Name	Mass	RT	Area	Ref M...	Conc	EMPC	T. Resp.	T. Ratio	T. R...	S/N
	57	FUNCTION4 NCDPE	479.7165	43.72	0.000		0.000					2.9
	57	FUNCTION4 NCDPE	479.7165	42.86	0.000		0.000					2.4
	57	FUNCTION4 NCDPE	479.7165	41.08	0.000		0.000					1.6
	57	FUNCTION4 NCDPE	479.7165	40.05	0.000		0.000					2.2
	57	FUNCTION4 NCDPE	479.7165	39.70	0.000		0.000					2.8

ETHERS6

	#	Name	Mass	RT	Area	Ref M...	Conc	EMPC	T. Resp.	T. Ratio	T. R...	S/N

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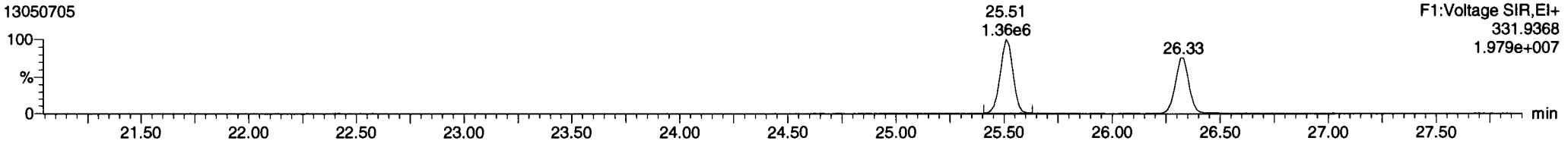
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 10:53:59 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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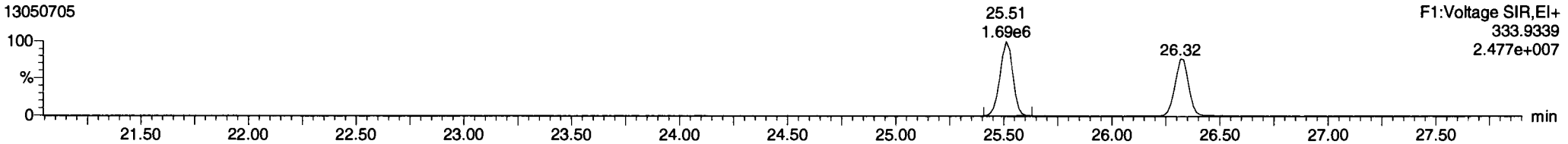

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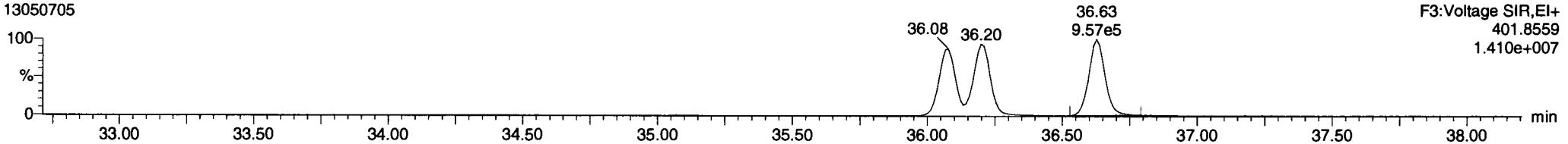

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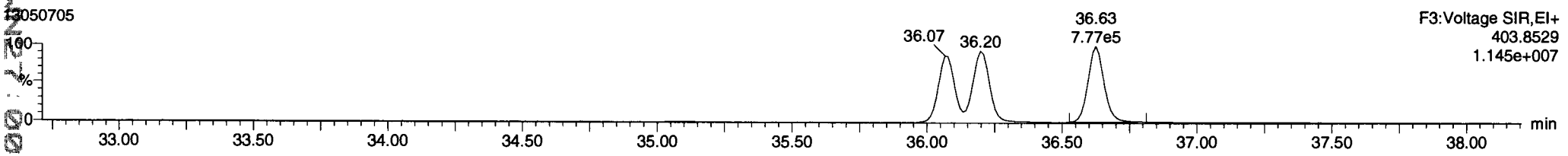
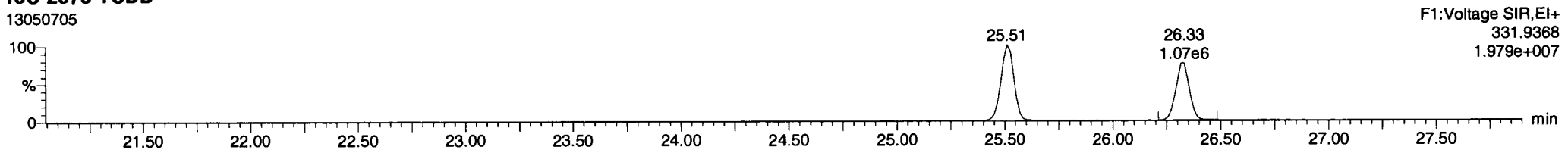


ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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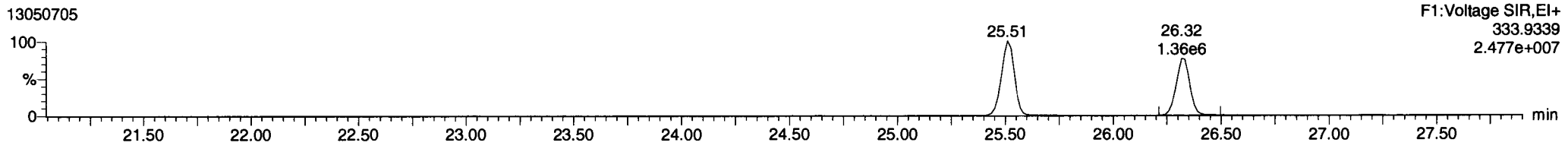
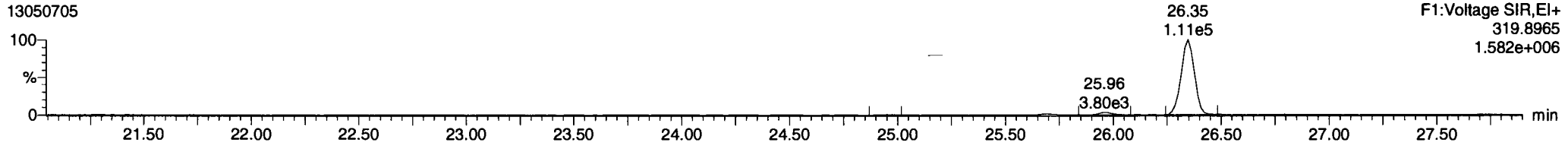
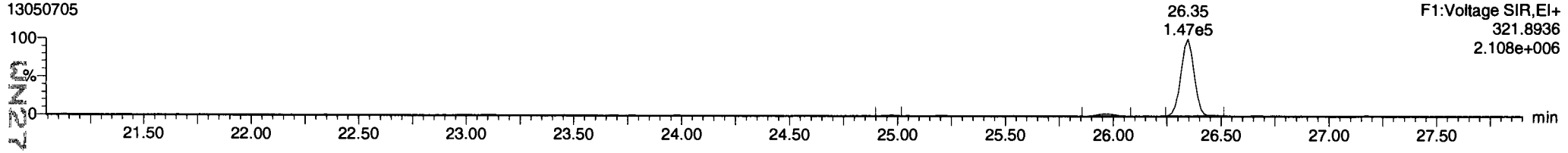


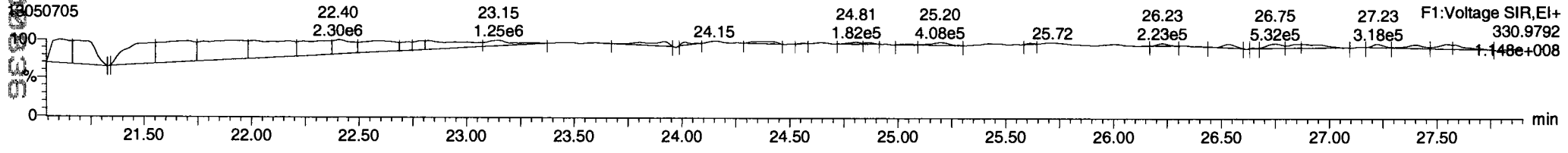
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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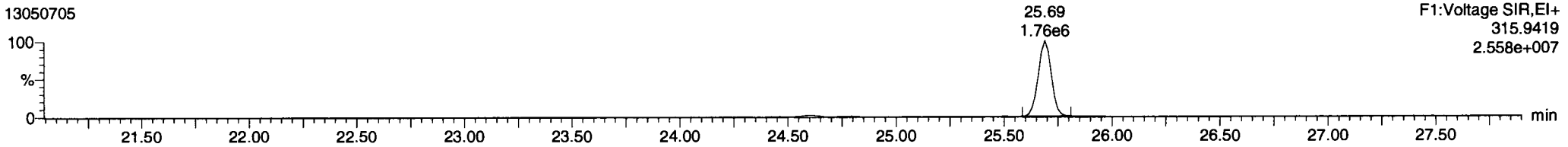
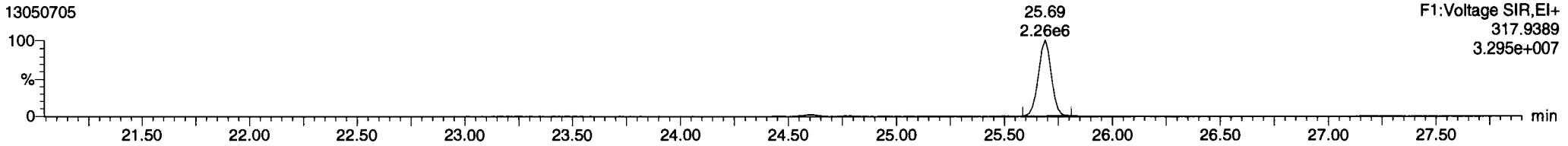
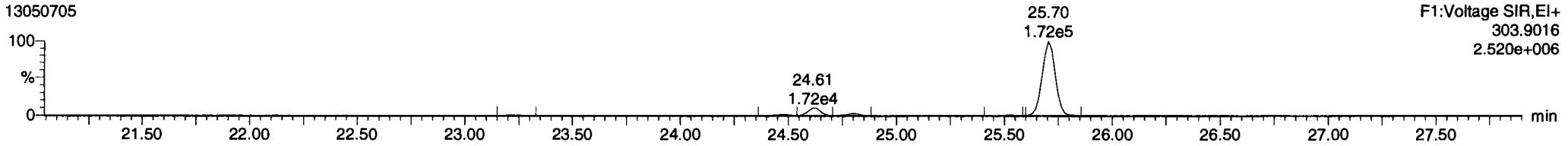
13C-2378-TCDF



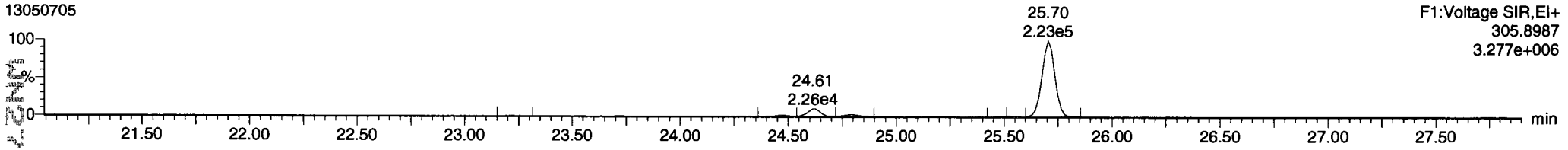
13C-2378-TCDF



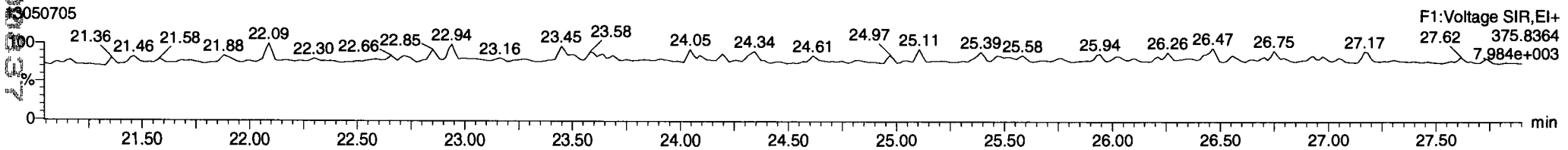
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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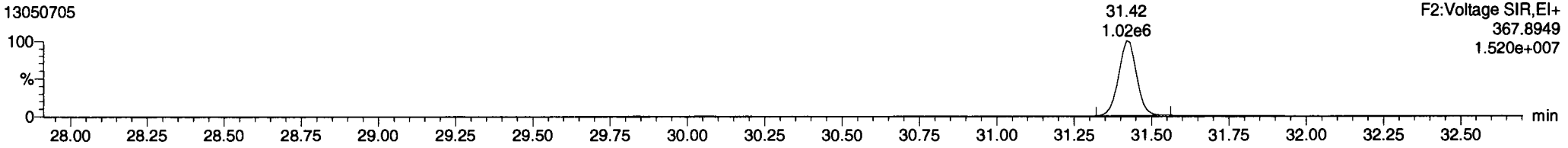
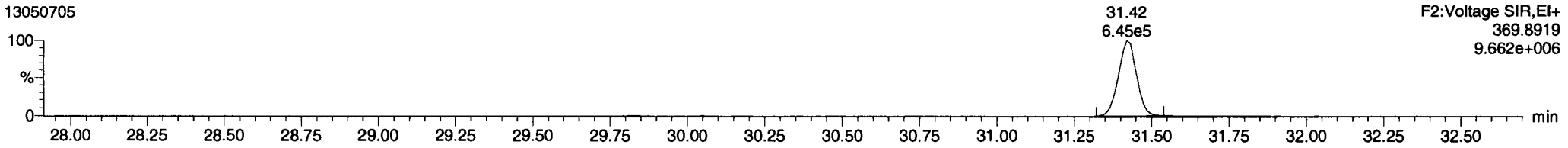
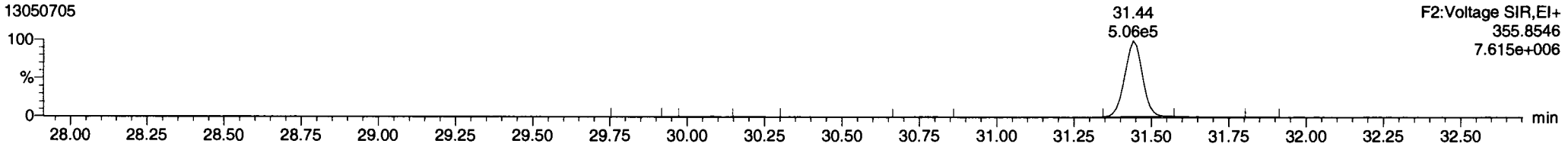
13C-12378-PeCDD



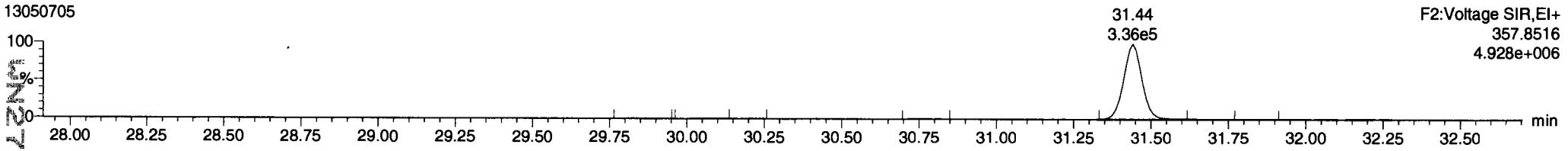
13C-12378-PeCDD



Total-pentadioxins



Total-pentadioxins



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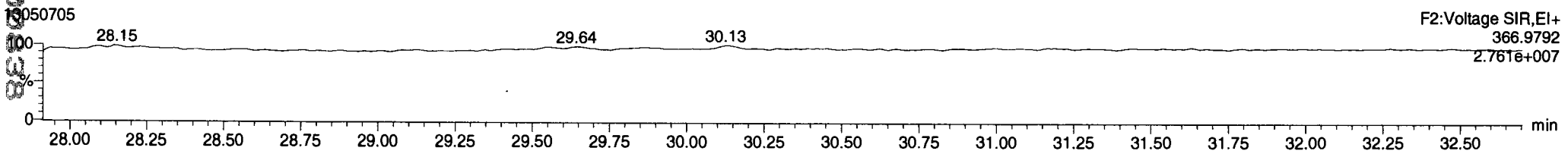

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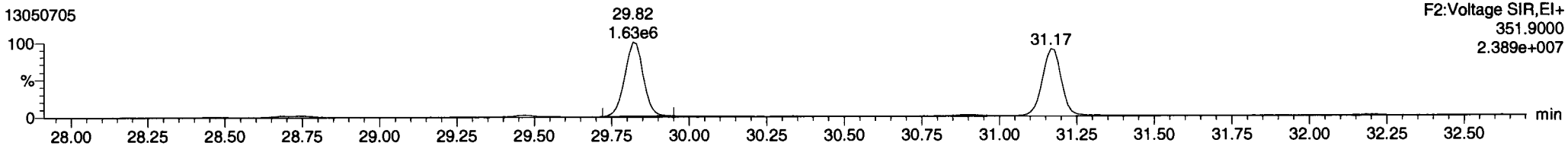
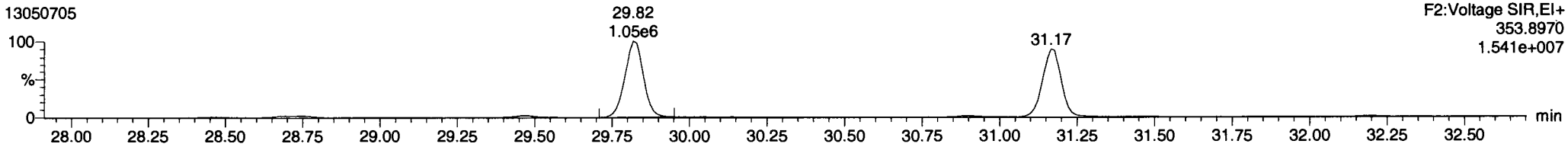
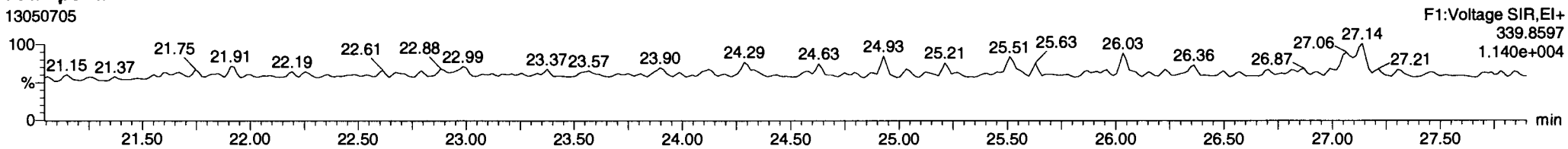
13C-12378-PeCDF



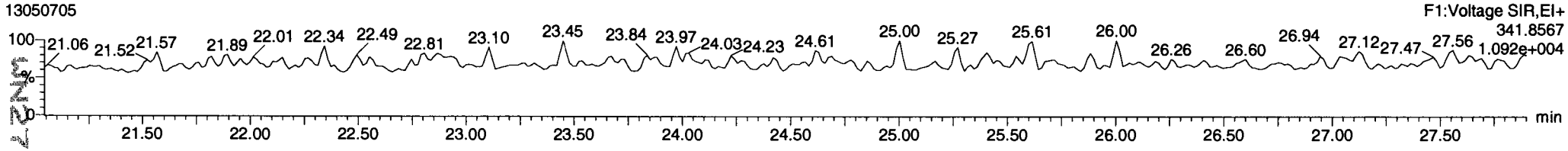
13C-12378-PeCDF



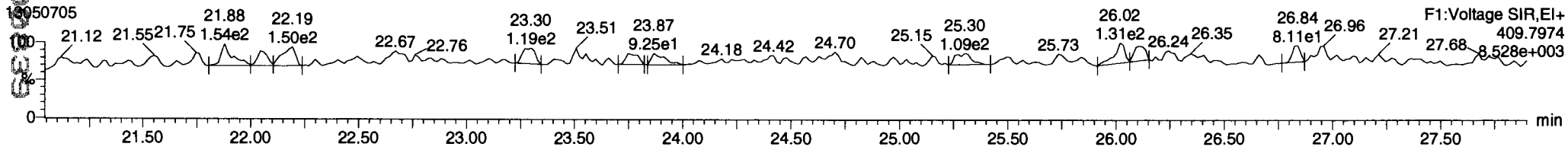
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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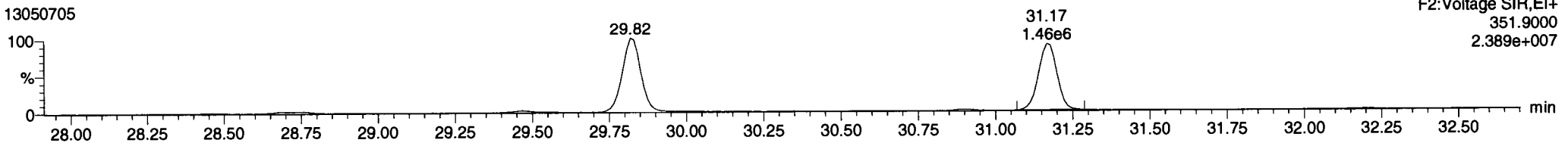
13C-23478-PeCDF



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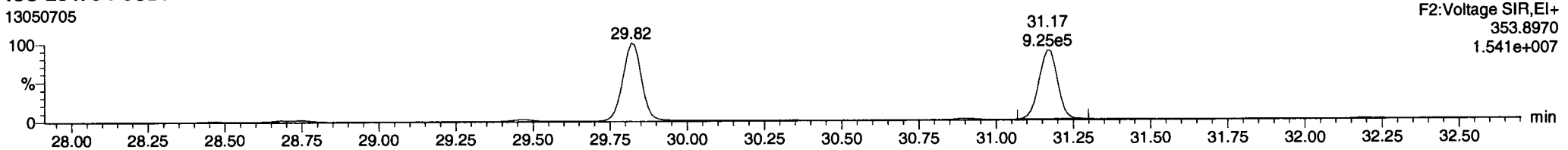
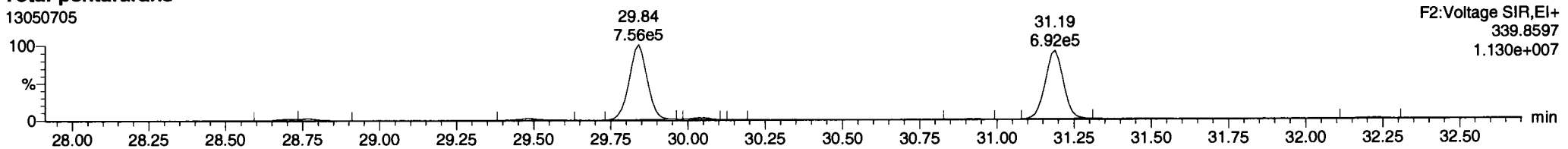
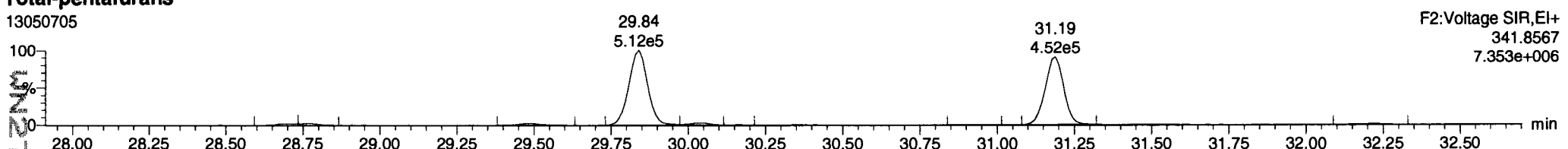


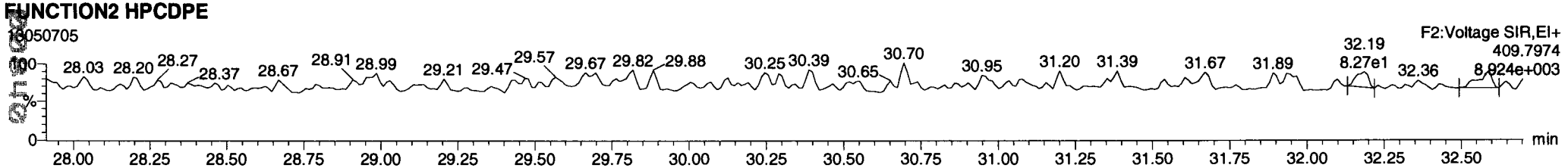
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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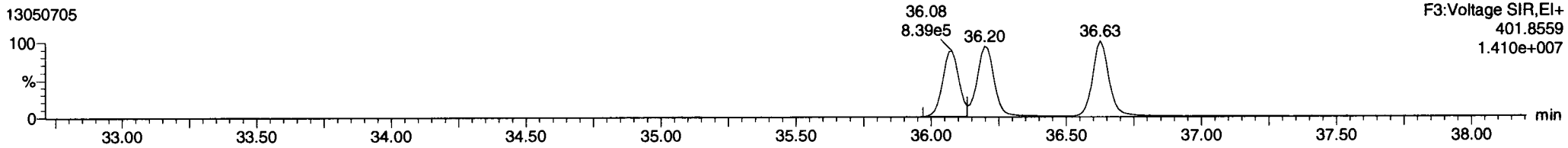
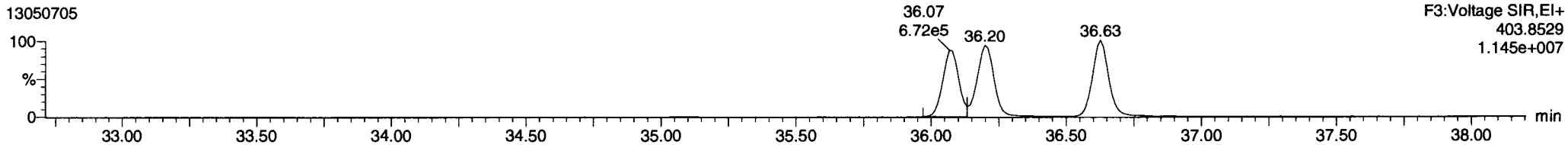
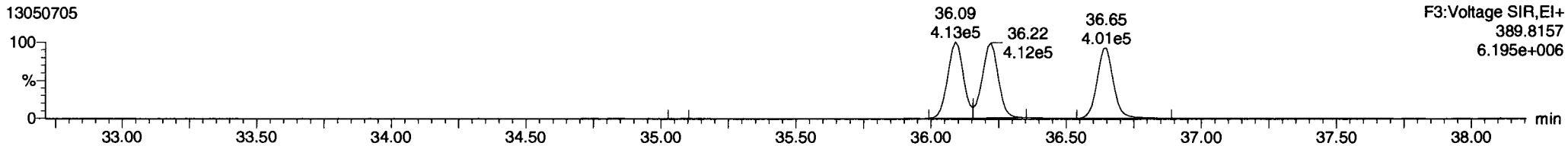
13C-123478-HxCDD



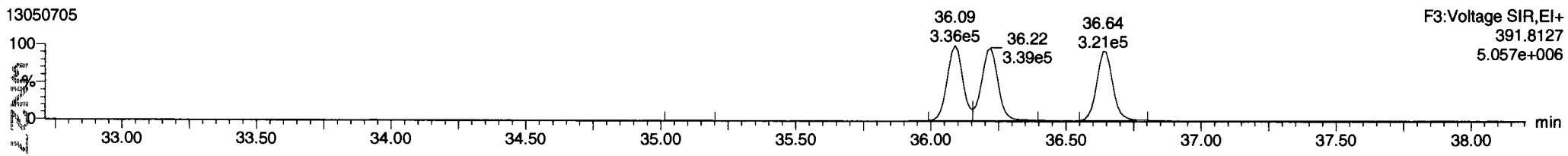
13C-123478-HxCDD



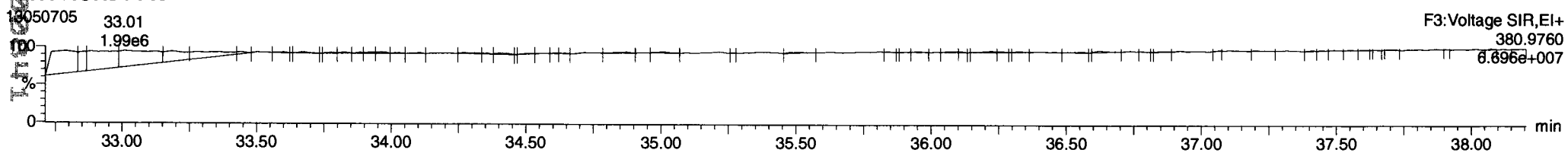
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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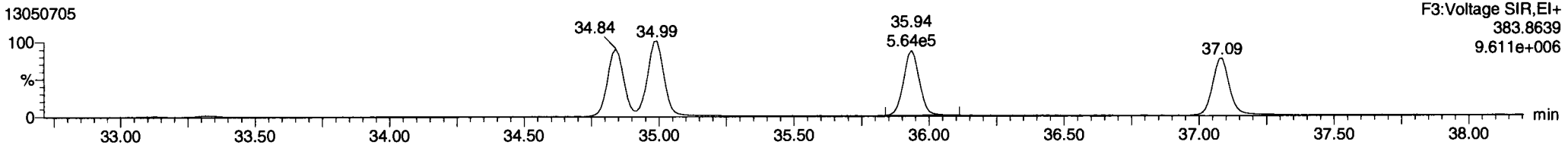
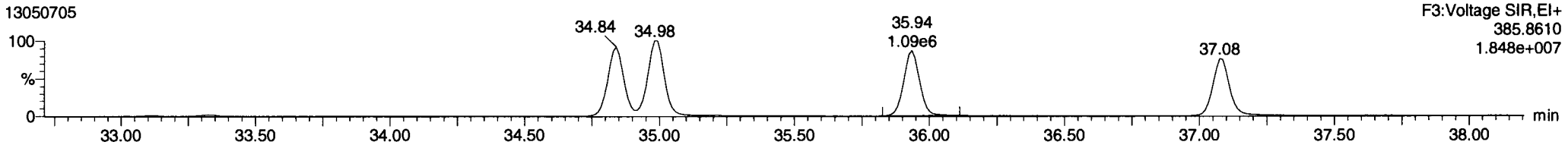
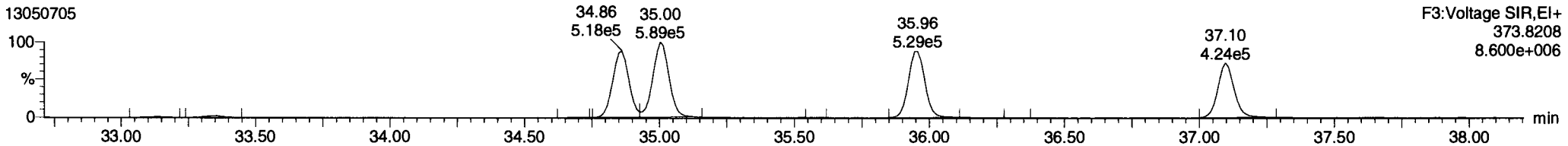
13C-234678-HxCDF



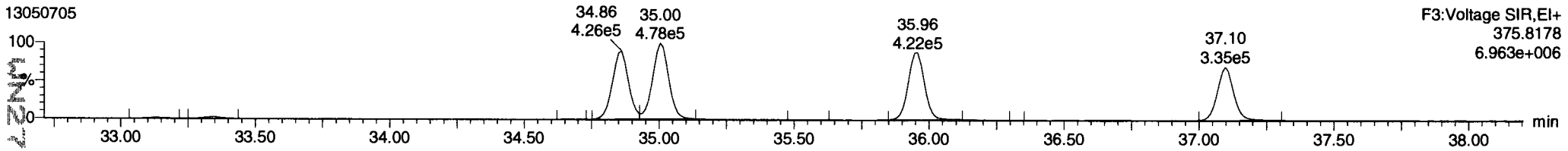
13C-234678-HxCDF



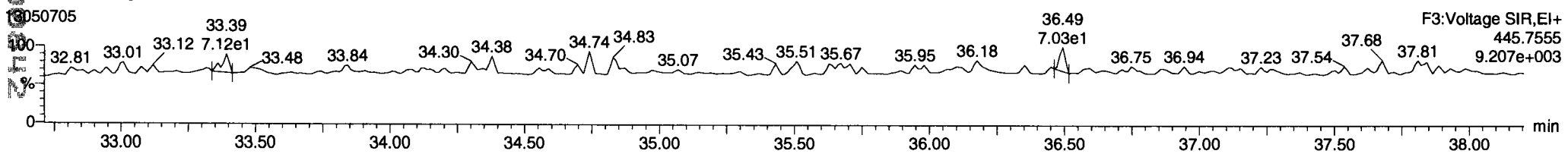
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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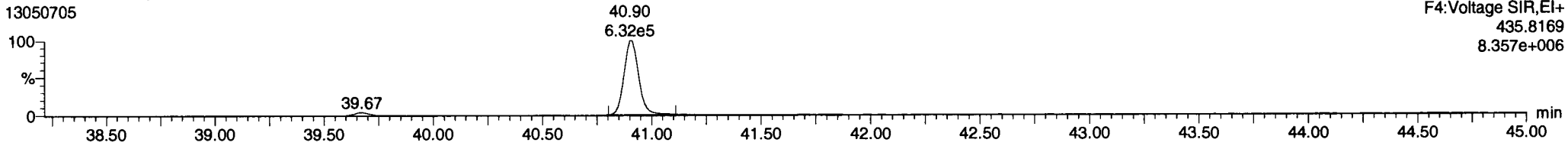
13C-1234678-HpCDD



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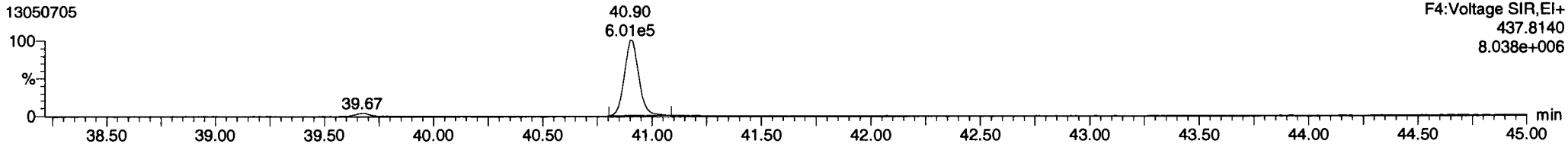
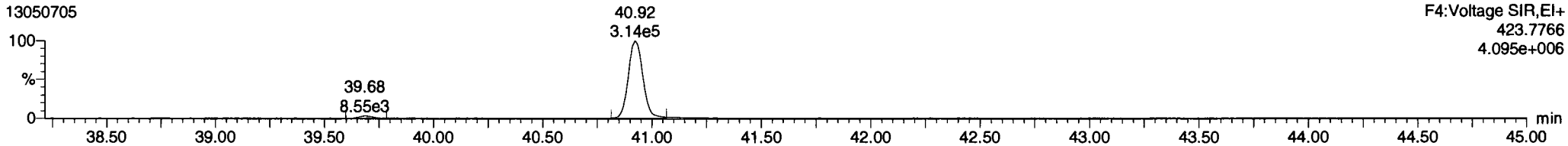
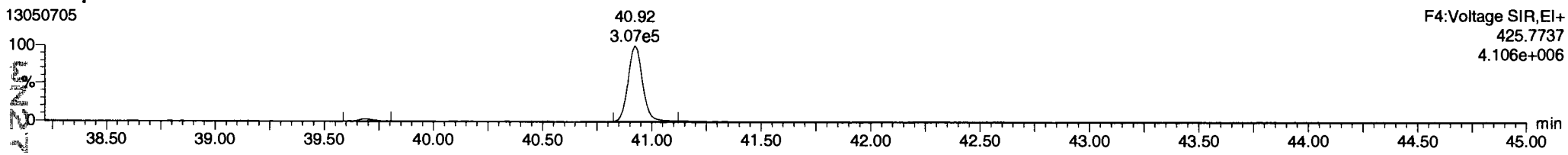


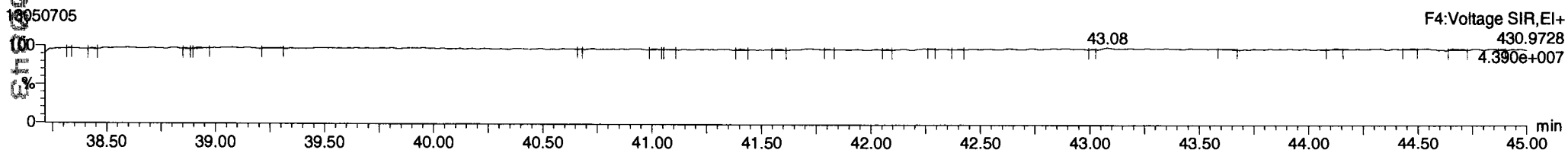
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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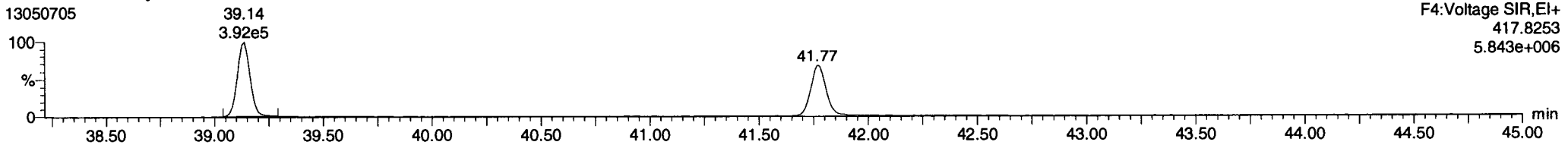
13C-1234678-HpCDF



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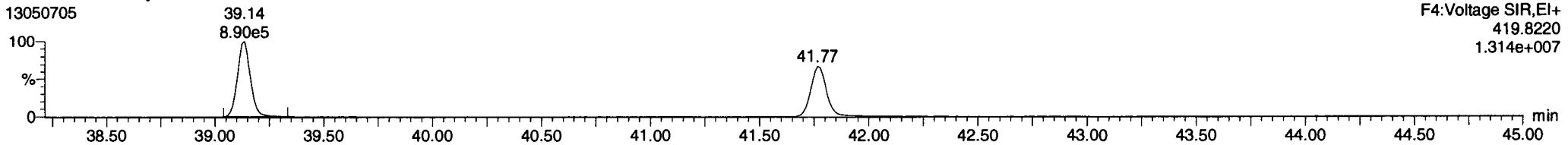
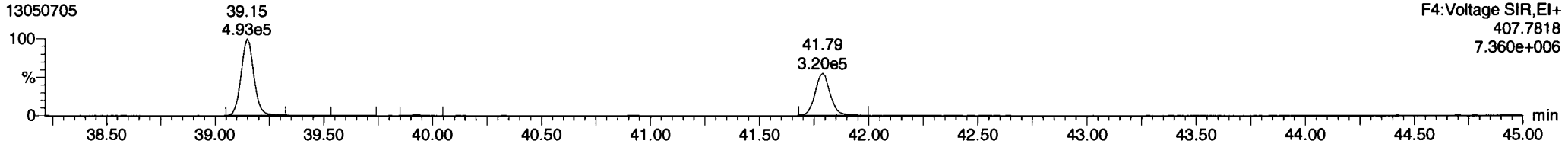
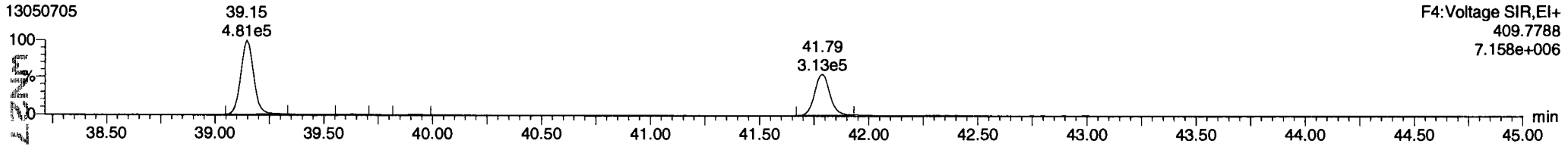


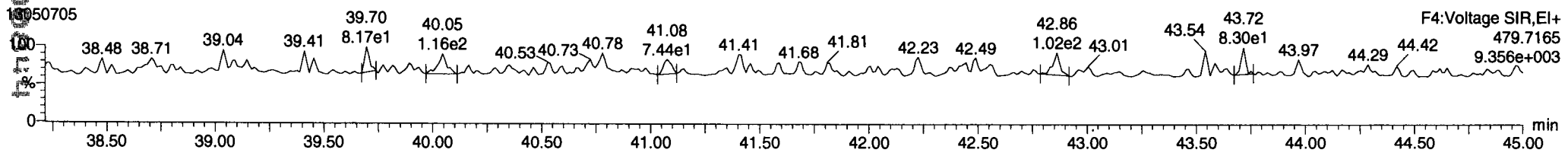
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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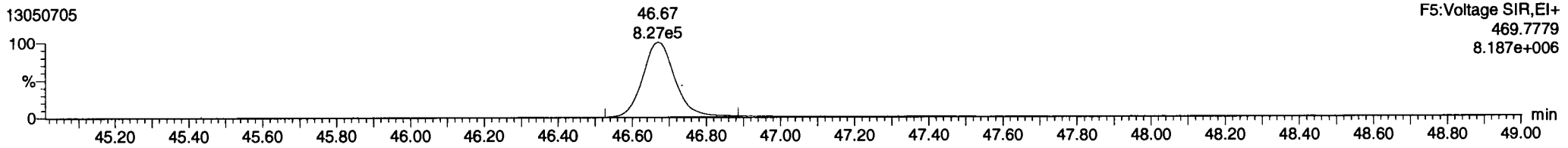
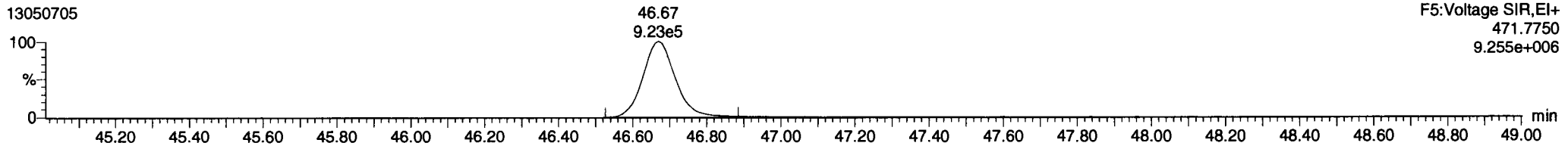
ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

13C-OCDD



13C-OCDD



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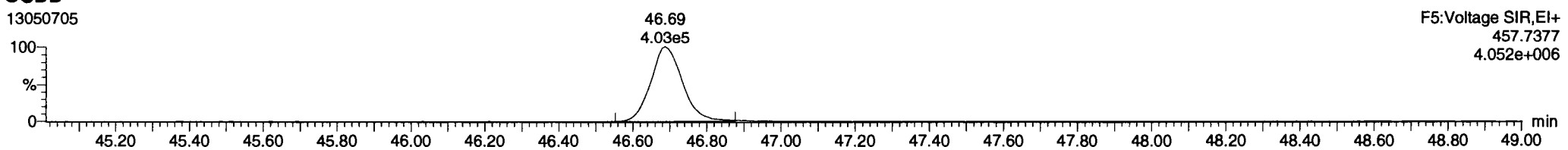
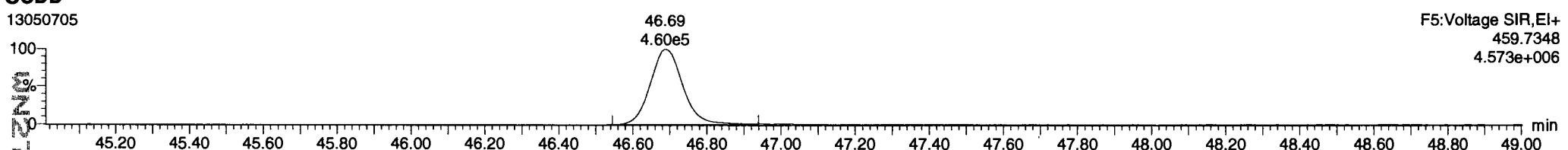
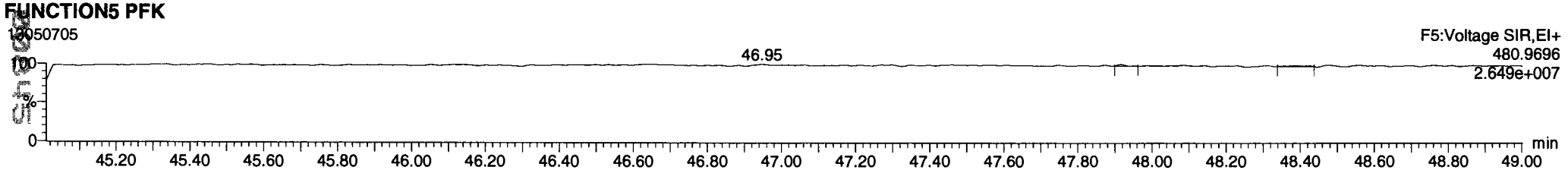


OCDD



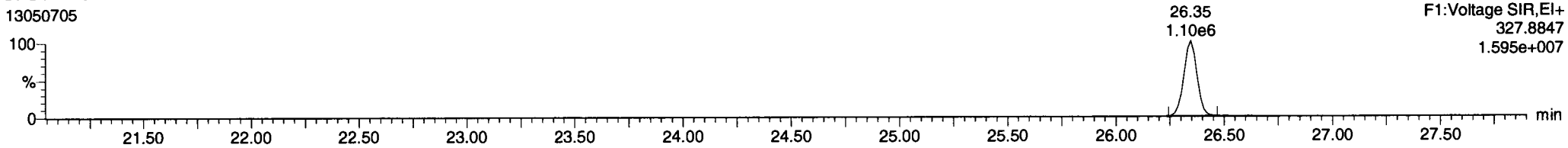
FUNCTION5 PFK



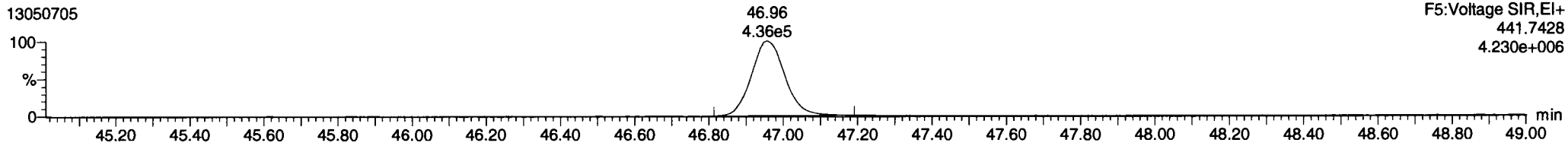
Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 10:53:59 Pacific Daylight Time

ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

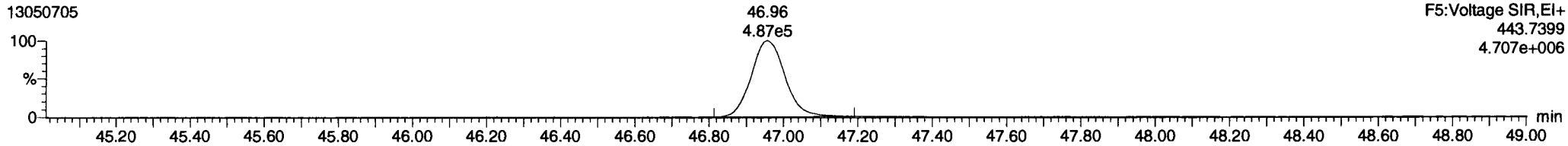
37CL-2378-TCDD



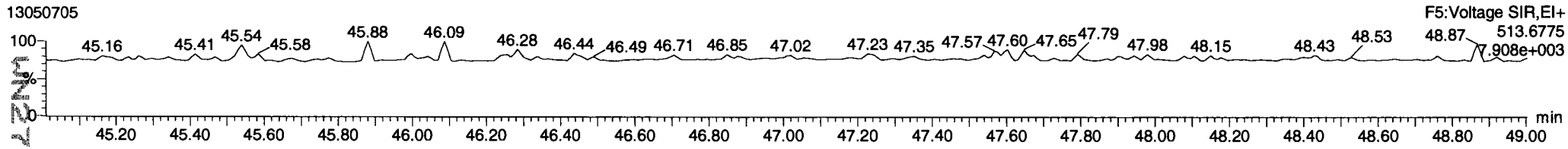
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 10:58:54 Pacific Daylight Time

5/8/13

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WN27A, Name: 13050712, Date: 07-May-2013, Time: 23:32:06, Conditions: AUTOSPEC01, User: pk

Name	RT	Rel RT	Area1	Area2	RRF	Ratio	Fred R	S/N	Noise 1	Noise 2	Height 1	Height 2	EMPC	Conc	pg	
2378-TCDF	25.705	1.001	3.20e4	3.96e4	0.763	0.809	0.770	126.5	3706	5375	4.69e5	5.81e5	NO	2.214	2.214	
12378-PeCDF	29.841	1.001	1.86e4	1.30e4	0.836	1.433	1.550	45.0	6319	2228	2.84e5	2.05e5	NO	1.012	1.012	X
23478-PeCDF	31.189	1.000	2.66e4	1.68e4	0.851	1.580	1.550	61.2	6319	2228	3.87e5	2.58e5	NO	1.391	1.391	
123478-HxCDF	34.883	1.001	2.89e4	2.30e4	1.017	1.256	1.240	205.9	2119	1414	4.36e5	3.30e5	NO	2.033	2.033	X
234678-HxCDF	35.979	1.001	3.28e4	2.68e4	1.027	1.225	1.240	157.4	2119	1414	3.34e5	2.85e5	NO	2.624	2.624	X
123678-HxCDF	35.026	1.001	2.58e4	2.07e4	1.013	1.249	1.240	187.5	2119	1414	3.97e5	2.95e5	NO	1.773	1.773	
123789-HxCDF	37.086	1.000	6.03e3	5.09e3	0.929	1.184	1.240	37.2	2119	1414	7.89e4	7.29e4	NO	0.563	0.563	
1234678-HpCDF	39.191	1.000	2.08e5	2.03e5	1.151	1.021	1.050	940.0	3426	1978	3.22e6	3.11e6	NO	25.715	25.715	
1234789-HpCDF	41.833	1.000	1.10e4	9.97e3	1.149	1.108	1.050	40.0	3426	1978	1.37e5	1.34e5	NO	1.656	1.656	
OCDF	47.028	1.006	2.27e5	2.61e5	0.963	0.872	0.890	949.4	2326	1685	2.21e6	2.57e6	NO	82.002	82.002	
2378-TCDD	26.347	1.001	3.50e3	6.34e3	0.980	0.552	0.770	23.1	2325	2869	5.38e4	8.48e4	YES	0.268	0.328	
12378-PeCDD	31.441	1.000	2.40e4	1.54e4	0.948	1.563	1.550	176.5	1843	1653	3.25e5	2.00e5	NO	1.670	1.670	
123478-HxCDD	36.111	1.000	2.42e4	1.89e4	0.941	1.280	1.240	139.7	2486	3325	3.47e5	2.82e5	NO	2.248	2.248	
123678-HxCDD	36.242	1.001	5.87e4	4.95e4	0.884	1.186	1.240	357.5	2486	3325	8.89e5	7.58e5	NO	5.835	5.835	
123789-HxCDD	36.670	1.012	4.31e4	3.48e4	0.870	1.236	1.240	250.9	2486	3325	6.24e5	5.19e5	NO	4.336	4.336	
1234678-HpCDD	40.967	1.000	7.57e5	7.29e5	0.948	1.039	1.050	2432.9	4223	4145	1.03e7	9.93e6	NO	125.409	125.409	
OCDD	46.768	1.000	2 52e6	2.82e6	0.969	0.893	0.890	10245.9	2494	2710	2.56e7	2.89e7	NO	891.793	891.793	
13C-2378-TCDF	25.690	1.007	1.84e6	2.39e6	1.318	0.770	0.770	7108.9	3842	2723	2.73e7	3.53e7	NO		77.462	
13C-12378-PeCDF	29.819	1.169	2.27e6	1.45e6	1.026	1.567	1.550	9030.2	3787	3355	3.42e7	2.21e7	NO		87.510	
13C-23478-PeCDF	31.178	1.222	2.25e6	1.42e6	0.966	1.585	1.550	8814.2	3787	3355	3.34e7	2.13e7	NO		91.533	
13C-123478-HxCDF	34.861	0.951	8.59e5	1.65e6	1.123	0.520	0.510	2698.6	4748	4117	1.28e7	2.45e7	NO		91.753	
13C-123678-HxCDF	35.004	0.955	8.92e5	1.70e6	1.216	0.526	0.510	2780.1	4748	4117	1.32e7	2.51e7	NO		87.355	
13C-234678-HxCDF	35.957	0.981	7.51e5	1.46e6	1.106	0.515	0.510	2346.8	4748	4117	1.11e7	2.17e7	NO		81.979	
13C-123789-HxCDF	37.097	1.012	7.31e5	1.40e6	0.995	0.523	0.510	2205.5	4748	4117	1.05e7	2.03e7	NO		87.731	
13C-1234678-HpCDF	39.180	1.069	4.29e5	9.61e5	0.896	0.446	0.440	1912.8	3338	3574	6.38e6	1.41e7	NO		63.658	
13C-1234789-HpCDF	41.811	1.141	3.39e5	7.65e5	0.693	0.443	0.440	1302.2	3338	3574	4.35e6	9.91e6	NO		65.357	
13C-1234-TCDD	25.510	0.000	1.84e6	2.31e6	1.000	0.797	0.770	6437.3	4347	2425	2.80e7	3.50e7	NO		100.000	
13C-2378-TCDD	26.317	1.032	1.35e6	1.72e6	0.961	0.782	0.770	4641.5	4347	2425	2.02e7	2.58e7	NO		76.832	
13C-12378-PeCDD	31.430	1.232	1.52e6	9.61e5	0.703	1.586	1.550	6831.9	3384	2479	2.31e7	1.45e7	NO		85.087	
13C-123478-HxCDD	36.100	0.985	1.15e6	8.88e5	1.016	1.291	1.240	6851.4	2443	2611	1.67e7	1.33e7	NO		82.173	
13C-123678-HxCDD	36.220	0.988	1.15e6	9.48e5	1.098	1.212	1.240	7012.8	2443	2611	1.71e7	1.40e7	NO		78.318	
13C-1234678-HpCDD	40.945	1.117	6.39e5	6.11e5	0.828	1.046	1.050	3074.7	2819	1938	8.67e6	8.29e6	NO		61.905	
13C-OCDD	46.750	1.276	5.80e5	6.57e5	0.770	0.882	0.890	3797.8	1543	1585	5.86e6	6 62e6	NO		65.933	

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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ID: WN27A, Name: 13050712, Date: 07-May-2013, Time: 23:32:06, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	IonIArea	IonJArea	[illegible]	[illegible]	[illegible]	S/N	Noise 1	Noise 2	Height	[illegible]	[illegible]	[illegible]	pg
13C-123789-HxCDD	36.648	0.000	1.35e6	1.09e6	1.000	1.233	1.240	8117.0	2443	2611	1.98e7	1.59e7	NO		100.000
Total-tetrafurans			4.41e5		0.763				3706		5.93e6				31.270
Total-penta1			2.46e5						1881		3.32e6				11.945
Total-pentafurans			3.95e5		0.844				6319		5.54e6				21.015
Total-hexafurans			5.75e5		0.997				2119		8.20e6				43.973
Total-heptafurans			5.26e5		1.150				3426		7.84e6				69.584
Total-Furans			2.41e6		0.970				3706		3.31e7				259.932
Total-tetradioxins			1.37e5		0.980				2325		1.97e6				10.145
Total-pentadioxins			2.21e5		0.948				1843		2.89e6				15.352
Total-hexadioxins			6.27e5		0.898				2486		8.13e6				61.205
Total-heptadioxins			1.72e6		0.948				4223		2.44e7				285.557
Total-Dioxins			5.23e6		0.934				2325		6.29e7				1264.053
Total-TEQ			7.64e6						2325		9.60e7				1523.984
37CL-2378-TCDD	26.347	1.033	1.49e6		0.999			11197.5	1976		2.21e7				35.974
FUNCTION1 PFK			3.52e7						806721		1.54e8				
FUNCTION2 PFK			2.81e6						211334		1.46e7				0.000
FUNCTION3 PFK			1.94e6						556545		7.66e6				0.000
FUNCTION4 PFK			9.95e5						310856		1.82e6				
FUNCTION5 PFK			7.98e4						222186		3.34e6				
FUNCTION1 HXCDPE			1.62e4						1447		2.65e5				0.000
FUNCTION1 HPCDPE			1.77e3						1353		4.27e4				0.000
FUNCTION2 HPCDPE			9.42e3						1635		1.31e5				0.000
FUNCTION3 OCDPE			8.43e3						1329		2.11e5				0.000
FUNCTION4 NCDPE			1.63e7						3335		2.24e8				0.000
FUNCTION5 DCDPE			0.00e0						868		0.00e0				

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WN27A, Name: 13050712, Date: 07-May-2013, Time: 23:32:06, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Reli...	2° Reli...	2° R...	S/N
	35	Total-tetrafurans	303.9016	24.45	27407.043	0.763	0.848		0.93	0.77	YES	50.2
	35	Total-tetrafurans	303.9016	24.38	72828.541	0.763	2.253		0.70	0.77	NO	97.5
	35	Total-tetrafurans	303.9016	23.94	54958.556	0.763	1.701		0.73	0.77	NO	97.0
	35	Total-tetrafurans	303.9016	23.81	42815.213	0.763	1.325		0.70	0.77	NO	74.0
	35	Total-tetrafurans	303.9016	23.70	37008.000	0.763	1.145		0.87	0.77	NO	65.7
	35	Total-tetrafurans	303.9016	23.55	18134.272	0.763	0.561		0.68	0.77	NO	32.9
	35	Total-tetrafurans	303.9016	23.46	30913.387	0.763	0.957		0.70	0.77	NO	52.7
	35	Total-tetrafurans	303.9016	23.36	49671.941	0.763	1.537		0.95	0.77	YES	73.6
	35	Total-tetrafurans	303.9016	23.22	60893.750	0.763	1.884		0.70	0.77	NO	61.4
	35	Total-tetrafurans	303.9016	23.06	97052.770	0.763	3.003		0.75	0.77	NO	142.3
	35	Total-tetrafurans	303.9016	22.48	32245.054	0.763	0.998		0.74	0.77	NO	55.4
	35	Total-tetrafurans	303.9016	22.21	20105.207	0.763	0.622		0.63	0.77	YES	32.4
	35	Total-tetrafurans	303.9016	27.11	9172.030	0.763	0.284		0.85	0.77	NO	9.0
	35	Total-tetrafurans	303.9016	26.33	1613.372	0.763	0.050		0.61	0.77	YES	3.6
	35	Total-tetrafurans	303.9016	25.93	97413.851	0.763	3.014		0.81	0.77	NO	163.2
	35	Total-tetrafurans	303.9016	25.84	34587.518	0.763	1.070		0.82	0.77	NO	61.6
	1	2378-TCDF	303.9016	25.70	71551.920	0.763	2.214	2.214	0.81	0.77	NO	126.5
	35	Total-tetrafurans	303.9016	25.47	60335.791	0.763	1.867		0.83	0.77	NO	70.0
	35	Total-tetrafurans	303.9016	25.35	6941.596	0.763	0.215		0.66	0.77	NO	10.2
	35	Total-tetrafurans	303.9016	25.20	24165.923	0.763	0.748		0.77	0.77	NO	37.9
	35	Total-tetrafurans	303.9016	25.02	35149.140	0.763	1.088		0.73	0.77	NO	63.0
	35	Total-tetrafurans	303.9016	24.79	50113.678	0.763	1.551		0.75	0.77	NO	91.5
	35	Total-tetrafurans	303.9016	24.61	75550.297	0.763	2.338		0.83	0.77	NO	127.7

PP

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Reli...	2° Reli...	2° R...	S/N
	36	Total-penta1	339.8597	27.12	405002.203		11.945		1.54	1.55	NO	1766.7

ID: WN27A, Name: 13050712, Date: 07-May-2013, Time: 23:32:06, Conditions: AUTOSPEC01, User: pk

PF

	#	Name	Trace	RT	Abs Area	RRF M...	ng	EMPC	1° Ratio	1° Rat...	1° R...	S/N
	37	Total-pentafurans	339.8597	29.38	10540.131	0.844	0.338		1.65	1.55	NO	14.7
	37	Total-pentafurans	339.8597	29.26	21047.714	0.844	0.675		1.53	1.55	NO	24.7
	37	Total-pentafurans	339.8597	29.06	7179.542	0.844	0.230		1.62	1.55	NO	11.3
	37	Total-pentafurans	339.8597	28.89	3189.139	0.844	0.102		2.16	1.55	YES	5.5
	37	Total-pentafurans	339.8597	28.77	119940.242	0.844	3.845		1.55	1.55	NO	190.2
	37	Total-pentafurans	339.8597	28.70	108128.625	0.844	3.466		1.52	1.55	NO	161.8
	37	Total-pentafurans	339.8597	28.57	89785.434	0.844	2.878		1.47	1.55	NO	86.3
	37	Total-pentafurans	339.8597	32.22	3523.507	0.844	0.113		1.20	1.55	YES	4.9
	3	23478-PeCDF	339.8597	31.19	43433.404	0.851	1.391	1.391	1.58	1.55	NO	61.2
	37	Total-pentafurans	339.8597	31.02	22262.694	0.844	0.714		1.58	1.55	NO	29.5
	37	Total-pentafurans	339.8597	30.92	43030.752	0.844	1.380		1.41	1.55	NO	60.3
	37	Total-pentafurans	339.8597	30.67	4451.703	0.844	0.143		1.67	1.55	NO	6.7
	37	Total-pentafurans	339.8597	30.59	1357.582	0.844	0.044		4.39	1.55	YES	2.6
	37	Total-pentafurans	339.8597	30.31	2296.350	0.844	0.074		1.53	1.55	NO	3.1
	37	Total-pentafurans	339.8597	30.15	19190.021	0.844	0.615		1.39	1.55	NO	27.5
	37	Total-pentafurans	339.8597	30.04	34431.647	0.844	1.104		1.51	1.55	NO	47.0
	2	12378-PeCDF	339.8597	29.84	31520.289	0.836	1.012	1.012	1.43	1.55	NO	45.0
	37	Total-pentafurans	339.8597	29.49	90216.617	0.844	2.892		1.50	1.55	NO	94.4

HF

	#	Name	Trace	RT	Abs Area	RRF M...	ng	EMPC	1° Rat...	1° Rat...	1° R...	S/N
	38	Total-hexafurans	373.8208	35.39	5968.716	0.997	0.254		1.53	1.24	YES	27.2
	38	Total-hexafurans	373.8208	35.24	3697.338	0.997	0.157		0.96	1.24	YES	12.2
	6	123678-HxCDF	373.8208	35.03	46467.051	1.013	1.773	1.773	1.25	1.24	NO	187.5
	4	123478-HxCDF	373.8208	34.88	51911.873	1.017	2.033	2.033	1.26	1.24	NO	205.9
	38	Total-hexafurans	373.8208	34.71	31548.266	0.997	1.342		1.16	1.24	NO	116.9
	38	Total-hexafurans	373.8208	34.23	251871.859	0.997	10.716		1.26	1.24	NO	985.2
	38	Total-hexafurans	373.8208	33.91	16748.065	0.997	0.713		1.24	1.24	NO	68.3
	38	Total-hexafurans	373.8208	33.62	4723.202	0.997	0.201		0.63	1.24	YES	16.9
	38	Total-hexafurans	373.8208	33.37	428203.469	0.997	18.218		1.24	1.24	NO	1540.2
	38	Total-hexafurans	373.8208	33.15	121779.492	0.997	5.181		1.24	1.24	NO	493.0
	7	123789-HxCDF	373.8208	37.09	11121.822	0.929	0.563	0.563	1.18	1.24	NO	37.2
	5	234678-HxCDF	373.8208	35.98	59530.320	1.027	2.624	2.624	1.22	1.24	NO	157.4
	38	Total-hexafurans	373.8208	35.58	4641.415	0.997	0.197		1.60	1.24	YES	21.0

HPF

	#	Name	Trace	RT	Abs Area	RRF M...	ng	EMPC	1° Rat...	1° Rat...	1° R...	S/N
	9	1234789-HpCDF	407.7818	41.83	21016.651	1.149	1.656	1.656	1.11	1.05	NO	40.0
	39	Total-heptafurans	407.7818	39.96	590797.438	1.150	41.199		1.03	1.05	NO	1277.3
	39	Total-heptafurans	407.7818	39.66	14531.687	1.150	1.013		0.98	1.05	NO	30.8
	8	1234678-HpCDF	407.7818	39.19	411303.734	1.151	25.715	25.715	1.02	1.05	NO	940.0

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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D: WN27A, Name: 13050712, Date: 07-May-2013, Time: 23:32:06, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Area	RRF M...	ng	EMPC	1° Rat...	1° Rat...	1° R...	S/N
	35	Total-tetrafurans	303.9016	24.45	27407.043	0.763	0.848		0.93	0.77	YES	50.2
	35	Total-tetrafurans	303.9016	24.38	72828.541	0.763	2.253		0.70	0.77	NO	97.5
	35	Total-tetrafurans	303.9016	23.94	54958.556	0.763	1.701		0.73	0.77	NO	97.0
	35	Total-tetrafurans	303.9016	23.81	42815.213	0.763	1.325		0.70	0.77	NO	74.0
	35	Total-tetrafurans	303.9016	23.70	37008.000	0.763	1.145		0.87	0.77	NO	65.7
	35	Total-tetrafurans	303.9016	23.55	18134.272	0.763	0.561		0.68	0.77	NO	32.9
	35	Total-tetrafurans	303.9016	23.46	30913.387	0.763	0.957		0.70	0.77	NO	52.7
	35	Total-tetrafurans	303.9016	23.36	49671.941	0.763	1.537		0.95	0.77	YES	73.6
	35	Total-tetrafurans	303.9016	23.22	60893.750	0.763	1.884		0.70	0.77	NO	61.4
	35	Total-tetrafurans	303.9016	23.06	97052.770	0.763	3.003		0.75	0.77	NO	142.3
	35	Total-tetrafurans	303.9016	22.48	32245.054	0.763	0.998		0.74	0.77	NO	55.4
	35	Total-tetrafurans	303.9016	22.21	20105.207	0.763	0.622		0.63	0.77	YES	32.4
	40	Total-Furans	303.9016	27.83	5876.500	0.970	0.143		0.69	0.77	NO	9.8
	35	Total-tetrafurans	303.9016	27.11	9172.030	0.763	0.284		0.85	0.77	NO	9.0
	35	Total-tetrafurans	303.9016	26.33	1613.372	0.763	0.050		0.61	0.77	YES	3.6
	35	Total-tetrafurans	303.9016	25.93	97413.851	0.763	3.014		0.81	0.77	NO	163.2
	35	Total-tetrafurans	303.9016	25.84	34587.518	0.763	1.070		0.82	0.77	NO	61.6
	1	2378-TCDF	303.9016	25.70	71551.920	0.763	2.214	2.214	0.81	0.77	NO	126.5
	35	Total-tetrafurans	303.9016	25.47	60335.791	0.763	1.867		0.83	0.77	NO	70.0
	35	Total-tetrafurans	303.9016	25.35	6941.596	0.763	0.215		0.66	0.77	NO	10.2
	35	Total-tetrafurans	303.9016	25.20	24165.923	0.763	0.748		0.77	0.77	NO	37.9
	35	Total-tetrafurans	303.9016	25.02	35149.140	0.763	1.088		0.73	0.77	NO	63.0
	35	Total-tetrafurans	303.9016	24.79	50113.678	0.763	1.551		0.75	0.77	NO	91.5
	35	Total-tetrafurans	303.9016	24.61	75550.297	0.763	2.338		0.83	0.77	NO	127.7
	37	Total-pentafurans	339.8597	29.38	10540.131	0.844	0.338		1.65	1.55	NO	14.7
	37	Total-pentafurans	339.8597	29.26	21047.714	0.844	0.675		1.53	1.55	NO	24.7
	37	Total-pentafurans	339.8597	29.06	7179.542	0.844	0.230		1.62	1.55	NO	11.3
	37	Total-pentafurans	339.8597	28.89	3189.139	0.844	0.102		2.16	1.55	YES	5.5
	37	Total-pentafurans	339.8597	28.77	119940.242	0.844	3.845		1.55	1.55	NO	190.2
	37	Total-pentafurans	339.8597	28.70	108128.625	0.844	3.466		1.52	1.55	NO	161.8
	37	Total-pentafurans	339.8597	28.57	89785.434	0.844	2.878		1.47	1.55	NO	86.3
	37	Total-pentafurans	339.8597	32.22	3523.507	0.844	0.113		1.20	1.55	YES	4.9
	3	23478-PeCDF	339.8597	31.19	43433.404	0.851	1.391	1.391	1.58	1.55	NO	61.2
	37	Total-pentafurans	339.8597	31.02	22262.694	0.844	0.714		1.58	1.55	NO	29.5
	37	Total-pentafurans	339.8597	30.92	43030.752	0.844	1.380		1.41	1.55	NO	60.3
	37	Total-pentafurans	339.8597	30.67	4451.703	0.844	0.143		1.67	1.55	NO	6.7
	37	Total-pentafurans	339.8597	30.59	1357.582	0.844	0.044		4.39	1.55	YES	2.6
	37	Total-pentafurans	339.8597	30.31	2296.350	0.844	0.074		1.53	1.55	NO	3.1
	37	Total-pentafurans	339.8597	30.15	19190.021	0.844	0.615		1.39	1.55	NO	27.5
	37	Total-pentafurans	339.8597	30.04	34431.647	0.844	1.104		1.51	1.55	NO	47.0
	2	12378-PeCDF	339.8597	29.84	31520.289	0.836	1.012	1.012	1.43	1.55	NO	45.0
	37	Total-pentafurans	339.8597	29.49	90216.617	0.844	2.892		1.50	1.55	NO	94.4
	38	Total-hexafurans	373.8208	35.39	5968.716	0.997	0.254		1.53	1.24	YES	27.2
	38	Total-hexafurans	373.8208	35.24	3697.338	0.997	0.157		0.96	1.24	YES	12.2
	6	123678-HxCDF	373.8208	35.03	46467.051	1.013	1.773	1.773	1.25	1.24	NO	187.5
	4	123478-HxCDF	373.8208	34.88	51911.873	1.017	2.033	2.033	1.26	1.24	NO	205.9
	38	Total-hexafurans	373.8208	34.71	31548.266	0.997	1.342		1.16	1.24	NO	116.9
	38	Total-hexafurans	373.8208	34.23	251871.859	0.997	10.716		1.26	1.24	NO	985.2
	38	Total-hexafurans	373.8208	33.91	16748.065	0.997	0.713		1.24	1.24	NO	68.3

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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs Resp	RRF M...	% pg	EMPC	1° Rati...	2° Rati...	T.R...	S/N
	38	Total-hexafurans	373.8208	33.62	4723.202	0.997	0.201		0.63	1.24	YES	16.9
	38	Total-hexafurans	373.8208	33.37	428203.469	0.997	18.218		1.24	1.24	NO	1540.2
	38	Total-hexafurans	373.8208	33.15	121779.492	0.997	5.181		1.24	1.24	NO	493.0
	7	123789-HxCDF	373.8208	37.09	11121.822	0.929	0.563	0.563	1.18	1.24	NO	37.2
	5	234678-HxCDF	373.8208	35.98	59530.320	1.027	2.624	2.624	1.22	1.24	NO	157.4
	38	Total-hexafurans	373.8208	35.58	4641.415	0.997	0.197		1.60	1.24	YES	21.0
	9	1234789-HpCDF	407.7818	41.83	21016.651	1.149	1.656	1.656	1.11	1.05	NO	40.0
	39	Total-heptafurans	407.7818	39.96	590797.438	1.150	41.199		1.03	1.05	NO	1277.3
	39	Total-heptafurans	407.7818	39.66	14531.687	1.150	1.013		0.98	1.05	NO	30.8
	8	1234678-HpCDF	407.7818	39.19	411303.734	1.151	25.715	25.715	1.02	1.05	NO	940.0
	10	OCDF	441.7428	47.03	488440.438	0.963	82.002	82.002	0.87	0.89	NO	949.4
	36	Total-penta1	339.8597	27.12	405002.203		11.945		1.54	1.55	NO	1766.7

TD

	#	Name	Trace	RT	Abs Resp	RRF M...	% pg	EMPC	1° Rati...	2° Rati...	T.R...	S/N
	41	Total-tetradioxins	319.8965	23.76	64500.754	0.980	2.147		0.85	0.77	NO	187.9
	41	Total-tetradioxins	319.8965	23.49	94294.715	0.980	3.139		0.81	0.77	NO	274.4
	41	Total-tetradioxins	319.8965	26.90	15527.983	0.980	0.517		0.94	0.77	YES	42.2
	41	Total-tetradioxins	319.8965	26.47	9045.854	0.980	0.301		0.89	0.77	YES	25.7
	11	2378-TCDD	319.8965	26.35	9844.710	0.980	0.328	0.268	0.55	0.77	YES	23.1
	41	Total-tetradioxins	319.8965	25.97	22646.568	0.980	0.754		0.76	0.77	NO	47.3
	41	Total-tetradioxins	319.8965	25.67	3907.858	0.980	0.130		1.24	0.77	YES	12.4
	41	Total-tetradioxins	319.8965	25.53	10381.578	0.980	0.346		0.77	0.77	NO	30.1
	41	Total-tetradioxins	319.8965	25.32	9776.345	0.980	0.325		0.80	0.77	NO	29.3
	41	Total-tetradioxins	319.8965	25.21	2583.237	0.980	0.086		0.58	0.77	YES	6.4
	41	Total-tetradioxins	319.8965	24.96	26843.757	0.980	0.893		0.83	0.77	NO	75.9
	41	Total-tetradioxins	319.8965	24.67	20784.088	0.980	0.692		0.79	0.77	NO	49.2
	41	Total-tetradioxins	319.8965	24.48	6148.784	0.980	0.205		1.04	0.77	YES	18.7
	41	Total-tetradioxins	319.8965	23.97	8515.226	0.980	0.283		0.91	0.77	YES	24.2

PD

	#	Name	Trace	RT	Abs Resp	RRF M...	% pg	EMPC	1° Rati...	2° Rati...	T.R...	S/N
	42	Total-pentadioxins	355.8546	31.85	10397.518	0.948	0.441		1.39	1.55	NO	49.2
	12	12378-PeCDD	355.8546	31.44	39345.766	0.948	1.670	1.670	1.56	1.55	NO	176.5
	42	Total-pentadioxins	355.8546	30.77	25465.500	0.948	1.081		1.46	1.55	NO	114.9
	42	Total-pentadioxins	355.8546	30.38	33058.824	0.948	1.403		1.65	1.55	NO	113.5
	42	Total-pentadioxins	355.8546	30.20	45504.516	0.948	1.932		1.58	1.55	NO	220.0
	42	Total-pentadioxins	355.8546	30.07	30361.972	0.948	1.289		1.60	1.55	NO	168.9
	42	Total-pentadioxins	355.8546	29.85	58138.254	0.948	2.468		1.55	1.55	NO	301.4
	42	Total-pentadioxins	355.8546	29.23	16980.742	0.948	0.721		1.66	1.55	NO	86.9
	42	Total-pentadioxins	355.8546	28.76	102397.527	0.948	4.347		1.58	1.55	NO	337.1

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HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	#EMPC	1° Rati...	1° Rati...	1° R...	S/N
	15	123789-HxCDD	389.8157	36.67	77889.585	0.870	4.336	4.336	1.24	1.24	NO	250.9
	43	Total-hexadioxins	389.8157	36.42	29446.681	0.898	1.587		1.27	1.24	NO	108.6
	14	123678-HxCDD	389.8157	36.24	108136.797	0.884	5.835	5.835	1.19	1.24	NO	357.5
	13	123478-HxCDD	389.8157	36.11	43025.936	0.941	2.248	2.248	1.28	1.24	NO	139.7
	43	Total-hexadioxins	389.8157	35.26	33113.803	0.898	1.785		1.16	1.24	NO	120.9
	43	Total-hexadioxins	389.8157	35.15	419539.516	0.898	22.615		1.23	1.24	NO	903.4
	43	Total-hexadioxins	389.8157	34.76	148839.742	0.898	8.023		1.23	1.24	NO	493.9
	43	Total-hexadioxins	389.8157	33.95	274111.969	0.898	14.776		1.26	1.24	NO	897.4

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	#EMPC	1° Rati...	1° Rati...	1° R...	S/N
	16	1234678-HpCDD	423.7766	40.97	1485498.376	0.948	125.409	125....	1.04	1.05	NO	2432.9
	44	Total-heptadioxins	423.7766	39.73	1896997.938	0.948	160.149		1.04	1.05	NO	3343.4

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Dioxins,TD,PD,HD,HPD,OD

[redacted]	#	Name	Time	RT	Abs Resp	REF RA	Bo	EMPC	1° Ratio	1° Ratio	1° R...	S/N
[redacted]	41	Total-tetradioxins	319.8965	23.76	64500.754	0.980	2.147		0.85	0.77	NO	187.9
[redacted]	41	Total-tetradioxins	319.8965	23.49	94294.715	0.980	3.139		0.81	0.77	NO	274.4
[redacted]	41	Total-tetradioxins	319.8965	26.90	15527.983	0.980	0.517		0.94	0.77	YES	42.2
[redacted]	41	Total-tetradioxins	319.8965	26.47	9045.854	0.980	0.301		0.89	0.77	YES	25.7
[redacted]	11	2378-TCDD	319.8965	26.35	9844.710	0.980	0.328	0.268	0.55	0.77	YES	23.1
[redacted]	41	Total-tetradioxins	319.8965	25.97	22646.568	0.980	0.754		0.76	0.77	NO	47.3
[redacted]	41	Total-tetradioxins	319.8965	25.67	3907.858	0.980	0.130		1.24	0.77	YES	12.4
[redacted]	41	Total-tetradioxins	319.8965	25.53	10381.578	0.980	0.346		0.77	0.77	NO	30.1
[redacted]	41	Total-tetradioxins	319.8965	25.32	9776.345	0.980	0.325		0.80	0.77	NO	29.3
[redacted]	41	Total-tetradioxins	319.8965	25.21	2583.237	0.980	0.086		0.58	0.77	YES	6.4
[redacted]	41	Total-tetradioxins	319.8965	24.96	26843.757	0.980	0.893		0.83	0.77	NO	75.9
[redacted]	41	Total-tetradioxins	319.8965	24.67	20784.088	0.980	0.692		0.79	0.77	NO	49.2
[redacted]	41	Total-tetradioxins	319.8965	24.48	6148.784	0.980	0.205		1.04	0.77	YES	18.7
[redacted]	41	Total-tetradioxins	319.8965	23.97	8515.226	0.980	0.283		0.91	0.77	YES	24.2
[redacted]	42	Total-pentadioxins	355.8546	31.85	10397.518	0.948	0.441		1.39	1.55	NO	49.2
[redacted]	12	12378-PeCDD	355.8546	31.44	39345.766	0.948	1.670	1.670	1.56	1.55	NO	176.5
[redacted]	42	Total-pentadioxins	355.8546	30.77	25465.500	0.948	1.081		1.46	1.55	NO	114.9
[redacted]	42	Total-pentadioxins	355.8546	30.38	33058.824	0.948	1.403		1.65	1.55	NO	113.5
[redacted]	42	Total-pentadioxins	355.8546	30.20	45504.516	0.948	1.932		1.58	1.55	NO	220.0
[redacted]	42	Total-pentadioxins	355.8546	30.07	30361.972	0.948	1.289		1.60	1.55	NO	168.9
[redacted]	42	Total-pentadioxins	355.8546	29.85	58138.254	0.948	2.468		1.55	1.55	NO	301.4
[redacted]	42	Total-pentadioxins	355.8546	29.23	16980.742	0.948	0.721		1.66	1.55	NO	86.9
[redacted]	42	Total-pentadioxins	355.8546	28.76	102397.527	0.948	4.347		1.58	1.55	NO	337.1
[redacted]	15	123789-HxCDD	389.8157	36.67	77889.585	0.870	4.336	4.336	1.24	1.24	NO	250.9
[redacted]	43	Total-hexadioxins	389.8157	36.42	29446.681	0.898	1.587		1.27	1.24	NO	108.6
[redacted]	14	123678-HxCDD	389.8157	36.24	108136.797	0.884	5.835	5.835	1.19	1.24	NO	357.5
[redacted]	13	123478-HxCDD	389.8157	36.11	43025.936	0.941	2.248	2.248	1.28	1.24	NO	139.7
[redacted]	43	Total-hexadioxins	389.8157	35.26	33113.803	0.898	1.785		1.16	1.24	NO	120.9
[redacted]	43	Total-hexadioxins	389.8157	35.15	419539.516	0.898	22.615		1.23	1.24	NO	903.4
[redacted]	43	Total-hexadioxins	389.8157	34.76	148839.742	0.898	8.023		1.23	1.24	NO	493.9
[redacted]	43	Total-hexadioxins	389.8157	33.95	274111.969	0.898	14.776		1.26	1.24	NO	897.4
[redacted]	16	1234678-HpCDD	423.7766	40.97	1485498.376	0.948	125.409	125....	1.04	1.05	NO	2432.9
[redacted]	44	Total-heptadioxins	423.7766	39.73	1896997.938	0.948	160.149		1.04	1.05	NO	3343.4
[redacted]	17	OCDD	457.7377	46.77	5345345.500	0.969	891.793	891....	0.89	0.89	NO	10245.9

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TotalTEQ,Furans,Dioxins

#	Name	Trace	RT	Abs Resp	RRF M...	ng	EMPC	TE Rati...	1* Rati...	1* R...	S/N
35	Total-tetrafurans	303.9016	24.45	27407.043	0.763	0.848		0.93	0.77	YES	50.2
35	Total-tetrafurans	303.9016	24.38	72828.541	0.763	2.253		0.70	0.77	NO	97.5
35	Total-tetrafurans	303.9016	23.94	54958.556	0.763	1.701		0.73	0.77	NO	97.0
35	Total-tetrafurans	303.9016	23.81	42815.213	0.763	1.325		0.70	0.77	NO	74.0
35	Total-tetrafurans	303.9016	23.70	37008.000	0.763	1.145		0.87	0.77	NO	65.7
35	Total-tetrafurans	303.9016	23.55	18134.272	0.763	0.561		0.68	0.77	NO	32.9
35	Total-tetrafurans	303.9016	23.46	30913.387	0.763	0.957		0.70	0.77	NO	52.7
35	Total-tetrafurans	303.9016	23.36	49671.941	0.763	1.537		0.95	0.77	YES	73.6
35	Total-tetrafurans	303.9016	23.22	60893.750	0.763	1.884		0.70	0.77	NO	61.4
35	Total-tetrafurans	303.9016	23.06	97052.770	0.763	3.003		0.75	0.77	NO	142.3
35	Total-tetrafurans	303.9016	22.48	32245.054	0.763	0.998		0.74	0.77	NO	55.4
35	Total-tetrafurans	303.9016	22.21	20105.207	0.763	0.622		0.63	0.77	YES	32.4
40	Total-Furans	303.9016	27.83	5876.500	0.970	0.143		0.69	0.77	NO	9.8
35	Total-tetrafurans	303.9016	27.11	9172.030	0.763	0.284		0.85	0.77	NO	9.0
35	Total-tetrafurans	303.9016	26.33	1613.372	0.763	0.050		0.61	0.77	YES	3.6
35	Total-tetrafurans	303.9016	25.93	97413.851	0.763	3.014		0.81	0.77	NO	163.2
35	Total-tetrafurans	303.9016	25.84	34587.518	0.763	1.070		0.82	0.77	NO	61.6
1	2378-TCDF	303.9016	25.70	71551.920	0.763	2.214	2.214	0.81	0.77	NO	126.5
35	Total-tetrafurans	303.9016	25.47	60335.791	0.763	1.867		0.83	0.77	NO	70.0
35	Total-tetrafurans	303.9016	25.35	6941.596	0.763	0.215		0.66	0.77	NO	10.2
35	Total-tetrafurans	303.9016	25.20	24165.923	0.763	0.748		0.77	0.77	NO	37.9
35	Total-tetrafurans	303.9016	25.02	35149.140	0.763	1.088		0.73	0.77	NO	63.0
35	Total-tetrafurans	303.9016	24.79	50113.678	0.763	1.551		0.75	0.77	NO	91.5
35	Total-tetrafurans	303.9016	24.61	75550.297	0.763	2.338		0.83	0.77	NO	127.7
37	Total-pentafurans	339.8597	29.38	10540.131	0.844	0.338		1.65	1.55	NO	14.7
37	Total-pentafurans	339.8597	29.26	21047.714	0.844	0.675		1.53	1.55	NO	24.7
37	Total-pentafurans	339.8597	29.06	7179.542	0.844	0.230		1.62	1.55	NO	11.3
37	Total-pentafurans	339.8597	28.89	3189.139	0.844	0.102		2.16	1.55	YES	5.5
37	Total-pentafurans	339.8597	28.77	119940.242	0.844	3.845		1.55	1.55	NO	190.2
37	Total-pentafurans	339.8597	28.70	108128.625	0.844	3.466		1.52	1.55	NO	161.8
37	Total-pentafurans	339.8597	28.57	89785.434	0.844	2.878		1.47	1.55	NO	86.3
37	Total-pentafurans	339.8597	32.22	3523.507	0.844	0.113		1.20	1.55	YES	4.9
3	23478-PeCDF	339.8597	31.19	43433.404	0.851	1.391	1.391	1.58	1.55	NO	61.2
37	Total-pentafurans	339.8597	31.02	22262.694	0.844	0.714		1.58	1.55	NO	29.5
37	Total-pentafurans	339.8597	30.92	43030.752	0.844	1.380		1.41	1.55	NO	60.3
37	Total-pentafurans	339.8597	30.67	4451.703	0.844	0.143		1.67	1.55	NO	6.7
37	Total-pentafurans	339.8597	30.59	1357.582	0.844	0.044		4.39	1.55	YES	2.6
37	Total-pentafurans	339.8597	30.31	2296.350	0.844	0.074		1.53	1.55	NO	3.1
37	Total-pentafurans	339.8597	30.15	19190.021	0.844	0.615		1.39	1.55	NO	27.5
37	Total-pentafurans	339.8597	30.04	34431.647	0.844	1.104		1.51	1.55	NO	47.0
2	12378-PeCDF	339.8597	29.84	31520.289	0.836	1.012	1.012	1.43	1.55	NO	45.0
37	Total-pentafurans	339.8597	29.49	90216.617	0.844	2.892		1.50	1.55	NO	94.4
38	Total-hexafurans	373.8208	35.39	5968.716	0.997	0.254		1.53	1.24	YES	27.2
38	Total-hexafurans	373.8208	35.24	3697.338	0.997	0.157		0.96	1.24	YES	12.2
6	123678-HxCDF	373.8208	35.03	46467.051	1.013	1.773	1.773	1.25	1.24	NO	187.5
4	123478-HxCDF	373.8208	34.88	51911.873	1.017	2.033	2.033	1.26	1.24	NO	205.9
38	Total-hexafurans	373.8208	34.71	31548.266	0.997	1.342		1.16	1.24	NO	116.9
38	Total-hexafurans	373.8208	34.23	251871.859	0.997	10.716		1.26	1.24	NO	985.2
38	Total-hexafurans	373.8208	33.91	16748.065	0.997	0.713		1.24	1.24	NO	68.3

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TotalTEQ,Furans,Dioxins

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
38	Total-hexafurans	373.8208	33.62	4723.202	0.997	0.201		0.63	1.24	YES	16.9
38	Total-hexafurans	373.8208	33.37	428203.469	0.997	18.218		1.24	1.24	NO	1540.2
38	Total-hexafurans	373.8208	33.15	121779.492	0.997	5.181		1.24	1.24	NO	493.0
7	123789-HxCDF	373.8208	37.09	11121.822	0.929	0.563	0.563	1.18	1.24	NO	37.2
5	234678-HxCDF	373.8208	35.98	59530.320	1.027	2.624	2.624	1.22	1.24	NO	157.4
38	Total-hexafurans	373.8208	35.58	4641.415	0.997	0.197		1.60	1.24	YES	21.0
9	1234789-HpCDF	407.7818	41.83	21016.651	1.149	1.656	1.656	1.11	1.05	NO	40.0
39	Total-heptafurans	407.7818	39.96	590797.438	1.150	41.199		1.03	1.05	NO	1277.3
39	Total-heptafurans	407.7818	39.66	14531.687	1.150	1.013		0.98	1.05	NO	30.8
8	1234678-HpCDF	407.7818	39.19	411303.734	1.151	25.715	25.715	1.02	1.05	NO	940.0
10	OCDF	441.7428	47.03	488440.438	0.963	82.002	82.002	0.87	0.89	NO	949.4
36	Total-penta1	339.8597	27.12	405002.203		11.945		1.54	1.55	NO	1766.7
41	Total-tetradioxins	319.8965	23.76	64500.754	0.980	2.147		0.85	0.77	NO	187.9
41	Total-tetradioxins	319.8965	23.49	94294.715	0.980	3.139		0.81	0.77	NO	274.4
41	Total-tetradioxins	319.8965	26.90	15527.983	0.980	0.517		0.94	0.77	YES	42.2
41	Total-tetradioxins	319.8965	26.47	9045.854	0.980	0.301		0.89	0.77	YES	25.7
11	2378-TCDD	319.8965	26.35	9844.710	0.980	0.328	0.268	0.55	0.77	YES	23.1
41	Total-tetradioxins	319.8965	25.97	22646.568	0.980	0.754		0.76	0.77	NO	47.3
41	Total-tetradioxins	319.8965	25.67	3907.858	0.980	0.130		1.24	0.77	YES	12.4
41	Total-tetradioxins	319.8965	25.53	10381.578	0.980	0.346		0.77	0.77	NO	30.1
41	Total-tetradioxins	319.8965	25.32	9776.345	0.980	0.325		0.80	0.77	NO	29.3
41	Total-tetradioxins	319.8965	25.21	2583.237	0.980	0.086		0.58	0.77	YES	6.4
41	Total-tetradioxins	319.8965	24.96	26843.757	0.980	0.893		0.83	0.77	NO	75.9
41	Total-tetradioxins	319.8965	24.67	20784.088	0.980	0.692		0.79	0.77	NO	49.2
41	Total-tetradioxins	319.8965	24.48	6148.784	0.980	0.205		1.04	0.77	YES	18.7
41	Total-tetradioxins	319.8965	23.97	8515.226	0.980	0.283		0.91	0.77	YES	24.2
42	Total-pentadioxins	355.8546	31.85	10397.518	0.948	0.441		1.39	1.55	NO	49.2
12	12378-PeCDD	355 8546	31.44	39345.766	0.948	1.670	1.670	1.56	1.55	NO	176.5
42	Total-pentadioxins	355.8546	30.77	25465.500	0.948	1.081		1.46	1.55	NO	114.9
42	Total-pentadioxins	355.8546	30.38	33058.824	0.948	1.403		1.65	1.55	NO	113.5
42	Total-pentadioxins	355.8546	30.20	45504.516	0.948	1.932		1.58	1.55	NO	220.0
42	Total-pentadioxins	355.8546	30.07	30361.972	0.948	1.289		1.60	1.55	NO	168.9
42	Total-pentadioxins	355.8546	29.85	58138.254	0.948	2.468		1.55	1.55	NO	301.4
42	Total-pentadioxins	355.8546	29.23	16980.742	0.948	0.721		1.66	1.55	NO	86.9
42	Total-pentadioxins	355.8546	28.76	102397.527	0.948	4.347		1.58	1.55	NO	337.1
15	123789-HxCDD	389.8157	36.67	77889.585	0.870	4.336	4.336	1.24	1.24	NO	250.9
43	Total-hexadioxins	389.8157	36.42	29446.681	0.898	1.587		1.27	1.24	NO	108.6
14	123678-HxCDD	389.8157	36.24	108136.797	0.884	5.835	5.835	1.19	1.24	NO	357.5
13	123478-HxCDD	389.8157	36.11	43025.936	0.941	2.248	2.248	1.28	1.24	NO	139.7
43	Total-hexadioxins	389.8157	35.26	33113.803	0.898	1.785		1.16	1.24	NO	120.9
43	Total-hexadioxins	389.8157	35.15	419539.516	0.898	22.615		1.23	1.24	NO	903.4
43	Total-hexadioxins	389.8157	34.76	148839.742	0.898	8.023		1.23	1.24	NO	493.9
43	Total-hexadioxins	389.8157	33.95	274111.969	0.898	14.776		1.26	1.24	NO	897.4
16	1234678-HpCDD	423.7766	40.97	1485498.376	0.948	125.409	125....	1.04	1.05	NO	2432.9
44	Total-heptadioxins	423.7766	39.73	1896997.938	0.948	160.149		1.04	1.05	NO	3343.4
17	OCDD	457.7377	46.77	5345345.500	0.969	891.793	891....	0.89	0.89	NO	10245.9

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PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	23.90	0.000							4.0
2	48	FUNCTION1 PFK	330.9792	23.21	0.000							1.9
3	48	FUNCTION1 PFK	330.9792	23.09	0.000							1.7
4	48	FUNCTION1 PFK	330.9792	22.52	0.000							5.0
5	48	FUNCTION1 PFK	330.9792	22.19	0.000							16.8
6	48	FUNCTION1 PFK	330.9792	21.39	0.000							40.6
7	48	FUNCTION1 PFK	330.9792	21.22	0.000							46.7
8	48	FUNCTION1 PFK	330.9792	21.15	0.000							49.3
9	48	FUNCTION1 PFK	330.9792	27.27	0.000							3.1
10	48	FUNCTION1 PFK	330.9792	27.18	0.000							4.3
11	48	FUNCTION1 PFK	330.9792	27.05	0.000							6.4
12	48	FUNCTION1 PFK	330.9792	26.50	0.000							1.7
13	48	FUNCTION1 PFK	330.9792	25.82	0.000							2.2
14	48	FUNCTION1 PFK	330.9792	25.61	0.000							2.8
15	48	FUNCTION1 PFK	330.9792	25.20	0.000							1.4
16	48	FUNCTION1 PFK	330.9792	24.40	0.000							1.0
17	48	FUNCTION1 PFK	330.9792	24.20	0.000							2.0

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	32.26	0.000		0.000					9.0
2	49	FUNCTION2 PFK	366.9792	31.92	0.000		0.000					6.4
3	49	FUNCTION2 PFK	366.9792	29.61	0.000		0.000					12.7
4	49	FUNCTION2 PFK	366.9792	28.76	0.000		0.000					9.0
5	49	FUNCTION2 PFK	366.9792	28.27	0.000		0.000					18.4
6	49	FUNCTION2 PFK	366.9792	28.12	0.000		0.000					13.4

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	36.56	0.000		0.000					3.6
2	50	FUNCTION3 PFK	380.9760	34.46	0.000		0.000					10.1

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	39.15	0.000							5.8

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PFK5

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	52	FUNCTION5 PFK	480.9696	48.28	0.000							0.5
	52	FUNCTION5 PFK	480.9696	48.14	0.000							1.6
	52	FUNCTION5 PFK	480.9696	47.96	0.000							0.8
	52	FUNCTION5 PFK	480.9696	47.69	0.000							1.6
	52	FUNCTION5 PFK	480.9696	47.16	0.000							1.5
	52	FUNCTION5 PFK	480.9696	46.47	0.000							2.4
	52	FUNCTION5 PFK	480.9696	46.02	0.000							0.9
	52	FUNCTION5 PFK	480.9696	45.21	0.000							0.5
	52	FUNCTION5 PFK	480.9696	45.12	0.000							0.8
	52	FUNCTION5 PFK	480.9696	45.08	0.000							0.9
	52	FUNCTION5 PFK	480.9696	48.87	0.000							1.1
	52	FUNCTION5 PFK	480.9696	48.31	0.000							2.2

ETHERS1

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	53	FUNCTION1 HXCD...	375.8364	25.48	0.000		0.000					4.8
	53	FUNCTION1 HXCD...	375.8364	25.39	0.000		0.000					1.4
	53	FUNCTION1 HXCD...	375.8364	25.20	0.000		0.000					2.2
	53	FUNCTION1 HXCD...	375.8364	24.91	0.000		0.000					2.4
	53	FUNCTION1 HXCD...	375.8364	24.78	0.000		0.000					6.4
	53	FUNCTION1 HXCD...	375.8364	24.70	0.000		0.000					5.3
	53	FUNCTION1 HXCD...	375.8364	24.20	0.000		0.000					2.8
	53	FUNCTION1 HXCD...	375.8364	24.03	0.000		0.000					3.2
	53	FUNCTION1 HXCD...	375.8364	23.69	0.000		0.000					1.5
	53	FUNCTION1 HXCD...	375.8364	23.57	0.000		0.000					124.9
	53	FUNCTION1 HXCD...	375.8364	22.18	0.000		0.000					2.0
	53	FUNCTION1 HXCD...	375.8364	22.09	0.000		0.000					1.4
	53	FUNCTION1 HXCD...	375.8364	21.42	0.000		0.000					2.2
	53	FUNCTION1 HXCD...	375.8364	27.68	0.000		0.000					4.8
	53	FUNCTION1 HXCD...	375.8364	27.54	0.000		0.000					1.0
	53	FUNCTION1 HXCD...	375.8364	26.99	0.000		0.000					2.9
	53	FUNCTION1 HXCD...	375.8364	26.41	0.000		0.000					3.1
	53	FUNCTION1 HXCD...	375.8364	26.36	0.000		0.000					4.8
	53	FUNCTION1 HXCD...	375.8364	26.15	0.000		0.000					3.1
	53	FUNCTION1 HXCD...	375.8364	25.78	0.000		0.000					2.8

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ETHERS2

[redacted]	#	Name	Trace	RT	Abs Resp	REF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.35	0.000	0.000						1.3
[redacted]	54	FUNCTION1 HPCD...	409.7974	23.58	0.000	0.000						4.1
[redacted]	54	FUNCTION1 HPCD...	409.7974	23.52	0.000	0.000						1.5
[redacted]	54	FUNCTION1 HPCD...	409.7974	23.28	0.000	0.000						1.7
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.18	0.000	0.000						1.4
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.03	0.000	0.000						1.4
[redacted]	54	FUNCTION1 HPCD...	409.7974	21.92	0.000	0.000						1.8
[redacted]	54	FUNCTION1 HPCD...	409.7974	21.81	0.000	0.000						1.5
[redacted]	54	FUNCTION1 HPCD...	409.7974	27.12	0.000	0.000						2.1
[redacted]	54	FUNCTION1 HPCD...	409.7974	27.05	0.000	0.000						2.0
[redacted]	54	FUNCTION1 HPCD...	409.7974	26.90	0.000	0.000						1.7
[redacted]	54	FUNCTION1 HPCD...	409.7974	26.14	0.000	0.000						3.8
[redacted]	54	FUNCTION1 HPCD...	409.7974	26.06	0.000	0.000						1.1
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.99	0.000	0.000						3.9
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.53	0.000	0.000						2.2

ETHERS3

[redacted]	#	Name	Trace	RT	Abs Resp	REF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
[redacted]	55	FUNCTION2 HPCD...	409.7974	32.49	0.000	0.000						19.7
[redacted]	55	FUNCTION2 HPCD...	409.7974	32.34	0.000	0.000						3.2
[redacted]	55	FUNCTION2 HPCD...	409.7974	30.58	0.000	0.000						13.0
[redacted]	55	FUNCTION2 HPCD...	409.7974	30.49	0.000	0.000						3.1
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.81	0.000	0.000						25.5
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.50	0.000	0.000						15.8

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ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	56	FUNCTION3 OCDPE	445.7555	34.54	0.000	0.000						11.8
	56	FUNCTION3 OCDPE	445.7555	36.33	0.000	0.000						7.5
	56	FUNCTION3 OCDPE	445.7555	36.29	0.000	0.000						5.0
	56	FUNCTION3 OCDPE	445.7555	36.09	0.000	0.000						3.1
	56	FUNCTION3 OCDPE	445.7555	36.03	0.000	0.000						4.3
	56	FUNCTION3 OCDPE	445.7555	36.00	0.000	0.000						5.1
	56	FUNCTION3 OCDPE	445.7555	35.95	0.000	0.000						6.2
	56	FUNCTION3 OCDPE	445.7555	35.69	0.000	0.000						2.2
	56	FUNCTION3 OCDPE	445.7555	35.11	0.000	0.000						4.8
	56	FUNCTION3 OCDPE	445.7555	35.06	0.000	0.000						3.3
	56	FUNCTION3 OCDPE	445.7555	34.89	0.000	0.000						6.5
	56	FUNCTION3 OCDPE	445.7555	34.86	0.000	0.000						7.3
	56	FUNCTION3 OCDPE	445.7555	34.82	0.000	0.000						13.0
	56	FUNCTION3 OCDPE	445.7555	34.78	0.000	0.000						10.5
	56	FUNCTION3 OCDPE	445.7555	34.66	0.000	0.000						4.1
	56	FUNCTION3 OCDPE	445.7555	34.64	0.000	0.000						5.3
	56	FUNCTION3 OCDPE	445.7555	34.60	0.000	0.000						6.8
	56	FUNCTION3 OCDPE	445.7555	38.16	0.000	0.000						2.3
	56	FUNCTION3 OCDPE	445.7555	37.32	0.000	0.000						3.0
	56	FUNCTION3 OCDPE	445.7555	37.26	0.000	0.000						4.9
	56	FUNCTION3 OCDPE	445.7555	37.17	0.000	0.000						2.8
	56	FUNCTION3 OCDPE	445.7555	37.08	0.000	0.000						4.9
	56	FUNCTION3 OCDPE	445.7555	36.94	0.000	0.000						5.8
	56	FUNCTION3 OCDPE	445.7555	36.74	0.000	0.000						3.1
	56	FUNCTION3 OCDPE	445.7555	36.67	0.000	0.000						4.4
	56	FUNCTION3 OCDPE	445.7555	36.54	0.000	0.000						3.2
	56	FUNCTION3 OCDPE	445.7555	36.49	0.000	0.000						3.6
	56	FUNCTION3 OCDPE	445.7555	36.46	0.000	0.000						5.1
	56	FUNCTION3 OCDPE	445.7555	36.42	0.000	0.000						8.7

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	57	FUNCTION4 NCDPE	479.7165	39.21	0.000	0.000						2.7
	57	FUNCTION4 NCDPE	479.7165	39.15	0.000	0.000						4.0
	57	FUNCTION4 NCDPE	479.7165	38.80	0.000	0.000						67044.1
	57	FUNCTION4 NCDPE	479.7165	43.49	0.000	0.000						8.5
	57	FUNCTION4 NCDPE	479.7165	42.46	0.000	0.000						39.5

ETHERS6

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
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Printed: Wednesday, May 08, 2013 10:58:54 Pacific Daylight Time

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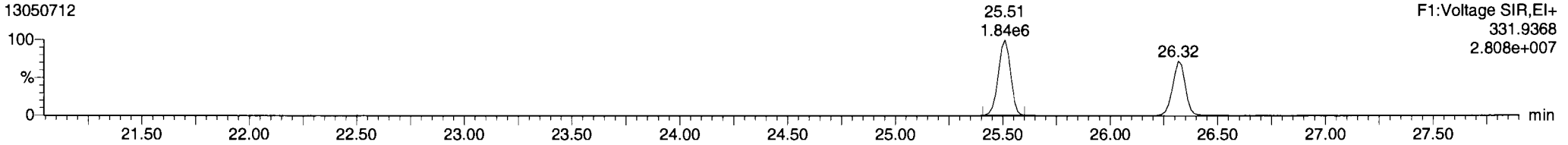
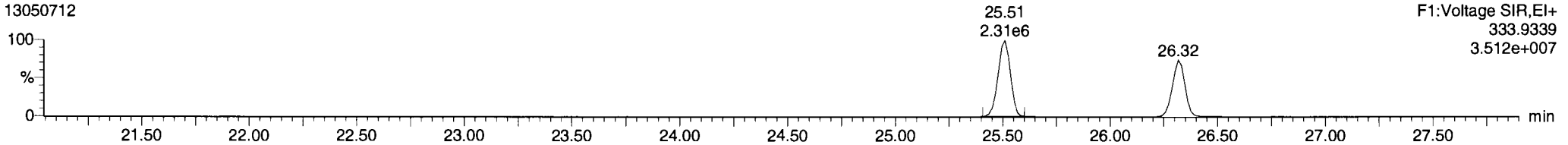
ID: WN27A, Name: 13050712, Date: 07-May-2013, Time: 23:32:06, Conditions: AUTOSPEC01, User: pk

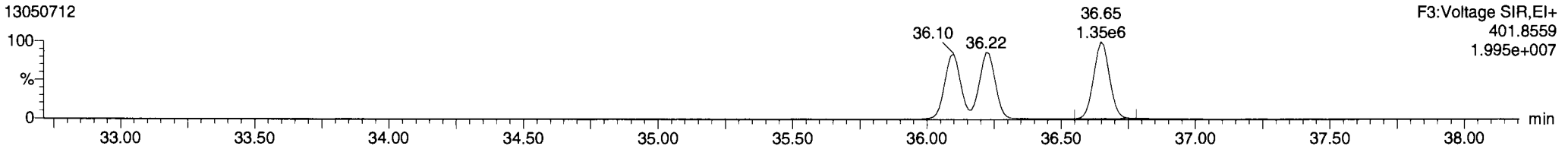
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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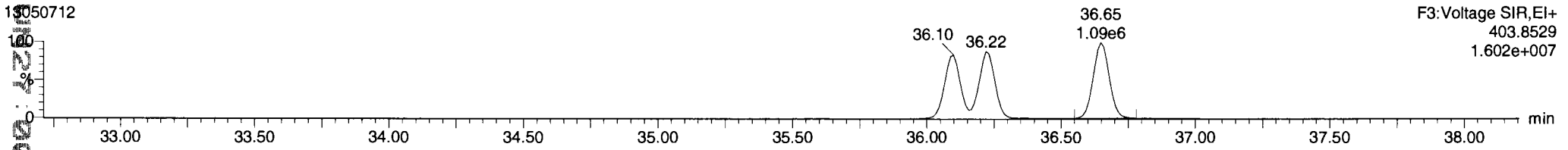

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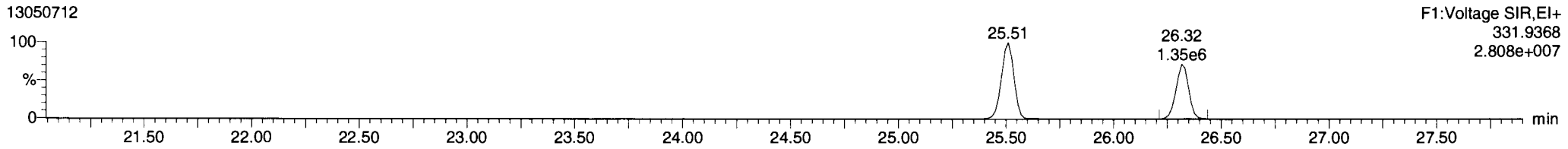
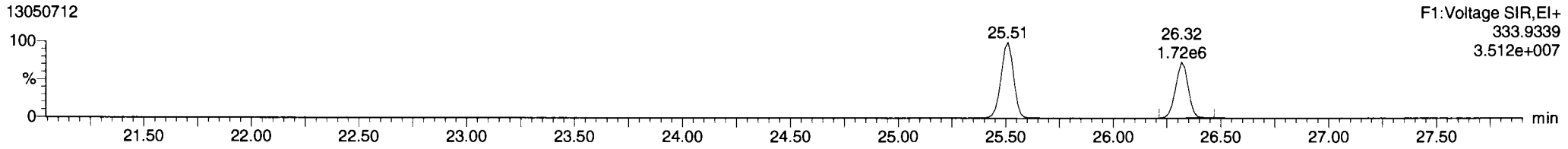
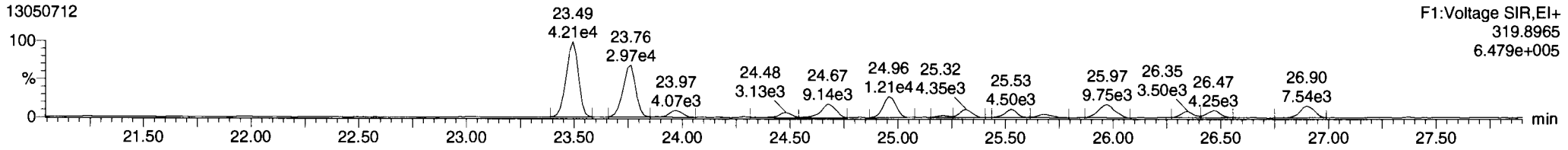
13C-2378-TCDD



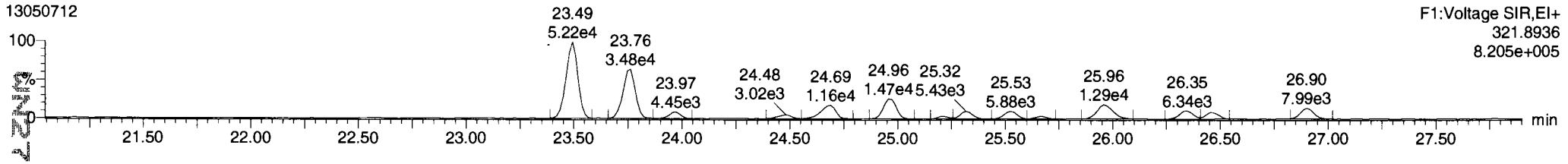
13C-2378-TCDD



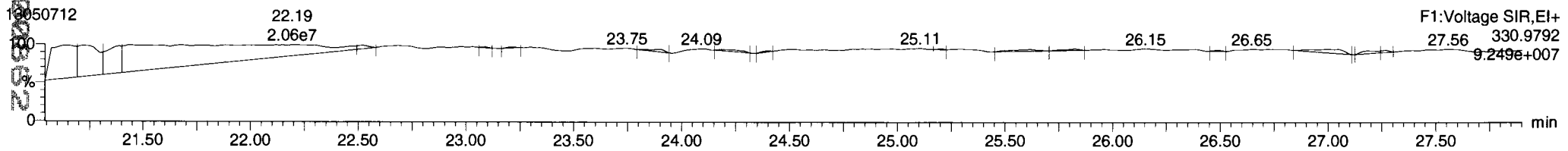
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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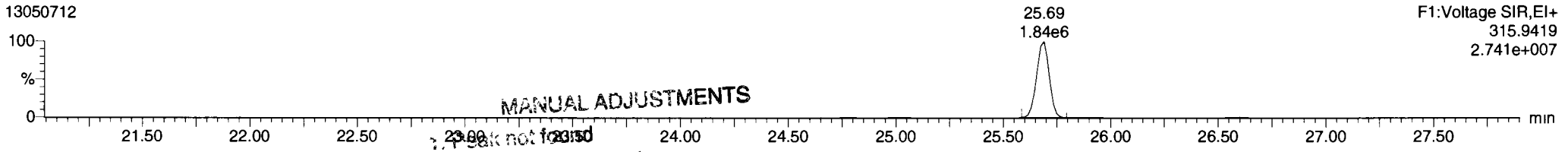
13C-2378-TCDF



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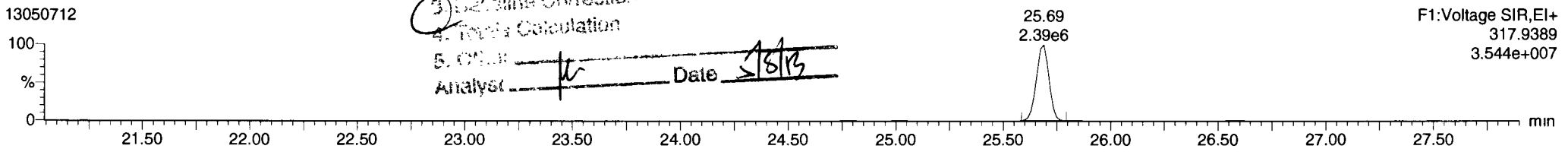
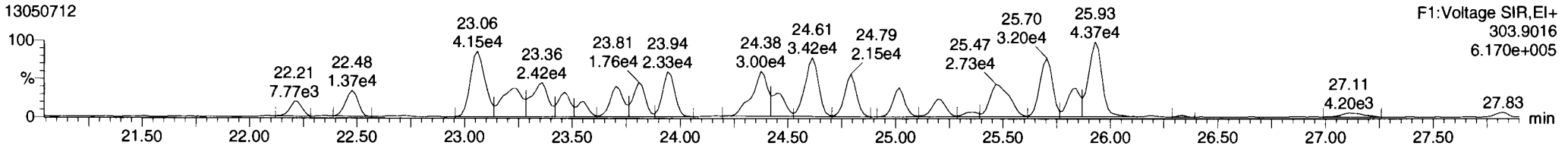
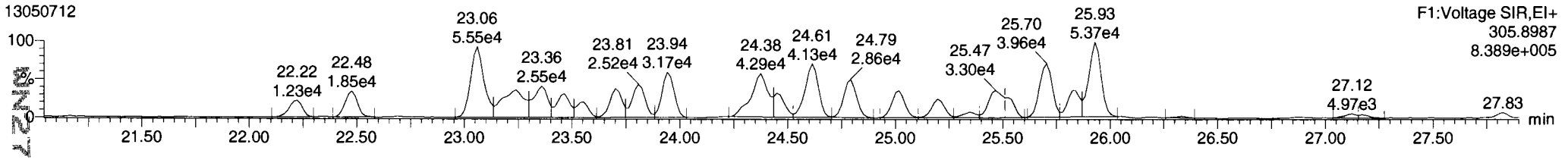


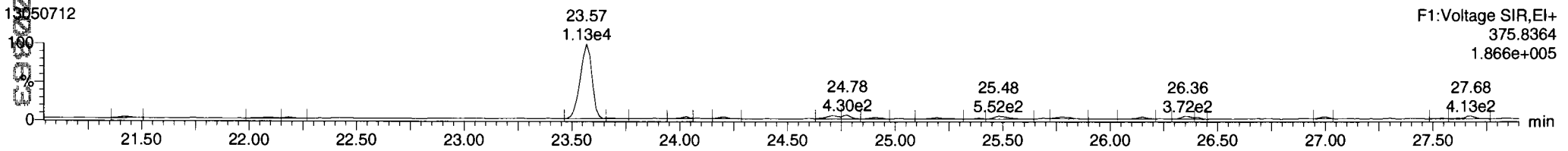
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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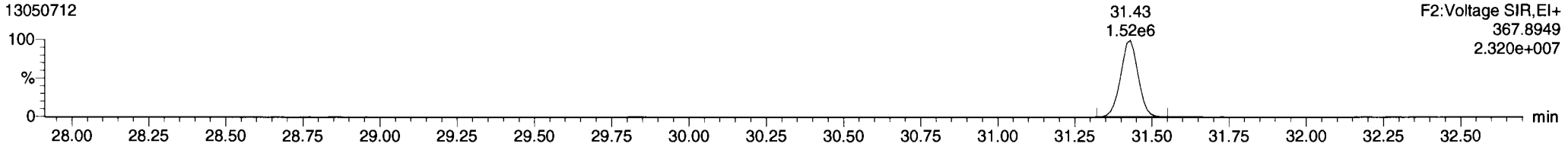
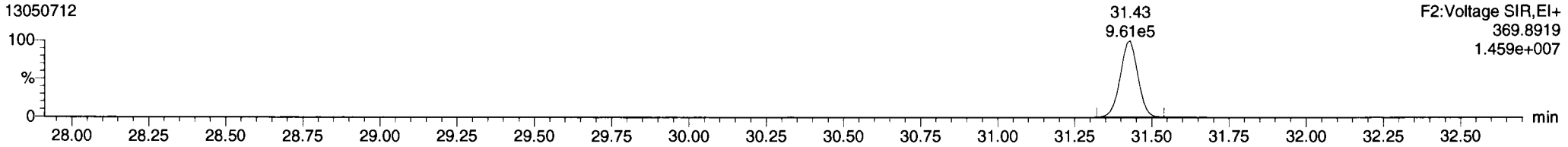
ID: WN27A, Name: 13050712, Date: 07-May-2013, Time: 23:32:06, Conditions: AUTOSPEC01, User: pk

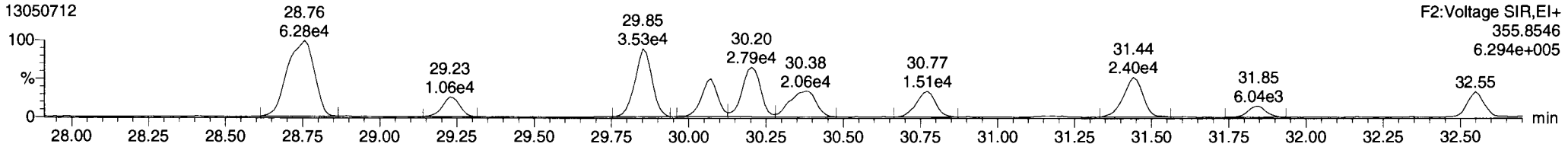
13C-12378-PeCDD



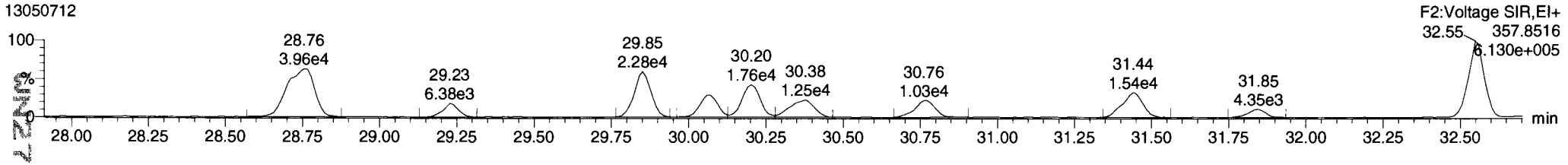
13C-12378-PeCDD



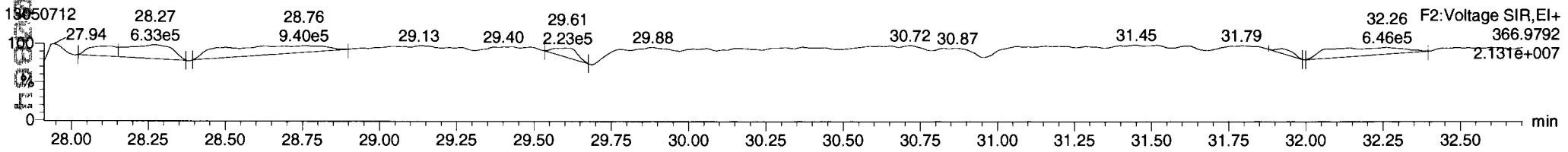
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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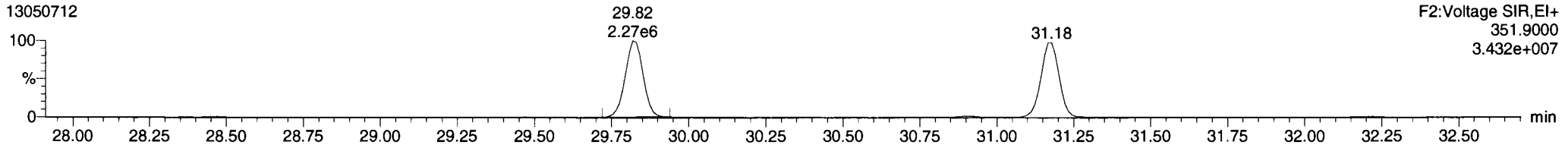
13C-12378-PeCDF



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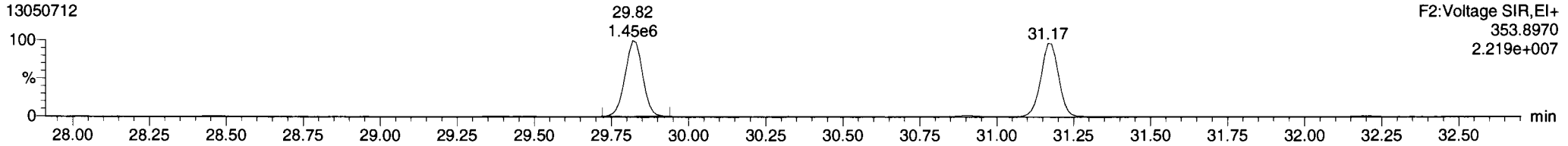
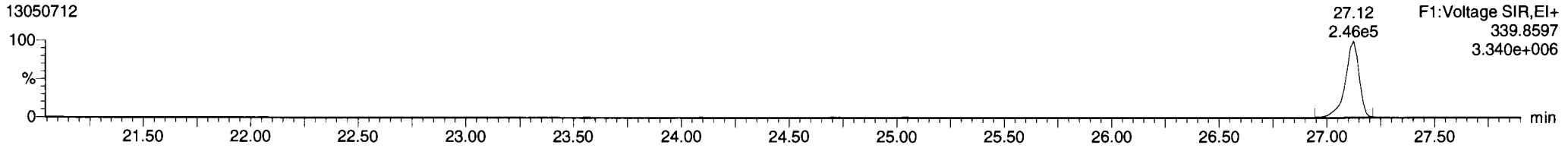
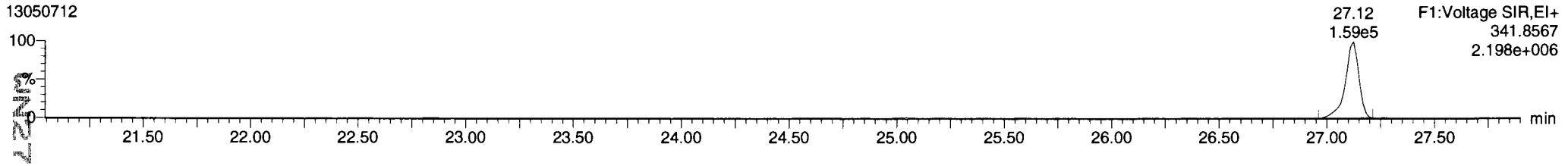


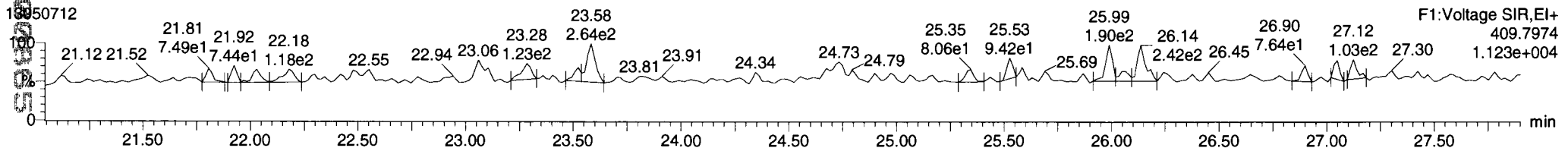
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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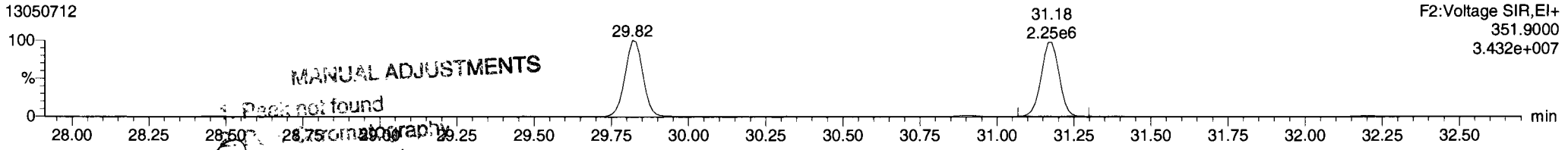
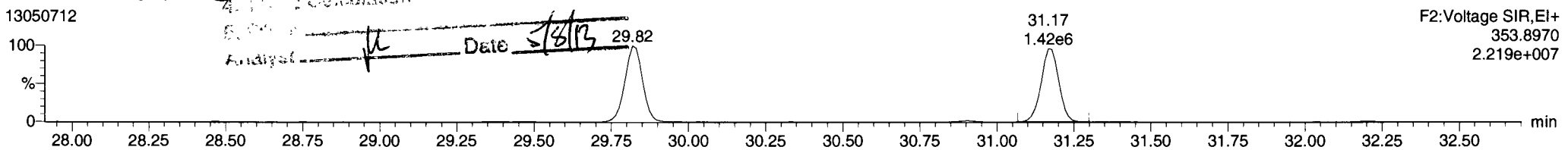
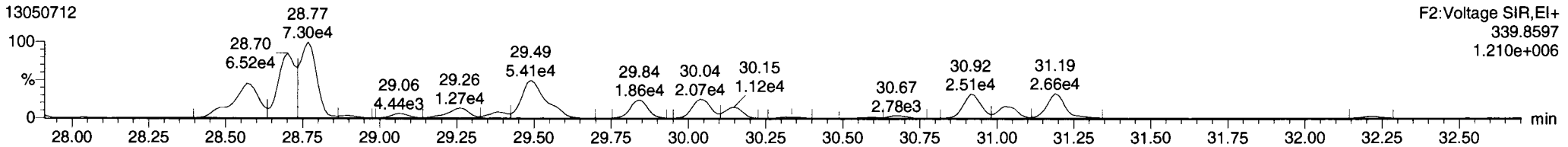
13C-23478-PeCDF



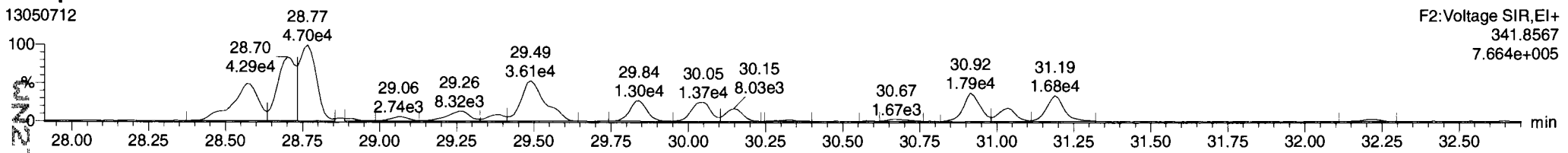
13C-23478-PeCDF



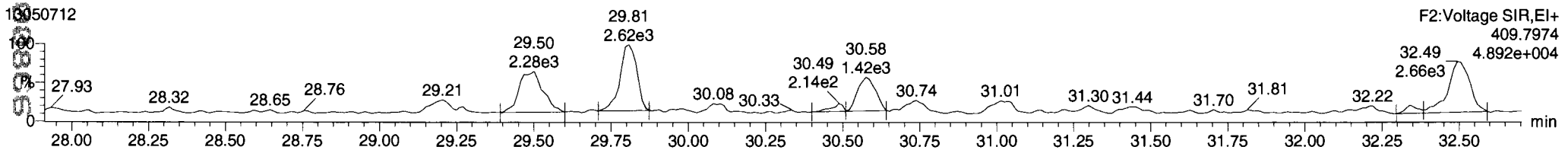
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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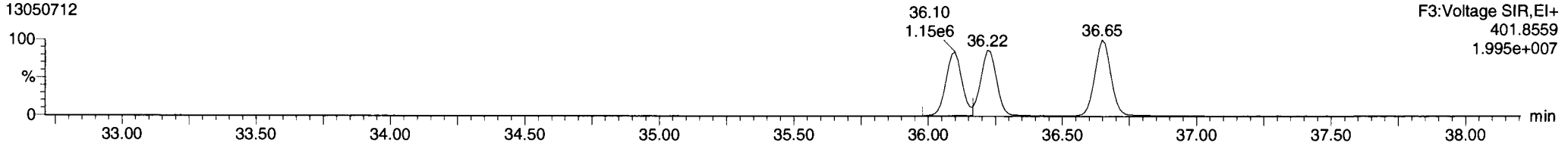
13C-123478-HxCDD



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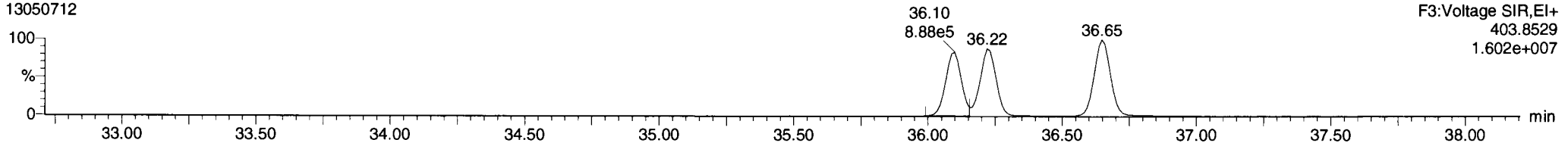
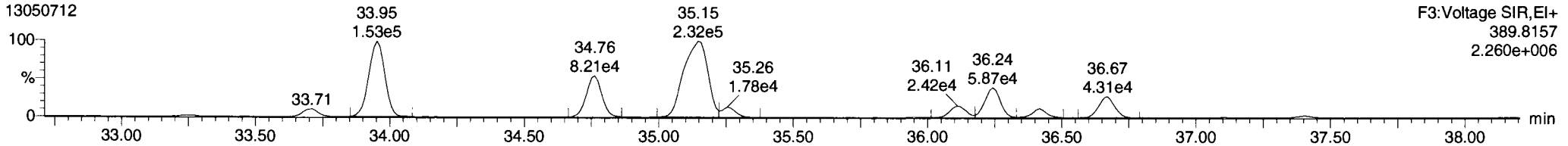
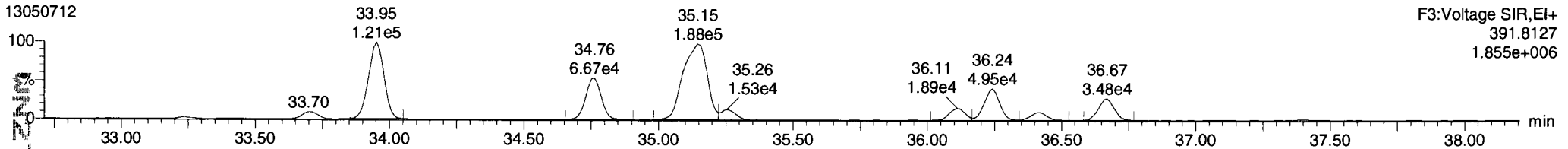


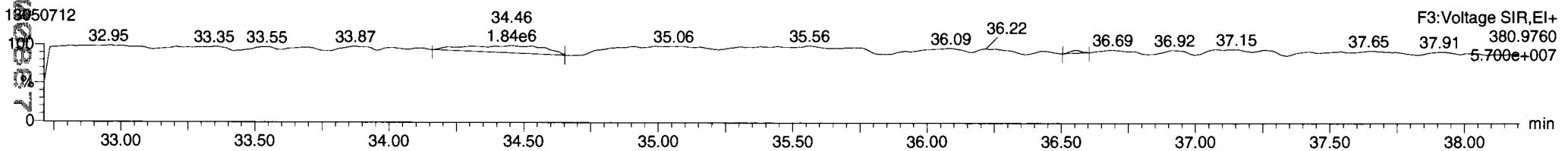
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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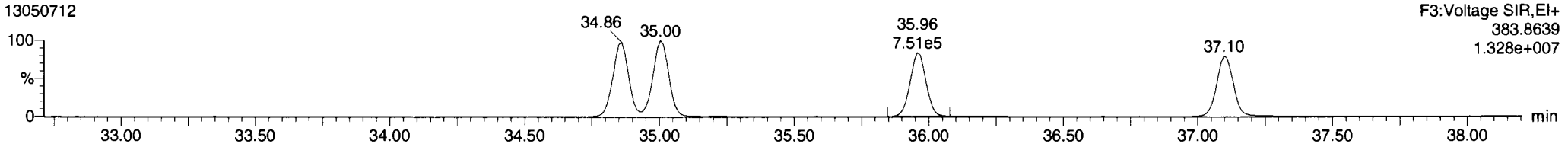
13C-234678-HxCDF



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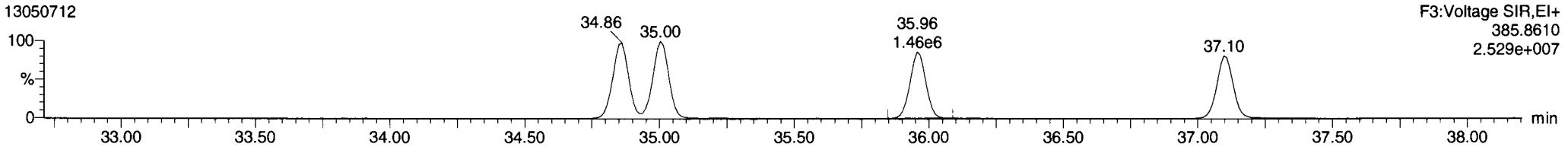
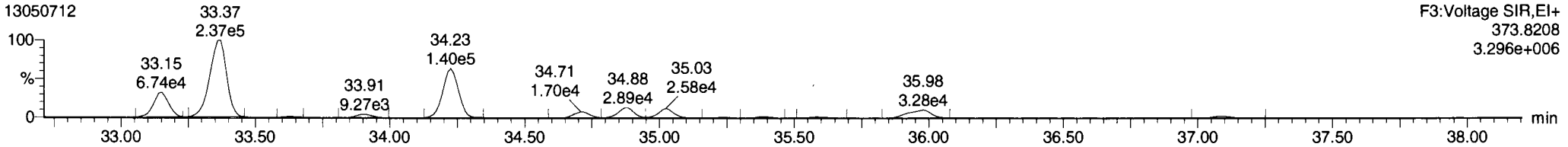
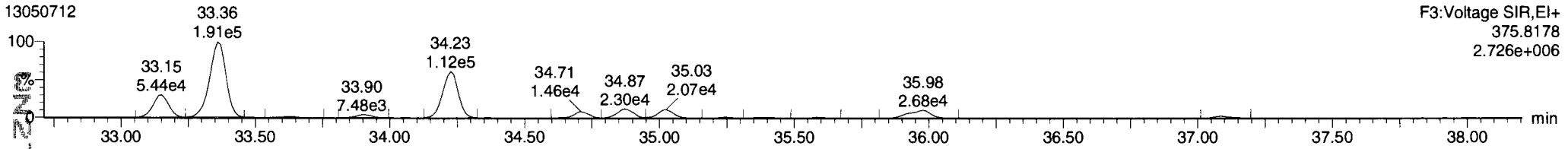


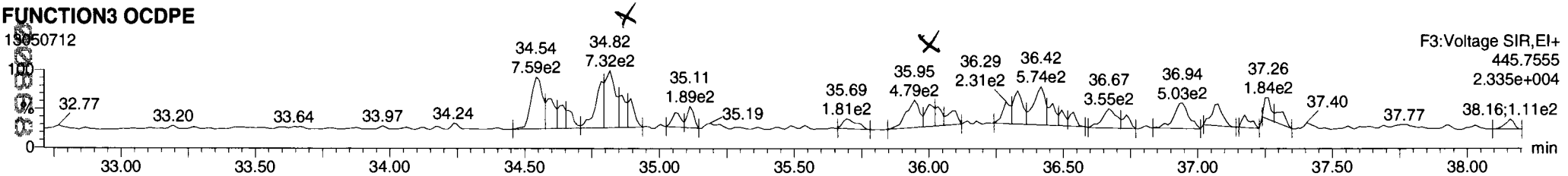
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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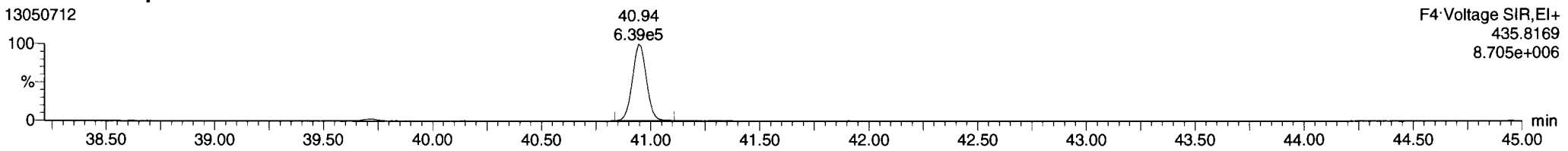
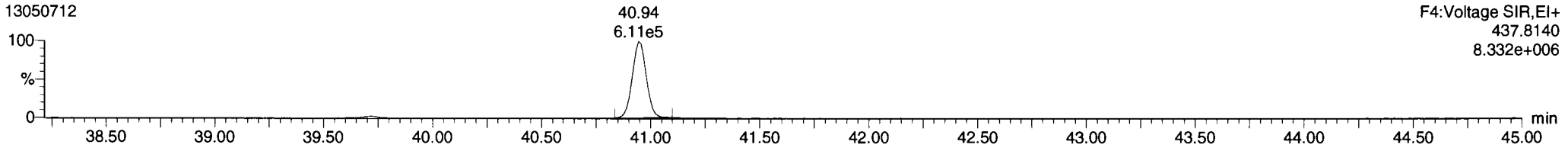
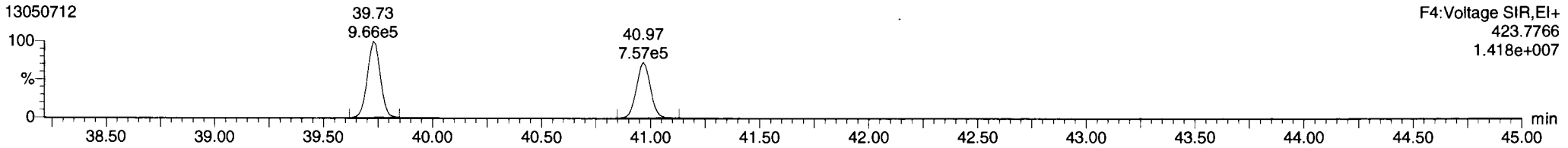
13C-1234678-HpCDD



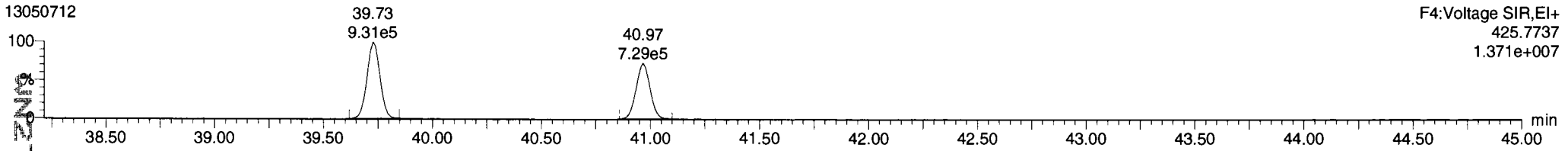
13C-1234678-HpCDD



Total-heptadioxins



Total-heptadioxins



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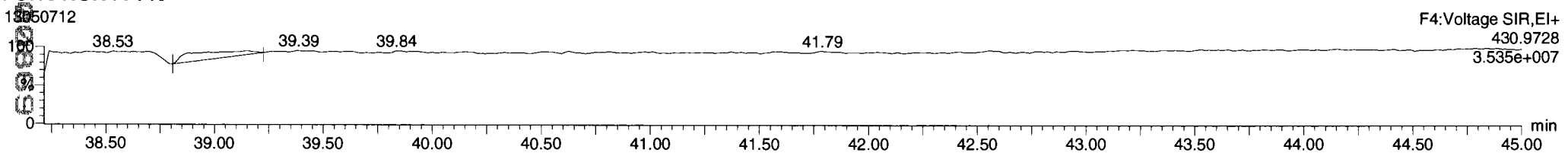

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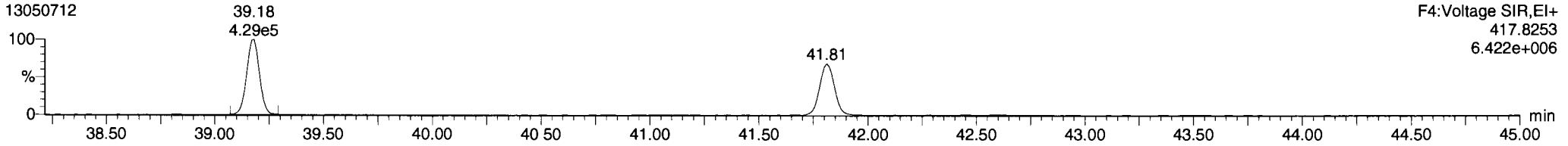
13C-1234678-HpCDF



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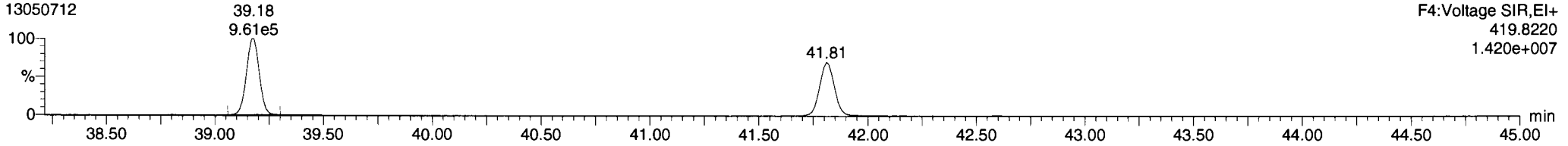

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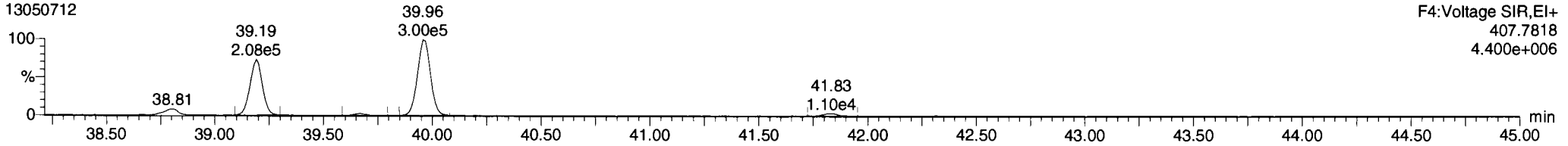

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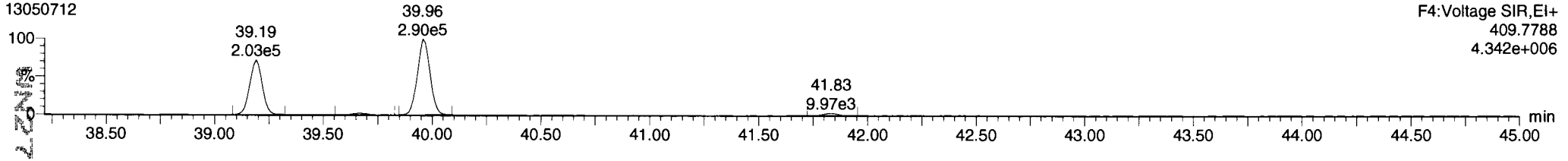
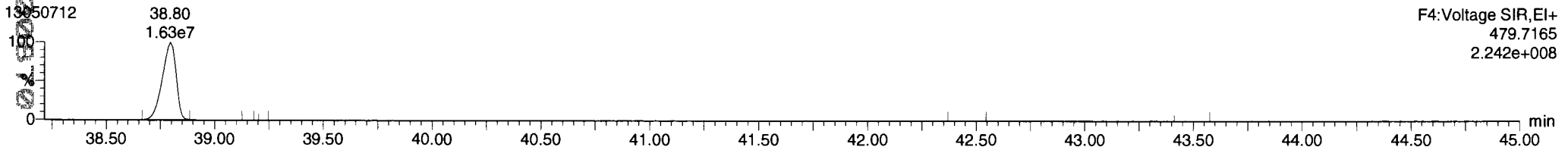


FUNCTION4 NCDPE



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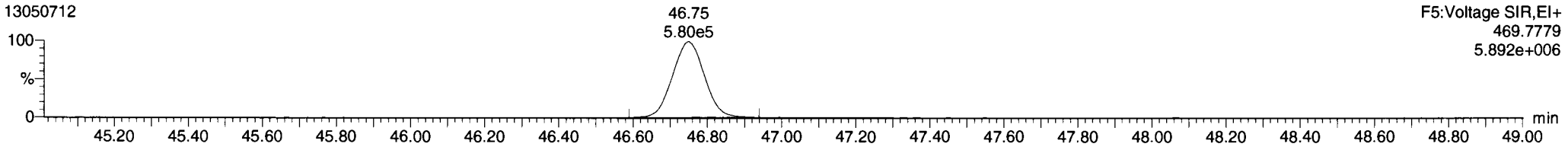
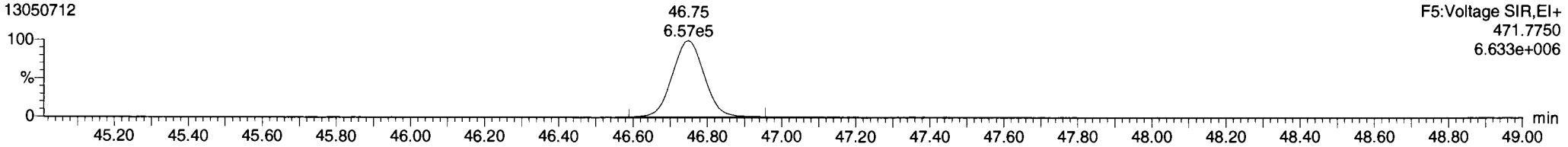
13C-OCDD



13C-OCDD



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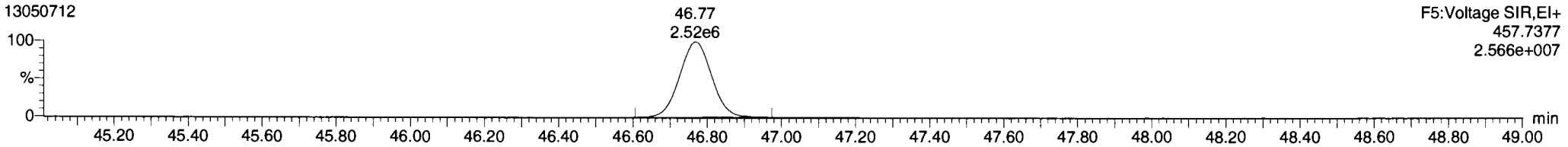

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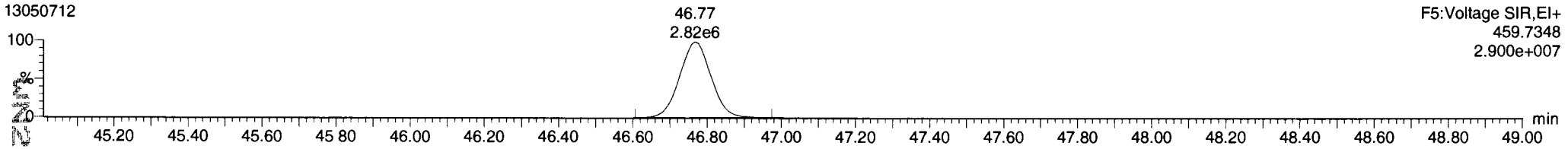
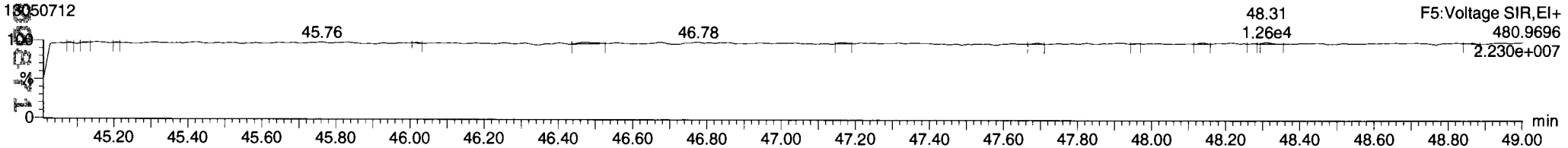


FUNCTION5 PFK



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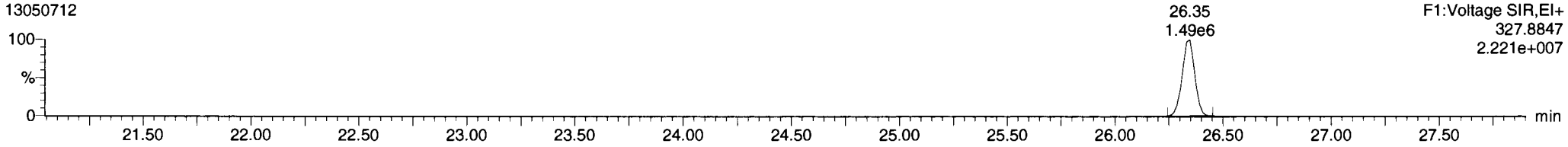
37CL-2378-TCDD



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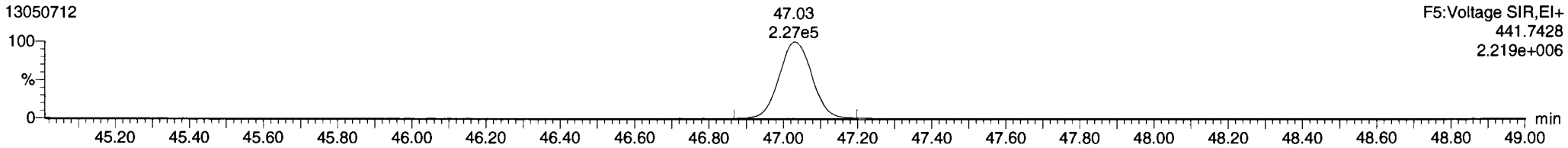

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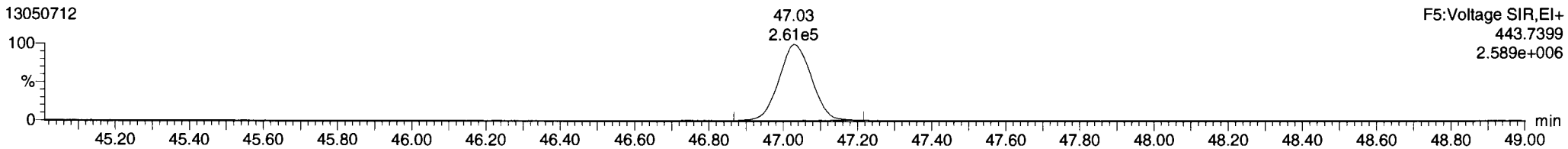
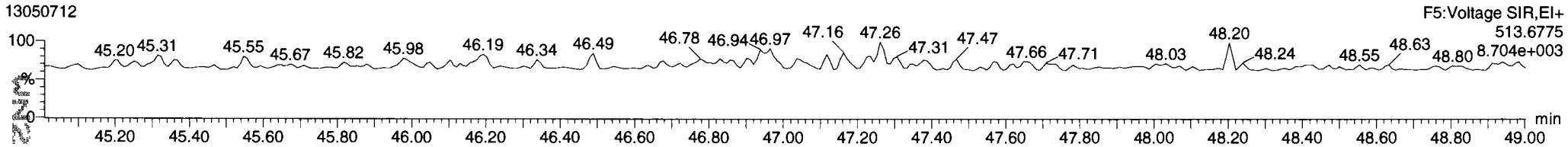


FUNCTION5 DCDPE



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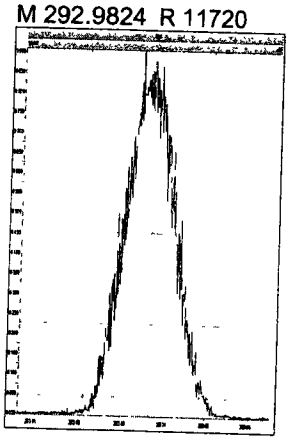
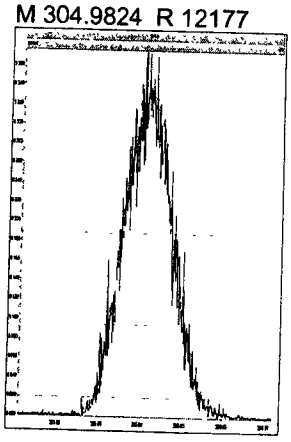
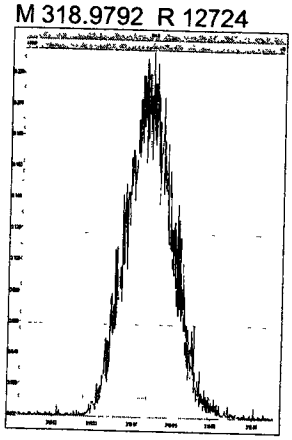


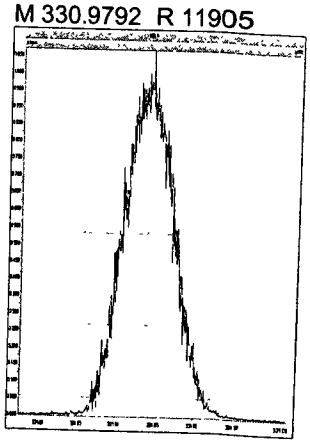
M 304.9824 R 12177



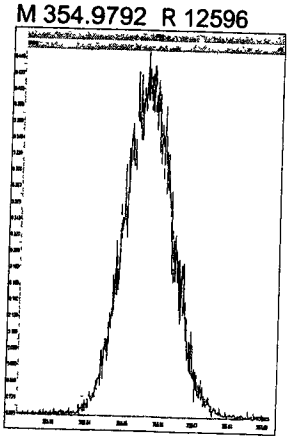
M 318.9792 R 12724



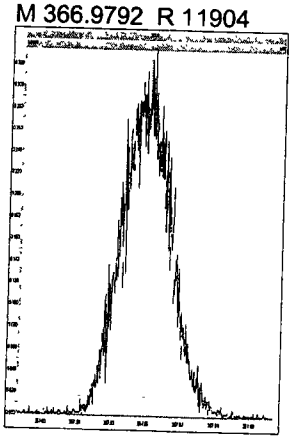
M 330.9792 R 11905



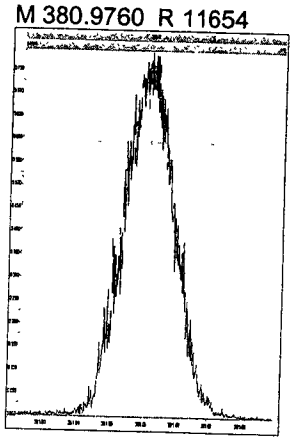
M 354.9792 R 12596



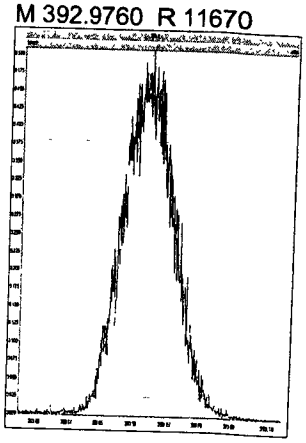
M 366.9792 R 11904



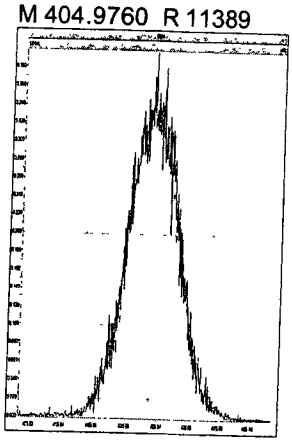
M 380.9760 R 11654



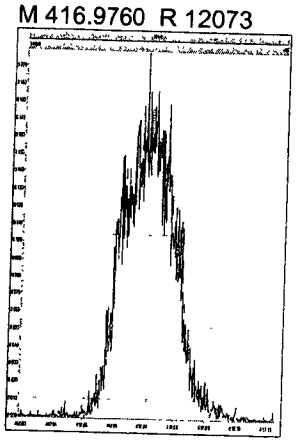
M 392.9760 R 11670



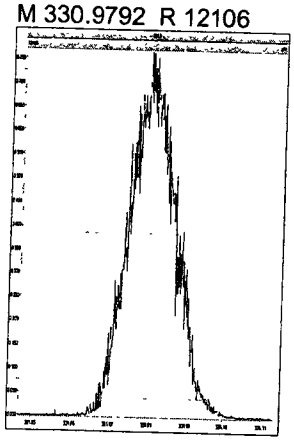
M 404.9760 R 11389



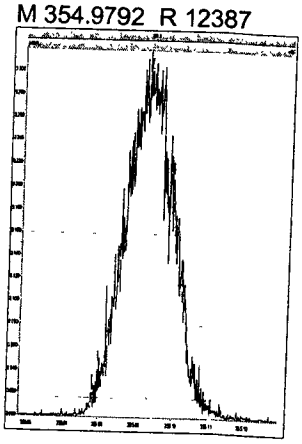
M 416.9760 R 12073



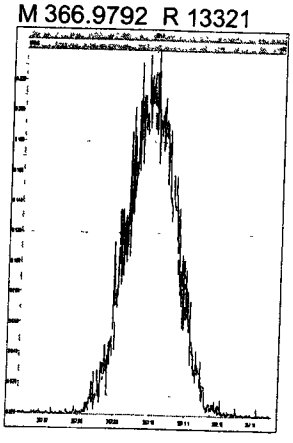
M 330.9792 R 12106



M 354.9792 R 12387



M 366.9792 R 13321



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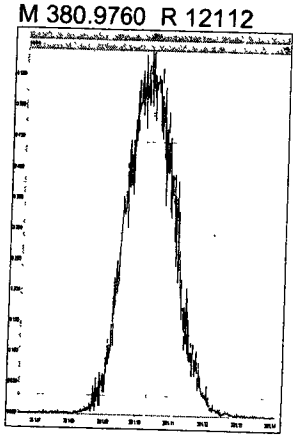
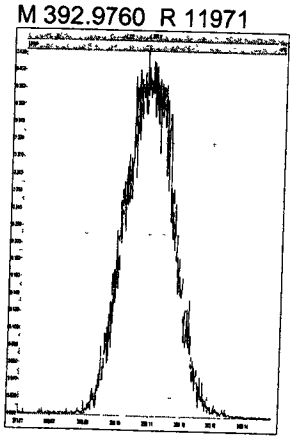
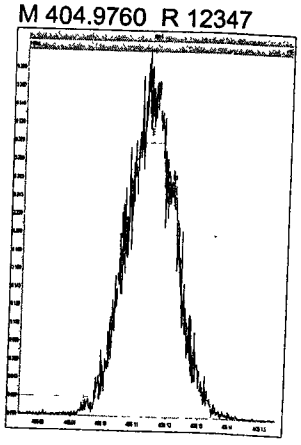


M 392.9760 R 11971



M 404.9760 R 12347



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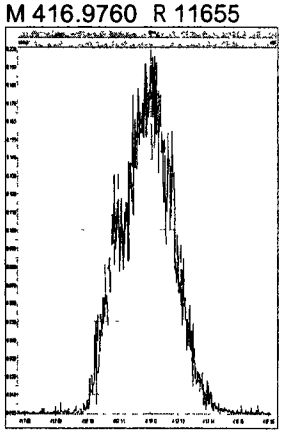

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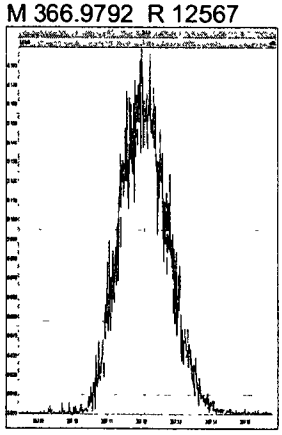
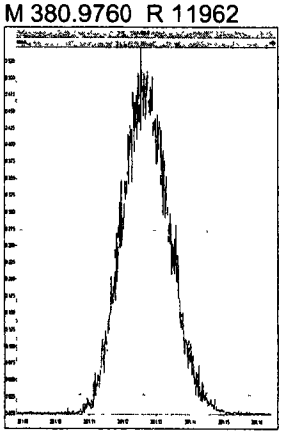
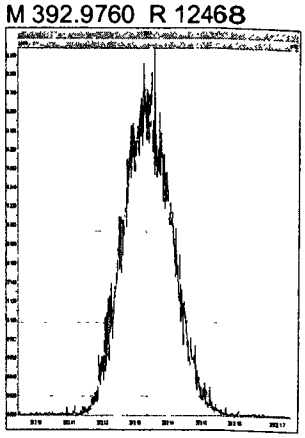


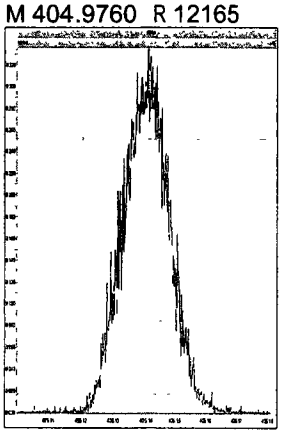
M 380.9760 R 11962



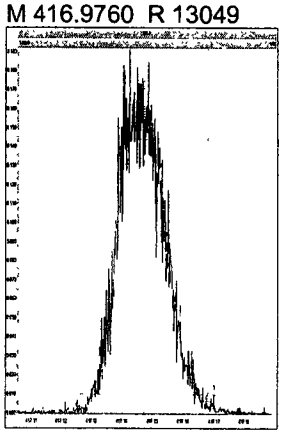
M 392.9760 R 12468



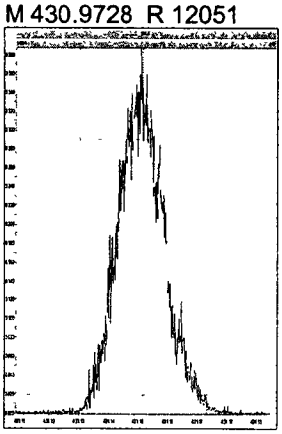
M 404.9760 R 12165



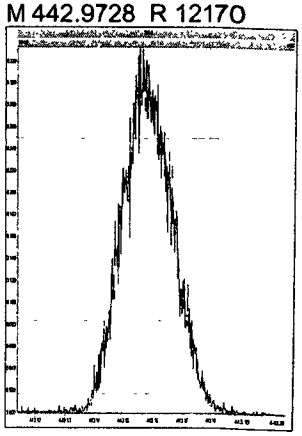
M 416.9760 R 13049



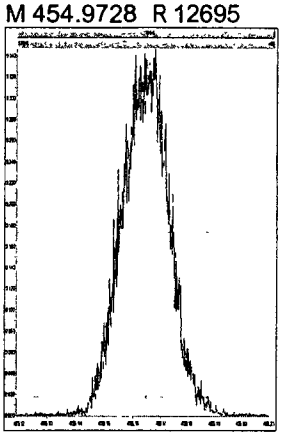
M 430.9728 R 12051



M 442.9728 R 12170



M 454.9728 R 12695



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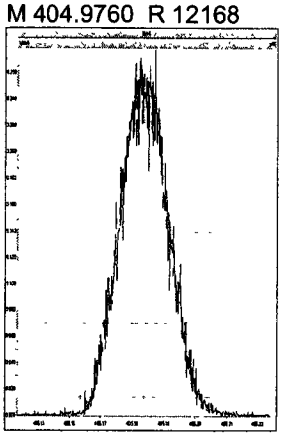
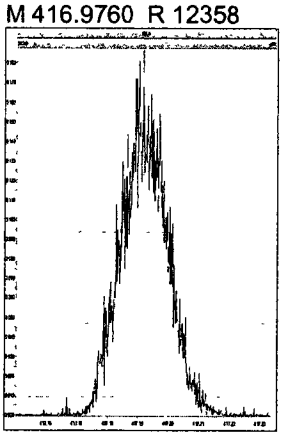
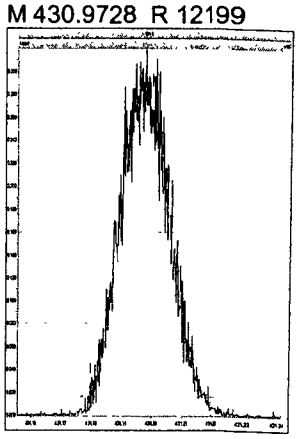


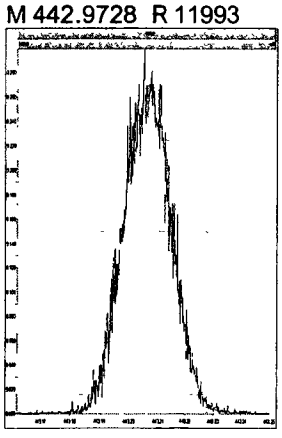
M 416.9760 R 12358



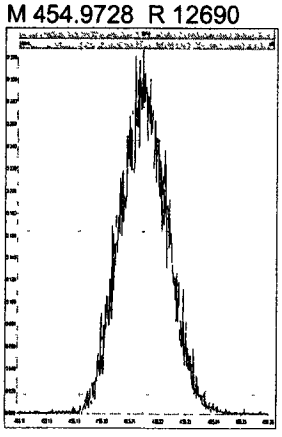
M 430.9728 R 12199



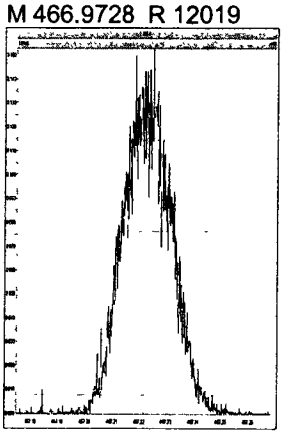
M 442.9728 R 11993



M 454.9728 R 12690



M 466.9728 R 12019



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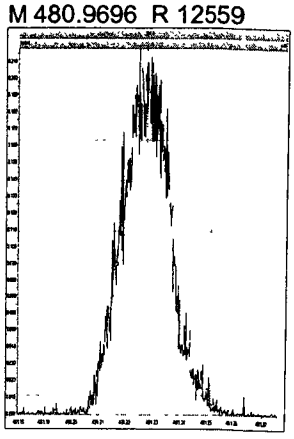
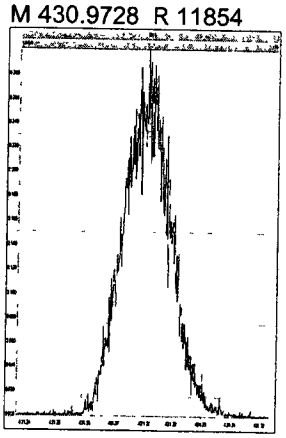
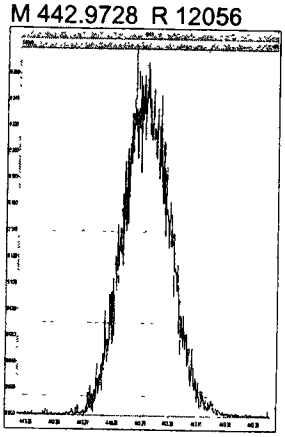


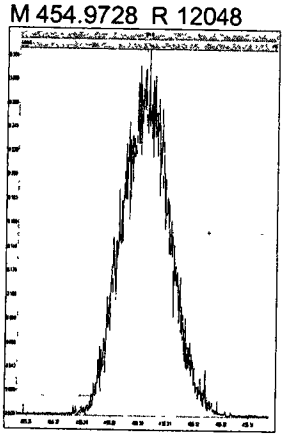
M 430.9728 R 11854



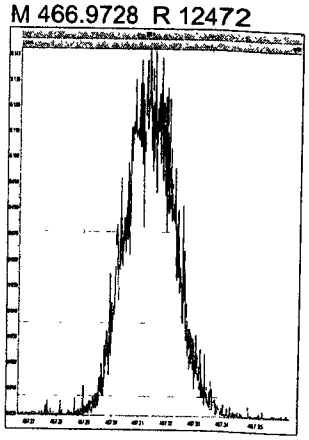
M 442.9728 R 12056



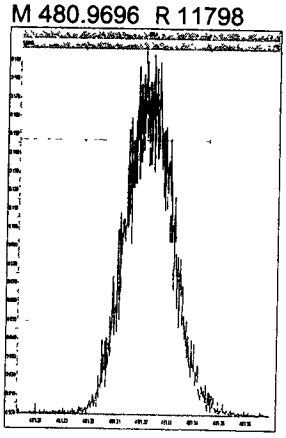
M 454.9728 R 12048



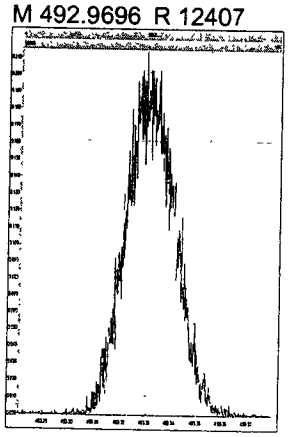
M 466.9728 R 12472



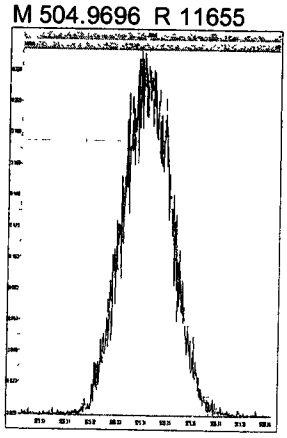
M 480.9696 R 11798



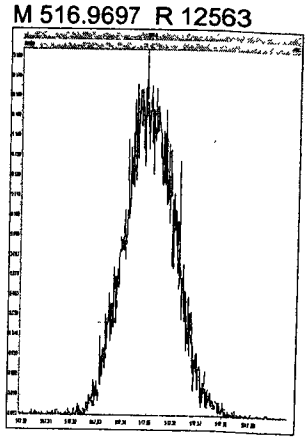
M 492.9696 R 12407



M 504.9696 R 11655



M 516.9697 R 12563



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Printed: Wednesday, May 08, 2013 16:03:06 Pacific Daylight Time

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ID: CS3, Name: 13050714, Date: 08-May-2013, Time: 01:16:42, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Int Area	Sum Int	Ion Ratio	Theor.	Ion Ratio	S/N	EMPC?	Conc.	Exp. Conc.
2378-TCDF	25.705	1.001	2.29e5	2.98e5	0.763	0.770	0.770	1495.2	NO	12.347	12.347
12378-PeCDF	29.841	1.000	1.36e6	8.69e5	0 836	1.559	1.550	6739.2	NO	56.177	56.177
23478-PeCDF	31.190	1.000	1.35e6	8.80e5	0.851	1.536	1.550	6700.8	NO	56.417	56.417
123478-HxCDF	34.862	1.000	1.05e6	8.49e5	1.017	1.236	1.240	3177.7	NO	53.873	53.873
234678-HxCDF	35.958	1.000	1.04e6	8.43e5	1.027	1.237	1.240	3170.2	NO	55.606	55.606
123678-HxCDF	35.015	1.001	1 08e6	8 67e5	1.013	1.243	1 240	3305.4	NO	52.824	52 824
123789-HxCDF	37.109	1.001	8.98e5	7.33e5	0 929	1.225	1.240	2673.7	NO	53 764	53.764
1234678-HpCDF	39.159	1.000	8.31e5	8.05e5	1.151	1.033	1.050	4888.5	NO	53.924	53.924
1234789-HpCDF	41 800	1.000	6.51e5	6.30e5	1.149	1 034	1.050	3288.8	NO	53.460	53.460
OCDF	46.966	1.006	9.94e5	1.09e6	0.963	0.909	0.890	3392.5	NO	118.574	118.574
2378-TCDD	26.347	1.001	1.70e5	2.14e5	0.980	0.794	0.770	997.4	NO	10.766	10.766
12378-PeCDD	31.453	1.001	9.26e5	6.01e5	0.948	1.540	1 550	3294.5	NO	52.386	52.386
123478-HxCDD	36.100	1.001	7.89e5	6.20e5	0.941	1.273	1.240	4711.0	NO	51.767	51.767
123678-HxCDD	36.221	1.000	7.50e5	6.18e5	0.884	1.213	1.240	4524.3	NO	50.704	50.704
123789-HxCDD	36 648	1.012	7.69e5	6.28e5	0.870	1.224	1.240	4509.9	NO	54.078	54.078
1234678-HpCDD	40.934	1.000	5.82e5	5.59e5	0 948	1.041	1.050	2513.1	NO	52.450	52.450
OCDD	46.706	1.001	8.39e5	9.47e5	0.969	0.887	0.890	3559.1	NO	100 776	100.776
13C-2378-TCDF	25.690	1.007	2.45e6	3 15e6	1.318	0.777	0.770	9196.0	NO		115.674
13C-12378-PeCDF	29.830	1.169	2.90e6	1.84e6	1.026	1.574	1.550	8192.5	NO		125.837
13C-23478-PeCDF	31.178	1.222	2.84e6	1.80e6	0.966	1.576	1.550	7850.9	NO		131.118
13C-123478-HxCDF	34.851	0.951	1 18e6	2.28e6	1.123	0.518	0 510	4145.2	NO		106 538
13C-123678-HxCDF	34.993	0.955	1.25e6	2.38e6	1.216	0.526	0.510	4315.7	NO		103.202
13C-234678-HxCDF	35 947	0.981	1.14e6	2.16e6	1.106	0.527	0.510	3976.7	NO		103.107
13C-123789-HxCDF	37.087	1.012	1.12e6	2 14e6	0.995	0.525	0.510	3850.7	NO		113 308
13C-1234678-HpCDF	39.147	1.069	8.09e5	1.83e6	0.896	0.443	0.440	4852.9	NO		101.561
13C-1234789-HpCDF	41.778	1.140	6.44e5	1.44e6	0.693	0.446	0 440	3334.8	NO		103.852
13C-1234-TCDD	25.511	0.000	1.63e6	2.04e6	1.000	0.799	0.770	4650.0	NO		100.000
13C-2378-TCDD	26.333	1.032	1.60e6	2.04e6	0.961	0.784	0.770	4619.6	NO		103 295
13C-12378-PeCDD	31.431	1.232	1.88e6	1.19e6	0.703	1.577	1.550	8161.1	NO		119.125
13C-123478-HxCDD	36.078	0.985	1.62e6	1.27e6	1.016	1.269	1.240	10864.2	NO		98.231
13C-123678-HxCDD	36.210	0 988	1.69e6	1.36e6	1.098	1.235	1.240	11301.7	NO		95.865
13C-1234678-HpCDD	40.912	1.117	1.17e6	1.12e6	0 828	1.041	1.050	6458.9	NO		95.571
13C-OCDD	46.679	1 274	1.73e6	1.93e6	0.770	0.894	0.890	7247.3	NO		163.958

ID: CS3, Name: 13050714, Date: 08-May-2013, Time: 01:16:42, Conditions: AUTOSPEC01, User: pk

Name	RT	RT Diff	Height	Peak Area	Resp	Ratio	Ratio %	Exp	Sel	Ref OK	Ref	EMPC	%D	Amt pg
13C-123789-HxCDD	36.637	0.000	1.60e6	1.30e6	1 000	1.230	1.240	10342.4	NO					100.000
Total-tetrafurans			6.90e5		0.763									37 487
Total-penta1			1.50e6											57.376
Total-pentafurans			4.15e6		0.844									172.501
Total-hexafurans			5.29e6		0.997									280.818
Total-heptafurans			1 48e6		1.150									107.505
Total-Furans			1.41e7		0.970									774.261
Total-tetradioxins			9.32e5		0.980									59.469
Total-pentadioxins			3 20e6		0.948									180.287
Total-hexadioxins			3.29e6		0.898									222.977
Total-heptadioxins			1.25e6		0.948									112.826
Total-Dioxins			9.51e6		0.934									676 334
Total-TEQ			2.36e7											1450.595
37CL-2378-TCDD	26.347	1.033	4.05e5		0.999			2427.4						11.040
FUNCTION1 PFK			2.34e7											
FUNCTION2 PFK			4.10e5											0.000
FUNCTION3 PFK			1.99e5											0.000
FUNCTION4 PFK			5.19e5											
FUNCTION5 PFK			4.12e4											
FUNCTION1 HXCDPE			1.49e3											0.000
FUNCTION1 HPCDPE			1.20e3											0.000
FUNCTION2 HPCDPE			2.04e3											0.000
FUNCTION3 OCDPE			1.27e3											0.000
FUNCTION4 NCDPE			1.38e3											0.000
FUNCTION5 DCDPE			4.86e2											0.000

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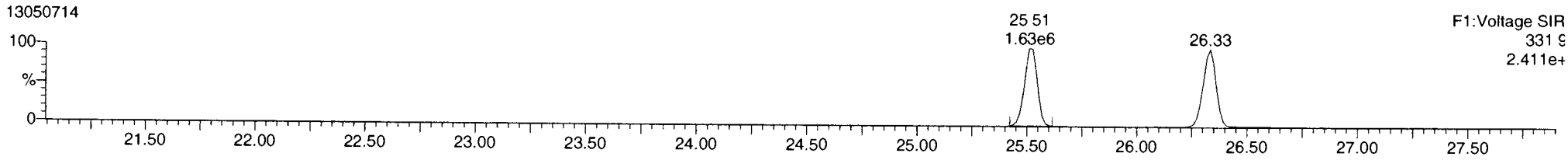
13C-1234-TCDD



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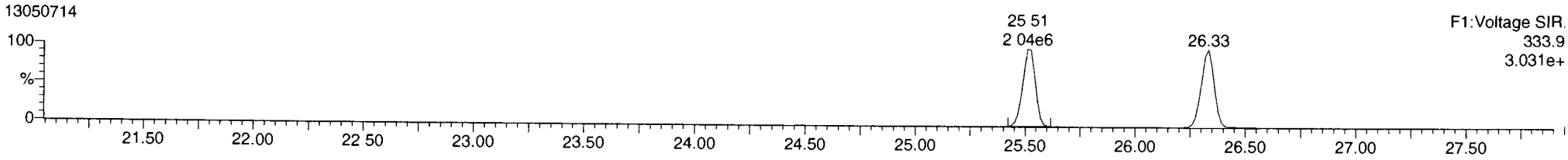

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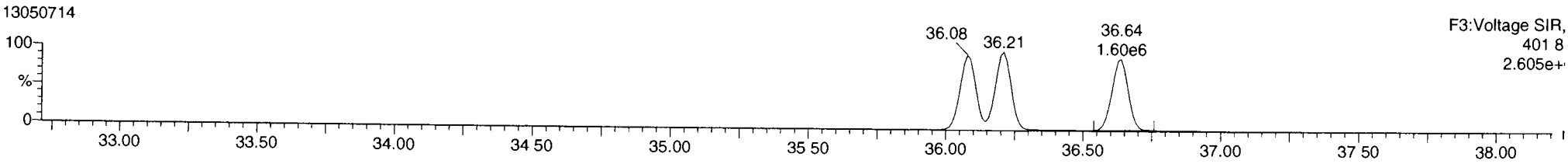

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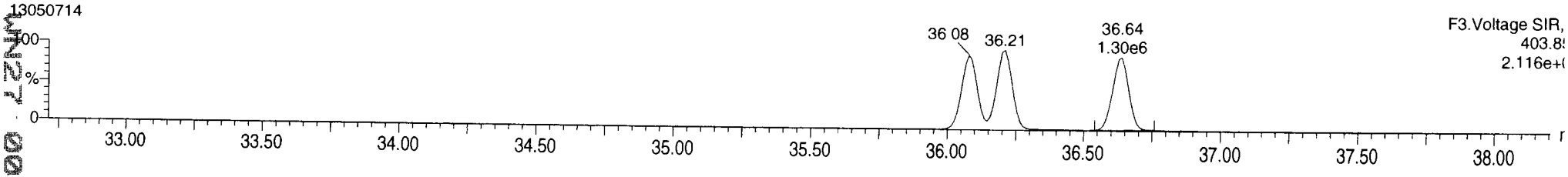

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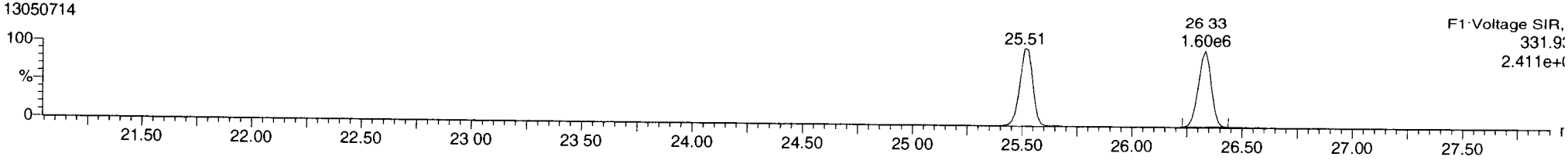
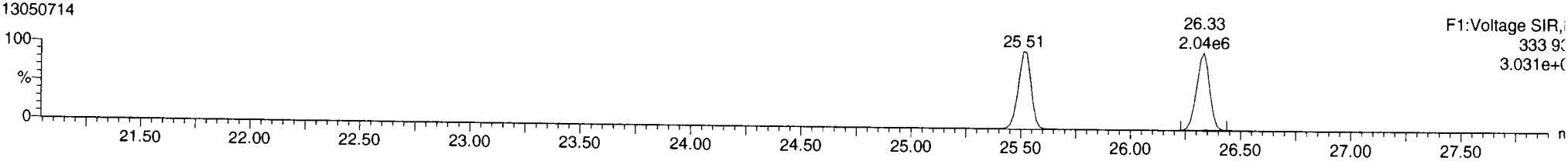
13C-2378-TCDD

13050714



13C-2378-TCDD

13050714



Total-tetradioxins

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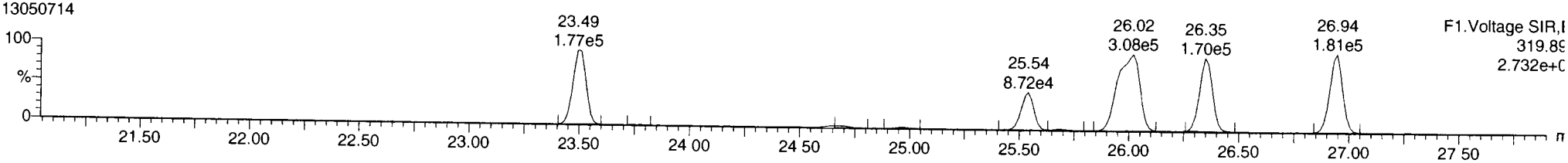

Total-tetradioxins

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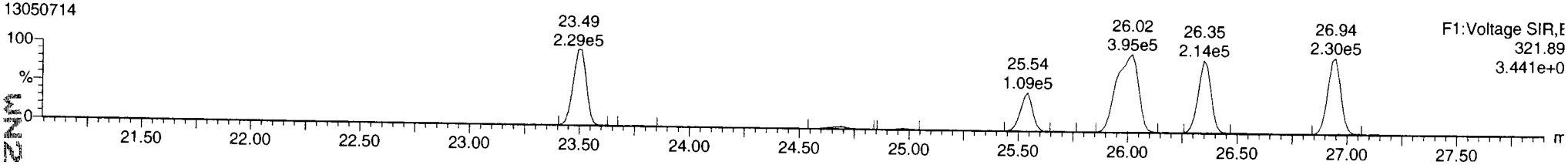

FUNCTION1 PFK

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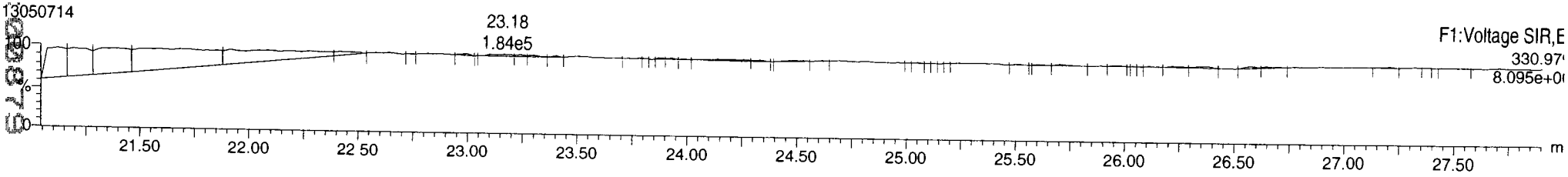

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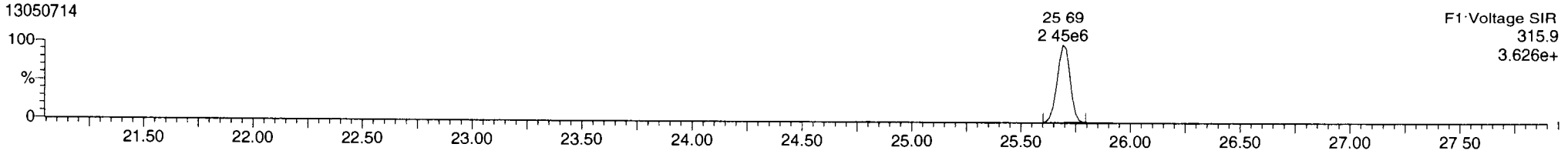

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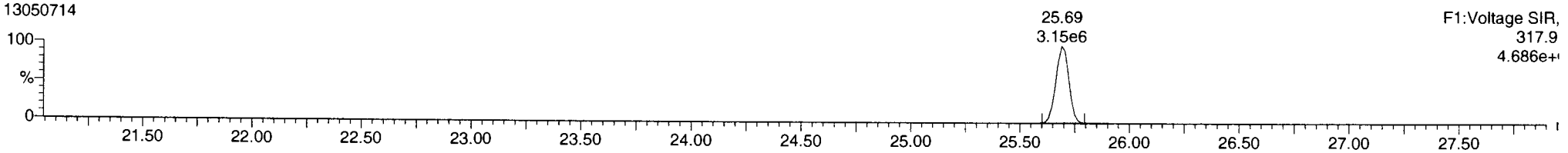
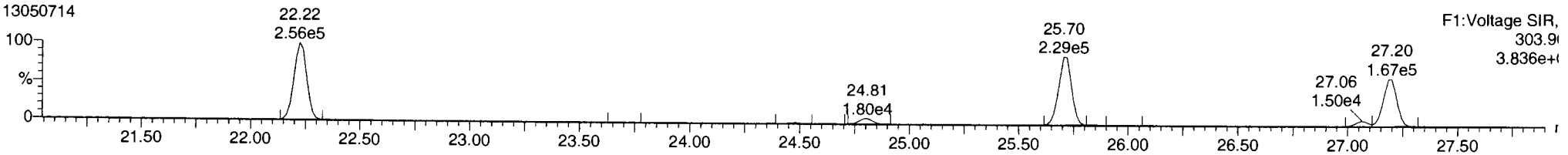
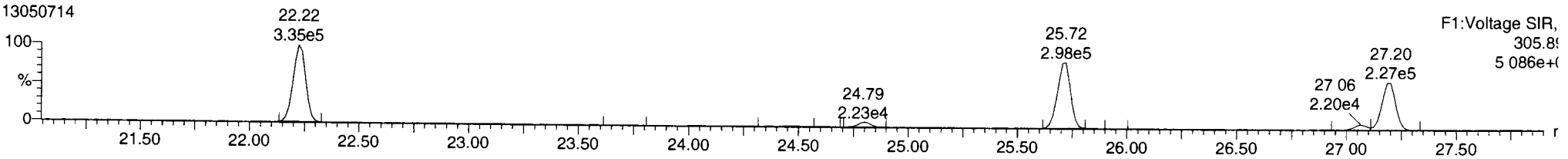


Total-tetrafurans



Total-tetrafurans



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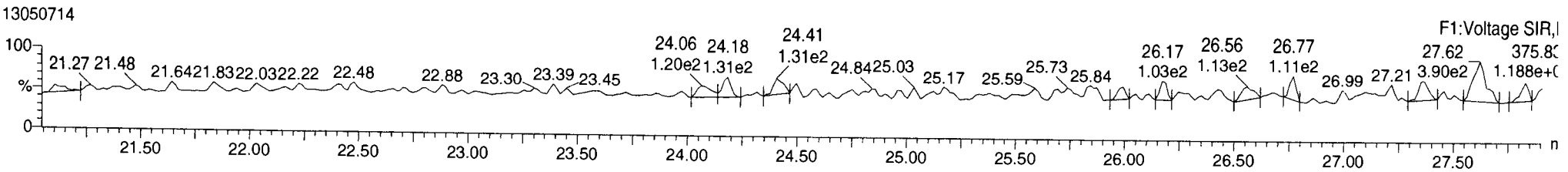

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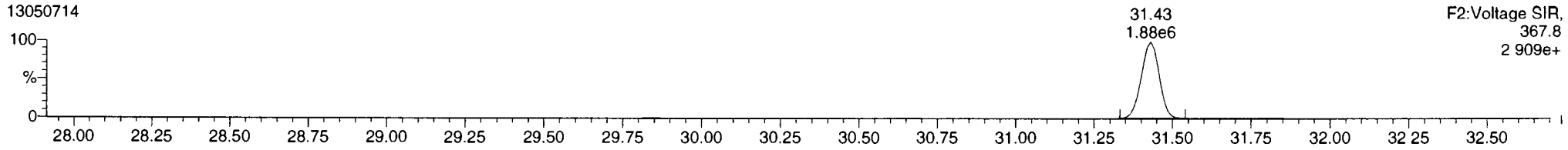
13C-12378-PeCDD



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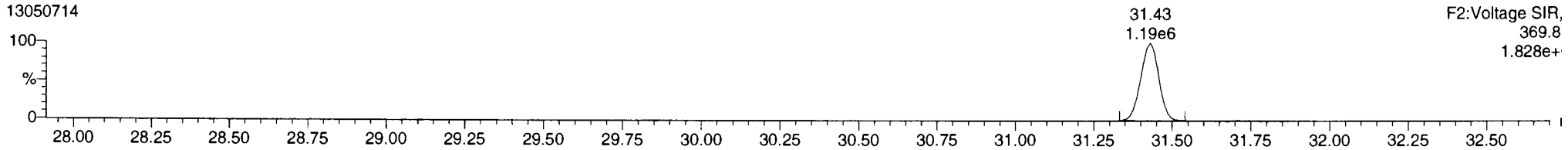
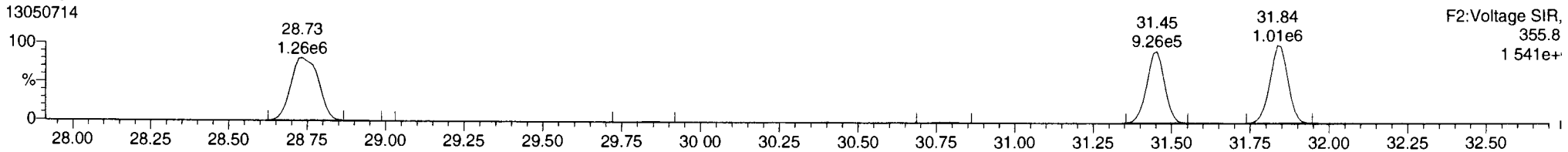


Total-pentadioxins



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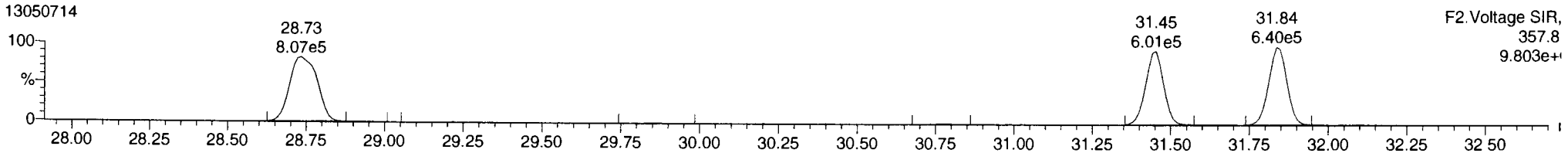
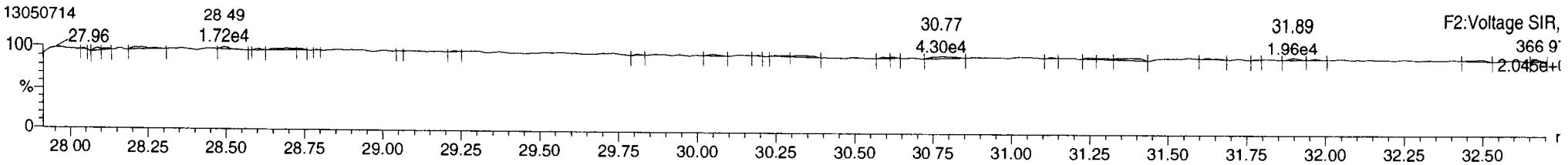


FUNCTION2 PFK



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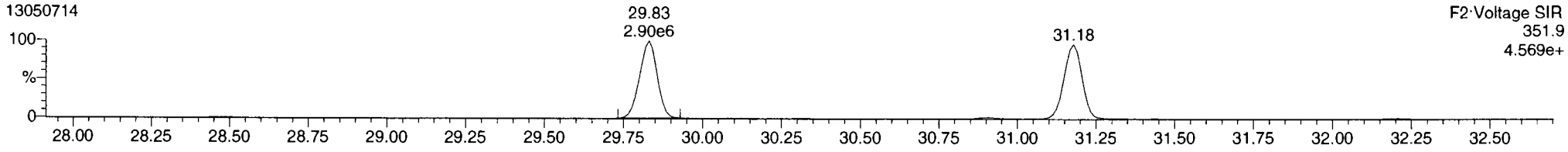
13C-12378-PeCDF



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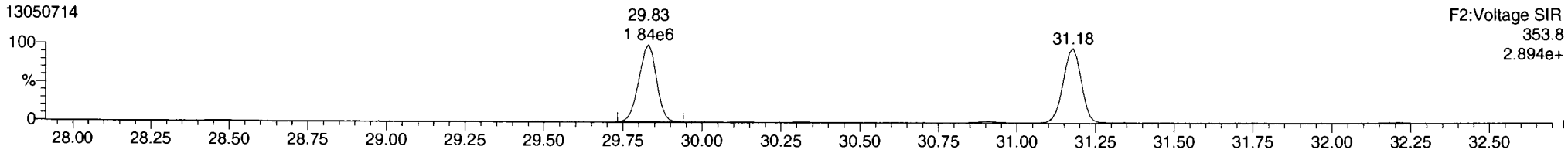

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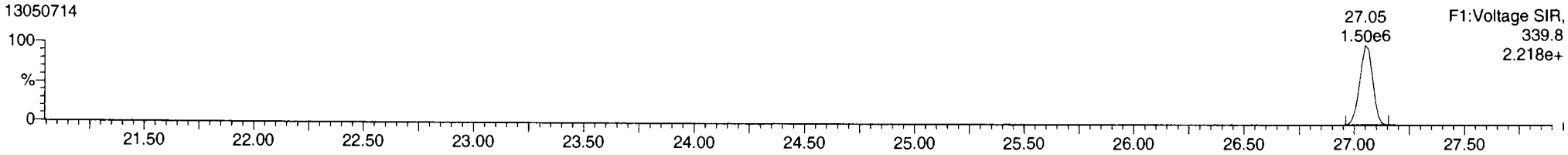

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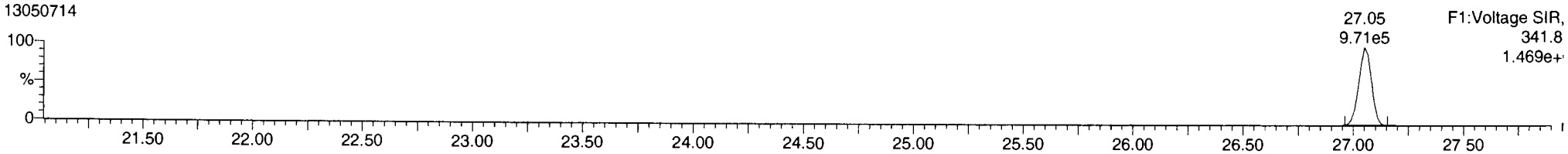

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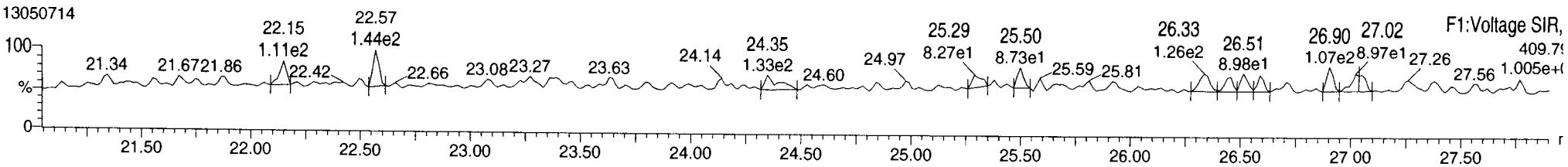

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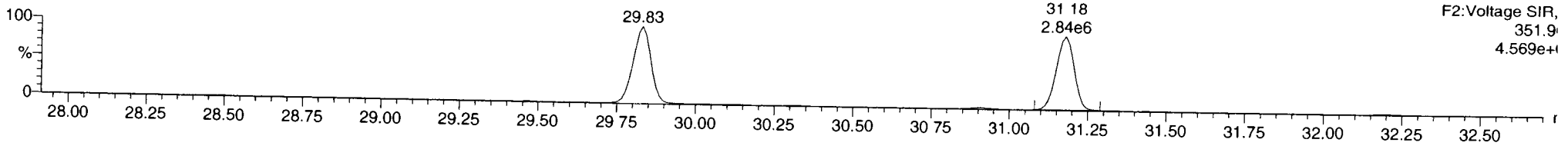
13C-23478-PeCDF

13050714



13C-23478-PeCDF

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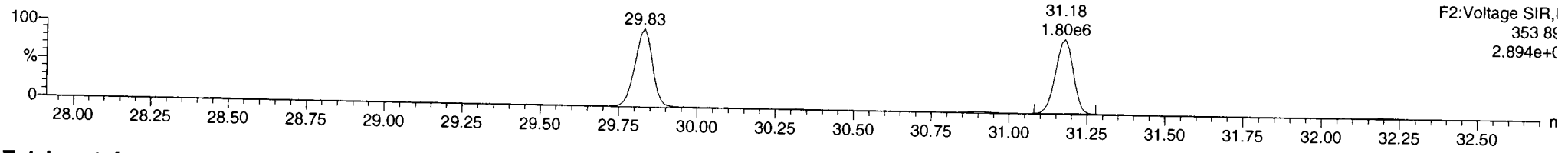

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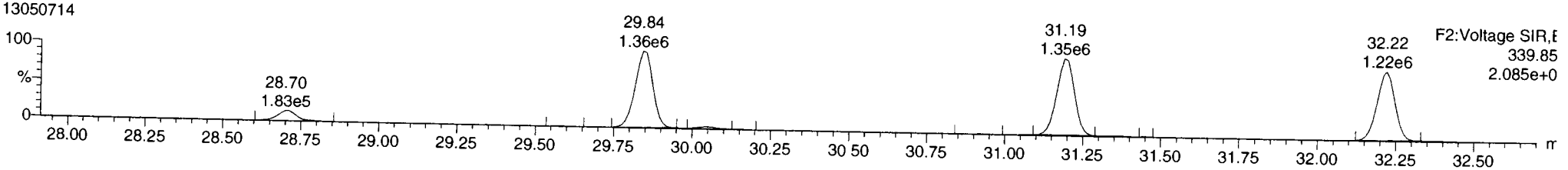

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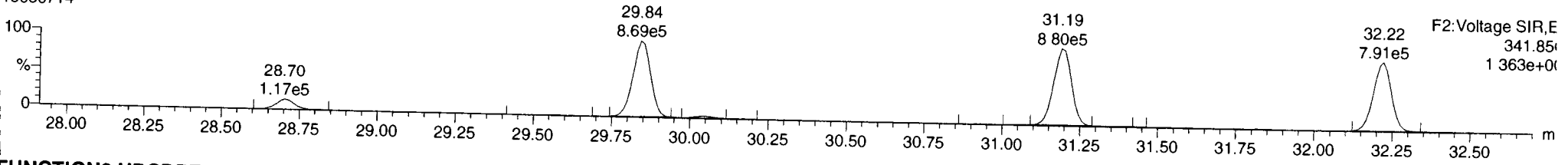

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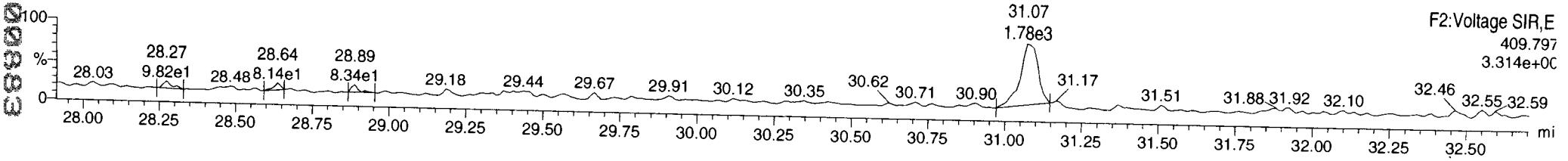

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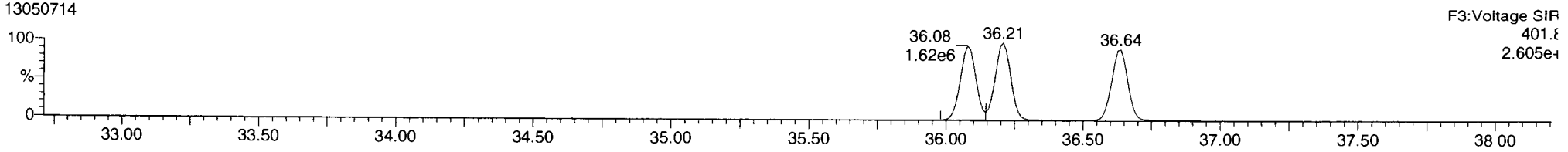
13C-123478-HxCDD

13050714



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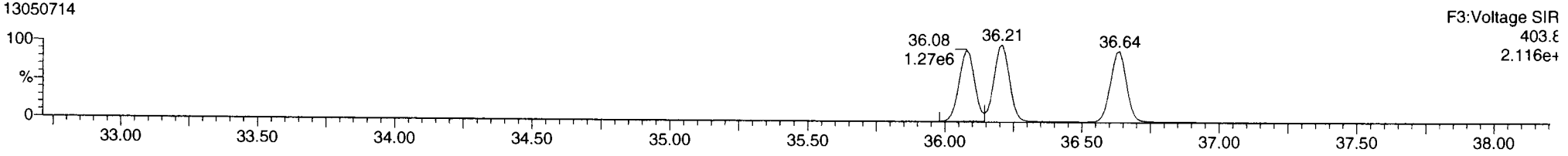

Total-hexadioxins

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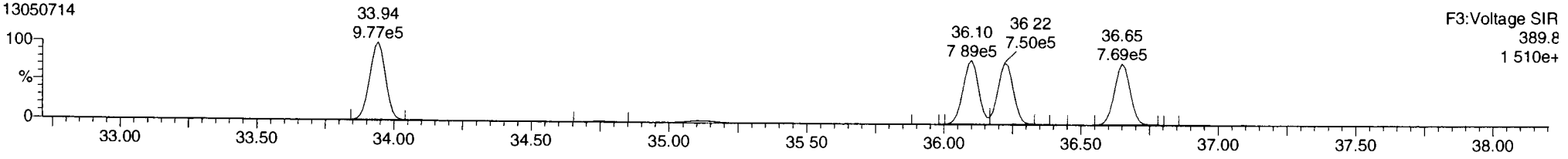

Total-hexadioxins

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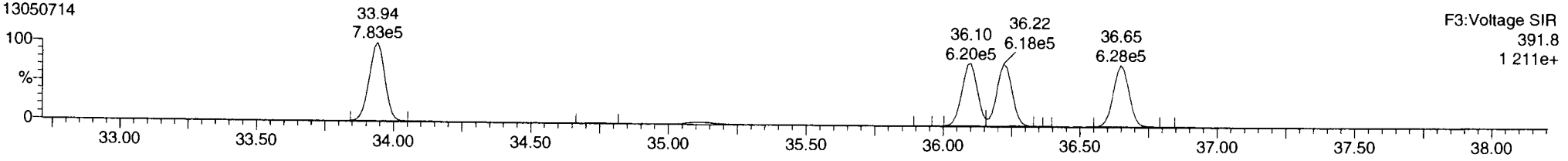
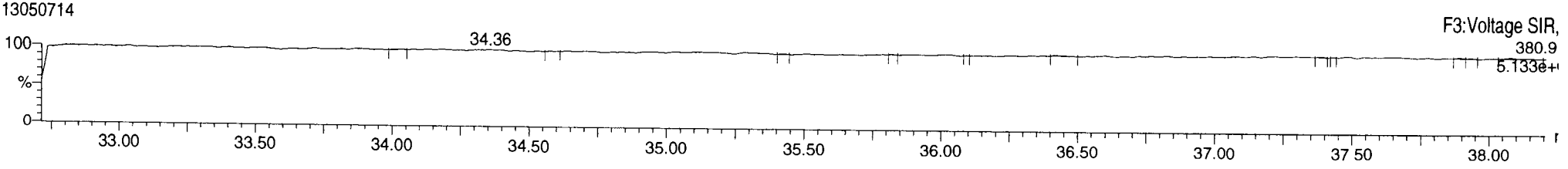


FUNCTION3 PFK

13050714



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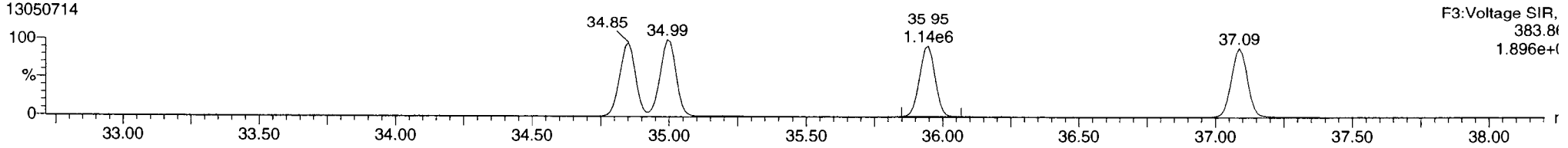
13C-234678-HxCDF



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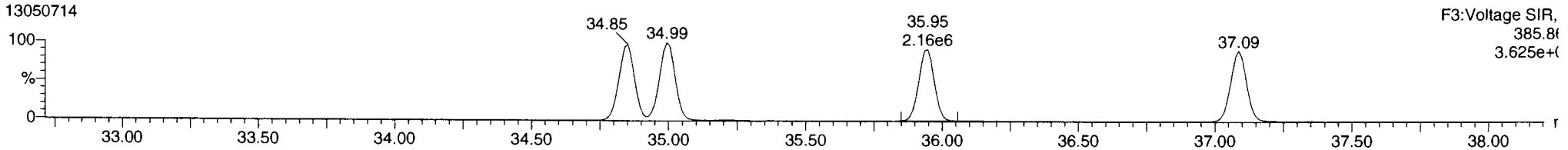

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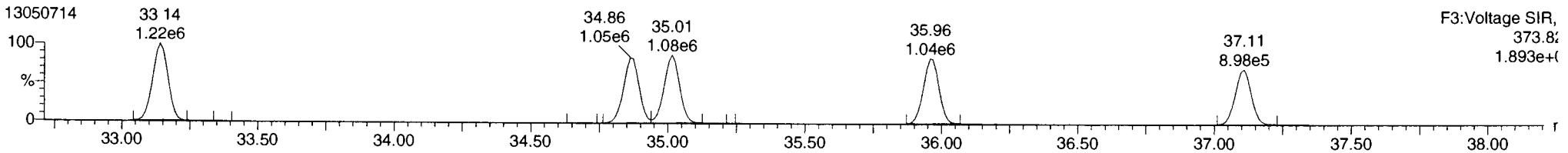

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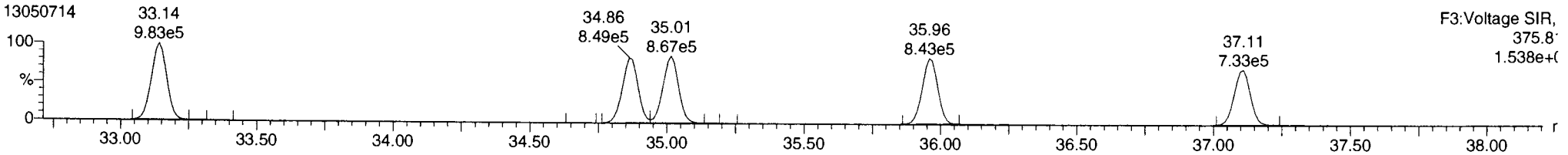
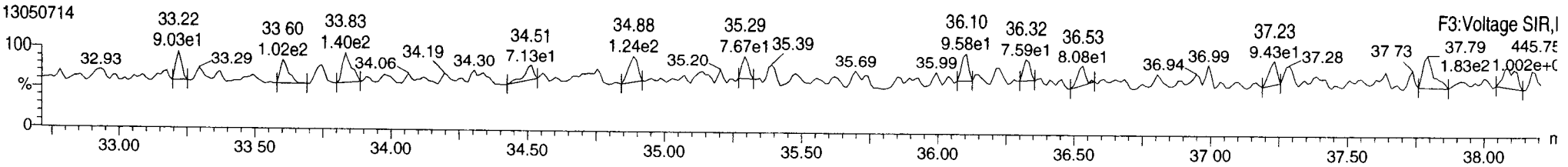


FUNCTION3 OCDPE



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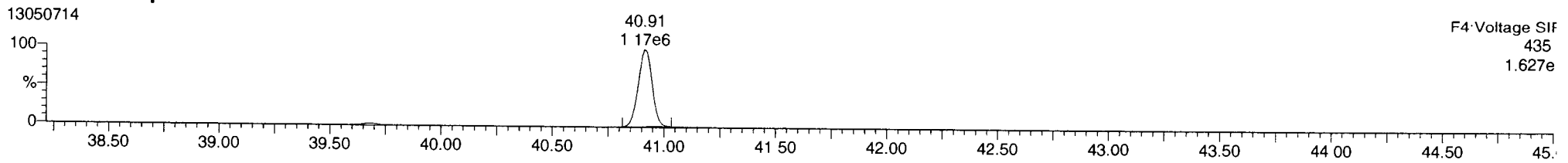
13C-1234678-HpCDD



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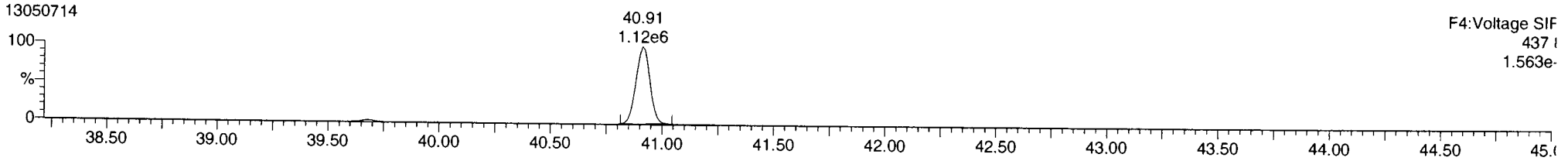

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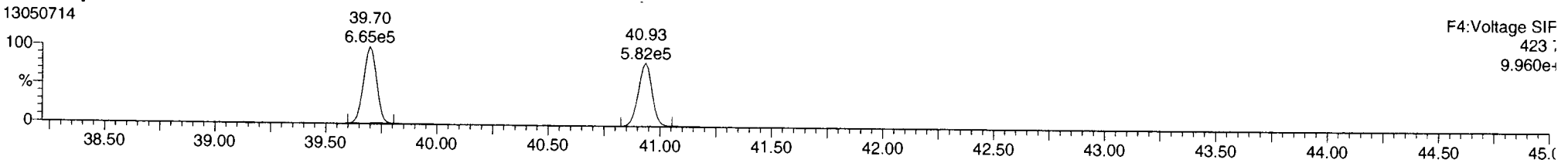

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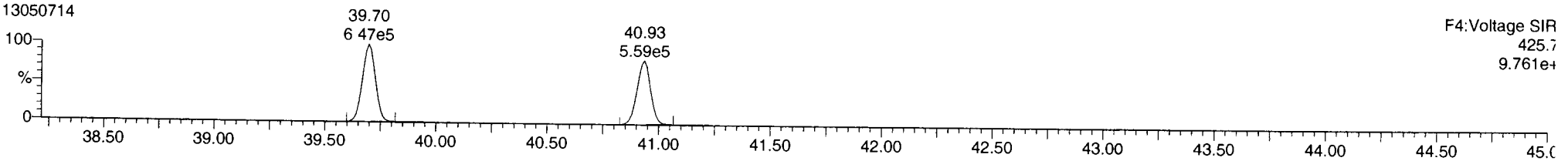

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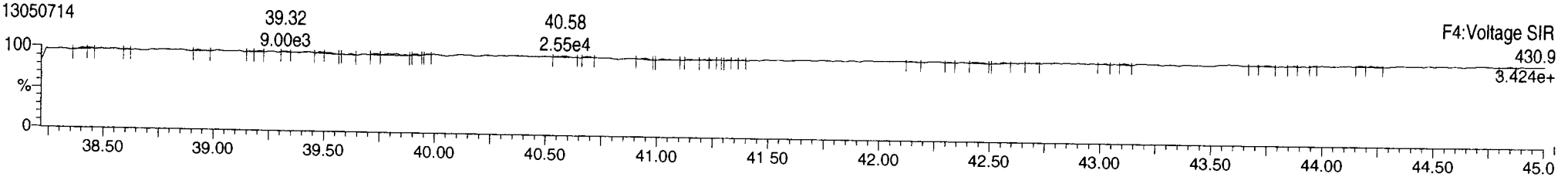

WNZ7 00886

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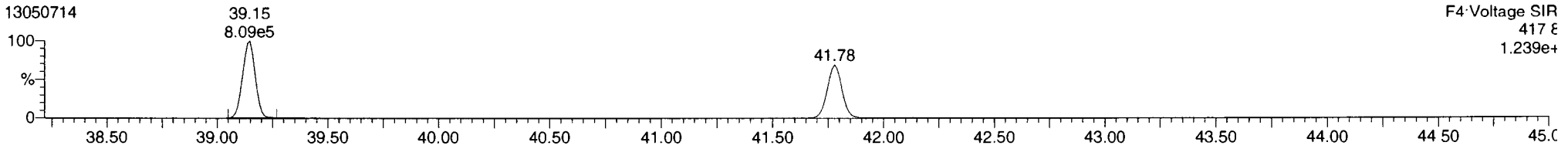

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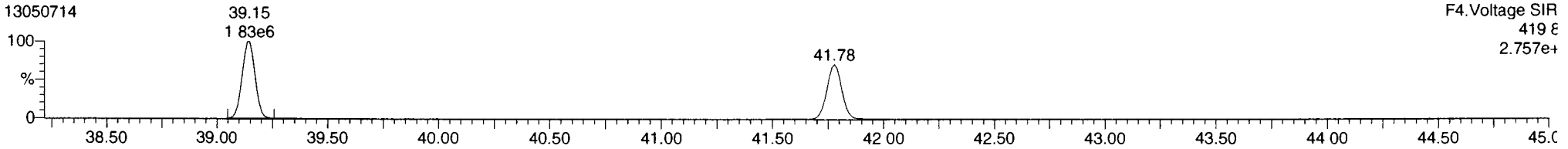

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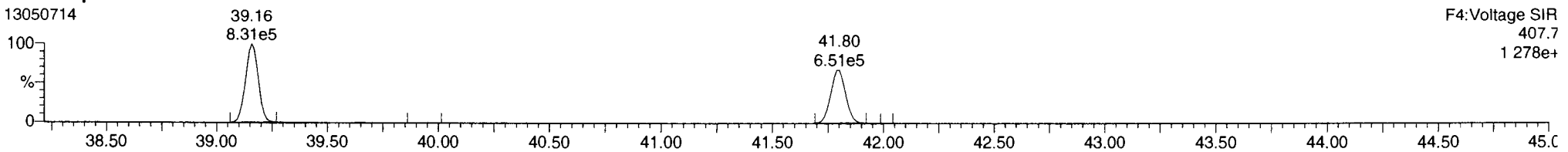
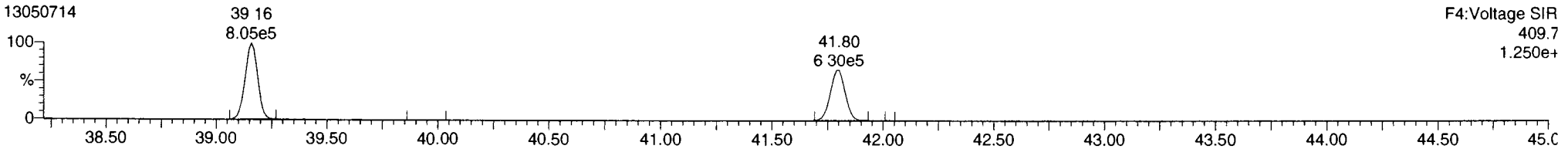


Total-heptafurans



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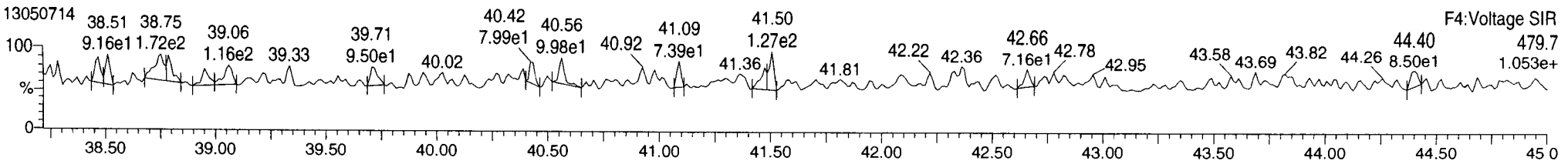

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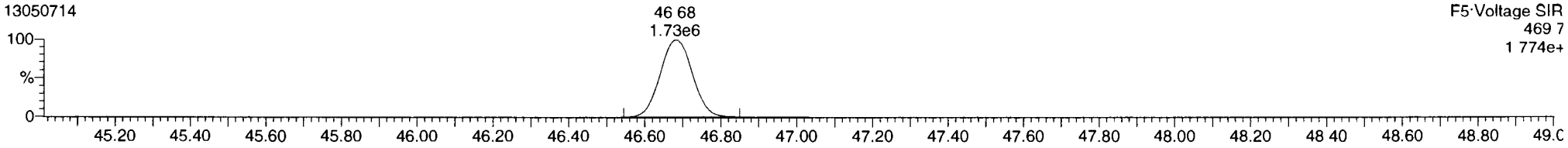
13C-OCDD



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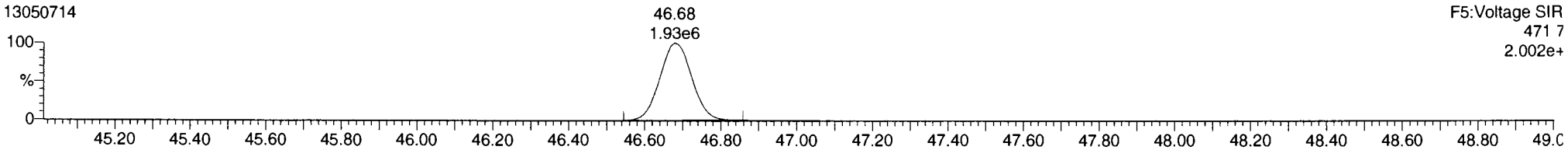

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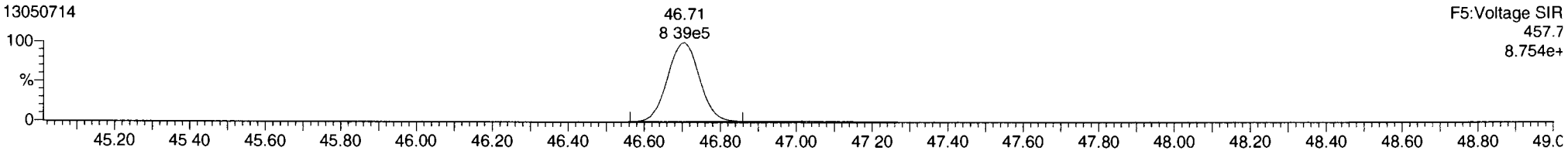

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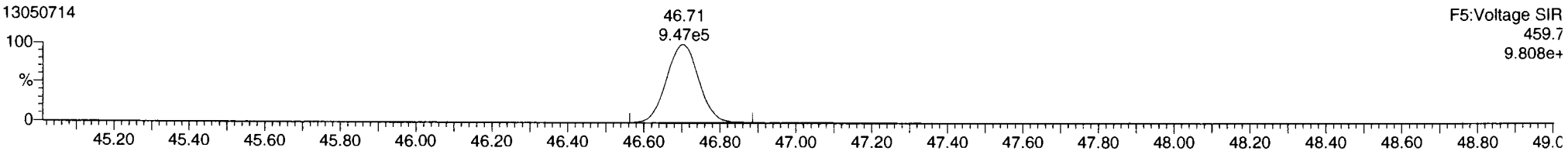

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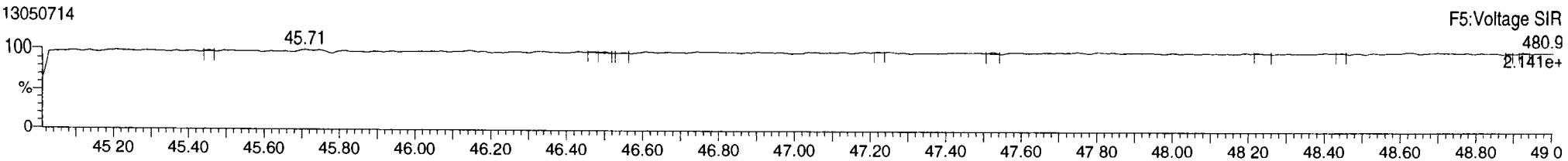

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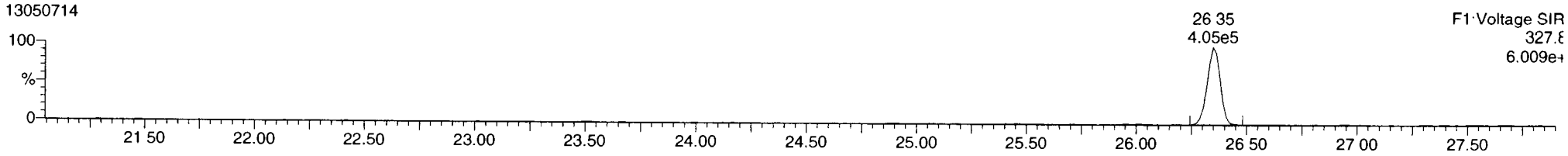
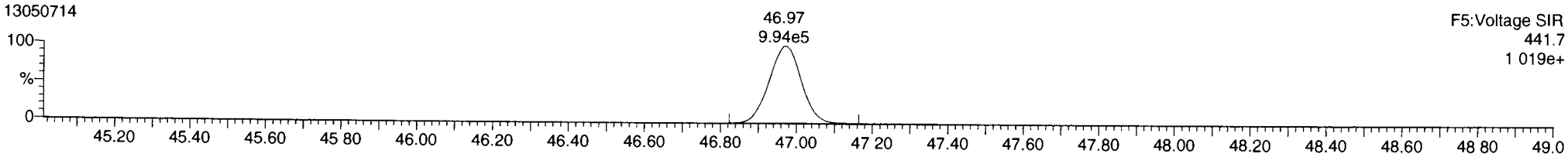
37CL-2378-TCDD



OCDF



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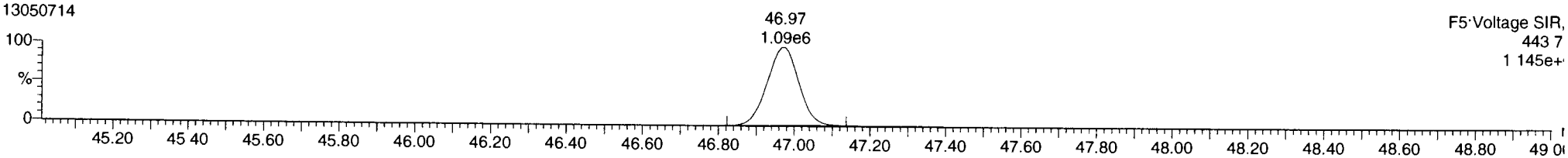

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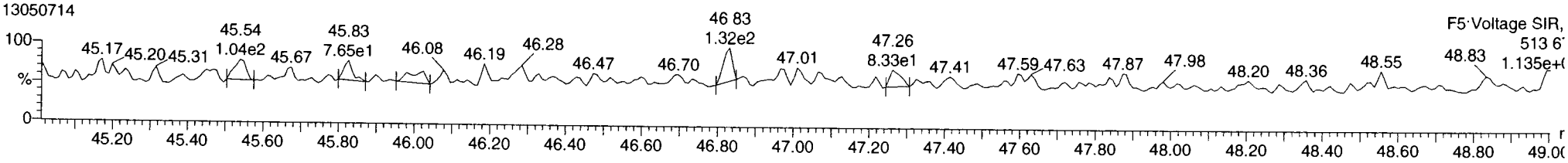


Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN27

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) WN27, WN31 Page 1 of 1 Batch set up by: SP

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5 dry wt)	(REQ) Sulfur Clean 2mL+0.5mL Ethyl Acetate 1 2 (3) very high	(REQ) Silica Gel Clean (1:2.5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID / Analyst/Date
	WN27 MBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 2 3 YL/CT 05/03/13 Analyst/Date
	SBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	
	SBS Dup.	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	
	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 CSZ 5/14/13 Analyst/Date
2	A	21.06	~~2.5mL~~ 5mL	~~(1:2.5) 1mL~~ 1:5 1mL	~~2.5mL~~ 5mL	1mL	See notes	
2	AMS	21.03	~~2.5mL~~ 5mL	~~(1:2.5) 1mL~~ 1:5 1mL	~~2.5mL~~ 5mL	1mL	See notes	
2	AMSD	21.04	~~2.5mL~~ 5mL	~~(1:2.5) 1mL~~ 1:5 1mL	~~2.5mL~~ 5mL	1mL	See notes	
9	WN31 A	32.00	~~2.5mL~~ 5mL	~~(1:2.5) 1mL~~ 1:5 1mL	~~2.5mL~~ 5mL	1mL	See notes	TurboVap 1 2 3 Pre-Cleanups SP 5/6/13 Analyst/Date
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 2 3 Post Cleanups SP 5/6/13 Analyst/Date
			2.5mL	(1:2.5) 1mL	2.5mL	1mL	SP 5/6/13	
Analyst/Date	YL 05/03/13		SP 5-6-13	SP 5/6/13	SP 5-6-13	SP 5/6/13		

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (2035-2)	2µg/mL	50µL	5/16/13	YL	WW
Spike	3 (2079-2)	0.5/1/5µg/mL	100µL	12/10/13	YL	WW
QLS Spike	10 (2046-2)	0.25-2.5µg/mL	25µL	12/10/13	YL	WW
Extraction Time: 12:30			Balance ID: B146426l4			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. **Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels).** 3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 Hex/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing neutral glasswool. 8. Rinse with Hexane 9. Microwave a 2nd time using 8:2 Hex/Ace (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (~~Small~~ or Large drying column) to 5mL at 100°C. 12. Exchange to Hexane (2 X with 20mL) 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial in Hexane.

A. Need Total Solids Y (N) B. ~~Archive~~/Freeze Y (N) Both Jobs

Reagent and Solutions Identification

(8081B) Pest PSDDA – Soil/Sed
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WN27, WN31

(8081B) Pest PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Anhydrous Sodium Sulfate: (I# 8096 jar date 4/14/13)	YLC
Neutral Glasswool: (I# 7998 + jar date 4/15/13)	05/03/13
1:1 Hexane/Acetone: (H# 164)	
80:20 Hexane/Acetone: (H# 162)	
Hexane: (I# 8203)	
KD Station:	KD
Hexane: (I# 8218)	CJZ
Anhydrous Sodium Sulfate: (I# 8068 + jar date 4/19/13)	5/4/13
Neutral Glasswool: (I# 7998 + jar date 4/8/13)	
Vialing Station:	Vialing
Hexane: (I# 8218)	SP
Ethyl Acetate: (I# 6079)	5/6/13
Tetrabutylammonium hydrogensulfate (TBAS): (H# 148)	
Sodium Sulfite: (I# 7704)	
Silica Gel (SPE) Darts: (I# 7514)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN27 Client ID: SAIC

Parameter: PSDDA Pest Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)= A	IAC 4-24-13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)= 5% sticks-grass = A	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	
-Temperature log didn't print during microwave.	YC 05/03/13
A, AMS, AMSD - black & viscous. Took to SonFEH cleaned ~~2nd (2:5) split~~ for SPE mL (1:5) SP 5/6/13	SP 5/6/13

3056F

Revision 009
08/14/12

Pesticide Raw Data
Initial Calibration

ARI Job ID: WN27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 04/05/13 Internal Standard ID 2006-1 Expiration 7/26/13

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets %RSD & r^2 Criteria YES / NO
Manual Integrations for ICal? YES / NO
Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO
ICV Exceeding ±30%? YES / NO
Linear Fits Used? YES / NO
Quadratic Fits Used? YES / NO
Calibration Points Dropped? YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	2048-1	5/16/13	Ultra	2063-1	5/16/13
	2048-2	5/16/13		2064-1	01/17/14
	2067-1	5/16/13			
	2067-2	5/16/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: VZ **Date:** 4/8/13

Reviewer: VD **Date:** 4.19.13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 4/05/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1097966 Column Type:

Column 2 Serial No.: 1092322 Column Type:

GC Method: ICal Date:

IS	Ical/Ccal	ICV
2006-1	2048-1,2	
	2067-1,2.	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/ical-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	05-APR-2013 11:46	0405a003.d	1	DS	
2	05-APR-2013 12:47	0405a004.d	1	INDAE	
3	05-APR-2013 13:05	0405a005.d	1	INDAA	
4	05-APR-2013 13:23	0405a006.d	1	INDAB	
5	05-APR-2013 13:41	0405a007.d	1	INDAC	
6	05-APR-2013 13:58	0405a008.d	1	INDAD	
7	05-APR-2013 14:17	0405a009.d	1	INDAF	
8	05-APR-2013 14:35	0405a010.d	1	INDAG	
9	05-APR-2013 14:53	0405a011.d	1	INDA ICV	
10	05-APR-2013 15:10	0405a012.d	1	DS	
11	05-APR-2013 15:28	0405a013.d	1	TOXAPHENE	
12	05-APR-2013 15:46	0405a014.d	1	WNDE	
13	05-APR-2013 16:04	0405a015.d	1	WNDA	
14	05-APR-2013 16:22	0405a016.d	1	WNDB	
15	05-APR-2013 16:40	0405a017.d	1	WNDC	
16	05-APR-2013 16:57	0405a018.d	1	WNDD	
17	05-APR-2013 17:15	0405a019.d	1	WNDF	
18	05-APR-2013 17:33	0405a020.d	1	WNDG	
19	05-APR-2013 17:51	0405a021.d	1	WNDICV	
20	05-APR-2013 18:09	0405a022.d	1	DS	
21	05-APR-2013 18:26	0405a023.d	1	INDAE	
22	05-APR-2013 18:44	0405a024.d	1	WNDE	
23	05-APR-2013 19:02	0405a025.d	1	TOXAPHENE	
24	05-APR-2013 19:20	0405a026.d	1	WI89F	W5
25	05-APR-2013 19:38	0405a027.d	1	WI89E	W4
26	05-APR-2013 19:55	0405a028.d	1	WI89D	W3-D
27	05-APR-2013 20:13	0405a029.d	1	WI89C	W3
28	05-APR-2013 20:31	0405a030.d	1	WI89BMSD	W2 MSD
29	05-APR-2013 20:49	0405a031.d	1	WI89BMS	W2 MS
30	05-APR-2013 21:07	0405a032.d	1	WI89B	W2
31	05-APR-2013 21:24	0405a033.d	1	WI89MBW1	WI89MBW1
32	05-APR-2013 21:42	0405a034.d	1	WI89LCSW1	WI89LCSW1
33	05-APR-2013 22:00	0405a035.d	1	WI89A	W1
34	05-APR-2013 22:18	0405a036.d	1	DS	
35	05-APR-2013 22:35	0405a037.d	1	INDAE	
36	05-APR-2013 22:53	0405a038.d	1	WNDE	
37	05-APR-2013 23:11	0405a039.d	1	TOXAPHENE	
38	05-APR-2013 23:29	0405a040.d	1	WJ10MBW1	
39	05-APR-2013 23:47	0405a041.d	1	WJ10LCSW1	
40	06-APR-2013 00:05	0405a042.d	1	WJ10LCSDW1	
41	06-APR-2013 00:22	0405a043.d	1	WJ10A	
42	06-APR-2013 00:40	0405a044.d	1	DS	
43	06-APR-2013 00:58	0405a045.d	1	INDAE	
44	06-APR-2013 01:16	0405a046.d	1	TOXAPHENE	

YZ 4/8/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Batch File: /chem2/ecd6.i/20130405PEST.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0405a004	0405a005	0405a006	0405a007	0405a008	0405a009	0405a010
INJ.DATE:	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013
INJ.TIME:	12:47	13:05	13:23	13:41	13:58	14:17	14:35

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.340	2.339	2.340	2.340	2.340	2.341	2.341	2.341	2.291-2.391	2.340	0.001
* 54 1Bromo-2nitrobenzene	3.165	3.164	3.164	3.165	3.165	3.165	3.165	3.165	3.115-3.215	3.165	0.000
* 58 Hexabromobiphenyl	8.980	8.979	8.979	8.979	8.979	8.980	8.980	8.979	8.929-9.029	8.979	0.001
$ 2 Tetrachloro-m-xylene	3.837	3.835	3.836	3.836	3.836	3.837	3.836	3.836	3.786-3.886	3.836	0.001
3 Hexachlorobenzene	4.181	4.178	4.179	4.179	4.179	4.180	4.179	4.179	4.129-4.229	4.179	0.001
4 alpha-BHC	4.331	4.329	4.329	4.329	4.330	4.331	4.330	4.330	4.280-4.380	4.330	0.001
5 gamma-BHC (Lindane)	4.617	4.614	4.615	4.615	4.615	4.616	4.615	4.615	4.565-4.665	4.615	0.001
6 beta-BHC	4.689	4.686	4.687	4.687	4.687	4.688	4.687	4.687	4.637-4.737	4.687	0.001
7 delta-BHC	4.860	4.858	4.858	4.859	4.858	4.859	4.858	4.858	4.808-4.908	4.859	0.001
8 Heptachlor	5.067	5.064	5.065	5.065	5.065	5.066	5.065	5.065	5.015-5.115	5.065	0.001
9 Aldrin	5.362	5.359	5.360	5.360	5.360	5.361	5.360	5.360	5.310-5.410	5.361	0.001
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
11 Heptachlor epoxide b	5.939	5.936	5.936	5.936	5.937	5.938	5.936	5.936	5.886-5.986	5.937	0.001
12 gamma-Chlordane	6.057	6.054	6.055	6.055	6.055	6.056	6.055	6.055	6.005-6.105	6.055	0.001
13 alpha-Chlordane	6.182	6.179	6.180	6.180	6.179	6.181	6.180	6.180	6.130-6.230	6.180	0.001
14 Endosulfan I	6.316	6.314	6.314	6.314	6.314	6.315	6.315	6.315	6.265-6.365	6.315	0.001

Reviewer 1 YL Date: 4/8/13

Reviewer 2 _____ Date: _____

15889 12nt

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: _____

6886 12-2454

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Batch File: /chem2/ecd6.i/20130405PEST.b/ical-2.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	6.921	6.918	6.919	6.919	6.920	6.921	6.920	6.921	6.871-6.971	6.920	0.001
	16 Dieldrin	7.121	7.119	7.120	7.120	7.120	7.121	7.121	7.121	7.071-7.171	7.120	0.001
	17 Endrin	7.411	7.409	7.409	7.410	7.409	7.411	7.410	7.411	7.361-7.461	7.410	0.001
	18 4,4'-DDD	7.458	7.456	7.456	7.457	7.457	7.458	7.458	7.458	7.408-7.508	7.457	0.001
	19 Endosulfan II	7.599	7.597	7.597	7.597	7.598	7.598	7.599	7.599	7.549-7.649	7.598	0.001
	20 4,4'-DDT	7.746	7.744	7.745	7.745	7.745	7.746	7.745	7.746	7.696-7.796	7.745	0.001
	21 Endrin aldehyde	7.896	7.895	7.895	7.896	7.895	7.896	7.895	7.896	7.846-7.946	7.895	0.001
	22 Endosulfan sulfate	8.141	8.139	8.140	8.140	8.140	8.141	8.140	8.141	8.091-8.191	8.140	0.001
	23 Methoxychlor	8.328	8.327	8.327	8.327	8.327	8.328	8.330	8.328	8.278-8.378	8.328	0.001
	24 Endrin ketone	8.633	8.632	8.632	8.632	8.632	8.633	8.633	8.633	8.583-8.683	8.632	0.001
$	25 Decachlorobiphenyl	9.796	9.794	9.795	9.795	9.794	9.795	9.795	9.796	9.746-9.846	9.795	0.001
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.131	7.081-7.181	+++++	+++++
	38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.432	6.382-6.482	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0405a014	0405a015	0405a016	0405a017	0405a018	0405a019	0405a020
INJ.DATE:	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013
INJ.TIME:	15:46	16:04	16:22	16:40	16:57	17:15	17:33

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.341	2.291-2.391	+++++	+++++
* 54 1Bromo-2nitrobenzene	3.165	3.165	3.165	3.165	3.165	3.165	3.164	3.165	3.115-3.215	3.165	0.000
* 58 Hexabromobiphenyl	8.979	8.979	8.979	8.979	8.979	8.979	8.978	8.979	8.929-9.029	8.979	0.000
$ 2 Tetrachloro-m-xylene	3.836	3.836	3.836	3.836	3.836	3.836	3.836	3.836	3.786-3.886	3.836	0.000
3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.179	4.129-4.229	+++++	+++++
4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.330	4.280-4.380	+++++	+++++
5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.615	4.565-4.665	+++++	+++++
6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.687	4.637-4.737	+++++	+++++
7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.858	4.808-4.908	+++++	+++++
8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.065	5.015-5.115	+++++	+++++
9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.360	5.310-5.410	+++++	+++++
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.936	5.886-5.986	+++++	+++++
12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.055	6.005-6.105	+++++	+++++
13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.180	6.130-6.230	+++++	+++++
14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.315	6.265-6.365	+++++	+++++

Reviewer 1 YZ Date: 4/8/13

Reviewer 2 _____ Date: _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.235	6.185-6.285	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.537	6.487-6.587	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.756	6.706-6.806	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.791	6.741-6.841	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.961	6.911-7.011	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.049	6.999-7.099	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.338	7.288-7.388	+++++	+++++
	22 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.474	7.424-7.524	+++++	+++++
	23 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.729	7.679-7.779	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.985	7.935-8.035	+++++	+++++
$	25 Decachlorobiphenyl	8.831	8.831	8.830	8.830	8.830	8.830	8.830	8.831	8.781-8.881	8.830	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.012	6.962-7.062	+++++	+++++
	39 2,4-DDE	5.911	5.911	5.911	5.911	5.910	5.911	5.911	5.911	5.861-5.961	5.911	0.000

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.398	6.398	6.398	6.398	6.397	6.398	6.397	6.397	6.347-6.447	6.398	0.000
41 2,4-DDT	6.637	6.637	6.638	6.637	6.637	6.637	6.636	6.636	6.586-6.686	6.637	0.000
42 Hexachloroethane	1.736	1.732	1.726	1.757	1.756	1.756	1.754	1.754	1.704-1.804	1.745	0.013
43 Oxychlordane	5.840	5.840	5.840	5.840	5.840	5.840	5.840	5.840	5.790-5.890	5.840	0.000
44 trans-Nonachlor	6.162	6.162	6.162	6.162	6.162	6.162	6.162	6.162	6.112-6.212	6.162	0.000
45 cis-Nonachlor	6.778	6.779	6.778	6.778	6.778	6.778	6.778	6.778	6.728-6.828	6.778	0.000
46 Mirex	7.653	7.653	7.653	7.653	7.653	7.653	7.653	7.653	7.603-7.703	7.653	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.837	4.787-4.887	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0405a014	0405a015	0405a016	0405a017	0405a018	0405a019	0405a020
INJ.DATE:	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013
INJ.TIME:	15:46	16:04	16:22	16:40	16:57	17:15	17:33

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.497	2.447-2.547	+++++	+++++
* 52 1Bromo-2nitrobenzene	3.334	3.333	3.333	3.333	3.333	3.333	3.332	3.334	3.284-3.384	3.333	0.000
* 55 Hexabromobiphenyl	10.366	10.367	10.368	10.367	10.366	10.366	10.366	10.366	10.316-10.416	10.366	0.001
$ 2 Tetrachloro-m-xylene	4.166	4.165	4.166	4.165	4.166	4.166	4.167	4.169	4.119-4.219	4.166	0.000
3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.629	4.579-4.679	+++++	+++++
4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.756	4.706-4.806	+++++	+++++
5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.116	5.066-5.166	+++++	+++++
6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.185	5.135-5.235	+++++	+++++
7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.499	5.449-5.549	+++++	+++++
8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.582	5.532-5.632	+++++	+++++
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.921	5.871-5.971	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.476	6.426-6.526	+++++	+++++
12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.657	6.607-6.707	+++++	+++++
13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.795	6.745-6.845	+++++	+++++
14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.863	6.813-6.913	+++++	+++++

Reviewer 1 YB Date: 4/9/13

Reviewer 2 _____ Date: _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-2.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.920	6.870-6.970	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.121	7.071-7.171	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.410	7.360-7.460	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.458	7.408-7.508	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.599	7.549-7.649	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.696-7.795	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.895	7.845-7.945	+++++	+++++
	22 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.140	8.090-8.190	+++++	+++++
	23 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.330	8.280-8.380	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.633	8.583-8.683	+++++	+++++
$	25 Decachlorobiphenyl	9.794	9.794	9.796	9.794	9.794	9.794	9.795	9.795	9.745-9.845	9.794	0.001
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.344	7.294-7.394	+++++	+++++
	38 2,4-DDE	6.631	6.631	6.631	6.631	6.630	6.631	6.631	6.631	6.581-6.681	6.631	0.000

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	7.115	7.115	7.115	7.115	7.115	7.115	7.115	7.115	7.065-7.165	7.115	0.000
40 2,4-DDT	7.403	7.403	7.403	7.403	7.402	7.404	7.404	7.403	7.353-7.453	7.403	0.000
41 Hexachloroethane	1.731	1.734	1.734	1.737	1.735	1.732	1.732	1.731	1.681-1.781	1.734	0.002
42 Oxychlordane	6.385	6.384	6.384	6.384	6.384	6.385	6.385	6.385	6.335-6.435	6.384	0.000
43 trans-Nonachlor	6.741	6.741	6.741	6.741	6.740	6.741	6.741	6.741	6.691-6.791	6.741	0.000
44 cis-Nonachlor	7.465	7.465	7.465	7.464	7.464	7.465	7.465	7.465	7.415-7.515	7.465	0.000
45 Mirex	8.619	8.619	8.619	8.619	8.618	8.619	8.619	8.619	8.569-8.669	8.619	0.000
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.369	5.319-5.419	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a015.d
Level 2: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a016.d
Level 3: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a017.d
Level 4: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a018.d
Level 5: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a014.d
Level 6: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a019.d
Level 7: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a020.d
Level 8: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a013.d

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.86412	1.76558	1.75954	1.71114	2.08197	1.99212		
	1.78783	+++++					1.85176	7.399
3 Hexachlorobenzene	1.38358	1.28363	1.24997	1.17654	1.38333	1.32436		
	1.17366	+++++					1.28215	6.849
4 alpha-BHC	1.58499	1.57280	1.64100	1.63674	2.03978	2.01414		
	1.82763	+++++					1.75958	11.425
5 gamma-BHC (Lindane)	1.45746	1.43950	1.49170	1.47883	1.82712	1.79783		
	1.62419	+++++					1.58809	10.372
6 beta-BHC	0.75156	0.70098	0.67868	0.64327	0.76675	0.73767		
	0.65579	+++++					0.70496	6.849
7 delta-BHC	1.41663	1.40250	1.46228	1.46046	1.82032	1.78467		
	1.61615	+++++					1.56614	11.241

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.47349	1.42706	1.45263	1.42228	1.73482	1.66896		
	1.47535	+++++					1.52208	8.275
9 Aldrin	1.40325	1.37786	1.40681	1.39200	1.72260	1.66943		
	1.48100	+++++					1.49328	9.585
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.39423	1.30165	1.30500	1.25720	1.53316	1.46726		
	1.29569	+++++					1.36488	7.545
12 gamma-Chlordane	1.36187	1.31575	1.31220	1.28261	1.58008	1.53695		
	1.37607	+++++					1.39508	8.361
13 alpha-Chlordane	1.35457	1.28201	1.27423	1.23035	1.50336	1.45331		
	1.29520	+++++					1.34186	7.541
14 Endosulfan I	1.27164	1.20775	1.19567	1.15176	1.40842	1.34368		
	1.18836	+++++					1.25247	7.468
15 4,4'-DDE	1.04917	1.00567	1.01136	0.98255	1.22472	1.19885		
	1.10321	+++++					1.08222	8.948

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.25469	1.23247	1.25397	1.22951	1.51636	1.45727		
	1.30179	+++++					1.32086	8.861
17 Endrin	1.22875	1.14838	1.17430	1.13567	1.42634	1.37547		
	1.19929	+++++					1.24117	9.212
18 4,4'-DDD	1.15755	1.09126	1.11675	1.07991	1.34305	1.32431		
	1.17095	+++++					1.18340	9.115
19 Endosulfan II	1.29578	1.20341	1.21232	1.15589	1.42367	1.39601		
	1.21493	+++++					1.27171	8.118
20 4,4'-DDT	1.17187	1.09730	1.11364	1.06913	1.33682	1.33220		
	1.18103	+++++					1.18600	9.179
21 Endrin aldehyde	1.09106	1.00151	0.99855	0.94279	1.15274	1.13516		
	0.98906	+++++					1.04441	7.767
22 Methoxychlor	0.62189	0.56482	0.55745	0.52922	0.65567	0.64731		
	0.58770	+++++					0.59487	8.074
23 Endosulfan sulfate	1.16358	1.06607	1.06515	1.00984	1.24528	1.22355		
	1.07475	+++++					1.12118	8.011
24 Endrin ketone	1.50306	1.35374	1.32941	1.25572	1.54293	1.52396		
	1.34556	+++++					1.40777	8.042

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.05148	+++++		
	+++++	0.05148					0.05148	0.000
(2)	+++++	+++++	+++++	+++++	0.03504	+++++		
	+++++	+++++					0.03504	0.000
(3)	+++++	+++++	+++++	+++++	0.05882	+++++		
	+++++	+++++					0.05882	0.000
(4)	+++++	+++++	+++++	+++++	0.05933	+++++		
	+++++	+++++					0.05933	0.000
(5)	+++++	+++++	+++++	+++++	0.03915	+++++		
	+++++	+++++					0.03915	0.000
(6)	+++++	+++++	+++++	+++++	0.03361	+++++		
	+++++	+++++					0.03361	0.000
39 2,4-DDE	0.97037	0.94494	0.94800	0.97255	0.90349	1.01619		
	0.84262	+++++					0.94259	5.914
40 2,4-DDD	0.86428	0.82066	0.81941	0.83423	0.77745	0.89463		
	0.76053	+++++					0.82446	5.633
41 2,4-DDT	0.97762	0.93181	0.93450	0.95197	0.89630	1.03633		
	0.87037	+++++					0.94270	5.752

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
43 Oxychlordane	1.29181	1.24713	1.25548	1.27408	1.19753	1.36047		
	1.13536	+++++					1.25169	5.691
44 trans-Nonachlor	1.52831	1.46845	1.47524	1.51266	1.42527	1.63694		
	1.39053	+++++					1.49105	5.361
45 cis-Nonachlor	1.60364	1.52966	1.54573	1.59353	1.51117	1.75011		
	1.49805	+++++					1.57598	5.479
46 Mirex	1.06476	0.97851	0.94279	0.93019	0.85718	0.98037		
	0.83485	+++++					0.94124	8.308
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
$ 2 Tetrachloro-m-xylene	1.22093	1.17519	1.17086	1.12023	1.33214	1.27457		
	1.13000	+++++					1.20342	6.446
$ 25 Decachlorobiphenyl	1.22712	1.39221	1.18347	1.03855	1.18904	1.14719		
	0.99666	+++++					1.16775	11.110

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a015.d
Level 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a016.d
Level 3: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a017.d
Level 4: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a018.d
Level 5: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a014.d
Level 6: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a019.d
Level 7: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a020.d
Level 8: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a013.d

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.68966	1.54770	1.52497	1.44719	1.51551	1.56884		
	1.43229	+++++					1.53231	5.583
3 Hexachlorobenzene	1.85432	1.77150	1.76373	1.68524	1.96131	1.87809		
	1.63888	+++++					1.79330	6.276
4 alpha-BHC	1.70138	1.75567	1.85342	1.87497	2.23583	2.20600		
	2.00018	+++++					1.94678	10.779
5 gamma-BHC (Lindane)	1.54386	1.55958	1.62894	1.63777	1.95411	1.92482		
	1.74555	+++++					1.71352	9.792
6 beta-BHC	0.75150	0.73780	0.73159	0.71129	0.83666	0.82054		
	0.72405	+++++					0.75906	6.493
7 delta-BHC	1.48508	1.50559	1.58354	1.59180	1.87744	1.86008		
	1.68038	+++++					1.65484	9.633

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.53588	1.52969	1.56029	1.54097	1.79481	1.70711		
	1.45373	+++++					1.58893	7.450
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Aldrin	1.37926	1.37037	1.39862	1.38737	1.64212	1.58534		
	1.37709	+++++					1.44860	7.893
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.27602	1.21672	1.22365	1.19040	1.39603	1.33591		
	1.14610	+++++					1.25497	6.928
12 gamma-Chlordane	1.23139	1.20522	1.21707	1.19590	1.40625	1.37528		
	1.20954	+++++					1.26295	7.003
13 alpha-Chlordane	1.15386	1.12660	1.12460	1.10005	1.29194	1.25884		
	1.10159	+++++					1.16535	6.683
14 Endosulfan I	1.07598	1.05971	1.06310	1.03937	1.21798	1.18434		
	1.01792	+++++					1.09406	6.957
15 4,4'-DDE	1.07231	1.07330	1.09778	1.07854	1.24866	1.20322		
	1.05591	+++++					1.11853	6.753

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.06871	1.06342	1.07850	1.05724	1.22625	1.17015		
	1.02268	+++++					1.09813	6.590
17 Endrin	2.17870	2.04807	2.09589	2.02185	2.57180	2.33640		
	1.95604	+++++					2.17268	9.894
18 4,4'-DDD	2.26082	2.14565	2.20459	2.13439	2.69106	2.51434		
	2.14488	+++++					2.29939	9.475
19 Endosulfan II	2.43748	2.28049	2.30366	2.19551	2.75928	2.56341		
	2.16454	+++++					2.38634	8.999
20 4,4'-DDT	2.05904	1.93083	1.97799	1.92012	2.39796	2.30287		
	2.02246	+++++					2.08733	9.013
21 Endrin aldehyde	1.93356	1.79284	1.80285	1.72269	2.16235	2.03164		
	1.72866	+++++					1.88208	8.858
22 Endosulfan sulfate	1.98303	1.84581	1.87837	1.81411	2.30559	2.17756		
	1.86710	+++++					1.98165	9.522
23 Methoxychlor	0.94203	0.85843	0.85236	0.79685	0.99291	0.93147		
	0.68248	+++++					0.86522	12.018
24 Endrin ketone	2.08253	1.92427	1.93089	1.84154	2.31127	2.19456		
	1.90367	+++++					2.02696	8.577

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.07348	+++++		
	+++++	+++++					0.07348	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	0.10995	+++++		
	+++++	+++++					0.10995	0.000
(3)	+++++	+++++	+++++	+++++	0.11751	+++++		
	+++++	+++++					0.11751	0.000
(4)	+++++	+++++	+++++	+++++	0.08491	+++++		
	+++++	+++++					0.08491	0.000
(5)	+++++	+++++	+++++	+++++	0.10752	+++++		
	+++++	+++++					0.10752	0.000
38 2,4-DDE	0.81007	0.79245	0.77739	0.77920	0.72189	0.78749		
	0.64847	+++++					0.75957	7.385
39 2,4-DDD	1.72533	1.60231	1.59340	1.62587	1.55489	1.72186		
	1.43911	+++++					1.60897	6.144
40 2,4-DDT	1.78286	1.67947	1.68200	1.72632	1.65914	1.86011		
	1.56080	+++++					1.70724	5.589
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	1.05125	1.04120	1.03502	1.04960	0.98900	1.10930		
	0.95840	+++++					1.03340	4.674

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
43 trans-Nonachlor	3.19206	3.05137	3.06372	3.12225	2.97977	3.28562		
	2.78344	+++++					3.06832	5.234
44 cis-Nonachlor	2.98886	2.83553	2.88674	2.93078	2.81218	3.13506		
	2.69727	+++++					2.89806	4.823
45 Mirex	1.50918	1.37059	1.31068	1.29630	1.22446	1.36347		
	1.17545	+++++					1.32145	8.226
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.45811	1.42532	1.42159	1.36019	1.57240	1.47902		
	1.18841	+++++					1.41501	8.423
$ 25 Decachlorobiphenyl	2.07956	1.87920	1.82822	1.70015	2.10612	1.97368		
	1.71032	+++++					1.89675	8.652

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a004.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a004.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 12:47
Report Date: 04/08/2013 11:23
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.165	0.001	5448520	3.333	0.001	21702340	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.001	2778447	4.756	0.000	12130669	23.1848	22.9695	0.9	alpha-BHC
4.689	0.002	1044408	5.186	0.001	4539393	21.7530	22.0447	1.3	beta-BHC
4.860	0.002	2479509	5.499	0.000	10186203	23.2458	22.6902	2.4	delta-BHC
4.617	0.002	2488780	5.116	0.000	10602173	23.0103	22.8081	0.9	gamma-BHC (Lindane)
5.067	0.002	2363050	5.582	0.000	9737910	22.7953	22.5915	0.9	Heptachlor
5.362	0.002	2346404	5.921	0.001	8909469	23.0714	22.5100	2.5	Aldrin
5.939	0.003	2088367	6.476	0.000	7574285	22.4658	20.8988	7.2	Heptachlor epoxide b
6.316	0.002	1918451	6.863	0.001	6608262	22.4903	20.9671	7.0	Endosulfan I
6.539	0.002	4130946	7.121	0.000	13306230	45.9201	42.4171	7.9	Dieldrin
6.236	0.001	3336461	6.921	0.000	13549372	45.2671	42.4999	6.3	4,4'-DDE
6.758	0.001	3428854	7.411	0.001	9877928	45.9676	46.5304	1.2	Endrin
6.962	0.002	3422424	7.599	0.000	10598036	44.7794	45.4490	1.5	Endosulfan II
6.792	0.002	3228623	7.458	0.000	10335979	45.3964	46.0101	1.3	4,4'-DDD
7.731	0.001	2993586	8.141	0.001	8855445	44.4276	45.7410	2.9	Endosulfan sulfate
7.050	0.001	3213661	7.746	0.001	9210229	45.0869	45.1669	0.2	4,4'-DDT
7.474	0.001	7880984	8.328	-0.002	19068155	220.4428	225.4457	2.2	Methoxychlor
7.986	0.001	3709123	8.633	0.001	8877278	43.8404	44.8222	2.2	Endrin ketone
7.341	0.002	2771127	7.896	0.001	8305275	44.1489	45.1600	2.3	Endrin aldehyde
6.057	0.002	2152268	6.658	0.001	7629720	22.6522	21.0220	7.5	gamma-Chlordane
6.182	0.002	2047773	6.796	0.001	7009508	22.4071	20.7377	7.7	alpha-Chlordane
2.340	-0.001	2835909	2.496	-0.001	8222529	22.4864	19.7808	12.8	Hexachlorobutadiene
4.181	0.001	1884279	4.629	0.000	10641250	21.5783	21.8738	1.4	Hexachlorobenzene
8.980	0.001	4807902	10.368	0.002	7681727	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.001	3629094	4.166	-0.002	17062390	44.2786	44.4493	0.4	Tetrachloro-m-xylen
8.832	0.001	2858402	9.796	0.000	8089313	40.7294	43.6315	6.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	110.7	111.1	110.7~	115- 0
Decachlorobiphenyl	101.8	109.1	101.8~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

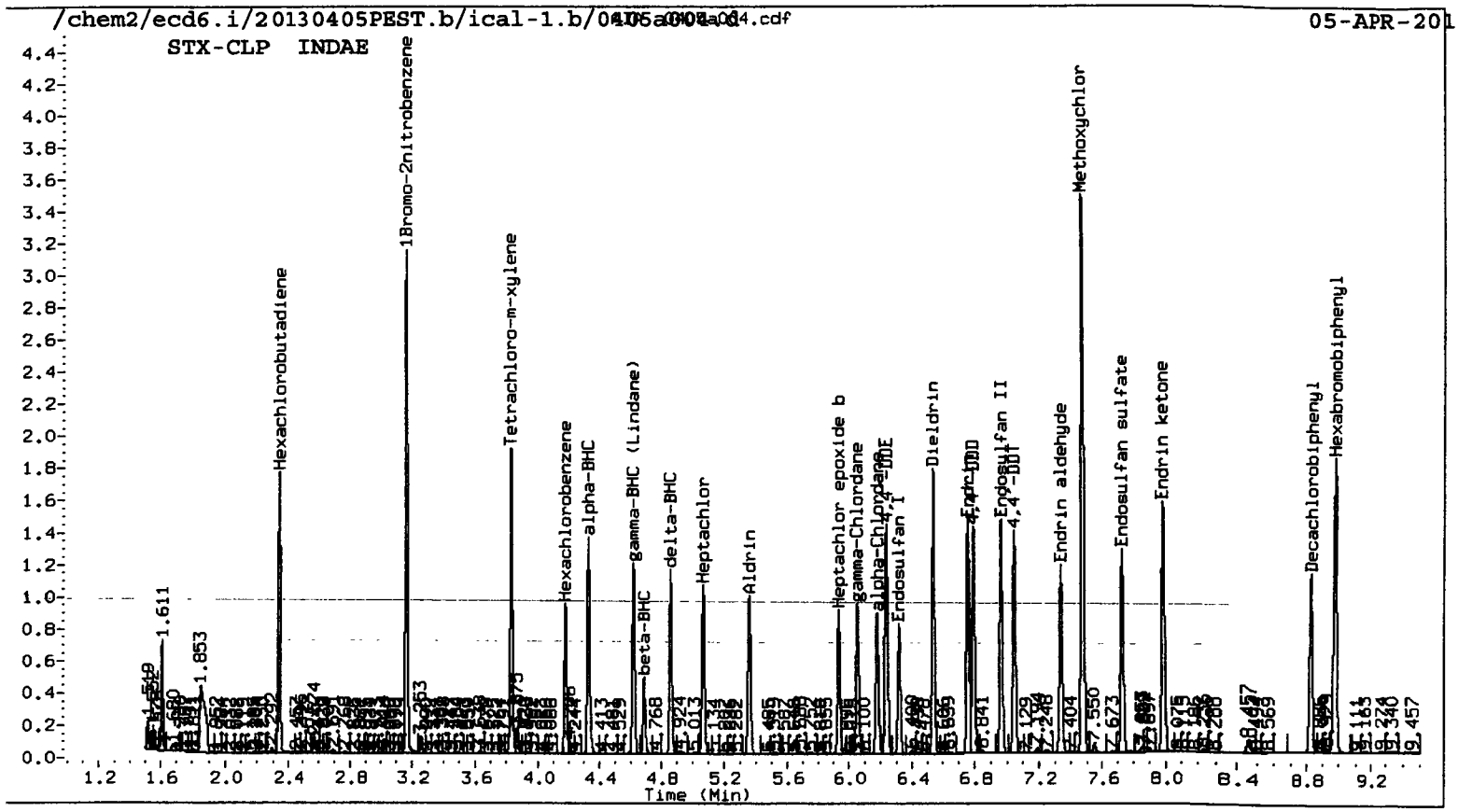
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5448520	0.0
Hexabromobiphenyl	4807902	4807902	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	21702340	0.0
Hexabromobiphenyl	7681727	7681727	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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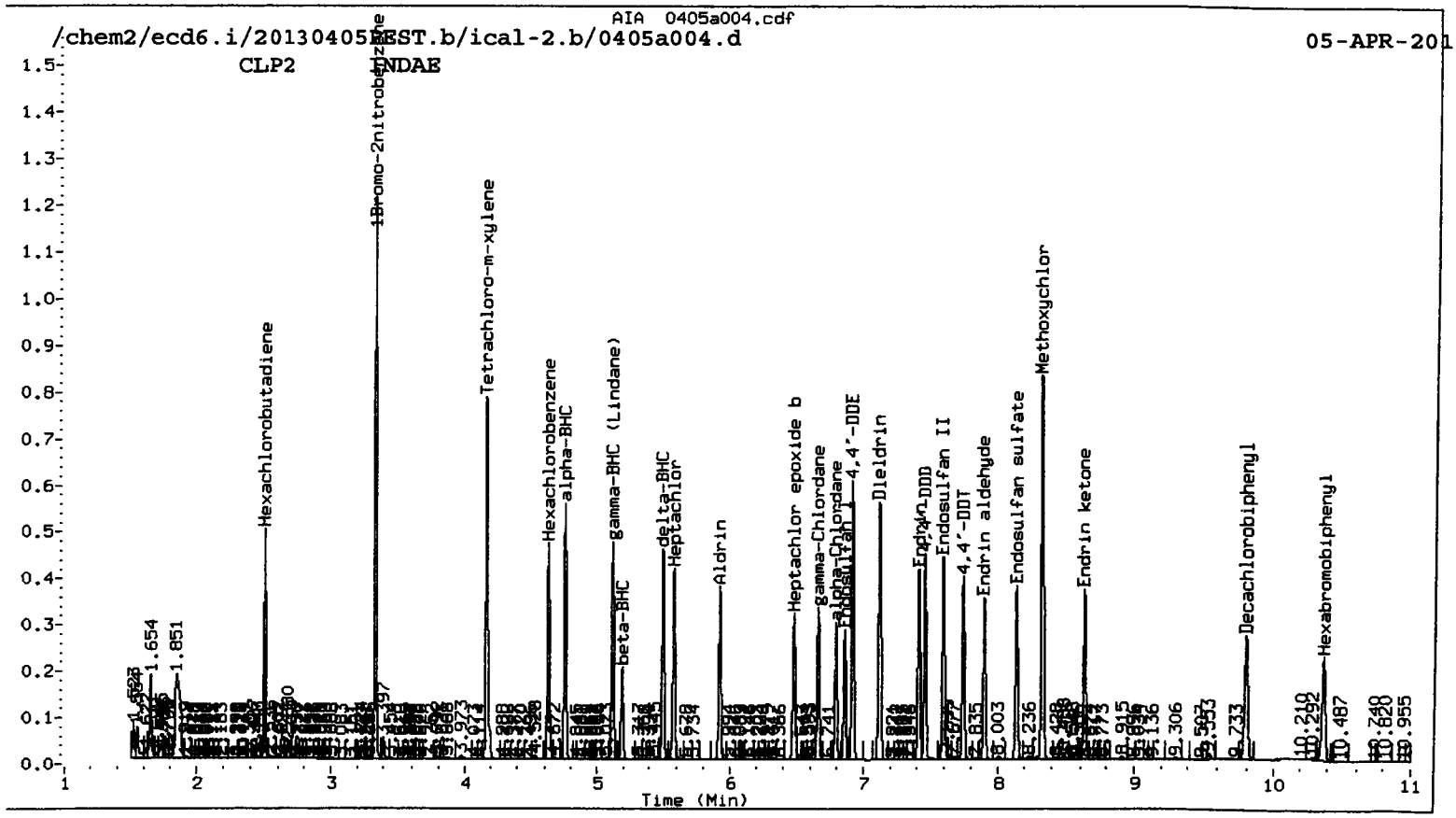
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Methoxychlor
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
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

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a005.d ARI ID: INDAA
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a005.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 13:05
Report Date: 04/08/2013 11:23
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col			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

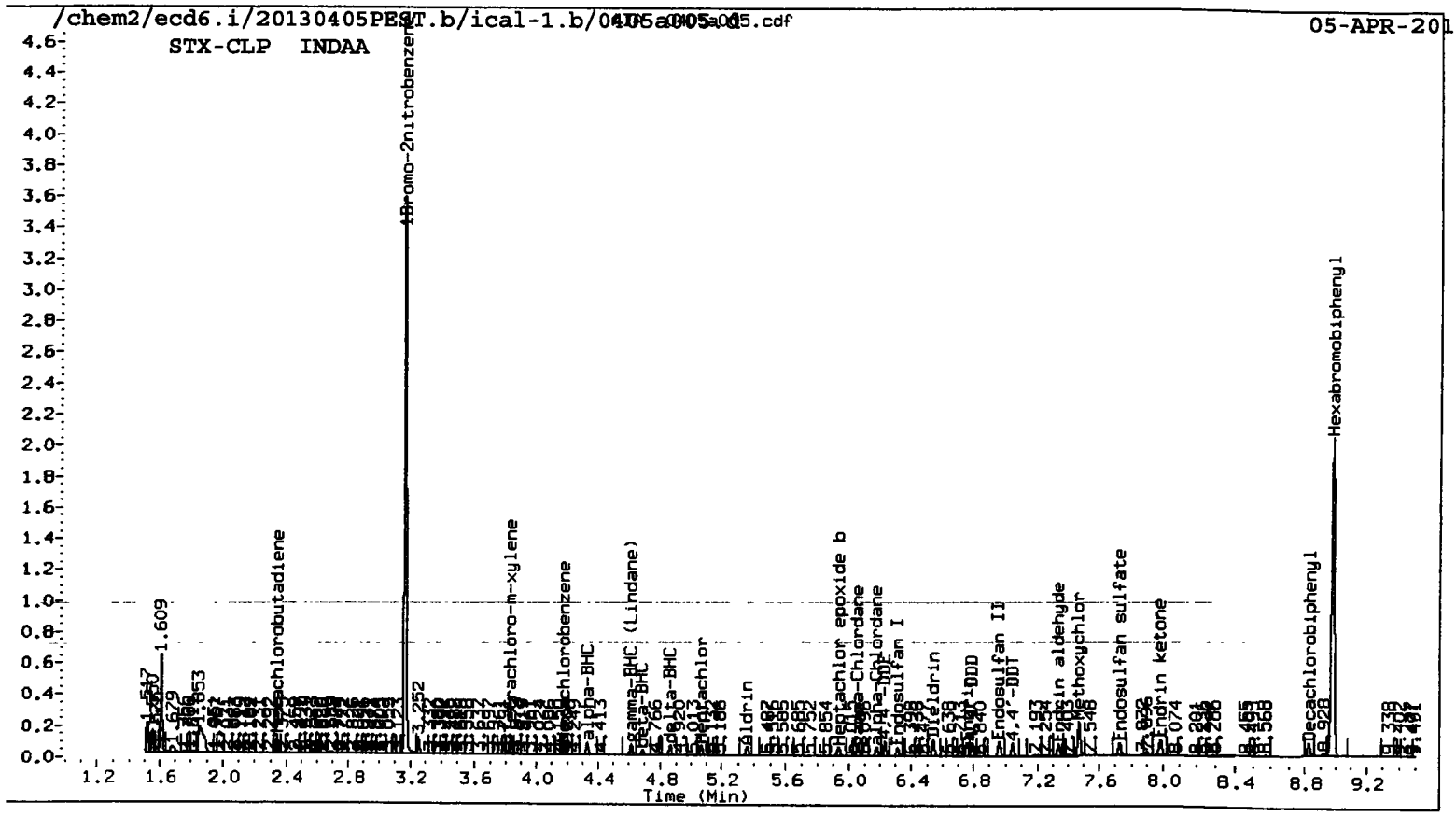
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	6225835	14.3
Hexabromobiphenyl	4807902	5241456	9.0

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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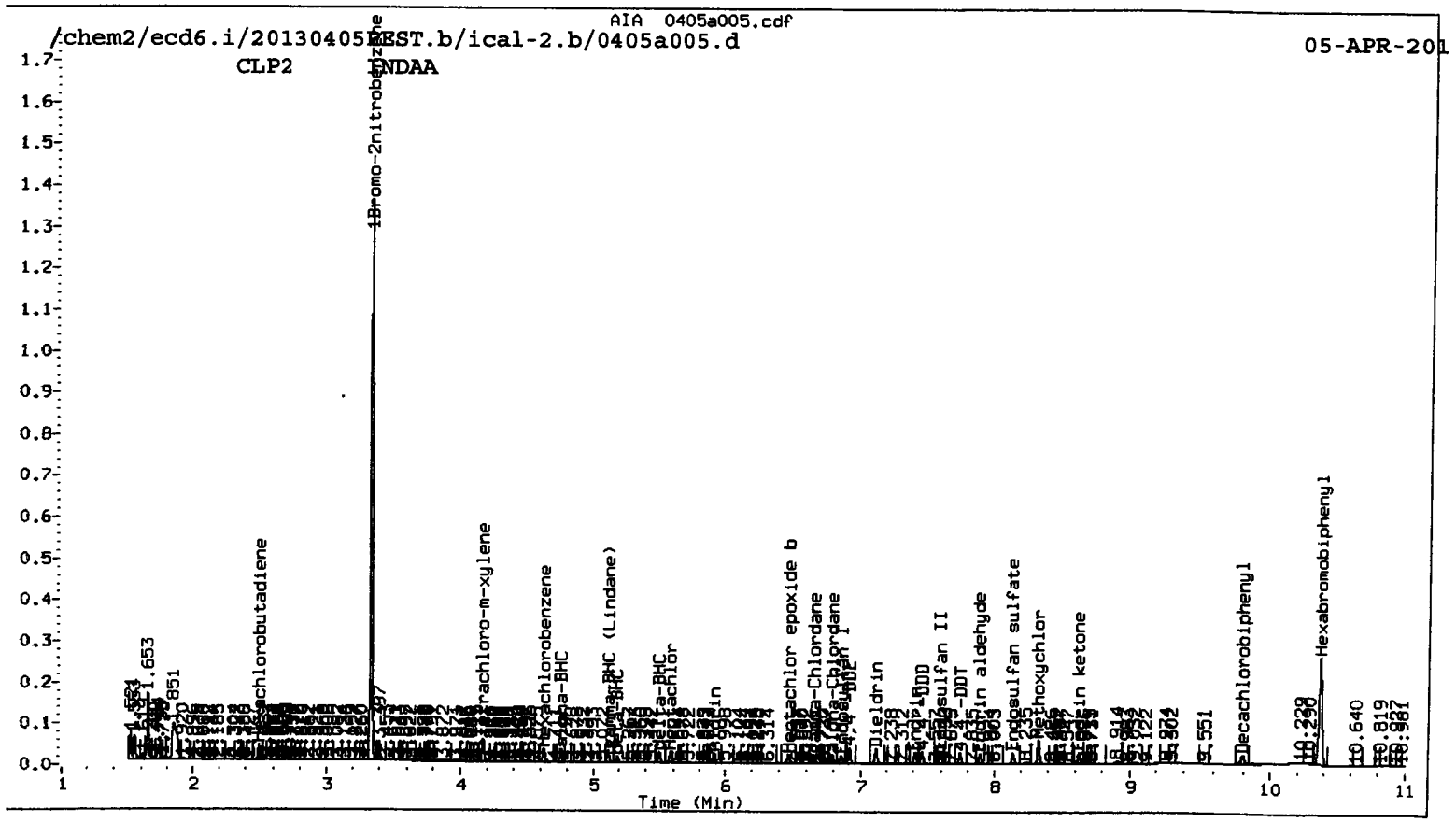
STX-CLP INDAA
1Bromo-2nitrobenzene
Hexachlorobutadiene
Pentachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Oxychlordane
Gamma-Chlordane
Alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAA
1Bromo-2nitrobenzene
Hexachlorobutadiene
Pentachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Oxychlordane
Gamma-Chlordane
Alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a006.d ARI ID: INDAB
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a006.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 13:23
Compound Sublist: INDA Report Date: 04/08/2013 11:23
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.164	0.000	6111022	3.333	0.000	25491655	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.329	-0.001	300357	4.755	-0.002	1398591	2.2346	2.2546	0.9	alpha-BHC
4.687	0.000	133866	5.184	-0.001	587741	2.4859	2.4300	2.3	beta-BHC
4.858	0.000	267835	5.498	-0.001	1199376	2.2388	2.2745	1.6	delta-BHC
4.615	0.000	274901	5.114	-0.002	1242383	2.2661	2.2754	0.4	gamma-BHC (Lindane)
5.065	0.000	272524	5.581	-0.001	1218574	2.3439	2.4068	2.6	Heptachlor
5.360	0.000	263130	5.919	-0.002	1091655	2.3068	2.3601	2.3	Aldrin
5.936	0.000	248575	6.474	-0.001	969258	2.3842	2.3846	0.0	Heptachlor epoxide b
6.314	-0.001	230643	6.862	-0.001	844183	2.4107	2.3789	1.3	Endosulfan I
6.537	0.000	470729	7.120	-0.001	1694276	4.6654	4.7748	2.3	Dieldrin
6.233	-0.002	384106	6.919	-0.002	1710014	4.6464	4.7027	1.2	4,4'-DDE
6.756	-0.001	384508	7.409	-0.001	1240005	4.6262	4.6716	1.0	Endrin
6.961	0.000	402934	7.597	-0.001	1380724	4.7315	4.7363	0.1	Endosulfan II
6.790	-0.001	365382	7.456	-0.001	1299090	4.6107	4.6244	0.3	4,4'-DDD
7.729	0.000	356948	8.140	-0.001	1117551	4.7543	4.6165	2.9	Endosulfan sulfate
7.048	-0.001	367403	7.745	-0.001	1169027	4.6260	4.5844	0.9	4,4'-DDT
7.473	-0.001	945576	8.327	-0.003	2598678	23.7372	24.5875	3.5	Methoxychlor
7.985	0.000	453268	8.632	0.000	1165050	4.8081	4.7053	2.2	Endrin ketone
7.339	0.000	335332	7.895	0.000	1085476	4.7946	4.7213	1.5	Endrin aldehyde
6.055	0.000	251268	6.656	-0.001	960096	2.3578	2.3448	0.6	gamma-Chlordane
6.180	0.000	244824	6.795	-0.001	897466	2.3885	2.3708	0.7	alpha-Chlordane
2.340	-0.001	337172	2.496	-0.002	1232920	2.3837	2.5251	5.8	Hexachlorobutadiene
4.179	-0.001	245134	4.628	-0.002	1411203	2.5029	2.4696	1.3	Hexachlorobenzene
8.979	-0.001	5357211	10.367	0.001	9687228	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	448849	4.165	-0.004	2270853	4.8827	5.0364	3.1	Tetrachloro-m-xylene
8.831	0.000	466148	9.795	-0.001	1137765	5.9611	4.9111	19.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	12.2	12.6	12.2~	115- 0
Decachlorobiphenyl	14.9	12.3	12.3~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

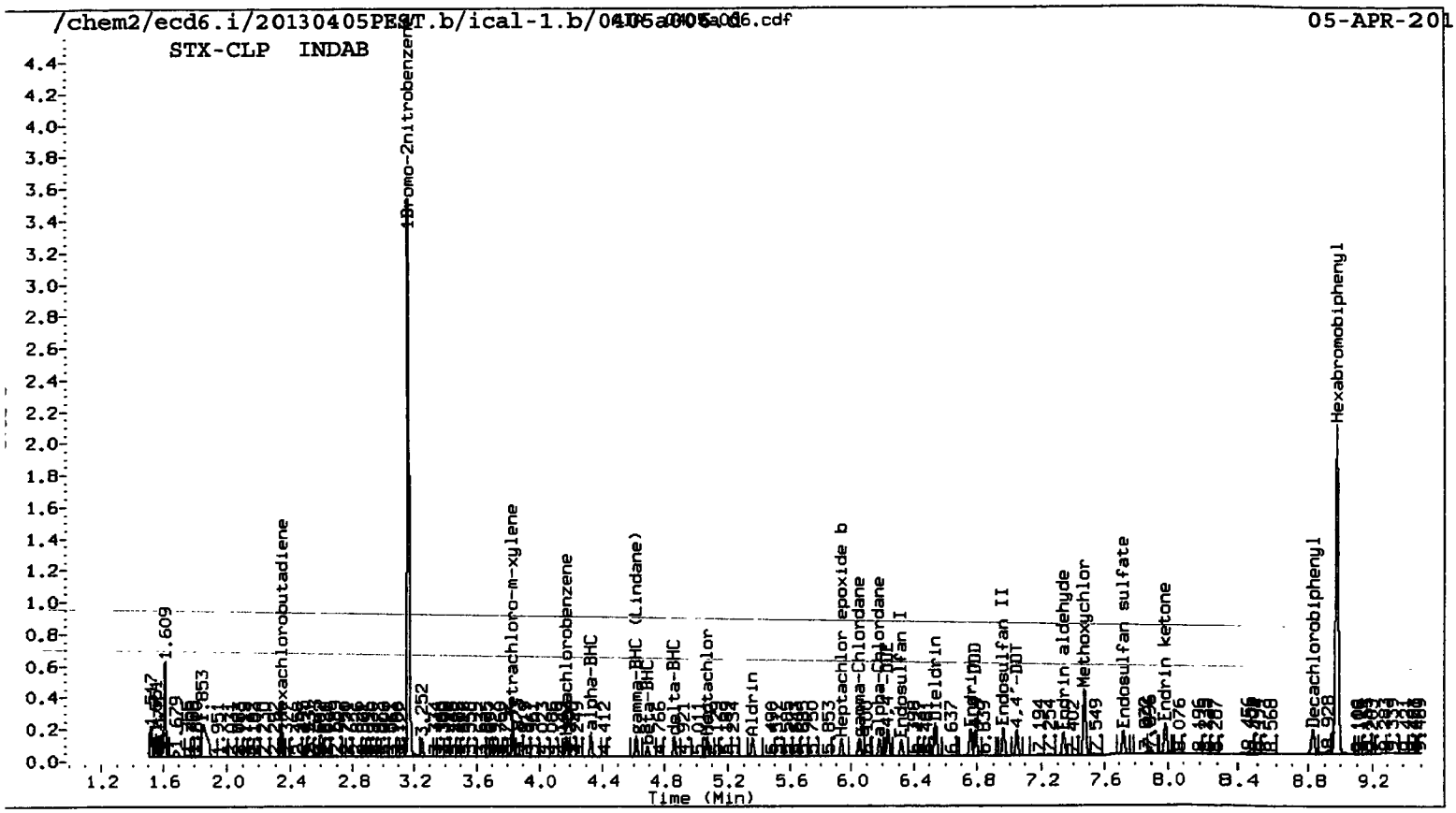
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	6111022	12.2
Hexabromobiphenyl	4807902	5357211	11.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25491655	17.5
Hexabromobiphenyl	7681727	9687228	26.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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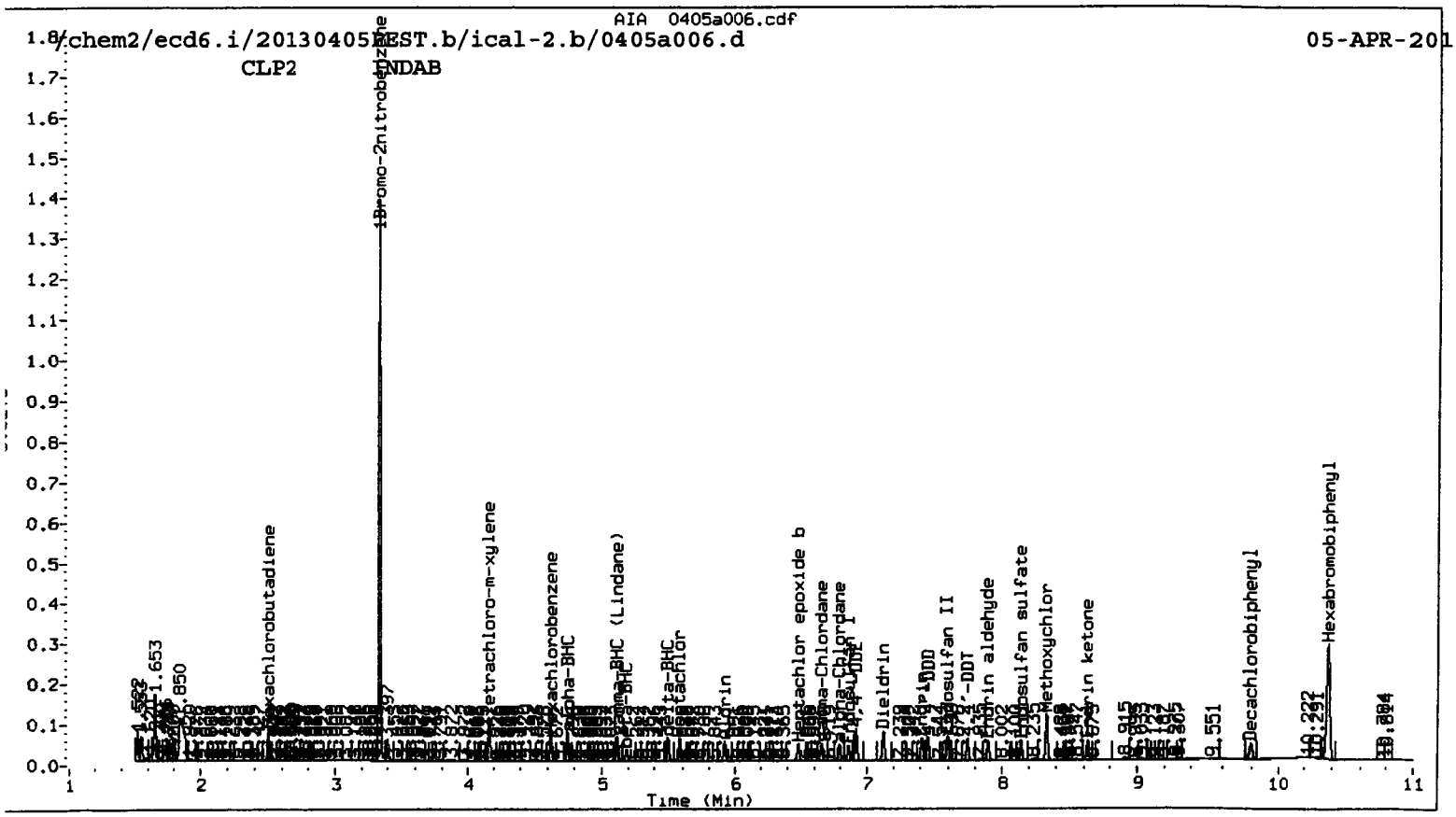
05-APR-201
STX-CLP INDAB
1-Bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4-Trichloro-m-xylene
Pentachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAB
1-Bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4-Trichloro-m-xylene
Pentachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a007.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a007.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 13:41
Report Date: 04/08/2013 11:24
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col			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

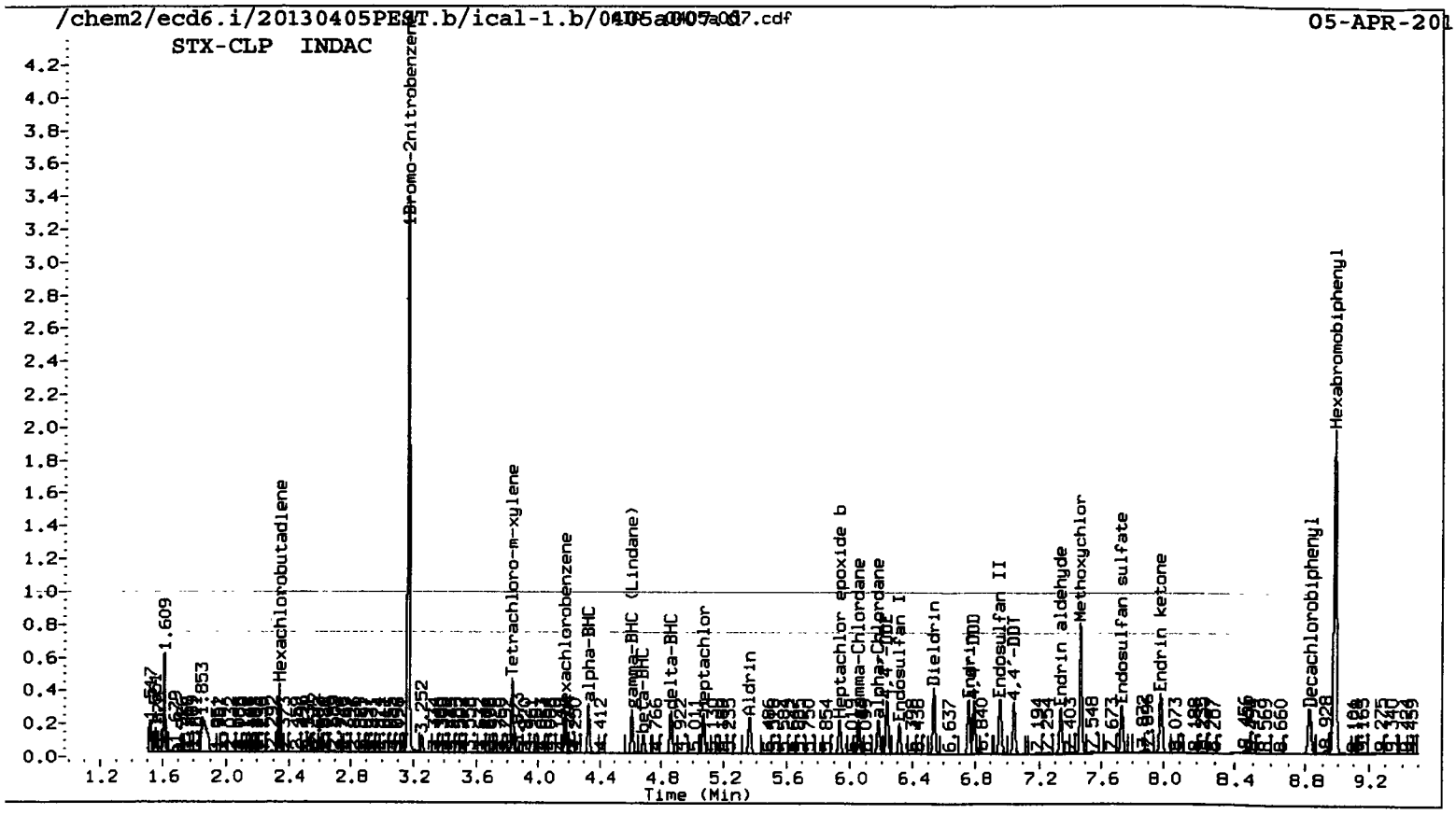
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5854383	7.4
Hexabromobiphenyl	4807902	5133358	6.8

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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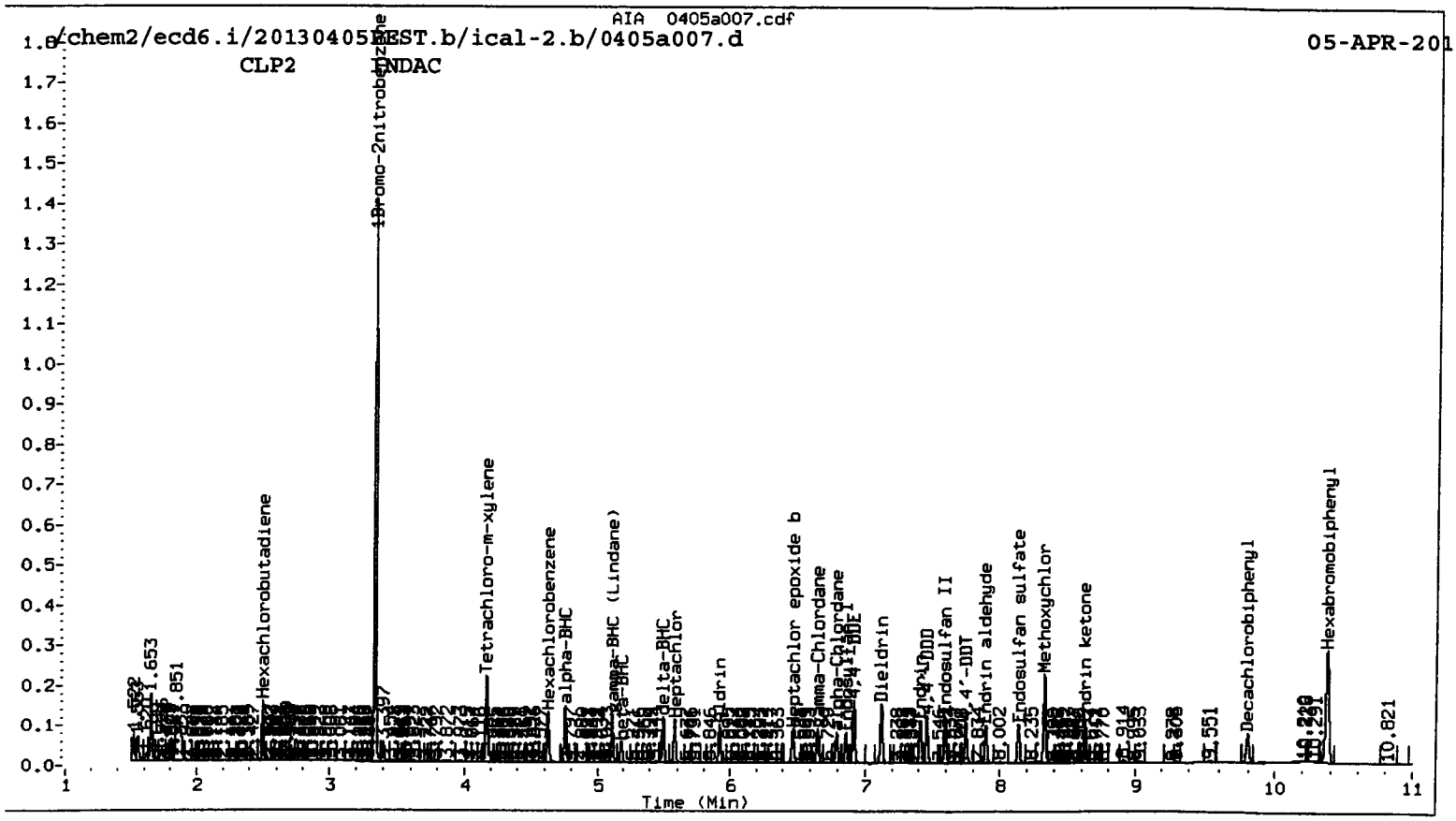
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a008.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a008.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
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

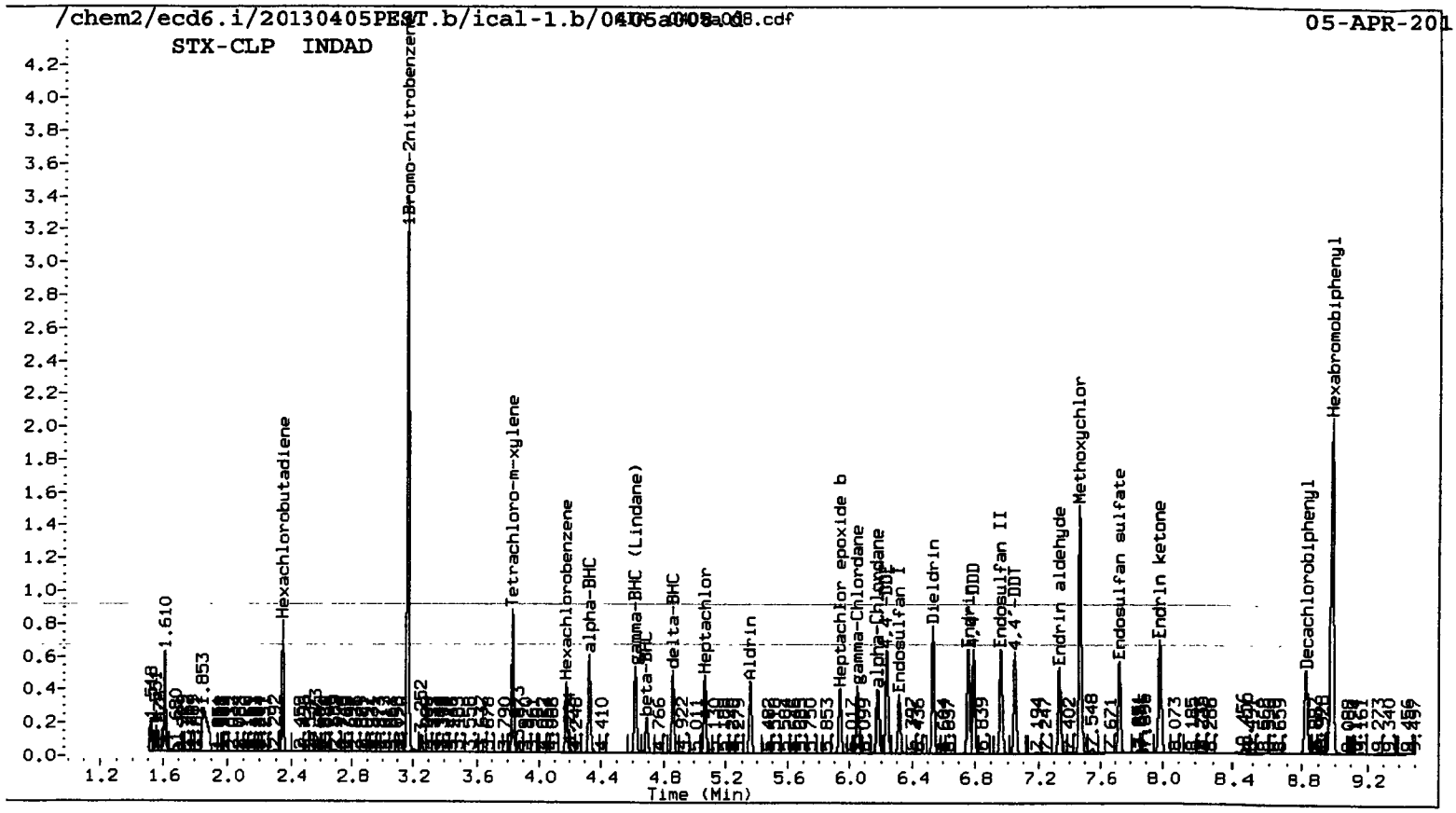
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5880001	7.9
Hexabromobiphenyl	4807902	5227384	8.7

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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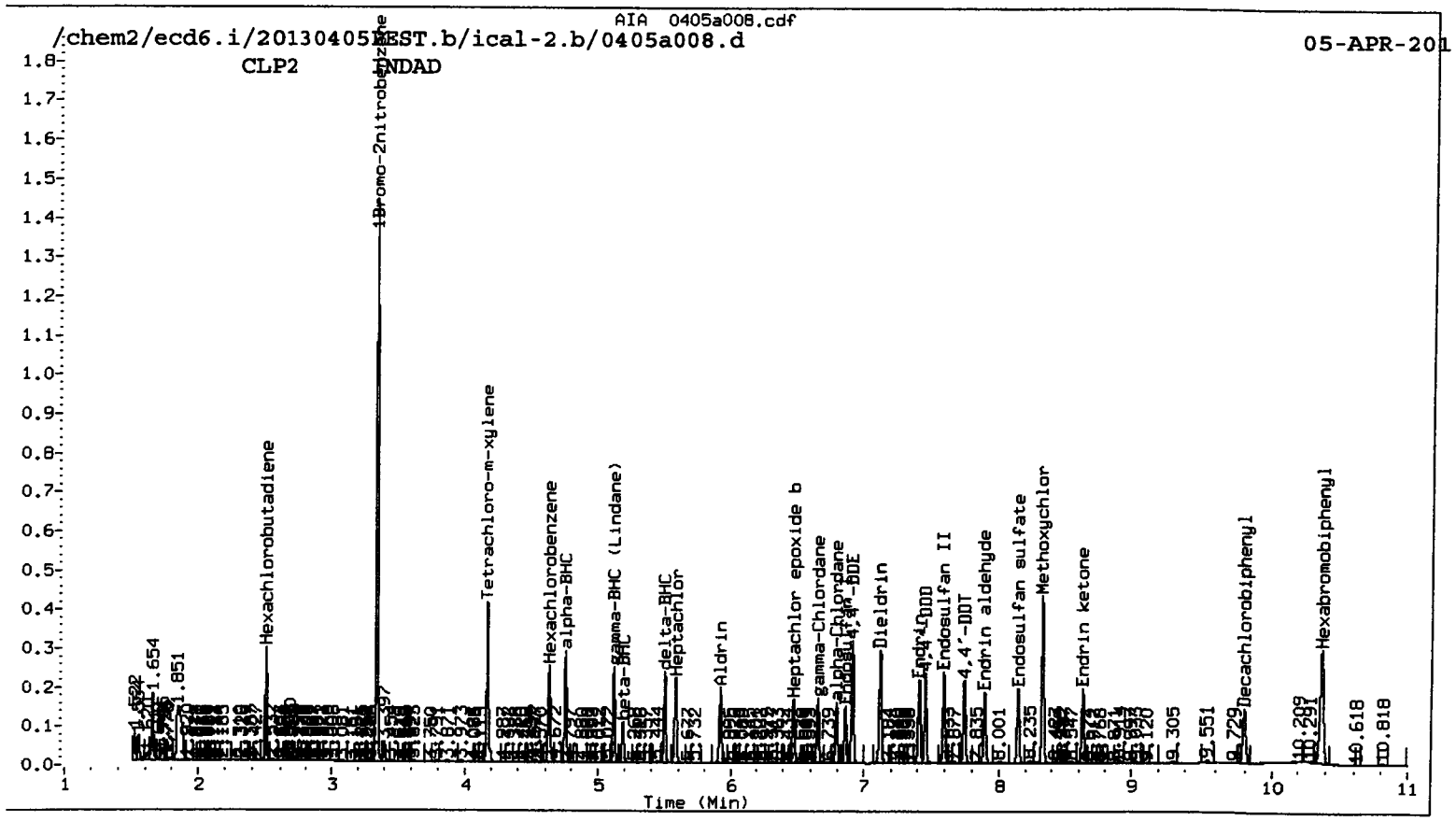
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
Gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 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
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/0405a009.d ARI ID: INDAF
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a009.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 14:17
Report Date: 04/08/2013 11:24
Matrix: NONE
Dilution Factor: 1.000

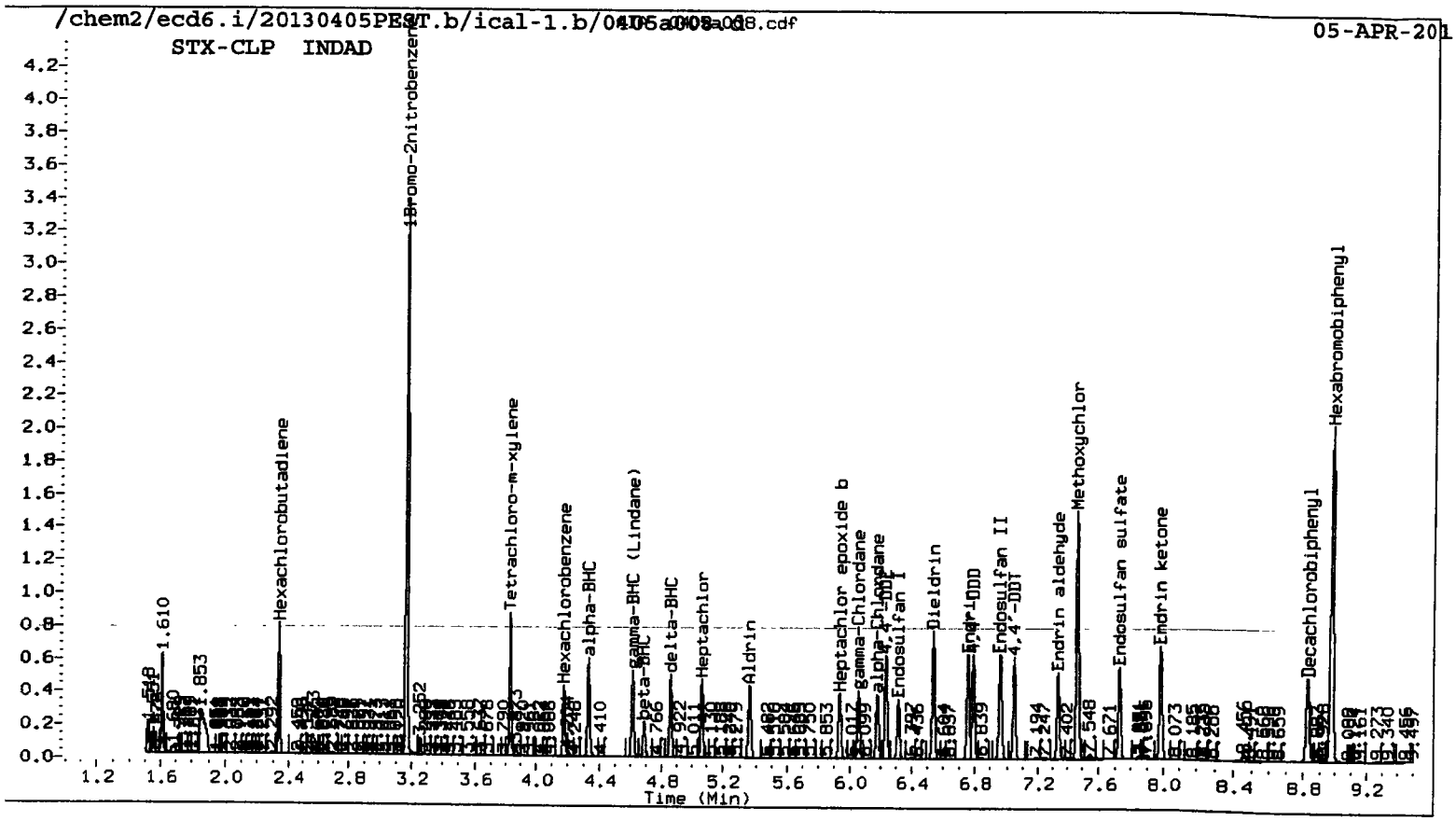
YB 4/9/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.165	0.001	4847986	3.333	0.001	21952139	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.001	4882270	4.756	-0.000	24213251	45.7868	45.3262	1.0	alpha-BHC
4.688	0.001	1788098	5.186	0.001	9006341	41.8560	43.2399	3.3	beta-BHC
4.859	0.001	4326035	5.499	0.000	20416336	45.5813	44.9608	1.4	delta-BHC
4.616	0.001	4357933	5.116	0.000	21126929	45.2828	44.9326	0.8	gamma-BHC (Lindane)
5.066	0.001	4045551	5.582	0.001	18737396	43.8599	42.9753	2.0	Heptachlor
5.361	0.001	4046691	5.921	0.001	17400848	44.7185	43.7739	2.1	Aldrin
5.938	0.002	3556630	6.476	0.001	14663019	43.0003	42.5488	1.1	Heptachlor epoxide
6.315	0.001	3257082	6.863	0.000	12999406	42.9131	43.2643	0.8	Endosulfan I
6.538	0.001	7064822	7.121	0.000	25687238	88.2616	85.2031	3.5	Dieldrin
6.236	0.001	5812030	6.921	0.000	26413144	88.6220	85.9912	3.0	4,4'-DDE
6.757	0.000	5768551	7.411	0.001	18948053	88.6563	85.9650	3.1	Endrin
6.962	0.001	5854698	7.598	0.000	20789051	87.8191	85.8723	2.2	Endosulfan II
6.792	0.001	5553985	7.458	0.000	20391121	89.5259	87.4117	2.4	4,4'-DDD
7.731	0.001	5131416	8.141	0.000	17659867	87.3047	87.8410	0.6	Endosulfan sulfate
7.050	0.001	5587066	7.746	0.000	18676076	89.8615	88.1909	1.9	4,4'-DDT
7.474	0.001	13573752	8.328	-0.002	37770569	435.2666	430.3491	1.1	Methoxychlor
7.986	0.001	6391301	8.633	0.000	17797724	86.6029	86.5482	0.1	Endrin ketone
7.340	0.001	4760729	7.896	0.000	16476429	86.9514	86.2920	0.8	Endrin aldehyde
6.056	0.001	3725551	6.658	0.000	15095175	44.0678	43.5198	1.3	gamma-Chlordane
6.181	0.001	3522813	6.796	0.000	13817131	43.3222	43.1706	0.4	alpha-Chlordane
2.341	0.000	4828892	2.497	0.000	17219705	43.0320	40.9537	4.9	Hexachlorobutadiene
4.180	0.001	3210249	4.630	0.000	20614101	41.3169	41.8914	1.4	Hexachlorobenzene
8.980	0.001	4193877	10.368	0.002	8109922	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.001	6179076	4.167	-0.002	32467743	84.7298	83.6194	1.3	Tetrachloro-m-xylen
8.832	0.001	4811180	9.795	0.000	16006409	78.5916	83.1833	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	211.8	209.0	209.0~	115- 0
Decachlorobiphenyl	196.5	208.0	196.5~	115- 0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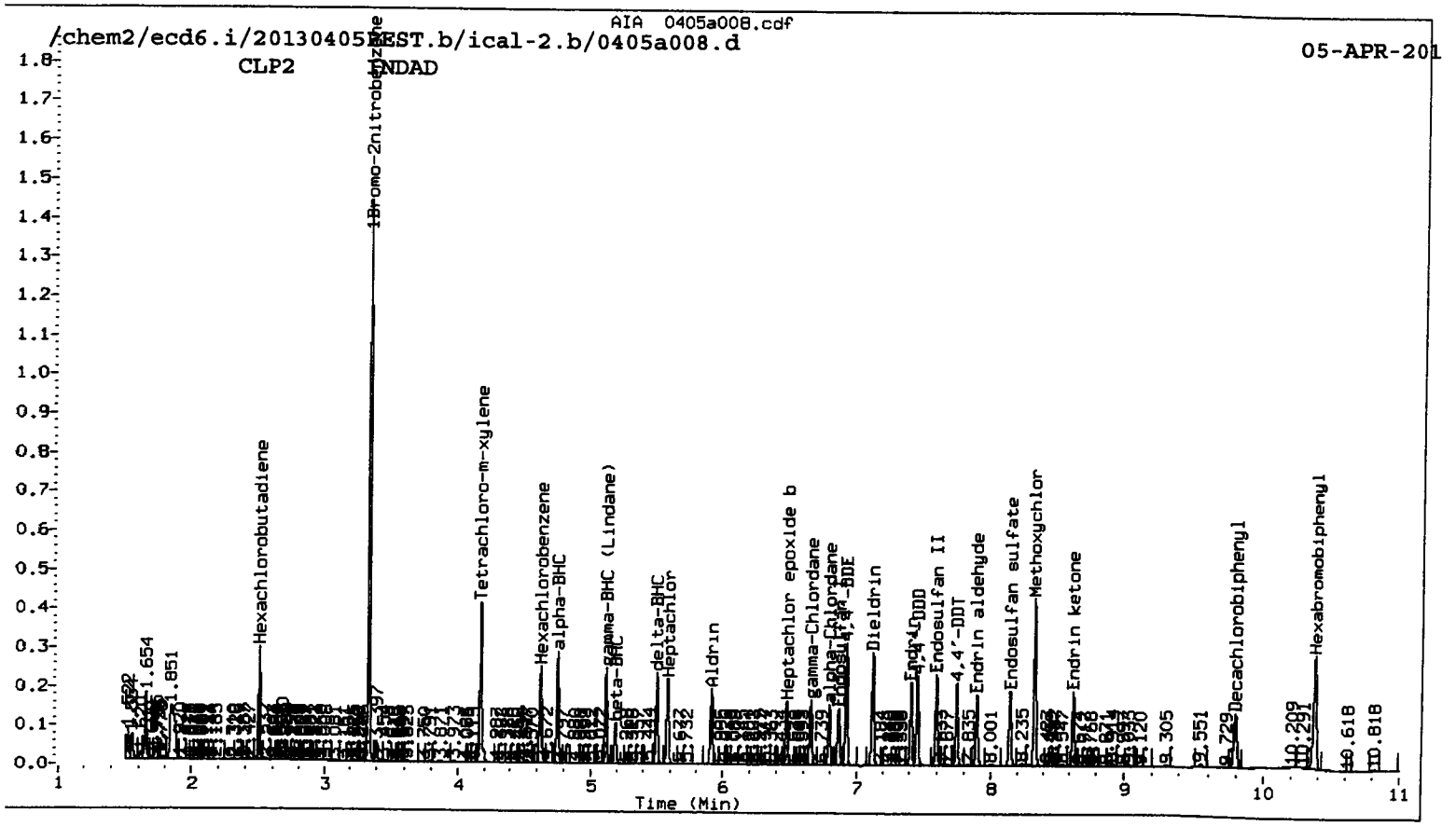
1.853
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
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

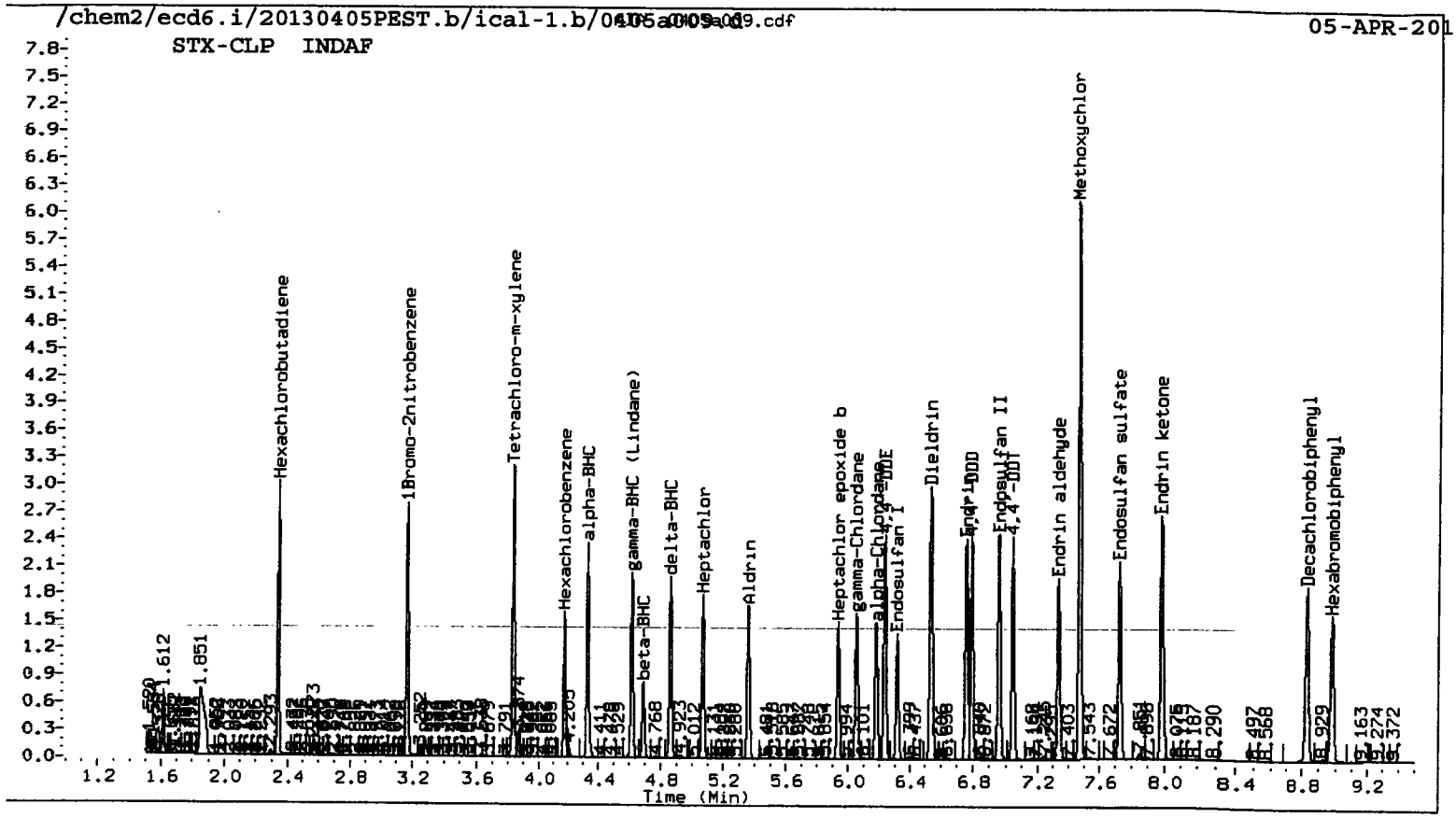
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4847986	-11.0
Hexabromobiphenyl	4807902	4193877	-12.8

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%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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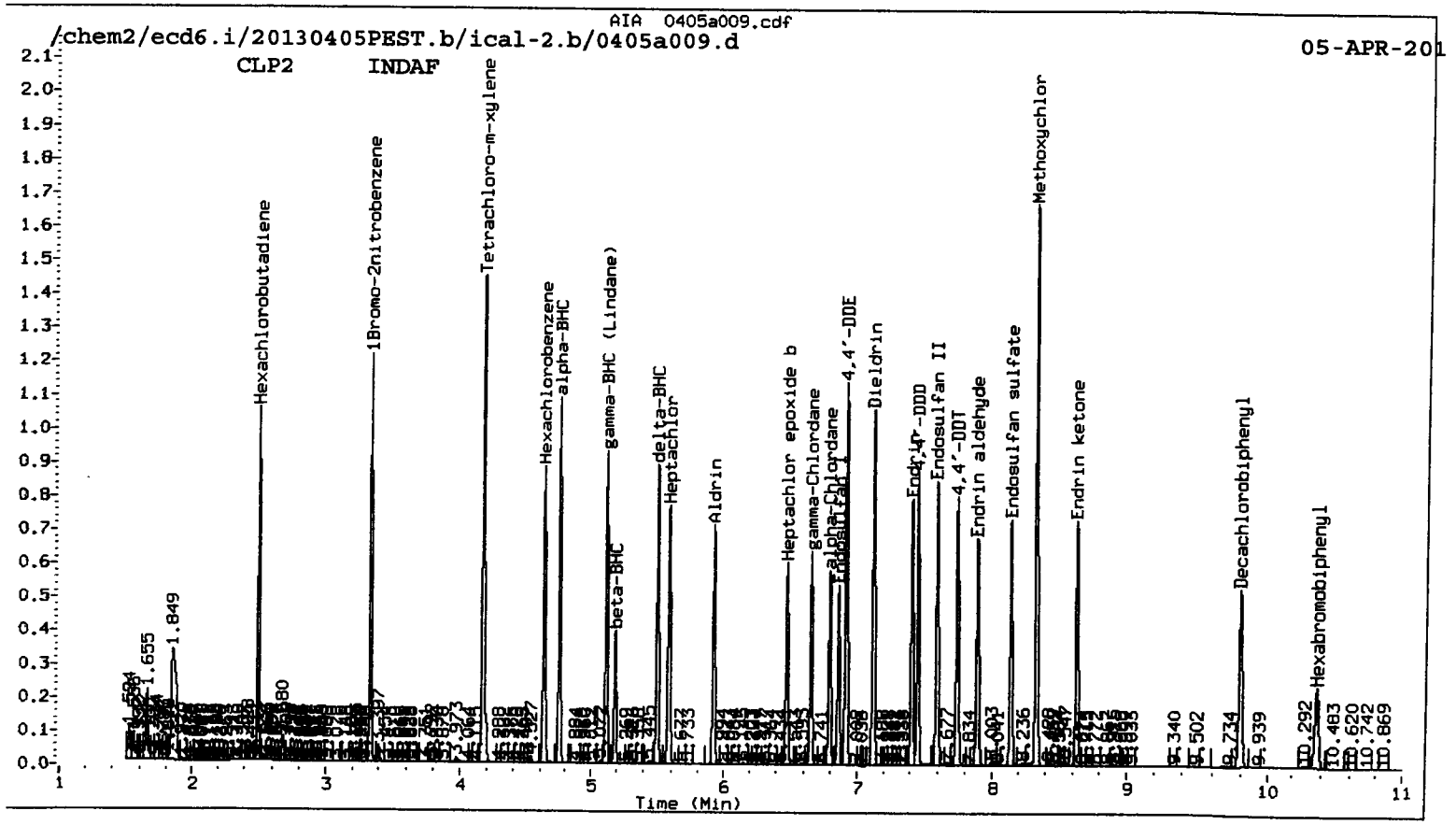
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
Dieldrin
Endrin-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

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Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a010.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 14:35
Report Date: 04/08/2013 11:24
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.165	0.000	5342959	3.333	0.001	24214609	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.330	0.000	9764956	4.756	0.000	48433656	83.0937	82.1946	1.1	alpha-BHC
4.687	0.000	3503869	5.185	0.000	17532492	74.4207	76.3096	2.5	beta-BHC
4.858	0.000	8634999	5.499	0.000	40689737	82.5541	81.2345	1.6	delta-BHC
4.615	0.000	8677966	5.116	0.000	42267854	81.8183	81.4956	0.4	gamma-BHC (Lindane)
5.065	0.000	7882743	5.582	0.000	35201577	77.5438	73.1932	5.8	Heptachlor
5.360	0.000	7912944	5.921	0.000	33345764	79.3424	76.0511	4.2	Aldrin
5.936	0.000	6922796	6.476	0.000	27752272	75.9441	73.0594	3.9	Heptachlor epoxide
6.315	0.000	6349384	6.863	0.000	24648435	75.9054	74.4323	2.0	Endosulfan I
6.537	0.000	13910769	7.121	0.000	49527352	157.6889	149.0055	5.7	Dieldrin
6.235	0.000	11788786	6.920	0.000	51136965	163.1031	151.0424	7.7	4,4'-DDE
6.756	0.000	11417629	7.410	0.000	36534149	154.6014	144.0467	7.1	Endrin
6.961	0.000	11566476	7.599	0.000	40428271	152.8553	145.1286	5.2	Endosulfan II
6.791	0.000	11147773	7.458	0.000	40061229	158.3168	149.2489	5.9	4,4'-DDD
7.729	0.000	10231992	8.140	0.000	34872841	153.3753	150.7507	1.7	Endosulfan sulfat
7.049	0.000	11243792	7.745	0.000	37774644	159.3300	155.0279	2.7	4,4'-DDT
7.474	0.000	27975334	8.330	0.000	63735142	790.3608	631.0353	22.4	Methoxychlor
7.985	0.000	12810113	8.633	0.000	35555890	152.9293	150.2678	1.8	Endrin ketone
7.338	0.000	9416182	7.895	0.000	32287177	151.5210	146.9573	3.1	Endrin aldehyde
6.055	0.000	7352296	6.657	0.000	29288582	78.9103	76.6169	2.9	gamma-Chlordane
6.180	0.000	6920208	6.795	0.000	26674608	77.2183	75.6227	2.1	alpha-Chlordane
2.341	0.000	9552315	2.497	0.000	34682314	77.2383	74.7781	3.2	Hexachlorobutadiene
4.179	0.000	6270804	4.629	0.000	39684942	73.2304	73.1115	0.2	Hexachlorobenzene
8.980	0.000	4760154	10.367	0.001	9338784	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	12075105	4.169	0.000	57553610	150.2392	134.3776	11.1	Tetrachloro-m-xyl
8.831	0.000	9488510	9.795	0.000	31944603	136.5580	144.2738	5.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	375.6	335.9	335.9~	115- 0
Decachlorobiphenyl	341.4	360.7	341.4~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

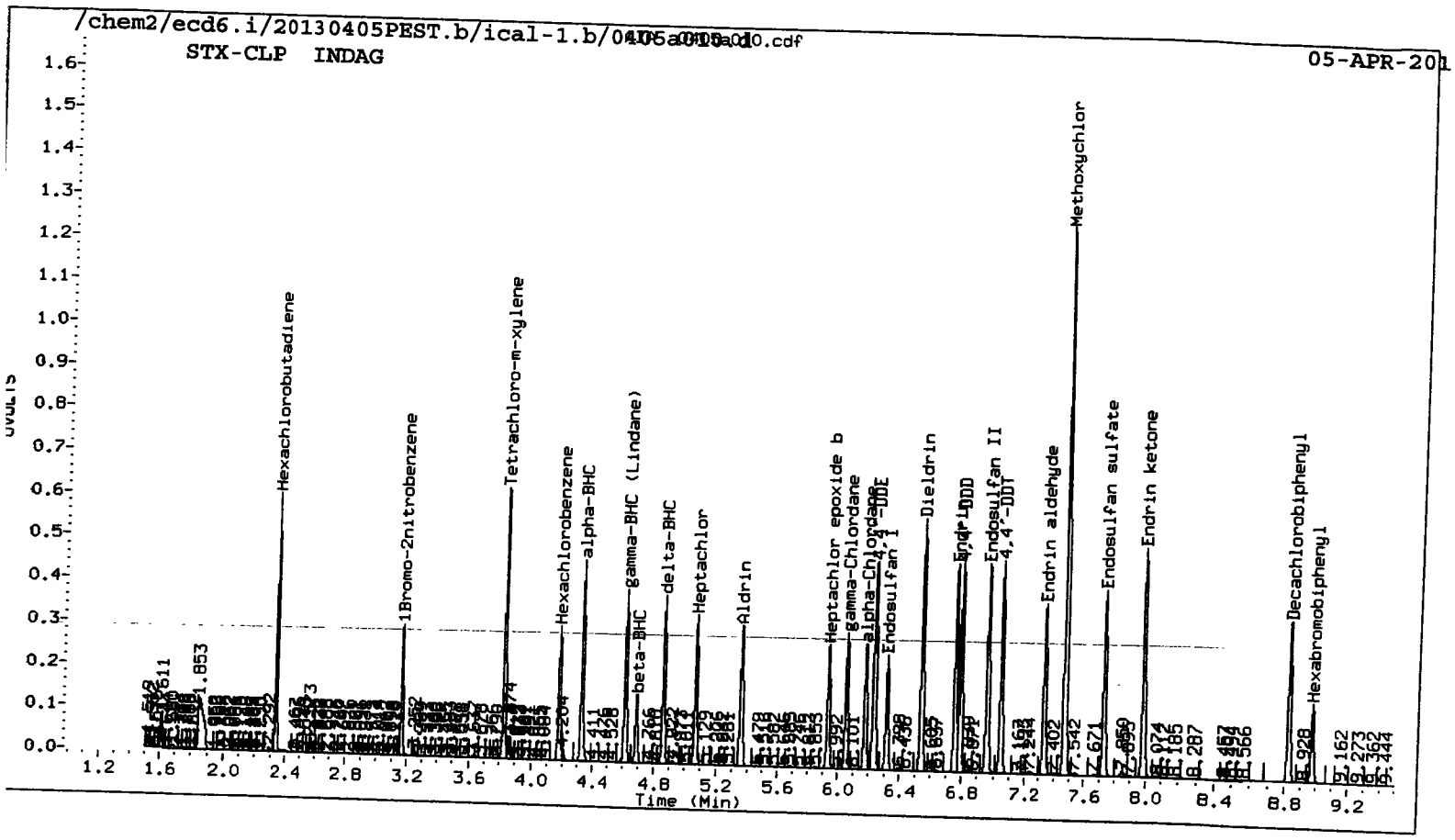
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5342959	-1.9
Hexabromobiphenyl	4807902	4760154	-1.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24214609	11.6
Hexabromobiphenyl	7681727	9338784	21.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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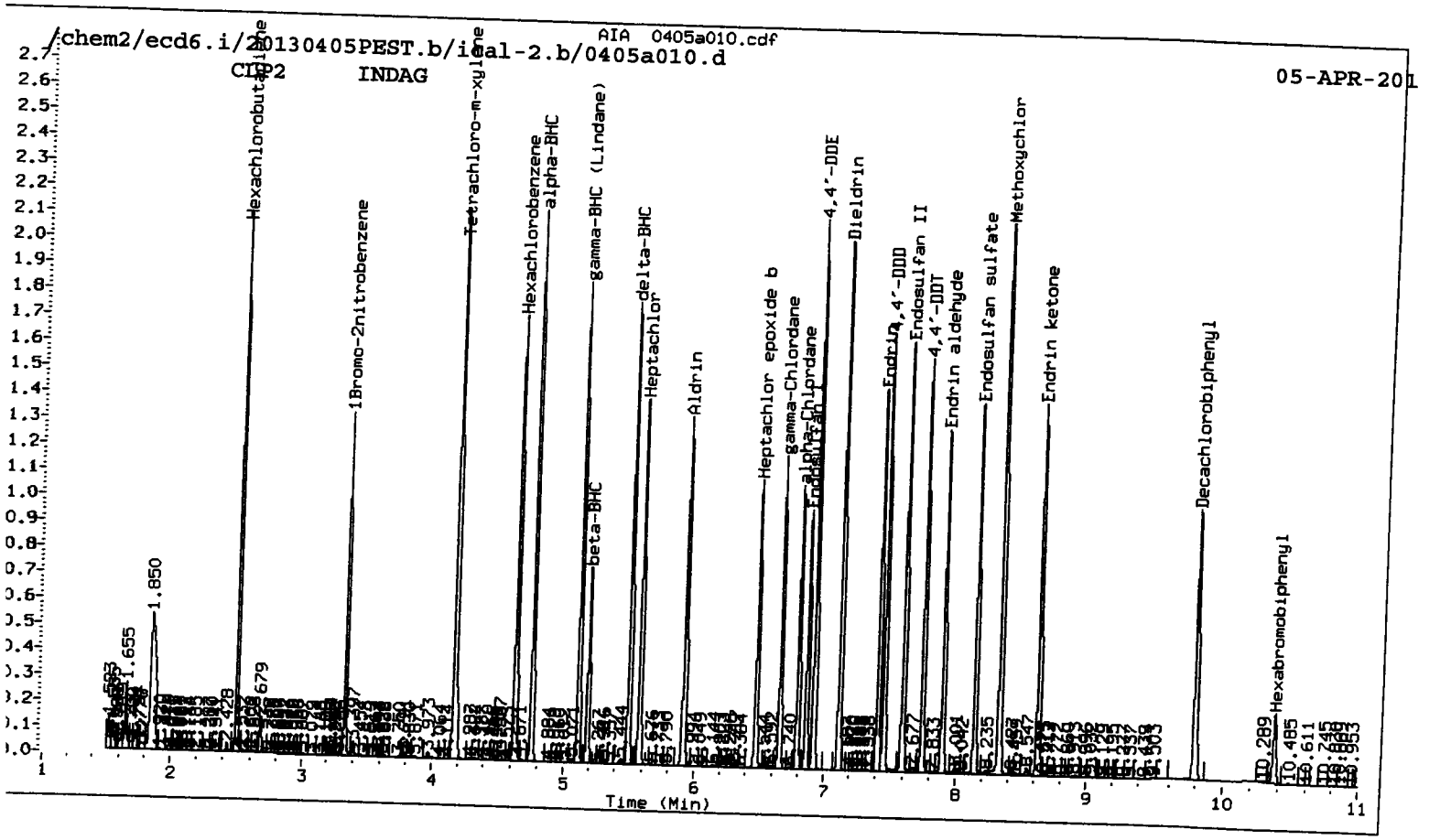
STX-CLP INDAG
05-APR-201
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAG
05-APR-201
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/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

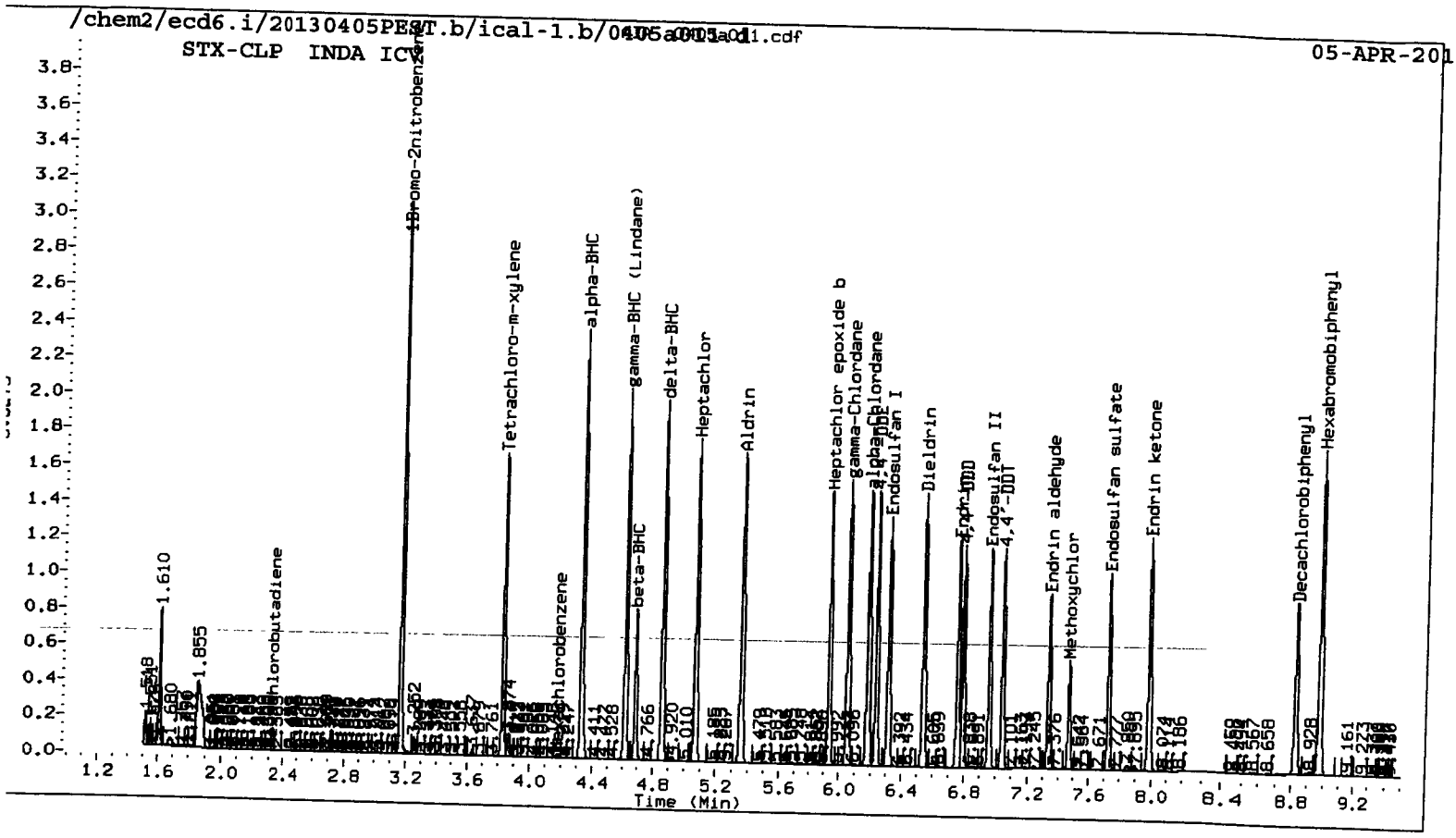
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5329694	-2.2
Hexabromobiphenyl	4807902	4682567	-2.6

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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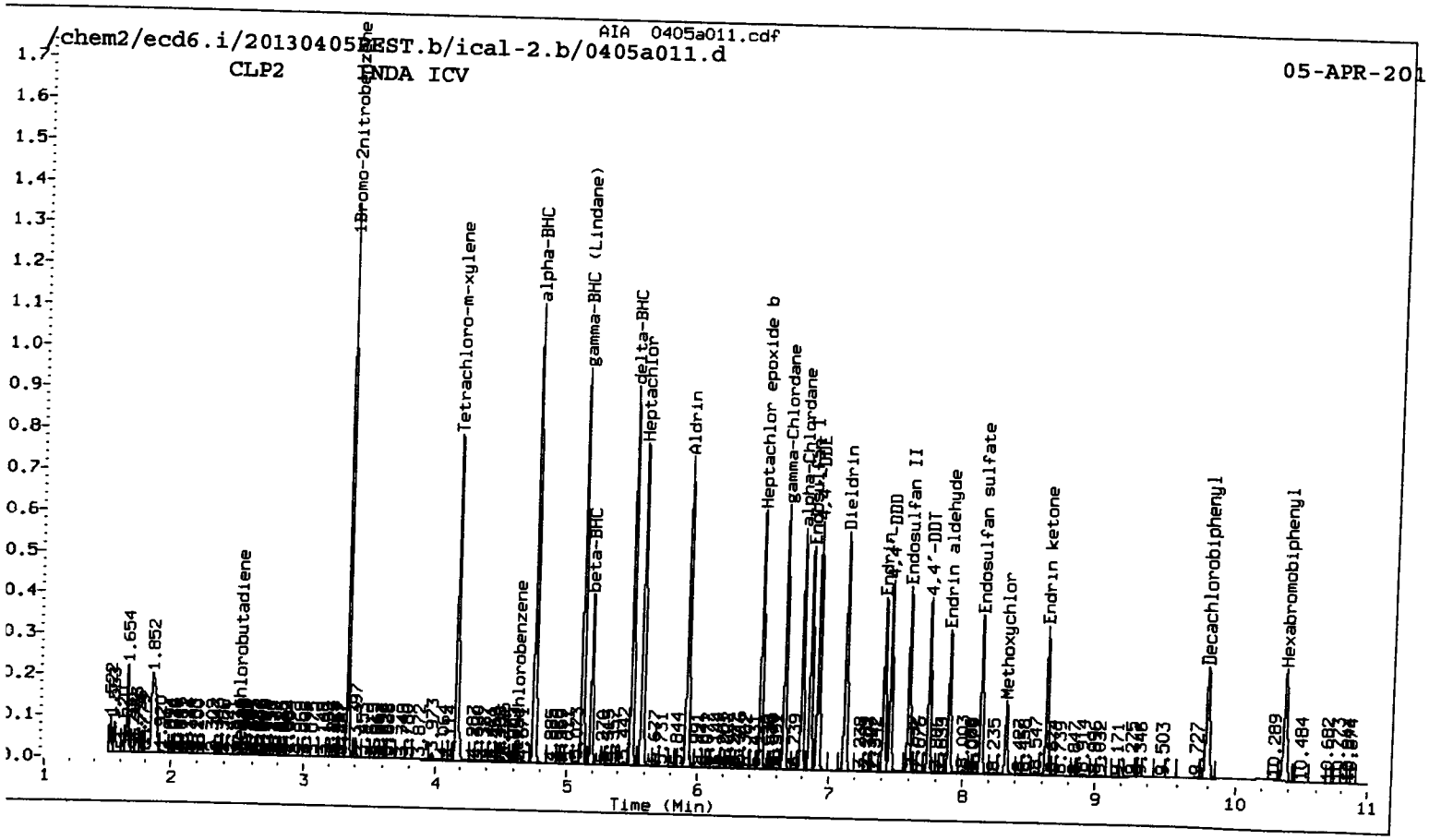
STX-CLP INDA ICV
05-APR-201
1,2-Dichlorobutadiene
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDA ICV
05-APR-201
1,2-Dichlorobutadiene
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

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

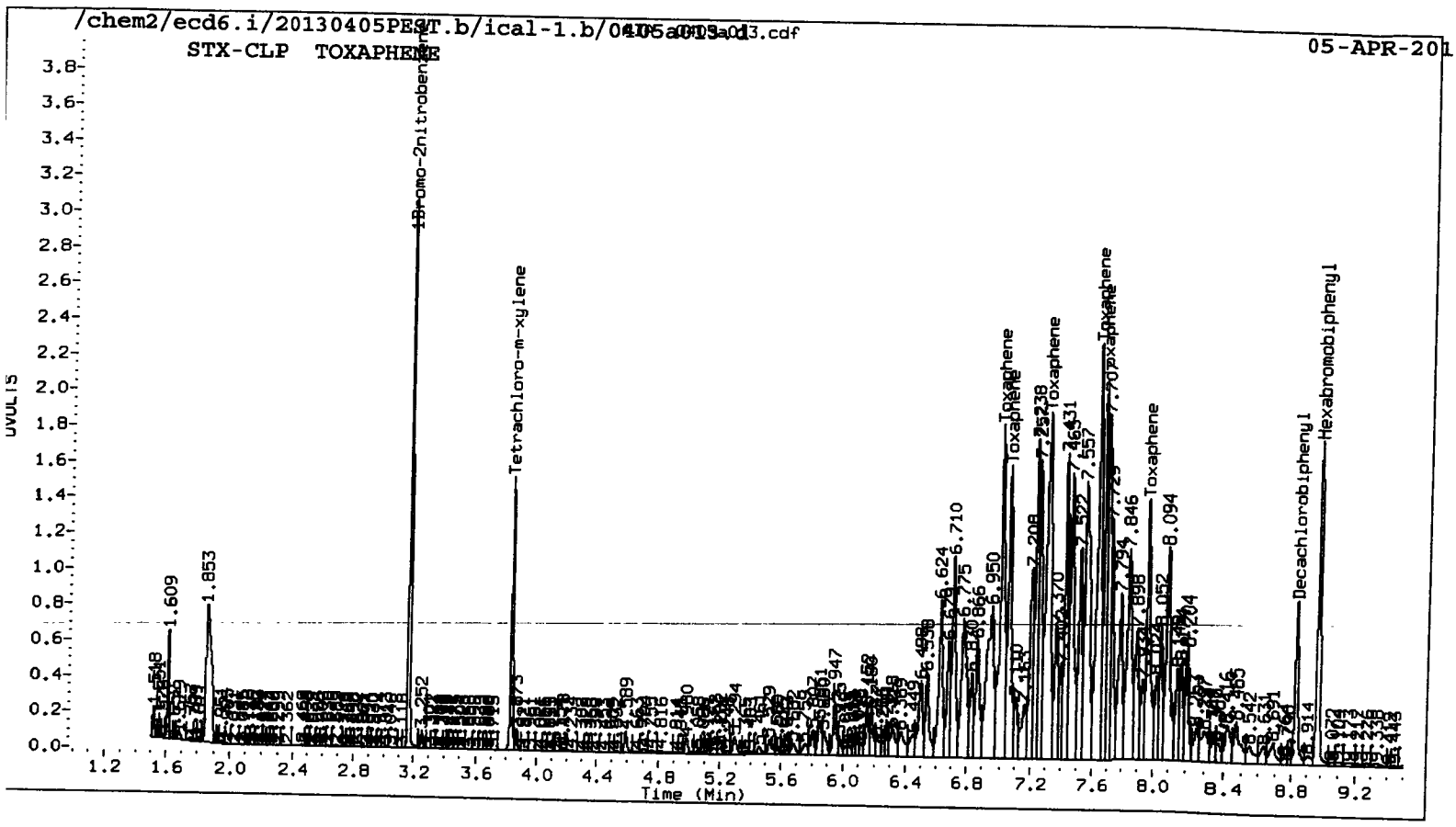
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5312805	-2.5
Hexabromobiphenyl	4807902	4975008	3.5

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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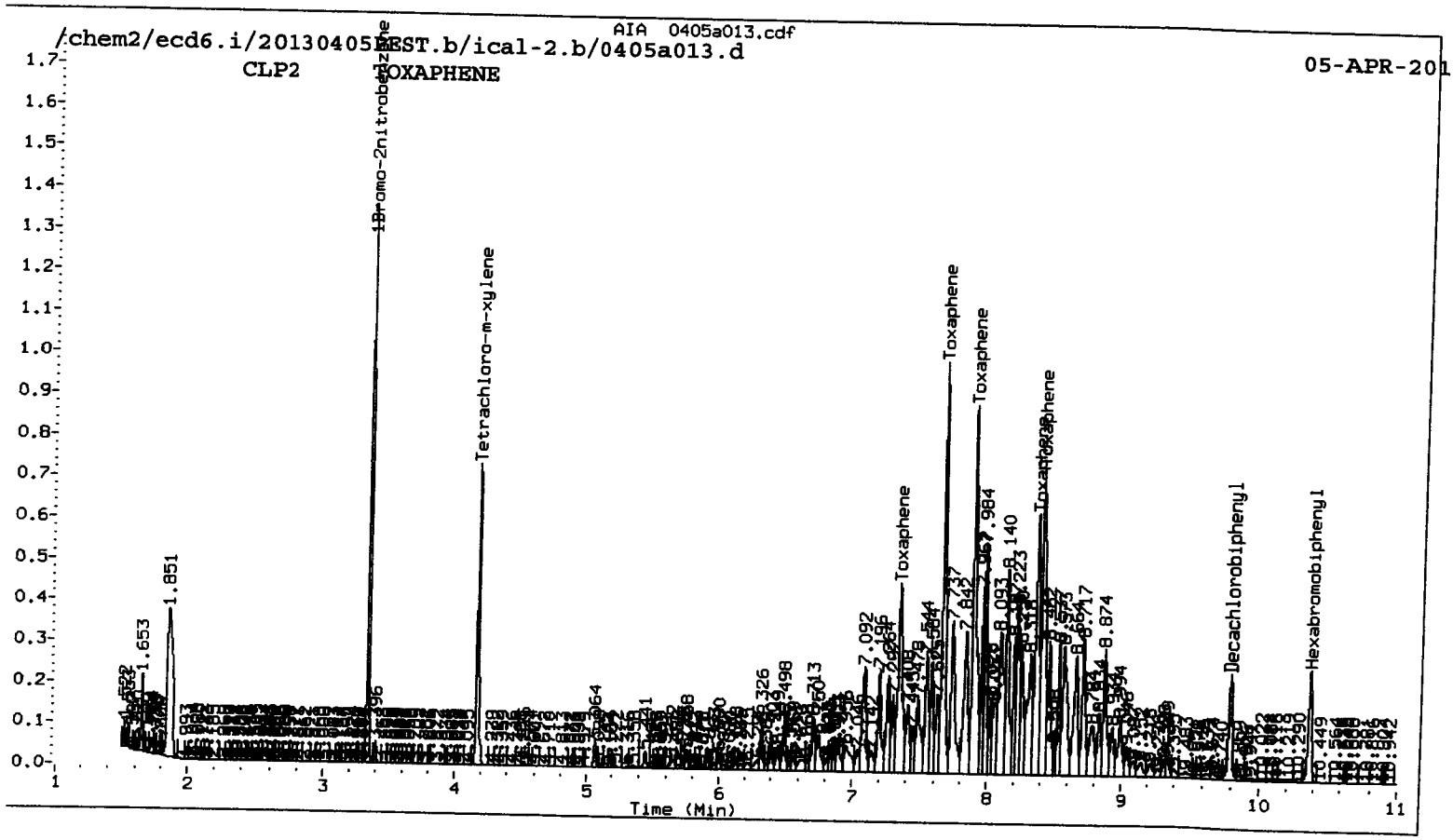
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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05-APR-201
1.851
1.653
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Y2 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a014.d ARI ID: WNDE
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a014.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 15:46
Compound Sublist: WND Report Date: 04/08/2013 11:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.736	-0.018	283	1.731	-0.001	943789	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5486756	3.334	0.001	25352954	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	2855555	6.385	0.000	12537032	38.2690	38.2815	0.0	Oxychlordane MN
5.911	0.001	2154414	6.631	0.000	9150967	38.3407	38.0157	0.9	2,4-DDE MN
6.162	0.000	3398608	6.741	0.000	14261784	38.2352	38.8457	1.6	trans-Nonachlor MN
6.398	0.000	1853860	7.115	0.000	7441995	37.7193	38.6555	2.5	2,4-DDD MN
6.637	0.001	2137262	7.403	0.000	7940976	38.0311	38.8730	2.2	2,4-DDT MN
6.778	0.000	3603446	7.465	0.000	13459648	38.3550	38.8147	1.2	cis-Nonachlor MN
7.653	0.001	2043980	8.619	0.000	5860500	36.4278	37.0642	1.7	Mirex MN
8.979	0.000	4769081	10.366	0.000	9572394	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	3067703	4.166	-0.002	16849872	37.1597	37.5751	1.1	Tetrachloro-m-xylen
8.831	-0.001	2388328	9.794	-0.001	8191515	34.6253	36.0931	4.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	92.9	93.9	92.9~	150- 0
Decachlorobiphenyl	86.6	90.2	86.6~	150- 0

~ Indicates recovery outside QC Limits

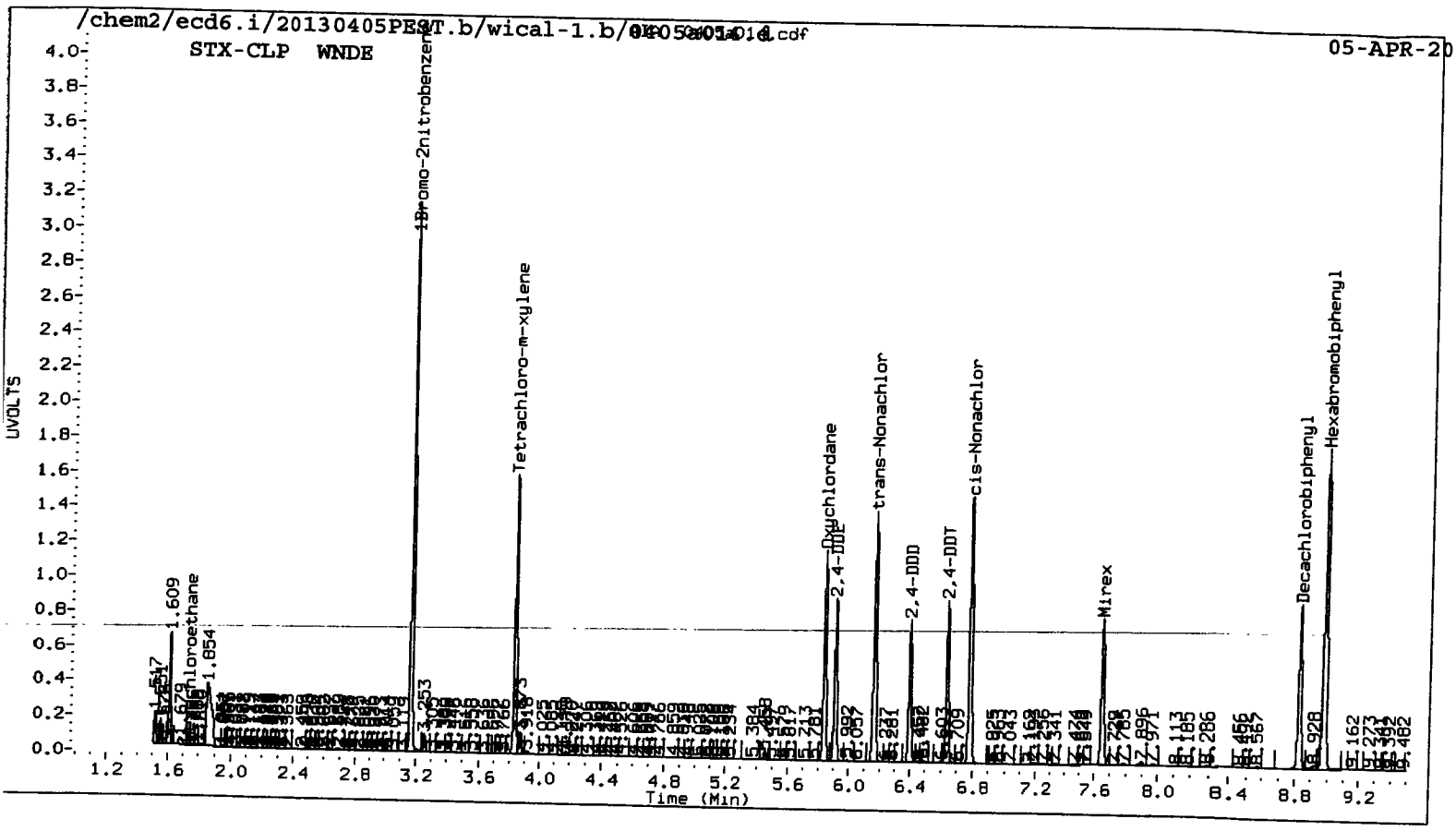
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5486756	0.7
Hexabromobiphenyl	4807902	4769081	-0.8

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25352954	16.8
Hexabromobiphenyl	7681727	9572394	24.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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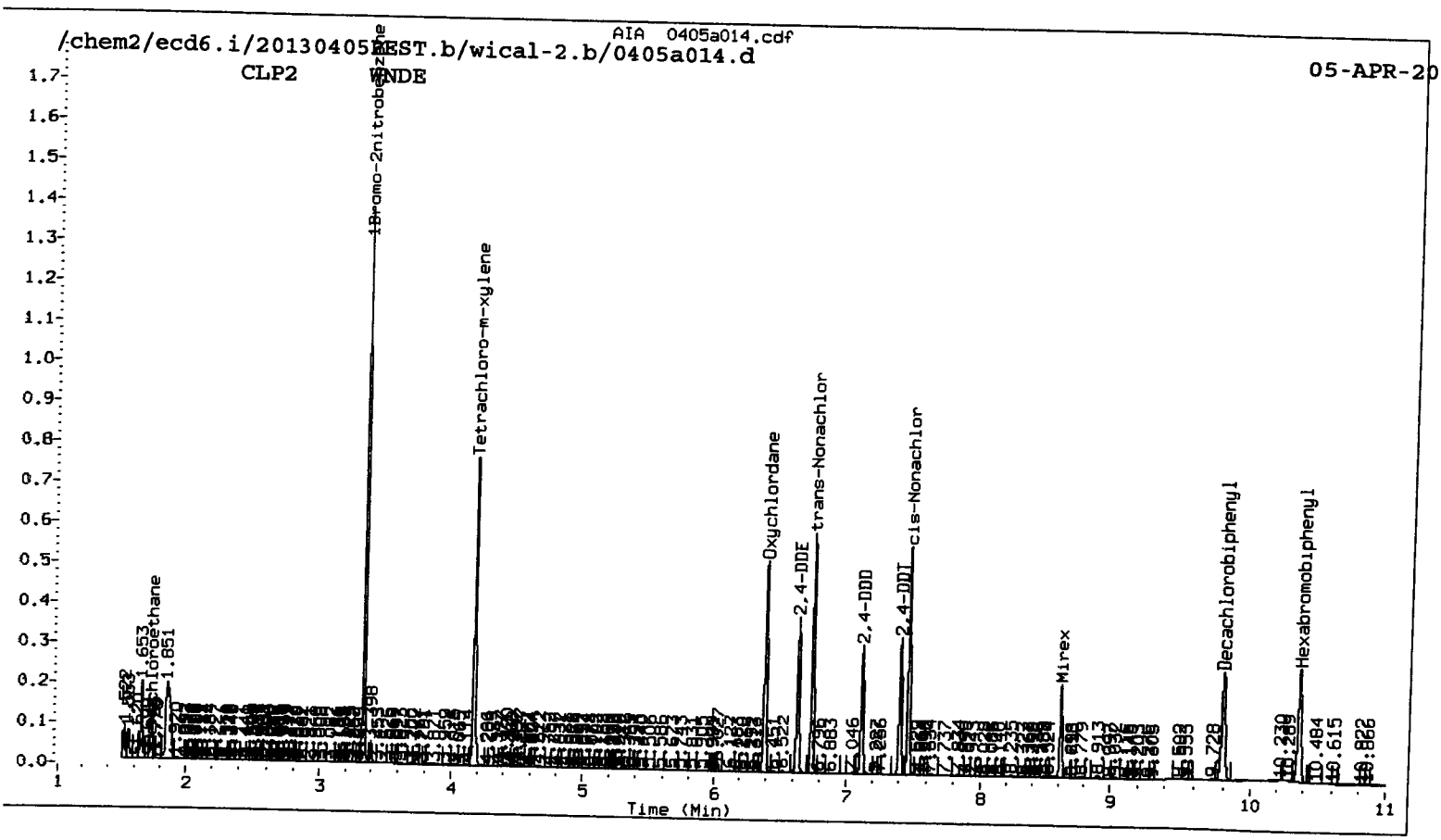
STX-CLP WNDE
05-APR-20
UVOLTS
Time (Min)
1,609
1,854
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WNDE
05-APR-20
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a015.d ARI ID: WNDA
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a015.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: WND
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 16:04
Report Date: 04/08/2013 11:10
Matrix: NONE
Dilution Factor: 1.000

YE 4/8/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.732	-0.022	445	1.734	0.002	572157	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5428471	3.333	0.001	25320828	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	193129	6.384	0.000	831832	2.5801	2.5432	1.4	Oxychlordane
5.911	0.001	145072	6.631	0.000	640991	2.5737	2.6662	3.5	2,4-DDE
6.162	0.001	228485	6.741	0.000	966266	2.5625	2.6008	1.5	trans-Nonachlor
6.398	0.001	129212	7.115	0.000	522273	2.6208	2.6808	2.3	2,4-DDD
6.637	0.001	146156	7.403	0.000	539689	2.5926	2.6107	0.7	2,4-DDT
6.779	0.001	239747	7.465	0.000	904756	2.5439	2.5783	1.3	cis-Nonachlor
7.653	0.001	159184	8.619	0.000	456842	2.8281	2.8552	1.0	Mirex
8.979	0.000	4784071	10.367	0.001	9686694	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	206775	4.165	-0.003	1151433	2.5316	2.5709	1.5	Tetrachloro-m-xylene
8.831	0.000	206837	9.794	-0.001	604802	2.9893	2.6334	12.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	6.3	6.4	6.3~	150- 0
Decachlorobiphenyl	7.5	6.6	6.6~	150- 0

~ Indicates recovery outside QC Limits

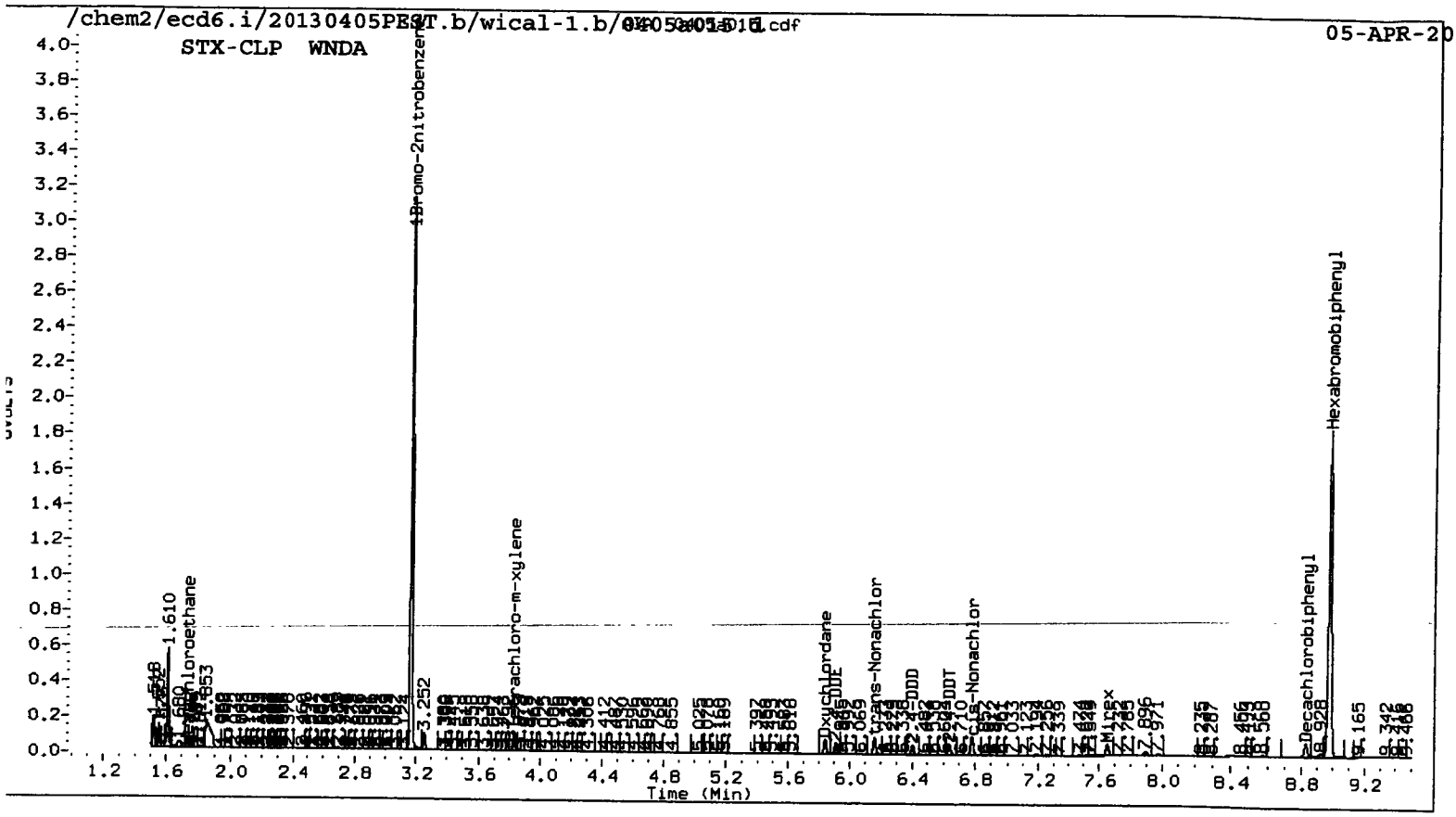
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5428471	-0.4
Hexabromobiphenyl	4807902	4784071	-0.5

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25320828	16.7
Hexabromobiphenyl	7681727	9686694	26.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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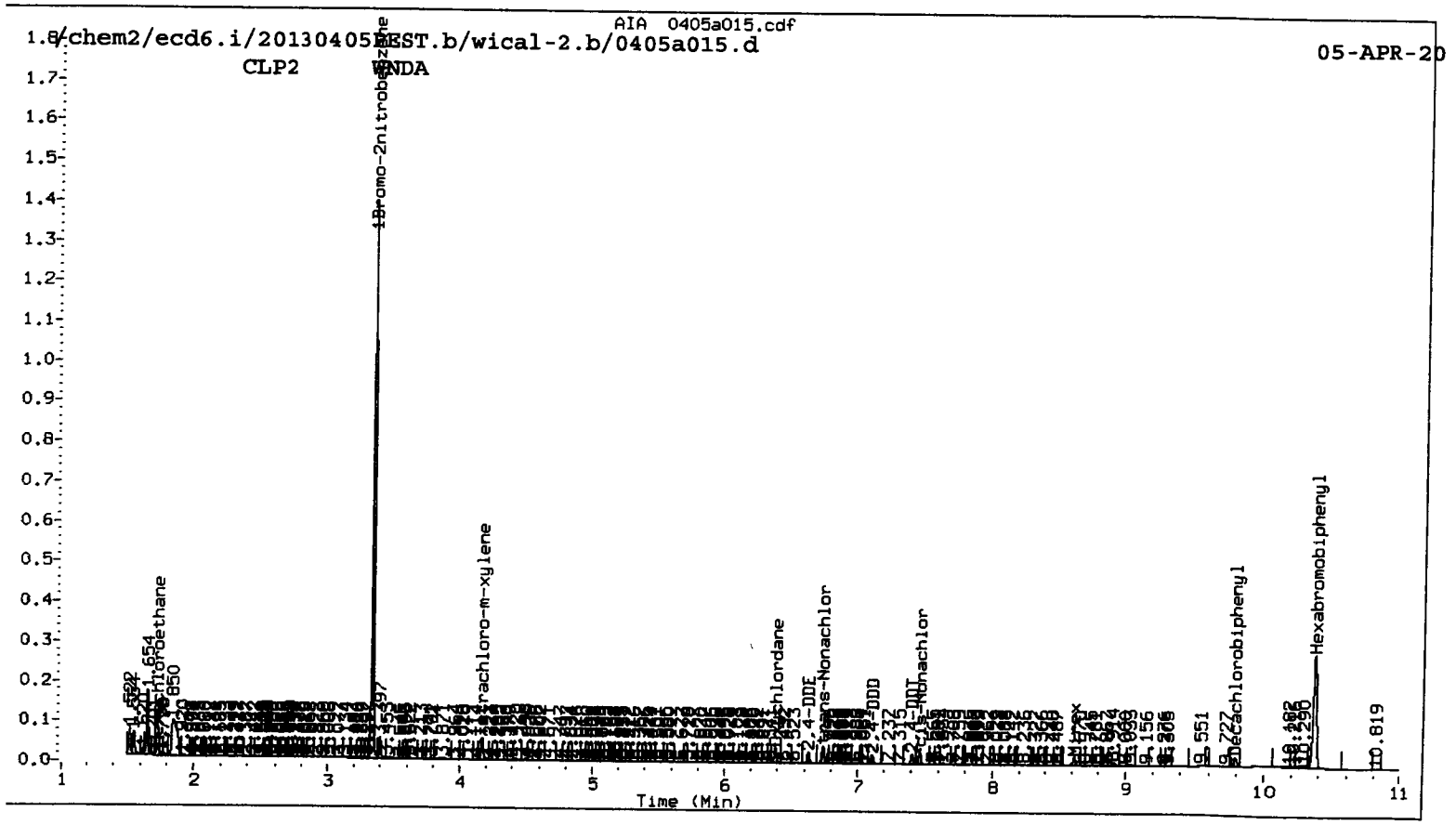
STX-CLP WNDA
05-APR-20
1Bromo-2nitrobenzene
1.610
Chloroethane
3.252
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
4,4'-DDD
4,4'-DDT
Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0405a015.cdf
/chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a015.d
CLP2 WNDA
05-APR-20
1Bromo-2nitrobenzene
Chloroethane
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
4,4'-DDD
4,4'-DDT
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/0405a016.d ARI ID: WNDB
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a016.d Client ID: YZ 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

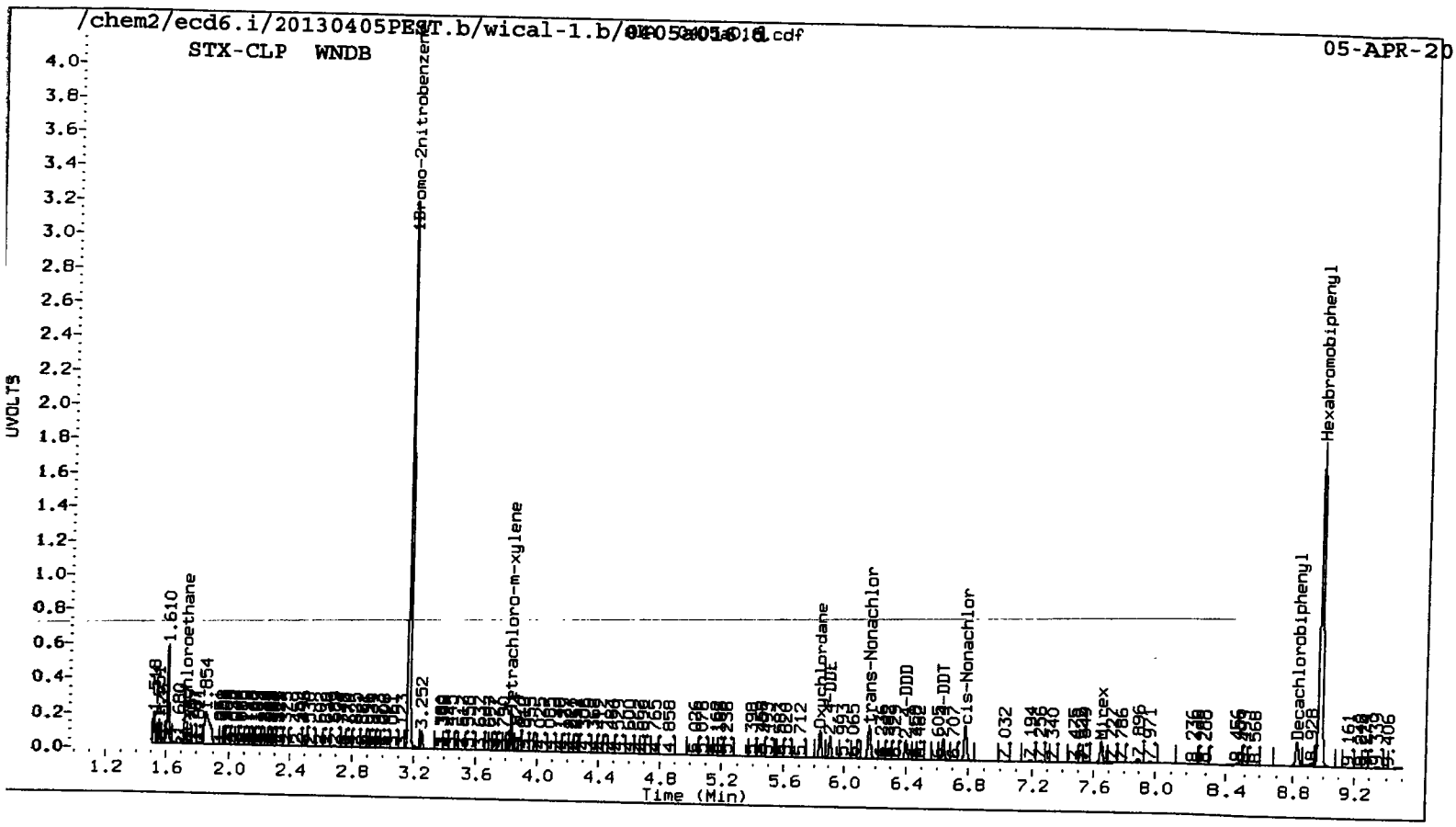
INTERNAL STANDARD SUMMARY

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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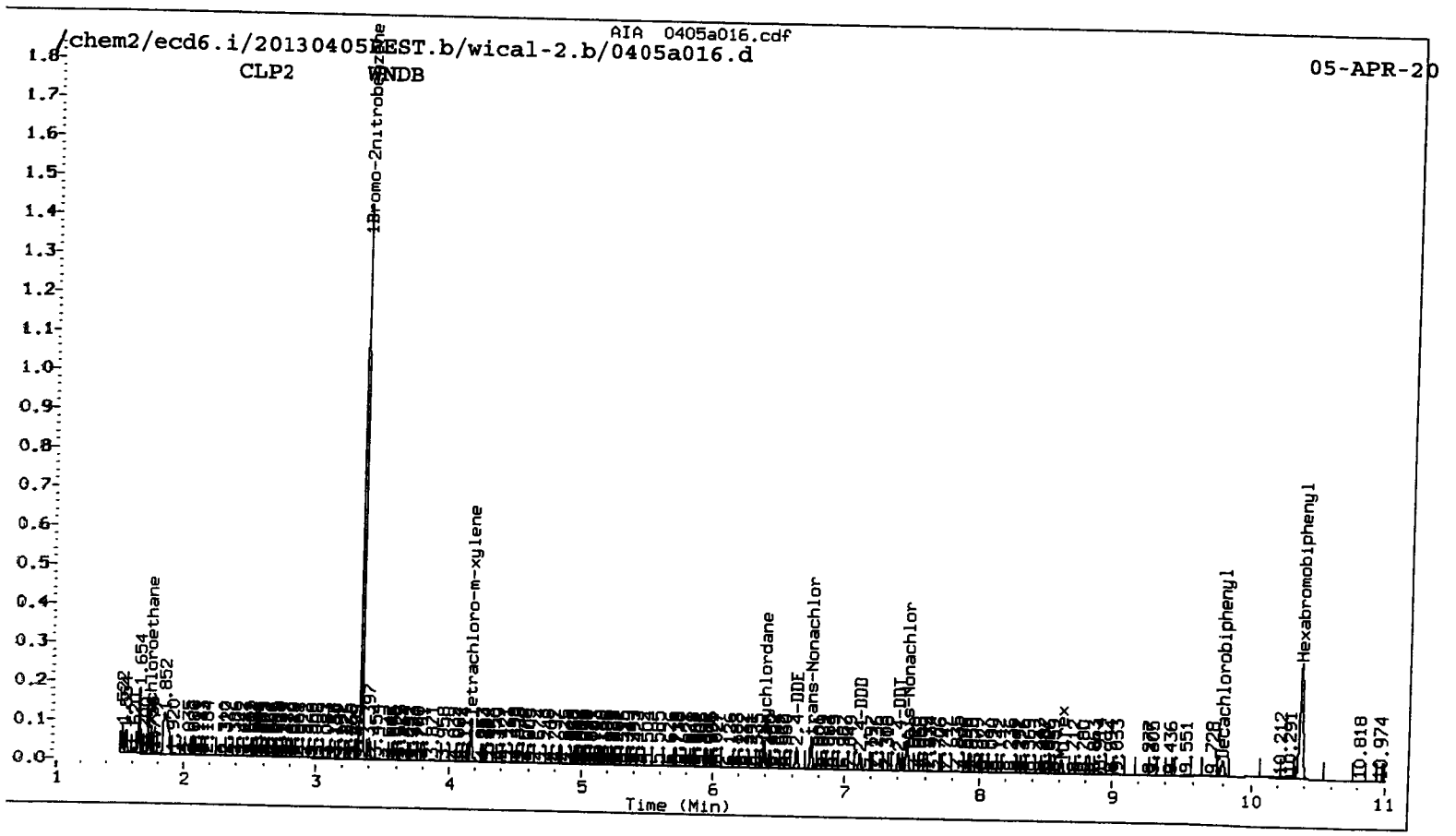
STX-CLP WNDB
05-APR-20
UVOLTS
Time (Min)
1,610 1,2-Dichloroethane
3,252 1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
4,4'-DDE
trans-Nonachlor
4,4'-DDD
4,4'-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WNDB
05-APR-20
Time (Min)
1,2-Dichloroethane
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
4,4'-DDE
trans-Nonachlor
4,4'-DDD
4,4'-DDT
Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a017.d ARI ID: WNDC
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a017.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 16:40
Compound Sublist: WND Report Date: 04/08/2013 11:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.757	0.003	337	1.737	0.005	641674	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5437070	3.333	0.001	25523423	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	744085	6.384	0.000	3302162	10.0303	10.0157	0.1	Oxychlordane
5.911	0.001	561847	6.631	0.000	2480201	10.0573	10.2346	1.7	2,4-DDE
6.162	0.001	874326	6.741	0.000	3786004	9.8939	9.9850	0.9	trans-Nonachlor
6.398	0.001	485638	7.115	0.000	1969056	9.9388	9.9033	0.4	2,4-DDD
6.637	0.001	553848	7.403	-0.001	2078537	9.9130	9.8521	0.6	2,4-DDT
6.778	0.000	916102	7.464	0.000	3567298	9.8080	9.9609	1.5	cis-Nonachlor
7.653	0.000	558764	8.619	0.000	1619675	10.0166	9.9185	1.0	Mirex
8.979	0.000	4741342	10.367	0.000	9886035	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	798694	4.165	-0.003	4570636	9.7632	10.1244	3.6	Tetrachloro-m-xylene
8.830	-0.001	675642	9.794	-0.002	2221004	9.8526	9.4756	3.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits	
Tetrachloro-m-xylene	24.4	25.3	24.4~	150-	0
Decachlorobiphenyl	24.6	23.7	23.7~	150-	0

~ Indicates recovery outside QC Limits

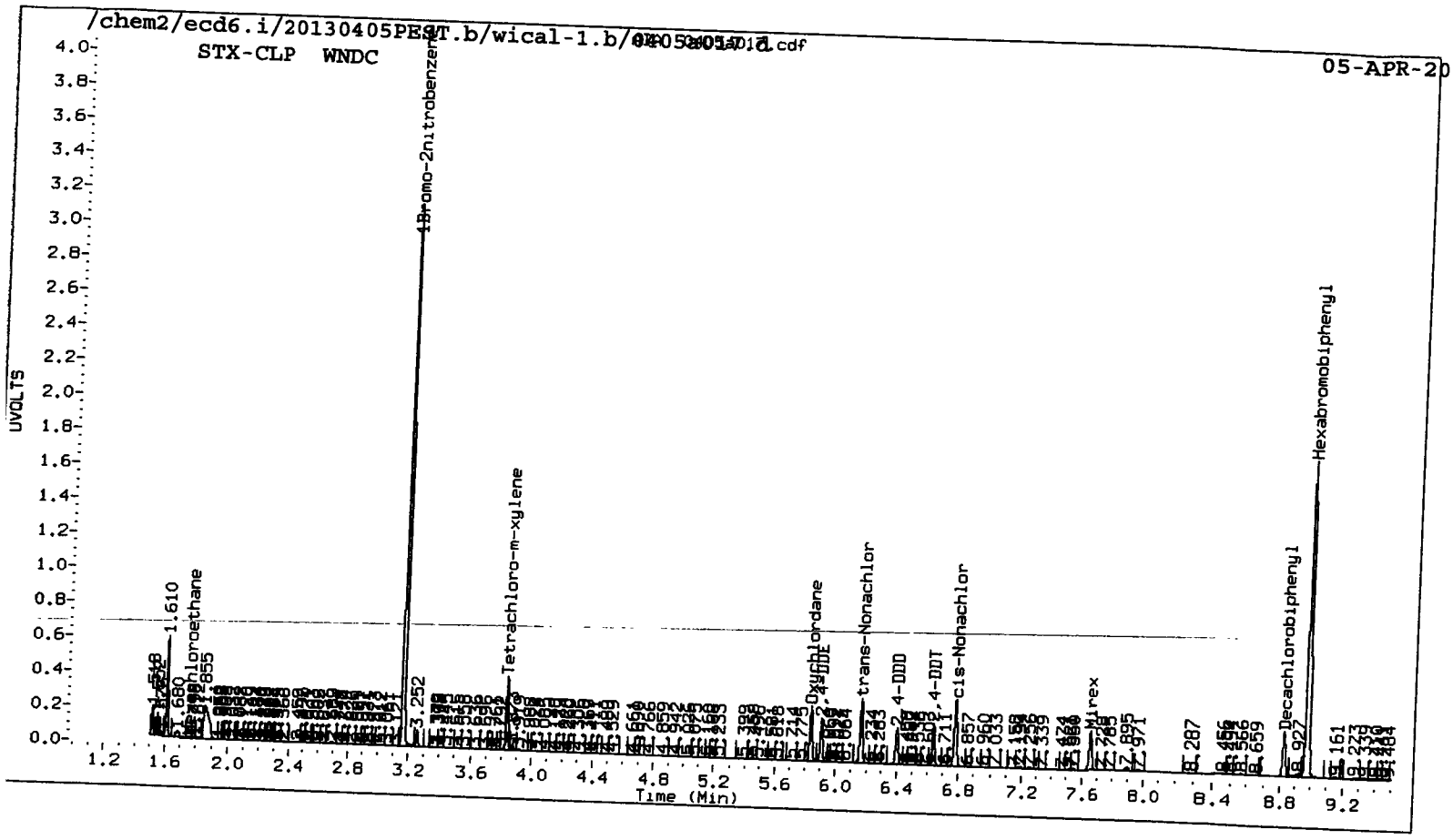
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5437070	-0.2
Hexabromobiphenyl	4807902	4741342	-1.4

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25523423	17.6
Hexabromobiphenyl	7681727	9886035	28.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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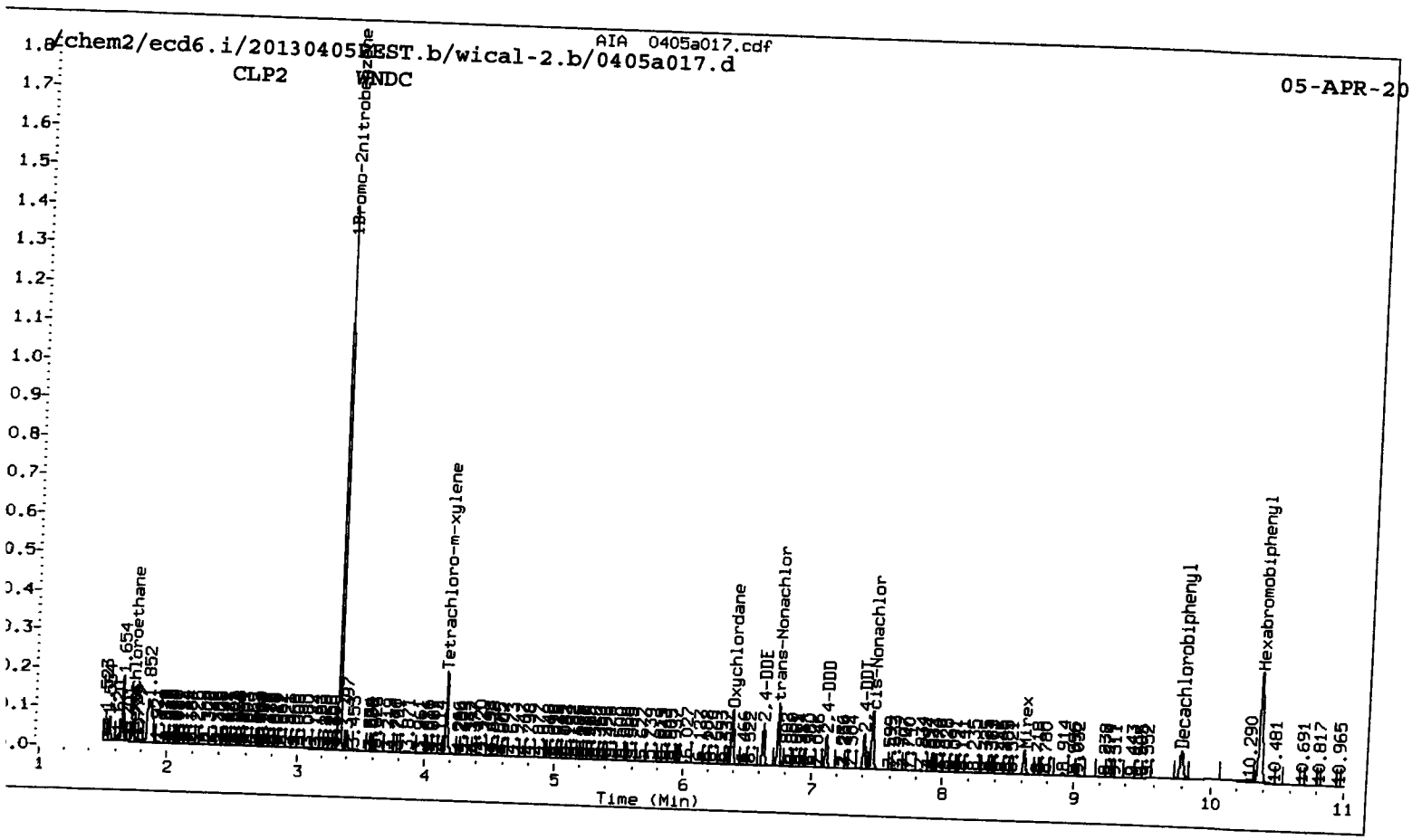
STX-CLP WNDC
05-APR-20
UVOLTS
Time (Min)
1.610
Chloroethane
3.252
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0405a017.cdf
CLP2 WNDC
05-APR-20
Time (Min)
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

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

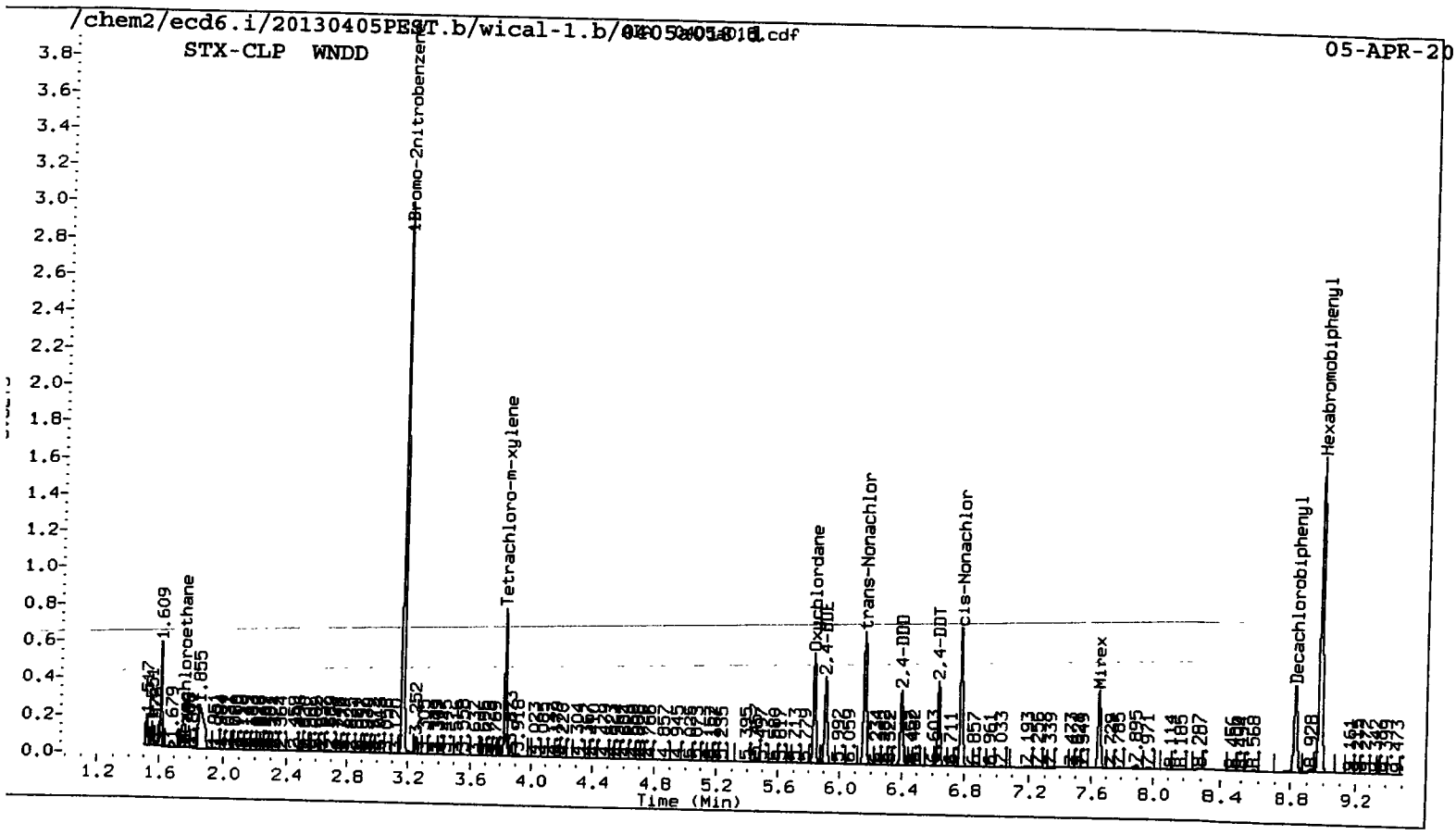
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5198393	-4.6
Hexabromobiphenyl	4807902	4473234	-7.0

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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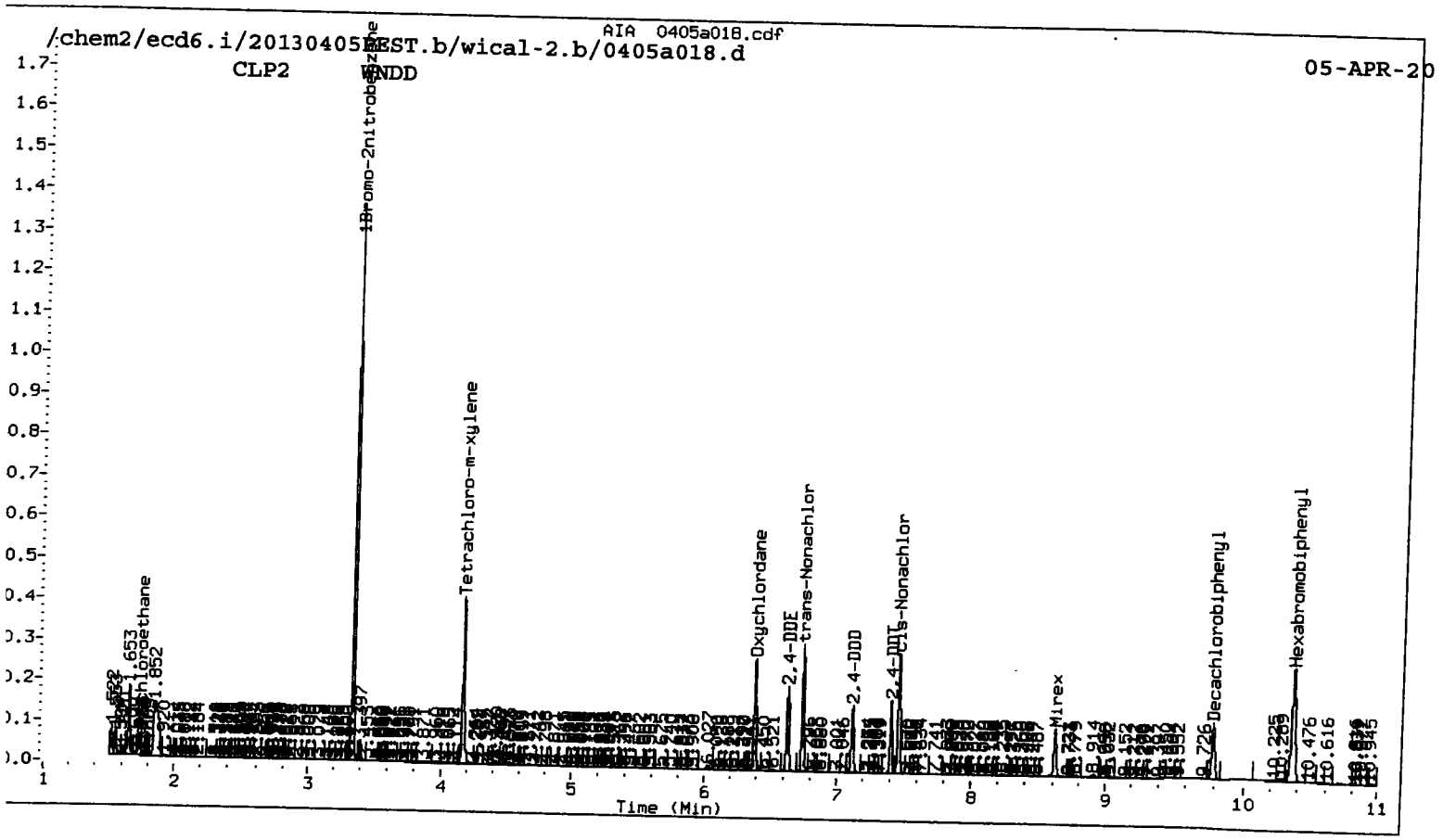
STX-CLP WNDD
05-APR-20
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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AIA 0405a018.cdf
CLP2 WNDD
05-APR-20
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
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

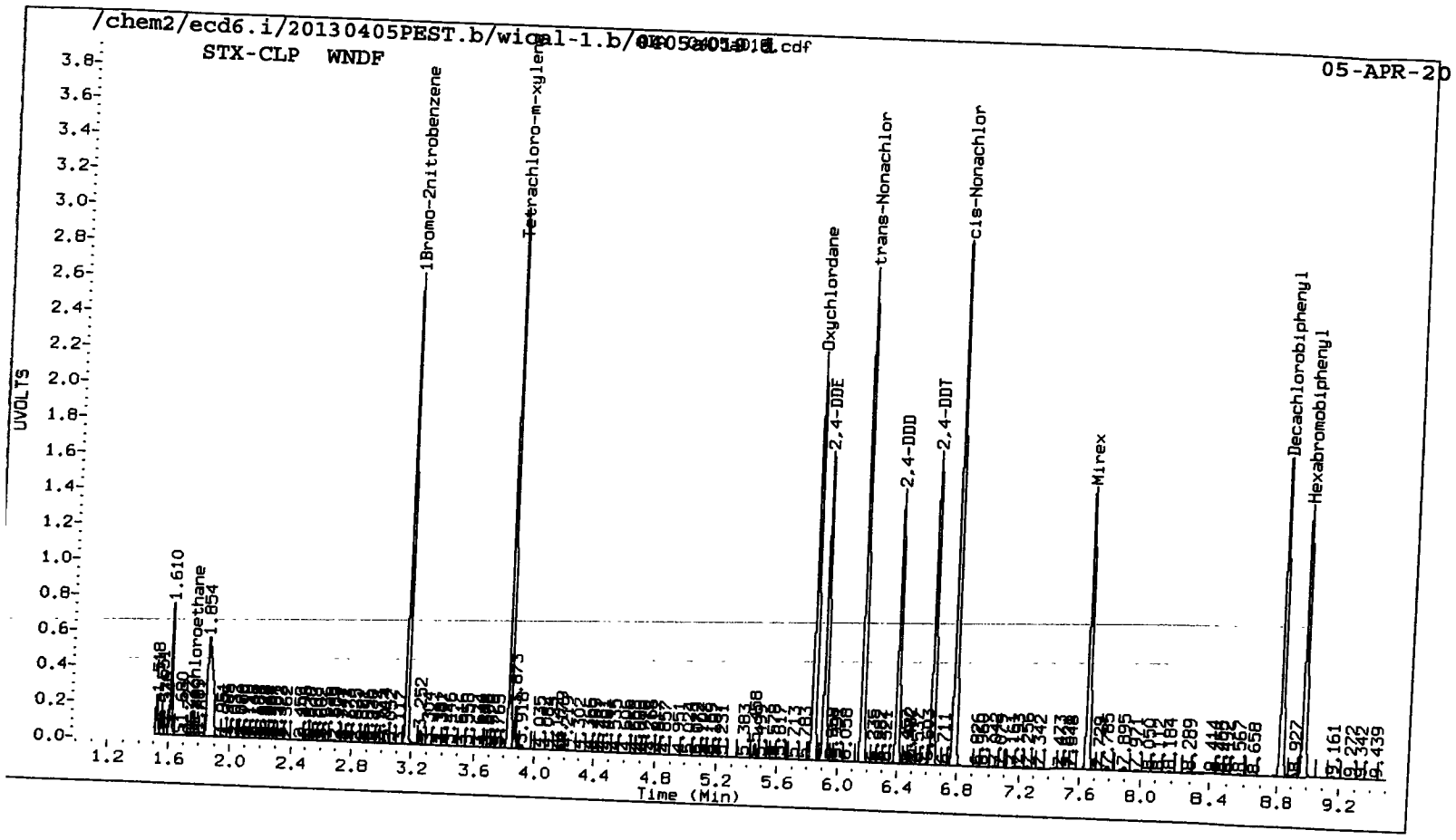
INTERNAL STANDARD SUMMARY

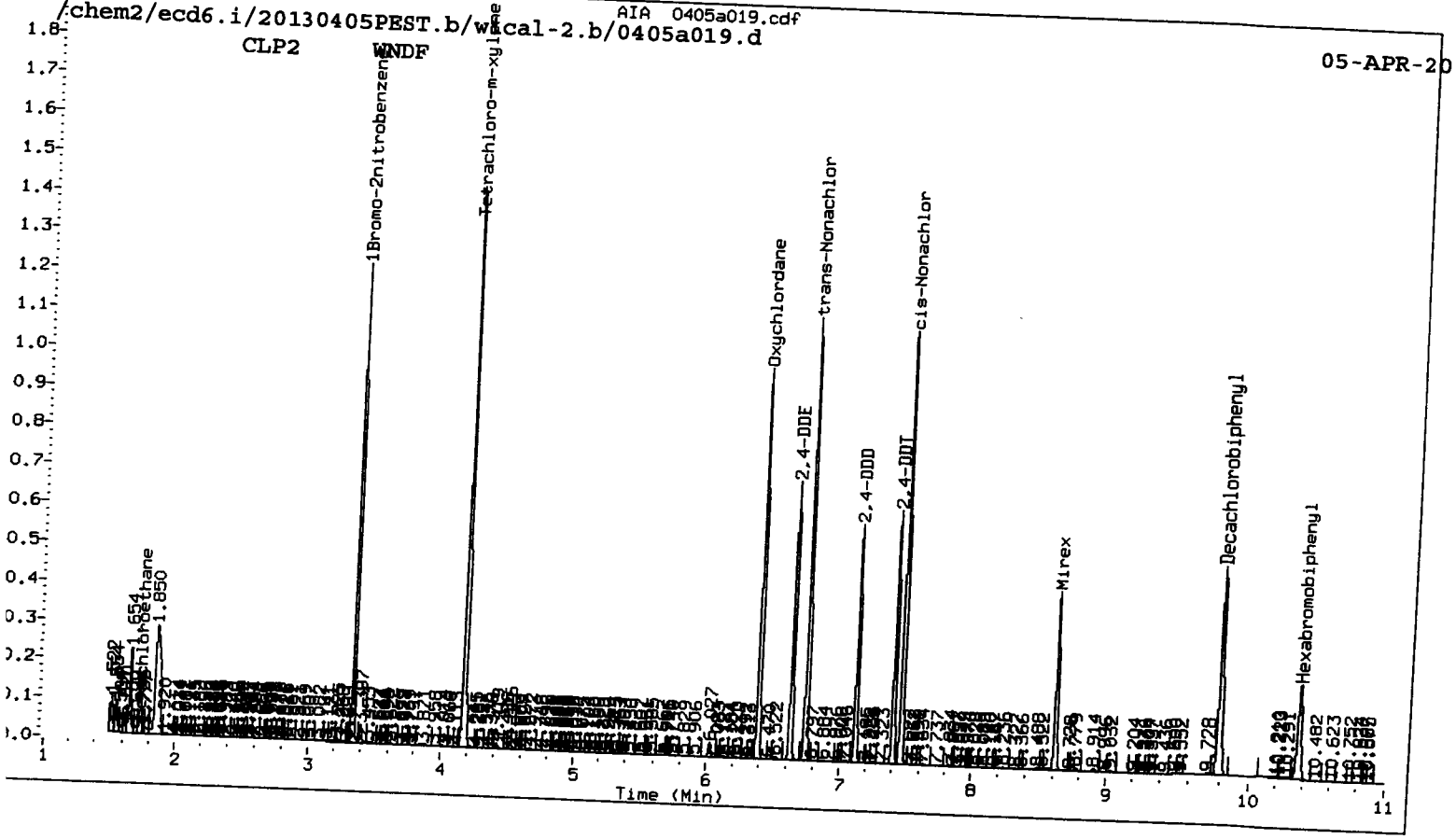
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4612962	-15.3
Hexabromobiphenyl	4807902	3994575	-16.9

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


/chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a019.d
STX-CLP WNDF
05-APR-20
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1,1,2,2-Tetrachloroethane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AIA 0405a019.cdf
CLP2 WNDF
05-APR-20
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1,1,2,2-Tetrachloroethane

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a020.d ARI ID: WNDG
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a020.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 17:33
Compound Sublist: WND Report Date: 04/08/2013 11:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.754	0.000	3460	1.732	0.000	2685728	0.0000	0.0000	---	Hexachloroethane
3.164	-0.001	5195250	3.332	0.000	24391118	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	10298992	6.385	0.000	46753129	145.1289	148.3892	2.2	Oxychlordane
5.911	0.000	7643527	6.631	0.000	31633724	143.0297	136.5977	4.6	2,4-DDE
6.162	0.000	12613712	6.741	0.000	52659310	149.2130	145.1446	2.8	trans-Nonachlor
6.397	0.000	6898918	7.115	0.000	27226192	147.5945	143.1087	3.1	2,4-DDD
6.636	0.000	7895245	7.404	0.000	29528420	147.7234	146.2755	1.0	2,4-DDT
6.778	0.000	13589021	7.465	0.000	51029091	152.0877	148.9144	2.1	cis-Nonachlor
7.653	0.000	7573057	8.619	0.000	22238197	141.9155	142.3234	0.3	Mirex
8.978	-0.001	4535578	10.366	0.000	9459401	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	11025035	4.167	-0.002	56455397	141.0420	130.8595	7.5	Tetrachloro-m-xyl
8.830	-0.001	8738751	9.795	-0.001	31424440	133.2144	140.1148	5.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	352.6	327.1	327.1~	150- 0
Decachlorobiphenyl	333.0	350.3	333.0~	150- 0

~ Indicates recovery outside QC Limits

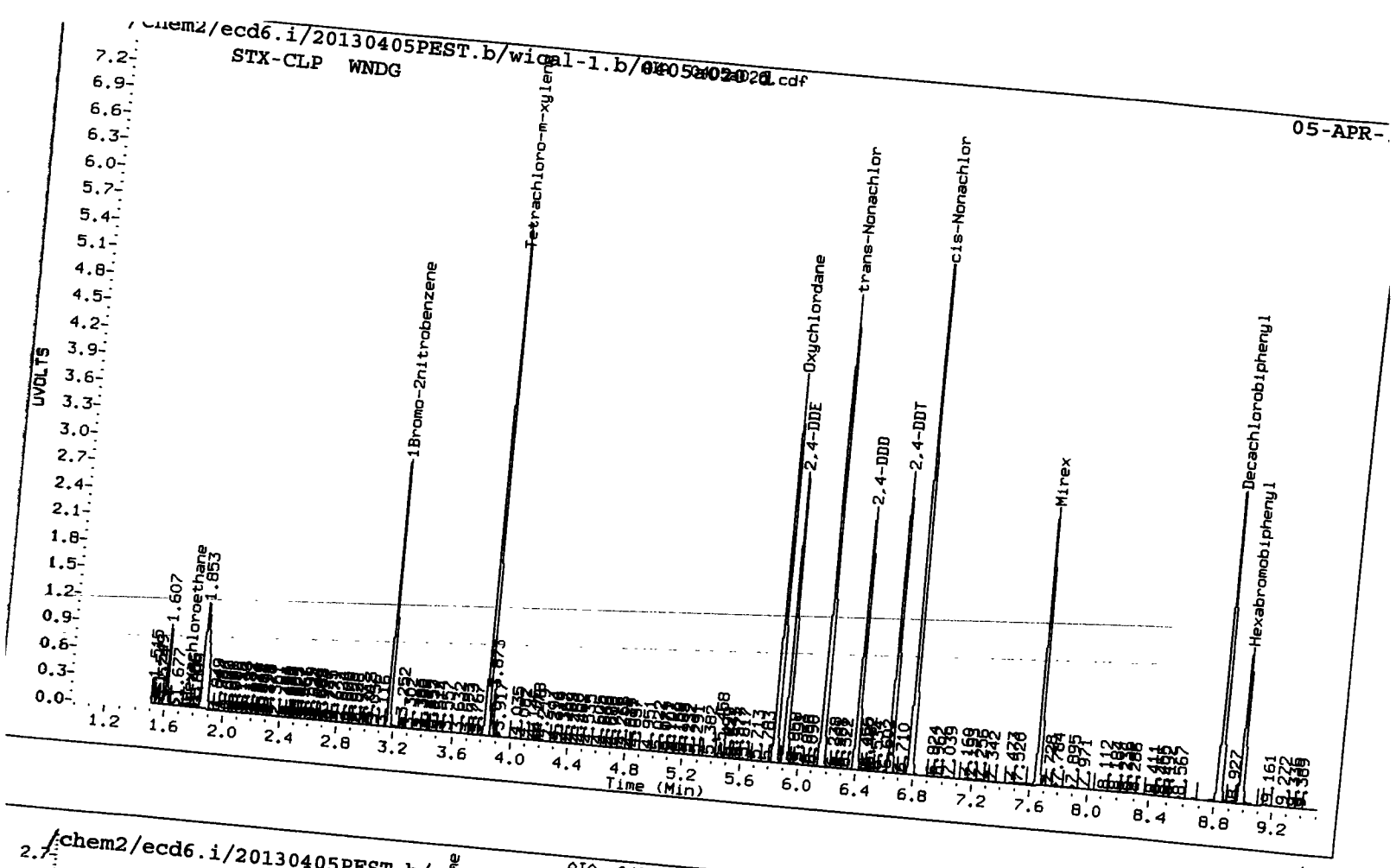
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5195250	-4.6
Hexabromobiphenyl	4807902	4535578	-5.7

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24391118	12.4
Hexabromobiphenyl	7681727	9459401	23.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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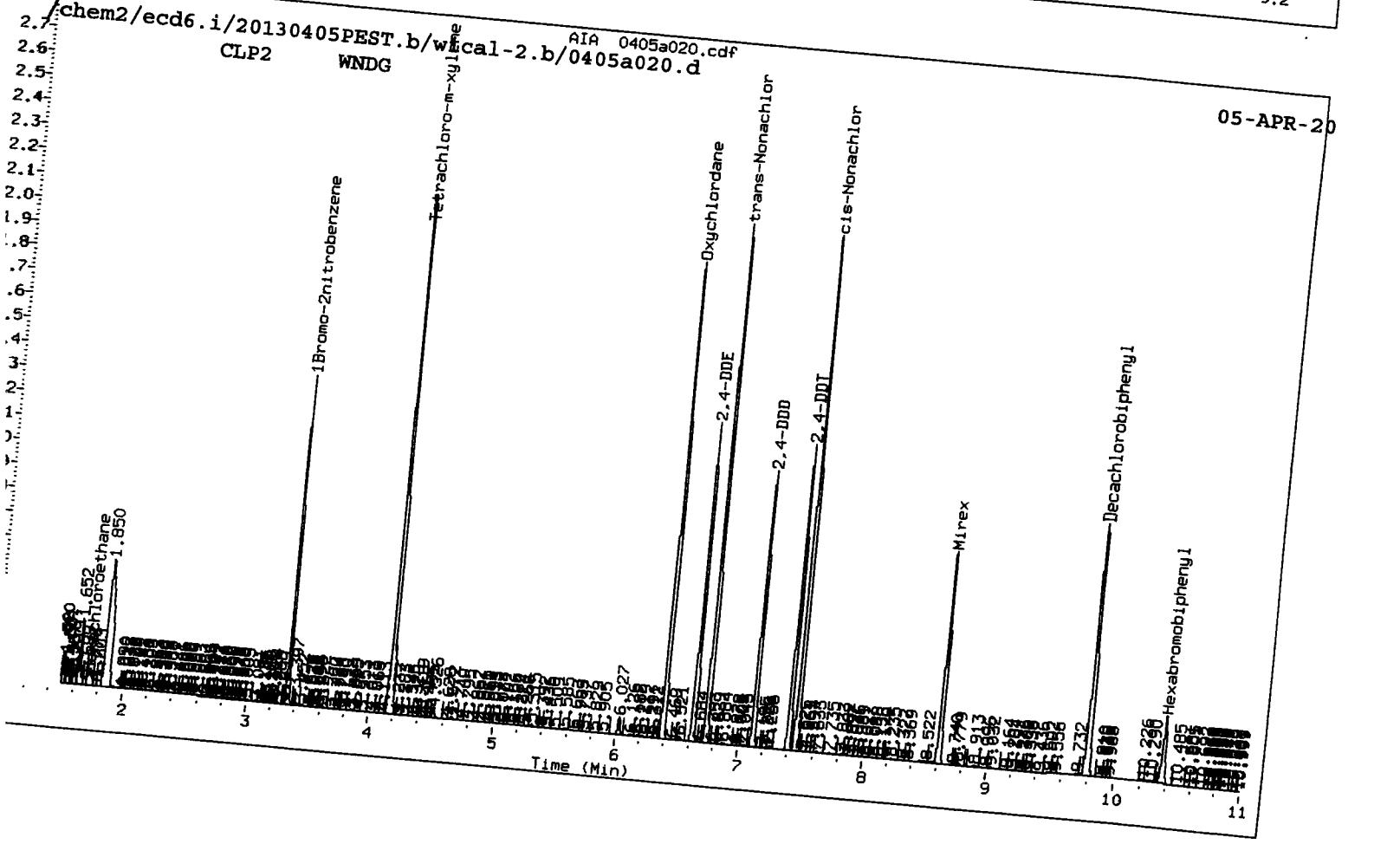
STX-CLP WNDG
AIA 0405a020.cdf
05-APR-
UVOLTS
1,2-Dichloroethane
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
2,4-DDE
Oxychlordane
2,4-DDD
trans-Nonachlor
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 WNDG
AIA 0405a020.cdf
05-APR-20
1,2-Dichloroethane
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
2,4-DDE
Oxychlordane
2,4-DDD
trans-Nonachlor
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/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
Compound Sublist: WND
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 17:51
Report Date: 04/08/2013 11:11
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.757	0.002	1668	1.734	0.002	1184573	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5135851	3.334	0.001	24444304	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	3462657	6.385	0.000	15600206	48.4809	49.4056	1.9	Oxychlordane
5.911	0.001	2512702	6.631	0.000	11057985	46.7170	47.6456	2.0	2,4-DDE
6.162	0.001	3991007	6.741	0.000	17158583	46.9081	47.4254	1.1	trans-Nonachlor
6.398	0.001	2224263	7.115	0.000	9088171	47.2800	47.9026	1.3	2,4-DDD
6.637	0.001	2602714	7.404	0.000	9968741	48.3851	49.5194	2.3	2,4-DDT
6.779	0.001	4114594	7.465	0.000	15732356	45.7546	46.0380	0.6	cis-Nonachlor
7.653	0.001	2454294	8.619	0.001	7311037	45.6969	46.9201	2.6	Mirex
8.979	0.000	4564895	10.366	0.000	9433225	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	2925232	4.166	-0.003	16541632	37.8550	38.2589	1.1	Tetrachloro-m-xylen
8.831	-0.001	2439138	9.794	-0.001	8060777	36.9437	36.0410	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.6	95.6	94.6~	150- 0
Decachlorobiphenyl	92.4	90.1	90.1~	150- 0

~ Indicates recovery outside QC Limits

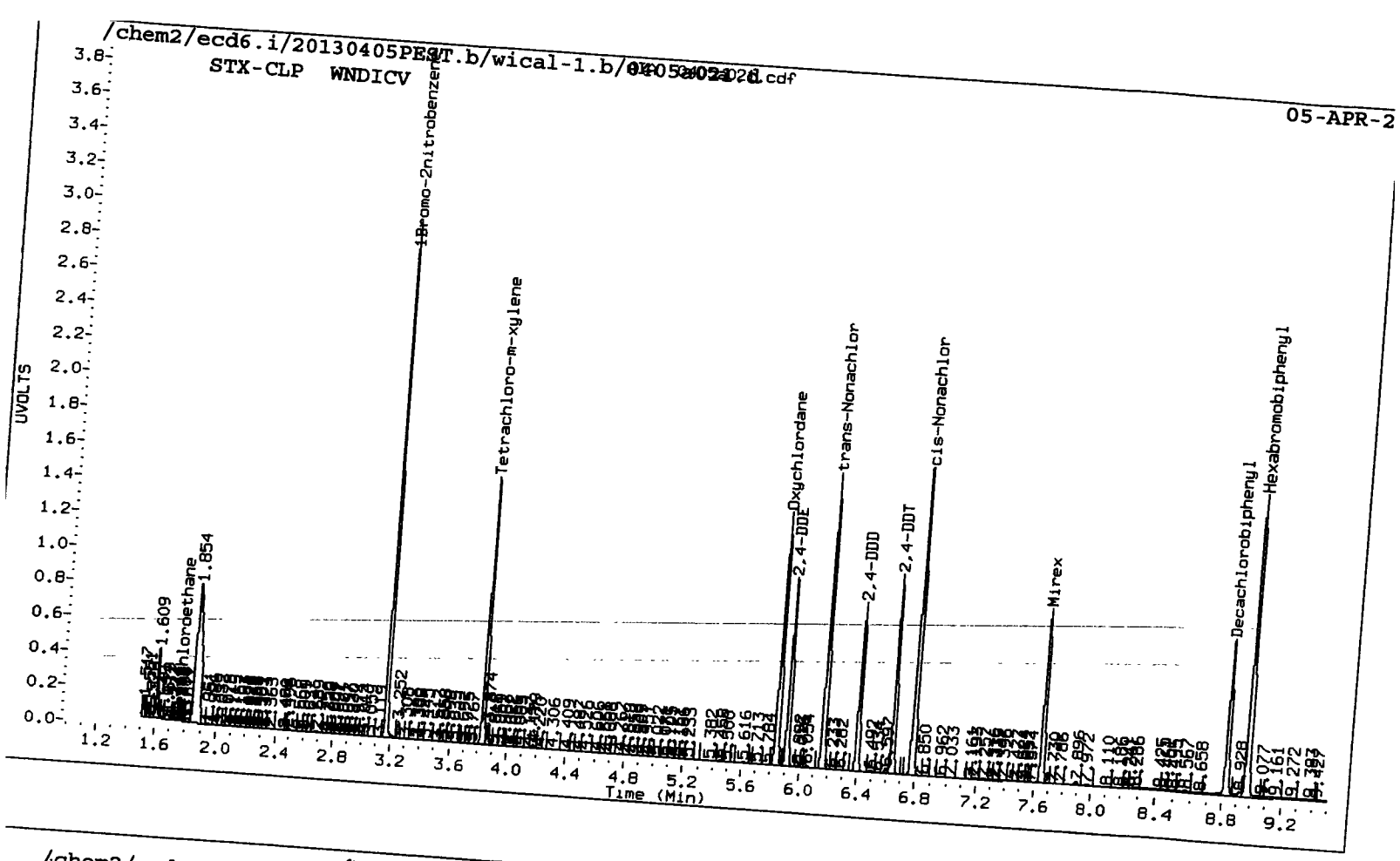
INTERNAL STANDARD SUMMARY

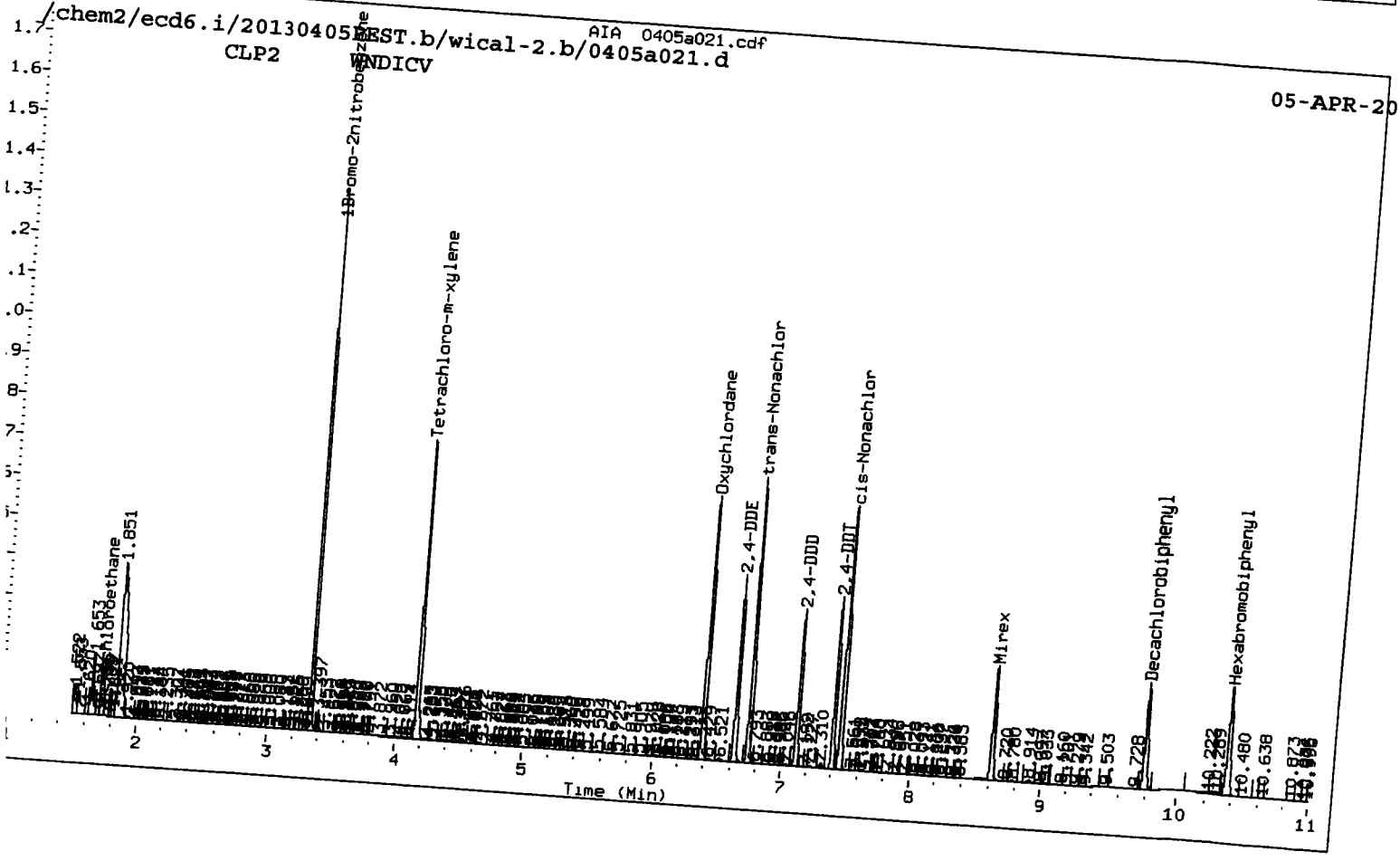
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5135851	-5.7
Hexabromobiphenyl	4807902	4564895	-5.1

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24444304	12.6
Hexabromobiphenyl	7681727	9433225	22.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a021.d
STX-CLP WNDICV
05-APR-2
UVOLTS
Time (Min)
1,4-Dichlorobenzene
1.609
Hexachloroethane
1.854
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0405a021.cdf
CLP2 WNDICV
05-APR-20
Time (Min)
Hexachloroethane
1.851
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WN27/WN31 Client ID: SAIC

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 (ECD-6) ECD-7 ECD-8

Curve Date: 04/05/13 Analysis Start Date: 05/7/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / (N) / 72%	Method Blank in Control?	(Y) / N / ____
Retention times within Windows?	(Y) / N / ____	LCS / LCSD Recovery in Control?	(Y) / N / ____
CCAL met %D Criteria?	Y / (N) / ____	LCS / LCSD RPD ≤30%?	NA / X
Surrogate Recovery in Control?	(Y) / N / ____	MS / MSD Recovery in Control?	(Y) / N / ____
Internal STD. within 50-200%?	NA / (Y) / N / ____	MS / MSD RPD ≤30%?	NA / Y
Manual Integrations?	Y / (N) / ____	Samples Diluted?	(Y) / N / 10x,dilx
Integration Summary?	Y / (N) / ____	Special Analysis Request?	(Y) / N / ____

Detail problems, corrective actions and/or other pertinent information below

- All samples were run @10x dilution due to very bad matrix
- Opening CCALs. Methoxychlor failed on cup_2, okay on cup_1, values reported. Toxaphene is high on cup_1, okay on cup_2, not found in the samples.
- Closing CCALs: DDT breakdown - 72%, CCALs failed, closing Toxaphene were not run due to injection failure.
- Samples were re-run @100x dilution. Breakdown is okay. Some analytes failed on cup_2 column okay on cup_1.

(Review 1) Analyst: YZ **Date:** 5/10/13

(Review 2) Reviewer: MW **Date:** 5/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 5/07/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 109.5684 Column Type: STXCL

Column 2 Serial No.: 109 4709 Column Type: STXCL

GC Method: Pest ICal Date: 04/05/13

IS	Ical/Ccal	ICV
2006-1	2048-1,2	
	2067-1,2	

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0507-1.b

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1	07-MAY-2013 12:31	0507a005.d	1	DS	
2	07-MAY-2013 12:49	0507a006.d	1	INDAE	
3	07-MAY-2013 13:07	0507a007.d	1	TOXAPH	
4	07-MAY-2013 13:24	0507a008.d	1	WN79MBW1	WN79MBW1
5	07-MAY-2013 13:42	0507a009.d	1	WN79LCSW1	WN79LCSW1
6	07-MAY-2013 14:00	0507a010.d	1	WN79QLS	
7	07-MAY-2013 14:19	0507a011.d	1	WN79B	GW-7A-010-01-181
8	07-MAY-2013 14:37	0507a012.d	1	WN79C	GW-7A-002-01-181
9	07-MAY-2013 14:54	0507a013.d	1	WN79D	GW-7A-022-01-181
10	07-MAY-2013 15:12	0507a014.d	1	WN79DMS	GW-7A-022-01-18 MS
11	07-MAY-2013 15:30	0507a015.d	1	WN79DMSD	GW-7A-022-01-18 MSD
12	07-MAY-2013 15:48	0507a016.d	1	WN79E	GW-7A-007-01-181
13	07-MAY-2013 16:06	0507a017.d	1	WN79F	GW-7A-015-01-181
14	07-MAY-2013 16:23	0507a018.d	1	WN79G	GW-7A-015-02-181
15	07-MAY-2013 16:41	0507a019.d	1	WN79H	GW-7A-011-01-181
16	07-MAY-2013 16:59	0507a020.d	1	WN79I	GW-7A-008-01-181
17	07-MAY-2013 17:17	0507a021.d	1	WN79J	GW-7A-018-01-181
18	07-MAY-2013 17:35	0507a022.d	1	DS	
19	07-MAY-2013 17:52	0507a023.d	1	INDAE	
20	07-MAY-2013 18:10	0507a024.d	1	TOXAPH	
21	07-MAY-2013 18:28	0507a025.d	1	WN79K	GW-7A-013-01-181
22	07-MAY-2013 18:46	0507a026.d	1	WN79L	GW-7A-003-01-181
23	07-MAY-2013 19:04	0507a027.d	1	WN79M	GW-7A-004-01-181
24	07-MAY-2013 19:21	0507a028.d	1	WN79N	GW-7A-012-01-181
25	07-MAY-2013 19:39	0507a029.d	1	WN79O	WR-7A-FB-01-181
26	07-MAY-2013 19:57	0507a030.d	1	WN79P	WR-7A-EB-01-181
27	07-MAY-2013 20:15	0507a031.d	1	WO09MBW1	
28	07-MAY-2013 20:33	0507a032.d	1	WO09LCSW1	
29	07-MAY-2013 20:50	0507a033.d	1	WO09LCSDW1	
30	07-MAY-2013 21:08	0507a034.d	1	WO09QLS	
31	07-MAY-2013 21:26	0507a035.d	1	WO09A	
32	07-MAY-2013 21:44	0507a036.d	1	WO09B	
33	07-MAY-2013 22:02	0507a037.d	1	DS	
34	07-MAY-2013 22:19	0507a038.d	1	INDAE	
35	07-MAY-2013 22:37	0507a039.d	1	TOXAPH	
36	07-MAY-2013 22:55	0507a040.d	1	WO14MBS1	
37	07-MAY-2013 23:13	0507a041.d	1	WO14LCSS1	
38	07-MAY-2013 23:31	0507a042.d	1	WO14LCSDS1	
39	07-MAY-2013 23:48	0507a043.d	1	WO14QLS	
40	08-MAY-2013 00:06	0507a044.d	1	WO14A	
41	08-MAY-2013 00:24	0507a045.d	1	WO14B	
42	08-MAY-2013 00:42	0507a046.d	1	WM19MBW1	
43	08-MAY-2013 01:00	0507a047.d	1	WM19LCSS1	
44	08-MAY-2013 01:17	0507a048.d	1	WM19N	
45	08-MAY-2013 01:35	0507a049.d	1	DS	
46	08-MAY-2013 01:53	0507a050.d	1	INDAE	
47	08-MAY-2013 02:11	0507a051.d	1	TOXAPH	
48	08-MAY-2013 02:28	0507a052.d	1	WN27MBS1	
49	08-MAY-2013 02:46	0507a053.d	1	WN27LCSS1	
50	08-MAY-2013 03:04	0507a054.d	1	WN27LCSDS1	
51	08-MAY-2013 03:22	0507a055.d	1	WN27QLS	
52	08-MAY-2013 03:40	0507a056.d	10	WN27A	10
53	08-MAY-2013 03:58	0507a057.d	10	WN27AMS	10
54	08-MAY-2013 04:15	0507a058.d	10	WN27AMSD	10
55	08-MAY-2013 04:33	0507a059.d	10	WN31A	10
56	08-MAY-2013 04:51	0507a060.d	1	WN27MBS1	
57	08-MAY-2013 05:09	0507a061.d	1	WN27LCSS1	
58	08-MAY-2013 05:27	0507a062.d	1	WN27LCSDS1	
59	08-MAY-2013 05:44	0507a063.d	1	WN27QLS	
60	08-MAY-2013 06:02	0507a064.d	1	DS	
61	08-MAY-2013 06:20	0507a065.d	1	INDAE	

Every li
Start a

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a050.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a050.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 08-MAY-2013 01:53
Report Date: 05/10/2013 13:04
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.161	-0.004	5547890	3.330	-0.002	29986568	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	2418645	4.751	-0.006	14416553	19.8209	19.7564	0.3	alpha-BHC
4.687	-0.001	904233	5.183	-0.002	5474400	18.4961	19.2408	3.9	beta-BHC
4.857	-0.001	2032772	5.495	-0.004	12057554	18.7163	19.4386	3.8	delta-BHC
4.610	-0.005	2144033	5.110	-0.006	12446556	19.4679	19.3787	0.5	gamma-BHC (Lindane)
5.058	-0.007	2031484	5.575	-0.007	11632788	19.2458	19.5318	1.5	Heptachlor
5.352	-0.008	1980420	5.913	-0.008	11077067	19.1240	20.4005	6.5	Aldrin
5.927	-0.009	1791819	6.467	-0.008	9733400	18.9304	20.6915	8.9	Heptachlor epoxide b
6.304	-0.010	1607986	6.855	-0.008	8805172	18.5130	21.4714	14.8	Endosulfan I
6.527	-0.010	3561068	7.113	-0.008	17445661	38.8762	42.3834	8.6	Dieldrin
6.227	-0.008	2782805	6.914	-0.007	17921728	37.0792	42.7459	14.2	4,4'-DDE
6.746	-0.011	2916193	7.402	-0.008	12772301	36.7333	33.3745	9.6	Endrin
6.953	-0.008	3003266	7.591	-0.007	14227986	36.9215	33.8496	8.7	Endosulfan II
6.788	-0.002	2983739	7.454	-0.004	14334270	39.4191	35.3919	10.8	4,4'-DDD
7.721	-0.009	2604282	8.134	-0.006	11424642	36.3153	32.7308	10.4	Endosulfan sulfate
7.044	-0.005	2788808	7.740	-0.005	11955180	36.7629	32.5168	12.3	4,4'-DDT
7.470	-0.003	6273476	8.323	-0.008	21394519	164.8788	140.3845	16.0	Methoxychlor
7.976	-0.009	3239815	8.626	-0.006	11906819	35.9803	33.3497	7.6	Endrin ketone
7.330	-0.008	2353630	7.889	-0.007	10673191	35.2324	32.1956	9.0	Endrin aldehyde
6.047	-0.008	1885103	6.650	-0.007	9995906	19.4850	21.1154	8.0	gamma-Chlordane
6.171	-0.009	1762086	6.788	-0.007	9250561	18.9357	21.1774	11.2	alpha-Chlordane
2.338	-0.003	2503043	2.495	-0.002	10761887	19.4915	18.7372	3.9	Hexachlorobutadiene
4.179	-0.001	1727106	4.626	-0.003	14052534	19.4241	20.9057	7.3	Hexachlorobenzene
8.981	0.002	5116989	10.362	-0.004	14091218	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	3165691	4.164	-0.005	19331755	37.9328	36.4482	4.0	Tetrachloro-m-xylen
8.825	-0.006	2527943	9.787	-0.008	10916382	33.8449	32.6746	3.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.8	91.1	91.1~	115- 0
Decachlorobiphenyl	84.6	81.7	81.7~	115- 0

~ Indicates recovery outside QC Limits

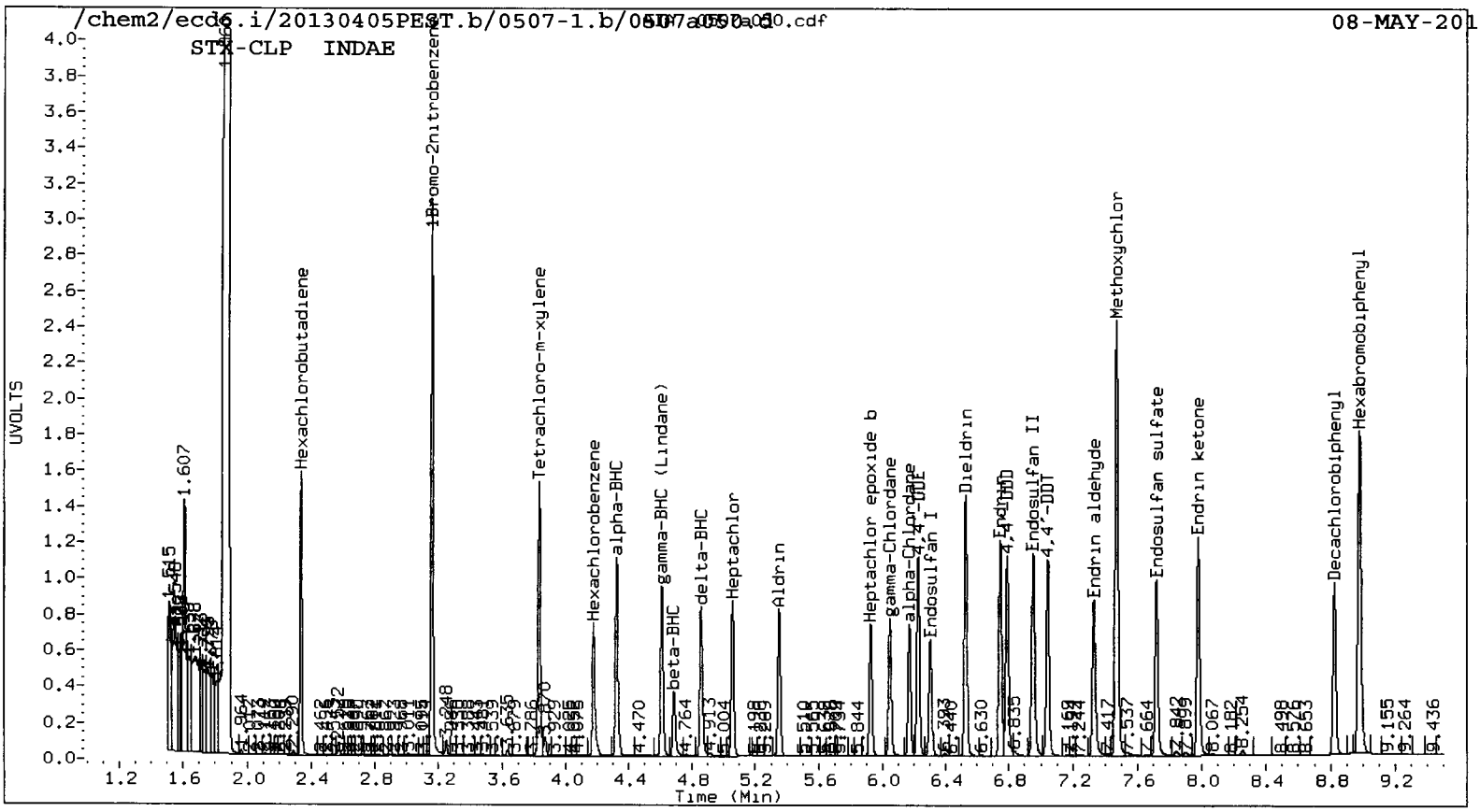
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5448520	5547890	1.8
Hexabromobiphenyl	4807902	5116989	6.4

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	21702340	29986568	38.2
Hexabromobiphenyl	7681727	14091218	83.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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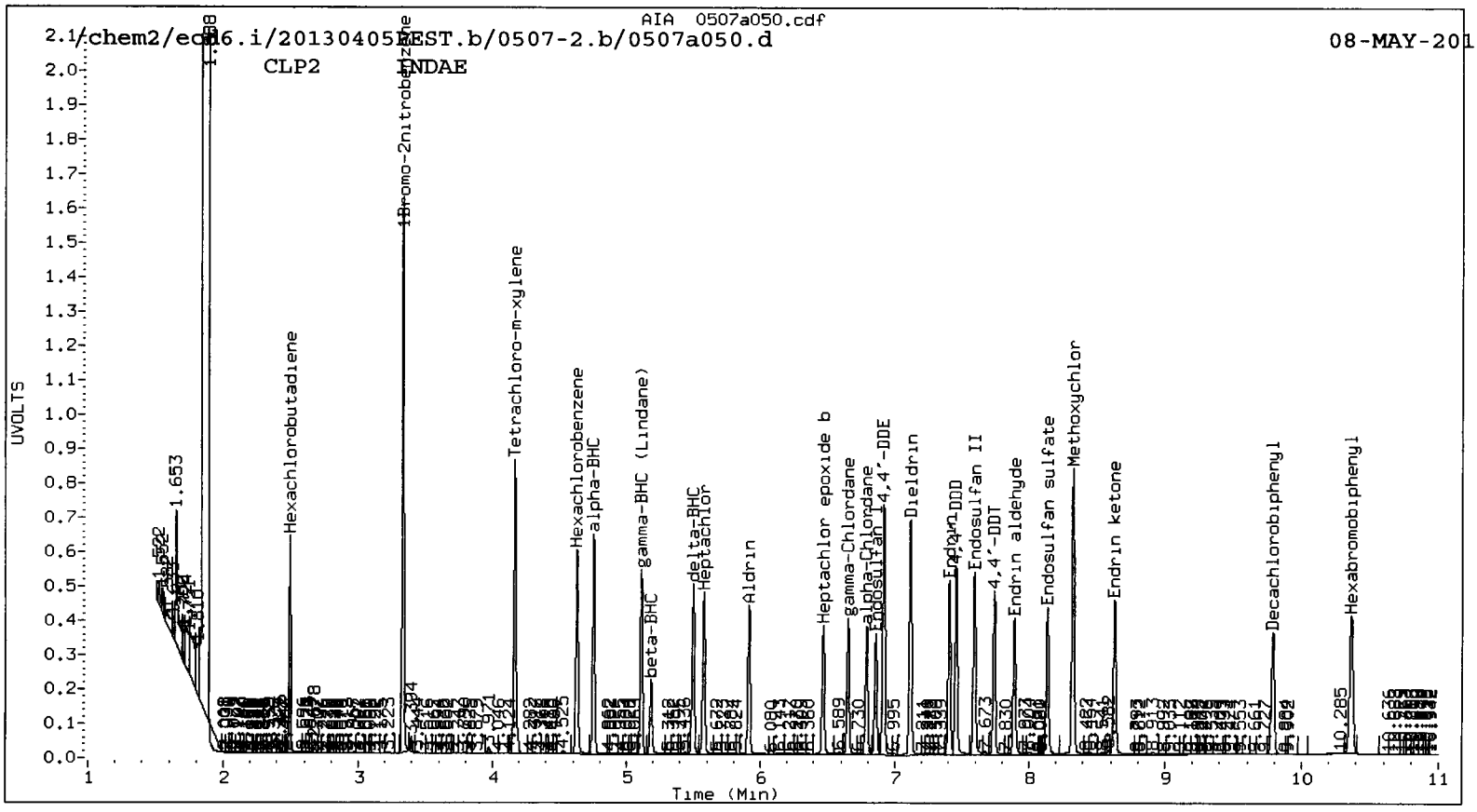
08-MAY-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.607
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0507a050.cdf
08-MAY-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
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

XZ 5/14/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a051.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a051.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 02:11
Compound Sublist: TOXAPH Report Date: 05/10/2013 13:04
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.160	-0.004	4713362	3.330	-0.002	25685217	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.981	0.001	4355363	10.361	-0.005	12281080	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	-0.001	3027111	4.165	-0.004	19352623	42.6945	42.5979	0.2	Tetrachloro-m-xylen
8.824	-0.007	2664426	9.786	-0.009	11696123	41.9102	40.1685	4.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	106.7	106.5	106.5~	150- 0
Decachlorobiphenyl	104.8	100.4	100.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

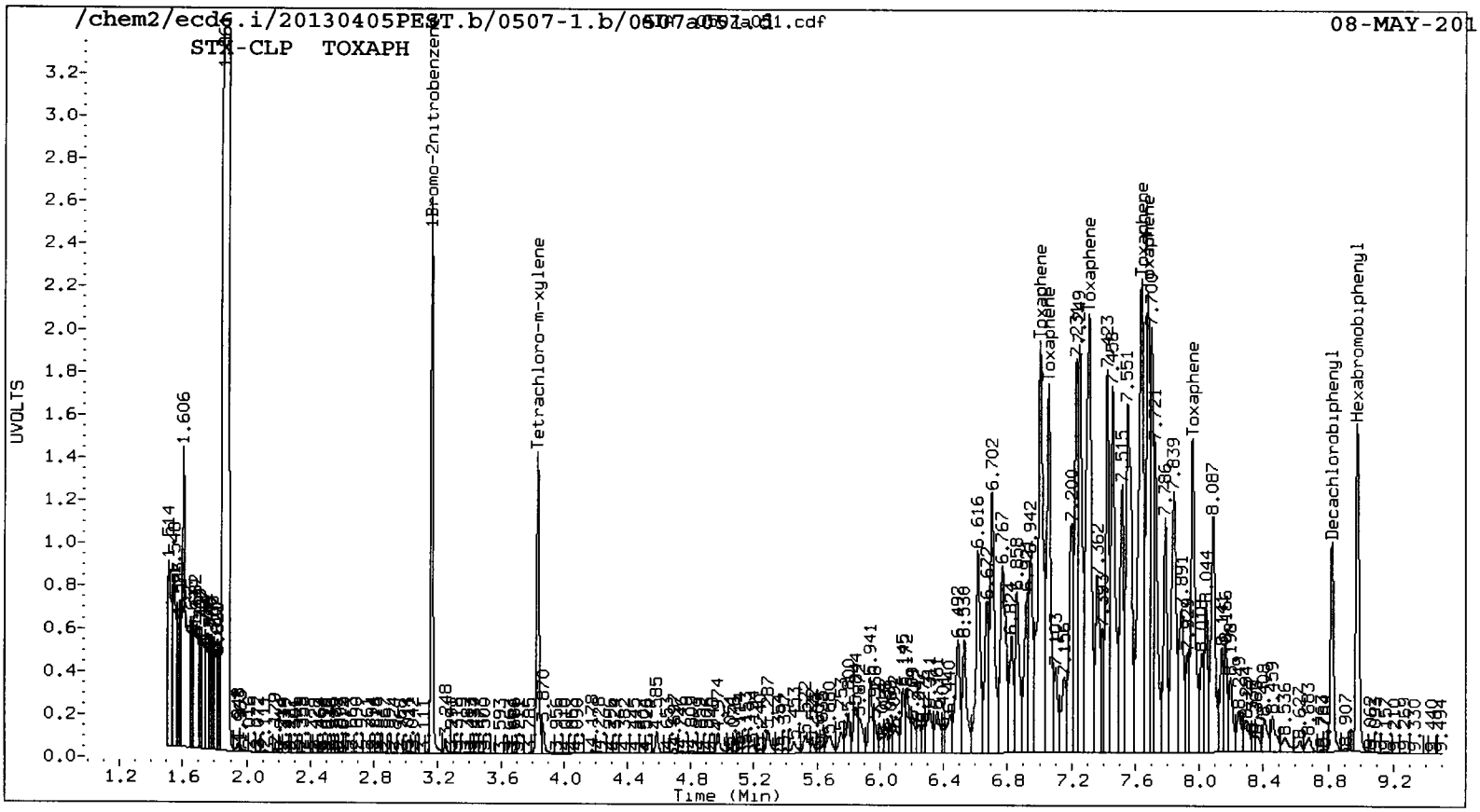
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4713362	-13.5
Hexabromobiphenyl	4807902	4355363	-9.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25685217	18.4
Hexabromobiphenyl	7681727	12281080	59.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.004	-0.007	9043486	3226.6	1	7.338	-0.006	31671887	2807.7
Toxaphene	2	7.056	-0.007	6414915	3363.1	2	7.662	-0.006	45287405	2683.0
Toxaphene	3	7.312	-0.008	9989078	3119.2	3	7.893	-0.005	47955413	2658.4
Toxaphene	4	7.638	-0.007	9862009	3053.2	4	8.361	-0.006	33574405	2575.7
Toxaphene	5	7.678	-0.007	6582209	3087.9	5	8.400	-0.006	42849708	2596.0
Toxaphene	6	7.958	-0.008	5557762	3037.1	NS	---			----
Total STX-CLPAve (6 peaks): 3147.858						Total CLP2Ave (5 peaks): 2664.145				RPD = 17
Corrected Ave (6 peaks): 3147.858						Corrected Ave (5 peaks): 2664.145				RPD = 17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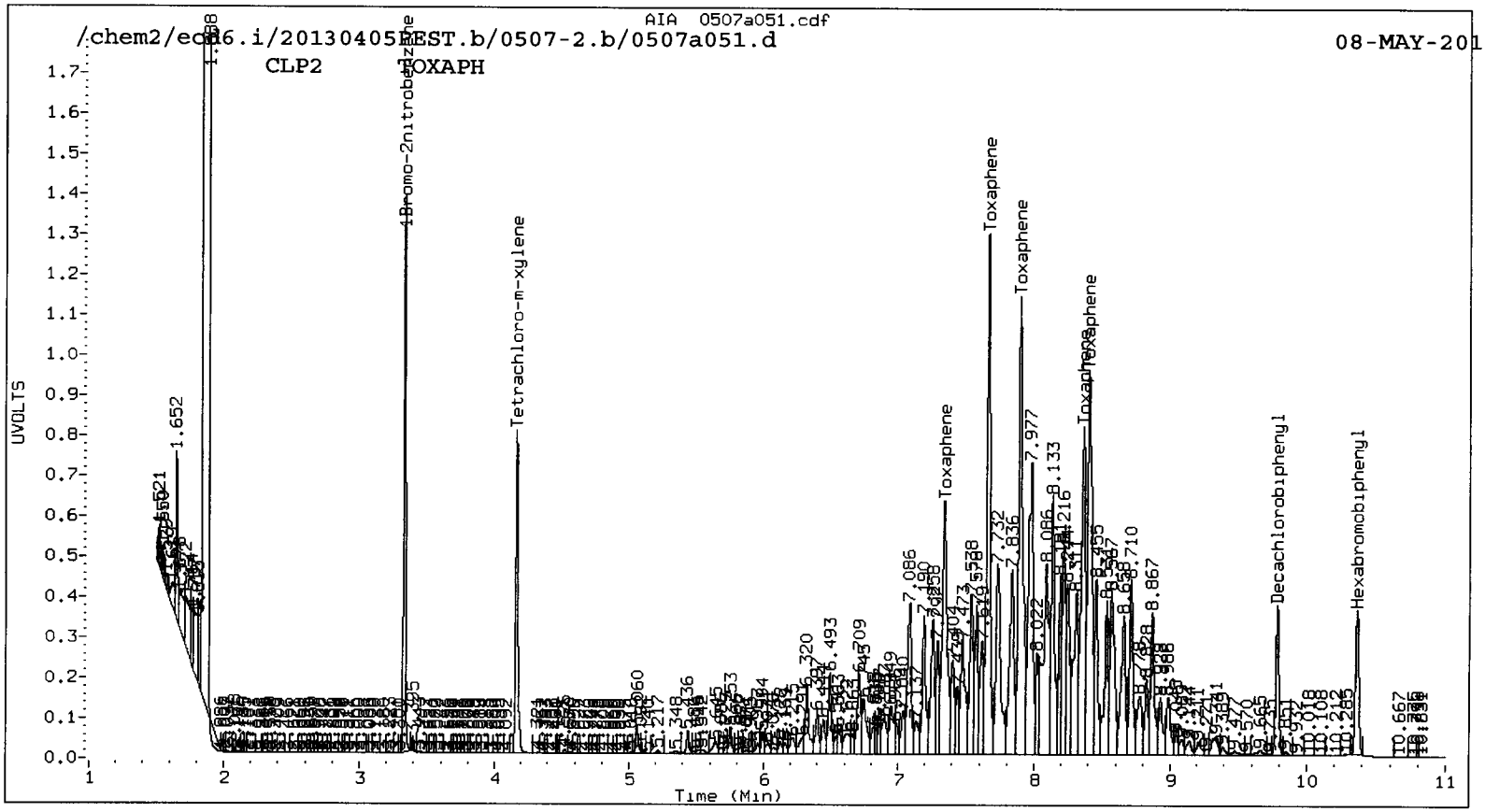
STX-CLP TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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08-MAY-201
CLP2 TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/9/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a052.d ARI ID: WN27MBS1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a052.d Client ID: WN27MBS1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 02:28
Compound Sublist: wpest Report Date: 05/10/2013 13:04
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.004	5310596	3.331	-0.002	27392372	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.321	-0.009	6359	4.749	-0.007	48414	~~0.0544~~	~~0.0726~~	28.6	alpha-BHC
4.658	-0.029	4204	5.205	0.020	44900	0.0898	0.1728	63.2*	beta-BHC
4.831	-0.027	7914	5.505	0.007	117193	0.0761	0.2068	92.4*	delta-BHC
4.606	-0.009	5163	5.091	-0.025	63146	0.0490	0.1076	74.9*	gamma-BHC (Lindane)
5.058	-0.008	9404	5.573	-0.008	79490	0.0931	0.1461	44.3*	Heptachlor
5.365	0.004	13232	5.943	0.022	132782	0.1335	0.2677	66.9*	Aldrin
5.945	0.009	8227	6.462	-0.013	67992	0.0908	0.1582	54.2*	Heptachlor epoxide b
6.301	-0.014	5754	----			0.0692	0.0000	---	Endosulfan I
6.527	-0.010	4795	----			0.0547	0.0000	---	Dieldrin
6.229	-0.006	10916	6.912	-0.009	111389	0.1519	0.2908	62.7*	4,4'-DDE
6.756	-0.001	8465	7.417	0.007	109677	0.1072	0.2778	88.6*	Endrin
6.947	-0.014	5353	7.568	-0.030	209251	0.0662	0.4826	151.8*	Endosulfan II
6.800	0.009	17388	7.447	-0.011	53148	0.2310	0.1272	57.9*	4,4'-DDD
7.718	-0.011	10287	8.131	-0.010	99945	0.1442	0.2776	63.2*	Endosulfan sulfate
7.057	0.008	6103	7.760	0.015	157136	0.0809	0.4143	134.7*	4,4'-DDT
7.448	-0.026	23057	8.318	-0.013	251156	0.6093	1.5975	89.6*	Methoxychlor
7.968	-0.017	28523	8.660	0.027	82673	0.3185	0.2245	34.6	Endrin ketone
7.321	-0.017	10401	7.887	-0.008	152413	0.1566	0.4457	96.0*	Endrin aldehyde
6.044	-0.011	4987	6.643	-0.014	38567	0.0539	0.0892	49.4*	gamma-Chlordane
6.173	-0.007	11592	6.796	0.001	40846	0.1301	0.1024	23.9	alpha-Chlordane
2.338	-0.002	16936	2.522	0.025	71229	0.1378	0.1358	1.5	Hexachlorobutadiene
4.176	-0.003	122721	4.625	-0.004	464990	1.4419	0.7573	62.3*	Hexachlorobenzene
5.828	-0.012	26838	6.371	-0.013	98831	0.3371	0.2793	18.7	Oxychlordane
5.876	-0.034	4361	6.613	-0.018	99085	0.0727	0.3810	135.9*	2,4-DDE
6.141	-0.021	8191	6.750	0.009	49359	0.0864	0.0885	2.5	trans-Nonachlor
6.375	-0.023	7337	7.109	-0.006	192346	0.1399	0.6579	129.9*	2,4-DDD
6.637	0.000	3758	7.374	-0.029	150470	0.0627	0.4851	154.2*	2,4-DDT
----			7.499	0.034	102511	0.0000	0.1947	---	cis-Nonachlor
7.641	-0.011	7350	8.615	-0.004	181524	~~0.1228~~	~~0.7560~~	144.1*	Mirex
8.974	-0.006	5089048	10.357	-0.009	14536366	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.754	0.000	28799	1.721	-0.011	5255882	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.571	-0.010	11492	7.309	-0.027	58152	~~0.0000~~	~~0.0000~~	---	Kepone
3.832	-0.004	2562830	4.163	-0.006	14250857	32.0812	29.4132	8.7	Tetrachloro-m-xylen
8.822	-0.009	2658671	9.785	-0.010	11902109	35.7905	34.5341	3.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	80.2	73.5	73.5	42-112
Decachlorobiphenyl	89.5	86.3	86.3	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

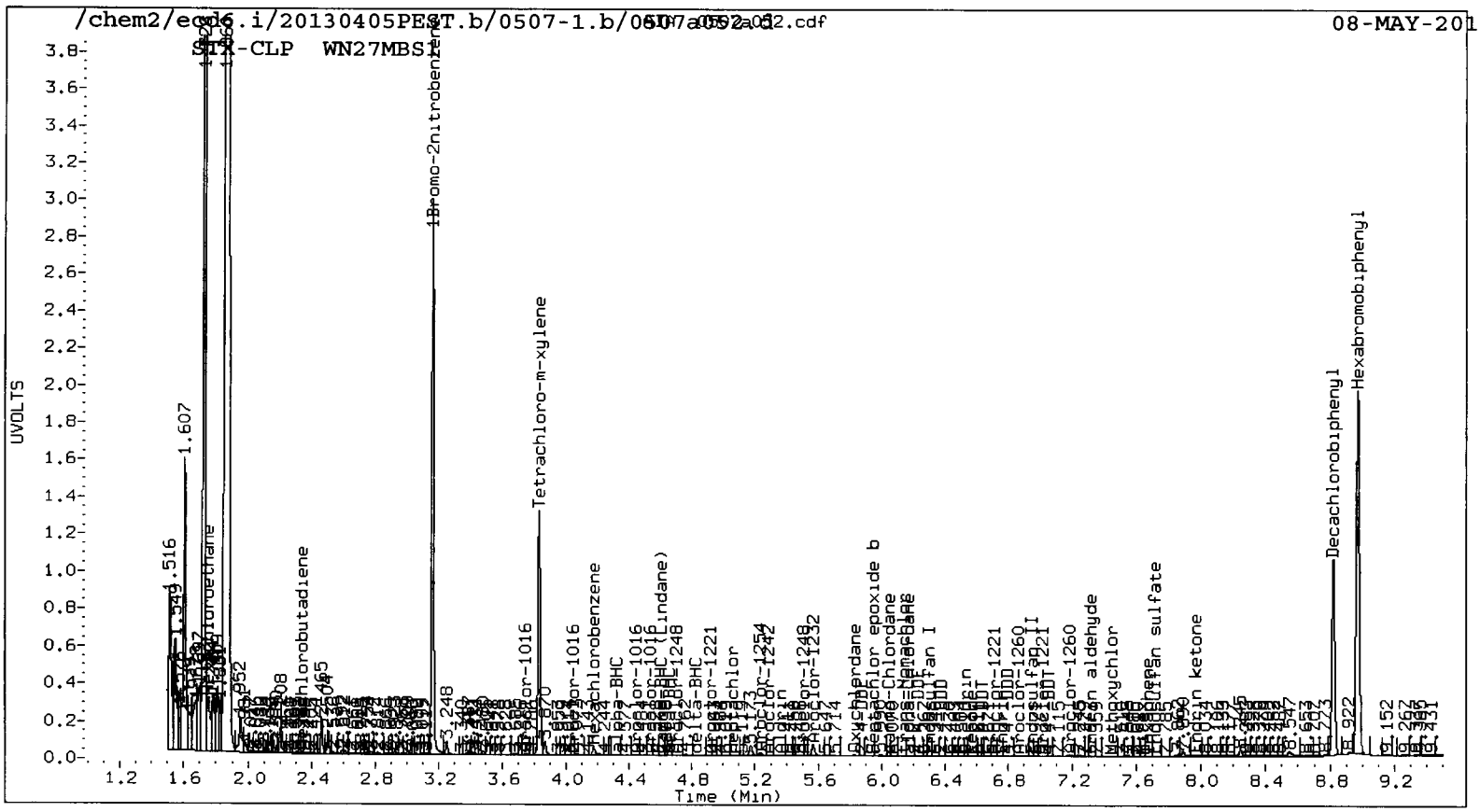
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5310596	-2.5
Hexabromobiphenyl	4807902	5089048	5.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	27392372	26.2
Hexabromobiphenyl	7681727	14536366	89.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.018	0.006	13723	4.2	1	7.374	0.030	150470	11.3
Toxaphene	2	7.057	-0.006	6103	2.7	2	7.670	0.002	95001	4.8
Toxaphene	3	7.321	0.001	10401	2.8	3	7.887	-0.011	152413	7.1
Toxaphene	4	7.641	-0.003	7350	1.9	4	8.376	0.010	63586	4.1
Toxaphene	5	7.672	-0.012	11389	4.6	5	8.403	-0.003	69672	3.6
Toxaphene	6	7.968	0.002	28523	13.3	NS	---			----
Total STX-CLPAve (6 peaks): 4.928						Total CLP2Ave (5 peaks): 6.170			RPD = 22	
Corrected Ave (5 peaks): 3.246						Corrected Ave (4 peaks): 4.895			RPD = 41*	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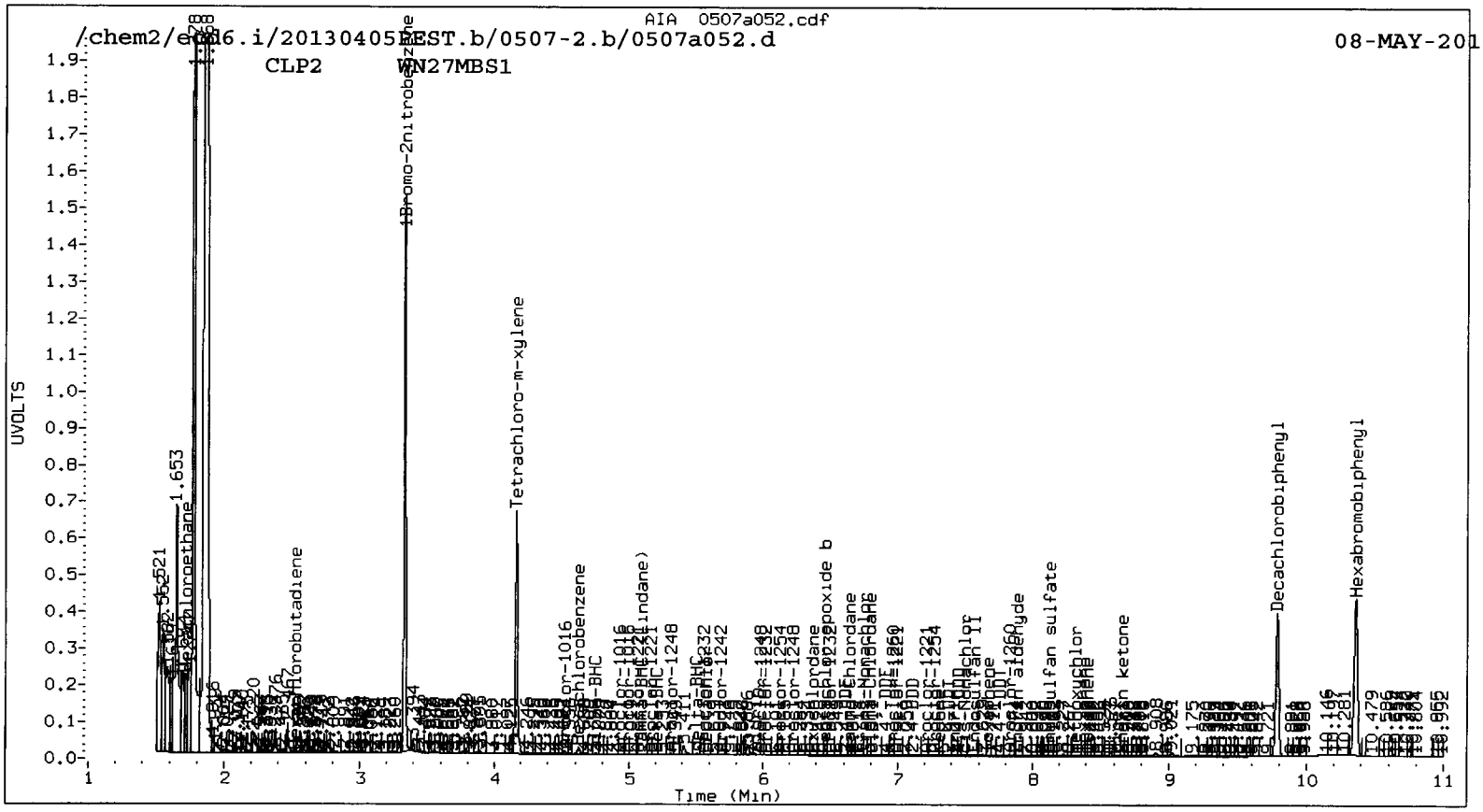
STX-CLP WN27MBS1
UVOLTS
Time (Min)
1.607
4.516
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl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08-MAY-201
CLP2 WN27MBS1
UVOLTS
Time (Min)
1.653
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a053.d ARI ID: WN27LCSS1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a053.d Client ID: WN27LCSS1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 02:46
Compound Sublist: wpest Report Date: 05/10/2013 13:04
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.004	5032757	3.330	-0.002	25467745	80.0000	80.0000	0.0	1Bromo-2nitrobenzen IS
4.323	-0.007	2011505	4.750	-0.006	10927741	18.1717	17.6325	3.0	alpha-BHC
4.685	-0.002	826552	5.182	-0.003	4276172	18.6377	17.6961	5.2	beta-BHC
4.856	-0.003	1904477	5.494	-0.005	10364427	19.3298	19.6738	1.8	delta-BHC
4.608	-0.007	1936505	5.109	-0.008	9718026	19.3833	17.8151	8.4	gamma-BHC (Lindane)
5.057	-0.008	1819387	5.574	-0.008	9482475	19.0007	18.7464	1.3	Heptachlor
5.352	-0.009	1684246	5.913	-0.008	9058001	17.9287	19.6419	9.1	Aldrin
5.926	-0.010	1714672	6.467	-0.008	8507329	19.9696	21.2940	6.4	Heptachlor epoxide b
6.304	-0.011	1606984	6.855	-0.008	7777183	20.3952	22.3296	9.1	Endosulfan I
6.527	-0.010	3387052	7.112	-0.009	16189999	40.7613	46.3117	12.7	Dieldrin N
6.227	-0.008	3298938	6.914	-0.007	16010044	48.4555	44.9618	7.5	4,4'-DDE
6.745	-0.011	2969516	7.402	-0.008	12489401	40.4418	34.6491	15.4	Endrin
6.951	-0.009	2997056	7.591	-0.008	13462606	39.8365	34.0051	15.8	Endosulfan II
6.783	-0.007	2881486	7.451	-0.007	13138212	41.1588	34.4405	17.8	4,4'-DDD
7.719	-0.011	2600962	8.133	-0.008	11155921	39.2136	33.9331	14.4	Endosulfan sulfate
7.041	-0.008	2810570	7.739	-0.007	11513045	40.0577	33.2465	18.6	4,4'-DDT
7.465	-0.009	6425544	8.320	-0.010	21578633	182.5858	150.3299	19.4	Methoxychlor
7.974	-0.011	3221987	8.624	-0.009	9160236	38.6873	27.2400	34.7	Endrin ketone
7.328	-0.010	1849039	7.888	-0.007	7447932	29.9262	23.8530	22.6	Endrin aldehyde
6.046	-0.009	1782254	6.650	-0.008	8740696	20.3075	21.7400	6.8	gamma-Chlordane
6.170	-0.010	1701567	6.787	-0.008	8044827	20.1570	21.6849	7.3	alpha-Chlordane
2.338	-0.003	1659451	2.495	-0.002	6963441	14.2451	14.2750	0.2	Hexachlorobutadiene
4.176	-0.003	1398652	4.625	-0.004	9972575	17.3402	17.4685	0.7	Hexachlorobenzene
5.842	0.002	38703	6.389	0.004	29051	0.5227	0.0883	142.2*	Oxychlordane
5.881	-0.030	4345	6.587	-0.044	136721	0.0779	0.5654	151.6*	2,4-DDE
----			6.732	-0.009	56572	0.0000	0.1111	---	trans-Nonachlor
6.390	-0.007	35751	7.112	-0.003	16189999	0.7330	0.6521	195.2*	2,4-DDD
6.628	-0.008	17605	----			0.3157	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.661	0.008	18647	8.577	-0.042	294389	0.3349	1.3428	120.2*	Mirex
8.973	-0.007	4732756	10.358	-0.008	13272223	80.0000	80.0000	0.0	Hexabromobiphenyl IS
1.755	0.001	27453	1.721	-0.011	5450239	0.0000	0.0000	---	Hexachloroethane
6.592	0.011	3544	7.335	-0.002	63580	0.0000	0.0000	---	Kepone
3.832	-0.004	2566381	4.163	-0.006	14073262	33.8992	31.2418	8.2	Tetrachloro-m-xylen
8.822	-0.009	2781102	9.786	-0.010	12088735	40.2572	38.4165	4.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	84.7	78.1	78.1	42-112
Decachlorobiphenyl	100.6	96.0	96.0	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1617670.7	1386.0	1386.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	1602307.7	1329.9	1329.9~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5032757	-7.6
Hexabromobiphenyl	4807902	4732756	-1.6

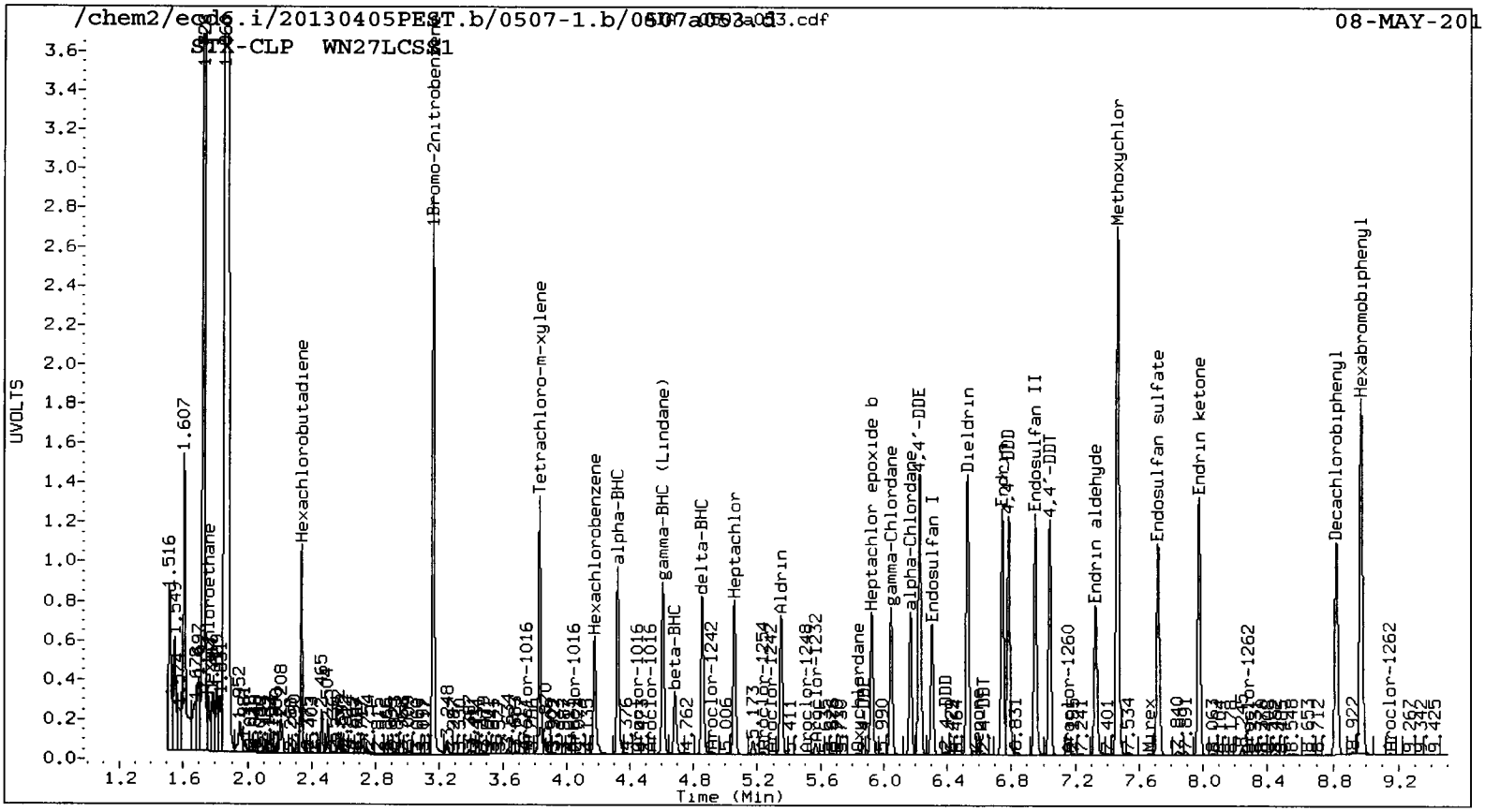
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25467745	17.4
Hexabromobiphenyl	7681727	13272223	72.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.041	0.029	2810570	922.8	1	7.335	-0.010	63580	5.2
Toxaphene	2	---			0.000	2	7.670	0.003	251677	13.8
Toxaphene	3	7.328	0.008	1849039	531.3	3	7.888	-0.010	7447932	382.0
Toxaphene	4	7.661	0.016	18647	5.3	4	8.320	-0.046	21578633	1531.8
Toxaphene	5	---			0.000	5	8.420	0.015	161075	9.0
Toxaphene	6	7.974	0.008	3221987	1620.3	NS	---			----

Total STX-CLPAve (4 peaks): 769.943 Total CLP2Ave (5 peaks): 388.375 RPD = 66*
Corrected Ave (3 peaks): 486.491 Corrected Ave (4 peaks): 102.519 RPD = 130*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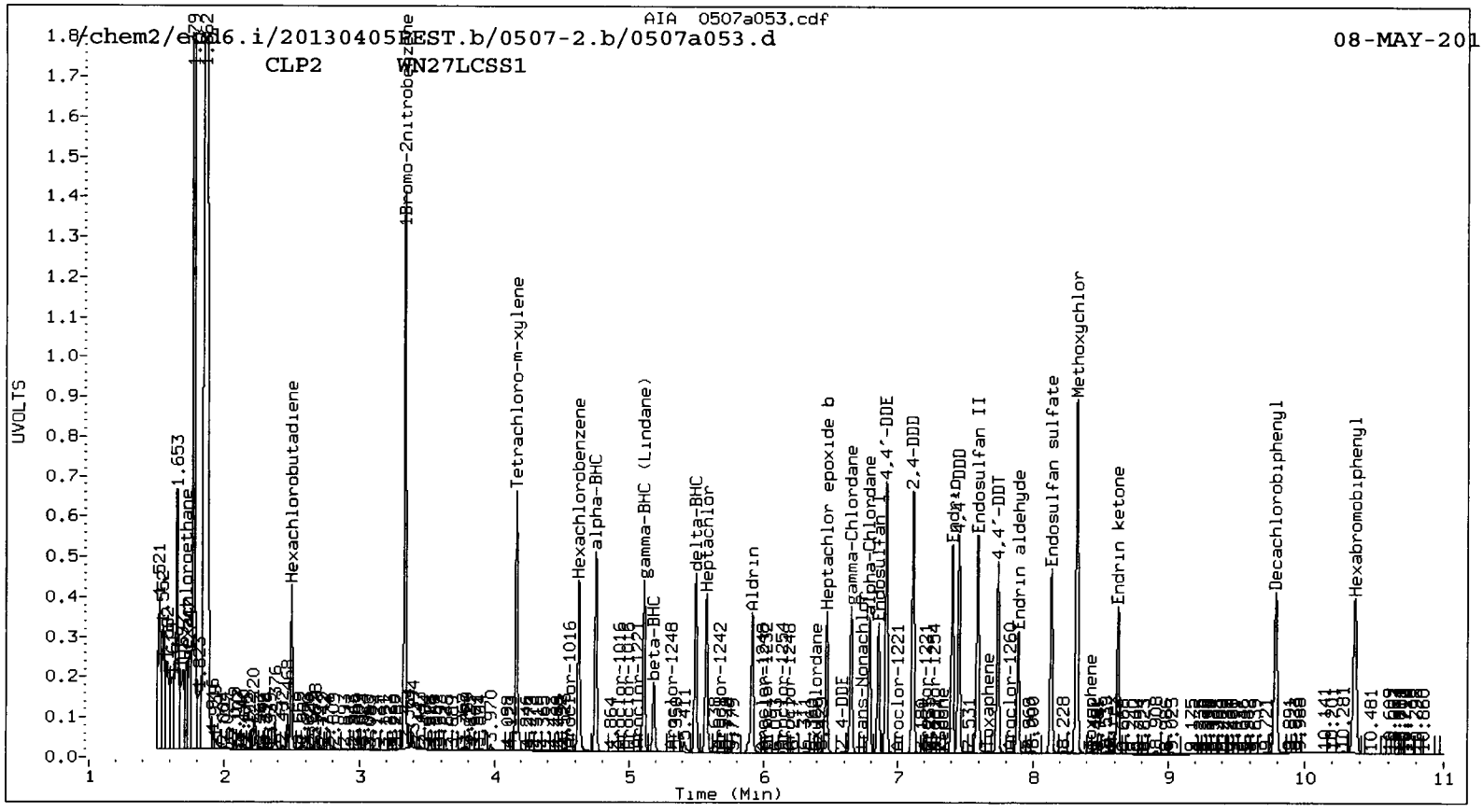
08-MAY-201
SIX-CLP WN27LCSS1
UVOLTS
Time (Min)
1.607
4.516
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WN27LCSS1
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
4,4'-DDE
2,4-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/10/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a056.d ARI ID: WN27A
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a056.d Client ID: CG-MH-010-20130423-
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 03:40
Compound Sublist: wpest Report Date: 05/10/2013 13:05
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 10.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.005	5221608	3.330	-0.003	23190958	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.311	-0.019	175942	4.736	-0.021	478892	1.5320	0.8486	57.4*	alpha-BHC
4.681	-0.006	51985	5.183	-0.002	119570	1.1298	0.5434	70.1*	beta-BHC
4.844	-0.014	27402	5.480	-0.019	1418553	0.2681	2.9571	166.8*	delta-BHC
4.613	-0.002	22034	5.136	0.020	111654	0.2126	0.2248	5.6	gamma-BHC (Lindane)
5.054	-0.011	42936	5.583	0.001	182006	0.4322	0.3951	9.0	Heptachlor
5.364	0.003	22493	5.929	0.008	59266	0.2308	0.1411	48.2*	Aldrin
5.962	0.026	160410	6.479	0.003	100602	1.8006	0.2765	146.7*	Heptachlor epoxide b
6.304	-0.011	10994	6.858	-0.005	186009	0.1345	0.5865	125.4*	Endosulfan I
6.528	-0.009	146914	7.155	0.034	165808	1.7041	0.5209	106.4*	Dieldrin
6.231	-0.004	60820	6.909	-0.011	168821	0.8610	0.5207	49.3*	4,4'-DDE
----			7.417	0.007	308088	0.0000	1.3937	---	Endrin
6.971	0.010	70550	7.573	-0.026	481345	0.9402	1.9826	71.3*	Endosulfan II
6.824	0.034	30593	7.453	-0.005	197218	0.4381	0.8430	63.2*	4,4'-DDD
7.750	0.021	376936	8.150	0.009	112600	5.6980	0.5585	164.3*	Endosulfan sulfate
7.050	0.001	49315	7.750	0.005	140897	0.7047	0.6635	6.0	4,4'-DDT
7.466	-0.007	52827	8.328	-0.003	116742	1.5051	1.3262	12.6	Methoxychlor
8.001	0.016	27076	8.638	0.006	401081	0.3260	1.9449	142.6*	Endrin ketone
7.349	0.010	49309	----			0.8002	0.0000	---	Endrin aldehyde
6.046	-0.009	189784	6.650	-0.007	868215	2.0842	2.3714	12.9	gamma-Chlordane
6.169	-0.011	121191	6.788	-0.008	341854	1.3837	1.0119	31.0	alpha-Chlordane
2.321	-0.019	131141	2.501	0.003	131831	1.0850	0.2968	114.1*	Hexachlorobutadiene
4.173	-0.006	89083	4.624	-0.005	656203	1.0645	1.2623	17.0	Hexachlorobenzene
5.816	-0.024	10266	6.363	-0.022	253349	0.1390	0.8457	143.5*	Oxychlordane
5.880	-0.031	82588	6.615	-0.015	137143	1.4850	0.6228	81.8*	2,4-DDE
6.156	-0.005	108635	6.733	-0.008	575015	1.2348	1.8420	39.5	trans-Nonachlor
6.387	-0.011	328583	7.112	-0.003	301018	6.7547	1.8389	114.4*	2,4-DDD
6.652	0.015	15005	----			0.2698	0.0000	---	2,4-DDT
6.773	-0.005	146160	7.491	0.026	913579	1.5718	3.0984	65.4*	cis-Nonachlor
7.673	0.021	411496	8.584	-0.034	393898	~~7.4096~~	~~2.9298~~	86.7*	Mirex
8.985	0.005	4720201	10.365	-0.001	8139307	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.754	0.000	75465	1.738	0.007	1225321	0.0000	0.0000	---	Hexachloroethane
6.573	-0.008	16368	7.360	0.024	430161	0.0000	0.0000	---	Kepone
3.842	0.006	338549	4.162	-0.007	549601	4.3101	1.3399	105.1*	Tetrachloro-m-xylene
8.836	0.005	1034061	9.794	-0.001	283882	15.0081	1.4711	164.3*	Decachlorobiphenyl

MR

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	10.8	3.3	3.3~	42-112
Decachlorobiphenyl	37.5	3.7	3.7~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

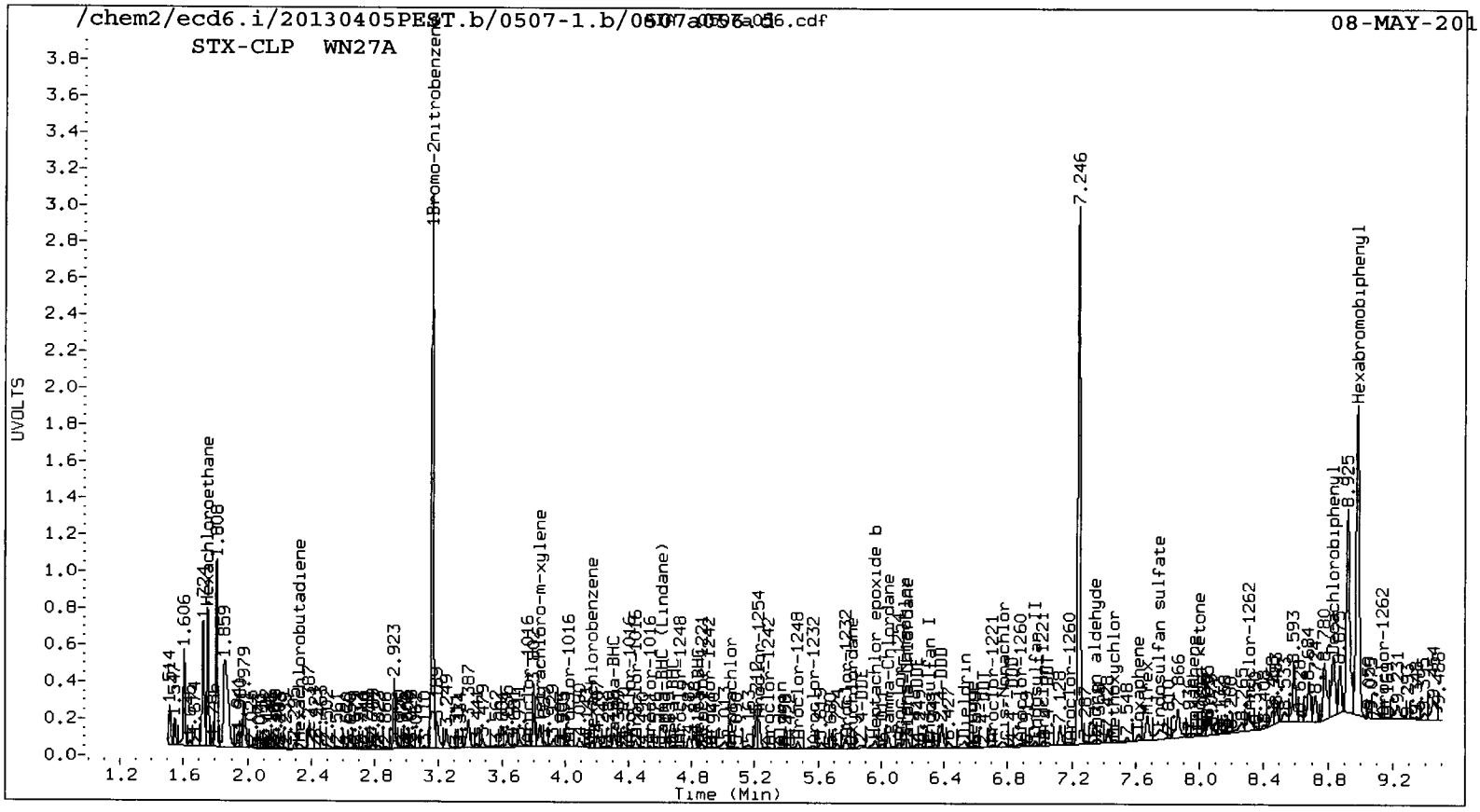
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5221608	-4.2
Hexabromobiphenyl	4807902	4720201	-1.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	23190958	6.9
Hexabromobiphenyl	7681727	8139307	6.0

* 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	7.022	0.010	65571	21.6	1	7.360	0.016	430161	57.5
Toxaphene	2	7.050	-0.013	49315	23.9	2	7.668	0.000	73923	6.6
Toxaphene	3	7.349	0.028	49309	14.2	3	---			0.0
Toxaphene	4	7.618	-0.026	107641	30.7	4	8.371	0.005	279572	32.4
Toxaphene	5	7.673	-0.011	411496	178.1	5	8.407	0.001	365842	33.4
Toxaphene	6	7.961	-0.006	40127	20.2	NS	---			----
Total STX-CLPAve (6 peaks): 48.126						Total CLP2Ave (4 peaks): 32.488				RPD = 39
Corrected Ave (5 peaks): 22.126						Corrected Ave (3 peaks): 24.137				RPD = 9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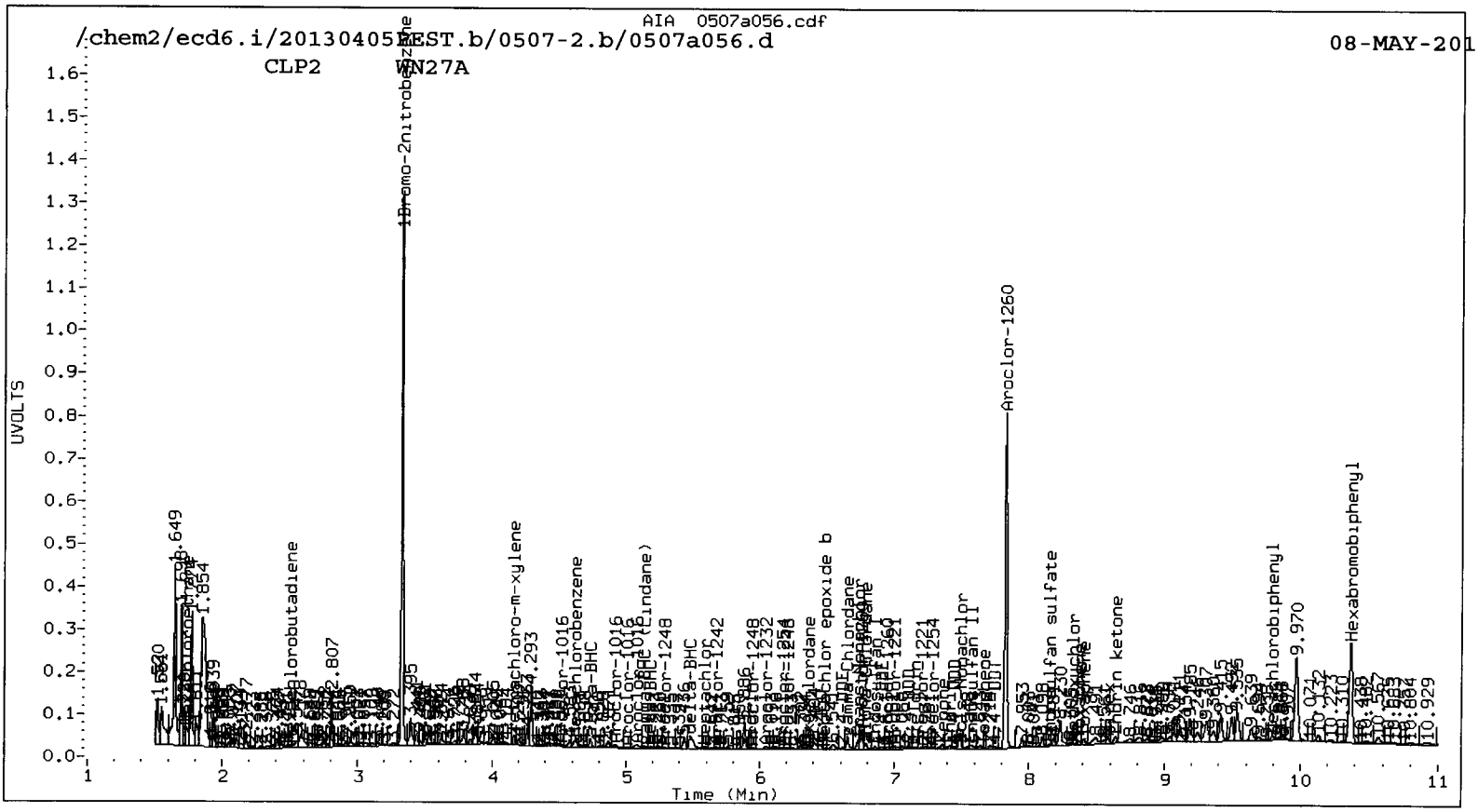
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
7.246
Hexabromobiphenyl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08-MAY-201
CLP2 WN27A
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Aroclor-1260
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/10/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a057.d ARI ID: WN27AMS
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a057.d Client ID: CG-MH-010-20130 MS
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 03:58
Compound Sublist: wpest Report Date: 05/10/2013 13:05
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 10.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.005	5374608	3.330	-0.002	18765104	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.312	-0.018	235994	4.739	-0.017	545703	1.9963	1.1950	50.2*	alpha-BHC
4.683	-0.004	82215	5.183	-0.002	223029	1.7359	1.2526	32.3	beta-BHC
4.853	-0.005	141528	5.501	0.002	1731960	1.3451	4.4619	107.3*	delta-BHC
4.608	-0.007	89106	5.107	-0.009	278044	0.8352	0.6918	18.8	gamma-BHC (Lindane)
5.056	-0.009	83308	5.576	-0.006	223194	0.8147	0.5989	30.5	Heptachlor
5.353	-0.008	83131	5.887	-0.033	1567358	0.8286	4.6127	139.1*	Aldrin
5.933	-0.003	151551	6.454	-0.021	525214	1.6527	1.7842	7.6	Heptachlor epoxide b
6.306	-0.009	78481	6.857	-0.006	248265	0.9327	0.9674	3.7	Endosulfan I
6.528	-0.009	260004	7.112	-0.009	483993	2.9300	1.8790	43.7*	Dieldrin N
6.229	-0.006	185832	6.914	-0.006	385061	2.5559	1.4676	54.1*	4,4'-DDE
6.750	-0.007	112737	7.362	-0.048	294521	1.4362	1.3661	5.0	Endrin
6.954	-0.006	175740	7.592	-0.007	614994	2.1850	2.5971	17.2	Endosulfan II
6.783	-0.008	160856	7.453	-0.005	481478	2.1492	2.1102	1.8	4,4'-DDD M
7.721	-0.008	106443	8.137	-0.003	352521	1.5011	1.7927	17.7	Endosulfan sulfate
7.045	-0.004	112590	7.744	-0.001	285551	1.5010	1.3786	8.5	4,4'-DDT
7.468	-0.005	213381	8.322	-0.008	970724	5.6716	11.3065	66.4*	Methoxychlor
8.002	0.017	40265	8.635	0.003	1010046	0.4522	5.0217	167.0*	Endrin ketone
7.346	0.008	84055	7.890	-0.006	119226	1.2725	0.6384	66.4*	Endrin aldehyde
6.047	-0.008	270042	6.651	-0.006	807992	2.8812	2.7275	5.5	gamma-Chlordane
6.171	-0.009	279387	6.789	-0.006	532011	3.0991	1.9463	45.7*	alpha-Chlordane
2.337	-0.004	129131	2.494	-0.003	603224	1.0380	1.6783	47.1*	Hexachlorobutadiene
4.175	-0.005	128737	4.625	-0.004	906700	1.4945	2.1555	36.2	Hexachlorobenzene
5.866	0.026	55476	6.365	-0.020	180994	~~0.7008~~	~~0.7467~~	6.3	Oxychlordane
----			6.617	-0.013	70821	0.0000	0.3975	---	2,4-DDE
6.116	-0.046	90798	6.734	-0.007	489507	0.9628	1.6077	50.2*	trans-Nonachlor
6.387	-0.010	330663	7.112	-0.002	483993	6.3414	3.0314	70.6*	2,4-DDD
6.649	0.012	25105	7.404	0.000	580039	0.421	3.4239	156.2*	2,4-DDT
6.783	0.005	160856	7.491	0.027	1005280	1.6138	3.4957	73.7*	cis-Nonachlor
7.673	0.021	347762	8.587	-0.032	523640	~~5.8419~~	~~3.9934~~	37.6	Mirex
8.987	0.007	5059646	10.367	0.001	7938408	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.754	-0.001	71039	1.739	0.008	957958	0.0000	0.0000	---	Hexachloroethane
6.601	0.020	51642	7.337	0.001	164396	0.0000	0.0000	---	Kepone
3.843	0.006	298036	4.163	-0.006	542377	3.6863	1.6341	77.1*	Tetrachloro-m-xylene
8.837	0.006	1350038	9.796	0.001	515309	18.2796	2.7379	147.9*	Decachlorobiphenyl

LR

* 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	9.2	4.1	4.1~	42-112
Decachlorobiphenyl	45.7	6.8	6.8~	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	574466.8	546.4	546.4~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	600406.4	551.5	551.5~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

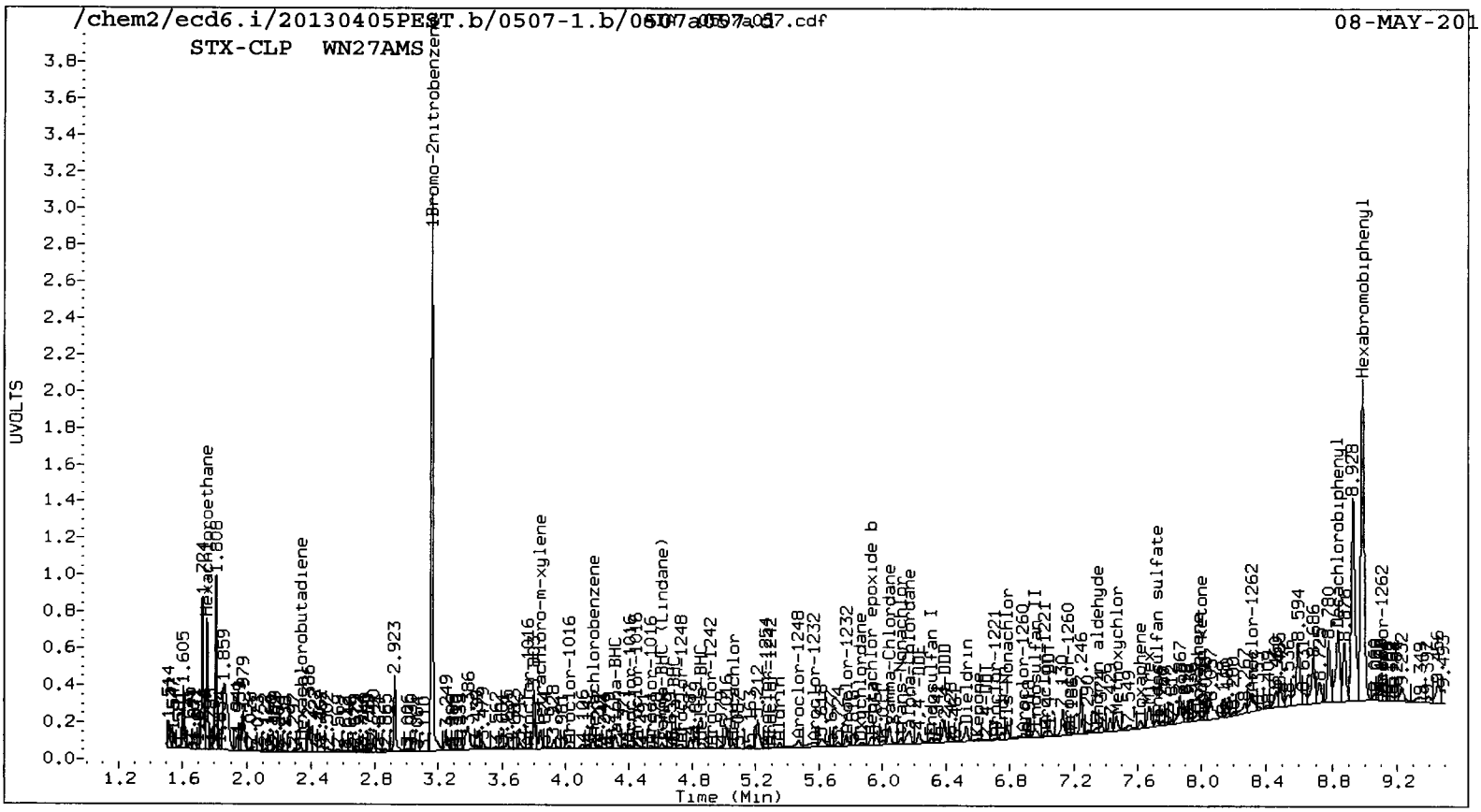
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5374608	-1.4
Hexabromobiphenyl	4807902	5059646	5.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	18765104	-13.5
Hexabromobiphenyl	7681727	7938408	3.3

* 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	7.023	0.011	75565	23.2	1	7.337	-0.007	164396	22.5
Toxaphene	2	7.045	-0.018	112590	50.8	2	7.664	-0.004	154872	14.2
Toxaphene	3	7.346	0.026	84055	22.6	3	7.890	-0.008	119226	10.2
Toxaphene	4	7.618	-0.026	118038	31.5	4	8.373	0.007	374865	44.5
Toxaphene	5	7.673	-0.011	347762	140.4	5	8.409	0.003	463926	43.5
Toxaphene	6	7.976	0.010	162531	76.5	NS	---			----
Total STX-CLPAve (6 peaks): 57.493						Total CLP2Ave (5 peaks): 26.987				RPD = 72*
Corrected Ave (5 peaks): 40.905						Corrected Ave (5 peaks): 26.987				RPD = 41*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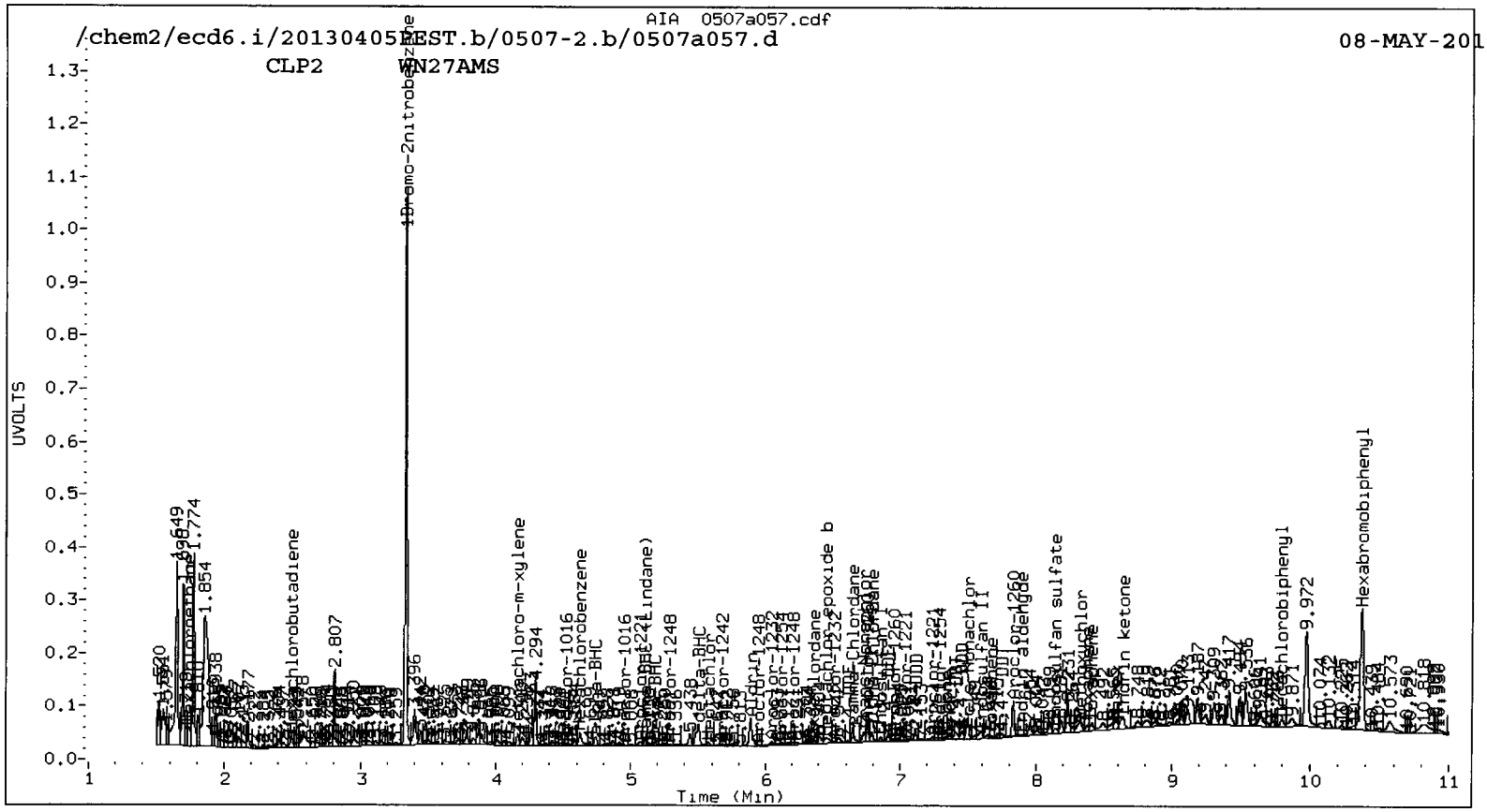
08-MAY-201
STX-CLP WN27AMS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachloroethane
Hexachlorobutadiene
Pentachloronitrobenzene
Hexachlorobenzene
Alpha-BHC
Gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
Trans-Chlordane
Alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDD
Endosulfan sulfate
4,4'-DDT
Methoxychlor
Endrin ketone
Endrin aldehyde
Hexachlorobiphenyl
Hexabromobiphenyl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08-MAY-201
CLP2 WN27AMS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Pentachloronitrobenzene
Hexachlorobenzene
Alpha-BHC
Gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
Trans-Chlordane
Alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDD
Endosulfan sulfate
4,4'-DDT
Methoxychlor
Endrin ketone
Endrin aldehyde
Hexachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/10/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a058.d ARI ID: WN27AMSD
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a058.d Client ID: CG-MH-010-20130 MSD
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 04:15
Compound Sublist: wpest Report Date: 05/10/2013 13:05
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 10.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.005	5186782	3.330	-0.002	18292648	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.313	-0.017	257075	4.740	-0.016	462917	2.2534	1.0399	73.7*	alpha-BHC
4.683	-0.005	85468	5.183	-0.002	207430	1.8700	1.1951	44.0*	beta-BHC
4.853	-0.005	136193	5.485	-0.014	874224	1.3413	2.3104	53.1*	delta-BHC
4.609	-0.006	124325	5.107	-0.010	250994	1.2075	0.6406	61.3*	gamma-BHC (Lindane)
5.056	-0.010	72993	5.579	-0.003	222605	0.7397	0.6127	18.8	Heptachlor
5.353	-0.008	74567	5.887	-0.034	1284993	0.7702	3.8794	133.7*	Aldrin
5.932	-0.005	120923	6.462	-0.013	389847	1.3665	1.3585	0.6	Heptachlor epoxide b
6.305	-0.010	49260	6.857	-0.006	207044	0.6066	0.8276	30.8	Endosulfan I
6.528	-0.009	208848	7.113	-0.008	448242	2.4387	1.7851	30.9	Dieldrin N
6.229	-0.006	181767	6.914	-0.006	337707	2.5906	1.3204	65.0*	4,4'-DDE
6.750	-0.006	110768	7.361	-0.049	143812	1.4917	0.6513	78.4*	Endrin
6.953	-0.008	132307	7.592	-0.007	511726	1.7390	2.1101	19.3	Endosulfan II
6.783	-0.008	149504	7.453	-0.005	470766	2.1117	2.0146	4.7	4,4'-DDD M
7.722	-0.008	88756	8.136	-0.004	358819	1.3232	1.7817	29.5	Endosulfan sulfate
7.046	-0.002	60551	7.751	0.006	255091	0.8534	1.2025	34.0	4,4'-DDT
7.469	-0.005	131687	8.323	-0.008	838513	3.7002	9.5362	88.2*	Methoxychlor
8.002	0.017	27516	8.637	0.005	1270262	0.3267	6.1665	179.9*	Endrin ketone
7.344	0.006	68589	7.887	-0.009	95637	1.0977	0.5000	74.8*	Endrin aldehyde
6.047	-0.008	270344	6.651	-0.006	863234	2.9889	2.9892	0.0	gamma-Chlordane
6.171	-0.009	279398	6.789	-0.006	474271	3.2115	1.7798	57.4*	alpha-Chlordane
2.337	-0.004	105924	2.494	-0.003	405845	0.8823	1.1583	27.1	Hexachlorobutadiene
4.174	-0.005	166008	4.625	-0.005	648272	1.9970	1.5810	23.3	Hexachlorobenzene
5.865	0.025	53300	6.363	-0.022	139613	0.7118	0.5908	18.6	Oxychlordane
----			6.617	-0.014	126705	0.0000	0.7295	---	2,4-DDE
6.117	-0.045	68963	6.734	-0.007	475680	0.7731	1.5255	65.5*	trans-Nonachlor
6.387	-0.010	258398	7.113	-0.002	448242	5.2387	2.7413	62.6*	2,4-DDD
6.653	0.016	14223	7.405	0.001	523180	0.2522	3.0154	169.1*	2,4-DDT
6.783	0.005	149504	7.491	0.027	655863	1.5856	2.2269	33.6	cis-Nonachlor
7.673	0.021	304271	8.586	-0.032	1293439	5.4033	9.6313	56.2*	Mirex
8.985	0.006	4786191	10.367	0.001	8130197	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.754	-0.001	65753	1.740	0.008	884777	0.0000	0.0000	---	Hexachloroethane
6.599	0.018	29713	7.334	-0.002	126518	0.0000	0.0000	---	Kepone
3.842	0.005	319458	4.163	-0.006	401136	4.0944	1.2398	107.0*	Tetrachloro-m-xylene
8.836	0.005	1060631	9.798	0.002	413190	15.1815	2.1435	150.5*	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	10.2	3.1	3.1~	42-112
Decachlorobiphenyl	38.0	5.4	5.4~	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	596681.9	260.5	260.5~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	341347.7	481.0	481.0~	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

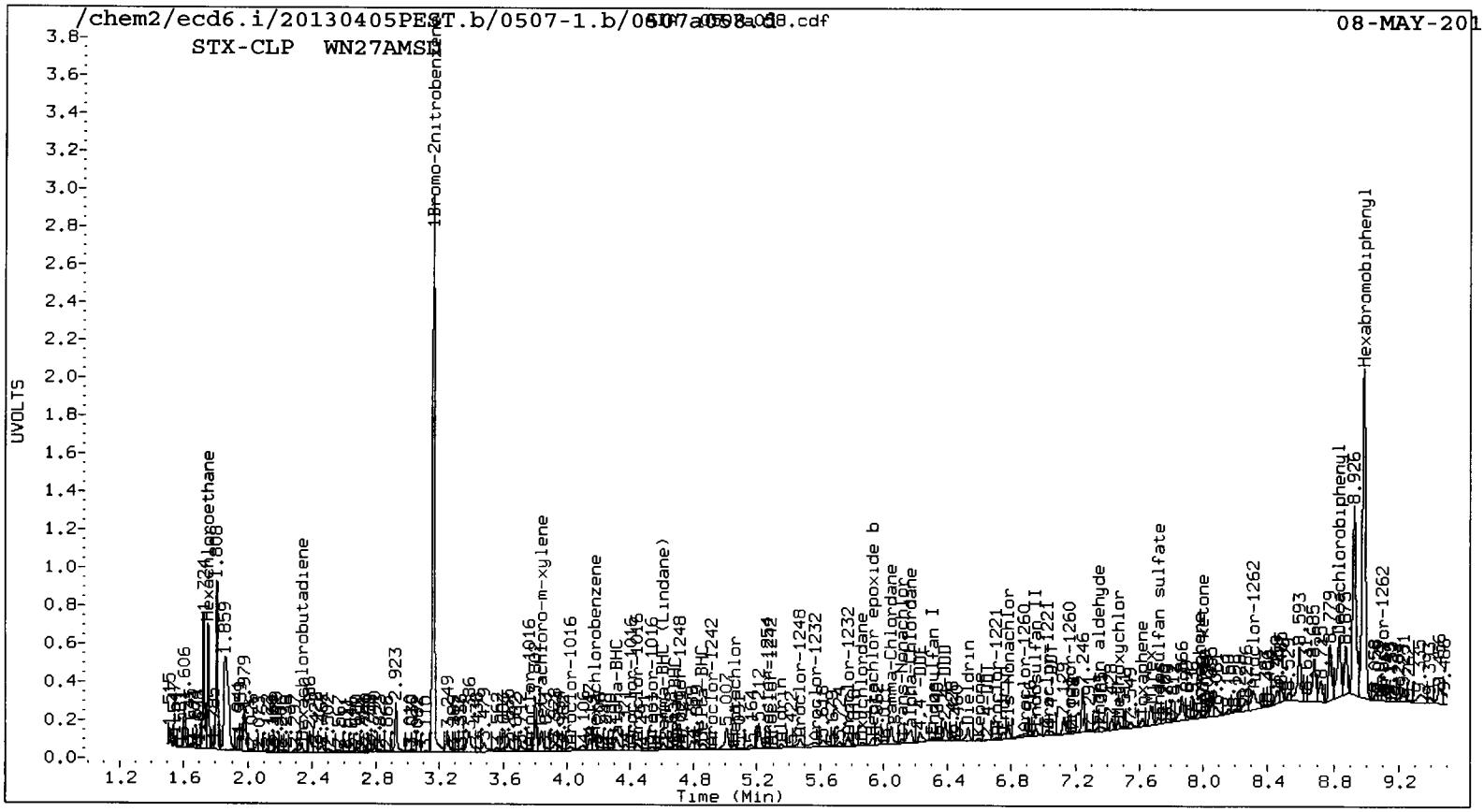
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5186782	-4.8
Hexabromobiphenyl	4807902	4786191	-0.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	18292648	-15.7
Hexabromobiphenyl	7681727	8130197	5.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.023	0.011	59168	19.2	1	7.334	-0.010	126518	16.9
Toxaphene	2	7.046	-0.017	60551	28.9	2	7.669	0.001	376093	33.7
Toxaphene	3	7.344	0.024	68589	19.5	3	7.887	-0.011	95637	8.0
Toxaphene	4	7.619	-0.025	109556	30.9	4	8.372	0.006	385202	44.6
Toxaphene	5	7.673	-0.011	304271	129.9	5	8.408	0.002	479714	43.9
Toxaphene	6	7.975	0.009	111383	55.4	NS	---			----
Total STX-CLPAve (6 peaks): 47.289						Total CLP2Ave (5 peaks): 29.429				RPD = 47*
Corrected Ave (5 peaks): 30.768						Corrected Ave (5 peaks): 29.429				RPD = 4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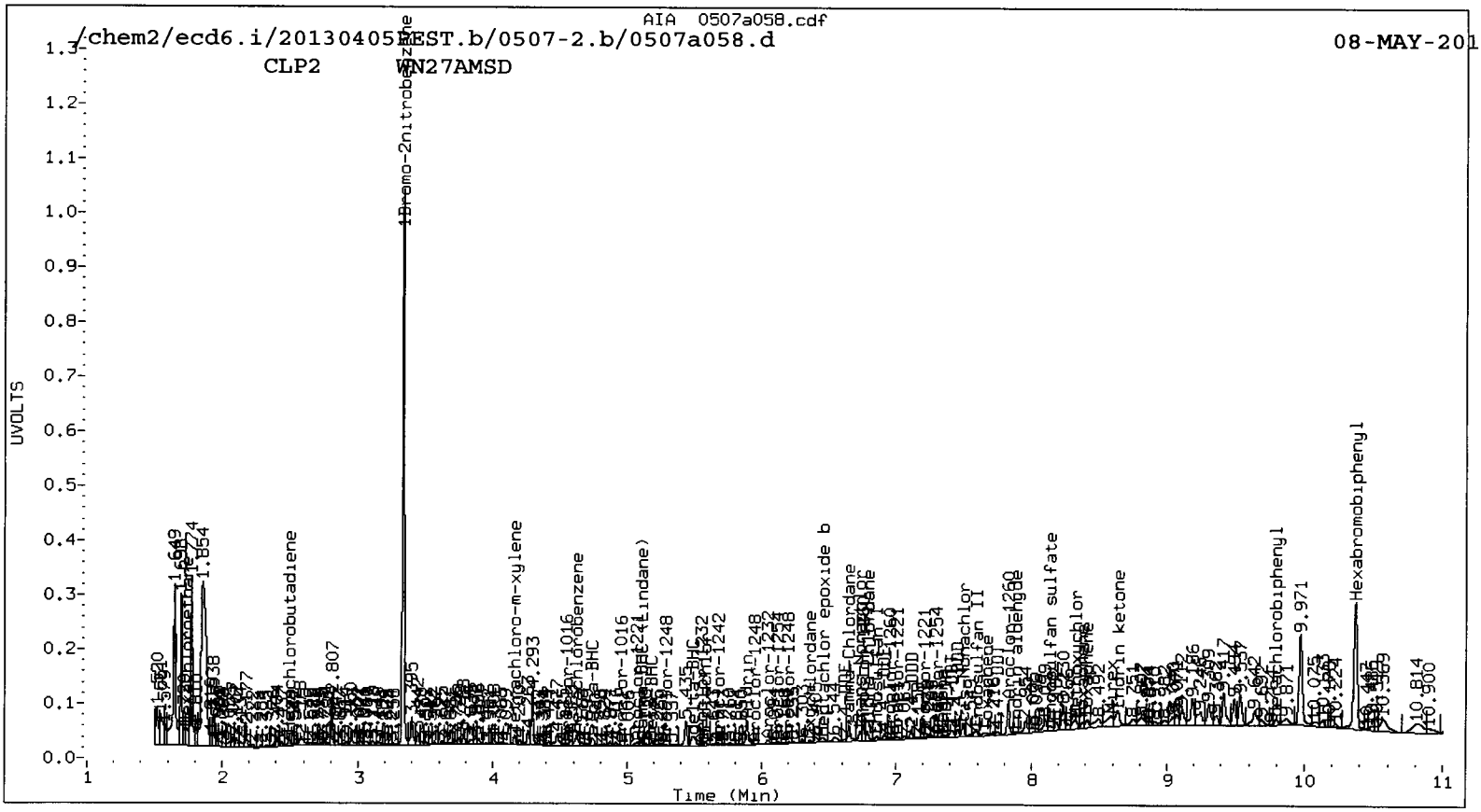
08-MAY-201
STX-CLP WN27AMSD
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachloroethane
Hexachlorobutadiene
Chloro-m-xylene
Hexachlorobenzene
Lindane
Chlordane
Hexachlor epoxide b
Dieldrin
Nonachlor
Aldrin aldehyde
Endosulfan sulfate
Hexachlorobiphenyl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08-MAY-201
CLP2 WN27AMSD
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Chloro-m-xylene
Hexachlorobenzene
Lindane
Chlordane
Hexachlor epoxide b
Dieldrin
Nonachlor
Endosulfan sulfate
Hexachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

KE 5/10/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a062.d ARI ID: WN27LCSDS1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a062.d Client ID: WN27LCSDS1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 05:27
Compound Sublist: wpest Report Date: 05/10/2013 13:16
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.005	5599264	3.330	-0.002	26917886	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.324	-0.006	1859794	4.751	-0.006	8744290	15.1013	13.3493	12.3	alpha-BHC
4.686	-0.002	689882	5.183	-0.002	2997714	13.9821	11.7371	17.5	beta-BHC
4.856	-0.002	1643324	5.495	-0.004	7029610	14.9917	12.6248	17.1	delta-BHC
4.609	-0.006	1616779	5.109	-0.007	6864213	14.5457	11.9056	20.0	gamma-BHC (Lindane)
5.057	-0.008	998105	5.575	-0.007	4179117	9.3691	7.8168	18.1	Heptachlor
5.352	-0.009	1477278	5.913	-0.008	6571252	14.1345	13.4818	4.7	Aldrin
5.927	-0.010	1432254	6.468	-0.008	5103006	14.9928	12.0848	21.5	Heptachlor epoxide b
6.304	-0.010	1369976	6.856	-0.007	4318089	15.6281	11.7301	28.5	Endosulfan I
6.527	-0.010	2901610	7.113	-0.008	9184472	31.3863	24.8570	23.2	Dieldrin N
6.227	-0.008	2828925	6.914	-0.006	8995560	37.3478	23.9017	43.9*	4,4'-DDE
6.745	-0.011	1752463	7.403	-0.007	4631491	23.1964	17.5367	27.8	Endrin
6.951	-0.009	2378494	7.591	-0.007	8344704	30.7267	28.7675	6.6	Endosulfan II
6.783	-0.007	3106338	7.451	-0.006	8625156	43.1243	30.8587	33.2	4,4'-DDD
7.719	-0.010	1881533	8.133	-0.007	6316561	27.5703	26.2226	5.0	Endosulfan sulfate
7.033	-0.016	923824	7.739	-0.006	1475662	12.7970	5.8159	75.0*	4,4'-DDT
7.465	-0.008	1311832	8.321	-0.010	3380385	36.2296	32.1414	12.0	Methoxychlor
7.974	-0.011	2068196	8.625	-0.007	4861394	24.1359	19.7305	20.1	Endrin ketone
7.328	-0.010	1301622	7.888	-0.007	3927310	20.4747	17.1664	17.6	Endrin aldehyde
6.047	-0.009	1484675	6.651	-0.006	4996720	15.2052	11.7584	25.6	gamma-Chlordane
6.171	-0.009	1408179	6.788	-0.007	4435004	14.9937	11.3106	28.0	alpha-Chlordane
2.338	-0.003	1769426	2.495	-0.002	7109186	13.6523	13.7887	1.0	Hexachlorobutadiene
4.176	-0.003	1335402	4.626	-0.003	8630976	14.8810	14.3040	4.0	Hexachlorobenzene
5.843	0.003	11547	6.359	-0.026	61985	0.1516	0.1783	16.2	Oxychlordane
5.879	-0.031	6496	6.587	-0.043	103657	0.1132	0.4056	112.7*	2,4-DDE
----			6.719	-0.022	76181	0.0000	0.2043	---	trans-Nonachlor
6.391	-0.006	30276	7.113	-0.002	9184472	0.6033	46.9602	194.9*	2,4-DDD
6.636	0.000	17624	----			0.3071	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.660	0.008	30764	8.577	-0.041	423457	0.5370	2.6362	132.3*	Mirex
8.973	-0.006	4869522	10.359	-0.007	9724485	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.753	-0.001	27926	1.718	-0.013	4767655	0.0000	0.0000	---	Hexachloroethane
6.594	0.013	3092	7.337	0.001	283720	0.0000	0.0000	---	Kepone
3.833	-0.003	2482481	4.163	-0.005	13072473	29.4733	27.4567	7.1	Tetrachloro-m-xylen
8.822	-0.009	2318652	9.786	-0.009	6787495	32.6204	29.4390	10.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	73.7	68.6	68.6	42-112
Decachlorobiphenyl	81.6	73.6	73.6	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	927857.1	0.0	0.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	511880.5	0.0	0.0~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

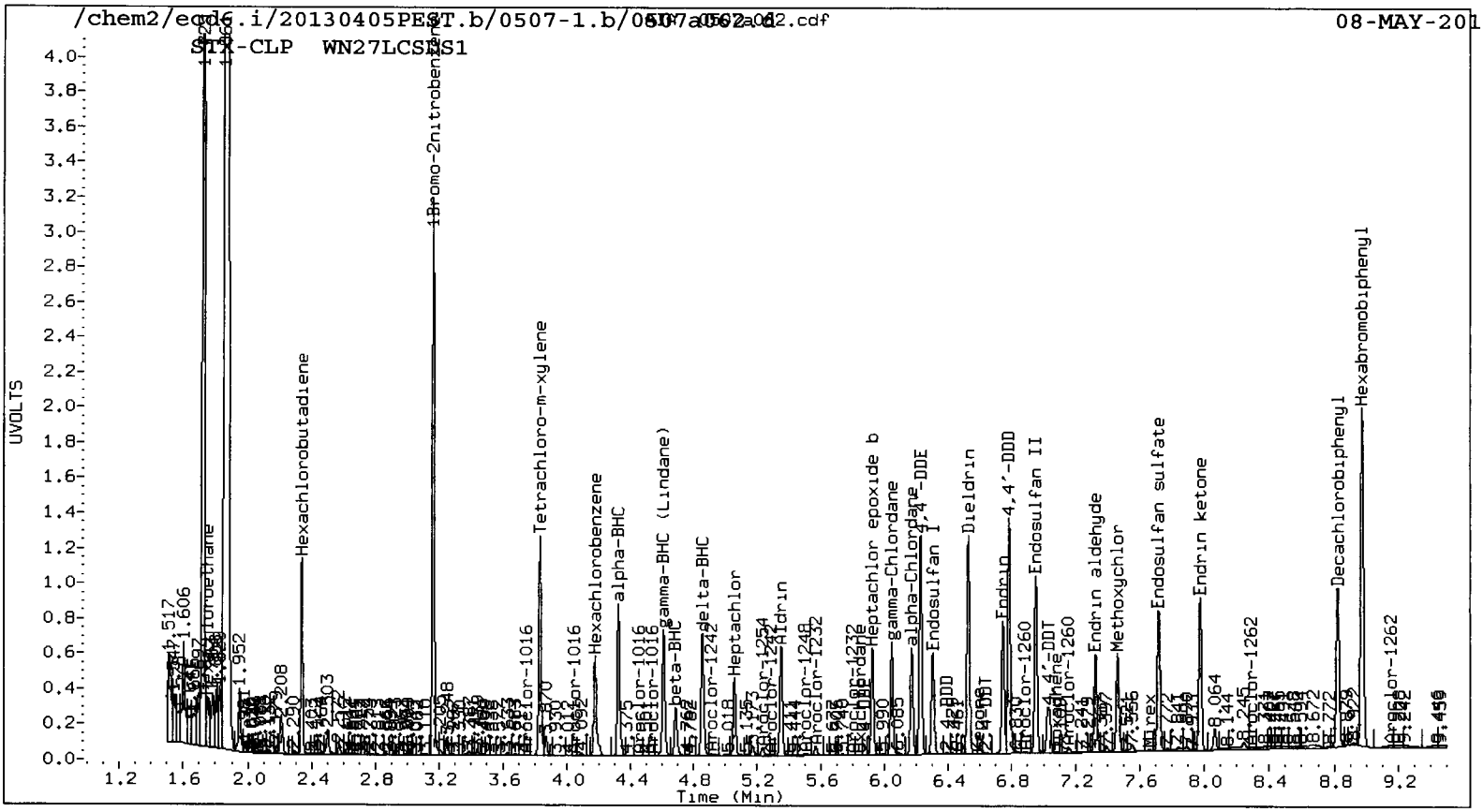
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5599264	2.8
Hexabromobiphenyl	4807902	4869522	1.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	26917886	24.0
Hexabromobiphenyl	7681727	9724485	26.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	7.033	0.021	923824	294.8	1	7.337	-0.007	283720	31.8	
Toxaphene	2	7.081	0.018	11643	5.5	2	7.673	0.006	278270	20.8	
Toxaphene	3	7.328	0.008	1301622	363.5	3	7.888	-0.010	3927310	274.9	
Toxaphene	4	7.660	0.016	30764	8.5	4	8.321	-0.045	3380385	327.5	
Toxaphene	5	---			0.000	5	8.418	0.012	260404	19.9	
Toxaphene	6	7.974	0.008	2068196	1010.9	NS	---			----	
Total STX-CLPAve (5 peaks): 336.635						Total CLP2Ave (5 peaks): 134.991				RPD = 86*	
Corrected Ave (4 peaks): 168.079						Corrected Ave (3 peaks): 24.169				RPD = 150*	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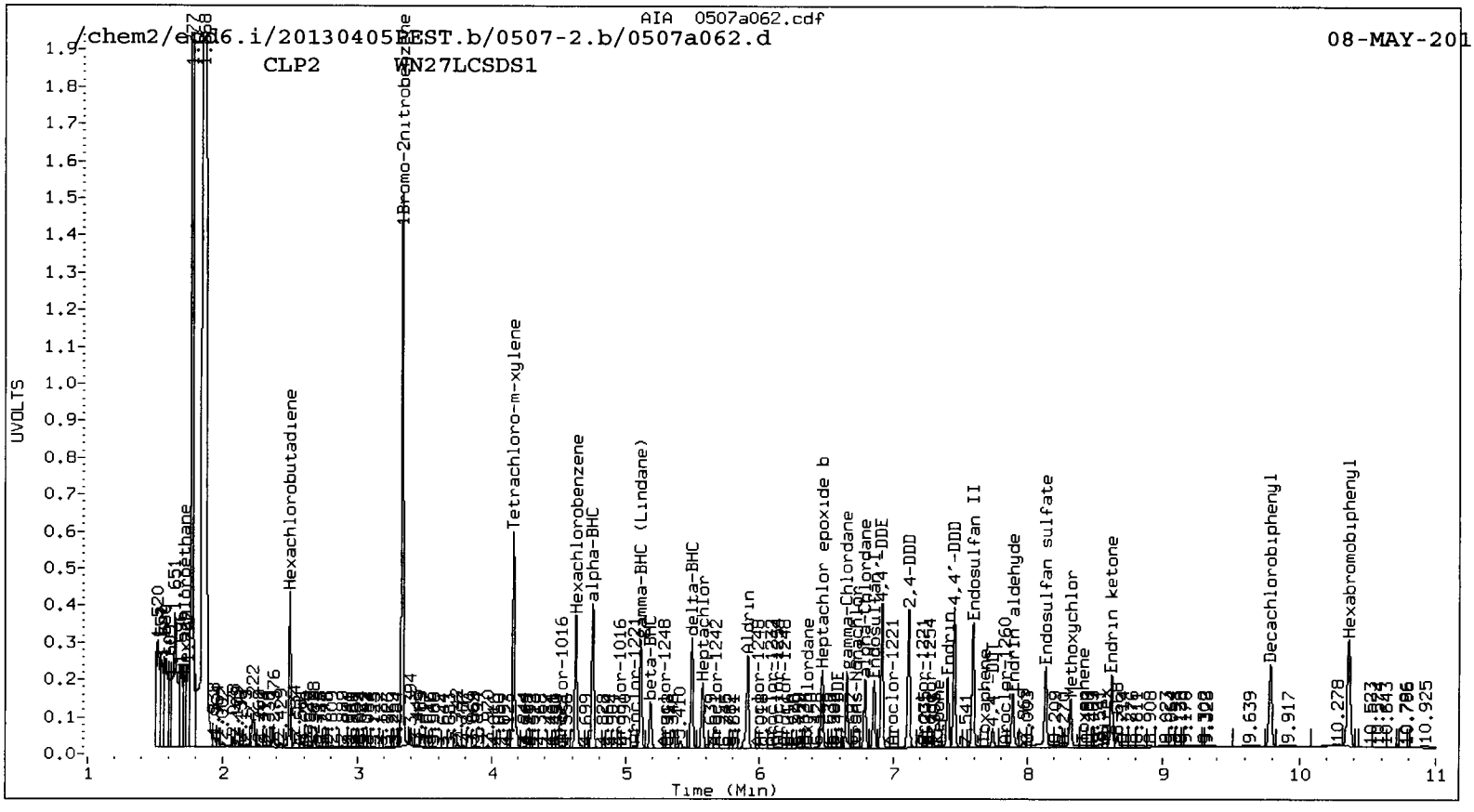
STX-CLP WN27LCSDS1
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endrin
Endosulfan II
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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08-MAY-201
CLP2 WN27LCSDS1
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
2,4-DDD
Endrin
4,4'-DDD
Endosulfan II
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/10/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a065.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a065.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar
Injection Date: 08-MAY-2013 06:20
Report Date: 05/10/2013 13:05
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.004	5388860	3.331	-0.002	27376233	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	2316080	4.751	-0.005	12772675	19.5405	19.1726	1.9	alpha-BHC
4.686	-0.001	813165	5.184	-0.001	4475889	17.1242	17.2313	0.6	beta-BHC
4.857	-0.002	1924130	5.495	-0.004	10273402	18.2388	18.1415	0.5	delta-BHC
4.609	-0.006	1866455	5.110	-0.006	9820817	17.4476	16.7485	4.1	gamma-BHC (Lindane)
5.058	-0.008	1180926	5.575	-0.007	6197903	11.5180	11.3988	1.0	Heptachlor
5.352	-0.009	1916634	5.913	-0.008	9216301	19.0542	18.5920	2.5	Aldrin
5.926	-0.010	1664769	6.467	-0.008	7198947	18.1072	16.7629	7.7	Heptachlor epoxide b
6.304	-0.011	1564934	6.855	-0.008	6556979	18.5491	17.5138	5.7	Endosulfan I
6.526	-0.011	3364778	7.112	-0.009	13379055	37.8174	35.6030	6.0	Dieldrin
6.226	-0.009	2723249	6.913	-0.007	13593294	37.3564	35.5134	5.1	4,4'-DDE
6.745	-0.011	1912699	7.401	-0.009	6650415	24.7863	21.5471	14.0	Endrin
6.951	-0.009	2684280	7.591	-0.008	11823112	33.9496	34.8767	2.7	Endosulfan II
6.785	-0.006	3565299	7.451	-0.006	12941331	48.4576	39.6188	20.1	4,4'-DDD
7.719	-0.010	2192999	8.133	-0.007	7396698	31.4602	26.2752	18.0	Endosulfan sulfate
7.030	-0.019	1121093	7.738	-0.007	1808309	15.2039	6.0984	85.5*	4,4'-DDT
7.466	-0.008	1261315	8.320	-0.010	3855250	34.1037	31.3663	8.4	Methoxychlor
7.974	-0.011	2221098	8.624	-0.008	6008389	25.3766	20.8664	19.5	Endrin ketone
7.329	-0.010	2013546	7.888	-0.008	7147834	31.0089	26.7344	14.8	Endrin aldehyde
6.046	-0.009	1728416	6.650	-0.008	7461202	18.3926	17.2639	6.3	gamma-Chlordane
6.170	-0.010	1652441	6.788	-0.008	6782318	18.2815	17.0073	7.2	alpha-Chlordane
2.338	-0.003	2506227	2.495	-0.002	9837873	20.0923	18.7617	6.8	Hexachlorobutadiene
4.178	-0.001	1685057	4.627	-0.002	12682712	19.5105	20.6669	5.8	Hexachlorobenzene
8.975	-0.005	4973861	10.359	-0.007	11364621	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.003	3063574	4.164	-0.005	17867769	37.7925	36.9002	2.4	Tetrachloro-m-xylen
8.822	-0.009	2350339	9.786	-0.010	7996956	32.3726	29.6790	8.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.5	92.3	92.3~	115- 0
Decachlorobiphenyl	80.9	74.2	74.2~	115- 0

~ Indicates recovery outside QC Limits

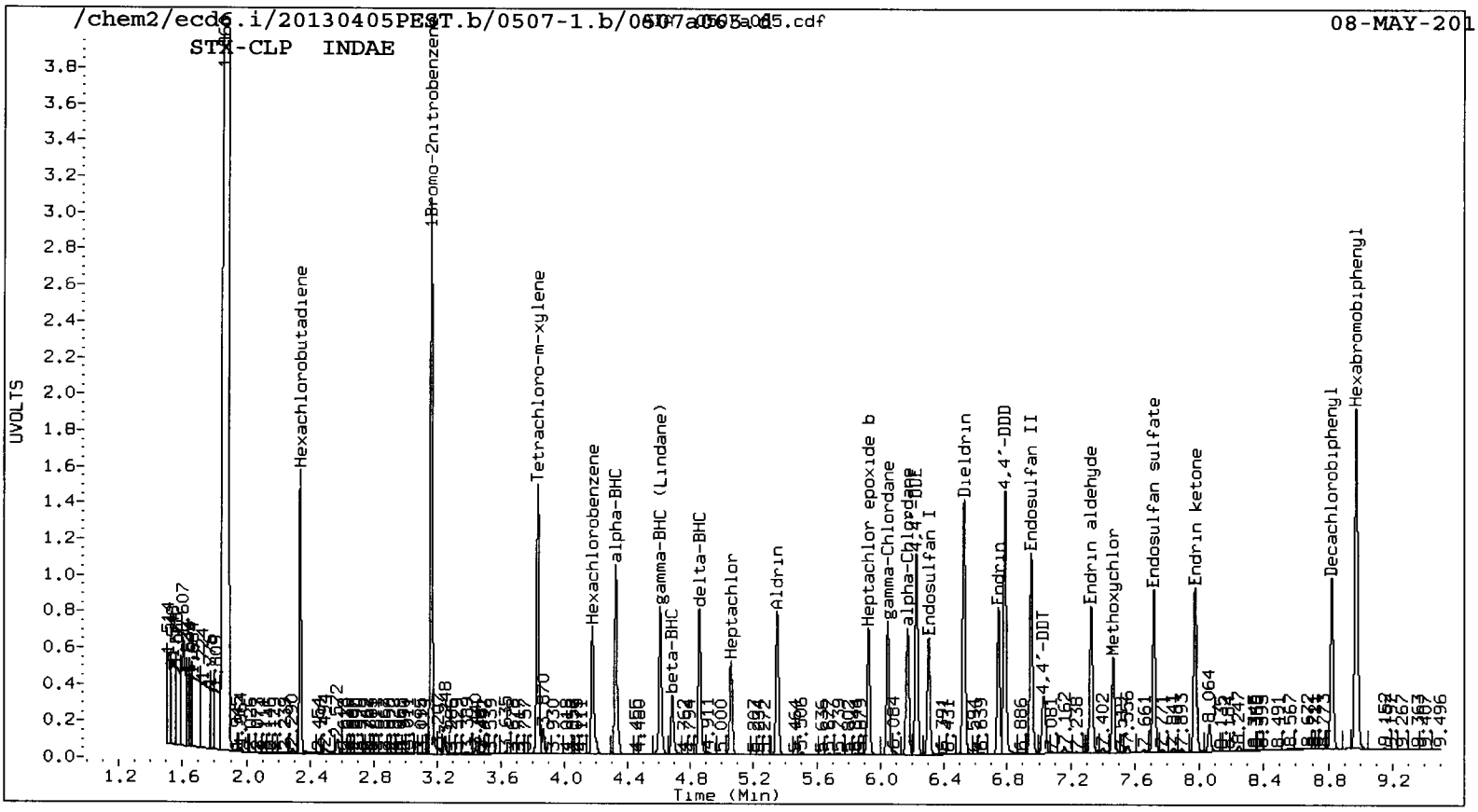
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5448520	5388860	-1.1
Hexabromobiphenyl	4807902	4973861	3.5

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	21702340	27376233	26.1
Hexabromobiphenyl	7681727	11364621	47.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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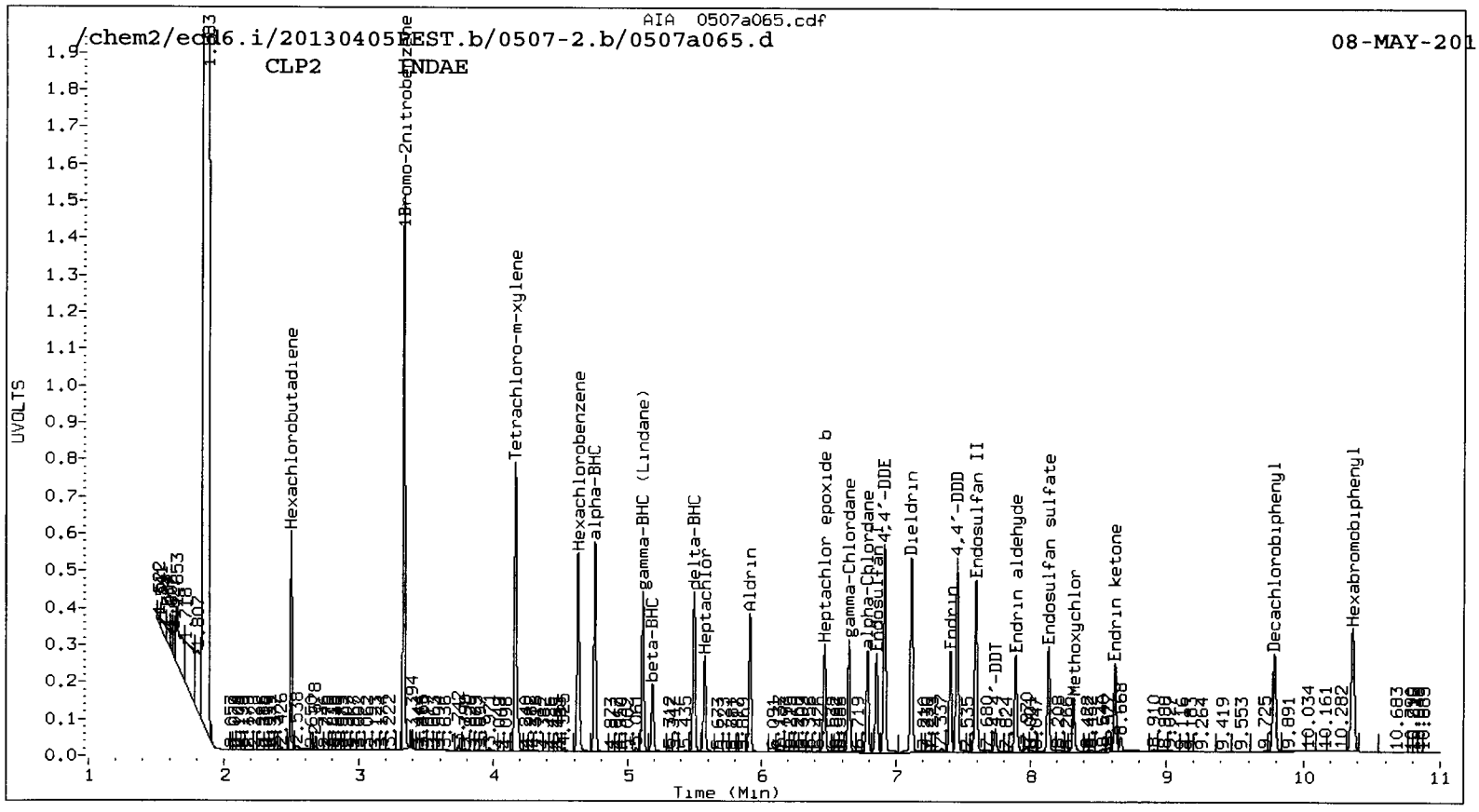
08-MAY-201
STX-CLP INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
beta-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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08-MAY-201
CLP2 INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
beta-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 5/08/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1085684 Column Type: 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.	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0508-1.b

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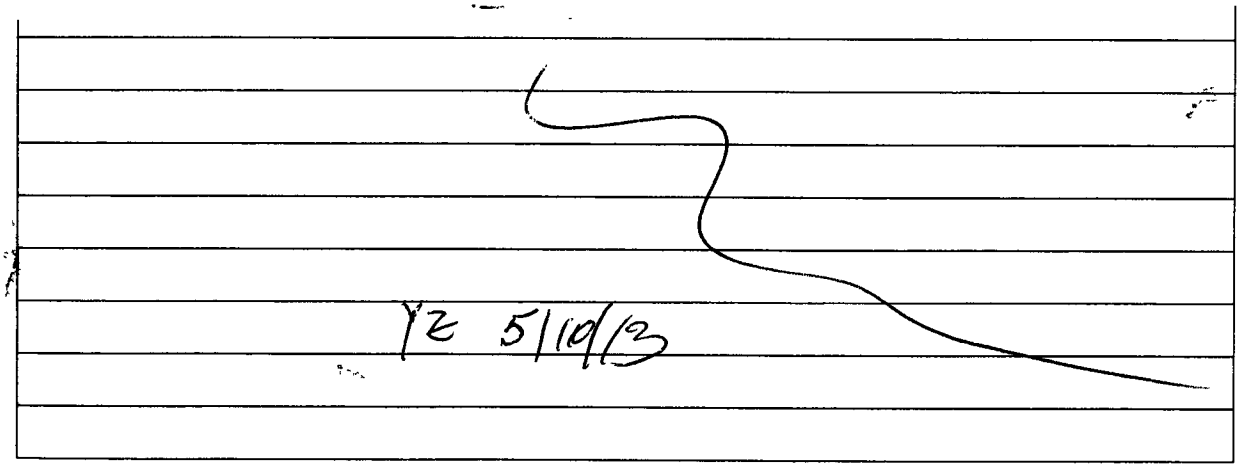
1	08-MAY-2013 17:15	0508a004.d	1	DS	
2	08-MAY-2013 17:32	0508a005.d	1	INDAE	
3	08-MAY-2013 17:50	0508a006.d	1	TOXAPH	
4	08-MAY-2013 18:08	0508a007.d	200	WN27A	CG-MH-010-20130423-
5	08-MAY-2013 18:26	0508a008.d	200	WN31A	ES-TS-INF-20130424-
6	08-MAY-2013 18:44	0508a009.d	1	DS	
7	08-MAY-2013 19:01	0508a010.d	1	INDAE	
8	08-MAY-2013 19:19	0508a011.d	1	TOXAPH	



Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0508-1.b/0508a005.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0508-2.b/0508a005.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 08-MAY-2013 17:32
Report Date: 05/10/2013 13:22
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.161	-0.004	4606200	3.331	-0.002	24467634	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	1930374	4.751	-0.005	11160530	19.0537	18.7442	1.6	alpha-BHC
4.687	0.000	721020	5.183	-0.002	4187788	17.7637	18.0387	1.5	beta-BHC
4.858	0.000	1633556	5.496	-0.003	9492651	18.1155	18.7555	3.5	delta-BHC
4.610	-0.005	1716557	5.110	-0.006	9561781	18.7728	18.2452	2.9	gamma-BHC (Lindane)
5.059	-0.007	1663043	5.575	-0.007	9315321	18.9763	19.1687	1.0	Heptachlor
5.353	-0.008	1633974	5.913	-0.008	8840371	19.0043	19.9536	4.9	Aldrin
5.927	-0.009	1443567	6.467	-0.008	7388110	18.3691	19.2485	4.7	Heptachlor epoxide b
6.305	-0.010	1348603	6.855	-0.008	6508379	18.7010	19.4505	3.9	Endosulfan I
6.527	-0.010	2924751	7.112	-0.009	12527106	38.4572	37.2987	3.1	Dieldrin
6.227	-0.008	2310478	6.913	-0.007	13212562	37.0795	38.6222	4.1	4,4'-DDE
6.746	-0.011	2479491	7.402	-0.008	9293492	41.1261	33.6558	20.0	Endrin
6.952	-0.008	2395700	7.591	-0.008	9714592	38.7819	32.0308	19.1	Endosulfan II
6.787	-0.004	2392400	7.452	-0.005	9701605	41.6189	33.1976	22.5	4,4'-DDD
7.720	-0.009	1997932	8.133	-0.007	7682531	36.6854	30.5037	18.4	Endosulfan sulfate
7.043	-0.006	2276836	7.739	-0.006	8522227	39.5216	32.1247	20.6	4,4'-DDT
7.468	-0.005	5097210	8.321	-0.009	15690573	176.4007	142.6887	21.1	Methoxychlor
7.976	-0.009	2451568	8.625	-0.007	7958744	35.8508	30.8941	14.9	Endrin ketone
7.330	-0.009	1832190	7.888	-0.007	7332147	36.1149	30.6527	16.4	Endrin aldehyde
6.047	-0.008	1525523	6.650	-0.007	7576250	18.9919	19.6140	3.2	gamma-Chlordane
6.171	-0.009	1438587	6.787	-0.008	6813215	18.6198	19.1158	2.6	alpha-Chlordane
2.338	-0.003	2023476	2.495	-0.002	8381590	18.9785	17.8846	5.9	Hexachlorobutadiene
4.179	0.000	1421885	4.627	-0.003	11233375	19.2607	20.4812	6.1	Hexachlorobenzene
8.979	-0.001	3886005	10.360	-0.006	10167501	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2614968	4.164	-0.005	15638914	37.7396	36.1365	4.3	Tetrachloro-m-xylen
8.824	-0.007	1938706	9.786	-0.010	7220589	34.1782	29.9529	13.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.3	90.3	90.3~	115- 0
Decachlorobiphenyl	85.4	74.9	74.9~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

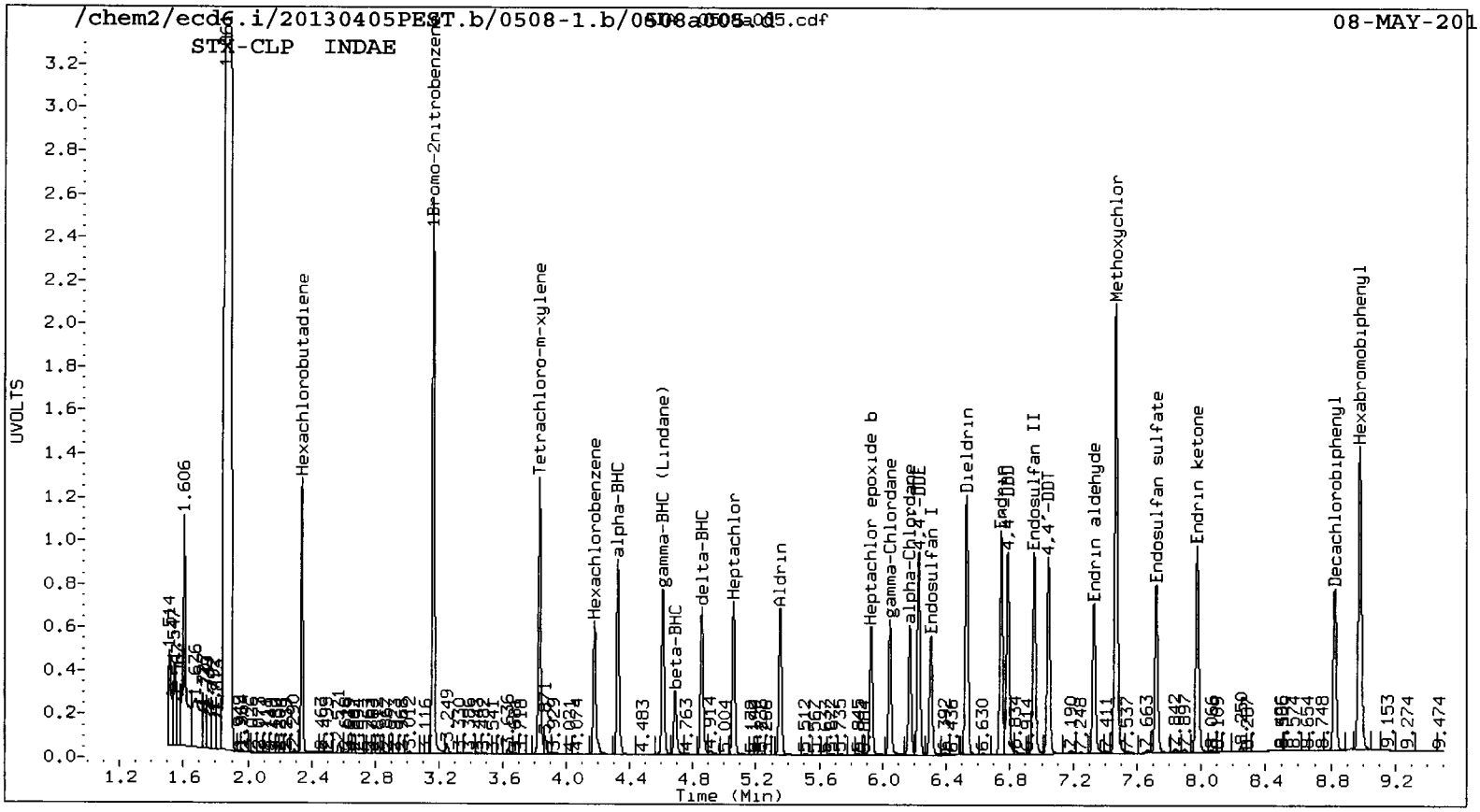
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4606200	-15.5
Hexabromobiphenyl	4807902	3886005	-19.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24467634	12.7
Hexabromobiphenyl	7681727	10167501	32.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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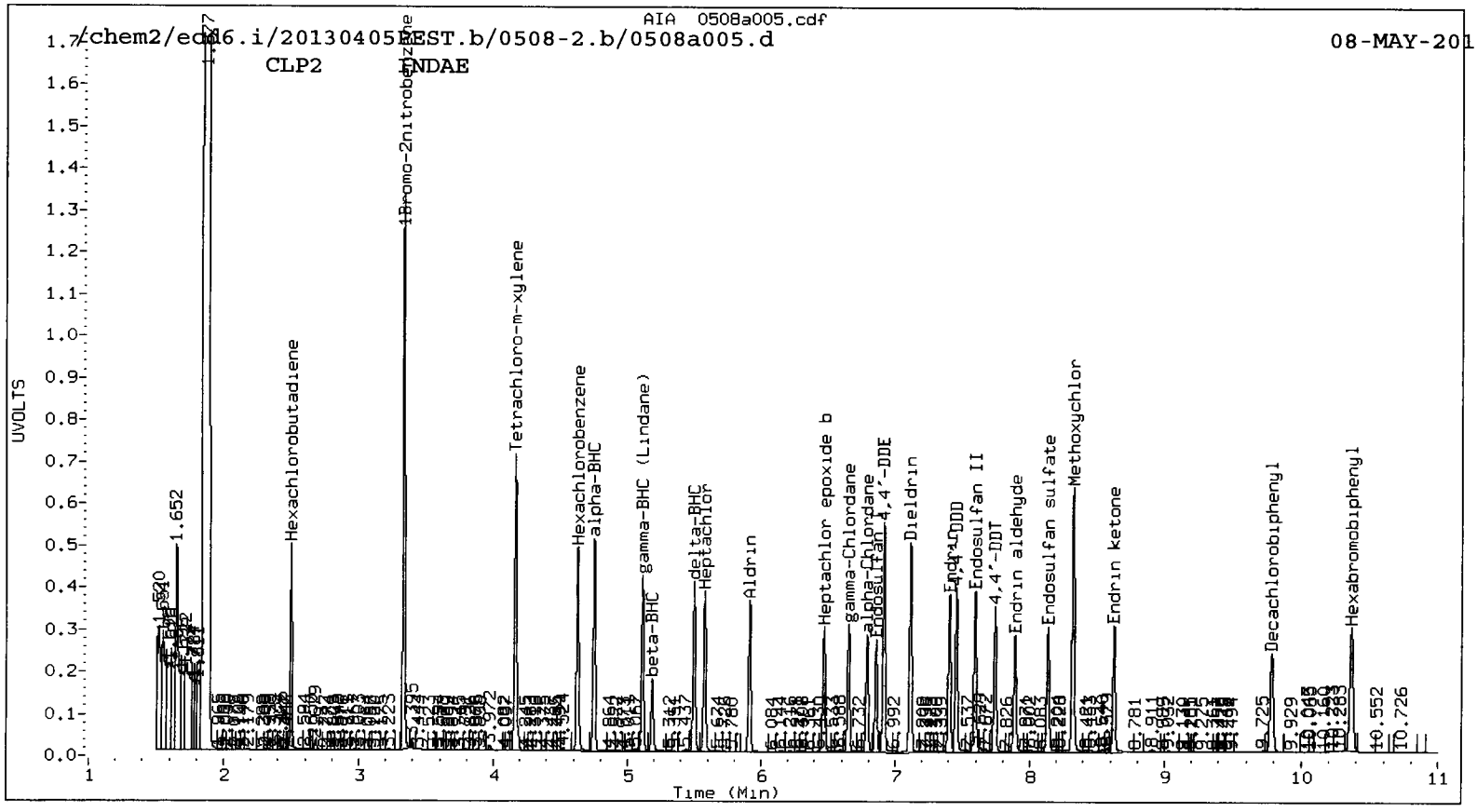
08-MAY-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.606
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 INDAE
UVOLTS
Time (Min)
1.652
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
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/0508-1.b/0508a006.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0508-2.b/0508a006.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 17:50
Compound Sublist: TOXAPH Report Date: 05/10/2013 13:22
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
3.161	-0.004	4148076	3.331	-0.002	21770088	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.980	0.000	3606518	10.361	-0.005	9021897	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	-0.001	2664516	4.165	-0.004	16330995	42.7018	42.4115	0.7	Tetrachloro-m-xylen
8.824	-0.008	2187202	9.786	-0.009	7905621	41.5471	36.9588	11.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	106.8	106.0	106.0~	150- 0
Decachlorobiphenyl	103.9	92.4	92.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

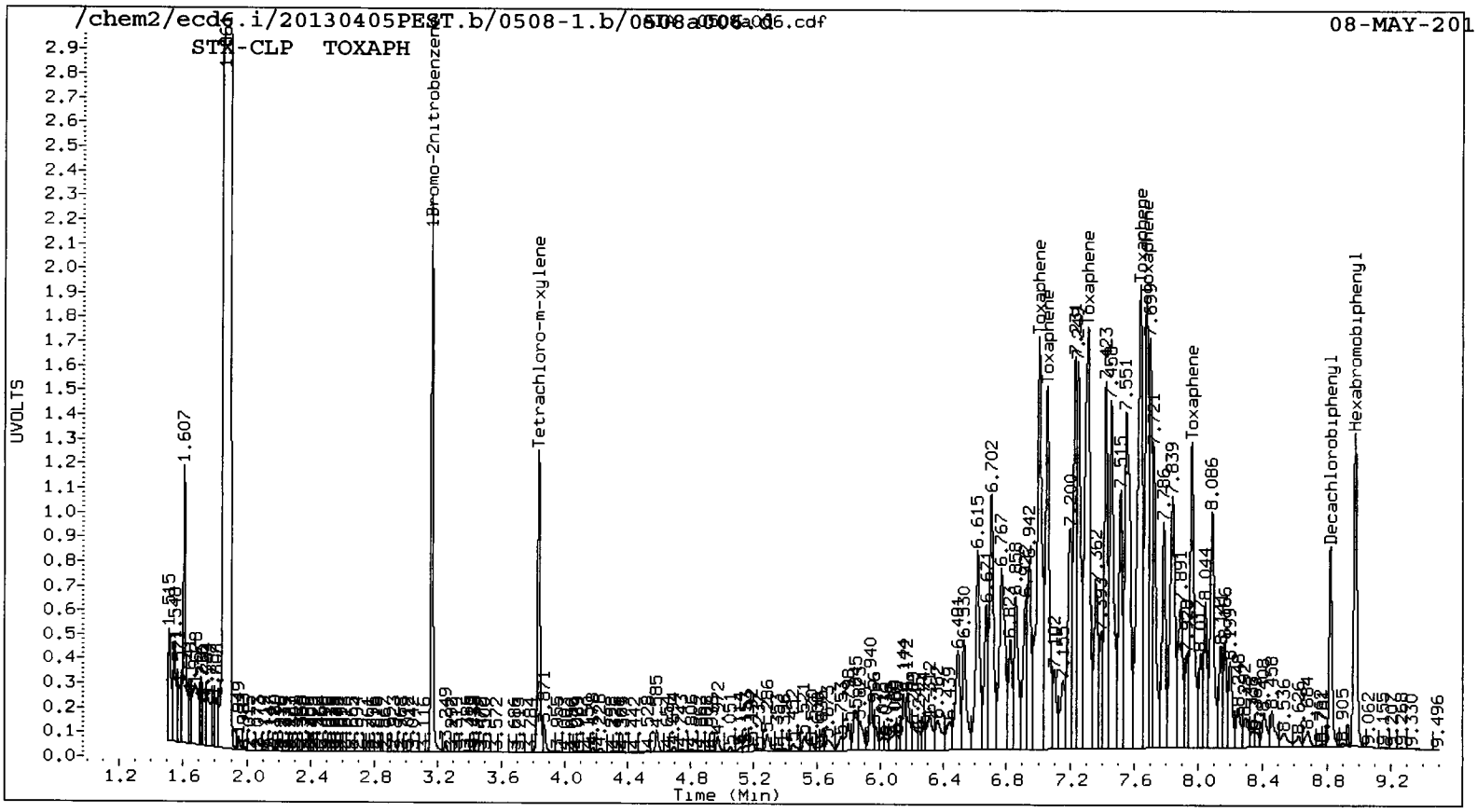
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4148076	-23.9
Hexabromobiphenyl	4807902	3606518	-25.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	21770088	0.3
Hexabromobiphenyl	7681727	9021897	17.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.004	-0.008	7620340	3283.4	1	7.338	-0.006	22740967	2744.2
Toxaphene	2	7.055	-0.008	5363042	3395.5	2	7.663	-0.005	33034594	2664.1
Toxaphene	3	7.312	-0.008	8381971	3160.8	3	7.893	-0.006	34930764	2635.9
Toxaphene	4	7.638	-0.006	8251913	3085.2	4	8.361	-0.006	23642264	2468.9
Toxaphene	5	7.677	-0.008	5479550	3104.3	5	8.400	-0.006	30304896	2499.3
Toxaphene	6	7.958	-0.008	4582547	3024.2	NS	---			----
Total STX-CLPAve (6 peaks): 3175.562						Total CLP2Ave (5 peaks): 2602.478				RPD = 20
Corrected Ave (6 peaks): 3175.562						Corrected Ave (5 peaks): 2602.478				RPD = 20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STX-CLP TOXAPH
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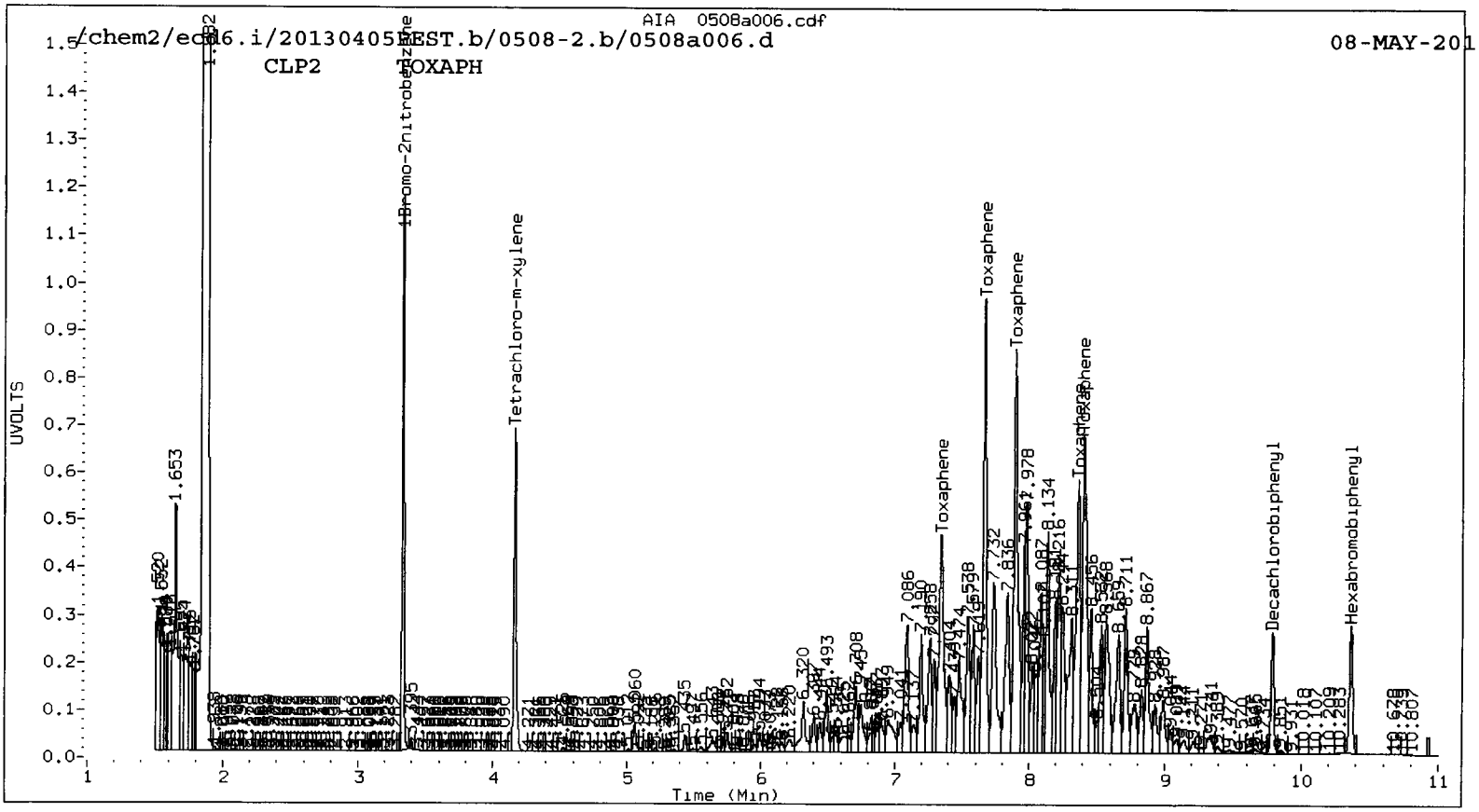
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Toxaphene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CLP2 TOXAPH
08-MAY-201
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Toxaphene

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/10/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0508-1.b/0508a007.d ARI ID: WN27A
Data file 2: /chem2/ecd6.i/20130405PEST.b/0508-2.b/0508a007.d Client ID: CG-MH-010-20130423-
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 18:08
Compound Sublist: wpest Report Date: 05/10/2013 13:22
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 200.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.005	5104914	3.330	-0.002	26356724	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.313	-0.017	17674	4.738	-0.018	34801	0.1574	0.0543	97.5*	alpha-BHC
4.683	-0.004	4209	5.185	0.000	9215	0.0936	0.0368	87.0*	beta-BHC
4.849	-0.010	6095	5.501	0.002	138544	0.0610	0.2541	122.6*	delta-BHC
4.580	-0.035	7026	5.140	0.024	6426	0.0693	0.0114	143.6*	gamma-BHC (Lindane)
5.055	-0.011	3067	5.582	0.001	25493	0.0316	0.0487	42.7*	Heptachlor
5.397	0.036	1001	5.946	0.025	10967	0.0105	0.0230	74.5*	Aldrin
5.939	0.002	6019	6.486	0.010	11982	0.0691	0.0290	81.8*	Heptachlor epoxide b
6.338	0.023	2863	6.863	0.000	9782	0.0358	0.0271	27.6	Endosulfan I
6.526	-0.011	6216	7.151	0.030	15170	0.0737	0.0419	55.0*	Dieldrin
6.225	-0.010	2421	6.909	-0.011	16257	0.0351	0.0441	22.9	4,4'-DDE
6.761	0.005	4945	7.413	0.003	37554	0.0733	0.1335	58.2*	Endrin
6.964	0.004	4245	7.572	-0.027	49665	0.0614	0.1607	89.4*	Endosulfan II
6.822	0.031	1058	7.449	-0.009	23977	0.0164	0.0805	132.2*	4,4'-DDD
7.721	-0.008	7996	8.133	-0.007	55177	0.1312	0.2150	48.4*	Endosulfan sulfate
7.053	0.004	5167	7.744	-0.001	22168	0.0801	0.0820	2.3	4,4'-DDT
7.458	-0.016	8017	8.302	-0.028	90557	0.2479	0.8081	106.1*	Methoxychlor
7.965	-0.020	8171	8.633	0.001	129125	0.1068	0.4919	128.7*	Endrin ketone
7.314	-0.024	6179	7.890	-0.006	46333	0.1088	0.1901	54.4*	Endrin aldehyde
6.045	-0.010	12922	6.650	-0.007	68904	0.1452	0.1656	13.2	gamma-Chlordane
6.167	-0.012	15095	6.786	-0.009	30764	0.1763	0.0801	75.0*	alpha-Chlordane
2.336	-0.005	2646	2.499	0.002	10482	0.0224	0.0208	7.5	Hexachlorobutadiene
4.176	-0.003	9887	4.625	-0.004	59110	0.1208	0.1000	18.8	Hexachlorobenzene
5.863	0.023	2569	6.365	-0.019	13056	0.0378	0.0383	1.6	Oxychlordane
5.880	-0.031	2207	6.613	-0.018	9176	0.0431	0.0367	16.0	2,4-DDE
6.120	-0.042	3367	6.732	-0.009	43702	0.0415	0.1100	90.3*	trans-Nonachlor
6.384	-0.014	18594	7.109	-0.006	41275	0.4148	0.1981	70.7*	2,4-DDD
6.607	-0.029	2544	----			0.0496	0.0000	---	2,4-DDT
6.771	-0.006	4593	7.487	0.023	40331	0.0536	0.1075	66.9*	cis-Nonachlor
7.638	-0.015	3882	8.609	-0.009	21144	0.0759	0.1235	47.8*	Mirex
8.973	-0.007	4349446	10.358	-0.008	10361445	80.0000	80.0000	0.0	Hexabromobiphenyl
1.753	-0.001	4799	1.733	0.001	1011003	0.0000	0.0000	---	Hexachloroethane
----			7.357	0.021	59503	0.0000	0.0000	---	Kepone
3.843	0.007	29656	4.163	-0.006	62099	0.3862	0.1332	97.4*	Tetrachloro-m-xylene
8.829	-0.002	48036	9.788	-0.007	37973	0.7566	0.1546	132.1*	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	1.0	0.3	0.3~	42-112
Decachlorobiphenyl	1.9	0.4	0.4~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

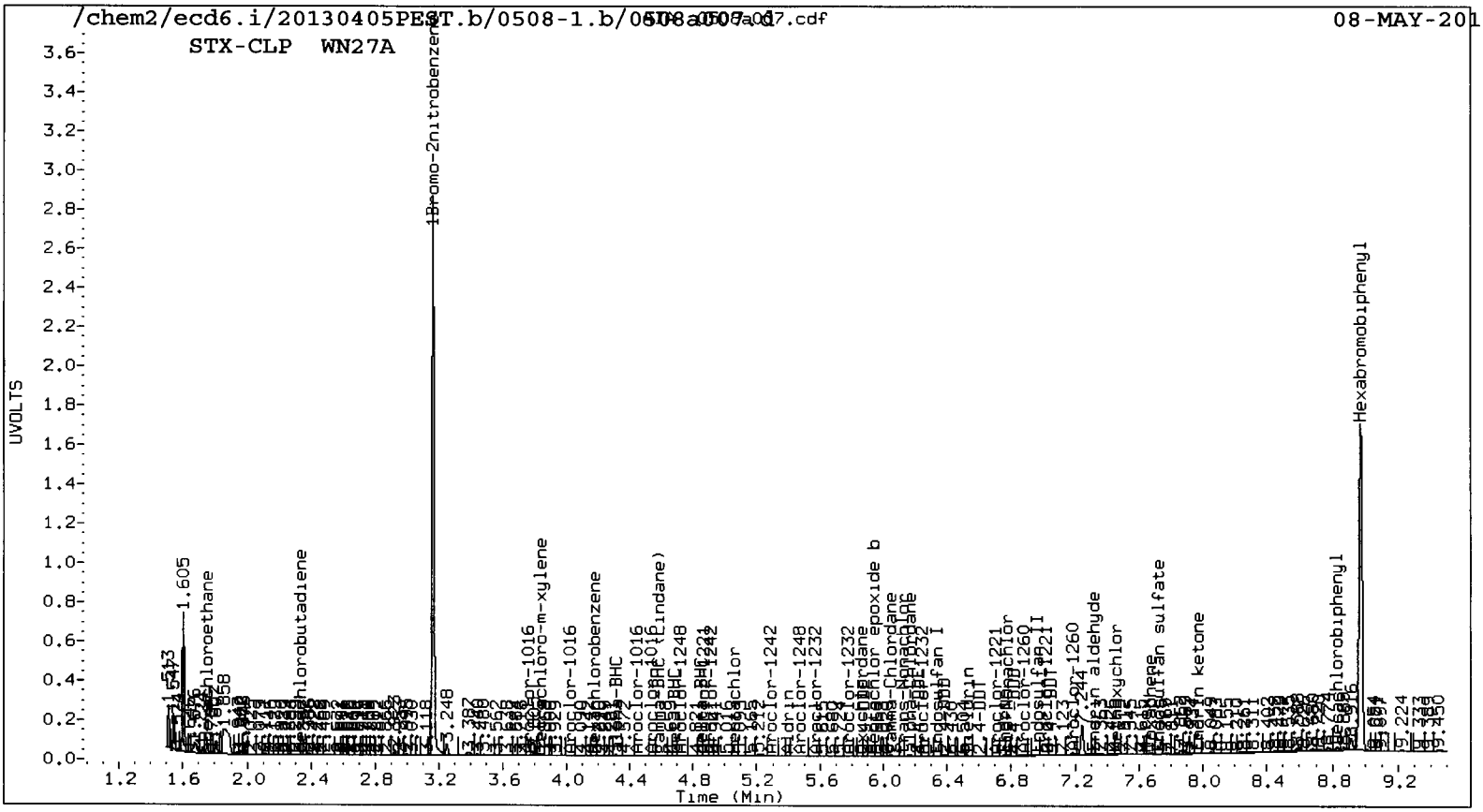
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5104914	-6.3
Hexabromobiphenyl	4807902	4349446	-9.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	26356724	21.4
Hexabromobiphenyl	7681727	10361445	34.9

* 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	7.018	0.006	7702	2.8	1	7.357	0.013	59503	6.3
Toxaphene	2	7.053	-0.010	5167	2.7	2	7.627	-0.041	182340	12.8
Toxaphene	3	7.314	-0.006	6179	1.9	3	7.890	-0.009	46333	3.0
Toxaphene	4	7.638	-0.007	3882	1.2	4	8.369	0.003	49874	4.5
Toxaphene	5	7.671	-0.013	23151	10.9	5	8.402	-0.003	92487	6.6
Toxaphene	6	7.965	-0.002	8171	4.5	NS	---			----
Total STX-CLPAve (6 peaks): 3.991						Total CLP2Ave (5 peaks): 6.655				RPD = 50*
Corrected Ave (5 peaks): 2.614						Corrected Ave (4 peaks): 5.118				RPD = 65*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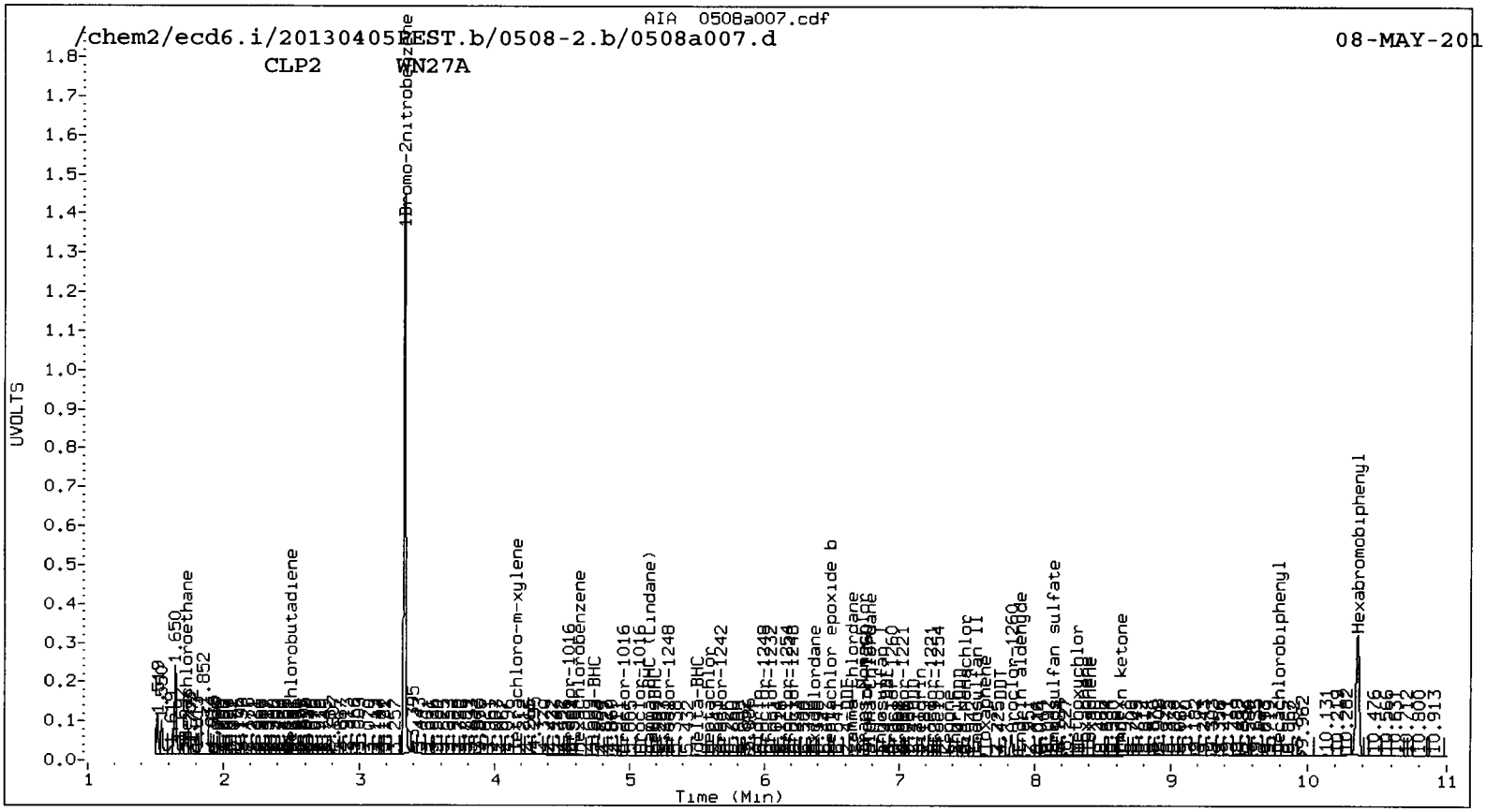
STX-CLP WN27A
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexabromobiphenyl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08-MAY-201
CLP2 WN27A
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0508-1.b/0508a010.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0508-2.b/0508a010.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 19:01
Compound Sublist: INDA Report Date: 05/10/2013 13:22
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.005	4721528	3.330	-0.002	25124831	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	1969396	4.750	-0.006	11078020	18.9640	18.1189	4.6	alpha-BHC
4.687	0.000	718830	5.183	-0.002	4100329	17.2771	17.2000	0.4	beta-BHC
4.858	0.000	1620342	5.495	-0.004	9269192	17.5300	17.8349	1.7	delta-BHC
4.609	-0.005	1724864	5.109	-0.007	9472356	18.4029	17.6018	4.5	gamma-BHC (Lindane)
5.058	-0.007	1666374	5.575	-0.007	9084541	18.5499	18.2048	1.9	Heptachlor
5.352	-0.009	1636235	5.912	-0.008	8423557	18.5657	18.5155	0.3	Aldrin
5.926	-0.010	1428463	6.467	-0.009	7041322	17.7329	17.8651	0.7	Heptachlor epoxide b
6.304	-0.010	1333922	6.855	-0.008	6172845	18.0456	17.9652	0.4	Endosulfan I
6.526	-0.011	2843689	7.112	-0.009	12037768	36.4780	34.9042	4.4	Dieldrin
6.227	-0.008	2326531	6.913	-0.007	12558580	36.4251	35.7502	1.9	4,4'-DDE
6.745	-0.011	2443346	7.402	-0.008	8573818	40.9784	32.4611	23.2	Endrin
6.952	-0.008	2314647	7.591	-0.008	9325451	37.8875	32.1456	16.4	Endosulfan II
6.787	-0.003	2382710	7.453	-0.005	9090739	41.9124	32.5215	25.2	4,4'-DDD
7.720	-0.009	1935397	8.134	-0.006	7083106	35.9333	29.4022	20.0	Endosulfan sulfate
7.044	-0.005	2121164	7.740	-0.006	7514076	37.2298	29.6121	22.8	4,4'-DDT
7.469	-0.005	4908368	8.322	-0.008	14678948	171.7589	139.5577	20.7	Methoxychlor
7.976	-0.009	2362782	8.626	-0.007	7312992	34.9376	29.6779	16.3	Endrin ketone
7.329	-0.009	1772674	7.888	-0.007	6539684	35.3312	28.5826	21.1	Endrin aldehyde
6.046	-0.009	1501057	6.650	-0.007	7110995	18.2309	17.9280	1.7	gamma-Chlordane
6.170	-0.009	1411643	6.787	-0.008	6388176	17.8248	17.4544	2.1	alpha-Chlordane
2.337	-0.003	2097148	2.494	-0.003	8659589	19.1890	17.9944	6.4	Hexachlorobutadiene
4.179	0.000	1452233	4.627	-0.002	11104227	19.1913	19.7162	2.7	Hexachlorobenzene
8.980	0.000	3843165	10.361	-0.005	9725369	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2667396	4.163	-0.005	15563161	37.5560	35.0208	7.0	Tetrachloro-m-xylen
8.824	-0.007	1899206	9.787	-0.008	6911751	33.8550	29.9752	12.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	93.9	87.6	87.6~	115- 0
Decachlorobiphenyl	84.6	74.9	74.9~	115- 0

~ Indicates recovery outside QC Limits

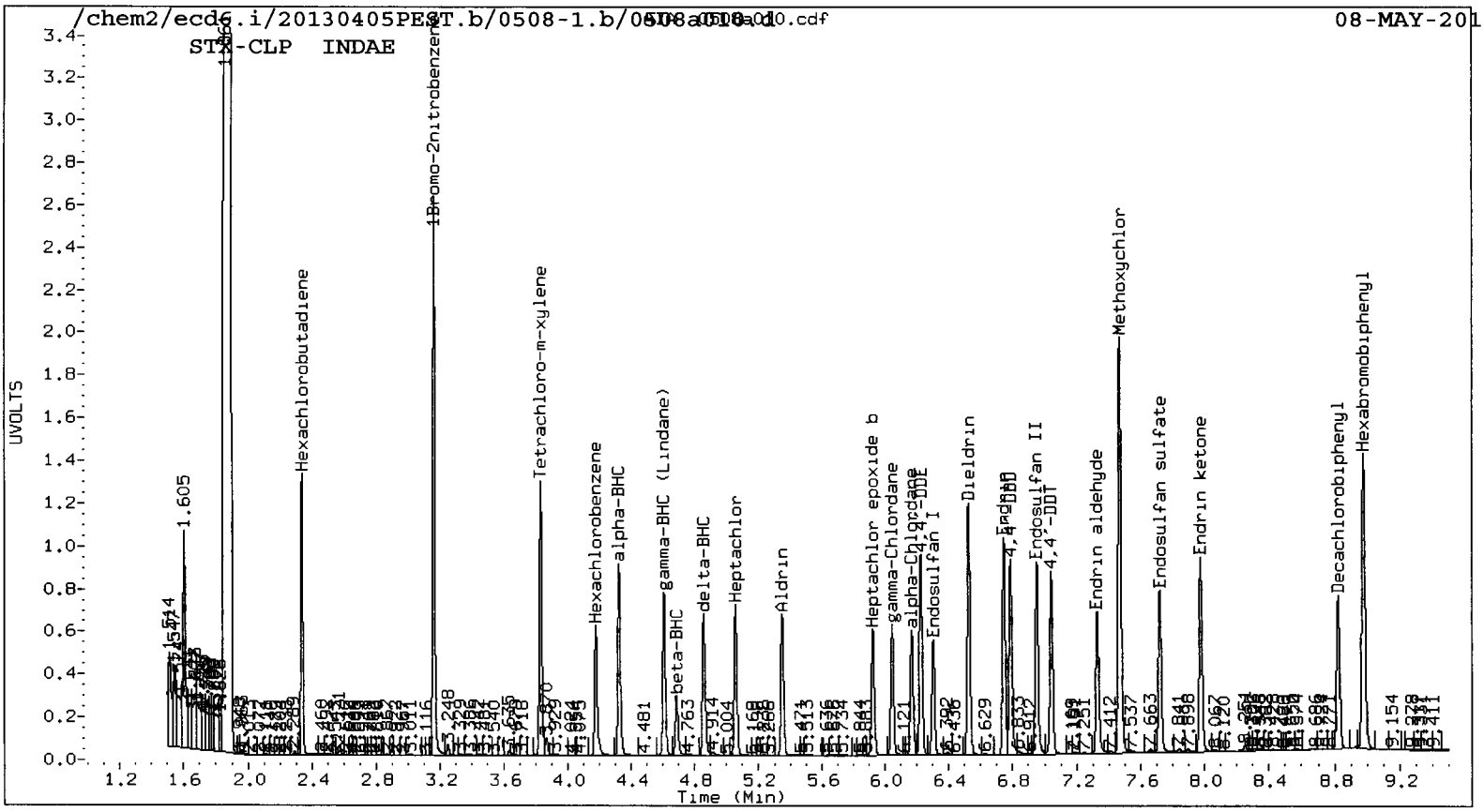
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5448520	4721528	-13.3
Hexabromobiphenyl	4807902	3843165	-20.1

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	21702340	25124831	15.8
Hexabromobiphenyl	7681727	9725369	26.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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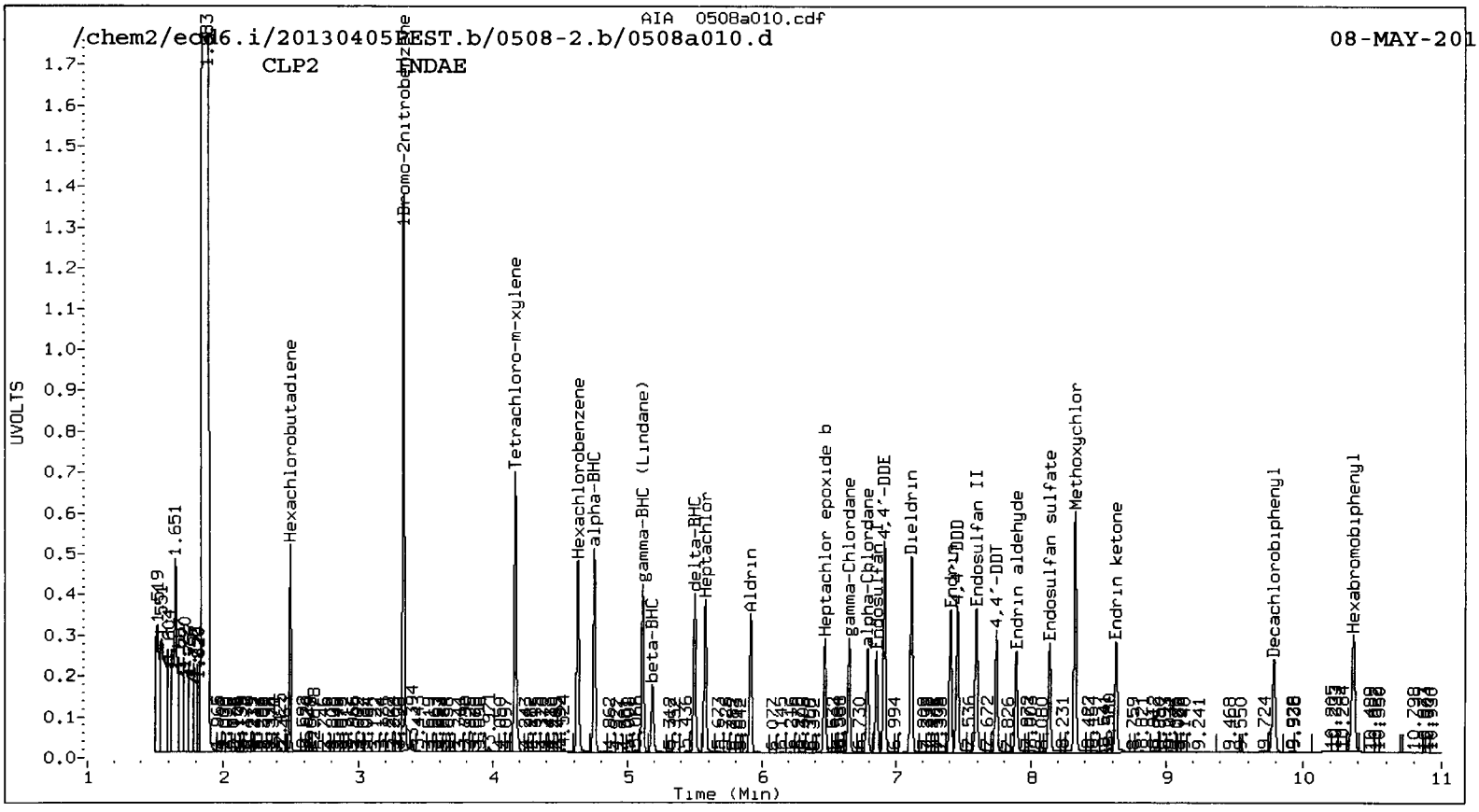
08-MAY-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.605
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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08-MAY-201
CLP2 INDAE
UVOLTS
Time (Min)
1.651
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
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/0508-1.b/0508a011.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0508-2.b/0508a011.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 19:19
Compound Sublist: TOXAPH Report Date: 05/10/2013 13:22
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.004	4137986	3.330	-0.002	21752207	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.981	0.001	3482863	10.362	-0.004	8713837	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	-0.001	2631026	4.165	-0.004	16419564	42.2679	42.6766	1.0	Tetrachloro-m-xylen
8.824	-0.007	2108077	9.787	-0.008	7629568	41.4658	36.9293	11.6	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	105.7	106.7	105.7~	150- 0
Decachlorobiphenyl	103.7	92.3	92.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

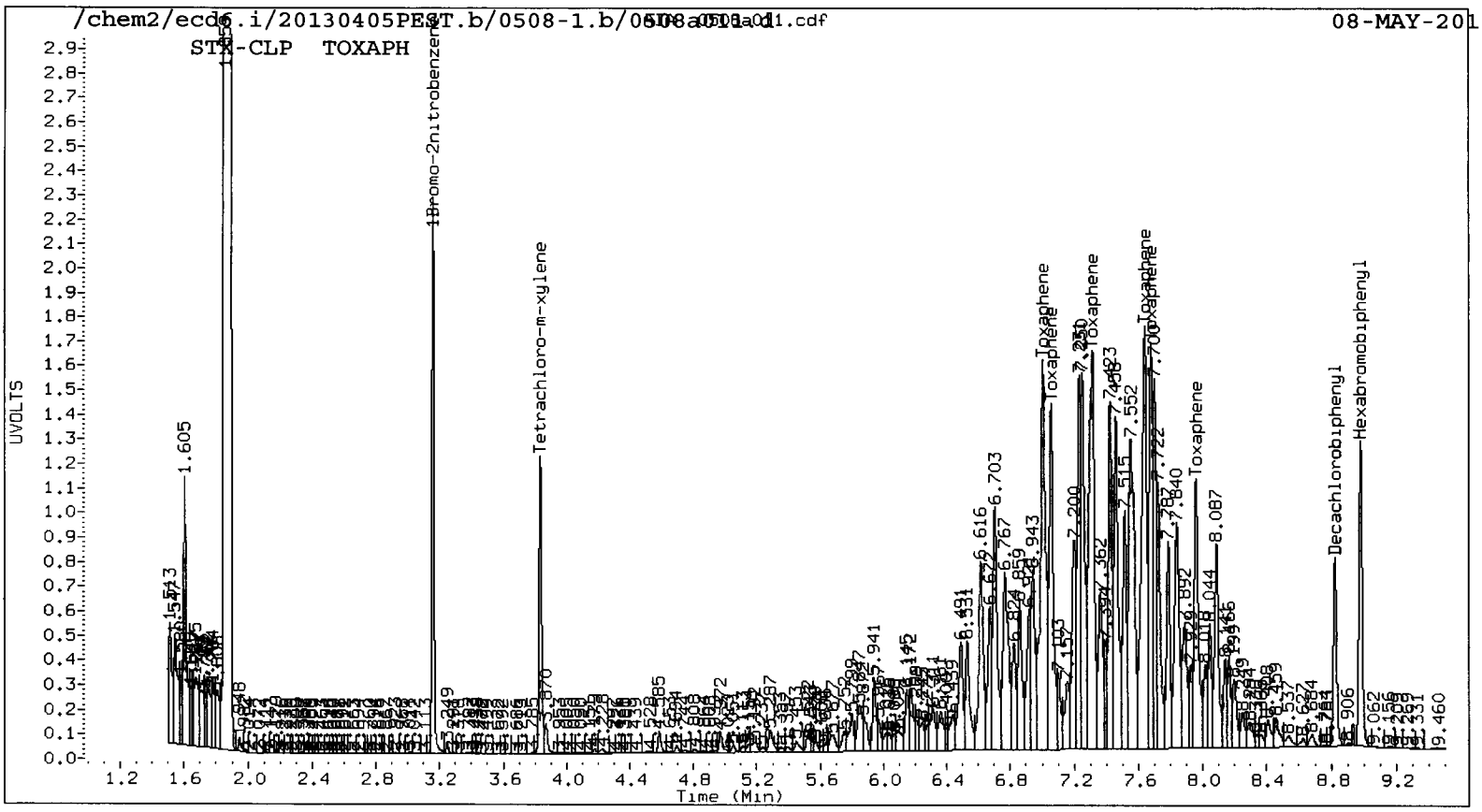
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4137986	-24.1
Hexabromobiphenyl	4807902	3482863	-27.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	21752207	0.2
Hexabromobiphenyl	7681727	8713837	13.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.004	-0.007	7159546	3194.4	1	7.339	-0.005	21327189	2664.6
Toxaphene	2	7.056	-0.008	5116950	3354.7	2	7.663	-0.005	30901134	2580.1
Toxaphene	3	7.313	-0.008	7930453	3096.7	3	7.893	-0.005	31682003	2475.2
Toxaphene	4	7.638	-0.006	7634782	2955.8	4	8.361	-0.005	21152188	2287.0
Toxaphene	5	7.678	-0.006	4980709	2921.9	5	8.401	-0.005	26852867	2292.9
Toxaphene	6	7.959	-0.007	4101145	2802.6	NS	---			----
Total STX-CLPAve (6 peaks): 3054.344						Total CLP2Ave (5 peaks): 2459.968				RPD = 22
Corrected Ave (6 peaks): 3054.344						Corrected Ave (5 peaks): 2459.968				RPD = 22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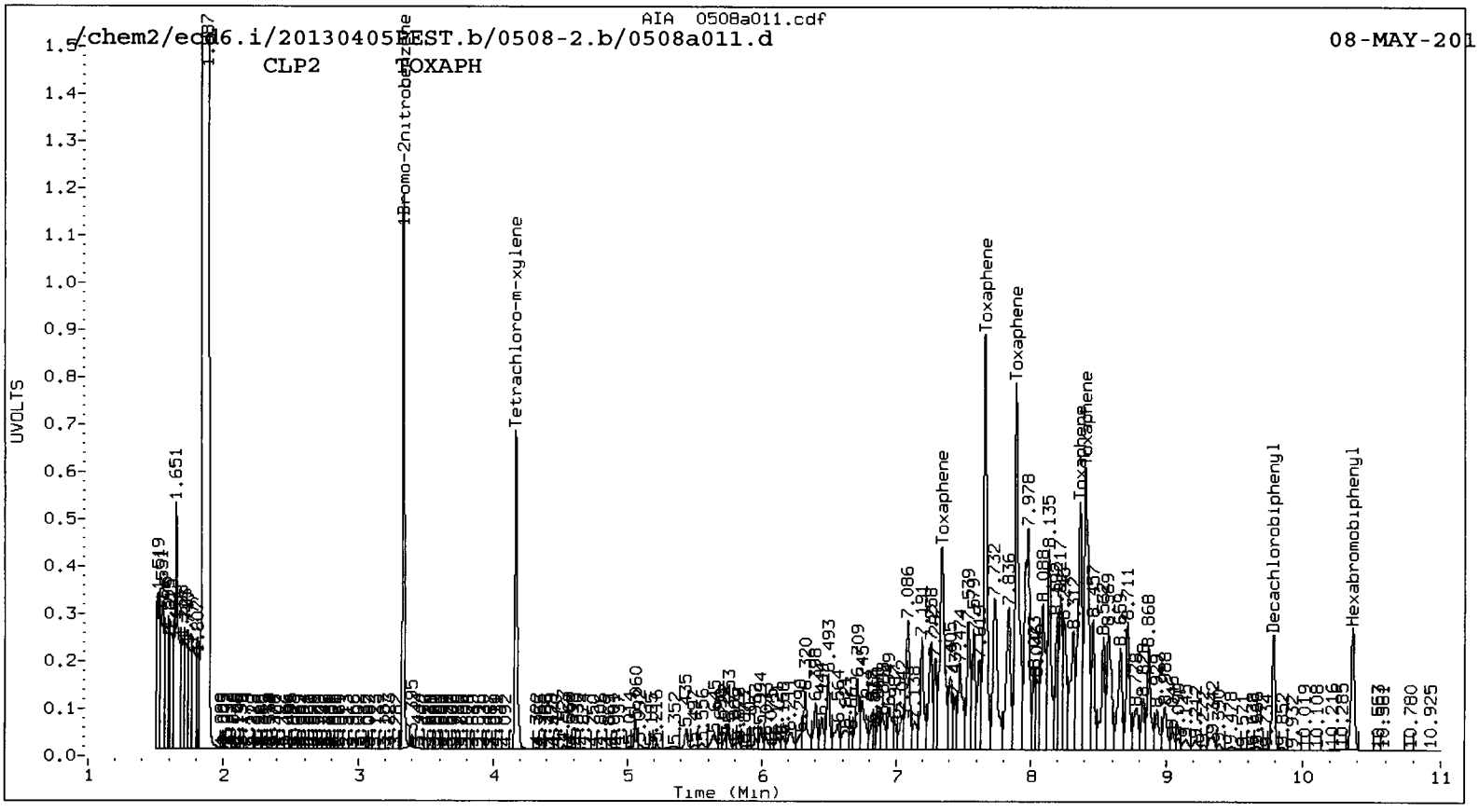
08-MAY-201
UVOLTS
Time (Min)
1.605
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Toxaphene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08-MAY-201
UVOLTS
Time (Min)
1.651
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Toxaphene

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN27

Analytical Chemists and Consultants

(8082A) PCB – Soil / Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test PCB PSDDA # 19 (PCBSDMP4)

ARI Job No(s) WO14, WN27, WN31 Page 1 of 1

PSDDA (4ppb)
Batch set up by: JH

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5g dry wt)	(REQ) Acid Clean (2.5mL)	(REQ) Sulfur Clean (2.5mL) Very high 1 2 (3) sulfur	(REQ) Silica Gel Clean (1:2.5)	Extraction Final Volume	Volume to Lab	Comments	Verify Client ID
	MBS WO14	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual W)	YL 05/02/13 Analyst/Date
	SBS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 (2) 3
	SBSDup	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	YL 05/02/13 Analyst/Date
	~~QLS~~	~~12.50g~~	~~2.5mL~~	~~2.5mL~~	~~1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
2	WO14A	19.05	2.5mL	2.5mL	1mL	2.5mL	1mL		KD 100°C Hexane Exchange (2 X 20mL) 1 2 3 4 5 6
2	B	18.04	2.5mL	2.5mL	1mL	2.5mL	1mL		
PSRM (SRM)	C	5.00	2.5mL	2.5mL	1mL	2.5mL	1mL		
2	WN27A	21.04	2.5mL	2.5mL	1mL	2.5mL	1mL		RS 05/03/13 Analyst/Date
2	Amb	21.04	2.5mL	2.5mL	1mL	2.5mL	1mL		
2	Amb2	21.04	2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap 1 2 3 Pre-Cleanups
9	WN31A	32.05	2.5mL	2.5mL	1mL	2.5mL	1mL		RS 5-4-13 Analyst/Date
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap 1 2 (3) Post Cleanups
Analyst/Date			RS 5-4-13	JH 5-6-13	SP 5-6-13	SP 5/4/13	SP 5/6/13	SP 5/6/13	SP 5/6/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N(2435-2)	2µg/mL	50µL	5/16/13	YL	SP
Spike	1(2474-4)	20µg/mL	63µL	10/31/13	YL	SP
~~QLS Spike~~	5( )	~~2µg/mL~~	~~25µL~~			
Extraction Time: 1420			Balance ID: B14642614			

SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate.
. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels).
. Add 1:1 Hexane/Acetone until the solvent layer is 3" inches above the soil layer after homogenization. 4. Add surr/spike.
Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then
ool vessels in cold water 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into E. flask with sodium sulfate in
ottom+ funnel with neutral glasswool plug. 8. Rinse with Hexane. 9. Add 8:2 Hexane/Acetone to the vessel 3"inches
ove the soil layer after homogenization. Microwave a 2nd time. 10. Let cool and decant solvent then empty the soil into the
nnel and rinse with Hexane. 11. KD (Smaller Large Drying Column) on 100° bath. (Blanks=only 5g Sodium Sulfate).
. Exchange (2 X with 20mL) Hexane. 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial with Hexane.

A. Need Total Solids Y (N) B. ~~Archive~~/Freeze Y N

WO14 only

Revision 04
01/18/2013

WN27 . 01019

Reagent and Solutions Identification

(8082A) PCB – Soil / (Sediment)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WN14, WN27, WN31

(8082A) PCB PSDDA (4ppb) Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Anhydrous Sodium Sulfate: (I# 8068 + jar date 4/19/13)	YL 05/02/13
Neutral Glasswool: (I# 7998 + jar date 04/08/13)	
1:1 Hexane/Acetone: (H# 164)	
80:20 Hexane/Acetone: (H# 162)	
Hexane: (I# 8203)	
KD Station:	KD
Hexane: (I# 8203) ~~8068~~ 04/19/13	RR 05/03/13
Anhydrous Sodium Sulfate: (I# ~~7998~~ + jar date 04/08/13)	
Neutral Glasswool: (I# 7998 + jar date 04/08/13)	
Vialing Station:	Vialing
Hexane: (I# 8203)	SP 5/4/13
Concentrated Sulfuric Acid: (I# 8156)	
Tetrabutylammonium hydrogensulfate (TBAS): (H# 148)	
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.: WN27 Client ID: SAIC

Parameter: PCB PSDDA (45ppb) Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)= A	IAC 4-24-13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)= 5% sticks-grass = A	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). GC analyst, (Centrifuge#1 used for all Centrifugations) Sample pre-screen indicates possible aroclor activity.	JH 4/3/13

3056F

Revision 009
08/14/12

WN27 : 010021

PCB Raw Data
Initial Calibration

ARI Job ID: WN27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 4/16/13 Internal Standard ID 2006-1 Expiration 7/26/13

Endrin/DDT Breakdown <15%?	YES / NO / NA	ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
1660	1980-1	5/16/13	1660	2009-2	5/16/13
1242	1980-4		1242	2009-5	
1248	1980-5		1248	2009-6	
1254	1980-6		1254	2009-7	
2162	1980-2		2162	2009-3	
3268	1980-3		3268	2009-4	

Detail problems, corrective actions and/or other pertinent information below:

Analyst: _____ **Date:** 4/22/13

Reviewer: _____ **Date:** 5/8/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130416.b/ical-1.b/0416a010.d
Level 2: /chem2/ecd5.i/20130416.b/ical-1.b/0416a011.d
Level 3: /chem2/ecd5.i/20130416.b/ical-1.b/0416a013.d
Level 4: /chem2/ecd5.i/20130416.b/ical-1.b/0416a009.d
Level 5: /chem2/ecd5.i/20130416.b/ical-1.b/0416a014.d
Level 6: /chem2/ecd5.i/20130416.b/ical-1.b/0416a012.d
Level 7: /chem2/ecd5.i/20130416.b/ical-1.b/0416a019.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03196	0.03196	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01009	0.01009	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01396	0.01396	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02633	0.02633	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.08105	0.08105	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03590	0.03590	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7							
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04490						0.04490	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01408						0.01408	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04340						0.04340	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02193						0.02193	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02572						0.02572	0.000
7 Aroclor-1016(1)	0.03955	0.03567	0.03633	0.03270	0.03063	0.02855		
	+++++						0.03390	11.923
(2)	0.12941	0.11130	0.11263	0.10024	0.09377	0.08633		
	+++++						0.10561	14.598
(3)	0.05565	0.04757	0.04997	0.04413	0.04121	0.03772		
	+++++						0.04604	13.952
(4)	0.03698	0.03177	0.03580	0.03222	0.03013	0.02772		
	+++++						0.03244	10.686

Analytical Resources, Inc.

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Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05052	0.05052	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.05597	0.05597	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.07224	0.07224	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05114	0.05114	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.07442	0.07442	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04939	0.04939	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.09915	0.09915	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10641	0.10641	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.04380	0.04380	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7							
9 Aroclor-1260(1)	0.05313	0.04904	0.04640	0.04287	0.03896	0.03514		
	+++++						0.04426	14.968
(2)	0.05485	0.04889	0.04655	0.04330	0.03940	+++++		
	+++++						0.04660	12.522
(3)	0.12876	0.11945	0.11321	0.10525	0.09591	+++++		
	+++++						0.11252	11.250
(4)	0.06966	0.06211	0.06029	0.05680	0.05240	+++++		
	+++++						0.06025	10.676
(5)	0.03762	0.03152	0.03214	0.03037	0.02802	+++++		
	+++++						0.03193	11.106
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05136						0.05136	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13372						0.13372	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04748						0.04748	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05697						0.05697	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.05591	0.05591	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.13029	0.13029	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.13012	0.13012	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.11247	0.11247	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.32821	0.32821	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1.44918	1.33361	1.34480	1.26920	1.23370	1.17740	+++++	1.30132	7.351
$ 13 Decachlorobiphenyl	1.53451	1.42137	1.28919	1.11511	1.01716	0.93667	+++++	1.21900	19.297

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB2.m
Cal Date : 19-Apr-2013 11:18 van
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130416.b/ical-2.b/0416a010.d
Level 2: /chem2/ecd5.i/20130416.b/ical-2.b/0416a011.d
Level 3: /chem2/ecd5.i/20130416.b/ical-2.b/0416a013.d
Level 4: /chem2/ecd5.i/20130416.b/ical-2.b/0416a009.d
Level 5: /chem2/ecd5.i/20130416.b/ical-2.b/0416a014.d
Level 6: /chem2/ecd5.i/20130416.b/ical-2.b/0416a012.d
Level 7: /chem2/ecd5.i/20130416.b/ical-2.b/0416a019.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
1 Aroclor-1221(1)	*****	*****	*****	*****	*****	*****	0.00835	0.00835	0.000
(2)	*****	*****	*****	*****	*****	*****	0.01307	0.01307	0.000
(3)	*****	*****	*****	*****	*****	*****	0.00790	0.00790	0.000
(4)	*****	*****	*****	*****	*****	*****	0.02385	0.02385	0.000
4 Aroclor-1232(1)	*****	*****	*****	*****	*****	*****	0.01989	0.01989	0.000
(2)	*****	*****	*****	*****	*****	*****	0.03907	0.03907	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB2.m
Cal Date : 19-Apr-2013 11:18 van
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01634	0.01634	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01338	0.01338	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03437	0.03437	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.07332	0.07332	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03073	0.03073	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02528	0.02528	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.04475	0.04475	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03673	0.03673	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03780	0.03780	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB2.m
Cal Date : 19-Apr-2013 11:18 van
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.04936	0.04936	0.000
7 Aroclor-1016(1)	0.06108	0.05107	0.04820	0.04243	0.03948	0.03622	+++++	0.04641	19.460
(2)	0.12457	0.10496	0.10034	0.08923	0.08662	0.08047	+++++	0.09770	16.334
(3)	0.03128	0.02702	0.02574	0.02395	0.02311	0.02174	+++++	0.02547	13.369
(4)	0.03037	0.02546	0.02403	0.02168	0.02073	0.01922	+++++	0.02358	17.016
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03682	0.03682	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04547	0.04547	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03515	0.03515	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.07596	0.07596	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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End Cal Date : 16-APR-2013 17:26
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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB2.m
Cal Date : 19-Apr-2013 11:18 van
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.04386	0.04386	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.06622	0.06622	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.05736	0.05736	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.13232	0.13232	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.08604	0.08604	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.05172	0.05172	0.000
9 Aroclor-1260(1)	0.05772	0.04814	0.04595	0.04116	0.03847	0.03548	+++++	0.04449	17.956
(2)	0.06783	0.05774	0.05498	0.05001	0.04712	0.04368	+++++	0.05356	16.170
(3)	0.13865	0.11330	0.10897	0.09959	0.09428	0.08792	+++++	0.10712	16.835

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP Genie
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Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
(4)	0.03762	0.03256	0.03123	0.02883	0.02738	0.02563	+++++	0.03054	14.024
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.13392	0.13392	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.13215	0.13215	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.10949	0.10949	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.32319	0.32319	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
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Cal Date : 19-Apr-2013 11:18 van
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Tetrachloro-m-xylene	1.31190	1.18980	1.21250	1.14038	1.12553	1.08138	+++++	1.17691	6.877
$ 13 Decachlorobiphenyl	1.37415	1.18372	1.17159	1.04616	0.97512	0.90538	+++++	1.10935	15.252

Analytical Resources Inc.: Organics Instrument Log

ECD-5 Serial No.: US00034118

Date: 4.16.13 Analysis: PCB Analyst: VB/YZ

Column 1 Serial No.: 196398 Column Type: ~~ZB-5~~

Column 2 Serial No.: 182259 Column Type: ZB-35

GC Method: PCB ICal Date: 4.16.13 Injection Volume: 2 ul

IS	Ical/Ccal	ICV
2006-7	1980 - 1,6 1991-2	2009-2,7

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130416.b/ical-1.b
/chem2/ecd5.i/20130416.b/ical-2.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	16-APR-2013 13:45	0416a008.d	1	IB	
2	16-APR-2013 14:05	0416a009.d	1	AR1660 250	
3	16-APR-2013 14:25	0416a010.d	1	AR1660 20	
4	16-APR-2013 14:45	0416a011.d	1	AR1660 50	
5	16-APR-2013 15:05	0416a012.d	1	AR1660 1000	
6	16-APR-2013 15:25	0416a013.d	1	AR1660 100	
7	16-APR-2013 15:45	0416a014.d	1	AR1660 500	
8	16-APR-2013 16:05	0416a015.d	1	AR1242	
9	16-APR-2013 16:25	0416a016.d	1	AR1248	
10	16-APR-2013 16:46	0416a017.d	1	AR1254	
11	16-APR-2013 17:06	0416a018.d	1	AR2162	
12	16-APR-2013 17:26	0416a019.d	1	AR3268	
13	16-APR-2013 17:46	0416a020.d	1	AR1242 ICV	
14	16-APR-2013 18:07	0416a021.d	1	AR1248 ICV	
15	16-APR-2013 18:27	0416a022.d	1	AR1254 ICV	
16	16-APR-2013 18:47	0416a023.d	1	AR1660 ICV	
17	16-APR-2013 19:07	0416a024.d	1	AR2162 ICV	
18	16-APR-2013 19:27	0416a025.d	1	AR3268 ICV	

4.18.13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a009.d
Data file 2: 20130416.b/ical-2.b/0416a009.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 250
Client ID:
Injection Date: 16-APR-2013 14:05
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	0.001	15435643	4.402	-0.001	4121479	19.5	19.4	0.7	Tetrachloro-m-xylen
12.828	0.001	22825918	13.203	-0.001	4253590	18.3	18.9	3.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	48.8	48.4
Decachlorobiphenyl	45.7	47.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48646950	0.0
Hexabromobiphenyl	81878684	81878684	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14456526	0.0
Hexabromobiphenyl	16263628	16263628	0.0

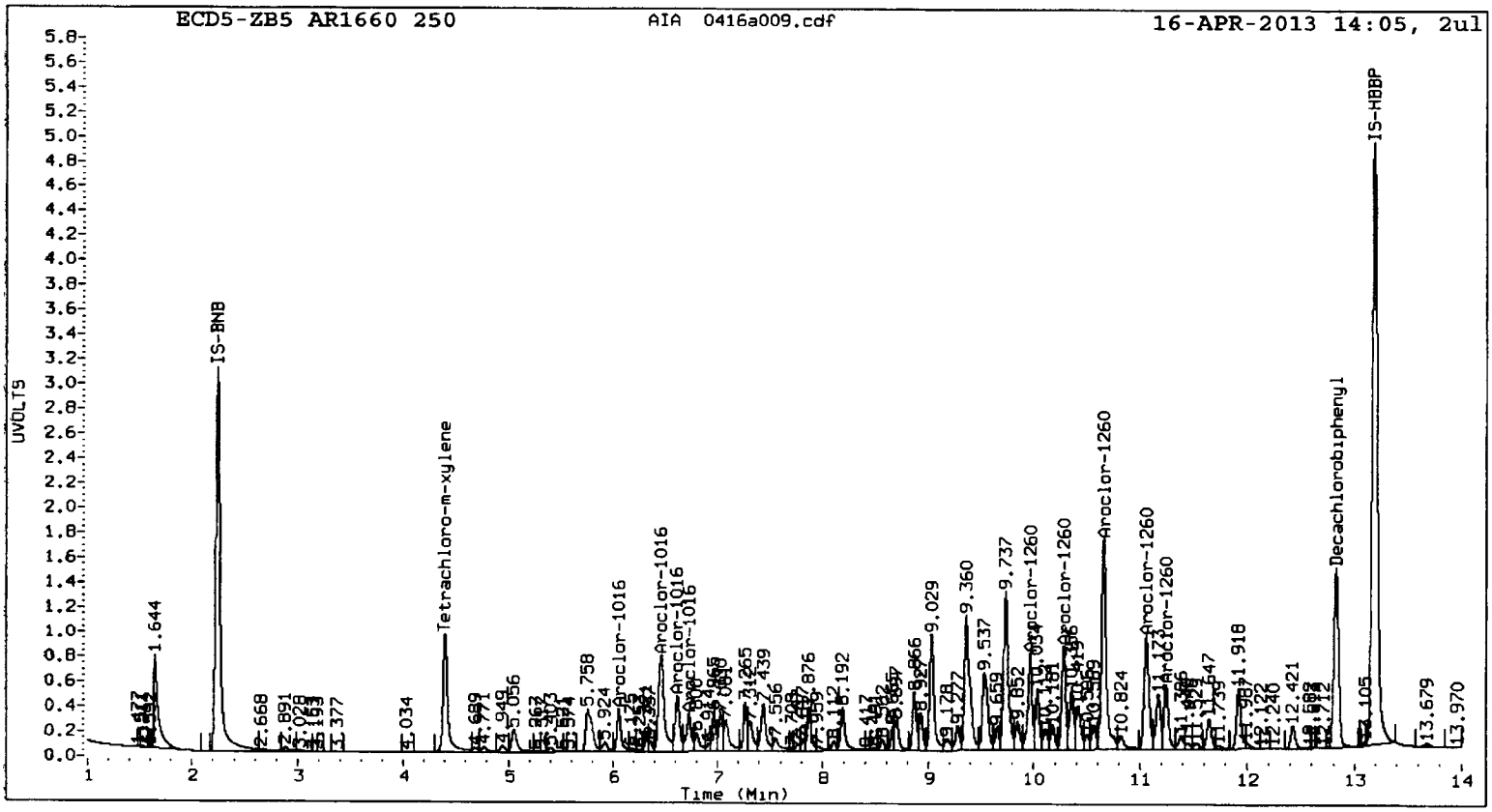
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.056	0.004	4971080	241.1	1	6.160	-0.001	1916939	228.6
Aroclor-1016	2	6.463	0.004	15239200	237.3	2	6.796	0.000	4031171	228.3
Aroclor-1016	3	6.612	0.004	6708948	239.6	3	7.181	0.000	1082154	235.1
Aroclor-1016	4	6.724	0.004	4898057	248.3	4	7.354	0.000	979509	229.8
Total Col1Ave (4 peaks):					241.6	Total Col2Ave (4 peaks):				230.5 RPD = 5
Corrected Ave (3 peaks):					239.3	Corrected Ave (3 peaks):				228.9 RPD = 4
Aroclor-1260	1	9.966	0.002	10968051	232.6	1	10.258	-0.001	2092083	231.3
Aroclor-1260	2	10.282	0.002	11078236	232.3	2	10.708	0.000	2541542	233.4
Aroclor-1260	3	10.658	0.003	26930223	233.9	3	10.983	-0.001	5061546	232.4
Aroclor-1260	4	11.059	0.003	14532581	235.7	4	11.503	-0.002	1465400	236.0
Aroclor-1260	5	11.247	0.002	7769906	237.7	NS	---			----
Total Col1Ave (5 peaks):					234.4	Total Col2Ave (4 peaks):				233.3 RPD = 0
Corrected Ave (4 peaks):					233.6	Corrected Ave (3 peaks):				232.4 RPD = 1

Total PCB Area Col1 (4.501 - 12.727) = 318231638 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 64033361 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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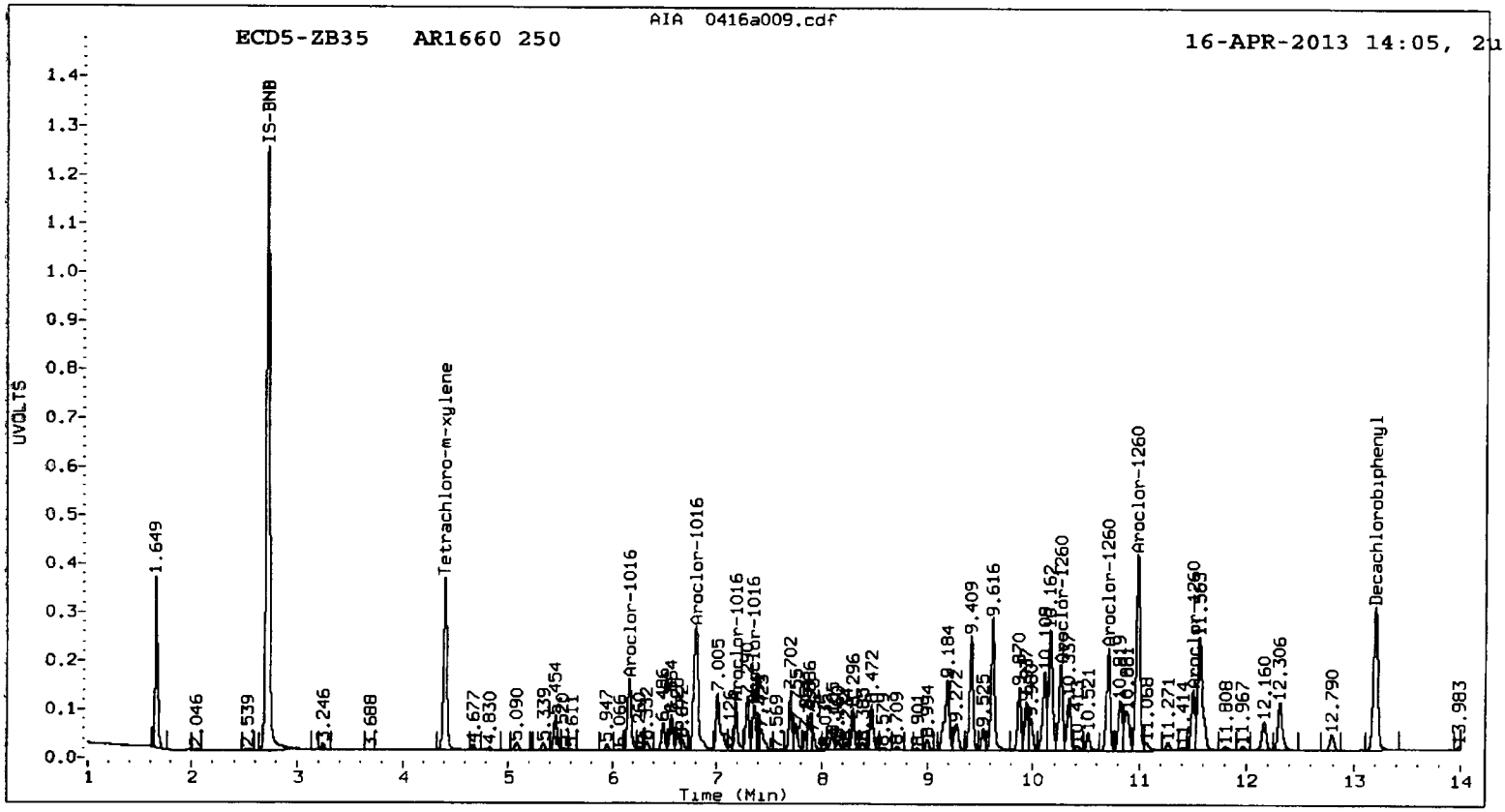
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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16-APR-2013 14:05, 2u
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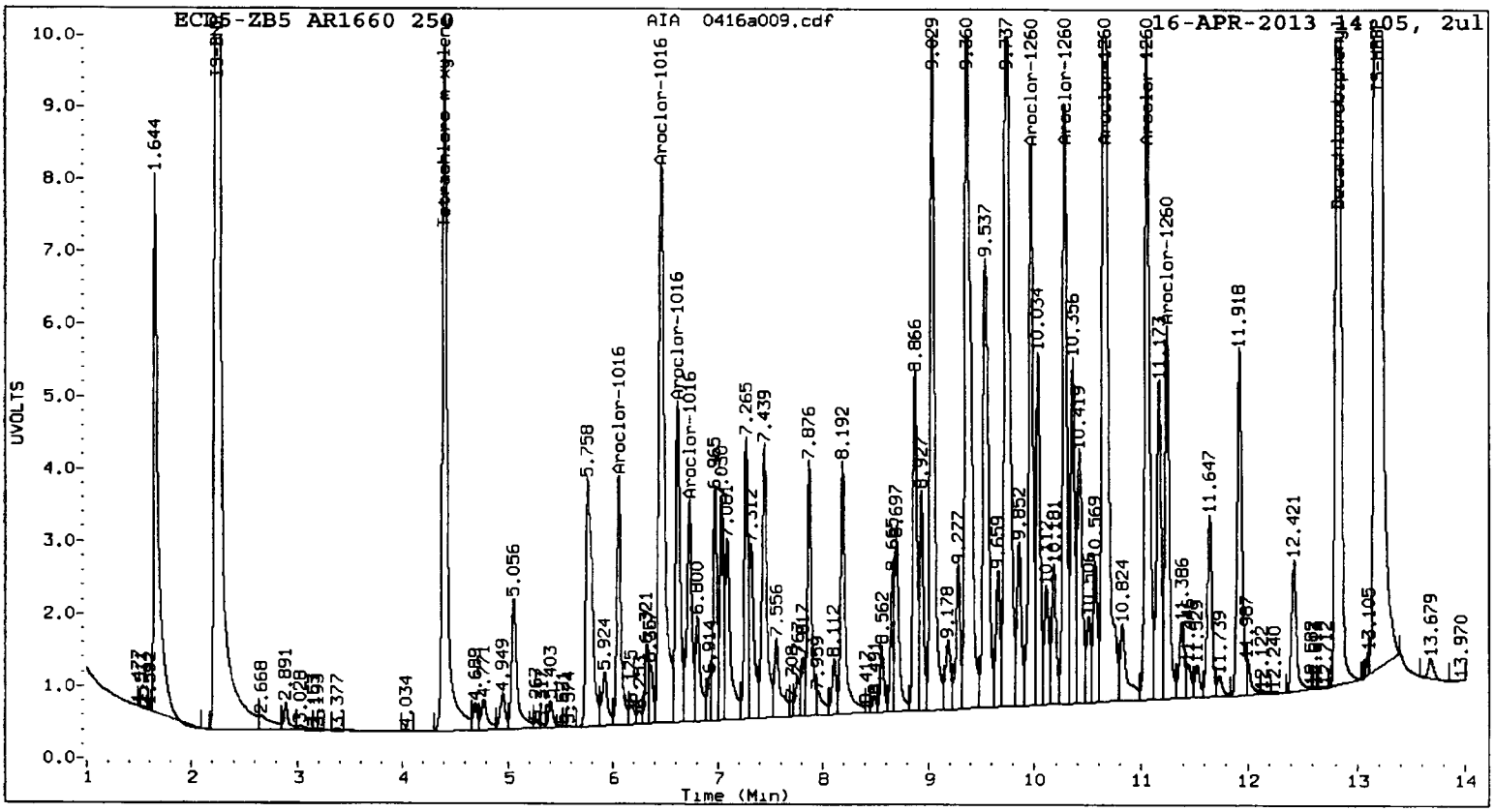
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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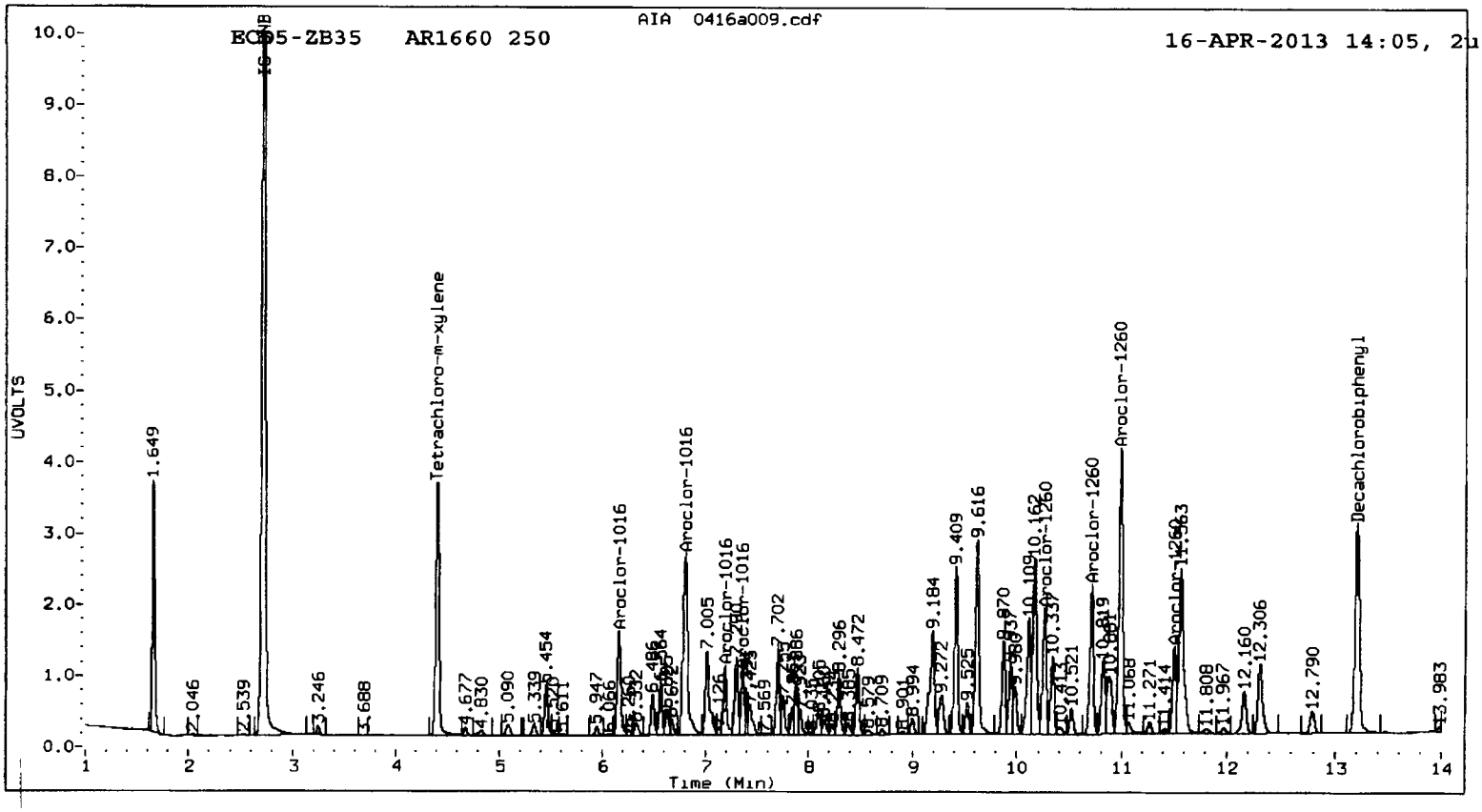
16-APR-2013 14:05, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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EC35-ZB35 AR1660 250
16-APR-2013 14:05, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a010.d
Data file 2: 20130416.b/ical-2.b/0416a010.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 20
Client ID:
Injection Date: 16-APR-2013 14:25
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.399	-0.002	1450153	4.405	0.001	379240	1.8	1.8	0.1	Tetrachloro-m-xylen
12.826	-0.001	2657197	13.204	0.000	452796	2.0	2.0	1.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	4.5	4.5
Decachlorobiphenyl	5.0	5.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50033552	2.9
Hexabromobiphenyl	81878684	86581362	5.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14453887	0.0
Hexabromobiphenyl	16263628	16475546	1.3

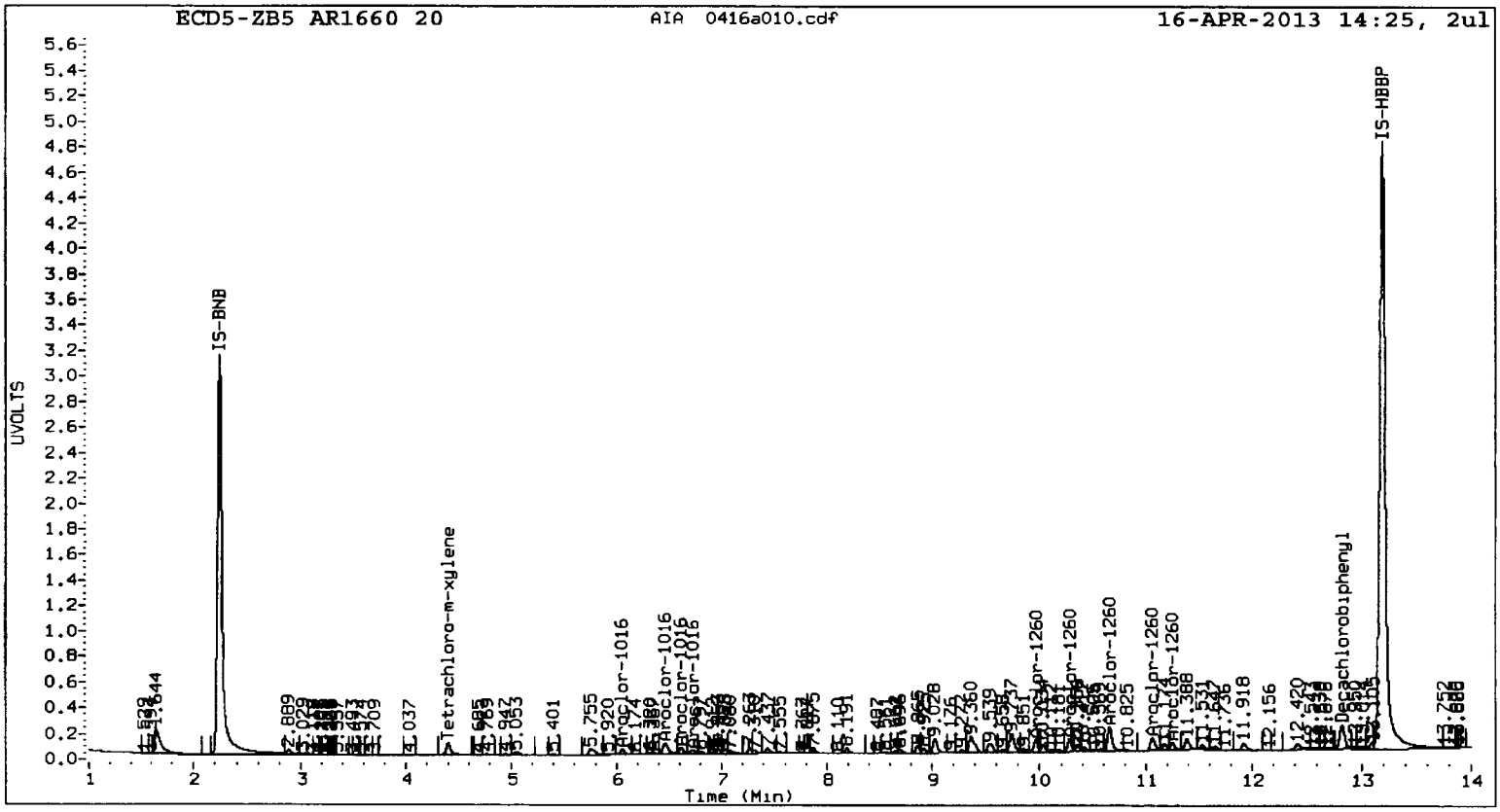
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.053	0.001	494662	23.3	1	6.161	0.000	220721	26.3
Aroclor-1016	2	6.462	0.003	1618660	24.5	2	6.797	0.001	450147	25.5
Aroclor-1016	3	6.612	0.003	696079	24.2	3	7.182	0.001	113028	24.6
Aroclor-1016	4	6.723	0.003	462608	22.8	4	7.355	0.001	109733	25.8
Total Col1Ave (4 peaks):					23.7	Total Col2Ave (4 peaks):			25.5	RPD = 7
Corrected Ave (3 peaks):					23.4	Corrected Ave (3 peaks):			25.3	RPD = 8
Aroclor-1260	1	9.966	0.002	1150090	23.1	1	10.259	0.000	237739	25.9
Aroclor-1260	2	10.282	0.002	1187319	23.5	2	10.710	0.001	279396	25.3
Aroclor-1260	3	10.659	0.003	2787092	22.9	3	10.987	0.003	571096	25.9
Aroclor-1260	4	11.060	0.004	1507804	23.1	4	11.507	0.002	154968	24.6
Aroclor-1260	5	11.248	0.003	814214	23.6	NS	---			----
Total Col1Ave (5 peaks):					23.2	Total Col2Ave (4 peaks):			25.5	RPD = 9
Corrected Ave (4 peaks):					23.2	Corrected Ave (3 peaks):			25.3	RPD = 9

Total PCB Area Col1 (4.501 - 12.727) = 34114669 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 7141245 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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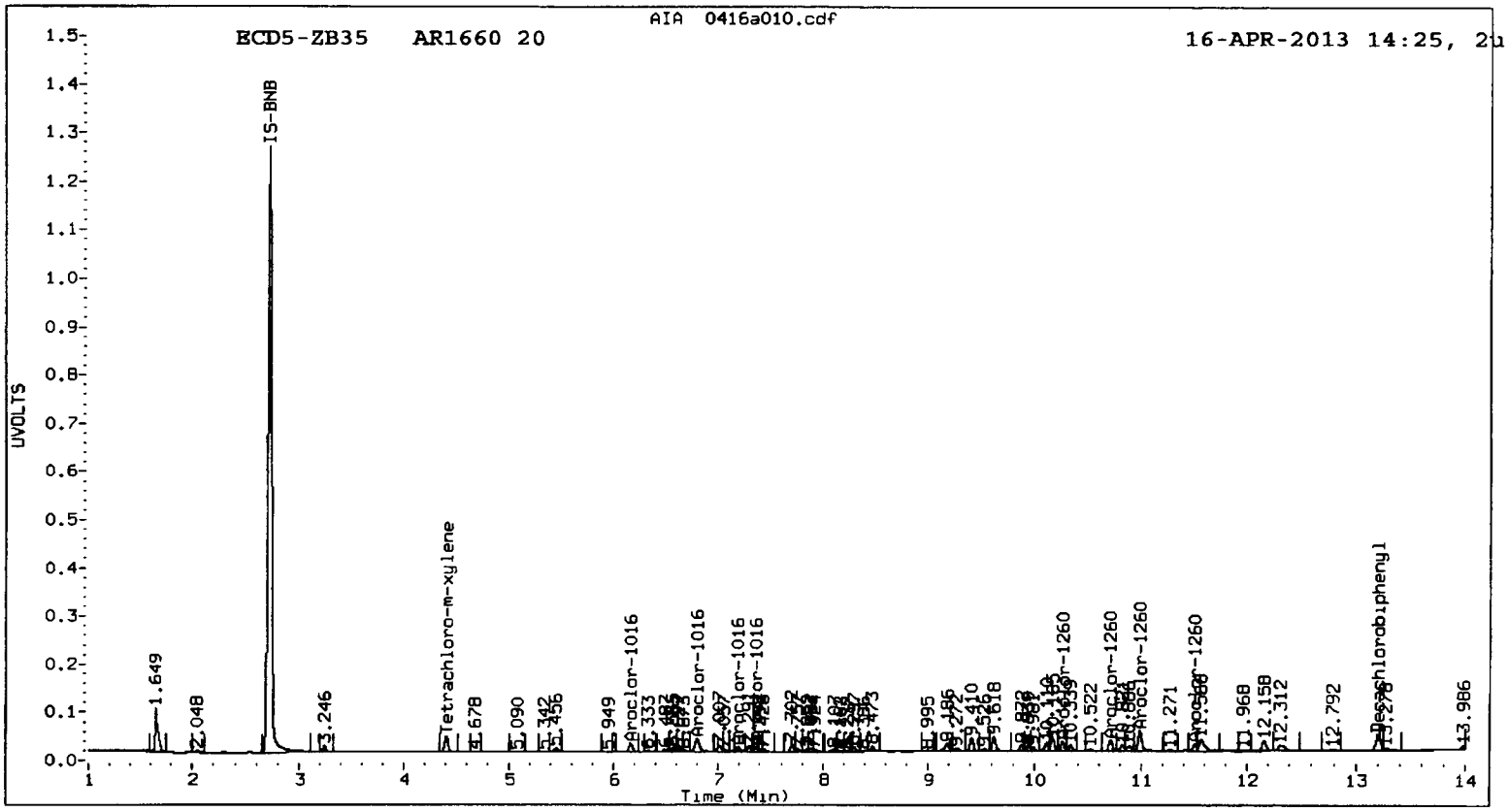
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)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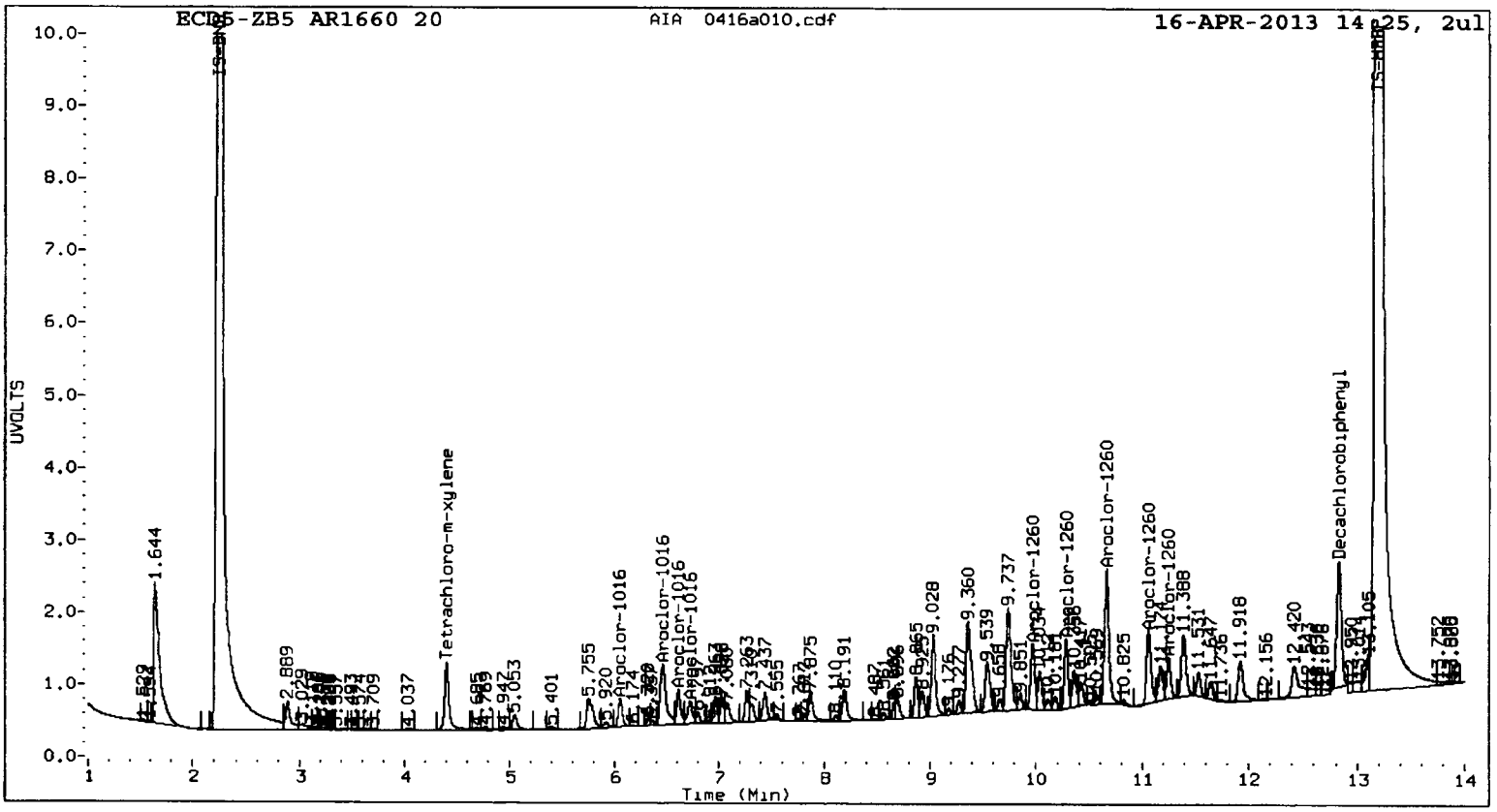
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)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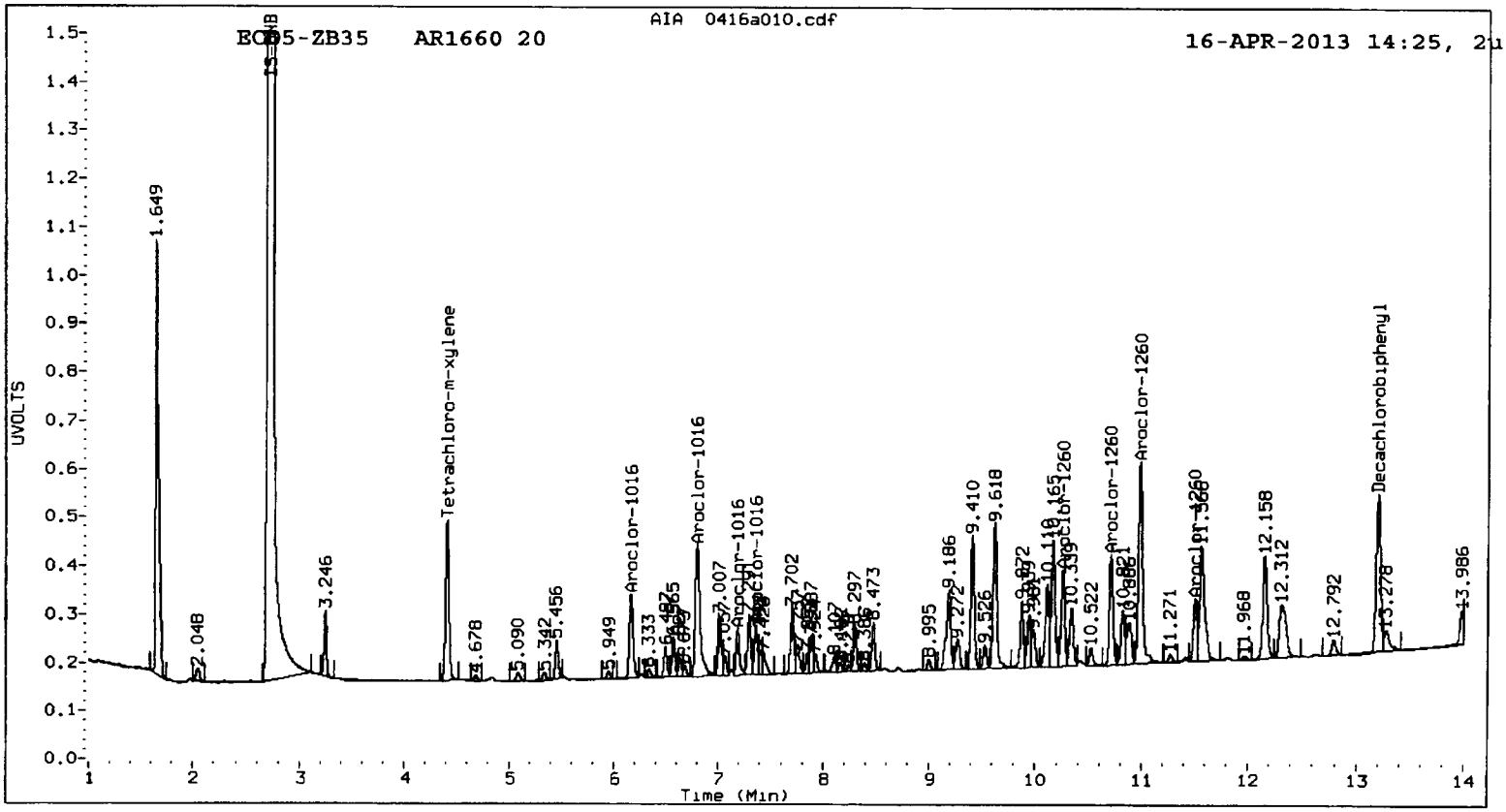
AIA 0416a010.cdf
16-APR-2013 14:25, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260


ECD5-ZB35 AR1660 20
AIA 0416a010.cdf
16-APR-2013 14:25, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a011.d
Data file 2: 20130416.b/ical-2.b/0416a011.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 50
Client ID:
Injection Date: 16-APR-2013 14:45
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.400	-0.001	3368851	4.402	-0.001	871429	4.1	4.0	1.4	Tetrachloro-m-xylen
12.826	-0.001	6278690	13.204	-0.001	982993	4.7	4.3	8.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	10.2	10.1
Decachlorobiphenyl	11.7	10.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50522404	3.9
Hexabromobiphenyl	81878684	88346709	7.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14648372	1.3
Hexabromobiphenyl	16263628	16608531	2.1

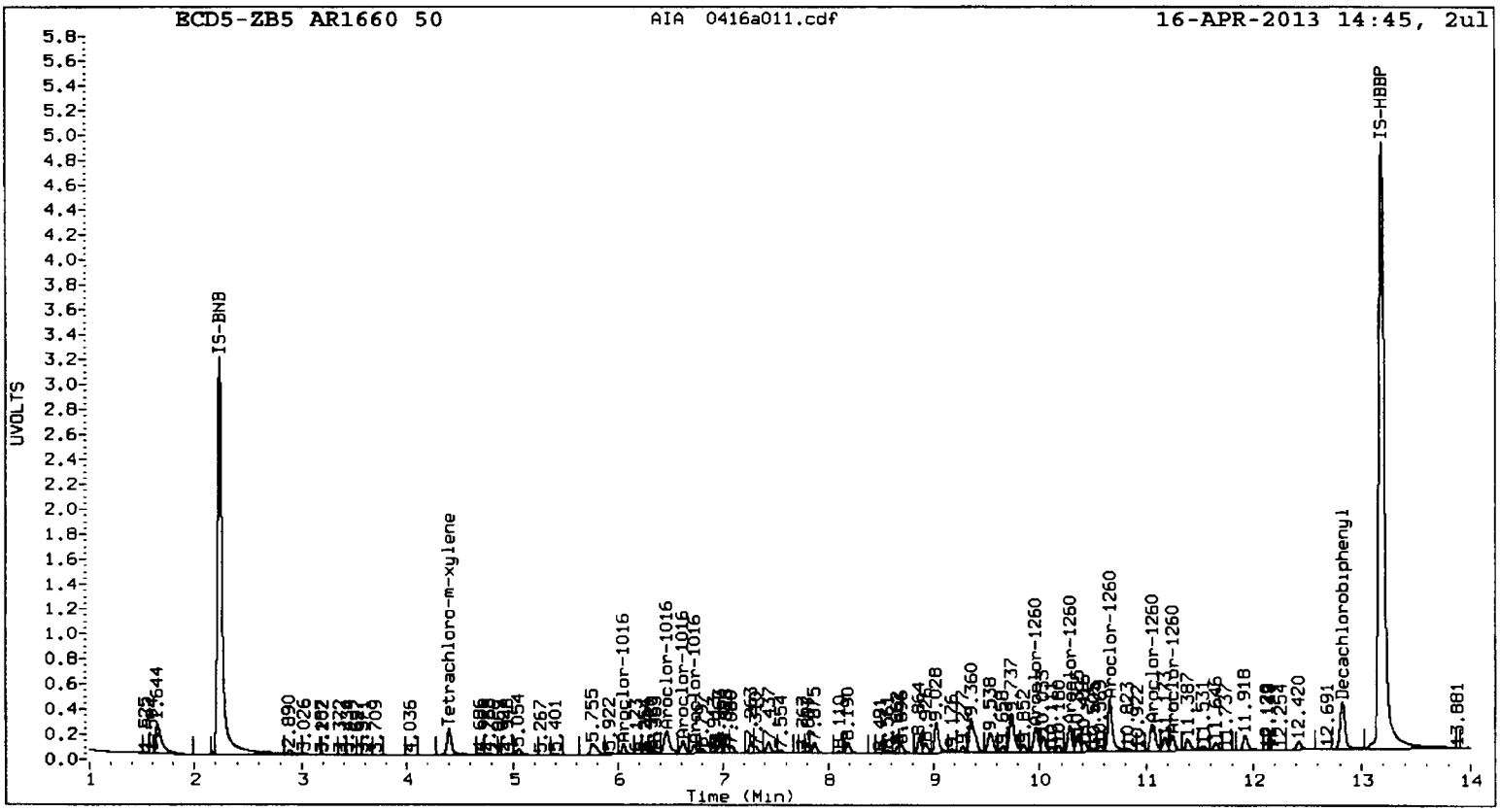
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.053	0.001	1126244	52.6	1	6.161	0.000	467567	55.0
Aroclor-1016	2	6.461	0.003	3514514	52.7	2	6.797	0.002	960918	53.7
Aroclor-1016	3	6.611	0.003	1502248	51.7	3	7.182	0.001	247387	53.0
Aroclor-1016	4	6.723	0.002	1003280	49.0	4	7.354	0.000	233129	54.0
	Total Col1Ave (4 peaks):				51.5	Total Col2Ave (4 peaks):			53.9	RPD = 5
	Corrected Ave (3 peaks):				51.1	Corrected Ave (3 peaks):			53.6	RPD = 5
Aroclor-1260	1	9.964	0.001	2707629	53.2	1	10.258	0.000	499754	54.1
Aroclor-1260	2	10.282	0.002	2699709	52.5	2	10.709	0.001	599377	53.9
Aroclor-1260	3	10.659	0.003	6595593	53.1	3	10.985	0.001	1176045	52.9
Aroclor-1260	4	11.059	0.003	3429495	51.5	4	11.506	0.001	337997	53.3
Aroclor-1260	5	11.247	0.002	1740219	49.3	NS	---			----
	Total Col1Ave (5 peaks):				51.9	Total Col2Ave (4 peaks):			53.6	RPD = 3
	Corrected Ave (4 peaks):				51.6	Corrected Ave (3 peaks):			53.4	RPD = 3

Total PCB Area Col1 (4.501 - 12.727) = 75065737 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 15085971 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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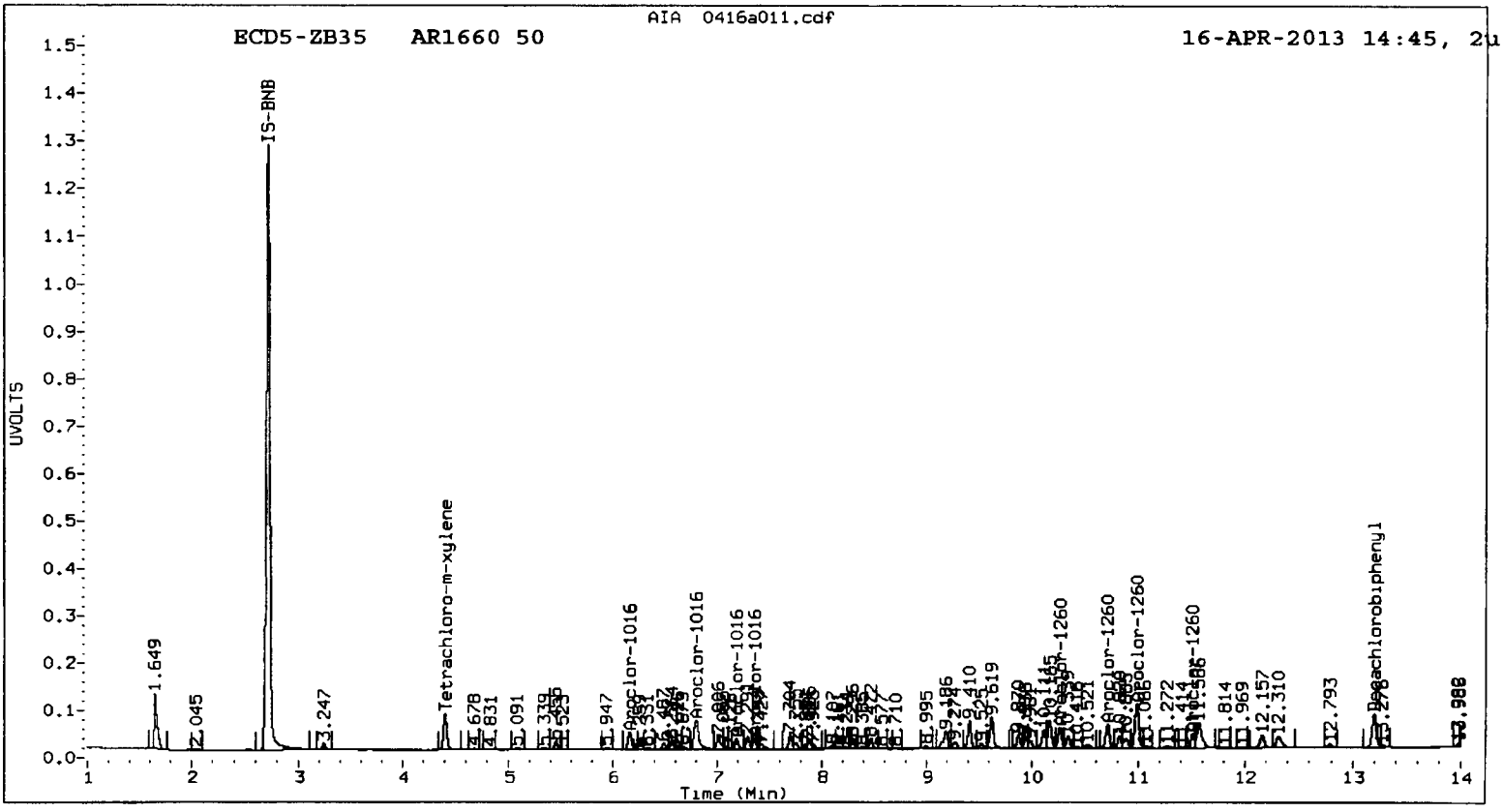
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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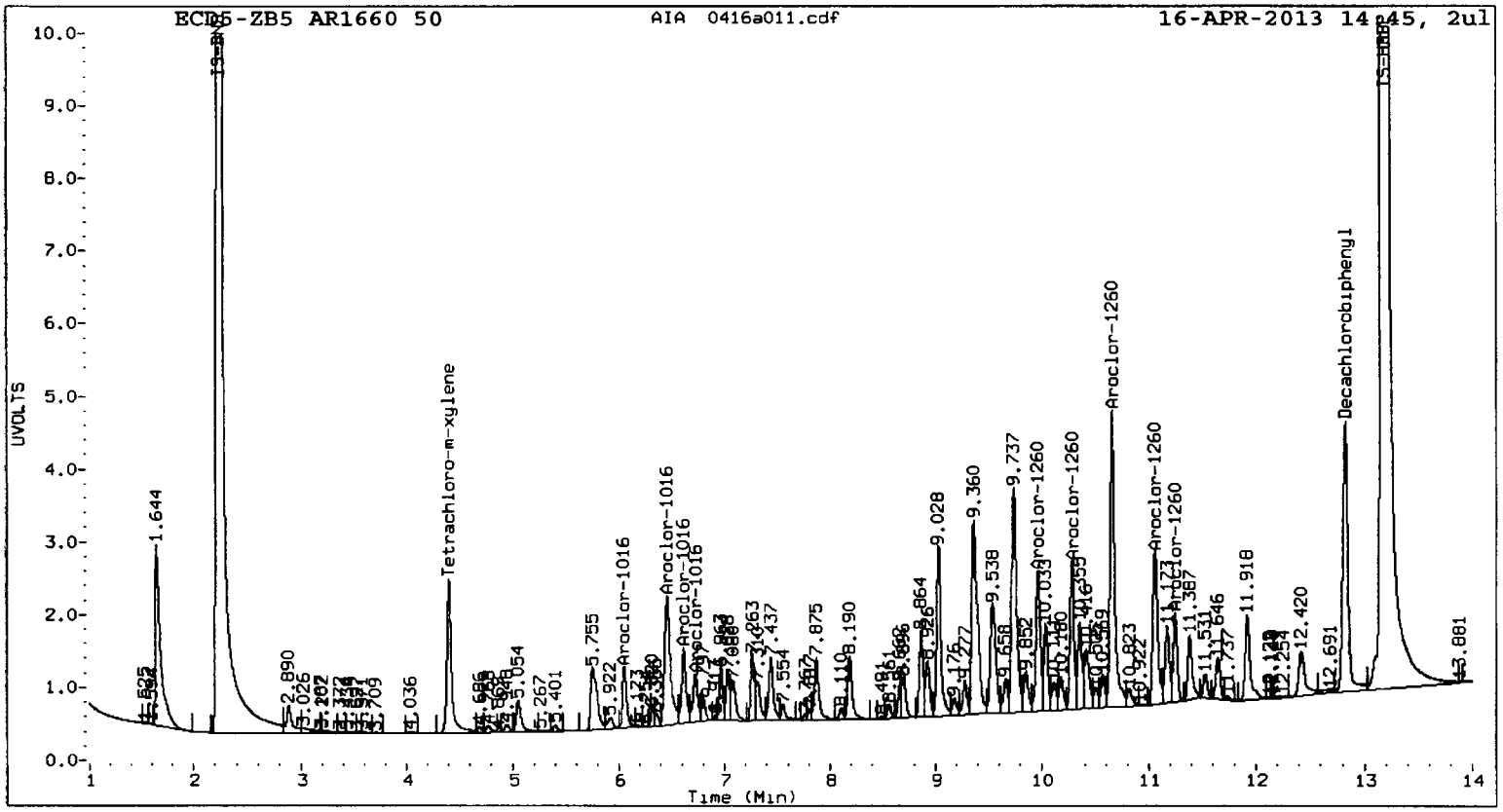
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
UVOLTS
Time (Min)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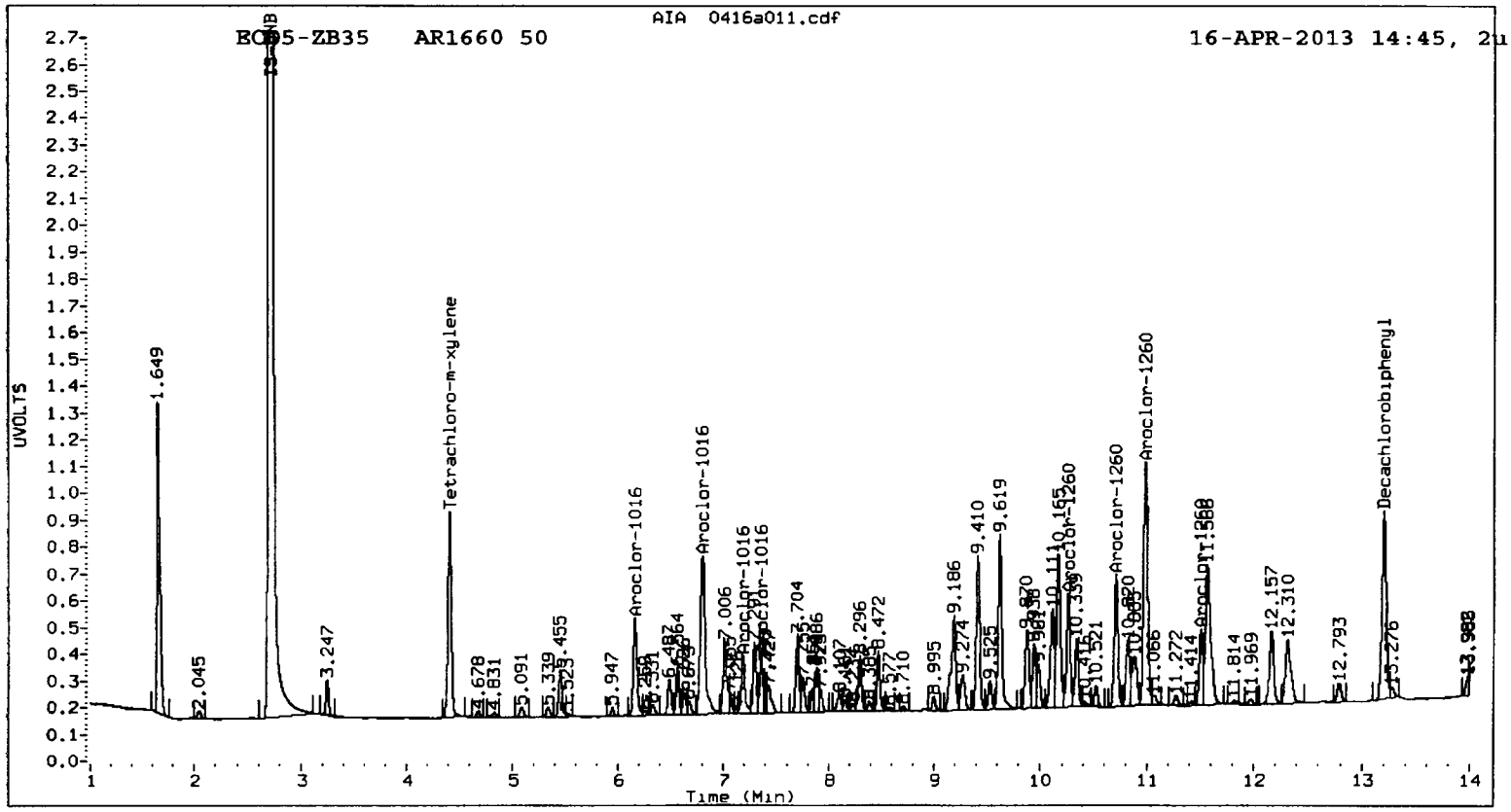
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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ECD5-ZB35 AR1660 50
16-APR-2013 14:45, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a012.d
Data file 2: 20130416.b/ical-2.b/0416a012.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 1000
Client ID:
Injection Date: 16-APR-2013 15:05
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.400	-0.001	56314884	4.403	-0.001	15543186	72.4	73.5	1.5	Tetrachloro-m-xylen
12.827	0.000	79380798	13.203	-0.002	15166727	61.5	65.3	6.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	181.0	183.8
Decachlorobiphenyl	153.7	163.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	47829881	-1.7
Hexabromobiphenyl	81878684	84747587	3.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14373421	-0.6
Hexabromobiphenyl	16263628	16751848	3.0

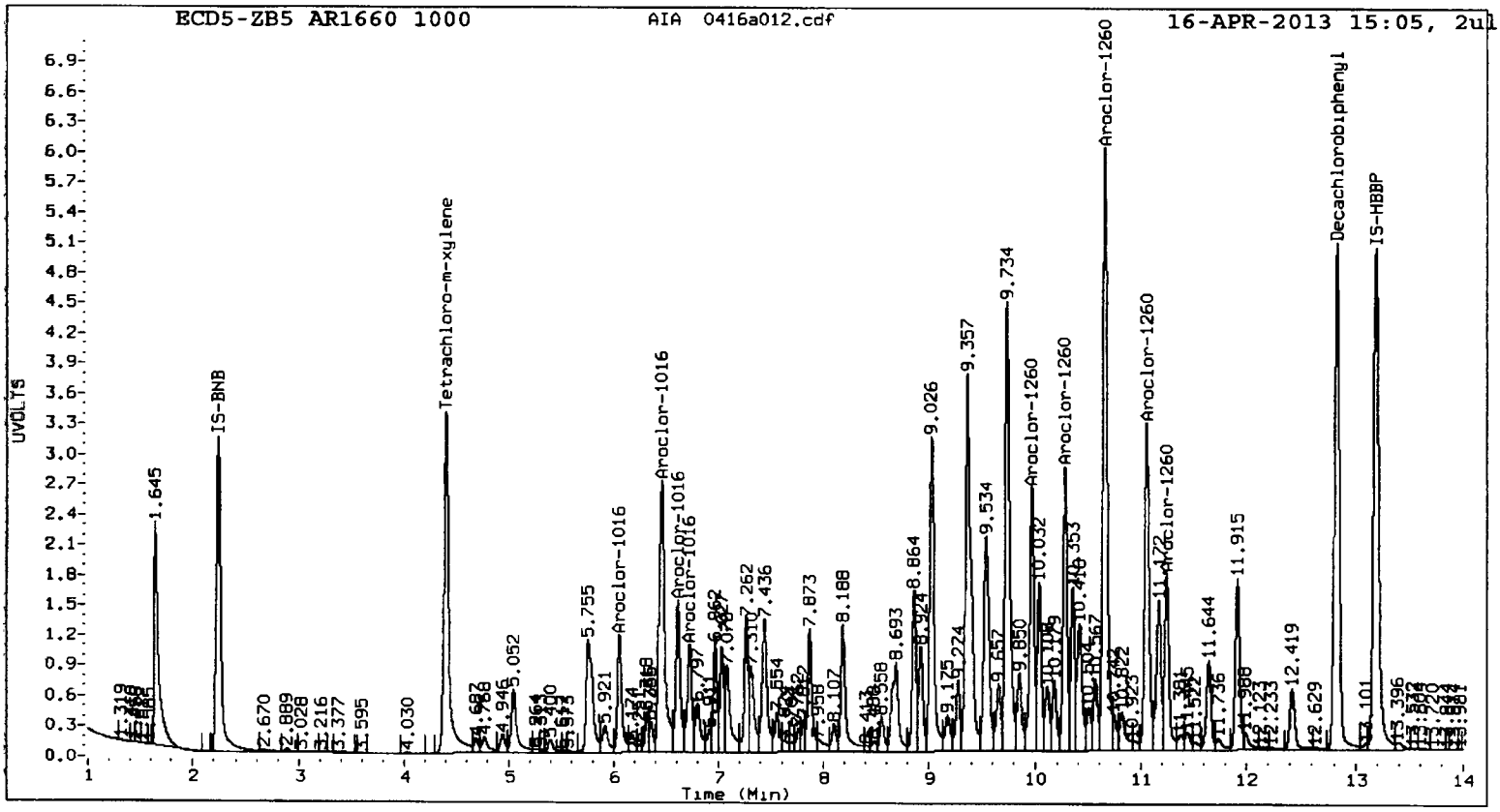
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.053	0.000	17066978	842.0	1	6.160	-0.001	6507335	780.3
Aroclor-1016	2	6.459	0.001	51616899	817.5	2	6.794	-0.002	14457644	823.6
Aroclor-1016	3	6.609	0.000	22552501	819.3	3	7.180	-0.001	3906266	853.5
Aroclor-1016	4	6.721	0.000	16572406	854.5	4	7.353	-0.001	3454027	815.2
Total Col1Ave (4 peaks):					833.3	Total Col2Ave (4 peaks):				818.2 RPD = 2
Corrected Ave (3 peaks):					826.2	Corrected Ave (3 peaks):				806.4 RPD = 2
Aroclor-1260	1	9.963	0.000	37224709	762.6	1	10.257	-0.002	7428470	797.4
Aroclor-1260	2	10.280	0.000	37718905	764.1	2	10.708	-0.001	9145661	815.5
Aroclor-1260	3	10.656	0.001	88513840	742.6	3	10.983	-0.001	18410396	820.8
Aroclor-1260	4	11.056	0.000	50597273	792.7	4	11.503	-0.002	5366701	839.1
Aroclor-1260	5	11.245	0.000	27326184	807.8	NS	---			----
Total Col1Ave (5 peaks):					774.0	Total Col2Ave (4 peaks):				818.2 RPD = 6
Corrected Ave (4 peaks):					765.5	Corrected Ave (3 peaks):				811.2 RPD = 6

Total PCB Area Col1 (4.501 - 12.727) = 1107201541 Col1 Total PCB = 1.9 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 228854645 Col2 Total PCB = 2.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
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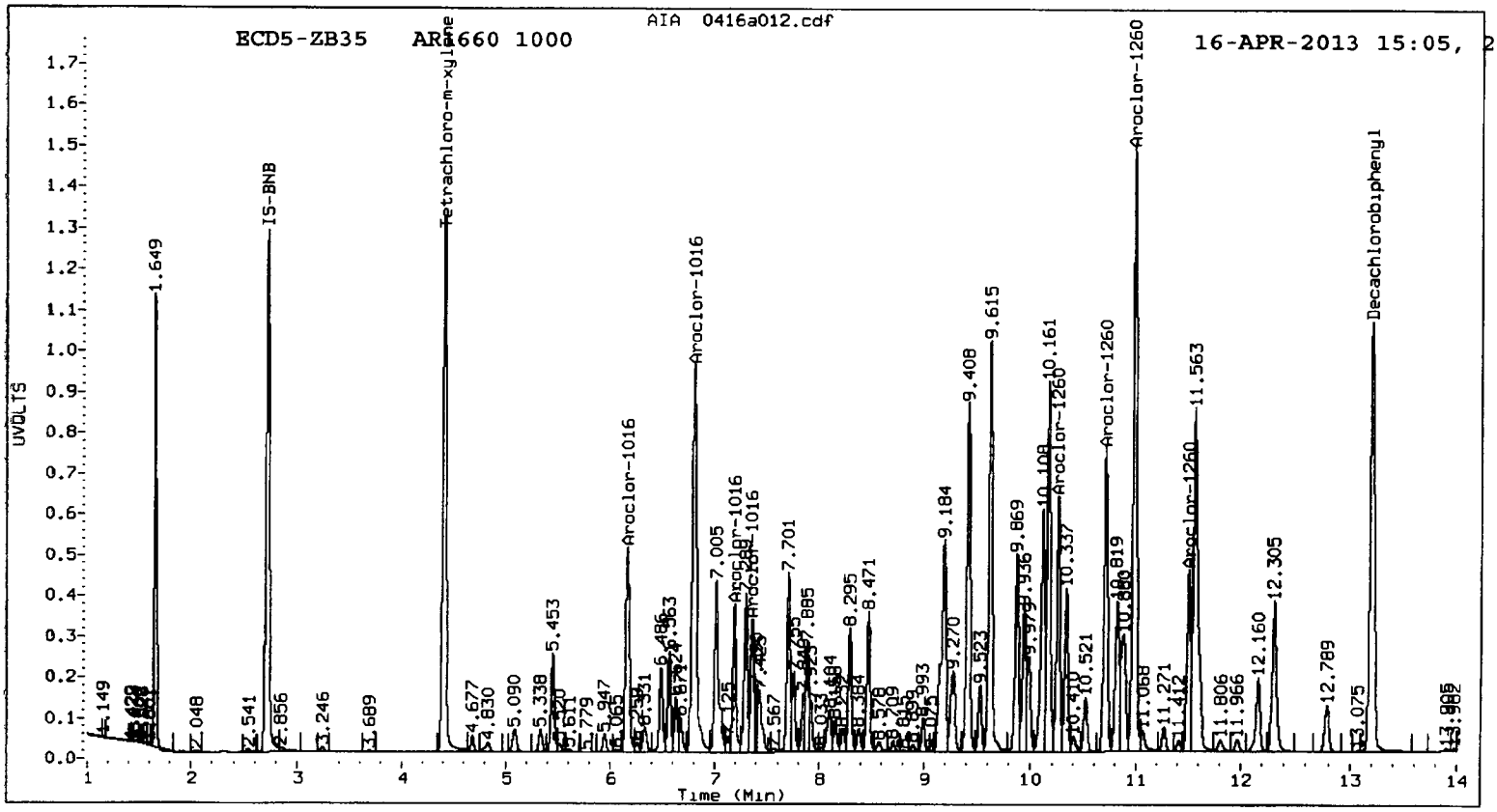
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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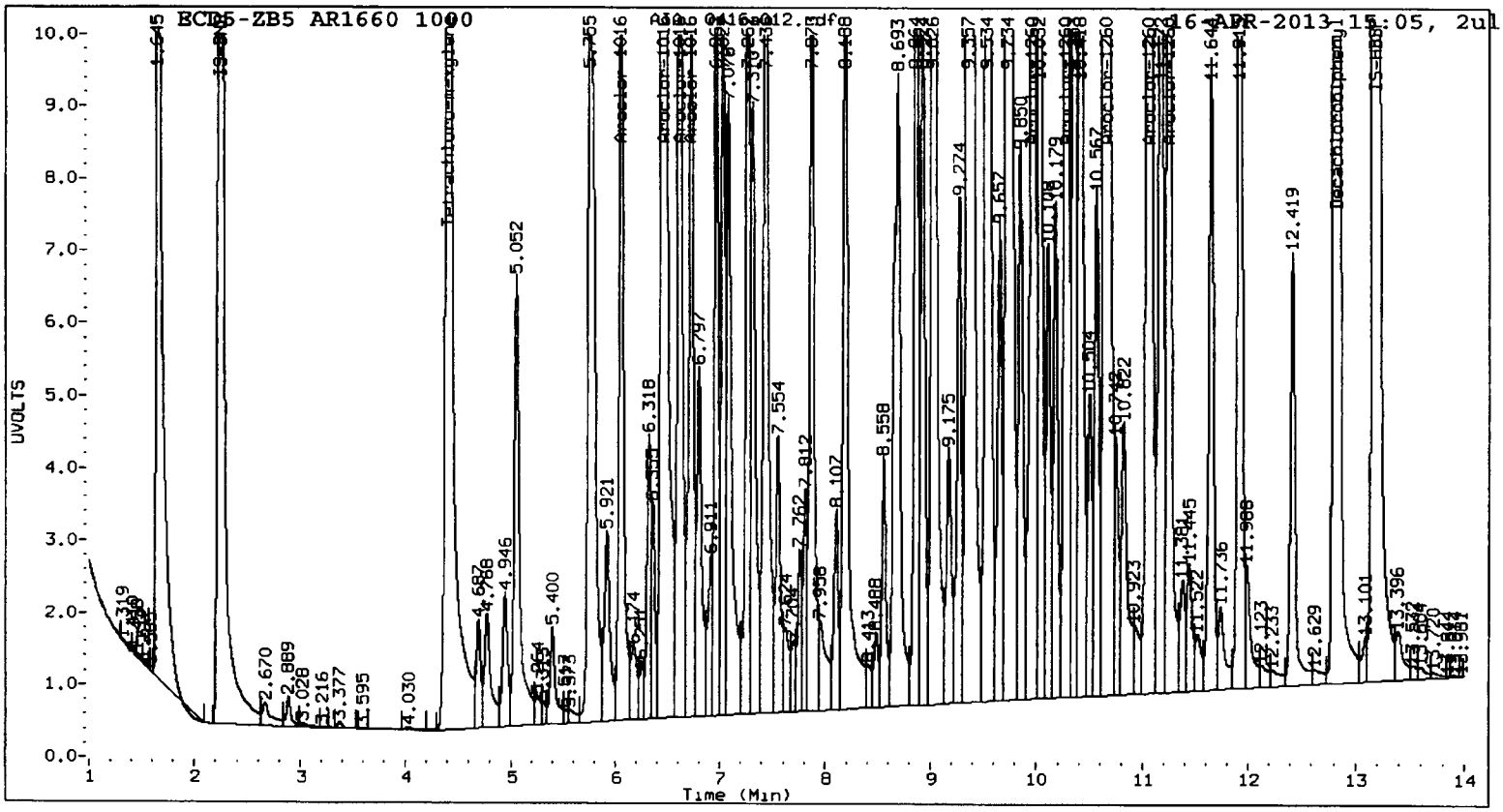
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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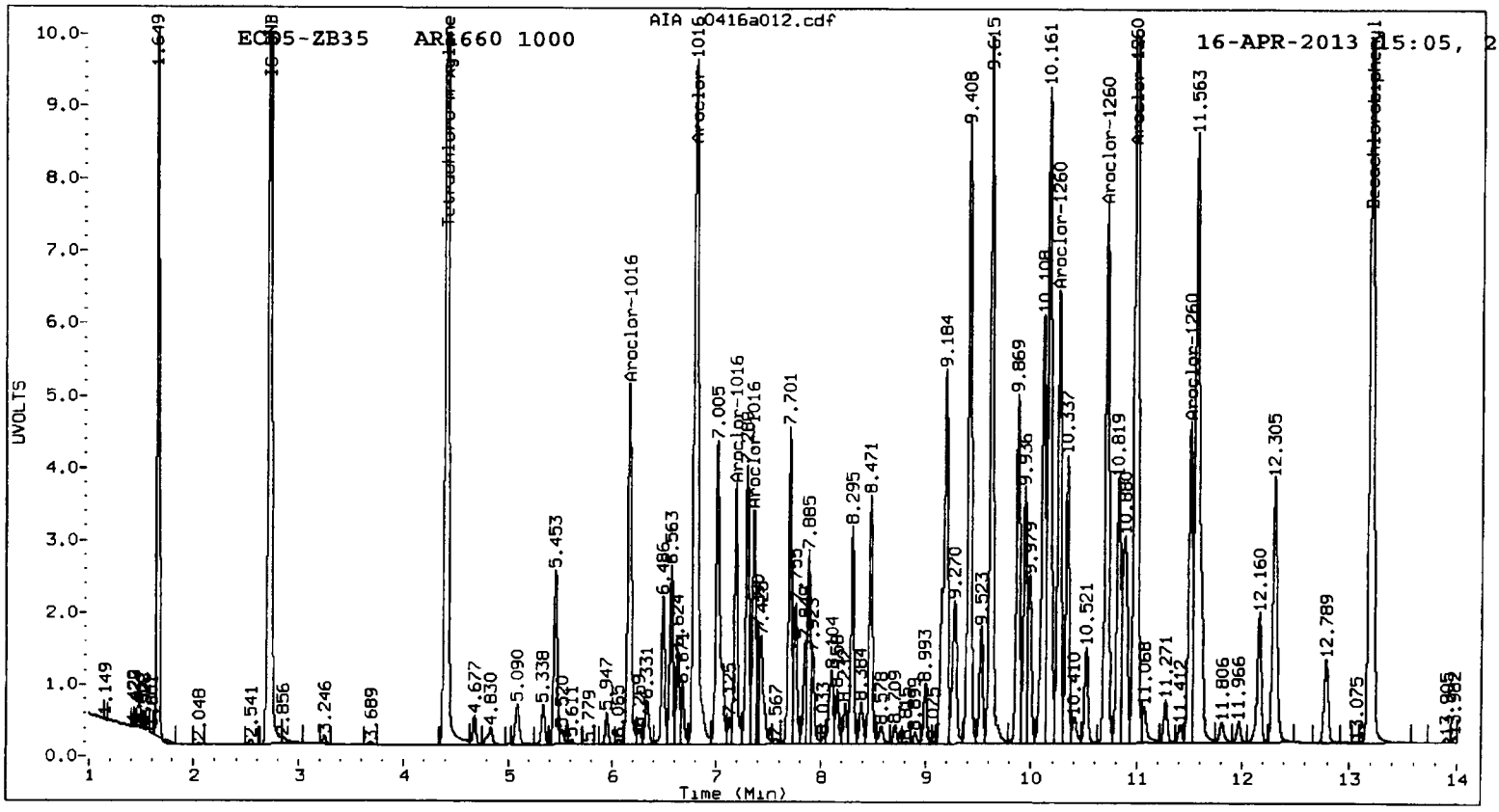
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a013.d
Data file 2: 20130416.b/ical-2.b/0416a013.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 100
Client ID:
Injection Date: 16-APR-2013 15:25
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.400	-0.001	6655668	4.403	0.000	1796284	8.3	8.2	0.3	Tetrachloro-m-xylen
12.826	-0.001	11218772	13.203	-0.001	1978613	8.5	8.4	0.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	20.7	20.6
Decachlorobiphenyl	21.2	21.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	49491748	1.7
Hexabromobiphenyl	81878684	87022078	6.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14814772	2.5
Hexabromobiphenyl	16263628	16888223	3.8

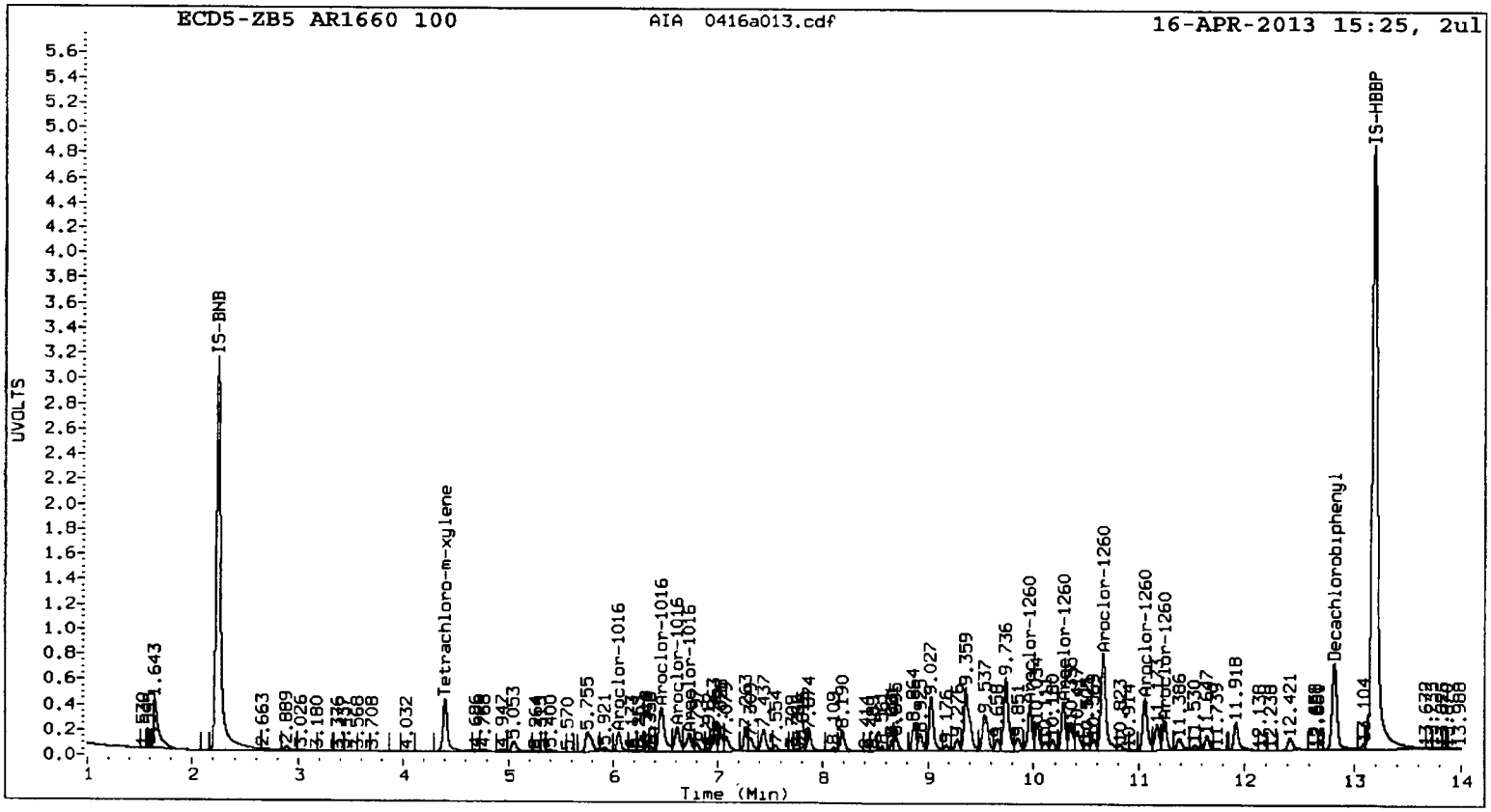
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.053	0.001	2247832	107.2	1	6.160	-0.001	892542	103.8
Aroclor-1016	2	6.461	0.003	6967688	106.6	2	6.796	0.000	1858090	102.7
Aroclor-1016	3	6.611	0.002	3091603	108.5	3	7.181	0.000	476659	101.0
Aroclor-1016	4	6.722	0.002	2214811	110.4	4	7.354	0.000	445027	101.9
Total Col1Ave (4 peaks):					108.2	Total Col2Ave (4 peaks):				102.4 RPD = 6
Corrected Ave (3 peaks):					107.4	Corrected Ave (3 peaks):				101.9 RPD = 5
Aroclor-1260	1	9.964	0.001	5047799	100.7	1	10.259	0.000	969916	103.3
Aroclor-1260	2	10.282	0.002	5063410	99.9	2	10.709	0.001	1160637	102.7
Aroclor-1260	3	10.659	0.003	12314379	100.6	3	10.985	0.001	2300349	101.7
Aroclor-1260	4	11.059	0.003	6558555	100.1	4	11.506	0.002	659340	102.3
Aroclor-1260	5	11.247	0.002	3496493	100.7	NS	---			----
Total Col1Ave (5 peaks):					100.4	Total Col2Ave (4 peaks):				102.5 RPD = 2
Corrected Ave (4 peaks):					100.3	Corrected Ave (3 peaks):				102.2 RPD = 2

Total PCB Area Col1 (4.501 - 12.727) = 145392043 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 29279549 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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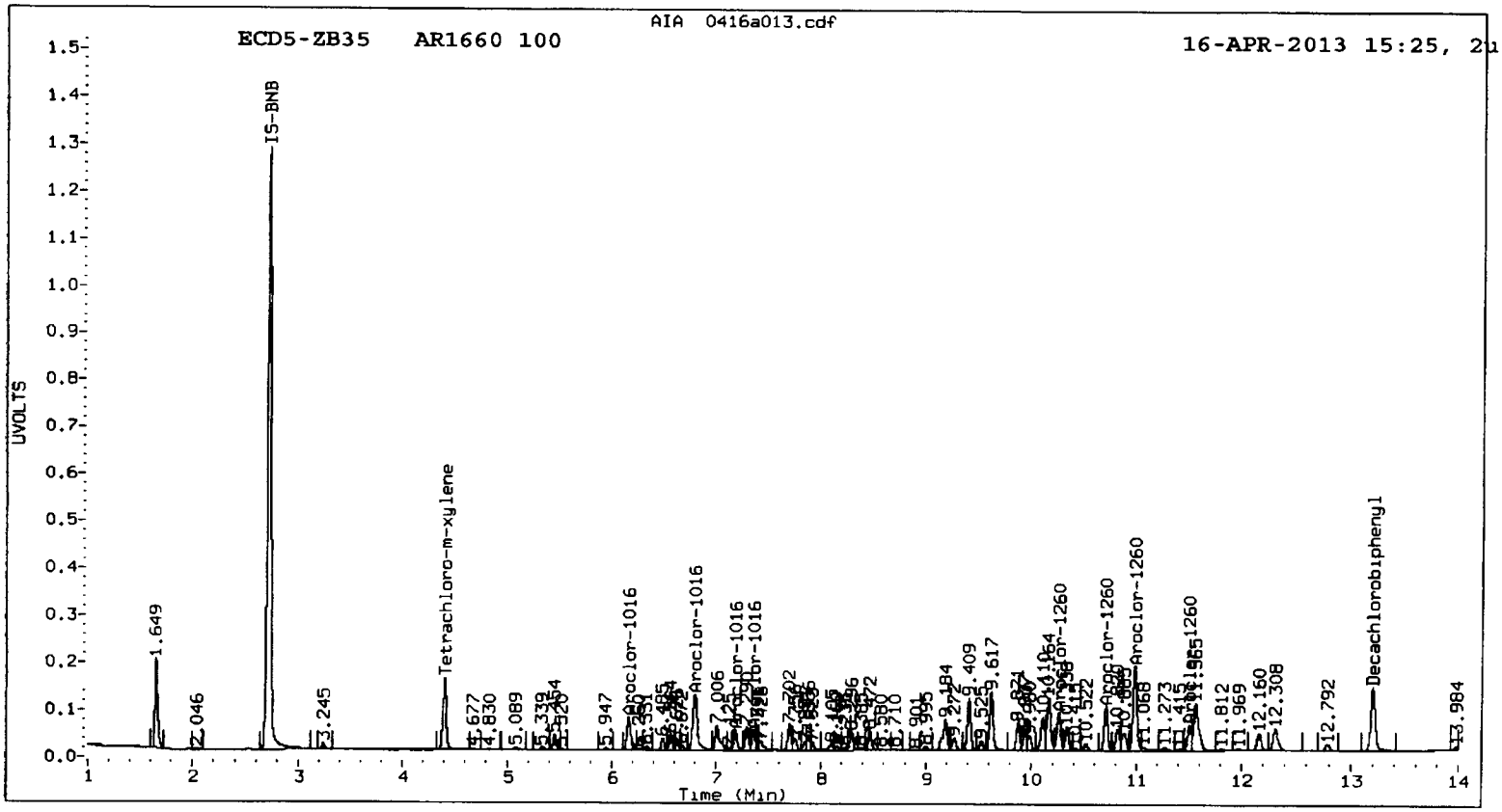
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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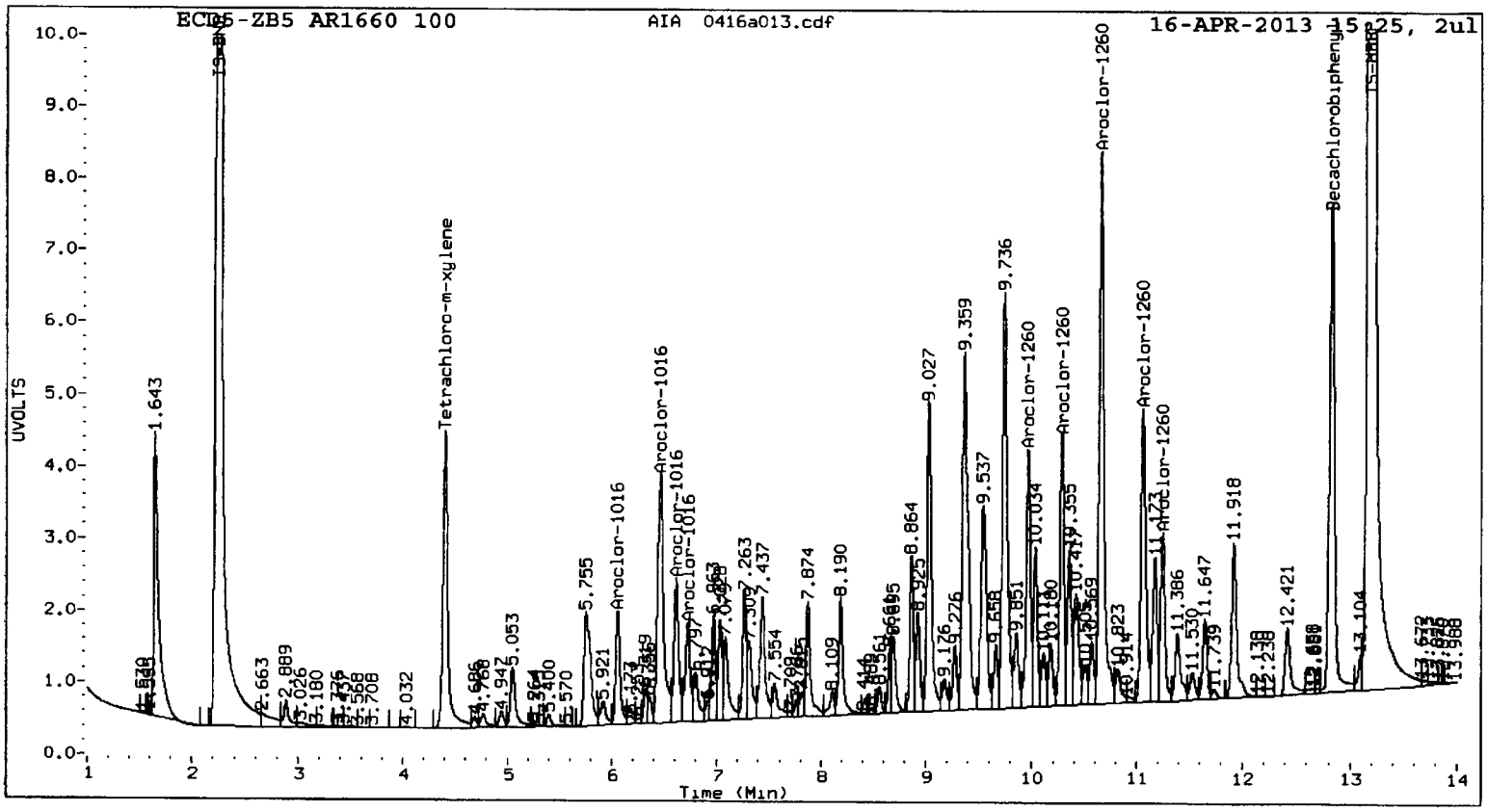
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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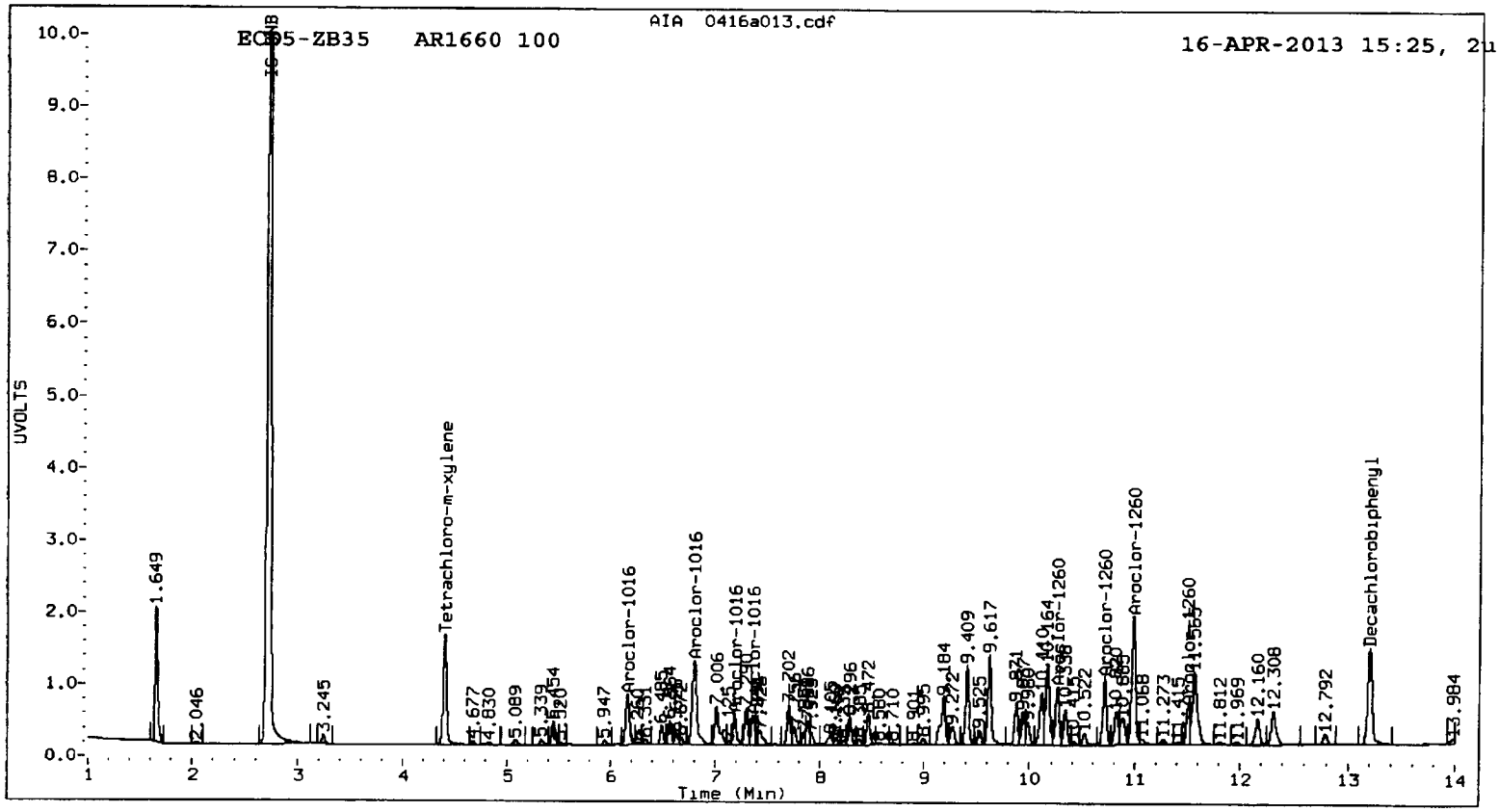
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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16-APR-2013 15:25, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a014.d
Data file 2: 20130416.b/ical-2.b/0416a014.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 500
Client ID:
Injection Date: 16-APR-2013 15:45
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.399	-0.002	29899586	4.404	0.001	8270146	37.9	38.3	0.9	Tetrachloro-m-xylen
12.825	-0.002	42666676	13.202	-0.002	8223049	33.4	35.2	5.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.8	95.6
Decachlorobiphenyl	83.4	87.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48471309	-0.4
Hexabromobiphenyl	81878684	83893855	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14695511	1.7
Hexabromobiphenyl	16263628	16865680	3.7

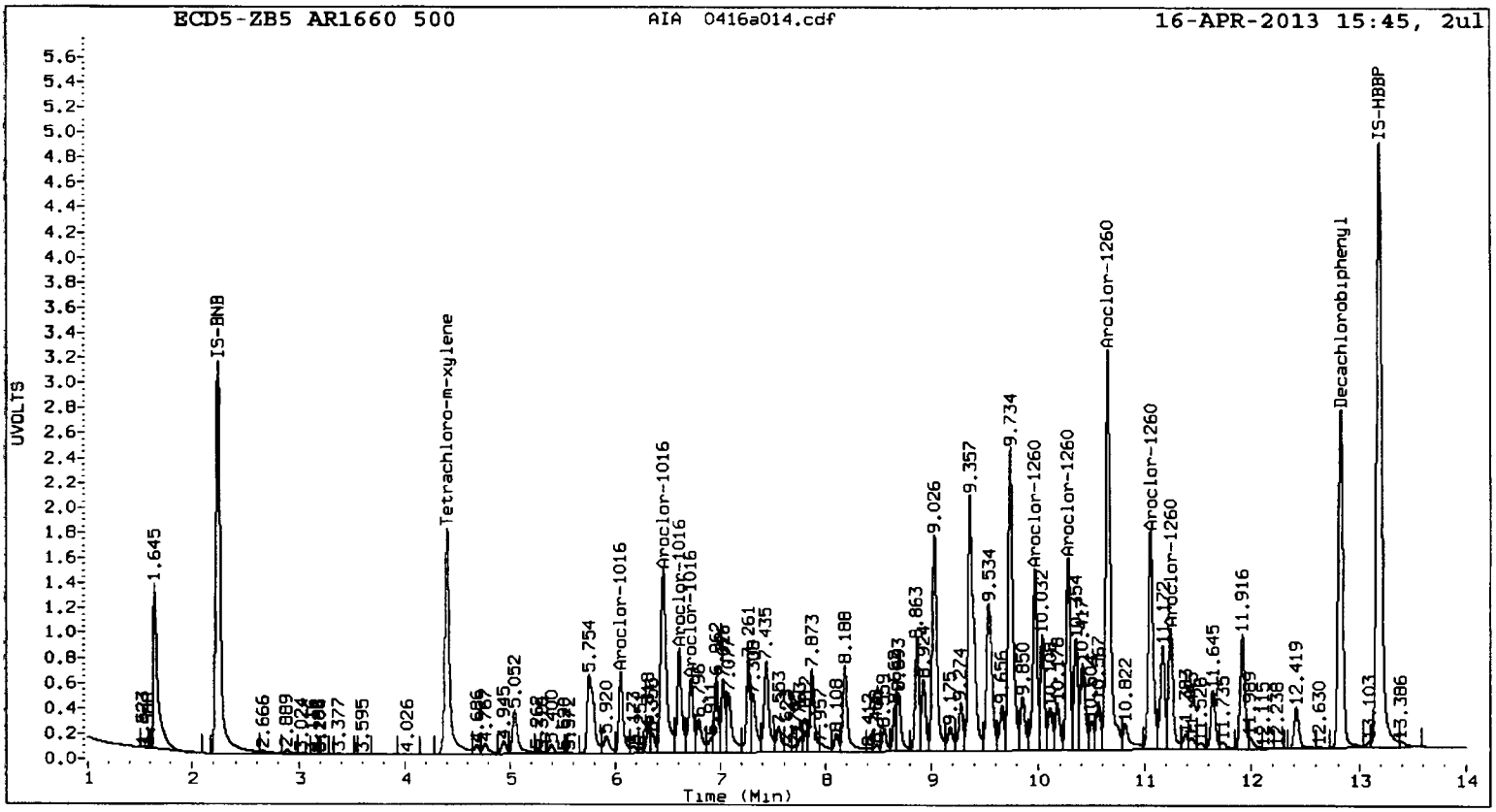
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.052	0.000	9280162	451.8	1	6.161	0.000	3626294	425.3
Aroclor-1016	2	6.458	0.000	28407314	443.9	2	6.796	0.000	7955554	443.3
Aroclor-1016	3	6.609	0.000	12484006	447.5	3	7.181	0.000	2122651	453.6
Aroclor-1016	4	6.720	0.000	9126889	464.4	4	7.354	0.000	1903999	439.5
	Total Col1Ave (4 peaks):				451.9		Total Col2Ave (4 peaks):			440.4 RPD = 3
	Corrected Ave (3 peaks):				447.7		Corrected Ave (3 peaks):			436.0 RPD = 3
Aroclor-1260	1	9.963	0.000	20426484	422.7	1	10.259	0.000	4055292	432.4
Aroclor-1260	2	10.280	0.000	20656871	422.7	2	10.709	0.000	4966879	439.9
Aroclor-1260	3	10.655	0.000	50291541	426.2	3	10.983	0.000	9938432	440.1
Aroclor-1260	4	11.056	0.000	27476201	434.9	4	11.505	0.000	2886443	448.3
Aroclor-1260	5	11.245	0.000	14690122	438.7	NS	---			----
	Total Col1Ave (5 peaks):				429.0		Total Col2Ave (4 peaks):			440.2 RPD = 3
	Corrected Ave (4 peaks):				426.6		Corrected Ave (3 peaks):			437.5 RPD = 3

Total PCB Area Col1 (4.501 - 12.727) = 598063876 Col1 Total PCB = 1.0 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 124755230 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
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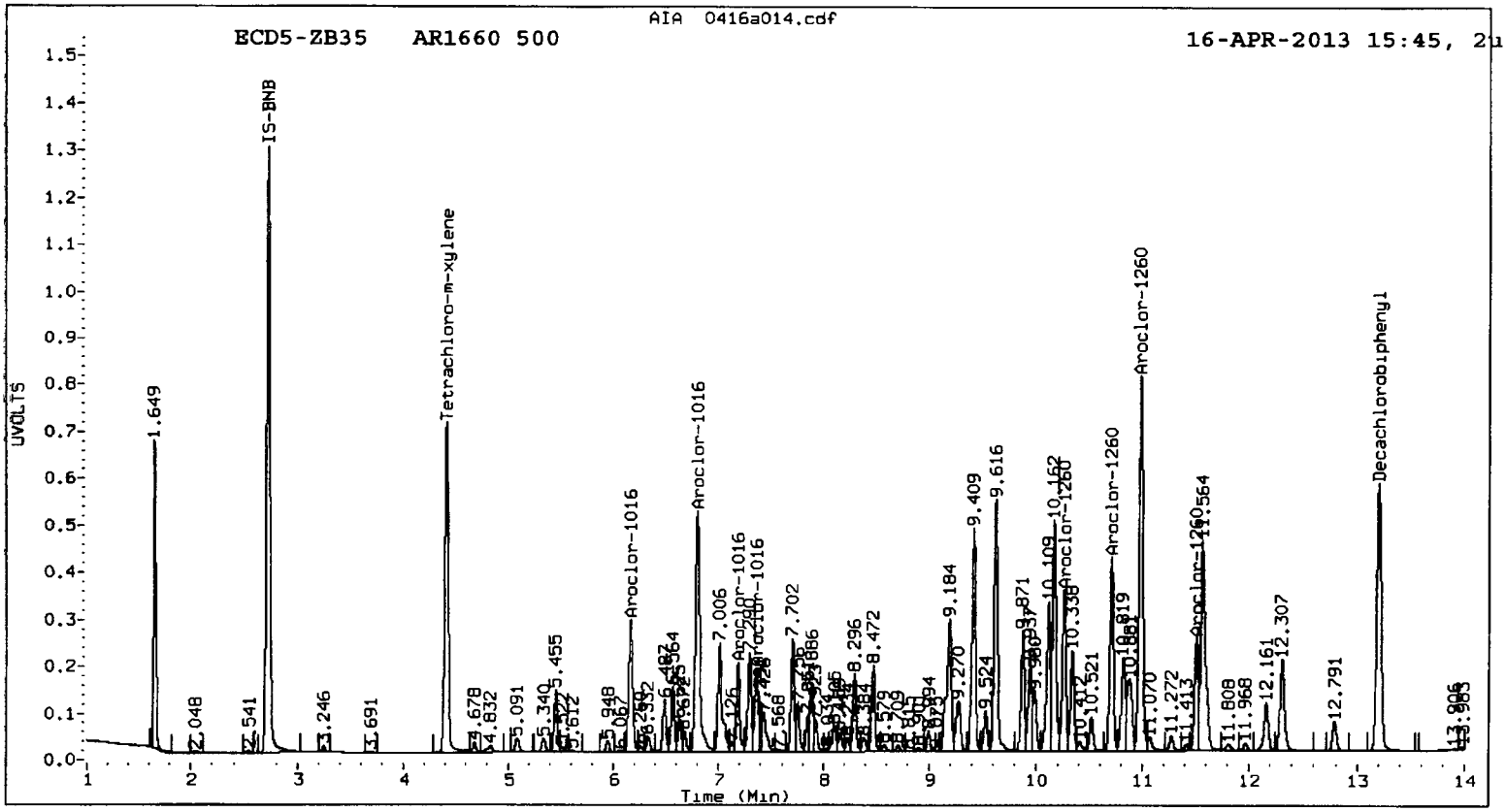
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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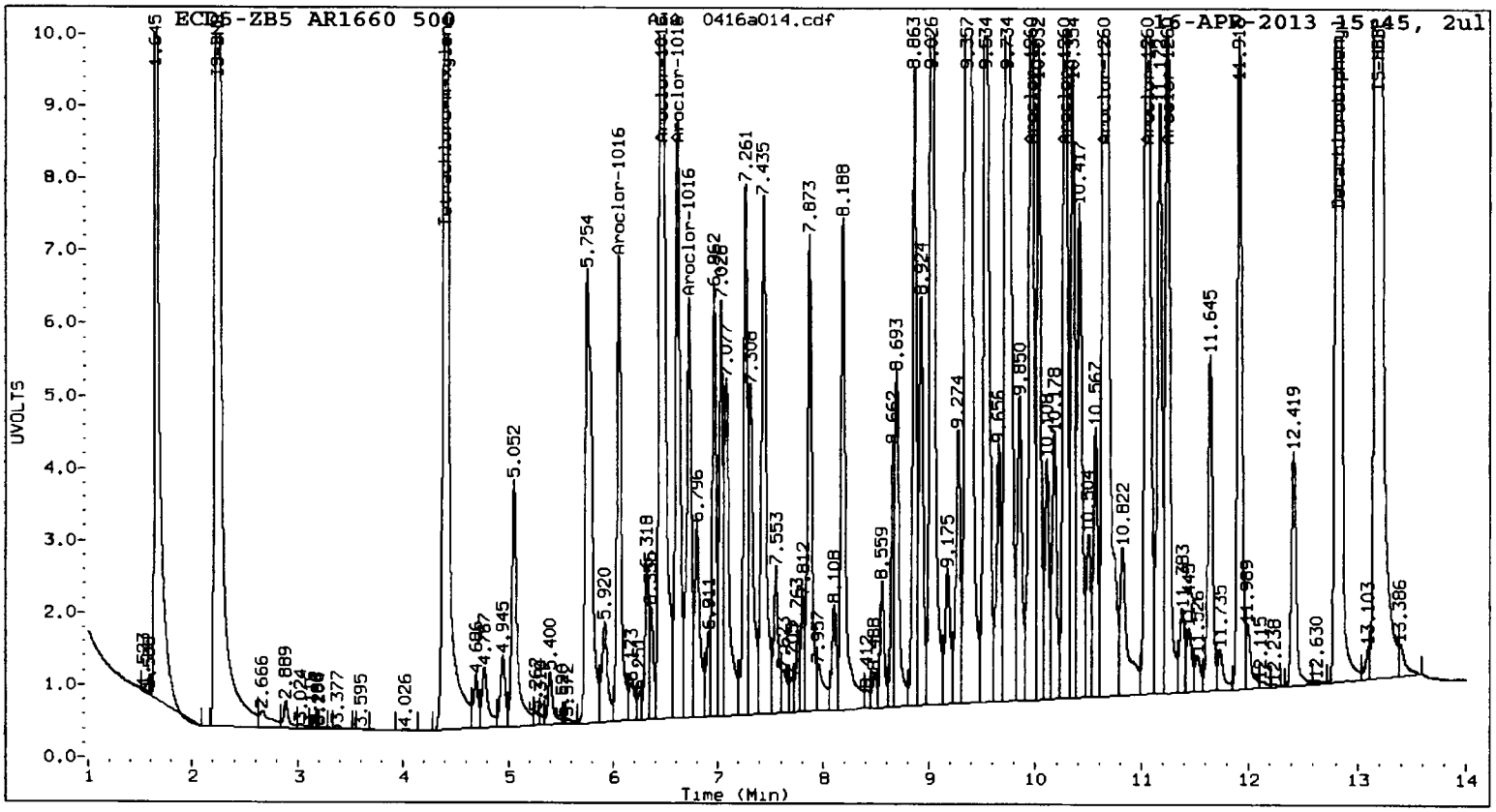
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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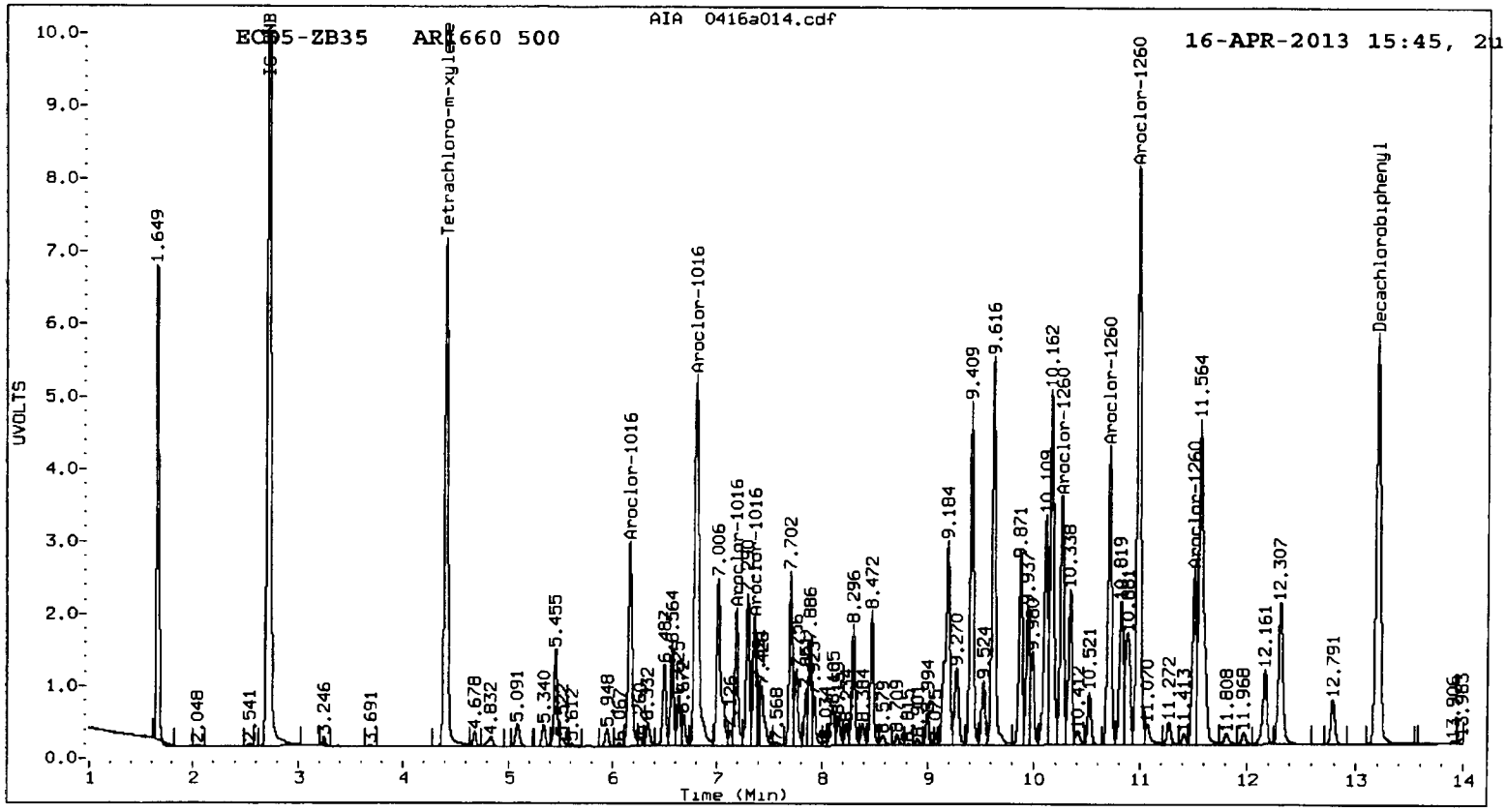
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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

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Data file 2: 20130416.b/ical-2.b/0416a015.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 16-APR-2013 16:05
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	-0.001	15476663	4.403	0.000	4191256	19.5	19.5	0.1	Tetrachloro-m-xylen
12.827	0.000	22745600	13.204	0.000	4356340	17.9	18.5	3.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	48.8	48.9
Decachlorobiphenyl	44.7	46.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48740551	0.2
Hexabromobiphenyl	81878684	82526190	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14577569	0.8
Hexabromobiphenyl	16263628	16939274	4.2

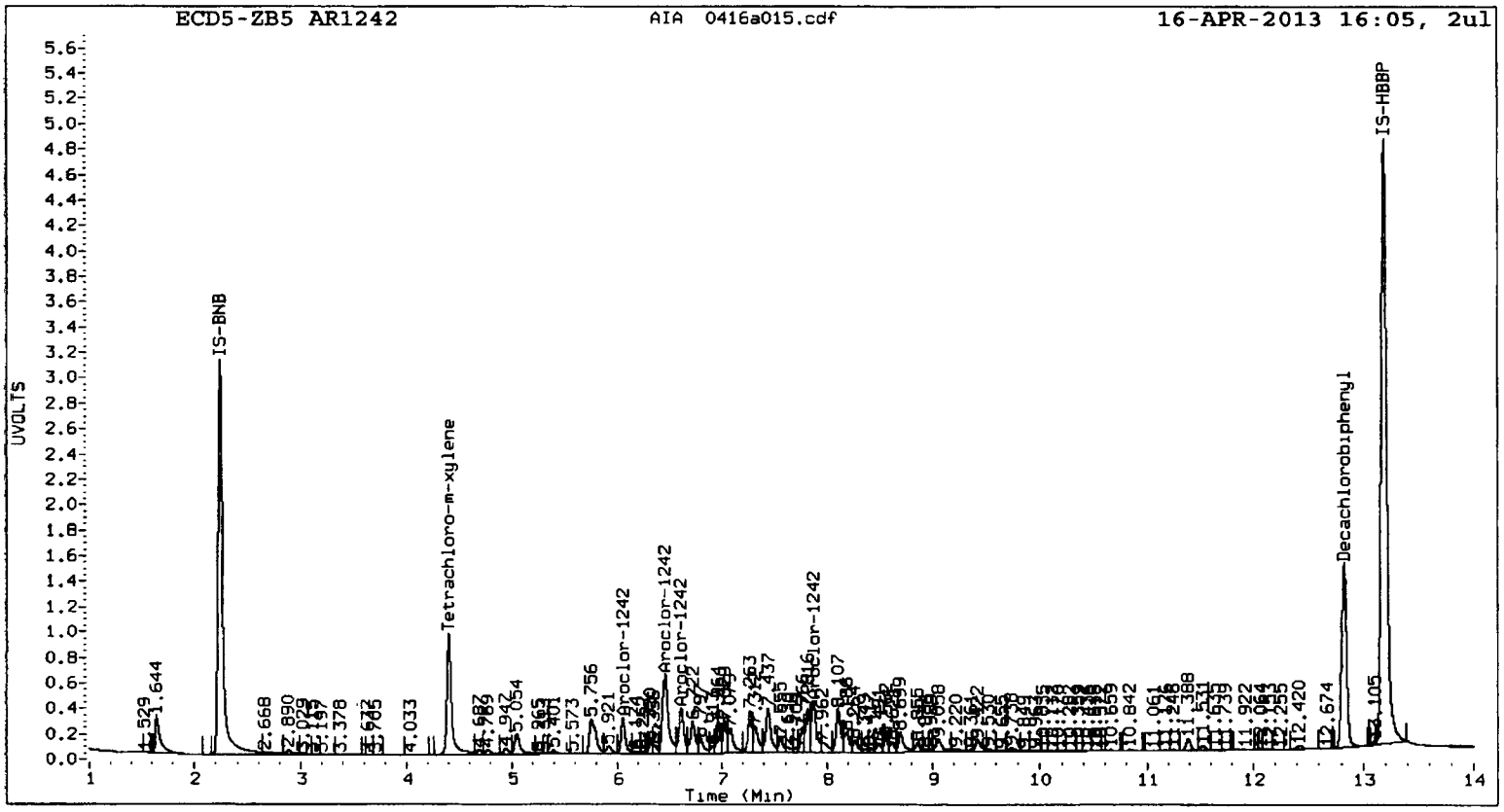
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.054	0.000	4010075	250.0	1	6.160	0.000	1565936	250.0
Aroclor-1242	2	6.461	0.000	12344357	250.0	2	6.797	0.000	3340234	250.0
Aroclor-1242	3	6.611	0.000	5467771	250.0	3	7.006	0.000	1399896	250.0
Aroclor-1242	4	7.870	0.000	6839059	250.0	4	8.236	0.000	1151658	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.501 - 12.727) = 115208487 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 24881228 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
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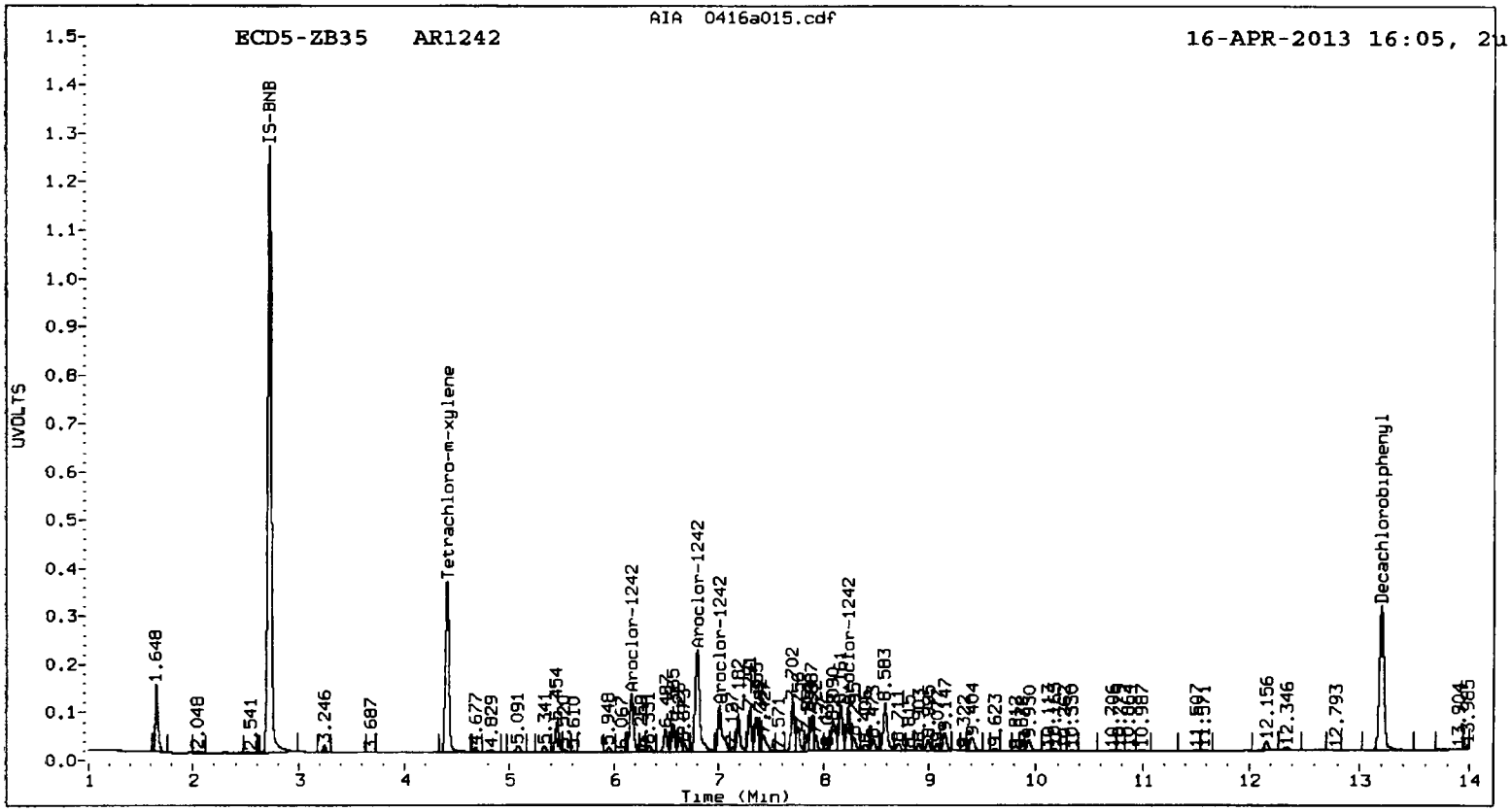
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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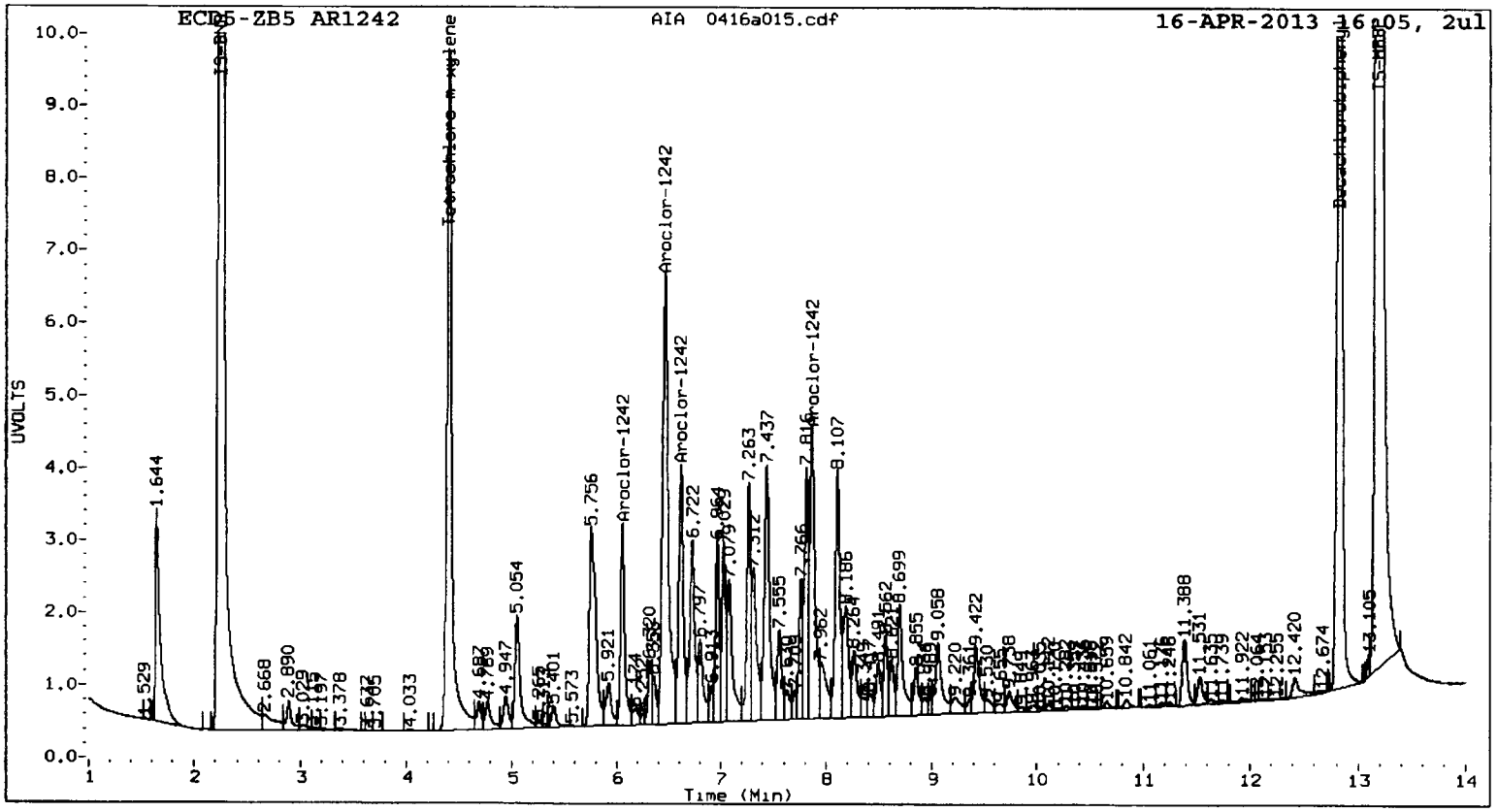
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl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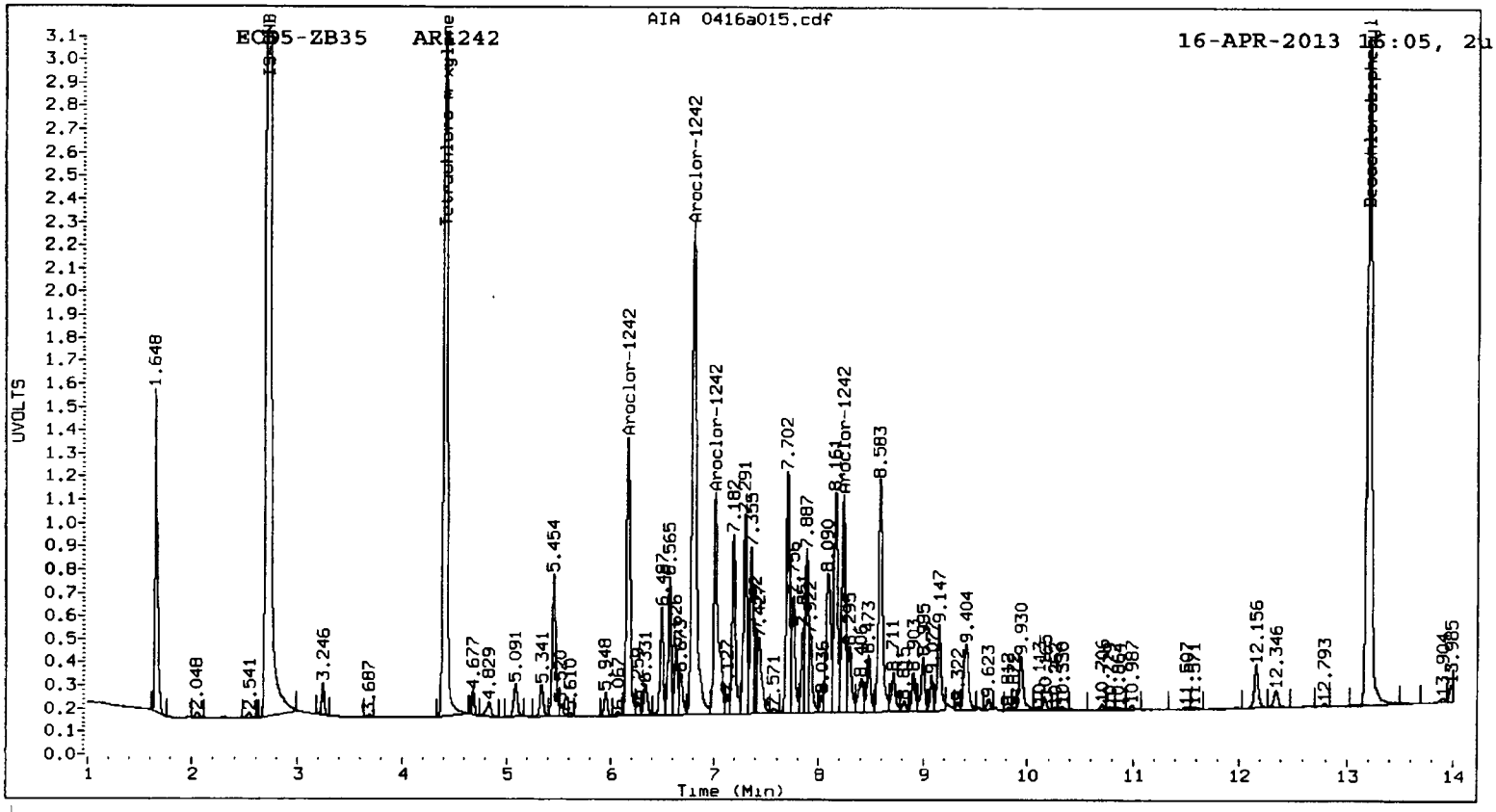
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

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Data file 2: 20130416.b/ical-2.b/0416a016.d
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Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 16-APR-2013 16:25
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.401	0.000	15352287	4.403	0.000	4274180	18.5	18.9	1.9	Tetrachloro-m-xylen
12.826	-0.001	22868834	13.203	-0.001	4397853	17.3	18.0	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	46.3	47.2
Decachlorobiphenyl	43.3	44.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50911859	4.7
Hexabromobiphenyl	81878684	85659578	4.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	15380233	6.4
Hexabromobiphenyl	16263628	17640987	8.5

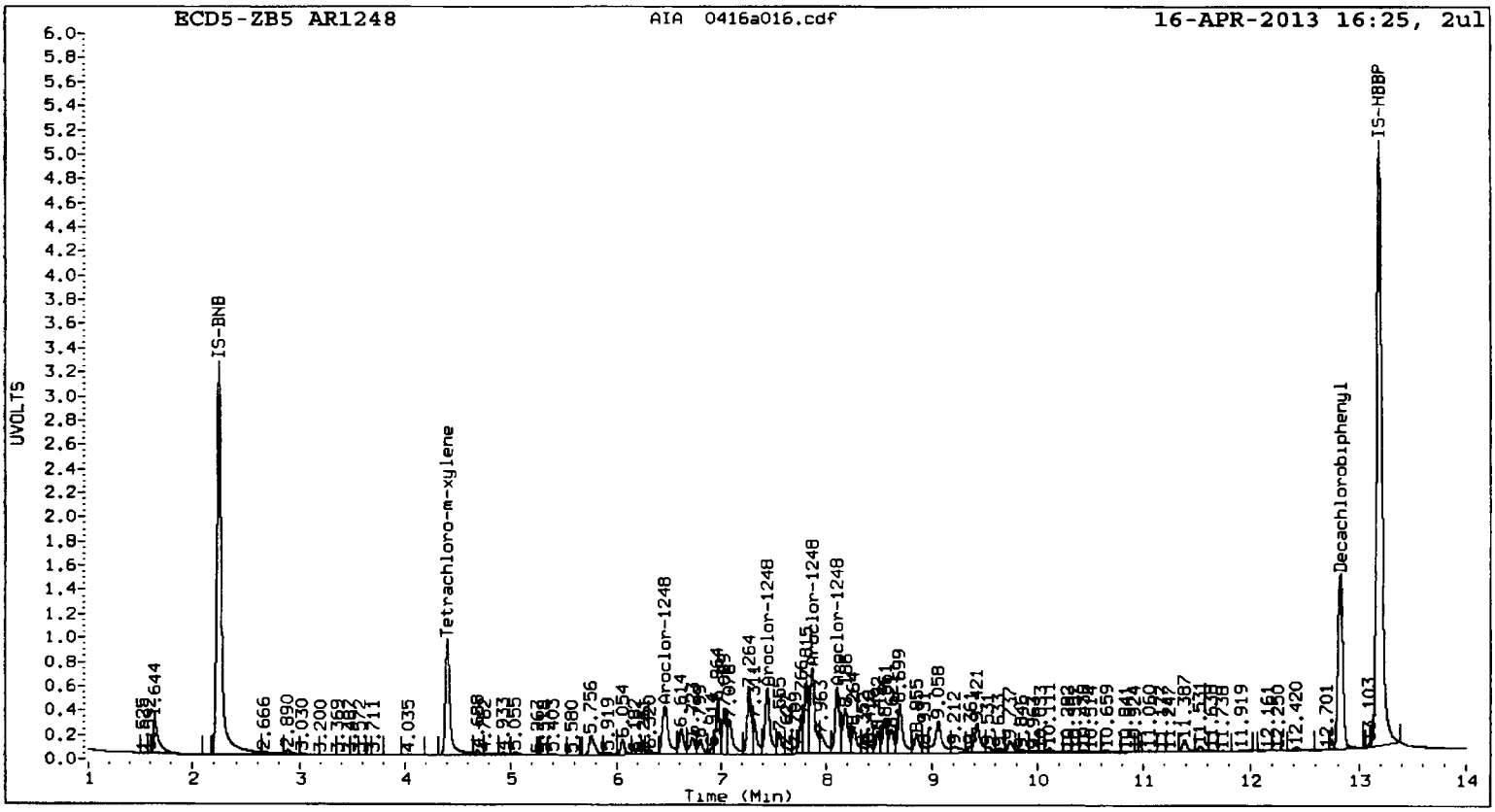
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	6.459	0.000	8037513	250.0	1	6.793	0.000	2150915	250.0
Aroclor-1248	2	7.438	0.000	8904332	250.0	2	7.703	0.000	1765581	250.0
Aroclor-1248	3	7.870	0.000	11493663	250.0	3	8.236	0.000	1816783	250.0
Aroclor-1248	4	8.107	0.000	8135743	250.0	4	8.582	0.000	2372312	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.501 - 12.727) = 150129044 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 31215329 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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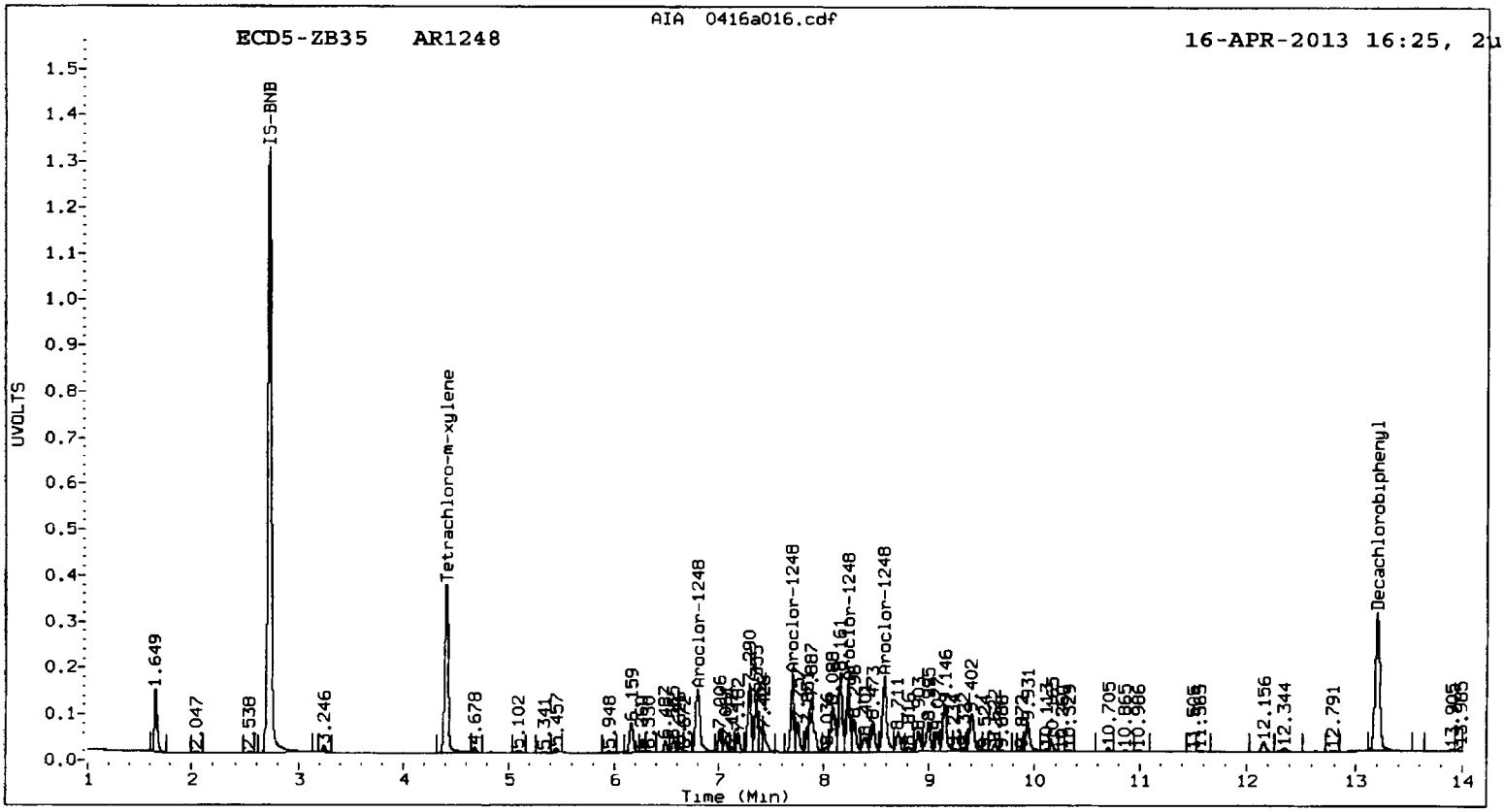
16-APR-2013 16:25, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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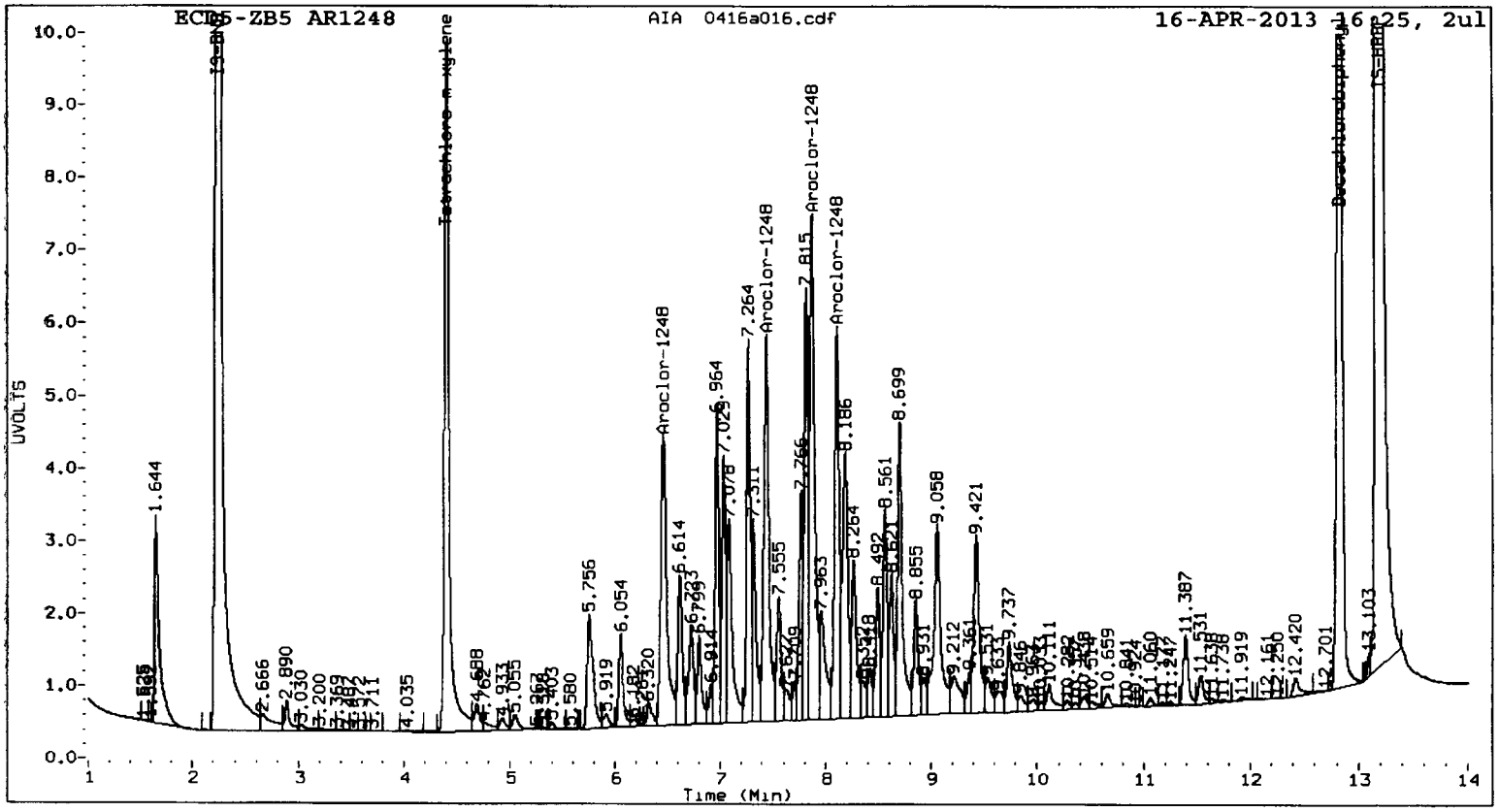
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl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Time (Min)
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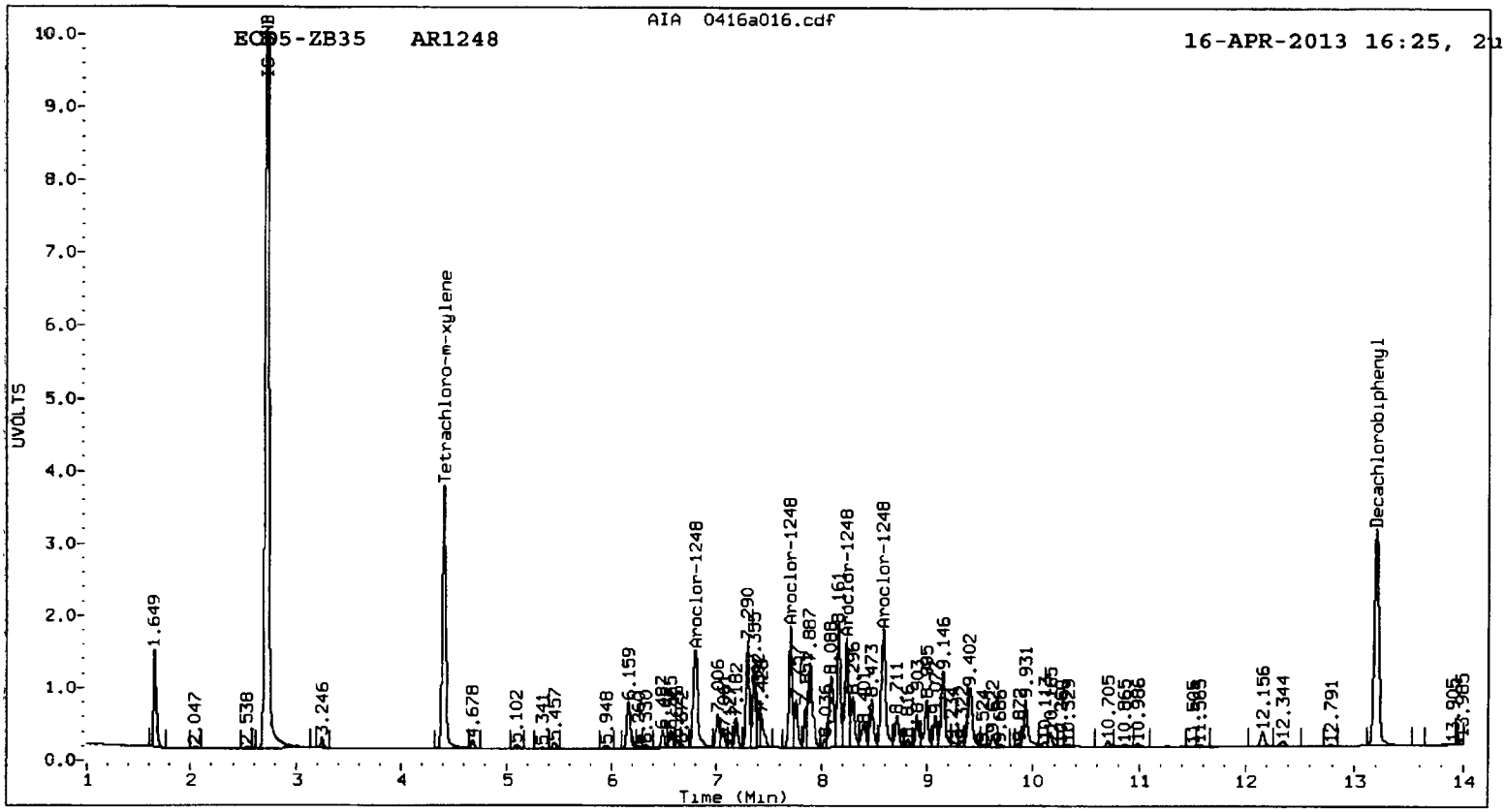
Aroclor-1248
Decachlorobiphenyl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16-APR-2013 16:25, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a017.d
Data file 2: 20130416.b/ical-2.b/0416a017.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 16-APR-2013 16:46
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.401	0.000	15464997	4.403	0.000	4201484	19.4	19.5	0.1	Tetrachloro-m-xylen
12.828	0.001	23082667	13.203	-0.001	4408966	18.3	18.9	3.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	48.6	48.6
Decachlorobiphenyl	45.7	47.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48930377	0.6
Hexabromobiphenyl	81878684	81889180	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14676530	1.5
Hexabromobiphenyl	16263628	16779133	3.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.189	0.000	11379587	250.0	1	8.297	0.000	1688939	250.0
Aroclor-1254	2	8.561	0.000	7552211	250.0	2	8.472	0.000	2085307	250.0
Aroclor-1254	3	8.698	0.000	15160758	250.0	3	8.995	0.000	1612149	250.0
Aroclor-1254	4	9.051	0.000	16270432	250.0	4	9.146	0.000	3483716	250.0
Aroclor-1254	5	9.360	0.000	6696890	250.0	5	9.933	0.000	2011720	250.0

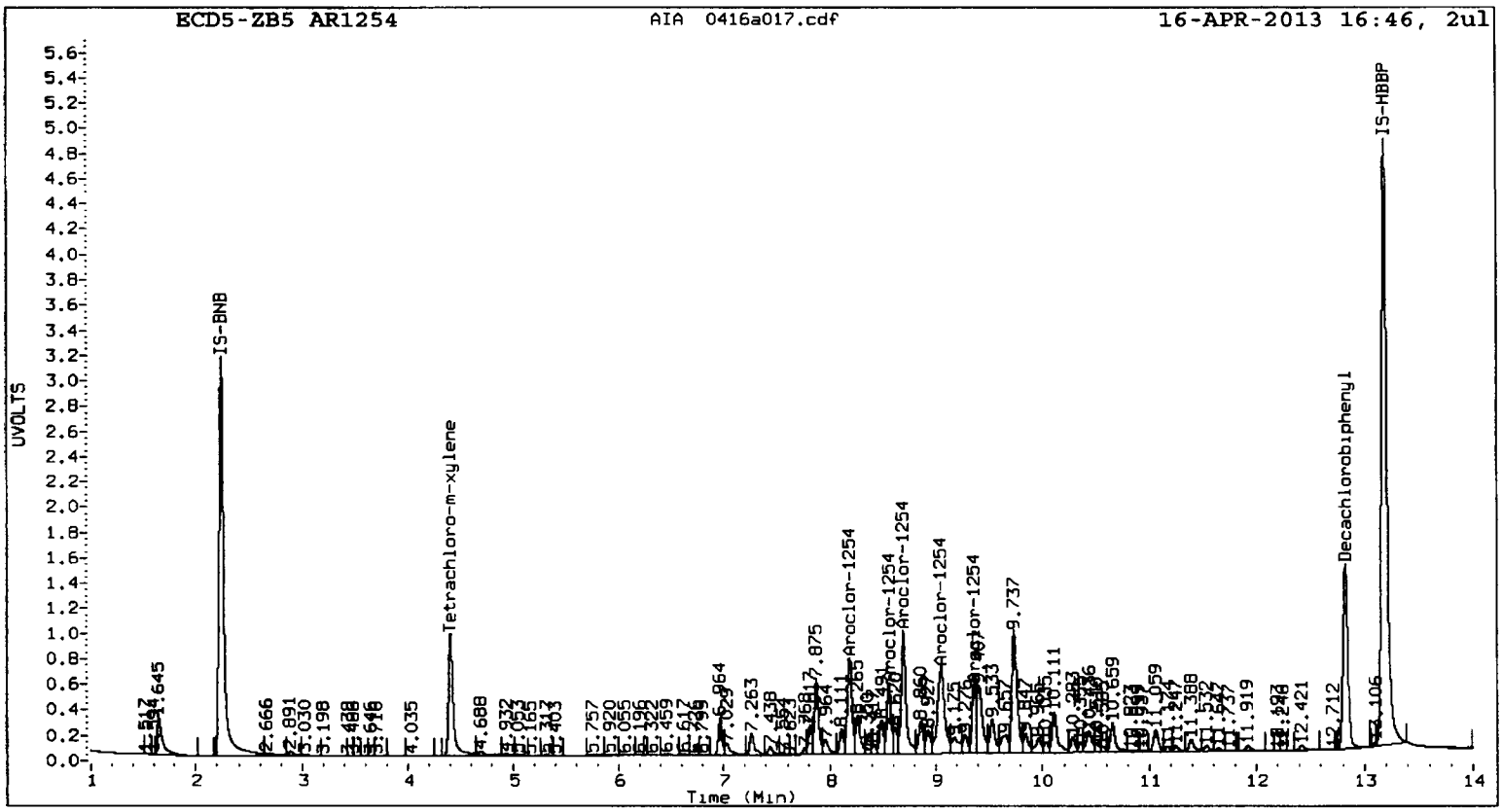
Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (4.501 - 12.727) = 174031896 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 34261272 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
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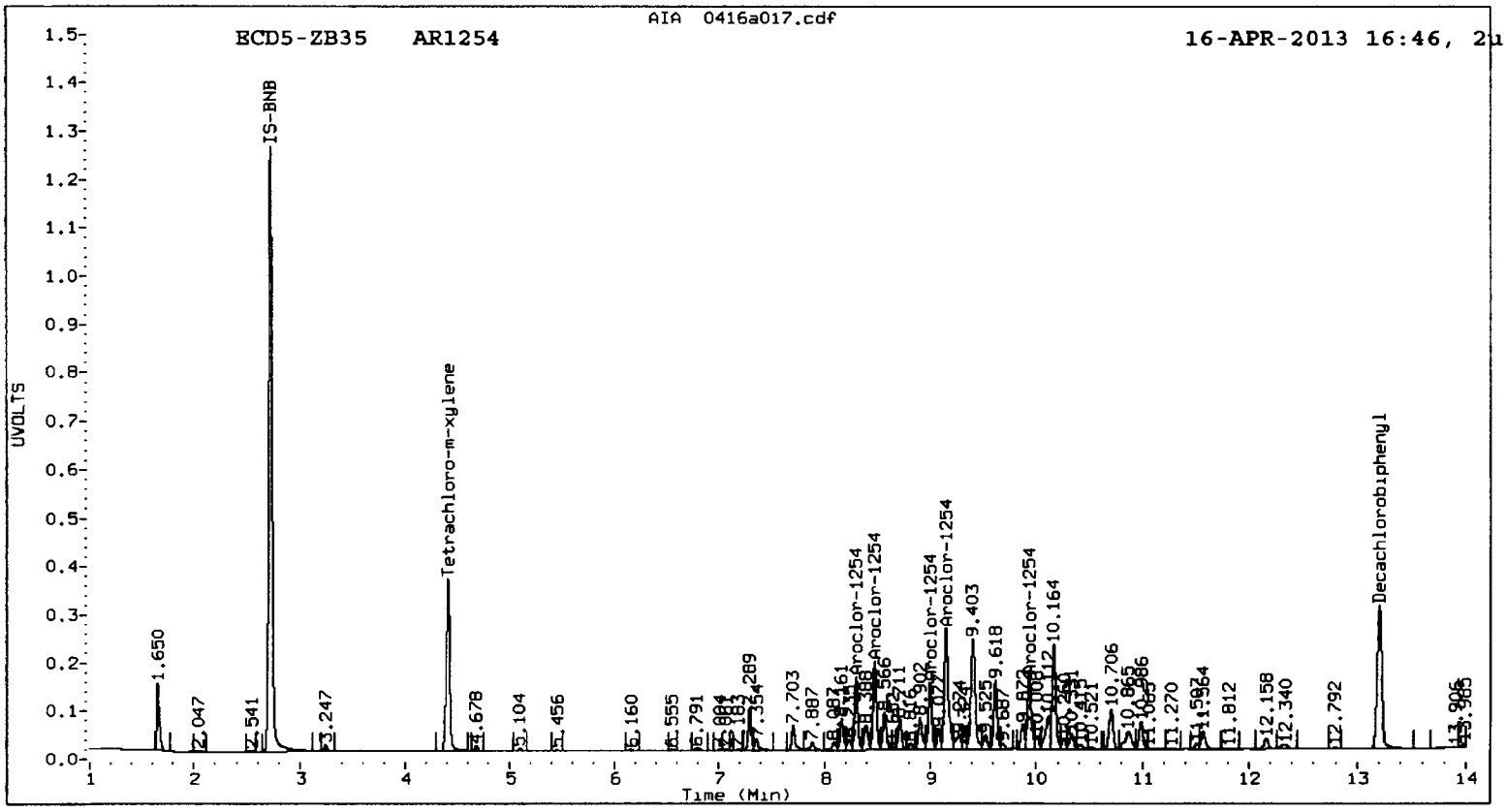
9.737
Decachlorobiphenyl
IS-HBBP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IS-BNB
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Aroclor-1254
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Aroclor-1254
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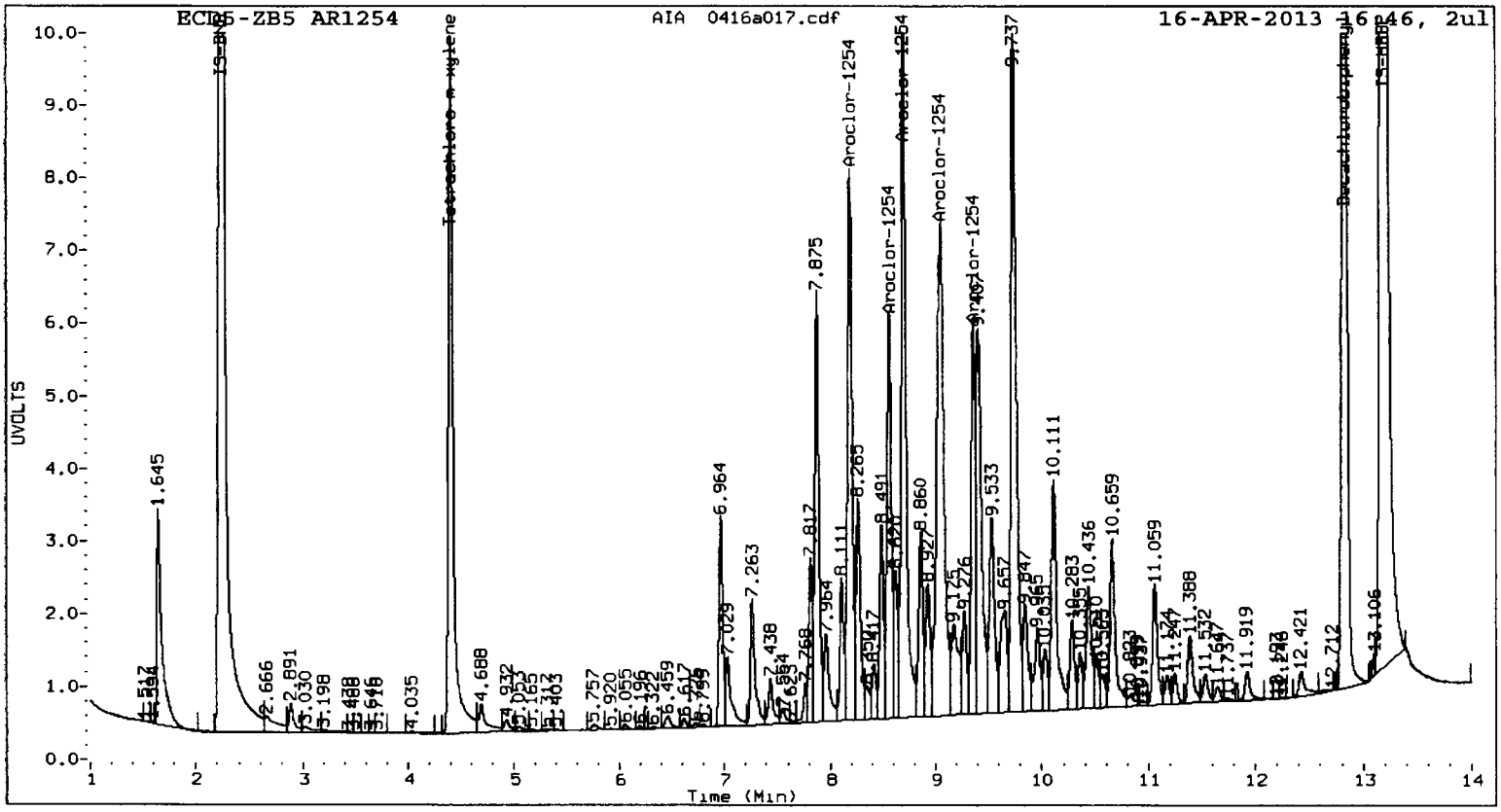
Decachlorobiphenyl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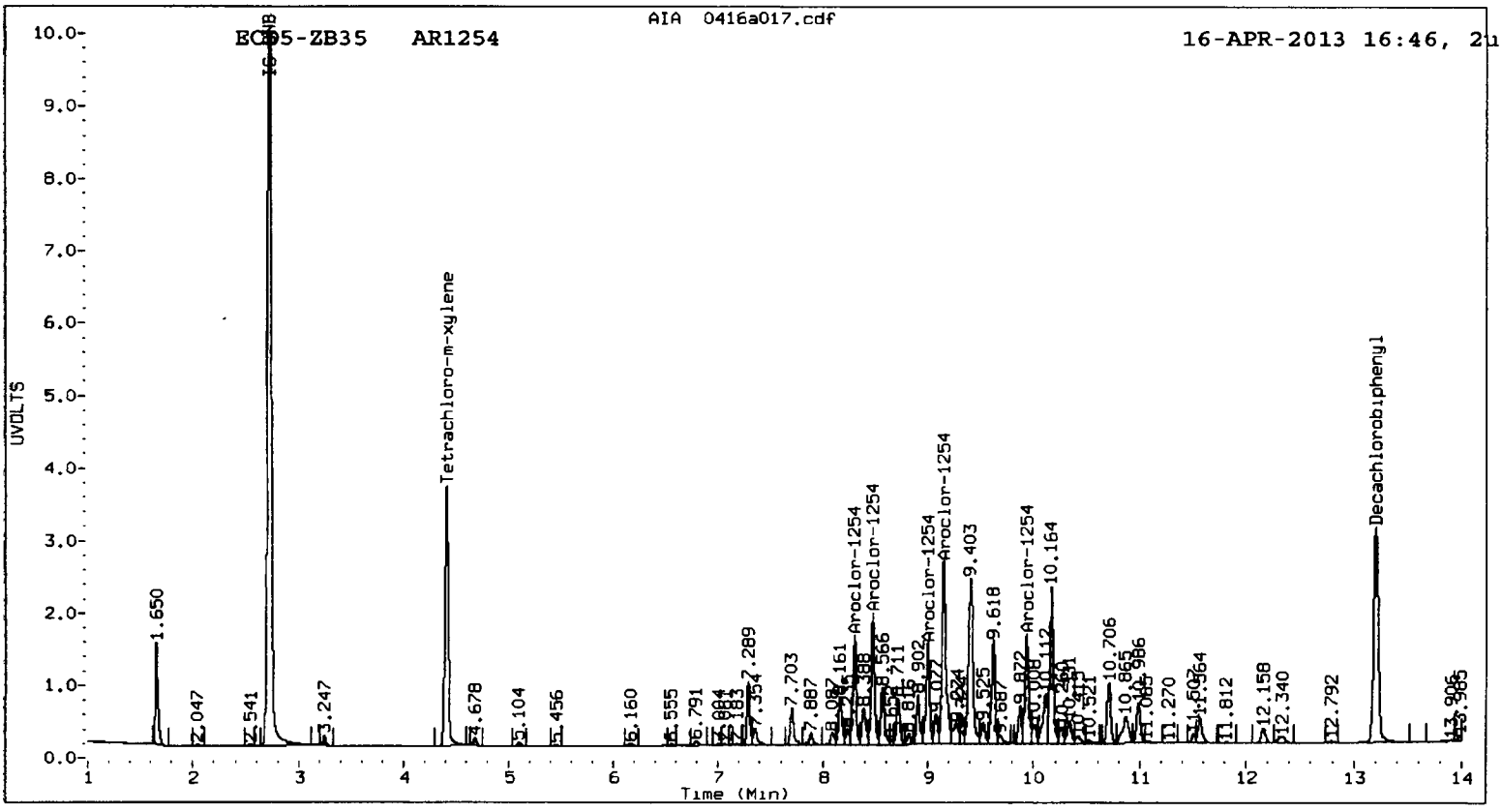
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl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16-APR-2013 16:46, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a018.d
Data file 2: 20130416.b/ical-2.b/0416a018.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 16-APR-2013 17:06
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	0.000	15793637	4.404	0.001	4262188	19.9	20.2	1.3	Tetrachloro-m-xylen
12.828	0.001	22994462	13.204	0.000	4404761	18.1	18.7	3.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.8	50.4
Decachlorobiphenyl	45.2	46.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48787562	0.3
Hexabromobiphenyl	81878684	82562472	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14371825	-0.6
Hexabromobiphenyl	16263628	17005647	4.6

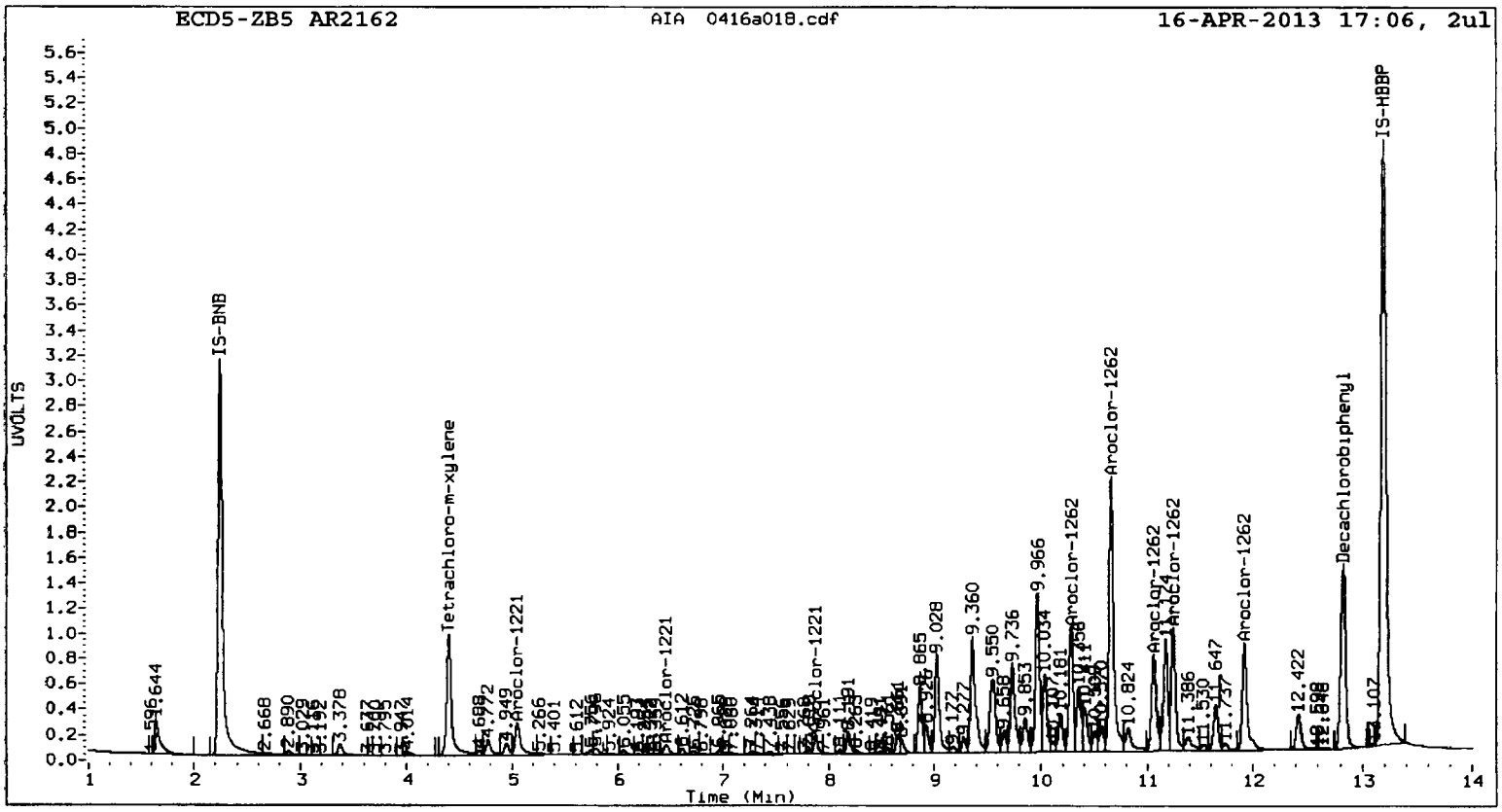
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1221	1	5.056	0.000	4872050	250.0	1	3.689	0.000	374918	250.0
Aroclor-1221	2	6.463	0.000	1538539	250.0	2	5.088	0.000	586977	250.0
Aroclor-1221	3	7.876	0.000	2128519	250.0	3	5.340	0.000	354713	250.0
Aroclor-1221	NS	---			----	4	5.455	0.000	1070993	250.0
Total Col1Ave (3 peaks): 250.0						Total Col2Ave (4 peaks): 250.0 RPD = 0				
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks): 250.0				
Aroclor-1262	1	10.282	0.000	13250381	250.0	1	10.260	0.000	3519347	250.0
Aroclor-1262	2	10.659	0.000	34501090	250.0	2	10.711	0.000	3048342	250.0
Aroclor-1262	3	11.059	0.000	12249391	250.0	3	10.987	0.000	7031709	250.0
Aroclor-1262	4	11.247	0.000	14699916	250.0	4	11.567	0.000	4572516	250.0
Aroclor-1262	5	11.919	0.000	14425477	250.0	5	12.309	0.000	2748455	250.0
Total Col1Ave (5 peaks): 250.0						Total Col2Ave (5 peaks): 250.0 RPD = 0				
Corrected Ave (4 peaks): 250.0						Corrected Ave (4 peaks): 250.0 RPD = 0				

Total PCB Area Col1 (4.501 - 12.727) = 262741672 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 51561813 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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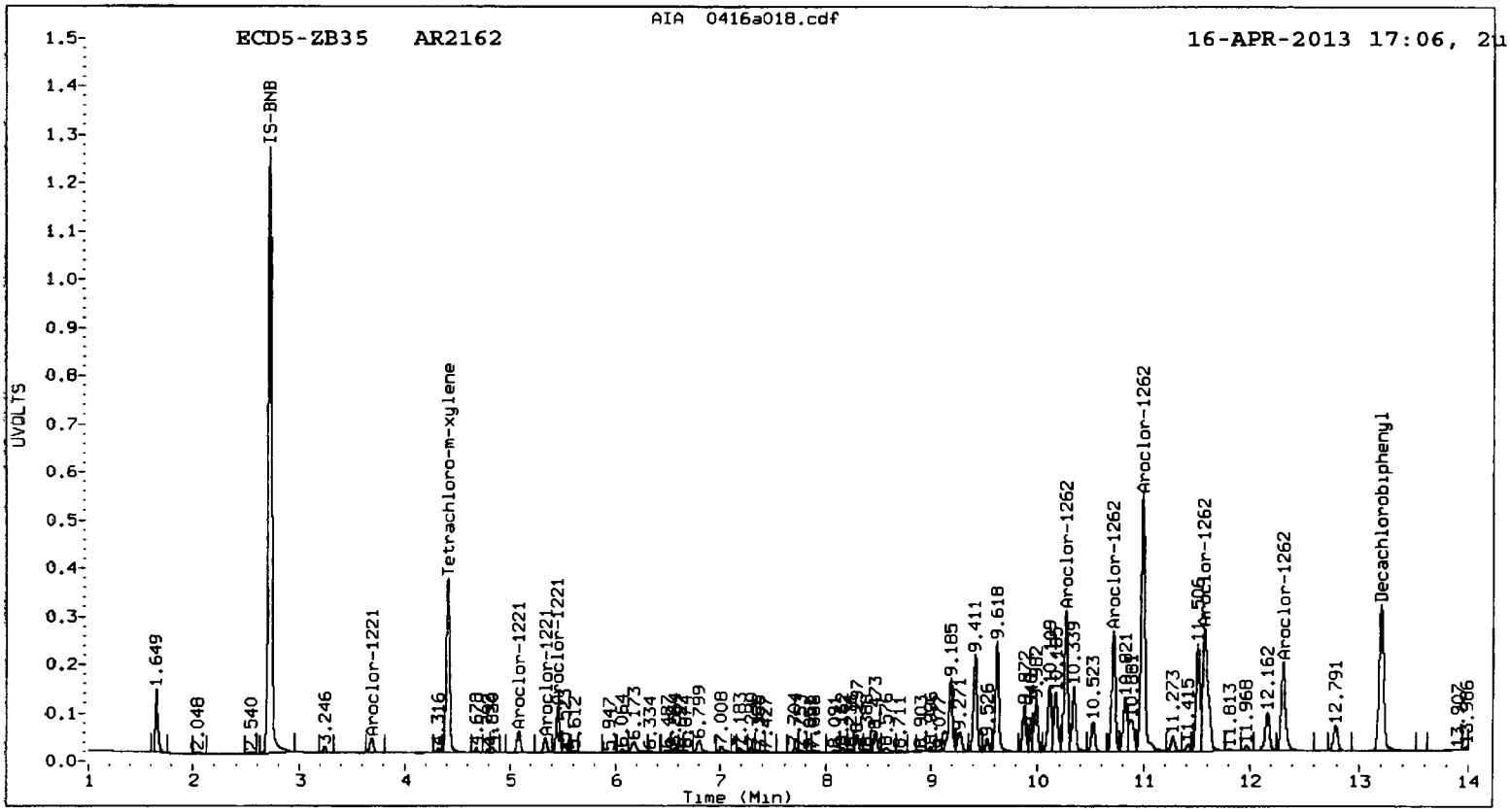
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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Time (Min)
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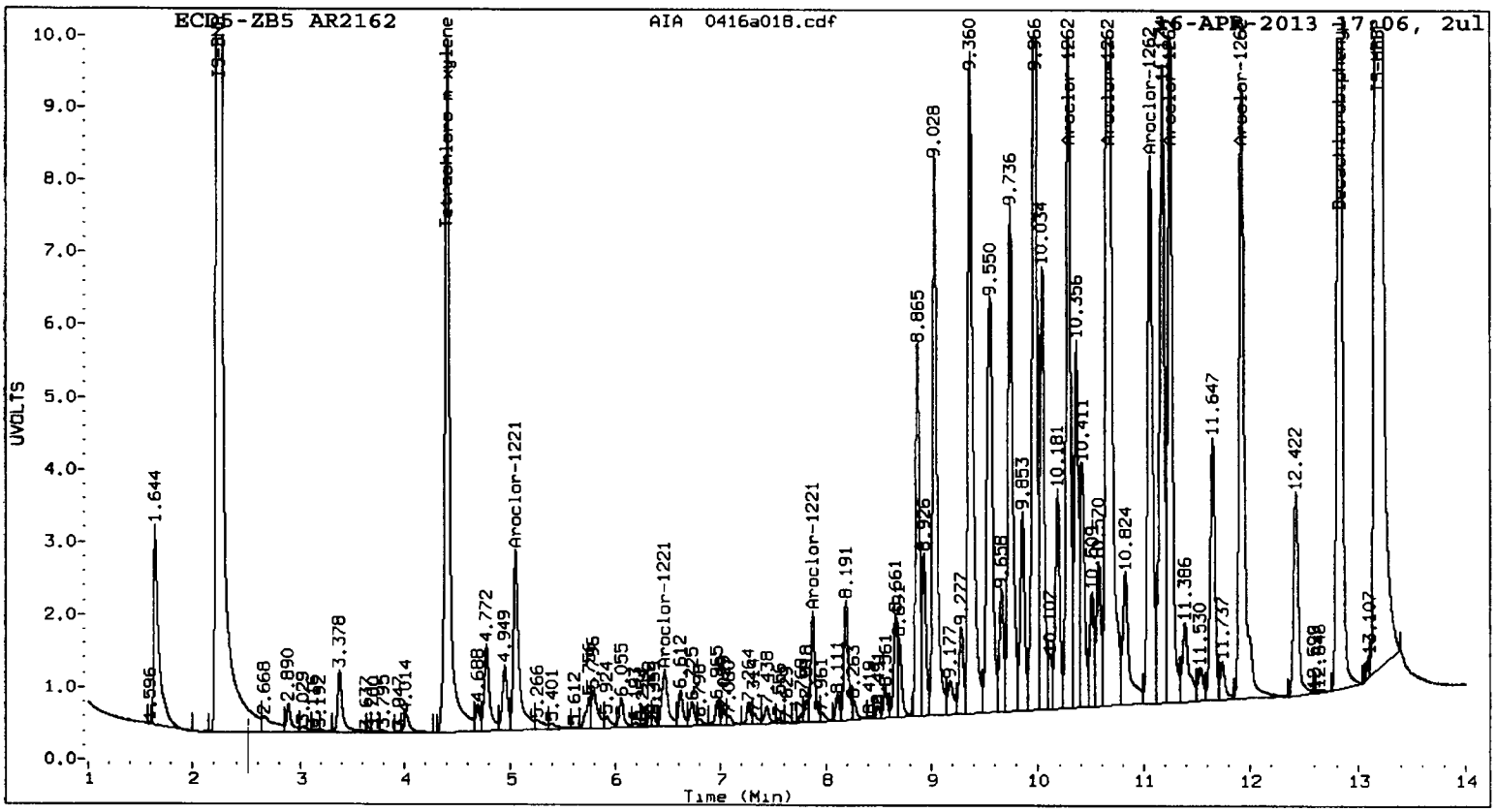
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl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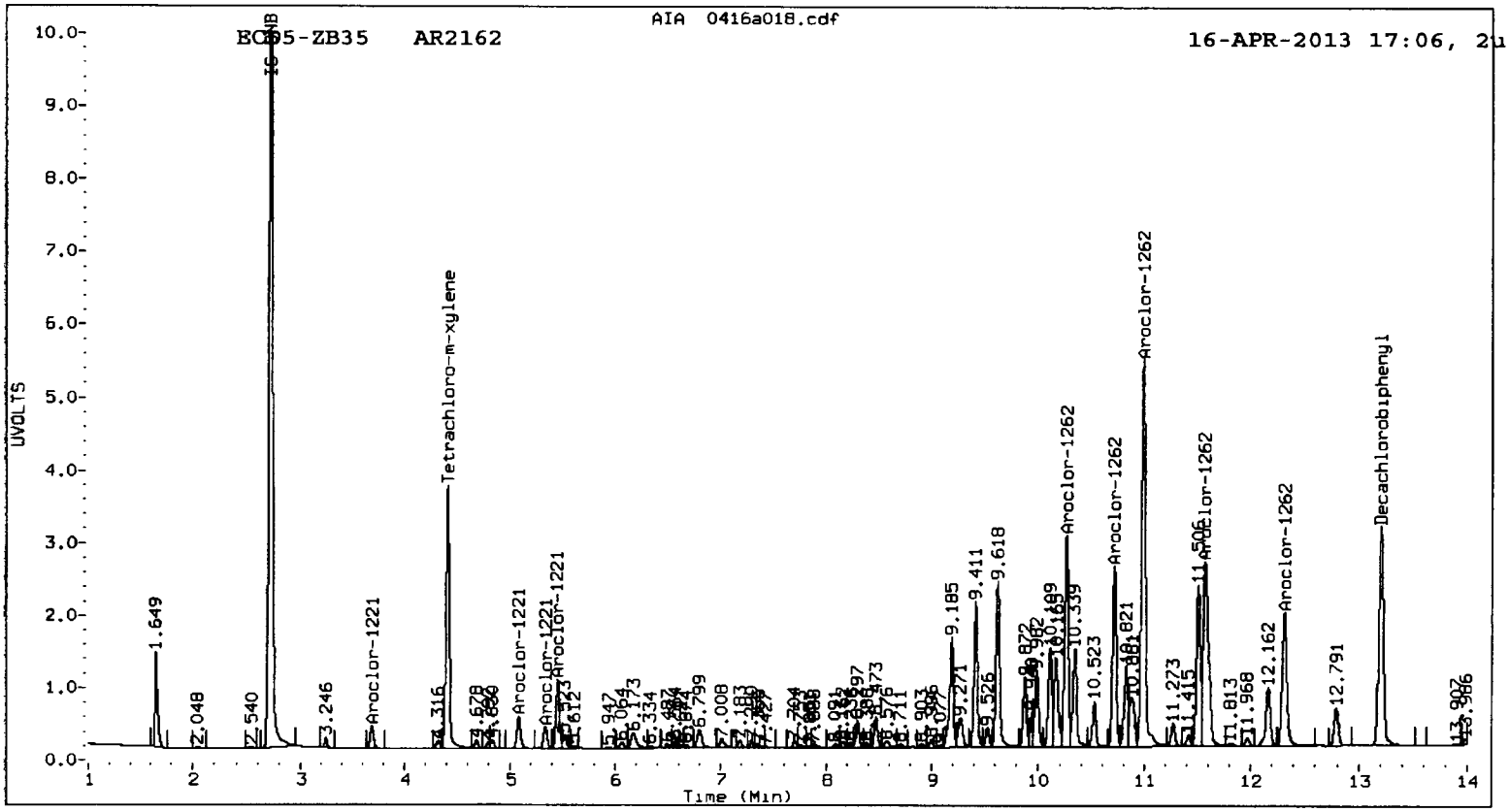
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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a019.d
Data file 2: 20130416.b/ical-2.b/0416a019.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 16-APR-2013 17:26
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	0.000	15722368	4.403	0.000	4286848	19.8	20.1	1.4	Tetrachloro-m-xylen
12.827	0.000	40900955	13.204	0.000	7801909	31.2	33.0	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.5	50.2
Decachlorobiphenyl	78.0	82.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48833507	0.4
Hexabromobiphenyl	81878684	86055260	5.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14519211	0.4
Hexabromobiphenyl	16263628	17039356	4.8

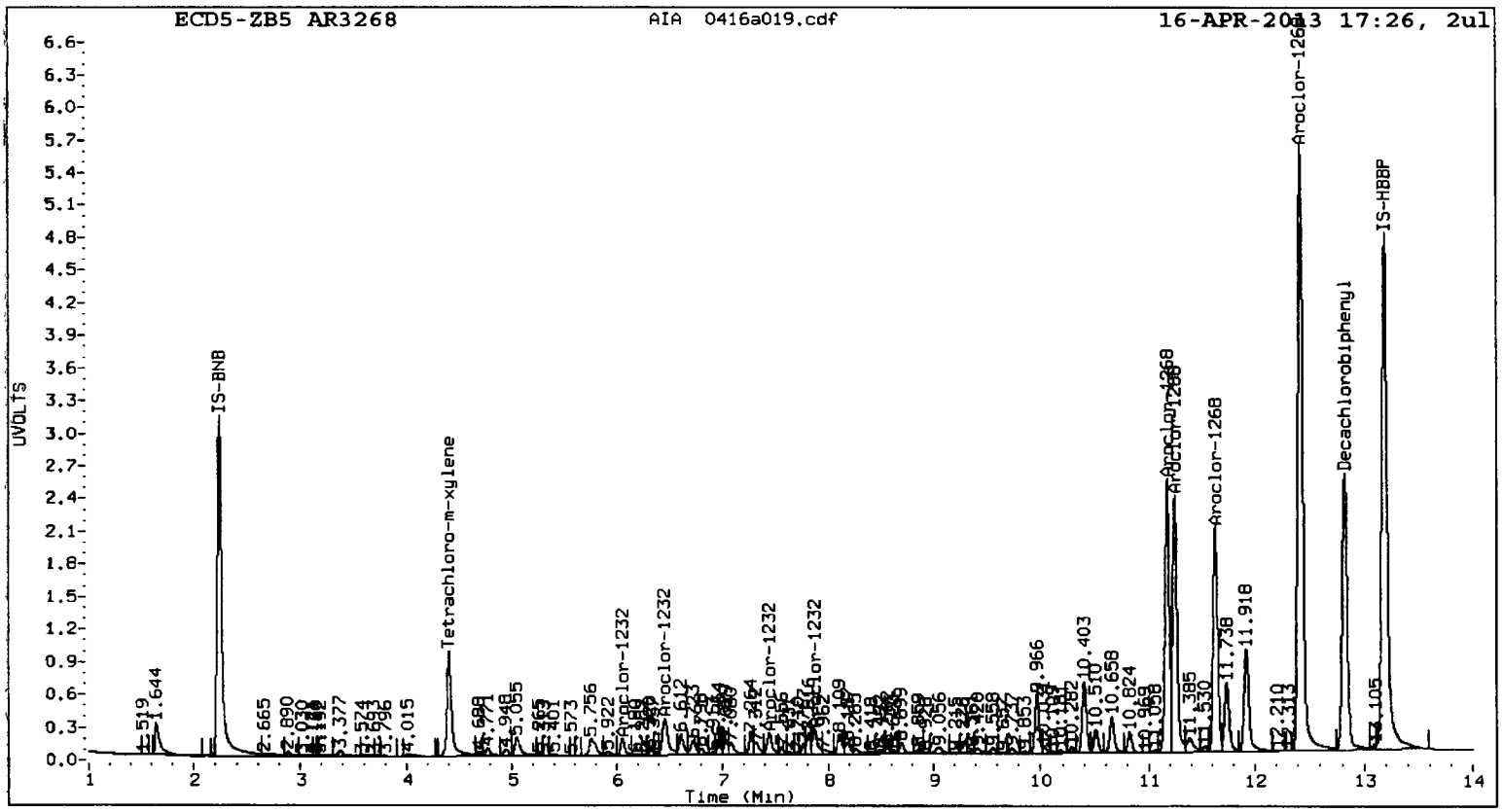
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	6.054	0.000	2148591	250.0	1	6.161	0.000	902472	250.0
Aroclor-1232	2	6.461	0.000	6622721	250.0	2	6.797	0.000	1772848	250.0
Aroclor-1232	3	7.438	0.000	3346789	250.0	3	7.007	0.000	741236	250.0
Aroclor-1232	4	7.871	0.000	3924521	250.0	4	8.237	0.000	607059	250.0
	Total Col1Ave (4 peaks):				250.0		Total Col2Ave (4 peaks):			250.0 RPD = 0
	Corrected Ave (3 peaks):				250.0		Corrected Ave (3 peaks):			250.0 RPD = 0
Aroclor-1268	1	11.174	0.000	35037891	250.0	1	11.506	0.000	7130839	250.0
Aroclor-1268	2	11.245	0.000	34991258	250.0	2	11.573	0.000	7036727	250.0
Aroclor-1268	3	11.631	0.000	30246012	250.0	3	11.969	0.000	5830162	250.0
Aroclor-1268	4	12.421	0.000	88262841	250.0	4	12.792	0.000	17209139	250.0
	Total Col1Ave (4 peaks):				250.0		Total Col2Ave (4 peaks):			250.0 RPD = 0
	Corrected Ave (3 peaks):				250.0		Corrected Ave (3 peaks):			250.0 RPD = 0

Total PCB Area Col1 (4.501 - 12.727) = 312960672 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 62838135 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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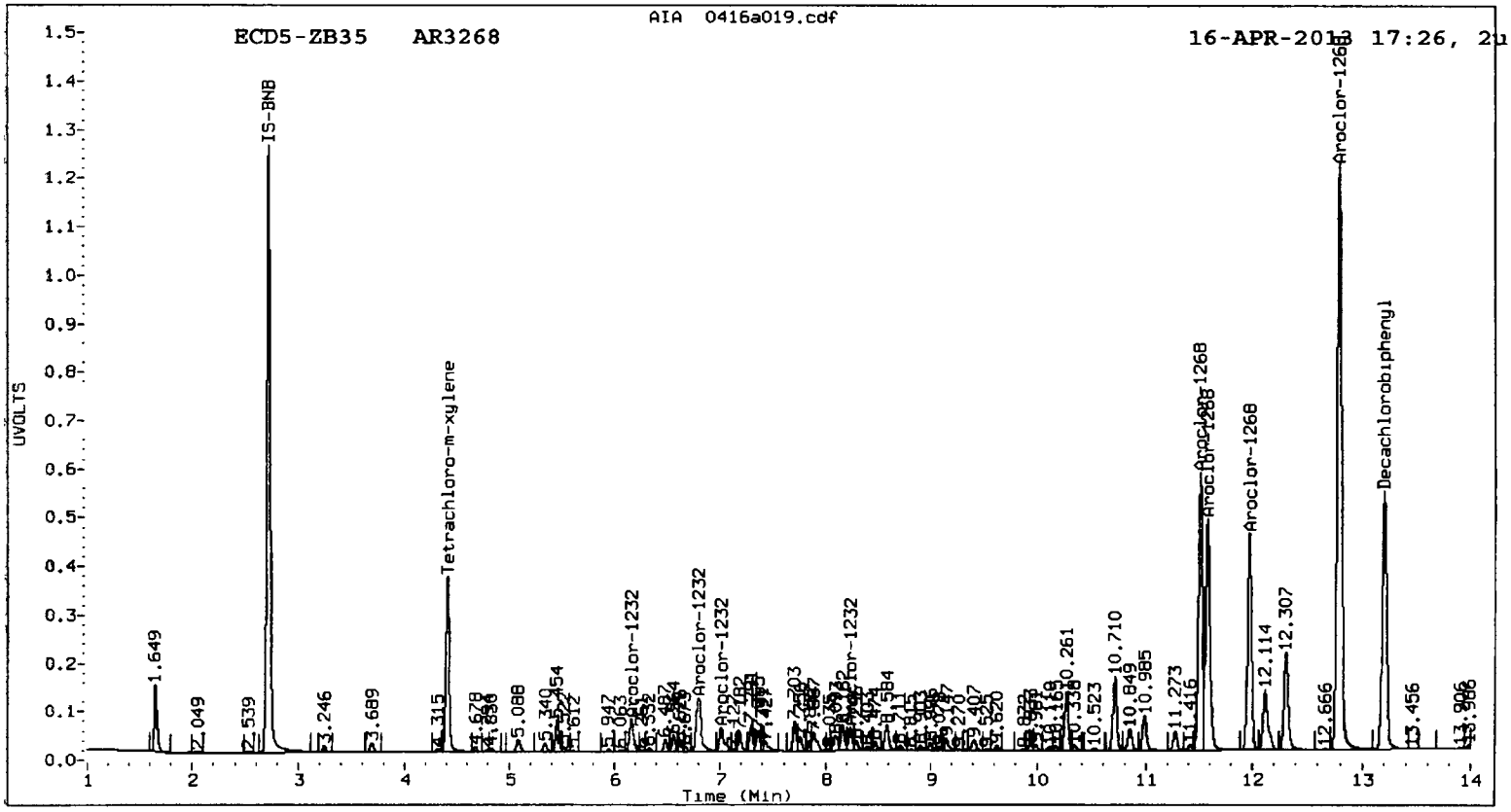
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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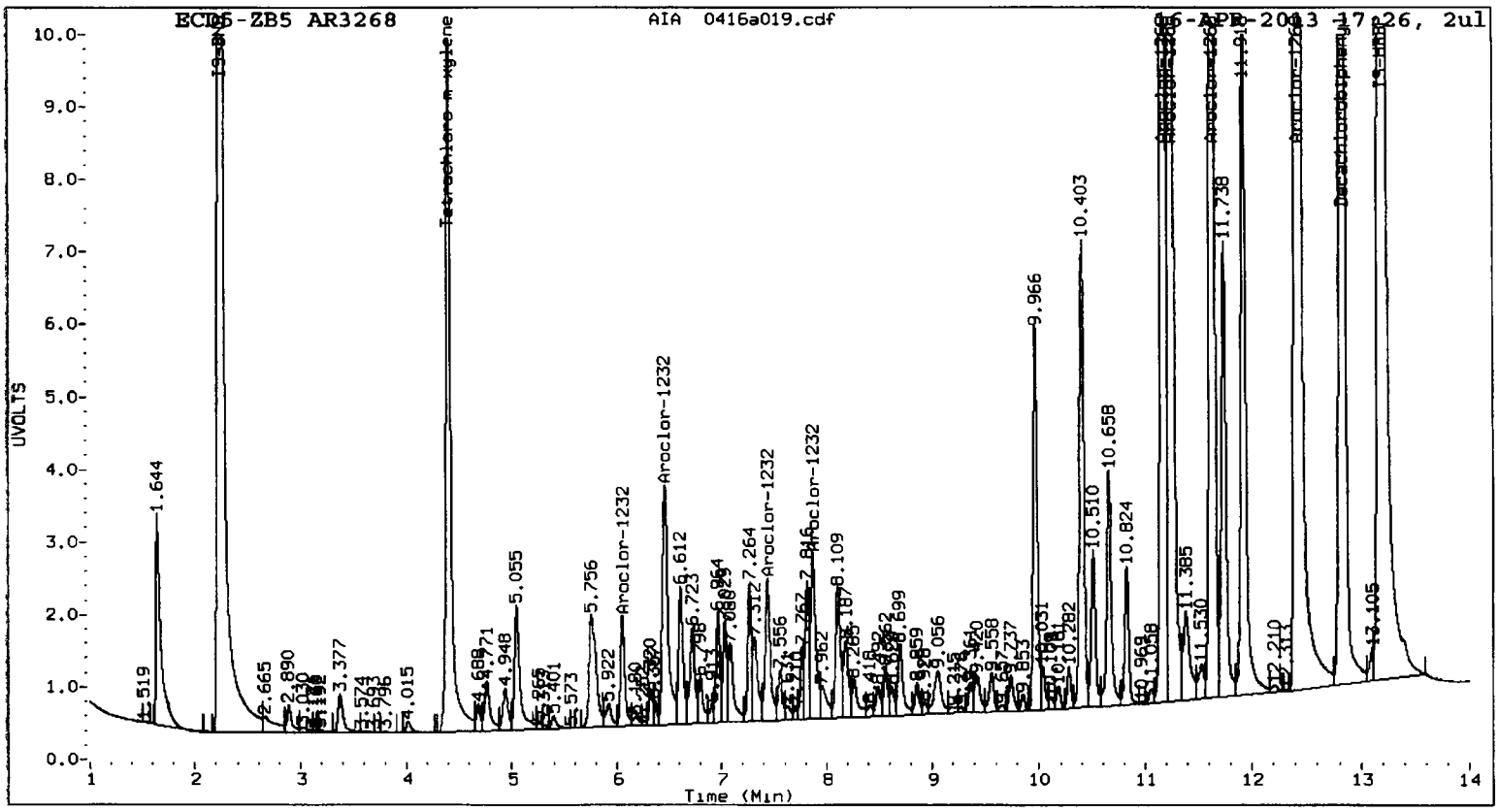
Aroclor-1268
Decachlorobiphenyl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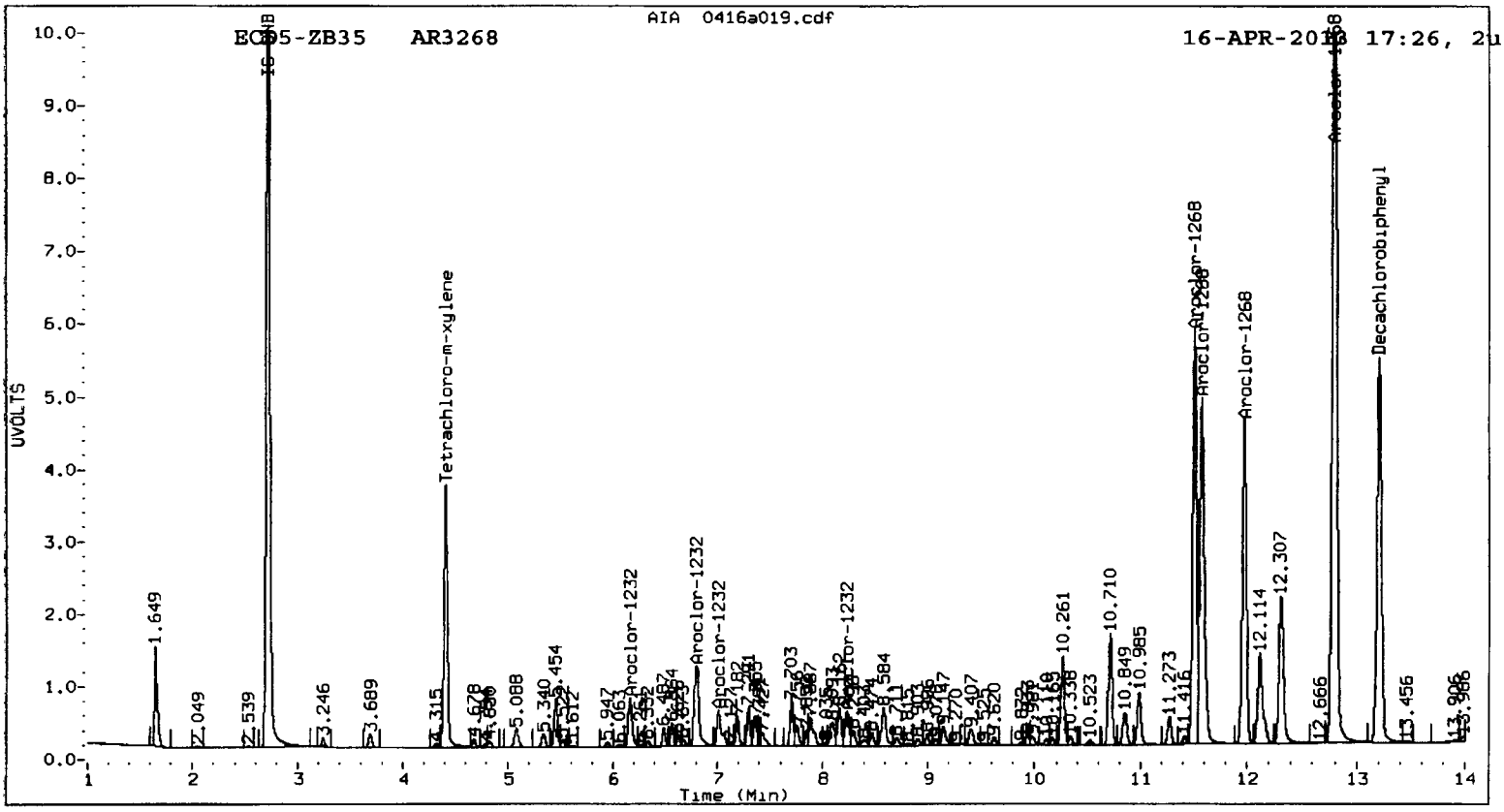
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl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ECD5-ZB35 AR3268
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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a020.d
Data file 2: 20130416.b/ical-2.b/0416a020.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 16-APR-2013 17:46
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.401	0.000	16593099	4.404	0.000	4541818	20.0	20.4	1.9	Tetrachloro-m-xylen
12.828	0.001	24694657	13.204	0.000	4668373	18.2	19.2	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.0	51.0
Decachlorobiphenyl	45.5	47.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	51001242	4.8
Hexabromobiphenyl	81878684	88986803	8.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	15142458	4.7
Hexabromobiphenyl	16263628	17563296	8.0

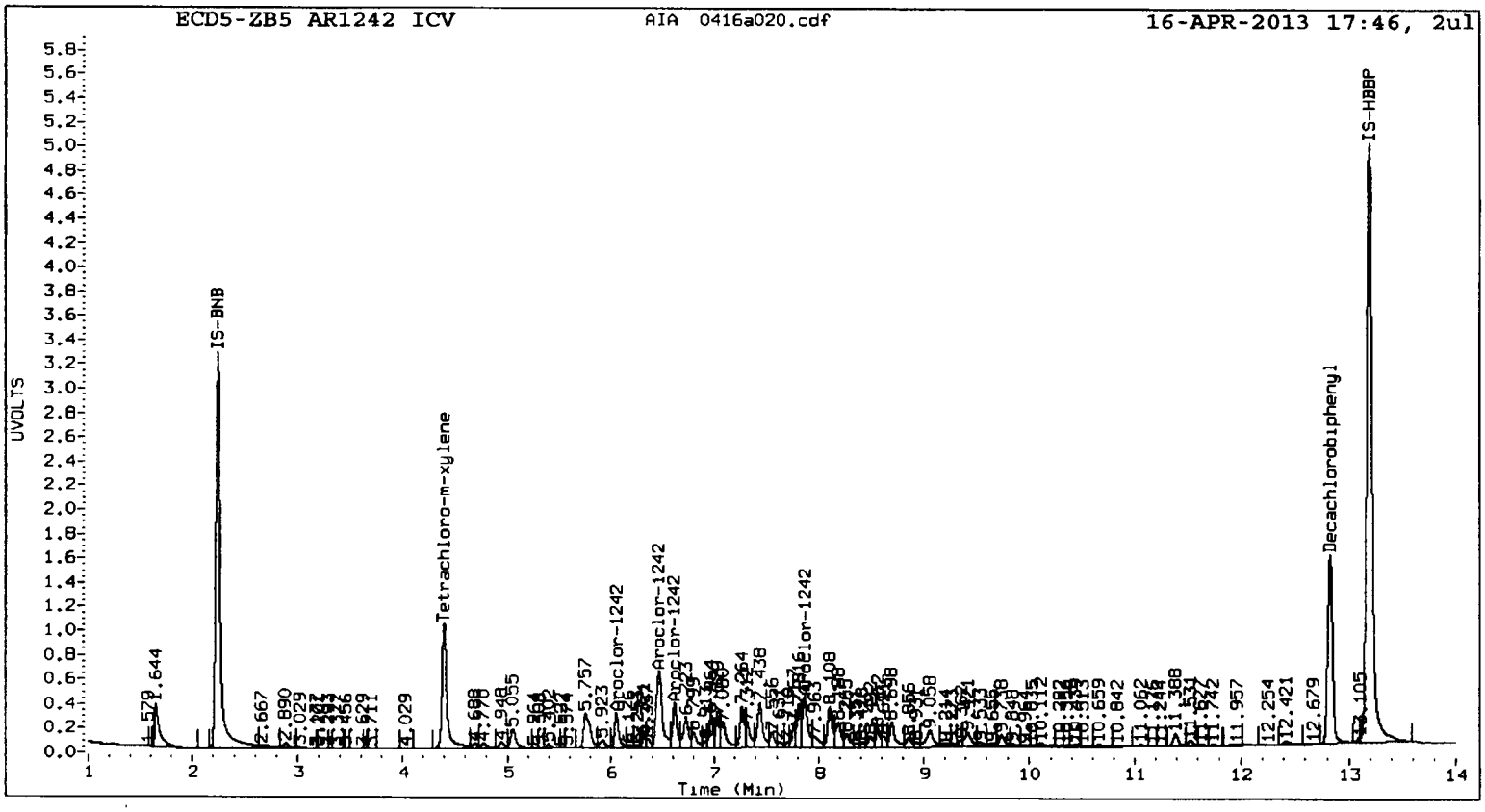
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.055	0.001	4081207	243.2	1	6.161	0.001	1591070	244.5
Aroclor-1242	2	6.462	0.001	12485251	241.6	2	6.796	0.000	3362730	242.3
Aroclor-1242	3	6.612	0.001	5514949	241.0	3	7.006	0.000	1407146	241.9
Aroclor-1242	4	7.871	0.002	6947363	242.7	4	8.236	0.000	1076976	225.1
Total Col1Ave (4 peaks): 242.1						Total Col2Ave (4 peaks): 238.5			RPD = 2	
Corrected Ave (3 peaks): 241.8						Corrected Ave (3 peaks): 236.4			RPD = 2	

Total PCB Area Col1 (4.501 - 12.727) = 124969121 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 26892197 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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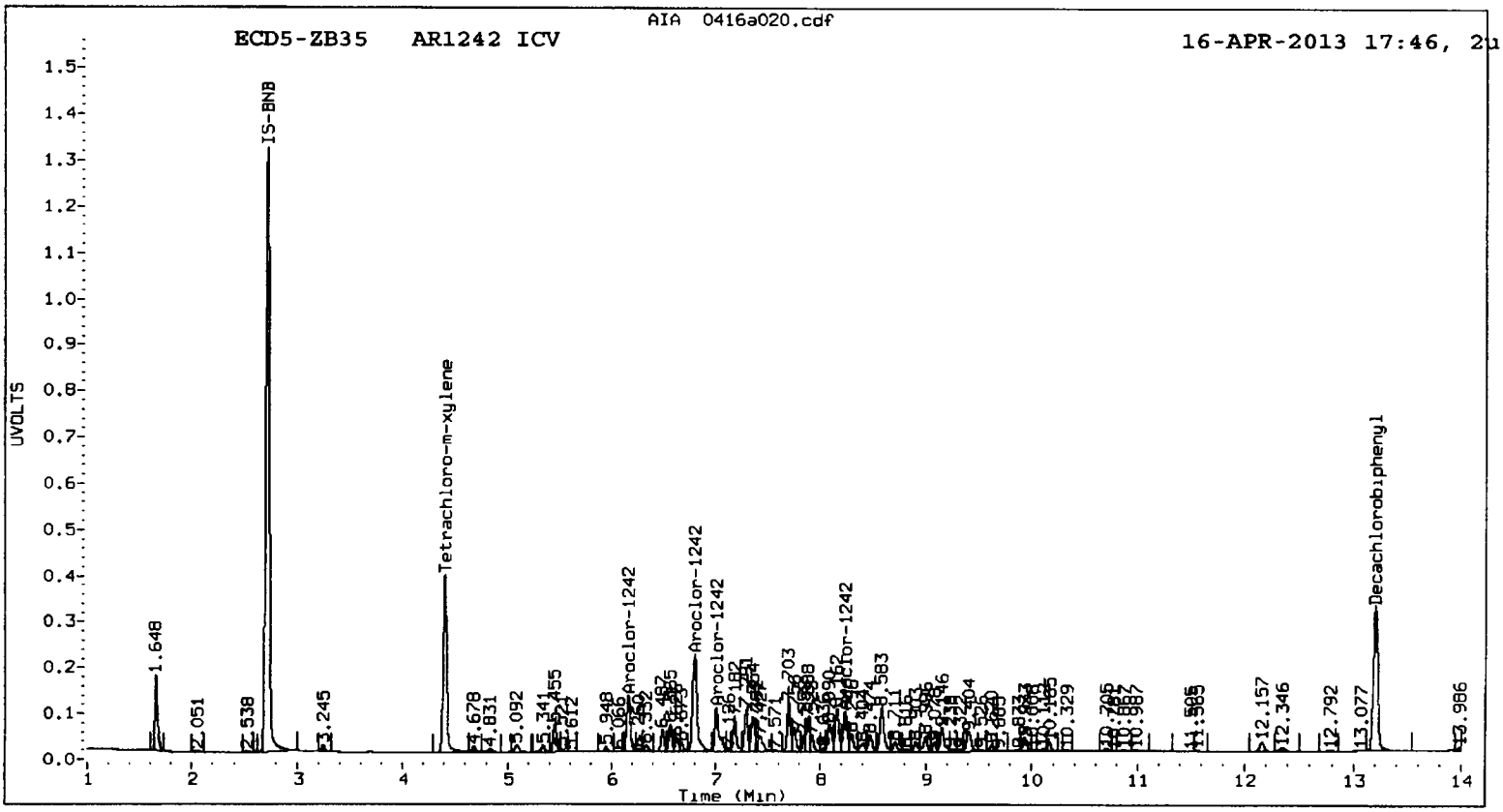
AIA 0416a020.cdf
16-APR-2013 17:46, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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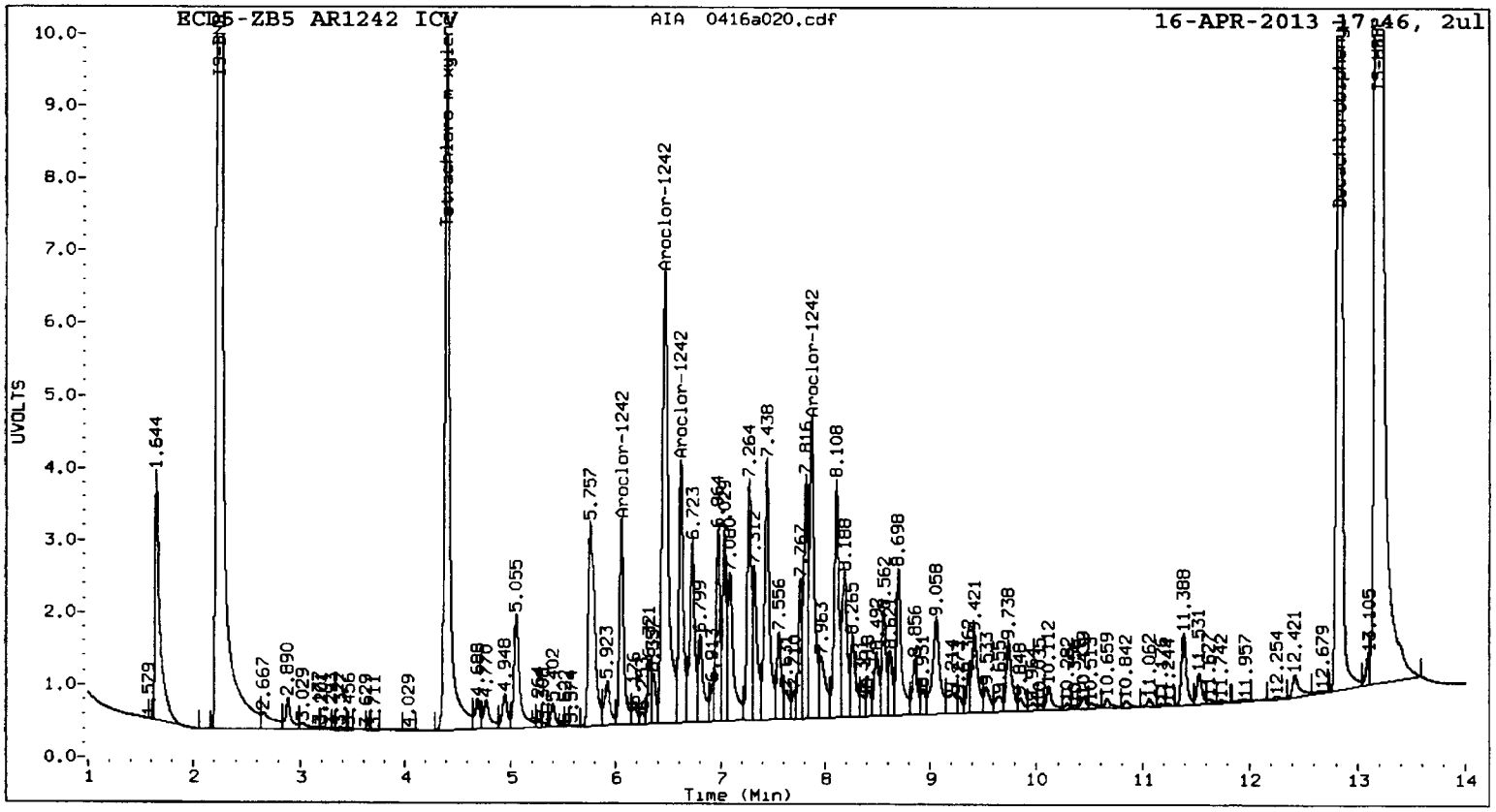
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl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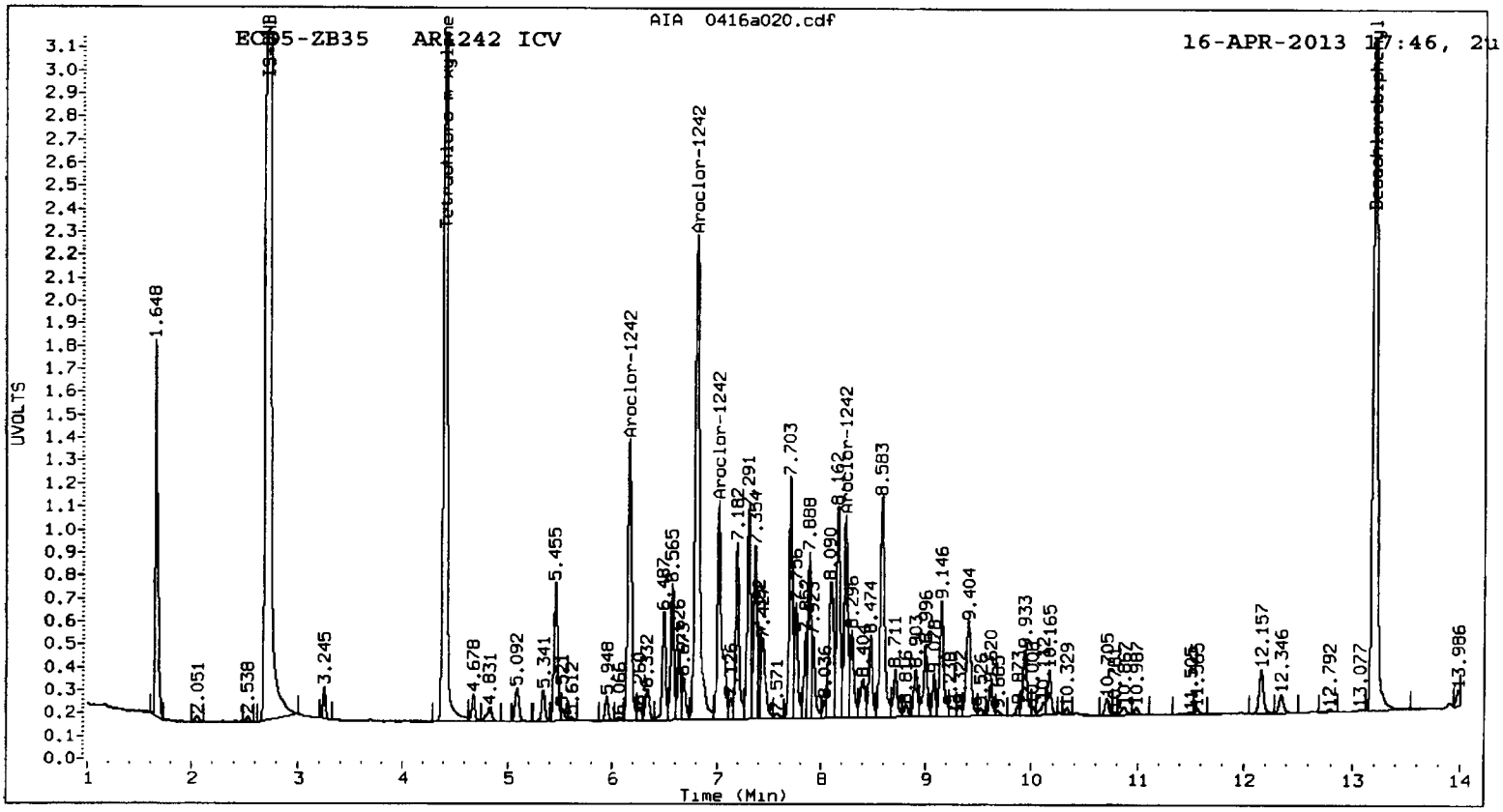
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl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AIA 0416a020.cdf
16-APR-2013 17:46, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a021.d
Data file 2: 20130416.b/ical-2.b/0416a021.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 16-APR-2013 18:07
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.402	0.000	16434645	4.404	0.000	4510253	20.2	20.6	1.6	Tetrachloro-m-xylen
12.827	0.000	24565717	13.203	-0.001	4561520	18.6	19.3	3.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.6	51.4
Decachlorobiphenyl	46.5	48.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	49939659	2.7
Hexabromobiphenyl	81878684	86667397	5.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14906989	3.1
Hexabromobiphenyl	16263628	17073568	5.0

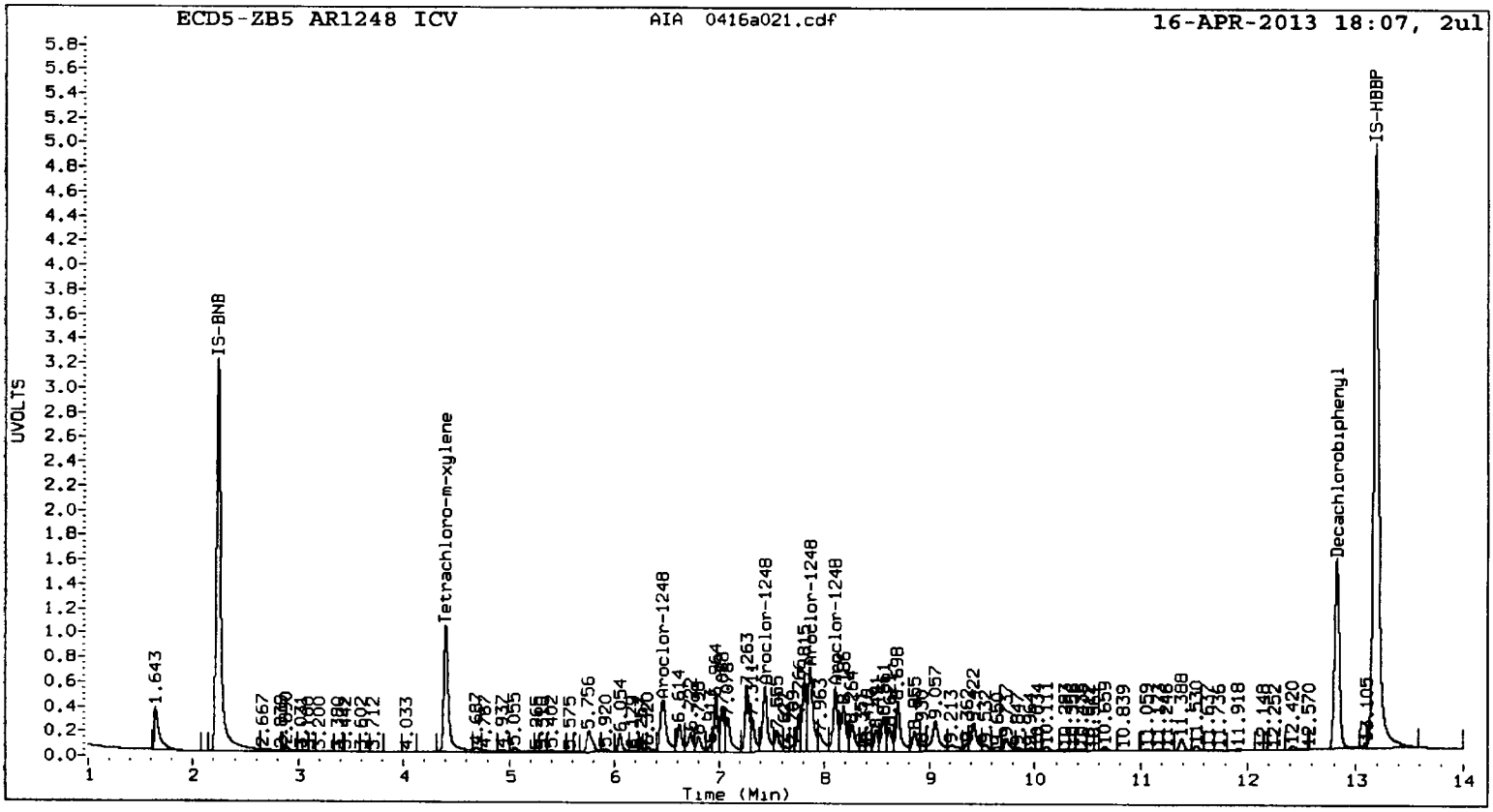
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

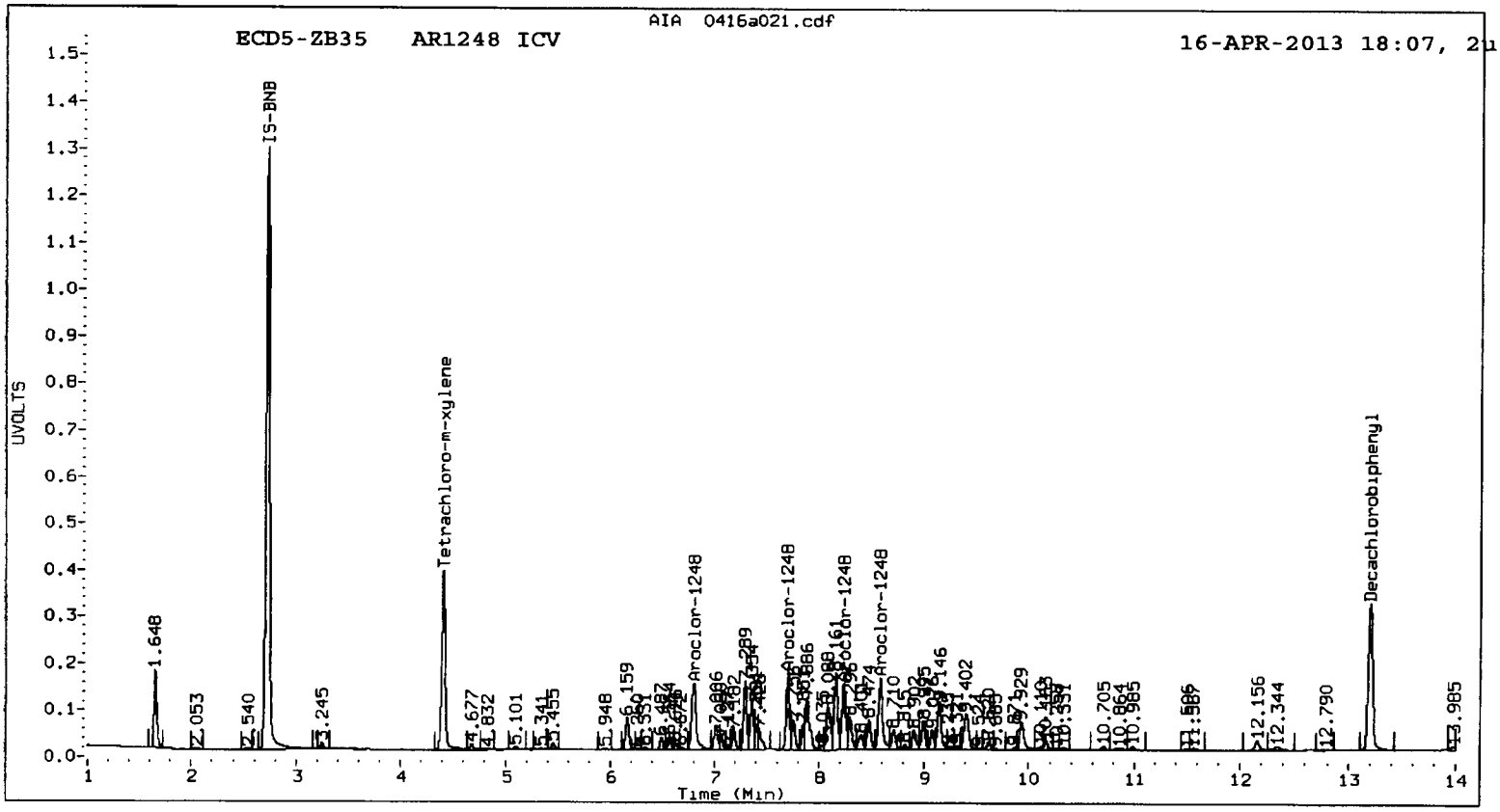
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1248	1	6.459	0.000	8519735	270.2	1	6.793	0.000	2238172	268.4
Aroclor-1248	2	7.437	0.000	8706566	249.2	2	7.703	0.000	1729076	252.6
Aroclor-1248	3	7.870	0.000	11200242	248.4	3	8.235	-0.001	1714155	243.4
Aroclor-1248	4	8.107	0.000	7781087	243.8	4	8.581	-0.001	2245475	244.1
Total Col1Ave (4 peaks):					252.9	Total Col2Ave (4 peaks):				252.1 RPD = 0
Corrected Ave (3 peaks):					247.1	Corrected Ave (3 peaks):				246.7 RPD = 0

Total PCB Area Col1 (4.501 - 12.727) = 151187427 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 31040298 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1248 ICV
AIA 0416a021.cdf
16-APR-2013 18:07, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)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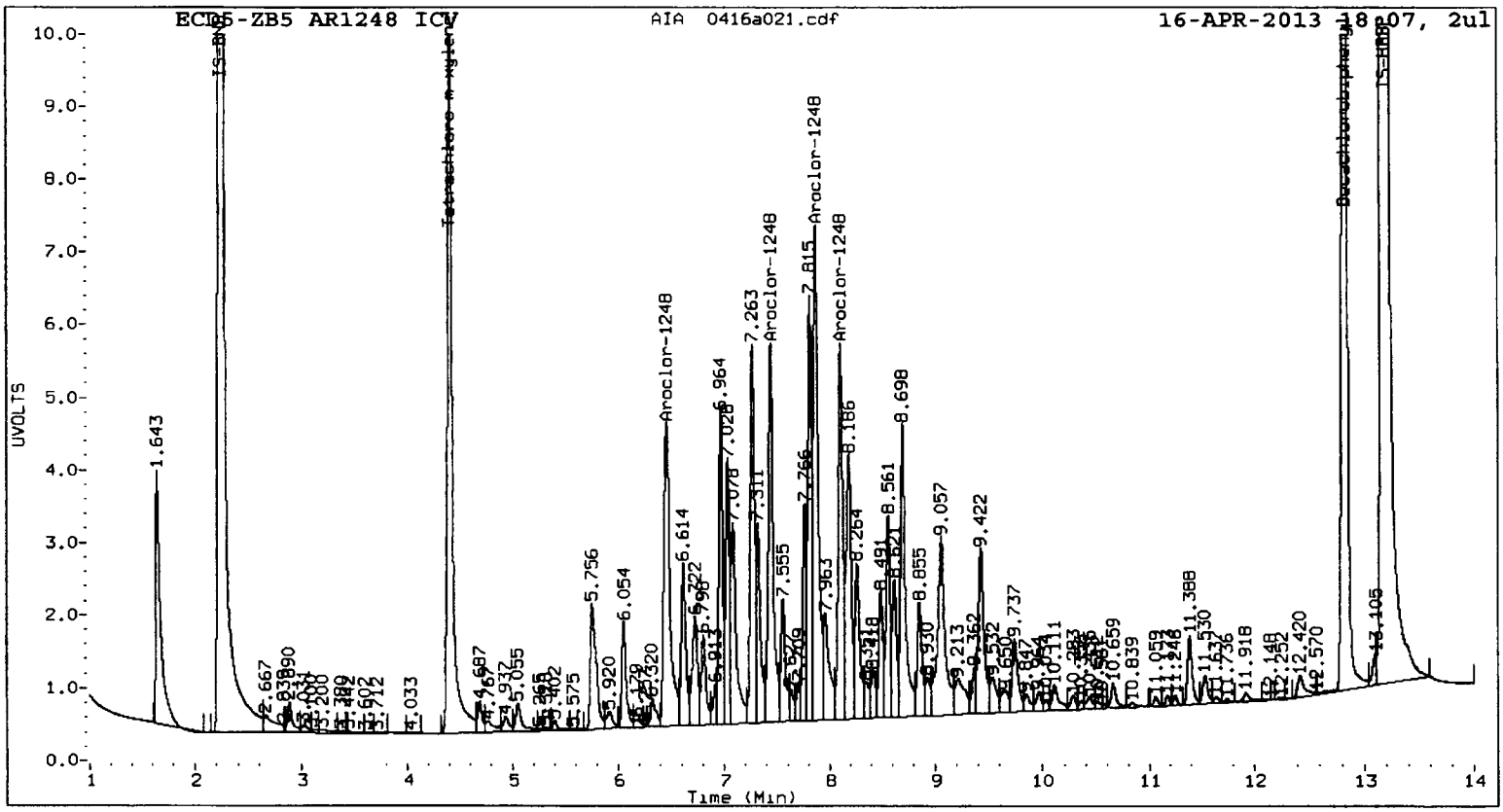
16-APR-2013 18:07, 2u
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
Time (Min)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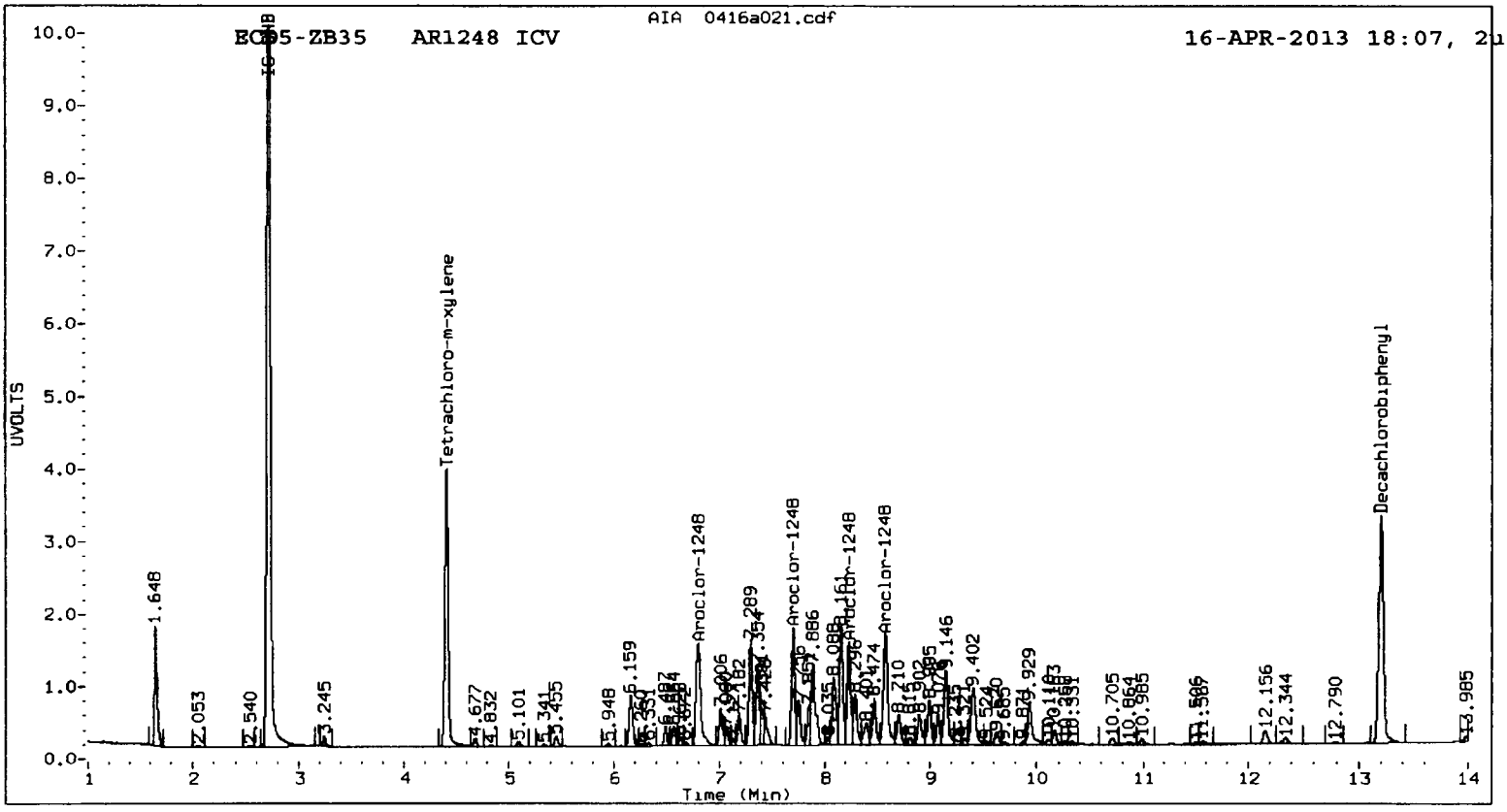
AIA 0416a021.cdf
16-APR-2013 18:07, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl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ECD5-ZB35 AR1248 ICV
16-APR-2013 18:07, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a022.d
Data file 2: 20130416.b/ical-2.b/0416a022.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 16-APR-2013 18:27
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.401	0.000	16164684	4.403	0.000	4418878	19.7	20.0	1.8	Tetrachloro-m-xylen
12.827	0.000	24520854	13.203	-0.001	4631908	18.4	19.3	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.2	50.1
Decachlorobiphenyl	46.0	48.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50495612	3.8
Hexabromobiphenyl	81878684	87535490	6.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14997960	3.7
Hexabromobiphenyl	16263628	17267294	6.2

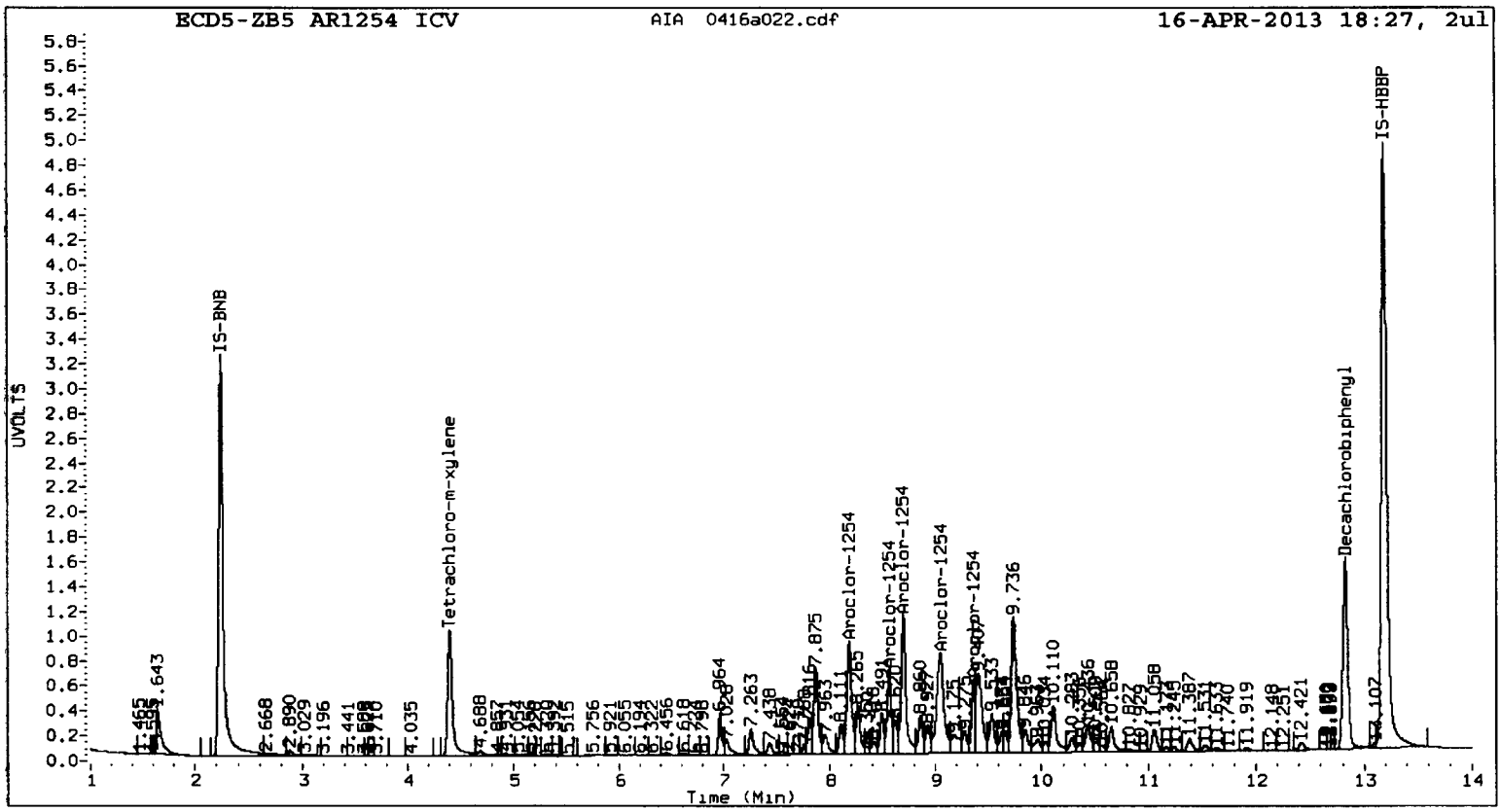
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	8.189	0.000	13390015	285.0	1	8.297	0.000	1960078	283.9
Aroclor-1254	2	8.561	0.000	9228818	296.0	2	8.472	0.001	2439852	286.2
Aroclor-1254	3	8.698	0.000	17570252	280.8	3	8.996	0.001	1952323	296.3
Aroclor-1254	4	9.052	0.001	19341435	288.0	4	9.146	0.000	4005354	281.3
Aroclor-1254	5	9.359	0.000	7190208	260.1	5	9.933	0.000	2428349	295.3
Total Col1Ave (5 peaks):					282.0	Total Col2Ave (5 peaks):				288.6 RPD = 2
Corrected Ave (4 peaks):					278.5	Corrected Ave (4 peaks):				286.7 RPD = 3

Total PCB Area Col1 (4.501 - 12.727) = 206139049 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 40952631 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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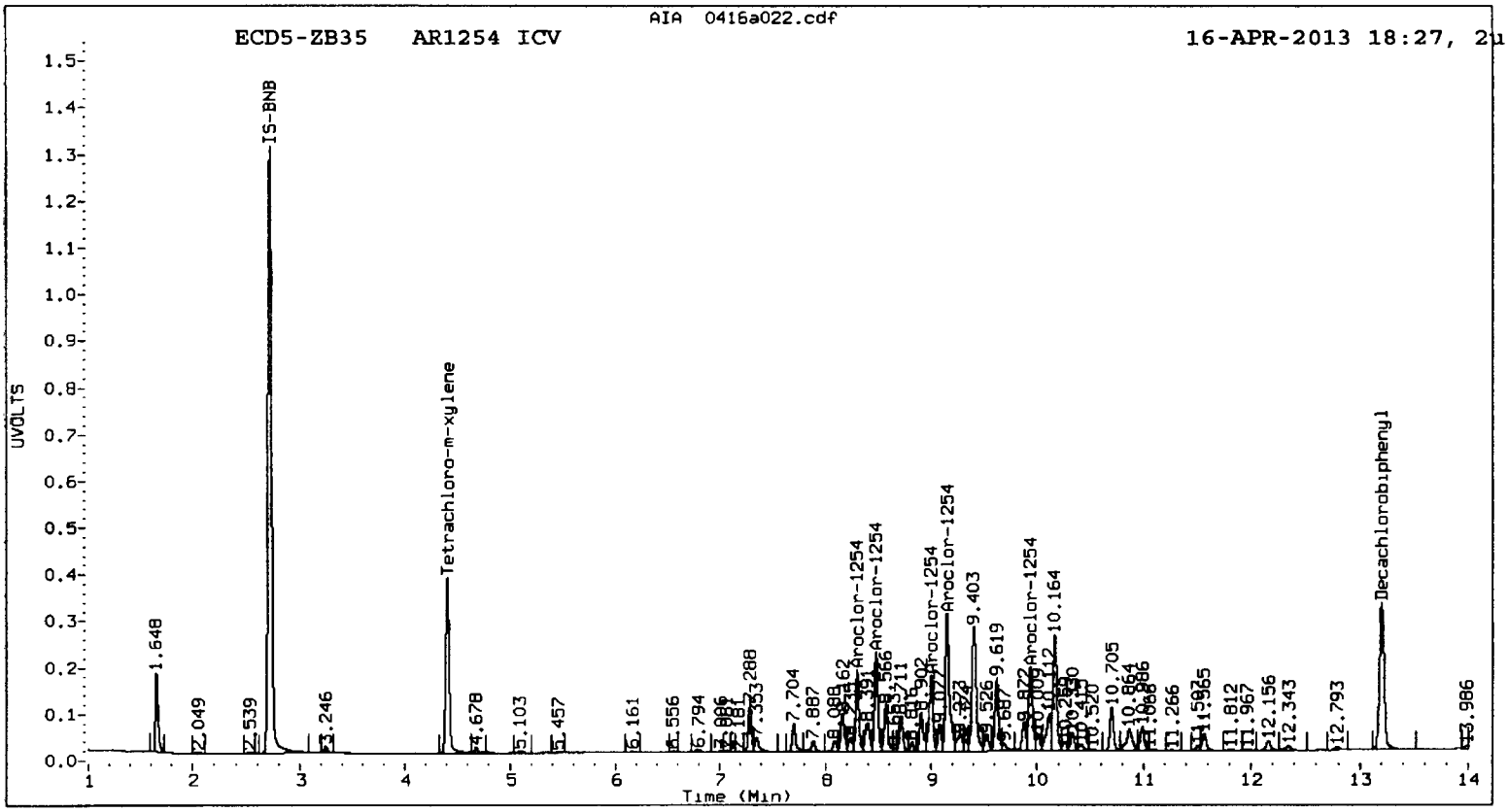
AIA 0416a022.cdf
16-APR-2013 18:27, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP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ECD5-ZB35 AR1254 ICV
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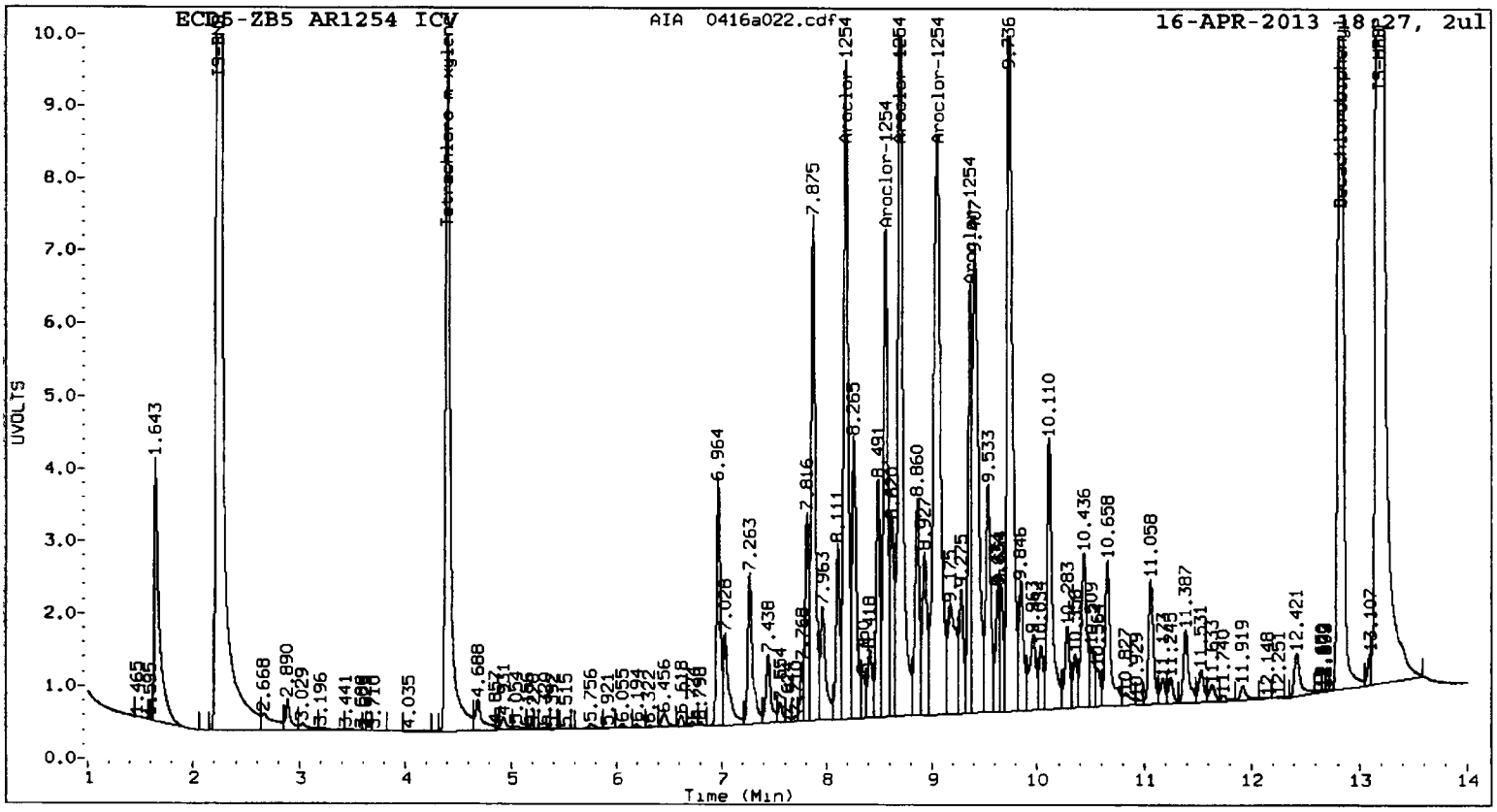
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl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AIA 0416a022.cdf
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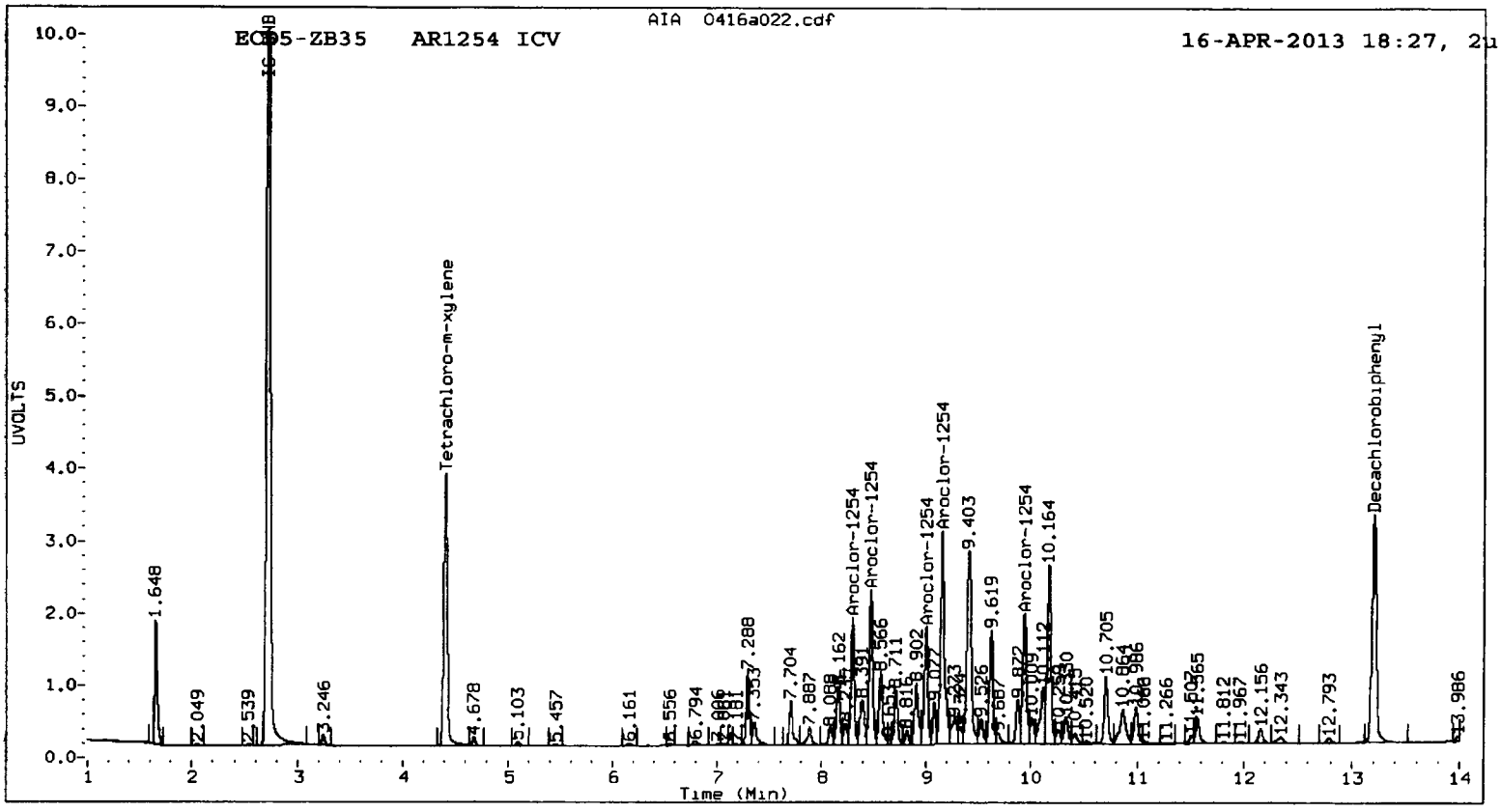
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl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EC05-ZB35 AR1254 ICV
16-APR-2013 18:27, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a023.d
Data file 2: 20130416.b/ical-2.b/0416a023.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 16-APR-2013 18:47
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	-0.001	16568304	4.404	0.000	4562337	21.0	20.6	2.3	Tetrachloro-m-xylen
12.827	0.000	24846551	13.203	-0.001	4697454	18.6	19.6	5.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	52.6	51.4
Decachlorobiphenyl	46.6	49.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48414554	-0.5
Hexabromobiphenyl	81878684	87556282	6.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	15086663	4.4
Hexabromobiphenyl	16263628	17274152	6.2

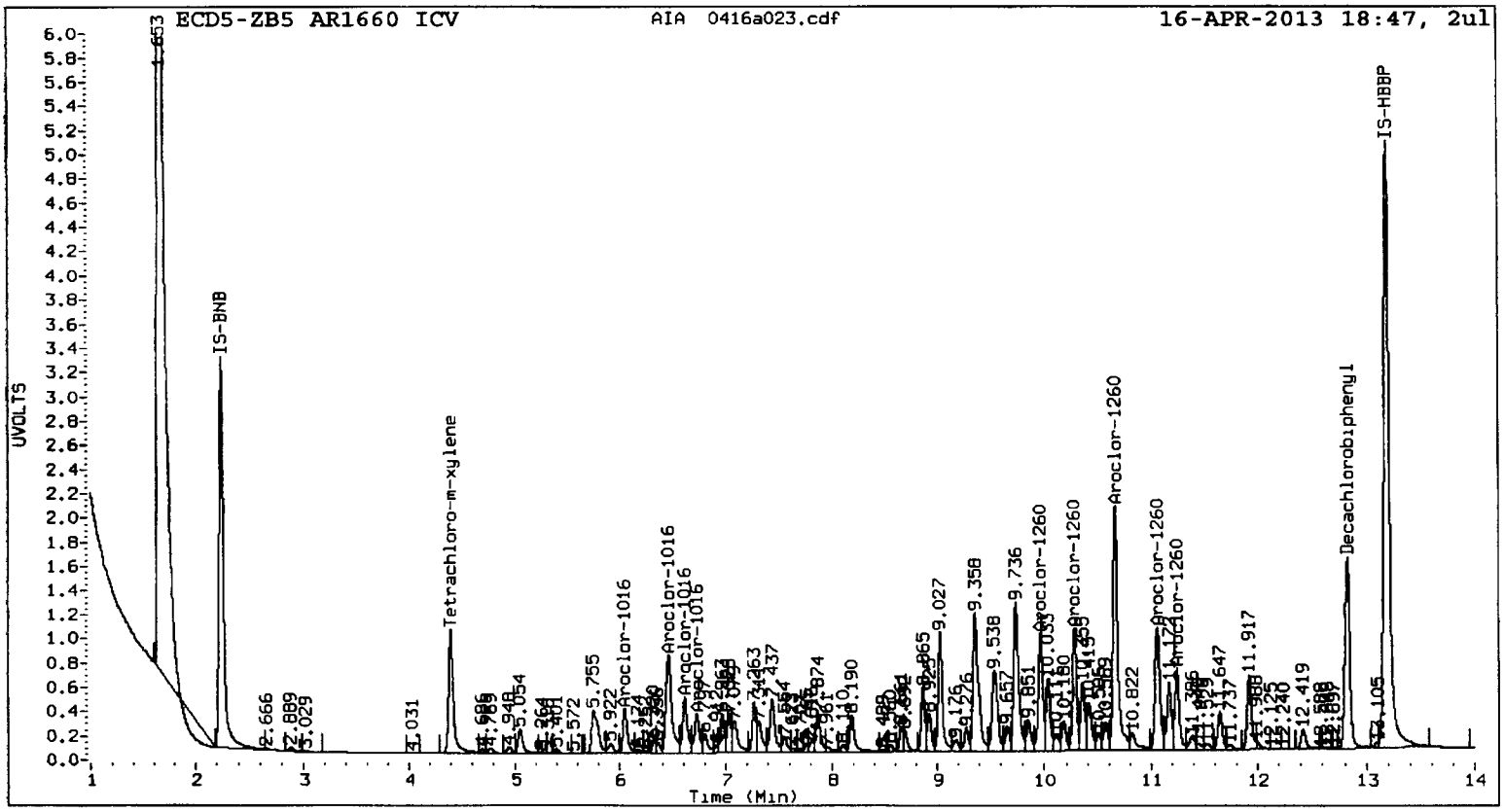
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.053	0.001	5117766	249.4	1	6.161	0.000	2031302	232.1
Aroclor-1016	2	6.460	0.002	15852374	248.0	2	6.796	0.001	4323605	234.7
Aroclor-1016	3	6.611	0.002	6989402	250.8	3	7.181	0.000	1141596	237.6
Aroclor-1016	4	6.722	0.001	5167449	263.2	4	7.354	0.000	1034796	232.7
Total Col1Ave (4 peaks):					252.9	Total Col2Ave (4 peaks):				234.3 RPD = 8
Corrected Ave (3 peaks):					249.4	Corrected Ave (3 peaks):				233.1 RPD = 7
Aroclor-1260	1	9.964	0.001	13526817	268.2	1	10.259	0.001	2668488	277.8
Aroclor-1260	2	10.281	0.001	13382415	262.4	2	10.709	0.001	3007211	260.0
Aroclor-1260	3	10.658	0.002	32513090	264.0	3	10.985	0.001	6251872	270.3
Aroclor-1260	4	11.059	0.003	16490263	250.1	4	11.506	0.001	1856520	281.5
Aroclor-1260	5	11.247	0.001	10128135	289.8	NS	---			----
Total Col1Ave (5 peaks):					266.9	Total Col2Ave (4 peaks):				272.4 RPD = 2
Corrected Ave (4 peaks):					261.2	Corrected Ave (3 peaks):				269.4 RPD = 3

Total PCB Area Col1 (4.501 - 12.727) = 346766707 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 71058121 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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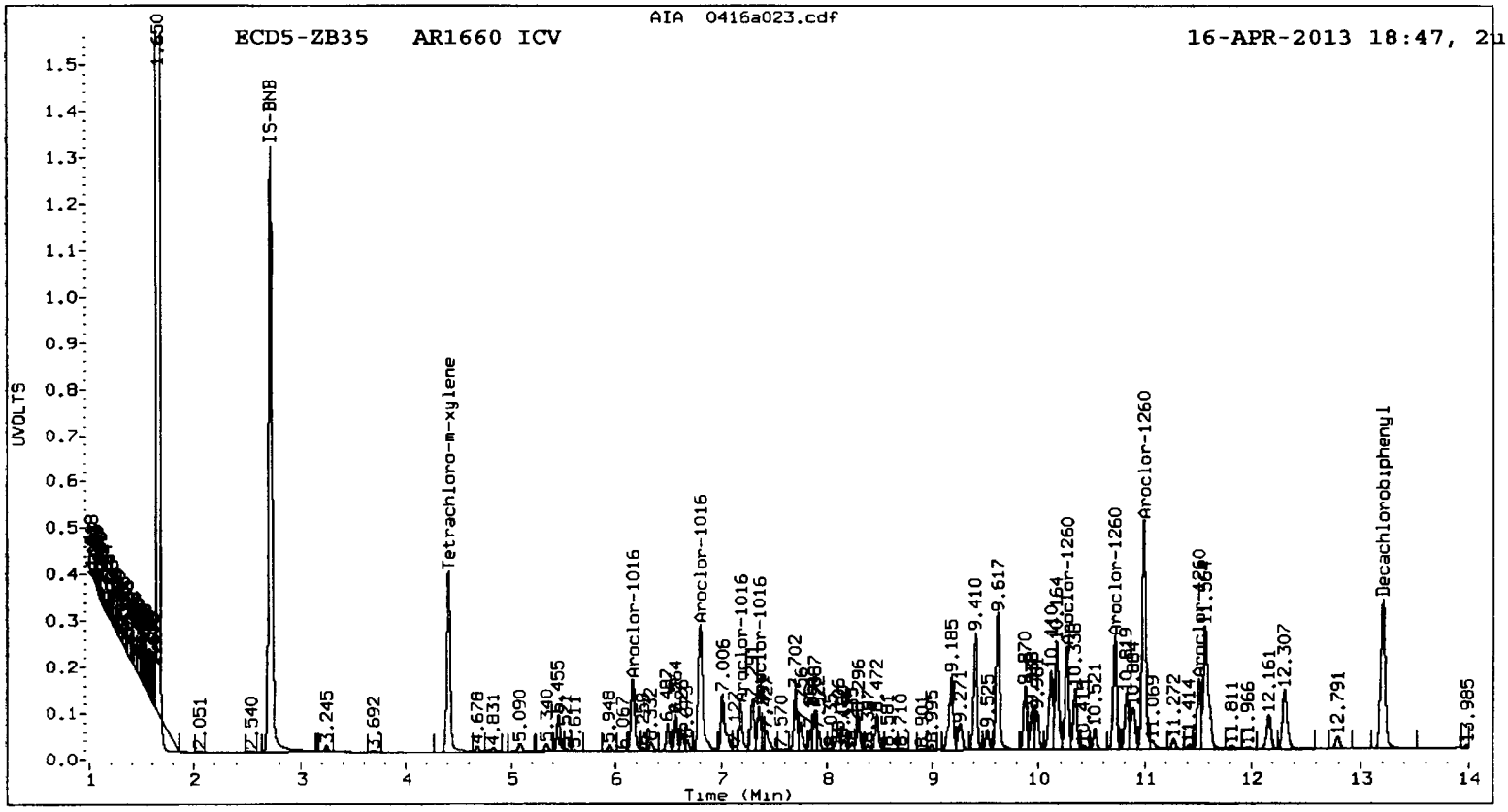
AIA 0416a023.cdf
16-APR-2013 18:47, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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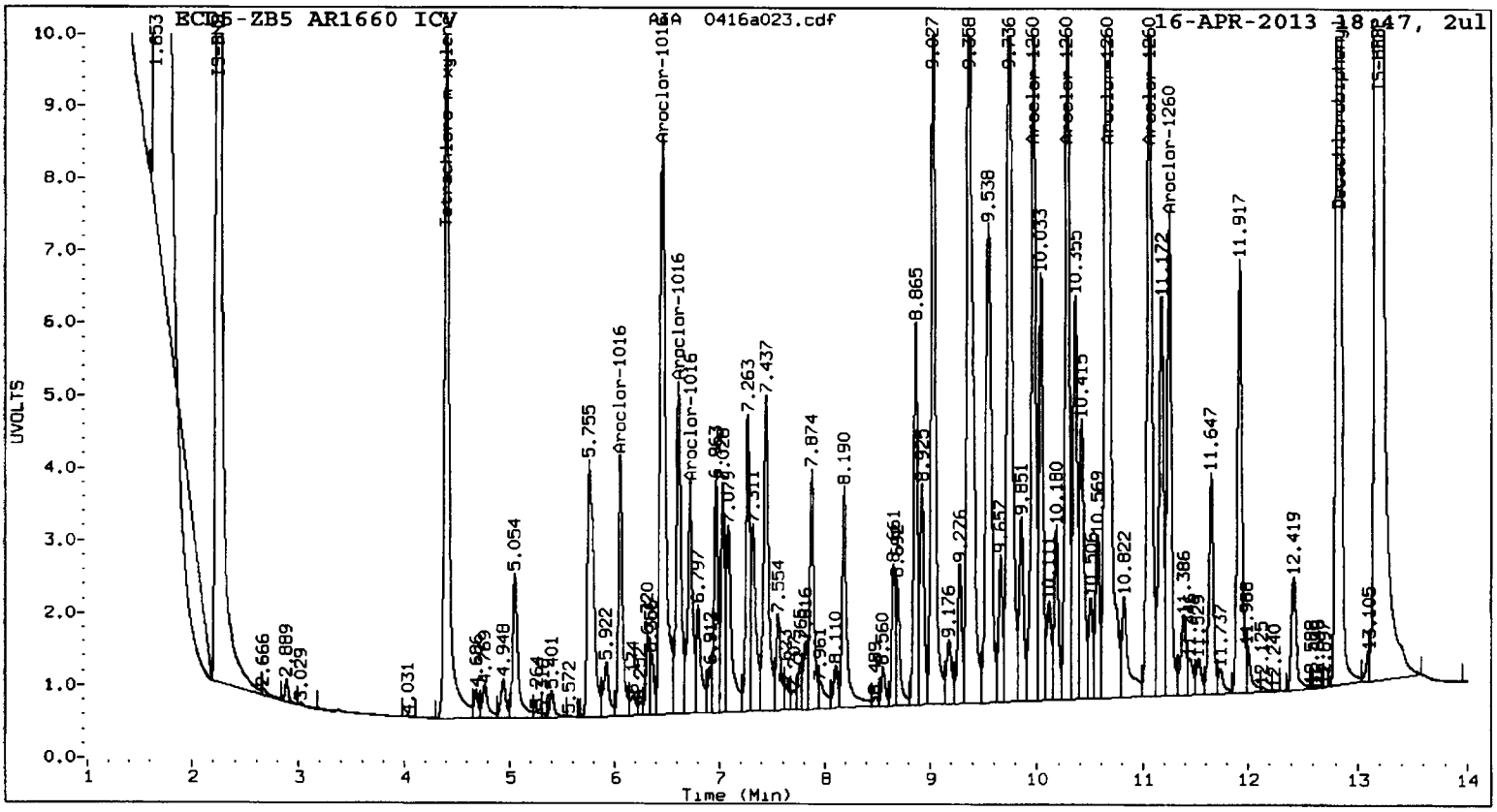
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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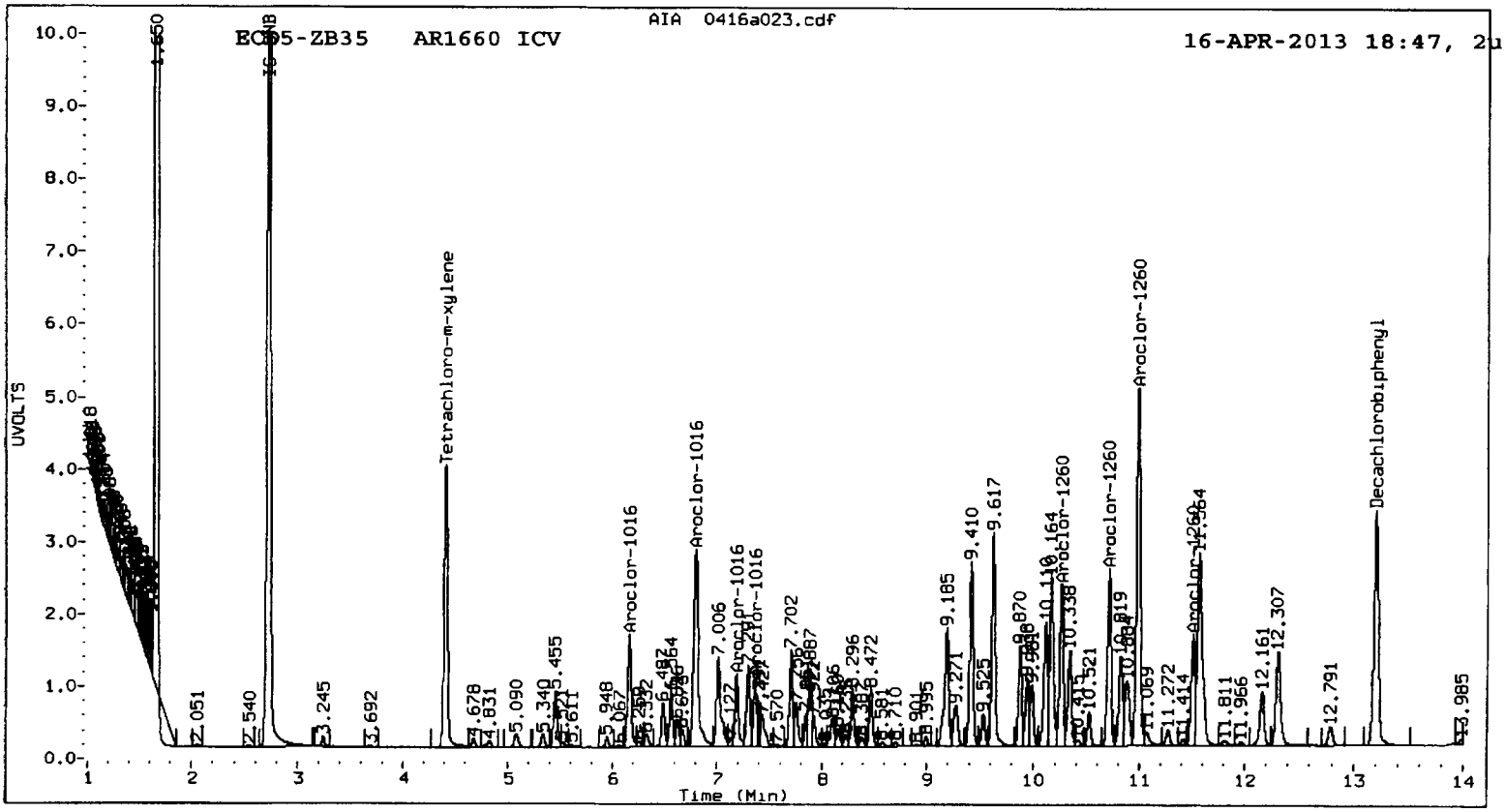
AIA 0416a023.cdf
16-APR-2013 18:47, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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EC35-ZB35 AR1660 ICV
16-APR-2013 18:47, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a024.d
Data file 2: 20130416.b/ical-2.b/0416a024.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 16-APR-2013 19:07
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	-0.001	16731323	4.402	-0.001	4463472	20.4	20.5	0.7	Tetrachloro-m-xylen
12.826	-0.001	24327523	13.204	0.000	4603132	18.3	19.2	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.9	51.2
Decachlorobiphenyl	45.7	48.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50527664	3.9
Hexabromobiphenyl	81878684	87430012	6.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14807065	2.4
Hexabromobiphenyl	16263628	17280448	6.3

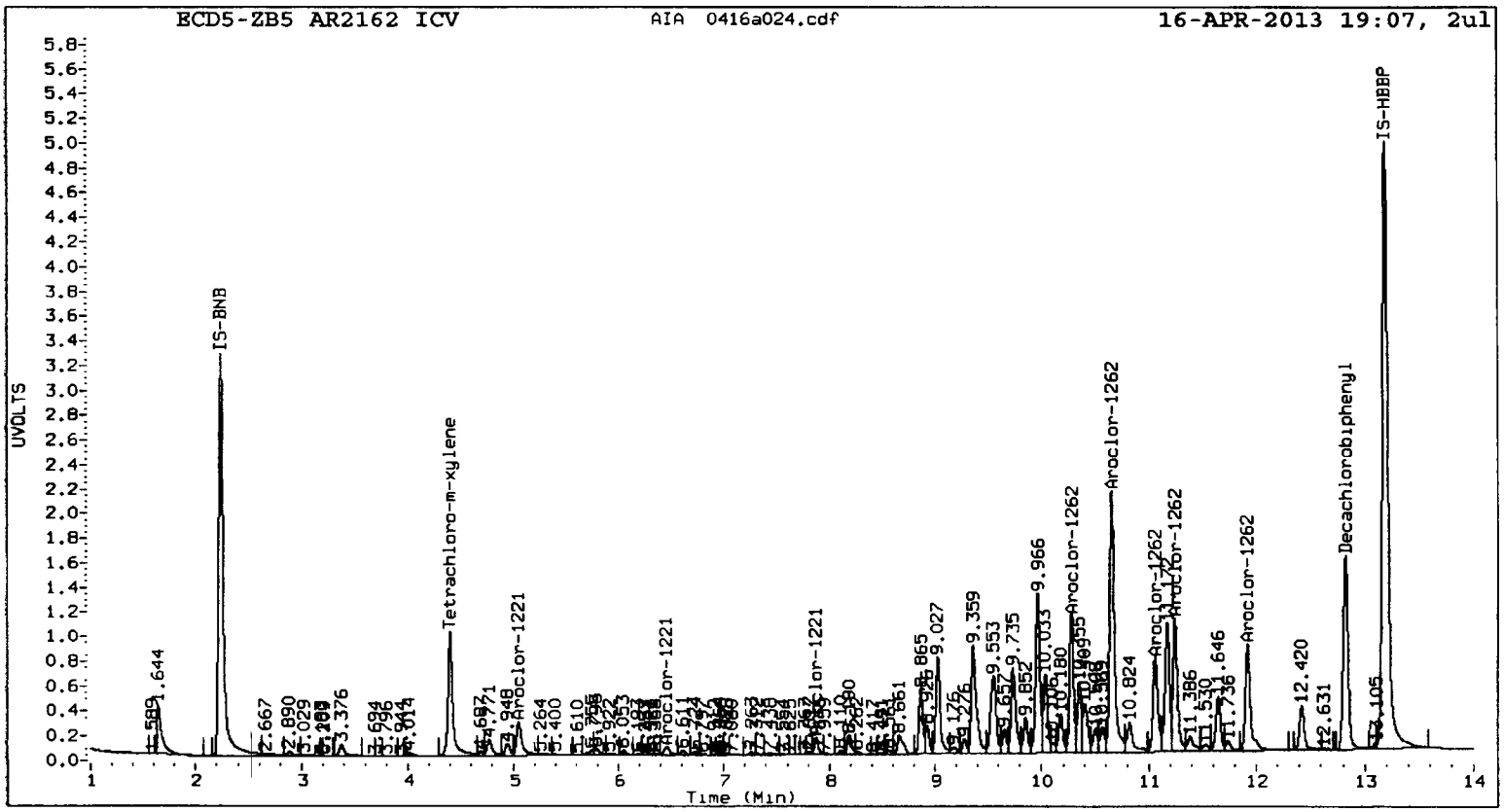
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

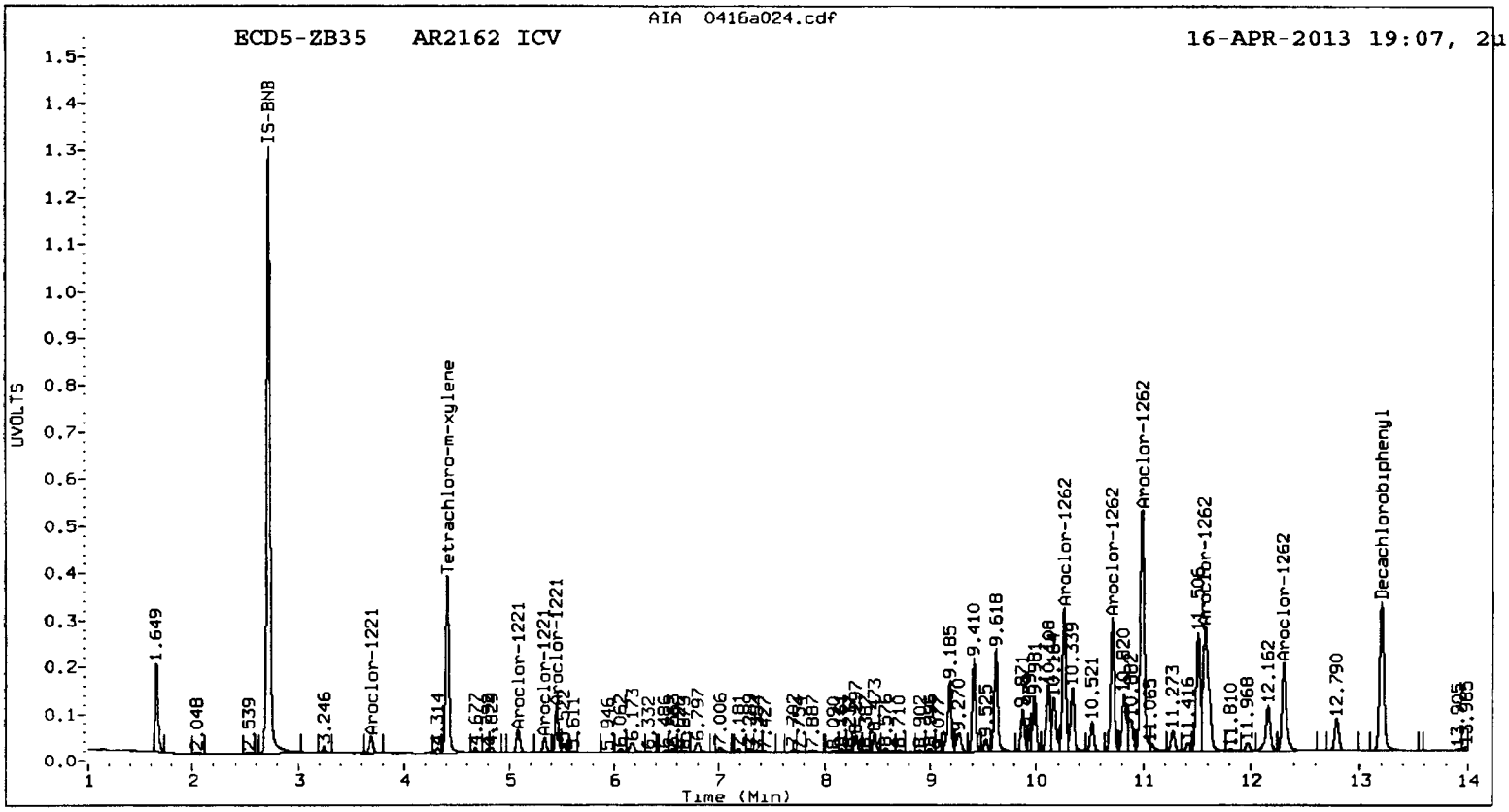
	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	5.054	-0.001	5315388	263.4	1	3.689	0.000	394565	255.4
Aroclor-1221	2	6.462	-0.001	1341017	210.4	2	5.086	-0.002	630264	260.5
Aroclor-1221	3	7.875	-0.001	1972735	223.7	3	5.339	-0.002	380132	260.0
Aroclor-1221	NS	---			----	4	5.454	-0.001	1141731	258.7
	Total Col1Ave (3 peaks):			232.5		Total Col2Ave (4 peaks):			258.7	RPD = 11
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			258.0	
Aroclor-1262	1	10.282	0.000	15125347	269.5	1	10.259	-0.001	3594565	251.3
Aroclor-1262	2	10.658	-0.001	33777104	231.1	2	10.711	0.000	3476377	280.6
Aroclor-1262	3	11.059	0.000	12107792	233.4	3	10.985	-0.002	6548011	229.1
Aroclor-1262	4	11.246	0.000	16398471	263.4	4	11.569	0.001	4847257	260.8
Aroclor-1262	5	11.918	-0.001	14753400	241.4	5	12.307	-0.001	2797834	250.4
	Total Col1Ave (5 peaks):			247.8		Total Col2Ave (5 peaks):			254.4	RPD = 3
	Corrected Ave (4 peaks):			242.3		Corrected Ave (4 peaks):			247.9	RPD = 2

Total PCB Area Col1 (4.501 - 12.727) = 273780574 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 53081620 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR2162 ICV
AIA 0416a024.cdf
16-APR-2013 19:07, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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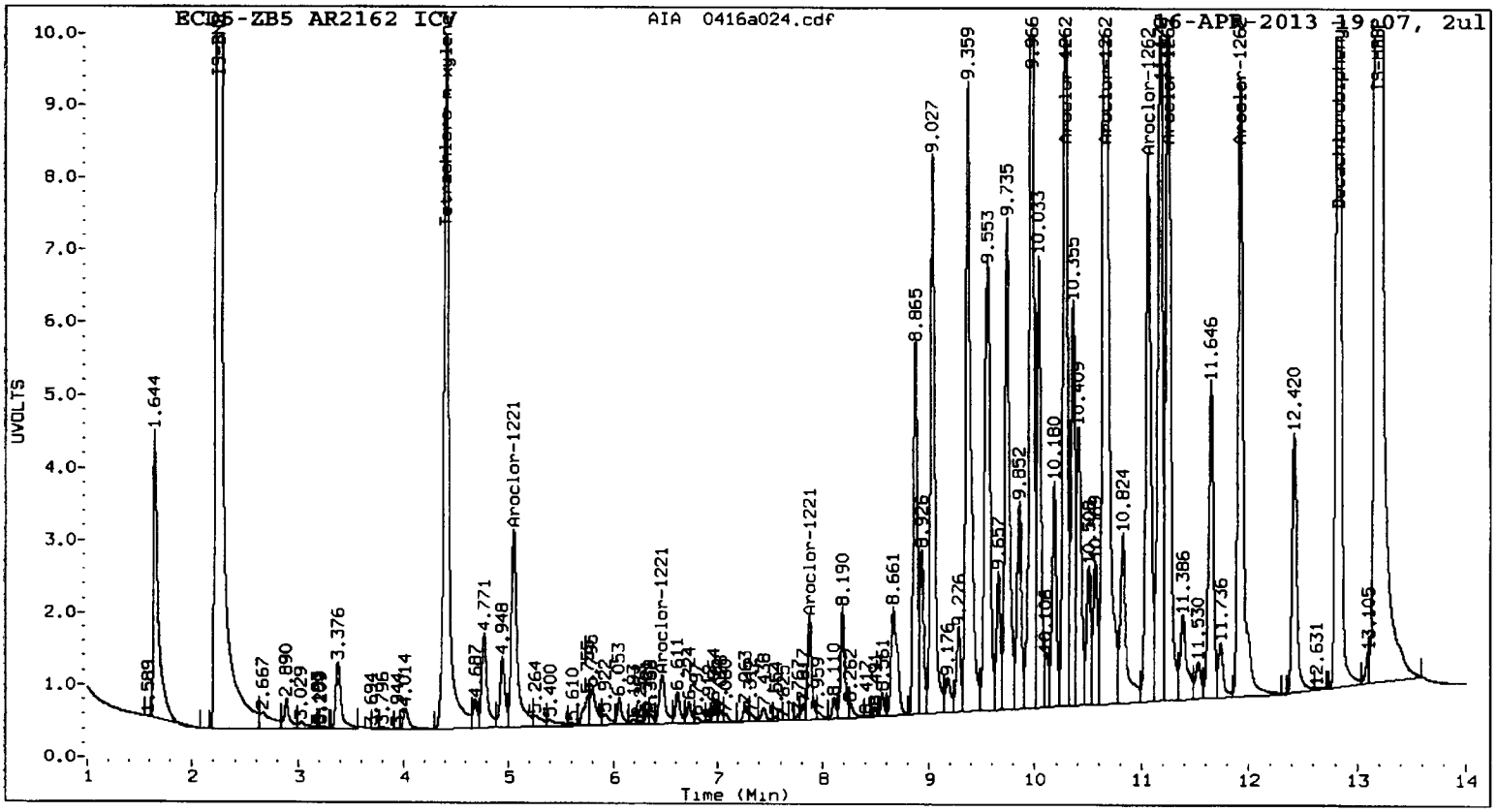
ECD5-ZB35 AR2162 ICV
16-APR-2013 19:07, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl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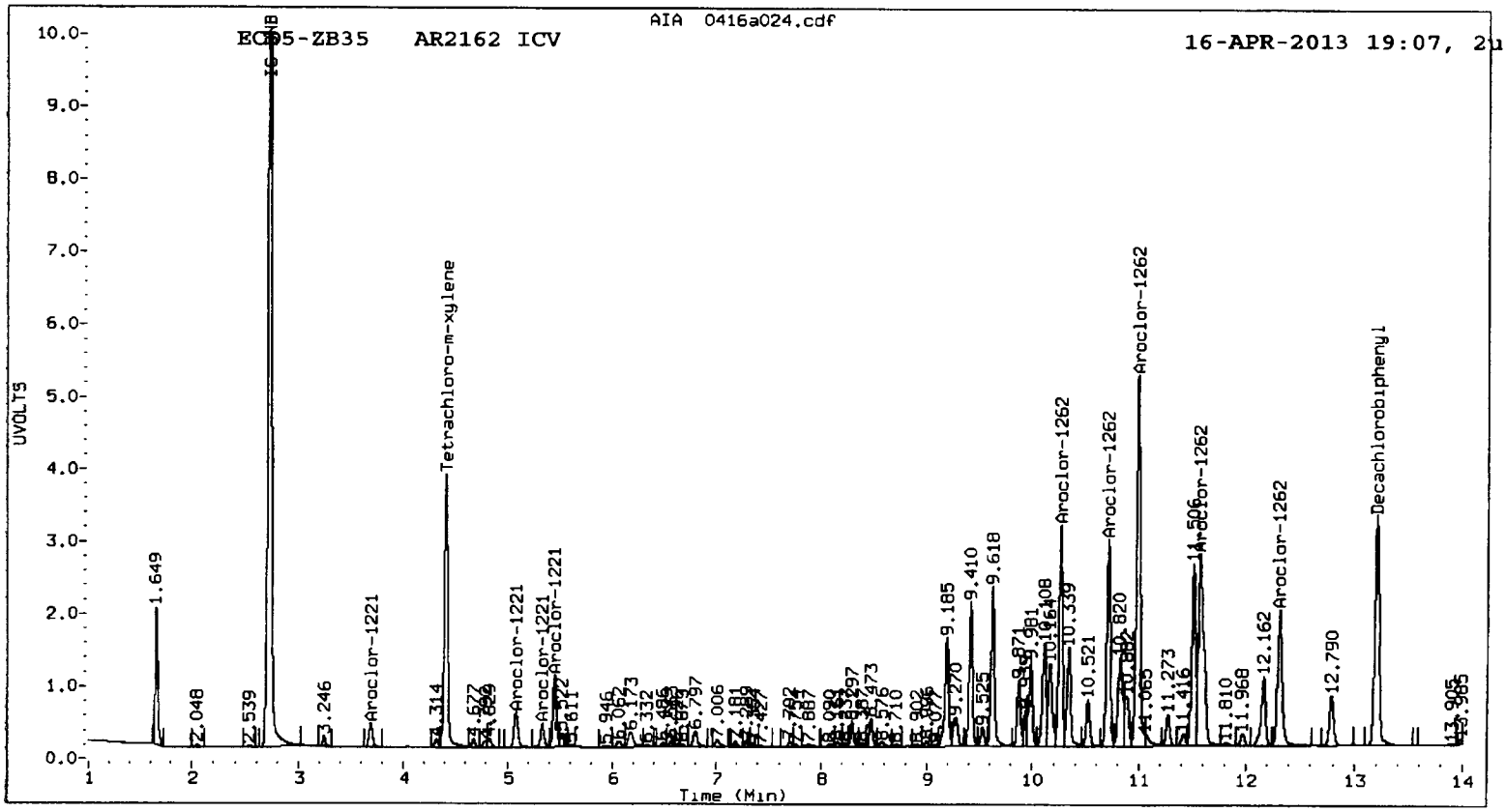
16-APR-2013 19:07, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl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EC05-ZB35 AR2162 ICV
16-APR-2013 19:07, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a025.d
Data file 2: 20130416.b/ical-2.b/0416a025.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 16-APR-2013 19:27
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.401	0.000	16523573	4.403	-0.001	4467196	19.6	19.9	1.3	Tetrachloro-m-xylen
12.827	0.000	38163496	13.203	-0.001	7222413	28.2	29.6	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.1	49.7
Decachlorobiphenyl	70.5	74.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	51740334	6.4
Hexabromobiphenyl	81878684	88870021	8.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	15260632	5.6
Hexabromobiphenyl	16263628	17569147	8.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

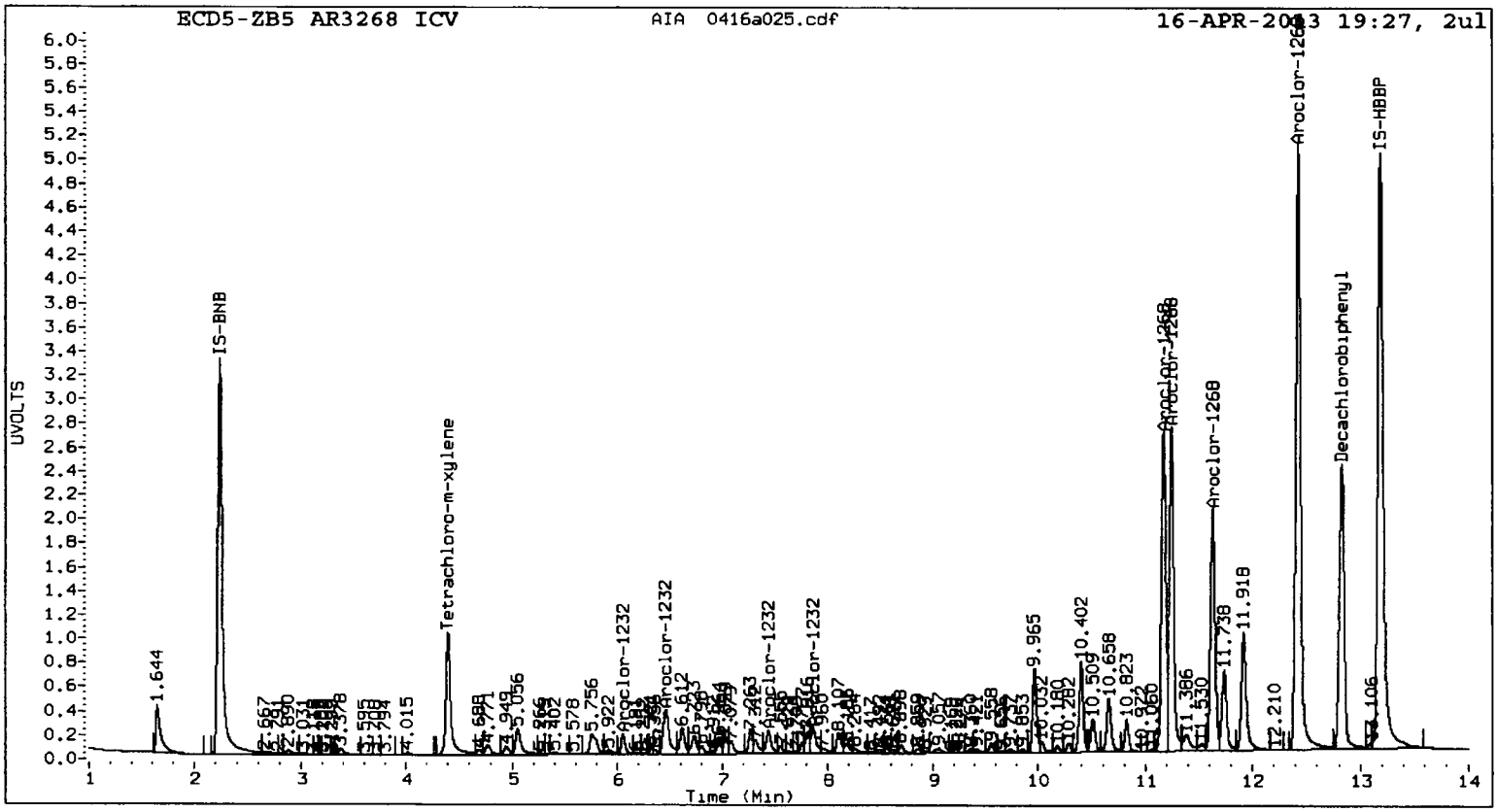
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	6.054	0.000	2451045	269.2	1	6.161	0.000	1011917	266.7
Aroclor-1232	2	6.462	0.000	7417711	264.3	2	6.796	-0.001	1958347	262.7
Aroclor-1232	3	7.438	0.000	3272559	230.7	3	7.006	-0.001	817922	262.5
Aroclor-1232	4	7.870	-0.001	3644887	219.1	4	8.236	-0.001	583770	228.7
Total Col1Ave (4 peaks):				245.8		Total Col2Ave (4 peaks):			255.2	RPD = 4
Corrected Ave (3 peaks):				238.0		Corrected Ave (3 peaks):			251.3	RPD = 5
Aroclor-1268	1	11.173	0.000	37443403	258.7	1	11.505	-0.001	7572443	257.5
Aroclor-1268	2	11.244	0.000	40652015	281.2	2	11.572	-0.001	8159229	281.1
Aroclor-1268	3	11.630	0.000	29361332	235.0	3	11.967	-0.001	5554407	231.0
Aroclor-1268	4	12.421	0.000	80417086	220.6	4	12.790	-0.002	15556403	219.2
Total Col1Ave (4 peaks):				248.9		Total Col2Ave (4 peaks):			247.2	RPD = 1
Corrected Ave (3 peaks):				238.1		Corrected Ave (3 peaks):			235.9	RPD = 1

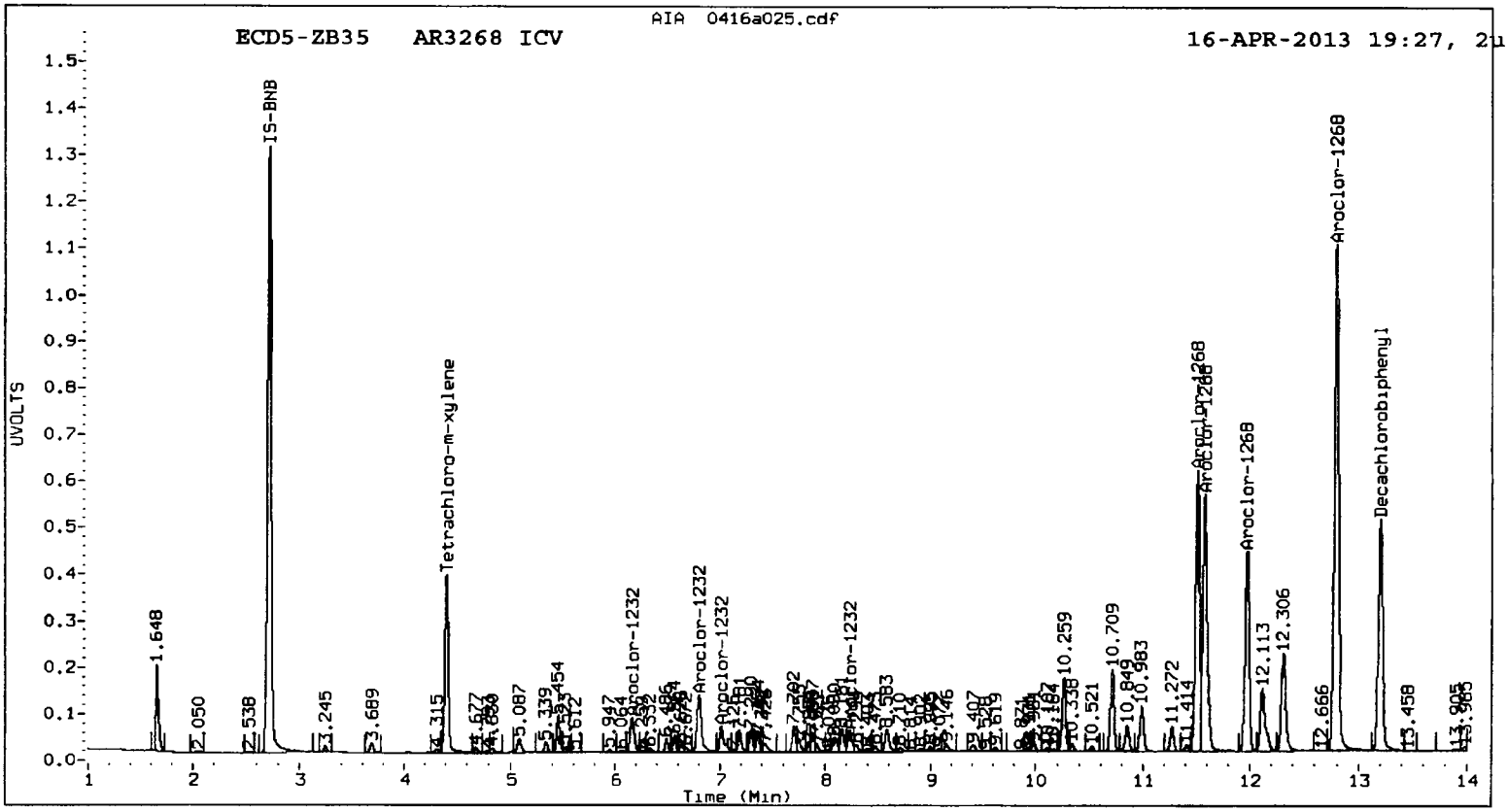
Total PCB Area Col1 (4.501 - 12.727) = 322597098 Col1 Total PCB = 0.5 ppm*

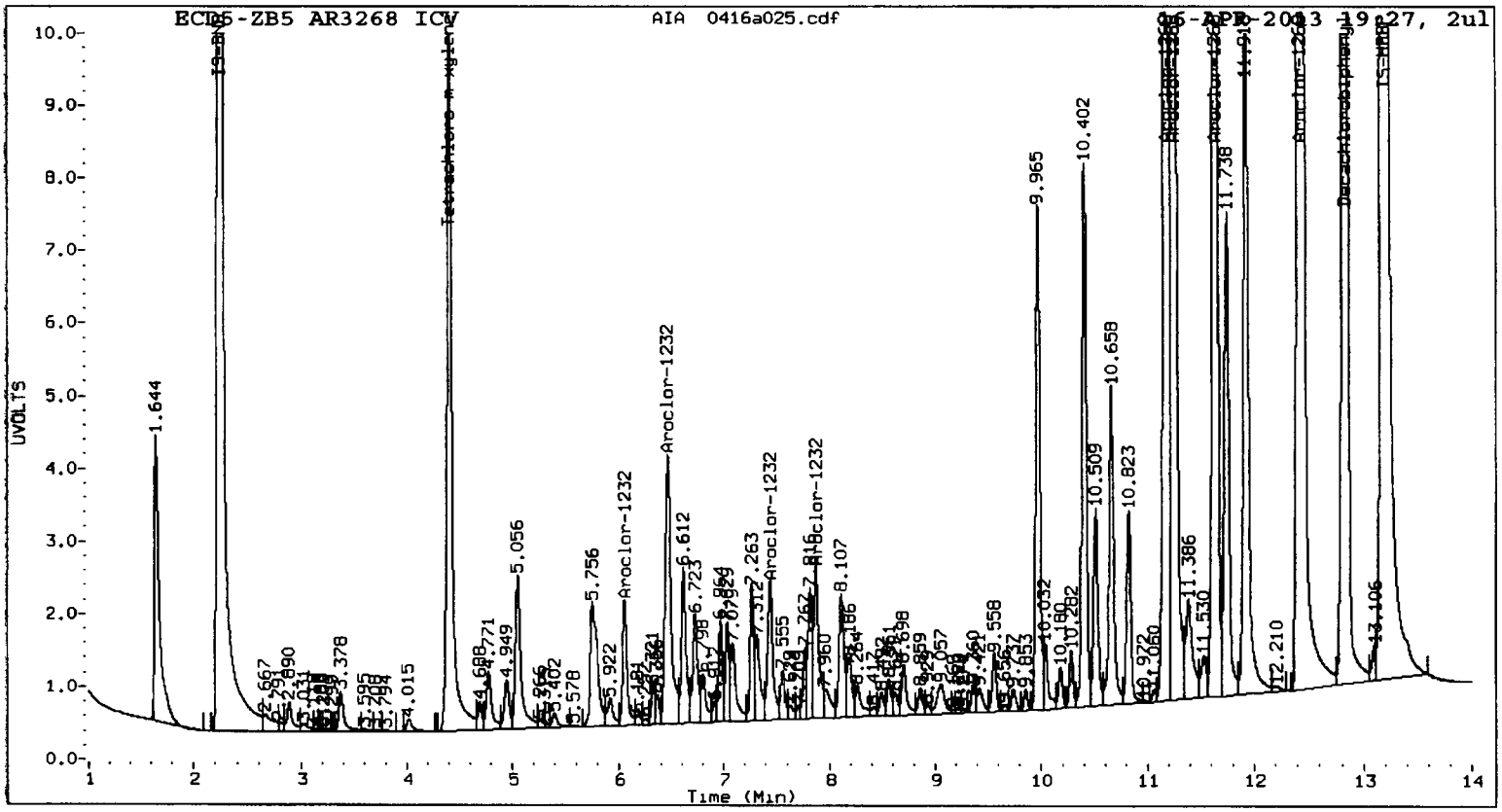
Total PCB Area Col2 (4.503 - 13.104) = 64195066 Col2 Total PCB = 0.5 ppm*

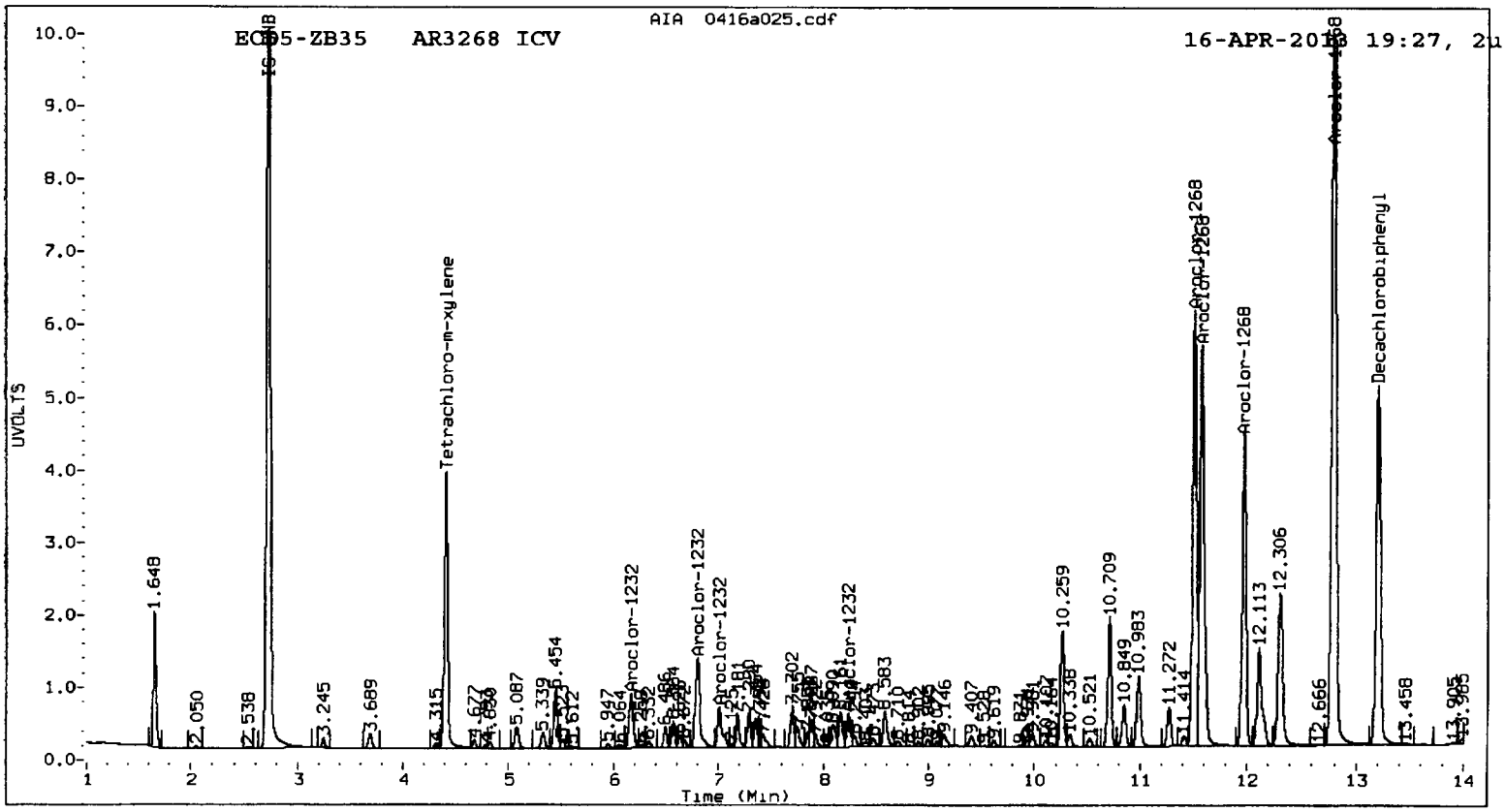
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR3268 ICV
AIA 0416a025.cdf
16-APR-2013 19:27, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
1.644
4.315
5.087
5.339
5.454
5.612
5.756
5.922
6.612
9.965
10.402
10.509
10.658
10.823
11.386
11.530
11.738
11.918
12.210


AIA 0416a025.cdf
ECD5-ZB35 AR3268 ICV
16-APR-2013 19:27, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
1.648
2.050
2.538
3.245
3.689
4.315
5.087
5.339
5.454
5.612
5.947
6.064
6.332
6.486
6.679
7.202
10.259
10.338
10.521
10.709
10.849
10.983
11.272
11.414
12.113
12.306
12.666
13.458
13.905
13.985


EC05-ZB5 AR3268 ICV
AIA 0416a025.cdf
16-APR-2003 19:27, 2ul
UVOLTS
Time (Min)
1.644
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1232
5.056
5.756
6.612
6.723
8.107
9.965
10.402
10.509
10.658
10.823
11.386
11.738
12.210
13.106


AIA 0416a025.cdf
EC05-ZB35 AR3268 ICV
16-APR-2003 19:27, 2u
UVOLTS
Time (Min)
1.648
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1268
Aroclor-1268
Aroclor-1268
Decachlorobiphenyl
10.259
10.709
10.849
10.983
12.113
12.306

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B ~~FID-4A~~ FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 05/07/13 Internal Standard ID 2006-1 Expiration 07/26/13

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets %RSD & r^2 Criteria YES / NO
Manual Integrations for ICal? YES / NO
Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO
ICV Exceeding ±30%? YES / NO
Linear Fits Used? YES / NO
Quadratic Fits Used? YES / NO
Calibration Points Dropped? YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
IB	1992-2	05/16/13	AR1660	~~B207~~ 05/09/13 B182	04/30/14
AR1660	B161	04/30/14	AR1242	B190	
AR1242	B163		AR1248	B191	
AR1248	B172		AR1254	B192	
AR1254	B173		AR2162	B193	
AR2162	B174		AR3268	B194	
AR3268	B175				
BD	2067-1	05/16/13			
DDT-	1991-2	01/21/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JR **Date:** 05/07/13

Reviewer: MD **Date:** 5-8-13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/ical-1.b

ARI Job No.: IB Method: PCB1.m Instrument: ecd5.i Date: 07-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1619	0507a003.d	IB		1	NO MANUAL INTEGRATION
1639	0507a004.d	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1659	0507a005.d	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1719	0507a006.d	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1739	0507a007.d	1PPMAR1660		1	NO MANUAL INTEGRATION
1759	0507a008.d	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1819	0507a009.d	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1839	0507a010.d	AR1242		1	NO MANUAL INTEGRATION
1859	0507a011.d	AR1248		1	NO MANUAL INTEGRATION
1920	0507a012.d	AR1254		1	NO MANUAL INTEGRATION
1940	0507a013.d	AR2162		1	NO MANUAL INTEGRATION
2000	0507a014.d	AR3268		1	NO MANUAL INTEGRATION
2021	0507a015.d	AR1242	ICV	1	NO MANUAL INTEGRATION
2041	0507a016.d	AR1248	ICV	1	NO MANUAL INTEGRATION
2101	0507a017.d	AR1254	ICV	1	NO MANUAL INTEGRATION
2121	0507a018.d	AR1660	ICV	1	NO MANUAL INTEGRATION
2142	0507a019.d	AR2162	ICV	1	NO MANUAL INTEGRATION
2202	0507a020.d	AR3268	ICV	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB	2.727	2.727	2.726	2.727	2.725	2.725	2.724	2.624-2.824	2.726	0.001
$ 2 Tetrachloro-m-xylene	4.414	4.413	4.413	4.414	4.413	4.412	4.412	4.312-4.512	4.413	0.001
1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	3.694	3.594-3.794	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.165	6.066-6.266	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.167	6.067-6.267	+++++	+++++
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.800	6.700-6.900	+++++	+++++
7 Aroclor-1016	6.167	6.167	6.167	6.167	6.167	6.166	6.166	6.066-6.266	6.167	0.000
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.298	8.198-8.398	+++++	+++++
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.260	10.160-10.360	+++++	+++++
9 Aroclor-1260	10.261	10.262	10.262	10.260	10.262	10.260	10.260	10.160-10.360	10.261	0.001
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.507	11.407-11.607	+++++	+++++
$ 13 Decachlorobiphenyl	13.206	13.206	13.205	13.203	13.204	13.204	13.205	13.105-13.305	13.205	0.001
* 12 IS-HBBP	14.074	14.073	14.073	14.072	14.073	14.073	14.072	13.972-14.172	14.073	0.001
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.560	8.510-8.610	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.246	9.196-9.296	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.949	8.849-9.049	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.713	9.613-9.813	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.148	10.048-10.248	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.250	2.250	2.250	2.249	2.249	2.249	2.249	2.149-2.349	2.249	0.001
$ 1 Tetrachloro-m-xylene	4.412	4.411	4.411	4.410	4.411	4.411	4.411	4.311-4.511	4.411	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	5.064	4.964-5.164	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.059	5.959-6.159	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.060	5.960-6.160	+++++	+++++
7 Aroclor-1016	6.062	6.062	6.062	6.059	6.061	6.060	6.060	5.960-6.160	6.061	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.467	6.367-6.567	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.192	8.092-8.292	+++++	+++++
9 Aroclor-1260	9.968	9.968	9.968	9.967	9.967	9.967	9.967	9.867-10.067	9.967	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.283	10.183-10.383	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.175	11.075-11.275	+++++	+++++
$ 13 Decachlorobiphenyl	12.829	12.828	12.828	12.827	12.828	12.827	12.828	12.728-12.928	12.828	0.001
* 12 IS-HBBP	13.191	13.191	13.191	13.189	13.191	13.190	13.191	13.091-13.291	13.190	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.156	8.106-8.206	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	8.707	8.657-8.757	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.210	9.160-9.260	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.589	8.489-8.689	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

WG27 05144

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.163	9.063-9.263	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.675	9.575-9.775	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-1.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-1.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-1.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-1.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-1.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-1.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-1.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-1.b/0507a021.d/0507a021.cdf

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
2 Aroclor-1221 (1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03259	+++++	0.03259	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00997	+++++	0.00997	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01408	+++++	0.01408	0.000
3 Aroclor-1242 (1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02881	+++++	0.02881	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.08837	+++++	0.08837	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03943	+++++	0.03943	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04869	+++++					0.04869	0.000
4 Aroclor-1232 (1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01482	+++++					0.01482	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04536	+++++					0.04536	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02357	+++++					0.02357	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02708	+++++					0.02708	0.000
7 Aroclor-1016 (1)	0.04186	0.03922	0.03800	0.03458	0.03232	0.03038		
	+++++	+++++					0.03606	12.136
(2)	0.12934	0.12017	0.11740	0.10631	0.09981	0.09343		
	+++++	+++++					0.11108	12.195
(3)	0.05884	0.05458	0.05260	0.04727	0.04418	0.04111		
	+++++	+++++					0.04976	13.510
(4)	0.04321	0.04072	0.03932	0.03524	0.03340	0.03123		
	+++++	+++++					0.03718	12.437

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05630	+++++					0.05630	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06332	+++++					0.06332	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08051	+++++					0.08051	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05614	+++++					0.05614	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07461	+++++					0.07461	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04925	+++++					0.04925	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10267	+++++					0.10267	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10574	+++++					0.10574	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03999	+++++					0.03999	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
9 Aroclor-1260(1)	0.08092	0.07140	0.06872	0.06239	0.05721	0.05245		
	+++++	+++++					0.06551	15.742
(2)	0.07490	0.06756	0.06590	0.06047	0.05602	+++++		
	+++++	+++++					0.06497	11.060
(3)	0.17376	0.16180	0.15830	0.14675	0.13829	+++++		
	+++++	+++++					0.15578	8.810
(4)	0.08420	0.07867	0.07662	0.07158	0.06832	+++++		
	+++++	+++++					0.07588	8.154
(5)	0.04297	0.04212	0.04155	0.03881	0.03753	+++++		
	+++++	+++++					0.04060	5.708
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07490	+++++					0.07490	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.17600	+++++					0.17600	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05574	+++++					0.05574	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07824	+++++					0.07824	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06005	+++++					0.06005	0.000
11 Aroclor-1268 (1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.16835	+++++					0.16835	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18617	+++++					0.18617	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13825	+++++					0.13825	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.38949	+++++					0.38949	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1037					1037	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1111					1111	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1189					1189	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1453					1453	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1128					1128	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1294					1294	0.000
$ 1 Tetrachloro-m-xylene	1.27779	1.27691	1.30214	1.24444	1.19768	1.14335		
	+++++	+++++					1.24039	4.811
$ 13 Decachlorobiphenyl	1.45250	1.28741	1.22687	1.12094	1.06410	1.01848		
	+++++	+++++					1.19505	13.474

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-2.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-2.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-2.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-2.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-2.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-2.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-2.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-2.b/0507a021.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00820	+++++					0.00820	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01373	+++++					0.01373	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00748	+++++					0.00748	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02352	+++++					0.02352	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02053	+++++					0.02053	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04099	+++++					0.04099	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.01709	+++++							0.01709	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.01434	+++++							0.01434	0.000
3 Aroclor-1242 (1)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.03645	+++++							0.03645	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.08006	+++++							0.08006	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.03345	+++++							0.03345	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.02802	+++++							0.02802	0.000
6 Aroclor-1248 (1)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05013	+++++							0.05013	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.04157	+++++							0.04157	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.04304	+++++							0.04304	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05593	+++++					0.05593	0.000
7 Aroclor-1016(1)	0.05136	0.05104	0.04862	0.04453	0.04104	0.03730		
	+++++	+++++					0.04565	12.493
(2)	0.11167	0.10627	0.10431	0.09724	0.09163	0.08432		
	+++++	+++++					0.09924	10.221
(3)	0.02778	0.02695	0.02737	0.02574	0.02469	0.02316		
	+++++	+++++					0.02595	6.857
(4)	0.02758	0.02578	0.02560	0.02332	0.02231	0.02042		
	+++++	+++++					0.02417	10.869
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03879	+++++					0.03879	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04792	+++++					0.04792	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03671	+++++					0.03671	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07862	+++++					0.07862	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04427	+++++					0.04427	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11065	+++++					0.11065	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10118	+++++					0.10118	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18978	+++++					0.18978	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.12335	+++++					0.12335	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05956	+++++					0.05956	0.000
9 Aroclor-1260(1)	0.08456	0.07842	0.07600	0.07099	0.06556	0.05983		
	+++++	+++++					0.07256	12.383
(2)	0.09657	0.09048	0.08853	0.08437	0.07825	0.07177		
	+++++	+++++					0.08500	10.489
(3)	0.16866	0.16707	0.16406	0.15713	0.14786	0.13685		
	+++++	+++++					0.15694	7.943

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	0.04850	0.04574	0.04367	0.04155	0.03920	0.03660		
	+++++	+++++					0.04254	10.221
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.19311	+++++					0.19311	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18203	+++++					0.18203	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.14408	+++++					0.14408	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.37318	+++++					0.37318	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	757					757	0.000
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	727					727	0.000
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1214					1214	0.000
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	916					916	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1037					1037	0.000
$ 2 Tetrachloro-m-xylene	1.13790	1.10316	1.09698	1.08696	1.05825	1.00770		
	+++++	+++++					1.08183	4.115
$ 13 Decachlorobiphenyl	1.43878	1.24550	1.16217	1.06757	1.02392	0.96937		
	+++++	+++++					1.15122	14.943

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a003.d
Data file 2: 20130507.b/ical-2.b/0507a003.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 07-MAY-2013 16:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	32061788	4.413	0.002	8759043	42.4	42.7	0.7	Tetrachloro-m-xylen
12.829	0.000	27295255	13.206	0.001	4923666	35.8	35.7	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.9	106.6
Decachlorobiphenyl	89.6	89.2

JE 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48807947	-0.3
Hexabromobiphenyl	50004151	51001521	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15184482	2.3
Hexabromobiphenyl	9345340	9588268	2.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

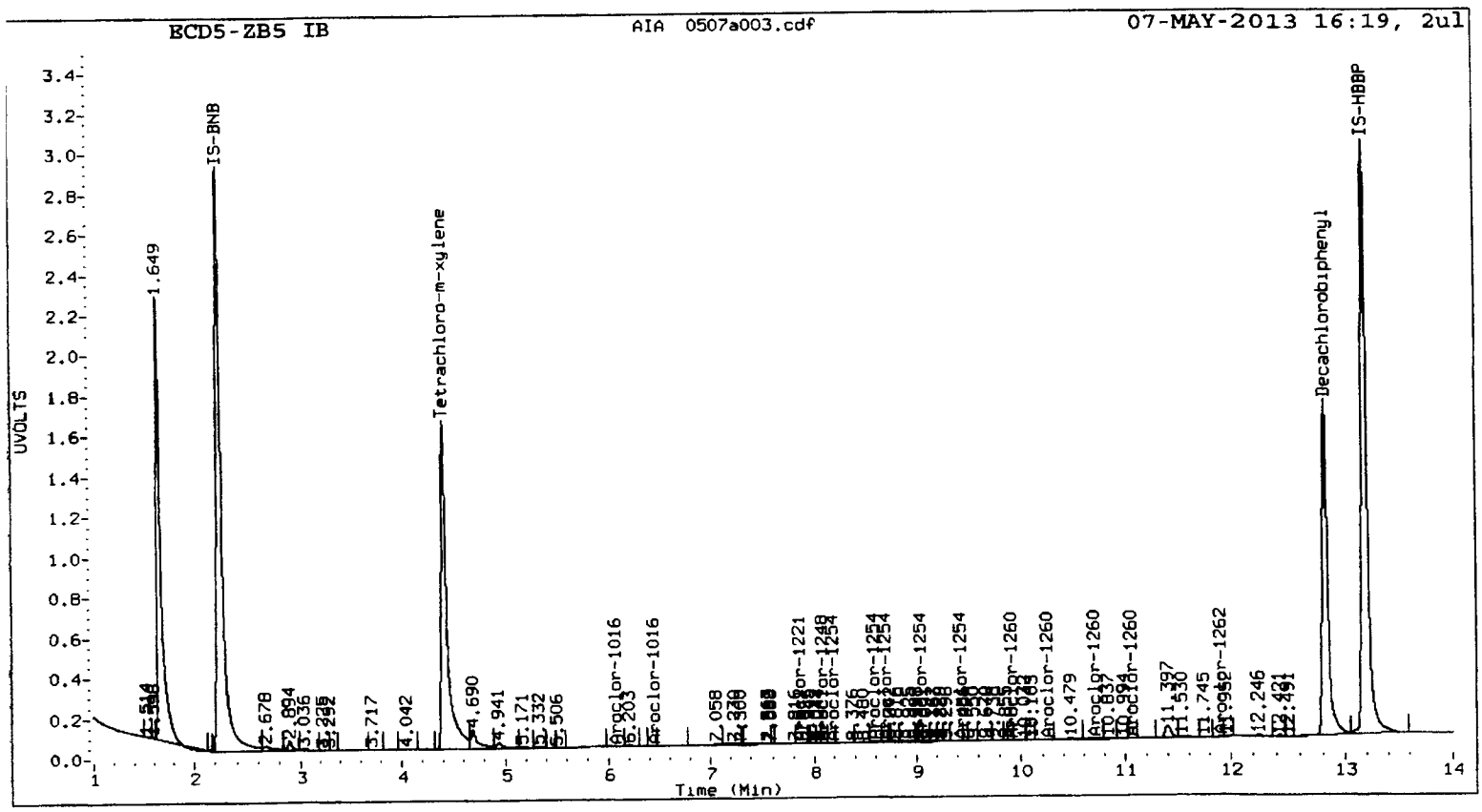
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.073	0.012	22097	1.0	1	---			0.0
Aroclor-1016	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.444	-0.024	12954	2.1	2	5.113	0.019	112267	43.1
Aroclor-1221	3	7.865	-0.013	88509	10.3	3	---			0.0
Aroclor-1221	NS	---			----	4	5.468	0.008	21627	4.8
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.073	0.012	22097	2.4	1	---			0.0
Aroclor-1232	2	6.444	-0.025	12954	0.5	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	7.865	-0.009	88509	5.4	4	---			0.0
	Total Col1Ave (3 peaks):			2.8		Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.073	0.013	22097	1.3	1	---			0.0
Aroclor-1242	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	7.865	-0.007	88509	3.0	4	---			0.0
	Total Col1Ave (3 peaks):			1.5		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.444	-0.022	12954	0.4	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	7.865	-0.009	88509	1.8	3	---			0.0
Aroclor-1248	4	8.084	-0.027	42411	1.2	4	---			0.0
	Total Col1Ave (3 peaks):			1.1		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.193	0.001	54179	1.2	1	---			0.0
Aroclor-1254	2	8.591	0.027	84538	2.8	2	---			0.0
Aroclor-1254	3	8.702	0.002	41716	0.7	3	---			0.0
Aroclor-1254	4	9.044	-0.009	43297	0.7	4	---			0.0
Aroclor-1254	5	9.430	0.068	73478	3.0	5	---			0.0
	Total Col1Ave (5 peaks):			1.7		Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	9.912	-0.055	26920	0.6	1	---			0.0
Aroclor-1260	2	10.257	-0.027	72723	1.8	2	---			0.0
Aroclor-1260	3	10.709	0.050	104804	1.1	3	---			0.0
Aroclor-1260	4	11.055	-0.003	13255	0.3	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Total Col1Ave (4 peaks):			0.9		Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.257	-0.026	72723	1.5	1	---			0.0
Aroclor-1262	2	10.709	0.051	104804	0.9	2	---			0.0
Aroclor-1262	3	11.055	-0.005	13255	0.4	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	11.906	-0.012	20784	0.5	5	---			0.0
	Total Col1Ave (4 peaks):			0.8		Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (4.511 - 12.728) = 7126262 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 766675 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Time (Min)
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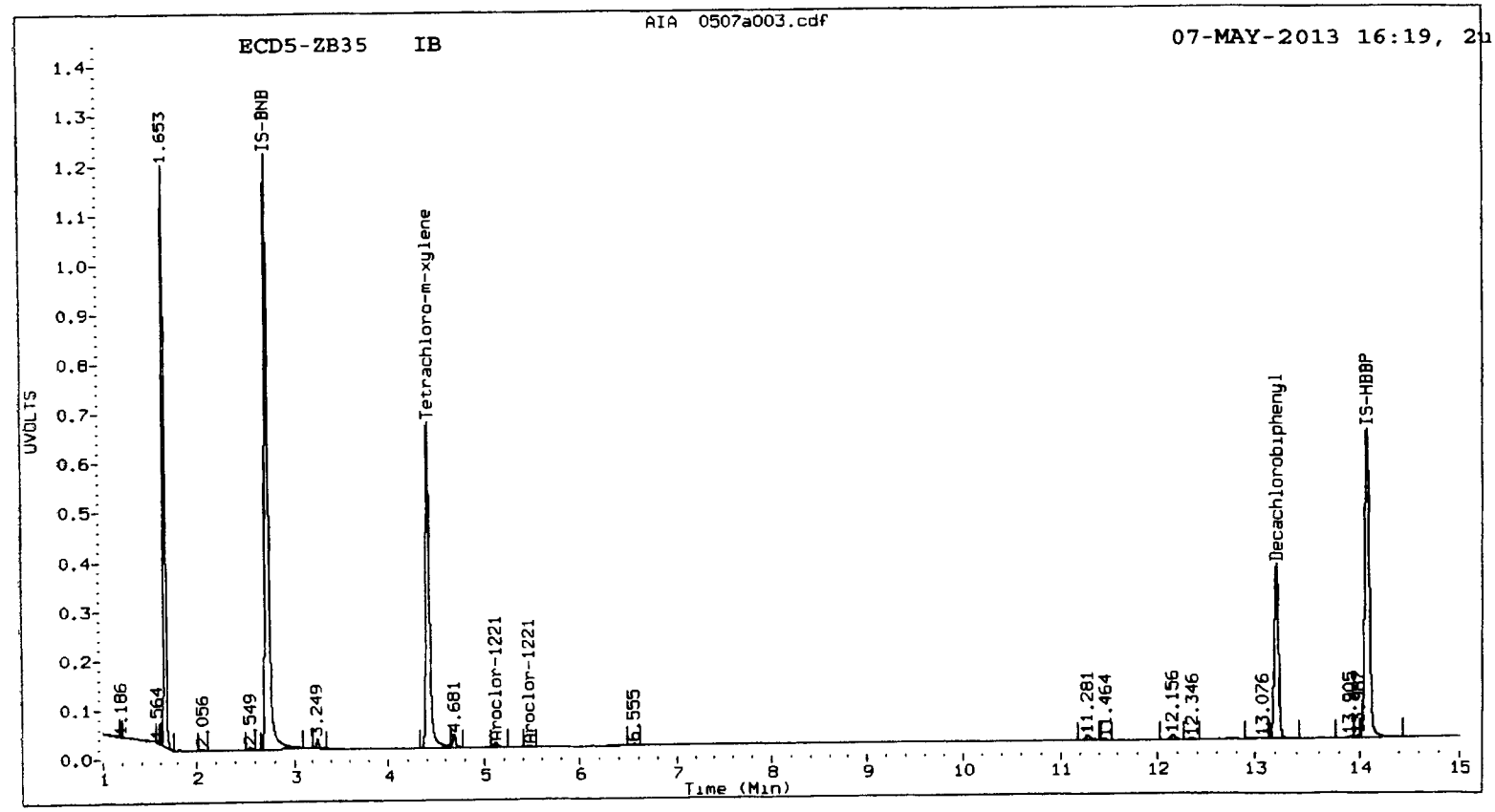
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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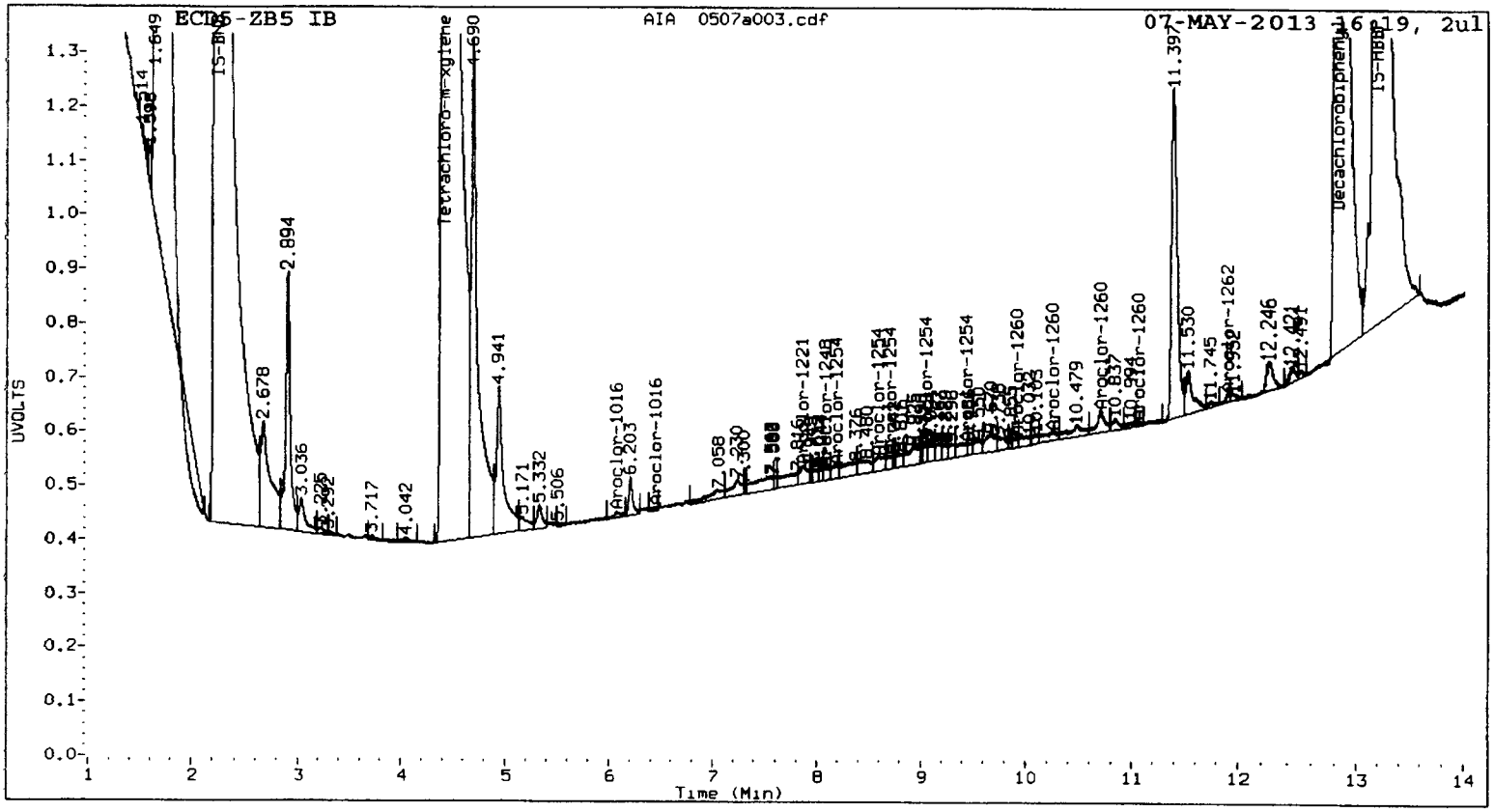
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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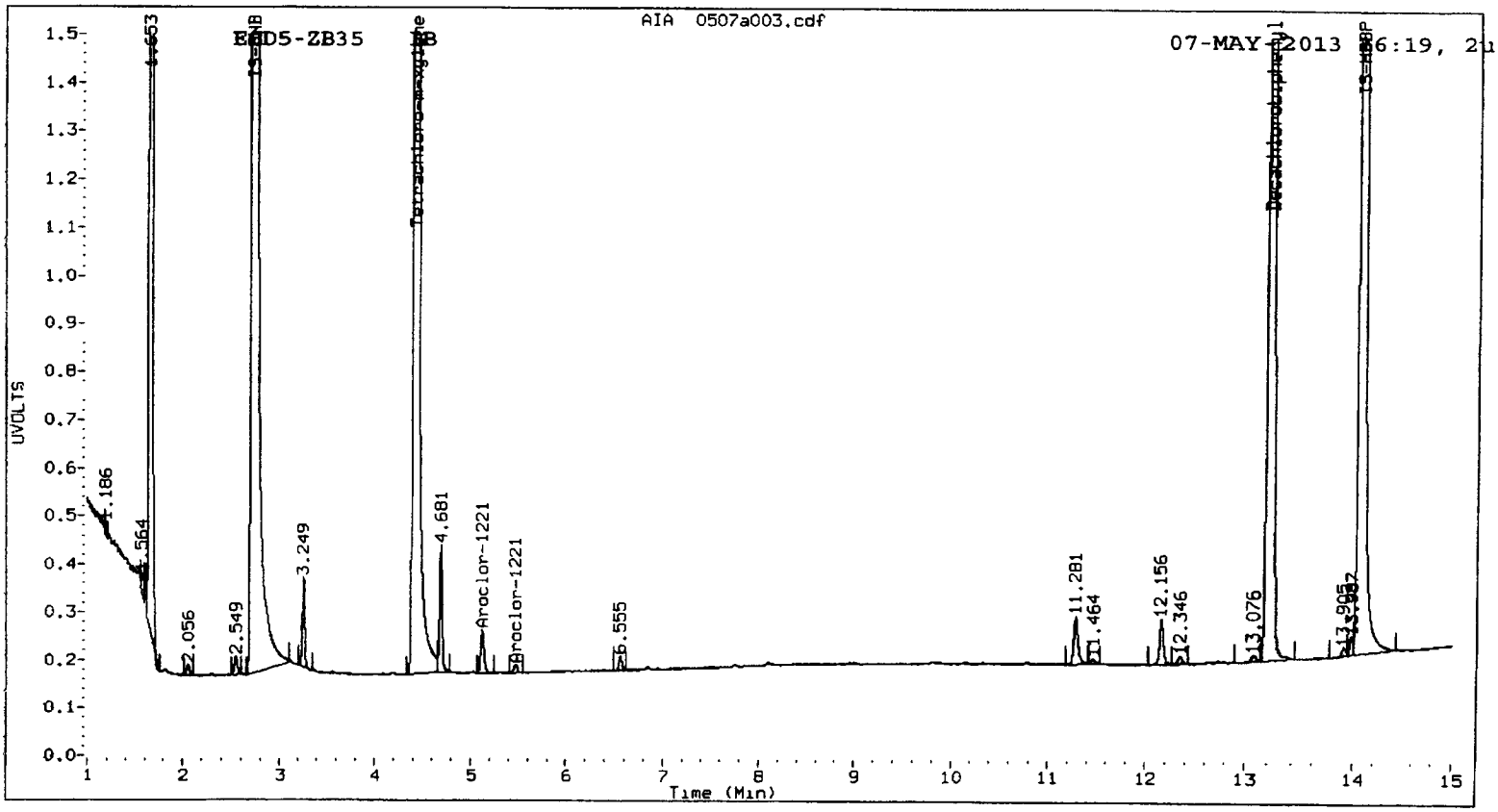
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1254
Aroclor-1260
Aroclor-1262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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1221

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a004.d
Data file 2: 20130507.b/ical-2.b/0507a004.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.412	0.002	15237305	4.414	0.002	4032555	20.1	20.1	0.1	Tetrachloro-m-xylen
12.829	0.000	14012855	13.206	0.000	2494212	18.8	18.5	1.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.2	50.2
Decachlorobiphenyl	46.9	46.4

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48977254	0.0
Hexabromobiphenyl	50004151	50004151	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14839715	0.0
Hexabromobiphenyl	9345340	9345340	0.0

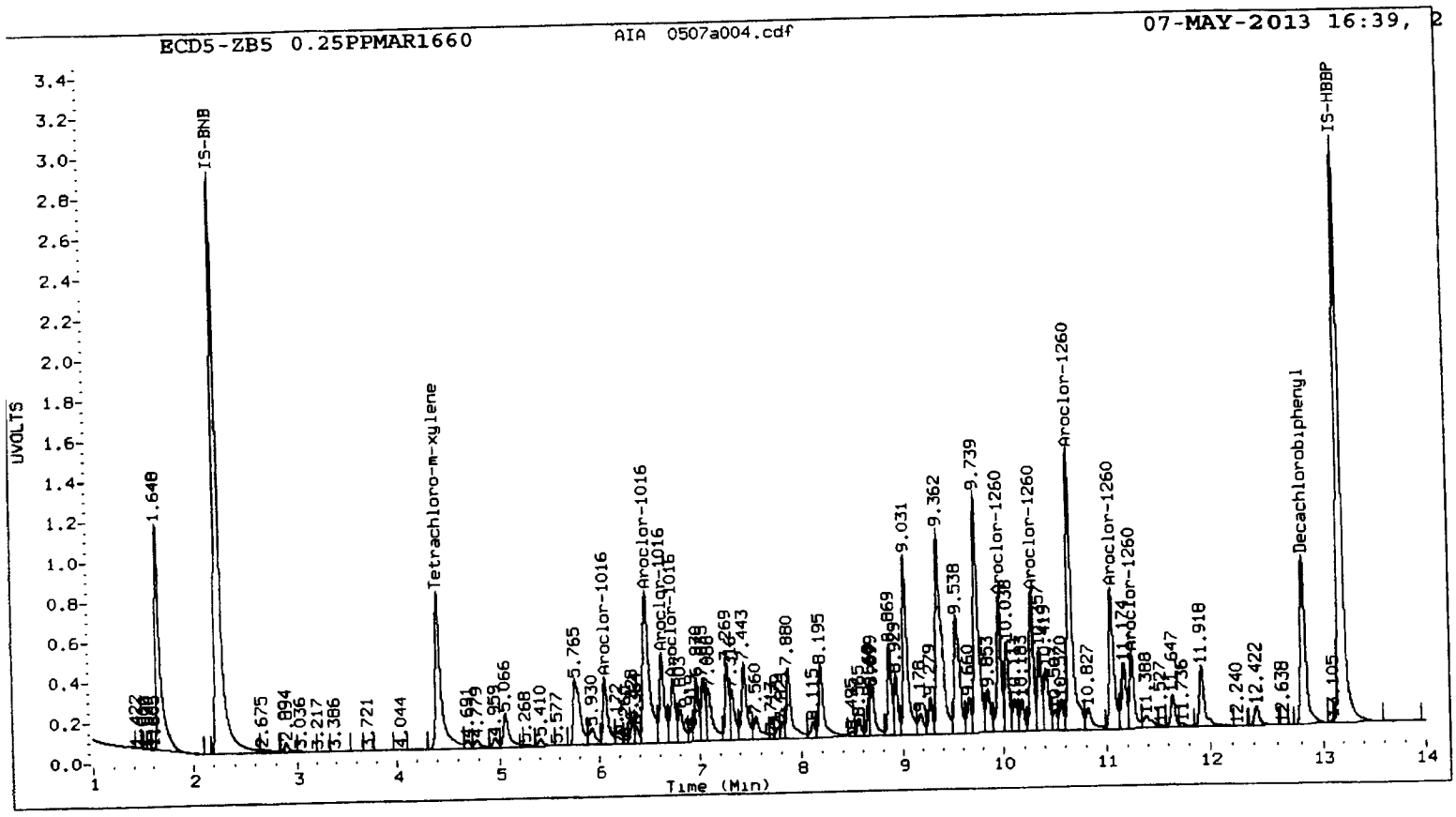
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	5292322	239.7	1	6.167	0.001	2064971	243.9
Aroclor-1016	2	6.470	0.002	16270732	239.3	2	6.803	0.002	4509319	245.0
Aroclor-1016	3	6.619	0.002	7234719	237.5	3	7.187	0.002	1193712	248.0
Aroclor-1016	4	6.731	0.003	5392918	236.9	4	7.360	0.002	1081244	241.2
Total Col1Ave (4 peaks):					238.3	Total Col2Ave (4 peaks):				244.5 RPD = 3
Corrected Ave (3 peaks):					237.9	Corrected Ave (3 peaks):				243.3 RPD = 2
Aroclor-1260	1	9.968	0.001	9749945	238.1	1	10.261	0.001	2073273	244.6
Aroclor-1260	2	10.284	0.001	9449895	232.7	2	10.711	0.001	2464050	248.2
Aroclor-1260	3	10.660	0.000	22932169	235.5	3	10.986	0.001	4588966	250.3
Aroclor-1260	4	11.059	0.001	11185744	235.8	4	11.507	0.002	1213324	244.1
Aroclor-1260	5	11.247	0.000	6064816	239.0	NS	---			----
Total Col1Ave (5 peaks):					236.2	Total Col2Ave (4 peaks):				246.8 RPD = 4
Corrected Ave (4 peaks):					235.5	Corrected Ave (3 peaks):				245.6 RPD = 4

Total PCB Area Col1 (4.511 - 12.728) = 301049488 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 65038970 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
IS-BNB
Tetrachloro-m-xylene
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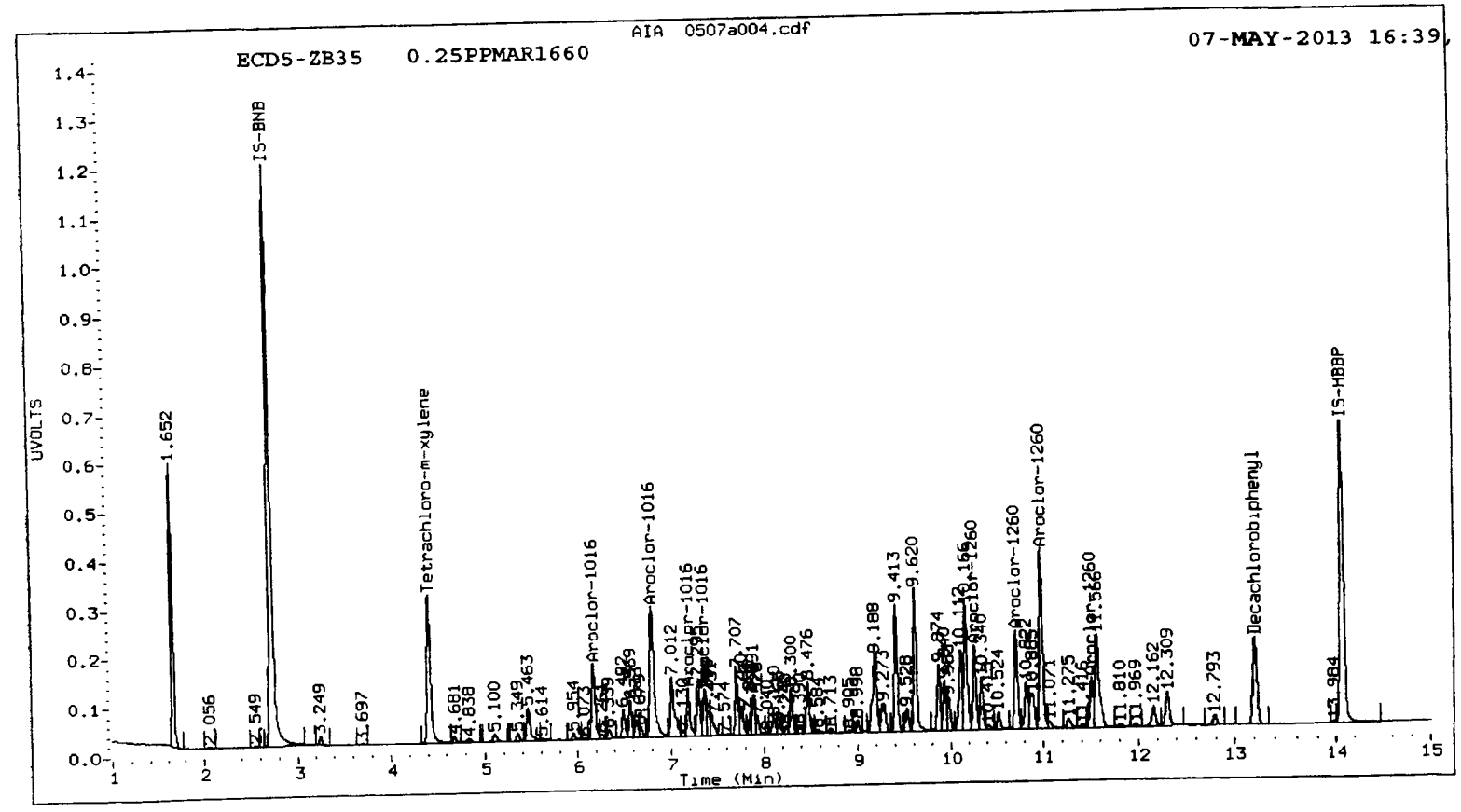
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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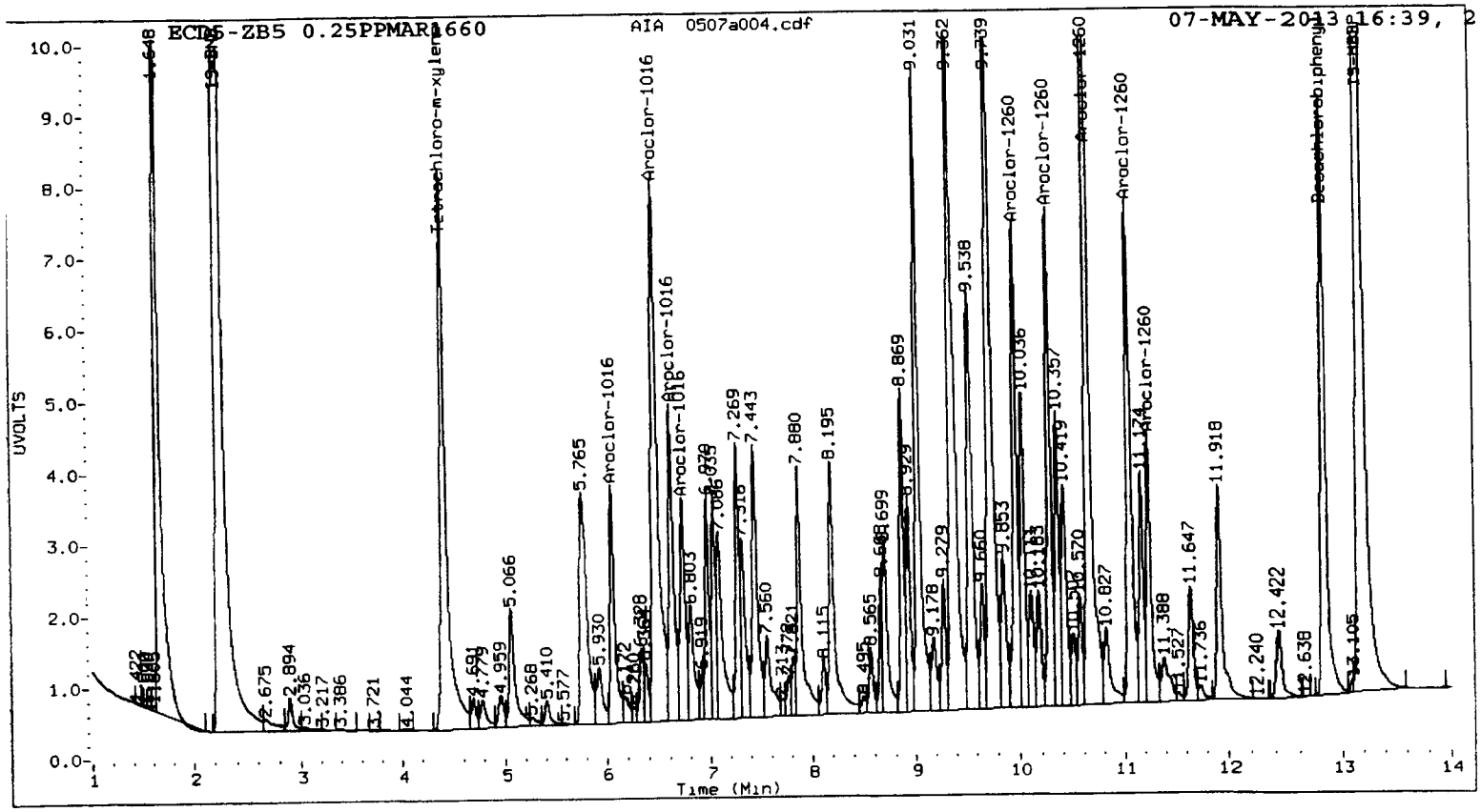
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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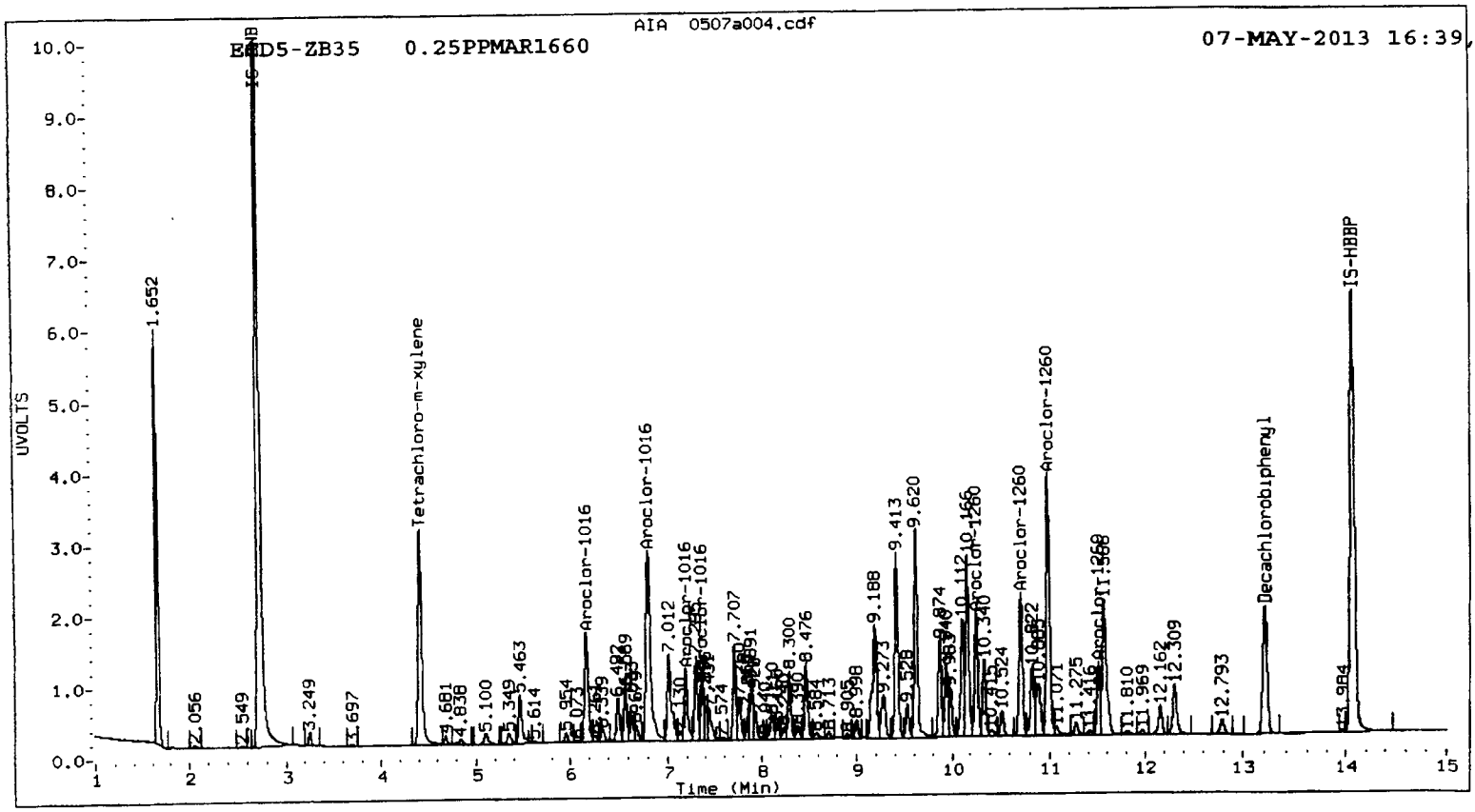
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 16:39,
UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a005.d
Data file 2: 20130507.b/ical-2.b/0507a005.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.001	1277251	4.413	0.002	336292	1.6	1.7	2.1	Tetrachloro-m-xylen
12.828	0.000	1463829	13.206	0.001	269190	1.9	2.0	2.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	4.1	4.2
Decachlorobiphenyl	4.9	5.0

A 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49978735	2.0
Hexabromobiphenyl	50004151	50389911	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14776833	-0.4
Hexabromobiphenyl	9345340	9354827	0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

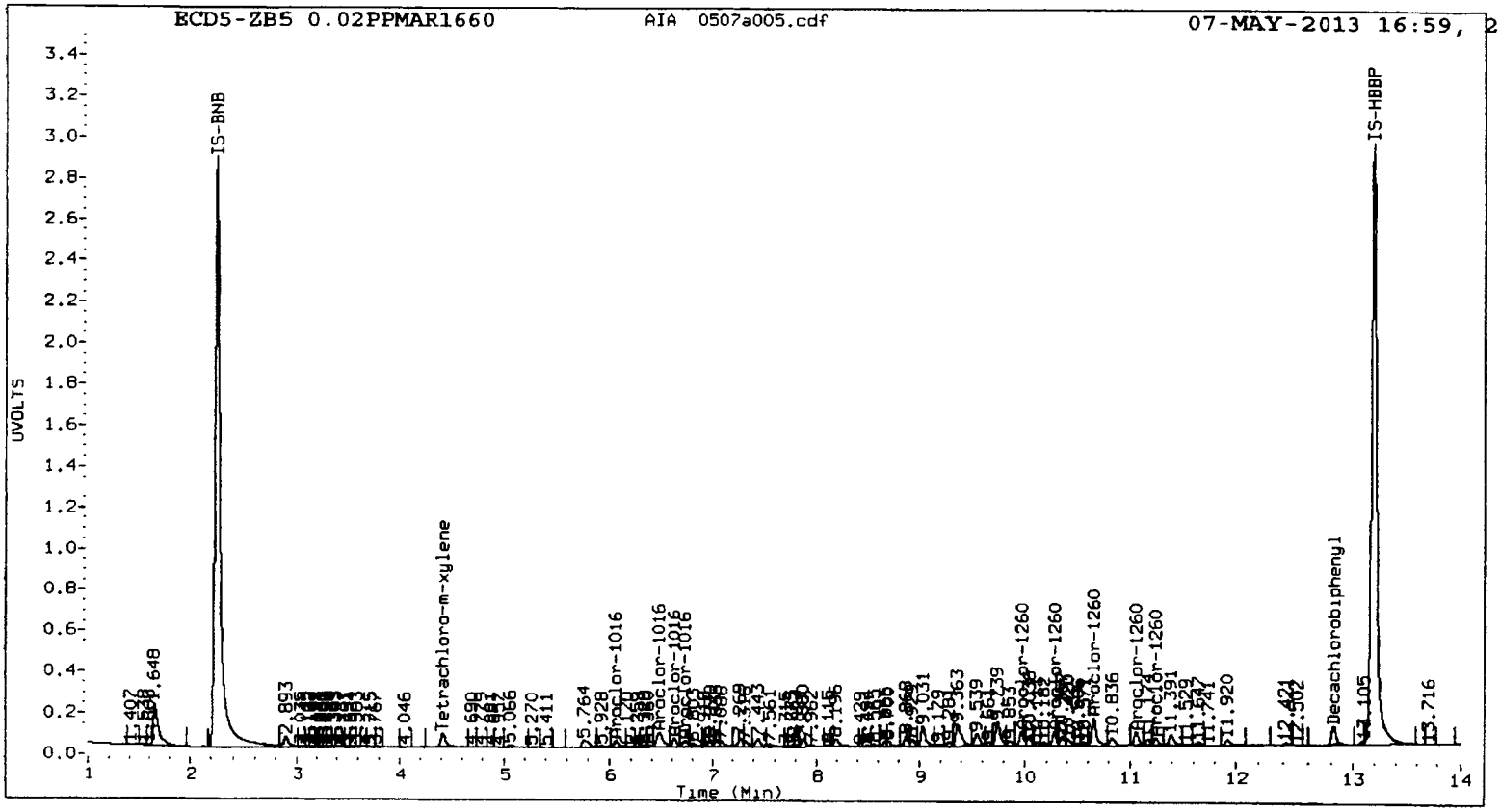
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	522973	23.2	1	6.167	0.001	189742	22.5
Aroclor-1016	2	6.471	0.003	1616098	23.3	2	6.805	0.004	412537	22.5
Aroclor-1016	3	6.620	0.004	735232	23.6	3	7.188	0.003	102632	21.4
Aroclor-1016	4	6.731	0.003	539914	23.2	4	7.360	0.002	101879	22.8
Total Col1Ave (4 peaks):					23.3	Total Col2Ave (4 peaks):			22.3	RPD = 5
Corrected Ave (3 peaks):					23.2	Corrected Ave (3 peaks):			22.1	RPD = 5
Aroclor-1260	1	9.968	0.001	1019399	24.7	1	10.262	0.002	197758	23.3
Aroclor-1260	2	10.284	0.001	943544	23.1	2	10.711	0.002	225842	22.7
Aroclor-1260	3	10.661	0.001	2188991	22.3	3	10.987	0.002	394454	21.5
Aroclor-1260	4	11.060	0.003	1060689	22.2	4	11.507	0.002	113428	22.8
Aroclor-1260	5	11.249	0.002	541330	21.2	NS	---			----
Total Col1Ave (5 peaks):					22.7	Total Col2Ave (4 peaks):			22.6	RPD = 0
Corrected Ave (4 peaks):					22.2	Corrected Ave (3 peaks):			22.3	RPD = 1

Total PCB Area Col1 (4.511 - 12.728) = 32498603 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 6010068 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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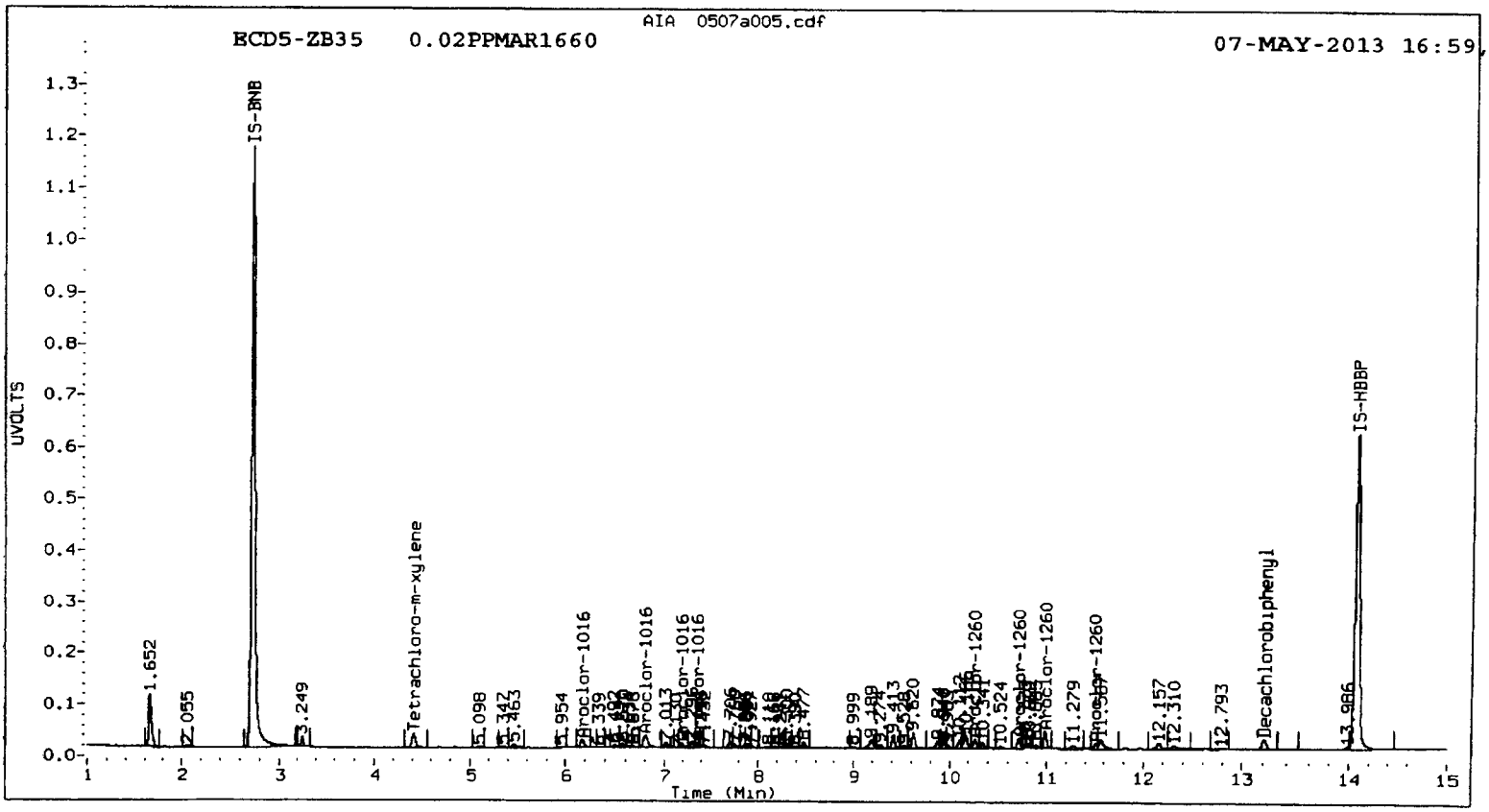
UVOLTS
Time (Min)
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl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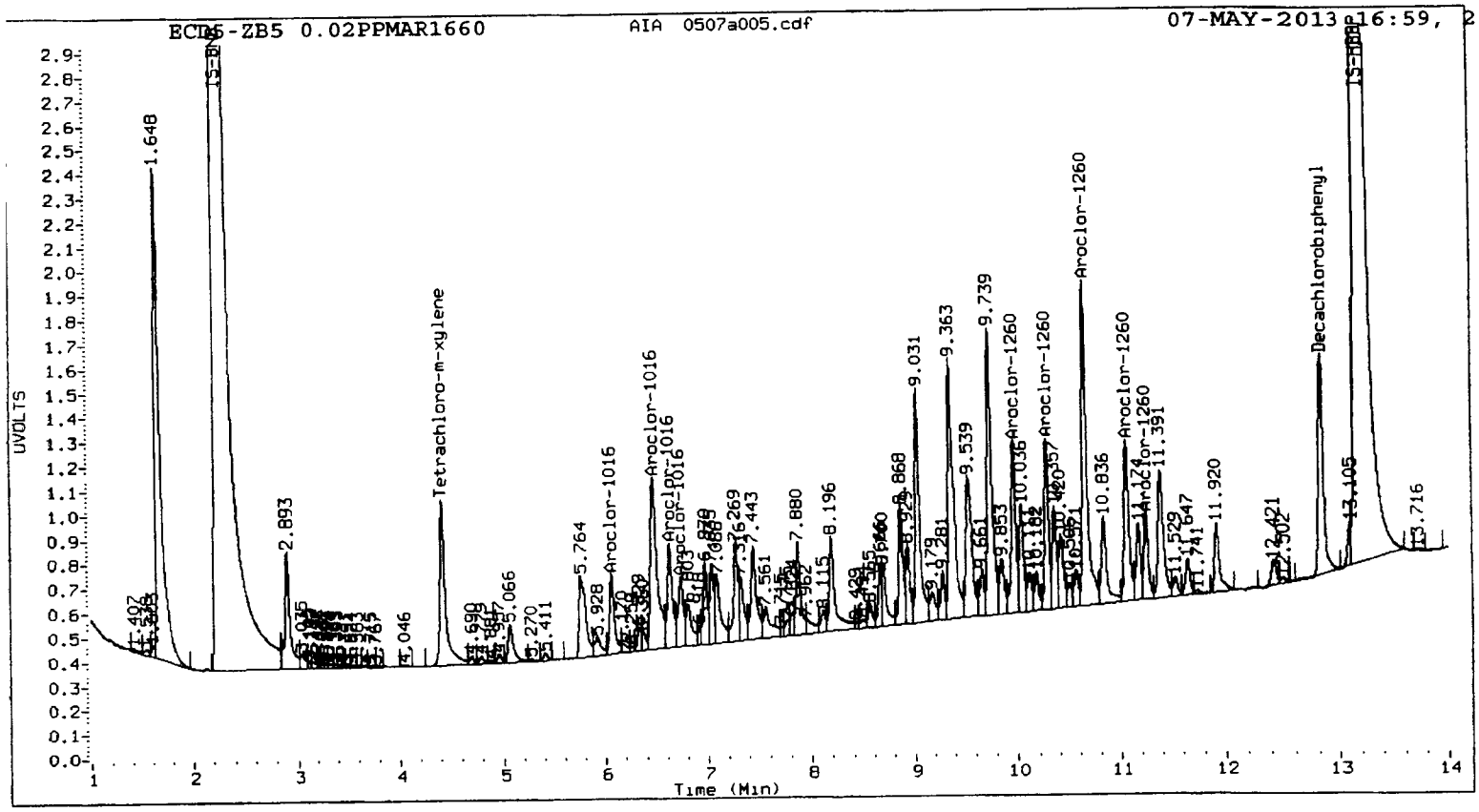
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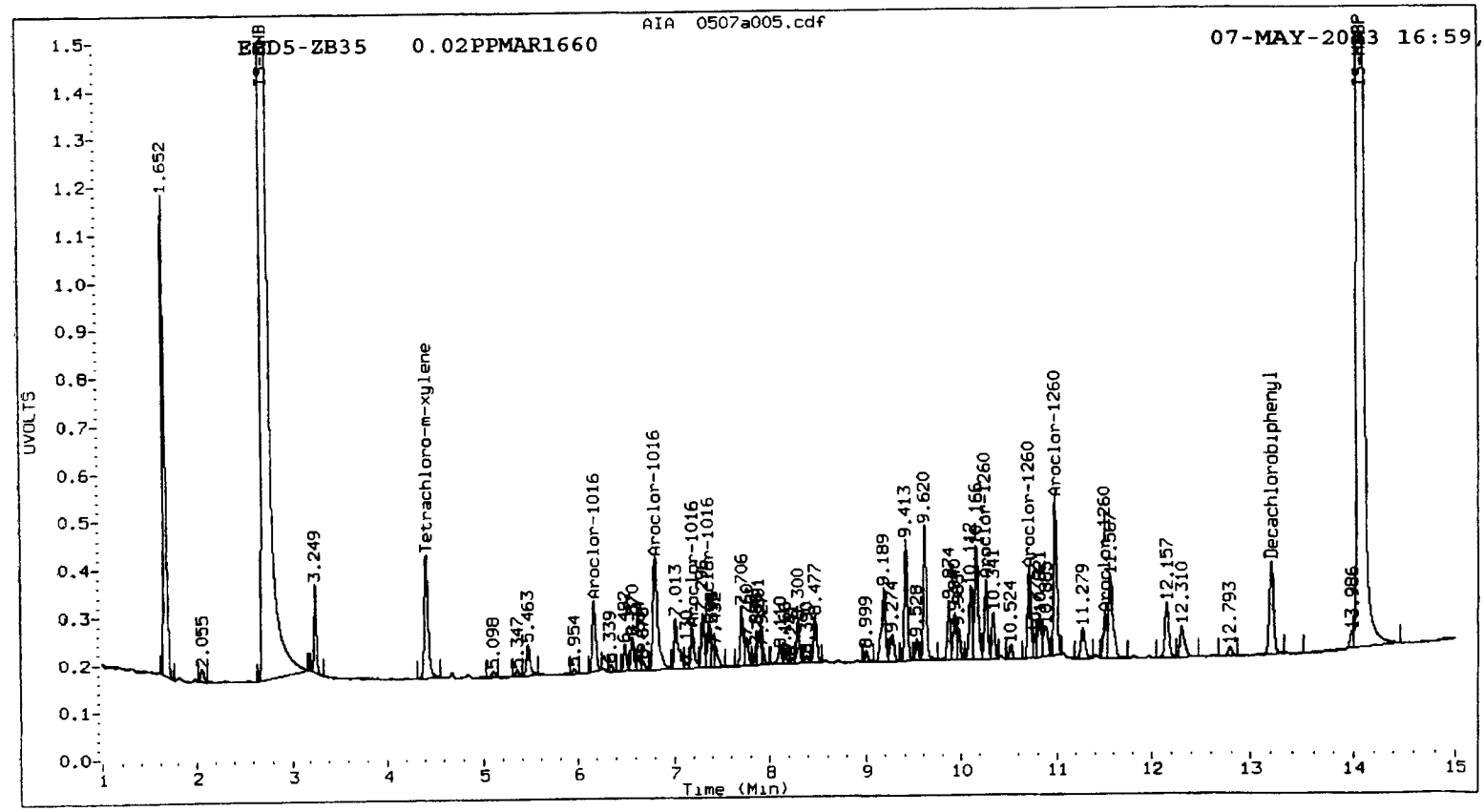
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Time (Min)
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Tetrachloro-m-xylene
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Aroclor-1016
7.013
9.189
9.413
9.620
Aroclor-1260
11.279
12.157
12.310
12.793
Decachlorobiphenyl
13.986

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a006.d
Data file 2: 20130507.b/ical-2.b/0507a006.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.411	0.001	3240306	4.413	0.001	828310	4.1	4.1	0.9	Tetrachloro-m-xylen
12.828	0.000	3422581	13.205	0.000	610804	4.3	4.3	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	10.3	10.2
Decachlorobiphenyl	10.8	10.8

JR 05/07/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50752482	3.6
Hexabromobiphenyl	50004151	53170067	6.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15017003	1.2
Hexabromobiphenyl	9345340	9808139	5.0

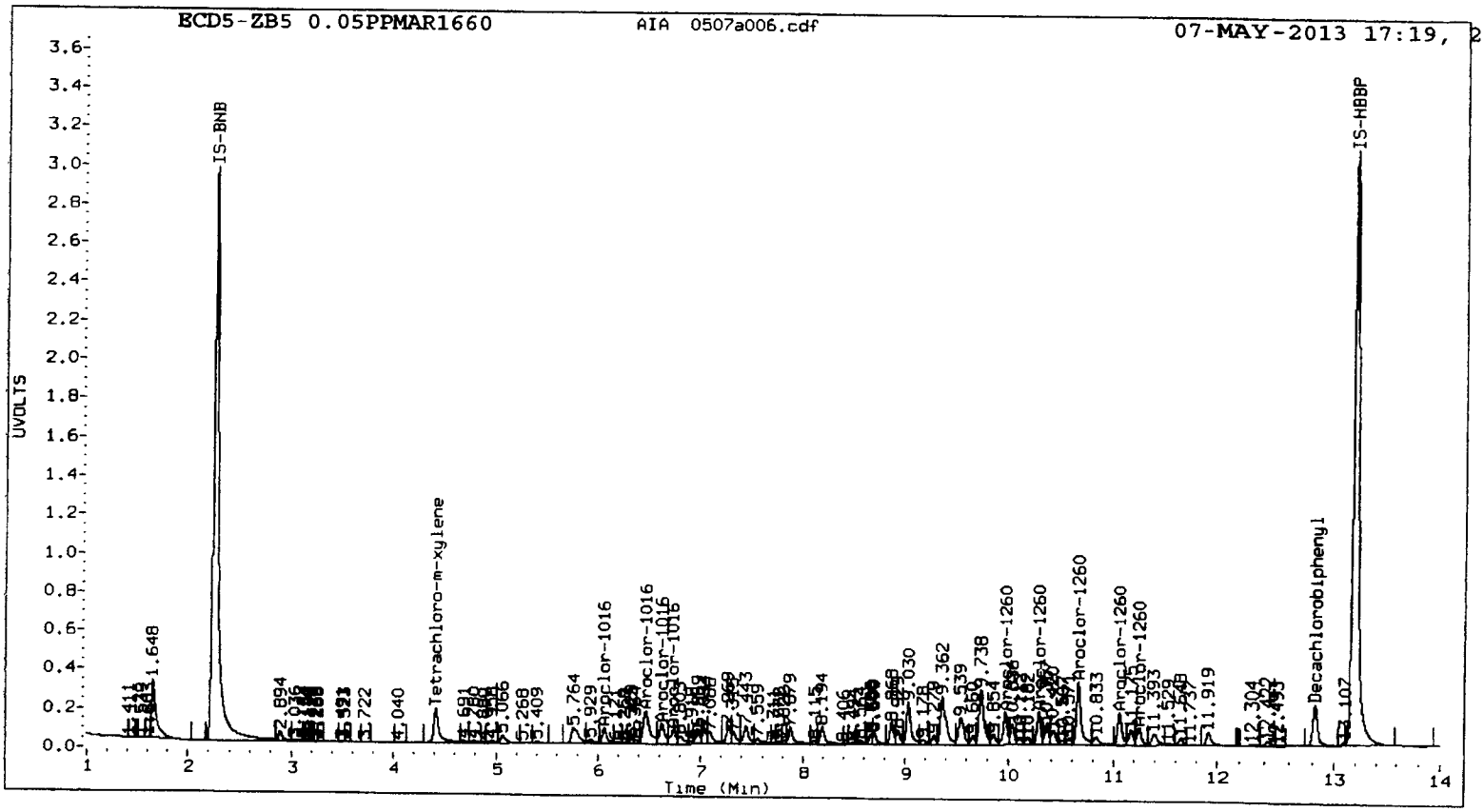
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	1244105	54.4	1	6.167	0.001	479006	55.9
Aroclor-1016	2	6.471	0.002	3811814	54.1	2	6.804	0.003	997455	53.5
Aroclor-1016	3	6.620	0.003	1731330	54.8	3	7.187	0.002	252974	51.9
Aroclor-1016	4	6.731	0.003	1291534	54.7	4	7.359	0.001	242005	53.3
Total Col1Ave (4 peaks):					54.5	Total Col2Ave (4 peaks):				53.7 RPD = 2
Corrected Ave (3 peaks):					54.4	Corrected Ave (3 peaks):				52.9 RPD = 3
Aroclor-1260	1	9.968	0.001	2372653	54.5	1	10.262	0.002	480726	54.0
Aroclor-1260	2	10.284	0.001	2245127	52.0	2	10.711	0.002	554671	53.2
Aroclor-1260	3	10.661	0.001	5376976	51.9	3	10.987	0.003	1024158	53.2
Aroclor-1260	4	11.059	0.002	2614350	51.8	4	11.507	0.002	280398	53.8
Aroclor-1260	5	11.248	0.001	1399830	51.9	NS	---			----
Total Col1Ave (5 peaks):					52.4	Total Col2Ave (4 peaks):				53.6 RPD = 2
Corrected Ave (4 peaks):					51.9	Corrected Ave (3 peaks):				53.4 RPD = 3

Total PCB Area Col1 (4.511 - 12.728) = 73710860 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 14729318 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
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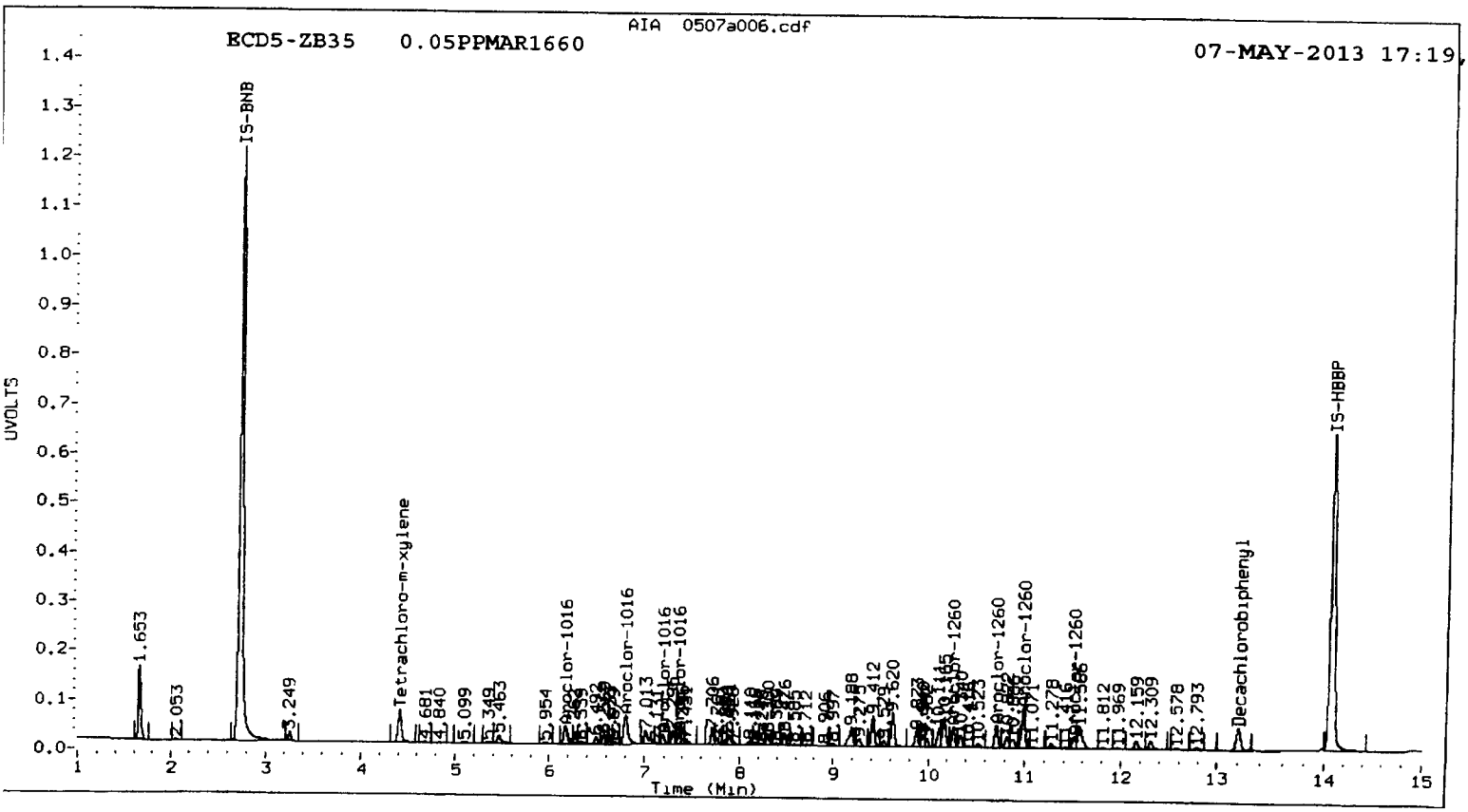
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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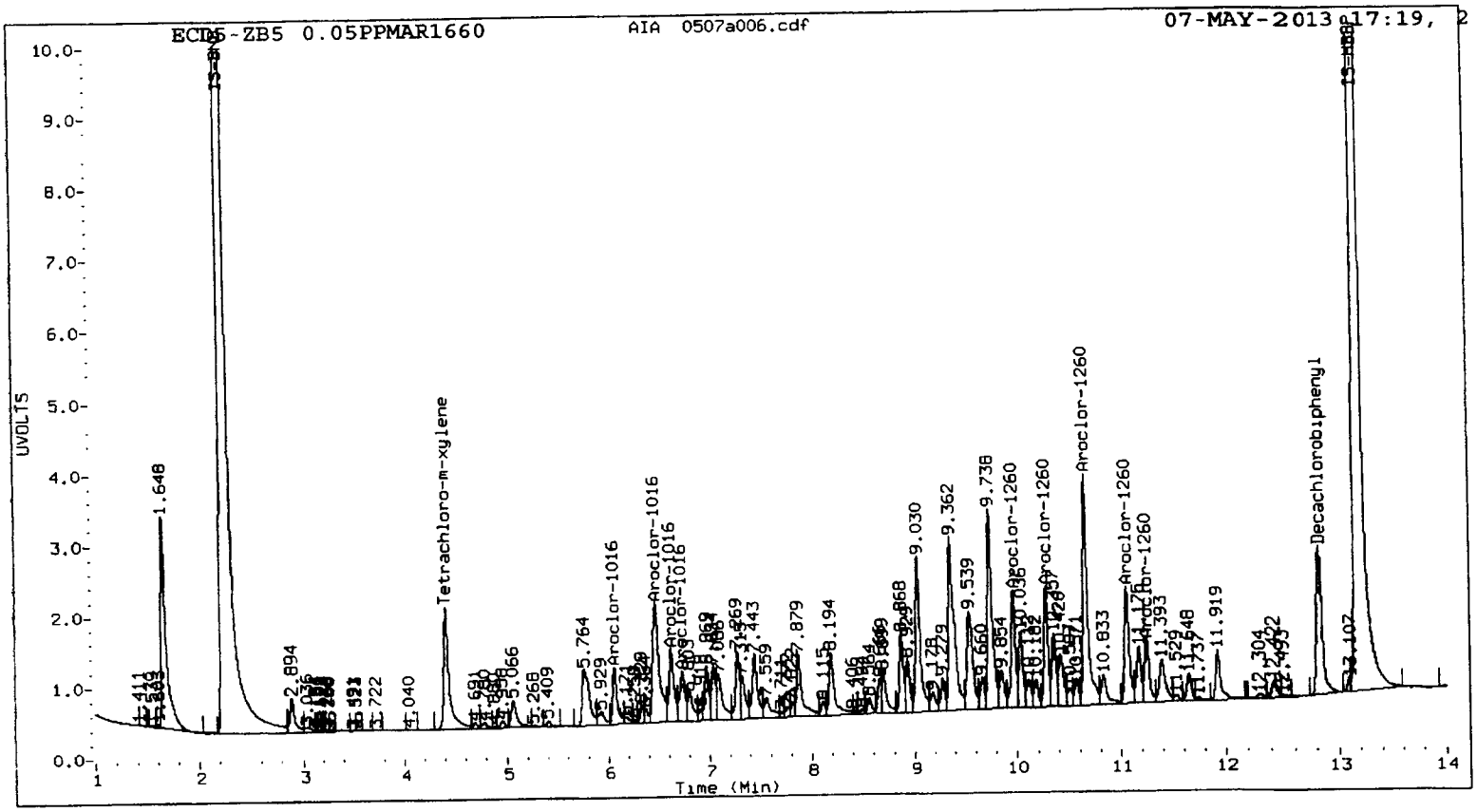
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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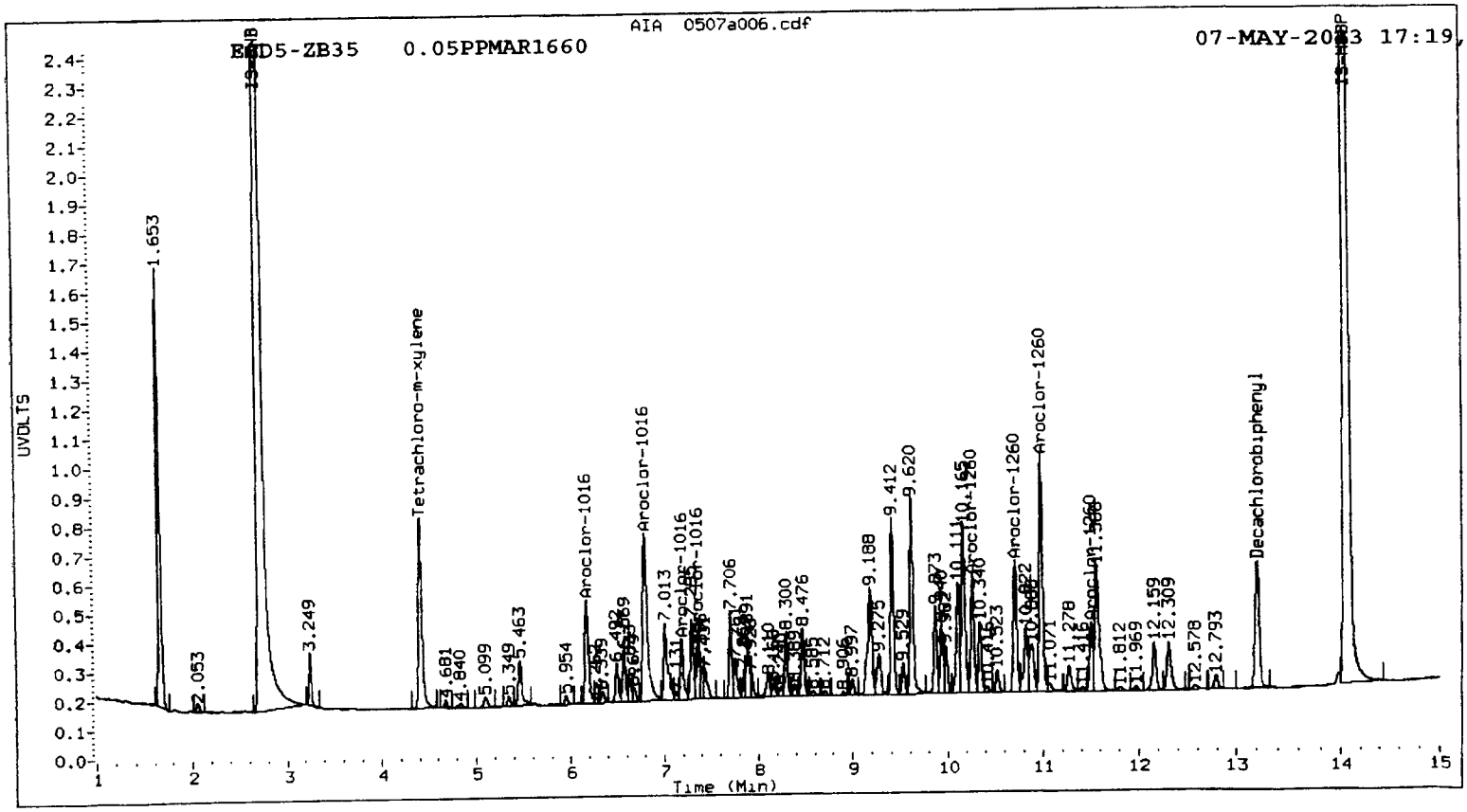
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a007.d
Data file 2: 20130507.b/ical-2.b/0507a007.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	56438104	4.414	0.003	14978631	73.7	74.5	1.0	Tetrachloro-m-xylen
12.827	-0.001	54253911	13.203	-0.002	9605990	68.2	67.4	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

05/28/13

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	184.4	186.3
Decachlorobiphenyl	170.5	168.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49361946	0.8
Hexabromobiphenyl	50004151	53269354	6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14864205	0.2
Hexabromobiphenyl	9345340	9909484	6.0

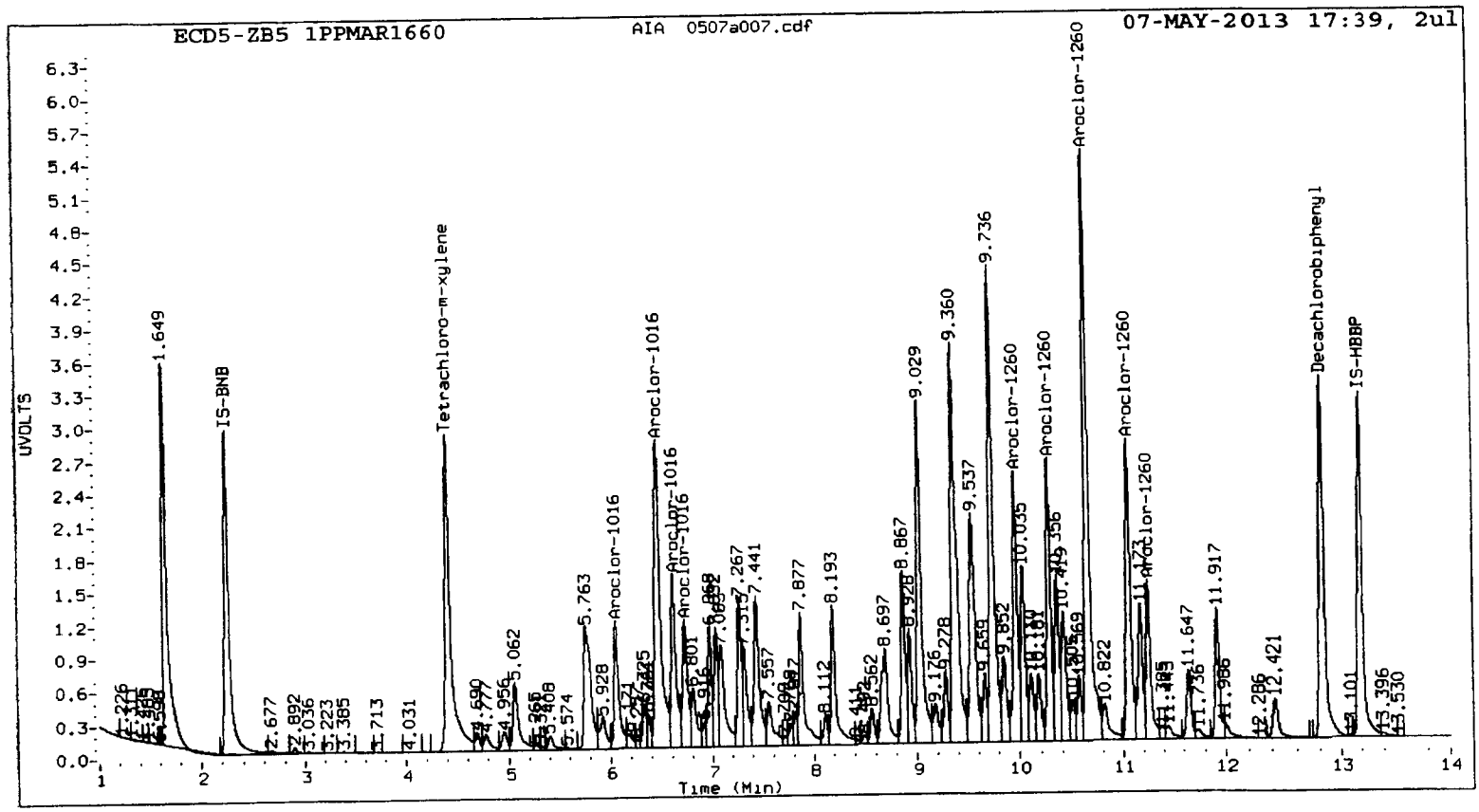
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.059	-0.001	18746470	842.5	1	6.167	0.001	6930745	817.2
Aroclor-1016	2	6.467	-0.002	57649136	841.1	2	6.801	0.000	15666487	849.6
Aroclor-1016	3	6.616	-0.001	25366020	826.1	3	7.186	0.000	4302384	892.4
Aroclor-1016	4	6.727	-0.001	19267159	839.8	4	7.359	0.001	3794728	845.1
Total Col1Ave (4 peaks):					837.4	Total Col2Ave (4 peaks):				851.1 RPD = 2
Corrected Ave (3 peaks):					835.7	Corrected Ave (3 peaks):				837.3 RPD = 0
Aroclor-1260	1	9.967	0.000	34921569	800.5	1	10.260	0.000	7411124	824.6
Aroclor-1260	2	10.283	-0.001	34401497	795.2	2	10.709	0.000	8889960	844.4
Aroclor-1260	3	10.659	0.000	86265488	831.6	3	10.986	0.001	16951381	872.0
Aroclor-1260	4	11.057	0.000	42604682	843.2	4	11.506	0.000	4533121	860.2
Aroclor-1260	5	11.247	0.000	23577619	872.2	NS	---			----
Total Col1Ave (5 peaks):					828.6	Total Col2Ave (4 peaks):				850.3 RPD = 3
Corrected Ave (4 peaks):					817.6	Corrected Ave (3 peaks):				843.1 RPD = 3

Total PCB Area Col1 (4.511 - 12.728) = 1078983721 Col1 Total PCB = 1.8 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 230522338 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
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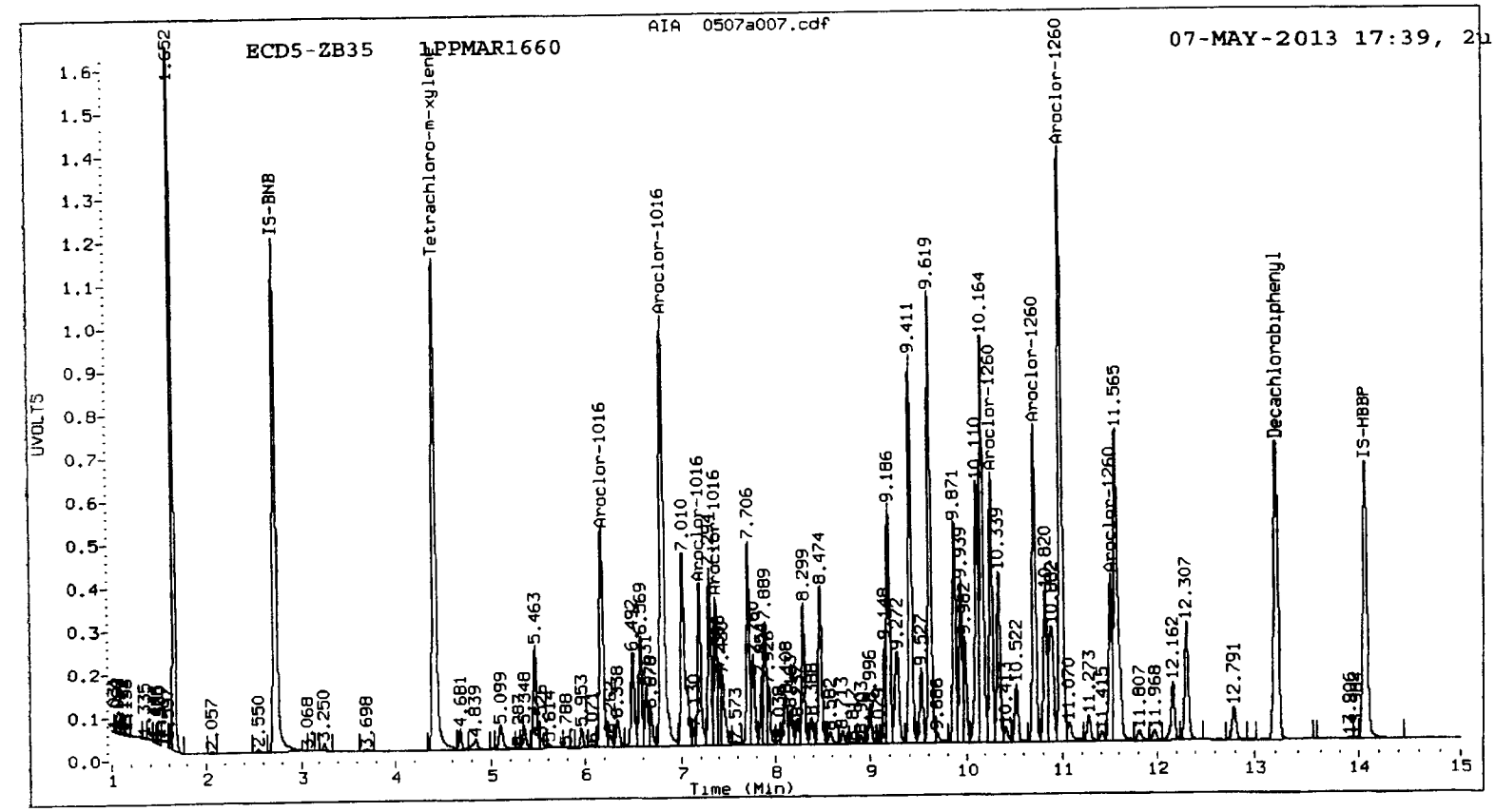
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
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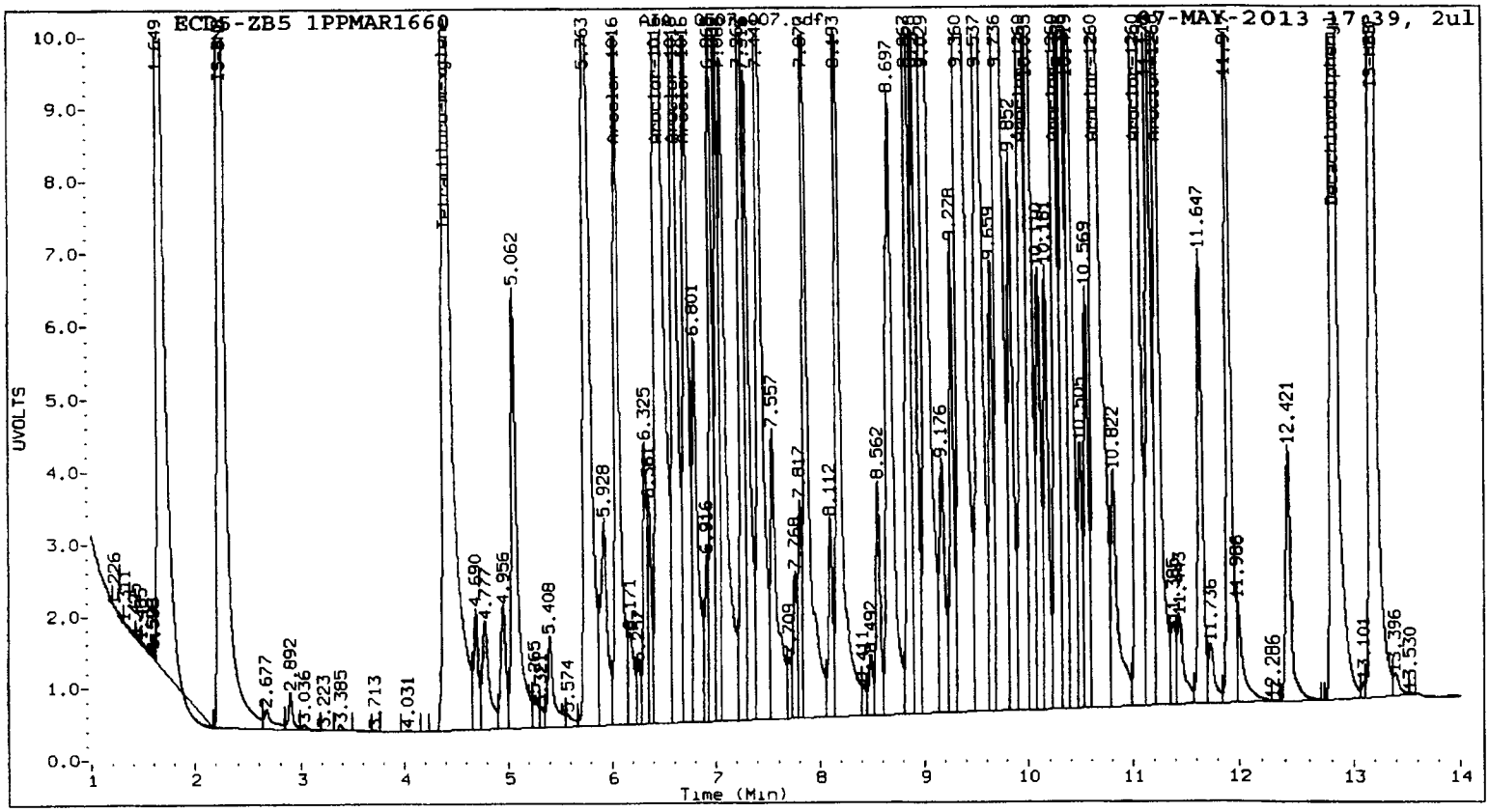
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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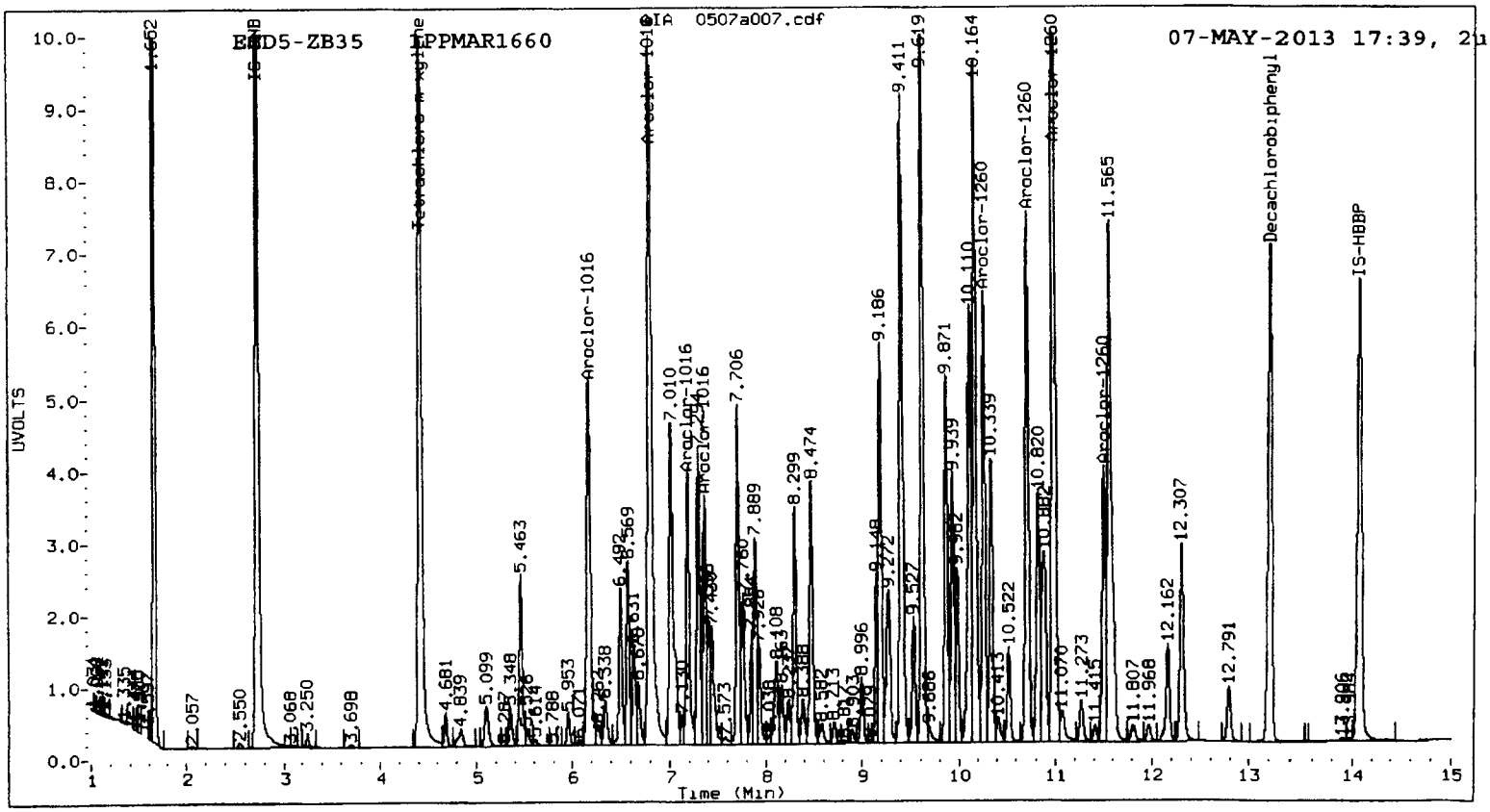
Time (Min)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0507a007.cdf
07-MAY-2013 17:39, 2u
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a008.d
Data file 2: 20130507.b/ical-2.b/0507a008.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	6731015	4.413	0.001	1684319	8.4	8.1	3.5	Tetrachloro-m-xylen
12.828	0.000	6587362	13.204	-0.001	1145480	8.2	8.1	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	21.0	20.3
Decachlorobiphenyl	20.5	20.2

JS 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51692067	5.5
Hexabromobiphenyl	50004151	53692342	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15354151	3.5
Hexabromobiphenyl	9345340	9856374	5.5

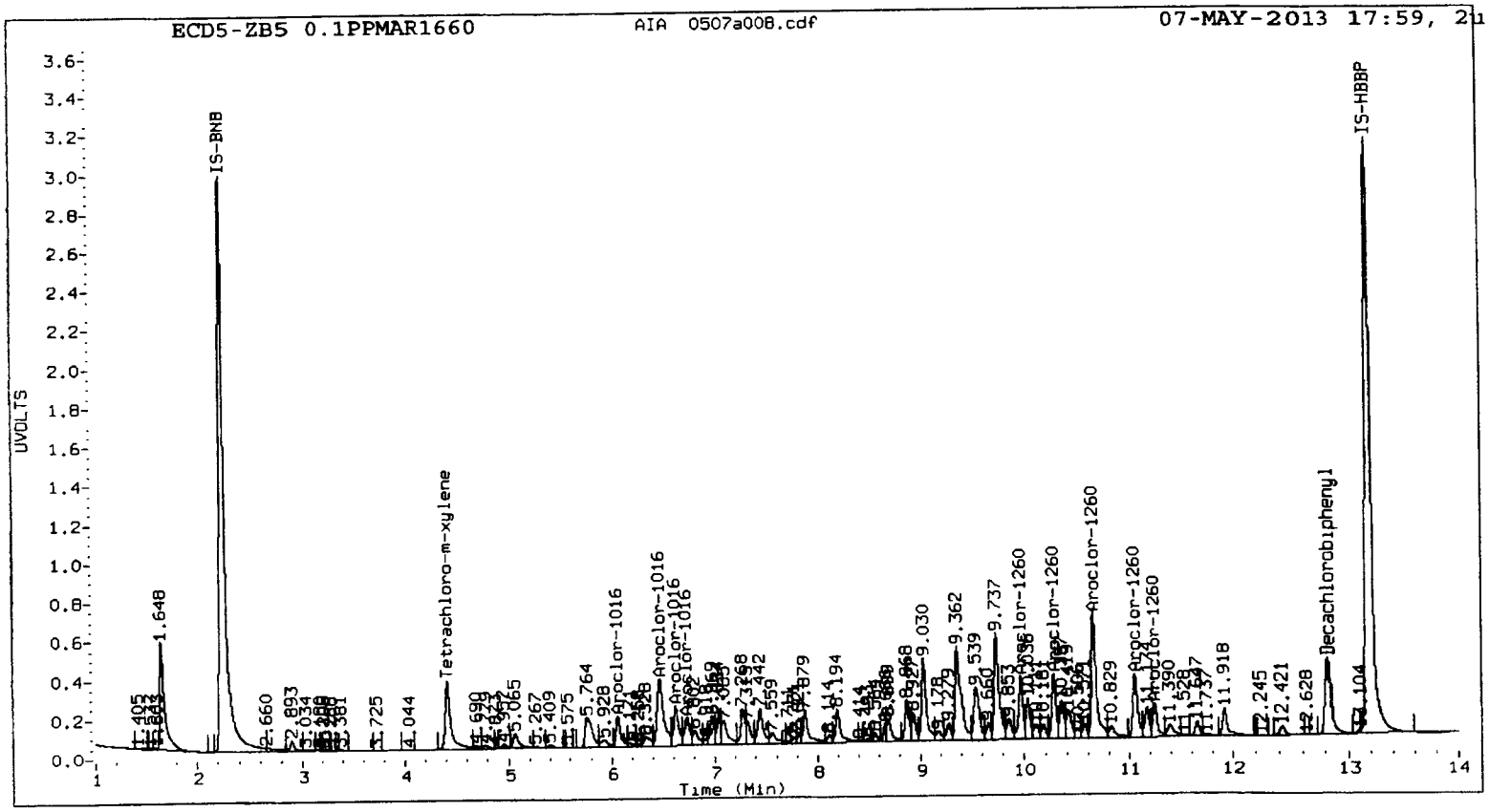
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.061	0.000	2455484	105.4	1	6.167	0.001	933103	106.5
Aroclor-1016	2	6.469	0.001	7585703	105.7	2	6.803	0.003	2002074	105.1
Aroclor-1016	3	6.619	0.002	3398868	105.7	3	7.187	0.002	525355	105.5
Aroclor-1016	4	6.730	0.002	2540359	105.7	4	7.359	0.001	491272	105.9
Total Col1Ave (4 peaks):					105.6	Total Col2Ave (4 peaks):				105.8 RPD = 0
Corrected Ave (3 peaks):					105.6	Corrected Ave (3 peaks):				105.5 RPD = 0
Aroclor-1260	1	9.967	0.001	4612344	104.9	1	10.262	0.002	936375	104.7
Aroclor-1260	2	10.284	0.001	4422973	101.4	2	10.710	0.001	1090787	104.2
Aroclor-1260	3	10.660	0.000	10624516	101.6	3	10.986	0.001	2021333	104.5
Aroclor-1260	4	11.059	0.001	5142675	101.0	4	11.507	0.002	538050	102.7
Aroclor-1260	5	11.248	0.001	2788613	102.3	NS	---			----
Total Col1Ave (5 peaks):					102.3	Total Col2Ave (4 peaks):				104.0 RPD = 2
Corrected Ave (4 peaks):					101.6	Corrected Ave (3 peaks):				103.8 RPD = 2

Total PCB Area Col1 (4.511 - 12.728) = 143086545 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 29038947 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
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IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
1.648
2.660
2.893
3.725
4.044
5.065
5.267
5.409
5.575
5.764
5.928
6.194
7.268
7.342
7.559
8.879
9.030
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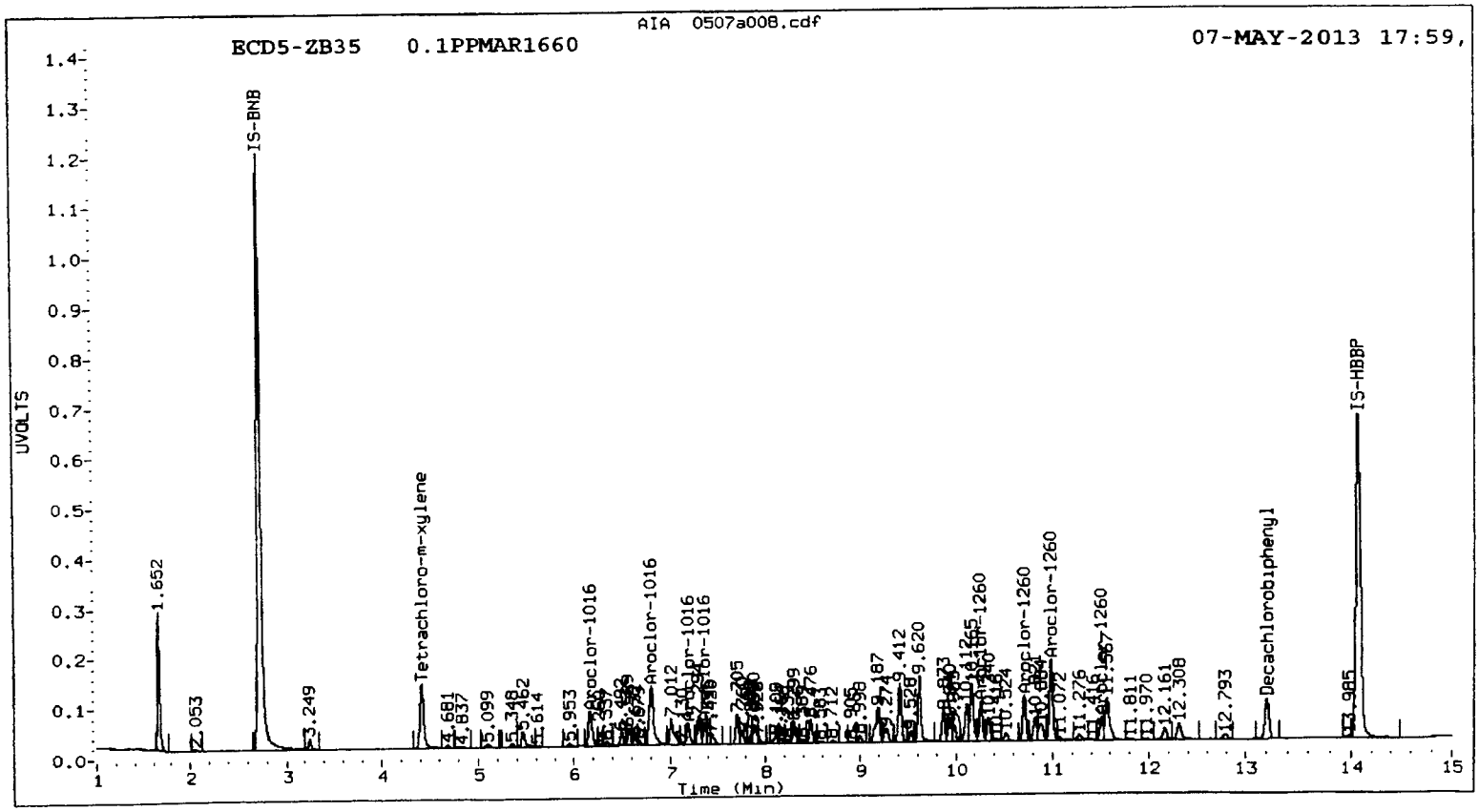
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Time (Min)
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IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
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Aroclor-1260
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3.953
4.681
4.837
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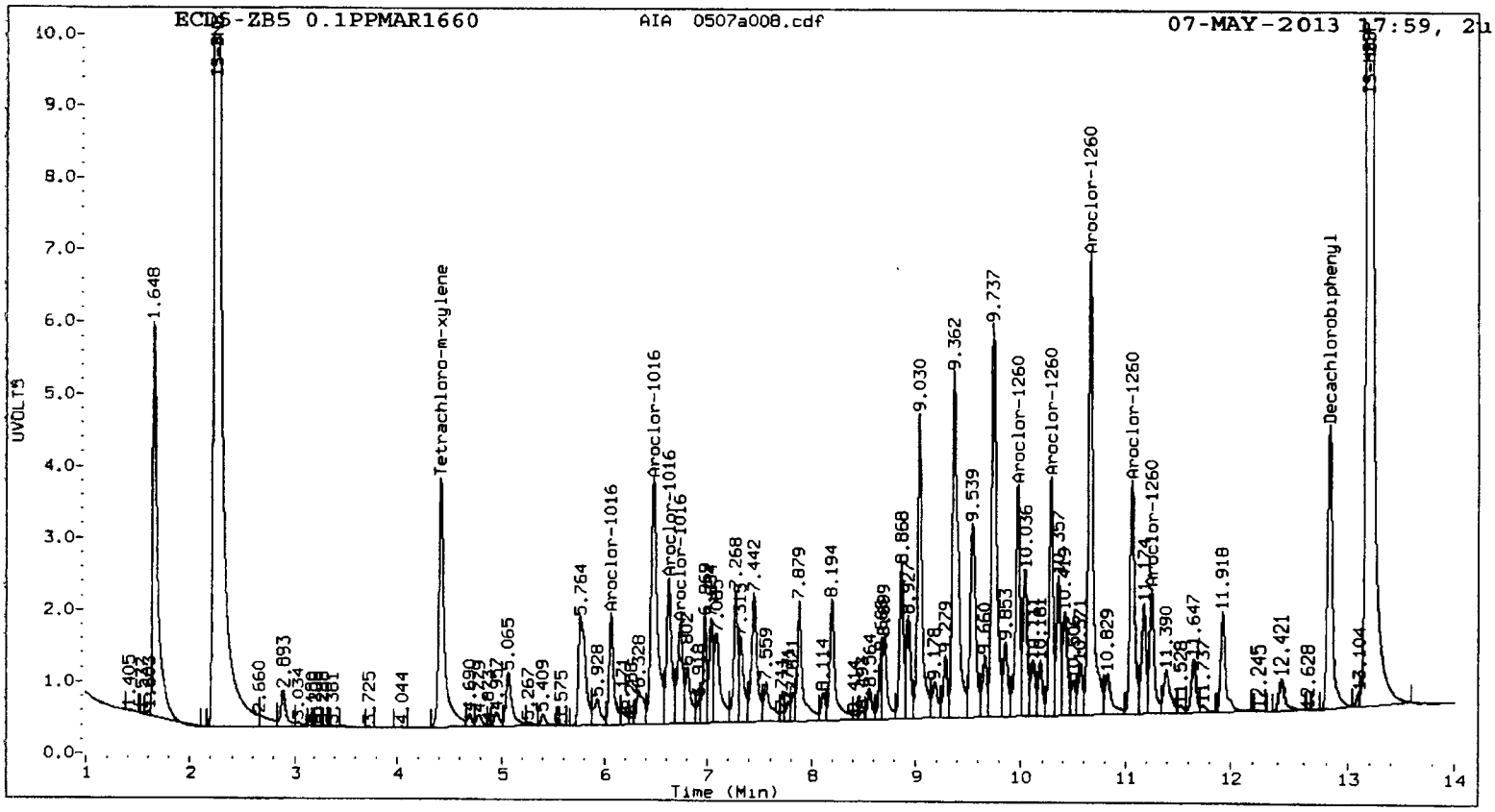
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Time (Min)
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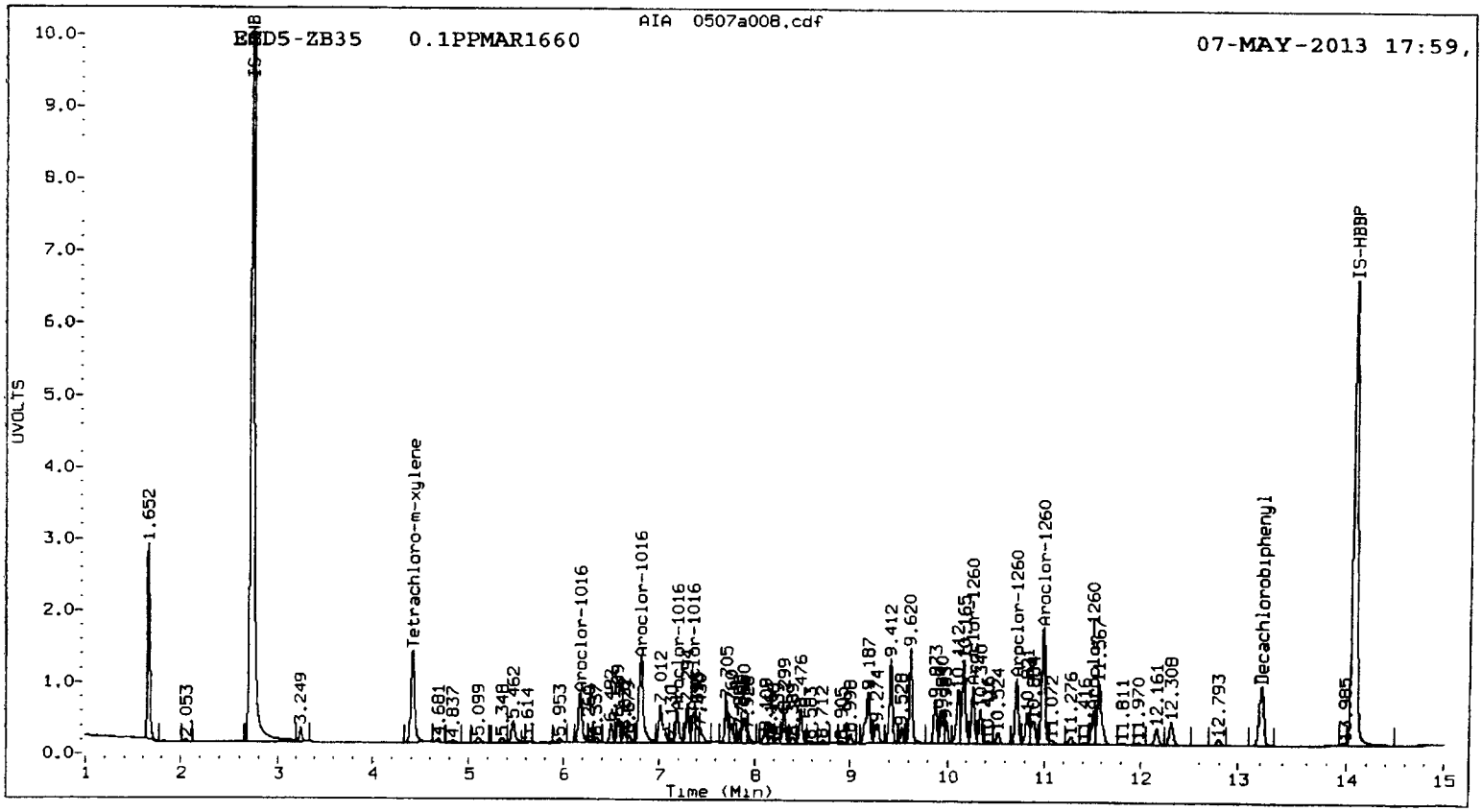
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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UVOLTS
Time (Min)
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Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a009.d
Data file 2: 20130507.b/ical-2.b/0507a009.d
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Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 18:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	30263952	4.412	0.001	7879158	38.6	39.1	1.3	Tetrachloro-m-xylen
12.827	-0.001	28353890	13.204	-0.001	4992554	35.6	35.6	0.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.6	97.8
Decachlorobiphenyl	89.0	88.9

5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50537542	3.2
Hexabromobiphenyl	50004151	53291913	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14890872	0.3
Hexabromobiphenyl	9345340	9751846	4.3

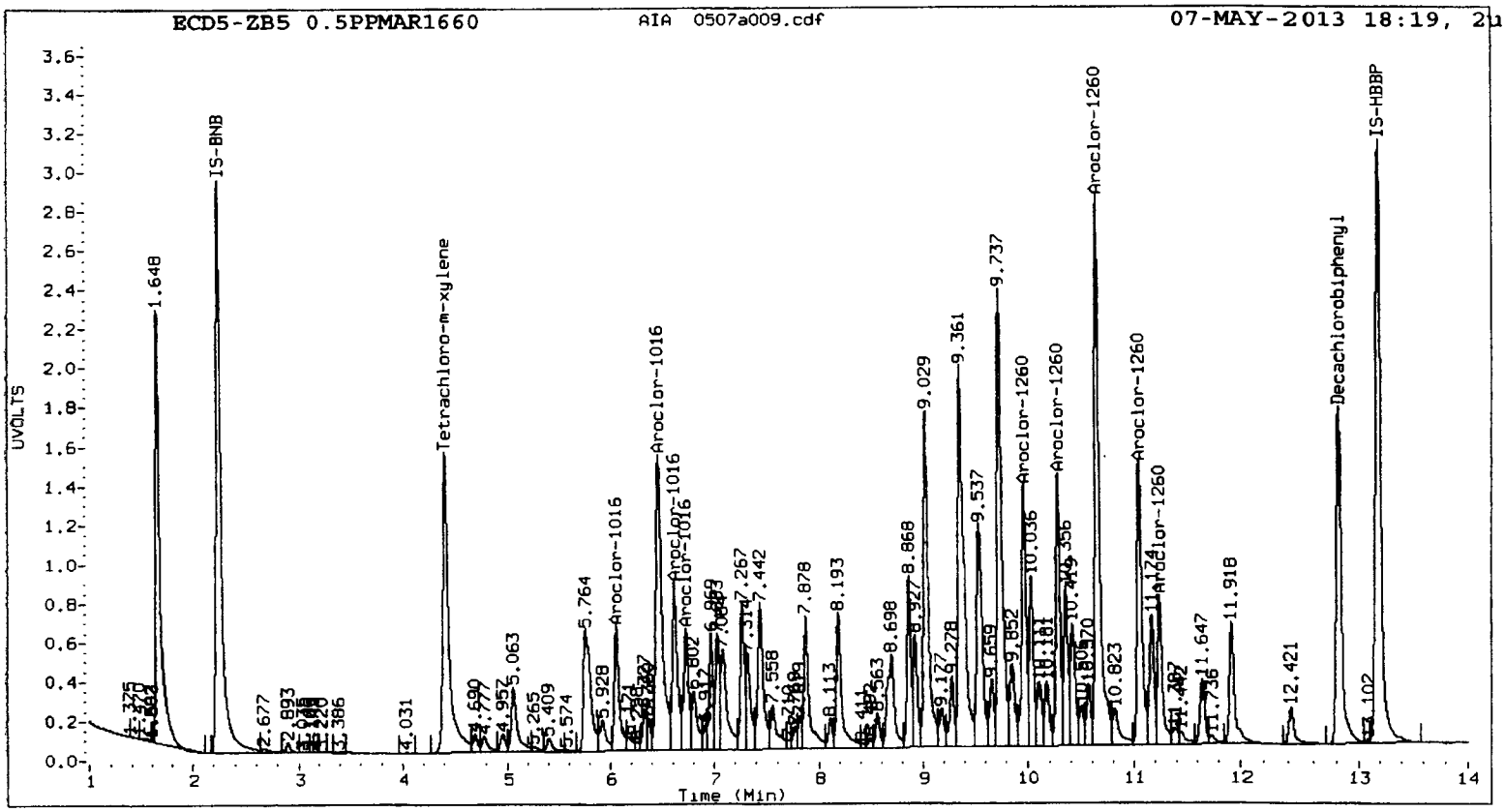
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.060	0.000	10209142	448.2	1	6.166	0.000	3819812	449.6
Aroclor-1016	2	6.469	0.000	31525506	449.3	2	6.801	0.000	8527560	461.6
Aroclor-1016	3	6.617	0.000	13954591	443.9	3	7.185	0.000	2297705	475.7
Aroclor-1016	4	6.728	0.000	10550969	449.2	4	7.358	0.000	2075939	461.5
Total Col1Ave (4 peaks):					447.6	Total Col2Ave (4 peaks):				462.1 RPD = 3
Corrected Ave (3 peaks):					447.1	Corrected Ave (3 peaks):				457.6 RPD = 2
Aroclor-1260	1	9.967	0.000	19054399	436.6	1	10.260	0.000	3995682	451.7
Aroclor-1260	2	10.284	0.000	18658025	431.1	2	10.709	0.000	4769094	460.3
Aroclor-1260	3	10.659	0.000	46060556	443.9	3	10.985	0.000	9011917	471.1
Aroclor-1260	4	11.058	0.000	22756673	450.2	4	11.505	0.000	2389092	460.7
Aroclor-1260	5	11.247	0.000	12499862	462.2	NS	---			----
Total Col1Ave (5 peaks):					444.8	Total Col2Ave (4 peaks):				461.0 RPD = 4
Corrected Ave (4 peaks):					440.4	Corrected Ave (3 peaks):				457.6 RPD = 4

Total PCB Area Col1 (4.511 - 12.728) = 589049282 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 124374053 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical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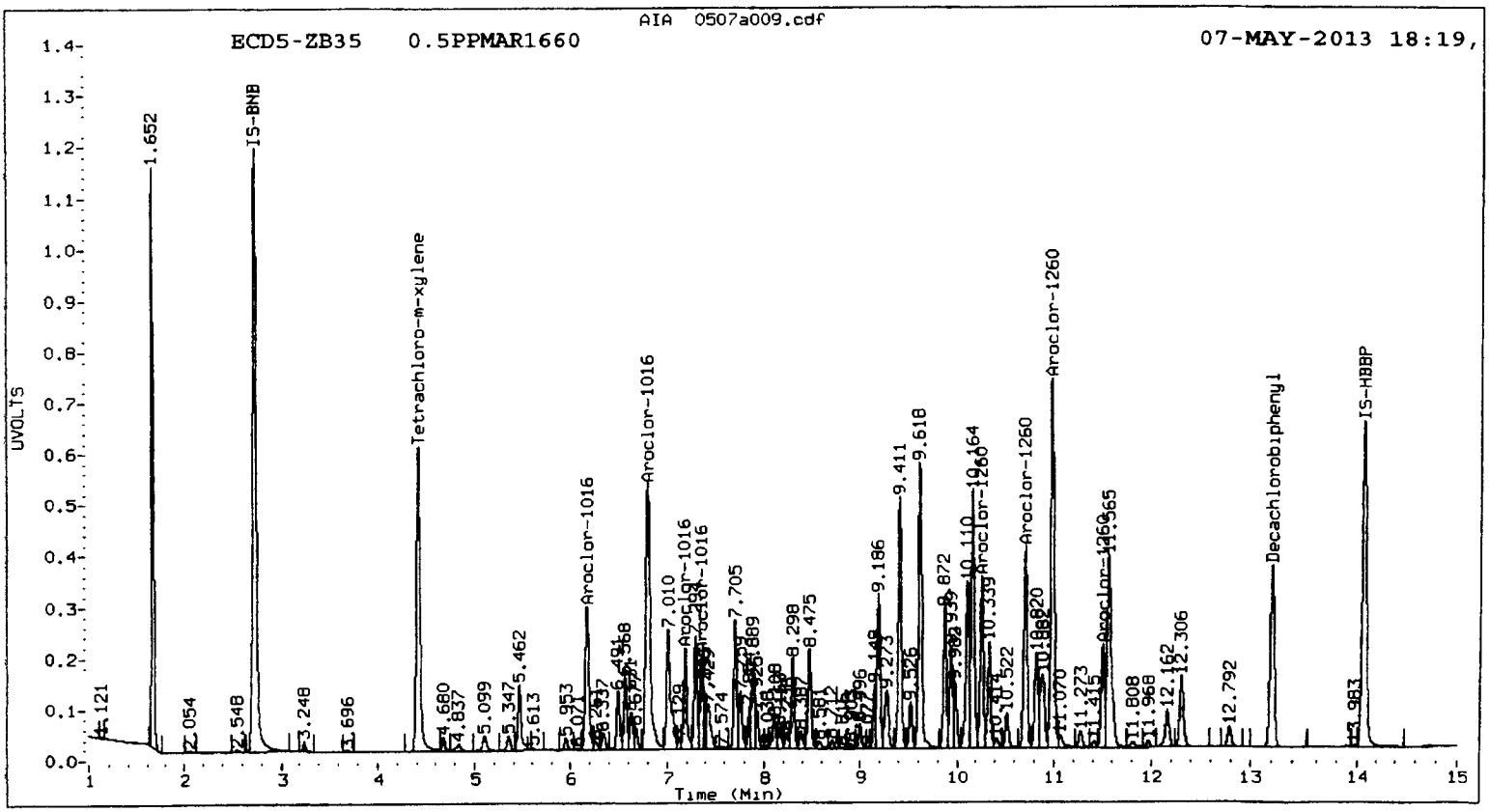
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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Time (Min)
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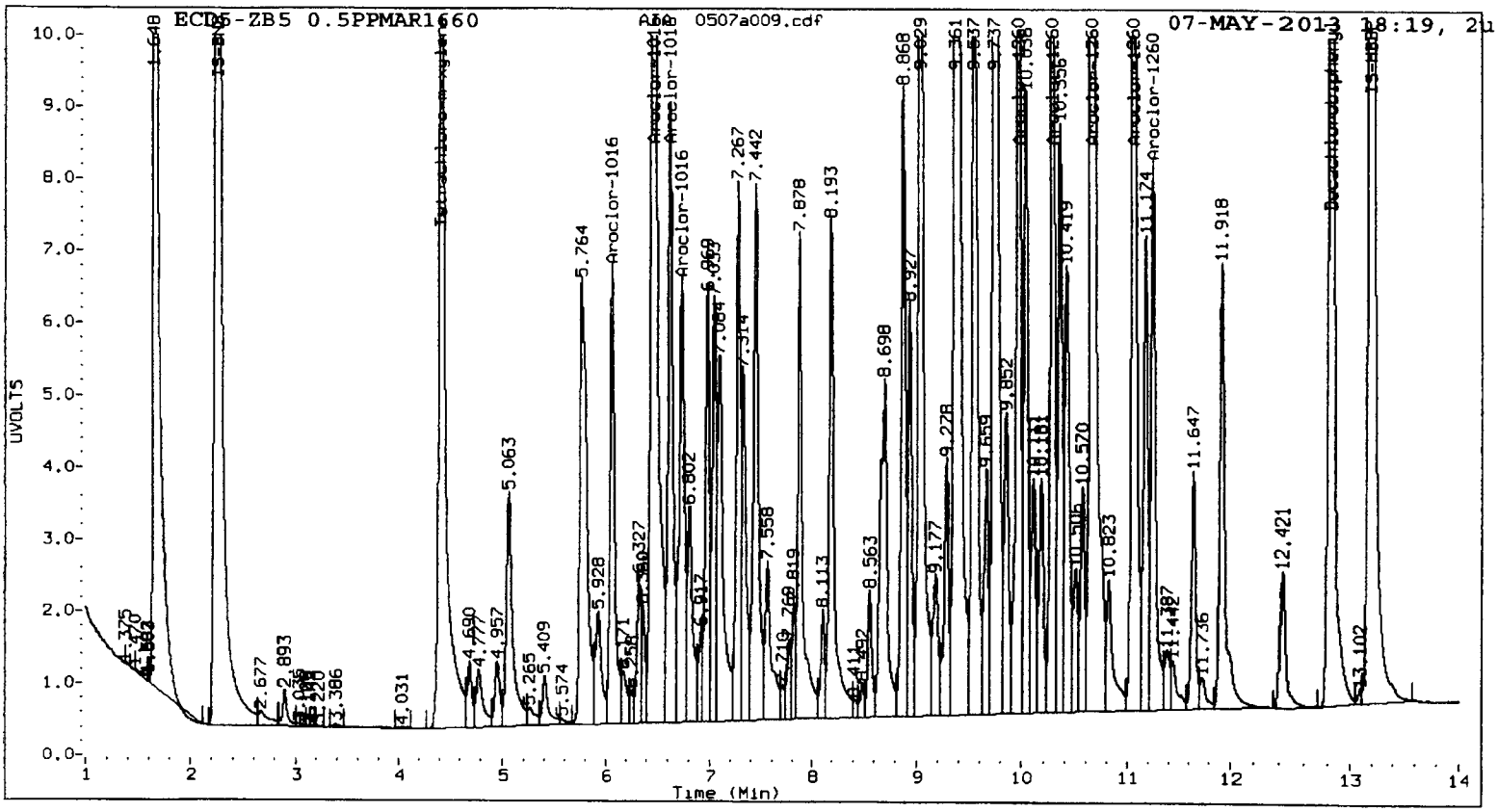
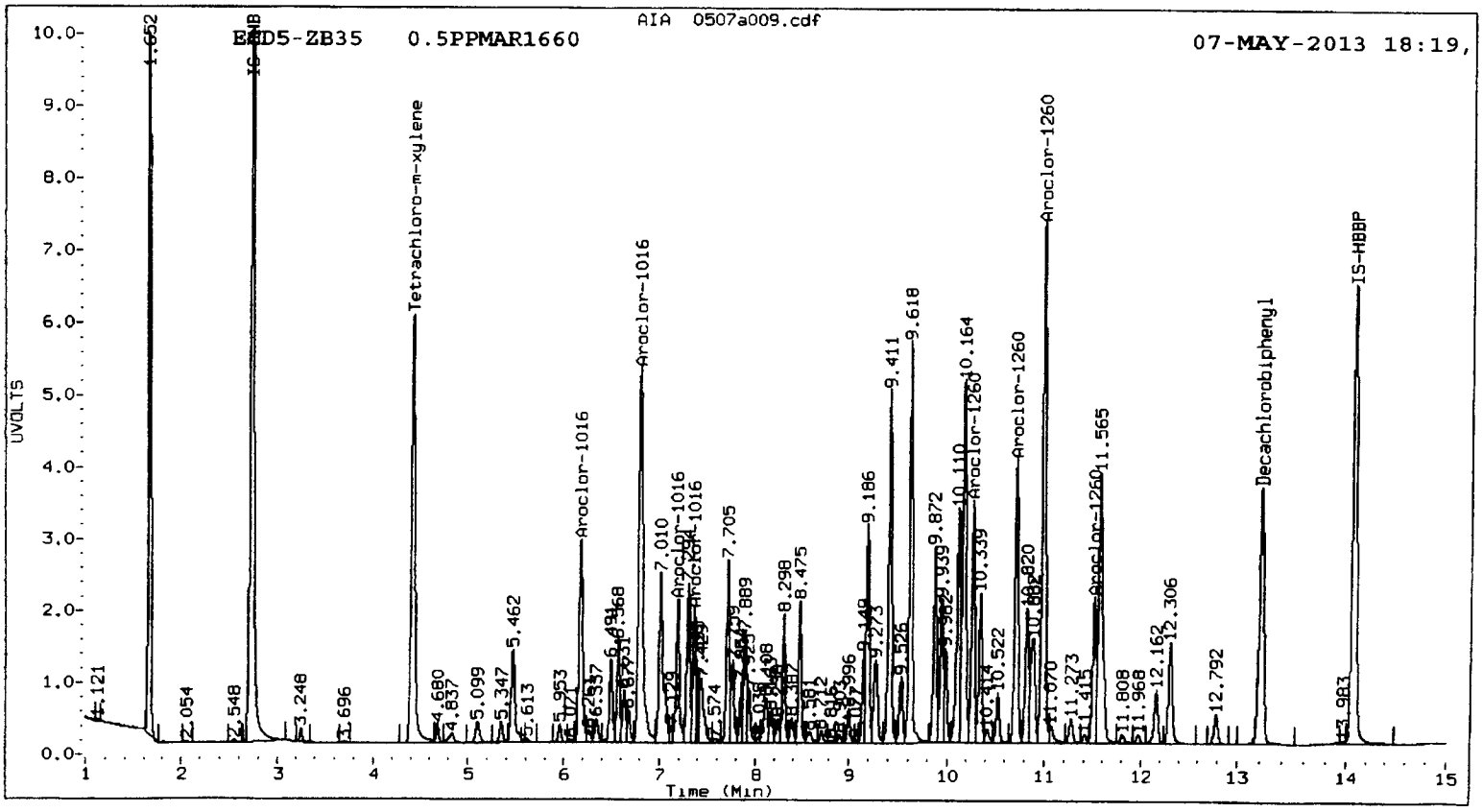
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 0.5PPMAR1660
AIA 0507a009.cdf
07-MAY-2013 18:19, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


AIA 0507a009.cdf
ECD5-ZB35 0.5PPMAR1660
07-MAY-2013 18:19,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a010.d
Data file 2: 20130507.b/ical-2.b/0507a010.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 07-MAY-2013 18:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	31274266	4.414	0.003	8134040	39.1	39.8	1.9	Tetrachloro-m-xylen
12.828	-0.001	31253738	13.204	-0.001	5452308	37.9	37.4	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.7	99.6
Decachlorobiphenyl	94.8	93.6

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51594521	5.3
Hexabromobiphenyl	50004151	55145987	10.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15094795	1.7
Hexabromobiphenyl	9345340	10120992	8.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.059	0.000	4645645	250.0	1	6.167	0.000	1719309	250.0
Aroclor-1242	2	6.468	0.000	14248309	250.0	2	6.803	0.000	3776677	250.0
Aroclor-1242	3	6.617	0.000	6357384	250.0	3	7.011	0.000	1577853	250.0
Aroclor-1242	4	7.873	0.000	7850170	250.0	4	8.239	0.000	1321956	250.0

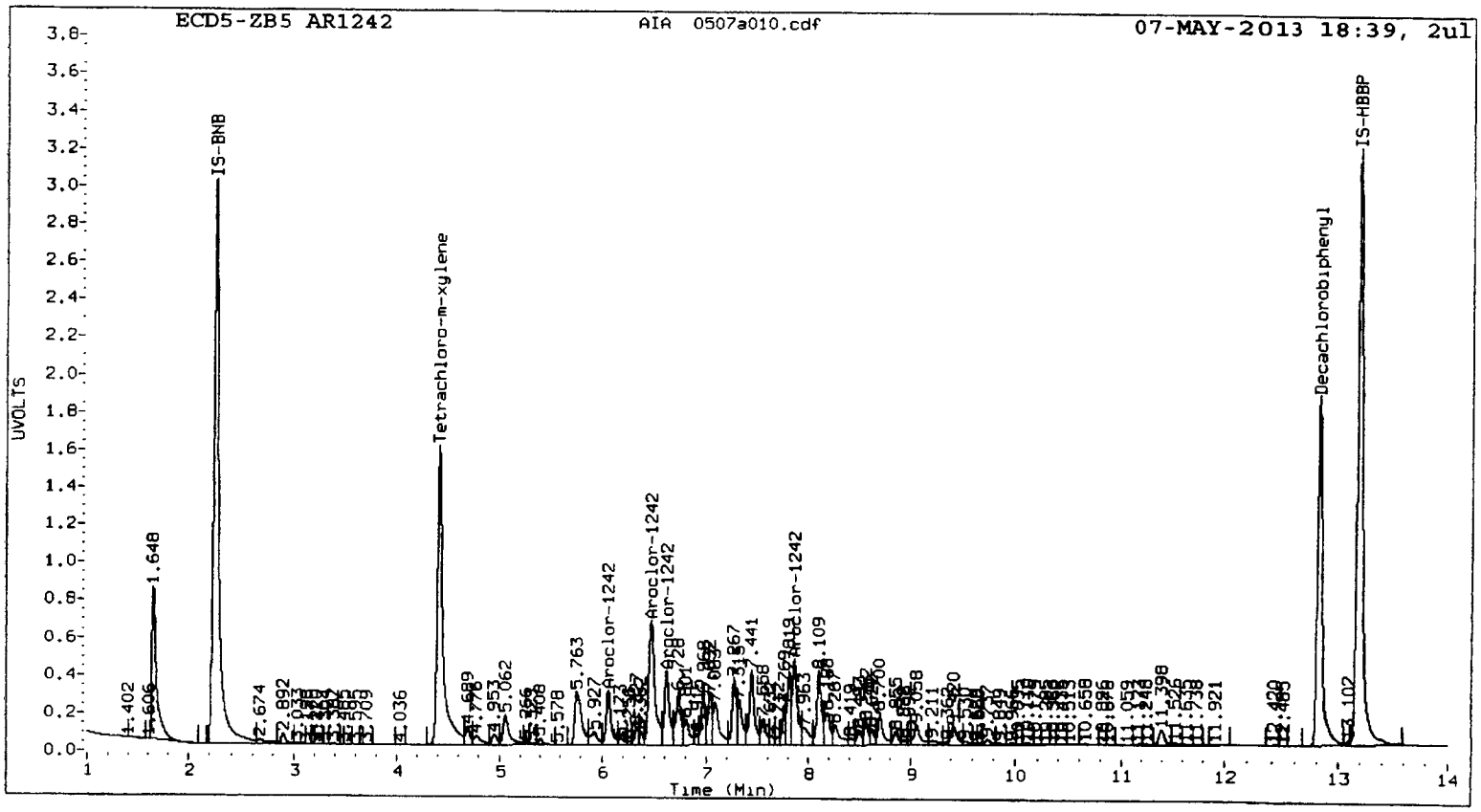
Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

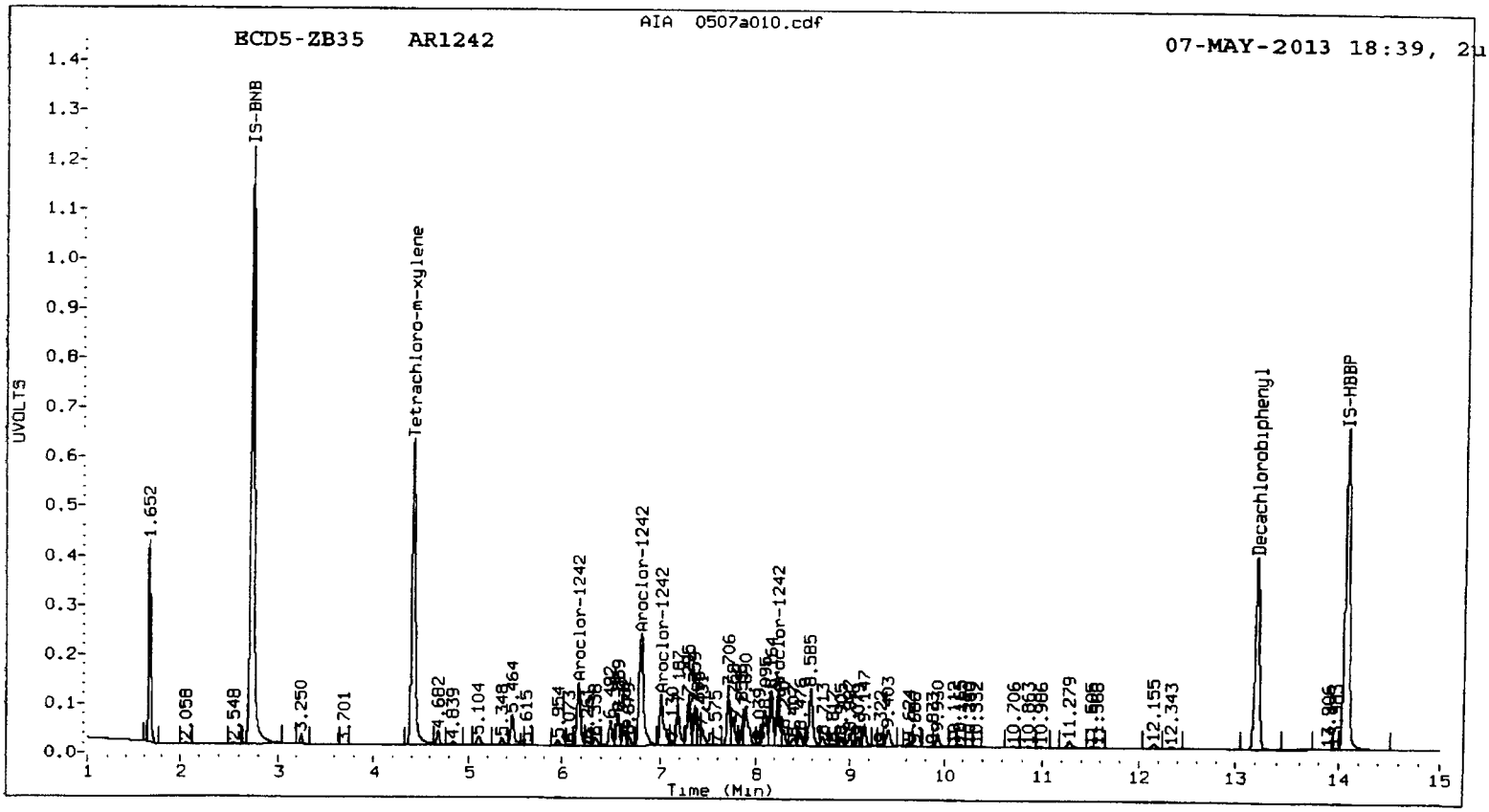
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

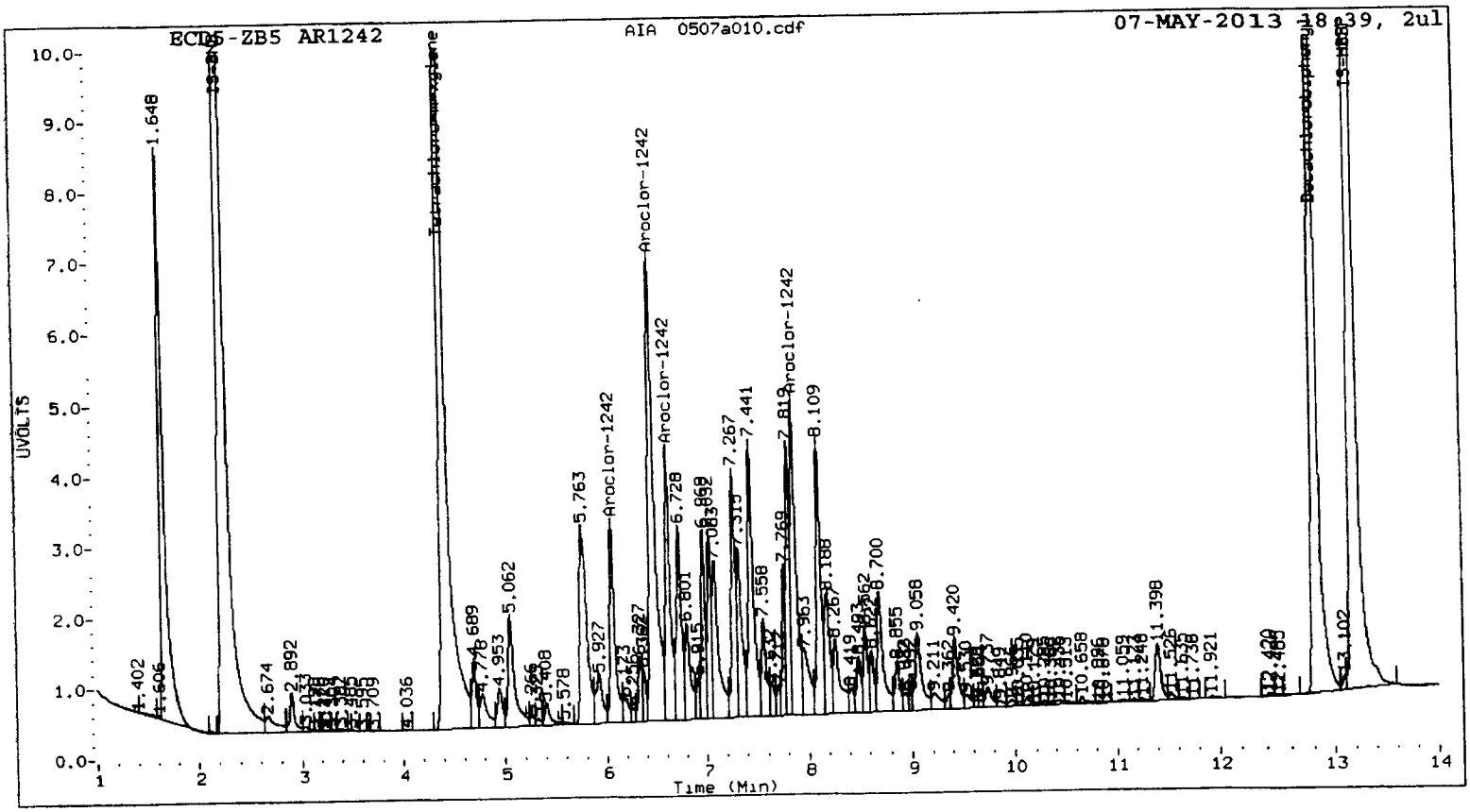
Total PCB Area Col1 (4.511 - 12.728) = 132730122 Col1 Total PCB = 0.2 ppm*

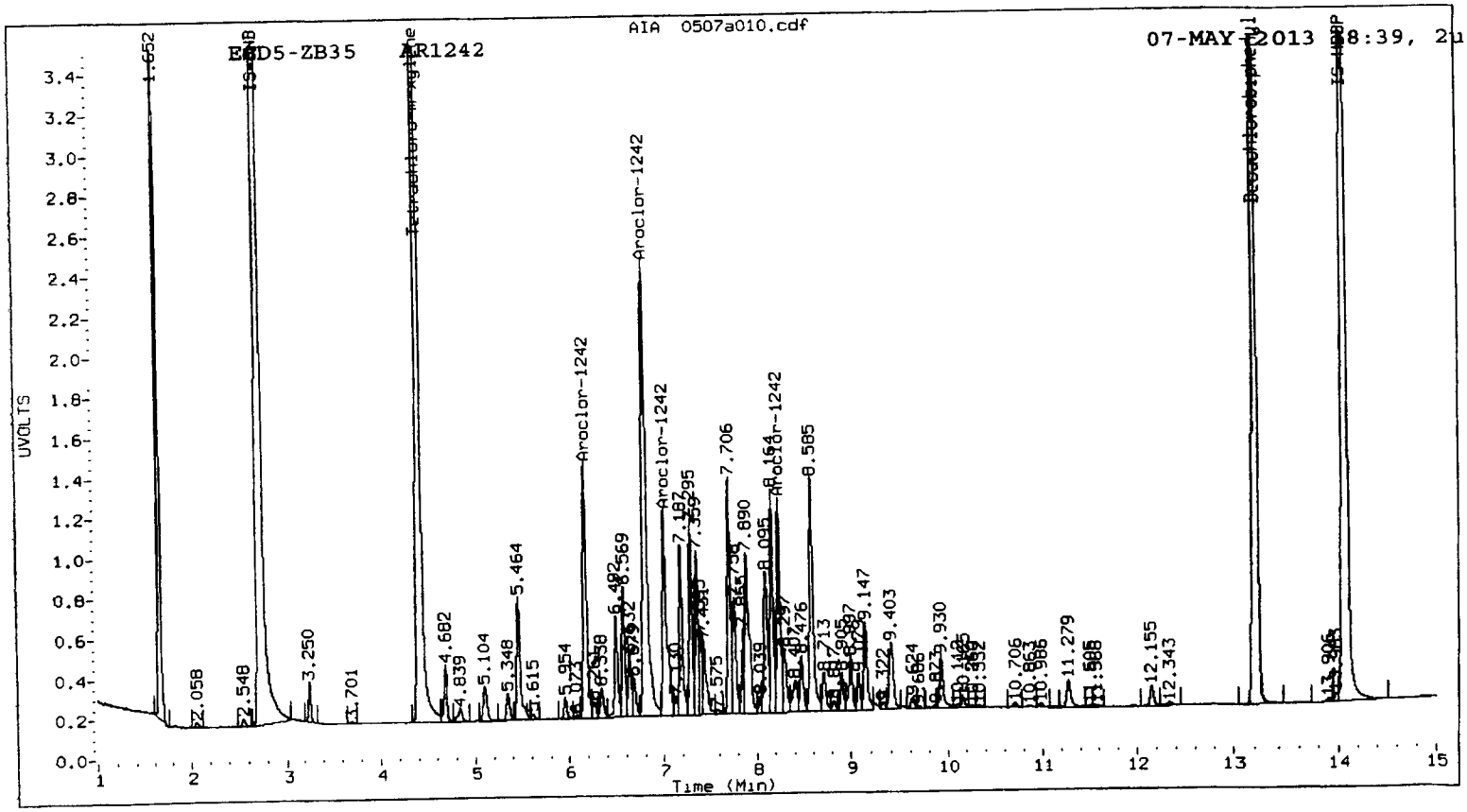
Total PCB Area Col2 (4.512 - 13.105) = 28500992 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


AIA 0507a010.cdf
ECD5-ZB35 AR1242
07-MAY-2013 18:39, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD5-ZB5 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl


ECD5-ZB35 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a011.d
Data file 2: 20130507.b/ical-2.b/0507a011.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 07-MAY-2013 18:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	31267686	4.412	0.000	8079724	38.2	39.1	2.2	Tetrachloro-m-xylen
12.828	0.000	29535239	13.204	-0.001	5138640	34.6	34.4	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	95.5	97.6
Decachlorobiphenyl	86.5	85.9

1 5/07/13
5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52790343	7.8
Hexabromobiphenyl	50004151	57162764	14.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15297537	3.1
Hexabromobiphenyl	9345340	10392760	11.2

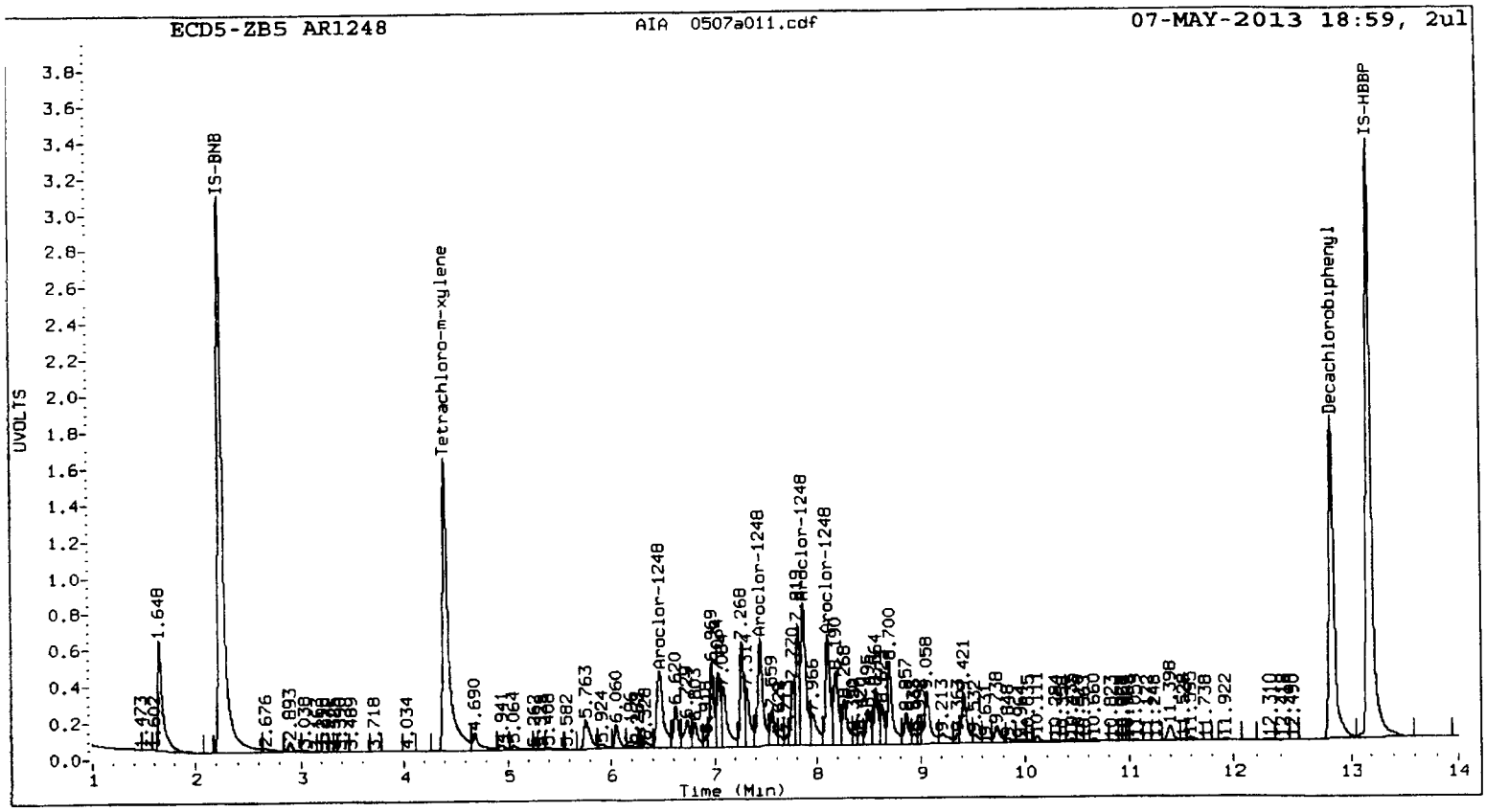
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

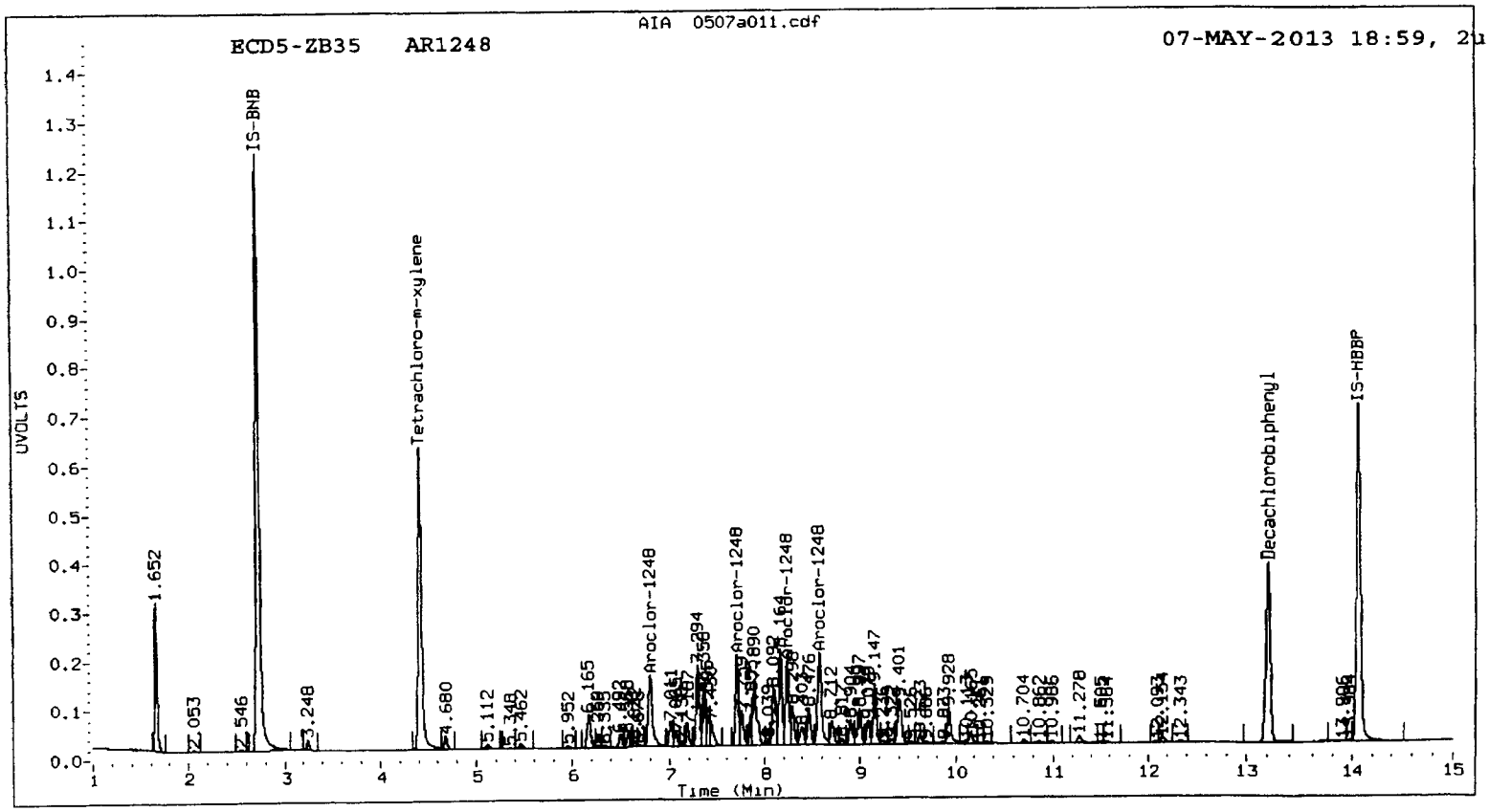
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1248	1	6.467	0.000	9288203	250.0	1	6.800	0.000	2396407	250.0
Aroclor-1248	2	7.442	0.000	10446110	250.0	2	7.706	0.000	1987417	250.0
Aroclor-1248	3	7.874	0.000	13282472	250.0	3	8.239	0.000	2057504	250.0
Aroclor-1248	4	8.110	0.000	9261094	250.0	4	8.584	0.000	2673699	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 170915176 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 35045707 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1248
AIA 0507a011.cdf
07-MAY-2013 18:59, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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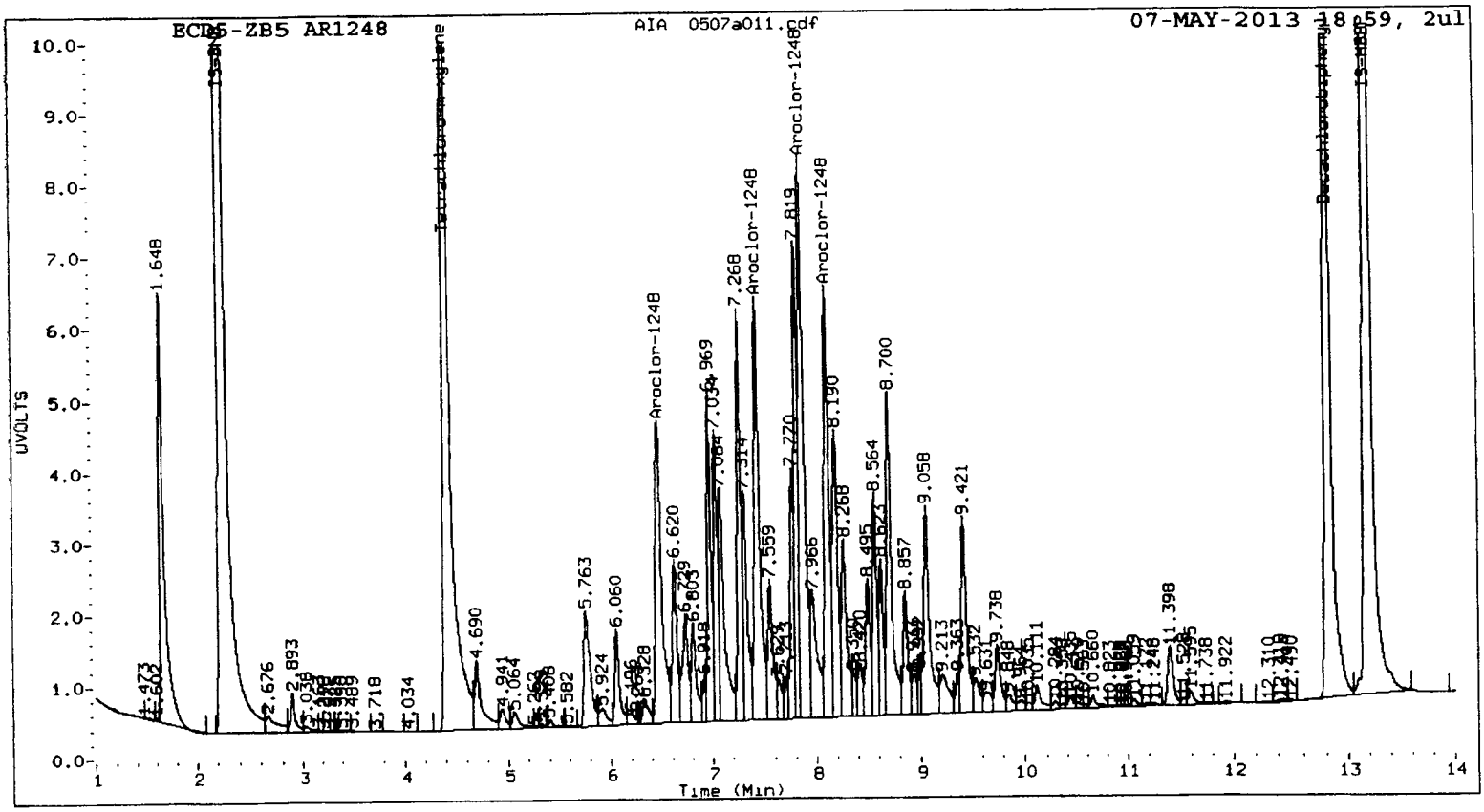
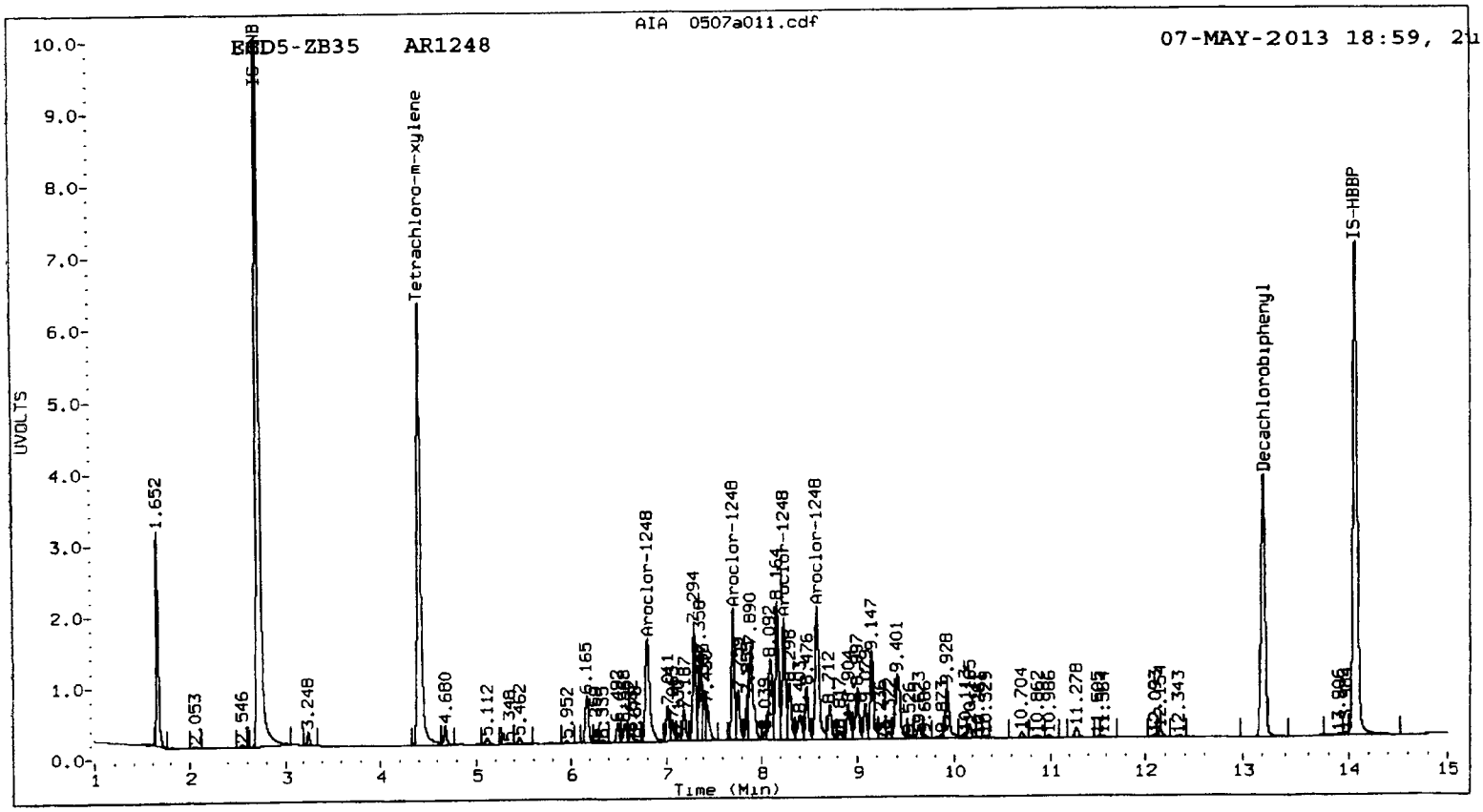
AIA 0507a011.cdf
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR1248
AIA 0507a011.cdf
07-MAY-2013 18:59, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP


AIA 0507a011.cdf
ECD5-ZB35 AR1248
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a012.d
Data file 2: 20130507.b/ical-2.b/0507a012.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 07-MAY-2013 19:20
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	31597187	4.412	0.000	8169778	38.5	39.8	3.2	Tetrachloro-m-xylen
12.828	0.000	30575045	13.204	-0.001	5300158	35.4	35.2	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.3	99.4
Decachlorobiphenyl	88.4	87.9

5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52930034	8.1
Hexabromobiphenyl	50004151	57859101	15.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15196733	2.4
Hexabromobiphenyl	9345340	10477901	12.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.192	0.000	12340679	250.0	1	8.298	0.000	1842172	250.0
Aroclor-1254	2	8.564	0.000	8145566	250.0	2	8.475	0.000	2275796	250.0
Aroclor-1254	3	8.700	0.000	16981832	250.0	3	8.996	0.000	1743263	250.0
Aroclor-1254	4	9.053	0.000	17490326	250.0	4	9.147	0.000	3733641	250.0
Aroclor-1254	5	9.362	0.000	6614633	250.0	5	9.935	0.000	2102395	250.0

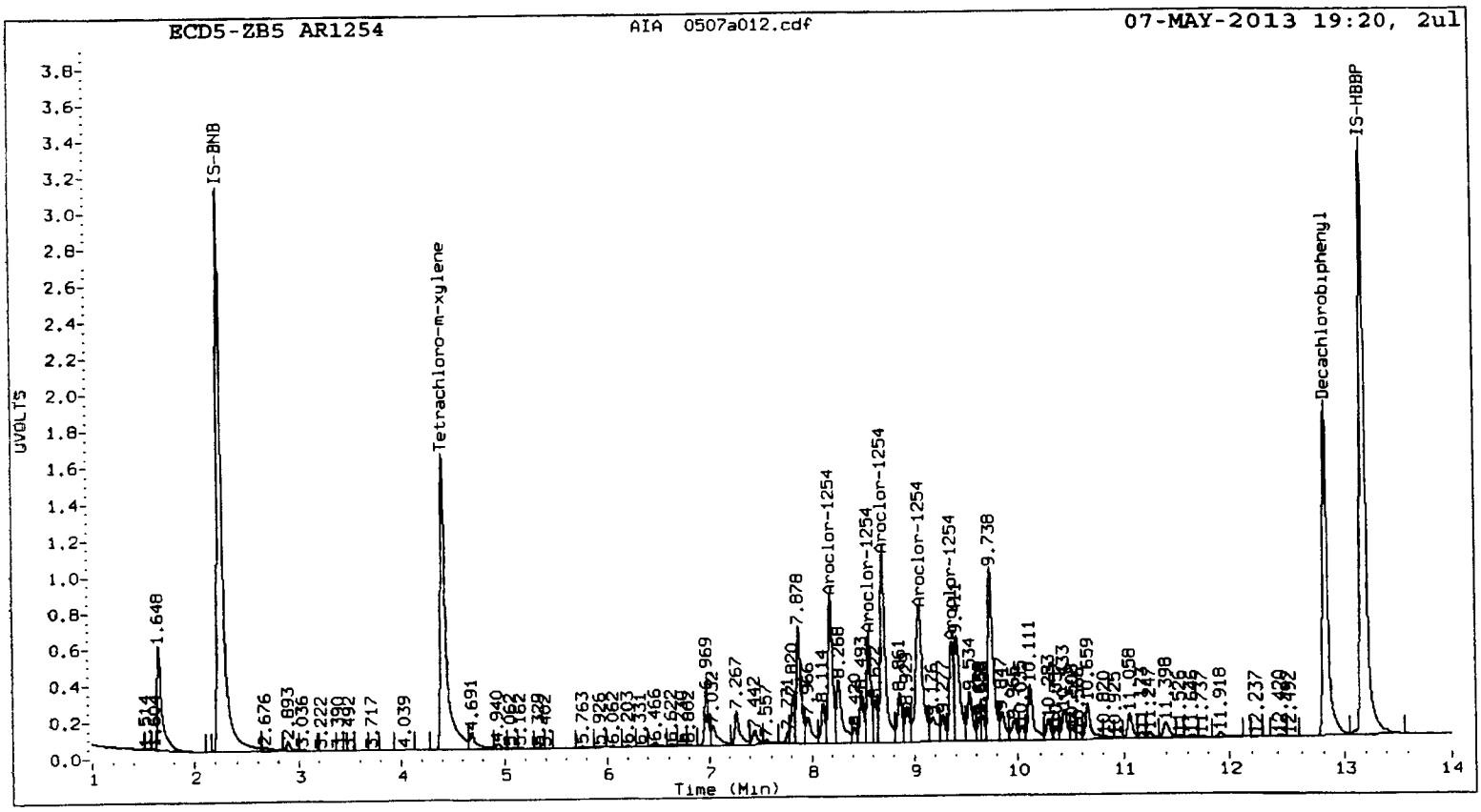
Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

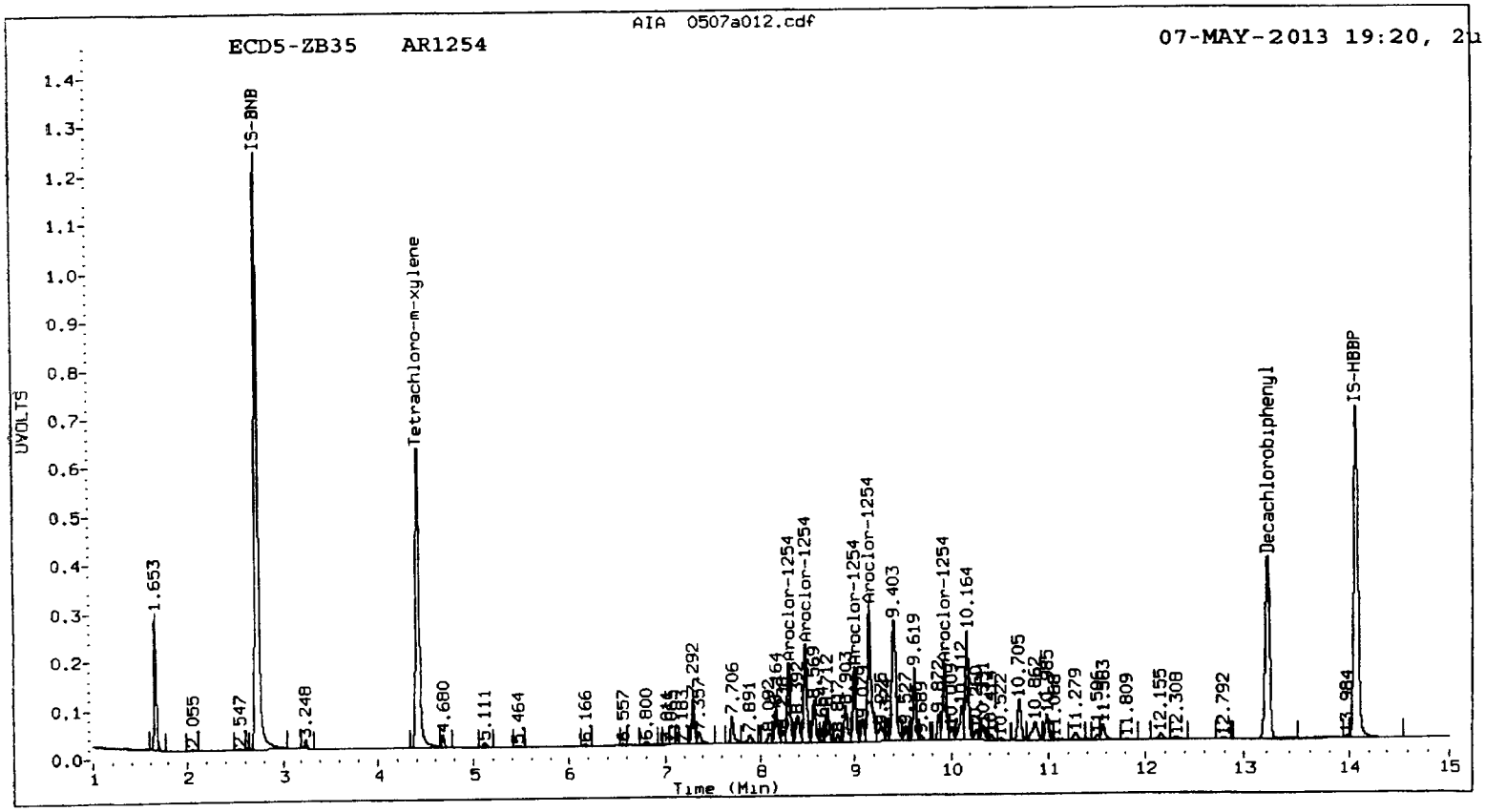
Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

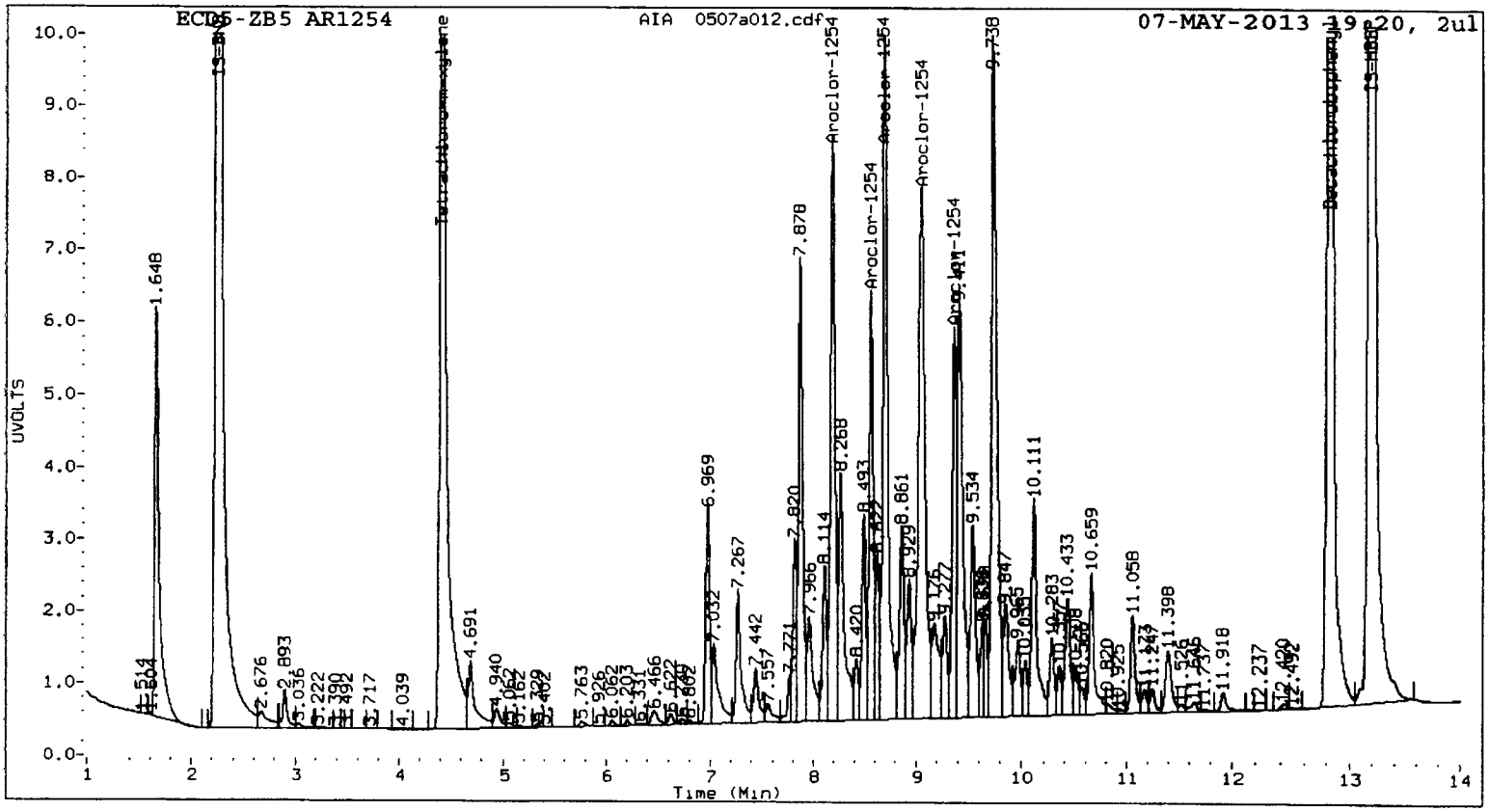
Total PCB Area Col1 (4.511 - 12.728) = 185172722 Col1 Total PCB = 0.3 ppm*

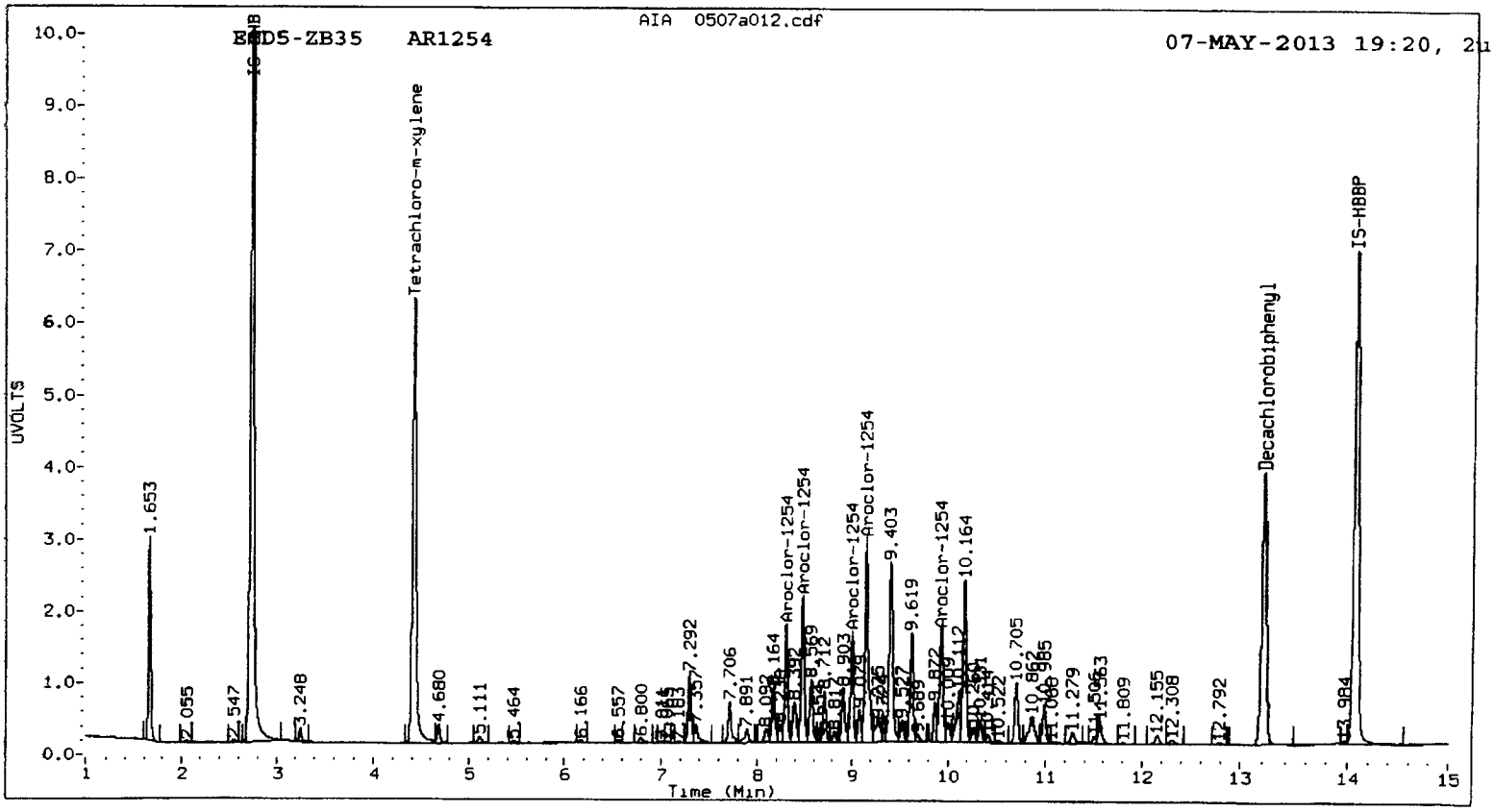
Total PCB Area Col2 (4.512 - 13.105) = 35929102 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


AIA 0507a012.cdf
ECD5-ZB35 AR1254
07-MAY-2013 19:20, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD5-ZB5 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a013.d
Data file 2: 20130507.b/ical-2.b/0507a013.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 07-MAY-2013 19:40
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	32354650	4.411	-0.001	8289820	38.8	40.0	2.9	Tetrachloro-m-xylen
12.828	-0.001	30623420	13.203	-0.002	5314887	35.1	34.9	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.1	99.9
Decachlorobiphenyl	87.9	87.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53739671	9.7
Hexabromobiphenyl	50004151	58323154	16.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15340978	3.4
Hexabromobiphenyl	9345340	10583916	13.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

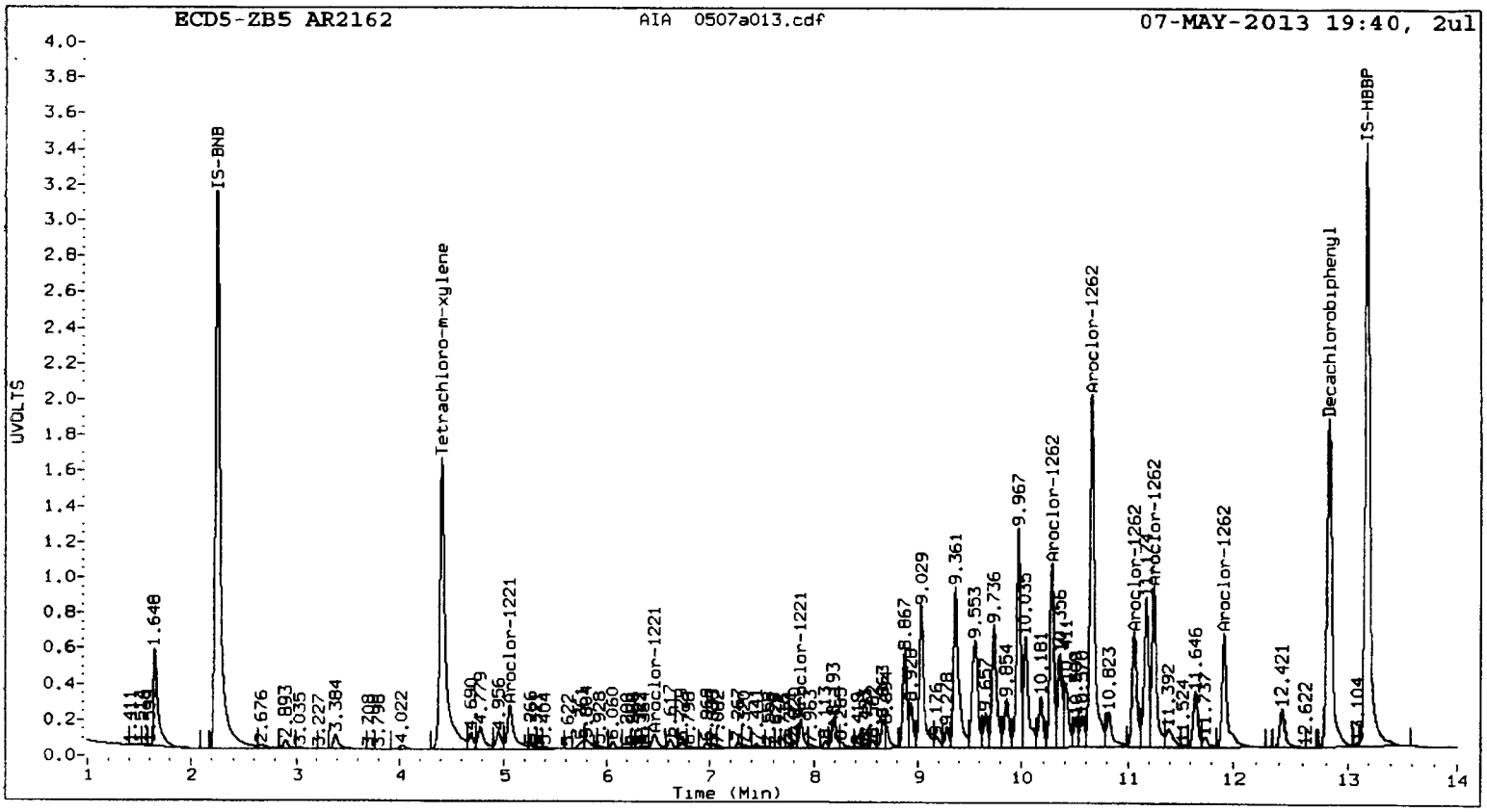
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	5.064	0.000	5473596	250.0	1	3.694	0.000	393179	250.0
Aroclor-1221	2	6.468	0.000	1674697	250.0	2	5.095	0.000	658077	250.0
Aroclor-1221	3	7.878	0.000	2364906	250.0	3	5.345	0.000	358396	250.0
Aroclor-1221	NS	---			----	4	5.460	0.000	1127517	250.0
Total Col1Ave (3 peaks): 250.0						Total Col2Ave (4 peaks): 250.0 RPD = 0				
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks): 250.0				
Aroclor-1262	1	10.283	0.000	13652093	250.0	1	10.260	0.000	3659800	250.0
Aroclor-1262	2	10.659	0.000	32077138	250.0	2	10.710	0.000	3346602	250.0
Aroclor-1262	3	11.059	0.000	10159557	250.0	3	10.985	0.000	6277067	250.0
Aroclor-1262	4	11.247	0.000	14260811	250.0	4	11.567	0.000	4079795	250.0
Aroclor-1262	5	11.918	0.000	10944344	250.0	5	12.306	0.000	1969832	250.0
Total Col1Ave (5 peaks): 250.0						Total Col2Ave (5 peaks): 250.0 RPD = 0				
Corrected Ave (4 peaks): 250.0						Corrected Ave (4 peaks): 250.0 RPD = 0				

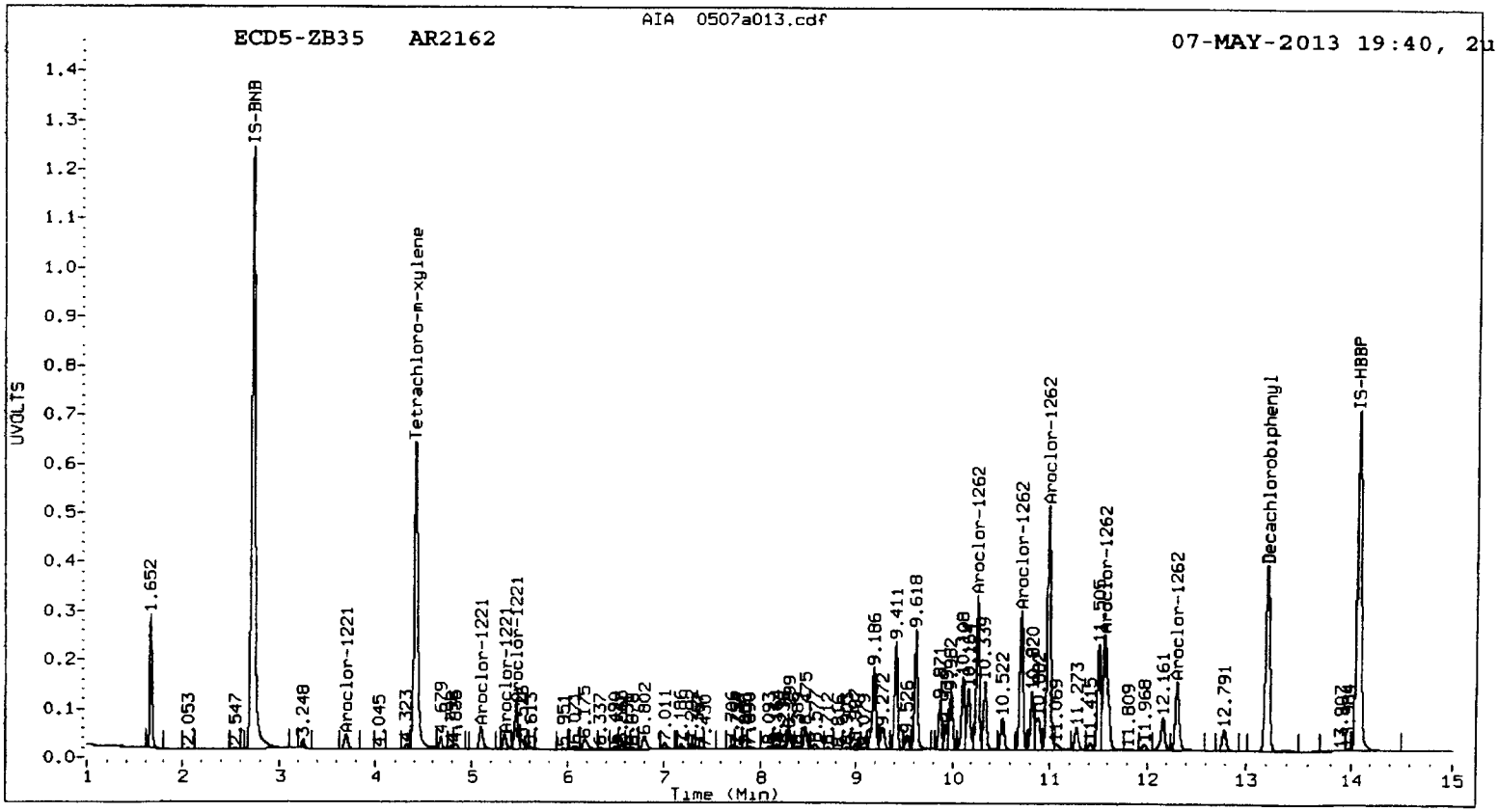
Total PCB Area Col1 (4.511 - 12.728) = 262283464 Col1 Total PCB = 0.4 ppm*

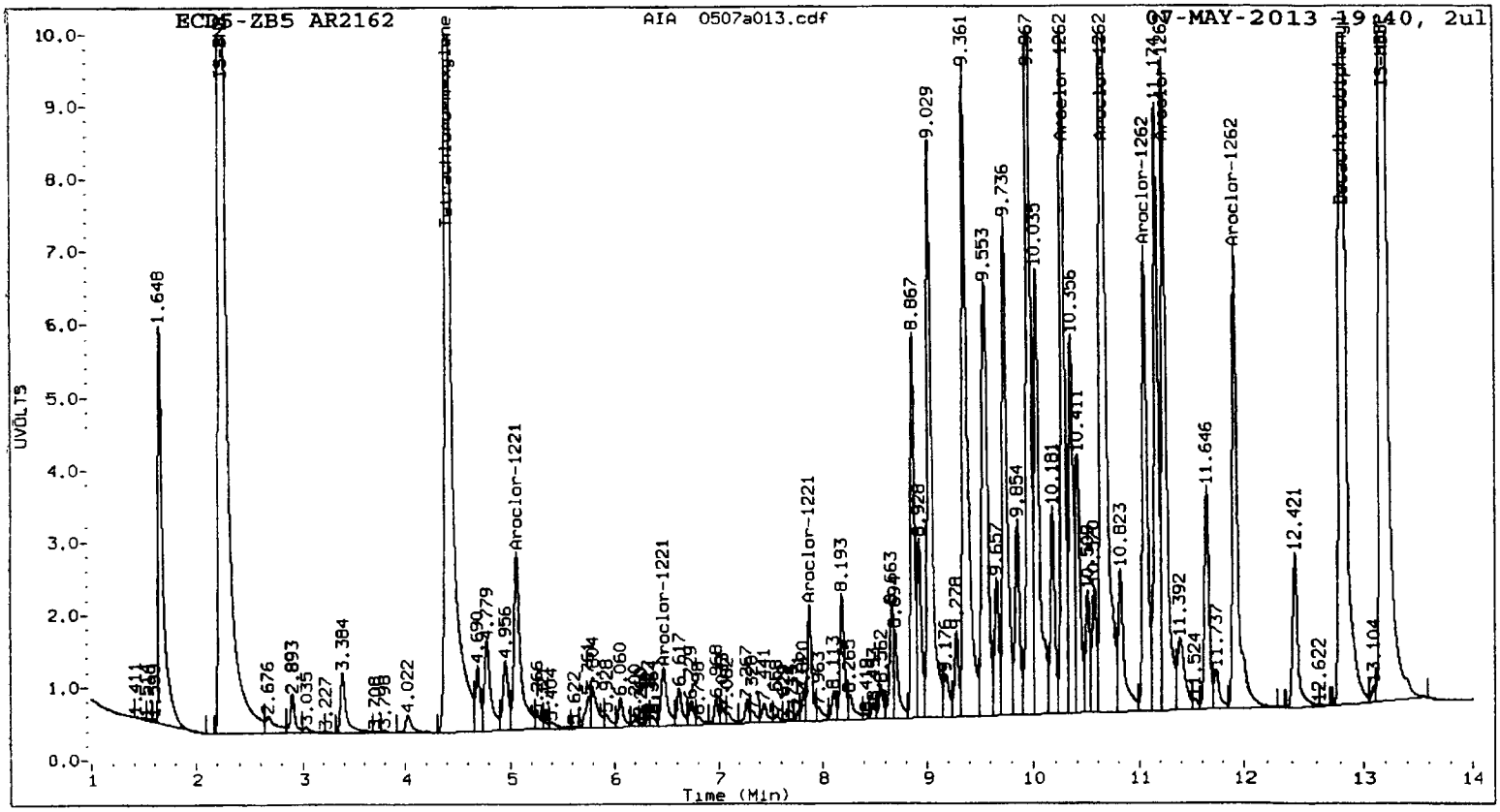
Total PCB Area Col2 (4.512 - 13.105) = 51791020 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR2162
AIA 0507a013.cdf
07-MAY-2013 19:40, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR2162
AIA 0507a013.cdf
07-MAY-2013 19:40, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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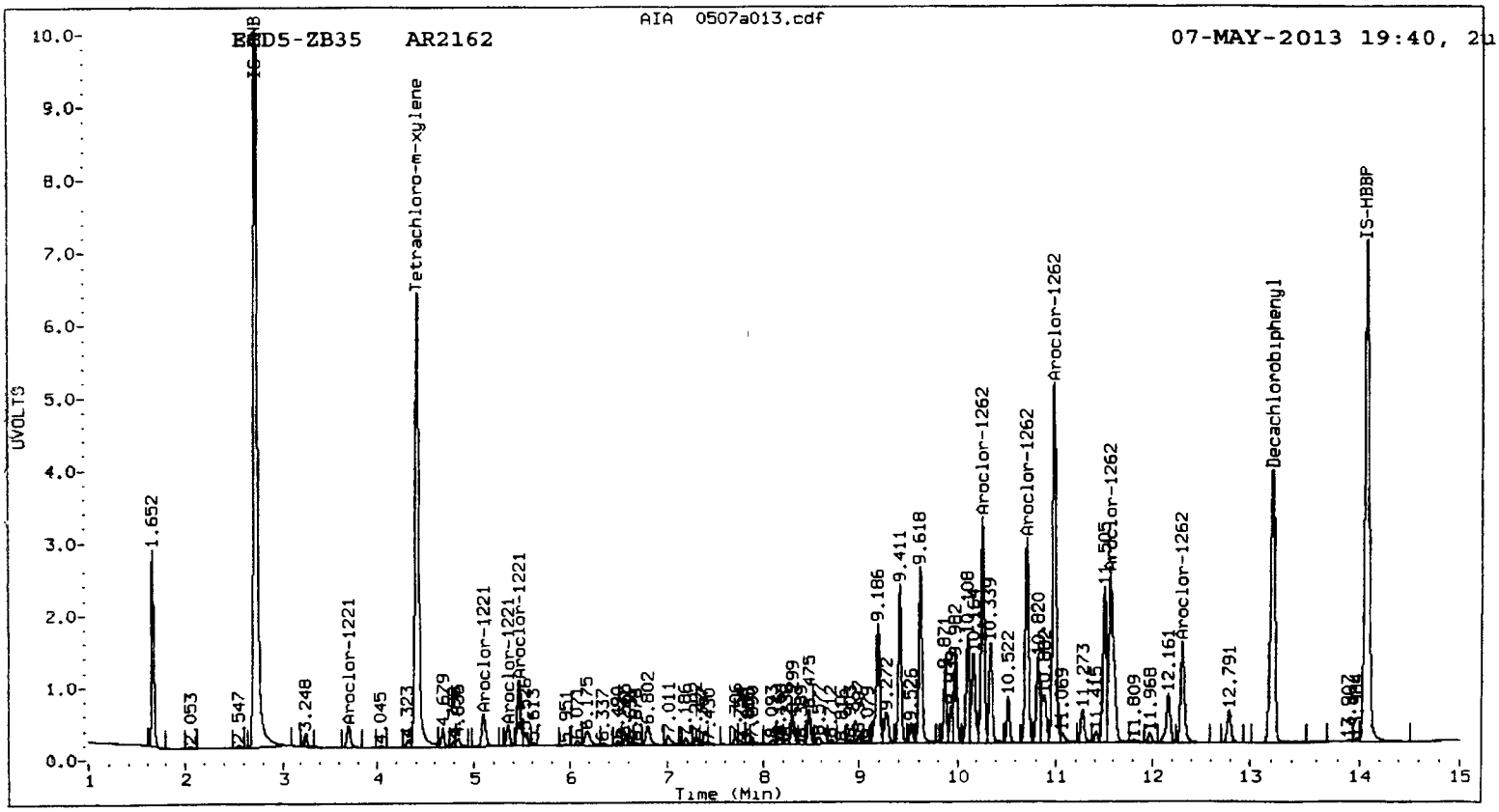
07-MAY-2013 19:40, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a014.d
Data file 2: 20130507.b/ical-2.b/0507a014.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 07-MAY-2013 20:00
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	31984640	4.412	0.000	8241550	38.7	40.0	3.2	Tetrachloro-m-xylen
12.828	0.000	43449498	13.205	0.000	7536002	50.6	49.8	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.8	100.0
Decachlorobiphenyl	126.5	124.5

5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53262724	8.7
Hexabromobiphenyl	50004151	57460185	14.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15239954	2.7
Hexabromobiphenyl	9345340	10518547	12.6

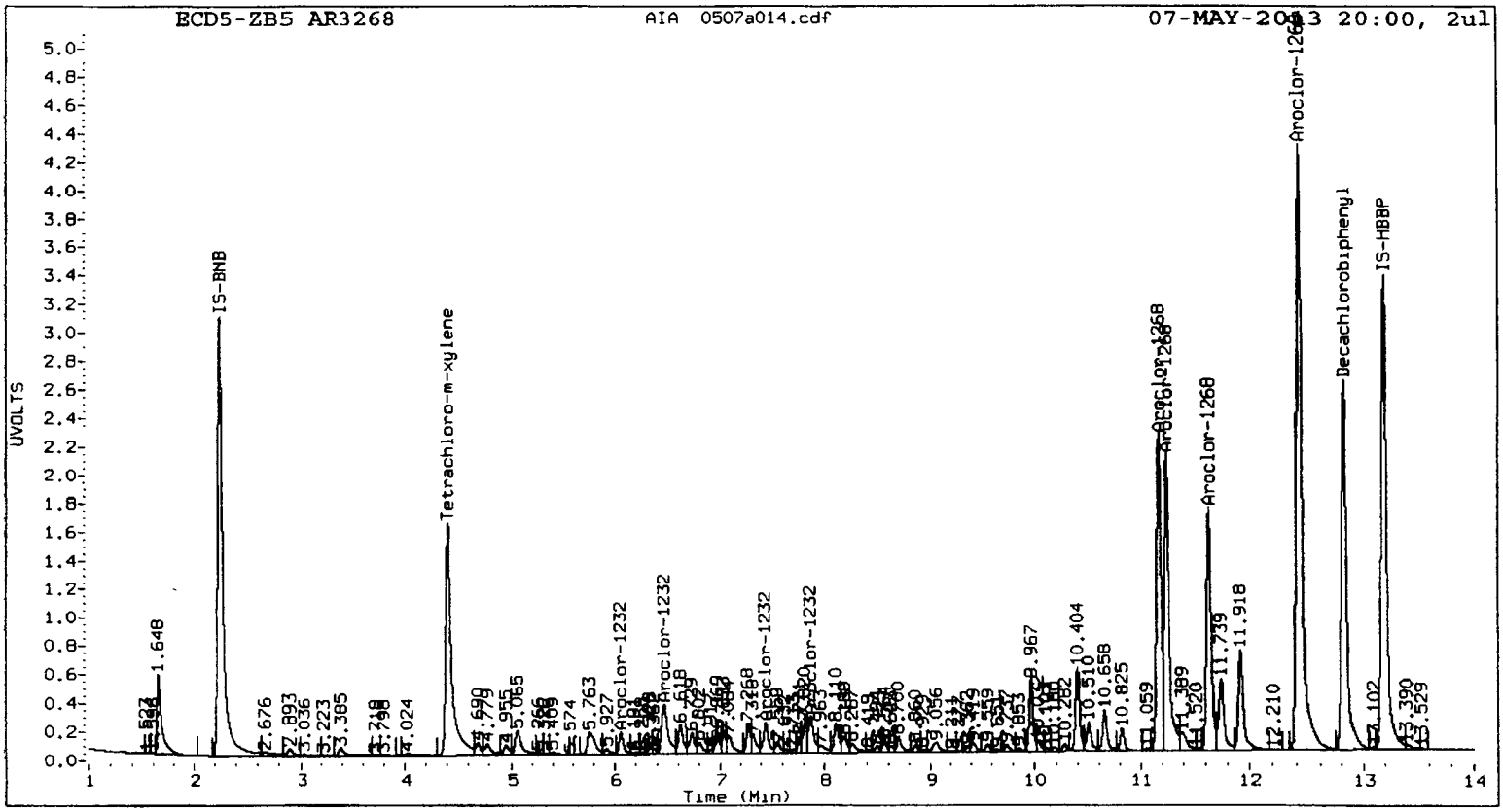
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1232	1	6.060	0.000	2466405	250.0	1	6.165	0.000	977839	250.0
Aroclor-1232	2	6.469	0.000	7549613	250.0	2	6.801	0.000	1952023	250.0
Aroclor-1232	3	7.442	0.000	3923778	250.0	3	7.011	0.000	813950	250.0
Aroclor-1232	4	7.874	0.000	4507818	250.0	4	8.239	0.000	683109	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	11.175	0.000	30229266	250.0	1	11.507	0.000	6347619	250.0
Aroclor-1268	2	11.246	0.000	33428922	250.0	2	11.573	0.000	5983248	250.0
Aroclor-1268	3	11.632	0.000	24825470	250.0	3	11.969	0.000	4735989	250.0
Aroclor-1268	4	12.422	0.000	69938717	250.0	4	12.792	0.000	12266670	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 288711386 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 55525050 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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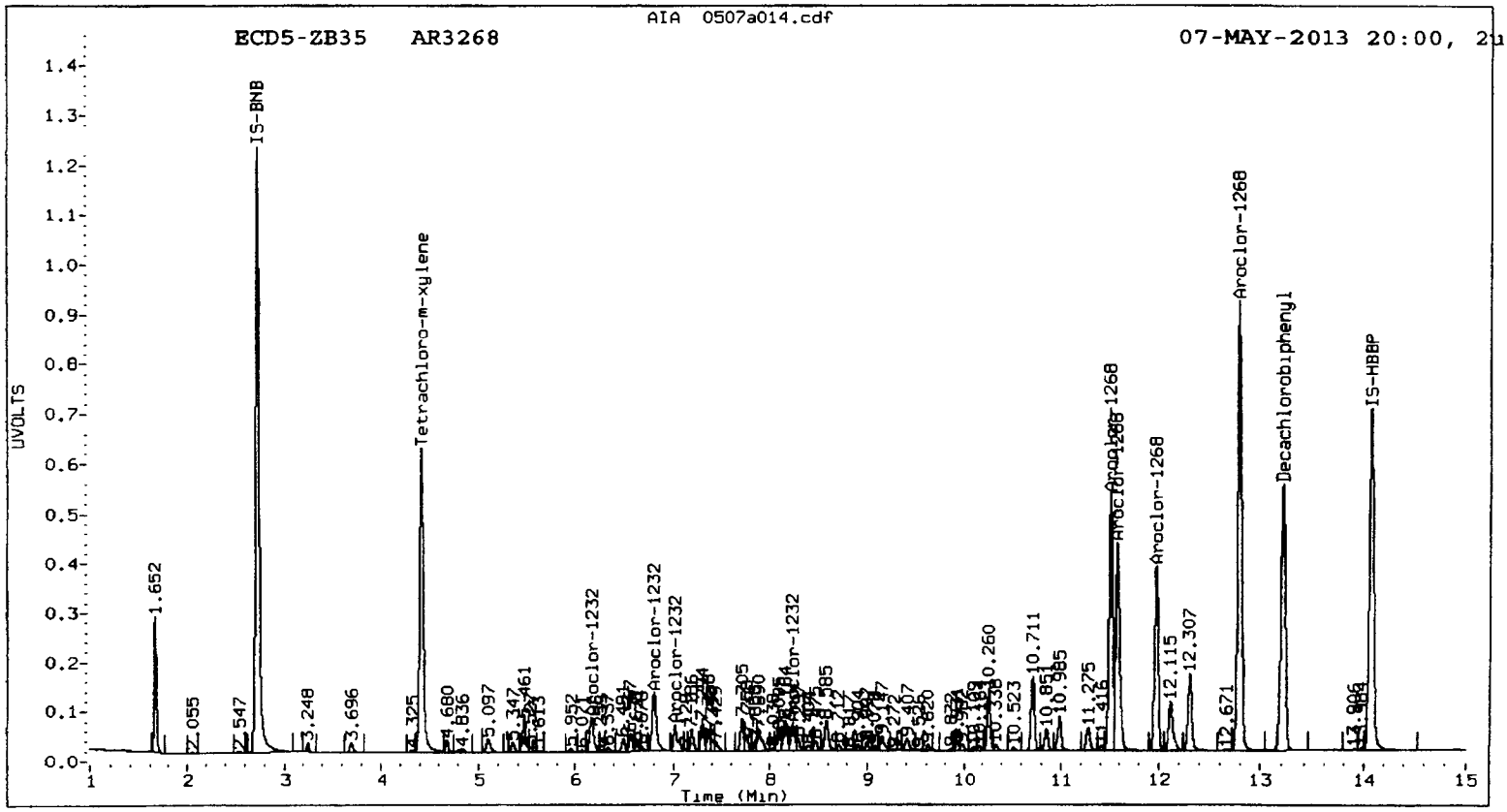
07-MAY-2013 20:00, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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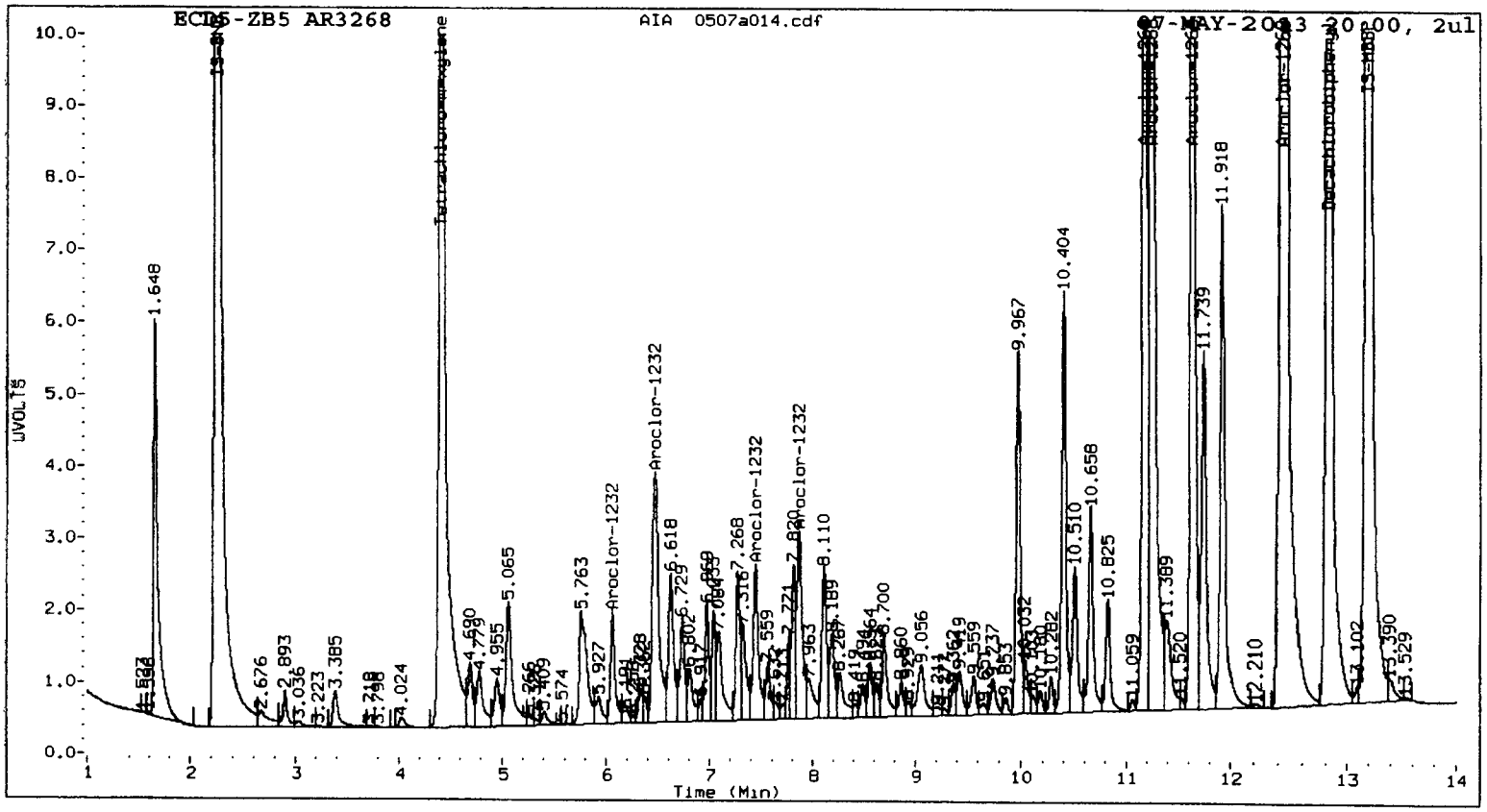
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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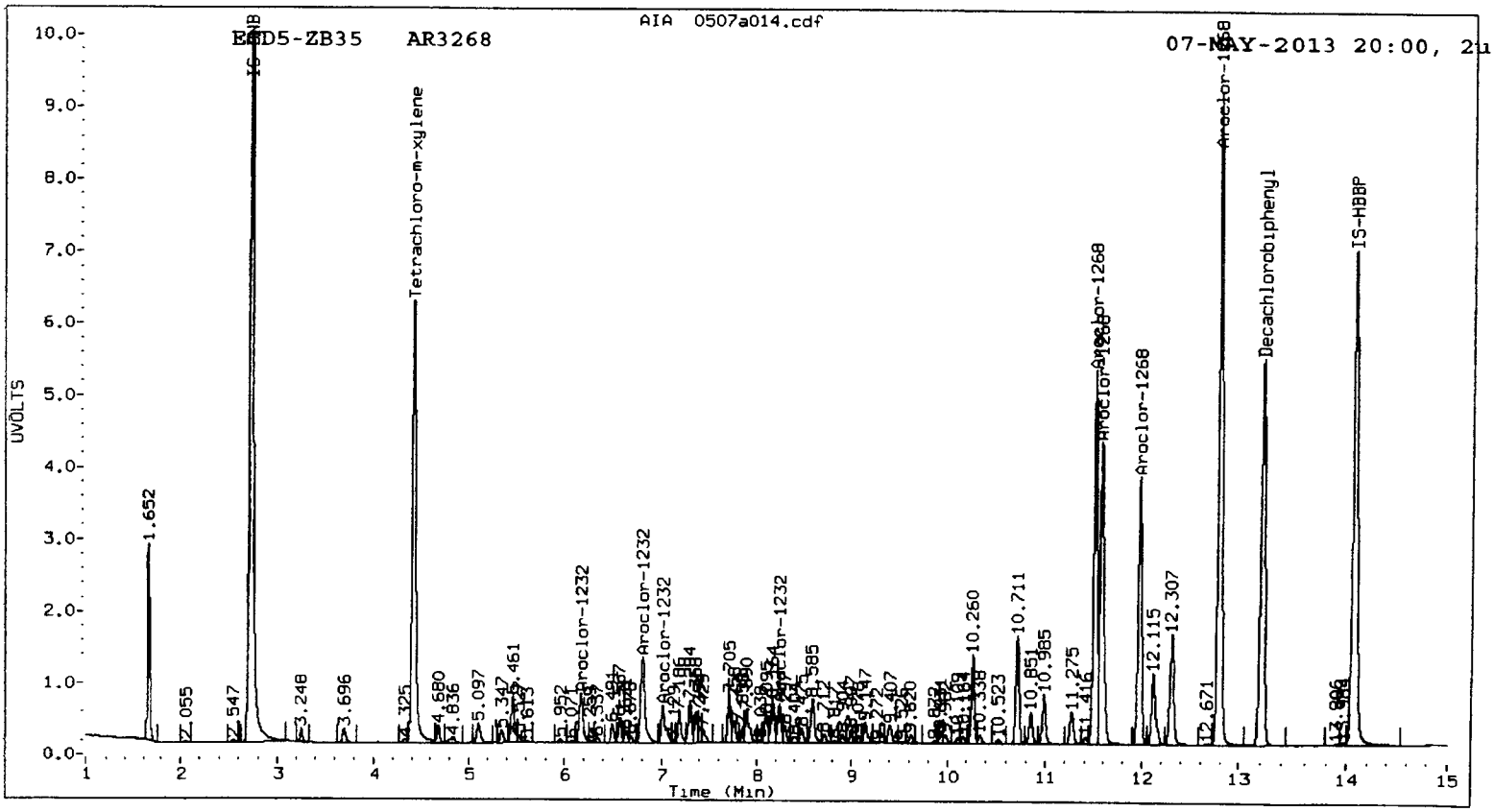
07-MAY-2013 20:00, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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AIA 0507a014.cdf
07-MAY-2013 20:00, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a015.d
Data file 2: 20130507.b/ical-2.b/0507a015.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 07-MAY-2013 20:21
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	31924156	4.411	0.000	8216234	38.0	38.8	2.2	Tetrachloro-m-xylen
12.828	0.000	30828729	13.205	0.000	5320370	34.3	34.0	1.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.9	97.0
Decachlorobiphenyl	85.8	84.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54248541	10.8
Hexabromobiphenyl	50004151	60099807	20.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15658755	5.5
Hexabromobiphenyl	9345340	10888882	16.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.060	-0.001	4470855	182.8	1	6.166	0.000	1663757	186.2
Aroclor-1016	2	6.468	0.000	13617695	180.8	2	6.802	0.001	3565246	183.5
Aroclor-1016	3	6.617	0.001	6113829	181.2	3	7.185	0.000	947812	186.6
Aroclor-1016	4	6.729	0.001	4549783	180.4	4	7.358	0.000	881454	186.3
Total Col1Ave (4 peaks):					181.3	Total Col2Ave (4 peaks):				185.7 RPD = 2
Corrected Ave (3 peaks):					180.8	Corrected Ave (3 peaks):				185.4 RPD = 2
Aroclor-1221	1	5.063	-0.001	3230223	146.2	1	---			0.0
Aroclor-1221	2	6.468	0.000	13617695	2013.8	2	5.101	0.006	254025	94.5
Aroclor-1221	3	7.874	-0.004	7607955	796.7	3	5.346	0.001	163596	111.8
Aroclor-1221	NS	---			---	4	5.461	0.001	799065	173.6
Total Col1Ave (3 peaks):					985.6	Total Col2Ave (3 peaks):				126.6 RPD = 154*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.060	-0.001	4470855	444.9	1	6.166	0.000	1663757	414.0
Aroclor-1232	2	6.468	-0.001	13617695	442.7	2	6.802	0.000	3565246	444.4
Aroclor-1232	3	7.442	0.000	6893473	431.2	3	7.009	-0.002	1501264	448.8
Aroclor-1232	4	7.874	0.000	7607955	414.3	4	8.238	-0.001	1167882	416.0
Total Col1Ave (4 peaks):					433.3	Total Col2Ave (4 peaks):				430.8 RPD = 1
Corrected Ave (3 peaks):					429.4	Corrected Ave (3 peaks):				424.8 RPD = 1
Aroclor-1242	1	6.060	0.000	4470855	228.8	1	6.166	-0.002	1663757	233.2
Aroclor-1242	2	6.468	0.000	13617695	227.2	2	6.802	-0.001	3565246	227.5
Aroclor-1242	3	6.617	0.001	6113829	228.7	3	7.009	-0.002	1501264	229.3
Aroclor-1242	4	7.874	0.001	7607955	230.4	4	8.238	-0.001	1167882	212.9
Total Col1Ave (4 peaks):					228.8	Total Col2Ave (4 peaks):				225.7 RPD = 1
Corrected Ave (3 peaks):					228.2	Corrected Ave (3 peaks):				223.2 RPD = 2
Aroclor-1248	1	6.468	0.002	13617695	356.7	1	6.802	0.002	3565246	363.4
Aroclor-1248	2	7.442	-0.001	6893473	160.5	2	7.705	-0.001	1266936	155.7
Aroclor-1248	3	7.874	-0.001	7607955	139.3	3	8.238	-0.001	1167882	138.6
Aroclor-1248	4	8.110	0.000	5502492	144.5	4	8.584	0.001	1486653	135.8
Total Col1Ave (4 peaks):					200.3	Total Col2Ave (4 peaks):				198.4 RPD = 1
Corrected Ave (3 peaks):					148.1	Corrected Ave (3 peaks):				143.4 RPD = 3
Aroclor-1254	1	8.190	-0.002	3647666	72.1	1	8.298	0.000	493209	65.0
Aroclor-1254	2	8.564	0.000	3121258	63.5	2	8.475	0.000	469897	50.1
Aroclor-1254	3	8.700	0.000	3853127	55.3	3	8.996	0.000	426802	59.4
Aroclor-1254	4	9.057	0.005	3495648	48.8	4	9.147	0.000	714252	46.4
Aroclor-1254	5	9.362	0.000	680929	25.1	5	9.930	-0.004	413402	47.7
Total Col1Ave (5 peaks):					53.0	Total Col2Ave (5 peaks):				53.7 RPD = 1
Corrected Ave (4 peaks):					48.2	Corrected Ave (4 peaks):				50.9 RPD = 5
Aroclor-1260	1	9.966	-0.001	248097	5.0	1	10.260	0.001	14609	1.5
Aroclor-1260	2	10.282	-0.001	177183	3.6	2	10.704	-0.005	88810	7.7
Aroclor-1260	3	10.658	-0.001	314580	2.7	3	10.985	0.001	50951	2.4
Aroclor-1260	4	11.058	0.000	188167	3.3	4	11.506	0.001	16977	2.9
Aroclor-1260	5	11.248	0.001	45330	1.5	NS	---			---
Total Col1Ave (5 peaks):					3.2	Total Col2Ave (4 peaks):				3.6 RPD = 11
Corrected Ave (4 peaks):					2.8	Corrected Ave (3 peaks):				2.3 RPD = 20
Aroclor-1262	1	10.282	0.000	177183	3.1	1	10.260	0.001	14609	1.0
Aroclor-1262	2	10.658	-0.001	314580	2.4	2	10.704	-0.006	88810	6.4
Aroclor-1262	3	11.058	-0.001	188167	4.5	3	10.985	0.000	50951	2.0
Aroclor-1262	4	11.248	0.001	45330	0.8	4	11.564	-0.003	37242	2.2
Aroclor-1262	5	11.923	0.005	55055	1.2	5	12.344	0.038	32722	4.0
Total Col1Ave (5 peaks):					2.4	Total Col2Ave (5 peaks):				3.1 RPD = 26
Corrected Ave (4 peaks):					1.9	Corrected Ave (4 peaks):				2.3 RPD = 20
Aroclor-1268	1	11.173	-0.002	51213	0.4	1	11.506	0.000	16977	0.6

Aroclor-1268	2	11.248	0.002	45330	0.3	2	11.564	-0.009	37242	1.5
Aroclor-1268	3	11.629	-0.004	63465	0.6	3	---			0.0
Aroclor-1268	4	12.419	-0.003	91475	0.3	4	12.791	-0.001	10921	0.2

Total Col1Ave (4 peaks): 0.4 Total Col2Ave (3 peaks): 0.8 RPD = 62*

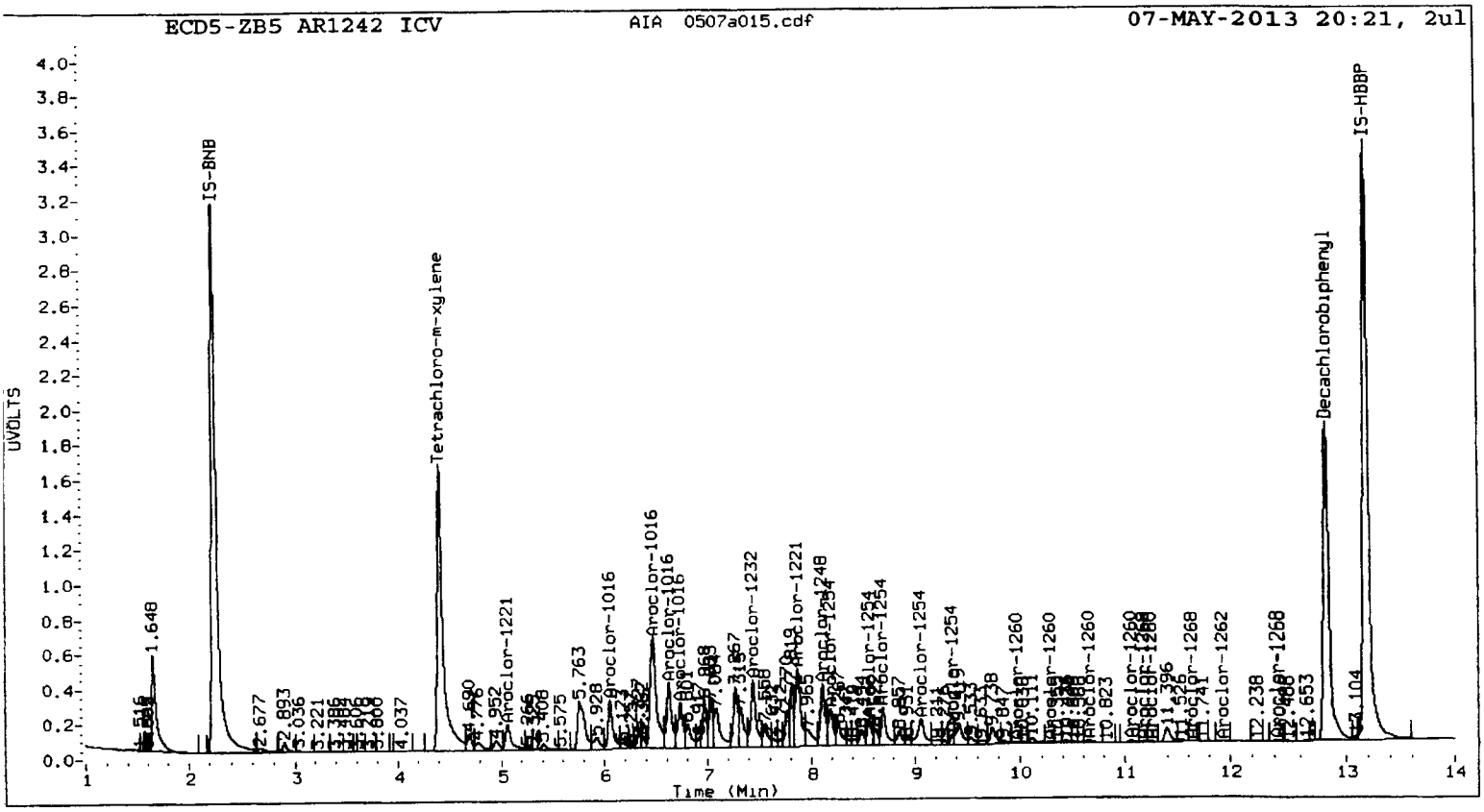
Corrected Ave (3 peaks): 0.3 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (4.511 - 12.728) = 136701149 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 28787302 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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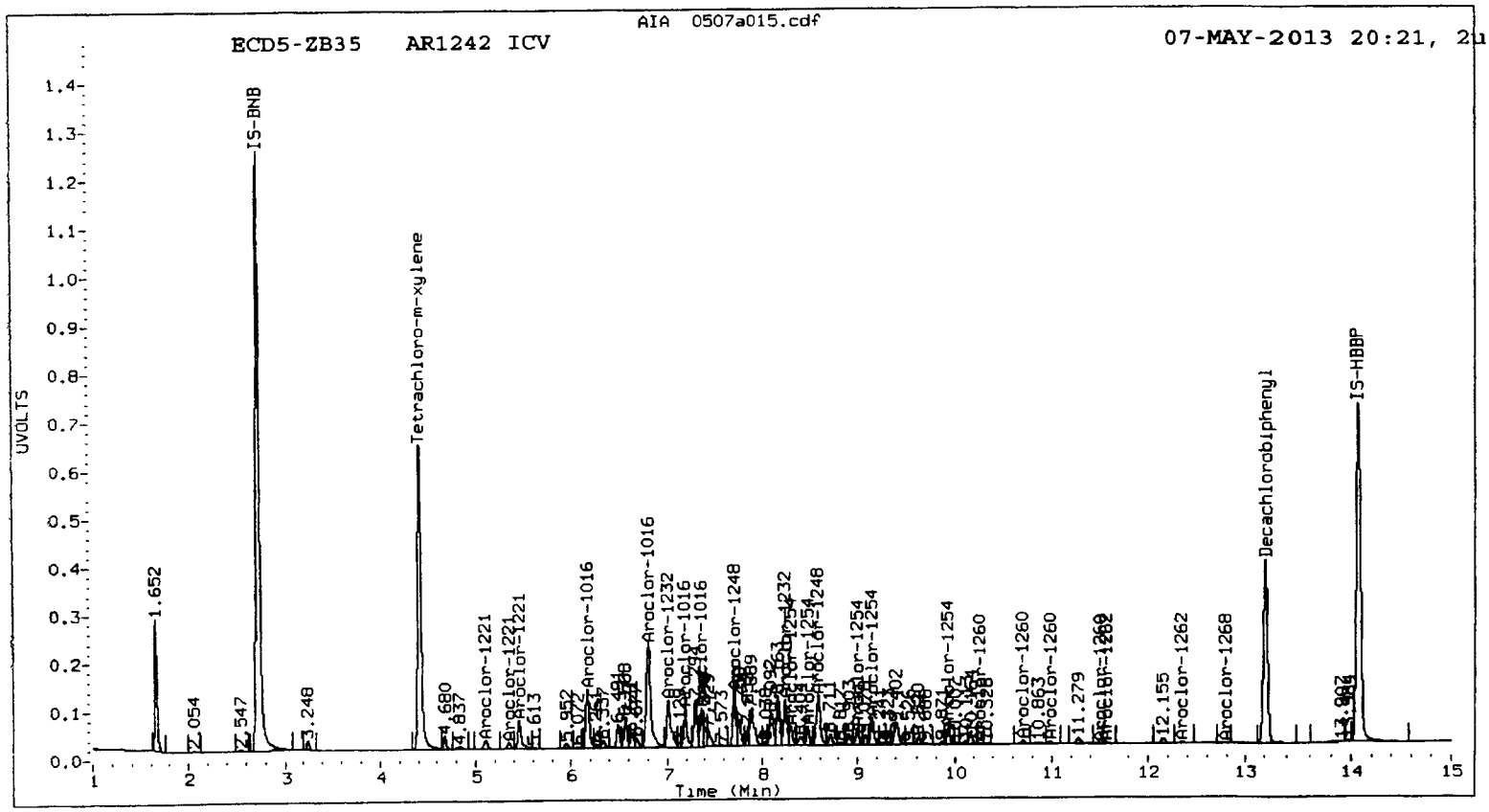
07-MAY-2013 20:21, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.648
4.037
5.763
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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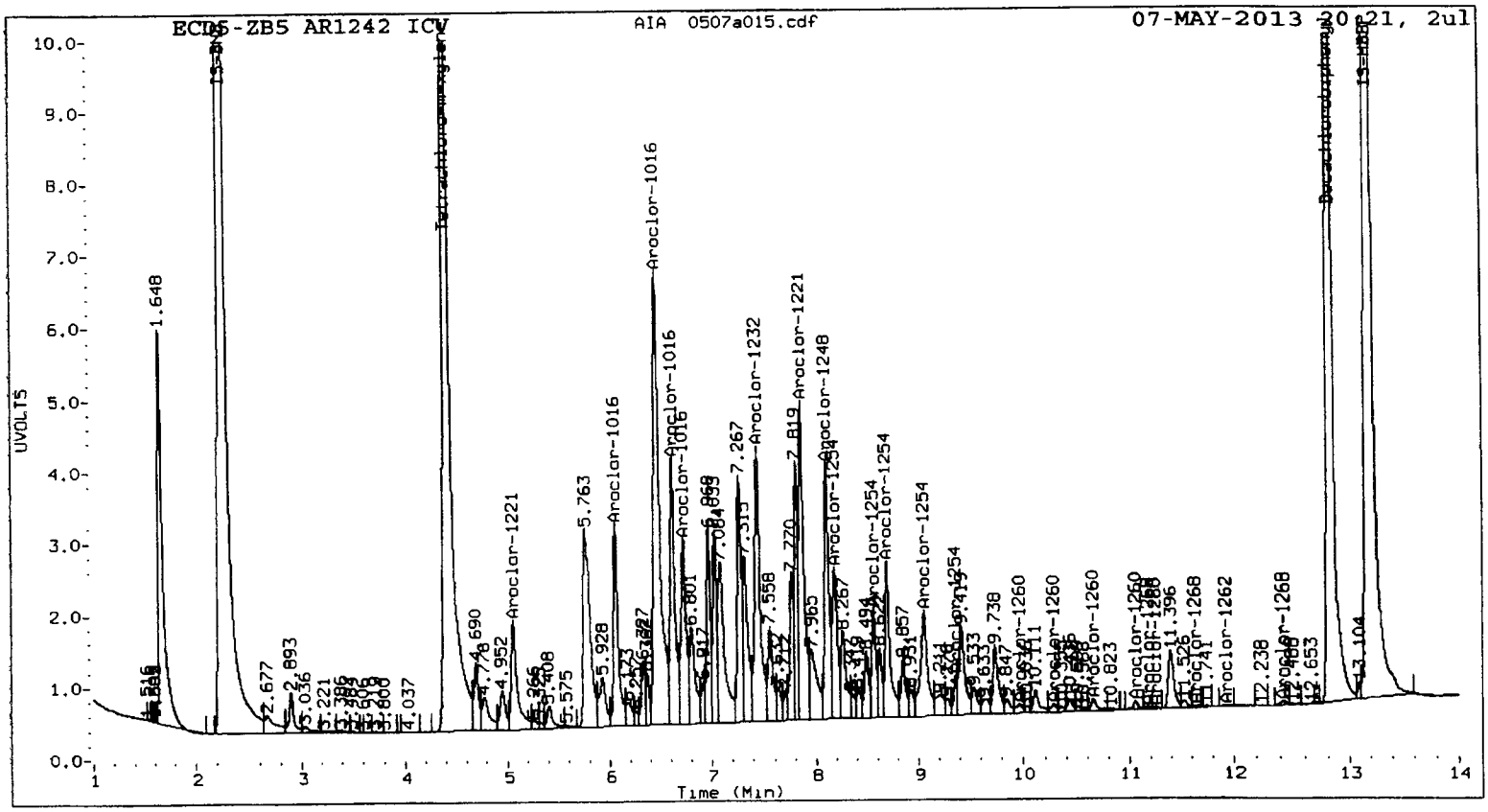
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.652
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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07-MAY-2013 20:21, 2ul
UVOLTS
Time (Min)
Aroclor-1016
Aroclor-1221
Aroclor-1232
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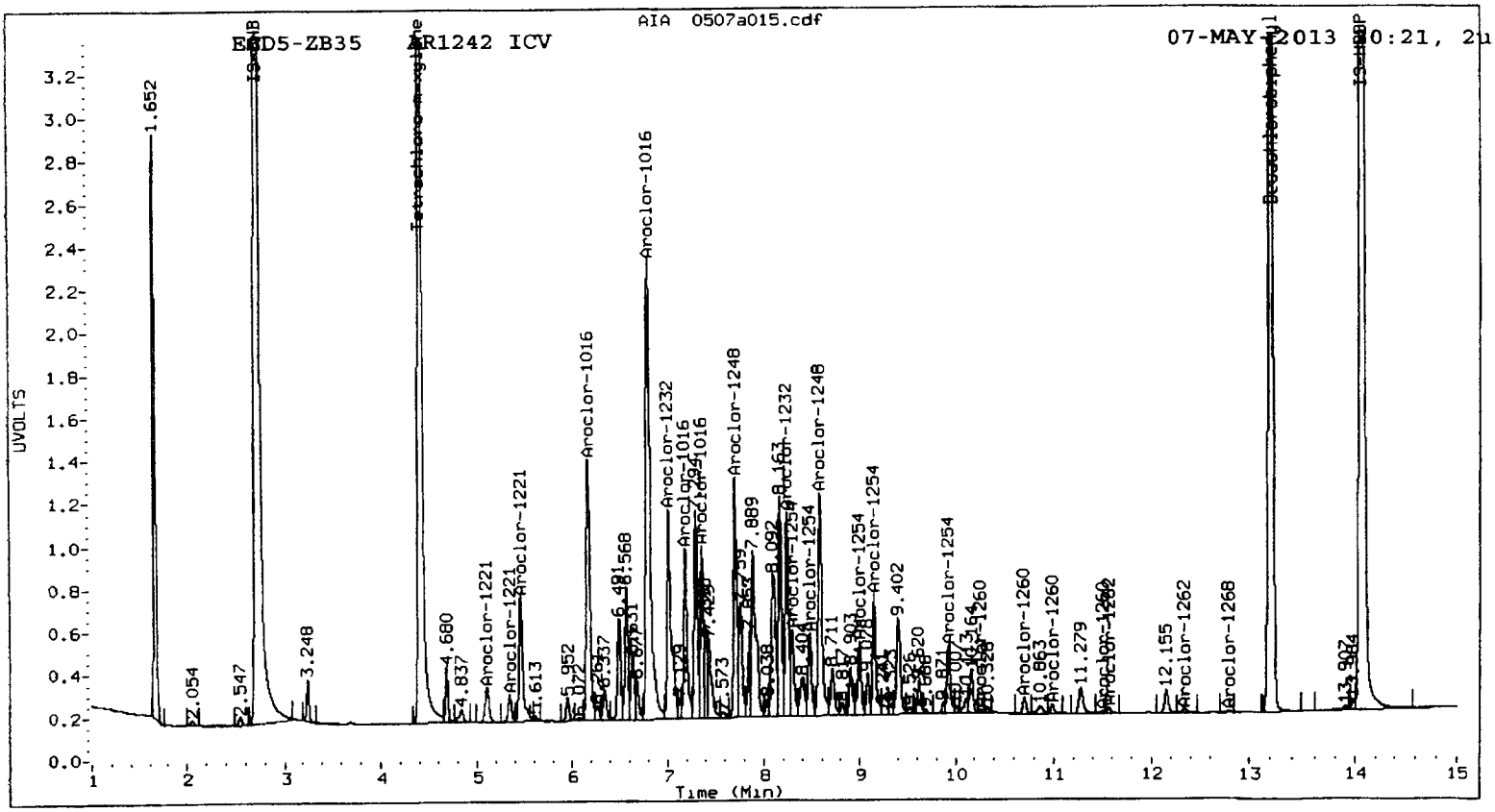
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl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UVOLTS
Time (Min)
Aroclor-1016
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Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a016.d
Data file 2: 20130507.b/ical-2.b/0507a016.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 07-MAY-2013 20:41
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	30900777	4.412	0.000	7953899	37.1	38.1	2.5	Tetrachloro-m-xylen
12.828	0.000	31048472	13.203	-0.002	5334093	34.3	33.8	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	92.9	95.2
Decachlorobiphenyl	85.7	84.6

JL 05/03/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53651835	9.5
Hexabromobiphenyl	50004151	60660565	21.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15441440	4.1
Hexabromobiphenyl	9345340	10952020	17.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.060	-0.001	2318537	95.9	1	6.163	-0.002	909531	103.2
Aroclor-1016	2	6.467	-0.002	9438131	126.7	2	6.800	-0.001	2390530	124.8
Aroclor-1016	3	6.619	0.002	3851669	115.4	3	7.186	0.000	515984	103.0
Aroclor-1016	4	6.729	0.001	2894284	116.1	4	7.358	0.000	1263898	270.9
Total Col1Ave (4 peaks):					113.5	Total Col2Ave (4 peaks):				150.5 RPD = 28
Corrected Ave (3 peaks):					109.1	Corrected Ave (3 peaks):				110.3 RPD = 1
Aroclor-1221	1	5.063	0.000	864224	39.5	1	---			0.0
Aroclor-1221	2	6.467	-0.001	9438131	1411.2	2	5.110	0.015	123396	46.6
Aroclor-1221	3	7.874	-0.004	12549915	1328.9	3	5.348	0.003	31614	21.9
Aroclor-1221	NS	---			----	4	5.462	0.001	185951	41.0
Total Col1Ave (3 peaks):					926.5	Total Col2Ave (3 peaks):				36.5 RPD = 185*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.060	-0.001	2318537	233.3	1	6.163	-0.002	909531	229.5
Aroclor-1232	2	6.467	-0.002	9438131	310.3	2	6.800	-0.001	2390530	302.2
Aroclor-1232	3	7.441	0.000	9852880	623.2	3	7.010	-0.001	586053	177.7
Aroclor-1232	4	7.874	0.000	12549915	691.0	4	8.238	-0.001	1898417	685.7
Total Col1Ave (4 peaks):					464.4	Total Col2Ave (4 peaks):				348.8 RPD = 28
Corrected Ave (3 peaks):					388.9	Corrected Ave (3 peaks):				236.4 RPD = 49*
Aroclor-1242	1	6.060	0.000	2318537	120.0	1	6.163	-0.004	909531	129.3
Aroclor-1242	2	6.467	-0.001	9438131	159.3	2	6.800	-0.003	2390530	154.7
Aroclor-1242	3	6.619	0.003	3851669	145.7	3	7.010	-0.001	586053	90.8
Aroclor-1242	4	7.874	0.001	12549915	384.3	4	8.238	-0.001	1898417	351.0
Total Col1Ave (4 peaks):					202.3	Total Col2Ave (4 peaks):				181.4 RPD = 11
Corrected Ave (3 peaks):					141.6	Corrected Ave (3 peaks):				124.9 RPD = 13
Aroclor-1248	1	6.467	0.000	9438131	250.0	1	6.800	0.000	2390530	247.1
Aroclor-1248	2	7.441	-0.001	9852880	232.0	2	7.705	-0.001	1901637	237.0
Aroclor-1248	3	7.874	-0.001	12549915	232.4	3	8.238	-0.001	1898417	228.5
Aroclor-1248	4	8.110	0.000	8659425	230.0	4	8.584	0.000	2478354	229.6
Total Col1Ave (4 peaks):					236.1	Total Col2Ave (4 peaks):				235.5 RPD = 0
Corrected Ave (3 peaks):					231.8	Corrected Ave (3 peaks):				231.7 RPD = 0
Aroclor-1254	1	8.190	-0.003	6700207	133.9	1	8.298	0.000	911407	121.7
Aroclor-1254	2	8.563	0.000	4108008	124.4	2	8.476	0.001	848875	91.8
Aroclor-1254	3	8.700	0.000	7416000	107.7	3	8.996	0.000	845277	119.3
Aroclor-1254	4	9.057	0.005	6343972	89.5	4	9.147	0.000	1366372	90.0
Aroclor-1254	5	9.362	0.000	724814	27.0	5	9.929	-0.006	923605	108.1
Total Col1Ave (5 peaks):					96.5	Total Col2Ave (5 peaks):				106.2 RPD = 10
Corrected Ave (4 peaks):					87.1	Corrected Ave (4 peaks):				102.3 RPD = 16
Aroclor-1260	1	9.965	-0.002	449508	9.0	1	10.261	0.001	42393	4.3
Aroclor-1260	2	10.283	0.000	290261	5.9	2	10.705	-0.004	108079	9.3
Aroclor-1260	3	10.658	-0.001	538597	4.6	3	10.986	0.001	81136	3.8
Aroclor-1260	4	11.058	0.000	190563	3.3	4	11.505	0.000	34540	5.9
Aroclor-1260	5	11.248	0.001	168155	5.5	NS	---			----
Total Col1Ave (5 peaks):					5.7	Total Col2Ave (4 peaks):				5.8 RPD = 3
Corrected Ave (4 peaks):					4.8	Corrected Ave (3 peaks):				4.7 RPD = 3
Aroclor-1262	1	10.283	0.000	290261	5.1	1	10.261	0.001	42393	2.8
Aroclor-1262	2	10.658	0.000	538597	4.0	2	10.705	-0.005	108079	7.8
Aroclor-1262	3	11.058	-0.002	190563	4.5	3	10.986	0.000	81136	3.1
Aroclor-1262	4	11.248	0.000	168155	2.8	4	11.567	0.000	56086	3.3
Aroclor-1262	5	11.919	0.001	152715	3.4	5	12.341	0.035	50555	6.2
Total Col1Ave (5 peaks):					4.0	Total Col2Ave (5 peaks):				4.6 RPD = 16
Corrected Ave (4 peaks):					3.7	Corrected Ave (4 peaks):				3.9 RPD = 5
Aroclor-1268	1	11.173	-0.002	164171	1.3	1	11.505	-0.001	34540	1.3

Aroclor-1268	2	11.248	0.002	168155	1.2	2	11.567	-0.006	56086	2.3
Aroclor-1268	3	11.641	0.008	89736	0.9	3	---			0.0
Aroclor-1268	4	12.419	-0.002	102180	0.3	4	12.793	0.001	11794	0.2

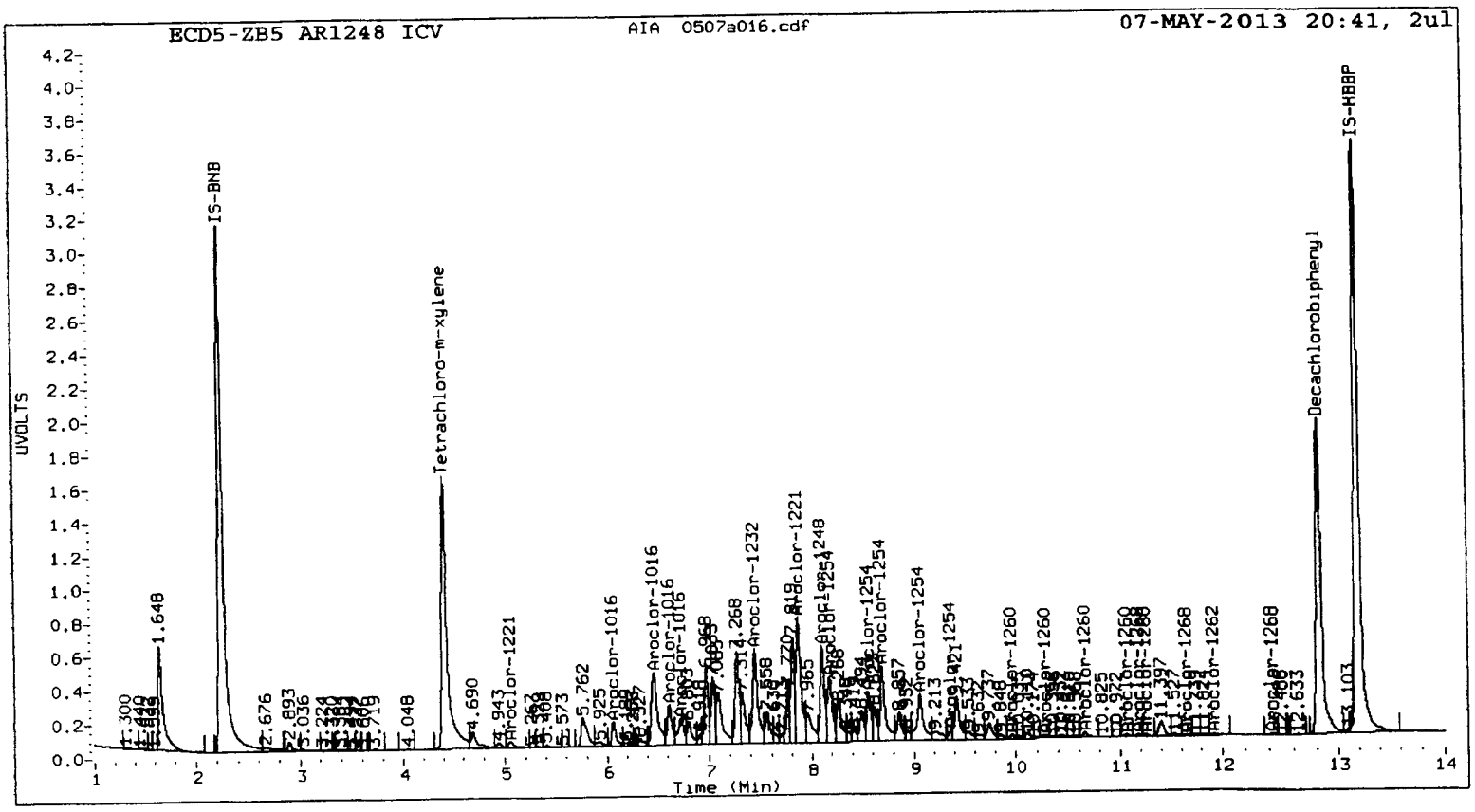
Total Col1Ave (4 peaks): 0.9 Total Col2Ave (3 peaks): 1.3 RPD = 31

Corrected Ave (3 peaks): 0.8 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (4.511 - 12.728) = 167287666 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 33824743 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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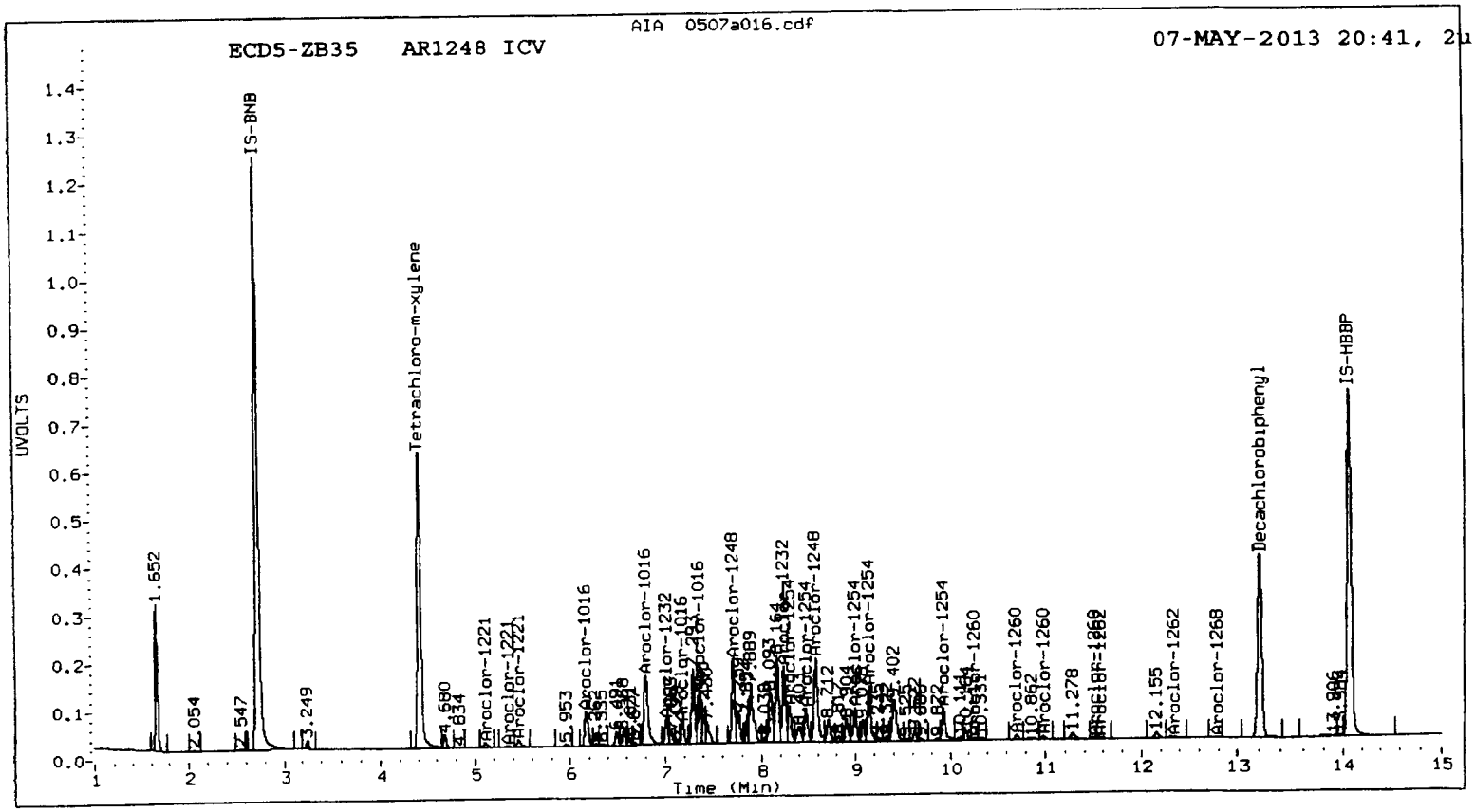
07-MAY-2013 20:41, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
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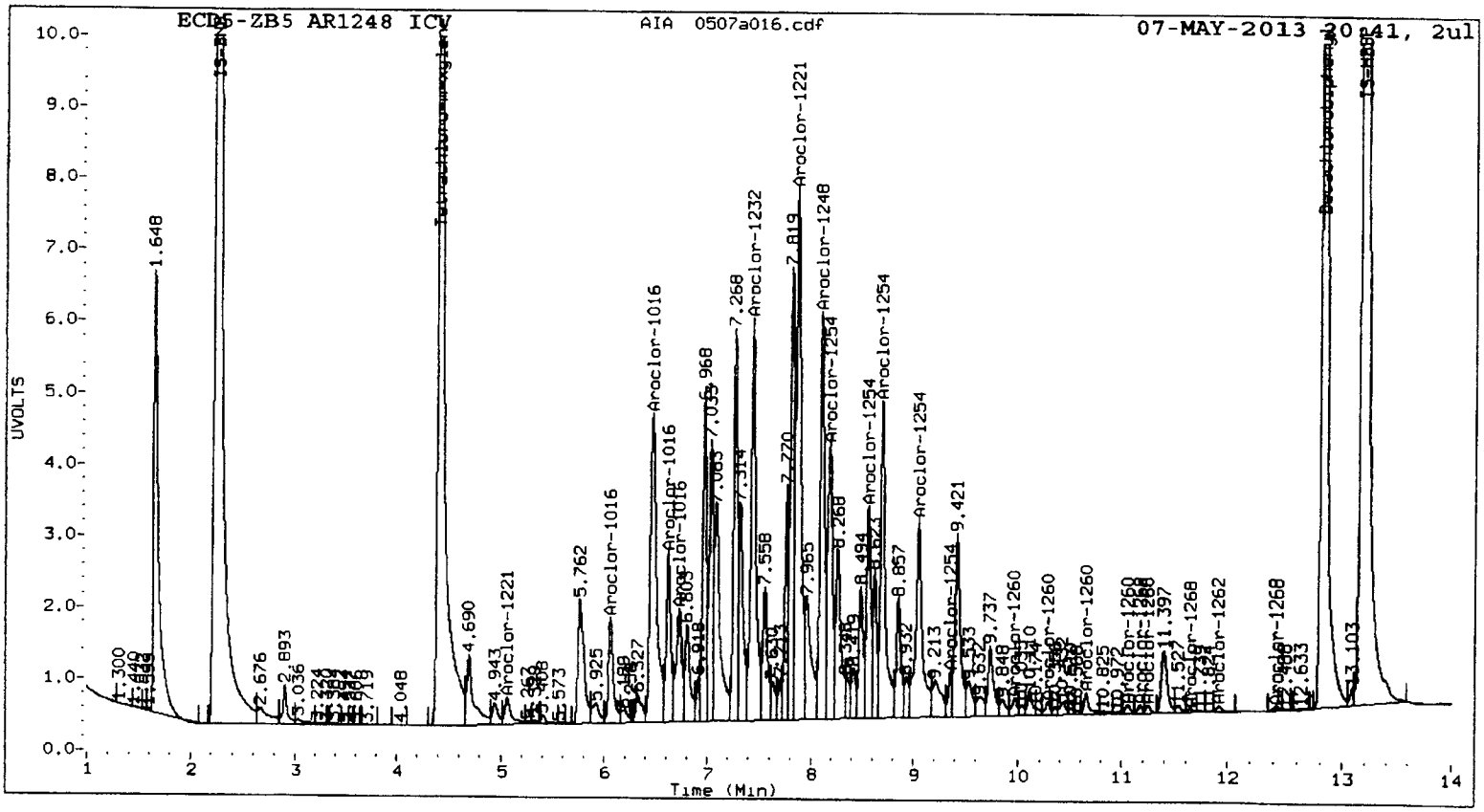
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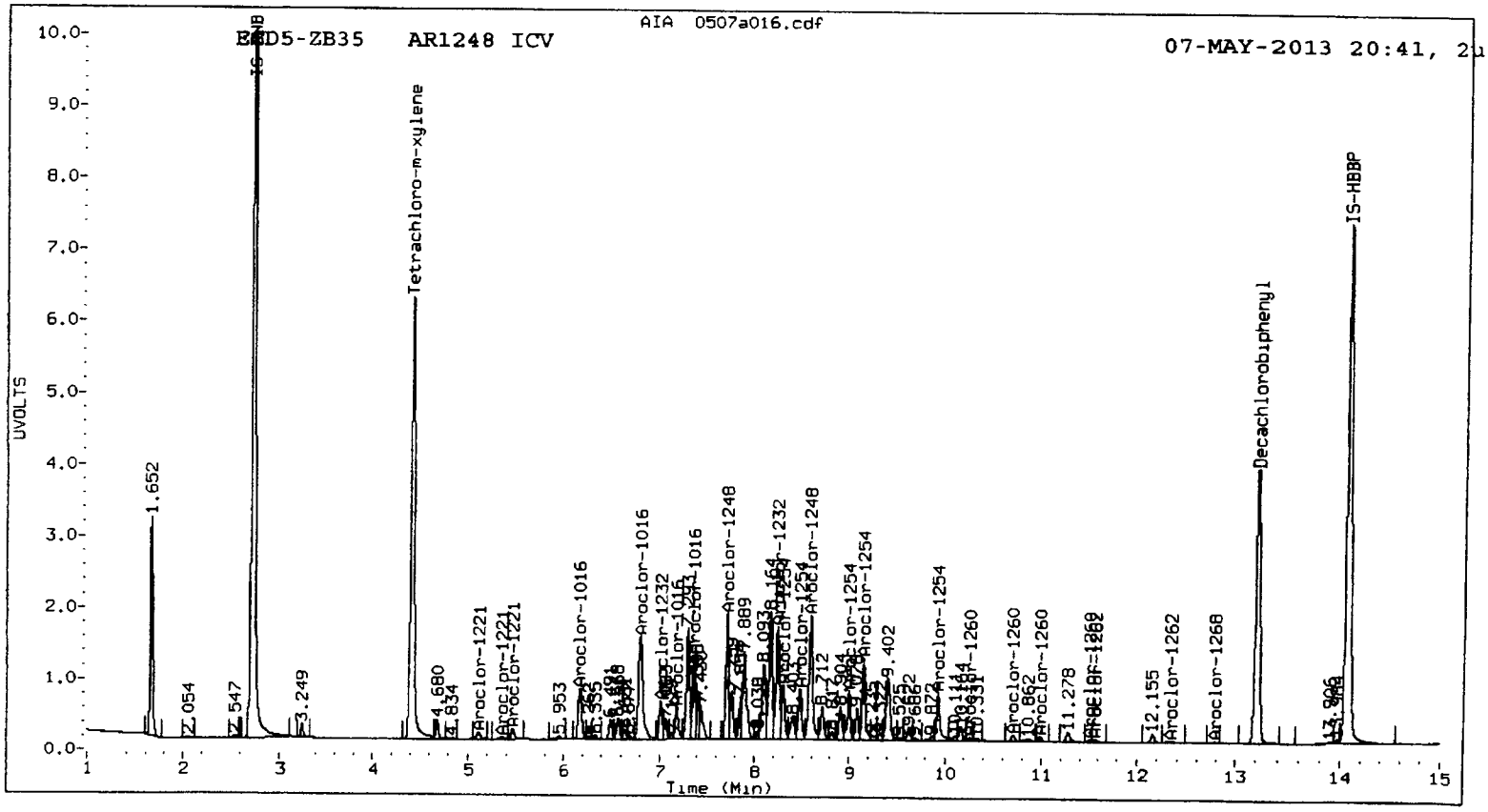
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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07-MAY-2013 20:41, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a017.d
Data file 2: 20130507.b/ical-2.b/0507a017.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 07-MAY-2013 21:01
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	31249884	4.411	0.000	8016298	37.6	38.6	2.7	Tetrachloro-m-xylen
12.828	0.000	30201361	13.205	-0.001	5162177	34.7	34.1	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	93.9	96.5
Decachlorobiphenyl	86.9	85.3

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53642771	9.5
Hexabromobiphenyl	50004151	58188446	16.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15360402	3.5
Hexabromobiphenyl	9345340	10510294	12.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.061	0.001	74537	3.1	1	6.163	-0.003	28483	3.2
Aroclor-1016	2	6.462	-0.007	337320	4.5	2	6.793	-0.007	84978	4.5
Aroclor-1016	3	6.623	0.006	206176	6.2	3	7.187	0.001	11814	2.4
Aroclor-1016	4	6.730	0.002	85227	3.4	4	7.357	-0.001	459146	98.9
Total Col1Ave (4 peaks):					4.3	Total Col2Ave (4 peaks):				27.3 RPD = 145*
Corrected Ave (3 peaks):					3.7	Corrected Ave (3 peaks):				3.4 RPD = 9
Aroclor-1221	1	5.059	-0.005	147002	6.7	1	---			0.0
Aroclor-1221	2	6.462	-0.007	337320	50.4	2	5.111	0.016	103036	39.1
Aroclor-1221	3	7.878	0.000	10714695	1134.7	3	---			0.0
Aroclor-1221	NS	---			----	4	5.465	0.004	27897	6.2
Total Col1Ave (3 peaks):					397.3	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.061	0.001	74537	7.5	1	6.163	-0.002	28483	7.2
Aroclor-1232	2	6.462	-0.008	337320	11.1	2	6.793	-0.008	84978	10.8
Aroclor-1232	3	7.442	0.001	1732024	109.6	3	7.010	-0.001	15916	4.9
Aroclor-1232	4	7.878	0.004	10714695	590.0	4	8.237	-0.001	361750	131.4
Total Col1Ave (4 peaks):					179.5	Total Col2Ave (4 peaks):				38.6 RPD = 129*
Corrected Ave (3 peaks):					42.7	Corrected Ave (3 peaks):				7.6 RPD = 139*
Aroclor-1242	1	6.061	0.002	74537	3.9	1	6.163	-0.004	28483	4.1
Aroclor-1242	2	6.462	-0.006	337320	5.7	2	6.793	-0.010	84978	5.5
Aroclor-1242	3	6.623	0.006	206176	7.8	3	7.010	-0.001	15916	2.5
Aroclor-1242	4	7.878	0.006	10714695	328.2	4	8.237	-0.002	361750	67.2
Total Col1Ave (4 peaks):					86.4	Total Col2Ave (4 peaks):				19.8 RPD = 125*
Corrected Ave (3 peaks):					5.8	Corrected Ave (3 peaks):				4.0 RPD = 36
Aroclor-1248	1	6.462	-0.005	337320	8.9	1	6.793	-0.007	84978	8.8
Aroclor-1248	2	7.442	0.000	1732024	40.8	2	7.705	-0.001	756815	94.8
Aroclor-1248	3	7.878	0.004	10714695	198.5	3	8.237	-0.001	361750	43.8
Aroclor-1248	4	8.113	0.003	3375422	89.7	4	8.569	-0.015	1382582	128.7
Total Col1Ave (4 peaks):					84.5	Total Col2Ave (4 peaks):				69.0 RPD = 20
Corrected Ave (3 peaks):					46.5	Corrected Ave (3 peaks):				49.1 RPD = 6
Aroclor-1254	1	8.192	0.000	14171059	283.3	1	8.299	0.001	2103454	282.4
Aroclor-1254	2	8.563	0.000	9711755	294.1	2	8.475	0.000	2629736	285.8
Aroclor-1254	3	8.700	0.000	19370984	281.4	3	8.996	0.000	2093024	297.0
Aroclor-1254	4	9.054	0.002	20541352	289.7	4	9.148	0.001	4267118	282.7
Aroclor-1254	5	9.362	0.000	7016935	261.7	5	9.933	-0.001	2526495	297.2
Total Col1Ave (5 peaks):					282.0	Total Col2Ave (5 peaks):				289.0 RPD = 2
Corrected Ave (4 peaks):					279.0	Corrected Ave (4 peaks):				287.0 RPD = 3
Aroclor-1260	1	9.964	-0.003	1762734	37.0	1	10.260	0.000	214372	22.5
Aroclor-1260	2	10.284	0.000	1461583	30.9	2	10.704	-0.005	1157323	103.6
Aroclor-1260	3	10.658	-0.001	2962044	26.1	3	10.985	0.000	606704	29.4
Aroclor-1260	4	11.057	0.000	2253674	40.8	4	11.506	0.001	77148	13.8
Aroclor-1260	5	11.247	0.000	227786	7.7	NS	---			----
Total Col1Ave (5 peaks):					28.5	Total Col2Ave (4 peaks):				42.3 RPD = 39
Corrected Ave (4 peaks):					25.4	Corrected Ave (3 peaks):				21.9 RPD = 15
Aroclor-1262	1	10.284	0.001	1461583	26.8	1	10.260	0.000	214372	14.7
Aroclor-1262	2	10.658	0.000	2962044	23.1	2	10.704	-0.006	1157323	87.1
Aroclor-1262	3	11.057	-0.002	2253674	55.6	3	10.985	0.000	606704	24.3
Aroclor-1262	4	11.247	0.000	227786	4.0	4	11.563	-0.004	395081	24.4
Aroclor-1262	5	11.918	0.000	149251	3.4	5	12.340	0.034	39786	5.1
Total Col1Ave (5 peaks):					22.6	Total Col2Ave (5 peaks):				31.1 RPD = 32
Corrected Ave (4 peaks):					14.3	Corrected Ave (4 peaks):				17.1 RPD = 18
Aroclor-1268	1	11.171	-0.004	198308	1.6	1	11.506	0.000	77148	3.0
Aroclor-1268	2	11.247	0.001	227786	1.7	2	11.563	-0.010	395081	16.5

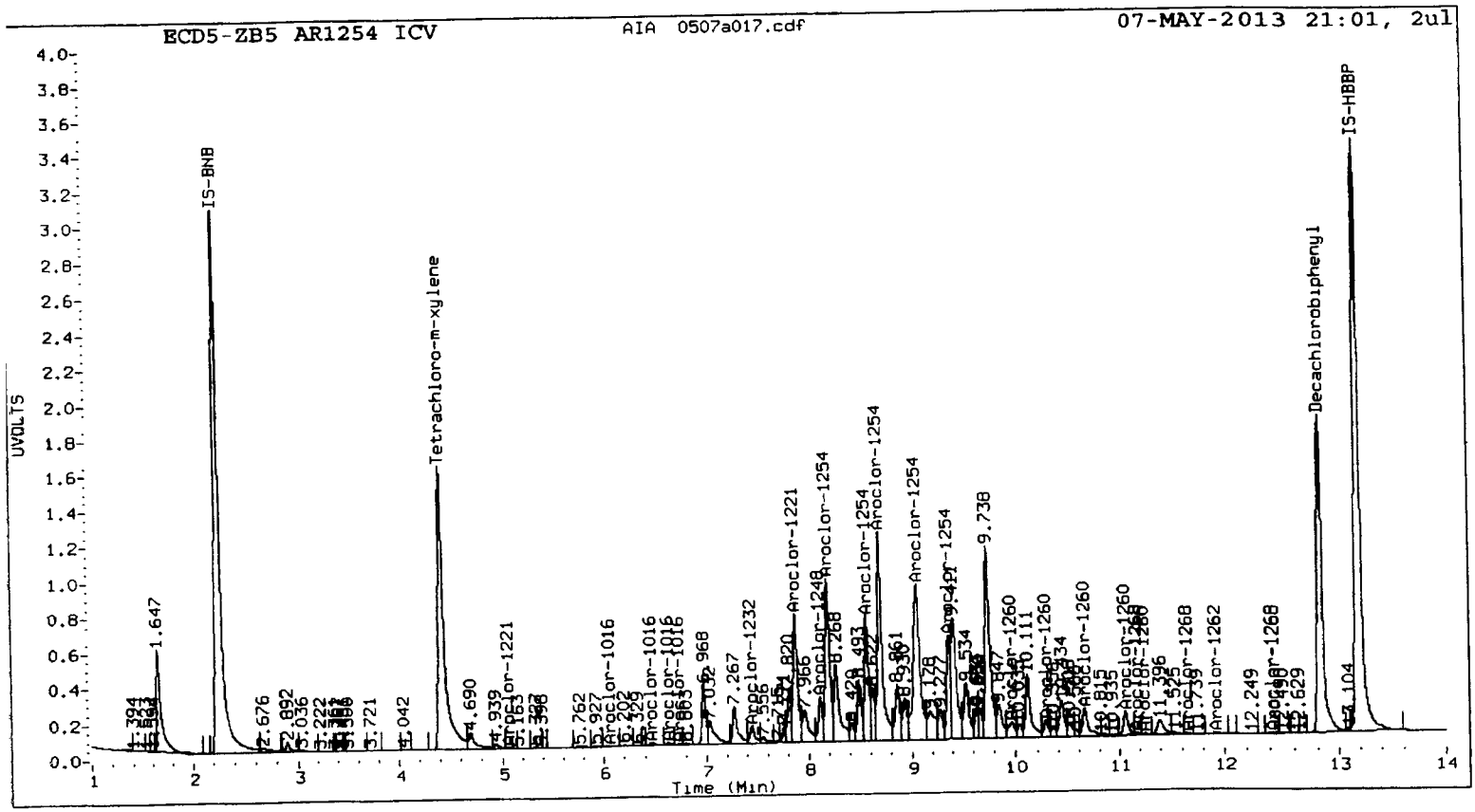
Aroclor-1268 3	11.643	0.011	109759	1.1	3	---	0.0
Aroclor-1268 4	12.420	-0.002	62105	0.2	4	---	0.0
Total Col1Ave (4 peaks):				1.2	Col2Ave: <3 Quant Peaks		

Total PCB Area Col1 (4.511 - 12.728) = 211898856 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 42309153 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 21:01, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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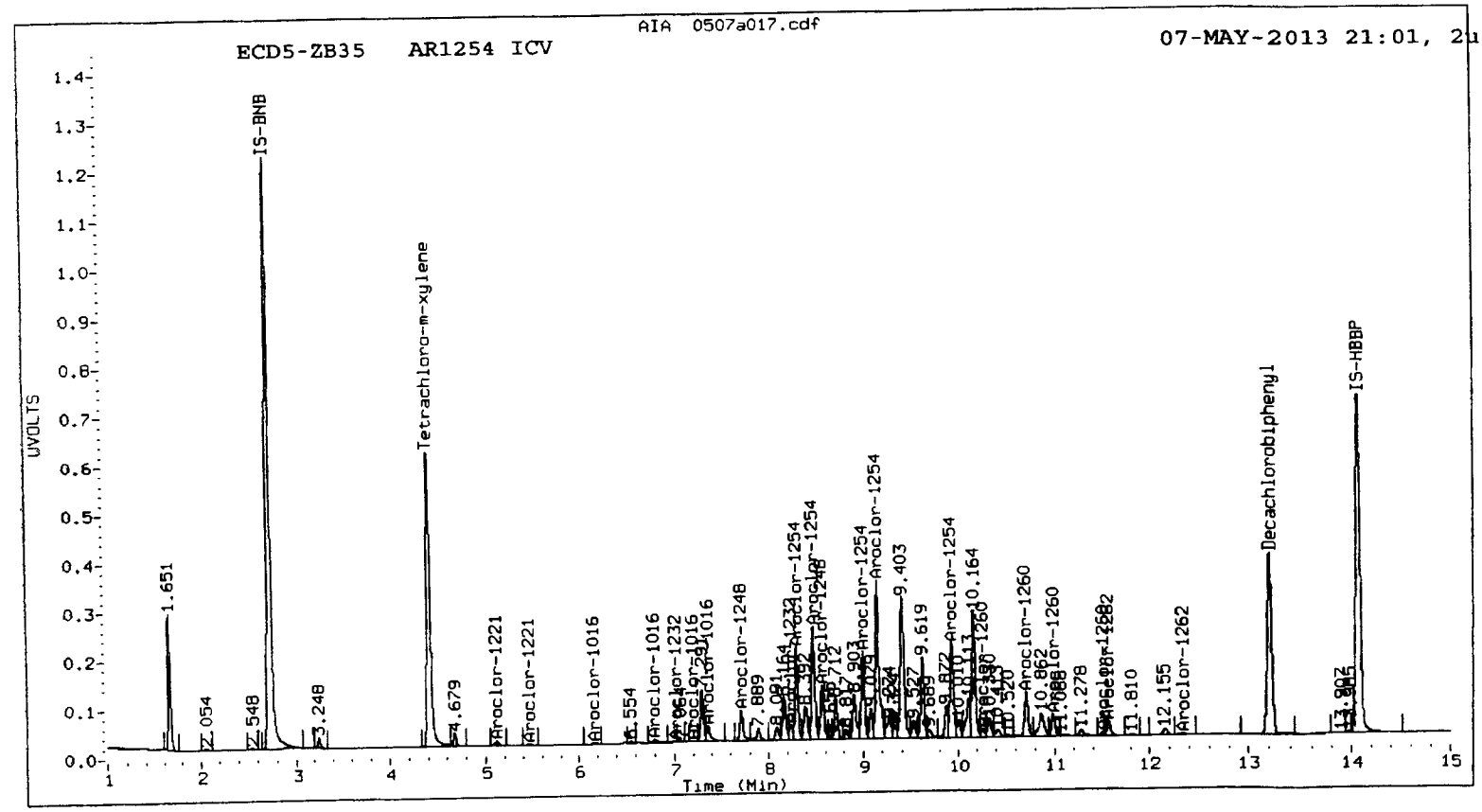
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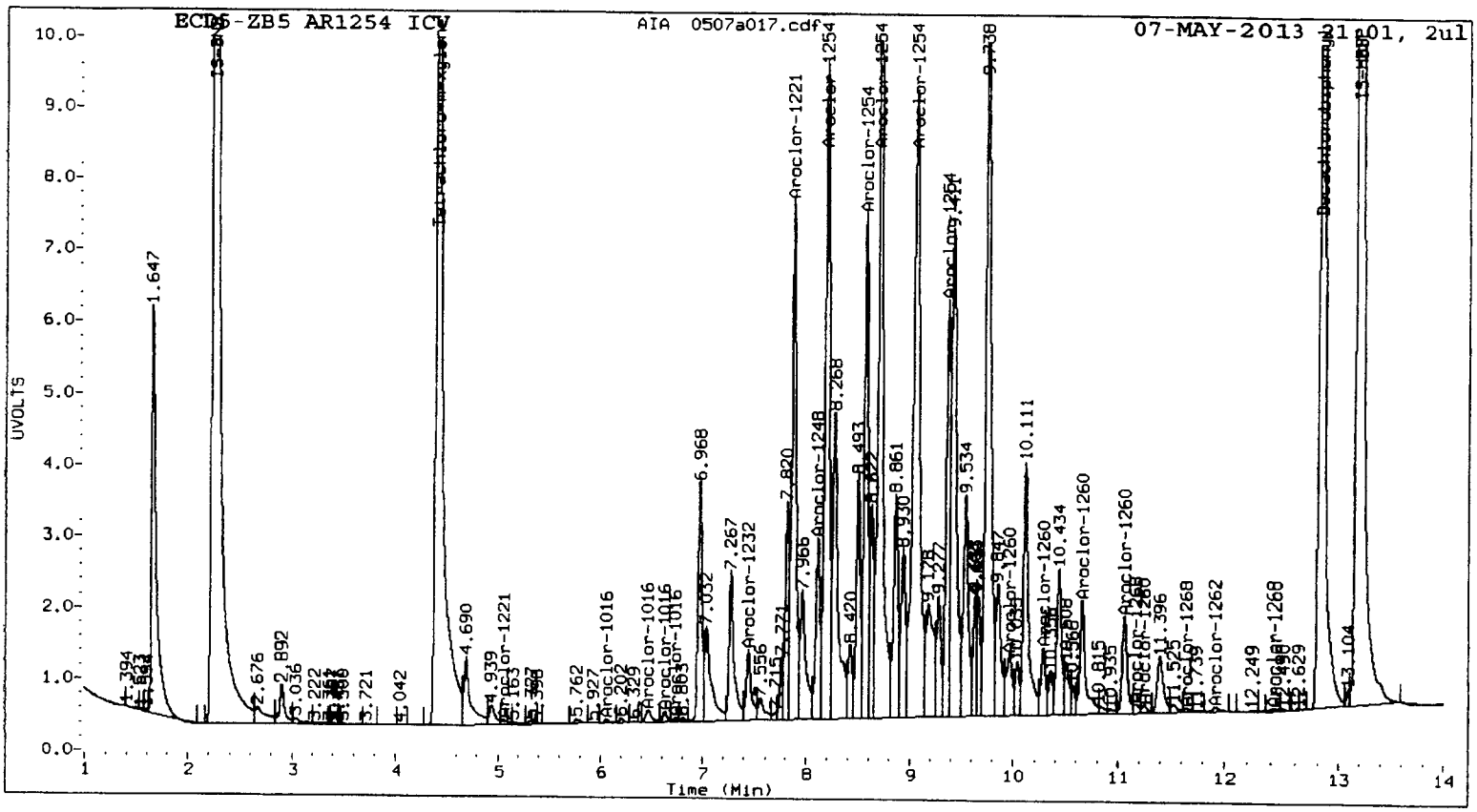
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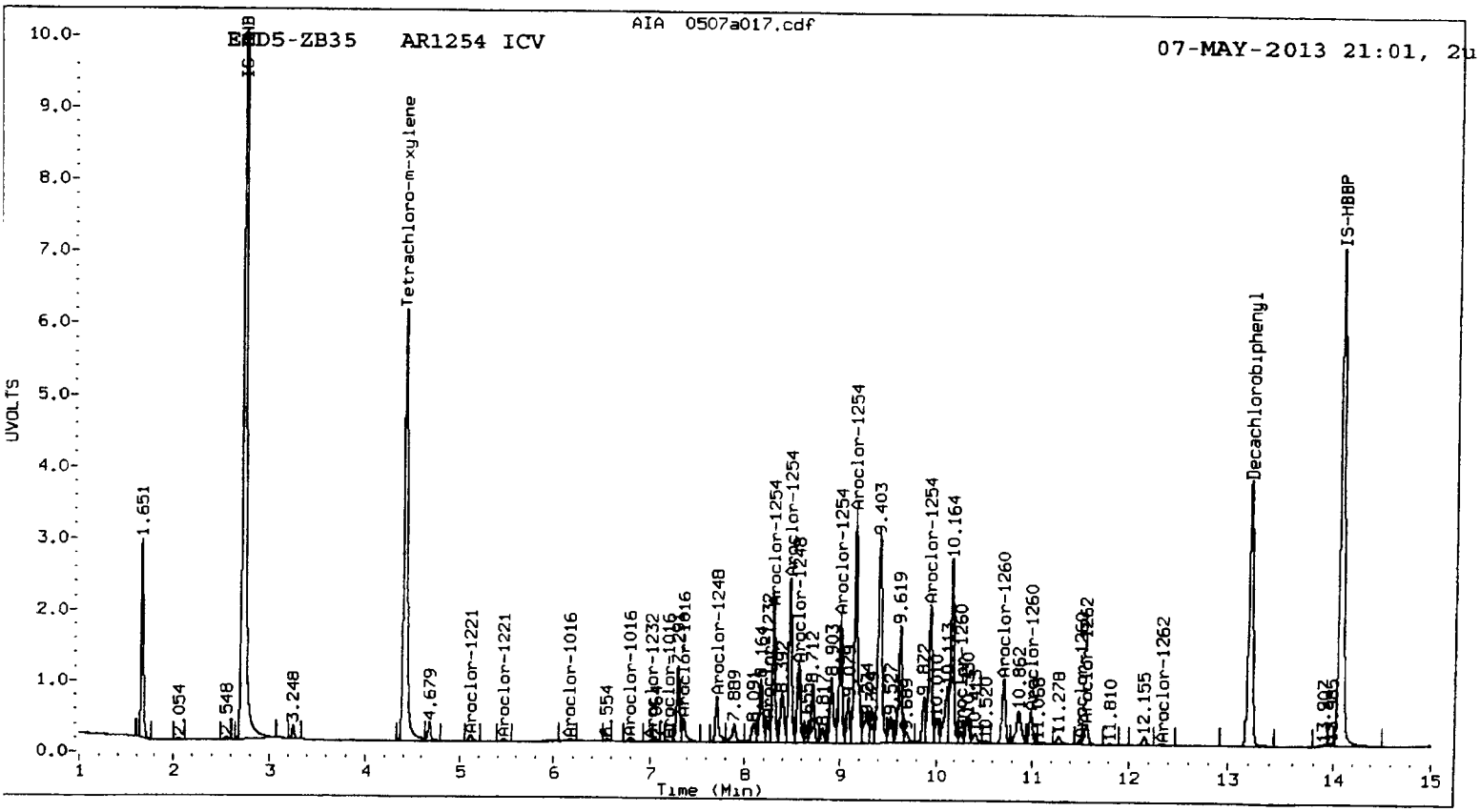
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1232
Aroclor-1016
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
Tetrachloro-m-xylene
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Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a018.d
Data file 2: 20130507.b/ical-2.b/0507a018.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 07-MAY-2013 21:21
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	31767638	4.411	0.000	8077710	37.7	38.5	2.1	Tetrachloro-m-xylen
12.827	-0.001	30552007	13.205	0.000	5210574	34.7	34.1	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.2	96.2
Decachlorobiphenyl	86.8	85.3

M 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54355833	11.0
Hexabromobiphenyl	50004151	58930522	17.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15522820	4.6
Hexabromobiphenyl	9345340	10608758	13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.060	0.000	5710646	233.1	1	6.166	0.000	2083969	235.3
Aroclor-1016	2	6.468	0.000	17399600	230.5	2	6.800	0.000	4481969	232.8
Aroclor-1016	3	6.618	0.001	7785800	230.3	3	7.185	0.000	1171797	232.7
Aroclor-1016	4	6.729	0.001	5827980	230.7	4	7.357	-0.001	1070181	228.2
	Total Col1Ave (4 peaks):				231.1		Total Col2Ave (4 peaks):			232.2 RPD = 0
	Corrected Ave (3 peaks):				230.5		Corrected Ave (3 peaks):			231.2 RPD = 0
Aroclor-1221	1	5.063	0.000	4136002	186.8	1	3.696	0.001	11910	7.5
Aroclor-1221	2	6.468	0.000	17399600	2568.0	2	5.100	0.006	292561	109.8
Aroclor-1221	3	7.878	0.000	5153861	538.7	3	5.347	0.002	209236	144.2
Aroclor-1221	NS	---			----	4	5.461	0.001	1022087	224.0
	Total Col1Ave (3 peaks):				1097.8		Total Col2Ave (4 peaks):			121.4 RPD = 160*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			87.2
Aroclor-1232	1	6.060	0.000	5710646	567.2	1	6.166	0.000	2083969	523.1
Aroclor-1232	2	6.468	-0.001	17399600	564.6	2	6.800	-0.001	4481969	563.6
Aroclor-1232	3	7.442	0.000	8239430	514.4	3	7.010	-0.001	1862855	561.7
Aroclor-1232	4	7.878	0.004	5153861	280.1	4	8.237	-0.002	198387	71.3
	Total Col1Ave (4 peaks):				481.6		Total Col2Ave (4 peaks):			429.9 RPD = 11
	Corrected Ave (3 peaks):				453.0		Corrected Ave (3 peaks):			385.4 RPD = 16
Aroclor-1242	1	6.060	0.001	5710646	291.7	1	6.166	-0.002	2083969	294.7
Aroclor-1242	2	6.468	0.000	17399600	289.8	2	6.800	-0.002	4481969	288.5
Aroclor-1242	3	6.618	0.001	7785800	290.6	3	7.010	-0.001	1862855	287.0
Aroclor-1242	4	7.878	0.006	5153861	155.8	4	8.237	-0.002	198387	36.5
	Total Col1Ave (4 peaks):				257.0		Total Col2Ave (4 peaks):			226.7 RPD = 13
	Corrected Ave (3 peaks):				245.4		Corrected Ave (3 peaks):			204.0 RPD = 18
Aroclor-1248	1	6.468	0.001	17399600	454.8	1	6.800	0.001	4481969	460.8
Aroclor-1248	2	7.442	0.000	8239430	191.5	2	7.705	-0.001	1494414	185.3
Aroclor-1248	3	7.878	0.004	5153861	94.2	3	8.237	-0.002	198387	23.8
Aroclor-1248	4	8.113	0.003	956546	25.1	4	8.584	0.000	77790	7.2
	Total Col1Ave (4 peaks):				191.4		Total Col2Ave (4 peaks):			169.2 RPD = 12
	Corrected Ave (3 peaks):				103.6		Corrected Ave (3 peaks):			72.1 RPD = 36
Aroclor-1254	1	8.194	0.002	5604593	110.6	1	8.299	0.000	888811	118.1
Aroclor-1254	2	8.563	0.000	760107	22.7	2	8.475	0.000	906791	97.5
Aroclor-1254	3	8.696	-0.004	2725232	39.1	3	8.997	0.001	149462	21.0
Aroclor-1254	4	9.029	-0.024	14910986	207.5	4	9.187	0.040	2306321	151.2
Aroclor-1254	5	9.361	-0.001	20865390	767.9	5	9.939	0.004	1000144	116.4
	Total Col1Ave (5 peaks):				229.6		Total Col2Ave (5 peaks):			100.8 RPD = 78*
	Corrected Ave (4 peaks):				95.0		Corrected Ave (4 peaks):			88.3 RPD = 7
Aroclor-1260	1	9.967	0.000	12336540	255.6	1	10.261	0.001	2515434	261.4
Aroclor-1260	2	10.283	-0.001	11792031	246.4	2	10.710	0.001	2780218	246.7
Aroclor-1260	3	10.659	-0.001	28793615	250.9	3	10.986	0.001	5491310	263.9
Aroclor-1260	4	11.059	0.001	13292663	237.8	4	11.506	0.001	1529990	271.2
Aroclor-1260	5	11.247	0.000	8346657	279.1	NS	---			----
	Total Col1Ave (5 peaks):				254.0		Total Col2Ave (4 peaks):			260.8 RPD = 3
	Corrected Ave (4 peaks):				247.7		Corrected Ave (3 peaks):			257.3 RPD = 4
Aroclor-1262	1	10.283	0.000	11792031	213.7	1	10.261	0.001	2515434	171.4
Aroclor-1262	2	10.659	0.000	28793615	222.1	2	10.710	0.000	2780218	207.2
Aroclor-1262	3	11.059	-0.001	13292663	323.7	3	10.986	0.001	5491310	218.2
Aroclor-1262	4	11.247	0.000	8346657	144.8	4	11.565	-0.002	3586824	219.3
Aroclor-1262	5	11.918	0.000	7146896	161.6	5	12.307	0.001	1281460	162.3
	Total Col1Ave (5 peaks):				213.2		Total Col2Ave (5 peaks):			195.7 RPD = 9
	Corrected Ave (4 peaks):				185.5		Corrected Ave (4 peaks):			189.8 RPD = 2
Aroclor-1268	1	11.174	-0.001	6512368	52.5	1	11.506	-0.001	1529990	59.7

Aroclor-1268	2	11.247	0.001	8346657	60.9	2	11.565	-0.008	3586824	148.6
Aroclor-1268	3	11.648	0.015	3204605	31.5	3	11.967	-0.002	50714	2.7
Aroclor-1268	4	12.420	-0.001	1403153	4.9	4	12.792	0.000	228513	4.6

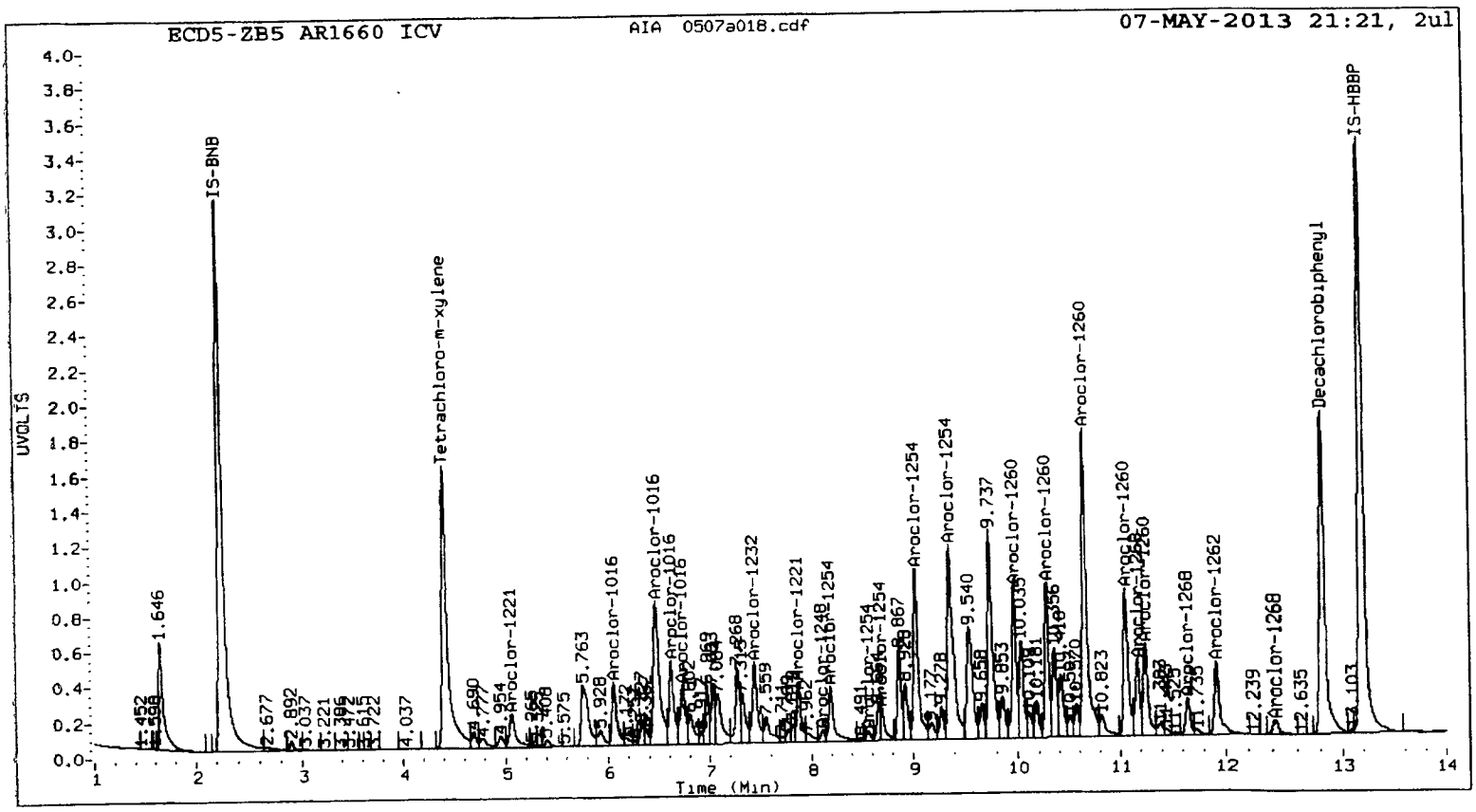
Total Col1Ave (4 peaks): 37.4 Total Col2Ave (4 peaks): 53.9 RPD = 36

Corrected Ave (3 peaks): 29.6 Corrected Ave (3 peaks): 22.3 RPD = 28

Total PCB Area Col1 (4.511 - 12.728) = 339033302 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 67437339 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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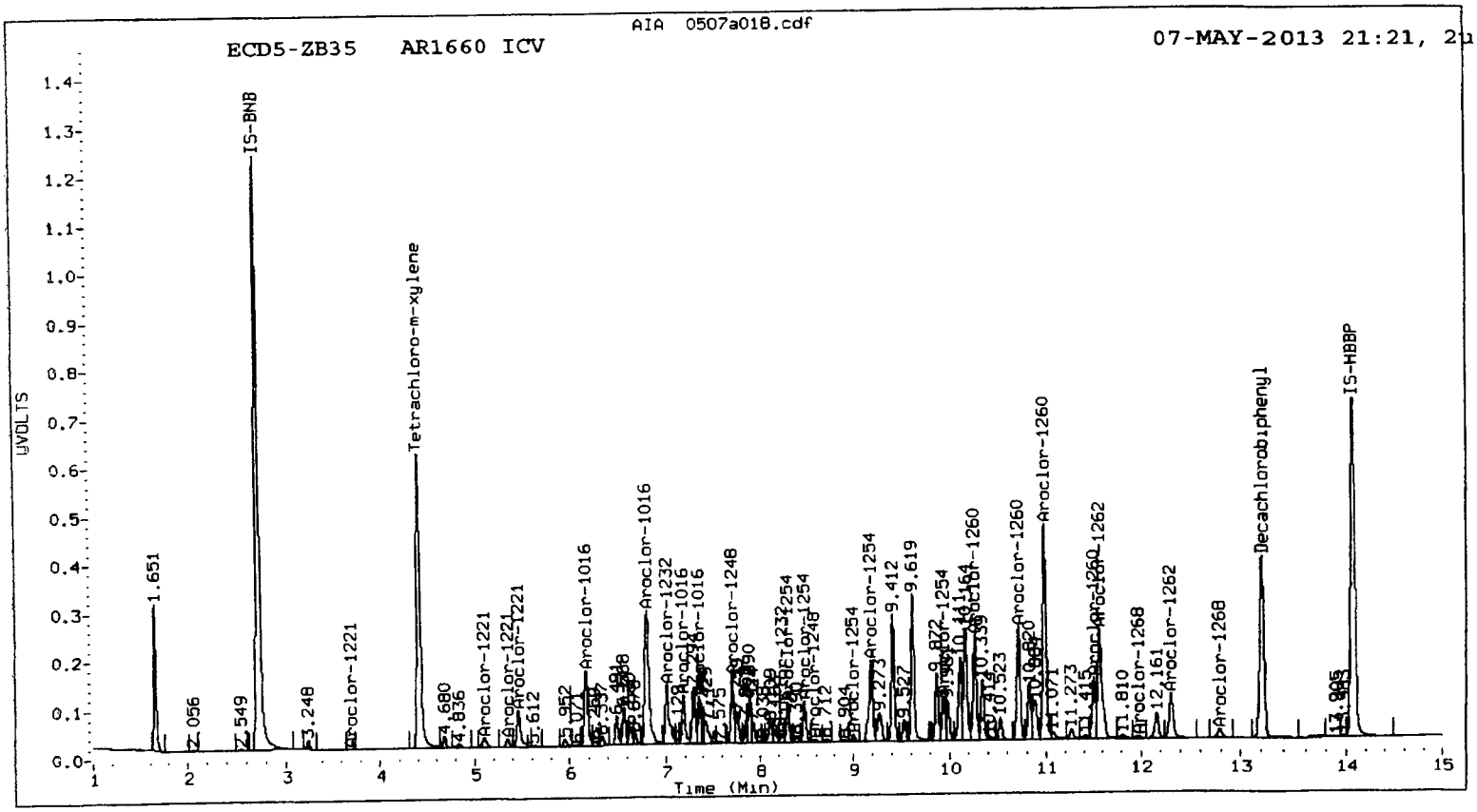
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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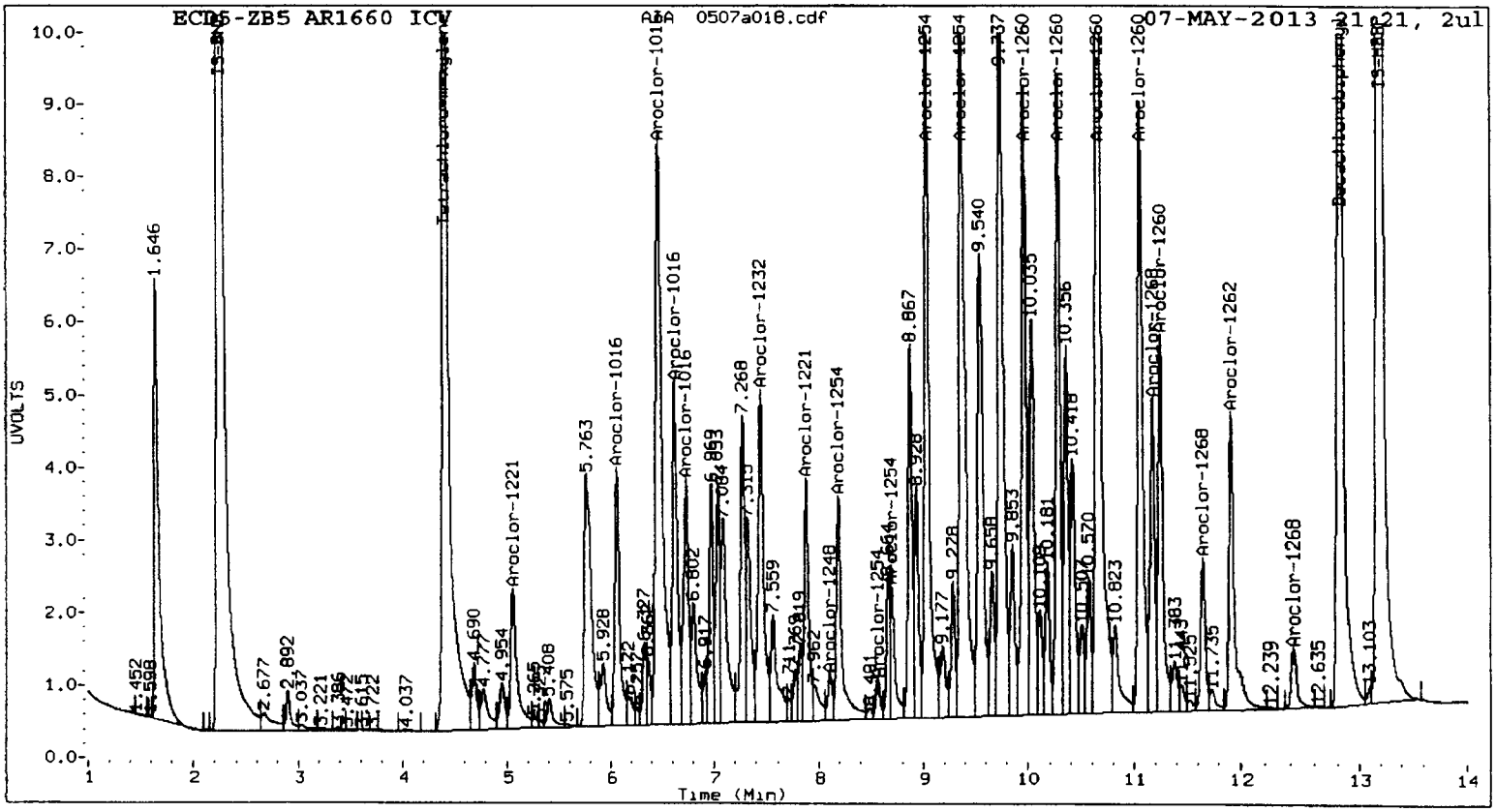
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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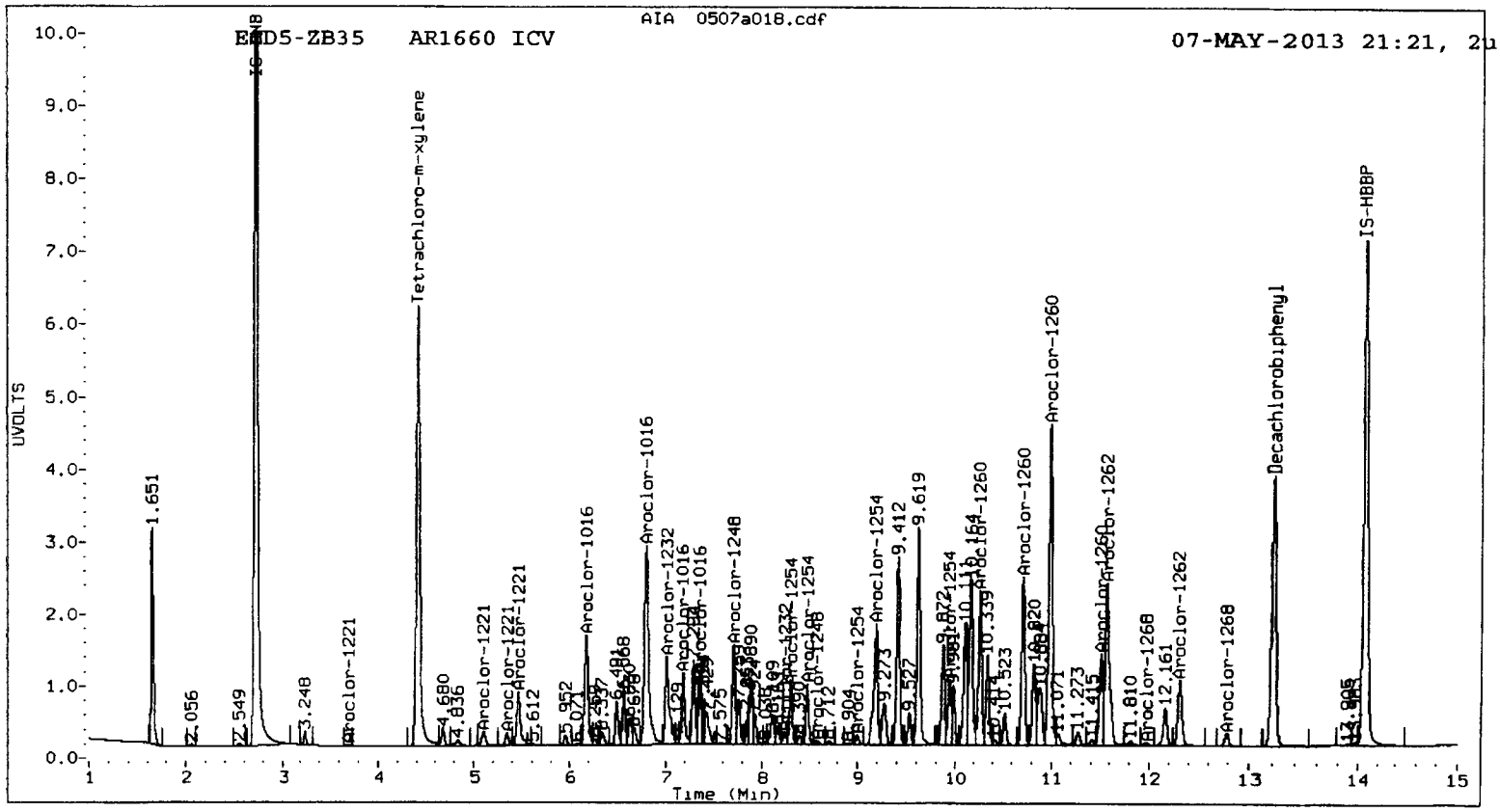
07-MAY-2013 21:21, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 21:21, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a019.d
Data file 2: 20130507.b/ical-2.b/0507a019.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 07-MAY-2013 21:42
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	32723514	4.412	0.000	8175501	38.5	39.3	2.2	Tetrachloro-m-xylen
12.828	0.000	30887403	13.205	0.000	5217278	35.3	34.6	1.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

05/08/13

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.1	98.3
Decachlorobiphenyl	88.3	86.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54884040	12.1
Hexabromobiphenyl	50004151	58566252	17.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15378234	3.6
Hexabromobiphenyl	9345340	10470042	12.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.060	-0.001	613149	24.8	1	6.177	0.011	386723	44.1
Aroclor-1016	2	6.470	0.001	1448260	19.0	2	6.803	0.002	348544	18.3
Aroclor-1016	3	6.617	0.000	702982	20.6	3	7.186	0.001	92186	18.5
Aroclor-1016	4	6.729	0.001	468102	18.3	4	7.357	-0.001	67755	14.6
	Total Col1Ave (4 peaks):				20.7	Total Col2Ave (4 peaks):				23.9 RPD = 14
	Corrected Ave (3 peaks):				19.3	Corrected Ave (3 peaks):				17.1 RPD = 12
Aroclor-1221	1	5.064	0.000	5852175	261.7	1	3.696	0.002	409204	259.6
Aroclor-1221	2	6.470	0.002	1448260	211.7	2	5.095	0.001	683679	259.1
Aroclor-1221	3	7.878	0.000	2211598	228.9	3	5.346	0.001	375497	261.3
Aroclor-1221	NS	---			----	4	5.461	0.001	1172244	259.3
	Total Col1Ave (3 peaks):				234.1	Total Col2Ave (4 peaks):				259.8 RPD = 10
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				259.3
Aroclor-1232	1	6.060	-0.001	613149	60.3	1	6.177	0.011	386723	98.0
Aroclor-1232	2	6.470	0.001	1448260	46.5	2	6.803	0.002	348544	44.2
Aroclor-1232	3	7.441	0.000	391114	24.2	3	7.011	0.000	157577	48.0
Aroclor-1232	4	7.878	0.004	2211598	119.0	4	8.239	0.001	57476	20.8
	Total Col1Ave (4 peaks):				62.5	Total Col2Ave (4 peaks):				52.8 RPD = 17
	Corrected Ave (3 peaks):				43.7	Corrected Ave (3 peaks):				37.7 RPD = 15
Aroclor-1242	1	6.060	0.000	613149	31.0	1	6.177	0.009	386723	55.2
Aroclor-1242	2	6.470	0.002	1448260	23.9	2	6.803	0.000	348544	22.6
Aroclor-1242	3	6.617	0.000	702982	26.0	3	7.011	0.000	157577	24.5
Aroclor-1242	4	7.878	0.005	2211598	66.2	4	8.239	0.000	57476	10.7
	Total Col1Ave (4 peaks):				36.8	Total Col2Ave (4 peaks):				28.3 RPD = 26
	Corrected Ave (3 peaks):				27.0	Corrected Ave (3 peaks):				19.3 RPD = 33
Aroclor-1248	1	6.470	0.003	1448260	37.5	1	6.803	0.003	348544	36.2
Aroclor-1248	2	7.441	-0.001	391114	9.0	2	7.705	-0.001	87992	11.0
Aroclor-1248	3	7.878	0.004	2211598	40.0	3	8.239	0.000	57476	6.9
Aroclor-1248	4	8.113	0.003	478072	12.4	4	8.578	-0.005	115261	10.7
	Total Col1Ave (4 peaks):				24.7	Total Col2Ave (4 peaks):				16.2 RPD = 42*
	Corrected Ave (3 peaks):				19.6	Corrected Ave (3 peaks):				9.6 RPD = 69*
Aroclor-1254	1	8.194	0.002	2387711	46.6	1	8.299	0.000	421166	56.5
Aroclor-1254	2	8.563	0.000	484981	14.4	2	8.475	0.000	484426	52.6
Aroclor-1254	3	8.663	-0.037	3505604	49.8	3	8.997	0.000	101058	14.3
Aroclor-1254	4	9.029	-0.024	12603810	173.7	4	9.186	0.040	2047860	135.5
Aroclor-1254	5	9.361	-0.001	15873155	578.6	5	9.939	0.004	484038	56.9
	Total Col1Ave (5 peaks):				172.6	Total Col2Ave (5 peaks):				63.2 RPD = 93*
	Corrected Ave (4 peaks):				71.1	Corrected Ave (4 peaks):				45.1 RPD = 45*
Aroclor-1260	1	9.967	0.000	17243313	359.5	1	10.261	0.001	3588073	377.8
Aroclor-1260	2	10.282	-0.001	14266396	299.9	2	10.711	0.002	3379274	303.8
Aroclor-1260	3	10.659	0.000	31833903	279.1	3	10.986	0.001	6071825	295.6
Aroclor-1260	4	11.059	0.002	10098810	181.8	4	11.507	0.002	2715788	487.8
Aroclor-1260	5	11.248	0.001	14639139	492.6	NS	---			----
	Total Col1Ave (5 peaks):				322.6	Total Col2Ave (4 peaks):				366.3 RPD = 13
	Corrected Ave (4 peaks):				280.1	Corrected Ave (3 peaks):				325.7 RPD = 15
Aroclor-1262	1	10.282	0.000	14266396	260.2	1	10.261	0.001	3588073	247.8
Aroclor-1262	2	10.659	0.000	31833903	247.1	2	10.711	0.001	3379274	255.2
Aroclor-1262	3	11.059	0.000	10098810	247.5	3	10.986	0.001	6071825	244.5
Aroclor-1262	4	11.248	0.000	14639139	255.6	4	11.569	0.002	4096791	253.8
Aroclor-1262	5	11.917	-0.001	11001330	250.3	5	12.308	0.002	1957515	251.1
	Total Col1Ave (5 peaks):				252.1	Total Col2Ave (5 peaks):				250.5 RPD = 1
	Corrected Ave (4 peaks):				250.1	Corrected Ave (4 peaks):				249.3 RPD = 0
Aroclor-1268	1	11.173	-0.002	12852069	104.3	1	11.507	0.000	2715788	107.5

Aroclor-1268 2	11.248	0.002	14639139	107.4	2	11.569	-0.004	4096791	172.0
Aroclor-1268 3	11.648	0.016	5026777	49.7	3	11.970	0.001	170870	9.1
Aroclor-1268 4	12.421	0.000	3714076	13.0	4	12.792	0.000	626393	12.8

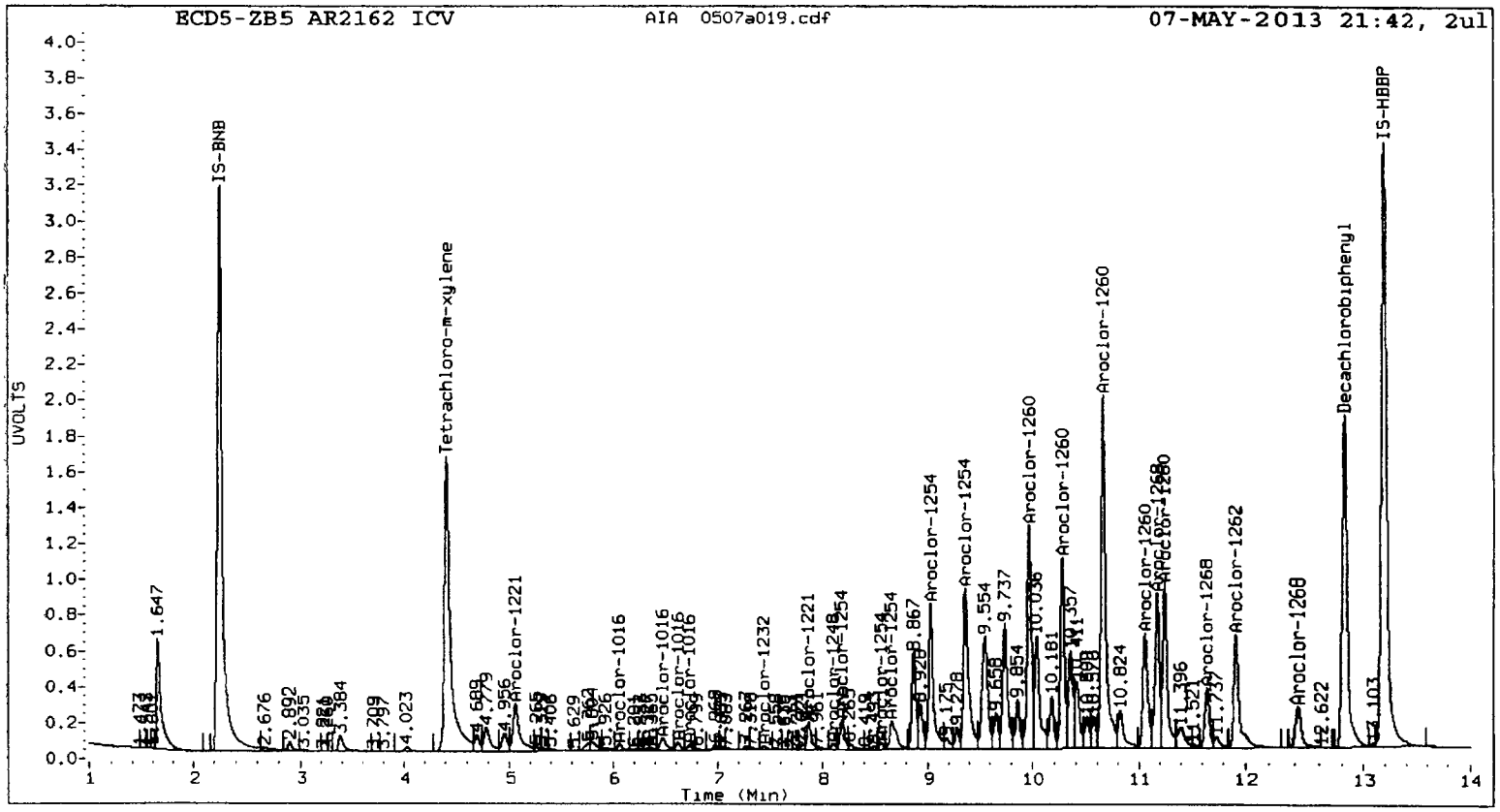
Total Col1Ave (4 peaks): 68.6 Total Col2Ave (4 peaks): 75.3 RPD = 9

Corrected Ave (3 peaks): 55.7 Corrected Ave (3 peaks): 43.1 RPD = 25

Total PCB Area Col1 (4.511 - 12.728) = 265426514 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 50390342 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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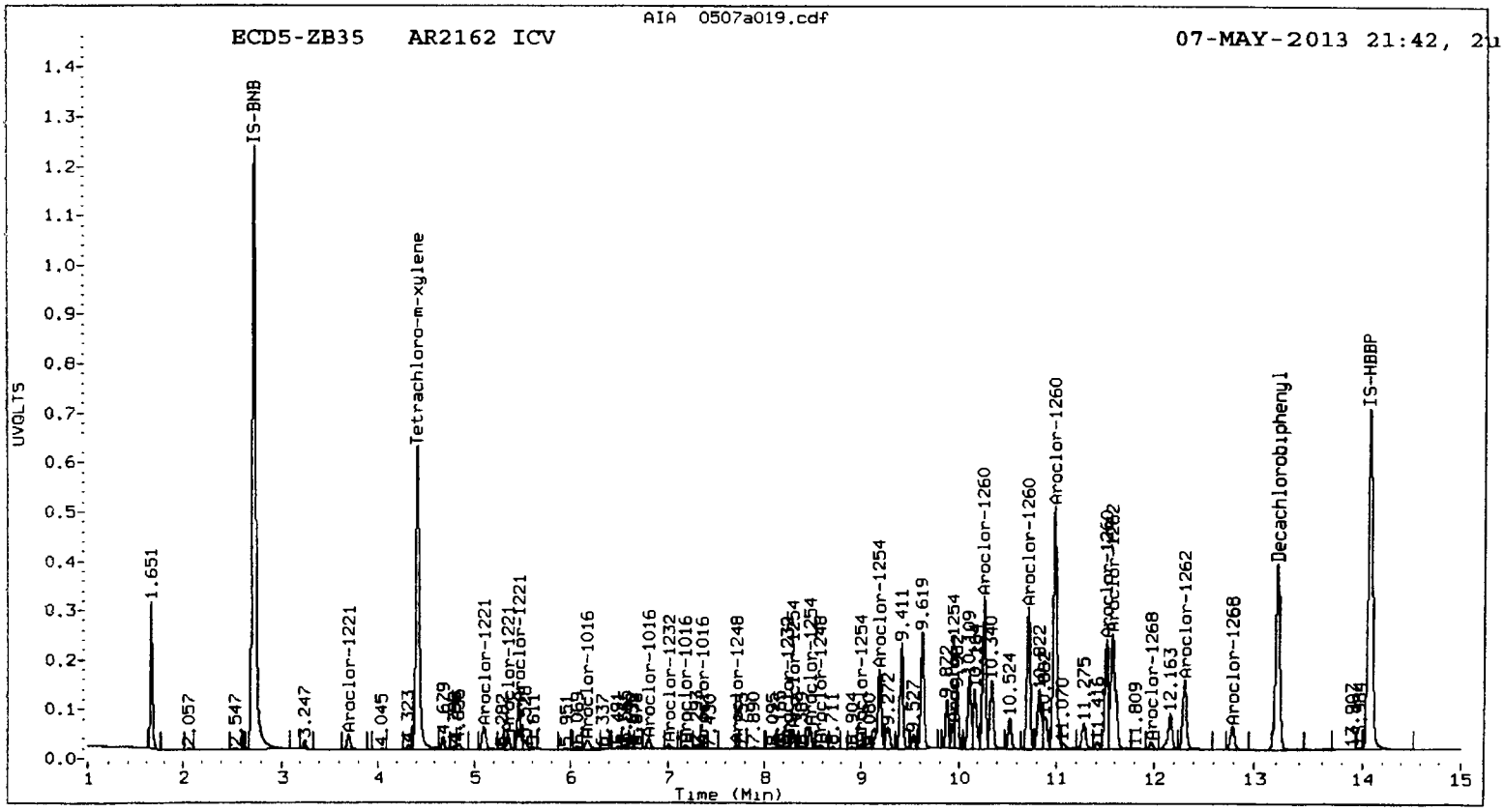
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
IS-BNB
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Aroclor-1232
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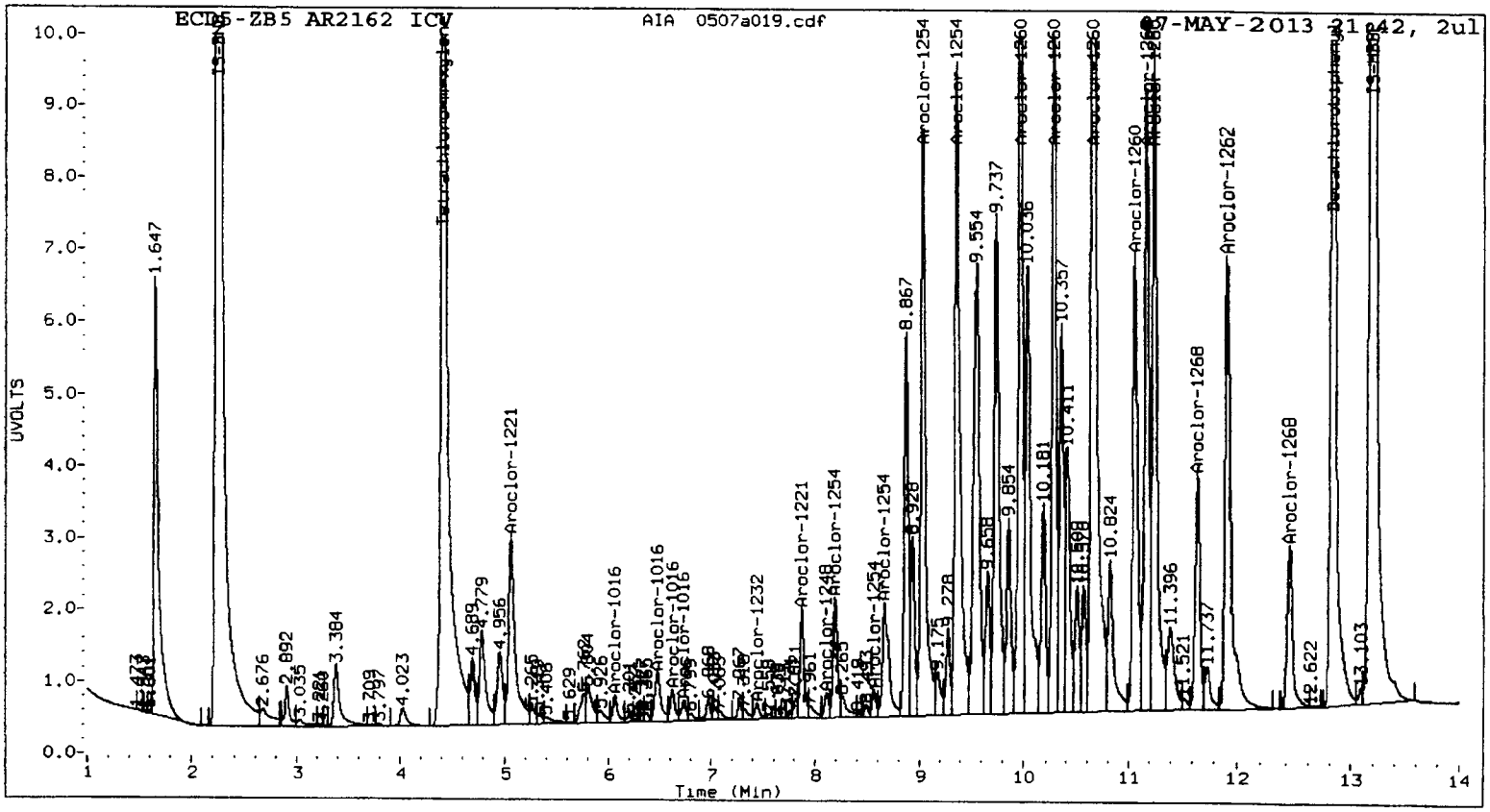
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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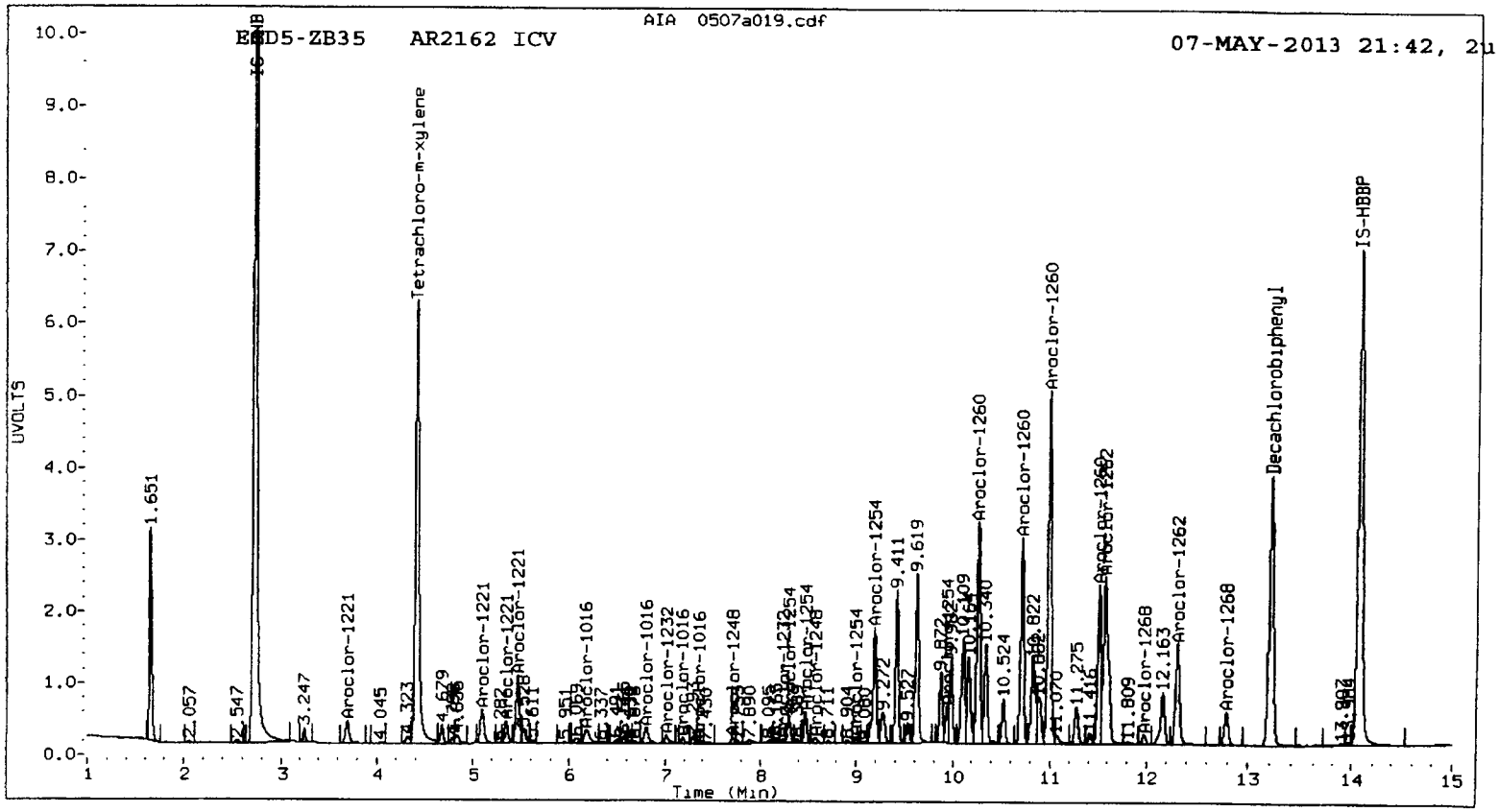
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a020.d
Data file 2: 20130507.b/ical-2.b/0507a020.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 07-MAY-2013 22:02
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	32178954	4.411	-0.001	8089911	37.9	39.1	3.0	Tetrachloro-m-xylen
12.827	-0.001	41292857	13.204	-0.001	6993423	45.8	45.1	1.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.8	97.7
Decachlorobiphenyl	114.6	112.8

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54747539	11.8
Hexabromobiphenyl	50004151	60316622	20.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15307215	3.2
Hexabromobiphenyl	9345340	10773388	15.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount	
Aroclor-1016	1	6.060	-0.001	2754975	111.6	1	6.165	-0.001	1064635	121.9	
Aroclor-1016	2	6.468	0.000	8293080	109.1	2	6.801	0.001	2096355	110.4	
Aroclor-1016	3	6.617	0.000	3727765	109.5	3	7.186	0.000	553151	111.4	
Aroclor-1016	4	6.729	0.001	2773984	109.0	4	7.357	-0.001	453332	98.0	
Total Col1Ave (4 peaks):					109.8	Total Col2Ave (4 peaks):				110.4	RPD = 1
Corrected Ave (3 peaks):					109.2	Corrected Ave (3 peaks):				106.6	RPD = 2
Aroclor-1221	1	5.063	0.000	4449445	199.5	1	3.695	0.001	235147	149.8	
Aroclor-1221	2	6.468	0.000	8293080	1215.2	2	5.097	0.002	434232	165.3	
Aroclor-1221	3	7.874	-0.004	4148169	430.4	3	5.346	0.001	253609	177.3	
Aroclor-1221	NS	---			----	4	5.461	0.000	945969	210.2	
Total Col1Ave (3 peaks):					615.0	Total Col2Ave (4 peaks):				175.7	RPD = 111*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				164.2	
Aroclor-1232	1	6.060	-0.001	2754975	271.7	1	6.165	0.000	1064635	271.0	
Aroclor-1232	2	6.468	-0.001	8293080	267.2	2	6.801	0.000	2096355	267.3	
Aroclor-1232	3	7.441	0.000	3759089	233.0	3	7.010	-0.001	874326	267.4	
Aroclor-1232	4	7.874	0.000	4148169	223.8	4	8.239	0.000	645903	235.3	
Total Col1Ave (4 peaks):					248.9	Total Col2Ave (4 peaks):				260.3	RPD = 4
Corrected Ave (3 peaks):					241.3	Corrected Ave (3 peaks):				256.7	RPD = 6
Aroclor-1242	1	6.060	0.000	2754975	139.7	1	6.165	-0.002	1064635	152.7	
Aroclor-1242	2	6.468	0.000	8293080	137.1	2	6.801	-0.001	2096355	136.8	
Aroclor-1242	3	6.617	0.001	3727765	138.1	3	7.010	-0.001	874326	136.6	
Aroclor-1242	4	7.874	0.001	4148169	124.5	4	8.239	0.000	645903	120.5	
Total Col1Ave (4 peaks):					134.9	Total Col2Ave (4 peaks):				136.6	RPD = 1
Corrected Ave (3 peaks):					133.3	Corrected Ave (3 peaks):				131.3	RPD = 1
Aroclor-1248	1	6.468	0.002	8293080	215.2	1	6.801	0.002	2096355	218.6	
Aroclor-1248	2	7.441	-0.001	3759089	86.7	2	7.705	-0.002	686789	86.3	
Aroclor-1248	3	7.874	0.000	4148169	75.3	3	8.239	0.000	645903	78.4	
Aroclor-1248	4	8.111	0.001	3087951	80.4	4	8.585	0.002	769968	71.9	
Total Col1Ave (4 peaks):					114.4	Total Col2Ave (4 peaks):				113.8	RPD = 1
Corrected Ave (3 peaks):					80.8	Corrected Ave (3 peaks):				78.9	RPD = 2
Aroclor-1254	1	8.189	-0.003	1593730	31.2	1	8.297	-0.002	213975	28.8	
Aroclor-1254	2	8.564	0.000	750392	22.3	2	8.476	0.001	185955	20.3	
Aroclor-1254	3	8.700	0.001	1491908	21.2	3	8.996	0.000	159149	22.7	
Aroclor-1254	4	9.035	-0.018	1725047	23.8	4	9.148	0.001	236498	15.7	
Aroclor-1254	5	9.362	0.000	1079040	39.4	5	9.932	-0.003	135485	16.0	
Total Col1Ave (5 peaks):					27.6	Total Col2Ave (5 peaks):				20.7	RPD = 29
Corrected Ave (4 peaks):					24.6	Corrected Ave (4 peaks):				18.7	RPD = 28
Aroclor-1260	1	9.967	0.000	9566796	193.7	1	10.260	0.000	2036369	208.4	
Aroclor-1260	2	10.283	-0.001	1540353	31.4	2	10.711	0.002	2209727	193.1	
Aroclor-1260	3	10.658	-0.001	7448068	63.4	3	10.985	0.000	1398883	66.2	
Aroclor-1260	4	11.059	0.002	580097	10.1	4	11.505	0.000	6860604	1197.5	
Aroclor-1260	5	11.246	-0.001	39714854	1297.5	NS	---			----	
Total Col1Ave (5 peaks):					319.2	Total Col2Ave (4 peaks):				416.3	RPD = 26
Corrected Ave (4 peaks):					74.7	Corrected Ave (3 peaks):				155.9	RPD = 70*
Aroclor-1262	1	10.283	0.000	1540353	27.3	1	10.260	0.000	2036369	136.7	
Aroclor-1262	2	10.658	0.000	7448068	56.1	2	10.711	0.001	2209727	162.2	
Aroclor-1262	3	11.059	0.000	580097	13.8	3	10.985	-0.001	1398883	54.7	
Aroclor-1262	4	11.246	-0.001	39714854	673.2	4	11.572	0.005	7134271	429.5	
Aroclor-1262	5	11.918	0.000	12822548	283.2	5	12.307	0.001	2273742	283.5	
Total Col1Ave (5 peaks):					210.7	Total Col2Ave (5 peaks):				213.3	RPD = 1
Corrected Ave (4 peaks):					95.1	Corrected Ave (4 peaks):				159.3	RPD = 50*
Aroclor-1268	1	11.174	-0.001	33104578	260.8	1	11.505	-0.001	6860604	263.8	

Aroclor-1268	2	11.246	0.000	39714854	282.9	2	11.572	-0.001	7134271	291.0
Aroclor-1268	3	11.632	-0.001	24428545	234.4	3	11.969	0.000	4550691	234.5
Aroclor-1268	4	12.422	0.000	64120345	218.3	4	12.791	-0.002	11103711	220.9

Total Col1Ave (4 peaks): 249.1 Total Col2Ave (4 peaks): 252.6 RPD = 1

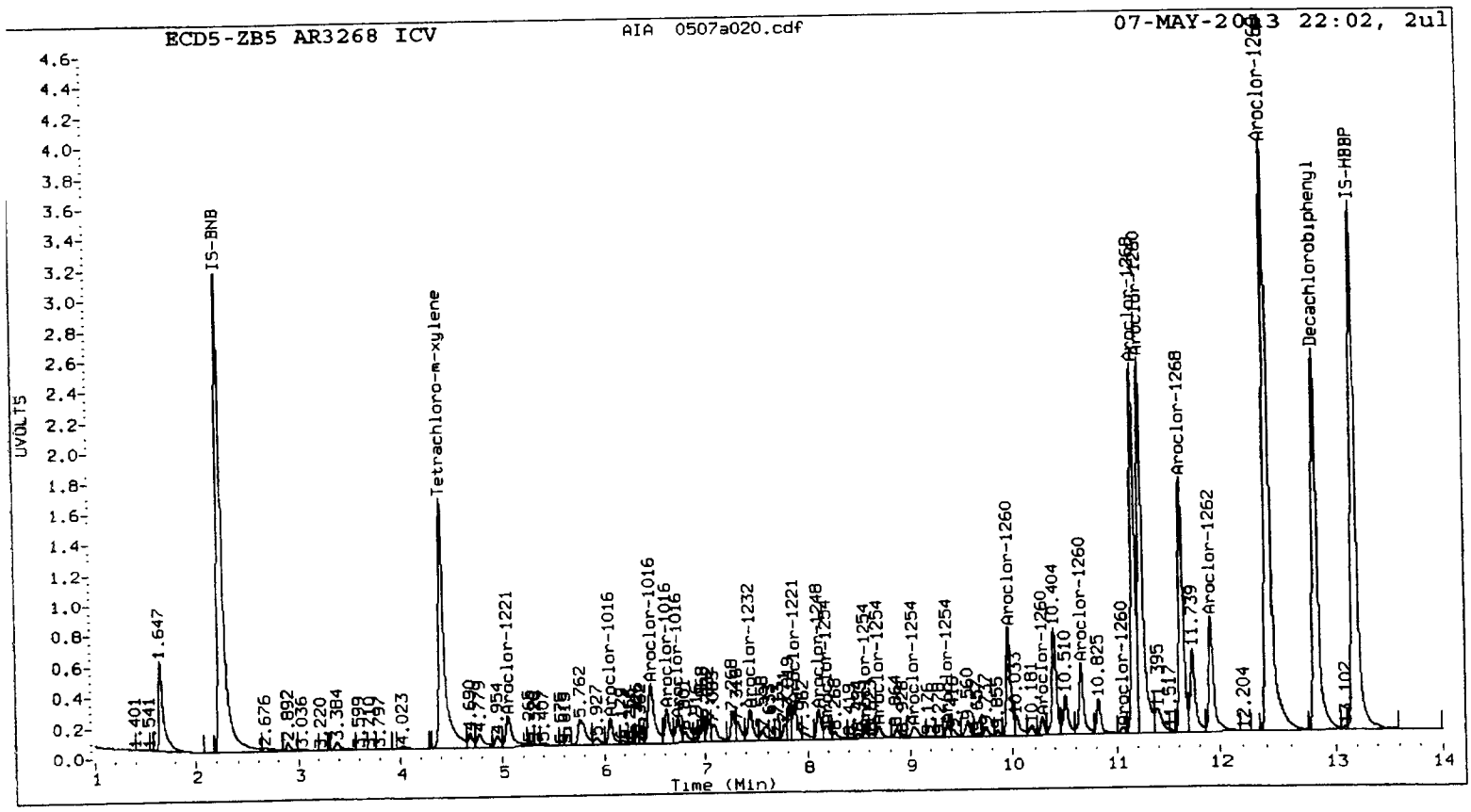
Corrected Ave (3 peaks): 237.8 Corrected Ave (3 peaks): 239.8 RPD = 1

Total PCB Area Col1 (4.511 - 12.728) = 308240732 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 58535775 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Aroclor-1016
Aroclor-1232
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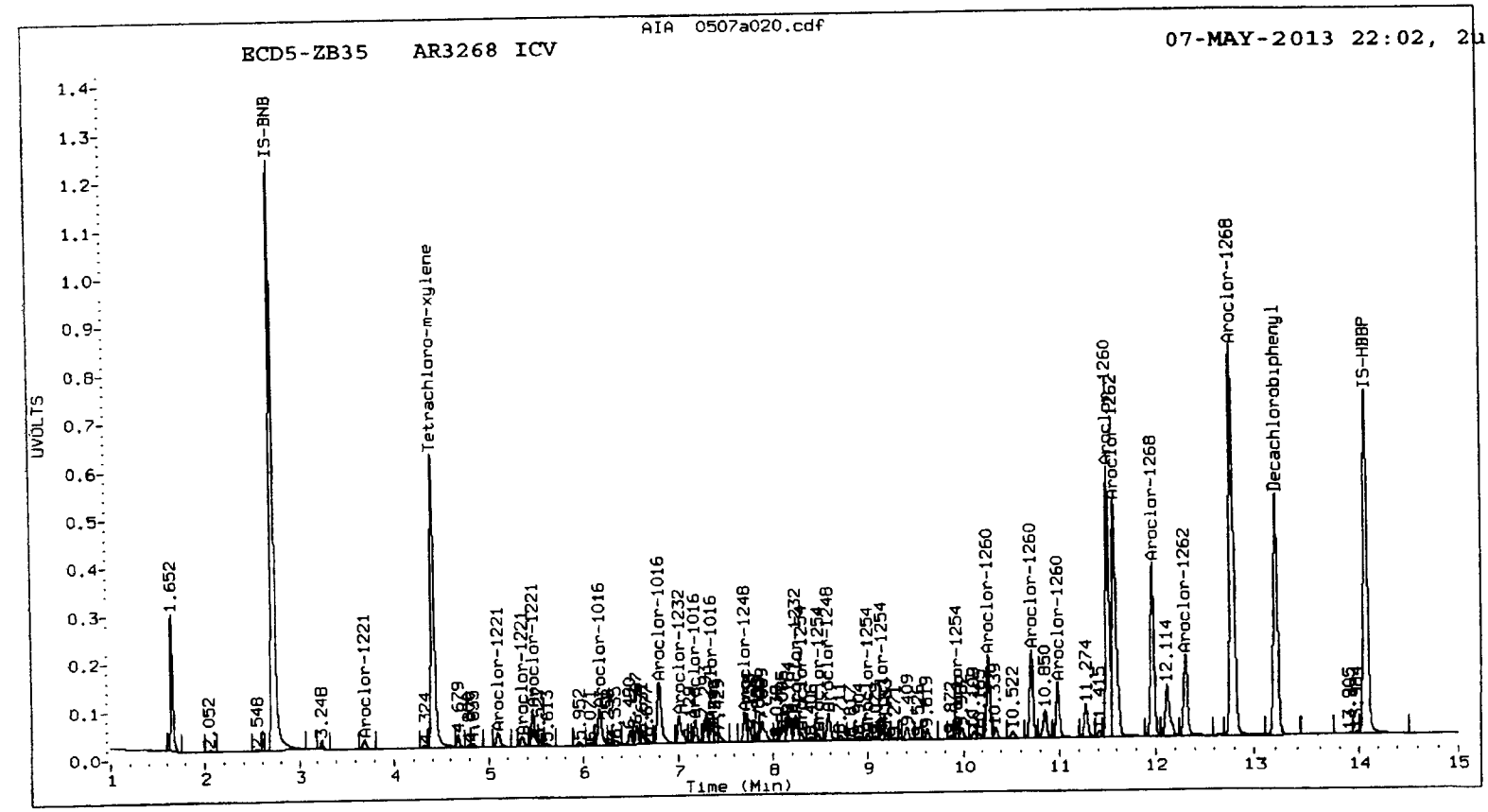
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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IS-BNB
Tetrachloro-m-xylene
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Aroclor-1016
Aroclor-1232
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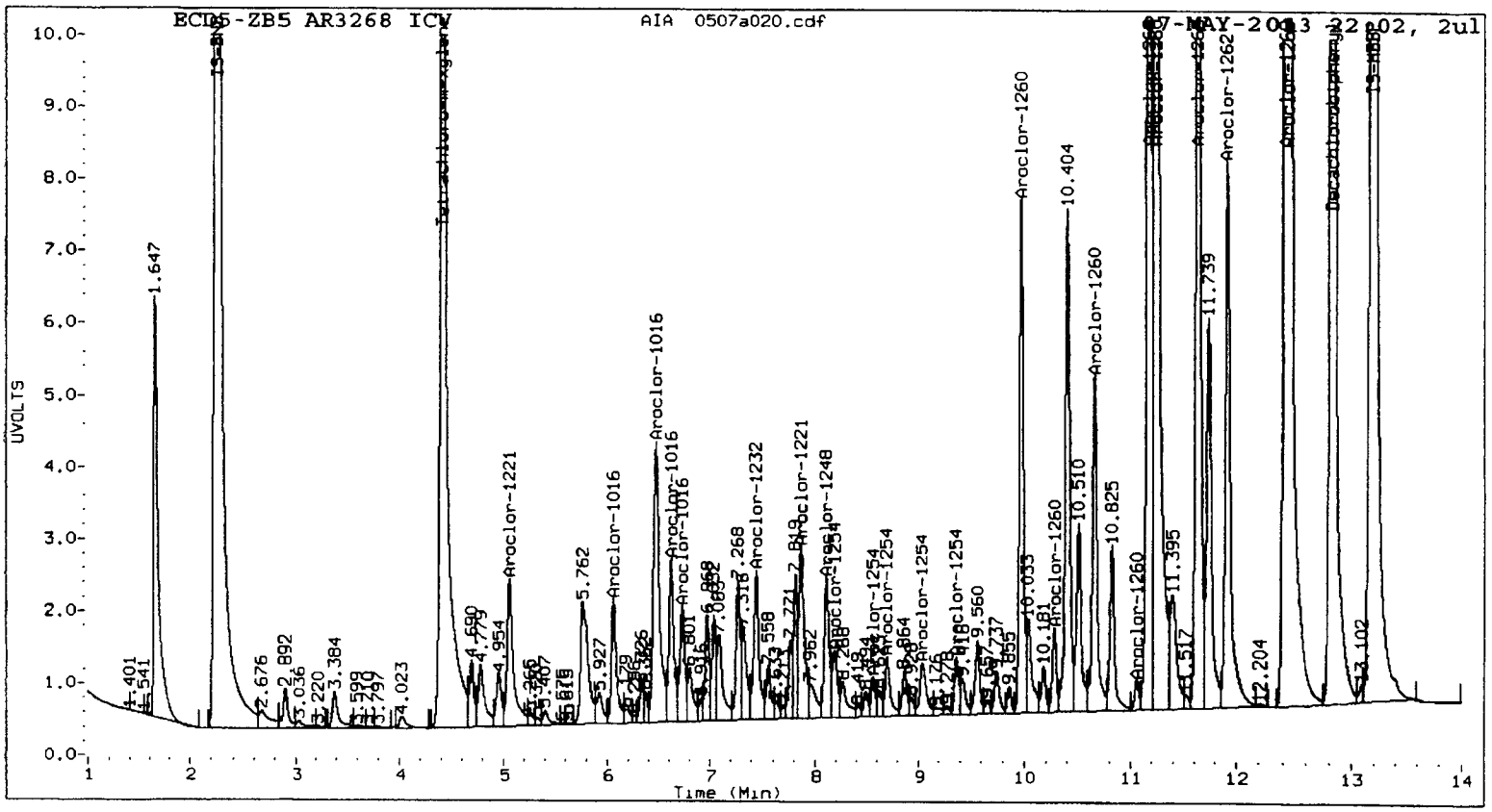
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
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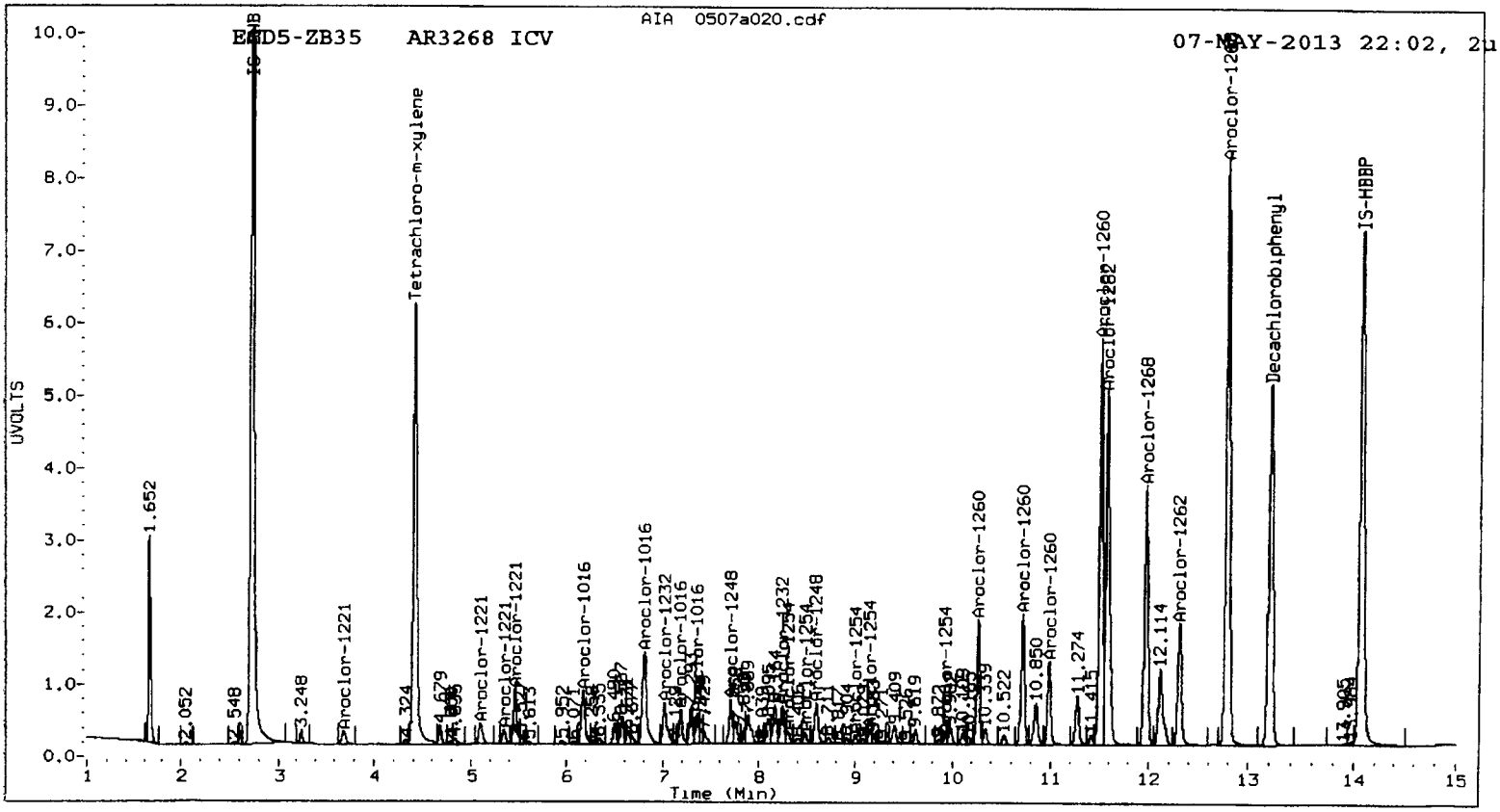
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 22:02, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20130507.b/ddt-1.b/0507a021.d ARI ID: 0.1 PPM DDTS

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
8.156	0.000	70648560	8.560	0.000	14556975	0.100	0.100	0.0	2,4-DDE
8.707	0.000	75652806	9.246	0.000	13980580	0.100	0.100	0.0	2,4-DDD
9.210	0.000	80992371	9.713	0.000	35257917	0.100	0.200#	66.7*	2,4-DDT
8.589	0.000	98960725	8.949	0.000	23356763	0.100	0.100	0.0	4,4-DDE
9.163	0.000	76831347	9.713	0.000	35257917	0.100	0.200#	66.7*	4,4-DDD
9.675	0.000	88164078	10.148	0.000	19956133	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

05/08/13

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD

Analysis Date: 07-MAY-2013 22:43 Init. Calib. Date: 07-MAY-2013

GC Column: ZB5 ID: 0.53 (mm)

COMPOUND	RT	AREA
4,4-DDE	8.590	867273
4,4-DDD	9.168	6982253
4,4-DDT	9.676	87775915

Col 1: 4,4-DDT Percent Breakdown = 8.2 %

GC Column: ZB35 ID: 0.53 (mm)

COMPOUND	RT	AREA
4,4-DDE	8.950	168832
4,4-DDD/2,4-DDT	9.719	1384968
4,4-DDT	10.149	20474911

Col 2: 4,4-DDT Percent Breakdown = 7.1 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

05/08/13

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WN27/31 Client ID: NPDES

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 04/16/13 & 05/07/13 Analysis Start Date: 05/06/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	~~NA~~ / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
CCAL met %D Criteria?	~~Y / N~~ / ✓	LCS / LCSD RPD ≤30%?	NA / ✓
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / ✓
Internal STD. within 50-200%?	NA / ~~Y / N~~ / ✓	MS / MSD RPD ≤30%?	NA / ✓
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below

Samples have an oily matrix, oily matrix neg. affect calib. closing ccals (AR1016 & AR1248) failed low ~8% for 1st run and AR1260 ccals failed high ~3% ~~on 05/08/13~~ HBBP failed low ~9% for closing ccals. cleaned ~~liner~~ liner and ran samples 2nd time. closing ccals failed low again for AR1248 & AR1016, AR1260 failed high again ~10% and HBBP failed low again ~9%. ~~05/08/13~~ re-curved and ran samples at 5X dil. closing AR1260 cal fails low on column1, column2 is w/in qc. reporting first run and dilutions went w/ best fit, y-flags are for AR1016→1248 ranges misc. peaks throughout samples

(Review 1) Analyst: ~~05/08/13~~ **Date:** ~~05/08/13~~

(Review 2) Reviewer: B **Date:** 5/8/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130416.b/0506-1.b

ARI Job No.: RINS Method: PCB1.m Instrument: ecd5.i Date: 06-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1622	0506a001.d	RINSE		1	NO MANUAL INTEGRATION
1643	0506a002.d	RINSE		1	NO MANUAL INTEGRATION
1702	0506a003.d	RINSE		1	NO MANUAL INTEGRATION
1722	0506a004.d	RINSE		1	NO MANUAL INTEGRATION
1742	0506a005.d	DDT BD		1	NO MANUAL INTEGRATION
1802	0506a006.d	AR1254		1	NO MANUAL INTEGRATION
1822	0506a007.d	AR1660		1	NO MANUAL INTEGRATION
1842	0506a008.d	WO14MBS1	WO14MBS1	1	NO MANUAL INTEGRATION
1902	0506a009.d	WO14LCSS1	WO14LCSS1	1	NO MANUAL INTEGRATION
1922	0506a010.d	WO14LCSDS1	WO14LCSDS1	1	NO MANUAL INTEGRATION
1942	0506a011.d	WO14A	2013042611	1	NO MANUAL INTEGRATION
2002	0506a012.d	WO14B	2013042611	1	NO MANUAL INTEGRATION
2022	0506a013.d	WO14C	PSRM	1	NO MANUAL INTEGRATION
2043	0506a014.d	AR1242		1	NO MANUAL INTEGRATION
2103	0506a015.d	AR1660		1	NO MANUAL INTEGRATION
2123	0506a016.d	WN27A		1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, IS-HBBP, Decachlorobiphenyl,
2143	0506a017.d	WN27AMS		1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, IS-HBBP, Decachlorobiphenyl,
2203	0506a018.d	WN72AMSD		1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, IS-HBBP, Decachlorobiphenyl,
2223	0506a019.d	WN31A		1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254,

Aroclor-1260, Aroclor-1262, Aroclor-1268, Decachlorobiphenyl,

2243	0506a020.d AR1248	1	NO MANUAL INTEGRATION
2303	0506a021.d AR1660	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130416.b/0506-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2323	0506a022.d	RINSE		1	NO MANUAL INTEGRATION
2343	0506a023.d	RINSE		1	NO MANUAL INTEGRATION
0004	0506a024.d	RINSE		1	NO MANUAL INTEGRATION
0024	0506a025.d	RINSE		1	NO MANUAL INTEGRATION
0044	0506a026.d	RINSE		1	NO MANUAL INTEGRATION
0104	0506a027.d	RINSE		1	NO MANUAL INTEGRATION
0125	0506a028.d	RINSE		1	NO MANUAL INTEGRATION
0145	0506a029.d	RINSE		1	NO MANUAL INTEGRATION
0206	0506a030.d	RINSE		1	NO MANUAL INTEGRATION
0226	0506a031.d	RINSE		1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a006.d
Data file 2: 20130416.b/0506-2.b/0506a006.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 06-MAY-2013 18:02
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	-0.013	16705166	4.405	-0.010	4297255	21.2	20.5	3.3	Tetrachloro-m-xylen
12.823	-0.009	22847535	13.200	-0.007	4199104	18.1	19.5	7.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	53.0	51.3
Decachlorobiphenyl	45.3	48.7

A 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48419450	-0.5
Hexabromobiphenyl	81878684	82802662	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14233456	-1.5
Hexabromobiphenyl	16263628	15559769	-4.3

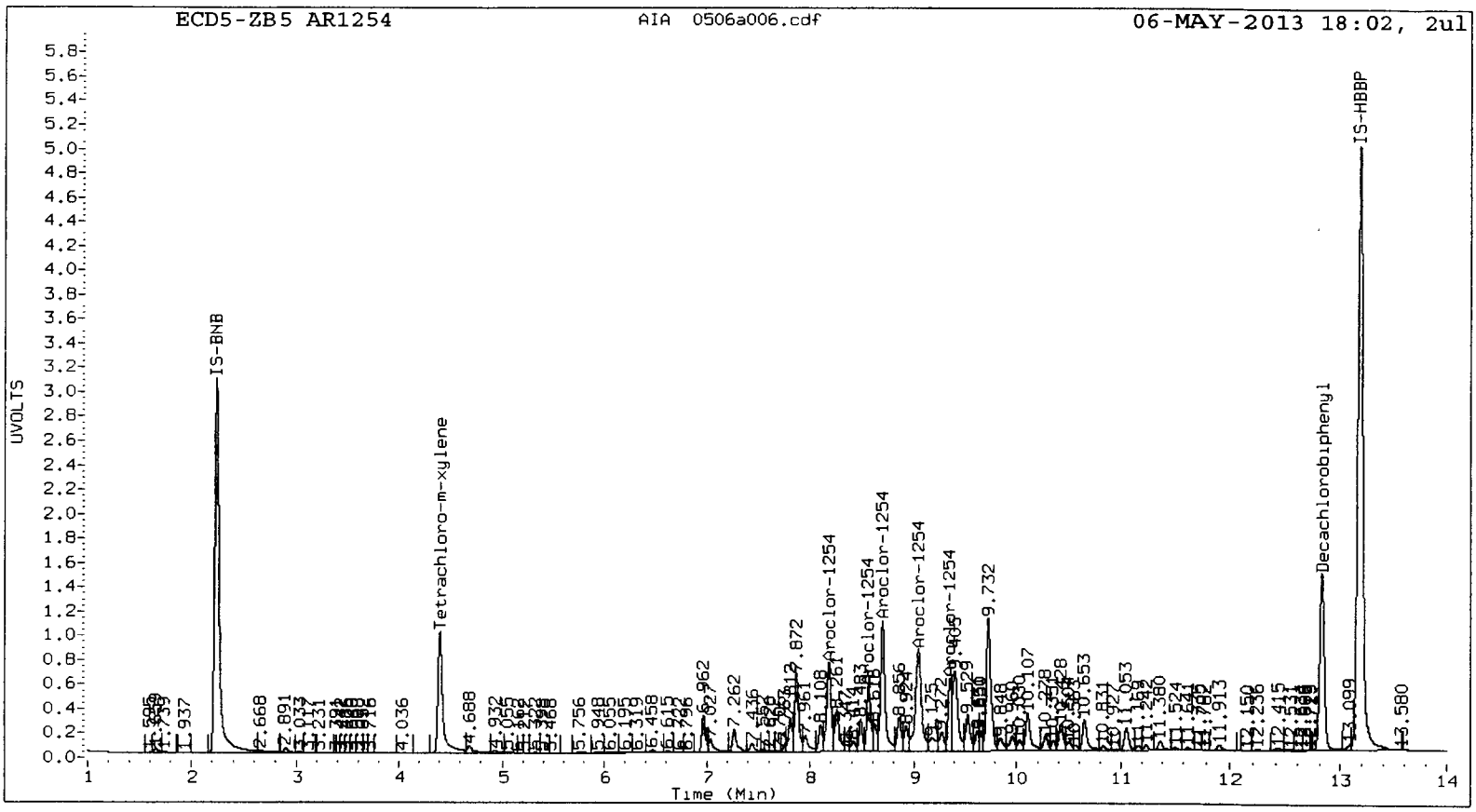
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	8.185	-0.008	11026579	244.8	1	8.294	-0.003	1806751	275.8
Aroclor-1254	2	8.560	-0.007	6671623	223.2	2	8.470	-0.003	2242747	277.2
Aroclor-1254	3	8.694	-0.008	16439452	273.9	3	8.992	-0.003	1739201	278.1
Aroclor-1254	4	9.045	-0.008	18101172	281.1	4	9.144	-0.003	3363490	248.9
Aroclor-1254	5	9.356	-0.008	7288031	274.9	5	9.928	-0.002	2237002	286.7
Total Col1Ave (5 peaks):				259.6		Total Col2Ave (5 peaks):			273.3	RPD = 5
Corrected Ave (4 peaks):				254.2		Corrected Ave (4 peaks):			270.0	RPD = 6

Total PCB Area Col1 (4.515 - 12.732) = 182922660 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 37447371 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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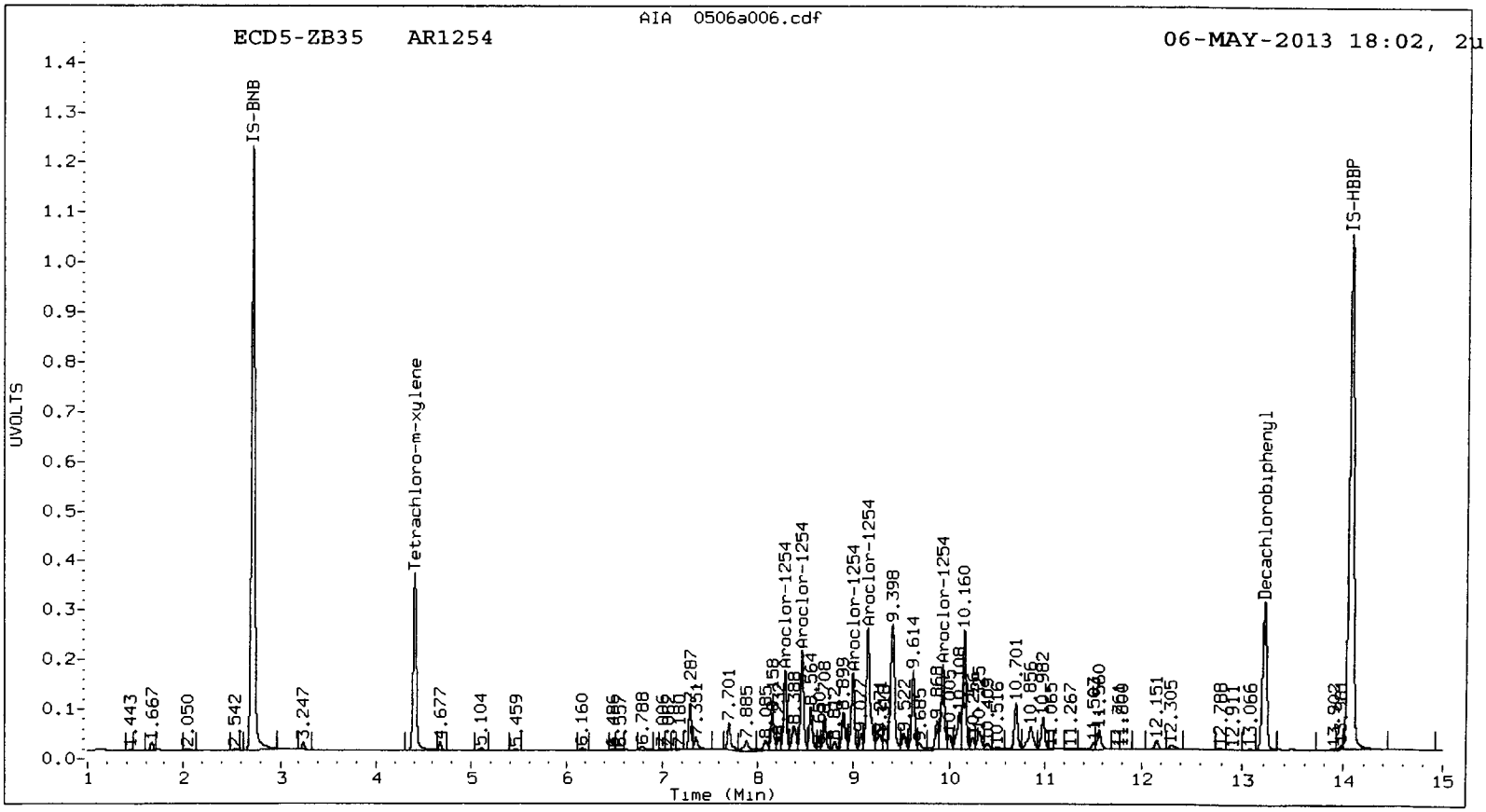
IS-HBBP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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a007.d
Data file 2: 20130416.b/0506-2.b/0506a007.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 06-MAY-2013 18:22
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	-0.013	14880812	4.405	-0.010	3678755	21.5	19.7	8.6	Tetrachloro-m-xylen
12.824	-0.008	20493270	13.201	-0.007	3751843	18.1	19.5	7.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	53.7	49.3
Decachlorobiphenyl	45.3	48.8

1 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	42607777	-12.4
Hexabromobiphenyl	81878684	74194353	-9.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	12690692	-12.2
Hexabromobiphenyl	16263628	13855174	-14.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

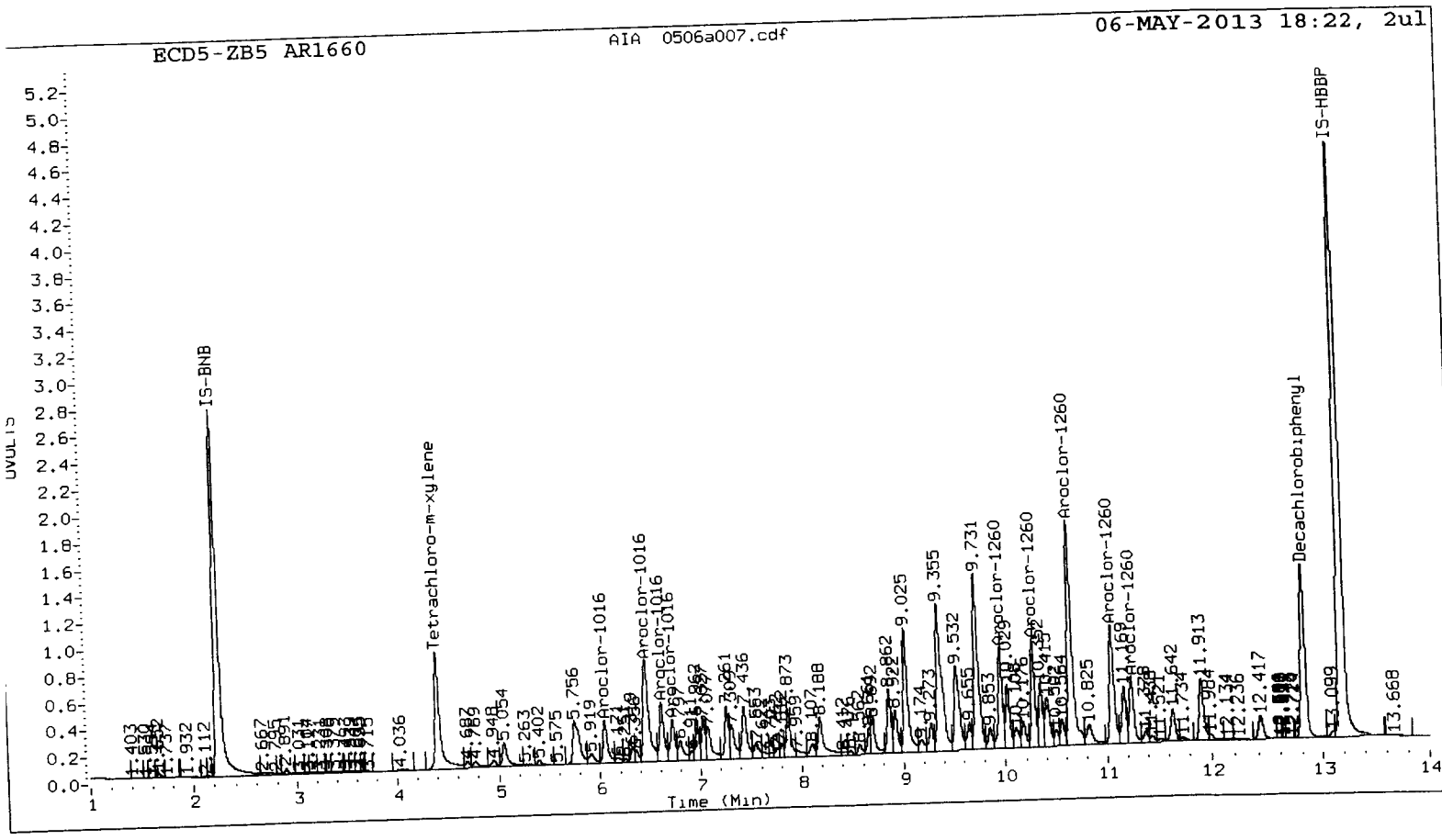
/chem2/ecd5.i/20130416.b/0506-1.b/0506a007.d AR1660

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.054	-0.010	4866489	269.5	1	6.161	-0.007	1789499	243.0
Aroclor-1016	2	6.461	-0.009	15157063	269.5	2	6.798	-0.006	3260703	210.4
Aroclor-1016	3	6.610	-0.010	6783103	276.6	3	7.180	-0.006	1060065	262.3
Aroclor-1016	4	6.721	-0.010	5007927	289.9	4	7.353	-0.007	951851	254.4
Total Col1Ave (4 peaks):				276.4		Total Col2Ave (4 peaks):			242.5	RPD = 13
Corrected Ave (3 peaks):				271.9		Corrected Ave (3 peaks):			236.0	RPD = 14
Aroclor-1260	1	9.962	-0.009	10762588	262.2	1	10.256	-0.007	2049259	266.0
Aroclor-1260	2	10.278	-0.009	10858288	251.3	2	10.706	-0.005	2565849	276.6
Aroclor-1260	3	10.653	-0.009	26222447	251.3	3	10.981	-0.006	4938178	266.2
Aroclor-1260	4	11.053	-0.008	13636148	244.0	4	11.502	-0.007	1466699	277.3
Aroclor-1260	5	11.242	-0.009	7416343	250.4	NS	---			----
Total Col1Ave (5 peaks):				251.8		Total Col2Ave (4 peaks):			271.5	RPD = 8
Corrected Ave (4 peaks):				249.3		Corrected Ave (3 peaks):			269.6	RPD = 8

Total PCB Area Col1 (4.515 - 12.732) = 320871080 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 63944613 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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IS-BNB
Tetrachloro-m-xylene
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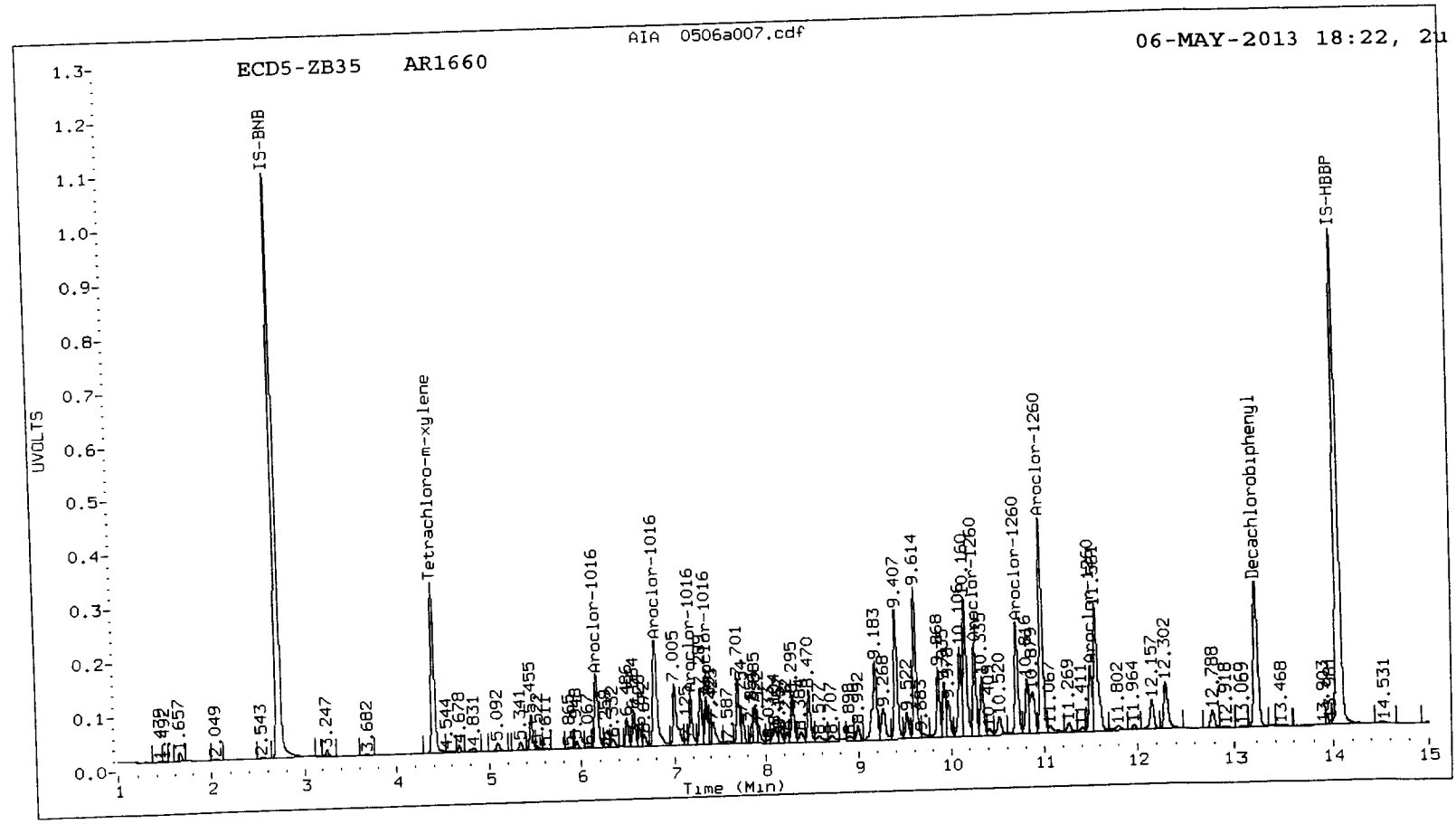
Decachlorobiphenyl
IS-HBBP
Time (Min)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Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a008.d
Data file 2: 20130416.b/0506-2.b/0506a008.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WO14MBS1
Client ID: WO14MBS1
Injection Date: 06-MAY-2013 18:42
Ical Date: 16-APR-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	-0.012	27385606	4.405	-0.010	6973887	30.1	28.1	7.0	Tetrachloro-m-xylen
12.824	-0.008	45467214	13.200	-0.007	8556263	31.0	33.9	8.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	75.3	70.2
Decachlorobiphenyl	77.5	84.7

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	55886984	14.9
Hexabromobiphenyl	81878684	96255452	17.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	16871793	16.7
Hexabromobiphenyl	16263628	18204310	11.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

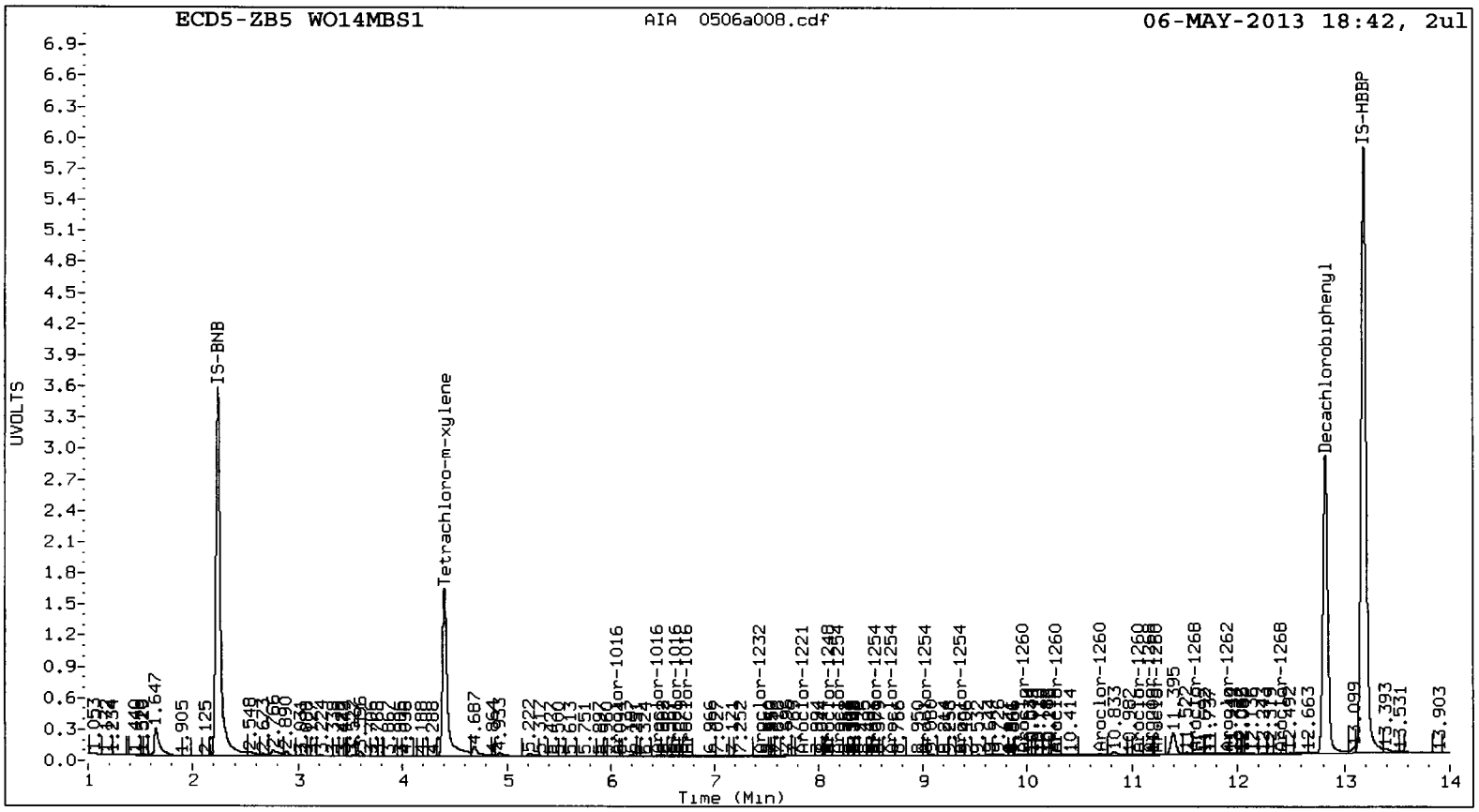
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.054	-0.009	69073	2.9	1	---			0.0
Aroclor-1016	2	6.452	-0.019	101618	1.4	2	---			0.0
Aroclor-1016	3	6.618	-0.002	74384	2.3	3	---			0.0
Aroclor-1016	4	6.725	-0.006	102084	4.5	4	---			0.0
Total Col1Ave (4 peaks):					2.8	Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	3.675	-0.013	193859	110.1
Aroclor-1221	2	6.452	-0.012	101618	14.4	2	5.105	0.017	96391	35.0
Aroclor-1221	3	7.856	-0.020	295692	30.3	3	5.364	0.024	98851	59.3
Aroclor-1221	NS	---			----	4	5.465	0.010	28852	5.7
Col1Ave: <3 Quant Peaks						Col2Ave: 52.5				
Aroclor-1232	1	6.054	0.000	69073	7.0	1	---			0.0
Aroclor-1232	2	6.452	-0.010	101618	3.4	2	---			0.0
Aroclor-1232	3	7.438	0.000	183940	12.0	3	---			0.0
Aroclor-1232	4	7.856	-0.015	295692	16.5	4	---			0.0
Total Col1Ave (4 peaks):					9.7	Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.054	-0.001	69073	3.8	1	---			0.0
Aroclor-1242	2	6.452	-0.011	101618	1.8	2	---			0.0
Aroclor-1242	3	6.618	0.006	74384	3.0	3	---			0.0
Aroclor-1242	4	7.856	-0.011	295692	9.4	4	---			0.0
Total Col1Ave (4 peaks):					4.5	Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.452	-0.016	101618	2.9	1	---			0.0
Aroclor-1248	2	7.438	-0.006	183940	4.7	2	---			0.0
Aroclor-1248	3	7.856	-0.020	295692	5.9	3	---			0.0
Aroclor-1248	4	8.099	-0.012	66352	1.9	4	---			0.0
Total Col1Ave (4 peaks):					3.8	Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.187	-0.007	149583	2.9	1	---			0.0
Aroclor-1254	2	8.543	-0.024	86473	2.5	2	---			0.0
Aroclor-1254	3	8.697	-0.005	142785	2.1	3	---			0.0
Aroclor-1254	4	9.025	-0.028	83454	1.1	4	---			0.0
Aroclor-1254	5	9.357	-0.007	124973	4.1	5	---			0.0
Total Col1Ave (5 peaks):					2.5	Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	9.964	-0.007	165539	3.1	1	---			0.0
Aroclor-1260	2	10.276	-0.010	140524	2.5	2	10.770	0.059	36946	3.0
Aroclor-1260	3	10.695	0.033	648486	4.8	3	---			0.0
Aroclor-1260	4	11.055	-0.006	244166	3.4	4	11.455	-0.054	27156	3.9
Aroclor-1260	5	11.236	-0.015	240014	6.2	NS	---			----
Total Col1Ave (5 peaks):					4.0	Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.276	-0.006	140524	2.3	1	---			0.0
Aroclor-1262	2	10.695	0.036	648486	4.0	2	10.770	0.060	36946	2.8
Aroclor-1262	3	11.055	-0.005	244166	4.3	3	---			0.0
Aroclor-1262	4	11.236	-0.011	240014	3.5	4	---			0.0
Aroclor-1262	5	11.903	-0.016	471613	7.0	5	12.340	0.031	35285	3.0
Total Col1Ave (5 peaks):					4.2	Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	11.166	-0.008	226763	1.4	1	---			0.0
Aroclor-1268	2	11.236	-0.009	240014	1.5	2	---			0.0
Aroclor-1268	3	11.594	-0.036	367746	2.7	3	---			0.0
Aroclor-1268	4	12.412	-0.009	388741	1.0	4	---			0.0
Total Col1Ave (4 peaks):					1.7	Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (4.515 - 12.732) = 20736432 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 1541801 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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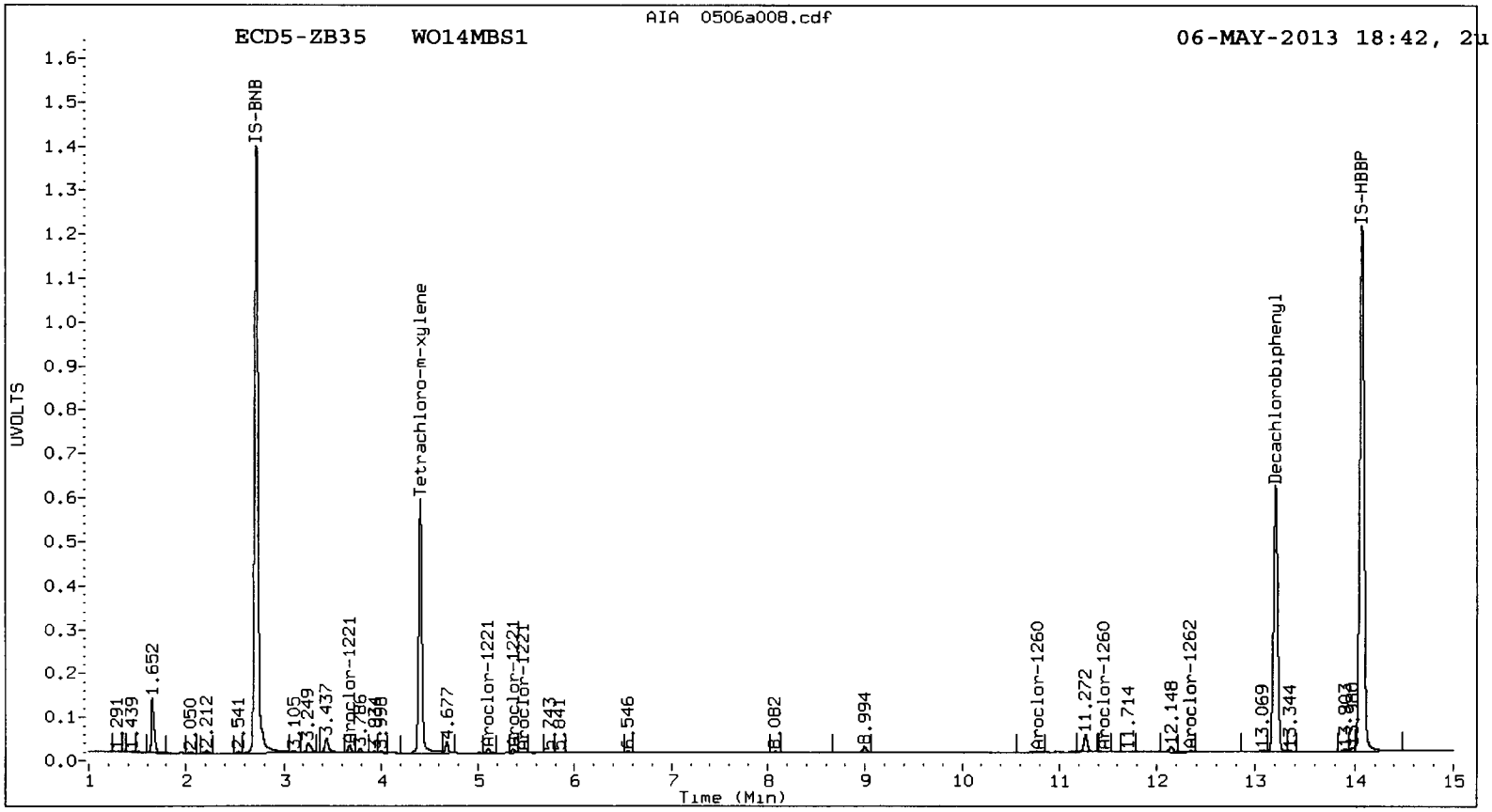
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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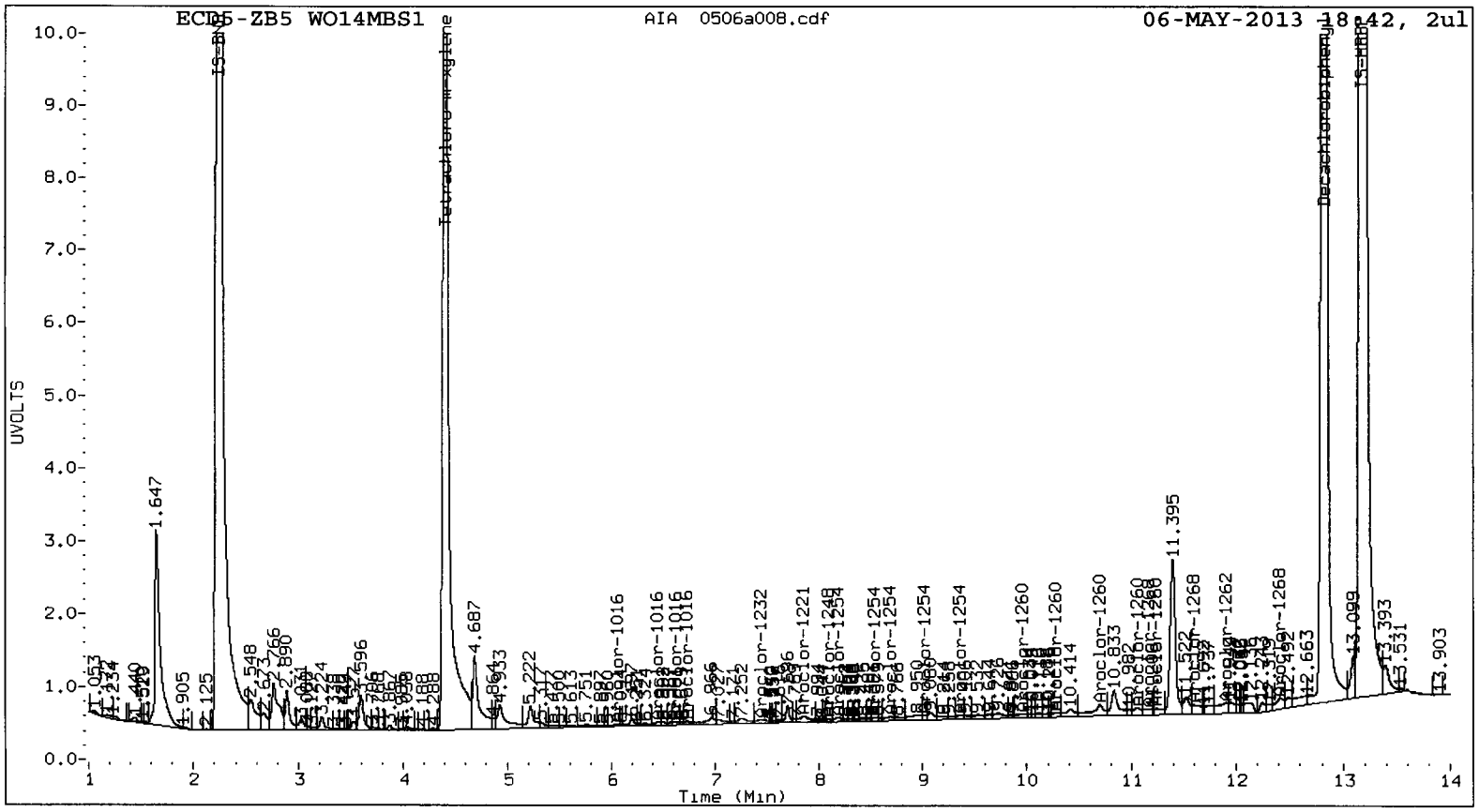
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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Time (Min)
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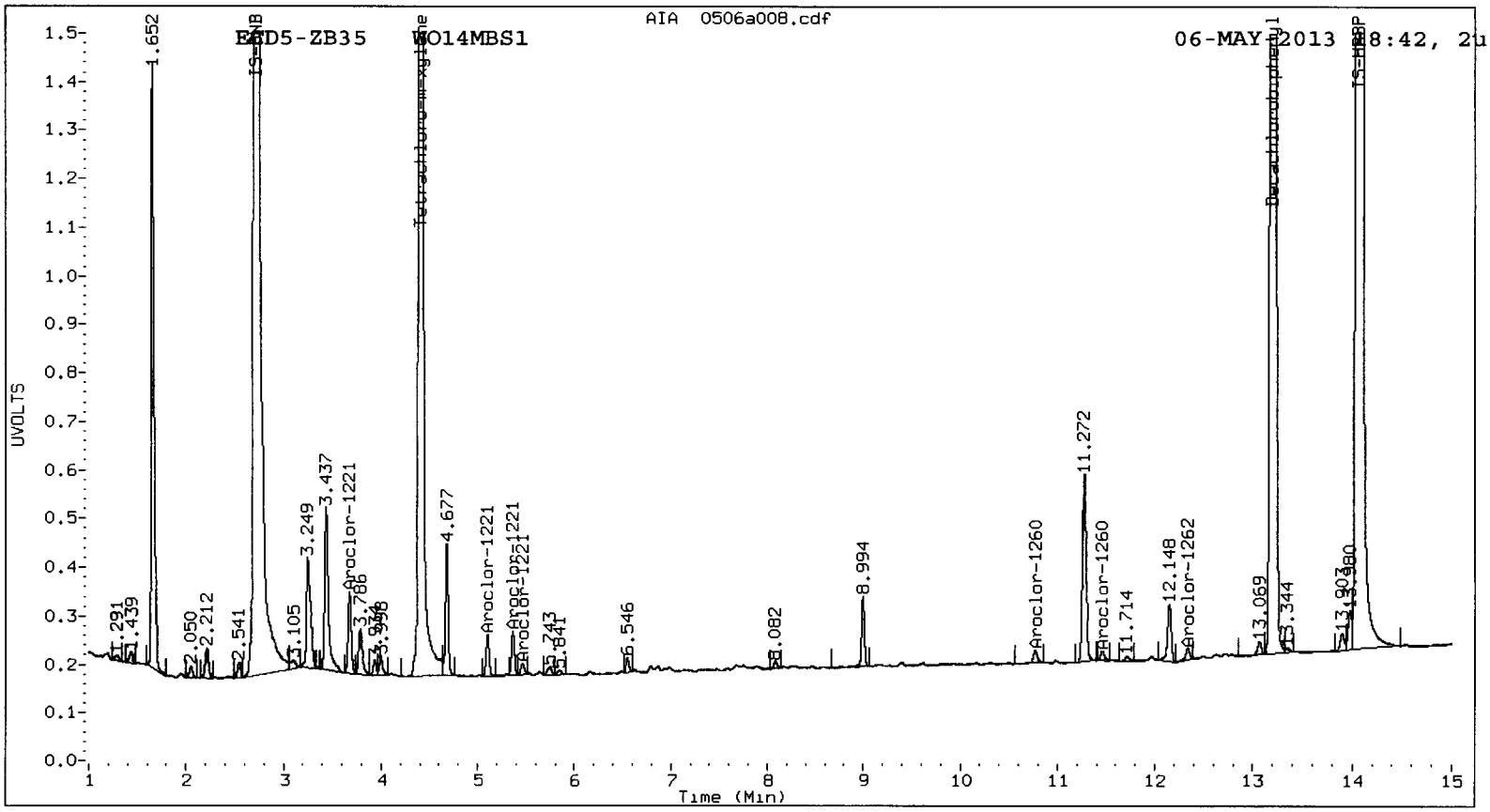
13.099
13.903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06-MAY-2013 18:42, 2u
UVOLTS
Time (Min)
1.652
4.677
3.249
3.437
Aroclor-1221
11.272
Aroclor-1260
8.994
12.148
Aroclor-1262

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a009.d
Data file 2: 20130416.b/0506-2.b/0506a009.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WO14LCSS1
Client ID: WO14LCSS1
Injection Date: 06-MAY-2013 19:02
Ical Date: 16-APR-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	-0.013	29990175	4.407	-0.008	7371706	35.1	32.2	8.7	Tetrachloro-m-xylen
12.823	-0.009	46572010	13.202	-0.006	8592016	33.2	35.8	7.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	87.8	80.5
Decachlorobiphenyl	83.1	89.4

05/06/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	52490645	7.9
Hexabromobiphenyl	81878684	92004843	12.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	15566793	7.7
Hexabromobiphenyl	16263628	17329892	6.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

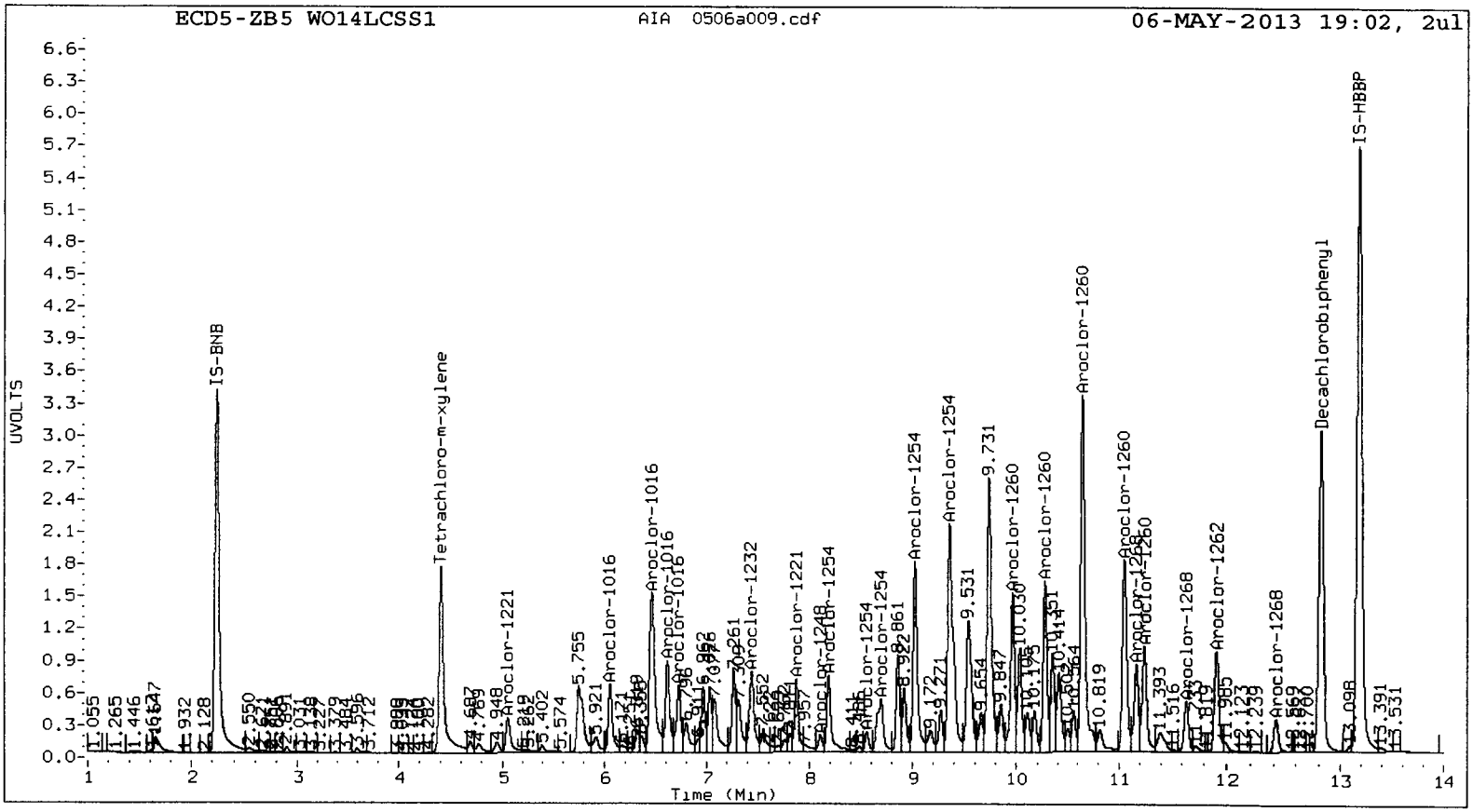
Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.053	-0.011	9392941	422.2	1	6.162	-0.007	3365217	372.6
Aroclor-1016	2	6.460	-0.010	29330132	423.3	2	6.797	-0.006	7603775	400.0
Aroclor-1016	3	6.610	-0.010	12920836	427.7	3	7.180	-0.006	2024068	408.3
Aroclor-1016	4	6.721	-0.010	9689148	455.3	4	7.354	-0.006	1832539	399.3
	Total Col1Ave (4 peaks):				432.1		Total Col2Ave (4 peaks):			395.1 RPD = 9
	Corrected Ave (3 peaks):				424.4		Corrected Ave (3 peaks):			390.6 RPD = 8
Aroclor-1221	1	5.054	-0.001	5960512	284.3	1	3.678	-0.011	184068	113.3
Aroclor-1221	2	6.460	-0.004	29330132	4429.7	2	5.094	0.006	369982	145.5
Aroclor-1221	3	7.872	-0.004	9829709	1073.1	3	5.343	0.002	348329	226.7
Aroclor-1221	NS	---			----	4	5.457	0.002	1385483	298.6
	Total Col1Ave (3 peaks):				1929.0		Total Col2Ave (4 peaks):			196.0 RPD = 163*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			161.8
Aroclor-1232	1	6.053	-0.001	9392941	1016.8	1	6.162	0.000	3365217	869.5
Aroclor-1232	2	6.460	-0.001	29330132	1030.0	2	6.797	0.001	7603775	1000.1
Aroclor-1232	3	7.435	-0.003	12859687	893.7	3	7.005	-0.002	2675939	841.8
Aroclor-1232	4	7.872	0.000	9829709	582.5	4	8.232	-0.005	326668	125.5
	Total Col1Ave (4 peaks):				880.8		Total Col2Ave (4 peaks):			709.2 RPD = 22
	Corrected Ave (3 peaks):				831.0		Corrected Ave (3 peaks):			612.3 RPD = 30
Aroclor-1242	1	6.053	-0.003	9392941	543.7	1	6.162	0.001	3365217	503.1
Aroclor-1242	2	6.460	-0.002	29330132	551.6	2	6.797	0.000	7603775	532.9
Aroclor-1242	3	6.610	-0.002	12920836	548.6	3	7.005	0.000	2675939	447.5
Aroclor-1242	4	7.872	0.004	9829709	333.7	4	8.232	-0.001	326668	66.4
	Total Col1Ave (4 peaks):				494.4		Total Col2Ave (4 peaks):			387.5 RPD = 24
	Corrected Ave (3 peaks):				475.3		Corrected Ave (3 peaks):			339.0 RPD = 33
Aroclor-1248	1	6.460	-0.008	29330132	884.8	1	6.797	-0.002	7603775	873.2
Aroclor-1248	2	7.435	-0.010	12859687	350.2	2	7.700	-0.007	2549378	356.7
Aroclor-1248	3	7.872	-0.004	9829709	207.4	3	8.232	-0.007	326668	44.4
Aroclor-1248	4	8.106	-0.005	2198802	65.5	4	8.577	-0.007	204105	21.3
	Total Col1Ave (4 peaks):				377.0		Total Col2Ave (4 peaks):			323.9 RPD = 15
	Corrected Ave (3 peaks):				207.7		Corrected Ave (3 peaks):			140.8 RPD = 38
Aroclor-1254	1	8.187	-0.007	11681925	239.2	1	8.294	-0.003	1757648	245.3
Aroclor-1254	2	8.556	-0.010	2567263	79.2	2	8.470	-0.004	1993193	225.3
Aroclor-1254	3	8.691	-0.010	10874380	167.2	3	8.992	-0.003	548848	80.2
Aroclor-1254	4	9.024	-0.029	26510827	379.7	4	9.144	-0.002	966852	65.4
Aroclor-1254	5	9.354	-0.009	38701994	1346.8	5	9.934	0.004	2203358	258.2
	Total Col1Ave (5 peaks):				442.4		Total Col2Ave (5 peaks):			174.9 RPD = 87*
	Corrected Ave (4 peaks):				216.3		Corrected Ave (4 peaks):			154.1 RPD = 34
Aroclor-1260	1	9.961	-0.010	20989314	412.4	1	10.256	-0.007	4028170	418.0
Aroclor-1260	2	10.277	-0.009	21041092	392.6	2	10.706	-0.006	4979178	429.2
Aroclor-1260	3	10.653	-0.009	51717807	399.7	3	10.981	-0.007	9973218	429.8
Aroclor-1260	4	11.052	-0.009	27628349	398.7	4	11.502	-0.007	2908994	439.7
Aroclor-1260	5	11.242	-0.009	14696880	400.2	NS	---			----
	Total Col1Ave (5 peaks):				400.7		Total Col2Ave (4 peaks):			429.2 RPD = 7
	Corrected Ave (4 peaks):				397.8		Corrected Ave (3 peaks):			425.7 RPD = 7
Aroclor-1262	1	10.277	-0.005	21041092	356.2	1	10.256	-0.005	4028170	280.8
Aroclor-1262	2	10.653	-0.006	51717807	336.3	2	10.706	-0.005	4979178	400.7
Aroclor-1262	3	11.052	-0.007	27628349	506.0	3	10.981	-0.006	9973218	347.9
Aroclor-1262	4	11.242	-0.004	14696880	224.3	4	11.561	-0.006	7108589	381.4
Aroclor-1262	5	11.912	-0.007	13581991	211.2	5	12.304	-0.005	2674772	238.7
	Total Col1Ave (5 peaks):				326.8		Total Col2Ave (5 peaks):			329.9 RPD = 1
	Corrected Ave (4 peaks):				282.0		Corrected Ave (4 peaks):			312.2 RPD = 10
Aroclor-1268	1	11.169	-0.005	11999227	80.1	1	11.502	-0.005	2908994	100.3

Aroclor-1268 2	11.242	-0.002	14696880	98.2	2	11.561	-0.012	7108589	248.3
Aroclor-1268 3	11.643	0.012	7088763	54.8	3	11.965	-0.004	198653	8.4
Aroclor-1268 4	12.416	-0.005	4728074	12.5	4	12.789	-0.003	811576	11.6
Total Col1Ave (4 peaks):				61.4	Total Col2Ave (4 peaks):			92.1	RPD = 40*
Corrected Ave (3 peaks):				49.1	Corrected Ave (3 peaks):			40.1	RPD = 20

Total PCB Area Col1 (4.515 - 12.732) = 616695797 Col1 Total PCB = 1.0 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 122052726 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical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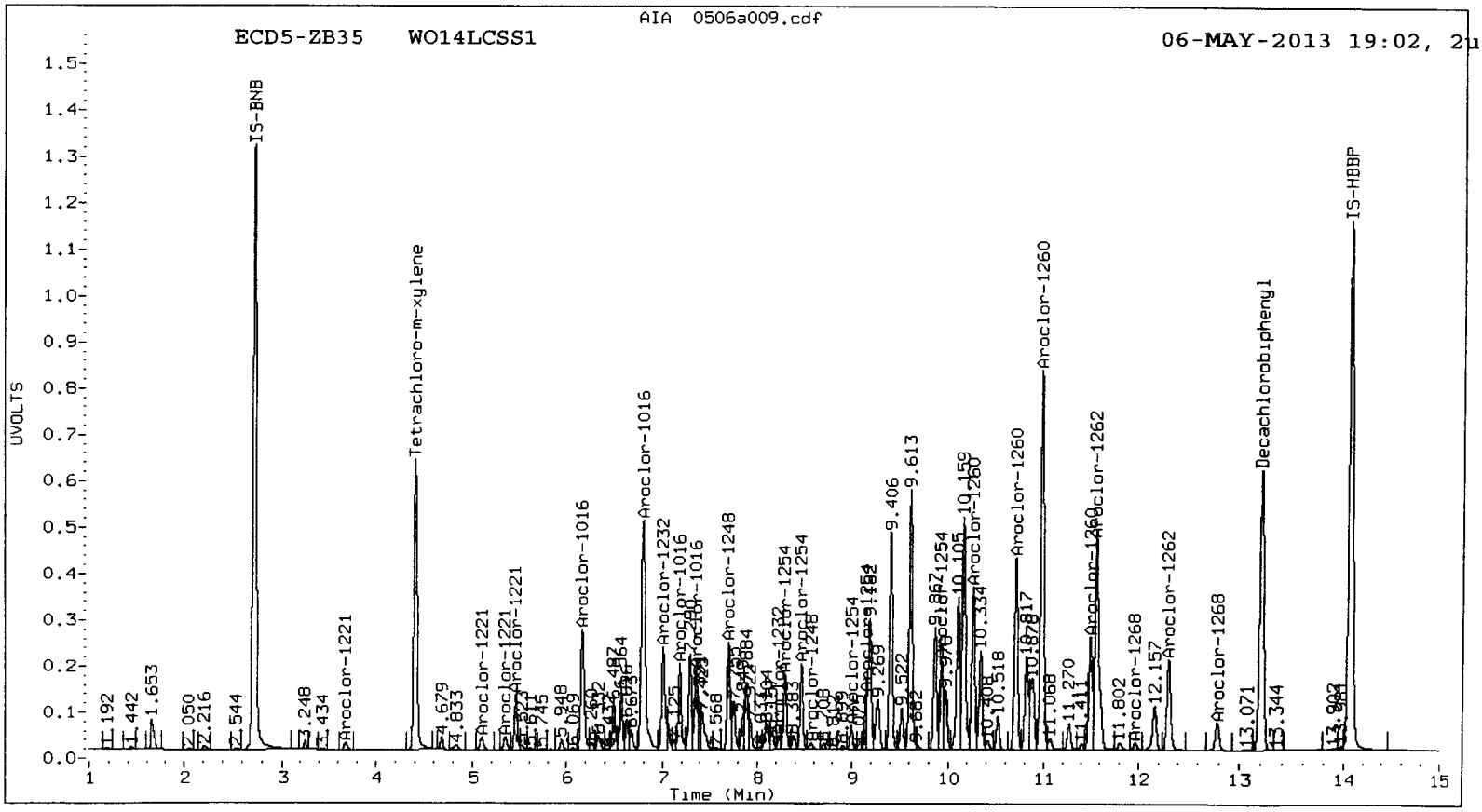
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Tetrachloro-m-xylene
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Aroclor-1232
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Aroclor-1254
Aroclor-1260
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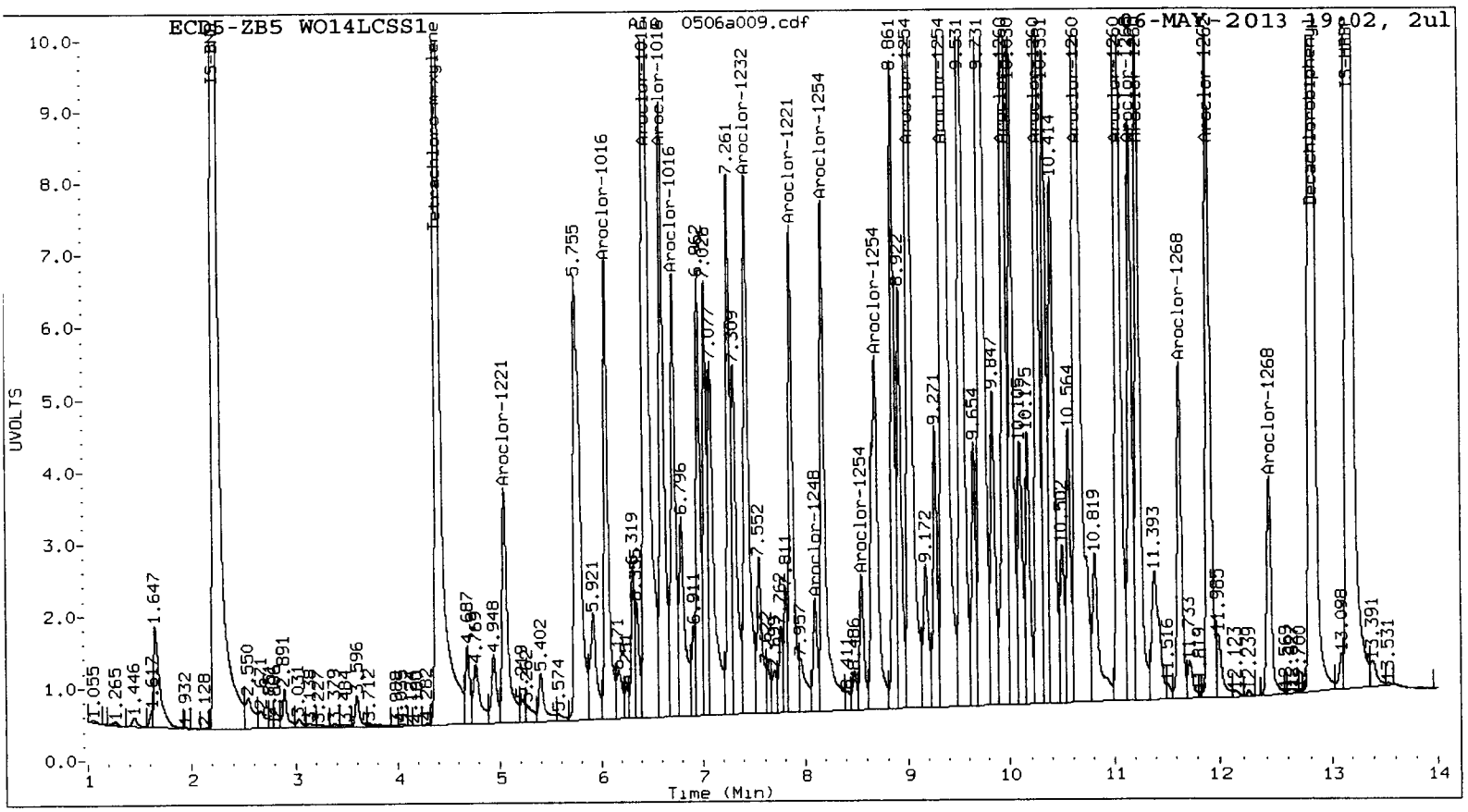
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Aroclor-1016
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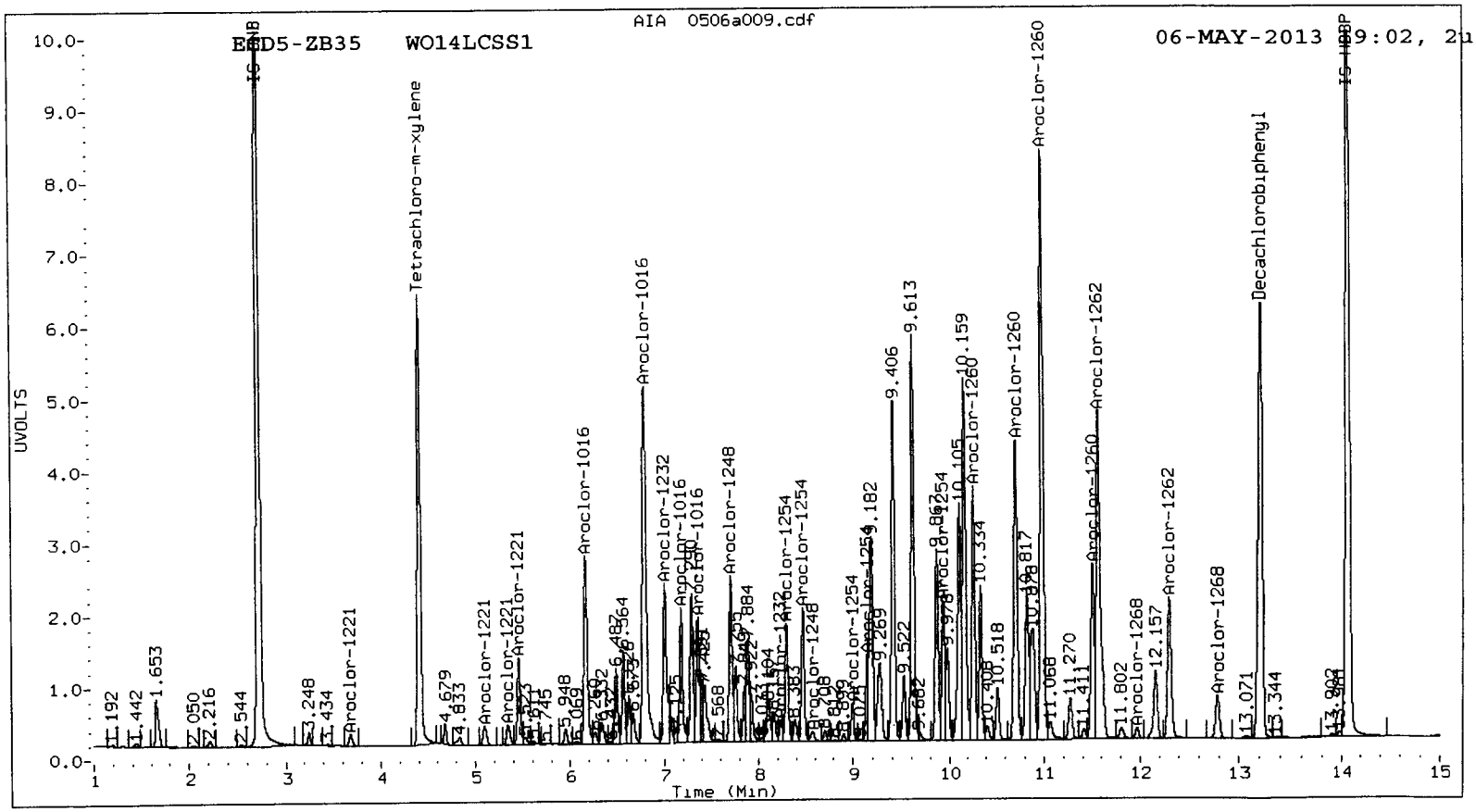
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl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Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a010.d
Data file 2: 20130416.b/0506-2.b/0506a010.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WO14LCSDS1
Client ID: WO14LCSDS1
Injection Date: 06-MAY-2013 19:22
Ical Date: 16-APR-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.404	-0.011	28856646	4.407	-0.008	7126339	31.6	29.9	5.7	Tetrachloro-m-xylen
12.825	-0.007	47630604	13.202	-0.006	8763406	32.2	34.8	7.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	79.1	74.7
Decachlorobiphenyl	80.6	86.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	56059074	15.2
Hexabromobiphenyl	81878684	96999147	18.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	16206025	12.1
Hexabromobiphenyl	16263628	18174342	11.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

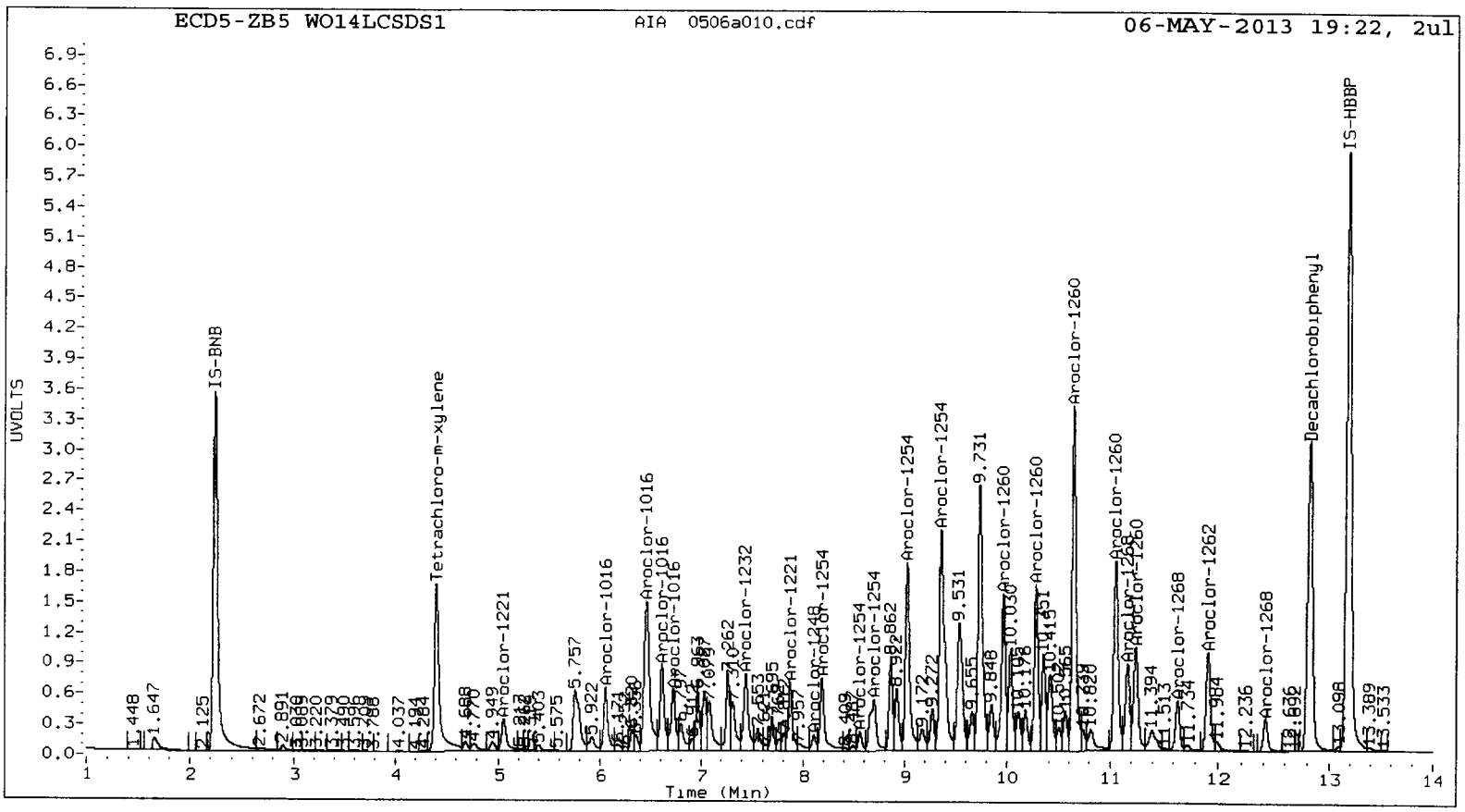
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.054	-0.009	9240539	388.9	1	6.161	-0.008	3277559	348.6
Aroclor-1016	2	6.461	-0.009	28916779	390.7	2	6.796	-0.007	7437952	375.8
Aroclor-1016	3	6.610	-0.010	12827579	397.6	3	7.180	-0.006	2001988	387.9
Aroclor-1016	4	6.721	-0.010	9615289	423.0	4	7.353	-0.007	1814466	379.8
Total Col1Ave (4 peaks):					400.1	Total Col2Ave (4 peaks):				373.0 RPD = 7
Corrected Ave (3 peaks):					392.4	Corrected Ave (3 peaks):				368.1 RPD = 6
Aroclor-1221	1	5.056	0.000	5837328	260.7	1	3.683	-0.006	47232	27.9
Aroclor-1221	2	6.461	-0.002	28916779	4089.3	2	5.092	0.004	360508	136.2
Aroclor-1221	3	7.872	-0.003	9763472	998.0	3	5.342	0.001	321200	200.8
Aroclor-1221	NS	---			----	4	5.456	0.001	1355545	280.6
Total Col1Ave (3 peaks):					1782.6	Total Col2Ave (4 peaks):				161.4 RPD = 167*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				121.6
Aroclor-1232	1	6.054	0.000	9240539	936.6	1	6.161	-0.001	3277559	813.4
Aroclor-1232	2	6.461	0.000	28916779	950.9	2	6.796	0.000	7437952	939.7
Aroclor-1232	3	7.436	-0.003	12802976	833.1	3	7.005	-0.002	3111163	940.1
Aroclor-1232	4	7.872	0.001	9763472	541.8	4	8.233	-0.004	323902	119.5
Total Col1Ave (4 peaks):					815.6	Total Col2Ave (4 peaks):				703.2 RPD = 15
Corrected Ave (3 peaks):					770.5	Corrected Ave (3 peaks):				624.2 RPD = 21
Aroclor-1242	1	6.054	-0.001	9240539	500.9	1	6.161	0.000	3277559	470.7
Aroclor-1242	2	6.461	-0.001	28916779	509.2	2	6.796	-0.001	7437952	500.8
Aroclor-1242	3	6.610	-0.002	12827579	509.9	3	7.005	-0.001	3111163	499.8
Aroclor-1242	4	7.872	0.005	9763472	310.3	4	8.233	0.000	323902	63.2
Total Col1Ave (4 peaks):					457.6	Total Col2Ave (4 peaks):				383.6 RPD = 18
Corrected Ave (3 peaks):					440.1	Corrected Ave (3 peaks):				344.6 RPD = 24
Aroclor-1248	1	6.461	-0.006	28916779	816.8	1	6.796	-0.003	7437952	820.5
Aroclor-1248	2	7.436	-0.009	12802976	326.5	2	7.701	-0.006	2549235	342.6
Aroclor-1248	3	7.872	-0.004	9763472	192.9	3	8.233	-0.006	323902	42.3
Aroclor-1248	4	8.107	-0.004	2233041	62.3	4	8.577	-0.006	195053	19.5
Total Col1Ave (4 peaks):					349.6	Total Col2Ave (4 peaks):				306.2 RPD = 13
Corrected Ave (3 peaks):					193.9	Corrected Ave (3 peaks):				134.8 RPD = 36
Aroclor-1254	1	8.187	-0.007	11633293	223.1	1	8.295	-0.002	1760077	235.9
Aroclor-1254	2	8.557	-0.010	2572371	74.3	2	8.470	-0.003	1994766	216.6
Aroclor-1254	3	8.692	-0.010	11134307	160.3	3	8.993	-0.002	2117087	297.3
Aroclor-1254	4	9.025	-0.028	27590075	370.0	4	9.145	-0.001	968174	62.9
Aroclor-1254	5	9.355	-0.008	40245382	1311.3	5	9.934	0.004	2226165	250.5
Total Col1Ave (5 peaks):					427.8	Total Col2Ave (5 peaks):				212.7 RPD = 67*
Corrected Ave (4 peaks):					206.9	Corrected Ave (4 peaks):				191.5 RPD = 8
Aroclor-1260	1	9.961	-0.009	21884109	407.8	1	10.256	-0.007	4139593	409.6
Aroclor-1260	2	10.278	-0.009	21765911	385.2	2	10.706	-0.006	5119258	420.7
Aroclor-1260	3	10.654	-0.008	50873951	372.9	3	10.981	-0.006	10261577	421.7
Aroclor-1260	4	11.053	-0.008	28647539	392.1	4	11.502	-0.007	3004834	433.0
Aroclor-1260	5	11.244	-0.007	15340594	396.2	NS	---			----
Total Col1Ave (5 peaks):					390.9	Total Col2Ave (4 peaks):				421.3 RPD = 7
Corrected Ave (4 peaks):					386.6	Corrected Ave (3 peaks):				417.3 RPD = 8
Aroclor-1262	1	10.278	-0.005	21765911	349.5	1	10.256	-0.005	4139593	275.2
Aroclor-1262	2	10.654	-0.005	50873951	313.8	2	10.706	-0.005	5119258	392.8
Aroclor-1262	3	11.053	-0.006	28647539	497.7	3	10.981	-0.006	10261577	341.4
Aroclor-1262	4	11.244	-0.003	15340594	222.1	4	11.561	-0.006	7323880	374.7
Aroclor-1262	5	11.913	-0.006	14060014	207.4	5	12.303	-0.006	2784550	237.0
Total Col1Ave (5 peaks):					318.1	Total Col2Ave (5 peaks):				324.2 RPD = 2
Corrected Ave (4 peaks):					273.2	Corrected Ave (4 peaks):				307.0 RPD = 12
Aroclor-1268	1	11.169	-0.004	12532266	79.3	1	11.502	-0.005	3004834	98.8

Aroclor-1268 2	11.244	-0.001	15340594	97.2	2	11.561	-0.013	7323880	244.0
Aroclor-1268 3	11.642	0.012	7424397	54.4	3	11.965	-0.004	203396	8.2
Aroclor-1268 4	12.416	-0.005	4913744	12.3	4	12.788	-0.004	833312	11.3
Total Col1Ave (4 peaks):				60.8	Total Col2Ave (4 peaks):			90.6	RPD = 39
Corrected Ave (3 peaks):				48.7	Corrected Ave (3 peaks):			39.4	RPD = 21

Total PCB Area Col1 (4.515 - 12.732) = 633946424 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 125676263 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical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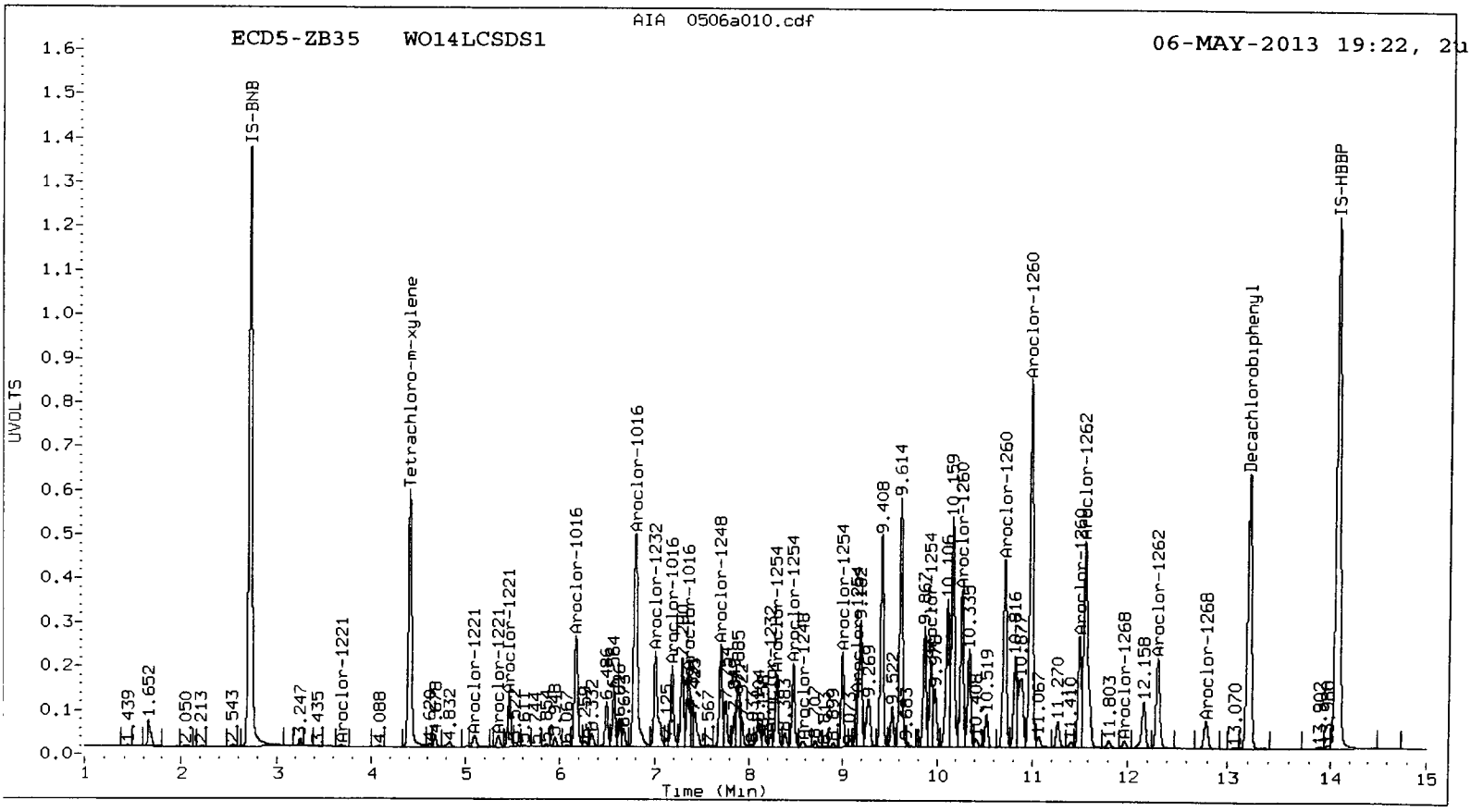
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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IS-BNB
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Aroclor-1016
Aroclor-1232
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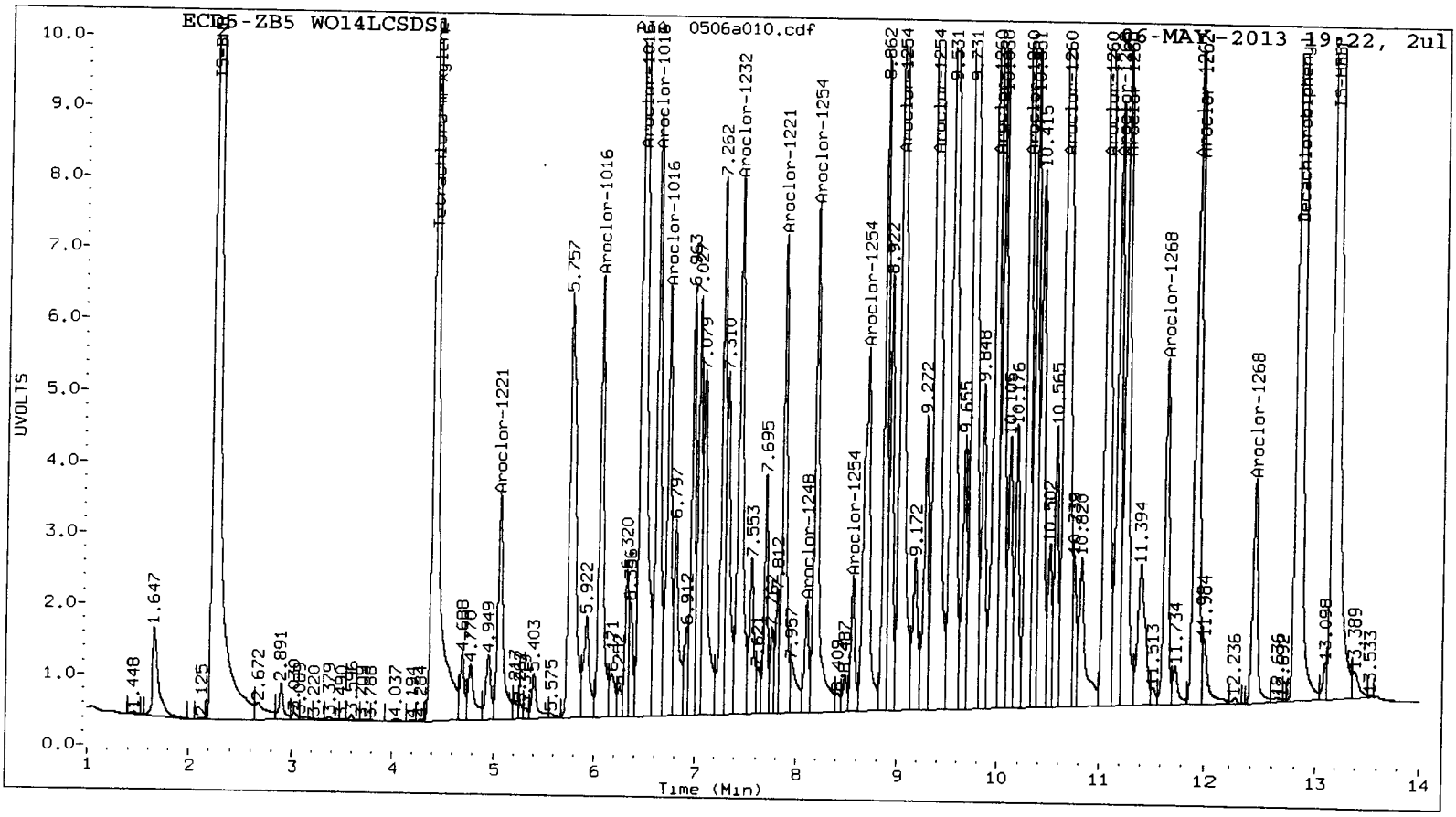
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
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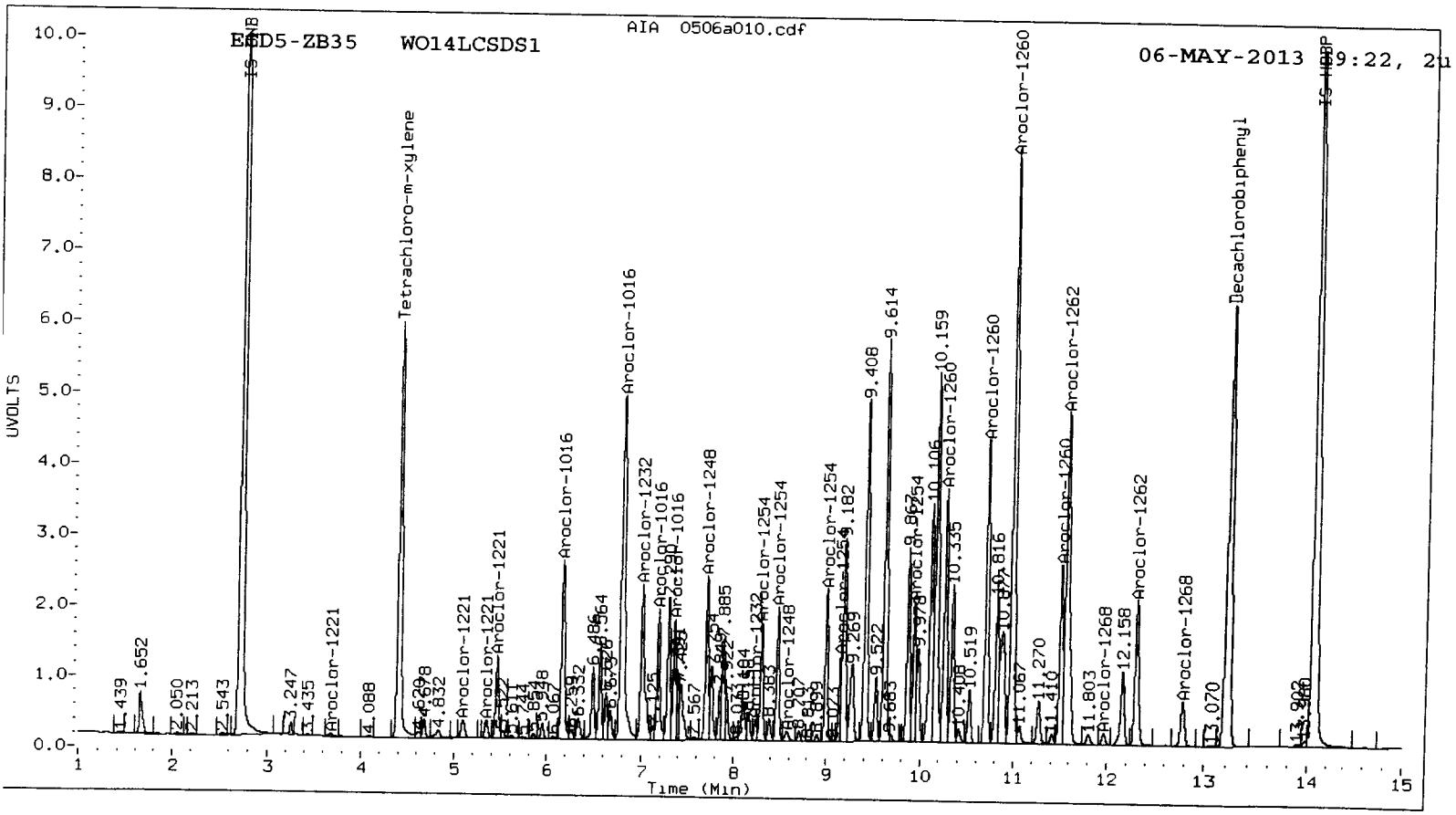
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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
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Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a014.d
Data file 2: 20130416.b/0506-2.b/0506a014.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 06-MAY-2013 20:43
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.404	-0.011	16974066	4.406	-0.009	4152325	21.3	20.1	6.1	Tetrachloro-m-xylen
12.824	-0.008	22589327	13.202	-0.006	4309485	18.2	20.7	12.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	53.3	50.2
Decachlorobiphenyl	45.6	51.8

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48909239	0.5
Hexabromobiphenyl	81878684	81323597	-0.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14063095	-2.7
Hexabromobiphenyl	16263628	14993516	-7.8

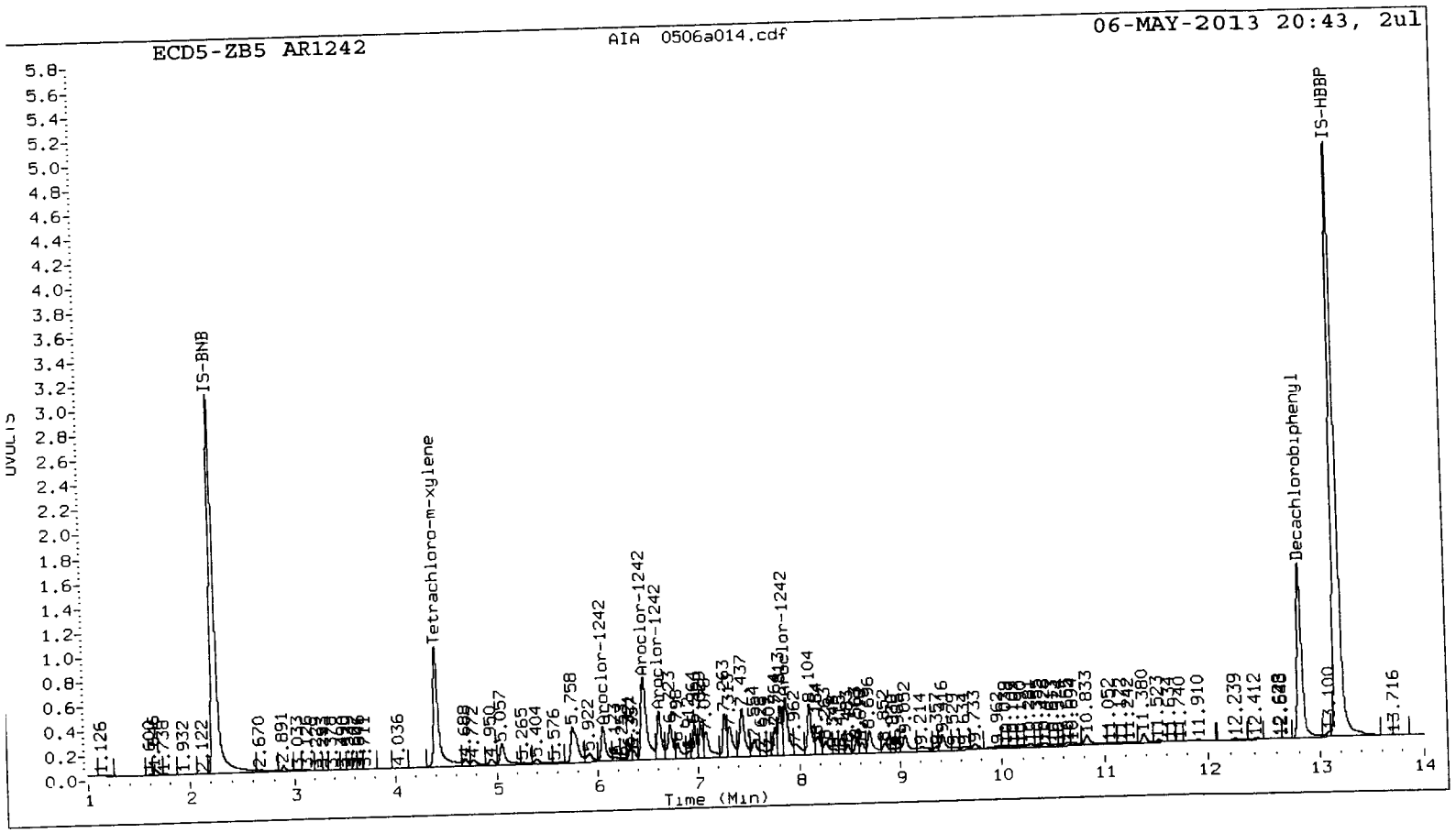
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	6.055	0.000	4390849	272.8	1	6.161	0.000	1554886	257.3
Aroclor-1242	2	6.462	0.000	13615429	274.8	2	6.798	0.000	2844223	220.7
Aroclor-1242	3	6.612	0.000	6111844	278.5	3	7.005	0.000	1422803	263.4
Aroclor-1242	4	7.867	0.000	7547288	274.9	4	8.233	0.000	1214547	273.3
Total Col1Ave (4 peaks):					275.3	Total Col2Ave (4 peaks):				253.7 RPD = 8
Corrected Ave (3 peaks):					274.2	Corrected Ave (3 peaks):				247.1 RPD = 10

Total PCB Area Col1 (4.515 - 12.732) = 138276385 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 26193252 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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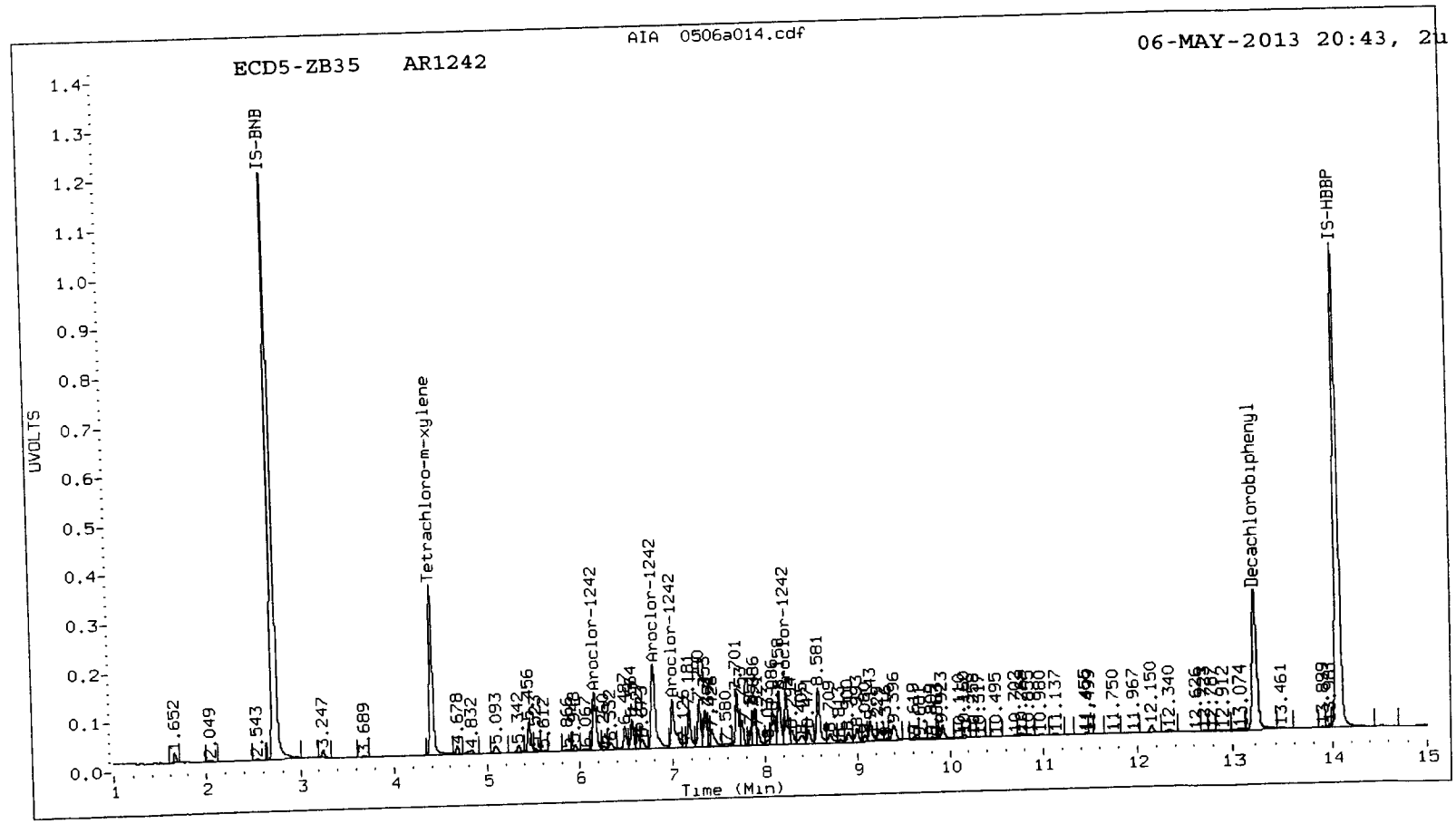
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a015.d
Data file 2: 20130416.b/0506-2.b/0506a015.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 06-MAY-2013 21:03
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.403	-0.012	15580491	4.405	-0.011	3796970	21.5	19.9	7.6	Tetrachloro-m-xylen
12.823	-0.008	21493406	13.200	-0.007	3805998	18.3	19.4	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	53.7	49.8
Decachlorobiphenyl	45.8	48.5

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	44586778	-8.3
Hexabromobiphenyl	81878684	76967556	-6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	12959627	-10.4
Hexabromobiphenyl	16263628	14141138	-13.1

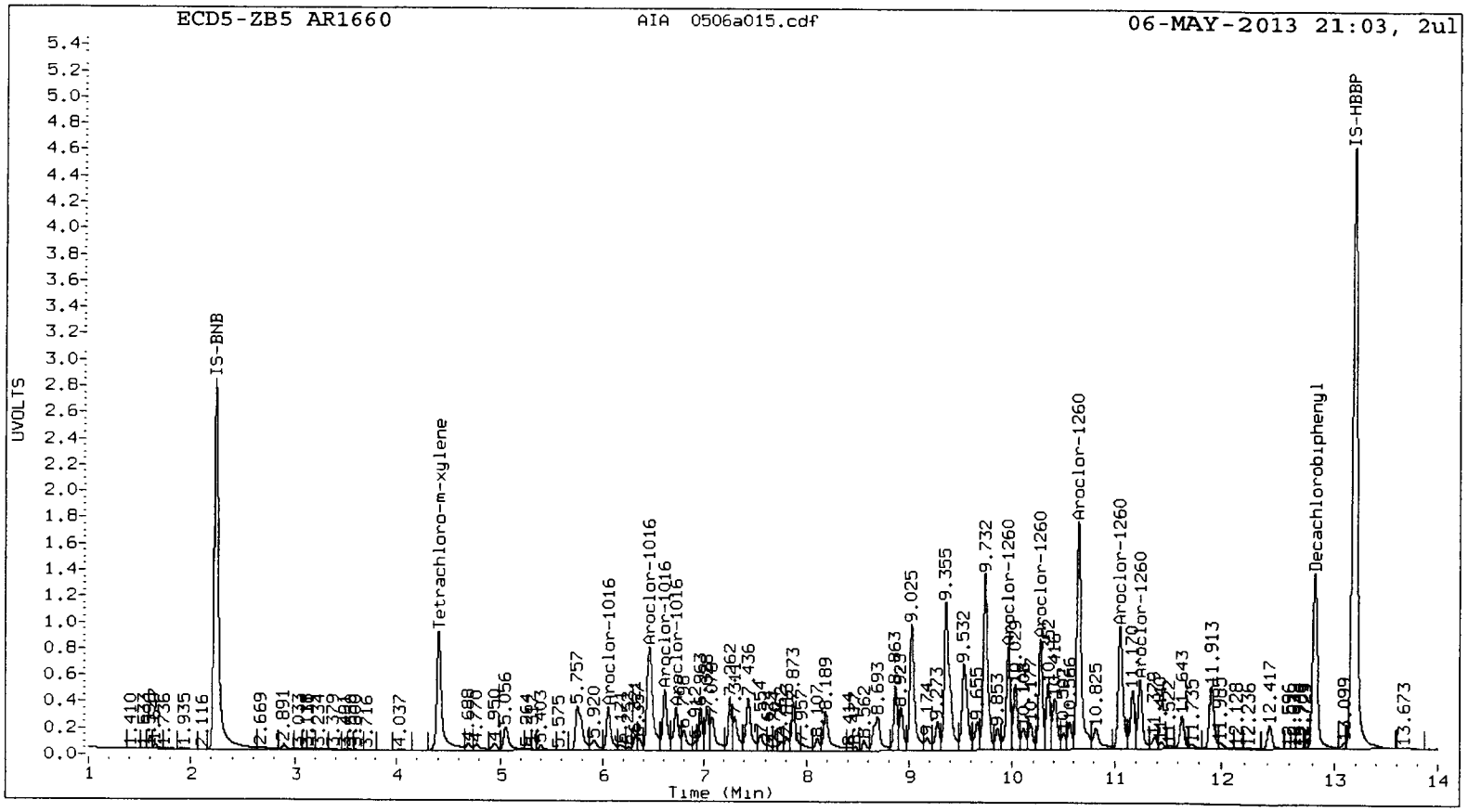
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.054	-0.009	4992632	264.2	1	6.160	-0.008	1800646	239.5
Aroclor-1016	2	6.462	-0.008	15773434	268.0	2	6.799	-0.005	3290991	207.9
Aroclor-1016	3	6.611	-0.009	7051536	274.8	3	7.181	-0.005	1067005	258.6
Aroclor-1016	4	6.723	-0.008	5212242	288.3	4	7.353	-0.007	959033	251.0
Total Col1Ave (4 peaks):					273.8	Total Col2Ave (4 peaks):				239.3 RPD = 13
Corrected Ave (3 peaks):					269.0	Corrected Ave (3 peaks):				232.8 RPD = 14
Aroclor-1260	1	9.962	-0.008	10961857	257.5	1	10.257	-0.007	2070806	263.3
Aroclor-1260	2	10.279	-0.008	11161782	249.0	2	10.706	-0.005	2584368	273.0
Aroclor-1260	3	10.654	-0.008	27513832	254.2	3	10.982	-0.005	5032062	265.8
Aroclor-1260	4	11.054	-0.007	14228119	245.4	4	11.502	-0.006	1485238	275.1
Aroclor-1260	5	11.243	-0.008	7947451	258.7	NS	---			----
Total Col1Ave (5 peaks):					252.9	Total Col2Ave (4 peaks):				269.3 RPD = 6
Corrected Ave (4 peaks):					251.5	Corrected Ave (3 peaks):				267.4 RPD = 6

Total PCB Area Col1 (4.515 - 12.732) = 333187228 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 64515442 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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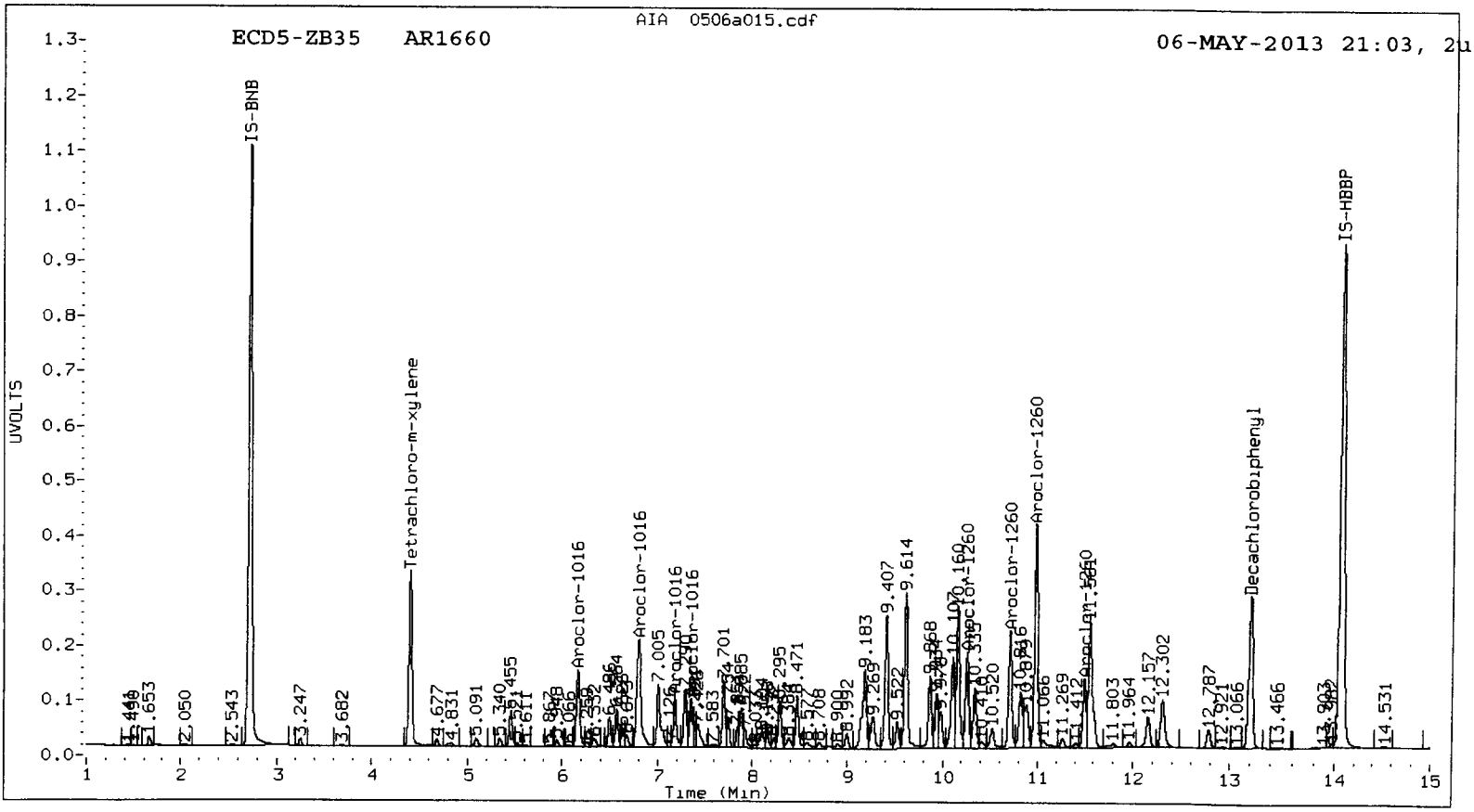
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a016.d
Data file 2: 20130416.b/0506-2.b/0506a016.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WN27A
Client ID:
Injection Date: 06-MAY-2013 21:23
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.409	-0.006	27111548	4.411	-0.004	7022426	31.5	29.6	6.3	Tetrachloro-m-xylen
12.845	0.014	34631279	13.216	0.008	5602104	37.9	32.5	15.2	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	78.8	74.0
Decachlorobiphenyl	94.6	81.3

JA 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	52899222	8.7
Hexabromobiphenyl	81878684	60035869	-26.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	16132918	11.6
Hexabromobiphenyl	16263628	12426771	-23.6

* 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	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.059	-0.005	1729589	77.1	1	6.167	-0.001	623590	66.6
Aroclor-1016	2	6.427	-0.043	9210514	131.9	2	6.803	0.000	1351505	68.6
Aroclor-1016	3	6.614	-0.006	1663771	54.6	3	7.149	-0.037	1210378	235.6
Aroclor-1016	4	6.701	-0.030	3392390	158.2	4	7.357	-0.003	615427	129.4
Total Col1Ave (4 peaks):					105.5	Total Col2Ave (4 peaks):				125.1 RPD = 17
Corrected Ave (3 peaks):					87.9	Corrected Ave (3 peaks):				88.2 RPD = 0
Aroclor-1221	1	5.062	0.006	667562	31.6	1	3.681	-0.007	5749012	3415.0
Aroclor-1221	2	6.427	-0.037	9210514	1380.3	2	5.102	0.014	362903	137.7
Aroclor-1221	3	7.877	0.001	7409815	802.7	3	5.372	0.031	3222598	2023.3
Aroclor-1221	NS	---			----	4	5.483	0.028	1324985	275.5
Total Col1Ave (3 peaks):					738.2	Total Col2Ave (4 peaks):				1462.9 RPD = 66*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				812.2
Aroclor-1232	1	6.059	0.005	1729589	185.8	1	6.167	0.006	623590	155.5
Aroclor-1232	2	6.427	-0.034	9210514	321.0	2	6.803	0.006	1351505	171.5
Aroclor-1232	3	7.438	0.000	4597730	317.0	3	7.018	0.012	2360836	716.6
Aroclor-1232	4	7.877	0.005	7409815	435.7	4	8.240	0.003	711242	263.6
Total Col1Ave (4 peaks):					314.9	Total Col2Ave (4 peaks):				326.8 RPD = 4
Corrected Ave (3 peaks):					274.6	Corrected Ave (3 peaks):				196.9 RPD = 33
Aroclor-1242	1	6.059	0.003	1729589	99.4	1	6.167	0.006	623590	90.0
Aroclor-1242	2	6.427	-0.035	9210514	171.9	2	6.803	0.005	1351505	91.4
Aroclor-1242	3	6.614	0.002	1663771	70.1	3	7.018	0.013	2360836	381.0
Aroclor-1242	4	7.877	0.010	7409815	249.6	4	8.240	0.007	711242	139.5
Total Col1Ave (4 peaks):					147.7	Total Col2Ave (4 peaks):				175.5 RPD = 17
Corrected Ave (3 peaks):					113.8	Corrected Ave (3 peaks):				107.0 RPD = 6
Aroclor-1248	1	6.427	-0.041	9210514	275.7	1	6.803	0.003	1351505	149.8
Aroclor-1248	2	7.438	-0.006	4597730	124.2	2	7.706	-0.001	1305698	176.3
Aroclor-1248	3	7.877	0.001	7409815	155.1	3	8.240	0.002	711242	93.3
Aroclor-1248	4	8.093	-0.018	33215265	982.3	4	8.612	0.029	6550788	658.1
Total Col1Ave (4 peaks):					384.3	Total Col2Ave (4 peaks):				269.4 RPD = 35
Corrected Ave (3 peaks):					303.0	Corrected Ave (3 peaks):				139.8 RPD = 28
Aroclor-1254	1	8.182	-0.011	15556728	316.1	1	8.302	0.005	2162756	291.2
Aroclor-1254	2	8.583	0.017	9802280	300.1	2	8.497	0.024	7658075	835.2
Aroclor-1254	3	8.702	0.001	13319433	203.2	3	9.003	0.008	1867047	263.4
Aroclor-1254	4	9.039	-0.014	17572883	249.8	4	9.152	0.005	2821701	184.2
Aroclor-1254	5	9.369	0.005	21436685	740.2	5	9.942	0.011	2146407	242.7
Total Col1Ave (5 peaks):					261.9	Total Col2Ave (5 peaks):				363.3 RPD = 0
Corrected Ave (4 peaks):					267.3	Corrected Ave (4 peaks):				245.4 RPD = 9
Aroclor-1260	1	9.979	0.009	7700503	231.9	1	10.273	0.010	1733089	250.8
Aroclor-1260	2	10.294	0.008	7417176	212.1	2	10.718	0.007	2699818	324.5
Aroclor-1260	3	10.681	0.020	17005875	201.4	3	11.000	0.013	4593803	276.1
Aroclor-1260	4	11.072	0.011	12126171	268.2	4	11.519	0.011	1152192	242.8
Aroclor-1260	5	11.266	0.015	6865424	286.5	NS	---			----
Total Col1Ave (5 peaks):					240.0	Total Col2Ave (4 peaks):				273.6 RPD = 13
Corrected Ave (4 peaks):					228.4	Corrected Ave (3 peaks):				256.6 RPD = 12
Aroclor-1262	1	10.294	0.012	7417176	192.5	1	10.273	0.012	1733089	168.5
Aroclor-1262	2	10.681	0.022	17005875	169.5	2	10.718	0.007	2699818	303.0
Aroclor-1262	3	11.072	0.013	12126171	340.3	3	11.000	0.013	4593803	223.5
Aroclor-1262	4	11.266	0.019	6865424	160.6	4	11.578	0.011	3025862	226.4
Aroclor-1262	5	11.926	0.008	15459782	368.5	5	12.325	0.016	1235474	153.8
Total Col1Ave (5 peaks):					246.3	Total Col2Ave (5 peaks):				215.0 RPD = 14
Corrected Ave (4 peaks):					215.7	Corrected Ave (4 peaks):				193.0 RPD = 11
Aroclor-1268	1	11.191	0.018	5480656	56.1	1	11.519	0.013	1152192	55.4

Aroclor-1268	2	11.266	0.021	6865424	70.3	2	11.578	0.005	3025862	147.4
Aroclor-1268	3	11.662	0.032	2634204	31.2	3	11.982	0.014	157713	9.3
Aroclor-1268	4	12.439	0.018	2392206	9.7	4	12.808	0.016	361570	7.2

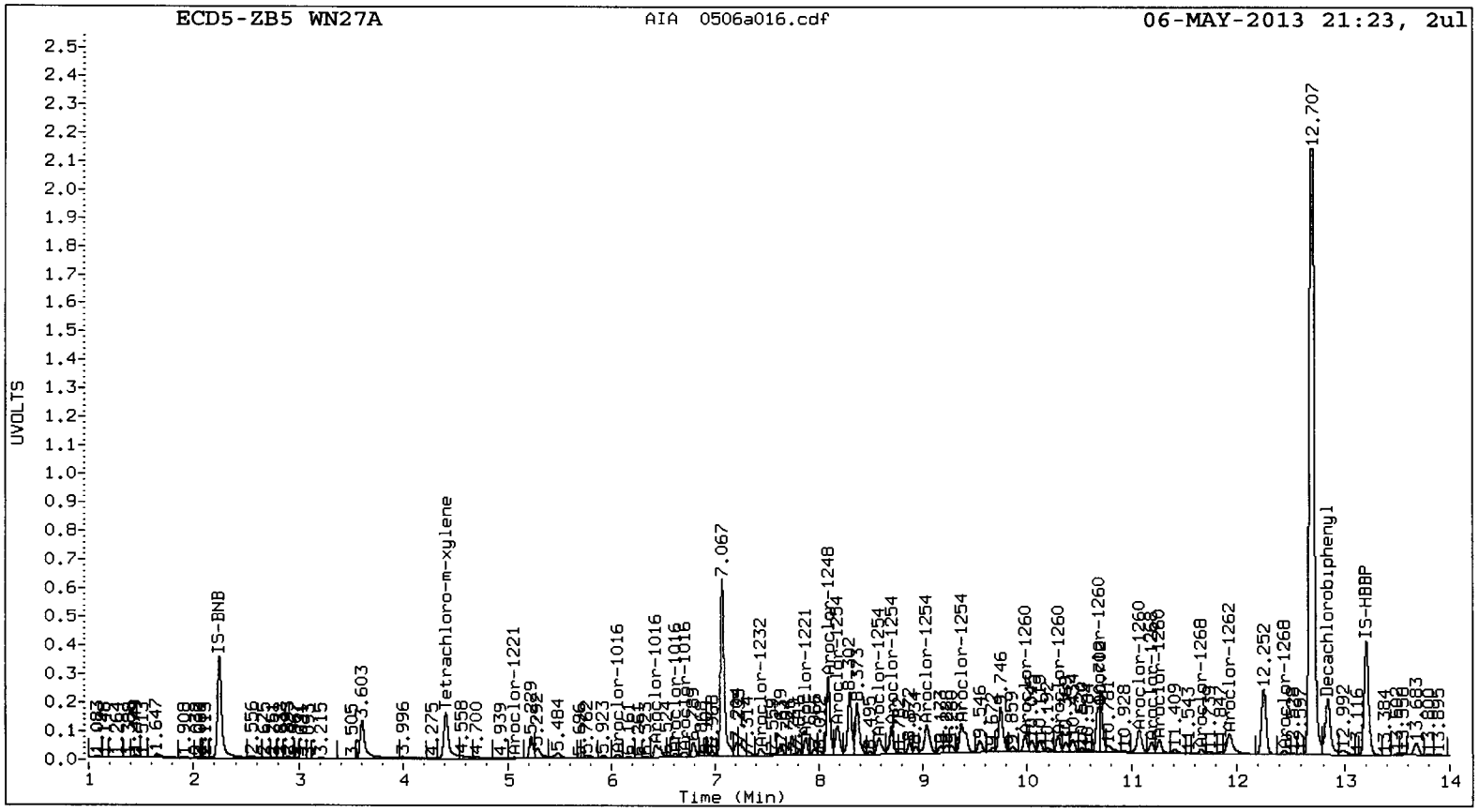
Total Col1Ave (4 peaks): 41.8 Total Col2Ave (4 peaks): 54.8 RPD = 27

Corrected Ave (3 peaks): 32.3 Corrected Ave (3 peaks): 24.0 RPD = 30

Total PCB Area Col1 (4.515 - 12.732) = 917608079 Col1 Total PCB = 1.4 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 144670888 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
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Decachlorobiphenyl
IS-HBBP
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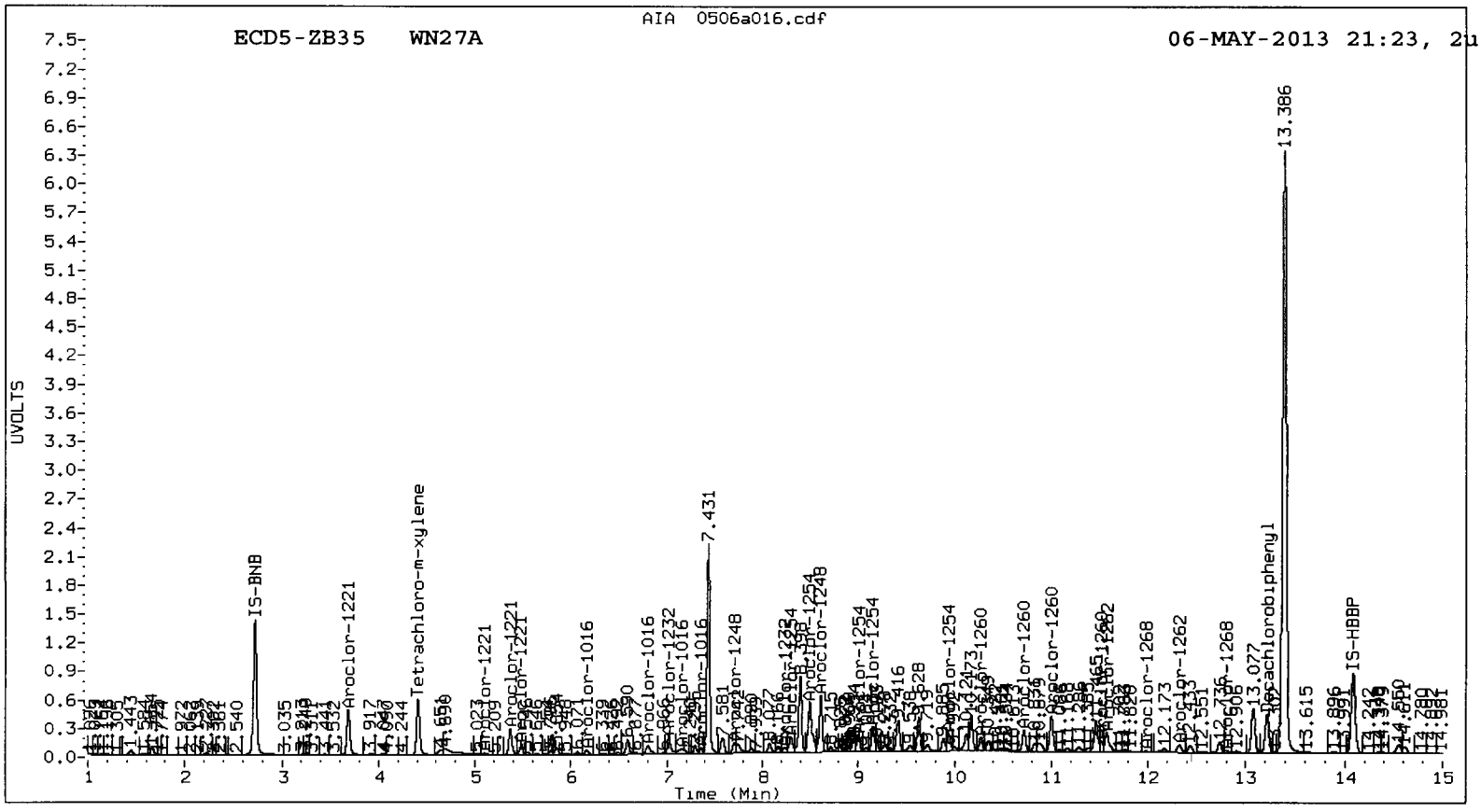
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Time (Min)
IS-BNB
Aroclor-1221
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
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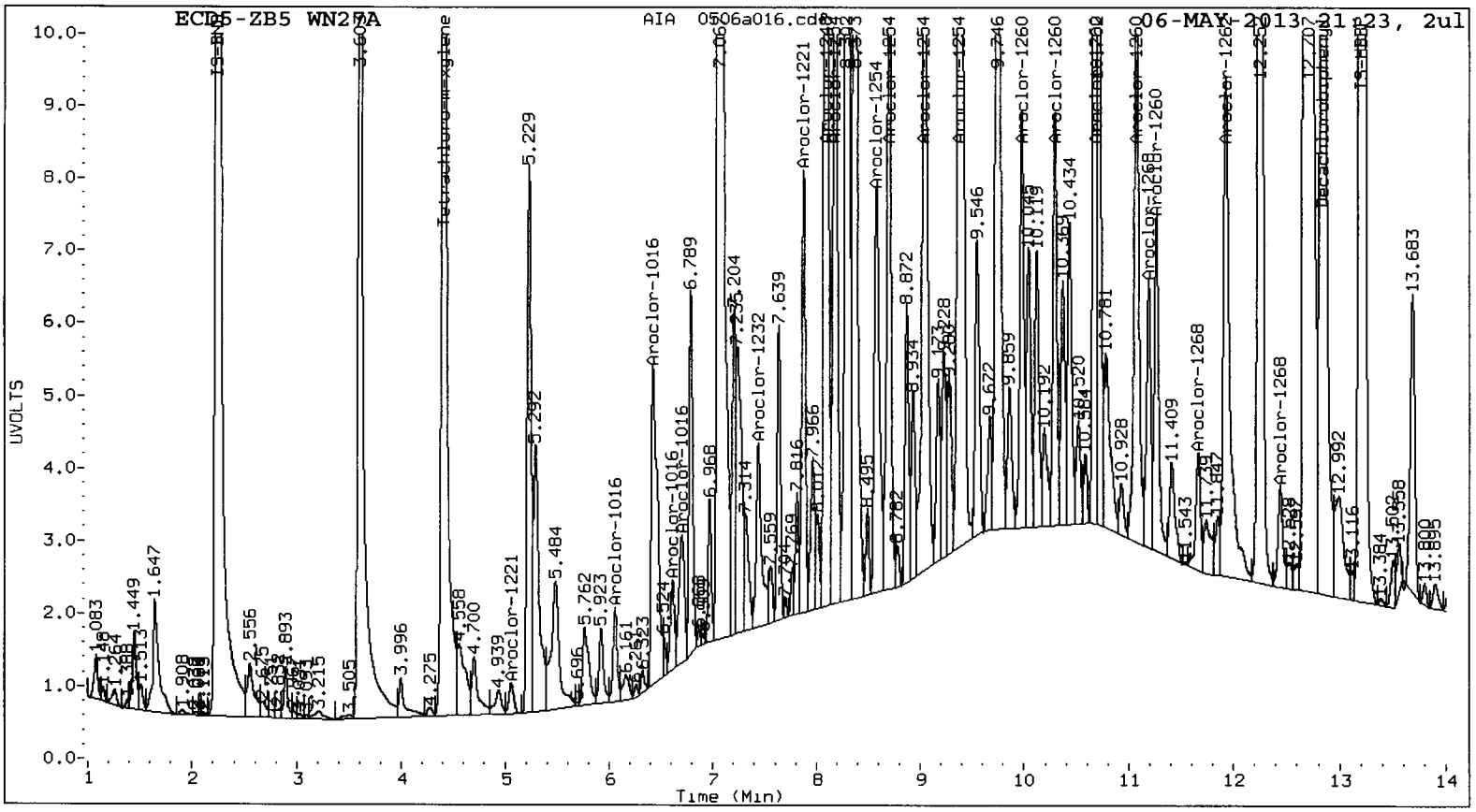
Decachlorobiphenyl
IS-HBBP
7.431
13.386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UVOLTS
Time (Min)
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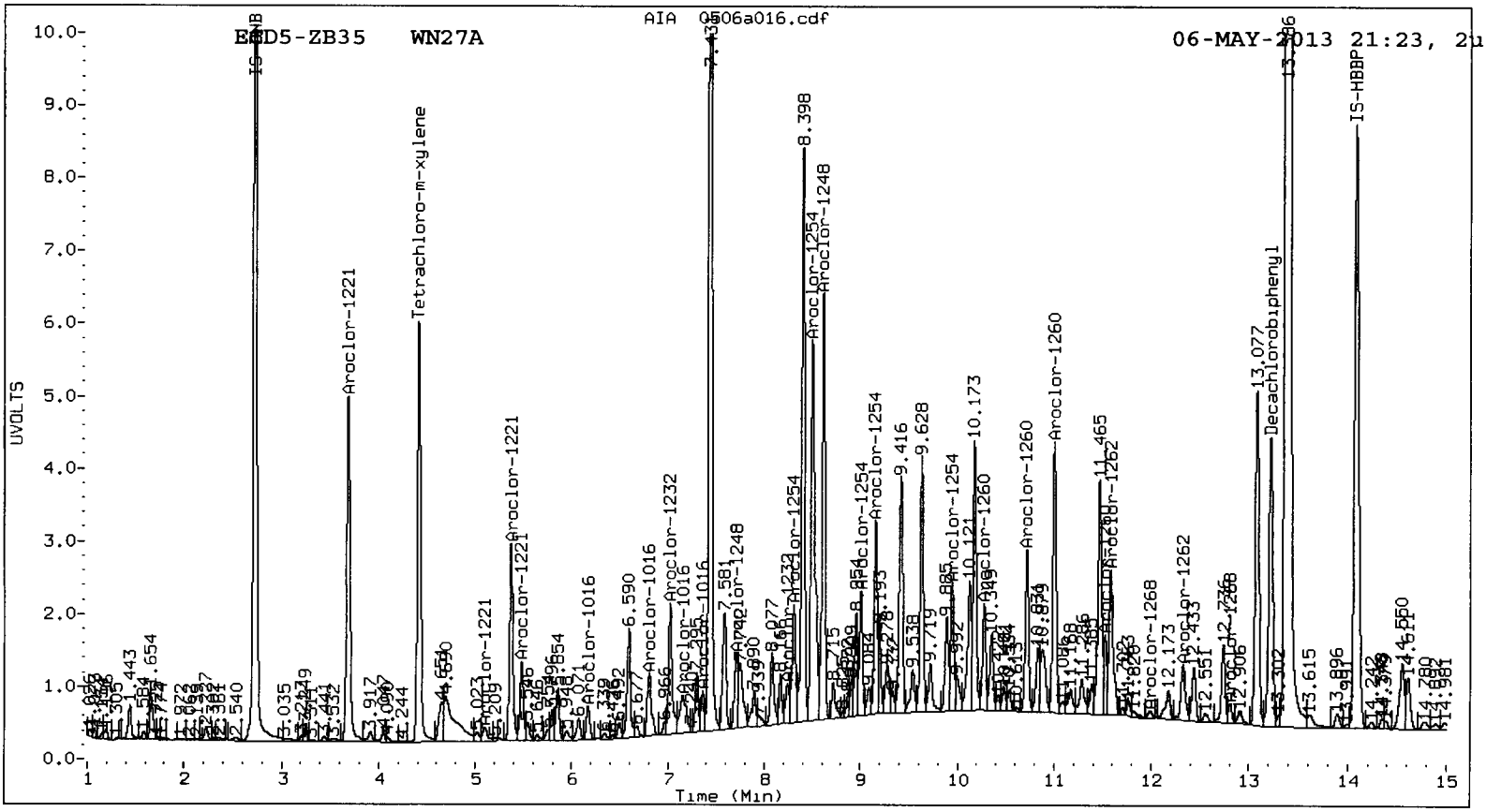
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a017.d
Data file 2: 20130416.b/0506-2.b/0506a017.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WN27AMS
Client ID:
Injection Date: 06-MAY-2013 21:43
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.412	-0.003	29328408	4.414	-0.002	7063863	35.8	31.8	11.7	Tetrachloro-m-xylen
12.845	0.013	29282944	13.219	0.011	5765356	40.0	42.6	6.3	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	89.5	79.6
Decachlorobiphenyl	100.0	106.5

5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50387145	3.6
Hexabromobiphenyl	81878684	48042336	-41.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	15088103	4.4
Hexabromobiphenyl	16263628	9761622	-40.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.061	-0.002	8135296	381.0	1	6.167	-0.002	3295162	376.4
Aroclor-1016	2	6.466	-0.004	33511044	503.8	2	6.801	-0.002	7454736	404.6
Aroclor-1016	3	6.616	-0.004	11297932	389.6	3	7.185	-0.001	2713094	564.7
Aroclor-1016	4	6.725	-0.005	10150018	496.8	4	7.360	0.000	1831749	411.8
	Total Col1Ave (4 peaks):				442.8		Total Col2Ave (4 peaks):			439.4 RPD = 1
	Corrected Ave (3 peaks):				422.5		Corrected Ave (3 peaks):			397.6 RPD = 6
Aroclor-1221	1	5.063	0.008	4608364	229.0	1	3.683	-0.006	5188757	3295.7
Aroclor-1221	2	6.466	0.002	33511044	5272.4	2	5.100	0.012	481653	195.4
Aroclor-1221	3	7.881	0.005	12167765	1383.8	3	5.372	0.032	3210906	2155.6
Aroclor-1221	NS	---			----	4	5.472	0.017	2413263	536.6
	Total Col1Ave (3 peaks):				2295.0		Total Col2Ave (4 peaks):			1545.8 RPD = 39
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			962.5
Aroclor-1232	1	6.061	0.007	8135296	917.4	1	6.167	0.005	3295162	878.4
Aroclor-1232	2	6.466	0.005	33511044	1226.0	2	6.801	0.004	7454736	1011.6
Aroclor-1232	3	7.443	0.005	12472084	902.9	3	7.014	0.007	4794066	1556.0
Aroclor-1232	4	7.881	0.009	12167765	751.2	4	8.241	0.004	900589	356.9
	Total Col1Ave (4 peaks):				949.4		Total Col2Ave (4 peaks):			950.7 RPD = 0
	Corrected Ave (3 peaks):				857.2		Corrected Ave (3 peaks):			749.0 RPD = 13
Aroclor-1242	1	6.061	0.006	8135296	490.6	1	6.167	0.006	3295162	508.3
Aroclor-1242	2	6.466	0.003	33511044	656.5	2	6.801	0.003	7454736	539.1
Aroclor-1242	3	6.616	0.004	11297932	499.7	3	7.014	0.008	4794066	827.2
Aroclor-1242	4	7.881	0.013	12167765	430.3	4	8.241	0.008	900589	188.9
	Total Col1Ave (4 peaks):				519.3		Total Col2Ave (4 peaks):			515.9 RPD = 1
	Corrected Ave (3 peaks):				473.5		Corrected Ave (3 peaks):			412.1 RPD = 14
Aroclor-1248	1	6.466	-0.002	33511044	1053.2	1	6.801	0.001	7454736	883.2
Aroclor-1248	2	7.443	-0.002	12472084	353.8	2	7.708	0.001	3393823	489.9
Aroclor-1248	3	7.881	0.005	12167765	267.4	3	8.241	0.003	900589	126.3
Aroclor-1248	4	8.096	-0.015	35159881	1091.7	4	8.613	0.030	6644851	713.8
	Total Col1Ave (4 peaks):				691.9		Total Col2Ave (4 peaks):			553.3 RPD = 22
	Corrected Ave (3 peaks):				568.1		Corrected Ave (3 peaks):			443.3 RPD = 23
Aroclor-1254	1	8.190	-0.004	20264237	432.3	1	8.303	0.006	2865306	412.6
Aroclor-1254	2	8.585	0.018	10311347	331.5	2	8.495	0.022	8597228	1002.6
Aroclor-1254	3	8.705	0.003	16784869	268.8	3	9.005	0.010	1347083	203.2
Aroclor-1254	4	9.039	-0.014	30996073	462.5	4	9.153	0.007	3031458	211.6
Aroclor-1254	5	9.374	0.010	41457436	1502.9	5	9.945	0.014	3056318	369.5
	Total Col1Ave (5 peaks):				599.6		Total Col2Ave (5 peaks):			429.9 RPD = 31
	Corrected Ave (4 peaks):				373.8		Corrected Ave (4 peaks):			299.2 RPD = 22
Aroclor-1260	1	9.979	0.009	16329679	614.4	1	10.273	0.010	4055150	747.0
Aroclor-1260	2	10.295	0.008	18316113	654.5	2	10.720	0.009	5187913	793.8
Aroclor-1260	3	10.677	0.016	58792745	870.1	3	10.999	0.012	10090477	772.0
Aroclor-1260	4	11.073	0.012	24489115	676.8	4	11.519	0.011	2548214	683.7
Aroclor-1260	5	11.264	0.013	14142113	737.5	NS	---			----
	Total Col1Ave (5 peaks):				710.7		Total Col2Ave (4 peaks):			749.1 RPD = 5
	Corrected Ave (4 peaks):				670.8		Corrected Ave (3 peaks):			734.3 RPD = 9
Aroclor-1262	1	10.295	0.012	18316113	593.9	1	10.273	0.013	4055150	501.8
Aroclor-1262	2	10.677	0.019	58792745	732.1	2	10.720	0.010	5187913	741.2
Aroclor-1262	3	11.073	0.014	24489115	858.9	3	10.999	0.012	10090477	625.0
Aroclor-1262	4	11.264	0.018	14142113	413.3	4	11.577	0.010	6384860	608.1
Aroclor-1262	5	11.932	0.014	19085969	568.4	5	12.320	0.012	2306998	365.6
	Total Col1Ave (5 peaks):				633.3		Total Col2Ave (5 peaks):			568.3 RPD = 11
	Corrected Ave (4 peaks):				576.9		Corrected Ave (4 peaks):			525.1 RPD = 9
Aroclor-1268	1	11.192	0.018	10565625	135.0	1	11.519	0.013	2548214	155.9

Aroclor-1268 2	11.264	0.020	14142113	181.0	2	11.577	0.004	6384860	396.0
Aroclor-1268 3	11.661	0.031	4809516	71.2	3	11.982	0.013	311101	23.3
Aroclor-1268 4	12.441	0.020	3641165	18.5	4	12.807	0.015	700072	17.8

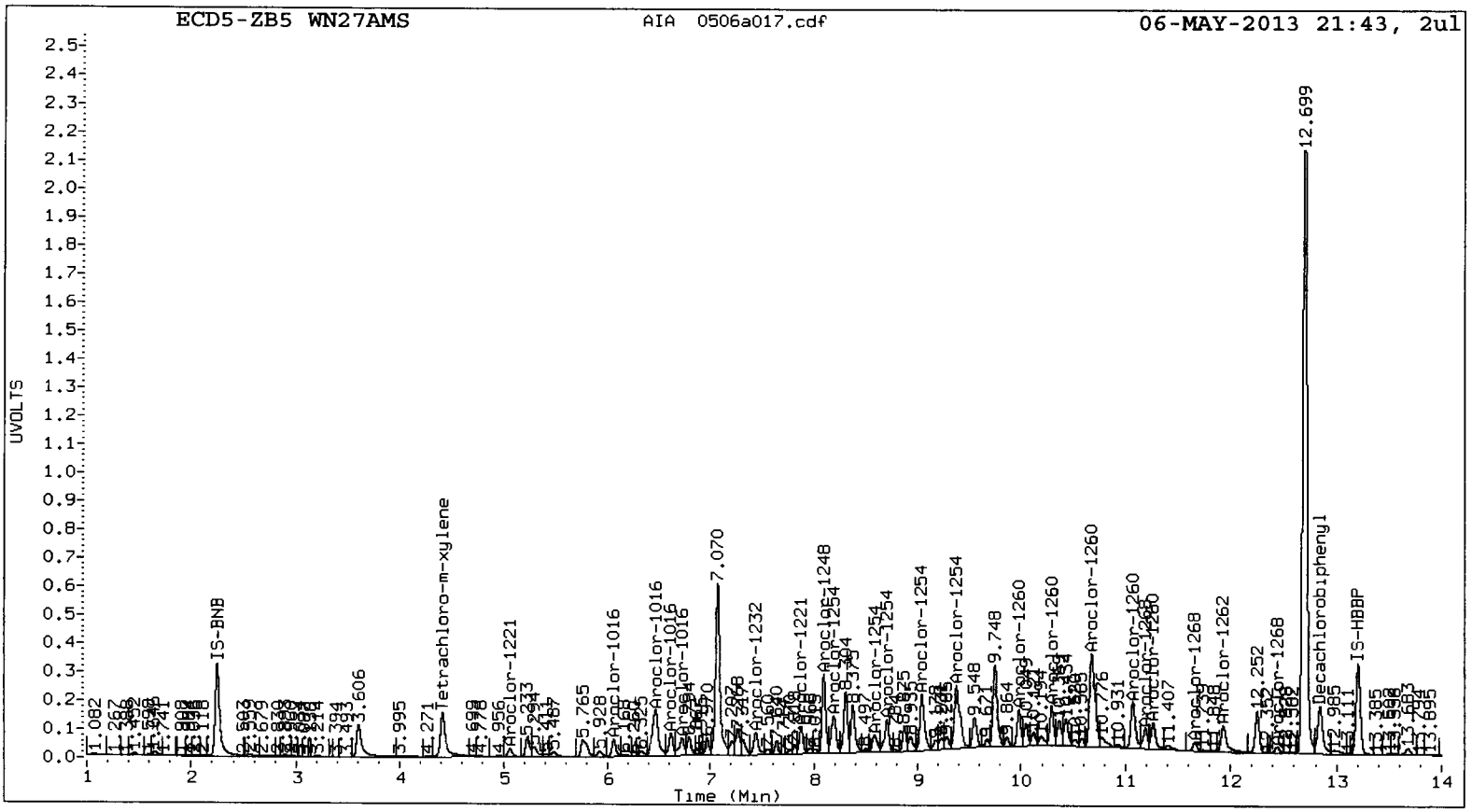
Total Col1Ave (4 peaks): 101.4 Total Col2Ave (4 peaks): 148.2 RPD = 37

Corrected Ave (3 peaks): 74.9 Corrected Ave (3 peaks): 65.7 RPD = 13

Total PCB Area Col1 (4.515 - 12.732) = 1177241131 Col1 Total PCB = 1.9 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 212156697 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
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10.931
11.407
12.252
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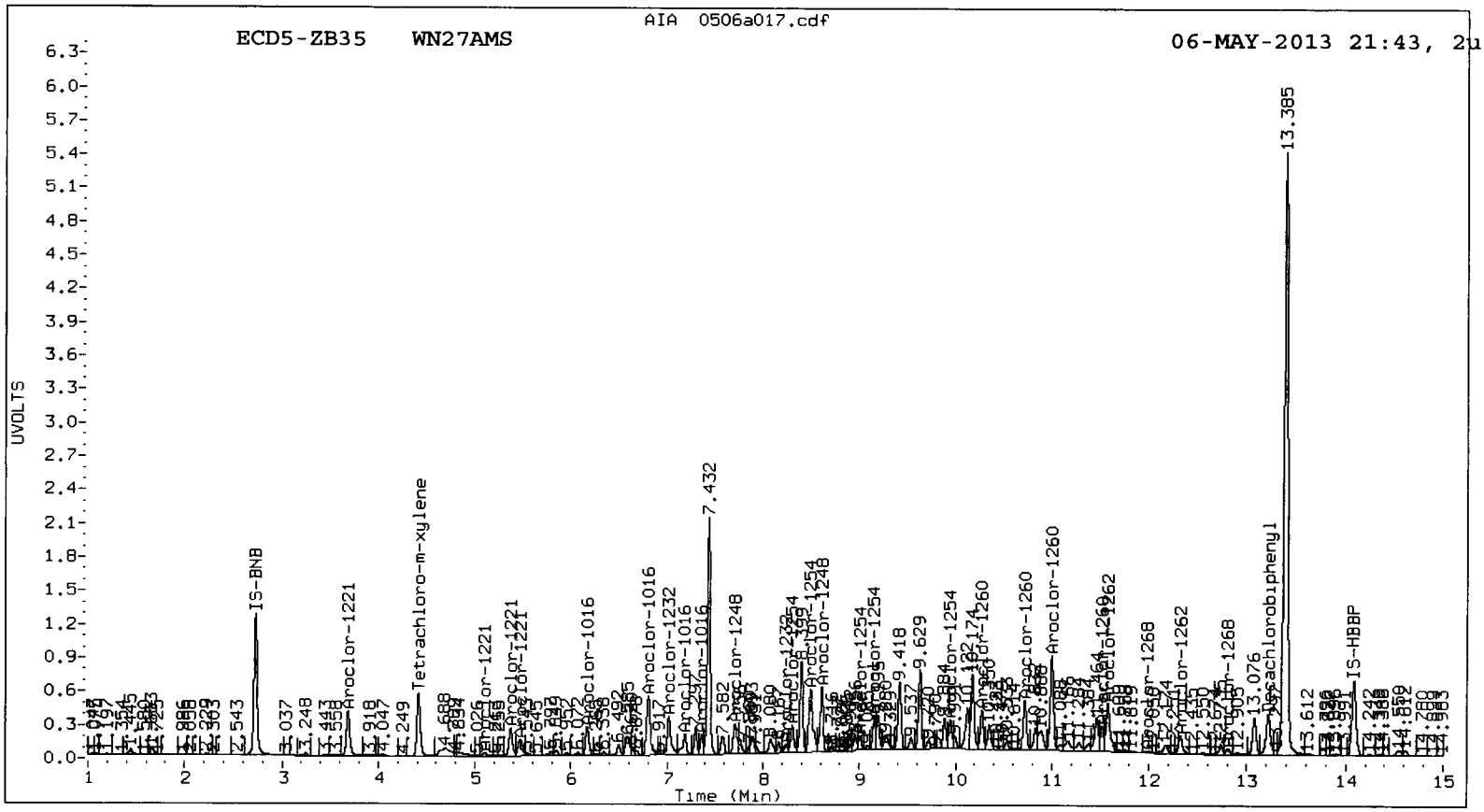
13.111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Time (Min)
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Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
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Decachlorobiphenyl
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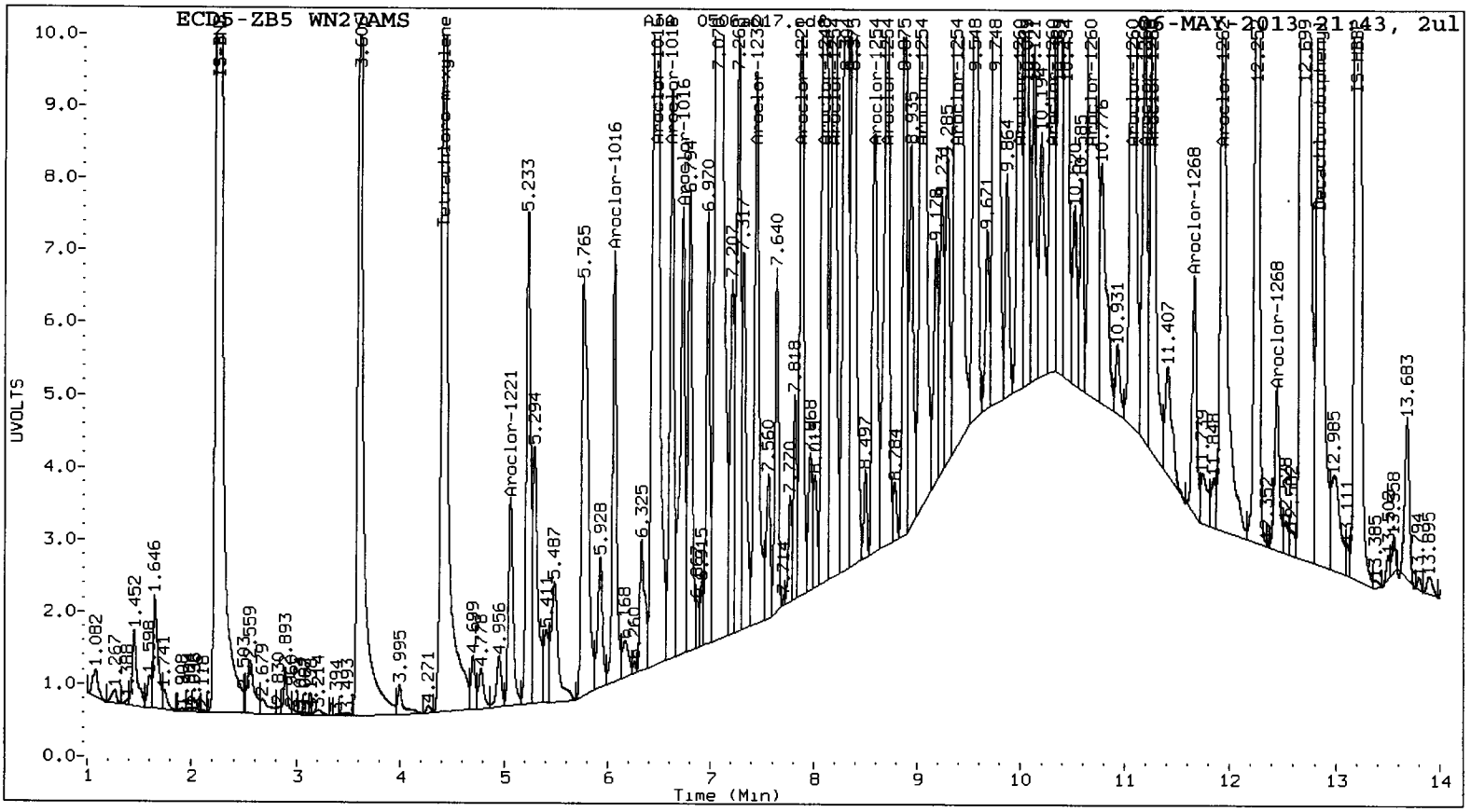
9.629
13.076
13.385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Aroclor-1016
Aroclor-1232
Aroclor-1248
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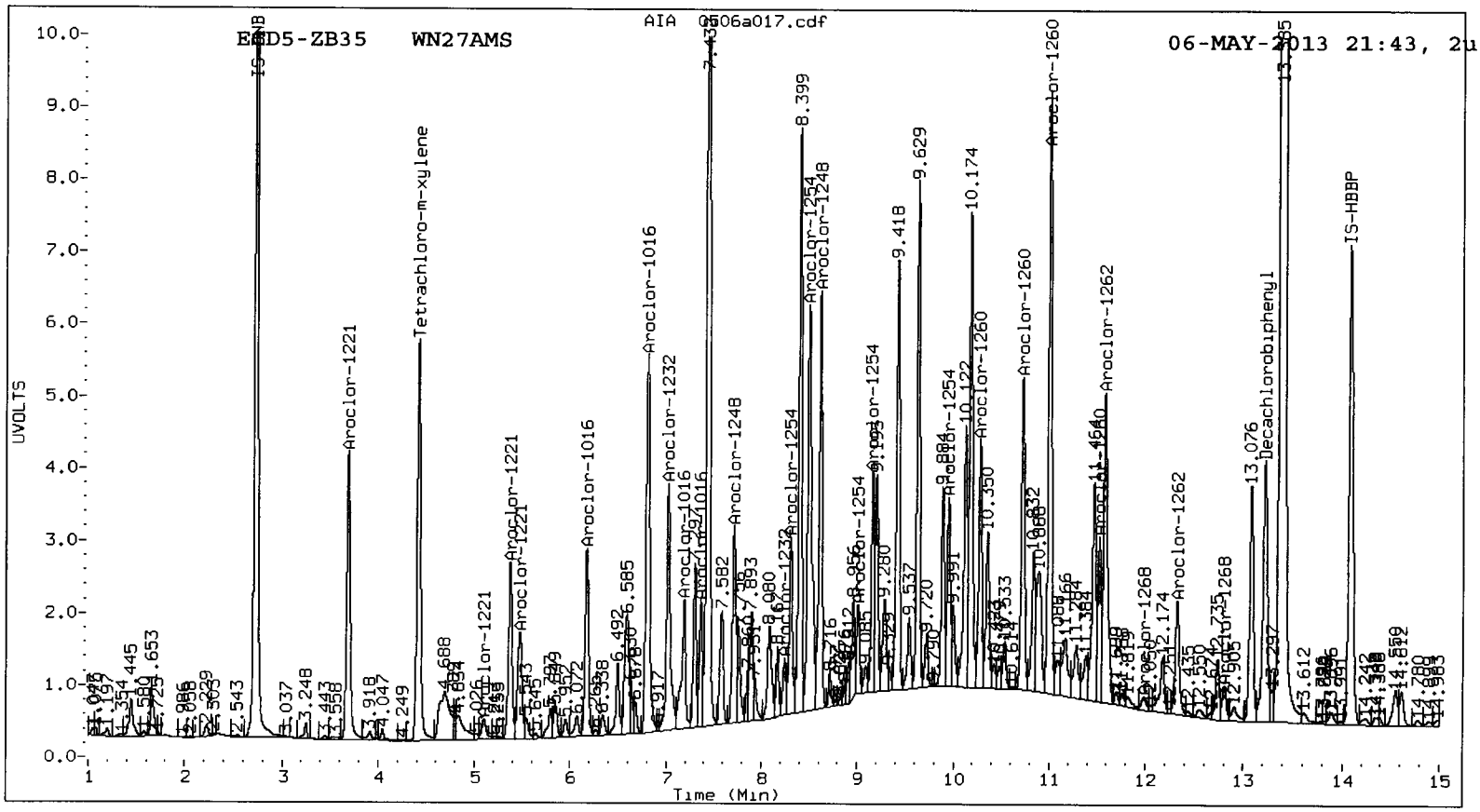
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a018.d
Data file 2: 20130416.b/0506-2.b/0506a018.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WN72AMSD
Client ID:
Injection Date: 06-MAY-2013 22:03
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.412	-0.003	29594399	4.416	0.001	7089877	35.9	32.3	10.5	Tetrachloro-m-xylen
12.845	0.013	27442056	13.212	0.004	5080182	40.7	39.4	3.2	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	89.7	80.8
Decachlorobiphenyl	101.8	98.5

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50682807	4.2
Hexabromobiphenyl	81878684	44241720	-46.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14914589	3.2
Hexabromobiphenyl	16263628	9296772	-42.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.062	-0.002	8138344	378.9	1	6.170	0.001	3306178	382.1
Aroclor-1016	2	6.465	-0.005	32737621	489.3	2	6.803	0.000	7587023	416.5
Aroclor-1016	3	6.616	-0.004	10773681	369.3	3	7.187	0.001	2686605	565.7
Aroclor-1016	4	6.726	-0.005	9909658	482.2	4	7.363	0.003	1812933	412.3
Total Col1Ave (4 peaks):					429.9	Total Col2Ave (4 peaks):				444.2 RPD = 3
Corrected Ave (3 peaks):					410.1	Corrected Ave (3 peaks):				403.7 RPD = 2
Aroclor-1221	1	5.064	0.008	4596844	227.1	1	3.687	-0.002	5376152	3454.4
Aroclor-1221	2	6.465	0.002	32737621	5120.7	2	5.103	0.016	429424	176.2
Aroclor-1221	3	7.881	0.006	12359022	1397.3	3	5.375	0.035	3459349	2349.4
Aroclor-1221	NS	---			----	4	5.478	0.023	2482982	558.5
Total Col1Ave (3 peaks):					2248.3	Total Col2Ave (4 peaks):				1634.6 RPD = 32
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				1028.1
Aroclor-1232	1	6.062	0.008	8138344	912.4	1	6.170	0.008	3306178	891.6
Aroclor-1232	2	6.465	0.004	32737621	1190.7	2	6.803	0.006	7587023	1041.5
Aroclor-1232	3	7.443	0.005	10898279	784.4	3	7.017	0.010	4820534	1582.7
Aroclor-1232	4	7.881	0.010	12359022	758.6	4	8.243	0.006	556214	223.0
Total Col1Ave (4 peaks):					911.5	Total Col2Ave (4 peaks):				934.7 RPD = 3
Corrected Ave (3 peaks):					818.4	Corrected Ave (3 peaks):				718.7 RPD = 13
Aroclor-1242	1	6.062	0.006	8138344	487.9	1	6.170	0.009	3306178	515.9
Aroclor-1242	2	6.465	0.003	32737621	637.6	2	6.803	0.006	7587023	555.0
Aroclor-1242	3	6.616	0.004	10773681	473.7	3	7.017	0.011	4820534	841.4
Aroclor-1242	4	7.881	0.014	12359022	434.5	4	8.243	0.010	556214	118.0
Total Col1Ave (4 peaks):					508.4	Total Col2Ave (4 peaks):				507.6 RPD = 0
Corrected Ave (3 peaks):					465.4	Corrected Ave (3 peaks):				396.3 RPD = 16
Aroclor-1248	1	6.465	-0.003	32737621	1022.9	1	6.803	0.004	7587023	909.4
Aroclor-1248	2	7.443	-0.001	10898279	307.4	2	7.710	0.003	3366645	491.6
Aroclor-1248	3	7.881	0.005	12359022	270.0	3	8.243	0.005	556214	78.9
Aroclor-1248	4	8.096	-0.015	37783490	1166.3	4	8.615	0.032	7012378	762.1
Total Col1Ave (4 peaks):					691.6	Total Col2Ave (4 peaks):				560.5 RPD = 21
Corrected Ave (3 peaks):					500.4	Corrected Ave (3 peaks):				440.2 RPD = 18
Aroclor-1254	1	8.190	-0.004	22620745	479.8	1	8.305	0.008	2904712	423.1
Aroclor-1254	2	8.581	0.015	11270152	360.2	2	8.497	0.023	9286519	1095.6
Aroclor-1254	3	8.705	0.004	18683480	297.4	3	9.004	0.009	1720409	262.5
Aroclor-1254	4	9.042	-0.011	30492983	452.3	4	9.156	0.010	3528482	249.2
Aroclor-1254	5	9.372	0.008	43737985	1576.3	5	9.944	0.014	3263835	399.1
Total Col1Ave (5 peaks):					633.2	Total Col2Ave (5 peaks):				485.9 RPD = 26
Corrected Ave (4 peaks):					397.4	Corrected Ave (4 peaks):				333.5 RPD = 17
Aroclor-1260	1	9.981	0.010	13486187	551.0	1	10.274	0.011	4107624	794.5
Aroclor-1260	2	10.296	0.010	16501228	640.3	2	10.720	0.008	5191873	834.2
Aroclor-1260	3	10.678	0.016	56934217	915.0	3	11.000	0.013	9884980	794.1
Aroclor-1260	4	11.071	0.010	27012718	810.7	4	11.519	0.010	2683417	756.0
Aroclor-1260	5	11.264	0.013	14812532	838.8	NS	---			----
Total Col1Ave (5 peaks):					751.2	Total Col2Ave (4 peaks):				794.7 RPD = 6
Corrected Ave (4 peaks):					710.2	Corrected Ave (3 peaks):				781.5 RPD = 10
Aroclor-1262	1	10.296	0.014	16501228	581.0	1	10.274	0.014	4107624	533.7
Aroclor-1262	2	10.678	0.019	56934217	769.9	2	10.720	0.009	5191873	778.9
Aroclor-1262	3	11.071	0.012	27012718	1028.8	3	11.000	0.013	9884980	642.9
Aroclor-1262	4	11.264	0.017	14812532	470.1	4	11.579	0.011	7116704	711.7
Aroclor-1262	5	11.936	0.017	19818871	641.0	5	12.320	0.012	2266598	377.1
Total Col1Ave (5 peaks):					698.2	Total Col2Ave (5 peaks):				608.9 RPD = 14
Corrected Ave (4 peaks):					615.5	Corrected Ave (4 peaks):				566.4 RPD = 8
Aroclor-1268	1	11.190	0.017	11539173	160.1	1	11.519	0.013	2683417	172.4

Aroclor-1268	2	11.264	0.019	14812532	205.9	2	11.579	0.005	7116704	463.4
Aroclor-1268	3	11.599	-0.032	223255	3.6	3	11.982	0.013	451052	35.4
Aroclor-1268	4	12.439	0.018	5429387	29.9	4	12.803	0.011	761090	20.3

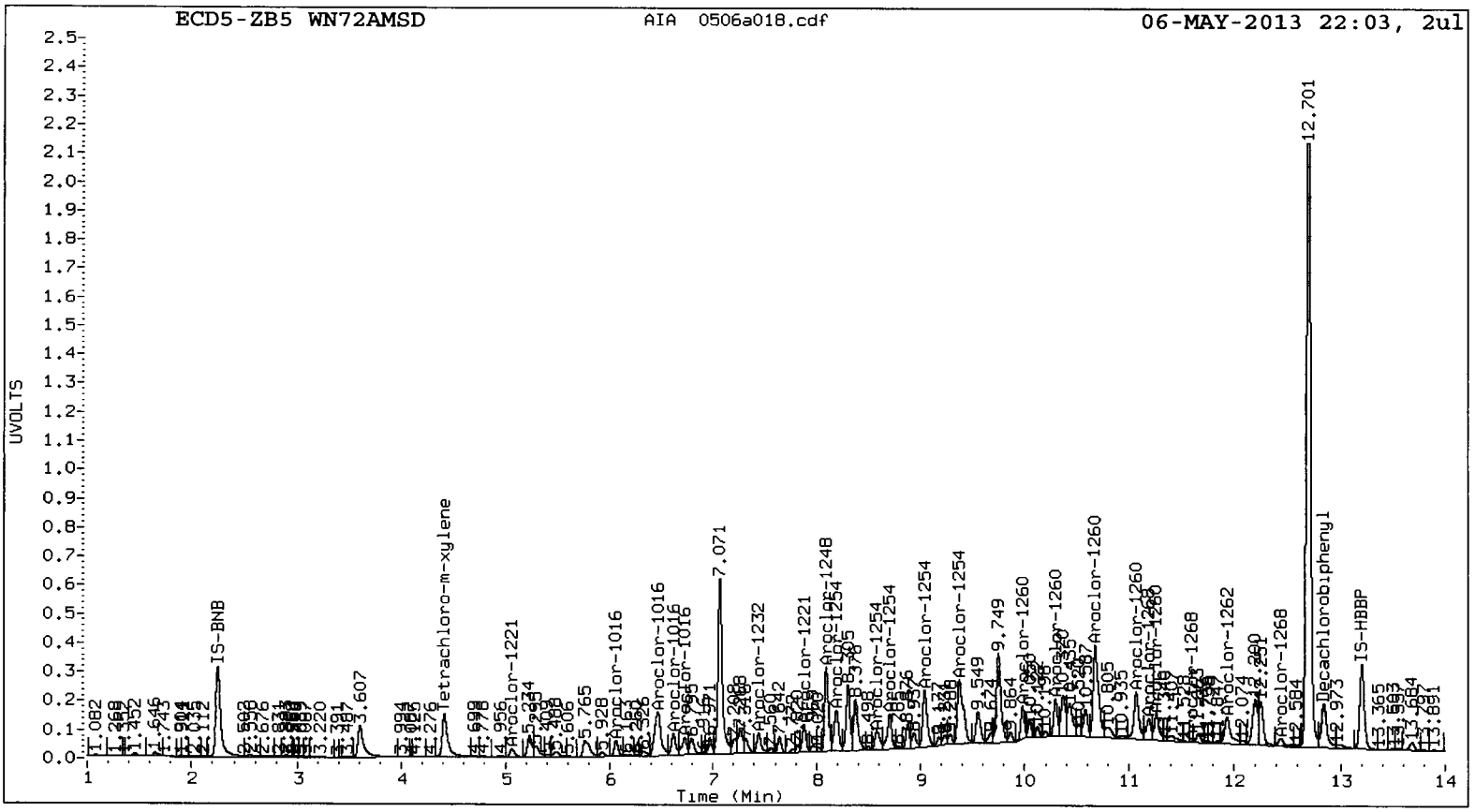
Total Col1Ave (4 peaks): 99.9 Total Col2Ave (4 peaks): 172.9 RPD = 54*

Corrected Ave (3 peaks): 64.6 Corrected Ave (3 peaks): 76.0 RPD = 16

Total PCB Area Col1 (4.515 - 12.732) = 1247904049 Col1 Total PCB = 2.0 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 227777928 Col2 Total PCB = 1.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
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Decachlorobiphenyl
IS-HBBP
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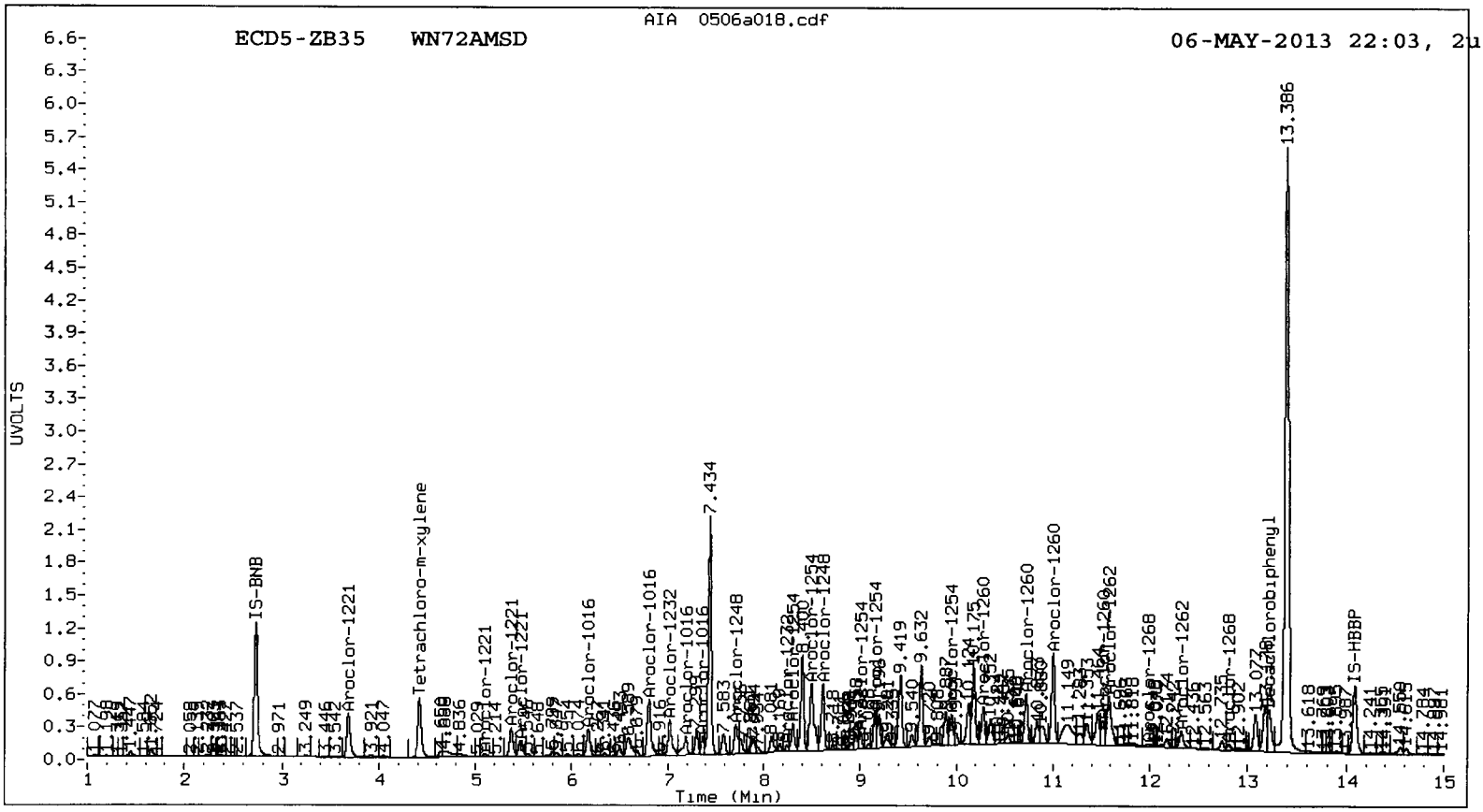
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Aroclor-1232
Aroclor-1248
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Decachlorobiphenyl
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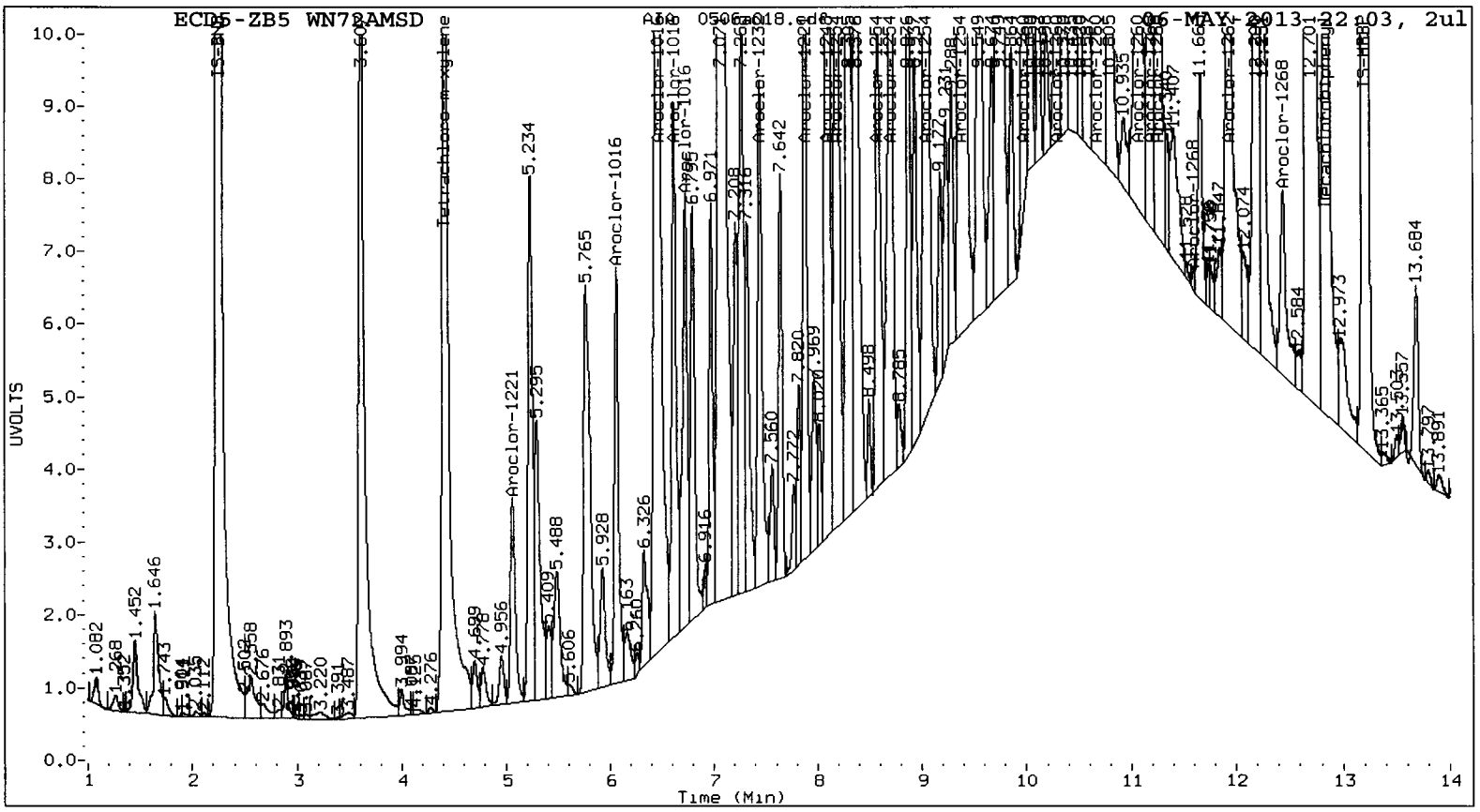
7.434
13.386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Time (Min)
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Aroclor-1016
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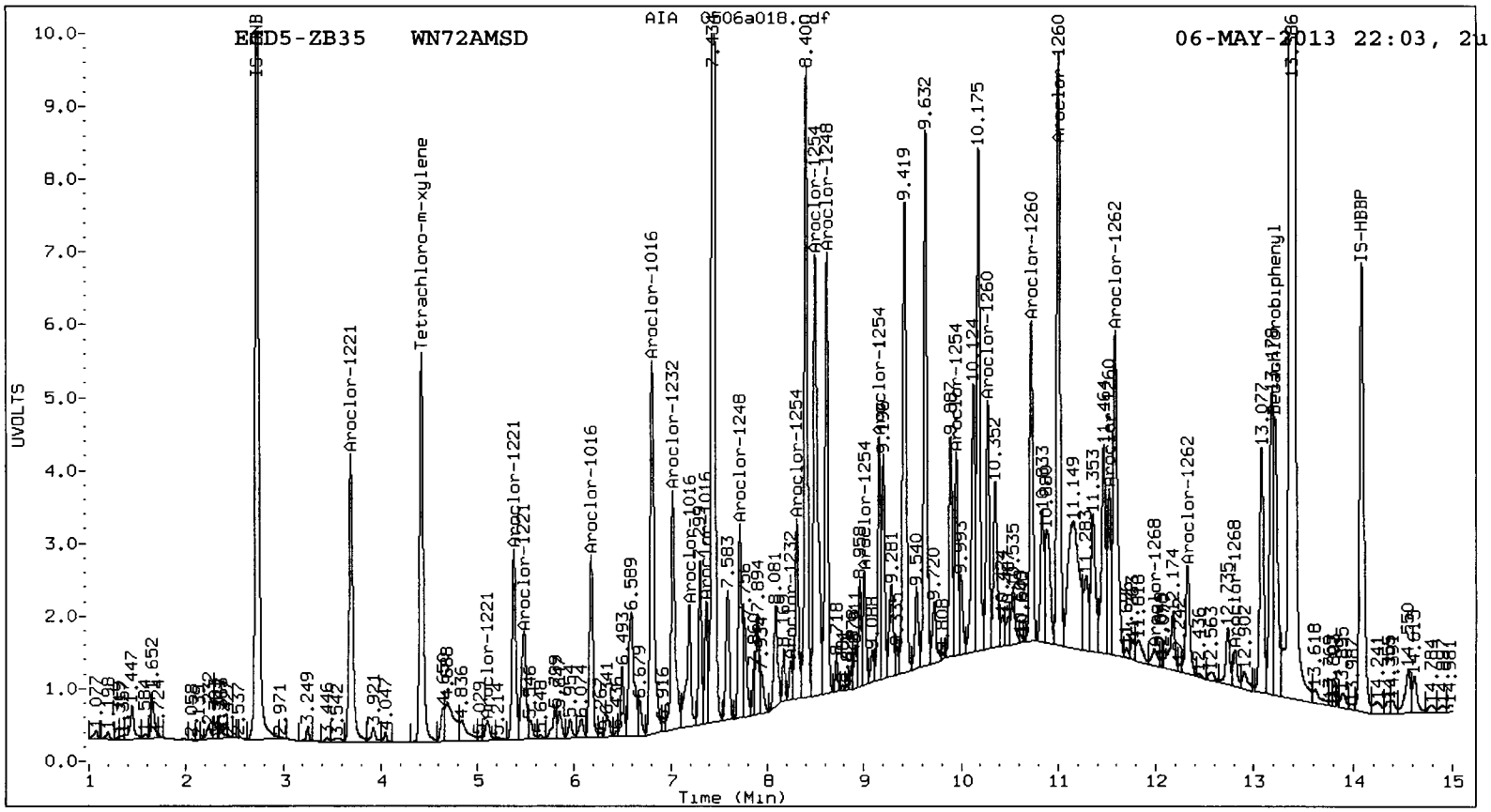
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
Tetrachloro-m-xylene
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Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a020.d
Data file 2: 20130416.b/0506-2.b/0506a020.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 06-MAY-2013 22:43
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.416	0.001	16927661	4.416	0.001	4257242	17.6	17.0	3.6	Tetrachloro-m-xylen
12.831	0.000	11582248	13.209	0.001	3866484	14.9	30.5	68.9*	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	44.0	42.4
Decachlorobiphenyl	37.2	76.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	59147946	21.6
Hexabromobiphenyl	81878684	51063965	-37.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	17050048	17.9
Hexabromobiphenyl	16263628	9128992	-43.9

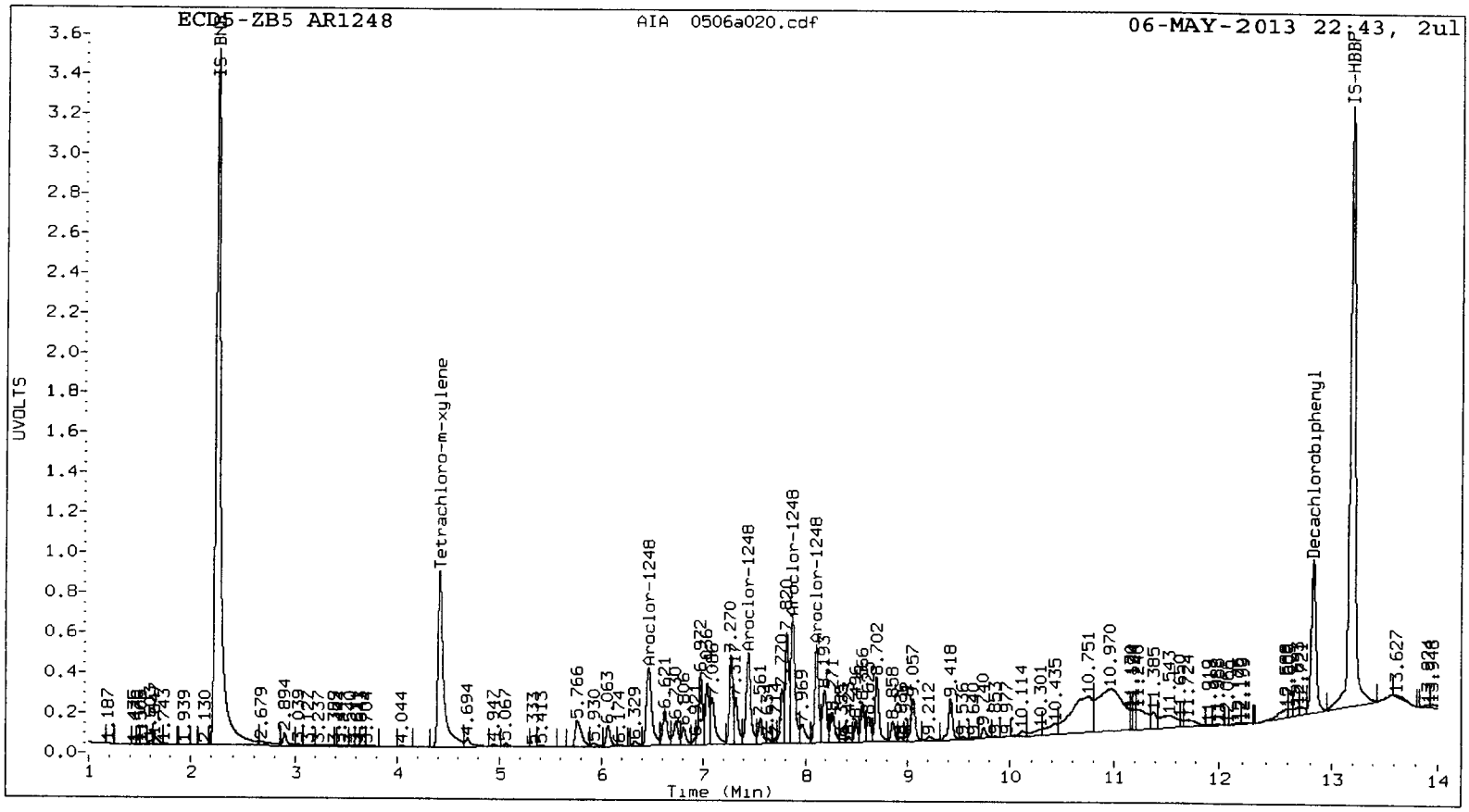
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	6.468	0.000	7428578	198.9	1	6.799	-0.001	1815046	190.3
Aroclor-1248	2	7.444	-0.001	7087384	171.3	2	7.707	0.000	1416463	180.9
Aroclor-1248	3	7.874	-0.002	9242921	173.0	3	8.237	-0.002	1460238	181.3
Aroclor-1248	4	8.110	-0.001	6583433	174.1	4	8.583	0.000	1769030	168.2
Total Col1Ave (4 peaks):					179.3	Total Col2Ave (4 peaks):				180.2 RPD = 0
Corrected Ave (3 peaks):					172.8	Corrected Ave (3 peaks):				176.8 RPD = 2

Total PCB Area Col1 (4.515 - 12.732) = 154491573 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 27768940 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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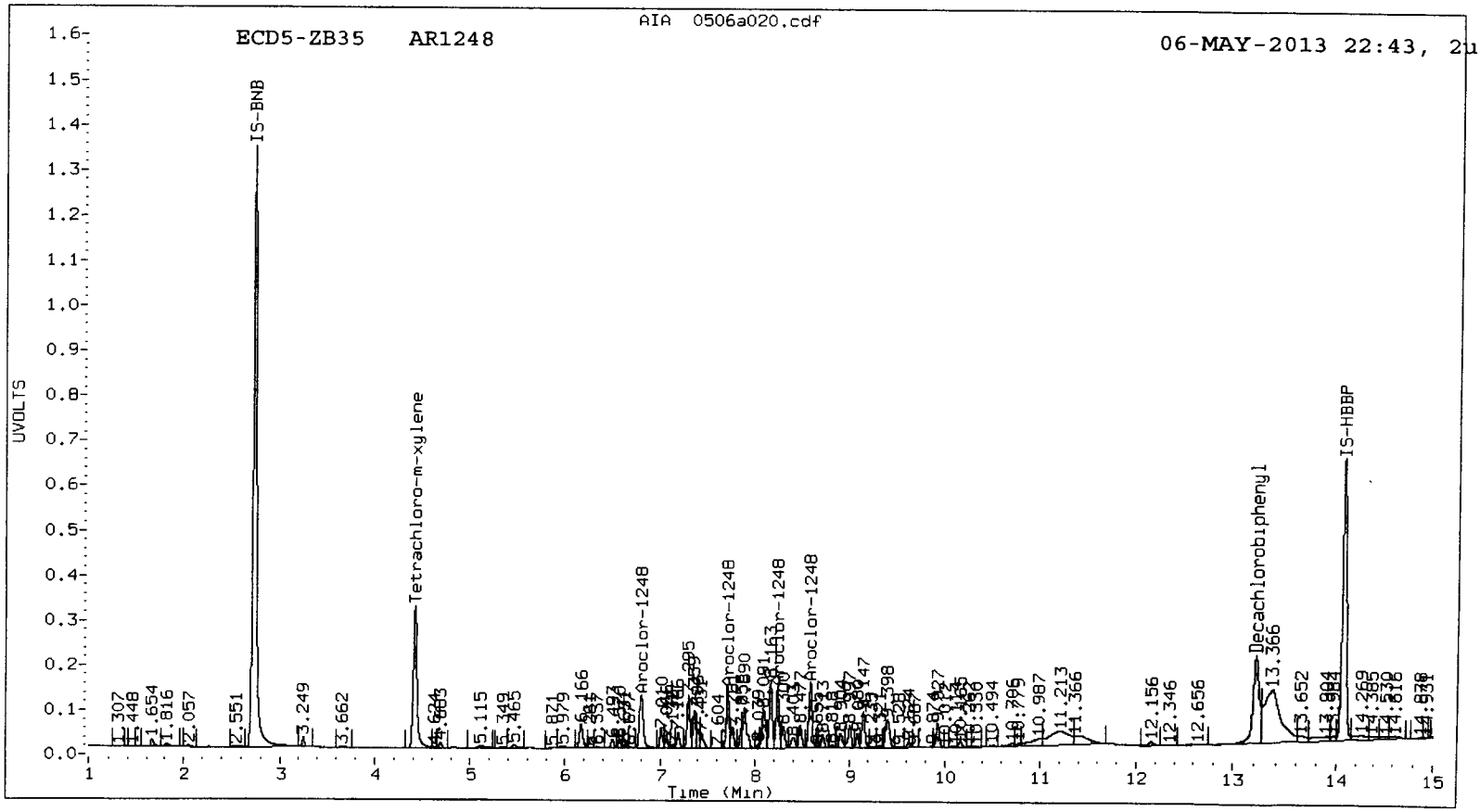
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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Aroclor-1248
Aroclor-1248
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Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a021.d
Data file 2: 20130416.b/0506-2.b/0506a021.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 06-MAY-2013 23:03
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.415	0.001	14490045	4.416	0.001	3496338	20.3	18.9	7.3	Tetrachloro-m-xylen
12.832	0.000	9738176	13.207	-0.001	2881285	17.0	31.1	59.0*	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.7	47.1
Decachlorobiphenyl	42.4	77.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	43905947	-9.7
Hexabromobiphenyl	81878684	37691491	-54.0 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	12605877	-12.8
Hexabromobiphenyl	16263628	6673150	-59.0 <-

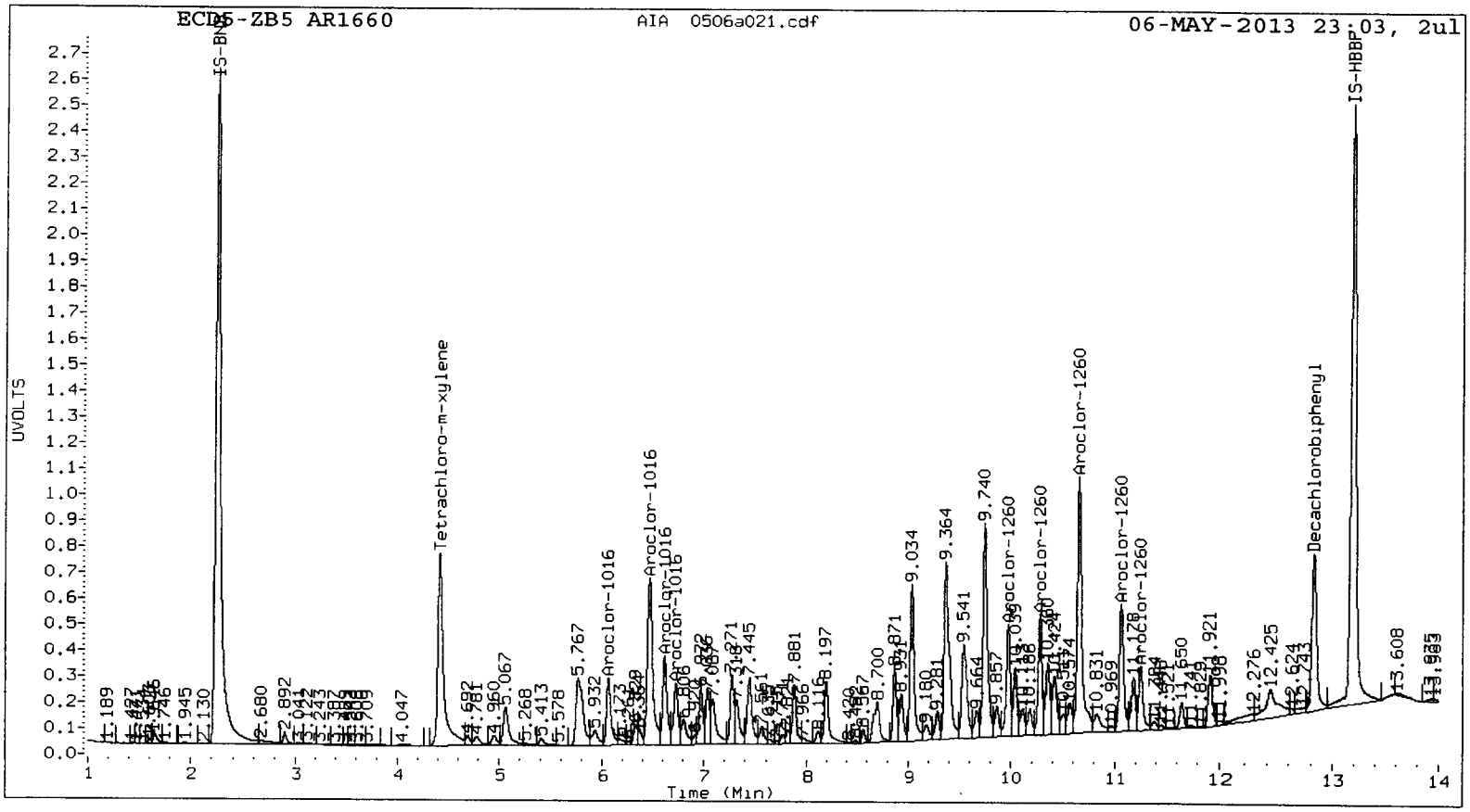
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.063	0.000	3906229	209.9	1	6.168	0.000	1477069	202.0
Aroclor-1016	2	6.471	0.000	12313832	212.4	2	6.803	0.000	2846129	184.9
Aroclor-1016	3	6.619	0.000	5174620	204.8	3	7.186	0.000	731174	182.2
Aroclor-1016	4	6.730	-0.001	3698517	207.8	4	7.360	0.000	653353	175.8
	Total Col1Ave (4 peaks):				208.7		Total Col2Ave (4 peaks):			186.2 RPD = 11
	Corrected Ave (3 peaks):				207.5		Corrected Ave (3 peaks):			180.9 RPD = 14
Aroclor-1260	1	9.970	0.000	5793014	277.8	1	10.263	0.000	1167257	314.6
Aroclor-1260	2	10.287	0.001	6206900	282.7	2	10.711	0.000	1448212	324.2
Aroclor-1260	3	10.662	0.000	15681988	295.8	3	10.986	-0.001	2704411	302.7
Aroclor-1260	4	11.061	0.000	7249176	255.4	4	11.508	-0.001	732070	287.3
Aroclor-1260	5	11.251	0.000	3813888	253.5	NS	---			----
	Total Col1Ave (5 peaks):				273.0		Total Col2Ave (4 peaks):			307.2 RPD = 12
	Corrected Ave (4 peaks):				267.4		Corrected Ave (3 peaks):			301.5 RPD = 12

Total PCB Area Col1 (4.515 - 12.732) = 199638634 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 38971945 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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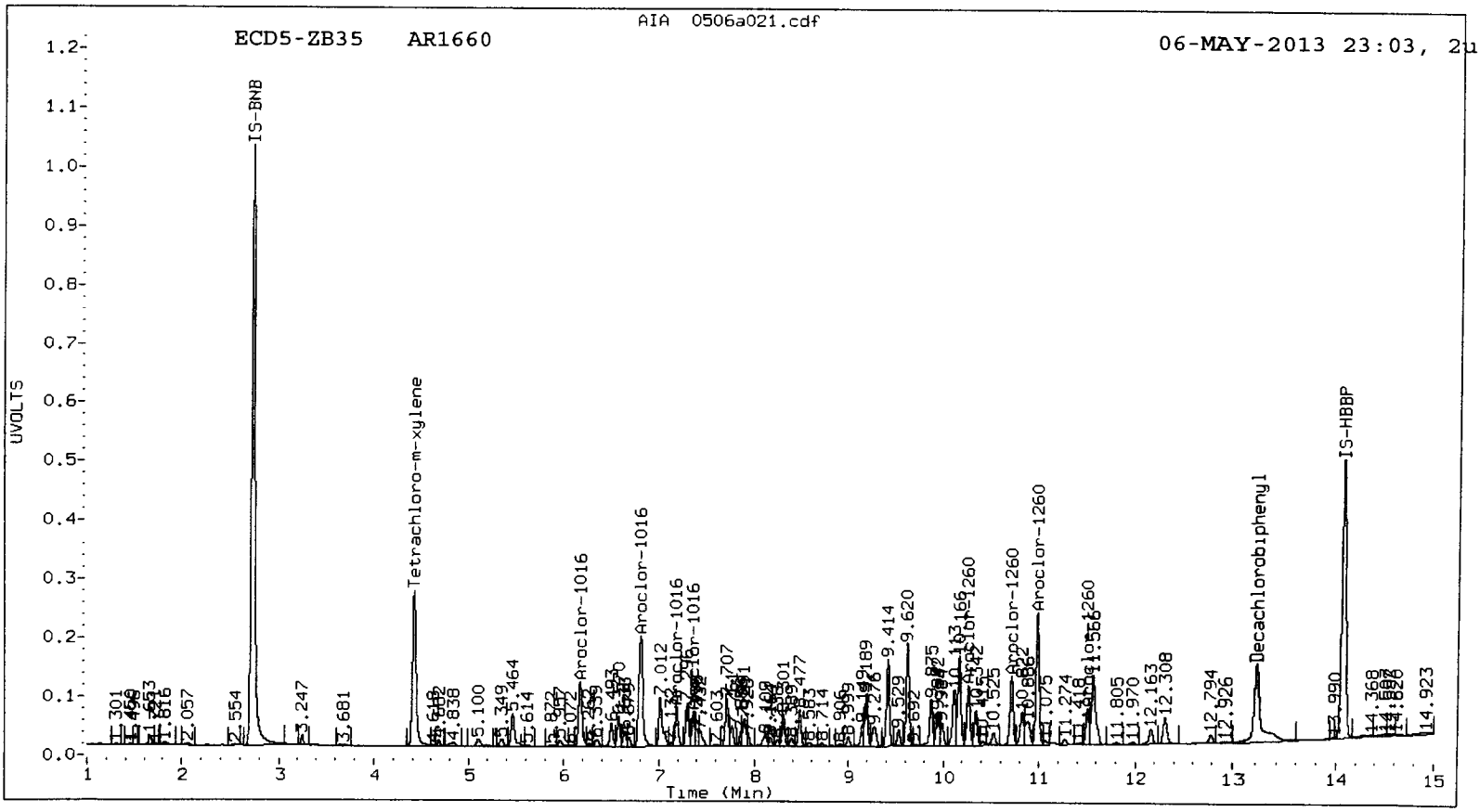
06-MAY-2013 23:03, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0507-1.b/0507a006.d
Data file 2: 20130416.b/0507-2.b/0507a006.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 07-MAY-2013 12:52
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.416	0.001	17442901	4.416	0.001	4586255	17.3	17.2	0.5	Tetrachloro-m-xylen
12.833	0.001	12171478	13.210	0.002	3315398	16.0	25.5	45.7*	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	43.3	43.1
Decachlorobiphenyl	40.1	63.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	61853261	27.1
Hexabromobiphenyl	81878684	49856336	-39.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	18074052	25.0
Hexabromobiphenyl	16263628	9376394	-42.3

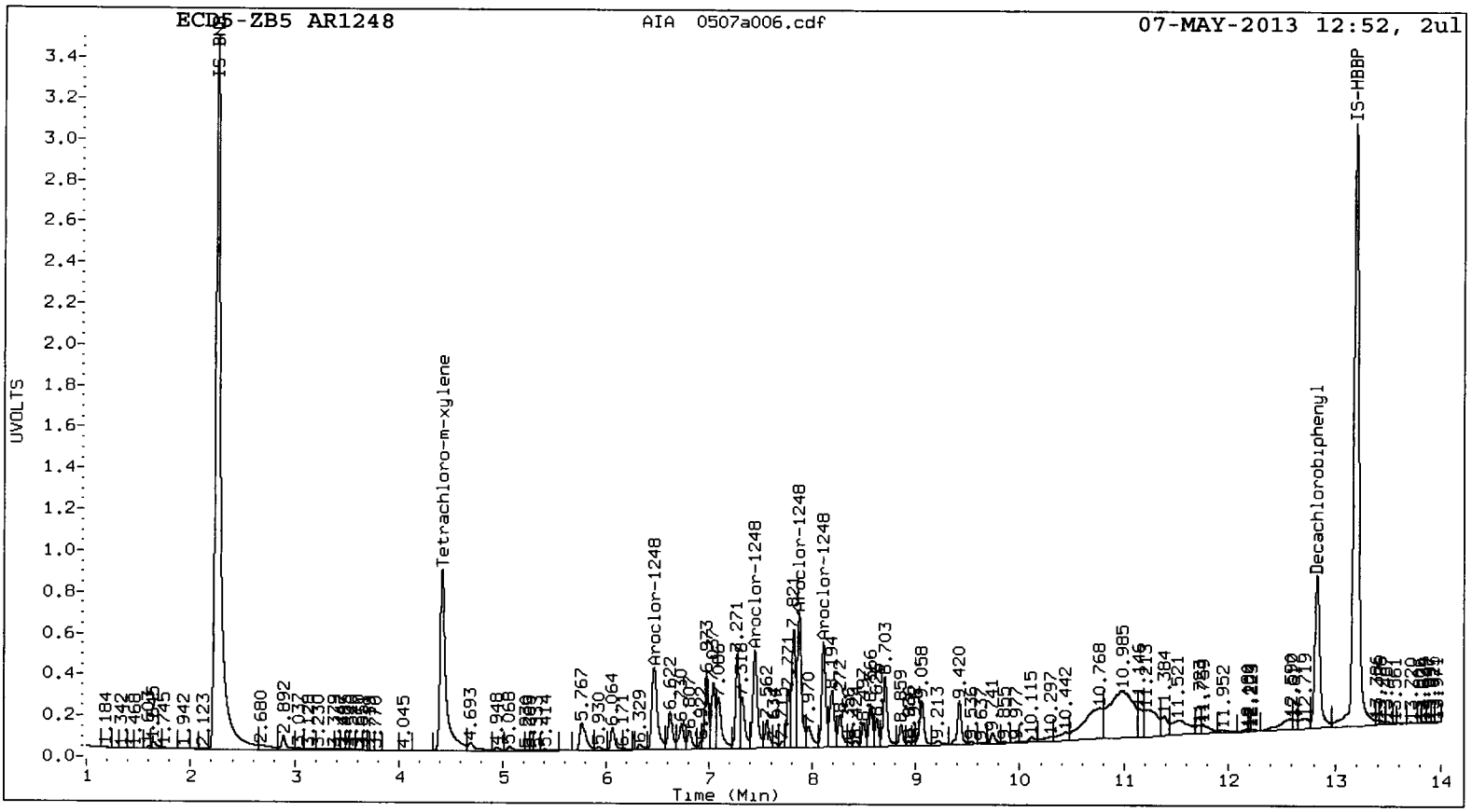
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	6.467	0.000	7730049	197.9	1	6.800	0.000	1995068	197.3
Aroclor-1248	2	7.445	0.000	7595019	175.5	2	7.707	0.000	1571020	189.3
Aroclor-1248	3	7.876	0.000	9866291	176.6	3	8.239	0.000	1625017	190.3
Aroclor-1248	4	8.111	0.000	6979086	176.5	4	8.583	0.000	1958590	175.6
Total Col1Ave (4 peaks):					181.6	Total Col2Ave (4 peaks):				188.1 RPD = 4
Corrected Ave (3 peaks):					176.2	Corrected Ave (3 peaks):				185.1 RPD = 5

Total PCB Area Col1 (4.515 - 12.732) = 162578303 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 31105425 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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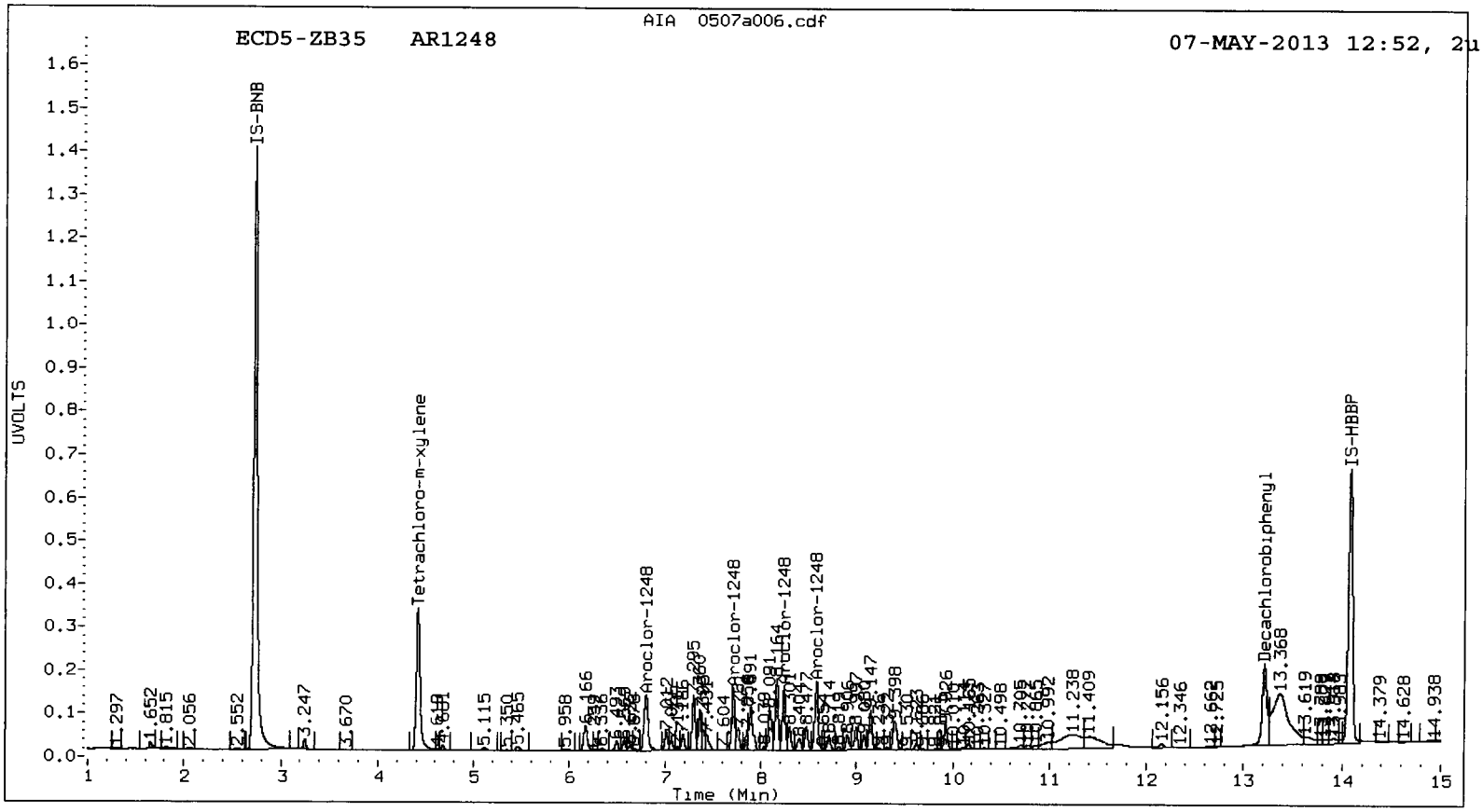
07-MAY-2013 12:52, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
IS-HBBP
Decachlorobiphenyl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ECD5-ZB35 AR1248
07-MAY-2013 12:52, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
IS-HBBP
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0507-1.b/0507a007.d
Data file 2: 20130416.b/0507-2.b/0507a007.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 07-MAY-2013 13:12
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.415	0.000	14655093	4.415	0.000	3714487	19.9	19.1	4.2	Tetrachloro-m-xylen
12.832	0.000	10291694	13.208	0.000	2385763	19.2	25.6	28.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.8	47.7
Decachlorobiphenyl	47.9	64.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	45254420	-7.0
Hexabromobiphenyl	81878684	35227046	-57.0 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	13221188	-8.5
Hexabromobiphenyl	16263628	6715702	-58.7 <-

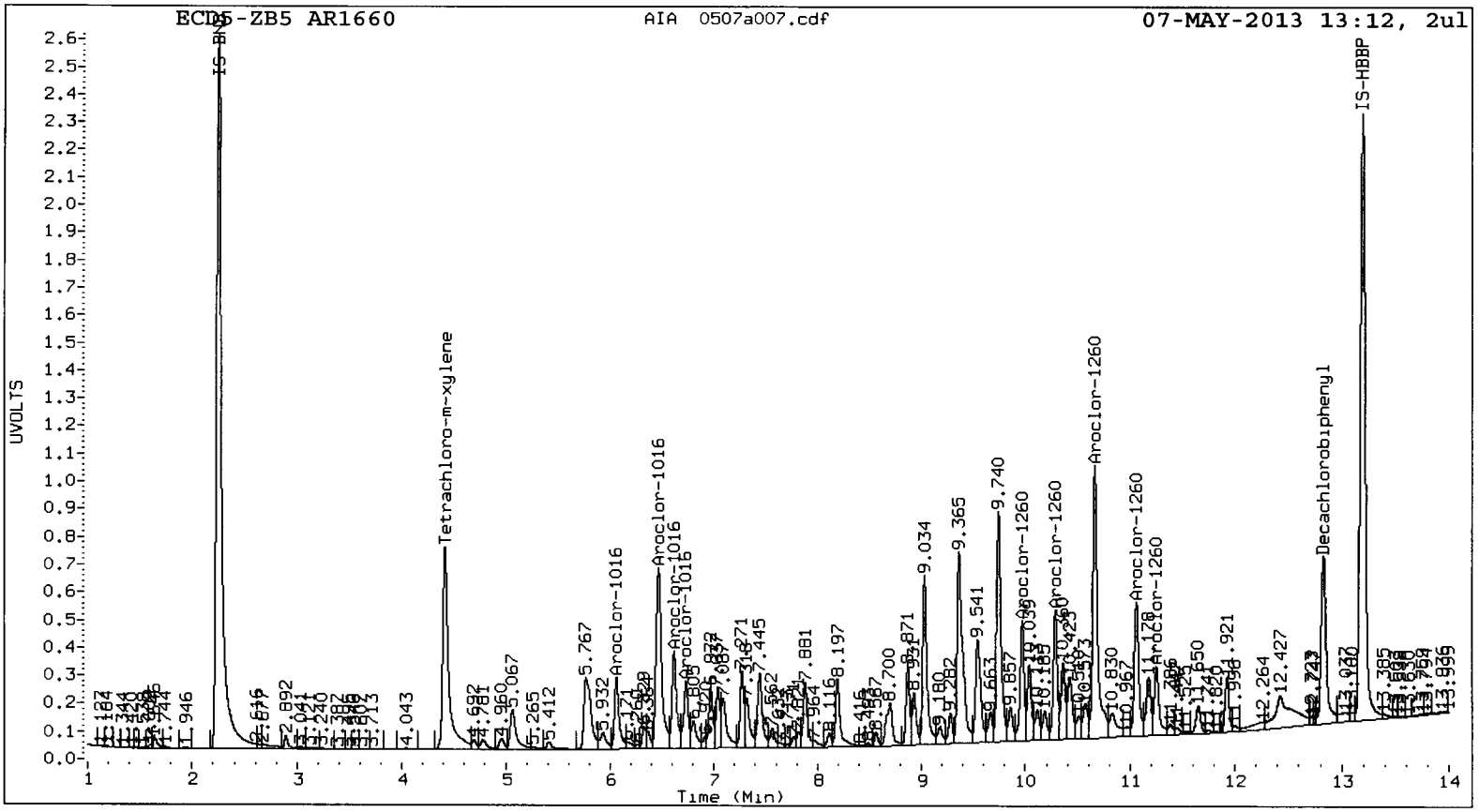
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.064	0.000	3993912	208.2	1	6.168	0.000	1572544	205.0
Aroclor-1016	2	6.470	0.000	12587309	210.7	2	6.803	0.000	3031352	187.7
Aroclor-1016	3	6.620	0.000	5357975	205.7	3	7.186	0.000	789071	187.4
Aroclor-1016	4	6.731	0.000	3804879	207.4	4	7.360	0.000	706852	181.4
Total Col1Ave (4 peaks):					208.0	Total Col2Ave (4 peaks):				190.4 RPD = 9
Corrected Ave (3 peaks):					207.1	Corrected Ave (3 peaks):				185.5 RPD = 11
Aroclor-1260	1	9.970	0.000	5879470	301.7	1	10.263	0.000	1243996	333.1
Aroclor-1260	2	10.286	0.000	6239676	304.1	2	10.711	0.000	1573291	349.9
Aroclor-1260	3	10.662	0.000	16306983	329.1	3	10.987	0.000	2826963	314.4
Aroclor-1260	4	11.061	0.000	7578279	285.6	4	11.508	0.000	763217	297.7
Aroclor-1260	5	11.251	0.000	4045420	287.7	NS	---			----
Total Col1Ave (5 peaks):					301.7	Total Col2Ave (4 peaks):				323.8 RPD = 7
Corrected Ave (4 peaks):					294.8	Corrected Ave (3 peaks):				315.1 RPD = 7

Total PCB Area Col1 (4.515 - 12.732) = 208545804 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 41851705 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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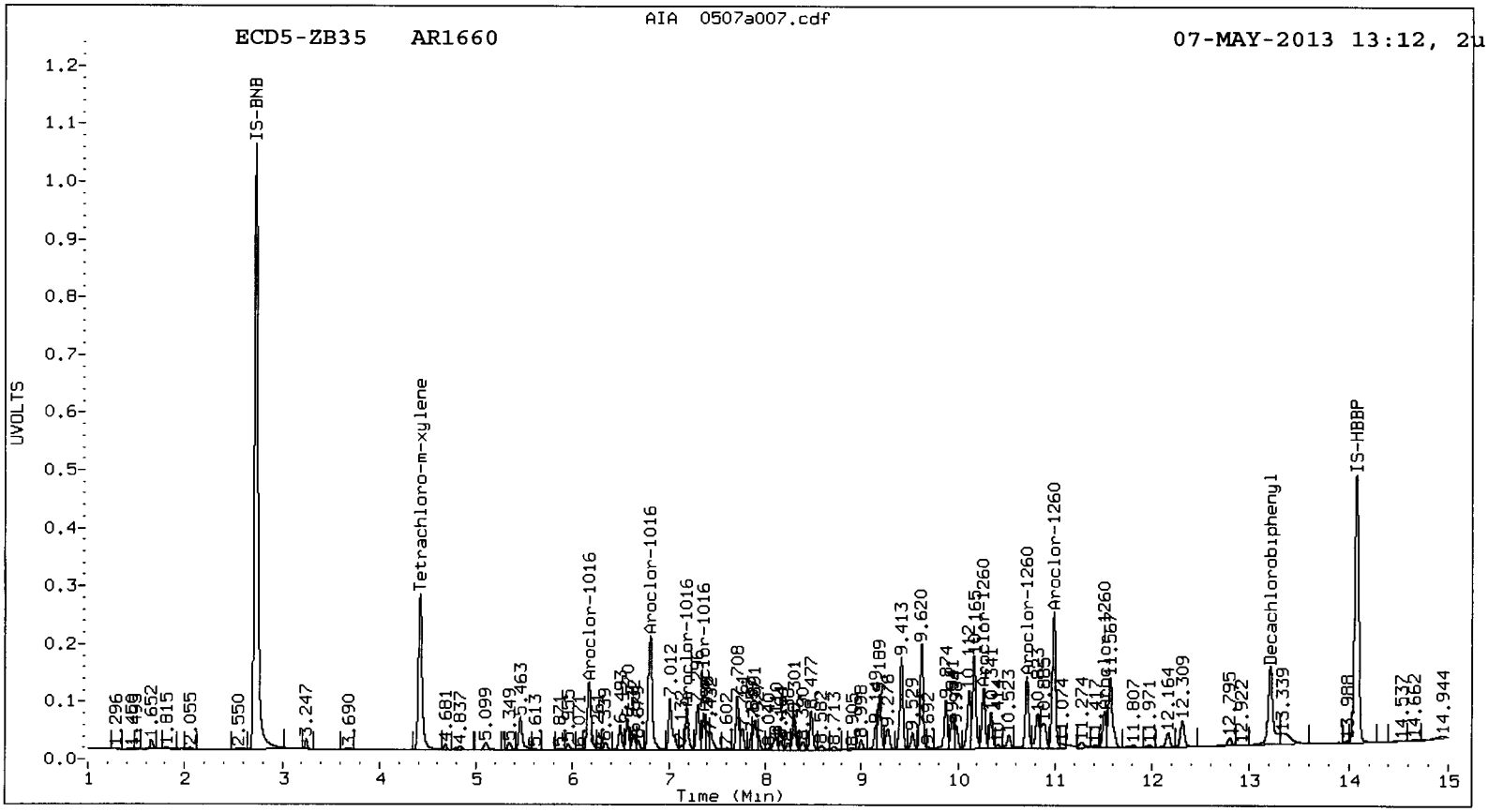
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 13:12, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0507-1.b/0507a037.d
Data file 2: 20130507.b/0507-2.b/0507a037.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 08-MAY-2013 03:48
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.409	0.000	33642115	4.409	0.000	8182729	37.6	38.8	3.1	Tetrachloro-m-xylen
12.827	0.001	33931360	13.203	0.001	4696346	38.4	33.1	14.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.1	97.1
Decachlorobiphenyl	96.1	82.7

05/03/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57636312	17.7
Hexabromobiphenyl	50004151	59113555	18.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15578403	5.0
Hexabromobiphenyl	9345340	9865366	5.6

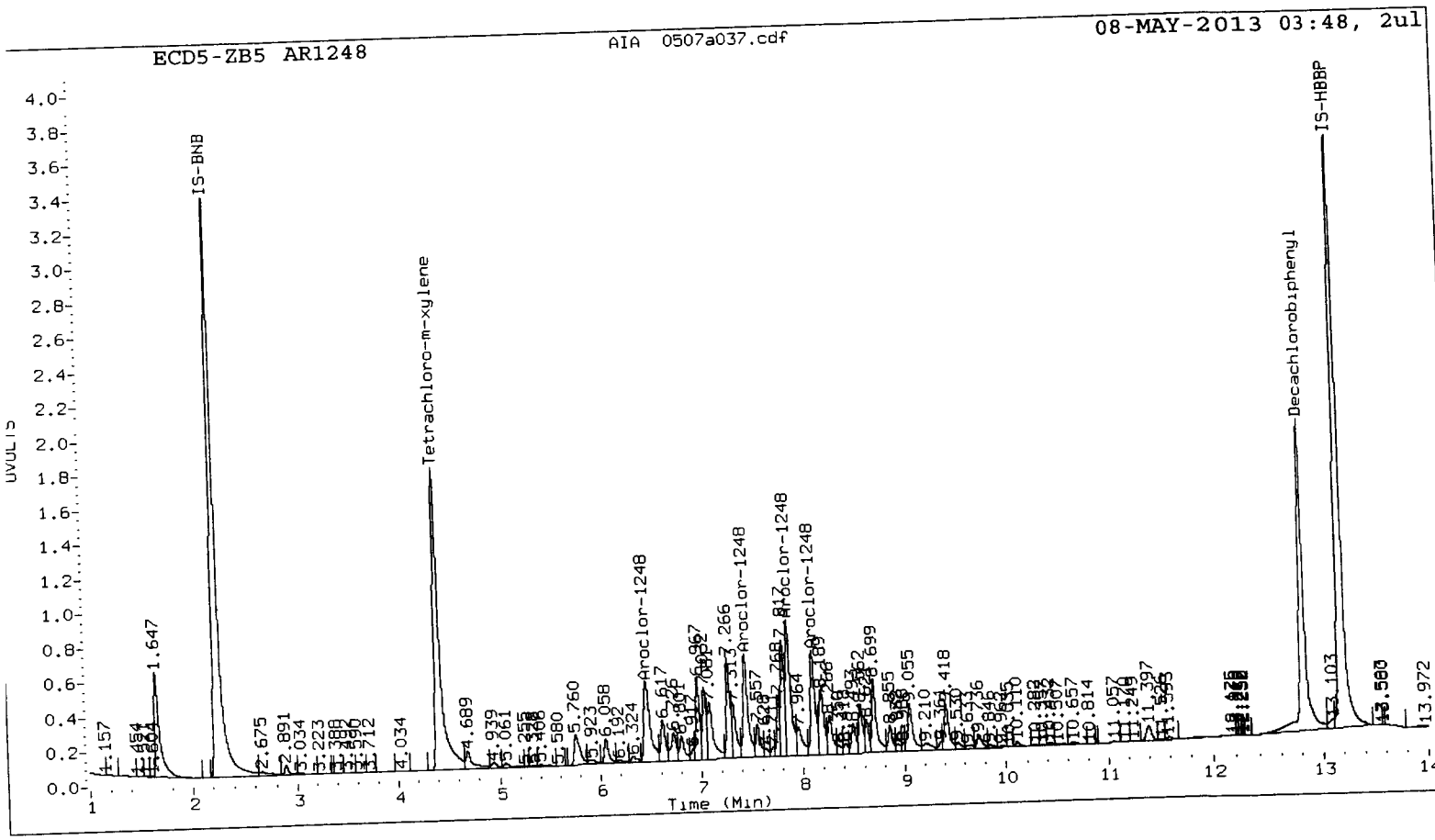
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	6.463	0.000	9791008	241.4	1	6.798	0.000	2369863	242.8
Aroclor-1248	2	7.440	0.000	10175518	223.0	2	7.704	0.000	1893975	234.0
Aroclor-1248	3	7.872	0.000	12748711	219.8	3	8.236	0.000	1923691	229.5
Aroclor-1248	4	8.108	0.000	8810805	217.8	4	8.581	0.000	2424631	222.6
Total Col1Ave (4 peaks):					225.5	Total Col2Ave (4 peaks):				232.2 RPD = 3
Corrected Ave (3 peaks):					220.2	Corrected Ave (3 peaks):				228.7 RPD = 4

Total PCB Area Col1 (4.508 - 12.726) = 161443926 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.509 - 13.103) = 32637626 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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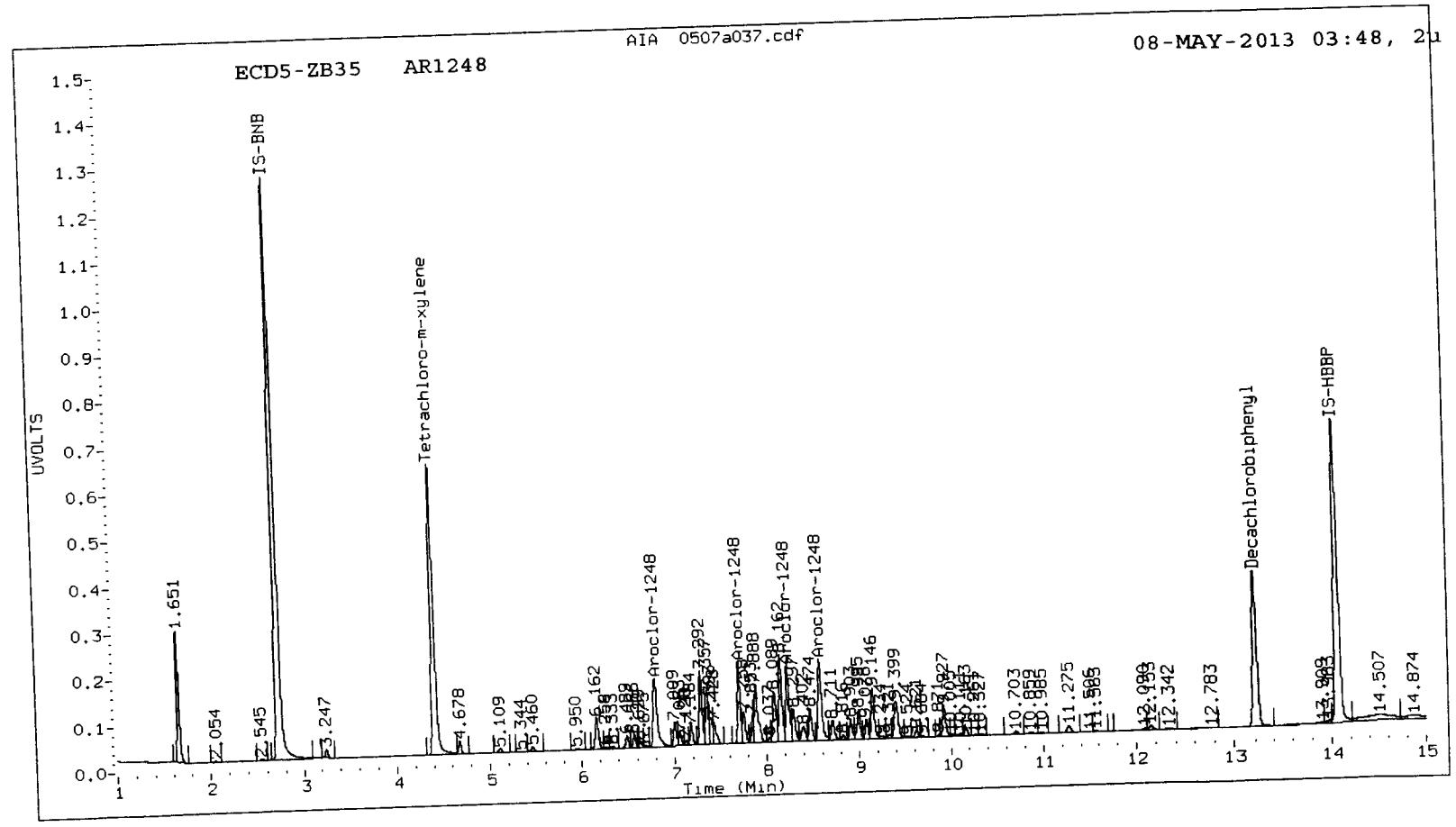
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)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UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0507-1.b/0507a038.d
Data file 2: 20130507.b/0507-2.b/0507a038.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 08-MAY-2013 04:08
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.408	0.000	33681045	4.409	0.000	8129847	38.0	38.9	2.4	Tetrachloro-m-xylen
12.826	0.000	33058871	13.203	0.000	4806869	36.7	33.9	8.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.9	97.2
Decachlorobiphenyl	91.8	84.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57225805	16.8
Hexabromobiphenyl	50004151	60264061	20.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15463967	4.2
Hexabromobiphenyl	9345340	9866019	5.6

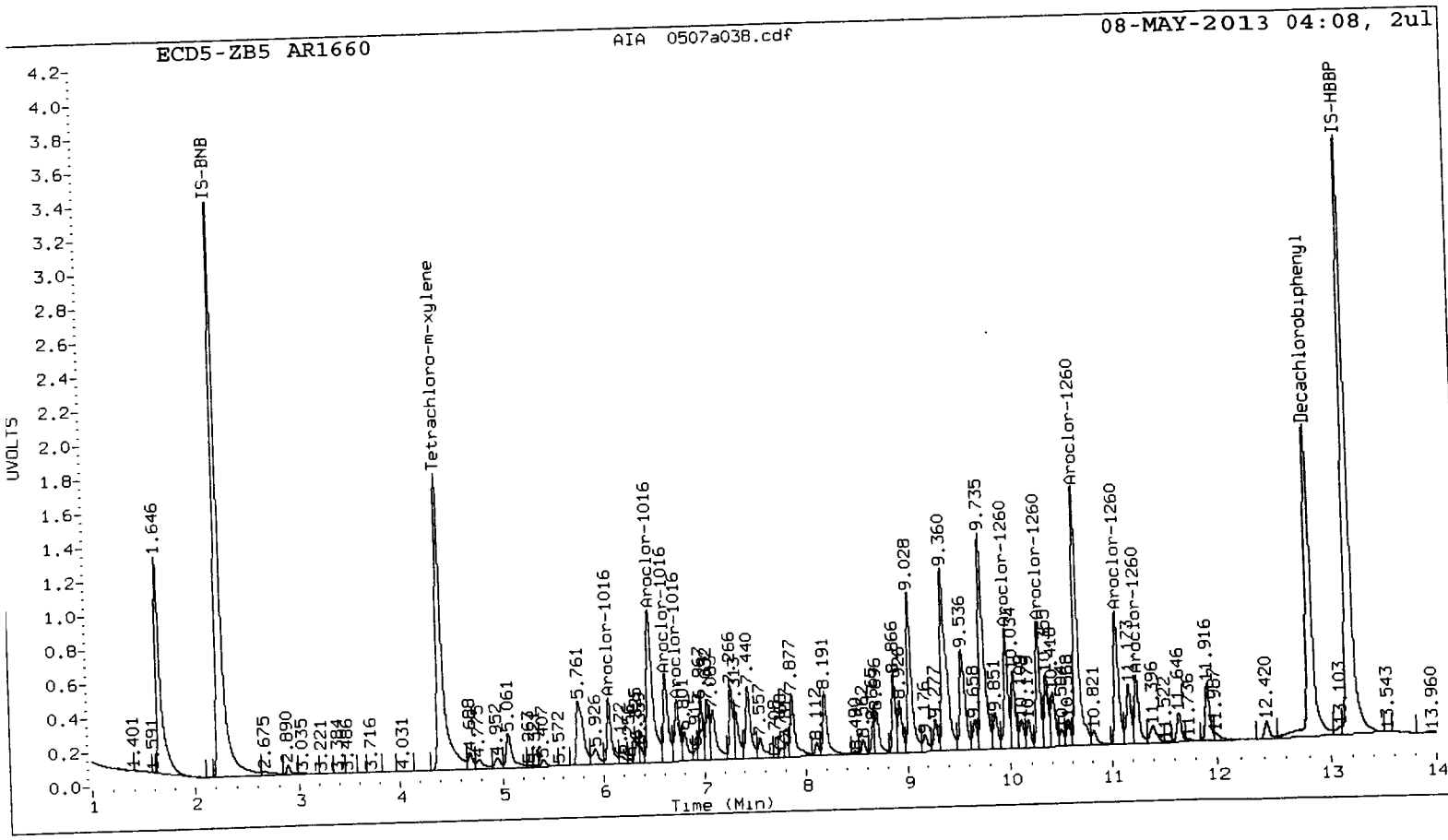
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.058	0.000	5985864	232.1	1	6.164	0.000	2121874	240.5
Aroclor-1016	2	6.465	0.000	18632171	234.5	2	6.799	0.000	4576994	238.6
Aroclor-1016	3	6.615	0.000	8192296	230.1	3	7.184	0.000	1177248	234.7
Aroclor-1016	4	6.727	0.000	6087788	228.9	4	7.356	0.000	1068000	228.6
Total Col1Ave (4 peaks):					231.4	Total Col2Ave (4 peaks):				235.6 RPD = 2
Corrected Ave (3 peaks):					230.4	Corrected Ave (3 peaks):				234.0 RPD = 2
Aroclor-1260	1	9.965	0.000	9863707	199.9	1	10.260	0.000	1905333	212.9
Aroclor-1260	2	10.282	0.000	9683196	197.8	2	10.709	0.000	2240560	213.8
Aroclor-1260	3	10.657	0.000	24153260	205.8	3	10.984	0.000	4305906	222.5
Aroclor-1260	4	11.057	0.000	11793614	206.3	4	11.505	0.000	1157650	220.7
Aroclor-1260	5	11.246	0.000	6281464	205.4	NS	---			----
Total Col1Ave (5 peaks):					203.1	Total Col2Ave (4 peaks):				217.4 RPD = 7
Corrected Ave (4 peaks):					202.2	Corrected Ave (3 peaks):				215.8 RPD = 6

Total PCB Area Col1 (4.508 - 12.726) = 314774418 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.509 - 13.103) = 61773550 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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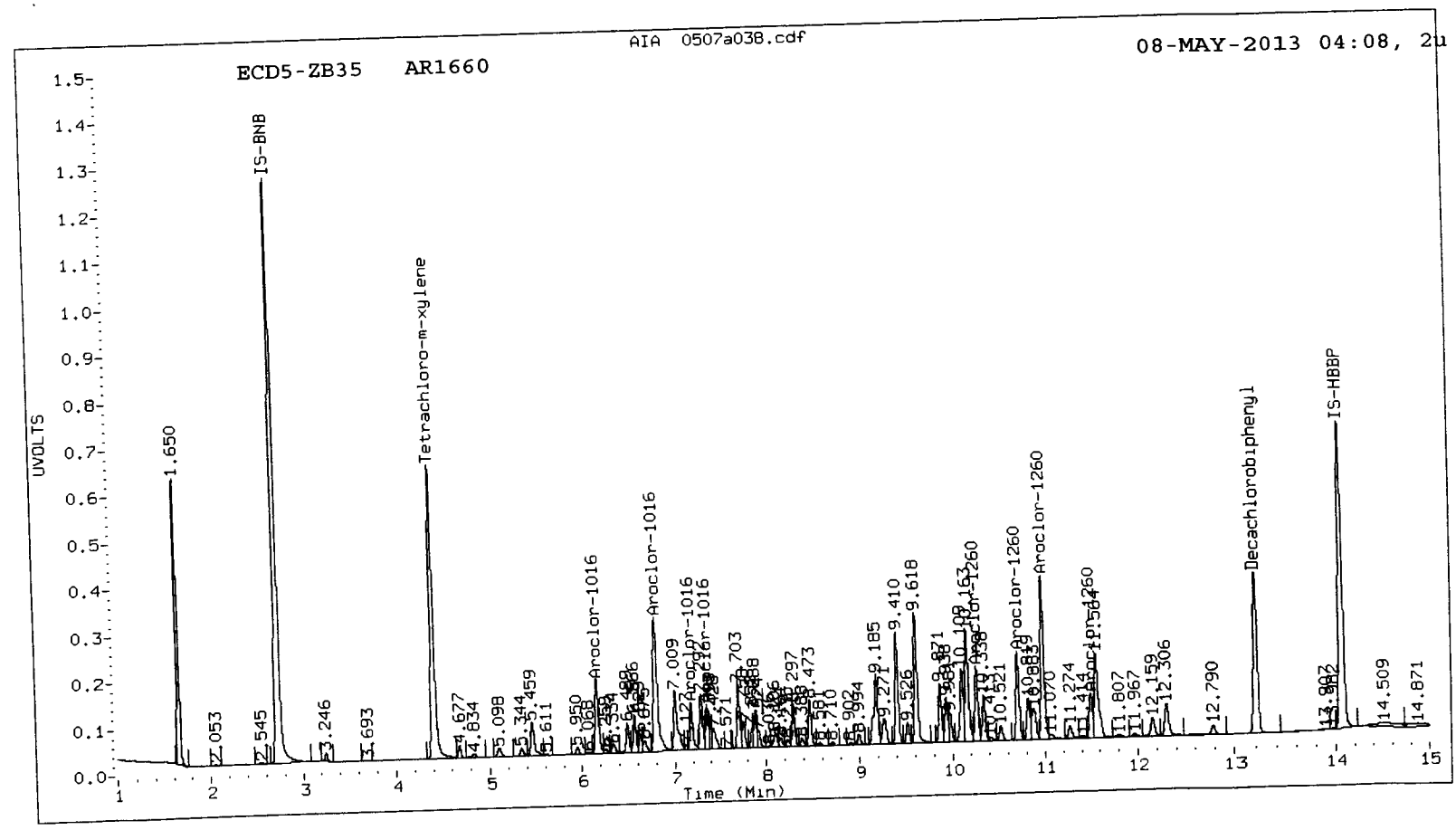
08-MAY-2013 04:08, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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AIA 0507a038.cdf
08-MAY-2013 04:08, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0507-1.b/0507a039.d
Data file 2: 20130507.b/0507-2.b/0507a039.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WN27A
Client ID:
Injection Date: 08-MAY-2013 04:29
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 5.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.409	0.000	6617955	4.410	0.001	1499108	7.7	7.1	9.1	Tetrachloro-m-xylen
12.829	0.003	8949535	13.207	0.004	1152666	10.2	7.5	30.4	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	96.5	88.2
Decachlorobiphenyl	127.9	94.1

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	55268578	12.8
Hexabromobiphenyl	50004151	58552850	17.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15716950	5.9
Hexabromobiphenyl	9345340	10635473	13.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.058	0.000	371980	14.9	1	6.165	0.002	142293	15.9
Aroclor-1016	2	6.462	-0.003	815132	10.6	2	6.801	0.002	346685	17.8
Aroclor-1016	3	6.613	-0.002	338279	9.8	3	7.180	-0.003	67476	13.2
Aroclor-1016	4	6.703	-0.023	696969	27.1	4	7.354	-0.002	141477	29.8
Total Col1Ave (4 peaks):					15.6	Total Col2Ave (4 peaks):				19.2 RPD = 20
Corrected Ave (3 peaks):					11.8	Corrected Ave (3 peaks):				15.6 RPD = 28
Aroclor-1221	1	5.062	-0.002	152433	6.8	1	3.681	-0.014	1281957	795.6
Aroclor-1221	2	6.462	-0.006	815132	118.3	2	5.103	0.008	48045	17.8
Aroclor-1221	3	7.876	-0.002	1864250	191.6	3	5.369	0.024	729275	496.5
Aroclor-1221	NS	---			----	4	5.480	0.020	297228	64.3
Total Col1Ave (3 peaks):					105.6	Total Col2Ave (4 peaks):				343.6 RPD = 106*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				192.9
Aroclor-1232	1	6.058	-0.002	371980	36.3	1	6.165	0.000	142293	35.3
Aroclor-1232	2	6.462	-0.007	815132	26.0	2	6.801	0.000	346685	43.1
Aroclor-1232	3	7.437	-0.004	1186245	72.8	3	7.015	0.004	558866	166.4
Aroclor-1232	4	7.876	0.002	1864250	99.6	4	8.235	-0.004	158173	56.1
Total Col1Ave (4 peaks):					58.7	Total Col2Ave (4 peaks):				75.2 RPD = 25
Corrected Ave (3 peaks):					45.1	Corrected Ave (3 peaks):				44.8 RPD = 1
Aroclor-1242	1	6.058	-0.001	371980	18.7	1	6.165	0.001	142293	19.9
Aroclor-1242	2	6.462	-0.005	815132	13.4	2	6.801	0.000	346685	22.0
Aroclor-1242	3	6.613	-0.004	338279	12.4	3	7.015	0.006	558866	85.0
Aroclor-1242	4	7.876	0.003	1864250	55.4	4	8.235	-0.003	158173	28.7
Total Col1Ave (4 peaks):					25.0	Total Col2Ave (4 peaks):				38.9 RPD = 44*
Corrected Ave (3 peaks):					14.8	Corrected Ave (3 peaks):				23.5 RPD = 45*
Aroclor-1248	1	6.462	-0.001	815132	21.0	1	6.801	0.004	346685	35.2
Aroclor-1248	2	7.437	-0.002	1186245	27.1	2	7.702	-0.002	296840	36.3
Aroclor-1248	3	7.876	0.005	1864250	33.5	3	8.235	-0.001	158173	18.7
Aroclor-1248	4	8.091	-0.017	7459585	192.3	4	8.607	0.026	1379869	125.6
Total Col1Ave (4 peaks):					68.5	Total Col2Ave (4 peaks):				54.0 RPD = 24
Corrected Ave (3 peaks):					27.2	Corrected Ave (3 peaks):				30.1 RPD = 10
Aroclor-1254	1	8.179	-0.013	3689909	71.6	1	8.299	0.001	494610	64.9
Aroclor-1254	2	8.579	0.016	2158206	63.4	2	8.491	0.016	1624948	172.6
Aroclor-1254	3	8.697	-0.002	3143106	44.3	3	8.996	0.000	317567	44.0
Aroclor-1254	4	9.032	-0.020	4045911	55.4	4	9.147	0.000	635002	41.1
Aroclor-1254	5	9.360	-0.002	3030532	109.7	5	9.937	0.002	477357	54.9
Total Col1Ave (5 peaks):					68.9	Total Col2Ave (5 peaks):				78.5 RPD = 9
Corrected Ave (4 peaks):					58.7	Corrected Ave (4 peaks):				51.2 RPD = 14
Aroclor-1260	1	9.969	0.004	1758024	36.7	1	10.261	0.002	399470	41.4
Aroclor-1260	2	10.285	0.003	1674433	35.2	2	10.709	0.000	590022	52.2
Aroclor-1260	3	10.665	0.009	3680018	32.3	3	10.985	0.001	977759	46.9
Aroclor-1260	4	11.059	0.002	2756152	49.6	4	11.505	0.000	260580	46.1
Aroclor-1260	5	11.249	0.003	1573848	53.0	NS	---			----
Total Col1Ave (5 peaks):					41.3	Total Col2Ave (4 peaks):				46.6 RPD = 12
Corrected Ave (4 peaks):					38.4	Corrected Ave (3 peaks):				44.8 RPD = 15
Aroclor-1262	1	10.285	0.002	1674433	30.5	1	10.261	0.001	399470	27.2
Aroclor-1262	2	10.665	0.007	3680018	28.6	2	10.709	-0.001	590022	43.9
Aroclor-1262	3	11.059	-0.001	2756152	67.6	3	10.985	0.000	977759	38.8
Aroclor-1262	4	11.249	0.002	1573848	27.5	4	11.566	-0.001	658914	40.2
Aroclor-1262	5	11.909	-0.009	3382632	77.0	5	12.308	0.002	284741	36.0
Total Col1Ave (5 peaks):					46.2	Total Col2Ave (5 peaks):				37.2 RPD = 22
Corrected Ave (4 peaks):					38.5	Corrected Ave (4 peaks):				35.5 RPD = 8
Aroclor-1268	1	11.177	0.002	1327293	10.8	1	11.505	-0.001	260580	10.2

Aroclor-1268	2	11.249	0.003	1573848	11.6	2	11.566	-0.007	658914	27.2
Aroclor-1268	3	11.650	0.017	567728	5.6	3	11.972	0.003	36967	1.9
Aroclor-1268	4	12.425	0.003	391701	1.4	4	12.793	0.000	88301	1.8

Total Col1Ave (4 peaks): 7.3 Total Col2Ave (4 peaks): 10.3 RPD = 33

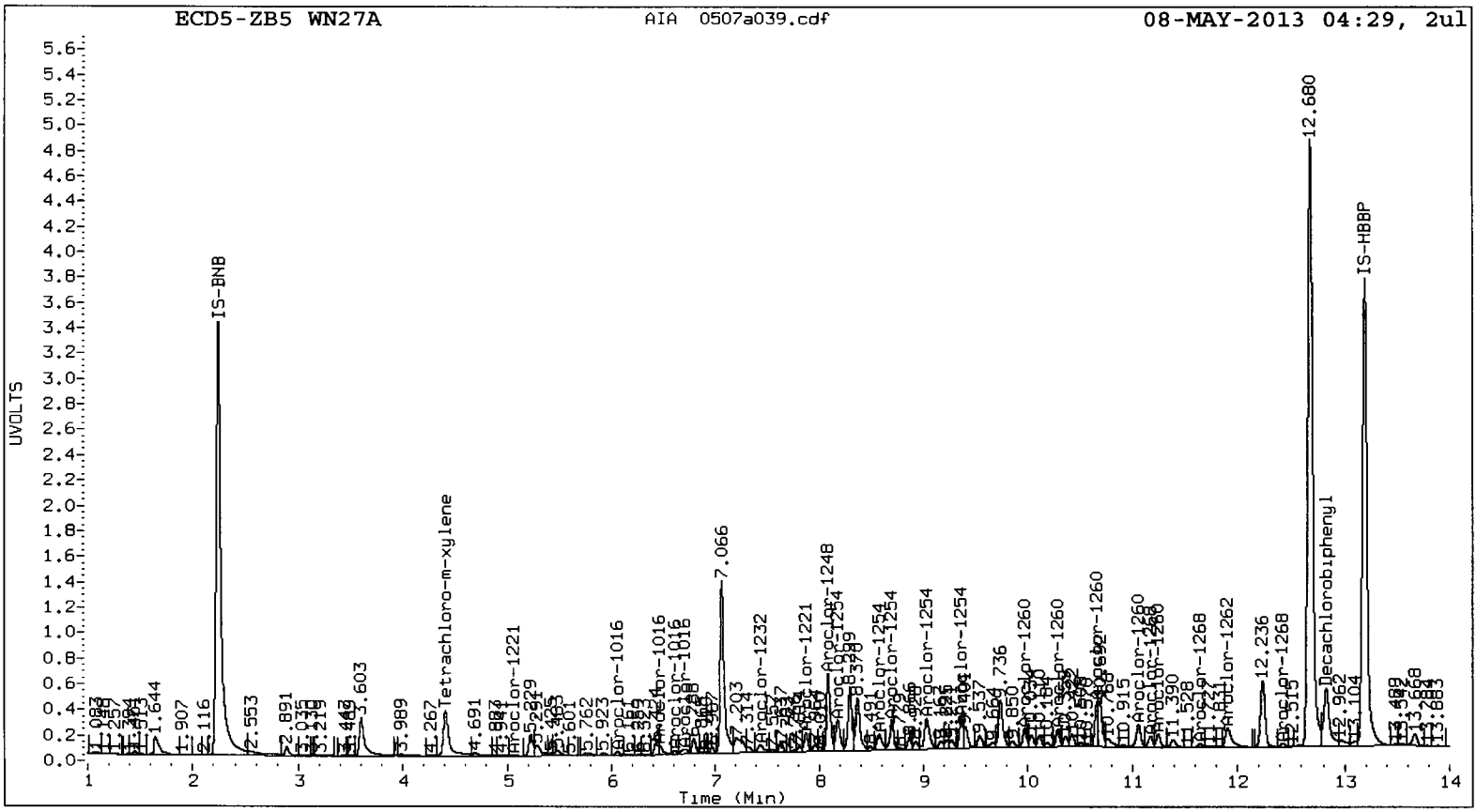
Corrected Ave (3 peaks): 5.9 Corrected Ave (3 peaks): 4.6 RPD = 25

Total PCB Area Col1 (4.508 - 12.726) = 205165779 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.509 - 13.103) = 30791310 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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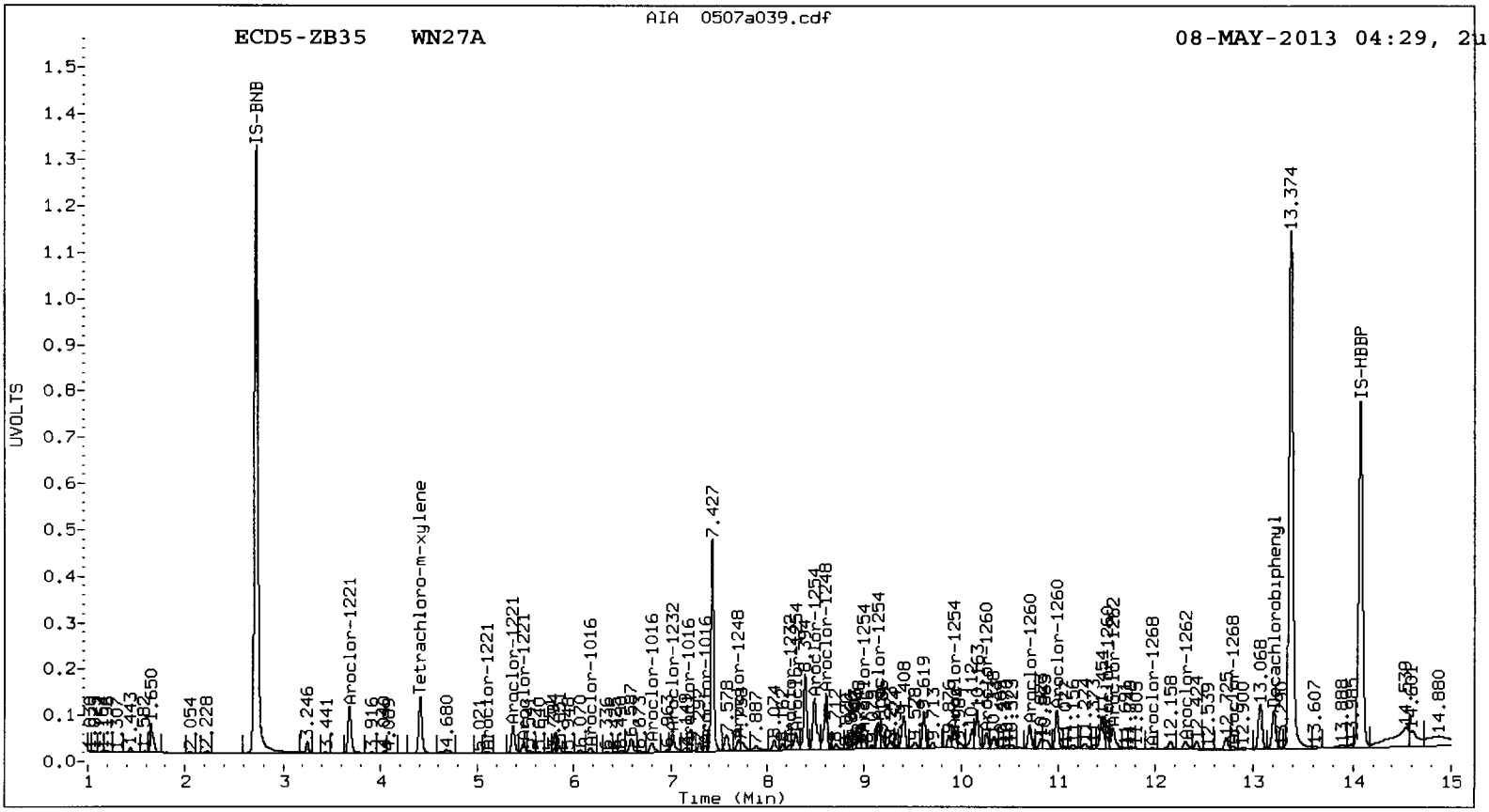
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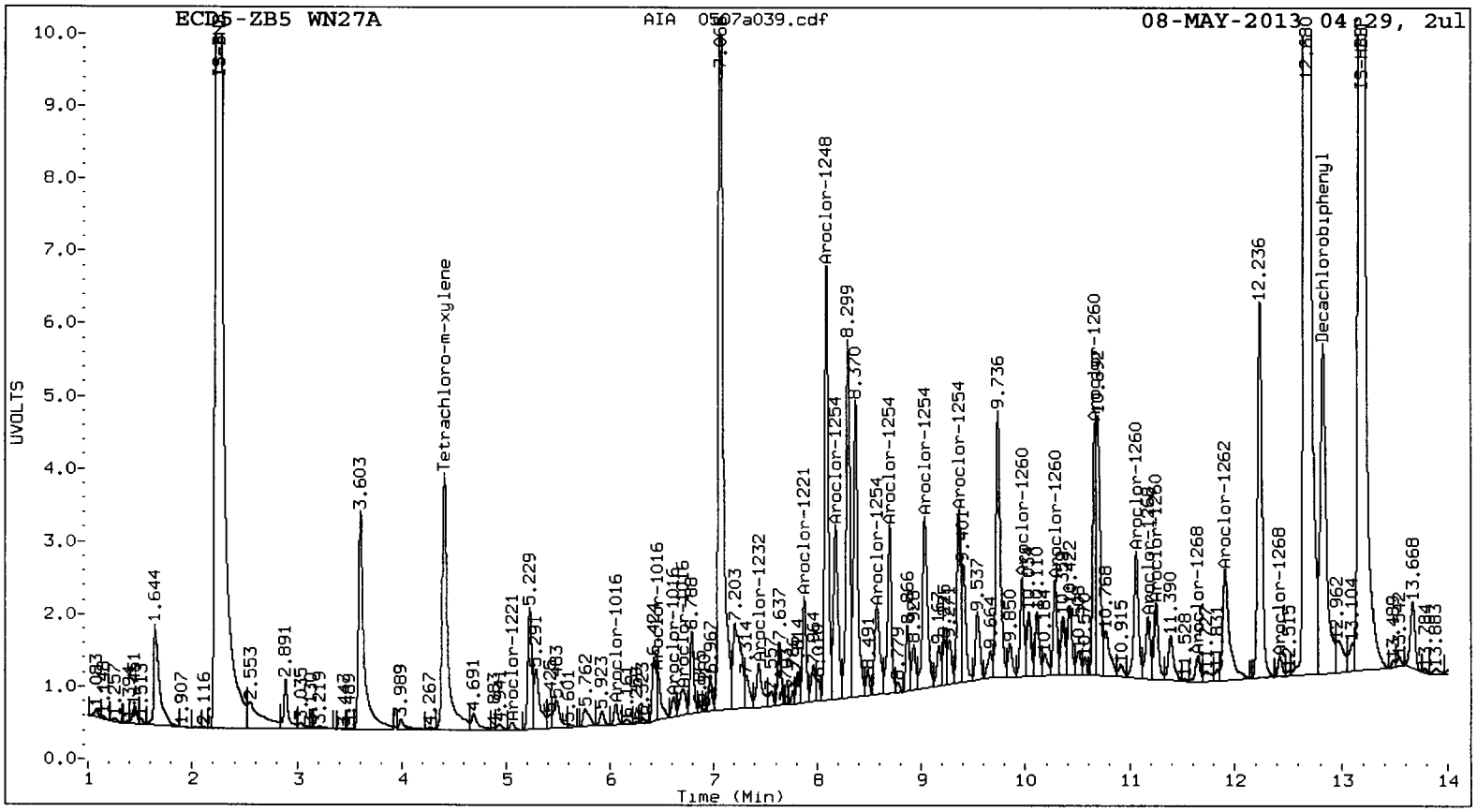
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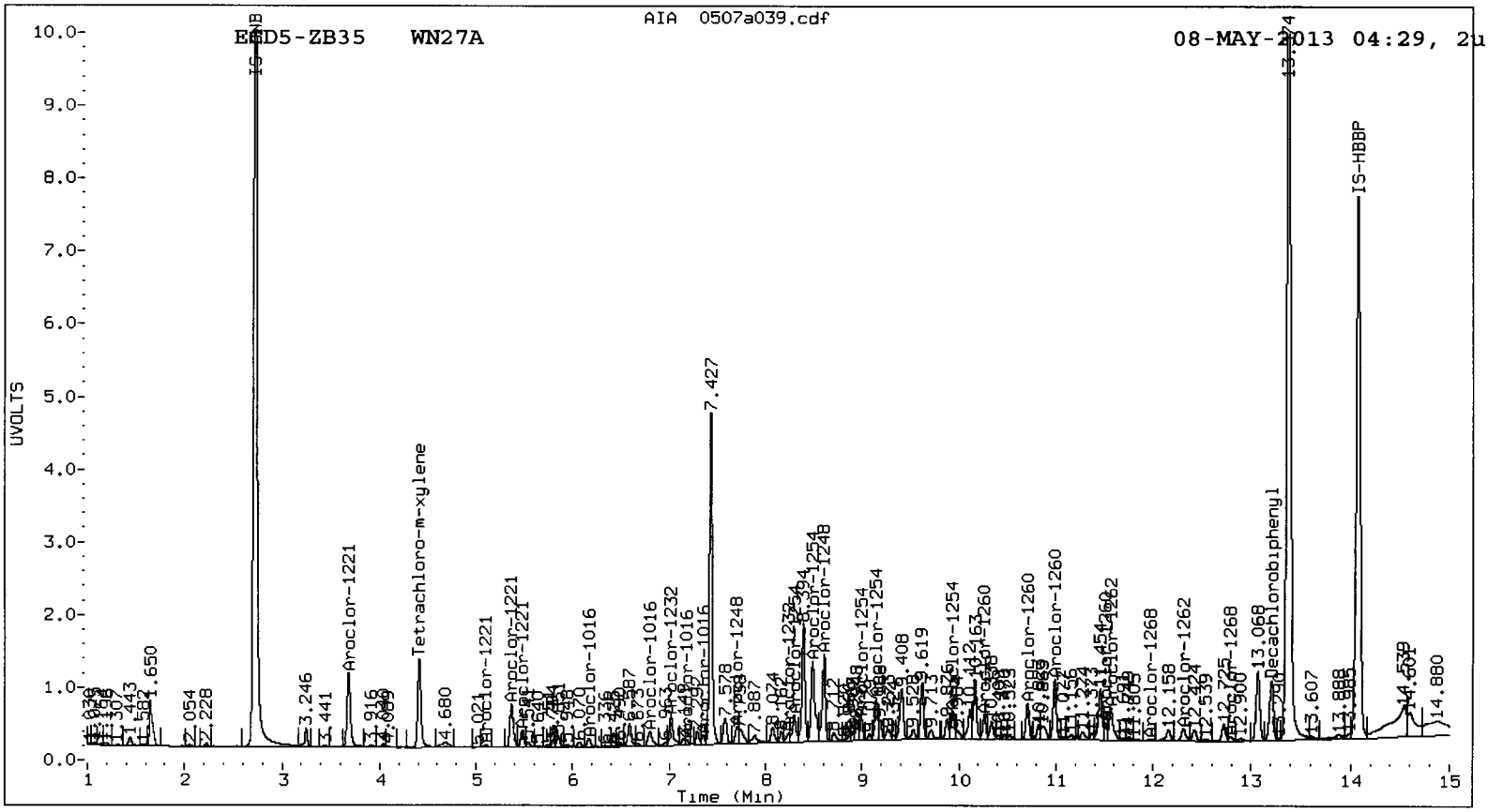
Tetrachloro-m-xylene
Decachlorobiphenyl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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

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Data file 2: 20130507.b/0507-2.b/0507a041.d
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Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WN27AMSD
Client ID:
Injection Date: 08-MAY-2013 05:09
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 5.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.409	0.001	6465002	4.411	0.002	1544660	7.8	7.6	2.4	Tetrachloro-m-xylen
12.832	0.005	8854464	13.168	-0.035	2684951	11.1	19.2	53.6*	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	97.2	94.9
Decachlorobiphenyl	138.8	240.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53604414	9.4
Hexabromobiphenyl	50004151	53396284	6.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15037824	1.3
Hexabromobiphenyl	9345340	9700189	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.058	0.000	1892845	78.3	1	6.165	0.001	745329	86.9
Aroclor-1016	2	6.464	-0.002	7317727	98.3	2	6.801	0.001	1610451	86.3
Aroclor-1016	3	6.614	-0.002	2423704	72.7	3	7.184	0.000	447059	91.7
Aroclor-1016	4	6.724	-0.002	2204367	88.5	4	7.357	0.001	403250	88.8
Total Col1Ave (4 peaks):		84.5				Total Col2Ave (4 peaks):			88.4	RPD = 5
Corrected Ave (3 peaks):		79.8				Corrected Ave (3 peaks):			87.3	RPD = 9
Aroclor-1221	1	5.061	-0.003	1080732	49.5	1	3.682	-0.013	1162776	754.2
Aroclor-1221	2	6.464	-0.005	7317727	1095.2	2	5.098	0.003	84044	32.6
Aroclor-1221	3	7.876	-0.003	2967622	314.5	3	5.370	0.025	774018	550.8
Aroclor-1221	NS	---			----	4	5.471	0.010	550894	124.6
Total Col1Ave (3 peaks):		486.4				Total Col2Ave (4 peaks):			365.6	RPD = 28
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			236.0	
Aroclor-1232	1	6.058	-0.002	1892845	190.6	1	6.165	-0.001	745329	193.1
Aroclor-1232	2	6.464	-0.006	7317727	240.8	2	6.801	-0.001	1610451	209.0
Aroclor-1232	3	7.439	-0.003	2554270	161.7	3	7.012	0.001	994777	309.6
Aroclor-1232	4	7.876	0.001	2967622	163.5	4	8.235	-0.004	165005	61.2
Total Col1Ave (4 peaks):		189.2				Total Col2Ave (4 peaks):			193.2	RPD = 2
Corrected Ave (3 peaks):		172.0				Corrected Ave (3 peaks):			154.4	RPD = 11
Aroclor-1242	1	6.058	0.000	1892845	98.0	1	6.165	0.001	745329	108.8
Aroclor-1242	2	6.464	-0.004	7317727	123.6	2	6.801	-0.001	1610451	107.0
Aroclor-1242	3	6.614	-0.003	2423704	91.7	3	7.012	0.002	994777	158.2
Aroclor-1242	4	7.876	0.003	2967622	91.0	4	8.235	-0.003	165005	31.3
Total Col1Ave (4 peaks):		101.1				Total Col2Ave (4 peaks):			101.3	RPD = 0
Corrected Ave (3 peaks):		93.6				Corrected Ave (3 peaks):			82.4	RPD = 13
Aroclor-1248	1	6.464	0.000	7317727	194.0	1	6.801	0.003	1610451	170.9
Aroclor-1248	2	7.439	-0.001	2554270	60.2	2	7.706	0.002	722176	92.4
Aroclor-1248	3	7.876	0.004	2967622	55.0	3	8.235	-0.001	165005	20.4
Aroclor-1248	4	8.091	-0.017	8532457	226.8	4	8.607	0.026	1499184	142.6
Total Col1Ave (4 peaks):		134.0				Total Col2Ave (4 peaks):			106.6	RPD = 23
Corrected Ave (3 peaks):		103.1				Corrected Ave (3 peaks):			85.1	RPD = 19
Aroclor-1254	1	8.185	-0.008	5359108	107.2	1	8.299	0.000	705591	96.8
Aroclor-1254	2	8.573	0.009	2570107	77.9	2	8.487	0.012	2010626	223.2
Aroclor-1254	3	8.699	-0.001	4466414	64.9	3	8.995	-0.001	312406	45.3
Aroclor-1254	4	9.032	-0.021	7386689	104.3	4	9.146	0.000	764023	51.7
Aroclor-1254	5	9.359	-0.003	10505227	392.0	5	9.935	0.000	715809	86.0
Total Col1Ave (5 peaks):		149.3				Total Col2Ave (5 peaks):			100.6	RPD = 39
Corrected Ave (4 peaks):		88.6				Corrected Ave (4 peaks):			69.9	RPD = 24
Aroclor-1260	1	9.970	0.005	3319345	75.9	1	10.263	0.003	903948	102.7
Aroclor-1260	2	10.285	0.003	4329133	99.8	2	10.709	0.000	1168742	113.4
Aroclor-1260	3	10.663	0.006	14038045	135.0	3	10.986	0.002	2204090	115.8
Aroclor-1260	4	11.058	0.001	6662397	131.5	4	11.507	0.002	627804	121.7
Aroclor-1260	5	11.250	0.004	4257630	157.1	NS	---			----
Total Col1Ave (5 peaks):		119.9				Total Col2Ave (4 peaks):			113.4	RPD = 6
Corrected Ave (4 peaks):		110.6				Corrected Ave (3 peaks):			110.7	RPD = 0
Aroclor-1262	1	10.285	0.002	4329133	86.6	1	10.263	0.003	903948	67.4
Aroclor-1262	2	10.663	0.004	14038045	119.5	2	10.709	-0.001	1168742	95.3
Aroclor-1262	3	11.058	-0.002	6662397	179.1	3	10.986	0.001	2204090	95.8
Aroclor-1262	4	11.250	0.003	4257630	81.5	4	11.567	0.000	1617519	108.1
Aroclor-1262	5	11.915	-0.003	5624741	140.3	5	12.308	0.002	580982	80.5
Total Col1Ave (5 peaks):		121.4				Total Col2Ave (5 peaks):			89.4	RPD = 30
Corrected Ave (4 peaks):		107.0				Corrected Ave (4 peaks):			84.7	RPD = 23
Aroclor-1268	1	11.175	0.000	3167732	28.2	1	11.507	0.000	627804	26.8

Aroclor-1268 2	11.250	0.004	4257630	34.3	2	11.567	-0.006	1617519	73.3
Aroclor-1268 3	11.649	0.016	1139182	12.3	3	11.975	0.006	100420	5.7
Aroclor-1268 4	12.424	0.002	1023527	3.9	4	12.793	0.001	180593	4.0

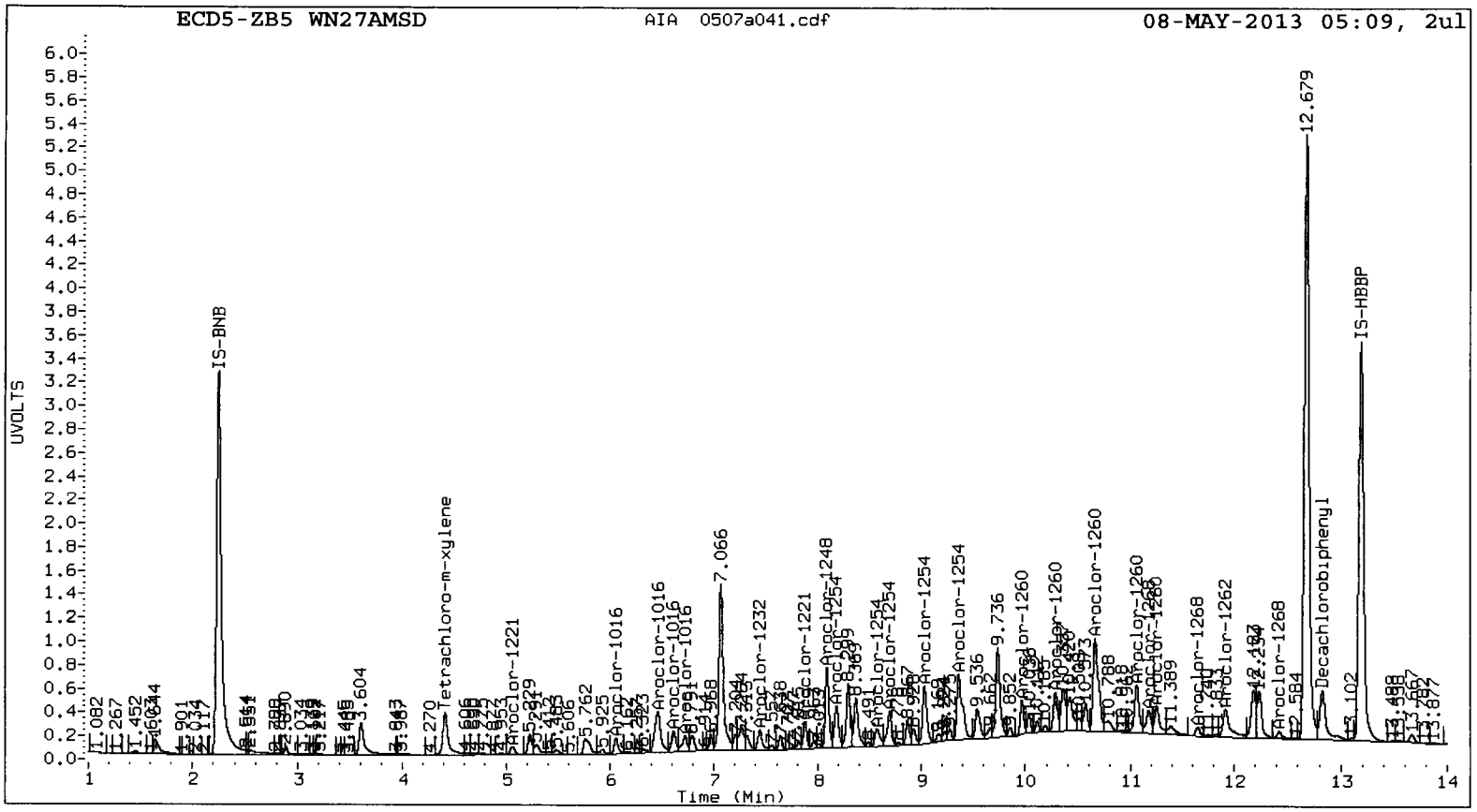
Total Col1Ave (4 peaks): 19.7 Total Col2Ave (4 peaks): 27.5 RPD = 33

Corrected Ave (3 peaks): 14.8 Corrected Ave (3 peaks): 12.2 RPD = 20

Total PCB Area Col1 (4.508 - 12.726) = 301165127 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.509 - 13.103) = 49256729 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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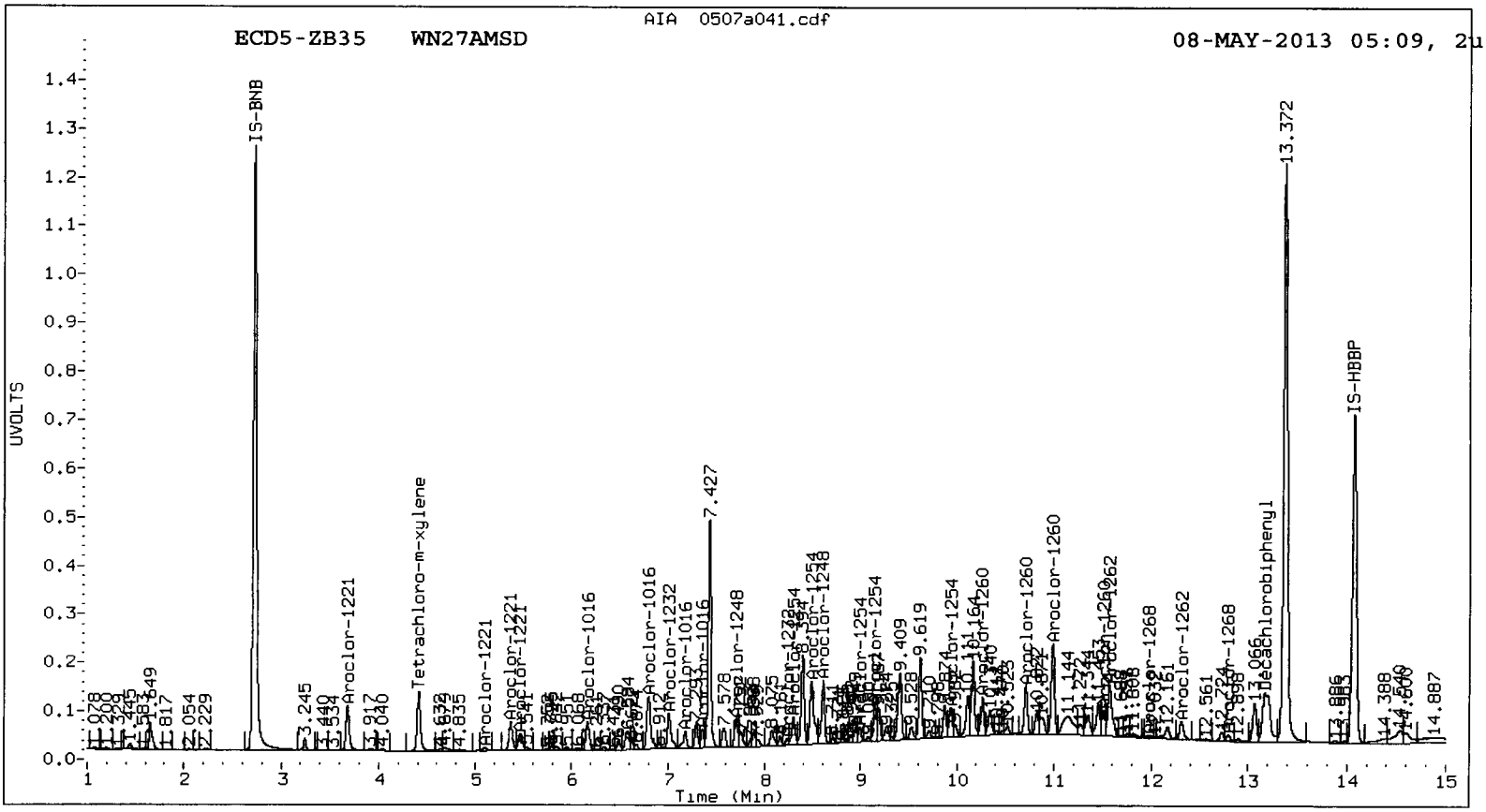
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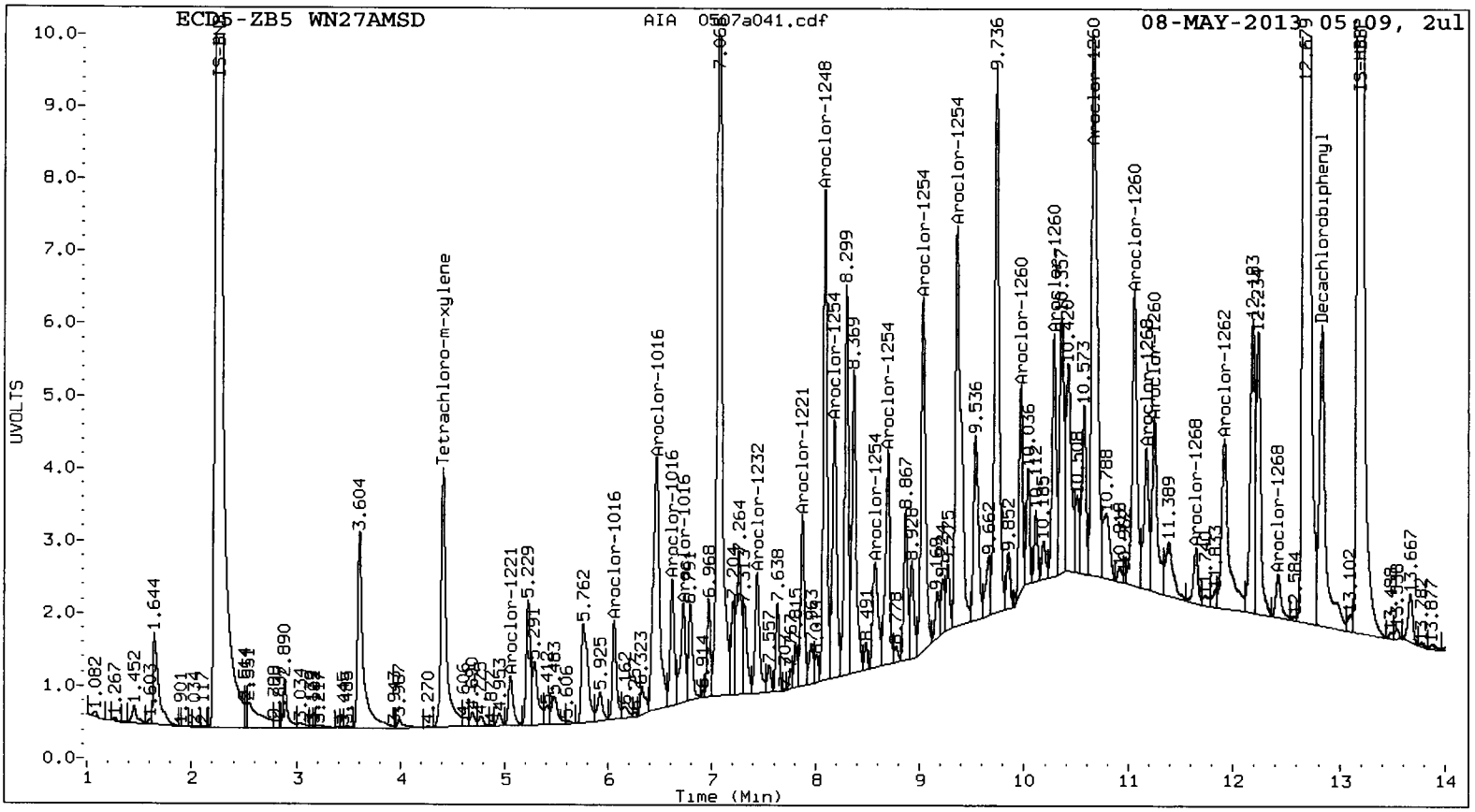
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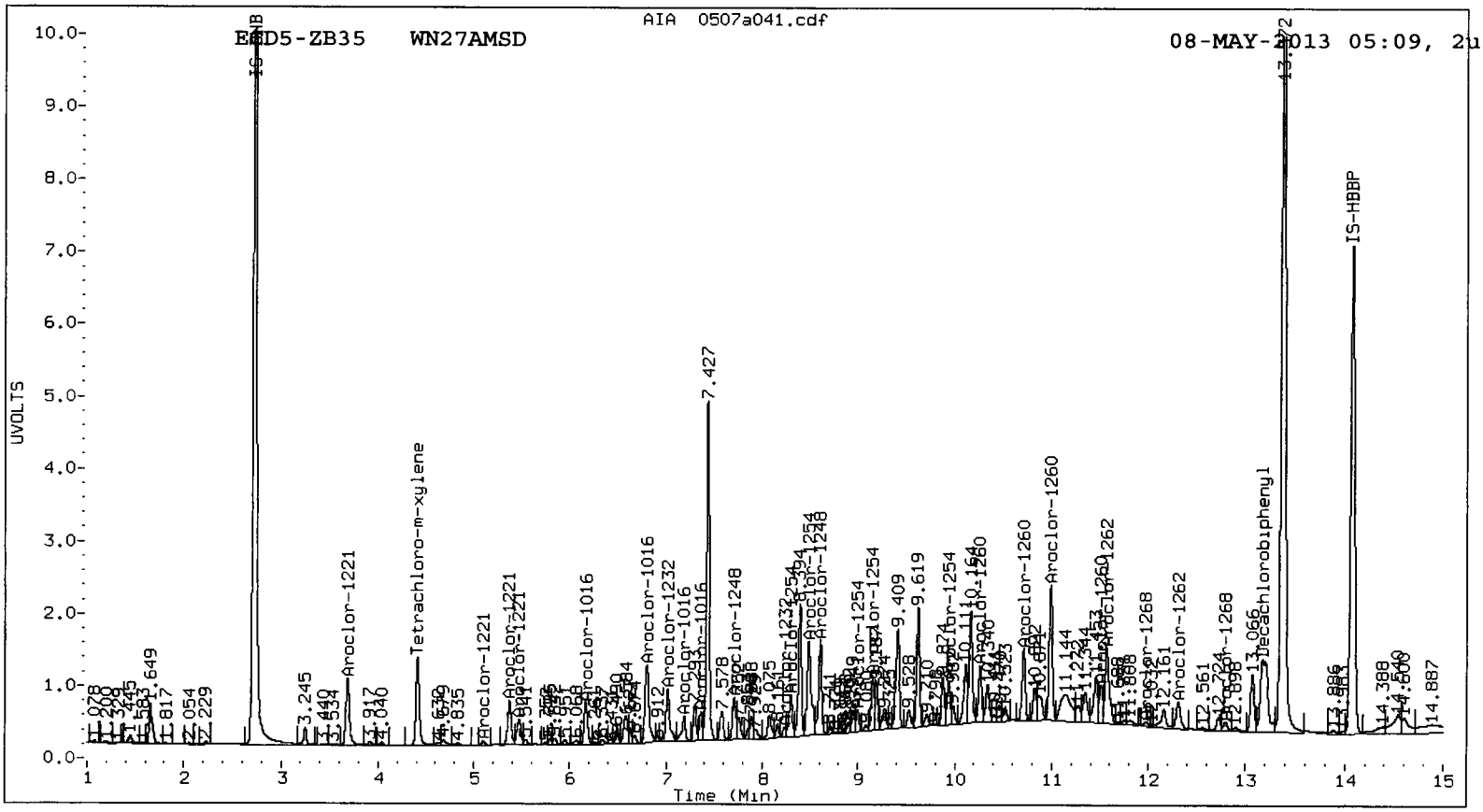
Decachlorobiphenyl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Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

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Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 08-MAY-2013 06:30
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.409	0.000	34221471	4.409	-0.001	8213450	38.4	39.5	3.0	Tetrachloro-m-xylen
12.827	0.000	28713612	13.203	0.000	4488619	34.2	33.4	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	95.9	98.8
Decachlorobiphenyl	85.6	83.5

jt 05/14/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57538144	17.5
Hexabromobiphenyl	50004151	56147205	12.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15370880	3.6
Hexabromobiphenyl	9345340	9337721	-0.1

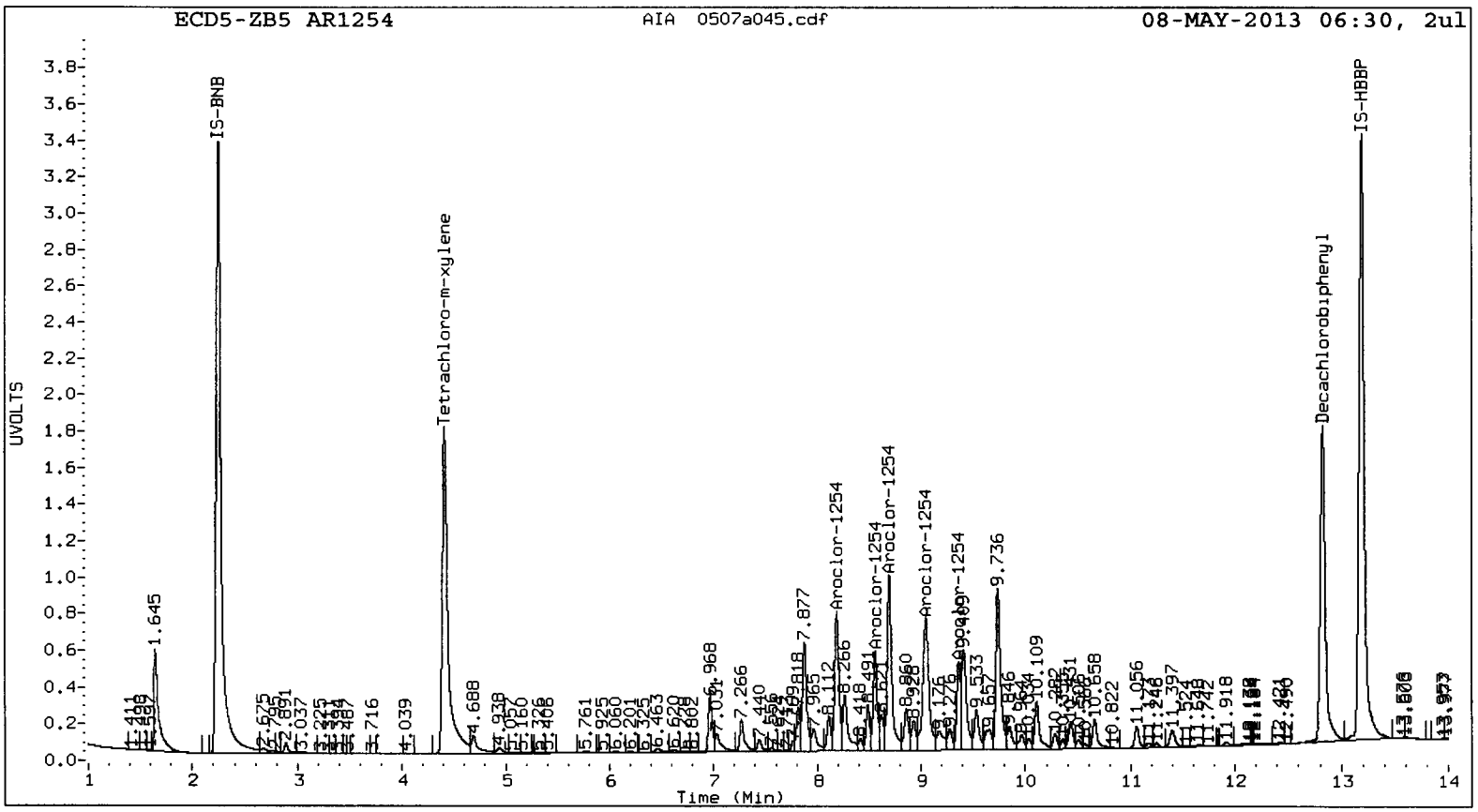
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.190	0.000	11076212	206.4	1	8.297	0.000	1585041	212.7
Aroclor-1254	2	8.561	0.000	7064963	199.5	2	8.473	0.000	1961874	213.1
Aroclor-1254	3	8.698	0.000	14842061	201.0	3	8.995	0.000	1439582	204.1
Aroclor-1254	4	9.050	0.000	15334962	201.6	4	9.145	0.000	3079059	203.8
Aroclor-1254	5	9.360	0.000	5683126	197.6	5	9.931	0.000	1708593	200.9
Total Col1Ave (5 peaks):					201.2	Total Col2Ave (5 peaks):				206.9 RPD = 3
Corrected Ave (4 peaks):					199.9	Corrected Ave (4 peaks):				205.4 RPD = 3

Total PCB Area Col1 (4.509 - 12.727) = 157493286 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.510 - 13.103) = 30161842 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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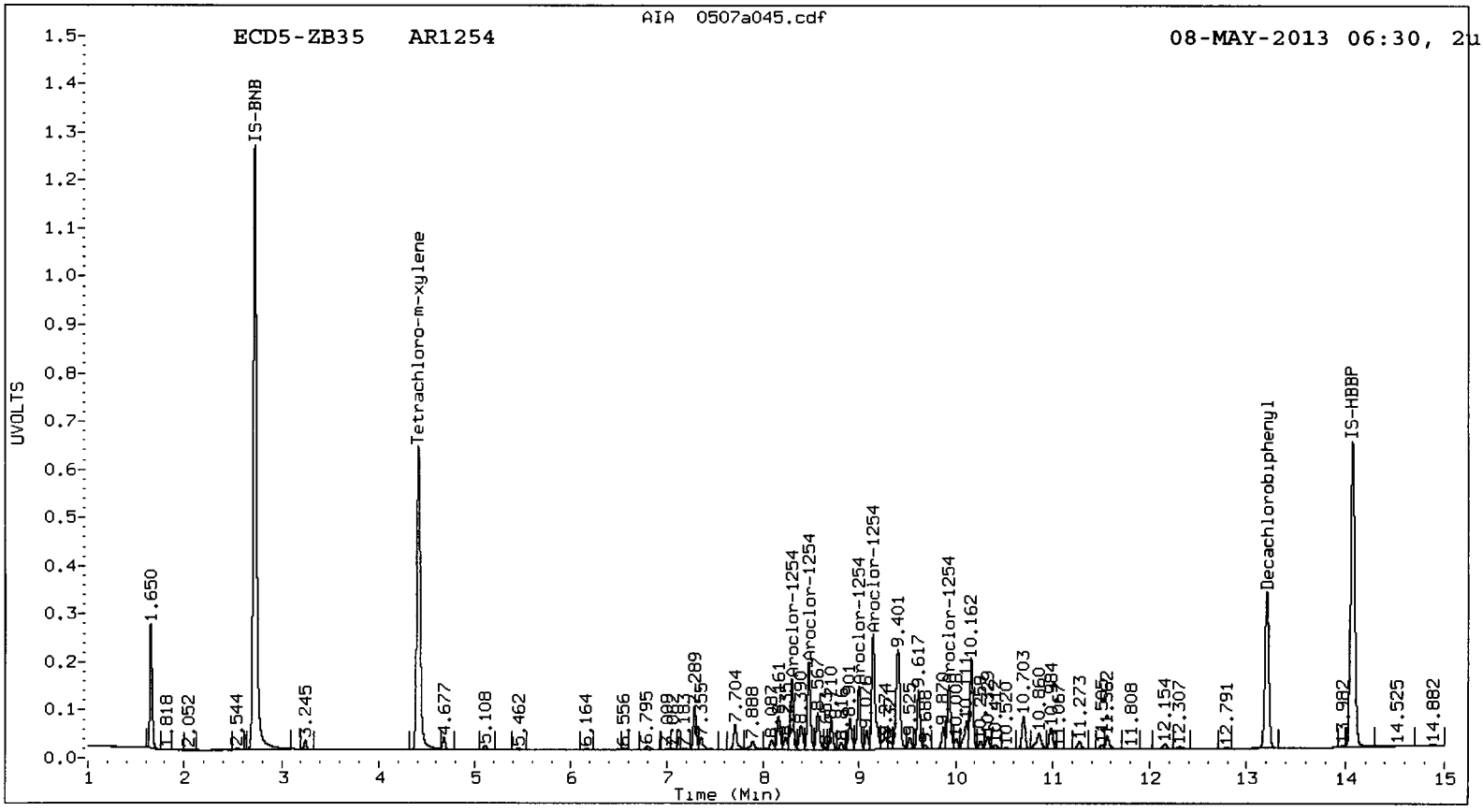
AIA 0507a045.cdf
08-MAY-2013 06:30, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.645
4.688
7.877
9.736
10.109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ECD5-ZB35 AR1254
08-MAY-2013 06:30, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.650
4.677
9.401
10.162
14.525
14.882

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0507-1.b/0507a046.d
Data file 2: 20130507.b/0507-2.b/0507a046.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 08-MAY-2013 06:51
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.408	0.000	33895635	4.410	0.000	8056746	37.9	38.9	2.7	Tetrachloro-m-xylen
12.827	0.000	30539880	13.203	0.000	4387828	34.6	32.7	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.7	97.2
Decachlorobiphenyl	86.5	81.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57738341	17.9
Hexabromobiphenyl	50004151	59085325	18.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15320524	3.2
Hexabromobiphenyl	9345340	9330725	-0.2

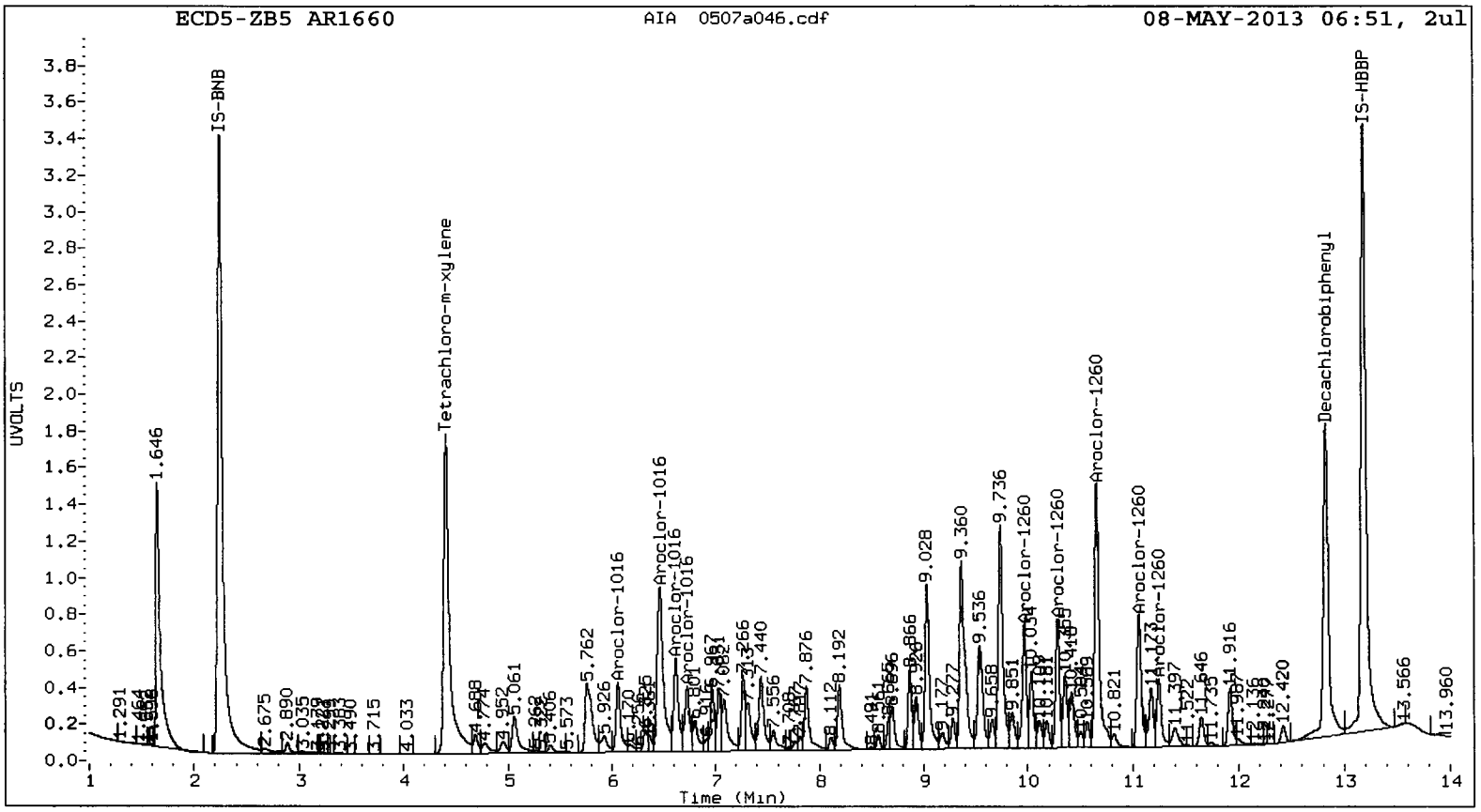
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

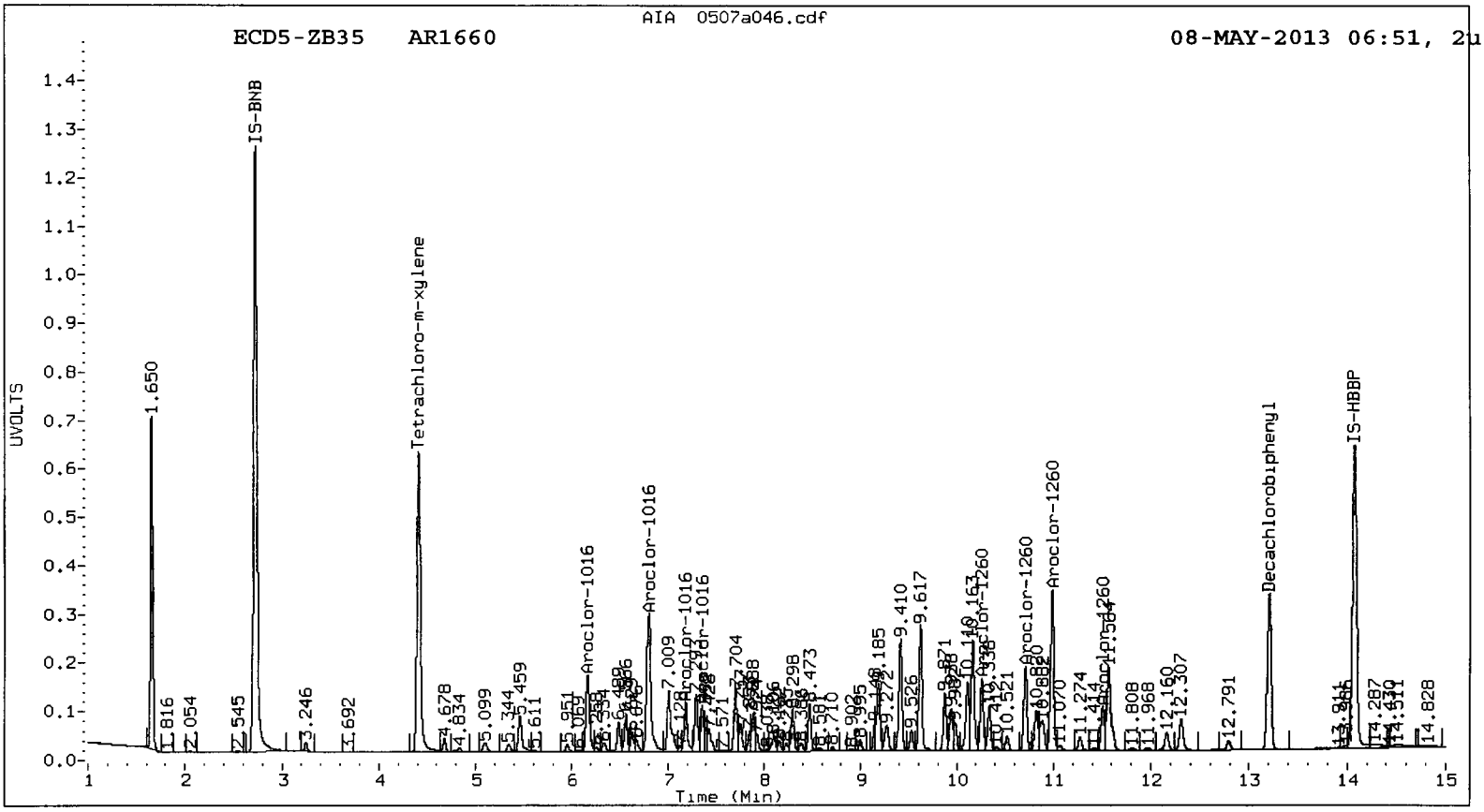
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.059	0.000	5992365	230.2	1	6.164	0.000	2107768	241.1
Aroclor-1016	2	6.467	0.000	18631806	232.4	2	6.800	0.000	4517241	237.7
Aroclor-1016	3	6.615	0.000	8130512	226.4	3	7.184	0.000	1165445	234.5
Aroclor-1016	4	6.727	0.000	6000978	223.6	4	7.356	0.000	1043877	225.5
Total Col1Ave (4 peaks):					228.2	Total Col2Ave (4 peaks):				234.7 RPD = 3
Corrected Ave (3 peaks):					226.7	Corrected Ave (3 peaks):				232.6 RPD = 3
Aroclor-1260	1	9.966	0.000	9172064	189.6	1	10.260	0.000	1729270	204.3
Aroclor-1260	2	10.282	0.000	9011332	187.8	2	10.709	0.000	2069618	208.8
Aroclor-1260	3	10.657	0.000	22422856	194.9	3	10.985	0.000	3983310	217.6
Aroclor-1260	4	11.056	0.000	10908980	194.7	4	11.505	0.000	1067534	215.1
Aroclor-1260	5	11.246	0.000	5779005	192.7	NS	---			----
Total Col1Ave (5 peaks):					191.9	Total Col2Ave (4 peaks):				211.5 RPD = 10
Corrected Ave (4 peaks):					191.2	Corrected Ave (3 peaks):				209.4 RPD = 9

Total PCB Area Col1 (4.508 - 12.727) = 297204921 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.510 - 13.103) = 58644422 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660
AIA 0507a046.cdf
08-MAY-2013 06:51, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


AIA 0507a046.cdf
ECD5-ZB35 AR1660
08-MAY-2013 06:51, 2u
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: WN27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

Miscellaneous
Water/Soil/~~Sed~~/Tissue/Other
Separatory Funnel (3510C)/Liq-Liq (3520C)
Sonication (3550C)/~~Microwave (3546)~~
TissueMize (Modified 3550C)

Parameter TPHD

Preparation Test Misc # 1
ARI Job No(s) WN27, WN31

Batch set up by: ~~SH~~

Bottle #	ARI Sample I.D. WN27	Verify Client ID	Weight ~~or Volume~~ Extracted	~~Sonic Horn ID + Chk~~	~~KD~~	Turbo Vap 1 2 3	Clean-Up Y/(N)	Clean-Up Y/(N)	Clean-Up Y/(N)	~~KD~~	Turbo Vap (1) 2 3	Final Effective Volume	Volume to Lab	Comments
	MB	Date YL 04/26/13	10.00g									10 mL	1 mL	
	SB		10.00g											
	~~SB~~													
	~~Dup.~~													
	~~QLS~~													
3	WN27A		10.03											
3	AMS		10.07											
3	AMSD		10.03											
9	WN31A		10.02											
														SP 4/30/13
Analyst/Date:		YL 04/26/13 CT									SP 4/30/13	SP 4/30/13	SP 4/30/13	

Standard Conc.	Standard ID	Volume	Expiration Date	Analyst	Witness
HcID Surrogate 2,250	P (2031-4)	200 µL	10/24/13	YL	TH
Spike		µL			
TPHD Spike 15,000	11 (2028-3)	1,000 µL	10/16/13	YL	TH
Spike		µL			
~~QLS Spike~~		µL			

Extraction Time: 12:15 **Balance ID:** B146/1241 **Liq/Liq Start:** **Liq/Liq Stop:**

SPECIAL INSTRUCTIONS:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: WN27/WN31 Client ID: ~~4/5~~ SAIC
Analyst: JW Date: 4/30/13

ARI Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Dilution Factor	Primary Dilution (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Final Dilution Factor
WN27A	100	DCM/I8174	400	5				
Amy	↓	↓	↓	↓				
Amsc								
WN31A								

WN27 : 61292

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN27 Client ID: SAIC

Parameter: TPHD Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)= A	AC 4-24-13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)= 5% sticks-grass = A	
☐ 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 10mL final volume,	
based on sample pre-screen.	SH 4/25/13

3056F

Revision 009
08/14/12

WN27 : 01293

TPHD Raw Data
Initial Calibration

ARI Job ID: WN27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 4/13/13 Internal Standard ID N/A Expiration 11/27/13

Endrin/DDT Breakdown <15%? YES / NO / (NA)		ICV Exceeding ±20%?	YES / (NO)
ICal Meets %RSD & r^2 Criteria	(YES) / NO	ICV Exceeding ±30%?	YES / (NO)
Manual Integrations for ICal?	(YES) / NO	Linear Fits Used?	YES / (NO)
Minimum Response S/N Met	(YES) / NO	Quadratic Fits Used?	YES / (NO)
		Calibration Points Dropped?	YES / (NO)

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Diesel/AK102	2091-2	3/15/14	Diesel/AK102	2043-1	10/20/13
Motor Oil	2041-4	11/27/13	Motor Oil	2043-2	10/19/13
RT	2043-4	10/20/13			
IB	2043-3	10/20/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JW **Date:** 4/16/13

Reviewer: [signature] **Date:** 4/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0413a006	0413a007	0413a008	0413a009	0413a010	0413a011
INJ.DATE:	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013
INJ.TIME:	11:53	12:13	12:34	12:54	13:15	13:35

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.914	0.814-1.014	+++++	+++++
	40 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.023	0.973-1.073	+++++	+++++
	39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.542	0.492-0.592	+++++	+++++
	36 JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.794	0.744-0.844	+++++	+++++
	37 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.729	0.679-0.779	+++++	+++++
	38 Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.197	1.147-1.247	+++++	+++++
	2 C8	1.165	1.136	1.132	1.133	1.135	1.134	1.134	1.034-1.234	1.139	0.013
	3 C10	2.960	2.962	2.962	2.963	2.963	2.966	2.966	2.916-3.016	2.963	0.002
	4 C12	3.905	3.904	3.905	3.906	3.907	3.910	3.910	3.860-3.960	3.906	0.002
	5 C14	4.587	4.584	4.586	4.586	4.588	4.594	4.594	4.544-4.644	4.588	0.003
	6 C16	5.170	5.167	5.168	5.171	5.171	5.178	5.178	5.128-5.228	5.171	0.004
	7 C18	5.716	5.713	5.715	5.717	5.720	5.727	5.727	5.677-5.777	5.718	0.005
$	8 o-terph	5.859	5.858	5.865	5.874	5.884	5.903	5.903	5.853-5.953	5.874	0.017
	9 C20	6.268	6.263	6.265	6.266	6.268	6.274	6.274	6.224-6.324	6.267	0.004
	10 C22	6.810	6.805	6.806	6.806	6.807	6.808	6.808	6.758-6.858	6.807	0.002
	11 C24	7.324	7.320	7.319	7.321	7.318	7.319	7.319	7.269-7.369	7.320	0.002
	12 C25	7.573	7.567	7.564	7.566	7.567	7.566	7.566	7.516-7.616	7.567	0.003

Reviewer 1 _____ Date: 4/16/13
Reviewer 2 _____ Date: 4/16/13

WG627295 04/29/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	7.811	7.808	7.806	7.827	7.833	7.827	7.827	7.777-7.877	7.819	0.012
14 C28	8.266	8.260	8.259	8.261	8.261	8.258	8.258	8.208-8.308	8.261	0.003
$ 15 Triacon Surr	8.706	8.710	8.706	8.711	8.712	8.700	8.700	8.650-8.750	8.707	0.004
16 C32	9.093	9.097	9.073	9.082	9.094	9.090	9.090	9.040-9.140	9.088	0.009
17 C34	9.462	9.465	9.462	9.469	9.468	9.458	9.458	9.408-9.508	9.464	0.004
18 Filter Peak	11.449	11.438	11.447	11.432	11.448	11.449	11.449	11.349-11.549	11.444	0.007
19 C36	9.835	9.834	9.819	9.827	9.827	9.824	9.824	9.774-9.874	9.828	0.006
20 C38	10.178	10.182	10.193	10.156	10.189	10.179	10.179	10.129-10.229	10.179	0.013
21 C40	10.533	10.531	10.533	10.538	10.535	10.541	10.541	10.491-10.591	10.535	0.004
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.683	0.633-0.733	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.499	0.449-0.549	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.662	0.612-0.712	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.615	0.565-0.665	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0413a013	0413a014	0413a015	0413a016	0413a017	0413a018
INJ.DATE:	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013
INJ.TIME:	14:16	14:36	14:57	15:17	15:38	15:58

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.914	0.814-1.014	+++++	+++++
	40 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.023	0.973-1.073	+++++	+++++
	39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.542	0.492-0.592	+++++	+++++
	36 JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.794	0.744-0.844	+++++	+++++
	37 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.729	0.679-0.779	+++++	+++++
	38 Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.197	1.147-1.247	+++++	+++++
	2 C8	1.180	1.166	1.100	1.178	1.128	1.143	1.143	1.044-1.244	1.149	0.032
	3 C10	2.964	2.961	2.963	2.963	2.962	2.962	2.962	2.912-3.012	2.963	0.001
	4 C12	3.904	3.903	3.904	3.904	3.903	3.905	3.905	3.854-3.954	3.904	0.001
	5 C14	4.585	4.583	4.603	4.569	4.583	4.584	4.584	4.534-4.634	4.585	0.011
	6 C16	5.184	5.188	5.164	5.167	5.183	5.166	5.166	5.116-5.216	5.175	0.011
$	8 o-terph	5.903	5.902	5.900	5.902	5.899	5.904	5.904	5.854-5.955	5.902	0.002
	9 C20	6.285	6.273	6.281	6.283	6.280	6.287	6.287	6.237-6.336	6.281	0.005
	10 C22	6.807	6.807	6.806	6.805	6.804	6.808	6.808	6.758-6.857	6.806	0.002
	11 C24	7.321	7.329	7.314	7.320	7.321	7.311	7.311	7.261-7.361	7.319	0.006
	12 C25	7.577	7.569	7.572	7.563	7.556	7.572	7.572	7.522-7.622	7.568	0.008

Reviewer 1 JW Date: 4/16/13
Reviewer 2 Date: 4/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	7.813	7.831	7.834	7.825	7.819	7.830	7.830	7.779-7.880	7.825	0.008
14 C28	8.258	8.257	8.247	8.256	8.257	8.258	8.258	8.209-8.309	8.255	0.004
$ 15 Triacon Surr	8.669	8.677	8.684	8.696	8.719	8.747	8.747	8.697-8.797	8.698	0.029
16 C32	9.082	9.091	9.091	9.090	9.084	9.095	9.095	9.045-9.145	9.089	0.005
17 C34	9.463	9.455	9.460	9.455	9.454	9.449	9.449	9.399-9.499	9.456	0.005
18 Filter Peak	11.443	11.451	11.444	11.452	11.438	11.443	11.443	11.343-11.543	11.445	0.005
19 C36	9.816	9.824	9.820	9.830	9.816	9.820	9.820	9.770-9.870	9.821	0.005
20 C38	10.173	10.184	10.178	10.178	10.168	10.185	10.185	10.136-10.236	10.178	0.007
21 C40	10.541	10.538	10.543	10.539	10.542	10.543	10.543	10.493-10.593	10.541	0.002
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.683	0.633-0.733	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.499	0.449-0.549	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.662	0.612-0.712	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.615	0.565-0.665	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130413.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	13-APR-2013 09:47	0413a001.d	1	RINSE	
2	13-APR-2013 10:07	0413a002.d	1	RT0413	
3	13-APR-2013 10:27	0413a003.d	1	IB0413	
4	13-APR-2013 10:47	0413a004.d	1	DIESEL#1	
5	13-APR-2013 11:07	0413a005.d	1	MOIL#1	
6	13-APR-2013 11:53	0413a006.d	1	DIESEL50	
7	13-APR-2013 12:13	0413a007.d	1	DIESEL100	
8	13-APR-2013 12:34	0413a008.d	1	DIESEL250	
9	13-APR-2013 12:54	0413a009.d	1	DIESEL500	
10	13-APR-2013 13:15	0413a010.d	1	DIESEL1000	
11	13-APR-2013 13:35	0413a011.d	1	DIESEL2500	
12	13-APR-2013 13:56	0413a012.d	1	DIESELICV250	
13	13-APR-2013 14:16	0413a013.d	1	MOIL100	
14	13-APR-2013 14:36	0413a014.d	1	MOIL250	
15	13-APR-2013 14:57	0413a015.d	1	MOIL500	
16	13-APR-2013 15:17	0413a016.d	1	MOIL1000	
17	13-APR-2013 15:38	0413a017.d	1	MOIL2500	
18	13-APR-2013 15:58	0413a018.d	1	MOIL5000	
19	13-APR-2013 16:19	0413a019.d	1	MOILICV500	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130413.b

ARI Job No.: RINS Method: ftphfid4a.m Instrument: fid4a.i Date: 13-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0947	0413a001.d	RINSE		1	NO MANUAL INTEGRATION
1007	0413a002.d	RT0413		1	Toluene,
1027	0413a003.d	IB0413		1	NO MANUAL INTEGRATION
1047	0413a004.d	DIESEL#1		1	o-terph,
1107	0413a005.d	MOIL#1		1	NO MANUAL INTEGRATION
1153	0413a006.d	DIESEL50		1	o-terph,
1213	0413a007.d	DIESEL100		1	o-terph,
1234	0413a008.d	DIESEL250		1	o-terph,
1254	0413a009.d	DIESEL500		1	o-terph,
1315	0413a010.d	DIESEL1000		1	o-terph,
1335	0413a011.d	DIESEL2500		1	o-terph,
1356	0413a012.d	DIESELICV250		1	o-terph,
1416	0413a013.d	MOIL100		1	Triacon Surr,
1436	0413a014.d	MOIL250		1	Triacon Surr,
1457	0413a015.d	MOIL500		1	Triacon Surr,
1517	0413a016.d	MOIL1000		1	Triacon Surr,
1538	0413a017.d	MOIL2500		1	Triacon Surr,
1558	0413a018.d	MOIL5000		1	Triacon Surr,
1619	0413a019.d	MOILICV500		1	Triacon Surr,

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130413 Project:

Instrument ID: FID4A GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.86 TRIAC: 8.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	04/13/13	0947	5.87	8.70
02		RT0413	04/13/13	1007	5.86	8.70
03		IB0413	04/13/13	1027	5.86	8.69
04		DIESEL#1	04/13/13	1047	5.87	8.69
05		MOIL#1	04/13/13	1107	5.85	8.69
06		DIESEL50	04/13/13	1153	5.86	8.71
07		DIESEL100	04/13/13	1213	5.86	8.71
08		DIESEL250	04/13/13	1234	5.87	8.71
09		DIESEL500	04/13/13	1254	5.87	8.71
10		DIESEL1000	04/13/13	1315	5.88	8.71
11		DIESEL2500	04/13/13	1335	5.90	8.70
12		DIESELICV250	04/13/13	1356	5.86	8.70
13		MOIL100	04/13/13	1416	5.90	8.67
14		MOIL250	04/13/13	1436	5.90	8.68
15		MOIL500	04/13/13	1457	5.90	8.68
16		MOIL1000	04/13/13	1517	5.90	8.70
17		MOIL2500	04/13/13	1538	5.90	8.72
18		MOIL5000	04/13/13	1558	5.90	8.75
19		MOILICV500	04/13/13	1619	5.90	8.68

QC LIMITS

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

* Values outside of QC limits.

FORM VIII TPH

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130413

Instrument: FID4A.I Project:

Calibration Date: 13-APR-2013 SDG No.: 20130413

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	15188	15021	14479	14279	14226	13910	14517	3.4
AK Diesel	17981	17836	17184	16948	16866	16485	17217	3.4
OR Diesel	18067	17904	17254	17021	16941	16562	17291	3.4
Cal Diesel	17937	17789	17145	16910	16821	16447	17175	3.4
o-Terph	20876	20737	19497	18356	18320	17911	19283	6.7

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

Quant Ranges : WA Diesel C12-C24 (3.908-7.326)
AK Diesel C10-C25 (2.967-7.574)
OR Diesel C10-C28 (2.967-8.269)
Cal Diesel C10-C24 (2.967-7.326)

Calibration Files	Analysis Time
0413a006.d	13-APR-2013 11:53
0413a007.d	13-APR-2013 12:13
0413a008.d	13-APR-2013 12:34
0413a009.d	13-APR-2013 12:54
0413a010.d	13-APR-2013 13:15
0413a011.d	13-APR-2013 13:35

FORM VI-Diesel

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a002.d ARI ID: RT0413
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 10:07
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.914	0.000	523273	404181	WATPHG	(Tol-C12)	1601919	103.09
C8	1.147	0.000	383436	378901	WATPHD	(C12-C24)	2482020	171.00
C10	2.967	0.000	554691	384061	WATPHM	(C24-C38)	3731338	274.28
C12	3.908	0.000	599973	392136	AK102	(C10-C25)	3297127	191.53
C14	4.587	0.000	632883	391482	AK103	(C25-C36)	3275864	355.99
C16	5.171	0.000	554416	390514				
C18	5.717	0.000	457643	373684				
C20	6.268	0.000	500619	352912				
C22	6.810	0.000	449542	363990	MIN.OIL	(C24-C38)	3731338	218.73
C24	7.326	0.000	451103	374543				
C25	7.574	0.000	428467	368739				
C26	7.826	0.000	1071962	1140709				
C28	8.269	0.000	451113	396216				
C32	9.081	0.000	434660	405330				
C34	9.457	0.000	423148	399566				
Filter Peak	11.442	0.000	2220	3573	CREOSOT	(C12-C22)	2071520	949.41 M
C36	9.823	0.000	376532	406269				
C38	10.179	0.000	384689	395168				
C40	10.533	0.000	339686	388792				
o-terph	5.861	0.000	933117	821007				
Triacon Surr	8.698	0.000	991072	1035385				

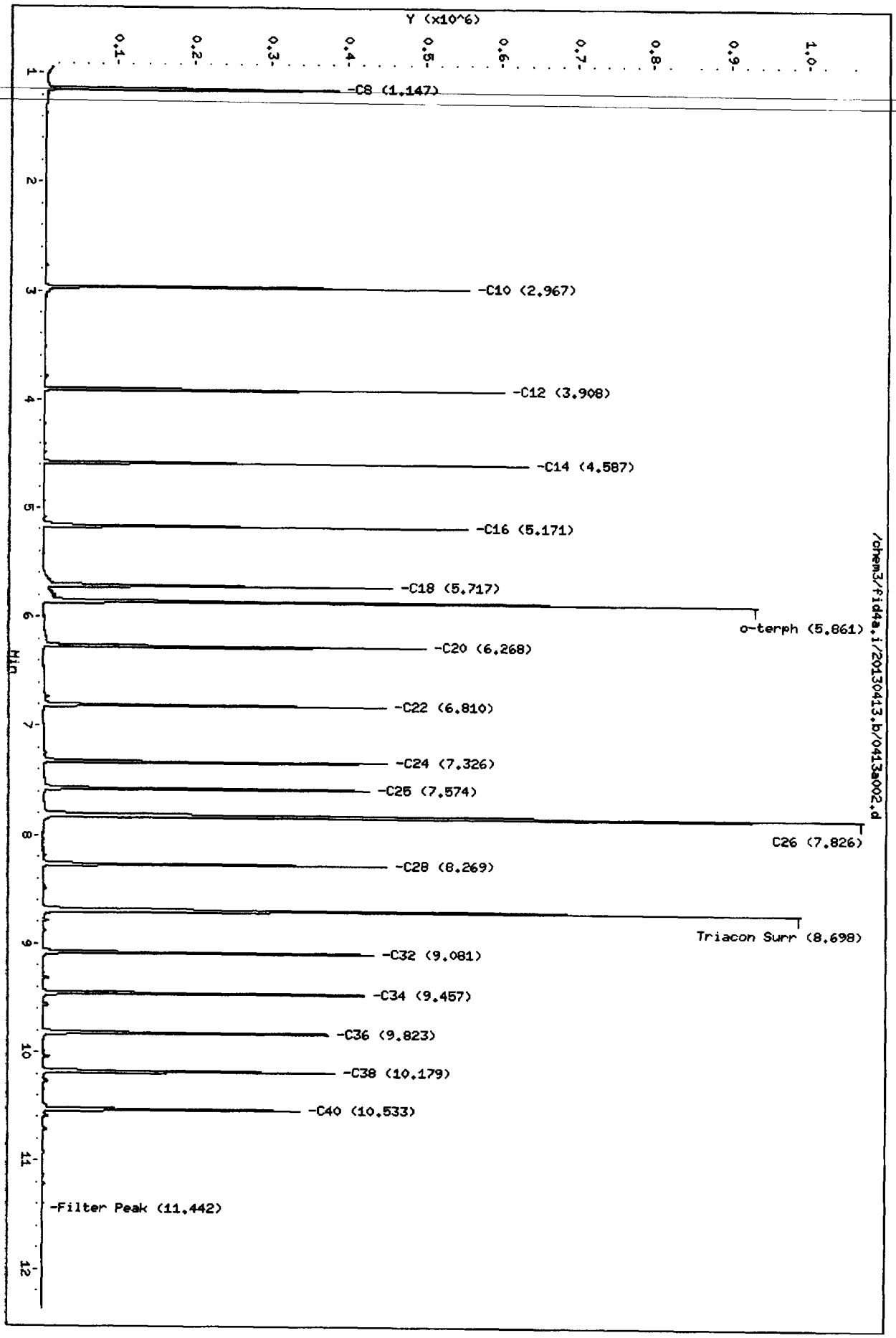
Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	821007	42.6	94.6
Triacontane	1035385	56.9	126.4

M Indicates the peak was manually integrated

JW 4/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013



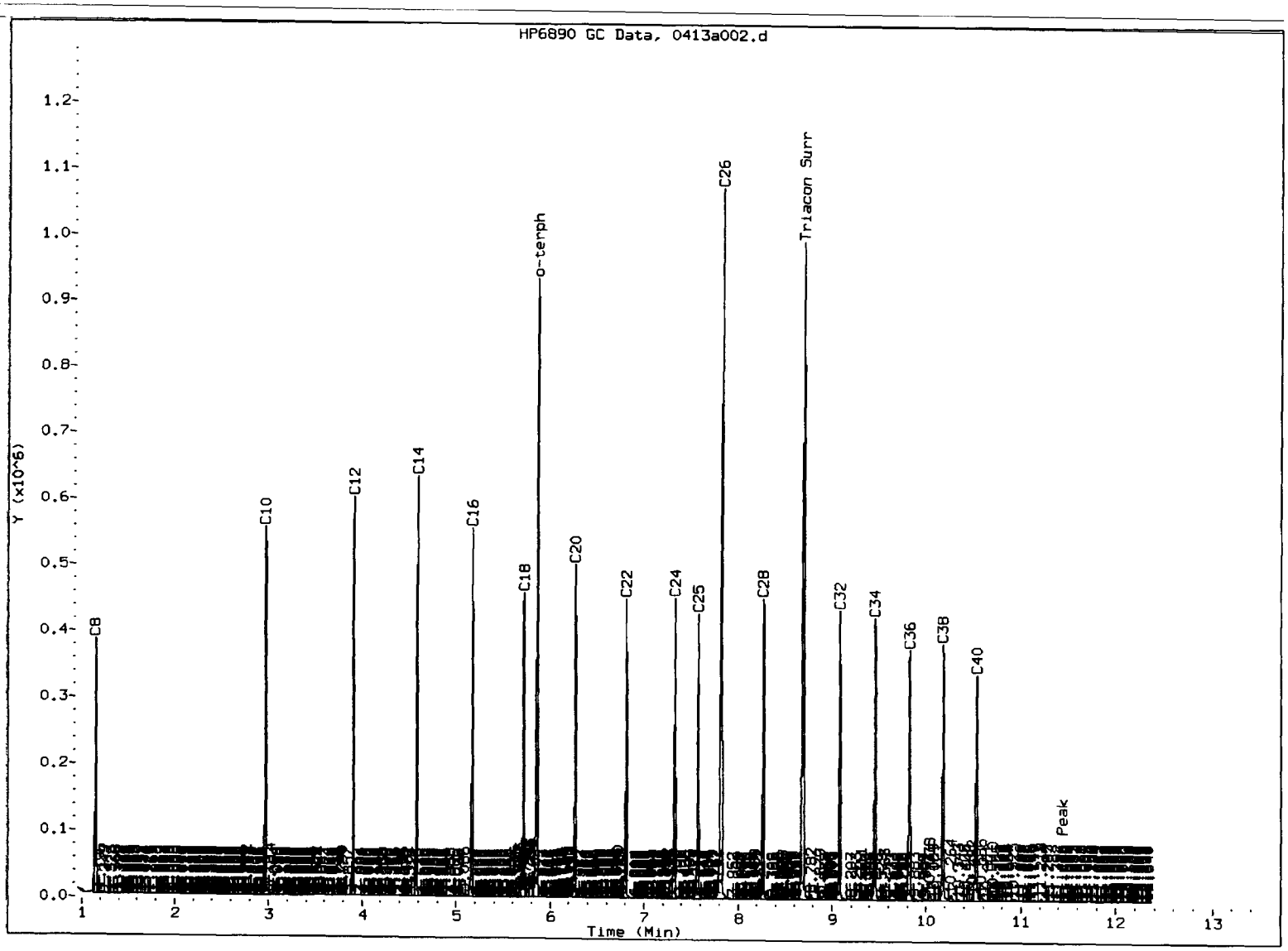
Data File: /chem3/fid4a.i/20130413.b/0413a002.d
Date : 13-APR-2013 10:07
Client ID:
Sample Info: RT0413
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JW
Column diameter: 0.25

JSU 11/14/13

FID:4A-2C/RTX-1 RT0413

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
2. Peak not found
5. Skimmed surrogate

Analyst: JCJ Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a003.d
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 04/15/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: IB0413
Client ID:
Injection: 13-APR-2013 10:27

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	17733	1.14
C8	1.102	-0.046	1135	2331	WATPHD	(C12-C24)	47239	3.25
C10	2.964	-0.004	232	237	WATPHM	(C24-C38)	117547	8.64
C12	3.905	-0.003	174	136	AK102	(C10-C25)	54060	3.14
C14	4.585	-0.003	110	101	AK103	(C25-C36)	90176	9.80
C16	5.167	-0.004	108	79				
C18	5.715	-0.002	160	177				
C20	6.261	-0.007	154	176				
C22	6.802	-0.008	133	182	MIN.OIL	(C24-C38)	117547	6.89
C24	7.321	-0.005	163	306				
C25	7.566	-0.008	139	147				
C26	7.807	-0.019	275	355				
C28	8.260	-0.009	813	902				
C32	9.055	-0.026	10958	9907				
C34	9.455	-0.002	490	696				
Filter Peak	11.440	-0.002	1869	927	CREOSOT	(C12-C22)	43412	19.90 M
C36	9.840	0.016	828	1744				
C38	10.165	-0.014	843	1177				
C40	10.527	-0.005	1196	569				
o-terph	5.863	0.002	1144381	871534				
Triacon Surr	8.687	-0.011	878761	820967				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	871534	45.2	100.4
Triacontane	820967	45.1	100.3

4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a003.d

Date : 13-APR-2013 10:27

Client ID:

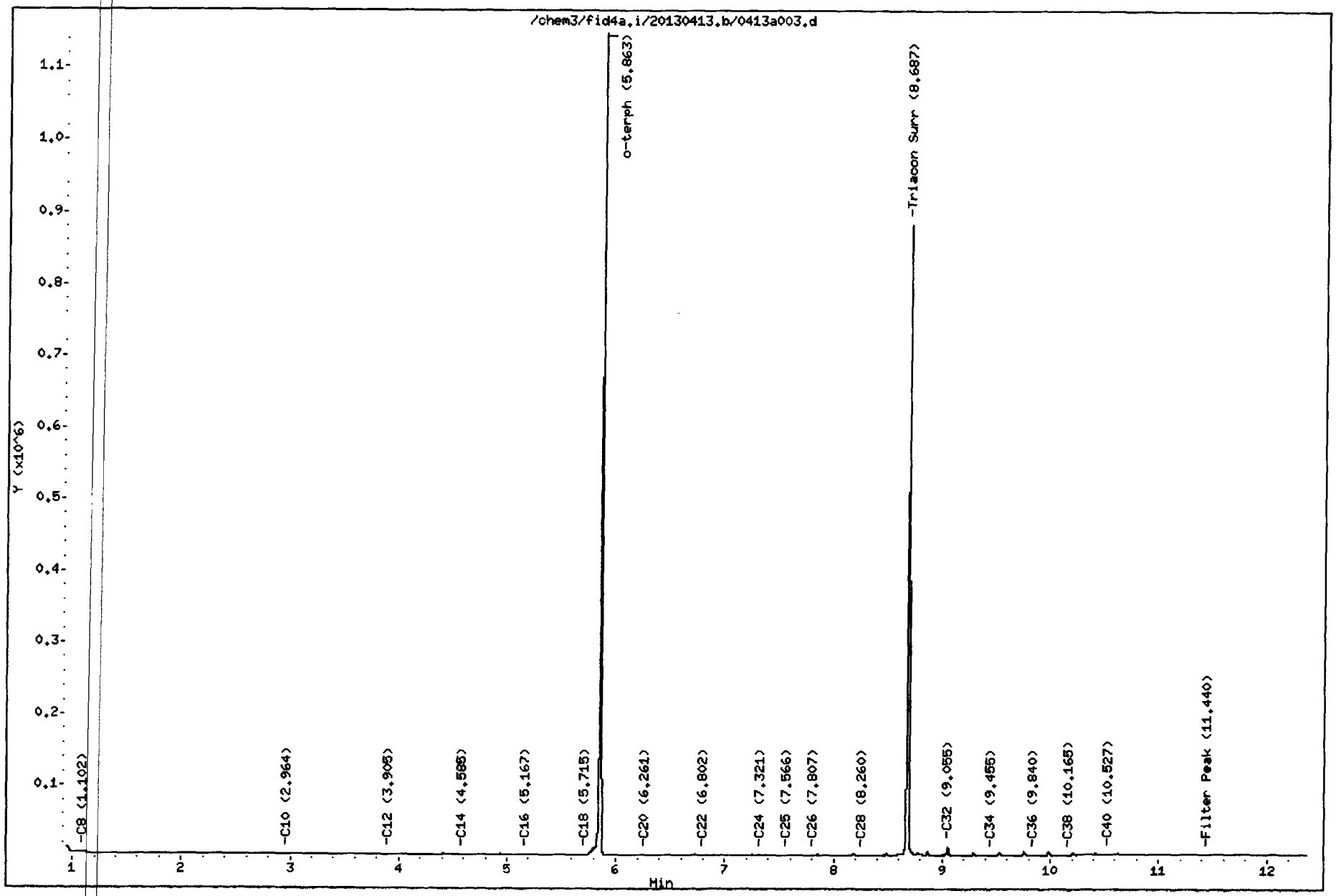
Sample Info: IB0413

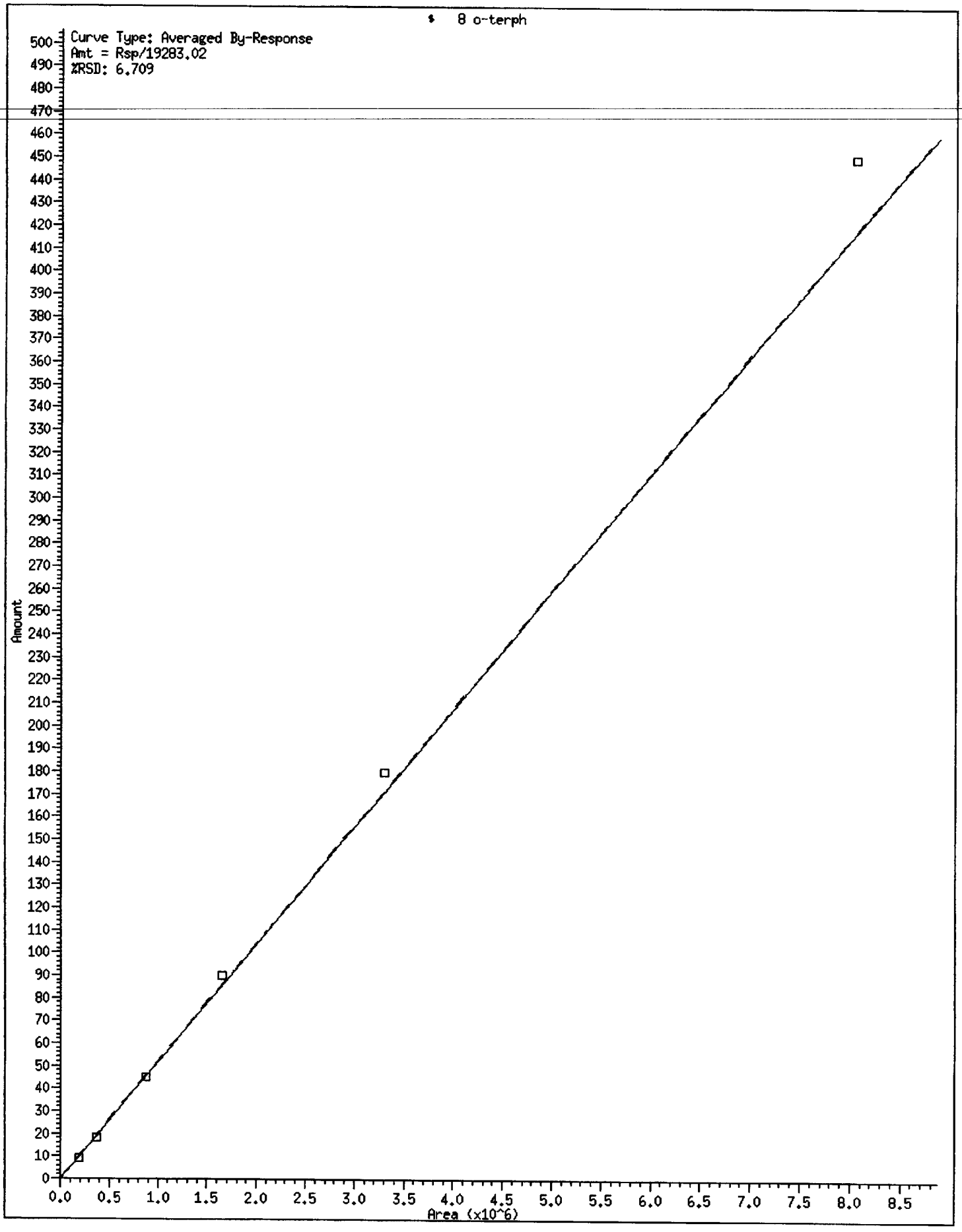
Column phase: RTX-1

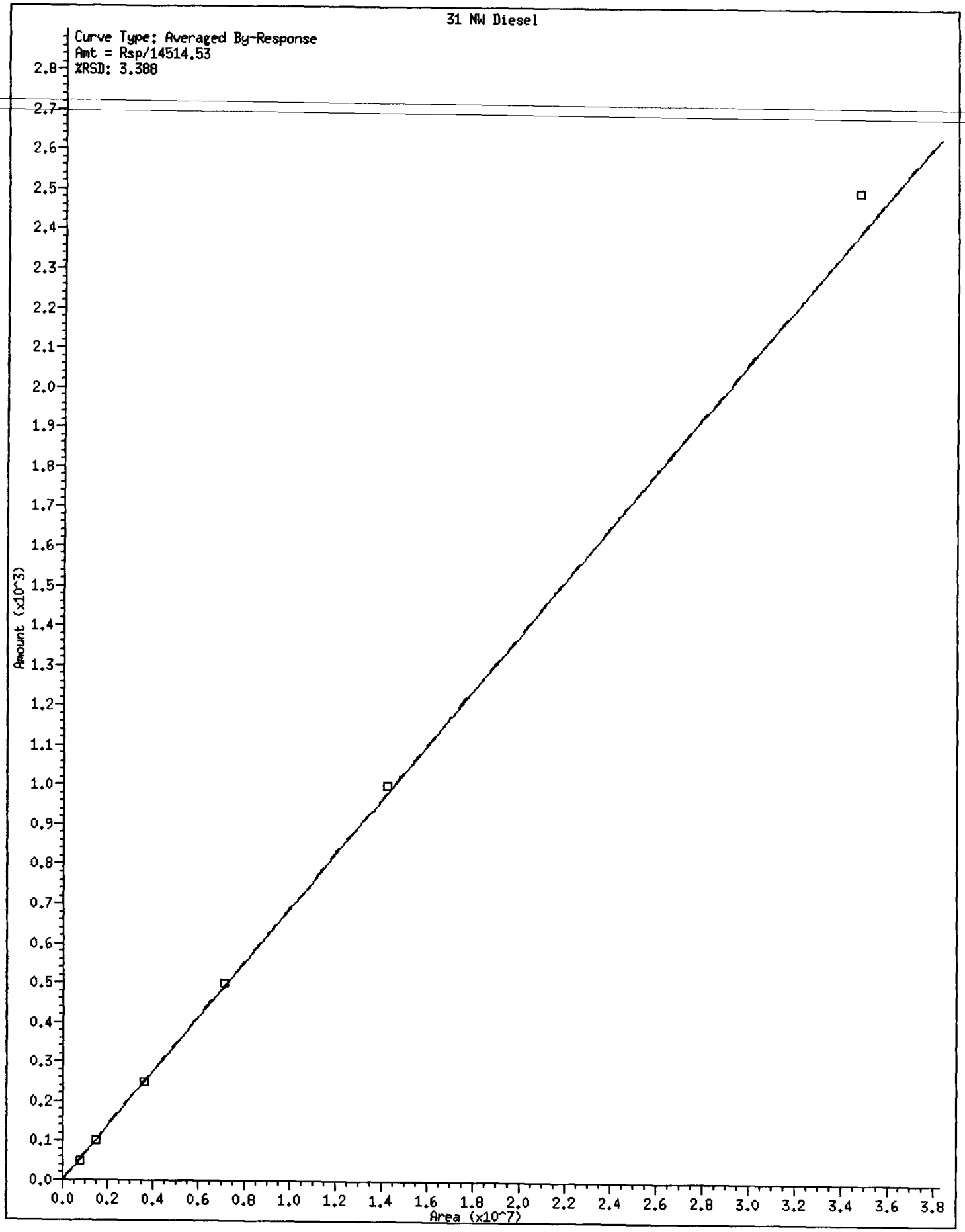
Instrument: fid4a.i

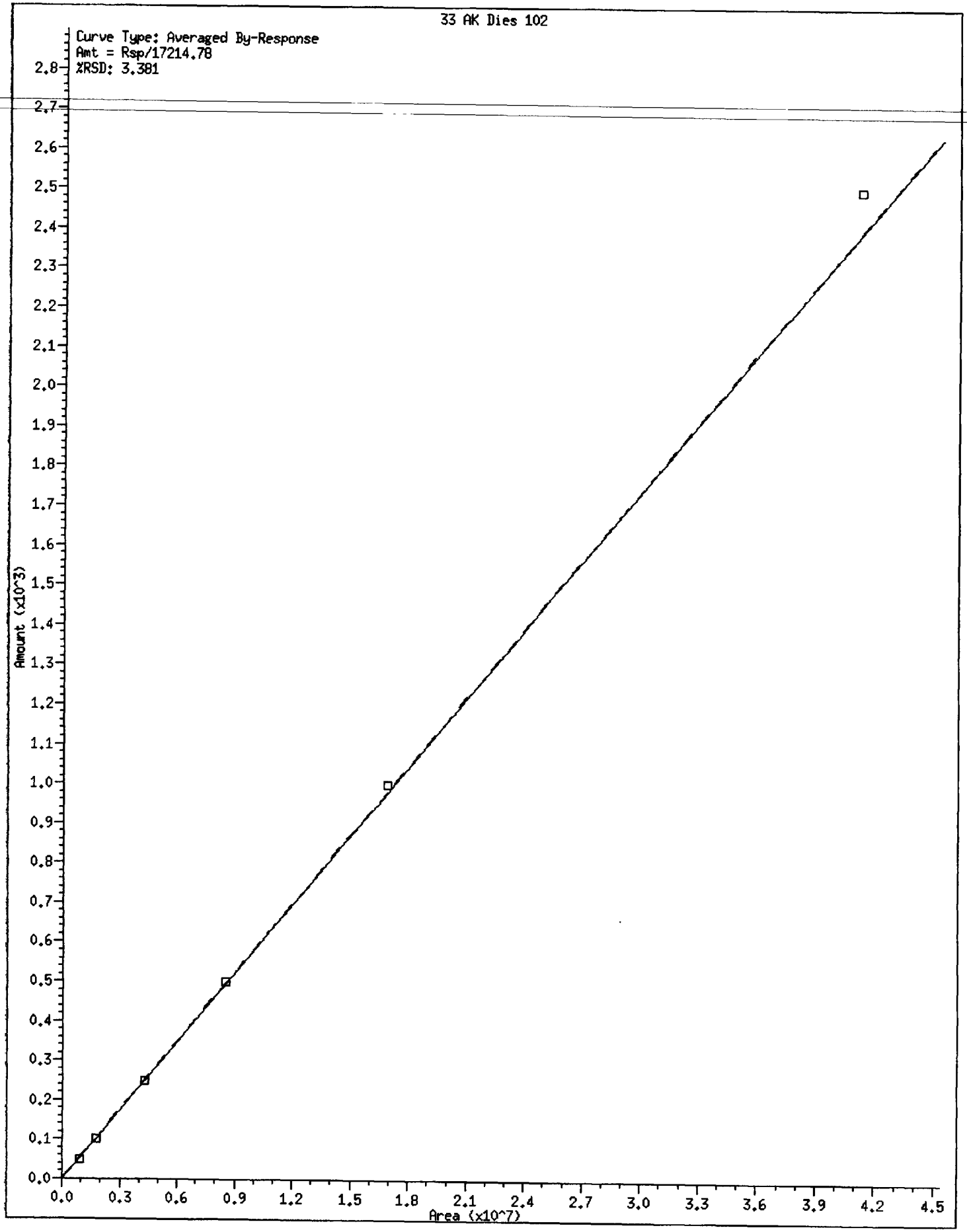
Operator: JR/VTS/JW

Column diameter: 0.25




$ 8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/19283.02
%RSD: 6.709
Amount
Area (x10^6)
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500


31 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/14514.53
%RSD: 3.388
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
3.6
3.8


33 AK Dies 102
Curve Type: Averaged By-Response
Amt = Rsp/17214.78
%RSD: 3.381
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a006.d ARI ID: DIESEL50
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 11:53
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	215268	13.85
C8	1.165	0.018	806	2277	WATPHD	(C12-C24)	759390	52.32
C10	2.960	-0.007	6459	4378	WATPHM	(C24-C38)	46996	3.45
C12	3.905	-0.003	11694	9658	AK102	(C10-C25)	899046	52.23
C14	4.587	0.000	16140	16680	AK103	(C25-C36)	27960	3.04
C16	5.170	-0.001	27596	20440				
C18	5.716	-0.001	21356	18380				
C20	6.268	0.000	14791	13160				
C22	6.810	0.000	6671	6517	MIN.OIL	(C24-C38)	46996	2.75
C24	7.324	-0.002	1715	1968				
C25	7.573	-0.001	706	926				
C26	7.811	-0.015	292	348				
C28	8.266	-0.003	63	56				
C32	9.093	0.012	127	99				
C34	9.462	0.005	225	183				
Filter Peak	11.449	0.007	1566	2590	CREOSOT	(C12-C22)	735404	337.05 M
C36	9.835	0.012	564	945				
C38	10.178	-0.001	736	362				
C40	10.533	0.000	1052	1464				
o-terph	5.859	-0.002	284403	187888				
Triacon Surr	8.706	0.008	114	152				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	187888	9.7	21.7 M
Triacontane	152	0.0	0.0

JW 4/16/13

M Indicates the peak was manually integrated

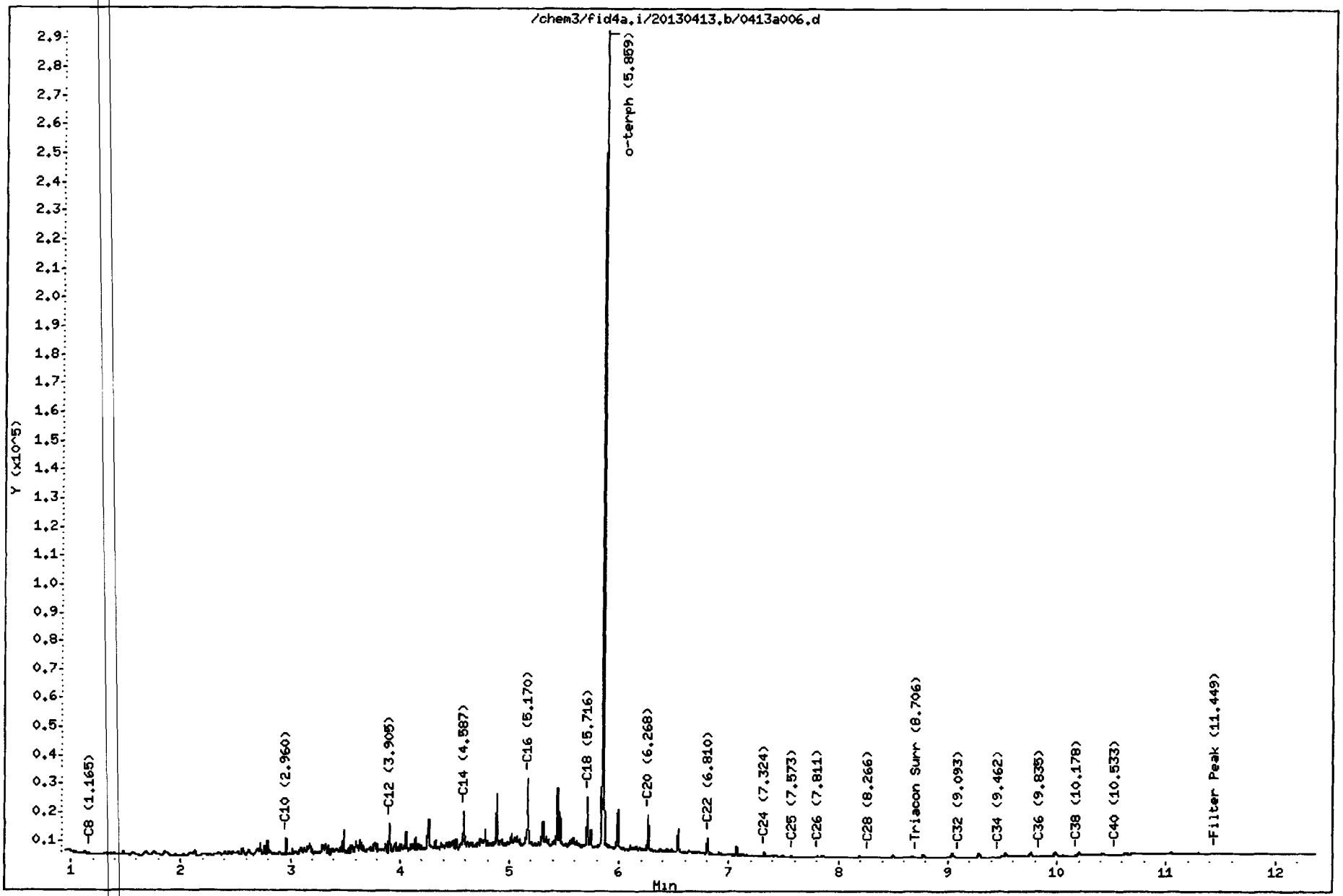
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a006.d
Date : 13-APR-2013 11:53
Client ID:
Sample Info: DIESEL50

Column phase: RTX-1

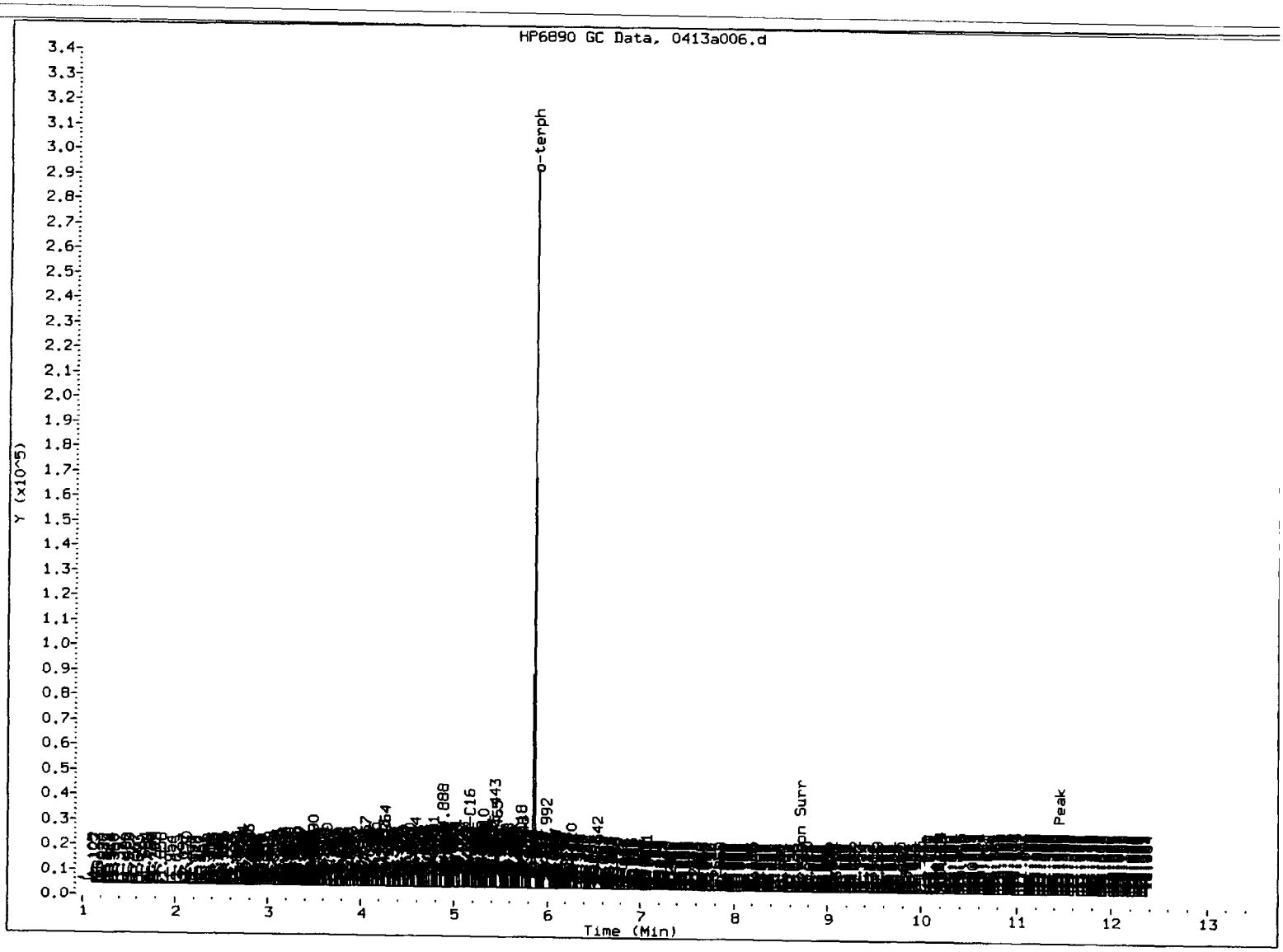
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 DIESEL50

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a007.d ARI ID: DIESEL100
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:13
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	417109	26.84
C8	1.136	-0.011	1941	3621	WATPHD	(C12-C24)	1502097	103.49
C10	2.962	-0.006	12519	8727	WATPHM	(C24-C38)	33140	2.44
C12	3.904	-0.005	20914	18536	AK102	(C10-C25)	1783636	103.61
C14	4.584	-0.003	33061	32735	AK103	(C25-C36)	20259	2.20
C16	5.167	-0.004	55285	41238				
C18	5.713	-0.004	42269	37534				
C20	6.263	-0.005	27729	25804				
C22	6.805	-0.005	12584	15117	MIN.OIL	(C24-C38)	33140	1.94
C24	7.320	-0.007	3636	4226				
C25	7.567	-0.007	1377	1724				
C26	7.808	-0.019	569	662				
C28	8.260	-0.009	83	67				
C32	9.097	0.016	105	158				
C34	9.465	0.008	182	122				
Filter Peak	11.438	-0.004	1449	1863	CREOSOT	(C12-C22)	1453523	666.17 M
C36	9.834	0.010	329	216				
C38	10.182	0.003	520	346				
C40	10.531	-0.002	816	1416				
o-terph	5.858	-0.003	557960	373271				
Triacon Surr	8.710	0.012	49	51				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	373271	19.4	43.0 M
Triacontane	51	0.0	0.0

JL 4/16/17

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a007.d
Date : 13-APR-2013 12:13
Client ID:
Sample Info: DIESEL100

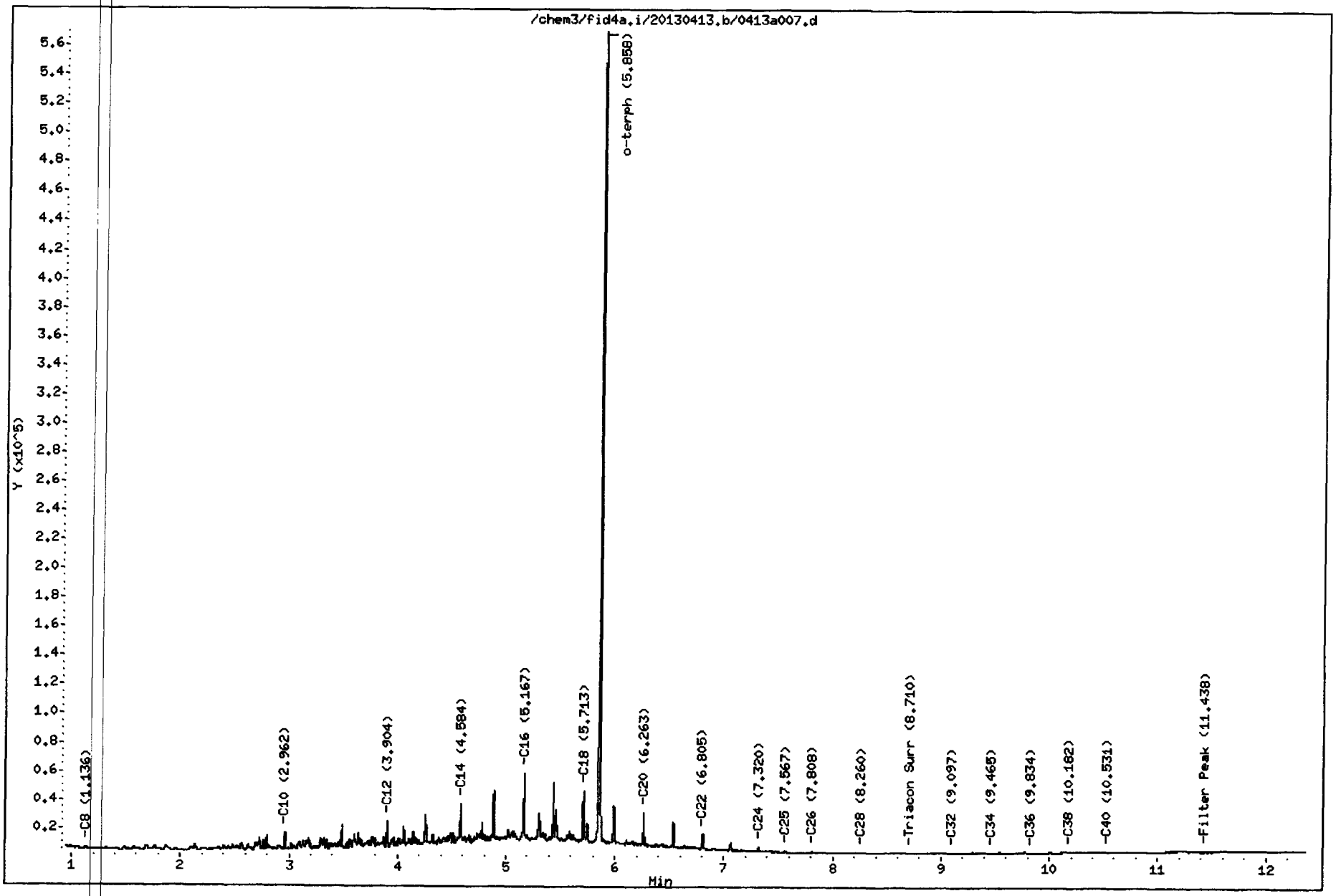
Column phase: RTX-1

Instrument: fid4a.i

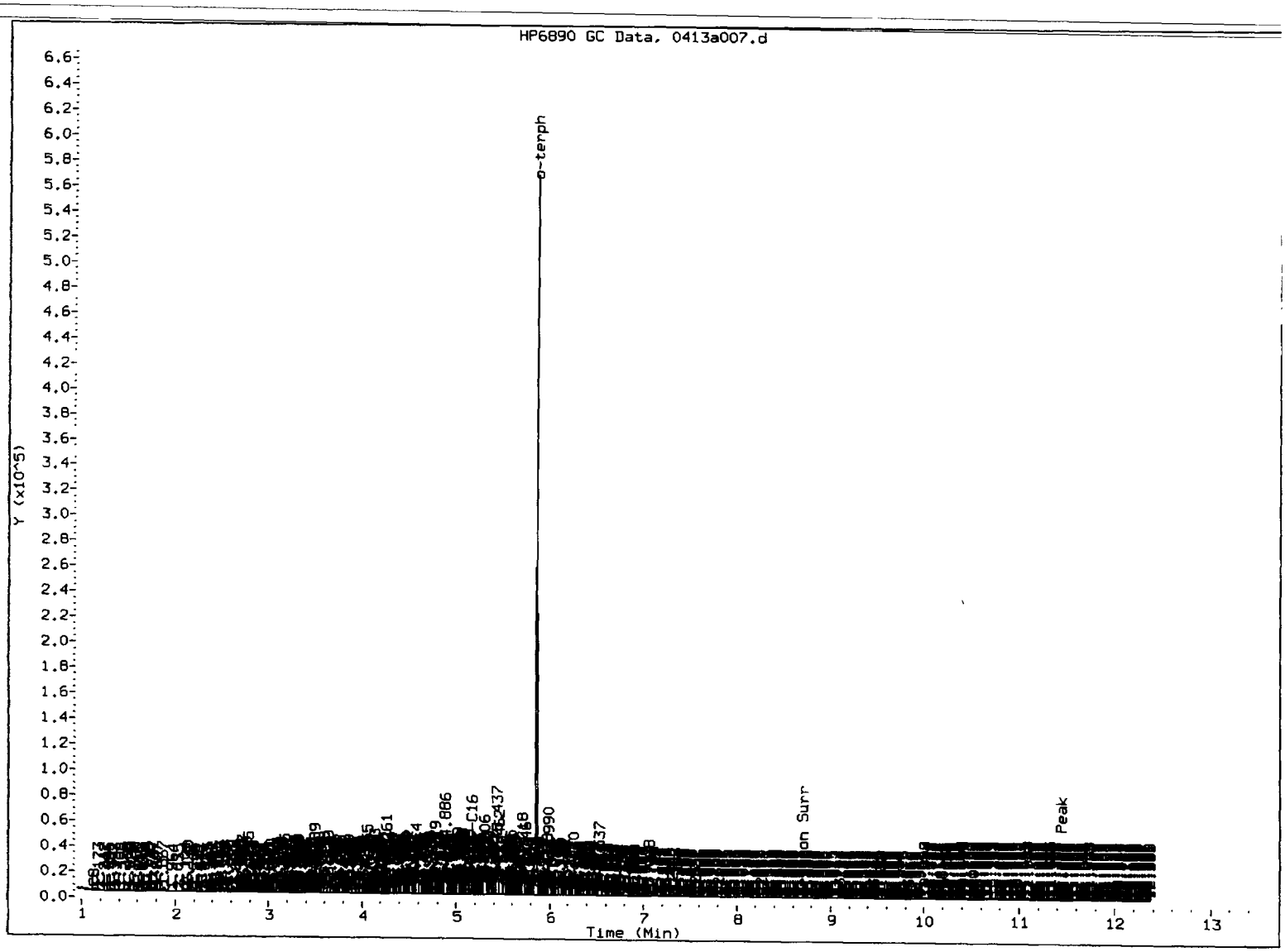
Operator: JR/VTS/JW
Column diameter: 0.25

JLC 4/16/13

WN27-01517



FID:4A-2C/RTX-1 DIESEL100 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JL Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a008.d ARI ID: DIESEL250
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:34
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	986529	63.49
C8	1.132	-0.015	3781	5720	WATPHD	(C12-C24)	3619636	249.38
C10	2.962	-0.005	30152	20850	WATPHM	(C24-C38)	50857	3.74
C12	3.905	-0.003	49975	43741	AK102	(C10-C25)	4295925	249.55
C14	4.586	-0.002	76514	63530	AK103	(C25-C36)	30121	3.27
C16	5.168	-0.003	117704	98659				
C18	5.715	-0.002	94445	95631				
C20	6.265	-0.002	60449	59524				
C22	6.806	-0.004	28706	35806	MIN.OIL	(C24-C38)	50857	2.98
C24	7.319	-0.007	8050	9800				
C25	7.564	-0.010	3537	4263				
C26	7.806	-0.020	1367	1552				
C28	8.259	-0.010	179	167				
C32	9.073	-0.007	82	95				
C34	9.462	0.005	187	107				
Filter Peak	11.447	0.006	1441	1346	CREOSOT	(C12-C22)	3511755	1609.49 M
C36	9.819	-0.004	351	301				
C38	10.193	0.014	656	259				
C40	10.533	0.000	894	615				
o-terph	5.865	0.004	1088756	877347				
Triacon Surr	8.706	0.008	36	15				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	877347	45.5	101.1 M
Triacontane	15	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

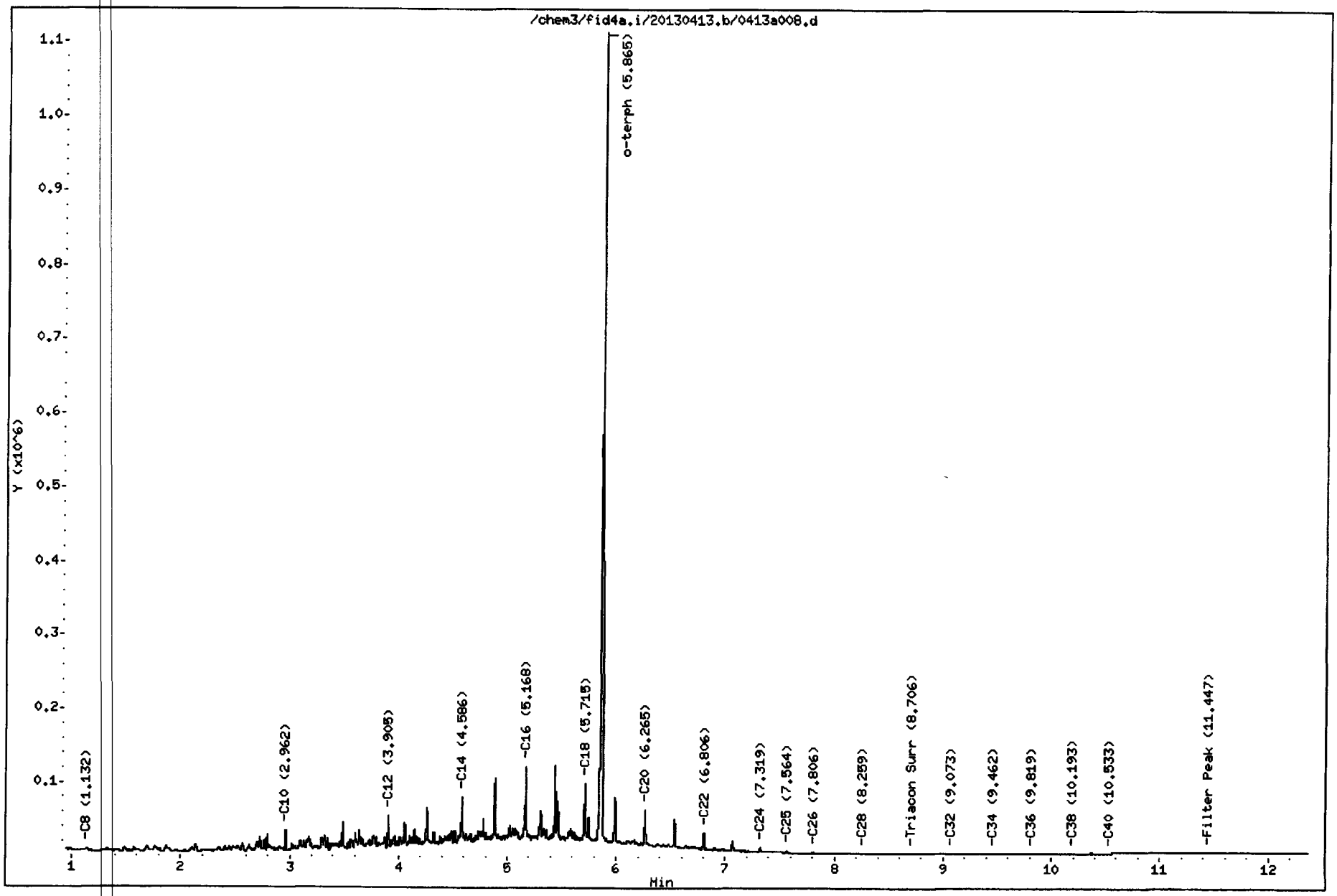
VTS 4/16/13

Data File: /chem3/fid4a.i/20130413.b/0413a008.d
Date : 13-APR-2013 12:34
Client ID:
Sample Info: DIESEL250

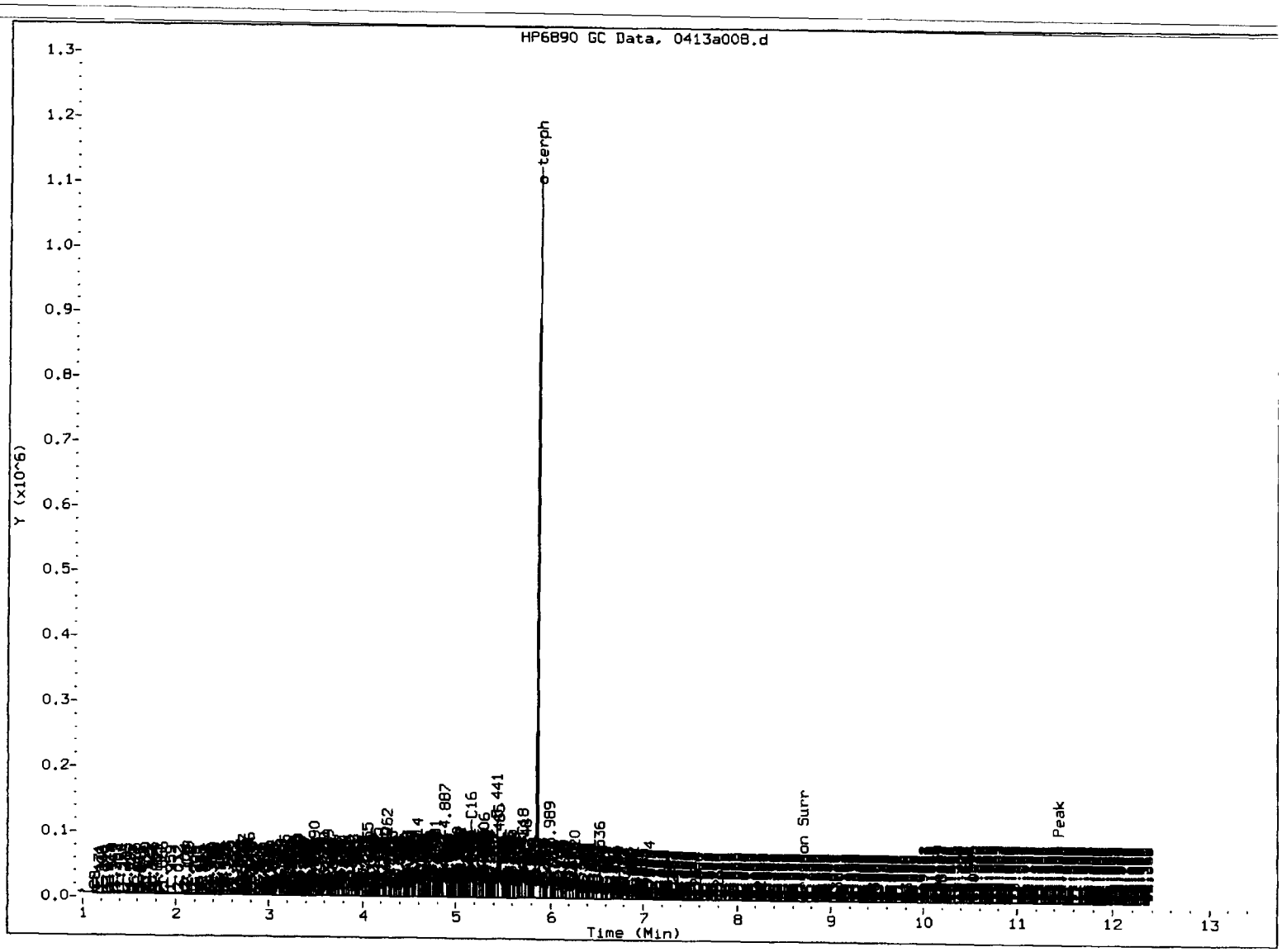
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 DIESEL250 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a009.d ARI ID: DIESEL500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:54
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1938503	124.75
C8	1.133	-0.014	6656	8984	WATPHD	(C12-C24)	7139483	491.89
C10	2.963	-0.005	60617	41059	WATPHM	(C24-C38)	73614	5.41
C12	3.906	-0.002	95786	86973	AK102	(C10-C25)	8473912	492.25
C14	4.586	-0.001	150874	130101	AK103	(C25-C36)	46507	5.05
C16	5.171	-0.001	221742	168860				
C18	5.717	0.000	183930	171594				
C20	6.266	-0.002	125277	138952				
C22	6.806	-0.004	61289	73010	MIN.OIL	(C24-C38)	73614	4.32
C24	7.321	-0.006	17056	16948				
C25	7.566	-0.008	7181	8056				
C26	7.827	0.001	795	590				
C28	8.261	-0.008	383	489				
C32	9.082	0.001	63	54				
C34	9.469	0.012	136	160				
Filter Peak	11.432	-0.010	1383	1663	CREOSOT	(C12-C22)	6912274	3168.01 M
C36	9.827	0.003	301	238				
C38	10.156	-0.023	477	399				
C40	10.538	0.005	798	1290				
o-terph	5.874	0.013	1524427	1652081				
Triacon Surr	8.711	0.013	30	9				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1652081	85.7	190.4 M
Triacontane	9	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

JW 4/16/13

Data File: /chem3/fid4a.i/20130413.b/0413a009.d
Date : 13-APR-2013 12:54
Client ID:
Sample Info: DIESEL500

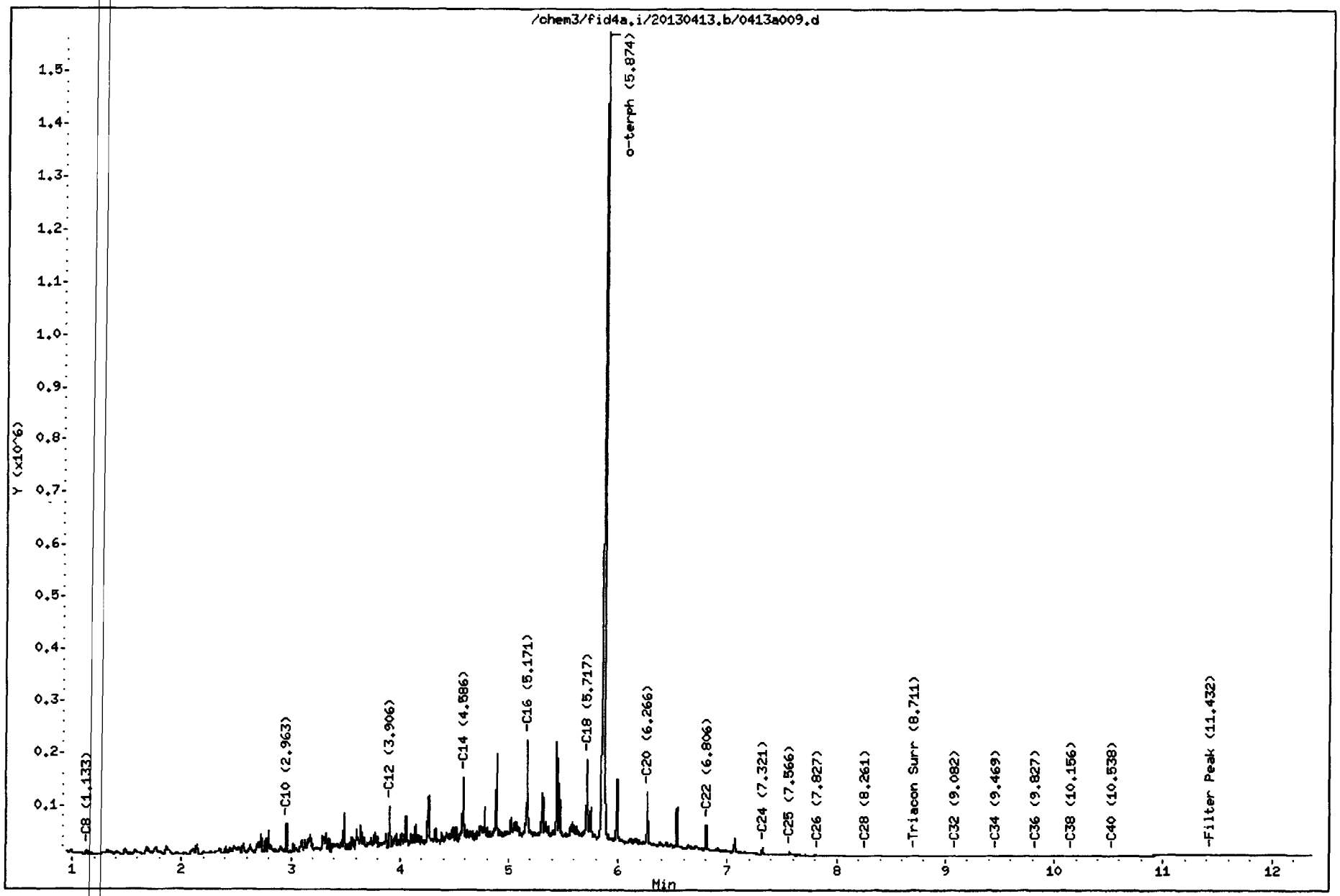
Column phase: RTX-1

Instrument: fid4a.i

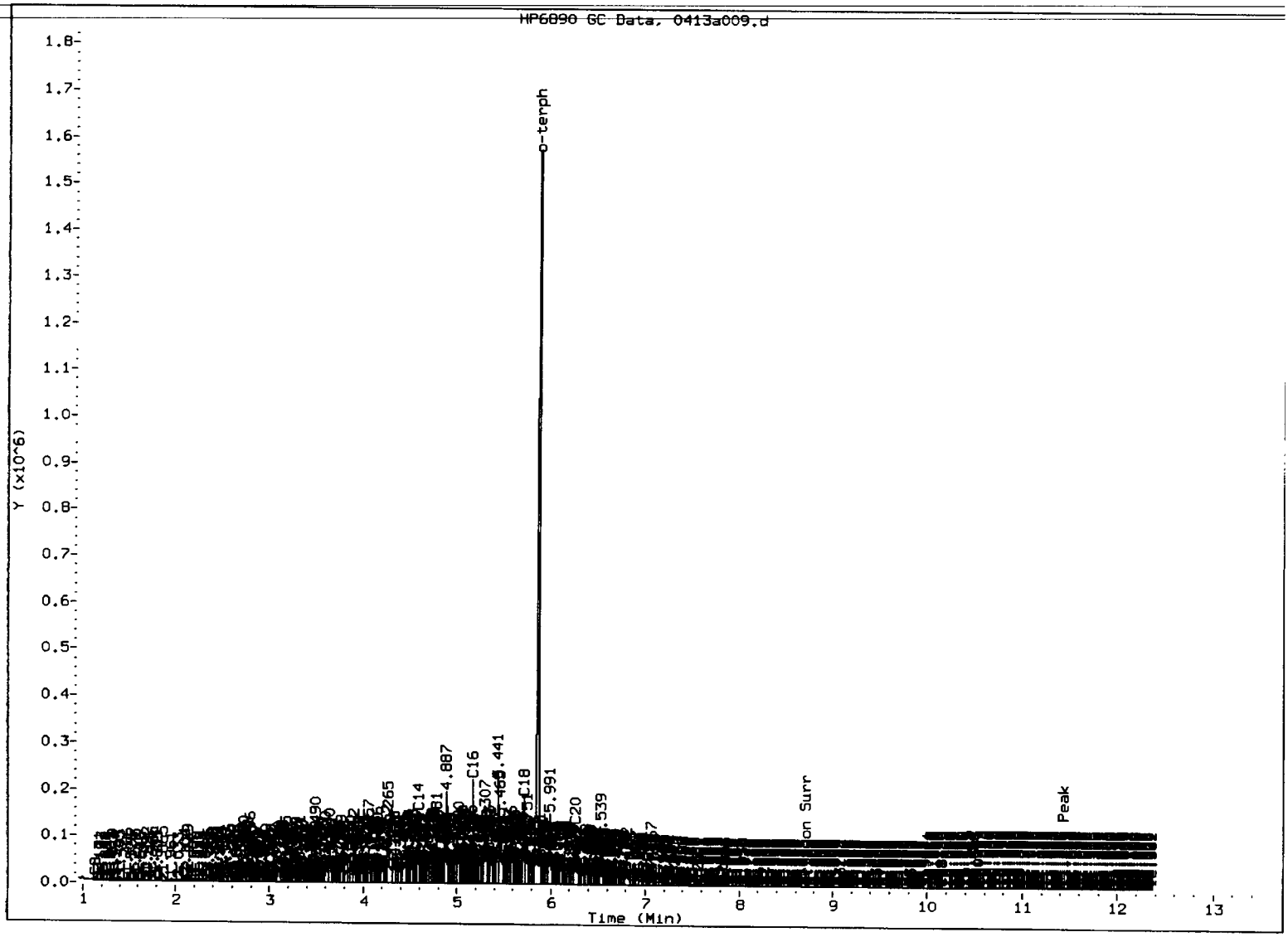
Operator: JR/VTS/JW
Column diameter: 0.25

TCU 4/16/13

WN27-01323



FID:4A-2C/RTX-1 DIESEL500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: SV Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a010.d ARI ID: DIESEL1000
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 13:15
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	3811929	245.31
C8	1.135	-0.013	12353	15129	WATPHD	(C12-C24)	14226320	980.14
C10	2.963	-0.004	115392	81567	WATPHM	(C24-C38)	139793	10.28
C12	3.907	-0.001	182454	170588	AK102	(C10-C25)	16866110	979.75
C14	4.588	0.001	281773	291443	AK103	(C25-C36)	86469	9.40
C16	5.171	0.000	434741	342755				
C18	5.720	0.003	345674	355731				
C20	6.268	0.001	228816	234559				
C22	6.807	-0.003	107722	108430	MIN.OIL	(C24-C38)	139793	8.19
C24	7.318	-0.008	31969	37766				
C25	7.567	-0.007	13295	16308				
C26	7.833	0.007	1443	522				
C28	8.261	-0.008	722	1112				
C32	9.094	0.014	29	7				
C34	9.468	0.011	112	107				
Filter Peak	11.448	0.007	1248	2720	CREOSOT	(C12-C22)	13802524	6325.92 M
C36	9.827	0.004	263	425				
C38	10.189	0.010	1014	1935				
C40	10.535	0.002	722	341				
o-terph	5.884	0.023	2512098	3297656				
Triacon Surr	8.712	0.014	48	18				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	3297656	171.0	380.0 M
Triacontane	18	0.0	0.0

M Indicates the peak was manually integrated

JC 11/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

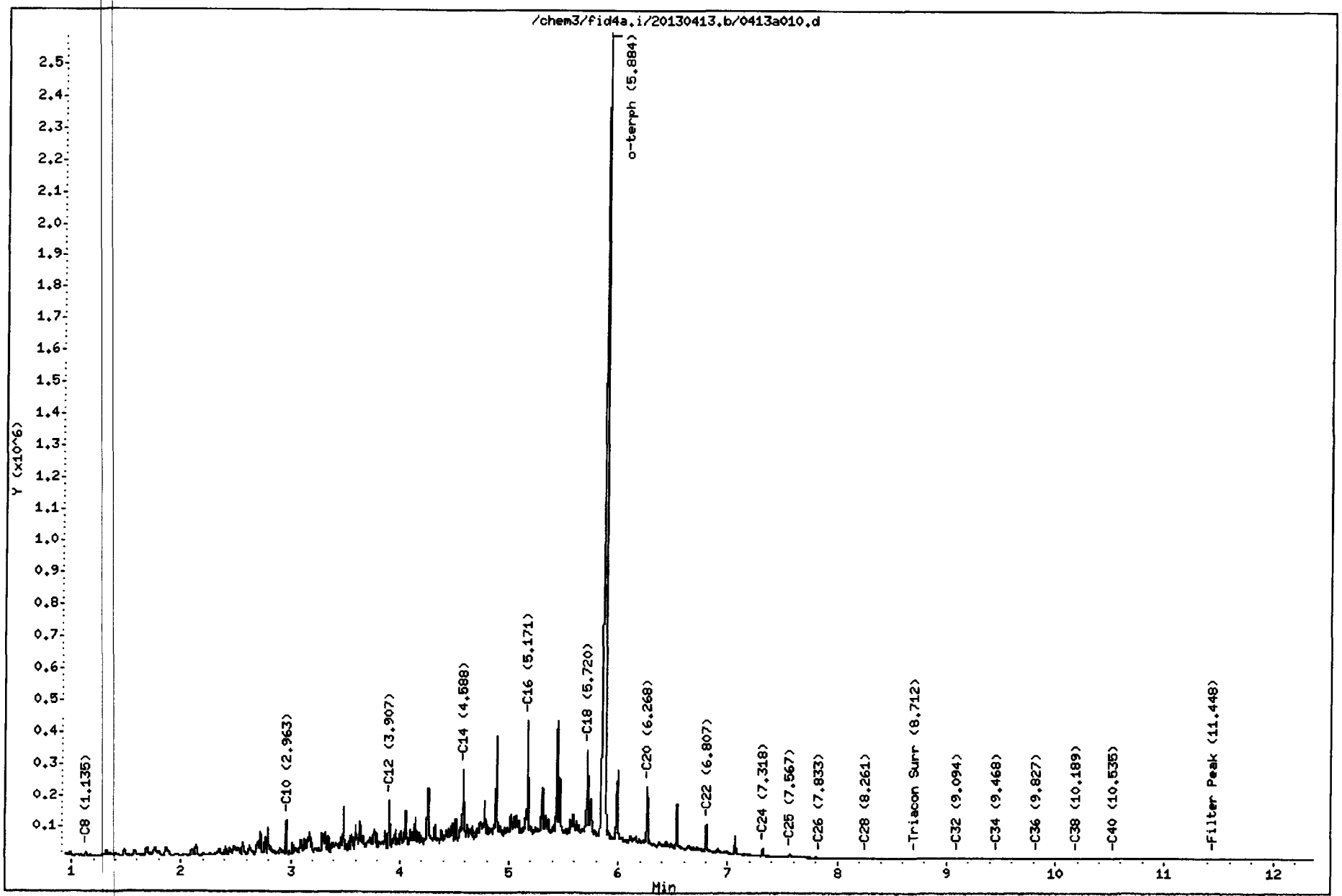
Data File: /chem3/fid4a.i/20130413.b/0413a010.d
Date : 13-APR-2013 13:15
Client ID:
Sample Info: DIESEL1000

Column phase: RTX-1

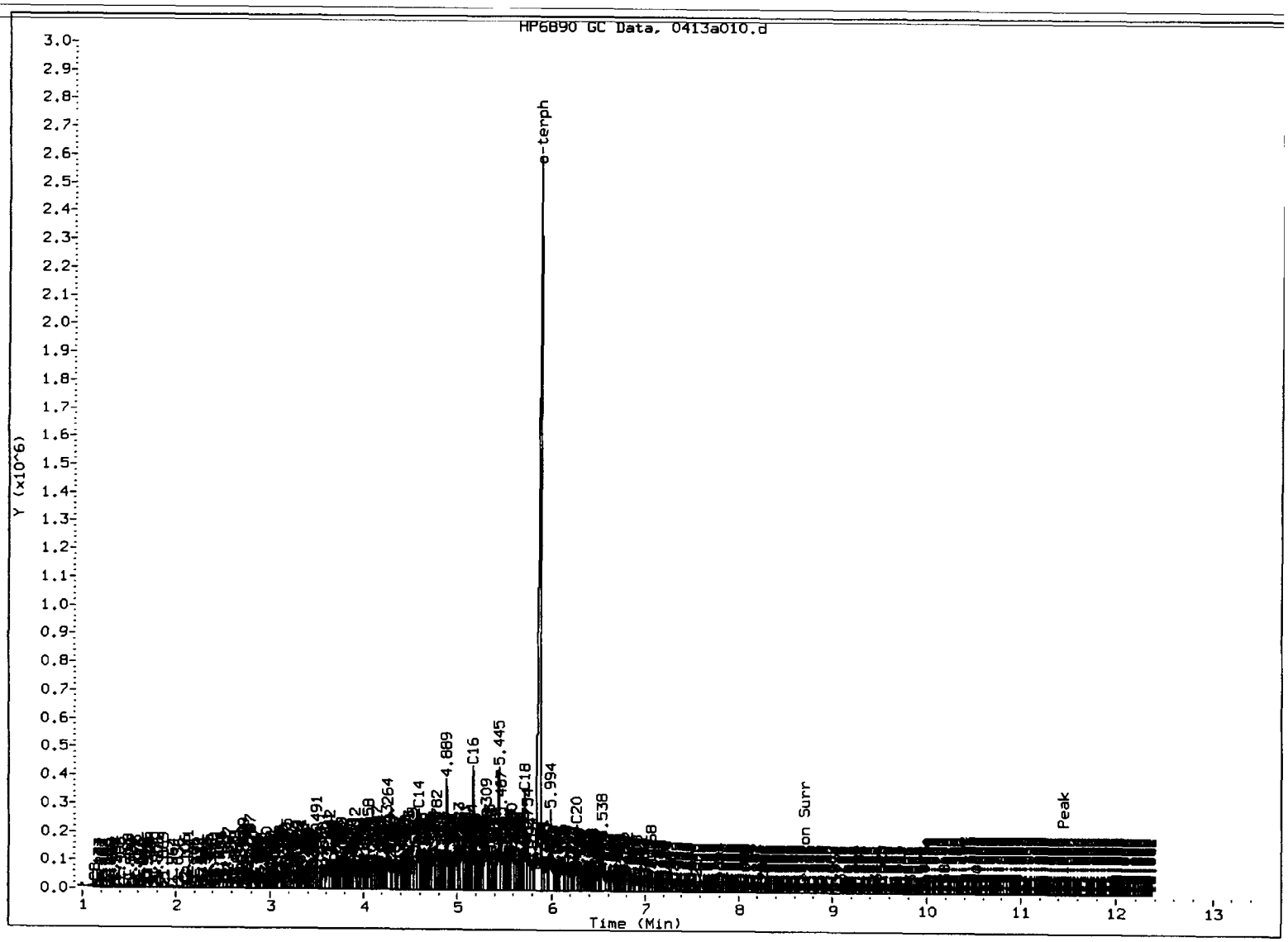
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JW 4/16/13



FID:4A-2C/RTX-1 DIESEL1000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a011.d ARI ID: DIESEL2500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 13:35
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	9276455	596.96
C8	1.134	-0.014	24908	33472	WATPHD	(C12-C24)	34774294	2395.83
C10	2.966	-0.002	252738	198288	WATPHM	(C24-C38)	305862	22.48
C12	3.910	0.001	400759	415390	AK102	(C10-C25)	41212082	2393.99
C14	4.594	0.006	611687	862603	AK103	(C25-C36)	206426	22.43
C16	5.178	0.006	943821	808157				
C18	5.727	0.010	671328	895926				
C20	6.274	0.006	489579	628809				
C22	6.808	-0.002	247196	289857	MIN.OIL	(C24-C38)	305862	17.93
C24	7.319	-0.007	75373	82766				
C25	7.566	-0.008	34345	42458				
C26	7.827	0.000	4044	3418				
C28	8.258	-0.012	1977	3055				
C32	9.090	0.009	48	61				
C34	9.458	0.000	70	50				
Filter Peak	11.449	0.007	1134	1190	CREOSOT	(C12-C22)	33616551	15407.01 M
C36	9.824	0.000	185	139				
C38	10.179	0.000	554	1390				
C40	10.541	0.008	631	435				
o-terph	5.903	0.042	4136741	8059957				
Triacon Surr	8.700	0.002	141	189				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	8059957	418.0	928.8 M
Triacontane	189	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

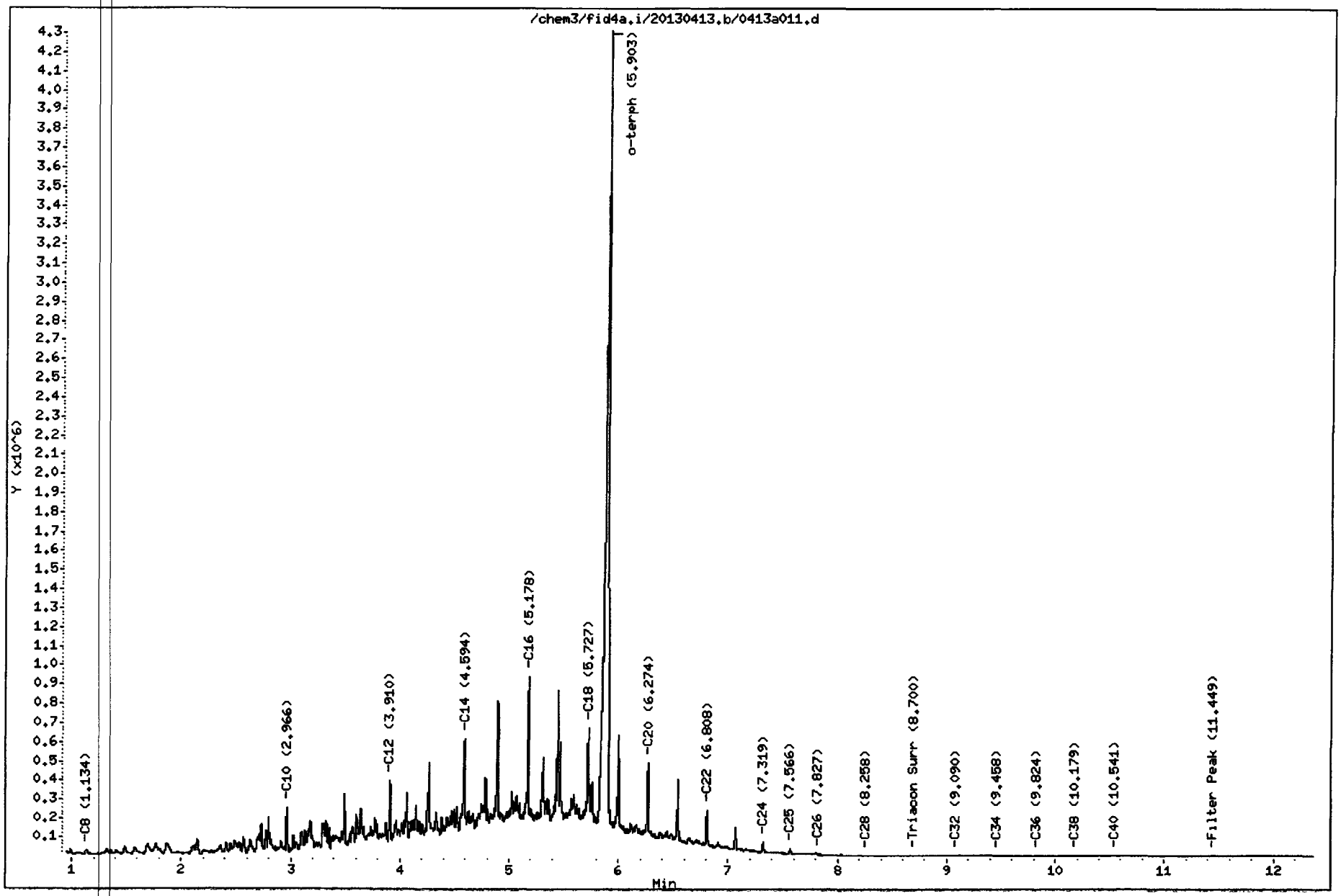
JW 4/16/13

Data File: /chem3/fid4a.i/20130413.b/0413a011.d
Date : 13-APR-2013 13:35
Client ID:
Sample Info: DIESEL2500

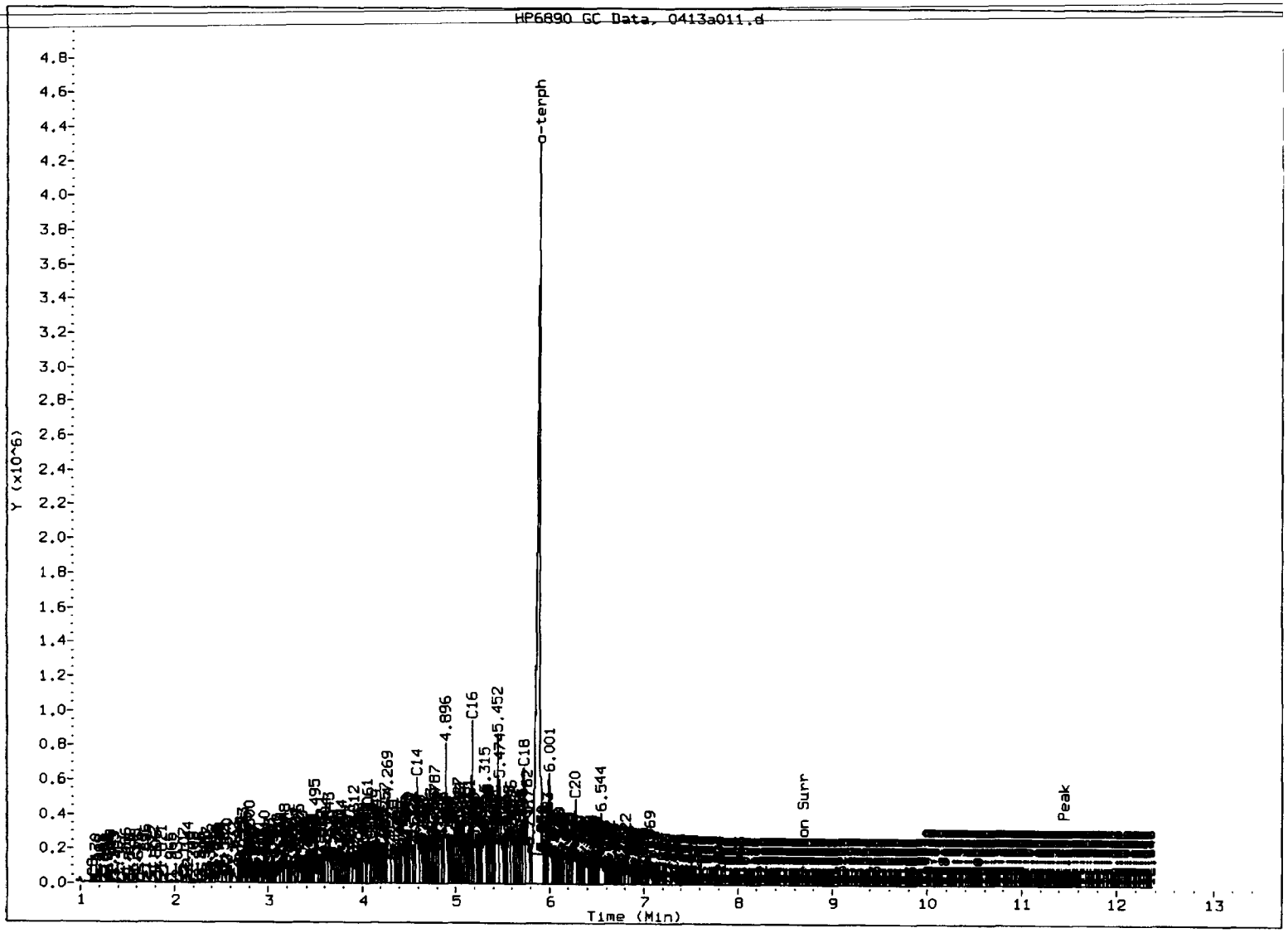
Instrument: fid4a.i

Operator: JR/VTS/JW
Column phase: RTX-1
Column diameter: 0.25

4/16/13



FID:4A-2C/RTX-1 DIESEL2500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a012.d
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 04/15/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: DIESELICV250
Client ID:
Injection: 13-APR-2013 13:56

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1350128	86.88
C8	1.140	-0.007	5894	7549	WATPHD	(C12-C24)	3336568	229.88
C10	2.964	-0.004	74183	48425	WATPHM	(C24-C38)	48278	3.55
C12	3.904	-0.004	80279	63955	AK102	(C10-C25)	4352962	252.86
C14	4.584	-0.004	91502	86727	AK103	(C25-C36)	29685	3.23
C16	5.167	-0.004	92428	91538				
C18	5.712	-0.005	64635	71687				
C20	6.261	-0.007	38864	46617				
C22	6.800	-0.010	19895	20409	MIN.OIL	(C24-C38)	48278	2.83
C24	7.317	-0.010	6621	7048				
C25	7.563	-0.011	3543	3438				
C26	7.839	0.013	511	944				
C28	8.257	-0.012	249	388				
C32	9.086	0.005	66	27				
C34	9.457	0.000	126	85				
Filter Peak	11.447	0.005	1300	1415	CREOSOT	(C12-C22)	3246102	1487.74 M
C36	9.826	0.003	279	175				
C38	10.165	-0.014	702	1540				
C40	10.542	0.010	811	690				
o-terph	5.863	0.002	1066499	883180				
Triacon Surr	8.703	0.005	33	42				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	883180	45.8	101.8 M
Triacontane	42	0.0	0.0

JW
4/16/13

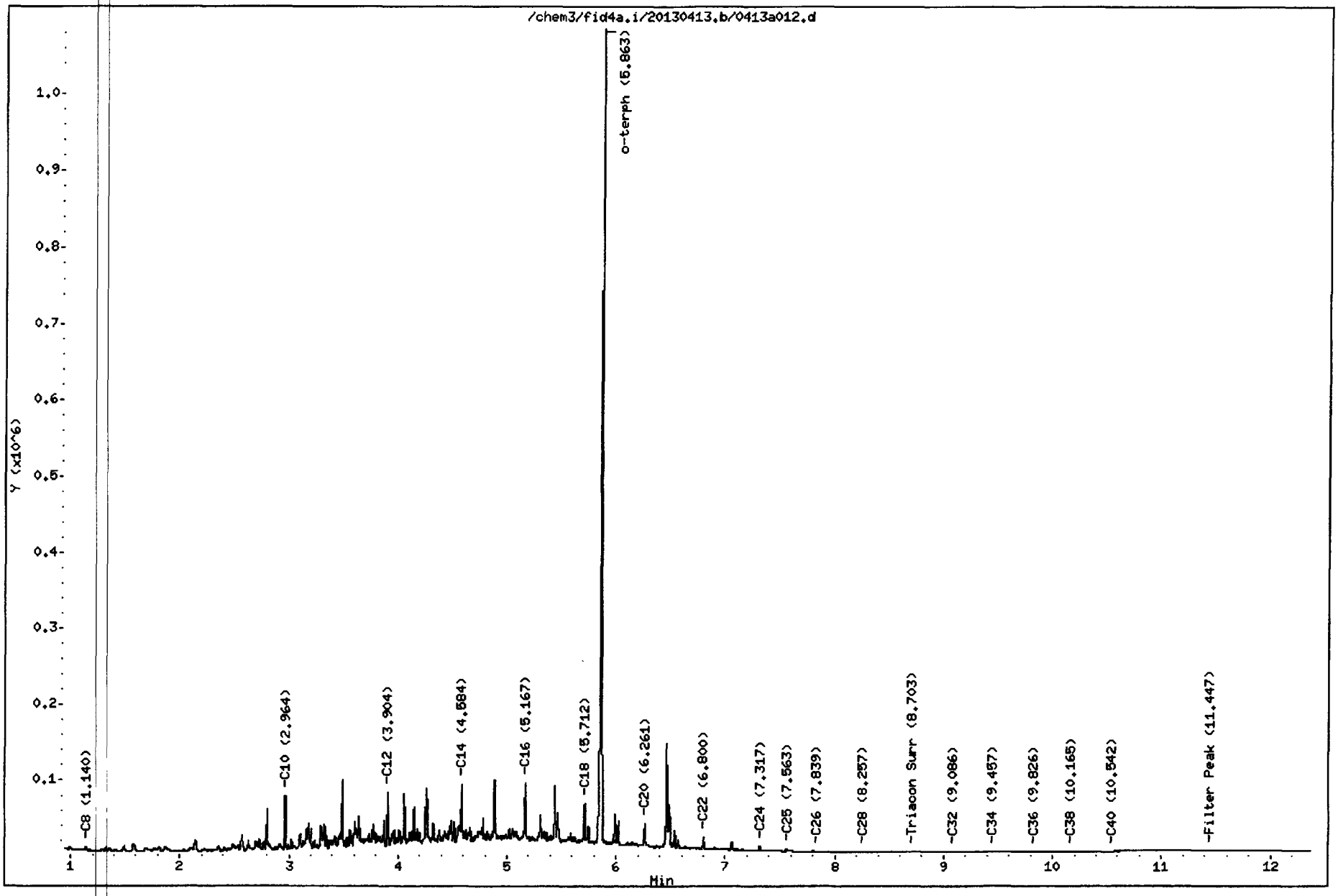
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

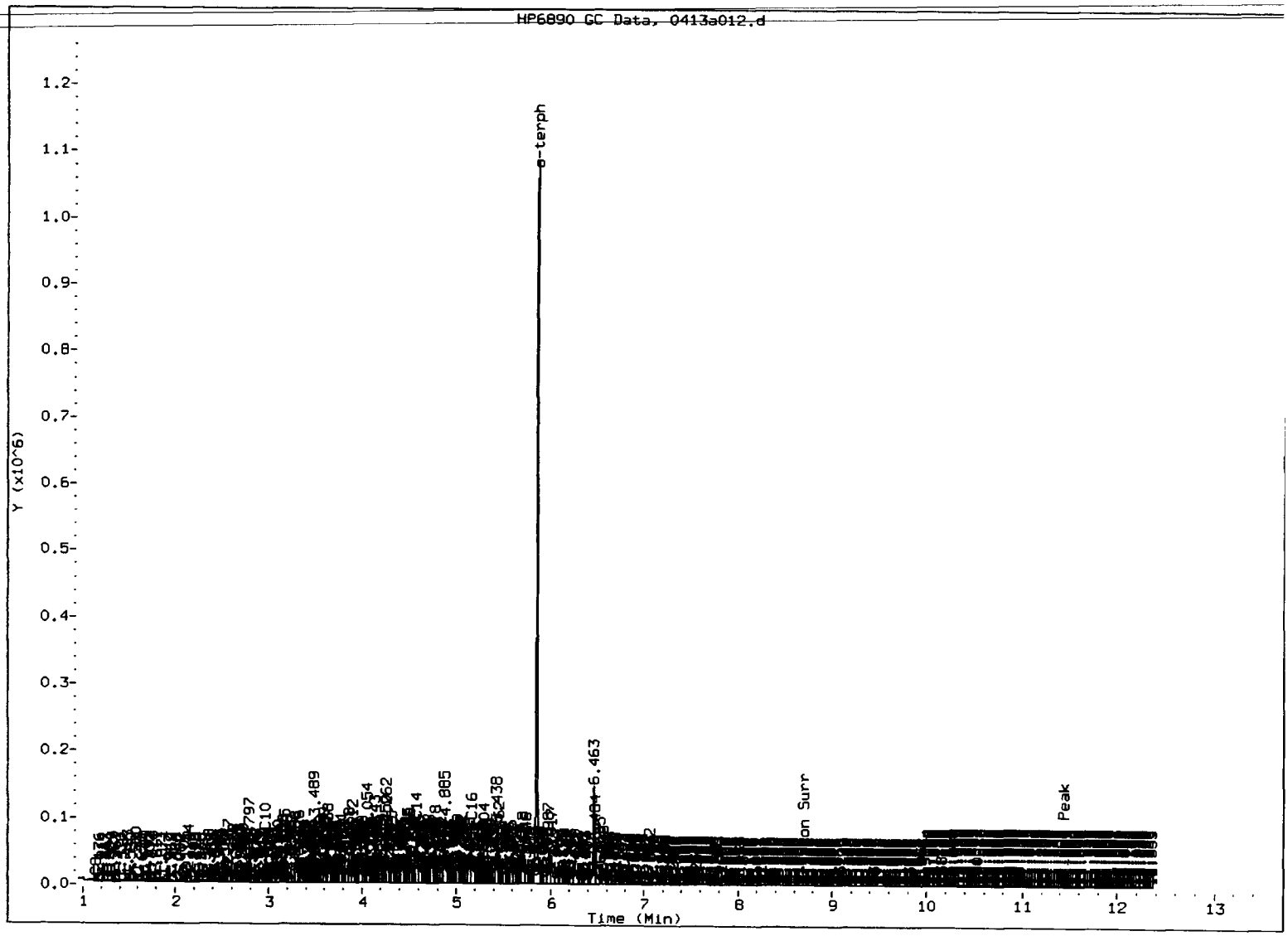
Data File: /chem3/fid4a.i/20130413.b/0413a012.d
Date : 13-APR-2013 13:56
Client ID:
Sample Info: DIESELICV250

Instrument: fid4a.i

Operator: JR/VTS/JW
Column phase: RTX-1
Column diameter: 0.25



FID:4A-2C/RTX-1 DIESELICV250 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130413

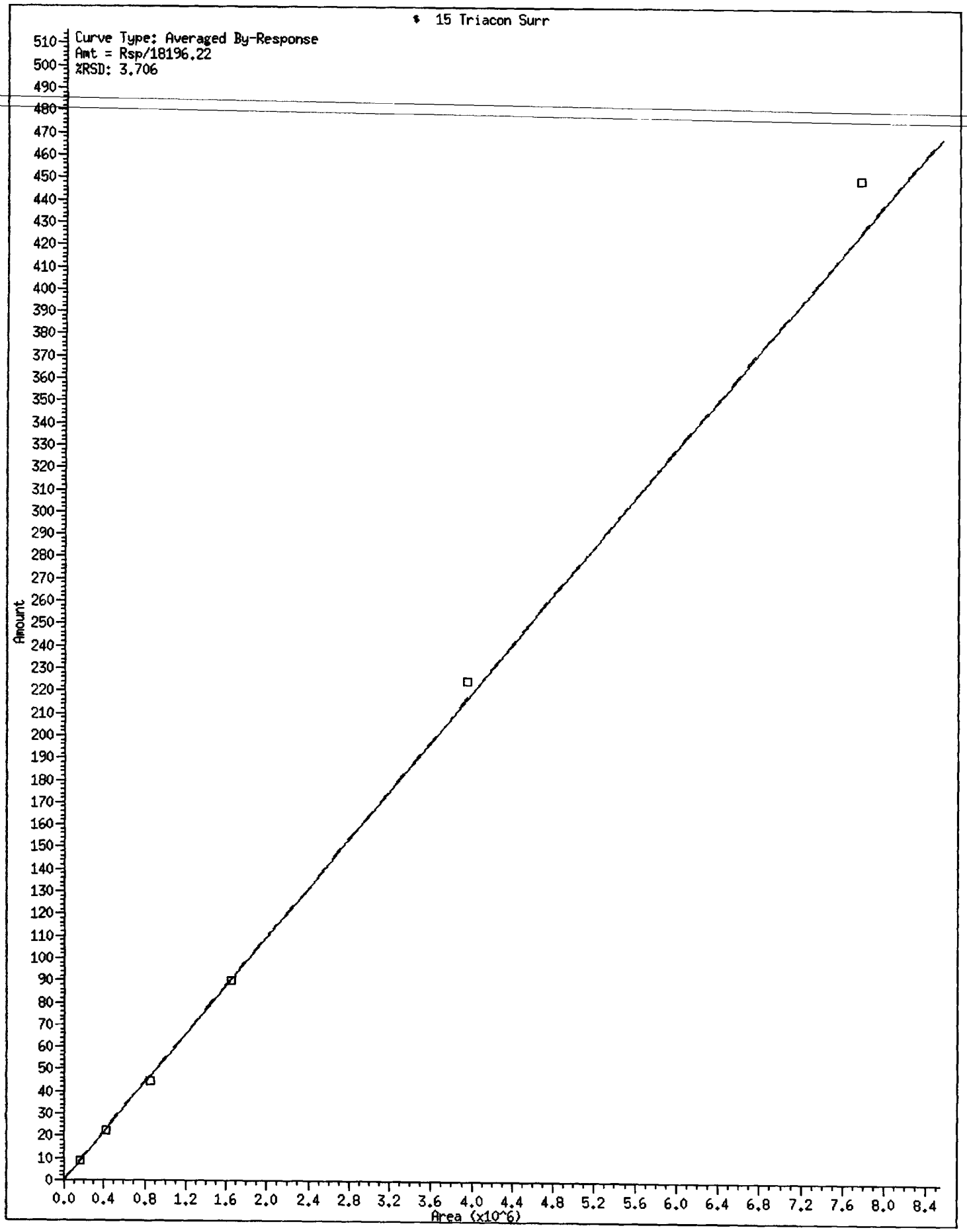
Instrument: FID4A.I Project:

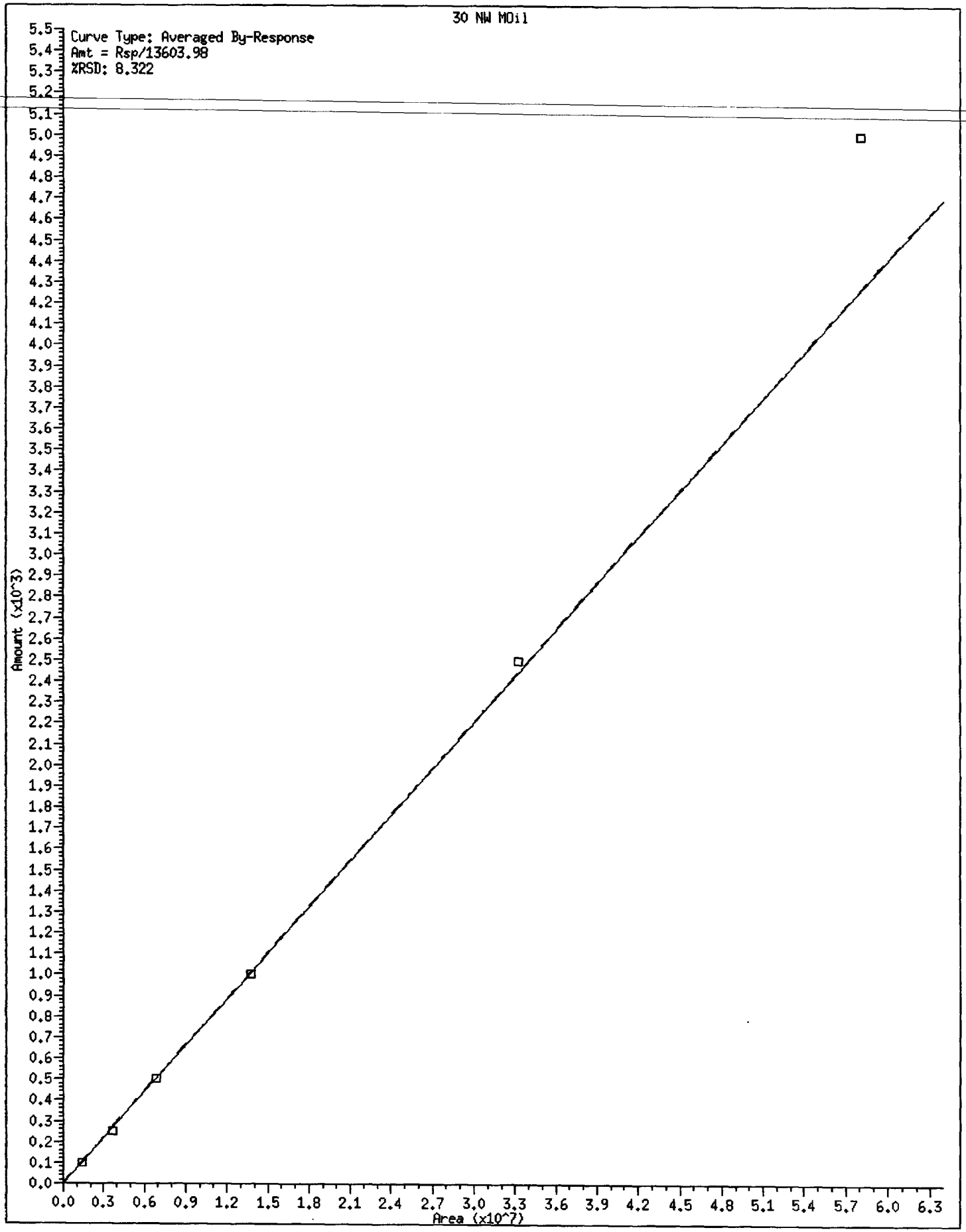
Calibration Date: 13-APR-2013 SDG No.: 20130413

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	14286	14877	13594	13683	13271	11581	13549	8.3
Triac Surr	18499	18745	18903	18271	17525	17235	18196	3.7

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

Calibration Files	Analysis Time
0413a013.d	13-APR-2013 14:16
0413a014.d	13-APR-2013 14:36
0413a015.d	13-APR-2013 14:57
0413a016.d	13-APR-2013 15:17
0413a017.d	13-APR-2013 15:38
0413a018.d	13-APR-2013 15:58


15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/18196.22
%RSD: 3.706
Amount
Area (x10^6)


30 NW MOil
Curve Type: Averaged By-Response
Amt = Rsp/13603.98
%RSD: 8.322
Amount (x10^3)
Area (x10^7)

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a013.d ARI ID: MOIL100
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 14:16
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	16170	1.04
C8	1.180	0.032	950	2566	WATPHD	(C12-C24)	122104	8.41
C10	2.964	-0.003	90	83	WATPHM	(C24-C38)	1428612	105.01
C12	3.904	-0.004	822	525	AK102	(C10-C25)	169178	9.83
C14	4.585	-0.002	65	50	AK103	(C25-C36)	1207097	131.18
C16	5.184	0.013	44	36				
C18	5.729	0.012	87	30				
C20	6.285	0.017	313	387				
C22	6.807	-0.003	1128	611	MIN.OIL	(C24-C38)	1428612	83.75
C24	7.321	-0.006	4504	4814				
C25	7.577	0.003	5951	7680				
C26	7.813	-0.013	6854	12383				
C28	8.258	-0.011	8227	2476				
C32	9.082	0.001	10258	10882				
C34	9.463	0.006	9755	5304				
Filter Peak	11.443	0.001	2846	2215	CREOSOT	(C12-C22)	34225	15.69 M
C36	9.816	-0.008	9988	8297				
C38	10.173	-0.005	8712	8389				
C40	10.541	0.008	7232	6974				
o-terph	5.903	0.042	129	130				
Triacon Surr	8.669	-0.029	213849	166491				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	130	0.0	0.0
Triacontane	166491	9.1	20.3 M

M Indicates the peak was manually integrated

JW
4/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a013.d
Date : 13-APR-2013 14:16
Client ID:
Sample Info: MOIL100

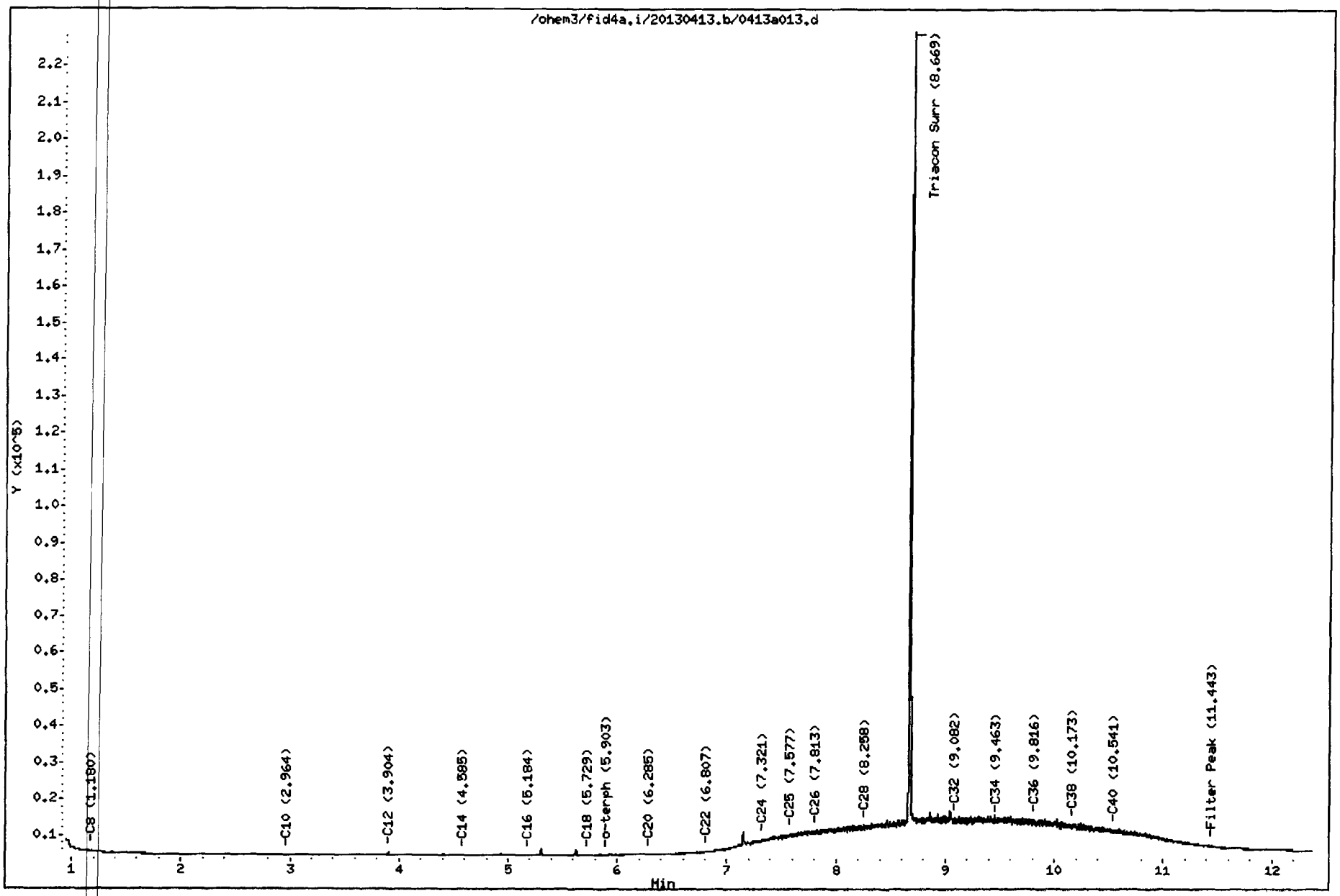
Column phase: RTX-1

Instrument: fid4a.i

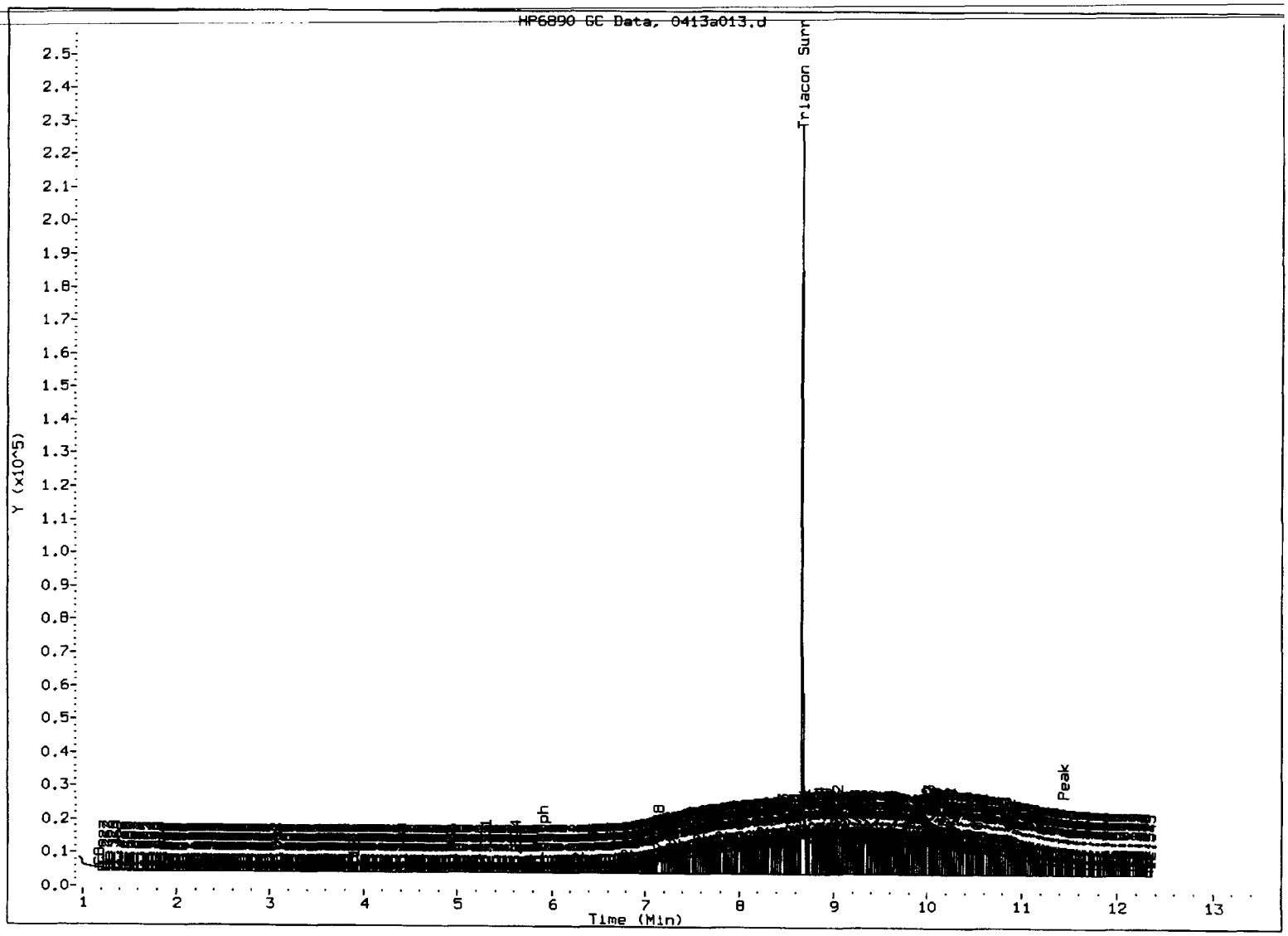
Operator: JR/VTS/JW
Column diameter: 0.25

TSO 4/16/13

WN27-01338



FID:4A-2C/RTX-1 MOIL100 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a014.d ARI ID: MOIL250
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 14:36
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	20237	1.30
C8	1.166	0.018	879	349	WATPHD	(C12-C24)	307705	21.20
C10	2.961	-0.006	163	125	WATPHM	(C24-C38)	3719215	273.39
C12	3.903	-0.005	1367	903	AK102	(C10-C25)	420555	24.43
C14	4.583	-0.005	76	70	AK103	(C25-C36)	3142992	341.55
C16	5.188	0.017	67	58				
C18	5.730	0.013	191	84				
C20	6.273	0.005	689	312				
C22	6.807	-0.004	2757	1621	MIN.OIL	(C24-C38)	3719215	218.02
C24	7.329	0.002	11003	6332				
C25	7.569	-0.005	14527	16476				
C26	7.831	0.004	16632	4908				
C28	8.257	-0.013	21369	8227				
C32	9.091	0.010	26334	25277				
C34	9.455	-0.003	26616	43678				
Filter Peak	11.451	0.009	4562	6091	CREOSOT	(C12-C22)	82787	37.94 M
C36	9.824	0.000	24339	31209				
C38	10.184	0.005	32819	59546				
C40	10.538	0.005	17060	23752				
o-terph	5.902	0.041	303	245				
Triacon Surr	8.677	-0.021	491117	421767				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	245	0.0	0.0
Triacontane	421767	23.2	51.5 M

JW 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

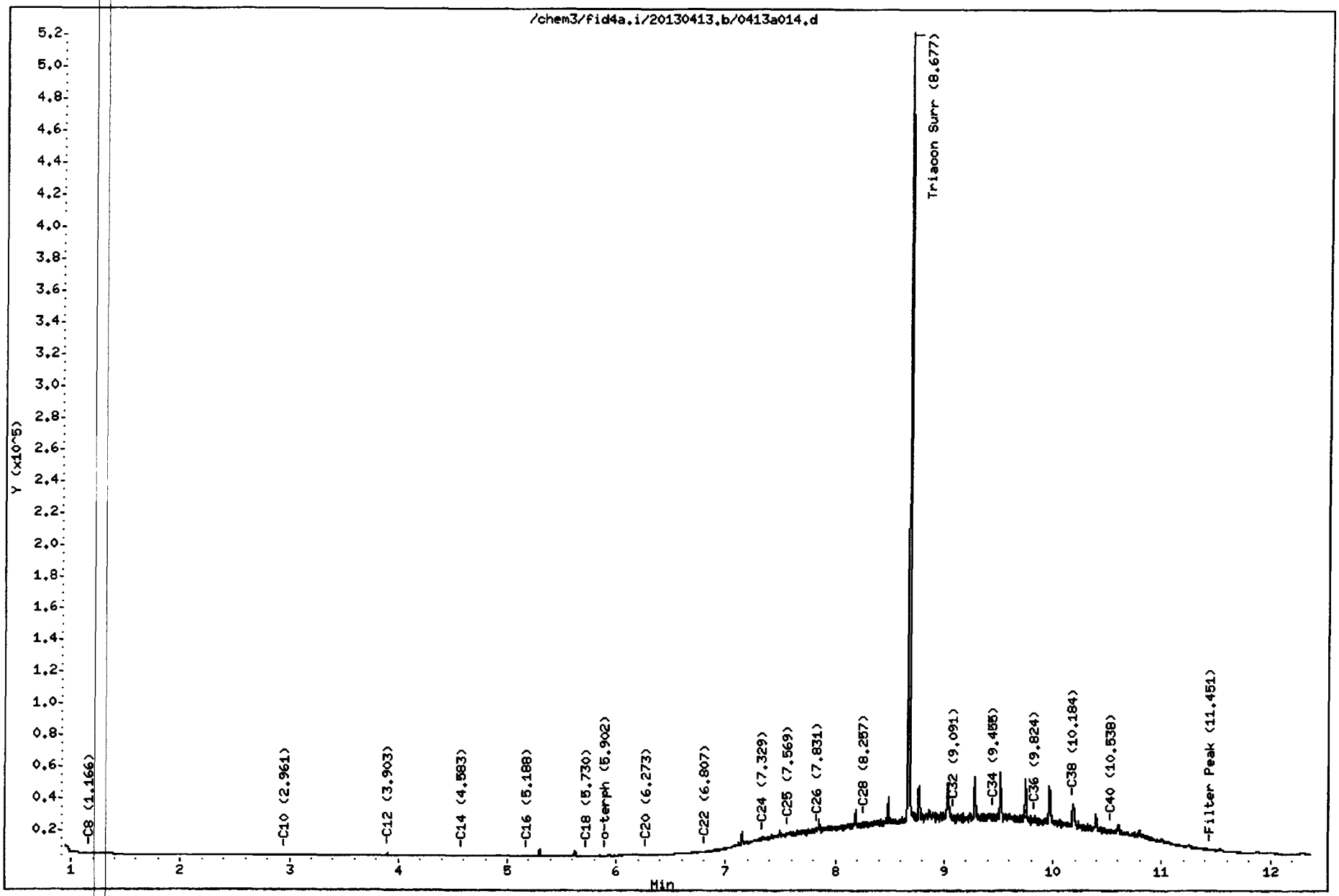
Data File: /chem3/fid4a.i/20130413.b/0413a014.d
Date : 13-APR-2013 14:36
Client ID:
Sample Info: MOIL250

Column phase: RTX-1

Instrument: fid4a.i

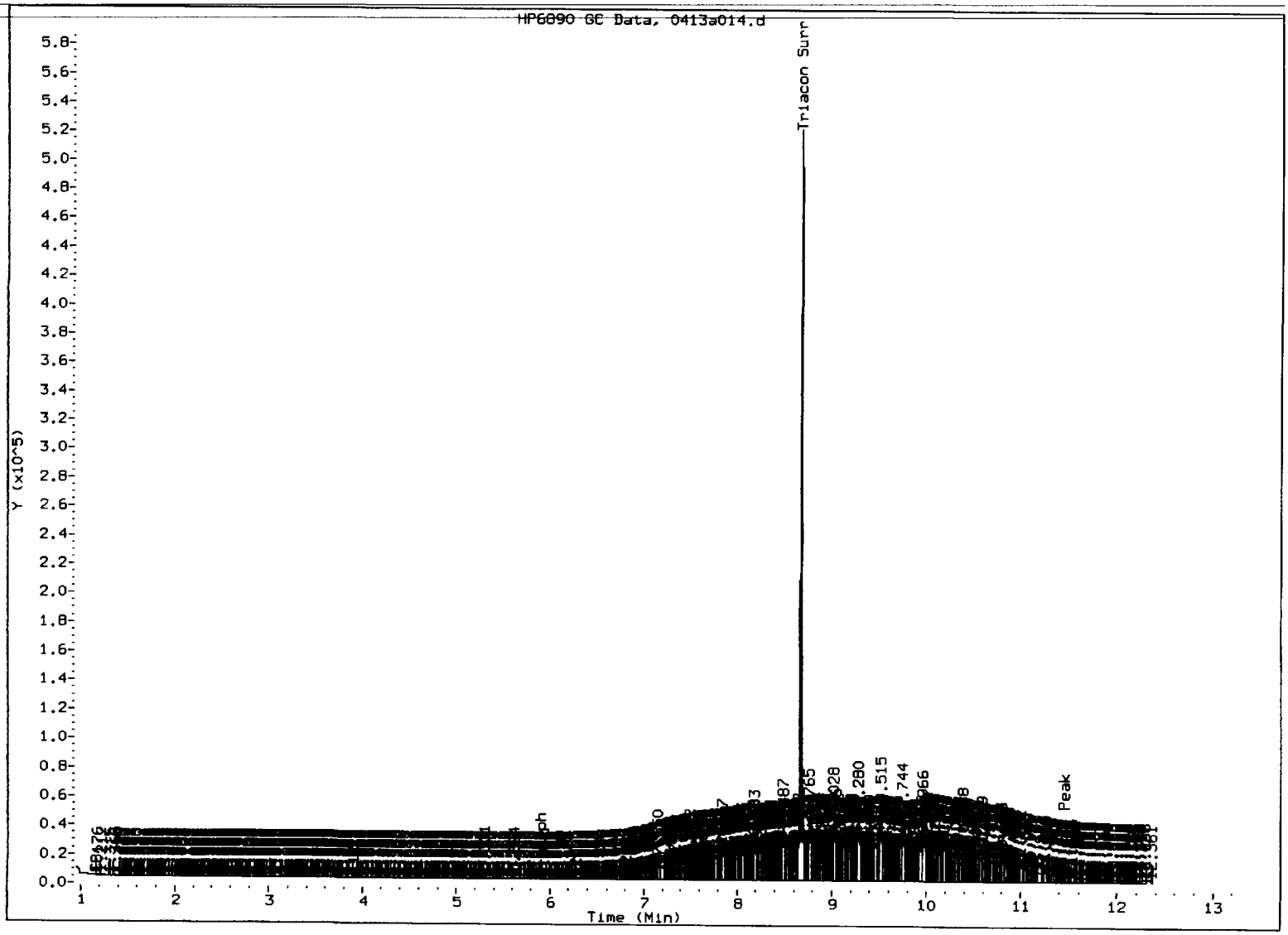
Operator: JR/VTS/JW
Column diameter: 0.25

JW 4/16/13



FID:4A-2C/RTX-1 MOIL250

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JL Date: 4/16/19

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a015.d ARI ID: MOIL500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 14:57
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	26511	1.71
C8	1.100	-0.047	1244	4785	WATPHD	(C12-C24)	582595	40.14
C10	2.963	-0.004	245	242	WATPHM	(C24-C38)	6796761	499.62
C12	3.904	-0.004	1353	860	AK102	(C10-C25)	780570	45.34
C14	4.603	0.015	66	55	AK103	(C25-C36)	5779080	628.02
C16	5.164	-0.007	156	146				
C18	5.730	0.013	343	254				
C20	6.281	0.014	1394	636				
C22	6.806	-0.004	5607	2253	MIN.OIL	(C24-C38)	6796761	398.43
C24	7.314	-0.012	21674	24615				
C25	7.572	-0.002	29371	15510				
C26	7.834	0.008	33783	10352				
C28	8.247	-0.022	44537	51498				
C32	9.091	0.010	49495	22975				
C34	9.460	0.003	49320	12419				
Filter Peak	11.444	0.002	6192	2625	CREOSOT	(C12-C22)	153949	70.56 M
C36	9.820	-0.004	46105	20897				
C38	10.178	-0.001	43137	30753				
C40	10.543	0.011	30917	18642				
o-terph	5.900	0.039	590	504				
Triacon Surr	8.684	-0.014	920547	850626				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	504	0.0	0.1
Triacontane	850626	46.7	103.9 M

JW 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a015.d

Date : 13-APR-2013 14:57

Client ID:

Sample Info: MOIL500

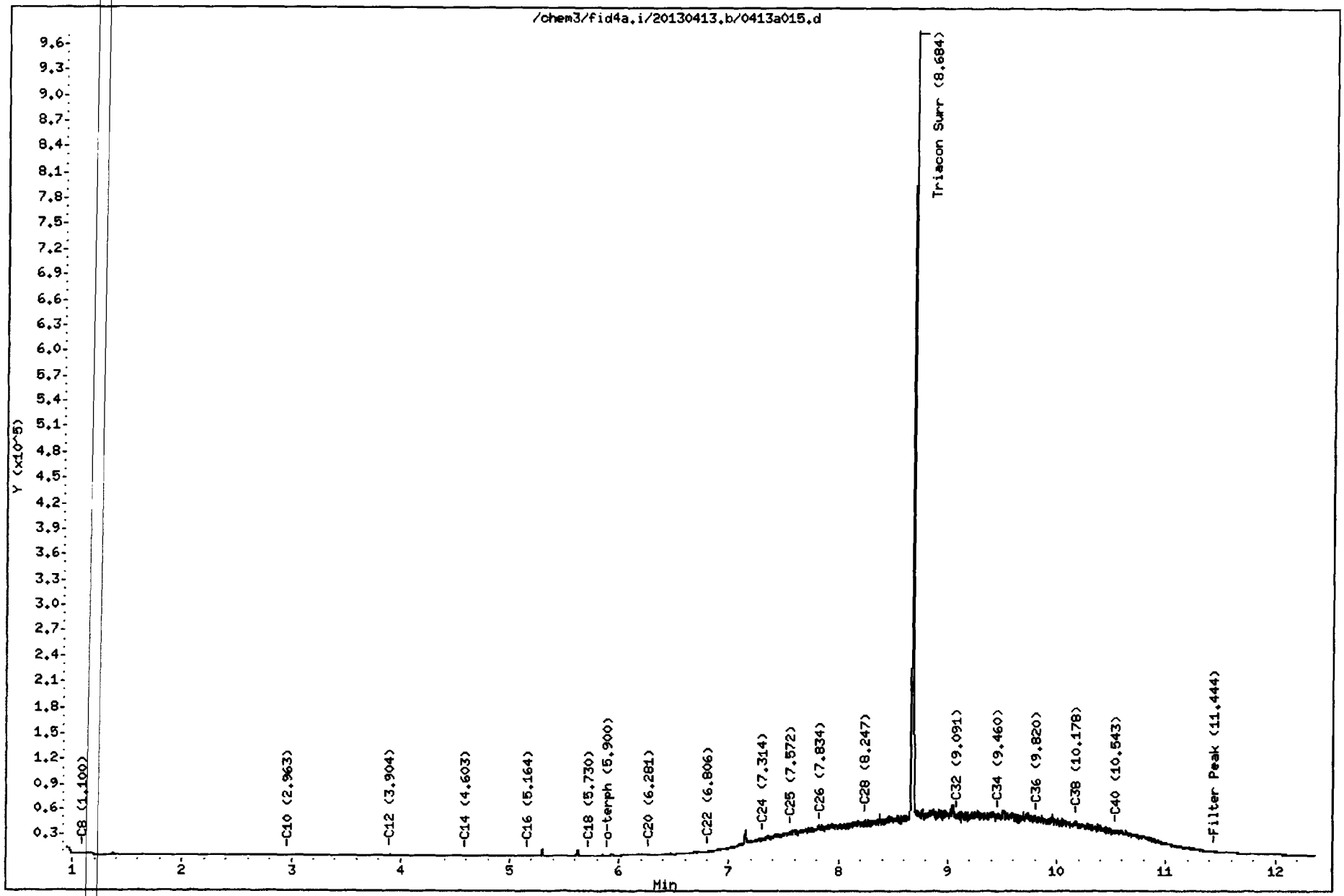
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW

Column diameter: 0.25

JW 4/16/13



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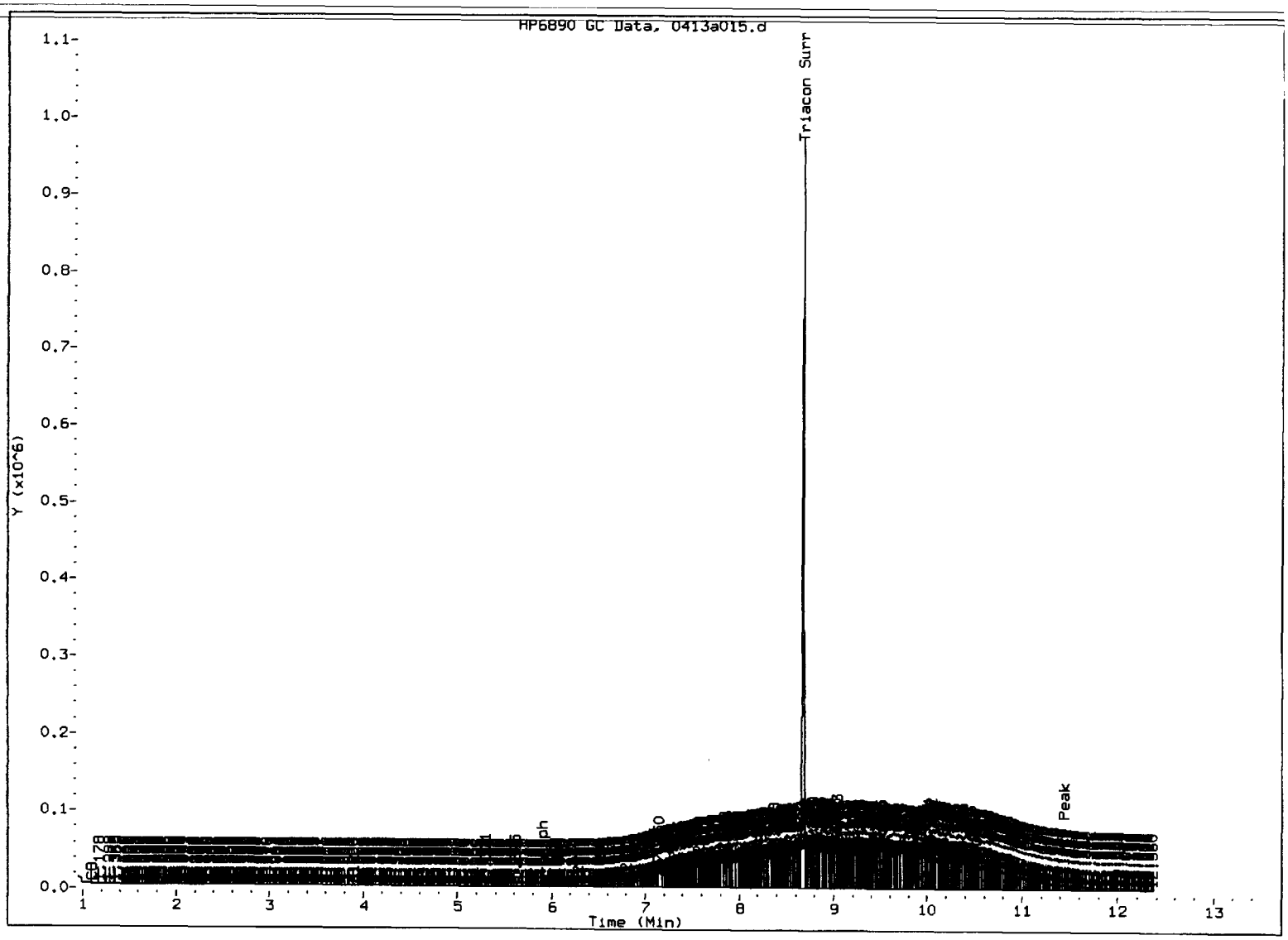


MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a016.d ARI ID: MOIL1000
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 15:17
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	32144	2.07
C8	1.178	0.031	1135	5780	WATPHD	(C12-C24)	1187416	81.81
C10	2.963	-0.005	498	473	WATPHM	(C24-C38)	13682887	1005.80
C12	3.904	-0.004	1016	818	AK102	(C10-C25)	1642208	95.40
C14	4.569	-0.018	1230	2767	AK103	(C25-C36)	11569970	1257.32
C16	5.167	-0.005	408	381				
C18	5.733	0.016	648	473				
C20	6.283	0.015	2709	1773				
C22	6.805	-0.006	11265	17820	MIN.OIL	(C24-C38)	13682887	802.09
C24	7.320	-0.007	41602	20838				
C25	7.563	-0.011	56243	35830				
C26	7.825	-0.001	71296	33239				
C28	8.256	-0.014	82383	53761				
C32	9.090	0.009	96645	53721				
C34	9.455	-0.002	98081	40550				
Filter Peak	11.452	0.010	4343	4334	CREOSOT	(C12-C22)	311440	142.74 M
C36	9.830	0.007	86063	45189				
C38	10.178	-0.001	77500	113868				
C40	10.539	0.006	53659	39892				
o-terph	5.902	0.041	1245	997				
Triacon Surr	8.696	-0.002	1366429	1644378				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	997	0.1	0.1
Triacontane	1644378	90.4	200.8 M

M Indicates the peak was manually integrated

JW 4/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a016.d

Date : 13-APR-2013 15:17

Client ID:

Sample Info: MOIL1000

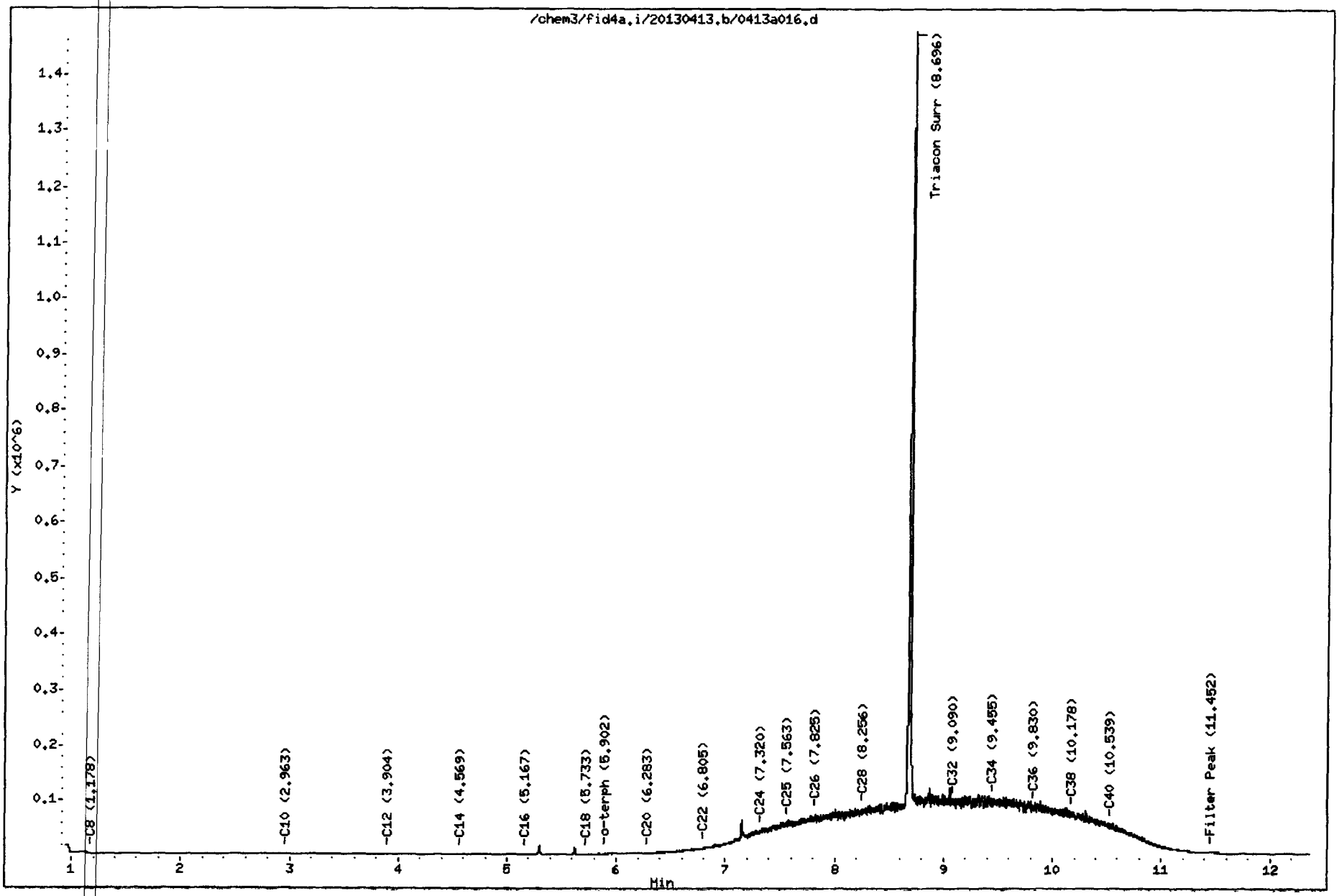
Column phase: RTX-1

Instrument: fid4a.i

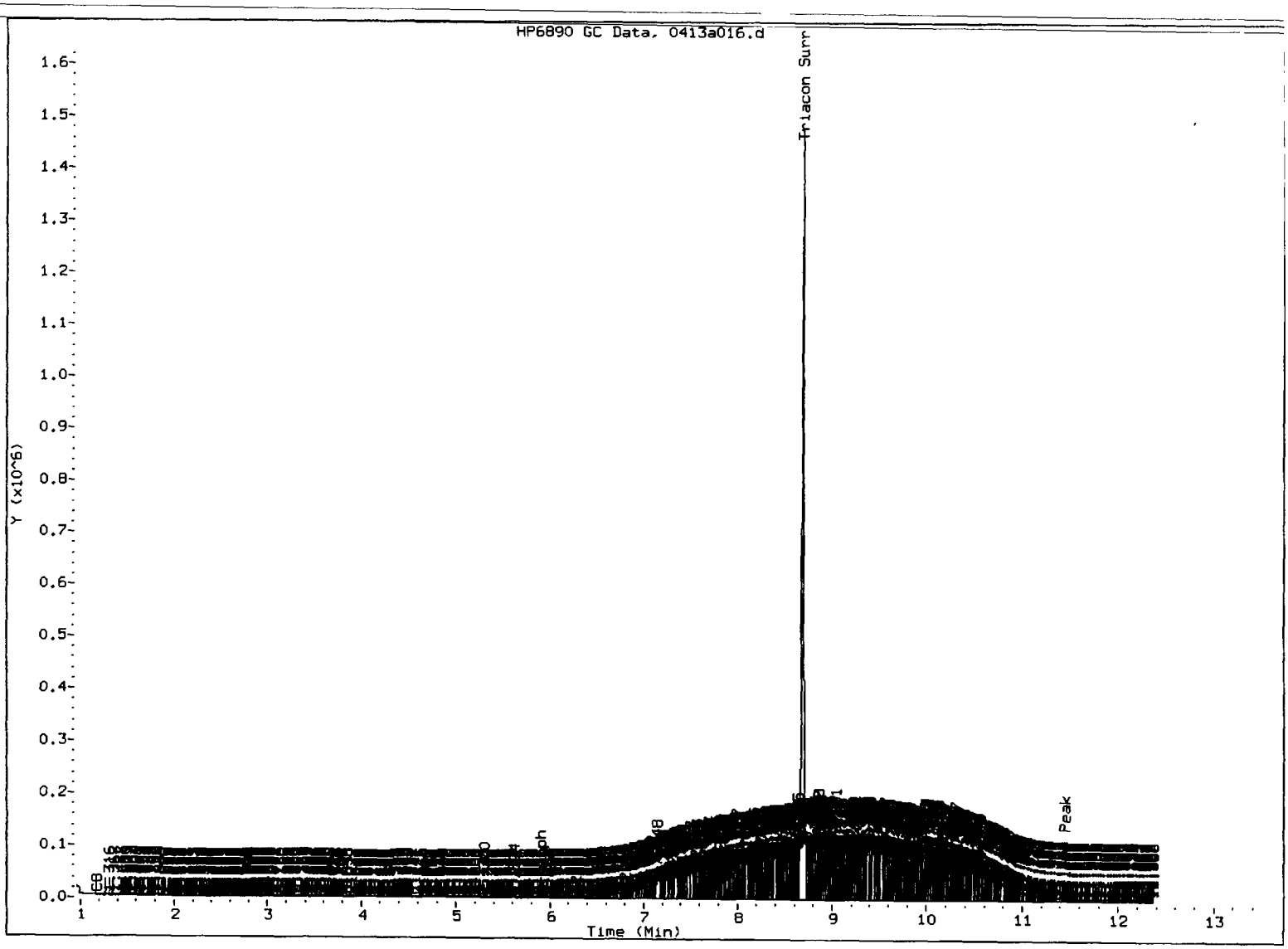
Operator: JR/VTS/JW

Column diameter: 0.25

TSJ 4/16/13



FID:4A-2C/RTX-1 MOIL1000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a017.d ARI ID: MOIL2500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 15:38
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	83416	5.37
C8	1.128	-0.020	4071	14644	WATPHD	(C12-C24)	2852196	196.51
C10	2.962	-0.006	887	1383	WATPHM	(C24-C38)	33178660	2438.89
C12	3.903	-0.005	907	770	AK102	(C10-C25)	3930340	228.31
C14	4.583	-0.004	266	301	AK103	(C25-C36)	28698517	3118.70
C16	5.183	0.012	317	96				
C18	5.731	0.014	1594	802				
C20	6.280	0.012	6716	3634				
C22	6.804	-0.007	27575	14749	MIN.OIL	(C24-C38)	33178660	1944.94
C24	7.321	-0.005	107450	102577				
C25	7.556	-0.018	131816	144834				
C26	7.819	-0.007	168407	187381				
C28	8.257	-0.013	202786	100155				
C32	9.084	0.003	242006	169583				
C34	9.454	-0.003	243975	205114				
Filter Peak	11.438	-0.004	4315	8182	CREOSOT	(C12-C22)	738851	338.63 M
C36	9.816	-0.007	216552	209982				
C38	10.168	-0.011	129920	131960				
C40	10.542	0.009	30687	39671				
o-terph	5.899	0.038	2815	2393				
Triacon Surr	8.719	0.021	2510735	3943079				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2393	0.1	0.3
Triacontane	3943079	216.7	481.6 M

M Indicates the peak was manually integrated

JLW 4/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a017.d

Date : 13-APR-2013 15:38

Client ID:

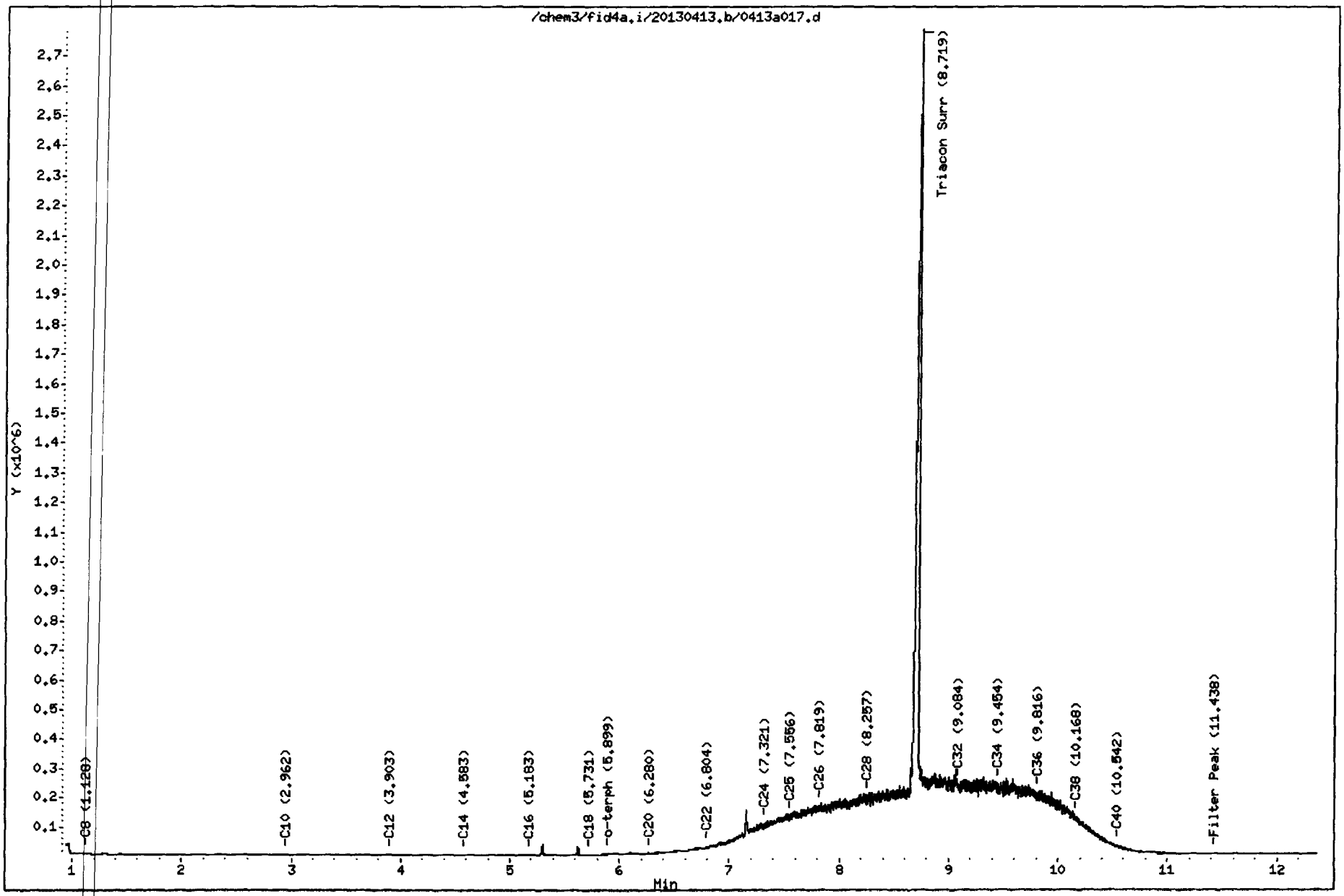
Sample Info: MOIL2500

Column phase: RTX-1

Instrument: fid4a.i

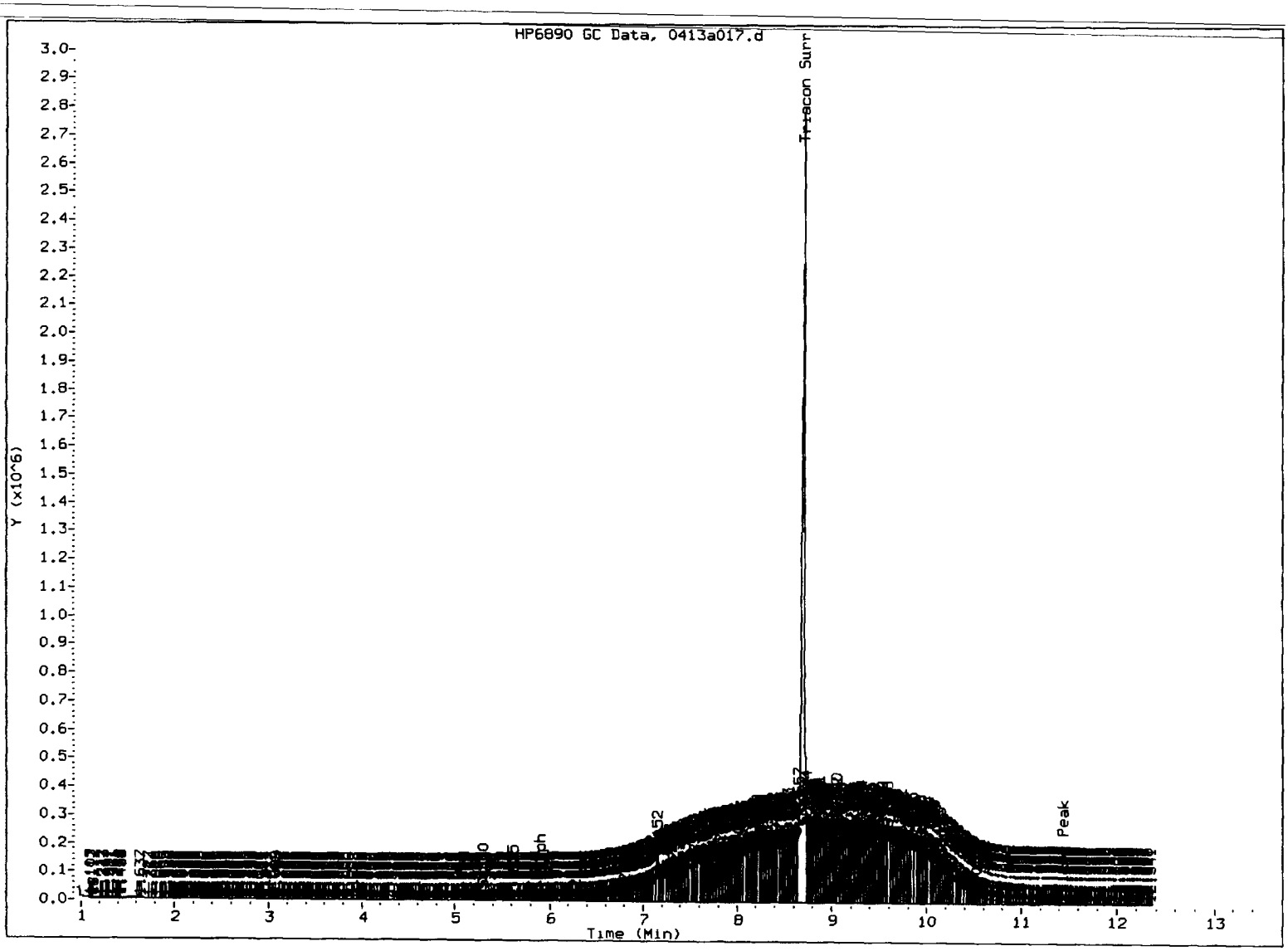
Operator: JR/VTS/JW

Column diameter: 0.25



WNZ7.01350

FID:4A-2C/RTX-1 MOIL2500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a018.d ARI ID: MOIL5000
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 15:58
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	244161	15.71
C8	1.143	-0.004	9812	13808	WATPHD	(C12-C24)	5664993	390.30
C10	2.962	-0.006	1119	1280	WATPHM	(C24-C38)	57905492	4256.51
C12	3.905	-0.004	838	1047	AK102	(C10-C25)	7402796	430.03
C14	4.584	-0.003	581	737	AK103	(C25-C36)	53984227	5866.53
C16	5.166	-0.005	1225	1541				
C18	5.734	0.016	3137	5027				
C20	6.287	0.019	13681	10731				
C22	6.808	-0.003	53624	26608	MIN.OIL	(C24-C38)	57905492	3394.43
C24	7.311	-0.015	190082	232659				
C25	7.572	-0.002	266765	199965				
C26	7.830	0.003	341666	162112				
C28	8.258	-0.011	390662	251200				
C32	9.095	0.014	497027	196106				
C34	9.449	-0.008	471783	471491				
Filter Peak	11.443	0.001	8530	6766	CREOSOT	(C12-C22)	1473907	675.52 M
C36	9.820	-0.003	267447	356349				
C38	10.185	0.007	48572	57747				
C40	10.543	0.010	15521	6156				
o-terph	5.904	0.043	5927	7458				
Triacon Surr	8.747	0.049	3448867	7755599				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	7458	0.4	0.9
Triacontane	7755599	426.2	947.2 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

4/16/13

Data File: /chem3/fid4a.i/20130413.b/0413a018.d

Date : 13-APR-2013 15:58

Client ID:

Sample Info: MOIL5000

Column phase: RTX-1

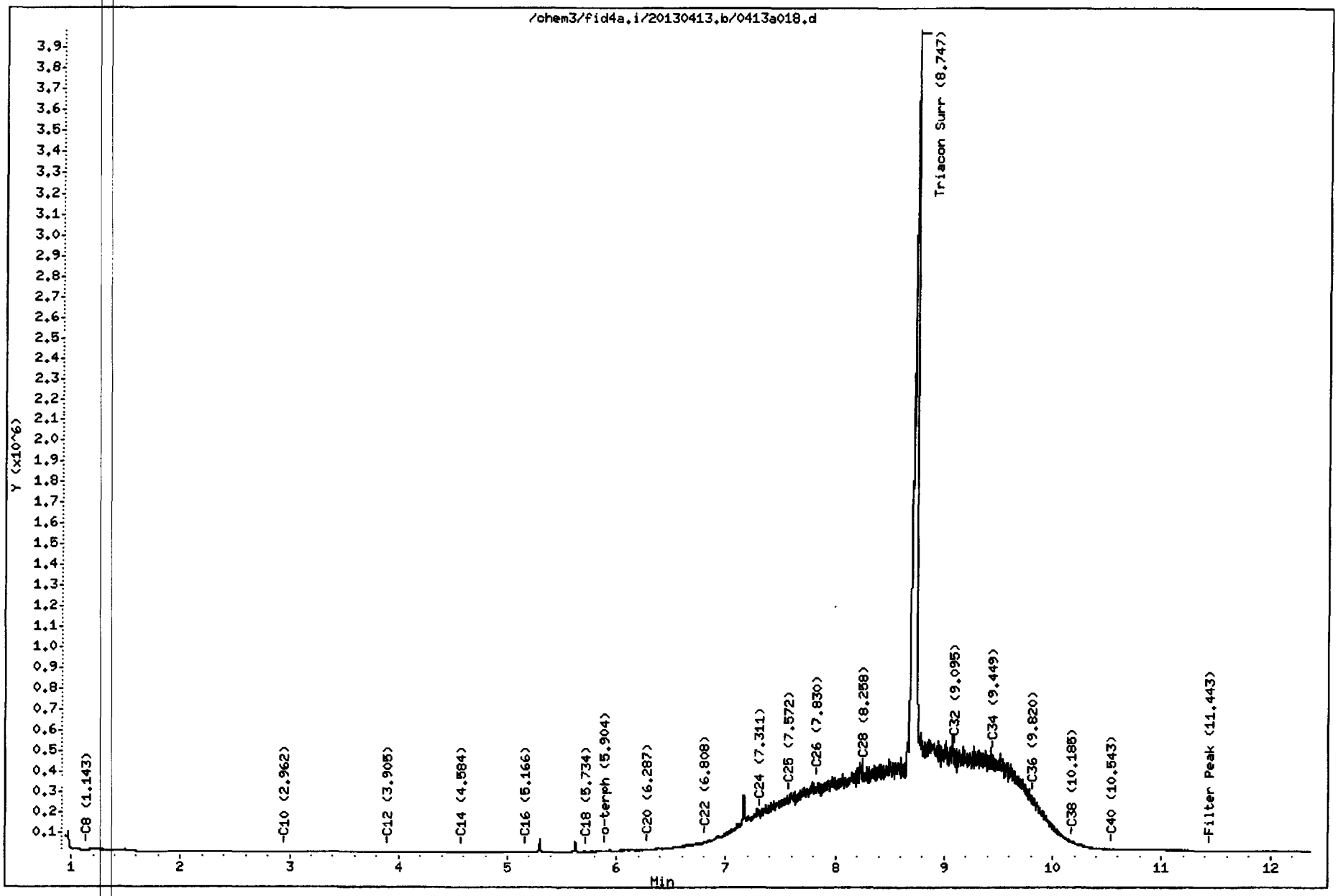
Instrument: fid4a.i

Operator: JR/VTS/JW

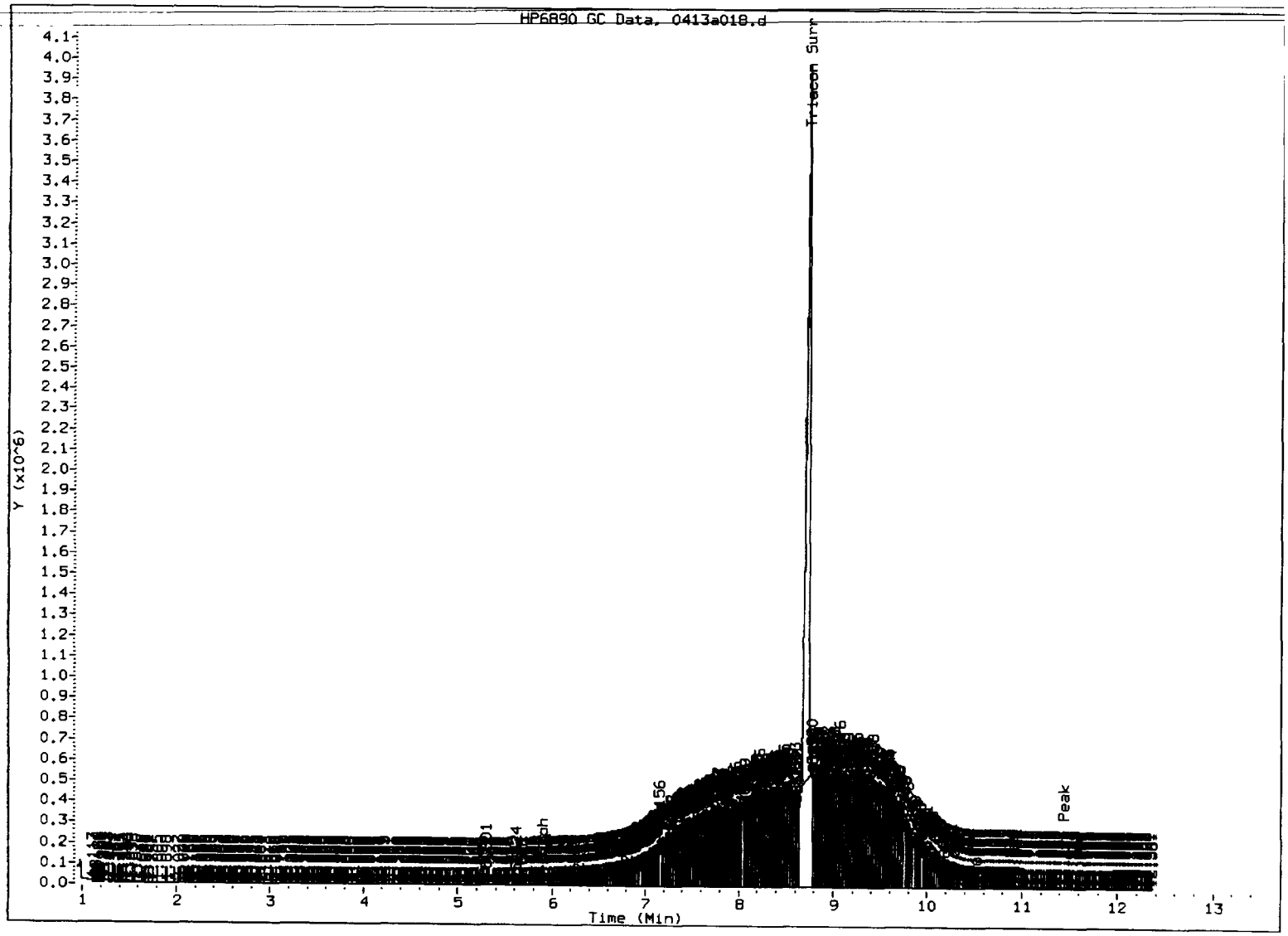
Column diameter: 0.25

JW 4/16/13

WN27.01.3553



FID:4A-2C/RTX-1 MOIL5000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/14/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a019.d ARI ID: MOILICV500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 16:19
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	17902	1.15
C8	1.158	0.011	898	1198	WATPHD	(C12-C24)	687706	47.38
C10	2.964	-0.004	207	178	WATPHM	(C24-C38)	6726037	494.42
C12	3.904	-0.004	96	186	AK102	(C10-C25)	899857	52.27
C14	4.594	0.007	65	65	AK103	(C25-C36)	5675797	616.80
C16	5.165	-0.006	314	358				
C18	5.735	0.018	436	657				
C20	6.290	0.023	1657	2232				
C22	6.806	-0.004	7399	2860	MIN.OIL	(C24-C38)	6726037	394.28
C24	7.315	-0.011	23586	20925				
C25	7.578	0.004	30874	35510				
C26	7.825	-0.001	32885	43912				
C28	8.255	-0.014	37444	17198				
C32	9.096	0.015	45972	43185				
C34	9.445	-0.012	48947	50794				
Filter Peak	11.444	0.003	7009	11665	CREOSOT	(C12-C22)	211443	96.91 M
C36	9.822	-0.001	49725	43813				
C38	10.189	0.010	42250	33643				
C40	10.540	0.008	32675	17032				
o-terph	5.902	0.041	787	812				
Triacon Surr	8.681	-0.017	736242	698013				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	812	0.0	0.1
Triacontane	698013	38.4	85.2 M

JW 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a019.d
Date : 13-APR-2013 16:19
Client ID:
Sample Info: MOILICV500

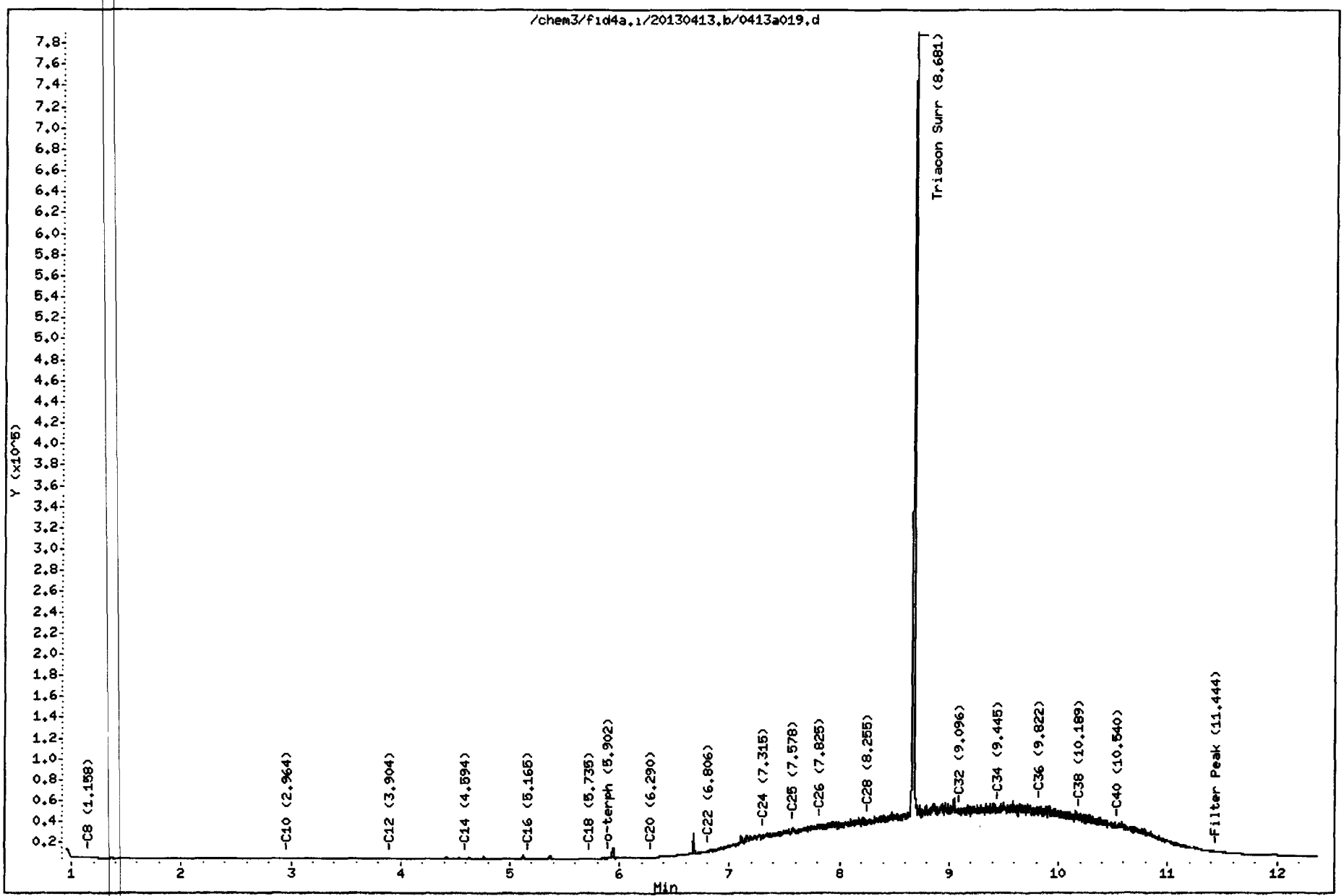
Column phase: RTX-1

Instrument: fid4a.i

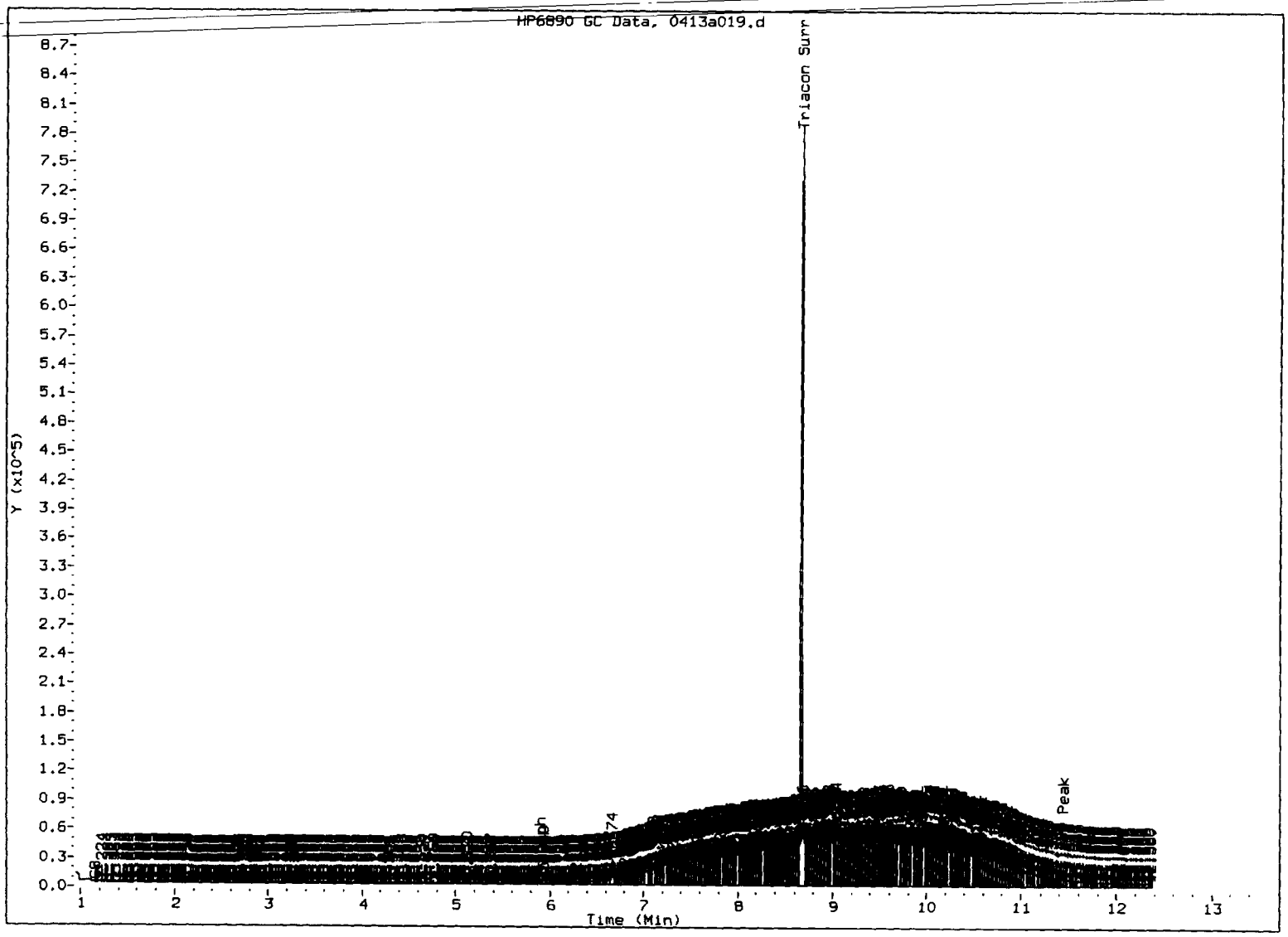
Operator: JR/VTS/JW
Column diameter: 0.25

JTC 4/16/13

WA27.91356



FID:4A-2C/RTX-1 MOILICV500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

TPHD Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN27

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WN27/WN31 Client ID: SAIC

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 4/13/13 Analysis Start Date: ~~5t~~ 4/30/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ___	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / ___
Surrogate Recovery in Control?	Y / N / ___	MS / MSD Recovery in Control?	Y / N / ✓
Internal STD. within 50-200%?	NA / Y / N / ___	MS / MSD RPD ≤30%?	NA / ___
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ___
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ___

Detail problems, corrective actions and/or other pertinent information below

WN27A contains PRO/motor oil. Diesel range inflated by motor oil
WN31A contains Diesel/Motor oil, diesel inflated by motor oil

(Review 1) Analyst: JW **Date:** 5/2/13

(Review 2) Reviewer: MW **Date:** 5/3

Analytical Resources Inc.: Organics Instrument Log

FID-4A Serial No.: US00003247

4/30/13 Analysis: TPHD Analyst: JW

mn 1 Serial No.: 1022005 Column Type: RTX-1

mn 2 Serial No.: Column Type:

Method: TPH ICal Date: 4/13/13 Injection Volume: 1uL

IS	Ical/Ccal	ICV
	2043-3,1	
	2041-2	
	2041-4	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130430.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	30-APR-2013 09:08	0430a001.d	1	RINSE	
2	30-APR-2013 09:28	0430a002.d	1	RINSE	
3	30-APR-2013 09:48	0430a003.d	1	RINSE	
4	30-APR-2013 10:09	0430a004.d	1	RT0430	
5	30-APR-2013 10:29	0430a005.d	1	IB0430	
6	30-APR-2013 10:49	0430a006.d	1	DIESEL#1	
7	30-APR-2013 11:10	0430a007.d	1	MOIL#1	
8	30-APR-2013 11:57	0430a008.d	1	WN88MBS1	WN88MBS1
9	30-APR-2013 12:17	0430a009.d	1	WN88LCSS1	WN88LCSS1
10	30-APR-2013 12:38	0430a010.d	1	WN88LCSDS1	WN88LCSDS1
11	30-APR-2013 12:59	0430a011.d	5	WN88A	TP1-2-3'
12	30-APR-2013 13:20	0430a012.d	5	WN88B	TP2A-2-3'
13	30-APR-2013 13:41	0430a013.d	5	WN88C	TP5A-2-3'
14	30-APR-2013 14:02	0430a014.d	1	WN88D	TP4A-2-3'
15	30-APR-2013 14:23	0430a015.d	5	WN88E	TP3A-1-1.5'
16	30-APR-2013 14:44	0430a016.d	5	WN88F	TP3B-1-1.5'
17	30-APR-2013 15:05	0430a017.d	5	WN88G	TP4B-1-1.5'
18	30-APR-2013 15:26	0430a018.d	1	DIESEL#2	
19	30-APR-2013 15:46	0430a019.d	1	MOIL#2	
20	30-APR-2013 16:07	0430a020.d	1	WN27MBS1	WN27MBS1
21	30-APR-2013 16:28	0430a021.d	1	WN27LCSS1	WN27LCSS1
22	30-APR-2013 16:49	0430a022.d	5	WN27A	CG-MH-010-20130423-
23	30-APR-2013 17:09	0430a023.d	5	WN27AMS	CG-MH-010-20130 MS
24	30-APR-2013 17:30	0430a024.d	5	WN27AMSD	CG-MH-010-20130 MSD
25	30-APR-2013 17:50	0430a025.d	5	WN31A	ES-TS-INF-20130424-
26	30-APR-2013 18:11	0430a026.d	1	DIESEL#3	
27	30-APR-2013 18:32	0430a027.d	1	MOIL#3	

JW

JW 5/2/13

very line must contain information or be lined out. Make all entries legible.
art a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130430.b

ARI Job No.: RT04 Method: ftphfid4a.m Instrument: fid4a.i Date: 30-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1009	0430a004.d	RT0430		1	Toluene, C8,
1029	0430a005.d	IB0430		1	NO MANUAL INTEGRATION
1526	0430a018.d	DIESEL#2	NPDES Samp	1	o-terph,
1546	0430a019.d	MOIL#2	NPDES Samp	1	Triacon Surr,
1607	0430a020.d	WN27MBS1	WN27MBS1	1	NO MANUAL INTEGRATION
1628	0430a021.d	WN27LCSS1	WN27LCSS1	1	o-terph,
1649	0430a022.d	WN27A	CG-MH-010-	5	o-terph, Triacon Surr,
1709	0430a023.d	WN27AMS	CG-MH-010-	5	o-terph, Triacon Surr,
1730	0430a024.d	WN27AMSD	CG-MH-010-	5	o-terph, Triacon Surr,
1750	0430a025.d	WN31A	ES-TS-INF-	5	o-terph, Triacon Surr,
1811	0430a026.d	DIESEL#3	NPDES Samp	1	o-terph,
1832	0430a027.d	MOIL#3	NPDES Samp	1	Triacon Surr,

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a004.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: RT0430
Client ID:
Injection: 30-APR-2013 10:09

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.791	0.000	530586	517053	WATPHG	(Tol-C12)	3249902	209.14
C8	1.002	0.000	424138	494701	WATPHD	(C12-C24)	2683779	184.90
C10	2.860	0.000	335032	304472	WATPHM	(C24-C38)	3980509	292.60
C12	3.824	0.000	451773	337542	AK102	(C10-C25)	3473341	201.77
C14	4.507	0.000	560456	411883	AK103	(C25-C36)	3507083	381.12
C16	5.088	0.000	588547	412865				
C18	5.625	0.000	469264	403474				
C20	6.166	0.000	418569	393800				
C22	6.706	0.000	476111	406078	MIN.OIL	(C24-C38)	3980509	233.34
C24	7.220	0.000	477739	416469				
C25	7.467	0.000	426053	405493				
C26	7.717	0.000	1058904	1238333				
C28	8.161	0.000	458837	426113				
C32	8.949	0.000	511246	425909				
C34	9.302	0.000	439116	428712				
Filter Peak	11.446	0.000	6729	5642	CREOSOT	(C12-C22)	2236396	1024.98 M
C36	9.644	0.000	482776	422232				
C38	9.976	0.000	482001	416163				
C40	10.298	0.000	410242	398523				
o-terph	5.759	0.000	919359	892893				
Triacon Surr	8.580	0.000	954204	1107890				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	892893	46.3	102.9
Triacontane	1107890	60.9	135.3

M Indicates the peak was manually integrated

JW 5/2/13

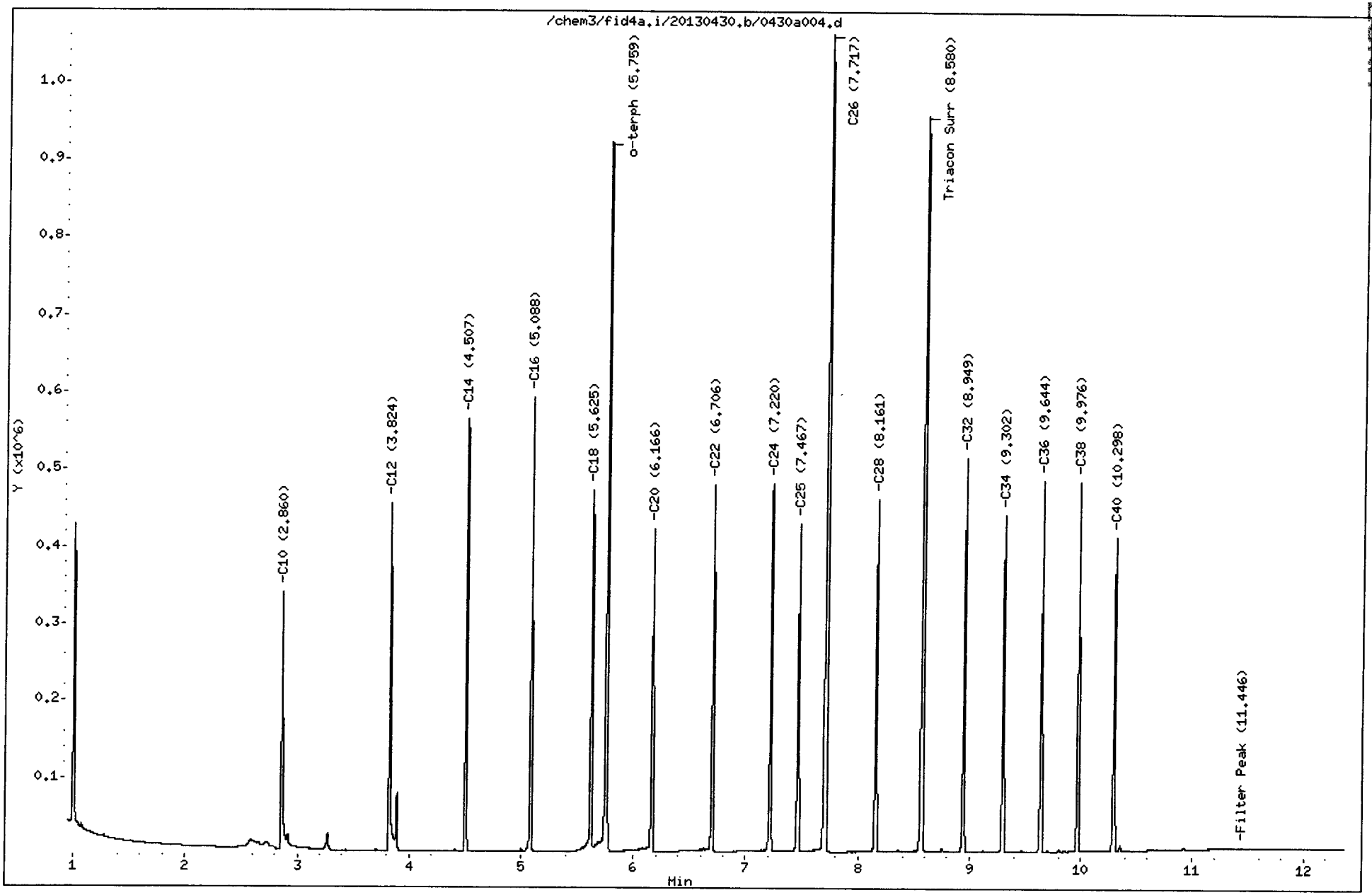
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a004.d
Date : 30-APR-2013 10:09
Client ID:
Sample Info: RT0430

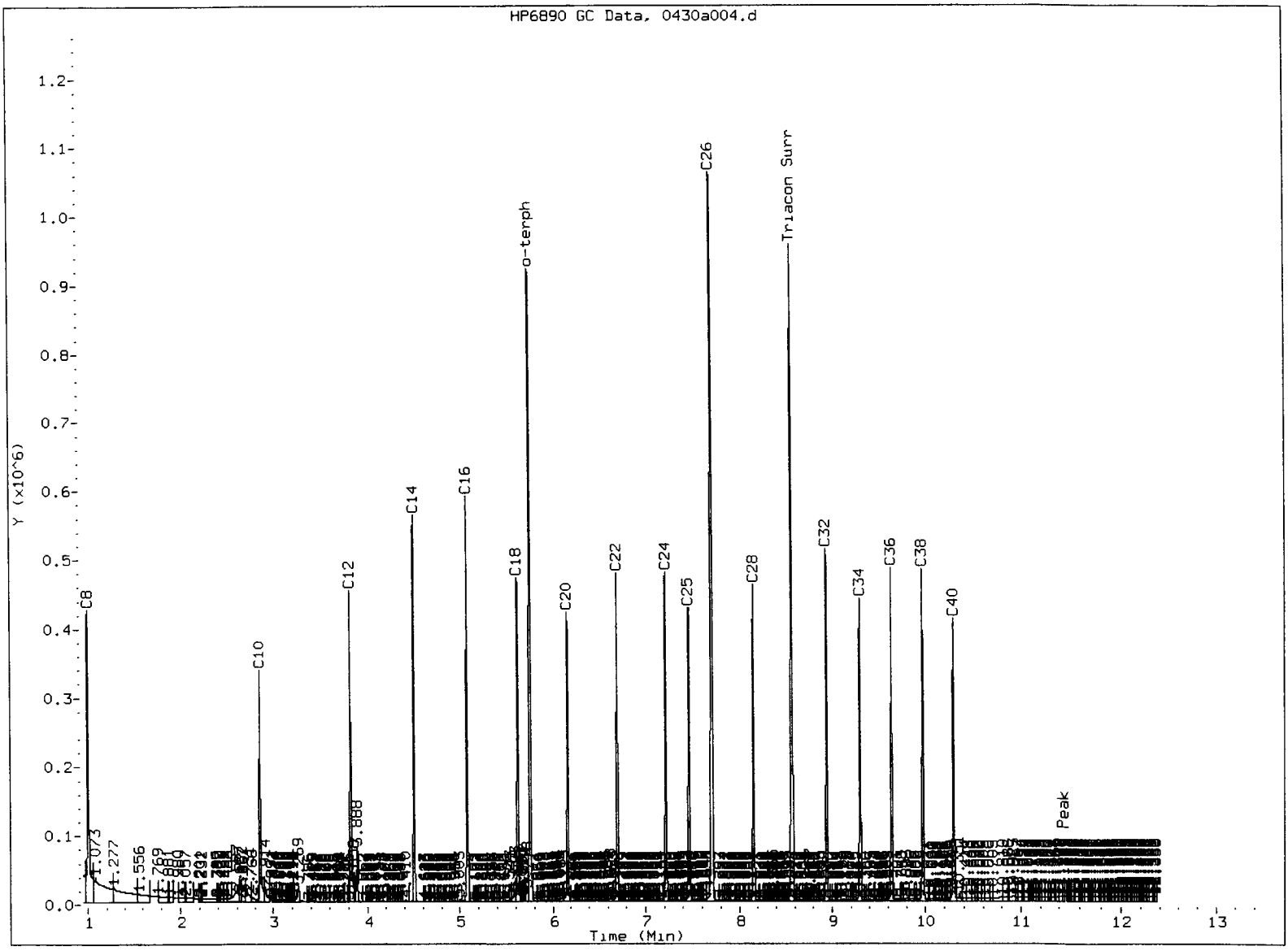
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 RT0430 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/24/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a005.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: IB0430
Client ID:
Injection: 30-APR-2013 10:29

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	42325	2.72
C8	----				WATPHD	(C12-C24)	30703	2.12
C10	2.856	-0.004	678	1074	WATPHM	(C24-C38)	150582	11.07
C12	3.820	-0.004	49	28	AK102	(C10-C25)	49703	2.89
C14	4.504	-0.002	66	84	AK103	(C25-C36)	111499	12.12
C16	5.092	0.004	84	73				
C18	5.617	-0.008	155	226				
C20	6.164	-0.002	236	335				
C22	6.700	-0.006	262	348	MIN.OIL	(C24-C38)	150582	8.83
C24	7.216	-0.004	332	907				
C25	7.460	-0.006	367	600				
C26	7.718	0.001	336	149				
C28	8.167	0.005	773	878				
C32	8.954	0.005	11521	12049				
C34	9.310	0.008	1058	1055				
Filter Peak	11.442	-0.005	5444	7757	CREOSOT	(C12-C22)	24011	11.00 M
C36	9.639	-0.005	1406	1255				
C38	9.989	0.013	1914	3394				
C40	10.299	0.001	2525	3886				
o-terph	5.763	0.003	1096691	950201				
Triacon Surr	8.581	0.001	805528	877736				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	950201	49.3	109.5
Triacontane	877736	48.2	107.2

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

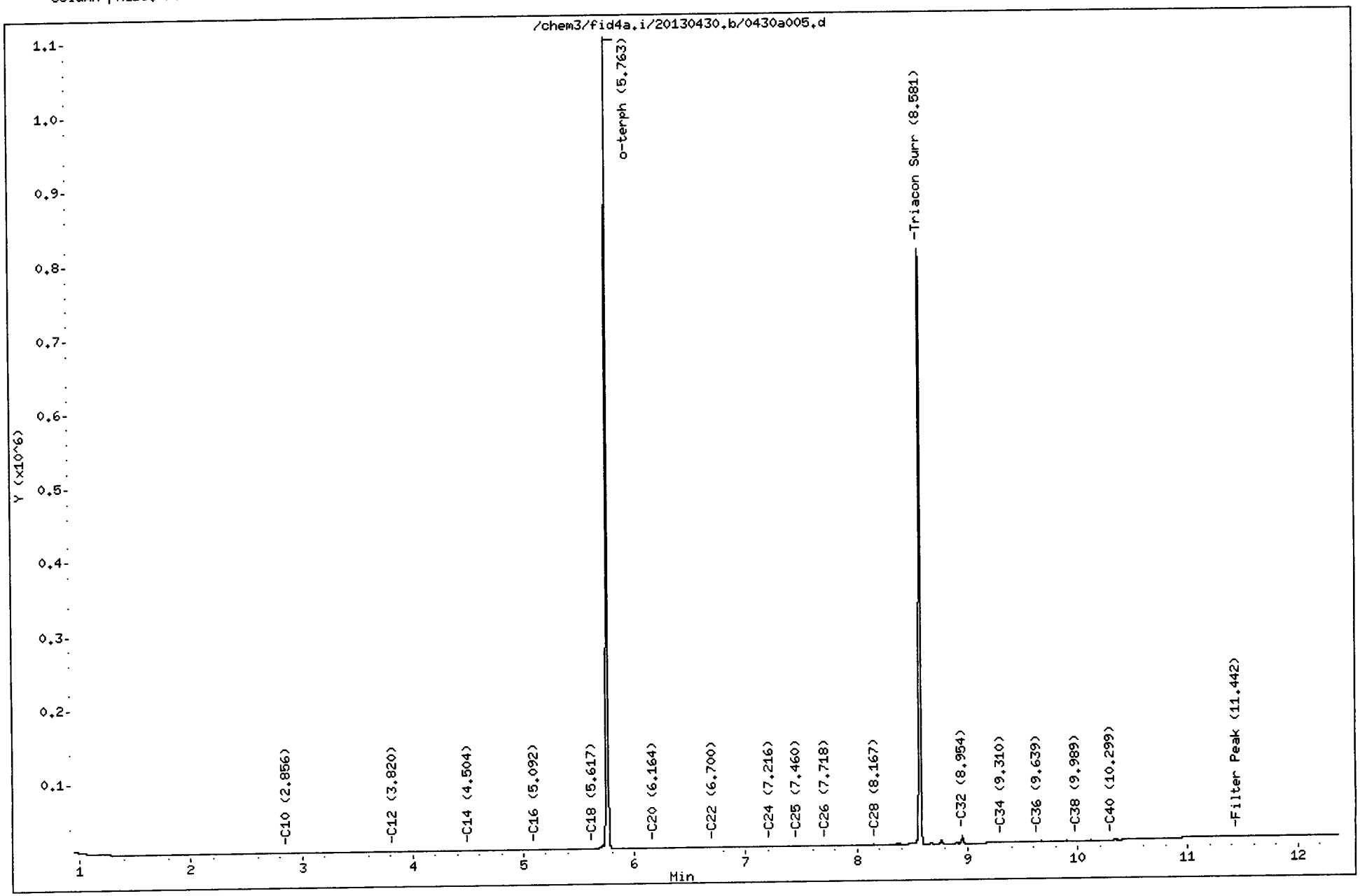
Data File: /chem3/fid4a.i/20130430.b/0430a005.d
Date : 30-APR-2013 10:29
Client ID:
Sample Info: IB0430

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1

WN27:01366



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a018.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: DIESEL#2
Client ID:
Injection: 30-APR-2013 15:26

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	953221	61.34
C8	----				WATPHD	(C12-C24)	3730152	256.99
C10	2.857	-0.003	24519	19717	WATPHM	(C24-C38)	281847	20.72
C12	3.822	-0.002	43127	43187	AK102	(C10-C25)	4401823	255.70
C14	4.504	-0.002	77752	70943	AK103	(C25-C36)	199752	21.71
C16	5.086	-0.002	114482	103937				
C18	5.628	0.003	89923	98473				
C20	6.169	0.003	61410	89478				
C22	6.707	0.001	34939	34823	MIN.OIL	(C24-C38)	281847	16.52
C24	7.221	0.001	9017	11854				
C25	7.467	0.000	4759	8102				
C26	7.705	-0.012	2074	3564				
C28	8.162	0.000	1067	2039				
C32	8.952	0.003	1713	5484				
C34	9.305	0.003	2054	1981				
Filter Peak	11.454	0.008	8458	14524	CREOSOT	(C12-C22)	3588951	1644.87 M
C36	9.640	-0.004	2796	2375				
C38	9.974	-0.002	3666	2470				
C40	10.296	-0.002	4464	3976				
o-terph	5.768	0.009	1052100	941323				
Triacon Surr	8.580	0.000	1677	2647				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	941323	48.8	108.5 M
Triacontane	2647	0.1	0.3

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a018.d
Date : 30-APR-2013 15:26
Client ID:
Sample Info: DIESEL#2

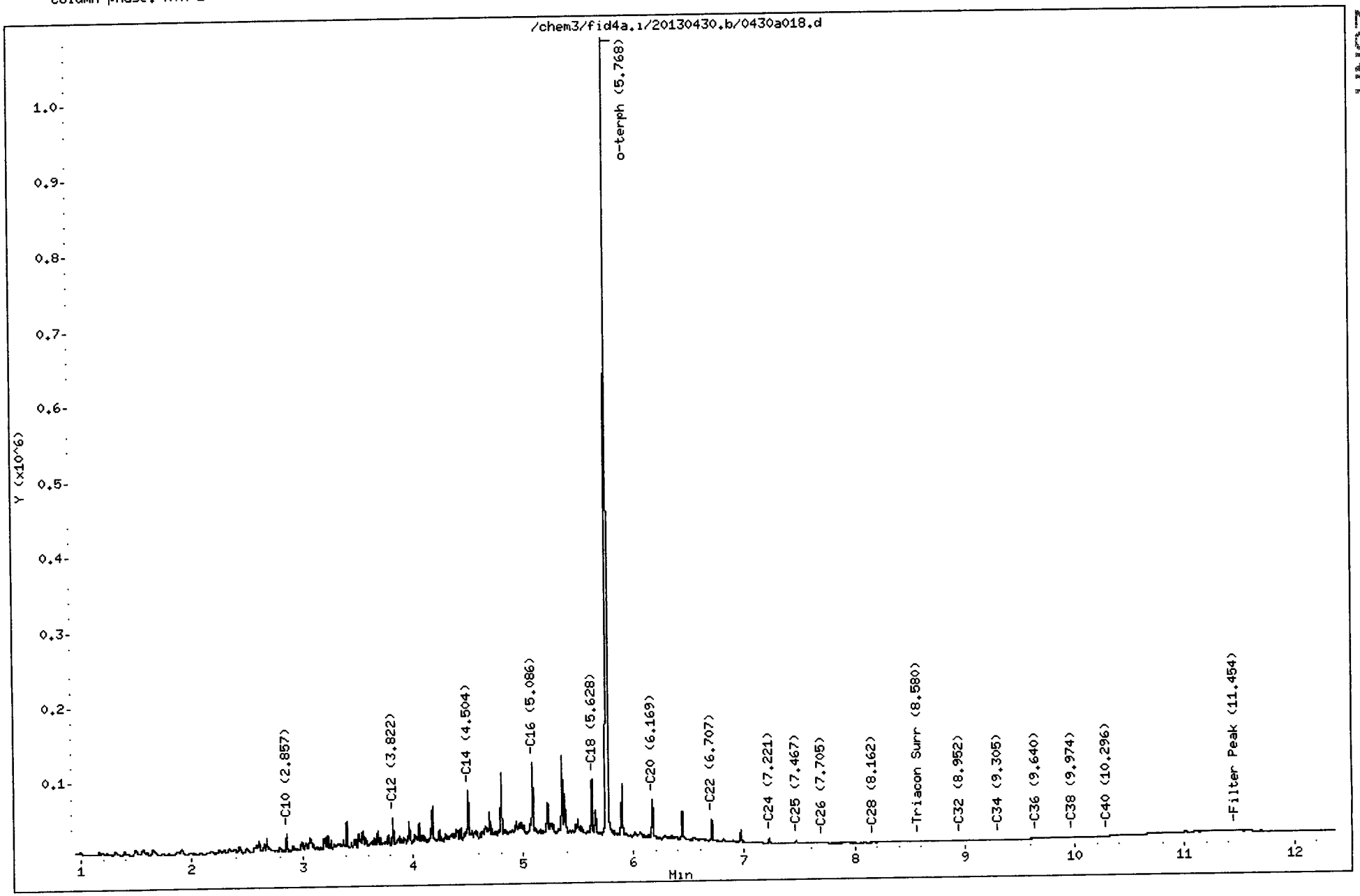
Column phase: RTX-1

Instrument: fid4a.i

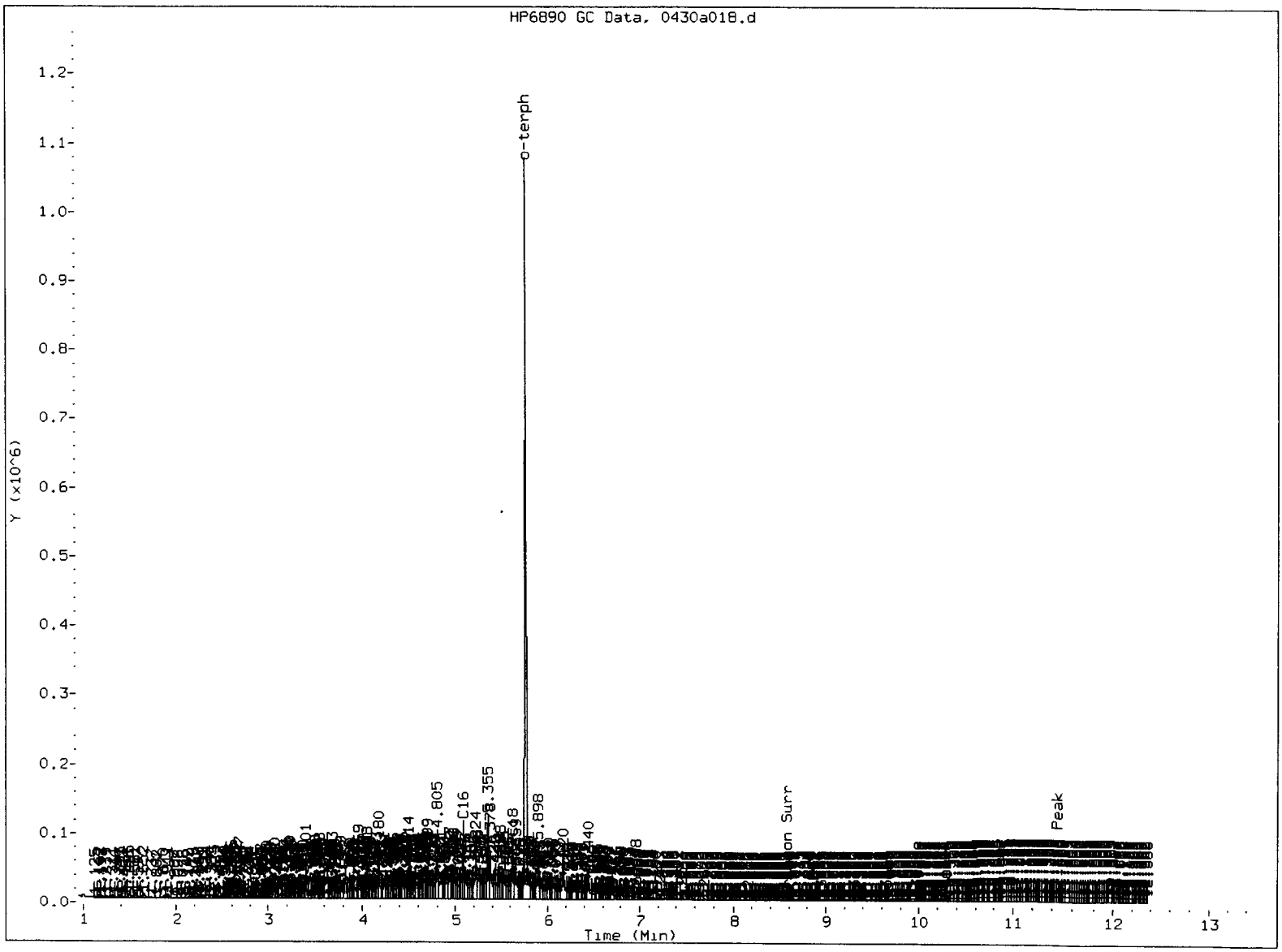
Operator: JR/VTS/JW
Column diameter: 0.25

JW 5/2/13

WN27 : 01369



FID:4A-2C/RTX-1 DIESEL#2 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a019.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: MOIL#2
Client ID:
Injection: 30-APR-2013 15:46

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	29761	1.92
C8	----				WATPHD	(C12-C24)	667971	46.02
C10	2.857	-0.003	267	431	WATPHM	(C24-C38)	6542031	480.89
C12	3.811	-0.013	153	229	AK102	(C10-C25)	837280	48.64
C14	4.505	-0.002	207	361	AK103	(C25-C36)	5678192	617.06
C16	5.086	-0.002	246	278				
C18	5.624	-0.001	613	957				
C20	6.172	0.006	1688	1186				
C22	6.696	-0.010	5853	10082	MIN.OIL	(C24-C38)	6542031	383.50
C24	7.221	0.001	23061	17142				
C25	7.467	0.000	29365	19592				
C26	7.718	0.001	37606	18454				
C28	8.166	0.005	41526	22036				
C32	8.953	0.004	51379	76001				
C34	9.295	-0.007	49515	51132				
Filter Peak	11.456	0.009	7138	5526	CREOSOT	(C12-C22)	180872	82.90 M
C36	9.639	-0.005	42949	47393				
C38	9.984	0.007	36025	40926				
C40	10.297	-0.001	16978	9397				
o-terph	5.754	-0.005	1043	2456				
Triacon Surr	8.601	0.021	797776	904929				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2456	0.1	0.3
Triacontane	904929	49.7	110.5 M

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a019.d

Date : 30-APR-2013 15:46

Client ID:

Sample Info: MOIL#2

Column phase: RTX-1

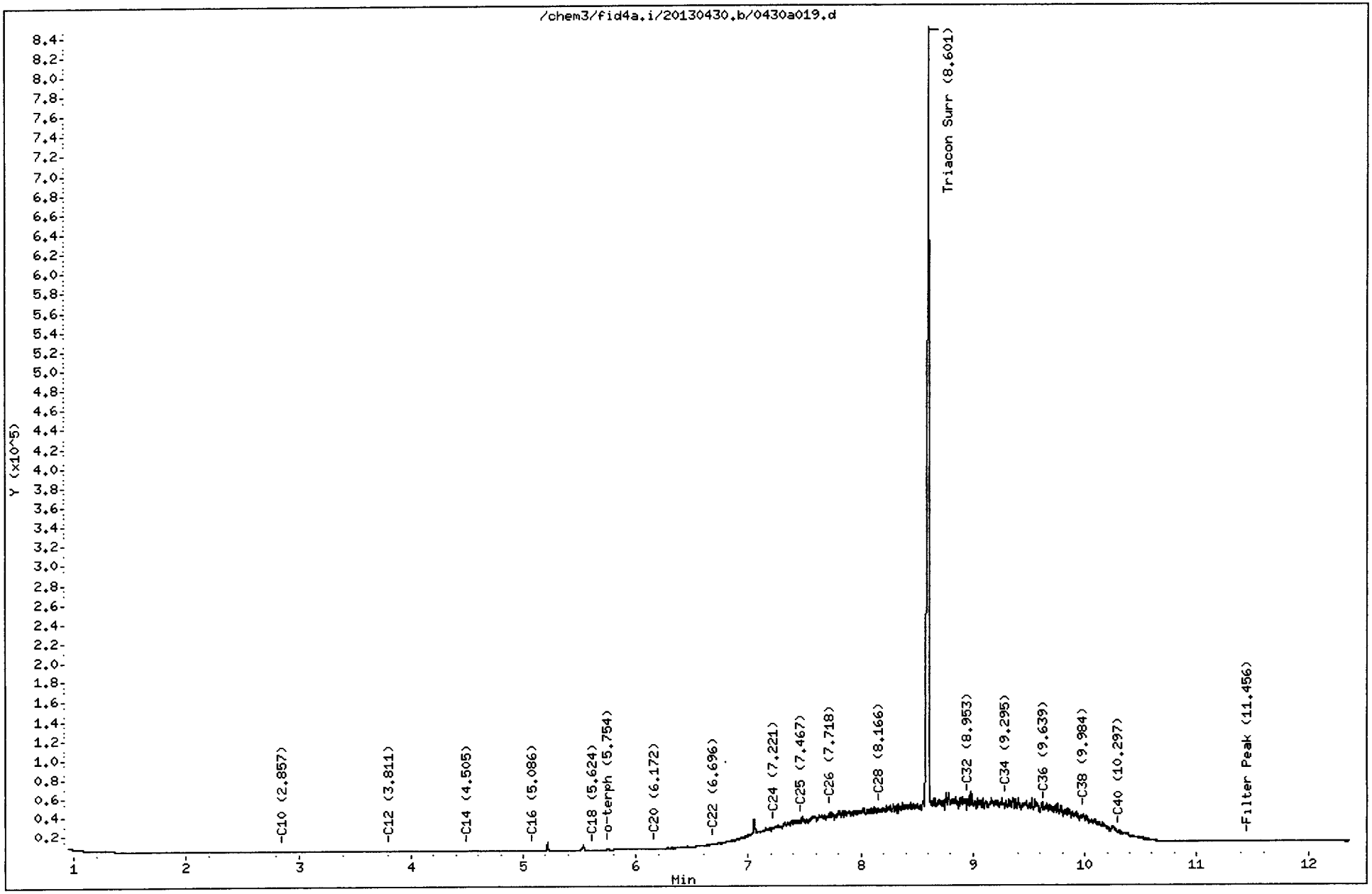
Instrument: fid4a.i

Operator: JR/VTS/JW

Column diameter: 0.25

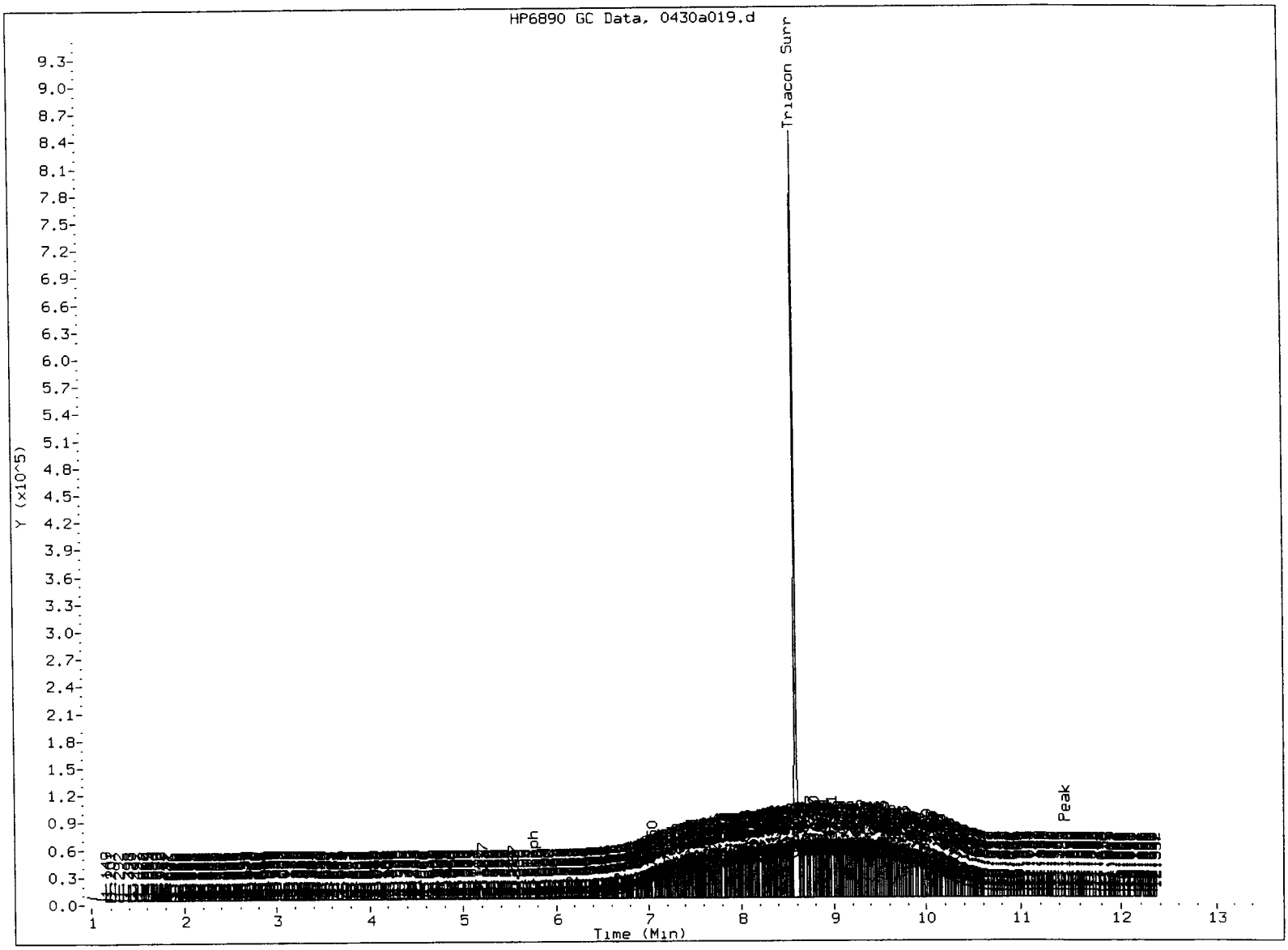
JW 5/2/13

WN27 : 91371



FID:4A-2C/RTX-1 MOIL#2

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a020.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WN27MBS1
Client ID: WN27MBS1
Injection: 30-APR-2013 16:07

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	28892	1.86
C8	----				WATPHD	(C12-C24)	40470	2.79
C10	2.859	-0.001	288	273	WATPHM	(C24-C38)	166971	12.27
C12	3.824	0.000	87	99	AK102	(C10-C25)	46255	2.69
C14	4.505	-0.002	142	208	AK103	(C25-C36)	116933	12.71
C16	5.084	-0.004	120	153				
C18	5.618	-0.007	170	231				
C20	6.167	0.001	228	201				
C22	6.706	0.000	288	553	MIN.OIL	(C24-C38)	166971	9.79
C24	7.223	0.003	344	389				
C25	7.471	0.004	868	1843				
C26	7.706	-0.011	447	511				
C28	8.162	0.000	1498	2799				
C32	8.966	0.017	2816	6574				
C34	9.300	-0.002	1228	701				
Filter Peak	11.439	-0.007	5702	10586	CREOSOT	(C12-C22)	31367	14.38 M
C36	9.639	-0.006	1854	2742				
C38	9.980	0.003	2330	924				
C40	10.304	0.006	2529	2443				
o-terph	5.766	0.007	966879	896338				
Triacon Surr	8.596	0.015	770765	886271				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	896338	46.5	103.3
Triacontane	886271	48.7	108.2

M Indicates the peak was manually integrated

JW
5/2/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a020.d

Date : 30-APR-2013 16:07

Client ID: WN27MBS1

Sample Info: WN27MBS1

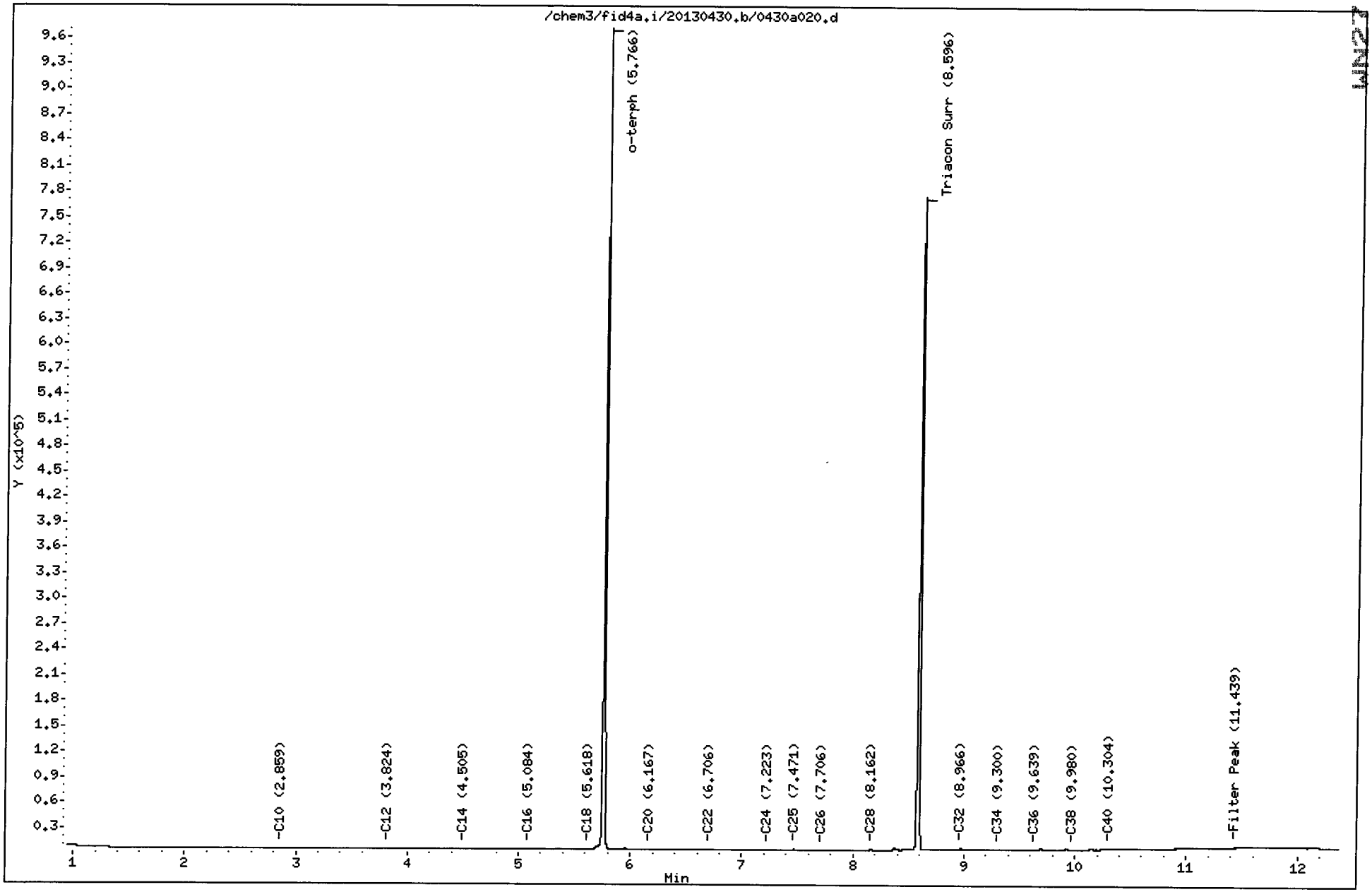
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW

Column diameter: 0.25

WN27-01371



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a021.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WN27LCSS1
Client ID: WN27LCSS1
Injection: 30-APR-2013 16:28

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	5329064	342.94
C8	----				WATPHD	(C12-C24)	21160063	1457.85
C10	2.864	0.004	127194	114558	WATPHM	(C24-C38)	242697	17.84
C12	3.825	0.001	208764	247097	AK102	(C10-C25)	24953162	1449.52
C14	4.509	0.002	356638	471720	AK103	(C25-C36)	148809	16.17
C16	5.092	0.004	566187	579121				
C18	5.632	0.008	436972	532045				
C20	6.175	0.010	329810	494631				
C22	6.711	0.005	178278	198175	MIN.OIL	(C24-C38)	242697	14.23
C24	7.220	0.000	45174	62156				
C25	7.468	0.001	21779	28158				
C26	7.706	-0.010	7869	10968				
C28	8.162	0.001	1444	2258				
C32	8.951	0.002	2281	1861				
C34	9.303	0.001	301	267				
Filter Peak	11.437	-0.009	3760	2546	CREOSOT	(C12-C22)	20443302	9369.50 M
C36	9.630	-0.014	714	1208				
C38	9.984	0.008	1279	508				
C40	10.297	-0.001	1461	581				
o-terph	5.769	0.010	865294	892806				
Triacon Surr	8.593	0.013	774627	842328				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	892806	46.3	102.9 M
Triacontane	842328	46.3	102.9

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a021.d
Date : 30-APR-2013 16:28
Client ID: WN27LCSS1
Sample Info: WN27LCSS1

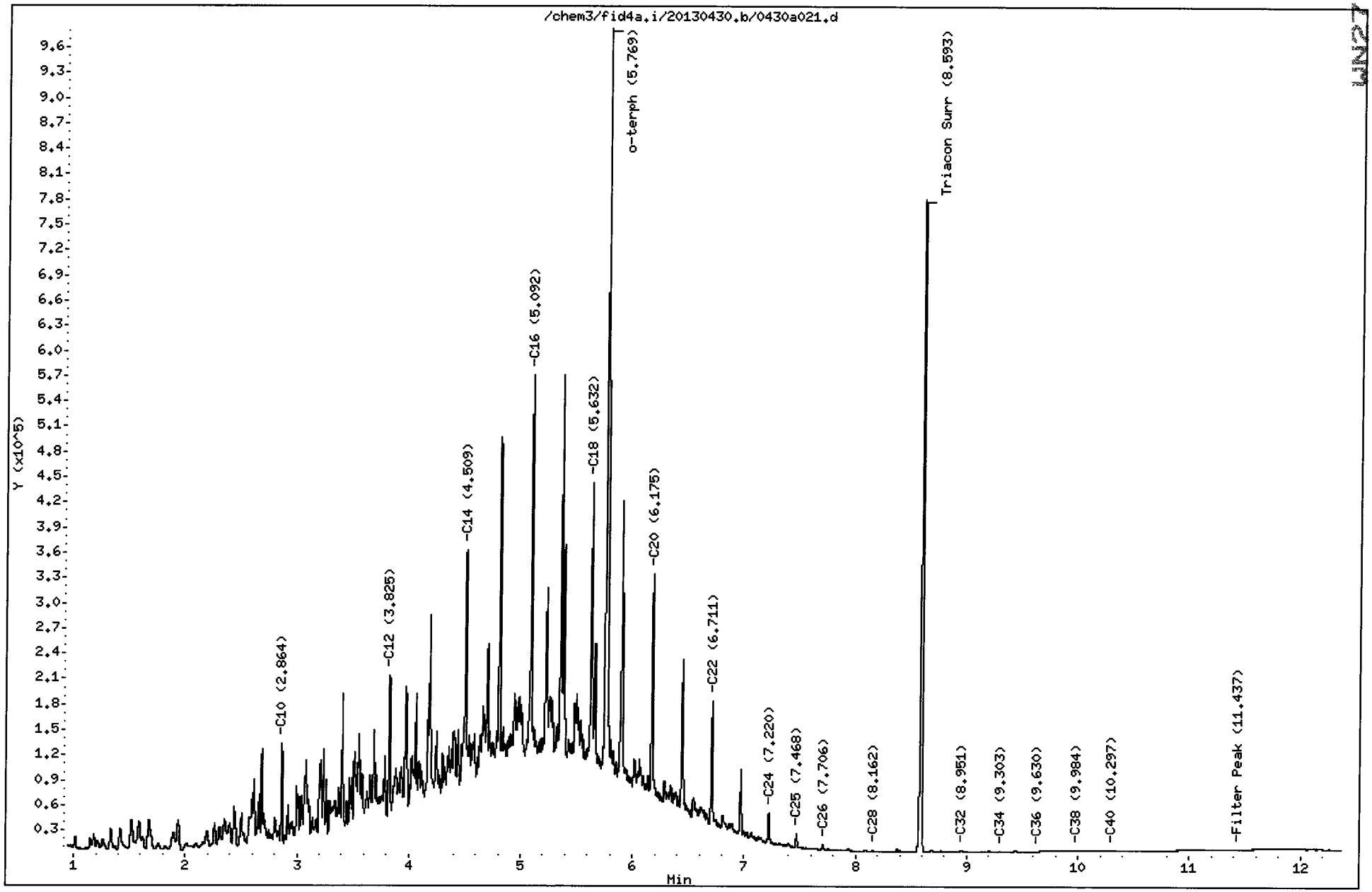
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1

JW 5/2/13

WN27 : 01376



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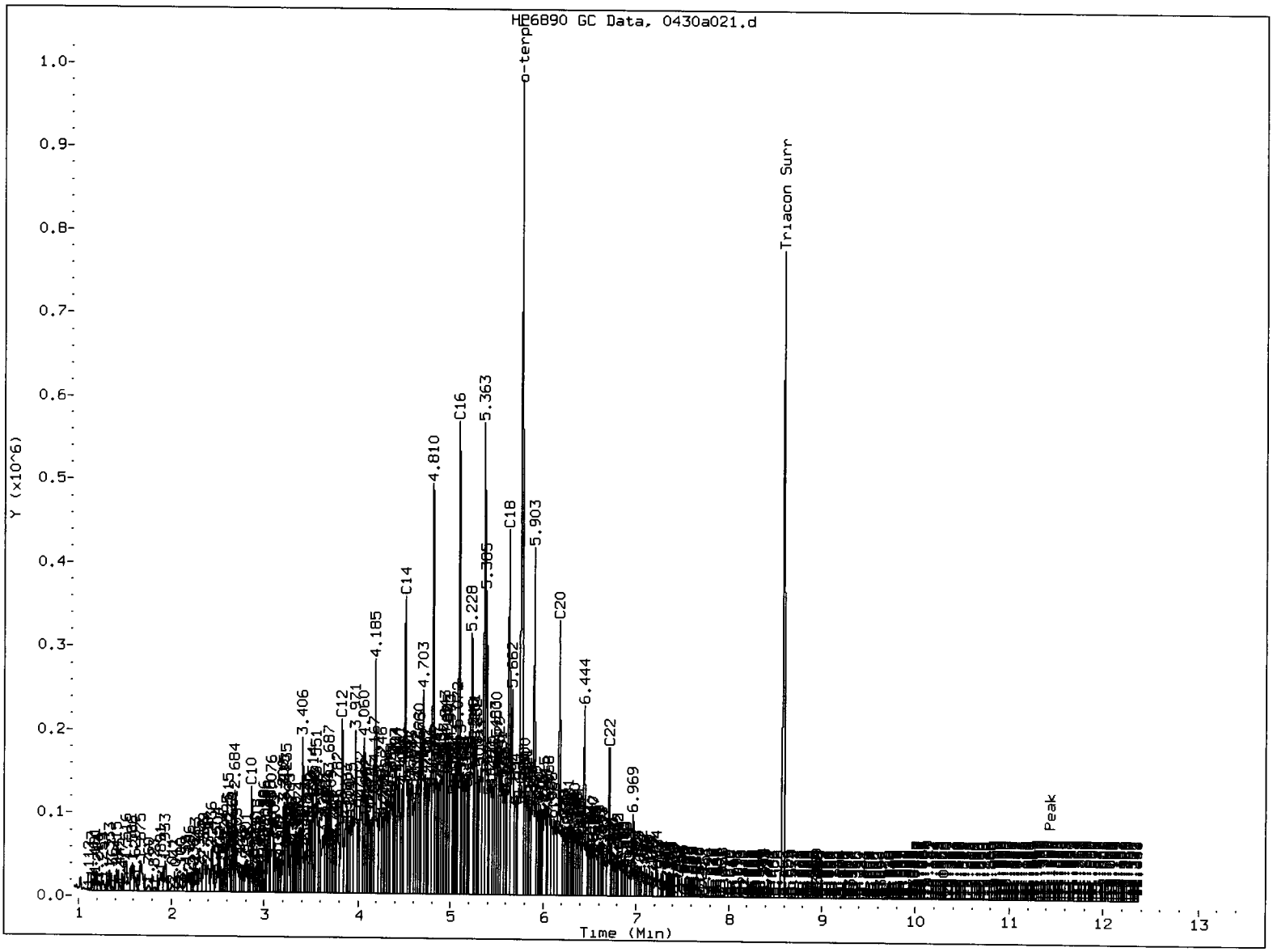
FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a022.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WN27A
Client ID: CG-MH-010-20130423-
Injection: 30-APR-2013 16:49

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	68708	4.42
C8	----				WATPHD	(C12-C24)	3042092	209.59
C10	2.856	-0.004	487	453	WATPHM	(C24-C38)	10803438	794.14
C12	3.822	-0.002	625	796	AK102	(C10-C25)	3646056	211.80
C14	4.506	-0.001	1425	1247	AK103	(C25-C36)	9241632	1004.30
C16	5.088	0.000	4511	4614				
C18	5.622	-0.003	10768	17797				
C20	6.159	-0.007	17225	12951				
C22	6.697	-0.009	37927	62363	MIN.OIL	(C24-C38)	10803438	633.30
C24	7.225	0.005	55867	85155				
C25	7.456	-0.011	62994	48607				
C26	7.722	0.005	70891	75961				
C28	8.164	0.002	77715	49678				
C32	8.949	0.000	81037	106693				
C34	9.297	-0.005	66806	48991				
Filter Peak	11.448	0.002	6699	7436	CREOSOT	(C12-C22)	1722516	789.46 M
C36	9.633	-0.012	67727	131456				
C38	9.967	-0.009	48678	55639				
C40	10.303	0.004	22128	30128				
o-terph	5.758	-0.002	175089	139508				
Triacon Surr	8.589	0.009	164651	152880				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	139508	7.2	80.4 M
Triacontane	152880	8.4	93.4 M

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a022.d
Date : 30-APR-2013 16:49
Client ID: CG-MH-010-20130423-
Sample Info: WN27A,5

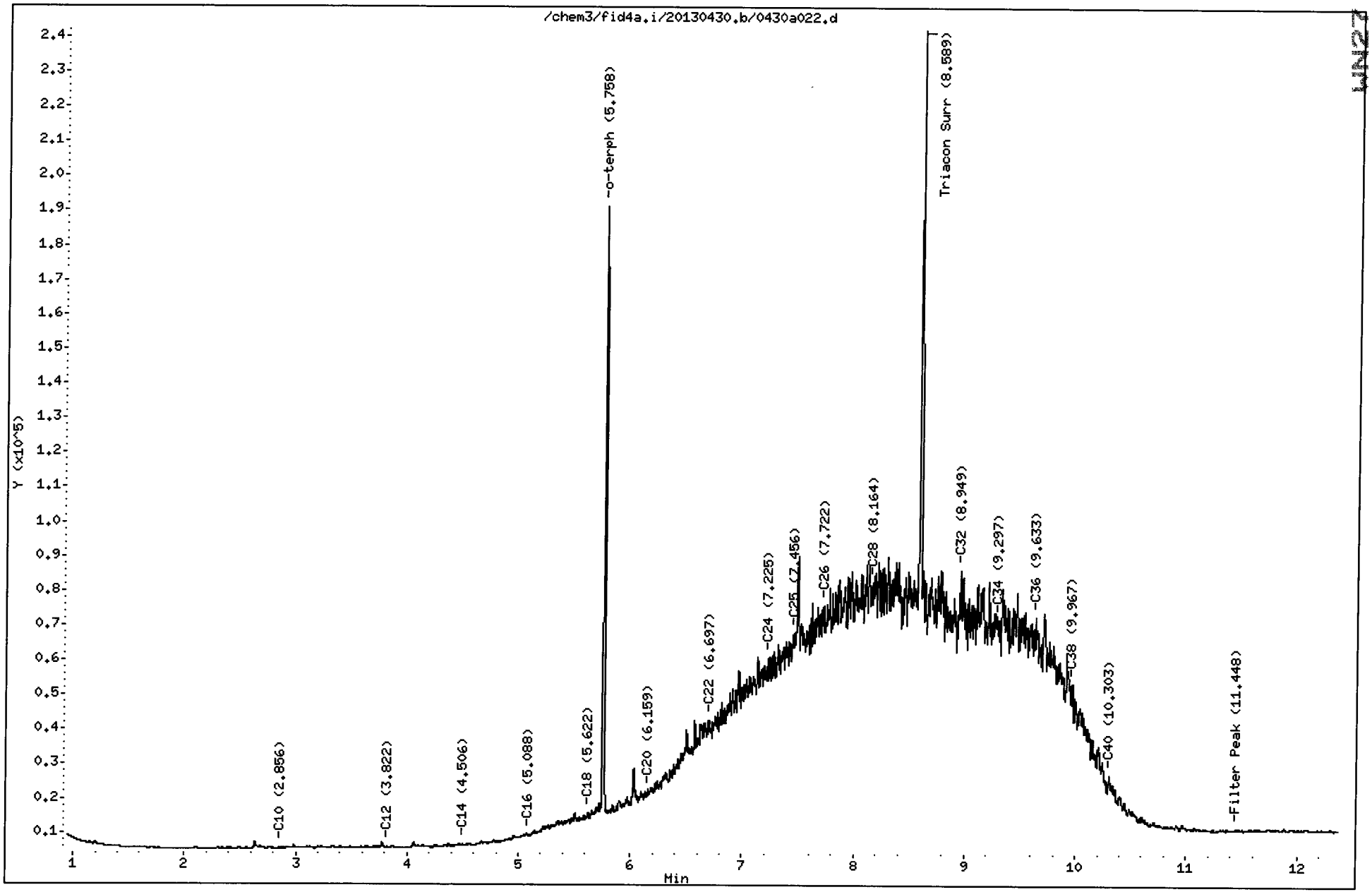
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

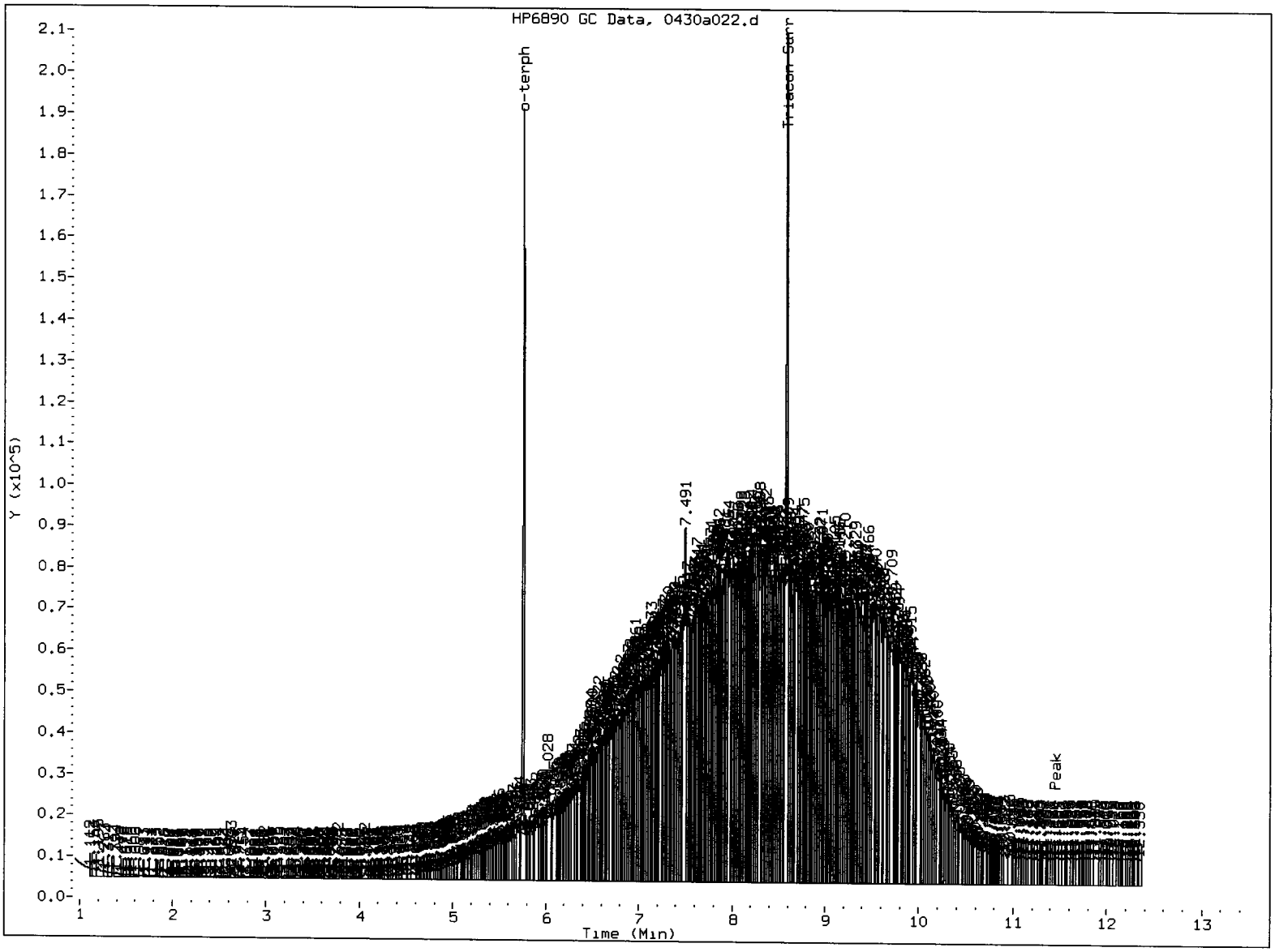
JW 5/2/13

WN27 : 01379



FID:4A-2C/RTX-1 WN27A

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JCJ Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a023.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WN27AMS
Client ID: CG-MH-010-20130 MS
Injection: 30-APR-2013 17:09

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	967054	62.23
C8	----				WATPHD	(C12-C24)	7699423	530.46
C10	2.858	-0.001	23010	19516	WATPHM	(C24-C38)	12024065	883.86
C12	3.823	-0.001	43886	44194	AK102	(C10-C25)	8924433	518.42
C14	4.506	-0.001	70584	75926	AK103	(C25-C36)	10514845	1142.66
C16	5.088	0.000	119026	123351				
C18	5.626	0.001	105677	140482				
C20	6.171	0.005	80477	145985				
C22	6.710	0.004	72085	137558	MIN.OIL	(C24-C38)	12024065	704.85
C24	7.222	0.002	68869	126996				
C25	7.460	-0.007	68614	23661				
C26	7.721	0.004	81856	36325				
C28	8.164	0.003	89679	95730				
C32	8.947	-0.002	84020	61557				
C34	9.317	0.016	76279	74294				
Filter Peak	11.449	0.003	7439	19942	CREOSOT	(C12-C22)	5904696	2706.22 M
C36	9.642	-0.002	66164	39478				
C38	9.962	-0.014	50516	81090				
C40	10.300	0.002	20878	27488				
o-terph	5.760	0.001	184281	150775				
Triacon Surr	8.590	0.010	178014	161562				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	150775	7.8	86.9 M
Triacontane	161562	8.9	98.7 M

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a023.d
Date : 30-APR-2013 17:09
Client ID: CG-MH-010-20130 MS
Sample Info: WN27AMS,5

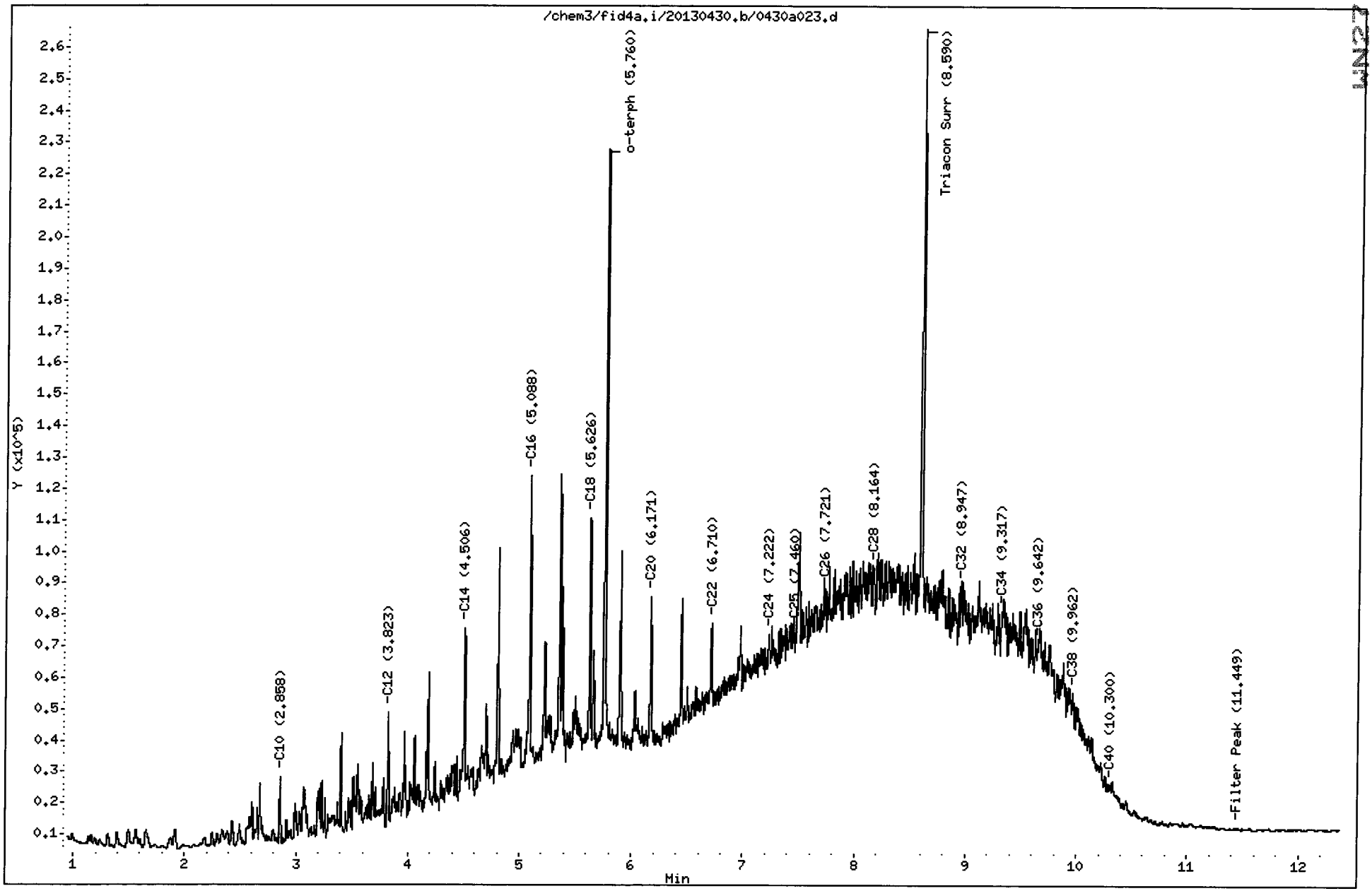
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

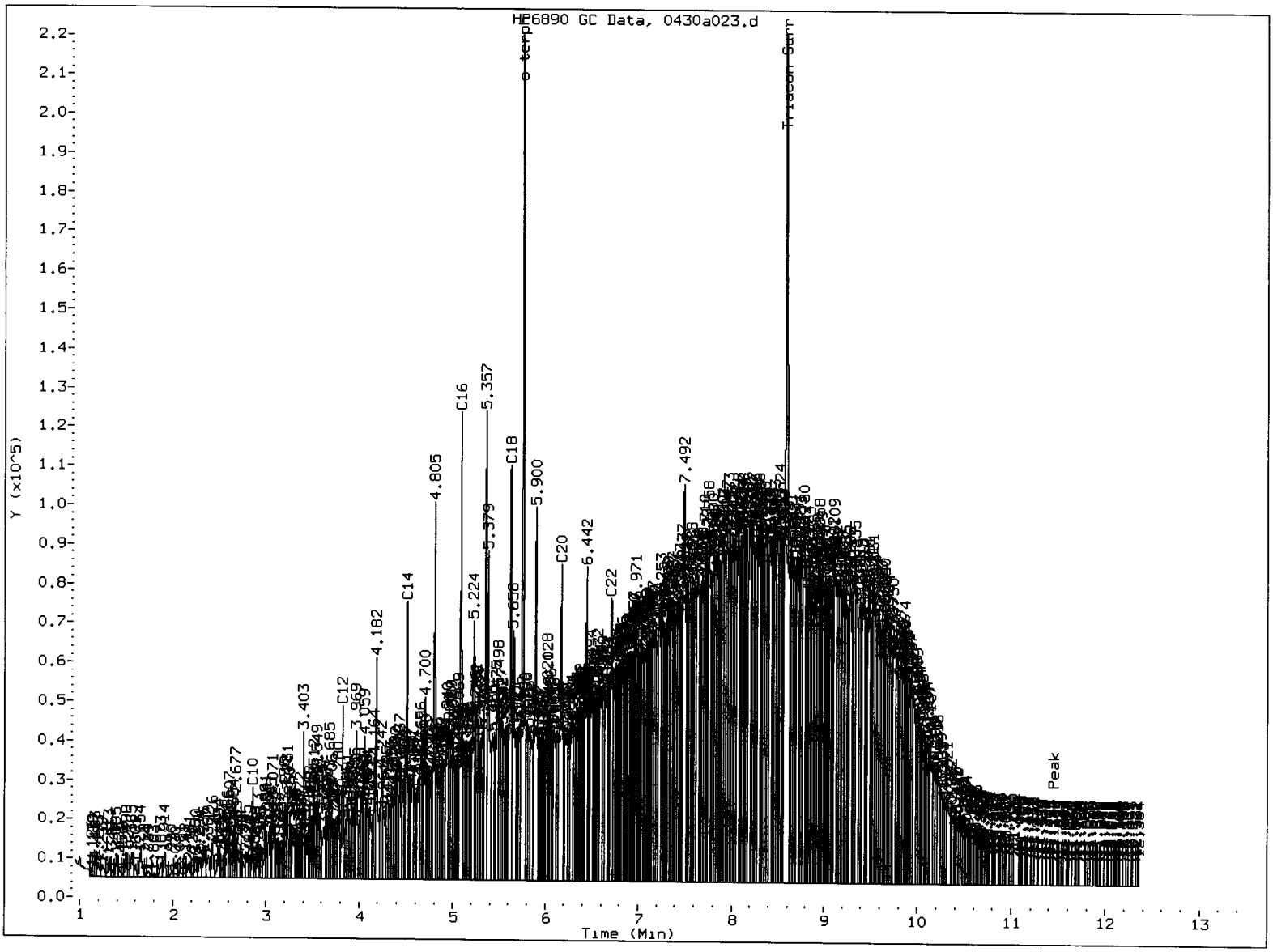
JW 5/2/13

WN27 : 01382



FID:4A-2C/RTX-1 WN27AMS

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a024.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WN27AMSD
Client ID: CG-MH-010-20130 MSD
Injection: 30-APR-2013 17:30

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	917642	59.05
C8	----				WATPHD	(C12-C24)	6669900	459.53
C10	2.858	-0.001	22148	18672	WATPHM	(C24-C38)	10333416	759.59
C12	3.823	-0.001	40832	42702	AK102	(C10-C25)	7798887	453.03
C14	4.506	-0.001	73392	71975	AK103	(C25-C36)	9022568	980.49
C16	5.088	0.000	110839	144400				
C18	5.627	0.002	98919	108134				
C20	6.172	0.006	73368	108517				
C22	6.708	0.002	65478	97789	MIN.OIL	(C24-C38)	10333416	605.75
C24	7.221	0.001	54871	63268				
C25	7.474	0.008	62283	43572				
C26	7.726	0.010	63277	26957				
C28	8.168	0.007	78469	76545				
C32	8.954	0.005	76514	73410				
C34	9.294	-0.008	65146	83216				
Filter Peak	11.446	0.000	7603	15797	CREOSOT	(C12-C22)	5204283	2385.21 M
C36	9.637	-0.007	57888	25508				
C38	9.970	-0.006	41008	37590				
C40	10.303	0.005	19873	11553				
o-terph	5.758	-0.001	190691	135872				
Triacon Surr	8.588	0.008	158327	151808				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	135872	7.0	78.3 M
Triacontane	151808	8.3	92.7 M

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a024.d
Date : 30-APR-2013 17:30
Client ID: CG-MH-010-20130 MSD
Sample Info: WN27AMSD,5

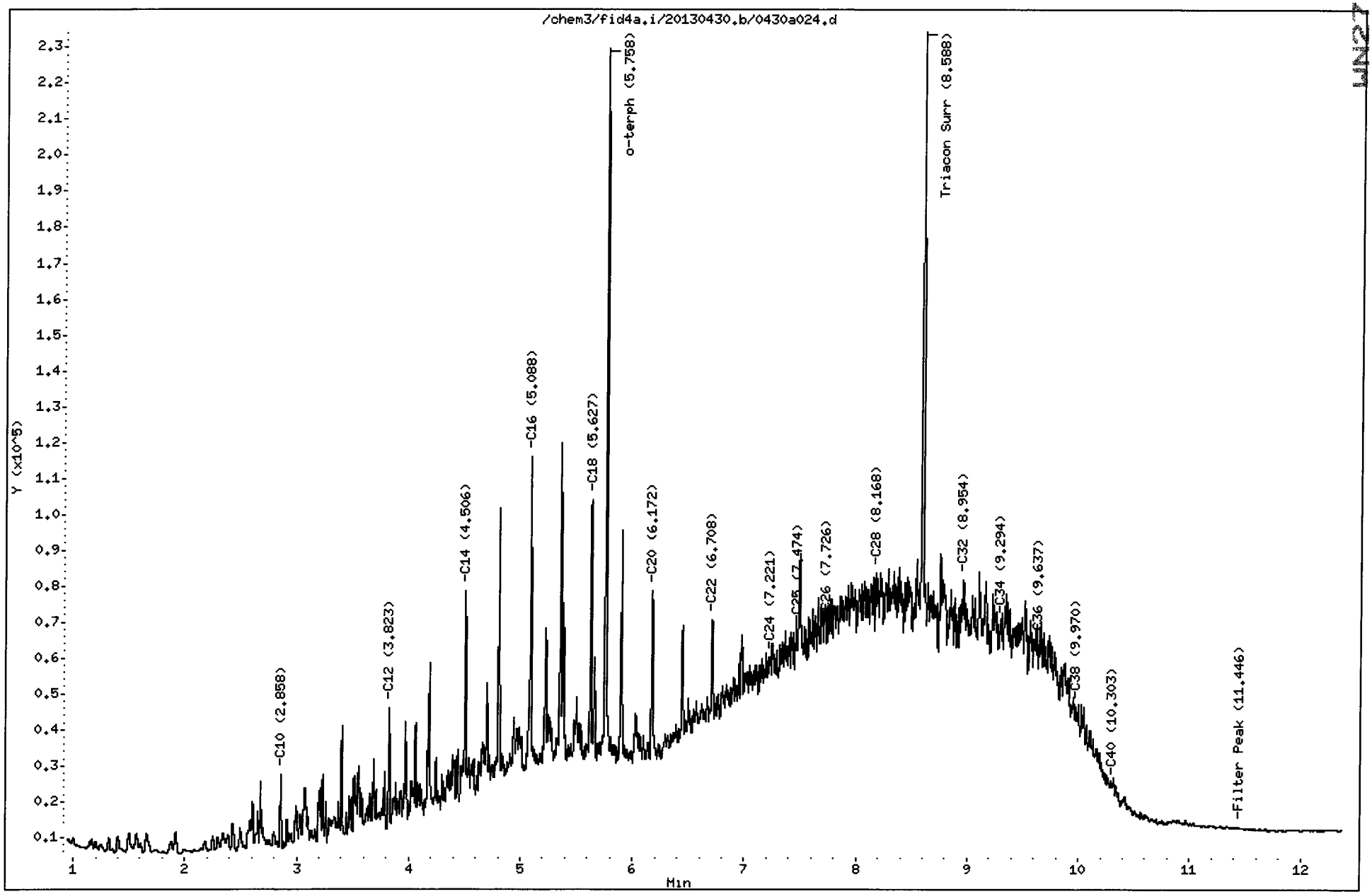
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

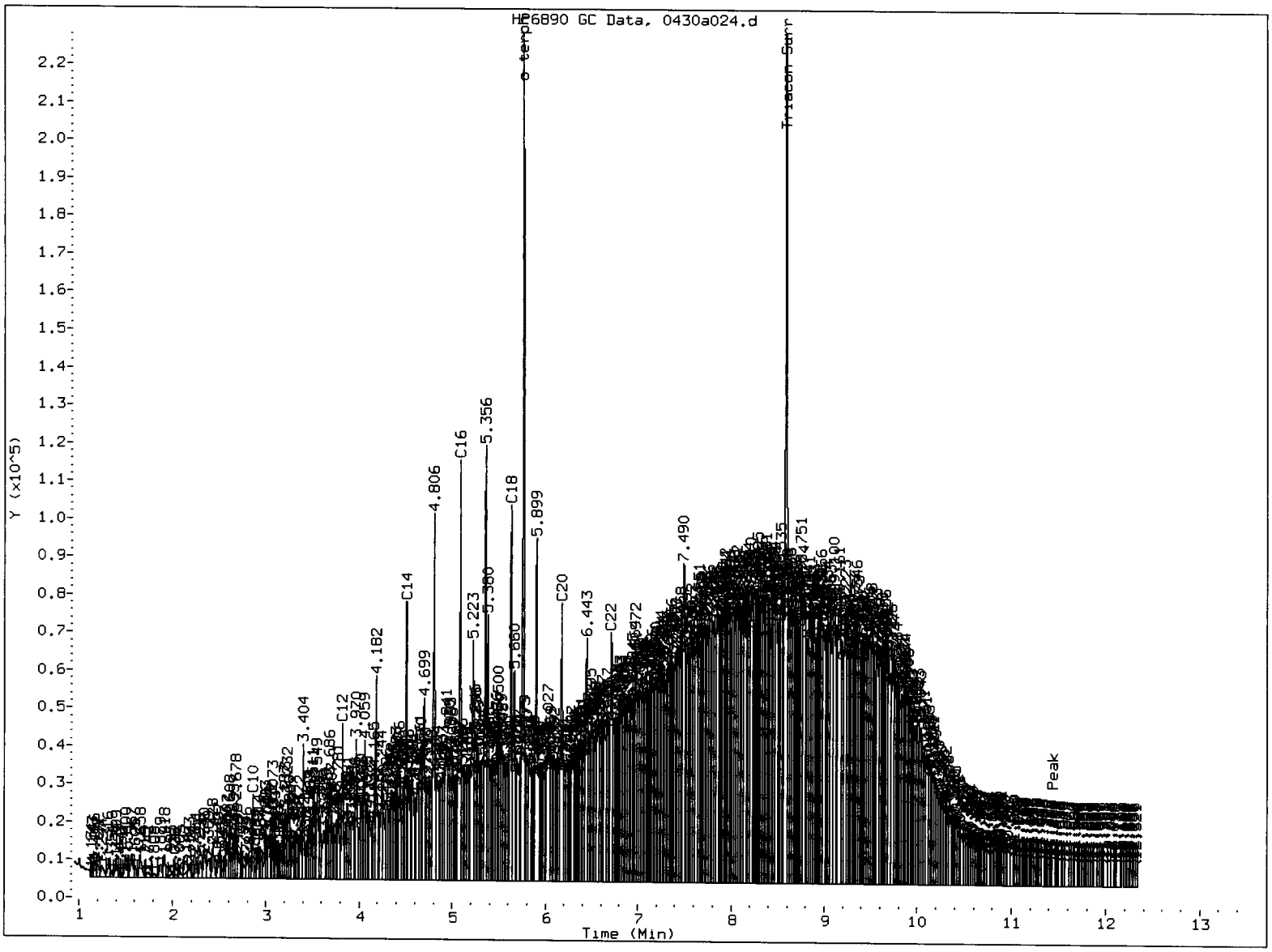
JW 5/2/13

WN27 : 01385



FID:4A-2C/RTX-1 WN27AMSD

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a025.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WN31A
Client ID: ES-TS-INF-20130424-
Injection: 30-APR-2013 17:50

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	521638	33.57
C8	----				WATPHD	(C12-C24)	13318311	917.58
C10	2.858	-0.001	2453	2490	WATPHM	(C24-C38)	32018844	2353.64
C12	3.823	-0.001	40161	40731	AK102	(C10-C25)	15162393	880.78
C14	4.506	-0.001	30621	36698	AK103	(C25-C36)	29851388	3243.98
C16	5.088	0.000	47299	56605				
C18	5.627	0.002	59808	102637				
C20	6.158	-0.008	57244	26760				
C22	6.701	-0.004	104508	74850	MIN.OIL	(C24-C38)	32018844	1876.95
C24	7.213	-0.007	181182	251550				
C25	7.477	0.010	206560	106505				
C26	7.713	-0.004	228086	117818				
C28	8.158	-0.003	275936	163745				
C32	8.946	-0.002	234130	121712				
C34	9.313	0.012	158877	49939				
Filter Peak	11.437	-0.009	11559	23589	CREOSOT	(C12-C22)	9114480	4177.31 M
C36	9.650	0.006	84070	100109				
C38	9.995	0.019	24845	13974				
C40	10.303	0.005	15621	10351				
o-terph	5.761	0.002	176779	161302				
Triacon Surr	8.602	0.022	183585	179875				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	161302	8.4	92.9 M
Triacontane	179875	9.9	109.8 M

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a025.d
Date : 30-APR-2013 17:50
Client ID: ES-TS-INF-20130424-
Sample Info: WN31A,5

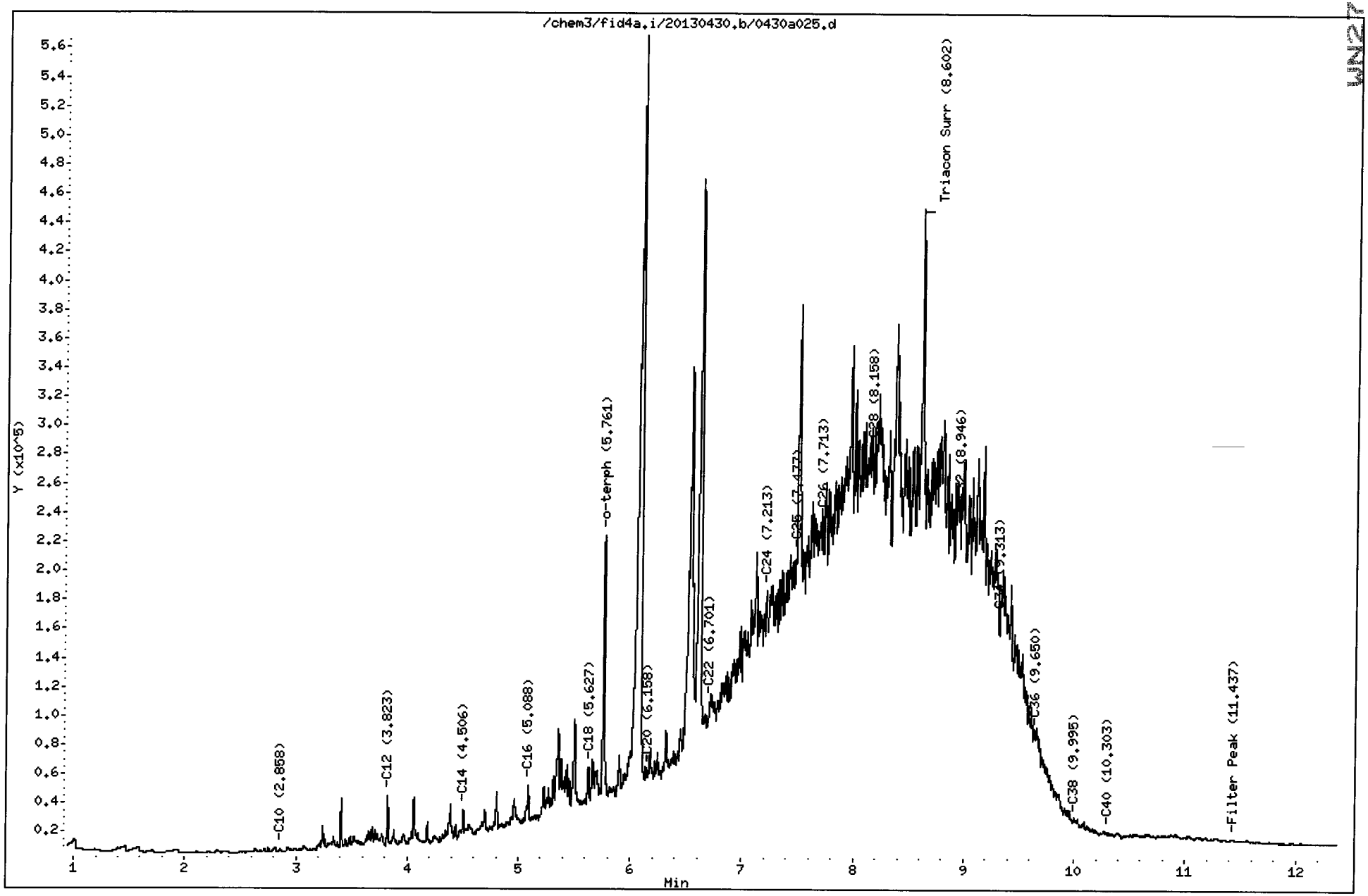
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

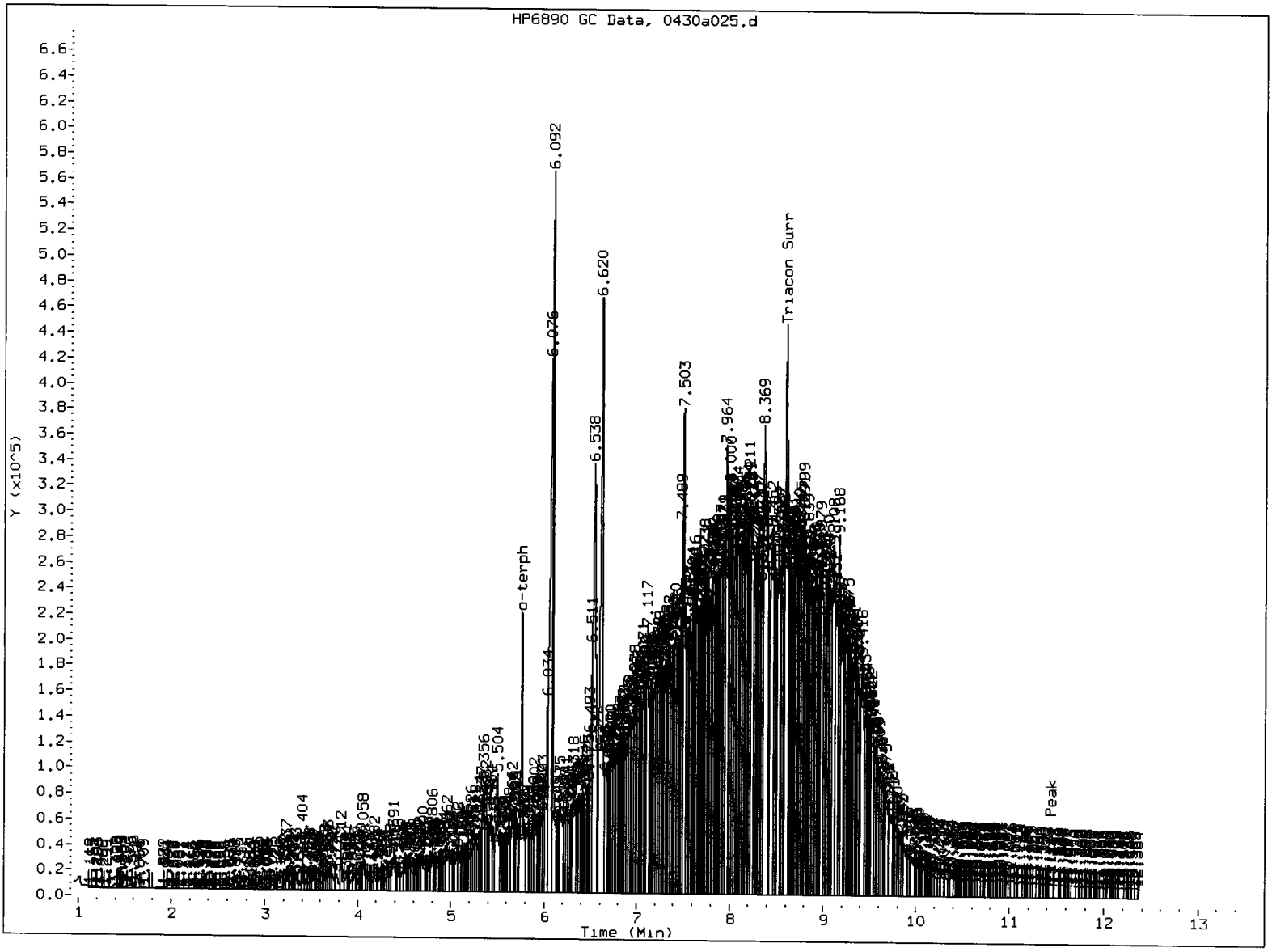
JW 5/2/13

WN27-01388



FID:4A-2C/RTX-1 WN31A

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a026.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: DIESEL#3
Client ID:
Injection: 30-APR-2013 18:11

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	942328	60.64
C8	----				WATPHD	(C12-C24)	3776818	260.21
C10	2.858	-0.002	23882	19614	WATPHM	(C24-C38)	173236	12.73
C12	3.823	-0.001	42404	42361	AK102	(C10-C25)	4446816	258.31
C14	4.505	-0.002	77569	68403	AK103	(C25-C36)	120294	13.07
C16	5.088	0.000	112980	91395				
C18	5.627	0.003	87456	105230				
C20	6.172	0.006	61085	68576				
C22	6.709	0.003	32406	40791	MIN.OIL	(C24-C38)	173236	10.16
C24	7.223	0.003	8602	10245				
C25	7.470	0.004	3790	6914				
C26	7.711	-0.005	1772	2055				
C28	8.169	0.008	646	1046				
C32	8.951	0.003	1109	3323				
C34	9.307	0.005	1281	610				
Filter Peak	11.450	0.004	6343	2907	CREOSOT	(C12-C22)	3640759	1668.62 M
C36	9.631	-0.013	1656	3290				
C38	9.982	0.006	2144	1358				
C40	10.307	0.009	3844	4278				
o-terph	5.770	0.011	1024888	947006				
Triacon Surr	8.580	0.000	1085	1836				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	947006	49.1	109.1 M
Triacontane	1836	0.1	0.2

JC 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a026.d
Date : 30-APR-2013 18:11
Client ID:
Sample Info: DIESEL#3

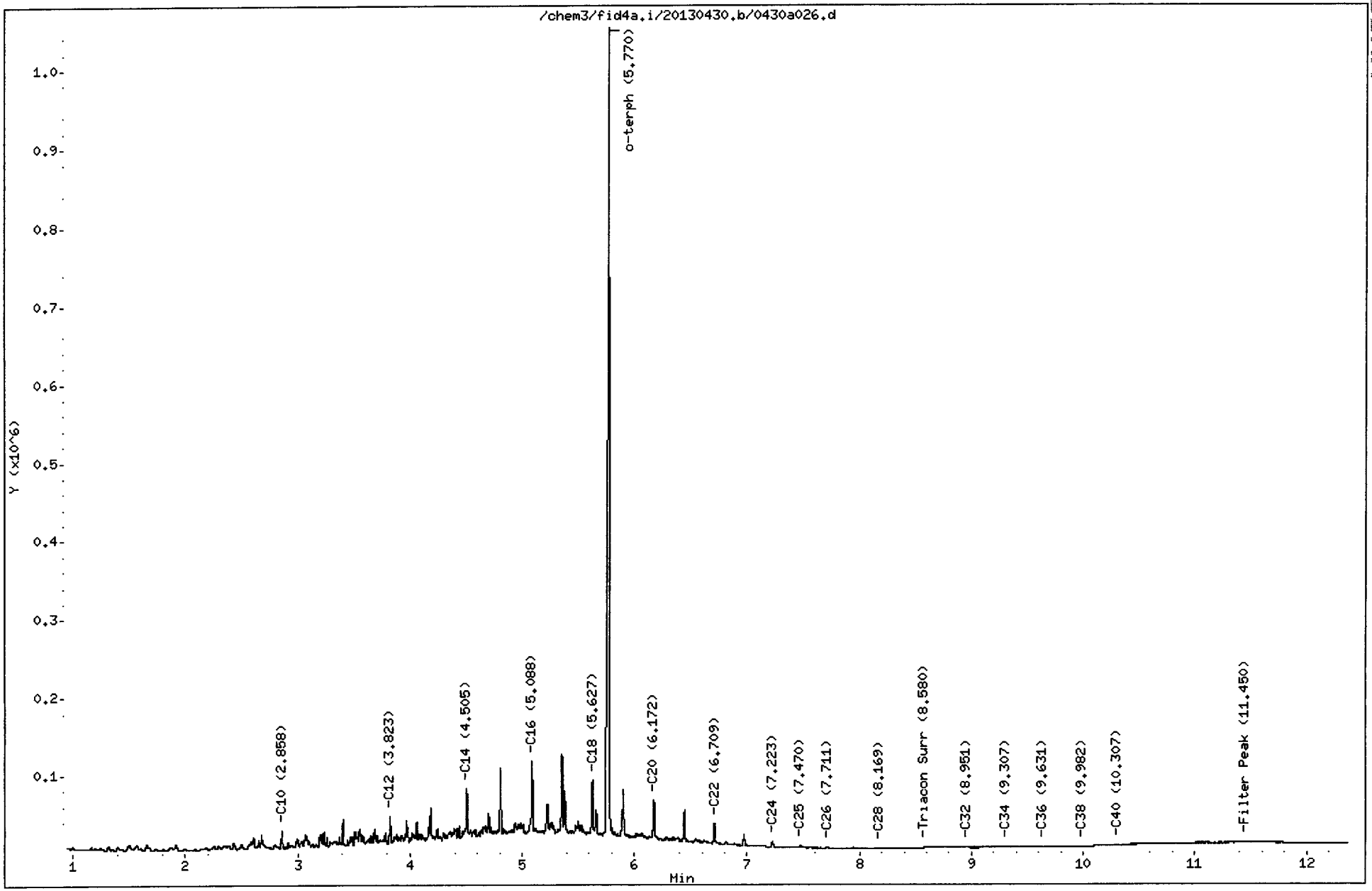
Column phase: RTX-1

Instrument: fid4a.i

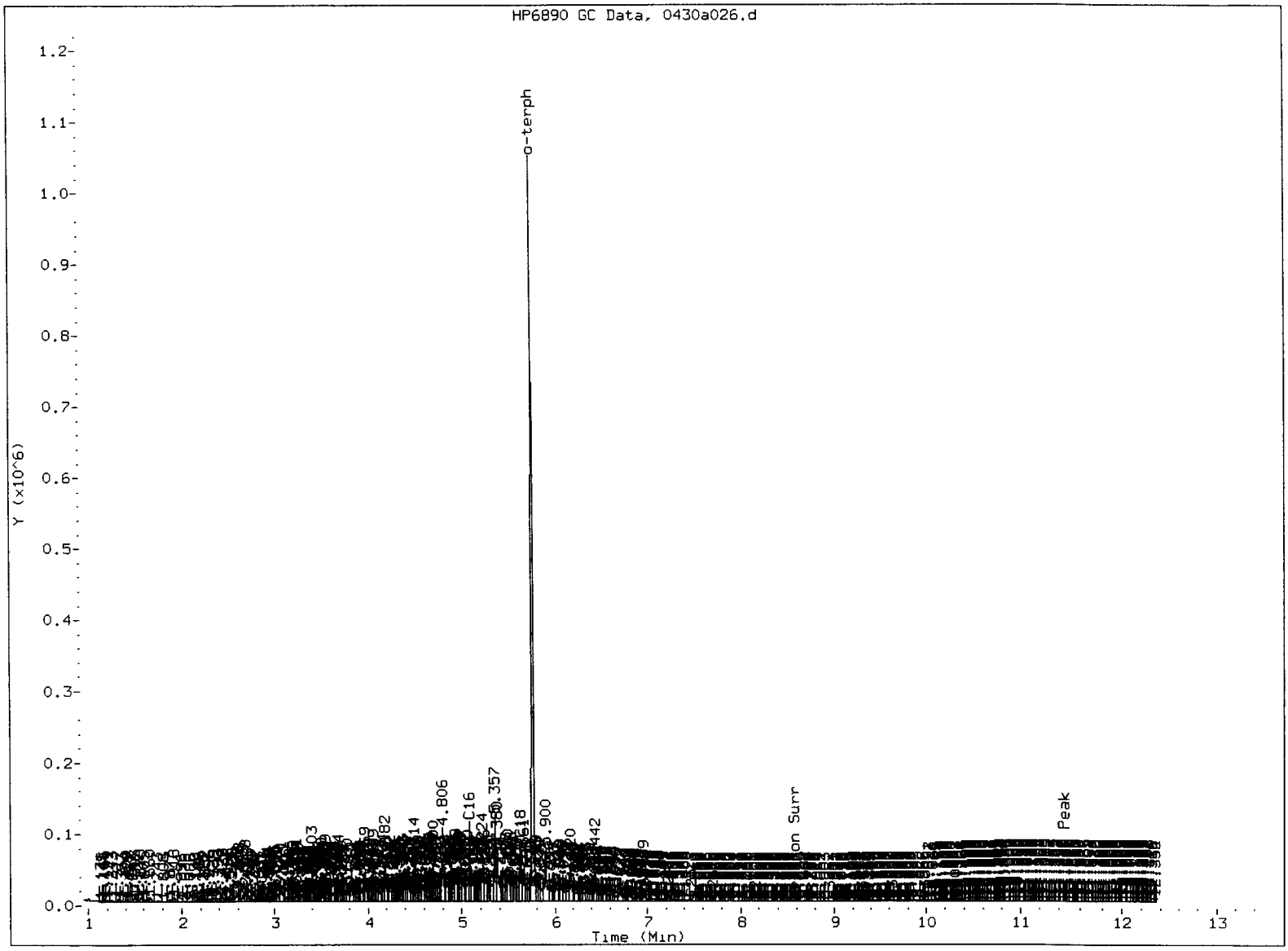
Operator: JR/VTS/JW
Column diameter: 0.25

JW 5/2/13

WN27 : 01391



FID:4A-2C/RTX-1 DIESEL#3 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a027.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: MOIL#3
Client ID:
Injection: 30-APR-2013 18:32

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	30235	1.95
C8	----				WATPHD	(C12-C24)	641539	44.20
C10	2.859	-0.001	303	571	WATPHM	(C24-C38)	6475200	475.98
C12	3.827	0.003	158	178	AK102	(C10-C25)	872367	50.68
C14	4.507	0.000	216	287	AK103	(C25-C36)	5605647	609.17
C16	5.087	-0.001	269	288				
C18	5.627	0.003	617	1260				
C20	6.173	0.007	1723	2970				
C22	6.704	-0.001	6343	4695	MIN.OIL	(C24-C38)	6475200	379.58
C24	7.229	0.010	22915	20558				
C25	7.467	0.000	30715	28333				
C26	7.714	-0.003	35204	40694				
C28	8.177	0.015	40540	33456				
C32	8.941	-0.008	55137	59710				
C34	9.300	-0.002	54174	51172				
Filter Peak	11.441	-0.005	5840	4167	CREOSOT	(C12-C22)	179871	82.44 M
C36	9.644	0.000	43210	44642				
C38	9.966	-0.010	34793	64323				
C40	10.286	-0.012	15106	22360				
o-terph	5.758	-0.001	1104	2101				
Triacon Surr	8.613	0.033	552246	902281				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2101	0.1	0.2
Triacontane	902281	49.6	110.2 M

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a027.d
Date : 30-APR-2013 18:32
Client ID:
Sample Info: MOIL#3

Column phase: RTX-1

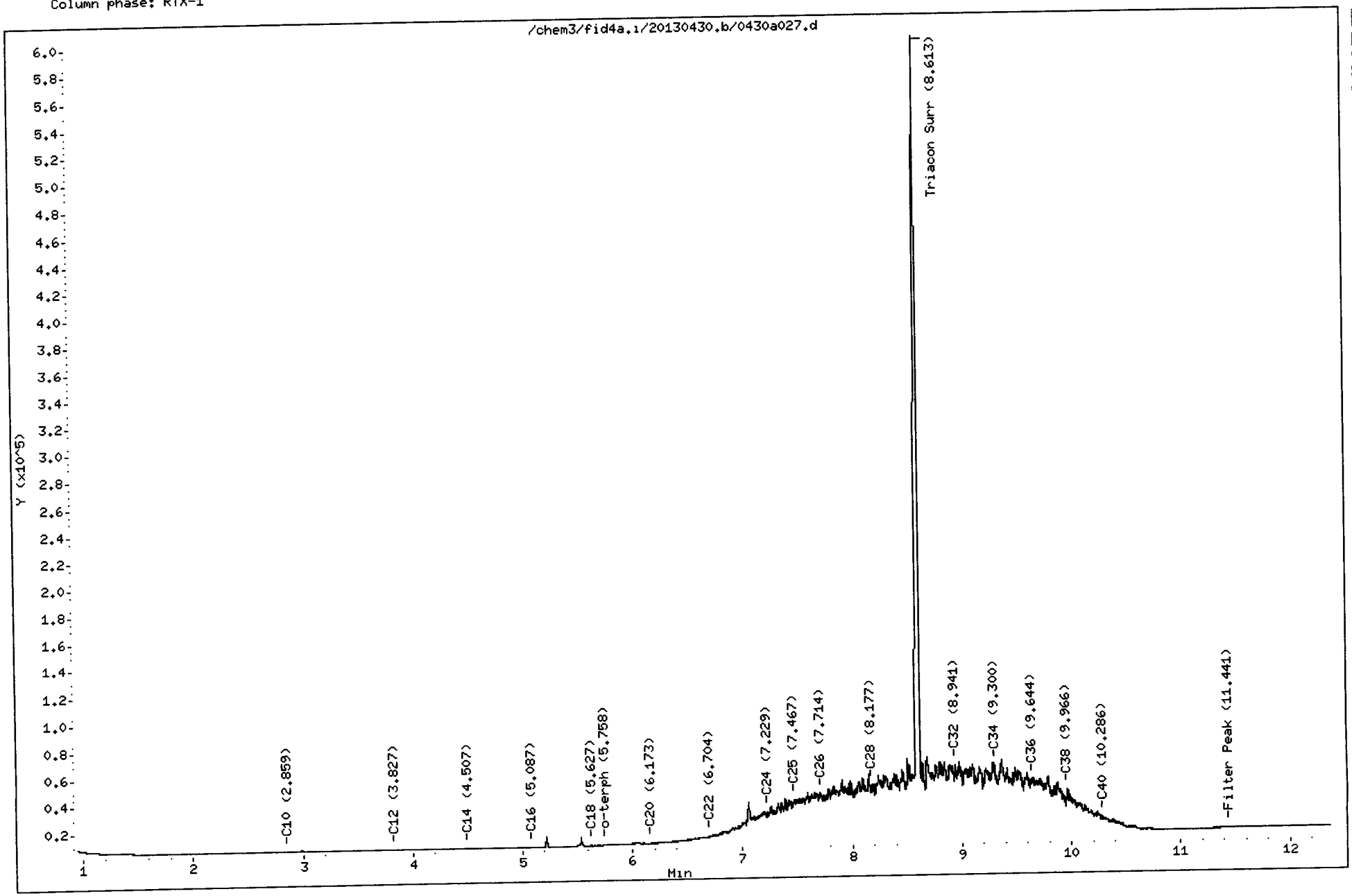
Instrument: fid4a.1

Operator: JR/VTS/JW
Column diameter: 0.25

JW 5/2/13

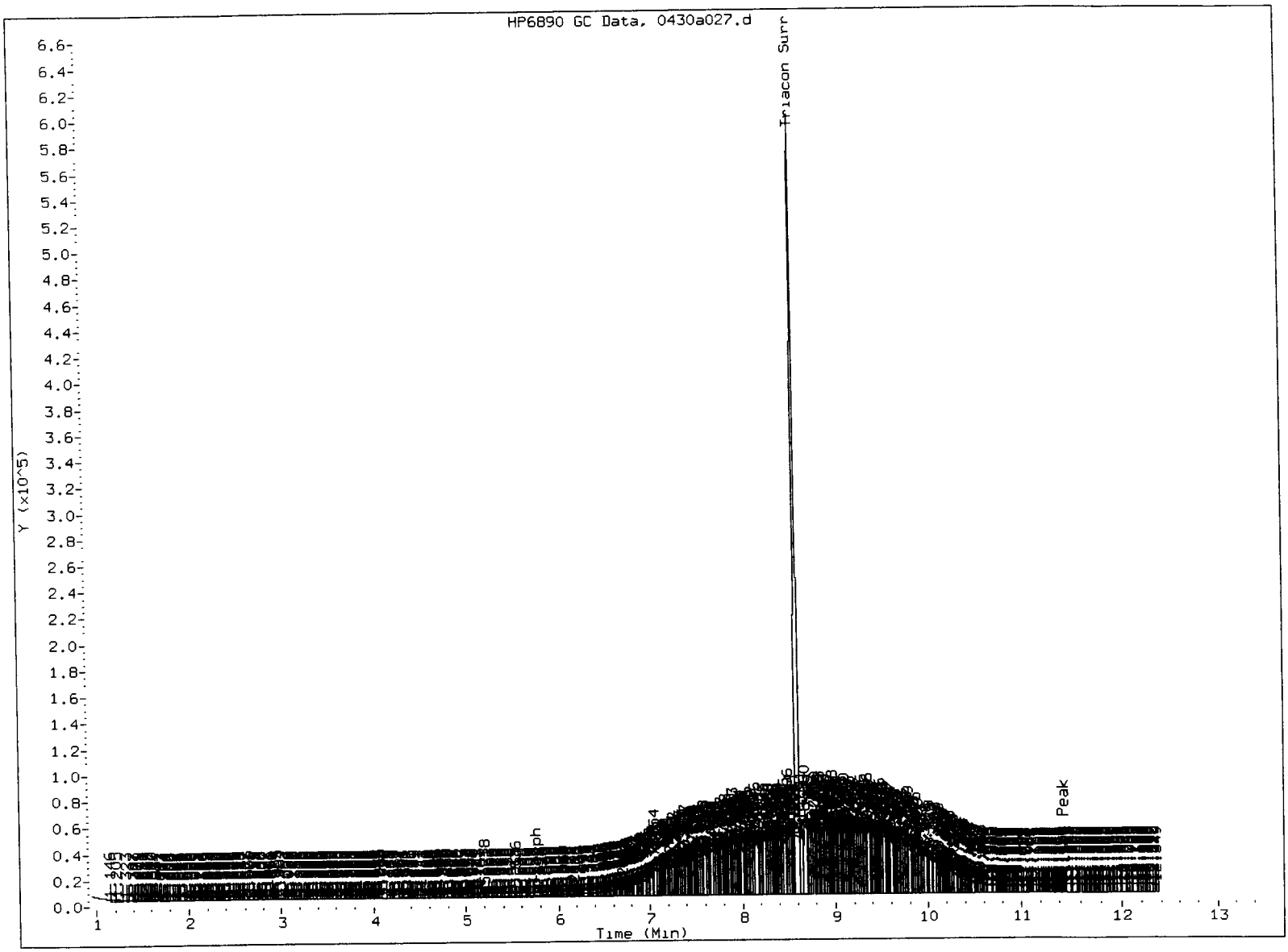
WN27 : 01394

/chem3/fid4a.1/20130430.b/0430a027.d



FID:4A-2C/RTX-1 MOIL#3

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JW Date: 5/2/13

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WN27

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: CB

Date: 4-25-13

Final Volume 50.0

Final Volume (Hg): 50.0

Sample ID WN32 ASPK, MBISPK
WN31 ASPK, MBISPK

Prepcode		SWC		
Spike Solution:		ICP Routine	ICP No GFA	GFA
Standard No.		3001-10		
Vol Added (mL):		1.0		
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50 ↓	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50 ↓	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50 ↓	50	

	SWN	SWN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	3021-15	3001-1	
	1.0	1.0	
Ag	25 ↓		
Al			500
As	25 ↓		
Ba	25		
Be	25		
Ca			500
Cd	25 ↓		
Co	25		
Cr	25 ↓		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25 ↓		
Pb	25 ↓		
Sb		25 ↓	
Se	80 ↓		
Tl	25 ↓		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SWM	CVA	1.0	0.05	3007-13
Hg MBSPK	↓	CVA	1.0	0.10	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

WN27 : 01357

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: CB **Date:** 04-25-13 **Time:** 1115

Matrix: Soil **Block ID:** HS **Block Temp:** 95°C **Thermometer:** mp60

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Comments
WN31 A	7	~	1.049	50.0	1.038	50.0	
" Adup	7	~	1.046		1.037		
" ASpk	7	~	1.048		1.041		
" mBi	~	~	~		~		
" mBiSpk	~	~	~		~		
WN27 A	1	~	1.076		1.081		
" Adup	1	~	1.078		1.081		
" ASpk	1	~	1.075		1.080		
" mBi	~	~	~		~		
" mBiSpk	~	~	~	50.0	~	50.0	

CB
4-25-13

Chemical/Reagent ID: HNO_3: mp 2473/ 28169 H_2O_2: I8135 Tube lot #: MM01LKKO

HCl: I7971

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm Matrix: Soil
Analyst: CB Date: 04-25-13
Bath Temp: 90°C Start Time: 1140 End Time: 1210

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WN31 A	7	~	0.218	50.0	5/08 1	Y	
" Adup	7	~	0.214		1		
" ASpk	7	~	0.216		1		
" MBl	~	~	~		1		
" MBlSpk	~	~	~		1		
WN27 A	1	~	0.217		5/08 1		
" Adup	1	~	0.216		1		
" ASpk	1	~	0.215		1		
" MBl	~	~	~	↓	1	↓	
" MBlSpk	~	~	~	50.0	1	Y	
				CB 4-25-13			

Chemical/Reagent ID:

HNO_3: I8169 H_2SO_4: I8044 HCl: ~

5% $K_2S_2O_8$: MP2462 5% $KMnO_4$: MP2445 Digest Tube Lot: MH21KK08

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WN27
Unacceptable Blank:	☐	Date of Event:	4-30-13
Unacceptable Duplicate:	☐	Client ID:	SAIC
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	SWN

Details of Problem/Recommended Corrective Action:

Low %R for Sb in ASPK
Post Spike OK

Samples Affected:

Corrective Action Taken:

5/1/13

Analyst Initials: AT **Supervisor:**

Date: 4-30-13 **Date:**

5049F

Revision 007
6/11/10

WN27 : 01400

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WN27

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA **Analysis Date:** 4-29-13

ICP 2	Analyst BA 4/29/13	Peer 4-30-13	Comment
Logbook			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration			
Blank & Standard intensities	✓	✓	Sen log ↓
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	WN07, WN80
Data Deliverables			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notebook C/A's	✓	✓	A.N. - WN07, WN80

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 1-22-13 Analysis Date: 4-29-13 Analyst: BA

LR Date: 1-22-13 Page: 1 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			3028-3
		2			3031-7 Cd,Co stds only
		3			-8
		4			-9
		5			-10
		ICV			3024-9
		ICB			
		CRI			
		ICSA			
		ICSAB			
		HiPUR QC7M			
		SPEX QC21			
		DI Check			
		CCV1			
		CCB1			
		WN26 MB	SWC	2	
		3031-13 Check			New ICV soln
		WN26 ADUP	SWC	2	
		A			
		ASPK			
		B			
		C			
		MBSPK			
		CCV2			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-29-13 Analyst: BA

LR Date: — Page: 2 of 4

All corrections made by analyst unless otherwise noted. BA 4-29-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CCB2			
		WN19 MB	SWC	2	PT Samples
		MB	LEN	5	Ba, Co↑ (AN)
	✓	F	↓	↓	Sr>2
		A	SWC	2	↓
		CCV3			
		CCB3			
		WN07 MB1	TWC		
		MB2	LEN	5	Ba↑ (AN)
		WDUP	↓	↓	
		W			
		WSPK			
		TDUP	TWC		
		T			
		TSPK			
zzz		~~TPOST~~ zzzzzz			0.08 mL ICP Spk 3001-10
		MB1SPK	↓	↓	
		CCV4			
		CCB4			End WN07
		WN59 MB1	SWC	2	
		ADUP	↓	↓	
		A			
		ASPK			
		B	↓	↓	

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-29-13 Analyst: BA

LR Date: — Page: 3 of 4

All corrections made by analyst unless otherwise noted. BA 4-29-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WN59 C	SWC	2	
		↓ D	↓	↓	
		WM19 F	LEN	10	PT sample
		WN59 MBISPK	SWC	2	✓
		↓ MBISPD	↓	↓	✓
		CCV5			
		CCB5			End WN59
	✓	WN27 MBI	SWC	2	Wrong Samples (Prep)
	✓	ADUP			✓
	✓	A			
	✓	ASPK			✓ Be, Cu↓ (CAF) Zn STL
zzz	✓	~~ZZZZZZ APOST~~			0.08 mL ICP Spk 3001-10 Be, Cu OK Zn STL
	✓	↓ MBISPK	↓	↓	✓ Be, Cu↓ Zn↑(Cu?)
		CCV6			
		CCB6			
		WN31 MBI	SWC	2	
		ADUP			✓
		A			
		ASPK			✓ Zn STL
zzz		~~ZZZZZZ APOST~~			0.08 mL ICP Spk 3001-10
		↓ MBISPK	↓	↓	✓
		CCV7			
		CCB7			End WN31
		WN80 MB	LEN	5	Ba↑ (A.N.)

WN27 : 01405

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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: 4-29-13 Analyst: BA

LR Date: – Page: 4 of 4

All corrections made by analyst unless otherwise noted. BA 4-29-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WN80 ADUP	LEN	5	
		A			
		ASPK			
		B			
		CCV8			
		CCB8			
		WN27 MB1	SWC	2	
		ADUP			
		A			
		ASPK			Zn STL
zzz		~~APOST~~ zzzzzz			0.48mL ICP Spk 3001-10
		MB1SPK			
		CCV9			
		CCB9			End Pkg (WN27)
		BA 4/29/13			

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

4/29/2013 8:18:24 AM Hg ReAlign... Actual peak offset (nm): 0.004
Drift (nm): -0.000 Slit adjustment: 0

Analysis Begun

Start Time: 4/29/2013 8:19:25 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/29/2013 7:08:06 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2130429
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST
IEC File: IEC012213.iec
Method Description: 12Axial Elements
Method Last Saved: 8/13/2012 7:13:22 AM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 1
Sample ID: B1
Autosampler Location: 1
Date Collected: 4/29/2013 8:19:32 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: B1

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

RA
4/29/13

WN27:01407

Analysis Begun

Start Time: 4/29/2013 8:44:09 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/29/2013 7:08:06 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2130429
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 4/29/2013 8:44:11 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2602965.2	7962.71	0.31%	100.0	%
ScR 361.383	373716.4	2875.32	0.77%	100.0	%
Ag 328.068†	-20.6	19.93	96.88%	[0.00]	mg/L
Al 308.215†	123.9	4.07	3.29%	[0.00]	mg/L
As 188.979†	-2.3	3.06	134.99%	[0.00]	mg/L
B 249.677†	-52.6	4.09	7.77%	[0.00]	mg/L
Ba 233.527†	-24.1	1.24	5.15%	[0.00]	mg/L
Be 313.042†	591.3	14.32	2.42%	[0.00]	mg/L
Ca 317.933†	16.5	13.46	81.75%	[0.00]	mg/L
Cd 228.802†	216.8	1.67	0.77%	[0.00]	mg/L
Co 228.616†	-110.9	1.87	1.69%	[0.00]	mg/L
Cr 267.716†	-71.2	4.67	6.55%	[0.00]	mg/L
Cu 324.752†	2363.2	22.67	0.96%	[0.00]	mg/L
Fe 273.955†	-39.6	0.77	1.95%	[0.00]	mg/L
K 766.490†	194.6	8.46	4.35%	[0.00]	mg/L
Mg 279.077†	167.0	7.80	4.67%	[0.00]	mg/L
Mn 257.610†	0.1	1.56	>999.9%	[0.00]	mg/L
Mo 202.031†	68.5	2.31	3.37%	[0.00]	mg/L
Na 589.592†	-239.2	19.08	7.97%	[0.00]	mg/L
Na 330.237†	74.5	5.98	8.03%	[0.00]	mg/L
Ni 231.604†	27.1	8.78	32.45%	[0.00]	mg/L
Pb 220.353†	-23.6	7.59	32.15%	[0.00]	mg/L
Sb 206.836†	6.1	2.55	41.64%	[0.00]	mg/L
Se 196.026†	-67.1	2.07	3.08%	[0.00]	mg/L
Si 288.158†	45.0	4.20	9.32%	[0.00]	mg/L
Sn 189.927†	-20.7	2.37	11.42%	[0.00]	mg/L
Sr 421.552†	344.2	34.68	10.07%	[0.00]	mg/L
Ti 334.903†	31.7	9.54	30.10%	[0.00]	mg/L
Tl 190.801†	-20.0	1.66	8.31%	[0.00]	mg/L
V 292.402†	14.7	11.26	76.56%	[0.00]	mg/L
Zn 206.200†	-5.4	1.97	36.22%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 4/29/2013 8:48:27 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected	Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2613334.8	71684.83	2.74%	100.4	%
ScR 361.383	374726.7	2296.23	0.61%	100.3	%
Ba 233.527†	55433.6	181.12	0.33%	[10]	mg/L
Cd 228.802†	227194.4	7435.88	3.27%	[10]	mg/L
Co 228.616†	306416.8	10199.02	3.33%	[10]	mg/L
Cr 267.716†	82189.8	416.20	0.51%	[10]	mg/L
Cu 324.752†	2533973.6	74841.43	2.95%	[10]	mg/L
Mn 257.610†	508256.4	2497.79	0.49%	[10]	mg/L
V 292.402†	1372482.6	37657.19	2.74%	[10]	mg/L

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: STD3 **Date Collected: 4/29/2013 8:50:29 AM**
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2608634.3	14642.08	0.56%	100.2	%
ScR 361.383	373204.3	2352.49	0.63%	99.86	%
Ag 328.068†	218938.3	1244.56	0.57%	[1.0]	mg/L
As 188.979†	13600.5	123.92	0.91%	[10]	mg/L
B 249.677†	60040.8	105.66	0.18%	[10]	mg/L
Be 313.042†	2848211.5	32539.06	1.14%	[5.0]	mg/L
Na 589.592†	568057.9	1514.36	0.27%	[50]	mg/L
Ni 231.604†	33680.4	112.61	0.33%	[10]	mg/L
Pb 220.353†	77922.1	766.43	0.98%	[10]	mg/L
Se 196.026†	15220.1	144.62	0.95%	[10]	mg/L
Sr 421.552†	4518615.9	14279.27	0.32%	[5]	mg/L
Tl 190.801†	17032.2	166.15	0.98%	[10]	mg/L
Zn 206.200†	39668.5	134.32	0.34%	[10]	mg/L

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: STD4 **Date Collected: 4/29/2013 8:53:04 AM**
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2658902.9	10848.02	0.41%	102.1	%
ScR 361.383	382268.5	1483.20	0.39%	102.3	%
Mo 202.031†	183010.1	1106.98	0.60%	[10]	mg/L
Sb 206.836†	26004.9	124.79	0.48%	[10]	mg/L
Si 288.158†	13650.5	34.97	0.26%	[10]	mg/L
Sn 189.927†	49463.1	209.09	0.42%	[10]	mg/L
Ti 334.903†	254955.7	1070.44	0.42%	[10]	mg/L

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: STD5 **Date Collected: 4/29/2013 8:55:20 AM**
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2485712.0	36658.27	1.47%	95.50	%
ScR 361.383	369863.2	793.37	0.21%	98.97	%
Al 308.215†	34082.4	364.92	1.07%	[30]	mg/L
Ca 317.933†	299355.6	297.39	0.10%	[30]	mg/L
Fe 273.955†	120147.1	225.37	0.19%	[100]	mg/L
K 766.490†	204261.9	307.68	0.15%	[100]	mg/L
Mg 279.077†	27737.0	337.75	1.22%	[30]	mg/L
Na 330.237†	3160.7	48.03	1.52%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	218900	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1136	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1360	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	6004	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	5543	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	569600	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	9979	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	22720	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	30640	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	8219	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	253400	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1201	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2043	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	924.6	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	50830	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	18300	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	11360	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	31.61	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3368	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7792	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2600	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1522	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1365	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	4946	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	903700	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	25500	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1703	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	137200	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3967	0.00000	1.000000	

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Analysis Begun

Start Time: 4/29/2013 9:05:33 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/29/2013 7:08:06 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2130429
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: ICV
Autosampler Location: 7
Date Collected: 4/29/2013 9:05:35 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2590179.4	99.51	%	0.432				0.43%
ScR 361.383	367811.6	98.42	%	1.329				1.35%
Ag 328.068†	232045.0	1.060	mg/L	0.0062	1.060	mg/L	0.0062	0.59%
Al 308.215†	2368.1	2.050	mg/L	0.0376	2.050	mg/L	0.0376	1.83%
As 188.979†	2714.6	2.027	mg/L	0.0164	2.027	mg/L	0.0164	0.81%
B 249.677†	6170.1	1.027	mg/L	0.0129	1.027	mg/L	0.0129	1.25%
Ba 233.527†	5801.5	1.046	mg/L	0.0163	1.046	mg/L	0.0163	1.56%
Be 313.042†	573708.9	1.007	mg/L	0.0166	1.007	mg/L	0.0166	1.65%
Ca 317.933†	20354.8	2.040	mg/L	0.0297	2.040	mg/L	0.0297	1.46%
Cd 228.802†	23876.1	1.040	mg/L	0.0032	1.040	mg/L	0.0032	0.30%
Co 228.616†	31181.6	1.016	mg/L	0.0035	1.016	mg/L	0.0035	0.35%
Cr 267.716†	8602.2	1.046	mg/L	0.0152	1.046	mg/L	0.0152	1.45%
Cu 324.752†	262827.0	1.037	mg/L	0.0031	1.037	mg/L	0.0031	0.30%
Fe 273.955†	2471.0	2.051	mg/L	0.0283	2.051	mg/L	0.0283	1.38%
K 766.490†	40541.6	19.85	mg/L	0.221	19.85	mg/L	0.221	1.11%
Mg 279.077†	1830.0	1.986	mg/L	0.0300	1.986	mg/L	0.0300	1.51%
Mn 257.610†	49986.7	0.9838	mg/L	0.01536	0.9838	mg/L	0.01536	1.56%
Mo 202.031†	18490.4	1.010	mg/L	0.0047	1.010	mg/L	0.0047	0.46%
Na 589.592†	578125.3	50.89	mg/L	0.721	50.89	mg/L	0.721	1.42%
Na 330.237†	1628.5	51.51	mg/L	0.568	51.51	mg/L	0.568	1.10%
Ni 231.604†	3463.2	1.028	mg/L	0.0159	1.028	mg/L	0.0159	1.55%
Pb 220.353†	15692.2	2.015	mg/L	0.0093	2.015	mg/L	0.0093	0.46%
Sb 206.836†	5419.7	2.082	mg/L	0.0048	2.082	mg/L	0.0048	0.23%
Se 196.026†	3051.4	2.004	mg/L	0.0161	2.004	mg/L	0.0161	0.81%
Si 288.158†	2782.4	2.033	mg/L	0.0227	2.033	mg/L	0.0227	1.12%
Sn 189.927†	4902.0	0.9925	mg/L	0.00669	0.9925	mg/L	0.00669	0.67%
Sr 421.552†	919250.6	1.017	mg/L	0.0142	1.017	mg/L	0.0142	1.40%
Ti 334.903†	26130.6	1.024	mg/L	0.0131	1.024	mg/L	0.0131	1.28%
Tl 190.801†	3562.9	2.084	mg/L	0.0108	2.084	mg/L	0.0108	0.52%
V 292.402†	137597.1	1.007	mg/L	0.0044	1.007	mg/L	0.0044	0.43%
Zn 206.200†	4018.2	1.013	mg/L	0.0171	1.013	mg/L	0.0171	1.68%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 4/29/2013 9:09:38 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2670526.8	102.6	%	0.19				0.19%
ScR 361.383	375077.4	100.4	%	0.65				0.64%
Ag 328.068†	51.0	0.00023	mg/L	0.000118	0.00023	mg/L	0.000118	50.77%
Al 308.215†	4.7	0.00413	mg/L	0.003924	0.00413	mg/L	0.003924	94.94%
As 188.979†	3.4	0.00256	mg/L	0.000159	0.00256	mg/L	0.000159	6.24%
B 249.677†	5.3	0.00088	mg/L	0.000657	0.00088	mg/L	0.000657	74.57%
Ba 233.527†	0.2	0.00004	mg/L	0.000541	0.00004	mg/L	0.000541	>999.9%
Be 313.042†	38.2	0.00007	mg/L	0.000005	0.00007	mg/L	0.000005	7.75%
Ca 317.933†	-0.4	-0.00004	mg/L	0.000266	-0.00004	mg/L	0.000266	678.17%
Cd 228.802†	3.3	0.00013	mg/L	0.000104	0.00013	mg/L	0.000104	80.05%
Co 228.616†	6.9	0.00023	mg/L	0.000082	0.00023	mg/L	0.000082	36.17%
Cr 267.716†	-6.1	-0.00074	mg/L	0.000360	-0.00074	mg/L	0.000360	48.96%
Cu 324.752†	60.9	0.00024	mg/L	0.000136	0.00024	mg/L	0.000136	56.46%
Fe 273.955†	-1.4	-0.00113	mg/L	0.001027	-0.00113	mg/L	0.001027	91.14%
K 766.490†	21.1	0.01034	mg/L	0.009263	0.01034	mg/L	0.009263	89.62%
Mg 279.077†	-8.1	-0.00880	mg/L	0.003412	-0.00880	mg/L	0.003412	38.76%
Mn 257.610†	8.9	0.00018	mg/L	0.000091	0.00018	mg/L	0.000091	52.04%
Mo 202.031†	12.5	0.00068	mg/L	0.000172	0.00068	mg/L	0.000172	25.29%
Na 589.592†	24.5	0.00216	mg/L	0.001045	0.00216	mg/L	0.001045	48.49%
Na 330.237†	-5.7	-0.1817	mg/L	0.44773	-0.1817	mg/L	0.44773	246.42%
Ni 231.604†	1.8	0.00052	mg/L	0.000302	0.00052	mg/L	0.000302	57.63%
Pb 220.353†	1.3	0.00016	mg/L	0.000603	0.00016	mg/L	0.000603	376.80%
Sb 206.836†	7.3	0.00281	mg/L	0.001153	0.00281	mg/L	0.001153	41.02%
Se 196.026†	5.8	0.00379	mg/L	0.002778	0.00379	mg/L	0.002778	73.37%
Si 288.158†	0.3	0.00019	mg/L	0.000518	0.00019	mg/L	0.000518	265.96%
Sn 189.927†	5.8	0.00118	mg/L	0.000505	0.00118	mg/L	0.000505	42.85%
Sr 421.552†	31.0	0.00003	mg/L	0.000026	0.00003	mg/L	0.000026	75.34%
Ti 334.903†	14.5	0.00057	mg/L	0.000383	0.00057	mg/L	0.000383	67.26%
Tl 190.801†	0.1	0.00008	mg/L	0.000802	0.00008	mg/L	0.000802	>999.9%
V 292.402†	15.7	0.00011	mg/L	0.000243	0.00011	mg/L	0.000243	218.90%
Zn 206.200†	-0.5	-0.00013	mg/L	0.000224	-0.00013	mg/L	0.000224	170.40%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 4/29/2013 9:13:53 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2710660.5	104.1	%	0.38				0.36%
ScR 361.383	381011.3	102.0	%	1.42				1.39%
Ag 328.068†	697.0	0.00318	mg/L	0.000103	0.00318	mg/L	0.000103	3.23%
Al 308.215†	63.2	0.05553	mg/L	0.001996	0.05553	mg/L	0.001996	3.60%
As 188.979†	66.9	0.04937	mg/L	0.001420	0.04937	mg/L	0.001420	2.88%
B 249.677†	114.4	0.01904	mg/L	0.000898	0.01904	mg/L	0.000898	4.71%
Ba 233.527†	18.5	0.00333	mg/L	0.000338	0.00333	mg/L	0.000338	10.15%
Be 313.042†	531.6	0.00093	mg/L	0.000035	0.00093	mg/L	0.000035	3.71%
Ca 317.933†	493.8	0.04948	mg/L	0.000448	0.04948	mg/L	0.000448	0.91%
Cd 228.802†	52.3	0.00203	mg/L	0.000110	0.00203	mg/L	0.000110	5.39%
Co 228.616†	102.1	0.00332	mg/L	0.000070	0.00332	mg/L	0.000070	2.11%
Cr 267.716†	38.0	0.00462	mg/L	0.000408	0.00462	mg/L	0.000408	8.84%
Cu 324.752†	446.4	0.00176	mg/L	0.000032	0.00176	mg/L	0.000032	1.79%
Fe 273.955†	59.4	0.04946	mg/L	0.002051	0.04946	mg/L	0.002051	4.15%
K 766.490†	974.0	0.4768	mg/L	0.02566	0.4768	mg/L	0.02566	5.38%
Mg 279.077†	39.7	0.04297	mg/L	0.000876	0.04297	mg/L	0.000876	2.04%
Mn 257.610†	53.8	0.00106	mg/L	0.000040	0.00106	mg/L	0.000040	3.73%
Mo 202.031†	91.0	0.00497	mg/L	0.000198	0.00497	mg/L	0.000198	3.98%
Na 589.592†	5344.1	0.4704	mg/L	0.00547	0.4704	mg/L	0.00547	1.16%
Na 330.237†	3.6	0.1134	mg/L	0.41333	0.1134	mg/L	0.41333	364.61%
Ni 231.604†	39.0	0.01158	mg/L	0.000489	0.01158	mg/L	0.000489	4.23%
Pb 220.353†	161.0	0.02068	mg/L	0.000361	0.02068	mg/L	0.000361	1.75%
Sb 206.836†	129.7	0.04989	mg/L	0.000734	0.04989	mg/L	0.000734	1.47%
Se 196.026†	78.3	0.05145	mg/L	0.000865	0.05145	mg/L	0.000865	1.68%
Si 288.158†	77.1	0.05644	mg/L	0.006059	0.05644	mg/L	0.006059	10.73%
Sn 189.927†	51.1	0.01037	mg/L	0.000047	0.01037	mg/L	0.000047	0.46%
Sr 421.552†	885.2	0.00098	mg/L	0.000046	0.00098	mg/L	0.000046	4.65%
Ti 334.903†	133.4	0.00522	mg/L	0.000194	0.00522	mg/L	0.000194	3.71%
Tl 190.801†	81.6	0.04787	mg/L	0.000804	0.04787	mg/L	0.000804	1.68%
V 292.402†	412.7	0.00302	mg/L	0.000066	0.00302	mg/L	0.000066	2.18%
Zn 206.200†	36.5	0.00920	mg/L	0.000522	0.00920	mg/L	0.000522	5.67%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 4/29/2013 9:18:10 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2623705.6	100.8	%	0.76				0.75%
ScR 361.383	371621.2	99.44	%	0.940				0.95%
Ag 328.068†	-308.2	-0.00077	mg/L	0.000154	-0.00077	mg/L	0.000154	20.02%
Al 308.215†	223861.1	197.0	mg/L	1.50	197.0	mg/L	1.50	0.76%
As 188.979†	61.4	0.03657	mg/L	0.000878	0.03657	mg/L	0.000878	2.40%
B 249.677†	81.2	0.01353	mg/L	0.001432	0.01353	mg/L	0.001432	10.58%
Ba 233.527†	138.7	-0.00178	mg/L	0.001149	-0.00178	mg/L	0.001149	64.56%
Be 313.042†	29.6	0.00005	mg/L	0.000020	0.00005	mg/L	0.000020	40.72%
Ca 317.933†	982148.9	98.43	mg/L	0.740	98.43	mg/L	0.740	0.75%
Cd 228.802†	66.9	0.00269	mg/L	0.000199	0.00269	mg/L	0.000199	7.38%
Co 228.616†	67.0	0.00216	mg/L	0.000192	0.00216	mg/L	0.000192	8.85%
Cr 267.716†	25.0	-0.00212	mg/L	0.000265	-0.00212	mg/L	0.000265	12.51%
Cu 324.752†	-1809.6	0.00128	mg/L	0.000139	0.00128	mg/L	0.000139	10.84%
Fe 273.955†	219191.2	182.4	mg/L	2.13	182.4	mg/L	2.13	1.17%
K 766.490†	40.7	0.01993	mg/L	0.007532	0.01993	mg/L	0.007532	37.80%
Mg 279.077†	94286.7	101.9	mg/L	0.48	101.9	mg/L	0.48	0.48%
Mn 257.610†	76.7	0.00014	mg/L	0.000176	0.00014	mg/L	0.000176	127.24%
Mo 202.031†	112.8	0.00501	mg/L	0.000107	0.00501	mg/L	0.000107	2.14%
Na 589.592†	116.1	0.01022	mg/L	0.004129	0.01022	mg/L	0.004129	40.42%
Na 330.237†	-20.1	-0.6310	mg/L	0.08009	-0.6310	mg/L	0.08009	12.69%
Ni 231.604†	1.6	0.00047	mg/L	0.000530	0.00047	mg/L	0.000530	112.64%
Pb 220.353†	-410.2	-0.00907	mg/L	0.001258	-0.00907	mg/L	0.001258	13.88%
Sb 206.836†	-42.6	-0.01648	mg/L	0.001445	-0.01648	mg/L	0.001445	8.77%
Se 196.026†	9.5	-0.01641	mg/L	0.001173	-0.01641	mg/L	0.001173	7.15%
Si 288.158†	-16.1	-0.00022	mg/L	0.003760	-0.00022	mg/L	0.003760	>999.9%
Sn 189.927†	-76.2	-0.00716	mg/L	0.001118	-0.00716	mg/L	0.001118	15.61%
Sr 421.552†	3641.4	0.00403	mg/L Conf.	0.000052	0.00403	mg/L	0.000052	1.30%
Ti 334.903†	294.3	0.00569	mg/L	0.000193	0.00569	mg/L	0.000193	3.40%
Tl 190.801†	-15.6	0.01498	mg/L	0.001101	0.01498	mg/L	0.001101	7.35%
V 292.402†	1544.5	0.00211	mg/L	0.000560	0.00211	mg/L	0.000560	26.58%
Zn 206.200†	-3.1	-0.00079	mg/L	0.000882	-0.00079	mg/L	0.000882	111.83%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 4/29/2013 9:22:27 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2618258.1	100.6	%	0.71				0.71%
ScR 361.383	374618.2	100.2	%	0.51				0.51%
Ag 328.068†	232075.2	1.061	mg/L	0.0066	1.061	mg/L	0.0066	0.62%
Al 308.215†	222871.5	196.2	mg/L	0.95	196.2	mg/L	0.95	0.48%
As 188.979†	1414.6	1.031	mg/L	0.0105	1.031	mg/L	0.0105	1.02%
B 249.677†	41.3	0.00466	mg/L	0.001249	0.00466	mg/L	0.001249	26.82%
Ba 233.527†	5829.7	1.025	mg/L	0.0156	1.025	mg/L	0.0156	1.53%
Be 313.042†	555564.8	0.9751	mg/L	0.00811	0.9751	mg/L	0.00811	0.83%
Ca 317.933†	980319.2	98.24	mg/L	0.479	98.24	mg/L	0.479	0.49%
Cd 228.802†	23373.0	1.024	mg/L	0.0084	1.024	mg/L	0.0084	0.82%
Co 228.616†	29196.5	0.9526	mg/L	0.00901	0.9526	mg/L	0.00901	0.95%
Cr 267.716†	8366.5	1.013	mg/L	0.0064	1.013	mg/L	0.0064	0.63%
Cu 324.752†	254931.0	1.015	mg/L	0.0056	1.015	mg/L	0.0056	0.55%
Fe 273.955†	219191.4	182.4	mg/L	1.21	182.4	mg/L	1.21	0.66%
K 766.490†	18.2	0.00891	mg/L	0.000738	0.00891	mg/L	0.000738	8.29%
Mg 279.077†	90374.0	97.64	mg/L	0.409	97.64	mg/L	0.409	0.42%
Mn 257.610†	47759.3	0.9385	mg/L	0.00455	0.9385	mg/L	0.00455	0.48%
Mo 202.031†	121.9	0.00545	mg/L	0.000407	0.00545	mg/L	0.000407	7.48%
Na 589.592†	83.0	0.00731	mg/L	0.001146	0.00731	mg/L	0.001146	15.68%
Na 330.237†	-14.5	-0.7411	mg/L	0.13286	-0.7411	mg/L	0.13286	17.93%
Ni 231.604†	3293.5	0.9779	mg/L	0.00956	0.9779	mg/L	0.00956	0.98%
Pb 220.353†	7037.9	0.9471	mg/L	0.00750	0.9471	mg/L	0.00750	0.79%
Sb 206.836†	2555.1	0.9722	mg/L	0.00958	0.9722	mg/L	0.00958	0.99%
Se 196.026†	1498.6	0.9611	mg/L	0.01136	0.9611	mg/L	0.01136	1.18%
Si 288.158†	-19.5	0.00022	mg/L	0.002679	0.00022	mg/L	0.002679	>999.9%
Sn 189.927†	-84.1	-0.00827	mg/L	0.000867	-0.00827	mg/L	0.000867	10.48%
Sr 421.552†	3589.2	0.00397	mg/L	Conc. 0.000014	0.00397	mg/L	0.000014	0.35%
Ti 334.903†	289.6	0.00532	mg/L	0.000336	0.00532	mg/L	0.000336	6.32%
Tl 190.801†	1617.7	0.9644	mg/L	0.00662	0.9644	mg/L	0.00662	0.69%
V 292.402†	133052.8	0.9648	mg/L	0.00572	0.9648	mg/L	0.00572	0.59%
Zn 206.200†	3808.2	0.9602	mg/L	0.00856	0.9602	mg/L	0.00856	0.89%

Sequence No.: 6
Sample ID: HiPurQC7M

Autosampler Location: 304
Date Collected: 4/29/2013 9:27:52 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: HiPurQC7M

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: HiPurQC7M

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2764277.2	106.2	%	0.15				0.14%
ScR 361.383	386264.1	103.4	%	0.69				0.66%
Ag 328.068†	216193.0	0.9875	mg/L	0.00144	0.9875	mg/L	0.00144	0.15%
Al 308.215†	2184.4	1.923	mg/L	0.0295	1.923	mg/L	0.0295	1.53%
As 188.979†	1.0	0.00073	mg/L	0.002456	0.00073	mg/L	0.002456	335.23%
B 249.677†	11864.4	1.976	mg/L	0.0149	1.976	mg/L	0.0149	0.75%
Ba 233.527†	11406.3	2.058	mg/L	0.0420	2.058	mg/L	0.0420	2.04%
Be 313.042†	-35.4	-0.00006	mg/L	0.000021	-0.00006	mg/L	0.000021	34.09%
Ca 317.933†	58.9	0.00590	mg/L	0.000734	0.00590	mg/L	0.000734	12.44%
Cd 228.802†	4.0	0.00017	mg/L	0.000142	0.00017	mg/L	0.000142	81.21%
Co 228.616†	13.1	0.00019	mg/L	0.000216	0.00019	mg/L	0.000216	111.20%
Cr 267.716†	-0.2	-0.00002	mg/L	0.000431	-0.00002	mg/L	0.000431	>999.9%
Cu 324.752†	79.6	0.00031	mg/L	0.000061	0.00031	mg/L	0.000061	19.39%
Fe 273.955†	5.6	0.00464	mg/L	0.001479	0.00464	mg/L	0.001479	31.89%
K 766.490†	39006.9	19.10	mg/L	0.186	19.10	mg/L	0.186	0.97%
Mg 279.077†	-1.9	-0.00203	mg/L	0.003223	-0.00203	mg/L	0.003223	159.09%
Mn 257.610†	1.3	0.00002	mg/L	0.000024	0.00002	mg/L	0.000024	143.64%
Mo 202.031†	4.1	0.00022	mg/L	0.000117	0.00022	mg/L	0.000117	52.57%
Na 589.592†	22225.8	1.956	mg/L	0.0128	1.956	mg/L	0.0128	0.65%
Na 330.237†	48.0	1.518	mg/L	0.1595	1.518	mg/L	0.1595	10.51%
Ni 231.604†	2.8	0.00083	mg/L	0.000220	0.00083	mg/L	0.000220	26.62%
Pb 220.353†	-1.5	0.00032	mg/L	0.000478	0.00032	mg/L	0.000478	148.42%
Sb 206.836†	-1.3	-0.00049	mg/L	0.001104	-0.00049	mg/L	0.001104	226.69%
Se 196.026†	9.8	0.00623	mg/L	0.004265	0.00623	mg/L	0.004265	68.51%
Si 288.158†	2678.6	1.962	mg/L	0.0150	1.962	mg/L	0.0150	0.77%
Sn 189.927†	-0.4	-0.00008	mg/L	0.000485	-0.00008	mg/L	0.000485	627.16%
Sr 421.552†	-29.9	-0.00003	mg/L	0.000011	-0.00003	mg/L	0.000011	33.27%
Ti 334.903†	-2.6	-0.00010	mg/L	0.000456	-0.00010	mg/L	0.000456	443.32%
Tl 190.801†	-2.0	-0.00118	mg/L	0.000799	-0.00118	mg/L	0.000799	67.87%
V 292.402†	2.3	0.00002	mg/L	0.000074	0.00002	mg/L	0.000074	437.67%
Zn 206.200†	1.8	0.00078	mg/L	0.000121	0.00078	mg/L	0.000121	15.58%

Sequence No.: 7
Sample ID: SPEXQC21

Autosampler Location: 305
Date Collected: 4/29/2013 9:32:07 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: SPEXQC21

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: SPEXQC21

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2753200.5	105.8	%	0.18				0.17%
ScR 361.383	380550.0	101.8	%	0.50				0.49%
Ag 328.068†	-44.6	0.00044	mg/L	0.000097	0.00044	mg/L	0.000097	22.13%
Al 308.215†	87.2	0.01062	mg/L	0.002942	0.01062	mg/L	0.002942	27.70%
As 188.979†	2597.6	1.972	mg/L	0.0089	1.972	mg/L	0.0089	0.45%
B 249.677†	68.5	0.00922	mg/L	0.000358	0.00922	mg/L	0.000358	3.88%
Ba 233.527†	2.8	-0.00010	mg/L	0.000362	-0.00010	mg/L	0.000362	345.45%
Be 313.042†	1081975.9	1.899	mg/L	0.0135	1.899	mg/L	0.0135	0.71%
Ca 317.933†	19542.7	1.958	mg/L	0.0158	1.958	mg/L	0.0158	0.81%
Cd 228.802†	44953.1	1.969	mg/L	0.0091	1.969	mg/L	0.0091	0.46%
Co 228.616†	60178.1	1.960	mg/L	0.0112	1.960	mg/L	0.0112	0.57%
Cr 267.716†	16433.2	1.998	mg/L	0.0180	1.998	mg/L	0.0180	0.90%
Cu 324.752†	474197.5	1.871	mg/L	0.0047	1.871	mg/L	0.0047	0.25%
Fe 273.955†	2445.9	2.025	mg/L	0.0162	2.025	mg/L	0.0162	0.80%
K 766.490†	-0.2	-0.00008	mg/L	0.015922	-0.00008	mg/L	0.015922	>999.9%
Mg 279.077†	1863.6	2.029	mg/L	0.0173	2.029	mg/L	0.0173	0.85%
Mn 257.610†	99420.0	1.956	mg/L	0.0128	1.956	mg/L	0.0128	0.65%
Mo 202.031†	34789.8	1.901	mg/L	0.0110	1.901	mg/L	0.0110	0.58%
Na 589.592†	262.1	0.02307	mg/L	0.004239	0.02307	mg/L	0.004239	18.37%
Na 330.237†	-8.7	-0.3270	mg/L	0.13861	-0.3270	mg/L	0.13861	42.39%
Ni 231.604†	6962.3	2.067	mg/L	0.0228	2.067	mg/L	0.0228	1.10%
Pb 220.353†	15091.8	1.938	mg/L	0.0138	1.938	mg/L	0.0138	0.71%
Sb 206.836†	5340.9	2.035	mg/L	0.0054	2.035	mg/L	0.0054	0.27%
Se 196.026†	2977.3	1.954	mg/L	0.0027	1.954	mg/L	0.0027	0.14%
Si 288.158†	54.6	0.04673	mg/L	0.007630	0.04673	mg/L	0.007630	16.33%
Sn 189.927†	-12.6	-0.00096	mg/L	0.000271	-0.00096	mg/L	0.000271	28.17%
Sr 421.552†	1811121.8	2.004	mg/L	0.0116	2.004	mg/L	0.0116	0.58%
Ti 334.903†	51202.8	2.006	mg/L	0.0151	2.006	mg/L	0.0151	0.76%
Tl 190.801†	3500.2	2.039	mg/L	0.0086	2.039	mg/L	0.0086	0.42%
V 292.402†	268695.9	1.967	mg/L	0.0148	1.967	mg/L	0.0148	0.75%
Zn 206.200†	8144.7	2.053	mg/L	0.0156	2.053	mg/L	0.0156	0.76%

Sequence No.: 8
Sample ID: DI CHECK

Autosampler Location: 306
Date Collected: 4/29/2013 9:36:25 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: DI CHECK

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: DI CHECK

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2816122.5	108.2	%	0.56				0.52%
ScR 361.383	400492.7	107.2	%	0.38				0.36%
Ag 328.068†	49.9	0.00023	mg/L	0.000187	0.00023	mg/L	0.000187	82.17%
Al 308.215†	0.4	0.00032	mg/L	0.010768	0.00032	mg/L	0.010768	>999.9%
As 188.979†	2.6	0.00190	mg/L	0.002410	0.00190	mg/L	0.002410	126.57%
B 249.677†	6.4	0.00106	mg/L	0.000651	0.00106	mg/L	0.000651	61.63%
Ba 233.527†	-0.6	-0.00011	mg/L	0.000087	-0.00011	mg/L	0.000087	81.44%
Be 313.042†	11.6	0.00002	mg/L	0.000009	0.00002	mg/L	0.000009	44.51%
Ca 317.933†	20.0	0.00200	mg/L	0.000931	0.00200	mg/L	0.000931	46.45%
Cd 228.802†	2.3	0.00009	mg/L	0.000101	0.00009	mg/L	0.000101	111.24%
Co 228.616†	19.5	0.00064	mg/L	0.000120	0.00064	mg/L	0.000120	18.85%
Cr 267.716†	-2.1	-0.00025	mg/L	0.000561	-0.00025	mg/L	0.000561	223.80%
Cu 324.752†	-89.5	-0.00035	mg/L	0.000081	-0.00035	mg/L	0.000081	23.01%
Fe 273.955†	3.0	0.00246	mg/L	0.000455	0.00246	mg/L	0.000455	18.48%
K 766.490†	24.2	0.01184	mg/L	0.005462	0.01184	mg/L	0.005462	46.12%
Mg 279.077†	-12.3	-0.01327	mg/L	0.003079	-0.01327	mg/L	0.003079	23.20%
Mn 257.610†	3.2	0.00006	mg/L	0.000046	0.00006	mg/L	0.000046	71.59%
Mo 202.031†	6.1	0.00033	mg/L	0.000210	0.00033	mg/L	0.000210	62.73%
Na 589.592†	-118.9	-0.01047	mg/L	0.001770	-0.01047	mg/L	0.001770	16.90%
Na 330.237†	-19.1	-0.6027	mg/L	0.13115	-0.6027	mg/L	0.13115	21.76%
Ni 231.604†	3.2	0.00096	mg/L	0.000690	0.00096	mg/L	0.000690	71.70%
Pb 220.353†	3.3	0.00042	mg/L	0.000245	0.00042	mg/L	0.000245	58.79%
Sb 206.836†	-7.6	-0.00293	mg/L	0.000493	-0.00293	mg/L	0.000493	16.83%
Se 196.026†	12.4	0.00814	mg/L	0.002143	0.00814	mg/L	0.002143	26.32%
Si 288.158†	5.9	0.00433	mg/L	0.010141	0.00433	mg/L	0.010141	234.09%
Sn 189.927†	-0.0	-0.00001	mg/L	0.000423	-0.00001	mg/L	0.000423	>999.9%
Sr 421.552†	28.1	0.00003	mg/L	0.000029	0.00003	mg/L	0.000029	94.91%
Ti 334.903†	2.3	0.00009	mg/L	0.000595	0.00009	mg/L	0.000595	666.09%
Tl 190.801†	2.1	0.00125	mg/L	0.000322	0.00125	mg/L	0.000322	25.73%
V 292.402†	4.6	0.00003	mg/L	0.000066	0.00003	mg/L	0.000066	204.12%
Zn 206.200†	-1.7	-0.00042	mg/L	0.000376	-0.00042	mg/L	0.000376	89.58%

Sequence No.: 9
Sample ID: CV

Autosampler Location: 7
Date Collected: 4/29/2013 9:40:40 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2671604.4	102.6	%	0.38				0.37%
ScR 361.383	376595.7	100.8	%	1.78				1.77%
Ag 328.068†	225863.6	1.032	mg/L	0.0038	1.032	mg/L	0.0038	0.37%
Al 308.215†	2292.5	1.984	mg/L	0.0392	1.984	mg/L	0.0392	1.98%
As 188.979†	2637.1	1.969	mg/L	0.0077	1.969	mg/L	0.0077	0.39%
B 249.677†	6023.4	1.002	mg/L	0.0170	1.002	mg/L	0.0170	1.69%
Ba 233.527†	5720.9	1.032	mg/L	0.0163	1.032	mg/L	0.0163	1.58%
Be 313.042†	551823.4	0.9685	mg/L	0.01119	0.9685	mg/L	0.01119	1.16%
Ca 317.933†	19952.7	2.000	mg/L	0.0351	2.000	mg/L	0.0351	1.76%
Cd 228.802†	23158.3	1.009	mg/L	0.0021	1.009	mg/L	0.0021	0.21%
Co 228.616†	30482.3	0.9930	mg/L	0.00377	0.9930	mg/L	0.00377	0.38%
Cr 267.716†	8420.7	1.024	mg/L	0.0191	1.024	mg/L	0.0191	1.87%
Cu 324.752†	253976.2	1.002	mg/L	0.0024	1.002	mg/L	0.0024	0.24%
Fe 273.955†	2387.1	1.981	mg/L	0.0414	1.981	mg/L	0.0414	2.09%
K 766.490†	39482.0	19.33	mg/L	0.265	19.33	mg/L	0.265	1.37%
Mg 279.077†	1792.0	1.944	mg/L	0.0354	1.944	mg/L	0.0354	1.82%
Mn 257.610†	47985.7	0.9445	mg/L	0.01730	0.9445	mg/L	0.01730	1.83%
Mo 202.031†	17939.2	0.9802	mg/L	0.00400	0.9802	mg/L	0.00400	0.41%
Na 589.592†	564962.9	49.73	mg/L	0.674	49.73	mg/L	0.674	1.36%
Na 330.237†	1576.1	49.85	mg/L	0.786	49.85	mg/L	0.786	1.58%
Ni 231.604†	3425.2	1.017	mg/L	0.0181	1.017	mg/L	0.0181	1.78%
Pb 220.353†	15260.2	1.959	mg/L	0.0044	1.959	mg/L	0.0044	0.22%
Sb 206.836†	5255.9	2.019	mg/L	0.0084	2.019	mg/L	0.0084	0.42%
Se 196.026†	2959.2	1.943	mg/L	0.0127	1.943	mg/L	0.0127	0.66%
Si 288.158†	2681.5	1.960	mg/L	0.0293	1.960	mg/L	0.0293	1.49%
Sn 189.927†	4727.8	0.9572	mg/L	0.00466	0.9572	mg/L	0.00466	0.49%
Sr 421.552†	890831.7	0.9857	mg/L	0.01391	0.9857	mg/L	0.01391	1.41%
Ti 334.903†	25276.5	0.9901	mg/L	0.01421	0.9901	mg/L	0.01421	1.44%
Tl 190.801†	3492.1	2.042	mg/L	0.0077	2.042	mg/L	0.0077	0.38%
V 292.402†	133401.3	0.9765	mg/L	0.00246	0.9765	mg/L	0.00246	0.25%
Zn 206.200†	3948.1	0.9957	mg/L	0.01715	0.9957	mg/L	0.01715	1.72%

Sequence No.: 10
Sample ID: CB

Autosampler Location: 1
Date Collected: 4/29/2013 9:44:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2690039.5	103.3	%	0.09				0.09%
ScR 361.383	381433.7	102.1	%	0.45				0.44%
Ag 328.068†	64.9	0.00030	mg/L	0.000135	0.00030	mg/L	0.000135	45.40%
Al 308.215†	4.6	0.00401	mg/L	0.002724	0.00401	mg/L	0.002724	67.99%
As 188.979†	3.8	0.00278	mg/L	0.001166	0.00278	mg/L	0.001166	41.97%
B 249.677†	6.3	0.00104	mg/L	0.000413	0.00104	mg/L	0.000413	39.62%
Ba 233.527†	-1.4	-0.00025	mg/L	0.000398	-0.00025	mg/L	0.000398	159.88%
Be 313.042†	18.6	0.00003	mg/L	0.000037	0.00003	mg/L	0.000037	114.85%
Ca 317.933†	5.3	0.00054	mg/L	0.000937	0.00054	mg/L	0.000937	174.89%
Cd 228.802†	4.8	0.00019	mg/L	0.000174	0.00019	mg/L	0.000174	89.15%
Co 228.616†	6.5	0.00021	mg/L	0.000113	0.00021	mg/L	0.000113	53.60%
Cr 267.716†	2.6	0.00032	mg/L	0.000558	0.00032	mg/L	0.000558	176.89%
Cu 324.752†	90.2	0.00036	mg/L	0.000171	0.00036	mg/L	0.000171	47.97%
Fe 273.955†	2.3	0.00194	mg/L	0.001487	0.00194	mg/L	0.001487	76.70%
K 766.490†	-5.8	-0.00283	mg/L	0.010990	-0.00283	mg/L	0.010990	388.26%
Mg 279.077†	-6.2	-0.00674	mg/L	0.002827	-0.00674	mg/L	0.002827	41.94%
Mn 257.610†	7.6	0.00015	mg/L	0.000063	0.00015	mg/L	0.000063	41.72%
Mo 202.031†	15.9	0.00087	mg/L	0.000173	0.00087	mg/L	0.000173	19.97%
Na 589.592†	21.3	0.00187	mg/L	0.002510	0.00187	mg/L	0.002510	134.10%
Na 330.237†	-8.4	-0.2661	mg/L	0.31183	-0.2661	mg/L	0.31183	117.18%
Ni 231.604†	1.5	0.00046	mg/L	0.000123	0.00046	mg/L	0.000123	26.93%
Pb 220.353†	7.2	0.00092	mg/L	0.000667	0.00092	mg/L	0.000667	72.41%
Sb 206.836†	5.1	0.00195	mg/L	0.001451	0.00195	mg/L	0.001451	74.54%
Se 196.026†	7.9	0.00521	mg/L	0.001647	0.00521	mg/L	0.001647	31.63%
Si 288.158†	1.4	0.00102	mg/L	0.000742	0.00102	mg/L	0.000742	72.43%
Sn 189.927†	3.5	0.00071	mg/L	0.001029	0.00071	mg/L	0.001029	145.07%
Sr 421.552†	20.6	0.00002	mg/L	0.000008	0.00002	mg/L	0.000008	34.10%
Ti 334.903†	16.1	0.00063	mg/L	0.001055	0.00063	mg/L	0.001055	167.05%
Tl 190.801†	-0.4	-0.00025	mg/L	0.002460	-0.00025	mg/L	0.002460	>999.9%
V 292.402†	36.8	0.00027	mg/L	0.000267	0.00027	mg/L	0.000267	99.02%
Zn 206.200†	2.0	0.00050	mg/L	0.000525	0.00050	mg/L	0.000525	104.70%

Sequence No.: 11
Sample ID: WN26 MB SWC

Autosampler Location: 307
Date Collected: 4/29/2013 9:49:01 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 MB SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN26 MB SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2693199.5	103.5	%	0.35				0.34%
ScR 361.383	382234.7	102.3	%	0.21				0.20%
Ag 328.068†	31.1	0.00014	mg/L	0.000170	0.00029	mg/L	0.000340	119.26%
Al 308.215†	54.6	0.04807	mg/L	0.004023	0.09613	mg/L	0.008045	8.37%
As 188.979†	1.7	0.00126	mg/L	0.002362	0.00252	mg/L	0.004725	187.26%
B 249.677†	-0.1	-0.00001	mg/L	0.000384	-0.00002	mg/L	0.000768	>999.9%
Ba 233.527†	3.5	0.00062	mg/L	0.000319	0.00125	mg/L	0.000638	51.21%
Be 313.042†	-13.7	-0.00002	mg/L	0.000022	-0.00005	mg/L	0.000045	92.98%
Ca 317.933†	687.4	0.06889	mg/L	0.001100	0.1378	mg/L	0.00220	1.60%
Cd 228.802†	5.1	0.00022	mg/L	0.000150	0.00043	mg/L	0.000301	69.73%
Co 228.616†	3.8	0.00012	mg/L	0.000070	0.00024	mg/L	0.000141	58.26%
Cr 267.716†	0.6	0.00008	mg/L	0.000276	0.00015	mg/L	0.000552	358.95%
Cu 324.752†	145.0	0.00057	mg/L	0.000168	0.00114	mg/L	0.000337	29.44%
Fe 273.955†	2.7	0.00222	mg/L	0.000749	0.00445	mg/L	0.001498	33.68%
K 766.490†	16.0	0.00782	mg/L	0.001453	0.01563	mg/L	0.002906	18.59%
Mg 279.077†	9.3	0.01004	mg/L	0.001749	0.02008	mg/L	0.003498	17.42%
Mn 257.610†	9.4	0.00019	mg/L	0.000079	0.00037	mg/L	0.000157	42.43%
Mo 202.031†	7.7	0.00042	mg/L	0.000284	0.00084	mg/L	0.000568	67.32%
Na 589.592†	-89.0	-0.00783	mg/L	0.003835	-0.01566	mg/L	0.007671	48.98%
Na 330.237†	-11.8	-0.3731	mg/L	0.15092	-0.7462	mg/L	0.30185	40.45%
Ni 231.604†	-2.0	-0.00059	mg/L	0.001004	-0.00118	mg/L	0.002009	170.20%
Pb 220.353†	11.8	0.00153	mg/L	0.000524	0.00306	mg/L	0.001049	34.26%
Sb 206.836†	1.2	0.00046	mg/L	0.000511	0.00093	mg/L	0.001022	109.92%
Se 196.026†	4.5	0.00297	mg/L	0.002627	0.00594	mg/L	0.005254	88.44%
Si 288.158†	36.7	0.02691	mg/L	0.004570	0.05383	mg/L	0.009141	16.98%
Sn 189.927†	1.4	0.00029	mg/L	0.000557	0.00058	mg/L	0.001115	193.08%
Sr 421.552†	17.3	0.00002	mg/L	0.000008	0.00004	mg/L	0.000016	41.16%
Ti 334.903†	32.0	0.00125	mg/L	0.000812	0.00250	mg/L	0.001623	64.90%
Tl 190.801†	-0.6	-0.00037	mg/L	0.001046	-0.00075	mg/L	0.002092	280.15%
V 292.402†	-6.8	-0.00005	mg/L	0.000067	-0.00010	mg/L	0.000134	134.61%
Zn 206.200†	0.1	0.00004	mg/L	0.000638	0.00008	mg/L	0.001276	>999.9%

Sequence No.: 12
Sample ID: 3031-13 Check

Autosampler Location: 308
Date Collected: 4/29/2013 9:53:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: 3031-13 Check

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: 3031-13 Check

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2667244.6	102.5	%	0.85				0.83%
ScR 361.383	370259.5	99.08	%	1.014				1.02%
Ag 328.068†	223400.7	1.021	mg/L	0.0029	1.021	mg/L	0.0029	0.28%
Al 308.215†	2379.3	2.060	mg/L	0.0152	2.060	mg/L	0.0152	0.74%
As 188.979†	2701.0	2.017	mg/L	0.0185	2.017	mg/L	0.0185	0.92%
B 249.677†	6207.0	1.033	mg/L	0.0079	1.033	mg/L	0.0079	0.77%
Ba 233.527†	5953.1	1.073	mg/L	0.0014	1.073	mg/L	0.0014	0.13%
Be 313.042†	567132.4	0.9954	mg/L	0.00797	0.9954	mg/L	0.00797	0.80%
Ca 317.933†	20676.0	2.072	mg/L	0.0148	2.072	mg/L	0.0148	0.72%
Cd 228.802†	23496.2	1.024	mg/L	0.0077	1.024	mg/L	0.0077	0.75%
Co 228.616†	30988.7	1.009	mg/L	0.0068	1.009	mg/L	0.0068	0.67%
Cr 267.716†	8735.1	1.062	mg/L	0.0088	1.062	mg/L	0.0088	0.83%
Cu 324.752†	251922.7	0.9940	mg/L	0.00380	0.9940	mg/L	0.00380	0.38%
Fe 273.955†	2472.4	2.052	mg/L	0.0225	2.052	mg/L	0.0225	1.10%
K 766.490†	40543.7	19.85	mg/L	0.103	19.85	mg/L	0.103	0.52%
Mg 279.077†	1861.4	2.020	mg/L	0.0250	2.020	mg/L	0.0250	1.24%
Mn 257.610†	49425.2	0.9728	mg/L	0.01227	0.9728	mg/L	0.01227	1.26%
Mo 202.031†	18204.6	0.9947	mg/L	0.00667	0.9947	mg/L	0.00667	0.67%
Na 589.592†	582997.8	51.31	mg/L	0.298	51.31	mg/L	0.298	0.58%
Na 330.237†	1639.8	51.86	mg/L	0.547	51.86	mg/L	0.547	1.05%
Ni 231.604†	3554.0	1.055	mg/L	0.0062	1.055	mg/L	0.0062	0.59%
Pb 220.353†	15546.0	1.996	mg/L	0.0149	1.996	mg/L	0.0149	0.75%
Sb 206.836†	5240.5	2.012	mg/L	0.0155	2.012	mg/L	0.0155	0.77%
Se 196.026†	3029.8	1.989	mg/L	0.0147	1.989	mg/L	0.0147	0.74%
Si 288.158†	2781.1	2.033	mg/L	0.0151	2.033	mg/L	0.0151	0.74%
Sn 189.927†	4816.3	0.9751	mg/L	0.00702	0.9751	mg/L	0.00702	0.72%
Sr 421.552†	915763.2	1.013	mg/L	0.0077	1.013	mg/L	0.0077	0.76%
Ti 334.903†	26005.6	1.019	mg/L	0.0071	1.019	mg/L	0.0071	0.70%
Tl 190.801†	3561.6	2.083	mg/L	0.0143	2.083	mg/L	0.0143	0.68%
V 292.402†	133509.2	0.9774	mg/L	0.00329	0.9774	mg/L	0.00329	0.34%
Zn 206.200†	4100.2	1.034	mg/L	0.0074	1.034	mg/L	0.0074	0.72%

Sequence No.: 13
Sample ID: WN26 ADUP SWC

Autosampler Location: 309
Date Collected: 4/29/2013 9:57:06 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 ADUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN26 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2676629.6	102.8	%	0.45				0.44%
ScR 361.383	386010.4	103.3	%	0.82				0.79%
Ag 328.068†	-184.9	-0.00059	mg/L	0.000096	-0.00118	mg/L	0.000192	16.29%
Al 308.215†	51525.0	45.34	mg/L	0.552	90.68	mg/L	1.104	1.22%
As 188.979†	-204.3	-0.00177	mg/L	0.001432	-0.00354	mg/L	0.002863	80.93%
B 249.677†	15.8	0.00257	mg/L	0.000648	0.00514	mg/L	0.001296	25.21%
Ba 233.527†	673.3	0.1154	mg/L	0.00164	0.2309	mg/L	0.00329	1.42%
Be 313.042†	378.7	0.00056	mg/L	0.000008	0.00113	mg/L	0.000016	1.43%
Ca 317.933†	274980.8	27.56	mg/L	0.369	55.11	mg/L	0.739	1.34%
Cd 228.802†	25.3	0.00196	mg/L	0.000074	0.00392	mg/L	0.000149	3.79%
Co 228.616†	875.6	0.02090	mg/L	0.000313	0.04179	mg/L	0.000625	1.50%
Cr 267.716†	435.3	0.05317	mg/L	0.001022	0.1063	mg/L	0.00204	1.92%
Cu 324.752†	21542.5	0.08614	mg/L	0.000608	0.1723	mg/L	0.00122	0.71%
Fe 273.955†	48793.5	40.61	mg/L	0.422	81.22	mg/L	0.845	1.04%
K 766.490†	4107.4	2.011	mg/L	0.0270	4.022	mg/L	0.0540	1.34%
Mg 279.077†	5907.9	6.365	mg/L	0.0645	12.73	mg/L	0.129	1.01%
Mn 257.610†	16780.7	0.3298	mg/L	0.00295	0.6597	mg/L	0.00589	0.89%
Mo 202.031†	88.2	0.00449	mg/L	0.000130	0.00899	mg/L	0.000260	2.89%
Na 589.592†	66537.1	5.857	mg/L	0.1065	11.71	mg/L	0.213	1.82%
Na 330.237†	137.0	5.517	mg/L	0.1321	11.03	mg/L	0.264	2.39%
Ni 231.604†	96.0	0.02850	mg/L	0.000495	0.05700	mg/L	0.000991	1.74%
Pb 220.353†	-40.1	0.00494	mg/L	0.000524	0.00989	mg/L	0.001048	10.60%
Sb 206.836†	-17.1	-0.00310	mg/L	0.002423	-0.00621	mg/L	0.004847	78.10%
Se 196.026†	7.5	-0.00041	mg/L	0.002062	-0.00082	mg/L	0.004124	503.41%
Si 288.158†	1765.3	1.294	mg/L	0.0079	2.588	mg/L	0.0158	0.61%
Sn 189.927†	-36.5	-0.00427	mg/L	0.000283	-0.00853	mg/L	0.000567	6.64%
Sr 421.552†	241260.2	0.2670	mg/L	0.00350	0.5339	mg/L	0.00701	1.31%
Ti 334.903†	111226.5	4.361	mg/L	0.0516	8.722	mg/L	0.1031	1.18%
Tl 190.801†	10.6	0.01055	mg/L	0.001325	0.02109	mg/L	0.002650	12.56%
V 292.402†	33385.3	0.2390	mg/L	0.00131	0.4780	mg/L	0.00262	0.55%
Zn 206.200†	439.0	0.1109	mg/L	0.00023	0.2218	mg/L	0.00045	0.20%

Sequence No.: 14
Sample ID: WN26 A SWC

Autosampler Location: 310
Date Collected: 4/29/2013 10:01:07 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN26 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2660292.6	102.2	%	0.69	.			0.67%
ScR 361.383	377217.4	100.9	%	0.32				0.32%
Ag 328.068†	-257.7	-0.00091	mg/L	0.000246	-0.00181	mg/L	0.000491	27.12%
Al 308.215†	58118.5	51.14	mg/L	0.243	102.3	mg/L	0.49	0.48%
As 188.979†	-217.3	-0.00229	mg/L	0.005387	-0.00457	mg/L	0.010773	235.67%
B 249.677†	6.3	0.00099	mg/L	0.000733	0.00198	mg/L	0.001467	74.10%
Ba 233.527†	1201.4	0.2101	mg/L	0.00091	0.4202	mg/L	0.00183	0.43%
Be 313.042†	355.9	0.00052	mg/L	0.000006	0.00104	mg/L	0.000013	1.22%
Ca 317.933†	294152.9	29.48	mg/L	0.276	58.96	mg/L	0.552	0.94%
Cd 228.802†	19.1	0.00174	mg/L	0.000287	0.00349	mg/L	0.000574	16.47%
Co 228.616†	887.1	0.02079	mg/L	0.000242	0.04159	mg/L	0.000485	1.17%
Cr 267.716†	401.5	0.04905	mg/L	0.000497	0.09810	mg/L	0.000993	1.01%
Cu 324.752†	23344.8	0.09339	mg/L	0.001243	0.1868	mg/L	0.00249	1.33%
Fe 273.955†	53636.1	44.64	mg/L	0.176	89.28	mg/L	0.353	0.40%
K 766.490†	4776.0	2.338	mg/L	0.0040	4.676	mg/L	0.0081	0.17%
Mg 279.077†	6922.4	7.459	mg/L	0.0331	14.92	mg/L	0.066	0.44%
Mn 257.610†	18960.4	0.3727	mg/L	0.00154	0.7454	mg/L	0.00309	0.41%
Mo 202.031†	74.6	0.00372	mg/L	0.000161	0.00745	mg/L	0.000322	4.32%
Na 589.592†	69375.6	6.106	mg/L	0.0595	12.21	mg/L	0.119	0.97%
Na 330.237†	144.0	5.811	mg/L	0.2177	11.62	mg/L	0.435	3.75%
Ni 231.604†	103.9	0.03084	mg/L	0.001100	0.06168	mg/L	0.002201	3.57%
Pb 220.353†	-55.9	0.00426	mg/L	0.000634	0.00852	mg/L	0.001268	14.88%
Sb 206.836†	-21.8	-0.00462	mg/L	0.001388	-0.00924	mg/L	0.002776	30.06%
Se 196.026†	-1.1	-0.00675	mg/L	0.001967	-0.01350	mg/L	0.003934	29.13%
Si 288.158†	1411.6	1.035	mg/L	0.0059	2.070	mg/L	0.0117	0.57%
Sn 189.927†	-38.8	-0.00451	mg/L	0.000275	-0.00903	mg/L	0.000550	6.09%
Sr 421.552†	320984.8	0.3552	mg/L	0.00311	0.7104	mg/L	0.00622	0.88%
Ti 334.903†	117975.5	4.626	mg/L	0.0370	9.251	mg/L	0.0741	0.80%
Tl 190.801†	13.5	0.01273	mg/L	0.001047	0.02547	mg/L	0.002094	8.22%
V 292.402†	34465.9	0.2465	mg/L	0.00267	0.4930	mg/L	0.00533	1.08%
Zn 206.200†	476.1	0.1202	mg/L	0.00053	0.2404	mg/L	0.00106	0.44%

Sequence No.: 15
Sample ID: WN26 ASPK SWC

Autosampler Location: 311
Date Collected: 4/29/2013 10:05:23 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN26 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2658619.1	102.1	%	0.86				0.84%
ScR 361.383	376047.2	100.6	%	1.04				1.03%
Ag 328.068†	115700.6	0.5290	mg/L	0.00176	1.058	mg/L	0.0035	0.33%
Al 308.215†	60229.8	53.00	mg/L	0.775	106.0	mg/L	1.55	1.46%
As 188.979†	2532.4	2.013	mg/L	0.0152	4.025	mg/L	0.0304	0.76%
B 249.677†	10.0	0.00044	mg/L	0.001459	0.00088	mg/L	0.002917	331.67%
Ba 233.527†	12571.0	2.262	mg/L	0.0348	4.523	mg/L	0.0696	1.54%
Be 313.042†	276439.6	0.4851	mg/L	0.00589	0.9701	mg/L	0.01179	1.21%
Ca 317.933†	404637.7	40.55	mg/L	0.440	81.10	mg/L	0.879	1.08%
Cd 228.802†	11999.4	0.5181	mg/L	0.00411	1.036	mg/L	0.0082	0.79%
Co 228.616†	16206.9	0.5207	mg/L	0.00501	1.041	mg/L	0.0100	0.96%
Cr 267.716†	4631.2	0.5623	mg/L	0.00676	1.125	mg/L	0.0135	1.20%
Cu 324.752†	151371.5	0.5986	mg/L	0.00351	1.197	mg/L	0.0070	0.59%
Fe 273.955†	49935.8	41.56	mg/L	0.344	83.12	mg/L	0.689	0.83%
K 766.490†	24349.2	11.92	mg/L	0.199	23.84	mg/L	0.398	1.67%
Mg 279.077†	15950.7	17.23	mg/L	0.210	34.45	mg/L	0.421	1.22%
Mn 257.610†	40952.7	0.8057	mg/L	0.00677	1.611	mg/L	0.0135	0.84%
Mo 202.031†	89.9	0.00440	mg/L	0.000187	0.00881	mg/L	0.000374	4.25%
Na 589.592†	196032.5	17.25	mg/L	0.191	34.51	mg/L	0.383	1.11%
Na 330.237†	494.7	16.72	mg/L	0.335	33.43	mg/L	0.670	2.00%
Ni 231.604†	1831.1	0.5428	mg/L	0.00777	1.086	mg/L	0.0155	1.43%
Pb 220.353†	15543.2	2.007	mg/L	0.0148	4.014	mg/L	0.0297	0.74%
Sb 206.836†	-14.0	-0.00698	mg/L	0.001361	-0.01396	mg/L	0.002721	19.49%
Se 196.026†	3050.8	1.998	mg/L	0.0147	3.995	mg/L	0.0295	0.74%
Si 288.158†	1679.1	1.234	mg/L	0.0108	2.468	mg/L	0.0216	0.88%
Sn 189.927†	-47.9	-0.00545	mg/L	0.000148	-0.01091	mg/L	0.000296	2.71%
Sr 421.552†	736972.7	0.8155	mg/L	0.01099	1.631	mg/L	0.0220	1.35%
Ti 334.903†	113931.8	4.466	mg/L	0.0533	8.932	mg/L	0.1065	1.19%
Tl 190.801†	3454.2	2.028	mg/L	0.0175	4.055	mg/L	0.0350	0.86%
V 292.402†	99446.4	0.7225	mg/L	0.00432	1.445	mg/L	0.0086	0.60%
Zn 206.200†	2426.0	0.6120	mg/L	0.00842	1.224	mg/L	0.0168	1.38%

Sequence No.: 16
Sample ID: WN26 B SWC

Autosampler Location: 312
Date Collected: 4/29/2013 10:09:27 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 B SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN26 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2679617.1	102.9	%	0.60				0.59%
ScR 361.383	385428.8	103.1	%	0.58				0.56%
Ag 328.068†	-257.3	-0.00067	mg/L	0.000015	-0.00134	mg/L	0.000030	2.27%
Al 308.215†	92686.5	81.57	mg/L	0.358	163.1	mg/L	0.72	0.44%
As 188.979†	-157.3	0.04469	mg/L	0.002228	0.08938	mg/L	0.004457	4.99%
B 249.677†	48.9	0.00808	mg/L	0.000729	0.01616	mg/L	0.001458	9.02%
Ba 233.527†	2019.5	0.3565	mg/L	0.00282	0.7129	mg/L	0.00564	0.79%
Be 313.042†	818.3	0.00128	mg/L	0.000027	0.00255	mg/L	0.000055	2.15%
Ca 317.933†	547506.0	54.87	mg/L	0.116	109.7	mg/L	0.23	0.21%
Cd 228.802†	55.9	0.00313	mg/L	0.000201	0.00625	mg/L	0.000403	6.45%
Co 228.616†	911.6	0.02130	mg/L	0.000200	0.04261	mg/L	0.000401	0.94%
Cr 267.716†	709.0	0.08585	mg/L	0.001200	0.1717	mg/L	0.00240	1.40%
Cu 324.752†	53527.8	0.2128	mg/L	0.00197	0.4257	mg/L	0.00393	0.92%
Fe 273.955†	63342.8	52.72	mg/L	0.104	105.4	mg/L	0.21	0.20%
K 766.490†	3948.3	1.933	mg/L	0.0097	3.866	mg/L	0.0194	0.50%
Mg 279.077†	11430.9	12.33	mg/L	0.085	24.66	mg/L	0.170	0.69%
Mn 257.610†	27474.4	0.5400	mg/L	0.00117	1.080	mg/L	0.0023	0.22%
Mo 202.031†	218.9	0.01131	mg/L	0.000170	0.02262	mg/L	0.000341	1.51%
Na 589.592†	88397.9	7.781	mg/L	0.0270	15.56	mg/L	0.054	0.35%
Na 330.237†	192.1	7.350	mg/L	0.0860	14.70	mg/L	0.172	1.17%
Ni 231.604†	191.2	0.05675	mg/L	0.001139	0.1135	mg/L	0.00228	2.01%
Pb 220.353†	311.4	0.05912	mg/L	0.000709	0.1182	mg/L	0.00142	1.20%
Sb 206.836†	-32.0	-0.00808	mg/L	0.003385	-0.01616	mg/L	0.006771	41.91%
Se 196.026†	4.5	-0.00670	mg/L	0.004208	-0.01340	mg/L	0.008415	62.78%
Si 288.158†	2259.2	1.657	mg/L	0.0072	3.313	mg/L	0.0144	0.44%
Sn 189.927†	-42.5	-0.00311	mg/L	0.000347	-0.00622	mg/L	0.000694	11.16%
Sr 421.552†	449205.5	0.4971	mg/L	0.00140	0.9941	mg/L	0.00280	0.28%
Ti 334.903†	121877.3	4.777	mg/L	0.0142	9.554	mg/L	0.0284	0.30%
Tl 190.801†	24.8	0.01967	mg/L	0.002489	0.03934	mg/L	0.004979	12.66%
V 292.402†	65231.5	0.4704	mg/L	0.00485	0.9407	mg/L	0.00970	1.03%
Zn 206.200†	799.0	0.2017	mg/L	0.00199	0.4035	mg/L	0.00397	0.98%

Sequence No.: 17
Sample ID: WN26 C SWC

Autosampler Location: 313
Date Collected: 4/29/2013 10:13:28 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 C SWC

Analyte	Back Pressure	Flow
A11	218.0 kPa	0.75 L/min

Mean Data: WN26 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2712617.5	104.2	%	0.14				0.14%
ScR 361.383	386728.7	103.5	%	0.67				0.65%
Ag 328.068†	-511.6	-0.00188	mg/L	0.000099	-0.00377	mg/L	0.000198	5.25%
Al 308.215†	222926.5	196.2	mg/L	1.05	392.4	mg/L	2.10	0.54%
As 188.979†	-432.6	0.01059	mg/L	0.006778	0.02118	mg/L	0.013557	64.02%
B 249.677†	53.7	0.00867	mg/L	0.000390	0.01734	mg/L	0.000779	4.49%
Ba 233.527†	4461.1	0.7729	mg/L	0.00586	1.546	mg/L	0.0117	0.76%
Be 313.042†	1674.8	0.00272	mg/L	0.000015	0.00544	mg/L	0.000030	0.54%
Ca 317.933†	439037.1	44.00	mg/L	0.209	88.00	mg/L	0.419	0.48%
Cd 228.802†	90.5	0.00591	mg/L	0.000007	0.01183	mg/L	0.000013	0.11%
Co 228.616†	3288.4	0.09030	mg/L	0.000458	0.1806	mg/L	0.00092	0.51%
Cr 267.716†	2172.4	0.2655	mg/L	0.00130	0.5310	mg/L	0.00259	0.49%
Cu 324.752†	53938.2	0.2214	mg/L	0.00072	0.4428	mg/L	0.00144	0.32%
Fe 273.955†	259337.8	215.8	mg/L	0.56	431.7	mg/L	1.11	0.26%
K 766.490†	15062.8	7.374	mg/L	0.0498	14.75	mg/L	0.100	0.68%
Mg 279.077†	43894.6	47.35	mg/L	0.278	94.70	mg/L	0.556	0.59%
Mn 257.610†	193615.9	3.808	mg/L	0.0107	7.617	mg/L	0.0215	0.28%
Mo 202.031†	96.4	0.00474	mg/L	0.000243	0.00947	mg/L	0.000486	5.13%
Na 589.592†	29596.5	2.605	mg/L	0.0167	5.210	mg/L	0.0335	0.64%
Na 330.237†	-24.5	1.781	mg/L	0.2864	3.562	mg/L	0.5728	16.08%
Ni 231.604†	722.9	0.2146	mg/L	0.00098	0.4293	mg/L	0.00197	0.46%
Pb 220.353†	198.6	0.06724	mg/L	0.001821	0.1345	mg/L	0.00364	2.71%
Sb 206.836†	-56.6	-0.01612	mg/L	0.000848	-0.03224	mg/L	0.001695	5.26%
Se 196.026†	1.2	-0.02212	mg/L	0.006156	-0.04424	mg/L	0.012312	27.83%
Si 288.158†	2267.2	1.666	mg/L	0.0076	3.333	mg/L	0.0153	0.46%
Sn 189.927†	-70.1	-0.00869	mg/L	0.000289	-0.01738	mg/L	0.000579	3.33%
Sr 421.552†	435519.4	0.4819	mg/L	0.00193	0.9638	mg/L	0.00386	0.40%
Ti 334.903†	245191.9	9.614	mg/L	0.0329	19.23	mg/L	0.066	0.34%
Tl 190.801†	-19.2	0.01475	mg/L	0.006669	0.02949	mg/L	0.013338	45.23%
V 292.402†	71810.8	0.5086	mg/L	0.00164	1.017	mg/L	0.0033	0.32%
Zn 206.200†	1661.2	0.4191	mg/L	0.00235	0.8382	mg/L	0.00470	0.56%

Sequence No.: 18
Sample ID: WN26 MBSPK SWC

Autosampler Location: 314
Date Collected: 4/29/2013 10:17:30 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 MBSPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN26 MBSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2687654.4	103.3	%	0.31				0.30%
ScR 361.383	383136.8	102.5	%	0.50				0.48%
Ag 328.068†	119852.4	0.5477	mg/L	0.00389	1.095	mg/L	0.0078	0.71%
Al 308.215†	2405.8	2.110	mg/L	0.0171	4.220	mg/L	0.0343	0.81%
As 188.979†	2836.9	2.085	mg/L	0.0222	4.170	mg/L	0.0443	1.06%
B 249.677†	4.0	-0.00052	mg/L	0.000975	-0.00104	mg/L	0.001950	187.33%
Ba 233.527†	11824.2	2.133	mg/L	0.0107	4.265	mg/L	0.0215	0.50%
Be 313.042†	280376.4	0.4921	mg/L	0.00183	0.9842	mg/L	0.00365	0.37%
Ca 317.933†	98772.3	9.898	mg/L	0.0360	19.80	mg/L	0.072	0.36%
Cd 228.802†	11927.1	0.5137	mg/L	0.00450	1.027	mg/L	0.0090	0.88%
Co 228.616†	15531.5	0.5066	mg/L	0.00658	1.013	mg/L	0.0132	1.30%
Cr 267.716†	4376.6	0.5313	mg/L	0.00422	1.063	mg/L	0.0084	0.79%
Cu 324.752†	128138.9	0.5058	mg/L	0.00476	1.012	mg/L	0.0095	0.94%
Fe 273.955†	2466.8	2.050	mg/L	0.0214	4.101	mg/L	0.0428	1.04%
K 766.490†	20239.7	9.909	mg/L	0.0426	19.82	mg/L	0.085	0.43%
Mg 279.077†	9634.8	10.42	mg/L	0.075	20.84	mg/L	0.149	0.72%
Mn 257.610†	24707.9	0.4865	mg/L	0.00178	0.9729	mg/L	0.00355	0.37%
Mo 202.031†	32.4	0.00162	mg/L	0.000251	0.00325	mg/L	0.000503	15.47%
Na 589.592†	115797.7	10.19	mg/L	0.004	20.38	mg/L	0.007	0.04%
Na 330.237†	324.0	10.10	mg/L	0.174	20.20	mg/L	0.348	1.72%
Ni 231.604†	1791.9	0.5311	mg/L	0.00431	1.062	mg/L	0.0086	0.81%
Pb 220.353†	15763.8	2.024	mg/L	0.0178	4.048	mg/L	0.0355	0.88%
Sb 206.836†	11.8	-0.00083	mg/L	0.000846	-0.00166	mg/L	0.001691	102.07%
Se 196.026†	3132.5	2.057	mg/L	0.0217	4.115	mg/L	0.0434	1.05%
Si 288.158†	26.2	0.02209	mg/L	0.001894	0.04417	mg/L	0.003789	8.58%
Sn 189.927†	-16.0	-0.00241	mg/L	0.000441	-0.00481	mg/L	0.000883	18.34%
Sr 421.552†	455830.4	0.5044	mg/L	0.00020	1.009	mg/L	0.0004	0.04%
Ti 334.903†	130.1	0.00441	mg/L	0.000325	0.00882	mg/L	0.000651	7.37%
Tl 190.801†	3584.2	2.100	mg/L	0.0194	4.199	mg/L	0.0387	0.92%
V 292.402†	70115.4	0.5131	mg/L	0.00387	1.026	mg/L	0.0077	0.75%
Zn 206.200†	2026.9	0.5112	mg/L	0.00276	1.022	mg/L	0.0055	0.54%

Sequence No.: 19
Sample ID: CV2

Autosampler Location: 7
Date Collected: 4/29/2013 10:21:31 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2654467.1	102.0	%	0.58				0.57%
ScR 361.383	378543.8	101.3	%	2.26				2.23%
Ag 328.068†	232317.1	1.061	mg/L	0.0105	1.061	mg/L	0.0105	0.99%
Al 308.215†	2336.1	2.022	mg/L	0.0452	2.022	mg/L	0.0452	2.24%
As 188.979†	2714.1	2.026	mg/L	0.0174	2.026	mg/L	0.0174	0.86%
B 249.677†	6121.7	1.018	mg/L	0.0223	1.018	mg/L	0.0223	2.19%
Ba 233.527†	5940.4	1.071	mg/L	0.0200	1.071	mg/L	0.0200	1.87%
Be 313.042†	556958.1	0.9775	mg/L	0.02839	0.9775	mg/L	0.02839	2.90%
Ca 317.933†	20340.4	2.038	mg/L	0.0448	2.038	mg/L	0.0448	2.20%
Cd 228.802†	23646.0	1.030	mg/L	0.0084	1.030	mg/L	0.0084	0.81%
Co 228.616†	31460.9	1.025	mg/L	0.0070	1.025	mg/L	0.0070	0.69%
Cr 267.716†	8573.7	1.043	mg/L	0.0249	1.043	mg/L	0.0249	2.38%
Cu 324.752†	259381.6	1.023	mg/L	0.0067	1.023	mg/L	0.0067	0.65%
Fe 273.955†	2397.0	1.989	mg/L	0.0472	1.989	mg/L	0.0472	2.37%
K 766.490†	39970.3	19.57	mg/L	0.473	19.57	mg/L	0.473	2.42%
Mg 279.077†	1828.1	1.984	mg/L	0.0508	1.984	mg/L	0.0508	2.56%
Mn 257.610†	48303.5	0.9507	mg/L	0.02666	0.9507	mg/L	0.02666	2.80%
Mo 202.031†	18354.9	1.003	mg/L	0.0089	1.003	mg/L	0.0089	0.88%
Na 589.592†	573123.0	50.45	mg/L	1.672	50.45	mg/L	1.672	3.31%
Na 330.237†	1601.7	50.66	mg/L	1.275	50.66	mg/L	1.275	2.52%
Ni 231.604†	3515.7	1.044	mg/L	0.0235	1.044	mg/L	0.0235	2.25%
Pb 220.353†	15687.7	2.014	mg/L	0.0173	2.014	mg/L	0.0173	0.86%
Sb 206.836†	5382.9	2.068	mg/L	0.0142	2.068	mg/L	0.0142	0.69%
Se 196.026†	3031.1	1.990	mg/L	0.0163	1.990	mg/L	0.0163	0.82%
Si 288.158†	2715.0	1.984	mg/L	0.0446	1.984	mg/L	0.0446	2.25%
Sn 189.927†	4851.6	0.9823	mg/L	0.00908	0.9823	mg/L	0.00908	0.92%
Sr 421.552†	900203.3	0.9961	mg/L	0.03075	0.9961	mg/L	0.03075	3.09%
Ti 334.903†	25543.6	1.001	mg/L	0.0313	1.001	mg/L	0.0313	3.12%
Tl 190.801†	3617.0	2.115	mg/L	0.0146	2.115	mg/L	0.0146	0.69%
V 292.402†	137300.4	1.005	mg/L	0.0086	1.005	mg/L	0.0086	0.85%
Zn 206.200†	4024.7	1.015	mg/L	0.0224	1.015	mg/L	0.0224	2.21%

Sequence No.: 20
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 4/29/2013 10:25:35 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
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	2659738.2	102.2	%	0.17				0.16%
ScR 361.383	379393.4	101.5	%	0.70				0.69%
Ag 328.068†	40.2	0.00018	mg/L	0.000143	0.00018	mg/L	0.000143	77.87%
Al 308.215†	4.0	0.00353	mg/L	0.008211	0.00353	mg/L	0.008211	232.89%
As 188.979†	4.2	0.00312	mg/L	0.000442	0.00312	mg/L	0.000442	14.16%
B 249.677†	-8.3	-0.00138	mg/L	0.000906	-0.00138	mg/L	0.000906	65.86%
Ba 233.527†	-1.1	-0.00020	mg/L	0.000451	-0.00020	mg/L	0.000451	230.74%
Be 313.042†	49.5	0.00009	mg/L	0.000009	0.00009	mg/L	0.000009	10.51%
Ca 317.933†	18.0	0.00180	mg/L	0.001141	0.00180	mg/L	0.001141	63.36%
Cd 228.802†	11.3	0.00048	mg/L	0.000250	0.00048	mg/L	0.000250	52.08%
Co 228.616†	6.9	0.00023	mg/L	0.000176	0.00023	mg/L	0.000176	77.71%
Cr 267.716†	-1.0	-0.00012	mg/L	0.000339	-0.00012	mg/L	0.000339	272.51%
Cu 324.752†	182.0	0.00072	mg/L	0.000076	0.00072	mg/L	0.000076	10.57%
Fe 273.955†	-2.1	-0.00171	mg/L	0.001590	-0.00171	mg/L	0.001590	92.95%
K 766.490†	26.6	0.01304	mg/L	0.005788	0.01304	mg/L	0.005788	44.38%
Mg 279.077†	-2.6	-0.00279	mg/L	0.004384	-0.00279	mg/L	0.004384	157.02%
Mn 257.610†	7.3	0.00014	mg/L	0.000034	0.00014	mg/L	0.000034	23.75%
Mo 202.031†	16.1	0.00088	mg/L	0.000011	0.00088	mg/L	0.000011	1.23%
Na 589.592†	-13.7	-0.00121	mg/L	0.000816	-0.00121	mg/L	0.000816	67.42%
Na 330.237†	-5.8	-0.1819	mg/L	0.27647	-0.1819	mg/L	0.27647	151.98%
Ni 231.604†	3.8	0.00113	mg/L	0.001896	0.00113	mg/L	0.001896	167.69%
Pb 220.353†	4.4	0.00056	mg/L	0.000582	0.00056	mg/L	0.000582	103.55%
Sb 206.836†	5.8	0.00222	mg/L	0.001439	0.00222	mg/L	0.001439	64.89%
Se 196.026†	4.0	0.00260	mg/L	0.002376	0.00260	mg/L	0.002376	91.42%
Si 288.158†	-0.9	-0.00067	mg/L	0.003723	-0.00067	mg/L	0.003723	551.94%
Sn 189.927†	1.7	0.00035	mg/L	0.000625	0.00035	mg/L	0.000625	180.48%
Sr 421.552†	76.3	0.00008	mg/L	0.000019	0.00008	mg/L	0.000019	22.93%
Ti 334.903†	4.2	0.00016	mg/L	0.000608	0.00016	mg/L	0.000608	369.43%
Tl 190.801†	1.8	0.00107	mg/L	0.001099	0.00107	mg/L	0.001099	103.08%
V 292.402†	36.2	0.00026	mg/L	0.000328	0.00026	mg/L	0.000328	124.08%
Zn 206.200†	-1.8	-0.00046	mg/L	0.000401	-0.00046	mg/L	0.000401	87.77%

Sequence No.: 21
Sample ID: WM19 MB SWC

Autosampler Location: 315
Date Collected: 4/29/2013 10:29:51 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WM19 MB SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WM19 MB SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2681826.1	103.0	%	0.18				0.18%
ScR 361.383	383151.8	102.5	%	0.91				0.89%
Ag 328.068†	60.6	0.00028	mg/L	0.000089	0.00055	mg/L	0.000179	32.25%
Al 308.215†	19.3	0.01702	mg/L	0.005586	0.03404	mg/L	0.011171	32.82%
As 188.979†	0.8	0.00062	mg/L	0.001117	0.00125	mg/L	0.002234	178.91%
B 249.677†	-2.0	-0.00034	mg/L	0.000912	-0.00067	mg/L	0.001824	271.32%
Ba 233.527†	0.5	0.00009	mg/L	0.000453	0.00019	mg/L	0.000906	478.30%
Be 313.042†	-8.9	-0.00002	mg/L	0.000015	-0.00003	mg/L	0.000030	95.11%
Ca 317.933†	300.8	0.03015	mg/L	0.001399	0.06029	mg/L	0.002798	4.64%
Cd 228.802†	5.0	0.00022	mg/L	0.000326	0.00043	mg/L	0.000652	150.84%
Co 228.616†	5.9	0.00019	mg/L	0.000013	0.00038	mg/L	0.000027	6.90%
Cr 267.716†	-7.4	-0.00090	mg/L	0.000217	-0.00180	mg/L	0.000433	24.11%
Cu 324.752†	203.9	0.00080	mg/L	0.000044	0.00161	mg/L	0.000088	5.46%
Fe 273.955†	3.3	0.00275	mg/L	0.000392	0.00551	mg/L	0.000783	14.22%
K 766.490†	18.2	0.00889	mg/L	0.002270	0.01778	mg/L	0.004539	25.52%
Mg 279.077†	0.4	0.00045	mg/L	0.002708	0.00090	mg/L	0.005416	604.74%
Mn 257.610†	6.9	0.00014	mg/L	0.000035	0.00027	mg/L	0.000070	25.84%
Mo 202.031†	2.2	0.00012	mg/L	0.000123	0.00024	mg/L	0.000247	103.40%
Na 589.592†	-143.1	-0.01259	mg/L	0.001486	-0.02519	mg/L	0.002973	11.80%
Na 330.237†	-15.9	-0.5019	mg/L	0.20839	-1.004	mg/L	0.4168	41.52%
Ni 231.604†	-2.2	-0.00066	mg/L	0.000894	-0.00132	mg/L	0.001788	135.09%
Pb 220.353†	0.6	0.00008	mg/L	0.000193	0.00016	mg/L	0.000387	245.08%
Sb 206.836†	-2.6	-0.00097	mg/L	0.001669	-0.00194	mg/L	0.003338	172.37%
Se 196.026†	6.7	0.00440	mg/L	0.001503	0.00879	mg/L	0.003006	34.19%
Si 288.158†	25.2	0.01845	mg/L	0.001544	0.03690	mg/L	0.003089	8.37%
Sn 189.927†	3.1	0.00062	mg/L	0.000519	0.00124	mg/L	0.001038	83.59%
Sr 421.552†	-7.6	-0.00001	mg/L	0.000024	-0.00002	mg/L	0.000048	285.49%
Ti 334.903†	20.4	0.00080	mg/L	0.000608	0.00160	mg/L	0.001217	76.20%
Tl 190.801†	-1.0	-0.00057	mg/L	0.000983	-0.00113	mg/L	0.001967	174.02%
V 292.402†	-0.8	-0.00001	mg/L	0.000112	-0.00002	mg/L	0.000223	>999.9%
Zn 206.200†	3.6	0.00091	mg/L	0.000756	0.00182	mg/L	0.001513	83.32%

Sequence No.: 22
Sample ID: WM19 MB LEN

Autosampler Location: 316
Date Collected: 4/29/2013 10:34:08 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WM19 MB LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WM19 MB LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2591314.9	99.55	%	0.150				0.15%
ScR 361.383	378002.8	101.1	%	0.12				0.12%
Ag 328.068†	18.8	0.00009	mg/L	0.000157	0.00043	mg/L	0.000783	181.85%
Al 308.215†	10.9	0.00959	mg/L	0.011695	0.04795	mg/L	0.058477	121.97%
As 188.979†	-0.0	0.00003	mg/L	0.001419	0.00015	mg/L	0.007096	>999.9%
B 249.677†	24.9	0.00415	mg/L	0.000226	0.02077	mg/L	0.001129	5.44%
Ba 233.527†	38.2	0.00689	mg/L	0.000018	0.03447	mg/L	0.000090	0.26%
Be 313.042†	33.9	0.00006	mg/L	0.000029	0.00030	mg/L	0.000143	48.14%
Ca 317.933†	616.4	0.06177	mg/L	0.001372	0.3088	mg/L	0.00686	2.22%
Cd 228.802†	16.2	0.00072	mg/L	0.000057	0.00358	mg/L	0.000284	7.92%
Co 228.616†	2.3	0.00007	mg/L	0.000076	0.00036	mg/L	0.000382	106.85%
Cr 267.716†	-1.0	-0.00013	mg/L	0.000194	-0.00063	mg/L	0.000970	152.89%
Cu 324.752†	341.4	0.00135	mg/L	0.000095	0.00674	mg/L	0.000476	7.07%
Fe 273.955†	12.7	0.01059	mg/L	0.001272	0.05294	mg/L	0.006360	12.01%
K 766.490†	37.0	0.01813	mg/L	0.012307	0.09063	mg/L	0.061533	67.90%
Mg 279.077†	6.0	0.00652	mg/L	0.003072	0.03259	mg/L	0.015358	47.12%
Mn 257.610†	9.1	0.00018	mg/L	0.000053	0.00090	mg/L	0.000267	29.70%
Mo 202.031†	6.2	0.00034	mg/L	0.000199	0.00168	mg/L	0.000996	59.36%
Na 589.592†	3378446.3	297.4	mg/L	1.08	1487	mg/L	5.38	0.36%
Na 330.237†	9439.5	298.7	mg/L	0.25	1493	mg/L	1.26	0.08%
Ni 231.604†	16.8	0.00498	mg/L	0.000886	0.02492	mg/L	0.004430	17.78%
Pb 220.353†	5.1	0.00066	mg/L	0.001174	0.00328	mg/L	0.005868	178.73%
Sb 206.836†	-2.8	-0.00105	mg/L	0.001206	-0.00527	mg/L	0.006028	114.30%
Se 196.026†	8.4	0.00552	mg/L	0.003017	0.02758	mg/L	0.015083	54.69%
Si 288.158†	28.2	0.02064	mg/L	0.001619	0.1032	mg/L	0.00809	7.84%
Sn 189.927†	1.1	0.00022	mg/L	0.000787	0.00111	mg/L	0.003935	355.59%
Sr 421.552†	172.9	0.00019	mg/L	0.000017	0.00096	mg/L	0.000084	8.79%
Ti 334.903†	27.3	0.00107	mg/L	0.000050	0.00533	mg/L	0.000251	4.71%
Tl 190.801†	1.6	0.00092	mg/L	0.001179	0.00458	mg/L	0.005893	128.57%
V 292.402†	3.7	0.00003	mg/L	0.000064	0.00013	mg/L	0.000319	248.92%
Zn 206.200†	26.1	0.00659	mg/L	0.000521	0.03293	mg/L	0.002604	7.91%

Sequence No.: 23
Sample ID: WM19 F LEN

Dilution: 5.000000X

Autosampler Location: 317
Date Collected: 4/29/2013 10:38:41 AM
Data Type: Original

Nebulizer Parameters: WM19 F LEN

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WM19 F LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2542451.8	97.68	%	0.169				0.17%
ScR 361.383	363332.4	97.22	%	1.082				1.11%
Ag 328.068†	34.0	0.00215	mg/L	0.000165	0.01076	mg/L	0.000825	7.67%
Al 308.215†	67.9	0.05959	mg/L	0.002590	0.2979	mg/L	0.01295	4.35%
As 188.979†	8348.7	6.111	mg/L	0.0066	30.56	mg/L	0.033	0.11%
B 249.677†	2444.3	0.4071	mg/L	0.00432	2.036	mg/L	0.0216	1.06%
Ba 233.527†	190.1	0.03429	mg/L	0.000836	0.1715	mg/L	0.00418	2.44%
Be 313.042†	55.5	0.00010	mg/L	0.000005	0.00049	mg/L	0.000027	5.52%
Ca 317.933†	3085091.1	309.2	mg/L	2.91	1546	mg/L	14.54	0.94%
Cd 228.802†	521792.9	22.93	mg/L	0.066	114.7	mg/L	0.33	0.29%
Co 228.616†	130.2	0.00419	mg/L	0.000054	0.02096	mg/L	0.000270	1.29%
Cr 267.716†	93.7	0.00669	mg/L	0.000346	0.03347	mg/L	0.001732	5.17%
Cu 324.752†	11842.6	0.04668	mg/L	0.000166	0.2334	mg/L	0.00083	0.36%
Fe 273.955†	-5.8	-0.00485	mg/L	0.004396	-0.02425	mg/L	0.021978	90.63%
K 766.490†	254010.2	124.4	mg/L	0.66	621.8	mg/L	3.29	0.53%
Mg 279.077†	8213.5	8.851	mg/L	0.1281	44.25	mg/L	0.641	1.45%
Mn 257.610†	7095.3	0.1389	mg/L	0.00187	0.6944	mg/L	0.00937	1.35%
Mo 202.031†	166.1	0.00543	mg/L	0.000394	0.02716	mg/L	0.001971	7.26%
Na 589.592†	4209833.1	370.5	mg/L	3.75	1853	mg/L	18.76	1.01%
Na 330.237†	11575.3	364.8	mg/L	4.29	1824	mg/L	21.45	1.18%
Ni 231.604†	50.4	0.01495	mg/L	0.000917	0.07474	mg/L	0.004584	6.13%
Pb 220.353†	19593.2	2.514	mg/L	0.0075	12.57	mg/L	0.037	0.30%
Sb 206.836†	11.5	0.00416	mg/L	0.001578	0.02078	mg/L	0.007889	37.96%
Se 196.026†	0.3	0.00018	mg/L	0.002776	0.00091	mg/L	0.013878	>999.9%
Si 288.158†	5862.1	4.371	mg/L	0.0621	21.85	mg/L	0.310	1.42%
Sn 189.927†	-78.7	0.00999	mg/L	0.000409	0.04995	mg/L	0.002046	4.10%
Sr 421.552†	478480.1	0.5295	mg/L	0.00258	2.647	mg/L	0.0129	0.49%
Ti 334.903†	756.0	0.01126	mg/L	0.000268	0.05632	mg/L	0.001339	2.38%
Tl 190.801†	52.9	0.03106	mg/L	0.003351	0.1553	mg/L	0.01675	10.79%
V 292.402†	10.1	0.00013	mg/L	0.000012	0.00067	mg/L	0.000062	9.25%
Zn 206.200†	18791.6	4.738	mg/L	0.0886	23.69	mg/L	0.443	1.87%

Sequence No.: 24
Sample ID: WM19 A SWC

Autosampler Location: 318
Date Collected: 4/29/2013 10:43:15 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WM19 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WM19 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2698046.3	103.7	%	0.61				0.59%
ScR 361.383	389467.1	104.2	%	0.41				0.39%
Ag 328.068†	116429.1	0.5323	mg/L	0.00317	1.065	mg/L	0.0063	0.60%
Al 308.215†	110180.2	96.96	mg/L	0.235	193.9	mg/L	0.47	0.24%
As 188.979†	1570.6	1.158	mg/L	0.0010	2.316	mg/L	0.0021	0.09%
B 249.677†	4317.1	0.7148	mg/L	0.00519	1.430	mg/L	0.0104	0.73%
Ba 233.527†	45849.8	8.262	mg/L	0.0284	16.52	mg/L	0.057	0.34%
Be 313.042†	357726.8	0.6278	mg/L	0.00552	1.256	mg/L	0.0110	0.88%
Ca 317.933†	368972.4	36.98	mg/L	0.149	73.95	mg/L	0.298	0.40%
Cd 228.802†	22783.9	0.9990	mg/L	0.00817	1.998	mg/L	0.0163	0.82%
Co 228.616†	70016.8	2.283	mg/L	0.0088	4.567	mg/L	0.0177	0.39%
Cr 267.716†	5655.1	0.6871	mg/L	0.00190	1.374	mg/L	0.0038	0.28%
Cu 324.752†	224505.5	0.8892	mg/L	0.00358	1.778	mg/L	0.0072	0.40%
Fe 273.955†	75471.5	62.81	mg/L	0.064	125.6	mg/L	0.13	0.10%
K 766.490†	99079.4	48.51	mg/L	0.148	97.01	mg/L	0.296	0.31%
Mg 279.077†	16970.0	18.32	mg/L	0.092	36.65	mg/L	0.185	0.50%
Mn 257.610†	227067.4	4.468	mg/L	0.0045	8.935	mg/L	0.0091	0.10%
Mo 202.031†	10640.6	0.5810	mg/L	0.00179	1.162	mg/L	0.0036	0.31%
Na 589.592†	314117.9	27.65	mg/L	0.379	55.30	mg/L	0.759	1.37%
Na 330.237†	887.5	26.83	mg/L	0.396	53.65	mg/L	0.793	1.48%
Ni 231.604†	10950.8	3.251	mg/L	0.0141	6.502	mg/L	0.0283	0.43%
Pb 220.353†	26035.4	3.364	mg/L	0.0118	6.728	mg/L	0.0236	0.35%
Sb 206.836†	830.0	0.3202	mg/L	0.00641	0.6404	mg/L	0.01283	2.00%
Se 196.026†	1301.1	0.8422	mg/L	0.00328	1.684	mg/L	0.0066	0.39%
Si 288.158†	2557.4	1.870	mg/L	0.0085	3.741	mg/L	0.0169	0.45%
Sn 189.927†	4854.5	0.9847	mg/L	0.00414	1.969	mg/L	0.0083	0.42%
Sr 421.552†	2642897.9	2.924	mg/L	0.0284	5.849	mg/L	0.0567	0.97%
Ti 334.903†	5236.8	0.2025	mg/L	0.00088	0.4049	mg/L	0.00175	0.43%
Tl 190.801†	1280.6	0.7444	mg/L	0.00490	1.489	mg/L	0.0098	0.66%
V 292.402†	104596.7	0.7628	mg/L	0.00462	1.526	mg/L	0.0092	0.61%
Zn 206.200†	17495.2	4.411	mg/L	0.0244	8.822	mg/L	0.0489	0.55%

Sequence No.: 25
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 4/29/2013 10:47:33 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2683304.8	103.1	%	0.79				0.77%
ScR 361.383	379393.2	101.5	%	0.98				0.96%
Ag 328.068†	222338.8	1.016	mg/L	0.0071	1.016	mg/L	0.0071	0.70%
Al 308.215†	2314.8	2.004	mg/L	0.0348	2.004	mg/L	0.0348	1.73%
As 188.979†	2666.9	1.991	mg/L	0.0225	1.991	mg/L	0.0225	1.13%
B 249.677†	6087.7	1.013	mg/L	0.0104	1.013	mg/L	0.0104	1.02%
Ba 233.527†	5875.7	1.060	mg/L	0.0170	1.060	mg/L	0.0170	1.60%
Be 313.042†	555002.0	0.9741	mg/L	0.01516	0.9741	mg/L	0.01516	1.56%
Ca 317.933†	20223.4	2.027	mg/L	0.0213	2.027	mg/L	0.0213	1.05%
Cd 228.802†	23362.4	1.018	mg/L	0.0105	1.018	mg/L	0.0105	1.03%
Co 228.616†	31028.1	1.011	mg/L	0.0108	1.011	mg/L	0.0108	1.07%
Cr 267.716†	8516.1	1.036	mg/L	0.0102	1.036	mg/L	0.0102	0.99%
Cu 324.752†	251480.2	0.9922	mg/L	0.00676	0.9922	mg/L	0.00676	0.68%
Fe 273.955†	2380.6	1.976	mg/L	0.0162	1.976	mg/L	0.0162	0.82%
K 766.490†	39804.2	19.49	mg/L	0.274	19.49	mg/L	0.274	1.40%
Mg 279.077†	1815.9	1.970	mg/L	0.0256	1.970	mg/L	0.0256	1.30%
Mn 257.610†	47963.1	0.9440	mg/L	0.01466	0.9440	mg/L	0.01466	1.55%
Mo 202.031†	18125.3	0.9903	mg/L	0.01066	0.9903	mg/L	0.01066	1.08%
Na 589.592†	574168.5	50.54	mg/L	0.667	50.54	mg/L	0.667	1.32%
Na 330.237†	1594.2	50.42	mg/L	0.630	50.42	mg/L	0.630	1.25%
Ni 231.604†	3496.5	1.038	mg/L	0.0099	1.038	mg/L	0.0099	0.96%
Pb 220.353†	15461.3	1.985	mg/L	0.0220	1.985	mg/L	0.0220	1.11%
Sb 206.836†	5321.7	2.044	mg/L	0.0235	2.044	mg/L	0.0235	1.15%
Se 196.026†	2981.3	1.958	mg/L	0.0150	1.958	mg/L	0.0150	0.77%
Si 288.158†	2700.0	1.973	mg/L	0.0277	1.973	mg/L	0.0277	1.40%
Sn 189.927†	4763.7	0.9645	mg/L	0.01092	0.9645	mg/L	0.01092	1.13%
Sr 421.552†	897768.8	0.9934	mg/L	0.01432	0.9934	mg/L	0.01432	1.44%
Ti 334.903†	25425.3	0.9959	mg/L	0.01457	0.9959	mg/L	0.01457	1.46%
Tl 190.801†	3560.3	2.082	mg/L	0.0286	2.082	mg/L	0.0286	1.37%
V 292.402†	133069.2	0.9741	mg/L	0.00732	0.9741	mg/L	0.00732	0.75%
Zn 206.200†	3997.1	1.008	mg/L	0.0096	1.008	mg/L	0.0096	0.96%

Sequence No.: 26
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 4/29/2013 10:51:22 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2720940.0	104.5	%	0.83				0.79%
ScR 361.383	387530.5	103.7	%	0.78				0.76%
Ag 328.068†	48.0	0.00022	mg/L	0.000288	0.00022	mg/L	0.000288	131.00%
Al 308.215†	5.5	0.00484	mg/L	0.003496	0.00484	mg/L	0.003496	72.30%
As 188.979†	3.9	0.00288	mg/L	0.003074	0.00288	mg/L	0.003074	106.87%
B 249.677†	10.2	0.00170	mg/L	0.000855	0.00170	mg/L	0.000855	50.41%
Ba 233.527†	2.7	0.00048	mg/L	0.000538	0.00048	mg/L	0.000538	111.13%
Be 313.042†	33.0	0.00006	mg/L	0.000057	0.00006	mg/L	0.000057	98.54%
Ca 317.933†	5.5	0.00055	mg/L	0.000391	0.00055	mg/L	0.000391	71.15%
Cd 228.802†	11.8	0.00050	mg/L	0.000141	0.00050	mg/L	0.000141	27.98%
Co 228.616†	9.3	0.00030	mg/L	0.000191	0.00030	mg/L	0.000191	63.00%
Cr 267.716†	3.7	0.00045	mg/L	0.000510	0.00045	mg/L	0.000510	113.16%
Cu 324.752†	132.1	0.00052	mg/L	0.000212	0.00052	mg/L	0.000212	40.71%
Fe 273.955†	3.5	0.00289	mg/L	0.000485	0.00289	mg/L	0.000485	16.76%
K 766.490†	26.4	0.01293	mg/L	0.012417	0.01293	mg/L	0.012417	96.06%
Mg 279.077†	-7.5	-0.00816	mg/L	0.006298	-0.00816	mg/L	0.006298	77.17%
Mn 257.610†	4.3	0.00008	mg/L	0.000105	0.00008	mg/L	0.000105	125.25%
Mo 202.031†	15.6	0.00085	mg/L	0.000118	0.00085	mg/L	0.000118	13.82%
Na 589.592†	222.6	0.01960	mg/L	0.002721	0.01960	mg/L	0.002721	13.89%
Na 330.237†	-8.9	-0.2830	mg/L	0.07351	-0.2830	mg/L	0.07351	25.98%
Ni 231.604†	0.0	0.00001	mg/L	0.000993	0.00001	mg/L	0.000993	>999.9%
Pb 220.353†	6.0	0.00077	mg/L	0.000558	0.00077	mg/L	0.000558	72.68%
Sb 206.836†	3.4	0.00130	mg/L	0.001163	0.00130	mg/L	0.001163	89.61%
Se 196.026†	6.5	0.00427	mg/L	0.003624	0.00427	mg/L	0.003624	84.96%
Si 288.158†	-0.7	-0.00051	mg/L	0.003011	-0.00051	mg/L	0.003011	594.29%
Sn 189.927†	2.7	0.00054	mg/L	0.000457	0.00054	mg/L	0.000457	84.53%
Sr 421.552†	96.9	0.00011	mg/L	0.000020	0.00011	mg/L	0.000020	18.38%
Ti 334.903†	11.6	0.00046	mg/L	0.000343	0.00046	mg/L	0.000343	75.35%
Tl 190.801†	2.5	0.00145	mg/L	0.000894	0.00145	mg/L	0.000894	61.41%
V 292.402†	37.9	0.00028	mg/L	0.000322	0.00028	mg/L	0.000322	115.73%
Zn 206.200†	-0.7	-0.00017	mg/L	0.000544	-0.00017	mg/L	0.000544	311.29%

Sequence No.: 27
Sample ID: WN07 MB1 TWC

Autosampler Location: 319
Date Collected: 4/29/2013 10:55:38 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN07 MB1 TWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 MB1 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2743448.0	105.4	%	0.55				0.52%
ScR 361.383	390639.5	104.5	%	1.26				1.20%
Ag 328.068†	53.2	0.00024	mg/L	0.000120	0.00024	mg/L	0.000120	49.35%
Al 308.215†	10.6	0.00931	mg/L	0.007511	0.00931	mg/L	0.007511	80.64%
As 188.979†	0.3	0.00021	mg/L	0.000956	0.00021	mg/L	0.000956	461.03%
B 249.677†	0.7	0.00011	mg/L	0.000721	0.00011	mg/L	0.000721	652.93%
Ba 233.527†	0.4	0.00008	mg/L	0.000560	0.00008	mg/L	0.000560	742.15%
Be 313.042†	-25.4	-0.00004	mg/L	0.000029	-0.00004	mg/L	0.000029	65.48%
Ca 317.933†	53.0	0.00531	mg/L	0.001047	0.00531	mg/L	0.001047	19.70%
Cd 228.802†	9.3	0.00041	mg/L	0.000085	0.00041	mg/L	0.000085	20.90%
Co 228.616†	5.0	0.00016	mg/L	0.000122	0.00016	mg/L	0.000122	74.83%
Cr 267.716†	1.0	0.00012	mg/L	0.000967	0.00012	mg/L	0.000967	774.48%
Cu 324.752†	175.2	0.00069	mg/L	0.000034	0.00069	mg/L	0.000034	4.90%
Fe 273.955†	3.0	0.00251	mg/L	0.002115	0.00251	mg/L	0.002115	84.44%
K 766.490†	1.8	0.00091	mg/L	0.026597	0.00091	mg/L	0.026597	>999.9%
Mg 279.077†	-6.0	-0.00650	mg/L	0.005165	-0.00650	mg/L	0.005165	79.50%
Mn 257.610†	2.1	0.00004	mg/L	0.000082	0.00004	mg/L	0.000082	202.43%
Mo 202.031†	8.9	0.00049	mg/L	0.000355	0.00049	mg/L	0.000355	72.81%
Na 589.592†	5.6	0.00049	mg/L	0.001021	0.00049	mg/L	0.001021	207.53%
Na 330.237†	-10.0	-0.3170	mg/L	0.08973	-0.3170	mg/L	0.08973	28.31%
Ni 231.604†	2.1	0.00063	mg/L	0.000807	0.00063	mg/L	0.000807	127.93%
Pb 220.353†	6.0	0.00077	mg/L	0.000581	0.00077	mg/L	0.000581	75.43%
Sb 206.836†	-0.8	-0.00029	mg/L	0.002450	-0.00029	mg/L	0.002450	831.79%
Se 196.026†	6.7	0.00438	mg/L	0.004598	0.00438	mg/L	0.004598	104.87%
Si 288.158†	98.3	0.07204	mg/L	0.002401	0.07204	mg/L	0.002401	3.33%
Sn 189.927†	0.4	0.00009	mg/L	0.000524	0.00009	mg/L	0.000524	582.66%
Sr 421.552†	-29.8	-0.00003	mg/L	0.000017	-0.00003	mg/L	0.000017	52.97%
Ti 334.903†	11.7	0.00046	mg/L	0.000346	0.00046	mg/L	0.000346	75.81%
Tl 190.801†	-2.8	-0.00167	mg/L	0.001635	-0.00167	mg/L	0.001635	97.92%
V 292.402†	11.1	0.00008	mg/L	0.000151	0.00008	mg/L	0.000151	186.09%
Zn 206.200†	-1.8	-0.00044	mg/L	0.000624	-0.00044	mg/L	0.000624	142.49%

Sequence No.: 28
Sample ID: WN07 MB2 LEN

Autosampler Location: 320
Date Collected: 4/29/2013 10:59:55 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN07 MB2 LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 MB2 LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2649786.6	101.8	%	0.77				0.76%
ScR 361.383	386592.7	103.4	%	0.25				0.25%
Ag 328.068†	31.1	0.00014	mg/L	0.000215	0.00071	mg/L	0.001076	150.64%
Al 308.215†	9.5	0.00832	mg/L	0.005010	0.04161	mg/L	0.025052	60.21%
As 188.979†	1.9	0.00143	mg/L	0.001979	0.00713	mg/L	0.009894	138.76%
B 249.677†	118.6	0.01976	mg/L	0.000805	0.09879	mg/L	0.004027	4.08%
Ba 233.527†	108.7	0.01960	mg/L	0.000045	0.09800	mg/L	0.000225	0.23%
Be 313.042†	-19.6	-0.00003	mg/L	0.000017	-0.00017	mg/L	0.000083	48.40%
Ca 317.933†	1045.8	0.1048	mg/L	0.00073	0.5240	mg/L	0.00365	0.70%
Cd 228.802†	11.3	0.00049	mg/L	0.000119	0.00247	mg/L	0.000597	24.15%
Co 228.616†	5.7	0.00018	mg/L	0.000039	0.00092	mg/L	0.000196	21.38%
Cr 267.716†	1.2	0.00015	mg/L	0.000969	0.00073	mg/L	0.004845	661.75%
Cu 324.752†	256.3	0.00101	mg/L	0.000214	0.00506	mg/L	0.001069	21.13%
Fe 273.955†	3.4	0.00280	mg/L	0.000857	0.01402	mg/L	0.004284	30.56%
K 766.490†	75.5	0.03698	mg/L	0.011793	0.1849	mg/L	0.05897	31.89%
Mg 279.077†	14.9	0.01613	mg/L	0.006299	0.08066	mg/L	0.031496	39.05%
Mn 257.610†	3.8	0.00007	mg/L	0.000060	0.00037	mg/L	0.000298	79.67%
Mo 202.031†	3.9	0.00021	mg/L	0.000281	0.00106	mg/L	0.001404	132.25%
Na 589.592†	3281644.1	288.8	mg/L	1.48	1444	mg/L	7.38	0.51%
Na 330.237†	9168.5	290.1	mg/L	1.41	1450	mg/L	7.03	0.48%
Ni 231.604†	10.9	0.00323	mg/L	0.000123	0.01614	mg/L	0.000615	3.81%
Pb 220.353†	2.1	0.00027	mg/L	0.000629	0.00134	mg/L	0.003147	235.51%
Sb 206.836†	-6.5	-0.00249	mg/L	0.001679	-0.01245	mg/L	0.008396	67.43%
Se 196.026†	7.1	0.00468	mg/L	0.001422	0.02341	mg/L	0.007112	30.38%
Si 288.158†	41.7	0.03052	mg/L	0.002543	0.1526	mg/L	0.01271	8.33%
Sn 189.927†	-1.1	-0.00021	mg/L	0.000632	-0.00103	mg/L	0.003162	308.31%
Sr 421.552†	207.9	0.00023	mg/L	0.000005	0.00115	mg/L	0.000026	2.23%
Ti 334.903†	11.4	0.00044	mg/L	0.000924	0.00220	mg/L	0.004619	209.68%
Tl 190.801†	-3.8	-0.00222	mg/L	0.001065	-0.01112	mg/L	0.005323	47.87%
V 292.402†	1.9	0.00001	mg/L	0.000069	0.00007	mg/L	0.000344	481.23%
Zn 206.200†	54.3	0.01370	mg/L	0.000198	0.06849	mg/L	0.000989	1.44%

Sequence No.: 29
Sample ID: WN07 WDUP LEN

Autosampler Location: 321
Date Collected: 4/29/2013 11:04:28 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN07 WDUP LEN

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN07 WDUP LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2639051.2	101.4	%	0.18				0.18%
ScR 361.383	384694.9	102.9	%	0.70				0.68%
Ag 328.068†	-36.1	-0.00014	mg/L	0.000104	-0.00068	mg/L	0.000522	76.80%
Al 308.215†	118.3	0.1041	mg/L	0.00339	0.5204	mg/L	0.01695	3.26%
As 188.979†	11.3	0.00794	mg/L	0.003320	0.03968	mg/L	0.016599	41.83%
B 249.677†	56.7	0.00944	mg/L	0.000207	0.04722	mg/L	0.001034	2.19%
Ba 233.527†	1036.1	0.1864	mg/L	0.00118	0.9321	mg/L	0.00592	0.63%
Be 313.042†	29.1	0.00005	mg/L	0.000005	0.00025	mg/L	0.000024	9.26%
Ca 317.933†	43851.2	4.395	mg/L	0.0315	21.97	mg/L	0.157	0.72%
Cd 228.802†	33.0	0.00142	mg/L	0.000039	0.00710	mg/L	0.000194	2.73%
Co 228.616†	112.4	0.00364	mg/L	0.000085	0.01822	mg/L	0.000425	2.33%
Cr 267.716†	8.8	0.00107	mg/L	0.000030	0.00534	mg/L	0.000150	2.81%
Cu 324.752†	277.8	0.00125	mg/L	0.000124	0.00627	mg/L	0.000620	9.89%
Fe 273.955†	3868.2	3.220	mg/L	0.0276	16.10	mg/L	0.138	0.86%
K 766.490†	446.2	0.2184	mg/L	0.01983	1.092	mg/L	0.0992	9.08%
Mg 279.077†	289.4	0.3107	mg/L	0.00295	1.554	mg/L	0.0147	0.95%
Mn 257.610†	8396.9	0.1652	mg/L	0.00152	0.8260	mg/L	0.00758	0.92%
Mo 202.031†	19.7	0.00103	mg/L	0.000143	0.00513	mg/L	0.000717	14.00%
Na 589.592†	3186455.1	280.5	mg/L	1.89	1402	mg/L	9.47	0.67%
Na 330.237†	8689.2	274.7	mg/L	1.38	1374	mg/L	6.91	0.50%
Ni 231.604†	48.4	0.01438	mg/L	0.001323	0.07190	mg/L	0.006617	9.20%
Pb 220.353†	415.0	0.05312	mg/L	0.000262	0.2656	mg/L	0.00131	0.49%
Sb 206.836†	4.5	0.00173	mg/L	0.000174	0.00864	mg/L	0.000871	10.07%
Se 196.026†	8.4	0.00548	mg/L	0.003275	0.02742	mg/L	0.016375	59.71%
Si 288.158†	421.2	0.3086	mg/L	0.00405	1.543	mg/L	0.0203	1.31%
Sn 189.927†	-5.2	-0.00067	mg/L	0.000721	-0.00337	mg/L	0.003603	106.83%
Sr 421.552†	150930.3	0.1670	mg/L	0.00108	0.8350	mg/L	0.00539	0.65%
Ti 334.903†	23.1	0.00064	mg/L	0.000157	0.00322	mg/L	0.000785	24.40%
Tl 190.801†	3.0	0.00217	mg/L	0.001230	0.01087	mg/L	0.006148	56.54%
V 292.402†	115.3	0.00071	mg/L	0.000117	0.00354	mg/L	0.000583	16.45%
Zn 206.200†	2278.1	0.5743	mg/L	0.00466	2.872	mg/L	0.0233	0.81%

Sequence No.: 30
Sample ID: WN07 W LEN

Autosampler Location: 322
Date Collected: 4/29/2013 11:08:46 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN07 W LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 W LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2633515.0	101.2	%	0.16				0.16%
ScR 361.383	382926.2	102.5	%	0.62				0.61%
Ag 328.068†	24.7	0.00014	mg/L	0.000208	0.00071	mg/L	0.001038	146.79%
Al 308.215†	122.9	0.1081	mg/L	0.00481	0.5406	mg/L	0.02407	4.45%
As 188.979†	11.9	0.00834	mg/L	0.000912	0.04172	mg/L	0.004559	10.93%
B 249.677†	58.1	0.00968	mg/L	0.000862	0.04838	mg/L	0.004309	8.91%
Ba 233.527†	1052.7	0.1894	mg/L	0.00076	0.9471	mg/L	0.00379	0.40%
Be 313.042†	29.7	0.00005	mg/L	0.000011	0.00026	mg/L	0.000053	20.35%
Ca 317.933†	43920.2	4.401	mg/L	0.0142	22.01	mg/L	0.071	0.32%
Cd 228.802†	37.2	0.00160	mg/L	0.000070	0.00801	mg/L	0.000350	4.37%
Co 228.616†	108.6	0.00352	mg/L	0.000040	0.01760	mg/L	0.000199	1.13%
Cr 267.716†	8.4	0.00102	mg/L	0.000803	0.00512	mg/L	0.004014	78.46%
Cu 324.752†	282.7	0.00127	mg/L	0.000069	0.00637	mg/L	0.000347	5.45%
Fe 273.955†	3907.6	3.252	mg/L	0.0283	16.26	mg/L	0.141	0.87%
K 766.490†	419.4	0.2053	mg/L	0.01360	1.027	mg/L	0.0680	6.62%
Mg 279.077†	292.9	0.3145	mg/L	0.00175	1.572	mg/L	0.0087	0.56%
Mn 257.610†	8430.2	0.1659	mg/L	0.00100	0.8293	mg/L	0.00499	0.60%
Mo 202.031†	17.5	0.00091	mg/L	0.000101	0.00453	mg/L	0.000506	11.16%
Na 589.592†	3225850.5	283.9	mg/L	1.42	1420	mg/L	7.08	0.50%
Na 330.237†	8727.1	275.9	mg/L	0.49	1380	mg/L	2.44	0.18%
Ni 231.604†	52.2	0.01550	mg/L	0.001623	0.07748	mg/L	0.008114	10.47%
Pb 220.353†	420.6	0.05384	mg/L	0.000317	0.2692	mg/L	0.00158	0.59%
Sb 206.836†	-4.4	-0.00173	mg/L	0.000375	-0.00864	mg/L	0.001874	21.69%
Se 196.026†	7.4	0.00482	mg/L	0.003578	0.02408	mg/L	0.017889	74.29%
Si 288.158†	425.6	0.3118	mg/L	0.00415	1.559	mg/L	0.0208	1.33%
Sn 189.927†	-8.4	-0.00133	mg/L	0.000632	-0.00664	mg/L	0.003158	47.53%
Sr 421.552†	151678.2	0.1678	mg/L	0.00089	0.8392	mg/L	0.00443	0.53%
Ti 334.903†	23.3	0.00065	mg/L	0.000243	0.00325	mg/L	0.001216	37.36%
Tl 190.801†	0.8	0.00089	mg/L	0.002081	0.00445	mg/L	0.010406	233.79%
V 292.402†	121.3	0.00075	mg/L	0.000093	0.00375	mg/L	0.000467	12.44%
Zn 206.200†	2304.4	0.5810	mg/L	0.00323	2.905	mg/L	0.0162	0.56%

Sequence No.: 31
Sample ID: WN07 WSPK LEN

Autosampler Location: 323
Date Collected: 4/29/2013 11:13:04 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN07 WSPK LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 WSPK LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2636425.0	101.3	%	0.69				0.68%
ScR 361.383	384387.6	102.9	%	0.57				0.55%
Ag 328.068†	46091.1	0.2106	mg/L	0.00067	1.053	mg/L	0.0034	0.32%
Al 308.215†	1041.8	0.9141	mg/L	0.00483	4.570	mg/L	0.0242	0.53%
As 188.979†	1139.9	0.8374	mg/L	0.00513	4.187	mg/L	0.0257	0.61%
B 249.677†	62.0	0.00986	mg/L	0.000336	0.04930	mg/L	0.001678	3.40%
Ba 233.527†	5707.0	1.029	mg/L	0.0090	5.144	mg/L	0.0448	0.87%
Be 313.042†	106825.1	0.1875	mg/L	0.00071	0.9374	mg/L	0.00353	0.38%
Ca 317.933†	82597.2	8.278	mg/L	0.0404	41.39	mg/L	0.202	0.49%
Cd 228.802†	4745.0	0.2043	mg/L	0.00117	1.022	mg/L	0.0059	0.57%
Co 228.616†	6059.7	0.1976	mg/L	0.00059	0.9881	mg/L	0.00297	0.30%
Cr 267.716†	1682.1	0.2042	mg/L	0.00115	1.021	mg/L	0.0057	0.56%
Cu 324.752†	50730.6	0.2004	mg/L	0.00017	1.002	mg/L	0.0008	0.08%
Fe 273.955†	4861.1	4.045	mg/L	0.0163	20.22	mg/L	0.082	0.40%
K 766.490†	8314.9	4.071	mg/L	0.0092	20.35	mg/L	0.046	0.23%
Mg 279.077†	3938.1	4.257	mg/L	0.0308	21.28	mg/L	0.154	0.72%
Mn 257.610†	17907.3	0.3524	mg/L	0.00108	1.762	mg/L	0.0054	0.31%
Mo 202.031†	31.9	0.00164	mg/L	0.000203	0.00818	mg/L	0.001015	12.41%
Na 589.592†	3274742.7	288.2	mg/L	1.23	1441	mg/L	6.13	0.43%
Na 330.237†	8900.6	281.4	mg/L	0.52	1407	mg/L	2.61	0.19%
Ni 231.604†	730.2	0.2165	mg/L	0.00059	1.082	mg/L	0.0029	0.27%
Pb 220.353†	6435.4	0.8260	mg/L	0.00309	4.130	mg/L	0.0155	0.37%
Sb 206.836†	2.3	-0.00118	mg/L	0.000972	-0.00590	mg/L	0.004859	82.37%
Se 196.026†	1262.2	0.8290	mg/L	0.00499	4.145	mg/L	0.0249	0.60%
Si 288.158†	422.6	0.3108	mg/L	0.00278	1.554	mg/L	0.0139	0.89%
Sn 189.927†	-14.9	-0.00232	mg/L	0.000684	-0.01162	mg/L	0.003418	29.42%
Sr 421.552†	329102.8	0.3642	mg/L	0.00098	1.821	mg/L	0.0049	0.27%
Ti 334.903†	32.6	0.00075	mg/L	0.000179	0.00373	mg/L	0.000897	24.03%
Tl 190.801†	1358.2	0.7960	mg/L	0.00415	3.980	mg/L	0.0207	0.52%
V 292.402†	27010.8	0.1975	mg/L	0.00051	0.9877	mg/L	0.00257	0.26%
Zn 206.200†	3093.5	0.7800	mg/L	0.00412	3.900	mg/L	0.0206	0.53%

Sequence No.: 32
Sample ID: WN07 TDUP TWC

Autosampler Location: 324
Date Collected: 4/29/2013 11:17:23 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN07 TDUP TWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 TDUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2642326.7	101.5	%	0.45				0.44%
ScR 361.383	378381.2	101.2	%	0.12				0.12%
Ag 328.068†	-19.3	0.00017	mg/L	0.000196	0.00017	mg/L	0.000196	115.02%
Al 308.215†	1135.4	0.9991	mg/L	0.00603	0.9991	mg/L	0.00603	0.60%
As 188.979†	1200.0	0.8798	mg/L	0.00292	0.8798	mg/L	0.00292	0.33%
B 249.677†	1645.8	0.2741	mg/L	0.00113	0.2741	mg/L	0.00113	0.41%
Ba 233.527†	921.4	0.1652	mg/L	0.00177	0.1652	mg/L	0.00177	1.07%
Be 313.042†	53.0	0.00009	mg/L	0.000012	0.00009	mg/L	0.000012	13.07%
Ca 317.933†	397586.9	39.84	mg/L	0.114	39.84	mg/L	0.114	0.29%
Cd 228.802†	109.4	-0.00011	mg/L	0.000229	-0.00011	mg/L	0.000229	200.62%
Co 228.616†	138.3	0.00444	mg/L	0.000121	0.00444	mg/L	0.000121	2.72%
Cr 267.716†	27.0	0.00213	mg/L	0.000246	0.00213	mg/L	0.000246	11.53%
Cu 324.752†	611.8	0.00269	mg/L	0.000147	0.00269	mg/L	0.000147	5.48%
Fe 273.955†	7981.0	6.643	mg/L	0.0342	6.643	mg/L	0.0342	0.51%
K 766.490†	6535.0	3.199	mg/L	0.0054	3.199	mg/L	0.0054	0.17%
Mg 279.077†	7507.4	8.112	mg/L	0.0016	8.112	mg/L	0.0016	0.02%
Mn 257.610†	57204.4	1.125	mg/L	0.0036	1.125	mg/L	0.0036	0.32%
Mo 202.031†	133.1	0.00680	mg/L	0.000249	0.00680	mg/L	0.000249	3.66%
Na 589.592†	1238625.2	109.0	mg/L	0.49	109.0	mg/L	0.49	0.45%
Na 330.237†	3396.3	107.3	mg/L	0.43	107.3	mg/L	0.43	0.40%
Ni 231.604†	29.6	0.00879	mg/L	0.000538	0.00879	mg/L	0.000538	6.12%
Pb 220.353†	0.1	-0.00007	mg/L	0.000414	-0.00007	mg/L	0.000414	563.74%
Sb 206.836†	10.4	0.00393	mg/L	0.002122	0.00393	mg/L	0.002122	53.97%
Se 196.026†	3.9	0.00241	mg/L	0.001304	0.00241	mg/L	0.001304	54.00%
Si 288.158†	24429.6	17.90	mg/L	0.115	17.90	mg/L	0.115	0.64%
Sn 189.927†	-40.0	-0.00475	mg/L	0.001207	-0.00475	mg/L	0.001207	25.41%
Sr 421.552†	769033.4	0.8510	mg/L	0.00439	0.8510	mg/L	0.00439	0.52%
Ti 334.903†	842.0	0.03065	mg/L	0.000221	0.03065	mg/L	0.000221	0.72%
Tl 190.801†	16.9	0.01077	mg/L	0.001350	0.01077	mg/L	0.001350	12.54%
V 292.402†	531.0	0.00371	mg/L	0.000036	0.00371	mg/L	0.000036	0.96%
Zn 206.200†	1824.5	0.4630	mg/L	0.00309	0.4630	mg/L	0.00309	0.67%

Sequence No.: 33
Sample ID: WN07 T TWC

Autosampler Location: 325
Date Collected: 4/29/2013 11:21:39 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN07 T TWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 T TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2664856.2	102.4	%	0.33				0.32%
ScR 361.383	377616.2	101.0	%	0.26				0.26%
Ag 328.068†	-10.8	0.00021	mg/L	0.000221	0.00021	mg/L	0.000221	106.29%
Al 308.215†	1124.3	0.9894	mg/L	0.00446	0.9894	mg/L	0.00446	0.45%
As 188.979†	1182.5	0.8669	mg/L	0.00356	0.8669	mg/L	0.00356	0.41%
B 249.677†	1618.3	0.2695	mg/L	0.00079	0.2695	mg/L	0.00079	0.29%
Ba 233.527†	902.0	0.1617	mg/L	0.00173	0.1617	mg/L	0.00173	1.07%
Be 313.042†	37.0	0.00006	mg/L	0.000020	0.00006	mg/L	0.000020	31.67%
Ca 317.933†	394851.0	39.57	mg/L	0.396	39.57	mg/L	0.396	1.00%
Cd 228.802†	103.6	-0.00030	mg/L	0.000133	-0.00030	mg/L	0.000133	44.62%
Co 228.616†	130.5	0.00418	mg/L	0.000165	0.00418	mg/L	0.000165	3.94%
Cr 267.716†	22.1	0.00153	mg/L	0.000107	0.00153	mg/L	0.000107	7.04%
Cu 324.752†	592.7	0.00262	mg/L	0.000061	0.00262	mg/L	0.000061	2.32%
Fe 273.955†	8243.8	6.861	mg/L	0.0055	6.861	mg/L	0.0055	0.08%
K 766.490†	6402.8	3.135	mg/L	0.0079	3.135	mg/L	0.0079	0.25%
Mg 279.077†	7719.6	8.342	mg/L	0.0334	8.342	mg/L	0.0334	0.40%
Mn 257.610†	56118.5	1.104	mg/L	0.0096	1.104	mg/L	0.0096	0.87%
Mo 202.031†	127.4	0.00649	mg/L	0.000208	0.00649	mg/L	0.000208	3.20%
Na 589.592†	1235153.1	108.7	mg/L	0.57	108.7	mg/L	0.57	0.52%
Na 330.237†	3457.2	109.3	mg/L	0.24	109.3	mg/L	0.24	0.22%
Ni 231.604†	26.4	0.00783	mg/L	0.000327	0.00783	mg/L	0.000327	4.18%
Pb 220.353†	2.9	0.00027	mg/L	0.000134	0.00027	mg/L	0.000134	49.75%
Sb 206.836†	11.0	0.00417	mg/L	0.001441	0.00417	mg/L	0.001441	34.51%
Se 196.026†	2.4	0.00149	mg/L	0.005180	0.00149	mg/L	0.005180	348.30%
Si 288.158†	25316.3	18.55	mg/L	0.124	18.55	mg/L	0.124	0.67%
Sn 189.927†	-43.9	-0.00554	mg/L	0.000367	-0.00554	mg/L	0.000367	6.62%
Sr 421.552†	770332.2	0.8524	mg/L	0.00352	0.8524	mg/L	0.00352	0.41%
Ti 334.903†	844.5	0.03076	mg/L	0.000357	0.03076	mg/L	0.000357	1.16%
Tl 190.801†	18.1	0.01153	mg/L	0.001413	0.01153	mg/L	0.001413	12.26%
V 292.402†	518.9	0.00360	mg/L	0.000028	0.00360	mg/L	0.000028	0.79%
Zn 206.200†	1791.3	0.4547	mg/L	0.00194	0.4547	mg/L	0.00194	0.43%

Sequence No.: 34
Sample ID: WN07 TSPK TWC

Autosampler Location: 326
Date Collected: 4/29/2013 11:25:55 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN07 TSPK TWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 TSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2632840.6	101.1	%	0.42				0.42%
ScR 361.383	383915.2	102.7	%	0.69				0.67%
Ag 328.068†	120572.2	0.5512	mg/L	0.00285	0.5512	mg/L	0.00285	0.52%
Al 308.215†	3425.8	3.008	mg/L	0.0249	3.008	mg/L	0.0249	0.83%
As 188.979†	4168.3	3.061	mg/L	0.0094	3.061	mg/L	0.0094	0.31%
B 249.677†	1602.9	0.2658	mg/L	0.00278	0.2658	mg/L	0.00278	1.04%
Ba 233.527†	12875.5	2.321	mg/L	0.0234	2.321	mg/L	0.0234	1.01%
Be 313.042†	285273.8	0.5007	mg/L	0.00259	0.5007	mg/L	0.00259	0.52%
Ca 317.933†	508951.2	51.00	mg/L	0.129	51.00	mg/L	0.129	0.25%
Cd 228.802†	12160.7	0.5185	mg/L	0.00202	0.5185	mg/L	0.00202	0.39%
Co 228.616†	15532.4	0.5065	mg/L	0.00267	0.5065	mg/L	0.00267	0.53%
Cr 267.716†	4270.7	0.5172	mg/L	0.00424	0.5172	mg/L	0.00424	0.82%
Cu 324.752†	133298.6	0.5265	mg/L	0.00265	0.5265	mg/L	0.00265	0.50%
Fe 273.955†	10599.8	8.819	mg/L	0.0580	8.819	mg/L	0.0580	0.66%
K 766.490†	26910.8	13.17	mg/L	0.159	13.17	mg/L	0.159	1.21%
Mg 279.077†	17262.8	18.66	mg/L	0.145	18.66	mg/L	0.145	0.78%
Mn 257.610†	81601.1	1.606	mg/L	0.0048	1.606	mg/L	0.0048	0.30%
Mo 202.031†	143.8	0.00723	mg/L	0.000310	0.00723	mg/L	0.000310	4.28%
Na 589.592†	1374288.3	121.0	mg/L	0.82	121.0	mg/L	0.82	0.68%
Na 330.237†	3817.8	120.5	mg/L	1.05	120.5	mg/L	1.05	0.87%
Ni 231.604†	1754.1	0.5199	mg/L	0.00334	0.5199	mg/L	0.00334	0.64%
Pb 220.353†	15494.0	1.989	mg/L	0.0099	1.989	mg/L	0.0099	0.50%
Sb 206.836†	21.9	0.00322	mg/L	0.001313	0.00322	mg/L	0.001313	40.74%
Se 196.026†	3190.8	2.096	mg/L	0.0122	2.096	mg/L	0.0122	0.58%
Si 288.158†	23349.6	17.11	mg/L	0.153	17.11	mg/L	0.153	0.89%
Sn 189.927†	-48.1	-0.00545	mg/L	0.000447	-0.00545	mg/L	0.000447	8.20%
Sr 421.552†	1239270.4	1.371	mg/L	0.0126	1.371	mg/L	0.0126	0.92%
Ti 334.903†	864.3	0.03076	mg/L	0.000366	0.03076	mg/L	0.000366	1.19%
Tl 190.801†	3560.6	2.087	mg/L	0.0039	2.087	mg/L	0.0039	0.19%
V 292.402†	71021.8	0.5195	mg/L	0.00166	0.5195	mg/L	0.00166	0.32%
Zn 206.200†	3776.9	0.9552	mg/L	0.00722	0.9552	mg/L	0.00722	0.76%

Sequence No.: 35
Sample ID: ~~WN07 TPOST TWC~~ ZZZZZZ
BA 4/29/13
Dilution: 1.000000X

Autosampler Location: 327
Date Collected: 4/29/2013 11:30:13 AM
Data Type: Original

Nebulizer Parameters: WN07 TPOST TWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 TPOST TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2614405.0	100.4	%	0.87				0.86%
ScR 361.383	373061.0	99.82	%	0.196				0.20%
Ag 328.068†	236330.8	1.080	mg/L	0.0070	1.080	mg/L	0.0070	0.65%
Al 308.215†	5798.4	5.089	mg/L	0.0408	5.089	mg/L	0.0408	0.80%
As 188.979†	6996.9	5.140	mg/L	0.0436	5.140	mg/L	0.0436	0.85%
B 249.677†	1613.5	0.2664	mg/L	0.00363	0.2664	mg/L	0.00363	1.36%
Ba 233.527†	24941.2	4.498	mg/L	0.0142	4.498	mg/L	0.0142	0.32%
Be 313.042†	560258.6	0.9833	mg/L	0.00398	0.9833	mg/L	0.00398	0.40%
Ca 317.933†	601502.5	60.28	mg/L	0.171	60.28	mg/L	0.171	0.28%
Cd 228.802†	23838.6	1.021	mg/L	0.0073	1.021	mg/L	0.0073	0.72%
Co 228.616†	30391.4	0.9911	mg/L	0.00829	0.9911	mg/L	0.00829	0.84%
Cr 267.716†	8528.9	1.034	mg/L	0.0049	1.034	mg/L	0.0049	0.47%
Cu 324.752†	262341.9	1.036	mg/L	0.0097	1.036	mg/L	0.0097	0.94%
Fe 273.955†	13031.2	10.84	mg/L	0.070	10.84	mg/L	0.070	0.64%
K 766.490†	47979.8	23.49	mg/L	0.146	23.49	mg/L	0.146	0.62%
Mg 279.077†	26800.6	28.98	mg/L	0.160	28.98	mg/L	0.160	0.55%
Mn 257.610†	106224.1	2.090	mg/L	0.0160	2.090	mg/L	0.0160	0.77%
Mo 202.031†	151.1	0.00749	mg/L	0.000427	0.00749	mg/L	0.000427	5.70%
Na 589.592†	1504659.7	132.4	mg/L	0.63	132.4	mg/L	0.63	0.47%
Na 330.237†	4133.6	130.4	mg/L	1.22	130.4	mg/L	1.22	0.94%
Ni 231.604†	3499.8	1.037	mg/L	0.0036	1.037	mg/L	0.0036	0.35%
Pb 220.353†	30473.9	3.912	mg/L	0.0345	3.912	mg/L	0.0345	0.88%
Sb 206.836†	37.0	0.00387	mg/L	0.001449	0.00387	mg/L	0.001449	37.44%
Se 196.026†	6292.7	4.133	mg/L	0.0373	4.133	mg/L	0.0373	0.90%
Si 288.158†	23586.6	17.29	mg/L	0.116	17.29	mg/L	0.116	0.67%
Sn 189.927†	-57.5	-0.00656	mg/L	0.001337	-0.00656	mg/L	0.001337	20.39%
Sr 421.552†	1713155.6	1.896	mg/L	0.0074	1.896	mg/L	0.0074	0.39%
Ti 334.903†	887.6	0.03102	mg/L	0.000931	0.03102	mg/L	0.000931	3.00%
Tl 190.801†	6922.7	4.056	mg/L	0.0333	4.056	mg/L	0.0333	0.82%
V 292.402†	139893.6	1.024	mg/L	0.0062	1.024	mg/L	0.0062	0.61%
Zn 206.200†	5770.7	1.458	mg/L	0.0052	1.458	mg/L	0.0052	0.35%

Sequence No.: 36
Sample ID: WN07 MB1SPK TWC

Autosampler Location: 328
Date Collected: 4/29/2013 11:33:32 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN07 MB1SPK TWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN07 MB1SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2731184.0	104.9	%	0.52				0.50%
ScR 361.383	384970.8	103.0	%	0.13				0.13%
Ag 328.068†	115410.3	0.5274	mg/L	0.00135	0.5274	mg/L	0.00135	0.26%
Al 308.215†	2322.6	2.037	mg/L	0.0057	2.037	mg/L	0.0057	0.28%
As 188.979†	2741.5	2.015	mg/L	0.0063	2.015	mg/L	0.0063	0.31%
B 249.677†	5.5	-0.00022	mg/L	0.001533	-0.00022	mg/L	0.001533	691.40%
Ba 233.527†	11509.2	2.076	mg/L	0.0214	2.076	mg/L	0.0214	1.03%
Be 313.042†	272505.7	0.4783	mg/L	0.00517	0.4783	mg/L	0.00517	1.08%
Ca 317.933†	95465.1	9.567	mg/L	0.0313	9.567	mg/L	0.0313	0.33%
Cd 228.802†	11454.2	0.4933	mg/L	0.00158	0.4933	mg/L	0.00158	0.32%
Co 228.616†	14911.8	0.4864	mg/L	0.00089	0.4864	mg/L	0.00089	0.18%
Cr 267.716†	4249.2	0.5158	mg/L	0.00289	0.5158	mg/L	0.00289	0.56%
Cu 324.752†	123492.8	0.4875	mg/L	0.00231	0.4875	mg/L	0.00231	0.47%
Fe 273.955†	2378.8	1.977	mg/L	0.0037	1.977	mg/L	0.0037	0.19%
K 766.490†	19781.2	9.684	mg/L	0.0089	9.684	mg/L	0.0089	0.09%
Mg 279.077†	9316.5	10.08	mg/L	0.031	10.08	mg/L	0.031	0.31%
Mn 257.610†	23926.7	0.4711	mg/L	0.00250	0.4711	mg/L	0.00250	0.53%
Mo 202.031†	26.4	0.00130	mg/L	0.000100	0.00130	mg/L	0.000100	7.65%
Na 589.592†	114869.2	10.11	mg/L	0.080	10.11	mg/L	0.080	0.79%
Na 330.237†	316.2	9.859	mg/L	0.1915	9.859	mg/L	0.1915	1.94%
Ni 231.604†	1725.2	0.5113	mg/L	0.00388	0.5113	mg/L	0.00388	0.76%
Pb 220.353†	15153.4	1.945	mg/L	0.0072	1.945	mg/L	0.0072	0.37%
Sb 206.836†	4.3	-0.00356	mg/L	0.001450	-0.00356	mg/L	0.001450	40.74%
Se 196.026†	3009.6	1.977	mg/L	0.0105	1.977	mg/L	0.0105	0.53%
Si 288.158†	109.9	0.08334	mg/L	0.006208	0.08334	mg/L	0.006208	7.45%
Sn 189.927†	-15.5	-0.00234	mg/L	0.000262	-0.00234	mg/L	0.000262	11.20%
Sr 421.552†	446583.7	0.4942	mg/L	0.00248	0.4942	mg/L	0.00248	0.50%
Ti 334.903†	45.5	0.00112	mg/L	0.000235	0.00112	mg/L	0.000235	21.07%
Tl 190.801†	3466.3	2.030	mg/L	0.0132	2.030	mg/L	0.0132	0.65%
V 292.402†	67725.0	0.4957	mg/L	0.00020	0.4957	mg/L	0.00020	0.04%
Zn 206.200†	1950.7	0.4920	mg/L	0.00110	0.4920	mg/L	0.00110	0.22%

Sequence No.: 37
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 4/29/2013 11:37:33 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2707143.6	104.0	%	0.17				0.16%
ScR 361.383	384797.3	103.0	%	0.70				0.68%
Ag 328.068†	227909.0	1.041	mg/L	0.0076	1.041	mg/L	0.0076	0.73%
Al 308.215†	2285.8	1.978	mg/L	0.0133	1.978	mg/L	0.0133	0.67%
As 188.979†	2642.9	1.974	mg/L	0.0051	1.974	mg/L	0.0051	0.26%
B 249.677†	6007.6	0.9995	mg/L	0.00710	0.9995	mg/L	0.00710	0.71%
Ba 233.527†	5791.1	1.044	mg/L	0.0054	1.044	mg/L	0.0054	0.52%
Be 313.042†	553424.9	0.9713	mg/L	0.00183	0.9713	mg/L	0.00183	0.19%
Ca 317.933†	19915.6	1.996	mg/L	0.0083	1.996	mg/L	0.0083	0.42%
Cd 228.802†	23087.4	1.006	mg/L	0.0021	1.006	mg/L	0.0021	0.21%
Co 228.616†	30621.1	0.9975	mg/L	0.00128	0.9975	mg/L	0.00128	0.13%
Cr 267.716†	8416.2	1.023	mg/L	0.0069	1.023	mg/L	0.0069	0.68%
Cu 324.752†	254500.2	1.004	mg/L	0.0043	1.004	mg/L	0.0043	0.43%
Fe 273.955†	2353.0	1.953	mg/L	0.0144	1.953	mg/L	0.0144	0.74%
K 766.490†	39466.2	19.32	mg/L	0.063	19.32	mg/L	0.063	0.33%
Mg 279.077†	1790.6	1.943	mg/L	0.0136	1.943	mg/L	0.0136	0.70%
Mn 257.610†	47750.5	0.9398	mg/L	0.00083	0.9398	mg/L	0.00083	0.09%
Mo 202.031†	17883.2	0.9771	mg/L	0.00306	0.9771	mg/L	0.00306	0.31%
Na 589.592†	571209.3	50.28	mg/L	0.085	50.28	mg/L	0.085	0.17%
Na 330.237†	1579.1	49.94	mg/L	0.149	49.94	mg/L	0.149	0.30%
Ni 231.604†	3432.9	1.019	mg/L	0.0106	1.019	mg/L	0.0106	1.04%
Pb 220.353†	15269.1	1.961	mg/L	0.0051	1.961	mg/L	0.0051	0.26%
Sb 206.836†	5247.6	2.016	mg/L	0.0036	2.016	mg/L	0.0036	0.18%
Se 196.026†	2956.7	1.941	mg/L	0.0038	1.941	mg/L	0.0038	0.19%
Si 288.158†	2690.1	1.966	mg/L	0.0128	1.966	mg/L	0.0128	0.65%
Sn 189.927†	4699.9	0.9516	mg/L	0.00586	0.9516	mg/L	0.00586	0.62%
Sr 421.552†	894657.6	0.9900	mg/L	0.00101	0.9900	mg/L	0.00101	0.10%
Ti 334.903†	25304.9	0.9912	mg/L	0.00188	0.9912	mg/L	0.00188	0.19%
Tl 190.801†	3504.4	2.049	mg/L	0.0075	2.049	mg/L	0.0075	0.37%
V 292.402†	134510.0	0.9845	mg/L	0.00393	0.9845	mg/L	0.00393	0.40%
Zn 206.200†	3934.1	0.9921	mg/L	0.00767	0.9921	mg/L	0.00767	0.77%

Sequence No.: 38
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 4/29/2013 11:41:37 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2713680.8	104.3	%	0.05				0.05%
ScR 361.383	388927.4	104.1	%	0.59				0.57%
Ag 328.068†	38.2	0.00017	mg/L	0.000109	0.00017	mg/L	0.000109	62.71%
Al 308.215†	4.9	0.00425	mg/L	0.003102	0.00425	mg/L	0.003102	72.92%
As 188.979†	1.7	0.00130	mg/L	0.001748	0.00130	mg/L	0.001748	134.87%
B 249.677†	3.3	0.00055	mg/L	0.000956	0.00055	mg/L	0.000956	172.68%
Ba 233.527†	2.1	0.00037	mg/L	0.000263	0.00037	mg/L	0.000263	70.47%
Be 313.042†	45.9	0.00008	mg/L	0.000009	0.00008	mg/L	0.000009	10.59%
Ca 317.933†	13.8	0.00138	mg/L	0.000447	0.00138	mg/L	0.000447	32.42%
Cd 228.802†	8.9	0.00039	mg/L	0.000172	0.00039	mg/L	0.000172	44.75%
Co 228.616†	10.8	0.00035	mg/L	0.000144	0.00035	mg/L	0.000144	40.90%
Cr 267.716†	3.4	0.00041	mg/L	0.000380	0.00041	mg/L	0.000380	92.32%
Cu 324.752†	99.5	0.00039	mg/L	0.000055	0.00039	mg/L	0.000055	14.03%
Fe 273.955†	3.6	0.00298	mg/L	0.002093	0.00298	mg/L	0.002093	70.26%
K 766.490†	24.0	0.01177	mg/L	0.007852	0.01177	mg/L	0.007852	66.73%
Mg 279.077†	-7.1	-0.00771	mg/L	0.002486	-0.00771	mg/L	0.002486	32.25%
Mn 257.610†	7.5	0.00015	mg/L	0.000116	0.00015	mg/L	0.000116	78.22%
Mo 202.031†	12.2	0.00067	mg/L	0.000230	0.00067	mg/L	0.000230	34.46%
Na 589.592†	401.9	0.03537	mg/L	0.004746	0.03537	mg/L	0.004746	13.42%
Na 330.237†	-5.6	-0.1758	mg/L	0.21009	-0.1758	mg/L	0.21009	119.52%
Ni 231.604†	5.1	0.00151	mg/L	0.001294	0.00151	mg/L	0.001294	85.57%
Pb 220.353†	9.0	0.00115	mg/L	0.000303	0.00115	mg/L	0.000303	26.30%
Sb 206.836†	3.1	0.00119	mg/L	0.001335	0.00119	mg/L	0.001335	111.92%
Se 196.026†	5.6	0.00368	mg/L	0.002252	0.00368	mg/L	0.002252	61.22%
Si 288.158†	8.8	0.00644	mg/L	0.003117	0.00644	mg/L	0.003117	48.43%
Sn 189.927†	2.7	0.00054	mg/L	0.000582	0.00054	mg/L	0.000582	108.10%
Sr 421.552†	52.7	0.00006	mg/L	0.000002	0.00006	mg/L	0.000002	2.73%
Ti 334.903†	24.1	0.00095	mg/L	0.000382	0.00095	mg/L	0.000382	40.37%
Tl 190.801†	0.8	0.00046	mg/L	0.000219	0.00046	mg/L	0.000219	47.92%
V 292.402†	29.2	0.00021	mg/L	0.000201	0.00021	mg/L	0.000201	93.82%
Zn 206.200†	-0.2	-0.00004	mg/L	0.000221	-0.00004	mg/L	0.000221	542.92%

Sequence No.: 39
Sample ID: WN59 MB1 SWC

Autosampler Location: 329
Date Collected: 4/29/2013 11:45:53 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2737555.1	105.2	%	0.66				0.63%
ScR 361.383	390787.4	104.6	%	0.34				0.32%
Ag 328.068†	16.8	0.00008	mg/L	0.000248	0.00015	mg/L	0.000497	323.80%
Al 308.215†	3.8	0.00335	mg/L	0.004349	0.00671	mg/L	0.008698	129.65%
As 188.979†	1.0	0.00077	mg/L	0.001252	0.00154	mg/L	0.002504	162.92%
B 249.677†	1.7	0.00029	mg/L	0.000335	0.00057	mg/L	0.000671	116.62%
Ba 233.527†	0.8	0.00014	mg/L	0.000419	0.00028	mg/L	0.000839	296.16%
Be 313.042†	-3.7	-0.00001	mg/L	0.000028	-0.00001	mg/L	0.000057	432.71%
Ca 317.933†	81.9	0.00821	mg/L	0.000954	0.01642	mg/L	0.001909	11.62%
Cd 228.802†	5.1	0.00022	mg/L	0.000101	0.00045	mg/L	0.000203	45.45%
Co 228.616†	5.2	0.00017	mg/L	0.000067	0.00034	mg/L	0.000133	39.27%
Cr 267.716†	4.2	0.00052	mg/L	0.000280	0.00103	mg/L	0.000560	54.17%
Cu 324.752†	224.4	0.00089	mg/L	0.000012	0.00177	mg/L	0.000024	1.33%
Fe 273.955†	9.7	0.00807	mg/L	0.001045	0.01615	mg/L	0.002089	12.94%
K 766.490†	15.5	0.00760	mg/L	0.004151	0.01520	mg/L	0.008303	54.61%
Mg 279.077†	-6.8	-0.00730	mg/L	0.010530	-0.01461	mg/L	0.021060	144.16%
Mn 257.610†	15.3	0.00030	mg/L	0.000046	0.00060	mg/L	0.000092	15.19%
Mo 202.031†	3.6	0.00019	mg/L	0.000076	0.00039	mg/L	0.000152	38.99%
Na 589.592†	194.9	0.01716	mg/L	0.000401	0.03431	mg/L	0.000801	2.34%
Na 330.237†	-4.0	-0.1254	mg/L	0.33881	-0.2507	mg/L	0.67762	270.27%
Ni 231.604†	3.1	0.00092	mg/L	0.001250	0.00183	mg/L	0.002501	136.56%
Pb 220.353†	4.2	0.00054	mg/L	0.000714	0.00107	mg/L	0.001428	133.08%
Sb 206.836†	-0.2	-0.00008	mg/L	0.002293	-0.00016	mg/L	0.004586	>999.9%
Se 196.026†	10.7	0.00703	mg/L	0.002151	0.01405	mg/L	0.004301	30.60%
Si 288.158†	27.4	0.02006	mg/L	0.003212	0.04012	mg/L	0.006423	16.01%
Sn 189.927†	4.4	0.00089	mg/L	0.000312	0.00177	mg/L	0.000625	35.28%
Sr 421.552†	-1.1	-0.00000	mg/L	0.000041	-0.00000	mg/L	0.000081	>999.9%
Ti 334.903†	4.8	0.00019	mg/L	0.000198	0.00038	mg/L	0.000397	105.60%
Tl 190.801†	-0.5	-0.00027	mg/L	0.000777	-0.00054	mg/L	0.001554	289.62%
V 292.402†	6.9	0.00005	mg/L	0.000072	0.00010	mg/L	0.000145	139.52%
Zn 206.200†	-0.4	-0.00009	mg/L	0.000052	-0.00019	mg/L	0.000103	55.28%

Sequence No.: 40
Sample ID: WN59 ADUP SWC

Autosampler Location: 330
Date Collected: 4/29/2013 11:50:10 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 ADUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2720324.7	104.5	%	0.68				0.65%
ScR 361.383	393751.4	105.4	%	0.64				0.61%
Ag 328.068†	40.6	0.00061	mg/L	0.000042	0.00122	mg/L	0.000083	6.84%
Al 308.215†	126939.0	111.7	mg/L	0.46	223.4	mg/L	0.93	0.42%
As 188.979†	83.0	0.2939	mg/L	0.00105	0.5878	mg/L	0.00210	0.36%
B 249.677†	246.3	0.04075	mg/L	0.000165	0.08150	mg/L	0.000331	0.41%
Ba 233.527†	4651.7	0.8050	mg/L	0.00371	1.610	mg/L	0.0074	0.46%
Be 313.042†	1036.5	0.00165	mg/L	0.000016	0.00331	mg/L	0.000031	0.95%
Ca 317.933†	449672.1	45.06	mg/L	0.323	90.13	mg/L	0.646	0.72%
Cd 228.802†	301.8	0.01325	mg/L	0.000186	0.02650	mg/L	0.000372	1.40%
Co 228.616†	3157.8	0.09086	mg/L	0.000346	0.1817	mg/L	0.00069	0.38%
Cr 267.716†	4639.3	0.5653	mg/L	0.00243	1.131	mg/L	0.0049	0.43%
Cu 324.752†	236704.2	0.9439	mg/L	0.00745	1.888	mg/L	0.0149	0.79%
Fe 273.955†	278119.4	231.5	mg/L	1.68	463.0	mg/L	3.37	0.73%
K 766.490†	21862.0	10.70	mg/L	0.046	21.41	mg/L	0.092	0.43%
Mg 279.077†	51936.2	56.04	mg/L	0.443	112.1	mg/L	0.89	0.79%
Mn 257.610†	196117.9	3.858	mg/L	0.0258	7.717	mg/L	0.0516	0.67%
Mo 202.031†	739.3	0.03984	mg/L	0.000487	0.07968	mg/L	0.000974	1.22%
Na 589.592†	118230.4	10.41	mg/L	0.053	20.81	mg/L	0.107	0.51%
Na 330.237†	287.6	9.821	mg/L	0.1080	19.64	mg/L	0.216	1.10%
Ni 231.604†	1269.9	0.3771	mg/L	0.00079	0.7541	mg/L	0.00159	0.21%
Pb 220.353†	20498.4	2.648	mg/L	0.0186	5.297	mg/L	0.0372	0.70%
Sb 206.836†	26.8	0.01618	mg/L	0.002409	0.03236	mg/L	0.004818	14.89%
Se 196.026†	-1.3	-0.01400	mg/L	0.002090	-0.02800	mg/L	0.004180	14.93%
Si 288.158†	4257.8	3.118	mg/L	0.0080	6.235	mg/L	0.0160	0.26%
Sn 189.927†	4466.2	0.9080	mg/L	0.00883	1.816	mg/L	0.0177	0.97%
Sr 421.552†	314135.3	0.3476	mg/L	0.00100	0.6952	mg/L	0.00199	0.29%
Ti 334.903†	175127.1	6.866	mg/L	0.0409	13.73	mg/L	0.082	0.60%
Tl 190.801†	-27.1	0.01253	mg/L	0.002058	0.02507	mg/L	0.004117	16.42%
V 292.402†	56115.1	0.3964	mg/L	0.00209	0.7927	mg/L	0.00418	0.53%
Zn 206.200†	15920.6	4.014	mg/L	0.0199	8.028	mg/L	0.0398	0.50%

Sequence No.: 41
Sample ID: WN59 A SWC

Autosampler Location: 331
Date Collected: 4/29/2013 11:54:12 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 A SWC

Analyte	Back Pressure	Flow
A11	219.0 kPa	0.75 L/min

Mean Data: WN59 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2724959.9	104.7	%	0.16				0.16%
ScR 361.383	389924.1	104.3	%	0.19				0.18%
Ag 328.068†	17.6	0.00052	mg/L	0.000358	0.00104	mg/L	0.000716	68.83%
Al 308.215†	126972.3	111.7	mg/L	0.41	223.5	mg/L	0.83	0.37%
As 188.979†	110.7	0.3123	mg/L	0.00310	0.6245	mg/L	0.00619	0.99%
B 249.677†	243.1	0.04021	mg/L	0.000438	0.08043	mg/L	0.000876	1.09%
Ba 233.527†	4737.3	0.8195	mg/L	0.00205	1.639	mg/L	0.0041	0.25%
Be 313.042†	1064.4	0.00170	mg/L	0.000005	0.00340	mg/L	0.000011	0.32%
Ca 317.933†	475349.5	47.64	mg/L	0.150	95.27	mg/L	0.301	0.32%
Cd 228.802†	294.3	0.01281	mg/L	0.000060	0.02562	mg/L	0.000120	0.47%
Co 228.616†	3161.7	0.09107	mg/L	0.000311	0.1821	mg/L	0.00062	0.34%
Cr 267.716†	4317.4	0.5263	mg/L	0.00260	1.053	mg/L	0.0052	0.49%
Cu 324.752†	235532.9	0.9396	mg/L	0.00241	1.879	mg/L	0.0048	0.26%
Fe 273.955†	286296.9	238.3	mg/L	1.41	476.6	mg/L	2.82	0.59%
K 766.490†	21802.9	10.67	mg/L	0.043	21.35	mg/L	0.086	0.40%
Mg 279.077†	52648.2	56.81	mg/L	0.229	113.6	mg/L	0.46	0.40%
Mn 257.610†	197133.1	3.878	mg/L	0.0208	7.757	mg/L	0.0415	0.54%
Mo 202.031†	728.7	0.03923	mg/L	0.000318	0.07846	mg/L	0.000635	0.81%
Na 589.592†	118790.5	10.46	mg/L	0.059	20.91	mg/L	0.118	0.56%
Na 330.237†	285.5	9.744	mg/L	0.1276	19.49	mg/L	0.255	1.31%
Ni 231.604†	1292.8	0.3838	mg/L	0.00328	0.7677	mg/L	0.00655	0.85%
Pb 220.353†	19297.4	2.494	mg/L	0.0074	4.988	mg/L	0.0147	0.29%
Sb 206.836†	13.8	0.01166	mg/L	0.001896	0.02331	mg/L	0.003793	16.27%
Se 196.026†	8.6	-0.00751	mg/L	0.006830	-0.01502	mg/L	0.013659	90.97%
Si 288.158†	4579.1	3.353	mg/L	0.0263	6.706	mg/L	0.0525	0.78%
Sn 189.927†	4450.3	0.9050	mg/L	0.00217	1.810	mg/L	0.0043	0.24%
Sr 421.552†	324745.1	0.3593	mg/L	0.00126	0.7187	mg/L	0.00252	0.35%
Ti 334.903†	173805.2	6.814	mg/L	0.0240	13.63	mg/L	0.048	0.35%
Tl 190.801†	-28.9	0.01238	mg/L	0.001444	0.02476	mg/L	0.002888	11.66%
V 292.402†	56384.5	0.3979	mg/L	0.00077	0.7957	mg/L	0.00155	0.19%
Zn 206.200†	15886.5	4.006	mg/L	0.0181	8.011	mg/L	0.0362	0.45%

Sequence No.: 42
Sample ID: WN59 ASPK SWC

Autosampler Location: 332
Date Collected: 4/29/2013 11:58:14 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2697618.6	103.6	%	0.40				0.38%
ScR 361.383	384124.3	102.8	%	0.31				0.30%
Ag 328.068†	110960.3	0.5075	mg/L	0.00162	1.015	mg/L	0.0032	0.32%
Al 308.215†	133593.4	117.6	mg/L	0.52	235.1	mg/L	1.04	0.44%
As 188.979†	2832.4	2.318	mg/L	0.0256	4.637	mg/L	0.0512	1.10%
B 249.677†	270.6	0.04366	mg/L	0.000211	0.08731	mg/L	0.000422	0.48%
Ba 233.527†	16560.0	2.952	mg/L	0.0271	5.905	mg/L	0.0543	0.92%
Be 313.042†	274690.7	0.4819	mg/L	0.00226	0.9639	mg/L	0.00452	0.47%
Ca 317.933†	592990.8	59.43	mg/L	0.420	118.9	mg/L	0.84	0.71%
Cd 228.802†	12287.1	0.5298	mg/L	0.00235	1.060	mg/L	0.0047	0.44%
Co 228.616†	18293.9	0.5843	mg/L	0.00267	1.169	mg/L	0.0053	0.46%
Cr 267.716†	8454.6	1.028	mg/L	0.0093	2.056	mg/L	0.0187	0.91%
Cu 324.752†	350414.8	1.393	mg/L	0.0050	2.786	mg/L	0.0099	0.36%
Fe 273.955†	284026.1	236.4	mg/L	2.56	472.8	mg/L	5.12	1.08%
K 766.490†	42429.0	20.77	mg/L	0.092	41.54	mg/L	0.184	0.44%
Mg 279.077†	65219.6	70.41	mg/L	0.562	140.8	mg/L	1.12	0.80%
Mn 257.610†	223721.2	4.402	mg/L	0.0363	8.803	mg/L	0.0725	0.82%
Mo 202.031†	856.4	0.04604	mg/L	0.000907	0.09209	mg/L	0.001814	1.97%
Na 589.592†	239957.0	21.12	mg/L	0.204	42.24	mg/L	0.407	0.96%
Na 330.237†	623.8	20.37	mg/L	0.421	40.73	mg/L	0.843	2.07%
Ni 231.604†	2980.2	0.8840	mg/L	0.01430	1.768	mg/L	0.0286	1.62%
Pb 220.353†	33827.6	4.361	mg/L	0.0229	8.721	mg/L	0.0459	0.53%
Sb 206.836†	25.8	0.01114	mg/L	0.005696	0.02228	mg/L	0.011393	51.14%
Se 196.026†	3070.4	2.003	mg/L	0.0054	4.006	mg/L	0.0107	0.27%
Si 288.158†	7839.4	5.745	mg/L	0.0167	11.49	mg/L	0.033	0.29%
Sn 189.927†	4356.6	0.8871	mg/L	0.01039	1.774	mg/L	0.0208	1.17%
Sr 421.552†	795180.5	0.8799	mg/L	0.00472	1.760	mg/L	0.0094	0.54%
Ti 334.903†	178336.0	6.991	mg/L	0.0382	13.98	mg/L	0.076	0.55%
Tl 190.801†	3288.7	1.955	mg/L	0.0111	3.910	mg/L	0.0222	0.57%
V 292.402†	120393.4	0.8665	mg/L	0.00253	1.733	mg/L	0.0051	0.29%
Zn 206.200†	17636.6	4.447	mg/L	0.0444	8.895	mg/L	0.0889	1.00%

Sequence No.: 43
Sample ID: WN59 B SWC

Autosampler Location: 333
Date Collected: 4/29/2013 12:00:34 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 B SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2740631.5	105.3	%	0.30				0.28%
ScR 361.383	395665.7	105.9	%	0.08				0.08%
Ag 328.068†	-190.6	-0.00051	mg/L	0.000045	-0.00101	mg/L	0.000090	8.92%
Al 308.215†	84931.0	74.74	mg/L	0.411	149.5	mg/L	0.82	0.55%
As 188.979†	-176.5	0.04919	mg/L	0.004898	0.09838	mg/L	0.009796	9.96%
B 249.677†	262.2	0.04351	mg/L	0.001292	0.08703	mg/L	0.002584	2.97%
Ba 233.527†	3736.7	0.6497	mg/L	0.00085	1.299	mg/L	0.0017	0.13%
Be 313.042†	659.9	0.00104	mg/L	0.000013	0.00207	mg/L	0.000026	1.25%
Ca 317.933†	416299.3	41.72	mg/L	0.336	83.44	mg/L	0.673	0.81%
Cd 228.802†	111.1	0.00576	mg/L	0.000191	0.01151	mg/L	0.000382	3.32%
Co 228.616†	1878.4	0.05192	mg/L	0.000216	0.1038	mg/L	0.00043	0.42%
Cr 267.716†	1535.5	0.1877	mg/L	0.00038	0.3754	mg/L	0.00075	0.20%
Cu 324.752†	59572.2	0.2420	mg/L	0.00029	0.4841	mg/L	0.00058	0.12%
Fe 273.955†	198776.8	165.4	mg/L	0.89	330.9	mg/L	1.78	0.54%
K 766.490†	9580.2	4.690	mg/L	0.0103	9.380	mg/L	0.0205	0.22%
Mg 279.077†	30335.1	32.71	mg/L	0.058	65.43	mg/L	0.116	0.18%
Mn 257.610†	338179.2	6.653	mg/L	0.0335	13.31	mg/L	0.067	0.50%
Mo 202.031†	190.0	0.00988	mg/L	0.000080	0.01976	mg/L	0.000160	0.81%
Na 589.592†	50375.8	4.434	mg/L	0.0117	8.868	mg/L	0.0233	0.26%
Na 330.237†	87.7	3.634	mg/L	0.0902	7.269	mg/L	0.1805	2.48%
Ni 231.604†	618.4	0.1836	mg/L	0.00172	0.3672	mg/L	0.00344	0.94%
Pb 220.353†	1786.9	0.2407	mg/L	0.00096	0.4814	mg/L	0.00193	0.40%
Sb 206.836†	-12.0	-0.00205	mg/L	0.001401	-0.00410	mg/L	0.002802	68.32%
Se 196.026†	8.2	-0.00342	mg/L	0.002120	-0.00683	mg/L	0.004240	62.07%
Si 288.158†	5291.7	3.880	mg/L	0.0091	7.761	mg/L	0.0181	0.23%
Sn 189.927†	-20.9	0.00025	mg/L	0.001562	0.00050	mg/L	0.003123	625.46%
Sr 421.552†	276859.2	0.3064	mg/L	0.00114	0.6127	mg/L	0.00229	0.37%
Ti 334.903†	134761.8	5.283	mg/L	0.0313	10.57	mg/L	0.063	0.59%
Tl 190.801†	-10.2	0.01446	mg/L	0.001298	0.02893	mg/L	0.002595	8.97%
V 292.402†	40326.1	0.2843	mg/L	0.00197	0.5686	mg/L	0.00394	0.69%
Zn 206.200†	8188.8	2.065	mg/L	0.0039	4.130	mg/L	0.0078	0.19%

Sequence No.: 44
Sample ID: WN59 C SWC

Autosampler Location: 334
Date Collected: 4/29/2013 12:04:35 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 C SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2726139.2	104.7	%	0.46				0.44%
ScR 361.383	394855.8	105.7	%	0.56				0.53%
Ag 328.068†	-242.3	-0.00078	mg/L	0.000125	-0.00156	mg/L	0.000250	16.03%
Al 308.215†	97730.8	86.01	mg/L	0.353	172.0	mg/L	0.71	0.41%
As 188.979†	-258.4	0.01575	mg/L	0.001710	0.03150	mg/L	0.003421	10.86%
B 249.677†	51.0	0.00827	mg/L	0.000675	0.01653	mg/L	0.001351	8.17%
Ba 233.527†	2303.6	0.3951	mg/L	0.00058	0.7902	mg/L	0.00116	0.15%
Be 313.042†	749.5	0.00119	mg/L	0.000005	0.00237	mg/L	0.000011	0.46%
Ca 317.933†	359194.3	36.00	mg/L	0.214	71.99	mg/L	0.427	0.59%
Cd 228.802†	72.4	0.00450	mg/L	0.000101	0.00901	mg/L	0.000203	2.25%
Co 228.616†	2139.7	0.05911	mg/L	0.000601	0.1182	mg/L	0.00120	1.02%
Cr 267.716†	3533.0	0.4294	mg/L	0.00256	0.8588	mg/L	0.00513	0.60%
Cu 324.752†	30587.6	0.1262	mg/L	0.00061	0.2523	mg/L	0.00123	0.49%
Fe 273.955†	166520.8	138.6	mg/L	0.88	277.2	mg/L	1.77	0.64%
K 766.490†	9703.4	4.750	mg/L	0.0173	9.501	mg/L	0.0345	0.36%
Mg 279.077†	38119.5	41.15	mg/L	0.156	82.30	mg/L	0.311	0.38%
Mn 257.610†	213249.3	4.195	mg/L	0.0250	8.390	mg/L	0.0500	0.60%
Mo 202.031†	117.8	0.00599	mg/L	0.000342	0.01198	mg/L	0.000683	5.70%
Na 589.592†	22192.1	1.953	mg/L	0.0237	3.907	mg/L	0.0473	1.21%
Na 330.237†	12.3	1.375	mg/L	0.1554	2.751	mg/L	0.3107	11.30%
Ni 231.604†	1034.1	0.3070	mg/L	0.00248	0.6141	mg/L	0.00496	0.81%
Pb 220.353†	797.5	0.1188	mg/L	0.00106	0.2377	mg/L	0.00213	0.89%
Sb 206.836†	-15.9	-0.00619	mg/L	0.001480	-0.01238	mg/L	0.002961	23.91%
Se 196.026†	3.4	-0.00789	mg/L	0.005432	-0.01578	mg/L	0.010864	68.86%
Si 288.158†	5335.2	3.913	mg/L	0.0190	7.826	mg/L	0.0381	0.49%
Sn 189.927†	53.3	0.01493	mg/L	0.000603	0.02986	mg/L	0.001205	4.04%
Sr 421.552†	208404.5	0.2306	mg/L	0.00105	0.4612	mg/L	0.00211	0.46%
Ti 334.903†	154343.0	6.051	mg/L	0.0243	12.10	mg/L	0.049	0.40%
Tl 190.801†	-10.0	0.01091	mg/L	0.003525	0.02183	mg/L	0.007049	32.30%
V 292.402†	39853.4	0.2825	mg/L	0.00206	0.5649	mg/L	0.00412	0.73%
Zn 206.200†	9346.0	2.357	mg/L	0.0132	4.714	mg/L	0.0264	0.56%

Sequence No.: 45
Sample ID: WN59 D SWC

Autosampler Location: 335
Date Collected: 4/29/2013 12:08:36 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 D SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WN59 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2744395.3	105.4	%	0.11				0.10%
ScR 361.383	394333.5	105.5	%	0.56				0.53%
Ag 328.068†	-156.9	-0.00029	mg/L	0.000121	-0.00059	mg/L	0.000241	40.98%
Al 308.215†	114960.5	101.2	mg/L	0.44	202.3	mg/L	0.88	0.44%
As 188.979†	-203.0	0.05677	mg/L	0.001239	0.1135	mg/L	0.00248	2.18%
B 249.677†	93.8	0.01522	mg/L	0.001006	0.03044	mg/L	0.002012	6.61%
Ba 233.527†	5080.2	0.8909	mg/L	0.00817	1.782	mg/L	0.0163	0.92%
Be 313.042†	1017.1	0.00164	mg/L	0.000026	0.00327	mg/L	0.000052	1.58%
Ca 317.933†	468744.7	46.98	mg/L	0.170	93.95	mg/L	0.340	0.36%
Cd 228.802†	118.9	0.00637	mg/L	0.000180	0.01274	mg/L	0.000360	2.83%
Co 228.616†	5278.0	0.1614	mg/L	0.00042	0.3228	mg/L	0.00083	0.26%
Cr 267.716†	1851.3	0.2243	mg/L	0.00111	0.4486	mg/L	0.00223	0.50%
Cu 324.752†	34790.3	0.1444	mg/L	0.00032	0.2889	mg/L	0.00063	0.22%
Fe 273.955†	208379.8	173.4	mg/L	0.54	346.9	mg/L	1.07	0.31%
K 766.490†	11605.6	5.682	mg/L	0.0036	11.36	mg/L	0.007	0.06%
Mg 279.077†	41290.6	44.56	mg/L	0.186	89.12	mg/L	0.373	0.42%
Mn 257.610†	868469.5	17.09	mg/L	0.051	34.17	mg/L	0.102	0.30%
Mo 202.031†	131.6	0.00663	mg/L	0.000219	0.01325	mg/L	0.000437	3.30%
Na 589.592†	34465.0	3.034	mg/L	0.0124	6.067	mg/L	0.0248	0.41%
Na 330.237†	32.6	2.425	mg/L	0.1352	4.849	mg/L	0.2703	5.57%
Ni 231.604†	1274.0	0.3783	mg/L	0.00209	0.7566	mg/L	0.00418	0.55%
Pb 220.353†	1696.4	0.2360	mg/L	0.00144	0.4721	mg/L	0.00289	0.61%
Sb 206.836†	-23.2	-0.00603	mg/L	0.000255	-0.01207	mg/L	0.000511	4.23%
Se 196.026†	10.4	-0.00511	mg/L	0.001602	-0.01021	mg/L	0.003203	31.37%
Si 288.158†	4974.6	3.649	mg/L	0.0142	7.299	mg/L	0.0283	0.39%
Sn 189.927†	-60.1	-0.00708	mg/L	0.000507	-0.01416	mg/L	0.001014	7.16%
Sr 421.552†	227940.8	0.2522	mg/L	0.00064	0.5044	mg/L	0.00128	0.25%
Ti 334.903†	154970.2	6.075	mg/L	0.0231	12.15	mg/L	0.046	0.38%
Tl 190.801†	-15.3	0.01160	mg/L	0.000616	0.02319	mg/L	0.001231	5.31%
V 292.402†	50791.6	0.3615	mg/L	0.00052	0.7229	mg/L	0.00104	0.14%
Zn 206.200†	3996.8	1.008	mg/L	0.0109	2.016	mg/L	0.0219	1.08%

Sequence No.: 46
Sample ID: WM19 F LEN

Autosampler Location: 338
Date Collected: 4/29/2013 12:12:38 PM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WM19 F LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WM19 F LEN

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2622885.4	100.8	%	1.00				0.99%
ScR 361.383	374064.2	100.1	%	0.48				0.48%
Ag 328.068†	60.2	0.00126	mg/L	0.000149	0.01259	mg/L	0.001487	11.81%
Al 308.215†	53.6	0.04701	mg/L	0.004069	0.4701	mg/L	0.04069	8.66%
As 188.979†	4102.4	3.003	mg/L	0.0312	30.03	mg/L	0.312	1.04%
B 249.677†	1198.4	0.1996	mg/L	0.00237	1.996	mg/L	0.0237	1.19%
Ba 233.527†	90.8	0.01638	mg/L	0.000630	0.1638	mg/L	0.00630	3.85%
Be 313.042†	58.6	0.00010	mg/L	0.000007	0.00103	mg/L	0.000074	7.20%
Ca 317.933†	1520993.3	152.4	mg/L	0.38	1524	mg/L	3.78	0.25%
Cd 228.802†	264537.7	11.63	mg/L	0.157	116.3	mg/L	1.57	1.35%
Co 228.616†	86.7	0.00279	mg/L	0.000157	0.02794	mg/L	0.001568	5.61%
Cr 267.716†	47.8	0.00347	mg/L	0.000243	0.03469	mg/L	0.002432	7.01%
Cu 324.752†	5897.5	0.02325	mg/L	0.000344	0.2325	mg/L	0.00344	1.48%
Fe 273.955†	26.5	0.02206	mg/L	0.002291	0.2206	mg/L	0.02291	10.38%
K 766.490†	124556.5	60.98	mg/L	0.714	609.8	mg/L	7.14	1.17%
Mg 279.077†	4260.8	4.592	mg/L	0.0294	45.92	mg/L	0.294	0.64%
Mn 257.610†	3685.0	0.07215	mg/L	0.000458	0.7215	mg/L	0.00458	0.64%
Mo 202.031†	123.1	0.00493	mg/L	0.000179	0.04932	mg/L	0.001787	3.62%
Na 589.592†	2034700.6	179.1	mg/L	0.46	1791	mg/L	4.60	0.26%
Na 330.237†	5575.3	175.7	mg/L	1.22	1757	mg/L	12.21	0.69%
Ni 231.604†	27.5	0.00817	mg/L	0.001697	0.08169	mg/L	0.016969	20.77%
Pb 220.353†	10080.9	1.294	mg/L	0.0115	12.94	mg/L	0.115	0.89%
Sb 206.836†	10.2	0.00376	mg/L	0.000825	0.03759	mg/L	0.008253	21.95%
Se 196.026†	2.2	0.00146	mg/L	0.002604	0.01459	mg/L	0.026037	178.42%
Si 288.158†	2927.3	2.183	mg/L	0.0103	21.83	mg/L	0.103	0.47%
Sn 189.927†	-58.7	0.00091	mg/L	0.000925	0.00908	mg/L	0.009252	101.93%
Sr 421.552†	235768.8	0.2609	mg/L	0.00025	2.609	mg/L	0.0025	0.09%
Ti 334.903†	478.6	0.00970	mg/L	0.000482	0.09703	mg/L	0.004824	4.97%
Tl 190.801†	43.9	0.02580	mg/L	0.003105	0.2580	mg/L	0.03105	12.04%
V 292.402†	33.2	0.00027	mg/L	0.000097	0.00270	mg/L	0.000973	36.01%
Zn 206.200†	9313.3	2.348	mg/L	0.0142	23.48	mg/L	0.142	0.60%

Sequence No.: 47
Sample ID: WN59 MB1SPK SWC

Autosampler Location: 336
Date Collected: 4/29/2013 12:16:57 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 MB1SPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2727254.7	104.8	%	0.16				0.15%
ScR 361.383	388149.7	103.9	%	0.76				0.73%
Ag 328.068†	115860.1	0.5294	mg/L	0.00318	1.059	mg/L	0.0064	0.60%
Al 308.215†	2323.1	2.038	mg/L	0.0148	4.075	mg/L	0.0295	0.72%
As 188.979†	2768.7	2.035	mg/L	0.0059	4.069	mg/L	0.0119	0.29%
B 249.677†	0.7	-0.00104	mg/L	0.000935	-0.00207	mg/L	0.001871	90.31%
Ba 233.527†	11417.8	2.059	mg/L	0.0288	4.119	mg/L	0.0576	1.40%
Be 313.042†	272215.2	0.4778	mg/L	0.00324	0.9555	mg/L	0.00649	0.68%
Ca 317.933†	95999.2	9.621	mg/L	0.0214	19.24	mg/L	0.043	0.22%
Cd 228.802†	11580.6	0.4987	mg/L	0.00150	0.9974	mg/L	0.00301	0.30%
Co 228.616†	15103.6	0.4926	mg/L	0.00220	0.9852	mg/L	0.00440	0.45%
Cr 267.716†	4265.8	0.5178	mg/L	0.00430	1.036	mg/L	0.0086	0.83%
Cu 324.752†	125051.1	0.4936	mg/L	0.00180	0.9873	mg/L	0.00359	0.36%
Fe 273.955†	2395.2	1.991	mg/L	0.0174	3.982	mg/L	0.0348	0.87%
K 766.490†	19792.8	9.690	mg/L	0.0613	19.38	mg/L	0.123	0.63%
Mg 279.077†	9367.2	10.13	mg/L	0.068	20.26	mg/L	0.136	0.67%
Mn 257.610†	24008.8	0.4727	mg/L	0.00037	0.9454	mg/L	0.00074	0.08%
Mo 202.031†	29.0	0.00145	mg/L	0.000048	0.00289	mg/L	0.000097	3.35%
Na 589.592†	113474.3	9.988	mg/L	0.0662	19.98	mg/L	0.132	0.66%
Na 330.237†	311.9	9.720	mg/L	0.1989	19.44	mg/L	0.398	2.05%
Ni 231.604†	1742.8	0.5166	mg/L	0.00534	1.033	mg/L	0.0107	1.03%
Pb 220.353†	15325.8	1.968	mg/L	0.0064	3.935	mg/L	0.0128	0.33%
Sb 206.836†	10.8	-0.00108	mg/L	0.000720	-0.00216	mg/L	0.001440	66.75%
Se 196.026†	3055.1	2.007	mg/L	0.0100	4.013	mg/L	0.0199	0.50%
Si 288.158†	35.1	0.02852	mg/L	0.002146	0.05704	mg/L	0.004292	7.53%
Sn 189.927†	-13.1	-0.00184	mg/L	0.000800	-0.00369	mg/L	0.001600	43.37%
Sr 421.552†	443692.6	0.4910	mg/L	0.00242	0.9819	mg/L	0.00483	0.49%
Ti 334.903†	54.9	0.00148	mg/L	0.000150	0.00297	mg/L	0.000299	10.09%
Tl 190.801†	3503.9	2.053	mg/L	0.0042	4.105	mg/L	0.0084	0.20%
V 292.402†	67916.3	0.4971	mg/L	0.00233	0.9941	mg/L	0.00466	0.47%
Zn 206.200†	1973.0	0.4976	mg/L	0.00340	0.9952	mg/L	0.00681	0.68%

Sequence No.: 48
Sample ID: WN59 MB1SPD SWC

Autosampler Location: 337
Date Collected: 4/29/2013 12:21:00 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 MB1SPD SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 MB1SPD SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2717166.2	104.4	%	0.51				0.49%
ScR 361.383	389314.4	104.2	%	0.33				0.32%
Ag 328.068†	116734.1	0.5334	mg/L	0.00552	1.067	mg/L	0.0110	1.03%
Al 308.215†	2371.3	2.080	mg/L	0.0119	4.160	mg/L	0.0239	0.57%
As 188.979†	2782.0	2.044	mg/L	0.0128	4.089	mg/L	0.0256	0.63%
B 249.677†	1.0	-0.00099	mg/L	0.000410	-0.00198	mg/L	0.000819	41.40%
Ba 233.527†	11745.5	2.118	mg/L	0.0091	4.237	mg/L	0.0183	0.43%
Be 313.042†	278556.1	0.4889	mg/L	0.00286	0.9778	mg/L	0.00572	0.58%
Ca 317.933†	98256.2	9.847	mg/L	0.0250	19.69	mg/L	0.050	0.25%
Cd 228.802†	11636.1	0.5011	mg/L	0.00523	1.002	mg/L	0.0105	1.04%
Co 228.616†	15188.7	0.4954	mg/L	0.00537	0.9908	mg/L	0.01074	1.08%
Cr 267.716†	4345.6	0.5275	mg/L	0.00152	1.055	mg/L	0.0030	0.29%
Cu 324.752†	125023.6	0.4935	mg/L	0.00293	0.9871	mg/L	0.00586	0.59%
Fe 273.955†	2433.7	2.023	mg/L	0.0095	4.046	mg/L	0.0189	0.47%
K 766.490†	20278.1	9.927	mg/L	0.0441	19.85	mg/L	0.088	0.44%
Mg 279.077†	9549.7	10.33	mg/L	0.036	20.66	mg/L	0.073	0.35%
Mn 257.610†	24520.7	0.4828	mg/L	0.00266	0.9655	mg/L	0.00531	0.55%
Mo 202.031†	25.2	0.00123	mg/L	0.000122	0.00247	mg/L	0.000243	9.85%
Na 589.592†	116337.4	10.24	mg/L	0.076	20.48	mg/L	0.152	0.74%
Na 330.237†	320.9	10.00	mg/L	0.106	20.01	mg/L	0.211	1.06%
Ni 231.604†	1772.1	0.5252	mg/L	0.00298	1.050	mg/L	0.0060	0.57%
Pb 220.353†	15430.7	1.981	mg/L	0.0173	3.962	mg/L	0.0346	0.87%
Sb 206.836†	2.9	-0.00425	mg/L	0.001449	-0.00849	mg/L	0.002899	34.14%
Se 196.026†	3076.2	2.020	mg/L	0.0130	4.041	mg/L	0.0261	0.64%
Si 288.158†	28.1	0.02342	mg/L	0.001677	0.04685	mg/L	0.003354	7.16%
Sn 189.927†	-14.1	-0.00202	mg/L	0.000457	-0.00403	mg/L	0.000913	22.65%
Sr 421.552†	454994.6	0.5035	mg/L	0.00194	1.007	mg/L	0.0039	0.39%
Ti 334.903†	55.3	0.00148	mg/L	0.000363	0.00296	mg/L	0.000727	24.51%
Tl 190.801†	3503.7	2.052	mg/L	0.0119	4.105	mg/L	0.0239	0.58%
V 292.402†	68223.1	0.4993	mg/L	0.00597	0.9987	mg/L	0.01194	1.20%
Zn 206.200†	2013.1	0.5077	mg/L	0.00114	1.015	mg/L	0.0023	0.22%

Sequence No.: 49
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 4/29/2013 12:25:01 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2716863.7	104.4	%	0.72				0.69%
ScR 361.383	382649.8	102.4	%	0.52				0.51%
Ag 328.068†	228468.3	1.044	mg/L	0.0088	1.044	mg/L	0.0088	0.85%
Al 308.215†	2299.1	1.990	mg/L	0.0053	1.990	mg/L	0.0053	0.27%
As 188.979†	2640.4	1.972	mg/L	0.0157	1.972	mg/L	0.0157	0.80%
B 249.677†	6050.2	1.007	mg/L	0.0010	1.007	mg/L	0.0010	0.10%
Ba 233.527†	5839.0	1.053	mg/L	0.0048	1.053	mg/L	0.0048	0.46%
Be 313.042†	552034.6	0.9688	mg/L	0.01056	0.9688	mg/L	0.01056	1.09%
Ca 317.933†	20133.5	2.018	mg/L	0.0035	2.018	mg/L	0.0035	0.17%
Cd 228.802†	23079.8	1.006	mg/L	0.0088	1.006	mg/L	0.0088	0.88%
Co 228.616†	30605.4	0.9970	mg/L	0.00761	0.9970	mg/L	0.00761	0.76%
Cr 267.716†	8496.7	1.033	mg/L	0.0015	1.033	mg/L	0.0015	0.15%
Cu 324.752†	253922.9	1.002	mg/L	0.0076	1.002	mg/L	0.0076	0.75%
Fe 273.955†	2378.5	1.974	mg/L	0.0095	1.974	mg/L	0.0095	0.48%
K 766.490†	39697.2	19.43	mg/L	0.105	19.43	mg/L	0.105	0.54%
Mg 279.077†	1807.8	1.961	mg/L	0.0060	1.961	mg/L	0.0060	0.31%
Mn 257.610†	47913.7	0.9430	mg/L	0.00832	0.9430	mg/L	0.00832	0.88%
Mo 202.031†	17873.6	0.9766	mg/L	0.00899	0.9766	mg/L	0.00899	0.92%
Na 589.592†	566993.8	49.91	mg/L	0.219	49.91	mg/L	0.219	0.44%
Na 330.237†	1584.3	50.10	mg/L	0.231	50.10	mg/L	0.231	0.46%
Ni 231.604†	3484.9	1.035	mg/L	0.0048	1.035	mg/L	0.0048	0.47%
Pb 220.353†	15303.4	1.965	mg/L	0.0158	1.965	mg/L	0.0158	0.81%
Sb 206.836†	5251.7	2.017	mg/L	0.0177	2.017	mg/L	0.0177	0.88%
Se 196.026†	2952.9	1.939	mg/L	0.0218	1.939	mg/L	0.0218	1.12%
Si 288.158†	2688.2	1.965	mg/L	0.0081	1.965	mg/L	0.0081	0.41%
Sn 189.927†	4718.1	0.9553	mg/L	0.01025	0.9553	mg/L	0.01025	1.07%
Sr 421.552†	891568.7	0.9866	mg/L	0.00579	0.9866	mg/L	0.00579	0.59%
Ti 334.903†	25304.1	0.9911	mg/L	0.00547	0.9911	mg/L	0.00547	0.55%
Tl 190.801†	3507.9	2.051	mg/L	0.0115	2.051	mg/L	0.0115	0.56%
V 292.402†	135034.1	0.9884	mg/L	0.00782	0.9884	mg/L	0.00782	0.79%
Zn 206.200†	3996.7	1.008	mg/L	0.0039	1.008	mg/L	0.0039	0.39%

Sequence No.: 50
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 4/29/2013 12:29:06 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2715175.1	104.3	%	0.62				0.59%
ScR 361.383	388705.9	104.0	%	0.29				0.28%
Ag 328.068†	14.1	0.00006	mg/L	0.000093	0.00006	mg/L	0.000093	144.46%
Al 308.215†	-0.4	-0.00041	mg/L	0.005896	-0.00041	mg/L	0.005896	>999.9%
As 188.979†	0.1	0.00008	mg/L	0.002657	0.00008	mg/L	0.002657	>999.9%
B 249.677†	-3.7	-0.00061	mg/L	0.000721	-0.00061	mg/L	0.000721	117.48%
Ba 233.527†	0.9	0.00016	mg/L	0.000225	0.00016	mg/L	0.000225	138.03%
Be 313.042†	5.3	0.00001	mg/L	0.000040	0.00001	mg/L	0.000040	434.16%
Ca 317.933†	-0.2	-0.00002	mg/L	0.001485	-0.00002	mg/L	0.001485	>999.9%
Cd 228.802†	5.5	0.00024	mg/L	0.000175	0.00024	mg/L	0.000175	73.17%
Co 228.616†	8.0	0.00026	mg/L	0.000107	0.00026	mg/L	0.000107	41.38%
Cr 267.716†	-0.8	-0.00009	mg/L	0.000213	-0.00009	mg/L	0.000213	227.77%
Cu 324.752†	94.3	0.00037	mg/L	0.000120	0.00037	mg/L	0.000120	32.20%
Fe 273.955†	1.5	0.00125	mg/L	0.001155	0.00125	mg/L	0.001155	92.52%
K 766.490†	9.9	0.00485	mg/L	0.013114	0.00485	mg/L	0.013114	270.31%
Mg 279.077†	-7.3	-0.00784	mg/L	0.006049	-0.00784	mg/L	0.006049	77.16%
Mn 257.610†	0.8	0.00002	mg/L	0.000083	0.00002	mg/L	0.000083	504.01%
Mo 202.031†	10.5	0.00058	mg/L	0.000162	0.00058	mg/L	0.000162	28.13%
Na 589.592†	50.1	0.00441	mg/L	0.000868	0.00441	mg/L	0.000868	19.70%
Na 330.237†	-5.1	-0.1597	mg/L	0.32613	-0.1597	mg/L	0.32613	204.26%
Ni 231.604†	-0.9	-0.00028	mg/L	0.001390	-0.00028	mg/L	0.001390	498.10%
Pb 220.353†	10.5	0.00135	mg/L	0.001005	0.00135	mg/L	0.001005	74.51%
Sb 206.836†	6.5	0.00252	mg/L	0.002721	0.00252	mg/L	0.002721	108.00%
Se 196.026†	7.0	0.00462	mg/L	0.002831	0.00462	mg/L	0.002831	61.25%
Si 288.158†	1.7	0.00125	mg/L	0.001900	0.00125	mg/L	0.001900	151.41%
Sn 189.927†	3.3	0.00067	mg/L	0.000036	0.00067	mg/L	0.000036	5.34%
Sr 421.552†	28.1	0.00003	mg/L	0.000017	0.00003	mg/L	0.000017	54.61%
Ti 334.903†	29.8	0.00117	mg/L	0.000537	0.00117	mg/L	0.000537	46.01%
Tl 190.801†	0.2	0.00013	mg/L	0.001209	0.00013	mg/L	0.001209	960.59%
V 292.402†	13.2	0.00010	mg/L	0.000119	0.00010	mg/L	0.000119	125.07%
Zn 206.200†	0.5	0.00013	mg/L	0.000397	0.00013	mg/L	0.000397	309.70%

Sequence No.: 51
Sample ID: WN27 MB1 SWC

Dilution: 2.000000X

Autosampler Location: 339
Date Collected: 4/29/2013 12:33:22 PM
Data Type: Original

Nebulizer Parameters: WN27 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN27 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2766713.8	106.3	%	0.53				0.50%
ScR 361.383	391515.1	104.8	%	0.14				0.14%
Ag 328.068†	60.5	0.00028	mg/L	0.000145	0.00055	mg/L	0.000290	52.39%
Al 308.215†	10.1	0.00886	mg/L	0.003203	0.01773	mg/L	0.006406	36.13%
As 188.979†	2.8	0.00205	mg/L	0.002294	0.00411	mg/L	0.004589	111.76%
B 249.677†	-3.8	-0.00064	mg/L	0.000660	-0.00127	mg/L	0.001321	103.84%
Ba 233.527†	-1.3	-0.00023	mg/L	0.000401	-0.00045	mg/L	0.000801	176.86%
Be 313.042†	-22.0	-0.00004	mg/L	0.000020	-0.00008	mg/L	0.000039	50.60%
Ca 317.933†	219.4	0.02198	mg/L	0.001040	0.04397	mg/L	0.002080	4.73%
Cd 228.802†	3.6	0.00015	mg/L	0.000170	0.00030	mg/L	0.000340	115.09%
Co 228.616†	4.8	0.00016	mg/L	0.000045	0.00031	mg/L	0.000091	29.17%
Cr 267.716†	2.7	0.00033	mg/L	0.000516	0.00065	mg/L	0.001031	158.19%
Cu 324.752†	61.7	0.00024	mg/L	0.000212	0.00049	mg/L	0.000424	87.03%
Fe 273.955†	4.4	0.00364	mg/L	0.002021	0.00729	mg/L	0.004042	55.48%
K 766.490†	22.7	0.01109	mg/L	0.008109	0.02218	mg/L	0.016217	73.11%
Mg 279.077†	-3.7	-0.00395	mg/L	0.006165	-0.00791	mg/L	0.012331	155.93%
Mn 257.610†	4.3	0.00009	mg/L	0.000110	0.00017	mg/L	0.000221	129.55%
Mo 202.031†	3.7	0.00020	mg/L	0.000189	0.00041	mg/L	0.000379	92.58%
Na 589.592†	-18.8	-0.00165	mg/L	0.002356	-0.00330	mg/L	0.004712	142.60%
Na 330.237†	-14.7	-0.4643	mg/L	0.41718	-0.9287	mg/L	0.83435	89.84%
Ni 231.604†	4.2	0.00124	mg/L	0.000949	0.00247	mg/L	0.001898	76.69%
Pb 220.353†	8.7	0.00112	mg/L	0.000499	0.00224	mg/L	0.000998	44.61%
Sb 206.836†	-1.2	-0.00045	mg/L	0.000320	-0.00090	mg/L	0.000641	70.97%
Se 196.026†	8.5	0.00561	mg/L	0.001022	0.01122	mg/L	0.002045	18.23%
Si 288.158†	33.0	0.02418	mg/L	0.002672	0.04836	mg/L	0.005343	11.05%
Sn 189.927†	2.7	0.00055	mg/L	0.000264	0.00110	mg/L	0.000528	48.13%
Sr 421.552†	-19.0	-0.00002	mg/L	0.000040	-0.00004	mg/L	0.000080	188.99%
Ti 334.903†	1.4	0.00006	mg/L	0.000800	0.00011	mg/L	0.001600	>999.9%
Tl 190.801†	0.1	0.00005	mg/L	0.001553	0.00011	mg/L	0.003107	>999.9%
V 292.402†	11.3	0.00008	mg/L	0.000054	0.00017	mg/L	0.000109	64.86%
Zn 206.200†	-2.4	-0.00060	mg/L	0.000331	-0.00120	mg/L	0.000661	55.18%

Sequence No.: 52
Sample ID: WN27 ADUP SWC

Dilution: 2.000000X

Del

Autosampler Location: 340
Date Collected: 4/29/2013 12:37:38 PM
Data Type: Original

Nebulizer Parameters: WN27 ADUP SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WN27 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2756432.3	105.9	%	0.53				0.50%
ScR 361.383	395458.3	105.8	%	1.42				1.34%
Ag 328.068†	-148.1	-0.00018	mg/L	0.000078	-0.00036	mg/L	0.000155	42.86%
Al 308.215†	114790.6	101.0	mg/L	1.30	202.0	mg/L	2.61	1.29%
As 188.979†	-273.0	0.04183	mg/L	0.007654	0.08365	mg/L	0.015308	18.30%
B 249.677†	196.1	0.03248	mg/L	0.000554	0.06495	mg/L	0.001109	1.71%
Ba 233.527†	7860.3	1.386	mg/L	0.0172	2.772	mg/L	0.0344	1.24%
Be 313.042†	968.3	0.00152	mg/L	0.000047	0.00305	mg/L	0.000094	3.07%
Ca 317.933†	548642.6	54.98	mg/L	0.621	110.0	mg/L	1.24	1.13%
Cd 228.802†	277.8	0.01349	mg/L	0.000283	0.02699	mg/L	0.000567	2.10%
Co 228.616†	2402.6	0.06564	mg/L	0.000501	0.1313	mg/L	0.00100	0.76%
Cr 267.716†	2373.8	0.2909	mg/L	0.00474	0.5818	mg/L	0.00948	1.63%
Cu 324.752†	173187.6	0.6926	mg/L	0.00476	1.385	mg/L	0.0095	0.69%
Fe 273.955†	260580.5	216.9	mg/L	3.11	433.8	mg/L	6.21	1.43%
K 766.490†	15540.2	7.608	mg/L	0.0584	15.22	mg/L	0.117	0.77%
Mg 279.077†	35002.4	37.73	mg/L	0.540	75.47	mg/L	1.080	1.43%
Mn 257.610†	136008.9	2.675	mg/L	0.0394	5.351	mg/L	0.0788	1.47%
Mo 202.031†	439.5	0.02335	mg/L	0.000386	0.04671	mg/L	0.000771	1.65%
Na 589.592†	110309.8	9.709	mg/L	0.1146	19.42	mg/L	0.229	1.18%
Na 330.237†	281.5	8.709	mg/L	0.2224	17.42	mg/L	0.445	2.55%
Ni 231.604†	659.9	0.1959	mg/L	0.00196	0.3919	mg/L	0.00392	1.00%
Pb 220.353†	3556.5	0.4718	mg/L	0.00107	0.9436	mg/L	0.00215	0.23%
Sb 206.836†	-18.7	-0.00404	mg/L	0.004707	-0.00809	mg/L	0.009414	116.44%
Se 196.026†	2.9	-0.01002	mg/L	0.007100	-0.02004	mg/L	0.014200	70.88%
Si 288.158†	371.9	0.2768	mg/L	0.00131	0.5535	mg/L	0.00261	0.47%
Sn 189.927†	-23.4	0.00122	mg/L	0.001207	0.00244	mg/L	0.002414	99.04%
Sr 421.552†	325937.0	0.3607	mg/L	0.00422	0.7213	mg/L	0.00845	1.17%
Ti 334.903†	182625.0	7.160	mg/L	0.0972	14.32	mg/L	0.194	1.36%
Tl 190.801†	-20.0	0.01493	mg/L	0.001477	0.02986	mg/L	0.002953	9.89%
V 292.402†	59990.9	0.4238	mg/L	0.00328	0.8476	mg/L	0.00656	0.77%
Zn 206.200†	29291.3	7.384	mg/L	0.1096	14.77	mg/L	0.219	1.48%

Sequence No.: 53
Sample ID: WN27 A SWC

Del

Dilution: 2.000000X

Autosampler Location: 341
Date Collected: 4/29/2013 12:41:40 PM
Data Type: Original

Nebulizer Parameters: WN27 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN27 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2762691.8	106.1	%	0.42				0.40%
ScR 361.383	394551.0	105.6	%	0.83				0.79%
Ag 328.068†	-137.7	-0.00012	mg/L	0.000165	-0.00023	mg/L	0.000330	140.78%
Al 308.215†	116660.8	102.7	mg/L	0.57	205.3	mg/L	1.14	0.55%
As 188.979†	-265.7	0.05073	mg/L	0.004330	0.1015	mg/L	0.00866	8.53%
B 249.677†	206.6	0.03421	mg/L	0.001140	0.06841	mg/L	0.002280	3.33%
Ba 233.527†	8232.3	1.451	mg/L	0.0154	2.901	mg/L	0.0309	1.06%
Be 313.042†	958.5	0.00150	mg/L	0.000005	0.00300	mg/L	0.000009	0.31%
Ca 317.933†	564298.5	56.55	mg/L	0.351	113.1	mg/L	0.70	0.62%
Cd 228.802†	295.3	0.01423	mg/L	0.000085	0.02847	mg/L	0.000169	0.60%
Co 228.616†	2561.9	0.07065	mg/L	0.000703	0.1413	mg/L	0.00141	0.99%
Cr 267.716†	2538.0	0.3114	mg/L	0.00323	0.6228	mg/L	0.00646	1.04%
Cu 324.752†	168624.6	0.6753	mg/L	0.00119	1.351	mg/L	0.0024	0.18%
Fe 273.955†	280443.0	233.4	mg/L	1.53	466.8	mg/L	3.06	0.65%
K 766.490†	15806.6	7.738	mg/L	0.0351	15.48	mg/L	0.070	0.45%
Mg 279.077†	34675.9	37.37	mg/L	0.241	74.74	mg/L	0.483	0.65%
Mn 257.610†	148801.6	2.927	mg/L	0.0145	5.854	mg/L	0.0290	0.49%
Mo 202.031†	465.5	0.02475	mg/L	0.000385	0.04951	mg/L	0.000770	1.55%
Na 589.592†	115944.1	10.21	mg/L	0.035	20.41	mg/L	0.069	0.34%
Na 330.237†	291.9	9.384	mg/L	0.2104	18.77	mg/L	0.421	2.24%
Ni 231.604†	665.1	0.1975	mg/L	0.00153	0.3949	mg/L	0.00307	0.78%
Pb 220.353†	3394.7	0.4507	mg/L	0.00322	0.9013	mg/L	0.00643	0.71%
Sb 206.836†	-15.4	-0.00288	mg/L	0.001388	-0.00576	mg/L	0.002776	48.16%
Se 196.026†	3.2	-0.01001	mg/L	0.003067	-0.02002	mg/L	0.006135	30.64%
Si 288.158†	425.7	0.3162	mg/L	0.00209	0.6323	mg/L	0.00419	0.66%
Sn 189.927†	-15.1	0.00304	mg/L	0.000445	0.00609	mg/L	0.000890	14.63%
Sr 421.552†	346365.2	0.3833	mg/L	0.00136	0.7665	mg/L	0.00271	0.35%
Ti 334.903†	185340.8	7.266	mg/L	0.0342	14.53	mg/L	0.068	0.47%
Tl 190.801†	-21.8	0.01595	mg/L	0.002683	0.03191	mg/L	0.005366	16.82%
V 292.402†	62776.7	0.4433	mg/L	0.00187	0.8866	mg/L	0.00374	0.42%
Zn 206.200†	25082.3	6.323	mg/L	0.0638	12.65	mg/L	0.128	1.01%

Sequence No.: 54
Sample ID: WN27 ASPK SWC

Dil

Dilution: 2.000000X

Autosampler Location: 342
Date Collected: 4/29/2013 12:45:42 PM
Data Type: Original

Nebulizer Parameters: WN27 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN27 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2747012.7	105.5	%	0.33				0.31%
ScR 361.383	393676.4	105.3	%	0.26				0.25%
Ag 328.068†	50495.4	0.2313	mg/L	0.00082	0.4626	mg/L	0.00164	0.35%
Al 308.215†	110223.2	96.99	mg/L	0.278	194.0	mg/L	0.56	0.29%
As 188.979†	43.8	0.2723	mg/L	0.00169	0.5446	mg/L	0.00338	0.62%
B 249.677†	195.4	0.03207	mg/L	0.001267	0.06415	mg/L	0.002534	3.95%
Ba 233.527†	12925.6	2.300	mg/L	0.0089	4.600	mg/L	0.0179	0.39%
Be 313.042†	128454.9	0.2253	mg/L	0.00042	0.4506	mg/L	0.00083	0.18%
Ca 317.933†	684375.3	68.58	mg/L	0.338	137.2	mg/L	0.68	0.49%
Cd 228.802†	5829.9	0.2567	mg/L	0.00091	0.5134	mg/L	0.00181	0.35%
Co 228.616†	9454.3	0.2957	mg/L	0.00118	0.5914	mg/L	0.00236	0.40%
Cr 267.716†	4257.6	0.5200	mg/L	0.00261	1.040	mg/L	0.0052	0.50%
Cu 324.752†	217511.1	0.8674	mg/L	0.00359	1.735	mg/L	0.0072	0.41%
Fe 273.955†	258122.0	214.8	mg/L	0.55	429.7	mg/L	1.10	0.26%
K 766.490†	15622.1	7.648	mg/L	0.0233	15.30	mg/L	0.047	0.31%
Mg 279.077†	32927.9	35.49	mg/L	0.124	70.98	mg/L	0.248	0.35%
Mn 257.610†	142896.7	2.811	mg/L	0.0075	5.622	mg/L	0.0151	0.27%
Mo 202.031†	4224.5	0.2300	mg/L	0.00089	0.4600	mg/L	0.00179	0.39%
Na 589.592†	114497.0	10.08	mg/L	0.050	20.16	mg/L	0.099	0.49%
Na 330.237†	306.3	9.019	mg/L	0.0873	18.04	mg/L	0.175	0.97%
Ni 231.604†	1403.2	0.4165	mg/L	0.00371	0.8331	mg/L	0.00741	0.89%
Pb 220.353†	5026.9	0.6597	mg/L	0.00332	1.319	mg/L	0.0066	0.50%
Sb 206.836†	9.5	0.00448	mg/L	0.002902	0.00896	mg/L	0.005803	64.76%
Se 196.026†	1105.2	0.7145	mg/L	0.00168	1.429	mg/L	0.0034	0.24%
Si 288.158†	414.8	0.3088	mg/L	0.00541	0.6175	mg/L	0.01082	1.75%
Sn 189.927†	-16.1	0.00383	mg/L	0.001657	0.00767	mg/L	0.003315	43.23%
Sr 421.552†	397273.3	0.4396	mg/L	0.00074	0.8792	mg/L	0.00148	0.17%
Ti 334.903†	182277.0	7.145	mg/L	0.0048	14.29	mg/L	0.010	0.07%
Tl 190.801†	374.5	0.2443	mg/L	0.00440	0.4887	mg/L	0.00881	1.80%
V 292.402†	88777.5	0.6348	mg/L	0.00235	1.270	mg/L	0.0047	0.37%
Zn 206.200†	35576.6	8.969	mg/L	0.0459	17.94	mg/L	0.092	0.51%

Sequence No.: 55
Sample ID: ~~WN27 APOST SWC~~ 222222
Dilution: 2.000000X

Autosampler Location: 343
Date Collected: 4/29/2013 12:49:44 PM
Data Type: Original

BA 4/29/13

Nebulizer Parameters: WN27 APOST SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WN27 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2719127.0	104.5	%	0.12				0.11%
ScR 361.383	385849.4	103.2	%	0.65				0.63%
Ag 328.068†	113550.3	0.5194	mg/L	0.00211	1.039	mg/L	0.0042	0.41%
Al 308.215†	118346.4	104.1	mg/L	0.35	208.3	mg/L	0.70	0.33%
As 188.979†	2542.5	2.112	mg/L	0.0120	4.225	mg/L	0.0239	0.57%
B 249.677†	205.3	0.03281	mg/L	0.001469	0.06562	mg/L	0.002938	4.48%
Ba 233.527†	20165.7	3.604	mg/L	0.0141	7.208	mg/L	0.0282	0.39%
Be 313.042†	280497.4	0.4921	mg/L	0.00443	0.9842	mg/L	0.00885	0.90%
Ca 317.933†	656222.8	65.76	mg/L	0.259	131.5	mg/L	0.52	0.39%
Cd 228.802†	12531.2	0.5416	mg/L	0.00191	1.083	mg/L	0.0038	0.35%
Co 228.616†	17990.8	0.5740	mg/L	0.00130	1.148	mg/L	0.0026	0.23%
Cr 267.716†	6886.3	0.8391	mg/L	0.00497	1.678	mg/L	0.0099	0.59%
Cu 324.752†	293442.4	1.168	mg/L	0.0028	2.336	mg/L	0.0057	0.24%
Fe 273.955†	276907.2	230.5	mg/L	0.97	460.9	mg/L	1.93	0.42%
K 766.490†	37057.7	18.14	mg/L	0.093	36.28	mg/L	0.186	0.51%
Mg 279.077†	43725.2	47.16	mg/L	0.130	94.32	mg/L	0.259	0.27%
Mn 257.610†	171491.8	3.374	mg/L	0.0168	6.748	mg/L	0.0336	0.50%
Mo 202.031†	485.4	0.02571	mg/L	0.001041	0.05141	mg/L	0.002081	4.05%
Na 589.592†	236506.6	20.82	mg/L	0.049	41.63	mg/L	0.097	0.23%
Na 330.237†	632.3	19.99	mg/L	0.263	39.99	mg/L	0.525	1.31%
Ni 231.604†	2439.9	0.7236	mg/L	0.00536	1.447	mg/L	0.0107	0.74%
Pb 220.353†	18966.7	2.450	mg/L	0.0120	4.900	mg/L	0.0239	0.49%
Sb 206.836†	-8.0	-0.00551	mg/L	0.005475	-0.01102	mg/L	0.010950	99.36%
Se 196.026†	3120.2	2.037	mg/L	0.0093	4.074	mg/L	0.0186	0.46%
Si 288.158†	891.3	0.6601	mg/L	0.00494	1.320	mg/L	0.0099	0.75%
Sn 189.927†	-32.3	0.00032	mg/L	0.001825	0.00065	mg/L	0.003651	564.07%
Sr 421.552†	810590.6	0.8969	mg/L	0.00296	1.794	mg/L	0.0059	0.33%
Ti 334.903†	183715.7	7.202	mg/L	0.0302	14.40	mg/L	0.060	0.42%
Tl 190.801†	3386.8	2.012	mg/L	0.0009	4.024	mg/L	0.0018	0.05%
V 292.402†	129064.1	0.9288	mg/L	0.00173	1.858	mg/L	0.0035	0.19%
Zn 206.200†	26997.2	6.806	mg/L	0.0546	13.61	mg/L	0.109	0.80%

Sequence No.: 56
Sample ID: WN27 MB1SPK SWC

Dilution: 2.000000X

Autosampler Location: 344
Date Collected: 4/29/2013 12:52:50 PM
Data Type: Original

Nebulizer Parameters: WN27 MB1SPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WN27 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2786641.6	107.1	%	0.88				0.82%
ScR 361.383	393903.5	105.4	%	0.36				0.34%
Ag 328.068†	55445.4	0.2533	mg/L	0.00240	0.5066	mg/L	0.00480	0.95%
Al 308.215†	81.7	0.06411	mg/L	0.002447	0.1282	mg/L	0.00489	3.82%
As 188.979†	327.2	0.2398	mg/L	0.00444	0.4797	mg/L	0.00889	1.85%
B 249.677†	-3.8	-0.00088	mg/L	0.001027	-0.00177	mg/L	0.002054	116.10%
Ba 233.527†	1427.5	0.2575	mg/L	0.00058	0.5149	mg/L	0.00115	0.22%
Be 313.042†	128492.2	0.2255	mg/L	0.00058	0.4510	mg/L	0.00117	0.26%
Ca 317.933†	326.0	0.03267	mg/L	0.001972	0.06535	mg/L	0.003943	6.03%
Cd 228.802†	5504.3	0.2411	mg/L	0.00214	0.4822	mg/L	0.00429	0.89%
Co 228.616†	7368.8	0.2404	mg/L	0.00280	0.4809	mg/L	0.00560	1.16%
Cr 267.716†	2034.0	0.2474	mg/L	0.00124	0.4947	mg/L	0.00248	0.50%
Cu 324.752†	60621.3	0.2392	mg/L	0.00240	0.4784	mg/L	0.00481	1.00%
Fe 273.955†	119.2	0.09791	mg/L	0.004856	0.1958	mg/L	0.00971	4.96%
K 766.490†	10.9	0.00536	mg/L	0.010728	0.01072	mg/L	0.021456	200.20%
Mg 279.077†	6.9	0.00926	mg/L	0.006140	0.01851	mg/L	0.012280	66.34%
Mn 257.610†	11650.9	0.2293	mg/L	0.00055	0.4586	mg/L	0.00111	0.24%
Mo 202.031†	4498.0	0.2458	mg/L	0.00228	0.4915	mg/L	0.00456	0.93%
Na 589.592†	-1.9	-0.00017	mg/L	0.000707	-0.00034	mg/L	0.001414	417.75%
Na 330.237†	-8.9	-0.5174	mg/L	0.03404	-1.035	mg/L	0.0681	6.58%
Ni 231.604†	851.8	0.2529	mg/L	0.00162	0.5058	mg/L	0.00325	0.64%
Pb 220.353†	1925.0	0.2472	mg/L	0.00327	0.4944	mg/L	0.00654	1.32%
Sb 206.836†	647.8	0.2466	mg/L	0.00252	0.4933	mg/L	0.00504	1.02%
Se 196.026†	1164.7	0.7650	mg/L	0.00863	1.530	mg/L	0.0173	1.13%
Si 288.158†	33.6	0.02542	mg/L	0.005496	0.05083	mg/L	0.010991	21.62%
Sn 189.927†	2.7	0.00068	mg/L	0.000367	0.00136	mg/L	0.000733	53.83%
Sr 421.552†	252.5	0.00028	mg/L	0.000050	0.00056	mg/L	0.000101	18.00%
Ti 334.903†	155.7	0.00580	mg/L	0.000090	0.01160	mg/L	0.000179	1.55%
Tl 190.801†	425.8	0.2480	mg/L	0.00245	0.4960	mg/L	0.00490	0.99%
V 292.402†	32537.8	0.2383	mg/L	0.00193	0.4766	mg/L	0.00385	0.81%
Zn 206.200†	3154.8	0.7953	mg/L	0.00278	1.591	mg/L	0.0056	0.35%

Sequence No.: 57
Sample ID: CV 6

Autosampler Location: 7
Date Collected: 4/29/2013 12:56:51 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2738452.4	105.2	%	0.44				0.42%
ScR 361.383	386275.7	103.4	%	0.55				0.53%
Ag 328.068†	225184.4	1.029	mg/L	0.0085	1.029	mg/L	0.0085	0.83%
Al 308.215†	2289.1	1.982	mg/L	0.0150	1.982	mg/L	0.0150	0.76%
As 188.979†	2629.7	1.964	mg/L	0.0124	1.964	mg/L	0.0124	0.63%
B 249.677†	6021.2	1.002	mg/L	0.0060	1.002	mg/L	0.0060	0.60%
Ba 233.527†	5811.7	1.048	mg/L	0.0078	1.048	mg/L	0.0078	0.75%
Be 313.042†	551869.6	0.9686	mg/L	0.00828	0.9686	mg/L	0.00828	0.85%
Ca 317.933†	20013.6	2.006	mg/L	0.0095	2.006	mg/L	0.0095	0.47%
Cd 228.802†	22976.8	1.001	mg/L	0.0056	1.001	mg/L	0.0056	0.56%
Co 228.616†	30452.2	0.9920	mg/L	0.00695	0.9920	mg/L	0.00695	0.70%
Cr 267.716†	8450.4	1.028	mg/L	0.0035	1.028	mg/L	0.0035	0.34%
Cu 324.752†	251725.8	0.9932	mg/L	0.00664	0.9932	mg/L	0.00664	0.67%
Fe 273.955†	2370.7	1.968	mg/L	0.0050	1.968	mg/L	0.0050	0.25%
K 766.490†	39553.2	19.36	mg/L	0.231	19.36	mg/L	0.231	1.20%
Mg 279.077†	1798.9	1.952	mg/L	0.0149	1.952	mg/L	0.0149	0.76%
Mn 257.610†	47667.1	0.9382	mg/L	0.00836	0.9382	mg/L	0.00836	0.89%
Mo 202.031†	17762.0	0.9705	mg/L	0.00734	0.9705	mg/L	0.00734	0.76%
Na 589.592†	565470.5	49.77	mg/L	0.503	49.77	mg/L	0.503	1.01%
Na 330.237†	1574.2	49.78	mg/L	0.130	49.78	mg/L	0.130	0.26%
Ni 231.604†	3461.5	1.028	mg/L	0.0079	1.028	mg/L	0.0079	0.77%
Pb 220.353†	15216.6	1.954	mg/L	0.0136	1.954	mg/L	0.0136	0.70%
Sb 206.836†	5217.9	2.004	mg/L	0.0154	2.004	mg/L	0.0154	0.77%
Se 196.026†	2936.4	1.928	mg/L	0.0212	1.928	mg/L	0.0212	1.10%
Si 288.158†	2676.6	1.956	mg/L	0.0118	1.956	mg/L	0.0118	0.60%
Sn 189.927†	4688.9	0.9493	mg/L	0.00990	0.9493	mg/L	0.00990	1.04%
Sr 421.552†	887729.0	0.9823	mg/L	0.01124	0.9823	mg/L	0.01124	1.14%
Ti 334.903†	25175.7	0.9861	mg/L	0.00877	0.9861	mg/L	0.00877	0.89%
Tl 190.801†	3491.3	2.042	mg/L	0.0163	2.042	mg/L	0.0163	0.80%
V 292.402†	133201.1	0.9750	mg/L	0.00774	0.9750	mg/L	0.00774	0.79%
Zn 206.200†	3968.7	1.001	mg/L	0.0037	1.001	mg/L	0.0037	0.37%

Sequence No.: 58
Sample ID: CB 6

Autosampler Location: 1
Date Collected: 4/29/2013 1:00:55 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2741855.2	105.3	%	0.18				0.17%
ScR 361.383	390296.7	104.4	%	0.92				0.88%
Ag 328.068†	106.5	0.00049	mg/L	0.000128	0.00049	mg/L	0.000128	26.24%
Al 308.215†	0.4	0.00030	mg/L	0.003997	0.00030	mg/L	0.003997	>999.9%
As 188.979†	1.7	0.00129	mg/L	0.001168	0.00129	mg/L	0.001168	90.60%
B 249.677†	5.2	0.00087	mg/L	0.001260	0.00087	mg/L	0.001260	144.44%
Ba 233.527†	-0.7	-0.00012	mg/L	0.000219	-0.00012	mg/L	0.000219	182.60%
Be 313.042†	86.8	0.00015	mg/L	0.000031	0.00015	mg/L	0.000031	20.28%
Ca 317.933†	10.7	0.00107	mg/L	0.001120	0.00107	mg/L	0.001120	104.29%
Cd 228.802†	13.1	0.00057	mg/L	0.000078	0.00057	mg/L	0.000078	13.67%
Co 228.616†	14.0	0.00046	mg/L	0.000201	0.00046	mg/L	0.000201	44.02%
Cr 267.716†	3.5	0.00043	mg/L	0.000188	0.00043	mg/L	0.000188	43.75%
Cu 324.752†	127.2	0.00050	mg/L	0.000108	0.00050	mg/L	0.000108	21.45%
Fe 273.955†	4.8	0.00400	mg/L	0.002260	0.00400	mg/L	0.002260	56.53%
K 766.490†	25.5	0.01249	mg/L	0.005346	0.01249	mg/L	0.005346	42.81%
Mg 279.077†	-6.3	-0.00681	mg/L	0.003604	-0.00681	mg/L	0.003604	52.91%
Mn 257.610†	11.9	0.00023	mg/L	0.000050	0.00023	mg/L	0.000050	21.47%
Mo 202.031†	27.5	0.00150	mg/L	0.000357	0.00150	mg/L	0.000357	23.76%
Na 589.592†	62.3	0.00548	mg/L	0.003288	0.00548	mg/L	0.003288	59.95%
Na 330.237†	-11.1	-0.3509	mg/L	0.18420	-0.3509	mg/L	0.18420	52.49%
Ni 231.604†	2.4	0.00073	mg/L	0.000800	0.00073	mg/L	0.000800	109.81%
Pb 220.353†	10.2	0.00131	mg/L	0.000269	0.00131	mg/L	0.000269	20.47%
Sb 206.836†	8.6	0.00331	mg/L	0.001581	0.00331	mg/L	0.001581	47.80%
Se 196.026†	10.5	0.00692	mg/L	0.002140	0.00692	mg/L	0.002140	30.91%
Si 288.158†	-2.8	-0.00208	mg/L	0.002981	-0.00208	mg/L	0.002981	143.12%
Sn 189.927†	7.5	0.00151	mg/L	0.000604	0.00151	mg/L	0.000604	40.04%
Sr 421.552†	176.6	0.00020	mg/L	0.000010	0.00020	mg/L	0.000010	5.15%
Ti 334.903†	30.5	0.00120	mg/L	0.000427	0.00120	mg/L	0.000427	35.70%
Tl 190.801†	1.2	0.00072	mg/L	0.000828	0.00072	mg/L	0.000828	115.56%
V 292.402†	58.1	0.00043	mg/L	0.000171	0.00043	mg/L	0.000171	40.19%
Zn 206.200†	-0.5	-0.00012	mg/L	0.000425	-0.00012	mg/L	0.000425	345.14%

Sequence No.: 59
Sample ID: WN31 MB1 SWC

Autosampler Location: 345
Date Collected: 4/29/2013 1:05:11 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN31 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN31 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2748559.7	105.6	%	0.77				0.73%
ScR 361.383	392272.1	105.0	%	0.30				0.29%
Ag 328.068†	20.3	0.00009	mg/L	0.000135	0.00019	mg/L	0.000271	145.56%
Al 308.215†	5.4	0.00475	mg/L	0.006470	0.00950	mg/L	0.012939	136.23%
As 188.979†	1.5	0.00112	mg/L	0.001597	0.00225	mg/L	0.003193	142.16%
B 249.677†	-3.3	-0.00055	mg/L	0.000845	-0.00110	mg/L	0.001691	154.06%
Ba 233.527†	5.2	0.00094	mg/L	0.000739	0.00188	mg/L	0.001478	78.76%
Be 313.042†	-9.5	-0.00002	mg/L	0.000016	-0.00003	mg/L	0.000032	95.05%
Ca 317.933†	74.6	0.00748	mg/L	0.000752	0.01496	mg/L	0.001505	10.06%
Cd 228.802†	5.2	0.00023	mg/L	0.000114	0.00045	mg/L	0.000228	50.65%
Co 228.616†	4.5	0.00015	mg/L	0.000125	0.00029	mg/L	0.000249	85.84%
Cr 267.716†	1.6	0.00019	mg/L	0.000234	0.00038	mg/L	0.000469	122.56%
Cu 324.752†	47.1	0.00019	mg/L	0.000074	0.00037	mg/L	0.000147	39.58%
Fe 273.955†	8.0	0.00665	mg/L	0.001151	0.01330	mg/L	0.002301	17.30%
K 766.490†	28.2	0.01378	mg/L	0.018583	0.02757	mg/L	0.037167	134.83%
Mg 279.077†	-7.1	-0.00773	mg/L	0.003976	-0.01546	mg/L	0.007951	51.43%
Mn 257.610†	5.8	0.00011	mg/L	0.000043	0.00023	mg/L	0.000086	37.26%
Mo 202.031†	3.6	0.00020	mg/L	0.000259	0.00039	mg/L	0.000518	132.33%
Na 589.592†	-126.0	-0.01109	mg/L	0.000759	-0.02218	mg/L	0.001517	6.84%
Na 330.237†	-13.9	-0.4407	mg/L	0.35233	-0.8814	mg/L	0.70465	79.95%
Ni 231.604†	2.9	0.00086	mg/L	0.000414	0.00172	mg/L	0.000828	48.24%
Pb 220.353†	4.9	0.00063	mg/L	0.000634	0.00126	mg/L	0.001269	100.72%
Sb 206.836†	-1.9	-0.00075	mg/L	0.003045	-0.00150	mg/L	0.006091	407.39%
Se 196.026†	5.9	0.00390	mg/L	0.000755	0.00779	mg/L	0.001510	19.37%
Si 288.158†	24.0	0.01760	mg/L	0.001734	0.03520	mg/L	0.003467	9.85%
Sn 189.927†	2.0	0.00040	mg/L	0.000272	0.00081	mg/L	0.000543	67.40%
Sr 421.552†	21.1	0.00002	mg/L	0.000020	0.00005	mg/L	0.000040	86.12%
Ti 334.903†	26.0	0.00102	mg/L	0.000640	0.00204	mg/L	0.001279	62.63%
Tl 190.801†	-2.4	-0.00141	mg/L	0.001499	-0.00282	mg/L	0.002998	106.19%
V 292.402†	4.3	0.00003	mg/L	0.000064	0.00006	mg/L	0.000127	204.98%
Zn 206.200†	1.9	0.00049	mg/L	0.000592	0.00098	mg/L	0.001183	120.57%

Sequence No.: 60
Sample ID: WN31 ADUP SWC

Autosampler Location: 346
Date Collected: 4/29/2013 1:09:28 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN31 ADUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN31 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2722264.9	104.6	%	0.26				0.25%
ScR 361.383	393387.5	105.3	%	0.56				0.53%
Ag 328.068†	195.8	0.00117	mg/L	0.000291	0.00233	mg/L	0.000581	24.93%
Al 308.215†	61863.7	54.44	mg/L	0.097	108.9	mg/L	0.19	0.18%
As 188.979†	-113.3	0.03172	mg/L	0.002156	0.06345	mg/L	0.004313	6.80%
B 249.677†	327.1	0.05437	mg/L	0.000720	0.1087	mg/L	0.00144	1.32%
Ba 233.527†	13169.7	2.356	mg/L	0.0119	4.712	mg/L	0.0237	0.50%
Be 313.042†	493.3	0.00077	mg/L	0.000018	0.00154	mg/L	0.000035	2.29%
Ca 317.933†	288643.1	28.93	mg/L	0.152	57.85	mg/L	0.303	0.52%
Cd 228.802†	268.1	0.01246	mg/L	0.000182	0.02492	mg/L	0.000363	1.46%
Co 228.616†	1612.9	0.04634	mg/L	0.000090	0.09268	mg/L	0.000181	0.20%
Cr 267.716†	3282.1	0.4007	mg/L	0.00259	0.8014	mg/L	0.00517	0.65%
Cu 324.752†	201158.5	0.7997	mg/L	0.00431	1.599	mg/L	0.0086	0.54%
Fe 273.955†	161162.7	134.1	mg/L	0.94	268.3	mg/L	1.87	0.70%
K 766.490†	9554.3	4.677	mg/L	0.0327	9.355	mg/L	0.0655	0.70%
Mg 279.077†	21147.0	22.80	mg/L	0.133	45.59	mg/L	0.266	0.58%
Mn 257.610†	96351.5	1.895	mg/L	0.0102	3.791	mg/L	0.0204	0.54%
Mo 202.031†	1207.9	0.06564	mg/L	0.000385	0.1313	mg/L	0.00077	0.59%
Na 589.592†	38479.3	3.387	mg/L	0.0149	6.774	mg/L	0.0298	0.44%
Na 330.237†	89.8	2.569	mg/L	0.1470	5.139	mg/L	0.2941	5.72%
Ni 231.604†	793.3	0.2355	mg/L	0.00282	0.4711	mg/L	0.00564	1.20%
Pb 220.353†	2619.4	0.3434	mg/L	0.00152	0.6869	mg/L	0.00304	0.44%
Sb 206.836†	19.5	0.00588	mg/L	0.001912	0.01176	mg/L	0.003824	32.51%
Se 196.026†	4.9	-0.00323	mg/L	0.000814	-0.00647	mg/L	0.001628	25.16%
Si 288.158†	2608.1	1.913	mg/L	0.0039	3.826	mg/L	0.0078	0.20%
Sn 189.927†	145.3	0.03244	mg/L	0.000189	0.06488	mg/L	0.000378	0.58%
Sr 421.552†	180277.8	0.1995	mg/L	0.00026	0.3990	mg/L	0.00052	0.13%
Ti 334.903†	87215.0	3.419	mg/L	0.0123	6.838	mg/L	0.0247	0.36%
Tl 190.801†	-13.0	0.00881	mg/L	0.005013	0.01763	mg/L	0.010025	56.87%
V 292.402†	36239.7	0.2574	mg/L	0.00214	0.5148	mg/L	0.00427	0.83%
Zn 206.200†	16344.2	4.121	mg/L	0.0250	8.241	mg/L	0.0500	0.61%

Sequence No.: 61
Sample ID: WN31 A SWC

Autosampler Location: 347
Date Collected: 4/29/2013 1:13:30 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN31 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN31 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2728634.7	104.8	%	0.40				0.38%
ScR 361.383	390527.0	104.5	%	0.17				0.17%
Ag 328.068†	137.8	0.00090	mg/L	0.000124	0.00179	mg/L	0.000248	13.80%
Al 308.215†	61364.2	54.00	mg/L	0.120	108.0	mg/L	0.24	0.22%
As 188.979†	-113.2	0.02862	mg/L	0.003239	0.05725	mg/L	0.006478	11.32%
B 249.677†	293.5	0.04878	mg/L	0.001156	0.09756	mg/L	0.002312	2.37%
Ba 233.527†	12997.9	2.325	mg/L	0.0075	4.651	mg/L	0.0150	0.32%
Be 313.042†	491.7	0.00077	mg/L	0.000014	0.00154	mg/L	0.000029	1.87%
Ca 317.933†	285787.5	28.64	mg/L	0.098	57.28	mg/L	0.196	0.34%
Cd 228.802†	272.1	0.01267	mg/L	0.000298	0.02534	mg/L	0.000596	2.35%
Co 228.616†	1631.6	0.04711	mg/L	0.000211	0.09423	mg/L	0.000421	0.45%
Cr 267.716†	3831.7	0.4675	mg/L	0.00194	0.9350	mg/L	0.00389	0.42%
Cu 324.752†	179639.6	0.7147	mg/L	0.00352	1.429	mg/L	0.0070	0.49%
Fe 273.955†	158748.5	132.1	mg/L	0.22	264.3	mg/L	0.45	0.17%
K 766.490†	9660.6	4.730	mg/L	0.0301	9.459	mg/L	0.0601	0.64%
Mg 279.077†	21286.6	22.95	mg/L	0.060	45.90	mg/L	0.119	0.26%
Mn 257.610†	96184.1	1.892	mg/L	0.0065	3.784	mg/L	0.0130	0.34%
Mo 202.031†	1340.6	0.07289	mg/L	0.000304	0.1458	mg/L	0.00061	0.42%
Na 589.592†	38079.7	3.352	mg/L	0.0062	6.703	mg/L	0.0125	0.19%
Na 330.237†	91.2	2.606	mg/L	0.0503	5.213	mg/L	0.1006	1.93%
Ni 231.604†	929.8	0.2761	mg/L	0.00069	0.5521	mg/L	0.00139	0.25%
Pb 220.353†	2604.2	0.3417	mg/L	0.00104	0.6834	mg/L	0.00208	0.30%
Sb 206.836†	16.0	0.00357	mg/L	0.000641	0.00713	mg/L	0.001282	17.97%
Se 196.026†	8.1	-0.00106	mg/L	0.000477	-0.00213	mg/L	0.000953	44.82%
Si 288.158†	2137.8	1.568	mg/L	0.0042	3.137	mg/L	0.0085	0.27%
Sn 189.927†	168.9	0.03716	mg/L	0.000672	0.07433	mg/L	0.001343	1.81%
Sr 421.552†	178430.2	0.1974	mg/L	0.00054	0.3949	mg/L	0.00109	0.28%
Ti 334.903†	84926.5	3.329	mg/L	0.0048	6.658	mg/L	0.0097	0.15%
Tl 190.801†	-12.5	0.00889	mg/L	0.000960	0.01778	mg/L	0.001920	10.80%
V 292.402†	35498.4	0.2525	mg/L	0.00147	0.5049	mg/L	0.00294	0.58%
Zn 206.200†	16120.5	4.064	mg/L	0.0129	8.128	mg/L	0.0257	0.32%

Sequence No.: 62
Sample ID: WN31 ASPK SWC

Autosampler Location: 348
Date Collected: 4/29/2013 1:17:31 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN31 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN31 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2729090.9	104.8	%	0.65				0.62%
ScR 361.383	392077.3	104.9	%	0.66				0.63%
Ag 328.068†	105973.1	0.4845	mg/L	0.00448	0.9690	mg/L	0.00897	0.93%
Al 308.215†	64008.6	56.32	mg/L	0.301	112.6	mg/L	0.60	0.53%
As 188.979†	2427.5	1.894	mg/L	0.0110	3.789	mg/L	0.0220	0.58%
B 249.677†	336.4	0.05485	mg/L	0.001001	0.1097	mg/L	0.00200	1.82%
Ba 233.527†	23780.7	4.270	mg/L	0.0371	8.540	mg/L	0.0742	0.87%
Be 313.042†	252318.8	0.4427	mg/L	0.00322	0.8855	mg/L	0.00644	0.73%
Ca 317.933†	379321.2	38.01	mg/L	0.090	76.03	mg/L	0.179	0.24%
Cd 228.802†	11291.5	0.4875	mg/L	0.00361	0.9751	mg/L	0.00723	0.74%
Co 228.616†	15705.8	0.5062	mg/L	0.00376	1.012	mg/L	0.0075	0.74%
Cr 267.716†	7188.7	0.8748	mg/L	0.00440	1.750	mg/L	0.0088	0.50%
Cu 324.752†	299558.6	1.188	mg/L	0.0070	2.376	mg/L	0.0139	0.59%
Fe 273.955†	160222.5	133.4	mg/L	1.21	266.7	mg/L	2.43	0.91%
K 766.490†	27535.2	13.48	mg/L	0.055	26.96	mg/L	0.110	0.41%
Mg 279.077†	30250.1	32.64	mg/L	0.261	65.28	mg/L	0.522	0.80%
Mn 257.610†	117673.4	2.315	mg/L	0.0183	4.630	mg/L	0.0366	0.79%
Mo 202.031†	1193.6	0.06473	mg/L	0.000615	0.1295	mg/L	0.00123	0.95%
Na 589.592†	144611.2	12.73	mg/L	0.015	25.46	mg/L	0.029	0.11%
Na 330.237†	388.1	11.85	mg/L	0.169	23.70	mg/L	0.337	1.42%
Ni 231.604†	2368.1	0.7023	mg/L	0.00527	1.405	mg/L	0.0105	0.75%
Pb 220.353†	16828.7	2.168	mg/L	0.0151	4.336	mg/L	0.0301	0.69%
Sb 206.836†	21.5	0.00168	mg/L	0.002015	0.00335	mg/L	0.004030	120.19%
Se 196.026†	2832.6	1.854	mg/L	0.0089	3.708	mg/L	0.0178	0.48%
Si 288.158†	1668.7	1.228	mg/L	0.0112	2.455	mg/L	0.0224	0.91%
Sn 189.927†	128.5	0.02978	mg/L	0.001429	0.05955	mg/L	0.002858	4.80%
Sr 421.552†	590922.8	0.6539	mg/L	0.00350	1.308	mg/L	0.0070	0.54%
Ti 334.903†	83811.6	3.285	mg/L	0.0195	6.570	mg/L	0.0390	0.59%
Tl 190.801†	3075.8	1.818	mg/L	0.0156	3.635	mg/L	0.0313	0.86%
V 292.402†	96583.4	0.6993	mg/L	0.00494	1.399	mg/L	0.0099	0.71%
Zn 206.200†	17956.2	4.527	mg/L	0.0358	9.054	mg/L	0.0715	0.79%

Sequence No.: 63
Sample ID: ~~WN31 APOST SWC~~ ZZZZZZ
BA 4/29/13
Dilution: 2.000000X

Autosampler Location: 349
Date Collected: 4/29/2013 1:21:33 PM
Data Type: Original

Nebulizer Parameters: WN31 APOST SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN31 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2735420.9	105.1	%	0.64				0.61%
ScR 361.383	384252.0	102.8	%	0.44				0.42%
Ag 328.068†	114551.5	0.5237	mg/L	0.00538	1.047	mg/L	0.0108	1.03%
Al 308.215†	64352.6	56.63	mg/L	0.032	113.3	mg/L	0.06	0.06%
As 188.979†	2696.5	2.094	mg/L	0.0046	4.189	mg/L	0.0092	0.22%
B 249.677†	300.8	0.04881	mg/L	0.000982	0.09763	mg/L	0.001965	2.01%
Ba 233.527†	25381.5	4.559	mg/L	0.0090	9.118	mg/L	0.0179	0.20%
Be 313.042†	278770.2	0.4892	mg/L	0.00288	0.9783	mg/L	0.00576	0.59%
Ca 317.933†	384632.5	38.55	mg/L	0.068	77.09	mg/L	0.136	0.18%
Cd 228.802†	12318.5	0.5317	mg/L	0.00200	1.063	mg/L	0.0040	0.38%
Co 228.616†	17095.2	0.5514	mg/L	0.00203	1.103	mg/L	0.0041	0.37%
Cr 267.716†	8207.9	0.9987	mg/L	0.00531	1.997	mg/L	0.0106	0.53%
Cu 324.752†	309316.2	1.227	mg/L	0.0098	2.453	mg/L	0.0196	0.80%
Fe 273.955†	160905.1	133.9	mg/L	0.11	267.8	mg/L	0.22	0.08%
K 766.490†	30323.8	14.85	mg/L	0.043	29.69	mg/L	0.085	0.29%
Mg 279.077†	31391.0	33.88	mg/L	0.120	67.75	mg/L	0.240	0.35%
Mn 257.610†	121058.2	2.382	mg/L	0.0047	4.764	mg/L	0.0093	0.20%
Mo 202.031†	1344.3	0.07295	mg/L	0.000670	0.1459	mg/L	0.00134	0.92%
Na 589.592†	156436.7	13.77	mg/L	0.077	27.54	mg/L	0.154	0.56%
Na 330.237†	428.7	13.12	mg/L	0.127	26.25	mg/L	0.253	0.97%
Ni 231.604†	2706.6	0.8027	mg/L	0.00475	1.605	mg/L	0.0095	0.59%
Pb 220.353†	18174.3	2.341	mg/L	0.0078	4.682	mg/L	0.0155	0.33%
Sb 206.836†	32.5	0.00453	mg/L	0.000997	0.00906	mg/L	0.001994	22.00%
Se 196.026†	3149.3	2.062	mg/L	0.0078	4.124	mg/L	0.0155	0.38%
Si 288.158†	2189.1	1.609	mg/L	0.0060	3.218	mg/L	0.0121	0.38%
Sn 189.927†	160.0	0.03621	mg/L	0.000602	0.07242	mg/L	0.001205	1.66%
Sr 421.552†	637522.9	0.7054	mg/L	0.00196	1.411	mg/L	0.0039	0.28%
Ti 334.903†	85584.6	3.354	mg/L	0.0011	6.709	mg/L	0.0021	0.03%
Tl 190.801†	3446.6	2.035	mg/L	0.0070	4.070	mg/L	0.0141	0.35%
V 292.402†	103600.4	0.7509	mg/L	0.00676	1.502	mg/L	0.0135	0.90%
Zn 206.200†	18379.3	4.634	mg/L	0.0199	9.268	mg/L	0.0397	0.43%

Sequence No.: 64
Sample ID: WN31 MB1SPK SWC

Autosampler Location: 350
Date Collected: 4/29/2013 1:25:37 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN31 MB1SPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN31 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2726219.2	104.7	%	0.26				0.25%
ScR 361.383	389928.8	104.3	%	0.59				0.57%
Ag 328.068†	114281.4	0.5222	mg/L	0.00145	1.044	mg/L	0.0029	0.28%
Al 308.215†	2260.9	1.983	mg/L	0.0054	3.966	mg/L	0.0108	0.27%
As 188.979†	2716.0	1.996	mg/L	0.0124	3.992	mg/L	0.0248	0.62%
B 249.677†	1.4	-0.00089	mg/L	0.000637	-0.00178	mg/L	0.001275	71.49%
Ba 233.527†	11394.6	2.055	mg/L	0.0098	4.110	mg/L	0.0196	0.48%
Be 313.042†	263575.2	0.4626	mg/L	0.00255	0.9252	mg/L	0.00511	0.55%
Ca 317.933†	93208.4	9.341	mg/L	0.0289	18.68	mg/L	0.058	0.31%
Cd 228.802†	11301.2	0.4866	mg/L	0.00164	0.9732	mg/L	0.00327	0.34%
Co 228.616†	14741.4	0.4808	mg/L	0.00209	0.9616	mg/L	0.00419	0.44%
Cr 267.716†	4120.7	0.5002	mg/L	0.00086	1.000	mg/L	0.0017	0.17%
Cu 324.752†	121704.7	0.4804	mg/L	0.00326	0.9609	mg/L	0.00653	0.68%
Fe 273.955†	2328.2	1.935	mg/L	0.0030	3.870	mg/L	0.0059	0.15%
K 766.490†	19375.0	9.485	mg/L	0.0616	18.97	mg/L	0.123	0.65%
Mg 279.077†	9100.7	9.842	mg/L	0.0204	19.68	mg/L	0.041	0.21%
Mn 257.610†	23229.0	0.4573	mg/L	0.00127	0.9147	mg/L	0.00254	0.28%
Mo 202.031†	29.9	0.00150	mg/L	0.000046	0.00299	mg/L	0.000091	3.06%
Na 589.592†	110177.4	9.698	mg/L	0.0142	19.40	mg/L	0.028	0.15%
Na 330.237†	296.8	9.248	mg/L	0.0484	18.50	mg/L	0.097	0.52%
Ni 231.604†	1683.4	0.4989	mg/L	0.00041	0.9979	mg/L	0.00082	0.08%
Pb 220.353†	14938.2	1.918	mg/L	0.0098	3.836	mg/L	0.0196	0.51%
Sb 206.836†	6.4	-0.00258	mg/L	0.000322	-0.00515	mg/L	0.000645	12.51%
Se 196.026†	2990.9	1.964	mg/L	0.0066	3.929	mg/L	0.0132	0.34%
Si 288.158†	31.6	0.02590	mg/L	0.003880	0.05180	mg/L	0.007759	14.98%
Sn 189.927†	-18.4	-0.00294	mg/L	0.000423	-0.00588	mg/L	0.000846	14.38%
Sr 421.552†	430680.3	0.4766	mg/L	0.00084	0.9531	mg/L	0.00167	0.18%
Ti 334.903†	91.8	0.00295	mg/L	0.000160	0.00590	mg/L	0.000320	5.42%
Tl 190.801†	3442.3	2.016	mg/L	0.0061	4.033	mg/L	0.0123	0.30%
V 292.402†	66440.5	0.4862	mg/L	0.00178	0.9725	mg/L	0.00355	0.37%
Zn 206.200†	1934.3	0.4878	mg/L	0.00122	0.9756	mg/L	0.00244	0.25%

Sequence No.: 65
Sample ID: CV 7

Autosampler Location: 7
Date Collected: 4/29/2013 1:29:38 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2741360.7	105.3	%	0.96				0.91%
ScR 361.383	386451.2	103.4	%	1.17				1.13%
Ag 328.068†	227876.7	1.041	mg/L	0.0149	1.041	mg/L	0.0149	1.44%
Al 308.215†	2282.2	1.976	mg/L	0.0156	1.976	mg/L	0.0156	0.79%
As 188.979†	2620.8	1.957	mg/L	0.0202	1.957	mg/L	0.0202	1.03%
B 249.677†	6008.2	0.9996	mg/L	0.00798	0.9996	mg/L	0.00798	0.80%
Ba 233.527†	5862.3	1.057	mg/L	0.0058	1.057	mg/L	0.0058	0.54%
Be 313.042†	541297.2	0.9500	mg/L	0.01426	0.9500	mg/L	0.01426	1.50%
Ca 317.933†	19945.9	1.999	mg/L	0.0192	1.999	mg/L	0.0192	0.96%
Cd 228.802†	22863.0	0.9963	mg/L	0.00988	0.9963	mg/L	0.00988	0.99%
Co 228.616†	30451.2	0.9920	mg/L	0.00886	0.9920	mg/L	0.00886	0.89%
Cr 267.716†	8426.3	1.025	mg/L	0.0076	1.025	mg/L	0.0076	0.74%
Cu 324.752†	252466.3	0.9961	mg/L	0.01197	0.9961	mg/L	0.01197	1.20%
Fe 273.955†	2331.2	1.935	mg/L	0.0161	1.935	mg/L	0.0161	0.83%
K 766.490†	39411.2	19.29	mg/L	0.245	19.29	mg/L	0.245	1.27%
Mg 279.077†	1795.7	1.948	mg/L	0.0177	1.948	mg/L	0.0177	0.91%
Mn 257.610†	47132.8	0.9277	mg/L	0.01511	0.9277	mg/L	0.01511	1.63%
Mo 202.031†	17725.2	0.9685	mg/L	0.01016	0.9685	mg/L	0.01016	1.05%
Na 589.592†	565540.0	49.78	mg/L	0.597	49.78	mg/L	0.597	1.20%
Na 330.237†	1567.0	49.56	mg/L	0.373	49.56	mg/L	0.373	0.75%
Ni 231.604†	3471.8	1.031	mg/L	0.0028	1.031	mg/L	0.0028	0.28%
Pb 220.353†	15180.0	1.949	mg/L	0.0188	1.949	mg/L	0.0188	0.96%
Sb 206.836†	5197.7	1.996	mg/L	0.0209	1.996	mg/L	0.0209	1.05%
Se 196.026†	2926.6	1.922	mg/L	0.0177	1.922	mg/L	0.0177	0.92%
Si 288.158†	2663.3	1.946	mg/L	0.0186	1.946	mg/L	0.0186	0.96%
Sn 189.927†	4666.7	0.9449	mg/L	0.00733	0.9449	mg/L	0.00733	0.78%
Sr 421.552†	881702.8	0.9756	mg/L	0.01430	0.9756	mg/L	0.01430	1.47%
Ti 334.903†	25006.2	0.9795	mg/L	0.01502	0.9795	mg/L	0.01502	1.53%
Tl 190.801†	3492.1	2.042	mg/L	0.0184	2.042	mg/L	0.0184	0.90%
V 292.402†	134171.0	0.9821	mg/L	0.01466	0.9821	mg/L	0.01466	1.49%
Zn 206.200†	3954.8	0.9973	mg/L	0.00755	0.9973	mg/L	0.00755	0.76%

Sequence No.: 66
Sample ID: CB 7
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 4/29/2013 1:33:42 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2735685.9	105.1	%	0.72				0.68%
ScR 361.383	390294.8	104.4	%	1.01				0.96%
Ag 328.068†	78.0	0.00036	mg/L	0.000024	0.00036	mg/L	0.000024	6.75%
Al 308.215†	7.2	0.00633	mg/L	0.003860	0.00633	mg/L	0.003860	60.97%
As 188.979†	2.9	0.00216	mg/L	0.000712	0.00216	mg/L	0.000712	32.98%
B 249.677†	2.0	0.00033	mg/L	0.001443	0.00033	mg/L	0.001443	439.79%
Ba 233.527†	1.8	0.00033	mg/L	0.000037	0.00033	mg/L	0.000037	11.40%
Be 313.042†	78.6	0.00014	mg/L	0.000023	0.00014	mg/L	0.000023	16.80%
Ca 317.933†	8.3	0.00083	mg/L	0.001081	0.00083	mg/L	0.001081	129.65%
Cd 228.802†	13.5	0.00058	mg/L	0.000189	0.00058	mg/L	0.000189	32.39%
Co 228.616†	8.4	0.00027	mg/L	0.000221	0.00027	mg/L	0.000221	81.85%
Cr 267.716†	6.9	0.00084	mg/L	0.000484	0.00084	mg/L	0.000484	57.86%
Cu 324.752†	214.3	0.00085	mg/L	0.000091	0.00085	mg/L	0.000091	10.71%
Fe 273.955†	2.9	0.00245	mg/L	0.001094	0.00245	mg/L	0.001094	44.62%
K 766.490†	35.4	0.01732	mg/L	0.004900	0.01732	mg/L	0.004900	28.29%
Mg 279.077†	-5.4	-0.00583	mg/L	0.005049	-0.00583	mg/L	0.005049	86.62%
Mn 257.610†	10.4	0.00020	mg/L	0.000086	0.00020	mg/L	0.000086	41.86%
Mo 202.031†	16.0	0.00087	mg/L	0.000170	0.00087	mg/L	0.000170	19.48%
Na 589.592†	4.4	0.00039	mg/L	0.000395	0.00039	mg/L	0.000395	101.74%
Na 330.237†	-9.7	-0.3056	mg/L	0.12301	-0.3056	mg/L	0.12301	40.25%
Ni 231.604†	1.8	0.00053	mg/L	0.001643	0.00053	mg/L	0.001643	310.15%
Pb 220.353†	10.1	0.00129	mg/L	0.000307	0.00129	mg/L	0.000307	23.70%
Sb 206.836†	4.2	0.00161	mg/L	0.000487	0.00161	mg/L	0.000487	30.30%
Se 196.026†	9.2	0.00607	mg/L	0.000726	0.00607	mg/L	0.000726	11.96%
Si 288.158†	0.7	0.00049	mg/L	0.000489	0.00049	mg/L	0.000489	99.18%
Sn 189.927†	4.7	0.00094	mg/L	0.000694	0.00094	mg/L	0.000694	73.62%
Sr 421.552†	130.9	0.00014	mg/L	0.000023	0.00014	mg/L	0.000023	16.08%
Ti 334.903†	43.9	0.00172	mg/L	0.000235	0.00172	mg/L	0.000235	13.66%
Tl 190.801†	-1.7	-0.00102	mg/L	0.001843	-0.00102	mg/L	0.001843	179.95%
V 292.402†	27.8	0.00021	mg/L	0.000094	0.00021	mg/L	0.000094	45.86%
Zn 206.200†	1.4	0.00034	mg/L	0.000323	0.00034	mg/L	0.000323	94.19%

Sequence No.: 67
Sample ID: WN80 MB LEN

Autosampler Location: 351
Date Collected: 4/29/2013 1:37:58 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN80 MB LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN80 MB LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2726984.9	104.8	%	0.34				0.32%
ScR 361.383	393965.6	105.4	%	0.41				0.39%
Ag 328.068†	57.2	0.00026	mg/L	0.000245	0.00132	mg/L	0.001223	93.00%
Al 308.215†	8.8	0.00775	mg/L	0.003786	0.03875	mg/L	0.018929	48.85%
As 188.979†	0.3	0.00025	mg/L	0.001163	0.00125	mg/L	0.005817	463.59%
B 249.677†	162.7	0.02710	mg/L	0.000553	0.1355	mg/L	0.00277	2.04%
Ba 233.527†	458.4	0.08269	mg/L	0.000456	0.4134	mg/L	0.00228	0.55%
Be 313.042†	-24.3	-0.00004	mg/L	0.000017	-0.00021	mg/L	0.000087	40.92%
Ca 317.933†	3139.6	0.3146	mg/L	0.00105	1.573	mg/L	0.0052	0.33%
Cd 228.802†	11.8	0.00052	mg/L	0.000090	0.00261	mg/L	0.000449	17.18%
Co 228.616†	1.8	0.00005	mg/L	0.000144	0.00023	mg/L	0.000722	314.40%
Cr 267.716†	-3.0	-0.00038	mg/L	0.000432	-0.00189	mg/L	0.002160	114.23%
Cu 324.752†	219.0	0.00086	mg/L	0.000076	0.00432	mg/L	0.000379	8.77%
Fe 273.955†	1.9	0.00159	mg/L	0.001642	0.00797	mg/L	0.008212	103.09%
K 766.490†	203.5	0.09964	mg/L	0.017632	0.4982	mg/L	0.08816	17.69%
Mg 279.077†	32.2	0.03478	mg/L	0.005971	0.1739	mg/L	0.02985	17.17%
Mn 257.610†	3.8	0.00007	mg/L	0.000099	0.00037	mg/L	0.000493	132.86%
Mo 202.031†	5.3	0.00029	mg/L	0.000215	0.00143	mg/L	0.001076	75.46%
Na 589.592†	3153348.4	277.6	mg/L	2.03	1388	mg/L	10.14	0.73%
Na 330.237†	8781.5	277.8	mg/L	1.18	1389	mg/L	5.91	0.43%
Ni 231.604†	14.8	0.00440	mg/L	0.000648	0.02200	mg/L	0.003240	14.73%
Pb 220.353†	6.2	0.00080	mg/L	0.000927	0.00398	mg/L	0.004635	116.35%
Sb 206.836†	-0.3	-0.00009	mg/L	0.001350	-0.00047	mg/L	0.006752	>999.9%
Se 196.026†	9.6	0.00629	mg/L	0.001685	0.03143	mg/L	0.008426	26.80%
Si 288.158†	43.7	0.03204	mg/L	0.003314	0.1602	mg/L	0.01657	10.34%
Sn 189.927†	1.5	0.00033	mg/L	0.000128	0.00163	mg/L	0.000639	39.28%
Sr 421.552†	860.9	0.00095	mg/L	0.000050	0.00476	mg/L	0.000250	5.24%
Ti 334.903†	30.3	0.00117	mg/L	0.000455	0.00585	mg/L	0.002277	38.96%
Tl 190.801†	0.9	0.00051	mg/L	0.000841	0.00256	mg/L	0.004203	164.23%
V 292.402†	8.7	0.00006	mg/L	0.000033	0.00030	mg/L	0.000167	55.00%
Zn 206.200†	72.4	0.01827	mg/L	0.000344	0.09135	mg/L	0.001719	1.88%

Sequence No.: 68
Sample ID: WN80 ADUP LEN

Autosampler Location: 352
Date Collected: 4/29/2013 1:42:33 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN80 ADUP LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN80 ADUP LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2643807.0	101.6	%	0.52				0.51%
ScR 361.383	380966.2	101.9	%	0.00				0.00%
Ag 328.068†	-313.6	-0.00030	mg/L	0.000116	-0.00149	mg/L	0.000579	38.96%
Al 308.215†	14.0	0.01212	mg/L	0.003317	0.06061	mg/L	0.016585	27.36%
As 188.979†	79.9	0.04328	mg/L	0.001510	0.2164	mg/L	0.00755	3.49%
B 249.677†	62.2	0.01036	mg/L	0.000876	0.05178	mg/L	0.004379	8.46%
Ba 233.527†	2294.9	0.4140	mg/L	0.00367	2.070	mg/L	0.0183	0.89%
Be 313.042†	-11.5	-0.00002	mg/L	0.000005	-0.00011	mg/L	0.000024	23.17%
Ca 317.933†	1752972.4	175.7	mg/L	1.06	878.4	mg/L	5.29	0.60%
Cd 228.802†	16.5	0.00040	mg/L	0.000177	0.00201	mg/L	0.000884	43.99%
Co 228.616†	53.4	0.00166	mg/L	0.000118	0.00832	mg/L	0.000592	7.12%
Cr 267.716†	65.3	0.00555	mg/L	0.000821	0.02775	mg/L	0.004104	14.79%
Cu 324.752†	639.7	0.00251	mg/L	0.000121	0.01254	mg/L	0.000605	4.82%
Fe 273.955†	-3.2	-0.00266	mg/L	0.000648	-0.01330	mg/L	0.003238	24.35%
K 766.490†	1268.3	0.6209	mg/L	0.00902	3.105	mg/L	0.0451	1.45%
Mg 279.077†	1947.3	2.088	mg/L	0.0051	10.44	mg/L	0.026	0.24%
Mn 257.610†	1644.3	0.03167	mg/L	0.000143	0.1584	mg/L	0.00071	0.45%
Mo 202.031†	125.0	0.00476	mg/L	0.000204	0.02379	mg/L	0.001018	4.28%
Na 589.592†	3312562.6	291.6	mg/L	1.28	1458	mg/L	6.38	0.44%
Na 330.237†	9016.7	285.3	mg/L	2.01	1426	mg/L	10.05	0.70%
Ni 231.604†	16.1	0.00478	mg/L	0.000462	0.02388	mg/L	0.002309	9.67%
Pb 220.353†	-9.7	-0.00124	mg/L	0.001021	-0.00618	mg/L	0.005107	82.63%
Sb 206.836†	54.1	0.02061	mg/L	0.002687	0.1030	mg/L	0.01343	13.04%
Se 196.026†	-3.9	-0.00259	mg/L	0.002607	-0.01293	mg/L	0.013034	100.84%
Si 288.158†	5332.1	3.907	mg/L	0.0359	19.53	mg/L	0.179	0.92%
Sn 189.927†	-61.4	0.00232	mg/L	0.000518	0.01158	mg/L	0.002588	22.35%
Sr 421.552†	145421.6	0.1609	mg/L	0.00040	0.8046	mg/L	0.00199	0.25%
Ti 334.903†	450.5	0.00722	mg/L	0.001370	0.03610	mg/L	0.006852	18.98%
Tl 190.801†	42.6	0.02501	mg/L	0.001296	0.1251	mg/L	0.00648	5.18%
V 292.402†	452.1	0.00333	mg/L	0.000018	0.01664	mg/L	0.000089	0.53%
Zn 206.200†	32.0	0.00873	mg/L	0.000218	0.04366	mg/L	0.001092	2.50%

Sequence No.: 69
Sample ID: WN80 A LEN

Autosampler Location: 353
Date Collected: 4/29/2013 1:47:07 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN80 A LEN

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WN80 A LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2653608.1	101.9	%	0.48				0.47%
ScR 361.383	377185.2	100.9	%	1.04				1.03%
Ag 328.068†	-300.8	-0.00021	mg/L	0.000190	-0.00104	mg/L	0.000950	91.68%
Al 308.215†	16.0	0.01388	mg/L	0.001868	0.06940	mg/L	0.009341	13.46%
As 188.979†	77.8	0.04141	mg/L	0.000687	0.2071	mg/L	0.00344	1.66%
B 249.677†	61.3	0.01022	mg/L	0.001421	0.05110	mg/L	0.007103	13.90%
Ba 233.527†	2346.7	0.4233	mg/L	0.00489	2.117	mg/L	0.0244	1.15%
Be 313.042†	36.9	0.00006	mg/L	0.000006	0.00032	mg/L	0.000029	9.08%
Ca 317.933†	1801441.7	180.5	mg/L	2.75	902.7	mg/L	13.77	1.53%
Cd 228.802†	21.3	0.00062	mg/L	0.000128	0.00311	mg/L	0.000638	20.49%
Co 228.616†	53.9	0.00168	mg/L	0.000132	0.00838	mg/L	0.000660	7.88%
Cr 267.716†	65.9	0.00556	mg/L	0.000859	0.02778	mg/L	0.004295	15.46%
Cu 324.752†	566.8	0.00222	mg/L	0.000069	0.01110	mg/L	0.000346	3.12%
Fe 273.955†	-3.4	-0.00282	mg/L	0.002007	-0.01408	mg/L	0.010034	71.25%
K 766.490†	1306.3	0.6395	mg/L	0.02194	3.198	mg/L	0.1097	3.43%
Mg 279.077†	1990.5	2.134	mg/L	0.0304	10.67	mg/L	0.152	1.43%
Mn 257.610†	1674.3	0.03224	mg/L	0.000401	0.1612	mg/L	0.00201	1.24%
Mo 202.031†	123.0	0.00459	mg/L	0.000243	0.02297	mg/L	0.001216	5.29%
Na 589.592†	3388009.7	298.2	mg/L	2.48	1491	mg/L	12.38	0.83%
Na 330.237†	9279.9	293.6	mg/L	3.76	1468	mg/L	18.82	1.28%
Ni 231.604†	14.5	0.00430	mg/L	0.000651	0.02150	mg/L	0.003253	15.13%
Pb 220.353†	-17.5	-0.00223	mg/L	0.000751	-0.01114	mg/L	0.003755	33.72%
Sb 206.836†	44.4	0.01692	mg/L	0.001468	0.08458	mg/L	0.007341	8.68%
Se 196.026†	-0.7	-0.00046	mg/L	0.004491	-0.00232	mg/L	0.022454	967.60%
Si 288.158†	5737.3	4.203	mg/L	0.0454	21.02	mg/L	0.227	1.08%
Sn 189.927†	-60.8	0.00283	mg/L	0.001899	0.01414	mg/L	0.009496	67.15%
Sr 421.552†	148456.9	0.1643	mg/L	0.00272	0.8214	mg/L	0.01360	1.66%
Ti 334.903†	492.5	0.00858	mg/L	0.000444	0.04289	mg/L	0.002222	5.18%
Tl 190.801†	43.3	0.02541	mg/L	0.002268	0.1271	mg/L	0.01134	8.93%
V 292.402†	454.5	0.00334	mg/L	0.000009	0.01672	mg/L	0.000046	0.28%
Zn 206.200†	31.7	0.00869	mg/L	0.000400	0.04346	mg/L	0.002000	4.60%

Sequence No.: 70
Sample ID: WN80 ASPK LEN

Autosampler Location: 354
Date Collected: 4/29/2013 1:51:41 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN80 ASPK LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN80 ASPK LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2641645.8	101.5	%	0.66				0.65%
ScR 361.383	381231.5	102.0	%	0.55				0.54%
Ag 328.068†	45817.0	0.2105	mg/L	0.00174	1.053	mg/L	0.0087	0.83%
Al 308.215†	943.2	0.8272	mg/L	0.00707	4.136	mg/L	0.0354	0.85%
As 188.979†	1208.7	0.8725	mg/L	0.00189	4.363	mg/L	0.0095	0.22%
B 249.677†	66.5	0.01063	mg/L	0.000849	0.05316	mg/L	0.004244	7.98%
Ba 233.527†	6984.9	1.260	mg/L	0.0078	6.299	mg/L	0.0389	0.62%
Be 313.042†	109468.8	0.1921	mg/L	0.00253	0.9606	mg/L	0.01264	1.32%
Ca 317.933†	1829511.1	183.3	mg/L	1.08	916.7	mg/L	5.41	0.59%
Cd 228.802†	4790.0	0.2060	mg/L	0.00154	1.030	mg/L	0.0077	0.75%
Co 228.616†	5977.8	0.1949	mg/L	0.00143	0.9744	mg/L	0.00715	0.73%
Cr 267.716†	1741.5	0.2090	mg/L	0.00174	1.045	mg/L	0.0087	0.83%
Cu 324.752†	51034.8	0.2014	mg/L	0.00151	1.007	mg/L	0.0075	0.75%
Fe 273.955†	925.0	0.7688	mg/L	0.00776	3.844	mg/L	0.0388	1.01%
K 766.490†	9518.3	4.660	mg/L	0.0515	23.30	mg/L	0.258	1.11%
Mg 279.077†	5669.9	6.113	mg/L	0.0395	30.57	mg/L	0.198	0.65%
Mn 257.610†	11082.9	0.2175	mg/L	0.00268	1.087	mg/L	0.0134	1.23%
Mo 202.031†	127.5	0.00479	mg/L	0.000035	0.02397	mg/L	0.000177	0.74%
Na 589.592†	3386838.8	298.1	mg/L	2.29	1491	mg/L	11.47	0.77%
Na 330.237†	9231.5	292.0	mg/L	2.21	1460	mg/L	11.05	0.76%
Ni 231.604†	694.4	0.2058	mg/L	0.00164	1.029	mg/L	0.0082	0.80%
Pb 220.353†	6041.1	0.7756	mg/L	0.00450	3.878	mg/L	0.0225	0.58%
Sb 206.836†	58.6	0.02029	mg/L	0.000232	0.1015	mg/L	0.00116	1.14%
Se 196.026†	1244.3	0.8172	mg/L	0.00704	4.086	mg/L	0.0352	0.86%
Si 288.158†	5802.9	4.253	mg/L	0.0258	21.26	mg/L	0.129	0.61%
Sn 189.927†	-65.5	0.00212	mg/L	0.000735	0.01062	mg/L	0.003676	34.61%
Sr 421.552†	324975.0	0.3596	mg/L	0.00220	1.798	mg/L	0.0110	0.61%
Ti 334.903†	488.9	0.00823	mg/L	0.000179	0.04116	mg/L	0.000893	2.17%
Tl 190.801†	1359.7	0.7965	mg/L	0.00467	3.982	mg/L	0.0234	0.59%
V 292.402†	27073.1	0.1982	mg/L	0.00166	0.9908	mg/L	0.00829	0.84%
Zn 206.200†	823.8	0.2085	mg/L	0.00137	1.042	mg/L	0.0069	0.66%

Sequence No.: 71
Sample ID: WN80 B LEN

Autosampler Location: 355
Date Collected: 4/29/2013 1:56:15 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN80 B LEN

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN80 B LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2632214.8	101.1	%	0.18				0.18%
ScR 361.383	376547.3	100.8	%	0.82				0.82%
Ag 328.068†	-305.6	-0.00016	mg/L	0.000195	-0.00079	mg/L	0.000977	123.59%
Al 308.215†	24.7	0.02150	mg/L	0.004265	0.1075	mg/L	0.02133	19.84%
As 188.979†	83.9	0.04491	mg/L	0.002167	0.2245	mg/L	0.01083	4.82%
B 249.677†	265.8	0.04427	mg/L	0.000098	0.2213	mg/L	0.00049	0.22%
Ba 233.527†	2129.0	0.3841	mg/L	0.00375	1.920	mg/L	0.0187	0.98%
Be 313.042†	42.9	0.00007	mg/L	0.000014	0.00037	mg/L	0.000072	19.50%
Ca 317.933†	1910840.8	191.5	mg/L	1.27	957.5	mg/L	6.34	0.66%
Cd 228.802†	16.1	0.00037	mg/L	0.000127	0.00183	mg/L	0.000636	34.70%
Co 228.616†	71.8	0.00226	mg/L	0.000211	0.01132	mg/L	0.001057	9.33%
Cr 267.716†	38.3	0.00208	mg/L	0.000373	0.01039	mg/L	0.001866	17.96%
Cu 324.752†	1164.6	0.00458	mg/L	0.000087	0.02290	mg/L	0.000436	1.90%
Fe 273.955†	0.4	0.00031	mg/L	0.001358	0.00156	mg/L	0.006792	434.75%
K 766.490†	2996.9	1.467	mg/L	0.0187	7.336	mg/L	0.0936	1.28%
Mg 279.077†	1744.9	1.867	mg/L	0.0204	9.335	mg/L	0.1018	1.09%
Mn 257.610†	4118.6	0.08029	mg/L	0.000742	0.4015	mg/L	0.00371	0.92%
Mo 202.031†	139.0	0.00534	mg/L	0.000061	0.02669	mg/L	0.000304	1.14%
Na 589.592†	3362224.6	295.9	mg/L	3.01	1480	mg/L	15.04	1.02%
Na 330.237†	9294.1	294.0	mg/L	3.99	1470	mg/L	19.96	1.36%
Ni 231.604†	18.0	0.00534	mg/L	0.001005	0.02668	mg/L	0.005026	18.84%
Pb 220.353†	-15.1	-0.00193	mg/L	0.001329	-0.00966	mg/L	0.006647	68.81%
Sb 206.836†	47.9	0.01832	mg/L	0.001418	0.09159	mg/L	0.007090	7.74%
Se 196.026†	-4.4	-0.00288	mg/L	0.002428	-0.01439	mg/L	0.012140	84.35%
Si 288.158†	7210.2	5.282	mg/L	0.0575	26.41	mg/L	0.288	1.09%
Sn 189.927†	-59.1	0.00411	mg/L	0.000783	0.02054	mg/L	0.003915	19.06%
Sr 421.552†	158378.4	0.1753	mg/L	0.00130	0.8763	mg/L	0.00648	0.74%
Ti 334.903†	533.9	0.00955	mg/L	0.000324	0.04775	mg/L	0.001622	3.40%
Tl 190.801†	44.1	0.02588	mg/L	0.001856	0.1294	mg/L	0.00928	7.17%
V 292.402†	585.0	0.00429	mg/L	0.000046	0.02144	mg/L	0.000230	1.07%
Zn 206.200†	186.1	0.04780	mg/L	0.000766	0.2390	mg/L	0.00383	1.60%

Sequence No.: 72
Sample ID: CV 8

Autosampler Location: 7
Date Collected: 4/29/2013 2:00:48 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	2734318.1	105.0	%	0.47				0.45%
ScR 361.383	387255.7	103.6	%	0.84				0.81%
Ag 328.068†	224257.0	1.025	mg/L	0.0124	1.025	mg/L	0.0124	1.21%
Al 308.215†	2287.6	1.980	mg/L	0.0210	1.980	mg/L	0.0210	1.06%
As 188.979†	2661.8	1.988	mg/L	0.0112	1.988	mg/L	0.0112	0.56%
B 249.677†	6011.7	1.000	mg/L	0.0079	1.000	mg/L	0.0079	0.79%
Ba 233.527†	5843.5	1.054	mg/L	0.0168	1.054	mg/L	0.0168	1.59%
Be 313.042†	556211.1	0.9762	mg/L	0.00988	0.9762	mg/L	0.00988	1.01%
Ca 317.933†	20218.1	2.026	mg/L	0.0122	2.026	mg/L	0.0122	0.60%
Cd 228.802†	23129.1	1.008	mg/L	0.0031	1.008	mg/L	0.0031	0.31%
Co 228.616†	30762.2	1.002	mg/L	0.0040	1.002	mg/L	0.0040	0.39%
Cr 267.716†	8487.1	1.032	mg/L	0.0082	1.032	mg/L	0.0082	0.80%
Cu 324.752†	252954.3	0.9980	mg/L	0.00989	0.9980	mg/L	0.00989	0.99%
Fe 273.955†	2376.0	1.972	mg/L	0.0109	1.972	mg/L	0.0109	0.55%
K 766.490†	40118.6	19.64	mg/L	0.157	19.64	mg/L	0.157	0.80%
Mg 279.077†	1808.4	1.962	mg/L	0.0167	1.962	mg/L	0.0167	0.85%
Mn 257.610†	47983.6	0.9444	mg/L	0.00591	0.9444	mg/L	0.00591	0.63%
Mo 202.031†	17965.2	0.9816	mg/L	0.00432	0.9816	mg/L	0.00432	0.44%
Na 589.592†	569544.8	50.13	mg/L	0.284	50.13	mg/L	0.284	0.57%
Na 330.237†	1572.2	49.72	mg/L	0.160	49.72	mg/L	0.160	0.32%
Ni 231.604†	3463.1	1.028	mg/L	0.0104	1.028	mg/L	0.0104	1.01%
Pb 220.353†	15385.1	1.975	mg/L	0.0089	1.975	mg/L	0.0089	0.45%
Sb 206.836†	5264.0	2.022	mg/L	0.0044	2.022	mg/L	0.0044	0.22%
Se 196.026†	2972.0	1.951	mg/L	0.0185	1.951	mg/L	0.0185	0.95%
Si 288.158†	2737.7	2.001	mg/L	0.0286	2.001	mg/L	0.0286	1.43%
Sn 189.927†	4744.9	0.9607	mg/L	0.00418	0.9607	mg/L	0.00418	0.44%
Sr 421.552†	893359.3	0.9885	mg/L	0.00614	0.9885	mg/L	0.00614	0.62%
Ti 334.903†	25329.6	0.9921	mg/L	0.00644	0.9921	mg/L	0.00644	0.65%
Tl 190.801†	3532.5	2.066	mg/L	0.0125	2.066	mg/L	0.0125	0.61%
V 292.402†	133194.5	0.9750	mg/L	0.01168	0.9750	mg/L	0.01168	1.20%
Zn 206.200†	4002.4	1.009	mg/L	0.0064	1.009	mg/L	0.0064	0.64%

Sequence No.: 73
Sample ID: CB 8

Autosampler Location: 1
Date Collected: 4/29/2013 2:04:52 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	2739758.5	105.3	%	0.34				0.32%
ScR 361.383	393905.3	105.4	%	0.53				0.51%
Ag 328.068†	61.8	0.00028	mg/L	0.000280	0.00028	mg/L	0.000280	99.05%
Al 308.215†	4.1	0.00355	mg/L	0.005592	0.00355	mg/L	0.005592	157.59%
As 188.979†	-0.3	-0.00021	mg/L	0.001550	-0.00021	mg/L	0.001550	753.82%
B 249.677†	5.0	0.00083	mg/L	0.000528	0.00083	mg/L	0.000528	63.52%
Ba 233.527†	-0.1	-0.00003	mg/L	0.000198	-0.00003	mg/L	0.000198	727.18%
Be 313.042†	84.7	0.00015	mg/L	0.000021	0.00015	mg/L	0.000021	14.20%
Ca 317.933†	27.3	0.00274	mg/L	0.000565	0.00274	mg/L	0.000565	20.63%
Cd 228.802†	8.6	0.00038	mg/L	0.000227	0.00038	mg/L	0.000227	59.48%
Co 228.616†	8.6	0.00028	mg/L	0.000109	0.00028	mg/L	0.000109	38.86%
Cr 267.716†	1.3	0.00016	mg/L	0.000455	0.00016	mg/L	0.000455	278.46%
Cu 324.752†	95.9	0.00038	mg/L	0.000174	0.00038	mg/L	0.000174	46.02%
Fe 273.955†	2.2	0.00183	mg/L	0.001000	0.00183	mg/L	0.001000	54.62%
K 766.490†	49.5	0.02422	mg/L	0.021594	0.02422	mg/L	0.021594	89.18%
Mg 279.077†	-4.2	-0.00452	mg/L	0.005630	-0.00452	mg/L	0.005630	124.67%
Mn 257.610†	7.5	0.00015	mg/L	0.000034	0.00015	mg/L	0.000034	22.83%
Mo 202.031†	18.4	0.00100	mg/L	0.000218	0.00100	mg/L	0.000218	21.75%
Na 589.592†	618.5	0.05444	mg/L	0.003096	0.05444	mg/L	0.003096	5.69%
Na 330.237†	-6.5	-0.2040	mg/L	0.18625	-0.2040	mg/L	0.18625	91.31%
Ni 231.604†	1.5	0.00045	mg/L	0.000322	0.00045	mg/L	0.000322	71.89%
Pb 220.353†	10.8	0.00139	mg/L	0.000655	0.00139	mg/L	0.000655	47.27%
Sb 206.836†	2.9	0.00111	mg/L	0.000701	0.00111	mg/L	0.000701	63.10%
Se 196.026†	6.7	0.00442	mg/L	0.000847	0.00442	mg/L	0.000847	19.14%
Si 288.158†	19.5	0.01428	mg/L	0.006762	0.01428	mg/L	0.006762	47.34%
Sn 189.927†	3.7	0.00074	mg/L	0.000490	0.00074	mg/L	0.000490	66.06%
Sr 421.552†	137.5	0.00015	mg/L	0.000019	0.00015	mg/L	0.000019	12.71%
Ti 334.903†	16.7	0.00065	mg/L	0.000220	0.00065	mg/L	0.000220	33.68%
Tl 190.801†	-0.5	-0.00027	mg/L	0.001017	-0.00027	mg/L	0.001017	370.63%
V 292.402†	49.6	0.00036	mg/L	0.000166	0.00036	mg/L	0.000166	45.91%
Zn 206.200†	-0.2	-0.00005	mg/L	0.000416	-0.00005	mg/L	0.000416	829.03%

Sequence No.: 74
Sample ID: WN27 MB1 SWC

Autosampler Location: 356
Date Collected: 4/29/2013 2:09:08 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN27 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN27 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2750189.2	105.7	%	0.14				0.14%
ScR 361.383	394759.7	105.6	%	0.70				0.66%
Ag 328.068†	35.5	0.00016	mg/L	0.000177	0.00033	mg/L	0.000354	108.69%
Al 308.215†	38.6	0.03399	mg/L	0.005405	0.06797	mg/L	0.010810	15.90%
As 188.979†	1.3	0.00096	mg/L	0.002554	0.00192	mg/L	0.005107	266.68%
B 249.677†	5.4	0.00090	mg/L	0.000547	0.00179	mg/L	0.001093	60.94%
Ba 233.527†	2.0	0.00036	mg/L	0.000550	0.00072	mg/L	0.001101	152.95%
Be 313.042†	2.8	0.00000	mg/L	0.000021	0.00001	mg/L	0.000043	441.52%
Ca 317.933†	532.8	0.05340	mg/L	0.001278	0.1068	mg/L	0.00256	2.39%
Cd 228.802†	4.5	0.00019	mg/L	0.000093	0.00039	mg/L	0.000186	47.93%
Co 228.616†	3.7	0.00012	mg/L	0.000163	0.00024	mg/L	0.000325	135.03%
Cr 267.716†	-1.9	-0.00024	mg/L	0.000131	-0.00047	mg/L	0.000262	55.33%
Cu 324.752†	254.9	0.00101	mg/L	0.000111	0.00201	mg/L	0.000221	10.99%
Fe 273.955†	6.9	0.00578	mg/L	0.000823	0.01156	mg/L	0.001646	14.24%
K 766.490†	32.7	0.01602	mg/L	0.007074	0.03204	mg/L	0.014147	44.15%
Mg 279.077†	5.5	0.00589	mg/L	0.006429	0.01177	mg/L	0.012857	109.19%
Mn 257.610†	7.6	0.00015	mg/L	0.000102	0.00030	mg/L	0.000203	67.73%
Mo 202.031†	6.1	0.00033	mg/L	0.000120	0.00067	mg/L	0.000240	36.06%
Na 589.592†	331.6	0.02919	mg/L	0.003895	0.05838	mg/L	0.007790	13.34%
Na 330.237†	-10.7	-0.3368	mg/L	0.05244	-0.6735	mg/L	0.10488	15.57%
Ni 231.604†	0.9	0.00027	mg/L	0.000554	0.00053	mg/L	0.001108	207.93%
Pb 220.353†	2.6	0.00034	mg/L	0.000848	0.00069	mg/L	0.001696	246.65%
Sb 206.836†	-4.8	-0.00184	mg/L	0.000903	-0.00369	mg/L	0.001806	48.95%
Se 196.026†	9.2	0.00604	mg/L	0.005078	0.01209	mg/L	0.010155	84.03%
Si 288.158†	47.8	0.03502	mg/L	0.002574	0.07003	mg/L	0.005147	7.35%
Sn 189.927†	0.7	0.00014	mg/L	0.000495	0.00029	mg/L	0.000991	346.86%
Sr 421.552†	-7.0	-0.00001	mg/L	0.000006	-0.00002	mg/L	0.000011	71.98%
Ti 334.903†	20.5	0.00080	mg/L	0.000725	0.00160	mg/L	0.001450	90.47%
Tl 190.801†	-1.4	-0.00081	mg/L	0.002730	-0.00162	mg/L	0.005460	337.11%
V 292.402†	5.0	0.00003	mg/L	0.000075	0.00007	mg/L	0.000150	214.74%
Zn 206.200†	0.4	0.00011	mg/L	0.000572	0.00021	mg/L	0.001144	535.71%

Sequence No.: 75
Sample ID: WN27 ADUP SWC

Autosampler Location: 357
Date Collected: 4/29/2013 2:13:25 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN27 ADUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN27 ADUP SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2732617.5	105.0	%	0.22				0.21%
ScR 361.383	392116.2	104.9	%	0.54				0.51%
Ag 328.068†	-191.5	-0.00026	mg/L	0.000029	-0.00052	mg/L	0.000057	10.96%
Al 308.215†	116213.0	102.3	mg/L	0.72	204.5	mg/L	1.45	0.71%
As 188.979†	-309.4	0.04080	mg/L	0.003609	0.08159	mg/L	0.007217	8.85%
B 249.677†	224.4	0.03717	mg/L	0.000939	0.07434	mg/L	0.001877	2.53%
Ba 233.527†	8979.9	1.586	mg/L	0.0134	3.171	mg/L	0.0268	0.85%
Be 313.042†	926.7	0.00144	mg/L	0.000007	0.00287	mg/L	0.000014	0.48%
Ca 317.933†	719696.0	72.12	mg/L	0.580	144.2	mg/L	1.16	0.80%
Cd 228.802†	285.4	0.01397	mg/L	0.000149	0.02794	mg/L	0.000298	1.07%
Co 228.616†	2505.2	0.06759	mg/L	0.000022	0.1352	mg/L	0.00004	0.03%
Cr 267.716†	2546.1	0.3121	mg/L	0.00153	0.6241	mg/L	0.00307	0.49%
Cu 324.752†	170501.3	0.6826	mg/L	0.00401	1.365	mg/L	0.0080	0.59%
Fe 273.955†	279215.3	232.4	mg/L	2.34	464.8	mg/L	4.68	1.01%
K 766.490†	16292.6	7.976	mg/L	0.0435	15.95	mg/L	0.087	0.55%
Mg 279.077†	35669.8	38.44	mg/L	0.278	76.89	mg/L	0.555	0.72%
Mn 257.610†	144194.6	2.836	mg/L	0.0279	5.673	mg/L	0.0557	0.98%
Mo 202.031†	511.1	0.02706	mg/L	0.000234	0.05412	mg/L	0.000469	0.87%
Na 589.592†	113036.7	9.949	mg/L	0.0397	19.90	mg/L	0.079	0.40%
Na 330.237†	272.7	9.034	mg/L	0.1543	18.07	mg/L	0.309	1.71%
Ni 231.604†	649.7	0.1929	mg/L	0.00106	0.3858	mg/L	0.00212	0.55%
Pb 220.353†	3399.7	0.4512	mg/L	0.00158	0.9025	mg/L	0.00317	0.35%
Sb 206.836†	-11.6	-0.00083	mg/L	0.000739	-0.00167	mg/L	0.001479	88.81%
Se 196.026†	-1.8	-0.01322	mg/L	0.003985	-0.02644	mg/L	0.007970	30.14%
Si 288.158†	1913.9	1.406	mg/L	0.0077	2.813	mg/L	0.0153	0.54%
Sn 189.927†	29.4	0.01347	mg/L	0.000616	0.02695	mg/L	0.001231	4.57%
Sr 421.552†	498798.5	0.5519	mg/L	0.00346	1.104	mg/L	0.0069	0.63%
Ti 334.903†	202724.9	7.947	mg/L	0.0611	15.89	mg/L	0.122	0.77%
Tl 190.801†	-15.7	0.01938	mg/L	0.004761	0.03877	mg/L	0.009523	24.56%
V 292.402†	63227.1	0.4463	mg/L	0.00213	0.8925	mg/L	0.00426	0.48%
Zn 206.200†	24177.4	6.095	mg/L	0.0418	12.19	mg/L	0.084	0.69%

Sequence No.: 76
Sample ID: WN27 A SWC

Autosampler Location: 358
Date Collected: 4/29/2013 2:17:27 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN27 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN27 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2729353.0	104.9	%	0.21				0.20%
ScR 361.383	394994.0	105.7	%	0.21				0.20%
Ag 328.068†	-160.0	-0.00020	mg/L	0.000074	-0.00039	mg/L	0.000148	37.72%
Al 308.215†	115302.8	101.5	mg/L	0.24	202.9	mg/L	0.48	0.24%
As 188.979†	-253.4	0.05513	mg/L	0.004046	0.1103	mg/L	0.00809	7.34%
B 249.677†	221.8	0.03674	mg/L	0.001055	0.07348	mg/L	0.002110	2.87%
Ba 233.527†	8186.0	1.436	mg/L	0.0016	2.871	mg/L	0.0031	0.11%
Be 313.042†	935.5	0.00146	mg/L	0.000007	0.00292	mg/L	0.000014	0.49%
Ca 317.933†	595639.4	59.69	mg/L	0.328	119.4	mg/L	0.66	0.55%
Cd 228.802†	302.0	0.01447	mg/L	0.000076	0.02895	mg/L	0.000152	0.52%
Co 228.616†	2515.9	0.06937	mg/L	0.000257	0.1387	mg/L	0.00051	0.37%
Cr 267.716†	2400.1	0.2957	mg/L	0.00123	0.5914	mg/L	0.00245	0.41%
Cu 324.752†	175727.4	0.7056	mg/L	0.00341	1.411	mg/L	0.0068	0.48%
Fe 273.955†	334320.5	278.3	mg/L	0.61	556.5	mg/L	1.22	0.22%
K 766.490†	15776.5	7.724	mg/L	0.0270	15.45	mg/L	0.054	0.35%
Mg 279.077†	37271.4	40.15	mg/L	0.182	80.30	mg/L	0.363	0.45%
Mn 257.610†	138326.3	2.721	mg/L	0.0098	5.442	mg/L	0.0196	0.36%
Mo 202.031†	491.4	0.02613	mg/L	0.000648	0.05227	mg/L	0.001295	2.48%
Na 589.592†	114766.2	10.10	mg/L	0.080	20.20	mg/L	0.160	0.79%
Na 330.237†	283.1	9.179	mg/L	0.0648	18.36	mg/L	0.130	0.71%
Ni 231.604†	649.5	0.1928	mg/L	0.00166	0.3857	mg/L	0.00332	0.86%
Pb 220.353†	3478.3	0.4586	mg/L	0.00097	0.9172	mg/L	0.00194	0.21%
Sb 206.836†	-12.4	-0.00146	mg/L	0.002948	-0.00293	mg/L	0.005896	201.39%
Se 196.026†	-0.2	-0.01208	mg/L	0.000916	-0.02417	mg/L	0.001832	7.58%
Si 288.158†	1683.0	1.237	mg/L	0.0077	2.475	mg/L	0.0154	0.62%
Sn 189.927†	46.9	0.01581	mg/L	0.001565	0.03163	mg/L	0.003130	9.90%
Sr 421.552†	417432.3	0.4619	mg/L	0.00124	0.9238	mg/L	0.00248	0.27%
Ti 334.903†	182104.7	7.139	mg/L	0.0202	14.28	mg/L	0.040	0.28%
Tl 190.801†	-26.7	0.01897	mg/L	0.001771	0.03795	mg/L	0.003543	9.34%
V 292.402†	63704.4	0.4478	mg/L	0.00329	0.8956	mg/L	0.00658	0.73%
Zn 206.200†	23637.7	5.959	mg/L	0.0203	11.92	mg/L	0.041	0.34%

Sequence No.: 77
Sample ID: WN27 ASPK SWC

Autosampler Location: 359
Date Collected: 4/29/2013 2:21:29 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN27 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN27 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2703270.0	103.9	%	0.56				0.54%
ScR 361.383	383175.0	102.5	%	0.58				0.56%
Ag 328.068†	106353.1	0.4865	mg/L	0.00172	0.9730	mg/L	0.00344	0.35%
Al 308.215†	116254.1	102.3	mg/L	0.47	204.6	mg/L	0.93	0.46%
As 188.979†	2319.5	1.966	mg/L	0.0024	3.932	mg/L	0.0047	0.12%
B 249.677†	226.4	0.03643	mg/L	0.001203	0.07287	mg/L	0.002406	3.30%
Ba 233.527†	19278.2	3.445	mg/L	0.0325	6.889	mg/L	0.0649	0.94%
Be 313.042†	265258.8	0.4654	mg/L	0.00158	0.9307	mg/L	0.00315	0.34%
Ca 317.933†	654326.5	65.57	mg/L	0.238	131.1	mg/L	0.48	0.36%
Cd 228.802†	11731.9	0.5073	mg/L	0.00153	1.015	mg/L	0.0031	0.30%
Co 228.616†	16800.0	0.5342	mg/L	0.00258	1.068	mg/L	0.0052	0.48%
Cr 267.716†	7275.0	0.8862	mg/L	0.00674	1.772	mg/L	0.0135	0.76%
Cu 324.752†	284125.3	1.131	mg/L	0.0009	2.261	mg/L	0.0019	0.08%
Fe 273.955†	268481.7	223.5	mg/L	0.36	446.9	mg/L	0.73	0.16%
K 766.490†	35225.8	17.25	mg/L	0.093	34.49	mg/L	0.187	0.54%
Mg 279.077†	43890.0	47.34	mg/L	0.209	94.68	mg/L	0.418	0.44%
Mn 257.610†	157351.3	3.096	mg/L	0.0063	6.191	mg/L	0.0125	0.20%
Mo 202.031†	868.2	0.04662	mg/L	0.000726	0.09324	mg/L	0.001452	1.56%
Na 589.592†	229527.2	20.20	mg/L	0.178	40.41	mg/L	0.355	0.88%
Na 330.237†	593.7	19.09	mg/L	0.125	38.18	mg/L	0.251	0.66%
Ni 231.604†	2300.3	0.6822	mg/L	0.00487	1.364	mg/L	0.0097	0.71%
Pb 220.353†	17807.1	2.301	mg/L	0.0052	4.602	mg/L	0.0103	0.22%
Sb 206.836†	-12.5	-0.00748	mg/L	0.004154	-0.01496	mg/L	0.008307	55.54%
Se 196.026†	2858.7	1.866	mg/L	0.0165	3.731	mg/L	0.0330	0.88%
Si 288.158†	2136.4	1.572	mg/L	0.0118	3.144	mg/L	0.0235	0.75%
Sn 189.927†	37.9	0.01460	mg/L	0.002701	0.02920	mg/L	0.005402	18.50%
Sr 421.552†	787212.4	0.8711	mg/L	0.00467	1.742	mg/L	0.0093	0.54%
Ti 334.903†	197089.1	7.726	mg/L	0.0285	15.45	mg/L	0.057	0.37%
Tl 190.801†	3134.3	1.863	mg/L	0.0110	3.726	mg/L	0.0219	0.59%
V 292.402†	124736.8	0.8975	mg/L	0.00134	1.795	mg/L	0.0027	0.15%
Zn 206.200†	24687.1	6.224	mg/L	0.0404	12.45	mg/L	0.081	0.65%

Sequence No.: 78
Sample ID: ~~WN27 APOST SWC~~ 222222
BA 4/29/13
Dilution: 2.000000X

Autosampler Location: 360
Date Collected: 4/29/2013 2:24:33 PM
Data Type: Original

Nebulizer Parameters: WN27 APOST SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WN27 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2689918.3	103.3	%	0.30				0.29%
ScR 361.383	381258.1	102.0	%	0.84				0.83%
Ag 328.068†	110249.2	0.5043	mg/L	0.00070	1.009	mg/L	0.0014	0.14%
Al 308.215†	122334.8	107.7	mg/L	0.74	215.3	mg/L	1.48	0.69%
As 188.979†	2448.6	2.049	mg/L	0.0062	4.098	mg/L	0.0125	0.30%
B 249.677†	231.7	0.03726	mg/L	0.001749	0.07452	mg/L	0.003498	4.69%
Ba 233.527†	20280.3	3.616	mg/L	0.0498	7.232	mg/L	0.0995	1.38%
Be 313.042†	269775.2	0.4733	mg/L	0.00583	0.9466	mg/L	0.01166	1.23%
Ca 317.933†	710104.4	71.16	mg/L	0.384	142.3	mg/L	0.77	0.54%
Cd 228.802†	12153.6	0.5254	mg/L	0.00186	1.051	mg/L	0.0037	0.35%
Co 228.616†	17422.6	0.5551	mg/L	0.00276	1.110	mg/L	0.0055	0.50%
Cr 267.716†	6694.2	0.8170	mg/L	0.00826	1.634	mg/L	0.0165	1.01%
Cu 324.752†	303647.4	1.211	mg/L	0.0008	2.422	mg/L	0.0015	0.06%
Fe 273.955†	344930.3	287.1	mg/L	1.48	574.2	mg/L	2.96	0.51%
K 766.490†	36844.2	18.04	mg/L	0.071	36.08	mg/L	0.143	0.40%
Mg 279.077†	47698.3	51.43	mg/L	0.231	102.9	mg/L	0.46	0.45%
Mn 257.610†	166656.4	3.279	mg/L	0.0174	6.557	mg/L	0.0349	0.53%
Mo 202.031†	516.4	0.02734	mg/L	0.000141	0.05467	mg/L	0.000283	0.52%
Na 589.592†	235361.5	20.72	mg/L	0.140	41.43	mg/L	0.280	0.68%
Na 330.237†	617.3	19.59	mg/L	0.370	39.19	mg/L	0.741	1.89%
Ni 231.604†	2377.4	0.7050	mg/L	0.00798	1.410	mg/L	0.0160	1.13%
Pb 220.353†	18538.9	2.393	mg/L	0.0117	4.786	mg/L	0.0233	0.49%
Sb 206.836†	-0.1	-0.00186	mg/L	0.005891	-0.00373	mg/L	0.011782	316.28%
Se 196.026†	3038.5	1.983	mg/L	0.0177	3.966	mg/L	0.0353	0.89%
Si 288.158†	1771.7	1.305	mg/L	0.0177	2.611	mg/L	0.0354	1.36%
Sn 189.927†	49.2	0.01730	mg/L	0.003254	0.03460	mg/L	0.006507	18.81%
Sr 421.552†	882191.6	0.9762	mg/L	0.00513	1.952	mg/L	0.0103	0.53%
Ti 334.903†	188422.6	7.386	mg/L	0.0340	14.77	mg/L	0.068	0.46%
Tl 190.801†	3244.3	1.936	mg/L	0.0007	3.872	mg/L	0.0015	0.04%
V 292.402†	130022.6	0.9328	mg/L	0.00100	1.866	mg/L	0.0020	0.11%
Zn 206.200†	26668.0	6.723	mg/L	0.0732	13.45	mg/L	0.146	1.09%

Sequence No.: 79
Sample ID: WN27 MB1SPK SWC

Autosampler Location: 361
Date Collected: 4/29/2013 2:27:39 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN27 MB1SPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN27 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2737349.0	105.2	%	0.48				0.46%
ScR 361.383	388660.5	104.0	%	1.49				1.44%
Ag 328.068†	113419.9	0.5183	mg/L	0.00233	1.037	mg/L	0.0047	0.45%
Al 308.215†	2263.3	1.985	mg/L	0.0305	3.970	mg/L	0.0609	1.53%
As 188.979†	2700.7	1.985	mg/L	0.0071	3.970	mg/L	0.0142	0.36%
B 249.677†	0.9	-0.00097	mg/L	0.000650	-0.00193	mg/L	0.001301	67.32%
Ba 233.527†	11079.9	1.998	mg/L	0.0260	3.997	mg/L	0.0520	1.30%
Be 313.042†	262036.0	0.4599	mg/L	0.00501	0.9198	mg/L	0.01001	1.09%
Ca 317.933†	92645.1	9.284	mg/L	0.0780	18.57	mg/L	0.156	0.84%
Cd 228.802†	11275.4	0.4855	mg/L	0.00227	0.9711	mg/L	0.00453	0.47%
Co 228.616†	14678.2	0.4787	mg/L	0.00268	0.9575	mg/L	0.00537	0.56%
Cr 267.716†	4130.6	0.5014	mg/L	0.00667	1.003	mg/L	0.0133	1.33%
Cu 324.752†	121398.7	0.4792	mg/L	0.00132	0.9584	mg/L	0.00264	0.28%
Fe 273.955†	2344.0	1.948	mg/L	0.0257	3.896	mg/L	0.0513	1.32%
K 766.490†	19314.8	9.456	mg/L	0.0765	18.91	mg/L	0.153	0.81%
Mg 279.077†	9095.2	9.836	mg/L	0.1317	19.67	mg/L	0.263	1.34%
Mn 257.610†	23122.3	0.4552	mg/L	0.00411	0.9105	mg/L	0.00823	0.90%
Mo 202.031†	27.5	0.00137	mg/L	0.000091	0.00273	mg/L	0.000181	6.64%
Na 589.592†	110030.3	9.685	mg/L	0.1193	19.37	mg/L	0.239	1.23%
Na 330.237†	303.1	9.448	mg/L	0.1401	18.90	mg/L	0.280	1.48%
Ni 231.604†	1688.5	0.5004	mg/L	0.00574	1.001	mg/L	0.0115	1.15%
Pb 220.353†	14946.4	1.919	mg/L	0.0099	3.838	mg/L	0.0197	0.51%
Sb 206.836†	4.7	-0.00326	mg/L	0.001033	-0.00653	mg/L	0.002065	31.63%
Se 196.026†	2965.4	1.948	mg/L	0.0072	3.895	mg/L	0.0144	0.37%
Si 288.158†	22.7	0.01938	mg/L	0.002733	0.03877	mg/L	0.005467	14.10%
Sn 189.927†	-15.3	-0.00232	mg/L	0.000385	-0.00463	mg/L	0.000770	16.62%
Sr 421.552†	429530.0	0.4753	mg/L	0.00572	0.9506	mg/L	0.01143	1.20%
Ti 334.903†	90.1	0.00289	mg/L	0.000129	0.00577	mg/L	0.000257	4.46%
Tl 190.801†	3418.6	2.003	mg/L	0.0114	4.005	mg/L	0.0227	0.57%
V 292.402†	66307.5	0.4853	mg/L	0.00153	0.9705	mg/L	0.00307	0.32%
Zn 206.200†	1911.1	0.4820	mg/L	0.00478	0.9640	mg/L	0.00955	0.99%

Sequence No.: 80
Sample ID: CV 9

Autosampler Location: 7
Date Collected: 4/29/2013 2:31:41 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	2736053.8	105.1	%	0.36				0.34%
ScR 361.383	387178.2	103.6	%	0.31				0.30%
Ag 328.068†	226671.3	1.036	mg/L	0.0040	1.036	mg/L	0.0040	0.39%
Al 308.215†	2273.6	1.968	mg/L	0.0061	1.968	mg/L	0.0061	0.31%
As 188.979†	2624.8	1.960	mg/L	0.0098	1.960	mg/L	0.0098	0.50%
B 249.677†	5990.7	0.9967	mg/L	0.00131	0.9967	mg/L	0.00131	0.13%
Ba 233.527†	5805.6	1.047	mg/L	0.0017	1.047	mg/L	0.0017	0.17%
Be 313.042†	543536.2	0.9539	mg/L	0.00830	0.9539	mg/L	0.00830	0.87%
Ca 317.933†	19899.4	1.994	mg/L	0.0018	1.994	mg/L	0.0018	0.09%
Cd 228.802†	22977.6	1.001	mg/L	0.0048	1.001	mg/L	0.0048	0.48%
Co 228.616†	30516.0	0.9941	mg/L	0.00405	0.9941	mg/L	0.00405	0.41%
Cr 267.716†	8410.8	1.023	mg/L	0.0010	1.023	mg/L	0.0010	0.10%
Cu 324.752†	253595.3	1.001	mg/L	0.0050	1.001	mg/L	0.0050	0.50%
Fe 273.955†	2335.7	1.939	mg/L	0.0029	1.939	mg/L	0.0029	0.15%
K 766.490†	39574.2	19.37	mg/L	0.073	19.37	mg/L	0.073	0.38%
Mg 279.077†	1788.9	1.941	mg/L	0.0024	1.941	mg/L	0.0024	0.12%
Mn 257.610†	46948.4	0.9241	mg/L	0.00741	0.9241	mg/L	0.00741	0.80%
Mo 202.031†	17806.4	0.9729	mg/L	0.00563	0.9729	mg/L	0.00563	0.58%
Na 589.592†	567428.3	49.94	mg/L	0.206	49.94	mg/L	0.206	0.41%
Na 330.237†	1570.3	49.66	mg/L	0.189	49.66	mg/L	0.189	0.38%
Ni 231.604†	3447.9	1.024	mg/L	0.0030	1.024	mg/L	0.0030	0.30%
Pb 220.353†	15213.5	1.953	mg/L	0.0119	1.953	mg/L	0.0119	0.61%
Sb 206.836†	5220.6	2.005	mg/L	0.0135	2.005	mg/L	0.0135	0.67%
Se 196.026†	2938.5	1.929	mg/L	0.0099	1.929	mg/L	0.0099	0.51%
Si 288.158†	2662.8	1.946	mg/L	0.0077	1.946	mg/L	0.0077	0.40%
Sn 189.927†	4694.1	0.9504	mg/L	0.00492	0.9504	mg/L	0.00492	0.52%
Sr 421.552†	883973.5	0.9781	mg/L	0.00387	0.9781	mg/L	0.00387	0.40%
Ti 334.903†	24996.0	0.9791	mg/L	0.00604	0.9791	mg/L	0.00604	0.62%
Tl 190.801†	3505.9	2.050	mg/L	0.0111	2.050	mg/L	0.0111	0.54%
V 292.402†	133740.1	0.9789	mg/L	0.00574	0.9789	mg/L	0.00574	0.59%
Zn 206.200†	3947.9	0.9956	mg/L	0.00059	0.9956	mg/L	0.00059	0.06%

Sequence No.: 81
Sample ID: CB9
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 4/29/2013 2:35:45 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2724113.6	104.7	%	1.00				0.96%
ScR 361.383	385519.4	103.2	%	0.16				0.15%
Ag 328.068†	97.3	0.00044	mg/L	0.000332	0.00044	mg/L	0.000332	74.72%
Al 308.215†	7.8	0.00682	mg/L	0.005507	0.00682	mg/L	0.005507	80.80%
As 188.979†	1.6	0.00121	mg/L	0.002078	0.00121	mg/L	0.002078	172.06%
B 249.677†	4.7	0.00078	mg/L	0.000722	0.00078	mg/L	0.000722	92.36%
Ba 233.527†	-1.8	-0.00032	mg/L	0.000933	-0.00032	mg/L	0.000933	289.69%
Be 313.042†	104.1	0.00018	mg/L	0.000028	0.00018	mg/L	0.000028	15.56%
Ca 317.933†	20.0	0.00201	mg/L	0.000421	0.00201	mg/L	0.000421	21.00%
Cd 228.802†	8.8	0.00038	mg/L	0.000105	0.00038	mg/L	0.000105	27.46%
Co 228.616†	8.0	0.00026	mg/L	0.000188	0.00026	mg/L	0.000188	72.58%
Cr 267.716†	1.5	0.00019	mg/L	0.000466	0.00019	mg/L	0.000466	249.26%
Cu 324.752†	145.7	0.00057	mg/L	0.000073	0.00057	mg/L	0.000073	12.67%
Fe 273.955†	1.7	0.00142	mg/L	0.002705	0.00142	mg/L	0.002705	191.07%
K 766.490†	35.9	0.01756	mg/L	0.027240	0.01756	mg/L	0.027240	155.14%
Mg 279.077†	-6.1	-0.00659	mg/L	0.005178	-0.00659	mg/L	0.005178	78.58%
Mn 257.610†	7.2	0.00014	mg/L	0.000124	0.00014	mg/L	0.000124	87.51%
Mo 202.031†	14.5	0.00079	mg/L	0.000175	0.00079	mg/L	0.000175	22.09%
Na 589.592†	151.2	0.01330	mg/L	0.004259	0.01330	mg/L	0.004259	32.02%
Na 330.237†	-16.0	-0.5055	mg/L	0.10490	-0.5055	mg/L	0.10490	20.75%
Ni 231.604†	0.4	0.00012	mg/L	0.001089	0.00012	mg/L	0.001089	894.27%
Pb 220.353†	9.1	0.00117	mg/L	0.000661	0.00117	mg/L	0.000661	56.30%
Sb 206.836†	2.8	0.00109	mg/L	0.001519	0.00109	mg/L	0.001519	139.69%
Se 196.026†	8.5	0.00556	mg/L	0.003077	0.00556	mg/L	0.003077	55.36%
Si 288.158†	4.7	0.00347	mg/L	0.005157	0.00347	mg/L	0.005157	148.63%
Sn 189.927†	5.4	0.00108	mg/L	0.000852	0.00108	mg/L	0.000852	78.62%
Sr 421.552†	169.1	0.00019	mg/L	0.000006	0.00019	mg/L	0.000006	3.33%
Ti 334.903†	21.4	0.00084	mg/L	0.000546	0.00084	mg/L	0.000546	64.98%
Tl 190.801†	-1.2	-0.00073	mg/L	0.003271	-0.00073	mg/L	0.003271	446.51%
V 292.402†	55.5	0.00041	mg/L	0.000145	0.00041	mg/L	0.000145	35.88%
Zn 206.200†	1.7	0.00042	mg/L	0.000507	0.00042	mg/L	0.000507	121.20%

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA **Analysis Date:** 4-30-13

ICP2	Analyst BA 4-30-13	Peer 4-30-13	Comment
Logbook			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration Data			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	
Samples			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	WN88
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 - WN88

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 1-22-13 Analysis Date: 4-30-13 Analyst: BA

LR Date: 1-22-13 Page: 1 of 3

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			3031-1
		2			-7
		3			-8
		4			-9
		5			-10
		ICV			3024-9
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		WN88 MB	SWC	2	
		ADUP			Pb wide (CAF)
		A			
		ASPK			
		B			
		C			
		D			
	✓	E			Fe > LR (BR5)
	✓	F			
		MBSPK			
		CCV2			
		CCB2			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-30-13 Analyst: BA

LR Date: — Page: 2 of 3

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WN57 MB	TWC		
		WN88 E	SWC	5	
		F			
		G		2	
		WN57 ADUP	TWC		✓
		A			
		ASPK			✓
		MBSPK			✓
		CCV3			
		CCB3			
		WN51 MB2	DMN		
		MB3			
		B			
		C			
		MB2SPK			✓ 0.08 mL ICP Spk 3001-10 0.08mL 1000ppm Si 57-18
		MB3SPK			✓
		CCV4			
		CCB4			
		WN27 ADUP	SWC	5	✓
		A			
		ASPK			✓ Zn STL
ZZZ		~~AASPK~~ ZZZZZZ			0.08 mL ICP Spk 3001-10
		CCV5			
		CCB5			End Pkg (WN27)

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

4/30/2013 8:03:02 AM Hg ReAlign... Actual peak offset (nm): 0.003
Drift (nm): 0.000 Slit adjustment: 0

Analysis Begun

Start Time: 4/30/2013 8:08:27 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/30/2013 7:06:18 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2130430
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST
IEC File: IEC012213.iec
Method Description: 12Axial Elements
Method Last Saved: 8/13/2012 7:13:22 AM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 1
Sample ID: Bl
Autosampler Location: 1
Date Collected: 4/30/2013 8:08:34 AM
Data Type: Original

Dilution: 1.000000X

BA 4/30/13

Nebulizer Parameters: Bl

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

==========

Analysis Begun

Start Time: 4/30/2013 8:30:07 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/30/2013 7:06:18 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0430.sif
Batch ID:
Results Data Set: I2130430
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: 4/30/2013 8:30:09 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2800841.0	15488.17	0.55%	100.0	%
ScR 361.383	392267.1	3669.11	0.94%	100.0	%
Ag 328.068†	26.6	25.77	97.05%	[0.00]	mg/L
Al 308.215†	141.8	3.41	2.40%	[0.00]	mg/L
As 188.979†	-0.5	1.04	230.91%	[0.00]	mg/L
B 249.677†	-63.6	4.61	7.26%	[0.00]	mg/L
Ba 233.527†	-23.3	1.15	4.95%	[0.00]	mg/L
Be 313.042†	611.9	17.77	2.90%	[0.00]	mg/L
Ca 317.933†	16.5	5.22	31.71%	[0.00]	mg/L
Cd 228.802†	245.1	3.38	1.38%	[0.00]	mg/L
Co 228.616†	-114.0	3.17	2.78%	[0.00]	mg/L
Cr 267.716†	-76.5	1.19	1.55%	[0.00]	mg/L
Cu 324.752†	2547.1	30.92	1.21%	[0.00]	mg/L
Fe 273.955†	-41.5	1.20	2.90%	[0.00]	mg/L
K 766.490†	204.2	39.07	19.13%	[0.00]	mg/L
Mg 279.077†	166.2	2.40	1.44%	[0.00]	mg/L
Mn 257.610†	-6.8	1.21	17.76%	[0.00]	mg/L
Mo 202.031†	75.0	2.25	3.00%	[0.00]	mg/L
Na 589.592†	-378.8	36.68	9.68%	[0.00]	mg/L
Na 330.237†	62.9	5.39	8.57%	[0.00]	mg/L
Ni 231.604†	30.5	2.26	7.40%	[0.00]	mg/L
Pb 220.353†	-21.3	2.87	13.48%	[0.00]	mg/L
Sb 206.836†	-1.4	2.55	187.83%	[0.00]	mg/L
Se 196.026†	-66.3	3.56	5.37%	[0.00]	mg/L
Si 288.158†	49.3	5.20	10.53%	[0.00]	mg/L
Sn 189.927†	-20.9	3.63	17.34%	[0.00]	mg/L
Sr 421.552†	344.6	5.24	1.52%	[0.00]	mg/L
Ti 334.903†	43.8	12.76	29.11%	[0.00]	mg/L
Tl 190.801†	-22.8	5.21	22.86%	[0.00]	mg/L
V 292.402†	30.7	22.50	73.33%	[0.00]	mg/L
Zn 206.200†	-7.2	0.27	3.79%	[0.00]	mg/L

==========

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 4/30/2013 8:34:25 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD2

Mean Corrected	Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2806097.6	6618.22	0.24%	100.2	%
ScR 361.383	394656.7	492.65	0.12%	100.6	%
Ba 233.527†	60115.6	91.09	0.15%	[10]	mg/L
Cd 228.802†	230681.1	541.04	0.23%	[10]	mg/L
Co 228.616†	320108.8	997.87	0.31%	[10]	mg/L
Cr 267.716†	84099.6	214.77	0.26%	[10]	mg/L
Cu 324.752†	2593731.1	11506.83	0.44%	[10]	mg/L
Mn 257.610†	497915.2	1640.41	0.33%	[10]	mg/L
V 292.402†	1427479.8	6197.71	0.43%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 4/30/2013 8:36:27 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2776979.4	18310.87	0.66%	99.15	%
ScR 361.383	389524.8	2460.45	0.63%	99.30	%
Ag 328.068†	231842.3	342.75	0.15%	[1.0]	mg/L
As 188.979†	14112.8	59.31	0.42%	[10]	mg/L
B 249.677†	62125.5	479.37	0.77%	[10]	mg/L
Be 313.042†	2857896.9	31543.91	1.10%	[5.0]	mg/L
Na 589.592†	590113.5	2807.84	0.48%	[50]	mg/L
Ni 231.604†	35788.6	468.55	1.31%	[10]	mg/L
Pb 220.353†	81013.0	489.85	0.60%	[10]	mg/L
Se 196.026†	15533.3	102.07	0.66%	[10]	mg/L
Sr 421.552†	4628135.1	22381.43	0.48%	[5]	mg/L
Tl 190.801†	18182.4	123.64	0.68%	[10]	mg/L
Zn 206.200†	41432.5	293.78	0.71%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 4/30/2013 8:39:02 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2809349.9	23213.21	0.83%	100.3	%
ScR 361.383	394896.7	306.43	0.08%	100.7	%
Mo 202.031†	189307.6	1321.90	0.70%	[10]	mg/L
Sb 206.836†	26928.3	228.90	0.85%	[10]	mg/L
Si 288.158†	13900.8	42.25	0.30%	[10]	mg/L
Sn 189.927†	50726.0	498.11	0.98%	[10]	mg/L
Ti 334.903†	260569.7	682.46	0.26%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 4/30/2013 8:41:18 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	2600701.9	12639.21	0.49%	92.85	%
ScR 361.383	393972.5	4150.45	1.05%	100.4	%
Al 308.215†	33918.0	465.69	1.37%	[30]	mg/L
Ca 317.933†	303789.1	3762.08	1.24%	[30]	mg/L
Fe 273.955†	115759.4	1513.42	1.31%	[100]	mg/L
K 766.490†	205697.5	2387.12	1.16%	[100]	mg/L
Mg 279.077†	28179.2	398.77	1.42%	[30]	mg/L
Na 330.237†	3141.6	67.73	2.16%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	231800	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1131	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1411	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	6213	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	6012	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	571600	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	10130	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	23070	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	32010	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	8410	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	259400	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1158	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2057	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	939.3	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	49790	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	18930	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	11800	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	31.42	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3579	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8101	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2693	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1553	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1390	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	5073	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	925600	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	1818	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	142700	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4143	0.00000	1.000000	

Analysis Begun

Start Time: 4/30/2013 8:44:00 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 4/30/2013 7:06:18 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0430.sif
Batch ID:
Results Data Set: I2130430
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: ICV

Autosampler Location: 7
Date Collected: 4/30/2013 8:44:01 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	2728567.8	97.42	%	0.690				0.71%
ScR 361.383	381637.4	97.29	%	0.562				0.58%
Ag 328.068†	248974.0	1.074	mg/L	0.0073	1.074	mg/L	0.0073	0.68%
Al 308.215†	2436.6	2.120	mg/L	0.0141	2.120	mg/L	0.0141	0.66%
As 188.979†	2866.6	2.063	mg/L	0.0149	2.063	mg/L	0.0149	0.72%
B 249.677†	6499.7	1.045	mg/L	0.0069	1.045	mg/L	0.0069	0.66%
Ba 233.527†	6385.5	1.062	mg/L	0.0064	1.062	mg/L	0.0064	0.60%
Be 313.042†	582826.6	1.019	mg/L	0.0145	1.019	mg/L	0.0145	1.42%
Ca 317.933†	21538.3	2.127	mg/L	0.0158	2.127	mg/L	0.0158	0.74%
Cd 228.802†	24930.4	1.070	mg/L	0.0068	1.070	mg/L	0.0068	0.64%
Co 228.616†	33559.9	1.046	mg/L	0.0081	1.046	mg/L	0.0081	0.77%
Cr 267.716†	9111.5	1.083	mg/L	0.0065	1.083	mg/L	0.0065	0.60%
Cu 324.752†	274741.3	1.059	mg/L	0.0099	1.059	mg/L	0.0099	0.94%
Fe 273.955†	2485.8	2.142	mg/L	0.0118	2.142	mg/L	0.0118	0.55%
K 766.490†	42241.6	20.54	mg/L	0.201	20.54	mg/L	0.201	0.98%
Mg 279.077†	1959.9	2.093	mg/L	0.0142	2.093	mg/L	0.0142	0.68%
Mn 257.610†	50286.7	1.010	mg/L	0.0055	1.010	mg/L	0.0055	0.54%
Mo 202.031†	19387.8	1.024	mg/L	0.0068	1.024	mg/L	0.0068	0.67%
Na 589.592†	611830.8	51.84	mg/L	0.397	51.84	mg/L	0.397	0.77%
Na 330.237†	1699.3	54.07	mg/L	0.319	54.07	mg/L	0.319	0.59%
Ni 231.604†	3754.9	1.049	mg/L	0.0033	1.049	mg/L	0.0033	0.32%
Pb 220.353†	16634.6	2.054	mg/L	0.0137	2.054	mg/L	0.0137	0.67%
Sb 206.836†	5672.1	2.104	mg/L	0.0160	2.104	mg/L	0.0160	0.76%
Se 196.026†	3190.7	2.053	mg/L	0.0141	2.053	mg/L	0.0141	0.69%
Si 288.158†	2864.3	2.056	mg/L	0.0114	2.056	mg/L	0.0114	0.56%
Sn 189.927†	5093.8	1.006	mg/L	0.0057	1.006	mg/L	0.0057	0.57%
Sr 421.552†	947748.3	1.024	mg/L	0.0081	1.024	mg/L	0.0081	0.79%
Ti 334.903†	26840.9	1.029	mg/L	0.0102	1.029	mg/L	0.0102	0.99%
Tl 190.801†	3866.1	2.118	mg/L	0.0150	2.118	mg/L	0.0150	0.71%
V 292.402†	146518.9	1.031	mg/L	0.0074	1.031	mg/L	0.0074	0.72%
Zn 206.200†	4298.8	1.038	mg/L	0.0067	1.038	mg/L	0.0067	0.65%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 4/30/2013 8:48:04 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 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	2747130.1	98.08	%	0.579				0.59%
ScR 361.383	389822.8	99.38	%	0.234				0.24%
Ag 328.068†	13.7	0.00006	mg/L	0.000330	0.00006	mg/L	0.000330	557.08%
Al 308.215†	-7.5	-0.00669	mg/L	0.002534	-0.00669	mg/L	0.002534	37.88%
As 188.979†	1.6	0.00114	mg/L	0.000765	0.00114	mg/L	0.000765	67.21%
B 249.677†	17.9	0.00288	mg/L	0.000671	0.00288	mg/L	0.000671	23.29%
Ba 233.527†	-5.5	-0.00091	mg/L	0.000475	-0.00091	mg/L	0.000475	52.01%
Be 313.042†	26.3	0.00005	mg/L	0.000021	0.00005	mg/L	0.000021	46.08%
Ca 317.933†	11.7	0.00116	mg/L	0.000816	0.00116	mg/L	0.000816	70.43%
Cd 228.802†	1.3	0.00005	mg/L	0.000040	0.00005	mg/L	0.000040	80.83%
Co 228.616†	-0.0	-0.00000	mg/L	0.000050	-0.00000	mg/L	0.000050	>999.9%
Cr 267.716†	2.3	0.00028	mg/L	0.000107	0.00028	mg/L	0.000107	38.79%
Cu 324.752†	39.5	0.00015	mg/L	0.000018	0.00015	mg/L	0.000018	11.60%
Fe 273.955†	0.8	0.00065	mg/L	0.003192	0.00065	mg/L	0.003192	490.42%
K 766.490†	34.7	0.01689	mg/L	0.010133	0.01689	mg/L	0.010133	60.01%
Mg 279.077†	6.6	0.00698	mg/L	0.006428	0.00698	mg/L	0.006428	92.08%
Mn 257.610†	6.4	0.00013	mg/L	0.000064	0.00013	mg/L	0.000064	49.15%
Mo 202.031†	15.6	0.00082	mg/L	0.000089	0.00082	mg/L	0.000089	10.76%
Na 589.592†	31.4	0.00266	mg/L	0.000990	0.00266	mg/L	0.000990	37.20%
Na 330.237†	6.3	0.2018	mg/L	0.21973	0.2018	mg/L	0.21973	108.89%
Ni 231.604†	-0.2	-0.00005	mg/L	0.000907	-0.00005	mg/L	0.000907	>999.9%
Pb 220.353†	3.9	0.00048	mg/L	0.000311	0.00048	mg/L	0.000311	64.13%
Sb 206.836†	10.4	0.00387	mg/L	0.001468	0.00387	mg/L	0.001468	37.96%
Se 196.026†	3.5	0.00227	mg/L	0.001781	0.00227	mg/L	0.001781	78.64%
Si 288.158†	2.1	0.00150	mg/L	0.002773	0.00150	mg/L	0.002773	184.97%
Sn 189.927†	-2.3	-0.00045	mg/L	0.000642	-0.00045	mg/L	0.000642	141.57%
Sr 421.552†	10.2	0.00001	mg/L	0.000017	0.00001	mg/L	0.000017	153.83%
Ti 334.903†	5.4	0.00021	mg/L	0.000352	0.00021	mg/L	0.000352	171.13%
Tl 190.801†	2.0	0.00108	mg/L	0.000654	0.00108	mg/L	0.000654	60.72%
V 292.402†	-4.1	-0.00003	mg/L	0.000088	-0.00003	mg/L	0.000088	321.11%
Zn 206.200†	-0.1	-0.00003	mg/L	0.000378	-0.00003	mg/L	0.000378	>999.9%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 4/30/2013 8:52:21 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	2766419.9	98.77	%	0.337				0.34%
ScR 361.383	388782.0	99.11	%	0.825				0.83%
Ag 328.068†	678.5	0.00293	mg/L	0.000064	0.00293	mg/L	0.000064	2.18%
Al 308.215†	58.0	0.05118	mg/L	0.002626	0.05118	mg/L	0.002626	5.13%
As 188.979†	69.4	0.04934	mg/L	0.001435	0.04934	mg/L	0.001435	2.91%
B 249.677†	133.6	0.02150	mg/L	0.001129	0.02150	mg/L	0.001129	5.25%
Ba 233.527†	17.0	0.00282	mg/L	0.000316	0.00282	mg/L	0.000316	11.19%
Be 313.042†	572.7	0.00100	mg/L	0.000064	0.00100	mg/L	0.000064	6.38%
Ca 317.933†	493.3	0.04871	mg/L	0.000543	0.04871	mg/L	0.000543	1.12%
Cd 228.802†	51.4	0.00196	mg/L	0.000206	0.00196	mg/L	0.000206	10.48%
Co 228.616†	106.6	0.00332	mg/L	0.000104	0.00332	mg/L	0.000104	3.13%
Cr 267.716†	46.6	0.00554	mg/L	0.000501	0.00554	mg/L	0.000501	9.04%
Cu 324.752†	555.7	0.00214	mg/L	0.000153	0.00214	mg/L	0.000153	7.15%
Fe 273.955†	60.1	0.05189	mg/L	0.002186	0.05189	mg/L	0.002186	4.21%
K 766.490†	1043.2	0.5071	mg/L	0.01045	0.5071	mg/L	0.01045	2.06%
Mg 279.077†	53.8	0.05730	mg/L	0.004333	0.05730	mg/L	0.004333	7.56%
Mn 257.610†	54.4	0.00110	mg/L	0.000093	0.00110	mg/L	0.000093	8.47%
Mo 202.031†	99.5	0.00525	mg/L	0.000272	0.00525	mg/L	0.000272	5.19%
Na 589.592†	5867.5	0.4972	mg/L	0.00584	0.4972	mg/L	0.00584	1.17%
Na 330.237†	5.3	0.1658	mg/L	0.31336	0.1658	mg/L	0.31336	188.96%
Ni 231.604†	38.5	0.01076	mg/L	0.000572	0.01076	mg/L	0.000572	5.32%
Pb 220.353†	169.8	0.02097	mg/L	0.000958	0.02097	mg/L	0.000958	4.57%
Sb 206.836†	142.4	0.05291	mg/L	0.001896	0.05291	mg/L	0.001896	3.58%
Se 196.026†	81.0	0.05214	mg/L	0.003062	0.05214	mg/L	0.003062	5.87%
Si 288.158†	90.8	0.06527	mg/L	0.002306	0.06527	mg/L	0.002306	3.53%
Sn 189.927†	52.0	0.01028	mg/L	0.000409	0.01028	mg/L	0.000409	3.97%
Sr 421.552†	916.0	0.00099	mg/L	0.000034	0.00099	mg/L	0.000034	3.47%
Ti 334.903†	123.6	0.00473	mg/L	0.000569	0.00473	mg/L	0.000569	12.02%
Tl 190.801†	94.8	0.05214	mg/L	0.001362	0.05214	mg/L	0.001362	2.61%
V 292.402†	443.3	0.00313	mg/L	0.000092	0.00313	mg/L	0.000092	2.94%
Zn 206.200†	43.5	0.01052	mg/L	0.000569	0.01052	mg/L	0.000569	5.41%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 4/30/2013 8:56:38 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2683062.7	95.79	%	0.368				0.38%
ScR 361.383	385018.2	98.15	%	0.716				0.73%
Ag 328.068†	-344.1	-0.00082	mg/L	0.000142	-0.00082	mg/L	0.000142	17.45%
Al 308.215†	233141.2	206.2	mg/L	1.74	206.2	mg/L	1.74	0.84%
As 188.979†	67.9	0.03907	mg/L	0.001531	0.03907	mg/L	0.001531	3.92%
B 249.677†	107.7	0.01734	mg/L	0.002194	0.01734	mg/L	0.002194	12.66%
Ba 233.527†	135.2	-0.00580	mg/L	0.000202	-0.00580	mg/L	0.000202	3.48%
Be 313.042†	33.4	0.00006	mg/L	0.000011	0.00006	mg/L	0.000011	20.35%
Ca 317.933†	1042489.7	102.9	mg/L	0.97	102.9	mg/L	0.97	0.94%
Cd 228.802†	63.6	0.00249	mg/L	0.000331	0.00249	mg/L	0.000331	13.32%
Co 228.616†	66.0	0.00204	mg/L	0.000379	0.00204	mg/L	0.000379	18.56%
Cr 267.716†	32.9	-0.00138	mg/L	0.000328	-0.00138	mg/L	0.000328	23.76%
Cu 324.752†	-1955.7	0.00136	mg/L	0.000069	0.00136	mg/L	0.000069	5.11%
Fe 273.955†	222870.9	192.5	mg/L	2.68	192.5	mg/L	2.68	1.39%
K 766.490†	63.5	0.03087	mg/L	0.013023	0.03087	mg/L	0.013023	42.19%
Mg 279.077†	99620.0	105.9	mg/L	1.19	105.9	mg/L	1.19	1.12%
Mn 257.610†	73.4	0.00004	mg/L	0.000141	0.00004	mg/L	0.000141	358.89%
Mo 202.031†	120.6	0.00516	mg/L	0.000563	0.00516	mg/L	0.000563	10.91%
Na 589.592†	223.8	0.01896	mg/L	0.003728	0.01896	mg/L	0.003728	19.66%
Na 330.237†	-13.4	-0.4239	mg/L	0.26459	-0.4239	mg/L	0.26459	62.41%
Ni 231.604†	2.4	0.00067	mg/L	0.000269	0.00067	mg/L	0.000269	40.07%
Pb 220.353†	-457.1	-0.01091	mg/L	0.000628	-0.01091	mg/L	0.000628	5.75%
Sb 206.836†	-52.1	-0.01946	mg/L	0.001272	-0.01946	mg/L	0.001272	6.54%
Se 196.026†	-3.3	-0.02584	mg/L	0.003364	-0.02584	mg/L	0.003364	13.02%
Si 288.158†	-13.7	0.00223	mg/L	0.004561	0.00223	mg/L	0.004561	204.81%
Sn 189.927†	-86.4	-0.00843	mg/L	0.000891	-0.00843	mg/L	0.000891	10.57%
Sr 421.552†	3808.6	0.00411	mg/L	Cont, 0.000031	0.00411	mg/L	0.000031	0.77%
Ti 334.903†	297.1	0.00528	mg/L	0.000195	0.00528	mg/L	0.000195	3.69%
Tl 190.801†	-11.3	0.01930	mg/L	0.001140	0.01930	mg/L	0.001140	5.90%
V 292.402†	1491.8	0.00080	mg/L	0.000302	0.00080	mg/L	0.000302	37.67%
Zn 206.200†	-2.8	-0.00069	mg/L	0.000302	-0.00069	mg/L	0.000302	44.04%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 4/30/2013 9:00:54 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	2670047.4	95.33	%	0.398				0.42%
ScR 361.383	377474.9	96.23	%	0.364				0.38%
Ag 328.068†	254295.7	1.098	mg/L	0.0027	1.098	mg/L	0.0027	0.25%
Al 308.215†	241046.1	213.2	mg/L	1.61	213.2	mg/L	1.61	0.76%
As 188.979†	1527.8	1.073	mg/L	0.0015	1.073	mg/L	0.0015	0.14%
B 249.677†	36.9	0.00362	mg/L	0.001710	0.00362	mg/L	0.001710	47.26%
Ba 233.527†	6530.7	1.057	mg/L	0.0065	1.057	mg/L	0.0065	0.61%
Be 313.042†	575112.6	1.006	mg/L	0.0022	1.006	mg/L	0.0022	0.22%
Ca 317.933†	1046277.7	103.3	mg/L	0.48	103.3	mg/L	0.48	0.46%
Cd 228.802†	24842.2	1.072	mg/L	0.0030	1.072	mg/L	0.0030	0.28%
Co 228.616†	31848.6	0.9947	mg/L	0.00295	0.9947	mg/L	0.00295	0.30%
Cr 267.716†	9035.1	1.069	mg/L	0.0056	1.069	mg/L	0.0056	0.52%
Cu 324.752†	274136.8	1.066	mg/L	0.0048	1.066	mg/L	0.0048	0.45%
Fe 273.955†	230499.4	199.1	mg/L	1.62	199.1	mg/L	1.62	0.81%
K 766.490†	43.9	0.02132	mg/L	0.015218	0.02132	mg/L	0.015218	71.37%
Mg 279.077†	99916.7	106.3	mg/L	0.68	106.3	mg/L	0.68	0.64%
Mn 257.610†	50436.6	1.012	mg/L	0.0090	1.012	mg/L	0.0090	0.89%
Mo 202.031†	121.1	0.00513	mg/L	0.000304	0.00513	mg/L	0.000304	5.92%
Na 589.592†	117.0	0.00991	mg/L	0.003568	0.00991	mg/L	0.003568	35.99%
Na 330.237†	5.7	-0.1137	mg/L	0.06413	-0.1137	mg/L	0.06413	56.41%
Ni 231.604†	3642.9	1.018	mg/L	0.0035	1.018	mg/L	0.0035	0.34%
Pb 220.353†	7554.4	0.9802	mg/L	0.00264	0.9802	mg/L	0.00264	0.27%
Sb 206.836†	2737.5	1.006	mg/L	0.0042	1.006	mg/L	0.0042	0.42%
Se 196.026†	1603.1	1.006	mg/L	0.0105	1.006	mg/L	0.0105	1.04%
Si 288.158†	-24.6	-0.00207	mg/L	0.002299	-0.00207	mg/L	0.002299	110.81%
Sn 189.927†	-96.3	-0.00982	mg/L	0.000695	-0.00982	mg/L	0.000695	7.08%
Sr 421.552†	3813.8	0.00412	mg/L Conf.	0.000015	0.00412	mg/L	0.000015	0.37%
Ti 334.903†	307.8	0.00546	mg/L	0.000356	0.00546	mg/L	0.000356	6.52%
Tl 190.801†	1772.4	0.9912	mg/L	0.00295	0.9912	mg/L	0.00295	0.30%
V 292.402†	144830.9	1.009	mg/L	0.0015	1.009	mg/L	0.0015	0.15%
Zn 206.200†	4145.5	1.001	mg/L	0.0067	1.001	mg/L	0.0067	0.67%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 4/30/2013 9:05:11 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	2730964.3	97.51	%	0.076				0.08%
ScR 361.383	384661.7	98.06	%	0.562				0.57%
Ag 328.068†	249701.8	1.077	mg/L	0.0063	1.077	mg/L	0.0063	0.59%
Al 308.215†	2426.3	2.111	mg/L	0.0113	2.111	mg/L	0.0113	0.54%
As 188.979†	2881.9	2.073	mg/L	0.0098	2.073	mg/L	0.0098	0.47%
B 249.677†	6458.4	1.038	mg/L	0.0051	1.038	mg/L	0.0051	0.49%
Ba 233.527†	6351.6	1.056	mg/L	0.0074	1.056	mg/L	0.0074	0.70%
Be 313.042†	579421.7	1.013	mg/L	0.0131	1.013	mg/L	0.0131	1.29%
Ca 317.933†	21478.2	2.121	mg/L	0.0090	2.121	mg/L	0.0090	0.43%
Cd 228.802†	24959.8	1.071	mg/L	0.0025	1.071	mg/L	0.0025	0.23%
Co 228.616†	33665.1	1.050	mg/L	0.0021	1.050	mg/L	0.0021	0.20%
Cr 267.716†	9088.1	1.080	mg/L	0.0057	1.080	mg/L	0.0057	0.52%
Cu 324.752†	276268.6	1.065	mg/L	0.0057	1.065	mg/L	0.0057	0.53%
Fe 273.955†	2485.1	2.141	mg/L	0.0113	2.141	mg/L	0.0113	0.53%
K 766.490†	41991.1	20.41	mg/L	0.255	20.41	mg/L	0.255	1.25%
Mg 279.077†	1953.6	2.086	mg/L	0.0157	2.086	mg/L	0.0157	0.75%
Mn 257.610†	49621.2	0.9969	mg/L	0.01347	0.9969	mg/L	0.01347	1.35%
Mo 202.031†	19446.1	1.027	mg/L	0.0045	1.027	mg/L	0.0045	0.44%
Na 589.592†	611683.8	51.83	mg/L	0.593	51.83	mg/L	0.593	1.14%
Na 330.237†	1693.7	53.89	mg/L	0.342	53.89	mg/L	0.342	0.64%
Ni 231.604†	3747.4	1.047	mg/L	0.0070	1.047	mg/L	0.0070	0.67%
Pb 220.353†	16700.8	2.063	mg/L	0.0078	2.063	mg/L	0.0078	0.38%
Sb 206.836†	5683.5	2.108	mg/L	0.0050	2.108	mg/L	0.0050	0.24%
Se 196.026†	3193.0	2.054	mg/L	0.0138	2.054	mg/L	0.0138	0.67%
Si 288.158†	2831.4	2.032	mg/L	0.0115	2.032	mg/L	0.0115	0.57%
Sn 189.927†	5118.8	1.011	mg/L	0.0058	1.011	mg/L	0.0058	0.57%
Sr 421.552†	940432.2	1.016	mg/L	0.0125	1.016	mg/L	0.0125	1.23%
Ti 334.903†	26562.8	1.018	mg/L	0.0116	1.018	mg/L	0.0116	1.14%
Tl 190.801†	3894.8	2.134	mg/L	0.0051	2.134	mg/L	0.0051	0.24%
V 292.402†	147095.6	1.035	mg/L	0.0047	1.035	mg/L	0.0047	0.45%
Zn 206.200†	4278.2	1.033	mg/L	0.0056	1.033	mg/L	0.0056	0.54%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 4/30/2013 9:09:15 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.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2772972.8	99.01	%	0.117				0.12%
ScR 361.383	394444.1	100.6	%	0.37				0.36%
Ag 328.068†	56.9	0.00025	mg/L	0.000179	0.00025	mg/L	0.000179	73.13%
Al 308.215†	-6.9	-0.00610	mg/L	0.004366	-0.00610	mg/L	0.004366	71.53%
As 188.979†	1.7	0.00125	mg/L	0.001089	0.00125	mg/L	0.001089	86.81%
B 249.677†	7.8	0.00126	mg/L	0.000715	0.00126	mg/L	0.000715	56.64%
Ba 233.527†	-3.8	-0.00062	mg/L	0.000582	-0.00062	mg/L	0.000582	93.23%
Be 313.042†	29.6	0.00005	mg/L	0.000017	0.00005	mg/L	0.000017	32.15%
Ca 317.933†	10.6	0.00105	mg/L	0.000442	0.00105	mg/L	0.000442	42.24%
Cd 228.802†	-0.9	-0.00004	mg/L	0.000150	-0.00004	mg/L	0.000150	343.20%
Co 228.616†	-2.9	-0.00009	mg/L	0.000082	-0.00009	mg/L	0.000082	87.65%
Cr 267.716†	6.8	0.00080	mg/L	0.001333	0.00080	mg/L	0.001333	165.82%
Cu 324.752†	96.4	0.00037	mg/L	0.000076	0.00037	mg/L	0.000076	20.53%
Fe 273.955†	2.8	0.00241	mg/L	0.002386	0.00241	mg/L	0.002386	98.99%
K 766.490†	39.3	0.01909	mg/L	0.009555	0.01909	mg/L	0.009555	50.05%
Mg 279.077†	9.2	0.00982	mg/L	0.004868	0.00982	mg/L	0.004868	49.56%
Mn 257.610†	4.7	0.00010	mg/L	0.000010	0.00010	mg/L	0.000010	10.11%
Mo 202.031†	12.9	0.00068	mg/L	0.000131	0.00068	mg/L	0.000131	19.20%
Na 589.592†	88.5	0.00749	mg/L	0.002018	0.00749	mg/L	0.002018	26.92%
Na 330.237†	6.2	0.1980	mg/L	0.34928	0.1980	mg/L	0.34928	176.36%
Ni 231.604†	0.9	0.00026	mg/L	0.000641	0.00026	mg/L	0.000641	247.39%
Pb 220.353†	2.4	0.00029	mg/L	0.001017	0.00029	mg/L	0.001017	349.02%
Sb 206.836†	9.2	0.00343	mg/L	0.001831	0.00343	mg/L	0.001831	53.36%
Se 196.026†	6.4	0.00409	mg/L	0.003823	0.00409	mg/L	0.003823	93.45%
Si 288.158†	1.6	0.00118	mg/L	0.001676	0.00118	mg/L	0.001676	142.01%
Sn 189.927†	4.3	0.00086	mg/L	0.000698	0.00086	mg/L	0.000698	81.61%
Sr 421.552†	27.9	0.00003	mg/L	0.000017	0.00003	mg/L	0.000017	55.11%
Ti 334.903†	36.4	0.00140	mg/L	0.000769	0.00140	mg/L	0.000769	55.13%
Tl 190.801†	0.1	0.00007	mg/L	0.001904	0.00007	mg/L	0.001904	>999.9%
V 292.402†	-1.3	-0.00001	mg/L	0.000197	-0.00001	mg/L	0.000197	>999.9%
Zn 206.200†	0.9	0.00022	mg/L	0.000334	0.00022	mg/L	0.000334	152.13%

Sequence No.: 8
Sample ID: WN88 MB SWC

Autosampler Location: 304
Date Collected: 4/30/2013 9:13:31 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN88 MB SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN88 MB SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2814937.8	100.5	%	0.59				0.58%
ScR 361.383	397803.8	101.4	%	0.17				0.17%
Ag 328.068†	-16.4	-0.00007	mg/L	0.000149	-0.00014	mg/L	0.000298	210.36%
Al 308.215†	-7.8	-0.00689	mg/L	0.005030	-0.01378	mg/L	0.010060	73.01%
As 188.979†	-0.9	-0.00065	mg/L	0.001923	-0.00131	mg/L	0.003847	293.99%
B 249.677†	6.2	0.00100	mg/L	0.000543	0.00199	mg/L	0.001086	54.53%
Ba 233.527†	-7.4	-0.00123	mg/L	0.000294	-0.00246	mg/L	0.000588	23.89%
Be 313.042†	-11.0	-0.00002	mg/L	0.000035	-0.00004	mg/L	0.000071	183.11%
Ca 317.933†	51.5	0.00508	mg/L	0.000624	0.01016	mg/L	0.001248	12.28%
Cd 228.802†	-5.1	-0.00022	mg/L	0.000095	-0.00043	mg/L	0.000190	44.18%
Co 228.616†	0.3	0.00001	mg/L	0.000146	0.00002	mg/L	0.000292	>999.9%
Cr 267.716†	9.8	0.00117	mg/L	0.000723	0.00233	mg/L	0.001446	62.05%
Cu 324.752†	41.0	0.00016	mg/L	0.000120	0.00032	mg/L	0.000239	75.70%
Fe 273.955†	5.0	0.00430	mg/L	0.000801	0.00861	mg/L	0.001602	18.61%
K 766.490†	38.6	0.01875	mg/L	0.009987	0.03751	mg/L	0.019974	53.26%
Mg 279.077†	1.5	0.00155	mg/L	0.004713	0.00309	mg/L	0.009427	305.02%
Mn 257.610†	0.1	0.00000	mg/L	0.000049	0.00000	mg/L	0.000099	>999.9%
Mo 202.031†	4.3	0.00023	mg/L	0.000123	0.00045	mg/L	0.000247	54.30%
Na 589.592†	27.0	0.00229	mg/L	0.002247	0.00457	mg/L	0.004494	98.29%
Na 330.237†	4.3	0.1376	mg/L	0.23689	0.2752	mg/L	0.47379	172.18%
Ni 231.604†	-0.6	-0.00016	mg/L	0.000851	-0.00032	mg/L	0.001702	524.11%
Pb 220.353†	-0.3	-0.00003	mg/L	0.000963	-0.00007	mg/L	0.001927	>999.9%
Sb 206.836†	1.4	0.00052	mg/L	0.000922	0.00105	mg/L	0.001843	176.19%
Se 196.026†	6.9	0.00443	mg/L	0.000875	0.00886	mg/L	0.001750	19.76%
Si 288.158†	22.9	0.01646	mg/L	0.000291	0.03292	mg/L	0.000582	1.77%
Sn 189.927†	2.2	0.00044	mg/L	0.000232	0.00088	mg/L	0.000464	52.46%
Sr 421.552†	-56.2	-0.00006	mg/L	0.000011	-0.00012	mg/L	0.000022	18.15%
Ti 334.903†	-1.4	-0.00005	mg/L	0.000916	-0.00011	mg/L	0.001832	>999.9%
Tl 190.801†	2.1	0.00114	mg/L	0.001437	0.00229	mg/L	0.002874	125.54%
V 292.402†	-20.4	-0.00014	mg/L	0.000005	-0.00028	mg/L	0.000011	3.93%
Zn 206.200†	3.8	0.00093	mg/L	0.000389	0.00185	mg/L	0.000778	42.00%

Sequence No.: 9
Sample ID: WN88 ADUP SWC

Autosampler Location: 305
Date Collected: 4/30/2013 9:17:48 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN88 ADUP SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WN88 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2750809.3	98.21	%	0.197				0.20%
ScR 361.383	397786.9	101.4	%	0.30				0.30%
Ag 328.068†	-187.3	-0.00019	mg/L	0.000164	-0.00037	mg/L	0.000328	87.50%
Al 308.215†	95766.1	84.68	mg/L	0.243	169.4	mg/L	0.49	0.29%
As 188.979†	-282.2	0.01980	mg/L	0.001593	0.03960	mg/L	0.003185	8.04%
B 249.677†	61.9	0.00982	mg/L	0.001295	0.01963	mg/L	0.002590	13.19%
Ba 233.527†	2166.0	0.3395	mg/L	0.00285	0.6790	mg/L	0.00570	0.84%
Be 313.042†	683.6	0.00102	mg/L	0.000023	0.00204	mg/L	0.000047	2.29%
Ca 317.933†	737592.9	72.84	mg/L	0.193	145.7	mg/L	0.39	0.26%
Cd 228.802†	1072.5	0.04770	mg/L	0.000275	0.09541	mg/L	0.000551	0.58%
Co 228.616†	2067.2	0.05302	mg/L	0.000415	0.1060	mg/L	0.00083	0.78%
Cr 267.716†	1269.1	0.1514	mg/L	0.00126	0.3028	mg/L	0.00251	0.83%
Cu 324.752†	281106.7	1.089	mg/L	0.0033	2.179	mg/L	0.0066	0.30%
Fe 273.955†	163088.7	140.9	mg/L	0.96	281.8	mg/L	1.91	0.68%
K 766.490†	11186.6	5.438	mg/L	0.0580	10.88	mg/L	0.116	1.07%
Mg 279.077†	26866.5	28.52	mg/L	0.103	57.03	mg/L	0.207	0.36%
Mn 257.610†	74040.5	1.486	mg/L	0.0097	2.973	mg/L	0.0194	0.65%
Mo 202.031†	168.7	0.00805	mg/L	0.000445	0.01610	mg/L	0.000891	5.53%
Na 589.592†	94689.8	8.023	mg/L	0.0197	16.05	mg/L	0.039	0.25%
Na 330.237†	248.5	8.171	mg/L	0.1644	16.34	mg/L	0.329	2.01%
Ni 231.604†	512.4	0.1432	mg/L	0.00119	0.2863	mg/L	0.00238	0.83%
Pb 220.353†	3503.3	0.4467	mg/L	0.00246	0.8935	mg/L	0.00491	0.55%
Sb 206.836†	-5.3	0.00278	mg/L	0.004250	0.00556	mg/L	0.008500	152.81%
Se 196.026†	-4.5	-0.01295	mg/L	0.001897	-0.02590	mg/L	0.003795	14.65%
Si 288.158†	1973.7	1.423	mg/L	0.0099	2.846	mg/L	0.0199	0.70%
Sn 189.927†	10.4	0.00937	mg/L	0.000731	0.01875	mg/L	0.001462	7.80%
Sr 421.552†	401189.8	0.4334	mg/L	0.00131	0.8668	mg/L	0.00262	0.30%
Ti 334.903†	170554.1	6.541	mg/L	0.0248	13.08	mg/L	0.050	0.38%
Tl 190.801†	5.4	0.01955	mg/L	0.001406	0.03910	mg/L	0.002811	7.19%
V 292.402†	66696.0	0.4573	mg/L	0.00118	0.9146	mg/L	0.00235	0.26%
Zn 206.200†	21818.4	5.266	mg/L	0.0166	10.53	mg/L	0.033	0.32%

Sequence No.: 10
Sample ID: WN88 A SWC

Autosampler Location: 306
Date Collected: 4/30/2013 9:21:50 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN88 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN88 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2767001.0	98.79	%	0.440				0.45%
ScR 361.383	392271.3	100.0	%	0.27				0.27%
Ag 328.068†	-55.5	0.00035	mg/L	0.000157	0.00070	mg/L	0.000314	44.84%
Al 308.215†	96684.2	85.50	mg/L	0.085	171.0	mg/L	0.17	0.10%
As 188.979†	-273.8	0.02281	mg/L	0.002961	0.04561	mg/L	0.005922	12.98%
B 249.677†	62.0	0.00982	mg/L	0.000183	0.01963	mg/L	0.000366	1.87%
Ba 233.527†	2229.3	0.3468	mg/L	0.00133	0.6936	mg/L	0.00265	0.38%
Be 313.042†	789.4	0.00121	mg/L	0.000016	0.00243	mg/L	0.000032	1.32%
Ca 317.933†	707121.5	69.83	mg/L	0.296	139.7	mg/L	0.59	0.42%
Cd 228.802†	1254.7	0.05558	mg/L	0.000337	0.1112	mg/L	0.00067	0.61%
Co 228.616†	2177.8	0.05664	mg/L	0.000420	0.1133	mg/L	0.00084	0.74%
Cr 267.716†	1488.3	0.1777	mg/L	0.00130	0.3554	mg/L	0.00259	0.73%
Cu 324.752†	442562.3	1.713	mg/L	0.0100	3.426	mg/L	0.0199	0.58%
Fe 273.955†	188657.5	163.0	mg/L	0.65	325.9	mg/L	1.30	0.40%
K 766.490†	12415.2	6.036	mg/L	0.0317	12.07	mg/L	0.063	0.52%
Mg 279.077†	31345.7	33.27	mg/L	0.175	66.55	mg/L	0.349	0.52%
Mn 257.610†	84538.5	1.697	mg/L	0.0056	3.395	mg/L	0.0112	0.33%
Mo 202.031†	165.8	0.00793	mg/L	0.000179	0.01585	mg/L	0.000358	2.26%
Na 589.592†	79540.4	6.739	mg/L	0.0291	13.48	mg/L	0.058	0.43%
Na 330.237†	218.6	6.929	mg/L	0.0975	13.86	mg/L	0.195	1.41%
Ni 231.604†	563.6	0.1575	mg/L	0.00066	0.3150	mg/L	0.00131	0.42%
Pb 220.353†	6716.0	0.8416	mg/L	0.00420	1.683	mg/L	0.0084	0.50%
Sb 206.836†	10.3	0.00815	mg/L	0.004606	0.01630	mg/L	0.009213	56.51%
Se 196.026†	1.2	-0.00933	mg/L	0.004754	-0.01866	mg/L	0.009507	50.96%
Si 288.158†	2119.4	1.528	mg/L	0.0179	3.057	mg/L	0.0357	1.17%
Sn 189.927†	100.0	0.02676	mg/L	0.000783	0.05353	mg/L	0.001567	2.93%
Sr 421.552†	367440.8	0.3970	mg/L	0.00069	0.7939	mg/L	0.00139	0.17%
Ti 334.903†	168109.3	6.447	mg/L	0.0070	12.89	mg/L	0.014	0.11%
Tl 190.801†	-0.7	0.01920	mg/L	0.002672	0.03839	mg/L	0.005344	13.92%
V 292.402†	61892.2	0.4227	mg/L	0.00252	0.8455	mg/L	0.00504	0.60%
Zn 206.200†	25482.0	6.151	mg/L	0.0308	12.30	mg/L	0.062	0.50%

Sequence No.: 11
Sample ID: WN88 ASPK SWC

Autosampler Location: 307
Date Collected: 4/30/2013 9:25:52 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN88 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN88 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2768249.7	98.84	%	0.261				0.26%
ScR 361.383	390801.4	99.63	%	0.219				0.22%
Ag 328.068†	124036.6	0.5358	mg/L	0.00189	1.072	mg/L	0.0038	0.35%
Al 308.215†	97924.8	86.59	mg/L	0.312	173.2	mg/L	0.62	0.36%
As 188.979†	2628.2	2.087	mg/L	0.0141	4.174	mg/L	0.0281	0.67%
B 249.677†	54.8	0.00747	mg/L	0.000680	0.01494	mg/L	0.001361	9.11%
Ba 233.527†	14838.5	2.447	mg/L	0.0077	4.894	mg/L	0.0154	0.32%
Be 313.042†	284124.3	0.4968	mg/L	0.00067	0.9936	mg/L	0.00134	0.13%
Ca 317.933†	808125.4	79.80	mg/L	0.264	159.6	mg/L	0.53	0.33%
Cd 228.802†	14340.3	0.6117	mg/L	0.00258	1.223	mg/L	0.0052	0.42%
Co 228.616†	18412.8	0.5631	mg/L	0.00289	1.126	mg/L	0.0058	0.51%
Cr 267.716†	5735.6	0.6811	mg/L	0.00136	1.362	mg/L	0.0027	0.20%
Cu 324.752†	481370.1	1.862	mg/L	0.0013	3.723	mg/L	0.0027	0.07%
Fe 273.955†	168524.8	145.6	mg/L	1.43	291.2	mg/L	2.85	0.98%
K 766.490†	32394.8	15.75	mg/L	0.011	31.50	mg/L	0.021	0.07%
Mg 279.077†	38863.6	41.29	mg/L	0.208	82.57	mg/L	0.416	0.50%
Mn 257.610†	102786.5	2.064	mg/L	0.0153	4.128	mg/L	0.0307	0.74%
Mo 202.031†	156.8	0.00731	mg/L	0.000214	0.01461	mg/L	0.000427	2.92%
Na 589.592†	217891.4	18.46	mg/L	0.050	36.92	mg/L	0.099	0.27%
Na 330.237†	613.5	18.90	mg/L	0.073	37.79	mg/L	0.146	0.39%
Ni 231.604†	2399.8	0.6697	mg/L	0.00099	1.339	mg/L	0.0020	0.15%
Pb 220.353†	21116.8	2.621	mg/L	0.0130	5.242	mg/L	0.0260	0.50%
Sb 206.836†	6.6	0.00182	mg/L	0.004048	0.00364	mg/L	0.008097	222.56%
Se 196.026†	3196.4	2.047	mg/L	0.0112	4.094	mg/L	0.0225	0.55%
Si 288.158†	1631.8	1.181	mg/L	0.0151	2.361	mg/L	0.0303	1.28%
Sn 189.927†	1.1	0.00815	mg/L	0.001006	0.01630	mg/L	0.002011	12.34%
Sr 421.552†	882822.0	0.9538	mg/L	0.00246	1.908	mg/L	0.0049	0.26%
Ti 334.903†	174742.2	6.701	mg/L	0.0219	13.40	mg/L	0.044	0.33%
Tl 190.801†	3647.9	2.019	mg/L	0.0096	4.037	mg/L	0.0193	0.48%
V 292.402†	133710.8	0.9288	mg/L	0.00078	1.858	mg/L	0.0016	0.08%
Zn 206.200†	34890.7	8.422	mg/L	0.0328	16.84	mg/L	0.066	0.39%

Sequence No.: 12
Sample ID: WN88 B SWC

Autosampler Location: 308
Date Collected: 4/30/2013 9:29:56 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN88 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WN88 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2766997.0	98.79	%	0.047				0.05%
ScR 361.383	398662.4	101.6	%	1.89				1.86%
Ag 328.068†	-413.8	-0.00121	mg/L	0.000067	-0.00242	mg/L	0.000134	5.55%
Al 308.215†	95258.1	84.23	mg/L	1.389	168.5	mg/L	2.78	1.65%
As 188.979†	-251.2	0.03370	mg/L	0.003599	0.06740	mg/L	0.007198	10.68%
B 249.677†	61.4	0.00972	mg/L	0.000159	0.01944	mg/L	0.000317	1.63%
Ba 233.527†	2542.6	0.4005	mg/L	0.00804	0.8010	mg/L	0.01609	2.01%
Be 313.042†	745.6	0.00114	mg/L	0.000049	0.00227	mg/L	0.000099	4.35%
Ca 317.933†	677297.4	66.88	mg/L	0.885	133.8	mg/L	1.77	1.32%
Cd 228.802†	145.0	0.00739	mg/L	0.000233	0.01477	mg/L	0.000467	3.16%
Co 228.616†	2189.4	0.05727	mg/L	0.000364	0.1145	mg/L	0.00073	0.63%
Cr 267.716†	1355.3	0.1617	mg/L	0.00266	0.3235	mg/L	0.00531	1.64%
Cu 324.752†	124211.6	0.4850	mg/L	0.00174	0.9700	mg/L	0.00348	0.36%
Fe 273.955†	176093.2	152.1	mg/L	3.11	304.2	mg/L	6.22	2.04%
K 766.490†	11327.4	5.507	mg/L	0.0812	11.01	mg/L	0.162	1.48%
Mg 279.077†	29868.9	31.71	mg/L	0.551	63.42	mg/L	1.103	1.74%
Mn 257.610†	86784.5	1.742	mg/L	0.0298	3.485	mg/L	0.0596	1.71%
Mo 202.031†	204.2	0.00999	mg/L	0.000209	0.01998	mg/L	0.000418	2.09%
Na 589.592†	86944.6	7.367	mg/L	0.0793	14.73	mg/L	0.159	1.08%
Na 330.237†	183.1	7.296	mg/L	0.1055	14.59	mg/L	0.211	1.45%
Ni 231.604†	546.0	0.1526	mg/L	0.00272	0.3051	mg/L	0.00545	1.79%
Pb 220.353†	4716.8	0.5966	mg/L	0.00114	1.193	mg/L	0.0023	0.19%
Sb 206.836†	-5.6	0.00228	mg/L	0.002017	0.00455	mg/L	0.004035	88.68%
Se 196.026†	-6.5	-0.01416	mg/L	0.004357	-0.02832	mg/L	0.008715	30.77%
Si 288.158†	2121.6	1.530	mg/L	0.0245	3.060	mg/L	0.0489	1.60%
Sn 189.927†	29.6	0.01261	mg/L	0.001255	0.02521	mg/L	0.002509	9.95%
Sr 421.552†	438898.1	0.4742	mg/L	0.00748	0.9483	mg/L	0.01496	1.58%
Ti 334.903†	164067.0	6.292	mg/L	0.1024	12.58	mg/L	0.205	1.63%
Tl 190.801†	-1.5	0.01732	mg/L	0.002884	0.03463	mg/L	0.005768	16.65%
V 292.402†	63080.4	0.4316	mg/L	0.00089	0.8633	mg/L	0.00177	0.21%
Zn 206.200†	4028.5	0.9726	mg/L	0.01542	1.945	mg/L	0.0308	1.59%

Sequence No.: 13
Sample ID: WN88 C SWC

Autosampler Location: 309
Date Collected: 4/30/2013 9:33:58 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN88 C SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN88 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2786863.7	99.50	%	0.199				0.20%
ScR 361.383	400877.0	102.2	%	1.70				1.66%
Ag 328.068†	-262.8	-0.00070	mg/L	0.000294	-0.00140	mg/L	0.000588	42.10%
Al 308.215†	79246.9	70.07	mg/L	1.233	140.1	mg/L	2.47	1.76%
As 188.979†	-280.0	0.00547	mg/L	0.002262	0.01095	mg/L	0.004524	41.33%
B 249.677†	32.5	0.00507	mg/L	0.001121	0.01015	mg/L	0.002242	22.10%
Ba 233.527†	1803.2	0.2802	mg/L	0.00334	0.5603	mg/L	0.00667	1.19%
Be 313.042†	748.1	0.00114	mg/L	0.000040	0.00229	mg/L	0.000080	3.50%
Ca 317.933†	463161.1	45.74	mg/L	0.832	91.48	mg/L	1.664	1.82%
Cd 228.802†	358.9	0.01674	mg/L	0.000069	0.03347	mg/L	0.000138	0.41%
Co 228.616†	1981.0	0.05127	mg/L	0.000450	0.1025	mg/L	0.00090	0.88%
Cr 267.716†	1198.1	0.1437	mg/L	0.00180	0.2873	mg/L	0.00359	1.25%
Cu 324.752†	123423.6	0.4812	mg/L	0.00191	0.9624	mg/L	0.00382	0.40%
Fe 273.955†	155185.8	134.1	mg/L	2.52	268.1	mg/L	5.03	1.88%
K 766.490†	9546.0	4.641	mg/L	0.1052	9.282	mg/L	0.2105	2.27%
Mg 279.077†	20934.5	22.21	mg/L	0.396	44.42	mg/L	0.793	1.78%
Mn 257.610†	78756.3	1.581	mg/L	0.0285	3.163	mg/L	0.0570	1.80%
Mo 202.031†	138.3	0.00676	mg/L	0.000373	0.01352	mg/L	0.000746	5.52%
Na 589.592†	78281.2	6.633	mg/L	0.1014	13.27	mg/L	0.203	1.53%
Na 330.237†	182.3	6.795	mg/L	0.1867	13.59	mg/L	0.373	2.75%
Ni 231.604†	400.8	0.1120	mg/L	0.00138	0.2240	mg/L	0.00276	1.23%
Pb 220.353†	8939.1	1.115	mg/L	0.0028	2.230	mg/L	0.0056	0.25%
Sb 206.836†	23.0	0.01299	mg/L	0.000758	0.02599	mg/L	0.001516	5.83%
Se 196.026†	-7.4	-0.01308	mg/L	0.004636	-0.02615	mg/L	0.009272	35.45%
Si 288.158†	1959.2	1.412	mg/L	0.0234	2.824	mg/L	0.0468	1.66%
Sn 189.927†	87.6	0.02222	mg/L	0.000891	0.04444	mg/L	0.001781	4.01%
Sr 421.552†	317080.0	0.3426	mg/L	0.00599	0.6851	mg/L	0.01198	1.75%
Ti 334.903†	156685.4	6.010	mg/L	0.1053	12.02	mg/L	0.211	1.75%
Tl 190.801†	-1.0	0.01525	mg/L	0.001723	0.03049	mg/L	0.003446	11.30%
V 292.402†	62216.4	0.4265	mg/L	0.00143	0.8531	mg/L	0.00286	0.34%
Zn 206.200†	9544.0	2.304	mg/L	0.0285	4.608	mg/L	0.0570	1.24%

Sequence No.: 14
Sample ID: WN88 D SWC

Autosampler Location: 310
Date Collected: 4/30/2013 9:37:59 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN88 D SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN88 D SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2771646.3	98.96	%	0.578				0.58%
ScR 361.383	395035.1	100.7	%	1.25				1.24%
Ag 328.068†	-361.8	-0.00113	mg/L	0.000226	-0.00226	mg/L	0.000452	19.97%
Al 308.215†	81160.7	71.77	mg/L	0.855	143.5	mg/L	1.71	1.19%
As 188.979†	-248.5	0.03976	mg/L	0.004934	0.07953	mg/L	0.009867	12.41%
B 249.677†	29.6	0.00459	mg/L	0.001000	0.00917	mg/L	0.002000	21.81%
Ba 233.527†	2650.5	0.4157	mg/L	0.00346	0.8314	mg/L	0.00693	0.83%
Be 313.042†	729.7	0.00111	mg/L	0.000006	0.00221	mg/L	0.000012	0.53%
Ca 317.933†	447282.6	44.17	mg/L	0.549	88.34	mg/L	1.097	1.24%
Cd 228.802†	216.5	0.01045	mg/L	0.000049	0.02090	mg/L	0.000099	0.47%
Co 228.616†	2214.4	0.05795	mg/L	0.000216	0.1159	mg/L	0.00043	0.37%
Cr 267.716†	1584.7	0.1903	mg/L	0.00234	0.3806	mg/L	0.00468	1.23%
Cu 324.752†	117453.6	0.4599	mg/L	0.00281	0.9197	mg/L	0.00562	0.61%
Fe 273.955†	197640.1	170.7	mg/L	1.97	341.5	mg/L	3.94	1.15%
K 766.490†	10442.6	5.077	mg/L	0.0920	10.15	mg/L	0.184	1.81%
Mg 279.077†	25476.3	27.02	mg/L	0.381	54.05	mg/L	0.763	1.41%
Mn 257.610†	88942.5	1.786	mg/L	0.0200	3.573	mg/L	0.0399	1.12%
Mo 202.031†	131.0	0.00639	mg/L	0.000431	0.01278	mg/L	0.000862	6.75%
Na 589.592†	63576.1	5.387	mg/L	0.0874	10.77	mg/L	0.175	1.62%
Na 330.237†	137.0	5.525	mg/L	0.1976	11.05	mg/L	0.395	3.58%
Ni 231.604†	459.8	0.1285	mg/L	0.00189	0.2569	mg/L	0.00378	1.47%
Pb 220.353†	21059.4	2.610	mg/L	0.0117	5.219	mg/L	0.0234	0.45%
Sb 206.836†	34.1	0.01683	mg/L	0.001340	0.03366	mg/L	0.002679	7.96%
Se 196.026†	-2.4	-0.01006	mg/L	0.002531	-0.02012	mg/L	0.005063	25.16%
Si 288.158†	2043.9	1.473	mg/L	0.0101	2.947	mg/L	0.0203	0.69%
Sn 189.927†	98.1	0.02424	mg/L	0.000423	0.04849	mg/L	0.000846	1.74%
Sr 421.552†	291451.7	0.3149	mg/L	0.00404	0.6297	mg/L	0.00808	1.28%
Ti 334.903†	165629.4	6.354	mg/L	0.0758	12.71	mg/L	0.152	1.19%
Tl 190.801†	-9.0	0.01559	mg/L	0.003792	0.03118	mg/L	0.007583	24.32%
V 292.402†	64462.6	0.4405	mg/L	0.00270	0.8809	mg/L	0.00541	0.61%
Zn 206.200†	8479.3	2.047	mg/L	0.0223	4.094	mg/L	0.0447	1.09%

Sequence No.: 15
Sample ID: WN88 E SWC

Dil

Dilution: 2.000000X

Autosampler Location: 311
Date Collected: 4/30/2013 9:42:00 AM
Data Type: Original

Nebulizer Parameters: WN88 E SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WN88 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2753458.8	98.31	%	0.671				0.68%
ScR 361.383	396872.2	101.2	%	0.15				0.15%
Ag 328.068†	165.0	0.00116	mg/L	0.000065	0.00231	mg/L	0.000131	5.66%
Al 308.215†	99248.8	87.77	mg/L	0.473	175.5	mg/L	0.95	0.54%
As 188.979†	-122.9	0.1199	mg/L	0.00714	0.2397	mg/L	0.01428	5.96%
B 249.677†	24.4	0.00371	mg/L	0.000366	0.00742	mg/L	0.000732	9.86%
Ba 233.527†	4819.4	0.7323	mg/L	0.00016	1.465	mg/L	0.0003	0.02%
Be 313.042†	1035.0	0.00165	mg/L	0.000027	0.00330	mg/L	0.000055	1.66%
Ca 317.933†	485516.3	47.95	mg/L	0.504	95.89	mg/L	1.009	1.05%
Cd 228.802†	1698.7	0.07431	mg/L	0.000433	0.1486	mg/L	0.00087	0.58%
Co 228.616†	2944.8	0.08113	mg/L	0.000699	0.1623	mg/L	0.00140	0.86%
Cr 267.716†	1886.1	0.2349	mg/L	0.00088	0.4699	mg/L	0.00177	0.38%
Cu 324.752†	558763.8	2.176	mg/L	0.0106	4.352	mg/L	0.0212	0.49%
Fe 273.955†	545698.5	471.4	mg/L	1.87	942.8	mg/L	3.74	0.40%
K 766.490†	11794.4	5.734	mg/L	0.0201	11.47	mg/L	0.040	0.35%
Mg 279.077†	27508.0	29.02	mg/L	0.022	58.04	mg/L	0.044	0.08%
Mn 257.610†	249494.2	5.012	mg/L	0.0203	10.02	mg/L	0.041	0.41%
Mo 202.031†	257.1	0.01300	mg/L	0.000329	0.02601	mg/L	0.000657	2.53%
Na 589.592†	50305.6	4.262	mg/L	0.0354	8.525	mg/L	0.0708	0.83%
Na 330.237†	201.4	4.259	mg/L	0.0378	8.518	mg/L	0.0757	0.89%
Ni 231.604†	883.6	0.2470	mg/L	0.00157	0.4939	mg/L	0.00313	0.63%
Pb 220.353†	67530.4	8.332	mg/L	0.1000	16.66	mg/L	0.200	1.20%
Sb 206.836†	301.7	0.1166	mg/L	0.00218	0.2333	mg/L	0.00437	1.87%
Se 196.026†	-11.3	-0.01766	mg/L	0.001522	-0.03532	mg/L	0.003045	8.62%
Si 288.158†	2378.2	1.713	mg/L	0.0102	3.425	mg/L	0.0203	0.59%
Sn 189.927†	947.0	0.1919	mg/L	0.00224	0.3838	mg/L	0.00447	1.17%
Sr 421.552†	293412.7	0.3170	mg/L	0.00160	0.6340	mg/L	0.00321	0.51%
Ti 334.903†	159268.5	6.109	mg/L	0.0329	12.22	mg/L	0.066	0.54%
Tl 190.801†	-83.2	0.01463	mg/L	0.003387	0.02926	mg/L	0.006775	23.15%
V 292.402†	59916.4	0.3943	mg/L	0.00433	0.7886	mg/L	0.00866	1.10%
Zn 206.200†	53768.6	12.98	mg/L	0.095	25.96	mg/L	0.189	0.73%

Sequence No.: 16
Sample ID: WN88 F SWC

Del

Dilution: 2.000000X

Autosampler Location: 312
Date Collected: 4/30/2013 9:46:02 AM
Data Type: Original

Nebulizer Parameters: WN88 F SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN88 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2766031.2	98.76	%	0.170				0.17%
ScR 361.383	393543.0	100.3	%	0.10				0.10%
Ag 328.068†	168.0	0.00129	mg/L	0.000231	0.00257	mg/L	0.000461	17.94%
Al 308.215†	84448.7	74.68	mg/L	0.140	149.4	mg/L	0.28	0.19%
As 188.979†	-139.4	0.09546	mg/L	0.001973	0.1909	mg/L	0.00395	2.07%
B 249.677†	17.6	0.00264	mg/L	0.000380	0.00528	mg/L	0.000760	14.38%
Ba 233.527†	3778.9	0.5584	mg/L	0.00575	1.117	mg/L	0.0115	1.03%
Be 313.042†	976.6	0.00155	mg/L	0.000011	0.00311	mg/L	0.000023	0.73%
Ca 317.933†	675958.1	66.75	mg/L	0.466	133.5	mg/L	0.93	0.70%
Cd 228.802†	1348.8	0.05918	mg/L	0.000103	0.1184	mg/L	0.00021	0.17%
Co 228.616†	2520.2	0.06845	mg/L	0.000619	0.1369	mg/L	0.00124	0.90%
Cr 267.716†	1814.2	0.2264	mg/L	0.00104	0.4529	mg/L	0.00209	0.46%
Cu 324.752†	963776.3	3.738	mg/L	0.0023	7.476	mg/L	0.0046	0.06%
Fe 273.955†	552017.2	476.9	mg/L	5.68	953.7	mg/L	11.37	1.19%
K 766.490†	10177.2	4.948	mg/L	0.0225	9.895	mg/L	0.0451	0.46%
Mg 279.077†	26732.9	28.19	mg/L	0.117	56.38	mg/L	0.234	0.42%
Mn 257.610†	234073.9	4.701	mg/L	0.0483	9.402	mg/L	0.0966	1.03%
Mo 202.031†	340.8	0.01720	mg/L	0.000283	0.03441	mg/L	0.000567	1.65%
Na 589.592†	59565.7	5.047	mg/L	0.0328	10.09	mg/L	0.066	0.65%
Na 330.237†	183.3	4.730	mg/L	0.0195	9.460	mg/L	0.0391	0.41%
Ni 231.604†	742.6	0.2075	mg/L	0.00172	0.4151	mg/L	0.00344	0.83%
Pb 220.353†	33940.8	4.180	mg/L	0.0135	8.360	mg/L	0.0271	0.32%
Sb 206.836†	154.4	0.06112	mg/L	0.001287	0.1222	mg/L	0.00257	2.11%
Se 196.026†	-4.7	-0.01186	mg/L	0.007590	-0.02371	mg/L	0.015179	64.02%
Si 288.158†	2288.9	1.649	mg/L	0.0176	3.298	mg/L	0.0353	1.07%
Sn 189.927†	524.2	0.1100	mg/L	0.00164	0.2201	mg/L	0.00329	1.49%
Sr 421.552†	314073.7	0.3393	mg/L	0.00023	0.6786	mg/L	0.00047	0.07%
Ti 334.903†	150977.3	5.790	mg/L	0.0189	11.58	mg/L	0.038	0.33%
Tl 190.801†	-80.1	0.01722	mg/L	0.001423	0.03444	mg/L	0.002845	8.26%
V 292.402†	57647.7	0.3783	mg/L	0.00107	0.7565	mg/L	0.00215	0.28%
Zn 206.200†	37910.9	9.151	mg/L	0.0465	18.30	mg/L	0.093	0.51%

Sequence No.: 17
Sample ID: WN88 MBSPK SWC

Autosampler Location: 313
Date Collected: 4/30/2013 9:50:04 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN88 MBSPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN88 MBSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2767190.4	98.80	%	0.381				0.39%
ScR 361.383	392543.2	100.1	%	0.54				0.53%
Ag 328.068†	128651.9	0.5551	mg/L	0.00223	1.110	mg/L	0.0045	0.40%
Al 308.215†	2429.1	2.141	mg/L	0.0078	4.282	mg/L	0.0156	0.36%
As 188.979†	2981.3	2.111	mg/L	0.0148	4.223	mg/L	0.0296	0.70%
B 249.677†	3.4	-0.00067	mg/L	0.001602	-0.00134	mg/L	0.003205	240.02%
Ba 233.527†	12720.4	2.116	mg/L	0.0234	4.231	mg/L	0.0469	1.11%
Be 313.042†	281110.0	0.4917	mg/L	0.00458	0.9834	mg/L	0.00915	0.93%
Ca 317.933†	101892.5	10.06	mg/L	0.031	20.12	mg/L	0.062	0.31%
Cd 228.802†	12375.9	0.5251	mg/L	0.00285	1.050	mg/L	0.0057	0.54%
Co 228.616†	16609.2	0.5186	mg/L	0.00200	1.037	mg/L	0.0040	0.39%
Cr 267.716†	4538.9	0.5384	mg/L	0.00332	1.077	mg/L	0.0066	0.62%
Cu 324.752†	134914.5	0.5203	mg/L	0.00168	1.041	mg/L	0.0034	0.32%
Fe 273.955†	2451.7	2.115	mg/L	0.0089	4.230	mg/L	0.0177	0.42%
K 766.490†	21154.7	10.28	mg/L	0.032	20.57	mg/L	0.063	0.31%
Mg 279.077†	9997.0	10.64	mg/L	0.044	21.28	mg/L	0.088	0.41%
Mn 257.610†	24676.5	0.4959	mg/L	0.00053	0.9918	mg/L	0.00106	0.11%
Mo 202.031†	29.4	0.00141	mg/L	0.000343	0.00282	mg/L	0.000685	24.33%
Na 589.592†	123488.4	10.46	mg/L	0.029	20.93	mg/L	0.058	0.28%
Na 330.237†	343.8	10.79	mg/L	0.135	21.58	mg/L	0.270	1.25%
Ni 231.604†	1885.1	0.5258	mg/L	0.00251	1.052	mg/L	0.0050	0.48%
Pb 220.353†	16615.2	2.052	mg/L	0.0181	4.103	mg/L	0.0362	0.88%
Sb 206.836†	14.2	-0.00014	mg/L	0.001853	-0.00027	mg/L	0.003706	>999.9%
Se 196.026†	3249.6	2.091	mg/L	0.0112	4.182	mg/L	0.0225	0.54%
Si 288.158†	21.2	0.01825	mg/L	0.001890	0.03651	mg/L	0.003780	10.35%
Sn 189.927†	-23.4	-0.00377	mg/L	0.000344	-0.00753	mg/L	0.000688	9.13%
Sr 421.552†	469518.4	0.5072	mg/L	0.00116	1.014	mg/L	0.0023	0.23%
Ti 334.903†	94.5	0.00293	mg/L	0.000424	0.00585	mg/L	0.000848	14.50%
Tl 190.801†	3864.9	2.121	mg/L	0.0094	4.241	mg/L	0.0187	0.44%
V 292.402†	74502.0	0.5242	mg/L	0.00237	1.048	mg/L	0.0047	0.45%
Zn 206.200†	2112.2	0.5100	mg/L	0.00250	1.020	mg/L	0.0050	0.49%

Sequence No.: 18
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 4/30/2013 9:54:05 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
A11	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	2753834.0	98.32	%	0.441				0.45%
ScR 361.383	386862.3	98.62	%	0.508				0.51%
Ag 328.068†	250982.3	1.083	mg/L	0.0116	1.083	mg/L	0.0116	1.07%
Al 308.215†	2418.6	2.104	mg/L	0.0103	2.104	mg/L	0.0103	0.49%
As 188.979†	2857.2	2.056	mg/L	0.0139	2.056	mg/L	0.0139	0.68%
B 249.677†	6440.1	1.035	mg/L	0.0055	1.035	mg/L	0.0055	0.53%
Ba 233.527†	6472.2	1.076	mg/L	0.0087	1.076	mg/L	0.0087	0.81%
Be 313.042†	572016.3	1.001	mg/L	0.0041	1.001	mg/L	0.0041	0.41%
Ca 317.933†	21358.3	2.109	mg/L	0.0117	2.109	mg/L	0.0117	0.56%
Cd 228.802†	24747.1	1.062	mg/L	0.0056	1.062	mg/L	0.0056	0.52%
Co 228.616†	33709.2	1.051	mg/L	0.0039	1.051	mg/L	0.0039	0.37%
Cr 267.716†	9054.3	1.076	mg/L	0.0065	1.076	mg/L	0.0065	0.61%
Cu 324.752†	274843.8	1.059	mg/L	0.0111	1.059	mg/L	0.0111	1.05%
Fe 273.955†	2423.7	2.088	mg/L	0.0104	2.088	mg/L	0.0104	0.50%
K 766.490†	42411.3	20.62	mg/L	0.109	20.62	mg/L	0.109	0.53%
Mg 279.077†	1944.0	2.076	mg/L	0.0141	2.076	mg/L	0.0141	0.68%
Mn 257.610†	49092.3	0.9863	mg/L	0.00620	0.9863	mg/L	0.00620	0.63%
Mo 202.031†	19286.8	1.019	mg/L	0.0042	1.019	mg/L	0.0042	0.41%
Na 589.592†	620988.2	52.62	mg/L	0.430	52.62	mg/L	0.430	0.82%
Na 330.237†	1684.5	53.60	mg/L	0.429	53.60	mg/L	0.429	0.80%
Ni 231.604†	3758.5	1.050	mg/L	0.0059	1.050	mg/L	0.0059	0.57%
Pb 220.353†	16613.0	2.052	mg/L	0.0088	2.052	mg/L	0.0088	0.43%
Sb 206.836†	5649.5	2.095	mg/L	0.0124	2.095	mg/L	0.0124	0.59%
Se 196.026†	3147.7	2.025	mg/L	0.0118	2.025	mg/L	0.0118	0.58%
Si 288.158†	2828.3	2.030	mg/L	0.0130	2.030	mg/L	0.0130	0.64%
Sn 189.927†	5017.4	0.9906	mg/L	0.00510	0.9906	mg/L	0.00510	0.52%
Sr 421.552†	945425.8	1.021	mg/L	0.0052	1.021	mg/L	0.0052	0.51%
Ti 334.903†	26579.6	1.019	mg/L	0.0055	1.019	mg/L	0.0055	0.54%
Tl 190.801†	3902.4	2.138	mg/L	0.0094	2.138	mg/L	0.0094	0.44%
V 292.402†	146948.6	1.034	mg/L	0.0107	1.034	mg/L	0.0107	1.04%
Zn 206.200†	4264.1	1.030	mg/L	0.0061	1.030	mg/L	0.0061	0.59%

Sequence No.: 19
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 4/30/2013 9:58:09 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.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2792873.9	99.72	%	0.618				0.62%
ScR 361.383	386723.5	98.59	%	1.806				1.83%
Ag 328.068†	11.5	0.00005	mg/L	0.000126	0.00005	mg/L	0.000126	253.45%
Al 308.215†	0.1	0.00004	mg/L	0.005036	0.00004	mg/L	0.005036	>999.9%
As 188.979†	1.3	0.00097	mg/L	0.001959	0.00097	mg/L	0.001959	201.85%
B 249.677†	6.8	0.00109	mg/L	0.000630	0.00109	mg/L	0.000630	57.71%
Ba 233.527†	-0.2	-0.00004	mg/L	0.000621	-0.00004	mg/L	0.000621	>999.9%
Be 313.042†	37.8	0.00007	mg/L	0.000042	0.00007	mg/L	0.000042	63.32%
Ca 317.933†	5.4	0.00053	mg/L	0.001204	0.00053	mg/L	0.001204	225.87%
Cd 228.802†	3.3	0.00014	mg/L	0.000088	0.00014	mg/L	0.000088	64.65%
Co 228.616†	2.4	0.00007	mg/L	0.000155	0.00007	mg/L	0.000155	208.26%
Cr 267.716†	8.9	0.00106	mg/L	0.000517	0.00106	mg/L	0.000517	48.86%
Cu 324.752†	156.9	0.00060	mg/L	0.000081	0.00060	mg/L	0.000081	13.42%
Fe 273.955†	-0.9	-0.00080	mg/L	0.000850	-0.00080	mg/L	0.000850	105.89%
K 766.490†	41.9	0.02036	mg/L	0.002380	0.02036	mg/L	0.002380	11.69%
Mg 279.077†	6.8	0.00720	mg/L	0.003323	0.00720	mg/L	0.003323	46.15%
Mn 257.610†	4.0	0.00008	mg/L	0.000100	0.00008	mg/L	0.000100	123.10%
Mo 202.031†	7.9	0.00042	mg/L	0.000255	0.00042	mg/L	0.000255	61.32%
Na 589.592†	41.1	0.00348	mg/L	0.003747	0.00348	mg/L	0.003747	107.74%
Na 330.237†	0.8	0.02604	mg/L	0.449474	0.02604	mg/L	0.449474	>999.9%
Ni 231.604†	-0.4	-0.00011	mg/L	0.000059	-0.00011	mg/L	0.000059	51.64%
Pb 220.353†	7.5	0.00093	mg/L	0.000337	0.00093	mg/L	0.000337	36.35%
Sb 206.836†	7.5	0.00277	mg/L	0.002558	0.00277	mg/L	0.002558	92.25%
Se 196.026†	6.3	0.00406	mg/L	0.003954	0.00406	mg/L	0.003954	97.27%
Si 288.158†	5.6	0.00401	mg/L	0.002185	0.00401	mg/L	0.002185	54.46%
Sn 189.927†	0.6	0.00012	mg/L	0.000460	0.00012	mg/L	0.000460	370.91%
Sr 421.552†	17.9	0.00002	mg/L	0.000015	0.00002	mg/L	0.000015	76.34%
Ti 334.903†	13.7	0.00052	mg/L	0.001075	0.00052	mg/L	0.001075	205.29%
Tl 190.801†	2.6	0.00142	mg/L	0.000904	0.00142	mg/L	0.000904	63.59%
V 292.402†	14.8	0.00011	mg/L	0.000107	0.00011	mg/L	0.000107	99.09%
Zn 206.200†	0.2	0.00005	mg/L	0.000183	0.00005	mg/L	0.000183	395.88%

Sequence No.: 20
Sample ID: WN57 MB TWC

Autosampler Location: 314
Date Collected: 4/30/2013 10:02:25 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN57 MB TWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WN57 MB TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2830108.0	101.0	%	0.55				0.54%
ScR 361.383	397243.4	101.3	%	0.71				0.70%
Ag 328.068†	13.9	0.00006	mg/L	0.000139	0.00006	mg/L	0.000139	231.58%
Al 308.215†	-8.6	-0.00764	mg/L	0.002571	-0.00764	mg/L	0.002571	33.67%
As 188.979†	2.0	0.00142	mg/L	0.000744	0.00142	mg/L	0.000744	52.35%
B 249.677†	12.1	0.00195	mg/L	0.000677	0.00195	mg/L	0.000677	34.70%
Ba 233.527†	-2.8	-0.00046	mg/L	0.000747	-0.00046	mg/L	0.000747	161.70%
Be 313.042†	-30.4	-0.00005	mg/L	0.000040	-0.00005	mg/L	0.000040	76.12%
Ca 317.933†	53.9	0.00532	mg/L	0.000165	0.00532	mg/L	0.000165	3.10%
Cd 228.802†	-1.7	-0.00008	mg/L	0.000034	-0.00008	mg/L	0.000034	41.87%
Co 228.616†	-4.4	-0.00014	mg/L	0.000066	-0.00014	mg/L	0.000066	47.65%
Cr 267.716†	10.0	0.00119	mg/L	0.000304	0.00119	mg/L	0.000304	25.55%
Cu 324.752†	113.8	0.00044	mg/L	0.000112	0.00044	mg/L	0.000112	25.46%
Fe 273.955†	1.4	0.00123	mg/L	0.001320	0.00123	mg/L	0.001320	106.89%
K 766.490†	23.2	0.01130	mg/L	0.008274	0.01130	mg/L	0.008274	73.25%
Mg 279.077†	2.4	0.00250	mg/L	0.005946	0.00250	mg/L	0.005946	237.43%
Mn 257.610†	4.7	0.00009	mg/L	0.000106	0.00009	mg/L	0.000106	113.37%
Mo 202.031†	2.9	0.00015	mg/L	0.000140	0.00015	mg/L	0.000140	91.07%
Na 589.592†	-33.0	-0.00280	mg/L	0.002816	-0.00280	mg/L	0.002816	100.71%
Na 330.237†	0.7	0.02272	mg/L	0.361947	0.02272	mg/L	0.361947	>999.9%
Ni 231.604†	-0.1	-0.00004	mg/L	0.000639	-0.00004	mg/L	0.000639	>999.9%
Pb 220.353†	-1.7	-0.00021	mg/L	0.000878	-0.00021	mg/L	0.000878	415.65%
Sb 206.836†	1.3	0.00049	mg/L	0.000496	0.00049	mg/L	0.000496	102.24%
Se 196.026†	8.7	0.00559	mg/L	0.001586	0.00559	mg/L	0.001586	28.36%
Si 288.158†	87.7	0.06308	mg/L	0.003825	0.06308	mg/L	0.003825	6.06%
Sn 189.927†	0.5	0.00010	mg/L	0.000534	0.00010	mg/L	0.000534	517.56%
Sr 421.552†	-81.5	-0.00009	mg/L	0.000027	-0.00009	mg/L	0.000027	30.79%
Ti 334.903†	5.8	0.00022	mg/L	0.000669	0.00022	mg/L	0.000669	302.62%
Tl 190.801†	0.7	0.00038	mg/L	0.002073	0.00038	mg/L	0.002073	541.85%
V 292.402†	-14.8	-0.00010	mg/L	0.000019	-0.00010	mg/L	0.000019	19.54%
Zn 206.200†	-0.7	-0.00016	mg/L	0.000477	-0.00016	mg/L	0.000477	307.60%

Sequence No.: 21
Sample ID: WN88 E SWC

Autosampler Location: 330
Date Collected: 4/30/2013 10:06:42 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN88 E SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN88 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2808726.4	100.3	%	0.05				0.05%
ScR 361.383	401656.1	102.4	%	0.74				0.72%
Ag 328.068†	34.3	0.00032	mg/L	0.000063	0.00161	mg/L	0.000313	19.45%
Al 308.215†	38609.3	34.14	mg/L	0.142	170.7	mg/L	0.71	0.42%
As 188.979†	-48.3	0.04649	mg/L	0.002423	0.2325	mg/L	0.01212	5.21%
B 249.677†	11.9	0.00183	mg/L	0.000573	0.00914	mg/L	0.002867	31.37%
Ba 233.527†	1938.3	0.2952	mg/L	0.00282	1.476	mg/L	0.0141	0.95%
Be 313.042†	440.2	0.00071	mg/L	0.000036	0.00353	mg/L	0.000182	5.16%
Ca 317.933†	189763.3	18.74	mg/L	0.046	93.70	mg/L	0.230	0.25%
Cd 228.802†	677.6	0.02964	mg/L	0.000165	0.1482	mg/L	0.00082	0.56%
Co 228.616†	1187.1	0.03285	mg/L	0.000159	0.1642	mg/L	0.00079	0.48%
Cr 267.716†	764.6	0.09509	mg/L	0.000957	0.4755	mg/L	0.00479	1.01%
Cu 324.752†	222234.3	0.8654	mg/L	0.00147	4.327	mg/L	0.0074	0.17%
Fe 273.955†	214032.8	184.9	mg/L	0.35	924.5	mg/L	1.75	0.19%
K 766.490†	4574.5	2.224	mg/L	0.0098	11.12	mg/L	0.049	0.44%
Mg 279.077†	10878.7	11.48	mg/L	0.100	57.39	mg/L	0.499	0.87%
Mn 257.610†	97078.6	1.950	mg/L	0.0034	9.750	mg/L	0.0172	0.18%
Mo 202.031†	117.3	0.00597	mg/L	0.000224	0.02984	mg/L	0.001118	3.75%
Na 589.592†	19859.5	1.683	mg/L	0.0111	8.413	mg/L	0.0557	0.66%
Na 330.237†	86.0	1.865	mg/L	0.0736	9.327	mg/L	0.3681	3.95%
Ni 231.604†	356.3	0.09960	mg/L	0.000176	0.4980	mg/L	0.00088	0.18%
Pb 220.353†	27107.9	3.345	mg/L	0.0149	16.72	mg/L	0.075	0.45%
Sb 206.836†	117.4	0.04535	mg/L	0.000976	0.2267	mg/L	0.00488	2.15%
Se 196.026†	-6.1	-0.00797	mg/L	0.004089	-0.03986	mg/L	0.020443	51.28%
Si 288.158†	934.0	0.6727	mg/L	0.01126	3.363	mg/L	0.0563	1.67%
Sn 189.927†	366.4	0.07427	mg/L	0.000875	0.3714	mg/L	0.00437	1.18%
Sr 421.552†	115882.2	0.1252	mg/L	0.00062	0.6260	mg/L	0.00310	0.49%
Ti 334.903†	62115.2	2.383	mg/L	0.0096	11.91	mg/L	0.048	0.40%
Tl 190.801†	-35.5	0.00414	mg/L	0.001336	0.02072	mg/L	0.006678	32.23%
V 292.402†	23627.9	0.1556	mg/L	0.00046	0.7779	mg/L	0.00230	0.30%
Zn 206.200†	21430.5	5.173	mg/L	0.0422	25.86	mg/L	0.211	0.82%

Sequence No.: 22
Sample ID: WN88 F SWC

Autosampler Location: 331
Date Collected: 4/30/2013 10:10:43 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN88 F SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WN88 F SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2803861.5	100.1	%	0.16				0.16%
ScR 361.383	398687.7	101.6	%	0.63				0.62%
Ag 328.068†	40.3	0.00040	mg/L	0.000201	0.00198	mg/L	0.001003	50.68%
Al 308.215†	33168.9	29.33	mg/L	0.170	146.7	mg/L	0.85	0.58%
As 188.979†	-48.1	0.04270	mg/L	0.001683	0.2135	mg/L	0.00841	3.94%
B 249.677†	1.6	0.00018	mg/L	0.001441	0.00089	mg/L	0.007207	808.75%
Ba 233.527†	1532.3	0.2271	mg/L	0.00180	1.136	mg/L	0.0090	0.79%
Be 313.042†	395.5	0.00063	mg/L	0.000013	0.00315	mg/L	0.000064	2.02%
Ca 317.933†	267226.3	26.39	mg/L	0.127	131.9	mg/L	0.63	0.48%
Cd 228.802†	541.4	0.02372	mg/L	0.000397	0.1186	mg/L	0.00198	1.67%
Co 228.616†	1033.7	0.02823	mg/L	0.000169	0.1411	mg/L	0.00084	0.60%
Cr 267.716†	734.7	0.09160	mg/L	0.000795	0.4580	mg/L	0.00397	0.87%
Cu 324.752†	371800.0	1.442	mg/L	0.0095	7.211	mg/L	0.0475	0.66%
Fe 273.955†	218565.4	188.8	mg/L	0.96	944.0	mg/L	4.80	0.51%
K 766.490†	3978.3	1.934	mg/L	0.0103	9.670	mg/L	0.0517	0.53%
Mg 279.077†	10614.3	11.19	mg/L	0.063	55.96	mg/L	0.316	0.56%
Mn 257.610†	92204.5	1.852	mg/L	0.0088	9.259	mg/L	0.0441	0.48%
Mo 202.031†	152.0	0.00771	mg/L	0.000074	0.03857	mg/L	0.000372	0.97%
Na 589.592†	23400.5	1.983	mg/L	0.0173	9.914	mg/L	0.0865	0.87%
Na 330.237†	77.2	2.011	mg/L	0.3128	10.05	mg/L	1.564	15.56%
Ni 231.604†	300.5	0.08398	mg/L	0.001282	0.4199	mg/L	0.00641	1.53%
Pb 220.353†	13464.7	1.658	mg/L	0.0094	8.291	mg/L	0.0472	0.57%
Sb 206.836†	62.5	0.02466	mg/L	0.001800	0.1233	mg/L	0.00900	7.30%
Se 196.026†	6.8	0.00090	mg/L	0.004771	0.00452	mg/L	0.023854	528.03%
Si 288.158†	876.2	0.6313	mg/L	0.00527	3.157	mg/L	0.0264	0.84%
Sn 189.927†	196.0	0.04129	mg/L	0.000356	0.2065	mg/L	0.00178	0.86%
Sr 421.552†	124051.2	0.1340	mg/L	0.00056	0.6701	mg/L	0.00279	0.42%
Ti 334.903†	59661.9	2.288	mg/L	0.0096	11.44	mg/L	0.048	0.42%
Tl 190.801†	-27.3	0.00925	mg/L	0.005581	0.04624	mg/L	0.027904	60.34%
V 292.402†	22880.8	0.1502	mg/L	0.00040	0.7508	mg/L	0.00201	0.27%
Zn 206.200†	15149.7	3.657	mg/L	0.0159	18.28	mg/L	0.080	0.44%

Sequence No.: 23
Sample ID: WN88 G SWC

Autosampler Location: 315
Date Collected: 4/30/2013 10:14:45 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN88 G SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WN88 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2798834.8	99.93	%	0.408				0.41%
ScR 361.383	400546.3	102.1	%	0.47				0.46%
Ag 328.068†	110.3	0.00101	mg/L	0.000236	0.00202	mg/L	0.000472	23.34%
Al 308.215†	123753.7	109.4	mg/L	0.13	218.9	mg/L	0.25	0.12%
As 188.979†	-160.9	0.1117	mg/L	0.00024	0.2234	mg/L	0.00049	0.22%
B 249.677†	58.2	0.00918	mg/L	0.001138	0.01837	mg/L	0.002275	12.39%
Ba 233.527†	4712.8	0.7514	mg/L	0.00369	1.503	mg/L	0.0074	0.49%
Be 313.042†	1056.7	0.00169	mg/L	0.000010	0.00338	mg/L	0.000020	0.60%
Ca 317.933†	649299.7	64.12	mg/L	0.157	128.2	mg/L	0.31	0.24%
Cd 228.802†	268.9	0.01252	mg/L	0.000103	0.02504	mg/L	0.000206	0.82%
Co 228.616†	2505.9	0.06639	mg/L	0.000356	0.1328	mg/L	0.00071	0.54%
Cr 267.716†	1710.0	0.2050	mg/L	0.00018	0.4100	mg/L	0.00036	0.09%
Cu 324.752†	330992.0	1.285	mg/L	0.0088	2.571	mg/L	0.0176	0.69%
Fe 273.955†	255519.2	220.7	mg/L	0.27	441.5	mg/L	0.55	0.12%
K 766.490†	19471.2	9.466	mg/L	0.0476	18.93	mg/L	0.095	0.50%
Mg 279.077†	39754.5	42.19	mg/L	0.056	84.39	mg/L	0.113	0.13%
Mn 257.610†	151003.9	3.032	mg/L	0.0063	6.064	mg/L	0.0126	0.21%
Mo 202.031†	357.1	0.01810	mg/L	0.000645	0.03619	mg/L	0.001289	3.56%
Na 589.592†	64281.8	5.447	mg/L	0.0120	10.89	mg/L	0.024	0.22%
Na 330.237†	124.5	5.341	mg/L	0.0556	10.68	mg/L	0.111	1.04%
Ni 231.604†	1004.3	0.2806	mg/L	0.00054	0.5612	mg/L	0.00108	0.19%
Pb 220.353†	9076.4	1.137	mg/L	0.0041	2.274	mg/L	0.0081	0.36%
Sb 206.836†	13.7	0.00899	mg/L	0.000756	0.01798	mg/L	0.001513	8.41%
Se 196.026†	-3.6	-0.01514	mg/L	0.005779	-0.03028	mg/L	0.011558	38.17%
Si 288.158†	2407.8	1.737	mg/L	0.0046	3.474	mg/L	0.0091	0.26%
Sn 189.927†	95.4	0.02544	mg/L	0.001078	0.05088	mg/L	0.002156	4.24%
Sr 421.552†	423748.2	0.4578	mg/L	0.00039	0.9156	mg/L	0.00079	0.09%
Ti 334.903†	174468.8	6.692	mg/L	0.0035	13.38	mg/L	0.007	0.05%
Tl 190.801†	-18.8	0.01704	mg/L	0.000925	0.03408	mg/L	0.001849	5.43%
V 292.402†	53905.2	0.3641	mg/L	0.00278	0.7281	mg/L	0.00555	0.76%
Zn 206.200†	6809.8	1.644	mg/L	0.0075	3.288	mg/L	0.0150	0.46%

Sequence No.: 24
Sample ID: WN57 ADUP TWC

Autosampler Location: 316
Date Collected: 4/30/2013 10:18:48 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN57 ADUP TWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN57 ADUP TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2788340.3	99.55	%	0.155				0.16%
ScR 361.383	395710.0	100.9	%	0.63				0.63%
Ag 328.068†	-31.8	-0.00004	mg/L	0.000208	-0.00004	mg/L	0.000208	530.13%
Al 308.215†	22.2	0.01954	mg/L	0.003892	0.01954	mg/L	0.003892	19.92%
As 188.979†	17.7	0.01137	mg/L	0.001648	0.01137	mg/L	0.001648	14.50%
B 249.677†	855.2	0.1377	mg/L	0.00084	0.1377	mg/L	0.00084	0.61%
Ba 233.527†	42.7	0.00709	mg/L	0.000828	0.00709	mg/L	0.000828	11.67%
Be 313.042†	17.2	0.00003	mg/L	0.000003	0.00003	mg/L	0.000003	11.70%
Ca 317.933†	153402.9	15.15	mg/L	0.081	15.15	mg/L	0.081	0.53%
Cd 228.802†	5.4	0.00017	mg/L	0.000062	0.00017	mg/L	0.000062	36.63%
Co 228.616†	3.2	0.00009	mg/L	0.000180	0.00009	mg/L	0.000180	200.85%
Cr 267.716†	19.0	0.00153	mg/L	0.000582	0.00153	mg/L	0.000582	38.10%
Cu 324.752†	4200.5	0.01617	mg/L	0.000164	0.01617	mg/L	0.000164	1.02%
Fe 273.955†	123.9	0.1070	mg/L	0.00424	0.1070	mg/L	0.00424	3.96%
K 766.490†	20412.9	9.924	mg/L	0.0502	9.924	mg/L	0.0502	0.51%
Mg 279.077†	5385.1	5.731	mg/L	0.0433	5.731	mg/L	0.0433	0.76%
Mn 257.610†	2633.4	0.05283	mg/L	0.000501	0.05283	mg/L	0.000501	0.95%
Mo 202.031†	51.4	0.00254	mg/L	0.000061	0.00254	mg/L	0.000061	2.41%
Na 589.592†	427151.5	36.19	mg/L	0.175	36.19	mg/L	0.175	0.48%
Na 330.237†	1170.2	37.24	mg/L	0.228	37.24	mg/L	0.228	0.61%
Ni 231.604†	9.6	0.00268	mg/L	0.000328	0.00268	mg/L	0.000328	12.22%
Pb 220.353†	3.1	0.00036	mg/L	0.000184	0.00036	mg/L	0.000184	50.53%
Sb 206.836†	1.5	0.00049	mg/L	0.001103	0.00049	mg/L	0.001103	227.24%
Se 196.026†	6.0	0.00385	mg/L	0.002578	0.00385	mg/L	0.002578	67.04%
Si 288.158†	7195.8	5.177	mg/L	0.0818	5.177	mg/L	0.0818	1.58%
Sn 189.927†	-26.4	-0.00393	mg/L	0.000122	-0.00393	mg/L	0.000122	3.11%
Sr 421.552†	62699.3	0.06774	mg/L	0.000044	0.06774	mg/L	0.000044	0.06%
Ti 334.903†	155.4	0.00506	mg/L	0.000890	0.00506	mg/L	0.000890	17.59%
Tl 190.801†	10.6	0.00584	mg/L	0.001995	0.00584	mg/L	0.001995	34.17%
V 292.402†	92.4	0.00066	mg/L	0.000046	0.00066	mg/L	0.000046	7.04%
Zn 206.200†	199.3	0.04899	mg/L	0.000410	0.04899	mg/L	0.000410	0.84%

Sequence No.: 25
Sample ID: WN57 A TWC

Autosampler Location: 317
Date Collected: 4/30/2013 10:23:04 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN57 A TWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WN57 A TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2812934.9	100.4	%	0.73				0.72%
ScR 361.383	395994.2	101.0	%	0.31				0.31%
Ag 328.068†	-38.3	-0.00007	mg/L	0.000147	-0.00007	mg/L	0.000147	215.12%
Al 308.215†	25.3	0.02236	mg/L	0.006364	0.02236	mg/L	0.006364	28.46%
As 188.979†	22.3	0.01453	mg/L	0.002946	0.01453	mg/L	0.002946	20.28%
B 249.677†	844.6	0.1359	mg/L	0.00037	0.1359	mg/L	0.00037	0.27%
Ba 233.527†	43.1	0.00716	mg/L	0.000499	0.00716	mg/L	0.000499	6.97%
Be 313.042†	17.0	0.00003	mg/L	0.000025	0.00003	mg/L	0.000025	83.88%
Ca 317.933†	151951.8	15.01	mg/L	0.069	15.01	mg/L	0.069	0.46%
Cd 228.802†	4.5	0.00011	mg/L	0.000250	0.00011	mg/L	0.000250	225.71%
Co 228.616†	4.6	0.00014	mg/L	0.000165	0.00014	mg/L	0.000165	120.99%
Cr 267.716†	18.1	0.00143	mg/L	0.001130	0.00143	mg/L	0.001130	79.15%
Cu 324.752†	4090.9	0.01575	mg/L	0.000169	0.01575	mg/L	0.000169	1.07%
Fe 273.955†	120.1	0.1038	mg/L	0.00019	0.1038	mg/L	0.00019	0.18%
K 766.490†	20229.7	9.835	mg/L	0.0365	9.835	mg/L	0.0365	0.37%
Mg 279.077†	5327.4	5.670	mg/L	0.0168	5.670	mg/L	0.0168	0.30%
Mn 257.610†	2599.8	0.05216	mg/L	0.000146	0.05216	mg/L	0.000146	0.28%
Mo 202.031†	44.7	0.00218	mg/L	0.000259	0.00218	mg/L	0.000259	11.87%
Na 589.592†	424029.7	35.93	mg/L	0.111	35.93	mg/L	0.111	0.31%
Na 330.237†	1154.6	36.74	mg/L	0.115	36.74	mg/L	0.115	0.31%
Ni 231.604†	9.4	0.00261	mg/L	0.001086	0.00261	mg/L	0.001086	41.55%
Pb 220.353†	6.4	0.00077	mg/L	0.001112	0.00077	mg/L	0.001112	143.91%
Sb 206.836†	2.6	0.00089	mg/L	0.001629	0.00089	mg/L	0.001629	182.25%
Se 196.026†	4.0	0.00259	mg/L	0.001893	0.00259	mg/L	0.001893	73.21%
Si 288.158†	7304.8	5.256	mg/L	0.0361	5.256	mg/L	0.0361	0.69%
Sn 189.927†	-25.2	-0.00372	mg/L	0.000682	-0.00372	mg/L	0.000682	18.34%
Sr 421.552†	61990.6	0.06697	mg/L	0.000275	0.06697	mg/L	0.000275	0.41%
Ti 334.903†	97.5	0.00285	mg/L	0.000327	0.00285	mg/L	0.000327	11.48%
Tl 190.801†	9.6	0.00529	mg/L	0.002890	0.00529	mg/L	0.002890	54.62%
V 292.402†	68.4	0.00049	mg/L	0.000072	0.00049	mg/L	0.000072	14.60%
Zn 206.200†	196.4	0.04829	mg/L	0.000639	0.04829	mg/L	0.000639	1.32%

Sequence No.: 26
Sample ID: WN57 ASPK TWC

Autosampler Location: 318
Date Collected: 4/30/2013 10:27:20 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN57 ASPK TWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN57 ASPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2784695.4	99.42	%	0.527				0.53%
ScR 361.383	393507.7	100.3	%	0.48				0.48%
Ag 328.068†	127140.5	0.5487	mg/L	0.00312	0.5487	mg/L	0.00312	0.57%
Al 308.215†	2412.3	2.126	mg/L	0.0186	2.126	mg/L	0.0186	0.88%
As 188.979†	3026.0	2.142	mg/L	0.0152	2.142	mg/L	0.0152	0.71%
B 249.677†	824.1	0.1315	mg/L	0.00008	0.1315	mg/L	0.00008	0.06%
Ba 233.527†	13162.2	2.189	mg/L	0.0165	2.189	mg/L	0.0165	0.75%
Be 313.042†	275808.0	0.4824	mg/L	0.00403	0.4824	mg/L	0.00403	0.84%
Ca 317.933†	251083.6	24.80	mg/L	0.072	24.80	mg/L	0.072	0.29%
Cd 228.802†	12252.6	0.5195	mg/L	0.00307	0.5195	mg/L	0.00307	0.59%
Co 228.616†	16445.1	0.5134	mg/L	0.00312	0.5134	mg/L	0.00312	0.61%
Cr 267.716†	4467.2	0.5292	mg/L	0.00499	0.5292	mg/L	0.00499	0.94%
Cu 324.752†	138648.9	0.5347	mg/L	0.00599	0.5347	mg/L	0.00599	1.12%
Fe 273.955†	2453.4	2.117	mg/L	0.0220	2.117	mg/L	0.0220	1.04%
K 766.490†	41376.2	20.12	mg/L	0.060	20.12	mg/L	0.060	0.30%
Mg 279.077†	15167.9	16.15	mg/L	0.144	16.15	mg/L	0.144	0.89%
Mn 257.610†	27736.4	0.5573	mg/L	0.00526	0.5573	mg/L	0.00526	0.94%
Mo 202.031†	64.4	0.00308	mg/L	0.000158	0.00308	mg/L	0.000158	5.13%
Na 589.592†	547038.0	46.35	mg/L	0.240	46.35	mg/L	0.240	0.52%
Na 330.237†	1469.8	46.62	mg/L	0.662	46.62	mg/L	0.662	1.42%
Ni 231.604†	1869.5	0.5223	mg/L	0.00670	0.5223	mg/L	0.00670	1.28%
Pb 220.353†	16292.4	2.012	mg/L	0.0190	2.012	mg/L	0.0190	0.94%
Sb 206.836†	5352.6	1.982	mg/L	0.0105	1.982	mg/L	0.0105	0.53%
Se 196.026†	3224.4	2.075	mg/L	0.0112	2.075	mg/L	0.0112	0.54%
Si 288.158†	3391.3	2.443	mg/L	0.0321	2.443	mg/L	0.0321	1.31%
Sn 189.927†	-44.7	-0.00571	mg/L	0.000276	-0.00571	mg/L	0.000276	4.83%
Sr 421.552†	529086.4	0.5716	mg/L	0.00105	0.5716	mg/L	0.00105	0.18%
Ti 334.903†	125.9	0.00326	mg/L	0.000189	0.00326	mg/L	0.000189	5.81%
Tl 190.801†	3858.6	2.117	mg/L	0.0144	2.117	mg/L	0.0144	0.68%
V 292.402†	74038.0	0.5209	mg/L	0.00212	0.5209	mg/L	0.00212	0.41%
Zn 206.200†	2293.2	0.5541	mg/L	0.00631	0.5541	mg/L	0.00631	1.14%

Sequence No.: 27
Sample ID: WN57 MBSPK TWC

Autosampler Location: 319
Date Collected: 4/30/2013 10:31:22 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN57 MBSPK TWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN57 MBSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2917883.1	104.2	%	0.28				0.27%
ScR 361.383	409207.4	104.3	%	0.57				0.55%
Ag 328.068†	122745.1	0.5297	mg/L	0.00316	0.5297	mg/L	0.00316	0.60%
Al 308.215†	2318.3	2.043	mg/L	0.0044	2.043	mg/L	0.0044	0.21%
As 188.979†	2858.4	2.024	mg/L	0.0098	2.024	mg/L	0.0098	0.48%
B 249.677†	9.0	0.00030	mg/L	0.000317	0.00030	mg/L	0.000317	105.80%
Ba 233.527†	12391.5	2.061	mg/L	0.0052	2.061	mg/L	0.0052	0.25%
Be 313.042†	266823.6	0.4667	mg/L	0.00211	0.4667	mg/L	0.00211	0.45%
Ca 317.933†	97480.9	9.627	mg/L	0.0479	9.627	mg/L	0.0479	0.50%
Cd 228.802†	11664.4	0.4947	mg/L	0.00395	0.4947	mg/L	0.00395	0.80%
Co 228.616†	15792.3	0.4930	mg/L	0.00050	0.4930	mg/L	0.00050	0.10%
Cr 267.716†	4355.6	0.5167	mg/L	0.00398	0.5167	mg/L	0.00398	0.77%
Cu 324.752†	127123.1	0.4903	mg/L	0.00348	0.4903	mg/L	0.00348	0.71%
Fe 273.955†	2278.4	1.965	mg/L	0.0182	1.965	mg/L	0.0182	0.93%
K 766.490†	20178.3	9.810	mg/L	0.0588	9.810	mg/L	0.0588	0.60%
Mg 279.077†	9614.4	10.23	mg/L	0.068	10.23	mg/L	0.068	0.66%
Mn 257.610†	23229.7	0.4669	mg/L	0.00530	0.4669	mg/L	0.00530	1.14%
Mo 202.031†	24.8	0.00117	mg/L	0.000131	0.00117	mg/L	0.000131	11.18%
Na 589.592†	118305.4	10.02	mg/L	0.068	10.02	mg/L	0.068	0.68%
Na 330.237†	327.9	10.29	mg/L	0.115	10.29	mg/L	0.115	1.12%
Ni 231.604†	1816.7	0.5076	mg/L	0.00304	0.5076	mg/L	0.00304	0.60%
Pb 220.353†	15823.0	1.954	mg/L	0.0099	1.954	mg/L	0.0099	0.51%
Sb 206.836†	5444.4	2.017	mg/L	0.0043	2.017	mg/L	0.0043	0.21%
Se 196.026†	3114.0	2.004	mg/L	0.0005	2.004	mg/L	0.0005	0.02%
Si 288.158†	91.8	0.06891	mg/L	0.001302	0.06891	mg/L	0.001302	1.89%
Sn 189.927†	-24.0	-0.00288	mg/L	0.000549	-0.00288	mg/L	0.000549	19.02%
Sr 421.552†	446960.1	0.4829	mg/L	0.00308	0.4829	mg/L	0.00308	0.64%
Ti 334.903†	39.3	0.00084	mg/L	0.000356	0.00084	mg/L	0.000356	42.48%
Tl 190.801†	3731.7	2.048	mg/L	0.0061	2.048	mg/L	0.0061	0.30%
V 292.402†	71180.0	0.5009	mg/L	0.00292	0.5009	mg/L	0.00292	0.58%
Zn 206.200†	2041.0	0.4928	mg/L	0.00310	0.4928	mg/L	0.00310	0.63%

Sequence No.: 28
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 4/30/2013 10:35:23 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 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	2792911.7	99.72	%	0.521				0.52%
ScR 361.383	390143.2	99.46	%	0.914				0.92%
Ag 328.068†	252165.4	1.088	mg/L	0.0129	1.088	mg/L	0.0129	1.18%
Al 308.215†	2413.0	2.099	mg/L	0.0225	2.099	mg/L	0.0225	1.07%
As 188.979†	2852.2	2.052	mg/L	0.0129	2.052	mg/L	0.0129	0.63%
B 249.677†	6459.6	1.039	mg/L	0.0116	1.039	mg/L	0.0116	1.12%
Ba 233.527†	6617.6	1.100	mg/L	0.0098	1.100	mg/L	0.0098	0.89%
Be 313.042†	566997.6	0.9917	mg/L	0.01162	0.9917	mg/L	0.01162	1.17%
Ca 317.933†	21481.9	2.121	mg/L	0.0230	2.121	mg/L	0.0230	1.08%
Cd 228.802†	24461.0	1.050	mg/L	0.0030	1.050	mg/L	0.0030	0.28%
Co 228.616†	33771.2	1.053	mg/L	0.0065	1.053	mg/L	0.0065	0.62%
Cr 267.716†	9092.0	1.080	mg/L	0.0111	1.080	mg/L	0.0111	1.03%
Cu 324.752†	272714.8	1.051	mg/L	0.0097	1.051	mg/L	0.0097	0.92%
Fe 273.955†	2381.6	2.052	mg/L	0.0218	2.052	mg/L	0.0218	1.06%
K 766.490†	42296.4	20.56	mg/L	0.152	20.56	mg/L	0.152	0.74%
Mg 279.077†	1956.1	2.089	mg/L	0.0241	2.089	mg/L	0.0241	1.15%
Mn 257.610†	48526.9	0.9750	mg/L	0.00648	0.9750	mg/L	0.00648	0.66%
Mo 202.031†	19151.8	1.012	mg/L	0.0047	1.012	mg/L	0.0047	0.47%
Na 589.592†	621616.3	52.67	mg/L	0.537	52.67	mg/L	0.537	1.02%
Na 330.237†	1673.5	53.24	mg/L	0.711	53.24	mg/L	0.711	1.34%
Ni 231.604†	3818.6	1.067	mg/L	0.0091	1.067	mg/L	0.0091	0.85%
Pb 220.353†	16578.6	2.048	mg/L	0.0108	2.048	mg/L	0.0108	0.53%
Sb 206.836†	5652.4	2.096	mg/L	0.0113	2.096	mg/L	0.0113	0.54%
Se 196.026†	3139.1	2.020	mg/L	0.0097	2.020	mg/L	0.0097	0.48%
Si 288.158†	2824.3	2.027	mg/L	0.0290	2.027	mg/L	0.0290	1.43%
Sn 189.927†	4965.4	0.9803	mg/L	0.00630	0.9803	mg/L	0.00630	0.64%
Sr 421.552†	941770.1	1.017	mg/L	0.0103	1.017	mg/L	0.0103	1.01%
Ti 334.903†	26504.2	1.016	mg/L	0.0102	1.016	mg/L	0.0102	1.00%
Tl 190.801†	3911.0	2.142	mg/L	0.0148	2.142	mg/L	0.0148	0.69%
V 292.402†	147633.2	1.039	mg/L	0.0113	1.039	mg/L	0.0113	1.08%
Zn 206.200†	4322.3	1.044	mg/L	0.0086	1.044	mg/L	0.0086	0.83%

Sequence No.: 29
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 4/30/2013 10:39:27 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 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	2822643.9	100.8	%	0.84				0.84%
ScR 361.383	401950.7	102.5	%	0.59				0.57%
Ag 328.068†	18.7	0.00008	mg/L	0.000040	0.00008	mg/L	0.000040	49.45%
Al 308.215†	-5.4	-0.00476	mg/L	0.002471	-0.00476	mg/L	0.002471	51.90%
As 188.979†	-0.1	-0.00006	mg/L	0.000958	-0.00006	mg/L	0.000958	>999.9%
B 249.677†	13.4	0.00216	mg/L	0.001558	0.00216	mg/L	0.001558	71.98%
Ba 233.527†	-3.3	-0.00055	mg/L	0.000615	-0.00055	mg/L	0.000615	112.00%
Be 313.042†	45.7	0.00008	mg/L	0.000009	0.00008	mg/L	0.000009	11.42%
Ca 317.933†	11.8	0.00117	mg/L	0.000643	0.00117	mg/L	0.000643	54.97%
Cd 228.802†	3.5	0.00015	mg/L	0.000152	0.00015	mg/L	0.000152	98.49%
Co 228.616†	1.2	0.00004	mg/L	0.000119	0.00004	mg/L	0.000119	310.86%
Cr 267.716†	6.0	0.00072	mg/L	0.000604	0.00072	mg/L	0.000604	84.31%
Cu 324.752†	135.7	0.00052	mg/L	0.000167	0.00052	mg/L	0.000167	32.00%
Fe 273.955†	-0.2	-0.00018	mg/L	0.002071	-0.00018	mg/L	0.002071	>999.9%
K 766.490†	31.7	0.01541	mg/L	0.007323	0.01541	mg/L	0.007323	47.51%
Mg 279.077†	5.0	0.00533	mg/L	0.005047	0.00533	mg/L	0.005047	94.71%
Mn 257.610†	3.2	0.00006	mg/L	0.000091	0.00006	mg/L	0.000091	141.48%
Mo 202.031†	9.6	0.00051	mg/L	0.000184	0.00051	mg/L	0.000184	36.33%
Na 589.592†	9.4	0.00079	mg/L	0.004609	0.00079	mg/L	0.004609	580.92%
Na 330.237†	8.8	0.2788	mg/L	0.25443	0.2788	mg/L	0.25443	91.25%
Ni 231.604†	3.1	0.00086	mg/L	0.000430	0.00086	mg/L	0.000430	50.13%
Pb 220.353†	5.1	0.00063	mg/L	0.000386	0.00063	mg/L	0.000386	61.53%
Sb 206.836†	7.4	0.00275	mg/L	0.001549	0.00275	mg/L	0.001549	56.33%
Se 196.026†	7.7	0.00494	mg/L	0.002268	0.00494	mg/L	0.002268	45.91%
Si 288.158†	1.0	0.00074	mg/L	0.001968	0.00074	mg/L	0.001968	267.29%
Sn 189.927†	4.5	0.00088	mg/L	0.000533	0.00088	mg/L	0.000533	60.35%
Sr 421.552†	11.9	0.00001	mg/L	0.000020	0.00001	mg/L	0.000020	157.97%
Ti 334.903†	6.1	0.00023	mg/L	0.000770	0.00023	mg/L	0.000770	331.34%
Tl 190.801†	1.9	0.00102	mg/L	0.002216	0.00102	mg/L	0.002216	216.78%
V 292.402†	10.4	0.00008	mg/L	0.000077	0.00008	mg/L	0.000077	100.85%
Zn 206.200†	1.9	0.00046	mg/L	0.000228	0.00046	mg/L	0.000228	50.19%

Sequence No.: 30
Sample ID: WN51 MB2 DMN

Autosampler Location: 320
Date Collected: 4/30/2013 10:43:43 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN51 MB2 DMN

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WN51 MB2 DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2917492.3	104.2	%	0.29				0.28%
ScR 361.383	410776.6	104.7	%	1.16				1.10%
Ag 328.068†	-23.5	-0.00010	mg/L	0.000147	-0.00010	mg/L	0.000147	147.30%
Al 308.215†	151.9	0.1343	mg/L	0.00840	0.1343	mg/L	0.00840	6.25%
As 188.979†	1.6	0.00109	mg/L	0.001229	0.00109	mg/L	0.001229	112.33%
B 249.677†	161.8	0.02605	mg/L	0.000810	0.02605	mg/L	0.000810	3.11%
Ba 233.527†	2.5	0.00042	mg/L	0.000601	0.00042	mg/L	0.000601	144.89%
Be 313.042†	9.2	0.00002	mg/L	0.000024	0.00002	mg/L	0.000024	146.60%
Ca 317.933†	3202.4	0.3162	mg/L	0.00339	0.3162	mg/L	0.00339	1.07%
Cd 228.802†	-0.6	-0.00003	mg/L	0.000118	-0.00003	mg/L	0.000118	392.88%
Co 228.616†	4.2	0.00013	mg/L	0.000065	0.00013	mg/L	0.000065	49.35%
Cr 267.716†	7.0	0.00083	mg/L	0.000604	0.00083	mg/L	0.000604	72.87%
Cu 324.752†	39.7	0.00015	mg/L	0.000073	0.00015	mg/L	0.000073	47.89%
Fe 273.955†	5.4	0.00465	mg/L	0.001152	0.00465	mg/L	0.001152	24.77%
K 766.490†	47.4	0.02303	mg/L	0.005164	0.02303	mg/L	0.005164	22.43%
Mg 279.077†	4.0	0.00417	mg/L	0.006261	0.00417	mg/L	0.006261	150.10%
Mn 257.610†	7.2	0.00014	mg/L	0.000100	0.00014	mg/L	0.000100	69.57%
Mo 202.031†	-5.5	-0.00029	mg/L	0.000119	-0.00029	mg/L	0.000119	40.62%
Na 589.592†	35.8	0.00303	mg/L	0.003133	0.00303	mg/L	0.003133	103.42%
Na 330.237†	2.8	0.08856	mg/L	0.099607	0.08856	mg/L	0.099607	112.47%
Ni 231.604†	0.9	0.00026	mg/L	0.001140	0.00026	mg/L	0.001140	446.37%
Pb 220.353†	3.7	0.00050	mg/L	0.000195	0.00050	mg/L	0.000195	39.21%
Sb 206.836†	-4.6	-0.00172	mg/L	0.000187	-0.00172	mg/L	0.000187	10.90%
Se 196.026†	7.4	0.00476	mg/L	0.002490	0.00476	mg/L	0.002490	52.26%
Si 288.158†	5.7	0.00410	mg/L	0.007659	0.00410	mg/L	0.007659	186.91%
Sn 189.927†	-0.8	-0.00013	mg/L	0.000930	-0.00013	mg/L	0.000930	736.19%
Sr 421.552†	1480.2	0.00160	mg/L	0.000017	0.00160	mg/L	0.000017	1.08%
Ti 334.903†	14.2	0.00053	mg/L	0.000751	0.00053	mg/L	0.000751	143.01%
Tl 190.801†	2.0	0.00111	mg/L	0.000751	0.00111	mg/L	0.000751	67.97%
V 292.402†	-8.8	-0.00006	mg/L	0.000045	-0.00006	mg/L	0.000045	77.03%
Zn 206.200†	1.4	0.00033	mg/L	0.001044	0.00033	mg/L	0.001044	313.80%

Sequence No.: 31
Sample ID: WN51 MB3 DMN

Autosampler Location: 321
Date Collected: 4/30/2013 10:48:00 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN51 MB3 DMN

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN51 MB3 DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2915989.4	104.1	%	0.62				0.59%
ScR 361.383	409878.4	104.5	%	0.89				0.85%
Ag 328.068†	-22.1	-0.00010	mg/L	0.000061	-0.00010	mg/L	0.000061	63.74%
Al 308.215†	7.3	0.00651	mg/L	0.006229	0.00651	mg/L	0.006229	95.67%
As 188.979†	-0.8	-0.00055	mg/L	0.000792	-0.00055	mg/L	0.000792	144.14%
B 249.677†	22.6	0.00363	mg/L	0.000244	0.00363	mg/L	0.000244	6.72%
Ba 233.527†	-0.4	-0.00006	mg/L	0.000433	-0.00006	mg/L	0.000433	737.20%
Be 313.042†	10.2	0.00002	mg/L	0.000021	0.00002	mg/L	0.000021	115.39%
Ca 317.933†	381.7	0.03770	mg/L	0.000543	0.03770	mg/L	0.000543	1.44%
Cd 228.802†	4.7	0.00021	mg/L	0.000196	0.00021	mg/L	0.000196	95.07%
Co 228.616†	2.2	0.00007	mg/L	0.000145	0.00007	mg/L	0.000145	211.56%
Cr 267.716†	4.6	0.00055	mg/L	0.000841	0.00055	mg/L	0.000841	152.39%
Cu 324.752†	32.8	0.00013	mg/L	0.000074	0.00013	mg/L	0.000074	58.68%
Fe 273.955†	1.3	0.00112	mg/L	0.002773	0.00112	mg/L	0.002773	247.31%
K 766.490†	5.9	0.00287	mg/L	0.014921	0.00287	mg/L	0.014921	519.78%
Mg 279.077†	3.5	0.00375	mg/L	0.004364	0.00375	mg/L	0.004364	116.22%
Mn 257.610†	-1.3	-0.00003	mg/L	0.000102	-0.00003	mg/L	0.000102	396.48%
Mo 202.031†	-8.7	-0.00046	mg/L	0.000201	-0.00046	mg/L	0.000201	43.84%
Na 589.592†	-67.3	-0.00570	mg/L	0.004114	-0.00570	mg/L	0.004114	72.13%
Na 330.237†	3.0	0.09575	mg/L	0.268980	0.09575	mg/L	0.268980	280.91%
Ni 231.604†	1.6	0.00045	mg/L	0.001112	0.00045	mg/L	0.001112	245.80%
Pb 220.353†	2.4	0.00030	mg/L	0.000574	0.00030	mg/L	0.000574	189.17%
Sb 206.836†	-4.1	-0.00151	mg/L	0.000729	-0.00151	mg/L	0.000729	48.10%
Se 196.026†	10.1	0.00648	mg/L	0.001767	0.00648	mg/L	0.001767	27.28%
Si 288.158†	3.4	0.00247	mg/L	0.003050	0.00247	mg/L	0.003050	123.47%
Sn 189.927†	3.3	0.00066	mg/L	0.000483	0.00066	mg/L	0.000483	73.04%
Sr 421.552†	120.1	0.00013	mg/L	0.000014	0.00013	mg/L	0.000014	10.45%
Ti 334.903†	2.7	0.00010	mg/L	0.001105	0.00010	mg/L	0.001105	>999.9%
Tl 190.801†	1.7	0.00096	mg/L	0.002632	0.00096	mg/L	0.002632	274.73%
V 292.402†	-21.2	-0.00015	mg/L	0.000033	-0.00015	mg/L	0.000033	22.62%
Zn 206.200†	3.5	0.00085	mg/L	0.000700	0.00085	mg/L	0.000700	82.75%

Sequence No.: 32
Sample ID: WN51 B DMN

Autosampler Location: 322
Date Collected: 4/30/2013 10:52:15 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN51 B DMN

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN51 B DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2930681.8	104.6	%	0.28				0.27%
ScR 361.383	412667.3	105.2	%	0.49				0.47%
Ag 328.068†	-35.3	-0.00011	mg/L	0.000070	-0.00011	mg/L	0.000070	66.75%
Al 308.215†	85.2	0.07538	mg/L	0.003384	0.07538	mg/L	0.003384	4.49%
As 188.979†	11.6	0.00761	mg/L	0.001185	0.00761	mg/L	0.001185	15.58%
B 249.677†	118.8	0.01913	mg/L	0.000630	0.01913	mg/L	0.000630	3.29%
Ba 233.527†	8.4	0.00139	mg/L	0.000245	0.00139	mg/L	0.000245	17.67%
Be 313.042†	-6.8	-0.00001	mg/L	0.000005	-0.00001	mg/L	0.000005	42.09%
Ca 317.933†	73620.6	7.270	mg/L	0.0710	7.270	mg/L	0.0710	0.98%
Cd 228.802†	1.9	0.00003	mg/L	0.000168	0.00003	mg/L	0.000168	490.65%
Co 228.616†	5.0	0.00015	mg/L	0.000063	0.00015	mg/L	0.000063	41.76%
Cr 267.716†	12.5	0.00132	mg/L	0.000592	0.00132	mg/L	0.000592	44.91%
Cu 324.752†	15668.9	0.06041	mg/L	0.000445	0.06041	mg/L	0.000445	0.74%
Fe 273.955†	16.3	0.01408	mg/L	0.000422	0.01408	mg/L	0.000422	2.99%
K 766.490†	472.1	0.2295	mg/L	0.02448	0.2295	mg/L	0.02448	10.67%
Mg 279.077†	788.7	0.8389	mg/L	0.00806	0.8389	mg/L	0.00806	0.96%
Mn 257.610†	29.7	0.00057	mg/L	0.000023	0.00057	mg/L	0.000023	4.01%
Mo 202.031†	12.9	0.00059	mg/L	0.000047	0.00059	mg/L	0.000047	7.93%
Na 589.592†	19933.7	1.689	mg/L	0.0287	1.689	mg/L	0.0287	1.70%
Na 330.237†	41.5	1.322	mg/L	0.1736	1.322	mg/L	0.1736	13.13%
Ni 231.604†	-0.3	-0.00008	mg/L	0.001206	-0.00008	mg/L	0.001206	>999.9%
Pb 220.353†	4.0	0.00044	mg/L	0.000473	0.00044	mg/L	0.000473	108.18%
Sb 206.836†	-2.7	-0.00104	mg/L	0.000859	-0.00104	mg/L	0.000859	82.30%
Se 196.026†	8.0	0.00511	mg/L	0.001930	0.00511	mg/L	0.001930	37.75%
Si 288.158†	4979.0	3.582	mg/L	0.0482	3.582	mg/L	0.0482	1.35%
Sn 189.927†	-15.0	-0.00235	mg/L	0.001071	-0.00235	mg/L	0.001071	45.62%
Sr 421.552†	21623.4	0.02336	mg/L	0.000240	0.02336	mg/L	0.000240	1.03%
Ti 334.903†	52.6	0.00158	mg/L	0.000297	0.00158	mg/L	0.000297	18.77%
Tl 190.801†	7.0	0.00382	mg/L	0.001407	0.00382	mg/L	0.001407	36.79%
V 292.402†	32.7	0.00023	mg/L	0.000043	0.00023	mg/L	0.000043	18.33%
Zn 206.200†	4.5	0.00168	mg/L	0.000399	0.00168	mg/L	0.000399	23.75%

Sequence No.: 33
Sample ID: WN51 C DMN

Autosampler Location: 323
Date Collected: 4/30/2013 10:56:30 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN51 C DMN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN51 C DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2925132.5	104.4	%	0.57				0.55%
ScR 361.383	412041.3	105.0	%	1.73				1.65%
Ag 328.068†	-31.8	-0.00009	mg/L	0.000238	-0.00009	mg/L	0.000238	262.16%
Al 308.215†	11.5	0.01016	mg/L	0.003120	0.01016	mg/L	0.003120	30.71%
As 188.979†	12.8	0.00844	mg/L	0.000427	0.00844	mg/L	0.000427	5.06%
B 249.677†	32.3	0.00520	mg/L	0.001129	0.00520	mg/L	0.001129	21.70%
Ba 233.527†	8.7	0.00144	mg/L	0.000441	0.00144	mg/L	0.000441	30.61%
Be 313.042†	-21.0	-0.00004	mg/L	0.000086	-0.00004	mg/L	0.000086	232.69%
Ca 317.933†	72706.7	7.180	mg/L	0.1204	7.180	mg/L	0.1204	1.68%
Cd 228.802†	3.7	0.00011	mg/L	0.000034	0.00011	mg/L	0.000034	30.66%
Co 228.616†	12.0	0.00037	mg/L	0.000061	0.00037	mg/L	0.000061	16.51%
Cr 267.716†	8.9	0.00089	mg/L	0.000584	0.00089	mg/L	0.000584	65.37%
Cu 324.752†	16362.4	0.06308	mg/L	0.000623	0.06308	mg/L	0.000623	0.99%
Fe 273.955†	13.3	0.01149	mg/L	0.002221	0.01149	mg/L	0.002221	19.34%
K 766.490†	466.4	0.2267	mg/L	0.02044	0.2267	mg/L	0.02044	9.01%
Mg 279.077†	800.6	0.8516	mg/L	0.01245	0.8516	mg/L	0.01245	1.46%
Mn 257.610†	22.4	0.00042	mg/L	0.000088	0.00042	mg/L	0.000088	20.89%
Mo 202.031†	13.4	0.00062	mg/L	0.000193	0.00062	mg/L	0.000193	30.90%
Na 589.592†	20243.9	1.715	mg/L	0.0377	1.715	mg/L	0.0377	2.20%
Na 330.237†	43.7	1.390	mg/L	0.0928	1.390	mg/L	0.0928	6.67%
Ni 231.604†	-1.0	-0.00028	mg/L	0.000397	-0.00028	mg/L	0.000397	142.80%
Pb 220.353†	2.4	0.00022	mg/L	0.000794	0.00022	mg/L	0.000794	358.78%
Sb 206.836†	-4.1	-0.00157	mg/L	0.000706	-0.00157	mg/L	0.000706	44.93%
Se 196.026†	7.9	0.00509	mg/L	0.001700	0.00509	mg/L	0.001700	33.39%
Si 288.158†	5044.3	3.629	mg/L	0.0772	3.629	mg/L	0.0772	2.13%
Sn 189.927†	-12.4	-0.00184	mg/L	0.001236	-0.00184	mg/L	0.001236	67.07%
Sr 421.552†	21083.3	0.02278	mg/L	0.000453	0.02278	mg/L	0.000453	1.99%
Ti 334.903†	34.7	0.00090	mg/L	0.000383	0.00090	mg/L	0.000383	42.36%
Tl 190.801†	8.3	0.00459	mg/L	0.001763	0.00459	mg/L	0.001763	38.42%
V 292.402†	32.5	0.00023	mg/L	0.000055	0.00023	mg/L	0.000055	23.80%
Zn 206.200†	6.7	0.00222	mg/L	0.000854	0.00222	mg/L	0.000854	38.40%

Sequence No.: 34
Sample ID: WN51 MB2SPK DMN

Autosampler Location: 324
Date Collected: 4/30/2013 11:00:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN51 MB2SPK DMN

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN51 MB2SPK DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2889541.7	103.2	%	0.53				0.51%
ScR 361.383	406122.8	103.5	%	0.82				0.80%
Ag 328.068†	127533.4	0.5503	mg/L	0.00263	0.5503	mg/L	0.00263	0.48%
Al 308.215†	2537.9	2.237	mg/L	0.0062	2.237	mg/L	0.0062	0.28%
As 188.979†	3052.8	2.162	mg/L	0.0092	2.162	mg/L	0.0092	0.42%
B 249.677†	174.1	0.02680	mg/L	0.001023	0.02680	mg/L	0.001023	3.82%
Ba 233.527†	13247.2	2.203	mg/L	0.0250	2.203	mg/L	0.0250	1.14%
Be 313.042†	280115.6	0.4900	mg/L	0.00179	0.4900	mg/L	0.00179	0.37%
Ca 317.933†	105885.1	10.46	mg/L	0.094	10.46	mg/L	0.094	0.90%
Cd 228.802†	12612.6	0.5350	mg/L	0.00336	0.5350	mg/L	0.00336	0.63%
Co 228.616†	16682.0	0.5208	mg/L	0.00166	0.5208	mg/L	0.00166	0.32%
Cr 267.716†	4467.4	0.5299	mg/L	0.00261	0.5299	mg/L	0.00261	0.49%
Cu 324.752†	131499.1	0.5071	mg/L	0.00238	0.5071	mg/L	0.00238	0.47%
Fe 273.955†	2342.0	2.020	mg/L	0.0153	2.020	mg/L	0.0153	0.76%
K 766.490†	21482.9	10.44	mg/L	0.081	10.44	mg/L	0.081	0.78%
Mg 279.077†	9978.3	10.62	mg/L	0.043	10.62	mg/L	0.043	0.41%
Mn 257.610†	25153.7	0.5055	mg/L	0.00226	0.5055	mg/L	0.00226	0.45%
Mo 202.031†	24.4	0.00114	mg/L	0.000158	0.00114	mg/L	0.000158	13.86%
Na 589.592†	124507.5	10.55	mg/L	0.112	10.55	mg/L	0.112	1.07%
Na 330.237†	332.7	10.43	mg/L	0.149	10.43	mg/L	0.149	1.42%
Ni 231.604†	1893.4	0.5281	mg/L	0.00156	0.5281	mg/L	0.00156	0.30%
Pb 220.353†	16728.9	2.066	mg/L	0.0164	2.066	mg/L	0.0164	0.79%
Sb 206.836†	10.2	-0.00155	mg/L	0.001237	-0.00155	mg/L	0.001237	79.59%
Se 196.026†	3532.6	2.273	mg/L	0.0134	2.273	mg/L	0.0134	0.59%
Si 288.158†	14354.6	10.33	mg/L	0.054	10.33	mg/L	0.054	0.52%
Sn 189.927†	-24.3	-0.00391	mg/L	0.000697	-0.00391	mg/L	0.000697	17.80%
Sr 421.552†	470677.0	0.5085	mg/L	0.00425	0.5085	mg/L	0.00425	0.84%
Ti 334.903†	48.1	0.00112	mg/L	0.000202	0.00112	mg/L	0.000202	18.03%
Tl 190.801†	3974.6	2.181	mg/L	0.0100	2.181	mg/L	0.0100	0.46%
V 292.402†	73710.9	0.5186	mg/L	0.00290	0.5186	mg/L	0.00290	0.56%
Zn 206.200†	2167.7	0.5251	mg/L	0.00202	0.5251	mg/L	0.00202	0.38%

Sequence No.: 35
Sample ID: WN51 MB3SPK DMN

Autosampler Location: 325
Date Collected: 4/30/2013 11:04:46 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN51 MB3SPK DMN

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN51 MB3SPK DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2897555.0	103.5	%	0.08				0.08%
ScR 361.383	405635.0	103.4	%	1.36				1.32%
Ag 328.068†	128391.4	0.5540	mg/L	0.00163	0.5540	mg/L	0.00163	0.29%
Al 308.215†	2456.6	2.165	mg/L	0.0246	2.165	mg/L	0.0246	1.14%
As 188.979†	3044.4	2.156	mg/L	0.0049	2.156	mg/L	0.0049	0.23%
B 249.677†	25.3	0.00286	mg/L	0.000665	0.00286	mg/L	0.000665	23.26%
Ba 233.527†	12912.8	2.148	mg/L	0.0279	2.148	mg/L	0.0279	1.30%
Be 313.042†	278931.3	0.4879	mg/L	0.00189	0.4879	mg/L	0.00189	0.39%
Ca 317.933†	102567.1	10.13	mg/L	0.062	10.13	mg/L	0.062	0.61%
Cd 228.802†	12675.8	0.5378	mg/L	0.00034	0.5378	mg/L	0.00034	0.06%
Co 228.616†	16666.3	0.5203	mg/L	0.00061	0.5203	mg/L	0.00061	0.12%
Cr 267.716†	4552.1	0.5400	mg/L	0.00687	0.5400	mg/L	0.00687	1.27%
Cu 324.752†	132185.8	0.5098	mg/L	0.00070	0.5098	mg/L	0.00070	0.14%
Fe 273.955†	2395.5	2.066	mg/L	0.0311	2.066	mg/L	0.0311	1.51%
K 766.490†	21432.4	10.42	mg/L	0.071	10.42	mg/L	0.071	0.68%
Mg 279.077†	10132.3	10.79	mg/L	0.127	10.79	mg/L	0.127	1.18%
Mn 257.610†	24416.6	0.4907	mg/L	0.00355	0.4907	mg/L	0.00355	0.72%
Mo 202.031†	23.6	0.00110	mg/L	0.000287	0.00110	mg/L	0.000287	26.05%
Na 589.592†	124247.4	10.53	mg/L	0.048	10.53	mg/L	0.048	0.46%
Na 330.237†	333.9	10.47	mg/L	0.284	10.47	mg/L	0.284	2.71%
Ni 231.604†	1916.3	0.5345	mg/L	0.00701	0.5345	mg/L	0.00701	1.31%
Pb 220.353†	16734.5	2.066	mg/L	0.0065	2.066	mg/L	0.0065	0.32%
Sb 206.836†	10.9	-0.00143	mg/L	0.000974	-0.00143	mg/L	0.000974	68.20%
Se 196.026†	3527.3	2.270	mg/L	0.0094	2.270	mg/L	0.0094	0.41%
Si 288.158†	14694.6	10.57	mg/L	0.137	10.57	mg/L	0.137	1.30%
Sn 189.927†	-23.2	-0.00372	mg/L	0.000211	-0.00372	mg/L	0.000211	5.68%
Sr 421.552†	468517.2	0.5062	mg/L	0.00306	0.5062	mg/L	0.00306	0.60%
Ti 334.903†	52.5	0.00131	mg/L	0.000176	0.00131	mg/L	0.000176	13.45%
Tl 190.801†	3979.9	2.184	mg/L	0.0032	2.184	mg/L	0.0032	0.15%
V 292.402†	74003.4	0.5207	mg/L	0.00081	0.5207	mg/L	0.00081	0.15%
Zn 206.200†	2183.6	0.5290	mg/L	0.00629	0.5290	mg/L	0.00629	1.19%

Sequence No.: 36
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 4/30/2013 11:08:47 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	2776860.8	99.14	%	0.312				0.31%
ScR 361.383	388776.2	99.11	%	0.135				0.14%
Ag 328.068†	249883.4	1.078	mg/L	0.0076	1.078	mg/L	0.0076	0.70%
Al 308.215†	2397.8	2.086	mg/L	0.0097	2.086	mg/L	0.0097	0.46%
As 188.979†	2810.3	2.022	mg/L	0.0076	2.022	mg/L	0.0076	0.37%
B 249.677†	6423.9	1.033	mg/L	0.0030	1.033	mg/L	0.0030	0.29%
Ba 233.527†	6567.5	1.092	mg/L	0.0085	1.092	mg/L	0.0085	0.78%
Be 313.042†	564050.2	0.9866	mg/L	0.00610	0.9866	mg/L	0.00610	0.62%
Ca 317.933†	21337.2	2.107	mg/L	0.0082	2.107	mg/L	0.0082	0.39%
Cd 228.802†	24165.2	1.037	mg/L	0.0009	1.037	mg/L	0.0009	0.09%
Co 228.616†	33372.4	1.041	mg/L	0.0026	1.041	mg/L	0.0026	0.25%
Cr 267.716†	9023.0	1.072	mg/L	0.0041	1.072	mg/L	0.0041	0.38%
Cu 324.752†	272092.3	1.049	mg/L	0.0030	1.049	mg/L	0.0030	0.28%
Fe 273.955†	2367.1	2.039	mg/L	0.0016	2.039	mg/L	0.0016	0.08%
K 766.490†	42310.3	20.57	mg/L	0.099	20.57	mg/L	0.099	0.48%
Mg 279.077†	1938.9	2.070	mg/L	0.0072	2.070	mg/L	0.0072	0.35%
Mn 257.610†	48254.7	0.9695	mg/L	0.00147	0.9695	mg/L	0.00147	0.15%
Mo 202.031†	18913.6	0.9990	mg/L	0.00246	0.9990	mg/L	0.00246	0.25%
Na 589.592†	616753.6	52.26	mg/L	0.112	52.26	mg/L	0.112	0.22%
Na 330.237†	1663.5	52.93	mg/L	0.205	52.93	mg/L	0.205	0.39%
Ni 231.604†	3780.9	1.056	mg/L	0.0058	1.056	mg/L	0.0058	0.55%
Pb 220.353†	16335.4	2.017	mg/L	0.0054	2.017	mg/L	0.0054	0.27%
Sb 206.836†	5570.9	2.066	mg/L	0.0019	2.066	mg/L	0.0019	0.09%
Se 196.026†	3084.9	1.985	mg/L	0.0105	1.985	mg/L	0.0105	0.53%
Si 288.158†	2803.2	2.012	mg/L	0.0043	2.012	mg/L	0.0043	0.21%
Sn 189.927†	4879.8	0.9634	mg/L	0.00542	0.9634	mg/L	0.00542	0.56%
Sr 421.552†	937016.1	1.012	mg/L	0.0005	1.012	mg/L	0.0005	0.05%
Ti 334.903†	26344.2	1.010	mg/L	0.0009	1.010	mg/L	0.0009	0.09%
Tl 190.801†	3865.2	2.117	mg/L	0.0040	2.117	mg/L	0.0040	0.19%
V 292.402†	145789.4	1.026	mg/L	0.0040	1.026	mg/L	0.0040	0.39%
Zn 206.200†	4277.4	1.033	mg/L	0.0059	1.033	mg/L	0.0059	0.57%

Sequence No.: 37
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 4/30/2013 11:12:50 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.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2805258.6	100.2	%	0.58				0.58%
ScR 361.383	392681.2	100.1	%	1.65				1.64%
Ag 328.068†	15.5	0.00007	mg/L	0.000121	0.00007	mg/L	0.000121	180.40%
Al 308.215†	-7.1	-0.00633	mg/L	0.003515	-0.00633	mg/L	0.003515	55.48%
As 188.979†	0.6	0.00047	mg/L	0.002689	0.00047	mg/L	0.002689	566.90%
B 249.677†	11.8	0.00191	mg/L	0.000359	0.00191	mg/L	0.000359	18.85%
Ba 233.527†	-4.6	-0.00076	mg/L	0.001185	-0.00076	mg/L	0.001185	156.06%
Be 313.042†	40.6	0.00007	mg/L	0.000025	0.00007	mg/L	0.000025	35.47%
Ca 317.933†	14.3	0.00141	mg/L	0.001892	0.00141	mg/L	0.001892	133.82%
Cd 228.802†	4.1	0.00018	mg/L	0.000069	0.00018	mg/L	0.000069	38.92%
Co 228.616†	0.6	0.00002	mg/L	0.000228	0.00002	mg/L	0.000228	>999.9%
Cr 267.716†	7.3	0.00087	mg/L	0.000739	0.00087	mg/L	0.000739	84.72%
Cu 324.752†	157.4	0.00061	mg/L	0.000050	0.00061	mg/L	0.000050	8.29%
Fe 273.955†	1.3	0.00110	mg/L	0.002587	0.00110	mg/L	0.002587	235.21%
K 766.490†	31.5	0.01533	mg/L	0.012282	0.01533	mg/L	0.012282	80.11%
Mg 279.077†	1.8	0.00194	mg/L	0.003793	0.00194	mg/L	0.003793	195.36%
Mn 257.610†	4.1	0.00008	mg/L	0.000074	0.00008	mg/L	0.000074	88.32%
Mo 202.031†	16.8	0.00089	mg/L	0.000177	0.00089	mg/L	0.000177	19.97%
Na 589.592†	11.3	0.00095	mg/L	0.002718	0.00095	mg/L	0.002718	284.96%
Na 330.237†	3.2	0.1021	mg/L	0.31223	0.1021	mg/L	0.31223	305.73%
Ni 231.604†	-0.2	-0.00005	mg/L	0.000839	-0.00005	mg/L	0.000839	>999.9%
Pb 220.353†	2.9	0.00036	mg/L	0.000651	0.00036	mg/L	0.000651	182.32%
Sb 206.836†	8.3	0.00310	mg/L	0.000746	0.00310	mg/L	0.000746	24.11%
Se 196.026†	7.7	0.00494	mg/L	0.002949	0.00494	mg/L	0.002949	59.69%
Si 288.158†	1.2	0.00087	mg/L	0.003745	0.00087	mg/L	0.003745	432.74%
Sn 189.927†	5.3	0.00104	mg/L	0.000287	0.00104	mg/L	0.000287	27.63%
Sr 421.552†	23.4	0.00003	mg/L	0.000031	0.00003	mg/L	0.000031	121.11%
Ti 334.903†	14.2	0.00054	mg/L	0.000379	0.00054	mg/L	0.000379	69.49%
Tl 190.801†	2.6	0.00145	mg/L	0.001599	0.00145	mg/L	0.001599	110.37%
V 292.402†	17.3	0.00013	mg/L	0.000162	0.00013	mg/L	0.000162	129.85%
Zn 206.200†	-0.7	-0.00016	mg/L	0.000097	-0.00016	mg/L	0.000097	59.27%

Sequence No.: 38
Sample ID: WN27 ADUP SWC

Autosampler Location: 326
Date Collected: 4/30/2013 11:17:06 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN27 ADUP SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WN27 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	Sample RSD
ScA 357.253	2798819.6	99.93	%	0.347				0.35%
ScR 361.383	401364.0	102.3	%	0.56				0.55%
Ag 328.068†	-52.5	0.00003	mg/L	0.000102	0.00014	mg/L	0.000509	363.35%
Al 308.215†	48137.0	42.57	mg/L	0.251	212.8	mg/L	1.26	0.59%
As 188.979†	-133.0	0.01499	mg/L	0.000659	0.07494	mg/L	0.003295	4.40%
B 249.677†	91.3	0.01461	mg/L	0.000968	0.07305	mg/L	0.004838	6.62%
Ba 233.527†	4124.8	0.6721	mg/L	0.00105	3.360	mg/L	0.0052	0.16%
Be 313.042†	398.6	0.00062	mg/L	0.000017	0.00309	mg/L	0.000086	2.79%
Ca 317.933†	301778.2	29.80	mg/L	0.275	149.0	mg/L	1.37	0.92%
Cd 228.802†	124.0	0.00596	mg/L	0.000148	0.02979	mg/L	0.000742	2.49%
Co 228.616†	1119.2	0.02919	mg/L	0.000083	0.1459	mg/L	0.00041	0.28%
Cr 267.716†	1089.8	0.1305	mg/L	0.00080	0.6525	mg/L	0.00402	0.62%
Cu 324.752†	72233.4	0.2825	mg/L	0.00165	1.412	mg/L	0.0083	0.58%
Fe 273.955†	110687.6	95.62	mg/L	0.470	478.1	mg/L	2.35	0.49%
K 766.490†	6829.5	3.320	mg/L	0.0162	16.60	mg/L	0.081	0.49%
Mg 279.077†	15087.0	16.01	mg/L	0.089	80.03	mg/L	0.447	0.56%
Mn 257.610†	57884.8	1.162	mg/L	0.0057	5.811	mg/L	0.0287	0.49%
Mo 202.031†	241.5	0.01240	mg/L	0.000360	0.06199	mg/L	0.001799	2.90%
Na 589.592†	48489.4	4.108	mg/L	0.0256	20.54	mg/L	0.128	0.62%
Na 330.237†	125.9	4.171	mg/L	0.1179	20.86	mg/L	0.590	2.83%
Ni 231.604†	285.1	0.07967	mg/L	0.001251	0.3984	mg/L	0.00625	1.57%
Pb 220.353†	1475.1	0.1884	mg/L	0.00079	0.9418	mg/L	0.00394	0.42%
Sb 206.836†	-0.3	0.00131	mg/L	0.002690	0.00656	mg/L	0.013448	205.11%
Se 196.026†	-0.3	-0.00519	mg/L	0.006635	-0.02597	mg/L	0.033177	127.76%
Si 288.158†	1294.7	0.9332	mg/L	0.00552	4.666	mg/L	0.0276	0.59%
Sn 189.927†	-6.8	0.00175	mg/L	0.000835	0.00877	mg/L	0.004174	47.61%
Sr 421.552†	209151.8	0.2260	mg/L	0.00096	1.130	mg/L	0.0048	0.42%
Ti 334.903†	84398.7	3.237	mg/L	0.0144	16.19	mg/L	0.072	0.44%
Tl 190.801†	-1.9	0.01072	mg/L	0.001072	0.05359	mg/L	0.005361	10.00%
V 292.402†	27586.3	0.1873	mg/L	0.00090	0.9367	mg/L	0.00451	0.48%
Zn 206.200†	10303.9	2.487	mg/L	0.0069	12.44	mg/L	0.034	0.28%

Sequence No.: 39
Sample ID: WN27 A SWC

Autosampler Location: 327
Date Collected: 4/30/2013 11:21:08 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN27 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN27 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2832643.5	101.1	%	0.78				0.77%
ScR 361.383	402732.2	102.7	%	0.70				0.68%
Ag 328.068†	-44.9	0.00003	mg/L	0.000251	0.00014	mg/L	0.001254	906.83%
Al 308.215†	47913.9	42.37	mg/L	0.190	211.9	mg/L	0.95	0.45%
As 188.979†	-112.2	0.01936	mg/L	0.003857	0.09678	mg/L	0.019283	19.92%
B 249.677†	90.1	0.01442	mg/L	0.000307	0.07212	mg/L	0.001534	2.13%
Ba 233.527†	3701.8	0.5988	mg/L	0.00168	2.994	mg/L	0.0084	0.28%
Be 313.042†	400.6	0.00063	mg/L	0.000029	0.00313	mg/L	0.000146	4.68%
Ca 317.933†	250164.2	24.70	mg/L	0.150	123.5	mg/L	0.75	0.61%
Cd 228.802†	127.3	0.00602	mg/L	0.000232	0.03009	mg/L	0.001159	3.85%
Co 228.616†	1114.5	0.02960	mg/L	0.000314	0.1480	mg/L	0.00157	1.06%
Cr 267.716†	1035.4	0.1246	mg/L	0.00082	0.6232	mg/L	0.00409	0.66%
Cu 324.752†	73779.8	0.2895	mg/L	0.00236	1.447	mg/L	0.0118	0.82%
Fe 273.955†	133540.7	115.4	mg/L	0.57	576.8	mg/L	2.85	0.49%
K 766.490†	6588.0	3.203	mg/L	0.0132	16.01	mg/L	0.066	0.41%
Mg 279.077†	15749.7	16.70	mg/L	0.111	83.50	mg/L	0.553	0.66%
Mn 257.610†	55852.0	1.121	mg/L	0.0026	5.607	mg/L	0.0129	0.23%
Mo 202.031†	230.2	0.01186	mg/L	0.000386	0.05930	mg/L	0.001928	3.25%
Na 589.592†	49178.9	4.167	mg/L	0.0138	20.83	mg/L	0.069	0.33%
Na 330.237†	131.7	4.281	mg/L	0.2128	21.41	mg/L	1.064	4.97%
Ni 231.604†	282.3	0.07889	mg/L	0.001555	0.3944	mg/L	0.00777	1.97%
Pb 220.353†	1495.0	0.1897	mg/L	0.00082	0.9485	mg/L	0.00412	0.43%
Sb 206.836†	-6.0	-0.00095	mg/L	0.001454	-0.00473	mg/L	0.007270	153.65%
Se 196.026†	7.3	-0.00032	mg/L	0.002425	-0.00159	mg/L	0.012125	763.45%
Si 288.158†	1311.2	0.9451	mg/L	0.01060	4.726	mg/L	0.0530	1.12%
Sn 189.927†	4.7	0.00355	mg/L	0.001190	0.01776	mg/L	0.005948	33.50%
Sr 421.552†	175560.9	0.1897	mg/L	0.00081	0.9483	mg/L	0.00403	0.42%
Ti 334.903†	76238.3	2.924	mg/L	0.0115	14.62	mg/L	0.058	0.39%
Tl 190.801†	-13.3	0.00705	mg/L	0.004059	0.03523	mg/L	0.020293	57.60%
V 292.402†	27401.5	0.1852	mg/L	0.00116	0.9260	mg/L	0.00578	0.62%
Zn 206.200†	10125.9	2.444	mg/L	0.0184	12.22	mg/L	0.092	0.75%

Sequence No.: 40
Sample ID: WN27 ASPK SWC

Autosampler Location: 328
Date Collected: 4/30/2013 11:25:08 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN27 ASPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WN27 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2793142.2	99.73	%	0.141				0.14%
ScR 361.383	398411.2	101.6	%	0.61				0.60%
Ag 328.068†	47320.7	0.2044	mg/L	0.00074	1.022	mg/L	0.0037	0.36%
Al 308.215†	47505.2	42.01	mg/L	0.292	210.0	mg/L	1.46	0.70%
As 188.979†	978.2	0.7978	mg/L	0.00165	3.989	mg/L	0.0083	0.21%
B 249.677†	95.4	0.01482	mg/L	0.001105	0.07410	mg/L	0.005527	7.46%
Ba 233.527†	8590.7	1.416	mg/L	0.0056	7.078	mg/L	0.0280	0.40%
Be 313.042†	105626.4	0.1847	mg/L	0.00084	0.9234	mg/L	0.00421	0.46%
Ca 317.933†	271121.1	26.77	mg/L	0.140	133.9	mg/L	0.70	0.52%
Cd 228.802†	4897.7	0.2086	mg/L	0.00044	1.043	mg/L	0.0022	0.21%
Co 228.616†	7471.0	0.2277	mg/L	0.00082	1.139	mg/L	0.0041	0.36%
Cr 267.716†	3011.0	0.3584	mg/L	0.00080	1.792	mg/L	0.0040	0.22%
Cu 324.752†	121850.3	0.4736	mg/L	0.00088	2.368	mg/L	0.0044	0.19%
Fe 273.955†	104799.0	90.53	mg/L	0.685	452.6	mg/L	3.43	0.76%
K 766.490†	14542.2	7.070	mg/L	0.0364	35.35	mg/L	0.182	0.52%
Mg 279.077†	18983.7	20.16	mg/L	0.071	100.8	mg/L	0.36	0.35%
Mn 257.610†	62298.9	1.251	mg/L	0.0065	6.255	mg/L	0.0324	0.52%
Mo 202.031†	387.9	0.02016	mg/L	0.000098	0.1008	mg/L	0.00049	0.49%
Na 589.592†	96545.6	8.180	mg/L	0.0330	40.90	mg/L	0.165	0.40%
Na 330.237†	257.1	8.313	mg/L	0.2019	41.57	mg/L	1.010	2.43%
Ni 231.604†	978.4	0.2730	mg/L	0.00303	1.365	mg/L	0.0151	1.11%
Pb 220.353†	7767.5	0.9654	mg/L	0.00225	4.827	mg/L	0.0113	0.23%
Sb 206.836†	2.7	-0.00005	mg/L	0.002104	-0.00024	mg/L	0.010522	>999.9%
Se 196.026†	1192.1	0.7623	mg/L	0.00226	3.811	mg/L	0.0113	0.30%
Si 288.158†	1397.0	1.008	mg/L	0.0041	5.040	mg/L	0.0205	0.41%
Sn 189.927†	-7.6	0.00132	mg/L	0.000864	0.00660	mg/L	0.004321	65.50%
Sr 421.552†	323760.5	0.3498	mg/L	0.00187	1.749	mg/L	0.0093	0.53%
Ti 334.903†	80902.1	3.103	mg/L	0.0191	15.52	mg/L	0.095	0.61%
Tl 190.801†	1435.8	0.7988	mg/L	0.00335	3.994	mg/L	0.0168	0.42%
V 292.402†	54930.4	0.3802	mg/L	0.00069	1.901	mg/L	0.0034	0.18%
Zn 206.200†	10272.2	2.480	mg/L	0.0103	12.40	mg/L	0.052	0.42%

Sequence No.: 41
Sample ID: ~~WN27 APOST SWC~~ ZZZZZZ
BA 4/30/13
Dilution: 5.000000X

Autosampler Location: 329
Date Collected: 4/30/2013 11:29:10 AM
Data Type: Original

Nebulizer Parameters: WN27 APOST SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN27 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2774645.9	99.06	%	0.112				0.11%
ScR 361.383	390394.0	99.52	%	0.305				0.31%
Ag 328.068†	126102.0	0.5444	mg/L	0.00412	2.722	mg/L	0.0206	0.76%
Al 308.215†	52269.6	46.21	mg/L	0.096	231.1	mg/L	0.48	0.21%
As 188.979†	2846.4	2.118	mg/L	0.0050	10.59	mg/L	0.025	0.24%
B 249.677†	97.1	0.01432	mg/L	0.000263	0.07160	mg/L	0.001316	1.84%
Ba 233.527†	17406.3	2.878	mg/L	0.0154	14.39	mg/L	0.077	0.54%
Be 313.042†	280678.8	0.4909	mg/L	0.00613	2.454	mg/L	0.0306	1.25%
Ca 317.933†	359023.8	35.45	mg/L	0.148	177.3	mg/L	0.74	0.42%
Cd 228.802†	12745.8	0.5417	mg/L	0.00145	2.708	mg/L	0.0073	0.27%
Co 228.616†	18041.1	0.5579	mg/L	0.00184	2.789	mg/L	0.0092	0.33%
Cr 267.716†	5612.6	0.6675	mg/L	0.00359	3.337	mg/L	0.0180	0.54%
Cu 324.752†	215719.2	0.8369	mg/L	0.00360	4.185	mg/L	0.0180	0.43%
Fe 273.955†	137737.1	119.0	mg/L	0.55	594.9	mg/L	2.73	0.46%
K 766.490†	28796.9	14.00	mg/L	0.058	70.00	mg/L	0.292	0.42%
Mg 279.077†	27398.2	29.10	mg/L	0.136	145.5	mg/L	0.68	0.47%
Mn 257.610†	81731.7	1.642	mg/L	0.0091	8.208	mg/L	0.0453	0.55%
Mo 202.031†	252.6	0.01289	mg/L	0.000340	0.06446	mg/L	0.001699	2.64%
Na 589.592†	179701.8	15.23	mg/L	0.051	76.13	mg/L	0.257	0.34%
Na 330.237†	476.8	15.11	mg/L	0.205	75.55	mg/L	1.024	1.36%
Ni 231.604†	2199.6	0.6137	mg/L	0.00300	3.068	mg/L	0.0150	0.49%
Pb 220.353†	18274.5	2.262	mg/L	0.0033	11.31	mg/L	0.016	0.14%
Sb 206.836†	14.4	0.00125	mg/L	0.001250	0.00625	mg/L	0.006251	99.96%
Se 196.026†	3236.8	2.078	mg/L	0.0039	10.39	mg/L	0.020	0.19%
Si 288.158†	1366.4	0.9881	mg/L	0.01648	4.940	mg/L	0.0824	1.67%
Sn 189.927†	-9.2	0.00173	mg/L	0.000420	0.00866	mg/L	0.002099	24.24%
Sr 421.552†	663339.7	0.7166	mg/L	0.00148	3.583	mg/L	0.0074	0.21%
Ti 334.903†	78791.7	3.022	mg/L	0.0075	15.11	mg/L	0.037	0.25%
Tl 190.801†	3806.2	2.103	mg/L	0.0079	10.51	mg/L	0.039	0.37%
V 292.402†	102428.8	0.7130	mg/L	0.00402	3.565	mg/L	0.0201	0.56%
Zn 206.200†	12695.6	3.065	mg/L	0.0180	15.32	mg/L	0.090	0.59%

Sequence No.: 42
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 4/30/2013 11:33:14 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	2798347.7	99.91	%	0.722				0.72%
ScR 361.383	392723.0	100.1	%	0.73				0.73%
Ag 328.068†	251500.4	1.085	mg/L	0.0121	1.085	mg/L	0.0121	1.11%
Al 308.215†	2412.4	2.099	mg/L	0.0121	2.099	mg/L	0.0121	0.58%
As 188.979†	2827.4	2.034	mg/L	0.0188	2.034	mg/L	0.0188	0.92%
B 249.677†	6432.3	1.034	mg/L	0.0093	1.034	mg/L	0.0093	0.90%
Ba 233.527†	6618.6	1.101	mg/L	0.0094	1.101	mg/L	0.0094	0.85%
Be 313.042†	559865.1	0.9793	mg/L	0.00587	0.9793	mg/L	0.00587	0.60%
Ca 317.933†	21249.4	2.098	mg/L	0.0167	2.098	mg/L	0.0167	0.80%
Cd 228.802†	24258.8	1.041	mg/L	0.0073	1.041	mg/L	0.0073	0.70%
Co 228.616†	33621.1	1.048	mg/L	0.0051	1.048	mg/L	0.0051	0.49%
Cr 267.716†	9040.2	1.074	mg/L	0.0080	1.074	mg/L	0.0080	0.74%
Cu 324.752†	271781.8	1.048	mg/L	0.0092	1.048	mg/L	0.0092	0.87%
Fe 273.955†	2356.4	2.030	mg/L	0.0180	2.030	mg/L	0.0180	0.89%
K 766.490†	42329.0	20.58	mg/L	0.064	20.58	mg/L	0.064	0.31%
Mg 279.077†	1937.7	2.069	mg/L	0.0153	2.069	mg/L	0.0153	0.74%
Mn 257.610†	48090.2	0.9662	mg/L	0.00260	0.9662	mg/L	0.00260	0.27%
Mo 202.031†	19010.0	1.004	mg/L	0.0061	1.004	mg/L	0.0061	0.61%
Na 589.592†	620542.6	52.58	mg/L	0.179	52.58	mg/L	0.179	0.34%
Na 330.237†	1663.9	52.94	mg/L	0.453	52.94	mg/L	0.453	0.86%
Ni 231.604†	3789.8	1.059	mg/L	0.0108	1.059	mg/L	0.0108	1.02%
Pb 220.353†	16433.9	2.030	mg/L	0.0116	2.030	mg/L	0.0116	0.57%
Sb 206.836†	5583.2	2.071	mg/L	0.0173	2.071	mg/L	0.0173	0.84%
Se 196.026†	3104.6	1.997	mg/L	0.0147	1.997	mg/L	0.0147	0.74%
Si 288.158†	2797.1	2.008	mg/L	0.0137	2.008	mg/L	0.0137	0.68%
Sn 189.927†	4902.2	0.9678	mg/L	0.00774	0.9678	mg/L	0.00774	0.80%
Sr 421.552†	937960.4	1.013	mg/L	0.0024	1.013	mg/L	0.0024	0.23%
Ti 334.903†	26345.0	1.010	mg/L	0.0008	1.010	mg/L	0.0008	0.08%
Tl 190.801†	3894.4	2.133	mg/L	0.0124	2.133	mg/L	0.0124	0.58%
V 292.402†	146871.0	1.034	mg/L	0.0102	1.034	mg/L	0.0102	0.99%
Zn 206.200†	4271.2	1.031	mg/L	0.0095	1.031	mg/L	0.0095	0.92%

Sequence No.: 43
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 4/30/2013 11:37:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 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	2903812.6	103.7	%	0.11				0.10%
ScR 361.383	400693.6	102.1	%	1.08				1.06%
Ag 328.068†	21.6	0.00009	mg/L	0.000255	0.00009	mg/L	0.000255	273.73%
Al 308.215†	-2.7	-0.00238	mg/L	0.009609	-0.00238	mg/L	0.009609	403.79%
As 188.979†	-1.4	-0.00101	mg/L	0.001381	-0.00101	mg/L	0.001381	136.67%
B 249.677†	12.2	0.00197	mg/L	0.000916	0.00197	mg/L	0.000916	46.53%
Ba 233.527†	-4.5	-0.00074	mg/L	0.000642	-0.00074	mg/L	0.000642	86.55%
Be 313.042†	38.9	0.00007	mg/L	0.000026	0.00007	mg/L	0.000026	37.65%
Ca 317.933†	13.6	0.00134	mg/L	0.000372	0.00134	mg/L	0.000372	27.64%
Cd 228.802†	3.3	0.00015	mg/L	0.000070	0.00015	mg/L	0.000070	47.20%
Co 228.616†	2.5	0.00008	mg/L	0.000149	0.00008	mg/L	0.000149	192.58%
Cr 267.716†	4.3	0.00051	mg/L	0.000350	0.00051	mg/L	0.000350	69.10%
Cu 324.752†	143.0	0.00055	mg/L	0.000130	0.00055	mg/L	0.000130	23.53%
Fe 273.955†	0.9	0.00078	mg/L	0.000637	0.00078	mg/L	0.000637	81.34%
K 766.490†	19.1	0.00930	mg/L	0.009930	0.00930	mg/L	0.009930	106.81%
Mg 279.077†	7.0	0.00745	mg/L	0.002513	0.00745	mg/L	0.002513	33.74%
Mn 257.610†	1.5	0.00003	mg/L	0.000018	0.00003	mg/L	0.000018	59.20%
Mo 202.031†	9.6	0.00051	mg/L	0.000104	0.00051	mg/L	0.000104	20.41%
Na 589.592†	8.6	0.00073	mg/L	0.003578	0.00073	mg/L	0.003578	488.98%
Na 330.237†	8.9	0.2823	mg/L	0.17856	0.2823	mg/L	0.17856	63.25%
Ni 231.604†	2.5	0.00071	mg/L	0.000479	0.00071	mg/L	0.000479	67.68%
Pb 220.353†	1.4	0.00017	mg/L	0.000478	0.00017	mg/L	0.000478	273.07%
Sb 206.836†	6.1	0.00225	mg/L	0.000424	0.00225	mg/L	0.000424	18.82%
Se 196.026†	5.0	0.00324	mg/L	0.001534	0.00324	mg/L	0.001534	47.34%
Si 288.158†	1.6	0.00116	mg/L	0.003607	0.00116	mg/L	0.003607	310.47%
Sn 189.927†	-0.4	-0.00008	mg/L	0.000511	-0.00008	mg/L	0.000511	605.47%
Sr 421.552†	17.5	0.00002	mg/L	0.000005	0.00002	mg/L	0.000005	28.26%
Ti 334.903†	8.8	0.00034	mg/L	0.000510	0.00034	mg/L	0.000510	151.94%
Tl 190.801†	5.4	0.00298	mg/L	0.000592	0.00298	mg/L	0.000592	19.83%
V 292.402†	-2.5	-0.00002	mg/L	0.000187	-0.00002	mg/L	0.000187	>999.9%
Zn 206.200†	3.3	0.00079	mg/L	0.000495	0.00079	mg/L	0.000495	62.85%

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Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 4-30-13

M1 ELAN	Analyst MS 5-1-13	Peer 5-1-13	Comment
Logbook			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibrations			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification			
ICV/CCV	✓	✓	See Log
ICB/CCB	✓	✓	See Log
Samples			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	See Log
Carry-over	✓	✓	
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WN52 WN27 WN31
Matrix Duplicates	✓	✓	WN50 WN31
Method Blanks	✓	✓	
Data Distribution			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysis Notes and Events	✓	✓	PAF WN52 WN27 WN31

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ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 4-30-13 **Analyst:** AK AK 5-1-13 **Page:** 1 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			3029-1
		1			3030-1
		2			-2
		3			-0
		4			-3
		Rinse			
		STD0			
zzz		zzzzzz ICV			no sample in stack 3023-4
		ICB			
		CCV1			
		CCB1			
		zzzzzz			^{53}Cr low
		STD0			
		CCV2			
		CCB2			^{53}Cr low
		STD0			
		CCV3			
		CCB3			
		Low check			^{53}Cr 31 high
		ICSA			
		ICSAB			
		LR200			
		LR300			
		CCV4			

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ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 30 4-30-13 **Analyst:** M **Page:** 2 of 5

All corrections made by analyst unless otherwise noted. M 4-30-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB4			
		STD0			
		CCV5			
		CCB5			
		WN27 MB1	SWN	20	
		WL69 A		100	Cr
		↓ B		100	↓
		WN27 ADup		20	✓ RRCr (sc)
		↓ A		↓	↓ CAF
		↓ ASpk		↓	↓ Sb %R
		↓ APost		↓	0.06mLSpk#2 4.0 0.06mLSpk#1 1.0 Sb
		↓ MBISpk	↓	↓	✓
		CCV6			
		CCB6			
		STD0			
		CCV7			
		CCB7			As 78Se ↓
		WN31 MB2	REN	2	
		WN27 ADup	SWN	100	Cr
		↓ A	↓	↓	↓
		↓ ASpk	↓	↓	↓
		WN40 B	REN	2	
		WN31 B Dup		↓	✓ RR As, Se Zn, Sb, High RPD
		↓ B	↓	↓	CAF

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ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 4-29-13 (30) **Analyst:** M **Page:** 3 of 5

All corrections made by analyst unless otherwise noted. M 4-30-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WN31 BSpk	REN	2	RR As Se
ZZZ		~~ZZZZZ BPost~~			
		MBSpk			
		CCV8			
		CCB8			^{62}Ni ^{78}Se
		WN31 MB3	REN	2	
		ADup	SWW	20	CC high RPD
		A			CAF
		ASpk			Sb +%R
		APost			0.06mL Spk#2 1:10 0.06mL Spk#1 1:10 Sb
		CDup	REN	2	RR As. Se
		C			
		CSpk			
ZZZ		~~ZZZZZ CPost~~			
		MB3Spk			
		CCV9			
		CCB9			^{62}Ni
		WN31 MB1	SWW	20	
		WN40 MB1	REN	2	
		ADup			
		A			
		ASpk			
ZZZ		~~ZZZZZ APost~~			
		WN52 B			

Instrument Tuning Report

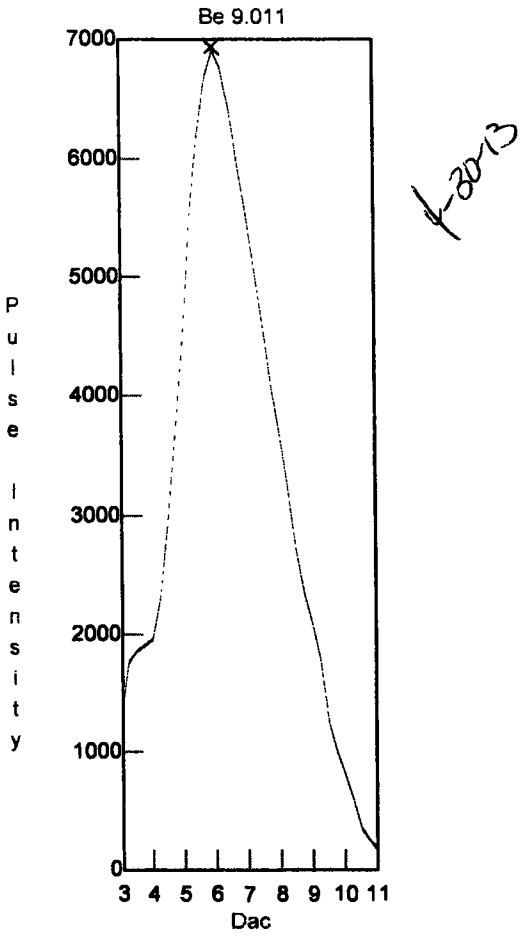
File Name: Default.tun
File Path: C:\Elandata\Tuning\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Be	9.012	9.125	2033	2165	0.704	
Mg	23.985	24.029	5654	2271	0.698	
Co	58.933	58.929	14149	2539	0.685	
In	114.904	114.929	27797	2982	0.703	
Pb	207.977	207.974	50435	3726	0.706	

Instrument Tuning Report

File Name: Default.tun
File Path: C:\Elandata\Tuning\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Be	9.012	8.975	2024	2165	0.696	
Mg	23.985	23.979	5652	2271	0.705	
Co	58.933	58.929	14147	2539	0.683	
In	114.904	114.879	27790	2982	0.711	
Pb	207.977	208.026	50447	3726	0.702	



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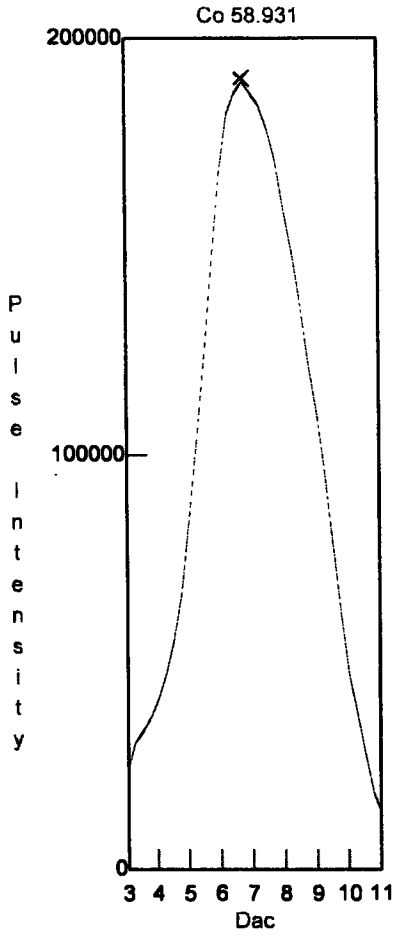
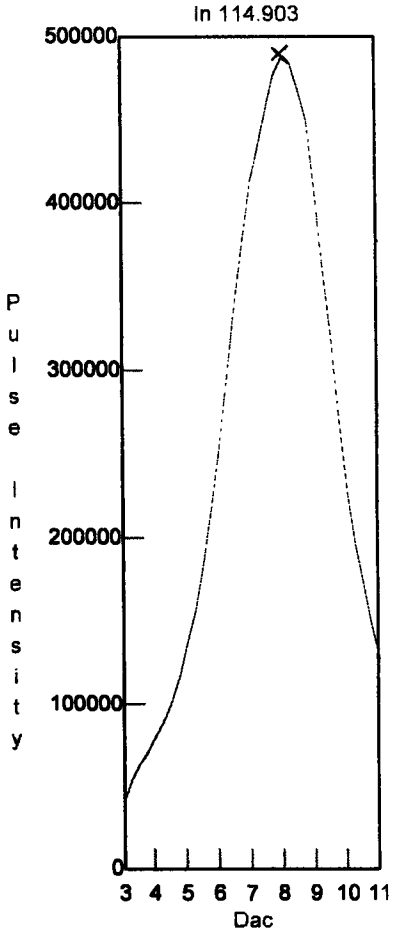
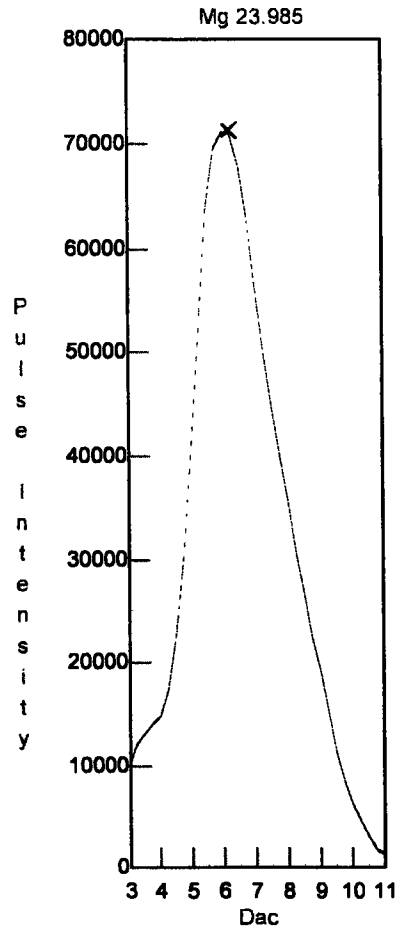
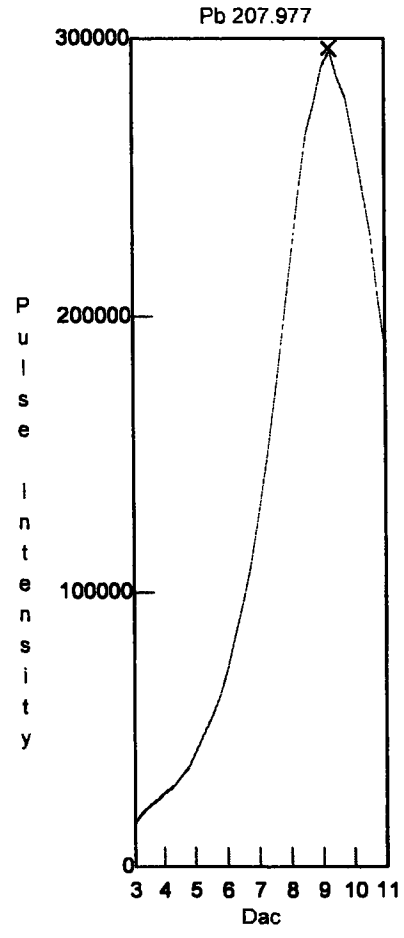
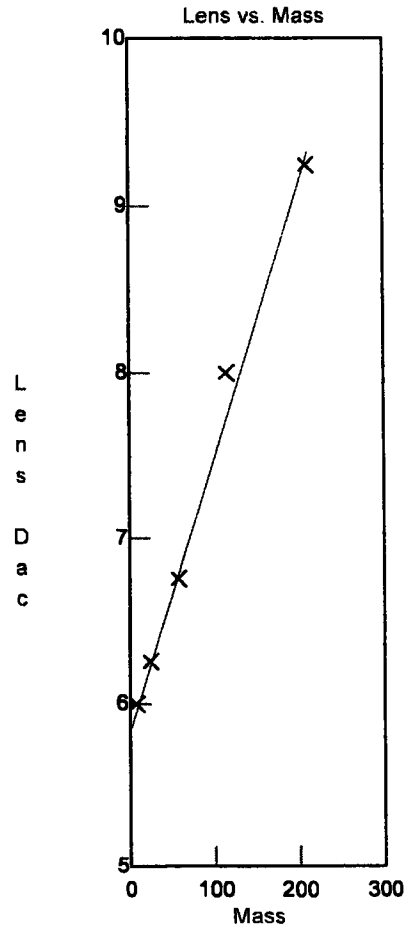










Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, April 30, 2013 08:32:32
Sample Description:
Sample File: 1119.sam
Method File: C:\Elandata\Method\aridailyperf.mth
Dataset File: C:\Elandata\Dataset\daily performance\Sample.1501
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Number of Replicates: 5
Dual Detector Mode: Dual

0.95

Summary

	Analyte	Mass	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24	37440.441	580.523	1.551
	In	115	367469.623	4941.995	1.345
	Pb	208	246884.165	4535.286	1.837
⌈>	Ba	138	255866.824	3375.130	1.319
⌊	Ba++	69	0.011	0.000	2.415
⌈>	Ce	140	305140.872	3581.939	1.174
⌊	CeO	156	0.031	0.001	1.803
	Bkgd	220	5.251	1.046	19.920

Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, April 30, 2013 08:33:37
Sample Description:
Sample File: 1119.sam
Method File: C:\Elandata\Method\aridailyperf.mth
Dataset File: C:\Elandata\Dataset\daily performance\Sample.1502
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Number of Replicates: 5
Dual Detector Mode: Dual

Summary

	Analyte	Mass	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24	34794.947	545.083	1.567
	In	115	344964.870	2551.682	0.740
	Pb	208	225816.217	2198.945	0.974
>	Ba	138	243425.067	777.236	0.319
	Ba++	69	0.011	0.000	2.380
>	Ce	140	289762.953	4028.655	1.390
	CeO	156	0.029	0.000	1.552
	Bkgd	220	8.501	2.054	24.164

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:05:33
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L				321928	0
[	Be	9		ug/L				3	78
	C	13		mg/L				3877	3
	Cl	37		mg/L				2028836	1
[>	Sc	45		ug/L				260685	0
|	V	51		ug/L				2398	11
|	V-1	51		ug/L				14379	0
|	Cr	52		ug/L				6372	3
|	Cr	53		ug/L				4551	2
|	Mn	55		ug/L				2053	26
[	Co	59		ug/L				52	21
[>	Ge	72		ug/L				279016	0
|	Ni	60		ug/L				420	37
|	Ni	62		ug/L				337	0
|	Cu	63		ug/L				679	11
|	Cu	65		ug/L				242	17
|	Zn	66		ug/L				1249	11
|	Zn	67		ug/L				473	3
|	Zn	68		ug/L				7831	0
|	As	75		ug/L				235	5
|	As-1	75		ug/L				8540	0
|	Se	82		ug/L				-5	160
|	Se	78		ug/L				8671	0
[	Mo	98		ug/L				133	9
	Y	89		ug/L				262660	0
	Kr	83		ug/L				162	4
[>	In	115		ug/L				307752	0
|	Ag	107		ug/L				20	27
|	Cd	111		ug/L				152	3
|	Cd	114		ug/L				20	12
|	Sb	121		ug/L				20	27
|	Sb	123		ug/L				14	15
|	Ba	135		ug/L				39	39
[	Ba	137		ug/L				65	21
[>	Tb	159		ug/L				378035	0
|	Tl	205		ug/L				67	17
|	Pb	208		ug/L				1398	23
|	Bi	209		ug/L				329363	0
|	Th	232		ug/L				41	32
[	U	238		ug/L				13	35

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:11:21
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			321928	331459	0
[	Be	9	10.000	ug/L	0.175	1	3	4368	1
	C	13		mg/L			3877	4958	3
	Cl	37		mg/L			2028836	2060604	0
[>	Sc	45		ug/L			260685	258915	0
[	V	51	10.000	ug/L	0.056	0	2398	118777	0
[	V-1	51	10.000	ug/L	0.100	0	14379	131326	0
[	Cr	52	10.000	ug/L	0.133	1	6372	107379	0
[	Cr	53	10.000	ug/L	0.274	2	4551	16147	1
[	Mn	55	10.000	ug/L	0.230	2	2053	165886	1
[	Co	59	10.000	ug/L	0.075	0	52	125486	0
[>	Ge	72		ug/L			279016	279445	1
[	Ni	60	10.000	ug/L	0.026	0	420	26311	0
[	Ni	62	10.000	ug/L	0.391	3	337	4100	3
[	Cu	63	10.000	ug/L	0.148	1	679	58003	0
[	Cu	65	10.000	ug/L	0.021	0	242	27243	1
[	Zn	66	10.000	ug/L	0.121	1	1249	17468	0
[	Zn	67	10.000	ug/L	0.273	2	473	3132	1
[	Zn	68	10.000	ug/L	0.143	1	7831	18912	1
[	As	75	10.000	ug/L	0.074	0	235	15959	1
[	As-1	75	10.000	ug/L	0.064	0	8540	23876	0
[	Se	82	10.000	ug/L	0.148	1	-5	1794	1
[	Se	78	10.000	ug/L	0.226	2	8671	12876	0
[	Mo	98	10.000	ug/L	0.100	1	133	58302	0
	Y	89		ug/L			262660	263919	0
	Kr	83		ug/L			162	169	6
[>	In	115		ug/L			307752	303810	1
[	Ag	107	10.000	ug/L	0.075	0	20	100580	1
[	Cd	111	10.000	ug/L	0.085	0	152	25358	0
[	Cd	114	10.000	ug/L	0.145	1	20	59384	0
[	Sb	121	10.000	ug/L	0.071	0	20	83988	0
[	Sb	123	10.000	ug/L	0.111	1	14	63443	0
[	Ba	135	10.000	ug/L	0.125	1	39	20878	1
[	Ba	137	10.000	ug/L	0.025	0	65	36239	1
[>	Tb	159		ug/L			378035	379838	0
[	Tl	205	10.000	ug/L	0.066	0	67	287604	0
[	Pb	208	10.000	ug/L	0.059	0	1398	397158	1
[	Bi	209		ug/L			329363	328751	0
[	Th	232	10.000	ug/L	0.070	0	41	469991	0
[	U	238	10.000	ug/L	0.026	0	13	515145	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:17:09
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			321928	336133	0
[	Be	9	19.983	ug/L	0.118	0	3	8818	0
	C	13		mg/L			3877	4839	0
	Cl	37		mg/L			2028836	1975690	0
[>	Sc	45		ug/L			260685	253309	0
[	V	51	20.032	ug/L	0.193	0	2398	231904	1
[	V-1	51	20.045	ug/L	0.223	1	14379	245601	0
[	Cr	52	20.000	ug/L	0.193	0	6372	203912	1
[	Cr	53	20.043	ug/L	0.349	1	4551	27422	0
[	Mn	55	20.079	ug/L	0.173	0	2053	329020	0
[	Co	59	19.975	ug/L	0.153	0	52	243970	0
[>	Ge	72		ug/L			279016	271258	0
[	Ni	60	20.086	ug/L	0.129	0	420	51771	0
[	Ni	62	20.166	ug/L	0.318	1	337	7944	1
[	Cu	63	20.021	ug/L	0.240	1	679	112530	0
[	Cu	65	20.003	ug/L	0.096	0	242	52686	0
[	Zn	66	20.183	ug/L	0.197	0	1249	34197	0
[	Zn	67	20.263	ug/L	0.195	0	473	5980	1
[	Zn	68	20.188	ug/L	0.371	1	7831	30147	0
[	As	75	20.036	ug/L	0.125	0	235	31028	0
[	As-1	75	20.054	ug/L	0.178	0	8540	38454	0
[	Se	82	19.976	ug/L	0.101	0	-5	3467	0
[	Se	78	20.022	ug/L	0.275	1	8671	16611	0
[	Mo	98	20.097	ug/L	0.129	0	133	115848	0
	Y	89		ug/L			262660	258117	1
	Kr	83		ug/L			162	159	1
[>	In	115		ug/L			307752	298413	0
[	Ag	107	20.043	ug/L	0.046	0	20	199734	0
[	Cd	111	20.074	ug/L	0.194	0	152	50595	1
[	Cd	114	20.033	ug/L	0.202	1	20	117611	1
[	Sb	121	20.026	ug/L	0.188	0	20	166077	1
[	Sb	123	20.028	ug/L	0.092	0	14	125515	0
[	Ba	135	20.022	ug/L	0.133	0	39	41203	0
[	Ba	137	20.068	ug/L	0.176	0	65	72346	0
[>	Tb	159		ug/L			378035	377227	0
[	Tl	205	20.011	ug/L	0.300	1	67	572683	0
[	Pb	208	20.015	ug/L	0.094	0	1398	790336	0
[	Bi	209		ug/L			329363	323938	0
[	Th	232	20.067	ug/L	0.105	0	41	949363	0
[	U	238	20.060	ug/L	0.015	0	13	1038782	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:22:58
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			321928	339074	0
[	Be	9	49.699	ug/L	0.407	0	3	21474	1
	C	13		mg/L			3877	4032	2
	Cl	37		mg/L			2028836	1951087	0
[>	Sc	45		ug/L			260685	250802	0
[	V	51	49.834	ug/L	0.558	1	2398	558527	0
[	V-1	51	49.870	ug/L	0.526	1	14379	577110	0
[	Cr	52	49.867	ug/L	0.792	1	6372	487845	1
[	Cr	53	49.982	ug/L	0.502	1	4551	61069	0
[	Mn	55	49.845	ug/L	0.304	0	2053	793538	0
[	Co	59	49.792	ug/L	0.601	1	52	589808	1
[>	Ge	72		ug/L			279016	268159	0
[	Ni	60	49.772	ug/L	0.302	0	420	123415	0
[	Ni	62	49.728	ug/L	0.738	1	337	18400	0
[	Cu	63	49.738	ug/L	0.285	0	679	268394	0
[	Cu	65	49.739	ug/L	0.180	0	242	125888	0
[	Zn	66	49.964	ug/L	0.707	1	1249	81630	0
[	Zn	67	49.873	ug/L	0.538	1	473	13717	1
[	Zn	68	49.943	ug/L	0.630	1	7831	62327	0
[	As	75	49.847	ug/L	0.459	0	235	74835	0
[	As-1	75	49.845	ug/L	0.634	1	8540	81163	0
[	Se	82	49.847	ug/L	0.623	1	-5	8434	0
[	Se	78	49.833	ug/L	0.911	1	8671	28132	0
[	Mo	98	49.855	ug/L	0.411	0	133	279862	0
	Y	89		ug/L			262660	255226	0
	Kr	83		ug/L			162	160	5
[>	In	115		ug/L			307752	294098	0
[	Ag	107	49.761	ug/L	0.587	1	20	477237	0
[	Cd	111	49.853	ug/L	0.423	0	152	121824	0
[	Cd	114	49.855	ug/L	0.261	0	20	284307	0
[	Sb	121	49.912	ug/L	0.418	0	20	404327	0
[	Sb	123	49.995	ug/L	0.227	0	14	308621	0
[	Ba	135	49.926	ug/L	0.273	0	39	100458	0
[	Ba	137	49.835	ug/L	0.282	0	65	174103	0
[>	Tb	159		ug/L			378035	373107	0
[	Tl	205	49.955	ug/L	0.213	0	67	1407776	0
[	Pb	208	49.925	ug/L	0.070	0	1398	1933366	0
[	Bi	209		ug/L			329363	319425	0
[	Th	232	49.677	ug/L	0.323	0	41	2251705	0
[	U	238	49.723	ug/L	0.154	0	13	2478002	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:28:46
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			321928	340391	0
[	**Be**	**9**	**99.442**	ug/L	0.308	0	3	42343	0
	C	**13**		mg/L			3877	4991	1
	Cl	**37**		mg/L			2028836	1960083	0
[>	**Sc**	**45**		ug/L			260685	248162	0
|	**V**	**51**	**100.122**	ug/L	0.335	0	2398	1112561	0
|	**V-1**	**51**	**100.161**	ug/L	0.366	0	14379	1139121	0
|	**Cr**	**52**	**99.892**	ug/L	0.257	0	6372	957452	0
|	**Cr**	**53**	**100.026**	ug/L	0.374	0	4551	116685	0
|	**Mn**	**55**	**99.807**	ug/L	0.676	0	2053	1560296	1
[	**Co**	**59**	**99.902**	ug/L	0.611	0	52	1167070	0
[>	**Ge**	**72**		ug/L			279016	265074	0
|	**Ni**	**60**	**99.895**	ug/L	0.623	0	420	243602	0
|	**Ni**	**62**	**99.733**	ug/L	0.264	0	337	35841	0
|	**Cu**	**63**	**99.757**	ug/L	0.552	0	679	527212	0
|	**Cu**	**65**	**99.583**	ug/L	0.394	0	242	245511	0
|	**Zn**	**66**	**99.640**	ug/L	1.236	1	1249	157857	0
|	**Zn**	**67**	**99.917**	ug/L	1.279	1	473	26642	1
|	**Zn**	**68**	**99.851**	ug/L	0.591	0	7831	115214	0
|	**As**	**75**	**100.048**	ug/L	1.232	1	235	148487	0
|	**As-1**	**75**	**100.134**	ug/L	0.886	0	8540	153639	0
|	**Se**	**82**	**99.687**	ug/L	1.454	1	-5	16506	1
|	**Se**	**78**	**99.997**	ug/L	0.264	0	8671	47508	0
[	**Mo**	**98**	**100.127**	ug/L	0.972	0	133	557847	0
	Y	**89**		ug/L			262660	253047	1
	Kr	**83**		ug/L			162	177	4
[>	**In**	**115**		ug/L			307752	290538	0
|	**Ag**	**107**	**99.699**	ug/L	1.534	1	20	935205	1
|	**Cd**	**111**	**99.900**	ug/L	1.023	1	152	240226	0
|	**Cd**	**114**	**99.697**	ug/L	1.772	1	20	555989	1
|	**Sb**	**121**	**100.204**	ug/L	0.631	0	20	807371	0
|	**Sb**	**123**	**100.078**	ug/L	0.758	0	14	611879	0
|	**Ba**	**135**	**100.087**	ug/L	0.818	0	39	199491	0
[	**Ba**	**137**	**100.138**	ug/L	0.373	0	65	347145	0
[>	**Tb**	**159**		ug/L			378035	372555	1
|	**Tl**	**205**	**98.998**	ug/L	1.399	1	67	2695225	0
|	**Pb**	**208**	**99.485**	ug/L	0.895	0	1398	3780303	0
|	**Bi**	**209**		ug/L			329363	315898	1
|	**Th**	**232**	**99.935**	ug/L	1.072	1	41	4512945	0
[	**U**	**238**	**99.885**	ug/L	1.308	1	13	4951027	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse Sample
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:35:05
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			321928	345477	0
[	Be	9	0.016	ug/L	0.012	73	3	10	48
	C	13		mg/L			3877	3704	1
	Cl	37		mg/L			2028836	1982050	0
[>	Sc	45		ug/L			260685	248942	0
[	V	51	-0.030	ug/L	0.018	58	2398	1952	9
[	V-1	51	-0.230	ug/L	0.010	4	14379	11142	0
[	Cr	52	-0.046	ug/L	0.008	17	6372	5646	1
[	Cr	53	-0.683	ug/L	0.050	7	4551	3576	1
[	Mn	55	-0.080	ug/L	0.003	3	2053	701	6
[	Co	59	0.006	ug/L	0.001	13	52	118	7
[>	Ge	72		ug/L			279016	265023	0
[	Ni	60	-0.131	ug/L	0.007	5	420	81	20
[	Ni	62	-0.136	ug/L	0.061	45	337	272	8
[	Cu	63	-0.029	ug/L	0.004	13	679	494	3
[	Cu	65	-0.032	ug/L	0.006	18	242	150	9
[	Zn	66	-0.463	ug/L	0.023	4	1249	458	7
[	Zn	67	-0.592	ug/L	0.032	5	473	294	2
[	Zn	68	-0.745	ug/L	0.084	11	7831	6634	0
[	As	75	0.009	ug/L	0.027	311	235	236	16
[	As-1	75	-0.021	ug/L	0.032	151	8540	8081	0
[	Se	82	-0.018	ug/L	0.038	210	-5	-8	72
[	Se	78	-0.073	ug/L	0.074	101	8671	8208	0
[	Mo	98	0.006	ug/L	0.014	217	133	161	46
	Y	89		ug/L			262660	252298	0
	Kr	83		ug/L			162	163	2
[>	In	115		ug/L			307752	294523	0
[	Ag	107	0.011	ug/L	0.005	47	20	127	40
[	Cd	111	0.005	ug/L	0.003	65	152	157	4
[	Cd	114	0.005	ug/L	0.003	57	20	48	34
[	Sb	121	0.081	ug/L	0.021	25	20	678	24
[	Sb	123	0.082	ug/L	0.027	33	14	521	32
[	Ba	135	0.004	ug/L	0.003	67	39	45	11
[	Ba	137	0.001	ug/L	0.005	777	65	64	28
[>	Tb	159		ug/L			378035	372585	0
[	Tl	205	0.016	ug/L	0.004	28	67	488	24
[	Pb	208	-0.014	ug/L	0.003	18	1398	843	11
[	Bi	209		ug/L			329363	324443	0
[	Th	232	0.043	ug/L	0.014	32	41	1996	32
[	U	238	0.012	ug/L	0.003	22	13	585	22

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:42:02
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L				343935	0
⌊	Be	9		ug/L				9	32
	C	13		mg/L				3671	0
	Cl	37		mg/L				1974717	0
⌈>	Sc	45		ug/L				246313	0
⌈	V	51		ug/L				2058	17
⌈	V-1	51		ug/L				10972	1
⌈	Cr	52		ug/L				5720	2
⌈	Cr	53		ug/L				3496	2
⌈	Mn	55		ug/L				597	6
⌊	Co	59		ug/L				61	20
⌈>	Ge	72		ug/L				265693	0
⌈	Ni	60		ug/L				74	10
⌈	Ni	62		ug/L				268	5
⌈	Cu	63		ug/L				427	4
⌈	Cu	65		ug/L				139	13
⌈	Zn	66		ug/L				448	9
⌈	Zn	67		ug/L				264	3
⌈	Zn	68		ug/L				6650	2
⌈	As	75		ug/L				220	9
⌈	As-1	75		ug/L				8107	0
⌈	Se	82		ug/L				-7	128
⌈	Se	78		ug/L				8254	0
⌊	Mo	98		ug/L				66	7
	Y	89		ug/L				251930	0
	Kr	83		ug/L				163	1
⌈>	In	115		ug/L				292229	1
⌈	Ag	107		ug/L				67	22
⌈	Cd	111		ug/L				134	11
⌈	Cd	114		ug/L				23	3
⌈	Sb	121		ug/L				195	11
⌈	Sb	123		ug/L				134	24
⌈	Ba	135		ug/L				27	15
⌊	Ba	137		ug/L				54	2
⌈>	Tb	159		ug/L				371120	0
⌈	Tl	205		ug/L				184	15
⌈	Pb	208		ug/L				583	6
⌈	Bi	209		ug/L				324859	0
⌈	Th	232		ug/L				587	19
⌊	U	238		ug/L				154	15

Quantitative Analysis - Calibration Report

Sample Date/Time: Tuesday, April 30, 2013 09:42:02
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

Analyte	Mass	r Corr Coeff	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	0.9999	0.0013	10	20	50	100	
C	13							
Cl	37							
Sc	45							
V	51	1.0000	0.0447	10	20	50	100	
V-1	51	1.0000	0.0453	10	20	50	100	
Cr	52	1.0000	0.0384	10	20	50	100	
Cr	53	1.0000	0.0045	10	20	50	100	
Mn	55	1.0000	0.0629	10	20	50	100	
Co	59	1.0000	0.0471	10	20	50	100	
Ge	72							
Ni	60	1.0000	0.0092	10	20	50	100	
Ni	62	1.0000	0.0013	10	20	50	100	
Cu	63	1.0000	0.0199	10	20	50	100	
Cu	65	1.0000	0.0093	10	20	50	100	
Zn	66	1.0000	0.0059	10	20	50	100	
Zn	67	1.0000	0.0010	10	20	50	100	
Zn	68	1.0000	0.0041	10	20	50	100	
As	75	1.0000	0.0056	10	20	50	100	
As-1	75	1.0000	0.0055	10	20	50	100	
Se	82	1.0000	0.0006	10	20	50	100	
Se	78	1.0000	0.0015	10	20	50	100	
Mo	98	1.0000	0.0210	10	20	50	100	
Y	89							
Kr	83							
In	115							
Ag	107	1.0000	0.0323	10	20	50	100	
Cd	111	1.0000	0.0083	10	20	50	100	
Cd	114	1.0000	0.0192	10	20	50	100	
Sb	121	1.0000	0.0277	10	20	50	100	
Sb	123	1.0000	0.0210	10	20	50	100	
Ba	135	1.0000	0.0069	10	20	50	100	
Ba	137	1.0000	0.0119	10	20	50	100	
Tb	159							
Tl	205	0.9998	0.0731	10	20	50	100	
Pb	208	1.0000	0.1020	10	20	50	100	
Bi	209							
Th	232	1.0000	0.1212	10	20	50	100	
U	238	1.0000	0.1331	10	20	50	100	

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV ZZZZZZ no sample in place
Sample Dil Factor:
Comments: 44-3073
Sample Date/Time: Tuesday, April 30, 2013 09:47:50
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			343935	362	7
[	**Be**	**9**	**61.261**	ug/L	17.447	28	9	27	29
	C	**13**		mg/L			3671	4799	0
	Cl	**37**		mg/L			1974717	989539	1
[>	**Sc**	**45**		ug/L			246313	2889	1
[	**V**	**51**	**15.851**	ug/L	2.343	14	2058	2068	13
[	**V-1**	**51**	**70.841**	ug/L	1.408	1	10972	9395	0
[	**Cr**	**52**	**39.200**	ug/L	1.074	2	5720	4413	2
[	**Cr**	**53**	**214.141**	ug/L	4.571	2	3496	2841	3
[	**Mn**	**55**	**10.893**	ug/L	0.220	2	597	1987	1
[	**Co**	**59**	**0.277**	ug/L	0.009	3	61	38	1
[>	**Ge**	**72**		ug/L			265693	160	6
[	**Ni**	**60**	**22.244**	ug/L	5.562	25	74	32	25
[	**Ni**	**62**	**603.949**	ug/L	72.270	11	268	130	5
[	**Cu**	**63**	**67.756**	ug/L	7.415	10	427	216	4
[	**Cu**	**65**	**37.454**	ug/L	9.916	26	139	55	19
[	**Zn**	**66**	**59.021**	ug/L	8.670	14	448	56	17
[	**Zn**	**67**	**1024.048**	ug/L	146.684	14	264	162	11
[	**Zn**	**68**	**12611.648**	ug/L	962.969	7	6650	8239	2
[	**As**	**75**	**2607.384**	ug/L	201.407	7	220	2337	1
[	**As-1**	**75**	**11454.277**	ug/L	778.288	6	8107	10077	1
[	**Se**	**82**	**-487.275**	ug/L	67.358	13	-7	-49	19
[	**Se**	**78**	**42753.846**	ug/L	2834.651	6	8254	10164	1
[	**Mo**	**98**	**6.754**	ug/L	1.519	22	66	22	21
	Y	**89**		ug/L			251930	33	20
	Kr	**83**		ug/L			163	1017	1
[>	**In**	**115**		ug/L			292229	38	34
[	**Ag**	**107**	**23.406**	ug/L	2.399	10	67	28	34
[	**Cd**	**111**	**103.227**	ug/L	48.387	46	134	29	16
[	**Cd**	**114**	**44.562**	ug/L	14.225	31	23	30	13
[	**Sb**	**121**	**37.879**	ug/L	12.469	32	195	37	17
[	**Sb**	**123**	**46.571**	ug/L	23.825	51	134	33	19
[	**Ba**	**135**	**155.201**	ug/L	68.606	44	27	36	3
[	**Ba**	**137**	**70.527**	ug/L	17.819	25	54	30	16
[>	**Tb**	**159**		ug/L			371120	32	16
[	**Tl**	**205**	**36.528**	ug/L	5.273	14	184	87	24
[	**Pb**	**208**	**33.823**	ug/L	3.532	10	583	110	7
[	**Bi**	**209**		ug/L			324859	42	9
[	**Th**	**232**	**10.140**	ug/L	0.405	3	587	40	17
[	**U**	**238**	**7.391**	ug/L	2.445	33	154	30	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:56:21
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			343935	349140	0
⌊	Be	9	49.466	ug/L	0.513	1	9	21612	1
	C	13		mg/L			3671	5249	3
	Cl	37		mg/L			1974717	1937489	0
⌈>	Sc	45		ug/L			246313	242911	0
|	V	51	51.382	ug/L	0.548	1	2058	559773	1
|	V-1	51	51.306	ug/L	0.441	0	10972	575117	1
|	Cr	52	51.089	ug/L	0.442	0	5720	481932	1
|	Cr	53	50.858	ug/L	0.381	0	3496	59365	0
|	Mn	55	51.304	ug/L	0.766	1	597	784630	1
⌊	Co	59	51.655	ug/L	0.078	0	61	590706	0
⌈>	Ge	72		ug/L			265693	256885	0
|	Ni	60	51.196	ug/L	0.335	0	74	120863	0
|	Ni	62	51.901	ug/L	0.520	1	268	18173	0
|	Cu	63	52.055	ug/L	0.337	0	427	266694	0
|	Cu	65	52.588	ug/L	0.299	0	139	125659	0
|	Zn	66	51.798	ug/L	0.553	1	448	79364	1
|	Zn	67	50.946	ug/L	0.240	0	264	13198	0
|	Zn	68	52.193	ug/L	0.501	0	6650	61023	0
|	As	75	52.991	ug/L	0.450	0	220	76317	0
|	As-1	75	52.537	ug/L	0.473	0	8107	81833	0
|	Se	82	81.217	ug/L	0.437	0	-7	13030	0
|	Se	78	81.592	ug/L	0.545	0	8254	39032	0
⌊	Mo	98	50.828	ug/L	0.126	0	66	274443	0
	Y	89		ug/L			251930	243615	1
	Kr	83		ug/L			163	174	1
⌈>	In	115		ug/L			292229	282937	0
|	Ag	107	51.615	ug/L	0.449	0	67	471563	0
|	Cd	111	50.511	ug/L	0.251	0	134	118349	0
|	Cd	114	50.522	ug/L	0.688	1	23	274405	1
|	Sb	121	51.416	ug/L	0.470	0	195	403617	0
|	Sb	123	51.400	ug/L	0.358	0	134	306163	0
|	Ba	135	51.478	ug/L	0.807	1	27	99927	1
⌊	Ba	137	51.345	ug/L	0.854	1	54	173356	1
⌈>	Tb	159		ug/L			371120	362898	0
|	Tl	205	53.086	ug/L	0.976	1	184	1407980	0
|	Pb	208	52.838	ug/L	0.409	0	583	1955689	0
|	Bi	209		ug/L			324859	311939	0
|	Th	232	51.966	ug/L	0.509	0	587	2286669	1
⌊	U	238	51.971	ug/L	0.306	0	154	2509576	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:02:39
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			343935	351739	0
⌊	Be	9	-0.003	ug/L	0.004	133	9	8	22
	C	13		mg/L			3671	3747	0
	Cl	37		mg/L			1974717	1967649	0
⌈>	Sc	45		ug/L			246313	243452	0
⌈	V	51	0.016	ug/L	0.036	225	2058	2208	17
⌊	V-1	51	-0.037	ug/L	0.007	19	10972	10437	0
⌈	Cr	52	-0.014	ug/L	0.009	64	5720	5525	1
⌊	Cr	53	-0.182	ug/L	0.098	54	3496	3255	3
⌈	Mn	55	0.004	ug/L	0.002	50	597	648	4
⌊	Co	59	0.000	ug/L	0.001	267	61	65	19
⌈>	Ge	72		ug/L			265693	261138	0
⌈	Ni	60	0.003	ug/L	0.003	103	74	80	8
⌊	Ni	62	-0.076	ug/L	0.071	93	268	237	9
⌈	Cu	63	0.005	ug/L	0.000	7	427	443	1
⌊	Cu	65	0.003	ug/L	0.001	45	139	144	2
⌈	Zn	66	0.011	ug/L	0.023	202	448	458	8
⌊	Zn	67	-0.011	ug/L	0.106	946	264	257	10
⌈	Zn	68	0.005	ug/L	0.099	2078	6650	6540	1
⌈	As	75	0.014	ug/L	0.015	108	220	237	9
⌊	As-1	75	0.022	ug/L	0.046	206	8107	8000	0
⌈	Se	82	-0.008	ug/L	0.021	281	-7	-8	40
⌊	Se	78	0.085	ug/L	0.225	263	8254	8145	0
⌊	Mo	98	0.003	ug/L	0.004	106	66	83	23
	Y	89		ug/L			251930	248402	0
	Kr	83		ug/L			163	170	3
⌈>	In	115		ug/L			292229	287704	1
⌈	Ag	107	0.002	ug/L	0.003	167	67	81	30
⌈	Cd	111	0.003	ug/L	0.010	298	134	140	16
⌊	Cd	114	0.000	ug/L	0.002	794	23	24	42
⌈	Sb	121	0.006	ug/L	0.007	110	195	240	21
⌊	Sb	123	0.007	ug/L	0.005	71	134	175	16
⌈	Ba	135	0.007	ug/L	0.007	102	27	40	33
⌊	Ba	137	0.001	ug/L	0.002	486	54	55	14
⌈>	Tb	159		ug/L			371120	365621	0
⌈	Tl	205	0.002	ug/L	0.003	185	184	223	34
⌈	Pb	208	0.003	ug/L	0.002	60	583	692	9
⌈	Bi	209		ug/L			324859	318664	1
⌈	Th	232	0.008	ug/L	0.006	72	587	953	28
⌊	U	238	0.002	ug/L	0.002	71	154	267	30

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:08:08
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			343935	351775	0
[	Be	9	48.204	ug/L	0.506	1	9	21219	0
	C	13		mg/L			3671	3911	1
	Cl	37		mg/L			1974717	1953136	0
[>	Sc	45		ug/L			246313	245448	0
|	V	51	49.771	ug/L	0.179	0	2058	547943	0
|	V-1	51	49.796	ug/L	0.171	0	10972	564336	0
|	Cr	52	49.698	ug/L	0.326	0	5720	473854	0
|	Cr	53	49.780	ug/L	0.169	0	3496	58787	0
|	Mn	55	49.922	ug/L	0.416	0	597	771500	0
[	Co	59	49.180	ug/L	0.273	0	61	568279	0
[>	Ge	72		ug/L			265693	259813	0
|	Ni	60	49.813	ug/L	0.400	0	74	118941	0
|	Ni	62	50.268	ug/L	0.107	0	268	17810	0
|	Cu	63	50.269	ug/L	0.359	0	427	260490	0
|	Cu	65	50.304	ug/L	0.563	1	139	121575	0
|	Zn	66	50.752	ug/L	0.401	0	448	78656	0
|	Zn	67	50.699	ug/L	0.237	0	264	13285	0
|	Zn	68	51.319	ug/L	0.095	0	6650	60795	0
|	As	75	50.136	ug/L	0.222	0	220	73040	0
|	As-1	75	50.081	ug/L	0.050	0	8107	79269	0
|	Se	82	50.669	ug/L	0.084	0	-7	8219	0
|	Se	78	50.547	ug/L	0.525	1	8254	27529	1
[	Mo	98	49.789	ug/L	0.552	1	66	271894	0
	Y	89		ug/L			251930	248001	0
	Kr	83		ug/L			163	175	9
[>	In	115		ug/L			292229	285591	0
|	Ag	107	49.913	ug/L	0.433	0	67	460303	0
|	Cd	111	49.203	ug/L	0.408	0	134	116368	0
|	Cd	114	49.419	ug/L	0.295	0	23	270932	0
|	Sb	121	50.003	ug/L	0.055	0	195	396218	0
|	Sb	123	49.499	ug/L	0.281	0	134	297614	0
|	Ba	135	50.269	ug/L	0.307	0	27	98500	0
[	Ba	137	50.185	ug/L	0.351	0	54	171037	0
[>	Tb	159		ug/L			371120	370208	0
|	Tl	205	50.798	ug/L	0.310	0	184	1374589	0
|	Pb	208	50.382	ug/L	0.300	0	583	1902411	0
|	Bi	209		ug/L			324859	316791	0
|	Th	232	49.745	ug/L	0.111	0	587	2233062	0
[	U	238	50.509	ug/L	0.348	0	154	2488174	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:14:26
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			343935	354260	0
[	Be	9	-0.002	ug/L	0.003	209	9	9	15
	C	13		mg/L			3671	3711	2
	Cl	37		mg/L			1974717	1954417	0
[>	Sc	45		ug/L			246313	243146	0
[	V	51	-0.021	ug/L	0.011	49	2058	1803	6
[	V-1	51	-0.080	ug/L	0.010	12	10972	9951	1
[	Cr	52	-0.017	ug/L	0.002	9	5720	5490	0
[	Cr	53	-0.205	ug/L	0.041	20	3496	3225	1
[	Mn	55	0.001	ug/L	0.000	18	597	610	0
[	Co	59	0.001	ug/L	0.000	37	61	71	5
[>	Ge	72		ug/L			265693	259579	0
[	Ni	60	-0.001	ug/L	0.003	322	74	70	11
[	Ni	62	-0.012	ug/L	0.023	187	268	257	2
[	Cu	63	0.002	ug/L	0.000	19	427	427	0
[	Cu	65	-0.007	ug/L	0.004	55	139	118	8
[	Zn	66	0.022	ug/L	0.009	39	448	471	2
[	Zn	67	0.035	ug/L	0.062	177	264	267	6
[	Zn	68	0.024	ug/L	0.036	149	6650	6522	0
[	As	75	0.015	ug/L	0.012	82	220	236	7
[	As-1	75	-0.030	ug/L	0.053	176	8107	7878	0
[	Se	82	0.005	ug/L	0.043	812	-7	-6	109
[	Se	78	-0.120	ug/L	0.153	127	8254	8018	0
[	Mo	98	0.005	ug/L	0.004	86	66	91	25
	Y	89		ug/L			251930	245565	0
	Kr	83		ug/L			163	165	5
[>	In	115		ug/L			292229	283942	0
[	Ag	107	0.002	ug/L	0.002	102	67	86	24
[	Cd	111	0.008	ug/L	0.001	12	134	149	1
[	Cd	114	0.003	ug/L	0.002	46	23	41	20
[	Sb	121	0.008	ug/L	0.010	130	195	251	31
[	Sb	123	0.011	ug/L	0.007	63	134	195	20
[	Ba	135	0.003	ug/L	0.004	128	27	33	25
[	Ba	137	0.001	ug/L	0.004	495	54	55	24
[>	Tb	159		ug/L			371120	367463	0
[	Tl	205	0.003	ug/L	0.002	71	184	257	21
[	Pb	208	0.004	ug/L	0.002	60	583	717	12
[	Bi	209		ug/L			324859	321393	0
[	Th	232	0.017	ug/L	0.010	61	587	1331	35
[	U	238	0.003	ug/L	0.002	63	154	305	32

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~LOW CHECK~~ ZZZZZZ
Sample Dil Factor: 4-30-13
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:19:54
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			343935	357308	0
[	Be	9	0.161	ug/L	0.013	8	9	82	7
	C	13		mg/L			3671	4328	3
	Cl	37		mg/L			1974717	1963018	1
[>	Sc	45		ug/L			246313	246785	0
[	V	51	0.196	ug/L	0.014	7	2058	4222	3
[	V-1	51	0.106	ug/L	0.014	13	10972	12180	0
[	Cr	52	0.482	ug/L	0.012	2	5720	10298	0
[	Cr	53	0.184	ug/L	0.029	15	3496	3708	0
[	Mn	55	0.487	ug/L	0.002	0	597	8160	0
[	Co	59	0.206	ug/L	0.002	1	61	2451	0
[>	Ge	72		ug/L			265693	263305	0
[	Ni	60	0.480	ug/L	0.023	4	74	1235	4
[	Ni	62	0.355	ug/L	0.073	20	268	391	6
[	Cu	63	0.512	ug/L	0.012	2	427	3106	2
[	Cu	65	0.520	ug/L	0.014	2	139	1411	2
[	Zn	66	4.027	ug/L	0.068	1	448	6734	1
[	Zn	67	3.658	ug/L	0.098	2	264	1214	1
[	Zn	68	3.934	ug/L	0.186	4	6650	10807	1
[	As	75	0.225	ug/L	0.022	9	220	549	5
[	As-1	75	0.120	ug/L	0.021	17	8107	8207	0
[	Se	82	0.495	ug/L	0.058	11	-7	74	12
[	Se	78	0.201	ug/L	0.089	44	8254	8258	0
[	Mo	98	0.197	ug/L	0.004	1	66	1156	2
	Y	89		ug/L			251930	249343	1
	Kr	83		ug/L			163	173	5
[>	In	115		ug/L			292229	290342	1
[	Ag	107	0.192	ug/L	0.006	3	67	1867	1
[	Cd	111	0.110	ug/L	0.008	7	134	399	4
[	Cd	114	0.108	ug/L	0.004	3	23	627	4
[	Sb	121	0.179	ug/L	0.003	1	195	1638	2
[	Sb	123	0.189	ug/L	0.003	1	134	1288	2
[	Ba	135	0.491	ug/L	0.026	5	27	1003	3
[	Ba	137	0.482	ug/L	0.019	3	54	1721	2
[>	Tb	159		ug/L			371120	370549	0
[	Tl	205	0.210	ug/L	0.009	4	184	5882	3
[	Pb	208	0.102	ug/L	0.001	1	583	4440	1
[	Bi	209		ug/L			324859	323558	0
[	Th	232	0.206	ug/L	0.002	1	587	9849	1
[	U	238	0.206	ug/L	0.004	1	154	10325	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:26:44
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L				351490	0
[	Be	9		ug/L				6	40
	C	13		mg/L				3778	1
	Cl	37		mg/L				1953277	0
[>	Sc	45		ug/L				244478	0
[	V	51		ug/L				2179	16
[	V-1	51		ug/L				9757	2
[	Cr	52		ug/L				5463	1
[	Cr	53		ug/L				3040	5
[	Mn	55		ug/L				573	3
[	Co	59		ug/L				41	16
[>	Ge	72		ug/L				261623	0
[	Ni	60		ug/L				69	8
[	Ni	62		ug/L				262	11
[	Cu	63		ug/L				391	4
[	Cu	65		ug/L				128	4
[	Zn	66		ug/L				451	4
[	Zn	67		ug/L				252	8
[	Zn	68		ug/L				6673	1
[	As	75		ug/L				247	21
[	As-1	75		ug/L				7957	0
[	Se	82		ug/L				-1	830
[	Se	78		ug/L				8104	0
[	Mo	98		ug/L				33	25
	Y	89		ug/L				248569	0
	Kr	83		ug/L				168	3
[>	In	115		ug/L				286252	0
[	Ag	107		ug/L				44	13
[	Cd	111		ug/L				146	3
[	Cd	114		ug/L				16	1
[	Sb	121		ug/L				66	12
[	Sb	123		ug/L				51	18
[	Ba	135		ug/L				32	12
[	Ba	137		ug/L				35	14
[>	Tb	159		ug/L				365903	1
[	Tl	205		ug/L				85	12
[	Pb	208		ug/L				557	6
[	Bi	209		ug/L				320639	1
[	Th	232		ug/L				327	21
[	U	238		ug/L				56	27

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:32:33
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			351490	379878	1
[	Be	9	46.681	ug/L	0.844	1	6	22185	1
	C	13		mg/L			3778	3960	2
	Cl	37		mg/L			1953277	1842352	0
[>	Sc	45		ug/L			244478	247581	0
[	V	51	49.757	ug/L	0.445	0	2179	552708	1
[	V-1	51	49.560	ug/L	0.270	0	9757	565460	1
[	Cr	52	50.246	ug/L	0.243	0	5463	482960	0
[	Cr	53	49.595	ug/L	0.823	1	3040	58652	0
[	Mn	55	50.330	ug/L	0.378	0	573	784527	0
[	Co	59	50.160	ug/L	0.633	1	41	584471	0
[>	Ge	72		ug/L			261623	258866	0
[	Ni	60	51.448	ug/L	0.066	0	69	122391	0
[	Ni	62	51.790	ug/L	0.678	1	262	18272	0
[	Cu	63	50.504	ug/L	0.176	0	391	260727	0
[	Cu	65	50.460	ug/L	0.513	1	128	121498	0
[	Zn	66	50.501	ug/L	0.379	0	451	77993	0
[	Zn	67	51.291	ug/L	0.591	1	252	13380	0
[	Zn	68	51.533	ug/L	0.447	0	6673	60921	0
[	As	75	50.180	ug/L	0.281	0	247	72868	0
[	As-1	75	50.611	ug/L	0.312	0	7957	79705	0
[	Se	82	53.628	ug/L	0.046	0	-1	8673	0
[	Se	78	55.358	ug/L	0.342	0	8104	29249	0
[	Mo	98	51.640	ug/L	0.265	0	33	280940	0
	Y	89		ug/L			248569	259041	0
	Kr	83		ug/L			168	161	2
[>	In	115		ug/L			286252	296140	0
[	Ag	107	49.916	ug/L	0.263	0	44	477312	0
[	Cd	111	50.014	ug/L	0.046	0	146	122665	0
[	Cd	114	50.018	ug/L	0.190	0	16	284339	0
[	Sb	121	48.446	ug/L	0.581	1	66	397940	1
[	Sb	123	48.321	ug/L	0.077	0	51	301182	0
[	Ba	135	49.930	ug/L	0.225	0	32	101455	0
[	Ba	137	49.843	ug/L	0.397	0	35	176123	0
[>	Tb	159		ug/L			365903	382936	0
[	Tl	205	51.870	ug/L	0.174	0	85	1451755	0
[	Pb	208	51.562	ug/L	0.400	0	557	2013834	0
[	Bi	209		ug/L			320639	330543	0
[	Th	232	51.185	ug/L	0.391	0	327	2376395	0
[	U	238	51.652	ug/L	0.688	1	56	2631728	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:38:51
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			351490	376738	2
[	Be	9	0.003	ug/L	0.004	110	6	8	22
	C	13		mg/L			3778	3743	2
	Cl	37		mg/L			1953277	1890455	0
[>	Sc	45		ug/L			244478	248309	0
[	V	51	0.001	ug/L	0.012	957	2179	2226	5
[	V-1	51	-0.169	ug/L	0.008	4	9757	8013	0
[	Cr	52	0.025	ug/L	0.017	67	5463	5787	2
[	Cr	53	-0.520	ug/L	0.022	4	3040	2504	1
[	Mn	55	0.003	ug/L	0.002	72	573	632	5
[	Co	59	0.002	ug/L	0.001	64	41	65	22
[>	Ge	72		ug/L			261623	259193	0
[	Ni	60	0.004	ug/L	0.005	150	69	77	16
[	Ni	62	-0.102	ug/L	0.019	18	262	224	2
[	Cu	63	0.002	ug/L	0.005	257	391	398	6
[	Cu	65	0.000	ug/L	0.007	2238	128	127	13
[	Zn	66	0.012	ug/L	0.007	61	451	466	2
[	Zn	67	-0.076	ug/L	0.078	103	252	231	8
[	Zn	68	0.274	ug/L	0.018	6	6673	6900	0
[	As	75	-0.026	ug/L	0.022	83	247	207	15
[	As-1	75	0.404	ug/L	0.012	2	7957	8457	0
[	Se	82	0.001	ug/L	0.046	3835	-1	-1	448
[	Se	78	1.509	ug/L	0.083	5	8104	8609	0
[	Mo	98	0.012	ug/L	0.004	31	33	101	20
	Y	89		ug/L			248569	258525	0
	Kr	83		ug/L			168	155	4
[>	In	115		ug/L			286252	292864	0
[	Ag	107	0.005	ug/L	0.002	35	44	90	17
[	Cd	111	0.008	ug/L	0.005	67	146	168	7
[	Cd	114	0.004	ug/L	0.001	34	16	39	19
[	Sb	121	0.019	ug/L	0.009	46	66	226	32
[	Sb	123	0.018	ug/L	0.002	11	51	164	7
[	Ba	135	0.002	ug/L	0.007	353	32	37	36
[	Ba	137	0.008	ug/L	0.001	18	35	63	7
[>	Tb	159		ug/L			365903	378104	0
[	Tl	205	0.007	ug/L	0.003	45	85	269	30
[	Pb	208	0.006	ug/L	0.002	31	557	788	8
[	Bi	209		ug/L			320639	334664	0
[	Th	232	0.022	ug/L	0.010	43	327	1365	32
[	U	238	0.005	ug/L	0.002	38	56	306	31

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:46:09
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L				372846	1
[	Be	9		ug/L				3	33
	C	13		mg/L				3654	2
	Cl	37		mg/L				1915264	1
[>	Sc	45		ug/L				247568	1
[	V	51		ug/L				2050	8
[	V-1	51		ug/L				8477	0
[	Cr	52		ug/L				5621	0
[	Cr	53		ug/L				2690	2
[	Mn	55		ug/L				390	8
[	Co	59		ug/L				40	15
[>	Ge	72		ug/L				261201	0
[	Ni	60		ug/L				38	16
[	Ni	62		ug/L				242	5
[	Cu	63		ug/L				343	4
[	Cu	65		ug/L				82	6
[	Zn	66		ug/L				334	4
[	Zn	67		ug/L				211	10
[	Zn	68		ug/L				6668	1
[	As	75		ug/L				227	13
[	As-1	75		ug/L				8290	1
[	Se	82		ug/L				-8	103
[	Se	78		ug/L				8442	0
[	Mo	98		ug/L				35	7
	Y	89		ug/L				254415	0
	Kr	83		ug/L				169	2
[>	In	115		ug/L				290439	0
[	Ag	107		ug/L				38	10
[	Cd	111		ug/L				146	8
[	Cd	114		ug/L				18	21
[	Sb	121		ug/L				87	20
[	Sb	123		ug/L				61	22
[	Ba	135		ug/L				21	23
[	Ba	137		ug/L				26	14
[>	Tb	159		ug/L				374240	0
[	Tl	205		ug/L				105	22
[	Pb	208		ug/L				382	5
[	Bi	209		ug/L				328776	0
[	Th	232		ug/L				456	29
[	U	238		ug/L				84	12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:54:19
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	364406	1
[	Be	9	47.692	ug/L	0.254	0	3	21741	0
	C	13		mg/L			3654	3957	3
	Cl	37		mg/L			1915264	1895227	0
[>	Sc	45		ug/L			247568	245893	0
[	V	51	49.903	ug/L	0.284	0	2050	550371	0
[	V-1	51	49.794	ug/L	0.215	0	8477	562801	0
[	Cr	52	50.252	ug/L	0.315	0	5621	479816	0
[	Cr	53	49.886	ug/L	0.462	0	2690	58194	1
[	Mn	55	50.216	ug/L	0.200	0	390	777253	0
[	Co	59	49.498	ug/L	0.459	0	40	572966	1
[>	Ge	72		ug/L			261201	260237	0
[	Ni	60	50.299	ug/L	0.498	0	38	120255	0
[	Ni	62	51.142	ug/L	0.179	0	242	18124	1
[	Cu	63	50.021	ug/L	0.502	1	343	259547	0
[	Cu	65	50.296	ug/L	0.441	0	82	121699	0
[	Zn	66	50.875	ug/L	0.264	0	334	78868	0
[	Zn	67	50.535	ug/L	1.421	2	211	13214	2
[	Zn	68	50.871	ug/L	0.077	0	6668	60549	0
[	As	75	50.204	ug/L	0.300	0	227	73267	0
[	As-1	75	49.821	ug/L	0.431	0	8290	79342	0
[	Se	82	52.980	ug/L	0.342	0	-8	8606	0
[	Se	78	51.725	ug/L	0.724	1	8442	28351	0
[	Mo	98	50.192	ug/L	0.736	1	35	274494	0
	Y	89		ug/L			254415	254200	0
	Kr	83		ug/L			169	173	2
[>	In	115		ug/L			290439	290015	0
[	Ag	107	49.478	ug/L	0.479	0	38	463339	1
[	Cd	111	49.927	ug/L	0.387	0	146	119918	0
[	Cd	114	50.046	ug/L	0.455	0	18	278619	1
[	Sb	121	48.950	ug/L	0.318	0	87	393776	0
[	Sb	123	49.016	ug/L	0.350	0	61	299204	0
[	Ba	135	49.853	ug/L	0.293	0	21	99193	0
[	Ba	137	50.049	ug/L	0.145	0	26	173185	0
[>	Tb	159		ug/L			374240	377410	0
[	Tl	205	51.804	ug/L	0.316	0	105	1428962	0
[	Pb	208	50.956	ug/L	0.207	0	382	1961311	0
[	Bi	209		ug/L			328776	321925	0
[	Th	232	50.442	ug/L	0.345	0	456	2308165	0
[	U	238	50.698	ug/L	0.269	0	84	2546010	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:00:38
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	367952	1
[	Be	9	0.006	ug/L	0.008	148	3	6	60
	C	13		mg/L			3654	3616	2
	Cl	37		mg/L			1915264	1924186	0
[>	Sc	45		ug/L			247568	244285	0
[	V	51	0.005	ug/L	0.044	848	2050	2078	22
[	V-1	51	-0.001	ug/L	0.005	821	8477	8358	1
[	Cr	52	0.001	ug/L	0.012	1316	5621	5555	1
[	Cr	53	-0.018	ug/L	0.126	719	2690	2636	5
[	Mn	55	0.004	ug/L	0.001	17	390	445	1
[	Co	59	0.002	ug/L	0.001	82	40	57	25
[>	Ge	72		ug/L			261201	258157	0
[	Ni	60	0.004	ug/L	0.004	98	38	47	19
[	Ni	62	-0.000	ug/L	0.019	7565	242	239	2
[	Cu	63	0.003	ug/L	0.003	111	343	354	4
[	Cu	65	0.008	ug/L	0.007	87	82	100	16
[	Zn	66	-0.002	ug/L	0.012	799	334	328	5
[	Zn	67	0.010	ug/L	0.083	850	211	211	9
[	Zn	68	-0.122	ug/L	0.085	69	6668	6462	1
[	As	75	0.028	ug/L	0.005	19	227	264	2
[	As-1	75	-0.046	ug/L	0.013	27	8290	8128	0
[	Se	82	0.034	ug/L	0.044	127	-8	-3	208
[	Se	78	-0.215	ug/L	0.050	23	8442	8261	0
[	Mo	98	0.009	ug/L	0.003	30	35	82	17
	Y	89		ug/L			254415	250211	0
	Kr	83		ug/L			169	171	2
[>	In	115		ug/L			290439	285382	0
[	Ag	107	0.005	ug/L	0.003	57	38	80	31
[	Cd	111	-0.002	ug/L	0.002	144	146	140	3
[	Cd	114	0.002	ug/L	0.001	40	18	28	15
[	Sb	121	0.018	ug/L	0.005	24	87	230	15
[	Sb	123	0.018	ug/L	0.008	46	61	169	30
[	Ba	135	0.001	ug/L	0.003	231	21	23	24
[	Ba	137	0.005	ug/L	0.002	35	26	43	14
[>	Tb	159		ug/L			374240	368811	0
[	Tl	205	0.006	ug/L	0.002	38	105	255	22
[	Pb	208	0.004	ug/L	0.002	50	382	526	14
[	Bi	209		ug/L			328776	326617	1
[	Th	232	0.020	ug/L	0.011	54	456	1326	36
[	U	238	0.004	ug/L	0.002	47	84	273	33

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:06:06
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	359227	0
[	Be	9	0.182	ug/L	0.012	6	3	85	5
	C	13		mg/L			3654	4326	1
	Cl	37		mg/L			1915264	1968057	0
[>	Sc	45		ug/L			247568	245662	0
[	V	51	0.164	ug/L	0.010	6	2050	3837	2
[	V-1	51	0.254	ug/L	0.010	4	8477	11237	1
[	Cr	52	0.504	ug/L	0.005	1	5621	10332	0
[	Cr	53	0.777	ug/L	0.008	0	2690	3533	0
[	Mn	55	0.503	ug/L	0.010	2	390	8154	1
[	Co	59	0.201	ug/L	0.004	2	40	2370	2
[>	Ge	72		ug/L			261201	262612	0
[	Ni	60	0.490	ug/L	0.016	3	38	1221	3
[	Ni	62	0.503	ug/L	0.092	18	242	420	7
[	Cu	63	0.533	ug/L	0.007	1	343	3132	0
[	Cu	65	0.518	ug/L	0.014	2	82	1348	1
[	Zn	66	4.071	ug/L	0.113	2	334	6678	3
[	Zn	67	3.657	ug/L	0.039	1	211	1162	0
[	Zn	68	3.778	ug/L	0.157	4	6668	10744	0
[	As	75	0.228	ug/L	0.003	1	227	562	0
[	As-1	75	-0.095	ug/L	0.027	28	8290	8198	0
[	Se	82	0.511	ug/L	0.069	13	-8	74	15
[	Se	78	-0.654	ug/L	0.066	10	8442	8233	0
[	Mo	98	0.198	ug/L	0.006	2	35	1125	2
	Y	89		ug/L			254415	250244	0
	Kr	83		ug/L			169	171	4
[>	In	115		ug/L			290439	289519	0
[	Ag	107	0.191	ug/L	0.005	2	38	1827	2
[	Cd	111	0.103	ug/L	0.010	9	146	392	6
[	Cd	114	0.103	ug/L	0.006	5	18	591	4
[	Sb	121	0.191	ug/L	0.006	3	87	1622	2
[	Sb	123	0.191	ug/L	0.004	2	61	1223	2
[	Ba	135	0.492	ug/L	0.020	4	21	998	4
[	Ba	137	0.491	ug/L	0.005	1	26	1724	0
[>	Tb	159		ug/L			374240	368074	0
[	Tl	205	0.211	ug/L	0.005	2	105	5768	1
[	Pb	208	0.111	ug/L	0.002	1	382	4531	1
[	Bi	209		ug/L			328776	323369	0
[	Th	232	0.212	ug/L	0.002	0	456	9923	1
[	U	238	0.206	ug/L	0.002	0	84	10153	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:11:34
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	355406	1
[	Be	9	0.001	ug/L	0.002	117	3	4	17
	C	13		mg/L			3654	16263	1
	Cl	37		mg/L			1915264	3238434	0
[>	Sc	45		ug/L			247568	236390	0
[	V	51	0.077	ug/L	0.037	48	2050	2772	14
[	V-1	51	0.452	ug/L	0.016	3	8477	12933	1
[	Cr	52	0.502	ug/L	0.024	4	5621	9923	2
[	Cr	53	1.684	ug/L	0.129	7	2690	4371	2
[	Mn	55	0.043	ug/L	0.002	4	390	1009	2
[	Co	59	0.019	ug/L	0.002	11	40	247	9
[>	Ge	72		ug/L			261201	254182	0
[	Ni	60	0.411	ug/L	0.018	4	38	997	4
[	Ni	62	3.597	ug/L	0.168	4	242	1464	3
[	Cu	63	0.429	ug/L	0.014	3	343	2506	2
[	Cu	65	0.552	ug/L	0.039	6	82	1383	6
[	Zn	66	1.264	ug/L	0.015	1	334	2231	0
[	Zn	67	1.374	ug/L	0.157	11	211	550	7
[	Zn	68	0.241	ug/L	0.116	48	6668	6738	1
[	As	75	0.092	ug/L	0.049	52	227	351	19
[	As-1	75	-0.170	ug/L	0.068	40	8290	7831	1
[	Se	82	-0.025	ug/L	0.052	211	-8	-12	65
[	Se	78	-0.862	ug/L	0.088	10	8442	7890	0
[	Mo	98	392.934	ug/L	1.638	0	35	2098836	0
	Y	89		ug/L			254415	240936	0
	Kr	83		ug/L			169	185	2
[>	In	115		ug/L			290439	271475	0
[	Ag	107	0.021	ug/L	0.005	21	38	222	19
[	Cd	111	0.042	ug/L	0.055	131	146	230	53
[	Cd	114	0.647	ug/L	0.014	2	18	3389	3
[	Sb	121	0.053	ug/L	0.003	5	87	481	5
[	Sb	123	0.052	ug/L	0.007	13	61	352	11
[	Ba	135	0.048	ug/L	0.007	14	21	109	11
[	Ba	137	0.040	ug/L	0.004	9	26	155	9
[>	Tb	159		ug/L			374240	363758	1
[	Tl	205	0.020	ug/L	0.002	9	105	631	8
[	Pb	208	0.033	ug/L	0.001	1	382	1580	0
[	Bi	209		ug/L			328776	300882	0
[	Th	232	0.022	ug/L	0.005	24	456	1427	15
[	U	238	0.000	ug/L	0.000	101	84	100	18

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:17:32
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			372846	357454	0
[	**Be**	**9**	**0.008**	ug/L	0.004	54	3	7	26
	C	**13**		mg/L			3654	16239	1
	Cl	**37**		mg/L			1915264	3178779	0
[>	**Sc**	**45**		ug/L			247568	232645	0
[	**V**	**51**	**-0.291**	ug/L	0.095	32	2050	-1101	89
[	**V-1**	**51**	**0.453**	ug/L	0.005	1	8477	12742	0
[	**Cr**	**52**	**19.994**	ug/L	0.177	0	5621	183806	0
[	**Cr**	**53**	**21.527**	ug/L	0.196	0	2690	25197	1
[	**Mn**	**55**	**19.479**	ug/L	0.096	0	390	285480	0
[	**Co**	**59**	**19.364**	ug/L	0.116	0	40	212090	0
[>	**Ge**	**72**		ug/L			261201	247882	0
[	**Ni**	**60**	**19.637**	ug/L	0.270	1	38	44743	0
[	**Ni**	**62**	**22.629**	ug/L	0.320	1	242	7766	0
[	**Cu**	**63**	**19.648**	ug/L	0.246	1	343	97309	0
[	**Cu**	**65**	**19.827**	ug/L	0.119	0	82	45746	1
[	**Zn**	**66**	**20.293**	ug/L	0.206	1	334	30157	1
[	**Zn**	**67**	**18.342**	ug/L	0.200	1	211	4697	1
[	**Zn**	**68**	**18.870**	ug/L	0.209	1	6668	25375	1
[	**As**	**75**	**19.483**	ug/L	0.087	0	227	27215	0
[	**As-1**	**75**	**19.625**	ug/L	0.073	0	8290	34539	0
[	**Se**	**82**	**0.016**	ug/L	0.081	492	-8	-5	211
[	**Se**	**78**	**-0.745**	ug/L	0.096	12	8442	7738	0
[	**Mo**	**98**	**389.791**	ug/L	4.026	1	35	2030433	1
	Y	**89**		ug/L			254415	237329	0
	Kr	**83**		ug/L			169	179	9
[>	**In**	**115**		ug/L			290439	265025	1
[	**Ag**	**107**	**19.706**	ug/L	0.197	1	38	168644	0
[	**Cd**	**111**	**20.146**	ug/L	0.168	0	146	44296	0
[	**Cd**	**114**	**20.728**	ug/L	0.066	0	18	105463	1
[	**Sb**	**121**	**0.056**	ug/L	0.004	7	87	488	7
[	**Sb**	**123**	**0.056**	ug/L	0.001	1	61	367	1
[	**Ba**	**135**	**0.054**	ug/L	0.005	8	21	117	8
[	**Ba**	**137**	**0.047**	ug/L	0.005	10	26	171	8
[>	**Tb**	**159**		ug/L			374240	358430	1
[	**Tl**	**205**	**0.020**	ug/L	0.003	13	105	628	10
[	**Pb**	**208**	**0.037**	ug/L	0.001	3	382	1707	3
[	**Bi**	**209**		ug/L			328776	296309	0
[	**Th**	**232**	**0.014**	ug/L	0.005	33	456	1053	19
[	**U**	**238**	**-0.000**	ug/L	0.000	302	84	76	15

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:23:29
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	351431	0
[	Be	9	189.900	ug/L	1.848	0	3	83480	1
	C	13		mg/L			3654	5960	3
	Cl	37		mg/L			1915264	1845118	0
[>	Sc	45		ug/L			247568	233222	0
[	V	51	199.061	ug/L	0.644	0	2050	2076471	0
[	V-1	51	199.215	ug/L	0.049	0	8477	2111671	0
[	Cr	52	197.461	ug/L	0.532	0	5621	1772716	0
[	Cr	53	198.020	ug/L	1.408	0	2690	211574	1
[	Mn	55	194.320	ug/L	1.652	0	390	2851660	0
[	Co	59	190.421	ug/L	0.187	0	40	2090543	0
[>	Ge	72		ug/L			261201	249236	0
[	Ni	60	189.411	ug/L	1.304	0	38	433618	0
[	Ni	62	191.890	ug/L	1.684	0	242	64489	0
[	Cu	63	189.921	ug/L	0.678	0	343	942930	0
[	Cu	65	190.599	ug/L	0.819	0	82	441482	0
[	Zn	66	191.276	ug/L	1.839	0	334	283110	0
[	Zn	67	190.554	ug/L	2.266	1	211	47167	0
[	Zn	68	192.458	ug/L	1.230	0	6668	201681	0
[	As	75	197.399	ug/L	0.219	0	227	275275	0
[	As-1	75	197.085	ug/L	0.493	0	8290	277231	0
[	Se	82	197.874	ug/L	2.841	1	-8	30809	1
[	Se	78	196.745	ug/L	1.067	0	8442	80701	0
[	Mo	98	198.450	ug/L	3.069	1	35	1039353	1
	Y	89		ug/L			254415	237387	0
	Kr	83		ug/L			169	199	1
[>	In	115		ug/L			290439	267364	0
[	Ag	107	195.526	ug/L	0.824	0	38	1687864	0
[	Cd	111	196.632	ug/L	2.389	1	146	434987	0
[	Cd	114	198.306	ug/L	1.520	0	18	1017716	0
[	Sb	121	200.336	ug/L	0.882	0	87	1485476	0
[	Sb	123	200.439	ug/L	1.499	0	61	1127775	0
[	Ba	135	204.399	ug/L	2.377	1	21	374851	0
[	Ba	137	205.450	ug/L	1.713	0	26	655327	0
[>	Tb	159		ug/L			374240	357060	1
[	Tl	205	196.680	ug/L	3.582	1	105	5131488	0
[	Pb	208	196.875	ug/L	2.464	1	382	7167235	0
[	Bi	209		ug/L			328776	285921	0
[	Th	232	202.746	ug/L	2.331	1	456	8775015	0
[	U	238	203.938	ug/L	4.546	2	84	9686711	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:29:46
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	343603	0
[	Be	9	281.508	ug/L	1.695	0	3	120990	0
	C	13		mg/L			3654	6331	2
	Cl	37		mg/L			1915264	1855505	0
[>	Sc	45		ug/L			247568	232059	0
[	V	51	298.847	ug/L	2.227	0	2050	3100903	0
[	V-1	51	298.787	ug/L	2.279	0	8477	3147352	0
[	Cr	52	295.391	ug/L	1.869	0	5621	2636073	0
[	Cr	53	295.343	ug/L	3.119	1	2690	312730	0
[	Mn	55	291.560	ug/L	3.752	1	390	4257000	0
[	Co	59	282.148	ug/L	3.849	1	40	3081980	0
[>	Ge	72		ug/L			261201	245618	0
[	Ni	60	281.977	ug/L	2.899	1	38	636154	0
[	Ni	62	285.530	ug/L	1.770	0	242	94458	0
[	Cu	63	279.918	ug/L	0.816	0	343	1369434	0
[	Cu	65	281.188	ug/L	1.416	0	82	641827	0
[	Zn	66	281.867	ug/L	2.300	0	334	410997	0
[	Zn	67	283.176	ug/L	1.247	0	211	68982	0
[	Zn	68	286.017	ug/L	0.329	0	6668	292329	0
[	As	75	294.481	ug/L	1.327	0	227	404593	0
[	As-1	75	294.175	ug/L	0.896	0	8290	403956	0
[	Se	82	290.931	ug/L	2.283	0	-8	44646	0
[	Se	78	289.470	ug/L	1.033	0	8442	113273	0
[	Mo	98	301.778	ug/L	0.567	0	35	1557639	0
	Y	89		ug/L			254415	233451	0
	Kr	83		ug/L			169	204	5
[>	In	115		ug/L			290439	266342	0
[	Ag	107	282.933	ug/L	2.610	0	38	2433005	0
[	Cd	111	291.340	ug/L	2.591	0	146	641979	0
[	Cd	114	291.963	ug/L	2.347	0	18	1492613	0
[	Sb	121	296.023	ug/L	3.114	1	87	2186513	0
[	Sb	123	298.570	ug/L	1.635	0	61	1673493	0
[	Ba	135	303.112	ug/L	0.811	0	21	553771	0
[	Ba	137	306.039	ug/L	2.843	0	26	972407	0
[>	Tb	159		ug/L			374240	353766	0
[	Tl	205	297.532	ug/L	0.726	0	105	7692664	0
[	Pb	208	293.456	ug/L	1.326	0	382	10585864	0
[	Bi	209		ug/L			328776	262310	0
[	Th	232	305.665	ug/L	1.316	0	456	13108935	0
[	U	238	307.728	ug/L	3.564	1	84	14484859	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:36:03
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			372846	348409	1
⌊	Be	9	47.968	ug/L	0.126	0	3	20908	1
	C	13		mg/L			3654	4084	1
	Cl	37		mg/L			1915264	1890556	0
⌈>	Sc	45		ug/L			247568	233650	0
|	V	51	49.642	ug/L	0.476	0	2050	520238	1
|	V-1	51	49.712	ug/L	0.494	0	8477	533915	1
|	Cr	52	49.875	ug/L	0.207	0	5621	452550	0
|	Cr	53	50.089	ug/L	0.319	0	2690	55512	0
|	Mn	55	49.570	ug/L	0.436	0	390	729049	0
⌊	Co	59	48.859	ug/L	0.431	0	40	537418	0
⌈>	Ge	72		ug/L			261201	248608	0
|	Ni	60	49.309	ug/L	0.423	0	38	112626	0
|	Ni	62	49.227	ug/L	0.832	1	242	16673	1
|	Cu	63	49.296	ug/L	0.188	0	343	244374	0
|	Cu	65	49.182	ug/L	0.655	1	82	113688	1
|	Zn	66	50.504	ug/L	0.455	0	334	74798	0
|	Zn	67	49.724	ug/L	0.390	0	211	12425	0
|	Zn	68	50.614	ug/L	0.463	0	6668	57583	0
|	As	75	50.115	ug/L	0.329	0	227	69870	0
|	As-1	75	49.653	ug/L	0.297	0	8290	75571	0
|	Se	82	51.077	ug/L	0.605	1	-8	7926	0
|	Se	78	49.462	ug/L	0.452	0	8442	26252	0
⌊	Mo	98	49.539	ug/L	0.115	0	35	258837	0
	Y	89		ug/L			254415	235309	0
	Kr	83		ug/L			169	173	1
⌈>	In	115		ug/L			290439	268741	0
|	Ag	107	50.318	ug/L	0.308	0	38	436637	0
|	Cd	111	49.823	ug/L	0.322	0	146	110891	0
|	Cd	114	50.677	ug/L	0.111	0	18	261430	0
|	Sb	121	50.971	ug/L	0.557	1	87	379960	1
|	Sb	123	50.726	ug/L	0.239	0	61	286925	0
|	Ba	135	50.820	ug/L	0.474	0	21	93698	0
⌊	Ba	137	51.055	ug/L	0.435	0	26	163707	0
⌈>	Tb	159		ug/L			374240	352671	0
|	Tl	205	51.920	ug/L	0.658	1	105	1338301	1
|	Pb	208	51.554	ug/L	0.364	0	382	1854250	0
|	Bi	209		ug/L			328776	306862	0
|	Th	232	51.982	ug/L	0.213	0	456	2222780	0
⌊	U	238	52.606	ug/L	0.229	0	84	2468657	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:42:22
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			372846	367105	1
[	**Be**	**9**	**0.015**	ug/L	0.001	10	3	10	6
	C	**13**		mg/L			3654	3639	0
	Cl	**37**		mg/L			1915264	1839113	0
[>	**Sc**	**45**		ug/L			247568	236744	0
[	**V**	**51**	**-0.008**	ug/L	0.011	147	2050	1879	6
[	**V-1**	**51**	**-0.090**	ug/L	0.006	7	8477	7146	0
[	**Cr**	**52**	**0.012**	ug/L	0.011	93	5621	5485	1
[	**Cr**	**53**	**-0.251**	ug/L	0.043	17	2690	2304	2
[	**Mn**	**55**	**0.013**	ug/L	0.002	18	390	568	6
[	**Co**	**59**	**0.009**	ug/L	0.002	20	40	133	15
[>	**Ge**	**72**		ug/L			261201	246935	0
[	**Ni**	**60**	**0.014**	ug/L	0.006	41	38	68	19
[	**Ni**	**62**	**-0.221**	ug/L	0.044	19	242	155	9
[	**Cu**	**63**	**0.002**	ug/L	0.007	476	343	332	10
[	**Cu**	**65**	**0.017**	ug/L	0.006	34	82	117	11
[	**Zn**	**66**	**-0.007**	ug/L	0.021	283	334	305	10
[	**Zn**	**67**	**0.023**	ug/L	0.027	113	211	205	3
[	**Zn**	**68**	**0.057**	ug/L	0.057	98	6668	6362	0
[	**As**	**75**	**0.008**	ug/L	0.019	241	227	225	11
[	**As-1**	**75**	**0.086**	ug/L	0.025	29	8290	7954	0
[	**Se**	**82**	**0.013**	ug/L	0.085	668	-8	-6	199
[	**Se**	**78**	**0.351**	ug/L	0.158	44	8442	8109	0
[	**Mo**	**98**	**0.037**	ug/L	0.015	40	35	226	33
	Y	**89**		ug/L			254415	243373	0
	Kr	**83**		ug/L			169	167	7
[>	**In**	**115**		ug/L			290439	280044	0
[	**Ag**	**107**	**0.018**	ug/L	0.009	49	38	195	40
[	**Cd**	**111**	**0.012**	ug/L	0.008	68	146	169	11
[	**Cd**	**114**	**0.009**	ug/L	0.006	61	18	68	45
[	**Sb**	**121**	**0.064**	ug/L	0.016	24	87	585	21
[	**Sb**	**123**	**0.083**	ug/L	0.040	48	61	548	43
[	**Ba**	**135**	**0.013**	ug/L	0.005	40	21	45	22
[	**Ba**	**137**	**0.011**	ug/L	0.003	27	26	61	16
[>	**Tb**	**159**		ug/L			374240	361081	0
[	**Tl**	**205**	**0.020**	ug/L	0.004	22	105	622	19
[	**Pb**	**208**	**0.013**	ug/L	0.005	38	382	848	22
[	**Bi**	**209**		ug/L			328776	322121	0
[	**Th**	**232**	**0.044**	ug/L	0.018	41	456	2360	33
[	**U**	**238**	**0.014**	ug/L	0.003	19	84	759	17

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:53:17
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L				365988	1
⌊	Be	9		ug/L				6	78
	C	13		mg/L				3664	1
	Cl	37		mg/L				1886360	0
⌈>	Sc	45		ug/L				235745	0
|	V	51		ug/L				2121	9
|	V-1	51		ug/L				7526	3
|	Cr	52		ug/L				5337	1
|	Cr	53		ug/L				2331	1
|	Mn	55		ug/L				377	3
⌊	Co	59		ug/L				50	5
⌈>	Ge	72		ug/L				248077	0
|	Ni	60		ug/L				42	16
|	Ni	62		ug/L				155	5
|	Cu	63		ug/L				303	4
|	Cu	65		ug/L				100	12
|	Zn	66		ug/L				315	8
|	Zn	67		ug/L				204	12
|	Zn	68		ug/L				6193	2
|	As	75		ug/L				256	8
|	As-1	75		ug/L				7960	0
|	Se	82		ug/L				2	233
|	Se	78		ug/L				8095	0
⌊	Mo	98		ug/L				70	22
	Y	89		ug/L				243424	1
	Kr	83		ug/L				161	7
⌈>	In	115		ug/L				276404	0
|	Ag	107		ug/L				66	10
|	Cd	111		ug/L				143	11
|	Cd	114		ug/L				18	28
|	Sb	121		ug/L				174	10
|	Sb	123		ug/L				152	18
|	Ba	135		ug/L				25	7
⌊	Ba	137		ug/L				37	10
⌈>	Tb	159		ug/L				361136	0
|	Tl	205		ug/L				179	16
|	Pb	208		ug/L				464	15
|	Bi	209		ug/L				318171	1
|	Th	232		ug/L				694	30
⌊	U	238		ug/L				154	22

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:59:05
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	354518	2
[	Be	9	47.790	ug/L	0.967	2	6	21193	0
	C	13		mg/L			3664	3911	1
	Cl	37		mg/L			1886360	1914297	0
[>	Sc	45		ug/L			235745	237715	1
[	V	51	49.452	ug/L	0.378	0	2121	527408	0
[	V-1	51	49.497	ug/L	0.389	0	7526	540308	0
[	Cr	52	49.743	ug/L	0.380	0	5337	459173	0
[	Cr	53	49.875	ug/L	0.386	0	2331	56012	0
[	Mn	55	49.696	ug/L	0.779	1	377	743564	1
[	Co	59	48.660	ug/L	0.396	0	50	544516	0
[>	Ge	72		ug/L			248077	250915	0
[	Ni	60	49.650	ug/L	0.699	1	42	114464	1
[	Ni	62	49.940	ug/L	0.713	1	155	16994	1
[	Cu	63	49.547	ug/L	0.076	0	303	247874	0
[	Cu	65	49.375	ug/L	0.025	0	100	115220	0
[	Zn	66	50.383	ug/L	0.520	1	315	75310	1
[	Zn	67	50.351	ug/L	0.480	0	204	12700	0
[	Zn	68	50.618	ug/L	0.113	0	6193	57981	0
[	As	75	49.836	ug/L	0.233	0	256	70171	0
[	As-1	75	49.482	ug/L	0.115	0	7960	76125	0
[	Se	82	51.427	ug/L	0.367	0	2	8066	0
[	Se	78	50.303	ug/L	0.283	0	8095	26887	0
[	Mo	98	49.401	ug/L	0.275	0	70	260549	0
	Y	89		ug/L			243424	239434	0
	Kr	83		ug/L			161	183	2
[>	In	115		ug/L			276404	272745	1
[	Ag	107	50.250	ug/L	0.350	0	66	442550	0
[	Cd	111	50.953	ug/L	0.385	0	143	115097	1
[	Cd	114	49.977	ug/L	0.122	0	18	261659	0
[	Sb	121	49.799	ug/L	0.385	0	174	376821	0
[	Sb	123	50.170	ug/L	0.655	1	152	288076	0
[	Ba	135	50.749	ug/L	0.423	0	25	94968	1
[	Ba	137	50.725	ug/L	0.380	0	37	165083	1
[>	Tb	159		ug/L			361136	359166	2
[	Tl	205	51.792	ug/L	0.647	1	179	1359464	0
[	Pb	208	51.155	ug/L	0.855	1	464	1873492	0
[	Bi	209		ug/L			318171	308590	0
[	Th	232	51.462	ug/L	1.009	1	694	2240780	0
[	U	238	52.429	ug/L	0.895	1	154	2505354	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:05:24
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	367089	1
[	Be	9	0.007	ug/L	0.009	132	6	10	45
	C	13		mg/L			3664	3624	2
	Cl	37		mg/L			1886360	1842712	0
[>	Sc	45		ug/L			235745	237516	0
[	V	51	0.003	ug/L	0.017	655	2121	2164	7
[	V-1	51	-0.037	ug/L	0.012	32	7526	7182	1
[	Cr	52	0.001	ug/L	0.004	269	5337	5389	1
[	Cr	53	-0.126	ug/L	0.045	35	2331	2213	2
[	Mn	55	0.004	ug/L	0.002	40	377	439	4
[	Co	59	0.002	ug/L	0.002	78	50	78	26
[>	Ge	72		ug/L			248077	246817	0
[	Ni	60	0.002	ug/L	0.008	365	42	46	37
[	Ni	62	-0.019	ug/L	0.064	337	155	148	14
[	Cu	63	-0.005	ug/L	0.004	87	303	278	6
[	Cu	65	0.002	ug/L	0.005	284	100	104	10
[	Zn	66	0.000	ug/L	0.015	2940	315	314	7
[	Zn	67	-0.033	ug/L	0.074	223	204	195	8
[	Zn	68	0.178	ug/L	0.089	49	6193	6341	1
[	As	75	-0.013	ug/L	0.003	24	256	236	1
[	As-1	75	0.079	ug/L	0.061	76	7960	8027	1
[	Se	82	-0.069	ug/L	0.083	120	2	-7	166
[	Se	78	0.346	ug/L	0.202	58	8095	8181	1
[	Mo	98	0.007	ug/L	0.006	96	70	104	31
	Y	89		ug/L			243424	245072	1
	Kr	83		ug/L			161	172	4
[>	In	115		ug/L			276404	278351	0
[	Ag	107	0.004	ug/L	0.004	101	66	99	33
[	Cd	111	0.003	ug/L	0.007	230	143	151	10
[	Cd	114	0.004	ug/L	0.002	50	18	37	24
[	Sb	121	0.012	ug/L	0.008	67	174	269	23
[	Sb	123	0.008	ug/L	0.011	140	152	198	31
[	Ba	135	0.001	ug/L	0.002	119	25	28	11
[	Ba	137	0.001	ug/L	0.002	110	37	42	12
[>	Tb	159		ug/L			361136	360116	0
[	Tl	205	0.005	ug/L	0.003	66	179	306	28
[	Pb	208	0.004	ug/L	0.002	62	464	592	13
[	Bi	209		ug/L			318171	319378	0
[	Th	232	0.019	ug/L	0.011	55	694	1533	31
[	U	238	0.003	ug/L	0.001	39	154	299	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:10:51
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	368669	1
[	Be	9	-0.001	ug/L	0.003	250	6	6	20
	C	13		mg/L			3664	5787	0
	Cl	37		mg/L			1886360	1890169	0
[>	Sc	45		ug/L			235745	243220	1
[	V	51	-0.009	ug/L	0.008	93	2121	2094	5
[	V-1	51	0.002	ug/L	0.022	930	7526	7790	2
[	Cr	52	0.026	ug/L	0.020	77	5337	5746	2
[	Cr	53	0.060	ug/L	0.068	113	2331	2470	1
[	Mn	55	0.020	ug/L	0.004	18	377	691	8
[	Co	59	0.000	ug/L	0.001	202	50	55	12
[>	Ge	72		ug/L			248077	255796	0
[	Ni	60	0.004	ug/L	0.001	27	42	53	5
[	Ni	62	-0.014	ug/L	0.046	329	155	155	10
[	Cu	63	0.022	ug/L	0.003	11	303	426	3
[	Cu	65	0.028	ug/L	0.011	39	100	170	14
[	Zn	66	0.972	ug/L	0.040	4	315	1799	3
[	Zn	67	0.861	ug/L	0.072	8	204	428	4
[	Zn	68	0.755	ug/L	0.055	7	6193	7173	1
[	As	75	0.006	ug/L	0.022	345	256	273	12
[	As-1	75	-0.266	ug/L	0.057	21	7960	7835	0
[	Se	82	-0.102	ug/L	0.035	34	2	-13	42
[	Se	78	-1.034	ug/L	0.285	27	8095	7954	0
[	Mo	98	-0.001	ug/L	0.002	126	70	65	14
	Y	89		ug/L			243424	247700	0
	Kr	83		ug/L			161	179	4
[>	In	115		ug/L			276404	282800	0
[	Ag	107	-0.001	ug/L	0.001	99	66	60	11
[	Cd	111	-0.001	ug/L	0.004	474	143	144	7
[	Cd	114	0.001	ug/L	0.001	82	18	26	24
[	Sb	121	-0.004	ug/L	0.001	30	174	146	6
[	Sb	123	-0.007	ug/L	0.002	21	152	112	8
[	Ba	135	0.038	ug/L	0.002	5	25	100	4
[	Ba	137	0.036	ug/L	0.003	7	37	157	6
[>	Tb	159		ug/L			361136	366745	0
[	Tl	205	-0.001	ug/L	0.000	48	179	158	7
[	Pb	208	0.012	ug/L	0.001	6	464	932	3
[	Bi	209		ug/L			318171	322043	0
[	Th	232	0.002	ug/L	0.003	132	694	810	17
[	U	238	-0.001	ug/L	0.000	38	154	99	22

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL69 A SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:16:49
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			365988	376307	0
⌊	Be	9	0.034	ug/L	0.010	30	6	22	22
	C	13		mg/L			3664	4844	1
	Cl	37		mg/L			1886360	1899541	0
⌈>	Sc	45		ug/L			235745	255519	0
|	V	51	3.799	ug/L	0.034	0	2121	45672	1
|	V-1	51	3.858	ug/L	0.006	0	7526	52793	0
|	Cr	52	5.362	ug/L	0.016	0	5337	58363	1
|	Cr	53	5.486	ug/L	0.099	1	2331	8872	1
|	Mn	55	103.571	ug/L	1.089	1	377	1665396	1
⌊	Co	59	0.738	ug/L	0.010	1	50	8929	1
⌈>	Ge	72		ug/L			248077	262466	1
|	Ni	60	3.564	ug/L	0.115	3	42	8635	2
|	Ni	62	4.111	ug/L	0.096	2	155	1614	2
|	Cu	63	2.316	ug/L	0.021	0	303	12425	2
|	Cu	65	2.369	ug/L	0.033	1	100	5884	0
|	Zn	66	8.803	ug/L	0.065	0	315	14038	1
|	Zn	67	8.249	ug/L	0.364	4	204	2356	3
|	Zn	68	8.447	ug/L	0.251	2	6193	15578	0
|	As	75	0.779	ug/L	0.019	2	256	1413	1
|	As-1	75	0.386	ug/L	0.053	13	7960	8976	0
|	Se	82	-0.048	ug/L	0.045	94	2	-4	158
|	Se	78	-1.462	ug/L	0.099	6	8095	7996	0
⌊	Mo	98	0.082	ug/L	0.001	0	70	526	1
	Y	89		ug/L			243424	270964	0
	Kr	83		ug/L			161	186	4
⌈>	In	115		ug/L			276404	289304	0
|	Ag	107	0.009	ug/L	0.002	17	66	150	10
|	Cd	111	0.059	ug/L	0.003	5	143	292	2
|	Cd	114	0.014	ug/L	0.002	12	18	94	10
|	Sb	121	-0.006	ug/L	0.001	9	174	134	3
|	Sb	123	-0.009	ug/L	0.001	16	152	106	8
|	Ba	135	8.097	ug/L	0.144	1	25	16093	1
⌊	Ba	137	8.112	ug/L	0.048	0	37	28035	0
⌈>	Tb	159		ug/L			361136	375384	0
|	Tl	205	0.004	ug/L	0.001	15	179	290	6
|	Pb	208	0.840	ug/L	0.004	0	464	32650	0
|	Bi	209		ug/L			318171	328824	0
|	Th	232	0.112	ug/L	0.005	4	694	5818	3
⌊	U	238	0.038	ug/L	0.000	0	154	2078	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL69 B SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:22:46
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			365988	374453	0
⌊	Be	9	0.048	ug/L	0.006	13	6	29	10
	C	13		mg/L			3664	4812	1
	Cl	37		mg/L			1886360	1883722	0
⌈>	Sc	45		ug/L			235745	256452	1
⌈	V	51	4.575	ug/L	0.129	2	2121	54717	1
⌈	V-1	51	4.606	ug/L	0.081	1	7526	61655	0
⌈	Cr	52	8.078	ug/L	0.177	2	5337	85292	0
⌈	Cr	53	8.030	ug/L	0.041	0	2331	11856	1
⌈	Mn	55	90.341	ug/L	0.216	0	377	1458012	1
⌊	Co	59	0.935	ug/L	0.012	1	50	11341	1
⌈>	Ge	72		ug/L			248077	262539	0
⌈	Ni	60	5.547	ug/L	0.016	0	42	13420	0
⌈	Ni	62	6.124	ug/L	0.157	2	155	2325	1
⌈	Cu	63	2.778	ug/L	0.020	0	303	14846	0
⌈	Cu	65	2.888	ug/L	0.011	0	100	7152	0
⌈	Zn	66	9.320	ug/L	0.051	0	315	14847	0
⌈	Zn	67	8.926	ug/L	0.248	2	204	2533	2
⌈	Zn	68	9.082	ug/L	0.015	0	6193	16263	0
⌈	As	75	0.780	ug/L	0.022	2	256	1415	2
⌈	As-1	75	0.421	ug/L	0.017	3	7960	9031	0
⌈	Se	82	0.044	ug/L	0.059	132	2	10	92
⌈	Se	78	-1.253	ug/L	0.122	9	8095	8079	0
⌊	Mo	98	0.111	ug/L	0.003	2	70	689	2
	Y	89		ug/L			243424	274361	0
	Kr	83		ug/L			161	183	3
⌈>	In	115		ug/L			276404	286629	0
⌈	Ag	107	0.009	ug/L	0.001	14	66	155	7
⌈	Cd	111	0.065	ug/L	0.006	9	143	302	5
⌈	Cd	114	0.019	ug/L	0.003	15	18	125	12
⌈	Sb	121	-0.010	ug/L	0.003	27	174	102	22
⌈	Sb	123	-0.013	ug/L	0.001	11	152	77	12
⌈	Ba	135	10.101	ug/L	0.072	0	25	19886	1
⌊	Ba	137	10.145	ug/L	0.071	0	37	34728	0
⌈>	Tb	159		ug/L			361136	373587	0
⌈	Tl	205	0.004	ug/L	0.001	12	179	305	5
⌈	Pb	208	0.908	ug/L	0.007	0	464	35075	0
⌈	Bi	209		ug/L			318171	331147	0
⌈	Th	232	0.148	ug/L	0.003	1	694	7421	1
⌊	U	238	0.048	ug/L	0.002	3	154	2524	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:28:43
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

RADR

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	380645	0
[	Be	9	0.187	ug/L	0.025	13	6	95	13
	C	13		mg/L			3664	11520	1
	Cl	37		mg/L			1886360	1892844	1
[>	Sc	45		ug/L			235745	290798	1
[	V	51	39.023	ug/L	0.387	0	2121	509656	0
[	V-1	51	38.720	ug/L	0.294	0	7526	519067	1
[	Cr	52	26.396	ug/L	0.406	1	5337	301123	0
[	Cr	53	25.956	ug/L	0.387	1	2331	37036	1
[	Mn	55	254.666	ug/L	2.482	0	377	4659249	0
[	Co	59	5.761	ug/L	0.020	0	50	78917	1
[>	Ge	72		ug/L			248077	272483	1
[	Ni	60	19.942	ug/L	0.290	1	42	49947	0
[	Ni	62	26.356	ug/L	0.324	1	155	9820	1
[	Cu	63	69.564	ug/L	0.475	0	303	377786	1
[	Cu	65	70.234	ug/L	0.363	0	100	177929	0
[	Zn	66	751.761	ug/L	5.089	0	315	1215445	1
[	Zn	67	672.753	ug/L	8.416	1	204	181491	0
[	Zn	68	749.538	ug/L	5.464	0	6193	838413	1
[	As	75	5.571	ug/L	0.036	0	256	8768	0
[	As-1	75	5.160	ug/L	0.076	1	7960	16452	0
[	Se	82	0.174	ug/L	0.055	31	2	32	27
[	Se	78	-1.580	ug/L	0.303	19	8095	8253	1
[	Mo	98	2.146	ug/L	0.046	2	70	12363	1
	Y	89		ug/L			243424	410052	0
	Kr	83		ug/L			161	202	4
[>	In	115		ug/L			276404	295040	0
[	Ag	107	0.176	ug/L	0.003	1	66	1750	1
[	Cd	111	1.240	ug/L	0.051	4	143	3179	3
[	Cd	114	0.945	ug/L	0.021	2	18	5372	1
[	Sb	121	0.027	ug/L	0.002	9	174	410	4
[	Sb	123	0.026	ug/L	0.002	8	152	326	3
[	Ba	135	136.340	ug/L	1.787	1	25	275921	0
[	Ba	137	137.481	ug/L	1.675	1	37	483915	0
[>	Tb	159		ug/L			361136	392073	0
[	Tl	205	0.085	ug/L	0.001	0	179	2642	1
[	Pb	208	50.843	ug/L	0.326	0	464	2033071	0
[	Bi	209		ug/L			318171	336417	1
[	Th	232	1.162	ug/L	0.006	0	694	55958	0
[	U	238	0.329	ug/L	0.003	0	154	17334	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:34:42
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

pH Ov

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	382120	0
[	Be	9	0.225	ug/L	0.008	3	6	114	3
	C	13		mg/L			3664	12644	1
	Cl	37		mg/L			1886360	1924442	0
[>	Sc	45		ug/L			235745	290186	0
[	V	51	40.415	ug/L	0.118	0	2121	526670	0
[	V-1	51	40.218	ug/L	0.145	0	7526	537686	0
[	Cr	52	27.756	ug/L	0.129	0	5337	315682	0
[	Cr	53	27.657	ug/L	0.087	0	2331	39195	0
[	Mn	55	273.248	ug/L	1.473	0	377	4989173	1
[	Co	59	6.177	ug/L	0.011	0	50	84436	0
[>	Ge	72		ug/L			248077	277157 ✓	0
[	Ni	60	19.352	ug/L	0.082	0	42	49309	0
[	Ni	62	25.950	ug/L	0.500	1	155	9837	1
[	Cu	63	66.047	ug/L	0.430	0	303	364859	0
[	Cu	65	66.536	ug/L	0.408	0	100	171467	0
[	Zn	66	624.039	ug/L	0.911	0	315	1026335	0
[	Zn	67	562.431	ug/L	3.681	0	204	154386	0
[	Zn	68	623.371	ug/L	4.437	0	6193	710439	0
[	As	75	6.018	ug/L	0.042	0	256	9611	0
[	As-1	75	5.529	ug/L	0.083	1	7960	17295	0
[	Se	82	0.172	ug/L	0.080	46	2	33	42
[	Se	78	-1.870	ug/L	0.193	10	8095	8276	1
[	Mo	98	2.283	ug/L	0.010	0	70	13373	0
	Y	89		ug/L			243424	414487	0
	Kr	83		ug/L			161	211	0
[>	In	115		ug/L			276404	297677 ✓	0
[	Ag	107	0.190	ug/L	0.009	4	66	1892	4
[	Cd	111	1.287	ug/L	0.031	2	143	3322	2
[	Cd	114	0.980	ug/L	0.011	1	18	5619	0
[	Sb	121	0.033	ug/L	0.003	9	174	457	5
[	Sb	123	0.029	ug/L	0.001	2	152	344	1
[	Ba	135	138.801	ug/L	2.174	1	25	283418	1
[	Ba	137	138.671	ug/L	0.348	0	37	492491	0
[>	Tb	159		ug/L			361136	392550 ✓	1
[	Tl	205	0.087	ug/L	0.000	0	179	2696	1
[	Pb	208	47.583	ug/L	0.346	0	464	1905001	0
[	Bi	209		ug/L			318171	335794	1
[	Th	232	1.133	ug/L	0.013	1	694	54645	0
[	U	238	0.346	ug/L	0.007	2	154	18255	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:40:40
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

RRV

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	371141	1
[	Be	9	23.310	ug/L	0.969	4	6	10825	3
	C	13		mg/L			3664	9408	0
	Cl	37		mg/L			1886360	1936944	0
[>	Sc	45		ug/L			235745	290359	0
	V	51	57.682	ug/L	0.427	0	2121	751019	0
	V-1	51	57.448	ug/L	0.503	0	7526	764515	0
	Cr	52	46.352	ug/L	0.093	0	5337	523098	0
	Cr	53	46.077	ug/L	0.486	1	2331	63425	0
	Mn	55	261.782	ug/L	1.748	0	377	4782577	0
[	Co	59	25.959	ug/L	0.114	0	50	354860	0
[>	Ge	72		ug/L			248077	274830	0
	Ni	60	41.286	ug/L	0.108	0	42	104261	0
	Ni	62	47.742	ug/L	0.203	0	155	17802	0
	Cu	63	85.036	ug/L	0.364	0	303	465718	0
	Cu	65	85.764	ug/L	0.742	0	100	219130	1
	Zn	66	900.493	ug/L	6.111	0	315	1468404	0
	Zn	67	808.576	ug/L	3.095	0	204	219990	0
	Zn	68	896.146	ug/L	9.781	1	6193	1009718	0
	As	75	29.638	ug/L	0.257	0	256	45822	0
	As-1	75	28.366	ug/L	0.228	0	7960	51562	0
	Se	82	72.839	ug/L	0.370	0	2	12512	0
	Se	78	71.406	ug/L	0.291	0	8095	38042	0
[	Mo	98	23.354	ug/L	0.214	0	70	134951	0
	Y	89		ug/L			243424	398263	0
	Kr	83		ug/L			161	214	2
[>	In	115		ug/L			276404	293609	1
	Ag	107	23.005	ug/L	0.138	0	66	218142	0
	Cd	111	25.532	ug/L	0.506	1	143	62150	0
	Cd	114	25.119	ug/L	0.441	1	18	141568	0
	Sb	121	0.964	ug/L	0.009	0	174	8036	1
	Sb	123	0.962	ug/L	0.009	0	152	6105	1
	Ba	135	223.579	ug/L	0.911	0	25	450279	0
[	Ba	137	224.283	ug/L	2.840	1	37	785555	0
[>	Tb	159		ug/L			361136	388941	0
	Tl	205	23.976	ug/L	0.207	0	179	681681	0
	Pb	208	69.707	ug/L	1.091	1	464	2764749	0
	Bi	209		ug/L			318171	331903	0
	Th	232	25.093	ug/L	0.567	2	694	1183686	1
[	U	238	24.897	ug/L	0.424	1	154	1288512	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:46:39
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	372589	0
[	Be	9	23.836	ug/L	0.282	1	6	11115	0
	C	13		mg/L			3664	12449	2
	Cl	37		mg/L			1886360	1903807	0
[>	Sc	45		ug/L			235745	281711	1
[	V	51	61.636	ug/L	0.818	1	2121	778350	0
[	V-1	51	61.241	ug/L	0.821	1	7526	790066	0
[	Cr	52	49.905	ug/L	0.277	0	5337	545909	0
[	Cr	53	49.134	ug/L	0.308	0	2331	65434	0
[	Mn	55	291.594	ug/L	5.238	1	377	5168004	1
[	Co	59	28.107	ug/L	0.243	0	50	372775	1
[>	Ge	72		ug/L			248077	266905	0
[	Ni	60	44.391	ug/L	0.604	1	42	108862	1
[	Ni	62	51.120	ug/L	1.129	2	155	18500	2
[	Cu	63	90.844	ug/L	0.739	0	303	483153	0
[	Cu	65	91.349	ug/L	0.540	0	100	226658	0
[	Zn	66	698.089	ug/L	3.521	0	315	1105603	0
[	Zn	67	626.591	ug/L	2.843	0	204	165610	0
[	Zn	68	693.853	ug/L	7.400	1	6193	760735	0
[	As	75	32.466	ug/L	0.187	0	256	48721	0
[	As-1	75	31.242	ug/L	0.269	0	7960	54283	0
[	Se	82	82.774	ug/L	0.633	0	2	13809	0
[	Se	78	82.052	ug/L	1.013	1	8095	41153	0
[	Mo	98	26.956	ug/L	0.282	1	70	151263	0
	Y	89		ug/L			243424	400308	0
	Kr	83		ug/L			161	213	2
[>	In	115		ug/L			276404	288927	0
[	Ag	107	25.735	ug/L	0.190	0	66	240131	0
[	Cd	111	26.325	ug/L	0.400	1	143	63063	1
[	Cd	114	26.250	ug/L	0.064	0	18	145597	0
[	Sb	121	24.773	ug/L	0.074	0	174	198675	0
[	Sb	123	24.675	ug/L	0.260	1	152	150180	0
[	Ba	135	162.059	ug/L	1.772	1	25	321184	0
[	Ba	137	162.121	ug/L	1.233	0	37	558823	0
[>	Tb	159		ug/L			361136	383270	0
[	Tl	205	25.706	ug/L	0.102	0	179	720244	0
[	Pb	208	71.751	ug/L	0.213	0	464	2804567	0
[	Bi	209		ug/L			318171	325096	0
[	Th	232	26.733	ug/L	0.248	0	694	1242811	0
[	U	238	26.027	ug/L	0.112	0	154	1327470	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:52:37
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	368149	0
[	Be	9	22.079	ug/L	0.117	0	6	10174	0
	C	13		mg/L			3664	5418	1
	Cl	37		mg/L			1886360	1948538	0
[>	Sc	45		ug/L			235745	253289	0
[	V	51	23.311	ug/L	0.033	0	2121	266121	0
[	V-1	51	23.335	ug/L	0.065	0	7526	275698	0
[	Cr	52	23.396	ug/L	0.160	0	5337	233172	1
[	Cr	53	23.469	ug/L	0.109	0	2331	29411	0
[	Mn	55	23.509	ug/L	0.373	1	377	375027	1
[	Co	59	23.357	ug/L	0.085	0	50	278535	0
[>	Ge	72		ug/L			248077	269941	0
[	Ni	60	23.607	ug/L	0.192	0	42	58574	0
[	Ni	62	23.850	ug/L	0.726	3	155	8819	2
[	Cu	63	24.630	ug/L	0.197	0	303	132725	0
[	Cu	65	24.581	ug/L	0.132	0	100	61766	0
[	Zn	66	77.442	ug/L	0.488	0	315	124350	0
[	Zn	67	70.976	ug/L	0.561	0	204	19169	0
[	Zn	68	77.280	ug/L	0.290	0	6193	91684	0
[	As	75	25.085	ug/L	0.264	1	256	38136	0
[	As-1	75	23.694	ug/L	0.342	1	7960	43729	1
[	Se	82	77.105	ug/L	0.378	0	2	13010	0
[	Se	78	75.821	ug/L	0.511	0	8095	39131	0
[	Mo	98	23.439	ug/L	0.151	0	70	133037	0
	Y	89		ug/L			243424	255219	0
	Kr	83		ug/L			161	203	3
[>	In	115		ug/L			276404	291348	0
[	Ag	107	24.297	ug/L	0.082	0	66	228622	0
[	Cd	111	23.849	ug/L	0.118	0	143	57627	0
[	Cd	114	23.881	ug/L	0.235	0	18	133566	0
[	Sb	121	23.690	ug/L	0.259	1	174	191588	0
[	Sb	123	23.779	ug/L	0.044	0	152	145953	0
[	Ba	135	23.878	ug/L	0.183	0	25	47744	0
[	Ba	137	24.097	ug/L	0.173	0	37	83794	0
[>	Tb	159		ug/L			361136	377178	0
[	Tl	205	24.733	ug/L	0.128	0	179	681944	0
[	Pb	208	24.358	ug/L	0.246	1	464	937251	0
[	Bi	209		ug/L			318171	328671	0
[	Th	232	23.939	ug/L	0.063	0	694	1095283	0
[	U	238	24.305	ug/L	0.430	1	154	1219871	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:58:36
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	355302	1
[	Be	9	48.900	ug/L	0.242	0	6	21738	1
	C	13		mg/L			3664	4324	2
	Cl	37		mg/L			1886360	1947063	0
[>	Sc	45		ug/L			235745	244962	0
[	V	51	49.531	ug/L	0.413	0	2121	544374	0
[	V-1	51	49.668	ug/L	0.605	1	7526	558695	1
[	Cr	52	50.034	ug/L	0.205	0	5337	475929	0
[	Cr	53	50.452	ug/L	0.784	1	2331	58359	1
[	Mn	55	49.834	ug/L	0.432	0	377	768398	0
[	Co	59	49.097	ug/L	0.200	0	50	566177	0
[>	Ge	72		ug/L			248077	263016	0
[	Ni	60	49.044	ug/L	0.286	0	42	118520	0
[	Ni	62	50.189	ug/L	0.469	0	155	17901	0
[	Cu	63	49.318	ug/L	0.089	0	303	258628	0
[	Cu	65	49.744	ug/L	0.499	1	100	121678	1
[	Zn	66	50.446	ug/L	0.547	1	315	79040	1
[	Zn	67	50.030	ug/L	0.346	0	204	13229	0
[	Zn	68	50.792	ug/L	0.464	0	6193	60963	0
[	As	75	50.161	ug/L	0.137	0	256	74031	0
[	As-1	75	49.944	ug/L	0.137	0	7960	80463	0
[	Se	82	50.774	ug/L	0.544	1	2	8348	1
[	Se	78	50.161	ug/L	0.330	0	8095	28128	0
[	Mo	98	49.012	ug/L	0.258	0	70	270964	0
	Y	89		ug/L			243424	247910	0
	Kr	83		ug/L			161	203	1
[>	In	115		ug/L			276404	280076	0
[	Ag	107	50.236	ug/L	0.351	0	66	454331	0
[	Cd	111	50.352	ug/L	0.414	0	143	116794	0
[	Cd	114	50.635	ug/L	0.103	0	18	272233	0
[	Sb	121	50.150	ug/L	0.388	0	174	389683	0
[	Sb	123	50.300	ug/L	0.352	0	152	296611	0
[	Ba	135	50.714	ug/L	0.384	0	25	97453	1
[	Ba	137	50.772	ug/L	0.583	1	37	169671	0
[>	Tb	159		ug/L			361136	368124	1
[	Tl	205	51.243	ug/L	0.547	1	179	1378697	0
[	Pb	208	50.311	ug/L	0.603	1	464	1888796	0
[	Bi	209		ug/L			318171	311794	0
[	Th	232	50.704	ug/L	0.775	1	694	2263121	0
[	U	238	51.240	ug/L	0.306	0	154	2509891	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:04:54
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			365988	383680	1
	Be	9	0.001	ug/L	0.005	423	6	7	28
	C	13		mg/L			3664	3783	4
	Cl	37		mg/L			1886360	1816365	1
>	Sc	45		ug/L			235745	248488	0
	V	51	-0.019	ug/L	0.009	48	2121	2021	5
	V-1	51	-0.146	ug/L	0.014	9	7526	6293	2
	Cr	52	0.044	ug/L	0.006	12	5337	6041	0
	Cr	53	-0.364	ug/L	0.039	10	2331	2048	2
	Mn	55	0.010	ug/L	0.003	35	377	546	9
	Co	59	0.003	ug/L	0.003	86	50	93	37
>	Ge	72		ug/L			248077	263088	0
	Ni	60	-0.001	ug/L	0.001	163	42	42	7
	Ni	62	-0.171	ug/L	0.013	7	155	105	4
	Cu	63	-0.005	ug/L	0.005	93	303	296	8
	Cu	65	0.005	ug/L	0.007	125	100	119	13
	Zn	66	0.037	ug/L	0.010	28	315	391	4
	Zn	67	-0.072	ug/L	0.019	26	204	197	2
	Zn	68	0.382	ug/L	0.078	20	6193	6978	1
	As	75	0.005	ug/L	0.017	342	256	279	8
	As-1	75	0.274	ug/L	0.038	13	7960	8837	0
	Se	82	-0.001	ug/L	0.006	444	2	2	36
	Se	78	1.047	ug/L	0.120	11	8095	8993	0
	Mo	98	0.005	ug/L	0.008	151	70	105	43
	Y	89		ug/L			243424	258900	0
	Kr	83		ug/L			161	180	3
>	In	115		ug/L			276404	293240	0
	Ag	107	0.006	ug/L	0.004	59	66	130	28
	Cd	111	-0.002	ug/L	0.011	528	143	147	17
	Cd	114	0.004	ug/L	0.003	76	18	42	41
	Sb	121	0.010	ug/L	0.007	70	174	264	21
	Sb	123	0.007	ug/L	0.008	107	152	205	23
	Ba	135	0.003	ug/L	0.003	95	25	32	17
	Ba	137	0.009	ug/L	0.004	47	37	69	21
>	Tb	159		ug/L			361136	378185	1
	Tl	205	0.004	ug/L	0.004	94	179	297	34
	Pb	208	0.006	ug/L	0.004	65	464	705	19
	Bi	209		ug/L			318171	333233	0
	Th	232	0.015	ug/L	0.011	71	694	1411	34
	U	238	0.004	ug/L	0.002	50	154	372	28

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:13:10
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				374583	1
	Be	9		ug/L				5	48
	C	13		mg/L				3727	1
	Cl	37		mg/L				1848526	0
>	Sc	45		ug/L				248909	0
	V	51		ug/L				1891	12
	V-1	51		ug/L				6386	1
	Cr	52		ug/L				5857	2
	Cr	53		ug/L				2099	2
	Mn	55		ug/L				454	4
	Co	59		ug/L				53	8
>	Ge	72		ug/L				261757	0
	Ni	60		ug/L				45	27
	Ni	62		ug/L				101	4
	Cu	63		ug/L				292	14
	Cu	65		ug/L				105	22
	Zn	66		ug/L				401	7
	Zn	67		ug/L				193	4
	Zn	68		ug/L				6893	0
	As	75		ug/L				266	5
	As-1	75		ug/L				8833	0
	Se	82		ug/L				-11	82
	Se	78		ug/L				8982	0
	Mo	98		ug/L				44	11
	Y	89		ug/L				259459	0
	Kr	83		ug/L				186	0
>	In	115		ug/L				291463	0
	Ag	107		ug/L				50	26
	Cd	111		ug/L				145	4
	Cd	114		ug/L				15	25
	Sb	121		ug/L				111	28
	Sb	123		ug/L				71	2
	Ba	135		ug/L				36	21
	Ba	137		ug/L				56	27
>	Tb	159		ug/L				378929	1
	Tl	205		ug/L				111	9
	Pb	208		ug/L				590	11
	Bi	209		ug/L				332212	0
	Th	232		ug/L				447	26
	U	238		ug/L				110	29

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:18:58
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	366032	0
[	Be	9	47.752	ug/L	0.520	1	5	21868	0
	C	13		mg/L			3727	4177	0
	Cl	37		mg/L			1848526	1870457	1
[>	Sc	45		ug/L			248909	246723	0
|	V	51	49.323	ug/L	0.196	0	1891	545663	0
|	V-1	51	49.507	ug/L	0.192	0	6386	559383	0
|	Cr	52	49.698	ug/L	0.177	0	5857	476396	0
|	Cr	53	50.272	ug/L	0.170	0	2099	58220	0
|	Mn	55	49.328	ug/L	0.367	0	454	766132	0
[	Co	59	49.180	ug/L	0.284	0	53	571225	0
[>	Ge	72		ug/L			261757	258917	0
|	Ni	60	50.343	ug/L	0.349	0	45	119763	0
|	Ni	62	50.465	ug/L	1.022	2	101	17656	2
|	Cu	63	49.934	ug/L	0.323	0	292	257739	0
|	Cu	65	50.020	ug/L	0.092	0	105	120444	0
|	Zn	66	50.164	ug/L	0.322	0	401	77443	0
|	Zn	67	51.284	ug/L	0.851	1	193	13323	1
|	Zn	68	50.833	ug/L	0.484	0	6893	60411	0
|	As	75	50.594	ug/L	0.094	0	266	73500	0
|	As-1	75	50.172	ug/L	0.370	0	8833	79960	0
|	Se	82	52.665	ug/L	0.173	0	-11	8510	0
|	Se	78	51.286	ug/L	0.835	1	8982	28557	0
[	Mo	98	50.551	ug/L	0.159	0	44	275085	0
	Y	89		ug/L			259459	251980	0
	Kr	83		ug/L			186	199	2
[>	In	115		ug/L			291463	285896	0
|	Ag	107	49.713	ug/L	0.672	1	50	458922	1
|	Cd	111	49.818	ug/L	0.237	0	145	117957	0
|	Cd	114	49.894	ug/L	0.220	0	15	273815	0
|	Sb	121	49.030	ug/L	0.287	0	111	388841	0
|	Sb	123	49.096	ug/L	0.349	0	71	295441	0
|	Ba	135	50.366	ug/L	0.323	0	36	98801	0
[	Ba	137	50.200	ug/L	0.303	0	56	171269	0
[>	Tb	159		ug/L			378929	373663	0
|	Tl	205	51.298	ug/L	0.452	0	111	1400961	0
|	Pb	208	50.950	ug/L	0.423	0	590	1941776	0
|	Bi	209		ug/L			332212	320318	0
|	Th	232	51.242	ug/L	0.095	0	447	2321555	0
[	U	238	51.750	ug/L	0.601	1	110	2573131	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:25:16
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			374583	373822	0
⌊	Be	9	0.003	ug/L	0.002	55	5	6	10
	C	13		mg/L			3727	3798	1
	Cl	37		mg/L			1848526	1922344	0
⌈>	Sc	45		ug/L			248909	250700	0
⌈	V	51	0.011	ug/L	0.022	202	1891	2027	12
⌊	V-1	51	0.056	ug/L	0.010	18	6386	7066	1
⌈	Cr	52	-0.042	ug/L	0.010	23	5857	5500	2
⌊	Cr	53	0.105	ug/L	0.091	86	2099	2232	4
⌈	Mn	55	-0.000	ug/L	0.003	659	454	450	11
⌊	Co	59	0.002	ug/L	0.002	91	53	81	30
⌈>	Ge	72		ug/L			261757	266521	0
⌈	Ni	60	0.002	ug/L	0.002	88	45	50	7
⌊	Ni	62	-0.009	ug/L	0.024	274	101	100	8
⌈	Cu	63	0.004	ug/L	0.005	131	292	317	7
⌊	Cu	65	0.005	ug/L	0.005	95	105	121	10
⌈	Zn	66	-0.015	ug/L	0.002	13	401	385	0
⌊	Zn	67	0.025	ug/L	0.028	115	193	203	3
⌈	Zn	68	-0.435	ug/L	0.087	20	6893	6546	1
⌈	As	75	0.027	ug/L	0.027	100	266	312	13
⌊	As-1	75	-0.569	ug/L	0.029	5	8833	8163	0
⌈	Se	82	-0.004	ug/L	0.088	2411	-11	-12	122
⌊	Se	78	-2.153	ug/L	0.106	4	8982	8295	0
⌊	Mo	98	0.008	ug/L	0.003	31	44	92	16
	Y	89		ug/L			259459	256716	0
	Kr	83		ug/L			186	198	2
⌈>	In	115		ug/L			291463	290276	0
⌈	Ag	107	0.004	ug/L	0.004	104	50	88	45
⌈	Cd	111	0.003	ug/L	0.004	157	145	150	7
⌊	Cd	114	0.003	ug/L	0.002	54	15	32	28
⌈	Sb	121	0.016	ug/L	0.005	28	111	242	16
⌊	Sb	123	0.019	ug/L	0.007	36	71	184	22
⌈	Ba	135	0.001	ug/L	0.004	320	36	38	18
⌊	Ba	137	0.001	ug/L	0.004	311	56	60	20
⌈>	Tb	159		ug/L			378929	377873	0
⌈	Tl	205	0.006	ug/L	0.004	63	111	279	38
⌊	Pb	208	0.004	ug/L	0.004	105	590	726	20
⌈	Bi	209		ug/L			332212	331511	0
⌈	Th	232	0.020	ug/L	0.014	68	447	1368	46
⌊	U	238	0.005	ug/L	0.003	66	110	337	45

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:30:43
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	393103	0
[	Be	9	U 0.002	ug/L	0.011	532	5	6	78
	C	13		mg/L			3727	5510	2
	Cl	37		mg/L			1848526	1913798	0
[>	Sc	45		ug/L			248909	211939	1
[	V	51	0.060	ug/L	0.037	61	1891	2180	15
[	V-1	51	0.180	ug/L	0.019	10	6386	7168	1
[	Cr	52	U 0.111	ug/L	0.009	8	5857	5890	1
[	Cr	53	0.493	ug/L	0.071	14	2099	2260	3
[	Mn	55	0.024	ug/L	0.002	9	454	707	4
[	Co	59	-0.000	ug/L	0.002	1260	53	44	35
[>	Ge	72		ug/L			261757	277700	0
[	Ni	60	U -0.002	ug/L	0.002	91	45	43	11
[	Ni	62	-0.033	ug/L	0.027	80	101	95	10
[	Cu	63	0.007	ug/L	0.002	28	292	346	2
[	Cu	65	U 0.014	ug/L	0.007	45	105	149	11
[	Zn	66	0.178	ug/L	0.004	2	401	718	1
[	Zn	67	U 0.200	ug/L	0.054	26	193	260	6
[	Zn	68	-0.515	ug/L	0.073	14	6893	6731	1
[	As	75	U 0.015	ug/L	0.006	37	266	306	3
[	As-1	75	-0.844	ug/L	0.026	3	8833	8085	0
[	Se	82	0.092	ug/L	0.007	7	-11	4	28
[	Se	78	U -3.152	ug/L	0.076	2	8982	8232	0
[	Mo	98	0.004	ug/L	0.005	121	44	72	41
	Y	89		ug/L			259459	267055	0
	Kr	83		ug/L			186	185	2
[>	In	115		ug/L			291463	304738	0
[	Ag	107	U -0.002	ug/L	0.001	33	50	37	13
[	Cd	111	U -0.001	ug/L	0.005	494	145	148	8
[	Cd	114	U -0.000	ug/L	0.000	254	15	15	12
[	Sb	121	0.003	ug/L	0.003	105	111	143	20
[	Sb	123	U 0.006	ug/L	0.001	15	71	114	5
[	Ba	135	-0.004	ug/L	0.000	11	36	30	2
[	Ba	137	-0.001	ug/L	0.005	487	56	55	29
[>	Tb	159		ug/L			378929	392189	0
[	Tl	205	U 0.002	ug/L	0.001	66	111	158	17
[	Pb	208	U -0.002	ug/L	0.001	42	590	532	6
[	Bi	209		ug/L			332212	344238	0
[	Th	232	0.007	ug/L	0.001	9	447	794	3
[	U	238	-0.000	ug/L	0.000	13	110	94	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 ADUP SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:36:41
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	375159	1
[	Be	9	0.041	ug/L	0.012	29	5	24	24
	C	13		mg/L			3727	5325	2
	Cl	37		mg/L			1848526	1979427	0
[>	Sc	45		ug/L			248909	265093	0
|	V	51	8.676	ug/L	0.030	0	1891	104786	0
|	V-1	51	8.690	ug/L	0.017	0	6386	111107	0
|	Cr	52	5.789	ug/L	0.089	1	5857	65135	0
|	Cr	53	5.956	ug/L	0.095	1	2099	9381	0
|	Mn	55	56.501	ug/L	0.292	0	454	942837	0
[	Co	59	1.291	ug/L	0.016	1	53	16169	1
[>	Ge	72		ug/L			261757	277085	0
|	Ni	60	3.985	ug/L	0.023	0	45	10190	0
|	Ni	62	5.304	ug/L	0.137	2	101	2082	2
|	Cu	63	14.097	ug/L	0.027	0	292	78091	0
|	Cu	65	14.196	ug/L	0.094	0	105	36660	0
|	Zn	66	155.321	ug/L	0.644	0	401	255722	0
|	Zn	67	137.902	ug/L	0.469	0	193	37992	0
|	Zn	68	152.023	ug/L	1.295	0	6893	178820	0
|	As	75	1.172	ug/L	0.022	1	266	2097	1
|	As-1	75	0.251	ug/L	0.041	16	8833	9732	0
|	Se	82	0.136	ug/L	0.037	27	-11	11	55
|	Se	78	-3.317	ug/L	0.188	5	8982	8146	1
[	Mo	98	0.431	ug/L	0.010	2	44	2559	1
	Y	89		ug/L			259459	291256	0
	Kr	83		ug/L			186	201	2
[>	In	115		ug/L			291463	296928	0
|	Ag	107	0.037	ug/L	0.001	3	50	407	2
|	Cd	111	0.255	ug/L	0.010	3	145	773	3
|	Cd	114	0.190	ug/L	0.009	4	15	1099	4
|	Sb	121	0.004	ug/L	0.001	23	111	150	6
|	Sb	123	0.004	ug/L	0.002	60	71	98	15
|	Ba	135	27.262	ug/L	0.268	0	36	55557	0
[	Ba	137	27.074	ug/L	0.157	0	56	95960	0
[>	Tb	159		ug/L			378929	384815	0
|	Tl	205	0.018	ug/L	0.000	2	111	615	2
|	Pb	208	10.211	ug/L	0.057	0	590	401256	0
|	Bi	209		ug/L			332212	335317	1
|	Th	232	0.232	ug/L	0.003	1	447	11286	2
[	U	238	0.064	ug/L	0.001	1	110	3393	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 A SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:42:39
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	386733	1
[	Be	9	0.052	ug/L	0.006	12	5	30	8
	C	13		mg/L			3727	5499	1
	Cl	37		mg/L			1848526	1938865	0
[>	Sc	45		ug/L			248909	266493	0
|	V	51	9.506	ug/L	0.029	0	1891	115225	0
|	V-1	51	9.522	ug/L	0.035	0	6386	121733	0
|	Cr	52	6.510	ug/L	0.136	2	5857	72856	1
|	Cr	53	6.687	ug/L	0.119	1	2099	10313	1
|	Mn	55	65.280	ug/L	0.252	0	454	1095003	0
[	Co	59	1.453	ug/L	0.023	1	53	18281	1
[>	Ge	72		ug/L			261757	277880	0
|	Ni	60	4.322	ug/L	0.096	2	45	11078	1
|	Ni	62	5.628	ug/L	0.152	2	101	2209	2
|	Cu	63	14.456	ug/L	0.282	1	292	80297	1
|	Cu	65	14.661	ug/L	0.026	0	105	37967	0
|	Zn	66	137.999	ug/L	0.804	0	401	227897	0
|	Zn	67	123.815	ug/L	1.695	1	193	34228	0
|	Zn	68	137.163	ug/L	0.626	0	6893	162517	0
|	As	75	1.331	ug/L	0.024	1	266	2351	1
|	As-1	75	0.423	ug/L	0.082	19	8833	10022	0
|	Se	82	0.062	ug/L	0.064	103	-11	-1	960
|	Se	78	-3.342	ug/L	0.220	6	8982	8159	0
[	Mo	98	0.484	ug/L	0.009	1	44	2873	1
	Y	89		ug/L			259459	295073	1
	Kr	83		ug/L			186	204	3
[>	In	115		ug/L			291463	298570	0
|	Ag	107	0.038	ug/L	0.002	5	50	421	5
|	Cd	111	0.261	ug/L	0.018	6	145	792	5
|	Cd	114	0.214	ug/L	0.004	1	15	1245	2
|	Sb	121	0.003	ug/L	0.001	46	111	137	8
|	Sb	123	0.007	ug/L	0.001	12	71	119	4
|	Ba	135	30.056	ug/L	0.237	0	36	61588	0
[	Ba	137	29.929	ug/L	0.120	0	56	106663	0
[>	Tb	159		ug/L			378929	388834	1
|	Tl	205	0.018	ug/L	0.000	2	111	630	3
|	Pb	208	10.421	ug/L	0.107	1	590	413742	0
|	Bi	209		ug/L			332212	341061	0
|	Th	232	0.244	ug/L	0.000	0	447	11972	1
[	U	238	0.076	ug/L	0.001	0	110	4024	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 ASPK SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:48:36
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	367401	1
[	Be	9	4.720	ug/L	0.159	3	5	2173	2
	C	13		mg/L			3727	4822	2
	Cl	37		mg/L			1848526	1944834	0
[>	Sc	45		ug/L			248909	257332	0
[	V	51	12.902	ug/L	0.111	0	1891	150315	0
[	V-1	51	12.943	ug/L	0.102	0	6386	157404	0
[	Cr	52	10.450	ug/L	0.036	0	5857	109260	0
[	Cr	53	10.683	ug/L	0.050	0	2099	14613	0
[	Mn	55	59.319	ug/L	0.818	1	454	960775	0
[	Co	59	5.942	ug/L	0.045	0	53	72035	0
[>	Ge	72		ug/L			261757	268280	0
[	Ni	60	8.655	ug/L	0.175	2	45	21371	1
[	Ni	62	9.816	ug/L	0.065	0	101	3642	1
[	Cu	63	17.757	ug/L	0.150	0	292	95161	0
[	Cu	65	17.985	ug/L	0.028	0	105	44941	0
[	Zn	66	189.444	ug/L	0.642	0	401	301896	0
[	Zn	67	188.886	ug/L	0.428	0	193	45005	0
[	Zn	68	186.582	ug/L	1.822	0	6893	210885	0
[	As	75	6.136	ug/L	0.047	0	266	9475	0
[	As-1	75	5.261	ug/L	0.180	3	8833	16791	0
[	Se	82	15.376	ug/L	0.178	1	-11	2566	1
[	Se	78	12.925	ug/L	0.377	2	8982	14342	0
[	Mo	98	4.768	ug/L	0.064	1	44	26925	0
	Y	89		ug/L			259459	282958	1
	Kr	83		ug/L			186	210	2
[>	In	115		ug/L			291463	288922	0
[	Ag	107	4.674	ug/L	0.037	0	50	43649	0
[	Cd	111	5.272	ug/L	0.023	0	145	12743	0
[	Cd	114	5.205	ug/L	0.066	1	15	28881	1
[	Sb	121	0.190	ug/L	0.005	2	111	1629	2
[	Sb	123	0.197	ug/L	0.007	3	71	1269	3
[	Ba	135	45.133	ug/L	0.454	1	36	89477	0
[	Ba	137	45.587	ug/L	0.105	0	56	157185	0
[>	Tb	159		ug/L			378929	373585	0
[	Tl	205	5.045	ug/L	0.008	0	111	137846	0
[	Pb	208	14.582	ug/L	0.128	0	590	556038	0
[	Bi	209		ug/L			332212	326482	0
[	Th	232	5.188	ug/L	0.013	0	447	235411	0
[	U	238	5.186	ug/L	0.054	1	110	257912	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN40 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:54:33
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	375884	1
[	Be	9	0.044	ug/L	0.019	42	5	26	33
	C	13		mg/L			3727	6084	1
	Cl	37		mg/L			1848526	1872098	0
[>	Sc	45		ug/L			248909	288526	0
[	V	51	0.271	ug/L	0.016	5	1891	5692	3
[	V-1	51	0.317	ug/L	0.023	7	6386	11540	2
[	Cr	52	3.664	ug/L	0.050	1	5857	47366	1
[	Cr	53	3.667	ug/L	0.080	2	2099	7222	1
[	Mn	55	798.117	ug/L	4.603	0	454	14488370	0
[	Co	59	4.452	ug/L	0.049	1	53	60529	1
[>	Ge	72		ug/L			261757	259233	0
[	Ni	60	13.985	ug/L	0.055	0	45	33343	0
[	Ni	62	13.915	ug/L	0.168	1	101	4947	1
[	Cu	63	2.323	ug/L	0.019	0	292	12282	0
[	Cu	65	2.366	ug/L	0.038	1	105	5802	1
[	Zn	66	12.678	ug/L	0.134	1	401	19892	0
[	Zn	67	12.428	ug/L	0.048	0	193	3377	0
[	Zn	68	12.648	ug/L	0.146	1	6893	20177	0
[	As	75	0.345	ug/L	0.019	5	266	764	4
[	As-1	75	-0.635	ug/L	0.052	8	8833	7846	0
[	Se	82	0.157	ug/L	0.053	33	-11	14	60
[	Se	78	-3.447	ug/L	0.193	5	8982	7571	0
[	Mo	98	0.712	ug/L	0.013	1	44	3921	2
	Y	89		ug/L			259459	256120	0
	Kr	83		ug/L			186	188	1
[>	In	115		ug/L			291463	287651	1
[	Ag	107	0.148	ug/L	0.003	2	50	1420	2
[	Cd	111	0.122	ug/L	0.005	3	145	432	2
[	Cd	114	0.115	ug/L	0.006	4	15	651	6
[	Sb	121	0.095	ug/L	0.004	3	111	868	4
[	Sb	123	0.096	ug/L	0.004	4	71	649	5
[	Ba	135	35.338	ug/L	0.918	2	36	69736	0
[	Ba	137	35.798	ug/L	0.968	2	56	122859	0
[>	Tb	159		ug/L			378929	374962	0
[	Tl	205	0.029	ug/L	0.002	6	111	898	6
[	Pb	208	0.166	ug/L	0.000	0	590	6914	0
[	Bi	209		ug/L			332212	319204	0
[	Th	232	0.026	ug/L	0.001	4	447	1636	3
[	U	238	0.020	ug/L	0.001	2	110	1116	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 BDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:00:30
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	371913	2
[	Be	9	0.015	ug/L	0.005	34	5	12	17
	C	13		mg/L			3727	6106	3
	Cl	37		mg/L			1848526	4032836	1
[>	Sc	45		ug/L			248909	255291	1
|	V	51	0.932	ug/L	0.023	2	1891	12567	2
|	V-1	51	1.495	ug/L	0.034	2	6386	23834	3
|	Cr	52	0.292	ug/L	0.021	7	5857	8866	3
|	Cr	53	2.121	ug/L	0.117	5	2099	4604	4
|	Mn	55	43.048	ug/L	0.796	1	454	691992	3
[	Co	59	0.369	ug/L	0.007	1	53	4494	2
[>	Ge	72		ug/L			261757	256042	1
|	Ni	60	1.410	ug/L	0.020	1	45	3360	0
|	Ni	62	2.658	ug/L	0.373	14	101	1015	14
|	Cu	63	5.428	ug/L	0.103	1	292	27958	0
|	Cu	65	4.359	ug/L	0.022	0	105	10474	1
|	Zn	66	26.745	ug/L	0.088	0	401	41014	1
|	Zn	67	23.676	ug/L	0.494	2	193	6185	3
|	Zn	68	25.958	ug/L	0.121	0	6893	33805	1
|	As	75	1.070	ug/L	0.016	1	266	1793	1
|	As-1	75	-0.039	ug/L	0.031	79	8833	8585	0
|	Se	82	1.159	ug/L	0.010	0	-11	174	1
|	Se	78	-2.853	ug/L	0.083	2	8982	7703	1
[	Mo	98	0.712	ug/L	0.007	0	44	3874	0
	Y	89		ug/L			259459	262253	1
	Kr	83		ug/L			186	194	3
[>	In	115		ug/L			291463	281332	2
|	Ag	107	0.007	ug/L	0.003	42	50	107	21
|	Cd	111	0.027	ug/L	0.028	105	145	202	32
|	Cd	114	0.089	ug/L	0.004	4	15	495	1
|	Sb	121	0.817	ug/L	0.004	0	111	6484	2
|	Sb	123	0.815	ug/L	0.022	2	71	4889	2
|	Ba	135	7.833	ug/L	0.157	2	36	15144	1
[	Ba	137	7.905	ug/L	0.202	2	56	26573	1
[>	Tb	159		ug/L			378929	374727	1
|	Tl	205	0.005	ug/L	0.002	31	111	245	15
|	Pb	208	0.955	ug/L	0.010	1	590	37066	1
|	Bi	209		ug/L			332212	302909	1
|	Th	232	0.006	ug/L	0.001	20	447	709	8
[	U	238	0.052	ug/L	0.001	1	110	2708	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:06:26
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	407857	1
[	Be	9	0.006	ug/L	0.009	134	5	9	47
	C	13		mg/L			3727	5720	0
	Cl	37		mg/L			1848526	3806759	1
[>	Sc	45		ug/L			248909	262717	1
	V	51	0.917	ug/L	0.026	2	1891	12759	1
	V-1	51	1.508	ug/L	0.063	4	6386	24669	1
	Cr	52	0.331	ug/L	0.017	5	5857	9516	2
	Cr	53	2.245	ug/L	0.171	7	2099	4884	3
	Mn	55	42.537	ug/L	0.354	0	454	703515	0
[	Co	59	0.361	ug/L	0.011	3	53	4523	1
[>	Ge	72		ug/L			261757	257520	0
	Ni	60	1.456	ug/L	0.030	2	45	3488	1
	Ni	62	2.687	ug/L	0.300	11	101	1030	10
	Cu	63	5.357	ug/L	0.014	0	292	27760	0
	Cu	65	4.245	ug/L	0.012	0	105	10262	0
	Zn	66	21.417	ug/L	0.076	0	401	33111	0
	Zn	67	18.870	ug/L	0.102	0	193	4996	1
	Zn	68	20.795	ug/L	0.171	0	6893	28586	0
	As	75	1.121	ug/L	0.032	2	266	1876	3
	As-1	75	0.176	ug/L	0.096	54	8833	8939	1
	Se	82	1.525	ug/L	0.130	8	-11	234	9
	Se	78	-1.908	ug/L	0.401	21	8982	8108	1
[	Mo	98	0.740	ug/L	0.002	0	44	4050	1
	Y	89		ug/L			259459	278296	0
	Kr	83		ug/L			186	187	3
[>	In	115		ug/L			291463	299657	0
	Ag	107	0.001	ug/L	0.001	99	50	64	19
	Cd	111	-0.002	ug/L	0.040	1870	145	144	70
	Cd	114	0.079	ug/L	0.003	3	15	470	4
	Sb	121	0.589	ug/L	0.005	0	111	5006	0
	Sb	123	0.580	ug/L	0.001	0	71	3732	0
	Ba	135	7.497	ug/L	0.084	1	36	15447	1
[	Ba	137	7.490	ug/L	0.069	0	56	26833	1
[>	Tb	159		ug/L			378929	393794	0
	Tl	205	0.002	ug/L	0.000	24	111	166	7
	Pb	208	0.824	ug/L	0.003	0	590	33698	1
	Bi	209		ug/L			332212	318646	1
	Th	232	0.009	ug/L	0.001	8	447	896	4
[	U	238	0.050	ug/L	0.000	0	110	2744	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 BSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:12:23
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	379283	2
[	Be	9	21.880	ug/L	0.070	0	5	10385	2
	C	13		mg/L			3727	5678	0
	Cl	37		mg/L			1848526	3723859	0
[>	Sc	45		ug/L			248909	256466	2
[	V	51	24.106	ug/L	0.222	0	1891	278231	3
[	V-1	51	24.706	ug/L	0.182	0	6386	293499	2
[	Cr	52	22.721	ug/L	0.160	0	5857	229653	2
[	Cr	53	24.701	ug/L	0.266	1	2099	30833	2
[	Mn	55	65.265	ug/L	0.333	0	454	1053598	2
[	Co	59	22.607	ug/L	0.084	0	53	272982	2
[>	Ge	72		ug/L			261757	243100	1
[	Ni	60	25.837	ug/L	0.159	0	45	57735	2
[	Ni	62	27.566	ug/L	0.540	1	101	9099	3
[	Cu	63	29.216	ug/L	0.293	1	292	141711	2
[	Cu	65	28.185	ug/L	0.075	0	105	63765	2
[	Zn	66	94.619	ug/L	0.747	0	401	136833	2
[	Zn	67	87.455	ug/L	0.802	0	193	21202	1
[	Zn	68	93.782	ug/L	0.343	0	6893	99238	2
[	As	75	27.616	ug/L	0.169	0	266	37778	1
[	As-1	75	25.377	ug/L	0.340	1	8833	42023	1
[	Se	82	82.952	ug/L	0.509	0	-11	12592	2
[	Se	78	78.717	ug/L	0.478	0	8982	36692	1
[	Mo	98	27.922	ug/L	0.372	1	44	142679	2
	Y	89		ug/L			259459	262551	2
	Kr	83		ug/L			186	189	5
[>	In	115		ug/L			291463	278885	1
[	Ag	107	22.616	ug/L	0.328	1	50	203717	2
[	Cd	111	23.633	ug/L	0.135	0	145	54656	1
[	Cd	114	23.777	ug/L	0.278	1	15	127308	2
[	Sb	121	25.005	ug/L	0.146	0	111	193503	1
[	Sb	123	24.999	ug/L	0.164	0	71	146782	1
[	Ba	135	32.359	ug/L	0.544	1	36	61942	2
[	Ba	137	32.533	ug/L	0.301	0	56	108297	2
[>	Tb	159		ug/L			378929	370397	2
[	Tl	205	24.298	ug/L	0.063	0	111	657862	2
[	Pb	208	25.292	ug/L	0.084	0	590	955858	2
[	Bi	209		ug/L			332212	302242	2
[	Th	232	22.356	ug/L	0.143	0	447	1004306	2
[	U	238	26.875	ug/L	0.385	1	110	1324795	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WN31 BPOST REN~~ ZZZZZZ
Sample Dil Factor: 2
Comments: 4-3013
Sample Date/Time: Tuesday, April 30, 2013 14:18:22
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	351659	4
[	Be	9	22.263	ug/L	0.365	1	5	9795	4
	C	13		mg/L			3727	5671	0
	Cl	37		mg/L			1848526	3625722	0
[>	Sc	45		ug/L			248909	228349	3
[	V	51	25.282	ug/L	0.194	0	1891	259759	3
[	V-1	51	26.112	ug/L	0.154	0	6386	275875	3
[	Cr	52	24.311	ug/L	0.240	0	5857	218470	4
[	Cr	53	27.007	ug/L	0.122	0	2099	29841	3
[	Mn	55	66.325	ug/L	0.437	0	454	953407	3
[	Co	59	23.959	ug/L	0.238	0	53	257633	4
[>	Ge	72		ug/L			261757	224786	3
[	Ni	60	26.403	ug/L	0.159	0	45	54557	4
[	Ni	62	28.913	ug/L	0.328	1	101	8817	2
[	Cu	63	29.730	ug/L	0.173	0	292	133335	3
[	Cu	65	28.893	ug/L	0.204	0	105	60443	3
[	Zn	66	96.665	ug/L	0.860	0	401	129257	4
[	Zn	67	89.319	ug/L	0.857	0	193	20025	4
[	Zn	68	95.887	ug/L	0.291	0	6893	93688	3
[	As	75	28.109	ug/L	0.447	1	266	35567	4
[	As-1	75	26.266	ug/L	0.138	0	8833	39959	3
[	Se	82	83.313	ug/L	1.375	1	-11	11697	4
[	Se	78	80.651	ug/L	0.814	1	8982	34569	3
[	Mo	98	27.758	ug/L	0.222	0	44	131181	4
	Y	89		ug/L			259459	236954	4
	Kr	83		ug/L			186	191	5
[>	In	115		ug/L			291463	255961	4
[	Ag	107	23.203	ug/L	0.149	0	50	191814	4
[	Cd	111	23.884	ug/L	0.359	1	145	50715	5
[	Cd	114	23.941	ug/L	0.140	0	15	117629	3
[	Sb	121	25.378	ug/L	0.211	0	111	180263	4
[	Sb	123	25.313	ug/L	0.122	0	71	136403	3
[	Ba	135	33.130	ug/L	0.200	0	36	58188	3
[	Ba	137	33.010	ug/L	0.270	0	56	100868	4
[>	Tb	159		ug/L			378929	341003	4
[	Tl	205	24.890	ug/L	0.216	0	111	620258	3
[	Pb	208	25.856	ug/L	0.064	0	590	899618	4
[	Bi	209		ug/L			332212	276261	4
[	Th	232	26.522	ug/L	0.279	1	447	1096864	4
[	U	238	27.044	ug/L	0.212	0	110	1227208	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:24:22
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			374583	359701	2
	Be	9	23.032	ug/L	0.388	1	5	10366	1
	C	13		mg/L			3727	4791	1
	Cl	37		mg/L			1848526	1849042	0
>	Sc	45		ug/L			248909	228787	0
	V	51	24.732	ug/L	0.329	1	1891	254587	1
	V-1	51	24.836	ug/L	0.285	1	6386	263147	0
	Cr	52	24.861	ug/L	0.137	0	5857	223677	0
	Cr	53	25.188	ug/L	0.142	0	2099	28012	0
	Mn	55	25.123	ug/L	0.467	1	454	362050	1
	Co	59	24.763	ug/L	0.057	0	53	266740	0
>	Ge	72		ug/L			261757	239275	0
	Ni	60	25.432	ug/L	0.265	1	45	55932	0
	Ni	62	26.847	ug/L	0.435	1	101	8723	1
	Cu	63	26.167	ug/L	0.143	0	292	124947	0
	Cu	65	25.995	ug/L	0.171	0	105	57891	0
	Zn	66	80.081	ug/L	0.316	0	401	114030	0
	Zn	67	73.420	ug/L	0.860	1	193	17549	1
	Zn	68	79.399	ug/L	0.706	0	6893	83663	1
	As	75	26.187	ug/L	0.360	1	266	35274	1
	As-1	75	24.240	ug/L	0.075	0	8833	39875	0
	Se	82	81.077	ug/L	0.952	1	-11	12112	0
	Se	78	77.880	ug/L	0.527	0	8982	35818	0
	Mo	98	25.709	ug/L	0.260	1	44	129308	1
	Y	89		ug/L			259459	237540	0
	Kr	83		ug/L			186	185	2
>	In	115		ug/L			291463	272474	0
	Ag	107	25.091	ug/L	0.343	1	50	220770	1
	Cd	111	24.935	ug/L	0.529	2	145	56331	1
	Cd	114	24.928	ug/L	0.159	0	15	130394	0
	Sb	121	24.928	ug/L	0.229	0	111	188463	0
	Sb	123	24.782	ug/L	0.137	0	71	142160	0
	Ba	135	24.762	ug/L	0.121	0	36	46311	0
	Ba	137	24.740	ug/L	0.195	0	56	80468	0
>	Tb	159		ug/L			378929	351504	0
	Tl	205	26.246	ug/L	0.149	0	111	674338	0
	Pb	208	26.417	ug/L	0.053	0	590	947396	0
	Bi	209		ug/L			332212	314952	0
	Th	232	24.390	ug/L	0.173	0	447	1039680	0
	U	238	27.327	ug/L	0.050	0	110	1278218	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:30:21
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			374583	331418	0
⌊	Be	9	49.501	ug/L	1.768	3	5	20522	2
	C	13		mg/L			3727	4147	0
	Cl	37		mg/L			1848526	1908669	1
⌈>	Sc	45		ug/L			248909	230940	2
⌈	V	51	49.645	ug/L	0.105	0	1891	514065	2
⌈	V-1	51	49.762	ug/L	0.174	0	6386	526248	1
⌈	Cr	52	50.170	ug/L	0.538	1	5857	450140	2
⌈	Cr	53	50.525	ug/L	0.321	0	2099	54762	2
⌈	Mn	55	50.233	ug/L	0.393	0	454	730211	1
⌊	Co	59	49.671	ug/L	0.299	0	53	540059	2
⌈>	Ge	72		ug/L			261757	241738	2
⌈	Ni	60	50.630	ug/L	0.460	0	45	112462	2
⌈	Ni	62	51.350	ug/L	0.697	1	101	16771	1
⌈	Cu	63	50.068	ug/L	0.345	0	292	241302	2
⌈	Cu	65	50.063	ug/L	0.355	0	105	112559	2
⌈	Zn	66	51.471	ug/L	0.454	0	401	74180	2
⌈	Zn	67	51.455	ug/L	0.882	1	193	12478	2
⌈	Zn	68	51.100	ug/L	1.139	2	6893	56658	2
⌈	As	75	50.515	ug/L	0.195	0	266	68519	2
⌈	As-1	75	49.983	ug/L	0.323	0	8833	74409	2
⌈	Se	82	51.984	ug/L	0.532	1	-11	7841	1
⌈	Se	78	50.171	ug/L	0.824	1	8982	26263	2
⌊	Mo	98	50.732	ug/L	0.169	0	44	257759	2
	Y	89		ug/L			259459	235212	1
	Kr	83		ug/L			186	188	5
⌈>	In	115		ug/L			291463	269964	2
⌈	Ag	107	49.963	ug/L	0.676	1	50	435620	3
⌈	Cd	111	50.526	ug/L	0.238	0	145	112956	2
⌈	Cd	114	50.315	ug/L	0.603	1	15	260692	1
⌈	Sb	121	49.660	ug/L	0.586	1	111	371822	1
⌈	Sb	123	49.617	ug/L	0.570	1	71	281886	1
⌈	Ba	135	49.501	ug/L	0.199	0	36	91690	2
⌊	Ba	137	50.105	ug/L	1.094	2	56	161362	0
⌈>	Tb	159		ug/L			378929	348710	1
⌈	Tl	205	52.162	ug/L	0.285	0	111	1329404	1
⌈	Pb	208	51.713	ug/L	0.198	0	590	1839219	1
⌈	Bi	209		ug/L			332212	304546	1
⌈	Th	232	52.180	ug/L	0.138	0	447	2206098	1
⌊	U	238	52.920	ug/L	0.387	0	110	2455635	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:36:40
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			374583	316540	1
[	**Be**	**9**	**0.012**	ug/L	0.010	87	5	9	43
	C	**13**		mg/L			3727	3636	2
	Cl	**37**		mg/L			1848526	2144673	0
[>	**Sc**	**45**		ug/L			248909	239174	1
[	**V**	**51**	**0.004**	ug/L	0.039	914	1891	1860	21
[	**V-1**	**51**	**0.091**	ug/L	0.031	34	6386	7117	3
[	**Cr**	**52**	**-0.044**	ug/L	0.004	8	5857	5226	0
[	**Cr**	**53**	**0.235**	ug/L	0.056	23	2099	2271	2
[	**Mn**	**55**	**-0.002**	ug/L	0.002	116	454	406	8
[	**Co**	**59**	**-0.001**	ug/L	0.000	29	53	43	4
[>	**Ge**	**72**		ug/L			261757	254415	0
[	**Ni**	**60**	**0.001**	ug/L	0.005	652	45	46	24
[	**Ni**	**62**	**0.701**	ug/L	0.105	14	101	338	10
[	**Cu**	**63**	**0.026**	ug/L	0.003	12	292	416	3
[	**Cu**	**65**	**0.010**	ug/L	0.008	80	105	125	14
[	**Zn**	**66**	**0.020**	ug/L	0.007	34	401	420	2
[	**Zn**	**67**	**0.131**	ug/L	0.062	47	193	220	7
[	**Zn**	**68**	**-0.423**	ug/L	0.062	14	6893	6261	0
[	**As**	**75**	**0.067**	ug/L	0.010	14	266	354	3
[	**As-1**	**75**	**0.782**	ug/L	0.036	4	8833	7495	0
[	**Se**	**82**	**0.011**	ug/L	0.051	446	-11	-9	89
[	**Se**	**78**	**2.959**	ug/L	0.181	6	8982	7615	1
[	**Mo**	**98**	**0.005**	ug/L	0.004	74	44	71	29
	Y	**89**		ug/L			259459	241753	0
	Kr	**83**		ug/L			186	205	1
[>	**In**	**115**		ug/L			291463	280966	0
[	**Ag**	**107**	**0.004**	ug/L	0.002	35	50	87	15
[	**Cd**	**111**	**0.012**	ug/L	0.001	5	145	168	1
[	**Cd**	**114**	**0.002**	ug/L	0.002	107	15	24	39
[	**Sb**	**121**	**0.019**	ug/L	0.004	23	111	254	13
[	**Sb**	**123**	**0.020**	ug/L	0.009	46	71	188	29
[	**Ba**	**135**	**-0.002**	ug/L	0.005	241	36	31	28
[	**Ba**	**137**	**0.001**	ug/L	0.004	375	56	58	23
[>	**Tb**	**159**		ug/L			378929	355066	0
[	**Tl**	**205**	**0.010**	ug/L	0.002	16	111	365	11
[	**Pb**	**208**	**0.004**	ug/L	0.000	6	590	697	1
[	**Bi**	**209**		ug/L			332212	315710	0
[	**Th**	**232**	**0.027**	ug/L	0.009	31	447	1584	23
[	**U**	**238**	**0.002**	ug/L	0.002	82	110	191	37

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA)

Analysis Date: 4-26-13

	Analyst 4-26 DM	Peer 4-29-13	Comment
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	√	/	
QC			
ICV/CCV	√	/	
ICB/CCB	√	/	
Samples			
RSD's & SD's	√	/	
Internal Standards	—	—	
Carry-over	—	/	
Method QC			
CRI/CRA	√	/	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	/	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	√	/	
Matrix Spikes	√	/	
Matrix Duplicates	√	/	
Method Blanks	√	/	
Data			
Requested elements/isotope identified	√	/	
Correct samples identified for distribution	√	/	
Raw data match distributed data	√	/	
Data filename correct	√	/	
Miscellaneous	—	—	

Mercury Analysis Log

Analyst: DM Date: 4-26-13

Instrument: CETAC Page: 2 of 6

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments	
STD 0.0	SMM	1X			
" 0.1					
" 0.5					
" 1.0					
" 2.0					
" 5.0					
" 10.0					
ICV			8.28	Begin CLP %R=104	✓
ICB			-0.01		✓
CCV1			4.19	%R=105	✓
CCB1			-0.01		✓
CRA			0.10		✓
WN81 MB1			0.01		✓
" MB1SPK			2.08	%R=104	✓
" A			0.32		
" ADUP			0.40		✓
" ASPK			1.38	%R=106	✓
WN27 MB1			0.01		✓
" MB1SPK			2.09	%R=105	✓
" A			0.29		
" ADUP			0.34		✓
CCV2			4.29	%R=107	✓
CCB2			-0.01		✓
WN27 ASPK			1.42	%R=113	✓
WN20 MB1			0.01		✓
" MB1SPK			2.05	%R=103	✓
" MB1SPD			2.13	%R=107	✓
" A			0.44		
" ADUP			0.46		✓
" ASPK	↓	↓	1.49	%R=105	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2464 14% NH_2OH/NaCl: MP2477

Standard ID:

Standard: 3030-11 ICV/CCV: 59-6

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 4-26-13

Page: 3 of 6

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments	
WN20 B	5mm	1X			
" C					
" D					
CCV3			4.29	%R=107	✓
CCB3			-0.00		✓
WN20 E					
WM80 MB1			0.00		✓
" MB1SPK			2.06	%R=103	✓
" REF1		5X	6.54	8.175mg/kg	✓
" A		1X			
" B					
" C					
" D			0.13		
" DDUP			0.11		✓
" DSPK			1.19	%R=106	✓
CCV4			4.23	%R=106	✓
CCB4			0.00		✓
WM80 E			4/29-13		
WN59 MB1			0.01		✓
" MB1SPK			1.98	%R=99	✓
" MB1SPD			2.08	%R=104	✓
" A			0.96		
" ADUP			0.97	RPD=1.03	✓
" ASPK			2.08	%R=112	✓
" B					
" C					
" D					
CCV5			4.25	%R=106	✓
CCB5			-0.01	END CLP	✓
WLC9 MB	↓	↓	0.01		✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2H54

14% NH_2OH/NaCl: MP2H77

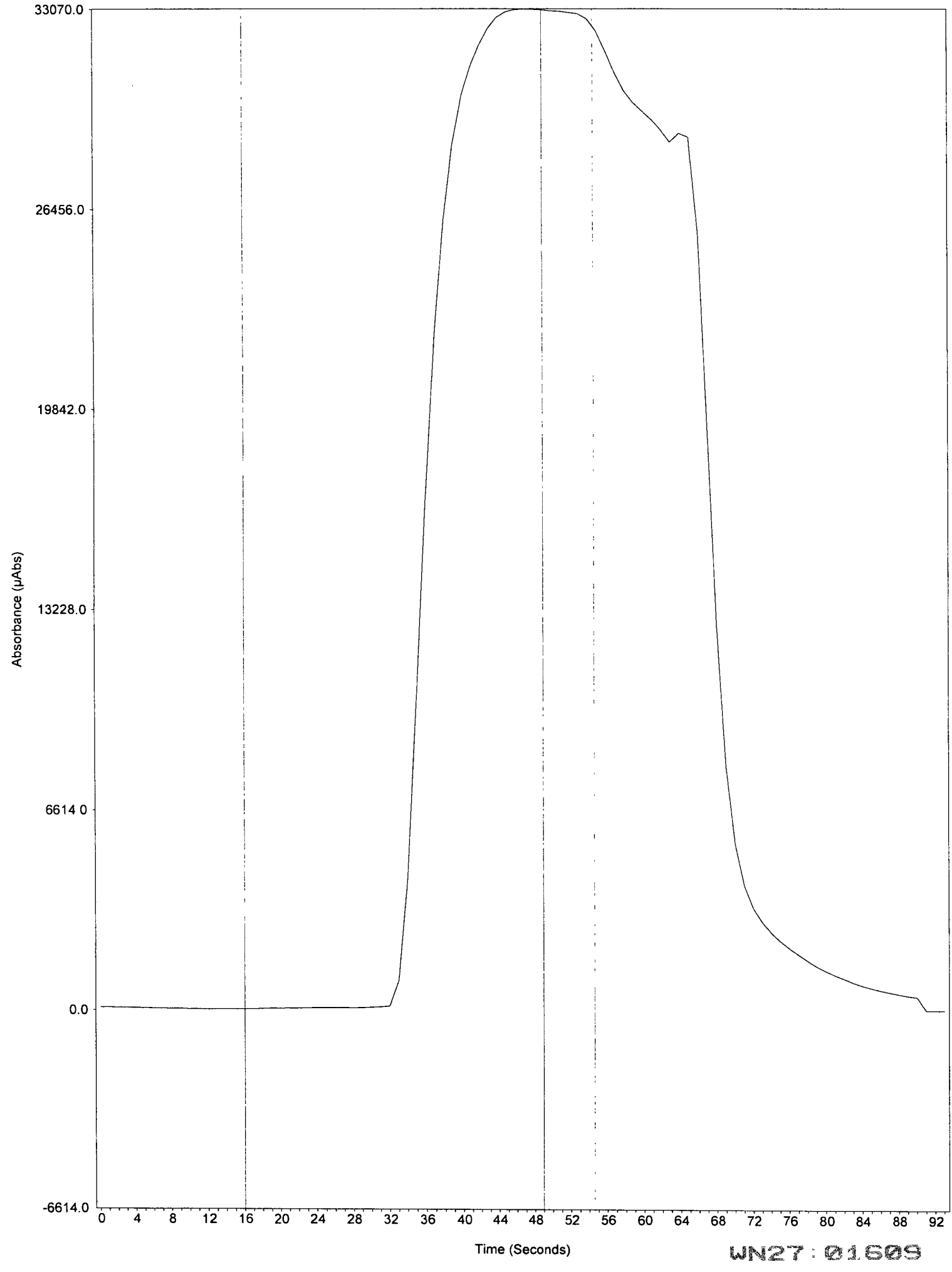
Standard ID:

Standard: 3030-11

ICV/CCV: 59-6

Std Tube 6 04/26/2013, 10:34 AM

32,910 uAbs 4-26 13 DM



WN27 : 01609

CETAC Hg Analysis Report - 13042600.DB - Friday, April 26, 2013, 3:03:18 PM

Analyst
Date Started Friday, April 26, 2013, 11:07:25
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 11:07	4.05	0.04	13400.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 11:09	-0.01	4.75	-43.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WM19 A SWM	26-Apr-2013, 11:10	4.70	0.19	15500.00	20.00	~PT Sample

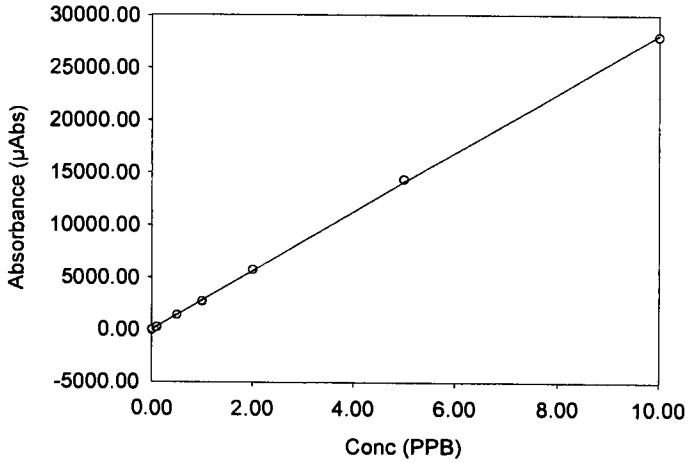
Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 11:12	4.05	0.18	13300.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 11:14	-0.00	18.30	-15.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	26-Apr-2013, 11:16	0.00	8.96	-33.50	1.00	
Standard #1	26-Apr-2013, 11:17	0.10	2.53	217.00	1.00	
Standard #2	26-Apr-2013, 11:19	0.50	0.17	1400.00	1.00	
Standard #3	26-Apr-2013, 11:20	1.00	0.82	2720.00	1.00	
Standard #4	26-Apr-2013, 11:22	2.00	0.18	5760.00	1.00	
Standard #5	26-Apr-2013, 11:24	5.00	0.09	14400.00	1.00	
Standard #6	26-Apr-2013, 11:25	10.00	0.11	28000.00	1.00	

SMM

Calibration Data



Int.	0.000
Slope	2817.346
Correlation	0 99989

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	26-Apr-2013, 11:29	8.28	0.51	23300.00	1.00	
ICB	26-Apr-2013, 11:31	-0.01	14.50	-40.40	1.00	

Begin CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 11:32	4.19	0.14	11800.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 11:34	-0.01	5.72	-40.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	26-Apr-2013, 11:35	0.10	2.09	286.00	1.00	
WN31 MB1 SMM	26-Apr-2013, 11:37	0.01	6.64	25.70	1.00	
WN31 MB1SPK SMM	26-Apr-2013, 11:39	2.08	1.69	5860.00	1.00	
WN31 A SMM	26-Apr-2013, 11:40	0.32	1.06	912.00	1.00	

WN27:01610

CETAC Hg Analysis Report - 13042600.DB - Friday, April 26, 2013, 3:03:19 PM

Analyst
Date Started Friday, April 26, 2013, 11:42:22
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WN31 ADUP SMM	26-Apr-2013, 11:42	0.40	1.46	1120.00	1.00	
WN31 ASPK SMM	26-Apr-2013, 11:43	1.38	0.20	3900.00	1.00	
WN27 MB1 SMM	26-Apr-2013, 11:45	0.01	8.50	21.70	1.00	
WN27 MB1SPK SMM	26-Apr-2013, 11:47	2.09	0.35	5900.00	1.00	
WN27 A SMM	26-Apr-2013, 11:48	0.29	0.14	828.00	1.00	
WN27 ADUP SMM	26-Apr-2013, 11:50	0.34	0.22	971.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 11:52	4.29	0.10	12100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 11:53	-0.01	6.32	-28.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WN27 ASPK SMM	26-Apr-2013, 11:55	1.42	0.34	3990.00	1.00	
WN20 MB1 SMM	26-Apr-2013, 11:57	0.01	20.00	21.40	1.00	
WN20 MB1SPK SMM	26-Apr-2013, 11:58	2.05	0.60	5780.00	1.00	
WN20 MB1SPD SMM	26-Apr-2013, 12:00	2.13	0.38	6010.00	1.00	
WN20 A SMM	26-Apr-2013, 12:01	0.44	0.13	1240.00	1.00	
WN20 ADUP SMM	26-Apr-2013, 12:03	0.46	0.66	1300.00	1.00	
WN20 ASPK SMM	26-Apr-2013, 12:05	1.49	0.19	4190.00	1.00	
WN20 B SMM	26-Apr-2013, 12:06	0.45	0.28	1270.00	1.00	
WN20 C SMM	26-Apr-2013, 12:08	0.43	0.10	1210.00	1.00	
WN20 D SMM	26-Apr-2013, 12:09	0.29	0.29	828.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 12:11	4.29	0.18	12100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 12:13	-0.00	57.90	-4.79	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WN20 E SMM	26-Apr-2013, 12:14	0.07	1.51	198.00	1.00	
WM89 MB1 SMM	26-Apr-2013, 12:16	0.00	34.80	9.44	1.00	
WM89 MB1SPK SMM	26-Apr-2013, 12:18	2.06	0.43	5810.00	1.00	
WM89 REF1 SMM	26-Apr-2013, 12:19	6.54	0.48	18400.00	5.00	
WM89 A SMM	26-Apr-2013, 12:21	0.04	3.01	117.00	1.00	
WM89 B SMM	26-Apr-2013, 12:22	0.05	1.08	140.00	1.00	
WM89 C SMM	26-Apr-2013, 12:24	0.26	0.88	728.00	1.00	
WM89 D SMM	26-Apr-2013, 12:26	0.13	1.31	366.00	1.00	
WM89 DDUP SMM	26-Apr-2013, 12:27	0.11	0.67	320.00	1.00	
WM89 DSPK SMM	26-Apr-2013, 12:29	1.19	0.37	3360.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 12:31	4.23	0.08	11900.00	1.00	

4-29-13

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 12:32	0.00	91.70	8.78	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WM89 E SMM	26-Apr-2013, 12:34	0.11	0.85	320.00	1.00	
WN59 MB1 SMM	26-Apr-2013, 12:36	0.01	4.60	20.40	1.00	
WN59 MB1SPK SMM	26-Apr-2013, 12:37	1.98	0.21	5590.00	1.00	
WN59 MB1SPD SMM	26-Apr-2013, 12:39	2.08	0.18	5870.00	1.00	
WN59 A SMM	26-Apr-2013, 12:40	0.96	0.16	2690.00	1.00	
WN59 ADUP SMM	26-Apr-2013, 12:42	0.97	0.21	2720.00	1.00	
WN59 ASPK SMM	26-Apr-2013, 12:44	2.08	0.34	5860.00	1.00	
WN59 B SMM	26-Apr-2013, 12:45	0.13	1.60	377.00	1.00	
WN59 C SMM	26-Apr-2013, 12:47	0.05	2.90	141.00	1.00	
WN59 D SMM	26-Apr-2013, 12:48	0.16	0.23	447.00	1.00	

WN27 : 01611

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

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Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: 5mm **Instrument:** CETAC

Analyst: CB **Date:** 04-24-13

Bath Temp: 90°C **Start Time:** 0840 **End Time:** 0910

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	–	0.00	50.0	0.0	3
STD1	3030-11	0.01	↓	0.1	2
STD2	↓	0.05	↓	0.5	2
STD3	↓	0.10	↓	1.0	2
STD4	↓	0.20	↓	2.0	2
STD5	↓	0.50	↓	5.0	2
STD6	↓	1.00	↓	10.0	2
CRA	↓	0.01	↓	0.1	1
ICB/CCB	–	0.00	↓	0.0	3
ICV/LCS	59-6	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:

HNO_3: I8169 **H_2SO_4:** I8044 **HCl:** –

5% $K_2S_2O_8$: mp2462 **5% $KMnO_4$:** mp2445

Prep Code: _____ **Instrument:** _____

Analyst: _____ **Date:** _____

Bath Temp: _____ **Start Time:** _____ **End Time:** _____

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0		0.00			
STD1					
STD2		0.05			
STD3		0.10			
STD4		0.20			
STD5		0.50			
STD6		1.00			
CRA					
ICB/CCB		0.00			
ICV/LCS					
CCV					

Chemical/Reagent ID:

HNO_3: _____ **H_2SO_4:** _____ **HCl:** _____

5% $K_2S_2O_8$: _____ **5% $KMnO_4$:** _____

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Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mM **Matrix:** Soil

Analyst: CB **Date:** 04-25-13

Bath Temp: 90°C **Start Time:** 1140 **End Time:** 1210

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WN31 A	7	~	0.218	50.0	5/08 1	Y	
" Adup	7	~	0.214		1		
" ASpk	7	~	0.216		1		
" mBI	~	~	~		1		
" mBIspk	~	~	~		1		
WN27 A	1	~	0.217		5/08 1		
" Adup	1	~	0.216		1		
" ASpk	1	~	0.215		1		
" mBI	~	~	~	↓	1	↓	
" mBIspk	~	~	~	50.0	1	Y	
				CB			
				4-25-13			

Chemical/Reagent ID:

HNO_3: I8169 H_2SO_4: I8044 HCl: ~

5% $K_2S_2O_8$: MP2462 5% $KMnO_4$: MP2445 Digest Tube Lot: MH21KK08

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WN27

4-26-13

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

DATE: 4/25/13 (A)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

ANALYST: KE 8:02

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

Batch drying time

record times as mm/dd/yy hh:mm

4/25/2013 8:02 date/time in oven KE

4/26/2013 6:26 date/time out KE

elapsed hrs = 22.4

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02			
	Date & Time	4/25/13 7:30 KE	4/25/13 6:48 KE	4/213 6:42 KE									
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000									
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*									

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.0412	1.0412			0.00							
WN27 A1		6.9598	1.0773	4.7116			3.63	61.78%						
WN31 A5		6.6489	1.0498	3.1754			2.13	37.96%						
WN31 A5 dup		6.8649	1.0595	3.2607			2.20	37.92%						
							RPD =	0.12%				RPD =	NA	
WN31 A5 trp		6.5616	1.0561	3.1318			2.08	37.70%						
							RSD =	0.37%				RSD =	NA	

WN27 9161 5

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TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

(A)

Analyst (W)	Date: 4-25-13	Oven ID:	Balance ID: 1123230597
Time in Oven: 8:02	Time Out of Oven: 6:24	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID		CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:		4-25-13 7:33	4-25-13 6:48	4-26-13 6:42						
Cal Weight (10.0000):		10.00000 (W)	10.00000 (W)	10.00000 (W)						
Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	2	3	Dry Weight grams	Ash Weight 550°C 1	2	3
BLANK	1	Ø	1.0412	1.0412						
WN27 A1	2	6.9598	1.0773	4.7116						
WN31 A6	3	6.1489	1.0498	3.1754						
" A6	4	6.9649	1.0505	3.2607						
" A6	5	6.5616	1.0561	3.1318						

4-25-13 (W)

LTS13.12MM

J
4-26-13

TOC Solids Prep Log

DATE: 4/25/2013
ANALYST: KE 8:16

acid purging to remove IC and drying at 70°C for TOC analysis
General notes regarding prep method and samples (identify the acid used)

HCL 10% ID:
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			12.9876		12.9877	0.1 mg	
WN27 A1		-	13.0416	19.5499	16.6835	55.96%	
WN31 A6		-	13.0322	19.8538	15.7937	40.48%	
WN31 A6 dup		-	13.0237	19.9008	15.8201	40.66%	RPD = 0.45%
WN31 A6 trip		-	12.9879	19.9302	15.8219	40.82%	RSD = 0.42%
WN30 A1		-	13.0142	18.8233	16.2395	55.52%	
WN30 A1 dup		-	13.0472	19.6544	16.7405	55.90%	RPD = 0.68%
WN30 A1 trip		-	13.0428	18.9798	16.3674	56.00%	RSD = 0.45%
WN30 B1		-	12.9876	19.4466	16.3955	52.76%	
WN30 C1		-	13.0022	18.6597	15.7646	48.83%	
WN30 D1		-	12.9539	19.9390	16.7039	53.69%	
WN30 E1		+-	13.0185	18.8445	16.8250	65.34%	
WN30 F1		+-	13.0426	19.8994	18.2800	76.38%	
WN30 G1		+-	13.0324	20.5411	18.2755	69.83%	
WN30 H1		+-	12.9423	19.9625	18.3535	77.08%	
WN30 I 1		+-	13.0679	19.4927	18.8386	89.82%	
WN30 J 1		-	13.0440	18.6940	16.1434	54.86%	
WN30 K1		-	13.0005	19.1723	15.8816	46.68%	

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TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (W) 8/16 Date 4-25-13

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			12.9876	0	12.9877		
WN27 A1		-	13.0416	19.5499	16.6935		Very hot Sediment Wet
WN31 A1		-	13.0322	19.8538	15.7937		Sediment + dust
↓ B1		-	13.0237	19.9008	15.8201		↓
↓ B6		-	12.9879	19.9302	15.8219		Sediment (thick) Some Rocks
WN30 A1		-	13.0142	18.8233	16.2395		↓
∞ A1		-	13.0472	19.6544	16.7405		↓
↓ A1		-	13.0428	18.9798	16.3674		Sediment
B1		-	12.9876	19.4466	16.3955		↓
C1		-	13.0022	18.6597	15.7646		Some Silty
D1		-	12.9539	19.9390	16.2039		↓
E1		+-	13.0185	18.8445	16.8250		Thick Silt
F1		+-	13.0426	19.8994	18.2800		Fine Sandy Sediment
G1		+-	13.0324	20.5411	18.2755		↓
H1		+-	12.9423	19.9625	18.3535		↓
I1		+-	13.0679	19.4927	18.8396		Sand
J1		(1)* -	13.0440	18.6940	16.1434		Sediment
K1		(1)* -	13.0005	19.1723	15.9816		↓

4-25-13 (W)

4-26-13

TOC, Solids Data Analysis

DATE: 4/26/2013

Instrument: Apollo 1 — ANALYST: KE 7:52

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
13.1	12.9	13.8				13.2	3.6%	*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	1002	1,002	*100.20%*
Blank				1.00		40.0	-49.25	-49	*Blank OK*
NIST 1941B				1.00		1.5	26524	26,524	*88.71%*
Silica Blanks 1				1.00		53.4	13.07	13	*Low Scale*
Silica Blanks 2				1.00		59.2	12.87	13	*Low Scale*
Silica Blanks 3				1.00		53.6	13.78	14	*Low Scale*
WM68 A1				1.00		0.9	60350	60,350	*Range OK!*
WM68 A1 dup				1.00		0.9	55208	55,208	*RPD=8.9%*
WM68 A1 trp				1.00		1.0	61648	61,648	*RSD=5.8%*
~~WM68 A1 ms~~	~~25.7~~	~~255.3~~	~~89.93%~~	~~9.93~~	~~10~~	~~3.5~~	~~10023~~	~~99,449~~	~~*Range OK!*~~
~~*Spike =*~~	~~*0.025*~~	~~*mg C to*~~	~~*0.4*~~	~~*mg samp=*~~	~~*70,956*~~	~~*ppm*~~		~~*55%*~~	
Low : Reran sample with higher sample valume.									
WM68 A1 ms	25.7	255.3	89.93%	9.93	10	4.7	10980	108,955	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.5*	*mg samp=*	*52,840*	*ppm*		*92%*	
WM68 B1	20.9	201.3	89.62%	9.63		1.7	7630	73,375	*Range OK!*
CCV				1.00		40.0	1016	1,016	*101.60%*
Blank				1.00		40.0	-52.33	-52	*Blank 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*
WM68 C1				1.00		1.0	45374	45,374	*Range OK!*
WM68 D1	14.6	143.8	89.85%	9.85		2.2	13006	127,983	*Range OK!*
WM68 E1				1.00		1.6	18539	18,539	*Range OK!*
WM69 A1				1.00		0.8	119383	119,383	*Range OK!*
WM69 B1				1.00		2.9	14765	14,765	*Range OK!*
WM69 C1	15.4	152.7	89.91%	9.92		2.8	4392	43,431	*Range OK!*
WN27 A1				1.00		0.7	74761	74,761	*Range OK!*
NIST 1941B				1.00		1.3	24327	24,327	*81.36%*
CCV				1.00		40.0	985	985	*98.50%*
Blank				1.00		40.0	-49.27	-49	*Blank OK*

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(1) 4-26-13 (W)

TOC Solids Sample Run Log

(S) ~~0409~~ (1) 00136-09 4-26-13 (W) Apollo 9000 Page 1 of 1

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler		
Standards:	Source		Conc (ppm)	Analyst:	(A)
Calibration:	ARI ~~0409-12-07~~ (2)		5000	Date:	4-26-13
Verification:	ERA – 0409-12-01		5000 to 1000 for CVS	Time:	7:57
SRM:	NBS – 1941b or 8704		Method: PSEP 1986-MOD	Balance ID	B148454145
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			1.5			
SA 1			53.4			
2			59.2			
3			53.6			
WN68 A1			0.9			
DA1			0.9			
4A1			1.0			
MS A1	25.7	253.3	3.5	2500	10	Low Purity w/Lagoon
MSA1	25.7	255.3	4.7	2500	10	Sample Volume
B1	20g	201.3	1.7			
CCV			40			
CCB			40			
WN68 C1			1.0			
D1	14.6	143.8	2.2			
E1			1.6			
WN69 A1			0.9			
B1			2.9			
C1	15.4	152.7	2.8			
WN27 A1			0.7			
NBS1941B			1.3			
CCV			40			
CCB			40			
			4-26-B (A)			

4-26-13 (2)

Detailed Analysis Report Print Date/Time: 2013/04/26 14:58:40

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 04260720
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 07:38
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1002.3702	40.0948	5752730	22.760	23.758	140

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 04260739
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 07:43
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-49.2515	-1.9701	14422	22.990	22.977	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 04260757
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 08:02
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26523.8242	39.7857	5710568	23.205	24.203	250

Sample ID: Silica Blank 1 Mode: TOC
Method: Boat Sampler Filename: 04260914
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 09:16
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13.0720	0.6980	95225	24.864	25.861	57

Sample ID: Silica Blank 2 Mode: TOC
Method: Boat Sampler Filename: 04260938
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 09:48
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12.8678	0.7618	103918	25.387	26.385	63

Sample ID: Silica Blank 3 (2) 4-26-13 Mode: TOC
Method: Boat Sampler Filename: 04260954
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 09:56
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13.7839	0.7388	100786	25.573	26.564	58

Sample ID: WM68 A1 Mode: TOC
Method: Boat Sampler Filename: 04261003
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 10:06
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	60349.6289	54.3147	7409372	25.600	26.600	166

Sample ID: WM68 A1DP
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04261013
Timestamp: 2013/04/26 10:17
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	55207.7305	49.6870	6778081	26.258	27.255	151

Sample ID: WM68 A1MS
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04261031
Timestamp: 2013/04/26 10:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	61647.9023	61.6479	8409741	26.639	27.637	174

Sample ID: WM68 A1 MS
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04261037
Timestamp: 2013/04/26 10:40
Sample Type: Sample

Left Ryan with Virginia Sample Update to Verify 4-30-13 RJ

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10022.5557	35.0789	4785318	27.125	28.125	113

Sample ID: WM68 A1 MS
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04261050
Timestamp: 2013/04/26 10:53
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10980.2100	51.6070	7040003	27.168	28.167	144

Sample ID: WM68 B1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04261103
Timestamp: 2013/04/26 11:05
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7630.0322	12.9711	1769455	27.825	28.820	99

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04261140
Timestamp: 2013/04/26 11:47
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1015.5211	40.6208	5824490	28.478	29.474	154

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04261213
Timestamp: 2013/04/26 12:17
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-52.3276	-2.0931	-2363	28.169	28.089	120

Last Message: Low Sample Detected

Sample ID: WM69 B1 4-26-13 (W) Mode: TOC
Method: Boat Sampler Filename: 04261224
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 12:27
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	45373.6172	45.3736	6189673	27.535	28.534	136

Sample ID: WM69 D1 4-26-13 (W) Mode: TOC
Method: Boat Sampler Filename: 04261230
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 12:33
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13006.2686	28.6138	3903370	27.417	28.415	113

Sample ID: WM69 E1 Mode: TOC
Method: Boat Sampler Filename: 04261235
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 12:38
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18538.5469	29.6617	4046318	27.234	28.231	133

Sample ID: WM69 A1 Mode: TOC
Method: Boat Sampler Filename: 04261244
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 12:49
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	119382.8984	95.5063	13028560	26.956	27.954	185

Sample ID: WM69 B1 Mode: TOC
Method: Boat Sampler Filename: 04261410
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 14:14
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14765.4492	42.8198	5841293	29.880	30.877	156

Sample ID: WM69 C1 Mode: TOC
Method: Boat Sampler Filename: 04261420
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 14:22
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4392.3618	12.2986	1677724	30.037	31.035	93

Sample ID: WN27 A1 Mode: TOC
Method: Boat Sampler Filename: 04261425
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/26 14:29
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	74760.8047	52.3326	7138982	29.954	30.953	150

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04261433
Timestamp: 2013/04/26 14:39
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24326.6797	31.6247	4597273	30.105	31.102	236

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04261448
Timestamp: 2013/04/26 14:51
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	984.5295	39.3812	5655381	29.982	30.978	138

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04261453
Timestamp: 2013/04/26 14:56
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-49.2713	-1.9709	14314	30.122	30.204	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

Cancelled 4-16-13

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6028195	32.752	34.573	301
2			-10861519	144.712	37.341	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: -2416662 Std Dev: 11942831 RSD: -494.19

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04161235
Timestamp: 2013/04/16 12:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6153702	36.612	38.838	300
2			6228680	39.843	41.810	300
3			6260806	41.504	43.301	301

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 6214396 Std Dev: 54962 RSD: 0.88

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04161300
Timestamp: 2013/04/16 13:27
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			13471712	43.807	45.798	300
2			13847641	46.690	48.258	301
3			13871687	47.866	50.704	300

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 13730347 Std Dev: 224307 RSD: 1.63

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04161329
Timestamp: 2013/04/16 13:35
Sample Type: Cal. Verification

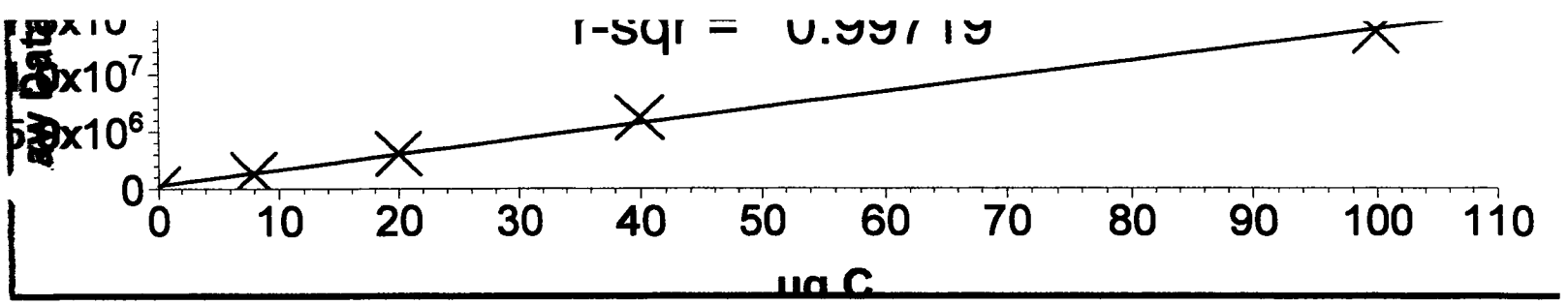
Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1069.2297	42.7692	6117558	49.225	51.488	300

Last Message: Max Integration Time Reached

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04161336
Timestamp: 2013/04/16 13:39
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.7771	0.1911	309237	50.289	51.285	104


r-sqr = 0.99719
x10^7
x10^6
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: WN27

Sample: CG-MH-010-20130423-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WN27\WN27A.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 5/3/2013 1:38:22PM
Reported: 5/3/2013 1:49:04PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 110 / 93 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	76.2	1.1	117.79979
917.3	0.125	75.1	1.1	104.98917
866.0	0.208	74.1	1.1	93.57170
817.5	0.291	73.0	1.1	83.39587
771.8	0.374	72.0	1.1	74.32664
728.6	0.457	70.9	1.1	66.24369
687.9	0.540	69.9	1.0	59.03975
649.4	0.623	68.8	1.0	52.61923
613.1	0.706	67.8	1.0	46.89694
578.8	0.789	66.7	1.0	41.79694
546.4	0.872	65.7	1.0	37.25156
515.8	0.955	64.7	1.0	33.20049
487.0	1.038	63.6	1.0	29.58997
459.7	1.121	62.6	1.0	26.37209
434.0	1.204	61.6	1.0	23.50415
409.7	1.287	60.5	1.0	20.94809
386.8	1.370	59.5	1.0	18.67001
365.2	1.453	58.5	1.0	16.63966
344.7	1.536	57.5	1.0	14.83012
325.5	1.619	56.5	1.0	13.21735
307.3	1.702	55.5	1.0	11.77998
290.1	1.786	54.5	1.0	10.49892
273.8	1.869	53.5	1.0	9.35717
258.5	1.952	52.6	1.0	8.33959
244.1	2.035	51.6	0.9	7.43266
230.4	2.118	50.8	0.9	6.62437
217.5	2.201	50.0	0.8	5.90398
205.4	2.284	49.3	0.7	5.26192
193.9	2.367	48.6	0.7	4.68969
183.0	2.450	48.0	0.6	4.17969
172.8	2.533	47.4	0.6	3.72516
163.1	2.616	46.9	0.5	3.32005
154.0	2.699	46.4	0.5	2.95900
145.4	2.782	45.9	0.5	2.63721
137.2	2.865	45.4	0.5	2.35041
129.6	2.948	44.9	0.5	2.09481
122.3	3.031	44.4	0.5	1.86700
115.5	3.114	43.9	0.5	1.66397
109.0	3.197	43.3	0.5	1.48301
102.9	3.280	42.8	0.5	1.32174

Sample: CG-MH-010-20130423-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WN27\WN27A.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 5/3/2013 1:38:22PM
Reported: 5/3/2013 1:49:04PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 110 / 93 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
97.16	3.363	42.2	0.5	1.17800
91.73	3.447	41.7	0.5	1.04989
86.60	3.530	41.2	0.5	0.93572
81.75	3.613	40.8	0.4	0.83396
77.18	3.696	40.4	0.4	0.74327
72.86	3.779	40.1	0.3	0.66244
68.79	3.862	39.9	0.2	0.59040
64.94	3.945	39.8	0.1	0.52619
61.31	4.028	39.8	0.0	0.46897
57.88	4.111	39.8	0.0	0.41797
54.64	4.194	39.8	0.0	0.37252
51.58	4.277	39.9	0.0	0.33200
48.70	4.360	39.9	0.0	0.29590
45.97	4.443	39.8	0.0	0.26372
43.40	4.526	39.8	0.0	0.23504
40.97	4.609	39.7	0.1	0.20948
38.68	4.692	39.6	0.1	0.18670
36.52	4.775	39.5	0.1	0.16640
34.47	4.858	39.4	0.1	0.14830
32.55	4.941	39.4	0.0	0.13217
30.73	5.024	39.4	0.0	0.11780
29.01	5.107	39.4	0.0	0.10499
27.38	5.191	39.4	0.0	0.09357
25.85	5.274	39.3	0.1	0.08340
24.41	5.357	39.0	0.2	0.07433
23.04	5.440	38.7	0.3	0.06624
21.75	5.523	38.3	0.4	0.05904
20.54	5.606	37.8	0.5	0.05262
19.39	5.689	37.3	0.5	0.04690
18.30	5.772	36.7	0.6	0.04180
17.28	5.855	36.1	0.6	0.03725
16.31	5.938	35.4	0.6	0.03320
15.40	6.021	34.8	0.6	0.02959
14.54	6.104	34.1	0.6	0.02637
13.72	6.187	33.6	0.6	0.02350
12.96	6.270	33.1	0.5	0.02095
12.23	6.353	32.6	0.4	0.01867
11.55	6.436	32.2	0.4	0.01664
10.90	6.519	31.8	0.4	0.01483
10.29	6.602	31.4	0.4	0.01322

Sample: CG-MH-010-20130423-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WN27\WN27A.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 5/3/2013 1:38:22PM
Reported: 5/3/2013 1:49:04PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 110 / 93 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
9.716	6.685	30.9	0.5	0.01178
9.173	6.768	30.4	0.5	0.01050
8.660	6.851	29.9	0.5	0.00936
8.175	6.935	29.4	0.5	0.00834
7.718	7.018	28.8	0.5	0.00743
7.286	7.101	28.3	0.5	0.00662
6.879	7.184	27.8	0.5	0.00590
6.494	7.267	27.2	0.6	0.00526
6.131	7.350	26.5	0.7	0.00469
5.788	7.433	25.6	0.8	0.00418
5.464	7.516	24.7	0.9	0.00373
5.158	7.599	23.8	0.9	0.00332
4.870	7.682	22.8	0.9	0.00296
4.597	7.765	21.9	0.9	0.00264
4.340	7.848	21.1	0.9	0.00235
4.097	7.931	20.2	0.8	0.00209
3.868	8.014	19.4	0.8	0.00187
3.652	8.097	18.7	0.8	0.00166
3.447	8.180	18.0	0.7	0.00148
3.255	8.263	17.3	0.7	0.00132
3.073	8.346	16.6	0.7	0.00118
2.901	8.429	15.9	0.7	0.00105
2.738	8.512	15.3	0.7	0.00094
2.585	8.595	14.6	0.6	0.00083
2.441	8.679	14.0	0.6	0.00074
2.304	8.762	13.4	0.6	0.00066
2.175	8.845	12.8	0.6	0.00059
2.054	8.928	12.3	0.6	0.00053
1.939	9.011	11.8	0.5	0.00047
1.830	9.094	11.3	0.5	0.00042
1.728	9.177	10.8	0.4	0.00037
1.631	9.260	10.4	0.4	0.00033
1.540	9.343	10.1	0.3	0.00030
1.454	9.426	9.8	0.3	0.00026
1.372	9.509	9.6	0.2	0.00024
1.296	9.592	9.4	0.2	0.00021
1.223	9.675	9.2	0.2	0.00019
1.155	9.758	9.1	0.1	0.00017
1.090	9.841	9.0	0.1	0.00015
1.029	9.924	9.1	0.0	0.00013

Sample: CG-MH-010-20130423-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WN27\WN27A.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 5/3/2013 1:38:22PM
Reported: 5/3/2013 1:49:04PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 110 / 93 kCnts/s
Reynolds Number: 0.42

Report by Size Table

Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	39.8	4.8
4750	94.5	5.5	31.00	39.4	0.4
2000	92.2	2.3	15.60	34.9	4.5
1000	76.7	15.5	7.800	28.9	6.0
500.0	64.1	12.6	3.900	19.5	9.4
250.0	52.0	12.1	2.000	12.0	7.5
125.0	44.6	7.4	1.000	9.1	3.0

Sample: CG-MH-010-20130423-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WN27\WN27A.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 5/3/2013 1:38:22PM
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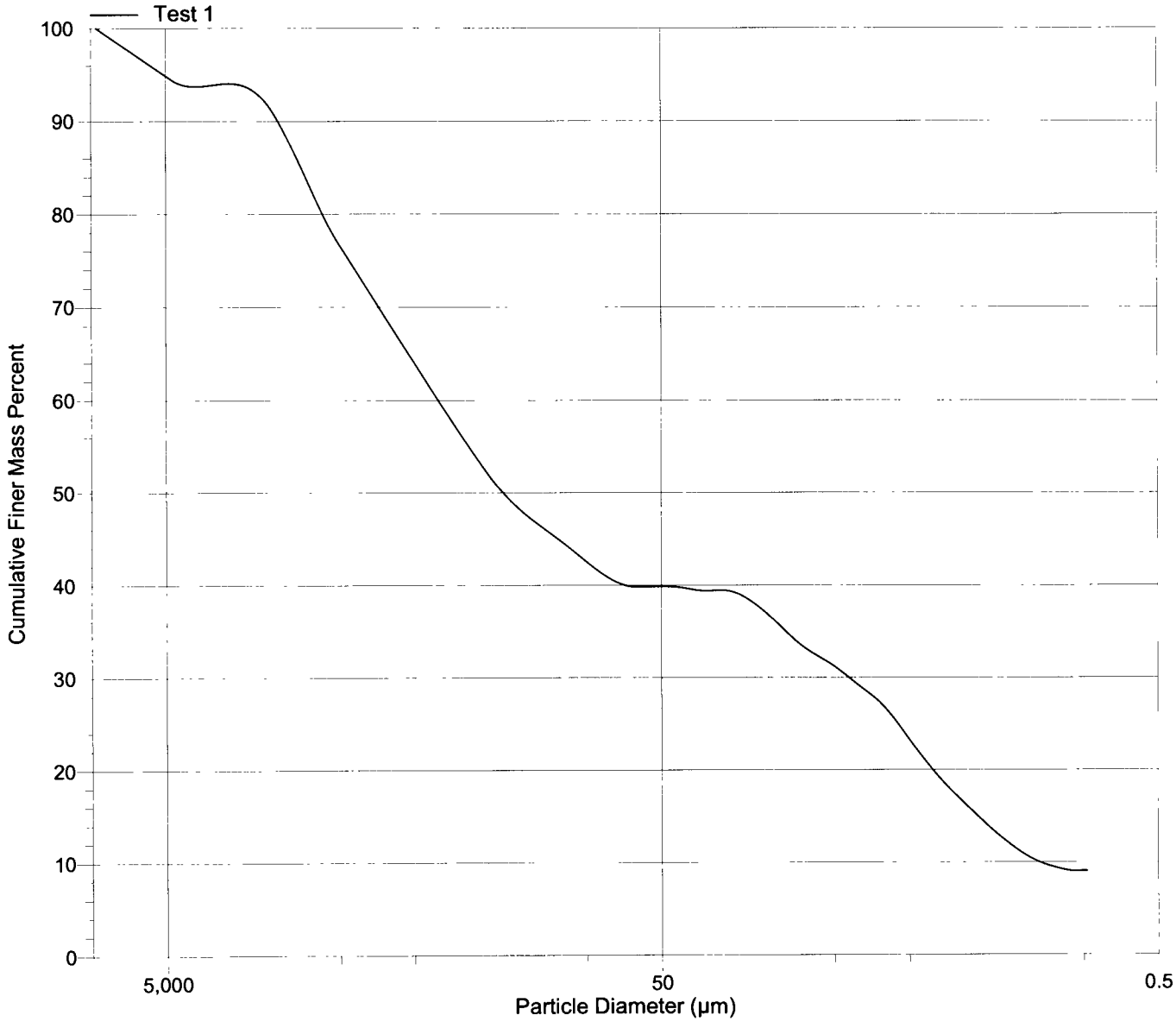
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 110 / 93 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



ANALYTICAL RESOURCES, INC.
SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WN27 ARI Sample No. A Client Sample No. CG-MH-010-20130423-S

Set-up Date: 05/01/2013 Sample Description: sandy organic fines, pebbles

Sieve Set # 2 Date Sieved: 5/2/13

SOLIDS CONTENT

Moisture Content	Initials JKL
Container No.	122
Tare Weight	1.4866
Wet Weight + Tare	16.4939
Dry Weight + Tare	9.8807

Test Sample	Initials JKL
Container No.	122
Tare Weight	50.3966
Wet Weight + Tare	85.9063
Washed Sample Dry Weight + Tare	63.1871

SIEVE ANALYSIS
Initials JG

Sieve Size	Weight Retained	
Tare	50.4405	JG
4	51.5236	JG
10	51.9968	
18	55.0676	JG
35	57.5687	
60	59.9690	
120	61.4366	
230	62.4072	
PAN	0.9133	

SEDIGRAPH ANALYSIS
Initials JG
Date Sedigraphed 5.3.2013

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI Water

Beaker ID	273A

Table of Contents: ARI Job WP24

Client: SAIC

Project: NPDES Sampling Support

BC
Signature

May-13-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 14, 2013

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

RE: Project: NPDES Sampling Support, 209977
ARI Job No.: WP24

Dear Christine:

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

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

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

Sincerely,

ANALYTICAL RESOURCES, INC.

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

cc: eFile WP24

Enclosures

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

Chain of Custody Documentation

ARI Job ID: WP24

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: UN27	Turn-around Requested: 15 Day	Date: 4/23/13	
ARI Client Company: SAIC	Phone: 206.300.2144 nancarrowc@saic.com	Page: 1 of 1	
Client Contact: Christine Nancarrow		No. of Coolers: 1	Cooler Temps: 6.8
Client Project Name: NPDES Sampling Support			
Client Project #: 209977	Samplers: CW CN		

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

Sample ID	Date	Time	Matrix	No. Containers	PCB Aroclors (EPA 8082)	SVOCs (EPA 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH Diesel (NWTPH-DX)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb, 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	Notes/Comments
Analysis Requested (Sediment Sample)																
CG-MH-010-20130423-1	4/23/13	1426	Sediment	4	1	2	1	6	2		3	3	4	5	1	~~4/23/13~~

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
Please analyze in priority order by number. Do not dispose of any samples prior to written authorization by SAIC PM.	(Signature)	(Signature)	(Signature)	(Signature)
	Printed Name: CNANCARROW	Printed Name: A. Bigirdsen	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 4/23/13 1533	Date & Time: 4/23/13 1533	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

COC No(s): _____ (NA)

Assigned ARI Job No: WN27

Project Name: NPDES Sampling Support

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	(YES)	NO AV
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) 6.8		

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

Temp Gun ID#: 90877952

Cooler Accepted by: AV Date: 4/23/13 Time: 1533

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)...		(YES)	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?	(NA)	YES	NO
Date VOC Trip Blank was made at ARI		(YES)	NO
Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____	(NA)	Split by: _____	

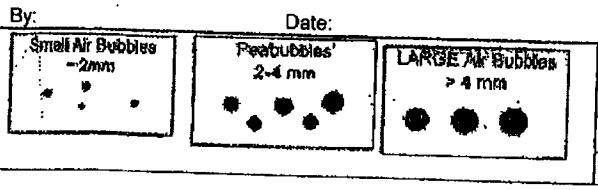
Samples Logged by: JM Date: 4/24/13 Time: 1023

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

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

Additional Notes, Discrepancies, & Resolutions:

By: Date:



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

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Consultants

WN27

Cooler Temperature Compliance Form

Cooler#: 1	Temperature(°C): 6.8	
Sample ID	**Bottle Count**	**Bottle Type**
All samples associated with this job were received at a temp greater than 6°C.		

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Completed by: JM Date: 4/24/13 Time: 1023

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WP24

ANALYTICAL
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INCORPORATED

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job No.: WP24

Sample Receipt

One sediment sample was removed from frozen archive on May 8, 2013 per email instructions. For details regarding sample receipt, please refer to the Cooler Receipt Form. The sample was analyzed for NWTPH-Dx with Acid/Silica extraction clean-ups, as requested.

NWTPH-Dx

The sample and associated laboratory QC were extracted and analyzed within recommended holding times for samples stored frozen.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

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

The matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits for sample **CG-MH-010-20130423-S**. No corrective action is required for matrix QC.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WP24
Client: SAIC
Project Event: N/A
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CG-MH-010-20130423-S	WP24A	13-9985	Sediment	04/23/13 14:26	04/23/13 15:33

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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

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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 [6]	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 [6]	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

TPHD Analysis
Report and Summary QC Forms

ARI Job ID: WP24

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned — QC Report No: WP24-SAIC
Extraction Method: — Project: NPDES Sampling Support

Matrix: Sediment
Data Release Authorized:
Reported: 05/13/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DI	Range	DL	LOQ	Result
MB-050913	Method Blank	05/09/13	05/11/13	1.00	Diesel	1.3	5.0	< 5.0 U
13-9985	HC ID: ---		FID3B	1.0	Motor Oil	1.6	10	< 10 U
					o-Terphenyl			84.5%
WP24A	CG-MH-010-20130405	05/09/13	05/11/13	10.0	**Diesel**	**110**	**420**	**1500**
13-9985	HC ID: **DRO/MOTOR OIL**		FID3B	5.0	**Motor Oil**	**130**	**840**	**5800**
					o-Terphenyl			D

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DI-Dilution of extract prior to analysis.
DL-Detection Limit
LOQ-Limit of Quantitation

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 indicate results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WP24-SAIC
Project: NPDES Sampling Support

Client ID	OTER	TOT OUT
MB-050913	84.5%	0
LCS-050913	76.7%	0
CG-MH-010-20130423	D	0
CG-MH-010-20130423 MS	D	0
CG-MH-010-20130423 MSD	D	0

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

Prep Method: SW3546
Log Number Range: 13-9985 to 13-9985

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: CG-MH-010-20130423-S**
Page 1 of 1 **MS/MSD**

Lab Sample ID: WP24A
LIMS ID: 13-9985
Matrix: Sediment
Data Release Authorized:
Reported: 05/13/13

QC Report No: WP24-SAIC
Project: NPDES Sampling Support

Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted MS/MSD: 05/09/13

Date Analyzed MS: 05/11/13 17:06
MSD: 05/11/13 17:26
Instrument/Analyst MS: FID/JLW
MSD: FID/JLW

Sample Amount MS: 5.96 g-dry-wt
MSD: 5.97 g-dry-wt
Final Extract Volume MS: 10 mL
MSD: 10 mL
Dilution Factor MS: 5.0
MSD: 5.0
Percent Moisture: 40.4%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	1500	2130	252	NA	1780	251	NA	17.9%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	D	D

Results reported in mg/kg
NA-No recovery due to high concentration of analyte in original sample and/or calculated negative recovery.
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-050913**
Page 1 of 1 **LAB CONTROL**

Lab Sample ID: LCS-050913 QC Report No: WP24-SAIC
LIMS ID: 13-9985 Project: NPDES Sampling Support
Matrix: Sediment
Data Release Authorized:
Reported: 05/13/13 Date Sampled: 04/23/13
Date Received: 04/23/13

Date Extracted: 05/09/13 Sample Amount: 10.0 g
Date Analyzed: 05/11/13 16:07 Final Extract Volume: 1.0 mL
Instrument/Analyst: FID/JLW Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	127	150	84.7%

TPHD Surrogate Recovery

o-Terphenyl	76.7%

Results reported in mg/kg

4

TPH METHOD BLANK SUMMARY

BLANK NO.

WP24MBS1

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WP24 Project No.: NPDES SAMPLING SUPPORT

Date Extracted: 05/09/13 Matrix: SOLID

Date Analyzed : 05/11/13 Instrument ID : FID3B

Time Analyzed : 1547

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WP24LCSS1	WP24LCSS1	05/11/13
02	CG-MH-010-20	WP24A	05/11/13
03	CG-MH-010-20	WP24AMS	05/11/13
04	CG-MH-010-20	WP24AMSD	05/11/13
05			
06			
07			
08			
09			
10			
11			
12			
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29			
30			

FORM IV TPH

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: WP24
Matrix: Sediment Project: NPDES Sampling Support
Date Received: 04/23/13

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-9985-050913MB1	Method Blank	10.0 g	1.00 mL	-	05/09/13
13-9985-050913LCS1	Lab Control	10.0 g	1.00 mL	-	05/09/13
13-9985-WP24A	CG-MH-010-20130423-5.97 g		10.0 mL	D	05/09/13
13-9985-WP24AMS	CG-MH-010-20130423-5.96 g		10.0 mL	D	05/09/13
13-9985-WP24AMSD	CG-MH-010-20130423-5.97 g		10.0 mL	D	05/09/13

Basis: D=Dry Weight W=As Received

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument: FID3B.I Project: NPDES Sampling Support

Calibration Date: 10-MAY-2013 SDG No.: WP24

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	10856	10816	10366	10222	10078	9806	10358	4.0
AK Diesel	12969	12897	12393	12178	12035	11673	12357	4.1
OR Diesel	13048	12968	12457	12240	12092	11727	12422	4.1
Cal Diesel	12938	12873	12366	12154	12013	11647	12332	4.1
o-Terph	13177	13696	13787	13594	13504	12941	13450	2.4

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

Quant Ranges : WA Diesel C12-C24 (3.049-5.760)
AK Diesel C10-C25 (2.254-5.938)
OR Diesel C10-C28 (2.254-6.427)
Cal Diesel C10-C24 (2.254-5.760)

Calibration Files	Analysis Time
0510b004.d	10-MAY-2013 08:41
0510b005.d	10-MAY-2013 09:01
0510b006.d	10-MAY-2013 09:20
0510b007.d	10-MAY-2013 09:40
0510b008.d	10-MAY-2013 10:00
0510b009.d	10-MAY-2013 10:20

6a
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

Instrument: FID3B.I
Project: NPDES Sampling Support

Calibration Date: 09-MAY-2013
SDG No.: WP24

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	9838	9724	9749	9868	9957	10101	9873	1.4
Triac Surr	12017	12392	13110	13138	13711	13920	13048	5.6

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

Calibration Files	Analysis Time
0509b019.d	09-MAY-2013 17:30
0509b020.d	09-MAY-2013 17:50
0509b021.d	09-MAY-2013 18:09
0509b022.d	09-MAY-2013 18:29
0509b023.d	09-MAY-2013 18:49
0509b024.d	09-MAY-2013 19:08

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

ICal Date: 10-MAY-2013

Project: NPDES Sampling Supp

CCal Date: 11-MAY-2013

SDG No.: WP24

Analysis Time: 13:28

Lab ID: DIESEL#1

Instrument: FID3B.I

Lab File Name: 0511b004.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	2441040	235.7	250	-5.7	
AK102 (C10-C25)	2927512	236.9	250	-5.2	
ITDIES (C10-C24)	2921356	211.9	250	-15.3	<-
Terphenyl	590508	43.9	45	-2.4	

* 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: 09-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 11-MAY-2013
SDG No.: WP24

Analysis Time: 13:47
Lab ID: MOIL#1

Instrument: FID3B.I
Lab File Name: 0511b005.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	4944711	500.8	500	0.2
AK103 (C25-C36)	4224822	594.3	500	18.9
n-Triacontane	606008	46.4	45	3.2

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

ICal Date: 10-MAY-2013

Project: NPDES Sampling Supp

CCal Date: 11-MAY-2013

SDG No.: WP24

Analysis Time: 18:05

Lab ID: DIESEL#2

Instrument: FID3B.I

Lab File Name: 0511b018.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2439376	235.5	250	-5.8
AK102 (C10-C25)	2940515	238.0	250	-4.8
ITDIES (C10-C24)	2934353	212.8	250	-14.9
Terphenyl	603700	44.9	45	-0.3

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25
IT Diesel C10-C24

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 09-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 11-MAY-2013
SDG No.: WP24

Analysis Time: 18:25
Lab ID: MOIL#2

Instrument: FID3B.I
Lab File Name: 0511b019.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	5015238	508.0	500	1.6
AK103 (C25-C36)	4280046	602.1	500	20.4
n-Triacontane	624933	47.9	45	6.4

* 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.: WP24 Project: NPDES Sampling Support

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	0822	4.67	6.72
02		RT0509	05/09/13	0840	4.68	6.72
03	ZZZZZ	ZZZZZ	05/09/13	0859	4.68	6.72
04	ZZZZZ	ZZZZZ	05/09/13	0919	4.68	6.73
05	ZZZZZ	ZZZZZ	05/09/13	0938	4.67	6.72
06	ZZZZZ	ZZZZZ	05/09/13	1021	4.67	6.72
07	ZZZZZ	ZZZZZ	05/09/13	1040	4.68	6.72
08		RT0509	05/09/13	1100	4.68	6.72
09	ZZZZZ	ZZZZZ	05/09/13	1120	4.68	6.72
10	ZZZZZ	ZZZZZ	05/09/13	1140	4.68	6.72
11	ZZZZZ	ZZZZZ	05/09/13	1200	4.67	6.72
12	ZZZZZ	ZZZZZ	05/09/13	1514	4.67	6.73
13	ZZZZZ	ZZZZZ	05/09/13	1533	4.67	6.72
14	ZZZZZ	ZZZZZ	05/09/13	1552	4.68	6.72
15	ZZZZZ	ZZZZZ	05/09/13	1612	4.68	6.72
16	ZZZZZ	ZZZZZ	05/09/13	1632	4.69	6.73
17	ZZZZZ	ZZZZZ	05/09/13	1651	4.70	6.73
18		DIESEL ICV 2	05/09/13	1711	4.68	6.72
19		MOIL 100	05/09/13	1730	4.67	6.72*
20		MOIL 250	05/09/13	1750	4.68	6.72
21		MOIL 500	05/09/13	1809	4.68	6.73
22		MOIL 1000	05/09/13	1829	4.67	6.74
23		MOIL 2500	05/09/13	1849	4.67	6.75
24		MOIL 5000	05/09/13	1908	4.68	6.77
25		MOIL ICV 500	05/09/13	1928	4.68	6.73
26	ZZZZZ	ZZZZZ	05/09/13	1947	4.67	6.73
27	ZZZZZ	ZZZZZ	05/09/13	2006	4.67	6.73
28	ZZZZZ	ZZZZZ	05/09/13	2026	4.68	6.73
29	ZZZZZ	ZZZZZ	05/09/13	2045	4.68	6.73
30	ZZZZZ	ZZZZZ	05/09/13	2104	4.69	6.72
31	ZZZZZ	ZZZZZ	05/09/13	2123	4.71	6.72
32	ZZZZZ	ZZZZZ	05/09/13	2143	4.68	6.72*

QC LIMITS

8
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	2202	4.67	6.72
02	ZZZZZ	ZZZZZ	05/09/13	2221	4.68	6.73
03	ZZZZZ	ZZZZZ	05/09/13	2241	4.68	6.74
04	ZZZZZ	ZZZZZ	05/09/13	2300	4.68	6.75
05	ZZZZZ	ZZZZZ	05/09/13	2319	4.68	6.77
06		AK103 ICV 50	05/09/13	2339	4.67	6.72

QC LIMITS

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

* Values outside of QC limits.

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WP24 Project: NPDES Sampling Support

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	05/10/13	0743	4.69	6.78
02		RT0510	05/10/13	0802	4.68	6.72
03		IB0510	05/10/13	0821	4.68	6.72
04		DIESEL 50	05/10/13	0841	4.67	6.72
05		DIESEL 100	05/10/13	0901	4.67	6.72
06		DIESEL 250	05/10/13	0920	4.68	6.72
07		DIESEL 500	05/10/13	0940	4.69	6.73
08		DIESEL 1000	05/10/13	1000	4.69	6.72
09		DIESEL 2500	05/10/13	1020	4.71	6.72
10		DIESEL ICV 2	05/10/13	1040	4.68	6.72
11		DIESEL#1	05/10/13	1331	4.67	6.78
12		JETA#1	05/10/13	1350	4.68	6.78
13		DIESEL#2	05/10/13	1410	4.68	6.76
14	ZZZZZ	ZZZZZ	05/10/13	1438	4.67	6.72
15	ZZZZZ	ZZZZZ	05/10/13	1457	4.68	6.72
16	ZZZZZ	ZZZZZ	05/10/13	1517	4.68	6.72
17	ZZZZZ	ZZZZZ	05/10/13	1537	4.67	6.72*
18	ZZZZZ	ZZZZZ	05/10/13	1556	4.67	6.71*
19	ZZZZZ	ZZZZZ	05/10/13	1616	4.67	6.72*
20	ZZZZZ	ZZZZZ	05/10/13	1635	4.68	6.72
21	ZZZZZ	ZZZZZ	05/10/13	1655	4.68	6.72
22	ZZZZZ	ZZZZZ	05/10/13	1714	4.68	6.72
23		DIESEL#3	05/10/13	1733	4.68	6.77
24		JETA#2	05/10/13	1753	4.68	6.77
25		MOIL#1	05/10/13	1812	4.68	6.76
26		WP23MBS1	05/10/13	1832	4.68	6.77
27		WP23LCSS1	05/10/13	1851	4.68	6.76
28		WP23A	05/10/13	1910	4.68	6.77
29		WP23A	05/10/13	1930	4.67	6.76
30		WP23B	05/10/13	1949	4.68	6.77
31		WP23B	05/10/13	2009	4.67	6.76
32		WP23C	05/10/13	2029	4.68	6.76

QC LIMITS

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		WP23C	05/10/13	2048	4.67	6.77
02		DIESEL#4	05/10/13	2107	4.68	6.77
03		MOIL#2	05/10/13	2127	4.68	6.76
04		WP24MBS1	05/10/13	2151	4.68	6.76
05		WP24LCSS1	05/10/13	2209	4.68	6.77
06		WN70A	05/10/13	2229	4.68	6.77
07		WP24A	05/10/13	2306	4.69	6.77

QC LIMITS

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

* Values outside of QC limits.

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WP24 Project: NPDES SAMPLING SUPPORT

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.71

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/11/13	1231	4.69	6.77*
02		RT0511	05/11/13	1250	4.68	6.71
03	ZZZZZ	ZZZZZ	05/11/13	1309	4.67	6.70
04	NPDES SAMPLI	DIESEL#1	05/11/13	1328	4.67	6.71
05	NPDES SAMPLI	MOIL#1	05/11/13	1347	4.68	6.70
06	ZZZZZ	ZZZZZ	05/11/13	1409	4.65	6.69
07	ZZZZZ	ZZZZZ	05/11/13	1429	4.65	6.70
08	ZZZZZ	ZZZZZ	05/11/13	1448	4.66	6.71
09	ZZZZZ	ZZZZZ	05/11/13	1508	4.66	6.71
10	ZZZZZ	ZZZZZ	05/11/13	1528	4.67	6.71
11	WP24MBS1	WP24MBS1	05/11/13	1547	4.66	6.71
12	WP24LCSS1	WP24LCSS1	05/11/13	1607	4.66	6.70
13	ZZZZZ	ZZZZZ	05/11/13	1627	4.66	6.70
14	CG-MH-010-20	WP24A	05/11/13	1646	4.65	
15	CG-MH-010-20	WP24AMS	05/11/13	1706	4.65	
16	CG-MH-010-20	WP24AMSD	05/11/13	1726	4.65	
17	ZZZZZ	ZZZZZ	05/11/13	1745		
18	NPDES SAMPLI	DIESEL#2	05/11/13	1805	4.66	6.71
19	NPDES SAMPLI	MOIL#2	05/11/13	1825	4.68	6.71

QC LIMITS

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

* Values outside of QC limits.

Total Solids

ARI Job ID: WP24

Total Solids Targets-Extractions
Data By: Jim Hawk
Created: 4/25/13

Worklist: 8504
Analyst: JBH
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	WN27A	10.00	59.6	16.78

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 4/24/13

Worklist: 7859
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.	WN27A 13-8552 CG-MH-010-20130423-S	1.17	12.39	7.86	59.6	NR

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 4/24/13

Worklist: 7859
Analyst: AC
Comments:

Oven ID: Ø15

Balance ID: B139298ØØ2

Samples In: Date: 4-24-13 Time: 12.55 Temp: 103°C Analyst: AC

Samples Out: Date: 04/25/13 Time: 06:55 Temp: NA° Analyst: RR

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WN27A 13-8552 CG-MH-010-20130423-S	1.17	12.39	7.86		NR

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WP24

Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test TPHD # 3 (DIESMI)
ARI Job No(s) WP24, WN7Φ

Page 1 of 1

In-House (5ppm)
Batch set up by: ~~SE~~

Bottle #	Extraction Requirements	Weight Extracted (wet wt)	Acid Clean (1:1) Y/N	Silica Gel Clean (1:1) Y/N	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	WP24 MBS	10.00g	(1:1) Y/N	(1:1) Y/N	1mL	1mL		YL Φ5/Φ9/13 Analyst/Date
	↓ SBS	10.00g	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
	~~SBS Dup.~~	~~10.00g~~	~~(1:1) Y/N~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~		
	~~QLS~~	~~10.00g~~	~~(1:1) Y/N~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~		Microwave 1 2 (3)
1	WP24 A	10.Φ1	~~(1:1)~~ (1:5) Y/N	~~(1:1)~~ (1:2) Y/N	~~1mL~~ 10mL	1mL	See notes	
1	↓ AMS	10.ΦΦ	~~(1:1)~~ (1:5) Y/N	~~(1:1)~~ (1:2) Y/N	~~1mL~~ 10mL	1mL	See notes	CT Φ5/Φ9/13
1	↓ AMSd	10.Φ1	~~(1:1)~~ (1:5) Y/N	~~(1:1)~~ (1:2) Y/N	~~1mL~~ 10mL	1mL	See notes	
	WN7Φ A	10.ΦΦ	(1:1) Y/N	(1:1) Y/N	1mL	1mL	LOD Verification	
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		Analyst/Date
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		TurboVap (1) 2 3 Pre-Acid/Silica Clean
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		SE 5/10/13 Analyst/Date
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		TurboVap 1 2 (3) Post Acid/Silica Clean
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL	SE 5/10/13	SE 5/10/13 Analyst/Date
Analyst/Date	YL Φ5/Φ9/13	SE 5/10/13	SE 5/10/13	SE 5/10/13	SE 5/10/13			

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	**O1** (2Φ82-5)	450µg/mL	**100**µL	11/19/13	CT	
Spike	**11** (2428-3)	15000µg/mL	**100**µL	1Φ/16/13	CT	
QLS Spike	**18** (BΦΦ179)	1000µg/mL	~~50~~µL	25mL 4/11/14		
Extraction Time: 12:00				**Balance ID:** B14642614		

SPECIAL INSTRUCTIONS: 1. Weigh into 100mL beakers-dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM to the vessel until the solvent is 1" above soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then let cool 15 min. in cold water bath. Re-homogenize while cool. 7. Collect into turbo tube with sm. funnel containing glasswool and 1" sodium sulfate. 8. Add (2) 10mL DCM rinses to vessel and transfer to turbo tube. 9. TurboVap. 10. Acid/Silica Clean-up?= Y/N. 11. TurboVap (if Silica Clean). 12. Vial in DCM.

A. Need Total Solids Y (N) **B.** ~~Archive/Freeze~~ Y/N
WP24

Organic Extractions
Reagent and Solutions Identification

(8015C) NWTPHD Soil/Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WP324, WP378

(8015C) NWTPHD Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Methylene Chloride: (I# 8232)	CT 4/5/13
Anhydrous Sodium Sulfate: (I# 8468 + jar date 4-19-13)	
Neutral Glasswool: (I# 7993 + jar date 4-15-15)	
Vialing Station:	Vialing
Methylene Chloride: (I# 8232)	SC 5/10/13
Concentrated Sulfuric Acid: (I# 8156)	
Silica Gel (SPE) Darts: (I# 7514)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WP24 Client ID: SAIC

Parameter: TPHD W/Ac/Si Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= A.	05/09/13 VL
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations) Samples A Ams, Amsd taken to 10mL FEV. 2mL Taken for Acid clean (1:5) and then 1mL taken for SPE (1:2) Sample extracts were dark and viscous.	SP 5/10/13 SP 5/10/13

3056F

Revision 009
08/14/12

TPHD Raw Data
Initial Calibration

ARI Job ID: WP24

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest) **427S**(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8 FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 5/10/13 / 5/9/13 Internal Standard ID N/A Expiration N/A

Endrin/DDT Breakdown <15%? YES / NO / NA		ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Diesel/Ak10/Cal Diesel	2091-2	3/15/14	Diesel ICV/Ak10/Cal	2043-1	10/20/13
Moil	2041-4	11/27/13	Moil ICV	2043-2	11/19/13
JetA	2008-1	5/11/13	Ak103 ICV	B000202	11/19/13
Ak103	B000201	11/19/13			
RT	2043-4	10/20/13			
IB	2043-3	10/20/13			

Detail problems, corrective actions and/or other pertinent information below:
Curve for JetA, Diesel, Ak102, Cal diesel (IT diesel same), moil & Ak103.

Analyst: JW **Date:** 5/11/13

Reviewer: [illegible] **Date:** 5/13/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0509b032	0509b033	0509b034	0509b035	0509b036	0509b037
INJ.DATE:	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:	21:43	22:02	22:21	22:41	23:00	23:19

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.560-0.760	+++++	+++++
35	Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
2	C8	0.834	0.839	0.832	0.834	0.831	0.825	0.827	0.727-0.927	0.832	0.005
3	C10	2.251	2.254	2.255	2.256	2.253	2.254	2.254	2.204-2.304	2.254	0.002
4	C12	3.043	3.032	3.033	3.032	3.032	3.033	3.049	2.999-3.099	3.034	0.004
5	C14	3.624	3.622	3.613	3.618	3.618	3.619	3.621	3.571-3.671	3.619	0.004
6	C16	4.118	4.114	4.115	4.119	4.116	4.116	4.116	4.066-4.166	4.116	0.002
7	C18	4.573	4.574	4.570	4.572	4.567	4.565	4.565	4.515-4.615	4.570	0.004
$ 8	o-terph	4.684	4.673	4.676	4.683	4.675	4.681	4.683	4.633-4.733	4.679	0.004
9	C20	4.998	4.992	4.991	4.990	4.987	4.991	4.989	4.939-5.039	4.991	0.004
10	C22	5.391	5.387	5.389	5.386	5.387	5.387	5.386	5.336-5.436	5.388	0.002
11	C24	5.760	5.763	5.757	5.762	5.762	5.758	5.760	5.710-5.810	5.760	0.002
12	C25	5.937	5.939	5.937	5.936	5.936	5.941	5.938	5.888-5.988	5.938	0.002
13	C26	6.113	6.114	6.114	6.112	6.115	6.114	6.114	6.064-6.164	6.114	0.001
14	C28	6.431	6.427	6.429	6.431	6.429	6.431	6.427	6.377-6.477	6.430	0.002
$ 15	Triacon Surr	6.715	6.720	6.726	6.736	6.750	6.767	6.768	6.718-6.818	6.736	0.020
16	C32	6.978	6.975	6.980	6.979	6.977	6.976	6.976	6.926-7.026	6.978	0.002

Reviewer 1 JU Date: 5/11/13
Reviewer 2 Date: 5/13/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.218	7.217	7.216	7.216	7.215	7.214	7.210	7.160-7.260	7.216	0.002
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.431	7.435	7.437	7.436	7.436	7.430	7.435	7.385-7.485	7.434	0.003
20 C38	7.637	7.640	7.641	7.634	7.640	7.641	7.639	7.589-7.689	7.639	0.003
21 C40	7.826	7.829	7.832	7.831	7.830	7.827	7.828	7.778-7.878	7.829	0.002
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0509b026	0509b027	0509b028	0509b029	0509b030	0509b031
INJ.DATE:	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:	19:47	20:06	20:26	20:45	21:04	21:23

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
2 C8	0.842	0.843	0.835	0.832	0.839	0.842	0.821	0.721-0.921	0.839	0.004
3 C10	2.256	2.257	2.255	2.254	2.258	2.266	2.250	2.200-2.300	2.258	0.004
4 C12	3.039	3.039	3.040	3.042	3.044	3.051	3.040	2.990-3.090	3.043	0.005
5 C14	3.620	3.620	3.620	3.620	3.621	3.627	3.620	3.570-3.670	3.621	0.003
6 C16	4.122	4.121	4.118	4.118	4.116	4.119	4.117	4.067-4.167	4.119	0.002
7 C18	4.564	4.564	4.566	4.567	4.567	4.568	4.568	4.518-4.618	4.566	0.002
$ 8 o-terph	4.671	4.671	4.678	4.685	4.694	4.698	4.676	4.626-4.726	4.683	0.011
9 C20	4.992	4.989	4.990	4.991	4.990	4.989	4.989	4.939-5.039	4.990	0.001
10 C22	5.396	5.388	5.389	5.389	5.390	5.392	5.387	5.337-5.437	5.391	0.003
11 C24	5.763	5.760	5.765	5.763	5.763	5.757	5.759	5.709-5.809	5.762	0.003
12 C25	5.934	5.937	5.932	5.935	5.931	5.936	5.934	5.884-5.984	5.934	0.002
13 C26	6.116	6.112	6.117	6.112	6.112	6.116	6.112	6.062-6.162	6.114	0.002
14 C28	6.431	6.428	6.437	6.428	6.431	6.431	6.426	6.376-6.476	6.431	0.003
$ 15 Triacon Surr	6.727	6.726	6.727	6.725	6.722	6.720	6.723	6.673-6.773	6.724	0.003
16 C32	6.982	6.988	6.982	6.981	6.981	6.981	6.976	6.926-7.026	6.982	0.003

Reviewer 1 JU Date: 5/14/13
Reviewer 2 Date: 5/13/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.202	7.223	7.218	7.215	7.211	7.215	7.214	7.164-7.264	7.214	0.007
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.437	7.444	7.442	7.438	7.418	7.443	7.432	7.382-7.482	7.437	0.010
20 C38	7.637	7.640	7.637	7.635	7.637	7.638	7.639	7.589-7.689	7.637	0.002
21 C40	7.834	7.836	7.832	7.829	7.833	7.828	7.833	7.783-7.883	7.832	0.003
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0509b019	0509b020	0509b021	0509b022	0509b023	0509b024
INJ.DATE:	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:	17:30	17:50	18:09	18:29	18:49	19:08

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
2 C8	0.836	0.832	0.835	0.839	0.826	0.827	0.836	0.736-0.936	0.833	0.005
3 C10	2.255	2.255	2.254	2.257	2.255	2.254	2.255	2.204-2.304	2.255	0.001
4 C12	3.049	3.033	3.033	3.033	3.033	3.049	3.049	2.999-3.099	3.038	0.008
5 C14	3.626	3.621	3.614	3.617	3.625	3.621	3.626	3.576-3.676	3.621	0.004
6 C16	4.118	4.118	4.115	4.117	4.120	4.116	4.118	4.068-4.168	4.117	0.002
7 C18	4.561	4.567	4.569	4.572	4.567	4.565	4.561	4.511-4.611	4.567	0.004
$ 8 o-terph	4.673	4.682	4.681	4.673	4.672	4.683	4.673	4.623-4.723	4.677	0.005
9 C20	4.984	4.991	4.994	4.988	4.986	4.989	4.984	4.934-5.035	4.989	0.003
10 C22	5.386	5.389	5.387	5.384	5.383	5.386	5.386	5.336-5.436	5.386	0.002
11 C24	5.762	5.760	5.755	5.763	5.761	5.760	5.762	5.712-5.812	5.760	0.003
12 C25	5.938	5.939	5.938	5.935	5.936	5.938	5.938	5.888-5.987	5.937	0.001
13 C26	6.116	6.114	6.113	6.114	6.115	6.114	6.116	6.066-6.166	6.114	0.001
14 C28	6.435	6.428	6.431	6.431	6.429	6.427	6.435	6.385-6.485	6.430	0.003
$ 15 Triacon Surr	6.717	6.720	6.728	6.738	6.752	6.768	6.717	6.667-6.767	6.737	0.020
16 C32	6.975	6.975	6.974	6.980	6.977	6.976	6.975	6.925-7.025	6.976	0.002

Reviewer 1 JU Date: 5/11/13
Reviewer 2 Date: 5/13/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.215	7.220	7.217	7.214	7.214	7.210	7.215	7.165-7.266	7.215	0.004
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.430	7.432	7.433	7.429	7.429	7.435	7.430	7.380-7.480	7.431	0.002
20 C38	7.634	7.632	7.638	7.637	7.639	7.639	7.634	7.584-7.684	7.637	0.003
21 C40	7.826	7.830	7.830	7.827	7.831	7.828	7.826	7.776-7.876	7.829	0.002
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130510.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0510b004	0510b005	0510b006	0510b007	0510b008	0510b009
INJ.DATE:	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013
INJ.TIME:	08:41	09:01	09:20	09:40	10:00	10:20

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
	35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
	2 C8	0.824	0.829	0.831	0.831	0.829	0.829	0.821	0.721-0.921	0.829	0.003
	3 C10	2.255	2.255	2.256	2.256	2.254	2.257	2.250	2.200-2.300	2.255	0.001
	4 C12	3.037	3.038	3.039	3.039	3.041	3.044	3.040	2.990-3.090	3.040	0.002
	5 C14	3.621	3.618	3.619	3.619	3.621	3.625	3.620	3.570-3.670	3.620	0.002
	6 C16	4.117	4.116	4.115	4.116	4.120	4.124	4.117	4.067-4.167	4.118	0.003
	7 C18	4.564	4.564	4.565	4.569	4.570	4.577	4.568	4.518-4.618	4.568	0.005
$	8 o-terph	4.670	4.672	4.678	4.686	4.693	4.712	4.676	4.626-4.726	4.685	0.016
	9 C20	4.990	4.988	4.987	4.989	4.989	4.994	4.989	4.939-5.039	4.989	0.002
	10 C22	5.382	5.389	5.386	5.387	5.385	5.389	5.387	5.337-5.437	5.386	0.003
	11 C24	5.759	5.758	5.762	5.761	5.755	5.758	5.759	5.709-5.809	5.759	0.003
	12 C25	5.938	5.938	5.931	5.940	5.935	5.935	5.934	5.884-5.984	5.936	0.003
	13 C26	6.111	6.113	6.112	6.115	6.109	6.104	6.112	6.062-6.162	6.110	0.004
	14 C28	6.432	6.426	6.424	6.426	6.423	6.424	6.426	6.376-6.476	6.426	0.003
$	15 Triacon Surr	6.720	6.723	6.721	6.726	6.724	6.719	6.723	6.673-6.773	6.722	0.003
	16 C32	6.992	6.980	6.980	6.979	6.980	6.979	6.976	6.926-7.026	6.982	0.005

Reviewer 1 JU Date: 5/11/13
Reviewer 2 RB Date: 5/13/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130510.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.213	7.211	7.219	7.212	7.218	7.212	7.214	7.164-7.264	7.214	0.004
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.441	7.438	7.418	7.441	7.439	7.439	7.432	7.382-7.482	7.436	0.009
20 C38	7.640	7.634	7.642	7.637	7.637	7.642	7.639	7.589-7.689	7.639	0.003
21 C40	7.833	7.844	7.834	7.835	7.831	7.835	7.833	7.783-7.883	7.835	0.005
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130510.b

ARI Job No.: RT05 Method: i/20130510.b/ftphfid3b.m Instrument: fid3b.i Date: 10-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0802	0510b002.d	RT0510		1	Toluene,
0821	0510b003.d	IB0510		1	NO MANUAL INTEGRATION
0841	0510b004.d	DIESEL 50		1	o-terph,
0901	0510b005.d	DIESEL 100		1	o-terph,
0920	0510b006.d	DIESEL 250		1	o-terph,
0940	0510b007.d	DIESEL 500		1	o-terph,
1000	0510b008.d	DIESEL 1000		1	o-terph,
1020	0510b009.d	DIESEL 2500		1	o-terph,
1040	0510b010.d	DIESEL ICV 250		1	o-terph,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130509.b

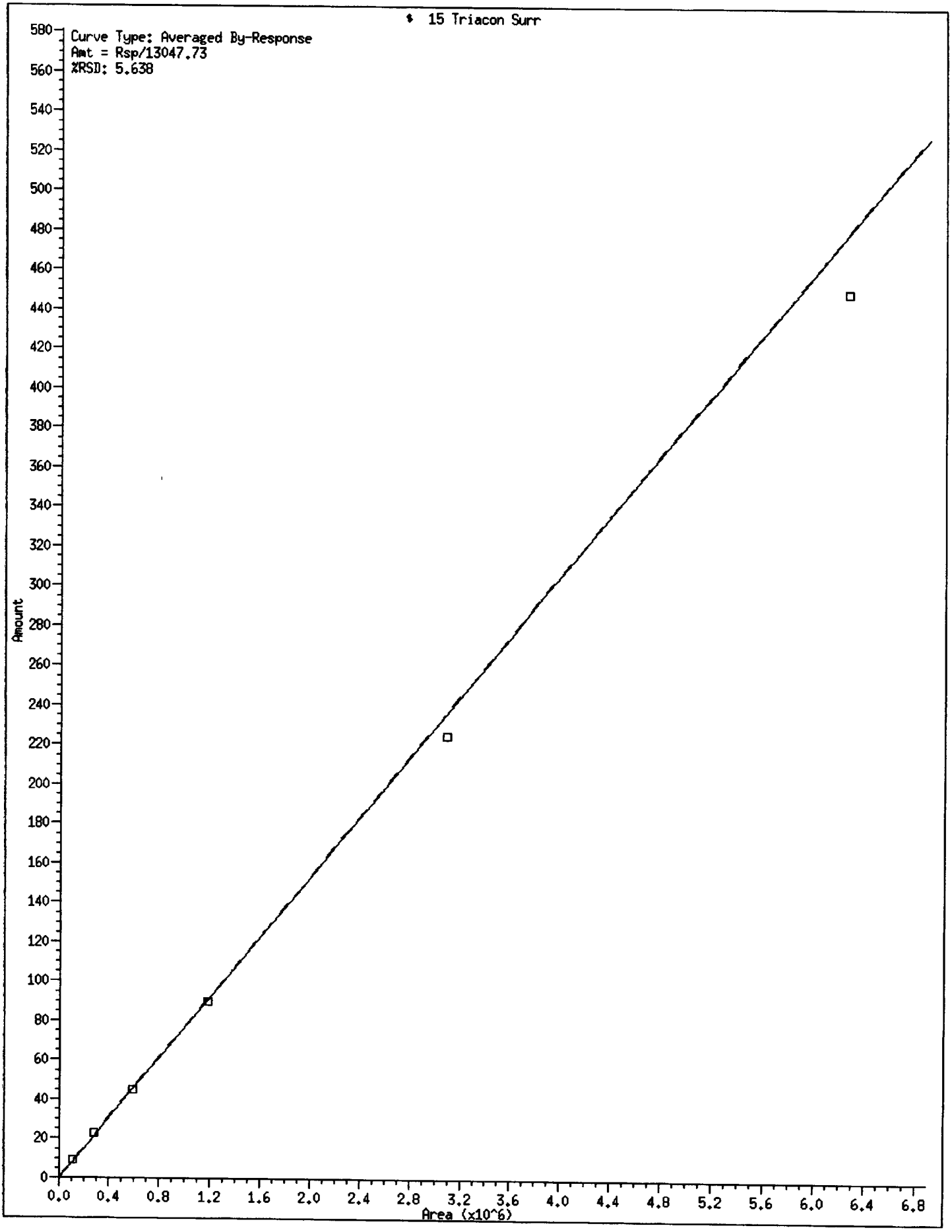
ARI Job No.: RINS Method: i/20130509.b/ftphfid3b.m Instrument: fid3b.i Date: 09-MAY-2013

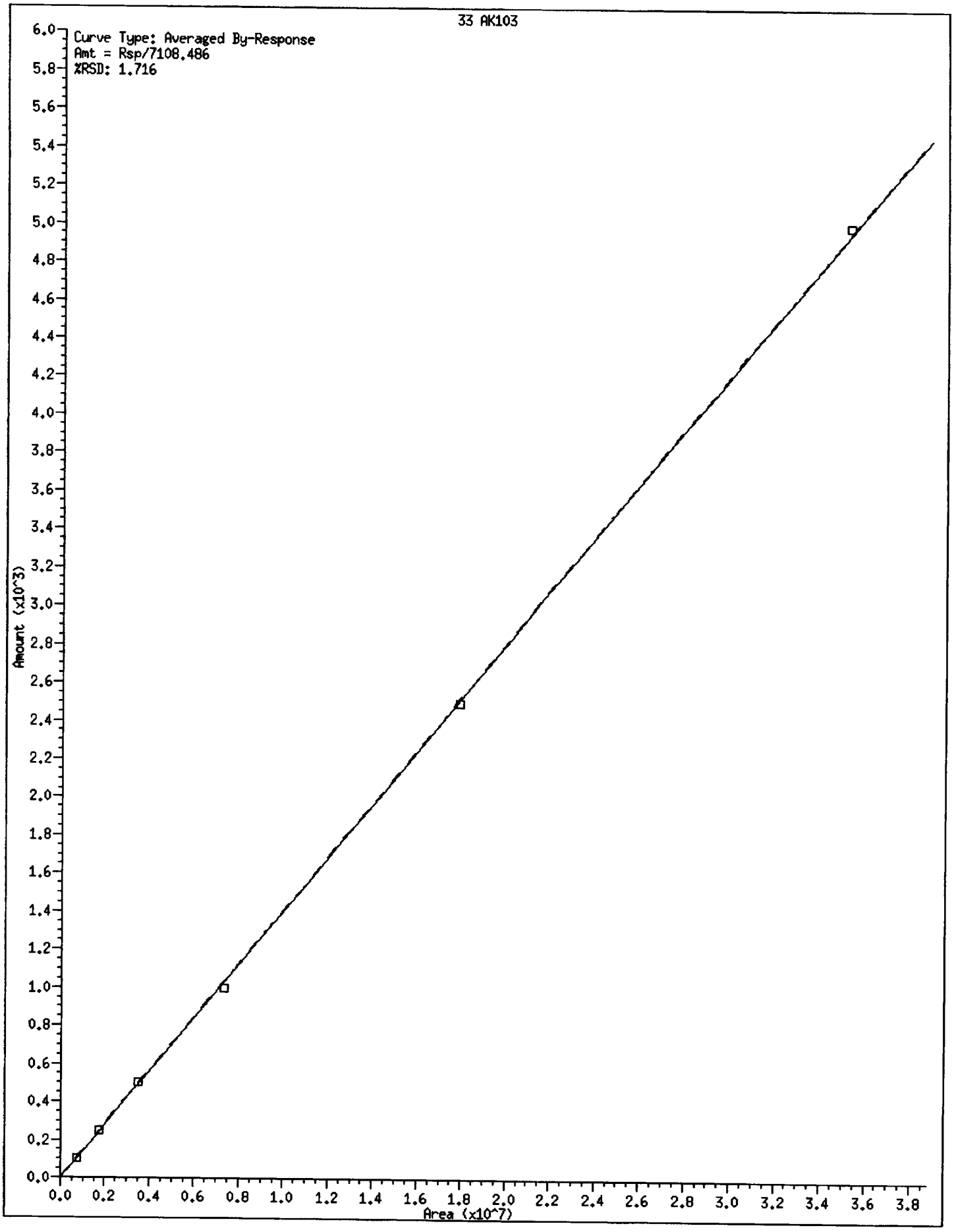
Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0822	0509b001.d	RINSE		1	NO MANUAL INTEGRATION
0840	0509b002.d	RT0509		1	Toluene,
0859	0509b003.d	IB0509		1	NO MANUAL INTEGRATION
0919	0509b004.d	DIESEL#1		1	o-terph,
0938	0509b005.d	MOIL#1		1	Triacon Surr,
1021	0509b006.d	RINSE		1	NO MANUAL INTEGRATION
1040	0509b007.d	RINSE		1	NO MANUAL INTEGRATION
1100	0509b008.d	RT0509		1	Toluene,
1120	0509b009.d	IB0509		1	NO MANUAL INTEGRATION
1140	0509b010.d	DIESEL#1		1	o-terph,
1200	0509b011.d	MOIL#1		1	Triacon Surr,
1514	0509b012.d	DIESEL 50		1	NO MANUAL INTEGRATION
1533	0509b013.d	DIESEL 100		1	NO MANUAL INTEGRATION
1552	0509b014.d	DIESEL 250		1	NO MANUAL INTEGRATION
1612	0509b015.d	DIESEL 500		1	NO MANUAL INTEGRATION
1632	0509b016.d	DIESEL 1000		1	NO MANUAL INTEGRATION
1651	0509b017.d	DIESEL 2500		1	NO MANUAL INTEGRATION
1711	0509b018.d	DIESEL ICV 250		1	NO MANUAL INTEGRATION
1730	0509b019.d	MOIL 100		1	Triacon Surr,
1750	0509b020.d	MOIL 250		1	Triacon Surr,

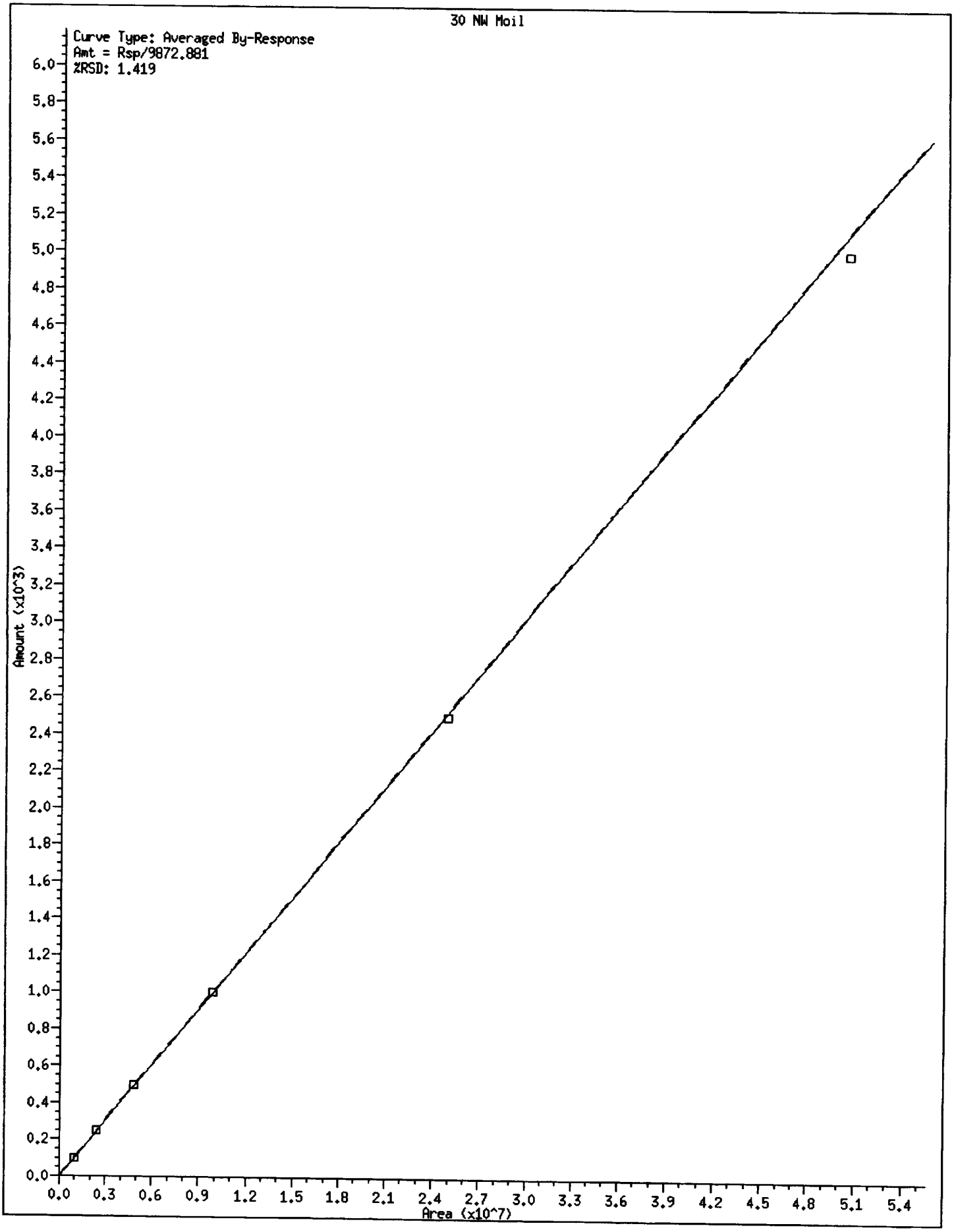
1809 0509b021.d MOIL 500 1 Triacon Surr,

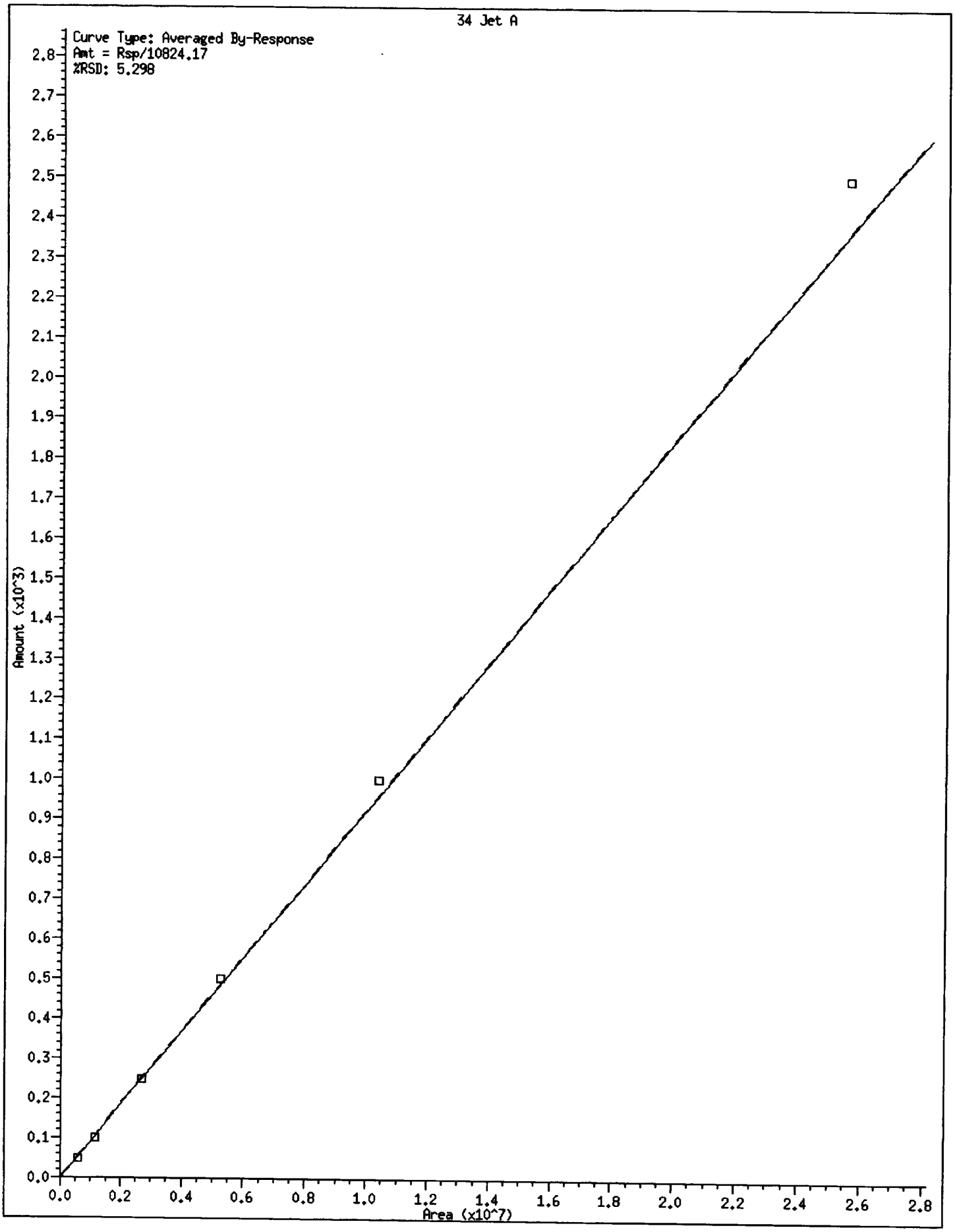
MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130509.b

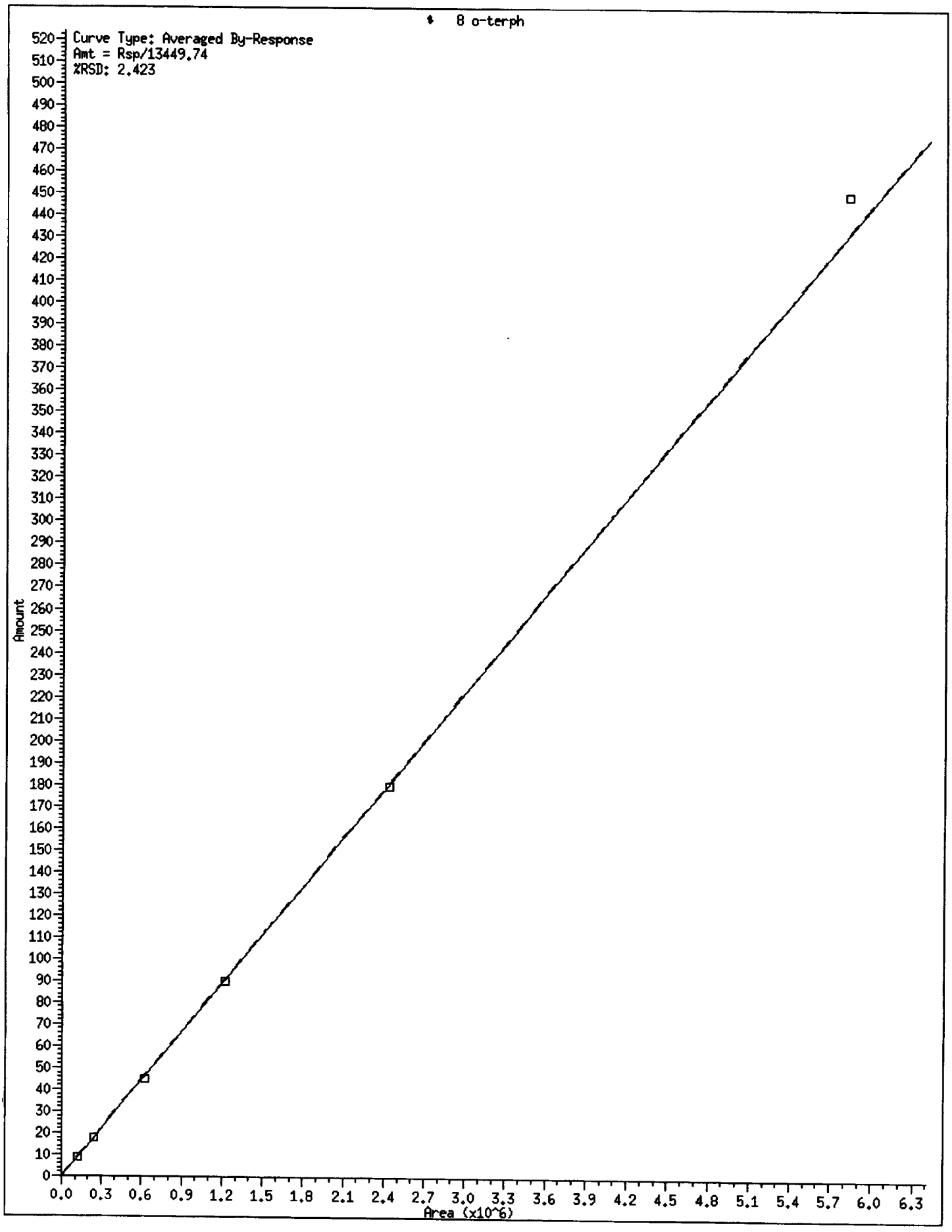
Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1829	0509b022.d	MOIL 1000		1	Triacon Surr,
1849	0509b023.d	MOIL 2500		1	Triacon Surr,
1908	0509b024.d	MOIL 5000		1	Triacon Surr,
1928	0509b025.d	MOIL ICV 500		1	Triacon Surr,
1947	0509b026.d	JETA 50		1	NO MANUAL INTEGRATION
2006	0509b027.d	JETA 100		1	NO MANUAL INTEGRATION
2026	0509b028.d	JETA 250		1	NO MANUAL INTEGRATION
2045	0509b029.d	JETA 500		1	NO MANUAL INTEGRATION
2104	0509b030.d	JETA 1000		1	NO MANUAL INTEGRATION
2123	0509b031.d	JETA 2500		1	o-terph,
2143	0509b032.d	AK103 100		1	Triacon Surr,
2202	0509b033.d	AK103 250		1	Triacon Surr,
2221	0509b034.d	AK103 500		1	Triacon Surr,
2241	0509b035.d	AK103 1000		1	Triacon Surr,
2300	0509b036.d	AK103 2500		1	Triacon Surr,
2319	0509b037.d	AK103 5000		1	Triacon Surr,
2339	0509b038.d	AK103 ICV 500		1	Triacon Surr,

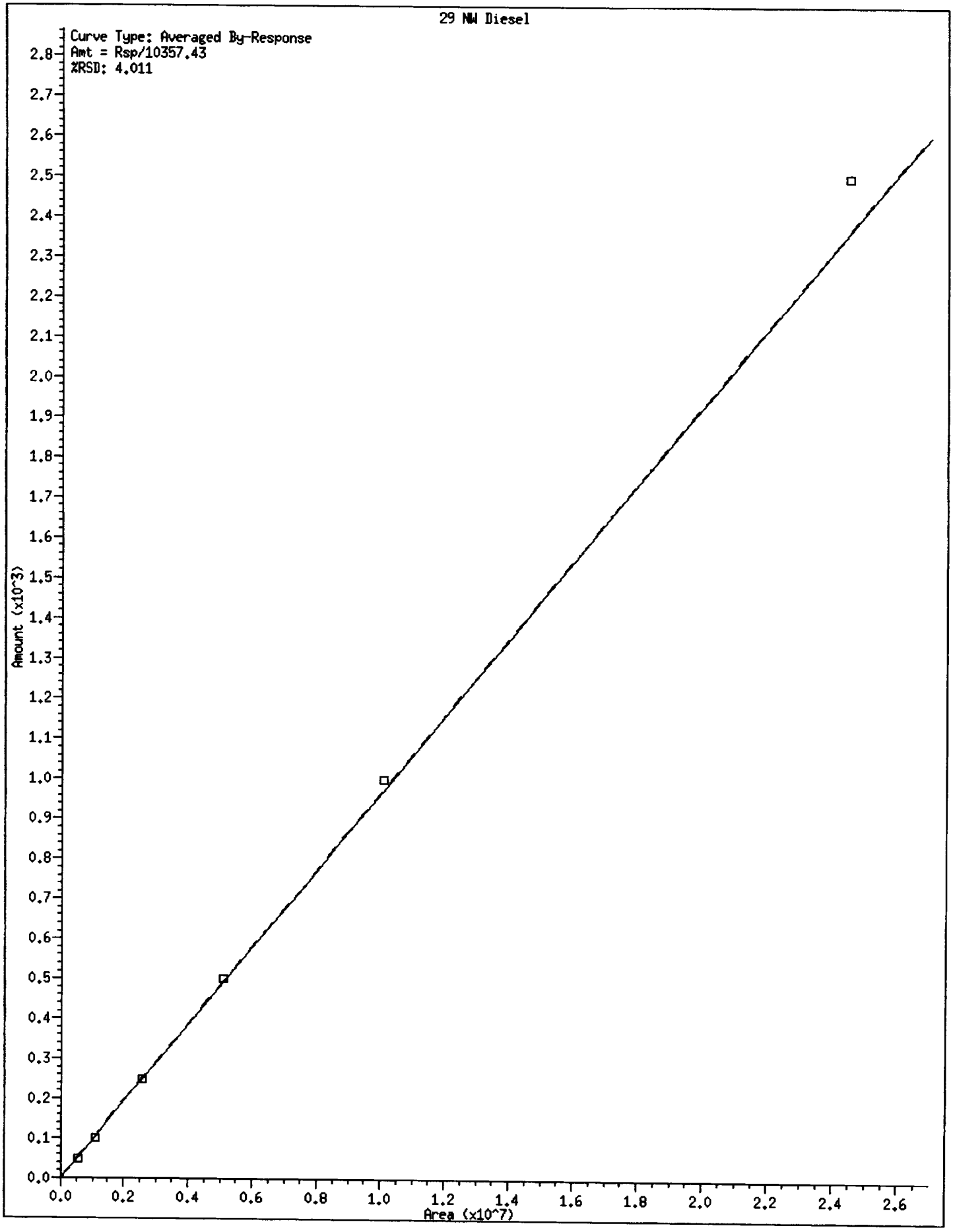

$ 15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/13047.73
%RSD: 5.638
Amount
Area (x10^6)
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500
520
540
560
580
0.0
0.4
0.8
1.2
1.6
2.0
2.4
2.8
3.2
3.6
4.0
4.4
4.8
5.2
5.6
6.0
6.4
6.8

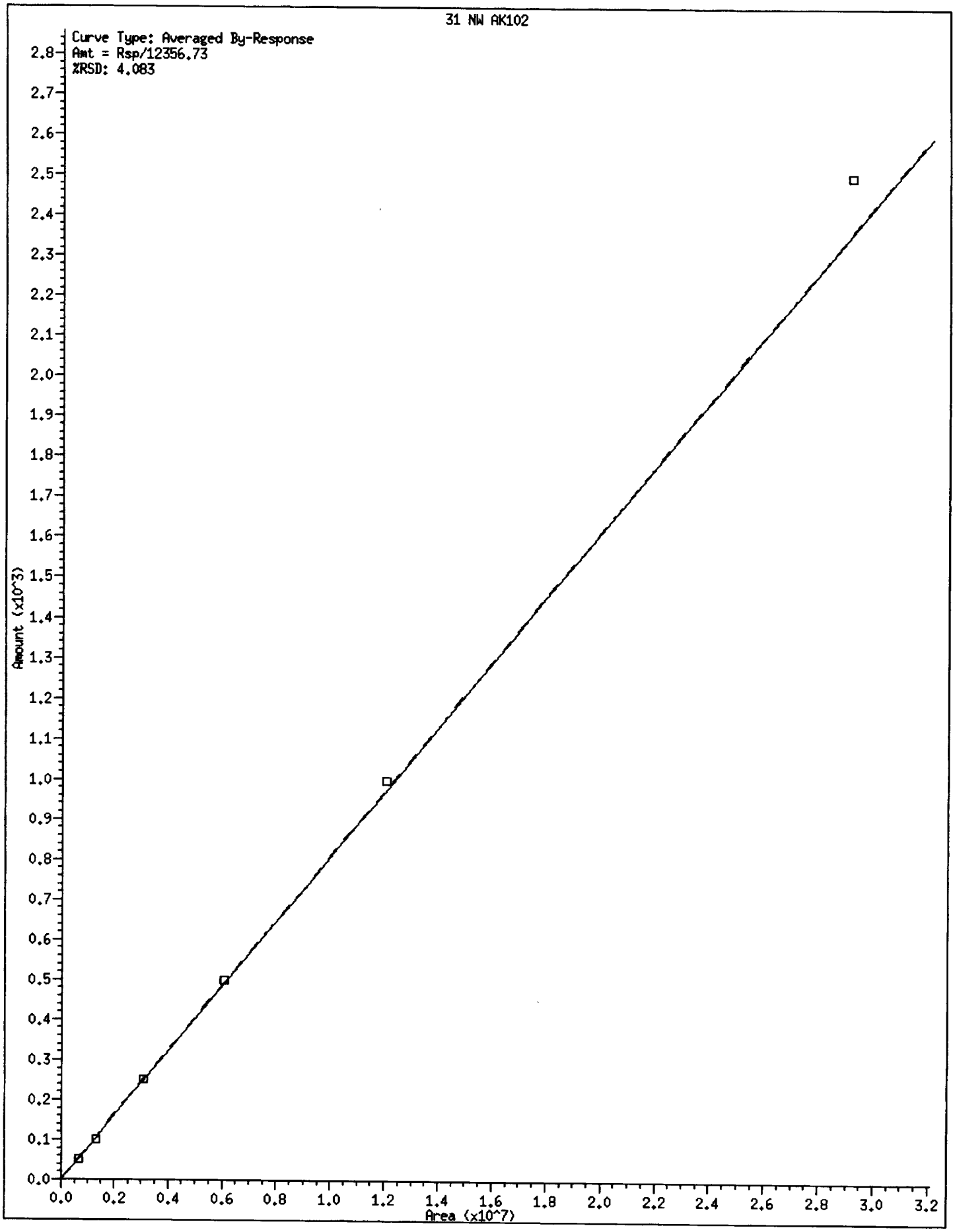

33 AK103
Curve Type: Averaged By-Response
Amt = Rsp/7108.486
%RSD: 1.716
Amount (x10^3)
Area (x10^7)
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8


30 NW Moil
Curve Type: Averaged By-Response
Amt = Rsp/9872.881
%RSD: 1.419
Amount (x10^3)
Area (x10^7)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
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


34 Jet A
Curve Type: Averaged By-Response
Amt = Rsp/10824.17
%RSD: 5.298
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8


8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/13449.74
%RSD: 2.423
Amount
Area (x10^6)
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4 5.7 6.0 6.3


29 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/10357.43
%RSD: 4.011
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6


31 NW AK102
Curve Type: Averaged By-Response
Amt = Rsp/12356.73
%RSD: 4.083
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

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: 20130510

Instrument: FID3B.I
Project:

Calibration Date: 10-MAY-2013
SDG No.: 20130510

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	10856	10816	10366	10222	10078	9806	10358	4.0
AK Diesel	12969	12897	12393	12178	12035	11673	12357	4.1
OR Diesel	13048	12968	12457	12240	12092	11727	12422	4.1
Cal Diesel	12938	12873	12366	12154	12013	11647	12332	4.1
o-Terph	13177	13696	13787	13594	13504	12941	13450	2.4

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

Quant Ranges :
WA Diesel C12-C24 (3.049-5.760)
AK Diesel C10-C25 (2.254-5.938)
OR Diesel C10-C28 (2.254-6.427)
Cal Diesel C10-C24 (2.254-5.760)

Calibration Files	Analysis Time
0510b004.d	10-MAY-2013 08:41
0510b005.d	10-MAY-2013 09:01
0510b006.d	10-MAY-2013 09:20
0510b007.d	10-MAY-2013 09:40
0510b008.d	10-MAY-2013 10:00
0510b009.d	10-MAY-2013 10:20

6a
JET A INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: 20130509

Instrument: FID3B.I
Project:

Calibration Date: 09-MAY-2013
SDG No.: 20130509

Product Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
JET A	11588	11469	10765	10505	10366	10245	10823	5.3
o-Terph	13361	13910	13769	13905	14073	13690	13785	1.8

<- Indicates %RSD outside limits
Quant Ranges : JET A - C10-C18 (2.254-4.565)

Calibration Files	Analysis Time
0509b026.d	09-MAY-2013 19:47
0509b027.d	09-MAY-2013 20:06
0509b028.d	09-MAY-2013 20:26
0509b029.d	09-MAY-2013 20:45
0509b030.d	09-MAY-2013 21:04
0509b031.d	09-MAY-2013 21:23

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130509

Instrument: FID3B.I

Project:

Calibration Date: 09-MAY-2013

SDG No.: 20130509

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	9838	9724	9749	9868	9957	10101	9873	1.4
Triac Surr	12017	12392	13110	13138	13711	13920	13048	5.6

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

Calibration Files	Analysis Time
0509b019.d	09-MAY-2013 17:30
0509b020.d	09-MAY-2013 17:50
0509b021.d	09-MAY-2013 18:09
0509b022.d	09-MAY-2013 18:29
0509b023.d	09-MAY-2013 18:49
0509b024.d	09-MAY-2013 19:08

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130509

Instrument: FID3B.I

Project:

Calibration Date: 09-MAY-2013

SDG No.: 20130509

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
AK M.Oil C25-C36	7138	7048	6994	7315	7153	7079	7121	1.6
Triac Surr	11701	12221	12616	13063	12991	13443	12673	5.0

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

Calibration Files	Analysis Time
0509b032.d	09-MAY-2013 21:43
0509b033.d	09-MAY-2013 22:02
0509b034.d	09-MAY-2013 22:21
0509b035.d	09-MAY-2013 22:41
0509b036.d	09-MAY-2013 23:00
0509b037.d	09-MAY-2013 23:19

FORM VI-M.Oil

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	05/10/13	0743	4.69	6.78
02		RT0510	05/10/13	0802	4.68	6.72
03		IB0510	05/10/13	0821	4.68	6.72
04		DIESEL 50	05/10/13	0841	4.67	6.72
05		DIESEL 100	05/10/13	0901	4.67	6.72
06		DIESEL 250	05/10/13	0920	4.68	6.72
07		DIESEL 500	05/10/13	0940	4.69	6.73
08		DIESEL 1000	05/10/13	1000	4.69	6.72
09		DIESEL 2500	05/10/13	1020	4.71	6.72
10		DIESEL ICV 2	05/10/13	1040	4.68	6.72
11		DIESEL#1	05/10/13	1331	4.67	6.78
12		JETA#1	05/10/13	1350	4.68	6.78
13		DIESEL#2	05/10/13	1410	4.68	6.76
14	ZZZZZ	ZZZZZ	05/10/13	1438	4.67	6.72
15	ZZZZZ	ZZZZZ	05/10/13	1457	4.68	6.72
16	ZZZZZ	ZZZZZ	05/10/13	1517	4.68	6.72
17	ZZZZZ	ZZZZZ	05/10/13	1537	4.67	6.72*
18	ZZZZZ	ZZZZZ	05/10/13	1556	4.67	6.71*
19	ZZZZZ	ZZZZZ	05/10/13	1616	4.67	6.72*
20	ZZZZZ	ZZZZZ	05/10/13	1635	4.68	6.72
21	ZZZZZ	ZZZZZ	05/10/13	1655	4.68	6.72
22	ZZZZZ	ZZZZZ	05/10/13	1714	4.68	6.72
23		DIESEL#3	05/10/13	1733	4.68	6.77
24		JETA#2	05/10/13	1753	4.68	6.77
25		MOIL#1	05/10/13	1812	4.68	6.76
26		WP23MBS1	05/10/13	1832	4.68	6.77
27		WP23LCSS1	05/10/13	1851	4.68	6.76
28		WP23A	05/10/13	1910	4.68	6.77
29		WP23A	05/10/13	1930	4.67	6.76
30		WP23B	05/10/13	1949	4.68	6.77
31		WP23B	05/10/13	2009	4.67	6.76
32		WP23C	05/10/13	2029	4.68	6.76

QC LIMITS

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

* Values outside of QC limits.

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		WP23C	05/10/13	2048	4.67	6.77
02		DIESEL#4	05/10/13	2107	4.68	6.77
03		MOIL#2	05/10/13	2127	4.68	6.76
04		WP24MBS1	05/10/13	2151	4.68	6.76
05		WP24LCSS1	05/10/13	2209	4.68	6.77
06		WN70A	05/10/13	2229	4.68	6.77
07		WP24A	05/10/13	2306	4.69	6.77

QC LIMITS

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

* Values outside of QC limits.

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	0822	4.67	6.72
02		RT0509	05/09/13	0840	4.68	6.72
03	ZZZZZ	ZZZZZ	05/09/13	0859	4.68	6.72
04	ZZZZZ	ZZZZZ	05/09/13	0919	4.68	6.73
05	ZZZZZ	ZZZZZ	05/09/13	0938	4.67	6.72
06	ZZZZZ	ZZZZZ	05/09/13	1021	4.67	6.72
07	ZZZZZ	ZZZZZ	05/09/13	1040	4.68	6.72
08		RT0509	05/09/13	1100	4.68	6.72
09	ZZZZZ	ZZZZZ	05/09/13	1120	4.68	6.72
10	ZZZZZ	ZZZZZ	05/09/13	1140	4.68	6.72
11	ZZZZZ	ZZZZZ	05/09/13	1200	4.67	6.72
12	ZZZZZ	ZZZZZ	05/09/13	1514	4.67	6.73
13	ZZZZZ	ZZZZZ	05/09/13	1533	4.67	6.72
14	ZZZZZ	ZZZZZ	05/09/13	1552	4.68	6.72
15	ZZZZZ	ZZZZZ	05/09/13	1612	4.68	6.72
16	ZZZZZ	ZZZZZ	05/09/13	1632	4.69	6.73
17	ZZZZZ	ZZZZZ	05/09/13	1651	4.70	6.73
18		DIESEL ICV 2	05/09/13	1711	4.68	6.72
19		MOIL 100	05/09/13	1730	4.67	6.72*
20		MOIL 250	05/09/13	1750	4.68	6.72
21		MOIL 500	05/09/13	1809	4.68	6.73
22		MOIL 1000	05/09/13	1829	4.67	6.74
23		MOIL 2500	05/09/13	1849	4.67	6.75
24		MOIL 5000	05/09/13	1908	4.68	6.77
25		MOIL ICV 500	05/09/13	1928	4.68	6.73
26	ZZZZZ	ZZZZZ	05/09/13	1947	4.67	6.73
27	ZZZZZ	ZZZZZ	05/09/13	2006	4.67	6.73
28	ZZZZZ	ZZZZZ	05/09/13	2026	4.68	6.73
29	ZZZZZ	ZZZZZ	05/09/13	2045	4.68	6.73
30	ZZZZZ	ZZZZZ	05/09/13	2104	4.69	6.72
31	ZZZZZ	ZZZZZ	05/09/13	2123	4.71	6.72
32	ZZZZZ	ZZZZZ	05/09/13	2143	4.68	6.72*

QC LIMITS

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

* Values outside of QC limits.

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	2202	4.67	6.72
02	ZZZZZ	ZZZZZ	05/09/13	2221	4.68	6.73
03	ZZZZZ	ZZZZZ	05/09/13	2241	4.68	6.74
04	ZZZZZ	ZZZZZ	05/09/13	2300	4.68	6.75
05	ZZZZZ	ZZZZZ	05/09/13	2319	4.68	6.77
06		AK103 ICV 50	05/09/13	2339	4.67	6.72

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

* Values outside of QC limits.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b002.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: RT0510
Client ID:
Injection: 10-MAY-2013 08:02
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.651	0.000	278628	291395	WATPHG	(Tol-C12)	1129888	83.65 M
C8	0.821	-0.006	181633	241331	WATPHD	(C12-C24)	1664879	160.74
C10	2.250	-0.004	359200	245154	WATPHM	(C24-C38)	2584330	261.76
C12	3.040	-0.009	358905	230134	AK102	(C10-C25)	2219047	179.58
C14	3.620	-0.001	408094	260963	AK103	(C25-C36)	2235210	314.44
C16	4.117	0.001	379580	245451	OR.DIES	(C10-C28)	3488483	226.79
C18	4.568	0.002	369583	253308				
C20	4.989	0.000	363534	236583				
C22	5.387	0.001	355771	240940				
C24	5.759	-0.001	347940	242813				
C25	5.934	-0.004	345745	237993				
C26	6.112	-0.002	959349	714870				
C28	6.426	-0.001	312314	257280	IT.DIES	(C10-C24)	2207860	160.12
C32	6.976	0.000	424837	286870				
C34	7.214	0.005	432992	287900	CREOSOT	(C8-C22)	1394958	431.43
Filter Peak	----							
C36	7.432	-0.003	430689	302270	BUNKERC	(C10-C38)	4792190	977.04
o-terph	4.676	-0.007	810739	558615	JET-A	(C10-C18)	1383968	127.86
Triacon Surr	6.723	-0.045	927716	705353				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	558615	41.5	92.3
Triacontane	705353	54.1	120.1

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

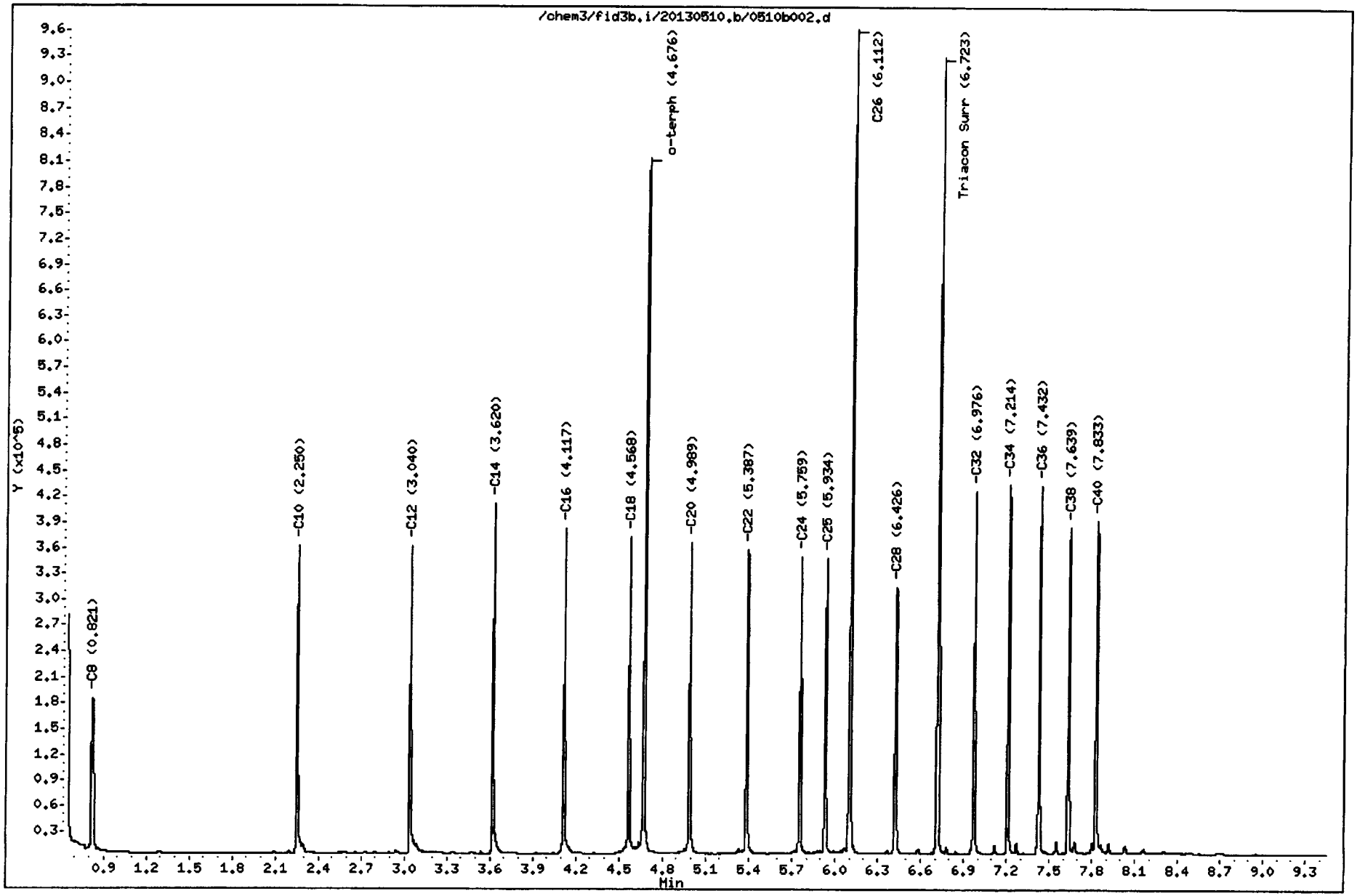
JW 5/11/13

Data File: /chem3/fid3b.i/20130510.b/0510b002.d
Date : 10-MAY-2013 08:02
Client ID:
Sample Info: RT0510

Column phase: RTX-1

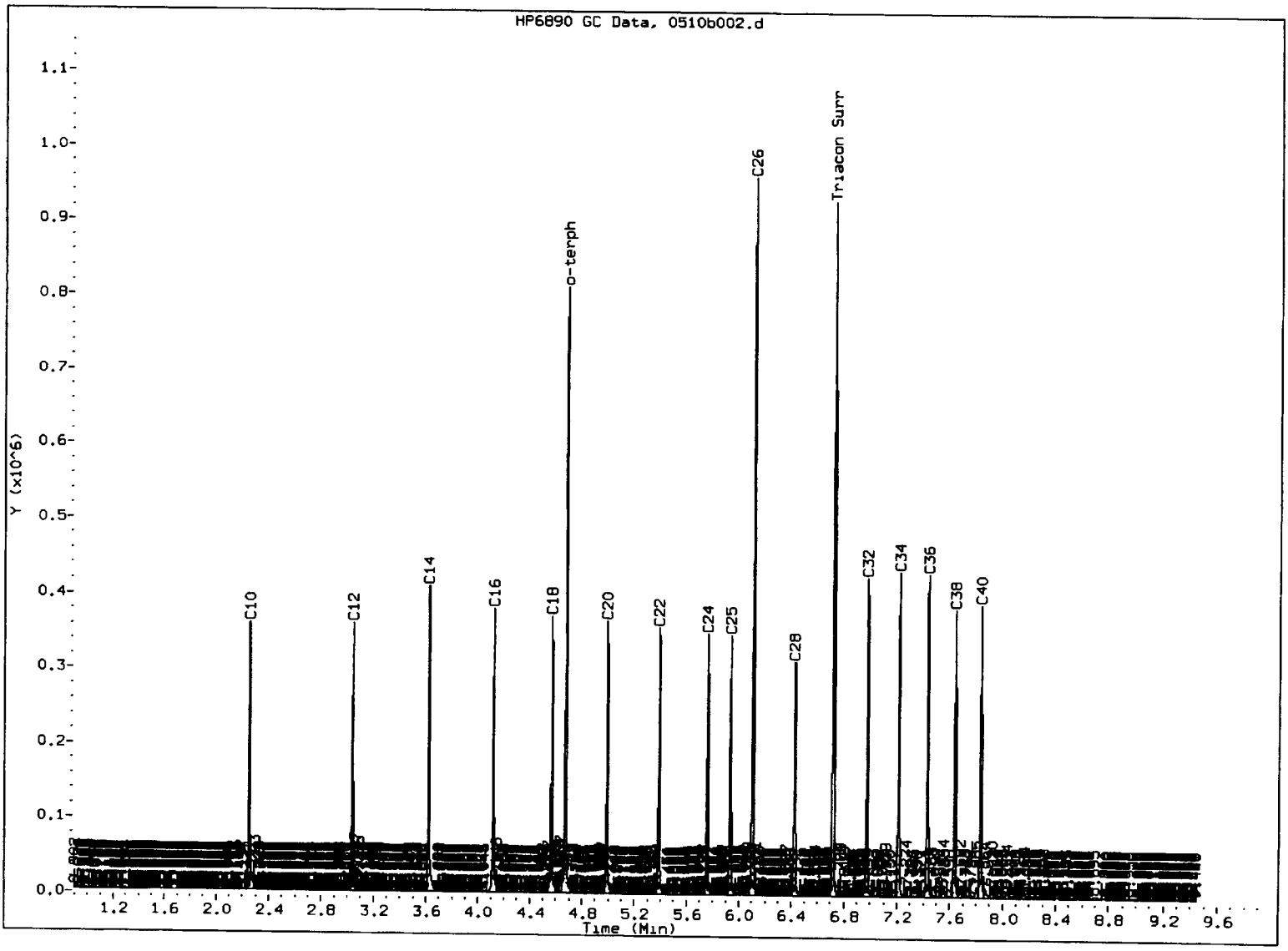
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 RT0510

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b003.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: IB0510
Client ID:
Injection: 10-MAY-2013 08:21
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	82802	6
C8	0.826	-0.002	3227	2790	WATPHD	(C12-C24)	51789	5.00
C10	2.253	-0.001	538	718	WATPHM	(C24-C38)	95461	9.67
C12	3.041	-0.007	348	185	AK102	(C10-C25)	73962	5.99
C14	3.617	-0.004	310	162	AK103	(C25-C36)	71921	10.12
C16	4.116	0.000	197	74	OR.DIES	(C10-C28)	78945	5.13
C18	4.564	-0.001	233	164				
C20	4.994	0.005	271	68				
C22	5.384	-0.003	117	79				
C24	5.753	-0.006	127	110				
C25	5.933	-0.005	24	4				
C26	6.104	-0.009	79	16				
C28	6.433	0.006	531	706	IT.DIES	(C10-C24)	73322	5.32
C32	6.987	0.011	2312	2615				
C34	7.214	0.005	585	115	CREOSOT	(C8-C22)	50403	15.59
Filter Peak	----							
C36	7.418	-0.017	6058	6883	BUNKERC	(C10-C38)	168784	34.41
o-terph	4.677	-0.006	864329	578060	JET-A	(C10-C18)	45532	4.21
Triacon Surr	6.722	-0.046	725287	542624				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	578060	43.0	95.5
Triacontane	542624	41.6	92.4

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b003.d

Date : 10-MAY-2013 08:21

Client ID:

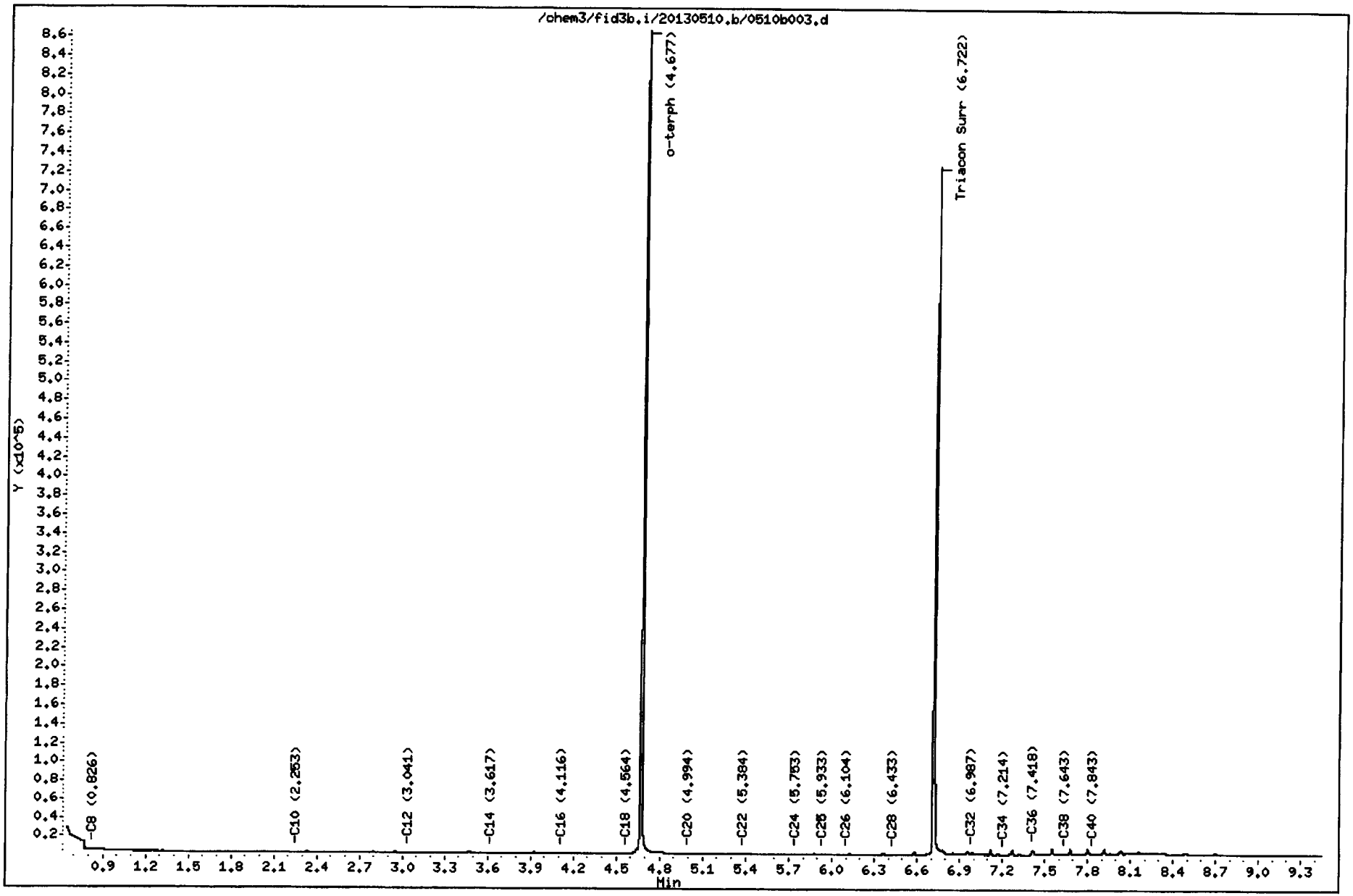
Sample Info: IB0510

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b004.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 50
Client ID:
Injection: 10-MAY-2013 08:41
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	193240	14
C8	0.824	-0.004	3186	2701	WATPHD	(C12-C24)	542793	52.41
C10	2.255	0.001	2818	2663	WATPHM	(C24-C38)	33378	3.38
C12	3.037	-0.011	3301	3758	AK102	(C10-C25)	648444	52.48 M
C14	3.621	0.000	7527	8721	AK103	(C25-C36)	20323	2.86
C16	4.117	0.001	11304	11840	OR.DIES	(C10-C28)	652389	42.41 M
C18	4.564	-0.001	12195	11129				
C20	4.990	0.001	4993	2568				
C22	5.382	-0.004	1288	422				
C24	5.759	-0.001	485	174				
C25	5.938	0.000	231	70				
C26	6.111	-0.003	110	48				
C28	6.432	0.006	29	8	IT.DIES	(C10-C24)	646906	46.91
C32	6.992	0.016	117	35				
C34	7.213	0.003	232	62	CREOSOT	(C8-C22)	526977	162.98
Filter Peak	----							
C36	7.441	0.006	446	167	BUNKERC	(C10-C38)	680284	138.70
o-terph	4.670	-0.013	199832	118595	JET-A	(C10-C18)	496912	45.91
Triacon Surr	6.720	-0.048	76	52				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	118595	8.8	19.6
Triacontane	52	0.0	0.0

JW
5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b004.d

Date : 10-MAY-2013 08:41

Client ID:

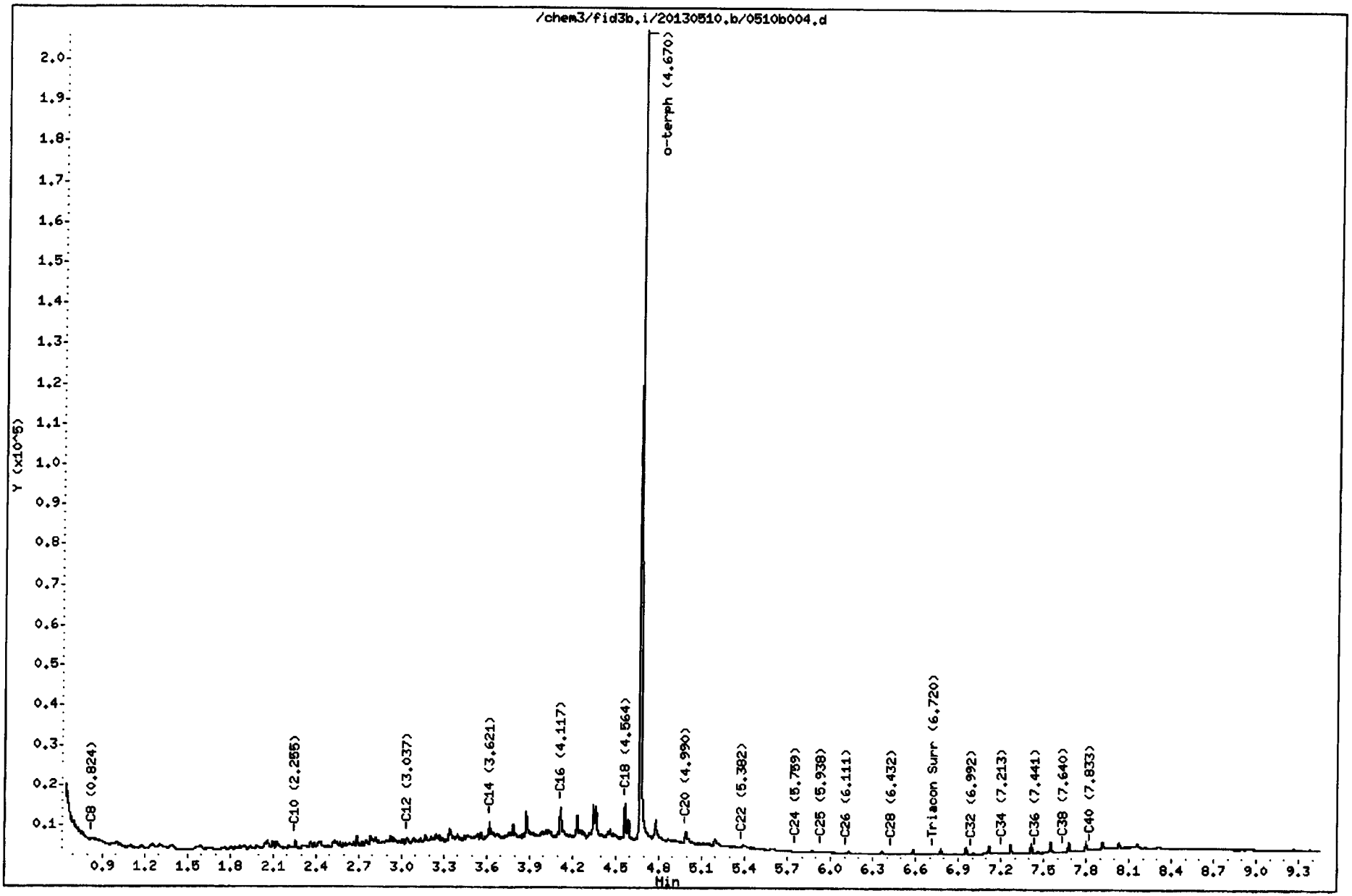
Sample Info: DIESEL 50

Column phase: RTX-1

Instrument: fid3b.i

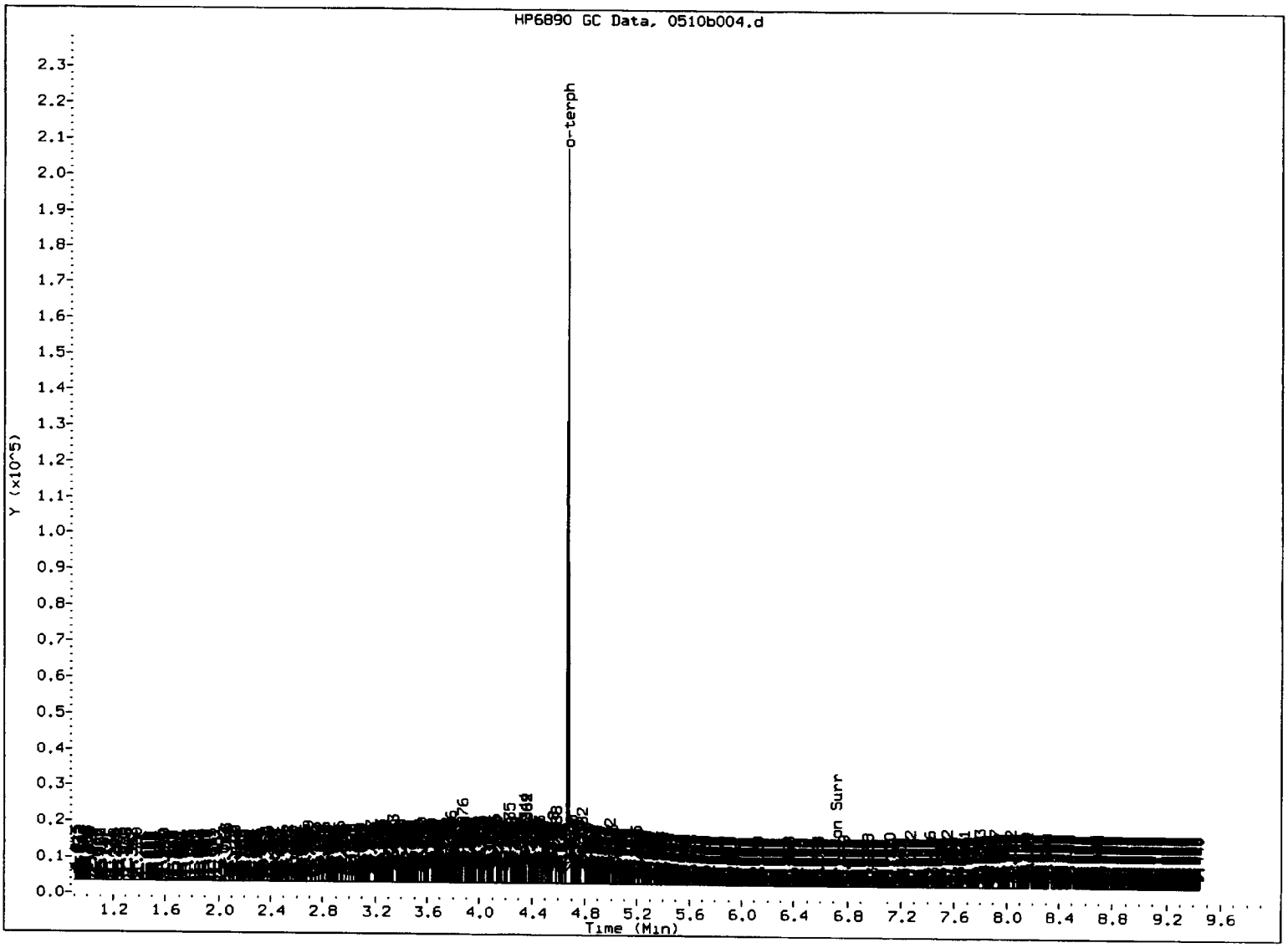
Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 50

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JD

Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b005.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 100
Client ID:
Injection: 10-MAY-2013 09:01
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	348905	26
C8	0.829	0.001	4019	3639	WATPHD	(C12-C24)	1081580	104.43
C10	2.255	0.001	5549	5298	WATPHM	(C24-C38)	30498	3.09
C12	3.038	-0.011	8688	11176	AK102	(C10-C25)	1289659	104.37 M
C14	3.618	-0.003	18063	21629	AK103	(C25-C36)	18970	2.67
C16	4.116	0.000	28732	34246	OR.DIES	(C10-C28)	1296754	84.30 M
C18	4.564	-0.001	28511	24397				
C20	4.988	-0.002	13723	21176				
C22	5.389	0.003	5048	4358				
C24	5.758	-0.001	930	234				
C25	5.938	0.000	463	108				
C26	6.113	-0.001	221	51				
C28	6.426	-0.001	46	9	IT.DIES	(C10-C24)	1287251	93.35
C32	6.980	0.004	95	30				
C34	7.211	0.001	189	59	CREOSOT	(C8-C22)	1048198	324.18
Filter Peak	----							
C36	7.438	0.003	375	176	BUNKERC	(C10-C38)	1317749	268.67
o-terph	4.672	-0.011	474682	246523	JET-A	(C10-C18)	984623	90.97
Triacon Surr	6.723	-0.045	53	24				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	246523	18.3	40.7
Triacontane	24	0.0	0.0

JW 5/14/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b005.d

Date : 10-MAY-2013 09:01

Client ID:

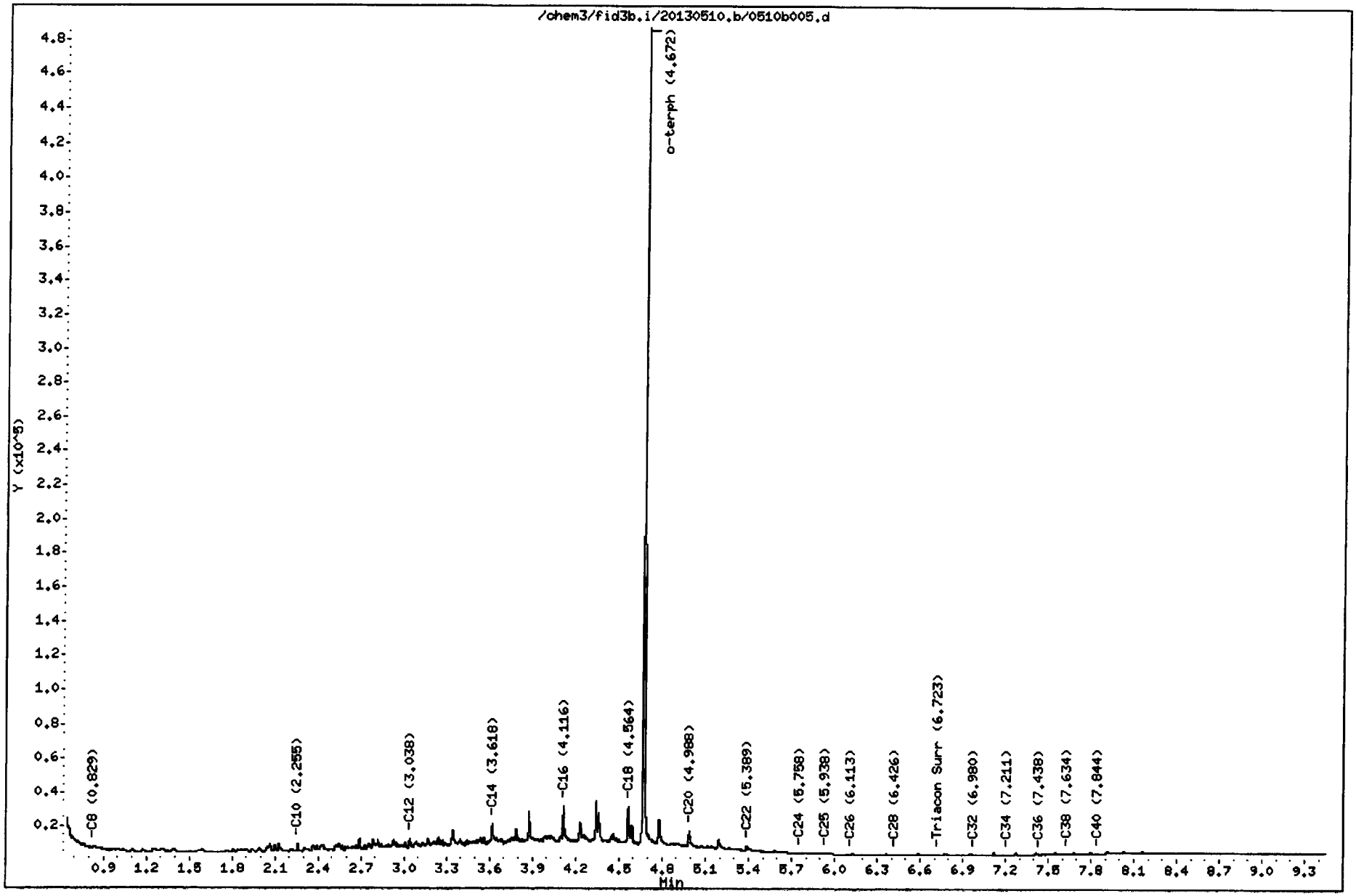
Sample Info: DIESEL 100

Column phase: RTX-1

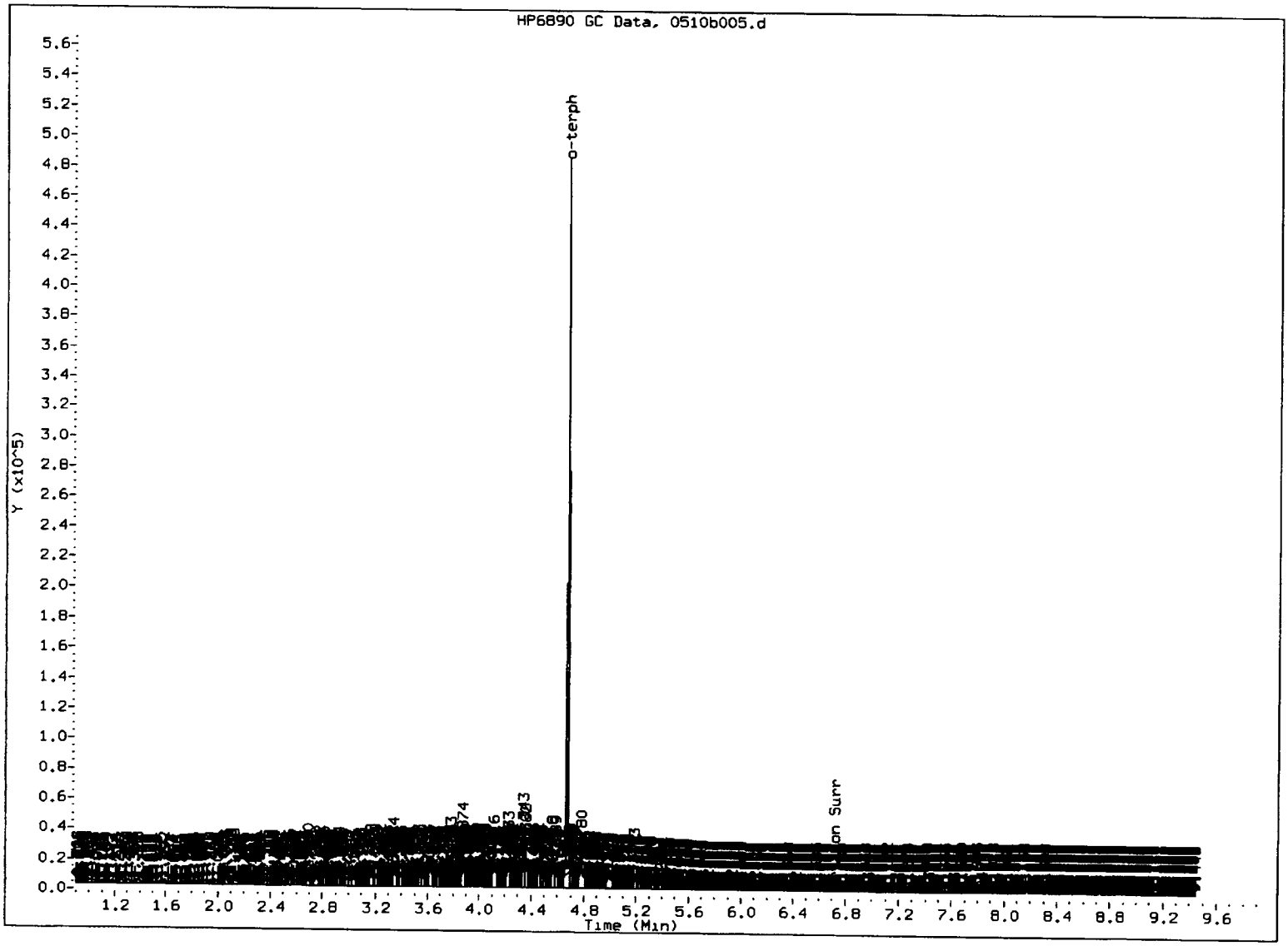
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 100 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b006.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 250
Client ID:
Injection: 10-MAY-2013 09:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	761791	56
C8	0.831	0.004	5218	8810	WATPHD	(C12-C24)	2591545	250.21
C10	2.256	0.002	15216	13003	WATPHM	(C24-C38)	38764	3.93
C12	3.039	-0.009	25438	28143	AK102	(C10-C25)	3098190	250.73 M
C14	3.619	-0.002	52194	51453	AK103	(C25-C36)	25541	3.59
C16	4.115	-0.001	83800	65685	OR.DIES	(C10-C28)	3114136	202.45 M
C18	4.565	0.000	76536	62707				
C20	4.987	-0.002	42799	46284				
C22	5.386	0.000	18091	23066				
C24	5.762	0.002	3061	2619				
C25	5.931	-0.007	1055	187				
C26	6.112	-0.002	544	242				
C28	6.424	-0.003	128	68	IT.DIES	(C10-C24)	3091557	224.20
C32	6.980	0.004	52	12				
C34	7.219	0.010	155	59	CREOSOT	(C8-C22)	2516265	778.22
Filter Peak	----							
C36	7.418	-0.017	1255	1376	BUNKERC	(C10-C38)	3130321	638.22
o-terph	4.678	-0.005	968874	620399	JET-A	(C10-C18)	2379987	219.88
Triacon Surr	6.721	-0.047	32	20				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	620399	46.1	102.5
Triacontane	20	0.0	0.0

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b006.d

Date : 10-MAY-2013 09:20

Client ID:

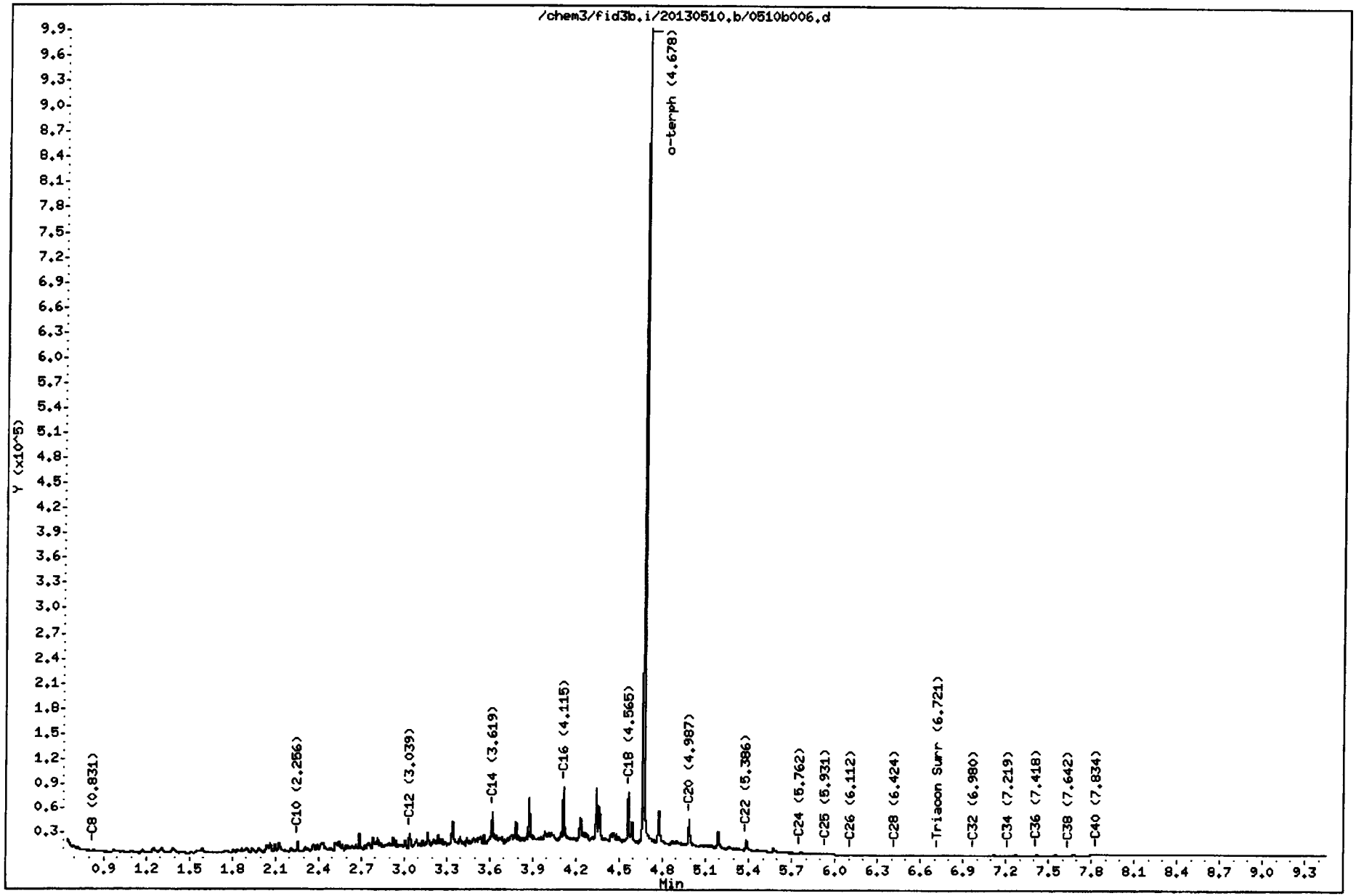
Sample Info: DIESEL 250

Column phase: RTX-1

Instrument: fid3b.i

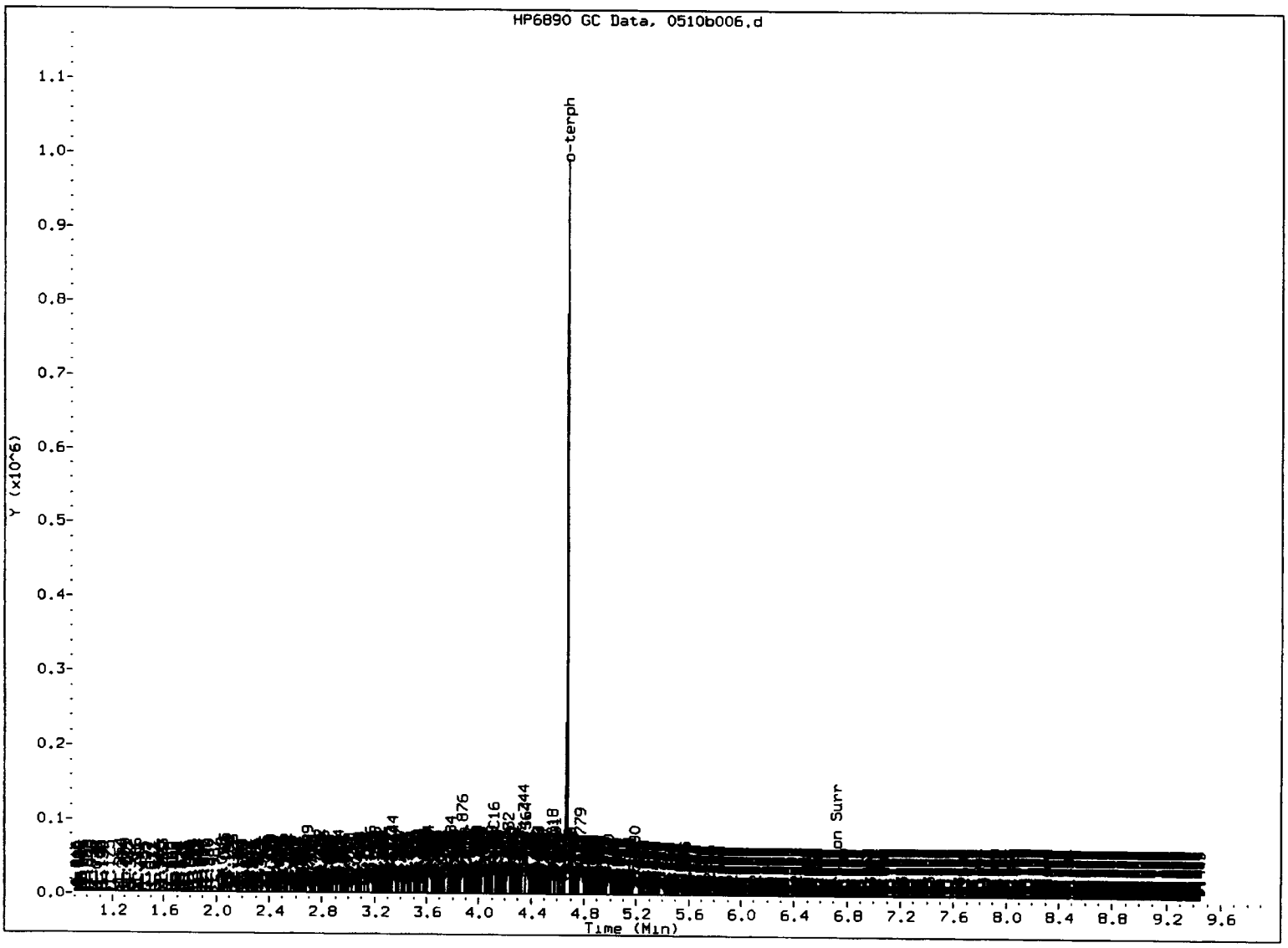
Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 250

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b007.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 500
Client ID:
Injection: 10-MAY-2013 09:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	1423305	105	
C8	0.831	0.004	7103	11774	WATPHD	(C12-C24)	5111212	493.48	
C10	2.256	0.002	34009	26478	WATPHM	(C24-C38)	56849	5.76	
C12	3.039	-0.009	59303	59524	AK102	(C10-C25)	6088980	492.77	M
C14	3.619	-0.002	108417	83752	AK103	(C25-C36)	39698	5.58	
C16	4.116	0.000	169964	136442	OR.DIES	(C10-C28)	6120141	397.88	M
C18	4.569	0.003	143941	125900					
C20	4.989	0.000	84653	96402					
C22	5.387	0.000	38580	47857					
C24	5.761	0.001	7758	13975					
C25	5.940	0.002	3274	5094					
C26	6.115	0.001	1168	274					
C28	6.426	0.000	225	21	IT.DIES	(C10-C24)	6077010	440.71	
C32	6.979	0.003	47	18					
C34	7.212	0.002	94	30	CREOSOT	(C8-C22)	4959474	1533.85	
Filter Peak	----								
C36	7.441	0.006	250	95	BUNKERC	(C10-C38)	6133859	1250.58	
o-terph	4.686	0.003	1593055	1223455	JET-A	(C10-C18)	4663065	430.80	
Triacon Surr	6.726	-0.042	55	7					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1223455	91.0	202.1
Triacontane	7	0.0	0.0

JW 5/14/13

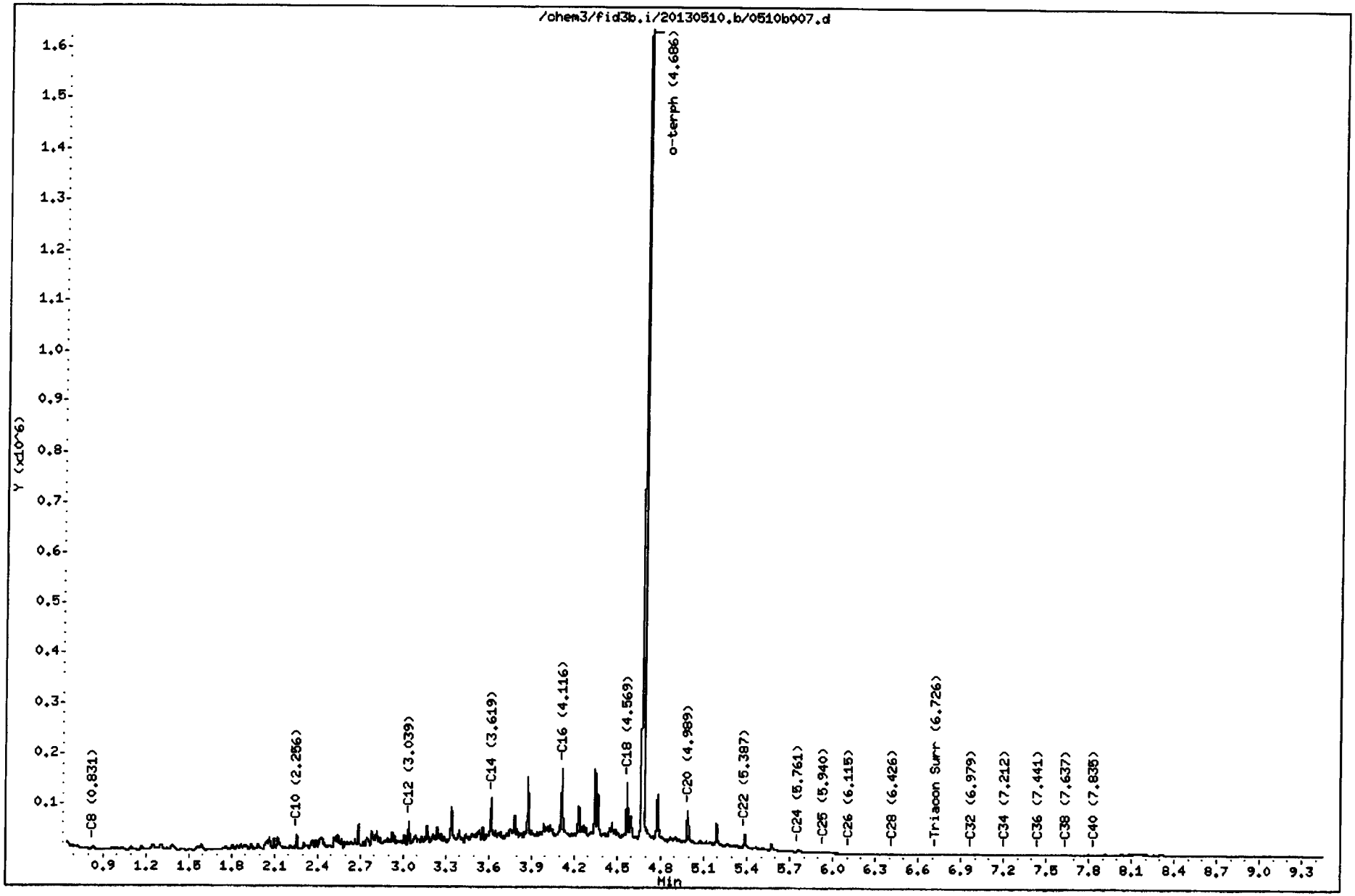
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b007.d
Date : 10-MAY-2013 09:40
Client ID:
Sample Info: DIESEL 500

Column phase: RTX-1

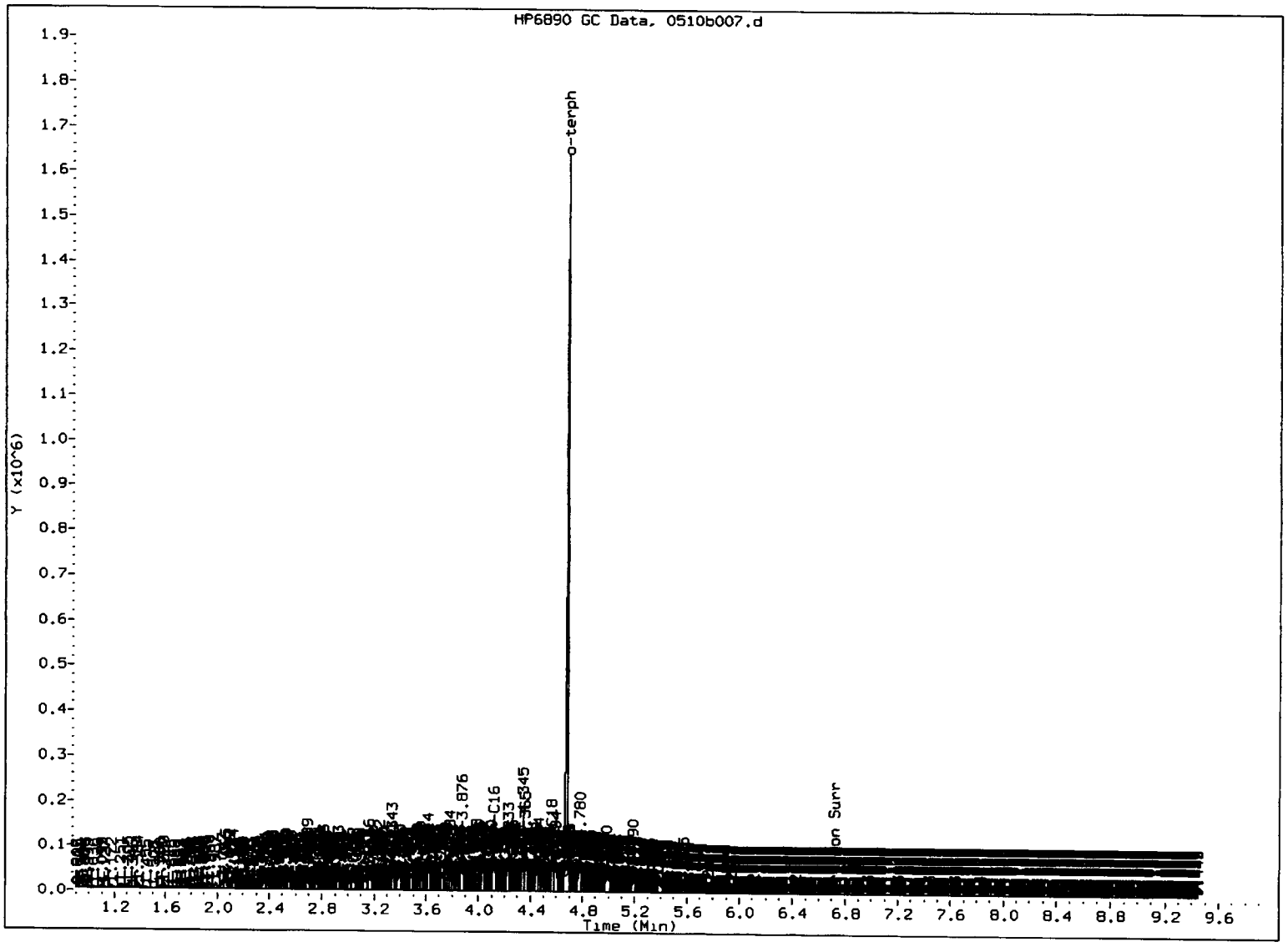
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 500

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW

Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b008.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 1000
Client ID:
Injection: 10-MAY-2013 10:00
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	2798069	207
C8	0.829	0.002	10964	16863	WATPHD	(C12-C24)	10078402	973.06
C10	2.254	0.000	70986	55849	WATPHM	(C24-C38)	93029	9.42
C12	3.041	-0.008	118758	119188	AK102	(C10-C25)	12035153	973.98 M
C14	3.621	0.000	212328	212133	AK103	(C25-C36)	65721	9.25
C16	4.120	0.003	357392	262718	OR.DIES	(C10-C28)	12092309	786.13 M
C18	4.570	0.004	265151	268202				
C20	4.989	0.000	200624	168107				
C22	5.385	-0.002	91523	83824				
C24	5.755	-0.005	18170	27279				
C25	5.935	-0.003	7287	10768				
C26	6.109	-0.005	2537	3182				
C28	6.423	-0.003	425	193	IT.DIES	(C10-C24)	12013086	871.21
C32	6.980	0.004	27	7				
C34	7.218	0.009	67	32	CREOSOT	(C8-C22)	9778215	3024.17
Filter Peak	----							
C36	7.439	0.004	181	79	BUNKERC	(C10-C38)	12106115	2468.22
o-terph	4.693	0.010	2508161	2430741	JET-A	(C10-C18)	9230123	852.73
Triacon Surr	6.724	-0.044	112	51				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2430741	180.7	401.6
Triacontane	51	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW 5/10

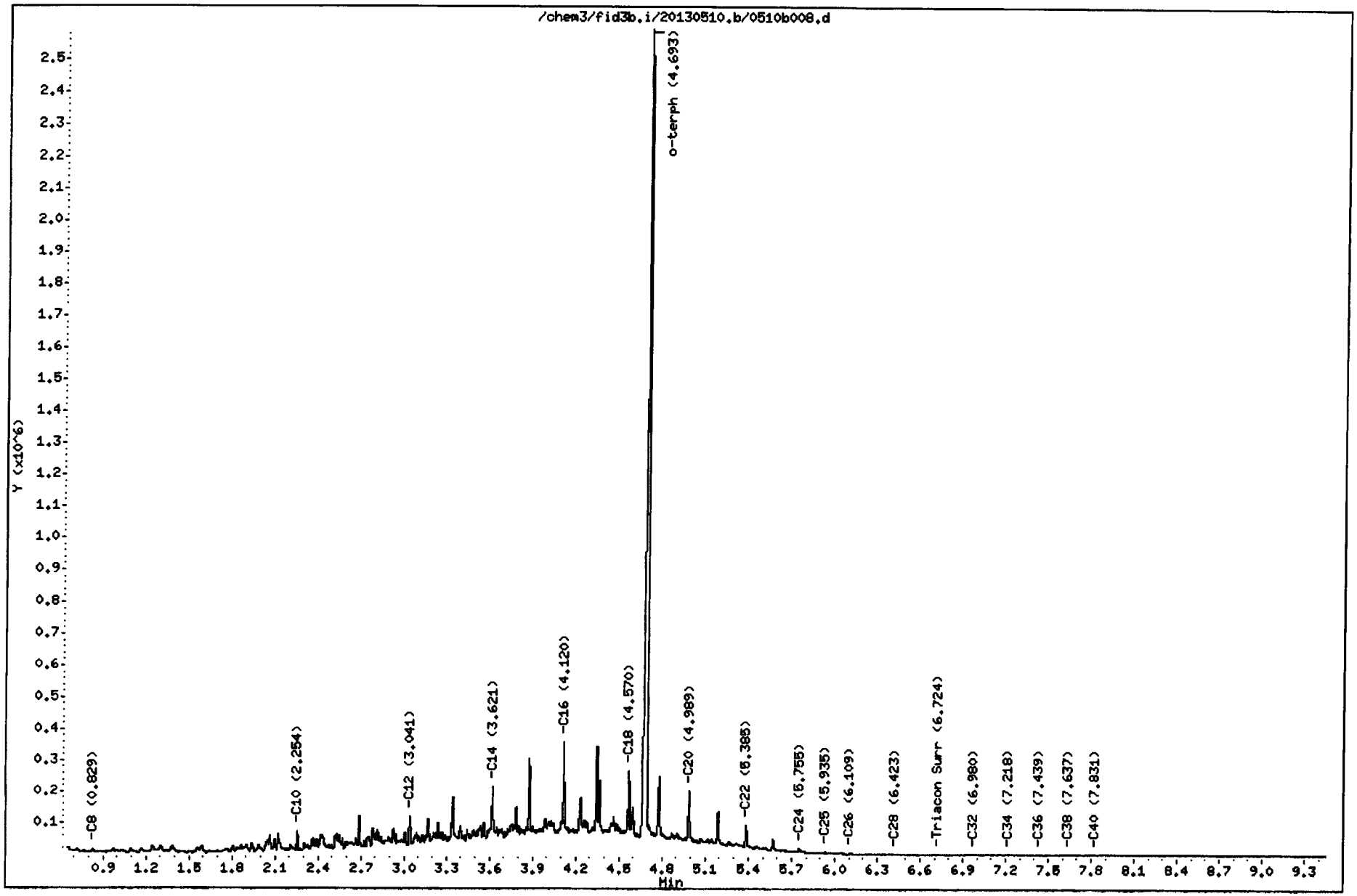
Data File: /chem3/fid3b.i/20130510.b/0510b008.d
Date : 10-MAY-2013 10:00
Client ID:
Sample Info: DIESEL 1000

Column phase: RTX-1

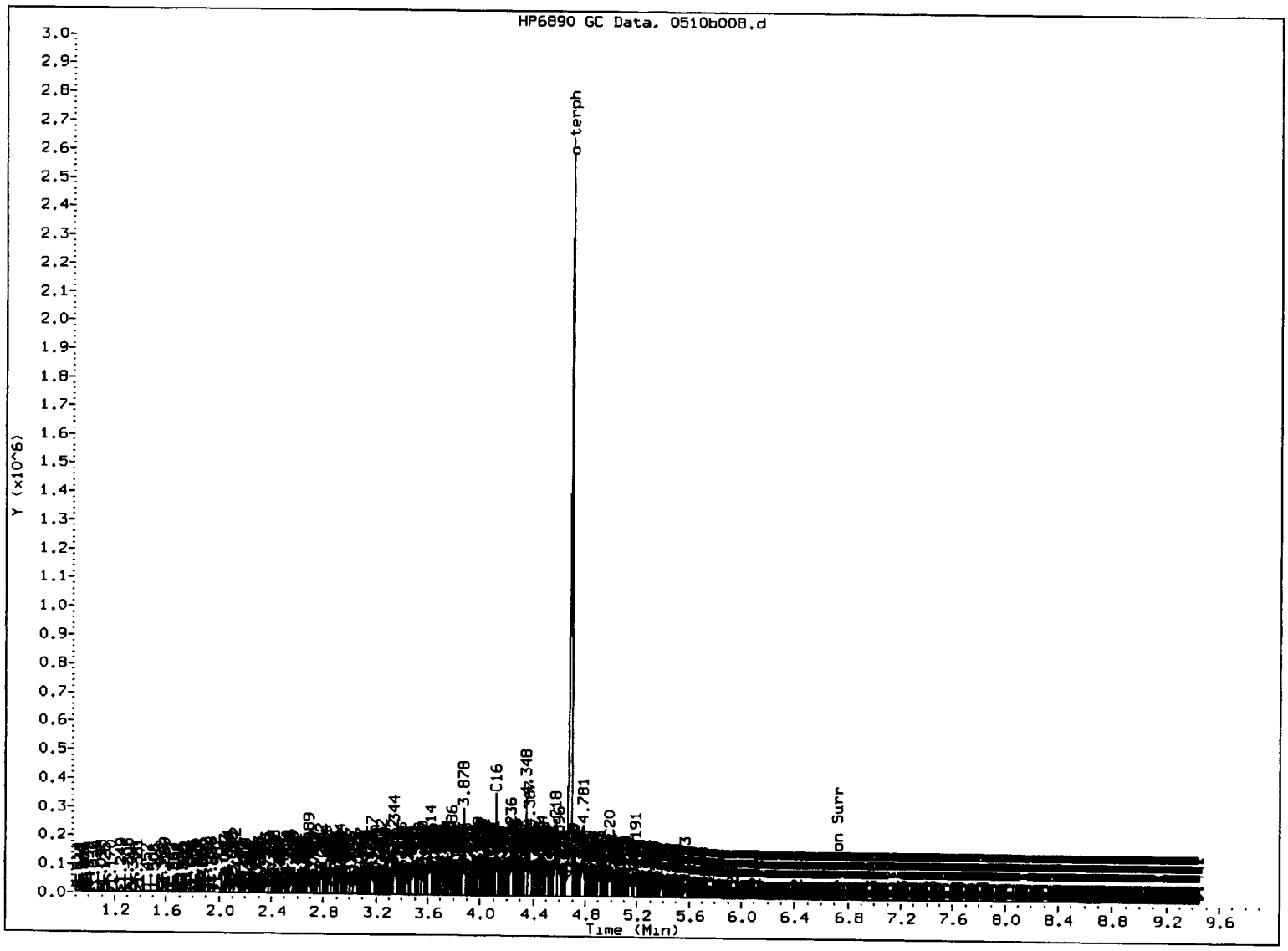
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW



FID:3B-2C/RTX-1 DIESEL 1000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JN Date: 5/14/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b009.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 2500
Client ID:
Injection: 10-MAY-2013 10:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	6660487	493	
C8	0.829	0.002	21021	28743	WATPHD	(C12-C24)	24516037	2367.00	
C10	2.257	0.003	184252	139283	WATPHM	(C24-C38)	215472	21.82	
C12	3.044	-0.005	272636	289945	AK102	(C10-C25)	29181661	2361.60	M
C14	3.625	0.004	499091	483378	AK103	(C25-C36)	148505	20.89	
C16	4.124	0.008	776125	651861	OR.DIES	(C10-C28)	29317252	1905.95	M
C18	4.577	0.011	612833	708514					
C20	4.994	0.005	468818	417212					
C22	5.389	0.002	229153	205978					
C24	5.758	-0.002	55212	62270					
C25	5.935	-0.003	21112	30434					
C26	6.104	-0.010	7971	8000					
C28	6.424	-0.003	998	176	IT.DIES	(C10-C24)	29118650	2111.73	
C32	6.979	0.003	59	24					
C34	7.212	0.002	34	7	CREOSOT	(C8-C22)	23742752	7343.06	
Filter Peak	----								
C36	7.439	0.004	108	34	BUNKERC	(C10-C38)	29334122	5980.70	
o-terph	4.712	0.029	3746058	5823353	JET-A	(C10-C18)	22333326	2063.28	
Triacon Surr	6.719	-0.049	269	85					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	5823353	433.0	962.2
Triacontane	85	0.0	0.0

JW 5/1/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b009.d

Date : 10-MAY-2013 10:20

Client ID:

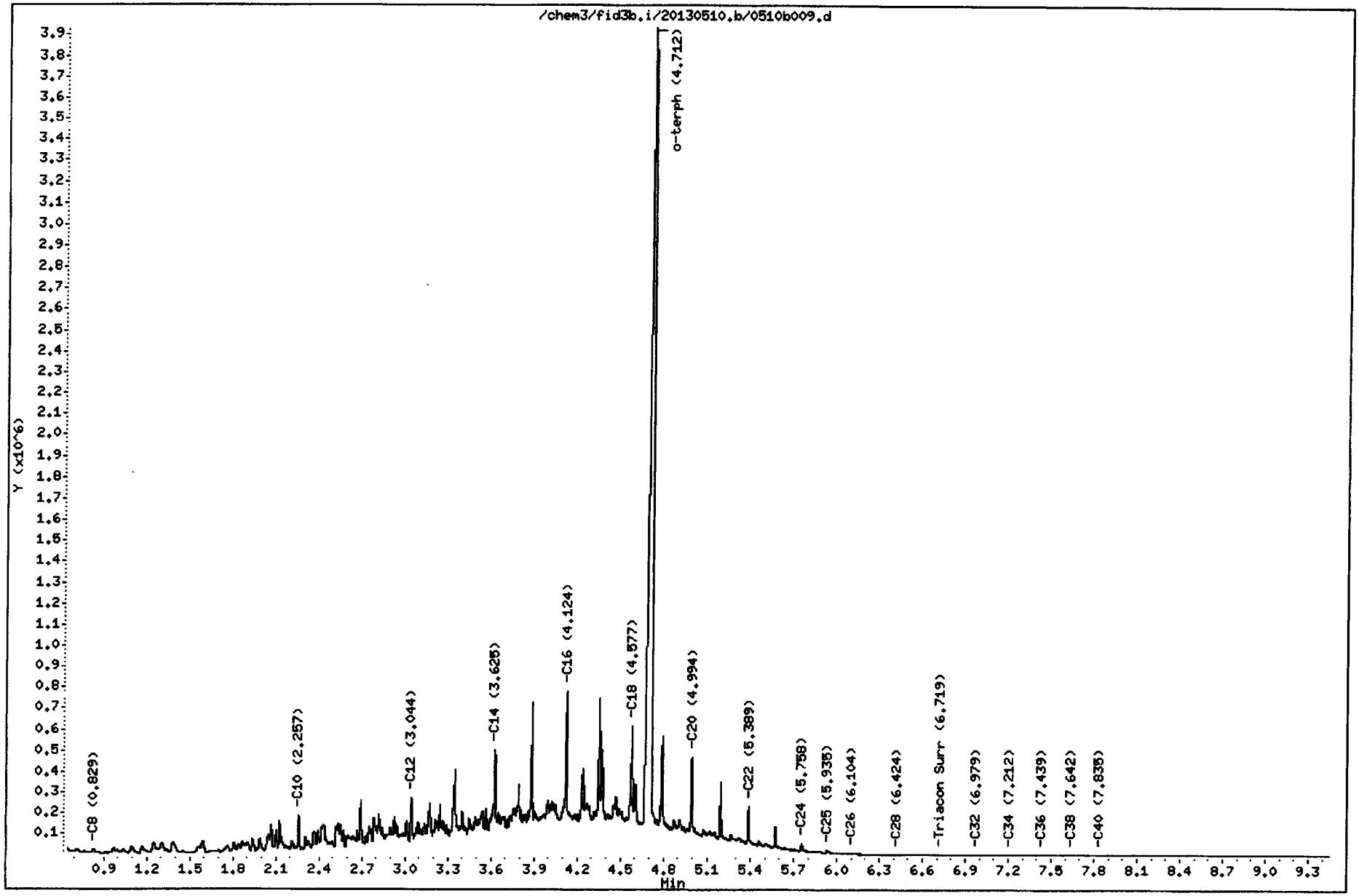
Sample Info: DIESEL 2500

Column phase: RTX-1

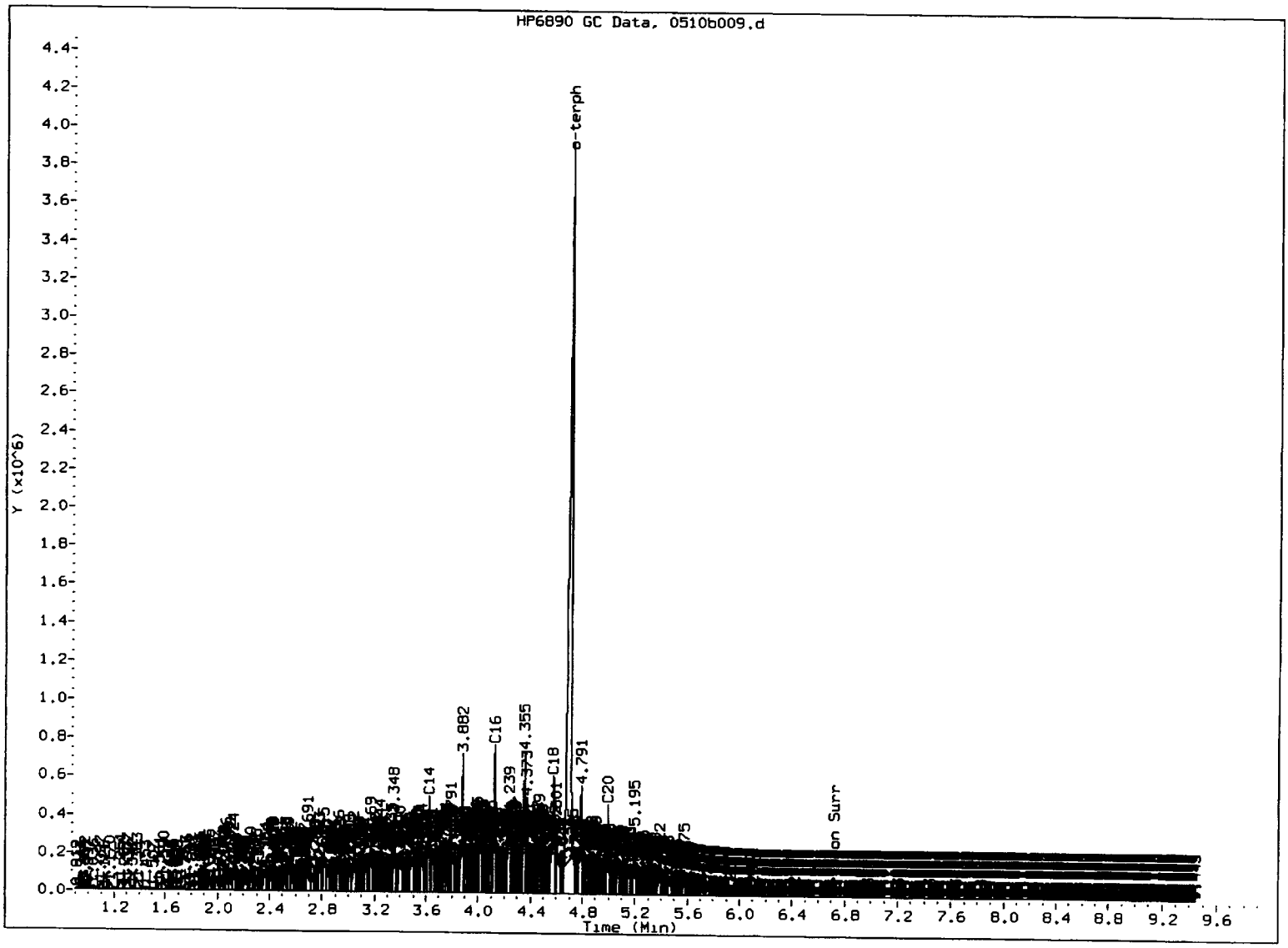
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b010.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL ICV 250
Client ID:
Injection: 10-MAY-2013 10:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1002945	74
C8	0.827	0.000	6470	11047	WATPHD	(C12-C24)	2375892	229.39
C10	2.256	0.003	38320	29591	WATPHM	(C24-C38)	36911	3.74
C12	3.039	-0.009	42860	42439	AK102	(C10-C25)	3107953	251.52 M
C14	3.618	-0.003	60801	55820	AK103	(C25-C36)	25599	3.60
C16	4.115	-0.001	56561	56130	OR.DIES	(C10-C28)	3126225	203.24 M
C18	4.566	0.001	48959	42994				
C20	4.987	-0.002	26988	31212				
C22	5.389	0.003	8625	13454				
C24	5.763	0.003	2460	3264				
C25	5.929	-0.009	1076	453				
C26	6.110	-0.004	601	224				
C28	6.428	0.001	160	83	IT.DIES	(C10-C24)	3102072	224.97
C32	6.984	0.008	36	9				
C34	7.214	0.004	102	46	CREOSOT	(C8-C22)	2319696	717.43
Filter Peak	----							
C36	7.442	0.007	236	116	BUNKERC	(C10-C38)	3138984	639.98
o-terph	4.678	-0.005	962111	602869	JET-A	(C10-C18)	2497954	230.78
Triacon Surr	6.721	-0.047	43	22				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	602869	44.8	99.6
Triacontane	22	0.0	0.0

JW 5/11/13

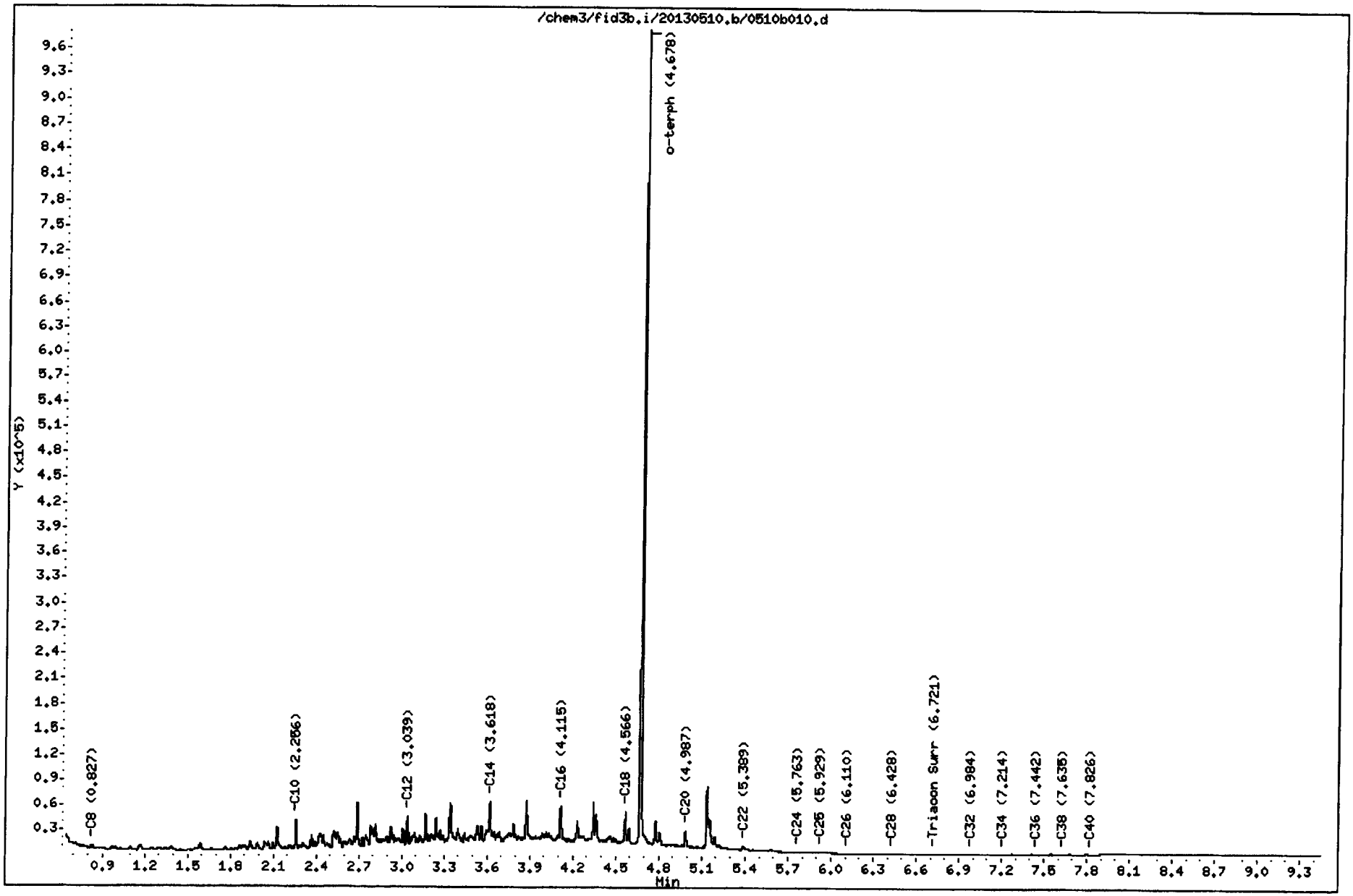
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b010.d
Date : 10-MAY-2013 10:40
Client ID:
Sample Info: DIESEL ICV 250

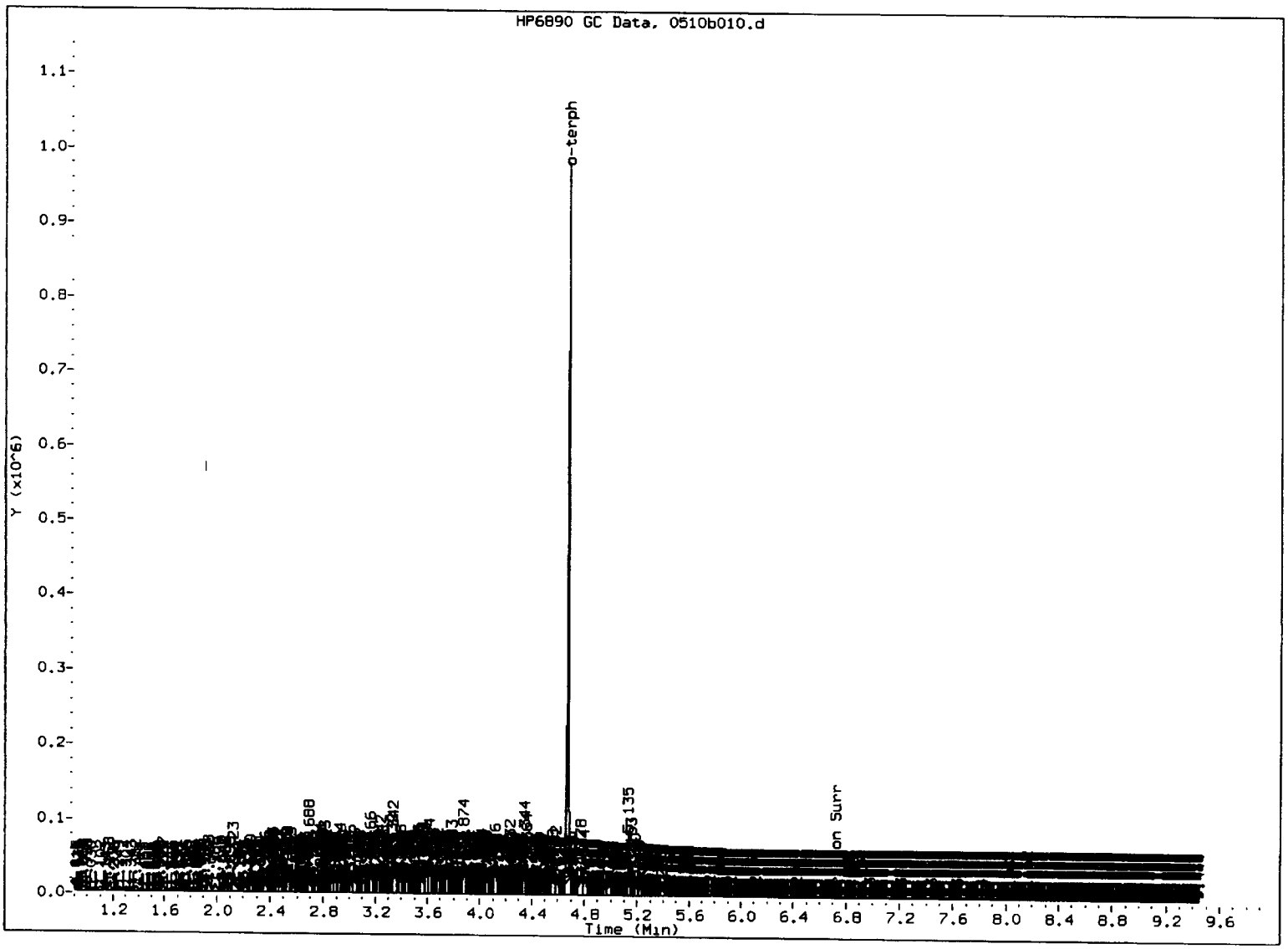
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL ICV 250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b008.d
Method: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: RT0509
Client ID:
Injection: 09-MAY-2013 11:00
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.660	0.000	281983	283611	WATPHG	(Tol-C12)	1136083	84.11 M
C8	0.832	0.005	213148	246004	WATPHD	(C12-C24)	1696380	149.59
C10	2.257	0.003	289258	227833	WATPHM	(C24-C38)	2294807	232.44
C12	3.042	-0.007	342225	251133	AK102	(C10-C25)	2269057	164.51
C14	3.620	-0.001	422171	257259	AK103	(C25-C36)	2029541	285.51
C16	4.118	0.002	397361	260570	OR.DIES	(C10-C28)	3505089	227.87
C18	4.568	0.003	375164	254000				
C20	4.990	0.001	342525	237388				
C22	5.389	0.003	366437	240556				
C24	5.760	0.001	344124	238634				
C25	5.937	-0.001	315093	229769				
C26	6.114	0.001	901378	700157				
C28	6.430	0.004	310083	241137	IT.DIES	(C10-C24)	2255789	163.59
C32	6.977	0.002	359459	246641				
C34	7.215	0.006	364386	243089	CREOSOT	(C8-C22)	1423173	440.15
Filter Peak	----							
C36	7.432	-0.003	319200	238105	BUNKERC	(C10-C38)	4550596	927.78
o-terph	4.677	-0.006	792786	568904	JET-A	(C10-C18)	1411903	130.44
Triacon Surr	6.725	-0.043	855331	640731				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.610 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	568904	39.2	87.1
Triacontane	640731	41.9	93.2

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	13047.7	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	9872.9	09-MAY-2013
AK102	13793.0	22-MAR-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW 5/11/13

Data File: /chem3/fid3b.i/20130509.b/0509b008.d

Date : 09-MAY-2013 11:00

Client ID:

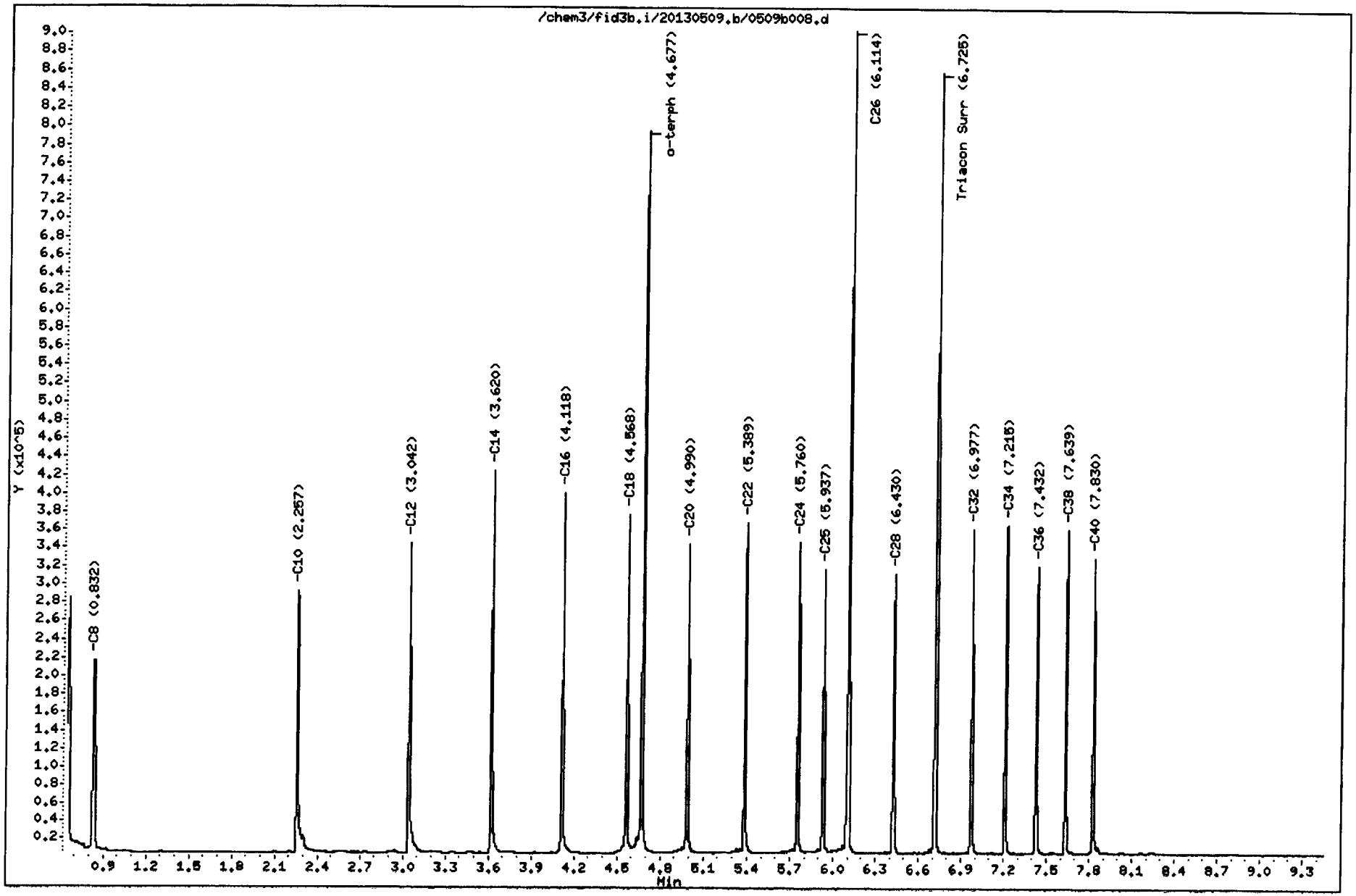
Sample Info: RT0509

Column phase: RTX-1

Instrument: fid3b.i

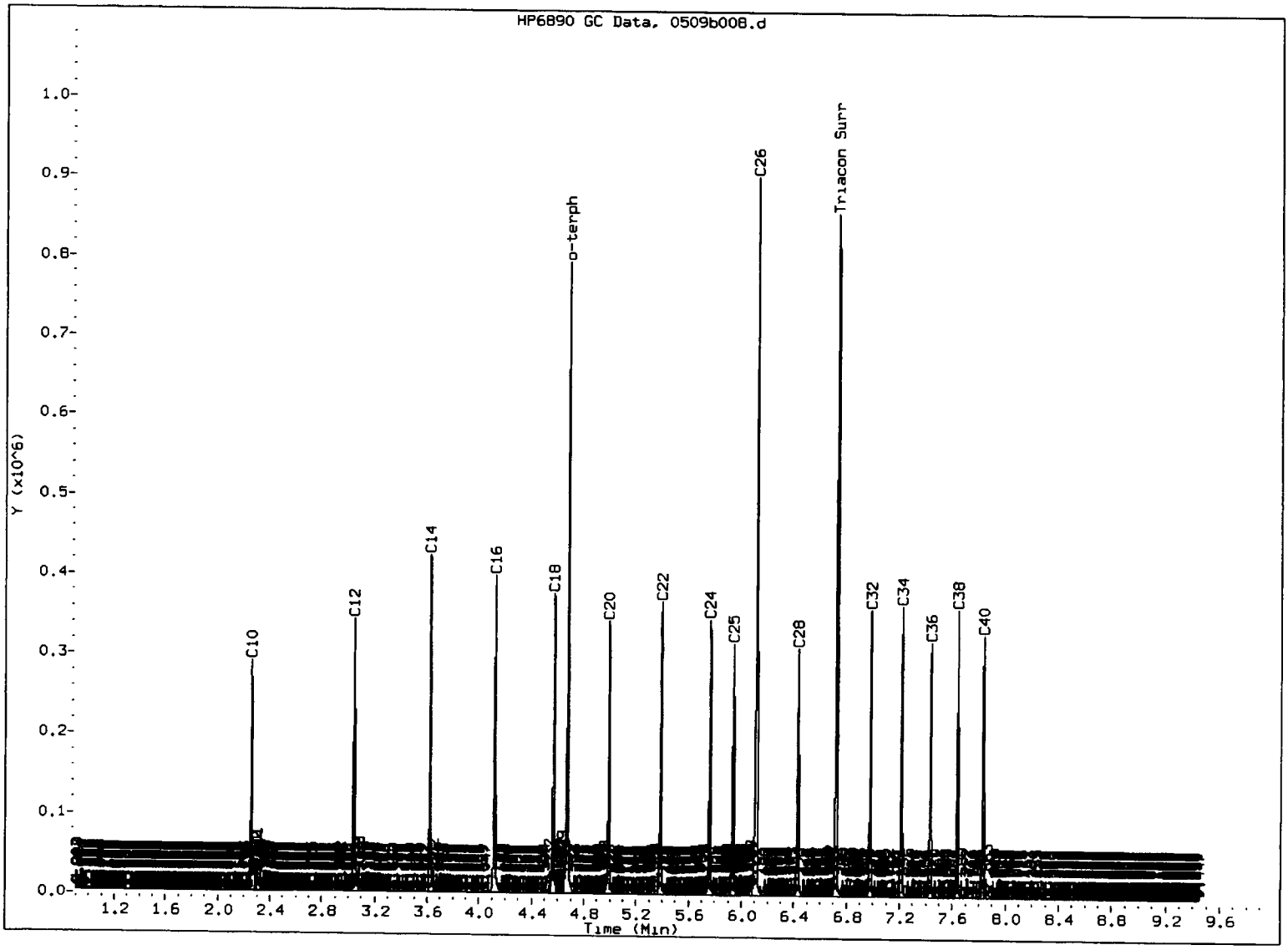
Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 RT0509

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b009.d
Method: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: IB0509
Client ID:
Injection: 09-MAY-2013 11:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	74751	6
C8	0.831	0.003	2498	1726	WATPHD	(C12-C24)	46821	4.13
C10	2.255	0.001	494	237	WATPHM	(C24-C38)	60854	6.16
C12	3.049	0.000	374	88	AK102	(C10-C25)	70320	5.10
C14	3.625	0.004	351	262	AK103	(C25-C36)	48437	6.81
C16	4.122	0.006	171	181	OR.DIES	(C10-C28)	73092	4.75
C18	4.564	-0.001	185	134				
C20	4.991	0.001	329	205				
C22	5.386	-0.001	175	75				
C24	5.760	0.001	95	30				
C25	5.941	0.003	74	42				
C26	6.110	-0.004	236	200				
C28	6.430	0.003	439	449	IT.DIES	(C10-C24)	69995	5.08
C32	6.984	0.008	2639	2753				
C34	7.219	0.009	409	111	CREOSOT	(C8-C22)	45466	14.06
Filter Peak	----							
C36	7.417	-0.018	2269	2595	BUNKERC	(C10-C38)	130849	26.68
o-terph	4.677	-0.006	905522	623043	JET-A	(C10-C18)	45066	4.16
Triacon Surr	6.723	-0.045	696611	521004				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.610 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	623043	42.9	95.4
Triacontane	521004	34.1	75.8

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	13047.7	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	9872.9	09-MAY-2013
AK102	13793.0	22-MAR-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

5/10/13

Data File: /chem3/fid3b.i/20130509.b/0509b009.d

Date : 09-MAY-2013 11:20

Client ID:

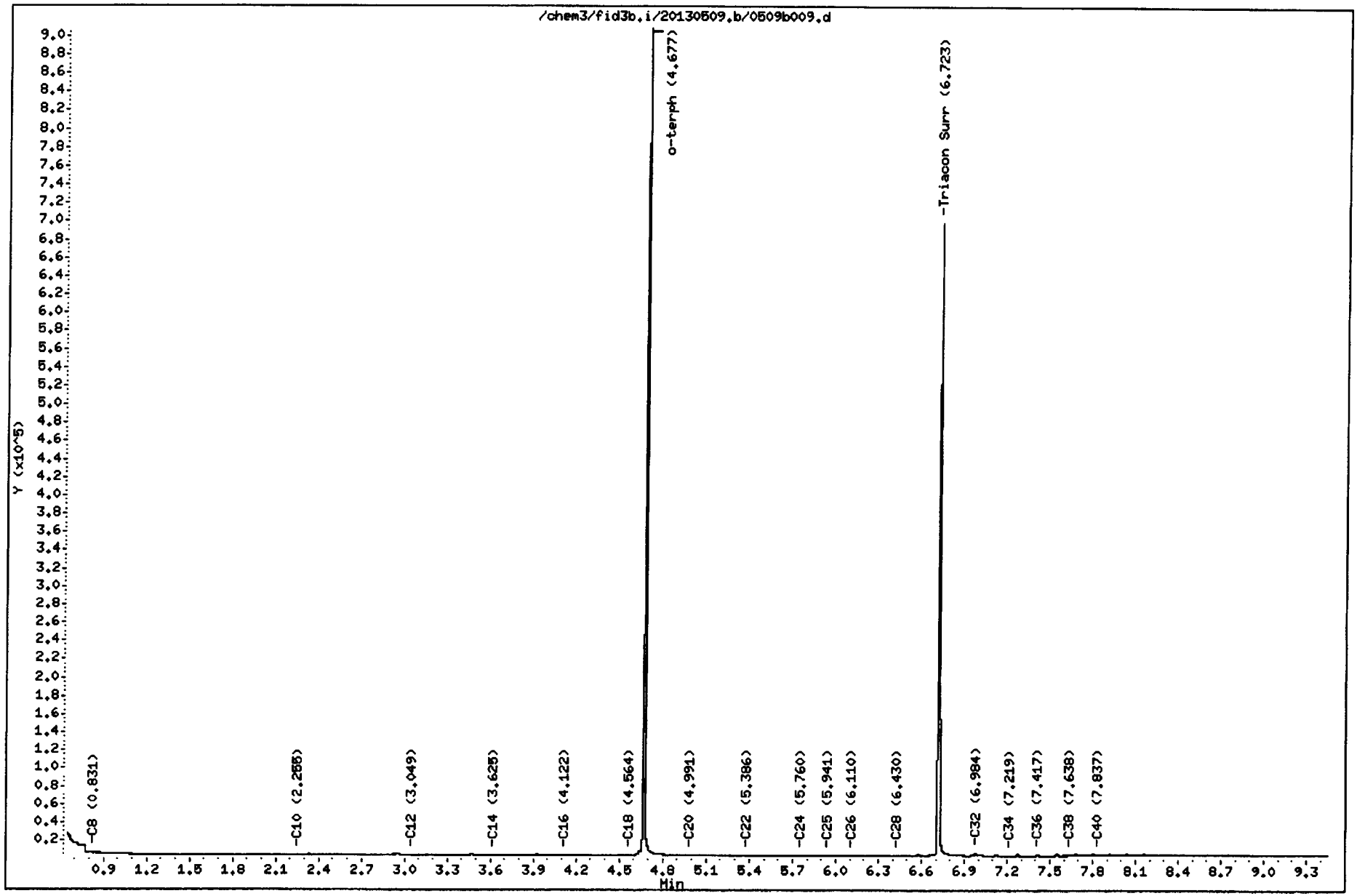
Sample Info: IB0509

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b019.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 100
Client ID:
Injection: 09-MAY-2013 17:30
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	94672	7	
C8	0.836	0.009	3898	2935	WATPHD	(C12-C24)	97099	9.37	
C10	2.255	0.001	484	102	WATPHM	(C24-C38)	983803	99.65	
C12	3.049	0.001	264	128	AK102	(C10-C25)	140753	11.39	
C14	3.626	0.005	241	281	AK103	(C25-C36)	839790	118.14	M
C16	4.118	0.002	59	16	OR.DIES	(C10-C28)	374445	24.34	
C18	4.561	-0.004	25	4					
C20	4.984	-0.005	176	134					
C22	5.386	0.000	946	428					
C24	5.762	0.002	4158	1297					
C25	5.938	0.000	5674	2319					
C26	6.116	0.002	6483	1793					
C28	6.435	0.008	7386	1030	IT.DIES	(C10-C24)	117897	8.55	
C32	6.975	-0.001	11846	9898					
C34	7.215	0.006	11088	4552	CREOSOT	(C8-C22)	32219	9.96	
Filter Peak	----								
C36	7.430	-0.005	10949	7546	BUNKERC	(C10-C38)	1101699	224.62	
o-terph	4.673	-0.010	198	73	JET-A	(C10-C18)	37057	3.42	
Triacon Surr	6.717	-0.051	163999	108151					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	73	0.0	0.0
Triacontane	108151	8.3	18.4

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b019.d

Date : 09-MAY-2013 17:30

Client ID:

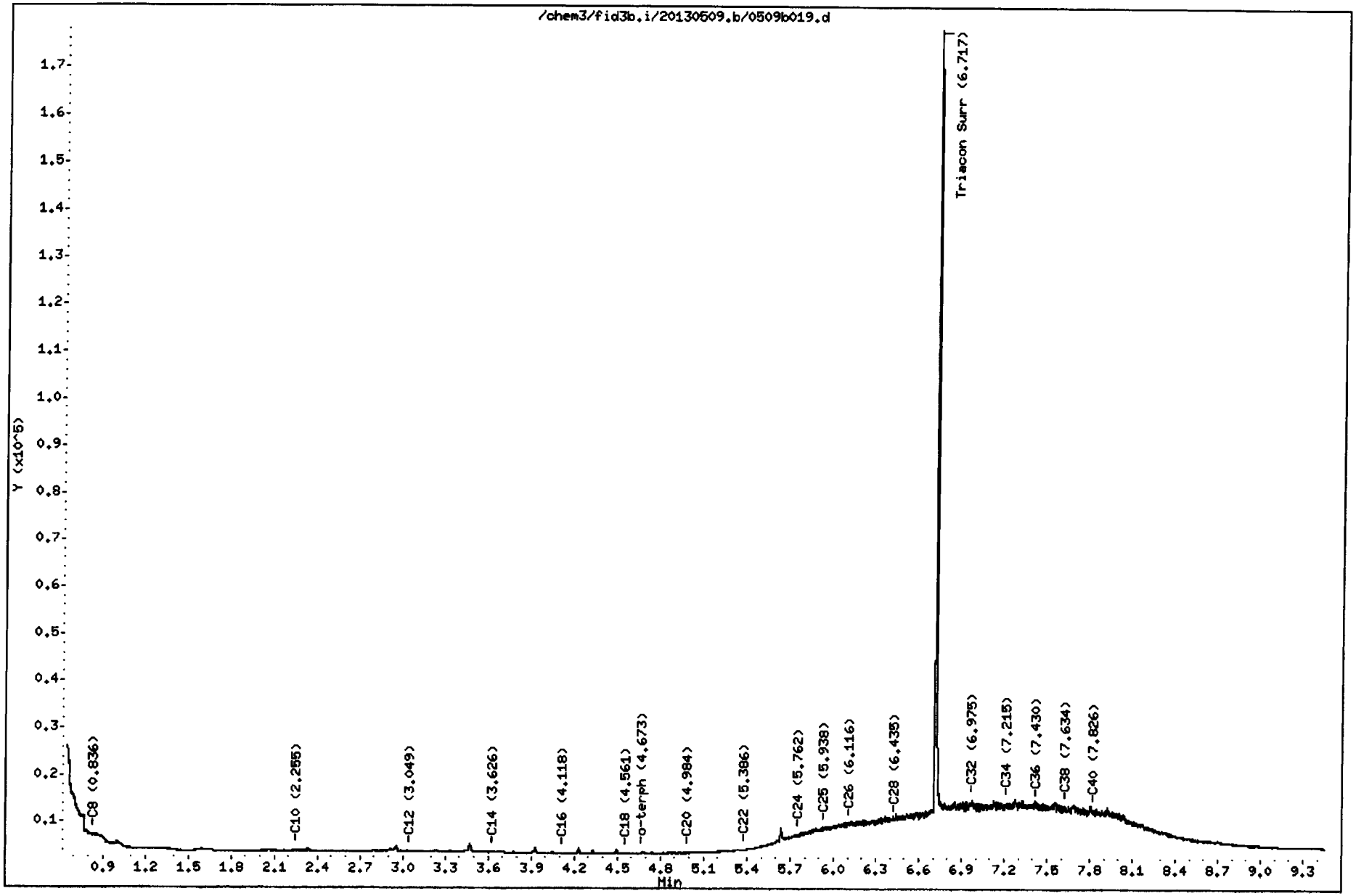
Sample Info: MOIL 100

Column phase: RTX-1

Instrument: fid3b.i

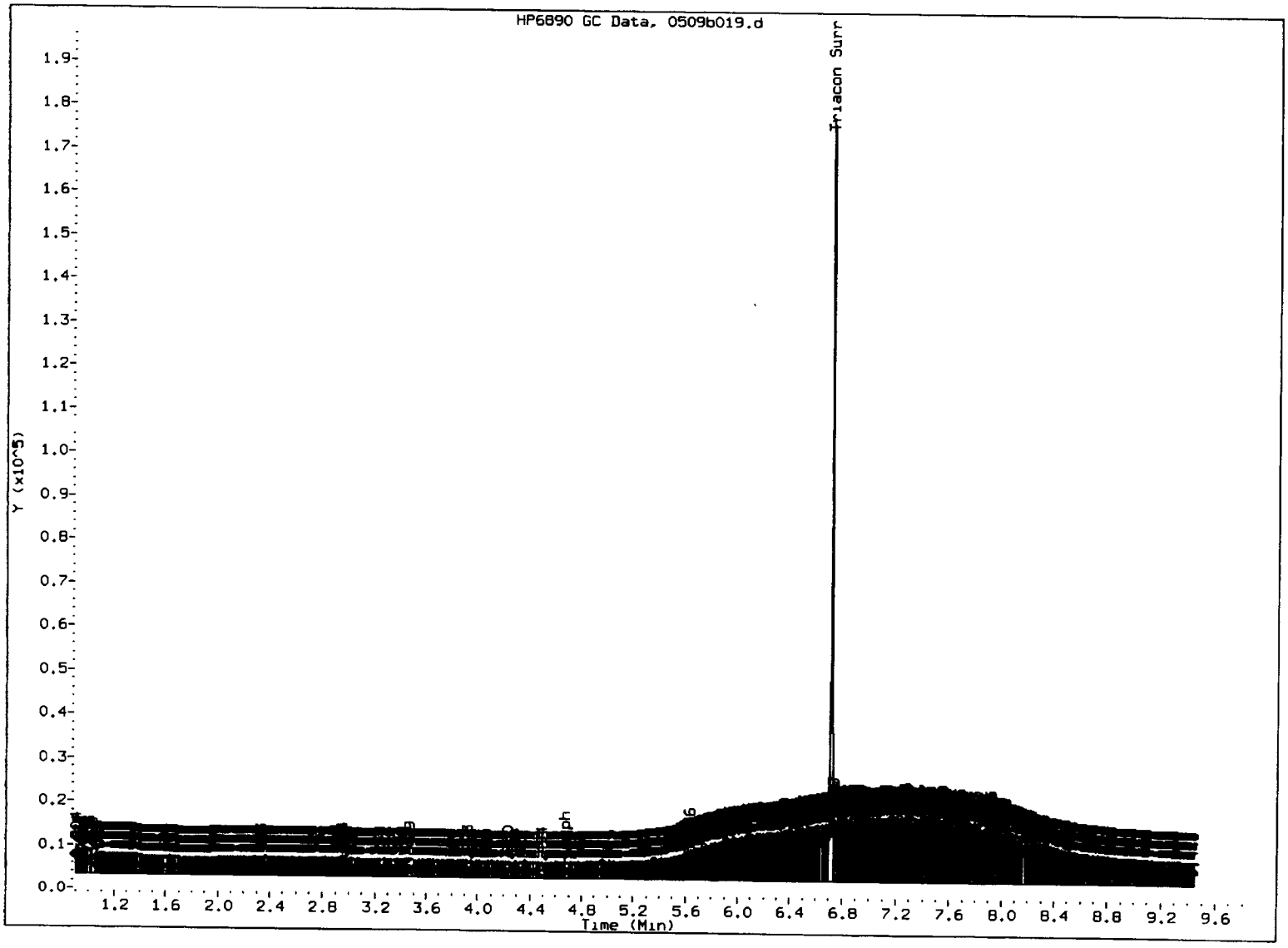
Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 100

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b020.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 250
Client ID:
Injection: 09-MAY-2013 17:50
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	94317	7
C8	0.832	0.004	3858	2902	WATPHD	(C12-C24)	222898	21.52
C10	2.255	0.001	548	468	WATPHM	(C24-C38)	2430997	246.23
C12	3.033	-0.016	495	613	AK102	(C10-C25)	302846	24.51
C14	3.621	0.000	227	107	AK103	(C25-C36)	2067243	290.81 M
C16	4.118	0.002	45	9	OR.DIES	(C10-C28)	862677	56.08
C18	4.567	0.002	77	42				
C20	4.991	0.001	463	90				
C22	5.389	0.003	2645	2457				
C24	5.760	0.000	10341	2614				
C25	5.939	0.001	14269	5543				
C26	6.114	0.001	15191	2395				
C28	6.428	0.001	18046	2866	IT.DIES	(C10-C24)	244439	17.73
C32	6.975	-0.001	30803	24376				
C34	7.220	0.011	27589	9147	CREOSOT	(C8-C22)	62726	19.40
Filter Peak	----							
C36	7.432	-0.004	27787	23456	BUNKERC	(C10-C38)	2675436	545.47
o-terph	4.682	-0.001	362	466	JET-A	(C10-C18)	40593	3.75
Triacon Surr	6.720	-0.048	413569	278811				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	466	0.0	0.1
Triacontane	278811	21.4	47.5

JW 5/11/13

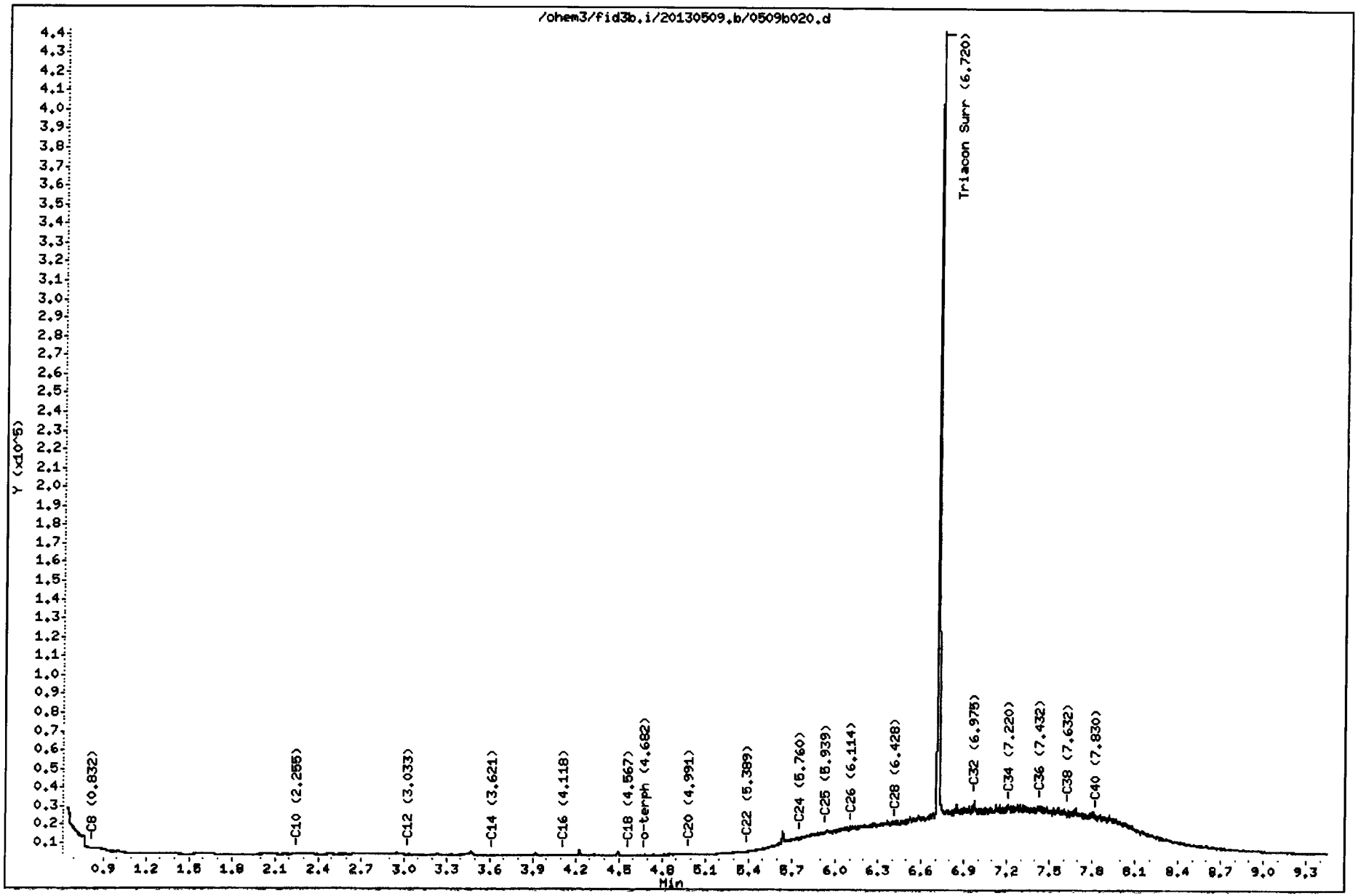
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b020.d
Date : 09-MAY-2013 17:50
Client ID:
Sample Info: MOIL 250

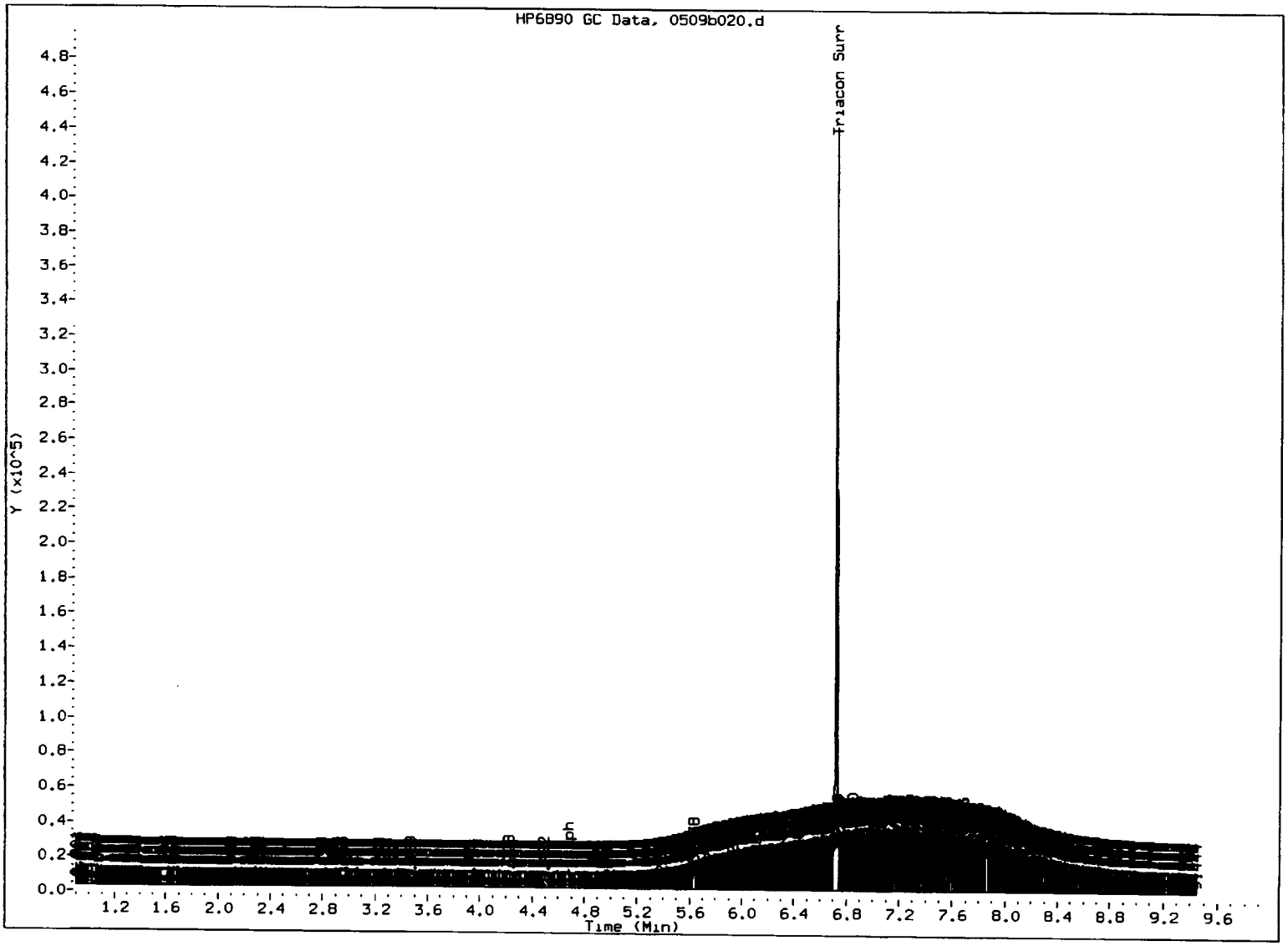
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 MOIL 250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 5/11/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b021.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 500
Client ID:
Injection: 09-MAY-2013 18:09
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	86393	6
C8	0.835	0.008	3946	3233	WATPHD	(C12-C24)	451001	43.54
C10	2.254	0.000	528	372	WATPHM	(C24-C38)	4874352	493.71
C12	3.033	-0.016	470	762	AK102	(C10-C25)	583655	47.23
C14	3.614	-0.006	163	21	AK103	(C25-C36)	4174060	587.19 M
C16	4.115	-0.001	57	21	OR.DIES	(C10-C28)	1727286	112.29
C18	4.569	0.004	188	139				
C20	4.994	0.005	1107	174				
C22	5.387	0.001	5301	1027				
C24	5.755	-0.004	22101	17666				
C25	5.938	0.000	27334	7504				
C26	6.113	0.000	31903	17009				
C28	6.431	0.004	40634	16288	IT.DIES	(C10-C24)	471357	34.18
C32	6.974	-0.002	60490	47282				
C34	7.217	0.008	56123	20764	CREOSOT	(C8-C22)	118683	36.71
Filter Peak	----							
C36	7.433	-0.002	53094	12521	BUNKERC	(C10-C38)	5345709	1089.89
o-terph	4.681	-0.002	580	602	JET-A	(C10-C18)	43423	4.01
Triacon Surr	6.728	-0.040	753642	589937				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	602	0.0	0.1
Triacontane	589937	45.2	100.5

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b021.d

Date : 09-MAY-2013 18:09

Client ID:

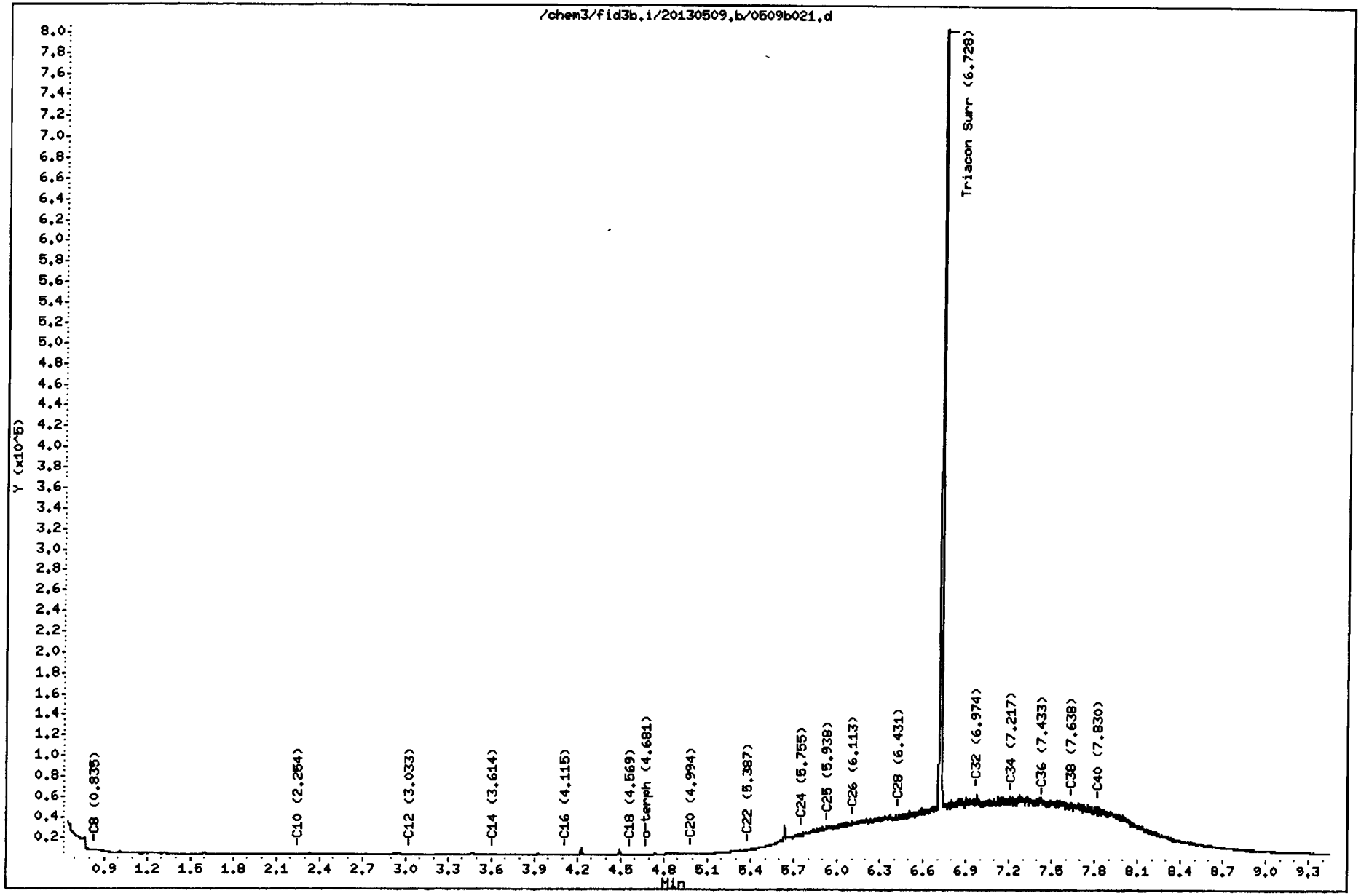
Sample Info: MOIL 500

Column phase: RTX-1

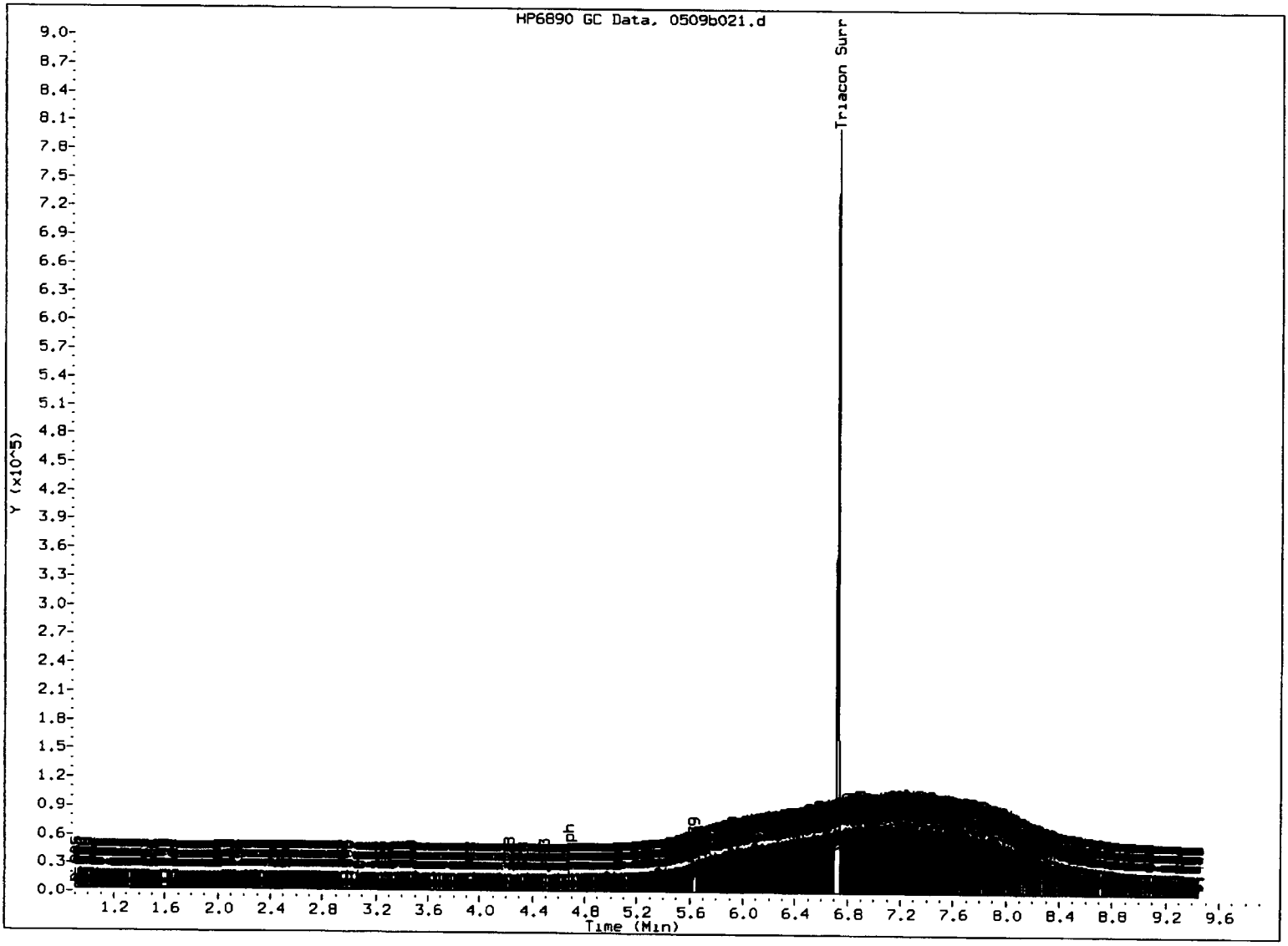
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JH Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b022.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 1000
Client ID:
Injection: 09-MAY-2013 18:29
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	78361	6
C8	0.839	0.012	3628	3009	WATPHD	(C12-C24)	874331	84.42
C10	2.257	0.003	680	612	WATPHM	(C24-C38)	9868273	999.53
C12	3.033	-0.015	596	654	AK102	(C10-C25)	1098523	88.90
C14	3.617	-0.004	289	86	AK103	(C25-C36)	8411348	1183.28 M
C16	4.117	0.001	178	66	OR.DIES	(C10-C28)	3361297	218.52
C18	4.572	0.007	532	659				
C20	4.988	-0.001	2555	1127				
C22	5.384	-0.002	10753	8200				
C24	5.763	0.003	39484	12501				
C25	5.935	-0.003	52198	10300				
C26	6.114	0.001	64456	26352				
C28	6.431	0.005	80230	54043	IT.DIES	(C10-C24)	896600	65.02
C32	6.980	0.004	126900	98292				
C34	7.214	0.005	113236	28858	CREOSOT	(C8-C22)	240131	74.27
Filter Peak	----							
C36	7.429	-0.006	113184	57310	BUNKERC	(C10-C38)	10764873	2194.76
o-terph	4.673	-0.009	1385	1372	JET-A	(C10-C18)	61579	5.69
Triacon Surr	6.738	-0.030	1129632	1182380				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1372	0.1	0.2
Triacontane	1182380	90.6	201.4

JW 5/11/13

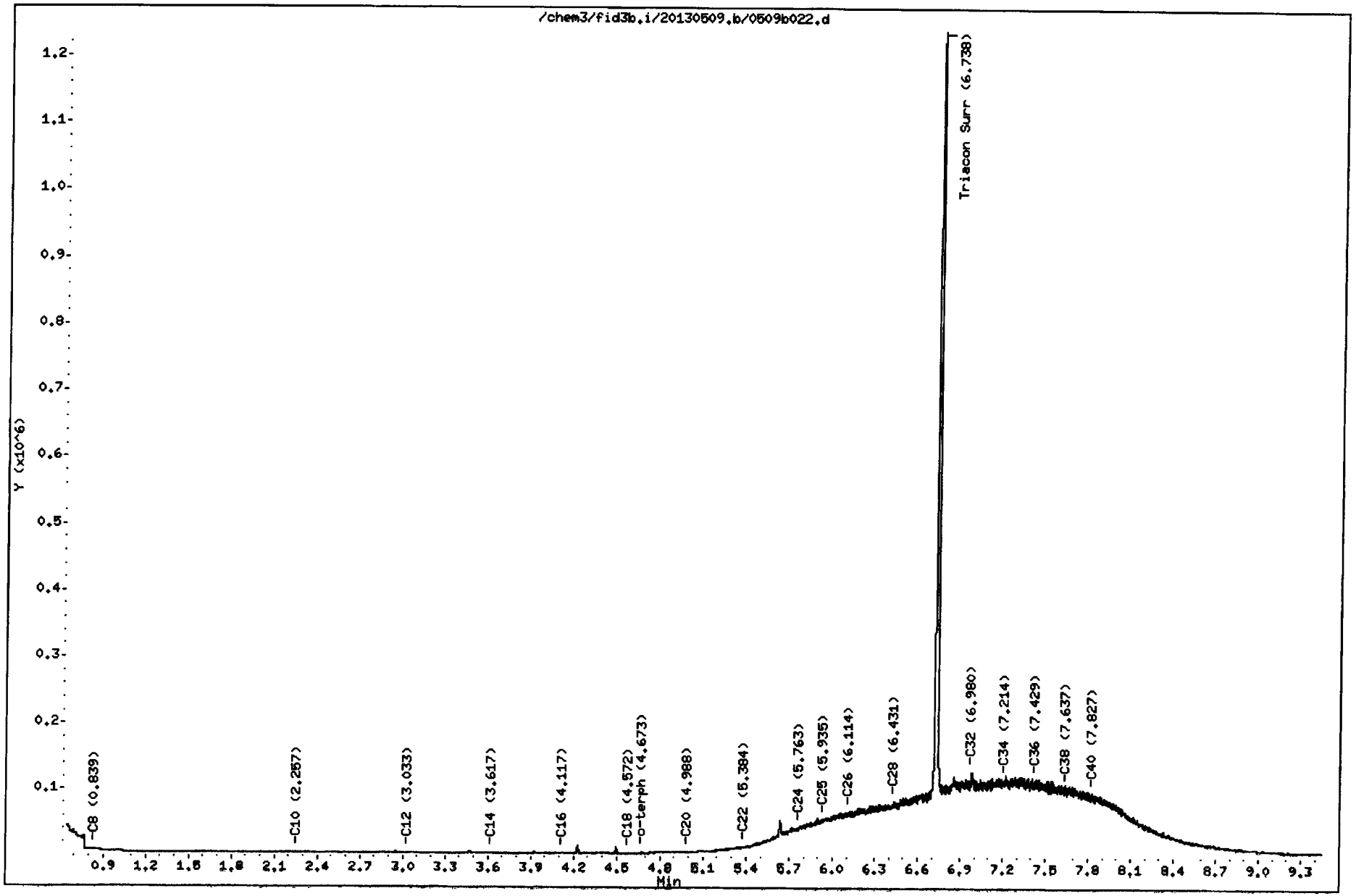
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b022.d
Date : 09-MAY-2013 18:29
Client ID:
Sample Info: MOIL 1000

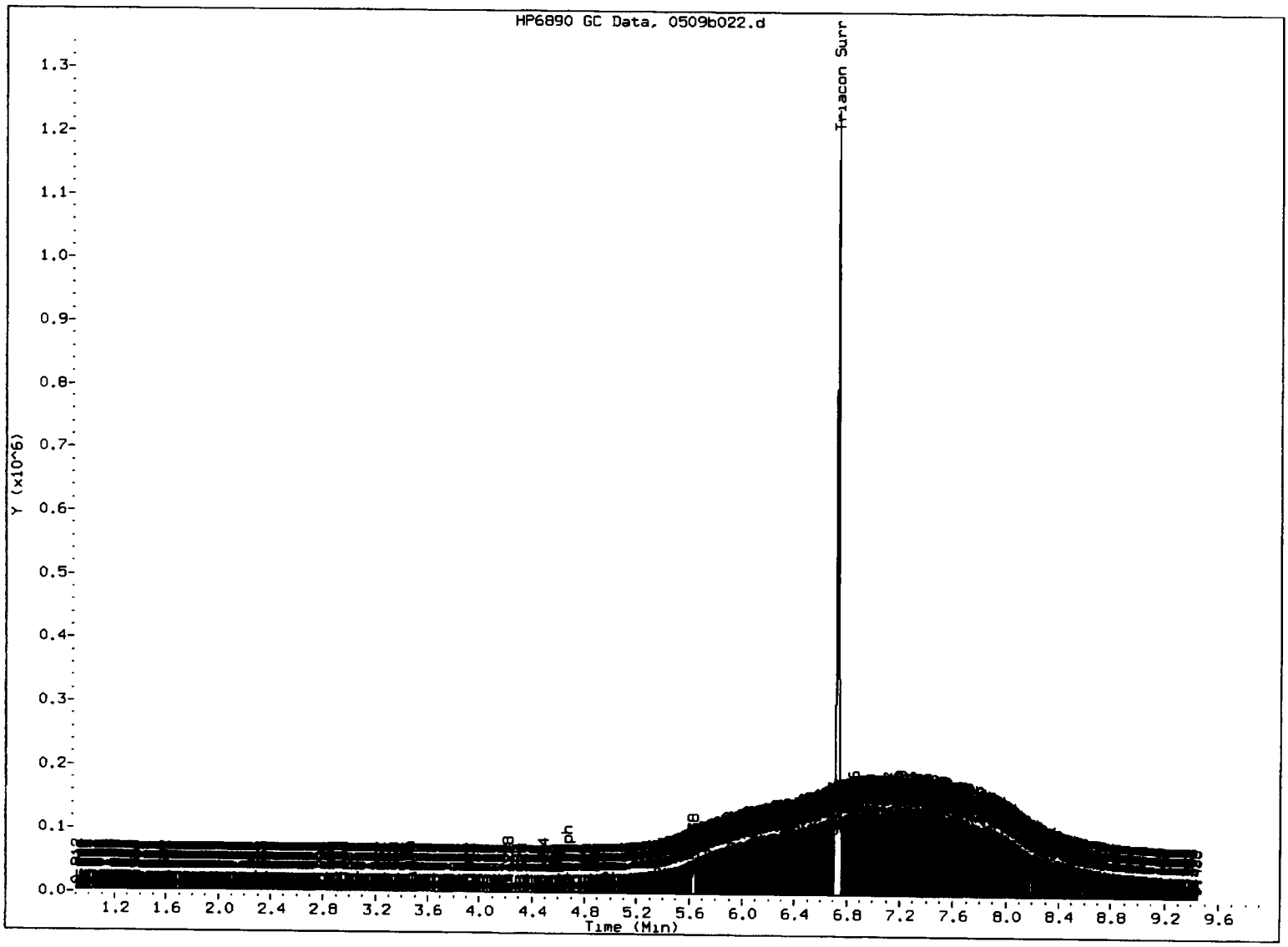
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 1000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
2. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/05

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b023.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 2500
Client ID:
Injection: 09-MAY-2013 18:49
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	104794	8
C8	0.826	-0.001	4378	3915	WATPHD	(C12-C24)	2194711	211.90
C10	2.255	0.001	1091	1225	WATPHM	(C24-C38)	24892471	2521.30
C12	3.033	-0.015	939	1080	AK102	(C10-C25)	2729082	220.86
C14	3.625	0.004	646	699	AK103	(C25-C36)	21251517	2989.60 M
C16	4.120	0.004	670	399	OR.DIES	(C10-C28)	8440502	548.73
C18	4.567	0.002	1755	1694				
C20	4.986	-0.003	7164	5835				
C22	5.383	-0.003	27130	11705				
C24	5.761	0.001	95353	13270				
C25	5.936	-0.002	134269	115080				
C26	6.115	0.002	165173	79024				
C28	6.429	0.003	191631	49338	IT.DIES	(C10-C24)	2230539	161.76
C32	6.977	0.002	286800	136356				
C34	7.214	0.004	290279	106480	CREOSOT	(C8-C22)	619583	191.62
Filter Peak	----							
C36	7.429	-0.006	290605	163378	BUNKERC	(C10-C38)	27123010	5529.89
o-terph	4.672	-0.011	3717	2590	JET-A	(C10-C18)	132813	12.27
Triacon Surr	6.752	-0.016	1571362	3084995				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2590	0.2	0.4
Triacontane	3084995	236.4	525.4

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b023.d

Date : 09-MAY-2013 18:49

Client ID:

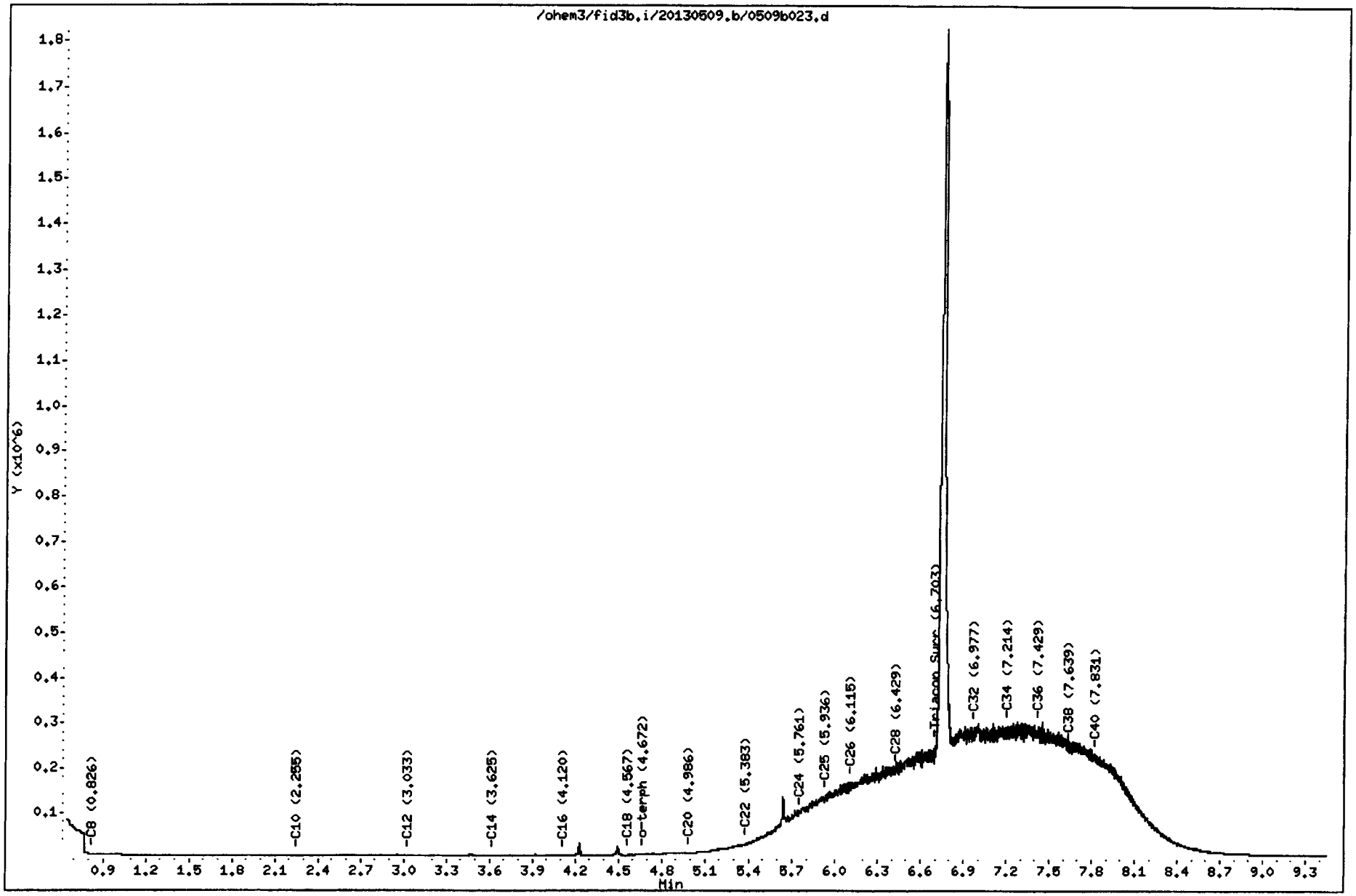
Sample Info: MOIL 2500

Column phase: RTX-1

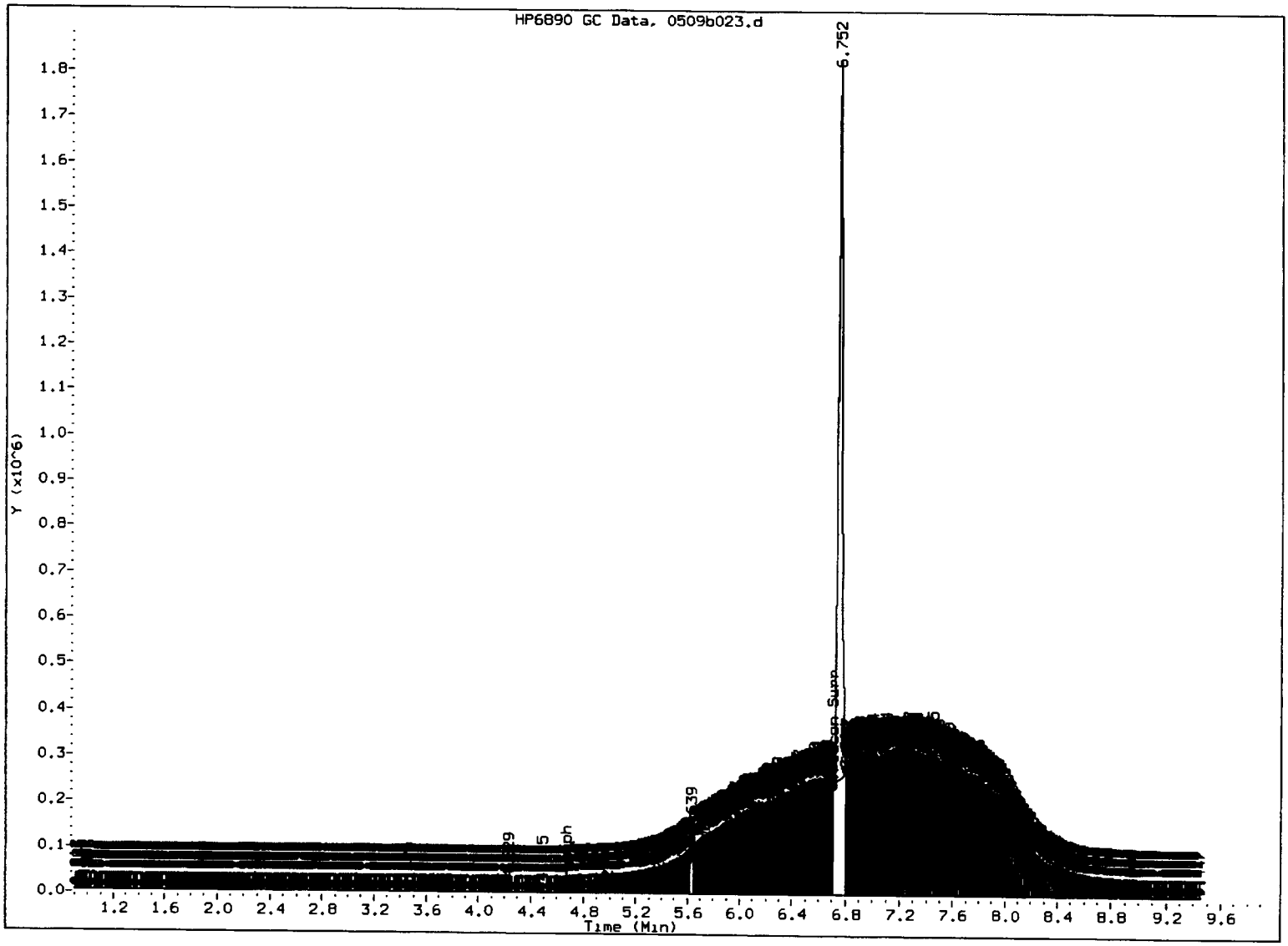
Instrument: fid3b.1

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b024.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 5000
Client ID:
Injection: 09-MAY-2013 19:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	119303	9	
C8	0.827	0.000	4466	3961	WATPHD	(C12-C24)	4431911	427.90	
C10	2.254	0.000	1905	1725	WATPHM	(C24-C38)	50506527	5115.68	✓
C12	3.049	0.000	894	857	AK102	(C10-C25)	5720466	462.94	
C14	3.621	0.000	1125	1543	AK103	(C25-C36)	43024953	6052.62	M
C16	4.116	0.000	1491	1370	OR.DIES	(C10-C28)	17341569	1127.39	
C18	4.565	0.000	4021	4376					
C20	4.989	0.000	14741	9616					
C22	5.386	0.000	55046	28683					
C24	5.760	0.000	205583	128372					
C25	5.938	0.000	259983	66571					
C26	6.114	0.000	326387	171329					
C28	6.427	0.000	402848	245127	IT.DIES	(C10-C24)	4481981	325.04	
C32	6.976	0.000	582492	328720					
C34	7.210	0.000	585534	435050	CREOSOT	(C8-C22)	1264803	391.17	
Filter Peak	----								
C36	7.435	0.000	552961	65445	BUNKERC	(C10-C38)	54988508	11211.16	
o-terph	4.683	0.000	5820	1701	JET-A	(C10-C18)	244722	22.61	
Triacon Surr	6.768	0.000	1587931	6263834					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	1701	0.1	0.3	
Triacontane	6263834	480.1	1066.8	✓

JW 5/14/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b024.d

Date : 09-MAY-2013 19:08

Client ID:

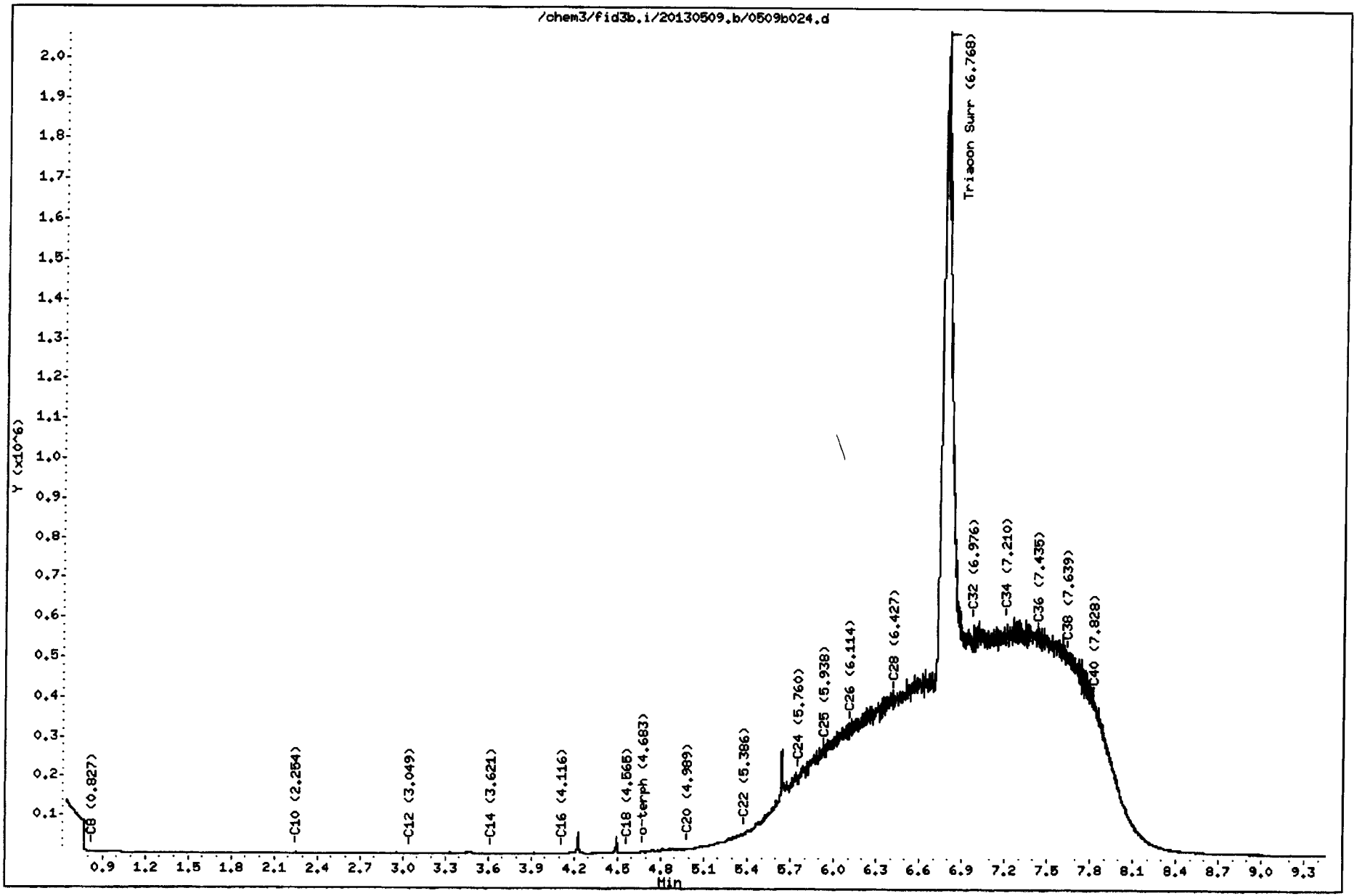
Sample Info: MOIL 5000

Column phase: RTX-1

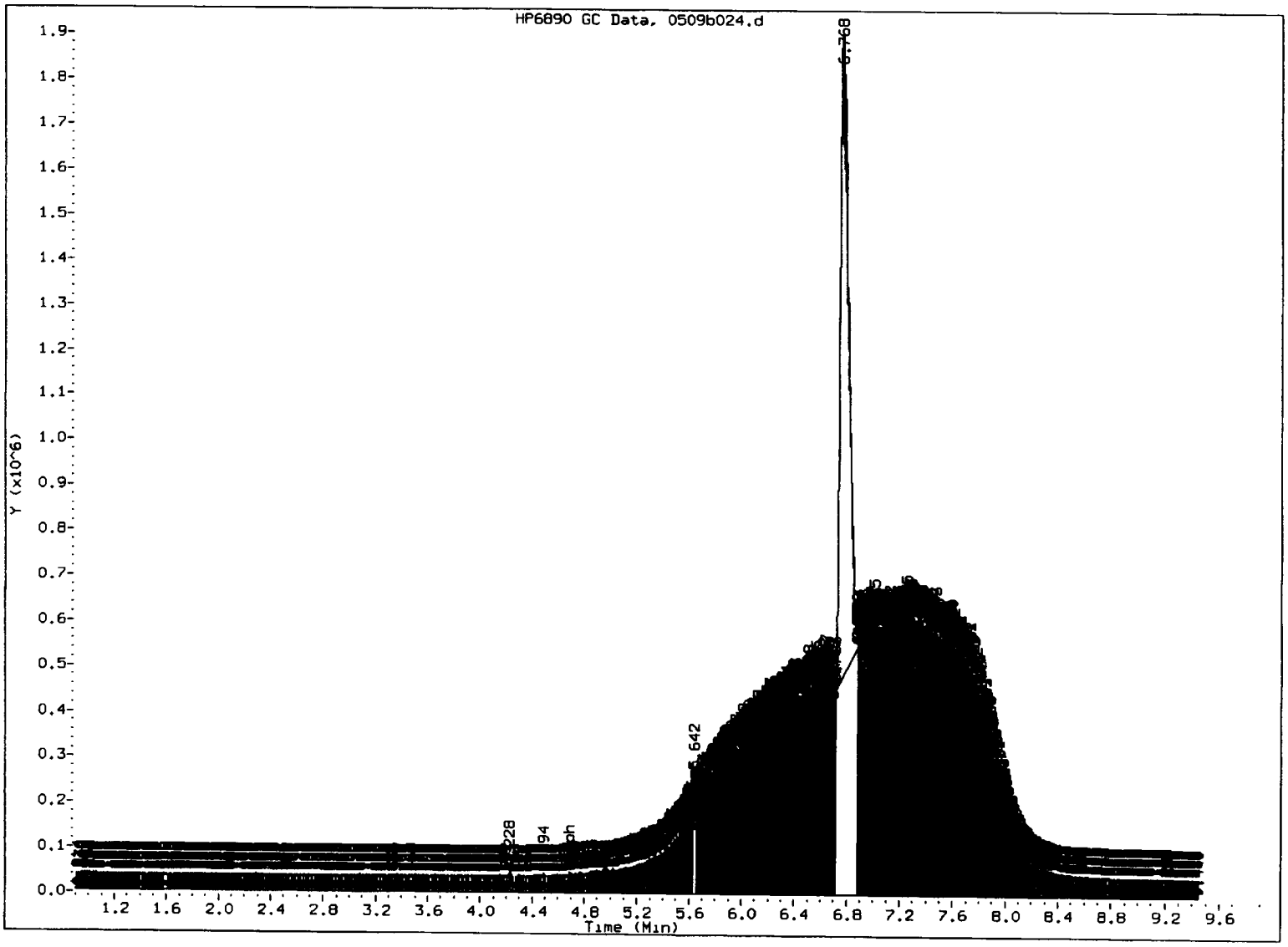
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 5000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/1/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b025.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL ICV 500
Client ID:
Injection: 09-MAY-2013 19:28
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	71814	5	
C8	0.827	0.000	3620	2782	WATPHD	(C12-C24)	518173	50.03	
C10	2.256	0.002	478	471	WATPHM	(C24-C38)	4554535	461.32	
C12	3.033	-0.015	421	481	AK102	(C10-C25)	639973	51.79	
C14	3.625	0.005	282	365	AK103	(C25-C36)	3832887	539.20	M
C16	4.114	-0.002	185	70	OR.DIES	(C10-C28)	1677576	109.06	
C18	4.563	-0.002	261	181					
C20	4.991	0.002	1248	666					
C22	5.385	-0.001	7293	4094					
C24	5.758	-0.001	21661	6739					
C25	5.935	-0.003	26089	4587					
C26	6.114	0.000	30955	11749					
C28	6.429	0.002	35583	18192	IT.DIES	(C10-C24)	535116	38.81	
C32	6.977	0.001	58496	48694					
C34	7.212	0.003	57093	58682	CREOSOT	(C8-C22)	152793	47.26	
Filter Peak	----								
C36	7.432	-0.003	56274	27657	BUNKERC	(C10-C38)	5089651	1037.69	
o-terph	4.681	-0.002	607	657	JET-A	(C10-C18)	36545	3.38	
Triacon Surr	6.727	-0.041	732229	563148					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	657	0.0	0.1
Triacontane	563148	43.2	95.9

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b025.d

Date : 09-MAY-2013 19:28

Client ID:

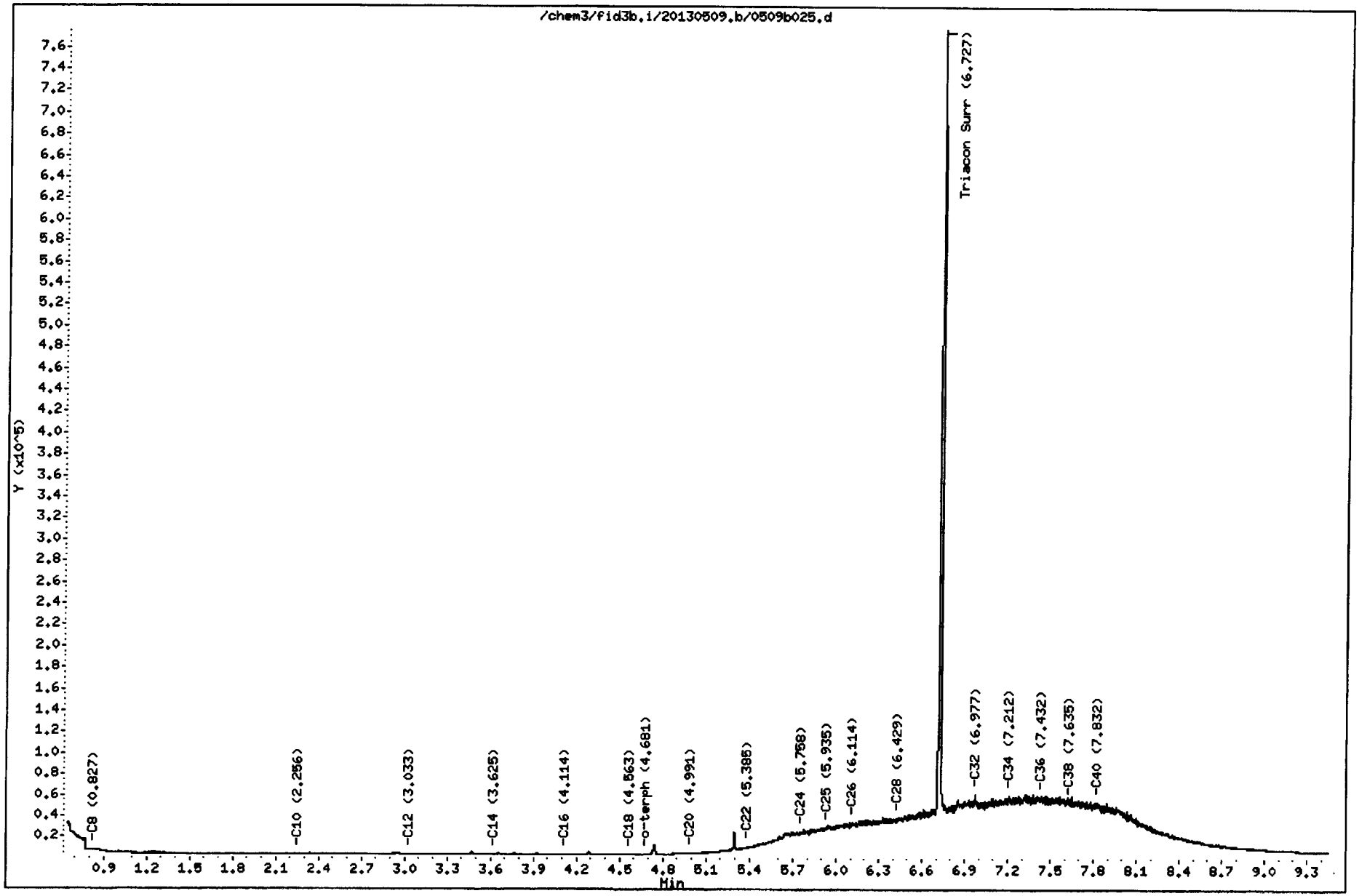
Sample Info: MOIL ICV 500

Column phase: RTX-1

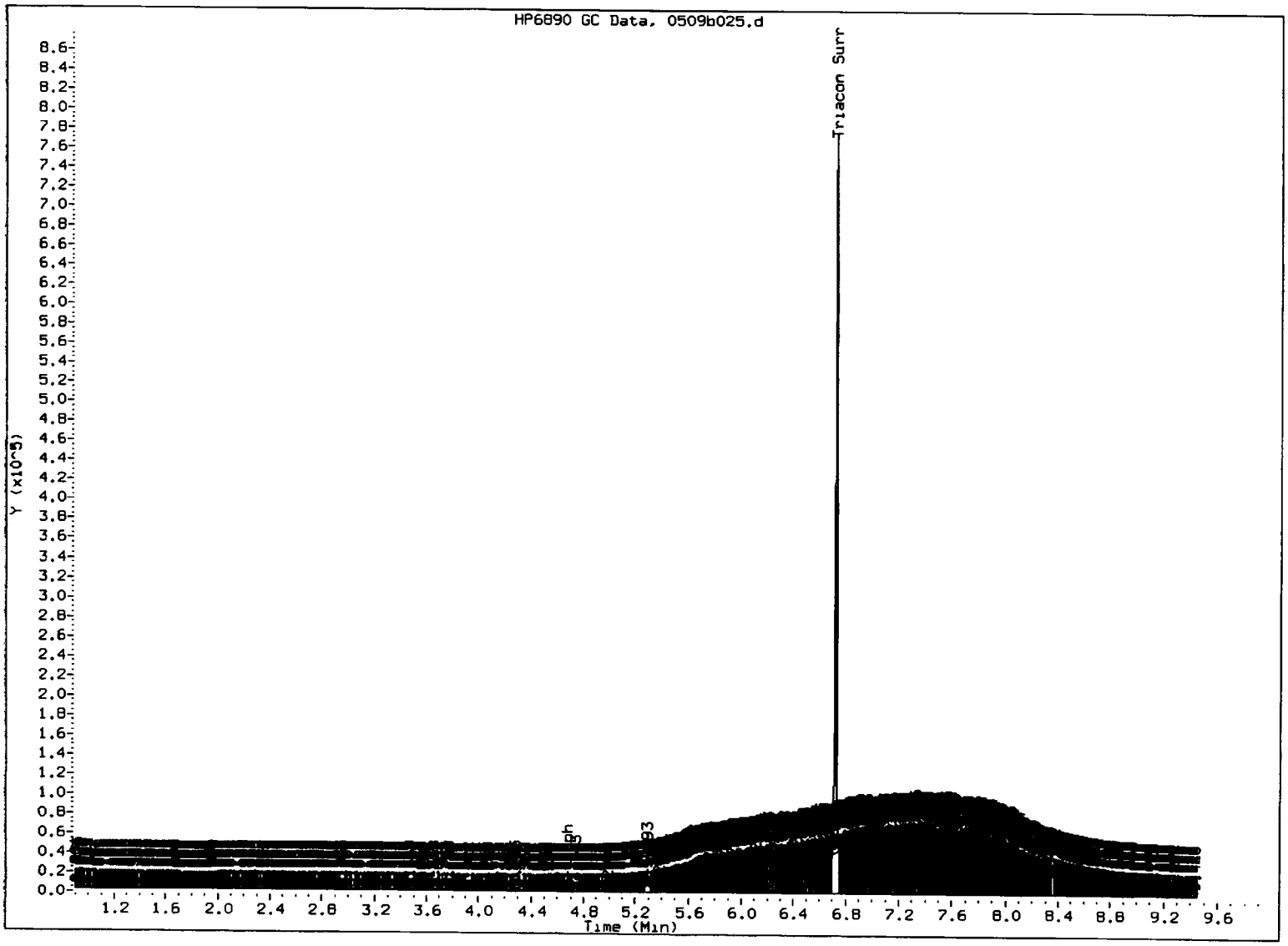
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL ICV 500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: DW Date: 5/11/13

TPHD Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WP24

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WP24 Client ID: SAIC

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A (FID-3B) FID-4A ~~FID-4B~~ FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 5/9/13 & 5/10/13 Analysis Start Date: 5/10/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	(NA) / Y / N / ✓	Method Blank in Control?	(Y) / N / ✓
Retention times within Windows?	(Y) / N / ✓	LCS / LCSD Recovery in Control?	(Y) / N / ✓
CCAL met %D Criteria?	(Y) / N / ✓	LCS / LCSD RPD ≤30%?	(NA) / ✓ LCS only
Surrogate Recovery in Control?	(Y) / (N) / ✓	MS / MSD Recovery in Control?	(Y) / N / ✓
Internal STD. within 50-200%?	(NA) / Y / N / ✓	MS / MSD RPD ≤30%?	(NA) / NR SOx10L
Manual Integrations?	(Y) / N / ✓	Samples Diluted?	(Y) / N / ✓
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	Y / (N) / ✓

Detail problems, corrective actions and/or other pertinent information below

Surr was diluted out, due to time FEU final dilution (50x TOTAL
A - contains DRO/Motor oil, note motor oil inflating diesel range.

Initial run on 5/10/13, vial gripper error occurred & GC trackers did not inject, rerun on 5/11/13 w/ passing GC.

(Review 1) Analyst: JW **Date:** 5/13/13

(Review 2) Reviewer: [signature] **Date:** 5/13/13

Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 5/11/17 Analysis: TPHD Analyst: JW

GC Program: TPHD3 Column No: 1022005 Column Type: RTX-1

Instrument Tune (.U or .CT.): ——— EM Voltage: ———

Calibration File: ——— Curve Date: 5/9/13 & 5/10/13

IS/SS	Ical/Ccal	LCS/ICV
	2043-3,4	
	2091-2	
	2041-4	

GC LOG SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130511.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	11-MAY-2013 12:31	0511b001.d	1	RINSE	
2	11-MAY-2013 12:50	0511b002.d	1	RT0511	
3	11-MAY-2013 13:09	0511b003.d	1	IB0511	
4	11-MAY-2013 13:28	0511b004.d	1	DIESEL#1	NPDES Sampling Supp
5	11-MAY-2013 13:47	0511b005.d	1	MOIL#1	NPDES Sampling Supp
6	11-MAY-2013 14:09	0511b006.d	1	WP23MBS1	WP23MBS1
7	11-MAY-2013 14:29	0511b007.d	1	WP23LCSS1	WP23LCSS1
8	11-MAY-2013 14:48	0511b008.d	1	WP23A	Stockpile-1
9	11-MAY-2013 15:08	0511b009.d	1	WP23B	Stockpile-2
10	11-MAY-2013 15:28	0511b010.d	1	WP23C	Stockpile-3
11	11-MAY-2013 15:47	0511b011.d	1	WP24MBS1	WP24MBS1
12	11-MAY-2013 16:07	0511b012.d	1	WP24LCSS1	WP24LCSS1
13	11-MAY-2013 16:27	0511b013.d	1	WN70A	LOD Verification
14	11-MAY-2013 16:46	0511b014.d	5	WP24A	CG-MH-010-20130423-
15	11-MAY-2013 17:06	0511b015.d	5	WP24AMS	CG-MH-010-20130 MS
16	11-MAY-2013 17:26	0511b016.d	5	WP24AMSD	CG-MH-010-20130 MSD
17	11-MAY-2013 17:45	0511b017.d	100	WP53A	Stormpipe-S-1
18	11-MAY-2013 18:05	0511b018.d	1	DIESEL#2	NPDES Sampling Supp
19	11-MAY-2013 18:25	0511b019.d	1	MOIL#2	NPDES Sampling Supp

JW

JW 5/13/13

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/20130511.b/0511b002.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: RT0511
Client ID:
Injection: 11-MAY-2013 12:50
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	783656	58
C8	0.806	0.000	212299	225183	WATPHD	(C12-C24)	1650771	159.38
C10	2.248	0.000	348218	238926	WATPHM	(C24-C38)	2634817	266.87
C12	3.051	0.000	416224	234371	AK102	(C10-C25)	2178709	176.32
C14	3.632	0.000	431376	244203	AK103	(C25-C36)	2283542	321.24
C16	4.128	0.000	398490	248035	OR.DIES	(C10-C28)	3484318	226.52
C18	4.575	0.000	361326	238153				
C20	4.997	0.000	346143	224843				
C22	5.391	0.000	324024	233788				
C24	5.758	0.000	345400	228563				
C25	5.933	0.000	404598	240131				
C26	6.109	0.000	986078	749189				
C28	6.422	0.000	352373	270207	IT.DIES	(C10-C24)	2168105	157.23
C32	6.965	0.000	488213	297258				
C34	7.197	0.000	431716	285817	CREOSOT	(C8-C22)	1388968	429.57
Filter Peak	----							
C36	7.415	0.000	478693	313285	BUNKERC	(C10-C38)	4802922	979.23
o-terph	4.683	0.000	870214	534232	JET-A	(C10-C18)	1342245	124.00
Triacon Surr	6.713	0.000	988971	742565				

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	534232	39.7	88.3
Triacontane	742565	56.9	126.5

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

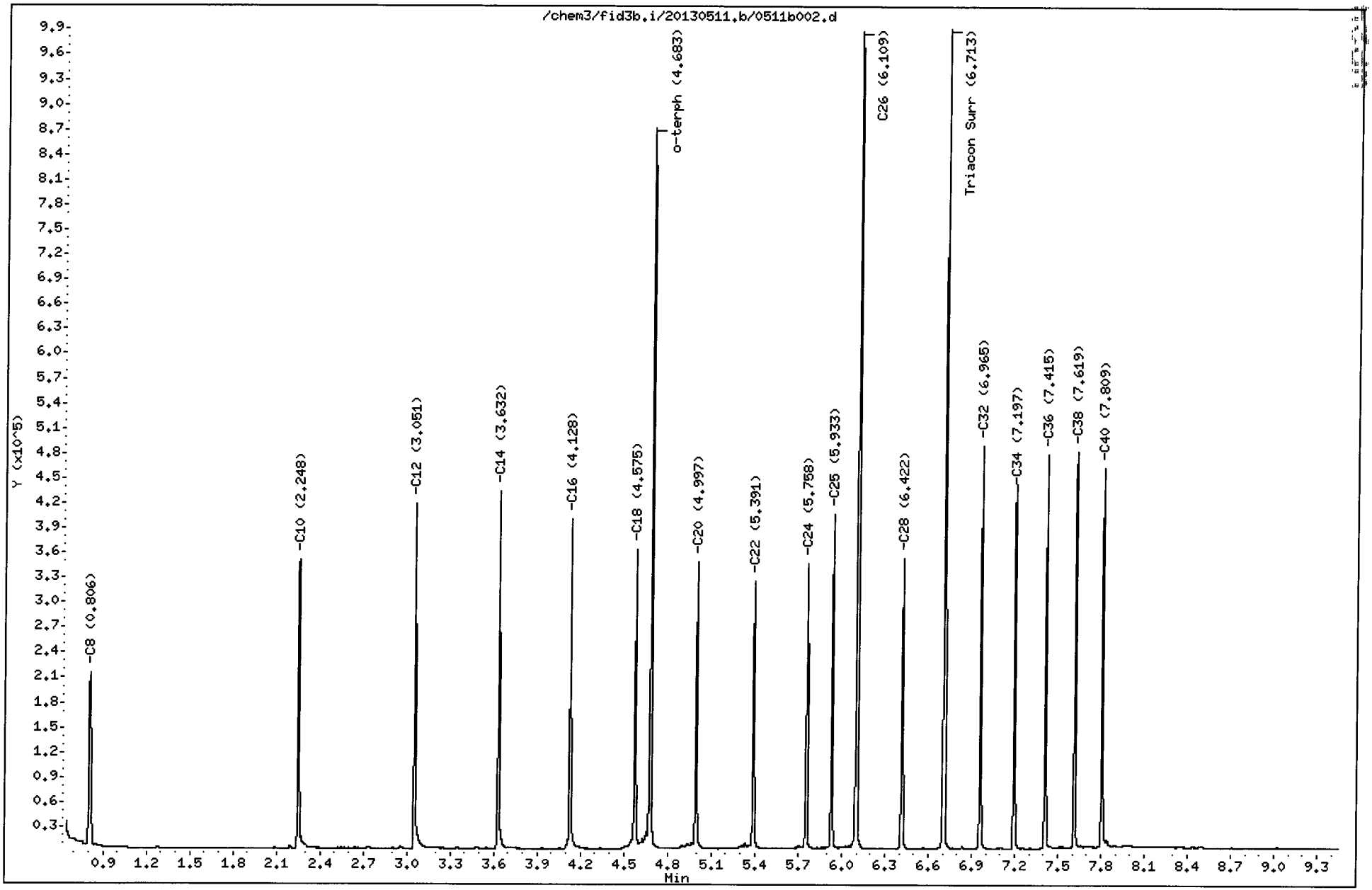
5/13/13

Data File: /chem3/fid3b.i/20130511.b/0511b002.d
Date : 11-MAY-2013 12:50
Client ID:
Sample Info: RT0511

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130511.b/0511b003.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: IB0511
Client ID:
Injection: 11-MAY-2013 13:09
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	84989	6
C8	0.813	0.007	3192	2410	WATPHD	(C12-C24)	42238	4.08
C10	2.246	-0.002	683	773	WATPHM	(C24-C38)	70635	7.15
C12	3.060	0.009	374	117	AK102	(C10-C25)	66247	5.36
C14	3.633	0.001	286	157	AK103	(C25-C36)	52925	7.45
C16	4.128	0.000	192	143	OR.DIES	(C10-C28)	70285	4.57
C18	4.585	0.010	134	69				
C20	4.993	-0.003	469	119				
C22	5.391	0.000	343	237				
C24	5.758	0.000	220	173				
C25	5.935	0.002	175	175				
C26	6.117	0.009	547	423				
C28	6.421	-0.001	465	401	IT.DIES	(C10-C24)	65994	4.79
C32	6.960	-0.005	3715	4959				
C34	7.200	0.003	771	540	CREOSOT	(C8-C22)	39851	12.32
Filter Peak	----							
C36	7.417	0.002	1042	744	BUNKERC	(C10-C38)	136629	27.86
o-terph	4.675	-0.009	934787	601147	JET-A	(C10-C18)	43354	4.01
Triacon Surr	6.704	-0.009	931836	615754				

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	601147	44.7	99.3
Triacontane	615754	47.2	104.9

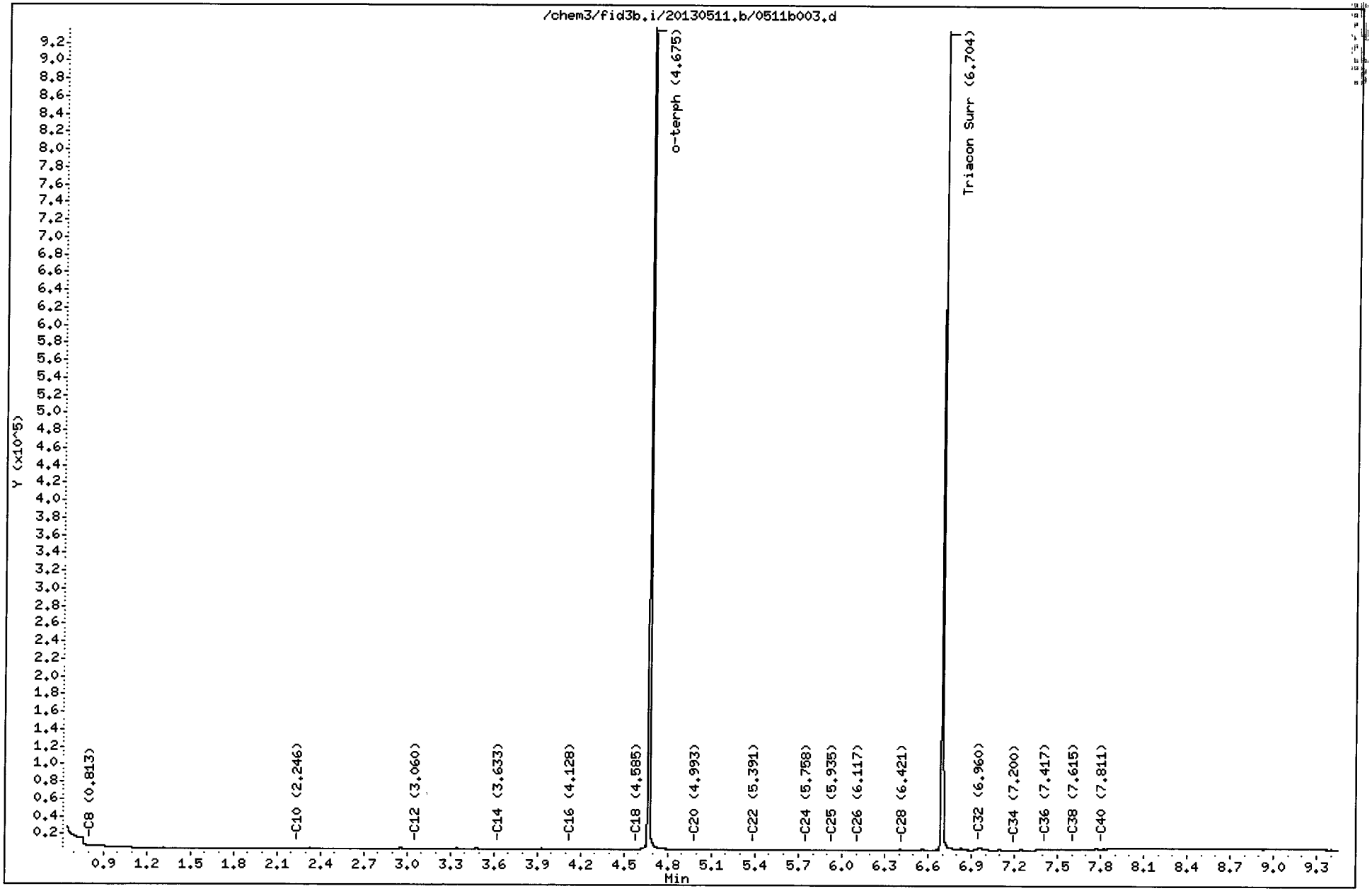
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW 5/13/13

Data File: /chem3/fid3b.i/20130511.b/0511b003.d
Date : 11-MAY-2013 13:09
Client ID:
Sample Info: IB0511

Instrument: fid3b.i

Operator: JW
Column phase: RTX-1
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130511.b/0511b004.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: DIESEL#1
Client ID:
Injection: 11-MAY-2013 13:28
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	741465	55
C8	0.817	0.010	5680	7882	WATPHD	(C12-C24)	2441040	235.68
C10	2.242	-0.006	16301	12861	WATPHM	(C24-C38)	43390	4.39
C12	3.056	0.005	9464	5474	AK102	(C10-C25)	2927512	236.92 M
C14	3.626	-0.007	19154	7890	AK103	(C25-C36)	25710	3.62
C16	4.127	-0.001	21191	16432	OR.DIES	(C10-C28)	2941479	191.23 M
C18	4.576	0.001	33116	17597				
C20	4.999	0.003	12424	8660				
C22	5.393	0.002	6591	905				
C24	5.753	-0.005	2946	1913				
C25	5.934	0.001	1228	334				
C26	6.107	-0.002	651	137				
C28	6.420	-0.002	95	24	IT.DIES	(C10-C24)	2921356	211.86
C32	6.964	-0.001	113	34				
C34	7.193	-0.004	260	85	CREOSOT	(C8-C22)	2368450	732.50
Filter Peak	----							
C36	7.415	0.001	550	107	BUNKERC	(C10-C38)	2964746	604.46
o-terph	4.665	-0.018	1019016	590508	JET-A	(C10-C18)	2225089	205.57
Triacon Surr	6.714	0.001	257	173				

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	590508	43.9	97.6
Triacontane	173	0.0	0.0

JW 5/13/10

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

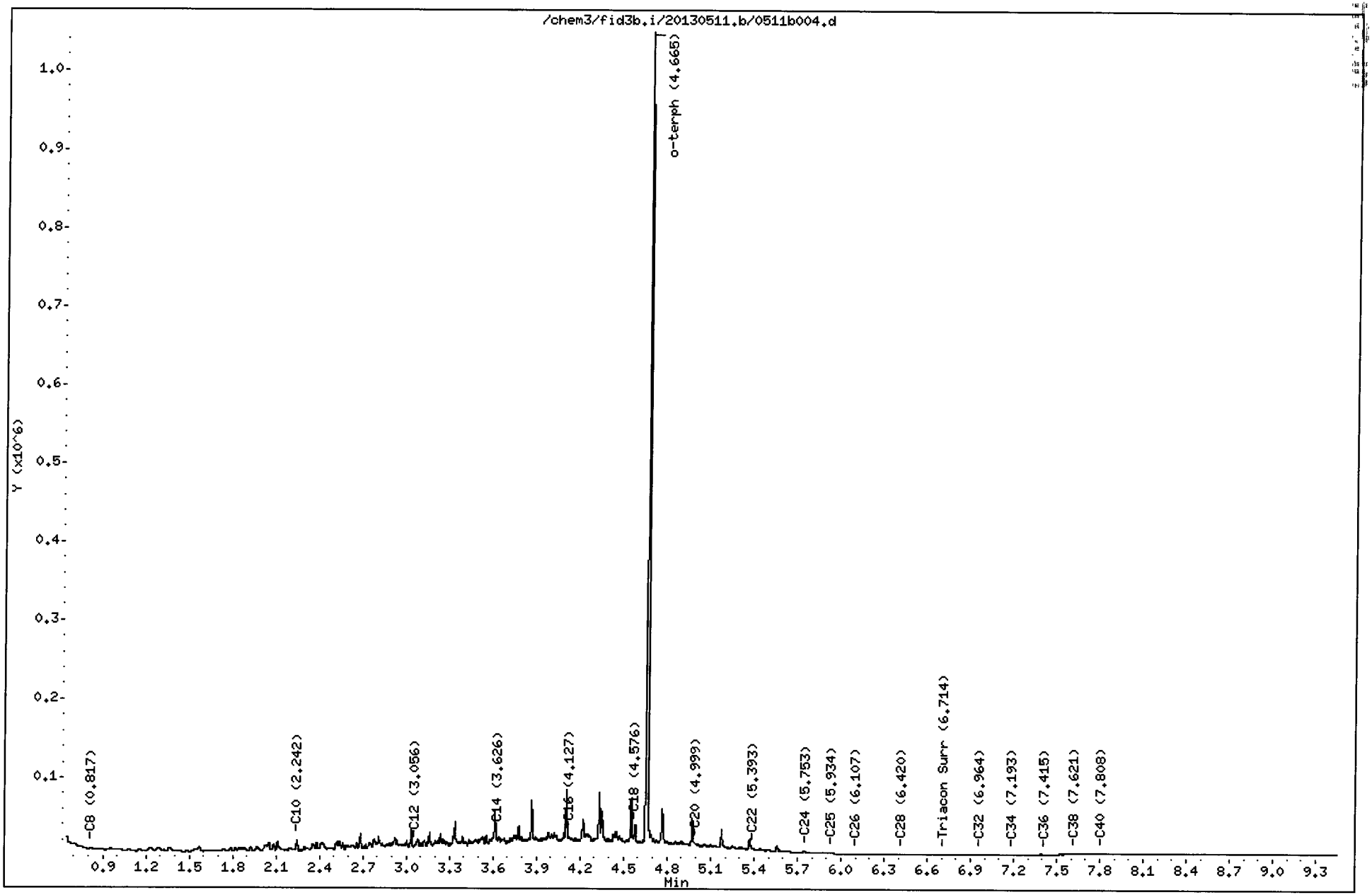
Data File: /chem3/fid3b.i/20130511.b/0511b004.d
Date : 11-MAY-2013 13:28
Client ID:
Sample Info: DIESEL#1

Column phase: RTX-1

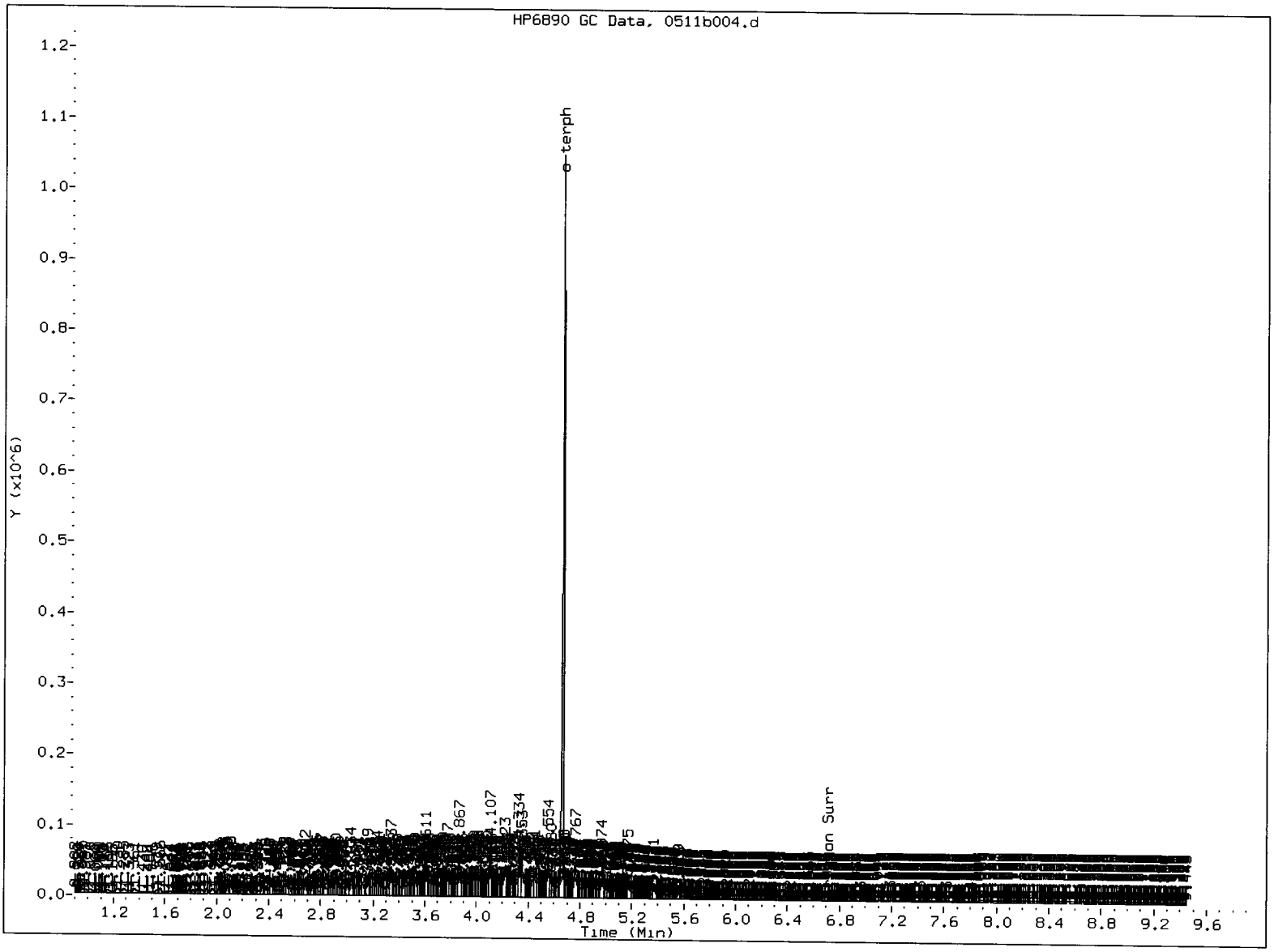
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 5/13/13



FID:3B-2C/RTX-1 DIESEL#1 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 5/13/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130511.b/0511b005.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: MOIL#1
Client ID:
Injection: 11-MAY-2013 13:47
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	88474	7
C8	0.816	0.010	4200	1672	WATPHD	(C12-C24)	463744	44.77
C10	2.244	-0.004	714	417	WATPHM	(C24-C38)	4944711	500.84
C12	3.049	-0.002	322	55	AK102	(C10-C25)	594351	48.10
C14	3.636	0.004	164	47	AK103	(C25-C36)	4224822	594.33 M
C16	4.121	-0.007	70	26	OR.DIES	(C10-C28)	1736859	112.92
C18	4.571	-0.005	187	96				
C20	4.998	0.001	1272	298				
C22	5.389	-0.002	5636	2003				
C24	5.760	0.002	21971	8307				
C25	5.932	-0.001	29449	9788				
C26	6.108	0.000	33601	26794				
C28	6.423	0.001	39870	11494	IT.DIES	(C10-C24)	489534	35.50
C32	6.963	-0.002	56355	18035				
C34	7.198	0.001	56879	24766	CREOSOT	(C8-C22)	122646	37.93
Filter Peak	----							
C36	7.417	0.002	53108	6312	BUNKERC	(C10-C38)	5434245	1107.94
o-terph	4.684	0.001	324	103	JET-A	(C10-C18)	47732	4.41
Triacon Surr	6.700	-0.013	830680	606008				

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	103	0.0	0.0
Triacontane	606008	46.4	103.2

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW 5/13/13

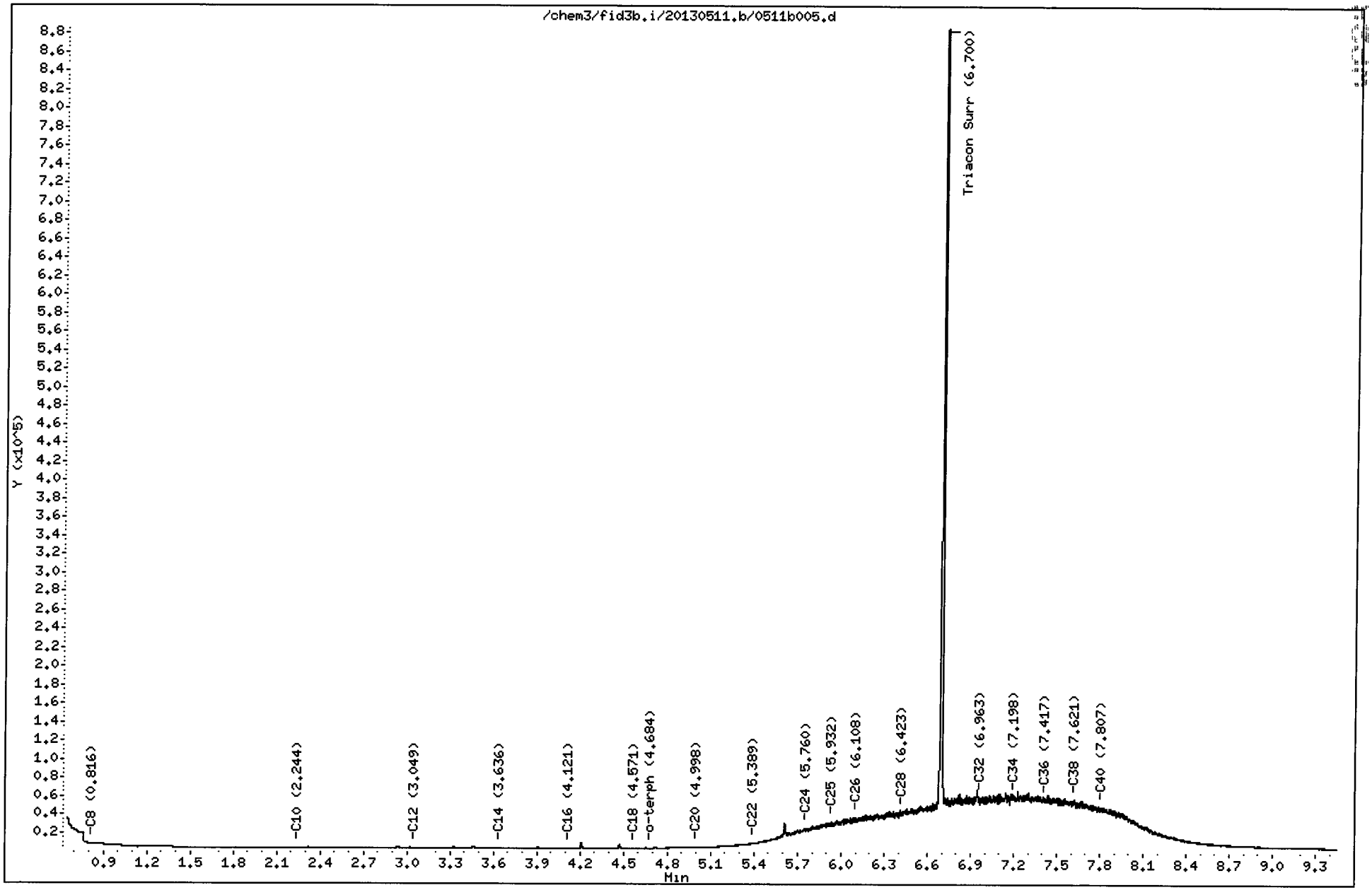
Data File: /chem3/fid3b.i/20130511.b/0511b005.d
Date : 11-MAY-2013 13:47
Client ID:
Sample Info: MOIL#1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

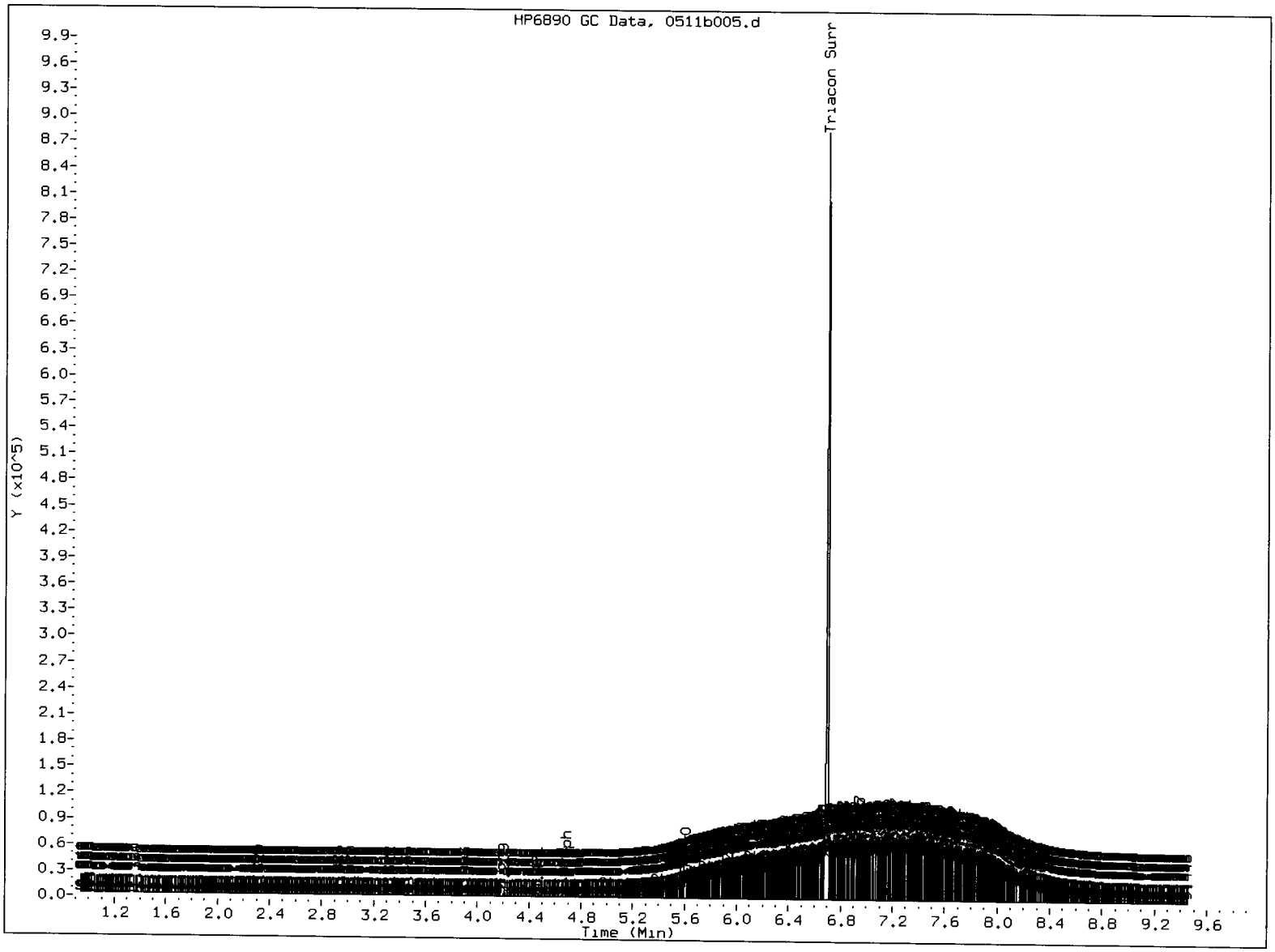
Column phase: RTX-1

JC 5/13/13



FID:3B-2C/RTX-1 MOIL#1

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/13/11

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130511.b/0511b011.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: WP24MBS1
Client ID:
Injection: 11-MAY-2013 15:47
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	271226	20
C8	0.805	-0.001	6368	5894	WATPHD	(C12-C24)	155010	14.97
C10	2.245	-0.003	4513	3880	WATPHM	(C24-C38)	113452	11.49
C12	3.051	-0.001	814	515	AK102	(C10-C25)	220306	17.83 M
C14	3.630	-0.002	1110	494	AK103	(C25-C36)	86930	12.23
C16	4.120	-0.008	1404	1366	OR.DIES	(C10-C28)	233814	15.20 M
C18	4.573	-0.003	728	223				
C20	4.995	-0.001	837	569				
C22	5.392	0.001	654	483				
C24	5.756	-0.002	304	94				
C25	5.932	-0.001	283	220				
C26	6.106	-0.002	271	135				
C28	6.423	0.001	515	291	IT.DIES	(C10-C24)	219752	15.94
C32	6.958	-0.006	5428	6585				
C34	7.193	-0.004	1279	1086	CREOSOT	(C8-C22)	148875	46.04
Filter Peak	----							
C36	7.414	-0.001	1817	1278	BUNKERC	(C10-C38)	333204	67.93
o-terph	4.661	-0.022	811493	511503	JET-A	(C10-C18)	176245	16.28
Triacon Surr	6.707	-0.006	680108	555767				

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	511503	38.0	84.5
Triacontane	555767	42.6	94.7

JW 5/13/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

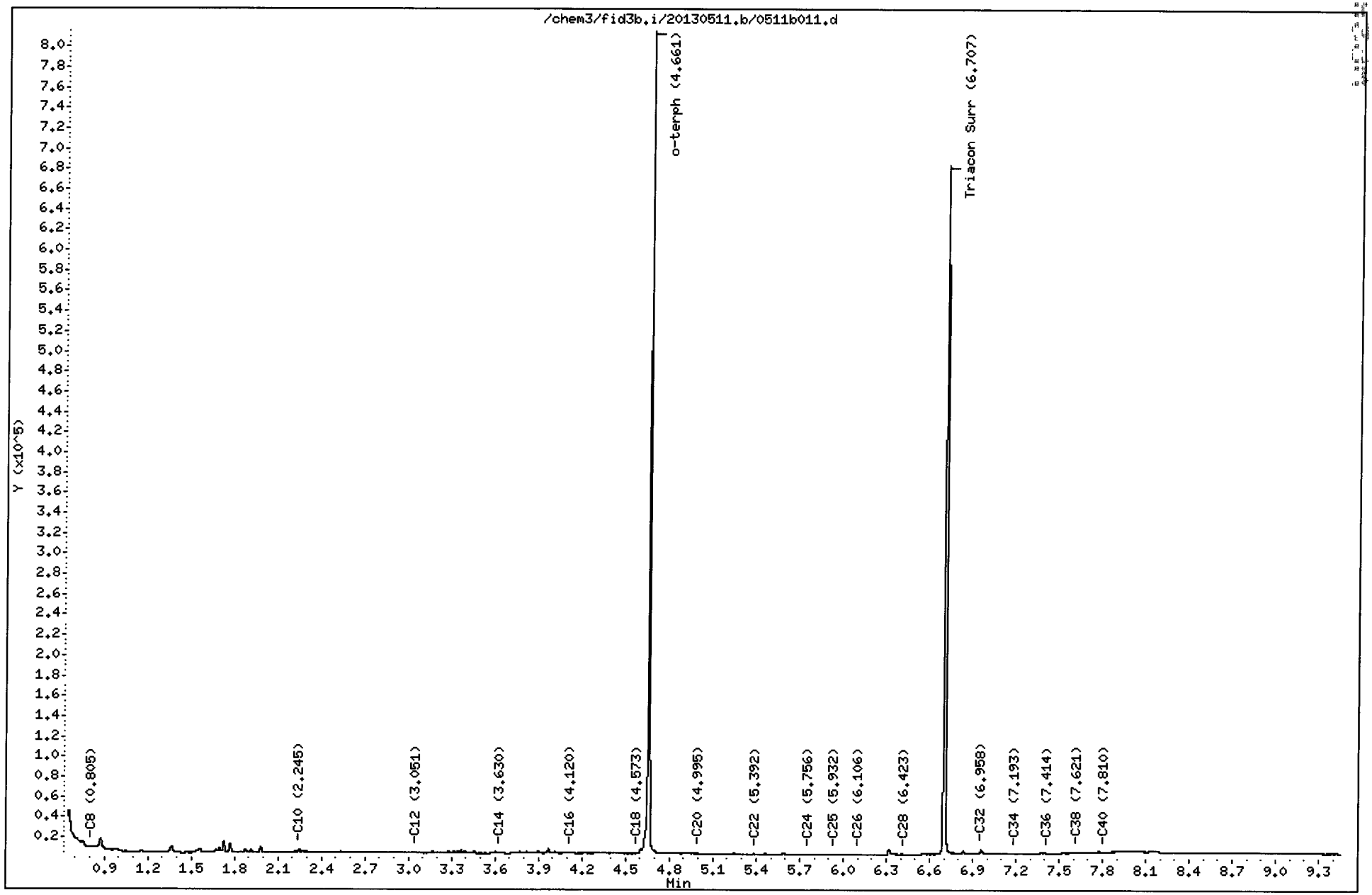
Data File: /chem3/fid3b.i/20130511.b/0511b011.d
Date : 11-MAY-2013 15:47
Client ID:
Sample Info: WP24MBS1

Column phase: RTX-1

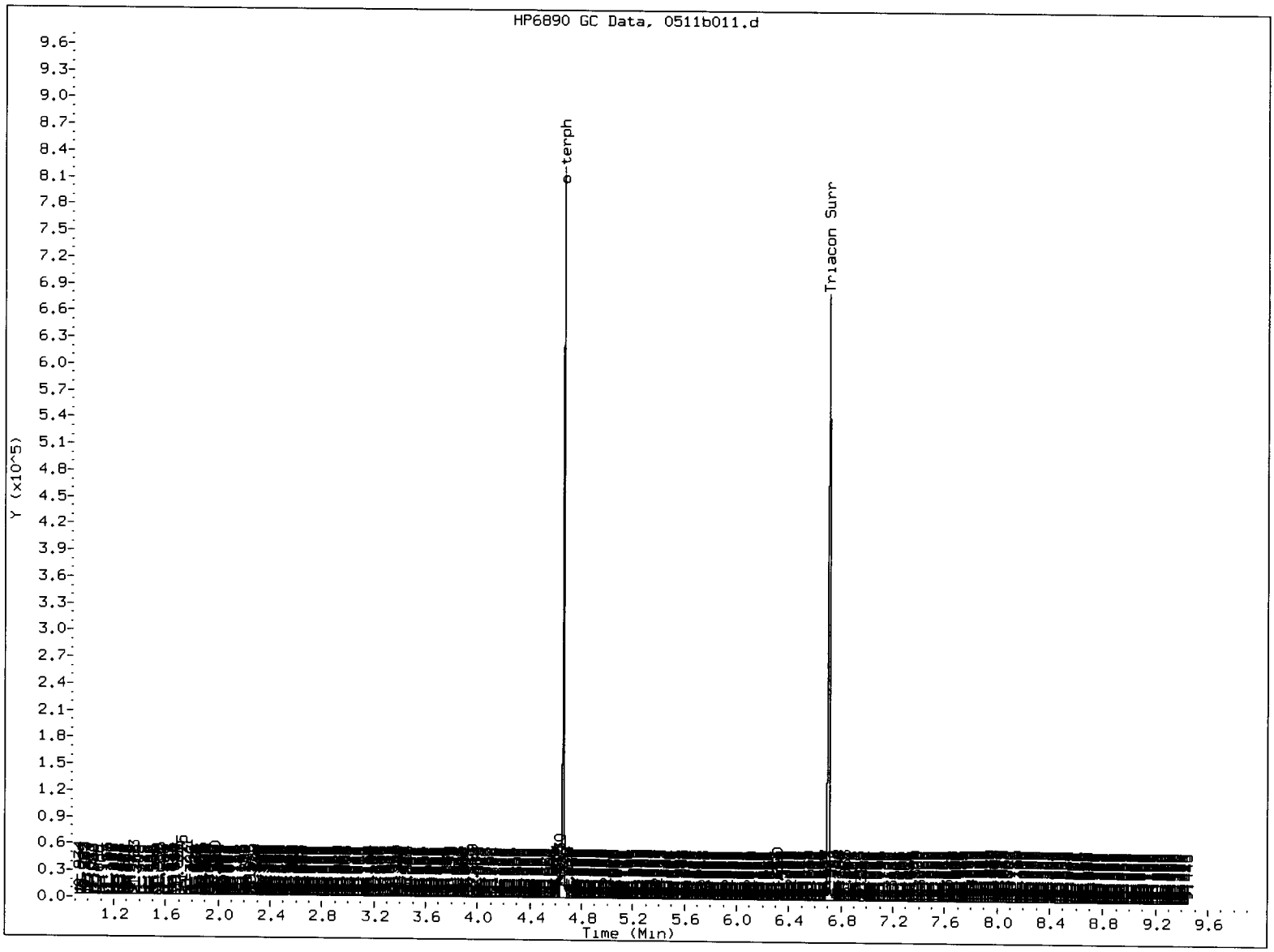
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 5/13/13



FID:3B-2C/RTX-1 WP24MBS1 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/13/13

WP24 : 05/13/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130511.b/0511b012.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: WP24LCSS1
Client ID:
Injection: 11-MAY-2013 16:07
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	3458376	256	
C8	0.822	0.015	10373	20745	WATPHD	(C12-C24)	13177590	1272.28	
C10	2.247	-0.001	17535	14100	WATPHM	(C24-C38)	247841	25.10	
C12	3.051	0.000	64401	55328	AK102	(C10-C25)	15615453	1263.72	M
C14	3.630	-0.002	102215	100688	AK103	(C25-C36)	210340	29.59	
C16	4.130	0.002	101769	53619	OR.DIES	(C10-C28)	15691865	1020.14	M
C18	4.580	0.004	209408	175012					
C20	4.992	-0.004	68390	56432					
C22	5.393	0.002	35430	20967					
C24	5.757	-0.001	11293	6076					
C25	5.944	0.011	4844	3060					
C26	6.112	0.003	2086	521					
C28	6.427	0.005	508	238	IT.DIES	(C10-C24)	15586947	1130.39	
C32	6.958	-0.007	4406	4893					
C34	7.197	0.000	281	147	CREOSOT	(C8-C22)	12784368	3953.90	
Filter Peak	----								
C36	7.416	0.001	392	98	BUNKERC	(C10-C38)	15834789	3228.43	
o-terph	4.662	-0.021	671902	464096	JET-A	(C10-C18)	11831993	1093.11	
Triacon Surr	6.704	-0.009	671902	464096					

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	464096	34.5	76.7
Triacontane	464096	35.6	79.0

JW 5/13/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130511.b/0511b012.d

Date : 11-MAY-2013 16:07

Client ID:

Sample Info: WP24LCSS1

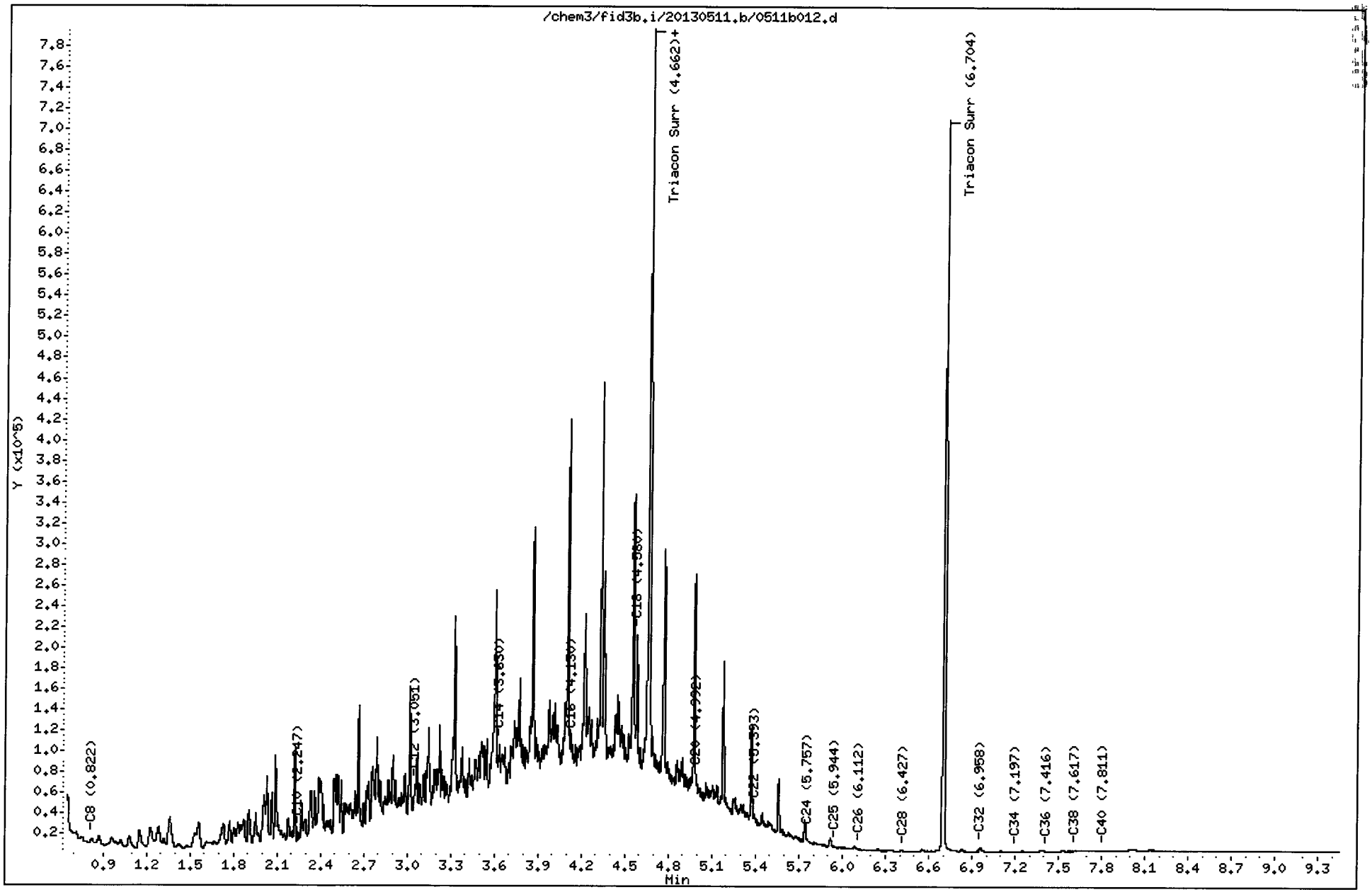
Column phase: RTX-1

Instrument: fid3b.i

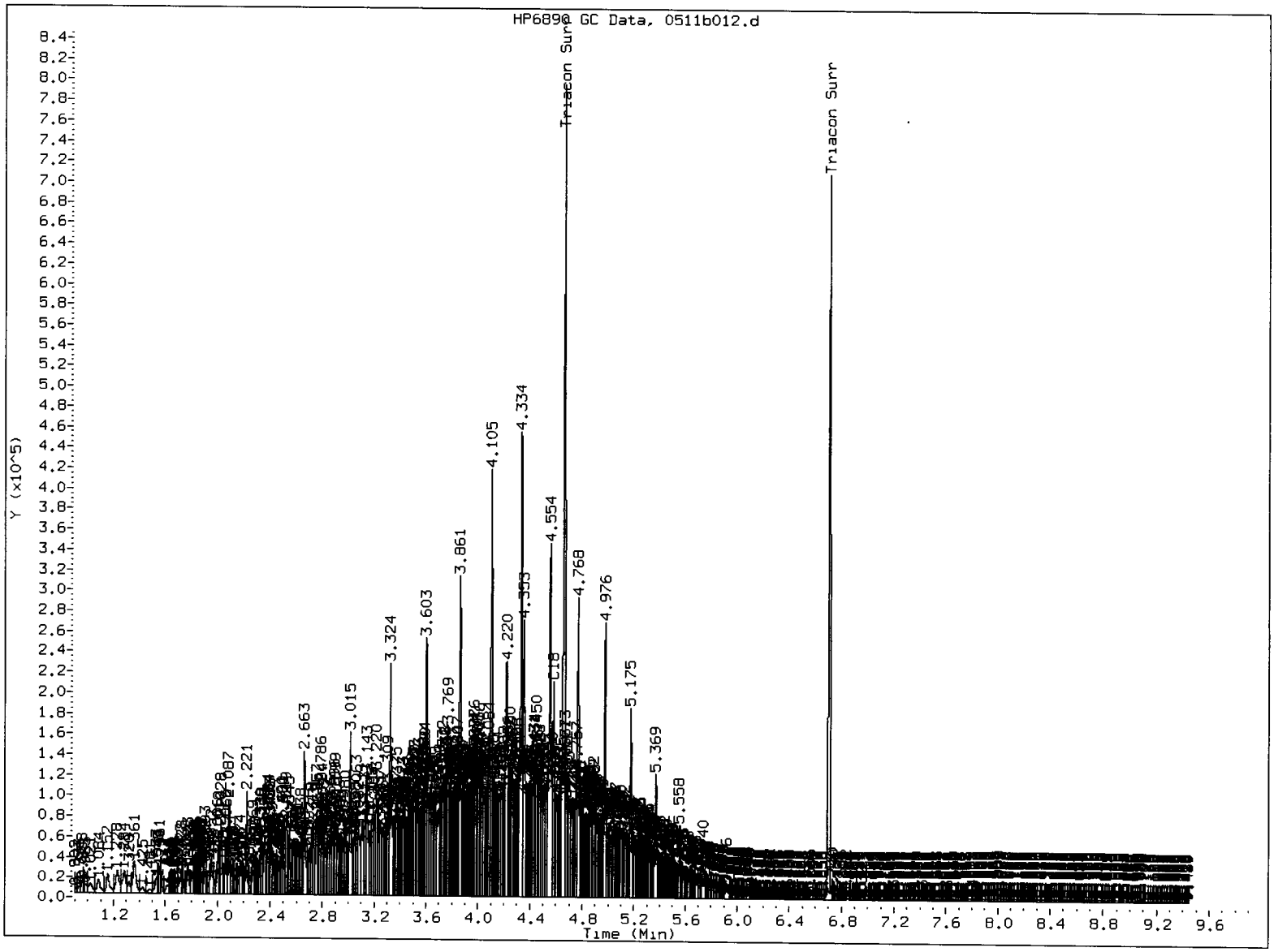
Operator: JW

Column diameter: 0.25

JW 5/13/13



FID:3B-2C/RTX-1 WP24LCSS1 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/13/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130511.b/0511b014.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: WP24A
Client ID:
Injection: 11-MAY-2013 16:46
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	104138	8	
C8	0.815	0.009	5716	7786	WATPHD	(C12-C24)	1850724	178.69	
C10	2.245	-0.003	392	226	WATPHM	(C24-C38)	6820218	690.80	
C12	3.052	0.001	282	216	AK102	(C10-C25)	2090058	169.14	M
C14	3.639	0.007	445	171	AK103	(C25-C36)	5774715	812.37	
C16	4.128	0.000	2283	714	OR.DIES	(C10-C28)	4104365	266.83	M
C18	4.573	-0.002	7144	3359					
C20	4.994	-0.003	14454	7836					
C22	5.391	0.000	30819	5876					
C24	5.754	-0.003	45201	13885					
C25	5.936	0.004	50191	17707					
C26	6.107	-0.001	58537	22590					
C28	6.422	0.000	66517	39302	IT.DIES	(C10-C24)	1871896	135.75	
C32	6.971	0.006	65634	53875					
C34	7.198	0.001	69163	57834	CREOSOT	(C8-C22)	996028	308.05	
Filter Peak	----								
C36	7.415	0.000	67895	9315	BUNKERC	(C10-C38)	8692113	1772.16	
o-terph	4.652	-0.031	14097	8264	JET-A	(C10-C18)	213075	19.69	
Triacon Surr	----								

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	8264	0.6	6.8	D
Triacontane	0	0.0	0.0	D

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

JW 5/13/13

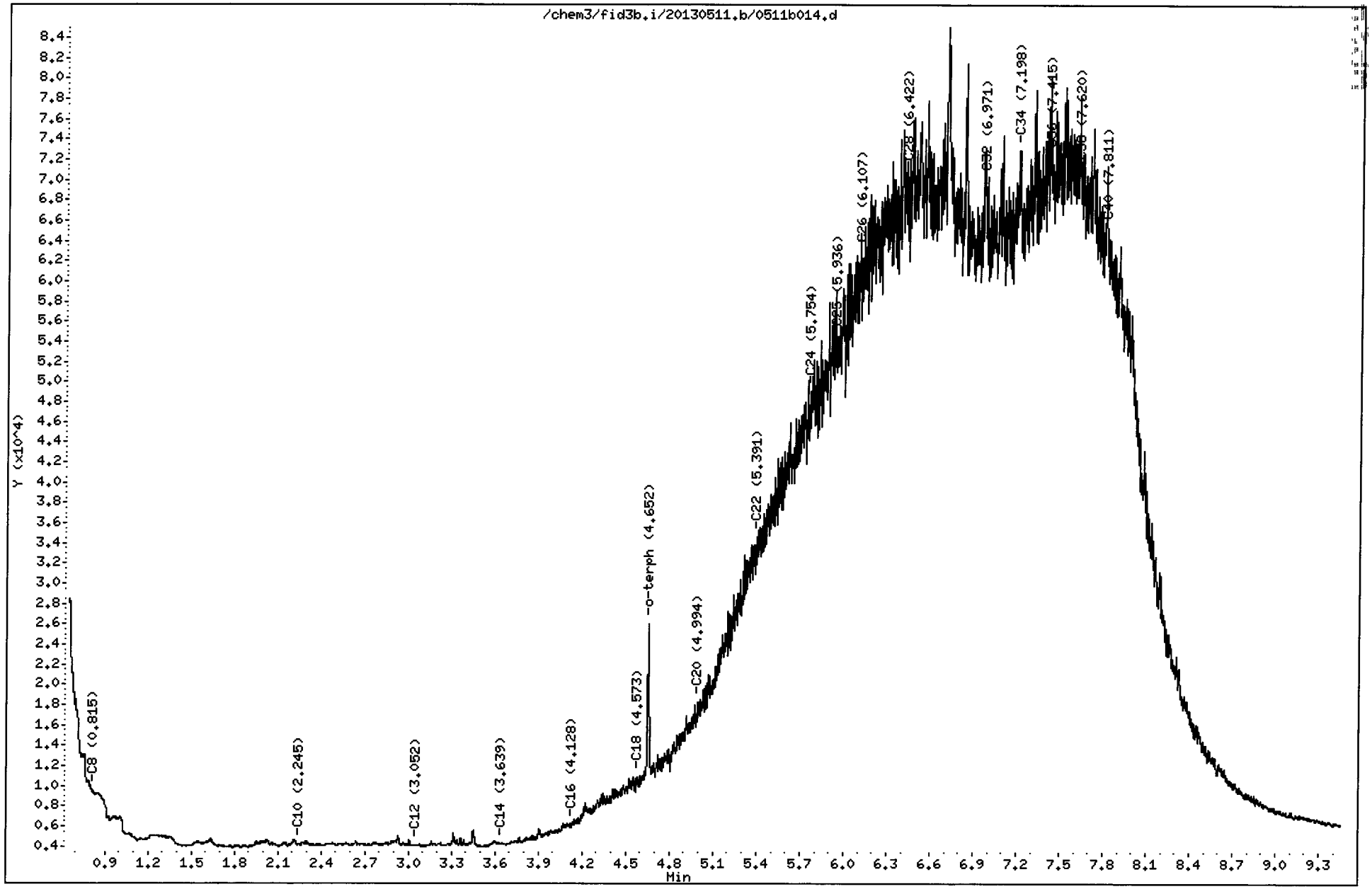
Data File: /chem3/fid3b.i/20130511.b/0511b014.d
Date : 11-MAY-2013 16:46
Client ID:
Sample Info: WP24A,5

Column phase: RTX-1

Instrument: fid3b.i

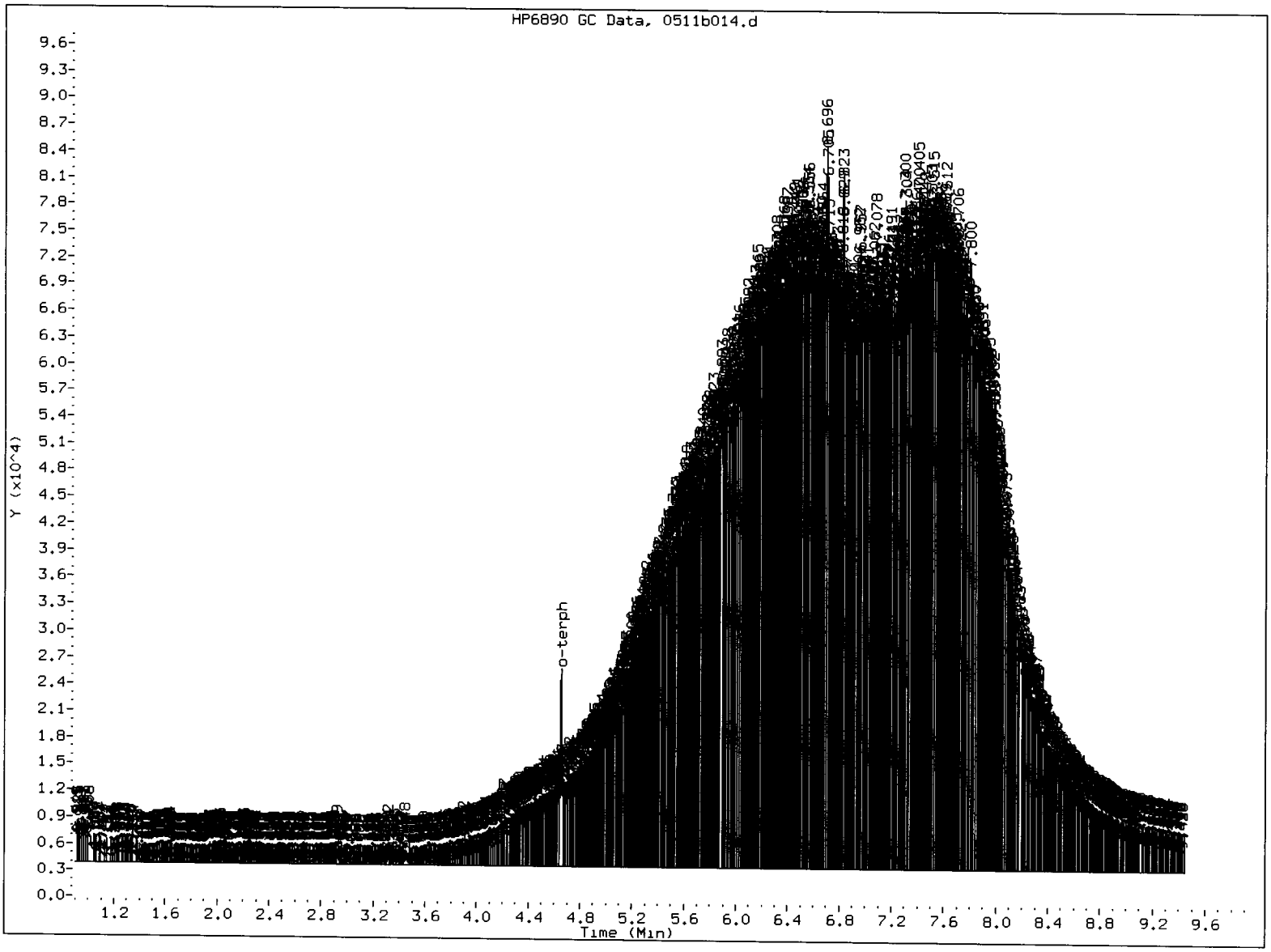
Operator: JW
Column diameter: 0.25

JW 5/13/13



FID:3B-2C/RTX-1 WP24A

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/13/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130511.b/0511b015.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: WP24AMS
Client ID:
Injection: 11-MAY-2013 17:06
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	141039	10
C8	0.812	0.006	5945	9161	WATPHD	(C12-C24)	2627139	253.65
C10	2.248	0.000	508	224	WATPHM	(C24-C38)	8622024	873.30
C12	3.051	-0.001	1276	433	AK102	(C10-C25)	2925171	236.73 M
C14	3.635	0.003	2093	769	AK103	(C25-C36)	7344754	1033.24
C16	4.127	-0.001	4801	3543	OR.DIES	(C10-C28)	5517890	358.72 M
C18	4.572	-0.004	13186	11995				
C20	4.995	-0.002	20166	13882				
C22	5.392	0.001	39537	15318				
C24	5.758	0.000	59169	46341				
C25	5.932	0.000	66001	40601				
C26	6.109	0.000	71222	39532				
C28	6.419	-0.003	85430	35168	IT.DIES	(C10-C24)	2679607	194.33
C32	6.967	0.003	85289	46009				
C34	7.199	0.002	86094	54285	CREOSOT	(C8-C22)	1536187	475.11
Filter Peak	----							
C36	7.414	-0.001	90756	44161	BUNKERC	(C10-C38)	11301631	2304.20
o-terph	4.652	-0.031	13246	6524	JET-A	(C10-C18)	457901	42.30
Triacon Surr	----							

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	6524	0.5	5.4
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

TW 5/17/13

Data File: /chem3/fid3b.i/20130511.b/0511b015.d

Date : 11-MAY-2013 17:06

Client ID:

Sample Info: WP24AMS,5

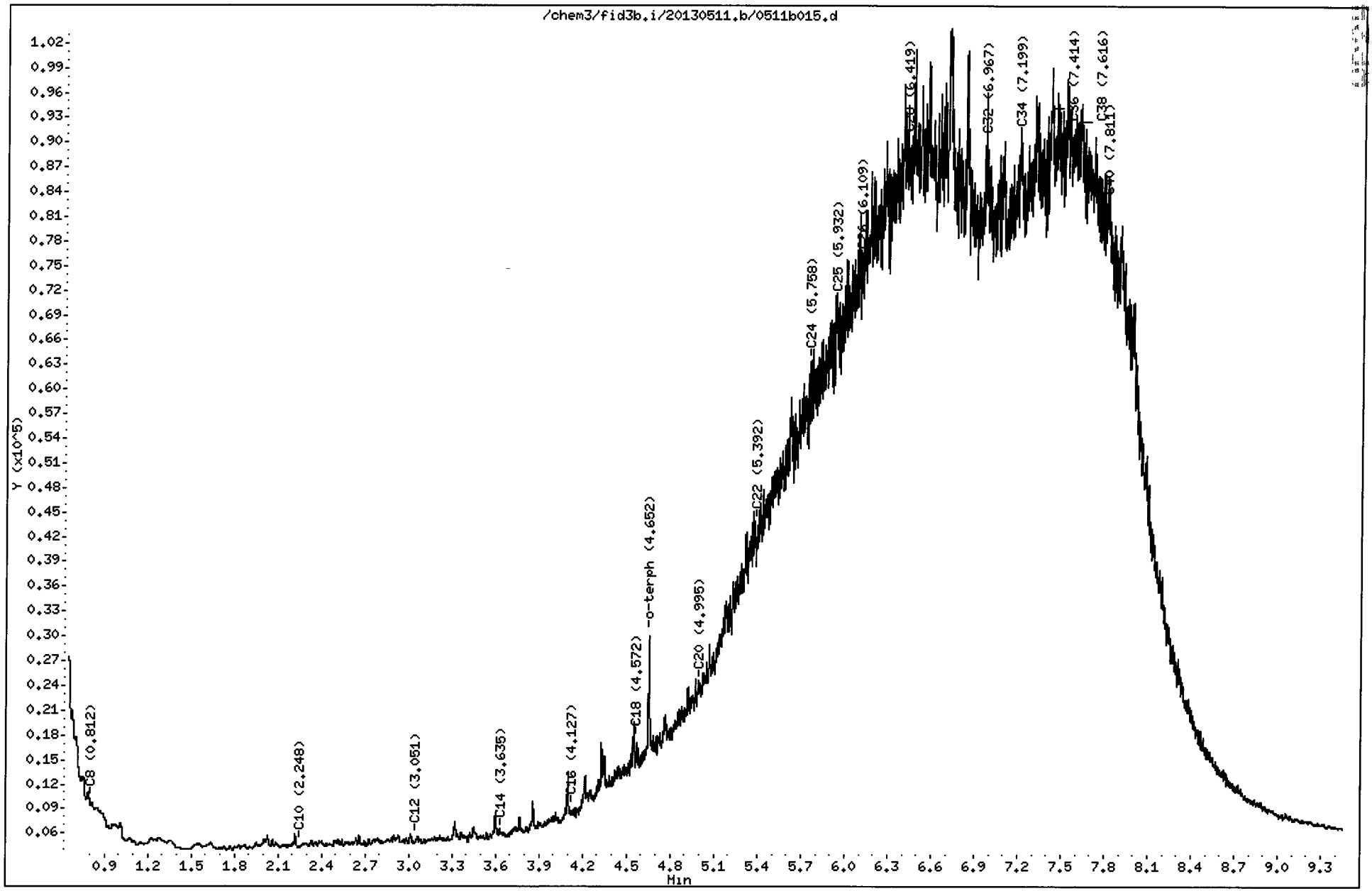
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

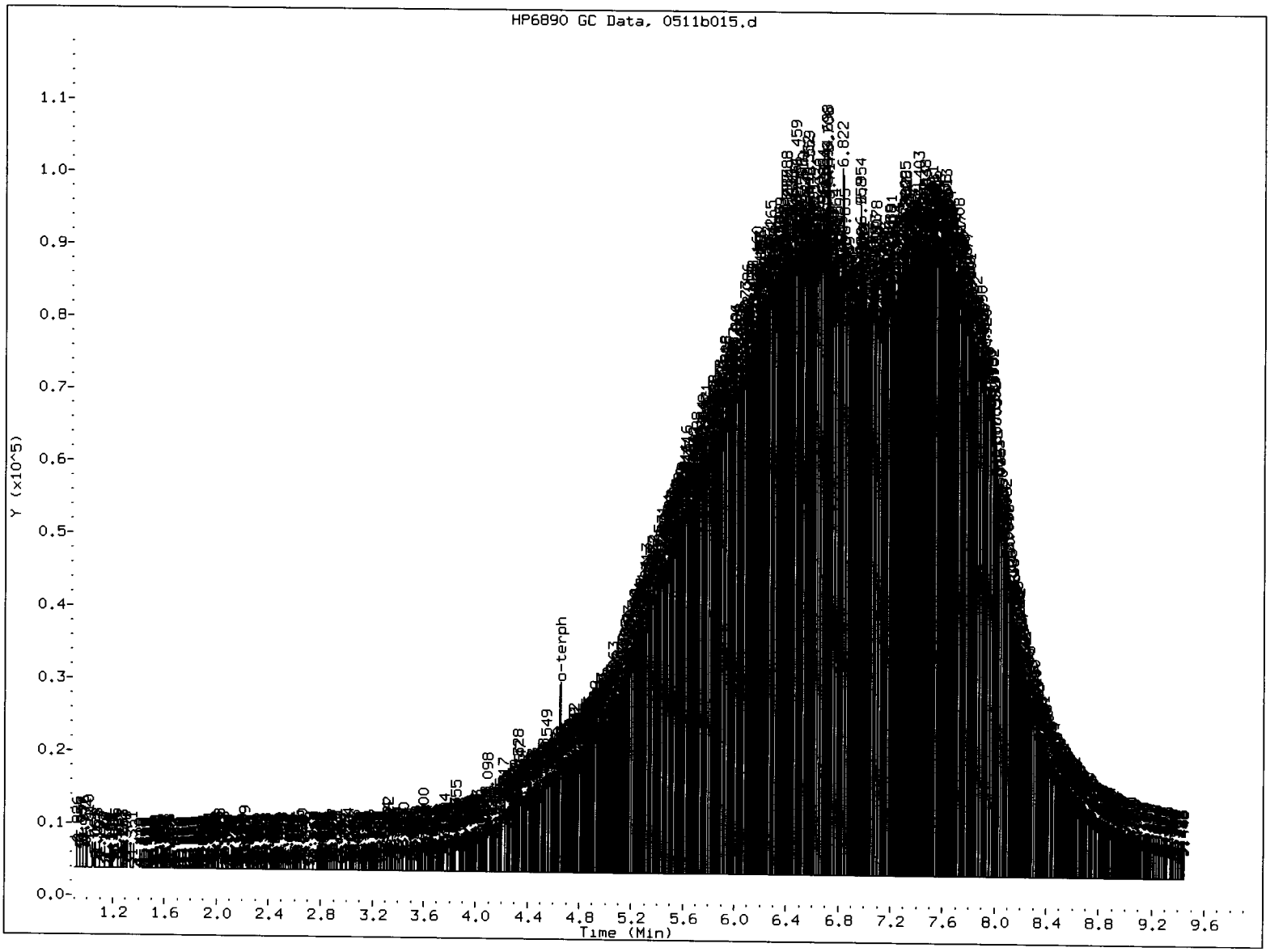
Column diameter: 0.25

JW 5/13/13



FID:3B-2C/RTX-1 WP24AMS

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW

Date: 5/13/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130511.b/0511b016.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: WP24AMSD
Client ID:
Injection: 11-MAY-2013 17:26
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	136038	10
C8	0.815	0.008	5835	7028	WATPHD	(C12-C24)	2205478	212.94
C10	2.248	0.000	570	321	WATPHM	(C24-C38)	7730214	782.97
C12	3.052	0.001	1250	538	AK102	(C10-C25)	2515730	203.59 M
C14	3.636	0.004	1857	325	AK103	(C25-C36)	6544603	920.67
C16	4.131	0.003	3729	1520	OR.DIES	(C10-C28)	4858119	315.83 M
C18	4.574	-0.001	9738	6459				
C20	4.995	-0.001	16809	6737				
C22	5.389	-0.002	34107	12816				
C24	5.757	-0.001	52590	8141				
C25	5.932	-0.001	57922	13700				
C26	6.108	-0.001	62361	11078				
C28	6.425	0.003	76722	39446	IT.DIES	(C10-C24)	2256924	163.68
C32	6.966	0.001	73936	18832				
C34	7.198	0.001	75313	14642	CREOSOT	(C8-C22)	1251183	386.96
Filter Peak	----							
C36	7.417	0.003	74758	10267	BUNKERC	(C10-C38)	9987137	2036.20
o-terph	4.651	-0.032	12759	6792	JET-A	(C10-C18)	381367	35.23
Triacon Surr	----							

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	6792	0.5	5.6
Triacontane	0	0.0	0.0

JW 5/13/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

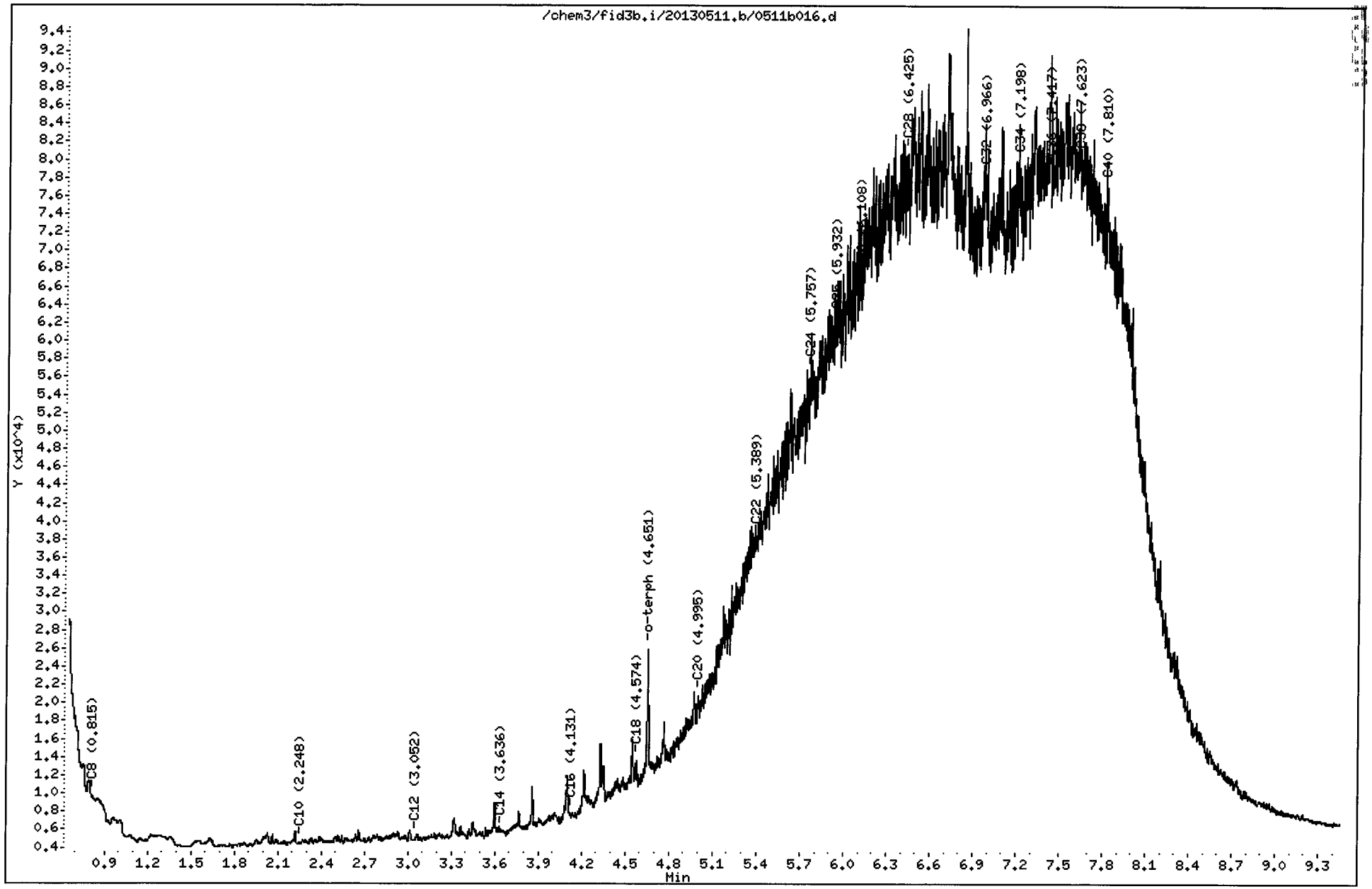
Data File: /chem3/fid3b.i/20130511.b/0511b016.d
Date : 11-MAY-2013 17:26
Client ID:
Sample Info: WP24AMSD,5

Column phase: RTX-1

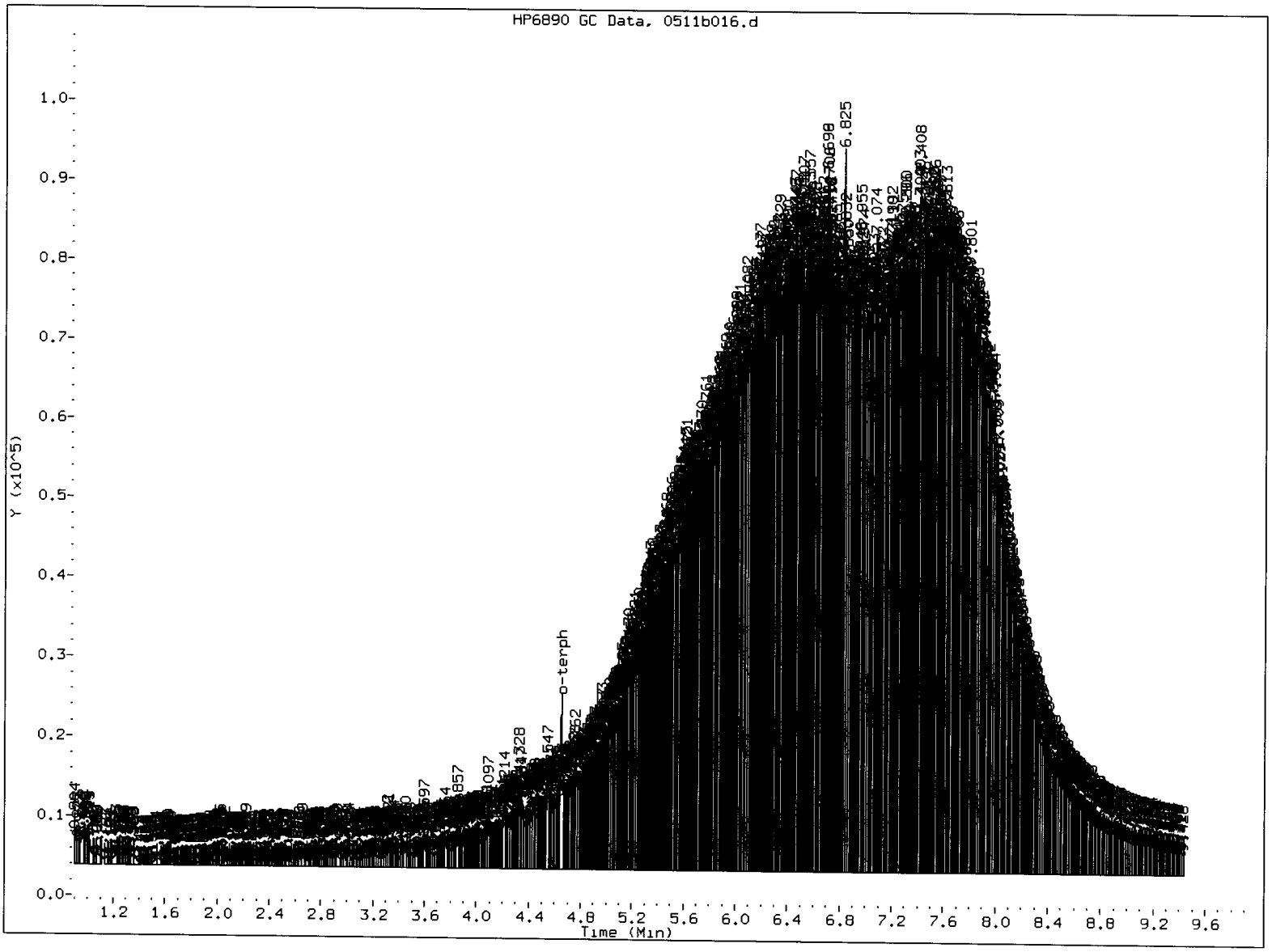
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 5/13/13



FID:3B-2C/RTX-1 WP24AMSD FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/10/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130511.b/0511b018.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: DIESEL#2
Client ID:
Injection: 11-MAY-2013 18:05
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	787687	58
C8	0.819	0.013	7221	13501	WATPHD	(C12-C24)	2439376	235.52
C10	2.244	-0.004	3492	2951	WATPHM	(C24-C38)	38578	3.91
C12	3.052	0.001	14261	11863	AK102	(C10-C25)	2940515	237.97 M
C14	3.627	-0.005	19535	11849	AK103	(C25-C36)	23512	3.31
C16	4.131	0.003	19354	10317	OR.DIES	(C10-C28)	2954594	192.08 M
C18	4.574	-0.002	35555	41423				
C20	4.997	0.000	12219	2635				
C22	5.392	0.001	6502	4661				
C24	5.750	-0.008	3496	2365				
C25	5.928	-0.004	1624	1078				
C26	6.108	-0.001	580	124				
C28	6.421	-0.001	114	36	IT.DIES	(C10-C24)	2934353	212.80
C32	6.967	0.002	59	29				
C34	7.196	-0.001	190	102	CREOSOT	(C8-C22)	2367432	732.19
Filter Peak	----							
C36	7.421	0.007	432	110	BUNKERC	(C10-C38)	2972930	606.13
o-terph	4.659	-0.024	933373	603700	JET-A	(C10-C18)	2254787	208.31
Triacon Surr	6.710	-0.003	128	91				

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	603700	44.9	99.7
Triacontane	91	0.0	0.0

JW 5/13/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

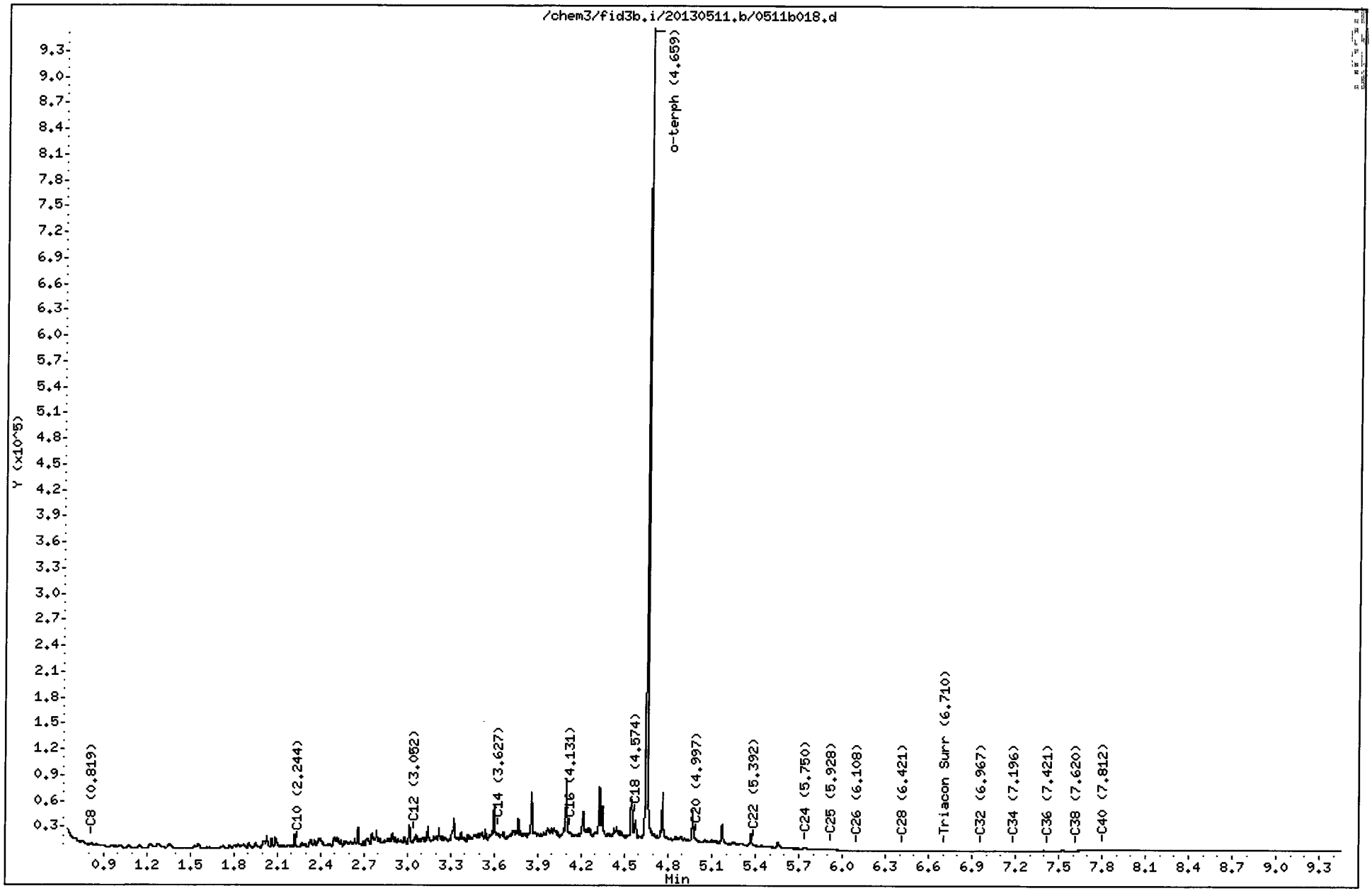
Data File: /chem3/fid3b.i/20130511.b/0511b018.d
Date : 11-MAY-2013 18:05
Client ID:
Sample Info: DIESEL#2

Column phase: RTX-1

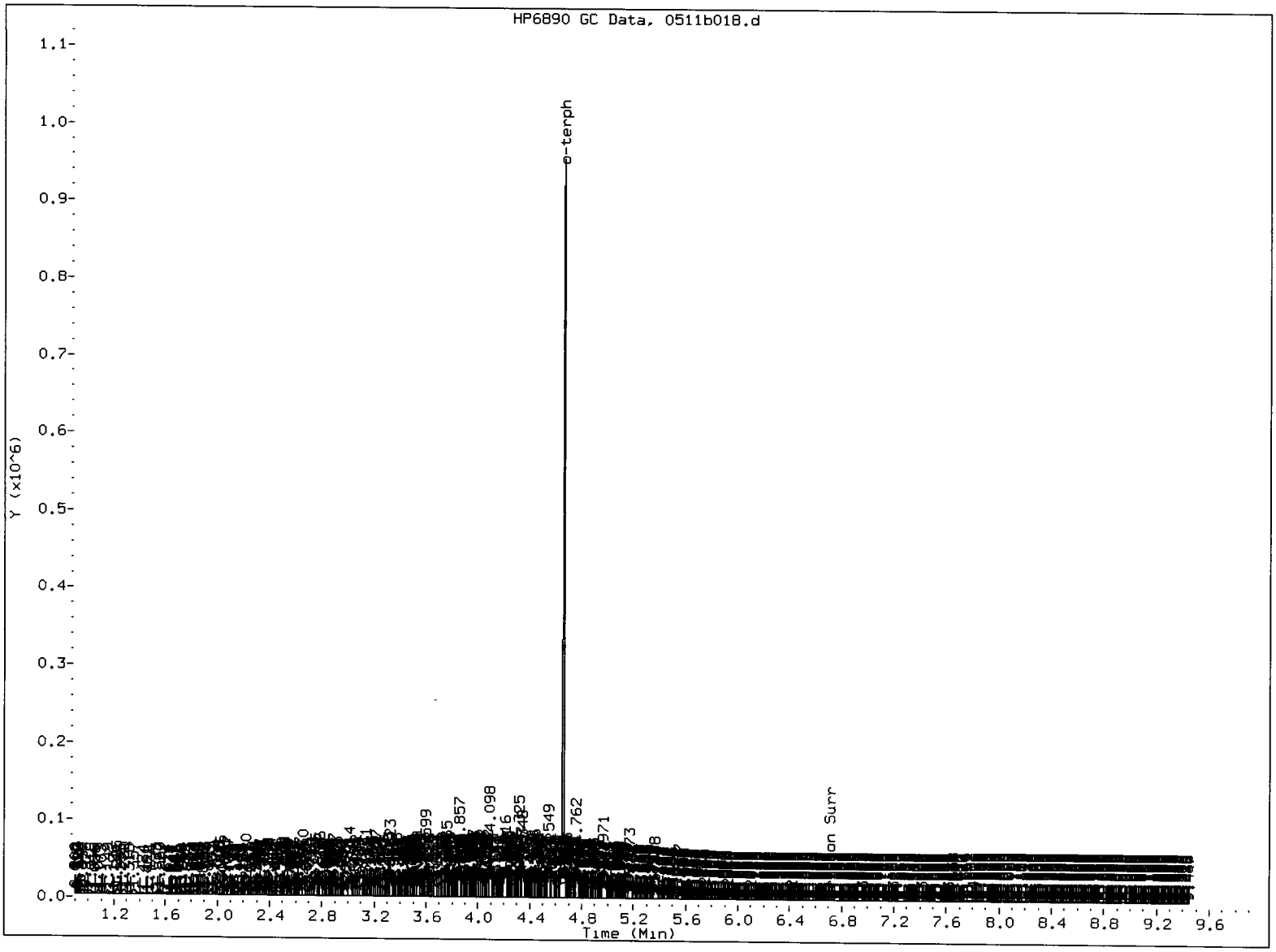
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 5/13/13



FID:3B-2C/RTX-1 DIESEL#2 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JV Date: 5/13/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130511.b/0511b019.d
Method: /chem3/fid3b.i/20130511.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/13/2013
Macro: FID:3B050913

ARI ID: MOIL#2
Client ID:
Injection: 11-MAY-2013 18:25
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	121208	9
C8	0.807	0.001	5391	3369	WATPHD	(C12-C24)	440806	42.56
C10	2.245	-0.003	646	354	WATPHM	(C24-C38)	5015238	507.98
C12	3.049	-0.003	385	216	AK102	(C10-C25)	581659	47.07
C14	3.635	0.002	230	101	AK103	(C25-C36)	4280046	602.10 M
C16	4.129	0.001	40	11	OR.DIES	(C10-C28)	1764974	114.74
C18	4.572	-0.003	158	113				
C20	4.997	0.000	1287	1006				
C22	5.390	-0.001	5801	3238				
C24	5.760	0.002	21989	5961				
C25	5.931	-0.001	28668	10897				
C26	6.110	0.002	32644	12147				
C28	6.424	0.002	40514	8631	IT.DIES	(C10-C24)	468713	33.99
C32	6.969	0.004	55266	28799				
C34	7.198	0.001	63346	46331	CREOSOT	(C8-C22)	119387	36.92
Filter Peak	----							
C36	7.415	0.000	59093	25083	BUNKERC	(C10-C38)	5483951	1118.08
o-terph	4.680	-0.003	258	63	JET-A	(C10-C18)	52819	4.88
Triacon Surr	6.709	-0.004	772869	624933				

Range Times: NW Diesel(3.101 - 5.808) NW Gas(0.601 - 3.101) NW M.Oil(5.808 - 7.669)
AK102(2.198 - 5.883) AK103(5.883 - 7.465) Jet A(2.198 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	63	0.0	0.0
Triacontane	624933	47.9	106.4

JW 5/13/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

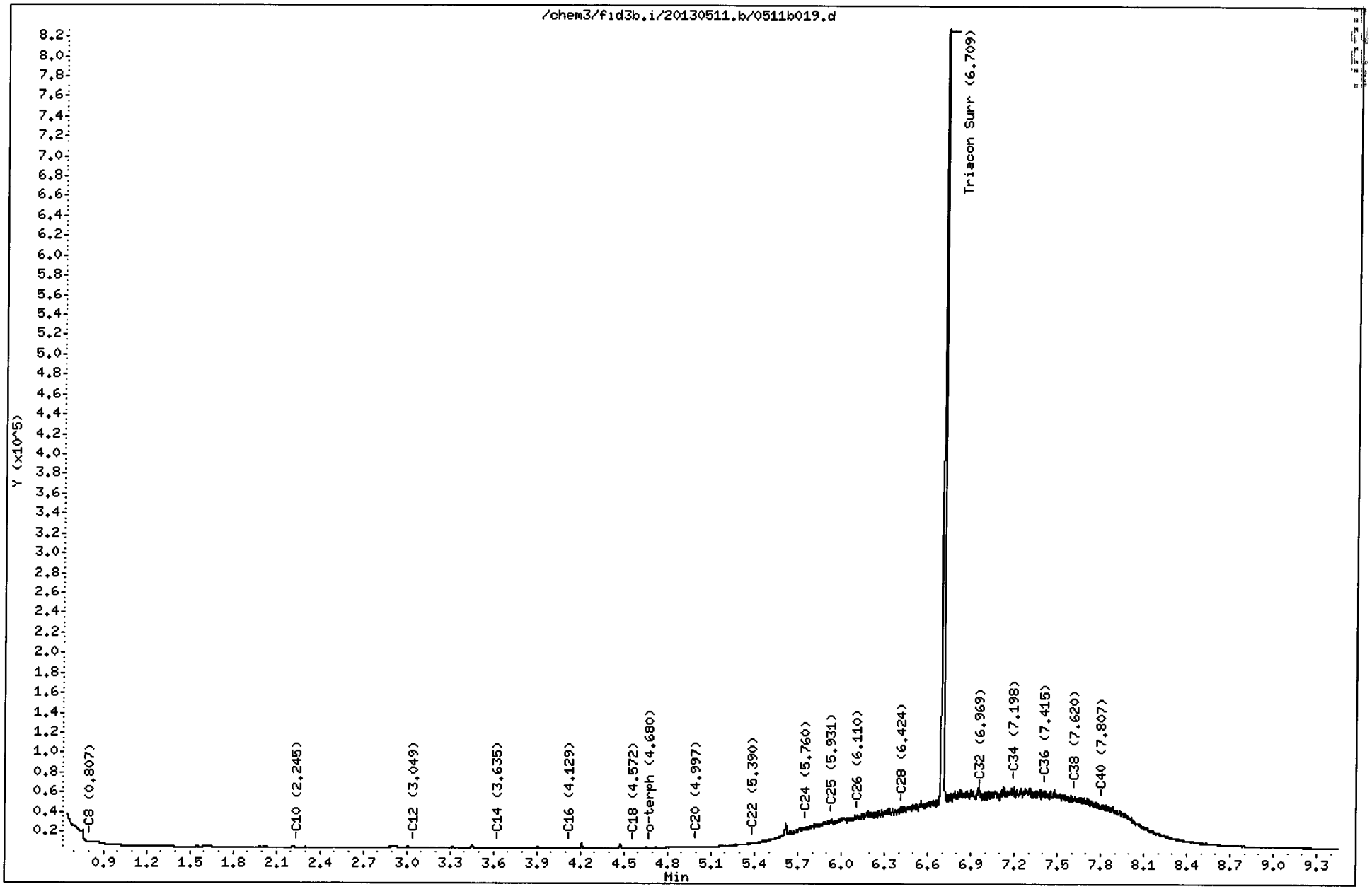
Data File: /chem3/fid3b.i/20130511.b/0511b019.d
Date : 11-MAY-2013 18:25
Client ID:
Sample Info: MOIL#2

Column phase: RTX-1

Instrument: fid3b.i

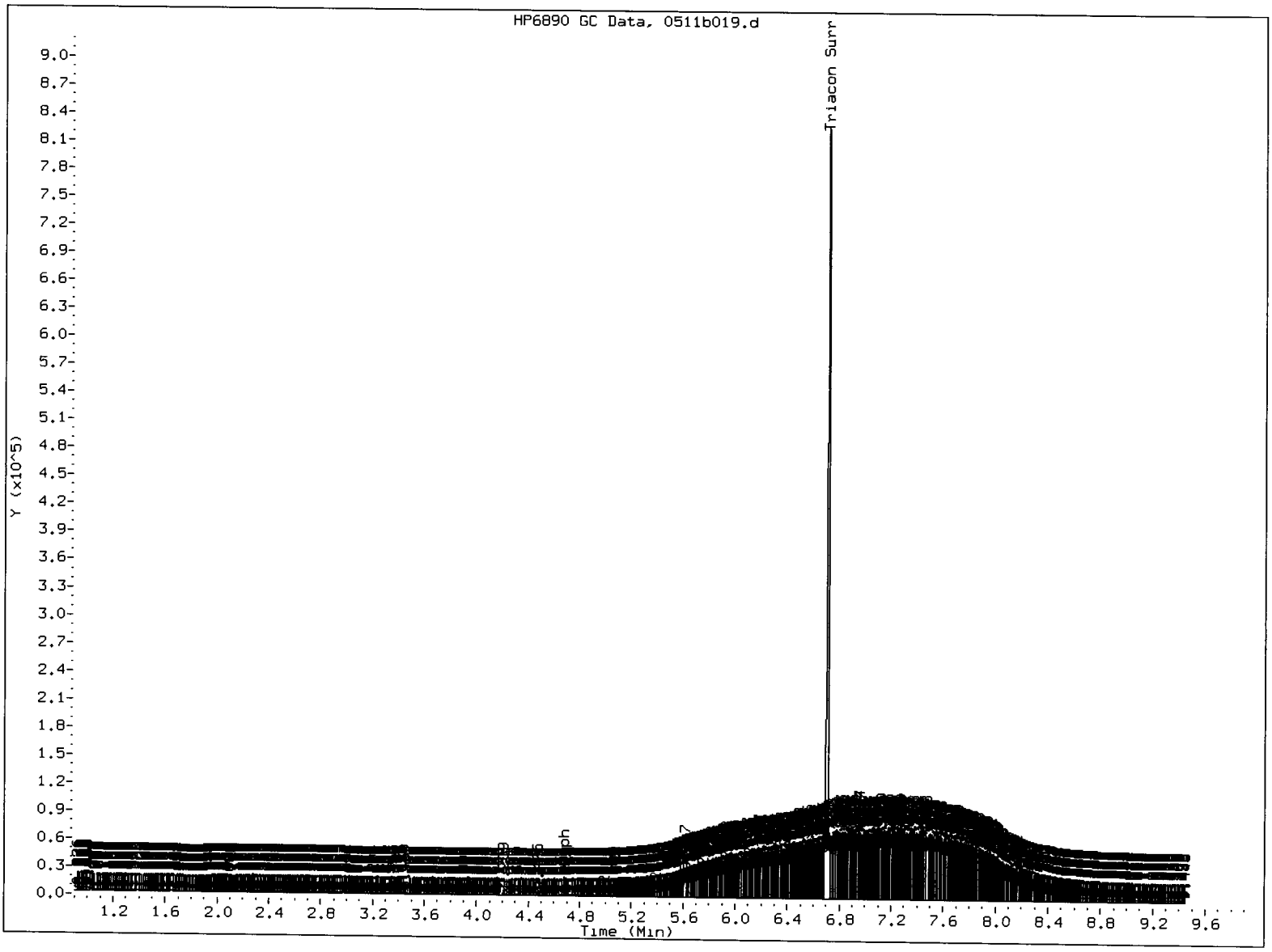
Operator: JW
Column diameter: 0.25

JW 5/10/13



FID:3B-2C/RTX-1 MOIL#2

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW

Date: 5/12/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130511.b

ARI Job No.: RT05 Method: i/20130511.b/ftphfid3b.m Instrument: fid3b.i Date: 11-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1250	0511b002.d	RT0511		1	NO MANUAL INTEGRATION
1309	0511b003.d	IB0511		1	NO MANUAL INTEGRATION
1328	0511b004.d	DIESEL#1		1	o-terph,
1347	0511b005.d	MOIL#1		1	Triacon Surr,
1547	0511b011.d	WP24MBS1	WP24MBS1	1	o-terph,
1607	0511b012.d	WP24LCSS1	WP24LCSS1	1	o-terph,
1646	0511b014.d	WP24A	CG-MH-010-	5	o-terph,
1706	0511b015.d	WP24AMS	CG-MH-010-	5	o-terph,
1726	0511b016.d	WP24AMSD	CG-MH-010-	5	o-terph,
1805	0511b018.d	DIESEL#2		1	o-terph,
1825	0511b019.d	MOIL#2		1	Triacon Surr,