

# Lower Duwamish Waterway

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## NPDES Inspection Sampling Support 2014/2015

Prepared for



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**Appendix V**  
**Waste Management Eastmont**  
**Transfer Station**

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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## V-1 Introduction and Background

<b>Facility Name</b>	<b>Waste Management Eastmont Transfer Station</b>
<b>Facility/Site ID</b>	2425
<b>Address</b>	7201 West Marginal Way SW Seattle, WA 98106
<b>NPDES Permit Type</b>	Industrial Stormwater General Permit
<b>NPDES Permit No.</b>	WAR000581
<b>Permit Monitoring Requirements</b>	Turbidity, pH, oil sheen, total copper, total zinc, total lead, TSS
<b>SIC Code</b>	4212: Local Trucking, Without storage 4953: Refuse Systems
<b>Inspection Date</b>	January 22, 2015
<b>Grab Samples</b>	1 water sample, 2 solids samples (including one field duplicate)
<b>Sample ID(s)</b>	WM-FT-1B-20150122-W WM-CB-03-20150122-S WM-FD-02-20150122-S
<b>Water Sample Analytes</b>	Total metals, mercury, PCB congeners, dioxins/furans, SVOCs, alkalinity/carbonate/bicarbonate, anions, specific conductance, pH, TOC, DOC, TSS
<b>Solids Sample Analytes</b>	Total metals, mercury, PCB Aroclors, PCB congeners, dioxins/furans, SVOCs, VOCs, TPH-diesel/motor oil, TPH-gasoline, grain size, TOC
<b>Split Samples with Facility</b>	No

The Waste Management Eastmont Transfer Station (Eastmont Transfer Station) is located on the west side of the Lower Duwamish Waterway (LDW) in the 1<sup>st</sup> Avenue S Storm Drain source control area. The perimeter of the facility is fenced, with designated entry gates along West Marginal Way SW. The facility borders Detroit Avenue SW along the southwest side and by commercial industrial facilities along the southeast and northwest sides.

The facility is a solid waste transfer station that collects and transfers refuse and recyclables from several communities. The Eastmont Transfer Station receives recyclables and wastes inside covered buildings and consolidates them for shipment to offsite recycling and disposal facilities. Site activities conducted in uncovered areas and exposed to rainwater include wet fueling of equipment, employee parking, and operations equipment parking.

The topography of the facility is generally level with a gradual slope from the west corner to the north and northeast. There is a small landscaped area near the facility entrance and roadway frontages along West Marginal Way SW. The facility is approximately 98% paved or covered by buildings (Waste Management 2012). A facility drainage map was not available for review.

## **V-1.1 Stormwater Conveyance and Treatment System**

Stormwater runoff at the Eastmont Transfer Station sheet flows into a series of stormwater catch basins located along the vehicle parking and traffic areas. Stormwater entering these catch basins discharges to a detention pond located just beyond the northeast property line of the facility. The stormwater flows through underground storm drains to the LDW, located less than one-half mile to the northeast. The facility has recently diverted all stormwater to holding tanks for use as process water on the property. The process water discharges to the sanitary sewer.

Wash water generated at the uncovered vehicle wash pad and process water from the transfer building floors discharge through one of two oil/water separators to the sanitary sewer. Wash water and process water are not discharged to the stormwater drainage system (Waste Management 2012).

## **V-1.2 Recent Compliance History**

Ecology previously inspected the Eastmont Transfer Station on January 2, 2005. The facility needed to install and maintain catch basin inserts in the storm drains at the site. The facility also needed to install oil absorbent drain inserts and increase sweeping frequency to prevent accumulation of sediments and discharge of turbid water to the facility stormwater system. Although it was not an issue during the inspection, Ecology recommended the facility to consider rebuilding berms in the opening of the building where material is processed. The Eastmont Transfer Station needed to update the permit information to reflect the correct facility contact and include a map showing the on-site stormwater pond (Ecology 2005). Follow-up information regarding compliance with corrective actions was not available for review.

Based on the Eastmont Transfer Station's 2013 Industrial Stormwater General Permit Annual Report, the facility exceeded benchmarks for turbidity during the 1<sup>st</sup> and 2<sup>nd</sup> quarter of 2013, triggering Level 1 and Level 2 corrective actions. The facility also exceeded the benchmark for copper, zinc, pH, and oil and grease during the 1<sup>st</sup> quarter of 2013, triggering a Level 1 corrective action. On April 12, 2013, the Eastmont Transfer Station performed dye tests in catch basins and downspouts to determine discharges as part of the Level 1 corrective action. In July 2013, the Eastmont Transfer Station added storage tanks for settling as part of the Level 2 corrective action (Waste Management 2013).

# **V-2 Inspection and Sampling**

## **V-2.1 January 2015 Stormwater Compliance Inspection**

On January 22, 2015, Ecology conducted a stormwater compliance inspection at the Eastmont Transfer Station. Leidos assisted Ecology with inspection and sampling of the facility's stormwater conveyance system. The inspection included investigating influent and effluent points at drainage structures, preparing written and photographic documentation, and assessing whether the drainage structures contained sufficient sampleable material. The coordinates of sample locations are plotted on Figure V-1 using geographic information system software. An

inspection photographic log and field documentation are presented in Attachments V-1 and V-2, respectively.

The field team inspected the following stormwater conveyance structures at the Eastmont Transfer Station, as shown on Figure V-1:

- **Catch basin 03 (WM-CB-03)**
- **Tank 1B (WM-FT-1B).**

Locations WM-CB-03 and WM-FT-1B both contained sufficient sampleable material. A solids grab sample was collected from WM-CB-03 and a water grab sample was collected from WM-FT-1B.

## **V-2.2 Stormwater Conveyance System Sampling**

Ecology collected one water sample and two solids samples (including a field duplicate) from the stormwater conveyance system at the Eastmont Transfer Station. Sample locations, analytes, and analytical methods are listed on Table V-1. Results for the water sample are presented in Tables V-2 through V-6. Results for the solids samples are presented in Tables V-7 through V-9. Chain of custody forms and the laboratory reports are provided as Attachments V-3 and V-4, respectively.

### **V-2.2.1 Water Sample**

Water sample WM-FT-1B-20150122-W was collected from tank FT-1B (Figure V-1 and Attachment V-1), which is a 21,000-gallon stormwater storage/settling tank located in the northeast area of the Eastmont Transfer Station. FT-1B receives stormwater from catch basin CB-05 including an area that drains a paved lot with heavy truck traffic. If the tank becomes full, it will overflow back to CB-05. Stormwater is conveyed from FT-1B offsite to the public storm drain system.

### **V-2.2.2 Solids Samples**

Solids sample WM-CB-03-20150122-S and field duplicate WM-FD-02-20150122-S were collected from catch basin CB-03 (Figure V-2, Attachment V-1), which is located in the southeast area of the Eastmont Transfer Station. CB-03 receives stormwater from CB-02 and an area that drains a paved lot with heavy truck traffic. The outlet from CB-03 to CB-04 is plugged and stormwater is conveyed from CB-03 to tank FT-1A, a 21,000-gallon stormwater storage/settling tank. The sample consisted of black silty clay with a moderate petroleum odor. A heavy sheen was observed during sample collection.

## **V-3 Results**

### **V-3.1 Chemical Analysis**

Ecology collected two solids samples (including one field duplicate) and one water sample during the January 22, 2015 stormwater compliance inspection at Eastmont Transfer Station.

Analytical methods, chemical results and regulatory criteria are presented in Tables V-1 through V-9.

All chemical results were independently validated by EcoChem, Inc. of Seattle, WA. A compliance-level, U.S. Environmental Protection Agency (EPA) Stage 2A data validation was performed on all chemistry results. Data validation was performed following EPA guidance (EPA 1994, 2008, 2009, 2010). The data validation report is available as Attachment 1 to the NPDES Inspection Sampling Support (2014/2015) Report (Leidos 2015).

In the water sample, concentrations of copper, mercury, zinc, total PCB congeners, benzo(a)anthracene, and chrysene exceeded a screening level (Table V-4). Concentrations of the following chemicals exceeded a screening level in solids samples (Table V-8).

- Metals: mercury and zinc;
- PCBs: total PCB congeners;
- Dioxin/furan TEQ;
- PAHs: 2-methylnaphthalene, fluoranthene, phenanthrene,
- Phthalates: bis(2-ethylhexyl)phthalate, butylbenzylphthalate, dimethylphthalate,
- Other SVOCs: benzyl alcohol and n-nitrosodiphenylamine,
- TPH: gasoline-, diesel-, and motor oil-hydrocarbons.

### V-3.2 Inspection Results and Permit Compliance Requirements

The Ecology inspection report was not available for review.

## V-4 References

- Ecology (Washington State Department of Ecology). 2005. Stormwater Compliance Inspection Report, Waste Management of Seattle, 7201 West Marginal Way SW, Seattle, WA 98108. November 15, 2005.
- EPA (U.S. Environmental Protection Agency). 1994. USEPA Contract Laboratory Program, *National Functional Guidelines for Inorganic Data Review*. EPA 540/R-94/013. Office of Emergency and Remedial Response. February 1994.
- EPA. 2008. USEPA Contract Laboratory Program, *National Functional Guidelines for Organic Data Review*. EPA-540-R-08-01. Office of Emergency and Remedial Response. June 2008.
- EPA. 2009. *Guidance for labeling externally validated laboratory analytical data for Superfund use*. EPA-540-R-08-005. Office of Emergency and Remedial Response. January 2009.
- EPA. 2010. *USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Data Review*. EPA 540-R-10-011. Office of Emergency and Remedial Response. January 2010.

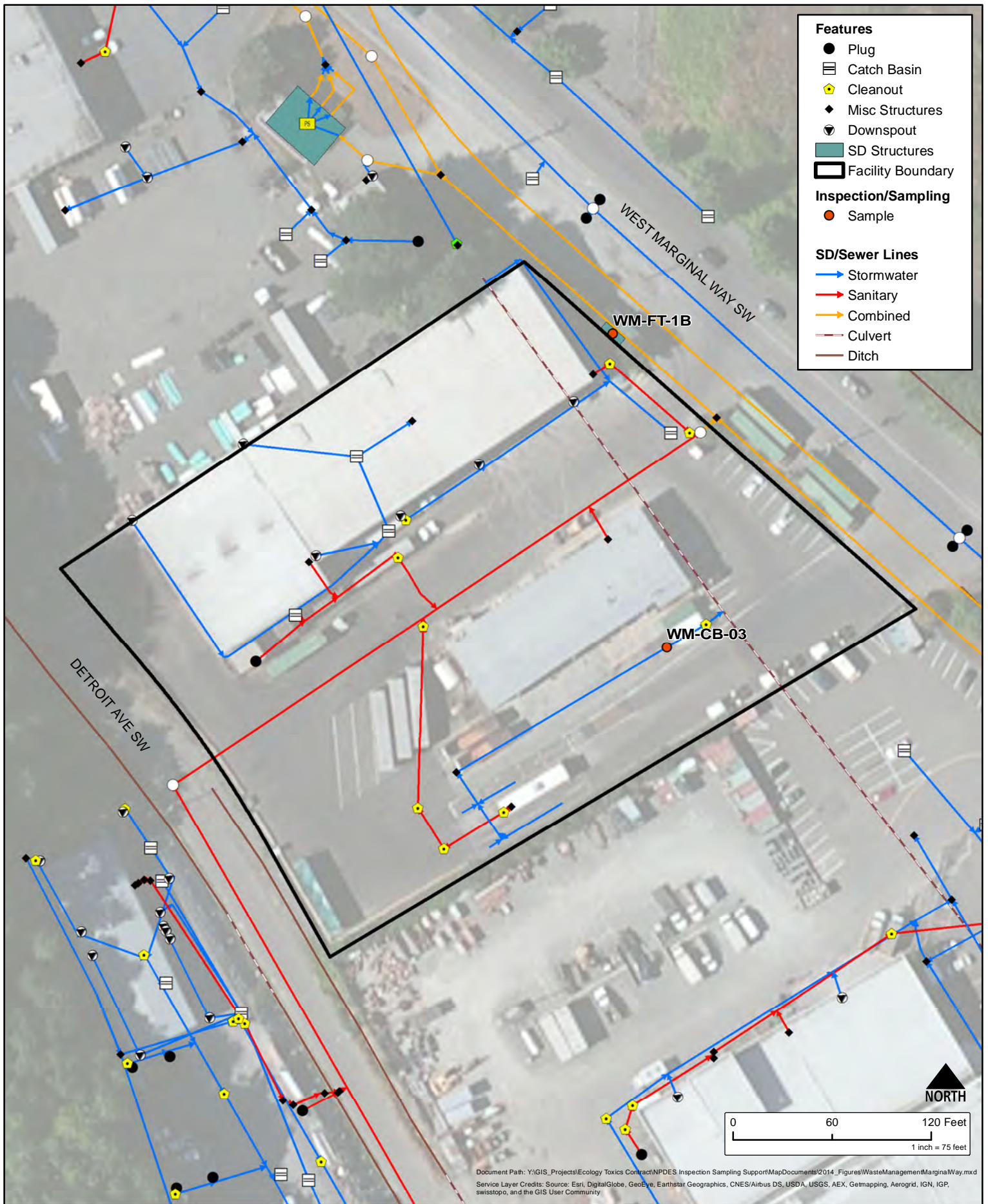


Leidos. 2015. Lower Duwamish Waterway NPDES Inspection Sampling Support, 2014/2015.. Prepared for Washington State Department of Ecology, Toxics Cleanup Program, Northwest Regional Office. June 2015.

Waste Management. 2012. Stormwater Pollution Prevention Plan, Eastmont Transfer Station and Materials Recovery Facility, 7201 West Marginal Way SW, Seattle, Washington, 98106. 2012.

Waste Management. 2013. Industrial Stormwater General Permit, Annual Report Form, WAR-000581, Waste Management of Seattle – Marginal Way. May 13, 2014.

# Figures



**Figure V-1. Waste Management Eastmont Transfer Station  
Inspection and Sampling Locations**

# Tables

## Acronyms and Abbreviations Used in Tables

<	not detected
%	percent
2LAET	Second Lowest Apparent Effects Threshold
CaCO <sub>3</sub>	calcium carbonate
CB	chlorobiphenyl
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CSL	Cleanup Screening Level
EF	exceedance factor (sample result / criteria value)
EMPC	estimated maximum possible concentration
EPA	U.S. Environmental Protection Agency
HHO	human health – consumption of organisms only
HPAH	high molecular weight polycyclic aromatic hydrocarbon
ICP-MS	Inductively coupled plasma – mass spectrometry
ISGP	Industrial Stormwater General Permit
J	estimated concentration
JN	estimated concentration
LAET	Lower Apparent Effects Threshold
LDW	Lower Duwamish Waterway
LPAH	low molecular weight polycyclic aromatic hydrocarbon
MA	marine acute
MC	marine chronic
µg/L	micrograms per liter
µmhos/cm	micromhos per centimeter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mS/cm	milliSiemens per centimeter
MTCA	Model Toxics Control Act
na	not analyzed
nd	not detected

ng/kg	nanograms per kilogram
NPDES	National Pollutant Discharge Elimination System
NR WQC	National Recommended Water Quality Criteria
NTR WQC	National Toxics Rule Water Quality Criteria
NTU	Nephelometric Turbidity Units
OC	organic carbon
ORP	Oxidation Reduction Potential
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
pg/L	picograms per liter
PSEP	Puget Sound Estuary Program
R	rejected during data validation review
RAL	Remedial Action Level
RL	reporting limit
SCO	Sediment Cleanup Objective
SDL	sample detection limit
SIM	Selected ion monitoring
SMS	Washington State Sediment Management Standards
std units	standard units
SVOC	Semivolatile organic compound
SW	Surface water
TEQ	toxic equivalency
TPH	Total petroleum hydrocarbon
U	not detected
U*	Flagged as EMPC by the laboratory; this was changed to U (non-detect) during data validation
VOC	volatile organic compound
WA WQC	Washington State Water Quality Criteria
WQC	Water Quality Criteria

**Table V-1**  
**Sampling Locations and Analytical Methods**  
**Waste Management Eastmont Transfer Station**

Analyte	Method	Sample Location / Collection Date		
		WM-CB-03 1/22/2015	WM-FD-02 1/22/2015	WM-FT-1B 1/22/2015
<b>Water Samples</b>				
Metals (total)	EPA 200.8			●
Mercury (total, dissolved)	EPA 245.1			●
PCB Congeners	EPA 1668C			●
SVOCs	SW 8270D-Low			●
Dioxins/furans	EPA 1613B			●
Alkalinity/Bicarbonate/Carbonate	SM2320B			●
Anions	EPA 300.0			●
Specific Conductance	EPA 120.1			●
pH	SM 4500H+B			●
Total organic carbon	SM 5310B			●
Dissolved organic carbon	SM 5310B			●
Total suspended solids	SM 2540D			●
<b>Solids Samples</b>				
Metals (total)	SW 6020	●	●	
Mercury	SW 7471A	●	●	
PCB Aroclors	EPA 8082	●	●	
PCB Congeners	EPA 1668C	●	●	
Dioxins/furans	EPA 1613B	●	●	
SVOCs	SW 8270D-Low	●	●	
VOCs	SW 8260B-Low	●	●	
TPH-diesel/motor oil	NWTPH-Dx	●	●	
TPH-gasoline	NWTPH-Gx	●	●	
Grain size	PSEP Plumb 1981	●	●	
Total organic carbon	PSEP 9060	●	●	

Bullet indicates a sample was collected for the listed analyte at the specified location.

**Table V-2. Water Quality Data - Field Measurements  
Waste Management Eastmont Transfer Station**

Location ID			WM-FT-1B
Collection Date			1/22/2015
Analyte	ISGP Benchmark	Units	Result
<b>Field Parameters</b>			
Flow	--	Yes/No	No
pH	5.0 to 9.0	std units	6.8
Conductivity	--	mS/cm	0.36
Temperature	--	degrees C	9.9
Total Dissolved Solids	--	mg/L	230
Turbidity	25	NTU	<b>65</b>
Oil & Grease	No visible sheen	Yes/No	No
Dissolved Oxygen	--	mg/L	1.4
ORP	--	mV	200

Results in **bold** exceed the ISGP benchmark.

**Table V-3. Water Sample Results  
Waste Management Eastmont Transfer Station**

	Location ID					WM-FT-1B
	Collection Date					1/22/2015
Analyte	ISGP Benchmark	WA WQC		NTR WQC	NR WQC	Result
		Marine		HHO	HHO	
		Chronic	Acute			
<b>Total Metals (µg/L)</b>						
Antimony	--	--	--	--	--	<b>1.9</b>
Arsenic	150	36	69	--	--	<b>1.7</b>
Beryllium	--	--	--	--	--	< 0.40 U
Cadmium	2.1	9.4	42	--	--	<b>0.15 J</b>
Chromium	--	--	--	--	--	<b>1.8</b>
Chromium, hexavalent	--	--	--	--	--	na
Copper	14	3.7	5.8	--	--	<b>8.4</b>
Lead	81.6	8.5	221	--	--	<b>17</b>
Mercury	1.4	0.025	2.1	--	--	<b>0.042 J</b>
Nickel	--	8.3	75	--	--	<b>5.2</b>
Selenium	5	71	291	--	--	< 1.0 U
Silver	3.8	--	2.2	--	--	< 0.40 U
Thallium	--	--	--	--	--	< 1.0 U
Zinc	117	86	95	--	--	<b>370</b>
<b>PCB Congeners (µg/L) <sup>a</sup></b>						
Total PCB Congeners	--	0.03	10	1.70E-04	6.40E-05	<b>0.012 J</b>
PCB TEQ, nd SDL*0	--	0.03	10	--	--	<b>3.84E-08 J</b>
PCB TEQ, nd SDL*0.5	--	0.03	10	--	--	<b>1.48E-06 J</b>
PCB TEQ, nd SDL*1	--	0.03	10	--	--	<b>2.92E-06 J</b>
<b>Dioxins and Furans (pg/L) <sup>a</sup></b>						
2,3,7,8-TCDD	--	--	--	0.014	0.0051	< 0.991 U
1,2,3,7,8-PeCDD	--	--	--	--	--	< 1.17 U
1,2,3,4,7,8-HxCDD	--	--	--	--	--	< 1.92 U
1,2,3,6,7,8-HxCDD	--	--	--	--	--	< 3.00 U*
1,2,3,7,8,9-HxCDD	--	--	--	--	--	< 1.98 U
1,2,3,4,6,7,8-HpCDD	--	--	--	--	--	<b>75.1</b>
OCDD	--	--	--	--	--	<b>770</b>
2,3,7,8-TCDF	--	--	--	--	--	< 0.91 U
1,2,3,7,8-PeCDF	--	--	--	--	--	< 1.13 U
2,3,4,7,8-PeCDF	--	--	--	--	--	< 1.25 U
1,2,3,4,7,8-HxCDF	--	--	--	--	--	< 0.887 U*
1,2,3,6,7,8-HxCDF	--	--	--	--	--	<b>0.792 J</b>
1,2,3,7,8,9-HxCDF	--	--	--	--	--	< 0.617 U
2,3,4,6,7,8-HxCDF	--	--	--	--	--	< 0.871 U*
1,2,3,4,6,7,8-HpCDF	--	--	--	--	--	<b>28.6</b>
1,2,3,4,7,8,9-HpCDF	--	--	--	--	--	< 0.826 U
OCDF	--	--	--	--	--	<b>35.7 J</b>
Total TCDD	--	--	--	--	--	< 0.991 U
Total PeCDD	--	--	--	--	--	< 1.18 U
Total HxCDD	--	--	--	--	--	<b>8.19 J</b>
Total HpCDD	--	--	--	--	--	<b>137</b>
Total TCDF	--	--	--	--	--	< 1.01 U
Total PeCDF	--	--	--	--	--	< 1.60 U*
Total HxCDF	--	--	--	--	--	<b>17.3 J</b>
Total HpCDF	--	--	--	--	--	<b>56.9</b>
Dioxin/Furan TEQ, nd SDL*0	--	--	--	--	--	<b>1.36 J</b>
Dioxin/Furan TEQ, nd SDL*0.5	--	--	--	--	--	<b>3.16 J</b>
Dioxin/Furan TEQ, nd SDL*1	--	--	--	--	--	<b>4.96 J</b>



**Table V-3. Water Sample Results  
Waste Management Eastmont Transfer Station**

	Location ID					WM-FT-1B
	Collection Date					1/22/2015
Analyte	ISGP Benchmark	WA WQC		NTR WQC	NR WQC	Result
		Marine		HHO	HHO	
		Chronic	Acute			
<b>PAHs (µg/L)</b>						
1-Methylnaphthalene	--	--	--	--	--	< 0.29 U
2-Chloronaphthalene	--	--	--	--	1,600	< 0.29 U
2-Methylnaphthalene	--	--	--	--	--	<b>0.18 J</b>
Acenaphthene	--	--	--	--	990	<b>0.10 J</b>
Acenaphthylene	--	--	--	--	--	< 0.39 U
Anthracene	--	--	--	110,000	40,000	<b>0.11 J</b>
Benzo(a)anthracene	--	--	--	0.031	0.018	<b>0.11 J</b>
Benzo(a)pyrene	--	--	--	0.031	0.018	< 0.19 U
Benzo(b)fluoranthene	--	--	--	0.031	0.018	< 0.39 U
Benzo(g,h,i)perylene	--	--	--	--	--	< 0.29 UJ
Benzo(k)fluoranthene	--	--	--	0.031	0.018	< 0.29 U
Chrysene	--	--	--	0.031	0.018	<b>0.13 J</b>
Dibenz(a,h)anthracene	--	--	--	0.031	0.018	< 0.29 UJ
Dibenzofuran	--	--	--	--	--	< 1.9 U
Fluoranthene	--	--	--	370	140	<b>0.27</b>
Fluorene	--	--	--	14,000	5,300	<b>0.19 J</b>
Indeno(1,2,3-cd)pyrene	--	--	--	0.031	0.018	< 0.29 UJ
Naphthalene	--	--	--	--	--	< 1.9 U
Phenanthrene	--	--	--	--	--	<b>0.77</b>
Pyrene	--	--	--	11,000	4,000	<b>0.25 J</b>
Total Benzofluoranthenes	--	--	--	--	--	< 0.39 U
Total HPAHs	--	--	--	--	--	<b>0.76 J</b>
Total LPAHs	--	--	--	--	--	<b>1.17 J</b>
Total PAHs	--	--	--	--	--	<b>1.93 J</b>
cPAHs, nd RL*0	--	--	--	--	--	<b>0.012 J</b>
cPAHs, nd RL*0.5	--	--	--	--	--	<b>0.17 J</b>
cPAHs, nd RL*1	--	--	--	--	--	<b>0.33 J</b>
<b>Phthalates (µg/L)</b>						
bis(2-Ethylhexyl)phthalate	--	--	--	5.9	2.2	< 15 U
Butylbenzylphthalate	--	--	--	--	1,900	<b>1.5 J</b>
Di-n-Butylphthalate	--	--	--	12,000	4,500	< 1.9 U
Diethylphthalate	--	--	--	120,000	44,000	<b>0.88 J</b>
Dimethylphthalate	--	--	--	2,900,000	1,100,000	< 1.9 U
Di-n-Octyl phthalate	--	--	--	--	--	< 1.9 U
<b>Phenols (µg/L)</b>						
2,3,4,6-Tetrachlorophenol	--	--	--	--	--	< 3.4 U
2,4,5-Trichlorophenol	--	--	--	--	3,600	< 1.9 U
2,4,6-Trichlorophenol	--	--	--	6.5	2.4	< 2.9 U
2,4-Dichlorophenol	--	--	--	790	290	< 1.9 U
2,4-Dimethylphenol	--	--	--	--	850	< 9.7 U
2,4-Dinitrophenol	--	--	--	14,000	5,300	< 24 UJ
2-Chlorophenol	--	--	--	--	150	< 1.9 U
2-Methylphenol	--	--	--	--	--	< 1.9 U
2-Nitrophenol	--	--	--	--	--	< 1.9 U
4,6-Dinitro-2-Methylphenol	--	--	--	765	280	< 19 U
4-Chloro-3-methylphenol	--	--	--	--	--	< 1.9 U
4-Methylphenol	--	--	--	--	--	<b>12</b>
4-Nitrophenol	--	--	--	--	--	< 15 U

**Table V-3. Water Sample Results  
Waste Management Eastmont Transfer Station**

	Location ID					WM-FT-1B	
	Collection Date					1/22/2015	
Analyte	ISGP Benchmark	WA WQC		NTR WQC	NR WQC	Result	
		Marine		HHO	HHO		
		Chronic	Acute				
Pentachlorophenol	--	7.9	13	8.2	3.0	1.7	J
Phenol	--	--	--	4,600,000	860,000	0.92	J
<b>Other SVOCs (µg/L)</b>							
1,2,4-Trichlorobenzene	--	--	--	--	70	< 1.9	U
1,2-Dichlorobenzene	--	--	--	17,000	1,300	< 1.9	U
1,3-Dichlorobenzene	--	--	--	2,600	960	< 1.9	U
1,4-Dichlorobenzene	--	--	--	2,600	190	< 1.9	U
2,4-Dinitrotoluene	--	--	--	9.1	3.4	< 1.9	U
2,6-Dinitrotoluene	--	--	--	--	--	< 1.9	U
2-Nitroaniline	--	--	--	--	--	< 1.9	U
3,3'-Dichlorobenzidine	--	--	--	0.077	0.028	< 10	U
3-Nitroaniline	--	--	--	--	--	< 1.9	U
4-Bromophenyl-phenylether	--	--	--	--	--	< 1.9	U
4-Chloroaniline	--	--	--	--	--	< 1.9	U
4-Chlorophenyl-phenylether	--	--	--	--	--	< 1.9	U
4-Nitroaniline	--	--	--	--	--	< 2.9	U
Benzoic Acid	--	--	--	--	--	<b>10</b>	J
Benzyl Alcohol	--	--	--	--	--	1.2	J
2,2'-Oxybis(1-Chloropropane)	--	--	--	170,000	65,000	< 1.9	U
bis(2-Chloroethoxy) Methane	--	--	--	--	--	< 1.9	U
Bis-(2-Chloroethyl) Ether	--	--	--	1.4	0.53	< 1.9	U
Carbazole	--	--	--	--	--	< 1.9	U
Hexachlorobenzene	--	--	--	0.00077	0.00029	< 1.9	U
Hexachlorobutadiene	--	--	--	50	18	< 2.9	U
Hexachlorocyclopentadiene	--	--	--	17,000	1,100	< 9.7	U
Hexachloroethane	--	--	--	8.9	3.3	< 2.9	U
Isophorone	--	--	--	600	960	< 1.9	U
Nitrobenzene	--	--	--	1,900	690	< 1.9	U
N-Nitrosodimethylamine	--	--	--	8.1	3.0	< 9.7	U
N-Nitroso-Di-N-Propylamine	--	--	--	--	0.51	< 1.9	U
N-Nitrosodiphenylamine	--	--	--	16	6.0	< 1.9	U

Results in **bold** are detections.

Results that are shaded in gray exceed one or more criteria.

a - Total PCB congeners and PCB/dioxin/furan TEQs include only congeners that met identification criteria as required by EPA Method 1668C (PCBs) or EPA Method 1613B (dioxins/furans).

PCB and dioxin/furan congeners identified with a U\* qualifier were tagged as "estimated maximum possible concentrations" by the laboratory. This was changed to non-detect (U) during data validation.

**Table V-4. Water Sample Results Compared to Criteria  
Waste Management Eastmont Transfer Station**

Location ID	WM-FT-1B				
Collection Date	1/22/2015				
Analyte	Exceedance Factor				
	ISGP Benchmark	WA Marine Chronic	WA Marine Acute	NTR Human Health - Organisms	NR Human Health - Organisms
<b>Total Metals</b>					
Copper		2.2	1.5		
Mercury		1.7			
Zinc	3.2	4.3	3.9		
<b>PCB Congeners</b>					
Total PCB Congeners				71	189
<b>PAHs</b>					
Benzo(a)anthracene				3.5	
Chrysene				4.2	7.2

Exceedance Factors (EFs) are presented for detected concentrations only.

Only chemicals with EF > 1 are shown.

The EFs are calculated (result divided by criterion) and have no regulatory relevance. They provide an indication of the general magnitude of the concentration relative to the WA, NTR, or NR Water Quality Criteria.

**Table V-5. Water Sample Results - PCB Congeners  
Waste Management Eastmont Transfer Station**

Location ID	WM-FT-1B
Collection Date	1/22/2015
Analyte	Result
Total PCB Congeners (µg/L)	0.0121 J
Total PCB Congeners (pg/L)	12,100 J
<b>Total Mono-CB (pg/L)</b>	31.3 J
PCB-1	15.4
PCB-2	4.09 J
PCB-3	11.8
<b>Total Di-CB (pg/L)</b>	383
PCB-4/10	26.0
PCB-5/8	71.7
PCB-6	16.3
PCB-7/9	< 2.46 U
PCB-11	239
PCB-12/13	< 2.61 U
PCB-14	< 2.24 U
PCB-15	30.1
<b>Total Tri-CB (pg/L)</b>	623 J
PCB-16/32	80.2
PCB-17	42.9
PCB-18	121
PCB-19	14.1
PCB-20/21/33	74.8
PCB-22	41.5
PCB-23	< 3.45 U
PCB-24/27	9.54 J
PCB-25	10.5
PCB-26	21.8
PCB-28	90.5
PCB-29	< 3.45 U
PCB-30	< 0.909 U
PCB-31	84.7
PCB-34	< 3.21 U
PCB-35	< 3.27 U
PCB-36	< 3.17 U
PCB-37	31.4
PCB-38	< 3.31 U
PCB-39	< 3.26 U
<b>Total Tetra-CB (pg/L)</b>	1,540 J
PCB-40	22.4
PCB-41/64/71/72	117
PCB-42/59	33.0
PCB-43/49	113
PCB-44	204
PCB-45	16.6
PCB-46	8.28
PCB-47	30.9
PCB-48/75	18.8
PCB-50	< 4.05 U
PCB-51	6.28
PCB-52/69	305
PCB-53	18.5
PCB-54	< 3.08 U
PCB-55	4.84 J

**Table V-5. Water Sample Results - PCB Congeners  
Waste Management Eastmont Transfer Station**

Location ID	WM-FT-1B
Collection Date	1/22/2015
Analyte	Result
PCB-56/60	88.2
PCB-57	< 3.03 U
PCB-58	< 2.98 U
PCB-61/70	322
PCB-62	< 3.45 U
PCB-63	< 3.97 U*
PCB-65	< 3.56 U
PCB-67	< 4.90 U*
PCB-68	< 2.91 U
PCB-73	< 3.29 U
PCB-74	78.5
PCB-76/66	123
PCB-77	14.9
PCB-78	< 3.84 U
PCB-79	6.53
PCB-80	< 2.80 U
PCB-81	4.10 J
<b>Total Penta-CB (pg/L)</b>	<b>4,530 J</b>
PCB-82	123
PCB-83	< 5.48 U
PCB-84/92	295
PCB-85/116	97.0
PCB-86	< 8.82 U
PCB-87/117/125	306
PCB-88/91	79.5
PCB-89	5.95
PCB-90/101	714
PCB-93	< 6.95 U
PCB-94	< 6.53 U
PCB-95/98/102	499
PCB-96	< 4.83 U
PCB-97	216
PCB-99	283
PCB-100	< 5.47 U
PCB-103	< 5.45 U
PCB-104	< 4.16 U
PCB-105	257
PCB-106/118	744
PCB-107/109	47.3
PCB-108/112	26.1
PCB-110	762
PCB-111/115	14.5
PCB-113	< 5.81 U
PCB-114	< 13.0 U*
PCB-119	7.80
PCB-120	< 4.59 U
PCB-121	< 4.19 U
PCB-122	< 22.5 U
PCB-123	13.8
PCB-124	38.3
PCB-126	< 21.3 U
PCB-127	< 20.1 U

**Table V-5. Water Sample Results - PCB Congeners  
Waste Management Eastmont Transfer Station**

Location ID	WM-FT-1B
Collection Date	1/22/2015
Analyte	Result
<b>Total Hexa-CB (pg/L)</b>	3,320 J
PCB-128/162	171
PCB-129	55.5
PCB-130	52.8
PCB-131	< 26.1 U
PCB-132/161	209
PCB-133/142	28.5 J
PCB-134/143	< 44.0 U*
PCB-135	83.3
PCB-136	90.7
PCB-137	52.5
PCB-138/163/164	758
PCB-139/149	540
PCB-140	< 35.2 U
PCB-141	138
PCB-144	41.5 J
PCB-145	< 25.0 U
PCB-146/165	88.7 J
PCB-147	20.2 J
PCB-148	< 33.5 U
PCB-150	< 24.2 U
PCB-151	132
PCB-152	< 23.4 U
PCB-153	586
PCB-154	< 30.7 U
PCB-155	< 22.8 U
PCB-156	107
PCB-157	26.2 J
PCB-158/160	99.6 J
PCB-159	< 18.0 U
PCB-166	< 19.2 U
PCB-167	42.6 J
PCB-168	< 16.2 U
PCB-169	< 24.9 U
<b>Total Hepta-CB (pg/L)</b>	1,120 J
PCB-170	176
PCB-171	< 45.4 U*
PCB-172	38.4 J
PCB-173	< 31.5 U
PCB-174	< 208 U*
PCB-175	< 20.3 U
PCB-176	< 23.5 U*
PCB-177	< 114 U*
PCB-178	41.2 J
PCB-179	81.4
PCB-180	424
PCB-181	< 25.8 U
PCB-182/187	244
PCB-183	93.9
PCB-184	< 15.9 U
PCB-185	< 24.8 U
PCB-186	< 14.6 U

**Table V-5. Water Sample Results - PCB Congeners  
Waste Management Eastmont Transfer Station**

Location ID	WM-FT-1B
Collection Date	1/22/2015
Analyte	Result
PCB-188	< 13.9 U
PCB-189	< 20.8 U
PCB-190	< 24.5 U*
PCB-191	< 18.7 U
PCB-192	< 20.0 U
PCB-193	20.4 J
<b>Total Octa-CB (pg/L)</b>	360 J
PCB-194	< 55.1 U*
PCB-195	55.4
PCB-196/203	134
PCB-197	< 24.1 U
PCB-198	< 37.3 U
PCB-199	127
PCB-200	< 27.2 U
PCB-201	< 25.6 U
PCB-202	43.9 J
PCB-204	< 26.2 U
PCB-205	< 26.9 U
<b>Total Nona-CB (pg/L)</b>	124 J
PCB-206	96.2
PCB-207	< 17.7 U
PCB-208	27.4 J
<b>Deca-CB (pg/L)</b>	41.0 J
PCB-209	41.0 J
PCB TEQ, nd SDL*0	0.0384 J
PCB TEQ, nd SDL*0.5	1.48 J
PCB TEQ, nd SDL*1	2.92 J

Total PCB congeners and total PCB homologs include only congeners that met identification criteria as required by EPA Method 1668C.

**Table V-6. Water Sample Results - Conventionals  
Waste Management Eastmont Transfer Station**

		Location ID	WM-FT-1B
		Collection	1/22/2015
Analyte	ISGP Benchmark	Units	Result
<b>Conventionals</b>			
Alkalinity	--	mg/L	100
Bicarbonate	--	mg/L CaCO <sub>3</sub>	15
Carbonate	--	mg/L CaCO <sub>3</sub>	86
Chloride	--	mg/L	12
Specific Conductance	--	µmhos/cm	360
Hydroxide	--	mg/L CaCO <sub>3</sub>	na
Nitrate	--	mg/L	< 0.9 U
pH	5-9	std units	7.05 J
Salinity	--	mg/L	na
Sulfate	--	mg/L	72
Dissolved Organic Carbon	--	mg/L	19 J
Total Organic Carbon	--	mg/L	19.0 J
Total Suspended Solids <sup>a</sup>	30	mg/L	21
Turbidity	25	NTU	na
Oil & Grease	--	mg/L	na
Oil & Grease - Polar	--	mg/L	na
Oil & Grease - Silica Gel Treated	--	mg/L	na

a - The ISGP benchmark for Total Suspended Solids becomes effective on January 1, 2017.

Shaded results exceed the ISGP benchmark for that parameter.



**Table V-7. Solids Sample Results  
Waste Management Eastmont Transfer Station**

				Location ID	WM-CB-03	WM-FD-02
				Collection Date	1/22/2015	1/22/2015
Analyte	SMS Criteria		Unit	Result	Result	
	SCO/ LAET <sup>a</sup>	CSL/ 2LAET				
<b>Metals (Total) (mg/kg)</b>						
Antimony	--	--	mg/kg	14		16
Arsenic	57	93	mg/kg	10		12
Beryllium	--	--	mg/kg	0.26 J		0.31 J
Cadmium	5.1	6.7	mg/kg	1.7		2.0
Chromium	260	270	mg/kg	79 J		85 J
Copper	390	390	mg/kg	250		300
Lead	450	530	mg/kg	230		250
Mercury	0.41	0.59	mg/kg	0.68		1.1
Nickel	--	--	mg/kg	52 J		68 J
Selenium	--	--	mg/kg	0.83 J		0.9 J
Silver	6.1	6.1	mg/kg	0.94		1.1
Thallium	--	--	mg/kg	< 0.93 U		< 1.2 U
Zinc	410	960	mg/kg	1,800		1,900
<b>PCB Aroclors (µg/kg)</b>						
Aroclor 1016	--	--	µg/kg	< 29 UJ		< 31 U
Aroclor 1221	--	--	µg/kg	< 32 UJ		< 34 U
Aroclor 1232	--	--	µg/kg	< 32 UJ		< 34 U
Aroclor 1242	--	--	µg/kg	< 29 UJ		< 31 U
Aroclor 1248	--	--	µg/kg	< 29 UJ		< 31 U
Aroclor 1254	--	--	µg/kg	< 29 UJ		< 31 U
Aroclor 1260	--	--	µg/kg	76 J		< 31 U
Total PCB Aroclors	130	1,000	µg/kg	76 J		< 34 U
<b>PCB Congeners (µg/kg)<sup>b</sup></b>						
Total PCB Congeners	130	1,000	µg/kg	408 J		484 J
PCB TEQ, nd SDL*0	--	--	µg/kg	0.024		0.030 J
PCB TEQ, nd SDL*0.5	--	--	µg/kg	0.026		0.034 J
PCB TEQ, nd SDL*1	--	--	µg/kg	0.027		0.038 J
<b>Dioxins and Furans (ng/kg)</b>						
2,3,7,8-TCDD	--	--	ng/kg	1.36		1.36
1,2,3,7,8-PeCDD	--	--	ng/kg	5.46		5.53
1,2,3,4,7,8-HxCDD	--	--	ng/kg	9.93		10.3
1,2,3,6,7,8-HxCDD	--	--	ng/kg	37.5		39.1
1,2,3,7,8,9-HxCDD	--	--	ng/kg	23.3		24.6
1,2,3,4,6,7,8-HpCDD	--	--	ng/kg	1,120		1,120
OCDD	--	--	ng/kg	12,300 J		11,800 J
2,3,7,8-TCDF	--	--	ng/kg	3.31		3.43
1,2,3,7,8-PeCDF	--	--	ng/kg	2.68		2.78
2,3,4,7,8-PeCDF	--	--	ng/kg	3.49		4.17
1,2,3,4,7,8-HxCDF	--	--	ng/kg	11.1		11.6
1,2,3,6,7,8-HxCDF	--	--	ng/kg	8.96		8.94
1,2,3,7,8,9-HxCDF	--	--	ng/kg	2.67		2.62
2,3,4,6,7,8-HxCDF	--	--	ng/kg	10.7		11.2
1,2,3,4,6,7,8-HpCDF	--	--	ng/kg	204		209
1,2,3,4,7,8,9-HpCDF	--	--	ng/kg	11		11.7
OCDF	--	--	ng/kg	456		474
Dioxin/Furan TEQ, nd SDL*0	25	--	ng/kg	35.9 J		36.5 J
Dioxin/Furan TEQ, nd SDL*0.5	25	--	ng/kg	35.9 J		36.5 J
Dioxin/Furan TEQ, nd SDL*1	25	--	ng/kg	35.9 J		36.5 J

**Table V-7. Solids Sample Results  
Waste Management Eastmont Transfer Station**

				Location ID	WM-CB-03	WM-FD-02
				Collection Date	1/22/2015	1/22/2015
Analyte	SMS Criteria		Unit	Result	Result	
	SCO/ LAET <sup>a</sup>	CSL/ 2LAET				
Total TCDD	--	--	ng/kg	21.7 J	22.8 J	
Total TCDF	--	--	ng/kg	68.5 J	70.8	
Total PeCDD	--	--	ng/kg	49.2	50.4	
Total PeCDF	--	--	ng/kg	101 J	107	
Total HxCDD	--	--	ng/kg	306	305	
Total HxCDF	--	--	ng/kg	230	238	
Total HpCDD	--	--	ng/kg	2,250	2,220	
Total HpCDF	--	--	ng/kg	535 J	549	
<b>PAHs (µg/kg)</b>						
1-Methylnaphthalene	--	--	µg/kg	750	910	
2-Chloronaphthalene	--	--	µg/kg	< 29 U	< 32 U	
2-Methylnaphthalene	670	1,400	µg/kg	1,200	1,500	
Acenaphthene	500	730	µg/kg	120	110	
Acenaphthylene	1,300	1,300	µg/kg	72	110	
Anthracene	960	4,400	µg/kg	180	200	
Benzo(a)anthracene	1,300	1,600	µg/kg	420	530	
Benzo(a)pyrene	1,600	3,000	µg/kg	390	390	
Benzo(g,h,i)perylene	670	720	µg/kg	300	290	
Chrysene	1,400	2,800	µg/kg	1,100	1,400	
Dibenz(a,h)anthracene	230	540	µg/kg	< 59 U	< 65 U	
Dibenzofuran	540	700	µg/kg	120 J	< 160 U	
Fluoranthene	1,700	2,500	µg/kg	1,600	1,900	
Fluorene	540	1,000	µg/kg	360	390	
Indeno(1,2,3-cd)pyrene	600	690	µg/kg	170	180	
Naphthalene	2,100	2,400	µg/kg	280	320	
Phenanthrene	1,500	5,400	µg/kg	1,400	1,600	
Pyrene	2,600	3,300	µg/kg	1,900	2,200	
Total Benzofluoranthenes	3,200	3,600	µg/kg	980	1,200	
Total HPAHs	12,000	17,000	µg/kg	6,900	8,100	
Total LPAHs	5,200	13,000	µg/kg	2,400	2,700	
cPAHs, nd RL*0	1,000	--	µg/kg	560	590	
cPAHs, nd RL*0.5	1,000	--	µg/kg	560	600	
cPAHs, nd RL*1	1,000	--	µg/kg	560	600	
<b>Phthalates (µg/kg)</b>						
bis(2-Ethylhexyl)phthalate	1,300	1,900	µg/kg	31,000	42,000	
Butylbenzylphthalate	63	900	µg/kg	5,900	8,300	
Di-n-Butylphthalate	1,400	5,100	µg/kg	280 J	400 J	
Diethylphthalate	200	1,200	µg/kg	< 290 U	< 320 U	
Dimethylphthalate	71	160	µg/kg	330	340	
Di-n-Octyl phthalate	6,200	--	µg/kg	700 J	1,300	
<b>Phenols (µg/kg)</b>						
2,4,5-Trichlorophenol	--	--	µg/kg	< 150 U	< 160 U	
2,4,6-Trichlorophenol	--	--	µg/kg	< 220 U	< 240 U	
2,4-Dichlorophenol	--	--	µg/kg	< 150 U	< 160 U	
2,4-Dimethylphenol	29	29	µg/kg	< 150 U	< 160 U	
2,4-Dinitrophenol	--	--	µg/kg	< 1500 U	< 1600 U	
2-Chlorophenol	--	--	µg/kg	< 150 U	< 160 U	
2-Methylphenol	63	63	µg/kg	< 150 U	< 160 U	
2-Nitrophenol	--	--	µg/kg	< 150 U	< 160 U	

**Table V-7. Solids Sample Results  
Waste Management Eastmont Transfer Station**

				Location ID	WM-CB-03	WM-FD-02
				Collection Date	1/22/2015	1/22/2015
Analyte	SMS Criteria		Unit	Result	Result	
	SCO/ LAET <sup>a</sup>	CSL/ 2LAET				
4,6-Dinitro-2-Methylphenol	--	--	µg/kg	< 1,500 U	< 1,600 U	
4-Chloro-3-methylphenol	--	--	µg/kg	< 150 U	< 160 U	
4-Methylphenol	670	670	µg/kg	<b>330</b>	<b>360</b>	
4-Nitrophenol	--	--	µg/kg	< 1,500 U	< 1,600 U	
Pentachlorophenol	360	690	µg/kg	<b>130 J</b>	< 320 U	
Phenol	420	1,200	µg/kg	<b>120 J</b>	<b>98 J</b>	
<b>Other SVOCs (µg/kg)</b>						
1,2,4-Trichlorobenzene	31	51	µg/kg	< 73 U	< 81 U	
1,2-Dichlorobenzene	35	50	µg/kg	< 81 U	< 89 U	
1,3-Dichlorobenzene	--	--	µg/kg	< 73 U	< 81 U	
1,4-Dichlorobenzene	110	120	µg/kg	<b>44 J</b>	<b>66 J</b>	
2,4-Dinitrotoluene	--	--	µg/kg	< 150 U	< 160 U	
2,6-Dinitrotoluene	--	--	µg/kg	< 150 U	< 160 U	
2-Nitroaniline	--	--	µg/kg	< 150 U	< 160 U	
3,3'-Dichlorobenzidine	--	--	µg/kg	< 290 U	< 320 U	
3-Nitroaniline	--	--	µg/kg	< 150 U	< 160 U	
4-Bromophenyl-phenylether	--	--	µg/kg	< 150 U	<b>32 J</b>	
4-Chloroaniline	--	--	µg/kg	< 150 U	< 160 U	
4-Chlorophenyl-phenylether	--	--	µg/kg	< 150 U	< 160 U	
4-Nitroaniline	--	--	µg/kg	< 150 U	< 160 U	
Benzoic Acid	650	650	µg/kg	< 3,700 U	< 4,100 U	
Benzyl Alcohol	57	73	µg/kg	<b>7,000</b>	<b>810</b>	
2,2'-Oxybis(1-Chloropropane)	--	--	µg/kg	< 370 U	< 410 U	
bis(2-Chloroethoxy) Methane	--	--	µg/kg	< 150 U	< 160 U	
Bis-(2-Chloroethyl) Ether	--	--	µg/kg	< 150 U	< 160 U	
Carbazole	--	--	µg/kg	<b>180</b>	<b>160</b>	
Hexachlorobenzene	22	70	µg/kg	< 73 U	< 81 U	
Hexachlorobutadiene	11	120	µg/kg	< 73 U	< 81 U	
Hexachlorocyclopentadiene	--	--	µg/kg	< 150 U	< 160 U	
Hexachloroethane	--	--	µg/kg	< 150 U	< 160 U	
Isophorone	--	--	µg/kg	< 150 U	< 160 U	
Nitrobenzene	--	--	µg/kg	< 150 U	< 160 U	
N-Nitrosodimethylamine	--	--	µg/kg	< 1,500 U	< 1,600 U	
N-Nitroso-Di-N-Propylamine	--	--	µg/kg	< 150 U	< 160 U	
N-Nitrosodiphenylamine	28	40	µg/kg	<b>430</b>	<b>410</b>	
<b>VOCs (µg/kg)</b>						
1,1,1,2-Tetrachloroethane	--	--	µg/kg	< 390 U	< 860 U	
1,1,1-Trichloroethane	--	--	µg/kg	< 3.1 U	< 4 U	
1,1,2,2-Tetrachloroethane	--	--	µg/kg	< 97 U	< 220 U	
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	µg/kg	< 3.1 U	< 4 U	
1,1,2-Trichloroethane	--	--	µg/kg	< 120 U	< 260 U	
1,1-Dichloroethane	--	--	µg/kg	< 3.1 U	< 4 U	
1,1-Dichloroethene	--	--	µg/kg	< 16 U	< 20 U	
1,1-Dichloropropene	--	--	µg/kg	< 3.1 U	< 4 U	
1,2,3-Trichlorobenzene	--	--	µg/kg	< 390 U	< 860 U	
1,2,3-Trichloropropane	--	--	µg/kg	< 390 U	< 860 U	
1,2,4-Trimethylbenzene	--	--	µg/kg	<b>7,000</b>	<b>18,000</b>	
1,2-Dibromo-3-chloropropane	--	--	µg/kg	< 1,900 U	< 4,300 U	
1,2-Dibromoethane	--	--	µg/kg	< 160 U	< 340 U	
1,2-Dichloroethane	--	--	µg/kg	< 3.1 U	< 4 U	

**Table V-7. Solids Sample Results  
Waste Management Eastmont Transfer Station**

Analyte	SMS Criteria		Unit	Location ID		WM-CB-03		WM-FD-02	
	SCO/ LAET <sup>a</sup>	CSL/ 2LAET		Collection Date		1/22/2015		1/22/2015	
				Result	Result	Result	Result		
1,2-Dichloropropane	--	--	µg/kg	<	3.1	U	<	4	U
1,3,5-Trimethylbenzene	--	--	µg/kg		<b>2,400</b>			<b>6,300</b>	
1,3-Dichloropropane	--	--	µg/kg	<	390	U	<	860	U
2,2-Dichloropropane	--	--	µg/kg	<	16	U	<	20	U
2-Chloroethylvinylether	--	--	µg/kg	<	1,900	U	<	4,300	U
2-Chlorotoluene	--	--	µg/kg	<	390	U	<	860	U
2-Hexanone	--	--	µg/kg	<	1,900	U	<	4,300	U
4-Chlorotoluene	--	--	µg/kg	<	390	U	<	860	U
Acetone	--	--	µg/kg		<b>1,200</b>	<b>J</b>		<b>1,700</b>	
Acrolein	--	--	µg/kg	<	93	U	<	120	U
Acrylonitrile	--	--	µg/kg	<	31	U	<	40	U
Benzene	--	--	µg/kg		<b>6.4</b>	<b>J</b>		<b>9.0</b>	
Bromobenzene	--	--	µg/kg	<	390	U	<	860	U
Bromochloromethane	--	--	µg/kg	<	6.2	U	<	8	U
Bromoform	--	--	µg/kg	<	390	U	<	860	U
Bromomethane	--	--	µg/kg	<	3.1	U	<	4	U
Carbon Disulfide	--	--	µg/kg		<b>19</b>	<b>J</b>		<b>30</b>	
Carbon Tetrachloride	--	--	µg/kg	<	3.1	U	<	4	U
Chlorobenzene	--	--	µg/kg	<	390	U	<	860	U
Dibromochloromethane	--	--	µg/kg	<	3.1	U	<	4	U
Chloroethane	--	--	µg/kg	<	3.1	U	<	4	U
Chloroform	--	--	µg/kg	<	3.1	U	<	4	U
Chloromethane	--	--	µg/kg	<	3.1	U	<	4	U
cis-1,2-Dichloroethene	--	--	µg/kg	<	3.1	U	<	4	U
cis-1,3-Dichloropropene	--	--	µg/kg	<	160	U	<	340	U
Dibromomethane	--	--	µg/kg	<	3.1	U	<	4	U
Bromodichloromethane	--	--	µg/kg	<	3.1	U	<	4	U
Dichlorodifluoromethane	--	--	µg/kg	<	3.1	U	<	4	U
Ethylbenzene	--	--	µg/kg		<b>750</b>			<b>1,600</b>	
Isopropylbenzene	--	--	µg/kg		<b>240</b>	<b>J</b>		<b>600</b>	<b>J</b>
m,p-Xylene	--	--	µg/kg		<b>2,100</b>			<b>4,300</b>	
2-Butanone	--	--	µg/kg		<b>400</b>	<b>J</b>		<b>540</b>	
Iodomethane	--	--	µg/kg	<	47	U	<	60	U
4-Methyl-2-Pentanone (MIBK)	--	--	µg/kg		<b>270</b>	<b>J</b>		<b>690</b>	<b>J</b>
Methyl tert-Butyl Ether	--	--	µg/kg	<	3.1	U	<	4	U
Methylene Chloride	--	--	µg/kg	<	47	U	<	60	U
n-Butylbenzene	--	--	µg/kg		<b>1,900</b>			<b>5,300</b>	
n-Propylbenzene	--	--	µg/kg		<b>770</b>			<b>2,000</b>	
o-Xylene	--	--	µg/kg		<b>1,100</b>			<b>2,100</b>	
4-Isopropyltoluene	--	--	µg/kg		<b>600</b>			<b>1,400</b>	
sec-Butylbenzene	--	--	µg/kg		<b>410</b>			<b>1,100</b>	
Styrene	--	--	µg/kg		300	<b>J</b>		<b>390</b>	<b>J</b>
tert-Butylbenzene	--	--	µg/kg	<	390	U	<	860	U
Tetrachloroethene	--	--	µg/kg		<b>33</b>	<b>J</b>	<	430	U
Toluene	--	--	µg/kg		<b>5,200</b>			<b>11,000</b>	
Total Xylenes	--	--	µg/kg		<b>3,200</b>			<b>6,400</b>	
trans-1,2-Dichloroethene	--	--	µg/kg	<	3.1	U	<	4	U
trans-1,3-Dichloropropene	--	--	µg/kg	<	160	U	<	340	U
trans-1,4-Dichloro-2-butene	--	--	µg/kg	<	1,900	U	<	4,300	U
Trichloroethene	--	--	µg/kg	<	3.1	U	<	4	U

**Table V-7. Solids Sample Results  
Waste Management Eastmont Transfer Station**

				Location ID	WM-CB-03	WM-FD-02
				Collection Date	1/22/2015	1/22/2015
Analyte	SMS Criteria		Unit	Result	Result	
	SCO/ LAET <sup>a</sup>	CSL/ 2LAET				
Trichlorofluoromethane	--	--	µg/kg	< 3.1 U	< 4 U	
Vinyl Acetate	--	--	µg/kg	< 16 U	< 24 U	
Vinyl Chloride	--	--	µg/kg	<b>8.4 J</b>	<b>12</b>	
<b>TPH (mg/kg)</b>						
Gasoline-Range Hydrocarbons	30/100	--	mg/kg	<b>300</b>	<b>510</b>	
Diesel-Range Hydrocarbons	2,000	--	mg/kg	<b>6,100 J</b>	<b>5,800 J</b>	
Motor Oil-Range Hydrocarbons	2,000	--	mg/kg	<b>33,000 J</b>	<b>32,000 J</b>	
<b>Grain size (%)</b>						
Clay	--	--	%	6.2	6.4	
Silt	--	--	%	46	52	
Sand	--	--	%	44	39	
Gravel	--	--	%	3.9	3.1	
Cobbles	--	--	%	0.0	0.0	
<b>Conventionals (%)</b>						
Total Organic Carbon	--	--	%	22	21	
Total Solids	--	--	%	33	30	

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

b - Total PCB congeners and PCB/dioxin/furan TEQs include only congeners that met identification criteria as required by EPA Method 1668C (PCBs) or EPA Method 1613B (dioxins/furans).

PCB and dioxin/furan congeners identified with a U\* qualifier were tagged as "estimated maximum possible concentrations" by the laboratory. This was changed to non-detect (U) during data validation.

Petroleum hydrocarbon results are compared to MTCA Method A cleanup levels. Two cleanup levels are available for TPH-Gasoline under MTCA Method A. The more stringent value (30 mg/kg) is applied for facilities where benzene has been detected.

Results in **bold** are detections.

**Table V-8. Solids Sample Results Compared to Dry Weight Criteria**

Location ID	WM-CB-03		WM-FD-02	
Collection Date	1/22/2015		1/22/2015	
Analyte	Exceedance Factor		Exceedance Factor	
	SCO/ LAET	CSL/ 2LAET	SCO/ LAET	CSL/ 2LAET
<b>Metals (Total)</b>				
Mercury	1.7	1.2	2.7	1.9
Zinc	4.4	1.9	4.6	2.0
<b>PCBs</b>				
Total PCB Congeners	3.1		3.7	
<b>Dioxins and Furans</b>				
Dioxin/Furan TEQ, nd SDL*0	1.4		1.5	
Dioxin/Furan TEQ, nd SDL*0.5	1.4		1.5	
Dioxin/Furan TEQ, nd SDL*1	1.4		1.5	
<b>PAHs</b>				
2-Methylnaphthalene	1.8		2.2	
Fluoranthene			1.1	
Phenanthrene			1.1	
<b>Phthalates</b>				
bis(2-Ethylhexyl)phthalate	24	16	32	22
Butylbenzylphthalate	94	6.6	132	9.2
Dimethylphthalate	4.6	2.1	4.8	2.1
<b>Other SVOCs</b>				
Benzyl Alcohol	123	96	14	11
N-Nitrosodiphenylamine	15	11	15	10
<b>TPH</b>				
Gasoline-Range Hydrocarbons	10		17	
Diesel-Range Hydrocarbons	3.1		2.9	
Motor Oil-Range Hydrocarbons	17		16	

Exceedance factors are presented for detected concentrations that exceed the SMS/AET criteria, LDW RALs (dioxins/furans and cPAHs), or MTCA Method A cleanup levels for soil (TPH).

The exceedance factors are calculated (result divided by criterion) and have no regulatory relevance. They provide an indication of the general magnitude of the concentration relative to the identified criterion.

**Table V-9. Solids Sample Results - PCB Congeners  
Waste Management Eastmont Transfer Station**

Location ID	WM-CB-03	WM-FD-02
Collection Date	1/22/2014	1/22/2014
Analyte	Result	Result
Total PCB Congeners (ng/kg) <sup>a</sup>	408,000 J	484,000 J
<b>Total Monochlorobiphenyl (ng/kg)<sup>a</sup></b>	688 J	965 J
PCB-1	308	454
PCB-2	113 J	165 J
PCB-3	267	346
<b>Total Dichlorobiphenyl (ng/kg)<sup>a</sup></b>	21,100 J	23,300
PCB-4/10	510	959
PCB-5/8	2,090	3,070
PCB-6	421	554
PCB-7/9	287	< 409 U
PCB-11	16,300	17,100
PCB-12/13	227 J	< 423 U
PCB-14	< 224 U	< 455 U
PCB-15	1,220	1,610
<b>Total Trichlorobiphenyl (ng/kg)<sup>a</sup></b>	26,700	33,100 J
PCB-16/32	2,560	4,310
PCB-17	1,260	2,320
PCB-18	3,800	7,120
PCB-19	363	745
PCB-20/21/33	4,030	4,410
PCB-22	2,000	2,310
PCB-23	< 36.1 U	< 111 U
PCB-24/27	268	447 J
PCB-25	411	383
PCB-26	990	< 866 U*
PCB-28	3,230	3,520
PCB-29	< 42.7 U	< 131 U
PCB-30	< 31.6 U	< 118 U
PCB-31	5,450	5,350
PCB-34	< 40.6 U	< 124 U
PCB-35	320	< 322 U*
PCB-36	< 65.7 U	< 131 U
PCB-37	2,020	2,180
PCB-38	< 62.6 U	< 124 U
PCB-39	< 67.3 U	< 134 U
<b>Total Tetrachlorobiphenyl (ng/kg)<sup>a</sup></b>	54,300	66,000 J
PCB-40	655	1,610
PCB-41/64/71/72	3,870	6,320
PCB-42/59	1,590	2,110
PCB-43/49	4,230	5,020
PCB-44	6,490	8,100
PCB-45	887	1,140
PCB-46	370	596
PCB-47	1,360	1,490
PCB-48/75	982	< 1,060 U*
PCB-50	< 67.3 U	< 200 U
PCB-51	246	< 344 U*
PCB-52/69	8,340	10,600
PCB-53	696	1,030
PCB-54	< 53.7 U	< 160 U
PCB-55	176	232 J
PCB-56/60	3,920	4,840

**Table V-9. Solids Sample Results - PCB Congeners  
Waste Management Eastmont Transfer Station**

Location ID	WM-CB-03	WM-FD-02
Collection Date	1/22/2014	1/22/2014
Analyte	Result	Result
PCB-57	< 63.0 U	< 179 U
PCB-58	< 66.5 U	< 189 U
PCB-61/70	10,800	11,900
PCB-62	< 73.4 U	< 182 U
PCB-63	226	260
PCB-65	< 73.2 U	< 181 U
PCB-67	195	213 J
PCB-68	< 66.5 U	< 165 U
PCB-73	< 67.0 U	< 185 U
PCB-74	2,500	2,900
PCB-76/66	5,370	6,220
PCB-77	1,070	1,140
PCB-78	< 63.2 U	< 155 U
PCB-79	170	268
PCB-80	< 55.6 U	< 139 U
PCB-81	153	< 81.9 U*
<b>Total Pentachlorobiphenyl (ng/kg)<sup>a</sup></b>	124,000 J	149,000 J
PCB-82	2,680	3,270
PCB-83	< 88.8 U	< 376 U
PCB-84/92	7,940	9,260
PCB-85/116	2,480	3,460
PCB-86	< 160 U	< 677 U
PCB-87/117/125	7,510	10,200
PCB-88/91	2,260	2,360
PCB-89	102 J	< 378 U
PCB-90/101	21,300	25,300
PCB-93	< 141 U	< 416 U
PCB-94	< 112 U	< 332 U
PCB-95/98/102	14,700	15,600
PCB-96	< 98.7 U	< 236 U
PCB-97	5,830	7,610
PCB-99	6,150	7,520
PCB-100	< 120 U	< 286 U
PCB-103	< 117 U	< 280 U
PCB-104	< 94.8 U	< 227 U
PCB-105	8,290	8,760
PCB-106/118	19,100	23,200
PCB-107/109	1,090	1,180
PCB-108/112	796	1,190
PCB-110	21,400	28,000
PCB-111/115	424	< 393 U*
PCB-113	< 85.3 U	< 303 U
PCB-114	370	573
PCB-119	288	445
PCB-120	< 80.4 U	< 340 U
PCB-121	< 73.6 U	< 217 U
PCB-122	230	< 434 U
PCB-123	305	1,160
PCB-124	760	< 254 U
PCB-126	230	291
PCB-127	< 96.6 U	< 329 U



**Table V-9. Solids Sample Results - PCB Congeners  
Waste Management Eastmont Transfer Station**

Location ID	WM-CB-03	WM-FD-02
Collection Date	1/22/2014	1/22/2014
Analyte	Result	Result
<b>Total Hexachlorobiphenyl (ng/kg)<sup>a</sup></b>	105,000	123,000 J
PCB-128/162	3,950	5,230
PCB-129	1,380	1,730
PCB-130	1,360	1,680
PCB-131	< 73.4 U	< 373 U
PCB-132/161	8,110	8,180
PCB-133/142	791	920
PCB-134/143	1,380	1,690
PCB-135	2,810	2,840
PCB-136	2,530	< 2,590 U*
PCB-137	1,320	1,510
PCB-138/163/164	24,100	28,600
PCB-139/149	17,900	22,000
PCB-140	< 132 U	< 376 U
PCB-141	4,990	6,110
PCB-144	861	1,300
PCB-145	< 79.1 U	< 226 U
PCB-146/165	2,680	3,350
PCB-147	372	< 332 U
PCB-148	< 128 U	< 365 U
PCB-150	< 95.1 U	< 272 U
PCB-151	5,010	5,960
PCB-152	< 85.1 U	< 244 U
PCB-153	18,700	23,200
PCB-154	194	< 317 U
PCB-155	< 85.0 U	< 245 U
PCB-156	2,710	3,300
PCB-157	547	736
PCB-158/160	2,710	3,590
PCB-159	< 64.7 U	< 279 U
PCB-166	< 60.7 U	< 262 U
PCB-167	881	1,220
PCB-168	< 45.8 U	< 234 U
PCB-169	< 91.6 U	< 244 U
<b>Total Heptachlorobiphenyl (ng/kg)<sup>a</sup></b>	51,600 J	60,200 J
PCB-170	5,360	5,760
PCB-171	1,520	1,640
PCB-172	848	1,010
PCB-173	< 159 U*	282
PCB-174	7,380	7,650
PCB-175	< 776 U*	278
PCB-176	783	917
PCB-177	4,010	3,960
PCB-178	1,170	1,500
PCB-179	3,020	3,640
PCB-180	15,200	17,900
PCB-181	< 122 U	< 302 U
PCB-182/187	6,720	9,060
PCB-183	3,080	4,040
PCB-184	< 49.7 U	< 163 U
PCB-185	658	< 731 U*
PCB-186	< 55.8 U	< 183 U



**Table V-9. Solids Sample Results - PCB Congeners  
Waste Management Eastmont Transfer Station**




Location ID	WM-CB-03	WM-FD-02
Collection Date	1/22/2014	1/22/2014
Analyte	Result	Result
PCB-188	< 51.3 U	< 168 U
PCB-189	238	309
PCB-190	841	1,180
PCB-191	164	338
PCB-192	< 96.5 U	< 239 U
PCB-193	619	730
<b>Total Octachlorobiphenyl (ng/kg)<sup>a</sup></b>	16,800 J	19,900 J
PCB-194	3,950	4,350
PCB-195	1,280	1,530
PCB-196/203	4,410	5,980
PCB-197	< 145 U*	< 445 U
PCB-198	541	< 633 U
PCB-199	4,100	5,450
PCB-200	500	974
PCB-201	611	< 620 U*
PCB-202	1,420	1,590
PCB-204	< 116 U	< 420 U
PCB-205	< 145 U	< 201 U
<b>Total Nonachlorobiphenyl (ng/kg)<sup>a</sup></b>	5,730	6,140
PCB-206	4,040	4,390
PCB-207	448	434
PCB-208	1,240	1,320
<b>Decachlorobiphenyl (ng/kg)</b>	1,790	2,130
PCB-209	1,790	2,130
PCB TEQ, nd SDL*0	24.1	30.4 J
PCB TEQ, nd SDL*0.5	25.5	34.1 J
PCB TEQ, nd SDL*1	26.9	37.7 J

a - Total PCBs and total PCB homologs include only congeners that met identification criteria as required by EPA Method1668C.

PCB congeners identified with a U\* qualifier were tagged as "estimated maximum possible concentrations" by the laboratory. This was changed to non-detect (U) during data validation.

**Attachment V-1**  
**Inspection Photographic Log**

Conveyance Structure Information	
<b>Structure Identification Number:</b> WM-CB-03	N↑
<b>Structure Type:</b> Catch Basin	
<b>General Location:</b> Southeast area of facility	
<b>Characteristics:</b> 7.5' to bottom of structure, 5' to depth of water, 18" of sediment	
<b>Pump Capacity (gpm):</b> --	
<b>Design Storm:</b> --	
<b>Access:</b> Catch Basin Grate	
<b>Volume Gauge:</b> --	
<b>Sample ID:</b> WM-CB-03-20150122-S WM-FD-02-20150122-S	
Drainage Information:	
<p>Catch Basin CB-03 is located in the southeast area of the Waste Management Facility. CB-03 receives stormwater from an area that drains a paved area with heavy truck traffic. Stormwater is conveyed from CB-03 to a 21,000 gallon stormwater storage/settling tank, frac tank 1A.</p>	N↑
	

Conveyance Structure Information	
<b>Structure Identification Number:</b> WM-FT-1B	<b>N↗</b> 
<b>Structure Type:</b> Frac (settling) Tank	
<b>General Location:</b> East area of facility	
<b>Characteristics:</b> UPDATE	
<b>Pump Capacity (gpm):</b> --	
<b>Design Storm:</b> --	
<b>Access:</b> UPDATE	
<b>Volume Gauge:</b> --	
<b>Sample ID:</b> WM-FT-1B-20150122-W	
<b>Drainage Information:</b>	<b>N→</b>
Frac tank 1B is a 21,000 gallon stormwater storage/settling tank located in the northeast area of the Waste Management Facility. 1B receives stormwater from CB5, an area that drain a paved area with heavy truck traffic. If frac tank 1B becomes full, it will overflow back to CB5. Stormwater is conveyed from 1B offsite to Outfall A.	

**Attachment V-2**  
**Field Documentation**

- 0645 M. Ivancench stops for ice while en route to field office/storage unit.
- 0700 M. Ivancench onsite at field office, prepping ice for sample coolers.
- 0710 J. Warters onsite, prepping ice & loading truck with sampling equipment.
- 0745 Leidos secures field office, drops off extra vehicle at Tully's.
- 0755 Leidos en route to Home Depot to purchase plastic sheeting.
- 0815 Leidos departs Home Depot, en route to Waste Management.
- 0830 Leidos field team meets C. Nancarrow offsite next to Waste Management facility.
- 0845 Mahbub Alam/Ecology meets Leidos offsite.
- 0850 Bob & Alex/Ecology meets Leidos offsite.
- 0900 Bob & Alex enter site.
- 0910 Bob gives okay to move onsite. Leidos & Ecology move onsite.
- 0915 Meeting with John Borghese/WM

Site manager, to review site map & facility information. Water from frac tanks reused

0940 H&S meeting. John Borghese cell # (206) 618-0503

1000 Beginning site walk & investigation.

1005 AT CB 3. Inlet from CB 2 from W.

Outlet E-plugged. Pipe coming out to frac tank. Viable location for solids - approx 1 1/2' of solids, 5' to water surface, 1' of water, 7 1/2' to bottom. Water pumped up to frac tank. John confirmed no split samples.

1020 Leidos setting up to collect a solids sample at CB 3. Will collect a duplicate sample at CB 3.

1045 Began collecting solids sample at CB 3.

Sample ID: WM-CB-03-20150122-S

Dup sample ID: WM-FD-02-20150122-S

1115 M. Ivancovich & J. Wartes complete sampling @ CB 3. C. Nancarrow informs Leidos sampling crew of next sampling location, water from frac tank 1B. Ecology offsite for lunch. Leidos

1145 sampling crew deconning & storing sampling equipment. C. Nancarrow offsite. M. Ivancovich & J. Wartes break for lunch.

1215 Prepping labels for next sampling location.

1225 M. Ivancovich & J. Wartes mob to frac tank 1B to begin setting up for a water sample.

1250 Began sampling at frac tank 1B. Sample ID: WM-FT-1B-20150122-W. Brown tinge to water. Strong odor when lid to frac tank opened.

1317 Completed sampling. Packing up sampling equipment & deconning.

1331 M. Ivancovich & J. Wartes offsite, en route to field office/storage unit.

1345 Leidos sampling crew arrives at storage unit, unpacks sampling supplies.

1400 Preparing COCs and sampling coolers for pickup/shipment.

1415 J. Wartes offsite, en route to return WA meter, store TA samples at Bothell office for courier



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Location Waste Management Date 01/22/15Project / Client NPDES/ECology

- pickup. M. Ivancevich preparing Vista cooler for shipment.
- 1500 M. Ivancevich secures field office, en route to FedEx.
- 1510 M. Ivancevich relinquishes Vista sample cooler to FedEx.

MAT 01/22/15



# Sediment Collection Form

Project: NPDES Sampling Support

Location ID: CB 3

Facility Name: Waste Management

Sample ID: WM-CB-03-20150122-S

Sampled By: MI & JW

Date: 01 / 22 / 2015 Time: 1045

Structure Type: <u>CB</u>	Dimensions: W <u>3'</u> L <u>2'</u>	Standing Water: <input checked="" type="radio"/> Y <input type="radio"/> N	Flow: <input checked="" type="radio"/> Y <input type="radio"/> N
Conveyance System Sketch <span style="float: right;">↑N</span>			
<p style="text-align: center;">X = sampling location</p>			
Depth to Bottom: <u>7.5</u> ft	Depth to Water: <u>5</u> ft	Depth of Sediment: <u>18</u> in	Sampled <input checked="" type="radio"/> Y <input type="radio"/> N Discrete / <input checked="" type="radio"/> Composite (circle one)
<b>Sediment type:</b> Cobble Gravel Sand C M F <input checked="" type="radio"/> Silt/clay <input checked="" type="radio"/> Organic matter Debris	<b>Sediment color:</b> Drab olive Brown Brown surface Gray <input checked="" type="radio"/> Black Tan	<b>Sediment Odor:</b> None Slight <input checked="" type="radio"/> Moderate Strong Overwhelming H <sub>2</sub> S <input checked="" type="radio"/> Petroleum	<b>Comments:</b>  Photo ID(s): _____ GPS ID: _____

NOTES: Duplicate sample collected, sample ID: WM-FD-02-20150122-S  
Sheen observed - heavy.

Recorded By/Date: MAI 01/22/15 Reviewed By/Date: \_\_\_\_\_



**Attachment V-3**  
**Chain of Custody Forms**







# CHAIN OF CUSTODY

FOR LABORATORY USE ONLY

Storage Secured

Laboratory Project ID: \_\_\_\_\_ Yes  No   
Storage ID \_\_\_\_\_ Temp \_\_\_\_\_ °C

Project I.D.: 1400647 P.O.# PO10163569 Sampler: M. Ivanench, J. Wartes  
(Name)

TAT: (Check One):  
Standard:  21 Days  
Rush (surcharge may apply):  
 14 days  7 days Specify: \_\_\_\_\_

Invoice to: Name Christine Nancarrow Company Leidos Address 18412 N. Creek Pkwy Ste 101 City Bethesda, WA State WA Zip 98011 Ph# (206) 300.2144 Fax# \_\_\_\_\_

Relinquished by: (Signature and Printed Name) Melissa Ivanench Date: 01/22/15 Time: 1440 Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

### See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory  
1104 Windfield Way  
El Dorado Hills, CA 95762  
(916) 673-1520 • Fax (916) 673-0106

Method of Shipment: FedEx

Add Analysis(es) Requested

ATTN: \_\_\_\_\_

Tracking No.: 806459792312

Container(s)

Quantity	Type	Matrix	2318-TCDD	2318-TCDD/TCDF	PCDD/PCDF	2318-TCDD	2318-TCDD/TCDF	PCDD/PCDF	2318-TCDD	2318-TCDD/TCDF	PCDD/PCDF	TOTALS	COPLANAR PCB'S	209 CONGENERS	PBDE	PAH	WHO-29
----------	------	--------	-----------	----------------	-----------	-----------	----------------	-----------	-----------	----------------	-----------	--------	----------------	---------------	------	-----	--------

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2318-TCDD	2318-TCDD/TCDF	PCDD/PCDF	2318-TCDD	2318-TCDD/TCDF	PCDD/PCDF	TOTALS	COPLANAR PCB'S	209 CONGENERS	PBDE	PAH	WHO-29	
WM-CB-03-20150122-S	01/22/15	1045	Waste Management	1	G	SD	✓						✓	✓					
WM-FD-02-20150122-S	01/22/15	1045	Waste Management	1	G	SD	✓						✓	✓					
WM-FT-1B-20150122-W	01/22/15	1250	Waste Management	4	A	AQ	✓						✓	✓					

Special Instructions/Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SEND DOCUMENTATION AND RESULTS TO:

Name: same as above  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: nancarrowc@leidos.com  
Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper,  
SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum  
AQ = Aqueous, O = Other

Container Types: A = 1 Liter Amber, G = Glass Jar  
P = PUF, T = MM5 Train, O = Other \_\_\_\_\_

\*Bottle Preservative Type: T = Thiosulfate,  
O = Other \_\_\_\_\_

**Attachment V-4**  
**Laboratory Reports**



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

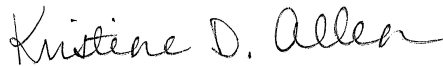
TestAmerica Job ID: 580-47171-1

Client Project/Site: NPDES Sampling Support

For:

Leidos, Inc.  
18912 North Creek Parkway, Suite 101  
Bothell, Washington 98011

Attn: Christine Nancarrow



Authorized for release by:  
2/24/2015 12:46:17 PM

Kristine Allen, Manager of Project Management  
(253)248-4970  
[kristine.allen@testamericainc.com](mailto:kristine.allen@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Job ID: 580-47171-1**

**Laboratory: TestAmerica Seattle**

## Narrative

### Receipt

The samples were received on 1/23/2015 11:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

### GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for batch 181285 recovered outside control limits for the following analytes: Dibromomethane, Acrolein, Acrylonitrile, MTBE. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 181318 recovered outside control limits for the following analytes: Trichloroethene and 1,1-Dichloropropane. The individual recoveries were within the acceptance criteria.

Method(s) 8260B: The method blank for batch 181451 contained 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 4-isopropyltoluene, hexachlorobutadiene and naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 181285 was outside criteria for the following analyte(s): Acetone and MEK. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated. A low level stated CCVL was run with passing detection criteria.

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside control limits: WM-CB-03-20150122-S (580-47171-1), WM-FD-02-20150122-S (580-47171-2). Evidence of matrix interference is present; sample analyzed in AB 181061 with same results, only this batch was reported.

Method(s) 8260B: Internal standard responses were outside of acceptance limits in the direct sparge analysis using the unpreserved stir bar vials for the following sample(s): WM-CB-03-20150122-S (580-47171-1), WM-FD-02-20150122-S (580-47171-2). The sample(s) shows evidence of matrix interference. The samples were reanalyzed for the compounds affected by IS failure using the methanol preserved vials. This data is reported.

Method(s) 8260B: The samples were analyzed for Vinyl Acetate only in analysis batch 181061. The internal standard, Fluorobenzene was low in the CCV by 0.31% (recovery 49.69% the lower limit is 50.0%). There were no more available vials for re-analysis. A low internal standard indicates a high system bias, the samples are non-detect; therefore the data have been reported. The following samples are affected: (CCVIS 580-181061/2), (LCS 580-181028/2-A), (LCSD 580-181028/3-A), (MB 580-181028/1-A), WM-CB-03-20150122-S (580-47171-1), WM-FD-02-20150122-S (580-47171-2).

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside the upper control limit: WM-CB-03-20150122-S (580-47171-1), WM-FD-02-20150122-S (580-47171-2). This sample did not contain any target analytes (Vinyl Acetate); therefore, re-extraction and/or re-analysis was not performed.

Method(s) NWTPH-Gx: The method blank for batch 180997 contained Gasoline above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### GC/MS Semi VOA

Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 181579 recovered outside acceptance criteria, low biased, for 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol and Benzo(g,h,i)perylene. The CCV also failed the RF criteria for Nitrobenzene, Isophorone, 4-Chloro-3-methylphenol, N-Nitroso-n-propylamine and Bis(2-chloroethoxy)methane. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detect for these analytes, the data have been reported. The affected samples are: (CCVIS 580-181579/2), (CCVL 580-181579/3), (LCS 580-181122/2-A), (LCSD 580-181122/3-A), (MB 580-181122/1-A), WM-FT-1B-20150122-W (580-47171-3).

Method(s) 8270D: Multiple analyte(s) recovered outside control limits for the LCS/LCSD associated with prep batch 181122. These

# Case Narrative

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Job ID: 580-47171-1 (Continued)

### Laboratory: TestAmerica Seattle (Continued)

analytes exceeded the Marginal Exceedance Limits; therefore, re-extraction and/or re-analysis was performed outside of holding time. Both sets of data have been reported. The affected samples are: (LCS 580-181122/2-A), (LCSD 580-181122/3-A), WM-FT-1B-20150122-W (580-47171-3)

Method(s) 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 181122 recovered outside control limits for multiple analytes.

Method(s) 8270D: The method blank for prep batch 181417 contained Diethyl phthalate, Butyl benzyl phthalate and Di-n-octyl phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8270D: The following analyte(s) recovered outside control limits for the LCS associated with prep batch 181417: Dimethyl phthalate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 181417 recovered outside control limits for the following analyte: Benzoic acid. The individual recoveries met the acceptance criteria.

Method(s) 8270D: The surrogate recovery for the blank associated with batch 181448 (MB 580-181448/1-A) was below the lower control limits. All associated sample surrogates fell within acceptance criteria, and there was no more volume for re-extraction. Data is qualified and reported.

Method(s) 8270D: The laboratory control sample duplicate (LCSD) for prep batch 181448 recovered outside control limits for the following analyte: Bis(2-ethylhexyl)phthalate. This analyte was biased high in the LCSD and was not detected in the associated sample; therefore, the data have been reported. Affected sample: (LCSD 580-181448/3-A), WM-FT-1B-20150122-W (580-47171-3).

Method(s) 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 181448 recovered outside control limits for multiple analytes. The individual recoveries met the acceptance criteria with the exception of Bis(2-ethylhexyl)phthalate .

Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 181641 failed the RF criteria for Bis(2-chloroethoxy)methane, Nitrobenzene, Isophorone and N-nitrosodi-n-propylamine. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detect for these analytes, the data have been reported.

Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 181758 recovered above the upper control limit for 2,4-dinitrophenol. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. Affected samples; (CCVIS 580-181758/3), WM-CB-03-20150122-S (580-47171-1), WM-FD-02-20150122-S (580-47171-2)

Method(s) 8270D: The continuing calibration verification (CCV) associated with analytical batch 181758 failed the RF criteria for Bis(2-chloroethoxy)methane, Nitrobenzene, Isophorone and N-nitrosodi-n-propylamine. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detect for these analytes, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### GC Semi VOA

Method(s) 8082, 8082A: In batch 181456, Tetrachloro-m-xylene and/or Decachlorobiphenyl surrogate recoveries for the following sample(s) was outside control limits: (580-47171-1 MSD), WM-CB-03-20150122-S (580-47171-1). Evidence of matrix interference is present in the very dark sulfuric acid layer; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8082, 8082A: In batch 181456, the following sample(s) required a copper clean-up to reduce matrix interferences caused by sulfur: (580-47171-1 MS), (580-47171-1 MSD), (LCS 580-181345/16-A), (LCSD 580-181345/17-A), (MB 580-181345/1-A), WM-CB-03-20150122-S (580-47171-1), WM-FD-02-20150122-S (580-47171-2). Lot# H25604

Method(s) NWTPH-Dx: In analysis batch 181281, for the following sample from preparation batch 181205: The following sample

# Case Narrative

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

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## Job ID: 580-47171-1 (Continued)

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### Laboratory: TestAmerica Seattle (Continued)

contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: SB-36-8.5 (580-47218-21).

Method(s) NWTPH-Dx: In analysis batch 181281, for the following sample(s) from preparation batch 181205: The following sample(s) contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: WM-CB-03-20150122-S (580-47171-1), WM-FD-02-20150122-S (580-47171-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Geotechnical

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Definitions/Glossary

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits
X	Surrogate is outside control limits
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD exceeds the control limits
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery exceeds the control limits

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
*	RPD of the LCS and LCSD exceeds the control limits
B	Compound was found in the blank and sample.
*	LCS or LCSD exceeds the control limits
H	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits

### GC VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC Semi VOA

Qualifier	Qualifier Description
Y	The chromatographic response resembles a typical fuel pattern.
X	Surrogate is outside control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery exceeds the control limits

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery exceeds the control limits
F2	MS/MSD RPD exceeds control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
F1	MS and/or MSD Recovery exceeds the control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)

## Definitions/Glossary

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

### Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-CB-03-20150122-S**

**Lab Sample ID: 580-47171-1**

Date Collected: 01/22/15 10:45

Matrix: Solid

Date Received: 01/23/15 11:30

Percent Solids: 33.2

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		3.1	0.93	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	0.62	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
1,1,1,2-Tetrachloroethane	ND		390	11	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
1,1-Dichloroethane	ND		3.1	1.2	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
1,1,2,2-Tetrachloroethane	ND		97	22	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
1,1-Dichloroethene	ND		16	0.62	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
1,1,2-Trichloroethane	ND		120	27	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
1,1-Dichloropropene	ND	*	3.1	0.93	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
1,2,3-Trichlorobenzene	ND		390	76	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
1,2,3-Trichloropropane	ND		390	37	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
1,2,4-Trichlorobenzene	ND		390	38	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
<b>1,2,4-Trimethylbenzene</b>	<b>7000</b>		390	32	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
1,2-Dibromo-3-Chloropropane	ND		1900	25	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
1,2-Dichlorobenzene	ND		390	31	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
1,2-Dichloroethane	ND		3.1	1.2	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
<b>1,3,5-Trimethylbenzene</b>	<b>2400</b>		390	28	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
1,3-Dichlorobenzene	ND		390	30	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
1,2-Dichloropropane	ND		3.1	1.2	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
1,3-Dichloropropane	ND		390	22	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
1,4-Dichlorobenzene	ND		390	19	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
2-Chloroethyl vinyl ether	ND		1900	60	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
2-Chlorotoluene	ND		390	33	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
2-Hexanone	ND		1900	110	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
4-Chlorotoluene	ND		390	29	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
2,2-Dichloropropane	ND		16	0.93	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
<b>4-Isopropyltoluene</b>	<b>600</b>	<b>B</b>	390	27	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
<b>2-Butanone</b>	<b>400</b>		31	9.3	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
<b>4-Methyl-2-pentanone</b>	<b>270</b>	<b>J</b>	1900	80	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
Bromobenzene	ND		390	23	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
Bromoform	ND		390	21	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
Chlorobenzene	ND		390	20	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
Chlorodibromomethane	ND		190	9.7	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
cis-1,3-Dichloropropene	ND		160	17	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
<b>Acetone</b>	<b>1200</b>		47	7.5	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
Acrolein	ND	*	93	26	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
<b>Ethylbenzene</b>	<b>750</b>		390	19	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
Acrylonitrile	ND	*	31	8.7	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
Ethylene Dibromide	ND		160	33	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
<b>Benzene</b>	<b>6.4</b>		3.1	0.93	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
<b>Hexachlorobutadiene</b>	<b>160</b>	<b>J B</b>	390	32	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
<b>Isopropylbenzene</b>	<b>240</b>	<b>J</b>	390	25	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
Bromochloromethane	ND		6.2	1.6	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
Bromodichloromethane	ND		3.1	1.2	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
<b>m-Xylene &amp; p-Xylene</b>	<b>2100</b>		390	29	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
<b>Naphthalene</b>	<b>760</b>	<b>B</b>	390	58	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
Bromomethane	ND		3.1	1.2	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
<b>n-Butylbenzene</b>	<b>1900</b>		390	34	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1
<b>Carbon disulfide</b>	<b>19</b>		3.1	0.62	ug/Kg	*	01/23/15 15:30	01/29/15 18:08	1
<b>N-Propylbenzene</b>	<b>770</b>		390	25	ug/Kg	*	01/30/15 15:59	01/30/15 19:51	1

TestAmerica Seattle



# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-CB-03-20150122-S**

**Lab Sample ID: 580-47171-1**

Date Collected: 01/22/15 10:45

Matrix: Solid

Date Received: 01/23/15 11:30

Percent Solids: 33.2

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		3.1	0.93	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
<b>o-Xylene</b>	<b>1100</b>		390	29	ug/Kg	☼	01/30/15 15:59	01/30/15 19:51	1
<b>sec-Butylbenzene</b>	<b>410</b>		390	27	ug/Kg	☼	01/30/15 15:59	01/30/15 19:51	1
<b>Styrene</b>	<b>300</b>	J	390	23	ug/Kg	☼	01/30/15 15:59	01/30/15 19:51	1
Chloroethane	ND		3.1	0.62	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
tert-Butylbenzene	ND		390	30	ug/Kg	☼	01/30/15 15:59	01/30/15 19:51	1
Chloroform	ND		3.1	0.93	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
<b>Tetrachloroethene</b>	<b>33</b>	J	190	13	ug/Kg	☼	01/30/15 15:59	01/30/15 19:51	1
Chloromethane	ND		3.1	0.93	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
<b>Toluene</b>	<b>5200</b>		390	25	ug/Kg	☼	01/30/15 15:59	01/30/15 19:51	1
cis-1,2-Dichloroethene	ND		3.1	0.93	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
trans-1,3-Dichloropropene	ND		160	23	ug/Kg	☼	01/30/15 15:59	01/30/15 19:51	1
trans-1,4-Dichloro-2-butene	ND		1900	160	ug/Kg	☼	01/30/15 15:59	01/30/15 19:51	1
Dibromomethane	ND	*	3.1	0.93	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
Dichlorodifluoromethane	ND		3.1	0.93	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
Iodomethane	ND		47	0.62	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
Methyl tert-butyl ether	ND	*	3.1	0.93	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
Methylene Chloride	ND		47	9.3	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
trans-1,2-Dichloroethene	ND		3.1	1.2	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
Trichloroethene	ND	*	3.1	0.93	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
Trichlorofluoromethane	ND		3.1	0.93	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1
<b>Vinyl chloride</b>	<b>8.4</b>		3.1	0.93	ug/Kg	☼	01/23/15 15:30	01/29/15 18:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	100		65 - 140	01/30/15 15:59	01/30/15 19:51	1
Toluene-d8 (Surr)	100		80 - 120	01/30/15 15:59	01/30/15 19:51	1
1,2-Dichloroethane-d4 (Surr)	99		71 - 136	01/30/15 15:59	01/30/15 19:51	1
4-Bromofluorobenzene (Surr)	98		70 - 120	01/30/15 15:59	01/30/15 19:51	1
Dibromofluoromethane (Surr)	101		75 - 132	01/30/15 15:59	01/30/15 19:51	1
1,2-Dichloroethane-d4 (Surr)	138	X	71 - 136	01/23/15 15:30	01/29/15 18:08	1
4-Bromofluorobenzene (Surr)	133	X*	70 - 120	01/23/15 15:30	01/29/15 18:08	1
Dibromofluoromethane (Surr)	112		75 - 132	01/23/15 15:30	01/29/15 18:08	1
Toluene-d8 (Surr)	123	X*	80 - 120	01/23/15 15:30	01/29/15 18:08	1
Trifluorotoluene (Surr)	79		65 - 140	01/23/15 15:30	01/29/15 18:08	1

**Method: 8260B - Volatile Organic Compounds (GC/MS) - RA**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	ND	*	16	1.9	ug/Kg	☼	01/23/15 15:30	01/27/15 09:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	195	*X	71 - 136	01/23/15 15:30	01/27/15 09:01	1
4-Bromofluorobenzene (Surr)	146	*X	70 - 120	01/23/15 15:30	01/27/15 09:01	1
Dibromofluoromethane (Surr)	108	*	75 - 132	01/23/15 15:30	01/27/15 09:01	1
Toluene-d8 (Surr)	128	*X	80 - 120	01/23/15 15:30	01/27/15 09:01	1
Trifluorotoluene (Surr)	66	*	65 - 140	01/23/15 15:30	01/27/15 09:01	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		73	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
1,2-Dichlorobenzene	ND		81	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5

TestAmerica Seattle

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-CB-03-20150122-S**

**Lab Sample ID: 580-47171-1**

**Date Collected: 01/22/15 10:45**

**Matrix: Solid**

**Date Received: 01/23/15 11:30**

**Percent Solids: 33.2**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		73	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>1,4-Dichlorobenzene</b>	<b>44</b>	<b>J</b>	73	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>1-Methylnaphthalene</b>	<b>750</b>		44	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2,2'-oxybis[1-chloropropane]	ND		370	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2,4,5-Trichlorophenol	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2,4,6-Trichlorophenol	ND		220	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2,4-Dichlorophenol	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2,4-Dimethylphenol	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2,4-Dinitrophenol	ND	^	1500	290	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2,4-Dinitrotoluene	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2,6-Dinitrotoluene	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2-Chloronaphthalene	ND		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2-Chlorophenol	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>2-Methylnaphthalene</b>	<b>1200</b>		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2-Methylphenol	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2-Nitroaniline	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
2-Nitrophenol	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>3 &amp; 4 Methylphenol</b>	<b>330</b>		290	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
3,3'-Dichlorobenzidine	ND		290	44	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
3-Nitroaniline	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
4,6-Dinitro-2-methylphenol	ND		1500	150	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
4-Bromophenyl phenyl ether	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
4-Chloro-3-methylphenol	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
4-Chloroaniline	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
4-Chlorophenyl phenyl ether	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
4-Nitroaniline	ND		150	29	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
4-Nitrophenol	ND		1500	370	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Acenaphthene</b>	<b>120</b>		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Acenaphthylene</b>	<b>72</b>		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Anthracene</b>	<b>180</b>		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Benzo[a]anthracene</b>	<b>420</b>		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Benzo[a]pyrene</b>	<b>390</b>		44	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Benzo[b]fluoranthene</b>	<b>690</b>		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Benzo[g,h,i]perylene</b>	<b>300</b>		37	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Benzo[k]fluoranthene</b>	<b>290</b>		37	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
Benzoic acid	ND	*	3700	1100	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Benzyl alcohol</b>	<b>7000</b>		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
Bis(2-chloroethoxy)methane	ND		150	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
Bis(2-chloroethyl)ether	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Butyl benzyl phthalate</b>	<b>5900</b>	<b>B</b>	290	73	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Carbazole</b>	<b>180</b>		150	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Chrysene</b>	<b>1100</b>		37	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
Dibenz(a,h)anthracene	ND		59	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Dibenzofuran</b>	<b>120</b>	<b>J</b>	150	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
Diethyl phthalate	ND		290	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Dimethyl phthalate</b>	<b>330</b>	<b>*</b>	150	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Di-n-butyl phthalate</b>	<b>280</b>	<b>J</b>	730	73	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Di-n-octyl phthalate</b>	<b>700</b>	<b>J B</b>	730	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Fluoranthene</b>	<b>1600</b>		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5

TestAmerica Seattle

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-CB-03-20150122-S**

**Lab Sample ID: 580-47171-1**

Date Collected: 01/22/15 10:45

Matrix: Solid

Date Received: 01/23/15 11:30

Percent Solids: 33.2

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Fluorene</b>	<b>360</b>		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
Hexachlorobenzene	ND		73	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
Hexachlorobutadiene	ND		73	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
Hexachlorocyclopentadiene	ND		150	15	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
Hexachloroethane	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Indeno[1,2,3-cd]pyrene</b>	<b>170</b>		59	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
Isophorone	ND		150	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Naphthalene</b>	<b>280</b>		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
Nitrobenzene	ND		150	50	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
N-Nitrosodimethylamine	ND		1500	370	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
N-Nitrosodi-n-propylamine	ND		150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>N-Nitrosodiphenylamine</b>	<b>430</b>		73	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Pentachlorophenol</b>	<b>130</b>	<b>J</b>	290	29	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Phenanthrene</b>	<b>1400</b>		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Phenol</b>	<b>120</b>	<b>J</b>	150	22	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5
<b>Pyrene</b>	<b>1900</b>		29	7.3	ug/Kg	☼	02/02/15 07:00	02/04/15 17:44	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	82		28 - 143	02/02/15 07:00	02/04/15 17:44	5
2-Fluorobiphenyl	83		42 - 140	02/02/15 07:00	02/04/15 17:44	5
2-Fluorophenol	78		36 - 145	02/02/15 07:00	02/04/15 17:44	5
Nitrobenzene-d5	109		38 - 141	02/02/15 07:00	02/04/15 17:44	5
Phenol-d5	76		38 - 149	02/02/15 07:00	02/04/15 17:44	5
Terphenyl-d14	102		42 - 151	02/02/15 07:00	02/04/15 17:44	5

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bis(2-ethylhexyl) phthalate</b>	<b>31000</b>		8800	730	ug/Kg	☼	02/02/15 07:00	02/04/15 18:10	50

**Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Gasoline</b>	<b>300</b>	<b>B</b>	33	4.1	mg/Kg	☼	01/26/15 13:09	01/26/15 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		50 - 150	01/26/15 13:09	01/26/15 16:33	1

**Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.029	0.0093	mg/Kg	☼	01/29/15 14:56	02/01/15 01:56	1
Arochlor 1221	ND		0.032	0.023	mg/Kg	☼	01/29/15 14:56	02/01/15 01:56	1
Arochlor 1232	ND		0.032	0.020	mg/Kg	☼	01/29/15 14:56	02/01/15 01:56	1
Arochlor 1242	ND		0.029	0.0061	mg/Kg	☼	01/29/15 14:56	02/01/15 01:56	1
Arochlor 1248	ND		0.029	0.0087	mg/Kg	☼	01/29/15 14:56	02/01/15 01:56	1
Arochlor 1254	ND		0.029	0.0061	mg/Kg	☼	01/29/15 14:56	02/01/15 01:56	1
<b>Arochlor 1260</b>	<b>0.076</b>		0.029	0.0087	mg/Kg	☼	01/29/15 14:56	02/01/15 01:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	41	X	45 - 135	01/29/15 14:56	02/01/15 01:56	1
DCB Decachlorobiphenyl	50		50 - 140	01/29/15 14:56	02/01/15 01:56	1

TestAmerica Seattle

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-CB-03-20150122-S**

**Lab Sample ID: 580-47171-1**

Date Collected: 01/22/15 10:45

Matrix: Solid

Date Received: 01/23/15 11:30

Percent Solids: 33.2

**Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	6100	Y	750	170	mg/Kg	☼	01/28/15 13:04	01/29/15 09:48	10
Motor Oil (>C24-C36)	33000	Y	1500	270	mg/Kg	☼	01/28/15 13:04	01/29/15 09:48	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	89		50 - 150				01/28/15 13:04	01/29/15 09:48	10

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		1.2	0.42	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10
Lead	230		1.2	0.11	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10
Antimony	14		0.46	0.097	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10
Beryllium	0.26	J	0.46	0.081	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10
Cadmium	1.7		0.46	0.044	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10
Chromium	79		1.2	0.15	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10
Copper	250		0.93	0.23	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10
Nickel	52		1.2	0.19	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10
Selenium	0.83	J	2.3	0.47	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10
Silver	0.94		0.46	0.028	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10
Thallium	ND		0.93	0.30	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10
Zinc	1800		12	2.6	mg/Kg	☼	01/26/15 14:10	01/26/15 18:56	10

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.68		0.039	0.012	mg/Kg	☼	01/27/15 10:00	01/27/15 11:26	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	33		0.10	0.10	%			01/27/15 14:41	1
Total Organic Carbon	220000		2000	250	mg/Kg			01/29/15 09:05	1

**Method: PSEP Plumb 1981 - Grain Size (PSEP Plumb 1981)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobbles	0.00				%			01/26/15 19:00	1
Gravel	3.9				%			01/26/15 19:00	1
Sand	44				%			01/26/15 19:00	1
Silt	46				%			01/26/15 19:00	1
Clay	6.2				%			01/26/15 19:00	1

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-FD-02-20150122-S**

**Lab Sample ID: 580-47171-2**

Date Collected: 01/22/15 10:45

Matrix: Solid

Date Received: 01/23/15 11:30

Percent Solids: 30.1

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.0	1.2	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	0.80	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
1,1,1,2-Tetrachloroethane	ND		860	24	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
1,1-Dichloroethane	ND		4.0	1.6	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
1,1,2,2-Tetrachloroethane	ND		220	49	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
1,1-Dichloroethene	ND		20	0.80	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
1,1,2-Trichloroethane	ND		260	60	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
1,1-Dichloropropene	ND	*	4.0	1.2	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
1,2,3-Trichlorobenzene	ND		860	170	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
1,2,3-Trichloropropane	ND		860	82	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
1,2,4-Trichlorobenzene	ND		860	84	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
<b>1,2,4-Trimethylbenzene</b>	<b>18000</b>		860	71	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
1,2-Dibromo-3-Chloropropane	ND		4300	56	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
1,2-Dichlorobenzene	ND		860	69	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
1,2-Dichloroethane	ND		4.0	1.6	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
<b>1,3,5-Trimethylbenzene</b>	<b>6300</b>		860	62	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
1,3-Dichlorobenzene	ND		860	67	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
1,2-Dichloropropane	ND		4.0	1.6	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
1,3-Dichloropropane	ND		860	49	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
1,4-Dichlorobenzene	ND		860	43	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
2-Chloroethyl vinyl ether	ND		4300	130	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
2-Chlorotoluene	ND		860	73	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
2-Hexanone	ND		4300	250	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
4-Chlorotoluene	ND		860	65	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
2,2-Dichloropropane	ND		20	1.2	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
<b>4-Isopropyltoluene</b>	<b>1400</b>	<b>B</b>	860	60	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
<b>2-Butanone</b>	<b>540</b>		40	12	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
<b>4-Methyl-2-pentanone</b>	<b>690</b>	<b>J</b>	4300	180	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
Bromobenzene	ND		860	52	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
Bromoform	ND		860	47	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
Chlorobenzene	ND		860	45	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
Chlorodibromomethane	ND		430	22	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
cis-1,3-Dichloropropene	ND		340	39	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
<b>Acetone</b>	<b>1700</b>		60	9.6	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
Acrolein	ND	*	120	33	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
<b>Ethylbenzene</b>	<b>1600</b>		860	43	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
Acrylonitrile	ND	*	40	11	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
Ethylene Dibromide	ND		340	73	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
<b>Benzene</b>	<b>9.0</b>		4.0	1.2	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
Hexachlorobutadiene	ND		860	71	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
<b>Isopropylbenzene</b>	<b>600</b>	<b>J</b>	860	56	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
Bromochloromethane	ND		8.0	2.0	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
Bromodichloromethane	ND		4.0	1.6	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
<b>m-Xylene &amp; p-Xylene</b>	<b>4300</b>		860	65	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
<b>Naphthalene</b>	<b>1100</b>	<b>B</b>	860	130	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
Bromomethane	ND		4.0	1.6	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
<b>n-Butylbenzene</b>	<b>5300</b>		860	75	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1
<b>Carbon disulfide</b>	<b>30</b>		4.0	0.80	ug/Kg	*	01/23/15 15:30	01/29/15 18:34	1
<b>N-Propylbenzene</b>	<b>2000</b>		860	56	ug/Kg	*	01/30/15 15:59	01/30/15 20:24	1

TestAmerica Seattle

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-FD-02-20150122-S**

**Lab Sample ID: 580-47171-2**

Date Collected: 01/22/15 10:45

Matrix: Solid

Date Received: 01/23/15 11:30

Percent Solids: 30.1

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		4.0	1.2	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
<b>o-Xylene</b>	<b>2100</b>		860	65	ug/Kg	☼	01/30/15 15:59	01/30/15 20:24	1
<b>sec-Butylbenzene</b>	<b>1100</b>		860	60	ug/Kg	☼	01/30/15 15:59	01/30/15 20:24	1
<b>Styrene</b>	<b>390 J</b>		860	52	ug/Kg	☼	01/30/15 15:59	01/30/15 20:24	1
Chloroethane	ND		4.0	0.80	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
tert-Butylbenzene	ND		860	67	ug/Kg	☼	01/30/15 15:59	01/30/15 20:24	1
Chloroform	ND		4.0	1.2	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
Tetrachloroethene	ND		430	28	ug/Kg	☼	01/30/15 15:59	01/30/15 20:24	1
Chloromethane	ND		4.0	1.2	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
<b>Toluene</b>	<b>11000</b>		860	56	ug/Kg	☼	01/30/15 15:59	01/30/15 20:24	1
cis-1,2-Dichloroethene	ND		4.0	1.2	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
trans-1,3-Dichloropropene	ND		340	52	ug/Kg	☼	01/30/15 15:59	01/30/15 20:24	1
trans-1,4-Dichloro-2-butene	ND		4300	340	ug/Kg	☼	01/30/15 15:59	01/30/15 20:24	1
Dibromomethane	ND *		4.0	1.2	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
Dichlorodifluoromethane	ND		4.0	1.2	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
Iodomethane	ND		60	0.80	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
Methyl tert-butyl ether	ND *		4.0	1.2	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
Methylene Chloride	ND		60	12	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
trans-1,2-Dichloroethene	ND		4.0	1.6	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
Trichloroethene	ND *		4.0	1.2	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
Trichlorofluoromethane	ND		4.0	1.2	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1
<b>Vinyl chloride</b>	<b>12</b>		4.0	1.2	ug/Kg	☼	01/23/15 15:30	01/29/15 18:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	99		65 - 140	01/30/15 15:59	01/30/15 20:24	1
Toluene-d8 (Surr)	100		80 - 120	01/30/15 15:59	01/30/15 20:24	1
1,2-Dichloroethane-d4 (Surr)	95		71 - 136	01/30/15 15:59	01/30/15 20:24	1
4-Bromofluorobenzene (Surr)	100		70 - 120	01/30/15 15:59	01/30/15 20:24	1
Dibromofluoromethane (Surr)	98		75 - 132	01/30/15 15:59	01/30/15 20:24	1
1,2-Dichloroethane-d4 (Surr)	134		71 - 136	01/23/15 15:30	01/29/15 18:34	1
4-Bromofluorobenzene (Surr)	134	X *	70 - 120	01/23/15 15:30	01/29/15 18:34	1
Dibromofluoromethane (Surr)	98		75 - 132	01/23/15 15:30	01/29/15 18:34	1
Toluene-d8 (Surr)	119	*	80 - 120	01/23/15 15:30	01/29/15 18:34	1
Trifluorotoluene (Surr)	74		65 - 140	01/23/15 15:30	01/29/15 18:34	1

**Method: 8260B - Volatile Organic Compounds (GC/MS) - RA**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	ND		24	2.9	ug/Kg	☼	01/23/15 15:30	01/27/15 09:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	131		71 - 136	01/23/15 15:30	01/27/15 09:27	1
4-Bromofluorobenzene (Surr)	179	* X	70 - 120	01/23/15 15:30	01/27/15 09:27	1
Dibromofluoromethane (Surr)	75		75 - 132	01/23/15 15:30	01/27/15 09:27	1
Toluene-d8 (Surr)	141	* X	80 - 120	01/23/15 15:30	01/27/15 09:27	1
Trifluorotoluene (Surr)	76		65 - 140	01/23/15 15:30	01/27/15 09:27	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		81	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
1,2-Dichlorobenzene	ND		89	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5

TestAmerica Seattle

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-FD-02-20150122-S**

**Lab Sample ID: 580-47171-2**

Date Collected: 01/22/15 10:45

Matrix: Solid

Date Received: 01/23/15 11:30

Percent Solids: 30.1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		81	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>1,4-Dichlorobenzene</b>	<b>66</b>	<b>J</b>	81	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>1-Methylnaphthalene</b>	<b>910</b>		49	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2,2'-oxybis[1-chloropropane]	ND		410	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2,4,5-Trichlorophenol	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2,4,6-Trichlorophenol	ND		240	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2,4-Dichlorophenol	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2,4-Dimethylphenol	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2,4-Dinitrophenol	ND	^	1600	320	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2,4-Dinitrotoluene	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2,6-Dinitrotoluene	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2-Chloronaphthalene	ND		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2-Chlorophenol	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>2-Methylnaphthalene</b>	<b>1500</b>		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2-Methylphenol	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2-Nitroaniline	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
2-Nitrophenol	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>3 &amp; 4 Methylphenol</b>	<b>360</b>		320	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
3,3'-Dichlorobenzidine	ND		320	49	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
3-Nitroaniline	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
4,6-Dinitro-2-methylphenol	ND		1600	160	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>4-Bromophenyl phenyl ether</b>	<b>32</b>	<b>J</b>	160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
4-Chloro-3-methylphenol	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
4-Chloroaniline	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
4-Chlorophenyl phenyl ether	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
4-Nitroaniline	ND		160	32	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
4-Nitrophenol	ND		1600	410	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Acenaphthene</b>	<b>110</b>		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Acenaphthylene</b>	<b>110</b>		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Anthracene</b>	<b>200</b>		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Benzo[a]anthracene</b>	<b>530</b>		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Benzo[a]pyrene</b>	<b>390</b>		49	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Benzo[b]fluoranthene</b>	<b>940</b>		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Benzo[g,h,i]perylene</b>	<b>290</b>		41	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Benzo[k]fluoranthene</b>	<b>230</b>		41	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Benzoic acid	ND	*	4100	1200	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Benzyl alcohol</b>	<b>810</b>		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Bis(2-chloroethoxy)methane	ND		160	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Bis(2-chloroethyl)ether	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Butyl benzyl phthalate</b>	<b>8300</b>	<b>B</b>	320	81	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Carbazole</b>	<b>160</b>		160	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Chrysene</b>	<b>1400</b>		41	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Dibenz(a,h)anthracene	ND		65	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Dibenzofuran	ND		160	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Diethyl phthalate	ND		320	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Dimethyl phthalate</b>	<b>340</b>	<b>*</b>	160	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Di-n-butyl phthalate</b>	<b>400</b>	<b>J</b>	810	81	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Di-n-octyl phthalate</b>	<b>1300</b>	<b>B</b>	810	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Fluoranthene</b>	<b>1900</b>		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5

TestAmerica Seattle

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-FD-02-20150122-S**

**Lab Sample ID: 580-47171-2**

Date Collected: 01/22/15 10:45

Matrix: Solid

Date Received: 01/23/15 11:30

Percent Solids: 30.1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Fluorene</b>	<b>390</b>		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Hexachlorobenzene	ND		81	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Hexachlorobutadiene	ND		81	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Hexachlorocyclopentadiene	ND		160	16	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Hexachloroethane	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Indeno[1,2,3-cd]pyrene</b>	<b>180</b>		65	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Isophorone	ND		160	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Naphthalene</b>	<b>320</b>		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Nitrobenzene	ND		160	55	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
N-Nitrosodimethylamine	ND		1600	410	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
N-Nitrosodi-n-propylamine	ND		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>N-Nitrosodiphenylamine</b>	<b>410</b>		81	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
Pentachlorophenol	ND		320	32	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Phenanthrene</b>	<b>1600</b>		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Phenol</b>	<b>98 J</b>		160	24	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5
<b>Pyrene</b>	<b>2200</b>		32	8.1	ug/Kg	☼	02/02/15 07:00	02/04/15 18:36	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	80		28 - 143	02/02/15 07:00	02/04/15 18:36	5
2-Fluorobiphenyl	82		42 - 140	02/02/15 07:00	02/04/15 18:36	5
2-Fluorophenol	79		36 - 145	02/02/15 07:00	02/04/15 18:36	5
Nitrobenzene-d5	138		38 - 141	02/02/15 07:00	02/04/15 18:36	5
Phenol-d5	86		38 - 149	02/02/15 07:00	02/04/15 18:36	5
Terphenyl-d14	106		42 - 151	02/02/15 07:00	02/04/15 18:36	5

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bis(2-ethylhexyl) phthalate</b>	<b>42000</b>		9700	810	ug/Kg	☼	02/02/15 07:00	02/04/15 19:02	50

**Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Gasoline</b>	<b>510</b>		39	4.9	mg/Kg	☼	01/26/15 13:09	01/26/15 17:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		50 - 150	01/26/15 13:09	01/26/15 17:07	1

**Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.031	0.0099	mg/Kg	☼	01/29/15 14:56	02/01/15 02:45	1
Arochlor 1221	ND		0.034	0.025	mg/Kg	☼	01/29/15 14:56	02/01/15 02:45	1
Arochlor 1232	ND		0.034	0.022	mg/Kg	☼	01/29/15 14:56	02/01/15 02:45	1
Arochlor 1242	ND		0.031	0.0065	mg/Kg	☼	01/29/15 14:56	02/01/15 02:45	1
Arochlor 1248	ND		0.031	0.0093	mg/Kg	☼	01/29/15 14:56	02/01/15 02:45	1
Arochlor 1254	ND		0.031	0.0065	mg/Kg	☼	01/29/15 14:56	02/01/15 02:45	1
Arochlor 1260	ND		0.031	0.0093	mg/Kg	☼	01/29/15 14:56	02/01/15 02:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	46		45 - 135	01/29/15 14:56	02/01/15 02:45	1
DCB Decachlorobiphenyl	53		50 - 140	01/29/15 14:56	02/01/15 02:45	1

TestAmerica Seattle



# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-FD-02-20150122-S**

**Lab Sample ID: 580-47171-2**

Date Collected: 01/22/15 10:45

Matrix: Solid

Date Received: 01/23/15 11:30

Percent Solids: 30.1

**Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	5800	Y	820	190	mg/Kg	☼	01/28/15 13:04	01/29/15 10:42	10
Motor Oil (>C24-C36)	32000	Y	1600	300	mg/Kg	☼	01/28/15 13:04	01/29/15 10:42	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	81		50 - 150				01/28/15 13:04	01/29/15 10:42	10

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		1.5	0.54	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10
Lead	250		1.5	0.14	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10
Antimony	16		0.60	0.13	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10
Beryllium	0.31	J	0.60	0.10	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10
Cadmium	2.0		0.60	0.057	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10
Chromium	85		1.5	0.19	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10
Copper	300		1.2	0.29	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10
Nickel	68		1.5	0.24	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10
Selenium	0.90	J	3.0	0.60	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10
Silver	1.1		0.60	0.036	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10
Thallium	ND		1.2	0.39	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10
Zinc	1900		15	3.3	mg/Kg	☼	01/26/15 14:10	01/26/15 19:27	10

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.1		0.048	0.015	mg/Kg	☼	01/27/15 10:00	01/27/15 11:36	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	30		0.10	0.10	%			01/27/15 14:41	1
Total Organic Carbon	210000		2000	250	mg/Kg			01/29/15 09:20	1

**Method: PSEP Plumb 1981 - Grain Size (PSEP Plumb 1981)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobbles	0.00				%			01/26/15 19:00	1
Gravel	3.1				%			01/26/15 19:00	1
Sand	39				%			01/26/15 19:00	1
Silt	52				%			01/26/15 19:00	1
Clay	6.4				%			01/26/15 19:00	1

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-FT-1B-20150122-W**

**Lab Sample ID: 580-47171-3**

**Date Collected: 01/22/15 12:50**

**Matrix: Water**

**Date Received: 01/23/15 11:30**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
1,2-Dichlorobenzene	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
1,3-Dichlorobenzene	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
1,4-Dichlorobenzene	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
1-Methylnaphthalene	ND		0.29	0.15	ug/L		01/27/15 12:56	02/03/15 15:28	5
2,2'-oxybis[1-chloropropane]	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
2,4,5-Trichlorophenol	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
2,4,6-Trichlorophenol	ND		2.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
2,4-Dichlorophenol	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
2,4-Dimethylphenol	ND		9.7	1.5	ug/L		01/27/15 12:56	02/03/15 15:28	5
2,4-Dinitrophenol	ND	* ^	24	4.9	ug/L		01/27/15 12:56	02/03/15 15:28	5
2,4-Dinitrotoluene	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
2,6-Dinitrotoluene	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
2-Chloronaphthalene	ND		0.29	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
2-Chlorophenol	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>2-Methylnaphthalene</b>	<b>0.18</b>	<b>J</b>	0.97	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
2-Methylphenol	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
2-Nitroaniline	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
2-Nitrophenol	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>3 &amp; 4 Methylphenol</b>	<b>12</b>		3.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
3,3'-Dichlorobenzidine	ND	*	9.7	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
3-Nitroaniline	ND		1.9	0.58	ug/L		01/27/15 12:56	02/03/15 15:28	5
4,6-Dinitro-2-methylphenol	ND	* ^	19	4.9	ug/L		01/27/15 12:56	02/03/15 15:28	5
4-Bromophenyl phenyl ether	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
4-Chloro-3-methylphenol	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
4-Chloroaniline	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
4-Chlorophenyl phenyl ether	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
4-Nitroaniline	ND		2.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
4-Nitrophenol	ND	*	15	4.9	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Acenaphthene</b>	<b>0.10</b>	<b>J</b>	0.49	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
Acenaphthylene	ND		0.39	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Anthracene</b>	<b>0.11</b>	<b>J</b>	0.19	0.049	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Benzo[a]anthracene</b>	<b>0.11</b>	<b>J</b>	0.29	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
Benzo[a]pyrene	ND		0.19	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
Benzo[b]fluoranthene	ND		0.39	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
Benzo[g,h,i]perylene	ND	* ^	0.29	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
Benzo[k]fluoranthene	ND		0.29	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Benzoic acid</b>	<b>10</b>	<b>J*</b>	15	2.9	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Benzyl alcohol</b>	<b>1.2</b>	<b>J</b>	1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
Bis(2-chloroethoxy)methane	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
Bis(2-chloroethyl)ether	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
Bis(2-ethylhexyl) phthalate	ND	*	15	5.7	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Butyl benzyl phthalate</b>	<b>1.5</b>	<b>J</b>	2.9	0.97	ug/L		01/27/15 12:56	02/03/15 15:28	5
Carbazole	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Chrysene</b>	<b>0.13</b>	<b>J</b>	0.19	0.063	ug/L		01/27/15 12:56	02/03/15 15:28	5
Dibenz(a,h)anthracene	ND	*	0.29	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
Dibenzofuran	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Diethyl phthalate</b>	<b>0.88</b>	<b>J</b>	1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
Dimethyl phthalate	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5

TestAmerica Seattle

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-FT-1B-20150122-W**

**Lab Sample ID: 580-47171-3**

Date Collected: 01/22/15 12:50

Matrix: Water

Date Received: 01/23/15 11:30

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		1.9	0.63	ug/L		01/27/15 12:56	02/03/15 15:28	5
Di-n-octyl phthalate	ND		1.9	0.88	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Fluoranthene</b>	<b>0.27</b>		0.24	0.063	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Fluorene</b>	<b>0.19</b>	<b>J</b>	0.29	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
Hexachlorobenzene	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
Hexachlorobutadiene	ND		2.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
Hexachlorocyclopentadiene	ND		9.7	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
Hexachloroethane	ND		2.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
Indeno[1,2,3-cd]pyrene	ND	*	0.29	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
Isophorone	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
Naphthalene	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
Nitrobenzene	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
N-Nitrosodimethylamine	ND		9.7	0.97	ug/L		01/27/15 12:56	02/03/15 15:28	5
N-Nitrosodi-n-propylamine	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
N-Nitrosodiphenylamine	ND		1.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Pentachlorophenol</b>	<b>1.7</b>	<b>J *</b>	3.4	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Phenanthrene</b>	<b>0.77</b>		0.39	0.097	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Phenol</b>	<b>0.92</b>	<b>J</b>	2.9	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5
<b>Pyrene</b>	<b>0.25</b>	<b>J</b>	0.29	0.063	ug/L		01/27/15 12:56	02/03/15 15:28	5
2,3,4,6-Tetrachlorophenol	ND		3.4	0.49	ug/L		01/27/15 12:56	02/03/15 15:28	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	96		44 - 125	01/27/15 12:56	02/03/15 15:28	5
2-Fluorobiphenyl	92		50 - 120	01/27/15 12:56	02/03/15 15:28	5
2-Fluorophenol	74		30 - 134	01/27/15 12:56	02/03/15 15:28	5
Nitrobenzene-d5	100		59 - 120	01/27/15 12:56	02/03/15 15:28	5
Phenol-d5	93		52 - 120	01/27/15 12:56	02/03/15 15:28	5
Terphenyl-d14	115		64 - 150	01/27/15 12:56	02/03/15 15:28	5

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
1,2-Dichlorobenzene	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
1,3-Dichlorobenzene	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
1,4-Dichlorobenzene	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
1-Methylnaphthalene	ND	H	0.28	0.14	ug/L		01/30/15 16:10	02/03/15 23:03	5
2,2'-oxybis[1-chloropropane]	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
2,4,5-Trichlorophenol	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
2,4,6-Trichlorophenol	ND	H	2.8	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
2,4-Dichlorophenol	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
2,4-Dimethylphenol	ND	H *	9.5	1.4	ug/L		01/30/15 16:10	02/03/15 23:03	5
2,4-Dinitrophenol	ND	H	24	4.7	ug/L		01/30/15 16:10	02/03/15 23:03	5
2,4-Dinitrotoluene	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
2,6-Dinitrotoluene	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
2-Chloronaphthalene	ND	H	0.28	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
2-Chlorophenol	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>2-Methylnaphthalene</b>	<b>0.14</b>	<b>J H</b>	0.95	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
2-Methylphenol	ND	H *	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
2-Nitroaniline	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
2-Nitrophenol	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5

TestAmerica Seattle

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-FT-1B-20150122-W**

**Lab Sample ID: 580-47171-3**

Date Collected: 01/22/15 12:50

Matrix: Water

Date Received: 01/23/15 11:30

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>3 &amp; 4 Methylphenol</b>	<b>16</b>	<b>H</b>	3.8	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
3,3'-Dichlorobenzidine	ND	H	9.5	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
3-Nitroaniline	ND	H	1.9	0.57	ug/L		01/30/15 16:10	02/03/15 23:03	5
4,6-Dinitro-2-methylphenol	ND	H	19	4.7	ug/L		01/30/15 16:10	02/03/15 23:03	5
4-Bromophenyl phenyl ether	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
4-Chloro-3-methylphenol	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
4-Chloroaniline	ND	H *	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
4-Chlorophenyl phenyl ether	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
4-Nitroaniline	ND	H	2.8	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
4-Nitrophenol	ND	H	14	4.7	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Acenaphthene</b>	<b>0.10</b>	<b>J H</b>	0.47	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
Acenaphthylene	ND	H	0.38	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Anthracene</b>	<b>0.096</b>	<b>J H</b>	0.19	0.047	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Benzo[a]anthracene</b>	<b>0.12</b>	<b>J H</b>	0.28	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
Benzo[a]pyrene	ND	H	0.19	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
Benzo[b]fluoranthene	ND	H	0.38	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
Benzo[g,h,i]perylene	ND	H	0.28	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
Benzo[k]fluoranthene	ND	H	0.28	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Benzoic acid</b>	<b>9.3</b>	<b>J H *</b>	14	2.8	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Benzyl alcohol</b>	<b>1.0</b>	<b>J H</b>	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Bis(2-chloroethoxy)methane	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Bis(2-chloroethyl)ether	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Bis(2-ethylhexyl) phthalate	ND	H *	14	5.6	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Butyl benzyl phthalate</b>	<b>1.2</b>	<b>J H</b>	2.8	0.95	ug/L		01/30/15 16:10	02/03/15 23:03	5
Carbazole	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Chrysene	ND	H	0.19	0.062	ug/L		01/30/15 16:10	02/03/15 23:03	5
Dibenz(a,h)anthracene	ND	H	0.28	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
Dibenzofuran	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Diethyl phthalate</b>	<b>0.79</b>	<b>J H</b>	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Dimethyl phthalate	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Di-n-butyl phthalate	ND	H	1.9	0.62	ug/L		01/30/15 16:10	02/03/15 23:03	5
Di-n-octyl phthalate	ND	H	1.9	0.85	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Fluoranthene</b>	<b>0.26</b>	<b>H</b>	0.24	0.062	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Fluorene</b>	<b>0.17</b>	<b>J H</b>	0.28	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
Hexachlorobenzene	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Hexachlorobutadiene	ND	H	2.8	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Hexachlorocyclopentadiene	ND	H	9.5	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Hexachloroethane	ND	H	2.8	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Indeno[1,2,3-cd]pyrene	ND	H	0.28	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
Isophorone	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Naphthalene	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
Nitrobenzene	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
N-Nitrosodimethylamine	ND	H	9.5	0.95	ug/L		01/30/15 16:10	02/03/15 23:03	5
N-Nitrosodi-n-propylamine	ND	H *	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
N-Nitrosodiphenylamine	ND	H	1.9	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Pentachlorophenol</b>	<b>1.5</b>	<b>J H</b>	3.3	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Phenanthrene</b>	<b>0.61</b>	<b>H</b>	0.38	0.095	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Phenol</b>	<b>0.66</b>	<b>J H</b>	2.8	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Pyrene</b>	<b>0.24</b>	<b>J H</b>	0.28	0.062	ug/L		01/30/15 16:10	02/03/15 23:03	5

TestAmerica Seattle

# Client Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-FT-1B-20150122-W**

**Lab Sample ID: 580-47171-3**

Date Collected: 01/22/15 12:50

Matrix: Water

Date Received: 01/23/15 11:30

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND	H	3.3	0.47	ug/L		01/30/15 16:10	02/03/15 23:03	5
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2,4,6-Tribromophenol	94		44 - 125				01/30/15 16:10	02/03/15 23:03	5
2-Fluorobiphenyl	67		50 - 120				01/30/15 16:10	02/03/15 23:03	5
2-Fluorophenol	70		30 - 134				01/30/15 16:10	02/03/15 23:03	5
Nitrobenzene-d5	80		59 - 120				01/30/15 16:10	02/03/15 23:03	5
Phenol-d5	81		52 - 120				01/30/15 16:10	02/03/15 23:03	5
Terphenyl-d14	99		64 - 150				01/30/15 16:10	02/03/15 23:03	5

**Method: 200.8 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0017		0.0010	0.00027	mg/L		01/27/15 17:35	01/29/15 09:54	1
Antimony	0.0019		0.00040	0.000080	mg/L		01/27/15 17:35	01/29/15 09:54	1
Beryllium	ND		0.00040	0.00010	mg/L		01/27/15 17:35	01/29/15 09:54	1
Cadmium	0.00015	J	0.00040	0.000028	mg/L		01/27/15 17:35	01/29/15 09:54	1
Chromium	0.0018		0.00040	0.00014	mg/L		01/27/15 17:35	01/29/15 09:54	1
Copper	0.0084		0.0020	0.00060	mg/L		01/27/15 17:35	01/29/15 09:54	1
Lead	0.017		0.00040	0.000034	mg/L		01/27/15 17:35	01/29/15 09:54	1
Nickel	0.0052		0.0030	0.00040	mg/L		01/27/15 17:35	01/29/15 09:54	1
Selenium	ND		0.0010	0.00030	mg/L		01/27/15 17:35	01/29/15 09:54	1
Silver	ND		0.00040	0.000030	mg/L		01/27/15 17:35	01/29/15 09:54	1
Thallium	ND		0.0010	0.00014	mg/L		01/27/15 17:35	01/29/15 09:54	1
Zinc	0.37		0.0070	0.0019	mg/L		01/27/15 17:35	01/29/15 09:54	1

**Method: 245.1 - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000042	J	0.00020	0.000041	mg/L		01/26/15 11:01	01/26/15 14:00	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	360		10	10	umhos/cm			01/29/15 10:15	1
Chloride	12		0.90	0.30	mg/L			01/23/15 17:09	1
Nitrate as N	ND		0.90	0.20	mg/L			01/23/15 17:09	1
Sulfate	72		1.2	0.40	mg/L			01/23/15 17:09	1
Alkalinity	100		5.0	5.0	mg/L			01/27/15 13:31	1
Bicarbonate Alkalinity as CaCO3	15		5.0	5.0	mg/L			01/27/15 13:31	1
Carbonate Alkalinity as CaCO3	86		5.0	5.0	mg/L			01/27/15 13:31	1
Total Suspended Solids	21		10	10	mg/L			01/27/15 11:17	1
pH	7.05	HF	0.0100	0.0100	SU			01/23/15 16:51	1
Total Organic Carbon	19		10	3.3	mg/L			01/30/15 14:01	10

**General Chemistry - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	19		1.0	0.33	mg/L			01/30/15 12:41	1

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-181028/1-A**

**Matrix: Solid**

**Analysis Batch: 181061**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 181028**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	ND		5.0	0.60	ug/Kg		01/26/15 14:58	01/27/15 05:27	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123		71 - 136	01/26/15 14:58	01/27/15 05:27	1
4-Bromofluorobenzene (Surr)	98		70 - 120	01/26/15 14:58	01/27/15 05:27	1
Dibromofluoromethane (Surr)	114		75 - 132	01/26/15 14:58	01/27/15 05:27	1
Toluene-d8 (Surr)	96		80 - 120	01/26/15 14:58	01/27/15 05:27	1
Trifluorotoluene (Surr)	96		65 - 140	01/26/15 14:58	01/27/15 05:27	1

**Lab Sample ID: LCS 580-181028/2-A**

**Matrix: Solid**

**Analysis Batch: 181061**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181028**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl acetate	60.5	71.8		ug/Kg		119	19 - 144

Surrogate	%Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	118		71 - 136
4-Bromofluorobenzene (Surr)	100		70 - 120
Dibromofluoromethane (Surr)	112		75 - 132
Toluene-d8 (Surr)	95		80 - 120
Trifluorotoluene (Surr)	99		65 - 140

**Lab Sample ID: LCSD 580-181028/3-A**

**Matrix: Solid**

**Analysis Batch: 181061**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 181028**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Vinyl acetate	60.5	70.2		ug/Kg		116	19 - 144	2	30

Surrogate	%Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	118		71 - 136
4-Bromofluorobenzene (Surr)	100		70 - 120
Dibromofluoromethane (Surr)	115		75 - 132
Toluene-d8 (Surr)	97		80 - 120
Trifluorotoluene (Surr)	98		65 - 140

**Lab Sample ID: MB 580-181247/1-A**

**Matrix: Solid**

**Analysis Batch: 181285**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 181247**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.20	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
1,1-Dichloroethane	ND		1.0	0.40	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
1,1-Dichloroethene	ND		5.0	0.20	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
1,1-Dichloropropene	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 580-181247/1-A**

**Matrix: Solid**

**Analysis Batch: 181285**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 181247**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.40	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
1,2-Dichloropropane	ND		1.0	0.40	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
2,2-Dichloropropane	ND		5.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
2-Butanone	ND		10	3.0	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Acetone	ND		15	2.4	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Acrolein	ND		30	8.2	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Acrylonitrile	ND		10	2.8	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Benzene	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Bromochloromethane	ND		2.0	0.50	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Bromodichloromethane	ND		1.0	0.40	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Bromomethane	ND		1.0	0.40	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Carbon disulfide	ND		1.0	0.20	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Carbon tetrachloride	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Chloroethane	ND		1.0	0.20	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Chloroform	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Chloromethane	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Dibromomethane	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Dichlorodifluoromethane	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Iodomethane	ND		15	0.20	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Methyl tert-butyl ether	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Methylene Chloride	ND		15	3.0	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
trans-1,2-Dichloroethene	ND		1.0	0.40	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Trichloroethene	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Trichlorofluoromethane	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1
Vinyl chloride	ND		1.0	0.30	ug/Kg		01/28/15 15:19	01/29/15 10:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	125		71 - 136	01/28/15 15:19	01/29/15 10:57	1
4-Bromofluorobenzene (Surr)	100		70 - 120	01/28/15 15:19	01/29/15 10:57	1
Dibromofluoromethane (Surr)	111		75 - 132	01/28/15 15:19	01/29/15 10:57	1
Toluene-d8 (Surr)	100		80 - 120	01/28/15 15:19	01/29/15 10:57	1
Trifluorotoluene (Surr)	93		65 - 140	01/28/15 15:19	01/29/15 10:57	1

**Lab Sample ID: LCS 580-181318/2-A**

**Matrix: Solid**

**Analysis Batch: 181285**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181318**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	30.0	32.0		ug/Kg		107	63 - 135
1,1,2-Trichloro-1,1,2-trifluoroethane	30.0	28.6		ug/Kg		95	66 - 163
1,1-Dichloroethane	30.0	33.4		ug/Kg		111	70 - 128
1,1-Dichloroethene	30.0	28.0		ug/Kg		93	70 - 133
1,1-Dichloropropene	30.0	32.3		ug/Kg		108	77 - 125
1,2-Dichloroethane	30.0	35.8		ug/Kg		119	71 - 128
1,2-Dichloropropane	30.0	34.4		ug/Kg		115	76 - 161
2,2-Dichloropropane	30.0	30.6		ug/Kg		102	56 - 144

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 580-181318/2-A**

**Matrix: Solid**

**Analysis Batch: 181285**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181318**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
2-Butanone	120	154		ug/Kg		128	30 - 160	
Acetone	120	137		ug/Kg		114	20 - 160	
Acrolein	178	229	*	ug/Kg		128	10 - 125	
Acrylonitrile	300	361	*	ug/Kg		120	74 - 117	
Benzene	30.0	31.7		ug/Kg		106	70 - 128	
Bromochloromethane	30.0	35.9		ug/Kg		120	78 - 123	
Bromodichloromethane	30.0	37.4		ug/Kg		125	58 - 133	
Bromomethane	30.0	31.7		ug/Kg		106	57 - 148	
Carbon disulfide	30.0	29.0		ug/Kg		97	45 - 160	
Carbon tetrachloride	30.0	32.6		ug/Kg		109	59 - 145	
Chloroethane	30.0	31.0		ug/Kg		103	48 - 167	
Chloroform	30.0	34.9		ug/Kg		116	78 - 125	
Chloromethane	30.0	30.5		ug/Kg		102	55 - 136	
cis-1,2-Dichloroethene	30.0	33.3		ug/Kg		111	70 - 130	
Dibromomethane	30.0	38.2	*	ug/Kg		127	78 - 126	
Dichlorodifluoromethane	30.0	28.8		ug/Kg		96	38 - 150	
Iodomethane	30.0	32.1		ug/Kg		107	44 - 148	
Methyl tert-butyl ether	30.0	37.8	*	ug/Kg		126	65 - 125	
Methylene Chloride	30.0	31.0		ug/Kg		103	57 - 146	
trans-1,2-Dichloroethene	30.0	30.5		ug/Kg		102	76 - 131	
Trichloroethene	30.0	32.1		ug/Kg		107	83 - 124	
Trichlorofluoromethane	30.0	29.8		ug/Kg		99	47 - 165	
Vinyl chloride	30.0	28.0		ug/Kg		93	67 - 131	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	117		71 - 136
4-Bromofluorobenzene (Surr)	104		70 - 120
Dibromofluoromethane (Surr)	110		75 - 132
Toluene-d8 (Surr)	98		80 - 120
Trifluorotoluene (Surr)	88		65 - 140

**Lab Sample ID: LCSD 580-181318/3-A**

**Matrix: Solid**

**Analysis Batch: 181285**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 181318**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
									RPD	Limit
1,1,1-Trichloroethane	40.0	37.8		ug/Kg		95	63 - 135	17	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	40.0	35.0		ug/Kg		87	66 - 163	20	30	
1,1-Dichloroethane	40.0	38.7		ug/Kg		97	70 - 128	15	21	
1,1-Dichloroethene	40.0	35.4		ug/Kg		89	70 - 133	23	23	
1,1-Dichloropropene	40.0	41.2	*	ug/Kg		103	77 - 125	24	16	
1,2-Dichloroethane	40.0	40.1		ug/Kg		100	71 - 128	11	18	
1,2-Dichloropropane	40.0	40.0		ug/Kg		100	76 - 161	15	15	
2,2-Dichloropropane	40.0	36.2		ug/Kg		91	56 - 144	17	21	
2-Butanone	160	193		ug/Kg		121	30 - 160	23	30	
Acetone	160	165		ug/Kg		103	20 - 160	19	30	
Acrolein	237	253		ug/Kg		107	10 - 125	10	30	

TestAmerica Seattle



# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 580-181318/3-A**  
**Matrix: Solid**  
**Analysis Batch: 181285**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 181318**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
							RPD	Limit		
Acrylonitrile	400	412		ug/Kg		103	74 - 117	13	30	
Benzene	40.0	37.8		ug/Kg		94	70 - 128	18	19	
Bromochloromethane	40.0	40.1		ug/Kg		100	78 - 123	11	19	
Bromodichloromethane	40.0	43.1		ug/Kg		108	58 - 133	14	19	
Bromomethane	40.0	34.9		ug/Kg		87	57 - 148	9	29	
Carbon disulfide	40.0	36.5		ug/Kg		91	45 - 160	23	30	
Carbon tetrachloride	40.0	39.4		ug/Kg		98	59 - 145	19	19	
Chloroethane	40.0	35.1		ug/Kg		88	48 - 167	12	53	
Chloroform	40.0	38.7		ug/Kg		97	78 - 125	10	17	
Chloromethane	40.0	32.4		ug/Kg		81	55 - 136	6	26	
cis-1,2-Dichloroethene	40.0	37.7		ug/Kg		94	70 - 130	13	19	
Dibromomethane	40.0	44.5		ug/Kg		111	78 - 126	15	18	
Dichlorodifluoromethane	40.0	33.0		ug/Kg		82	38 - 150	13	26	
Iodomethane	40.0	36.8		ug/Kg		92	44 - 148	14	30	
Methyl tert-butyl ether	40.0	41.1		ug/Kg		103	65 - 125	8	30	
Methylene Chloride	40.0	33.9		ug/Kg		85	57 - 146	9	21	
trans-1,2-Dichloroethene	40.0	36.5		ug/Kg		91	76 - 131	18	18	
Trichloroethene	40.0	39.5 *		ug/Kg		99	83 - 124	21	17	
Trichlorofluoromethane	40.0	34.9		ug/Kg		87	47 - 165	16	54	
Vinyl chloride	40.0	31.4		ug/Kg		79	67 - 131	11	22	

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	110		71 - 136
4-Bromofluorobenzene (Surr)	102		70 - 120
Dibromofluoromethane (Surr)	102		75 - 132
Toluene-d8 (Surr)	98		80 - 120
Trifluorotoluene (Surr)	92		65 - 140

**Lab Sample ID: MB 580-181447/1-A**  
**Matrix: Solid**  
**Analysis Batch: 181451**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 181447**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	ND		40	1.1	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,1,1,2-Tetrachloroethane	ND		10	2.3	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,1,2-Trichloroethane	ND		12	2.8	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,1-Dichloropropene	ND		40	5.3	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,2,3-Trichlorobenzene	15.9	J	40	7.8	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,2,3-Trichloropropane	ND		40	3.8	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,2,4-Trichlorobenzene	9.46	J	40	3.9	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,2,4-Trimethylbenzene	ND		40	3.3	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,2-Dibromo-3-Chloropropane	ND		200	2.6	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,2-Dichlorobenzene	ND		40	3.2	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,3,5-Trimethylbenzene	ND		40	2.9	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,3-Dichlorobenzene	ND		40	3.1	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,3-Dichloropropane	ND		40	2.3	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
1,4-Dichlorobenzene	ND		40	2.0	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
2-Chloroethyl vinyl ether	ND		200	6.2	ug/Kg		01/30/15 15:59	01/30/15 18:12	1

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 580-181447/1-A**

**Matrix: Solid**

**Analysis Batch: 181451**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 181447**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Chlorotoluene	ND		40	3.4	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
2-Hexanone	ND		200	12	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
4-Chlorotoluene	ND		40	3.0	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
4-Isopropyltoluene	2.84	J	40	2.8	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
4-Methyl-2-pentanone	ND		200	8.2	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Acrolein	ND		1200	1200	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Acrylonitrile	ND		200	96	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Ethylene Dibromide	ND		16	3.4	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Bromobenzene	ND		40	2.4	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Bromoform	ND		40	2.2	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Chlorobenzene	ND		40	2.1	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Chlorodibromomethane	ND		20	1.0	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
cis-1,3-Dichloropropene	ND		16	1.8	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Dibromomethane	ND		40	4.1	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Ethylbenzene	ND		40	2.0	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Hexachlorobutadiene	10.8	J	40	3.3	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Isopropylbenzene	ND		40	2.6	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Methyl tert-butyl ether	ND		40	6.0	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
m-Xylene & p-Xylene	ND		40	3.0	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Naphthalene	21.2	J	40	6.0	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
n-Butylbenzene	ND		40	3.5	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
N-Propylbenzene	ND		40	2.6	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
o-Xylene	ND		40	3.0	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
sec-Butylbenzene	ND		40	2.8	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Styrene	ND		40	2.4	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
tert-Butylbenzene	ND		40	3.1	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Tetrachloroethene	ND		20	1.3	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Toluene	ND		40	2.6	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
trans-1,3-Dichloropropene	ND		16	2.4	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
trans-1,4-Dichloro-2-butene	ND		200	16	ug/Kg		01/30/15 15:59	01/30/15 18:12	1
Trichloroethene	ND		16	3.1	ug/Kg		01/30/15 15:59	01/30/15 18:12	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	103		71 - 136	01/30/15 15:59	01/30/15 18:12	1
4-Bromofluorobenzene (Surr)	100		70 - 120	01/30/15 15:59	01/30/15 18:12	1
Dibromofluoromethane (Surr)	99		75 - 132	01/30/15 15:59	01/30/15 18:12	1
Toluene-d8 (Surr)	99		80 - 120	01/30/15 15:59	01/30/15 18:12	1
Trifluorotoluene (Surr)	101		65 - 140	01/30/15 15:59	01/30/15 18:12	1

**Lab Sample ID: LCS 580-181447/2-A**

**Matrix: Solid**

**Analysis Batch: 181451**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181447**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1,1,2-Tetrachloroethane	800	937		ug/Kg		117	72 - 123
1,1,2,2-Tetrachloroethane	800	961		ug/Kg		120	73 - 125
1,1,2-Trichloroethane	800	887		ug/Kg		111	77 - 124
1,1-Dichloropropene	800	879		ug/Kg		110	77 - 125

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 580-181447/2-A**

**Matrix: Solid**

**Analysis Batch: 181451**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181447**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichlorobenzene	800	854		ug/Kg		107	61 - 130
1,2,3-Trichloropropane	800	878		ug/Kg		110	77 - 123
1,2,4-Trichlorobenzene	800	897		ug/Kg		112	61 - 130
1,2,4-Trimethylbenzene	800	917		ug/Kg		115	79 - 124
1,2-Dibromo-3-Chloropropane	800	880		ug/Kg		110	53 - 132
1,2-Dichlorobenzene	800	889		ug/Kg		111	79 - 117
1,3,5-Trimethylbenzene	800	910		ug/Kg		114	80 - 125
1,3-Dichlorobenzene	800	897		ug/Kg		112	79 - 119
1,3-Dichloropropane	800	932		ug/Kg		117	77 - 123
1,4-Dichlorobenzene	800	843		ug/Kg		105	79 - 117
2-Chloroethyl vinyl ether	800	918		ug/Kg		115	60 - 150
2-Chlorotoluene	800	907		ug/Kg		113	79 - 122
2-Hexanone	3200	3880		ug/Kg		121	45 - 145
4-Chlorotoluene	800	896		ug/Kg		112	80 - 122
4-Isopropyltoluene	800	886		ug/Kg		111	78 - 126
4-Methyl-2-pentanone	3200	3800		ug/Kg		119	45 - 145
Acrolein	4740	4250		ug/Kg		90	10 - 125
Acrylonitrile	8000	8410		ug/Kg		105	74 - 117
Ethylene Dibromide	800	899		ug/Kg		112	69 - 126
Bromobenzene	800	881		ug/Kg		110	80 - 120
Bromoform	800	908		ug/Kg		113	50 - 124
Chlorobenzene	800	894		ug/Kg		112	75 - 120
Chlorodibromomethane	800	950		ug/Kg		119	42 - 129
cis-1,3-Dichloropropene	800	925		ug/Kg		116	69 - 129
Dibromomethane	800	928		ug/Kg		116	78 - 126
Ethylbenzene	800	912		ug/Kg		114	78 - 126
Hexachlorobutadiene	800	848		ug/Kg		106	68 - 134
Isopropylbenzene	800	920		ug/Kg		115	79 - 127
Methyl tert-butyl ether	800	958		ug/Kg		120	65 - 125
m-Xylene & p-Xylene	800	928		ug/Kg		116	78 - 126
Naphthalene	800	881		ug/Kg		110	14 - 170
n-Butylbenzene	800	903		ug/Kg		113	78 - 128
N-Propylbenzene	800	901		ug/Kg		113	81 - 127
o-Xylene	800	911		ug/Kg		114	77 - 127
sec-Butylbenzene	800	884		ug/Kg		110	78 - 128
Styrene	800	934		ug/Kg		117	79 - 127
tert-Butylbenzene	800	905		ug/Kg		113	71 - 136
Tetrachloroethene	800	891		ug/Kg		111	56 - 155
Toluene	800	879		ug/Kg		110	75 - 126
trans-1,3-Dichloropropene	800	946		ug/Kg		118	72 - 129
trans-1,4-Dichloro-2-butene	800	906		ug/Kg		113	42 - 160
Trichloroethene	800	917		ug/Kg		115	83 - 124

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	100		71 - 136
4-Bromofluorobenzene (Surr)	102		70 - 120
Dibromofluoromethane (Surr)	102		75 - 132
Toluene-d8 (Surr)	100		80 - 120

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 580-181447/2-A**  
**Matrix: Solid**  
**Analysis Batch: 181451**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 181447**

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Trifluorotoluene (Surr)	99		65 - 140

**Lab Sample ID: LCSD 580-181447/3-A**  
**Matrix: Solid**  
**Analysis Batch: 181451**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 181447**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD	Limit
							Limits		Limit	
1,1,1,2-Tetrachloroethane	800	851		ug/Kg		106	72 - 123	10	20	
1,1,1,2-Tetrachloroethane	800	816		ug/Kg		102	73 - 125	16	22	
1,1,1,2-Trichloroethane	800	785		ug/Kg		98	77 - 124	12	18	
1,1-Dichloropropene	800	790		ug/Kg		99	77 - 125	11	16	
1,2,3-Trichlorobenzene	800	806		ug/Kg		101	61 - 130	6	23	
1,2,3-Trichloropropane	800	738		ug/Kg		92	77 - 123	17	23	
1,2,4-Trichlorobenzene	800	829		ug/Kg		104	61 - 130	8	22	
1,2,4-Trimethylbenzene	800	834		ug/Kg		104	79 - 124	10	18	
1,2-Dibromo-3-Chloropropane	800	719		ug/Kg		90	53 - 132	20	27	
1,2-Dichlorobenzene	800	797		ug/Kg		100	79 - 117	11	17	
1,3,5-Trimethylbenzene	800	823		ug/Kg		103	80 - 125	10	18	
1,3-Dichlorobenzene	800	810		ug/Kg		101	79 - 119	10	17	
1,3-Dichloropropane	800	819		ug/Kg		102	77 - 123	13	19	
1,4-Dichlorobenzene	800	759		ug/Kg		95	79 - 117	11	18	
2-Chloroethyl vinyl ether	800	788		ug/Kg		99	60 - 150	15	30	
2-Chlorotoluene	800	808		ug/Kg		101	79 - 122	12	18	
2-Hexanone	3200	3030		ug/Kg		95	45 - 145	24	30	
4-Chlorotoluene	800	807		ug/Kg		101	80 - 122	10	18	
4-Isopropyltoluene	800	802		ug/Kg		100	78 - 126	10	18	
4-Methyl-2-pentanone	3200	3020		ug/Kg		94	45 - 145	23	30	
Acrolein	4740	3680		ug/Kg		77	10 - 125	14	30	
Acrylonitrile	8000	6880		ug/Kg		86	74 - 117	20	30	
Ethylene Dibromide	800	785		ug/Kg		98	69 - 126	14	21	
Bromobenzene	800	826		ug/Kg		103	80 - 120	6	19	
Bromoform	800	771		ug/Kg		96	50 - 124	16	25	
Chlorobenzene	800	821		ug/Kg		103	75 - 120	9	21	
Chlorodibromomethane	800	843		ug/Kg		105	42 - 129	12	23	
cis-1,3-Dichloropropene	800	831		ug/Kg		104	69 - 129	11	19	
Dibromomethane	800	810		ug/Kg		101	78 - 126	14	18	
Ethylbenzene	800	837		ug/Kg		105	78 - 126	9	23	
Hexachlorobutadiene	800	775		ug/Kg		97	68 - 134	9	21	
Isopropylbenzene	800	836		ug/Kg		105	79 - 127	10	20	
Methyl tert-butyl ether	800	833		ug/Kg		104	65 - 125	14	30	
m-Xylene & p-Xylene	800	834		ug/Kg		104	78 - 126	11	23	
Naphthalene	800	786		ug/Kg		98	14 - 170	11	50	
n-Butylbenzene	800	816		ug/Kg		102	78 - 128	10	17	
N-Propylbenzene	800	819		ug/Kg		102	81 - 127	10	20	
o-Xylene	800	829		ug/Kg		104	77 - 127	9	22	
sec-Butylbenzene	800	802		ug/Kg		100	78 - 128	10	17	
Styrene	800	844		ug/Kg		106	79 - 127	10	21	
tert-Butylbenzene	800	810		ug/Kg		101	71 - 136	11	27	

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 580-181447/3-A**

**Matrix: Solid**

**Analysis Batch: 181451**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 181447**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	800	826		ug/Kg		103	56 - 155	8	27
Toluene	800	810		ug/Kg		101	75 - 126	8	19
trans-1,3-Dichloropropene	800	853		ug/Kg		107	72 - 129	10	20
trans-1,4-Dichloro-2-butene	800	783		ug/Kg		98	42 - 160	14	30
Trichloroethene	800	825		ug/Kg		103	83 - 124	11	17

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	97		71 - 136
4-Bromofluorobenzene (Surr)	102		70 - 120
Dibromofluoromethane (Surr)	99		75 - 132
Toluene-d8 (Surr)	100		80 - 120
Trifluorotoluene (Surr)	99		65 - 140

**Lab Sample ID: 580-47171-2 MS**

**Matrix: Solid**

**Analysis Batch: 181451**

**Client Sample ID: WM-FD-02-20150122-S**

**Prep Type: Total/NA**

**Prep Batch: 181447**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		17200	19400		ug/Kg	☼	113	75 - 125
1,1,1,2,2-Tetrachloroethane	ND		17200	21200		ug/Kg	☼	123	55 - 130
1,1,1,2-Trichloroethane	ND		17200	18700		ug/Kg	☼	109	60 - 125
1,1-Dichloropropene	ND		17200	18800		ug/Kg	☼	109	70 - 135
1,2,3-Trichlorobenzene	ND		17200	18300		ug/Kg	☼	106	60 - 135
1,2,3-Trichloropropane	ND		17200	21100		ug/Kg	☼	122	65 - 130
1,2,4-Trichlorobenzene	ND		17200	19100		ug/Kg	☼	111	65 - 130
1,2,4-Trimethylbenzene	18000		17200	37200		ug/Kg	☼	110	65 - 135
1,2-Dibromo-3-Chloropropane	ND		17200	23000		ug/Kg	☼	134	40 - 135
1,2-Dichlorobenzene	ND		17200	19300		ug/Kg	☼	112	75 - 120
1,3,5-Trimethylbenzene	6300		17200	26000		ug/Kg	☼	114	65 - 135
1,3-Dichlorobenzene	ND		17200	19400		ug/Kg	☼	113	70 - 125
1,3-Dichloropropane	ND		17200	19700		ug/Kg	☼	115	75 - 125
1,4-Dichlorobenzene	ND		17200	19000		ug/Kg	☼	110	70 - 125
2-Chloroethyl vinyl ether	ND		17200	20100		ug/Kg	☼	117	60 - 150
2-Chlorotoluene	ND		17200	20200		ug/Kg	☼	117	70 - 130
2-Hexanone	ND		68800	90200		ug/Kg	☼	131	45 - 145
4-Chlorotoluene	ND		17200	20400		ug/Kg	☼	119	75 - 125
4-Isopropyltoluene	1400	B	17200	21100		ug/Kg	☼	115	75 - 135
4-Methyl-2-pentanone	690	J	68800	88400		ug/Kg	☼	127	45 - 145
Acrolein	ND		102000	107000		ug/Kg	☼	105	10 - 125
Acrylonitrile	ND		172000	204000	F1	ug/Kg	☼	118	74 - 117
Ethylene Dibromide	ND		17200	19200		ug/Kg	☼	112	70 - 125
Bromobenzene	ND		17200	19600		ug/Kg	☼	114	65 - 120
Bromoform	ND		17200	18900		ug/Kg	☼	110	55 - 135
Chlorobenzene	ND		17200	19200		ug/Kg	☼	111	75 - 125
Chlorodibromomethane	ND		17200	19800		ug/Kg	☼	115	65 - 130
cis-1,3-Dichloropropene	ND		17200	19400		ug/Kg	☼	112	70 - 125
Dibromomethane	ND		17200	19000		ug/Kg	☼	111	75 - 130
Ethylbenzene	1600		17200	20700		ug/Kg	☼	111	75 - 125

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 580-47171-2 MS**

**Matrix: Solid**

**Analysis Batch: 181451**

**Client Sample ID: WM-FD-02-20150122-S**

**Prep Type: Total/NA**

**Prep Batch: 181447**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Hexachlorobutadiene	ND		17200	16900		ug/Kg	☼	98	55 - 140
Isopropylbenzene	600	J	17200	20600		ug/Kg	☼	116	75 - 130
Methyl tert-butyl ether	ND		17200	19100		ug/Kg	☼	111	59 - 137
m-Xylene & p-Xylene	4300		17200	23400		ug/Kg	☼	111	80 - 125
Naphthalene	1100	B	17200	22000		ug/Kg	☼	122	40 - 125
n-Butylbenzene	5300		17200	24700		ug/Kg	☼	113	65 - 140
N-Propylbenzene	2000		17200	21900		ug/Kg	☼	116	65 - 135
o-Xylene	2100		17200	21100		ug/Kg	☼	110	75 - 125
sec-Butylbenzene	1100		17200	21100		ug/Kg	☼	117	65 - 130
Styrene	390	J	17200	19900		ug/Kg	☼	114	75 - 125
tert-Butylbenzene	ND		17200	20500		ug/Kg	☼	119	65 - 130
Tetrachloroethene	ND		17200	19600		ug/Kg	☼	114	65 - 140
Toluene	11000		17200	28500		ug/Kg	☼	104	70 - 125
trans-1,3-Dichloropropene	ND		17200	19900		ug/Kg	☼	115	65 - 125
trans-1,4-Dichloro-2-butene	ND		17200	22800		ug/Kg	☼	132	42 - 160
Trichloroethene	ND		17200	19800		ug/Kg	☼	115	75 - 125

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	94		71 - 136
4-Bromofluorobenzene (Surr)	99		70 - 120
Dibromofluoromethane (Surr)	96		75 - 132
Toluene-d8 (Surr)	99		80 - 120
Trifluorotoluene (Surr)	100		65 - 140

**Lab Sample ID: 580-47171-2 MSD**

**Matrix: Solid**

**Analysis Batch: 181451**

**Client Sample ID: WM-FD-02-20150122-S**

**Prep Type: Total/NA**

**Prep Batch: 181447**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	
	Result	Qualifier	Added	Result	Qualifier					RPD	Limit
1,1,1,2-Tetrachloroethane	ND		17200	19700		ug/Kg	☼	115	75 - 125	2	30
1,1,1,2,2-Tetrachloroethane	ND		17200	20700		ug/Kg	☼	120	55 - 130	2	30
1,1,1,2-Trichloroethane	ND		17200	18700		ug/Kg	☼	109	60 - 125	0	30
1,1-Dichloropropene	ND		17200	19300		ug/Kg	☼	112	70 - 135	2	30
1,2,3-Trichlorobenzene	ND		17200	18800		ug/Kg	☼	109	60 - 135	3	30
1,2,3-Trichloropropane	ND		17200	19800		ug/Kg	☼	115	65 - 130	6	30
1,2,4-Trichlorobenzene	ND		17200	19100		ug/Kg	☼	111	65 - 130	0	30
1,2,4-Trimethylbenzene	18000		17200	36900		ug/Kg	☼	109	65 - 135	1	30
1,2-Dibromo-3-Chloropropane	ND		17200	21100		ug/Kg	☼	123	40 - 135	9	30
1,2-Dichlorobenzene	ND		17200	18900		ug/Kg	☼	110	75 - 120	2	30
1,3,5-Trimethylbenzene	6300		17200	25900		ug/Kg	☼	114	65 - 135	1	30
1,3-Dichlorobenzene	ND		17200	19600		ug/Kg	☼	114	70 - 125	1	30
1,3-Dichloropropane	ND		17200	19300		ug/Kg	☼	112	75 - 125	2	30
1,4-Dichlorobenzene	ND		17200	19100		ug/Kg	☼	111	70 - 125	1	30
2-Chloroethyl vinyl ether	ND		17200	19200		ug/Kg	☼	111	60 - 150	5	30
2-Chlorotoluene	ND		17200	20000		ug/Kg	☼	116	70 - 130	1	30
2-Hexanone	ND		68800	84800		ug/Kg	☼	123	45 - 145	6	30
4-Chlorotoluene	ND		17200	20000		ug/Kg	☼	116	75 - 125	2	30
4-Isopropyltoluene	1400	B	17200	21100		ug/Kg	☼	115	75 - 135	0	30

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-47171-2 MSD

Matrix: Solid

Analysis Batch: 181451

Client Sample ID: WM-FD-02-20150122-S

Prep Type: Total/NA

Prep Batch: 181447

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
4-Methyl-2-pentanone	690	J	68800	84600		ug/Kg	*	122	45 - 145	4	30
Acrolein	ND		102000	97400		ug/Kg	*	95	10 - 125	9	30
Acrylonitrile	ND		172000	187000		ug/Kg	*	108	74 - 117	9	30
Ethylene Dibromide	ND		17200	18700		ug/Kg	*	109	70 - 125	2	30
Bromobenzene	ND		17200	19300		ug/Kg	*	112	65 - 120	2	30
Bromoform	ND		17200	19200		ug/Kg	*	111	55 - 135	2	30
Chlorobenzene	ND		17200	19300		ug/Kg	*	112	75 - 125	1	30
Chlorodibromomethane	ND		17200	19800		ug/Kg	*	115	65 - 130	0	30
cis-1,3-Dichloropropene	ND		17200	19300		ug/Kg	*	112	70 - 125	0	30
Dibromomethane	ND		17200	18400		ug/Kg	*	107	75 - 130	3	30
Ethylbenzene	1600		17200	21300		ug/Kg	*	114	75 - 125	2	30
Hexachlorobutadiene	ND		17200	18000		ug/Kg	*	105	55 - 140	6	30
Isopropylbenzene	600	J	17200	20700		ug/Kg	*	117	75 - 130	0	30
Methyl tert-butyl ether	ND		17200	18900		ug/Kg	*	110	59 - 137	1	30
m-Xylene & p-Xylene	4300		17200	24000		ug/Kg	*	115	80 - 125	2	30
Naphthalene	1100	B	17200	21600		ug/Kg	*	119	40 - 125	2	30
n-Butylbenzene	5300		17200	24800		ug/Kg	*	113	65 - 140	0	30
N-Propylbenzene	2000		17200	21500		ug/Kg	*	114	65 - 135	2	30
o-Xylene	2100		17200	21000		ug/Kg	*	110	75 - 125	0	30
sec-Butylbenzene	1100		17200	21100		ug/Kg	*	116	65 - 130	0	30
Styrene	390	J	17200	20300		ug/Kg	*	115	75 - 125	2	30
tert-Butylbenzene	ND		17200	20400		ug/Kg	*	119	65 - 130	0	30
Tetrachloroethene	ND		17200	19600		ug/Kg	*	114	65 - 140	0	30
Toluene	11000		17200	28700		ug/Kg	*	106	70 - 125	1	30
trans-1,3-Dichloropropene	ND		17200	19400		ug/Kg	*	113	65 - 125	2	30
trans-1,4-Dichloro-2-butene	ND		17200	21200		ug/Kg	*	123	42 - 160	7	30
Trichloroethene	ND		17200	20200		ug/Kg	*	118	75 - 125	2	30

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	94		71 - 136
4-Bromofluorobenzene (Surr)	101		70 - 120
Dibromofluoromethane (Surr)	97		75 - 132
Toluene-d8 (Surr)	103		80 - 120
Trifluorotoluene (Surr)	102		65 - 140

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-181122/1-A

Matrix: Water

Analysis Batch: 181579

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 181122

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		01/27/15 12:56	02/03/15 12:52	1
2,2'-oxybis[1-chloropropane]	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-181122/1-A

Matrix: Water

Analysis Batch: 181579

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 181122

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		01/27/15 12:56	02/03/15 12:52	1
2,4-Dinitrophenol	ND	^	5.0	1.0	ug/L		01/27/15 12:56	02/03/15 12:52	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
2-Chlorophenol	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
2-Methylphenol	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
2-Nitroaniline	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
2-Nitrophenol	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
3-Nitroaniline	ND		0.40	0.12	ug/L		01/27/15 12:56	02/03/15 12:52	1
4,6-Dinitro-2-methylphenol	ND	^	4.0	1.0	ug/L		01/27/15 12:56	02/03/15 12:52	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
4-Chloroaniline	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
4-Nitroaniline	ND		0.60	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
4-Nitrophenol	ND		3.0	1.0	ug/L		01/27/15 12:56	02/03/15 12:52	1
Acenaphthene	ND		0.10	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
Acenaphthylene	ND		0.080	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
Anthracene	ND		0.040	0.010	ug/L		01/27/15 12:56	02/03/15 12:52	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
Benzo[g,h,i]perylene	ND	^	0.060	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
Benzoic acid	ND		3.0	0.60	ug/L		01/27/15 12:56	02/03/15 12:52	1
Benzyl alcohol	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		01/27/15 12:56	02/03/15 12:52	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		01/27/15 12:56	02/03/15 12:52	1
Carbazole	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Chrysene	ND		0.040	0.013	ug/L		01/27/15 12:56	02/03/15 12:52	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
Dibenzofuran	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Diethyl phthalate	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Dimethyl phthalate	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		01/27/15 12:56	02/03/15 12:52	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		01/27/15 12:56	02/03/15 12:52	1
Fluoranthene	ND		0.050	0.013	ug/L		01/27/15 12:56	02/03/15 12:52	1
Fluorene	ND		0.060	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1

TestAmerica Seattle



# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 580-181122/1-A**

**Matrix: Water**

**Analysis Batch: 181579**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 181122**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Hexachlorobutadiene	ND		0.60	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Hexachloroethane	ND		0.60	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
Isophorone	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Naphthalene	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Nitrobenzene	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
N-Nitrosodimethylamine	ND		2.0	0.20	ug/L		01/27/15 12:56	02/03/15 12:52	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Pentachlorophenol	ND		0.70	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Phenanthrene	ND		0.080	0.020	ug/L		01/27/15 12:56	02/03/15 12:52	1
Phenol	ND		0.60	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1
Pyrene	ND		0.060	0.013	ug/L		01/27/15 12:56	02/03/15 12:52	1
2,3,4,6-Tetrachlorophenol	ND		0.70	0.10	ug/L		01/27/15 12:56	02/03/15 12:52	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol	63		44 - 125	01/27/15 12:56	02/03/15 12:52	1
2-Fluorobiphenyl	72		50 - 120	01/27/15 12:56	02/03/15 12:52	1
2-Fluorophenol	66		30 - 134	01/27/15 12:56	02/03/15 12:52	1
Nitrobenzene-d5	67		59 - 120	01/27/15 12:56	02/03/15 12:52	1
Phenol-d5	72		52 - 120	01/27/15 12:56	02/03/15 12:52	1
Terphenyl-d14	99		64 - 150	01/27/15 12:56	02/03/15 12:52	1

**Lab Sample ID: LCS 580-181122/2-A**

**Matrix: Water**

**Analysis Batch: 181579**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181122**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,2,4-Trichlorobenzene	2.00	1.55		ug/L		77	40 - 125
1,2-Dichlorobenzene	2.00	1.70		ug/L		85	44 - 125
1,3-Dichlorobenzene	2.00	1.60		ug/L		80	40 - 125
1,4-Dichlorobenzene	2.00	1.53		ug/L		76	40 - 125
1-Methylnaphthalene	2.00	1.62		ug/L		81	54 - 125
2,2'-oxybis[1-chloropropane]	2.00	1.58		ug/L		79	44 - 130
2,4,5-Trichlorophenol	2.00	1.72		ug/L		86	66 - 130
2,4,6-Trichlorophenol	2.00	1.66		ug/L		83	55 - 140
2,4-Dichlorophenol	2.00	1.59		ug/L		80	50 - 140
2,4-Dimethylphenol	2.00	1.33	J	ug/L		66	30 - 135
2,4-Dinitrophenol	4.00	ND	* ^	ug/L		4	24 - 146
2,4-Dinitrotoluene	2.00	1.57		ug/L		79	73 - 126
2,6-Dinitrotoluene	2.00	1.72		ug/L		86	67 - 134
2-Chloronaphthalene	2.00	1.59		ug/L		79	55 - 125
2-Chlorophenol	2.00	1.61		ug/L		80	57 - 125
2-Methylnaphthalene	2.00	1.61		ug/L		81	56 - 125
2-Methylphenol	2.00	1.62		ug/L		81	60 - 130
2-Nitroaniline	2.00	1.69		ug/L		84	52 - 140
2-Nitrophenol	2.00	1.73		ug/L		87	55 - 140

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 580-181122/2-A**

**Matrix: Water**

**Analysis Batch: 181579**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181122**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3 & 4 Methylphenol	2.00	1.82		ug/L		91	60 - 130
3,3'-Dichlorobenzidine	4.00	1.45	J	ug/L		36	20 - 175
3-Nitroaniline	2.00	1.49		ug/L		74	22 - 124
4,6-Dinitro-2-methylphenol	4.00	1.24	J * ^	ug/L		31	50 - 136
4-Bromophenyl phenyl ether	2.00	1.82		ug/L		91	62 - 132
4-Chloro-3-methylphenol	2.00	1.71		ug/L		85	65 - 145
4-Chloroaniline	2.00	1.07		ug/L		54	20 - 150
4-Chlorophenyl phenyl ether	2.00	1.72		ug/L		86	59 - 125
4-Nitroaniline	2.00	1.66		ug/L		83	49 - 125
4-Nitrophenol	4.00	1.87	J	ug/L		47	35 - 153
Acenaphthene	2.00	1.68		ug/L		84	63 - 125
Acenaphthylene	2.00	1.50		ug/L		75	62 - 125
Anthracene	2.00	1.47		ug/L		74	50 - 125
Benzo[a]anthracene	2.00	1.83		ug/L		92	65 - 125
Benzo[a]pyrene	2.00	1.24		ug/L		62	45 - 125
Benzo[b]fluoranthene	2.00	2.07		ug/L		103	70 - 129
Benzo[g,h,i]perylene	2.00	1.20	* ^	ug/L		60	65 - 153
Benzo[k]fluoranthene	2.00	2.07		ug/L		104	70 - 123
Benzoic acid	4.00	ND	*	ug/L		5	20 - 144
Benzyl alcohol	2.00	1.48		ug/L		74	41 - 144
Bis(2-chloroethoxy)methane	2.00	1.59		ug/L		80	59 - 125
Bis(2-chloroethyl)ether	2.00	1.68		ug/L		84	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	7.20	*	ug/L		360	70 - 185
Butyl benzyl phthalate	2.00	2.28		ug/L		114	60 - 167
Carbazole	2.00	1.99		ug/L		100	75 - 142
Chrysene	2.00	1.94		ug/L		97	70 - 125
Dibenz(a,h)anthracene	2.00	1.37	*	ug/L		68	69 - 154
Dibenzofuran	2.00	1.64		ug/L		82	60 - 125
Diethyl phthalate	2.00	1.90		ug/L		95	60 - 150
Dimethyl phthalate	2.00	1.77		ug/L		89	65 - 155
Di-n-butyl phthalate	2.00	1.99		ug/L		99	55 - 167
Di-n-octyl phthalate	2.00	2.20		ug/L		110	55 - 150
Fluoranthene	2.00	1.87		ug/L		94	70 - 145
Fluorene	2.00	1.72		ug/L		86	69 - 125
Hexachlorobenzene	2.00	1.90		ug/L		95	61 - 125
Hexachlorobutadiene	2.00	1.51		ug/L		75	25 - 125
Hexachlorocyclopentadiene	2.00	0.695	J	ug/L		35	20 - 125
Hexachloroethane	2.00	1.53		ug/L		76	30 - 125
Indeno[1,2,3-cd]pyrene	2.00	1.27	*	ug/L		63	70 - 136
Isophorone	2.00	1.72		ug/L		86	64 - 125
Naphthalene	2.00	1.62		ug/L		81	56 - 125
Nitrobenzene	2.00	1.46		ug/L		73	62 - 125
N-Nitrosodimethylamine	2.00	1.38	J	ug/L		69	33 - 143
N-Nitrosodi-n-propylamine	2.00	1.63		ug/L		81	60 - 120
N-Nitrosodiphenylamine	2.00	1.40		ug/L		70	40 - 135
Pentachlorophenol	4.00	0.581	J *	ug/L		15	20 - 145
Phenanthrene	2.00	1.86		ug/L		93	70 - 125
Phenol	2.00	1.64		ug/L		82	53 - 130

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 580-181122/2-A**

**Matrix: Water**

**Analysis Batch: 181579**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181122**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyrene	2.00	1.85		ug/L		93	70 - 133
2,3,4,6-Tetrachlorophenol	2.00	1.35		ug/L		68	60 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol	72		44 - 125
2-Fluorobiphenyl	72		50 - 120
2-Fluorophenol	65		30 - 134
Nitrobenzene-d5	76		59 - 120
Phenol-d5	81		52 - 120
Terphenyl-d14	96		64 - 150

**Lab Sample ID: LCSD 580-181122/3-A**

**Matrix: Water**

**Analysis Batch: 181579**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 181122**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.64		ug/L		82	40 - 125	6	20
1,2-Dichlorobenzene	2.00	1.78		ug/L		89	44 - 125	5	20
1,3-Dichlorobenzene	2.00	1.69		ug/L		85	40 - 125	6	20
1,4-Dichlorobenzene	2.00	1.67		ug/L		83	40 - 125	9	20
1-Methylnaphthalene	2.00	1.64		ug/L		82	54 - 125	1	20
2,2'-oxybis[1-chloropropane]	2.00	1.65		ug/L		82	44 - 130	4	20
2,4,5-Trichlorophenol	2.00	1.76		ug/L		88	66 - 130	2	20
2,4,6-Trichlorophenol	2.00	1.66		ug/L		83	55 - 140	0	20
2,4-Dichlorophenol	2.00	1.74		ug/L		87	50 - 140	9	20
2,4-Dimethylphenol	2.00	1.38	J	ug/L		69	30 - 135	4	20
2,4-Dinitrophenol	4.00	1.11	J * ^	ug/L		28	24 - 146	146	20
2,4-Dinitrotoluene	2.00	1.62		ug/L		81	73 - 126	3	20
2,6-Dinitrotoluene	2.00	1.57		ug/L		78	67 - 134	9	20
2-Chloronaphthalene	2.00	1.68		ug/L		84	55 - 125	6	20
2-Chlorophenol	2.00	1.70		ug/L		85	57 - 125	6	20
2-Methylnaphthalene	2.00	1.67		ug/L		84	56 - 125	4	20
2-Methylphenol	2.00	1.61		ug/L		81	60 - 130	1	20
2-Nitroaniline	2.00	1.66		ug/L		83	52 - 140	2	20
2-Nitrophenol	2.00	1.60		ug/L		80	55 - 140	8	20
3 & 4 Methylphenol	2.00	1.77		ug/L		88	60 - 130	3	20
3,3'-Dichlorobenzidine	4.00	1.89	J *	ug/L		47	20 - 175	26	20
3-Nitroaniline	2.00	1.45		ug/L		73	22 - 124	2	20
4,6-Dinitro-2-methylphenol	4.00	2.30	J * ^	ug/L		58	50 - 136	60	20
4-Bromophenyl phenyl ether	2.00	1.73		ug/L		87	62 - 132	5	20
4-Chloro-3-methylphenol	2.00	1.66		ug/L		83	65 - 145	3	20
4-Chloroaniline	2.00	0.946		ug/L		47	20 - 150	13	20
4-Chlorophenyl phenyl ether	2.00	1.69		ug/L		85	59 - 125	1	20
4-Nitroaniline	2.00	1.71		ug/L		86	49 - 125	3	20
4-Nitrophenol	4.00	2.79	J *	ug/L		70	35 - 153	40	20
Acenaphthene	2.00	1.67		ug/L		84	63 - 125	0	20
Acenaphthylene	2.00	1.56		ug/L		78	62 - 125	4	20
Anthracene	2.00	1.52		ug/L		76	50 - 125	3	20

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-181122/3-A

Matrix: Water

Analysis Batch: 181579

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 181122

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
Benzo[a]anthracene	2.00	1.81		ug/L		90	65 - 125	1	20
Benzo[a]pyrene	2.00	1.30		ug/L		65	45 - 125	4	20
Benzo[b]fluoranthene	2.00	1.99		ug/L		99	70 - 129	4	20
Benzo[g,h,i]perylene	2.00	1.17	* ^	ug/L		59	65 - 153	2	20
Benzo[k]fluoranthene	2.00	2.09		ug/L		105	70 - 123	1	20
Benzoic acid	4.00	0.653	J *	ug/L		16	20 - 144	103	20
Benzyl alcohol	2.00	1.54		ug/L		77	41 - 144	3	20
Bis(2-chloroethoxy)methane	2.00	1.54		ug/L		77	59 - 125	3	20
Bis(2-chloroethyl)ether	2.00	1.80		ug/L		90	55 - 125	7	20
Bis(2-ethylhexyl) phthalate	2.00	2.55	J *	ug/L		127	70 - 185	95	20
Butyl benzyl phthalate	2.00	2.21		ug/L		110	60 - 167	3	20
Carbazole	2.00	2.16		ug/L		108	75 - 142	8	20
Chrysene	2.00	2.07		ug/L		104	70 - 125	6	20
Dibenz(a,h)anthracene	2.00	1.27	*	ug/L		64	69 - 154	7	20
Dibenzofuran	2.00	1.68		ug/L		84	60 - 125	2	20
Diethyl phthalate	2.00	1.98		ug/L		99	60 - 150	4	20
Dimethyl phthalate	2.00	1.75		ug/L		87	65 - 155	1	20
Di-n-butyl phthalate	2.00	1.87		ug/L		93	55 - 167	6	20
Di-n-octyl phthalate	2.00	1.95		ug/L		97	55 - 150	12	20
Fluoranthene	2.00	2.02		ug/L		101	70 - 145	8	20
Fluorene	2.00	1.72		ug/L		86	69 - 125	0	20
Hexachlorobenzene	2.00	1.85		ug/L		93	61 - 125	2	20
Hexachlorobutadiene	2.00	1.55		ug/L		78	25 - 125	3	20
Hexachlorocyclopentadiene	2.00	0.774	J	ug/L		39	20 - 125	11	20
Hexachloroethane	2.00	1.58		ug/L		79	30 - 125	3	20
Indeno[1,2,3-cd]pyrene	2.00	1.22	*	ug/L		61	70 - 136	4	20
Isophorone	2.00	1.80		ug/L		90	64 - 125	4	20
Naphthalene	2.00	1.65		ug/L		83	56 - 125	2	20
Nitrobenzene	2.00	1.50		ug/L		75	62 - 125	3	20
N-Nitrosodimethylamine	2.00	1.51	J	ug/L		76	33 - 143	10	20
N-Nitrosodi-n-propylamine	2.00	1.67		ug/L		83	60 - 120	2	20
N-Nitrosodiphenylamine	2.00	1.41		ug/L		70	40 - 135	0	20
Pentachlorophenol	4.00	1.34	*	ug/L		34	20 - 145	79	20
Phenanthrene	2.00	1.86		ug/L		93	70 - 125	0	20
Phenol	2.00	1.54		ug/L		77	53 - 130	6	20
Pyrene	2.00	1.96		ug/L		98	70 - 133	6	20
2,3,4,6-Tetrachlorophenol	2.00	1.55		ug/L		78	60 - 130	14	20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	78		44 - 125
2-Fluorobiphenyl	72		50 - 120
2-Fluorophenol	71		30 - 134
Nitrobenzene-d5	78		59 - 120
Phenol-d5	82		52 - 120
Terphenyl-d14	95		64 - 150

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 580-181417/1-A**

**Matrix: Solid**

**Analysis Batch: 181641**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 181417**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
1,2-Dichlorobenzene	ND		5.5	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
1,3-Dichlorobenzene	ND		5.0	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
1,4-Dichlorobenzene	ND		5.0	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
1-Methylnaphthalene	ND		3.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2,2'-oxybis[1-chloropropane]	ND		25	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2,4,5-Trichlorophenol	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2,4,6-Trichlorophenol	ND		15	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2,4-Dichlorophenol	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2,4-Dimethylphenol	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2,4-Dinitrophenol	ND		100	20	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2,4-Dinitrotoluene	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2,6-Dinitrotoluene	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2-Chloronaphthalene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2-Chlorophenol	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2-Methylnaphthalene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2-Methylphenol	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2-Nitroaniline	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
2-Nitrophenol	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
3 & 4 Methylphenol	ND		20	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
3,3'-Dichlorobenzidine	ND		20	3.0	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
3-Nitroaniline	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
4,6-Dinitro-2-methylphenol	ND		100	10	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
4-Bromophenyl phenyl ether	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
4-Chloro-3-methylphenol	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
4-Chloroaniline	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
4-Chlorophenyl phenyl ether	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
4-Nitroaniline	ND		10	2.0	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
4-Nitrophenol	ND		100	25	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Acenaphthene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Acenaphthylene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Anthracene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Benzo[a]anthracene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Benzo[a]pyrene	ND		3.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Benzo[b]fluoranthene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Benzo[g,h,i]perylene	ND		2.5	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Benzo[k]fluoranthene	ND		2.5	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Benzoic acid	ND		250	75	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Benzyl alcohol	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Bis(2-chloroethoxy)methane	ND		10	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Bis(2-chloroethyl)ether	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Bis(2-ethylhexyl) phthalate	ND		60	5.0	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Butyl benzyl phthalate	7.78	J	20	5.0	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Carbazole	ND		10	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Chrysene	ND		2.5	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Dibenz(a,h)anthracene	ND		4.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Dibenzofuran	ND		10	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Diethyl phthalate	2.07	J	20	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 580-181417/1-A**

**Matrix: Solid**

**Analysis Batch: 181641**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 181417**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dimethyl phthalate	ND		10	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Di-n-butyl phthalate	ND		50	5.0	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Di-n-octyl phthalate	0.953	J	50	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Fluoranthene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Fluorene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Hexachlorobenzene	ND		5.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Hexachlorobutadiene	ND		5.0	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Hexachloroethane	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Isophorone	ND		10	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Naphthalene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Nitrobenzene	ND		10	3.4	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
N-Nitrosodimethylamine	ND		100	25	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
N-Nitrosodiphenylamine	ND		5.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Pentachlorophenol	ND		20	2.0	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Phenanthrene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Phenol	ND		10	1.5	ug/Kg		02/02/15 07:00	02/03/15 20:52	1
Pyrene	ND		2.0	0.50	ug/Kg		02/02/15 07:00	02/03/15 20:52	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol	65		28 - 143	02/02/15 07:00	02/03/15 20:52	1
2-Fluorobiphenyl	84		42 - 140	02/02/15 07:00	02/03/15 20:52	1
2-Fluorophenol	92		36 - 145	02/02/15 07:00	02/03/15 20:52	1
Nitrobenzene-d5	81		38 - 141	02/02/15 07:00	02/03/15 20:52	1
Phenol-d5	87		38 - 149	02/02/15 07:00	02/03/15 20:52	1
Terphenyl-d14	110		42 - 151	02/02/15 07:00	02/03/15 20:52	1

**Lab Sample ID: LCS 580-181417/2-A**

**Matrix: Solid**

**Analysis Batch: 181641**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181417**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
1,2,4-Trichlorobenzene	100	76.2		ug/Kg		76	66 - 115	
1,2-Dichlorobenzene	100	73.1		ug/Kg		73	64 - 112	
1,3-Dichlorobenzene	100	74.2		ug/Kg		74	64 - 111	
1,4-Dichlorobenzene	100	72.6		ug/Kg		73	65 - 110	
1-Methylnaphthalene	100	77.8		ug/Kg		78	62 - 118	
2,2'-oxybis[1-chloropropane]	100	75.7		ug/Kg		76	41 - 126	
2,4,5-Trichlorophenol	100	74.4		ug/Kg		74	57 - 133	
2,4,6-Trichlorophenol	100	70.6		ug/Kg		71	62 - 133	
2,4-Dichlorophenol	100	82.1		ug/Kg		82	68 - 125	
2,4-Dimethylphenol	100	90.8		ug/Kg		91	54 - 139	
2,4-Dinitrophenol	200	97.0	J	ug/Kg		49	20 - 141	
2,4-Dinitrotoluene	100	78.8		ug/Kg		79	68 - 121	
2,6-Dinitrotoluene	100	76.3		ug/Kg		76	66 - 123	
2-Chloronaphthalene	100	78.3		ug/Kg		78	68 - 112	

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 580-181417/2-A**

**Matrix: Solid**

**Analysis Batch: 181641**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181417**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorophenol	100	79.2		ug/Kg		79	68 - 117
2-Methylnaphthalene	100	78.3		ug/Kg		78	64 - 119
2-Methylphenol	100	79.6		ug/Kg		80	71 - 116
2-Nitroaniline	100	79.4		ug/Kg		79	64 - 112
2-Nitrophenol	100	79.4		ug/Kg		79	67 - 127
3 & 4 Methylphenol	100	85.3		ug/Kg		85	70 - 116
3,3'-Dichlorobenzidine	200	162		ug/Kg		81	20 - 103
3-Nitroaniline	100	63.2		ug/Kg		63	27 - 103
4,6-Dinitro-2-methylphenol	200	134		ug/Kg		67	48 - 130
4-Bromophenyl phenyl ether	100	82.4		ug/Kg		82	68 - 122
4-Chloro-3-methylphenol	100	84.6		ug/Kg		85	69 - 121
4-Chloroaniline	100	49.1		ug/Kg		49	20 - 103
4-Chlorophenyl phenyl ether	100	78.7		ug/Kg		79	75 - 108
4-Nitroaniline	100	84.7		ug/Kg		85	58 - 108
4-Nitrophenol	200	146		ug/Kg		73	20 - 165
Acenaphthene	100	79.9		ug/Kg		80	68 - 116
Acenaphthylene	100	75.9		ug/Kg		76	68 - 120
Anthracene	100	84.3		ug/Kg		84	73 - 116
Benzo[a]anthracene	100	90.9		ug/Kg		91	76 - 119
Benzo[a]pyrene	100	85.7		ug/Kg		86	72 - 117
Benzo[b]fluoranthene	100	93.8		ug/Kg		94	63 - 132
Benzo[g,h,i]perylene	100	85.5		ug/Kg		86	55 - 139
Benzo[k]fluoranthene	100	90.4		ug/Kg		90	63 - 119
Benzoic acid	200	97.9	J	ug/Kg		49	29 - 158
Benzyl alcohol	100	78.7		ug/Kg		79	55 - 123
Bis(2-chloroethoxy)methane	100	77.3		ug/Kg		77	69 - 107
Bis(2-chloroethyl)ether	100	73.1		ug/Kg		73	62 - 110
Bis(2-ethylhexyl) phthalate	100	106		ug/Kg		106	62 - 144
Butyl benzyl phthalate	100	112		ug/Kg		112	69 - 142
Carbazole	100	97.3		ug/Kg		97	76 - 135
Chrysene	100	103		ug/Kg		103	75 - 114
Dibenz(a,h)anthracene	100	96.4		ug/Kg		96	56 - 134
Dibenzofuran	100	77.7		ug/Kg		78	72 - 109
Diethyl phthalate	100	85.5		ug/Kg		85	73 - 116
Dimethyl phthalate	100	77.4	*	ug/Kg		77	78 - 117
Di-n-butyl phthalate	100	84.5		ug/Kg		84	66 - 140
Di-n-octyl phthalate	100	86.4		ug/Kg		86	65 - 141
Fluoranthene	100	91.6		ug/Kg		92	73 - 125
Fluorene	100	80.6		ug/Kg		81	70 - 121
Hexachlorobenzene	100	90.8		ug/Kg		91	66 - 117
Hexachlorobutadiene	100	72.0		ug/Kg		72	65 - 116
Hexachlorocyclopentadiene	100	73.8		ug/Kg		74	46 - 131
Hexachloroethane	100	69.3		ug/Kg		69	62 - 120
Indeno[1,2,3-cd]pyrene	100	92.8		ug/Kg		93	56 - 127
Isophorone	100	81.9		ug/Kg		82	67 - 119
Naphthalene	100	77.0		ug/Kg		77	62 - 112
Nitrobenzene	100	71.3		ug/Kg		71	64 - 118
N-Nitrosodimethylamine	100	73.3	J	ug/Kg		73	38 - 133

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 580-181417/2-A**

**Matrix: Solid**

**Analysis Batch: 181641**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181417**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Nitrosodi-n-propylamine	100	81.7		ug/Kg		82	62 - 116
N-Nitrosodiphenylamine	100	82.6		ug/Kg		83	73 - 115
Pentachlorophenol	200	130		ug/Kg		65	45 - 117
Phenanthrene	100	87.3		ug/Kg		87	73 - 106
Phenol	100	81.9		ug/Kg		82	63 - 111
Pyrene	100	88.3		ug/Kg		88	70 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol	67		28 - 143
2-Fluorobiphenyl	68		42 - 140
2-Fluorophenol	79		36 - 145
Nitrobenzene-d5	73		38 - 141
Phenol-d5	76		38 - 149
Terphenyl-d14	84		42 - 151

**Lab Sample ID: LCSD 580-181417/3-A**

**Matrix: Solid**

**Analysis Batch: 181641**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 181417**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	100	85.3		ug/Kg		85	66 - 115	11	28
1,2-Dichlorobenzene	100	86.8		ug/Kg		87	64 - 112	17	30
1,3-Dichlorobenzene	100	83.4		ug/Kg		83	64 - 111	12	30
1,4-Dichlorobenzene	100	81.1		ug/Kg		81	65 - 110	11	30
1-Methylnaphthalene	100	90.2		ug/Kg		90	62 - 118	15	30
2,2'-oxybis[1-chloropropane]	100	84.4		ug/Kg		84	41 - 126	11	57
2,4,5-Trichlorophenol	100	87.8		ug/Kg		88	57 - 133	17	30
2,4,6-Trichlorophenol	100	88.8		ug/Kg		89	62 - 133	23	30
2,4-Dichlorophenol	100	101		ug/Kg		101	68 - 125	21	30
2,4-Dimethylphenol	100	92.8		ug/Kg		93	54 - 139	2	30
2,4-Dinitrophenol	200	112		ug/Kg		56	20 - 141	14	36
2,4-Dinitrotoluene	100	88.6		ug/Kg		89	68 - 121	12	30
2,6-Dinitrotoluene	100	94.5		ug/Kg		94	66 - 123	21	30
2-Chloronaphthalene	100	88.3		ug/Kg		88	68 - 112	12	25
2-Chlorophenol	100	90.0		ug/Kg		90	68 - 117	13	27
2-Methylnaphthalene	100	92.7		ug/Kg		93	64 - 119	17	27
2-Methylphenol	100	87.2		ug/Kg		87	71 - 116	9	25
2-Nitroaniline	100	95.5		ug/Kg		96	64 - 112	18	22
2-Nitrophenol	100	95.7		ug/Kg		96	67 - 127	19	30
3 & 4 Methylphenol	100	101		ug/Kg		101	70 - 116	17	27
3,3'-Dichlorobenzidine	200	168		ug/Kg		84	20 - 103	4	60
3-Nitroaniline	100	72.7		ug/Kg		73	27 - 103	14	33
4,6-Dinitro-2-methylphenol	200	152		ug/Kg		76	48 - 130	12	22
4-Bromophenyl phenyl ether	100	105		ug/Kg		105	68 - 122	24	30
4-Chloro-3-methylphenol	100	104		ug/Kg		104	69 - 121	21	27
4-Chloroaniline	100	49.6		ug/Kg		50	20 - 103	1	60
4-Chlorophenyl phenyl ether	100	94.3		ug/Kg		94	75 - 108	18	30
4-Nitroaniline	100	98.4		ug/Kg		98	58 - 108	15	32

TestAmerica Seattle



# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-181417/3-A

Matrix: Solid

Analysis Batch: 181641

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 181417

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
4-Nitrophenol	200	174		ug/Kg		87	20 - 165	18	30	
Acenaphthene	100	91.4		ug/Kg		91	68 - 116	13	27	
Acenaphthylene	100	88.6		ug/Kg		89	68 - 120	15	28	
Anthracene	100	96.4		ug/Kg		96	73 - 116	13	27	
Benzo[a]anthracene	100	101		ug/Kg		101	76 - 119	11	27	
Benzo[a]pyrene	100	93.6		ug/Kg		94	72 - 117	9	30	
Benzo[b]fluoranthene	100	103		ug/Kg		103	63 - 132	9	30	
Benzo[g,h,i]perylene	100	94.0		ug/Kg		94	55 - 139	9	28	
Benzo[k]fluoranthene	100	99.3		ug/Kg		99	63 - 119	9	30	
Benzoic acid	200	167	J *	ug/Kg		84	29 - 158	52	28	
Benzyl alcohol	100	91.2		ug/Kg		91	55 - 123	15	60	
Bis(2-chloroethoxy)methane	100	87.0		ug/Kg		87	69 - 107	12	30	
Bis(2-chloroethyl)ether	100	84.6		ug/Kg		85	62 - 110	14	22	
Bis(2-ethylhexyl) phthalate	100	107		ug/Kg		107	62 - 144	2	30	
Butyl benzyl phthalate	100	119		ug/Kg		119	69 - 142	6	30	
Carbazole	100	107		ug/Kg		107	76 - 135	10	30	
Chrysene	100	103		ug/Kg		103	75 - 114	0	26	
Dibenz(a,h)anthracene	100	108		ug/Kg		108	56 - 134	11	30	
Dibenzofuran	100	90.4		ug/Kg		90	72 - 109	15	30	
Diethyl phthalate	100	96.4		ug/Kg		96	73 - 116	12	26	
Dimethyl phthalate	100	93.0		ug/Kg		93	78 - 117	18	30	
Di-n-butyl phthalate	100	94.4		ug/Kg		94	66 - 140	11	30	
Di-n-octyl phthalate	100	94.7		ug/Kg		95	65 - 141	9	30	
Fluoranthene	100	99.7		ug/Kg		100	73 - 125	8	30	
Fluorene	100	96.4		ug/Kg		96	70 - 121	18	30	
Hexachlorobenzene	100	101		ug/Kg		101	66 - 117	11	30	
Hexachlorobutadiene	100	78.5		ug/Kg		79	65 - 116	9	30	
Hexachlorocyclopentadiene	100	94.8		ug/Kg		95	46 - 131	25	29	
Hexachloroethane	100	80.6		ug/Kg		81	62 - 120	15	30	
Indeno[1,2,3-cd]pyrene	100	92.9		ug/Kg		93	56 - 127	0	29	
Isophorone	100	93.2		ug/Kg		93	67 - 119	13	30	
Naphthalene	100	88.0		ug/Kg		88	62 - 112	13	26	
Nitrobenzene	100	86.6		ug/Kg		87	64 - 118	19	30	
N-Nitrosodimethylamine	100	97.5	J	ug/Kg		98	38 - 133	28	30	
N-Nitrosodi-n-propylamine	100	91.3		ug/Kg		91	62 - 116	11	28	
N-Nitrosodiphenylamine	100	90.6		ug/Kg		91	73 - 115	9	30	
Pentachlorophenol	200	121		ug/Kg		60	45 - 117	7	23	
Phenanthrene	100	102		ug/Kg		102	73 - 106	16	28	
Phenol	100	95.0		ug/Kg		95	63 - 111	15	26	
Pyrene	100	97.5		ug/Kg		98	70 - 120	10	30	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	76		28 - 143
2-Fluorobiphenyl	85		42 - 140
2-Fluorophenol	90		36 - 145
Nitrobenzene-d5	81		38 - 141
Phenol-d5	87		38 - 149
Terphenyl-d14	97		42 - 151

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 580-181448/1-A**

**Matrix: Water**

**Analysis Batch: 181641**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 181448**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
1,2-Dichlorobenzene	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
1,3-Dichlorobenzene	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
1,4-Dichlorobenzene	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
1-Methylnaphthalene	ND		0.060	0.030	ug/L		01/30/15 16:10	02/03/15 19:33	1
2,2'-oxybis[1-chloropropane]	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
2,4,5-Trichlorophenol	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
2,4,6-Trichlorophenol	ND		0.60	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
2,4-Dichlorophenol	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
2,4-Dimethylphenol	ND		2.0	0.30	ug/L		01/30/15 16:10	02/03/15 19:33	1
2,4-Dinitrophenol	ND		5.0	1.0	ug/L		01/30/15 16:10	02/03/15 19:33	1
2,4-Dinitrotoluene	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
2,6-Dinitrotoluene	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
2-Chloronaphthalene	ND		0.060	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
2-Chlorophenol	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
2-Methylphenol	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
2-Nitroaniline	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
2-Nitrophenol	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
3 & 4 Methylphenol	ND		0.80	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
3,3'-Dichlorobenzidine	ND		2.0	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
3-Nitroaniline	ND		0.40	0.12	ug/L		01/30/15 16:10	02/03/15 19:33	1
4,6-Dinitro-2-methylphenol	ND		4.0	1.0	ug/L		01/30/15 16:10	02/03/15 19:33	1
4-Bromophenyl phenyl ether	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
4-Chloro-3-methylphenol	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
4-Chloroaniline	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
4-Chlorophenyl phenyl ether	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
4-Nitroaniline	ND		0.60	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
4-Nitrophenol	ND		3.0	1.0	ug/L		01/30/15 16:10	02/03/15 19:33	1
Acenaphthene	ND		0.10	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
Acenaphthylene	ND		0.080	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
Anthracene	ND		0.040	0.010	ug/L		01/30/15 16:10	02/03/15 19:33	1
Benzo[a]anthracene	ND		0.060	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
Benzo[a]pyrene	ND		0.040	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
Benzo[b]fluoranthene	ND		0.080	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
Benzo[g,h,i]perylene	ND		0.060	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
Benzo[k]fluoranthene	ND		0.060	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
Benzoic acid	ND		3.0	0.60	ug/L		01/30/15 16:10	02/03/15 19:33	1
Benzyl alcohol	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Bis(2-chloroethoxy)methane	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Bis(2-chloroethyl)ether	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Bis(2-ethylhexyl) phthalate	ND		3.0	1.2	ug/L		01/30/15 16:10	02/03/15 19:33	1
Butyl benzyl phthalate	ND		0.60	0.20	ug/L		01/30/15 16:10	02/03/15 19:33	1
Carbazole	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Chrysene	ND		0.040	0.013	ug/L		01/30/15 16:10	02/03/15 19:33	1
Dibenz(a,h)anthracene	ND		0.060	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
Dibenzofuran	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Diethyl phthalate	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 580-181448/1-A**

**Matrix: Water**

**Analysis Batch: 181641**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 181448**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dimethyl phthalate	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Di-n-butyl phthalate	ND		0.40	0.13	ug/L		01/30/15 16:10	02/03/15 19:33	1
Di-n-octyl phthalate	ND		0.40	0.18	ug/L		01/30/15 16:10	02/03/15 19:33	1
Fluoranthene	ND		0.050	0.013	ug/L		01/30/15 16:10	02/03/15 19:33	1
Fluorene	ND		0.060	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
Hexachlorobenzene	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Hexachlorobutadiene	ND		0.60	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Hexachlorocyclopentadiene	ND		2.0	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Hexachloroethane	ND		0.60	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Indeno[1,2,3-cd]pyrene	ND		0.060	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
Isophorone	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Naphthalene	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Nitrobenzene	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
N-Nitrosodimethylamine	ND		2.0	0.20	ug/L		01/30/15 16:10	02/03/15 19:33	1
N-Nitrosodi-n-propylamine	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
N-Nitrosodiphenylamine	ND		0.40	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Pentachlorophenol	ND		0.70	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Phenanthrene	ND		0.080	0.020	ug/L		01/30/15 16:10	02/03/15 19:33	1
Phenol	ND		0.60	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1
Pyrene	ND		0.060	0.013	ug/L		01/30/15 16:10	02/03/15 19:33	1
2,3,4,6-Tetrachlorophenol	ND		0.70	0.10	ug/L		01/30/15 16:10	02/03/15 19:33	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol	39	X	44 - 125	01/30/15 16:10	02/03/15 19:33	1
2-Fluorobiphenyl	39	X	50 - 120	01/30/15 16:10	02/03/15 19:33	1
2-Fluorophenol	36		30 - 134	01/30/15 16:10	02/03/15 19:33	1
Nitrobenzene-d5	39	X	59 - 120	01/30/15 16:10	02/03/15 19:33	1
Phenol-d5	41	X	52 - 120	01/30/15 16:10	02/03/15 19:33	1
Terphenyl-d14	110		64 - 150	01/30/15 16:10	02/03/15 19:33	1

**Lab Sample ID: LCS 580-181448/2-A**

**Matrix: Water**

**Analysis Batch: 181641**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181448**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
1,2,4-Trichlorobenzene	2.00	1.48		ug/L		74	40 - 125
1,2-Dichlorobenzene	2.00	1.51		ug/L		75	44 - 125
1,3-Dichlorobenzene	2.00	1.55		ug/L		77	40 - 125
1,4-Dichlorobenzene	2.00	1.52		ug/L		76	40 - 125
1-Methylnaphthalene	2.00	1.48		ug/L		74	54 - 125
2,2'-oxybis[1-chloropropane]	2.00	1.50		ug/L		75	44 - 130
2,4,5-Trichlorophenol	2.00	1.44		ug/L		72	66 - 130
2,4,6-Trichlorophenol	2.00	1.49		ug/L		75	55 - 140
2,4-Dichlorophenol	2.00	1.54		ug/L		77	50 - 140
2,4-Dimethylphenol	2.00	1.35	J	ug/L		67	30 - 135
2,4-Dinitrophenol	4.00	2.71	J	ug/L		68	24 - 146
2,4-Dinitrotoluene	2.00	1.57		ug/L		78	73 - 126
2,6-Dinitrotoluene	2.00	1.47		ug/L		73	67 - 134

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 580-181448/2-A**

**Matrix: Water**

**Analysis Batch: 181641**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181448**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	2.00	1.39		ug/L		69	55 - 125
2-Chlorophenol	2.00	1.51		ug/L		76	57 - 125
2-Methylnaphthalene	2.00	1.51		ug/L		76	56 - 125
2-Methylphenol	2.00	1.51		ug/L		76	60 - 130
2-Nitroaniline	2.00	1.28		ug/L		64	52 - 140
2-Nitrophenol	2.00	1.52		ug/L		76	55 - 140
3 & 4 Methylphenol	2.00	1.60		ug/L		80	60 - 130
3,3'-Dichlorobenzidine	4.00	4.04		ug/L		101	20 - 175
3-Nitroaniline	2.00	1.56		ug/L		78	22 - 124
4,6-Dinitro-2-methylphenol	4.00	3.49	J	ug/L		87	50 - 136
4-Bromophenyl phenyl ether	2.00	1.63		ug/L		82	62 - 132
4-Chloro-3-methylphenol	2.00	1.61		ug/L		81	65 - 145
4-Chloroaniline	2.00	1.67		ug/L		84	20 - 150
4-Chlorophenyl phenyl ether	2.00	1.45		ug/L		73	59 - 125
4-Nitroaniline	2.00	2.05		ug/L		102	49 - 125
4-Nitrophenol	4.00	4.18		ug/L		105	35 - 153
Acenaphthene	2.00	1.54		ug/L		77	63 - 125
Acenaphthylene	2.00	1.37		ug/L		69	62 - 125
Anthracene	2.00	1.64		ug/L		82	50 - 125
Benzo[a]anthracene	2.00	2.32		ug/L		116	65 - 125
Benzo[a]pyrene	2.00	1.87		ug/L		94	45 - 125
Benzo[b]fluoranthene	2.00	2.35		ug/L		117	70 - 129
Benzo[g,h,i]perylene	2.00	2.24		ug/L		112	65 - 153
Benzo[k]fluoranthene	2.00	2.35		ug/L		118	70 - 123
Benzoic acid	4.00	1.87	J	ug/L		47	20 - 144
Benzyl alcohol	2.00	1.46		ug/L		73	41 - 144
Bis(2-chloroethoxy)methane	2.00	1.43		ug/L		72	59 - 125
Bis(2-chloroethyl)ether	2.00	1.55		ug/L		77	55 - 125
Bis(2-ethylhexyl) phthalate	2.00	2.59	J	ug/L		130	70 - 185
Butyl benzyl phthalate	2.00	2.64		ug/L		132	60 - 167
Carbazole	2.00	2.39		ug/L		119	75 - 142
Chrysene	2.00	2.44		ug/L		122	70 - 125
Dibenz(a,h)anthracene	2.00	2.47		ug/L		123	69 - 154
Dibenzofuran	2.00	1.46		ug/L		73	60 - 125
Diethyl phthalate	2.00	1.82		ug/L		91	60 - 150
Dimethyl phthalate	2.00	1.67		ug/L		83	65 - 155
Di-n-butyl phthalate	2.00	2.13		ug/L		106	55 - 167
Di-n-octyl phthalate	2.00	2.26		ug/L		113	55 - 150
Fluoranthene	2.00	2.16		ug/L		108	70 - 145
Fluorene	2.00	1.52		ug/L		76	69 - 125
Hexachlorobenzene	2.00	1.73		ug/L		87	61 - 125
Hexachlorobutadiene	2.00	1.45		ug/L		72	25 - 125
Hexachlorocyclopentadiene	2.00	0.892	J	ug/L		45	20 - 125
Hexachloroethane	2.00	1.43		ug/L		71	30 - 125
Indeno[1,2,3-cd]pyrene	2.00	2.40		ug/L		120	70 - 136
Isophorone	2.00	1.58		ug/L		79	64 - 125
Naphthalene	2.00	1.54		ug/L		77	56 - 125
Nitrobenzene	2.00	1.49		ug/L		75	62 - 125

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 580-181448/2-A**

**Matrix: Water**

**Analysis Batch: 181641**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181448**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Nitrosodimethylamine	2.00	1.40	J	ug/L		70	33 - 143
N-Nitrosodi-n-propylamine	2.00	1.58		ug/L		79	60 - 120
N-Nitrosodiphenylamine	2.00	1.53		ug/L		77	40 - 135
Pentachlorophenol	4.00	2.04		ug/L		51	20 - 145
Phenanthrene	2.00	1.83		ug/L		91	70 - 125
Phenol	2.00	1.56		ug/L		78	53 - 130
Pyrene	2.00	2.16		ug/L		108	70 - 133
2,3,4,6-Tetrachlorophenol	2.00	1.49		ug/L		74	60 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol	74		44 - 125
2-Fluorobiphenyl	62		50 - 120
2-Fluorophenol	67		30 - 134
Nitrobenzene-d5	77		59 - 120
Phenol-d5	74		52 - 120
Terphenyl-d14	111		64 - 150

**Lab Sample ID: LCSD 580-181448/3-A**

**Matrix: Water**

**Analysis Batch: 181641**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 181448**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.28		ug/L		64	40 - 125	14	20
1,2-Dichlorobenzene	2.00	1.31		ug/L		65	44 - 125	14	20
1,3-Dichlorobenzene	2.00	1.29		ug/L		64	40 - 125	18	20
1,4-Dichlorobenzene	2.00	1.29		ug/L		64	40 - 125	16	20
1-Methylnaphthalene	2.00	1.29		ug/L		64	54 - 125	14	20
2,2'-oxybis[1-chloropropane]	2.00	1.29		ug/L		64	44 - 130	15	20
2,4,5-Trichlorophenol	2.00	1.37		ug/L		68	66 - 130	5	20
2,4,6-Trichlorophenol	2.00	1.32		ug/L		66	55 - 140	12	20
2,4-Dichlorophenol	2.00	1.38		ug/L		69	50 - 140	11	20
2,4-Dimethylphenol	2.00	1.03	J *	ug/L		51	30 - 135	27	20
2,4-Dinitrophenol	4.00	2.69	J	ug/L		67	24 - 146	1	20
2,4-Dinitrotoluene	2.00	1.68		ug/L		84	73 - 126	7	20
2,6-Dinitrotoluene	2.00	1.38		ug/L		69	67 - 134	6	20
2-Chloronaphthalene	2.00	1.31		ug/L		65	55 - 125	6	20
2-Chlorophenol	2.00	1.30		ug/L		65	57 - 125	15	20
2-Methylnaphthalene	2.00	1.25		ug/L		63	56 - 125	19	20
2-Methylphenol	2.00	1.22	*	ug/L		61	60 - 130	22	20
2-Nitroaniline	2.00	1.44		ug/L		72	52 - 140	11	20
2-Nitrophenol	2.00	1.28		ug/L		64	55 - 140	17	20
3 & 4 Methylphenol	2.00	1.44		ug/L		72	60 - 130	10	20
3,3'-Dichlorobenzidine	4.00	3.54		ug/L		88	20 - 175	13	20
3-Nitroaniline	2.00	1.46		ug/L		73	22 - 124	7	20
4,6-Dinitro-2-methylphenol	4.00	3.50	J	ug/L		88	50 - 136	0	20
4-Bromophenyl phenyl ether	2.00	1.62		ug/L		81	62 - 132	1	20
4-Chloro-3-methylphenol	2.00	1.35		ug/L		68	65 - 145	18	20
4-Chloroaniline	2.00	1.36	*	ug/L		68	20 - 150	21	20

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-181448/3-A

Matrix: Water

Analysis Batch: 181641

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 181448

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
							Lower	Upper	RPD	Limit
4-Chlorophenyl phenyl ether	2.00	1.39		ug/L		69	59 - 125	5	20	
4-Nitroaniline	2.00	1.95		ug/L		98	49 - 125	5	20	
4-Nitrophenol	4.00	4.19		ug/L		105	35 - 153	0	20	
Acenaphthene	2.00	1.34		ug/L		67	63 - 125	13	20	
Acenaphthylene	2.00	1.27		ug/L		63	62 - 125	8	20	
Anthracene	2.00	1.55		ug/L		77	50 - 125	6	20	
Benzo[a]anthracene	2.00	2.14		ug/L		107	65 - 125	8	20	
Benzo[a]pyrene	2.00	1.83		ug/L		91	45 - 125	2	20	
Benzo[b]fluoranthene	2.00	2.02		ug/L		101	70 - 129	15	20	
Benzo[g,h,i]perylene	2.00	2.04		ug/L		102	65 - 153	9	20	
Benzo[k]fluoranthene	2.00	2.41		ug/L		121	70 - 123	3	20	
Benzoic acid	4.00	2.40	J *	ug/L		60	20 - 144	25	20	
Benzyl alcohol	2.00	1.29		ug/L		65	41 - 144	12	20	
Bis(2-chloroethoxy)methane	2.00	1.26		ug/L		63	59 - 125	13	20	
Bis(2-chloroethyl)ether	2.00	1.33		ug/L		66	55 - 125	15	20	
Bis(2-ethylhexyl) phthalate	2.00	5.45	*	ug/L		273	70 - 185	71	20	
Butyl benzyl phthalate	2.00	2.45		ug/L		123	60 - 167	7	20	
Carbazole	2.00	2.26		ug/L		113	75 - 142	5	20	
Chrysene	2.00	2.38		ug/L		119	70 - 125	3	20	
Dibenz(a,h)anthracene	2.00	2.49		ug/L		124	69 - 154	1	20	
Dibenzofuran	2.00	1.38		ug/L		69	60 - 125	6	20	
Diethyl phthalate	2.00	1.80		ug/L		90	60 - 150	1	20	
Dimethyl phthalate	2.00	1.57		ug/L		79	65 - 155	6	20	
Di-n-butyl phthalate	2.00	2.06		ug/L		103	55 - 167	3	20	
Di-n-octyl phthalate	2.00	2.13		ug/L		106	55 - 150	6	20	
Fluoranthene	2.00	2.14		ug/L		107	70 - 145	1	20	
Fluorene	2.00	1.43		ug/L		72	69 - 125	6	20	
Hexachlorobenzene	2.00	1.56		ug/L		78	61 - 125	10	20	
Hexachlorobutadiene	2.00	1.30		ug/L		65	25 - 125	11	20	
Hexachlorocyclopentadiene	2.00	0.945	J	ug/L		47	20 - 125	6	20	
Hexachloroethane	2.00	1.18		ug/L		59	30 - 125	19	20	
Indeno[1,2,3-cd]pyrene	2.00	2.14		ug/L		107	70 - 136	11	20	
Isophorone	2.00	1.35		ug/L		67	64 - 125	16	20	
Naphthalene	2.00	1.31		ug/L		65	56 - 125	16	20	
Nitrobenzene	2.00	1.29		ug/L		65	62 - 125	14	20	
N-Nitrosodimethylamine	2.00	1.23	J	ug/L		62	33 - 143	13	20	
N-Nitrosodi-n-propylamine	2.00	1.28	*	ug/L		64	60 - 120	21	20	
N-Nitrosodiphenylamine	2.00	1.34		ug/L		67	40 - 135	14	20	
Pentachlorophenol	4.00	2.34		ug/L		59	20 - 145	14	20	
Phenanthrene	2.00	1.69		ug/L		84	70 - 125	8	20	
Phenol	2.00	1.36		ug/L		68	53 - 130	14	20	
Pyrene	2.00	2.15		ug/L		107	70 - 133	1	20	
2,3,4,6-Tetrachlorophenol	2.00	1.55		ug/L		77	60 - 130	4	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	72		44 - 125
2-Fluorobiphenyl	58		50 - 120
2-Fluorophenol	60		30 - 134

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 580-181448/3-A  
**Matrix:** Water  
**Analysis Batch:** 181641

**Client Sample ID:** Lab Control Sample Dup  
**Prep Type:** Total/NA  
**Prep Batch:** 181448

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	63		59 - 120
Phenol-d5	62		52 - 120
Terphenyl-d14	106		64 - 150

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID:** MB 580-181011/1-A  
**Matrix:** Solid  
**Analysis Batch:** 180997

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA  
**Prep Batch:** 181011

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Gasoline	1.16	J	4.0	0.50	mg/Kg		01/26/15 12:35	01/26/15 13:49	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	98		50 - 150	01/26/15 12:35	01/26/15 13:49	1

**Lab Sample ID:** LCS 580-181011/2-A  
**Matrix:** Solid  
**Analysis Batch:** 180997

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 181011

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Gasoline	50.0	45.9		mg/Kg		92	68 - 120

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	102		50 - 150

**Lab Sample ID:** LCSD 580-181011/3-A  
**Matrix:** Solid  
**Analysis Batch:** 180997

**Client Sample ID:** Lab Control Sample Dup  
**Prep Type:** Total/NA  
**Prep Batch:** 181011

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec. Limits	RPD	Limit
		Result	Qualifier						
Gasoline	50.0	47.0		mg/Kg		94	68 - 120	2	25

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	102		50 - 150

**Lab Sample ID:** 580-47171-2 MS  
**Matrix:** Solid  
**Analysis Batch:** 180997

**Client Sample ID:** WM-FD-02-20150122-S  
**Prep Type:** Total/NA  
**Prep Batch:** 181011

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
Gasoline	510		453	877		mg/Kg	☼	82	50 - 150

Surrogate	MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	110		50 - 150

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: 580-47171-2 MSD**

**Matrix: Solid**

**Analysis Batch: 180997**

**Client Sample ID: WM-FD-02-20150122-S**

**Prep Type: Total/NA**

**Prep Batch: 181011**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline	510		453	918		mg/Kg	☼	91	50 - 150	5	35
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>MSD</b>	<b>Limits</b>							
4-Bromofluorobenzene (Surr)	113			50 - 150							

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Lab Sample ID: MB 580-181345/1-A**

**Matrix: Solid**

**Analysis Batch: 181456**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 181345**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.010	0.0032	mg/Kg		01/29/15 14:56	02/01/15 01:06	1
Arochlor 1221	ND		0.011	0.0080	mg/Kg		01/29/15 14:56	02/01/15 01:06	1
Arochlor 1232	ND		0.011	0.0070	mg/Kg		01/29/15 14:56	02/01/15 01:06	1
Arochlor 1242	ND		0.010	0.0021	mg/Kg		01/29/15 14:56	02/01/15 01:06	1
Arochlor 1248	ND		0.010	0.0030	mg/Kg		01/29/15 14:56	02/01/15 01:06	1
Arochlor 1254	ND		0.010	0.0021	mg/Kg		01/29/15 14:56	02/01/15 01:06	1
Arochlor 1260	ND		0.010	0.0030	mg/Kg		01/29/15 14:56	02/01/15 01:06	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>MB Qualifier</b>	<b>MB</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Tetrachloro-m-xylene	75			45 - 135			01/29/15 14:56	02/01/15 01:06	1
DCB Decachlorobiphenyl	85			50 - 140			01/29/15 14:56	02/01/15 01:06	1

**Lab Sample ID: LCS 580-181345/16-A**

**Matrix: Solid**

**Analysis Batch: 181456**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 181345**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arochlor 1016	0.100	0.0870		mg/Kg		87	40 - 140
Arochlor 1260	0.100	0.0827		mg/Kg		83	60 - 130
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>LCS</b>	<b>Limits</b>			
Tetrachloro-m-xylene	73			45 - 135			
DCB Decachlorobiphenyl	84			50 - 140			

**Lab Sample ID: LCSD 580-181345/17-A**

**Matrix: Solid**

**Analysis Batch: 181456**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 181345**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arochlor 1016	0.100	0.0818		mg/Kg		82	40 - 140	6	20
Arochlor 1260	0.100	0.0801		mg/Kg		80	60 - 130	3	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCSD Qualifier</b>	<b>LCSD</b>	<b>Limits</b>					
Tetrachloro-m-xylene	68			45 - 135					

TestAmerica Seattle



# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

**Lab Sample ID: LCSD 580-181345/17-A**  
**Matrix: Solid**  
**Analysis Batch: 181456**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 181345**

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	81		50 - 140

**Lab Sample ID: 580-47171-1 MS**  
**Matrix: Solid**  
**Analysis Batch: 181456**

**Client Sample ID: WM-CB-03-20150122-S**  
**Prep Type: Total/NA**  
**Prep Batch: 181345**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
Arochlor 1016	ND		0.285	0.204		mg/Kg	☼	71	40 - 140
Arochlor 1260	0.076		0.285	0.200	F1	mg/Kg	☼	44	60 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene	50		45 - 135
DCB Decachlorobiphenyl	53		50 - 140

**Lab Sample ID: 580-47171-1 MSD**  
**Matrix: Solid**  
**Analysis Batch: 181456**

**Client Sample ID: WM-CB-03-20150122-S**  
**Prep Type: Total/NA**  
**Prep Batch: 181345**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec. Limits	RPD	
				Result	Qualifier					RPD	Limit
Arochlor 1016	ND		0.286	0.227		mg/Kg	☼	80	40 - 140	11	20
Arochlor 1260	0.076		0.286	0.196	F1	mg/Kg	☼	42	60 - 130	2	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene	39	X	45 - 135
DCB Decachlorobiphenyl	49	X	50 - 140

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-181205/1-A**  
**Matrix: Solid**  
**Analysis Batch: 181281**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 181205**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
#2 Diesel (C10-C24)	ND		25	5.7	mg/Kg		01/28/15 10:05	01/29/15 08:00	1
Motor Oil (>C24-C36)	ND		50	9.1	mg/Kg		01/28/15 10:05	01/29/15 08:00	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
o-Terphenyl	84		50 - 150	01/28/15 10:05	01/29/15 08:00	1		

**Lab Sample ID: LCS 580-181205/2-A**  
**Matrix: Solid**  
**Analysis Batch: 181281**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 181205**

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
#2 Diesel (C10-C24)	500	441		mg/Kg		88	70 - 125
Motor Oil (>C24-C36)	502	443		mg/Kg		88	64 - 127

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-181205/2-A**  
**Matrix: Solid**  
**Analysis Batch: 181281**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 181205**

Surrogate	LCS		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	87		50 - 150

**Lab Sample ID: LCSD 580-181205/3-A**  
**Matrix: Solid**  
**Analysis Batch: 181281**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 181205**

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
#2 Diesel (C10-C24)	500	451		mg/Kg		90	70 - 125	2	16	
Motor Oil (>C24-C36)	502	458		mg/Kg		91	64 - 127	3	17	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	86		50 - 150

**Lab Sample ID: 580-47171-1 MS**  
**Matrix: Solid**  
**Analysis Batch: 181281**

**Client Sample ID: WM-CB-03-20150122-S**  
**Prep Type: Total/NA**  
**Prep Batch: 181205**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
#2 Diesel (C10-C24)	6100	Y	1510	6900	4	mg/Kg	☼	52	70 - 125			
Motor Oil (>C24-C36)	33000	Y	1510	31200	4	mg/Kg	☼	-137	64 - 127			

Surrogate	MS		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	98		50 - 150

**Lab Sample ID: 580-47171-1 MSD**  
**Matrix: Solid**  
**Analysis Batch: 181281**

**Client Sample ID: WM-CB-03-20150122-S**  
**Prep Type: Total/NA**  
**Prep Batch: 181205**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
#2 Diesel (C10-C24)	6100	Y	1500	6400	4	mg/Kg	☼	19	70 - 125	8	16	
Motor Oil (>C24-C36)	33000	Y	1510	29100	4	mg/Kg	☼	-274	64 - 127	7	17	

Surrogate	MSD		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	91		50 - 150

## Method: 200.8 - Metals (ICP/MS)

**Lab Sample ID: MB 580-181170/25-A**  
**Matrix: Water**  
**Analysis Batch: 181329**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 181170**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		0.0010	0.00027	mg/L		01/27/15 17:35	01/29/15 08:32	1
Antimony	ND		0.00040	0.000080	mg/L		01/27/15 17:35	01/29/15 08:32	1
Beryllium	ND		0.00040	0.00010	mg/L		01/27/15 17:35	01/29/15 08:32	1
Cadmium	ND		0.00040	0.000028	mg/L		01/27/15 17:35	01/29/15 08:32	1
Chromium	ND		0.00040	0.00014	mg/L		01/27/15 17:35	01/29/15 08:32	1

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 200.8 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 580-181170/25-A**  
**Matrix: Water**  
**Analysis Batch: 181329**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 181170**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		0.0020	0.00060	mg/L		01/27/15 17:35	01/29/15 08:32	1
Lead	ND		0.00040	0.000034	mg/L		01/27/15 17:35	01/29/15 08:32	1
Nickel	ND		0.0030	0.00040	mg/L		01/27/15 17:35	01/29/15 08:32	1
Selenium	ND		0.0010	0.00030	mg/L		01/27/15 17:35	01/29/15 08:32	1
Silver	ND		0.00040	0.000030	mg/L		01/27/15 17:35	01/29/15 08:32	1
Thallium	ND		0.0010	0.00014	mg/L		01/27/15 17:35	01/29/15 08:32	1
Zinc	ND		0.0070	0.0019	mg/L		01/27/15 17:35	01/29/15 08:32	1

**Lab Sample ID: LCS 580-181170/26-A**  
**Matrix: Water**  
**Analysis Batch: 181329**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 181170**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0978		mg/L		98	85 - 115
Antimony	0.100	0.102		mg/L		102	85 - 115
Beryllium	0.100	0.0955		mg/L		95	85 - 115
Cadmium	0.100	0.101		mg/L		101	85 - 115
Chromium	0.100	0.0954		mg/L		95	85 - 115
Copper	0.100	0.0962		mg/L		96	85 - 115
Lead	0.100	0.101		mg/L		101	85 - 115
Nickel	0.100	0.0965		mg/L		96	85 - 115
Selenium	0.100	0.100		mg/L		100	85 - 115
Silver	0.100	0.0958		mg/L		96	85 - 115
Thallium	0.100	0.102		mg/L		102	85 - 115
Zinc	0.100	0.0970		mg/L		97	85 - 115

**Lab Sample ID: LCSD 580-181170/27-A**  
**Matrix: Water**  
**Analysis Batch: 181329**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 181170**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	0.100	0.0993		mg/L		99	85 - 115	2	20
Antimony	0.100	0.105		mg/L		105	85 - 115	3	20
Beryllium	0.100	0.0975		mg/L		97	85 - 115	2	20
Cadmium	0.100	0.101		mg/L		101	85 - 115	0	20
Chromium	0.100	0.0984		mg/L		98	85 - 115	3	20
Copper	0.100	0.0970		mg/L		97	85 - 115	1	20
Lead	0.100	0.106		mg/L		106	85 - 115	5	20
Nickel	0.100	0.0973		mg/L		97	85 - 115	1	20
Selenium	0.100	0.102		mg/L		102	85 - 115	2	20
Silver	0.100	0.0974		mg/L		97	85 - 115	2	20
Thallium	0.100	0.106		mg/L		106	85 - 115	4	20
Zinc	0.100	0.0982		mg/L		98	85 - 115	1	20

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-47171-3 MS

Matrix: Water

Analysis Batch: 181329

Client Sample ID: WM-FT-1B-20150122-W

Prep Type: Total/NA

Prep Batch: 181170

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Arsenic	0.0017		0.100	0.101		mg/L		99	70 - 130
Antimony	0.0019		0.100	0.110		mg/L		108	70 - 130
Beryllium	ND		0.100	0.0972		mg/L		97	70 - 130
Cadmium	0.00015	J	0.100	0.104		mg/L		103	70 - 130
Chromium	0.0018		0.100	0.0973		mg/L		95	70 - 130
Copper	0.0084		0.100	0.103		mg/L		95	70 - 130
Lead	0.017		0.100	0.117		mg/L		99	70 - 130
Nickel	0.0052		0.100	0.0999		mg/L		95	70 - 130
Selenium	ND		0.100	0.103		mg/L		103	70 - 130
Silver	ND		0.100	0.0976		mg/L		98	70 - 130
Thallium	ND		0.100	0.100		mg/L		100	70 - 130
Zinc	0.37		0.100	0.469		mg/L		94	70 - 130

Lab Sample ID: 580-47171-3 MSD

Matrix: Water

Analysis Batch: 181329

Client Sample ID: WM-FT-1B-20150122-W

Prep Type: Total/NA

Prep Batch: 181170

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	
	Result	Qualifier	Added	Result	Qualifier					RPD	Limit
Arsenic	0.0017		0.100	0.102		mg/L		101	70 - 130	1	20
Antimony	0.0019		0.100	0.113		mg/L		111	70 - 130	2	20
Beryllium	ND		0.100	0.0985		mg/L		99	70 - 130	1	20
Cadmium	0.00015	J	0.100	0.106		mg/L		106	70 - 130	2	20
Chromium	0.0018		0.100	0.0992		mg/L		97	70 - 130	2	20
Copper	0.0084		0.100	0.105		mg/L		96	70 - 130	1	20
Lead	0.017		0.100	0.118		mg/L		101	70 - 130	2	20
Nickel	0.0052		0.100	0.102		mg/L		97	70 - 130	2	20
Selenium	ND		0.100	0.104		mg/L		104	70 - 130	1	20
Silver	ND		0.100	0.0990		mg/L		99	70 - 130	1	20
Thallium	ND		0.100	0.102		mg/L		102	70 - 130	2	20
Zinc	0.37		0.100	0.478		mg/L		104	70 - 130	2	20

## Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-180994/19-A

Matrix: Water

Analysis Batch: 181023

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 180994

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.00020	0.000041	mg/L		01/26/15 11:01	01/26/15 13:17	1

Lab Sample ID: LCS 580-180994/20-A

Matrix: Water

Analysis Batch: 181023

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 180994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 580-180994/21-A  
Matrix: Water  
Analysis Batch: 181023

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 180994

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00191		mg/L		95	85 - 115	2	20

## Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 580-181018/21-A  
Matrix: Solid  
Analysis Batch: 181092

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 181018

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.18	mg/Kg		01/26/15 14:10	01/26/15 18:37	10
Lead	ND		0.50	0.048	mg/Kg		01/26/15 14:10	01/26/15 18:37	10
Antimony	ND		0.20	0.042	mg/Kg		01/26/15 14:10	01/26/15 18:37	10
Beryllium	ND		0.20	0.035	mg/Kg		01/26/15 14:10	01/26/15 18:37	10
Cadmium	ND		0.20	0.019	mg/Kg		01/26/15 14:10	01/26/15 18:37	10
Chromium	ND		0.50	0.063	mg/Kg		01/26/15 14:10	01/26/15 18:37	10
Copper	ND		0.40	0.098	mg/Kg		01/26/15 14:10	01/26/15 18:37	10
Nickel	ND		0.50	0.081	mg/Kg		01/26/15 14:10	01/26/15 18:37	10
Selenium	ND		1.0	0.20	mg/Kg		01/26/15 14:10	01/26/15 18:37	10
Silver	ND		0.20	0.012	mg/Kg		01/26/15 14:10	01/26/15 18:37	10
Thallium	ND		0.40	0.13	mg/Kg		01/26/15 14:10	01/26/15 18:37	10
Zinc	ND		5.0	1.1	mg/Kg		01/26/15 14:10	01/26/15 18:37	10

Lab Sample ID: LCS 580-181018/22-A  
Matrix: Solid  
Analysis Batch: 181092

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 181018

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	195		mg/Kg		98	80 - 120
Lead	50.0	49.5		mg/Kg		99	80 - 120
Antimony	150	144		mg/Kg		96	80 - 120
Beryllium	5.00	4.87		mg/Kg		97	80 - 120
Cadmium	5.00	4.92		mg/Kg		98	80 - 120
Chromium	20.0	20.6		mg/Kg		103	80 - 120
Copper	25.0	25.6		mg/Kg		103	80 - 120
Nickel	50.0	50.3		mg/Kg		101	80 - 120
Selenium	200	195		mg/Kg		97	80 - 120
Silver	30.0	33.9		mg/Kg		113	80 - 120
Thallium	200	197		mg/Kg		98	80 - 120
Zinc	200	198		mg/Kg		99	80 - 120

Lab Sample ID: LCSD 580-181018/23-A  
Matrix: Solid  
Analysis Batch: 181092

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 181018

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	196		mg/Kg		98	80 - 120	0	20
Lead	50.0	48.9		mg/Kg		98	80 - 120	1	20
Antimony	150	147		mg/Kg		98	80 - 120	2	20

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-181018/23-A

Matrix: Solid

Analysis Batch: 181092

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 181018

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Beryllium	5.00	4.84		mg/Kg		97	80 - 120	1	20	
Cadmium	5.00	5.08		mg/Kg		102	80 - 120	3	20	
Chromium	20.0	20.9		mg/Kg		105	80 - 120	1	20	
Copper	25.0	25.6		mg/Kg		102	80 - 120	0	20	
Nickel	50.0	49.9		mg/Kg		100	80 - 120	1	20	
Selenium	200	196		mg/Kg		98	80 - 120	1	20	
Silver	30.0	34.3		mg/Kg		114	80 - 120	1	20	
Thallium	200	193		mg/Kg		97	80 - 120	2	20	
Zinc	200	200		mg/Kg		100	80 - 120	1	20	

Lab Sample ID: LCSSRM 580-181018/24-A

Matrix: Solid

Analysis Batch: 181092

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 181018

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Arsenic	139	135		mg/Kg		96.8	70.4 - 140.	3		
Lead	133	131		mg/Kg		98.4	72.9 - 127.	8		
Antimony	88.8	150		mg/Kg		169.1	22.0 - 259.	0		
Beryllium	96.1	89.9		mg/Kg		93.5	74.5 - 125.	9		
Cadmium	96.0	90.4		mg/Kg		94.2	73.2 - 127.	1		
Chromium	136	143		mg/Kg		105.2	69.9 - 129.	4		
Copper	168	165		mg/Kg		98.0	75.6 - 125.	0		
Nickel	123	121		mg/Kg		98.7	73.1 - 128.	5		
Selenium	177	172		mg/Kg		97.3	67.8 - 131.	6		
Silver	40.2	44.7		mg/Kg		111.2	66.2 - 134.	1		
Thallium	138	139		mg/Kg		100.6	68.1 - 131.	9		
Zinc	189	189		mg/Kg		99.9	69.8 - 130.	7		

Lab Sample ID: 580-47171-1 MS

Matrix: Solid

Analysis Batch: 181092

Client Sample ID: WM-CB-03-20150122-S

Prep Type: Total/NA

Prep Batch: 181018

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	
									Limits	RPD
Arsenic	10		525	545		mg/Kg	☼	102	80 - 120	
Lead	230		131	380		mg/Kg	☼	117	80 - 120	
Antimony	14		394	401		mg/Kg	☼	98	80 - 120	
Beryllium	0.26	J	13.1	13.5		mg/Kg	☼	101	80 - 120	
Cadmium	1.7		13.1	15.4		mg/Kg	☼	105	80 - 120	
Chromium	79		52.5	144	F1	mg/Kg	☼	124	80 - 120	
Copper	250		65.7	332	F1	mg/Kg	☼	127	80 - 120	

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-47171-1 MS

Matrix: Solid

Analysis Batch: 181092

Client Sample ID: WM-CB-03-20150122-S

Prep Type: Total/NA

Prep Batch: 181018

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Nickel	52		131	200		mg/Kg	☼	112		80 - 120
Selenium	0.83	J	525	539		mg/Kg	☼	102		80 - 120
Silver	0.94		78.8	94.6		mg/Kg	☼	119		80 - 120
Thallium	ND		525	540		mg/Kg	☼	103		80 - 120
Zinc	1800		525	2520	F1	mg/Kg	☼	143		80 - 120

Lab Sample ID: 580-47171-1 MSD

Matrix: Solid

Analysis Batch: 181092

Client Sample ID: WM-CB-03-20150122-S

Prep Type: Total/NA

Prep Batch: 181018

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Arsenic	10		435	455		mg/Kg	☼	102		80 - 120	18	20
Lead	230		109	350		mg/Kg	☼	114		80 - 120	8	20
Antimony	14		326	335		mg/Kg	☼	98		80 - 120	18	20
Beryllium	0.26	J	10.9	11.2		mg/Kg	☼	101		80 - 120	18	20
Cadmium	1.7		10.9	13.1		mg/Kg	☼	105		80 - 120	16	20
Chromium	79		43.5	188	F1 F2	mg/Kg	☼	252		80 - 120	27	20
Copper	250		54.3	323	4	mg/Kg	☼	137		80 - 120	3	20
Nickel	52		109	303	F1 F2	mg/Kg	☼	231		80 - 120	41	20
Selenium	0.83	J	435	448		mg/Kg	☼	103		80 - 120	18	20
Silver	0.94		65.2	78.9		mg/Kg	☼	120		80 - 120	18	20
Thallium	ND		435	446		mg/Kg	☼	103		80 - 120	19	20
Zinc	1800		435	2630	4	mg/Kg	☼	199		80 - 120	4	20

Lab Sample ID: 580-47171-1 DU

Matrix: Solid

Analysis Batch: 181092

Client Sample ID: WM-CB-03-20150122-S

Prep Type: Total/NA

Prep Batch: 181018

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier		Result				
Arsenic	10		10.4		mg/Kg	☼	0.3	20
Lead	230		224		mg/Kg	☼	0.9	20
Antimony	14		14.0		mg/Kg	☼	0.3	20
Beryllium	0.26	J	0.217	J	mg/Kg	☼	19	20
Cadmium	1.7		1.70		mg/Kg	☼	2	20
Chromium	79		77.0		mg/Kg	☼	2	20
Copper	250		245		mg/Kg	☼	2	20
Nickel	52		51.9		mg/Kg	☼	0.7	20
Selenium	0.83	J	0.932	J	mg/Kg	☼	11	20
Silver	0.94		0.945		mg/Kg	☼	0.4	20
Thallium	ND		ND		mg/Kg	☼	NC	20
Zinc	1800		1730		mg/Kg	☼	2	20

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 7471A - Mercury (CVAA)

**Lab Sample ID: MB 580-181045/23-A**  
**Matrix: Solid**  
**Analysis Batch: 181152**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 181045**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0053	mg/Kg		01/27/15 10:00	01/27/15 11:19	1

**Lab Sample ID: LCS 580-181045/24-A**  
**Matrix: Solid**  
**Analysis Batch: 181152**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 181045**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.155		mg/Kg		93	80 - 120

**Lab Sample ID: LCSD 580-181045/25-A**  
**Matrix: Solid**  
**Analysis Batch: 181152**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 181045**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	0.167	0.145		mg/Kg		87	80 - 120	6	20

**Lab Sample ID: 580-47171-1 MS**  
**Matrix: Solid**  
**Analysis Batch: 181152**

**Client Sample ID: WM-CB-03-20150122-S**  
**Prep Type: Total/NA**  
**Prep Batch: 181045**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.68		0.377	0.970	F1	mg/Kg	☼	78	80 - 120

**Lab Sample ID: 580-47171-1 MSD**  
**Matrix: Solid**  
**Analysis Batch: 181152**

**Client Sample ID: WM-CB-03-20150122-S**  
**Prep Type: Total/NA**  
**Prep Batch: 181045**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	0.68		0.451	1.11		mg/Kg	☼	96	80 - 120	13	20

**Lab Sample ID: 580-47171-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 181152**

**Client Sample ID: WM-CB-03-20150122-S**  
**Prep Type: Total/NA**  
**Prep Batch: 181045**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Mercury	0.68		0.606		mg/Kg	☼	11	20

## Method: 120.1 - Conductivity, Specific Conductance

**Lab Sample ID: MB 580-181315/1**  
**Matrix: Water**  
**Analysis Batch: 181315**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		10	10	umhos/cm			01/29/15 10:15	1

TestAmerica Seattle



# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 120.1 - Conductivity, Specific Conductance (Continued)

**Lab Sample ID: LCS 580-181315/2**

**Matrix: Water**

**Analysis Batch: 181315**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	500	526		umhos/cm		105	90 - 110

**Lab Sample ID: 580-47171-3 DU**

**Matrix: Water**

**Analysis Batch: 181315**

**Client Sample ID: WM-FT-1B-20150122-W**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	360		362		umhos/cm		1	20

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 580-180983/3**

**Matrix: Water**

**Analysis Batch: 180983**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.90	0.30	mg/L			01/23/15 10:30	1
Sulfate	ND		1.2	0.40	mg/L			01/23/15 10:30	1

**Lab Sample ID: LCS 580-180983/4**

**Matrix: Water**

**Analysis Batch: 180983**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	9.00	9.14		mg/L		102	90 - 110
Sulfate	12.0	12.4		mg/L		104	90 - 110

**Lab Sample ID: LCSD 580-180983/5**

**Matrix: Water**

**Analysis Batch: 180983**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.00	9.12		mg/L		101	90 - 110	0	15
Sulfate	12.0	12.1		mg/L		101	90 - 110	3	15

**Lab Sample ID: 580-47171-3 MS**

**Matrix: Water**

**Analysis Batch: 180983**

**Client Sample ID: WM-FT-1B-20150122-W**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12		9.00	22.1		mg/L		109	90 - 110
Sulfate	72		12.0	83.5	4	mg/L		94	90 - 110

**Lab Sample ID: MB 580-180984/3**

**Matrix: Water**

**Analysis Batch: 180984**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.90	0.20	mg/L			01/23/15 10:30	1

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 580-180984/4**

**Matrix: Water**

**Analysis Batch: 180984**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.80	1.81		mg/L		101	90 - 110

**Lab Sample ID: LCSD 580-180984/5**

**Matrix: Water**

**Analysis Batch: 180984**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.80	1.80		mg/L		100	90 - 110	1	15

**Lab Sample ID: 580-47171-3 MS**

**Matrix: Water**

**Analysis Batch: 180984**

**Client Sample ID: WM-FT-1B-20150122-W**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	ND		1.80	1.94		mg/L		108	90 - 110

## Method: 9060\_PSEP - TOC (Puget Sound)

**Lab Sample ID: MB 580-181316/3**

**Matrix: Solid**

**Analysis Batch: 181316**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		2000	250	mg/Kg			01/29/15 08:57	1

**Lab Sample ID: LCS 580-181316/4**

**Matrix: Solid**

**Analysis Batch: 181316**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2850	3400		mg/Kg		119	27.8 - 170

**Lab Sample ID: LCSD 580-181316/5**

**Matrix: Solid**

**Analysis Batch: 181316**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	2850	3010		mg/Kg		106	27.8 - 170	12	35

**Lab Sample ID: 580-47171-1 MS**

**Matrix: Solid**

**Analysis Batch: 181316**

**Client Sample ID: WM-CB-03-20150122-S**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	220000		129000	318000		mg/Kg		78	50 - 140

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: 9060\_PSEP - TOC (Puget Sound) (Continued)

**Lab Sample ID: 580-47171-1 MSD**  
**Matrix: Solid**  
**Analysis Batch: 181316**

**Client Sample ID: WM-CB-03-20150122-S**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	220000		119000	310000		mg/Kg		77	50 - 140	3	35

**Lab Sample ID: 580-47171-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 181316**

**Client Sample ID: WM-CB-03-20150122-S**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	220000		194000		mg/Kg		11	50

## Method: SM 2320B - Alkalinity

**Lab Sample ID: LCS 580-181133/2**  
**Matrix: Water**  
**Analysis Batch: 181133**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	100	105		mg/L		105	85 - 115

## Method: SM 2540D - Solids, Total Suspended (TSS)

**Lab Sample ID: MB 580-181108/1**  
**Matrix: Water**  
**Analysis Batch: 181108**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		2.0	2.0	mg/L			01/27/15 11:17	1

**Lab Sample ID: LCS 580-181108/2**  
**Matrix: Water**  
**Analysis Batch: 181108**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	30.0	28.8		mg/L		96	70.6 - 120

**Lab Sample ID: 580-47171-3 DU**  
**Matrix: Water**  
**Analysis Batch: 181108**

**Client Sample ID: WM-FT-1B-20150122-W**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	21		23.0		mg/L		9	20

TestAmerica Seattle

# QC Sample Results

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Method: SM 5310B - Organic Carbon, Total (TOC)

**Lab Sample ID: MB 580-181386/1**  
**Matrix: Water**  
**Analysis Batch: 181386**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.33	mg/L			01/30/15 09:45	1

**Lab Sample ID: LCS 580-181386/2**  
**Matrix: Water**  
**Analysis Batch: 181386**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	15.0	15.8		mg/L		105	85 - 115

**Lab Sample ID: 580-47171-3 MS**  
**Matrix: Water**  
**Analysis Batch: 181386**

**Client Sample ID: WM-FT-1B-20150122-W**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	19		10.0	34.9	F1	mg/L		162	85 - 115

**Lab Sample ID: 580-47171-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 181386**

**Client Sample ID: WM-FT-1B-20150122-W**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	19		10.0	36.4	F1	mg/L		176	85 - 115	4	20

**Lab Sample ID: 580-47171-3 DU**  
**Matrix: Water**  
**Analysis Batch: 181386**

**Client Sample ID: WM-FT-1B-20150122-W**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	19		17.5		mg/L		7	20

# Lab Chronicle

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-CB-03-20150122-S**

**Lab Sample ID: 580-47171-1**

**Date Collected: 01/22/15 10:45**

**Matrix: Solid**

**Date Received: 01/23/15 11:30**

**Percent Solids: 33.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			181447	01/30/15 15:59	IWH	TAL SEA
Total/NA	Analysis	8260B		1	181451	01/30/15 19:51	TL1	TAL SEA
Total/NA	Prep	5035	RA		181028	01/23/15 15:30	SOC	TAL SEA
Total/NA	Analysis	8260B	RA	1	181061	01/27/15 09:01	MMH	TAL SEA
Total/NA	Prep	5035			181318	01/23/15 15:30	MMH	TAL SEA
Total/NA	Analysis	8260B		1	181285	01/29/15 18:08	TL1	TAL SEA
Total/NA	Prep	3550B			181417	02/02/15 07:00	RMB	TAL SEA
Total/NA	Analysis	8270D		5	181758	02/04/15 17:44	AHP	TAL SEA
Total/NA	Prep	3550B	DL		181417	02/02/15 07:00	RMB	TAL SEA
Total/NA	Analysis	8270D	DL	50	181758	02/04/15 18:10	AHP	TAL SEA
Total/NA	Prep	5035			181011	01/26/15 13:09	IWH	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	180997	01/26/15 16:33	TL1	TAL SEA
Total/NA	Prep	3550B			181345	01/29/15 14:56	ERZ	TAL SEA
Total/NA	Analysis	8082		1	181456	02/01/15 01:56	EKK	TAL SEA
Total/NA	Prep	3546			181205	01/28/15 13:04	RMB	TAL SEA
Total/NA	Analysis	NWTPH-Dx		10	181281	01/29/15 09:48	JJP	TAL SEA
Total/NA	Prep	3050B			181018	01/26/15 14:10	PAB	TAL SEA
Total/NA	Analysis	6020		10	181092	01/26/15 18:56	FCW	TAL SEA
Total/NA	Prep	7471A			181045	01/27/15 10:00	PAB	TAL SEA
Total/NA	Analysis	7471A		1	181152	01/27/15 11:26	SPP	TAL SEA
Total/NA	Analysis	2540B		1	181153	01/27/15 14:41	ERZ	TAL SEA
Total/NA	Analysis	9060_PSEP		1	181316	01/29/15 09:05	RSB	TAL SEA
Total/NA	Analysis	PSEP Plumb 1981		1	181058	01/26/15 19:00	LKC	TAL SEA

**Client Sample ID: WM-FD-02-20150122-S**

**Lab Sample ID: 580-47171-2**

**Date Collected: 01/22/15 10:45**

**Matrix: Solid**

**Date Received: 01/23/15 11:30**

**Percent Solids: 30.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			181447	01/30/15 15:59	IWH	TAL SEA
Total/NA	Analysis	8260B		1	181451	01/30/15 20:24	TL1	TAL SEA
Total/NA	Prep	5035	RA		181028	01/23/15 15:30	SOC	TAL SEA
Total/NA	Analysis	8260B	RA	1	181061	01/27/15 09:27	MMH	TAL SEA
Total/NA	Prep	5035			181318	01/23/15 15:30	MMH	TAL SEA
Total/NA	Analysis	8260B		1	181285	01/29/15 18:34	TL1	TAL SEA
Total/NA	Prep	3550B			181417	02/02/15 07:00	RMB	TAL SEA
Total/NA	Analysis	8270D		5	181758	02/04/15 18:36	AHP	TAL SEA
Total/NA	Prep	3550B	DL		181417	02/02/15 07:00	RMB	TAL SEA
Total/NA	Analysis	8270D	DL	50	181758	02/04/15 19:02	AHP	TAL SEA
Total/NA	Prep	5035			181011	01/26/15 13:09	IWH	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	180997	01/26/15 17:07	TL1	TAL SEA
Total/NA	Prep	3550B			181345	01/29/15 14:56	ERZ	TAL SEA
Total/NA	Analysis	8082		1	181456	02/01/15 02:45	EKK	TAL SEA

TestAmerica Seattle

# Lab Chronicle

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

**Client Sample ID: WM-FD-02-20150122-S**

**Lab Sample ID: 580-47171-2**

Date Collected: 01/22/15 10:45

Matrix: Solid

Date Received: 01/23/15 11:30

Percent Solids: 30.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			181205	01/28/15 13:04	RMB	TAL SEA
Total/NA	Analysis	NWTPH-Dx		10	181281	01/29/15 10:42	JJP	TAL SEA
Total/NA	Prep	3050B			181018	01/26/15 14:10	PAB	TAL SEA
Total/NA	Analysis	6020		10	181092	01/26/15 19:27	FCW	TAL SEA
Total/NA	Prep	7471A			181045	01/27/15 10:00	PAB	TAL SEA
Total/NA	Analysis	7471A		1	181152	01/27/15 11:36	SPP	TAL SEA
Total/NA	Analysis	2540B		1	181153	01/27/15 14:41	ERZ	TAL SEA
Total/NA	Analysis	9060_PSEP		1	181316	01/29/15 09:20	RSB	TAL SEA
Total/NA	Analysis	PSEP Plumb 1981		1	181058	01/26/15 19:00	LKC	TAL SEA

**Client Sample ID: WM-FT-1B-20150122-W**

**Lab Sample ID: 580-47171-3**

Date Collected: 01/22/15 12:50

Matrix: Water

Date Received: 01/23/15 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			181122	01/27/15 12:56	ALC	TAL SEA
Total/NA	Analysis	8270D		5	181579	02/03/15 15:28	ERB	TAL SEA
Total/NA	Prep	3520C	RE		181448	01/30/15 16:10	ALC	TAL SEA
Total/NA	Analysis	8270D	RE	5	181641	02/03/15 23:03	ERB	TAL SEA
Total/NA	Prep	200.8			181170	01/27/15 17:35	PAB	TAL SEA
Total/NA	Analysis	200.8		1	181329	01/29/15 09:54	FCW	TAL SEA
Total/NA	Prep	245.1			180994	01/26/15 11:01	PAB	TAL SEA
Total/NA	Analysis	245.1		1	181023	01/26/15 14:00	FCW	TAL SEA
Total/NA	Analysis	120.1		1	181315	01/29/15 10:15	RSB	TAL SEA
Total/NA	Analysis	300.0		1	180983	01/23/15 17:09	RSB	TAL SEA
Total/NA	Analysis	300.0		1	180984	01/23/15 17:09	RSB	TAL SEA
Total/NA	Analysis	SM 2320B		1	181133	01/27/15 13:31	JLS	TAL SEA
Total/NA	Analysis	SM 2540D		1	181108	01/27/15 11:17	LKC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	180989	01/23/15 16:51	LKC	TAL SEA
Dissolved	Analysis	SM 5310B		1	181386	01/30/15 12:41	JLS	TAL SEA
Total/NA	Analysis	SM 5310B		10	181386	01/30/15 14:01	JLS	TAL SEA

**Laboratory References:**

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# Certification Summary

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

## Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-04-15
California	State Program	9	2901	01-31-15 *
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE192332-0	02-28-16
USDA	Federal		P330-11-00222	04-08-17
Washington	State Program	10	C553	02-17-15 *

\* Certification renewal pending - certification considered valid.

TestAmerica Seattle

# Sample Summary

Client: Leidos, Inc.  
Project/Site: NPDES Sampling Support

TestAmerica Job ID: 580-47171-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-47171-1	WM-CB-03-20150122-S	Solid	01/22/15 10:45	01/23/15 11:30
580-47171-2	WM-FD-02-20150122-S	Solid	01/22/15 10:45	01/23/15 11:30
580-47171-3	WM-FT-1B-20150122-W	Water	01/22/15 12:50	01/23/15 11:30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11



Chain of Custody Record

Tacoma, WA 98424  
phone 253.922.2310 fax

Regulatory Program:  DW  NPDES  RCRA  Other:

4717

TestAmerica Laboratories, Inc  
COC No: 2 of 2 COCS  
2/24/15

Client Contact

Project Manager: Christine Nancarrow  
Tel/Fax: 206.300.2144

Site Contact: Melissa Ivancevich  
Lab Contact: Kris Allen

Date: 01/22/15  
Carrier: Courier

Analysis Turnaround Time

CALENDAR DAYS  
 WORKING DAYS  
TAT if different from Below 3 Weeks

2 weeks  
1 week  
2 days  
1 day

Filtered Sample ( Y / N )  
Perform MS / MSD ( Y / N )  
PCB Aroclors (Method 8082)  
SVOC (Method 8270D/8270D-SIM)  
TPH-Diesel (NWTPH-Dx)  
Metals (Method 6020/7471A)  
Total Solids (Method SM2540B)  
TPH-Gasoline (NWTPH-Gx)  
VOCs (EPA 8260B)  
TOC (Plumb1981/9060)  
Particle Size (PSEP\_Plumb1981)

Sampler:  
For Lab Use Only:  
Walk-in Client:  
Lab Sampling:  
Job / SDG No.:

Sample Identification

Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.
01/22/15	1045	C	Sed	6
01/22/15	1045	C	Sed	6

WV WV WV WV  
WV WV WV WV  
WV WV WV WV

Sample Specific Notes:



580-47171 Chain of Custody

Preservation Used: 1=Ice; 2=HC; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other; MeOH  
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown

Special Instructions/QC Requirements & Comments:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Cooler/IR cor 3.4 unc 2.4  
Cooler Dsc Lg Black/4@Lab 1500  
Wet/Packs Packing 8x11x12  
w/c s

Custody Seals Intact:  Yes  No

Custody Seal No: 242407

Cooler Temp. (°C): Obsd: \_\_\_\_\_

Therm ID No: \_\_\_\_\_

Relinquished by: Melissa Ivancevich

Company: Leidos

Date/Time: 01/22/15 1405

Received by: [Signature]

Company: TASEH

Date/Time: 1/23/15 1130

Relinquished by:

Company:

Date/Time:

Received in Laboratory by:

Company:

Date/Time:

Tacoma, WA 98424  
 phone 253.922.2310 fax

Regulatory Program:  DW  NPDES  RCRA  Other:

Client Contact  
 Leidors  
 18912 N Creek Pkwy, Ste. 101  
 Bothell, WA 98011  
 425.398.2101 Phone  
 425.485.5566 FAX  
 Project Name: NPDES Sampling Support  
 Site: Lower Duwamish Waterway  
 P O # P010163427

Project Manager: Christine Nancarrow  
 Tel/Fax: 206.300.2144  
 Analysis Turnaround Time  
 CALENDAR DAYS  WORKING DAYS  
 TAT if different from Below 3 Weeks  
 2 weeks  
 1 week  
 2 days  
 1 day

Site Contact: Melissa Ivancevich  
 Lab Contact: Kris Allen  
 Date: 01/22/15  
 Carrier: Courier

COG No: 2 of 2 COCs  
 Sampler:  
 For Lab Use Only:  
 Walk-In Client:  
 Lab Sampling:  
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (G=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample ( Y / N )	Perform MS / MSD ( Y / N )	SVOCs (Method 8270D)	Metals (Method 200.8/7470A)	pH (Method SM4500H)	Spec Cond (Method 120.1)	Alk/Bicarb/Carb (Method SM2320)	Anions (Method 300.0/353.2)	TOC (Method SM5310B)	DOC (Method SM5310B)	TSS (Method 2540D)	Sample Specific Notes:
WM-FT-1B--20150122-W	01/22/15	1250	G	w	9	N	V	V	V	V	V	V	V	V	V	V	

Preservation Used:  Ice,  HCl,  H2SO4,  HNO3,  NaOH,  Other: MeOH  
 Possible Hazard Identification:  
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month )  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Special Instructions/QC Requirements & Comments:  
 Non-hazard  Flammable  Skin Irritant  Poison B  Unknown

Custody Seals Intact:  Yes  No  
 Relinquished by: Melissa Ivancevich  
 Relinquished by: Melissa Ivancevich  
 Relinquished by:

Custody Seal No.: 242407  
 Date/Time: 01/22/15 1405  
 Received by: [Signature]  
 Received In Laboratory by:

Carrier: TH-SEK  
 Date/Time: 1/23/15 1150

## Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 580-47171-1

**Login Number: 47171**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Abello, Andrea N**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not present
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



February 12, 2015

**Vista Project I.D.: 1500116**

Ms. Christine Nancarrow  
Leidos  
18912 North Creek Parkway, Suite 101  
Bothell, WA 98011

Dear Ms. Nancarrow,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on January 23, 2015. This sample set was analyzed on a standard turn-around time, under your Project Name '1400647'. The work was authorized under your Purchase Order No. PO10163569.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com).

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier  
Laboratory Director



*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.*

**Vista Work Order No. 1500116**

**Case Narrative**

**Sample Condition on Receipt:**

Two sediment samples and one aqueous sample were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

**Analytical Notes:**

**EPA Method 1613**

These samples were extracted and analyzed for tetra-through-octa chlorinated dioxins and furans by EPA Method 1613 using a ZB-5MS GC column.

Holding Times

These samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with each preparation batch. No analytes were detected in the Method Blanks. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

**EPA Method 1668C**

These samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with each preparation batch. No analytes were detected above the sample quantitation limit in the Method Blanks. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

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# Sample Inventory Report

<b>Vista Sample ID</b>	<b>Client Sample ID</b>	<b>Sampled</b>	<b>Received</b>	<b>Components/Containers</b>
1500116-01	WM-CB-03-20150122-S	22-Jan-15 10:45	23-Jan-15 08:50	Glass Jar, 250mL
1500116-02	WM-FD-02-20150122-S	22-Jan-15 10:45	23-Jan-15 08:50	Glass Jar, 250mL
1500116-03	WM-FT-IB-20150122-W	22-Jan-15 12:50	23-Jan-15 08:50	Amber Glass NM Bottle, 1L Amber Glass NM Bottle, 1L Amber Glass NM Bottle, 1L Amber Glass NM Bottle, 1L



## **ANALYTICAL RESULTS**

Sample ID: Method Blank							EPA Method 1613B				
Matrix: Solid Sample Size: 10.0 g			QC Batch: B5A0101 Date Extracted: 27-Jan-2015 11:06			Lab Sample: B5A0101-BLK1 Date Analyzed: 31-Jan-15 13:10 Column: ZB-5MS Analyst: WJL					
Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
2,3,7,8-TCDD	ND	0.500	0.0921		0.0778		IS 13C-2,3,7,8-TCDD	85.5	25 - 164		
1,2,3,7,8-PeCDD	ND	2.50	0.0837		0.230		13C-1,2,3,7,8-PeCDD	75.6	25 - 181		
1,2,3,4,7,8-HxCDD	ND	2.50	0.143		0.231		13C-1,2,3,4,7,8-HxCDD	79.8	32 - 141		
1,2,3,6,7,8-HxCDD	ND	2.50	0.137		0.126		13C-1,2,3,6,7,8-HxCDD	80.7	28 - 130		
1,2,3,7,8,9-HxCDD	ND	2.50	0.146		0.173		13C-1,2,3,7,8,9-HxCDD	79.0	32 - 141		
1,2,3,4,6,7,8-HpCDD	ND	2.50	0.136		0.263		13C-1,2,3,4,6,7,8-HpCDD	85.6	23 - 140		
OCDD	ND	5.00	0.233		0.167		13C-OCDD	59.7	17 - 157		
2,3,7,8-TCDF	ND	0.500	0.0497		0.0289		13C-2,3,7,8-TCDF	87.6	24 - 169		
1,2,3,7,8-PeCDF	ND	2.50	0.0648		0.254		13C-1,2,3,7,8-PeCDF	86.2	24 - 185		
2,3,4,7,8-PeCDF	ND	2.50	0.0655		0.211		13C-2,3,4,7,8-PeCDF	82.9	21 - 178		
1,2,3,4,7,8-HxCDF	ND	2.50	0.0449		0.154		13C-1,2,3,4,7,8-HxCDF	86.4	26 - 152		
1,2,3,6,7,8-HxCDF	ND	2.50	0.0472		0.195		13C-1,2,3,6,7,8-HxCDF	83.8	26 - 123		
2,3,4,6,7,8-HxCDF	ND	2.50	0.0541		0.0805		13C-2,3,4,6,7,8-HxCDF	78.5	28 - 136		
1,2,3,7,8,9-HxCDF	ND	2.50	0.0705		0.195		13C-1,2,3,7,8,9-HxCDF	81.2	29 - 147		
1,2,3,4,6,7,8-HpCDF	ND	2.50	0.0859		0.230		13C-1,2,3,4,6,7,8-HpCDF	82.4	28 - 143		
1,2,3,4,7,8,9-HpCDF	ND	2.50	0.0823		0.211		13C-1,2,3,4,7,8,9-HpCDF	84.7	26 - 138		
OCDF	ND	5.00	0.138		0.470		13C-OCDF	68.7	17 - 157		
							CRS 37Cl-2,3,7,8-TCDD	92.2	35 - 197		
							<b>Toxic Equivalent Quotient (TEQ) Data</b>				
							TEQMinWHO2005Dioxin		0.00		
<b>TOTALS</b>											
Total TCDD	ND		0.0921								
Total PeCDD	ND		0.0836								
Total HxCDD	ND		0.156								
Total HpCDD	ND		0.136								
Total TCDF	ND		0.0497								
Total PeCDF	ND		0.0693								
Total HxCDF	ND		0.0558								
Total HpCDF	ND		0.0875								

DL - Sample specific estimated detection limit

MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

RL - Reporting limit

The results are reported in dry weight. The sample size is reported in wet weight.

Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: OPR					EPA Method 1613B		
Matrix: Solid	QC Batch: B5A0101	Lab Sample: B5A0101-BS1					
Sample Size: 10.0 g	Date Extracted: 27-Jan-2015 11:06	Date Analyzed: 31-Jan-15 10:46	Column: ZB-5MS	Analyst: WJL			
Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	16.5	20.0	82.3	67 - 158	IS 13C-2,3,7,8-TCDD	85.8	20 - 175
1,2,3,7,8-PeCDD	98.0	100	98.0	70 - 142	13C-1,2,3,7,8-PeCDD	78.2	21 - 227
1,2,3,4,7,8-HxCDD	101	100	101	70 - 164	13C-1,2,3,4,7,8-HxCDD	83.0	21 - 193
1,2,3,6,7,8-HxCDD	105	100	105	76 - 134	13C-1,2,3,6,7,8-HxCDD	79.7	25 - 163
1,2,3,7,8,9-HxCDD	102	100	102	64 - 162	13C-1,2,3,7,8,9-HxCDD	83.1	21 - 193
1,2,3,4,6,7,8-HpCDD	98.8	100	98.8	70 - 140	13C-1,2,3,4,6,7,8-HpCDD	88.2	26 - 166
OCDD	202	200	101	78 - 144	13C-OCDD	64.8	13 - 199
2,3,7,8-TCDF	18.6	20.0	92.9	75 - 158	13C-2,3,7,8-TCDF	86.1	22 - 152
1,2,3,7,8-PeCDF	98.0	100	98.0	80 - 134	13C-1,2,3,7,8-PeCDF	88.3	21 - 192
2,3,4,7,8-PeCDF	95.3	100	95.3	68 - 160	13C-2,3,4,7,8-PeCDF	84.0	13 - 328
1,2,3,4,7,8-HxCDF	99.9	100	99.9	72 - 134	13C-1,2,3,4,7,8-HxCDF	86.9	19 - 202
1,2,3,6,7,8-HxCDF	97.2	100	97.2	84 - 130	13C-1,2,3,6,7,8-HxCDF	84.9	21 - 159
2,3,4,6,7,8-HxCDF	99.3	100	99.3	70 - 156	13C-2,3,4,6,7,8-HxCDF	80.3	22 - 176
1,2,3,7,8,9-HxCDF	100	100	100	78 - 130	13C-1,2,3,7,8,9-HxCDF	85.5	17 - 205
1,2,3,4,6,7,8-HpCDF	99.6	100	99.6	82 - 122	13C-1,2,3,4,6,7,8-HpCDF	88.0	21 - 158
1,2,3,4,7,8,9-HpCDF	102	100	102	78 - 138	13C-1,2,3,4,7,8,9-HpCDF	84.1	20 - 186
OCDF	203	200	101	63 - 170	13C-OCDF	72.5	13 - 199
					CRS 37Cl-2,3,7,8-TCDD	93.7	31 - 191

LCL-UCL - Lower control limit - upper control limit

**Sample ID: WM-CB-03-20150122-S** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Leidos	Matrix: Sediment	Lab Sample: 1500116-01      Date Received: 23-Jan-2015 8:50
Project: 1400647	Sample Size: 34.5 g	QC Batch: B5A0101      Date Extracted: 27-Jan-2015 11:06
Date Collected: 22-Jan-2015 10:45	% Solids: 29.0	Date Analyzed: 03-Feb-15 12:37      Column: ZB-5MS      Analyst: DMS 05-Feb-15 18:34      Column: DB-225      Analyst: CVG

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	1.36	0.499			0.0778		IS 13C-2,3,7,8-TCDD	81.9	25 - 164	
1,2,3,7,8-PeCDD	5.46	2.50			0.230		13C-1,2,3,7,8-PeCDD	74.9	25 - 181	
1,2,3,4,7,8-HxCDD	9.93	2.50			0.231		13C-1,2,3,4,7,8-HxCDD	86.2	32 - 141	
1,2,3,6,7,8-HxCDD	37.5	2.50			0.126		13C-1,2,3,6,7,8-HxCDD	86.0	28 - 130	
1,2,3,7,8,9-HxCDD	23.3	2.50			0.173		13C-1,2,3,7,8,9-HxCDD	85.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	1120	2.50			0.263		13C-1,2,3,4,6,7,8-HpCDD	90.0	23 - 140	
OCDD	12300	4.99			0.167	E	13C-OCDD	64.1	17 - 157	
2,3,7,8-TCDF	3.31	0.499			0.0289		13C-2,3,7,8-TCDF	84.2	24 - 169	
1,2,3,7,8-PeCDF	2.68	2.50			0.254		13C-1,2,3,7,8-PeCDF	77.0	24 - 185	
2,3,4,7,8-PeCDF	3.49	2.50			0.211		13C-2,3,4,7,8-PeCDF	78.2	21 - 178	
1,2,3,4,7,8-HxCDF	11.1	2.50			0.154		13C-1,2,3,4,7,8-HxCDF	76.4	26 - 152	
1,2,3,6,7,8-HxCDF	8.96	2.50			0.195		13C-1,2,3,6,7,8-HxCDF	77.3	26 - 123	
2,3,4,6,7,8-HxCDF	10.7	2.50			0.0805		13C-2,3,4,6,7,8-HxCDF	75.2	28 - 136	
1,2,3,7,8,9-HxCDF	2.67	2.50			0.195		13C-1,2,3,7,8,9-HxCDF	83.6	29 - 147	
1,2,3,4,6,7,8-HpCDF	204	2.50			0.230		13C-1,2,3,4,6,7,8-HpCDF	82.1	28 - 143	
1,2,3,4,7,8,9-HpCDF	11.0	2.50			0.211		13C-1,2,3,4,7,8,9-HpCDF	76.8	26 - 138	
OCDF	456	4.99			0.470		13C-OCDF	62.1	17 - 157	
							CRS 37Cl-2,3,7,8-TCDD	90.9	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data**

TEQMinWHO2005Dioxin      35.9

<b>TOTALS</b>		
Total TCDD	21.7	22.1
Total PeCDD	49.2	
Total HxCDD	306	
Total HpCDD	2250	
Total TCDF	68.5	69.0
Total PeCDF	101	102
Total HxCDF	230	
Total HpCDF	535	539

DL - Sample specific estimated detection limit      MDL - Method detection limit      LCL-UCL- Lower control limit - upper control limit  
 EMPC - Estimated maximum possible concentration      RL - Reporting limit      The results are reported in dry weight. The sample size is reported in wet weight.  
 Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

**Sample ID: WM-FD-02-20150122-S** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Leidos	Matrix: Sediment	Lab Sample: 1500116-02      Date Received: 23-Jan-2015 8:50
Project: 1400647	Sample Size: 33.9 g	QC Batch: B5A0101      Date Extracted: 27-Jan-2015 11:06
Date Collected: 22-Jan-2015 10:45	% Solids: 29.6	Date Analyzed: 03-Feb-15 13:25      Column: ZB-5MS      Analyst: DMS 05-Feb-15 19:07      Column: DB-225      Analyst: CVG

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	1.36	0.498			0.0778		IS 13C-2,3,7,8-TCDD	86.9	25 - 164	
1,2,3,7,8-PeCDD	5.53	2.49			0.230		13C-1,2,3,7,8-PeCDD	73.8	25 - 181	
1,2,3,4,7,8-HxCDD	10.3	2.49			0.231		13C-1,2,3,4,7,8-HxCDD	98.9	32 - 141	
1,2,3,6,7,8-HxCDD	39.1	2.49			0.126		13C-1,2,3,6,7,8-HxCDD	98.6	28 - 130	
1,2,3,7,8,9-HxCDD	24.6	2.49			0.173		13C-1,2,3,7,8,9-HxCDD	99.0	32 - 141	
1,2,3,4,6,7,8-HpCDD	1120	2.49			0.263		13C-1,2,3,4,6,7,8-HpCDD	102	23 - 140	
OCDD	11800	4.98			0.167	E	13C-OCDD	67.5	17 - 157	
2,3,7,8-TCDF	3.43	0.498			0.0289		13C-2,3,7,8-TCDF	97.3	24 - 169	
1,2,3,7,8-PeCDF	2.78	2.49			0.254		13C-1,2,3,7,8-PeCDF	83.1	24 - 185	
2,3,4,7,8-PeCDF	4.17	2.49			0.211		13C-2,3,4,7,8-PeCDF	80.1	21 - 178	
1,2,3,4,7,8-HxCDF	11.6	2.49			0.154		13C-1,2,3,4,7,8-HxCDF	82.3	26 - 152	
1,2,3,6,7,8-HxCDF	8.94	2.49			0.195		13C-1,2,3,6,7,8-HxCDF	84.8	26 - 123	
2,3,4,6,7,8-HxCDF	11.2	2.49			0.0805		13C-2,3,4,6,7,8-HxCDF	86.5	28 - 136	
1,2,3,7,8,9-HxCDF	2.62	2.49			0.195		13C-1,2,3,7,8,9-HxCDF	93.4	29 - 147	
1,2,3,4,6,7,8-HpCDF	209	2.49			0.230		13C-1,2,3,4,6,7,8-HpCDF	93.3	28 - 143	
1,2,3,4,7,8,9-HpCDF	11.7	2.49			0.211		13C-1,2,3,4,7,8,9-HpCDF	84.9	26 - 138	
OCDF	474	4.98			0.470		13C-OCDF	67.8	17 - 157	
							CRS 37Cl-2,3,7,8-TCDD	95.0	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data**

TEQMinWHO2005Dioxin	36.5
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<b>TOTALS</b>	
Total TCDD	22.8
Total PeCDD	50.4
Total HxCDD	305
Total HpCDD	2220
Total TCDF	70.8
Total PeCDF	107
Total HxCDF	238
Total HpCDF	549

DL - Sample specific estimated detection limit      MDL - Method detection limit      LCL-UCL - Lower control limit - upper control limit  
 EMPC - Estimated maximum possible concentration      RL - Reporting limit      The results are reported in dry weight. The sample size is reported in wet weight.  
 Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: Method Blank							EPA Method 1613B				
Matrix: Aqueous Sample Size: 1.00 L			QC Batch: B5A0110 Date Extracted: 29-Jan-2015 8:12			Lab Sample: B5A0110-BLK1 Date Analyzed: 31-Jan-15 00:37 Column: ZB-5MS Analyst: DMS					
Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
2,3,7,8-TCDD	ND	5.00	0.857		0.943		IS 13C-2,3,7,8-TCDD	80.1	25 - 164		
1,2,3,7,8-PeCDD	ND	25.0	0.692		4.51		13C-1,2,3,7,8-PeCDD	72.5	25 - 181		
1,2,3,4,7,8-HxCDD	ND	25.0	1.21		2.21		13C-1,2,3,4,7,8-HxCDD	76.9	32 - 141		
1,2,3,6,7,8-HxCDD	ND	25.0	1.19		1.93		13C-1,2,3,6,7,8-HxCDD	76.8	28 - 130		
1,2,3,7,8,9-HxCDD	ND	25.0	1.22		2.02		13C-1,2,3,7,8,9-HxCDD	74.4	32 - 141		
1,2,3,4,6,7,8-HpCDD	ND	25.0	1.23		2.98		13C-1,2,3,4,6,7,8-HpCDD	76.8	23 - 140		
OCDD	ND	50.0	2.84		3.57		13C-OCDD	56.3	17 - 157		
2,3,7,8-TCDF	ND	5.00	0.643		0.984		13C-2,3,7,8-TCDF	78.4	24 - 169		
1,2,3,7,8-PeCDF	ND	25.0	0.766		2.50		13C-1,2,3,7,8-PeCDF	73.7	24 - 185		
2,3,4,7,8-PeCDF	ND	25.0	0.665		1.73		13C-2,3,4,7,8-PeCDF	75.2	21 - 178		
1,2,3,4,7,8-HxCDF	ND	25.0	0.421		1.36		13C-1,2,3,4,7,8-HxCDF	76.7	26 - 152		
1,2,3,6,7,8-HxCDF	ND	25.0	0.484		1.56		13C-1,2,3,6,7,8-HxCDF	73.4	26 - 123		
2,3,4,6,7,8-HxCDF	ND	25.0	0.497		2.05		13C-2,3,4,6,7,8-HxCDF	72.9	28 - 136		
1,2,3,7,8,9-HxCDF	ND	25.0	0.618		1.34		13C-1,2,3,7,8,9-HxCDF	77.2	29 - 147		
1,2,3,4,6,7,8-HpCDF	ND	25.0	0.516		1.46		13C-1,2,3,4,6,7,8-HpCDF	70.9	28 - 143		
1,2,3,4,7,8,9-HpCDF	ND	25.0	0.478		1.75		13C-1,2,3,4,7,8,9-HpCDF	74.5	26 - 138		
OCDF	ND	50.0	0.926		2.98		13C-OCDF	58.0	17 - 157		
							CRS 37Cl-2,3,7,8-TCDD	91.8	35 - 197		
							<b>Toxic Equivalent Quotient (TEQ) Data</b>				
							TEQMinWHO2005Dioxin		0.00		
<b>TOTALS</b>											
Total TCDD	ND		0.857								
Total PeCDD	ND		0.692								
Total HxCDD	ND		1.27								
Total HpCDD	ND		1.23								
Total TCDF	ND		0.644								
Total PeCDF	ND		0.753								
Total HxCDF	ND		0.525								
Total HpCDF	ND		0.528								

DL - Sample specific estimated detection limit

MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

RL - Reporting limit

Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: OPR					EPA Method 1613B		
Matrix: Aqueous	QC Batch: B5A0110	Lab Sample: B5A0110-BS1					
Sample Size: 1.00 L	Date Extracted: 29-Jan-2015 8:12	Date Analyzed: 30-Jan-15 23:00	Column: ZB-5MS	Analyst: DMS			
Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	162	200	80.8	67 - 158	IS 13C-2,3,7,8-TCDD	74.3	20 - 175
1,2,3,7,8-PeCDD	878	1000	87.8	70 - 142	13C-1,2,3,7,8-PeCDD	66.7	21 - 227
1,2,3,4,7,8-HxCDD	939	1000	93.9	70 - 164	13C-1,2,3,4,7,8-HxCDD	74.7	21 - 193
1,2,3,6,7,8-HxCDD	967	1000	96.7	76 - 134	13C-1,2,3,6,7,8-HxCDD	75.1	25 - 163
1,2,3,7,8,9-HxCDD	943	1000	94.3	64 - 162	13C-1,2,3,7,8,9-HxCDD	74.4	21 - 193
1,2,3,4,6,7,8-HpCDD	925	1000	92.5	70 - 140	13C-1,2,3,4,6,7,8-HpCDD	76.9	26 - 166
OCDD	1910	2000	95.3	78 - 144	13C-OCDD	56.7	13 - 199
2,3,7,8-TCDF	170	200	84.8	75 - 158	13C-2,3,7,8-TCDF	77.8	22 - 152
1,2,3,7,8-PeCDF	894	1000	89.4	80 - 134	13C-1,2,3,7,8-PeCDF	66.3	21 - 192
2,3,4,7,8-PeCDF	908	1000	90.8	68 - 160	13C-2,3,4,7,8-PeCDF	73.0	13 - 328
1,2,3,4,7,8-HxCDF	964	1000	96.4	72 - 134	13C-1,2,3,4,7,8-HxCDF	72.7	19 - 202
1,2,3,6,7,8-HxCDF	957	1000	95.7	84 - 130	13C-1,2,3,6,7,8-HxCDF	72.2	21 - 159
2,3,4,6,7,8-HxCDF	975	1000	97.5	70 - 156	13C-2,3,4,6,7,8-HxCDF	70.8	22 - 176
1,2,3,7,8,9-HxCDF	948	1000	94.8	78 - 130	13C-1,2,3,7,8,9-HxCDF	73.0	17 - 205
1,2,3,4,6,7,8-HpCDF	966	1000	96.6	82 - 122	13C-1,2,3,4,6,7,8-HpCDF	72.8	21 - 158
1,2,3,4,7,8,9-HpCDF	987	1000	98.7	78 - 138	13C-1,2,3,4,7,8,9-HpCDF	71.5	20 - 186
OCDF	1890	2000	94.5	63 - 170	13C-OCDF	57.3	13 - 199
					CRS 37Cl-2,3,7,8-TCDD	99.6	31 - 191

LCL-UCL - Lower control limit - upper control limit

**Sample ID: WM-FT-IB-20150122-W** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Leidos	Matrix: Aqueous	Lab Sample: 1500116-03      Date Received: 23-Jan-2015 8:50
Project: 1400647	Sample Size: 1.00 L	QC Batch: B5A0110      Date Extracted: 29-Jan-2015 8:12
Date Collected: 22-Jan-2015 12:50		Date Analyzed: 31-Jan-15 06:14      Column: ZB-5MS      Analyst: WJL

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	4.99	0.991		0.943		IS 13C-2,3,7,8-TCDD	77.0	25 - 164	
1,2,3,7,8-PeCDD	ND	25.0	1.17		4.51		13C-1,2,3,7,8-PeCDD	67.8	25 - 181	
1,2,3,4,7,8-HxCDD	ND	25.0	1.92		2.21		13C-1,2,3,4,7,8-HxCDD	73.4	32 - 141	
1,2,3,6,7,8-HxCDD	ND	25.0		3.00	1.93		13C-1,2,3,6,7,8-HxCDD	72.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	25.0	1.98		2.02		13C-1,2,3,7,8,9-HxCDD	74.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	75.1	25.0			2.98		13C-1,2,3,4,6,7,8-HpCDD	74.7	23 - 140	
OCDD	770	49.9			3.57		13C-OCDD	53.5	17 - 157	
2,3,7,8-TCDF	ND	4.99	0.910		0.984		13C-2,3,7,8-TCDF	83.2	24 - 169	
1,2,3,7,8-PeCDF	ND	25.0	1.13		2.50		13C-1,2,3,7,8-PeCDF	80.0	24 - 185	
2,3,4,7,8-PeCDF	ND	25.0	1.25		1.73		13C-2,3,4,7,8-PeCDF	77.3	21 - 178	
1,2,3,4,7,8-HxCDF	ND	25.0		0.887	1.36		13C-1,2,3,4,7,8-HxCDF	72.3	26 - 152	
1,2,3,6,7,8-HxCDF	0.792	25.0			1.56	J	13C-1,2,3,6,7,8-HxCDF	71.0	26 - 123	
2,3,4,6,7,8-HxCDF	ND	25.0		0.871	2.05		13C-2,3,4,6,7,8-HxCDF	71.1	28 - 136	
1,2,3,7,8,9-HxCDF	ND	25.0	0.617		1.34		13C-1,2,3,7,8,9-HxCDF	73.0	29 - 147	
1,2,3,4,6,7,8-HpCDF	28.6	25.0			1.46		13C-1,2,3,4,6,7,8-HpCDF	66.9	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	25.0	0.826		1.75		13C-1,2,3,4,7,8,9-HpCDF	71.5	26 - 138	
OCDF	35.7	49.9			2.98	J	13C-OCDF	54.0	17 - 157	
							CRS 37Cl-2,3,7,8-TCDD	99.2	35 - 197	

<b>Toxic Equivalent Quotient (TEQ) Data</b>										
								TEQMinWHO2005Dioxin	1.36	

<b>TOTALS</b>										
Total TCDD	ND		0.991							
Total PeCDD	ND		1.18							
Total HxCDD	8.19			11.2						
Total HpCDD	137									
Total TCDF	ND		1.01							
Total PeCDF	ND			1.60						
Total HxCDF	17.3			19.1						
Total HpCDF	56.9									

DL - Sample specific estimated detection limit      MDL - Method detection limit      LCL-UCL- Lower control limit - upper control limit  
 EMPC - Estimated maximum possible concentration      RL - Reporting limit      Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.



**Sample ID: Method Blank**

**EPA Method 1668C**

Matrix: Solid	QC Batch: B5A0115	Lab Sample: B5A0115-BLK1
Sample Size: 2.00 g	Date Extracted: 29-Jan-2015 10:19	Date Analyzed: 05-Feb-15 12:12 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	ND	12.5	8.17		0.320		PCB-43/49	ND	25.0	5.33		0.879	
PCB-2	ND	12.5	7.98		0.240		PCB-44	ND	12.5	5.68		0.745	
PCB-3	ND	12.5	6.63		0.323		PCB-45	ND	12.5	6.13		0.402	
PCB-4/10	ND	25.0	31.3		1.14		PCB-46	ND	12.5	6.27		0.537	
PCB-5/8	ND	25.0	26.7		1.76		PCB-47	ND	12.5	4.62		2.19	
PCB-6	ND	12.5	23.6		1.00		PCB-48/75	ND	25.0	3.98		0.983	
PCB-7/9	ND	25.0	25.4		1.34		PCB-50	ND	12.5	5.11		0.603	
PCB-11	ND	12.5	26.5		3.48		PCB-51	ND	12.5	5.35		0.789	
PCB-12/13	ND	25.0	24.2		1.37		PCB-52/69	ND	25.0	4.13		0.722	
PCB-14	ND	12.5	26.0		0.337		PCB-53	ND	12.5	4.98		0.331	
PCB-15	ND	12.5	22.5		0.634		PCB-54	ND	12.5	4.08		0.275	
PCB-16/32	ND	25.0		7.46	0.430		PCB-55	ND	12.5	3.56		0.416	
PCB-17	ND	12.5	3.60		0.658		PCB-56/60	ND	25.0	3.67		0.825	
PCB-18	ND	12.5	4.25		0.696		PCB-57	ND	12.5	3.92		0.354	
PCB-19	ND	12.5	4.85		0.612		PCB-58	ND	12.5	4.14		0.589	
PCB-20/21/33	4.93	37.5			2.47	J	PCB-61/70	ND	25.0	4.03		1.20	
PCB-22	ND	12.5	2.77		0.964		PCB-62	ND	12.5	4.00		0.597	
PCB-23	ND	12.5	2.62		0.543		PCB-63	ND	12.5	4.03		0.524	
PCB-24/27	ND	25.0	2.79		0.742		PCB-65	ND	12.5	3.99		0.842	
PCB-25	ND	12.5	2.65		0.768		PCB-66/76	ND	25.0	3.67		1.31	
PCB-26	ND	12.5	2.77		0.766		PCB-67	ND	12.5	3.47		0.486	
PCB-28	ND	12.5		3.44	1.12		PCB-68	ND	12.5	3.63		0.658	
PCB-29	ND	12.5	3.10		0.949		PCB-73	ND	12.5	3.92		0.454	
PCB-30	ND	12.5	2.95		0.355		PCB-74	ND	12.5	3.09		0.781	
PCB-31	ND	12.5	2.61		0.809		PCB-77	ND	12.5	3.76		0.748	
PCB-34	ND	12.5	2.95		1.57		PCB-78	ND	12.5	3.37		0.385	
PCB-35	ND	12.5	2.85		0.565		PCB-79	ND	12.5	3.43		0.633	
PCB-36	ND	12.5	3.08		0.406		PCB-80	ND	12.5	3.11		0.336	
PCB-37	ND	12.5	2.86		0.389		PCB-81	ND	12.5	3.21		0.674	
PCB-38	ND	12.5	2.93		0.528		PCB-82	ND	12.5	6.52		0.981	
PCB-39	ND	12.5	3.15		0.461		PCB-83	ND	12.5	4.26		0.440	
PCB-40	ND	12.5	6.97		0.927		PCB-84/92	ND	25.0	5.49		1.01	
PCB-41/64/71/72	ND	50.0	4.05		1.70		PCB-85/116	ND	25.0	4.96		1.64	
PCB-42/59	ND	25.0	4.30		0.899		PCB-86	ND	12.5	7.67		1.79	

RL - Reporting limit

DL - Sample specific estimated detection limit

LCL-UCL - Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

MDL - Method detection limit

The results are reported in dry weight. The sample size is reported in wet weight.

**Sample ID: Method Blank**

**EPA Method 1668C**

Matrix: Solid	QC Batch: B5A0115	Lab Sample: B5A0115-BLK1
Sample Size: 2.00 g	Date Extracted: 29-Jan-2015 10:19	Date Analyzed: 05-Feb-15 12:12 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-87/117/125	ND	37.5	4.17		0.880		PCB-133/142	ND	25.0	7.47		1.04	
PCB-88/91	ND	25.0	5.47		1.25		PCB-134/143	ND	25.0	6.68		1.05	
PCB-89	ND	12.5	5.08		1.22		PCB-135	ND	12.5	7.44		1.47	
PCB-90/101	ND	25.0	5.22		1.19		PCB-136	ND	12.5	5.01		0.776	
PCB-93	ND	12.5	7.24		2.53		PCB-137	ND	12.5	6.25		0.541	
PCB-94	ND	12.5	5.78		0.874		PCB-138/163/164	ND	37.5	5.00		0.809	
PCB-95/98/102	ND	37.5	4.99		1.38		PCB-139/149	ND	25.0	7.74		1.49	
PCB-96	ND	12.5	4.10		0.588		PCB-140	ND	12.5	8.17		1.20	
PCB-97	ND	12.5	5.47		0.675		PCB-141	ND	12.5	6.12		0.678	
PCB-99	ND	12.5	4.30		0.474		PCB-144	ND	12.5	7.74		1.38	
PCB-100	ND	12.5	4.97		0.511		PCB-145	ND	12.5	4.91		1.05	
PCB-103	ND	12.5	4.87		0.428		PCB-146/165	ND	25.0	4.91		0.792	
PCB-104	ND	12.5	3.95		0.876		PCB-147	ND	12.5	7.19		5.26	
PCB-105	ND	12.5	4.78		0.462		PCB-148	ND	12.5	7.92		1.45	
PCB-106/118	ND	25.0	3.97		0.728		PCB-150	ND	12.5	5.91		0.801	
PCB-107/109	ND	25.0	3.74		0.631		PCB-151	ND	12.5	7.90		1.16	
PCB-108/112	ND	25.0	5.05		0.844		PCB-152	ND	12.5	5.29		0.744	
PCB-110	ND	12.5	4.15		0.555		PCB-153	ND	12.5	4.90		0.484	
PCB-111/115	ND	25.0	3.96		1.24		PCB-154	ND	12.5	6.87		0.837	
PCB-113	ND	12.5	4.07		0.495		PCB-155	ND	12.5	5.28		0.767	
PCB-114	ND	12.5	4.78		0.418		PCB-156	ND	12.5	4.76		0.534	
PCB-119	ND	12.5	4.22		0.383		PCB-157	ND	12.5	4.64		0.485	
PCB-120	ND	12.5	3.85		0.622		PCB-158/160	ND	25.0	4.82		0.915	
PCB-121	ND	12.5	3.78		0.978		PCB-159	ND	12.5	5.19		0.578	
PCB-122	ND	12.5	5.53		0.619		PCB-166	ND	12.5	4.87		0.425	
PCB-123	ND	12.5	4.24		0.494		PCB-167	ND	12.5	4.18		0.653	
PCB-124	ND	12.5	3.37		0.813		PCB-168	ND	12.5	4.22		0.502	
PCB-126	ND	12.5	5.45		0.543		PCB-169	ND	12.5	4.71		0.767	
PCB-127	ND	12.5	4.21		0.326		PCB-170	ND	12.5	4.69		0.758	
PCB-128/162	ND	25.0	5.51		1.08		PCB-171	ND	12.5	4.19		0.372	
PCB-129	ND	12.5	7.58		0.567		PCB-172	ND	12.5	4.06		0.857	
PCB-130	ND	12.5	6.88		0.798		PCB-173	ND	12.5	5.98		0.507	
PCB-131	ND	12.5	6.74		0.731		PCB-174	ND	12.5	4.82		0.797	
PCB-132/161	ND	25.0	5.54		1.05		PCB-175	ND	12.5	4.73		0.679	

RL - Reporting limit

DL - Sample specific estimated detection limit

LCL-UCL - Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

MDL - Method detection limit

The results are reported in dry weight. The sample size is reported in wet weight.

**Sample ID: Method Blank**

**EPA Method 1668C**

Matrix: Solid	QC Batch: B5A0115	Lab Sample: B5A0115-BLK1
Sample Size: 2.00 g	Date Extracted: 29-Jan-2015 10:19	Date Analyzed: 05-Feb-15 12:12 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-176	ND	12.5	3.25		0.729		Total triCB	4.93	12.5		15.8		
PCB-177	ND	12.5	5.29		0.404		Total tetraCB	ND	12.5	6.97			
PCB-178	ND	12.5	4.63		0.610		Total pentaCB	ND	12.5	7.67			
PCB-179	ND	12.5	3.68		0.418		Total hexaCB	ND	12.5	8.17			
PCB-180	ND	12.5	4.94		0.420		Total heptaCB	ND	12.5	5.98			
PCB-181	ND	12.5	4.81		1.26		Total octaCB	ND	12.5	9.75			
PCB-182/187	ND	25.0	3.83		1.33		Total nonaCB	ND	12.5	5.23			
PCB-183	ND	12.5	3.97		0.638		DecaCB	ND	12.5	4.66			
PCB-184	ND	12.5	2.94		0.597		Total PCB	4.93	12.5				
PCB-185	ND	12.5	3.68		0.557								
PCB-186	ND	12.5	3.30		0.421								
PCB-188	ND	12.5	3.03		0.759								
PCB-189	ND	12.5	3.82		0.483								
PCB-190	ND	12.5	3.39		0.686								
PCB-191	ND	12.5	3.92		0.447								
PCB-192	ND	12.5	3.81		0.528								
PCB-193	ND	12.5	3.87		0.836								
PCB-194	ND	12.5	4.25		0.645								
PCB-195	ND	12.5	4.20		0.722								
PCB-196/203	ND	25.0	9.19		0.983								
PCB-197	ND	12.5	6.86		0.794								
PCB-198	ND	12.5	9.75		0.792								
PCB-199	ND	12.5	9.23		0.615								
PCB-200	ND	12.5	6.93		0.795								
PCB-201	ND	12.5	6.40		0.317								
PCB-202	ND	12.5	6.80		0.759								
PCB-204	ND	12.5	6.47		0.543								
PCB-205	ND	12.5	3.34		0.471								
PCB-206	ND	12.5	5.23		0.852								
PCB-207	ND	12.5	2.51		0.402								
PCB-208	ND	12.5	2.93		0.441								
PCB-209	ND	12.5	4.66		1.10								
Total monoCB	ND	12.5	8.17										
Total diCB	ND	12.5	31.3										

RL - Reporting limit  
EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit  
The results are reported in dry weight. The sample size is reported in wet weight.

**Sample ID: Method Blank**

**EPA Method 1668C**

Matrix: Solid	QC Batch: B5A0115	Lab Sample: B5A0115-BLK1
Sample Size: 2.00 g	Date Extracted: 29-Jan-2015 10:19	Date Analyzed: 05-Feb-15 12:12 Column: ZB-1 Analyst: DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	70.0	5 - 145		13C-PCB-157	87.5	10 - 145	
13C-PCB-3	73.9	5 - 145		13C-PCB-159	89.2	10 - 145	
13C-PCB-4	68.1	5 - 145		13C-PCB-167	89.2	10 - 145	
13C-PCB-11	78.2	5 - 145		13C-PCB-169	85.4	10 - 145	
13C-PCB-9	72.2	5 - 145		13C-PCB-170	81.0	10 - 145	
13C-PCB-19	73.8	5 - 145		13C-PCB-180	78.2	10 - 145	
13C-PCB-28	73.0	5 - 145		13C-PCB-188	83.3	10 - 145	
13C-PCB-32	77.2	5 - 145		13C-PCB-189	77.8	10 - 145	
13C-PCB-37	89.2	5 - 145		13C-PCB-194	89.0	10 - 145	
13C-PCB-47	80.8	5 - 145		13C-PCB-202	72.5	10 - 145	
13C-PCB-52	79.6	5 - 145		13C-PCB-206	88.5	10 - 145	
13C-PCB-54	70.0	5 - 145		13C-PCB-208	79.7	10 - 145	
13C-PCB-70	86.9	5 - 145		13C-PCB-209	94.0	10 - 145	
13C-PCB-77	88.0	10 - 145		CRS 13C-PCB-79	91.5	10 - 145	
13C-PCB-80	87.9	10 - 145		13C-PCB-178	86.4	10 - 145	
13C-PCB-81	88.7	10 - 145					
13C-PCB-95	87.6	10 - 145					
13C-PCB-97	89.6	10 - 145					
13C-PCB-101	89.6	10 - 145					
13C-PCB-104	84.3	10 - 145					
13C-PCB-105	87.0	10 - 145					
13C-PCB-114	88.3	10 - 145					
13C-PCB-118	90.6	10 - 145					
13C-PCB-123	92.5	10 - 145					
13C-PCB-126	87.1	10 - 145					
13C-PCB-127	87.1	10 - 145					
13C-PCB-138	88.5	10 - 145					
13C-PCB-141	87.0	10 - 145					
13C-PCB-153	88.9	10 - 145					
13C-PCB-155	74.9	10 - 145					
13C-PCB-156	88.1	10 - 145					

RL - Reporting limit

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

MDL - Method detection limit

The results are reported in dry weight. The sample size is reported in wet weight.

**Sample ID: OPR**

**EPA Method 1668C**

Matrix: Solid  
Sample Size: 2.00 g

QC Batch: B5A0115  
Date Extracted: 29-Jan-2015 10:19

Lab Sample: B5A0115-BS1  
Date Analyzed: 05-Feb-15 10:04 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	4660	5000	93.1	60 - 135	IS 13C-PCB-1	70.1	15 - 145
PCB-3	4630	5000	92.6	60 - 135	IS 13C-PCB-3	70.9	15 - 145
PCB-4/10	21000	20000	105	60 - 135	IS 13C-PCB-4	65.9	15 - 145
PCB-15	10400	10000	104	60 - 135	IS 13C-PCB-11	74.7	15 - 145
PCB-19	5030	5000	101	60 - 135	IS 13C-PCB-9	68.7	15 - 145
PCB-37	5450	5000	109	60 - 135	IS 13C-PCB-19	68.8	15 - 145
PCB-54	5100	5000	102	60 - 135	IS 13C-PCB-28	73.3	15 - 145
PCB-77	5160	5000	103	60 - 135	IS 13C-PCB-32	74.7	15 - 145
PCB-81	5020	5000	100	60 - 135	IS 13C-PCB-37	86.0	15 - 145
PCB-104	5360	5000	107	60 - 135	IS 13C-PCB-47	76.9	15 - 145
PCB-105	5370	5000	107	60 - 135	IS 13C-PCB-52	75.5	15 - 145
PCB-106/118	10500	10000	105	60 - 135	IS 13C-PCB-54	67.6	15 - 145
PCB-114	5250	5000	105	60 - 135	IS 13C-PCB-70	80.8	15 - 145
PCB-123	5340	5000	107	60 - 135	IS 13C-PCB-77	84.6	40 - 145
PCB-126	5530	5000	111	60 - 135	IS 13C-PCB-80	82.5	40 - 145
PCB-155	5270	5000	105	60 - 135	IS 13C-PCB-81	84.8	40 - 145
PCB-156	4940	5000	98.9	60 - 135	IS 13C-PCB-95	82.4	40 - 145
PCB-157	4780	5000	95.5	60 - 135	IS 13C-PCB-97	86.3	40 - 145
PCB-167	4920	5000	98.3	60 - 135	IS 13C-PCB-101	85.1	40 - 145
PCB-169	4650	5000	93.0	60 - 135	IS 13C-PCB-104	79.7	40 - 145
PCB-188	5010	5000	100	60 - 135	IS 13C-PCB-105	81.1	40 - 145
PCB-189	4970	5000	99.4	60 - 135	IS 13C-PCB-114	85.4	40 - 145
PCB-202	5000	5000	100	60 - 135	IS 13C-PCB-118	87.9	40 - 145
PCB-205	5040	5000	101	60 - 135	IS 13C-PCB-123	89.7	40 - 145
PCB-206	5170	5000	103	60 - 135	IS 13C-PCB-126	82.8	40 - 145
PCB-208	5190	5000	104	60 - 135	IS 13C-PCB-127	82.4	40 - 145
PCB-209	5160	5000	103	60 - 135	IS 13C-PCB-138	86.1	40 - 145
					IS 13C-PCB-141	84.8	40 - 145
					IS 13C-PCB-153	87.1	40 - 145
					IS 13C-PCB-155	71.0	40 - 145
					IS 13C-PCB-156	84.8	40 - 145
					IS 13C-PCB-157	84.5	40 - 145
					IS 13C-PCB-159	85.3	40 - 145
					IS 13C-PCB-167	85.6	40 - 145
					IS 13C-PCB-169	85.8	40 - 145
					IS 13C-PCB-170	80.1	40 - 145
					IS 13C-PCB-180	79.4	40 - 145
					IS 13C-PCB-188	83.0	40 - 145
					IS 13C-PCB-189	80.0	40 - 145
					IS 13C-PCB-194	85.2	40 - 145

**Sample ID: OPR**

**EPA Method 1668C**

Matrix: Solid  
Sample Size: 2.00 g

QC Batch: B5A0115  
Date Extracted: 29-Jan-2015 10:19

Lab Sample: B5A0115-BS1  
Date Analyzed: 05-Feb-15 10:04 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	72.2	40 - 145
					IS 13C-PCB-206	87.1	40 - 145
					IS 13C-PCB-208	78.7	40 - 145
					IS 13C-PCB-209	94.0	40 - 145
					CRS 13C-PCB-79	87.8	40 - 145
					CRS 13C-PCB-178	82.0	40 - 145

LCL-UCL - Lower control limit - upper control limit

**Sample ID: WM-CB-03-20150122-S**

**EPA Method 1668C**

<b>Client Data</b>				<b>Sample Data</b>			<b>Laboratory Data</b>						
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1500116-01		Date Received:	23-Jan-2015 8:50		
Project:	1400647			Sample Size:	6.93 g		QC Batch:	B5A0115		Date Extracted:	29-Jan-2015 10:19		
Date Collected:	22-Jan-2015 10:45			% Solids:	29.0		Date Analyzed:	05-Feb-15 19:40		Column:	ZB-1 Analyst: DMS		

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	308	124			0.320	D	PCB-44	6490	124			0.745	D
PCB-2	113	124			0.240	J, D	PCB-45	887	124			0.402	D
PCB-3	267	124			0.323	D	PCB-46	370	124			0.537	D
PCB-4/10	510	248			1.14	D	PCB-47	1360	124			2.19	D
PCB-5/8	2090	248			1.76	D	PCB-48/75	982	248			0.983	D
PCB-6	421	124			1.00	D	PCB-50	ND	124	67.3		0.603	D
PCB-7/9	287	248			1.34	D	PCB-51	246	124			0.789	D
PCB-11	16300	124			3.48	D	PCB-52/69	8340	248			0.722	D
PCB-12/13	227	248			1.37	J, D	PCB-53	696	124			0.331	D
PCB-14	ND	124	224		0.337	D	PCB-54	ND	124	53.7		0.275	D
PCB-15	1220	124			0.634	D	PCB-55	176	124			0.416	D
PCB-16/32	2560	248			0.430	D	PCB-56/60	3920	248			0.825	D
PCB-17	1260	124			0.658	D	PCB-57	ND	124	63.0		0.354	D
PCB-18	3800	124			0.696	D	PCB-58	ND	124	66.5		0.589	D
PCB-19	363	124			0.612	D	PCB-61/70	10800	248			1.20	D
PCB-20/21/33	4030	373			2.47	B, D	PCB-62	ND	124	73.4		0.597	D
PCB-22	2000	124			0.964	D	PCB-63	226	124			0.524	D
PCB-23	ND	124	36.1		0.543	D	PCB-65	ND	124	73.2		0.842	D
PCB-24/27	268	248			0.742	D	PCB-66/76	5370	248			1.31	D
PCB-25	411	124			0.768	D	PCB-67	195	124			0.486	D
PCB-26	990	124			0.766	D	PCB-68	ND	124	66.5		0.658	D
PCB-28	3230	124			1.12	D	PCB-73	ND	124	67.0		0.454	D
PCB-29	ND	124	42.7		0.949	D	PCB-74	2500	124			0.781	D
PCB-30	ND	124	31.6		0.355	D	PCB-77	1070	124			0.748	D
PCB-31	5450	124			0.809	D	PCB-78	ND	124	63.2		0.385	D
PCB-34	ND	124	40.6		1.57	D	PCB-79	170	124			0.633	D
PCB-35	320	124			0.565	D	PCB-80	ND	124	55.6		0.336	D
PCB-36	ND	124	65.7		0.406	D	PCB-81	153	124			0.674	D
PCB-37	2020	124			0.389	D	PCB-82	2680	124			0.981	D
PCB-38	ND	124	62.6		0.528	D	PCB-83	ND	124	88.8		0.440	D
PCB-39	ND	124	67.3		0.461	D	PCB-84/92	7940	248			1.01	D
PCB-40	655	124			0.927	D	PCB-85/116	2480	248			1.64	D
PCB-41/64/71/72	3870	497			1.70	D	PCB-86	ND	124	160		1.79	D
PCB-42/59	1590	248			0.899	D	PCB-87/117/125	7510	373			0.880	D
PCB-43/49	4230	248			0.879	D	PCB-88/91	2260	248			1.25	D

RL - Reporting limit  
EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit  
The results are reported in dry weight. The sample size is reported in wet weight.

**Sample ID: WM-CB-03-20150122-S**

**EPA Method 1668C**

<b>Client Data</b>				<b>Sample Data</b>			<b>Laboratory Data</b>						
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1500116-01		Date Received:	23-Jan-2015 8:50		
Project:	1400647			Sample Size:	6.93 g		QC Batch:	B5A0115		Date Extracted:	29-Jan-2015 10:19		
Date Collected:	22-Jan-2015 10:45			% Solids:	29.0		Date Analyzed:	05-Feb-15 19:40		Column:	ZB-1 Analyst: DMS		

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	102	124			1.22	J, D	PCB-136	2530	124			0.776	D
PCB-90/101	21300	248			1.19	D	PCB-137	1320	124			0.541	D
PCB-93	ND	124	141		2.53	D	PCB-138/163/164	24100	373			0.809	D
PCB-94	ND	124	112		0.874	D	PCB-139/149	17900	248			1.49	D
PCB-95/98/102	14700	373			1.38	D	PCB-140	ND	124	132		1.20	D
PCB-96	ND	124	98.7		0.588	D	PCB-141	4990	124			0.678	D
PCB-97	5830	124			0.675	D	PCB-144	861	124			1.38	D
PCB-99	6150	124			0.474	D	PCB-145	ND	124	79.1		1.05	D
PCB-100	ND	124	120		0.511	D	PCB-146/165	2680	248			0.792	D
PCB-103	ND	124	117		0.428	D	PCB-147	372	124			5.26	D
PCB-104	ND	124	94.8		0.876	D	PCB-148	ND	124	128		1.45	D
PCB-105	8290	124			0.462	D	PCB-150	ND	124	95.1		0.801	D
PCB-106/118	19100	248			0.728	D	PCB-151	5010	124			1.16	D
PCB-107/109	1090	248			0.631	D	PCB-152	ND	124	85.1		0.744	D
PCB-108/112	796	248			0.844	D	PCB-153	18700	124			0.484	D
PCB-110	21400	124			0.555	D	PCB-154	194	124			0.837	D
PCB-111/115	424	248			1.24	D	PCB-155	ND	124	85.0		0.767	D
PCB-113	ND	124	85.3		0.495	D	PCB-156	2710	124			0.534	D
PCB-114	370	124			0.418	D	PCB-157	547	124			0.485	D
PCB-119	288	124			0.383	D	PCB-158/160	2710	248			0.915	D
PCB-120	ND	124	80.4		0.622	D	PCB-159	ND	124	64.7		0.578	D
PCB-121	ND	124	73.6		0.978	D	PCB-166	ND	124	60.7		0.425	D
PCB-122	230	124			0.619	D	PCB-167	881	124			0.653	D
PCB-123	305	124			0.494	D	PCB-168	ND	124	45.8		0.502	D
PCB-124	760	124			0.813	D	PCB-169	ND	124	91.6		0.767	D
PCB-126	230	124			0.543	D	PCB-170	5360	124			0.758	D
PCB-127	ND	124	96.6		0.326	D	PCB-171	1520	124			0.372	D
PCB-128/162	3950	248			1.08	D	PCB-172	848	124			0.857	D
PCB-129	1380	124			0.567	D	PCB-173	ND	124		159	0.507	D
PCB-130	1360	124			0.798	D	PCB-174	7380	124			0.797	D
PCB-131	ND	124	73.4		0.731	D	PCB-175	ND	124		776	0.679	D
PCB-132/161	8110	248			1.05	D	PCB-176	783	124			0.729	D
PCB-133/142	791	248			1.04	D	PCB-177	4010	124			0.404	D
PCB-134/143	1380	248			1.05	D	PCB-178	1170	124			0.610	D
PCB-135	2810	124			1.47	D	PCB-179	3020	124			0.418	D

RL - Reporting limit  
EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit  
The results are reported in dry weight. The sample size is reported in wet weight.



**Sample ID: WM-CB-03-20150122-S**

**EPA Method 1668C**

Client Data				Sample Data			Laboratory Data				
Name:	Leidos	Matrix:	Sediment	Lab Sample:	1500116-01	Date Received:	23-Jan-2015	8:50			
Project:	1400647	Sample Size:	6.93 g	QC Batch:	B5A0115	Date Extracted:	29-Jan-2015	10:19			
Date Collected:	22-Jan-2015 10:45	% Solids:	29.0	Date Analyzed :	05-Feb-15 19:40	Column:	ZB-1	Analyst:	DMS		

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	15200	124			0.420	D	Total octaCB	16800	124		17000		
PCB-181	ND	124	122		1.26	D	Total nonaCB	5720	124				
PCB-182/187	6720	248			1.33	D	DecaCB	1790	124				
PCB-183	3080	124			0.638	D	Total PCB	408000	124				B
PCB-184	ND	124	49.7		0.597	D							
PCB-185	658	124			0.557	D							
PCB-186	ND	124	55.8		0.421	D							
PCB-188	ND	124	51.3		0.759	D							
PCB-189	238	124			0.483	D							
PCB-190	841	124			0.686	D							
PCB-191	164	124			0.447	D							
PCB-192	ND	124	96.5		0.528	D							
PCB-193	619	124			0.836	D							
PCB-194	3950	124			0.645	D							
PCB-195	1280	124			0.722	D							
PCB-196/203	4410	248			0.983	D							
PCB-197	ND	124		145	0.794	D							
PCB-198	541	124			0.792	D							
PCB-199	4100	124			0.615	D							
PCB-200	500	124			0.795	D							
PCB-201	611	124			0.317	D							
PCB-202	1420	124			0.759	D							
PCB-204	ND	124	116		0.543	D							
PCB-205	ND	124	145		0.471	D							
PCB-206	4040	124			0.852	D							
PCB-207	448	124			0.402	D							
PCB-208	1240	124			0.441	D							
PCB-209	1790	124			1.10	D							
Total monoCB	689	124											
Total diCB	21100	124											
Total triCB	26700	124				B							
Total tetraCB	54200	124											
Total pentaCB	124000	124											
Total hexaCB	105000	124											
Total heptaCB	51600	124		52500									

RL - Reporting limit  
EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit  
The results are reported in dry weight. The sample size is reported in wet weight.

**Sample ID: WM-CB-03-20150122-S**

**EPA Method 1668C**

<b>Client Data</b>		<b>Sample Data</b>		<b>Laboratory Data</b>	
Name:	Leidos	Matrix:	Sediment	Lab Sample:	1500116-01
Project:	1400647	Sample Size:	6.93 g	Date Received:	23-Jan-2015 8:50
Date Collected:	22-Jan-2015 10:45	% Solids:	29.0	QC Batch:	B5A0115
				Date Analyzed:	05-Feb-15 19:40
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	94.7	5 -145	D	13C-PCB-170	68.7	10 -145	D
13C-PCB-3	95.9	5 -145	D	13C-PCB-180	73.9	10 -145	D
13C-PCB-4	94.7	5 -145	D	13C-PCB-188	97.9	10 -145	D
13C-PCB-11	93.3	5 -145	D	13C-PCB-189	44.8	10 -145	D
13C-PCB-9	95.7	5 -145	D	13C-PCB-194	95.2	10 -145	D
13C-PCB-19	82.5	5 -145	D	13C-PCB-202	76.3	10 -145	D
13C-PCB-28	70.6	5 -145	D	13C-PCB-206	91.3	10 -145	D
13C-PCB-32	79.9	5 -145	D	13C-PCB-208	99.0	10 -145	D
13C-PCB-37	73.5	5 -145	D	13C-PCB-209	118	10 -145	D
13C-PCB-47	93.2	5 -145	D	CRS 13C-PCB-79	88.0	10 -145	D
13C-PCB-52	96.7	5 -145	D	13C-PCB-178	93.0	10 -145	D
13C-PCB-54	89.4	5 -145	D				
13C-PCB-70	94.1	5 -145	D				
13C-PCB-77	77.6	10 -145	D				
13C-PCB-80	89.6	10 -145	D				
13C-PCB-81	81.8	10 -145	D				
13C-PCB-95	102	10 -145	D				
13C-PCB-97	101	10 -145	D				
13C-PCB-101	104	10 -145	D				
13C-PCB-104	104	10 -145	D				
13C-PCB-105	102	10 -145	D				
13C-PCB-114	116	10 -145	D				
13C-PCB-118	82.2	10 -145	D				
13C-PCB-123	91.3	10 -145	D				
13C-PCB-126	94.0	10 -145	D				
13C-PCB-127	99.1	10 -145	D				
13C-PCB-138	98.4	10 -145	D				
13C-PCB-141	108	10 -145	D				
13C-PCB-153	108	10 -145	D				
13C-PCB-155	79.9	10 -145	D				
13C-PCB-156	82.4	10 -145	D				
13C-PCB-157	84.8	10 -145	D				
13C-PCB-159	93.6	10 -145	D				
13C-PCB-167	87.4	10 -145	D				
13C-PCB-169	61.0	10 -145	D				

RL - Reporting limit  
 EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
 MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit  
 The results are reported in dry weight. The sample size is reported in wet weight.

**Sample ID: WM-FD-02-20150122-S**

**EPA Method 1668C**

<b>Client Data</b>				<b>Sample Data</b>			<b>Laboratory Data</b>						
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1500116-02		Date Received:	23-Jan-2015 8:50		
Project:	1400647			Sample Size:	6.78 g		QC Batch:	B5A0115		Date Extracted:	29-Jan-2015 10:19		
Date Collected:	22-Jan-2015 10:45			% Solids:	29.6		Date Analyzed :	04-Feb-15 18:09		Column:	ZB-1 Analyst: DMS		

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	454	249			0.320	D	PCB-44	8100	249			0.745	D
PCB-2	165	249			0.240	J, D	PCB-45	1140	249			0.402	D
PCB-3	346	249			0.323	D	PCB-46	596	249			0.537	D
PCB-4/10	959	498			1.14	D	PCB-47	1490	249			2.19	D
PCB-5/8	3070	498			1.76	D	PCB-48/75	ND	498		1060	0.983	D
PCB-6	554	249			1.00	D	PCB-50	ND	249	200		0.603	D
PCB-7/9	ND	498	409		1.34	D	PCB-51	ND	249		344	0.789	D
PCB-11	17100	249			3.48	D	PCB-52/69	10600	498			0.722	D
PCB-12/13	ND	498	423		1.37	D	PCB-53	1030	249			0.331	D
PCB-14	ND	249	455		0.337	D	PCB-54	ND	249	160		0.275	D
PCB-15	1610	249			0.634	D	PCB-55	232	249			0.416	J, D
PCB-16/32	4310	498			0.430	D	PCB-56/60	4840	498			0.825	D
PCB-17	2320	249			0.658	D	PCB-57	ND	249	179		0.354	D
PCB-18	7120	249			0.696	D	PCB-58	ND	249	189		0.589	D
PCB-19	745	249			0.612	D	PCB-61/70	11900	498			1.20	D
PCB-20/21/33	4410	747			2.47	B, D	PCB-62	ND	249	182		0.597	D
PCB-22	2310	249			0.964	D	PCB-63	260	249			0.524	D
PCB-23	ND	249	111		0.543	D	PCB-65	ND	249	181		0.842	D
PCB-24/27	447	498			0.742	J, D	PCB-66/76	6220	498			1.31	D
PCB-25	383	249			0.768	D	PCB-67	213	249			0.486	J, D
PCB-26	ND	249		866	0.766	D	PCB-68	ND	249	165		0.658	D
PCB-28	3520	249			1.12	D	PCB-73	ND	249	185		0.454	D
PCB-29	ND	249	131		0.949	D	PCB-74	2900	249			0.781	D
PCB-30	ND	249	118		0.355	D	PCB-77	1140	249			0.748	D
PCB-31	5350	249			0.809	D	PCB-78	ND	249	155		0.385	D
PCB-34	ND	249	124		1.57	D	PCB-79	268	249			0.633	D
PCB-35	ND	249		322	0.565	D	PCB-80	ND	249	139		0.336	D
PCB-36	ND	249	131		0.406	D	PCB-81	ND	249		81.9	0.674	D
PCB-37	2180	249			0.389	D	PCB-82	3270	249			0.981	D
PCB-38	ND	249	124		0.528	D	PCB-83	ND	249	376		0.440	D
PCB-39	ND	249	134		0.461	D	PCB-84/92	9260	498			1.01	D
PCB-40	1610	249			0.927	D	PCB-85/116	3460	498			1.64	D
PCB-41/64/71/72	6320	996			1.70	D	PCB-86	ND	249	677		1.79	D
PCB-42/59	2110	498			0.899	D	PCB-87/117/125	10200	747			0.880	D
PCB-43/49	5020	498			0.879	D	PCB-88/91	2360	498			1.25	D

RL - Reporting limit  
EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit  
The results are reported in dry weight. The sample size is reported in wet weight.

**Sample ID: WM-FD-02-20150122-S**

**EPA Method 1668C**

<b>Client Data</b>				<b>Sample Data</b>			<b>Laboratory Data</b>						
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1500116-02		Date Received:	23-Jan-2015 8:50		
Project:	1400647			Sample Size:	6.78 g		QC Batch:	B5A0115		Date Extracted:	29-Jan-2015 10:19		
Date Collected:	22-Jan-2015 10:45			% Solids:	29.6		Date Analyzed:	04-Feb-15 18:09		Column:	ZB-1 Analyst: DMS		

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	ND	249	378		1.22	D	PCB-136	ND	249		2590	0.776	D
PCB-90/101	25300	498			1.19	D	PCB-137	1510	249			0.541	D
PCB-93	ND	249	416		2.53	D	PCB-138/163/164	28600	747			0.809	D
PCB-94	ND	249	332		0.874	D	PCB-139/149	22000	498			1.49	D
PCB-95/98/102	15600	747			1.38	D	PCB-140	ND	249	376		1.20	D
PCB-96	ND	249	236		0.588	D	PCB-141	6110	249			0.678	D
PCB-97	7610	249			0.675	D	PCB-144	1300	249			1.38	D
PCB-99	7520	249			0.474	D	PCB-145	ND	249	226		1.05	D
PCB-100	ND	249	286		0.511	D	PCB-146/165	3350	498			0.792	D
PCB-103	ND	249	280		0.428	D	PCB-147	ND	249	332		5.26	D
PCB-104	ND	249	227		0.876	D	PCB-148	ND	249	365		1.45	D
PCB-105	8760	249			0.462	D	PCB-150	ND	249	272		0.801	D
PCB-106/118	23200	498			0.728	D	PCB-151	5960	249			1.16	D
PCB-107/109	1180	498			0.631	D	PCB-152	ND	249	244		0.744	D
PCB-108/112	1190	498			0.844	D	PCB-153	23200	249			0.484	D
PCB-110	28000	249			0.555	D	PCB-154	ND	249	317		0.837	D
PCB-111/115	ND	498		393	1.24	D	PCB-155	ND	249	245		0.767	D
PCB-113	ND	249	303		0.495	D	PCB-156	3300	249			0.534	D
PCB-114	573	249			0.418	D	PCB-157	736	249			0.485	D
PCB-119	445	249			0.383	D	PCB-158/160	3590	498			0.915	D
PCB-120	ND	249	340		0.622	D	PCB-159	ND	249	279		0.578	D
PCB-121	ND	249	217		0.978	D	PCB-166	ND	249	262		0.425	D
PCB-122	ND	249	434		0.619	D	PCB-167	1220	249			0.653	D
PCB-123	1160	249			0.494	D	PCB-168	ND	249	234		0.502	D
PCB-124	ND	249	254		0.813	D	PCB-169	ND	249	244		0.767	D
PCB-126	291	249			0.543	D	PCB-170	5760	249			0.758	D
PCB-127	ND	249	329		0.326	D	PCB-171	1640	249			0.372	D
PCB-128/162	5230	498			1.08	D	PCB-172	1010	249			0.857	D
PCB-129	1730	249			0.567	D	PCB-173	282	249			0.507	D
PCB-130	1680	249			0.798	D	PCB-174	7650	249			0.797	D
PCB-131	ND	249	373		0.731	D	PCB-175	278	249			0.679	D
PCB-132/161	8180	498			1.05	D	PCB-176	917	249			0.729	D
PCB-133/142	920	498			1.04	D	PCB-177	3960	249			0.404	D
PCB-134/143	1690	498			1.05	D	PCB-178	1500	249			0.610	D
PCB-135	2840	249			1.47	D	PCB-179	3640	249			0.418	D

RL - Reporting limit

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

MDL - Method detection limit

The results are reported in dry weight. The sample size is reported in wet weight.

**Sample ID: WM-FD-02-20150122-S**

**EPA Method 1668C**

Client Data				Sample Data			Laboratory Data					
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1500116-02	Date Received:	23-Jan-2015 8:50		
Project:	1400647			Sample Size:	6.78 g		QC Batch:	B5A0115	Date Extracted:	29-Jan-2015 10:19		
Date Collected:	22-Jan-2015 10:45			% Solids:	29.6		Date Analyzed :	04-Feb-15 18:09 Column: ZB-1 Analyst: DMS				

Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/g)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	17900	249			0.420	D	Total octaCB	19900	249		20500		
PCB-181	ND	249	302		1.26	D	Total nonaCB	6140	249				
PCB-182/187	9060	498			1.33	D	DecaCB	2130	249				
PCB-183	4040	249			0.638	D	Total PCB	484000	249				B
PCB-184	ND	249	163		0.597	D							
PCB-185	ND	249		731	0.557	D							
PCB-186	ND	249	183		0.421	D							
PCB-188	ND	249	168		0.759	D							
PCB-189	309	249			0.483	D							
PCB-190	1180	249			0.686	D							
PCB-191	338	249			0.447	D							
PCB-192	ND	249	239		0.528	D							
PCB-193	730	249			0.836	D							
PCB-194	4350	249			0.645	D							
PCB-195	1530	249			0.722	D							
PCB-196/203	5980	498			0.983	D							
PCB-197	ND	249	445		0.794	D							
PCB-198	ND	249	633		0.792	D							
PCB-199	5450	249			0.615	D							
PCB-200	974	249			0.795	D							
PCB-201	ND	249		620	0.317	D							
PCB-202	1590	249			0.759	D							
PCB-204	ND	249	420		0.543	D							
PCB-205	ND	249	201		0.471	D							
PCB-206	4390	249			0.852	D							
PCB-207	434	249			0.402	D							
PCB-208	1320	249			0.441	D							
PCB-209	2130	249			1.10	D							
Total monoCB	965	249											
Total diCB	23300	249											
Total triCB	33100	249		34300		B							
Total tetraCB	66000	249		67500									
Total pentaCB	149000	249		150000									
Total hexaCB	123000	249		126000									
Total heptaCB	60200	249		60900									

RL - Reporting limit  
EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit  
The results are reported in dry weight. The sample size is reported in wet weight.

**Sample ID: WM-FD-02-20150122-S**

**EPA Method 1668C**

<b>Client Data</b>		<b>Sample Data</b>		<b>Laboratory Data</b>					
Name:	Leidos	Matrix:	Sediment	Lab Sample:	1500116-02	Date Received:	23-Jan-2015 8:50		
Project:	1400647	Sample Size:	6.78 g	QC Batch:	B5A0115	Date Extracted:	29-Jan-2015 10:19		
Date Collected:	22-Jan-2015 10:45	% Solids:	29.6	Date Analyzed:	04-Feb-15 18:09	Column:	ZB-1	Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	84.6	5 -145	D	13C-PCB-170	83.4	10 -145	D
13C-PCB-3	82.9	5 -145	D	13C-PCB-180	83.4	10 -145	D
13C-PCB-4	95.7	5 -145	D	13C-PCB-188	91.7	10 -145	D
13C-PCB-11	91.8	5 -145	D	13C-PCB-189	70.3	10 -145	D
13C-PCB-9	94.5	5 -145	D	13C-PCB-194	96.8	10 -145	D
13C-PCB-19	78.6	5 -145	D	13C-PCB-202	71.3	10 -145	D
13C-PCB-28	88.2	5 -145	D	13C-PCB-206	96.2	10 -145	D
13C-PCB-32	74.4	5 -145	D	13C-PCB-208	98.5	10 -145	D
13C-PCB-37	95.6	5 -145	D	13C-PCB-209	90.0	10 -145	D
13C-PCB-47	88.0	5 -145	D	CRS 13C-PCB-79	97.9	10 -145	D
13C-PCB-52	87.7	5 -145	D	13C-PCB-178	89.1	10 -145	D
13C-PCB-54	83.5	5 -145	D				
13C-PCB-70	95.8	5 -145	D				
13C-PCB-77	91.6	10 -145	D				
13C-PCB-80	92.9	10 -145	D				
13C-PCB-81	89.7	10 -145	D				
13C-PCB-95	106	10 -145	D				
13C-PCB-97	88.5	10 -145	D				
13C-PCB-101	101	10 -145	D				
13C-PCB-104	96.5	10 -145	D				
13C-PCB-105	96.9	10 -145	D				
13C-PCB-114	96.5	10 -145	D				
13C-PCB-118	86.5	10 -145	D				
13C-PCB-123	101	10 -145	D				
13C-PCB-126	88.9	10 -145	D				
13C-PCB-127	97.5	10 -145	D				
13C-PCB-138	90.4	10 -145	D				
13C-PCB-141	96.4	10 -145	D				
13C-PCB-153	99.2	10 -145	D				
13C-PCB-155	79.5	10 -145	D				
13C-PCB-156	92.5	10 -145	D				
13C-PCB-157	98.0	10 -145	D				
13C-PCB-159	87.2	10 -145	D				
13C-PCB-167	92.3	10 -145	D				
13C-PCB-169	84.4	10 -145	D				

RL - Reporting limit  
 EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
 MDL - Method detection limit

LCL-UCL - Lower control limit - upper control limit  
 The results are reported in dry weight. The sample size is reported in wet weight.

**Sample ID: Method Blank**

**EPA Method 1668C**

Matrix: Aqueous	QC Batch: B5A0099	Lab Sample: B5A0099-BLK1
Sample Size: 1.00 L	Date Extracted: 26-Jan-2015 10:29	Date Analyzed: 27-Jan-15 13:52 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	ND	5.00	3.07		1.21		PCB-43/49	ND	10.0	2.98		3.38	
PCB-2	ND	5.00	2.92		1.75		PCB-44	ND	5.00	3.78		2.48	
PCB-3	ND	5.00	2.91		1.49		PCB-45	ND	5.00	3.26		1.96	
PCB-4/10	ND	10.0	5.35		5.64		PCB-46	ND	5.00	3.57		2.49	
PCB-5/8	ND	10.0	4.52		3.59		PCB-47	ND	5.00	2.75		4.42	
PCB-6	ND	5.00	4.63		3.10		PCB-48/75	ND	10.0	2.48		2.09	
PCB-7/9	ND	10.0	4.58		6.22		PCB-50	ND	5.00	3.35		1.40	
PCB-11	ND	5.00	12.0		3.86		PCB-51	ND	5.00	2.92		1.42	
PCB-12/13	ND	10.0	4.39		5.01		PCB-52/69	ND	10.0	2.63		3.64	
PCB-14	ND	5.00	3.78		3.98		PCB-53	ND	5.00	2.98		1.12	
PCB-15	ND	5.00	3.86		2.53		PCB-54	ND	5.00	2.55		1.51	
PCB-16/32	ND	10.0	1.83		2.87		PCB-55	ND	5.00	1.98		1.19	
PCB-17	ND	5.00	2.00		1.37		PCB-56/60	ND	10.0	2.21		2.19	
PCB-18	ND	5.00	2.16		2.57		PCB-57	ND	5.00	2.21		0.857	
PCB-19	ND	5.00	2.35		2.38		PCB-58	ND	5.00	2.18		1.81	
PCB-20/21/33	ND	15.0	2.70		10.3		PCB-61/70	ND	10.0	2.20		2.40	
PCB-22	ND	5.00	2.68		3.17		PCB-62	ND	5.00	2.42		1.46	
PCB-23	ND	5.00	2.58		1.35		PCB-63	ND	5.00	2.13		0.696	
PCB-24/27	ND	10.0	1.47		3.16		PCB-65	ND	5.00	2.50		0.953	
PCB-25	ND	5.00	2.85		3.34		PCB-66/76	ND	10.0	2.10		2.82	
PCB-26	ND	5.00	2.52		2.19		PCB-67	ND	5.00	2.27		1.22	
PCB-28	ND	5.00	2.52		2.90		PCB-68	ND	5.00	2.05		1.24	
PCB-29	ND	5.00	2.58		1.60		PCB-73	ND	5.00	2.40		1.56	
PCB-30	ND	5.00	1.48		2.09		PCB-74	ND	5.00	2.04		1.53	
PCB-31	ND	5.00	2.50		4.29		PCB-77	ND	5.00	1.92		1.34	
PCB-34	ND	5.00	2.40		2.34		PCB-78	ND	5.00	2.07		0.990	
PCB-35	ND	5.00	2.66		1.65		PCB-79	ND	5.00	2.10		1.60	
PCB-36	ND	5.00	2.57		2.69		PCB-80	ND	5.00	1.84		1.98	
PCB-37	ND	5.00	2.48		1.92		PCB-81	ND	5.00	1.89		2.34	
PCB-38	ND	5.00	2.69		1.56		PCB-82	ND	5.00	4.06		1.69	
PCB-39	ND	5.00	2.65		2.60		PCB-83	ND	5.00	2.47		1.32	
PCB-40	ND	5.00	3.84		3.08		PCB-84/92	ND	10.0	3.47		3.38	
PCB-41/64/71/72	ND	20.0	2.46		5.57		PCB-85/116	ND	10.0	2.95		2.83	
PCB-42/59	ND	10.0	2.66		2.84		PCB-86	ND	5.00	3.97		2.34	

RL - Reporting limit

DL - Sample specific estimated detection limit

LCL-UCL - Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

MDL - Method detection limit

**Sample ID: Method Blank**

**EPA Method 1668C**

Matrix: Aqueous	QC Batch: B5A0099	Lab Sample: B5A0099-BLK1
Sample Size: 1.00 L	Date Extracted: 26-Jan-2015 10:29	Date Analyzed: 27-Jan-15 13:52 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-87/117/125	ND	15.0	2.58		3.79		PCB-133/142	ND	10.0	2.06		2.19	
PCB-88/91	ND	5.00	3.81		3.25		PCB-134/143	ND	10.0	2.01		2.40	
PCB-89	ND	5.00	3.73		1.84		PCB-135	ND	5.00	2.04		2.90	
PCB-90/101	ND	10.0	3.08		1.92		PCB-136	ND	5.00	1.42		2.89	
PCB-93	ND	5.00	4.04		1.47		PCB-137	ND	5.00	1.78		2.08	
PCB-94	ND	5.00	3.79		1.91		PCB-138/163/164	ND	15.0	1.44		2.68	
PCB-95/98/102	ND	15.0	3.33		6.58		PCB-139/149	ND	10.0	1.86		7.87	
PCB-96	ND	5.00	3.03		2.16		PCB-140	ND	5.00	2.09		3.52	
PCB-97	ND	5.00	3.16		1.24		PCB-141	ND	5.00	1.81		1.15	
PCB-99	ND	5.00	2.97		1.94		PCB-144	ND	5.00	1.90		3.22	
PCB-100	ND	5.00	3.43		2.03		PCB-145	ND	5.00	1.48		1.73	
PCB-103	ND	5.00	3.42		2.28		PCB-146/165	ND	10.0	1.73		1.91	
PCB-104	ND	5.00	2.62		0.931		PCB-147	ND	5.00	2.08		3.62	
PCB-105	ND	5.00	1.27		2.21		PCB-148	ND	5.00	1.98		1.68	
PCB-106/118	ND	10.0	2.39		2.44		PCB-150	ND	5.00	1.44		1.14	
PCB-107/109	ND	10.0	2.26		1.98		PCB-151	ND	5.00	1.98		3.59	
PCB-108/112	ND	10.0	2.92		1.86		PCB-152	ND	5.00	1.39		1.82	
PCB-110	ND	5.00	2.41		1.94		PCB-153	ND	5.00	1.56		1.83	
PCB-111/115	ND	10.0	2.21		0.768		PCB-154	ND	5.00	1.82		2.78	
PCB-113	ND	5.00	2.77		1.31		PCB-155	ND	5.00	1.35		1.45	
PCB-114	ND	5.00	1.35		1.81		PCB-156	ND	5.00	1.26		1.74	
PCB-119	ND	5.00	2.18		0.949		PCB-157	ND	5.00	1.29		1.17	
PCB-120	ND	5.00	2.07		1.01		PCB-158/160	ND	10.0	1.34		1.99	
PCB-121	ND	5.00	2.43		1.94		PCB-159	ND	5.00	1.33		1.20	
PCB-122	ND	5.00	1.61		1.84		PCB-166	ND	5.00	1.42		0.920	
PCB-123	ND	5.00	2.41		1.35		PCB-167	ND	5.00	1.36		1.65	
PCB-124	ND	5.00	2.31		1.79		PCB-168	ND	5.00	1.38		0.933	
PCB-126	ND	5.00	1.43		2.05		PCB-169	ND	5.00	1.36		1.12	
PCB-127	ND	5.00	1.44		0.808		PCB-170	ND	5.00	1.12		1.38	
PCB-128/162	ND	10.0	1.57		1.68		PCB-171	ND	5.00	1.13		1.61	
PCB-129	ND	5.00	2.00		1.11		PCB-172	ND	5.00	1.22		1.46	
PCB-130	ND	5.00	2.28		2.21		PCB-173	ND	5.00	1.49		1.49	
PCB-131	ND	5.00	2.22		1.46		PCB-174	ND	5.00	1.28		1.42	
PCB-132/161	ND	10.0	1.67		2.34		PCB-175	ND	5.00	1.47		3.15	

RL - Reporting limit

DL - Sample specific estimated detection limit

LCL-UCL - Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

MDL - Method detection limit



**Sample ID: Method Blank**

**EPA Method 1668C**

Matrix: Aqueous	QC Batch: B5A0099	Lab Sample: B5A0099-BLK1
Sample Size: 1.00 L	Date Extracted: 26-Jan-2015 10:29	Date Analyzed: 27-Jan-15 13:52 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-176	ND	5.00	1.06		2.17		Total triCB	ND	5.00	2.85			
PCB-177	ND	5.00	1.30		1.34		Total tetraCB	ND	5.00	3.84			
PCB-178	ND	5.00	1.43		2.25		Total pentaCB	ND	5.00	4.06			
PCB-179	ND	5.00	1.11		1.57		Total hexaCB	ND	5.00	2.28			
PCB-180	ND	5.00	1.14		0.610		Total heptaCB	ND	5.00	1.49			
PCB-181	ND	5.00	1.22		1.01		Total octaCB	ND	5.00	2.84			
PCB-182/187	ND	10.0	1.36		6.20		Total nonaCB	ND	5.00	1.90			
PCB-183	ND	5.00	1.26		3.29		DecaCB	ND	5.00	1.54			
PCB-184	ND	5.00	1.15		1.25		Total PCB	ND	5.00	12.0			
PCB-185	ND	5.00	1.18		1.47								
PCB-186	ND	5.00	1.06		2.43								
PCB-188	ND	5.00	1.01		1.08								
PCB-189	ND	5.00	0.827		1.49								
PCB-190	ND	5.00	0.835		1.70								
PCB-191	ND	5.00	0.887		1.96								
PCB-192	ND	5.00	0.950		1.69								
PCB-193	ND	5.00	0.892		1.46								
PCB-194	ND	5.00	1.53		1.71								
PCB-195	ND	5.00	1.73		1.47								
PCB-196/203	ND	10.0	2.54		6.35								
PCB-197	ND	5.00	1.80		1.80								
PCB-198	ND	5.00	2.79		3.78								
PCB-199	ND	5.00	2.84		4.05								
PCB-200	ND	5.00	2.03		1.75								
PCB-201	ND	5.00	1.92		1.02								
PCB-202	ND	5.00	2.07		1.55								
PCB-204	ND	5.00	1.96		1.48								
PCB-205	ND	5.00	1.23		1.53								
PCB-206	ND	5.00	1.90		1.32								
PCB-207	ND	5.00	0.979		1.51								
PCB-208	ND	5.00	0.992		1.34								
PCB-209	ND	5.00	1.54		1.86								
Total monoCB	ND	5.00	3.07										
Total diCB	ND	5.00	12.0										

RL - Reporting limit

DL - Sample specific estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

MDL - Method detection limit

**Sample ID: Method Blank**

**EPA Method 1668C**

Matrix: Aqueous	QC Batch: B5A0099	Lab Sample: B5A0099-BLK1
Sample Size: 1.00 L	Date Extracted: 26-Jan-2015 10:29	Date Analyzed: 27-Jan-15 13:52 Column: ZB-1 Analyst: DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	71.6	5 - 145		13C-PCB-157	83.8	10 - 145	
13C-PCB-3	77.0	5 - 145		13C-PCB-159	80.8	10 - 145	
13C-PCB-4	70.7	5 - 145		13C-PCB-167	81.7	10 - 145	
13C-PCB-11	76.3	5 - 145		13C-PCB-169	89.5	10 - 145	
13C-PCB-9	70.7	5 - 145		13C-PCB-170	87.4	10 - 145	
13C-PCB-19	85.1	5 - 145		13C-PCB-180	85.5	10 - 145	
13C-PCB-28	65.6	5 - 145		13C-PCB-188	68.3	10 - 145	
13C-PCB-32	88.0	5 - 145		13C-PCB-189	88.8	10 - 145	
13C-PCB-37	81.1	5 - 145		13C-PCB-194	89.6	10 - 145	
13C-PCB-47	74.4	5 - 145		13C-PCB-202	73.3	10 - 145	
13C-PCB-52	80.4	5 - 145		13C-PCB-206	97.4	10 - 145	
13C-PCB-54	67.1	5 - 145		13C-PCB-208	88.0	10 - 145	
13C-PCB-70	80.4	5 - 145		13C-PCB-209	100	10 - 145	
13C-PCB-77	85.1	10 - 145		CRS 13C-PCB-79	88.8	10 - 145	
13C-PCB-80	79.1	10 - 145		13C-PCB-178	87.5	10 - 145	
13C-PCB-81	83.4	10 - 145					
13C-PCB-95	80.9	10 - 145					
13C-PCB-97	88.4	10 - 145					
13C-PCB-101	82.2	10 - 145					
13C-PCB-104	73.8	10 - 145					
13C-PCB-105	75.5	10 - 145					
13C-PCB-114	71.0	10 - 145					
13C-PCB-118	87.3	10 - 145					
13C-PCB-123	88.6	10 - 145					
13C-PCB-126	82.2	10 - 145					
13C-PCB-127	75.9	10 - 145					
13C-PCB-138	79.4	10 - 145					
13C-PCB-141	78.0	10 - 145					
13C-PCB-153	74.2	10 - 145					
13C-PCB-155	71.9	10 - 145					
13C-PCB-156	84.0	10 - 145					

RL - Reporting limit

EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit

MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit

**Sample ID: OPR**

**EPA Method 1668C**

Matrix: Aqueous  
Sample Size: 1.00 L

QC Batch: B5A0099  
Date Extracted: 26-Jan-2015 10:29

Lab Sample: B5A0099-BS1  
Date Analyzed: 27-Jan-15 11:43 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PCB-1	790	1000	79.0	60 - 135	IS 13C-PCB-1	84.9	15 - 145
PCB-3	786	1000	78.6	60 - 135	IS 13C-PCB-3	87.5	15 - 145
PCB-4/10	1740	2000	87.1	60 - 135	IS 13C-PCB-4	77.8	15 - 145
PCB-15	871	1000	87.1	60 - 135	IS 13C-PCB-11	85.4	15 - 145
PCB-19	970	1000	97.0	60 - 135	IS 13C-PCB-9	78.9	15 - 145
PCB-37	829	1000	82.9	60 - 135	IS 13C-PCB-19	98.3	15 - 145
PCB-54	923	1000	92.3	60 - 135	IS 13C-PCB-28	75.3	15 - 145
PCB-77	907	1000	90.7	60 - 135	IS 13C-PCB-32	100	15 - 145
PCB-81	901	1000	90.1	60 - 135	IS 13C-PCB-37	90.0	15 - 145
PCB-104	944	1000	94.4	60 - 135	IS 13C-PCB-47	85.6	15 - 145
PCB-105	812	1000	81.2	60 - 135	IS 13C-PCB-52	87.7	15 - 145
PCB-106/118	1910	2000	95.3	60 - 135	IS 13C-PCB-54	77.1	15 - 145
PCB-114	850	1000	85.0	60 - 135	IS 13C-PCB-70	89.7	15 - 145
PCB-123	971	1000	97.1	60 - 135	IS 13C-PCB-77	97.9	40 - 145
PCB-126	824	1000	82.4	60 - 135	IS 13C-PCB-80	88.0	40 - 145
PCB-155	968	1000	96.8	60 - 135	IS 13C-PCB-81	95.2	40 - 145
PCB-156	913	1000	91.3	60 - 135	IS 13C-PCB-95	93.1	40 - 145
PCB-157	935	1000	93.5	60 - 135	IS 13C-PCB-97	98.0	40 - 145
PCB-167	920	1000	92.0	60 - 135	IS 13C-PCB-101	91.8	40 - 145
PCB-169	961	1000	96.1	60 - 135	IS 13C-PCB-104	83.9	40 - 145
PCB-188	955	1000	95.5	60 - 135	IS 13C-PCB-105	88.9	40 - 145
PCB-189	972	1000	97.2	60 - 135	IS 13C-PCB-114	84.8	40 - 145
PCB-202	996	1000	99.6	60 - 135	IS 13C-PCB-118	97.2	40 - 145
PCB-205	899	1000	89.9	60 - 135	IS 13C-PCB-123	102	40 - 145
PCB-206	919	1000	91.9	60 - 135	IS 13C-PCB-126	96.0	40 - 145
PCB-208	911	1000	91.1	60 - 135	IS 13C-PCB-127	92.1	40 - 145
PCB-209	921	1000	92.1	60 - 135	IS 13C-PCB-138	93.1	40 - 145
					IS 13C-PCB-141	92.2	40 - 145
					IS 13C-PCB-153	89.9	40 - 145
					IS 13C-PCB-155	81.6	40 - 145
					IS 13C-PCB-156	98.1	40 - 145
					IS 13C-PCB-157	96.3	40 - 145
					IS 13C-PCB-159	94.8	40 - 145
					IS 13C-PCB-167	95.1	40 - 145
					IS 13C-PCB-169	100	40 - 145
					IS 13C-PCB-170	101	40 - 145
					IS 13C-PCB-180	98.8	40 - 145
					IS 13C-PCB-188	82.9	40 - 145
					IS 13C-PCB-189	101	40 - 145
					IS 13C-PCB-194	99.8	40 - 145

**Sample ID: OPR**

**EPA Method 1668C**

Matrix: Aqueous  
Sample Size: 1.00 L

QC Batch: B5A0099  
Date Extracted: 26-Jan-2015 10:29

Lab Sample: B5A0099-BS1  
Date Analyzed: 27-Jan-15 11:43 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
					IS 13C-PCB-202	86.8	40 - 145
					IS 13C-PCB-206	107	40 - 145
					IS 13C-PCB-208	97.3	40 - 145
					IS 13C-PCB-209	114	40 - 145
					CRS 13C-PCB-79	98.3	40 - 145
					CRS 13C-PCB-178	99.9	40 - 145

LCL-UCL - Lower control limit - upper control limit

**Sample ID: WM-FT-IB-20150122-W**

**EPA Method 1668C**

<b>Client Data</b>				<b>Sample Data</b>			<b>Laboratory Data</b>					
Name:	Leidos	Matrix:	Aqueous	Lab Sample:	1500116-03	Date Received:	23-Jan-2015	8:50				
Project:	1400647	Sample Size:	0.997 L	QC Batch:	B5A0099	Date Extracted:	26-Jan-2015	10:29				
Date Collected:	22-Jan-2015 12:50				Date Analyzed :	02-Feb-15 20:10	Column: ZB-1	Analyst: DMS				
							27-Jan-15 19:15	Column: ZB-1	Analyst: DMS			

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-1	15.4	5.01			1.21		PCB-44	204	5.01			2.48	
PCB-2	4.09	5.01			1.75	J	PCB-45	16.6	5.01			1.96	
PCB-3	11.8	5.01			1.49		PCB-46	8.28	5.01			2.49	
PCB-4/10	26.0	10.0			5.64		PCB-47	30.9	5.01			4.42	
PCB-5/8	71.7	10.0			3.59		PCB-48/75	18.8	10.0			2.09	
PCB-6	16.3	5.01			3.10		PCB-50	ND	5.01	4.05		1.40	
PCB-7/9	ND	10.0	2.46		6.22		PCB-51	6.28	5.01			1.42	
PCB-11	239	5.01			3.86		PCB-52/69	305	10.0			3.64	
PCB-12/13	ND	10.0	2.61		5.01		PCB-53	18.5	5.01			1.12	
PCB-14	ND	5.01	2.24		3.98		PCB-54	ND	5.01	3.08		1.51	
PCB-15	30.1	5.01			2.53		PCB-55	4.84	5.01			1.19	J
PCB-16/32	80.2	10.0			2.87		PCB-56/60	88.2	10.0			2.19	
PCB-17	42.9	5.01			1.37		PCB-57	ND	5.01	3.03		0.857	
PCB-18	121	5.01			2.57		PCB-58	ND	5.01	2.98		1.81	
PCB-19	14.1	5.01			2.38		PCB-61/70	322	10.0			2.40	
PCB-20/21/33	74.8	15.0			10.3		PCB-62	ND	5.01	3.45		1.46	
PCB-22	41.5	5.01			3.17		PCB-63	ND	5.01		3.97	0.696	
PCB-23	ND	5.01	3.45		1.35		PCB-65	ND	5.01	3.56		0.953	
PCB-24/27	9.54	10.0			3.16	J	PCB-66/76	123	10.0			2.82	
PCB-25	10.5	5.01			3.34		PCB-67	ND	5.01		4.90	1.22	
PCB-26	21.8	5.01			2.19		PCB-68	ND	5.01	2.91		1.24	
PCB-28	90.5	5.01			2.90		PCB-73	ND	5.01	3.29		1.56	
PCB-29	ND	5.01	3.45		1.60		PCB-74	78.5	5.01			1.53	
PCB-30	ND	5.01	0.909		2.09		PCB-77	14.9	5.01			1.34	
PCB-31	84.7	5.01			4.29		PCB-78	ND	5.01	3.84		0.990	
PCB-34	ND	5.01	3.21		2.34		PCB-79	6.53	5.01			1.60	
PCB-35	ND	5.01	3.27		1.65		PCB-80	ND	5.01	2.80		1.98	
PCB-36	ND	5.01	3.17		2.69		PCB-81	4.10	5.01			2.34	J
PCB-37	31.4	5.01			1.92		PCB-82	123	5.01			1.69	
PCB-38	ND	5.01	3.31		1.56		PCB-83	ND	5.01	5.48		1.32	
PCB-39	ND	5.01	3.26		2.60		PCB-84/92	295	10.0			3.38	
PCB-40	22.4	5.01			3.08		PCB-85/116	97.0	10.0			2.83	
PCB-41/64/71/72	117	20.1			5.57		PCB-86	ND	5.01	8.82		2.34	
PCB-42/59	33.0	10.0			2.84		PCB-87/117/125	306	15.0			3.79	
PCB-43/49	113	10.0			3.38		PCB-88/91	79.5	5.01			3.25	

RL - Reporting limit  
EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit

**Sample ID: WM-FT-IB-20150122-W**

**EPA Method 1668C**

Client Data				Sample Data			Laboratory Data							
Name:	Leidos			Matrix:	Aqueous		Lab Sample:	1500116-03		Date Received:	23-Jan-2015 8:50			
Project:	1400647			Sample Size:	0.997 L		QC Batch:	B5A0099		Date Extracted:	26-Jan-2015 10:29			
Date Collected:	22-Jan-2015 12:50						Date Analyzed :	02-Feb-15 20:10		Column:	ZB-1 Analyst: DMS			
									27-Jan-15 19:15		Column:	ZB-1 Analyst: DMS		

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-89	5.95	5.01			1.84		PCB-136	90.7	50.1			2.89	D
PCB-90/101	714	10.0			1.92		PCB-137	52.5	50.1			2.08	D
PCB-93	ND	5.01	6.95		1.47		PCB-138/163/164	758	150			2.68	D
PCB-94	ND	5.01	6.53		1.91		PCB-139/149	540	100			7.87	D
PCB-95/98/102	499	15.0			6.58		PCB-140	ND	50.1	35.2		3.52	D
PCB-96	ND	5.01	4.83		2.16		PCB-141	138	50.1			1.15	D
PCB-97	216	5.01			1.24		PCB-144	41.5	50.1			3.22	J, D
PCB-99	283	5.01			1.94		PCB-145	ND	50.1	25.0		1.73	D
PCB-100	ND	5.01	5.47		2.03		PCB-146/165	88.7	100			1.91	J, D
PCB-103	ND	5.01	5.45		2.28		PCB-147	20.2	50.1			3.62	J, D
PCB-104	ND	5.01	4.16		0.931		PCB-148	ND	50.1	33.5		1.68	D
PCB-105	257	50.1			2.21	D	PCB-150	ND	50.1	24.2		1.14	D
PCB-106/118	744	10.0			2.44		PCB-151	132	50.1			3.59	D
PCB-107/109	47.3	10.0			1.98		PCB-152	ND	50.1	23.4		1.82	D
PCB-108/112	26.1	10.0			1.86		PCB-153	586	50.1			1.83	D
PCB-110	762	5.01			1.94		PCB-154	ND	50.1	30.7		2.78	D
PCB-111/115	14.5	10.0			0.768		PCB-155	ND	50.1	22.8		1.45	D
PCB-113	ND	5.01	5.81		1.31		PCB-156	107	50.1			1.74	D
PCB-114	ND	50.1		13.0	1.81	D	PCB-157	26.2	50.1			1.17	J, D
PCB-119	7.80	5.01			0.949		PCB-158/160	99.6	100			1.99	J, D
PCB-120	ND	5.01	4.59		1.01		PCB-159	ND	50.1	18.0		1.20	D
PCB-121	ND	5.01	4.19		1.94		PCB-166	ND	50.1	19.2		0.920	D
PCB-122	ND	50.1	22.5		1.84	D	PCB-167	42.6	50.1			1.65	J, D
PCB-123	13.8	5.01			1.35		PCB-168	ND	50.1	16.2		0.933	D
PCB-124	38.3	5.01			1.79		PCB-169	ND	50.1	24.9		1.12	D
PCB-126	ND	50.1	21.3		2.05	D	PCB-170	176	50.1			1.38	D
PCB-127	ND	50.1	20.1		0.808	D	PCB-171	ND	50.1		45.4	1.61	D
PCB-128/162	171	100			1.68	D	PCB-172	38.4	50.1			1.46	J, D
PCB-129	55.5	50.1			1.11	D	PCB-173	ND	50.1	31.5		1.49	D
PCB-130	52.8	50.1			2.21	D	PCB-174	ND	50.1		208	1.42	D
PCB-131	ND	50.1	26.1		1.46	D	PCB-175	ND	50.1	20.3		3.15	D
PCB-132/161	209	100			2.34	D	PCB-176	ND	50.1		23.5	2.17	D
PCB-133/142	28.5	100			2.19	J, D	PCB-177	ND	50.1		114	1.34	D
PCB-134/143	ND	100		44.0	2.40	D	PCB-178	41.2	50.1			2.25	J, D
PCB-135	83.3	50.1			2.90	D	PCB-179	81.4	50.1			1.57	D

RL - Reporting limit  
EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit

**Sample ID: WM-FT-IB-20150122-W**

**EPA Method 1668C**

Client Data			Sample Data			Laboratory Data			
Name:	Leidos		Matrix:	Aqueous		Lab Sample:	1500116-03	Date Received:	23-Jan-2015 8:50
Project:	1400647		Sample Size:	0.997 L		QC Batch:	B5A0099	Date Extracted:	26-Jan-2015 10:29
Date Collected:	22-Jan-2015 12:50					Date Analyzed:	02-Feb-15 20:10	Column:	ZB-1
								Analyst:	DMS
									27-Jan-15 19:15
								Column:	ZB-1
								Analyst:	DMS

Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers	Analyte	Conc. (pg/L)	RL	DL	EMPC	MDL	Qualifiers
PCB-180	424	50.1			0.610	D	Total octaCB	359	50.1		414		
PCB-181	ND	50.1	25.8		1.01	D	Total nonaCB	124	50.1				
PCB-182/187	244	100			6.20	D	DecaCB	41.0	50.1				J
PCB-183	93.9	50.1			3.29	D	Total PCB	12100	50.1				
PCB-184	ND	50.1	15.9		1.25	D							
PCB-185	ND	50.1	24.8		1.47	D							
PCB-186	ND	50.1	14.6		2.43	D							
PCB-188	ND	50.1	13.9		1.08	D							
PCB-189	ND	50.1	20.8		1.49	D							
PCB-190	ND	50.1		24.5	1.70	D							
PCB-191	ND	50.1	18.7		1.96	D							
PCB-192	ND	50.1	20.0		1.69	D							
PCB-193	20.4	50.1			1.46	J, D							
PCB-194	ND	50.1		55.1	1.71	D							
PCB-195	55.4	50.1			1.47	D							
PCB-196/203	134	100			6.35	D							
PCB-197	ND	50.1	24.1		1.80	D							
PCB-198	ND	50.1	37.3		3.78	D							
PCB-199	127	50.1			4.05	D							
PCB-200	ND	50.1	27.2		1.75	D							
PCB-201	ND	50.1	25.6		1.02	D							
PCB-202	43.9	50.1			1.55	J, D							
PCB-204	ND	50.1	26.2		1.48	D							
PCB-205	ND	50.1	26.9		1.53	D							
PCB-206	96.2	50.1			1.32	D							
PCB-207	ND	50.1	17.7		1.51	D							
PCB-208	27.4	50.1			1.34	J, D							
PCB-209	41.0	50.1			1.86	J, D							
Total monoCB	31.3	5.01											
Total diCB	383	5.01											
Total triCB	623	5.01											
Total tetraCB	1540	5.01											
Total pentaCB	4530	5.01		4540									
Total hexaCB	3320	50.1		3370									
Total heptaCB	1120	50.1		1530									

RL - Reporting limit  
EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
MDL - Method detection limit

LCL-UCL- Lower control limit - upper control limit

**Sample ID: WM-FT-IB-20150122-W**

**EPA Method 1668C**

<b>Client Data</b>		<b>Sample Data</b>		<b>Laboratory Data</b>	
Name:	Leidos	Matrix:	Aqueous	Lab Sample:	1500116-03
Project:	1400647	Sample Size:	0.997 L	Date Received:	23-Jan-2015 8:50
Date Collected:	22-Jan-2015 12:50			QC Batch:	B5A0099
				Date Analyzed:	02-Feb-15 20:10
				Column:	ZB-1
				Analyst:	DMS
				Date Analyzed:	27-Jan-15 19:15
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	74.7	5 -145		13C-PCB-170	62.0	10 -145	D
13C-PCB-3	78.4	5 -145		13C-PCB-180	61.0	10 -145	D
13C-PCB-4	83.0	5 -145		13C-PCB-188	71.7	10 -145	D
13C-PCB-11	88.0	5 -145		13C-PCB-189	46.8	10 -145	D
13C-PCB-9	85.7	5 -145		13C-PCB-194	102	10 -145	D
13C-PCB-19	78.0	5 -145		13C-PCB-202	56.0	10 -145	D
13C-PCB-28	86.8	5 -145		13C-PCB-206	117	10 -145	D
13C-PCB-32	81.1	5 -145		13C-PCB-208	113	10 -145	D
13C-PCB-37	92.9	5 -145		13C-PCB-209	115	10 -145	D
13C-PCB-47	97.3	5 -145		CRS 13C-PCB-79	96.9	10 -145	
13C-PCB-52	97.0	5 -145		13C-PCB-178	80.6	10 -145	
13C-PCB-54	86.4	5 -145					
13C-PCB-70	94.7	5 -145					
13C-PCB-77	74.8	10 -145					
13C-PCB-80	95.2	10 -145					
13C-PCB-81	79.5	10 -145					
13C-PCB-95	112	10 -145					
13C-PCB-97	103	10 -145					
13C-PCB-101	100	10 -145					
13C-PCB-104	108	10 -145					
13C-PCB-105	98.5	10 -145	D				
13C-PCB-114	94.7	10 -145	D				
13C-PCB-118	73.2	10 -145					
13C-PCB-123	76.8	10 -145					
13C-PCB-126	90.4	10 -145	D				
13C-PCB-127	94.7	10 -145	D				
13C-PCB-138	92.4	10 -145	D				
13C-PCB-141	96.2	10 -145	D				
13C-PCB-153	93.6	10 -145	D				
13C-PCB-155	66.1	10 -145	D				
13C-PCB-156	84.7	10 -145	D				
13C-PCB-157	81.1	10 -145	D				
13C-PCB-159	85.1	10 -145	D				
13C-PCB-167	85.7	10 -145	D				
13C-PCB-169	62.9	10 -145	D				

RL - Reporting limit  
EMPC - Estimated maximum possible concentration

DL - Sample specific estimated detection limit  
MDL - Method detection limit

LCL-UCL - Lower control limit - upper control limit



## **DATA QUALIFIERS & ABBREVIATIONS**

<b>B</b>	<b>This compound was also detected in the method blank.</b>
<b>D</b>	<b>Dilution</b>
<b>E</b>	<b>The amount detected is above the High Calibration Limit.</b>
<b>H</b>	<b>Recovery was outside laboratory acceptance limits.</b>
<b>I</b>	<b>Chemical Interference</b>
<b>J</b>	<b>The amount detected is below the Low Calibration Limit.</b>
<b>P</b>	<b>The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.</b>
<b>*</b>	<b>See Cover Letter</b>
<b>Conc.</b>	<b>Concentration</b>
<b>DL</b>	<b>Sample-specific estimated detection limit</b>
<b>MDL</b>	<b>Method Detection Limit as determined by 40 CFR 136, Appendix B.</b>
<b>EMPC</b>	<b>Estimated Maximum Possible Concentration</b>
<b>M</b>	<b>Estimated Maximum Possible Concentration (CA Region 2)</b>
<b>NA</b>	<b>Not applicable</b>
<b>RL</b>	<b>Reporting Limit – concentrations that correspond to low calibration point</b>
<b>ND</b>	<b>Not Detected</b>
<b>TEQ</b>	<b>Toxic Equivalency</b>

**Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.**

## CERTIFICATIONS

<b>Accrediting Authority</b>	<b>Certificate Number</b>
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160



# CHAIN OF CUSTODY

FOR LABORATORY USE ONLY

Storage Secured

Laboratory Project ID: 1500116

Yes  No

Storage ID: WR-2

Temp: 2.4 °C

Project I.D.: 1400647 P.O.# PO10163569 Sampler: M. Ivancench, J. Wartes  
(Name)

TAT: (Check One):

Standard:  21 Days

Rush (surcharge may apply):

14 days  7 days Specify: \_\_\_\_\_

Invoice to: Name Christine Nancarrow Company Leidos Address 18412 N. Creek Pkwy, Ste 101 City Bothell, WA State WA Zip 98011 Ph# (206) 300.2194 Fax# \_\_\_\_\_  
Relinquished by: (Signature and Printed Name) Melissa Ivancench Date: 01/22/15 Time: 1440 Received by: (Signature and Printed Name) B. Benedict Date: 1/23/15 Time: 0856  
Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

### See "Sample Log-in Checklist" for additional sample information

SHIP TO: Vista Analytical Laboratory  
1104 Windfield Way  
El Dorado Hills, CA 95762  
(916) 673-1520 • Fax (916) 673-0106

Method of Shipment: FedEx

Add Analysis(es) Requested

ATTN: \_\_\_\_\_

Tracking No.: 806459712312

Container(s)

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	Add Analysis(es) Requested																	
							2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	TOTALS	COPLANAR PCB's	209 CONGENERS	PBDE	PAH	WHO-29			
WM-CB-03-20150122-S	01/22/15	1045	Waste Management	1	G	SD	✓									✓	✓							
WM-FD-02-20150122-S	01/22/15	1045	Waste Management	1	G	SD	✓									✓	✓							
WM-FT-1B-20150122-W	01/22/15	1250	Waste Management	4	A	AQ	✓									✓	✓							

Special Instructions/Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SEND DOCUMENTATION AND RESULTS TO:

Name: same as above  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: nancarrowc@leidos.com  
Matrix Types: DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, AQ = Aqueous, O = Other \_\_\_\_\_

Container Types: A = 1 Liter Amber, G = Glass Jar  
P = PUF, T = MM5 Train, O = Other \_\_\_\_\_

\*Bottle Preservative Type: T = Thiosulfate,  
O = Other \_\_\_\_\_

**SAMPLE LOG-IN CHECKLIST**



Vista Project #: 1500116 TAT Std

<b>Samples Arrival:</b>	<b>Date/Time:</b> 1/23/15 0850	<b>Initials:</b> VBSB	<b>Location:</b> WR-2
			<b>Shelf/Rack:</b> NA
<b>Logged In:</b>	<b>Date/Time:</b> 1/23/15 1226	<b>Initials:</b> VBSB	<b>Location:</b> WR-2
			<b>Shelf/Rack:</b> F6/B2
<b>Delivered By:</b>	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
<b>Preservation:</b>	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
<b>Temp °C:</b> 2.3 (uncorrected)	<b>Time:</b> 0855		<b>Thermometer ID:</b> IR-1
<b>Temp °C:</b> 2.4 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk #	806459792312		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?	NA	<b>COC</b>	<b>Sample Container</b>
		<b>None</b>	
Shipping Container	<input checked="" type="checkbox"/> Vista	<b>Client</b>	<input checked="" type="checkbox"/> Retain
		<b>Return</b>	<b>Dispose</b>

Comments:

## **EXTRACTION INFORMATION**

Process Sheet  
Workorder: 1500116

Prep Expiration: 01/22/2016  
Client: Leidos

Workorder Due: 13-Feb-15 00:00

TAT: 21

Method: 1613 Full List  
Matrix: Solid  
Client Matrix: Sediment  
Also run: Percent Solids

Prep Batch: BSA0101

Prep Data Entered: M.T. 1/29/15  
Date and Initials

Initial Sequence: SSA0047

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1500116-01	<input checked="" type="checkbox"/>	WM-CB-03-20150122-S	23-Jan-15 08:50	WR-2 F-6	
1500116-02	<input checked="" type="checkbox"/>	WM-FD-02-20150122-S	23-Jan-15 08:50	WR-2 F-6	

⊕ Samples have strong petroleum like scent gr 1/27/15

Vista PM: Martha Maier

Vial Box ID: Strange clouds

Sample Reconciled By: B. Roberts 1/26/15

Analyst: B. Roberts

Test Code: %Moist/%Solids

Analyte:  
Dried at 110°C +/- 5°C

Units: %

Date/Time IN: 1/26/15 14:37 Date/Time OUT: 1/27/15 10:20

INST HRMS - 2

Pan #	SampID	Source ID	SampType	Initial and Date:		Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
				Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)							
	1400970-02		Sample	1.32	15.18	10.02						
	1400970-03		Sample	1.33	12.96	7.51						
	1400970-04		Sample	1.29	12.33	4.60						
	1500108-01		Sample	1.31	11.84	5.42						
	1500108-02		Sample	1.31	9.61	4.35						
	1500108-03		Sample	1.32	18.69	12.27						
	1500116-01		Sample	1.32	11.96	4.41						
	1500116-02		Sample	1.31	10.56	4.05						

Analyst: B.Roberts

Test Code: %Moist/%Solids

Analyte:

Units: %

Dried at 110°C+/-5°C

Date/Time IN: 1/26/15 1437 Date/Time OUT: 1/27/15 1020

HRMS-2

Pan #	SampID	Source ID	SampType	E		G		H	K	M N O			P
				Intial and Date:	Pan Tare Wt. (gms)	BR 1/26/15	SR 1/27/15			Dry Sample Weight (g)	%Solids RawVal	pH Before	
	1400970-02		Sample	1.3200	15.1800	10.0200	8.7000	62.77					
	1400970-03		Sample	1.3300	12.9600	7.5100	6.1800	53.14					
	1400970-04		Sample	1.2900	12.3300	4.6000	3.3100	29.98					
	1500108-01		Sample	1.3100	11.8400	5.4200	4.1100	39.03					
	1500108-02		Sample	1.3100	9.6100	4.3500	3.0400	36.63					
	1500108-03		Sample	1.3200	18.6900	12.2700	10.9500	63.04					
	1500116-01		Sample	1.3200	11.9600	4.4100	3.0900	29.04					
	1500116-02		Sample	1.3100	10.5600	4.0500	2.7400	29.62					



PREPARATION BENCH SHEET

Matrix: Solid

B5A0101

Chemist: S. Roughton

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 27-Jan-15 11:06

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	CSA0103	CSA0104	CSA104	CSA105	RS CHEM/WIT DATE
						AP CHEM/DATE	ABSG CHEM/DATE	AA CHEM/DATE	Florisil CHEM/DATE	
<input type="checkbox"/>	B5A0101-BLK1	(10.00)	10.00	SR 1/27/15	M.T 1/28/15	M.T 1/28/15	M.T 1/29/15	M.T 1/29/15	M.T 1/29/15	M.T 1/29/15
<input type="checkbox"/>	B5A0101-BS1	↓	↓	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1400970-02	15.93	16.07 <sup>SR 1/27/15</sup> <sub>20</sub>	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1400970-03	18.82	19.05	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1400970-04	33.35	33.39	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500108-01	25.62	25.91	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500108-02	27.30	27.43	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500108-03	15.86	15.93	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500116-01	34.43	34.48	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500116-02	33.76	33.89	↓	↓	↓	↓	↓	↓	↓

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP: SEFUN SOX (SDS)	Check Out: SR 1/27/15
PCDD/F 14H2704, 10ml (V4)	PCDD/F 13L1101, 10ml (V13)	PCDD/F 14H2705, 10ml (V8)	PCDD/F 14H2706, 10ml (V8)	Start Date/Time	SOLV: Tol	Chemist/Date: SR 1/27/15
PCB	PCB	PCB	PCB	1/27/15 1450	Other: N/A	Check In: ↓
PAH	PAH	PAH	PAH	Stop Date/Time	Final Volume(s) 20ml	Chemist/Date:
				1/28/15 0710	C14	Balance ID: HRMS-2

Comments:

Process Sheet  
Workorder: 1500116

Prep Expiration: 01/22/2016  
Client: Leidos

Workorder Due: 13-Feb-15 00:00  
TAT: 21

Method: 1613 Full List  
Matrix: Aqueous  
Client Matrix: Aqueous  
Also run: Percent Solids

Prep Batch: BSA0110

Prep Data Entered: M.T/30/15  
Date and Initials

Initial Sequence: \_\_\_\_\_

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1500116-03 <sup>u</sup> #	<input checked="" type="checkbox"/>	WM-FT-IB-20150122-W	23-Jan-15 08:50	WR-2 B-2	

Vista PM:Martha Maier

Vial Box ID: Dolph

Sample Reconciled By: B. Smith 1/29/15

Analyst: B. Smith	Test Code: %Moist/%Solids
Analyte: Dried at 110°C+/-5°C	Units: %

HRMS-4

Date/Time IN: 1/29/15 08:51 Date/Time OUT: 1/30/15 15:15

B		C		D		E		F		G		H		K		M N O P			
Pan #	SampID	Source ID	SampType	Intial and Date:		Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-	BMSV2915					
				Pan Tare Wt. (gms)															
	1400970-01RE1		Sample	1.30		14.93	1.30			7									
	1500107-01		Sample	1.31		15.64	1.65			7									
	1500107-02		Sample	1.30		18.56	1.85			7									
	1500108-04RE1		Sample	1.29		19.70	1.29			7									
	1500109-01		Sample	1.31		16.94	1.33			7									
	1500115-01		Sample	1.30		14.47	1.32			7									
	1500116-03RE1		Sample	1.30		16.88	1.31			7									
	1500121-02		Sample	1.30		13.40	1.30			7									
	1500121-03		Sample	1.28		12.76	1.29			7									

<p><b>Analyst:</b> B. Smith</p> <p><b>Analyte:</b> Dried at 110°C+/-5°C</p>	<p><b>Test Code:</b> %Moist/%Solids</p> <p><b>Units:</b> %</p>
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HRMS-4

<u>Date/Time IN:</u>	<u>Date/Time OUT:</u>
1/29/15 8:51	1/30/15 15:15

B		C	D	E		F	G	H	K	M	N	O	P
Pan #	SampID	Source ID	SampType	Initial and Date:		BMS 1/29/2015		MJT 1/30/2015		BMS 1/29/2015			
				Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-	
	1400970-01RE1		Sample	1.3000	14.9300	1.3000	0.0000	0.00	5	NA	NA	0	
	1500107-01		Sample	1.3100	15.6400	1.6500	0.3400	2.37	7	NA	NA	0	
	1500107-02		Sample	1.3000	18.5600	1.8500	0.5500	3.19	7	NA	NA	0	
	1500108-04RE1		Sample	1.2900	19.4000	1.2900	0.0000	0.00	7	NA	NA	0	
	1500109-01		Sample	1.3100	16.9400	1.3300	0.0200	0.13	7	NA	NA	0	
	1500115-01		Sample	1.3000	14.4700	1.3200	0.0200	0.15	7	NA	NA	0	
	1500116-03RE1		Sample	1.3000	16.8800	1.3100	0.0100	0.06	7	NA	NA	0	
	1500121-02		Sample	1.3000	13.4000	1.3000	0.0000	0.00	7	NA	NA	0	
	1500121-03		Sample	1.2800	12.7600	1.2900	0.0100	0.09	7	NA	NA	0	

PREPARATION BENCH SHEET

Matrix: Aqueous

B5A0110

Chemist: B. Smith

Method: 1613 Full List

Prep Date/Time: 29-Jan-15 08:12

Method: 1613 2.3.7.8s Only

Method: 1613 TCDD Only

Prepared using: HRMS - SPE Extraction

C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	NA	CSA0115	CSA0115	CSA0116	RS CHEM/WIT DATE
							AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisol CHEM/ DATE	
<input type="checkbox"/>	B5A0110-BLK1	NA	NA	1.020	MS 48-1/29/15	MS 48-1/30/15	NA	M.T. 1/30/15	M.T. 1/30/15	M.T. 1/30/15	M.T. 4/1/30/15
<input type="checkbox"/>	B5A0110-BS1	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1400970-01	1509.29	502.64	1.00665	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500107-01	1312.40	417.10	0.8953	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500107-02	1334.31	416.34	0.91797	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500108-04	1509.08	498.60	1.00648	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500109-01	1515.57	497.18	1.01839	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500115-01	1523.25	501.07	1.02218	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500116-03	1503.87	502.52	1.00135	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500121-02	1544.00	506.73	1.03727	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500121-03	1482.75	517.34	0.96541	↓	↓	↓	↓	↓	↓	↓

IS Name <u>V8</u>	NS Name <u>V13</u>	CRS Name <u>V8</u>	RS Name <u>V8</u>	Cycle Time	APP: SEFUN SOX <u>SDS</u>	Check Out: <u>BMS 1/29/15</u>
PCDD/F <u>14H2704, 10A</u>	PCDD/F <u>1341101, 110A</u>	PCDD/F <u>14H2705, 10A</u>	PCDD/F <u>14H2706, 10A</u>	Start Date/Time <u>1/29/15 1602</u>	SOLV: <u>TOL</u>	Chemist/Date: <u>empty</u>
PCB	PCB	PCB	PCB	Stop Date/Time <u>1/30/15 0825</u>	Other: <u>NA</u>	Chemist/Date: <u>Mensy</u>
PAH	PAH	PAH	PAH	Final Volume(s) <u>20ml</u>	<u>C14</u>	Balance ID: <u>Mensy</u>

Comments:

Process Sheet

Rx

Workorder: 1500116

Prep Expiration: 01/22/2016

Client: Leidos

Workorder Due: 13-Feb-15 00:00

TAT: 21

Method: 1668C Full List

Matrix: Solid

Client Matrix: Sediment

Also run: Percent Solids

Prep Batch: B5A0115

Prep Data Entered: 1/30/15 ES  
Date and Initials

Initial Sequence: S5B0002E

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1500116-01 "A"	<input checked="" type="checkbox"/>	WM-CB-03-20150122-S	23-Jan-15 08:50	WR-2 F-6	
1500116-02 "A"	<input checked="" type="checkbox"/>	WM-FD-02-20150122-S	23-Jan-15 08:50	WR-2 F-6	

2g (2x Spike) w

Vista PM:Martha Maier

Vial Box ID: Gap 2

Sample Reconciled By: M.T 1/29/15

Solids estimate

Batch: B5A0100

Lab ID	Analysis	% Solids	Entered	Target weight	Weigh this much
1400970-02	Percent Solids	62.77		2.00	3.19
1400970-03	Percent Solids	53.14		2.00	3.76
1400970-04	Percent Solids	29.98		2.00	6.67
1500108-01	Percent Solids	39.03		2.00	5.12
1500108-02	Percent Solids	36.63		2.00	5.46
1500108-03	Percent Solids	63.04		2.00	3.17
1500116-01	Percent Solids	29.04		2.00	6.89
1500116-02	Percent Solids	29.62		2.00	6.75

Percent Moisture/ Percent Solids

D2216-90

BATCH ID

B5A0100

<b>Analyst:</b> <i>B. Roberts</i>	<b>Test Code:</b> %Moist/%Solids
<b>Analyte:</b> Dried at 110°C/+5°C	<b>Units:</b> %

~~INST~~ HRMS-2

Date/Time IN: *1/26/15 14:37*    Date/Time OUT: *1/27/15 10:20*

B		C	D	E		F		G	H	K	M	N	O	P
Pan #	Sample ID	Source ID	Sample Type	Initial and Date:			Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-
				Pan Tare Wt. (gms)	Date									
	1400970-02		Sample	1.32	<i>SR 1/26/15</i>		15.18	<i>SR 1/27/15</i>		10.02				
	1400970-03		Sample	1.33			12.96			7.51				
	1400970-04		Sample	1.29			12.33			4.60				
	1500108-01		Sample	1.31			11.84			5.42				
	1500108-02		Sample	1.31			9.61			4.35				
	1500108-03		Sample	1.32			18.69			12.27				
	1500116-01		Sample	1.32			11.96			4.41				
	1500116-02		Sample	1.31			10.56			4.05				



PREPARATION BENCH SHEET

Matrix: Solid

B5A0115

Chemist: M.T

Method: 1668C Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 29-Jan-15 10:19

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	PS CRS CHEM/WIT DATE	CSA013	CSA014	N/A	N/A	RS CHEM/WIT DATE
						AP CHEM/DATE	ABSG CHEM/DATE	AA CHEM/DATE	Florisil CHEM/DATE	
<input type="checkbox"/>	B5A0115-BLK1	NA	(2.00) <del>(10.00)</del>	M.T. 1/29/15	ES 8/1/30/15	ES 1/30/15	ES 1/30/15	N/A	N/A	ES 8/1/30/15
<input type="checkbox"/>	B5A0115-BS1	↓	↓							
<input type="checkbox"/>	1400970-02RE1 (A)	3.19	3.23							
<input type="checkbox"/>	1400970-03RE1	3.76	3.84							
<input type="checkbox"/>	1400970-04RE1 (A)	6.67	6.69							
<input type="checkbox"/>	1500108-01RE1	5.12	5.16							
<input type="checkbox"/>	1500108-02RE1 (A)	5.46	5.56							
<input type="checkbox"/>	1500108-03RE1 (A)	3.17	3.18							
<input type="checkbox"/>	1500116-01RE1 (A)	6.89	6.93							
<input type="checkbox"/>	1500116-02RE1 (A)	6.75	6.78							

- (A) Precipitate present at final volume. ES 1/30/15
- (B) Crystals present at final volume. ES 1/30/15
- (C) FV. of -100µL. ES 1/30/15

IS Name <u>ZX</u> <u>PCB</u> PCDD/F <u>14D2901, 20µL</u>	NS Name <u>ZX</u> <u>PCB</u> PCDD/F <u>14F1301, 20µL</u>	CRS Name <u>ZX</u> <u>PCDD/F</u> <u>v2</u>	RS Name <u>ZX</u> <u>PCDD/F</u> <u>v2</u>	Cycle Time Start Date/Time <u>1/29/15</u> <u>15:35</u> Stop Date/Time <u>1/30/15</u> <u>7:30</u>	APP: SEFUN SOX <u>(SDS)</u> SOLV: <u>Tol</u> Other <u>NA</u> Final Volume(s) <u>100µL</u> <u>C9</u>	Check Out: Chemist/Date: <u>M.T. 1/29/15</u> Check In: Chemist/Date: <u>M.T. 1/29/15</u> Balance ID: <u>HRMS-2</u>
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Comments:

Process Sheet

Workorder: **1500116**

Prep Expiration: 01/22/2016

Client: Leidos

Workorder Due: 13-Feb-15 00:00

TAT: 21

Method: **1668C Full List**

Matrix: **Aqueous**

Prep Batch: BSA0099

Client Matrix: Aqueous

Also run: **Percent Solids**

Prep Data Entered: M.T. 1/27/15

Date and Initials

Initial Sequence: \_\_\_\_\_

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1500116-03 'B'	<input checked="" type="checkbox"/>	WM-FT-IB-20150122-W	23-Jan-15 08:50	WR-2 B-2	

Vista PM:Martha Maier

Vial Box ID: WOBRAIN

Sample Reconciled By: M.T. 1/29/15

<b>Analyst:</b> MJT	<b>Test Code:</b> %Moist/%Solids
<b>Analyte:</b> Dried at 110°C+/-5°C	<b>Units:</b> %

INST HRMS-4  
 Date/Time IN: 1/26/15 11:05      Date/Time OUT: 1/27/15 8:35

Pan #	SampID	Source ID	SampType	E		G		H	K	M N O			P	
				Intial and Date:	Pan Tare Wt. (gms)	MJT 1/26/2015	MJT 1/27/2015			Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)		%Solids RawVal
	1400970-01		Sample		1.3300		1.3300		0.0000	0.00	6	2	10	0
	1500084-01RE1		Sample		1.3200		1.3200		0.0000	0.00	6	2	10	0
	1500084-02RE1		Sample		1.3200		1.3200		0.0000	0.00	6	2	10	0
	1500108-01		Sample		1.3000		1.3000		0.0000	0.00	7	2	10	0
	1500116-03		Sample		1.3200		1.3300		0.0100	0.10	7	2	10	0
	B5A0099-MB		QC		NA		NA		NA	NA	5	2	10	0
	B5A0099-OPR		QC		NA		NA		NA	NA	5	2	10	0

<b>Analyst:</b> MJT	<b>Test Code:</b> %Moist/%Solids
<b>Analyte:</b> Dried at 110°C+/-5°C	<b>Units:</b> %

INST HRMS-4  
 Date/Time IN: 1/26/15 0:00  
 Date/Time OUT: 1/27/15 8:35  
 11:05

Pan #	SampID	Source ID	SampType	Initial and Date:		Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	MJT 1/26/2015			Cl-
				Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)				pH Before	pH After	Acid Added	
	1400970-01		Sample	1.33	11.07	1.33		6	2	10	0	
	1500084-01RE1		Sample	1.32	11.40	1.32		6	2	T	0	
	1500084-02RE1		Sample	1.32	12.08	1.32		6	2		0	
	1500108-04 MJT 1/26/14		Sample	1.30	12.23	1.30		7	2		0	
	1500116-03		Sample	1.32	11.39	1.33		7	2		0	
	B5A0099-MB		QC					5	2		0	
	B5A0099-OPR		QC					5	2	↓	0	

PREPARATION BENCH SHEET

Matrix: Aqueous

B5A0099

Chemist: M.T

Method: 1668A Full List

Prep Date/Time: 26-Jan-15 10:29

Method: 1668C Full List

Prepared using: HRMS - Separatory Funnel

C	VISTA Sample ID	Bottle + Sample (mL)	Bottle Only (mL)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	NA	CSA0086	NA	NA	RS CHEM/WIT DATE
							AP CHEM/DATE	ABSG CHEM/DATE	AA CHEM/DATE	Florisol CHEM/DATE	
<input type="checkbox"/>	B5A0099-BLK (A)	NA	NA	(1.000)	M.T. 8/26/15	M.T. 8/26/15	NA	M.T. 1/26/15	NA	NA	M.T. 1/26/15
<input type="checkbox"/>	B5A0099-BS (A)	NA	↓	↓	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1400970-01	1532.91	501.63	1.03128	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500084-01	779.65	286.23	0.49342	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500084-02	766.61	281.61	0.485	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500108-04 (A)	1498.97	498.41	1.00056	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1500116-03 (A)	1496.20	498.89	0.99731	↓	↓	↓	↓	↓	↓	↓

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP: SEFUN SOX (SDS)	Check Out:
PCDD/F (V3)	PCDD/F (V3)	PCDD/F (V4)	PCDD/F (V4)	Start Date/Time	SOLV: DCM	Chemist/Date: M.T. 1/26/15
PCB 14L 2202, 10µl	PCB 14L 2204, 10µl	PCB 14L 2201, 10µl	PCB 14L 2203, 10µl	NA	Other: NA	Check In:
PAH	PAH	PAH	PAH	Stop Date/Time	Final Volume(s) 20µl	Chemist/Date: Empty
				NS	C9	Balance ID: HRMS-4

Comments:

(A) Samples formed heavy emulsions, separated in the beaker. along M.T. 1/26/15

(B) Sample approached dryness before ABSG column on rotavap. M.T. 1/26/15.

**SAMPLE DATA**

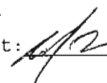

**EPA Method 1613**

Client ID: Method Blank  
Lab ID: B5A0101-BLK1

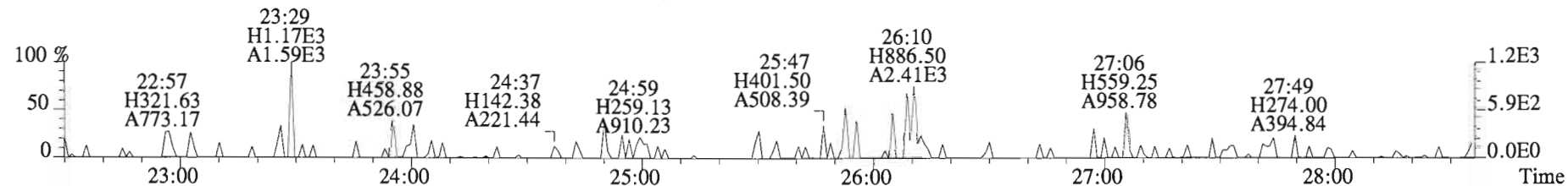
Filename: 150130D3 S:5 Acq:31-JAN-15 13:10:47  
GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol:10.000

ConCal: ST150130D3-1  
EndCAL: NA

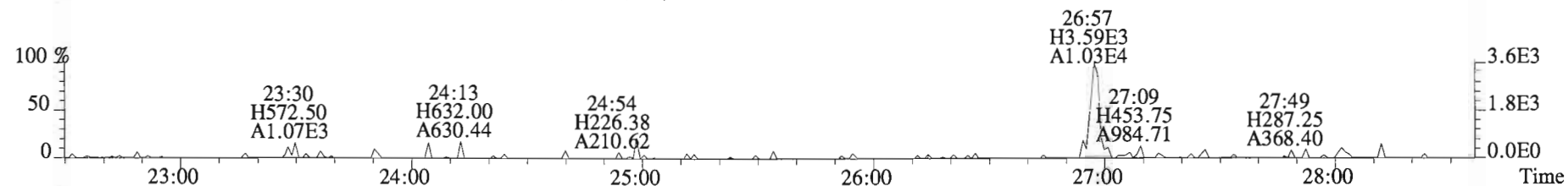
Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	1.17	Not F <sub>η</sub>	*	*	615	2.5	0.0921		Total Tetra-Dioxins	*	*		615	0.0921
1,2,3,7,8-PeCDD	*	* n	0.91	Not F <sub>η</sub>	*	*	625	2.5	0.0837		Total Penta-Dioxins	*	*		625	0.0836
1,2,3,4,7,8-HxCDD	*	* n	1.08	Not F <sub>η</sub>	*	*	595	2.5	0.143		Total Hexa-Dioxins	*	*		652	0.156
1,2,3,6,7,8-HxCDD	*	* n	1.06	Not F <sub>η</sub>	*	*	595	2.5	0.137		Total Hepta-Dioxins	*	*		656	0.136
1,2,3,7,8,9-HxCDD	*	* n	0.93	Not F <sub>η</sub>	*	*	595	2.5	0.146		Total Tetra-Furans	*	*		428	0.0497
1,2,3,4,6,7,8-HpCDD	*	* n	1.10	Not F <sub>η</sub>	*	*	656	2.5	0.136		Total Penta-Furans	0.0000	0.0000		506	0.0693
OCDD	*	* n	0.95	Not F <sub>η</sub>	*	*	708	2.5	0.233		Total Hexa-Furans	*	*		582	0.0558
											Total Hepta-Furans	*	*		782	0.0875
2,3,7,8-TCDF	*	* n	1.07	Not F <sub>η</sub>	*	*	428	2.5	0.0497							
1,2,3,7,8-PeCDF	*	* n	1.07	Not F <sub>η</sub>	*	*	476	2.5	0.0648							
2,3,4,7,8-PeCDF	*	* n	1.03	Not F <sub>η</sub>	*	*	476	2.5	0.0655							
1,2,3,4,7,8-HxCDF	*	* n	1.38	Not F <sub>η</sub>	*	*	552	2.5	0.0449							
1,2,3,6,7,8-HxCDF	*	* n	1.26	Not F <sub>η</sub>	*	*	552	2.5	0.0472							
2,3,4,6,7,8-HxCDF	*	* n	1.29	Not F <sub>η</sub>	*	*	552	2.5	0.0541							
1,2,3,7,8,9-HxCDF	*	* n	1.19	Not F <sub>η</sub>	*	*	552	2.5	0.0705							
1,2,3,4,6,7,8-HpCDF	*	* n	1.61	Not F <sub>η</sub>	*	*	752	2.5	0.0859							
1,2,3,4,7,8,9-HpCDF	*	* n	1.53	Not F <sub>η</sub>	*	*	752	2.5	0.0823							
OCDF	*	* n	1.10	Not F <sub>η</sub>	*	*	599	2.5	0.138							
											Rec	Qual				
IS	13C-2,3,7,8-TCDD	1.83e+07	0.81 y	1.06	26:56	1.021	171.02				85.5					
IS	13C-1,2,3,7,8-PeCDD	1.79e+07	0.61 y	1.18	31:24	1.190	151.16				75.6					
IS	13C-1,2,3,4,7,8-HxCDD	1.31e+07	1.26 y	0.72	34:43	1.014	159.65				79.8					
IS	13C-1,2,3,6,7,8-HxCDD	1.36e+07	1.26 y	0.74	34:50	1.017	161.30				80.7					
IS	13C-1,2,3,7,8,9-HxCDD	1.54e+07	1.28 y	0.85	35:08	1.026	158.01				79.0					
IS	13C-1,2,3,4,6,7,8-HpCDD	1.28e+07	1.05 y	0.65	38:34	1.126	171.24				85.6					
IS	13C-OCDD	2.08e+07	0.89 y	0.76	41:53	1.223	238.79				59.7					
IS	13C-2,3,7,8-TCDF	2.58e+07	0.78 y	0.92	26:10	0.992	175.13				87.6					
IS	13C-1,2,3,7,8-PeCDF	2.54e+07	1.61 y	0.92	30:15	1.147	172.32				86.2					
IS	13C-2,3,4,7,8-PeCDF	2.47e+07	1.60 y	0.93	31:08	1.180	165.87				82.9					
IS	13C-1,2,3,4,7,8-HxCDF	1.94e+07	0.52 y	0.98	33:50	0.988	172.77				86.4					
IS	13C-1,2,3,6,7,8-HxCDF	2.07e+07	0.52 y	1.08	33:57	0.991	167.67				83.8					
IS	13C-2,3,4,6,7,8-HxCDF	1.84e+07	0.53 y	1.03	34:33	1.009	156.98				78.5					
IS	13C-1,2,3,7,8,9-HxCDF	1.60e+07	0.52 y	0.86	35:31	1.037	162.46				81.2					
IS	13C-1,2,3,4,6,7,8-HpCDF	1.36e+07	0.44 y	0.72	37:22	1.091	164.83				82.4					
IS	13C-1,2,3,4,7,8,9-HpCDF	1.35e+07	0.44 y	0.70	39:07	1.142	169.46				84.7					
IS	13C-OCDF	2.66e+07	0.89 y	0.85	42:07	1.230	274.61				68.7					
C/Up	37C1-2,3,7,8-TCDD	8.31e+06		1.12	26:58	1.022	73.748				92.2					
RS/RT	13C-1,2,3,4-TCDD	2.02e+07	0.81 y	1.00	26:23	*	200.00									
RS	13C-1,2,3,4-TCDF	3.20e+07	0.79 y	1.00	24:58	*	200.00									
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.29e+07	0.51 y	1.00	34:15	*	200.00									

Integrations Reviewed  
by Analyst:  by   
Date: 2/2/15 Date: 2/2/15

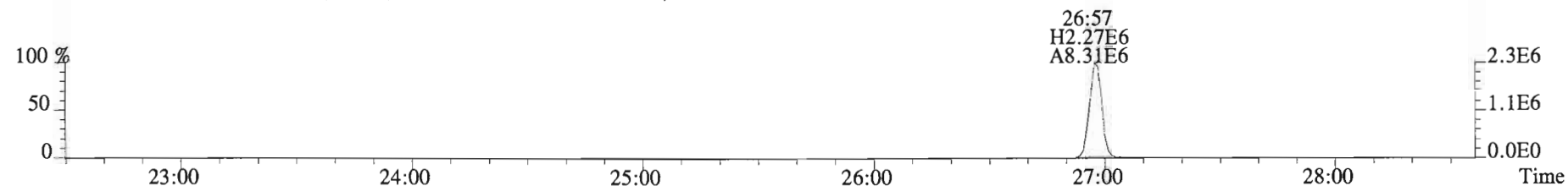
File:150130D3 #1-551 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



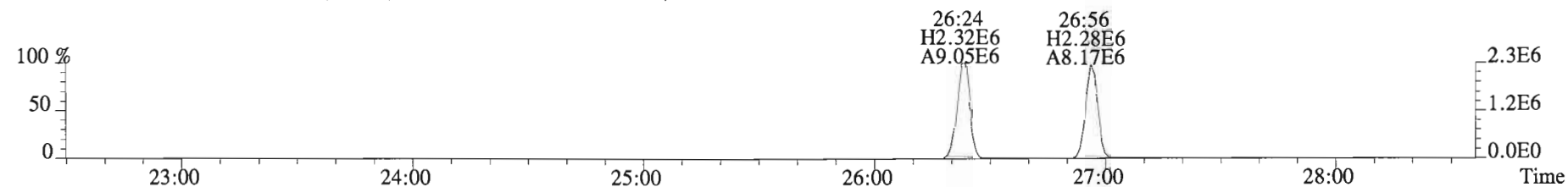
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



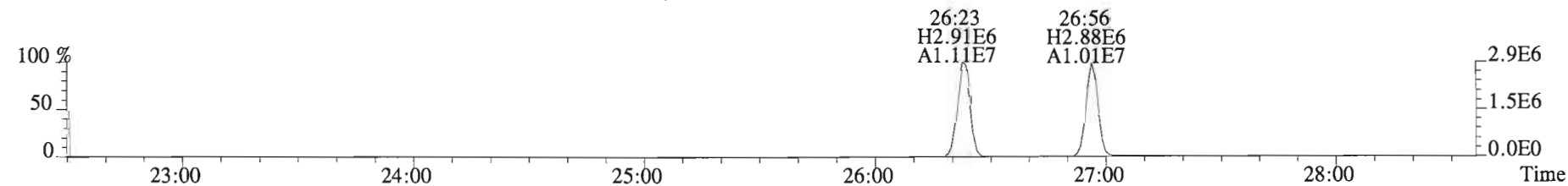
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

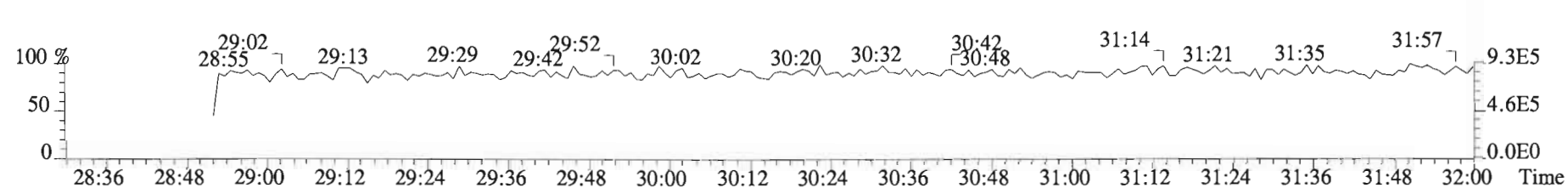
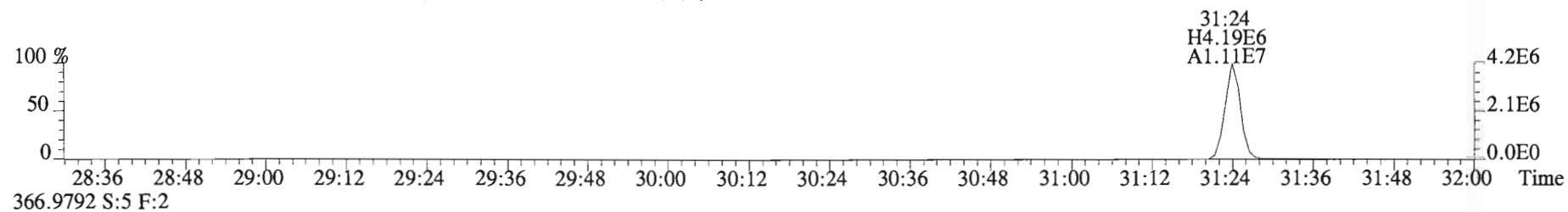
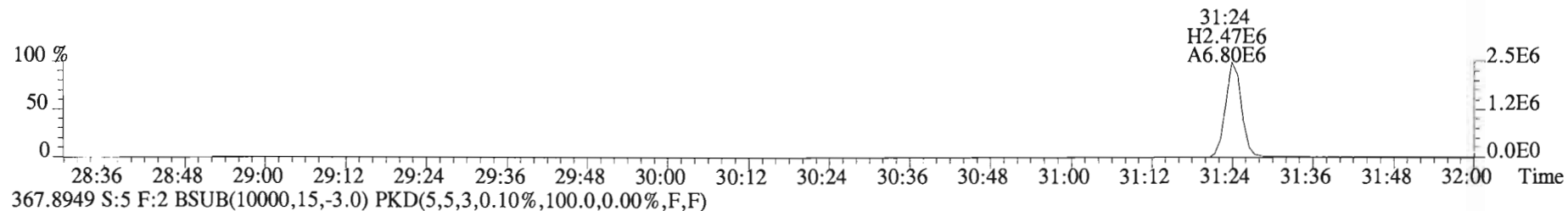
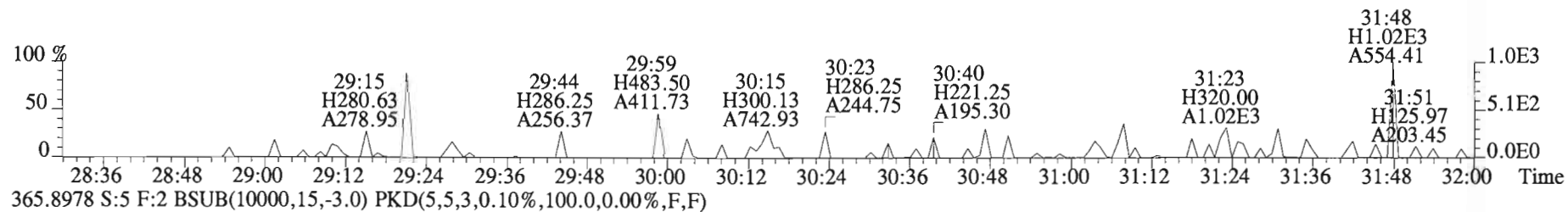
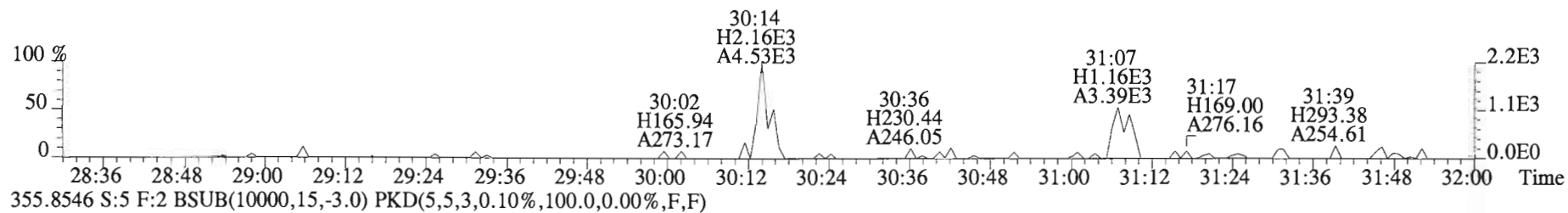


333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

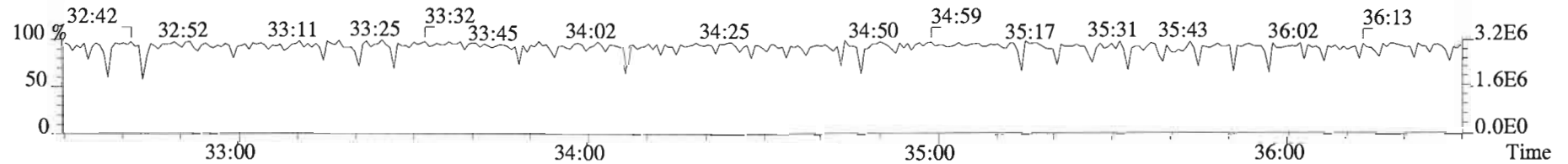
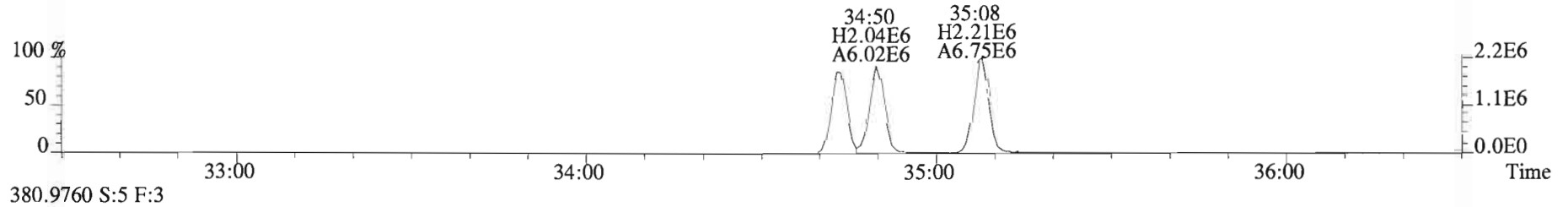
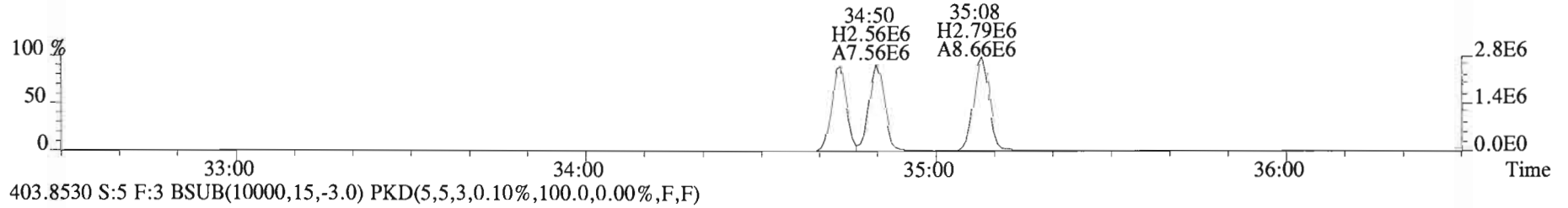
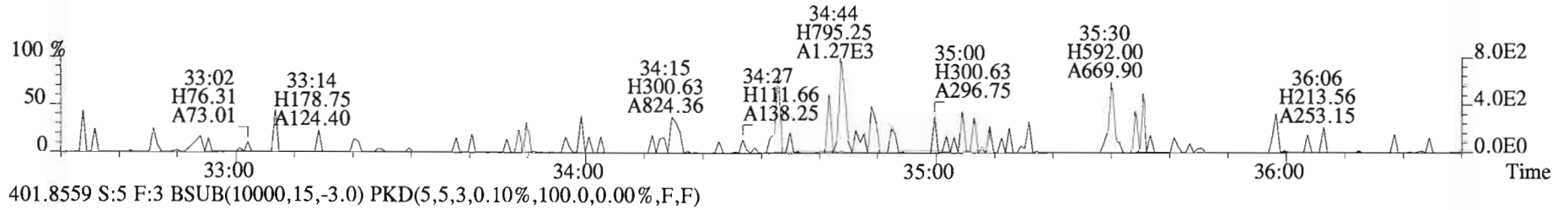
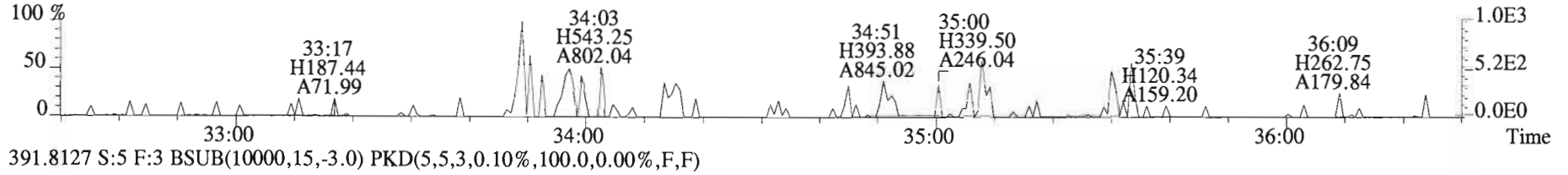




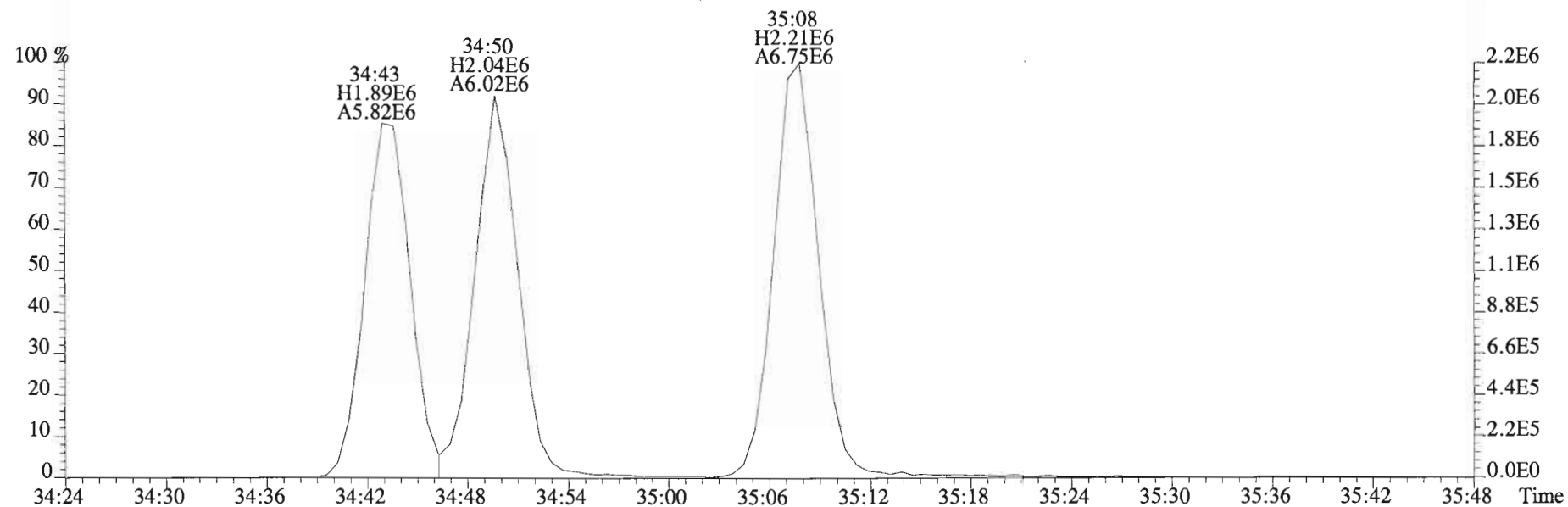
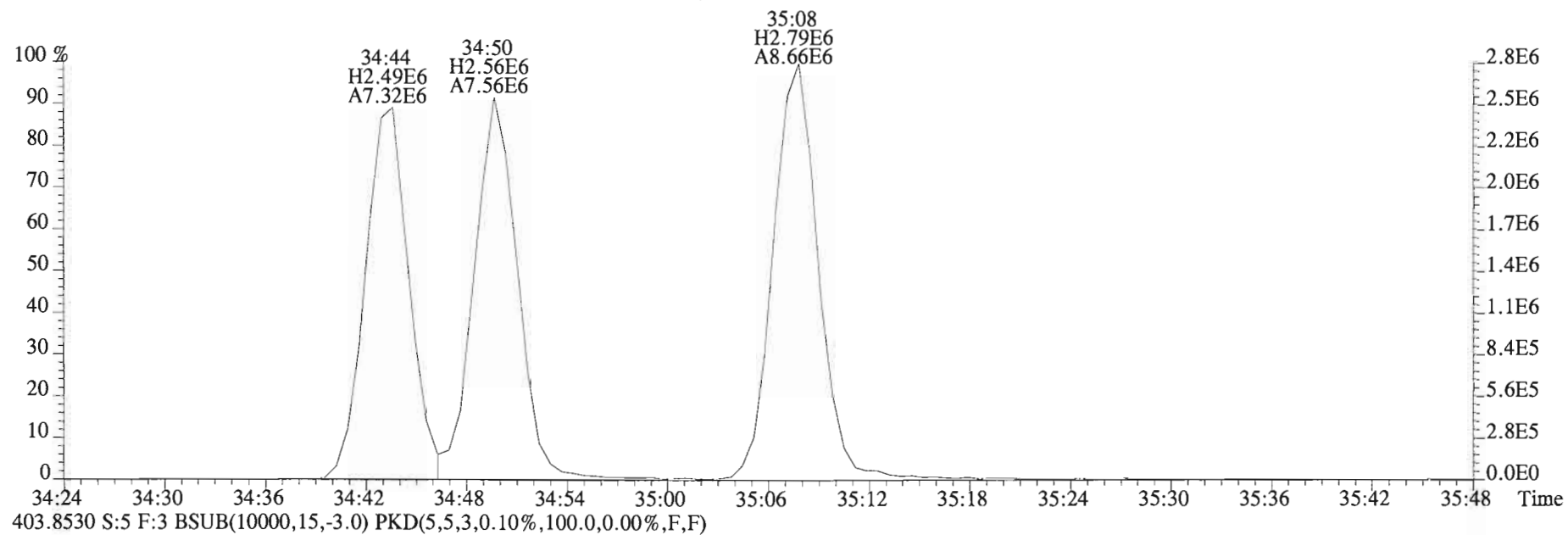
File:150130D3 #1-251 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



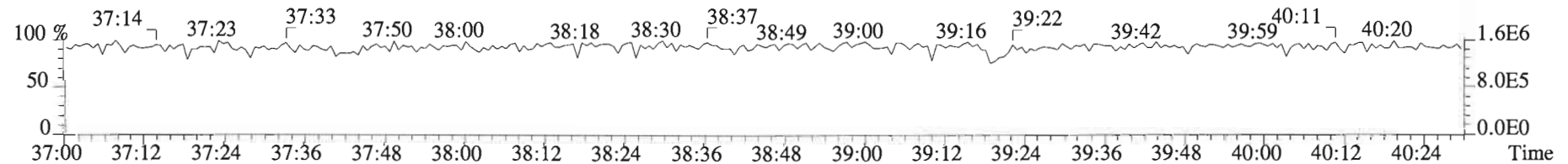
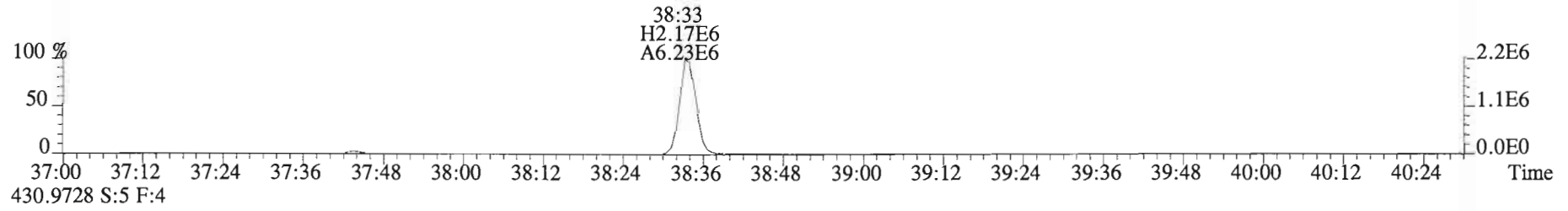
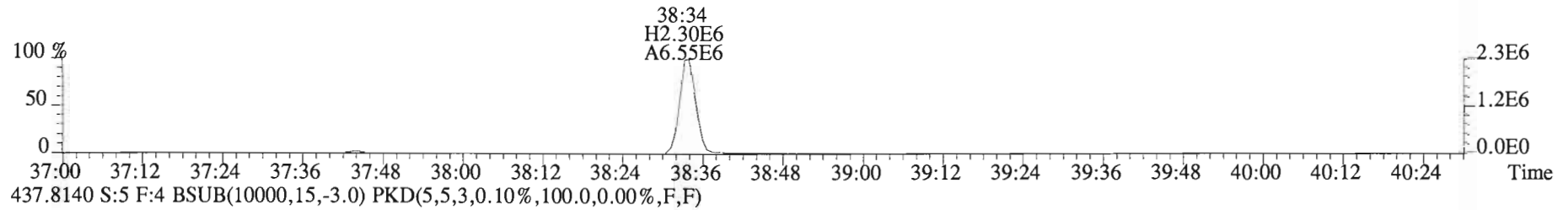
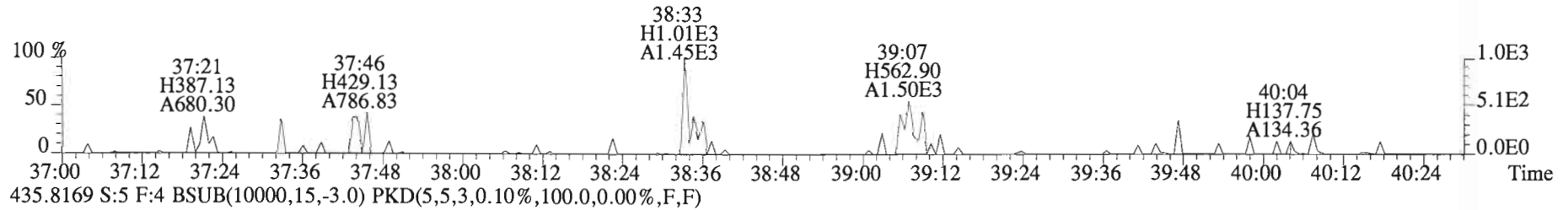
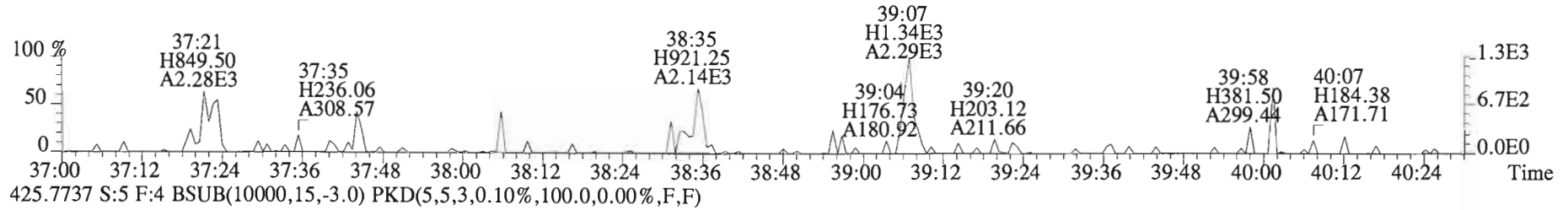
File:150130D3 #1-392 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



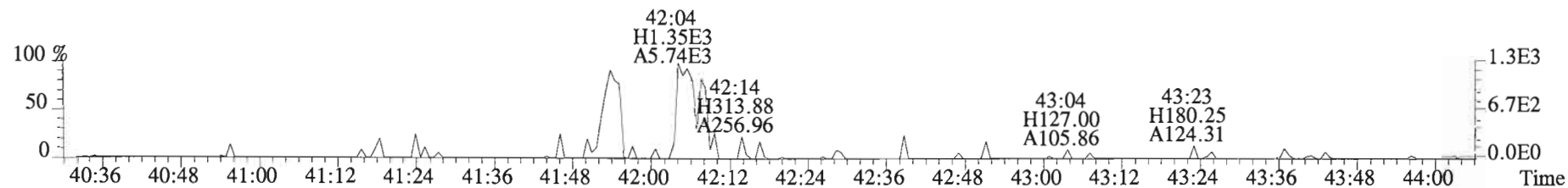
File:150130D3 #1-392 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



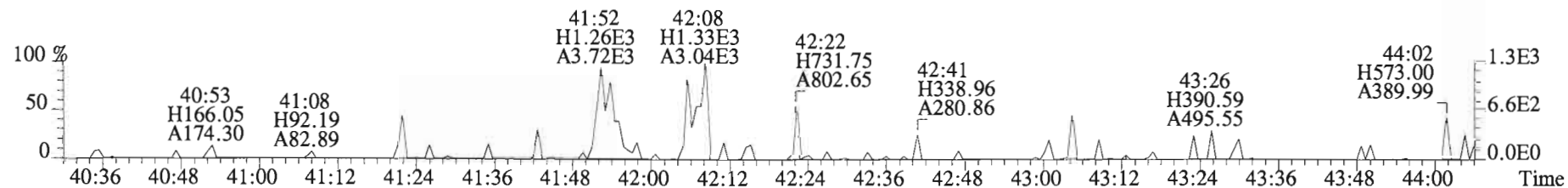
File:150130D3 #1-326 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



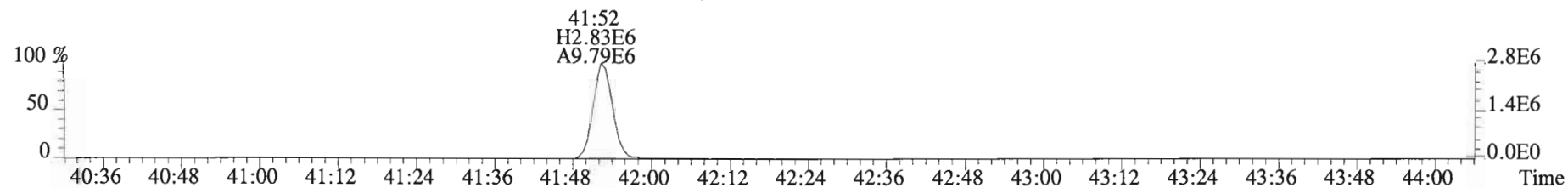
File:150130D3 #1-389 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



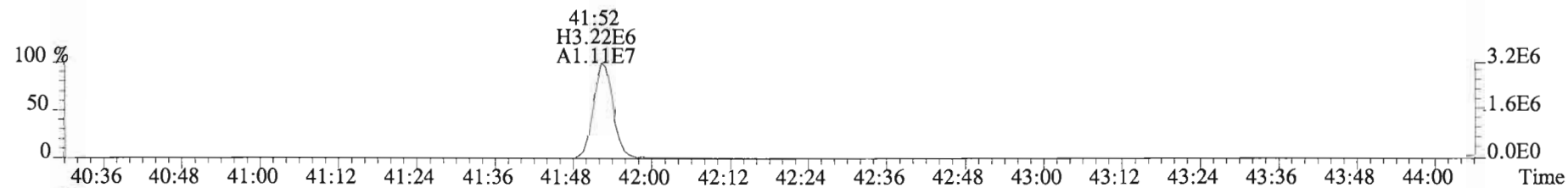
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



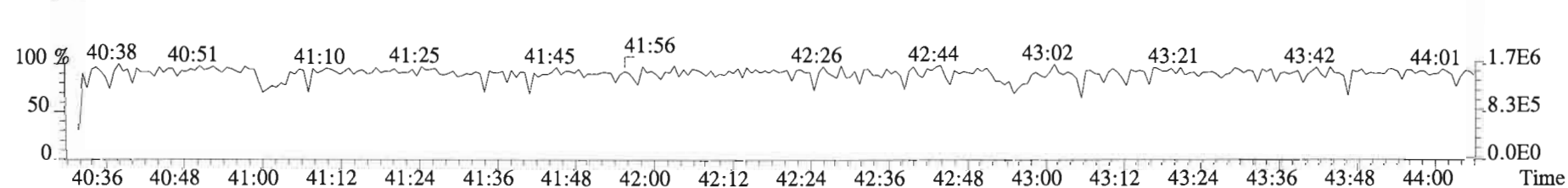
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



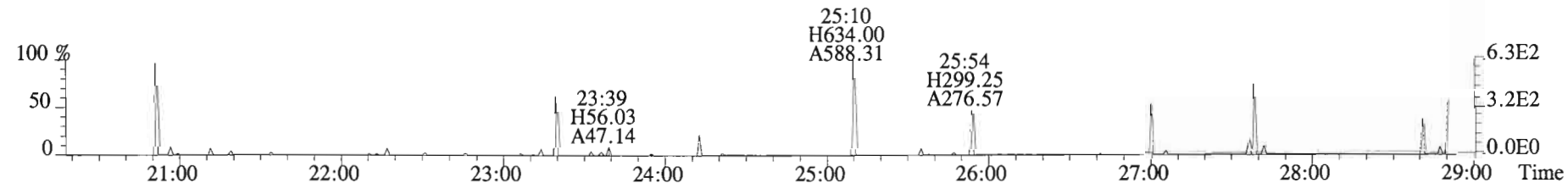
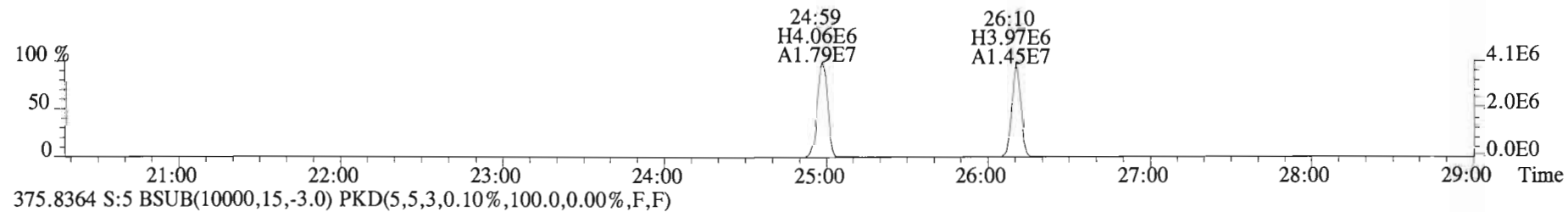
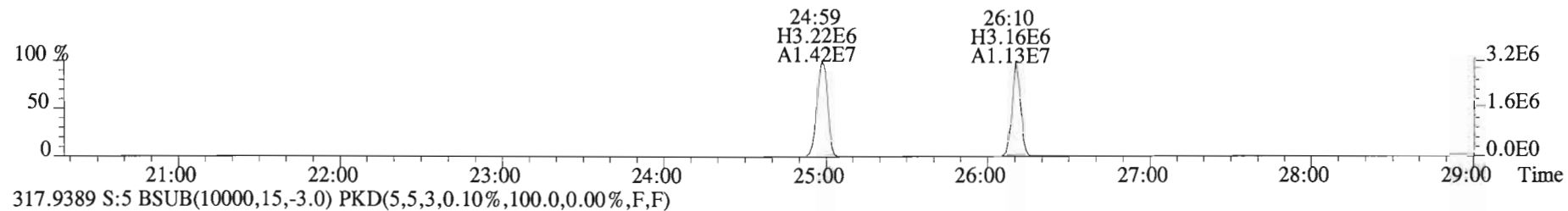
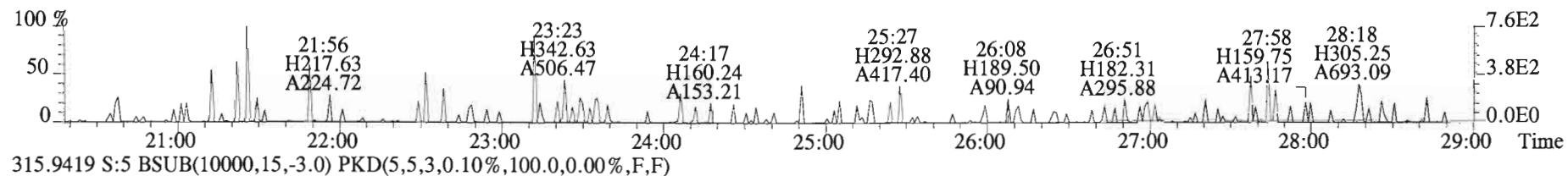
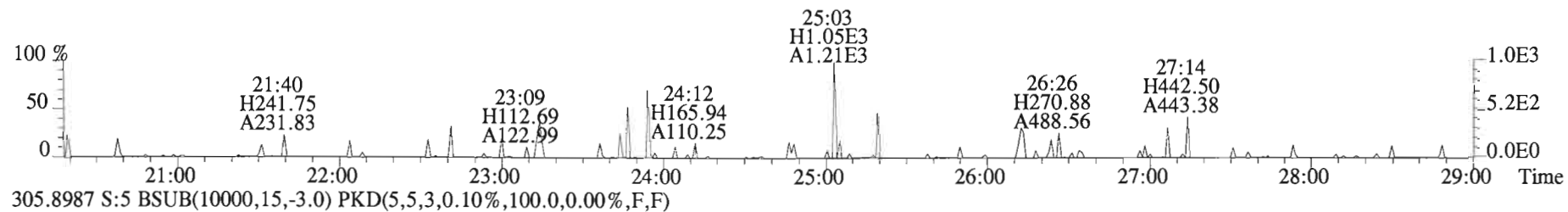
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



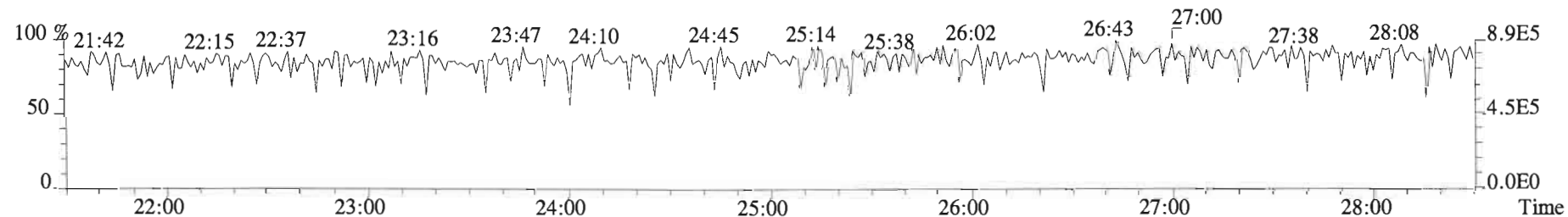
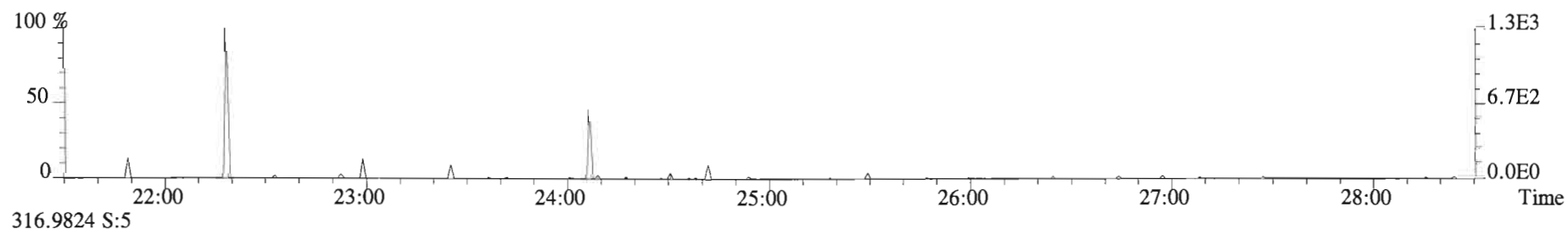
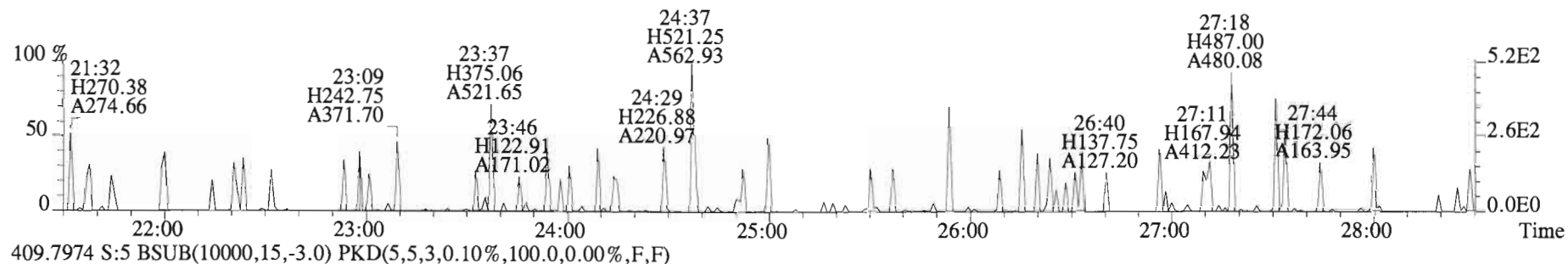
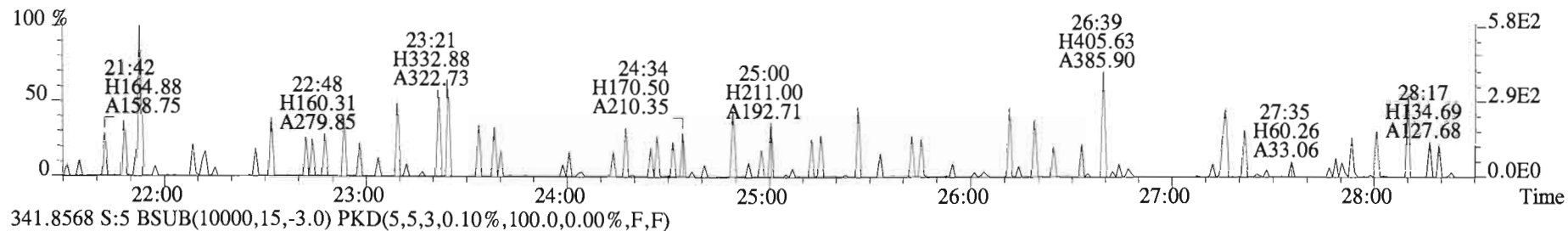
454.9728 S:5 F:5



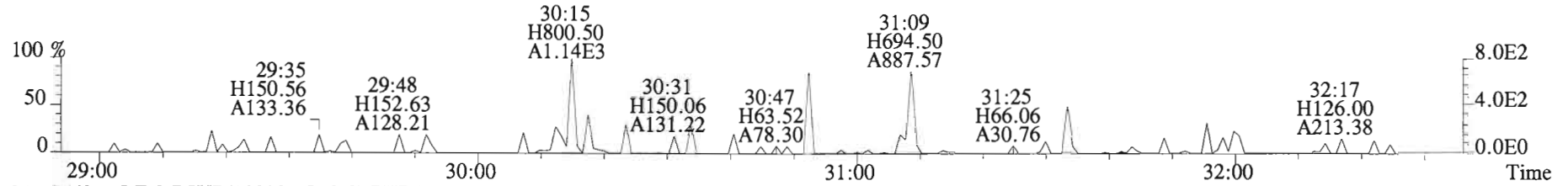
File:150130D3 #1-551 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



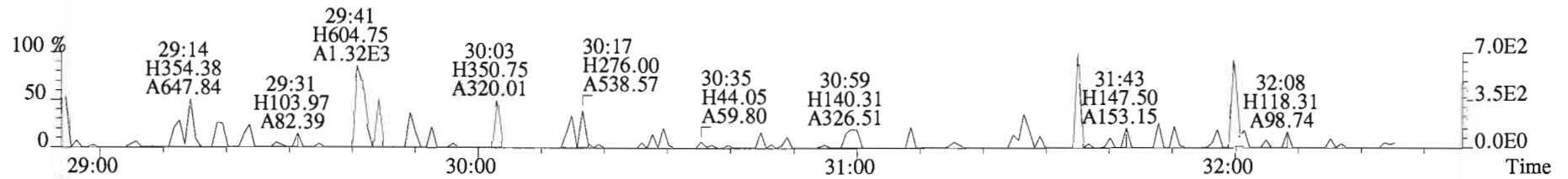
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Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



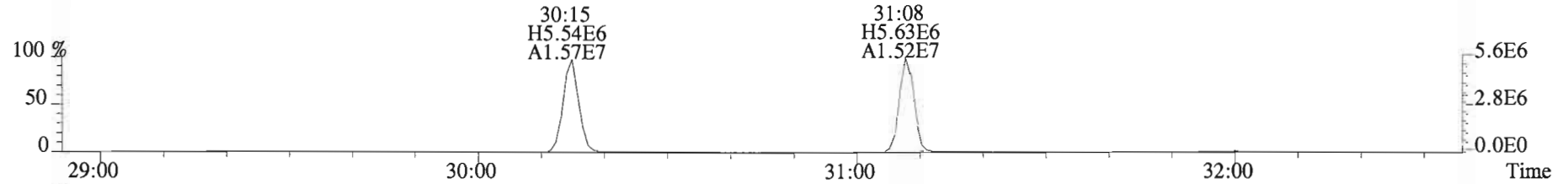
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Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



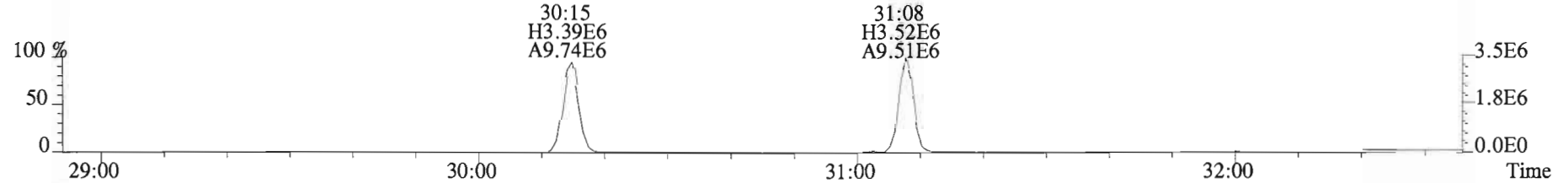
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



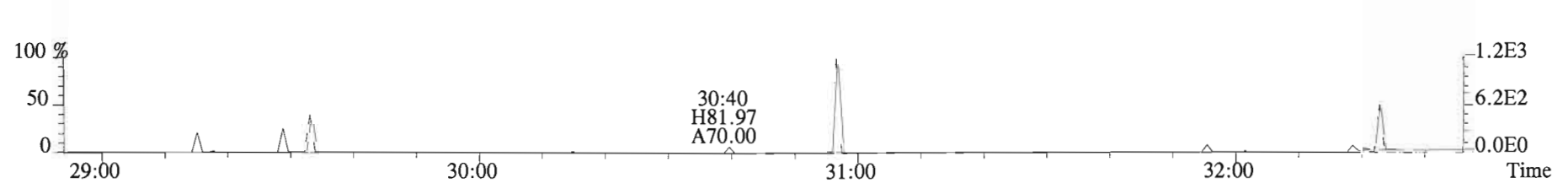
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

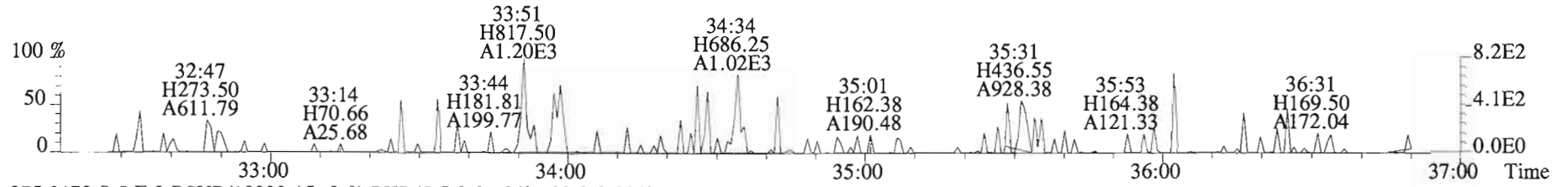


409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

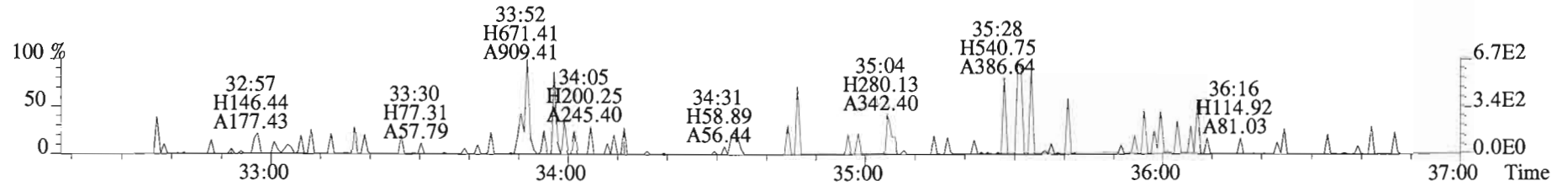




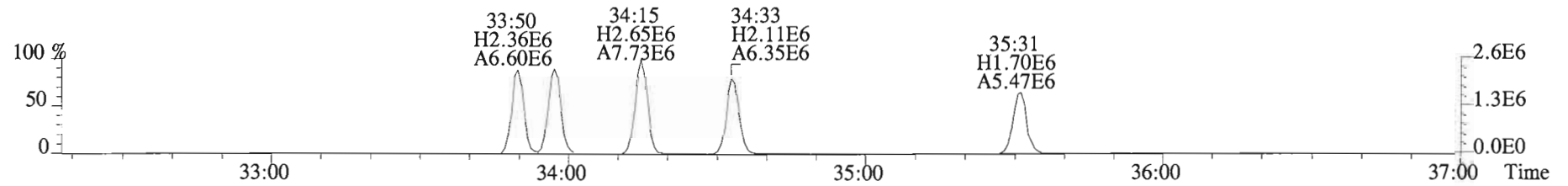
File:150130D3 #1-392 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



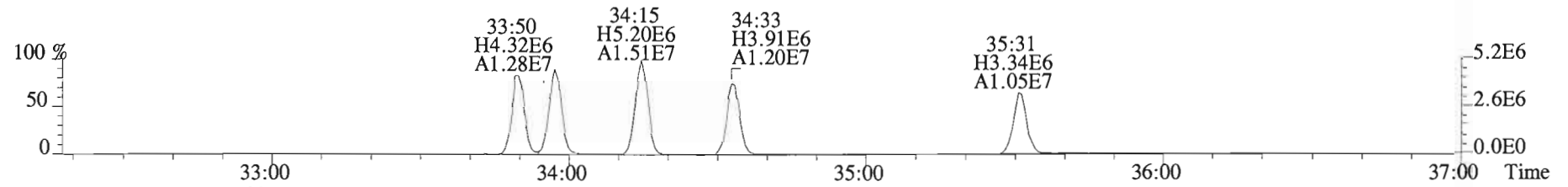
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



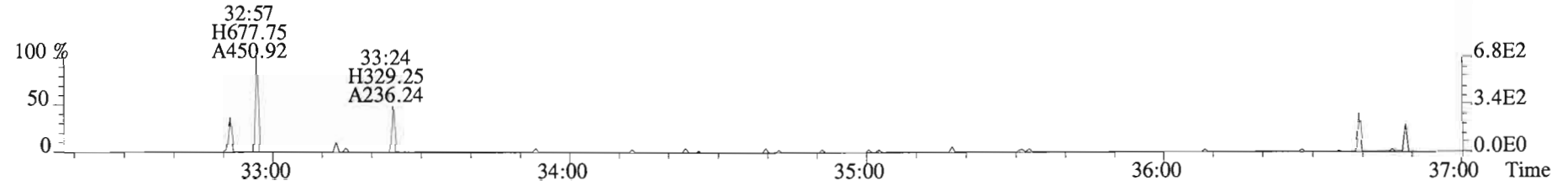
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



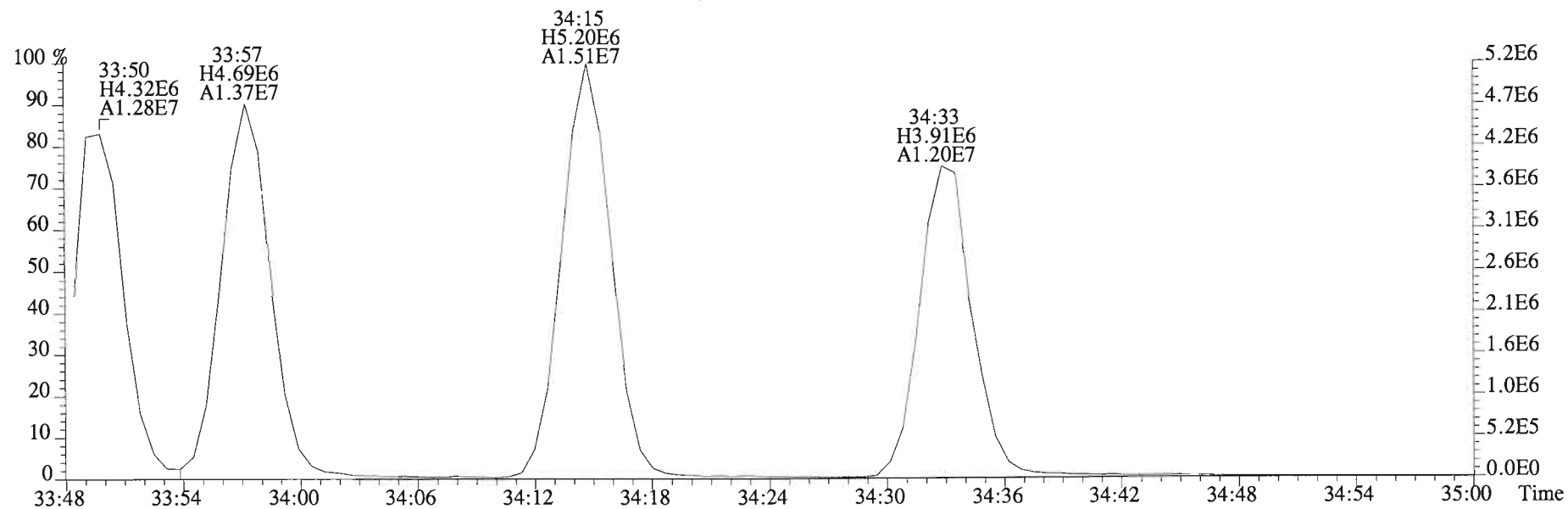
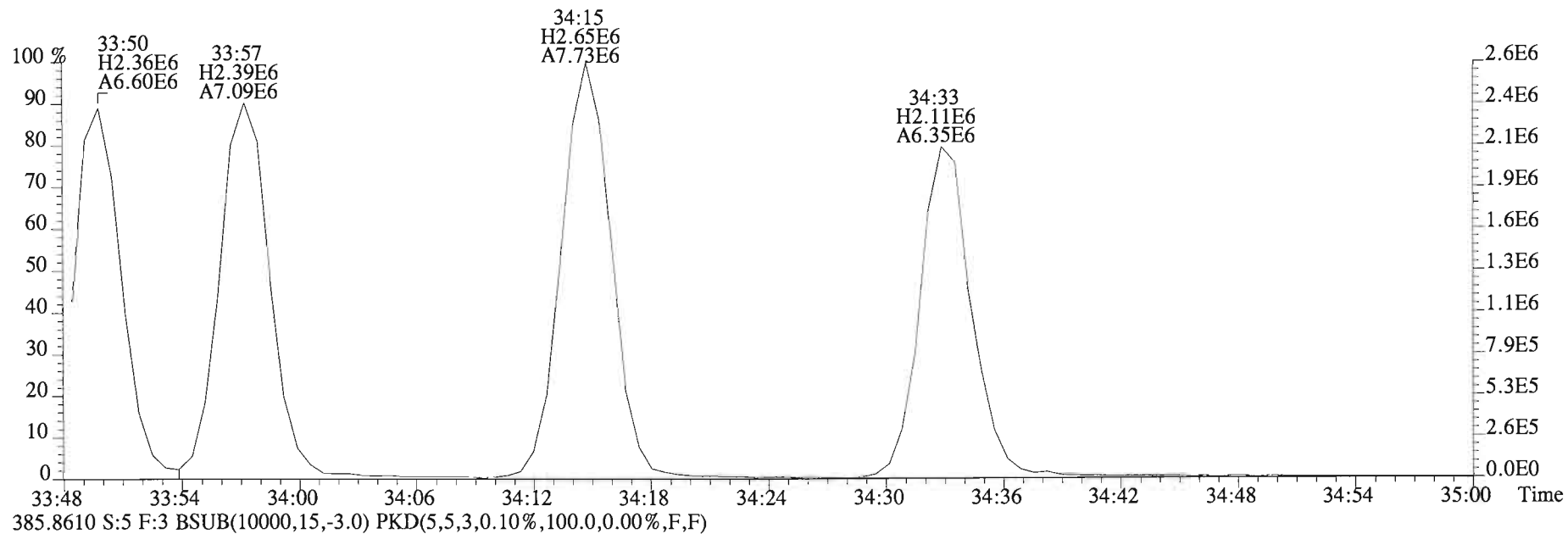
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



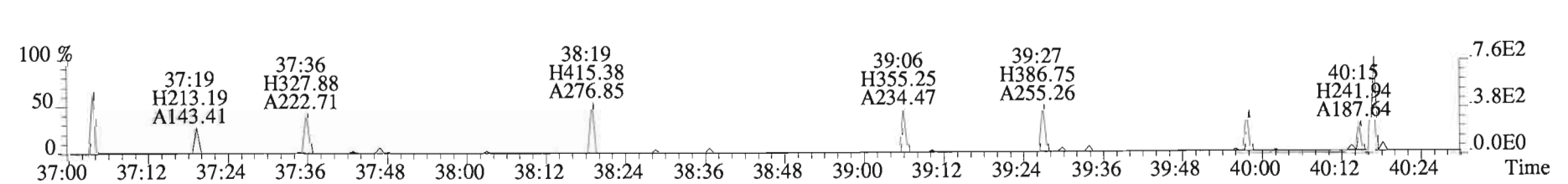
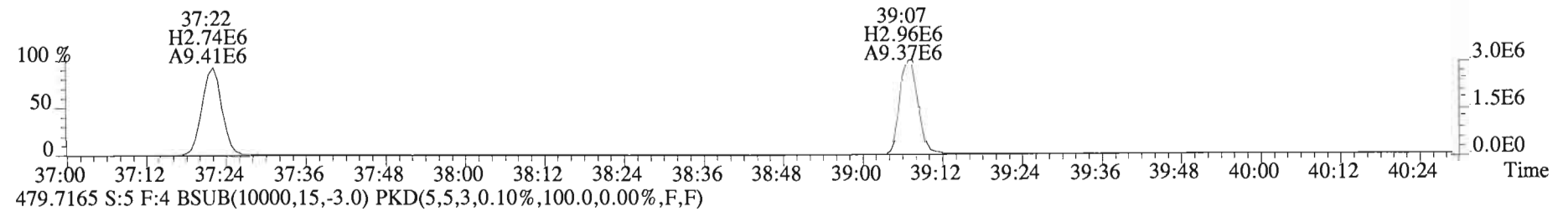
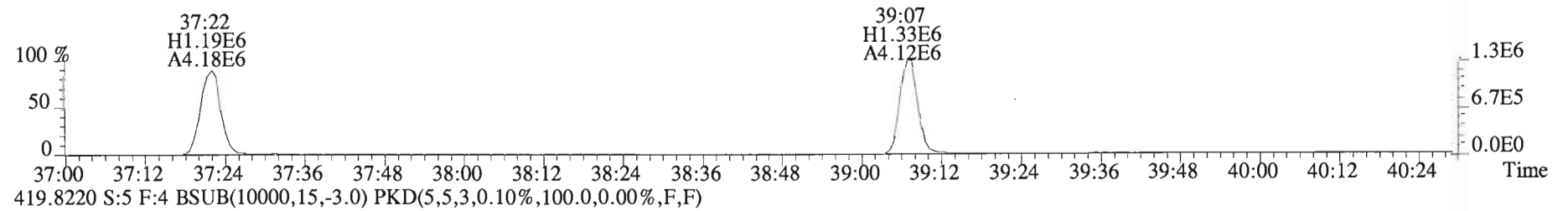
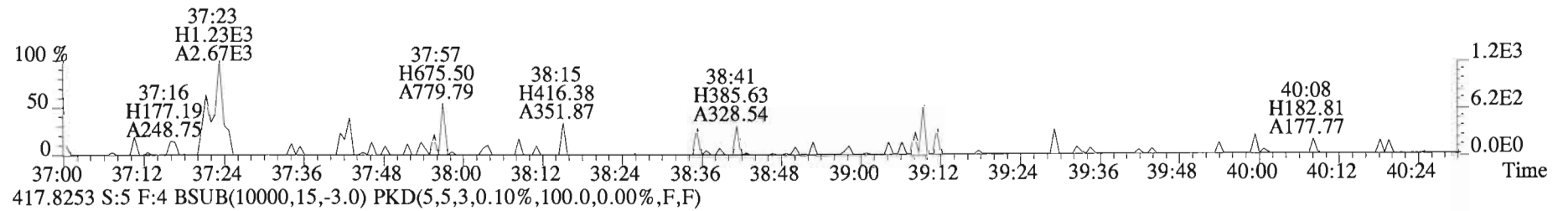
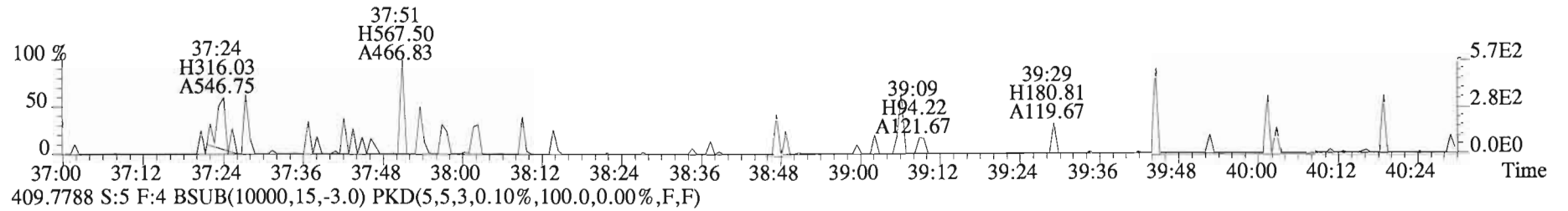
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



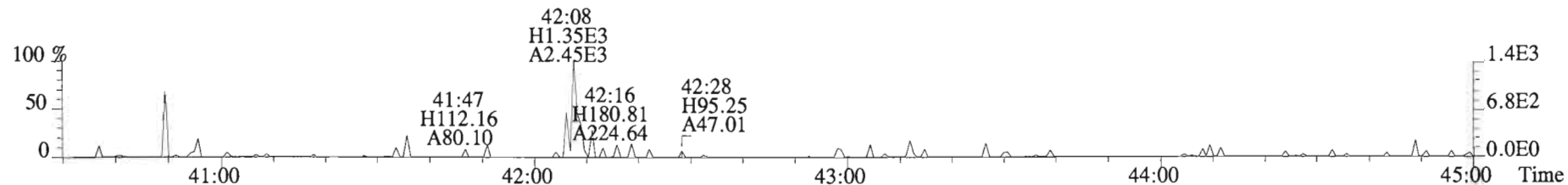
File:150130D3 #1-392 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



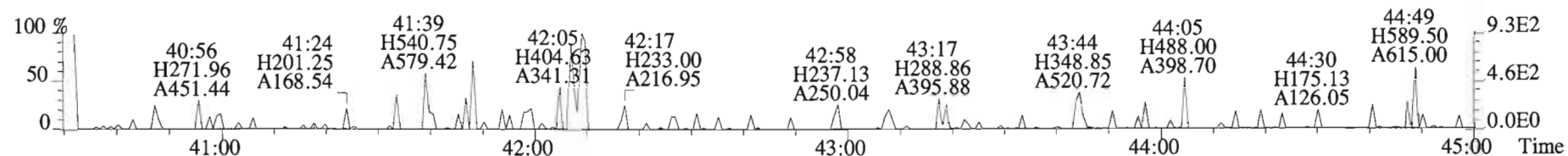
File:150130D3 #1-326 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
407.7818 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



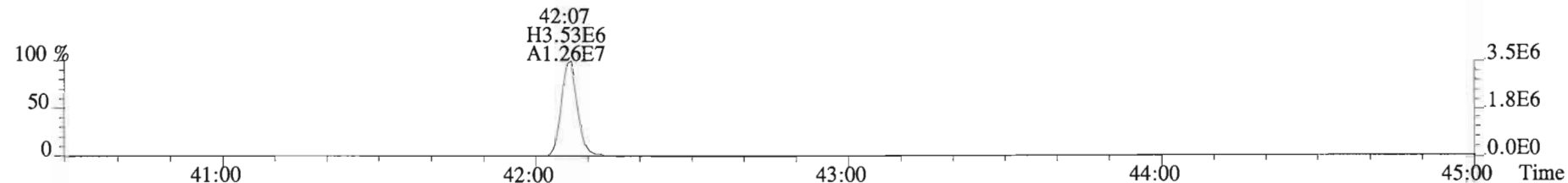
File:150130D3 #1-389 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD\_DB5  
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



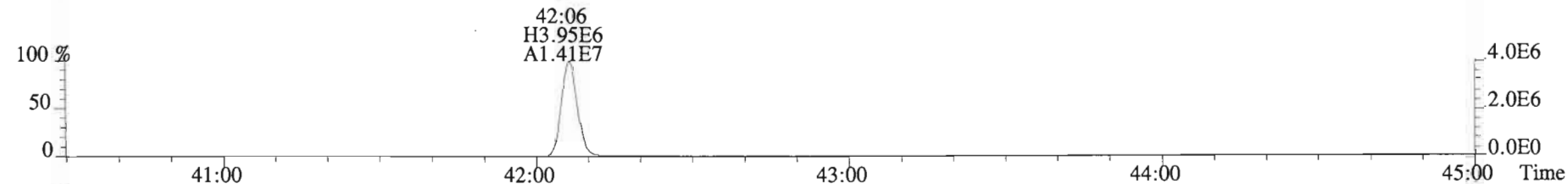
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



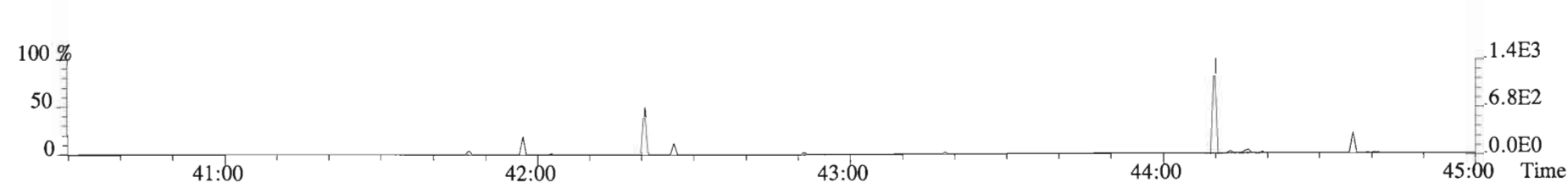
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A  
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory      Extraction Batch: B5A0101-BS1

Contract No.:                      SAS No.:

Matrix (aqueous/solid/leachate): SOLID      OPR Data Filename: 150130D3-2

Ext. Date: 1-27-15    Shift: Day    Analysis Date: 31-JAN-15    Time: 10:46:04

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	8.23	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	49.0	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	50.6	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	52.6	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	50.8	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	49.4	35.0 - 70.0
OCDD	100	101	78.0 - 144.0
2,3,7,8-TCDF	10	9.29	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	49.0	40.0 - 67.0
2,3,4,7,8-PeCDF	50	47.6	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	50.0	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	48.6	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	49.6	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	50.0	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	49.8	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	51.2	39.0 - 69.0
OCDF	100	101	63.0 - 170.0

(1) Contract-required concentration limits for OPR  
as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR  
as specified in Table 6a, Method 1613. 10/94

Analyst:    

Date:    2/2/15

## FORM 8B

## PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory      Extraction Batch: B5A0101-BS1

Contract No.:                      SAS No.:

Matrix (aqueous/solid/leachate): SOLID      OPR Data Filename: 150130D3-2

Ext. Date: 1-27-15    Shift: Day    Analysis Date: 31-JAN-15    Time: 10:46:04

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	85.8	20.0 - 175.0 25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	78.2	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	83.0	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	79.7	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	83.1	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	88.2	26.0 - 166.0
13C-OCDD	200	130	26.0 - 397.0
13C-2,3,7,8-TCDF	100	86.1	22.0 - 152.0 26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	88.3	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	84.0	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	86.9	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	84.9	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	80.3	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	85.5	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	88.0	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	84.1	20.0 - 186.0
13C-OCDF	200	145	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	37.5	12.4 - 76.4

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: AKDate: 2/4/15

Client ID: OPR  
Lab ID: B5A0101-BS1

Filename: 150130D3 S:2 Acq:31-JAN-15 10:46:04  
GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000

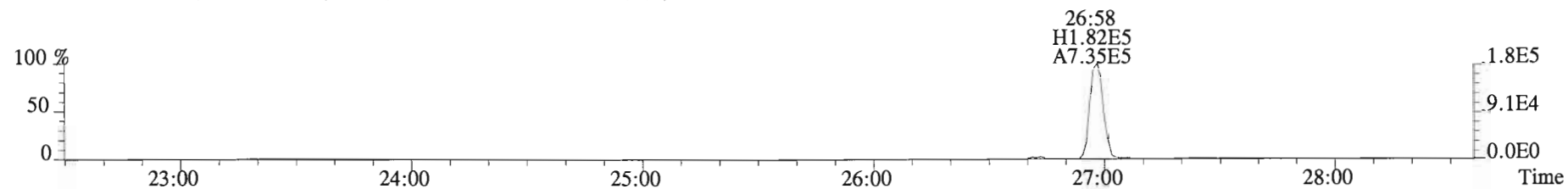
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EndCAL: NA

Page 3 of 3

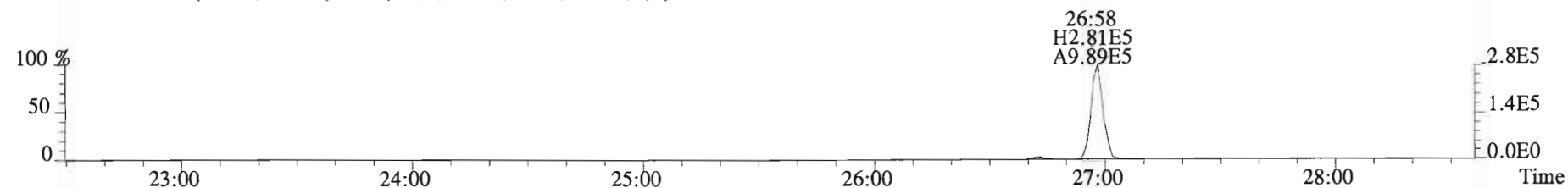
Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	1.72e+06	0.74 y	1.17	26:58	1.001	8.2308	*	2.5	*	*	Total Tetra-Dioxins	8.49	8.54	*	*	
1,2,3,7,8-PeCDD	8.06e+06	0.63 y	0.91	31:26	1.000	48.989	*	2.5	*	*	Total Penta-Dioxins	49.0	49.3	*	*	
1,2,3,4,7,8-HxCDD	7.23e+06	1.26 y	1.08	34:44	1.000	50.607	*	2.5	*	*	Total Hexa-Dioxins	154	155	*	*	
1,2,3,6,7,8-HxCDD	7.27e+06	1.26 y	1.06	34:51	1.000	52.555	*	2.5	*	*	Total Hepta-Dioxins	49.4	50.7	*	*	
1,2,3,7,8,9-HxCDD	7.43e+06	1.25 y	0.93	35:09	1.000	50.803	*	2.5	*	*	Total Tetra-Furans	9.50	9.54	*	*	
1,2,3,4,6,7,8-HpCDD	6.97e+06	1.04 y	1.10	38:35	1.000	49.378	*	2.5	*	*	Total Penta-Furans	97.779	98.333	*	*	
OCDD	1.05e+07	0.88 y	0.95	41:54	1.000	100.93	*	2.5	*	*	Total Hexa-Furans	198	200	*	*	
											Total Hepta-Furans	102	102	*	*	
2,3,7,8-TCDF	2.45e+06	0.78 y	1.07	26:12	1.001	9.2855	*	2.5	*	*						
1,2,3,7,8-PeCDF	1.34e+07	1.60 y	1.07	30:16	1.001	48.997	*	2.5	*	*						
2,3,4,7,8-PeCDF	1.20e+07	1.58 y	1.03	31:09	1.001	47.638	*	2.5	*	*						
1,2,3,4,7,8-HxCDF	1.31e+07	1.33 y	1.38	33:51	1.001	49.962	*	2.5	*	*						
1,2,3,6,7,8-HxCDF	1.24e+07	1.28 y	1.26	33:59	1.000	48.577	*	2.5	*	*						
2,3,4,6,7,8-HxCDF	1.17e+07	1.32 y	1.29	34:35	1.001	49.648	*	2.5	*	*						
1,2,3,7,8,9-HxCDF	9.66e+06	1.31 y	1.19	35:33	1.000	49.979	*	2.5	*	*						
1,2,3,4,6,7,8-HpCDF	1.13e+07	1.08 y	1.61	37:23	1.000	49.779	*	2.5	*	*						
1,2,3,4,7,8,9-HpCDF	1.01e+07	1.08 y	1.53	39:08	1.000	51.163	*	2.5	*	*						
OCDF	1.52e+07	0.93 y	1.10	42:08	1.000	101.32	*	2.5	*	*						
											Rec	Qual				
IS 13C-2,3,7,8-TCDD	1.79e+07	0.77 y	1.06	26:57	1.021	85.759					85.8					
IS 13C-1,2,3,7,8-PeCDD	1.81e+07	0.61 y	1.18	31:25	1.190	78.171					78.2					
IS 13C-1,2,3,4,7,8-HxCDD	1.32e+07	1.25 y	0.72	34:44	1.014	83.022					83.0					
IS 13C-1,2,3,6,7,8-HxCDD	1.30e+07	1.23 y	0.74	34:50	1.017	79.694					79.7					
IS 13C-1,2,3,7,8,9-HxCDD	1.57e+07	1.25 y	0.85	35:08	1.026	83.112					83.1					
IS 13C-1,2,3,4,6,7,8-HpCDD	1.28e+07	1.05 y	0.65	38:34	1.126	88.224					88.2					
IS 13C-OCDD	2.19e+07	0.90 y	0.76	41:54	1.223	129.55					64.8					
IS 13C-2,3,7,8-TCDF	2.47e+07	0.77 y	0.92	26:11	0.992	86.099					86.1					
IS 13C-1,2,3,7,8-PeCDF	2.54e+07	1.61 y	0.92	30:15	1.146	88.324					88.3					
IS 13C-2,3,4,7,8-PeCDF	2.44e+07	1.62 y	0.93	31:08	1.180	84.013					84.0					
IS 13C-1,2,3,4,7,8-HxCDF	1.89e+07	0.52 y	0.98	33:50	0.988	86.862					86.9					
IS 13C-1,2,3,6,7,8-HxCDF	2.04e+07	0.52 y	1.08	33:58	0.992	84.932					84.9					
IS 13C-2,3,4,6,7,8-HxCDF	1.82e+07	0.50 y	1.03	34:34	1.009	80.291					80.3					
IS 13C-1,2,3,7,8,9-HxCDF	1.63e+07	0.52 y	0.86	35:32	1.037	85.542					85.5					
IS 13C-1,2,3,4,6,7,8-HpCDF	1.41e+07	0.44 y	0.72	37:22	1.091	87.993					88.0					
IS 13C-1,2,3,4,7,8,9-HpCDF	1.30e+07	0.43 y	0.70	39:08	1.142	84.113					84.1					
IS 13C-OCDF	2.73e+07	0.89 y	0.85	42:07	1.230	145.00					72.5					
C/Up 37Cl-2,3,7,8-TCDD	8.23e+06		1.12	26:58	1.022	37.470					93.7					
RS/RT 13C-1,2,3,4-TCDD	1.97e+07	0.81 y	1.00	26:23	*	100.00										
RS 13C-1,2,3,4-TCDF	3.12e+07	0.78 y	1.00	24:59	*	100.00										
RS/RT 13C-1,2,3,4,6,9-HxCDF	2.22e+07	0.51 y	1.00	34:15	*	100.00										

Integrations  
by  
Analyst: [Signature]  
Date: 2/2/15  
Reviewed  
by  
Analyst: [Signature]  
Date: [Signature]

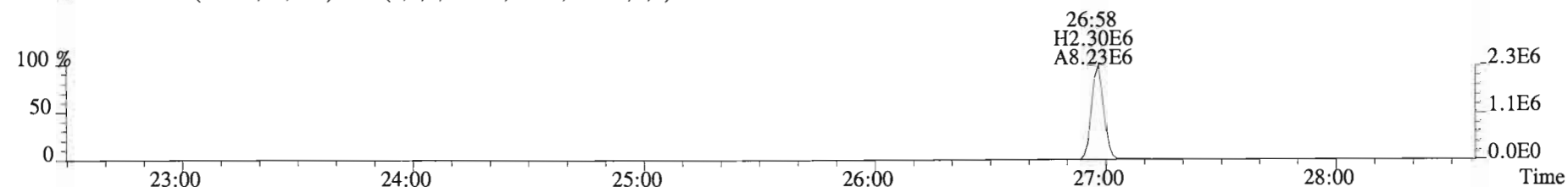
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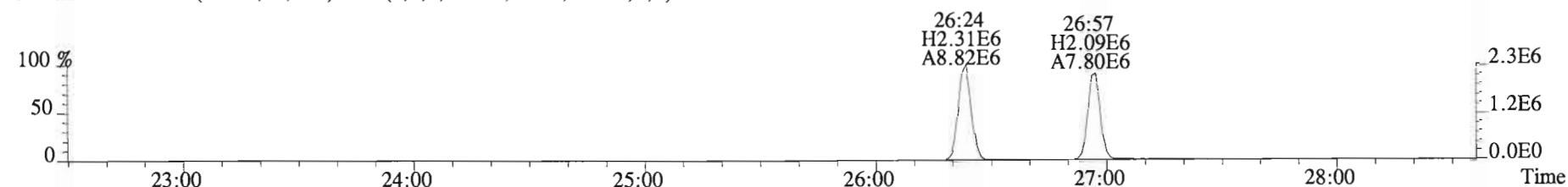
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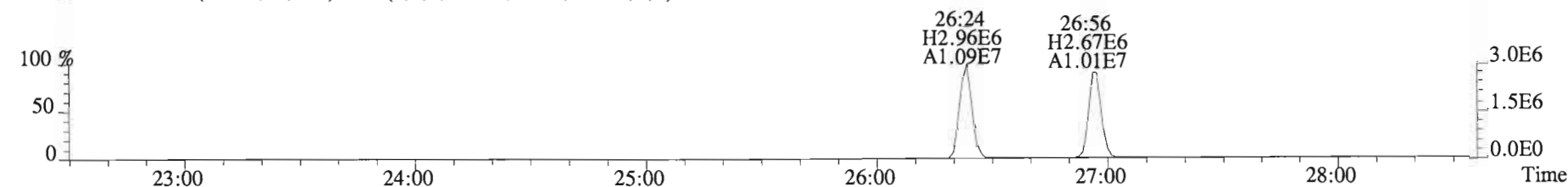
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

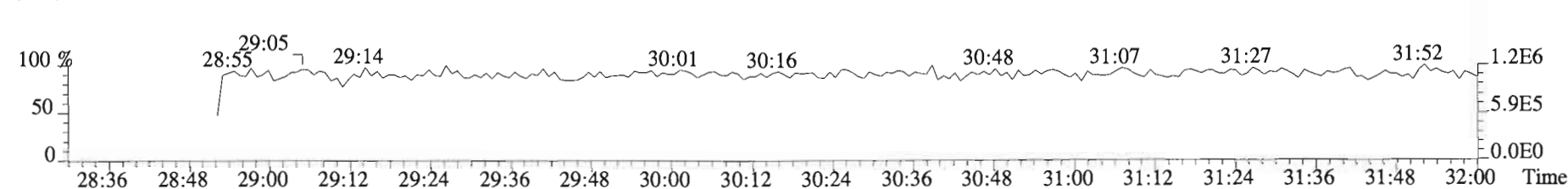
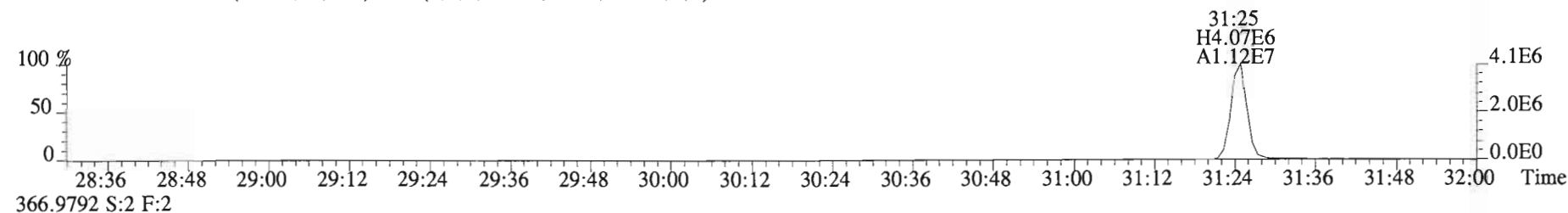
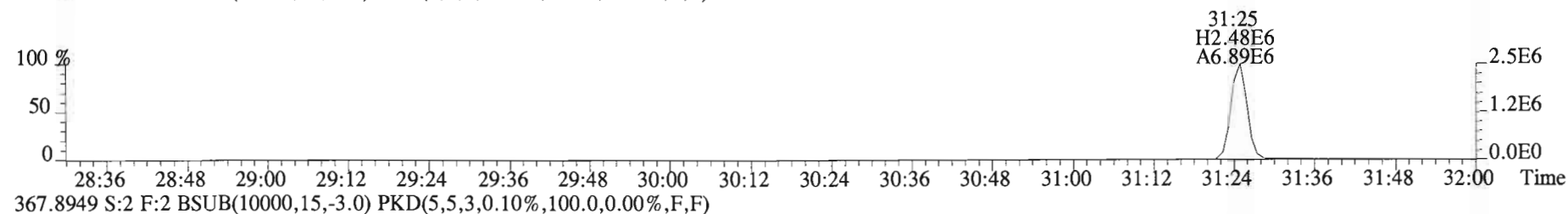
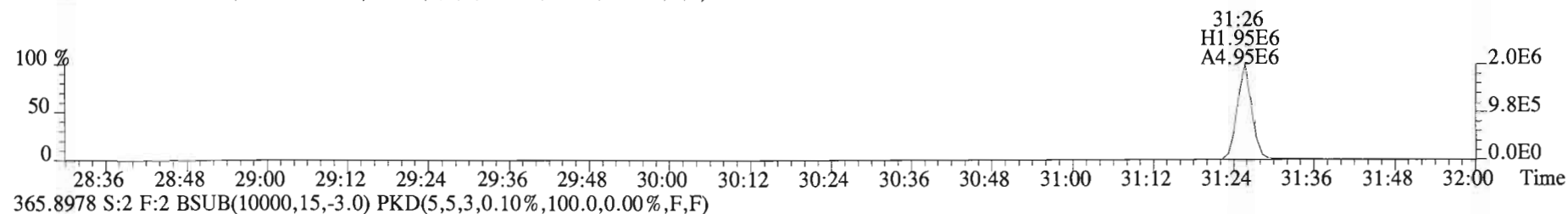
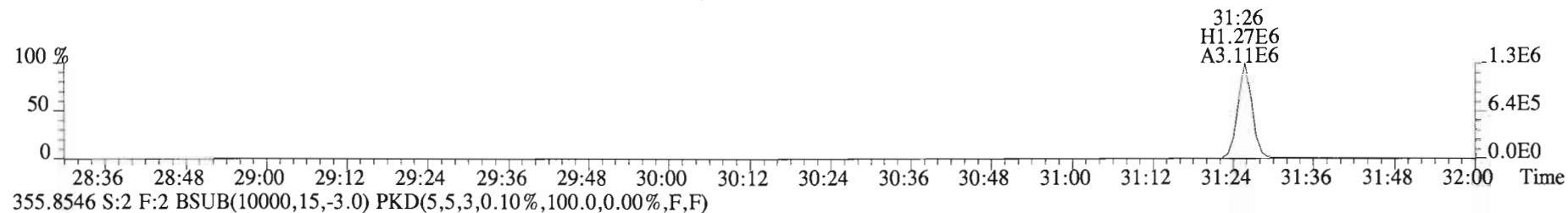


333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

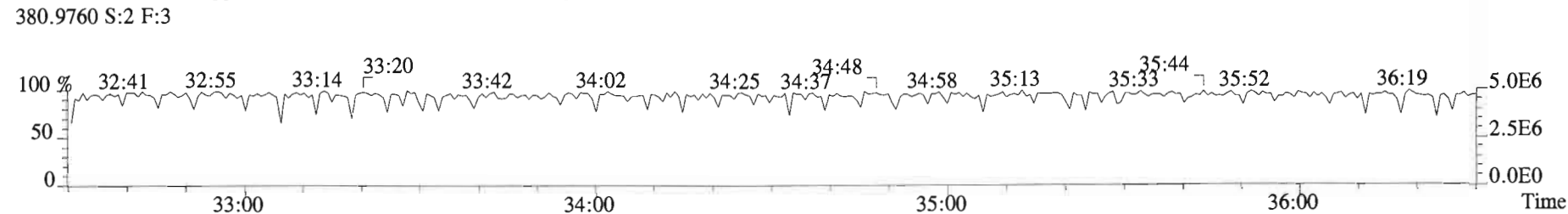
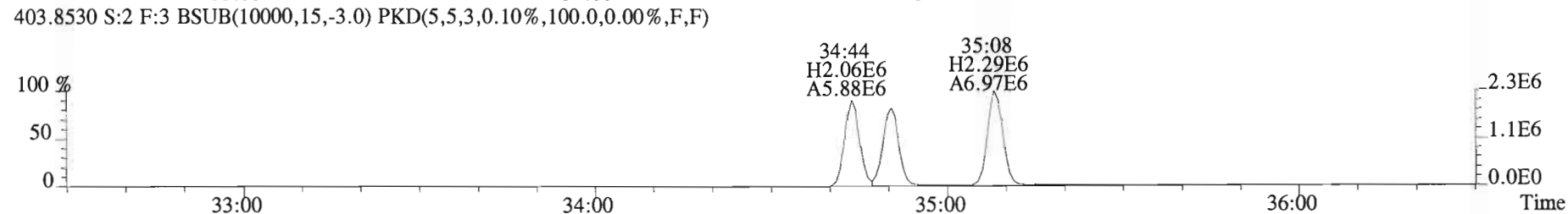
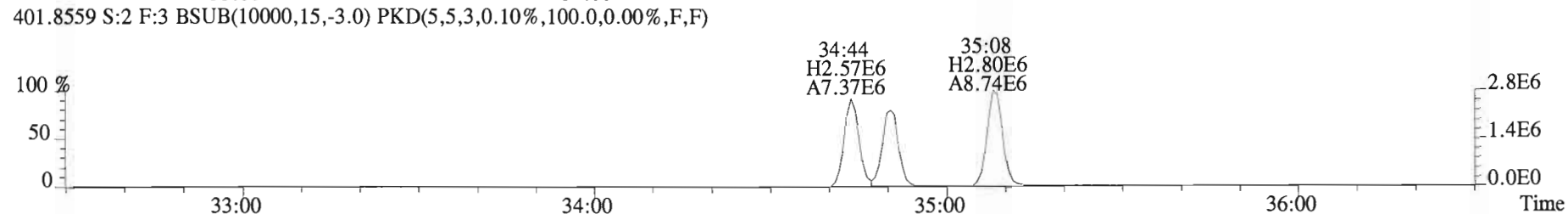
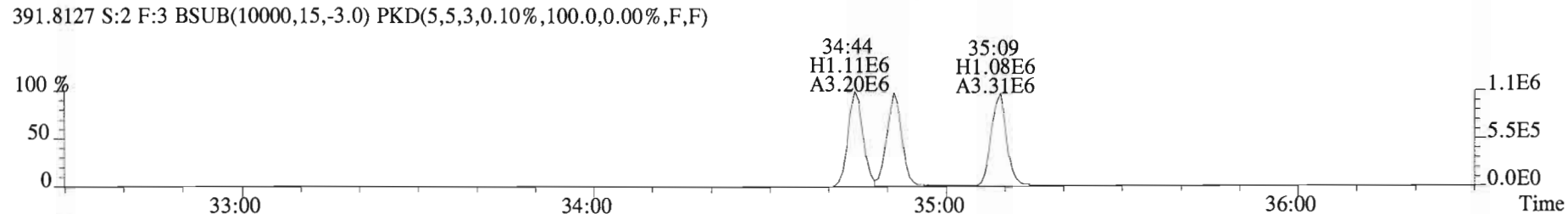
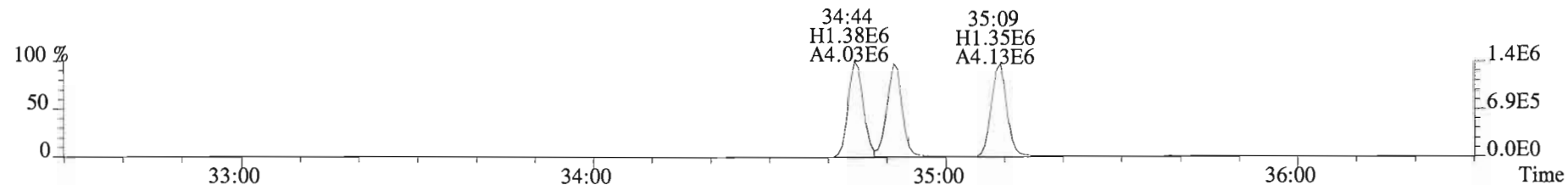




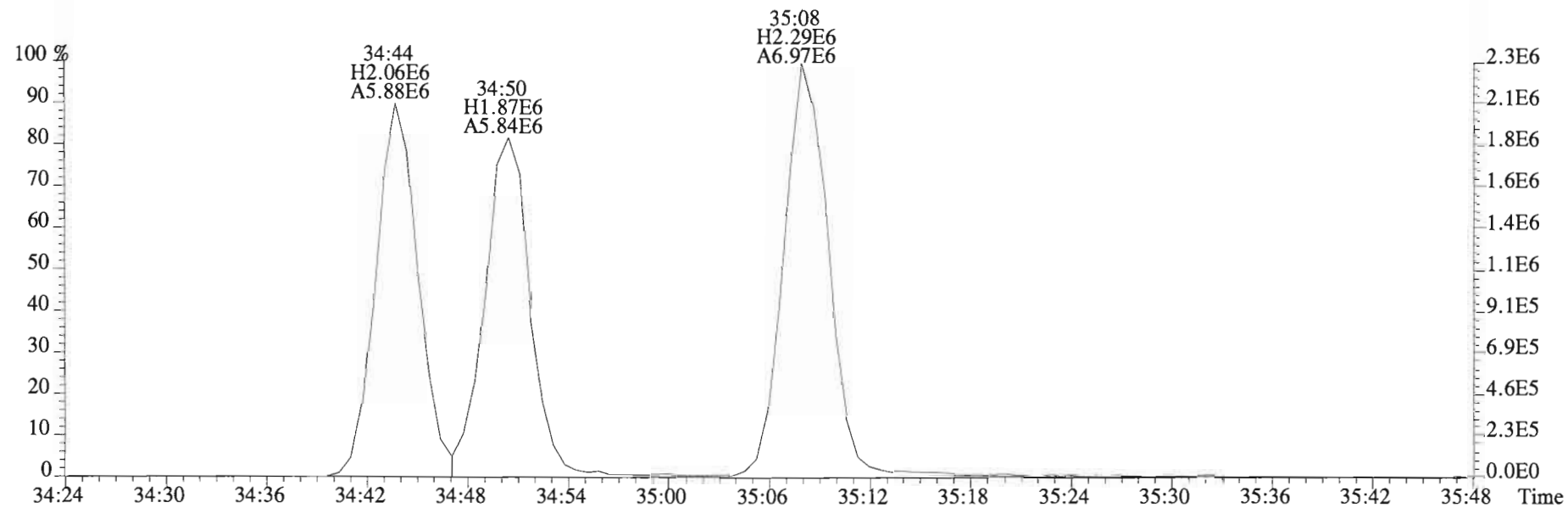
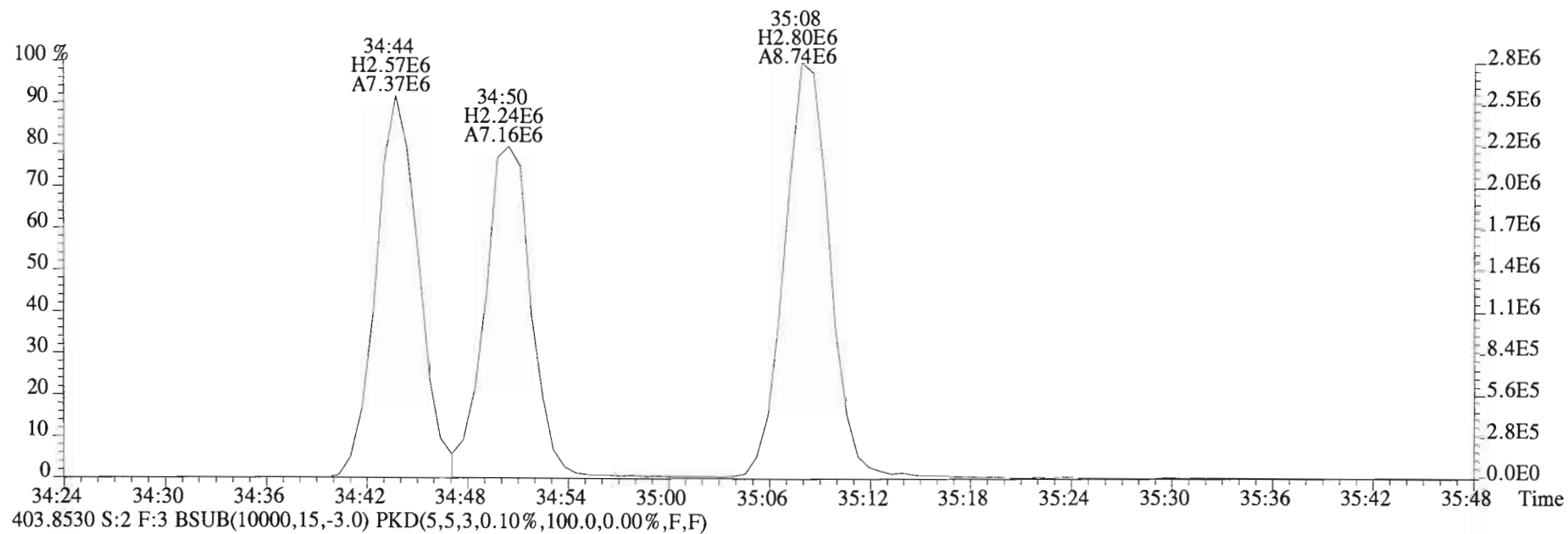
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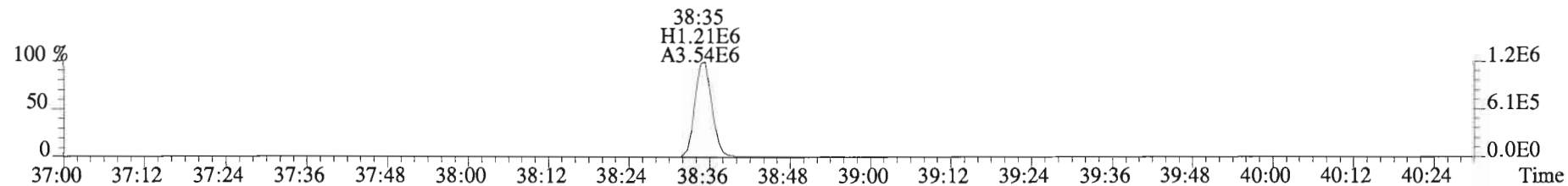
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Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD\_DB5  
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



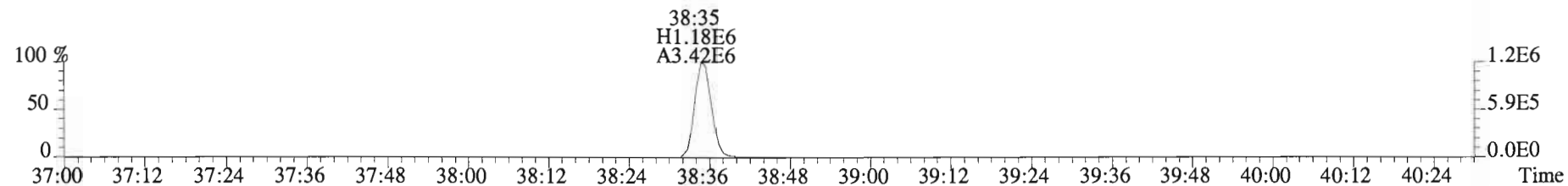
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401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



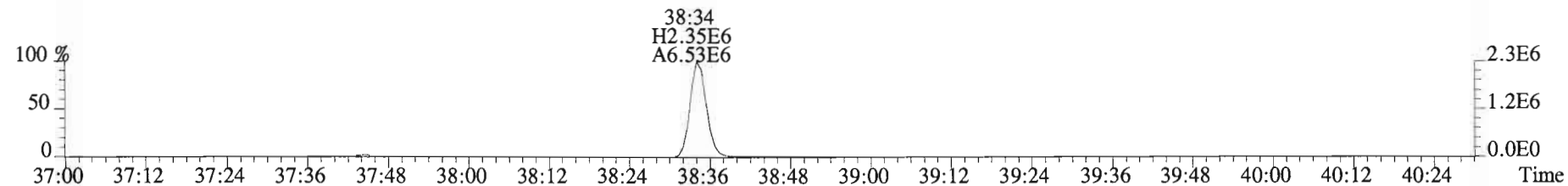
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Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD\_DB5  
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



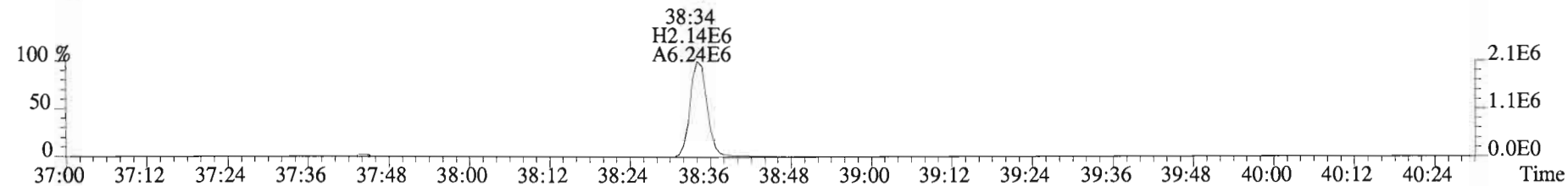
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



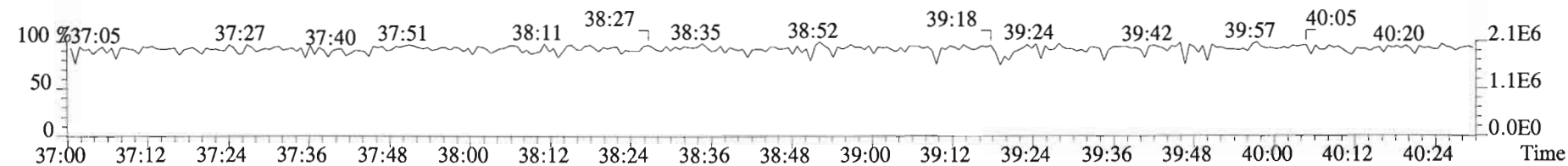
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



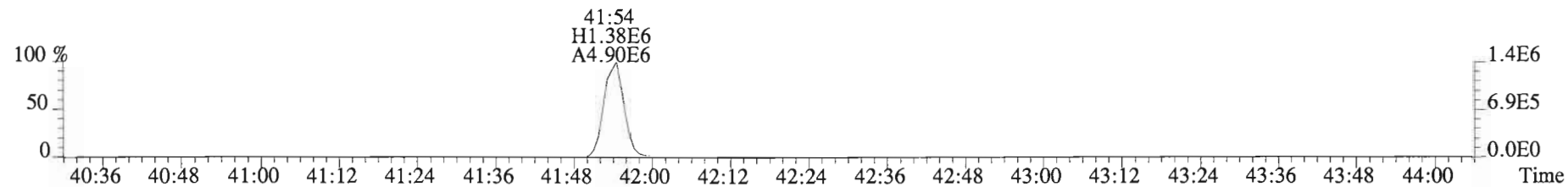
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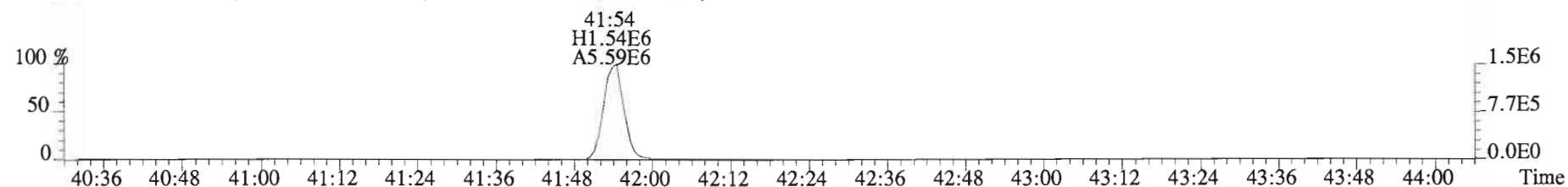
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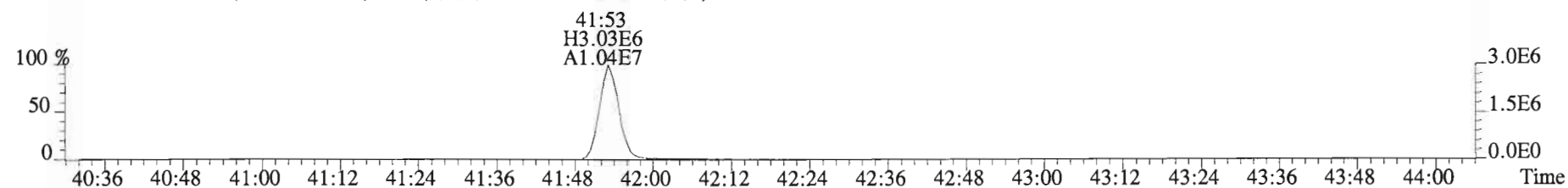
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457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



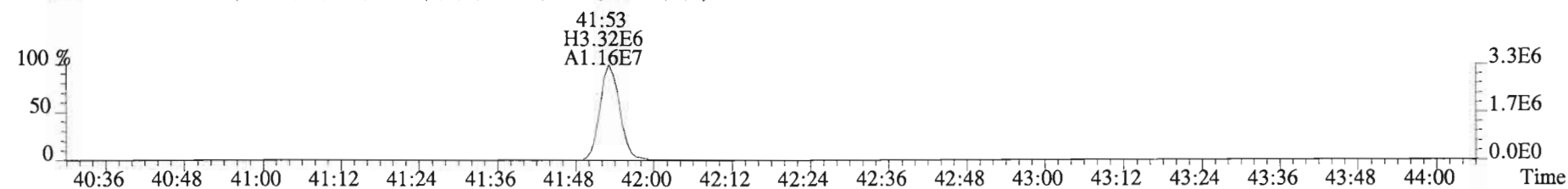
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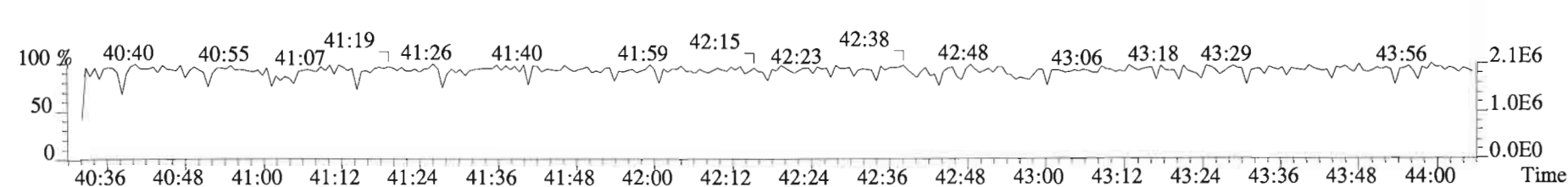
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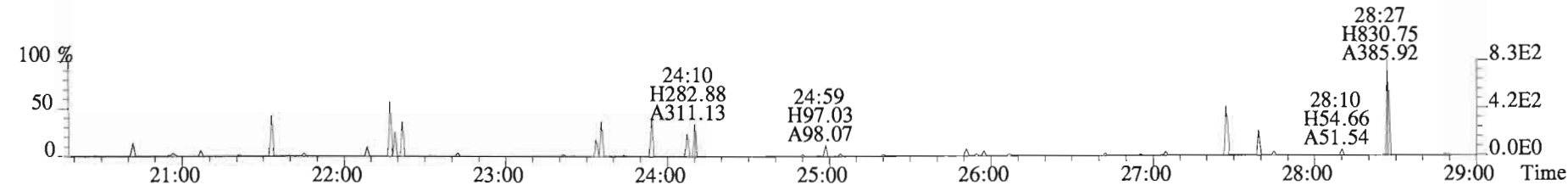
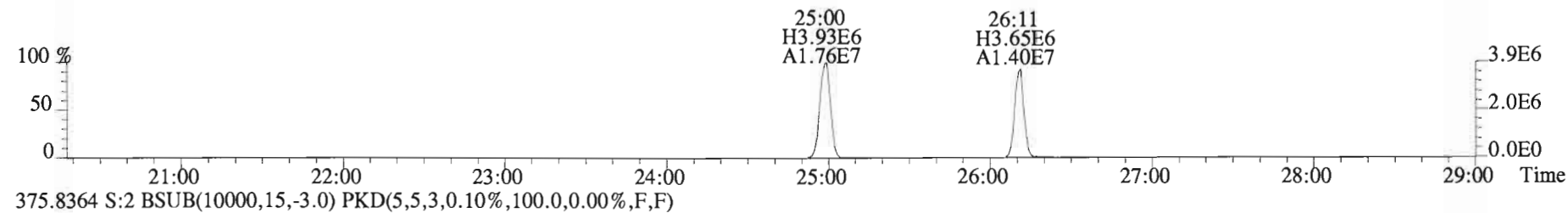
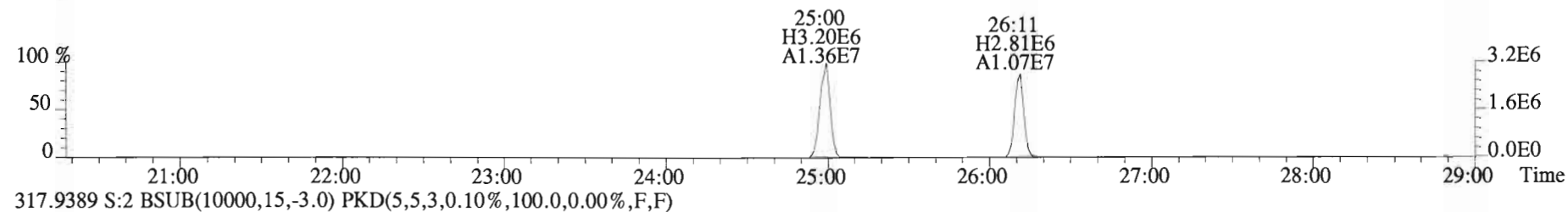
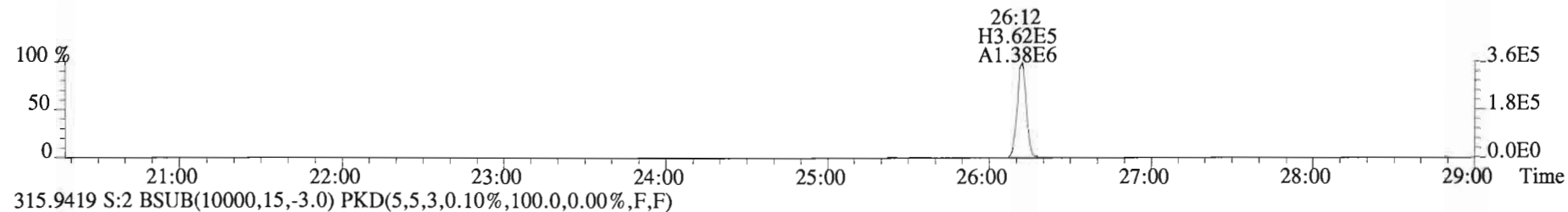
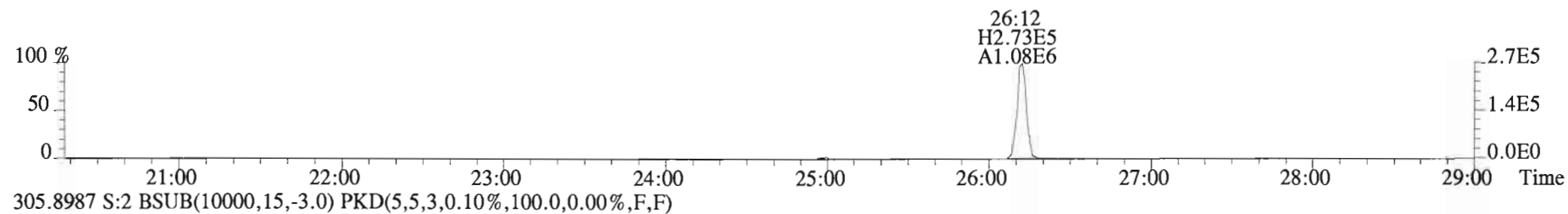
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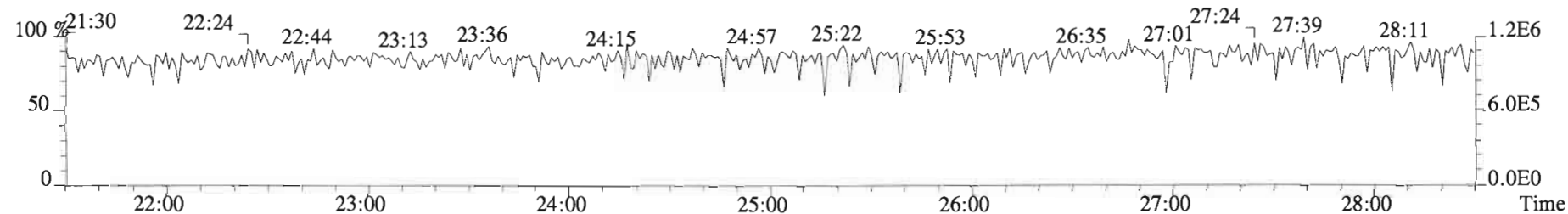
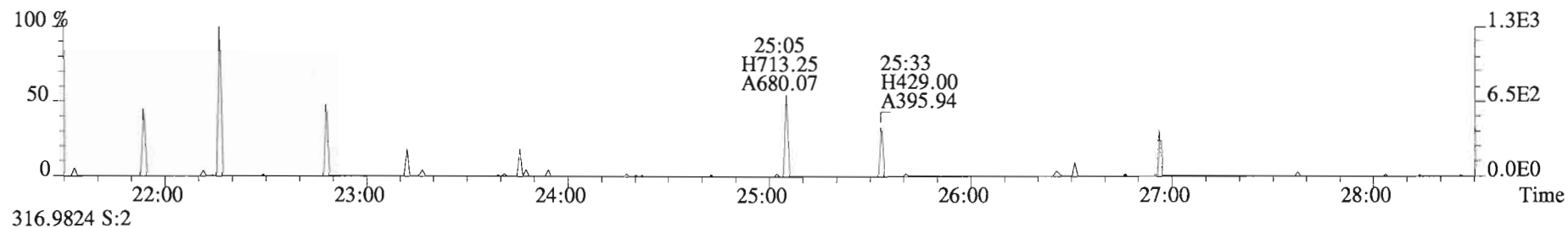
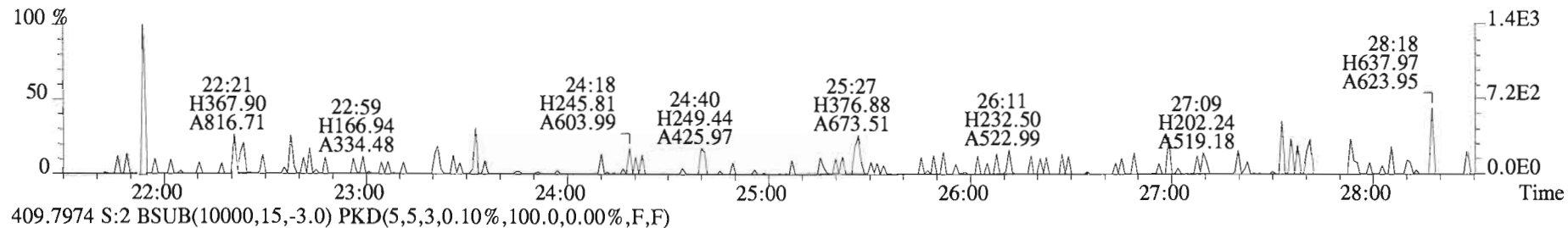
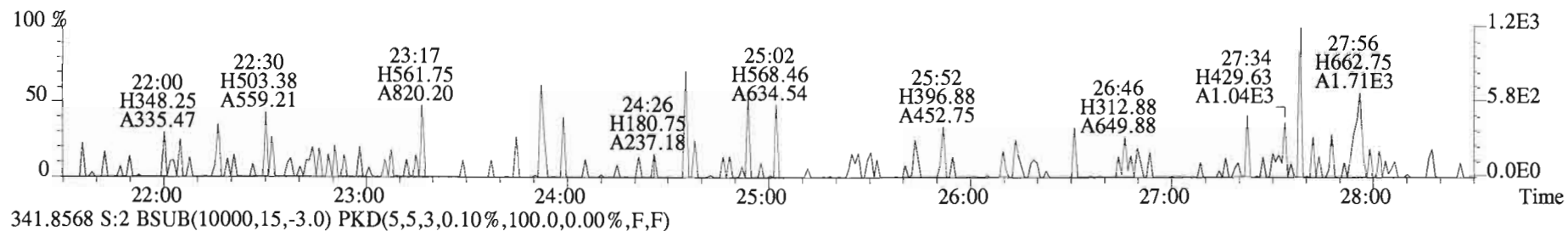
454.9728 S:2 F:5



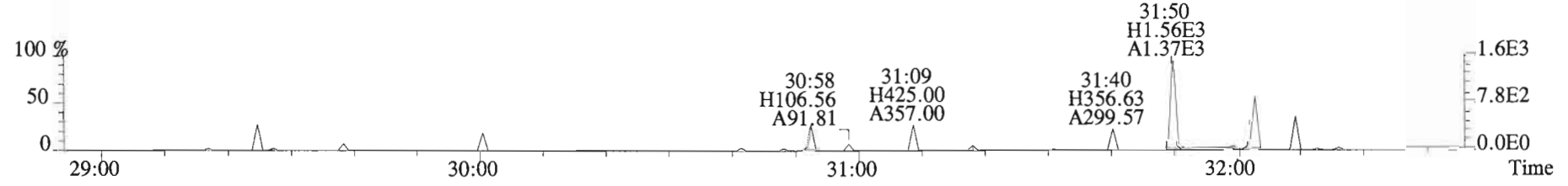
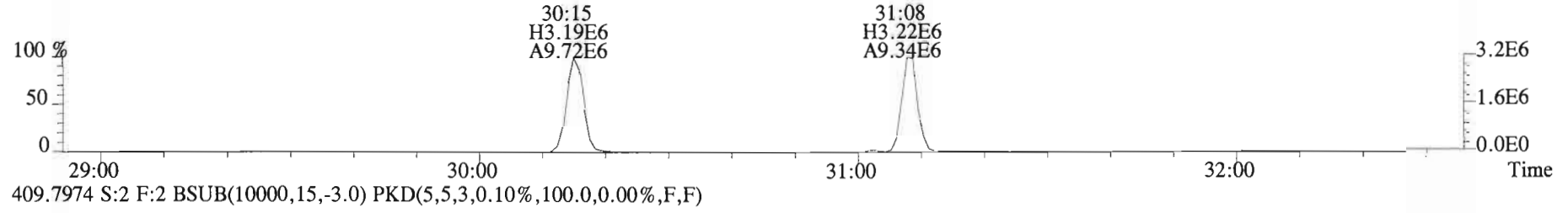
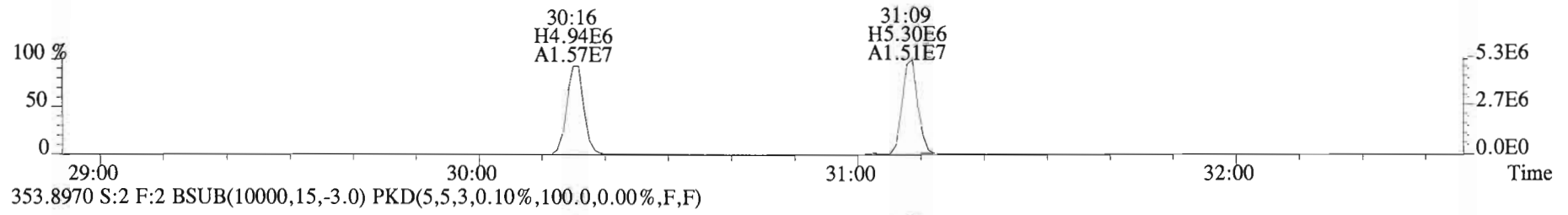
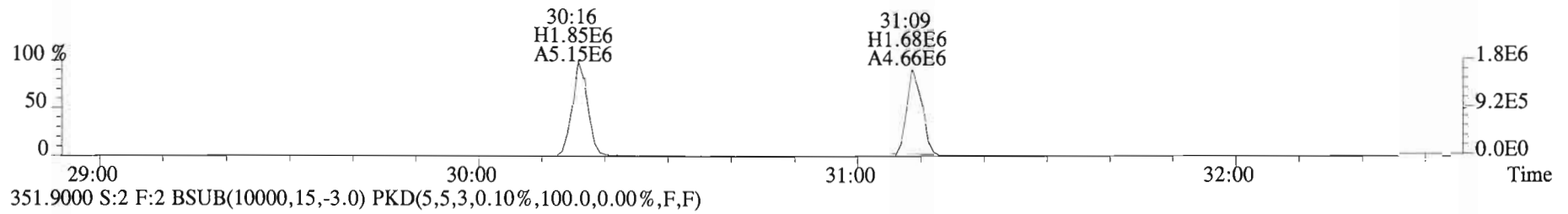
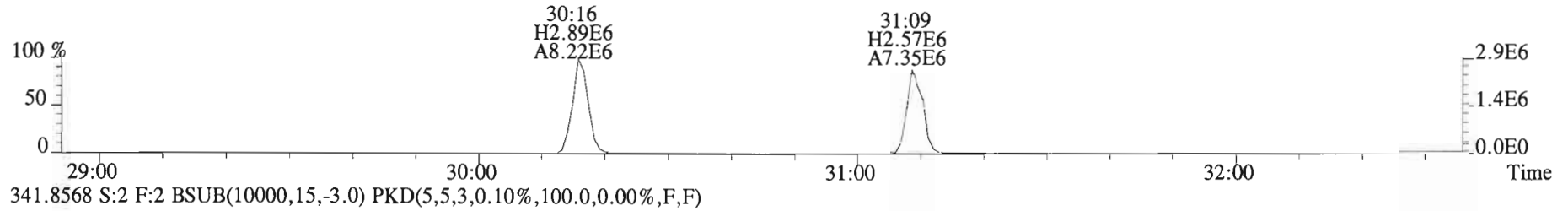
File:150130D3 #1-551 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD\_DB5  
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:150130D3 #1-551 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD\_DB5  
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

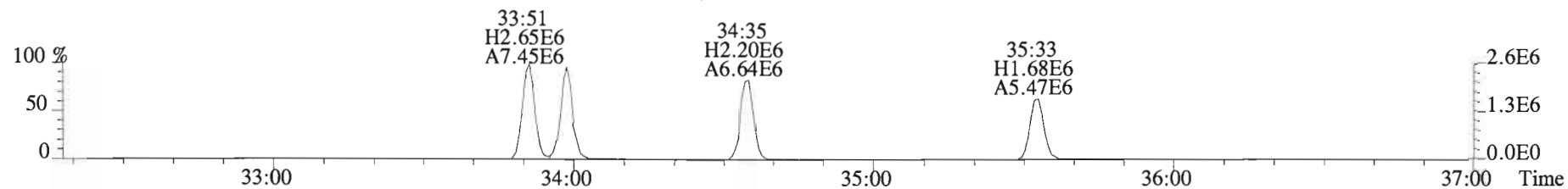


File:150130D3 #1-251 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD\_DB5  
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

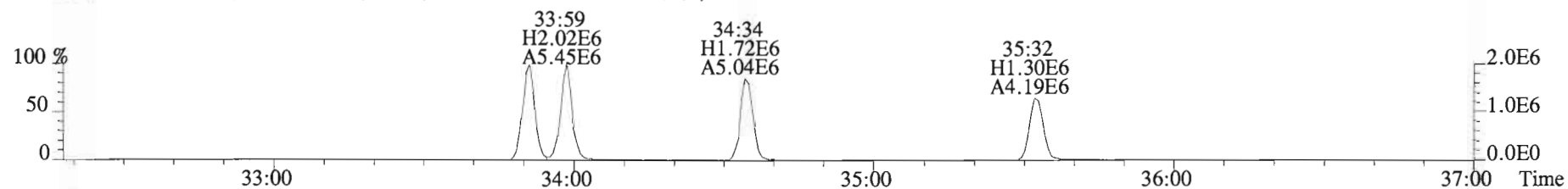




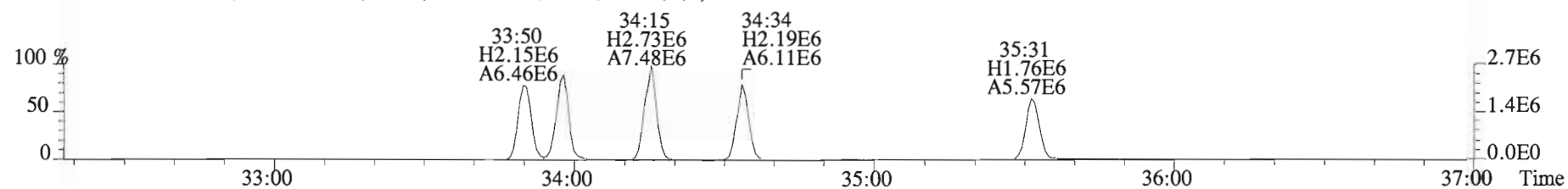
File:150130D3 #1-392 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD\_DB5  
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



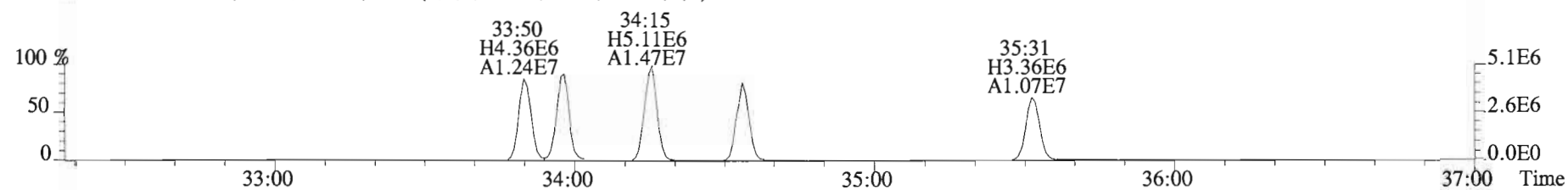
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



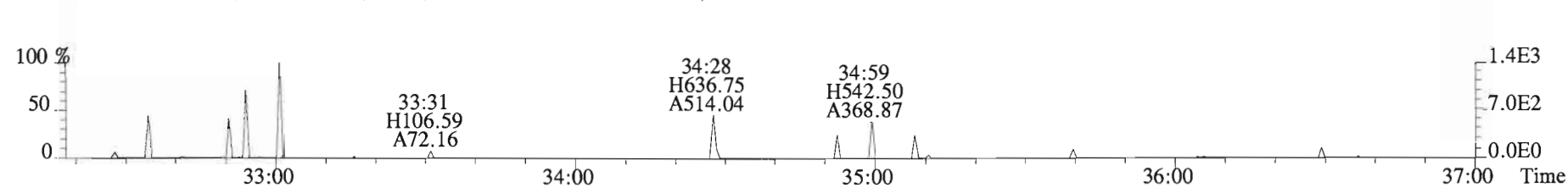
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



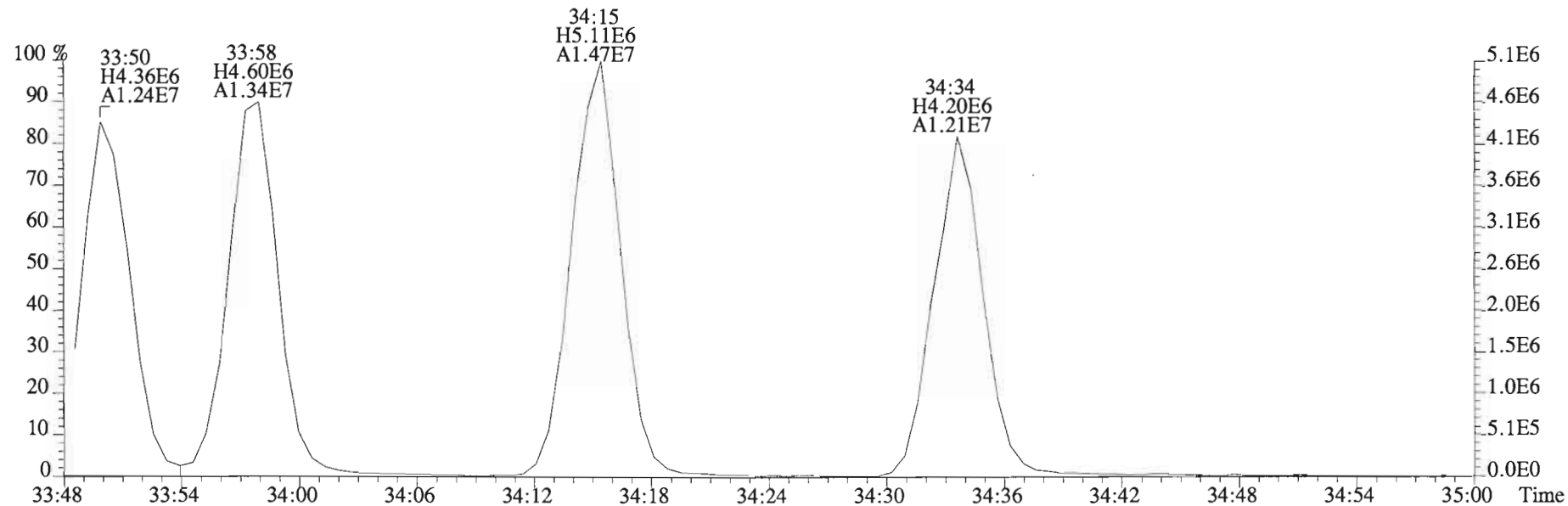
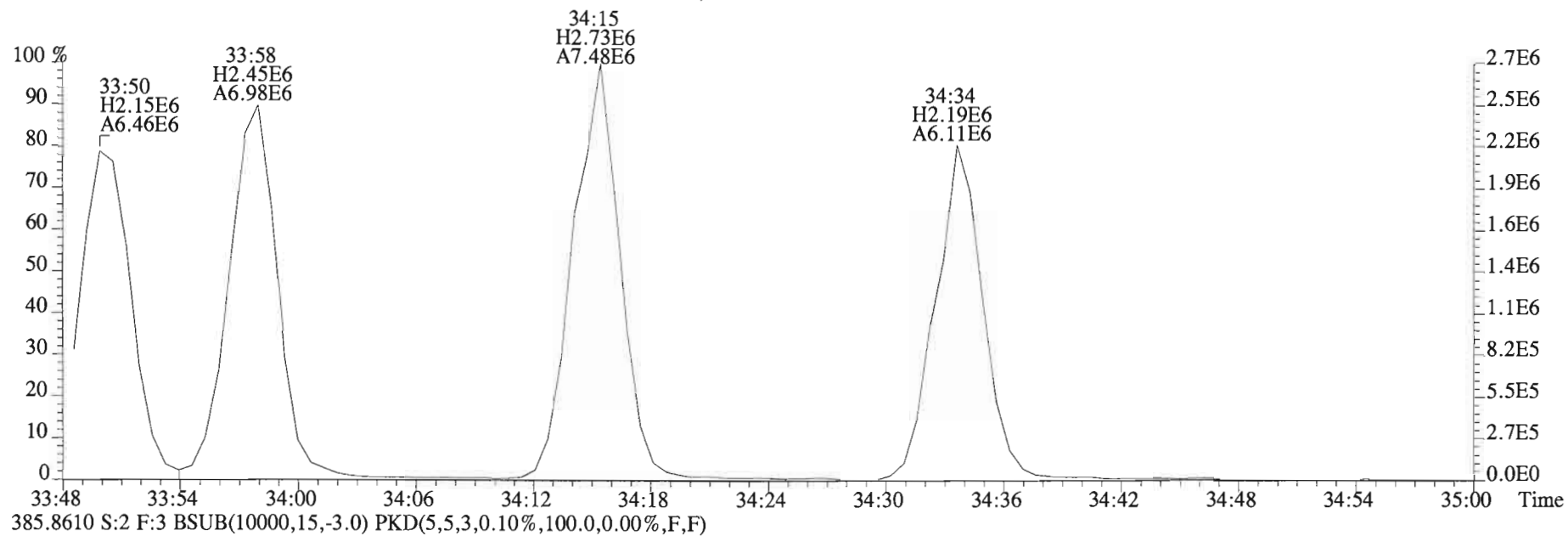
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



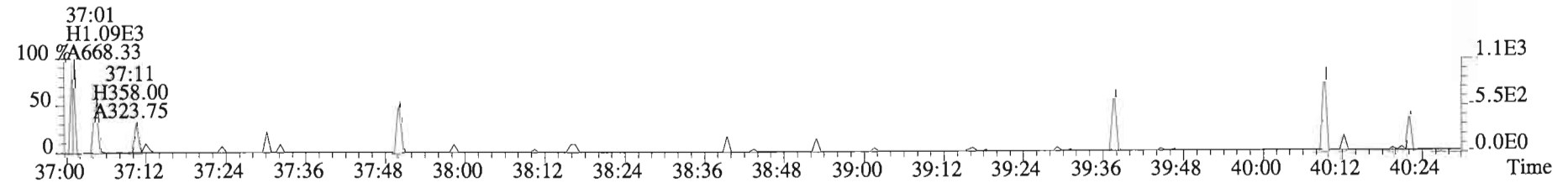
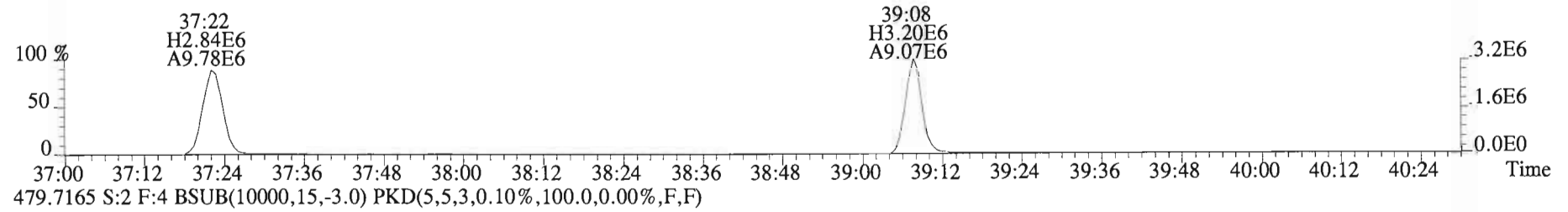
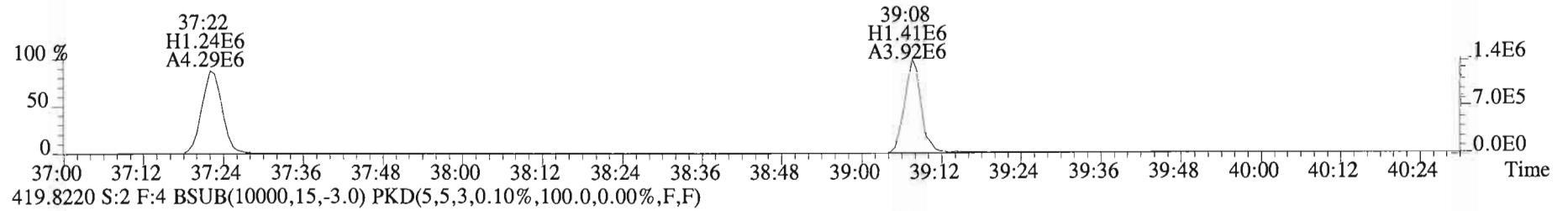
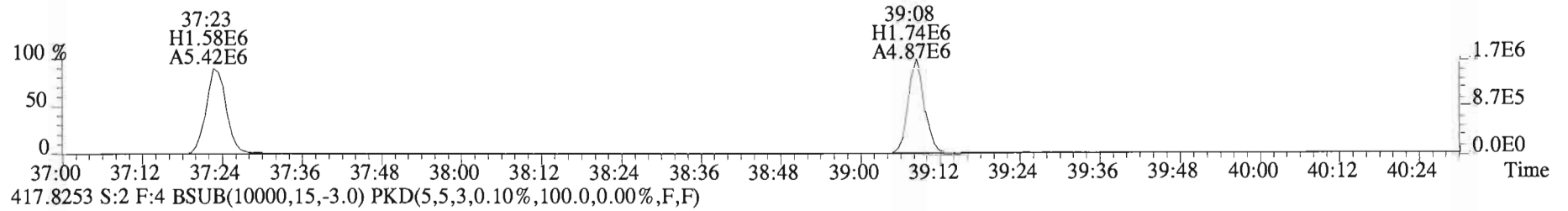
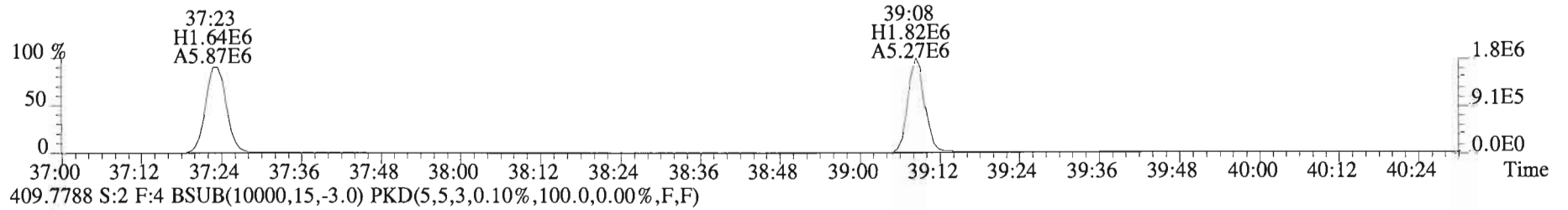
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



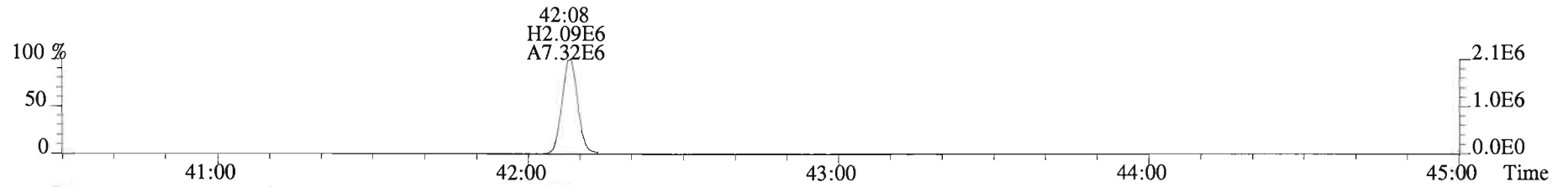
File:150130D3 #1-392 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD\_DB5  
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



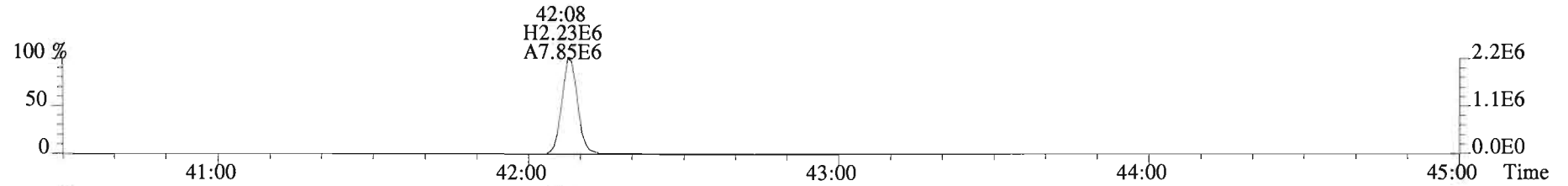
File:150130D3 #1-326 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD\_DB5  
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



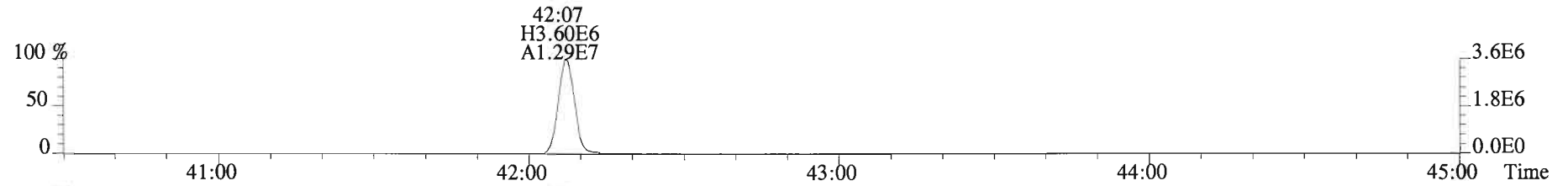
File:150130D3 #1-388 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:BSA0101-BS1 OPR 10 Exp:OCDD\_DB5  
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



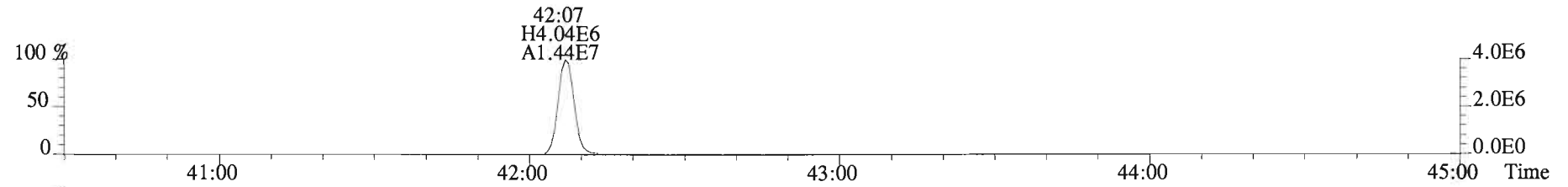
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



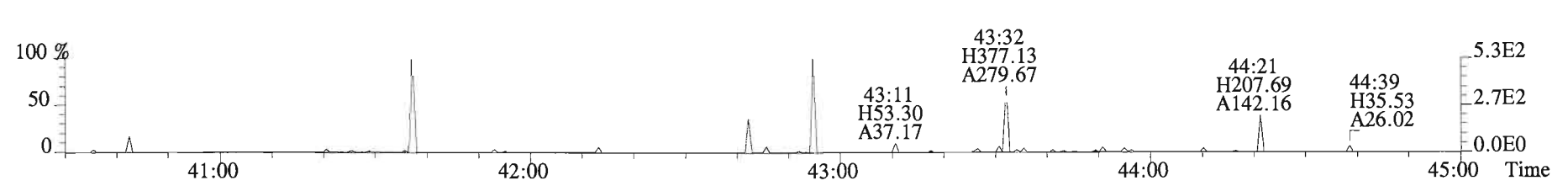
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: WM-CB-03-20150122-S      Filename: 150203D1      S:6      Acq:3-FEB-15 12:37:47  
 Lab ID: 1500116-01      GC Column ID: ZB-5MS      ICal: 1613VG7-1-7-15      wt/vol:10.013

ConCal: ST150203D1-1  
 EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	1.60e+05	0.67 y	1.17	26:58	1.3570			* 2.5	*	Total Tetra-Dioxins	21.7	22.1		*	*
1,2,3,7,8-PeCDD	5.07e+05	0.62 y	0.91	31:25	5.4644			* 2.5	*	Total Penta-Dioxins	49.2	49.2		*	*
1,2,3,4,7,8-HxCDD	8.27e+05	1.19 y	1.08	34:44	9.9330			* 2.5	*	Total Hexa-Dioxins	306	306		*	*
1,2,3,6,7,8-HxCDD	3.14e+06	1.23 y	1.06	34:51	37.452			* 2.5	*	Total Hepta-Dioxins	2250	2250		*	*
1,2,3,7,8,9-HxCDD	1.98e+06	1.25 y	0.93	35:09	23.310			* 2.5	*	Total Tetra-Furans	68.5	69.0		*	*
1,2,3,4,6,7,8-HpCDD	9.06e+07	1.03 y	1.10	38:35	1120.6			* 2.5	*	Total Penta-Furans	101.42	102.02		*	*
OCDD	7.11e+08	0.88 y	0.95	41:55	12299			* 2.5	*	Total Hexa-Furans	230	230		*	*
2,3,7,8-TCDF	5.69e+05	0.81 y	1.07	26:13	3.9183		3.31	* 2.5	*	Total Hepta-Furans	535	539		*	*
1,2,3,7,8-PeCDF	3.58e+05	1.66 y	1.07	30:16	2.6780			* 2.5	*						
2,3,4,7,8-PeCDF	4.61e+05	1.77 y	1.03	31:08	3.4923			* 2.5	*						
1,2,3,4,7,8-HxCDF	1.44e+06	1.27 y	1.38	33:51	11.130			* 2.5	*						
1,2,3,6,7,8-HxCDF	1.17e+06	1.31 y	1.26	33:58	8.9595			* 2.5	*						
2,3,4,6,7,8-HxCDF	1.33e+06	1.29 y	1.29	34:34	10.723			* 2.5	*						
1,2,3,7,8,9-HxCDF	2.83e+05	1.23 y	1.19	35:34	2.6665			* 2.5	*						
1,2,3,4,6,7,8-HpCDF	2.42e+07	1.07 y	1.61	37:23	203.72			* 2.5	*						
1,2,3,4,7,8,9-HpCDF	1.12e+06	1.16 y	1.53	39:08	11.048			* 2.5	*						
OCDF	3.29e+07	0.92 y	1.10	42:08	456.37			* 2.5	*						
IS	13C-2,3,7,8-TCDD	2.01e+07	0.83 y	1.06	26:57	163.51				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	2.04e+07	0.61 y	1.18	31:24	149.52				81.9					
IS	13C-1,2,3,4,7,8-HxCDD	1.54e+07	1.25 y	0.72	34:43	172.13				74.9					
IS	13C-1,2,3,6,7,8-HxCDD	1.57e+07	1.27 y	0.74	34:50	171.76				86.2					
IS	13C-1,2,3,7,8,9-HxCDD	1.82e+07	1.21 y	0.85	35:08	171.56				86.0					
IS	13C-1,2,3,4,6,7,8-HpCDD	1.46e+07	1.06 y	0.65	38:34	179.67				85.9					
IS	13C-OCDD	2.43e+07	0.89 y	0.76	41:54	256.00				90.0					
IS	13C-2,3,7,8-TCDF	2.71e+07	0.76 y	0.92	26:12	168.12				64.1					
IS	13C-1,2,3,7,8-PeCDF	2.49e+07	1.51 y	0.92	30:15	153.74				84.2					
IS	13C-2,3,4,7,8-PeCDF	2.55e+07	1.59 y	0.93	31:08	156.13				77.0					
IS	13C-1,2,3,4,7,8-HxCDF	1.86e+07	0.51 y	0.98	33:50	152.60				78.2					
IS	13C-1,2,3,6,7,8-HxCDF	2.08e+07	0.51 y	1.08	33:57	154.44				76.4					
IS	13C-2,3,4,6,7,8-HxCDF	1.92e+07	0.51 y	1.03	34:33	150.20				77.3					
IS	13C-1,2,3,7,8,9-HxCDF	1.79e+07	0.51 y	0.86	35:31	167.03				75.2					
IS	13C-1,2,3,4,6,7,8-HpCDF	1.47e+07	0.44 y	0.72	37:22	163.90				83.6					
IS	13C-1,2,3,4,7,8,9-HpCDF	1.33e+07	0.45 y	0.70	39:07	153.33				82.1					
IS	13C-OCDF	2.62e+07	0.89 y	0.85	42:08	248.08				76.8					
C/Up	37Cl-2,3,7,8-TCDD	9.40e+06		1.12	26:58	72.632				62.1					
RS/RT	13C-1,2,3,4-TCDD	2.32e+07	0.81 y	1.00	26:24	199.73									
RS	13C-1,2,3,4-TCDF	3.51e+07	0.78 y	1.00	25:00	199.73									
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.49e+07	0.52 y	1.00	34:15	199.73									

Integrations      Reviewed  
 by  
 Analyst: DMS      Analyst: AS  
 Date: 2/4/18      Date: 2/5/18

Totals class: TCDD EMPC

Entry #: 19

Run: 11 File: 150203D1 S: 6 I: 1 F: 1  
 Acquired: 3-FEB-15 12:37:47 Processed: 4-FEB-15 07:54:13

Total Concentration: 22.104

Unnamed Concentration: 20.747

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
23:38	2.889e+05	3.508e+05	0.82	y	6.398e+05	5.4309
24:00	1.705e+05	2.338e+05	0.73	y	4.043e+05	3.4318
24:24	4.287e+04	5.646e+04	0.76	y	9.932e+04	0.84313
25:07	1.950e+04	3.180e+04	0.61	n	4.482e+04	0.38043
25:20	7.954e+04	1.174e+05	0.68	y	1.969e+05	1.6717
25:31	1.114e+05	1.262e+05	0.88	y	2.375e+05	2.0165
25:41	3.354e+04	5.079e+04	0.66	y	8.432e+04	0.71581
25:54	2.036e+04	2.727e+04	0.75	y	4.764e+04	0.40438
26:04	4.310e+04	6.565e+04	0.66	y	1.087e+05	0.92315
26:24	4.614e+04	5.954e+04	0.77	y	1.057e+05	0.89711
26:30	1.299e+04	1.693e+04	0.77	y	2.992e+04	0.25399
26:43	7.538e+04	9.869e+04	0.76	y	1.741e+05	1.4777
26:51	1.453e+04	2.205e+04	0.66	y	3.659e+04	0.31056
26:58	6.441e+04	9.544e+04	0.67	y	1.599e+05	1.3570 2,3,7,8-TCDD
27:15	5.346e+04	7.359e+04	0.73	y	1.270e+05	1.0785
27:23	1.480e+04	2.076e+04	0.71	y	3.556e+04	0.30189
27:49	2.907e+04	4.277e+04	0.68	y	7.184e+04	0.60984

Totals class: PeCDD EMPC

Entry #: 21

Run: 11 File: 150203D1 S: 6 I: 1 F: 2  
 Acquired: 3-FEB-15 12:37:47 Processed: 4-FEB-15 07:54:13

Total Concentration: 49.166

Unnamed Concentration: 43.702

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
29:23	4.409e+05	7.263e+05	0.61 y	1.167e+06	12.574	
29:49	9.985e+04	1.706e+05	0.59 y	2.705e+05	2.9137	
30:17	2.141e+05	3.467e+05	0.62 y	5.609e+05	6.0422	
30:25	2.100e+05	3.500e+05	0.60 y	5.600e+05	6.0329	
30:31	1.780e+05	2.800e+05	0.64 y	4.581e+05	4.9348	
30:44	2.147e+05	3.386e+05	0.63 y	5.533e+05	5.9612	
31:01	7.038e+04	1.215e+05	0.58 y	1.919e+05	2.0670	
31:25	1.943e+05	3.129e+05	0.62 y	5.072e+05	5.4644	1,2,3,7,8-PeCDD
31:29	4.438e+04	6.384e+04	0.70 y	1.082e+05	1.1659	
31:46	7.461e+04	1.120e+05	0.67 y	1.866e+05	2.0104	

Totals class: HxCDD EMPC

Entry #: 23

Run: 11 File: 150203D1 S: 6 I: 1 F: 3  
Acquired: 3-FEB-15 12:37:47 Processed: 4-FEB-15 07:54:13

Total Concentration: 305.94 Unnamed Concentration: 235.249

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
33:11	3.918e+06	3.067e+06	1.28 y	6.985e+06	83.128	
33:45	8.204e+05	6.628e+05	1.24 y	1.483e+06	17.651	
34:01	5.704e+06	4.565e+06	1.25 y	1.027e+07	122.22	
34:09	3.046e+05	2.271e+05	1.34 y	5.317e+05	6.3271	
34:44	4.493e+05	3.778e+05	1.19 y	8.272e+05	9.9330	1,2,3,4,7,8-HxCDD
34:51	1.736e+06	1.406e+06	1.23 y	3.142e+06	37.452	1,2,3,6,7,8-HxCDD
35:03	2.801e+05	2.177e+05	1.29 y	4.978e+05	5.9242	
35:09	1.099e+06	8.806e+05	1.25 y	1.980e+06	23.310	1,2,3,7,8,9-HxCDD



Totals class: HpCDD EMPC

Entry #: 25

Run: 11 File: 150203D1 S: 6 I: 1 F: 4  
Acquired: 3-FEB-15 12:37:47 Processed: 4-FEB-15 07:54:13

Total Concentration: 2253.7

Unnamed Concentration: 1133.098

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:45	4.636e+07	4.522e+07	1.03 y	9.158e+07	1133.1	
38:35	4.603e+07	4.454e+07	1.03 y	9.057e+07	1120.6	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 11 File: 150203D1 S: 6 I: 1 F: 1  
 Acquired: 3-FEB-15 12:37:47 Processed: 4-FEB-15 07:54:13

Total Concentration: 69.005

Unnamed Concentration: 65.087

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
21:33	9.175e+04	1.237e+05	0.74 y	2.155e+05	1.4835	
22:08	1.248e+05	1.551e+05	0.80 y	2.799e+05	1.9271	
22:45	5.560e+05	7.247e+05	0.77 y	1.281e+06	8.8176	
23:15	4.222e+05	5.190e+05	0.81 y	9.411e+05	6.4797	
23:32	5.840e+04	8.181e+04	0.71 y	1.402e+05	0.96533	
23:38	2.845e+05	3.785e+05	0.75 y	6.630e+05	4.5650	
24:02	3.017e+05	4.022e+05	0.75 y	7.040e+05	4.8469	
24:09	1.264e+05	1.557e+05	0.81 y	2.821e+05	1.9421	
24:19	1.397e+05	1.933e+05	0.72 y	3.330e+05	2.2927	
24:40	7.006e+04	1.065e+05	0.66 y	1.766e+05	1.2156	
24:47	1.463e+05	1.762e+05	0.83 y	3.234e+05	2.2200	
24:54	3.776e+05	4.859e+05	0.78 y	8.635e+05	5.9454	
25:02	3.060e+05	3.741e+05	0.82 y	6.801e+05	4.6826	
25:26*	2.404e+05	3.362e+05	0.71 y	5.766e+05	3.9698	
25:40	1.273e+05	1.507e+05	0.84 y	2.779e+05	1.9136	
25:50	1.050e+05	1.425e+05	0.74 y	2.475e+05	1.7038	
26:01	9.022e+04	1.324e+05	0.68 y	2.226e+05	1.5326	
26:06	9.540e+04	1.415e+05	0.67 y	2.369e+05	1.6311	
26:13	2.541e+05	3.150e+05	0.81 y	5.691e+05	3.9183	2,3,7,8-TCDF
26:32	3.671e+05	4.793e+05	0.77 y	8.464e+05	5.8272	
26:45	2.224e+04	2.786e+04	0.80 y	5.010e+04	0.34496	
27:00*	1.101e+04	1.465e+04	0.75 y	2.566e+04	0.17668	
27:39	9.713e+03	1.109e+04	0.88 y	2.081e+04	0.14325	
27:57	3.958e+04	3.779e+04	1.05 n	6.688e+04	0.46050	

Totals class: 1st Func. PeCDF EMPC            Entry #: 29

Run: 11            File: 150203D1            S: 6 I: 1 F: 1  
Acquired: 3-FEB-15 12:37:47    Processed: 4-FEB-15 07:54:13

Total Concentration: 46.813            Unnamed Concentration: 46.813

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
27:55	3.722e+06	2.497e+06	1.49 y	6.219e+06	46.813	

Totals class: PeCDF EMPC

Entry #: 31

Run: 11 File: 150203D1 S: 6 I: 1 F: 2  
 Acquired: 3-FEB-15 12:37:47 Processed: 4-FEB-15 07:54:13

Total Concentration: 55.205 Unnamed Concentration: 49.035

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
29:14	3.947e+05	2.503e+05	1.58 y	6.450e+05	4.8547	
29:21	1.852e+06	1.150e+06	1.61 y	3.003e+06	22.602	
29:43	4.795e+04	3.695e+04	1.30 n	7.889e+04	0.59379	
29:53	7.094e+05	4.373e+05	1.62 y	1.147e+06	8.6316	
30:06	1.122e+05	7.416e+04	1.51 y	1.863e+05	1.4024	
30:16	2.238e+05	1.344e+05	1.66 y	3.582e+05	2.6780	1,2,3,7,8-PeCDF
30:30	3.909e+05	2.569e+05	1.52 y	6.478e+05	4.8758	
30:57	2.231e+04	1.256e+04	1.78 y	3.487e+04	0.26249	
31:03	1.841e+05	1.228e+05	1.50 y	3.069e+05	2.3100	
31:08	2.942e+05	1.664e+05	1.77 y	4.606e+05	3.4923	2,3,4,7,8-PeCDF
31:11	2.247e+05	1.631e+05	1.38 y	3.879e+05	2.9194	
31:25	1.875e+04	1.160e+04	1.62 y	3.035e+04	0.22848	
32:01	3.001e+04	1.707e+04	1.76 y	4.708e+04	0.35438	

Totals class: HxCDF EMPC

Entry #: 33

Run: 11 File: 150203D1 S: 6 I: 1 F: 3  
 Acquired: 3-FEB-15 12:37:47 Processed: 4-FEB-15 07:54:13

Total Concentration: 230.45

Unnamed Concentration: 196.968

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
32:39	1.961e+06	1.515e+06	1.29 y	3.476e+06	28.322	
32:49	6.611e+06	5.046e+06	1.31 y	1.166e+07	94.978	
33:10	1.214e+05	9.195e+04	1.32 y	2.133e+05	1.7383	
33:22	4.752e+06	3.604e+06	1.32 y	8.356e+06	68.084	
33:44	2.223e+05	1.681e+05	1.32 y	3.904e+05	3.1809	
33:51	8.026e+05	6.343e+05	1.27 y	1.437e+06	11.130	1,2,3,4,7,8-HxCDF
33:58	6.667e+05	5.073e+05	1.31 y	1.174e+06	8.9595	1,2,3,6,7,8-HxCDF
34:16	4.494e+04	3.668e+04	1.23 y	8.162e+04	0.66500	
34:34	7.468e+05	5.809e+05	1.29 y	1.328e+06	10.723	2,3,4,6,7,8-HxCDF
35:34	1.561e+05	1.271e+05	1.23 y	2.832e+05	2.6665	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

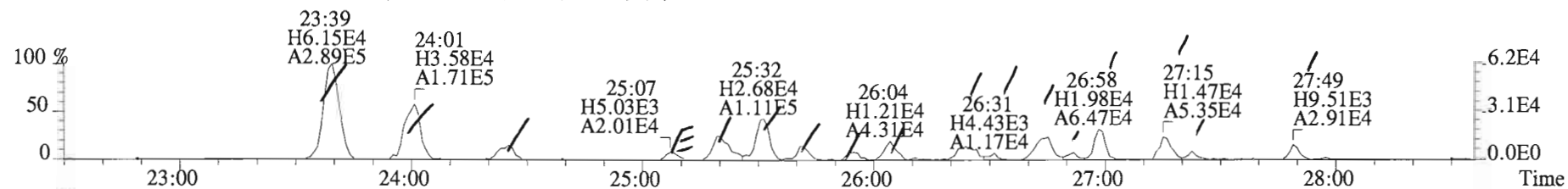
Entry #: 35

Run: 11 File: 150203D1 S: 6 I: 1 F: 4  
Acquired: 3-FEB-15 12:37:47 Processed: 4-FEB-15 07:54:13

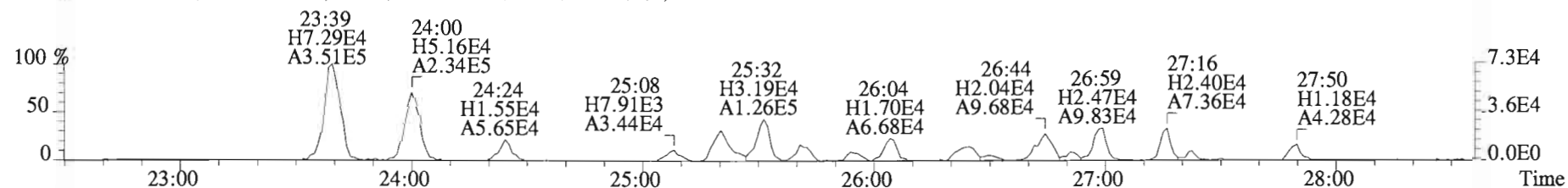
Total Concentration: 538.56 Unnamed Concentration: 323.788

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:23	1.252e+07	1.169e+07	1.07 y	2.421e+07	203.72	1,2,3,4,6,7,8-HpCDF
37:45	2.391e+05	1.883e+05	1.27 n	3.842e+05	3.4895	
37:56	1.851e+07	1.675e+07	1.10 y	3.526e+07	320.30	
39:08	6.040e+05	5.189e+05	1.16 y	1.123e+06	11.048	1,2,3,4,7,8,9-HpCDF

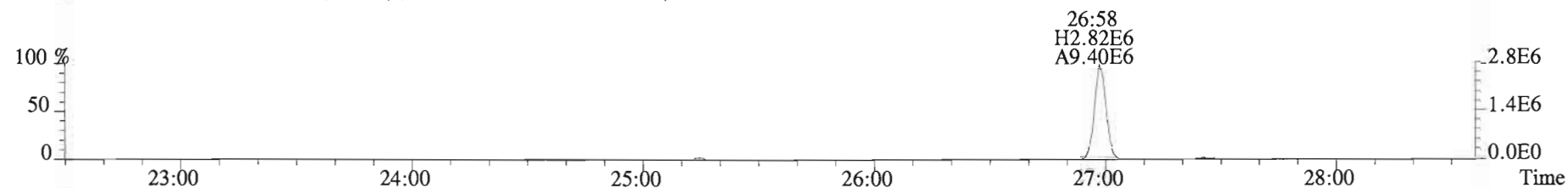
File:150203D1 #1-551 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



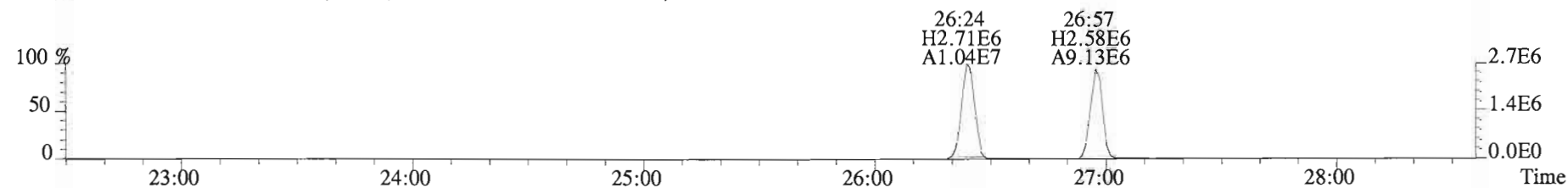
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



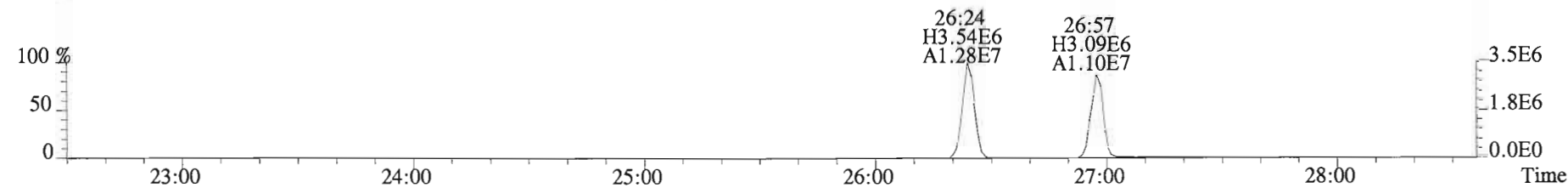
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



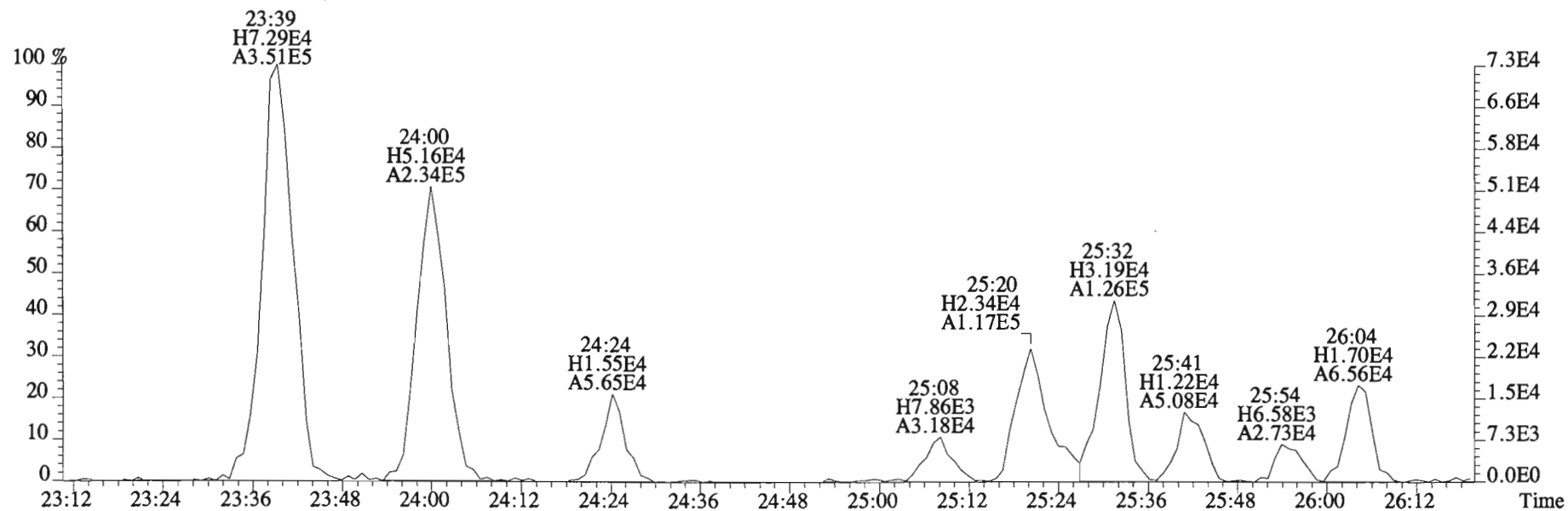
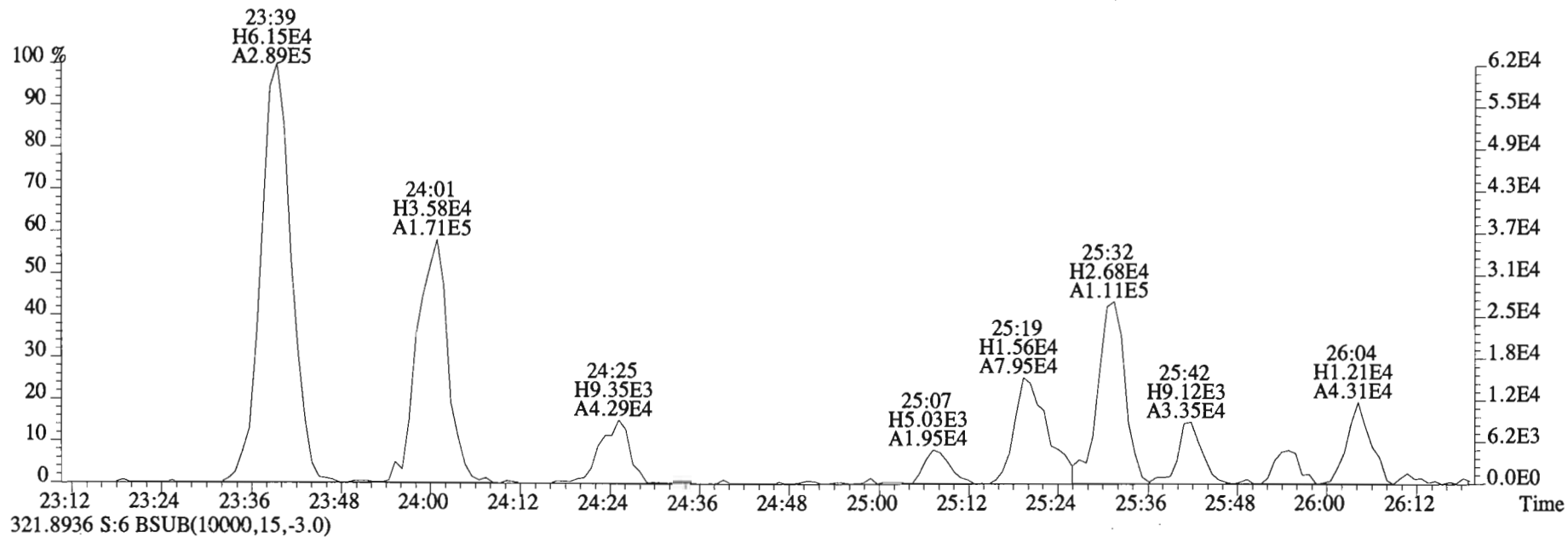
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

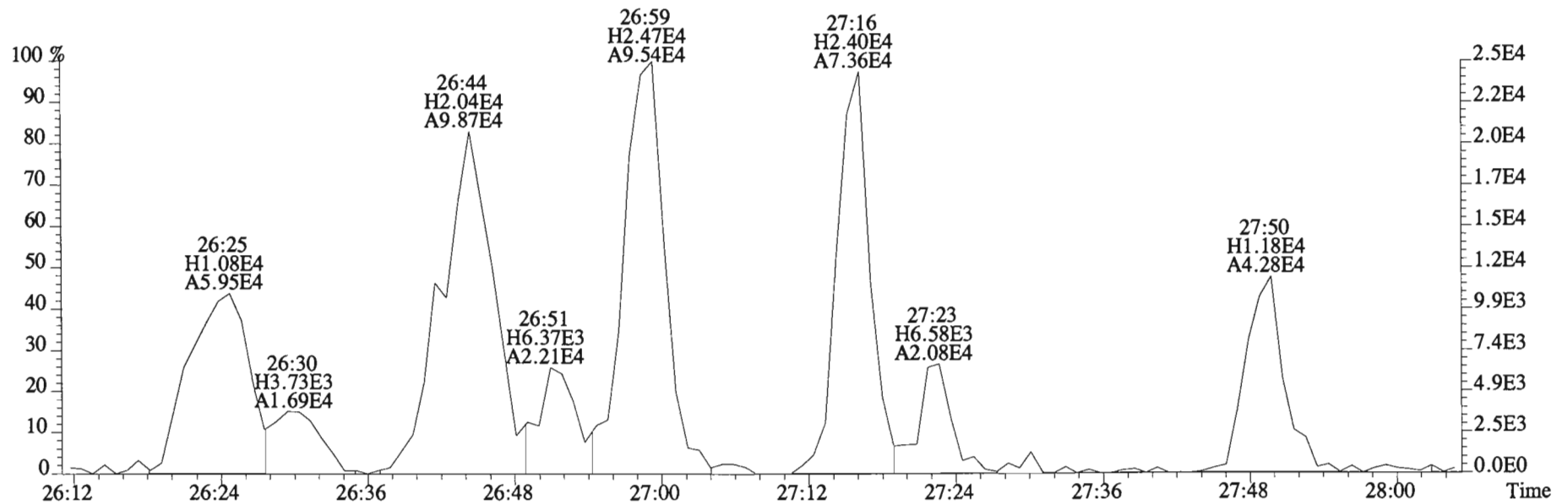
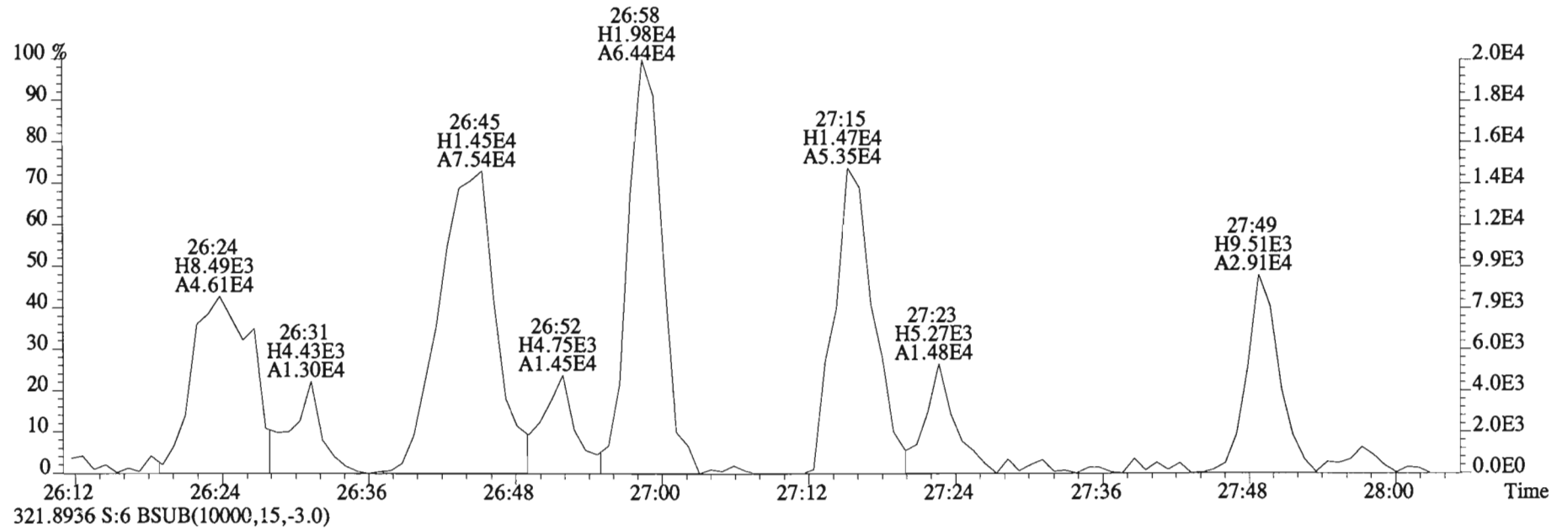


File:150203D1 #1-551 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text: Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5.  
 319.8965 S:6 BSUB(10000,15,-3.0)

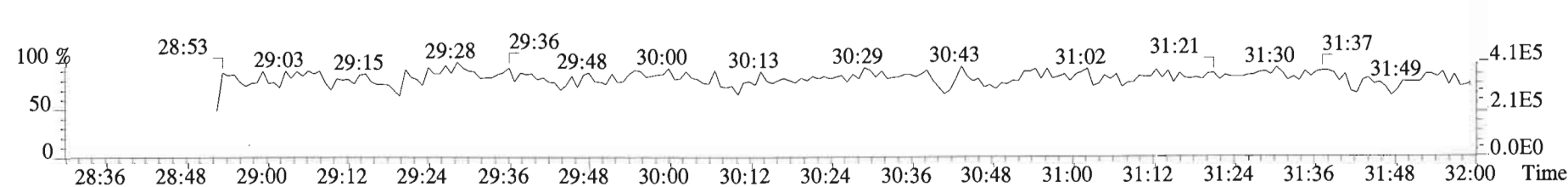
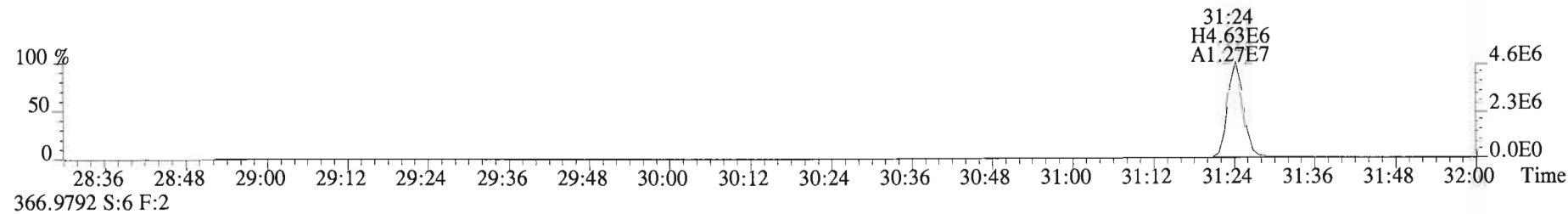
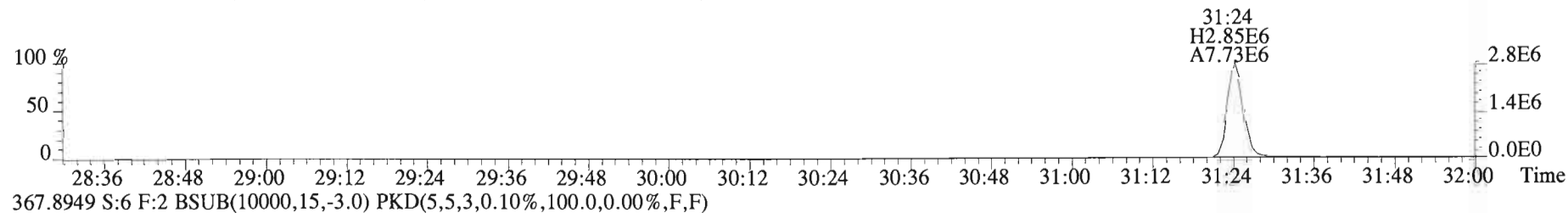
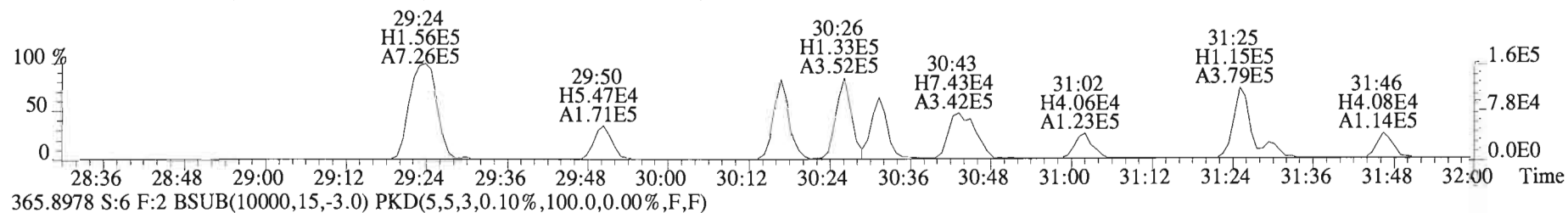
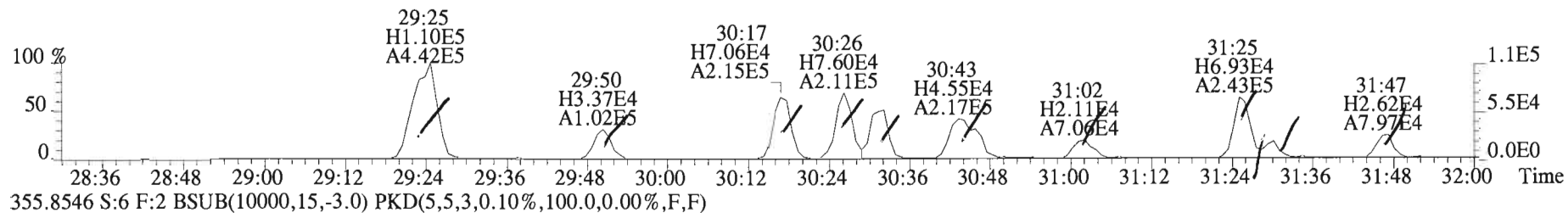




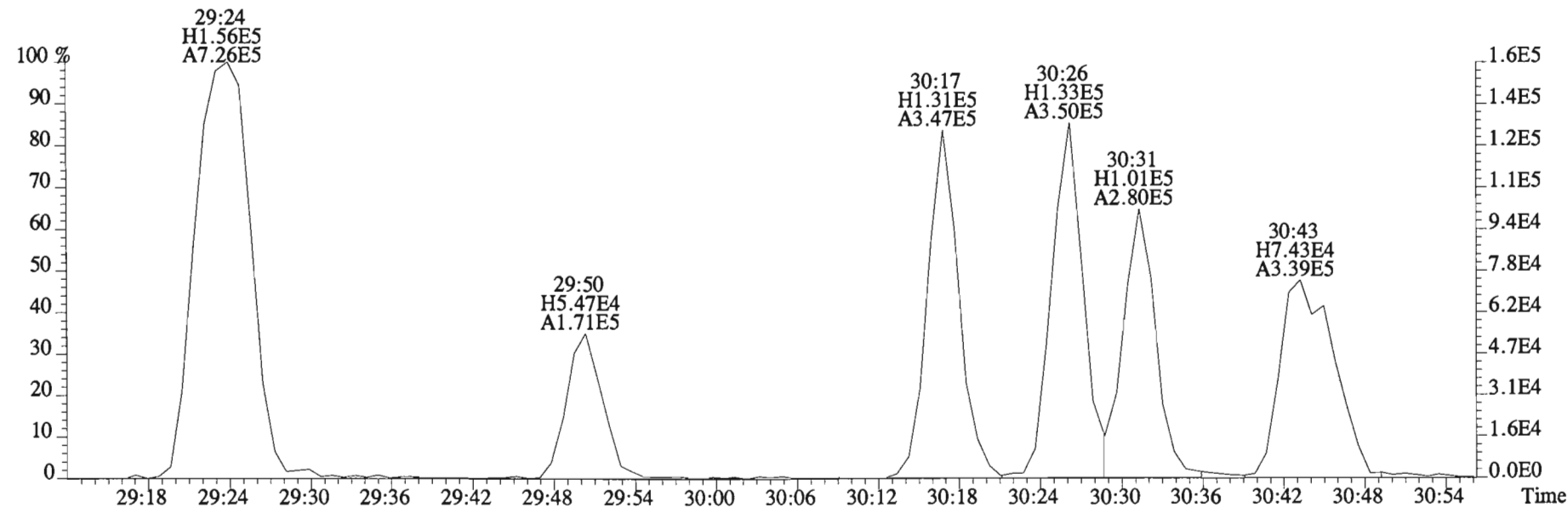
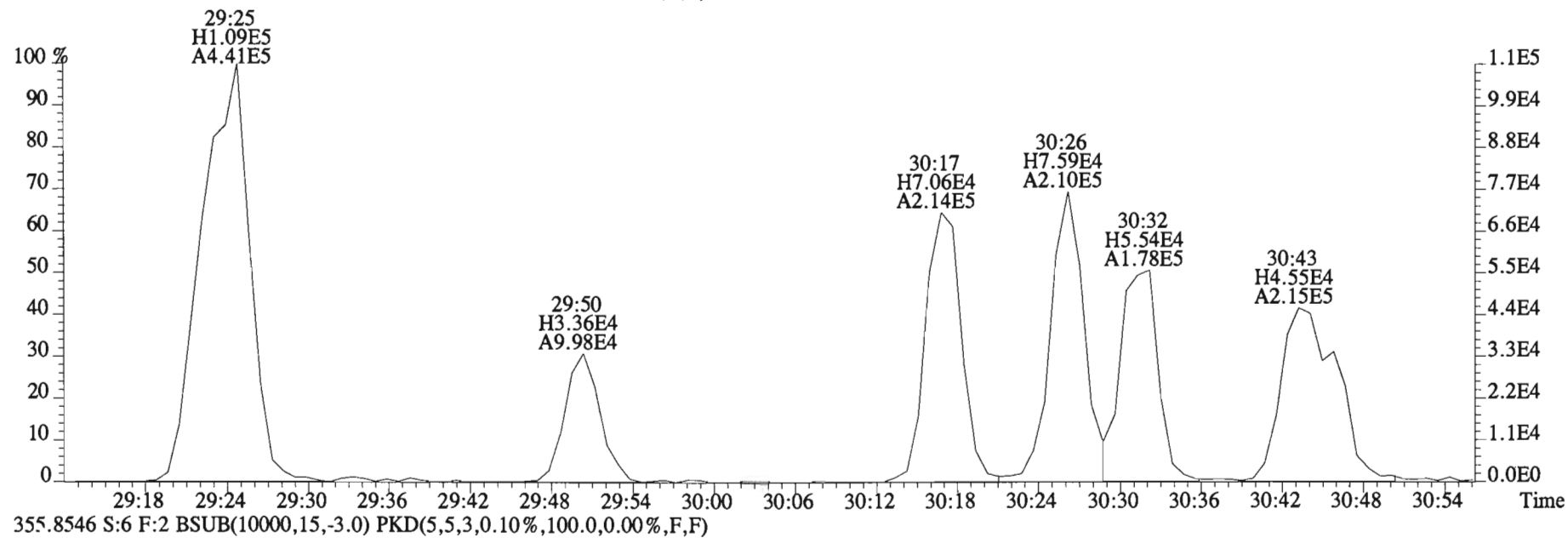
File:150203D1 #1-551 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
 319.8965 S:6 BSUB(10000,15,-3.0)



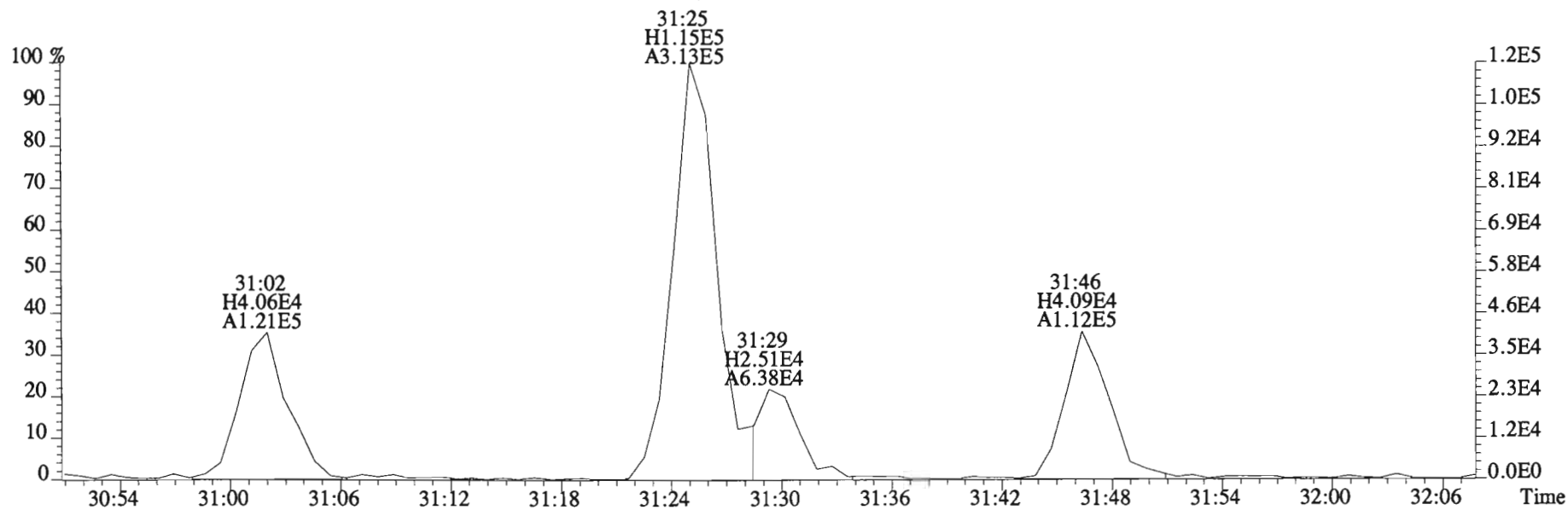
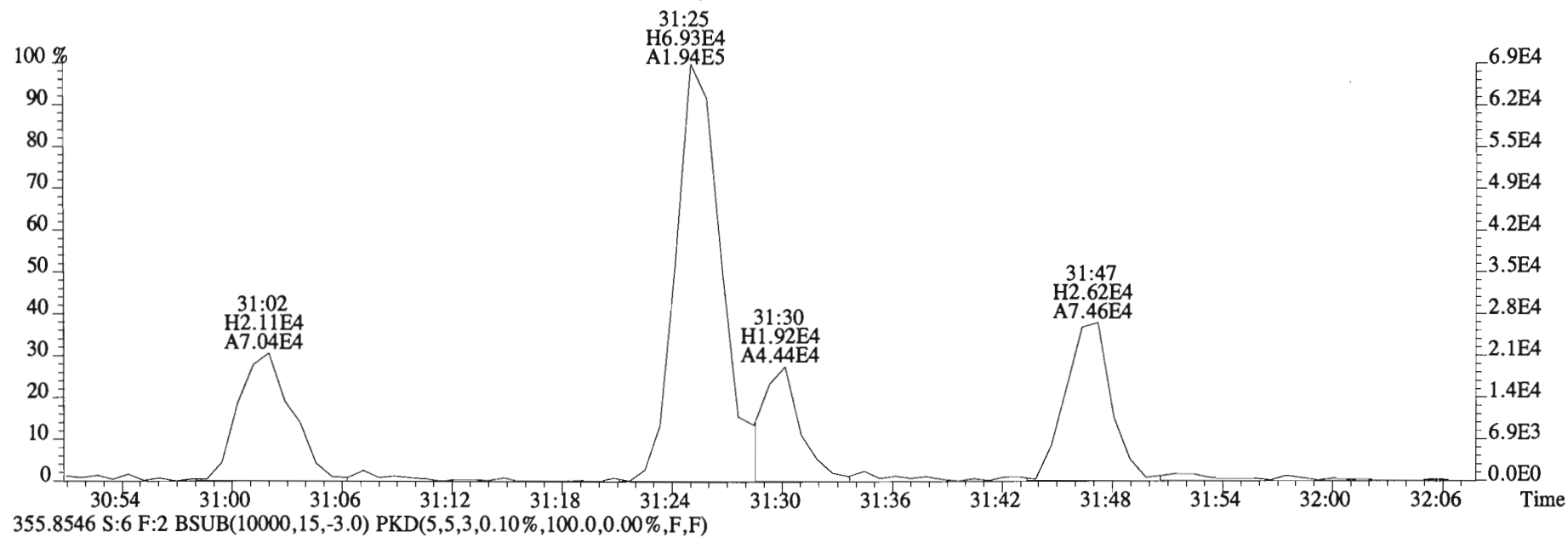
File:150203D1 #1-251 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



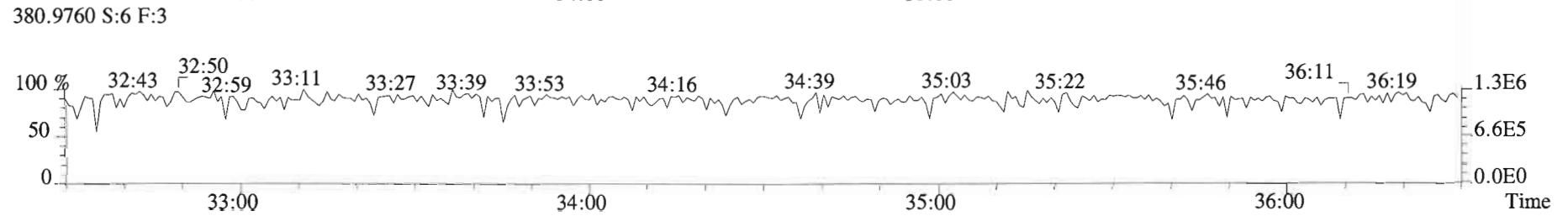
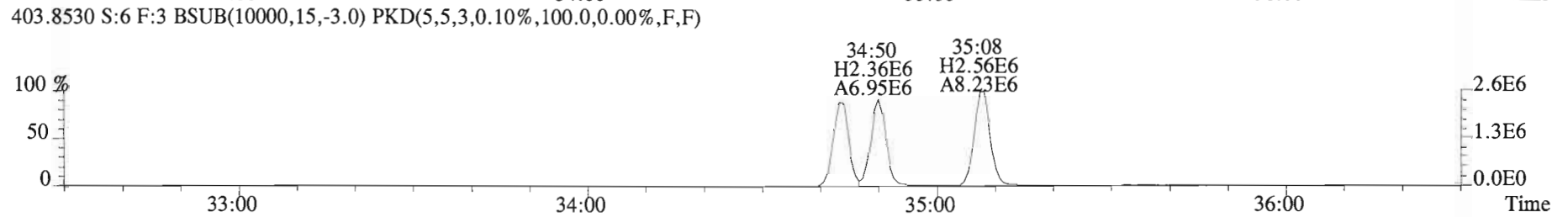
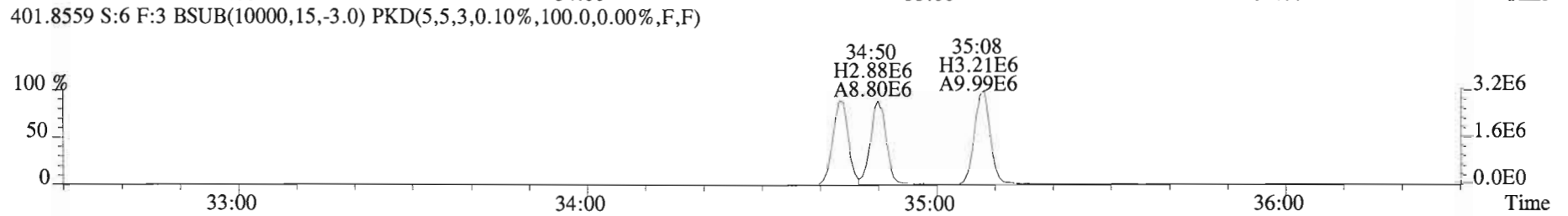
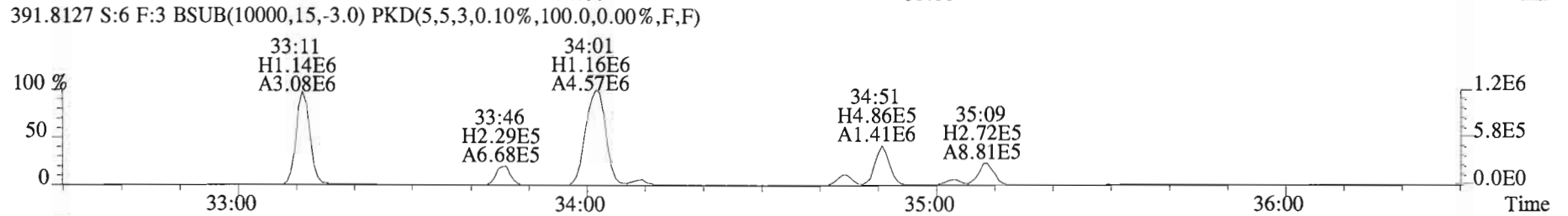
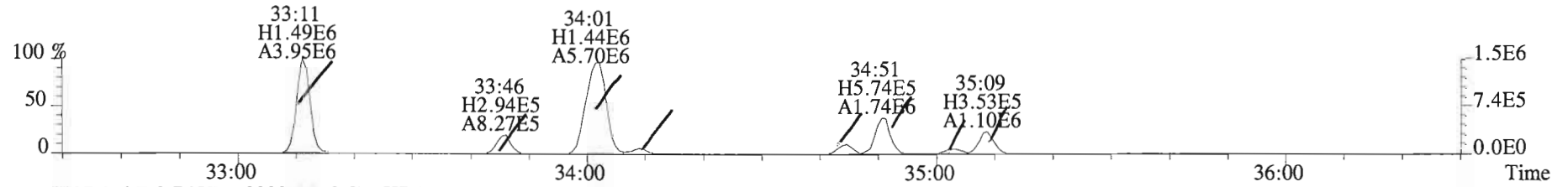
File:150203D1 #1-251 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



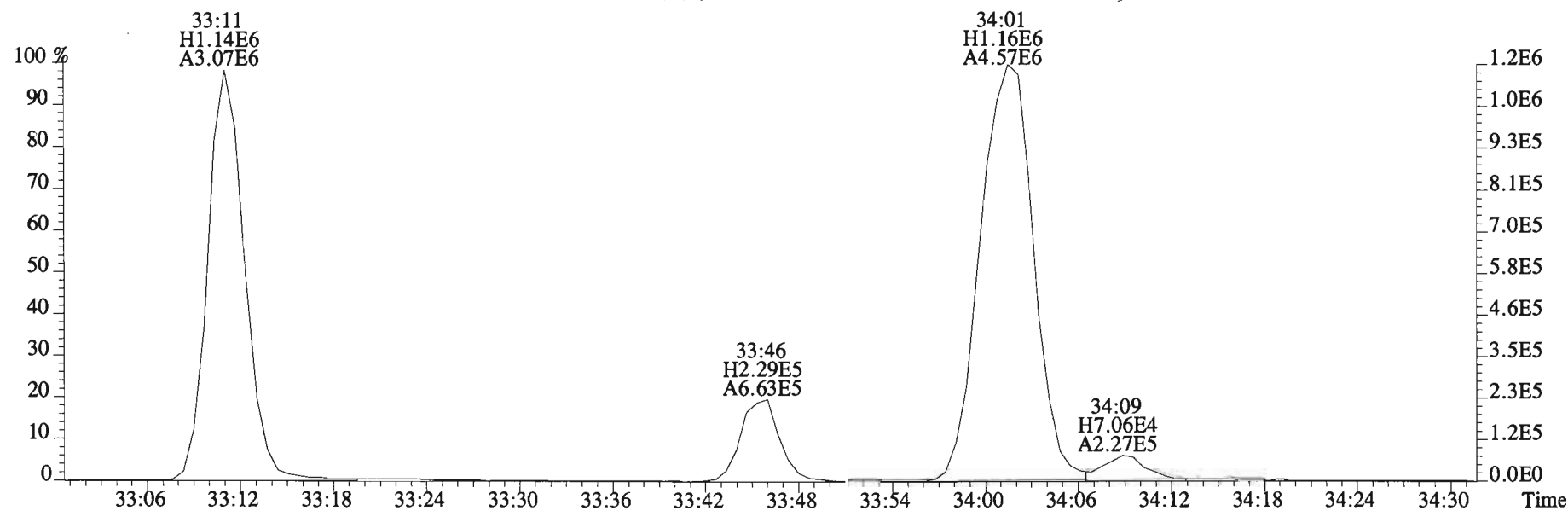
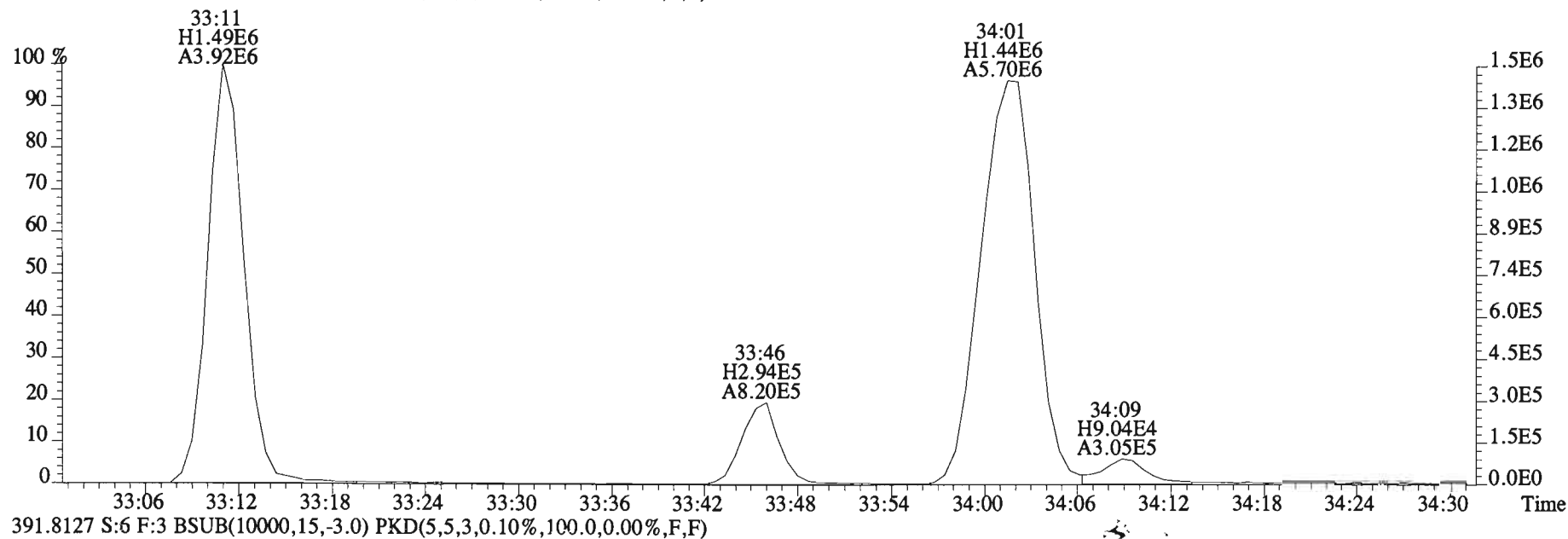
File:150203D1 #1-251 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



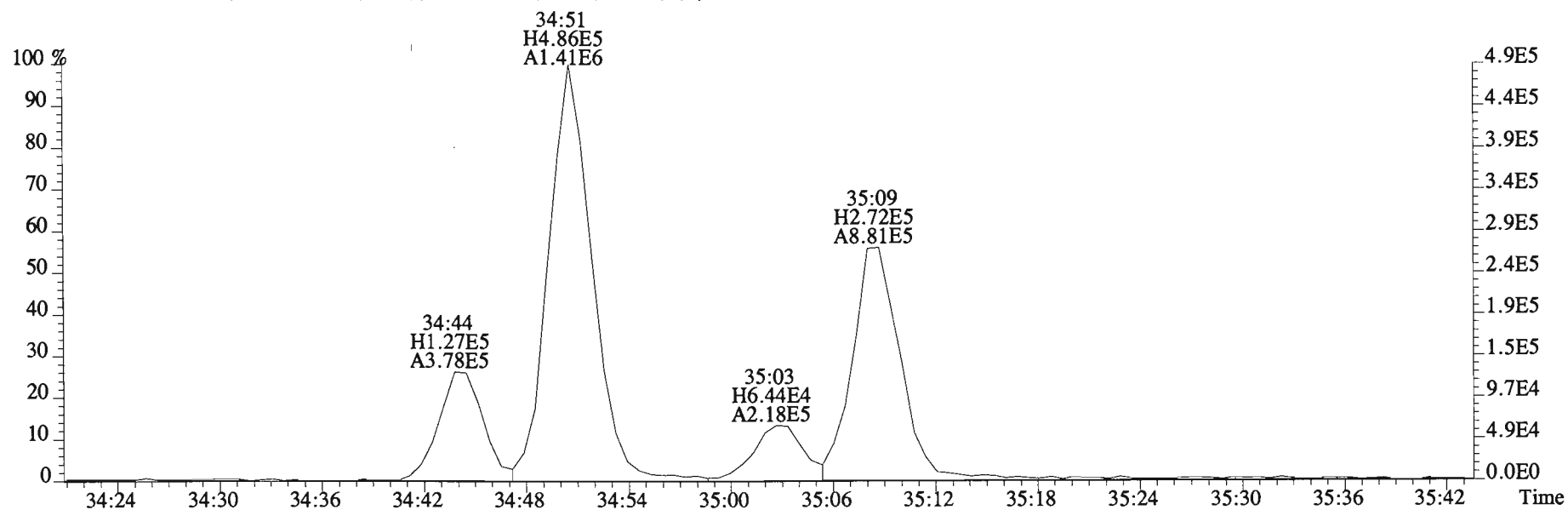
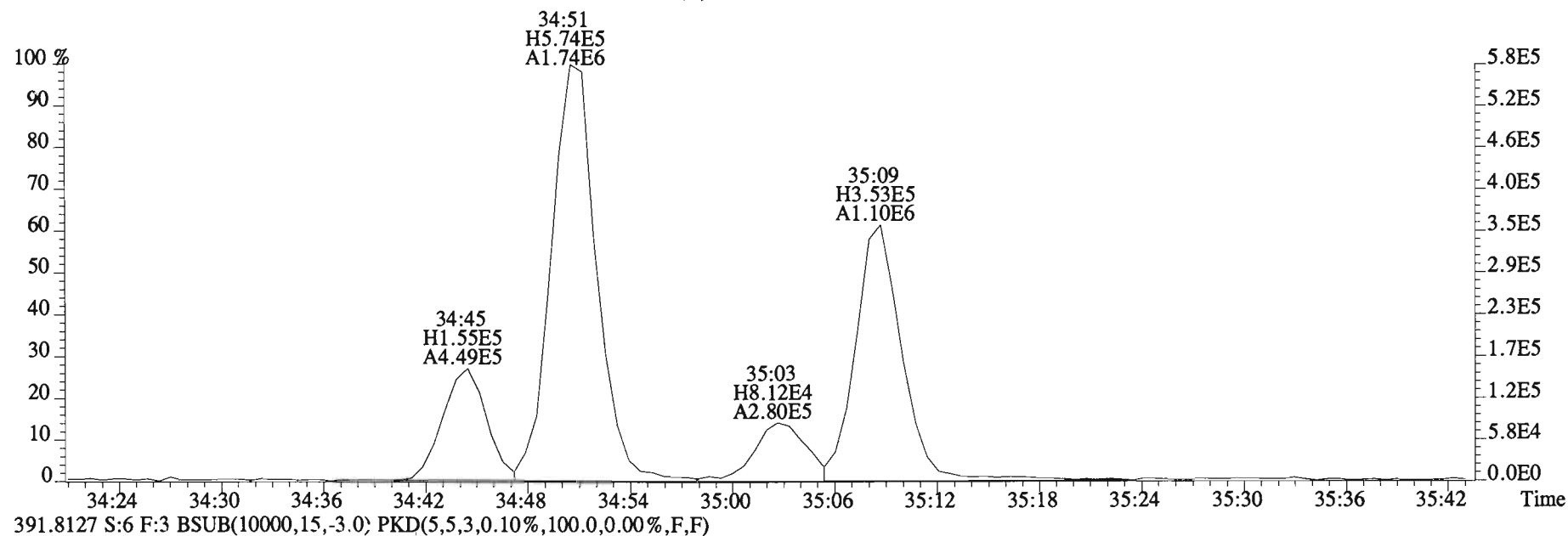
File:150203D1 #1-392 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
 389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



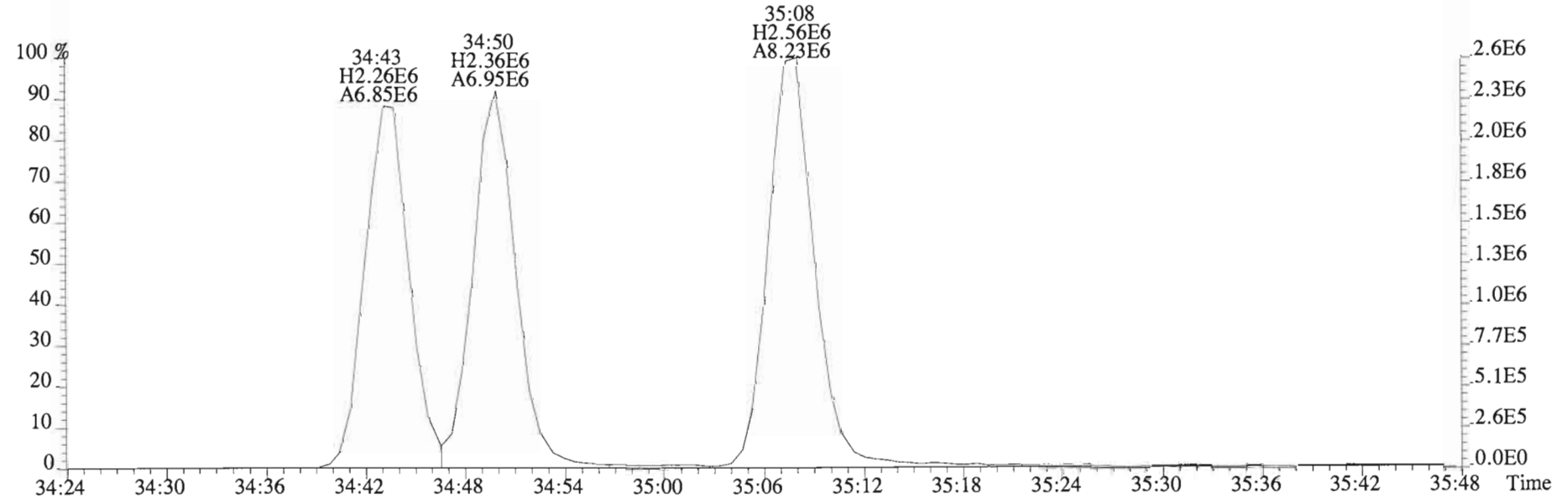
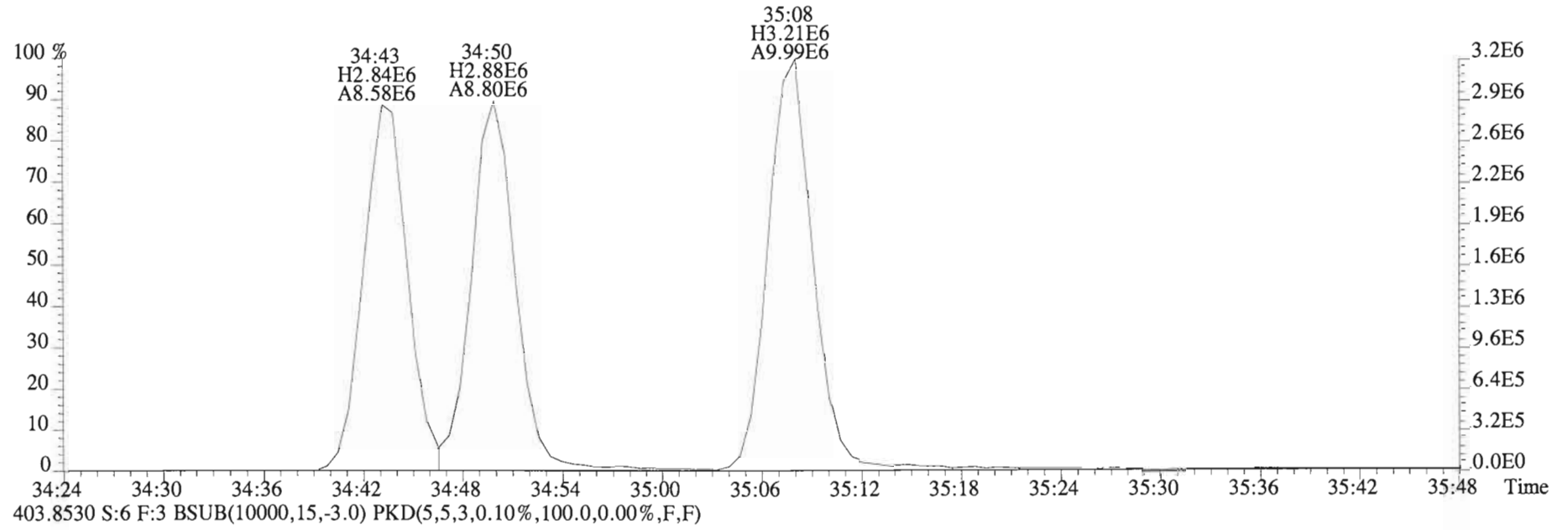
File:150203D1 #1-392 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:150203D1 #1-392 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

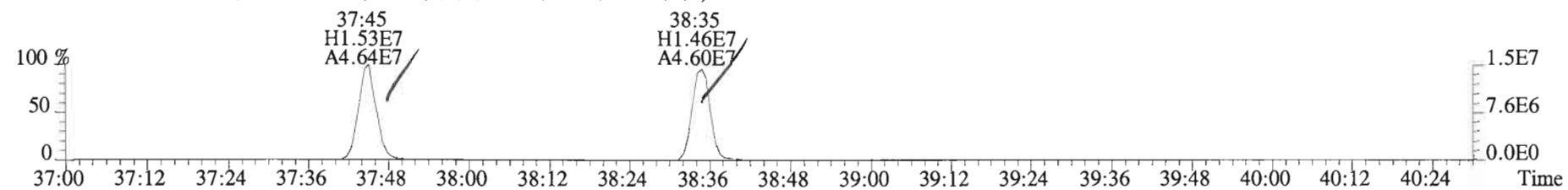


File:150203D1 #1-392 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text: Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

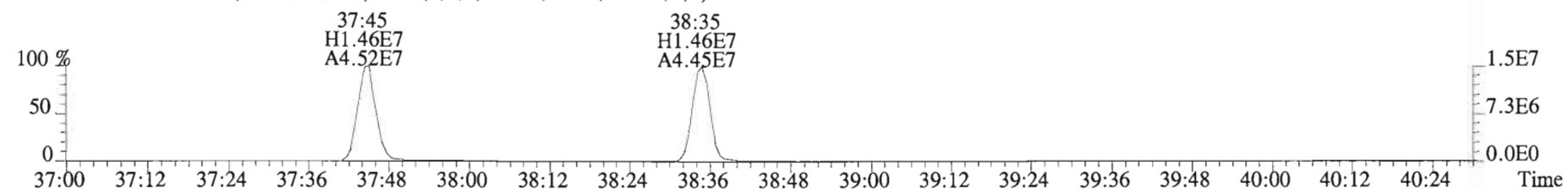




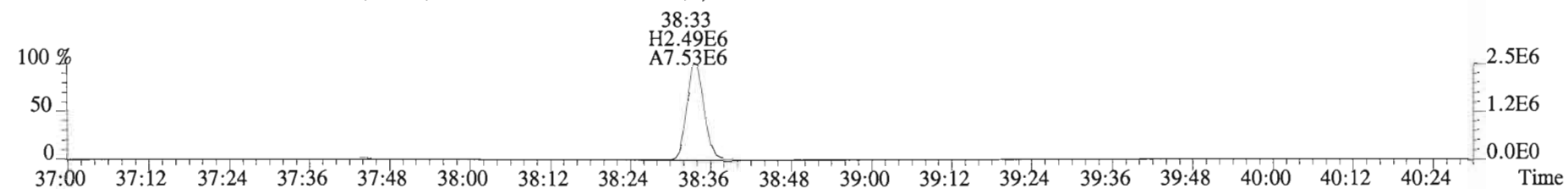
File:150203D1 #1-326 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text: Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



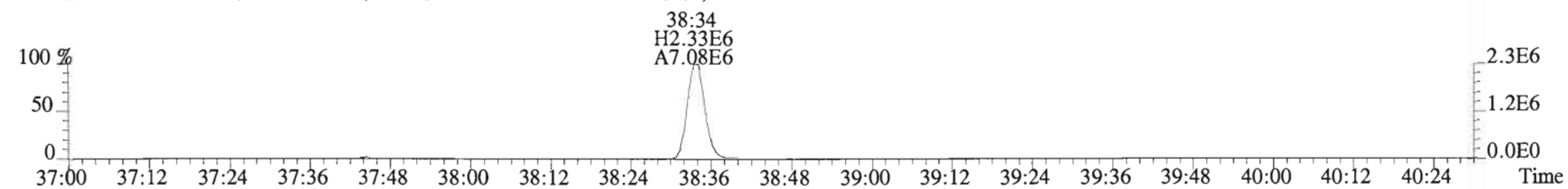
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



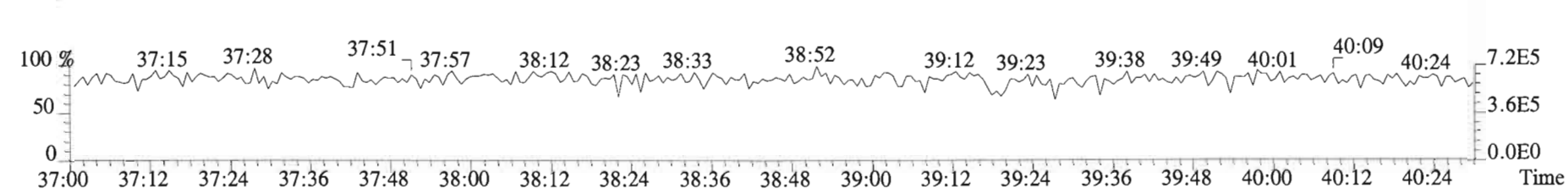
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



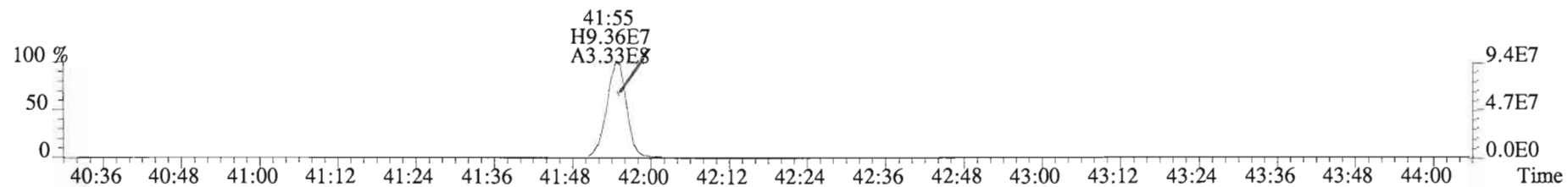
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



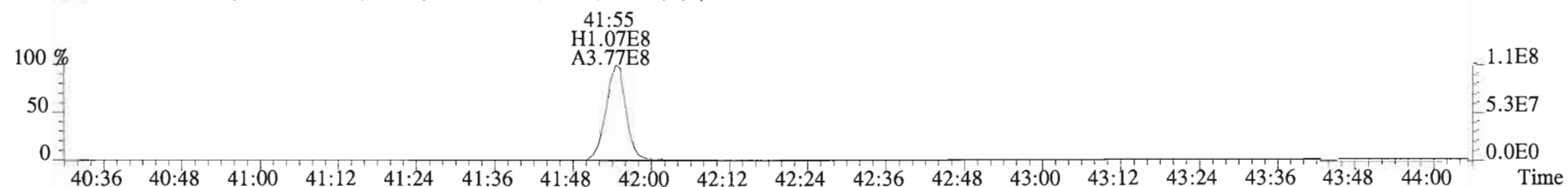
430.9728 S:6 F:4



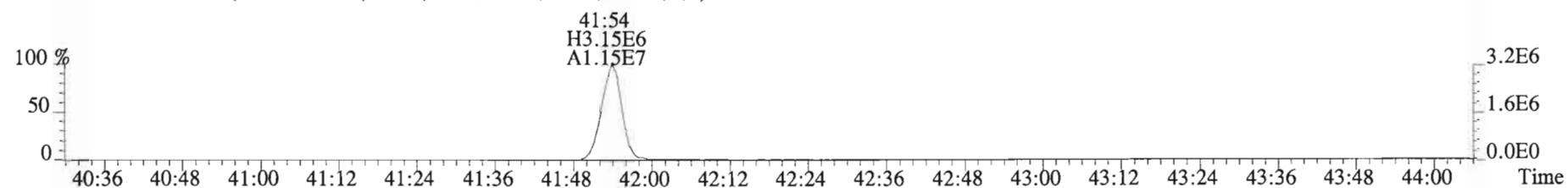
File:150203D1 #1-388 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



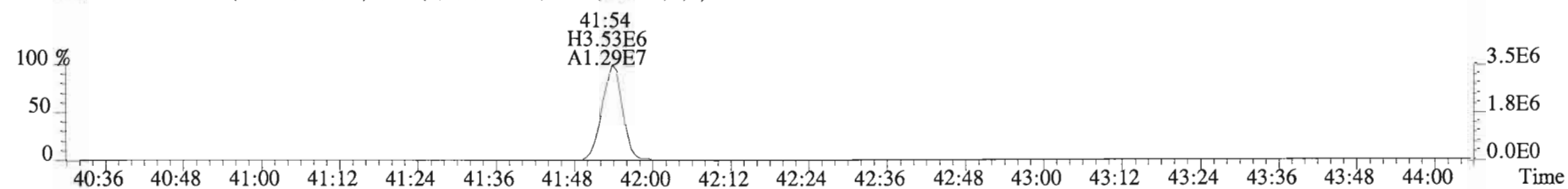
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



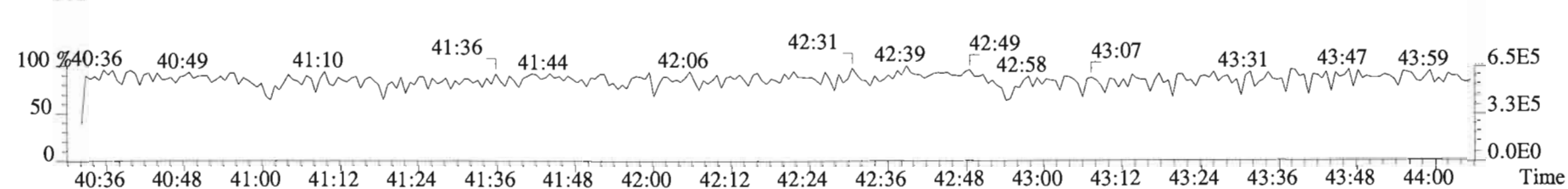
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



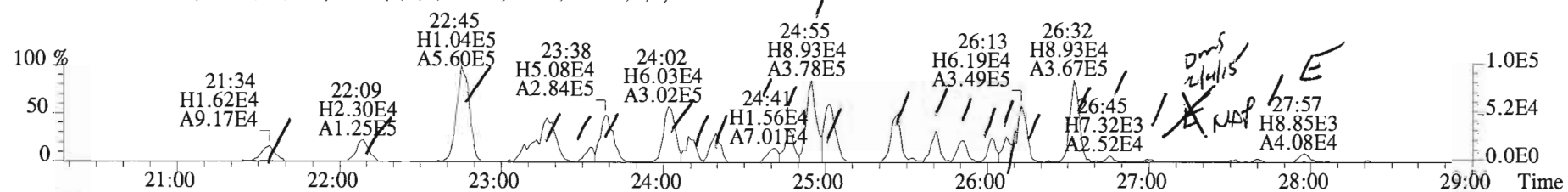
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



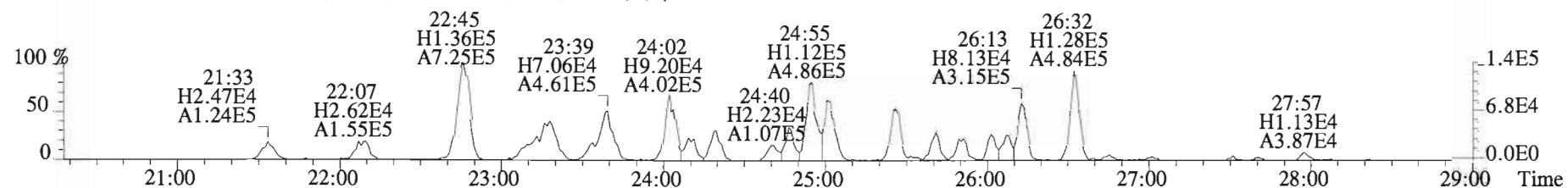
454.9728 S:6 F:5



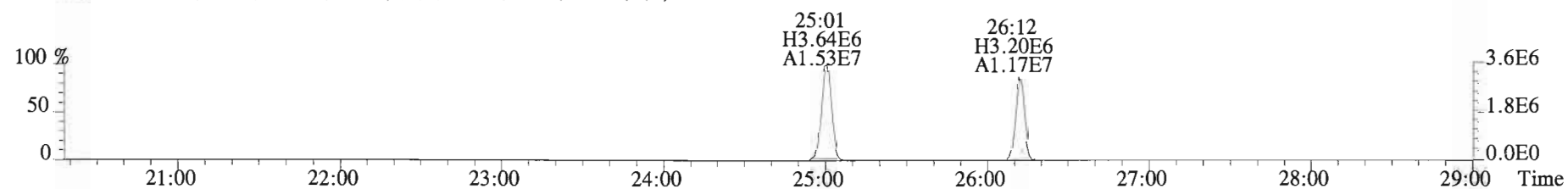
File:150203D1 #1-551 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



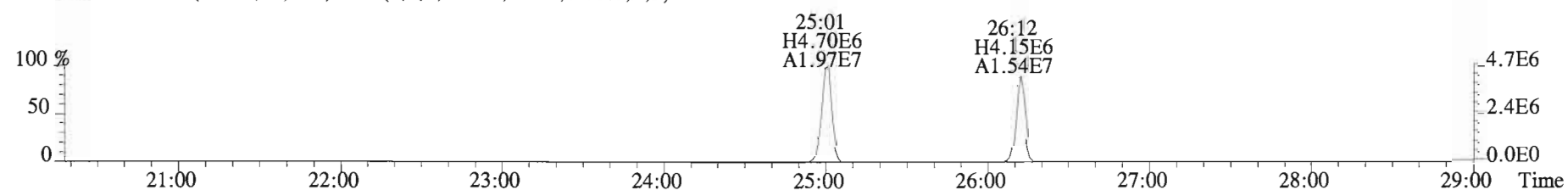
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



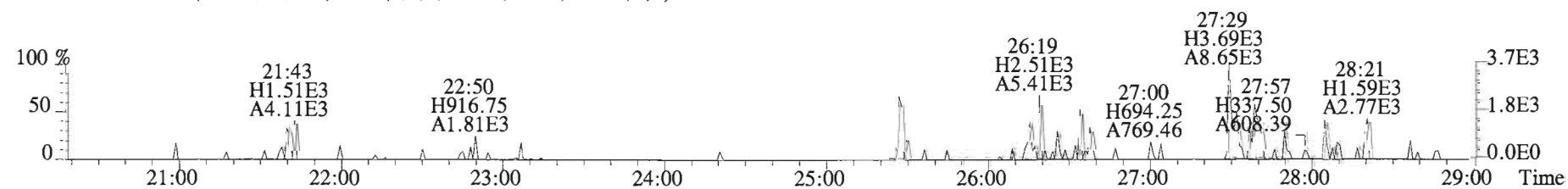
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



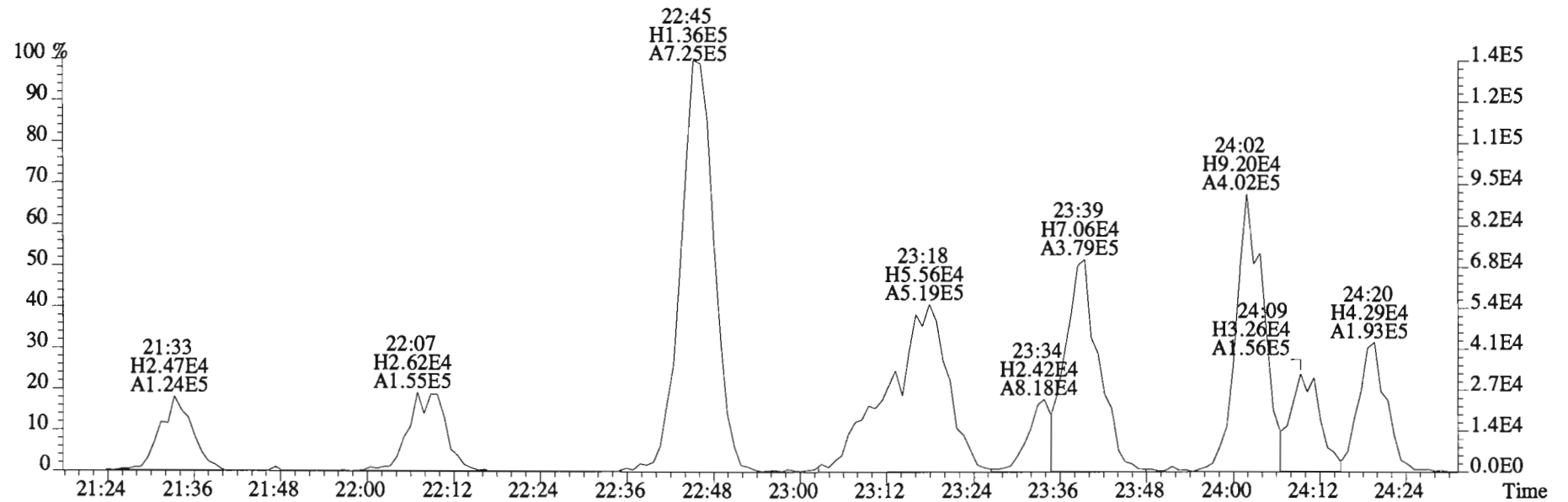
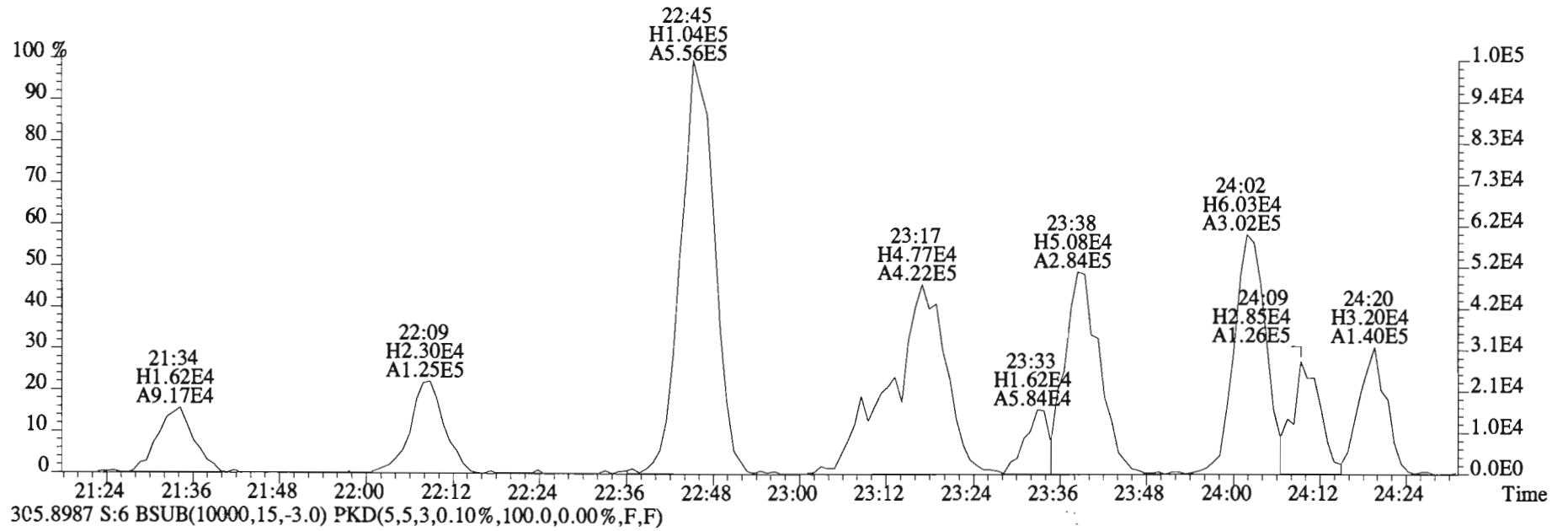
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



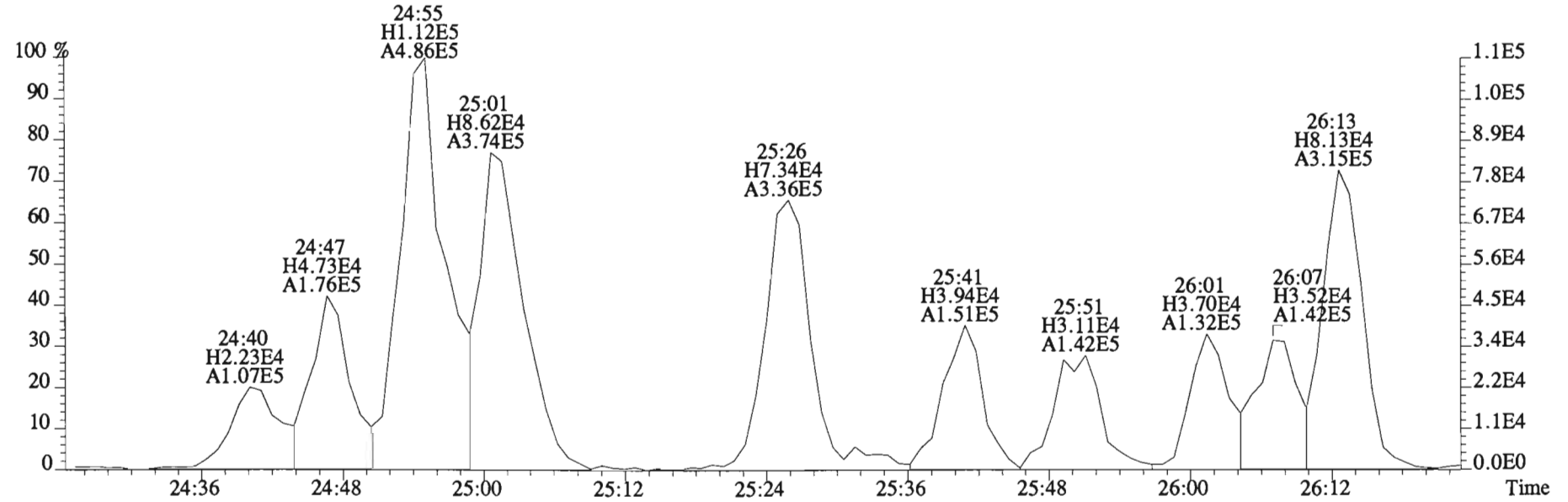
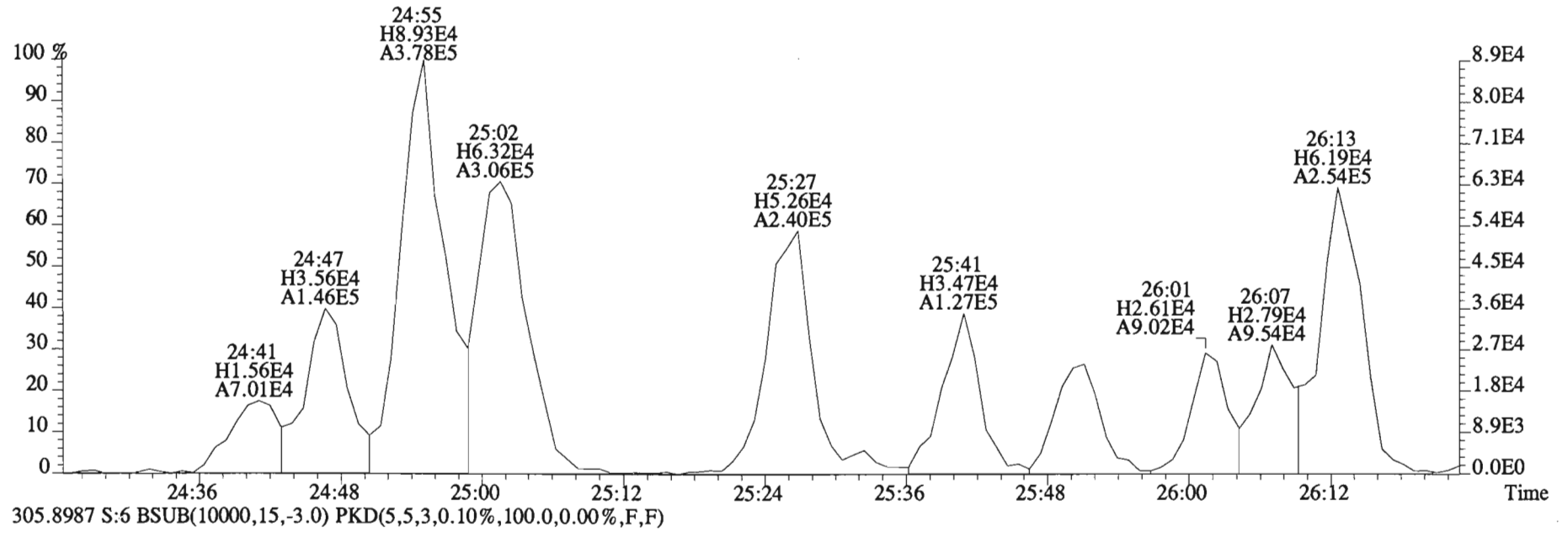
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



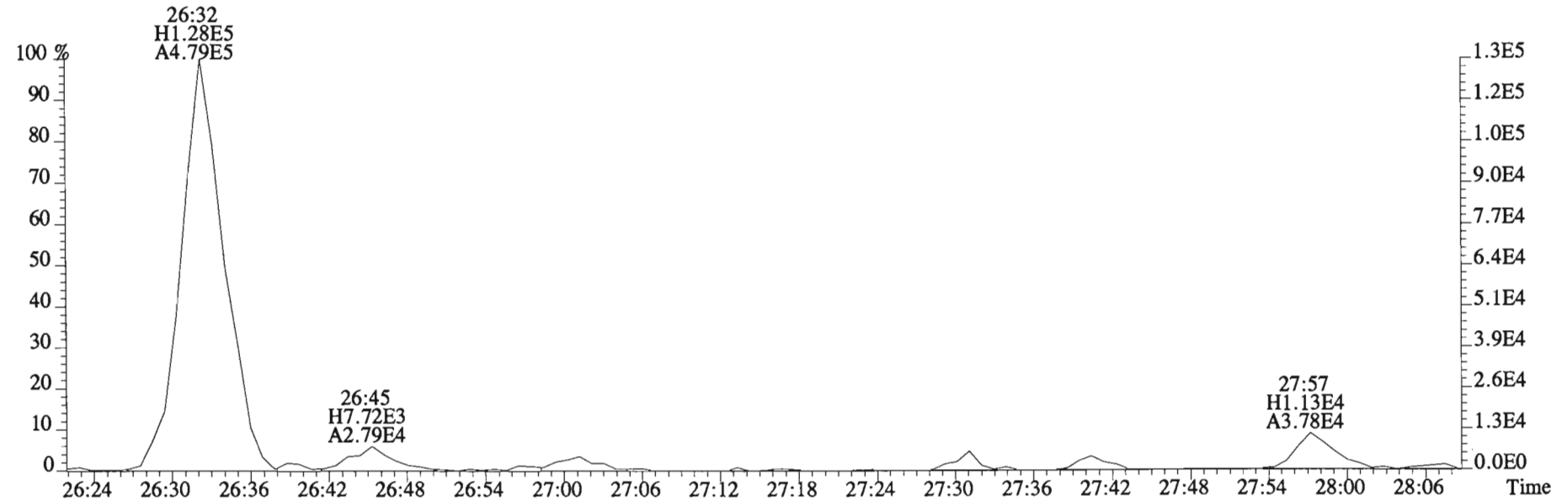
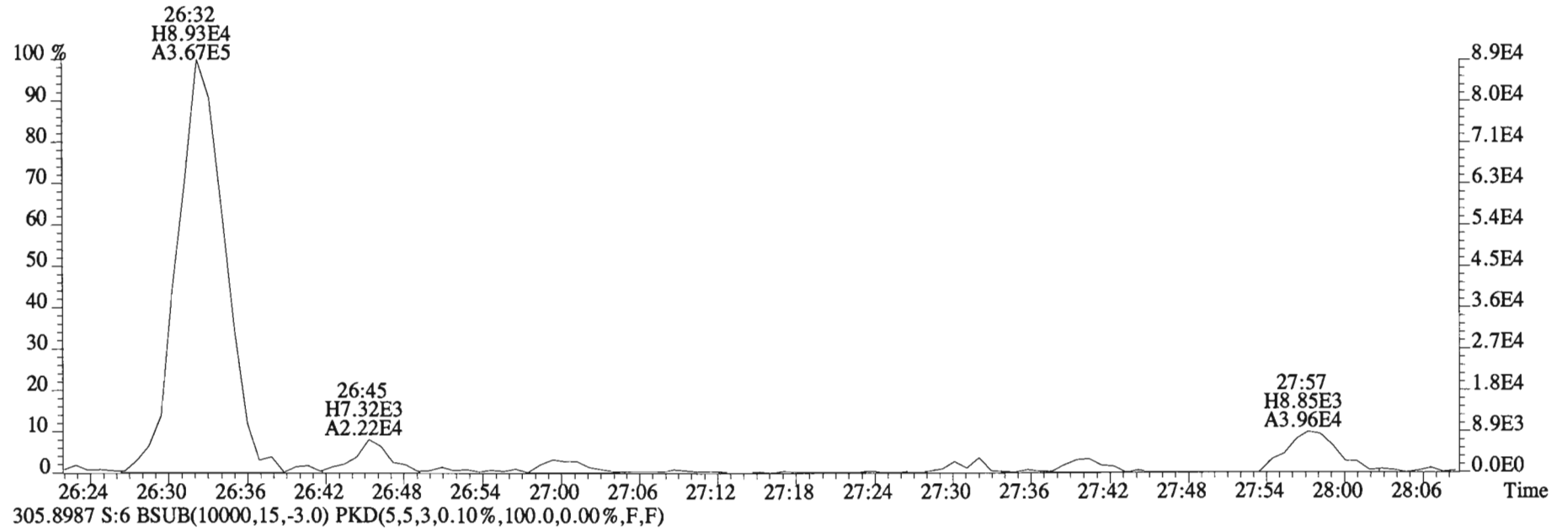
File:150203D1 #1-551 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
 303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



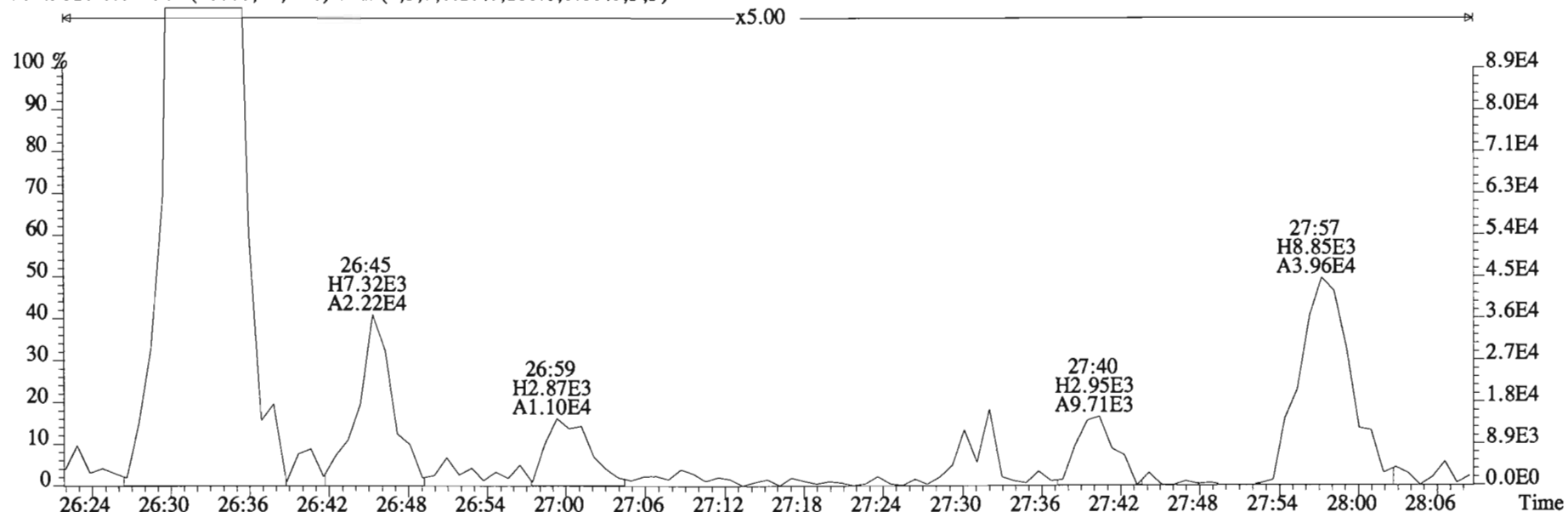
File:150203D1 #1-551 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
 303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



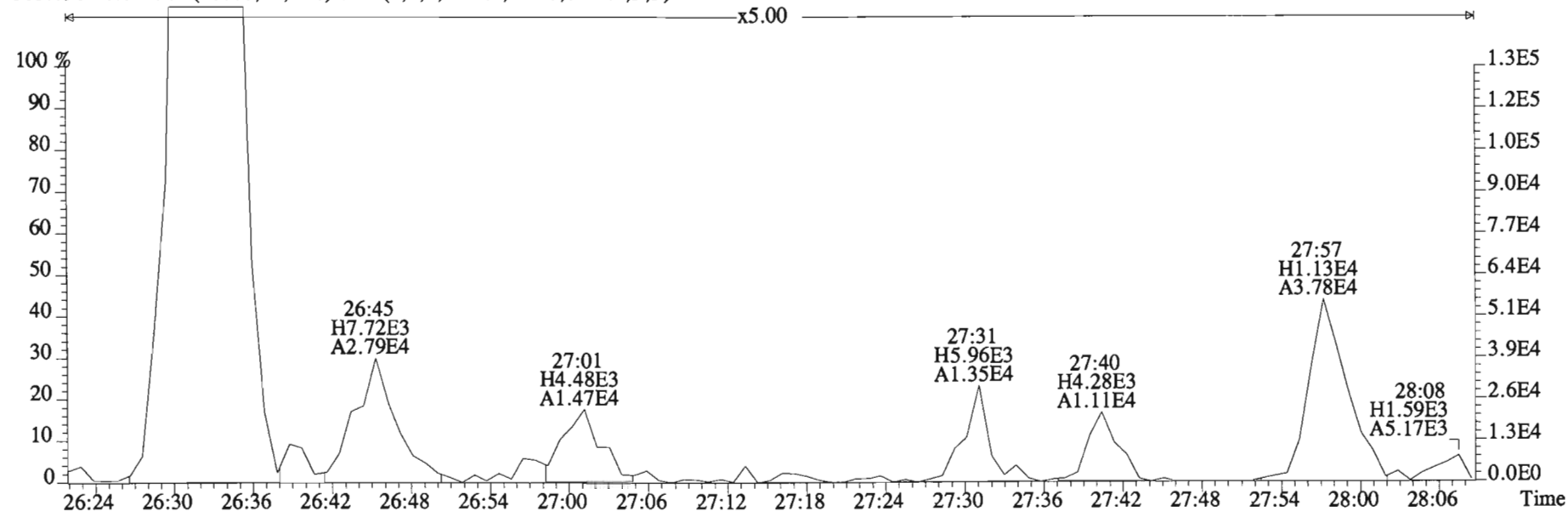
File:150203D1 #1-551 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text: Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



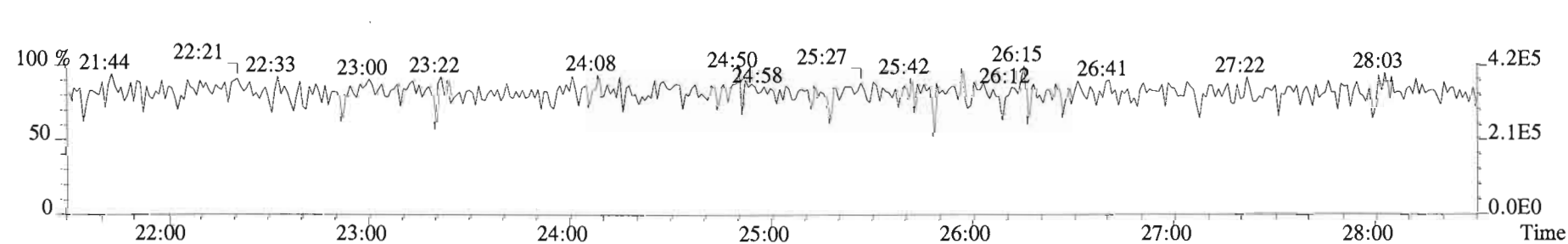
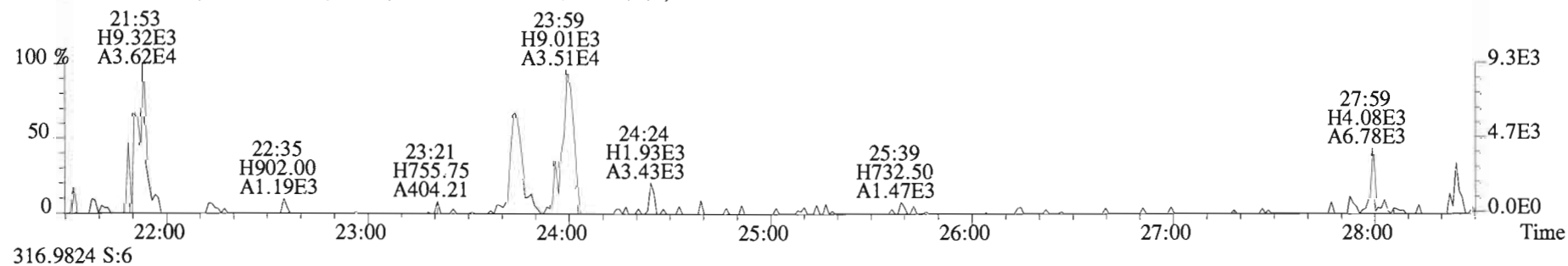
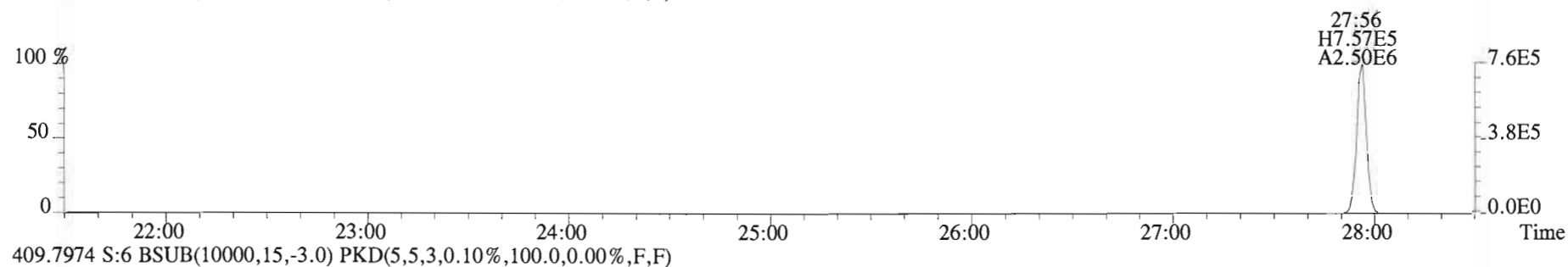
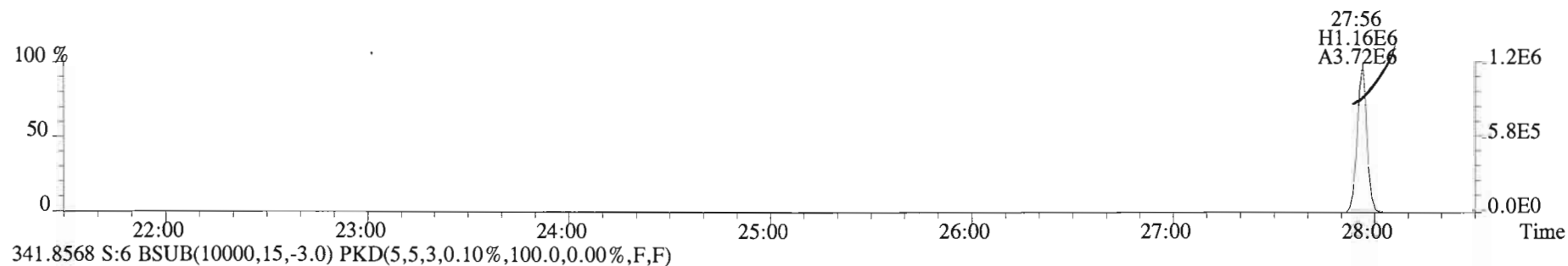
File:150203D1 #1-551 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text: Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

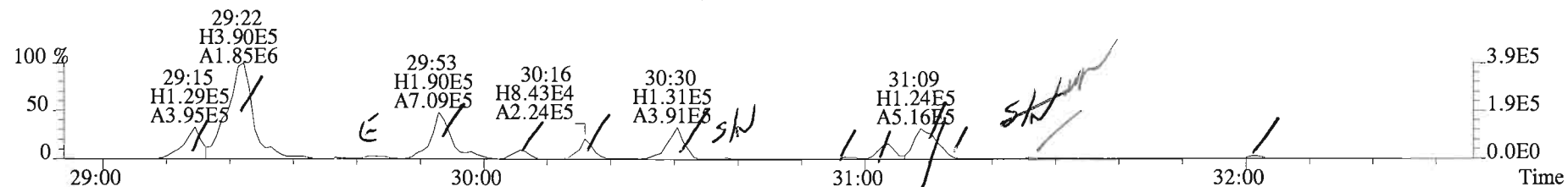


File:150203D1 #1-551 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

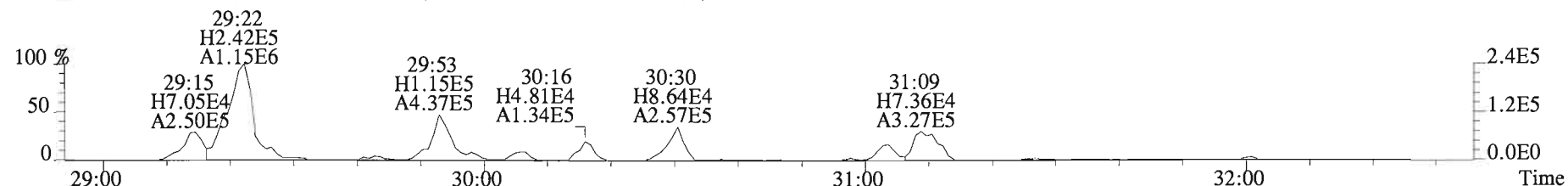




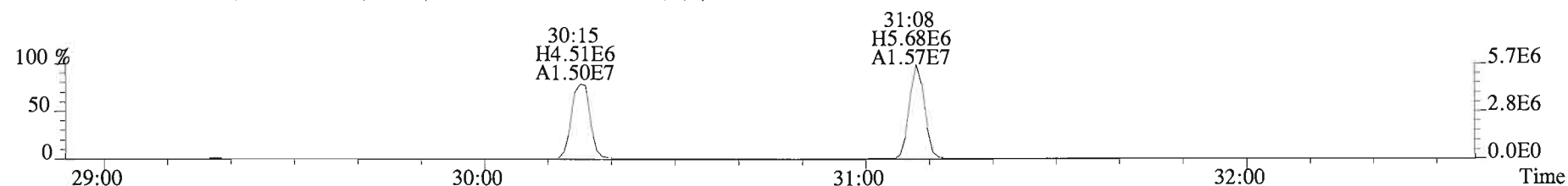
File:150203D1 #1-251 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



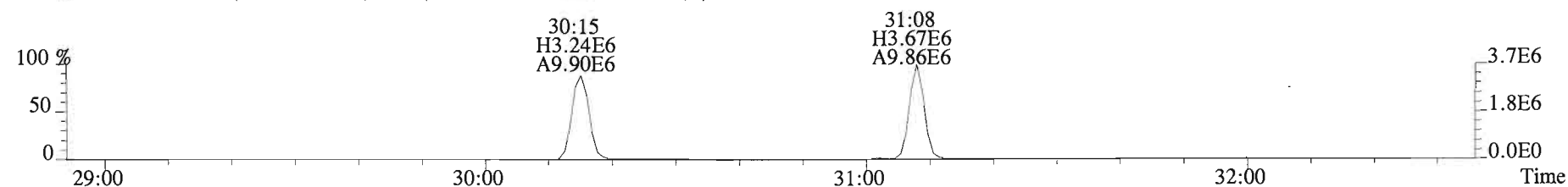
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



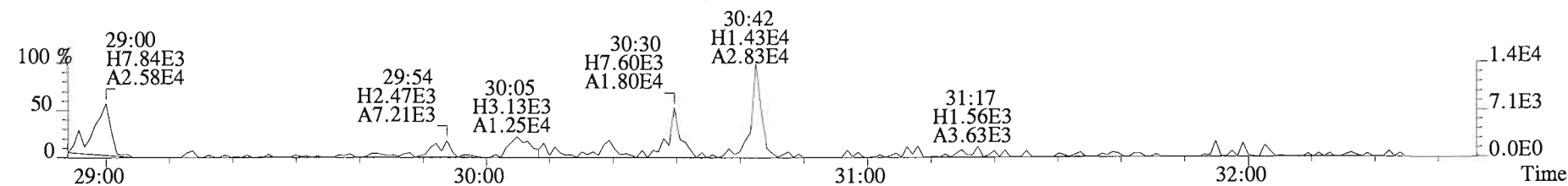
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



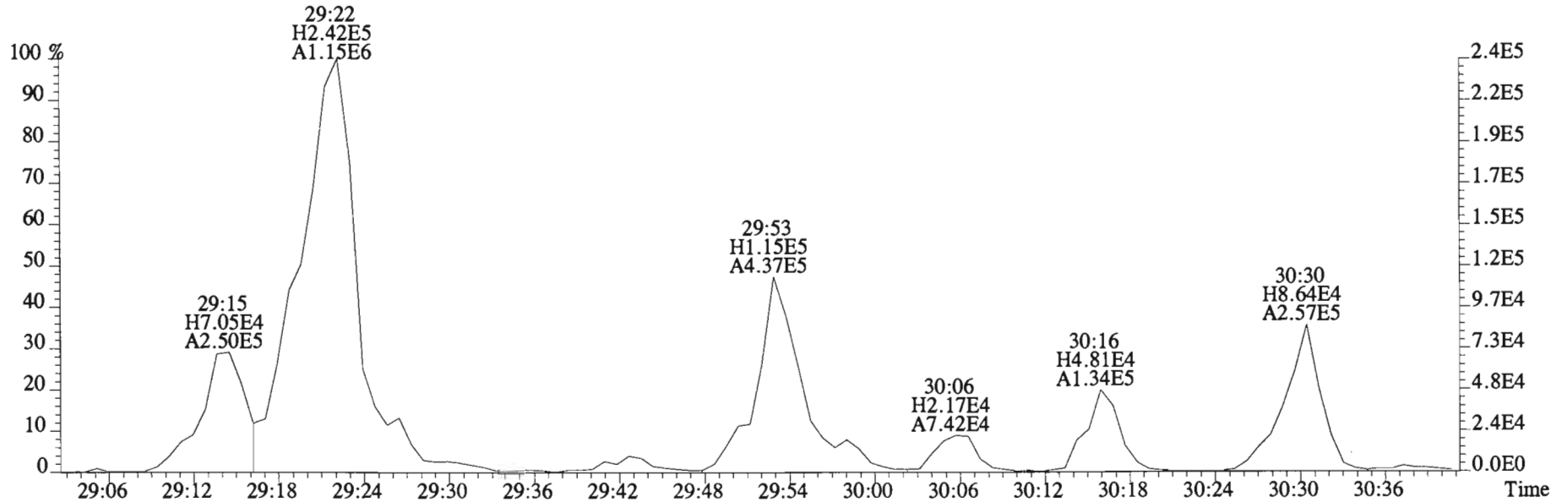
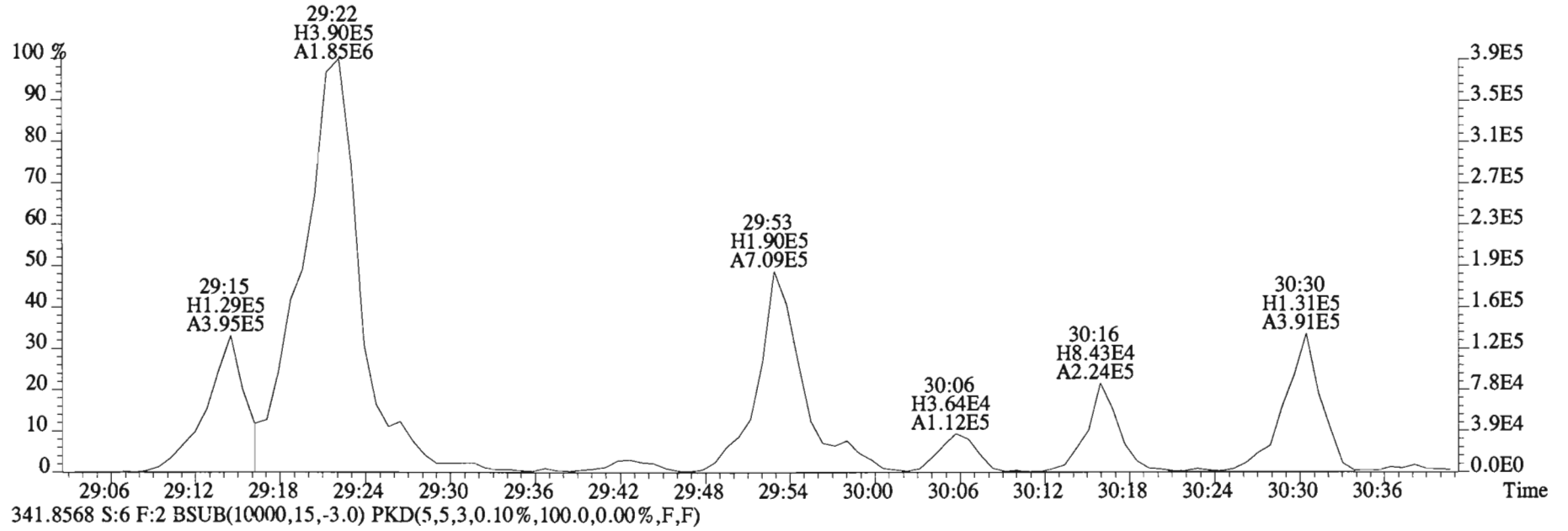
353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



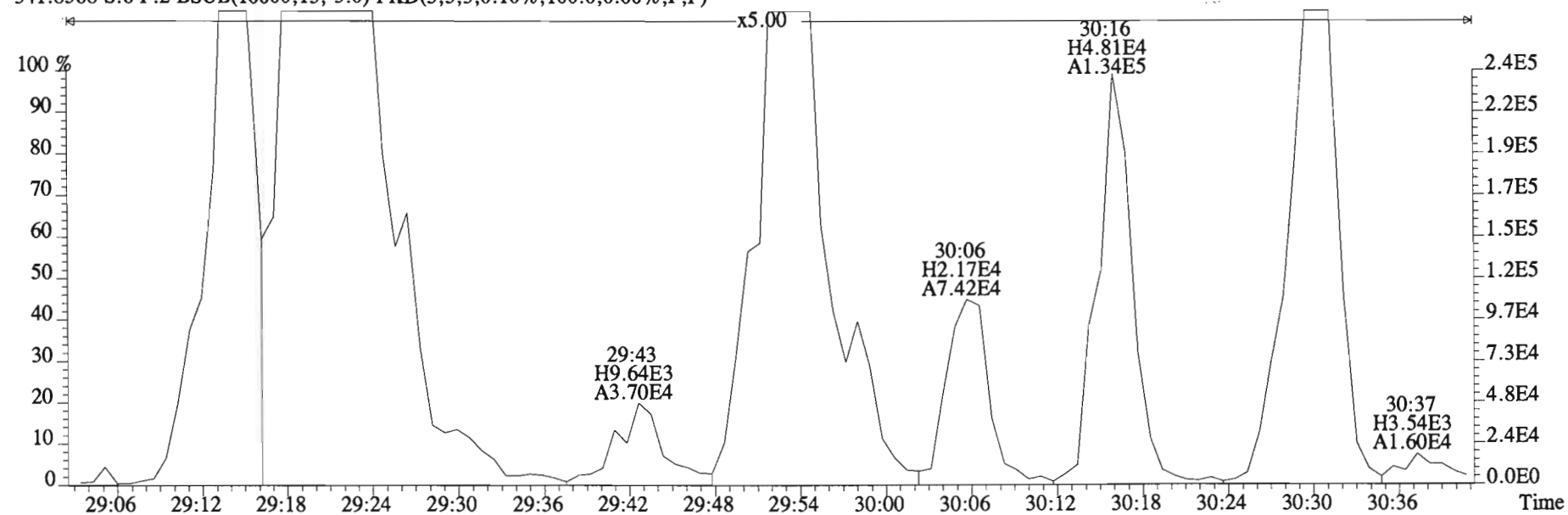
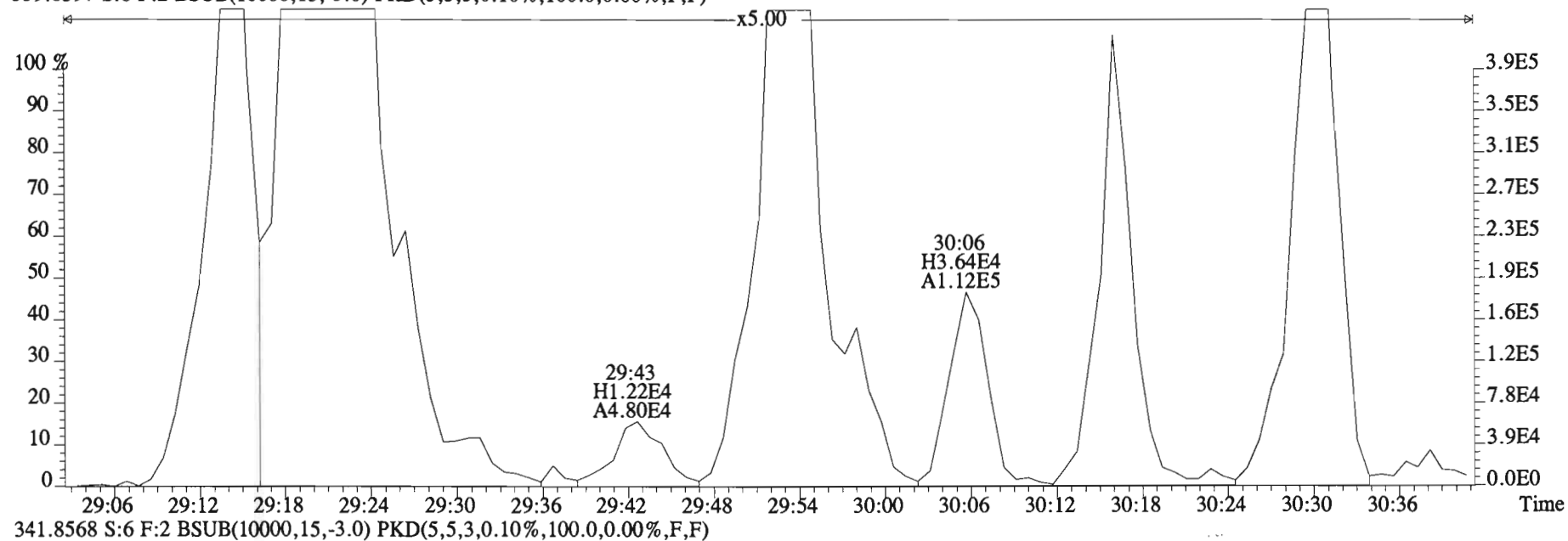
409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



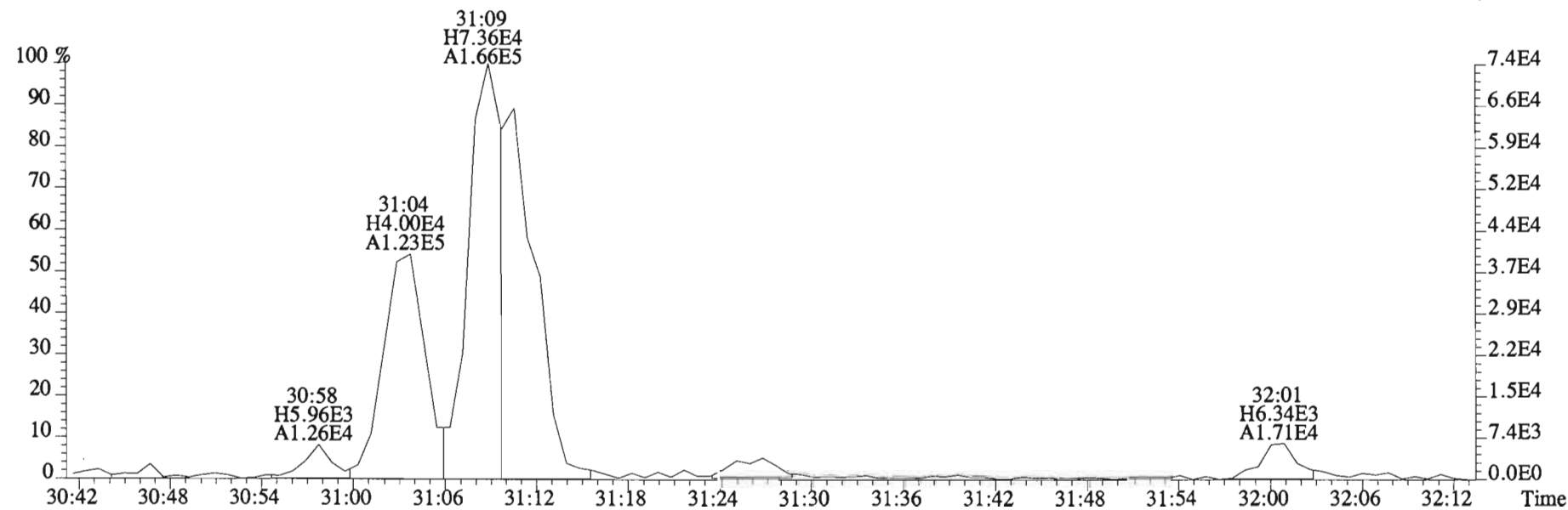
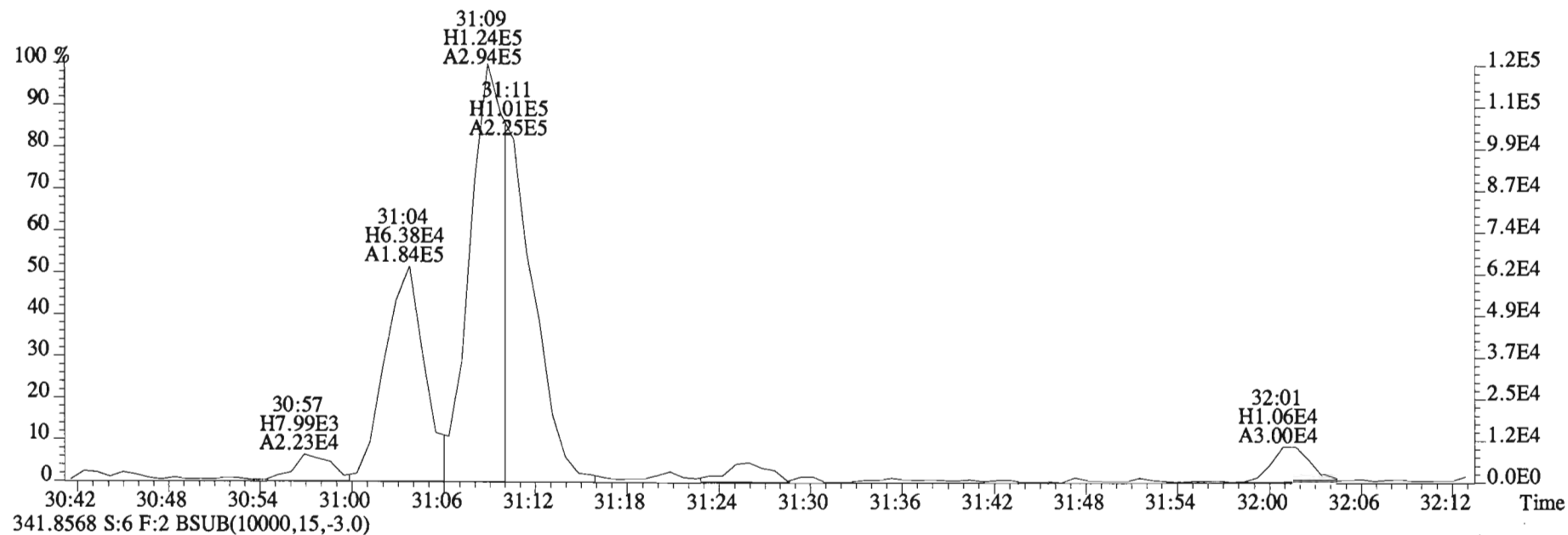
File:150203D1 #1-251 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text: Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
 339.8597 S:6 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



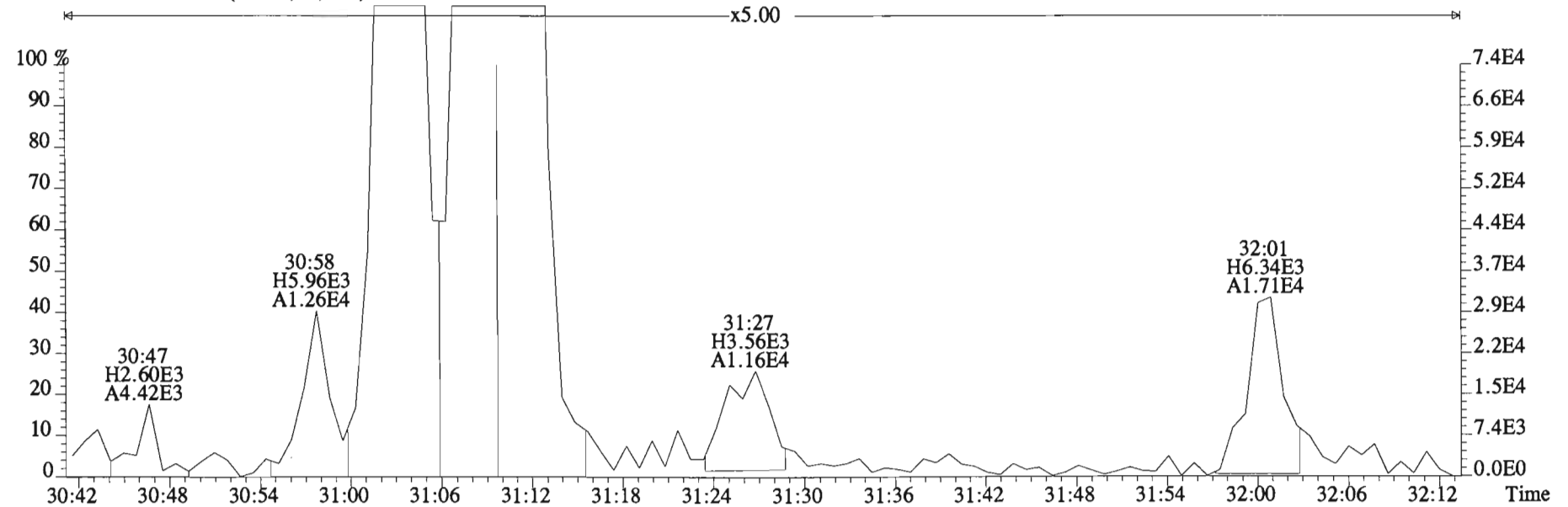
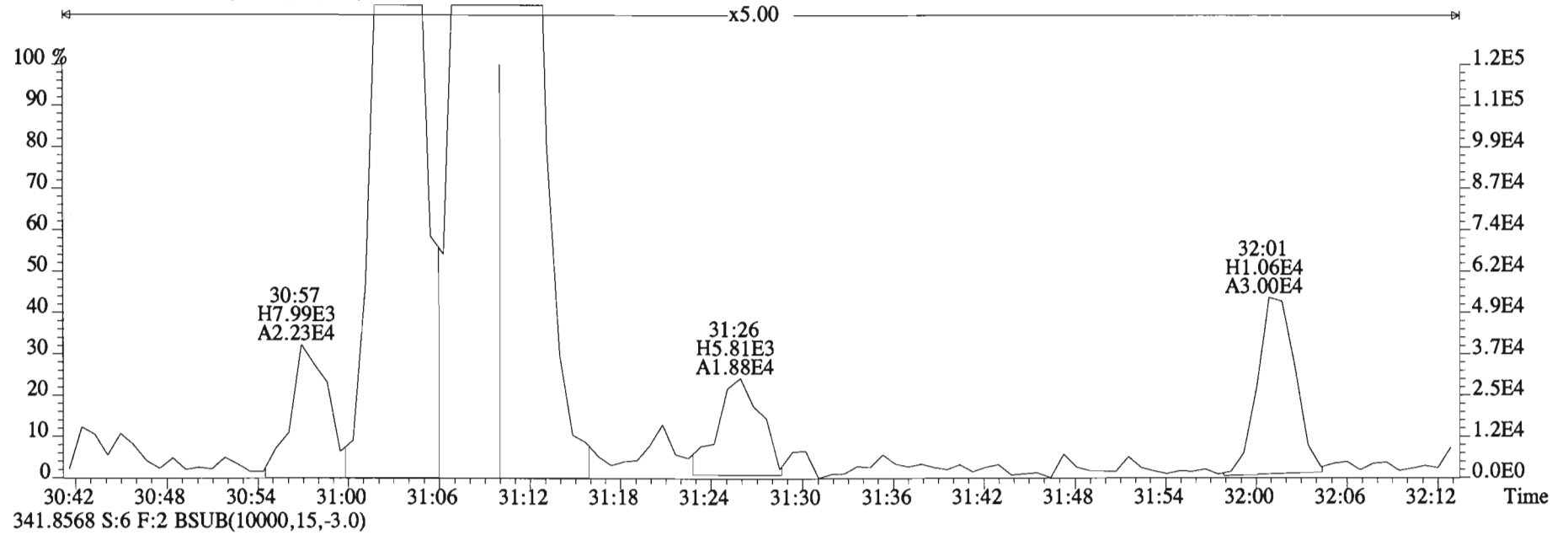
File:150203D1 #1-251 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



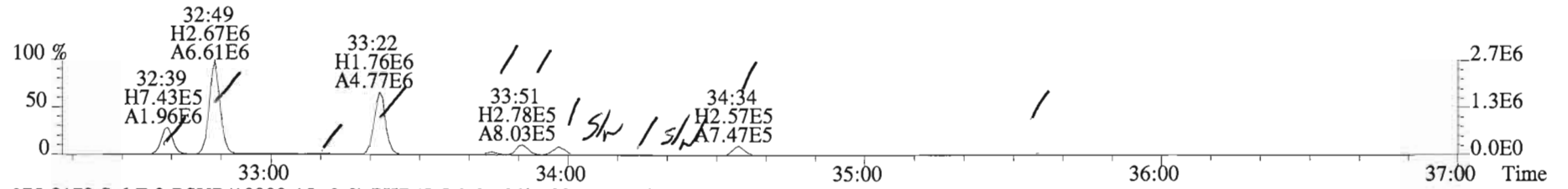
File:150203D1 #1-251 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
339.8597 S:6 F:2 BSUB(10000,15,-3.0)



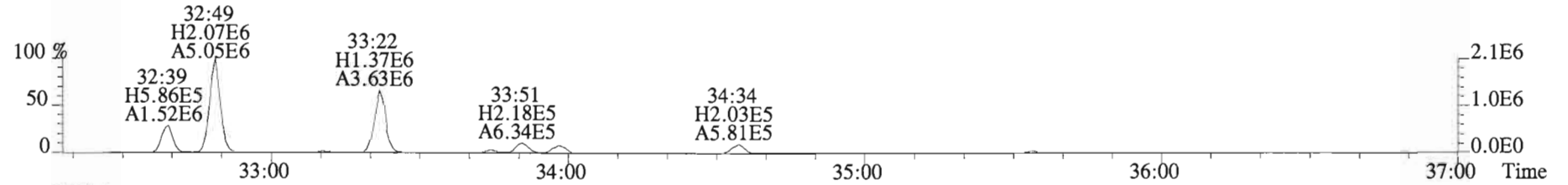
File:150203D1 #1-251 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
339.8597 S:6 F:2 BSUB(10000,15,-3.0)



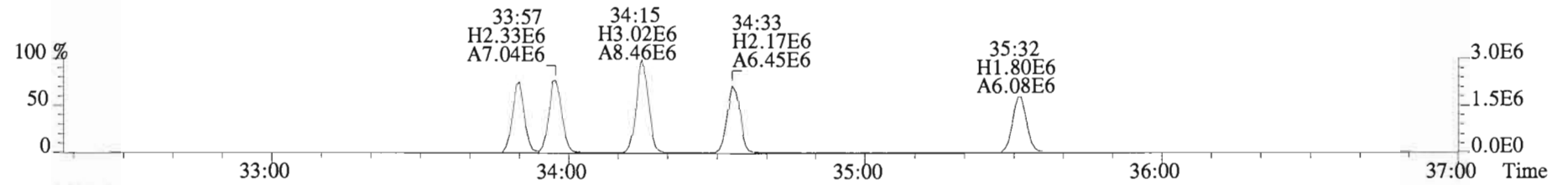
File:150203D1 #1-392 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



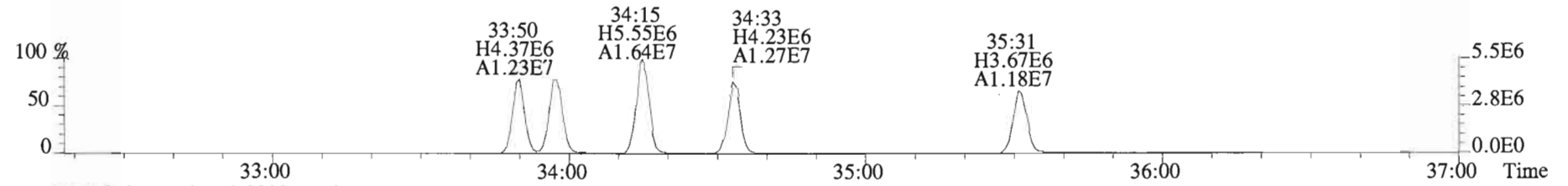
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



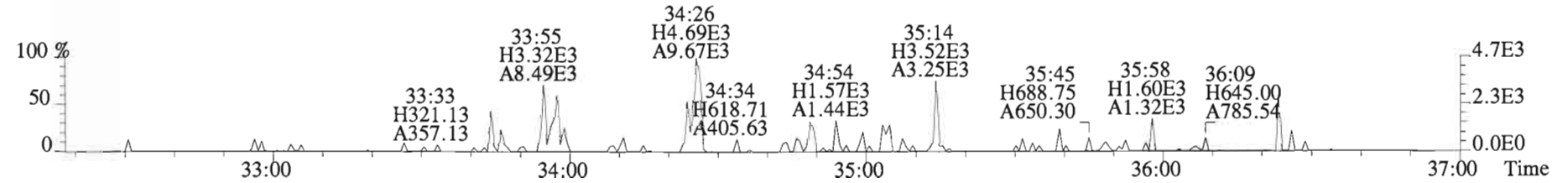
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



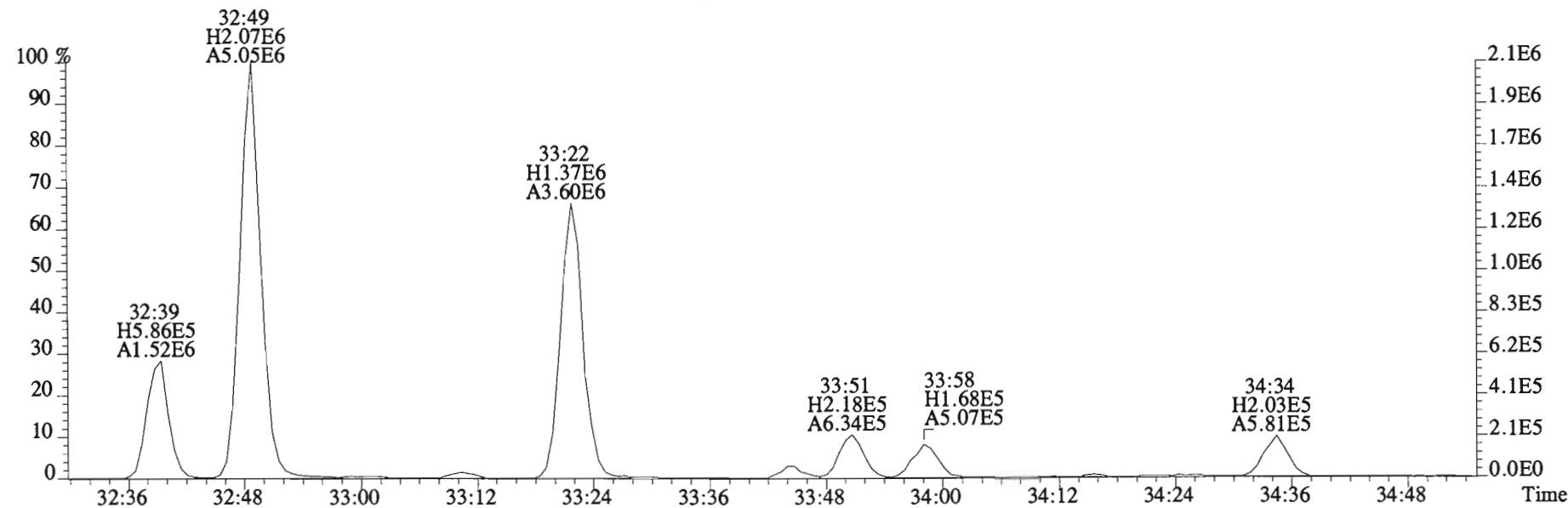
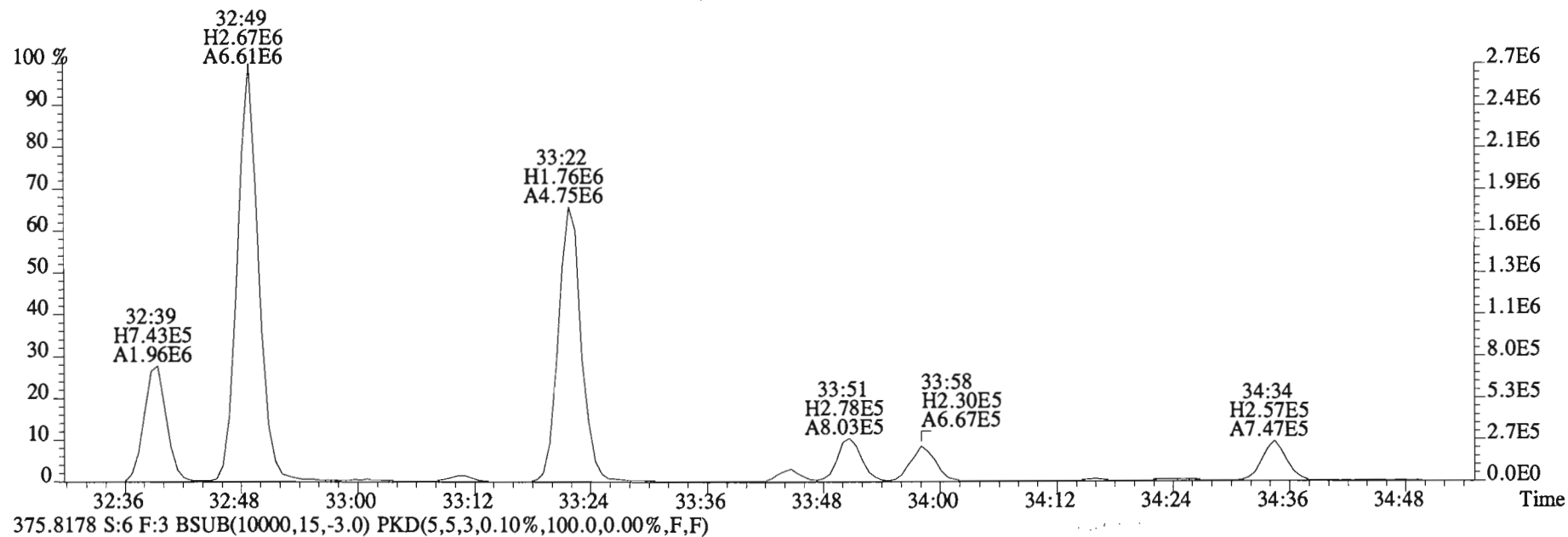
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



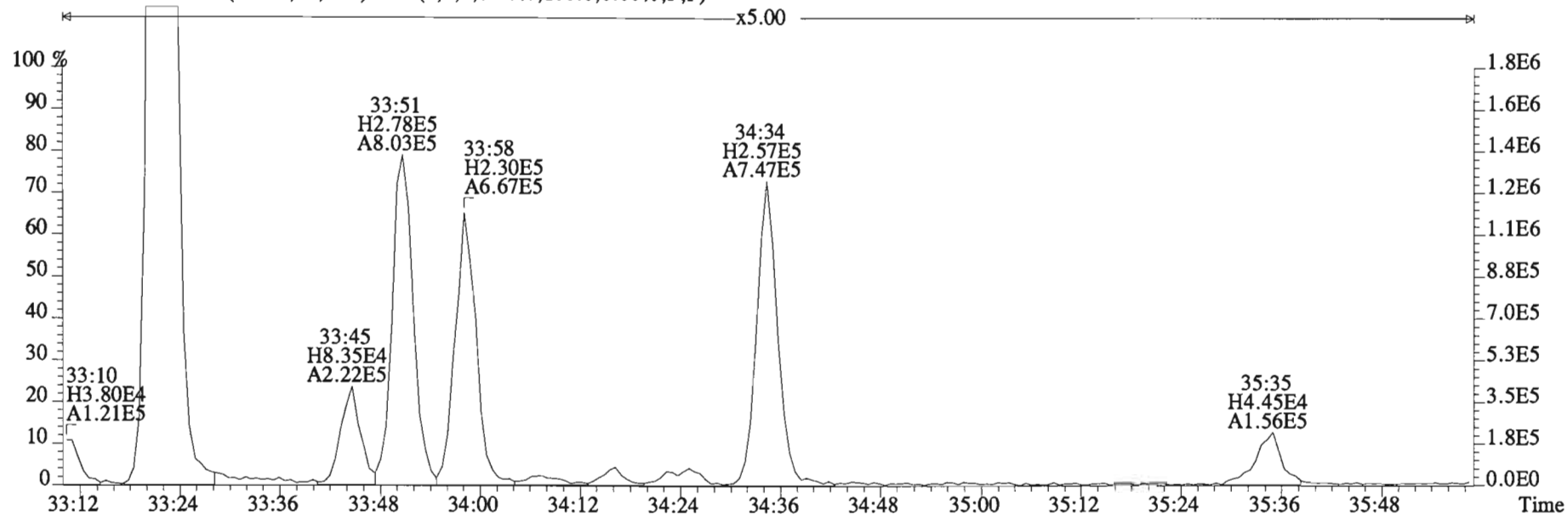
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



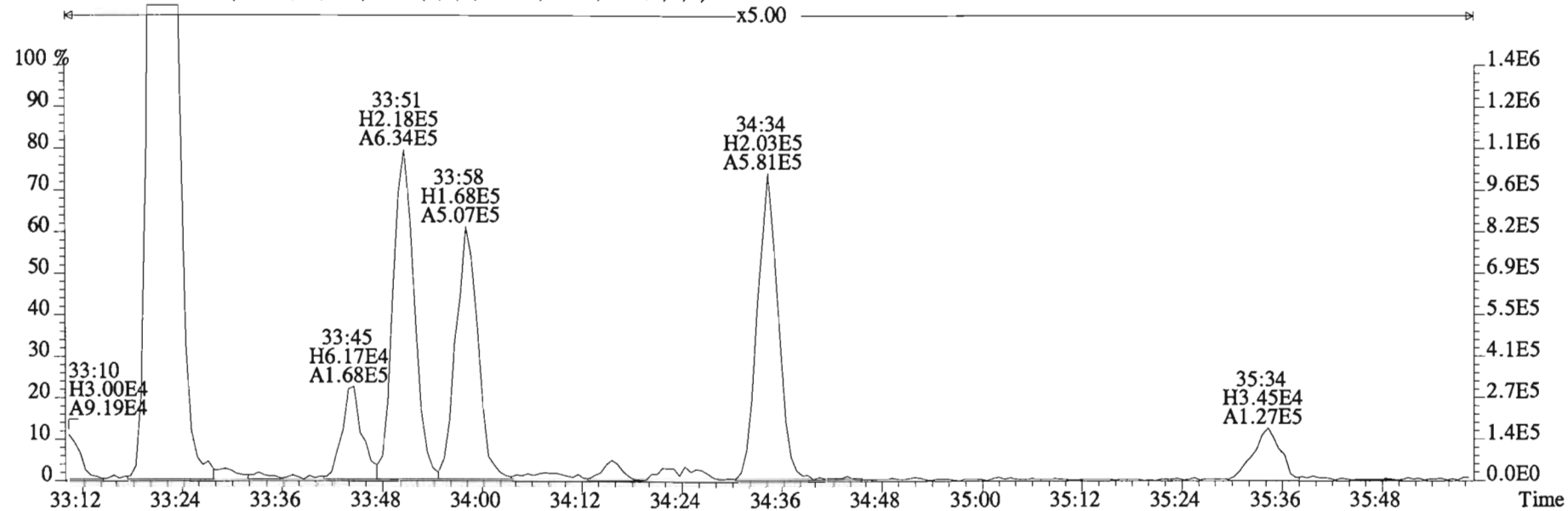
File:150203D1 #1-392 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:150203D1 #1-392 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

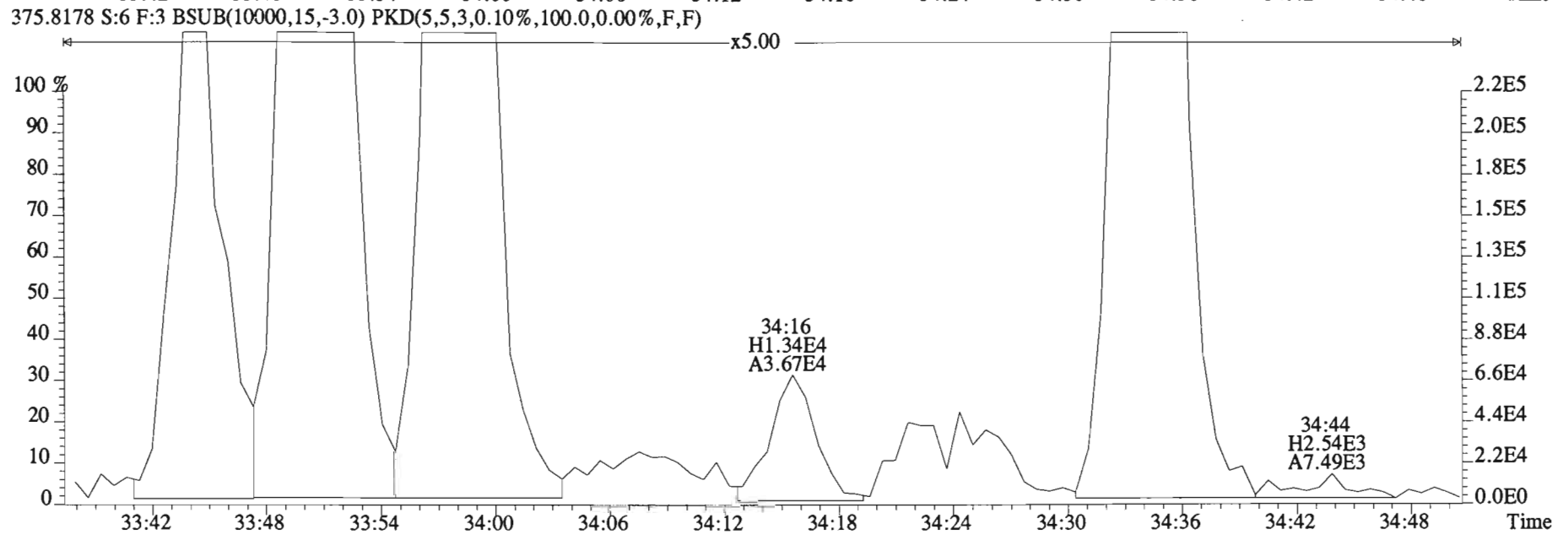
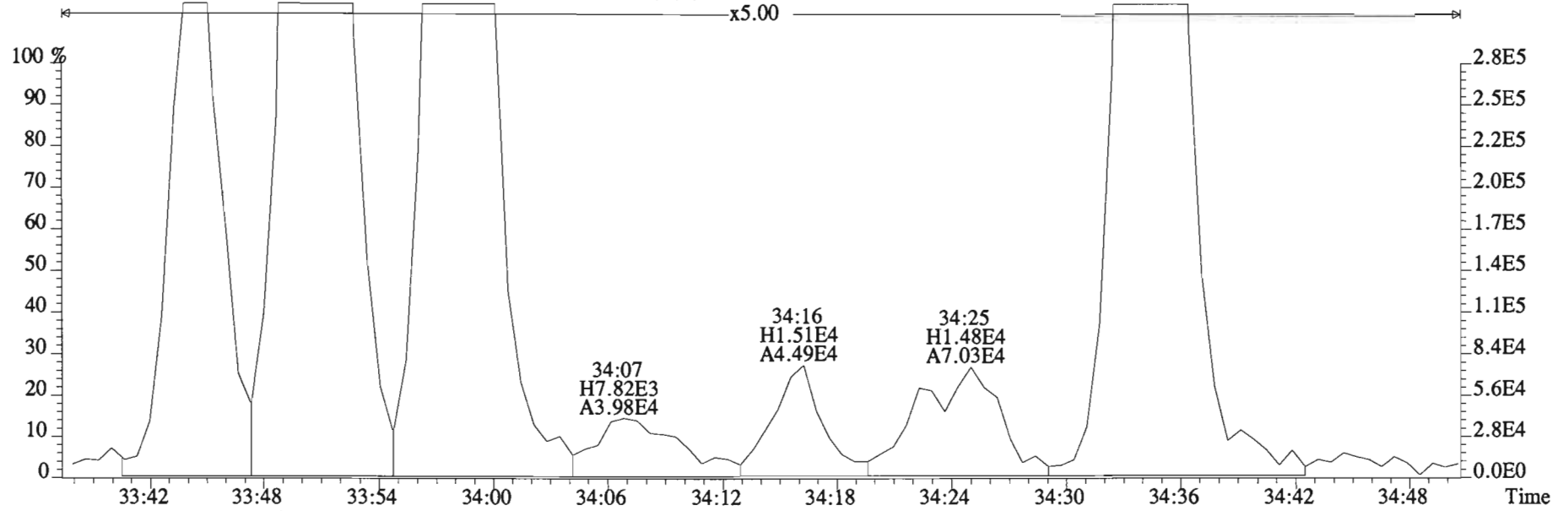


375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

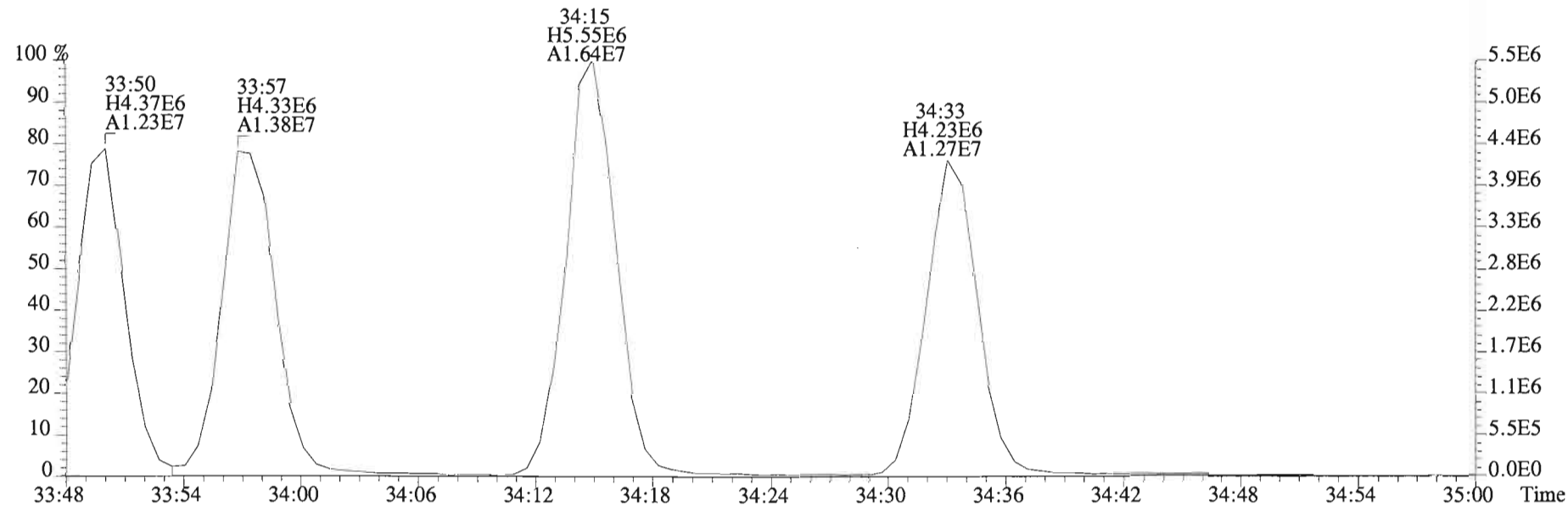
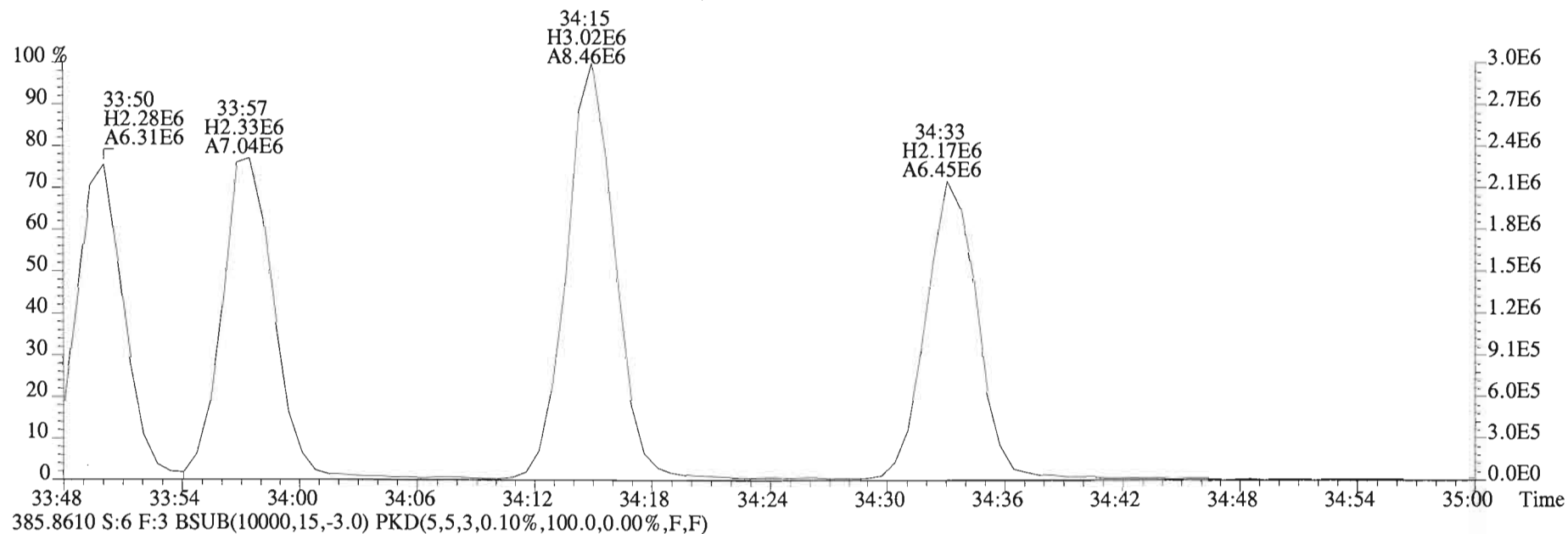




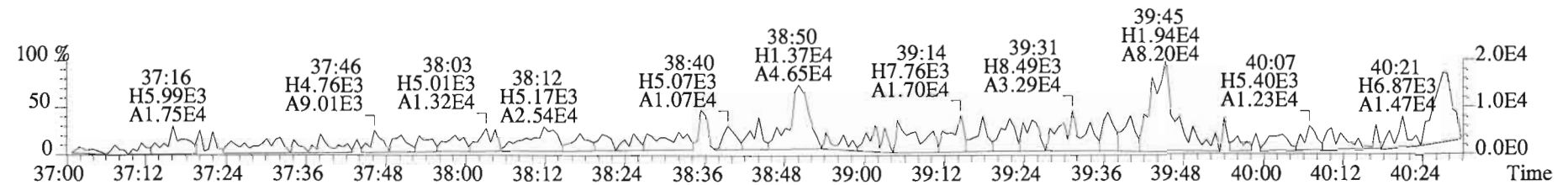
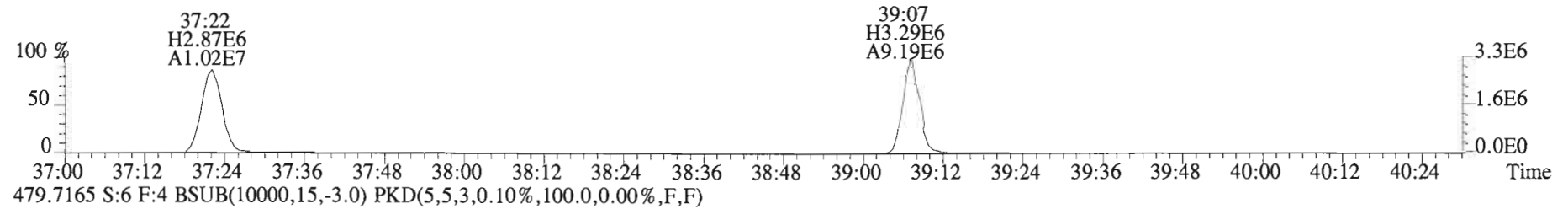
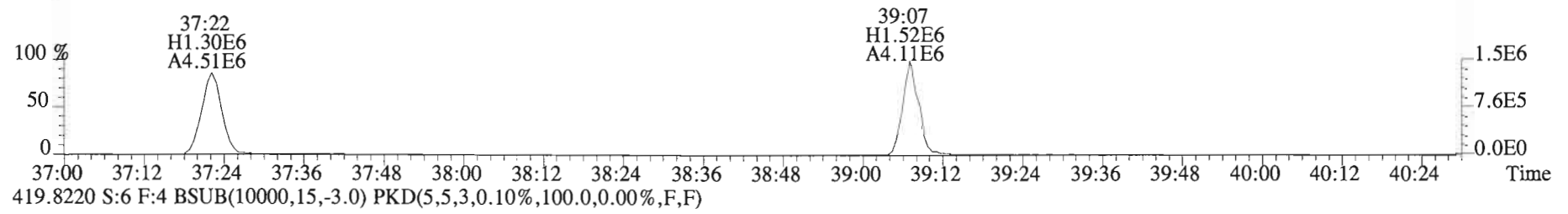
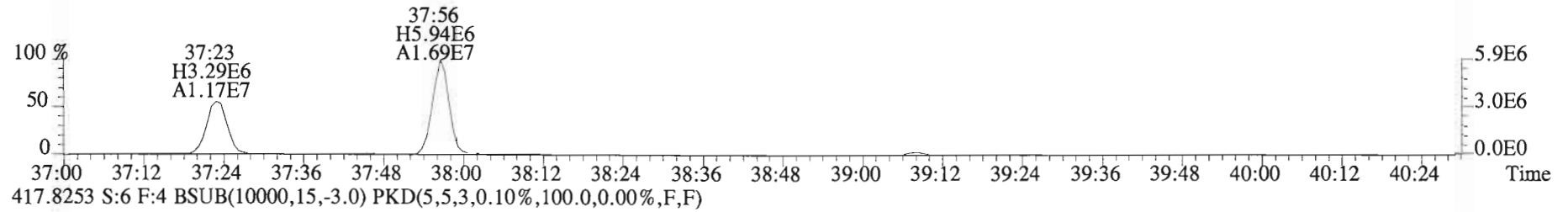
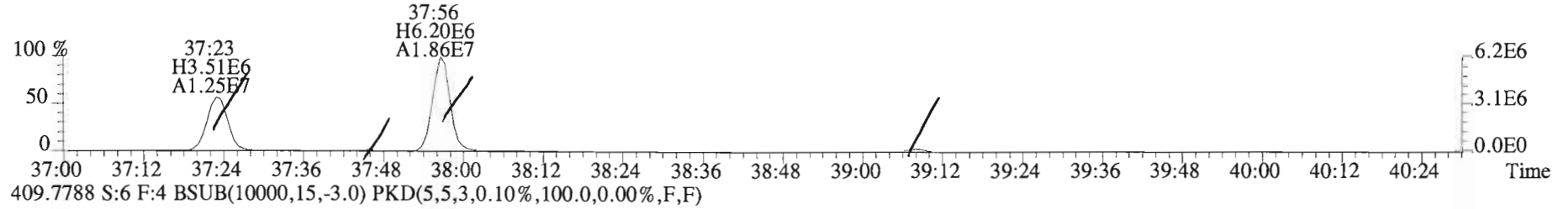
File:150203D1 #1-392 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



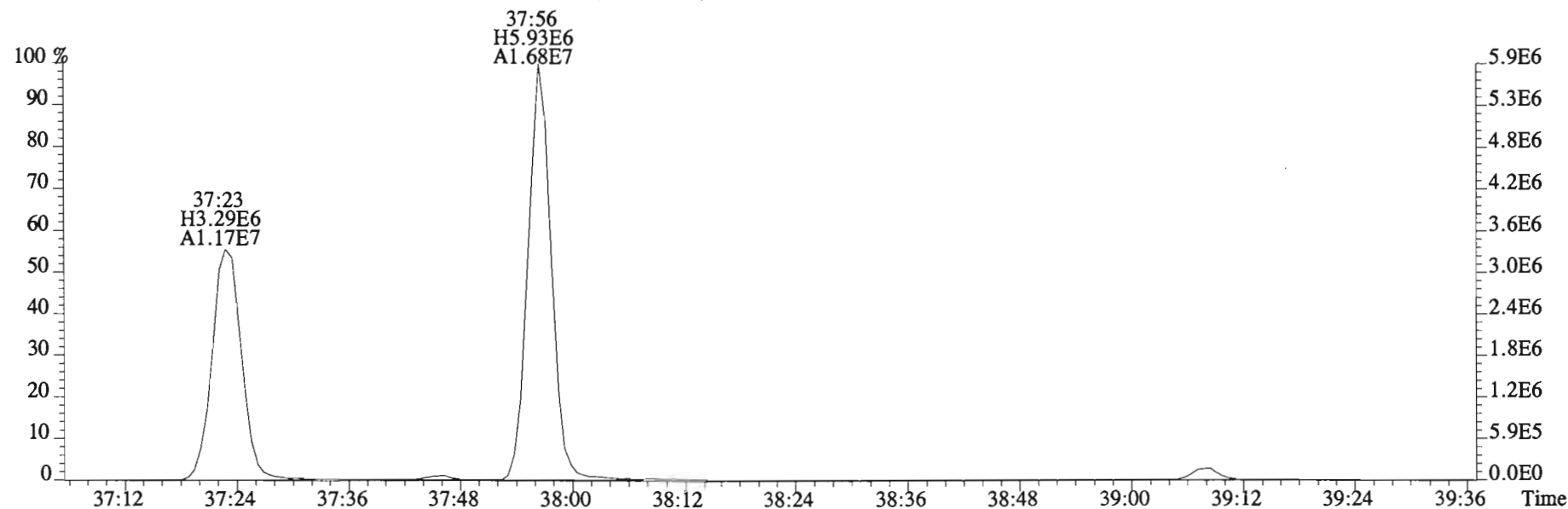
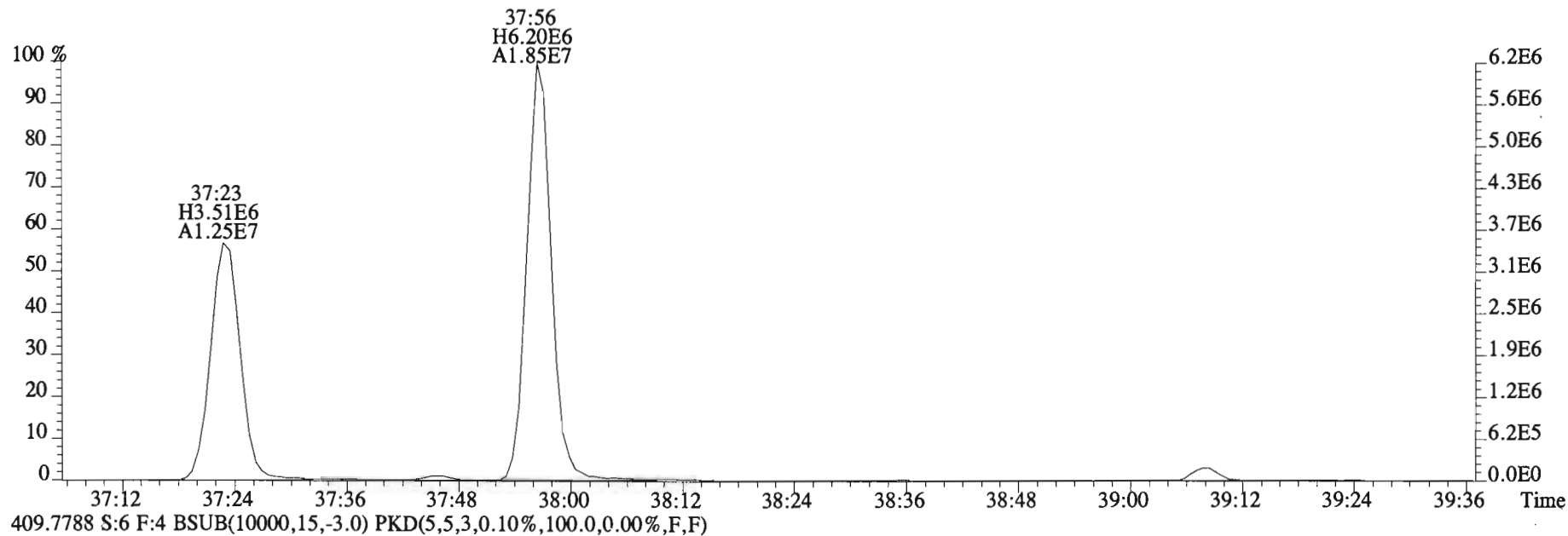
File:150203D1 #1-392 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text: Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



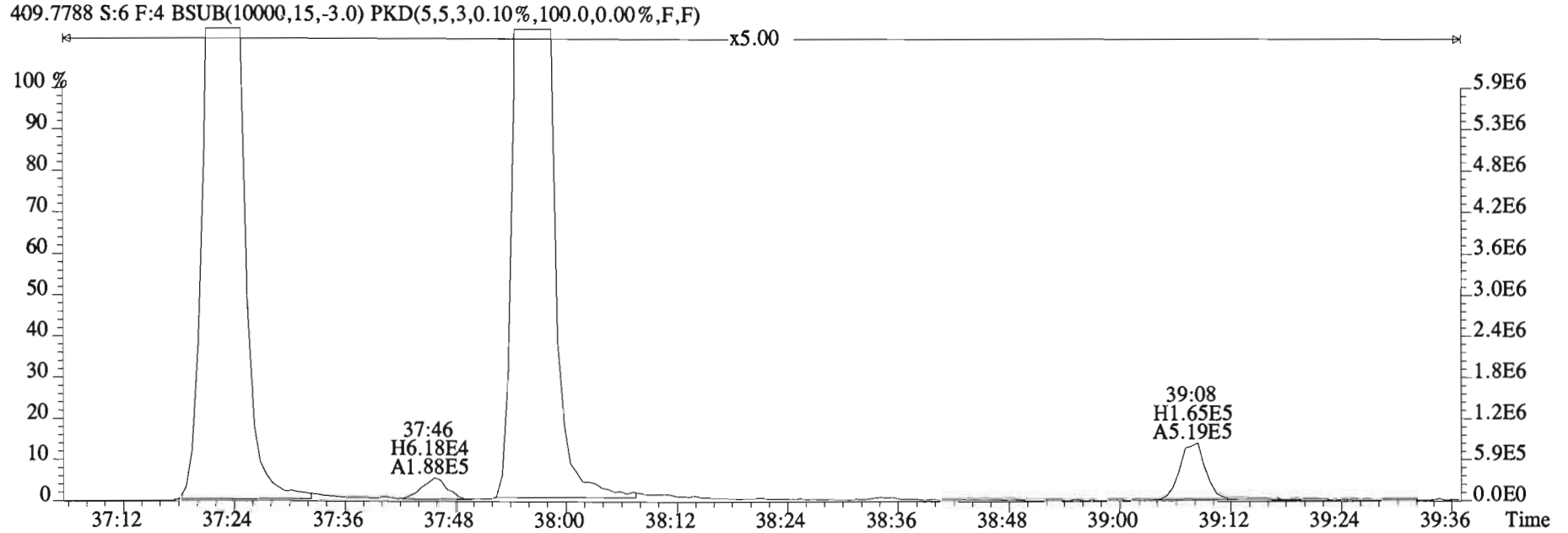
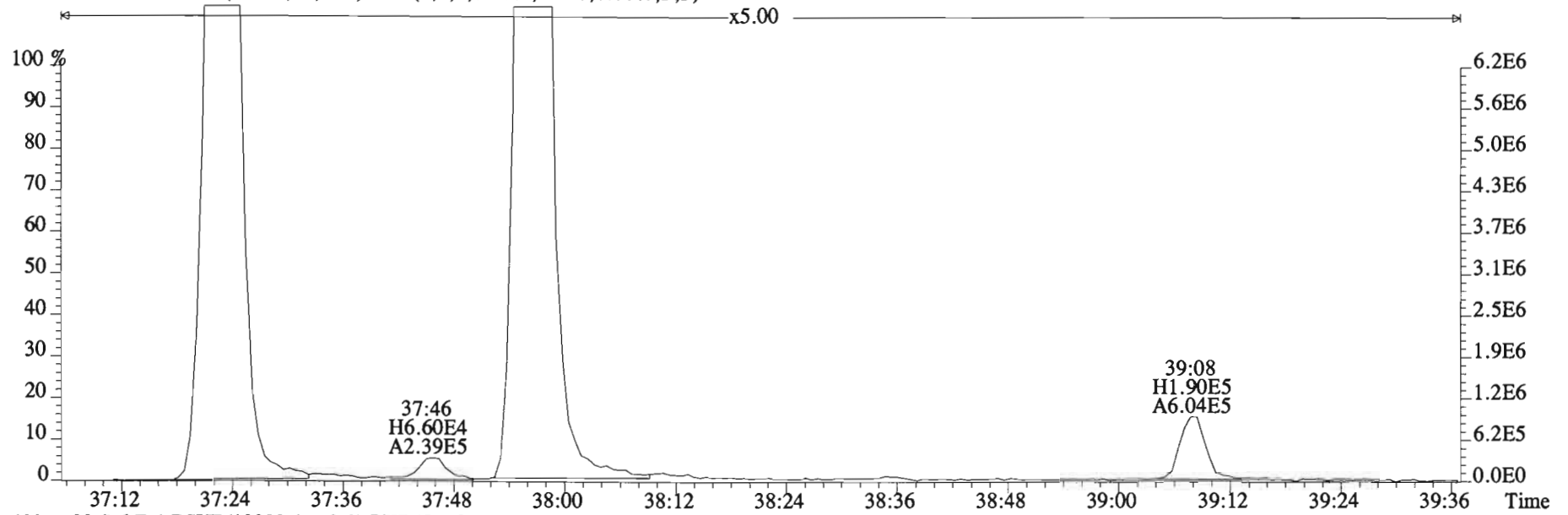
File:150203D1 #1-326 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



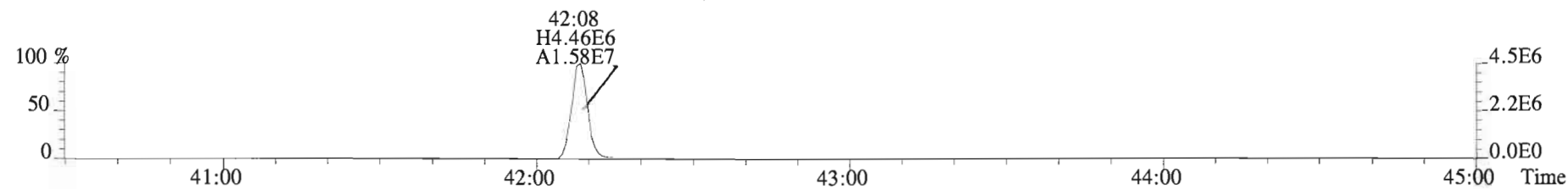
File:150203D1 #1-326 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



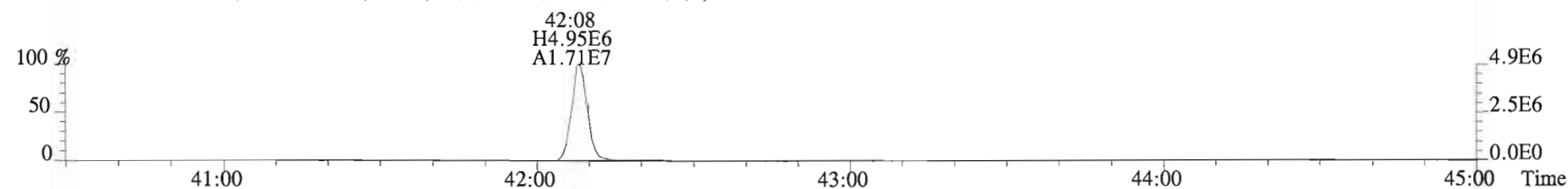
File:150203D1 #1-326 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01@20X WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



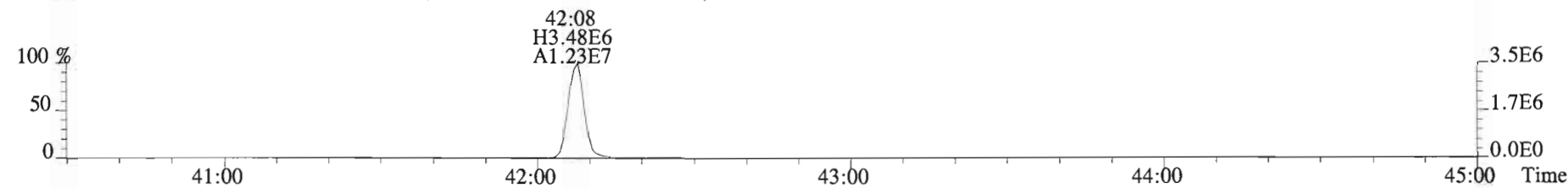
File:150203D1 #1-388 Acq: 3-FEB-2015 12:37:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-7 Text:1500116-01 WM-CB-03-20150122-S 34.48 Exp:OCDD\_DB5  
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



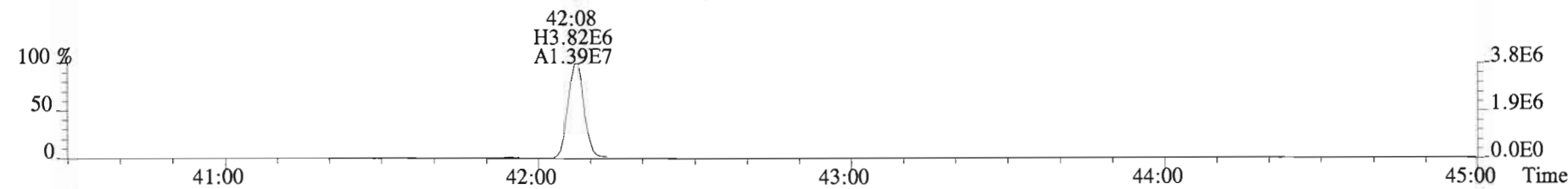
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



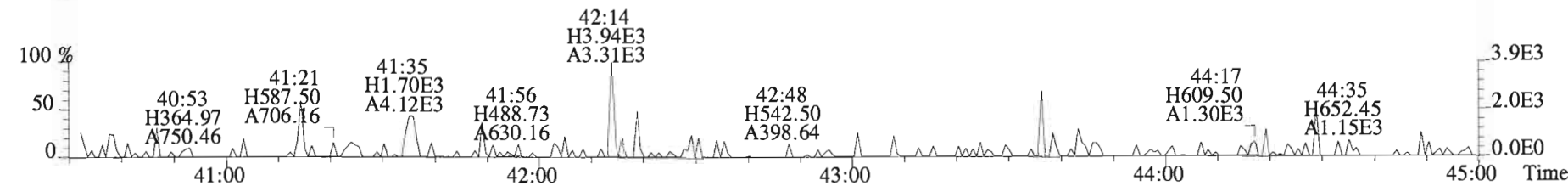
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: WM-FD-02-20150122-S      Filename: 150203D1      S:7      Acq:3-FEB-15 13:25:59  
 Lab ID: 1500116-02      GC Column ID: ZB-5MS      ICal: 1613VG7-1-7-15      wt/vol:10.039

ConCal: ST150203D1-1  
 EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	1.78e+05	0.73 y	1.17	26:58	1.3598	*	2.5	*	*	Total Tetra-Dioxins	22.8	23.2	*	*	
1,2,3,7,8-PeCDD	5.30e+05	0.57 y	0.91	31:25	5.5306	*	2.5	*	*	Total Penta-Dioxins	50.4	50.4	*	*	
1,2,3,4,7,8-HxCDD	9.28e+05	1.17 y	1.08	34:44	10.343	*	2.5	*	*	Total Hexa-Dioxins	305	305	*	*	
1,2,3,6,7,8-HxCDD	3.53e+06	1.27 y	1.06	34:51	39.105	*	2.5	*	*	Total Hepta-Dioxins	2220	2220	*	*	
1,2,3,7,8,9-HxCDD	2.26e+06	1.26 y	0.93	35:09	24.574	*	2.5	*	*	Total Tetra-Furans	70.8	70.8	*	*	
1,2,3,4,6,7,8-HpCDD	9.62e+07	1.02 y	1.10	38:35	1122.9	*	2.5	*	*	Total Penta-Furans	106.76	106.76	*	*	
OCDD	6.74e+08	0.89 y	0.95	41:56	11794	*	2.5	*	*	Total Hexa-Furans	238	238	*	*	
2,3,7,8-TCDF	6.23e+05	0.75 y	1.07	26:13	3.7899	*	2.5	*	*	Total Hepta-Furans	549	549	*	*	
1,2,3,7,8-PeCDF	3.94e+05	1.50 y	1.07	30:16	2.7832	*	2.5	*	*						
2,3,4,7,8-PeCDF	5.52e+05	1.51 y	1.03	31:09	4.1713	*	2.5	*	*						
1,2,3,4,7,8-HxCDF	1.51e+06	1.31 y	1.38	33:51	11.572	*	2.5	*	*						
1,2,3,6,7,8-HxCDF	1.21e+06	1.35 y	1.26	33:58	8.9412	*	2.5	*	*						
2,3,4,6,7,8-HxCDF	1.49e+06	1.27 y	1.29	34:34	11.160	*	2.5	*	*						
1,2,3,7,8,9-HxCDF	2.92e+05	1.29 y	1.19	35:34	2.6220	*	2.5	*	*						
1,2,3,4,6,7,8-HpCDF	2.65e+07	1.06 y	1.61	37:23	209.03	*	2.5	*	*						
1,2,3,4,7,8,9-HpCDF	1.24e+06	1.04 y	1.53	39:08	11.727	*	2.5	*	*						
OCDF	3.50e+07	0.91 y	1.10	42:10	474.44	*	2.5	*	*						
IS	13C-2,3,7,8-TCDD	2.23e+07	0.81 y	1.06	26:57	173.10				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	2.10e+07	0.62 y	1.18	31:25	146.98				86.9					
IS	13C-1,2,3,4,7,8-HxCDD	1.66e+07	1.26 y	0.72	34:44	197.01				73.8					
IS	13C-1,2,3,6,7,8-HxCDD	1.69e+07	1.21 y	0.74	34:50	196.47				98.9					
IS	13C-1,2,3,7,8,9-HxCDD	1.97e+07	1.24 y	0.85	35:08	197.20				98.6					
IS	13C-1,2,3,4,6,7,8-HpCDD	1.55e+07	1.08 y	0.65	38:35	202.35				99.0					
IS	13C-OCDD	2.40e+07	0.89 y	0.76	41:55	268.82				102					
IS	13C-2,3,7,8-TCDF	3.06e+07	0.76 y	0.92	26:12	193.79				67.5					
IS	13C-1,2,3,7,8-HpCDF	2.62e+07	1.52 y	0.92	30:15	165.63				97.3					
IS	13C-2,3,4,7,8-PeCDF	2.55e+07	1.56 y	0.93	31:08	159.53				83.1					
IS	13C-1,2,3,4,7,8-HxCDF	1.88e+07	0.50 y	0.98	33:50	164.03				80.1					
IS	13C-1,2,3,6,7,8-HxCDF	2.14e+07	0.51 y	1.08	33:57	168.96				82.3					
IS	13C-2,3,4,6,7,8-HxCDF	2.07e+07	0.51 y	1.03	34:34	172.41				84.8					
IS	13C-1,2,3,7,8,9-HxCDF	1.87e+07	0.51 y	0.86	35:32	186.07				86.5					
IS	13C-1,2,3,4,6,7,8-HpCDF	1.57e+07	0.44 y	0.72	37:23	185.93				93.4					
IS	13C-1,2,3,4,7,8,9-HpCDF	1.38e+07	0.44 y	0.70	39:08	169.06				93.3					
IS	13C-OCDF	2.68e+07	0.87 y	0.85	42:08	270.07				84.9					
C/Up	37C1-2,3,7,8-TCDD	1.03e+07		1.12	26:58	75.695				67.8					
RS/RT	13C-1,2,3,4-TCDD	2.42e+07	0.81 y	1.00	26:24	199.23									
RS	13C-1,2,3,4-TCDF	3.42e+07	0.78 y	1.00	25:00	199.23									
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.33e+07	0.52 y	1.00	34:15	199.23									

Integrations      Reviewed  
 by      by  
 Analyst: DMS      Analyst: [Signature]  
 Date: 2/4/15      Date: 2/12/15

Totals class: TCDD EMPC

Entry #: 19

Run: 12 File: 150203D1 S: 7 I: 1 F: 1  
 Acquired: 3-FEB-15 13:25:59 Processed: 4-FEB-15 07:54:14

Total Concentration: 23.172

Unnamed Concentration: 21.812

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
23:38	3.198e+05	4.332e+05	0.74 y	7.530e+05	5.7503	
24:00	2.053e+05	2.558e+05	0.80 y	4.610e+05	3.5208	
24:23	4.813e+04	6.575e+04	0.73 y	1.139e+05	0.86970	
25:07	2.190e+04	3.679e+04	0.60 n	5.034e+04	0.38443	
25:20	1.055e+05	1.495e+05	0.71 y	2.550e+05	1.9472	
25:31	1.029e+05	1.493e+05	0.69 y	2.522e+05	1.9256	
25:41	3.863e+04	5.887e+04	0.66 y	9.749e+04	0.74452	
25:55	2.280e+04	3.255e+04	0.70 y	5.534e+04	0.42262	
26:04	5.328e+04	7.250e+04	0.73 y	1.258e+05	0.96054	
26:23	5.863e+04	7.995e+04	0.73 y	1.386e+05	1.0582	
26:30	1.459e+04	2.129e+04	0.69 y	3.588e+04	0.27402	
26:43	9.351e+04	1.081e+05	0.86 y	2.016e+05	1.5398	
26:51	1.709e+04	2.595e+04	0.66 y	4.304e+04	0.32864	
26:58	7.540e+04	1.027e+05	0.73 y	1.781e+05	1.3598	2,3,7,8-TCDD
27:15	6.407e+04	7.857e+04	0.82 y	1.426e+05	1.0893	
27:22	2.259e+04	2.604e+04	0.87 y	4.863e+04	0.37139	
27:49	3.304e+04	4.886e+04	0.68 y	8.190e+04	0.62545	



Totals class: PeCDD EMPC

Entry #: 21

Run: 12 File: 150203D1 S: 7 I: 1 F: 2  
 Acquired: 3-FEB-15 13:25:59 Processed: 4-FEB-15 07:54:14

Total Concentration: 50.448

Unnamed Concentration: 44.917

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
29:24	4.731e+05	7.940e+05	0.60 y	1.267e+06	13.224	
29:50	1.148e+05	1.856e+05	0.62 y	3.004e+05	3.1351	
30:17	2.307e+05	3.624e+05	0.64 y	5.931e+05	6.1902	
30:26	2.110e+05	3.564e+05	0.59 y	5.674e+05	5.9222	
30:31	1.878e+05	2.917e+05	0.64 y	4.795e+05	5.0046	
30:44	2.167e+05	3.626e+05	0.60 y	5.793e+05	6.0456	
31:02	6.909e+04	1.191e+05	0.58 y	1.882e+05	1.9645	
31:25	1.914e+05	3.385e+05	0.57 y	5.299e+05	5.5306	1,2,3,7,8-PeCDD
31:30	4.603e+04	7.617e+04	0.60 y	1.222e+05	1.2753	
31:46	7.897e+04	1.276e+05	0.62 y	2.065e+05	2.1556	

Totals class: HxCDD EMPC

Entry #: 23

Run: 12 File: 150203D1 S: 7 I: 1 F: 3  
 Acquired: 3-FEB-15 13:25:59 Processed: 4-FEB-15 07:54:14

Total Concentration: 304.96 Unnamed Concentration: 230.942

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
33:11	4.120e+06	3.300e+06	1.25 y	7.420e+06	81.837	
33:45	8.618e+05	6.948e+05	1.24 y	1.557e+06	17.169	
34:01	6.040e+06	4.875e+06	1.24 y	1.092e+07	120.40	
34:09	2.884e+05	2.629e+05	1.10 y	5.513e+05	6.0805	
34:44	5.007e+05	4.273e+05	1.17 y	9.280e+05	10.343	1,2,3,4,7,8-HxCDD
34:51	1.974e+06	1.559e+06	1.27 y	3.533e+06	39.105	1,2,3,6,7,8-HxCDD
35:03	2.690e+05	2.259e+05	1.19 y	4.949e+05	5.4584	
35:09	1.258e+06	1.001e+06	1.26 y	2.259e+06	24.574	1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 12 File: 150203D1 S: 7 I: 1 F: 4  
Acquired: 3-FEB-15 13:25:59 Processed: 4-FEB-15 07:54:14

Total Concentration: 2221.3

Unnamed Concentration: 1098.373

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:45	4.768e+07	4.644e+07	1.03 y	9.412e+07	1098.4	
38:35	4.869e+07	4.753e+07	1.02 y	9.623e+07	1122.9	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 12 File: 150203D1 S: 7 I: 1 F: 1  
 Acquired: 3-FEB-15 13:25:59 Processed: 4-FEB-15 07:54:14

Total Concentration: 70.785 Unnamed Concentration: 66.995

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
21:33	8.859e+04	1.217e+05	0.73	y	2.103e+05	1.2793
22:08	1.412e+05	1.605e+05	0.88	y	3.016e+05	1.8348
22:21	5.324e+02	6.464e+02	0.82	y	1.179e+03	0.0071700
22:45	6.173e+05	8.098e+05	0.76	y	1.427e+06	8.6812
23:15	4.538e+05	6.030e+05	0.75	y	1.057e+06	6.4283
23:38	4.146e+05	5.238e+05	0.79	y	9.384e+05	5.7083
24:02	3.543e+05	4.667e+05	0.76	y	8.210e+05	4.9939
24:09	1.466e+05	1.733e+05	0.85	y	3.199e+05	1.9461
24:19	1.728e+05	2.238e+05	0.77	y	3.967e+05	2.4131
24:39	8.431e+04	9.973e+04	0.85	y	1.840e+05	1.1195
24:46	1.588e+05	2.237e+05	0.71	y	3.825e+05	2.3267
24:54	4.056e+05	5.245e+05	0.77	y	9.302e+05	5.6581
25:02	3.926e+05	4.792e+05	0.82	y	8.718e+05	5.3031
25:26	2.937e+05	3.742e+05	0.78	y	6.679e+05	4.0627
25:40	1.489e+05	1.939e+05	0.77	y	3.428e+05	2.0852
25:50	1.249e+05	1.554e+05	0.80	y	2.804e+05	1.7054
26:01	1.323e+05	1.560e+05	0.85	y	2.884e+05	1.7542
26:07	1.223e+05	1.571e+05	0.78	y	2.794e+05	1.6995
26:13	2.671e+05	3.560e+05	0.75	y	6.230e+05	3.7899 2,3,7,8-TCDF
26:32	4.623e+05	5.752e+05	0.80	y	1.037e+06	6.3110
26:45	2.276e+04	2.596e+04	0.88	y	4.872e+04	0.29635
27:00	1.309e+04	1.791e+04	0.73	y	3.100e+04	0.18857
27:30	2.011e+04	2.715e+04	0.74	y	4.726e+04	0.28747
27:39	2.480e+04	3.214e+04	0.77	y	5.694e+04	0.34634
27:57	4.029e+04	5.158e+04	0.78	y	9.187e+04	0.55882

Totals class: 1st Func. PeCDF EMPC            Entry #: 29

Run: 12            File: 150203D1            S: 7 I: 1 F: 1  
Acquired: 3-FEB-15 13:25:59    Processed: 4-FEB-15 07:54:14

Total Concentration: 50.185            Unnamed Concentration: 50.185

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
27:56	4.152e+06	2.716e+06	1.53 y	6.869e+06	50.185	

Totals class: PeCDF EMPC

Entry #: 31

Run: 12 File: 150203D1 S: 7 I: 1 F: 2  
 Acquired: 3-FEB-15 13:25:59 Processed: 4-FEB-15 07:54:14

Total Concentration: 56.572 Unnamed Concentration: 49.617

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
29:14	4.083e+05	2.741e+05	1.49 y	6.824e+05	4.9860	
29:21	1.932e+06	1.209e+06	1.60 y	3.141e+06	22.952	
29:43	4.391e+04	3.278e+04	1.34 y	7.668e+04	0.56028	
29:54	7.055e+05	4.653e+05	1.52 y	1.171e+06	8.5542	
30:06	1.216e+05	8.237e+04	1.48 y	2.040e+05	1.4903	
30:16	2.362e+05	1.576e+05	1.50 y	3.939e+05	2.7832	1,2,3,7,8-PeCDF
30:30	4.601e+05	2.752e+05	1.67 y	7.353e+05	5.3721	
30:58	2.479e+04	1.725e+04	1.44 y	4.203e+04	0.30712	
31:03	1.941e+05	1.308e+05	1.48 y	3.249e+05	2.3738	
31:09	3.319e+05	2.201e+05	1.51 y	5.520e+05	4.1713	2,3,4,7,8-PeCDF
31:11	2.178e+05	1.399e+05	1.56 y	3.577e+05	2.6134	
32:01	3.188e+04	2.401e+04	1.33 y	5.589e+04	0.40836	

Totals class: HxCDF EMPC

Entry #: 33

Run: 12 File: 150203D1 S: 7 I: 1 F: 3  
 Acquired: 3-FEB-15 13:25:59 Processed: 4-FEB-15 07:54:14

Total Concentration: 238.44 Unnamed Concentration: 204.148

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
32:39	2.076e+06	1.585e+06	1.31 y	3.661e+06	28.608	
32:49	7.175e+06	5.538e+06	1.30 y	1.271e+07	99.345	
33:10	1.182e+05	9.265e+04	1.28 y	2.108e+05	1.6476	
33:22	5.038e+06	3.841e+06	1.31 y	8.879e+06	69.386	
33:44	2.217e+05	1.678e+05	1.32 y	3.894e+05	3.0432	
33:51	8.572e+05	6.547e+05	1.31 y	1.512e+06	11.572	1,2,3,4,7,8-HxCDF
33:58	6.926e+05	5.140e+05	1.35 y	1.207e+06	8.9412	1,2,3,6,7,8-HxCDF
34:16	5.171e+04	3.709e+04	1.39 y	8.880e+04	0.69397	
34:24	1.038e+05	7.855e+04	1.32 y	1.824e+05	1.4251	
34:34	8.362e+05	6.570e+05	1.27 y	1.493e+06	11.160	2,3,4,6,7,8-HxCDF
35:34	1.646e+05	1.275e+05	1.29 y	2.921e+05	2.6220	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

Entry #: 35

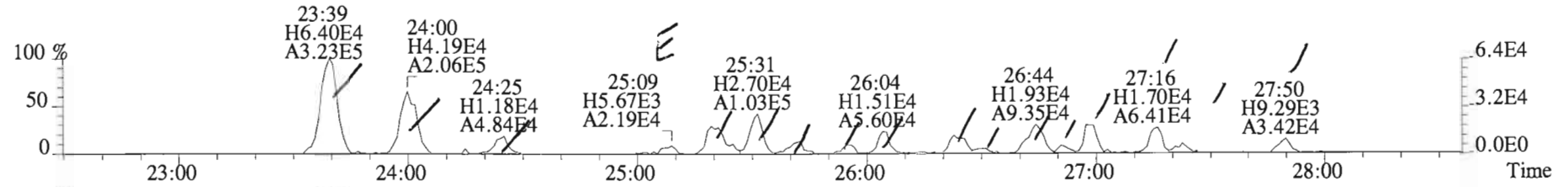
Run: 12 File: 150203D1 S: 7 I: 1 F: 4  
 Acquired: 3-FEB-15 13:25:59 Processed: 4-FEB-15 07:54:14

Total Concentration: 549.38 Unnamed Concentration: 328.628

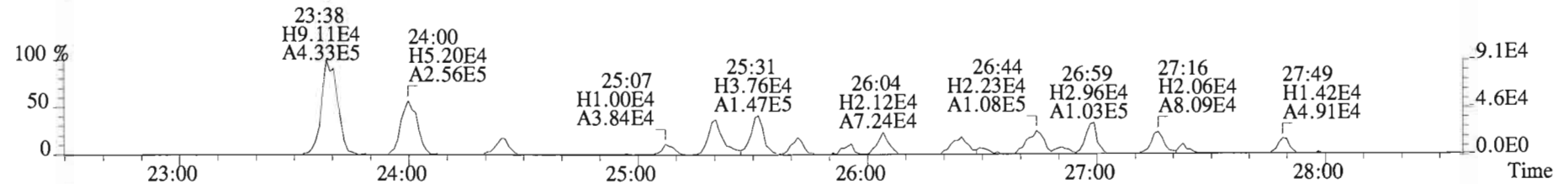
RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:23	1.365e+07	1.287e+07	1.06 y	2.652e+07	209.03	1,2,3,4,6,7,8-HpCDF
37:46	2.189e+05	2.125e+05	1.03 y	4.313e+05	3.7179	
37:57	1.968e+07	1.802e+07	1.09 y	3.769e+07	324.91	
39:08	6.306e+05	6.065e+05	1.04 y	1.237e+06	11.727	1,2,3,4,7,8,9-HpCDF



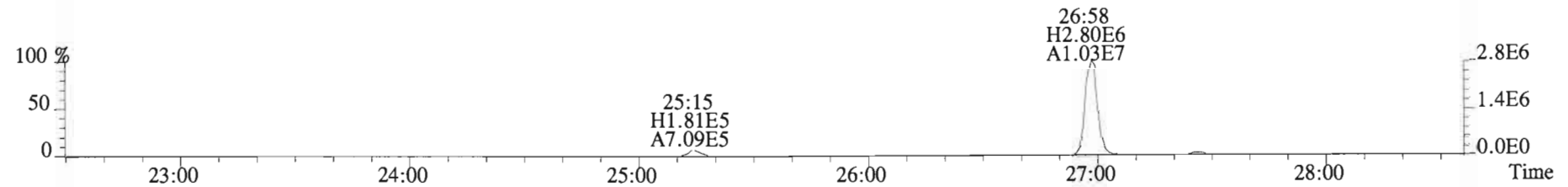
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319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



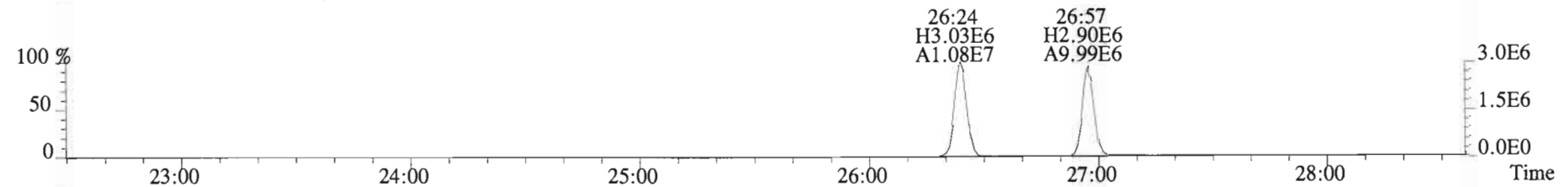
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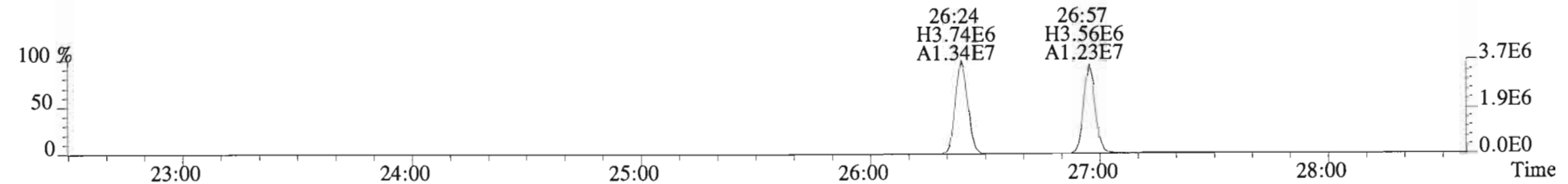
327.8847 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



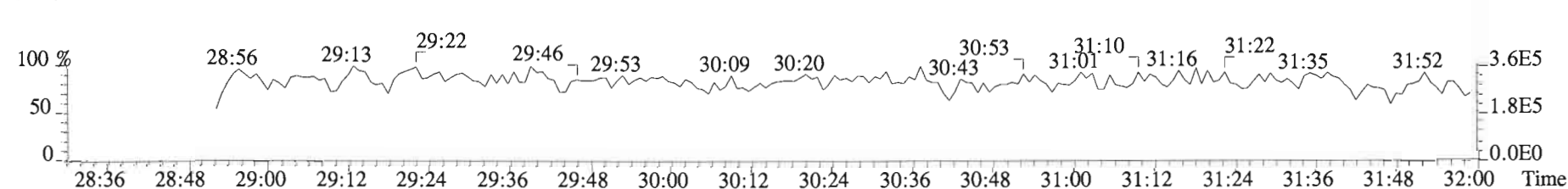
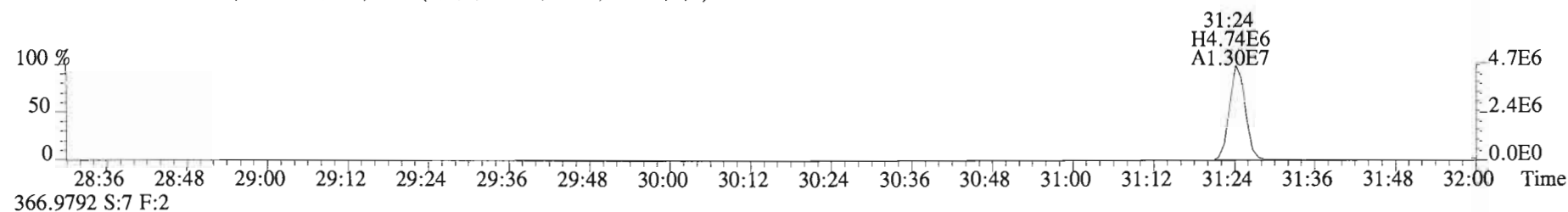
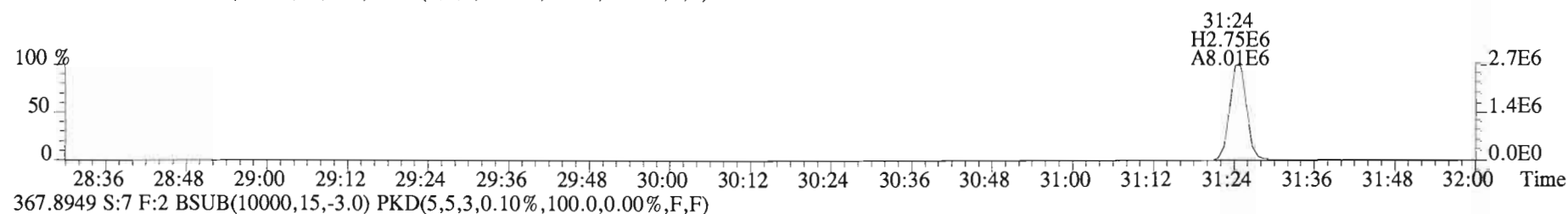
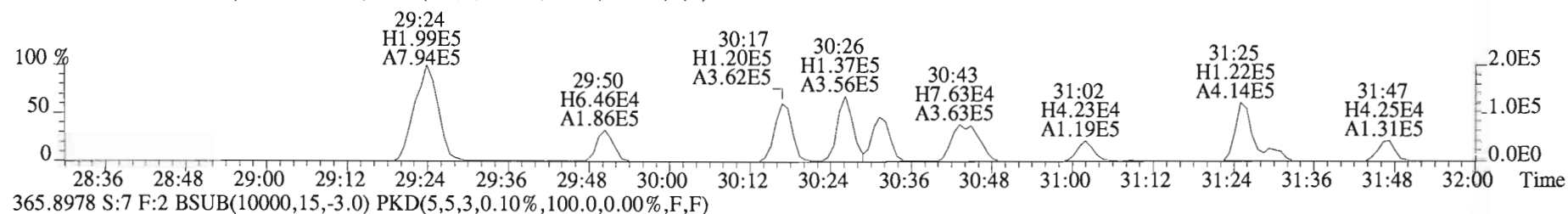
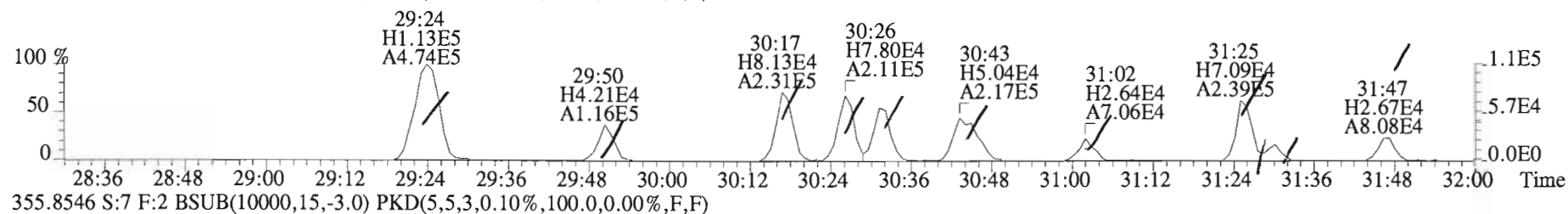
331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



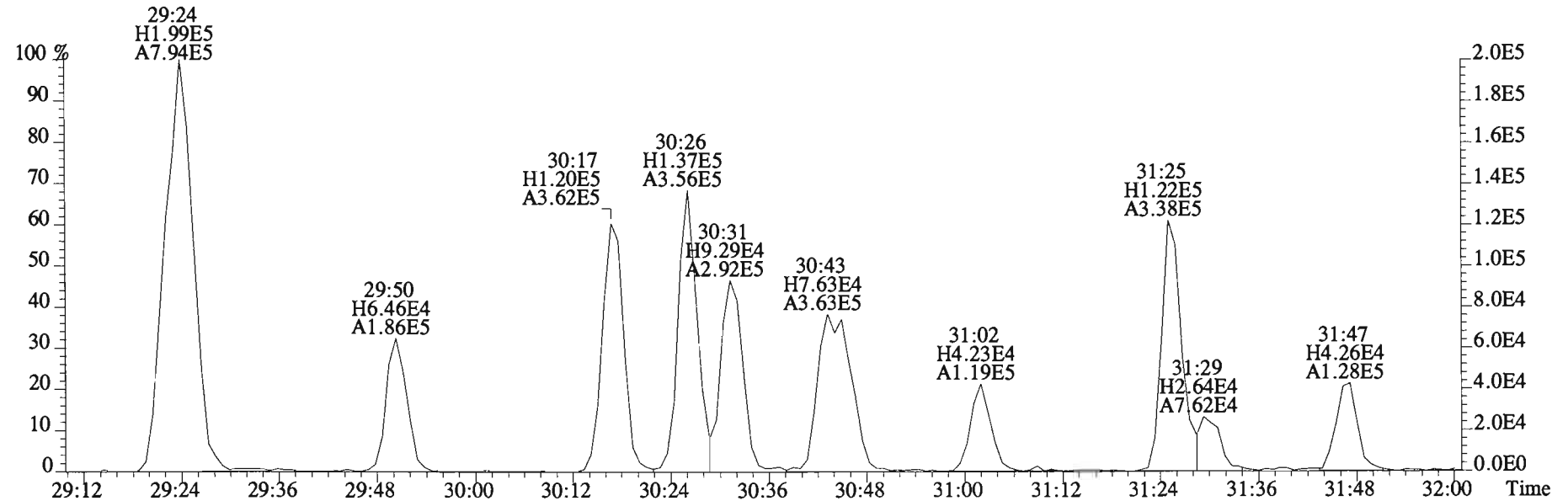
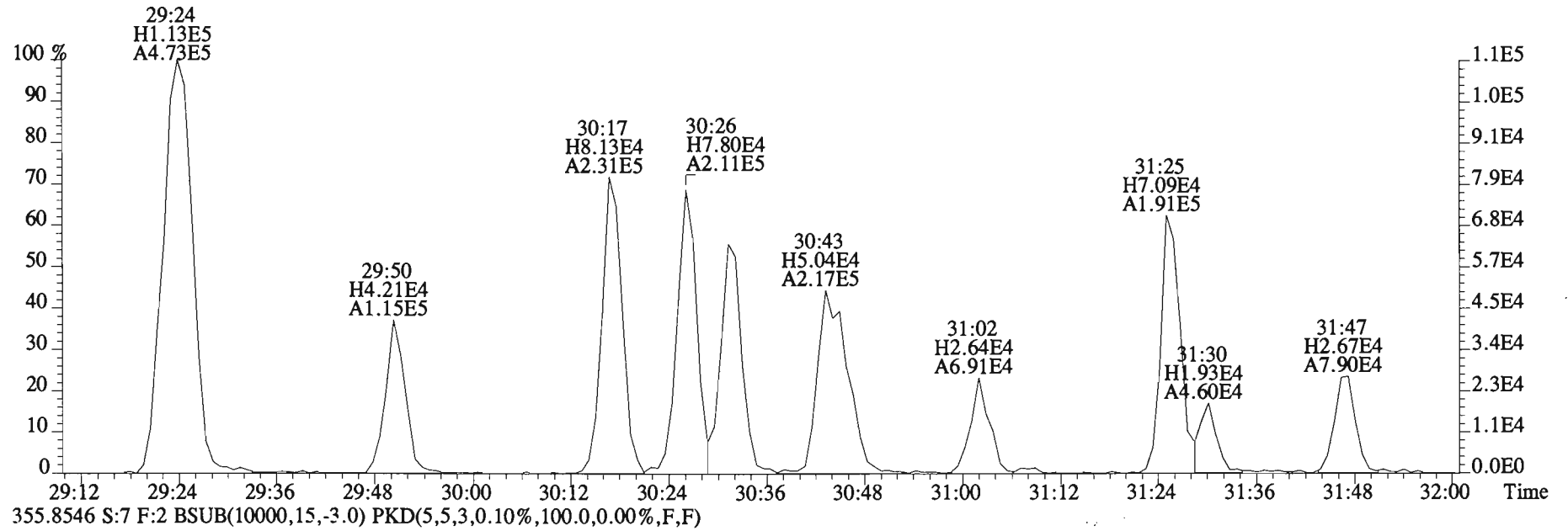
333.9339 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



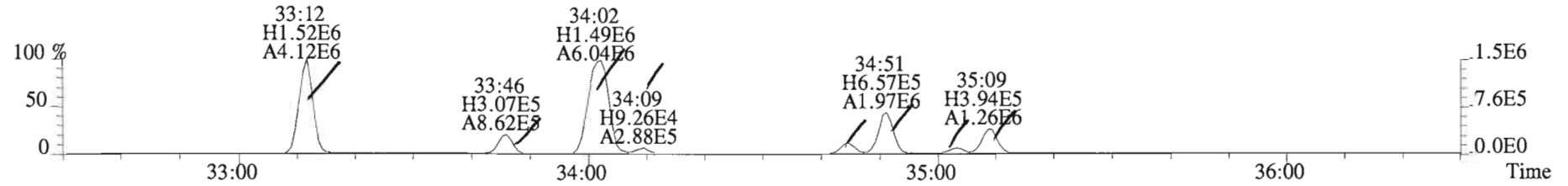
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353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



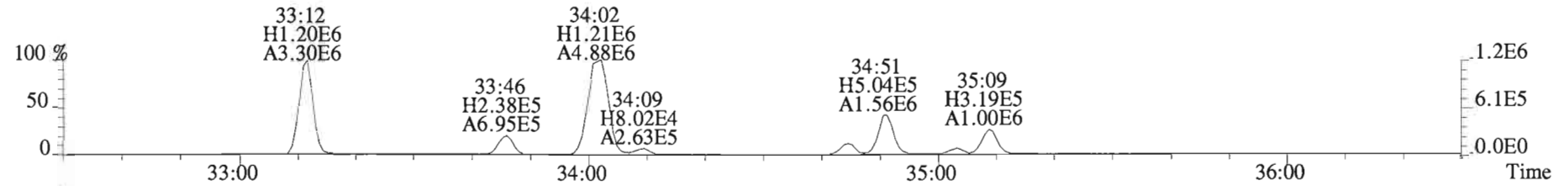
File:150203D1 #1-251 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



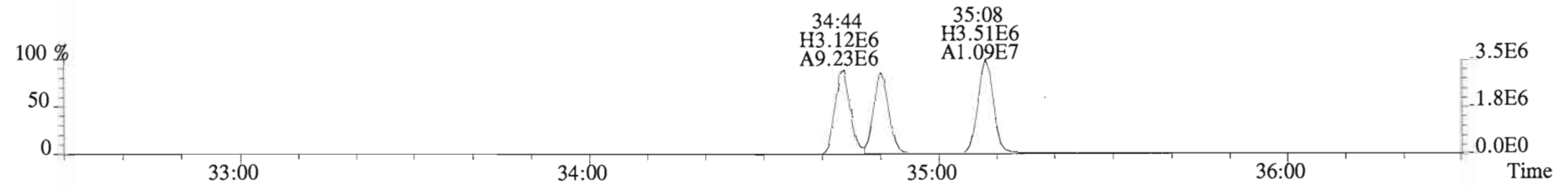
File:150203D1 #1-392 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02 WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
 389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



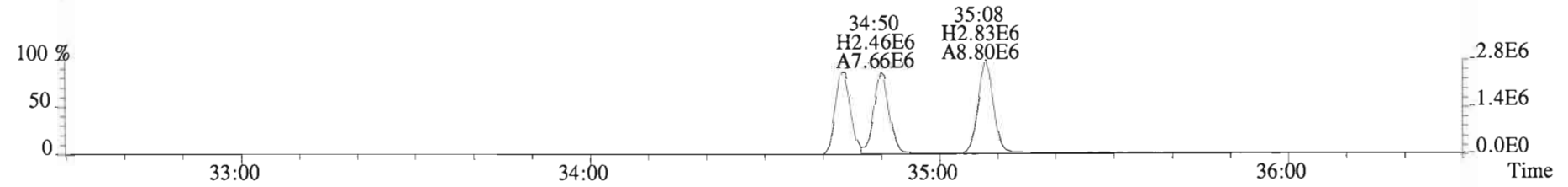
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



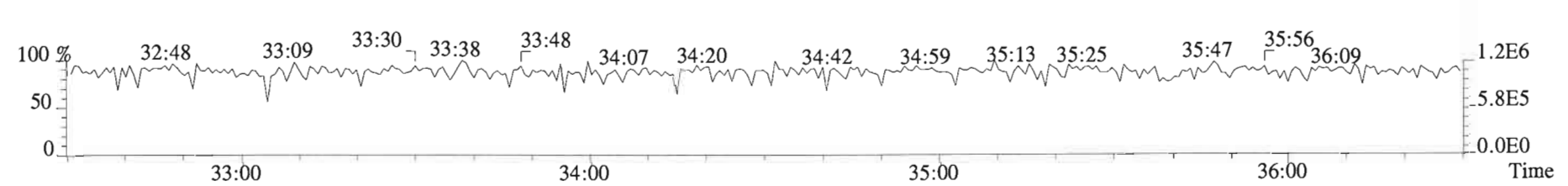
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



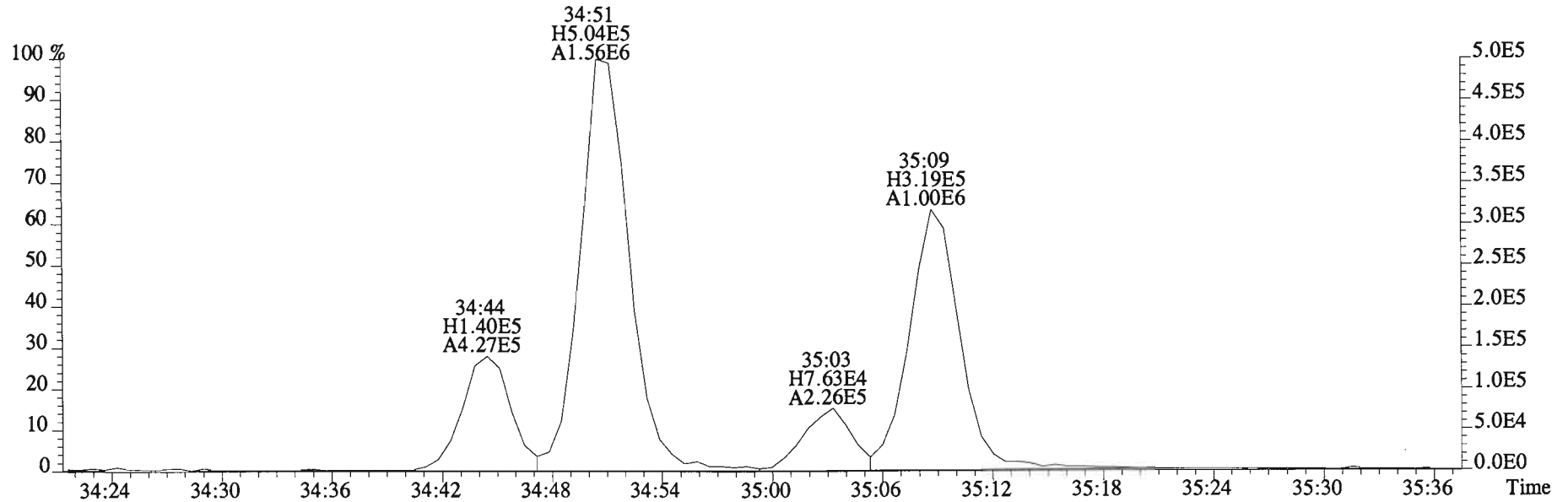
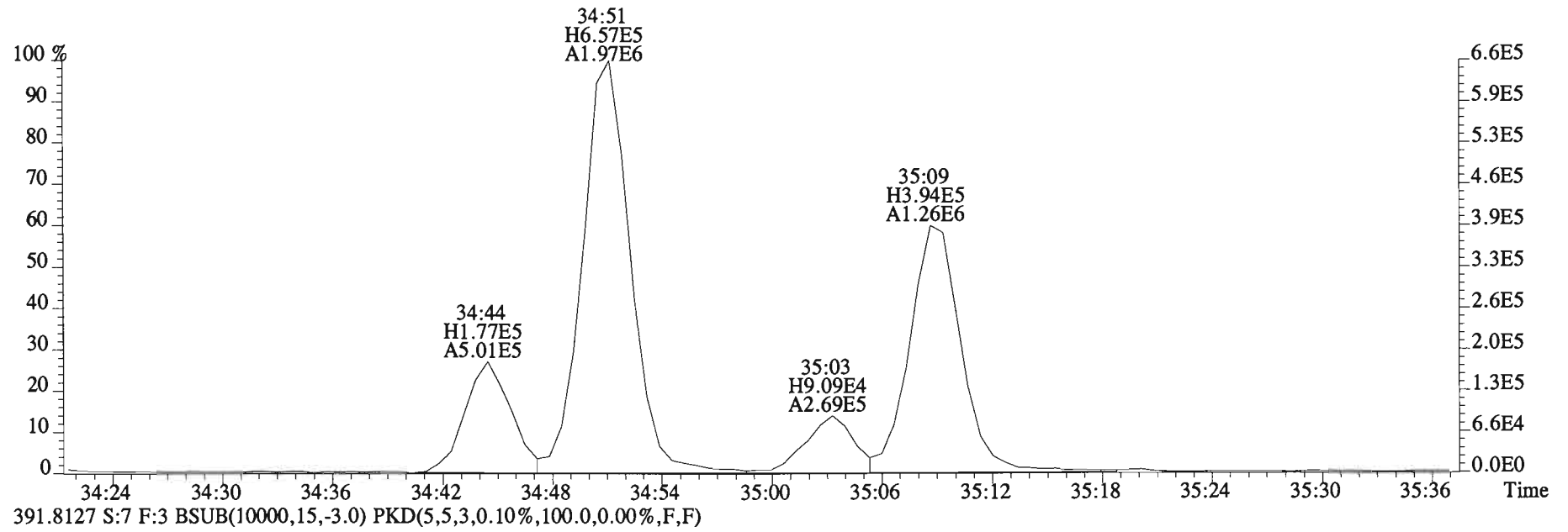
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



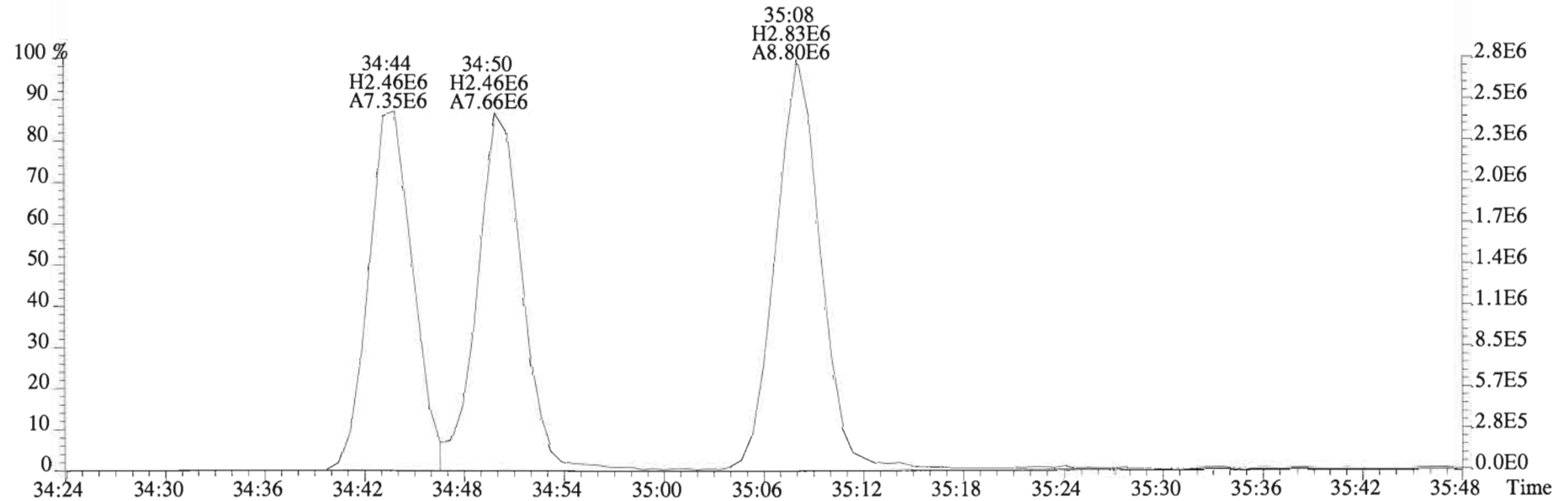
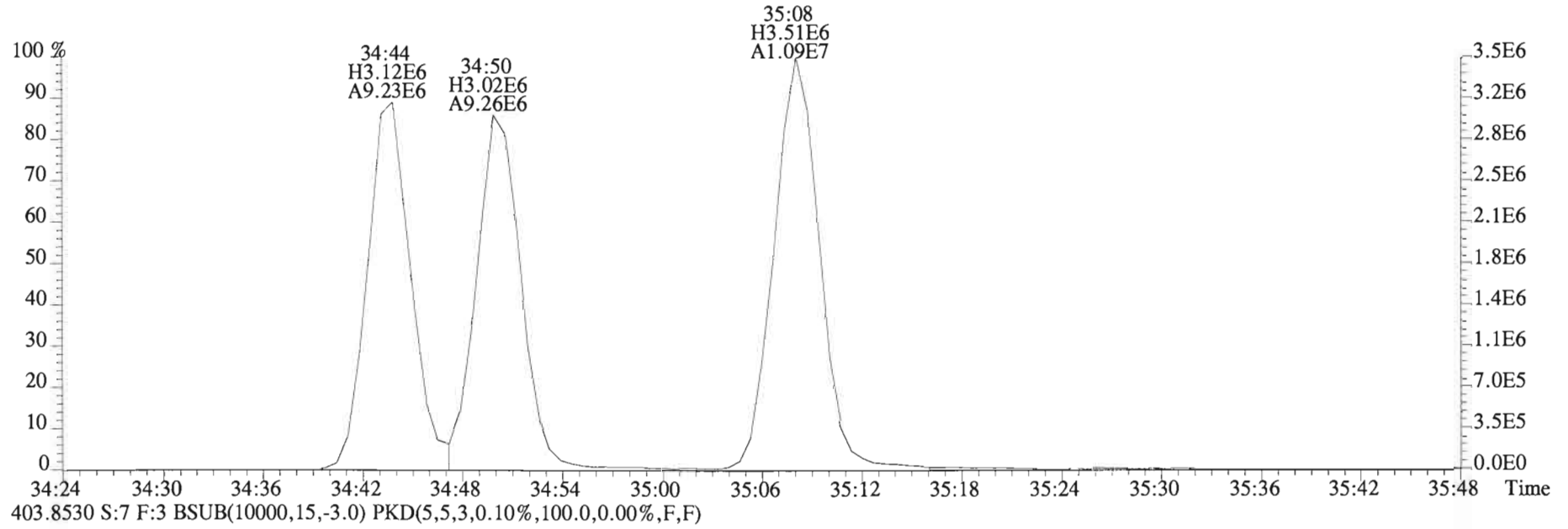
380.9760 S:7 F:3



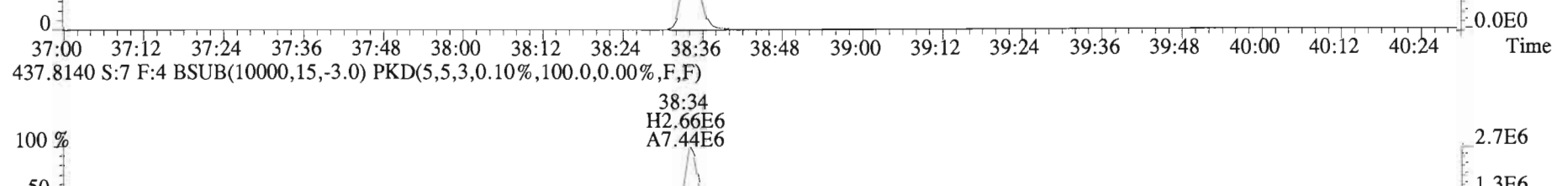
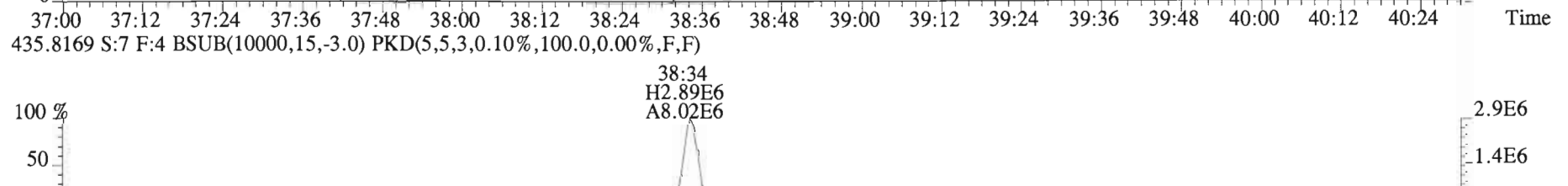
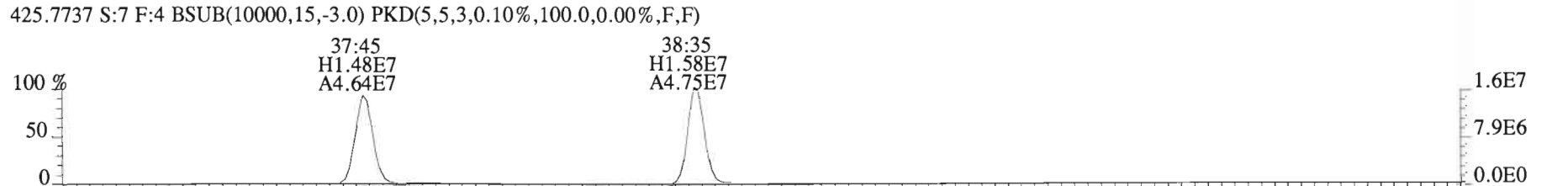
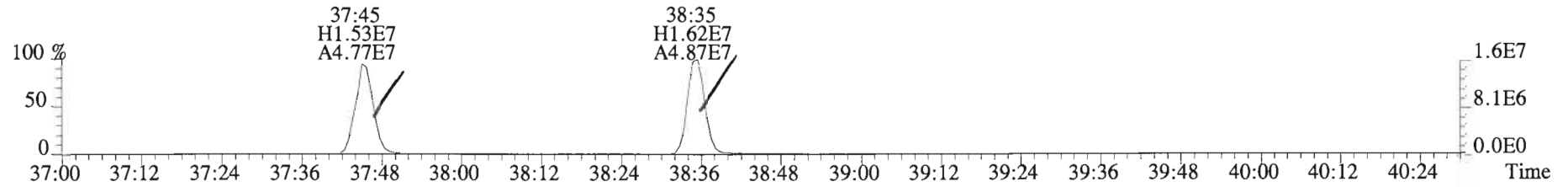
File:150203D1 #1-392 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



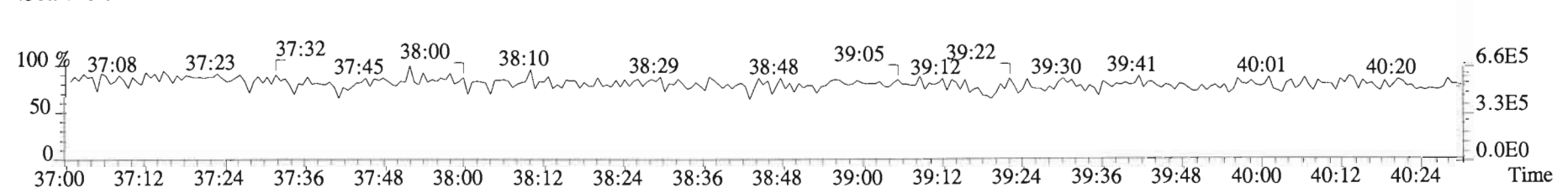
File:150203D1 #1-392 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02 WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



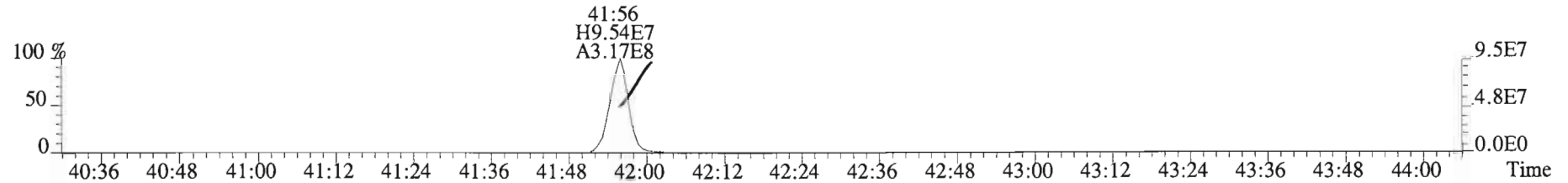
File:150203D1 #1-326 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02 WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



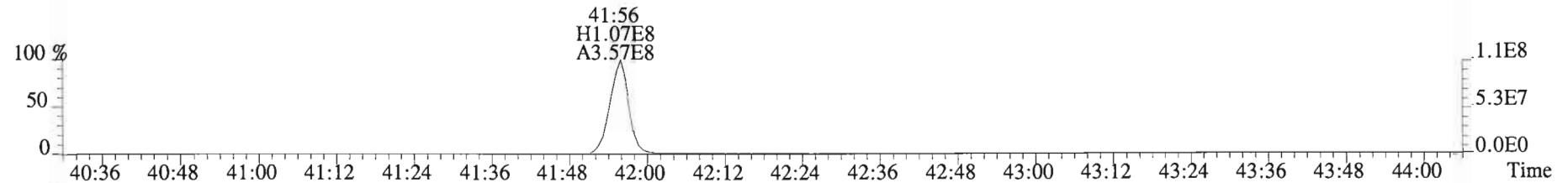
430.9728 S:7 F:4



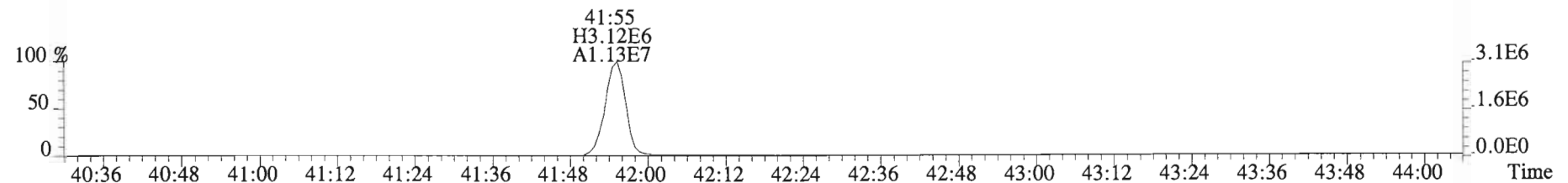
File:150203D1 #1-388 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02 WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



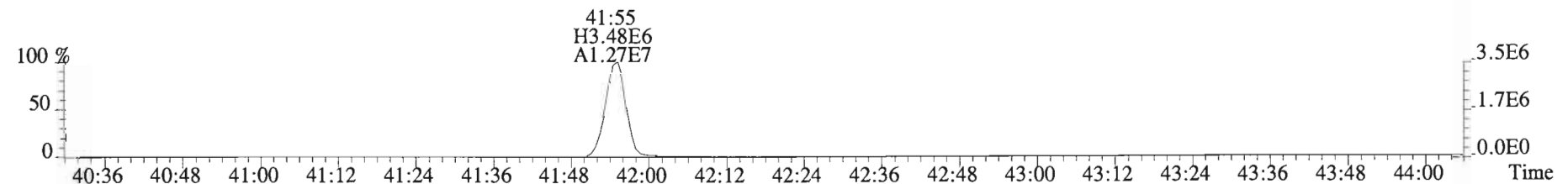
459.7348 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



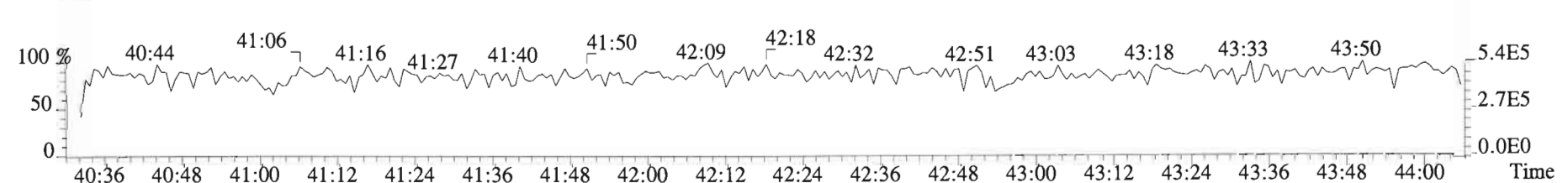
469.7780 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



471.7750 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

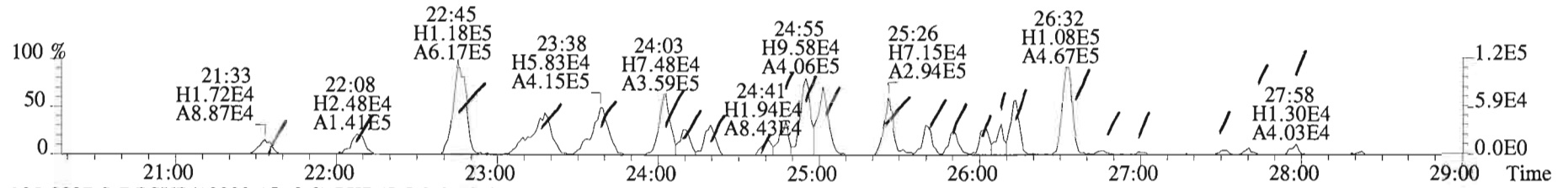


454.9728 S:7 F:5

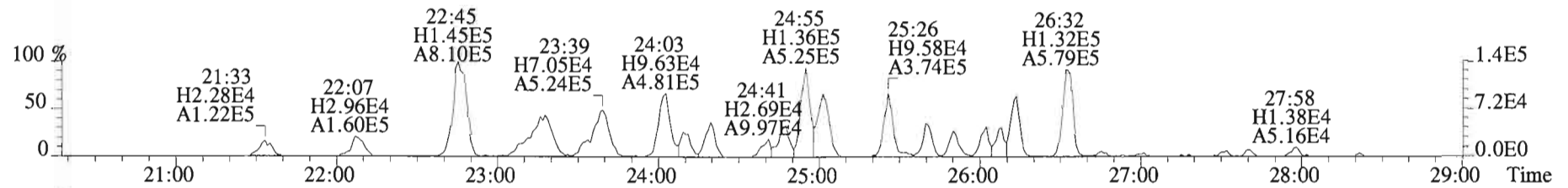




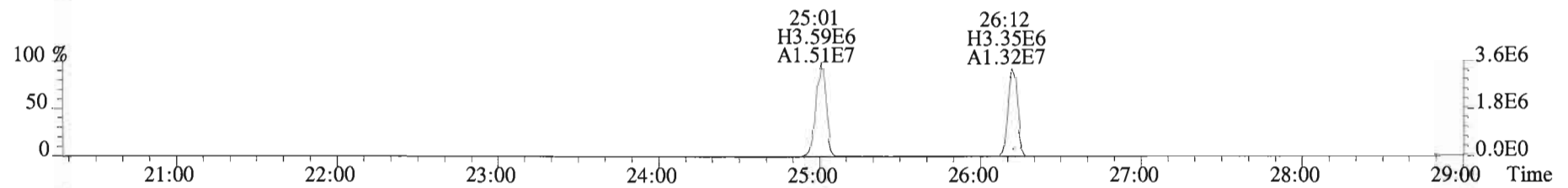
File:150203D1 #1-551 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02 WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



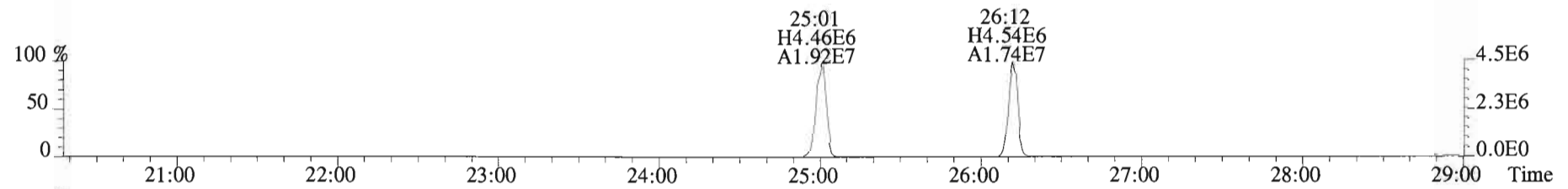
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



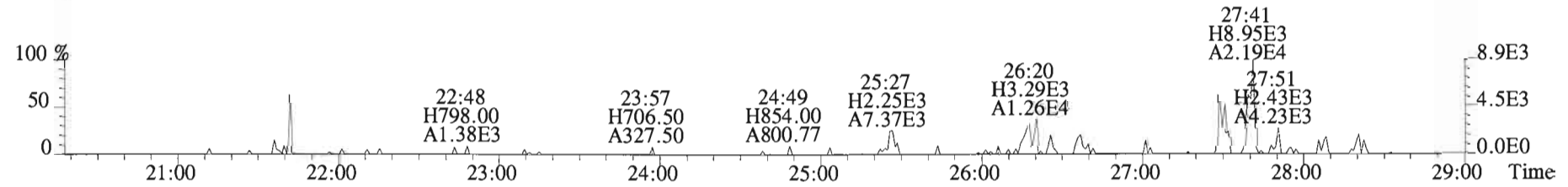
315.9419 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



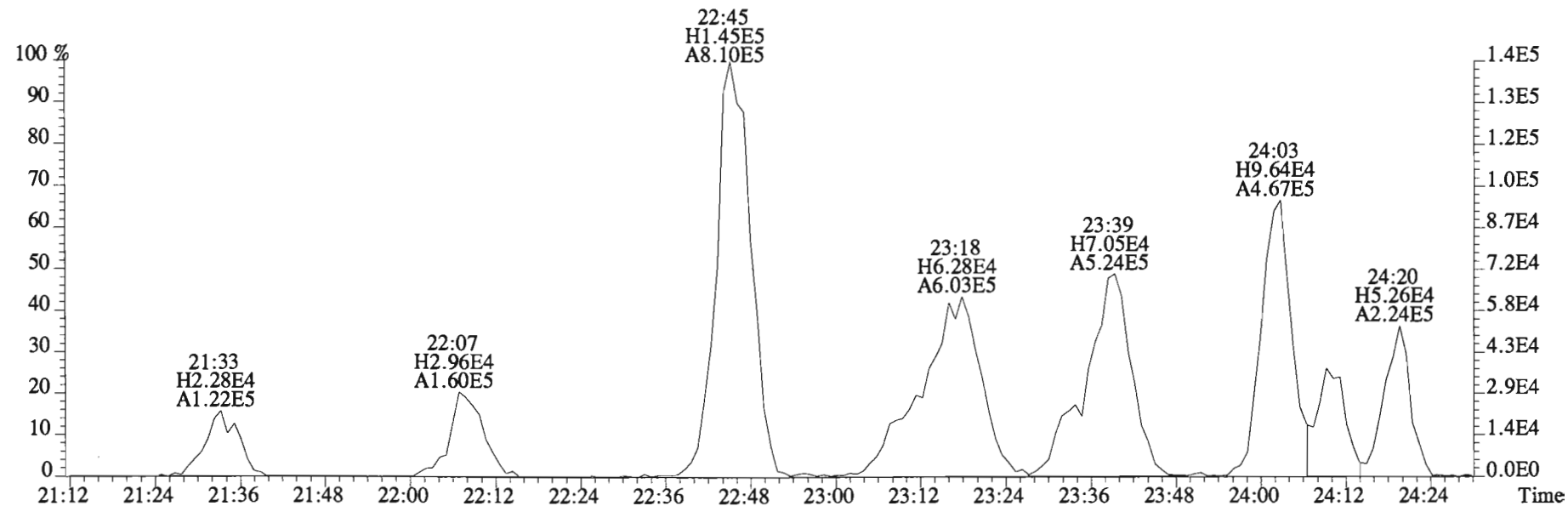
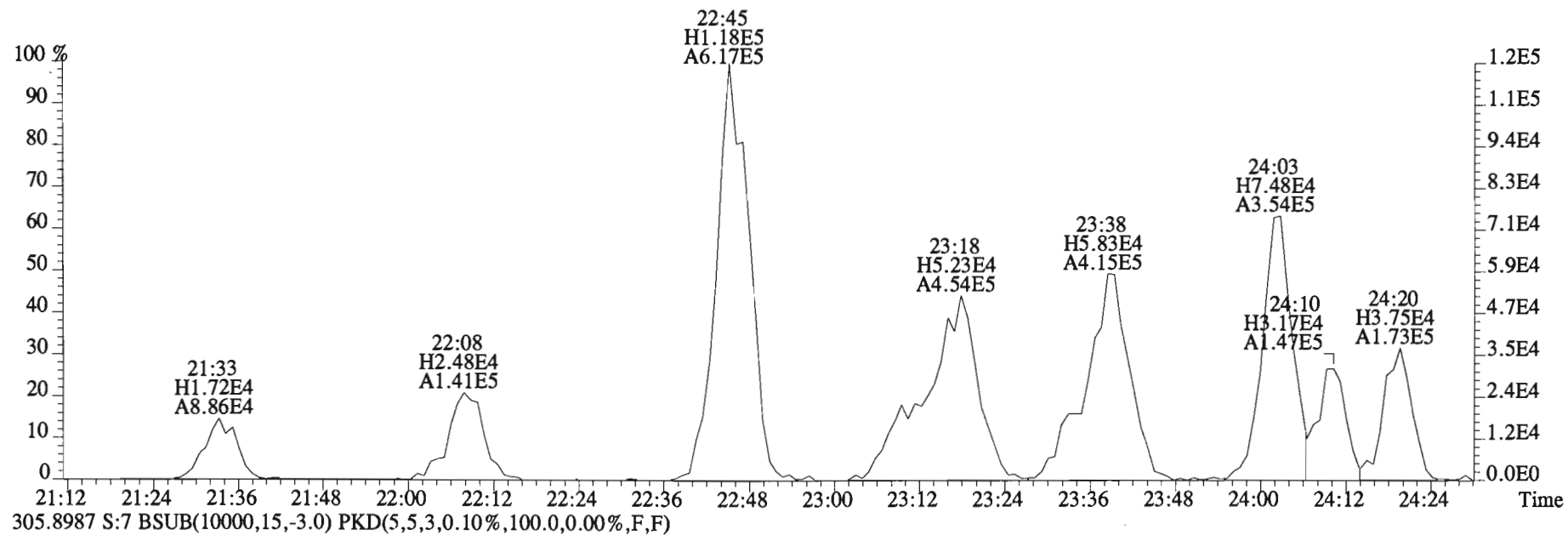
317.9389 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



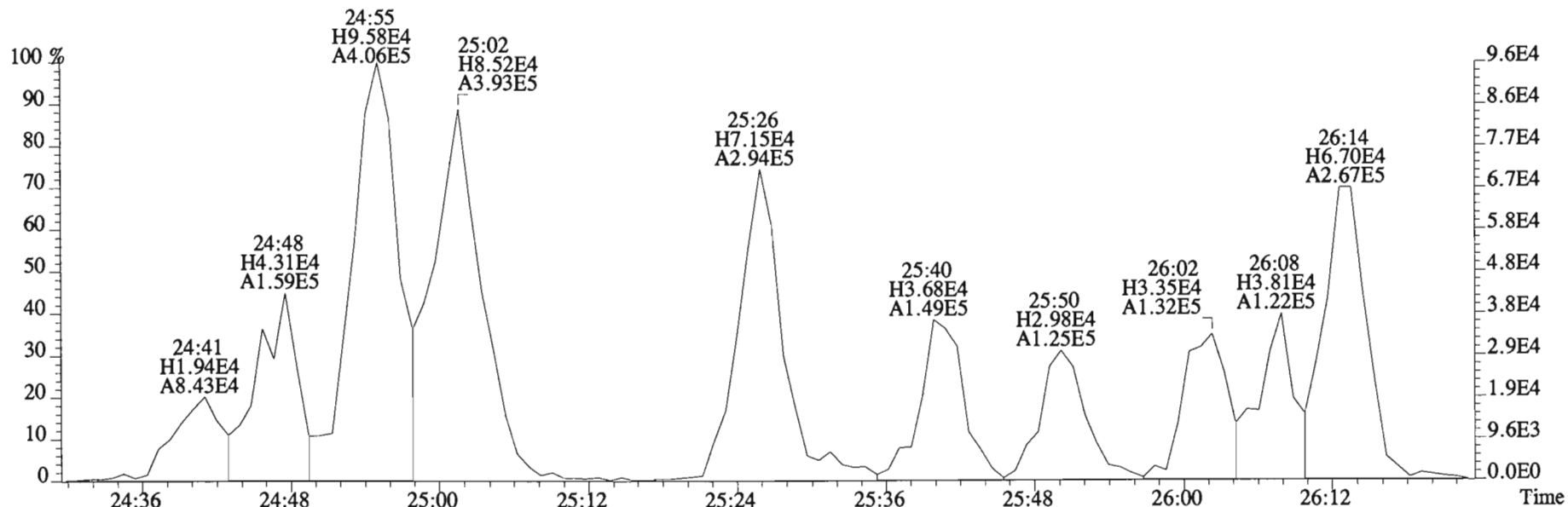
375.8364 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



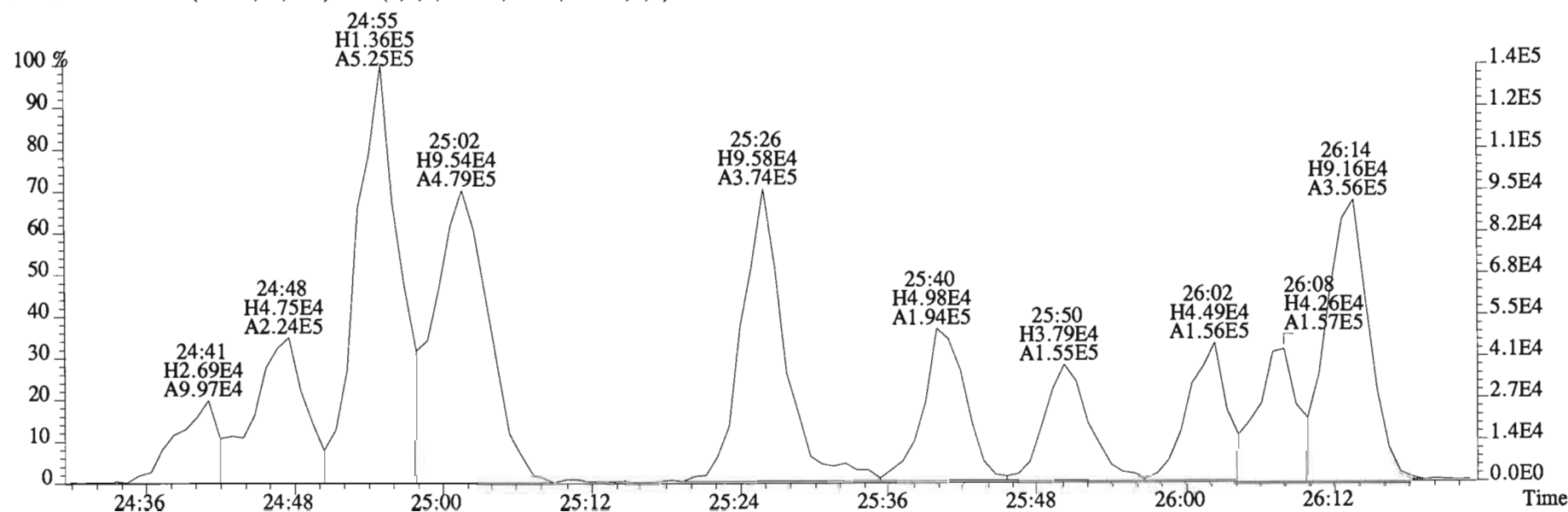
File:150203D1 #1-551 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
 303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



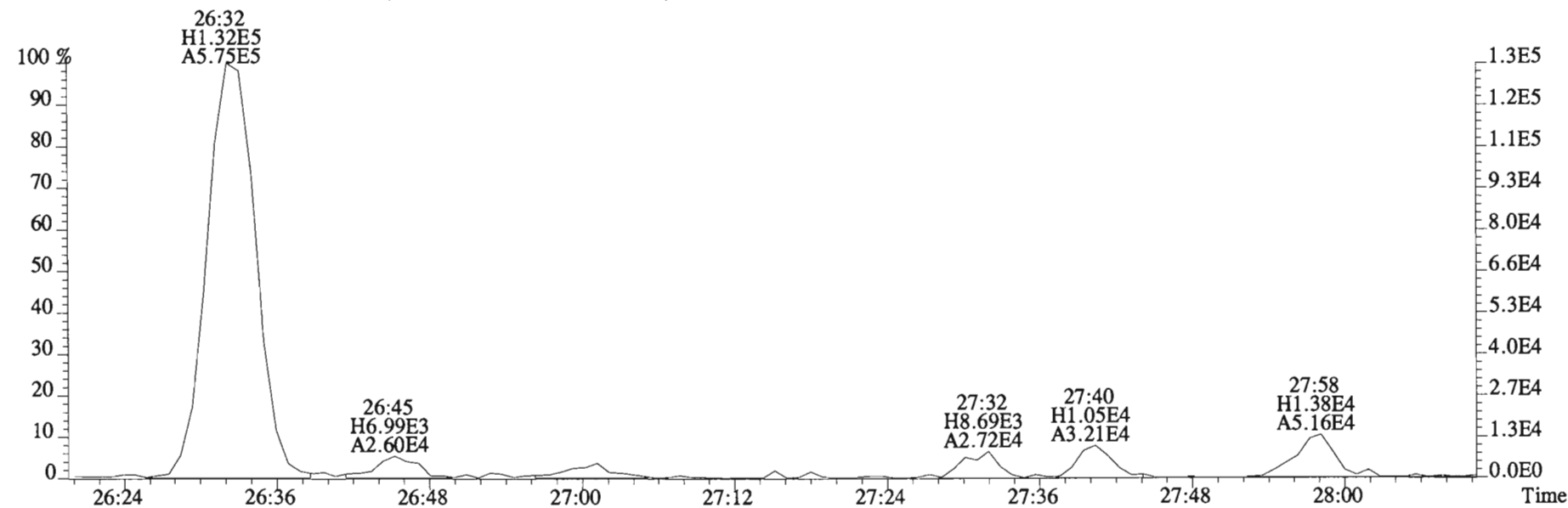
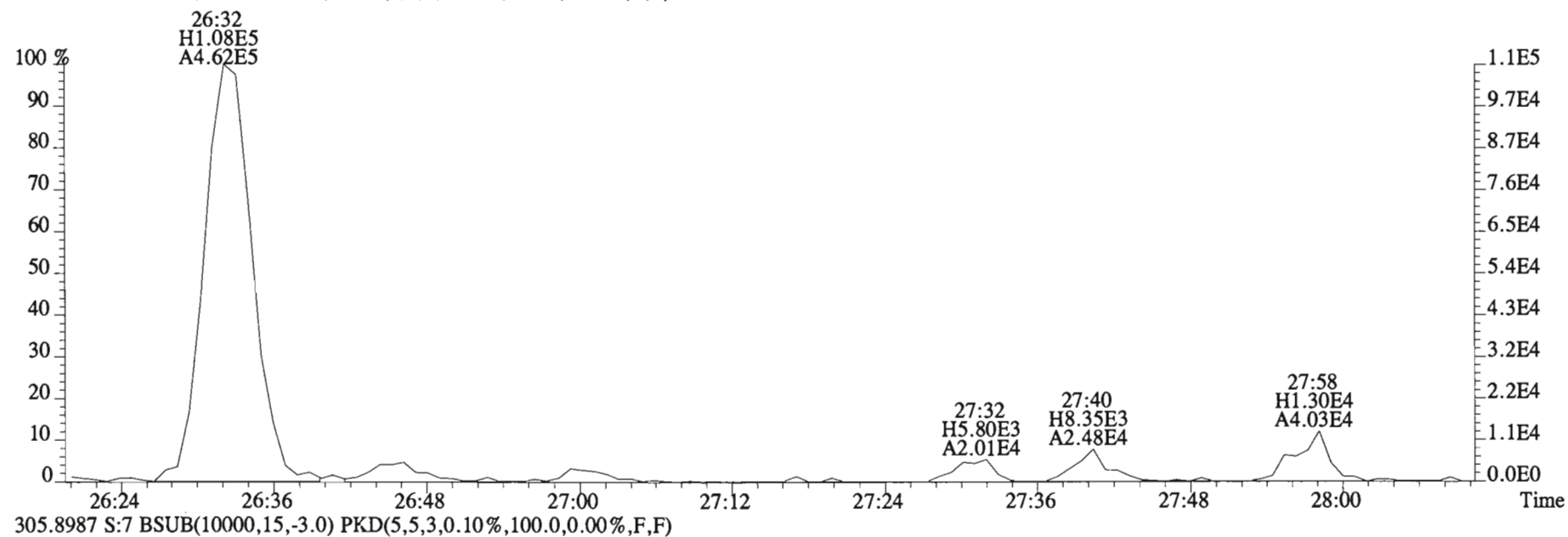
File:150203D1 #1-551 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
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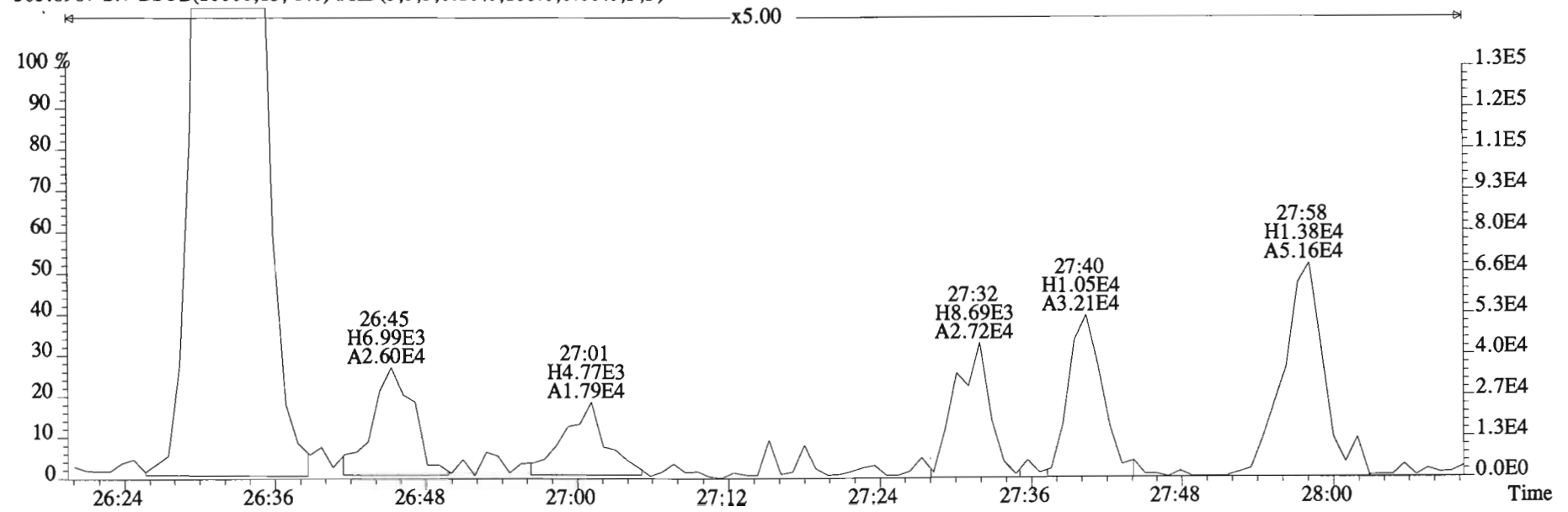
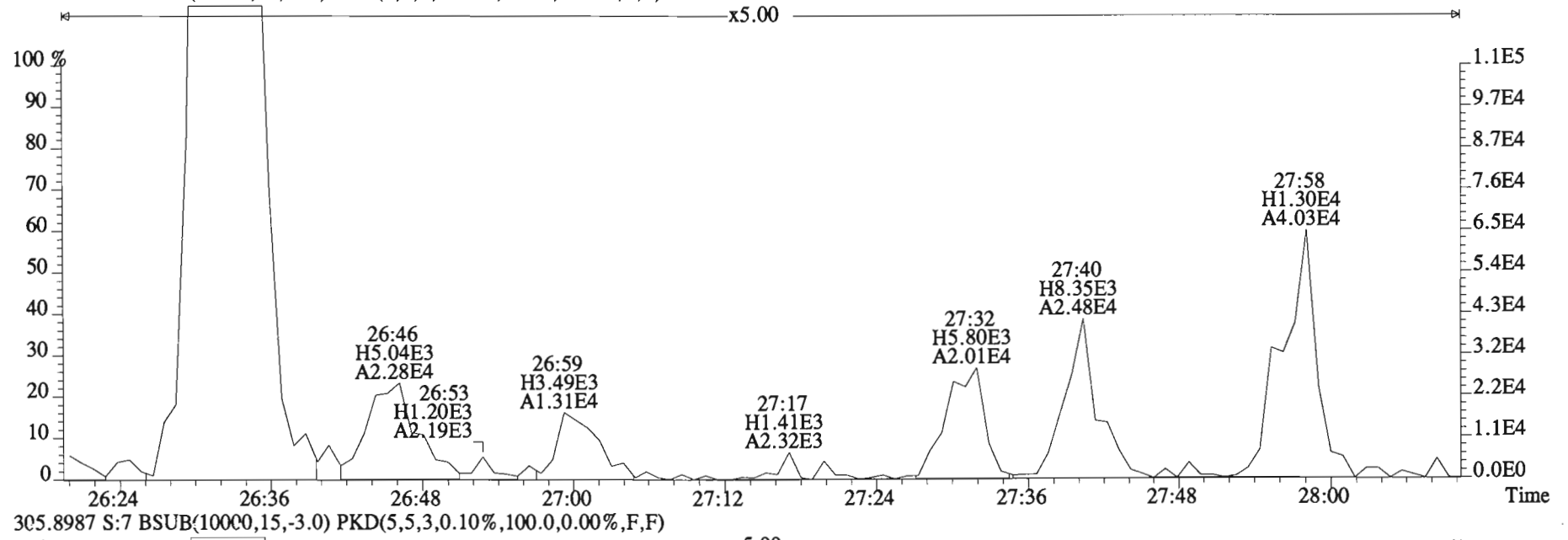
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



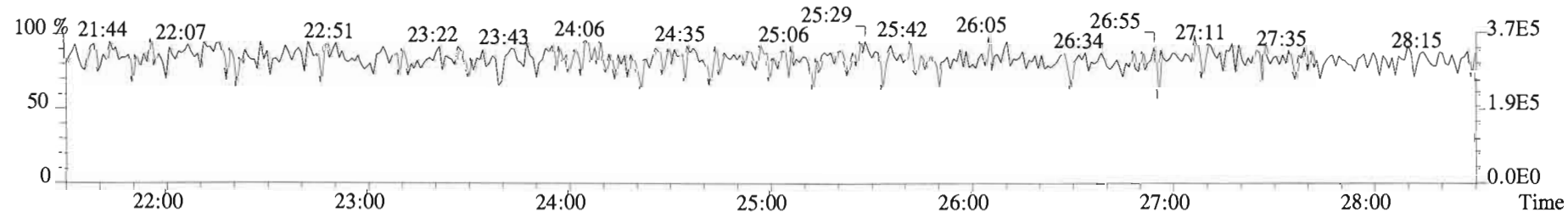
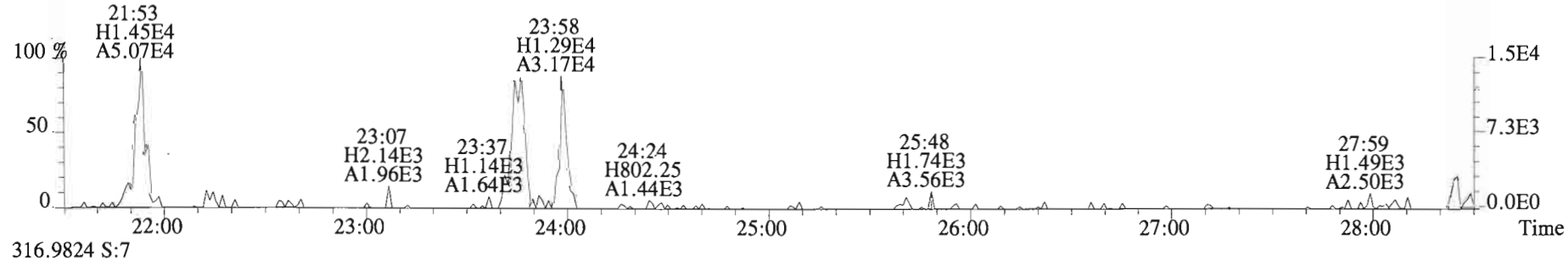
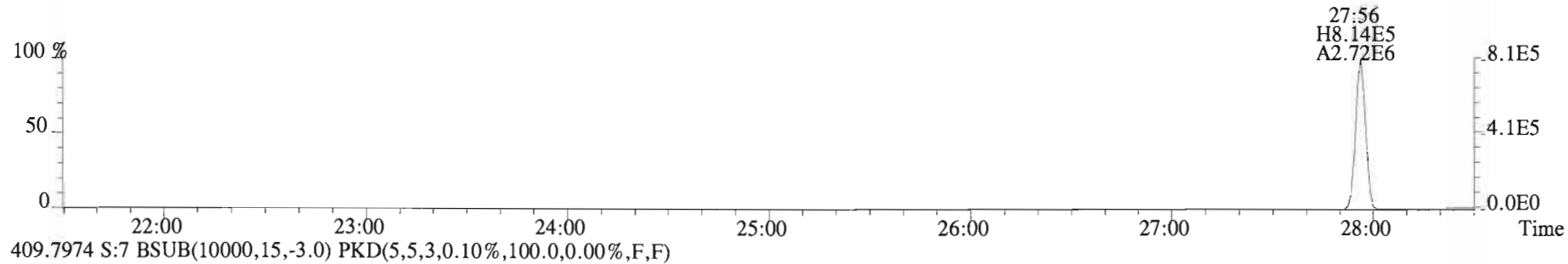
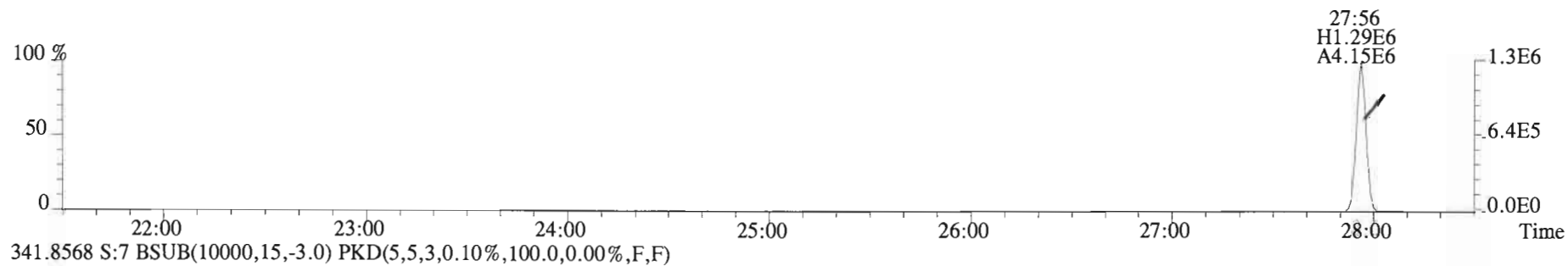
File:150203D1 #1-551 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



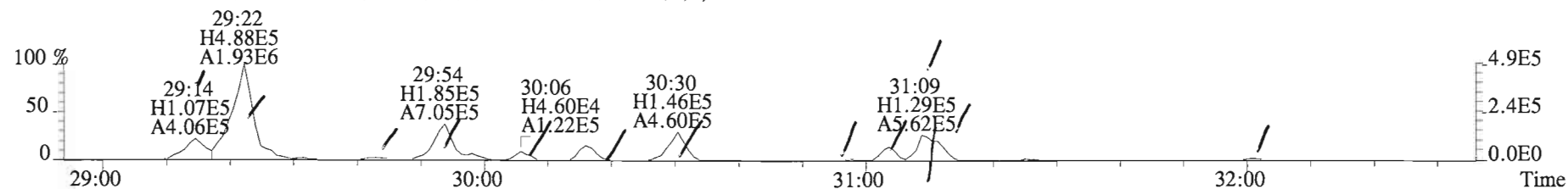
File:150203D1 #1-551 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
 303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



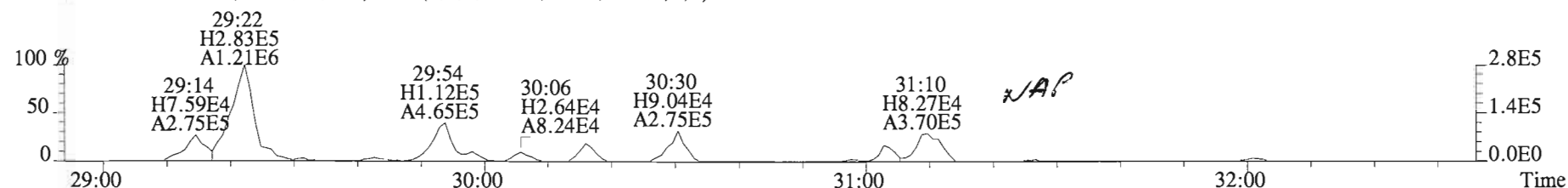
File:150203D1 #1-551 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02 WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



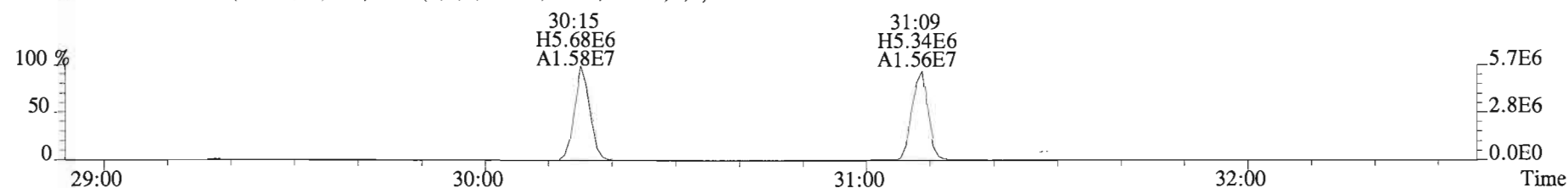
File:150203D1 #1-251 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02 WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
 339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



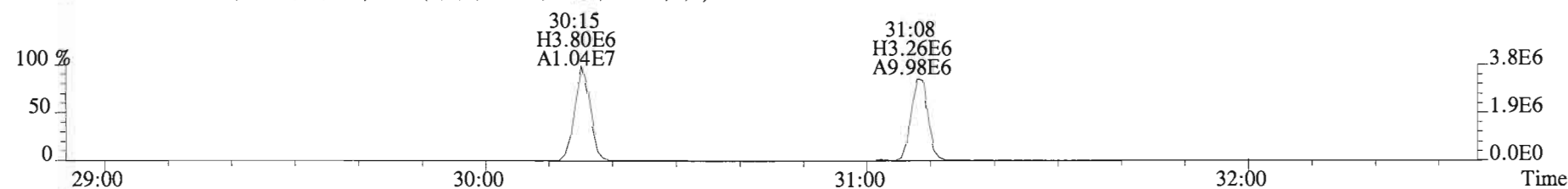
341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



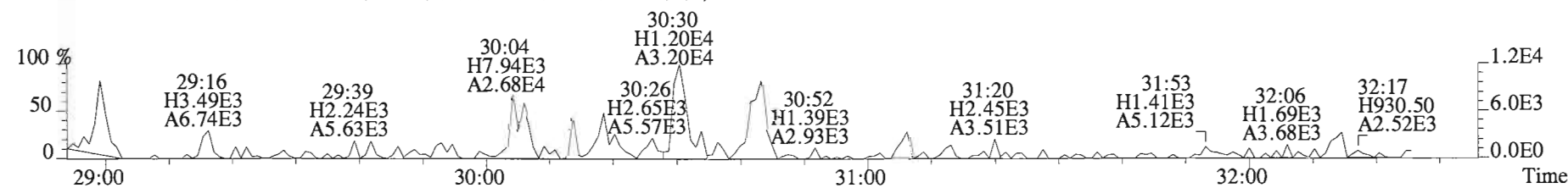
351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



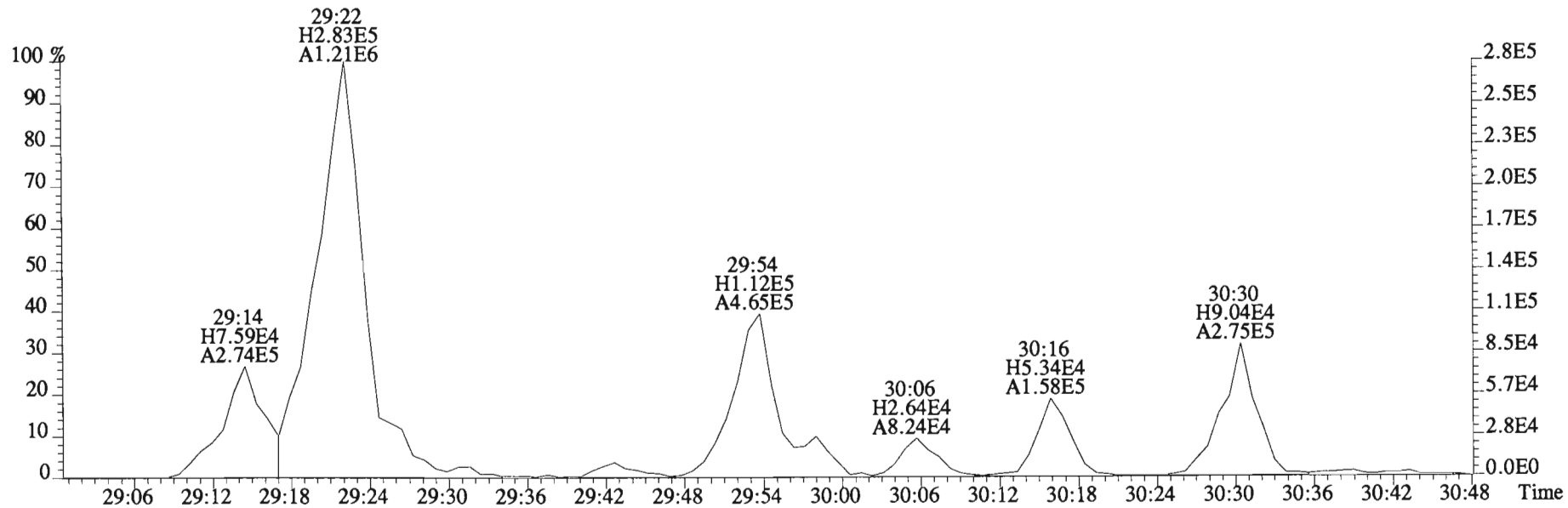
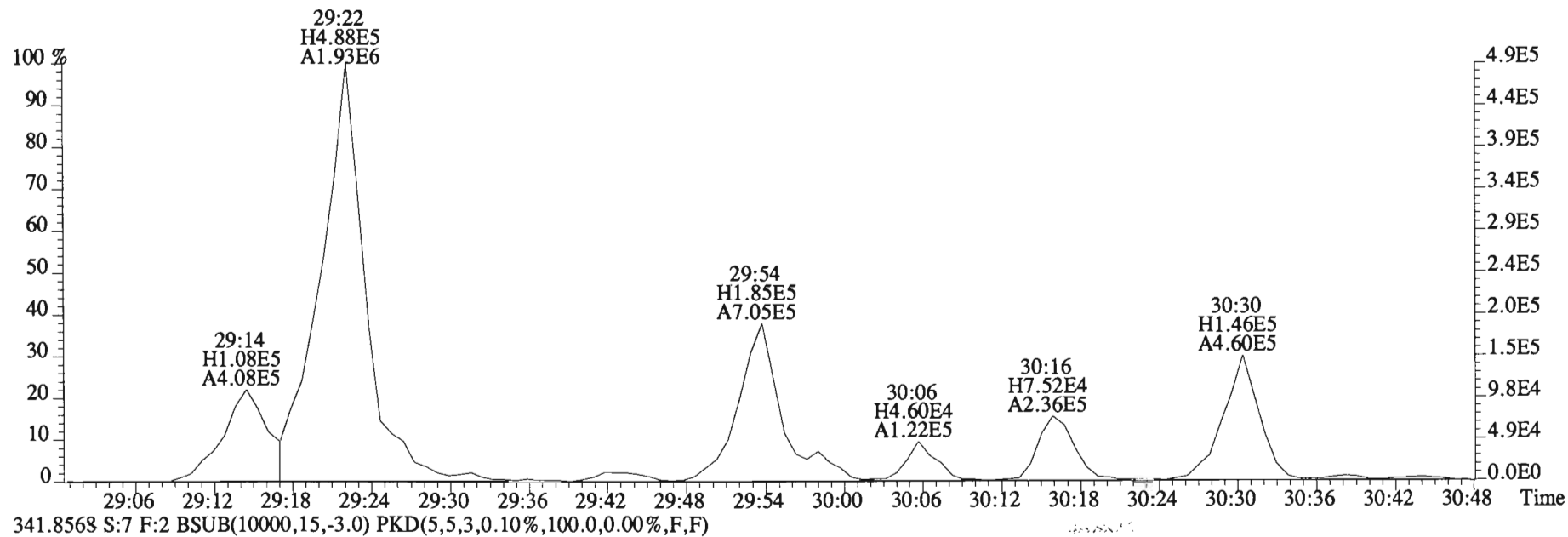
353.8970 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



409.7974 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

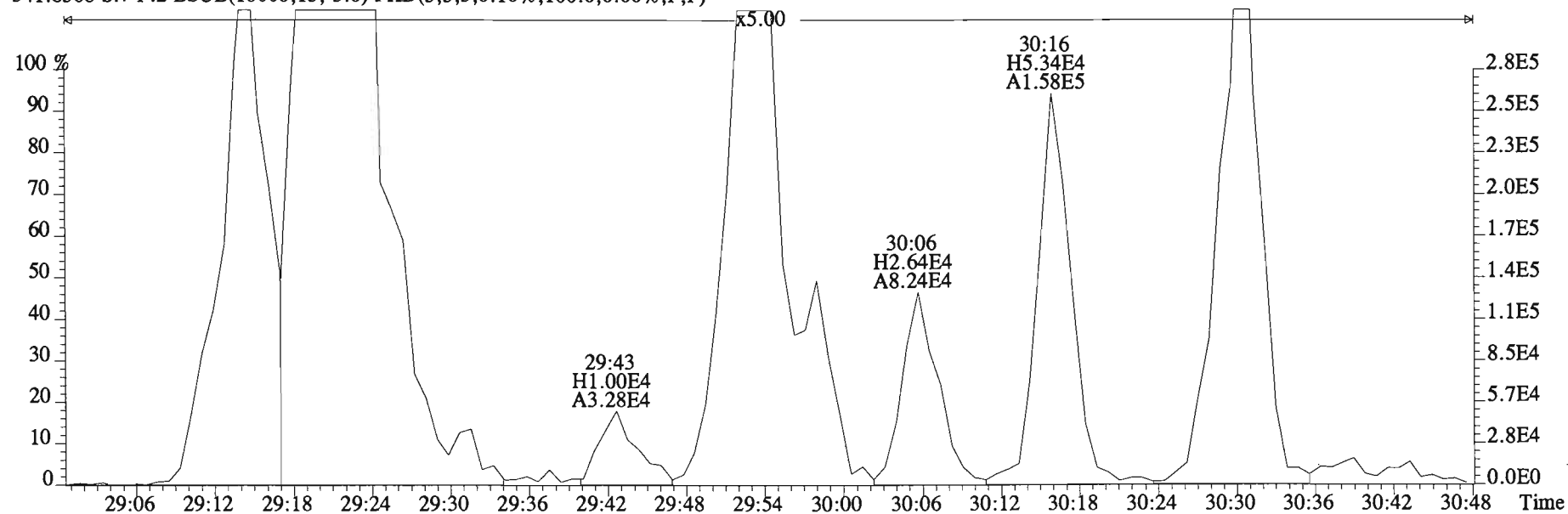
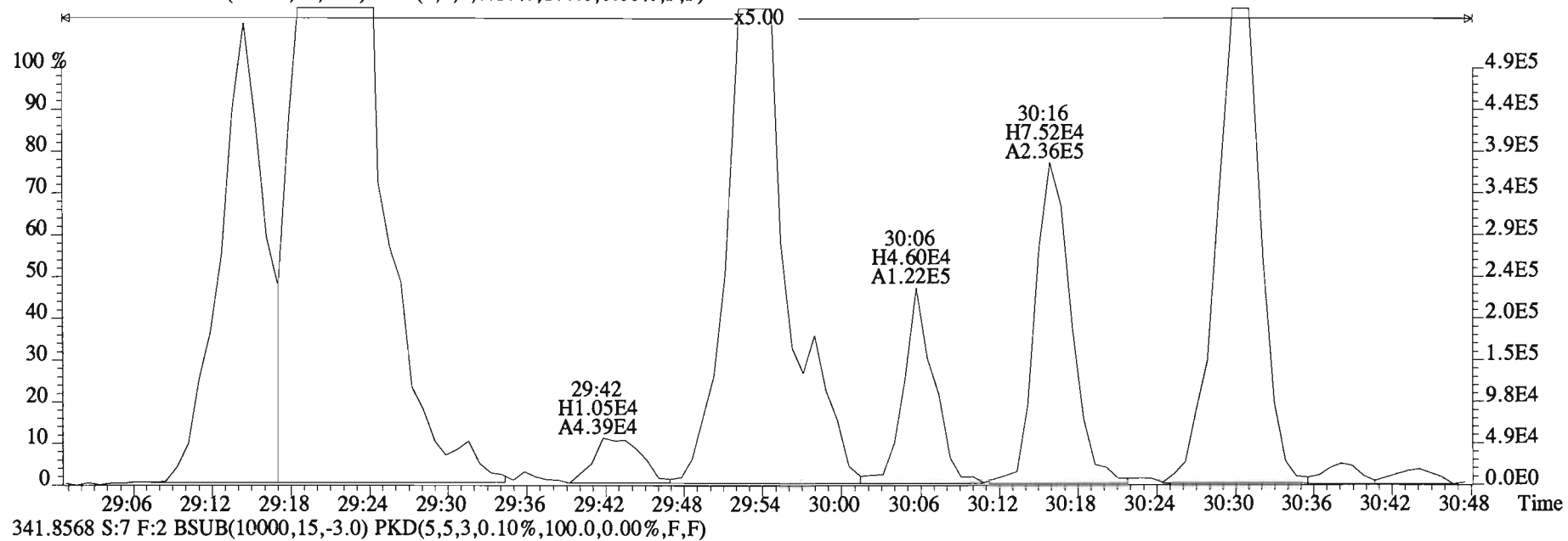


File:150203D1 #1-251 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
 339.8597 S:7 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

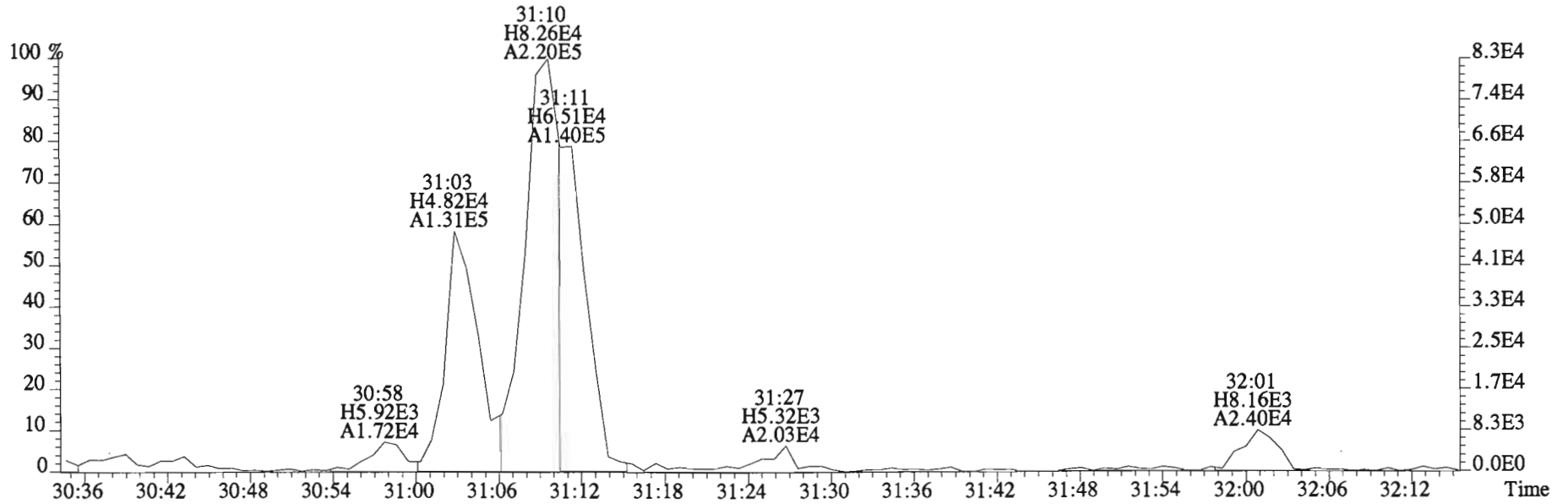
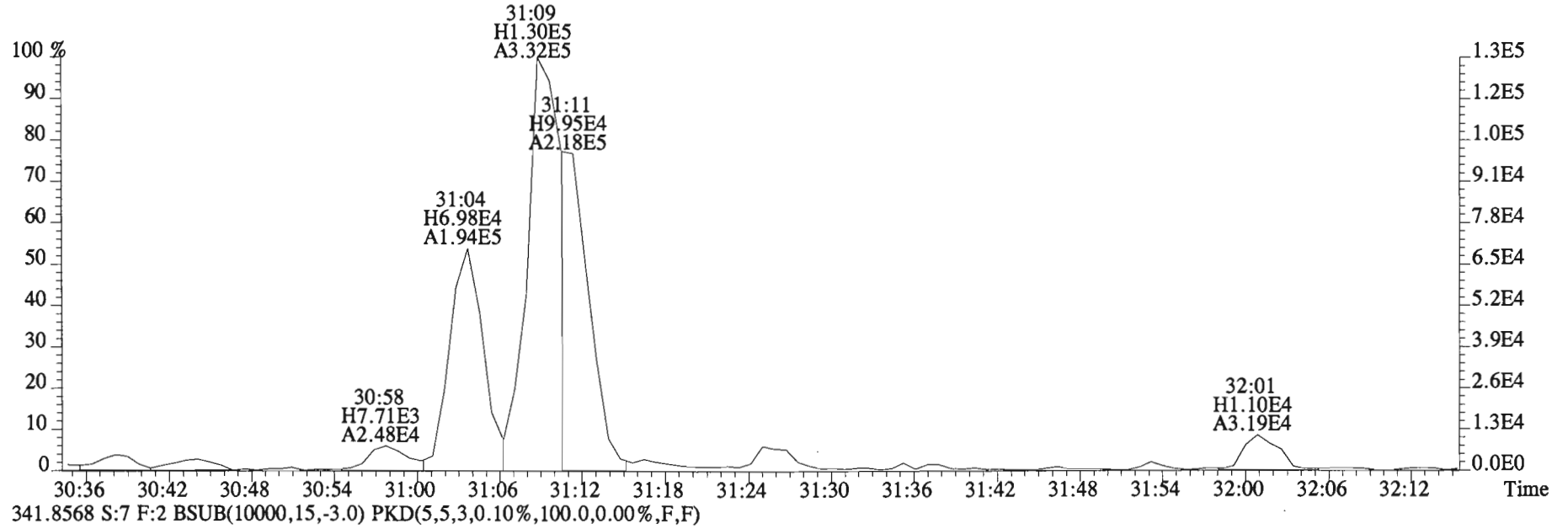




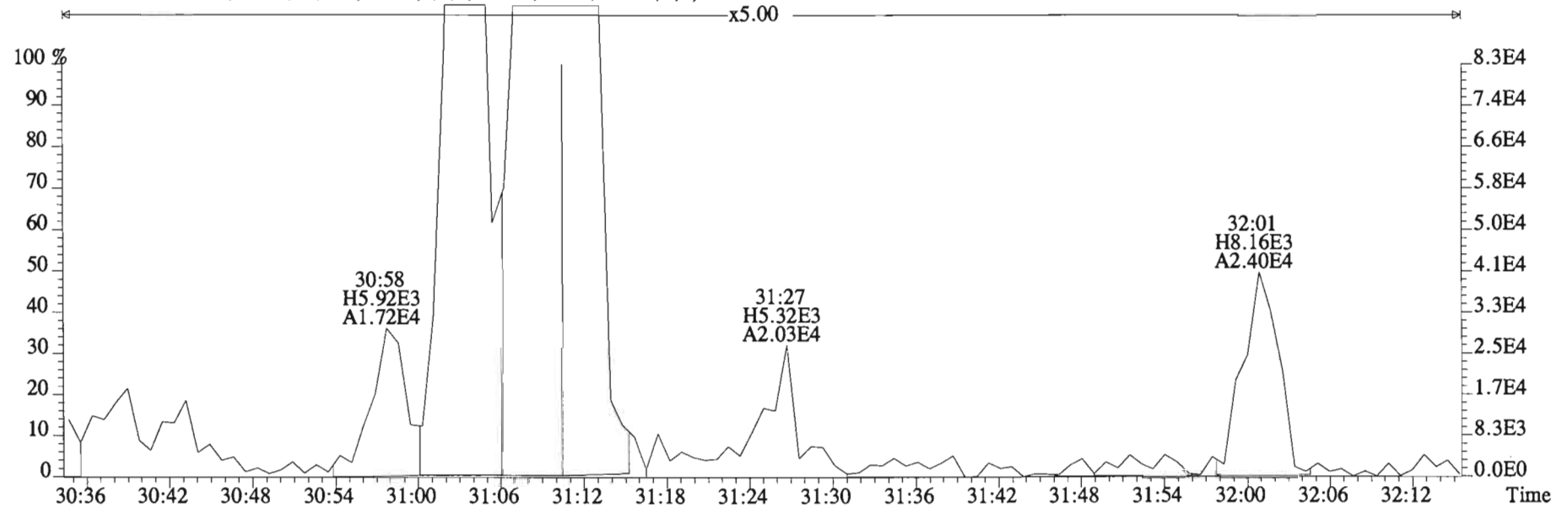
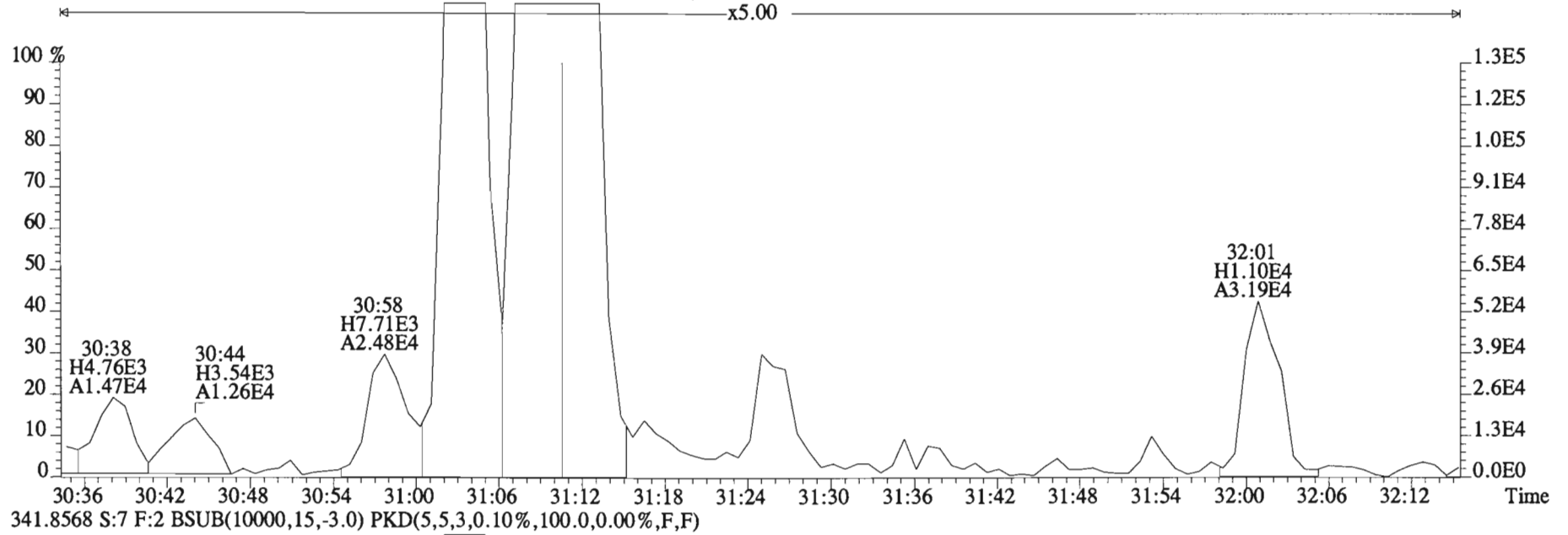
File:150203D1 #1-251 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



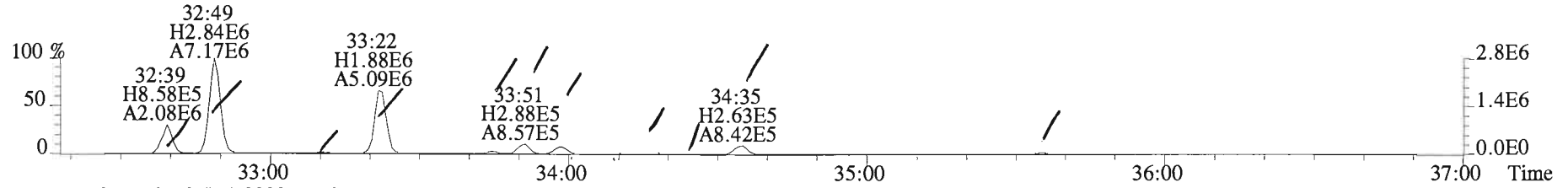
File:150203D1 #1-251 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



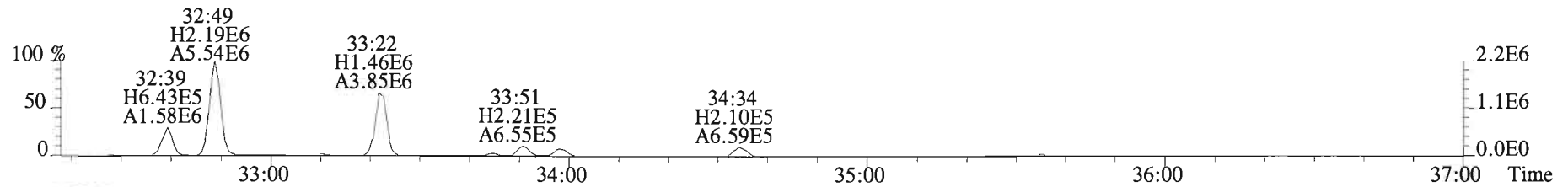
File:150203D1 #1-251 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



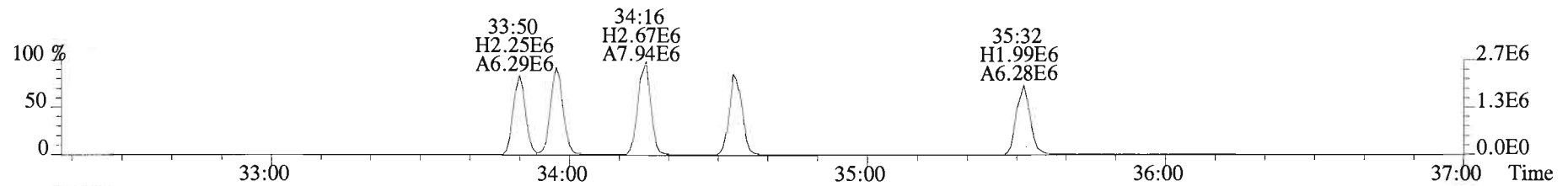
File:150203D1 #1-392 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02 WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



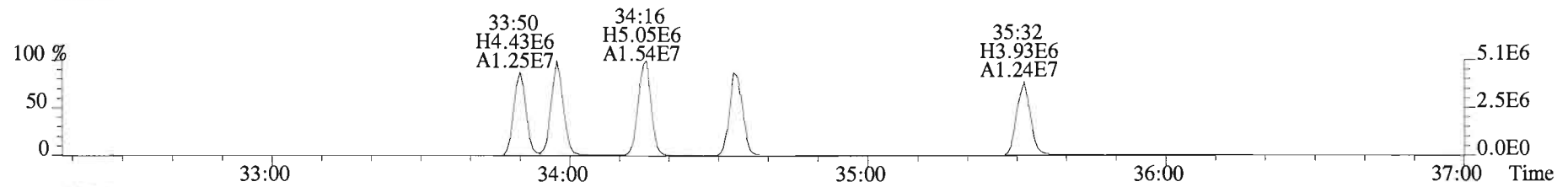
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



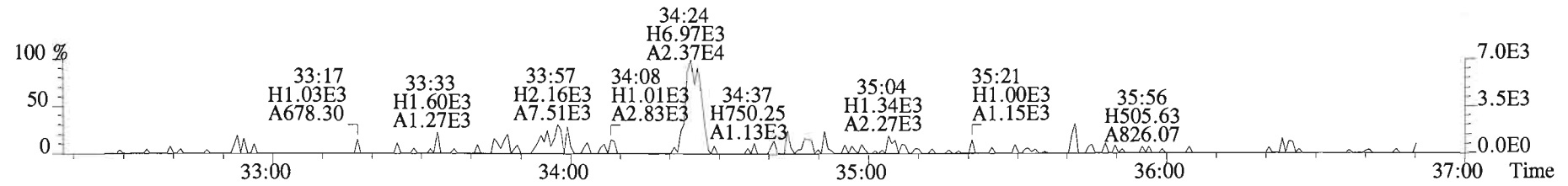
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



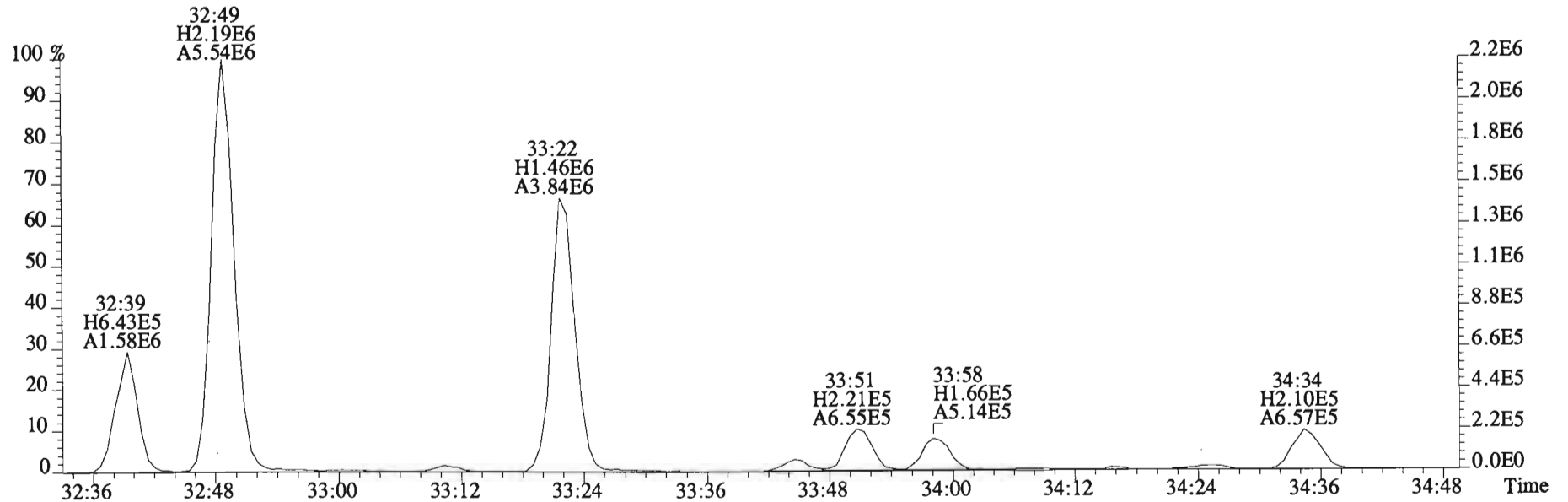
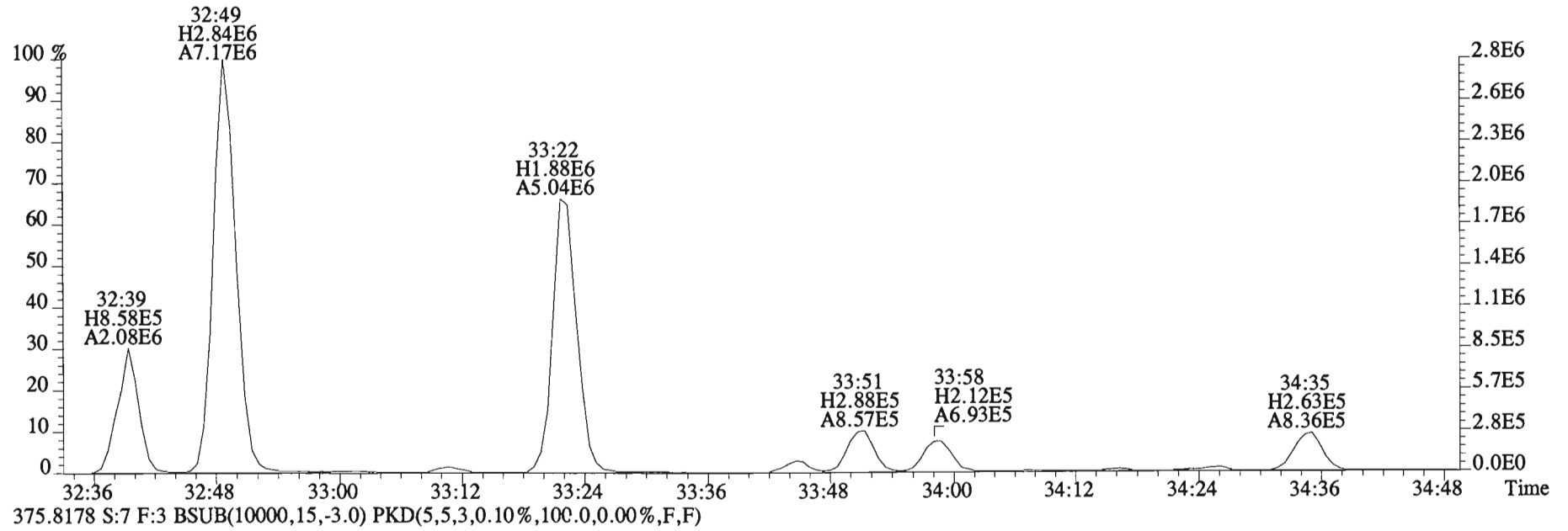
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



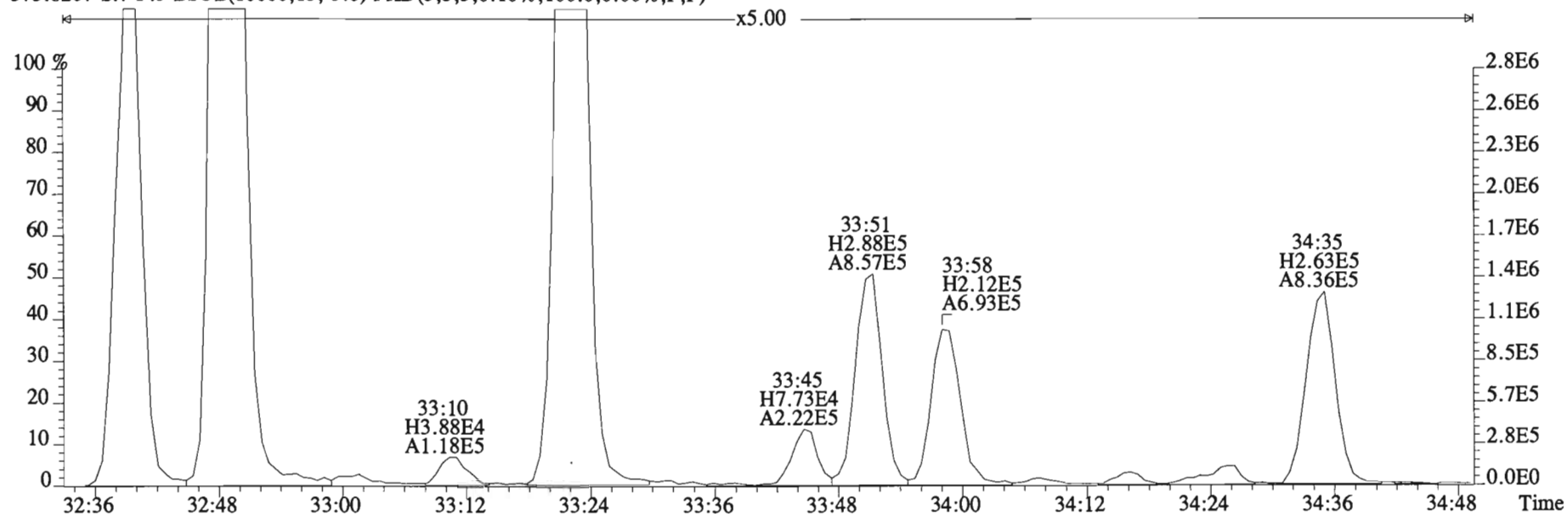
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



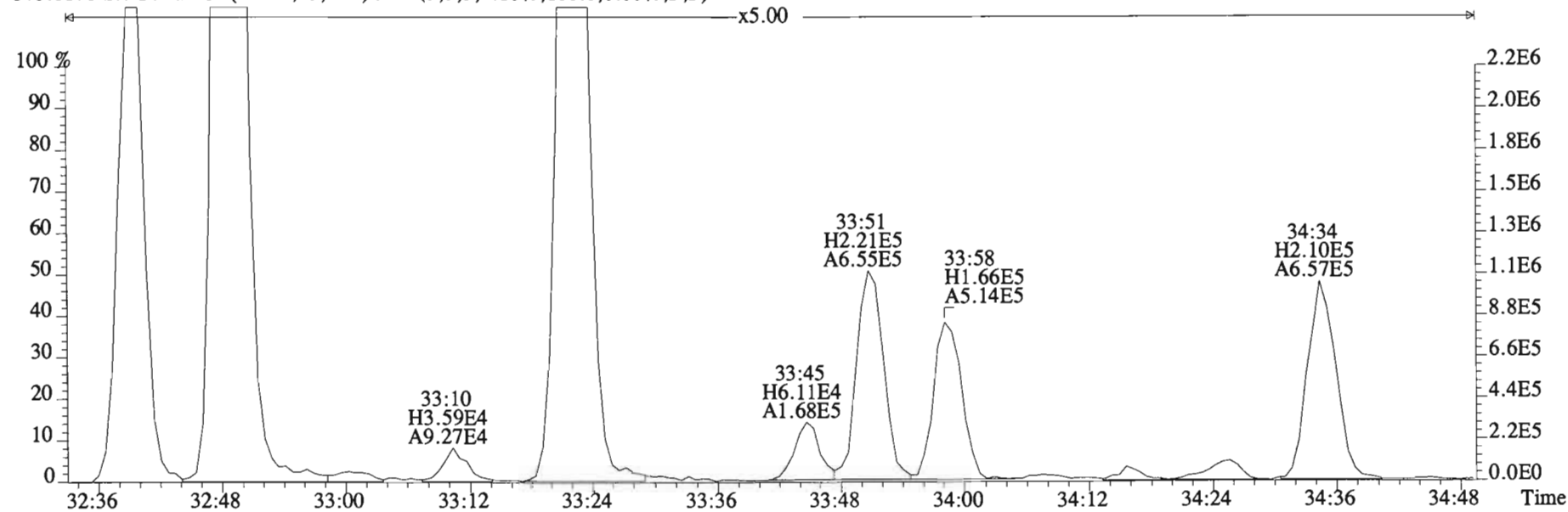
File:150203D1 #1-392 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



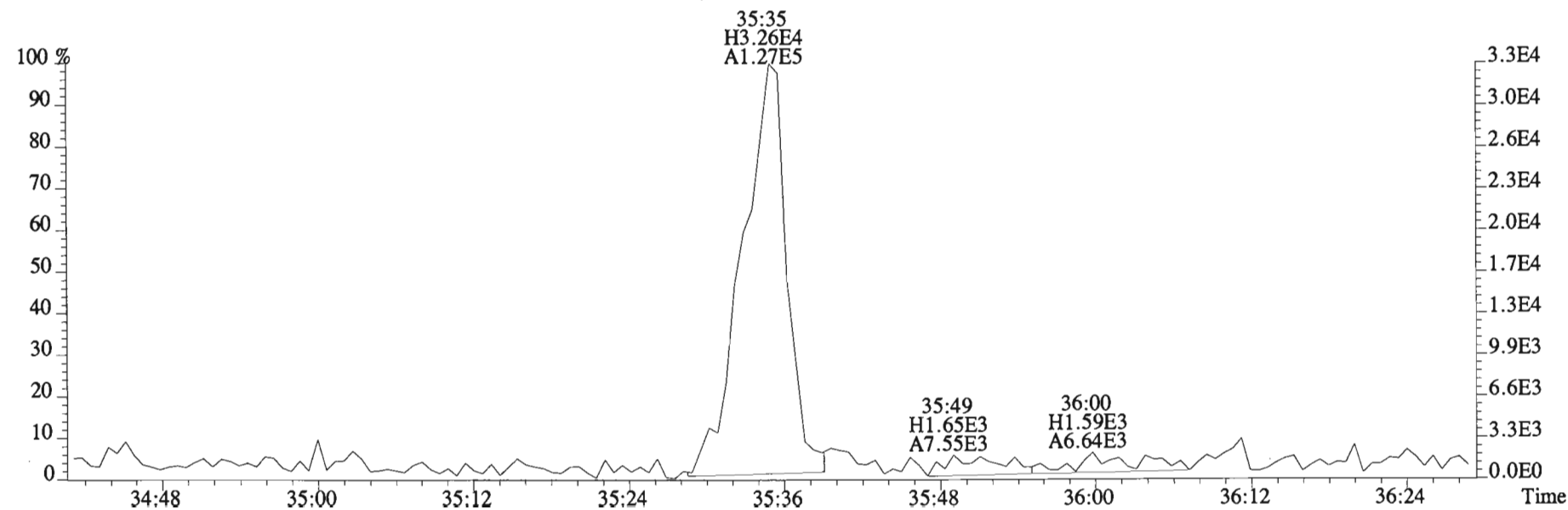
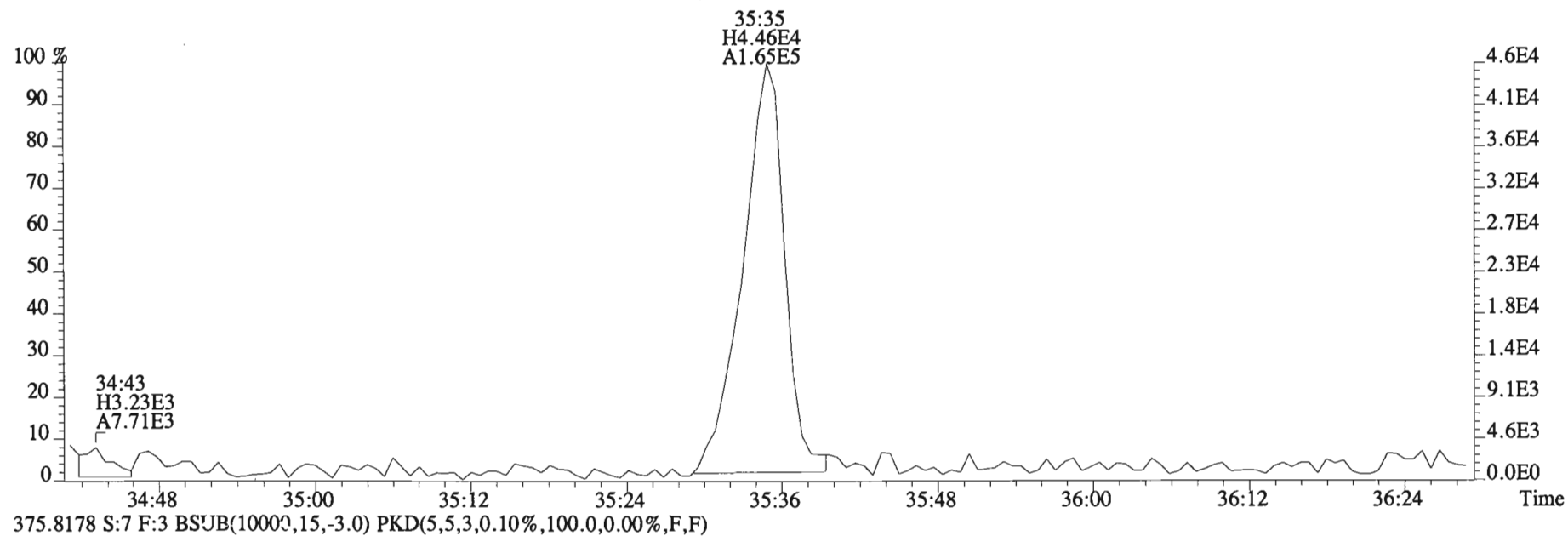
File:150203D1 #1-392 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
373.8207 S:7 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



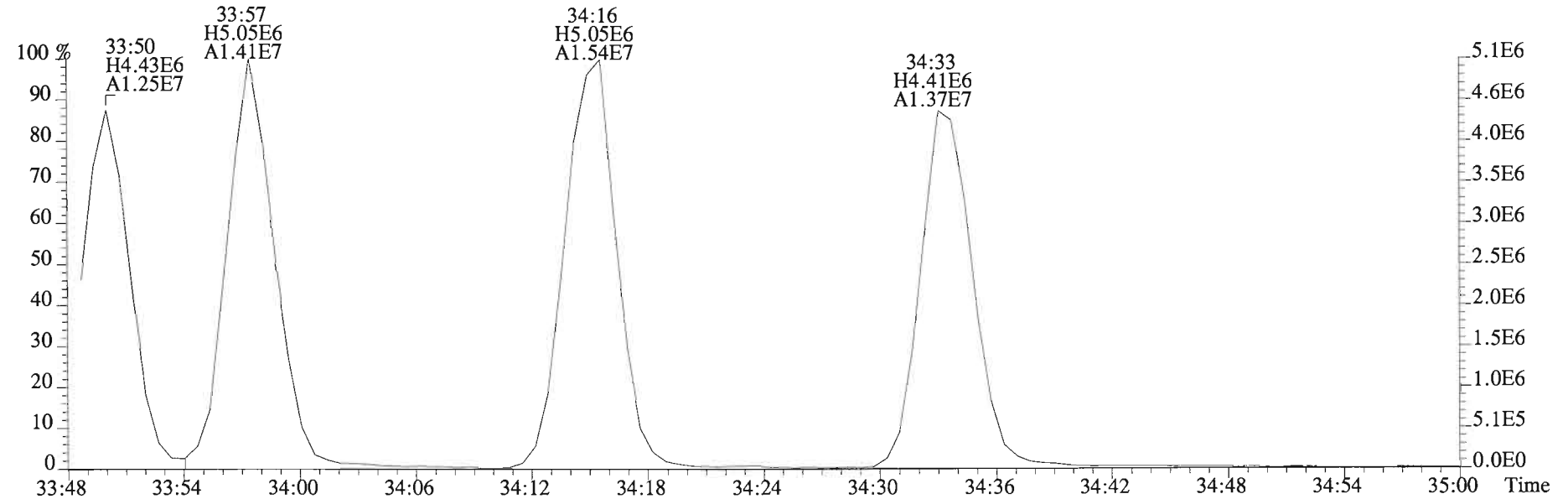
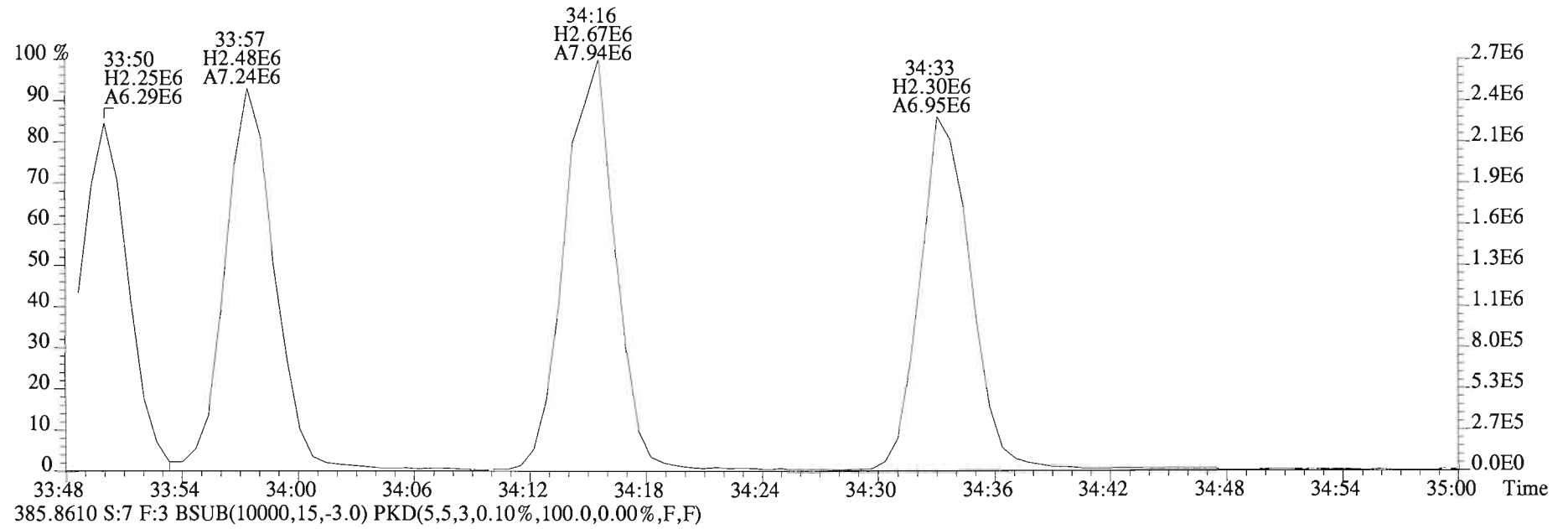
375.8178 S:7 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:150203D1 #1-392 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

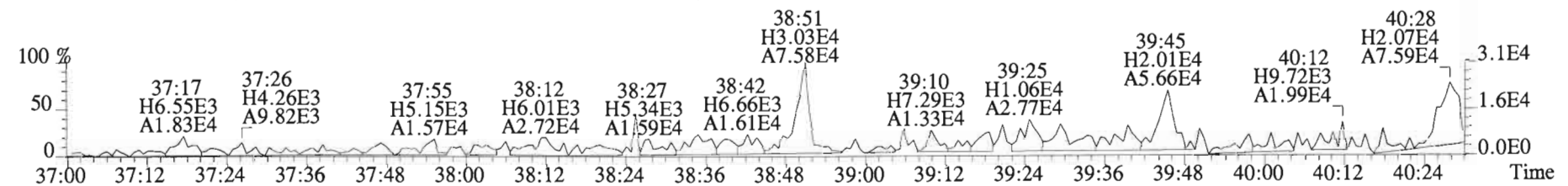
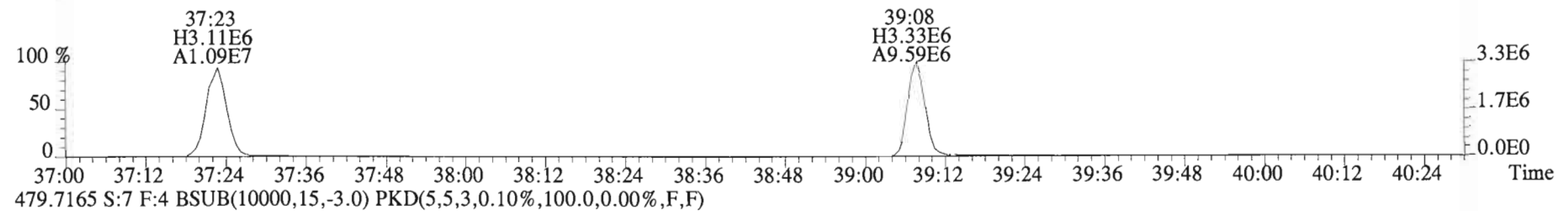
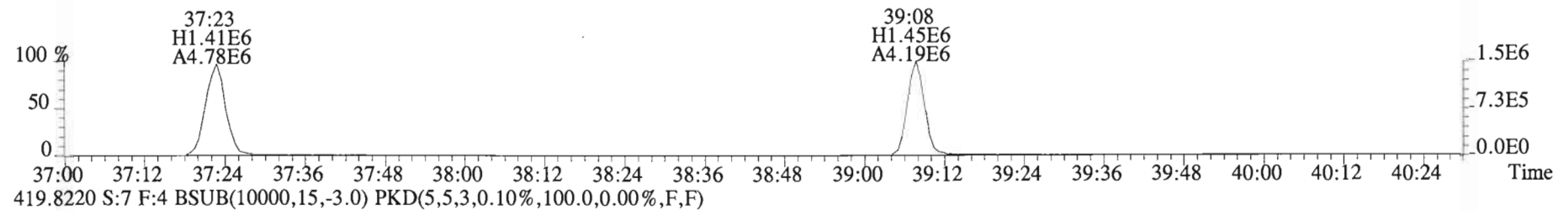
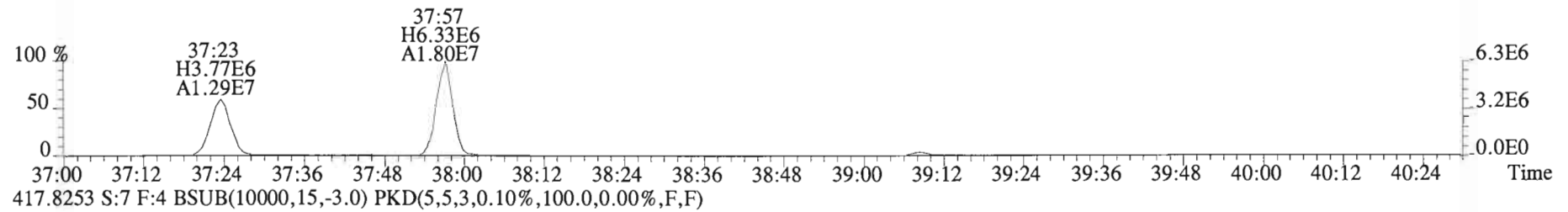
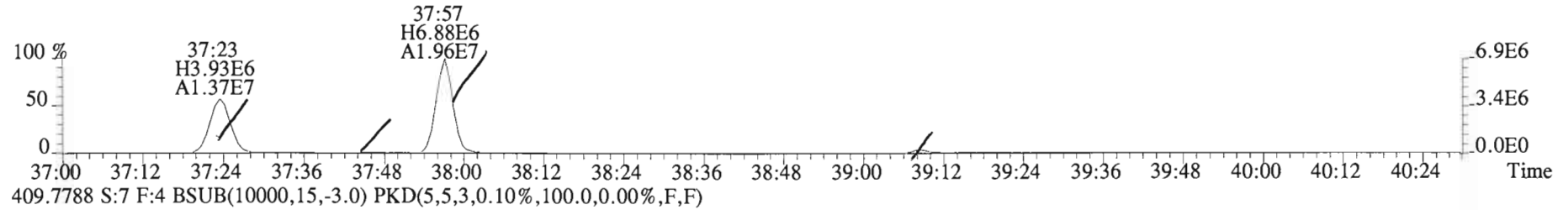


File:150203D1 #1-392 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02 WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
383.8639 S:7 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

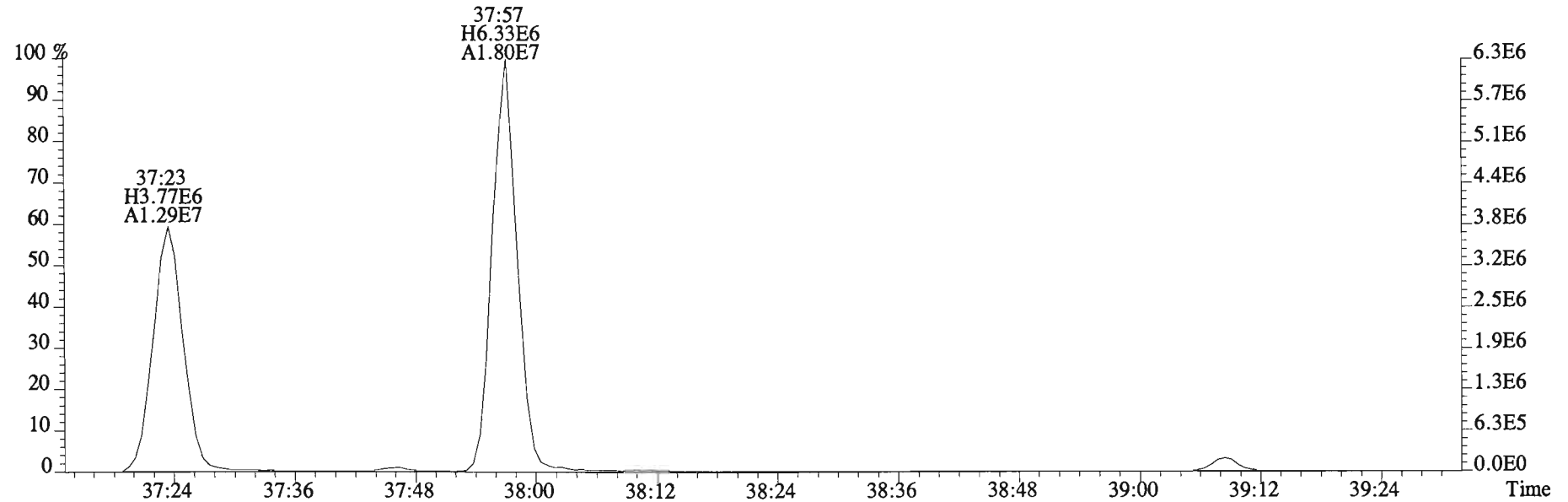
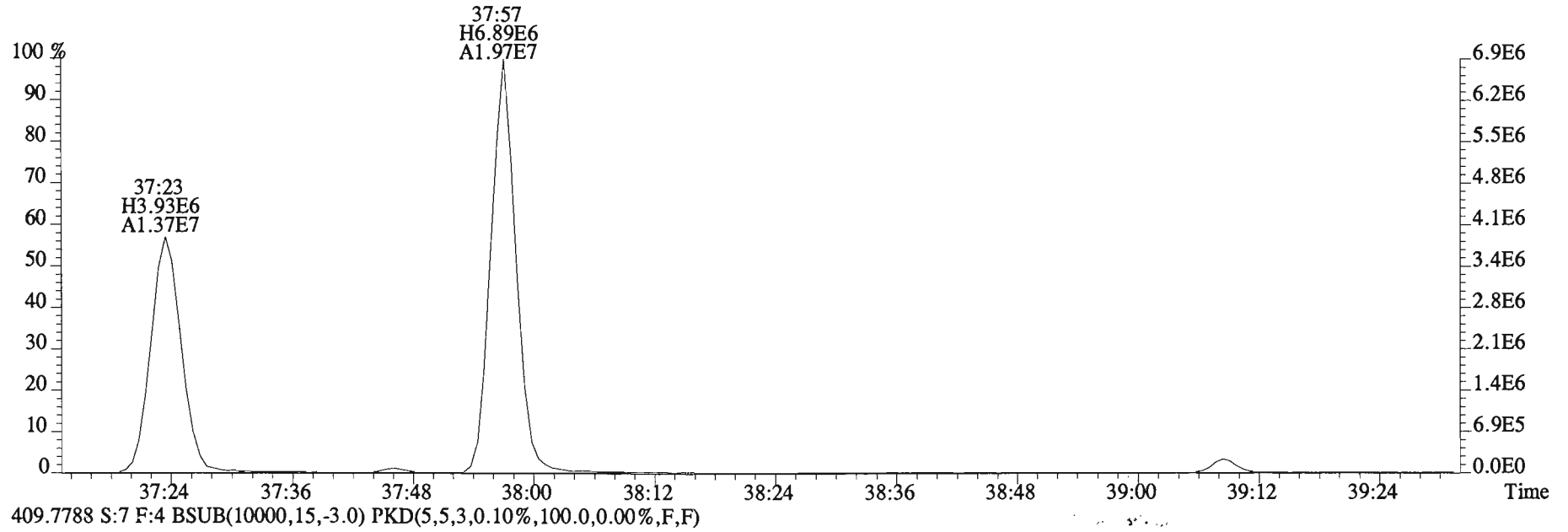




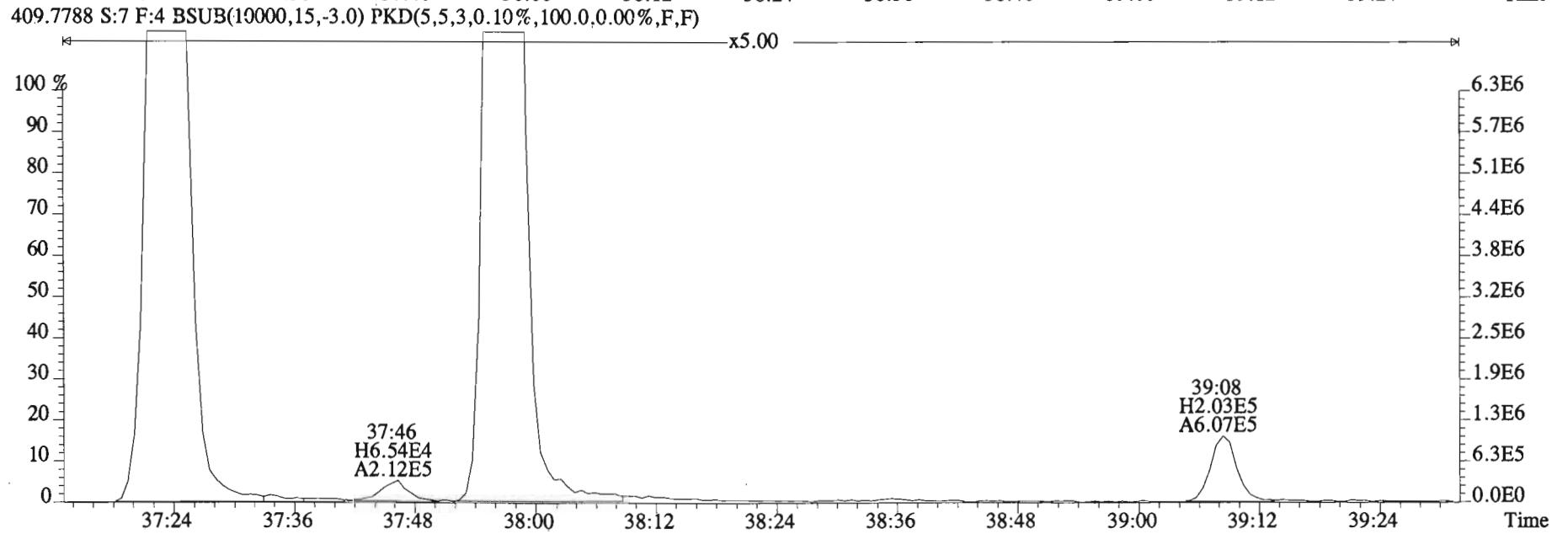
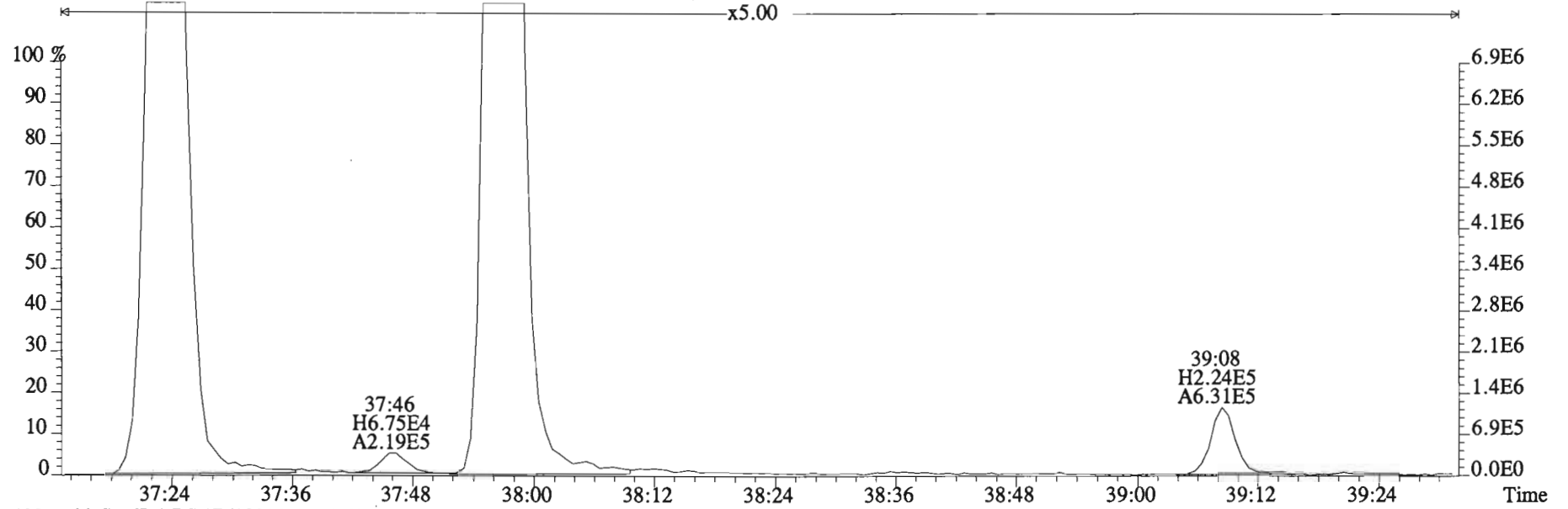
File:150203D1 #1-326 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02 WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
 407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



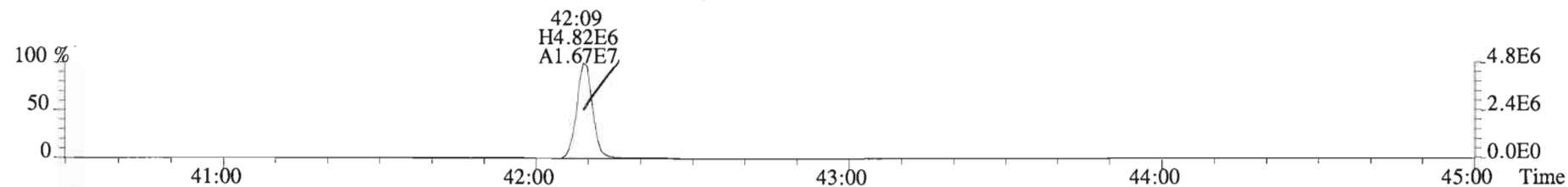
File:150203D1 #1-326 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



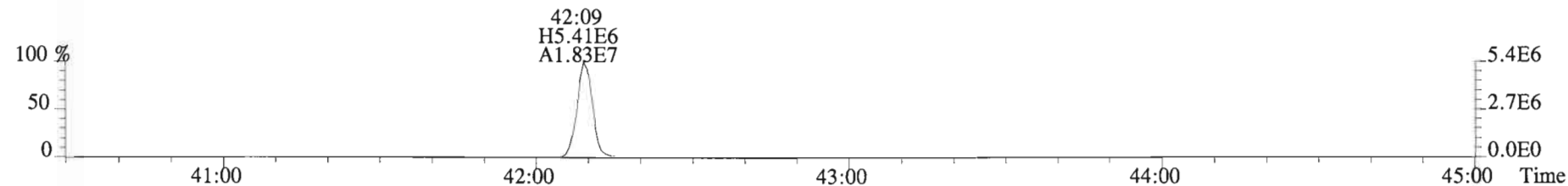
File:150203D1 #1-326 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1500116-02@20X WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
407.7818 S:7 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



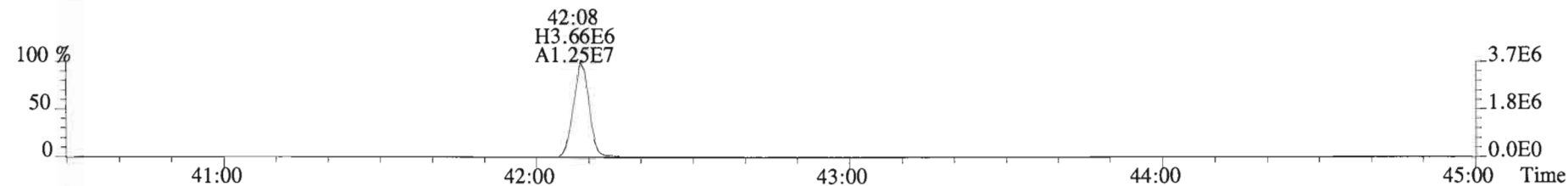
File:150203D1 #1-388 Acq: 3-FEB-2015 13:25:59 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1500116-02 WM-FD-02-20150122-S 33.89 Exp:OCDD\_DB5  
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



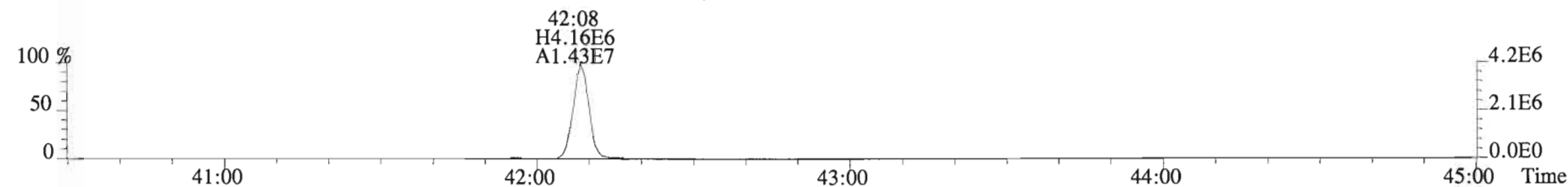
443.7398 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



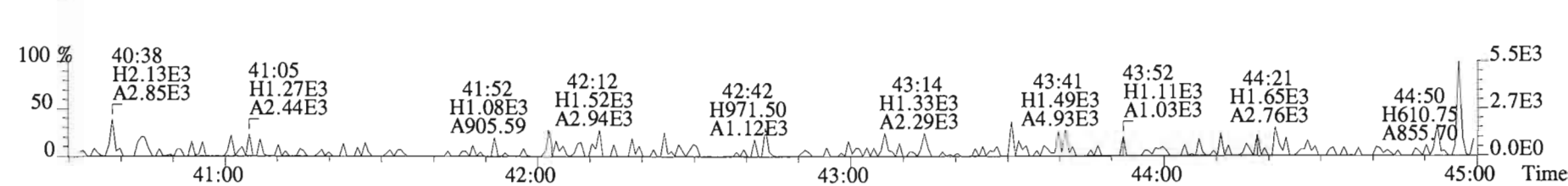
453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	1.17	NotF $\eta$	*	*		643	2.5	0.857	Total Tetra-Dioxins	*	*		643	0.857
1,2,3,7,8-PeCDD	*	* n	0.91	NotF $\eta$	*	*		638	2.5	0.692	Total Penta-Dioxins	*	*		638	0.692
1,2,3,4,7,8-HxCDD	*	* n	1.08	NotF $\eta$	*	*		601	2.5	1.21	Total Hexa-Dioxins	*	*		631	1.27
1,2,3,6,7,8-HxCDD	*	* n	1.06	NotF $\eta$	*	*		601	2.5	1.19	Total Hepta-Dioxins	*	*		639	1.23
1,2,3,7,8,9-HxCDD	*	* n	0.93	NotF $\eta$	*	*		601	2.5	1.22	Total Tetra-Furans	*	*		594	0.644
1,2,3,4,6,7,8-HpCDD	*	* n	1.10	NotF $\eta$	*	*		639	2.5	1.23	Total Penta-Furans	0.0000	0.0000		601	0.753
OCDD	*	* n	0.95	NotF $\eta$	*	*		964	2.5	2.84	Total Hexa-Furans	*	*		577	0.525
											Total Hepta-Furans	*	*		517	0.528
2,3,7,8-TCDF	*	* n	1.07	NotF $\eta$	*	*		594	2.5	0.643						
1,2,3,7,8-PeCDF	*	* n	1.07	NotF $\eta$	*	*		571	2.5	0.766						
2,3,4,7,8-PeCDF	*	* n	1.03	NotF $\eta$	*	*		571	2.5	0.665						
1,2,3,4,7,8-HxCDF	*	* n	1.38	NotF $\eta$	*	*		547	2.5	0.421						
1,2,3,6,7,8-HxCDF	*	* n	1.26	NotF $\eta$	*	*		547	2.5	0.484						
2,3,4,6,7,8-HxCDF	*	* n	1.29	NotF $\eta$	*	*		547	2.5	0.497						
1,2,3,7,8,9-HxCDF	*	* n	1.19	NotF $\eta$	*	*		547	2.5	0.618						
1,2,3,4,6,7,8-HpCDF	*	* n	1.61	NotF $\eta$	*	*		487	2.5	0.516						
1,2,3,4,7,8,9-HpCDF	*	* n	1.53	NotF $\eta$	*	*		487	2.5	0.478						
OCDF	*	* n	1.10	NotF $\eta$	*	*		412	2.5	0.926						

IS																
IS	13C-2,3,7,8-TCDD	2.17e+07	0.79 y	1.06	26:59	1.021	1601.4									
IS	13C-1,2,3,7,8-PeCDD	2.18e+07	0.62 y	1.18	31:26	1.190	1450.1									
IS	13C-1,2,3,4,7,8-HxCDD	1.52e+07	1.25 y	0.72	34:45	1.014	1538.3									
IS	13C-1,2,3,6,7,8-HxCDD	1.55e+07	1.24 y	0.74	34:51	1.017	1535.3									
IS	13C-1,2,3,7,8,9-HxCDD	1.75e+07	1.24 y	0.85	35:09	1.026	1487.2									
IS	13C-1,2,3,4,6,7,8-HpCDD	1.38e+07	1.06 y	0.65	38:35	1.126	1536.4									
IS	13C-OCDD	2.37e+07	0.89 y	0.76	41:54	1.223	2253.6									
IS	13C-2,3,7,8-TCDF	2.86e+07	0.76 y	0.92	26:12	0.992	1567.9									
IS	13C-1,2,3,7,8-PeCDF	2.70e+07	1.56 y	0.92	30:16	1.146	1474.1									
IS	13C-2,3,4,7,8-PeCDF	2.78e+07	1.58 y	0.93	31:09	1.179	1504.3									
IS	13C-1,2,3,4,7,8-HxCDF	2.07e+07	0.51 y	0.98	33:51	0.988	1534.5									
IS	13C-1,2,3,6,7,8-HxCDF	2.19e+07	0.52 y	1.08	33:58	0.991	1467.4									
IS	13C-2,3,4,6,7,8-HxCDF	2.06e+07	0.51 y	1.03	34:35	1.009	1459.0									
IS	13C-1,2,3,7,8,9-HxCDF	1.83e+07	0.50 y	0.86	35:33	1.037	1544.1									
IS	13C-1,2,3,4,6,7,8-HpCDF	1.41e+07	0.44 y	0.72	37:23	1.091	1419.0									
IS	13C-1,2,3,4,7,8,9-HpCDF	1.43e+07	0.45 y	0.70	39:09	1.142	1489.6									
IS	13C-OCDF	2.71e+07	0.89 y	0.85	42:08	1.230	2321.8									

Rec Qual

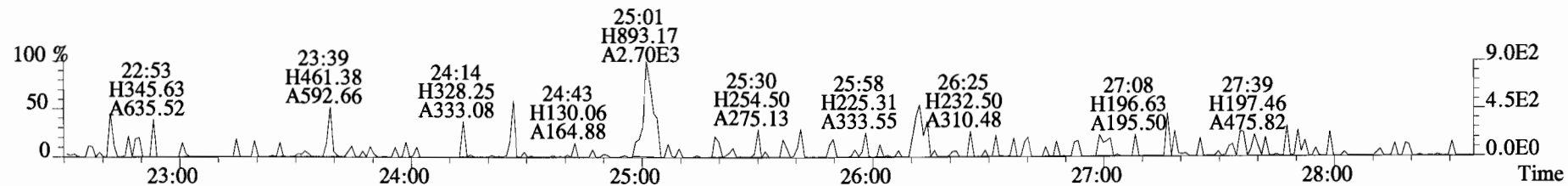
80.1
72.5
76.9
76.8
74.4
76.8
56.3
78.4
73.7
75.2
76.7
73.4
72.9
77.2
70.9
74.5
58.0

C/Up	37C1-2,3,7,8-TCDD	1.05e+07		1.12	26:60	1.022	734.36									
RS/RT	13C-1,2,3,4-TCDD	2.55e+07	0.80 y	1.00	26:25	*	2000.0									
RS	13C-1,2,3,4-TCDF	3.97e+07	0.76 y	1.00	25:01	*	2000.0									
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.75e+07	0.52 y	1.00	34:16	*	2000.0									

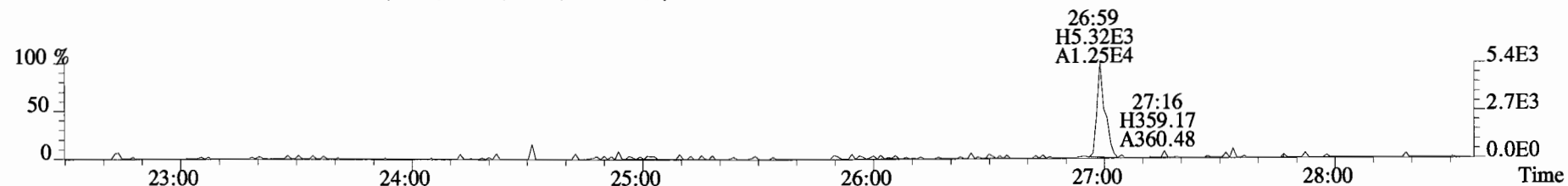
Integrations  
 by AP  
 Analyst: AP  
 Date: 2/11/15

Reviewed  
 by CT  
 Analyst: CT  
 Date: 2/2/15

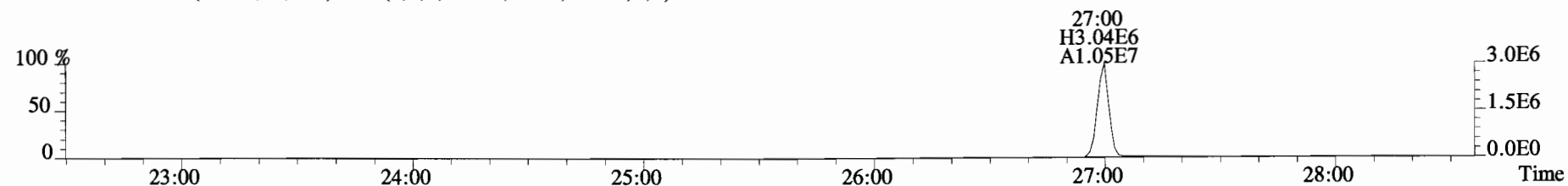
File:150130D2 #1-551 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



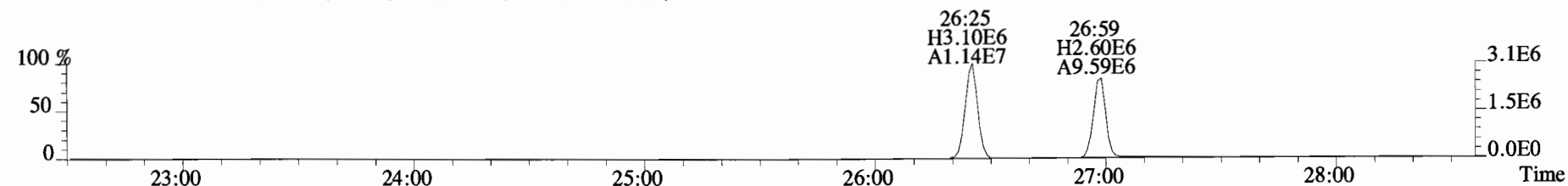
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



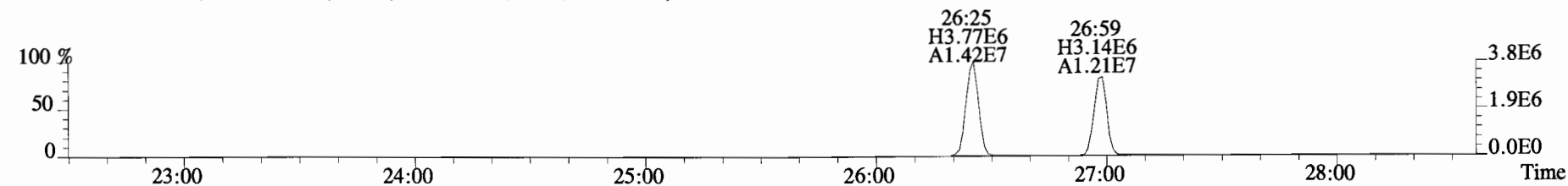
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



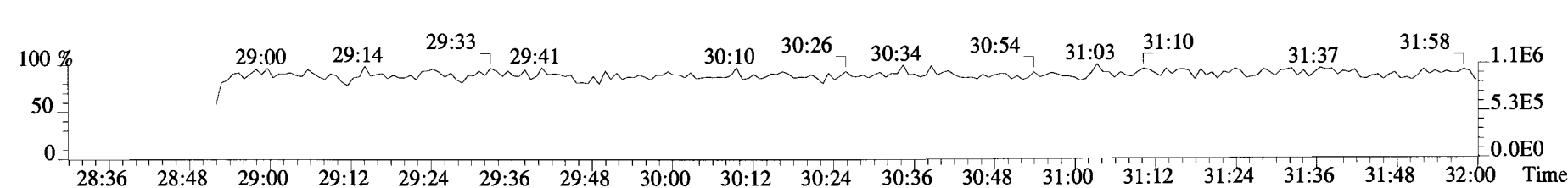
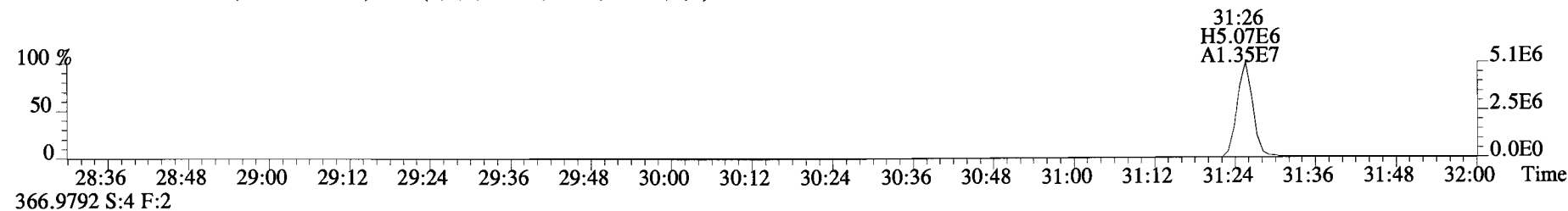
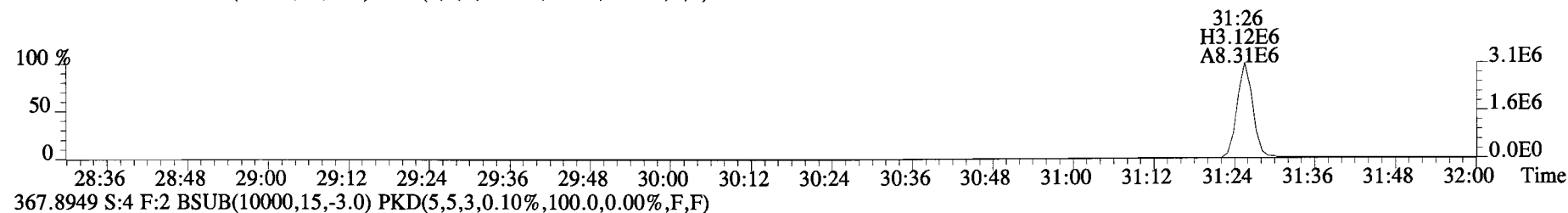
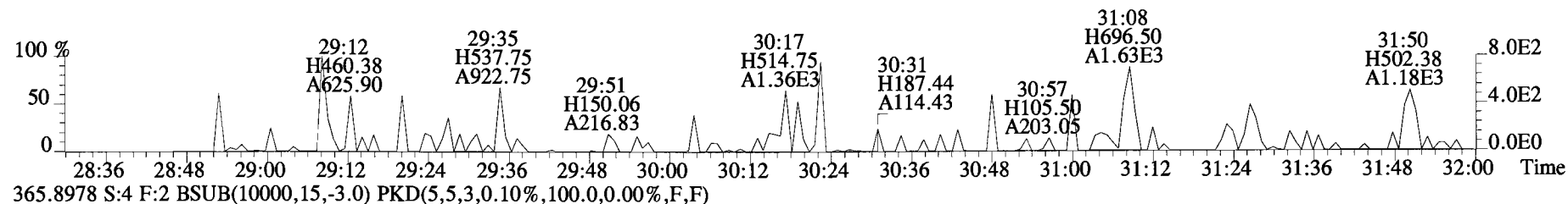
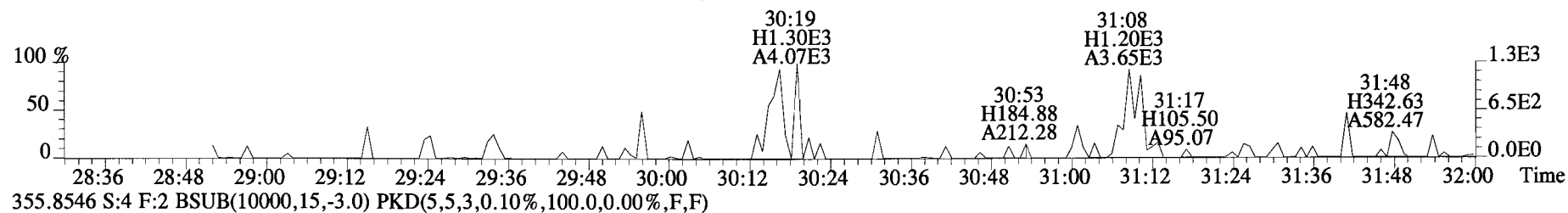
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



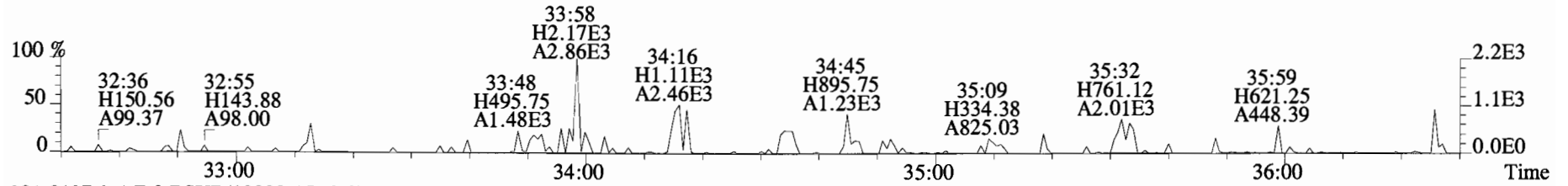
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



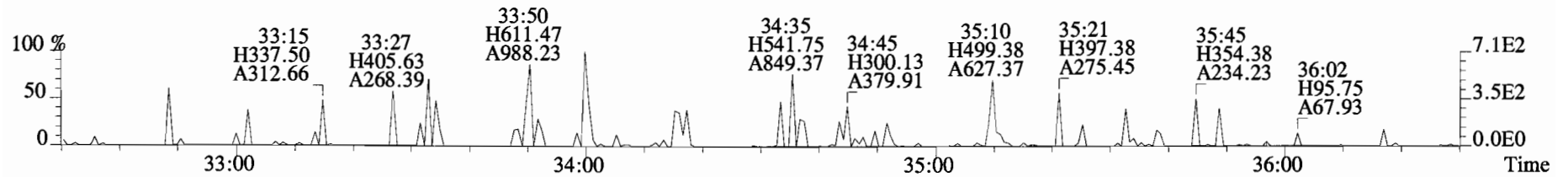
File:150130D2 #1-251 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



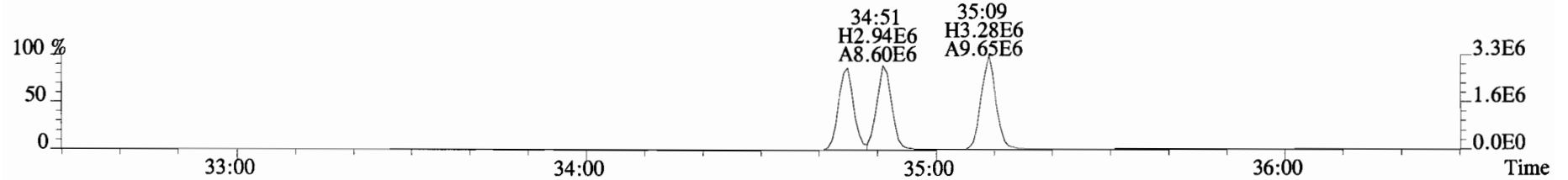
File:150130D2 #1-393 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



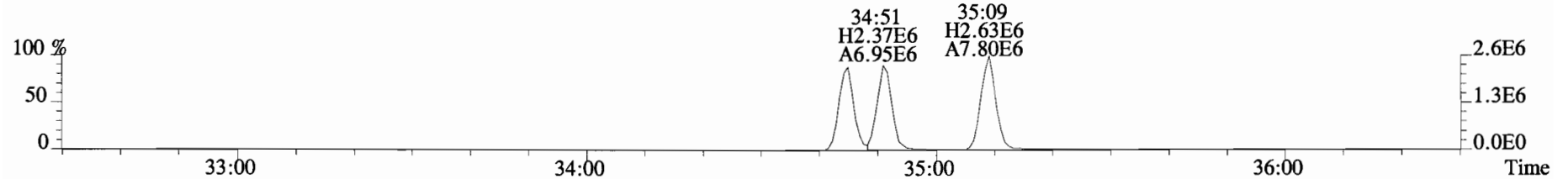
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



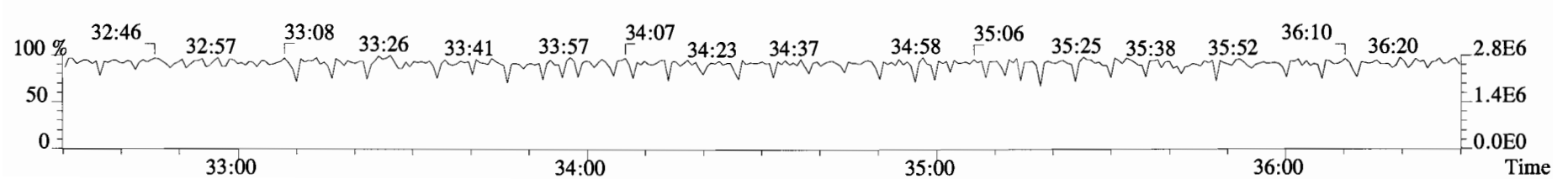
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

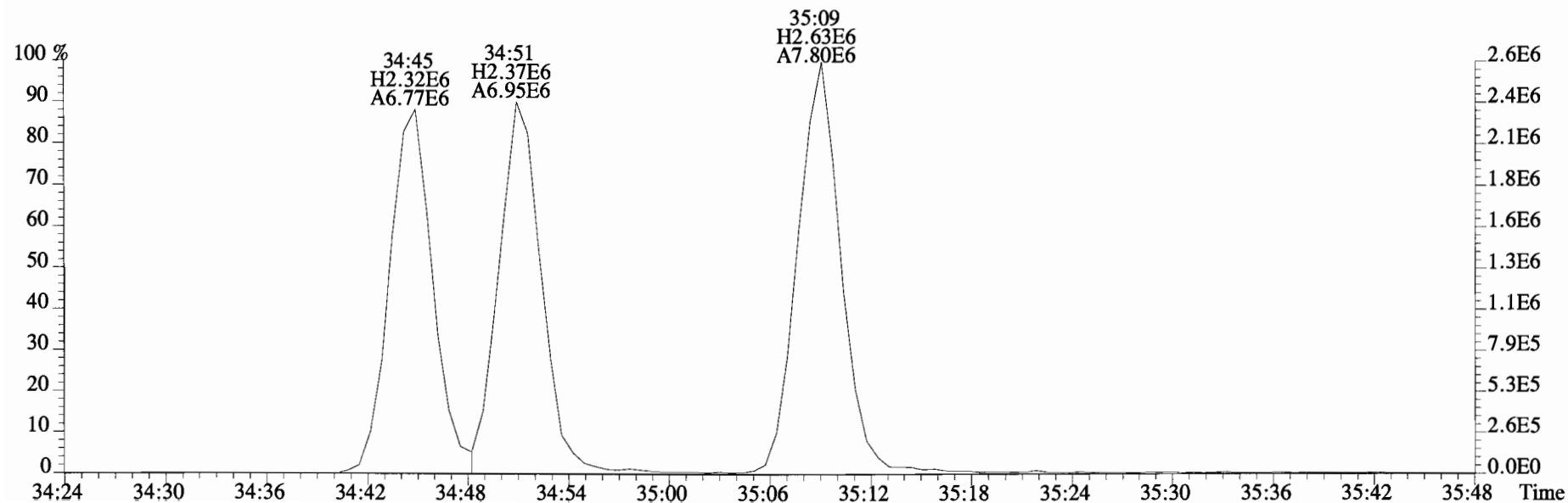
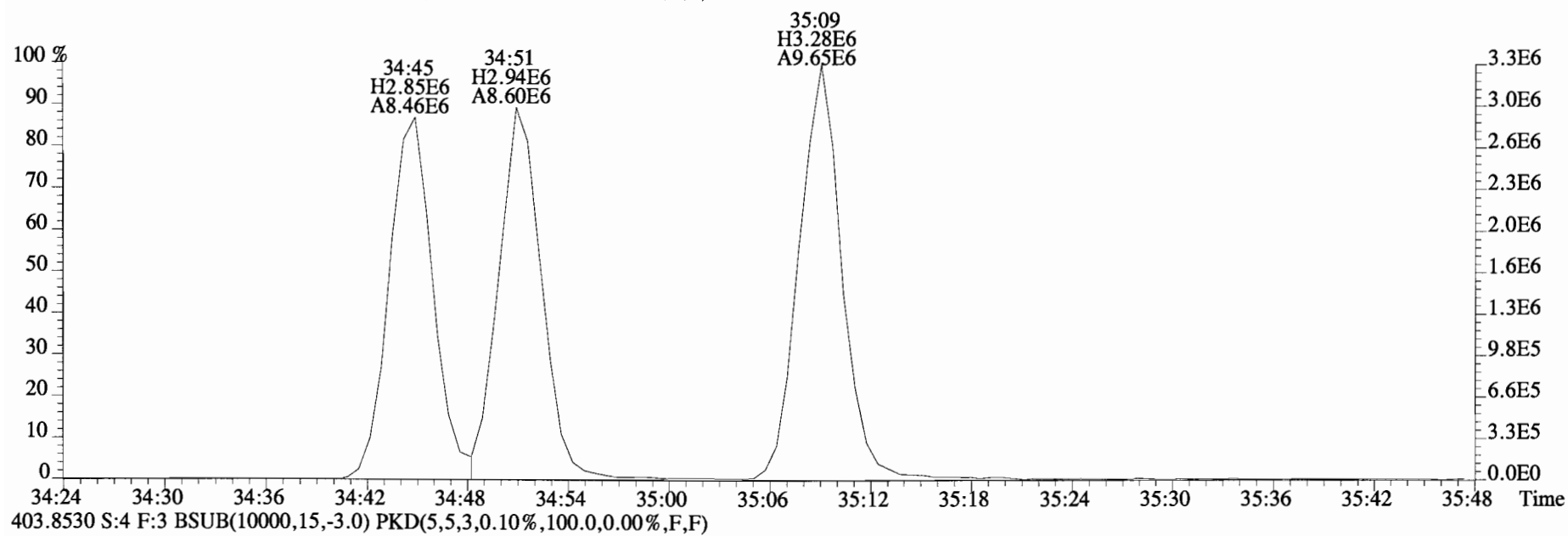


380.9760 S:4 F:3

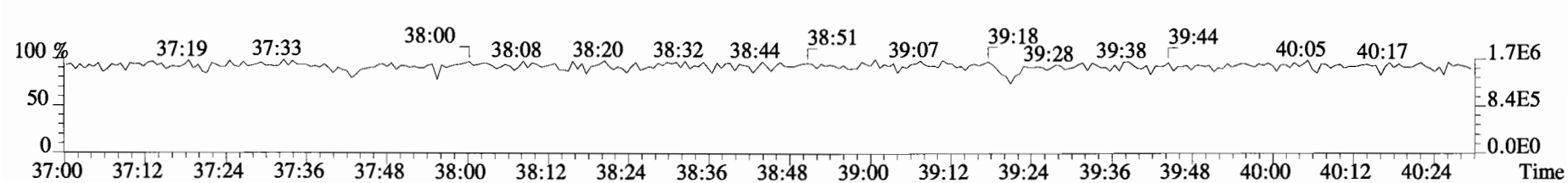
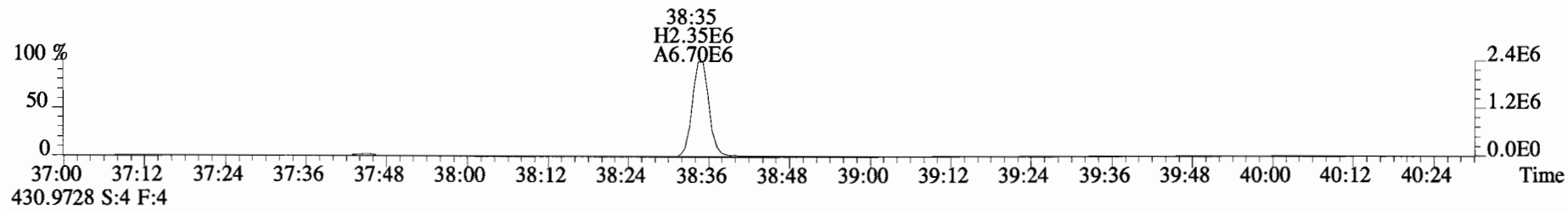
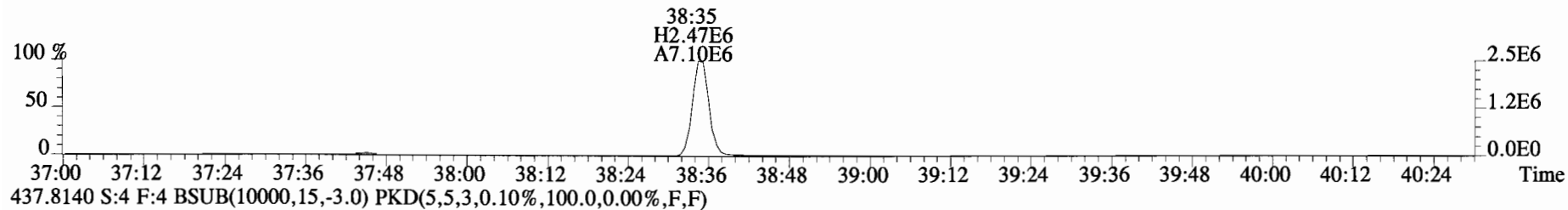
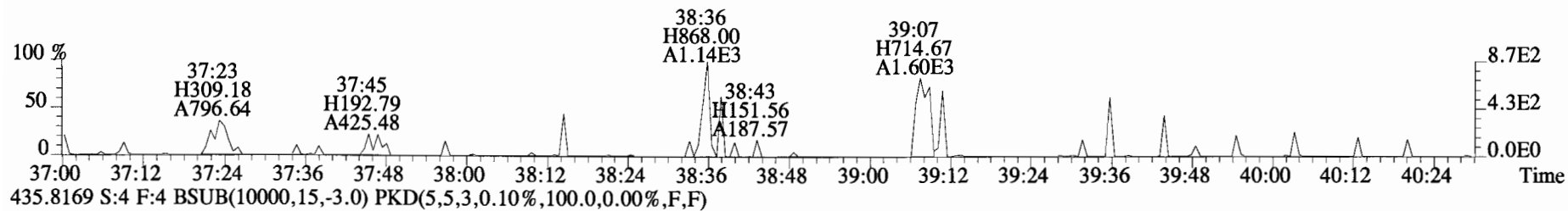
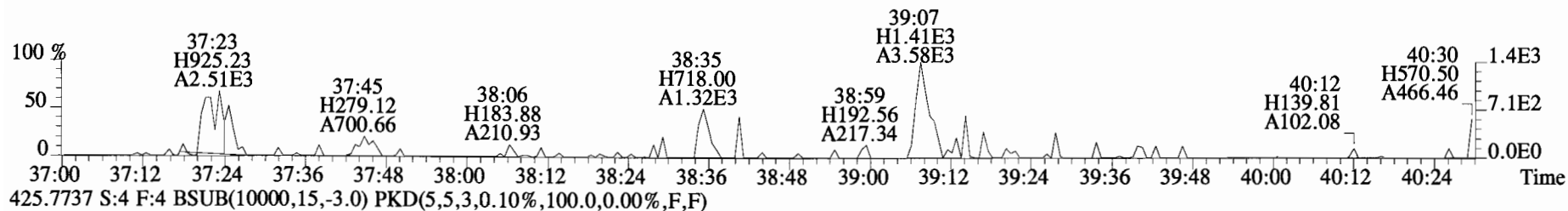




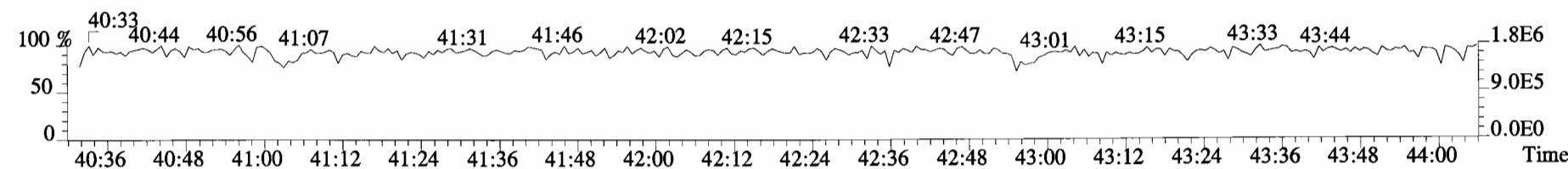
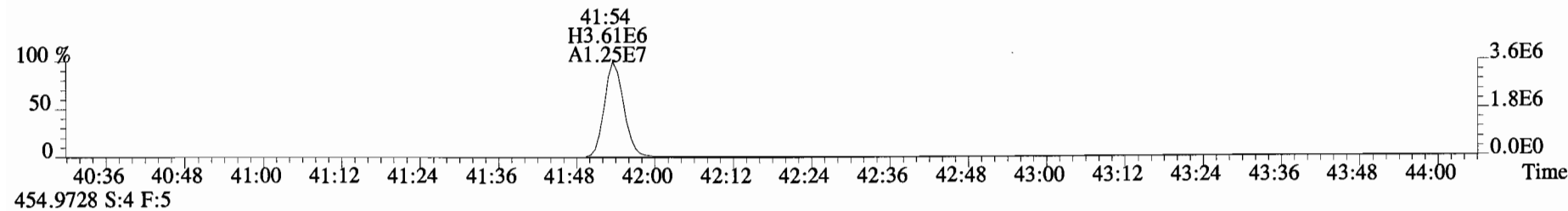
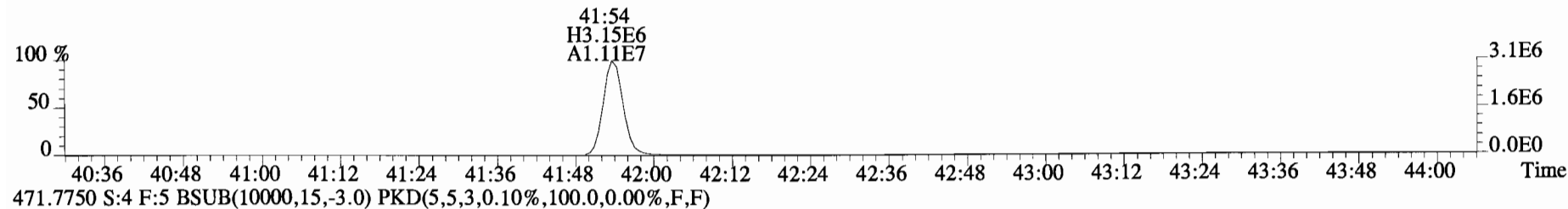
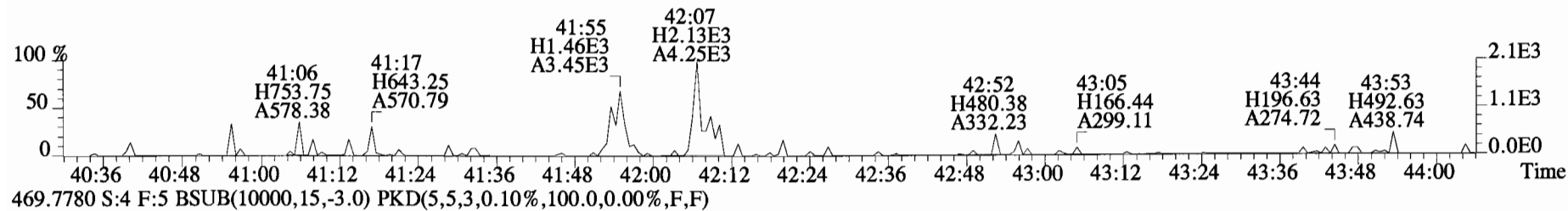
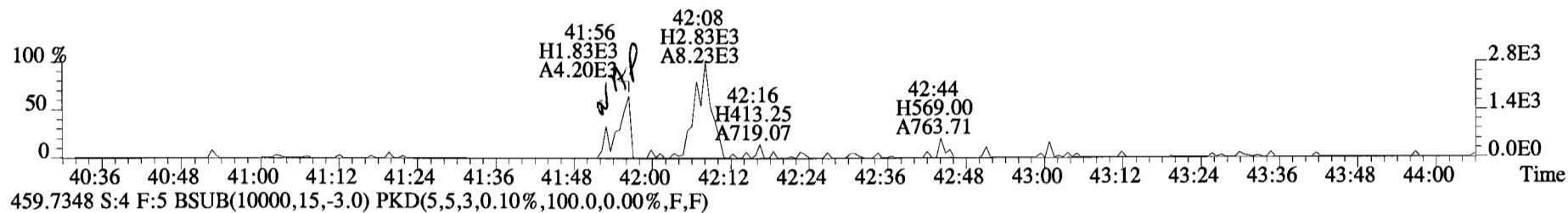
File:150130D2 #1-393 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text: Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



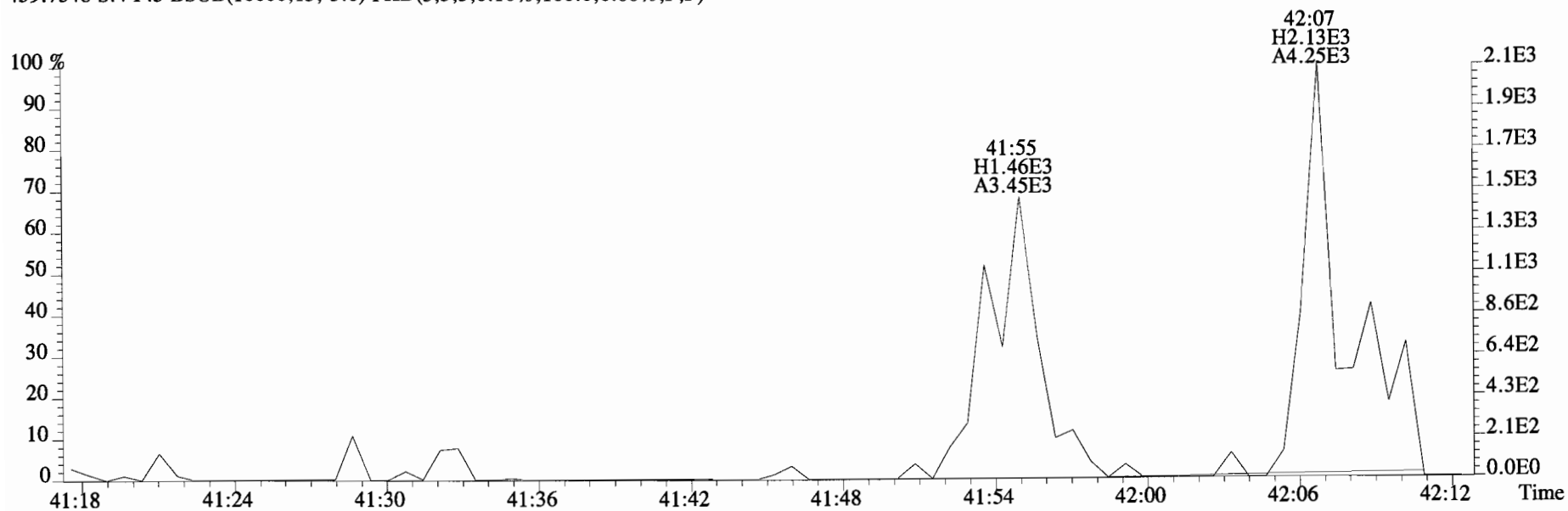
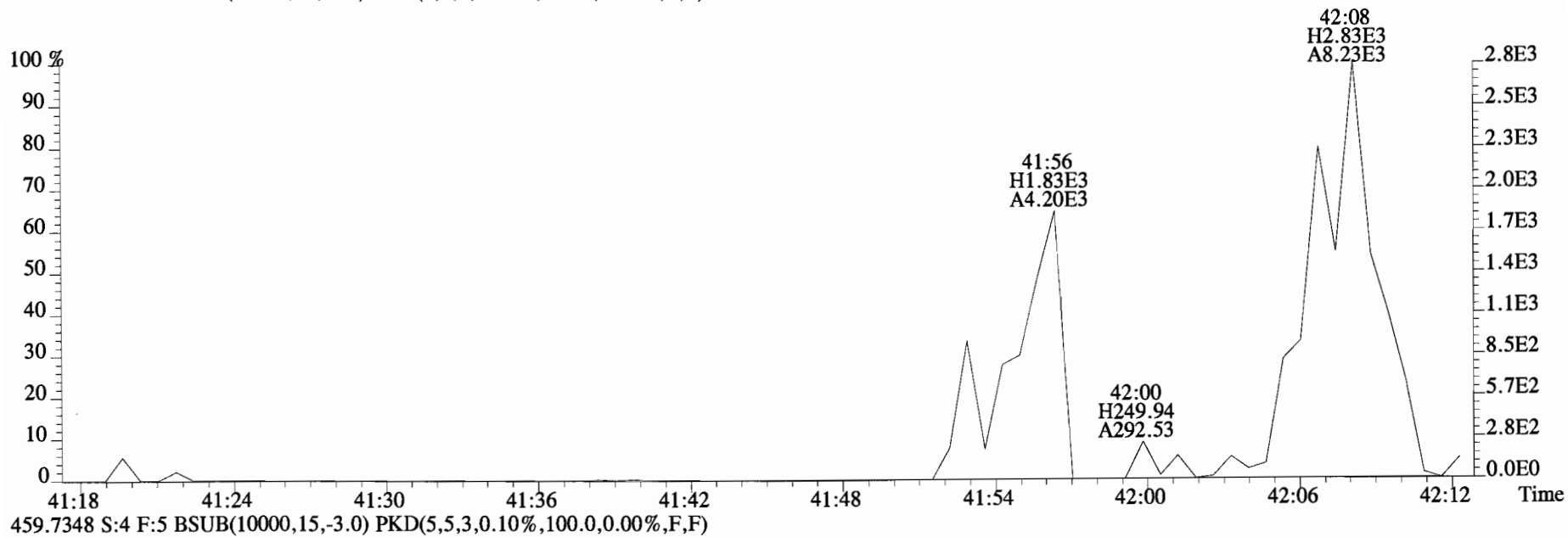
File:150130D2 #1-325 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
423.7767 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



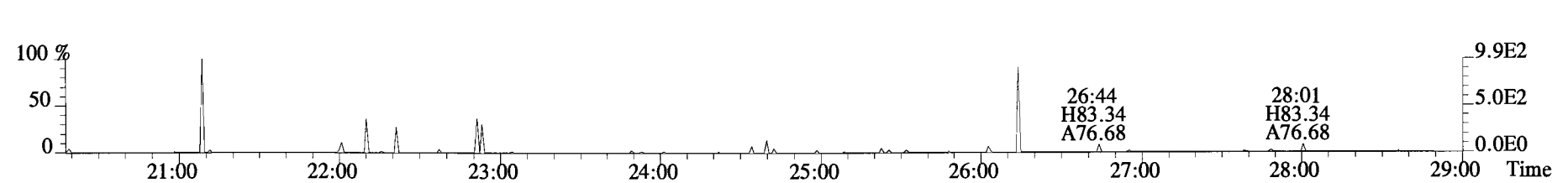
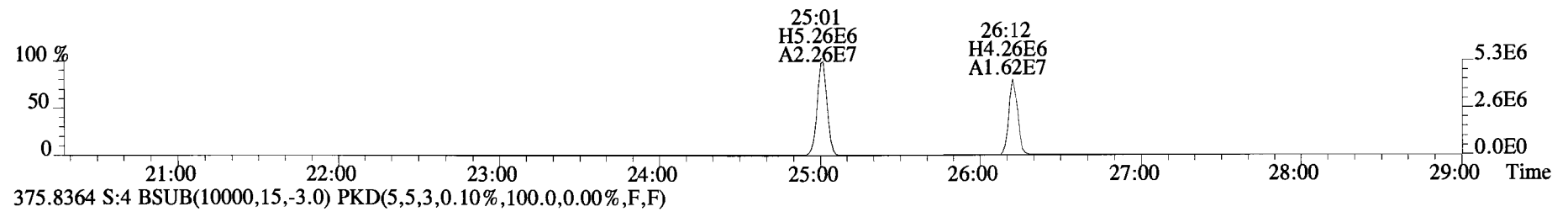
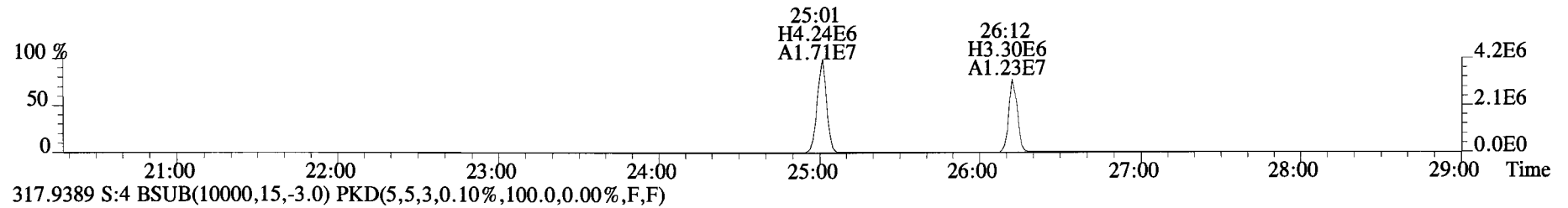
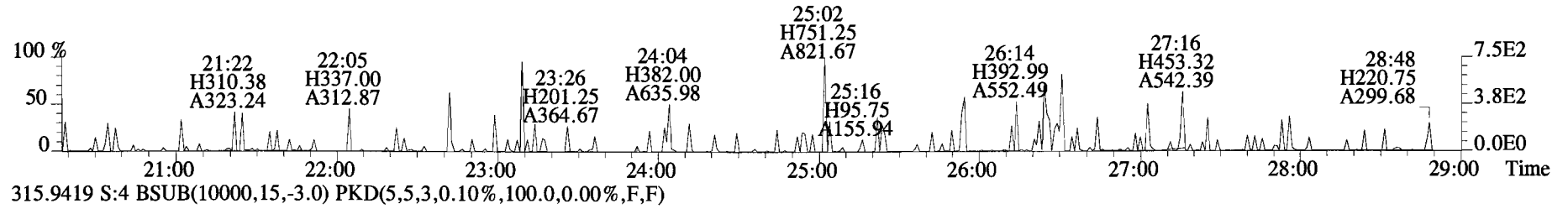
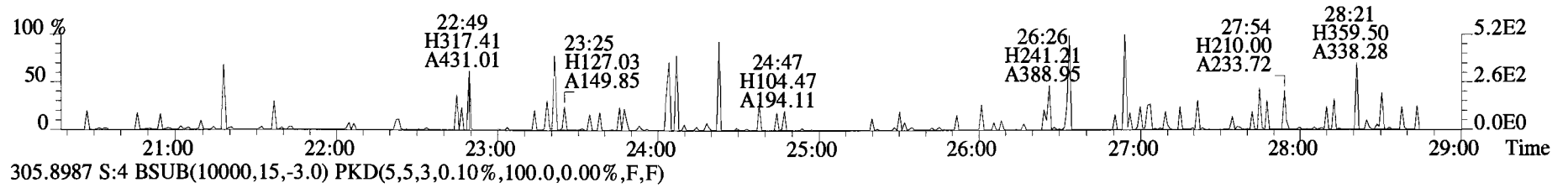
File:150130D2 #1-389 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text: Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



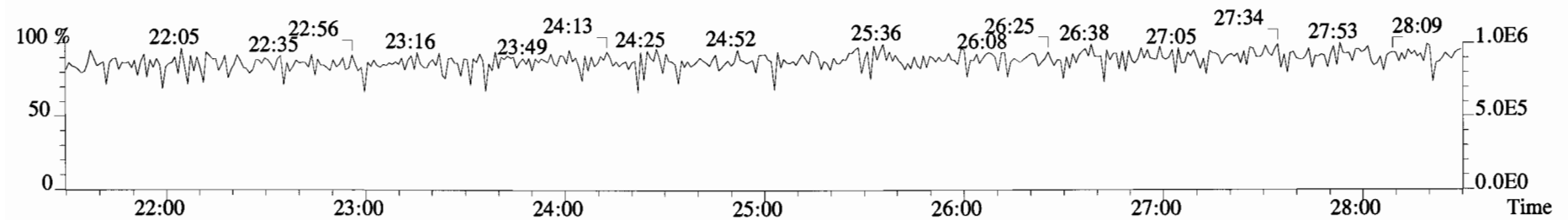
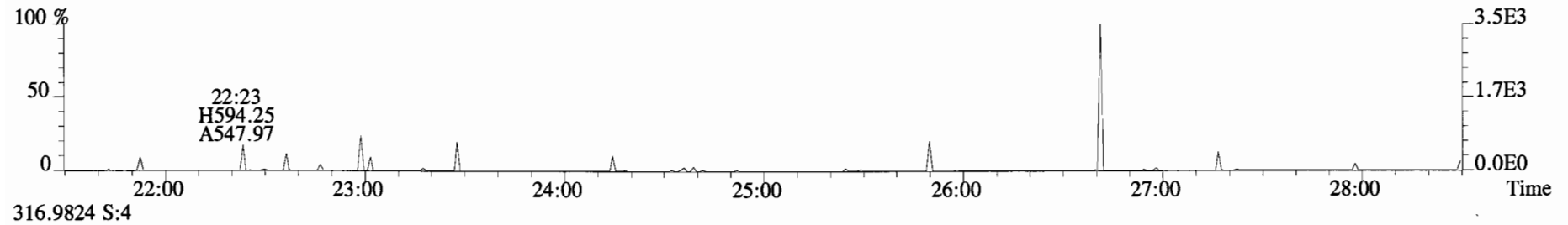
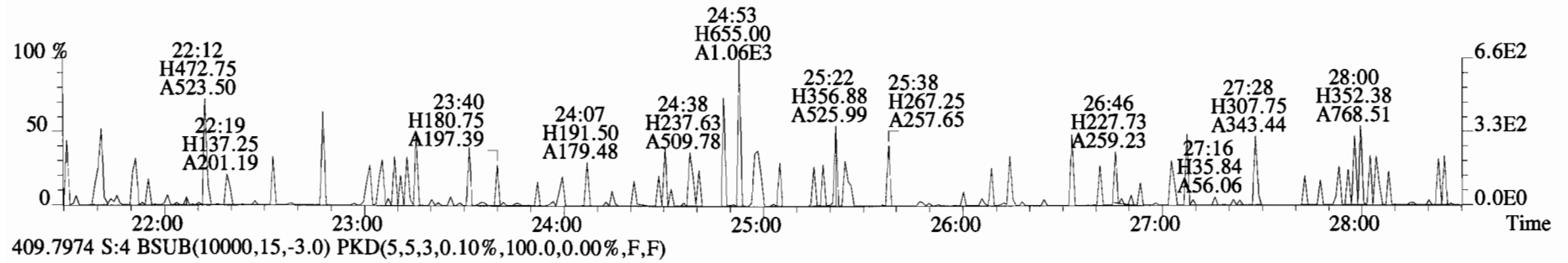
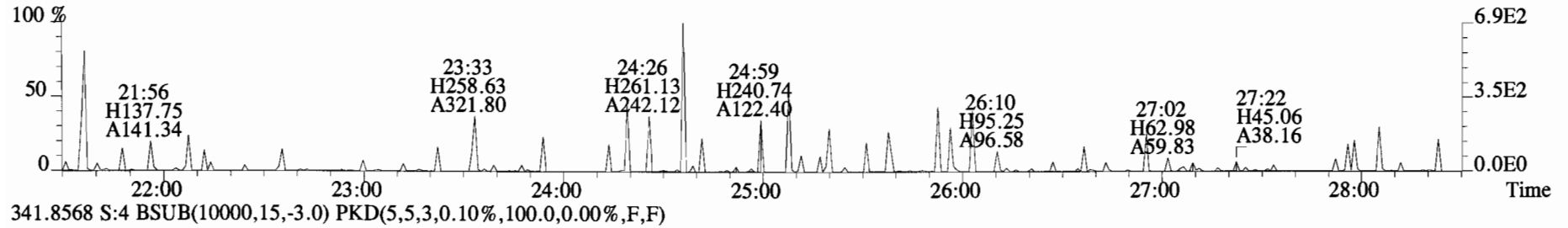
File:150130D2 #1-389 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



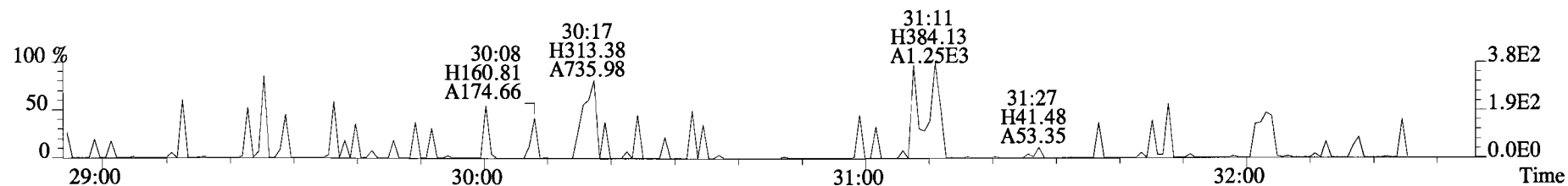
File:150130D2 #1-551 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



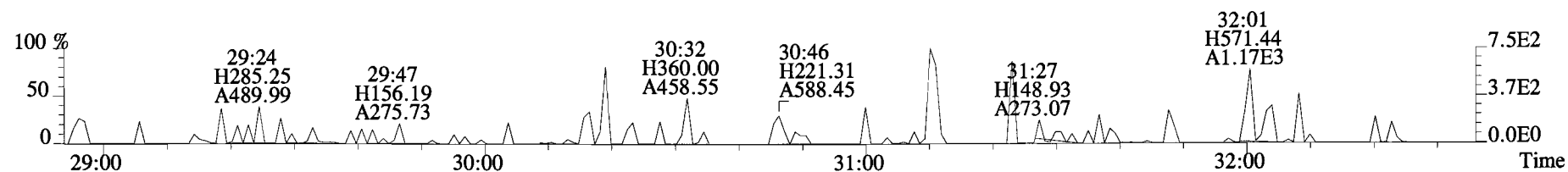
File:150130D2 #1-551 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



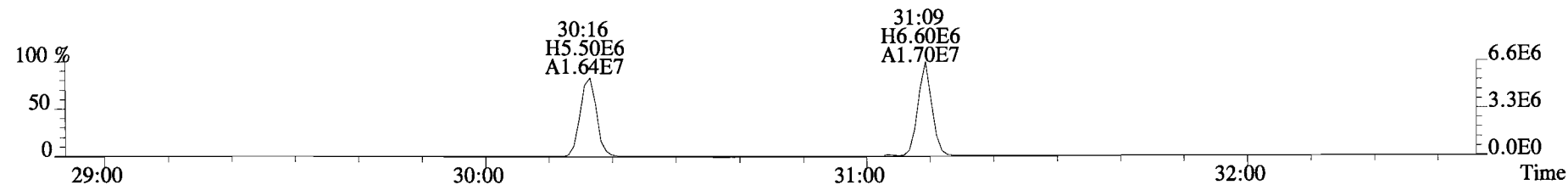
File:150130D2 #1-251 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



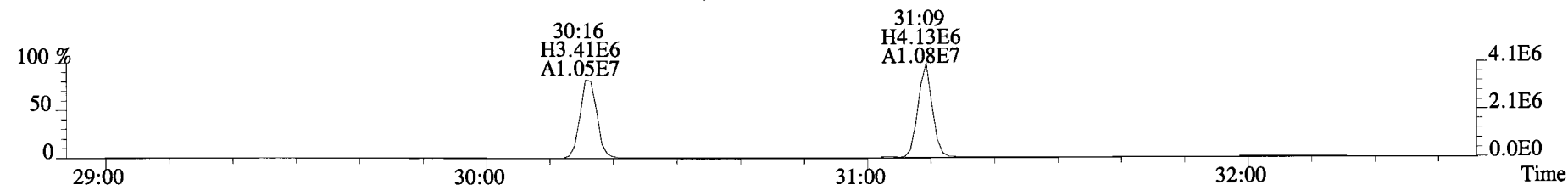
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



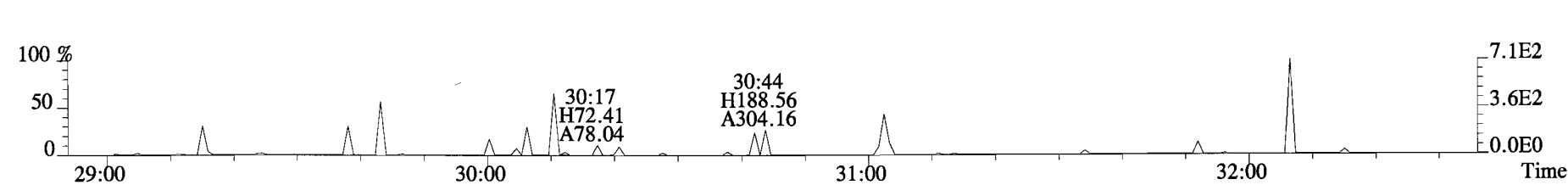
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



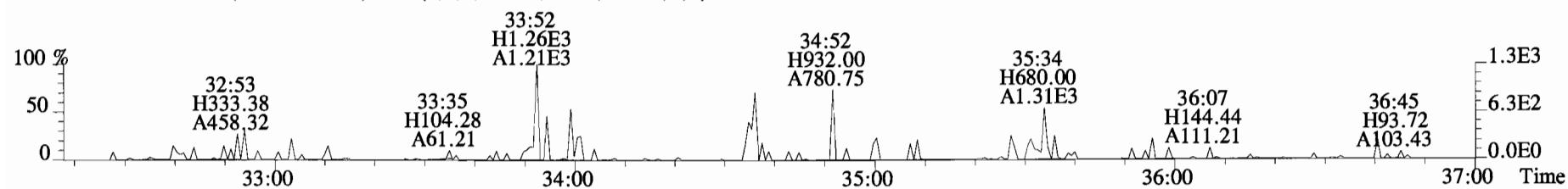
353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



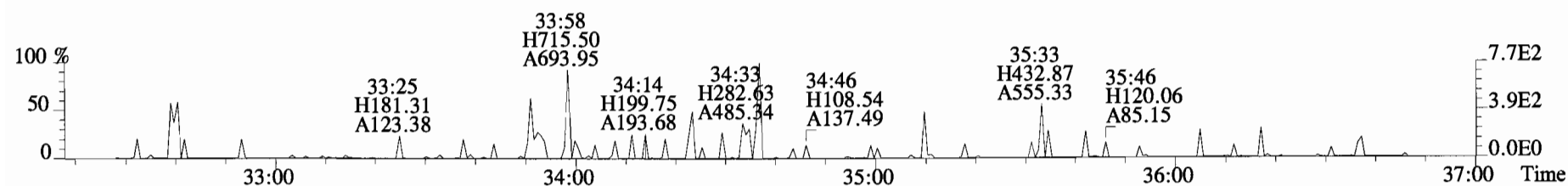
409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



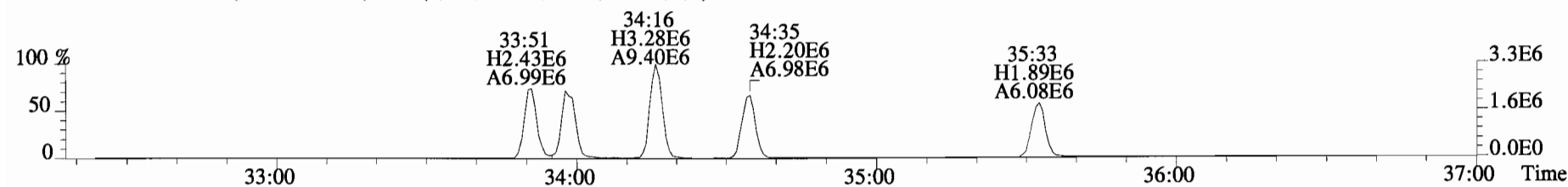
File:150130D2 #1-393 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
 373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



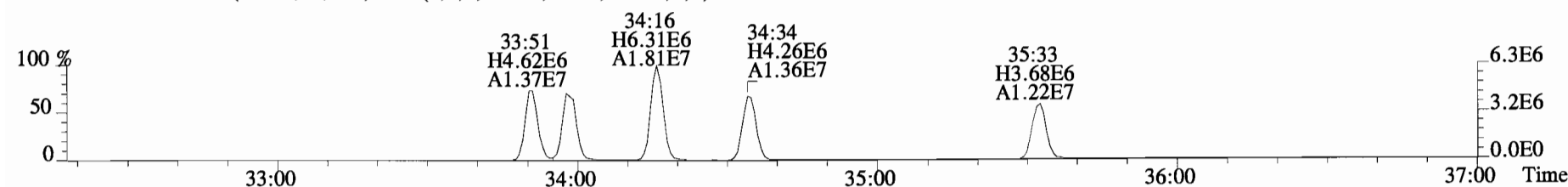
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



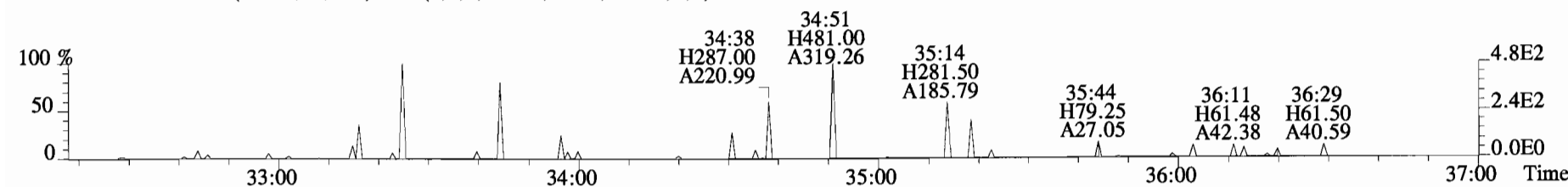
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

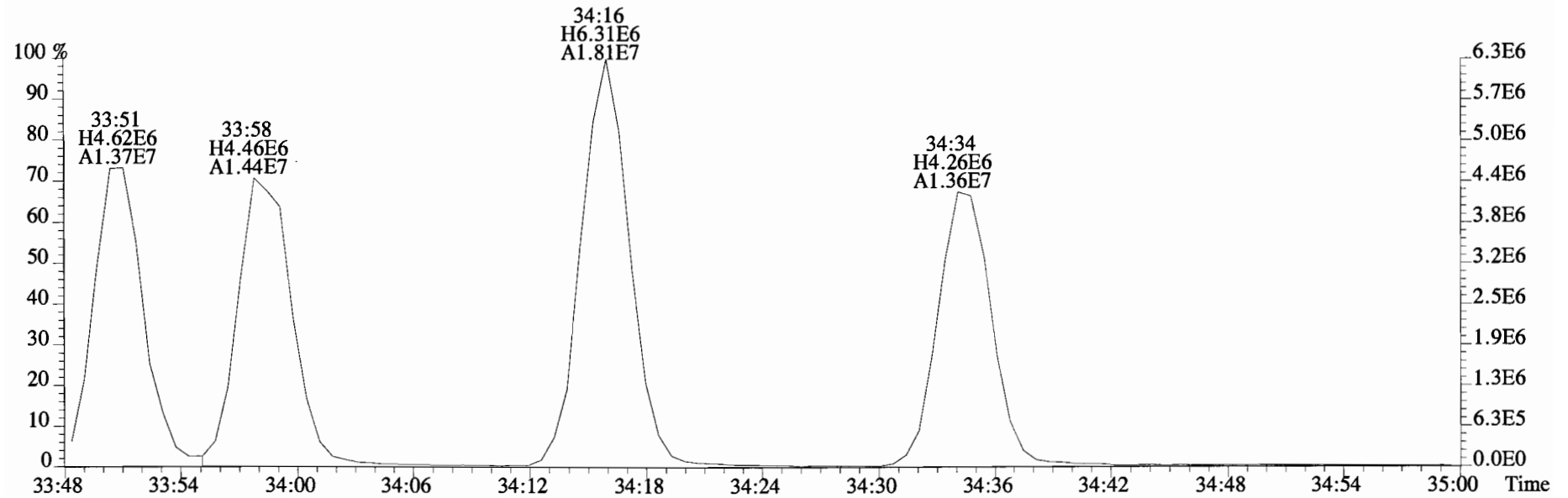
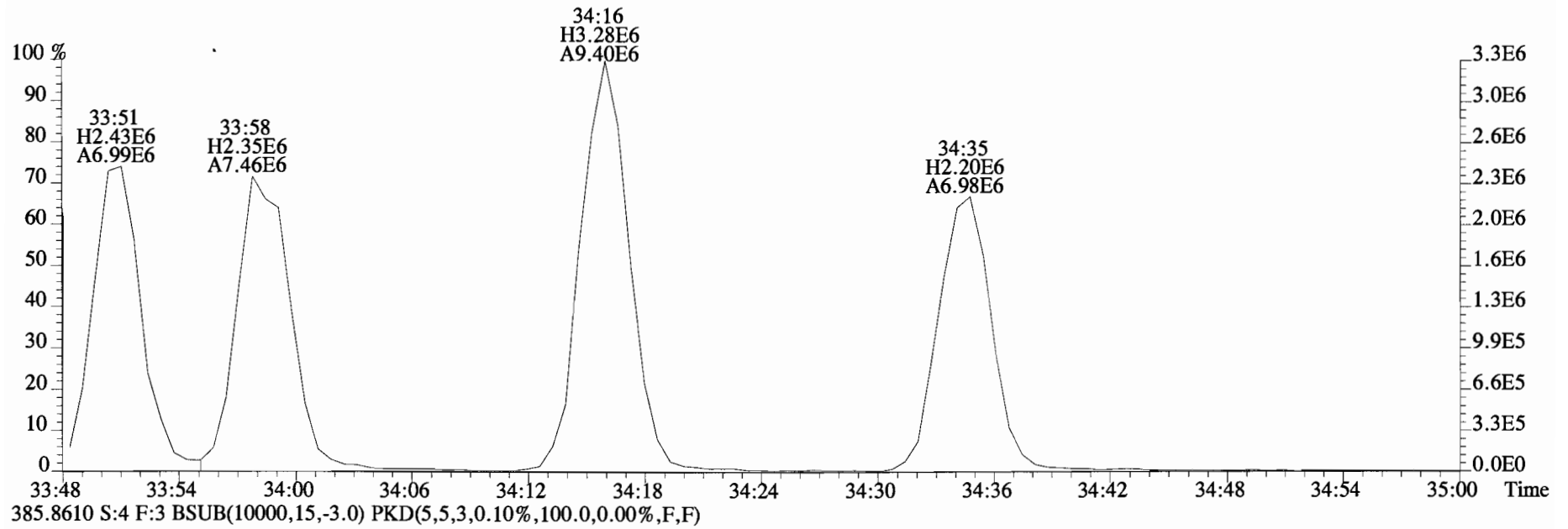


445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

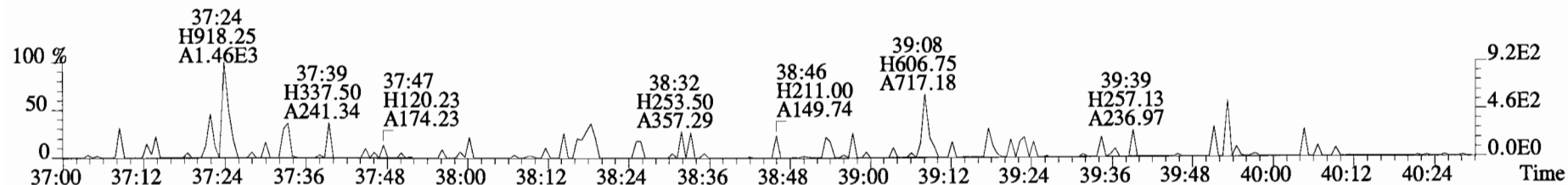




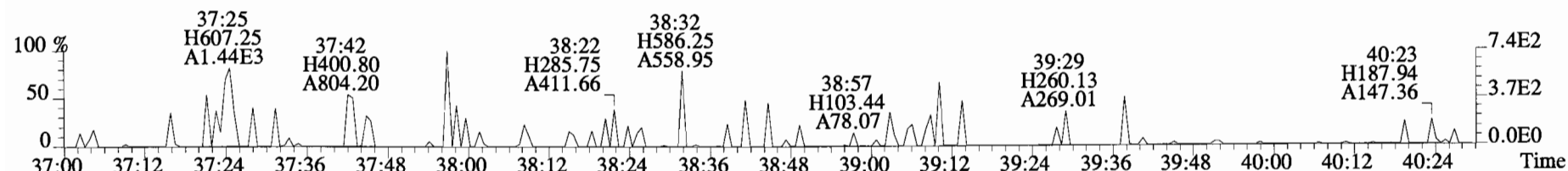
File:150130D2 #1-393 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
383.8639 S:4 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



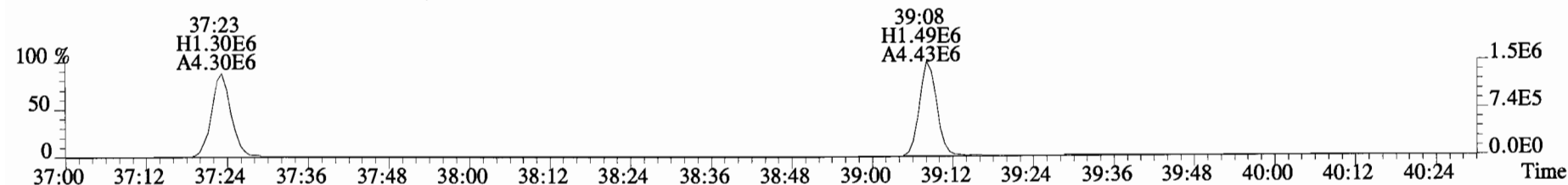
File:150130D2 #1-325 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
407.7818 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



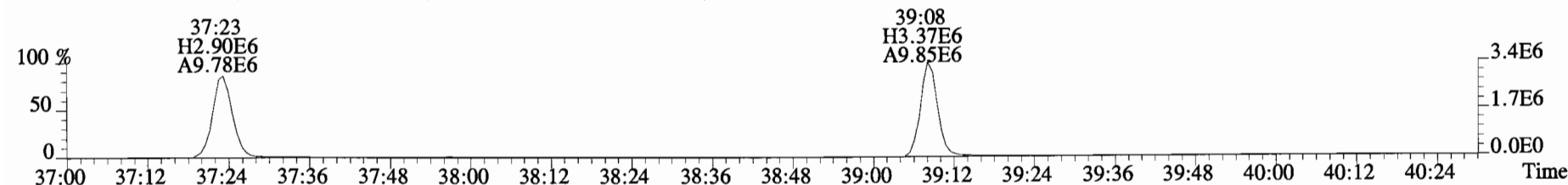
409.7788 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



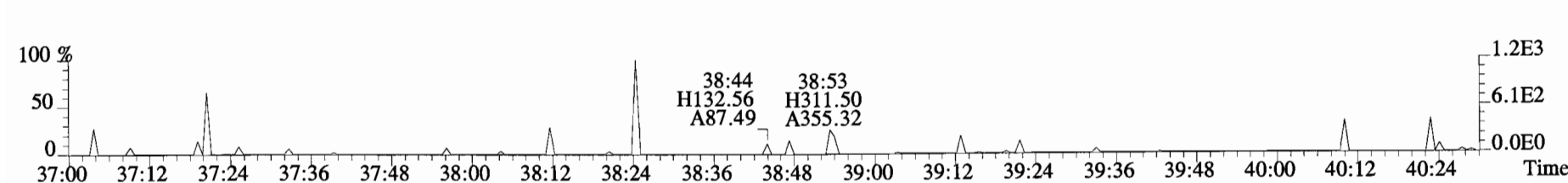
417.8253 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



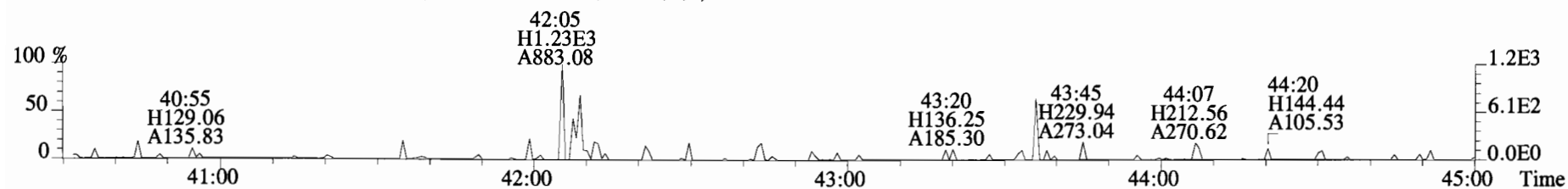
419.8220 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



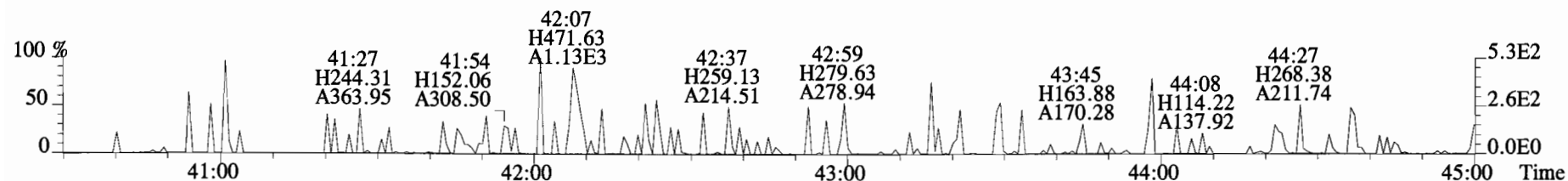
479.7165 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



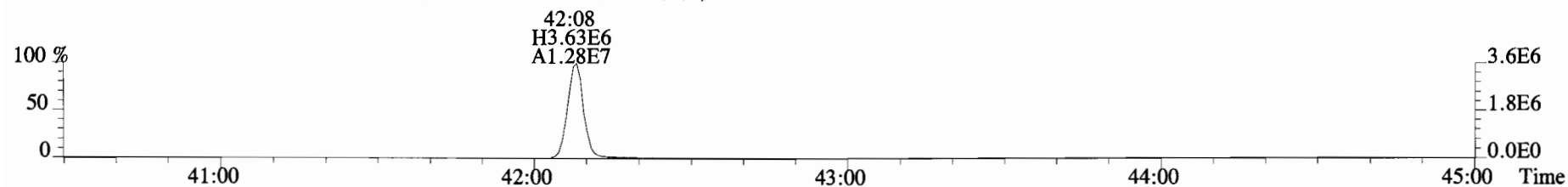
File:150130D2 #1-389 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD\_DB5  
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



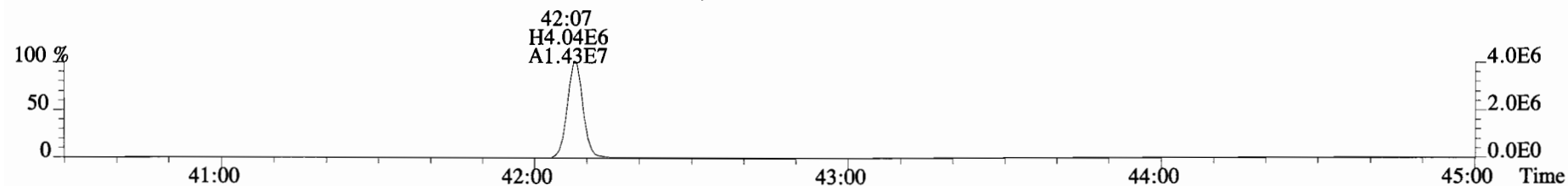
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



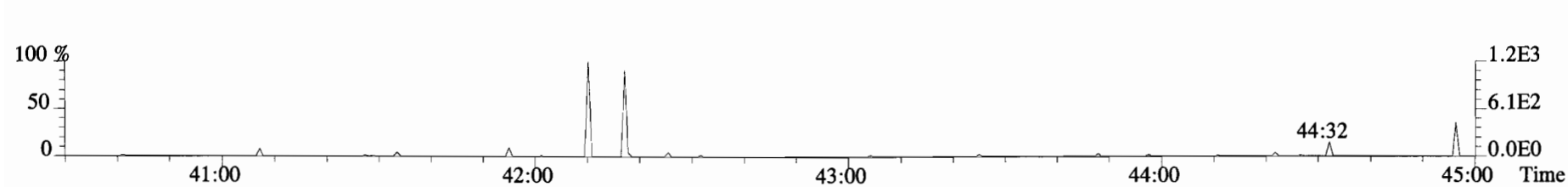
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A  
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory      Extraction Batch: B5A0110-BS1

Contract No.:                      SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS    OPR Data Filename: 150130D2-2

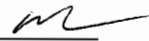
Ext. Date: 1-29-15    Shift: Day    Analysis Date: 30-JAN-15    Time: 23:00:58

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	8.08	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	43.9	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	46.9	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	48.3	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	47.2	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	46.2	35.0 - 70.0
OCDD	100	95.3	78.0 - 144.0
2,3,7,8-TCDF	10	8.48	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	44.7	40.0 - 67.0
2,3,4,7,8-PeCDF	50	45.4	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	48.2	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	47.9	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	48.7	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	47.4	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	48.3	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	49.3	39.0 - 69.0
OCDF	100	94.5	63.0 - 170.0

(1) Contract-required concentration limits for OPR  
as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR  
as specified in Table 6a, Method 1613. 10/94

Analyst: 

Date: 2/11/15

FORM 8B  
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory      Extraction Batch: B5A0110-BS1

Contract No.:                      SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS      OPR Data Filename: 150130D2-2

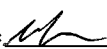
Ext. Date: 1-29-15      Shift: Day      Analysis Date: 30-JAN-15      Time: 23:00:58

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	74.3	20.0 - 175.0
13C-1,2,3,7,8-PeCDD	100	66.7	25.0 - 141.0 (2) 21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	74.7	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	75.1	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	74.4	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	76.9	26.0 - 166.0
13C-OCDD	200	113	26.0 - 397.0
13C-2,3,7,8-TCDF	100	77.8	22.0 - 152.0 26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	66.3	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	73.0	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	72.7	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	72.2	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	70.8	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	73.0	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	72.8	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	71.5	20.0 - 186.0
13C-OCDF	200	115	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	39.8	12.4 - 76.4

(1) Contract-required concentration limits for OPR  
as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR  
as specified in Table 6a, Method 1613. 10/94

Analyst: 

Date: 2/11/15

Client ID: OPR  
Lab ID: B5A0110-BS1

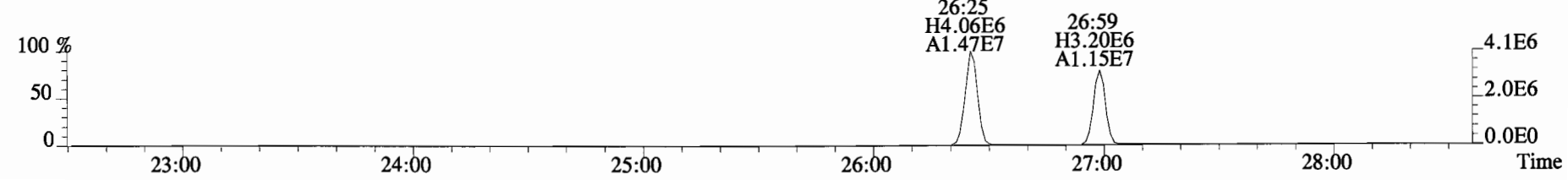
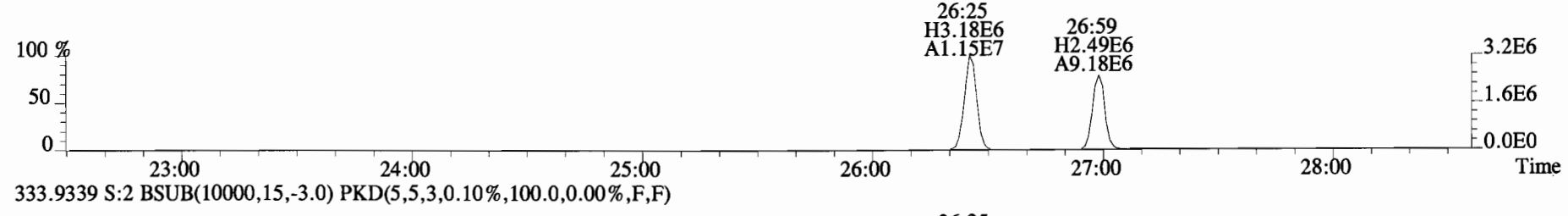
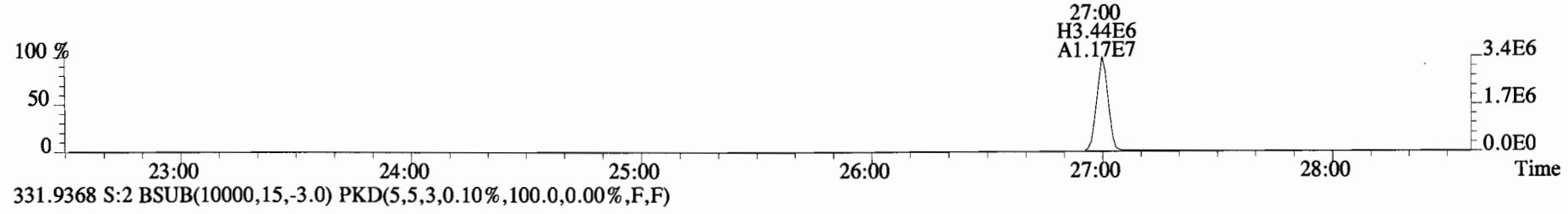
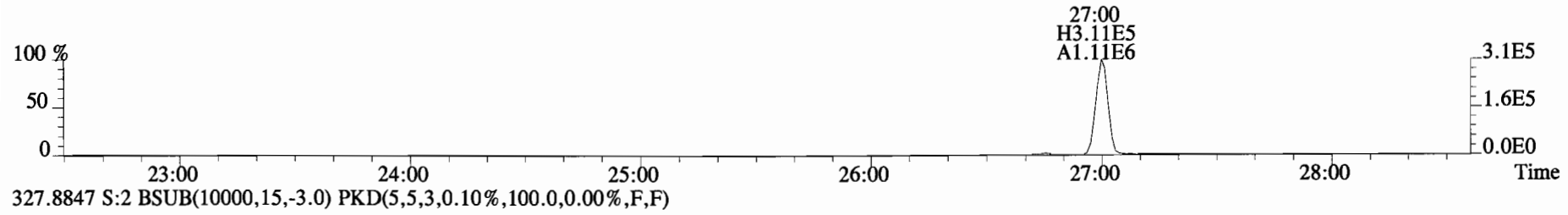
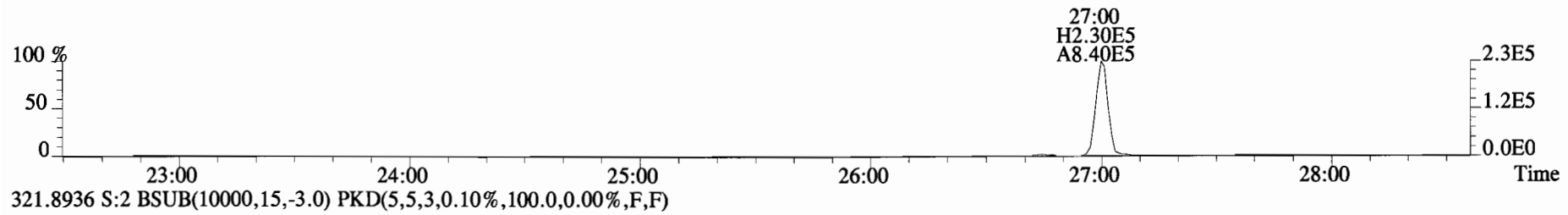
Filename: 150130D2 S:2 Acq:30-JAN-15 23:00:58  
GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000

ConCal: ST150130D2-1  
EndCAL: NA

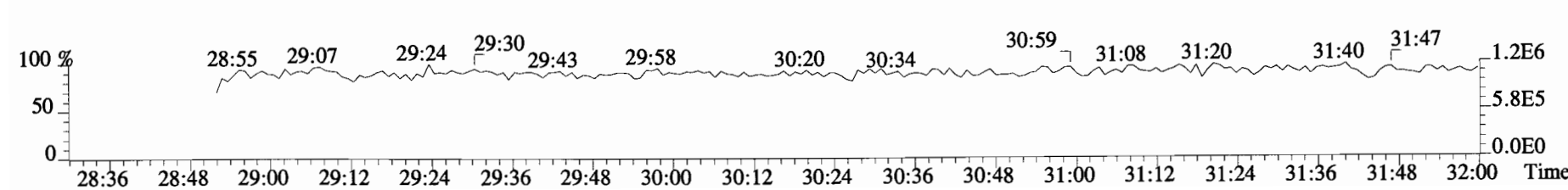
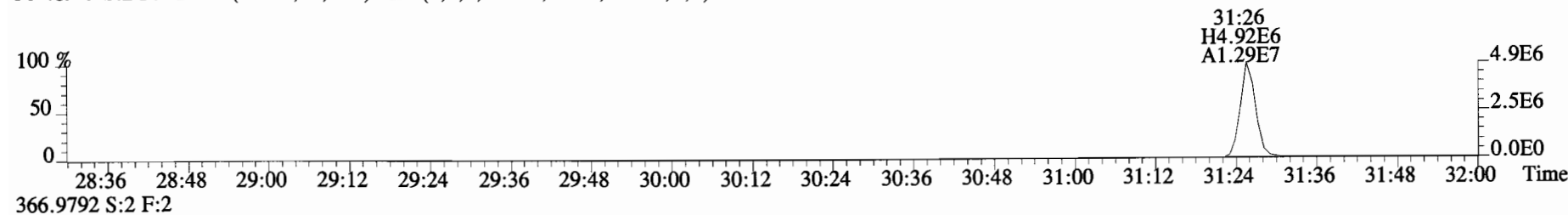
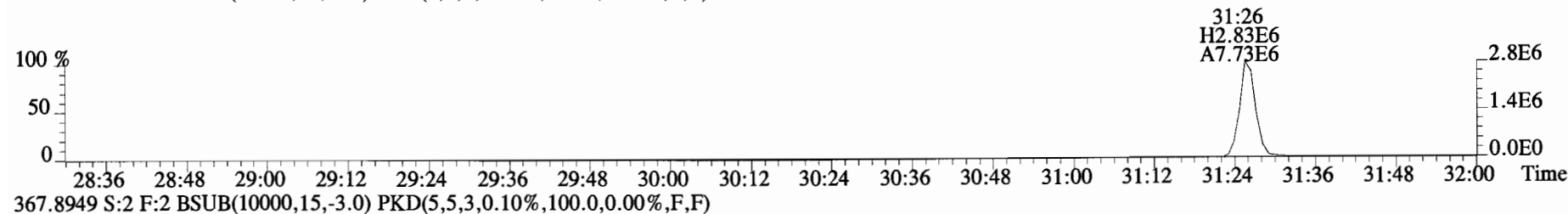
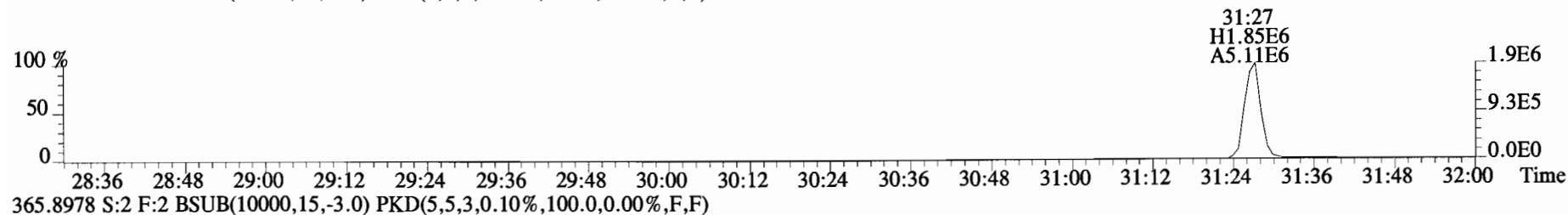
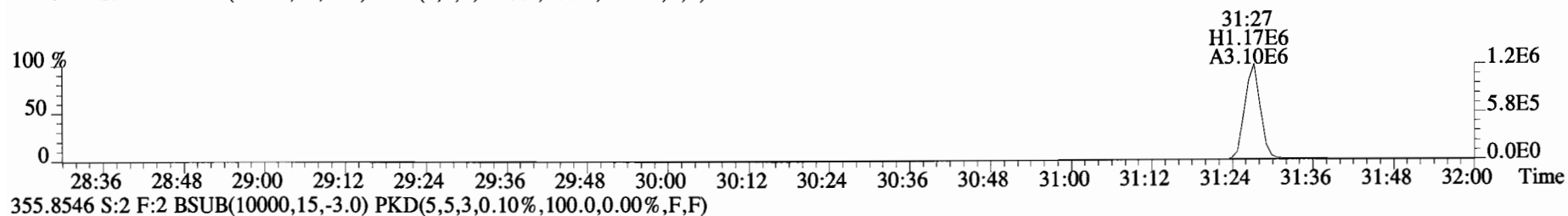
Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	1.95e+06	0.76 y	1.17	26:60	1.001	161.59		*	2.5	*	Total Tetra-Dioxins	168	168		*	*
1,2,3,7,8-PeCDD	8.21e+06	0.61 y	0.91	31:27	1.001	877.56		*	2.5	*	Total Penta-Dioxins	879	882		*	*
1,2,3,4,7,8-HxCDD	7.44e+06	1.23 y	1.08	34:46	1.001	938.78		*	2.5	*	Total Hexa-Dioxins	2850	2860		*	*
1,2,3,6,7,8-HxCDD	7.77e+06	1.25 y	1.06	34:53	1.001	966.56		*	2.5	*	Total Hepta-Dioxins	925	934		*	*
1,2,3,7,8,9-HxCDD	7.62e+06	1.26 y	0.93	35:10	1.000	943.37		*	2.5	*	Total Tetra-Furans	171	172		*	*
1,2,3,4,6,7,8-HpCDD	7.01e+06	1.04 y	1.10	38:36	1.000	924.80		*	2.5	*	Total Penta-Furans	1810.9	1832.0		*	*
OCDD	1.07e+07	0.88 y	0.95	41:55	1.000	1906.3		*	2.5	*	Total Hexa-Furans	3850	3860		*	*
											Total Hepta-Furans	1960	1980		*	*
2,3,7,8-TCDF	2.60e+06	0.76 y	1.07	26:14	1.001	169.62		*	2.5	*						
1,2,3,7,8-PeCDF	1.18e+07	1.60 y	1.07	30:17	1.000	893.82		*	2.5	*						
2,3,4,7,8-PeCDF	1.28e+07	1.56 y	1.03	31:10	1.000	907.91		*	2.5	*						
1,2,3,4,7,8-HxCDF	1.30e+07	1.31 y	1.38	33:52	1.001	963.53		*	2.5	*						
1,2,3,6,7,8-HxCDF	1.28e+07	1.31 y	1.26	33:60	1.000	957.06		*	2.5	*						
2,3,4,6,7,8-HxCDF	1.25e+07	1.31 y	1.29	34:36	1.001	974.53		*	2.5	*						
1,2,3,7,8,9-HxCDF	9.65e+06	1.32 y	1.19	35:34	1.000	948.03		*	2.5	*						
1,2,3,4,6,7,8-HpCDF	1.12e+07	1.09 y	1.61	37:25	1.000	965.87		*	2.5	*						
1,2,3,4,7,8,9-HpCDF	1.03e+07	1.08 y	1.53	39:10	1.000	986.89		*	2.5	*						
OCDF	1.38e+07	0.93 y	1.10	42:09	1.000	1890.8		*	2.5	*						
											Rec	Qual				
IS	13C-2,3,7,8-TCDD	2.06e+07	0.80 y	1.06	26:59	1.021	1486.1				74.3					
IS	13C-1,2,3,7,8-PeCDD	2.06e+07	0.60 y	1.18	31:26	1.190	1334.8				66.7					
IS	13C-1,2,3,4,7,8-HxCDD	1.47e+07	1.26 y	0.72	34:45	1.014	1494.3				74.7					
IS	13C-1,2,3,6,7,8-HxCDD	1.51e+07	1.25 y	0.74	34:52	1.017	1501.8				75.1					
IS	13C-1,2,3,7,8,9-HxCDD	1.73e+07	1.25 y	0.85	35:10	1.026	1488.5				74.4					
IS	13C-1,2,3,4,6,7,8-HpCDD	1.37e+07	1.07 y	0.65	38:35	1.126	1538.5				76.9					
IS	13C-OCDD	2.37e+07	0.88 y	0.76	41:54	1.223	2268.1				56.7					
IS	13C-2,3,7,8-TCDF	2.86e+07	0.78 y	0.92	26:13	0.992	1555.2				77.8					
IS	13C-1,2,3,7,8-PeCDF	2.45e+07	1.57 y	0.92	30:16	1.146	1325.1				66.3					
IS	13C-2,3,4,7,8-PeCDF	2.73e+07	1.62 y	0.93	31:09	1.179	1459.9				73.0					
IS	13C-1,2,3,4,7,8-HxCDF	1.95e+07	0.51 y	0.98	33:51	0.988	1454.2				72.7					
IS	13C-1,2,3,6,7,8-HxCDF	2.13e+07	0.51 y	1.08	33:59	0.991	1443.0				72.2					
IS	13C-2,3,4,6,7,8-HxCDF	1.98e+07	0.52 y	1.03	34:35	1.009	1416.0				70.8					
IS	13C-1,2,3,7,8,9-HxCDF	1.72e+07	0.49 y	0.86	35:33	1.037	1460.9				73.0					
IS	13C-1,2,3,4,6,7,8-HpCDF	1.44e+07	0.44 y	0.72	37:24	1.091	1456.5				72.8					
IS	13C-1,2,3,4,7,8,9-HpCDF	1.36e+07	0.44 y	0.70	39:09	1.142	1430.7				71.5					
IS	13C-OCDF	2.66e+07	0.89 y	0.85	42:08	1.229	2293.9				57.3					
C/Up	37C1-2,3,7,8-TCDD	1.17e+07		1.12	26:60	1.022	796.78				99.6					
RS/RT	13C-1,2,3,4-TCDD	2.62e+07	0.79 y	1.00	26:25	*	2000.0									
RS	13C-1,2,3,4-TCDF	4.01e+07	0.78 y	1.00	25:01	*	2000.0									
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.73e+07	0.53 y	1.00	34:17	*	2000.0									

Integrations Reviewed  
by [Signature] by C7  
Analyst: [Signature]  
Date: 2/11/15 Date: 2/2/15

File:150130D2 #1-551 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

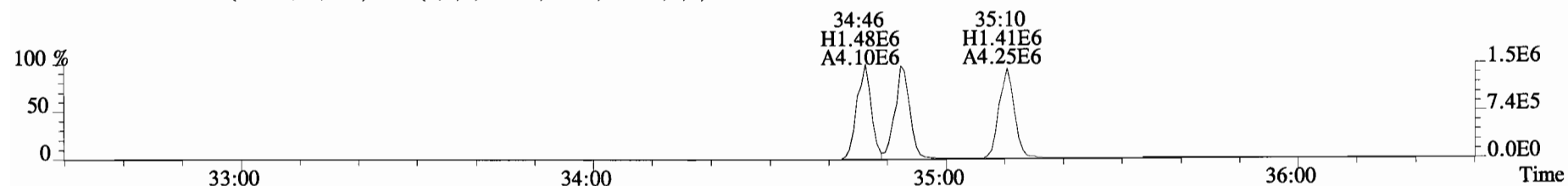


File:150130D2 #1-251 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

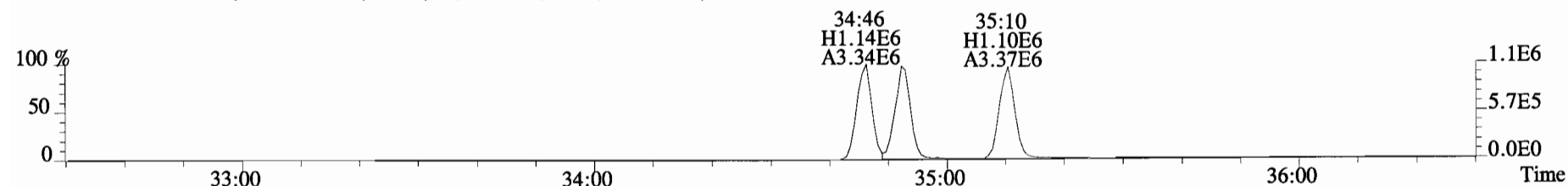




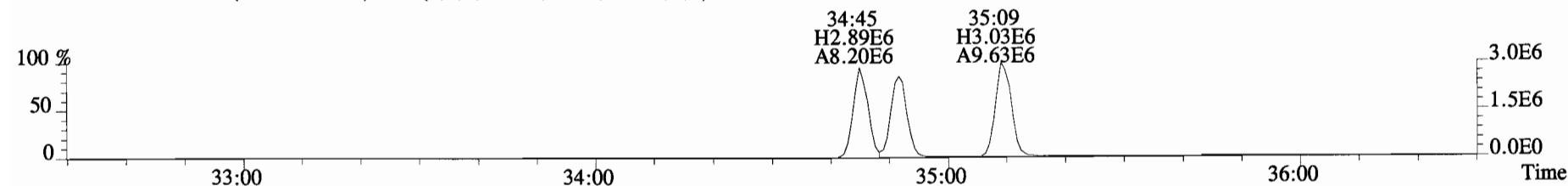
File:150130D2 #1-393 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



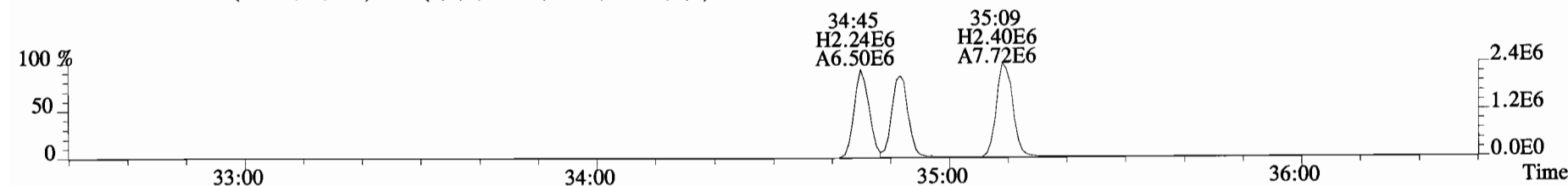
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



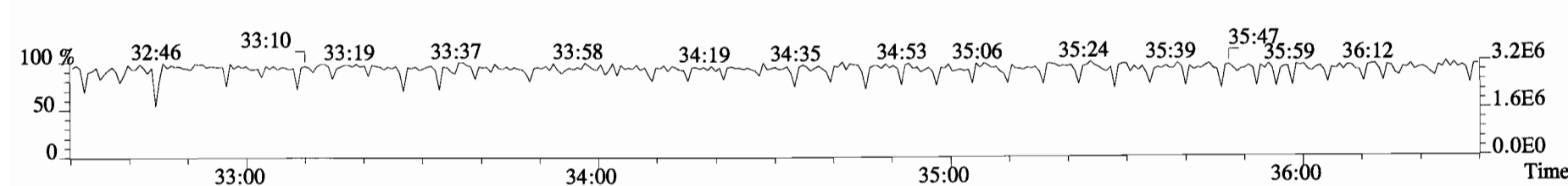
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



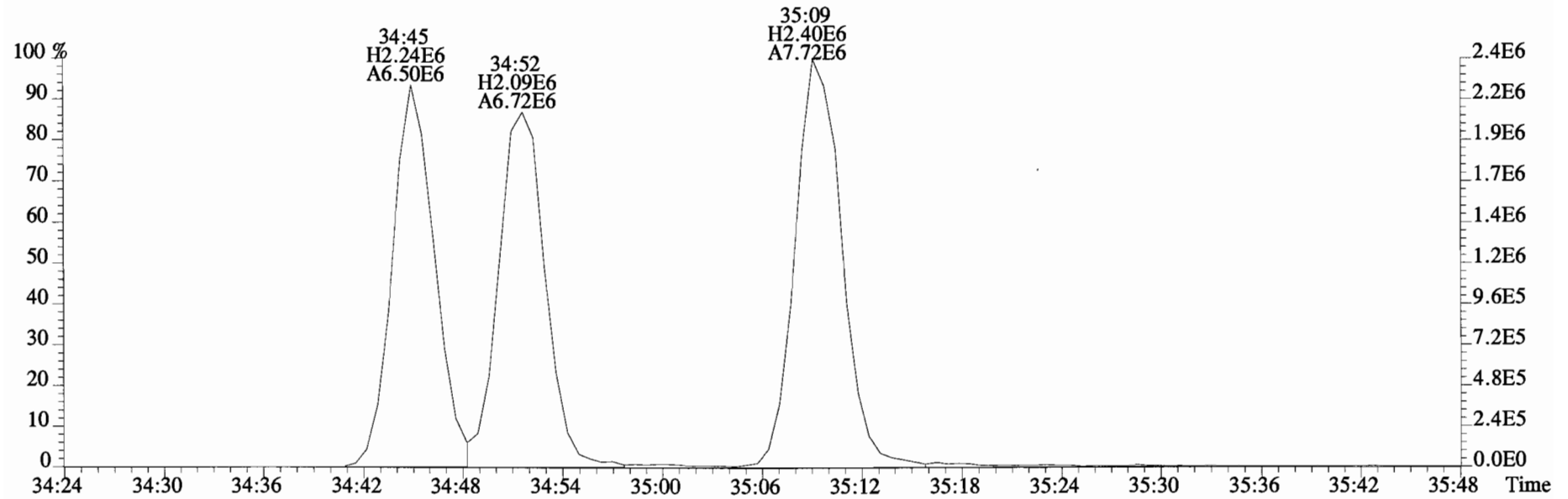
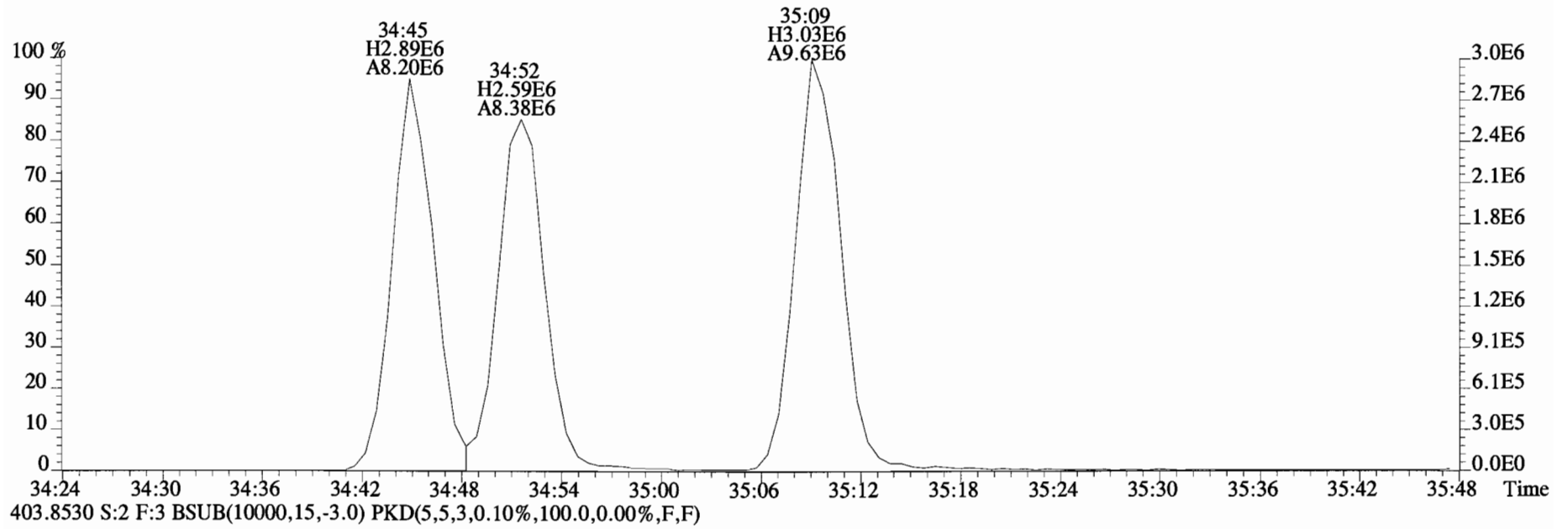
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



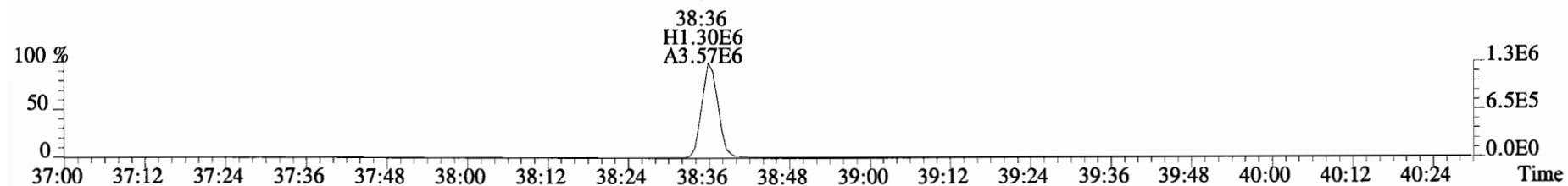
380.9760 S:2 F:3



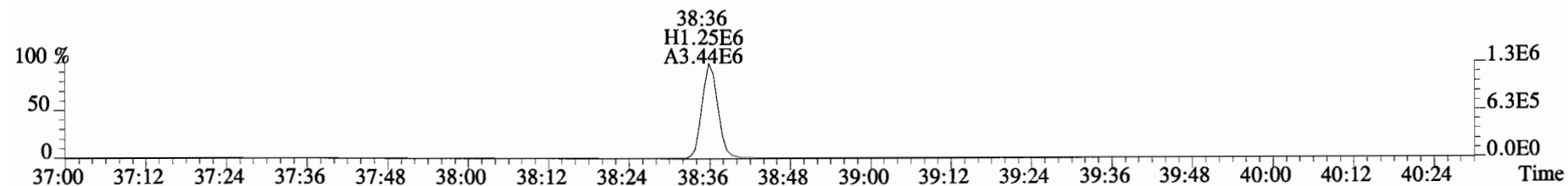
File:150130D2 #1-393 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



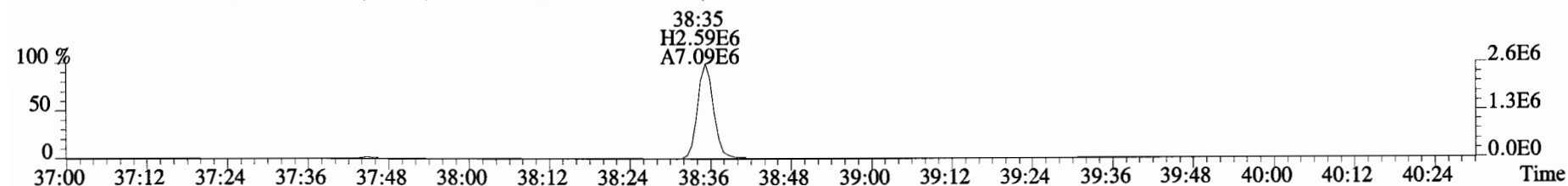
File:150130D2 #1-325 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



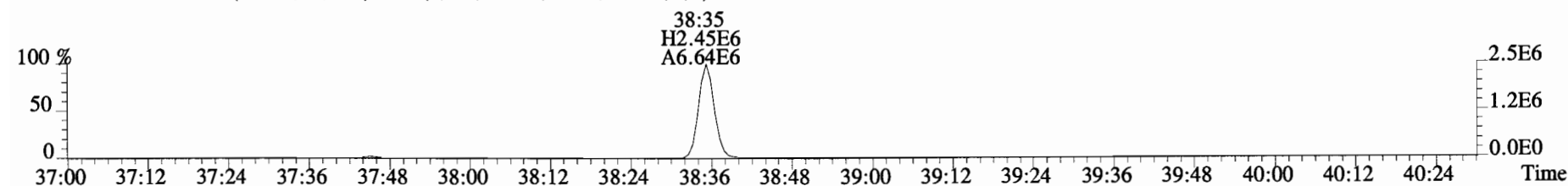
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



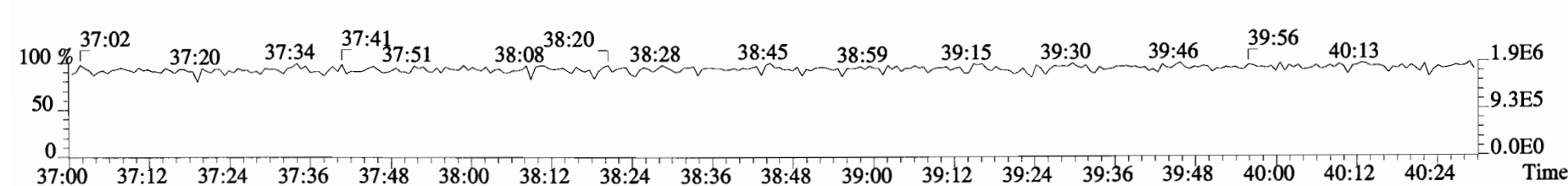
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



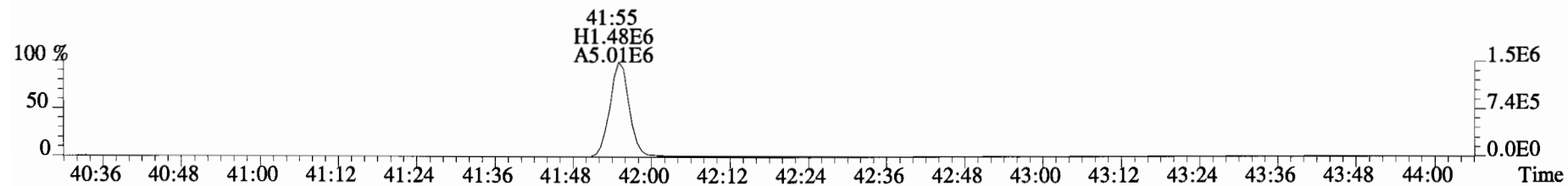
437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



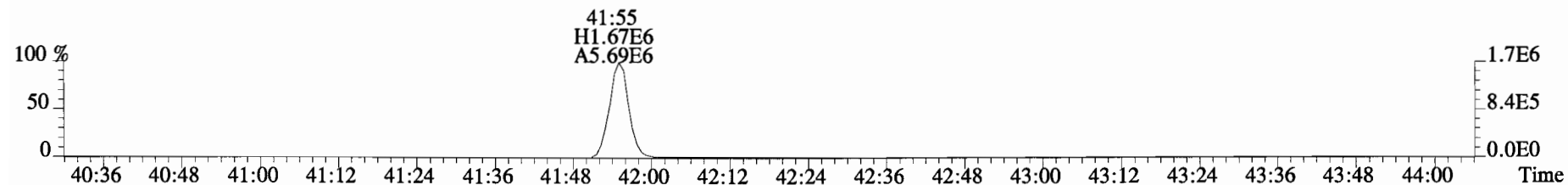
430.9728 S:2 F:4



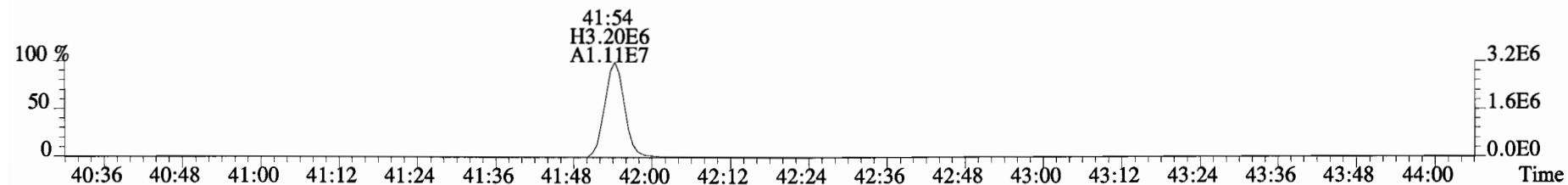
File:150130D2 #1-389 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



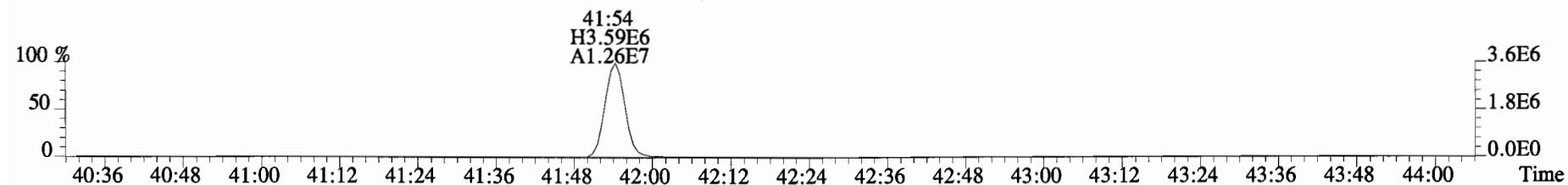
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



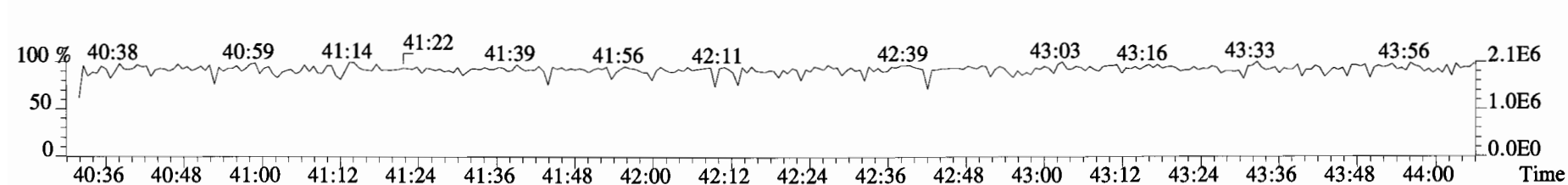
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



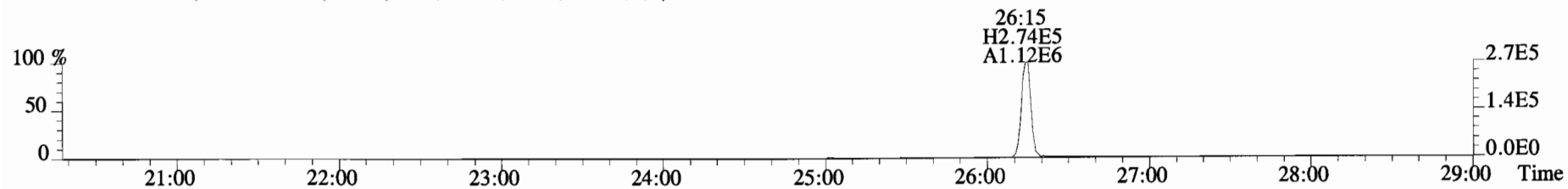
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



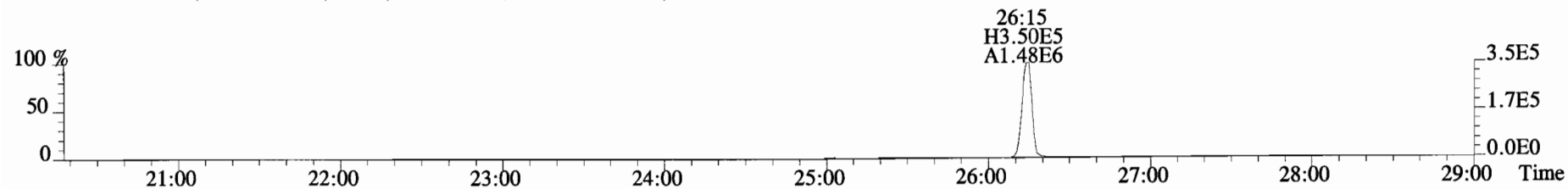
454.9728 S:2 F:5



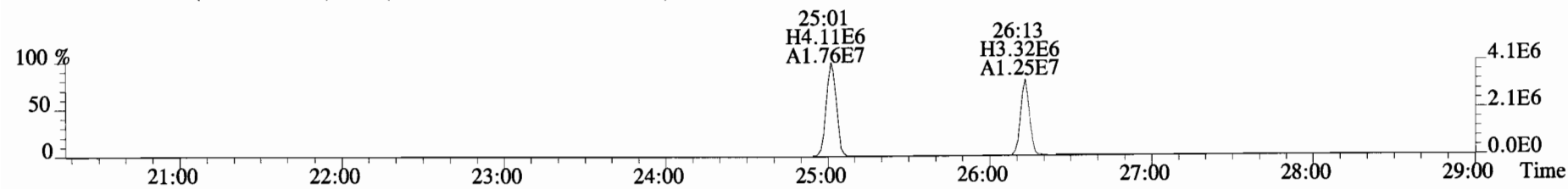
File:150130D2 #1-551 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



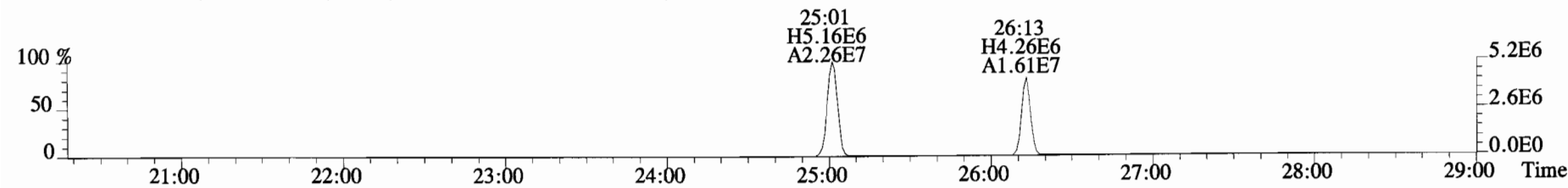
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



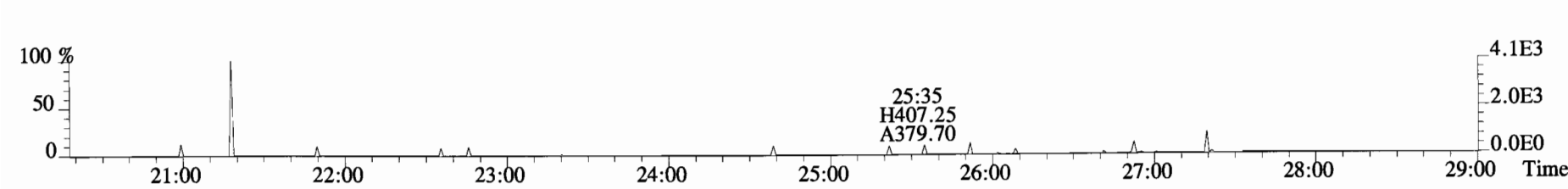
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



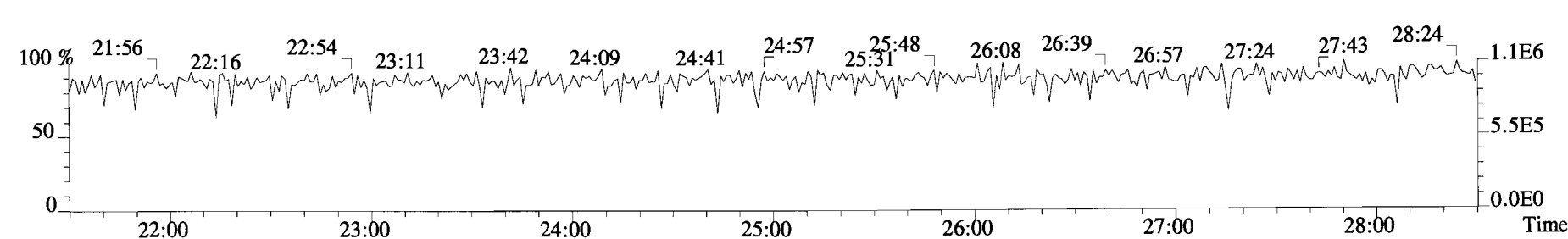
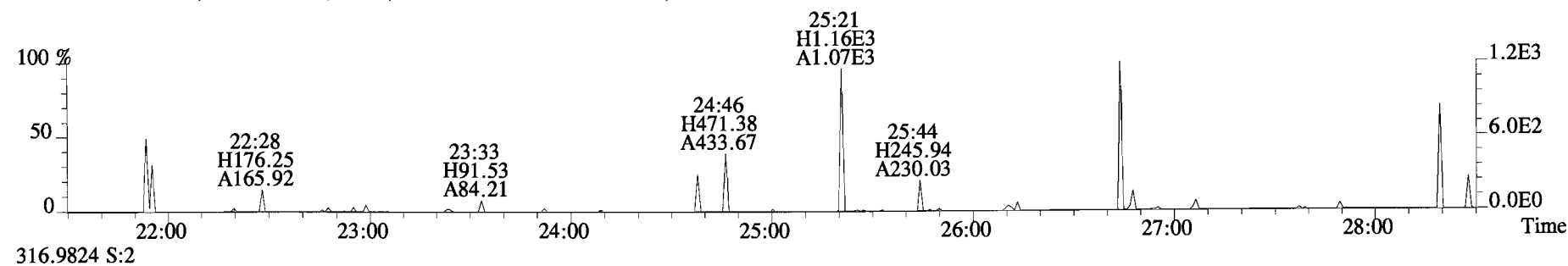
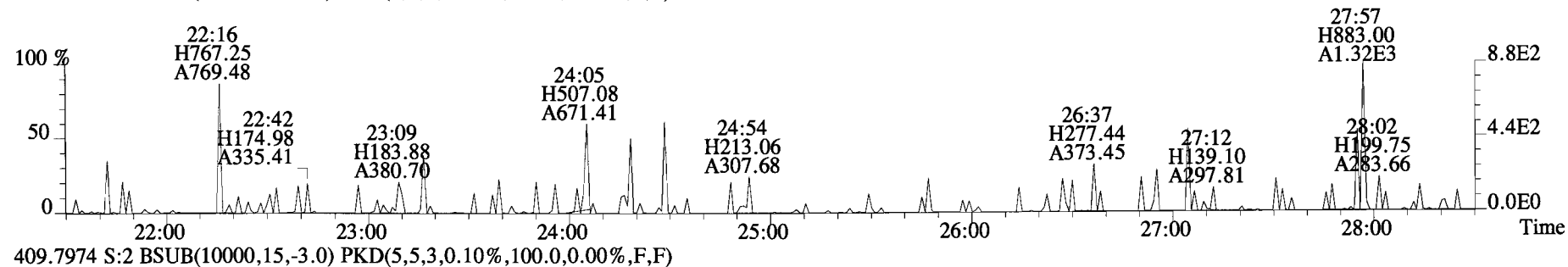
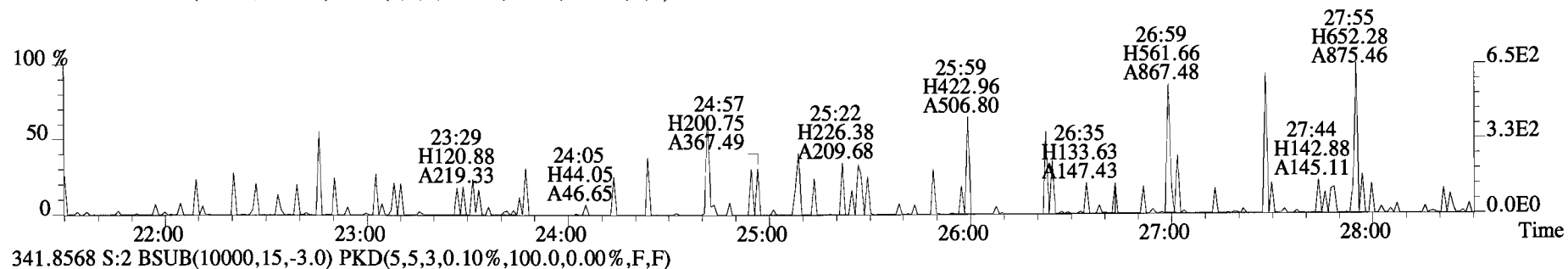
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



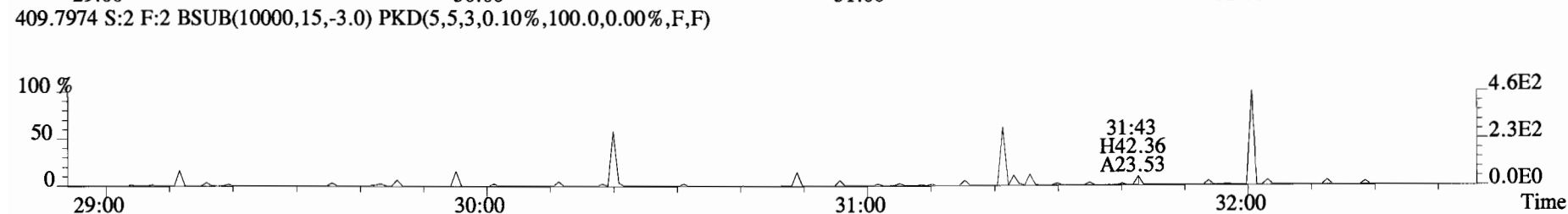
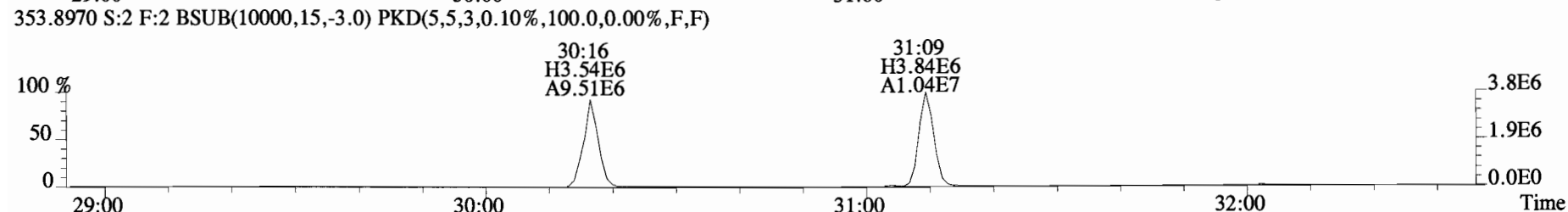
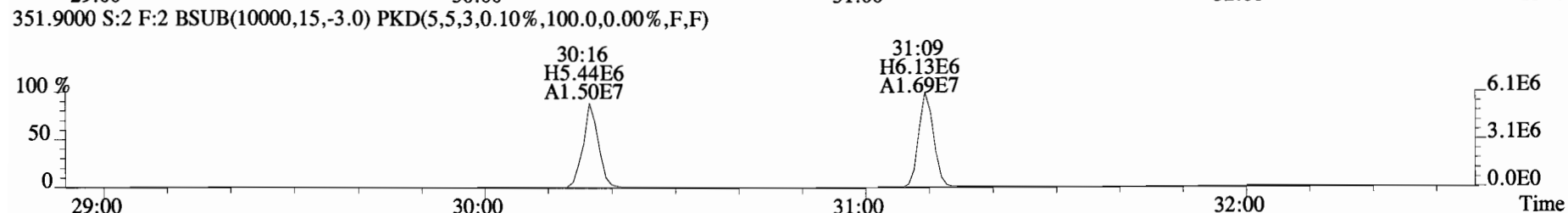
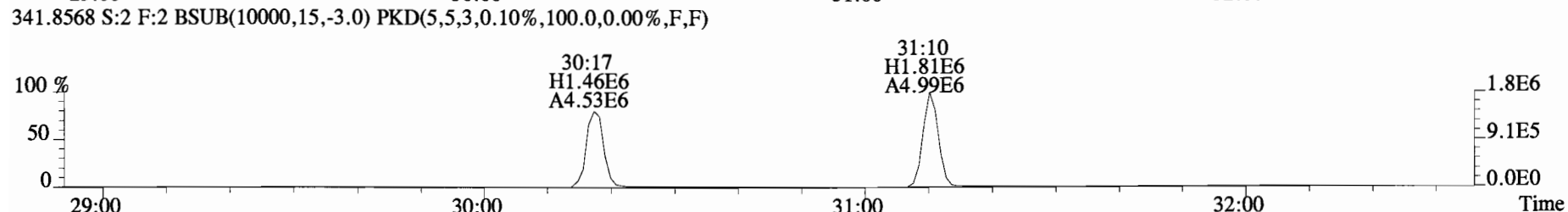
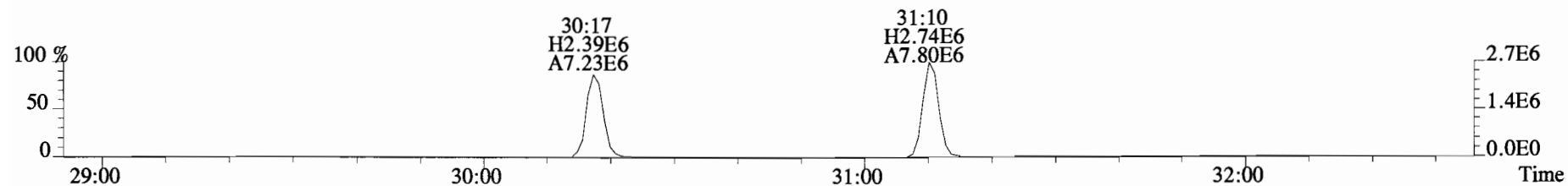
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



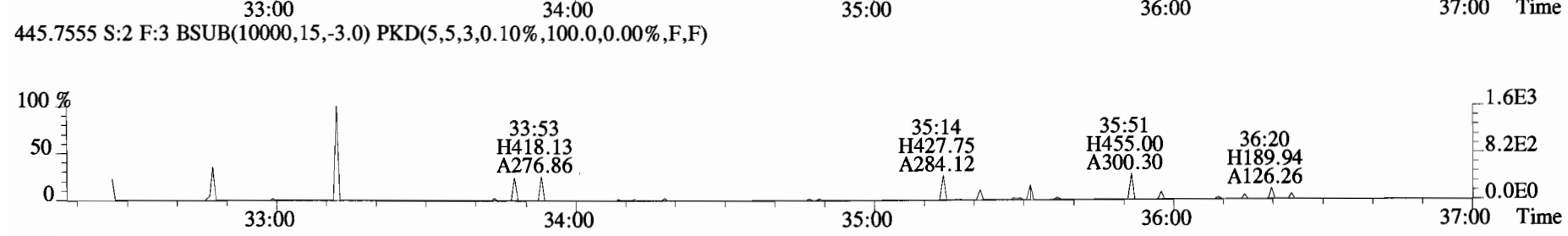
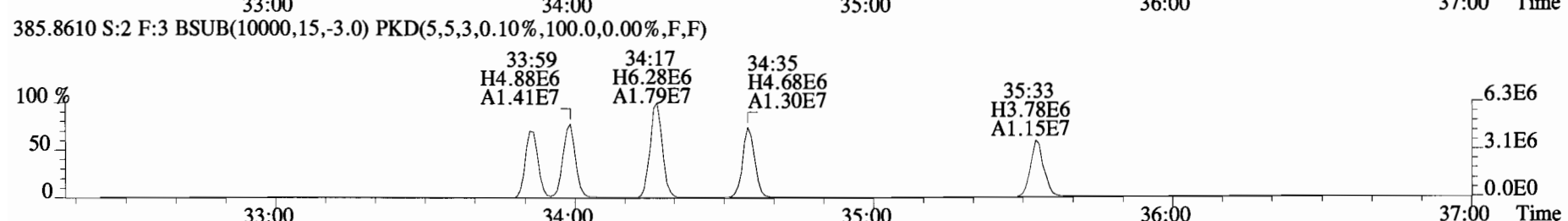
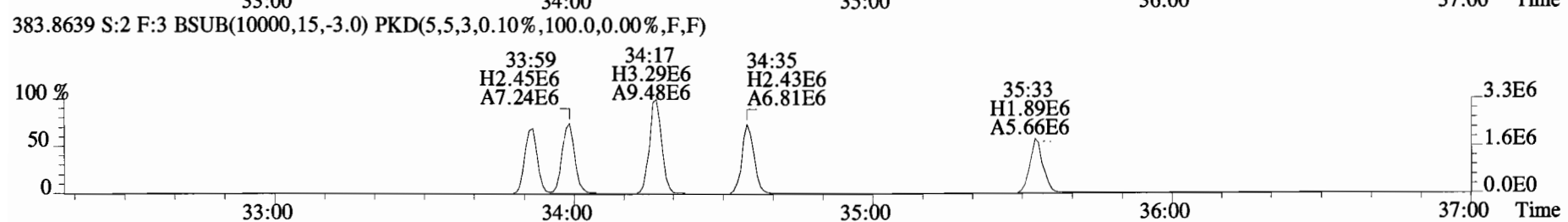
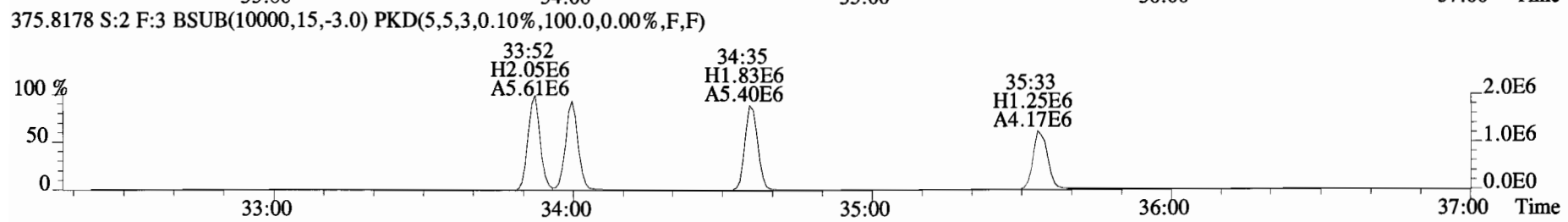
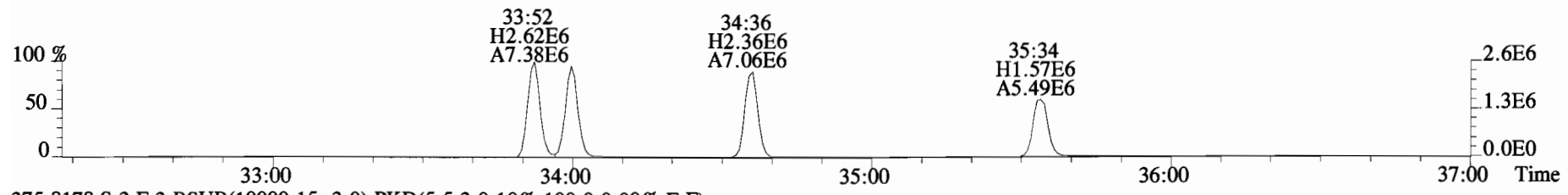
File:150130D2 #1-551 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:150130D2 #1-251 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

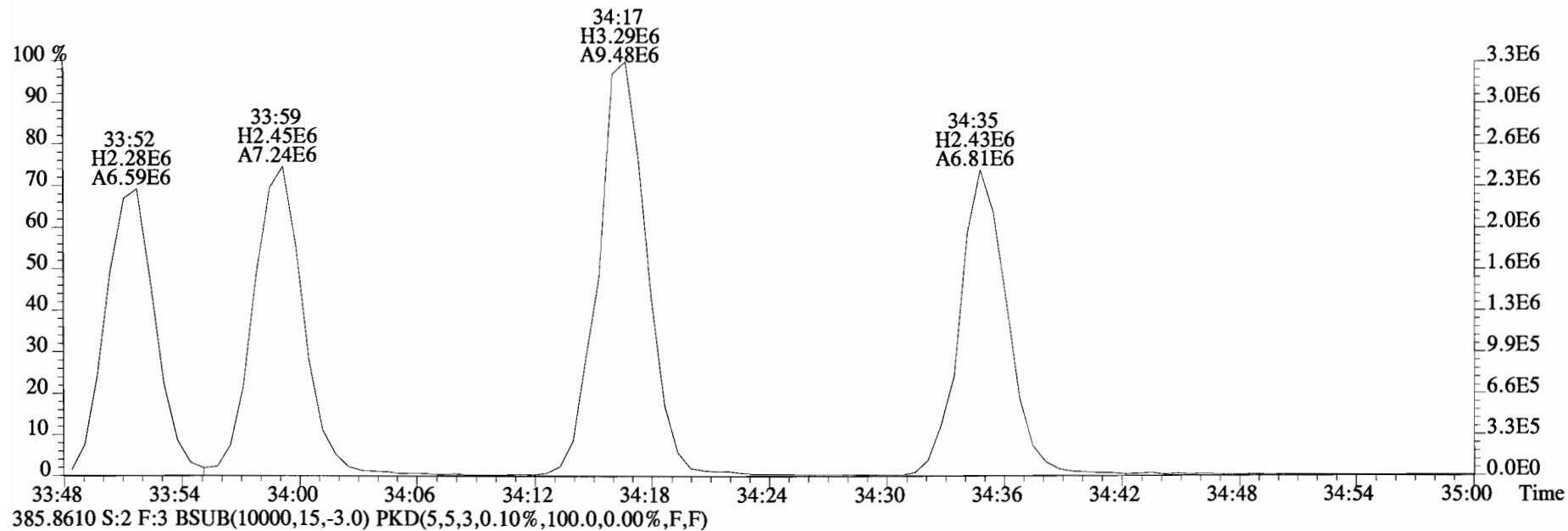


File:150130D2 #1-393 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
 373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

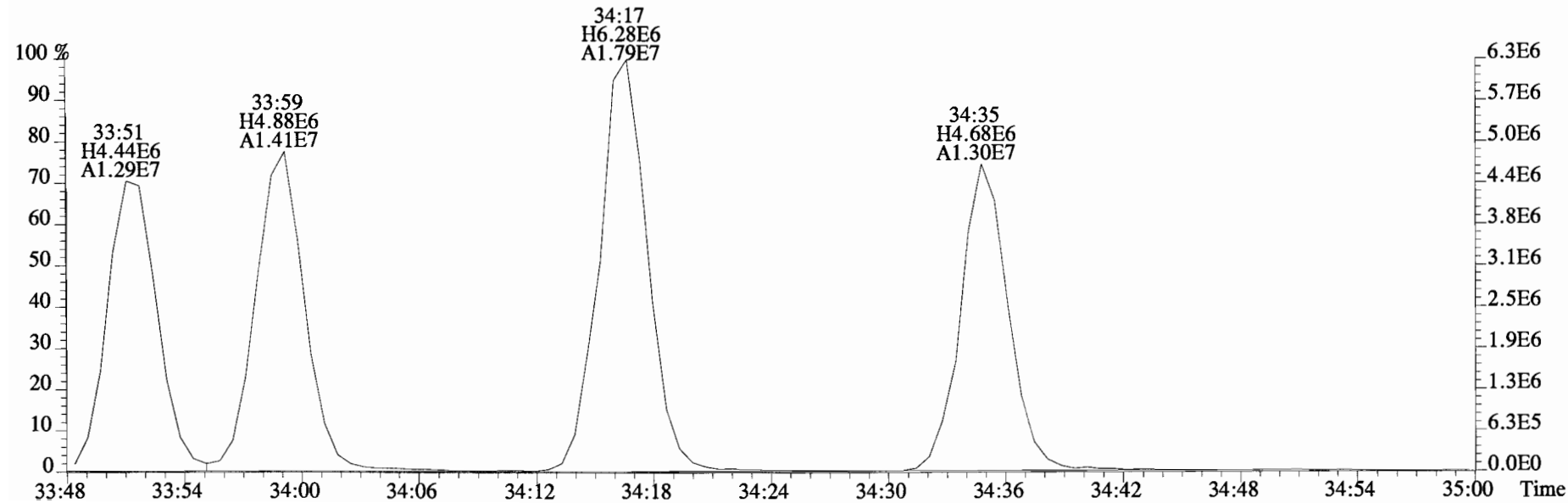




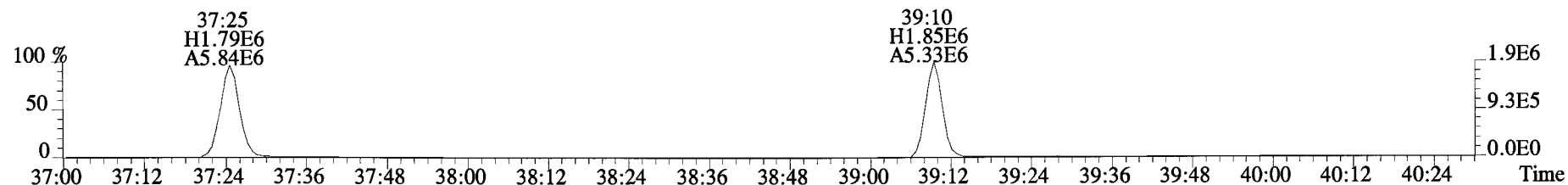
File:150130D2 #1-393 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



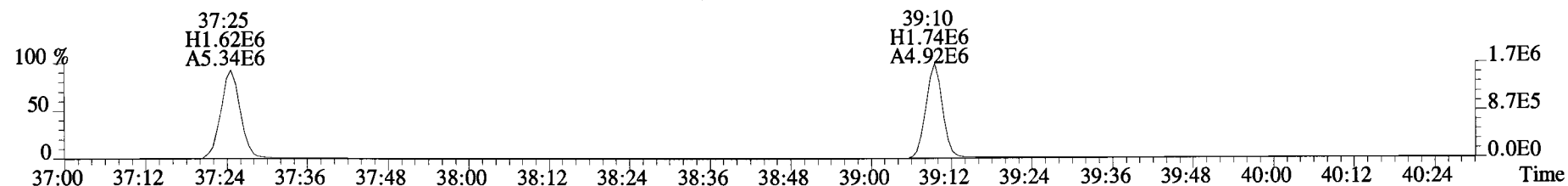
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



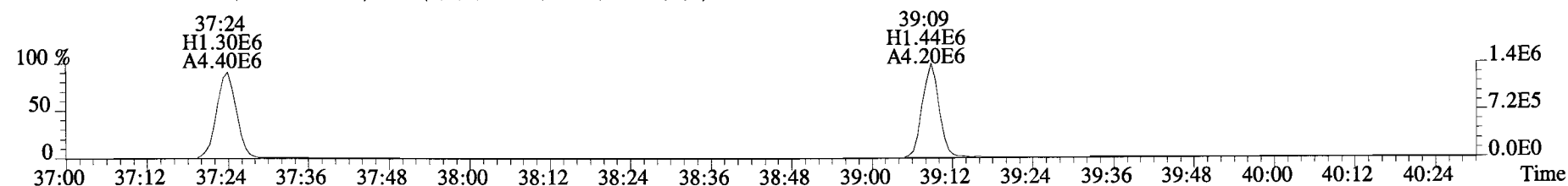
File:150130D2 #1-325 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



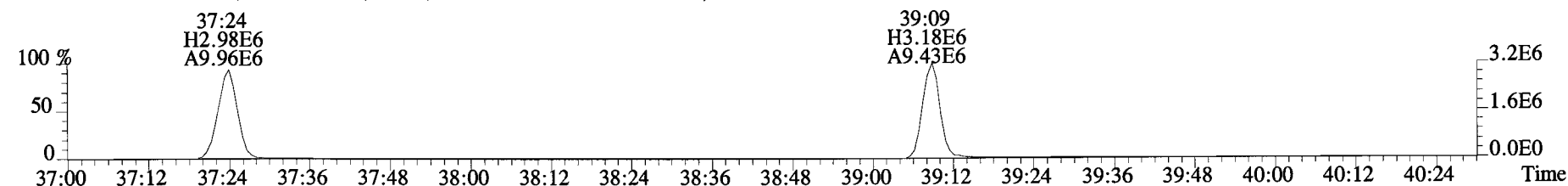
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



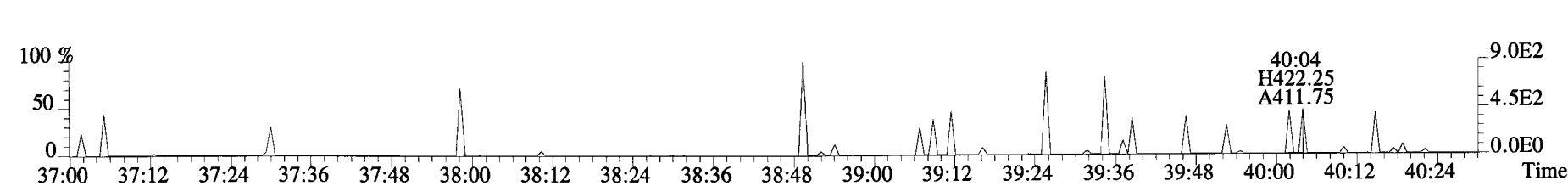
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



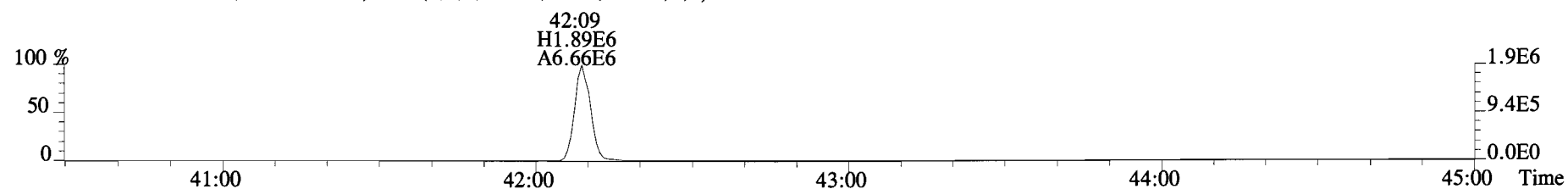
419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



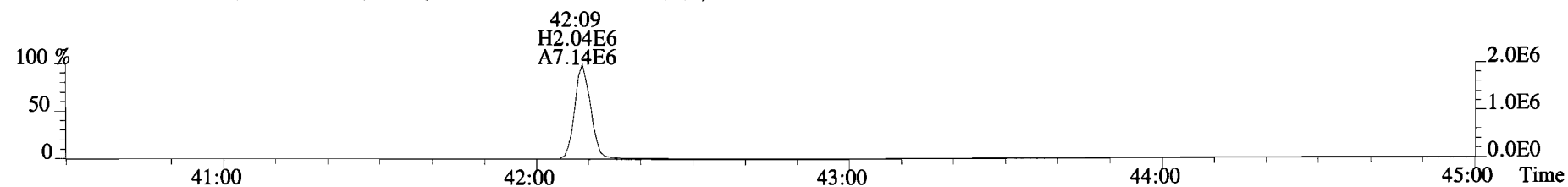
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



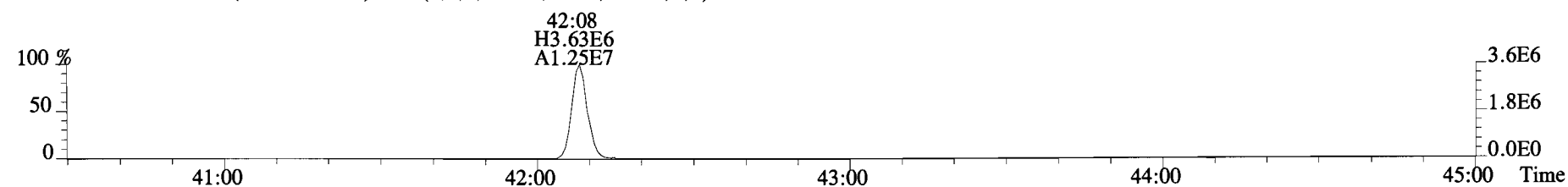
File:150130D2 #1-389 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD\_DB5  
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



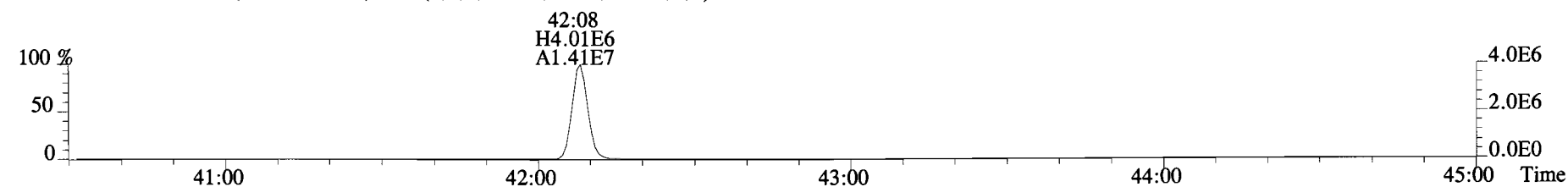
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



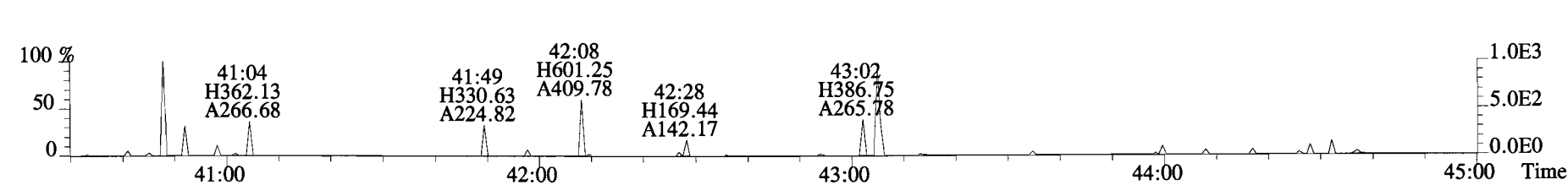
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: WM-FT-IB-20150122-W  
Lab ID: 1500116-03

Filename: 150130D2 S:11 Acq:31-JAN-15 06:14:51  
GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15

wt/vol: 1.001

ConCal: ST150130D2-1  
EndCAL: NA

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Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	1.17	NotF $\eta$	*	*		712	2.5	0.991	Total Tetra-Dioxins	*	*		712	0.991
1,2,3,7,8-PeCDD	*	* n	0.91	NotF $\eta$	*	*		973	2.5	1.17	Total Penta-Dioxins	*	*		973	1.18
1,2,3,4,7,8-HxCDD	*	* n	1.08	NotF $\eta$	*	*		879	2.5	1.92	Total Hexa-Dioxins	8.19	11.2		*	*
1,2,3,6,7,8-HxCDD	2.22e+04	1.00 n	1.06	34:51	1.000	3.0010	*	*	2.5	*	Total Hepta-Dioxins	137	137		*	*
1,2,3,7,8,9-HxCDD	*	* n	0.93	NotF $\eta$	*	*		879	2.5	1.98	Total Tetra-Furans	*	*		876	1.01
1,2,3,4,6,7,8-HpCDD	5.24e+05	1.04 y	1.10	38:34	1.000	75.121	*	*	2.5	*	Total Penta-Furans	0.0000	1.5983		*	*
OCDD	3.86e+06	0.89 y	0.95	41:53	1.000	769.86	*	*	2.5	*	Total Hexa-Furans	17.3	19.1		*	*
											Total Hepta-Furans	56.9	56.9		*	*
2,3,7,8-TCDF	*	* n	1.07	NotF $\eta$	*	*		789	2.5	0.910						
1,2,3,7,8-PeCDF	*	* n	1.07	NotF $\eta$	*	*		846	2.5	1.13						
2,3,4,7,8-PeCDF	*	* n	1.03	NotF $\eta$	*	*		846	2.5	1.25						
1,2,3,4,7,8-HxCDF	1.13e+04	1.77 n	1.38	33:50	1.000	0.88700	*	*	2.5	*						
1,2,3,6,7,8-HxCDF	9.91e+03	1.32 y	1.26	33:58	1.000	0.79195	*	*	2.5	*						
2,3,4,6,7,8-HxCDF	1.06e+04	1.02 n	1.29	34:35	1.001	0.87063	*	*	2.5	*						
1,2,3,7,8,9-HxCDF	*	* n	1.19	NotF $\eta$	*	*		477	2.5	0.617						
1,2,3,4,6,7,8-HpCDF	2.88e+05	1.12 y	1.61	37:22	1.000	28.582	*	*	2.5	*						
1,2,3,4,7,8,9-HpCDF	*	* n	1.53	NotF $\eta$	*	*		743	2.5	0.826						
OCDF	2.33e+05	0.86 y	1.10	42:08	1.000	35.749	*	*	2.5	*						
IS	13C-2,3,7,8-TCDD	1.94e+07	0.79 y	1.06	26:57	1.021	1537.0				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	1.89e+07	0.62 y	1.18	31:25	1.190	1354.1				77.0					
IS	13C-1,2,3,4,7,8-HxCDD	1.37e+07	1.23 y	0.72	34:43	1.014	1466.2				67.8					
IS	13C-1,2,3,6,7,8-HxCDD	1.39e+07	1.24 y	0.74	34:50	1.017	1456.1				73.4					
IS	13C-1,2,3,7,8,9-HxCDD	1.65e+07	1.22 y	0.85	35:08	1.026	1495.8				72.9					
IS	13C-1,2,3,4,6,7,8-HpCDD	1.26e+07	1.05 y	0.65	38:34	1.126	1491.3				74.9					
IS	13C-OCDD	2.11e+07	0.87 y	0.76	41:53	1.223	2137.2				74.7					
IS	13C-2,3,7,8-TCDF	2.64e+07	0.75 y	0.92	26:11	0.992	1662.6				53.5					
IS	13C-1,2,3,7,8-PeCDF	2.55e+07	1.57 y	0.92	30:15	1.146	1597.1				83.2					
IS	13C-2,3,4,7,8-PeCDF	2.49e+07	1.59 y	0.93	31:08	1.180	1544.4				80.0					
IS	13C-1,2,3,4,7,8-HxCDF	1.83e+07	0.51 y	0.98	33:50	0.988	1444.4				77.3					
IS	13C-1,2,3,6,7,8-HxCDF	1.99e+07	0.51 y	1.08	33:58	0.991	1418.8				72.3					
IS	13C-2,3,4,6,7,8-HxCDF	1.89e+07	0.52 y	1.03	34:33	1.009	1421.0				71.0					
IS	13C-1,2,3,7,8,9-HxCDF	1.62e+07	0.52 y	0.86	35:32	1.037	1457.8				71.1					
IS	13C-1,2,3,4,6,7,8-HpCDF	1.25e+07	0.44 y	0.72	37:22	1.091	1337.1				73.0					
IS	13C-1,2,3,4,7,8,9-HpCDF	1.29e+07	0.44 y	0.70	39:07	1.142	1427.7				66.9					
IS	13C-OCDF	2.37e+07	0.87 y	0.85	42:07	1.229	2155.5				71.5					
C/Up	37C1-2,3,7,8-TCDD	1.05e+07		1.12	26:58	1.022	792.92				54.0					
RS/RT	13C-1,2,3,4-TCDD	2.37e+07	0.79 y	1.00	26:23	*	1997.3				99.2	Integrations	Reviewed			
RS	13C-1,2,3,4-TCDF	3.46e+07	0.77 y	1.00	24:59	*	1997.3				by	by				
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.58e+07	0.51 y	1.00	34:15	*	1997.3				Analyst: <u>UP</u>	Analyst: <u>CT</u>				

Date: 2/11/15 Date: 2/2/15

Totals class: TCDD EMPC

Entry #: 19

Run: 16 File: 150130D2 S: 11 I: 1 F: 1  
Acquired: 31-JAN-15 06:14:51 Processed: 1-FEB-15 09:20:55

Total Concentration: \*

Unnamed Concentration: \*

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
NotFη	*	**	n	*	*

Totals class: PeCDD EMPC

Entry #: 21

Run: 16 File: 150130D2 S: 11 I: 1 F: 2  
Acquired: 31-JAN-15 06:14:51 Processed: 1-FEB-15 09:20:55

Total Concentration: \*

Unnamed Concentration: \*

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
NotF	*	*	*	n	*

Totals class: HxCDD EMPC

Entry #: 23

Run: 16 File: 150130D2 S: 11 I: 1 F: 3  
Acquired: 31-JAN-15 06:14:51 Processed: 1-FEB-15 09:20:55

Total Concentration: 11.193 Unnamed Concentration: 8.192

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
33:11	1.145e+04	8.064e+03	1.42	y	1.951e+04	2.6046
34:01	2.375e+04	1.810e+04	1.31	y	4.186e+04	5.5871
34:51	1.228e+04	1.232e+04	1.00	n	2.218e+04	3.0010 1,2,3,6,7,8-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 16 File: 150130D2 S: 11 I: 1 F: 4  
Acquired: 31-JAN-15 06:14:51 Processed: 1-FEB-15 09:20:55

Total Concentration: 137.18

Unnamed Concentration: 62.057

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:45	2.233e+05	2.093e+05	1.07 y	4.326e+05	62.057	
38:34	2.670e+05	2.567e+05	1.04 y	5.237e+05	75.121	1,2,3,4,6,7,8-HpCDD



Totals class: TCDF EMPC

Entry #: 27

Run: 16 File: 150130D2 S: 11 I: 1 F: 1  
Acquired: 31-JAN-15 06:14:51 Processed: 1-FEB-15 09:20:55

Total Concentration: \*

Unnamed Concentration: \*

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
NotF $\eta$	*	*	* n	*	*

Totals class: 1st Func. PeCDF EMPC            Entry #: 29

Run: 16            File: 150130D2            S: 11 I: 1 F: 1  
Acquired: 31-JAN-15 06:14:51    Processed: 1-FEB-15 09:20:55

Total Concentration: 1.5983            Unnamed Concentration: 1.598

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:56	1.574e+04	8.321e+03	1.89 n	2.122e+04	1.5983

Totals class: PeCDF EMPC

Entry #: 31

Run: 16

File: 150130D2

S: 11 I: 1 F: 2

Acquired: 31-JAN-15 06:14:51

Processed: 1-FEB-15 09:20:55

Total Concentration: \*

Unnamed Concentration: \*

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
NotEq	*	**	n	*	*

Totals class: HxCDF EMPC

Entry #: 33

Run: 16 File: 150130D2 S: 11 I: 1 F: 3  
 Acquired: 31-JAN-15 06:14:51 Processed: 1-FEB-15 09:20:55

Total Concentration: 19.092 Unnamed Concentration: 16.542

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Resp Concentration	Name
32:39	1.821e+04	1.626e+04	1.12 y	3.447e+04	2.9328	
32:48	4.903e+04	3.694e+04	1.33 y	8.597e+04	7.3141	
33:21	3.933e+04	3.466e+04	1.13 y	7.399e+04	6.2954	
33:50	8.876e+03	5.029e+03	1.77 n	1.126e+04	0.88702	1,2,3,4,7,8-HxCDF
33:58	5.644e+03	4.263e+03	1.32 y	9.907e+03	0.79195	1,2,3,6,7,8-HxCDF
34:35	5.866e+03	5.732e+03	1.02 n	1.060e+04	0.87063	2,3,4,6,7,8-HxCDF

Totals class: HpCDF EMPC

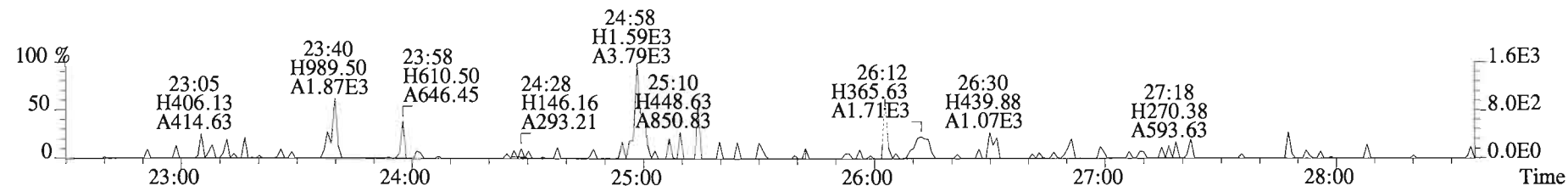
Entry #: 35

Run: 16 File: 150130D2 S: 11 I: 1 F: 4  
Acquired: 31-JAN-15 06:14:51 Processed: 1-FEB-15 09:20:55

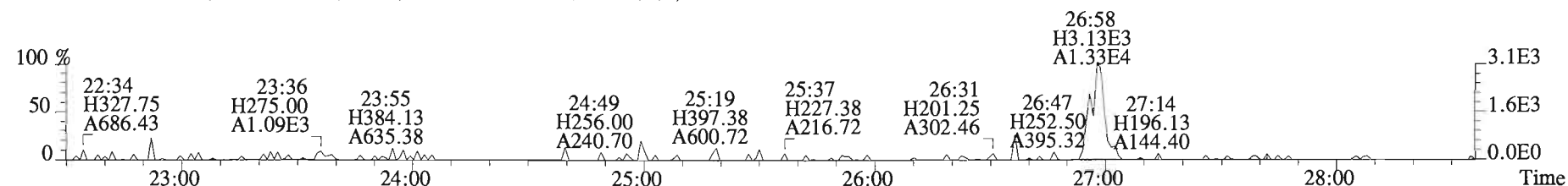
Total Concentration: 56.891 Unnamed Concentration: 28.310

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Resp Concentration	Name
37:22	1.522e+05	1.356e+05	1.12 y	2.879e+05	28.582	1,2,3,4,6,7,8-HpCDF
37:56	1.481e+05	1.339e+05	1.11 y	2.820e+05	28.310	

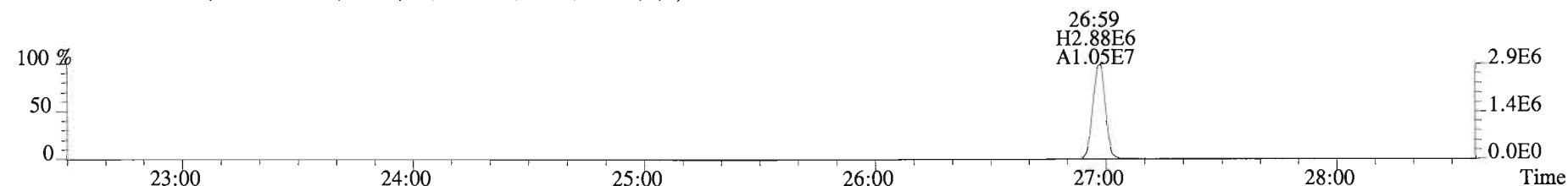
File:150130D2 #1-551 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



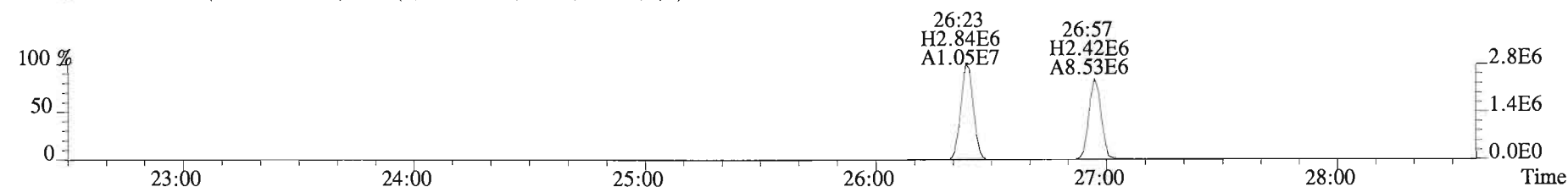
321.8936 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



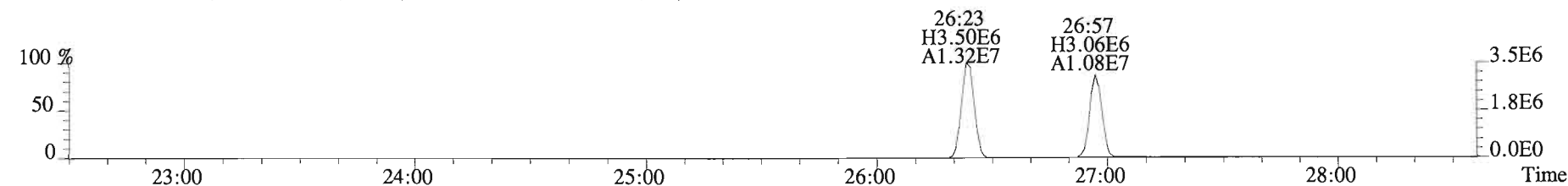
327.8847 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



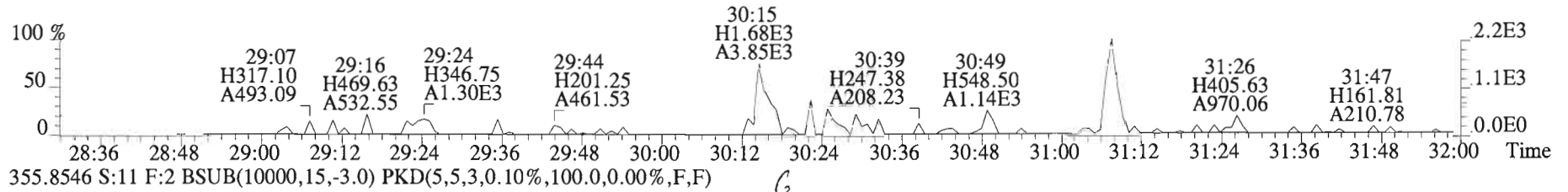
331.9368 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



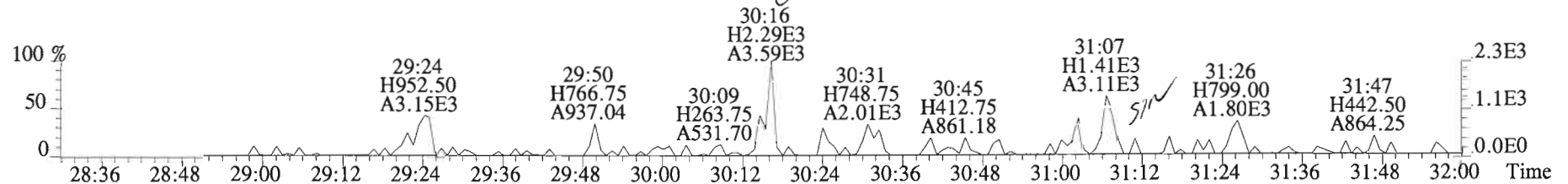
333.9339 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



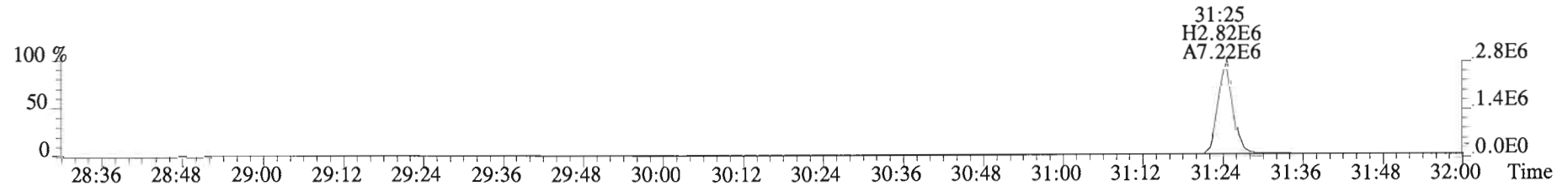
File:150130D2 #1-251 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
353.8576 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



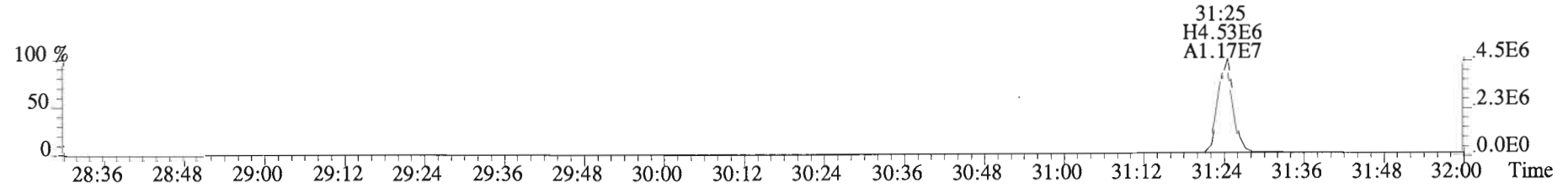
355.8546 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



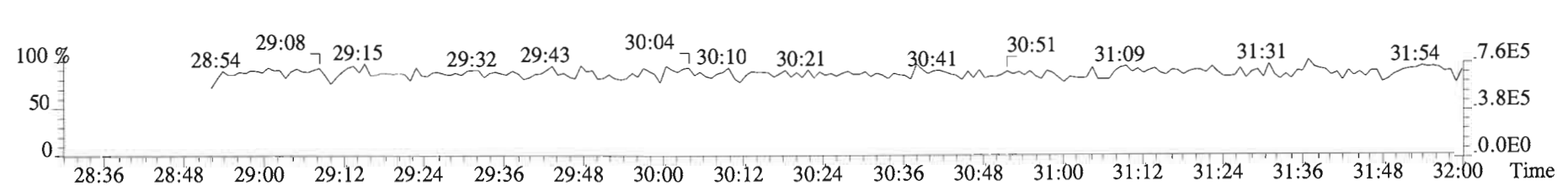
365.8978 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



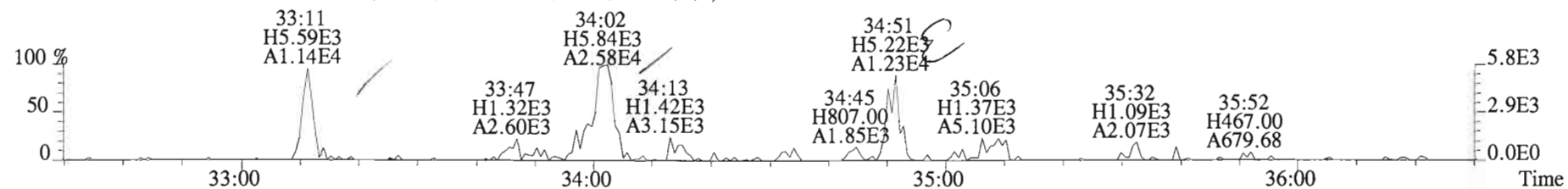
367.8949 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



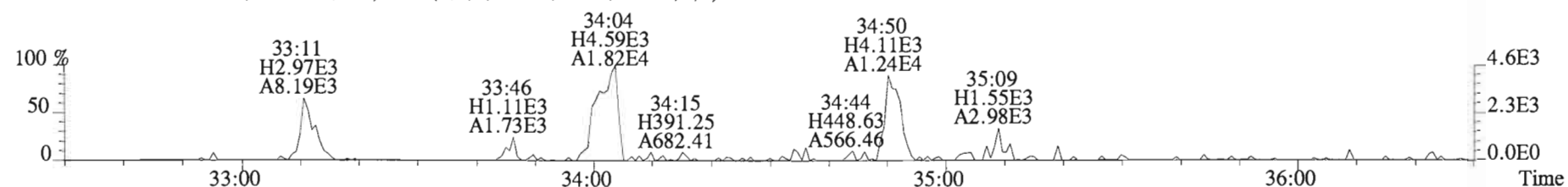
366.9792 S:11 F:2



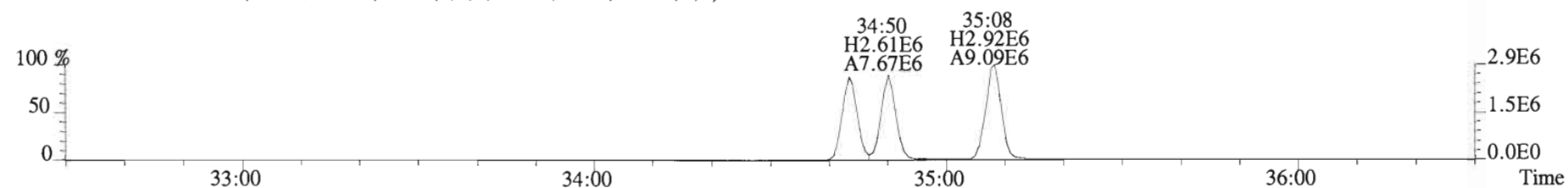
File:150130D2 #1-393 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
 389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



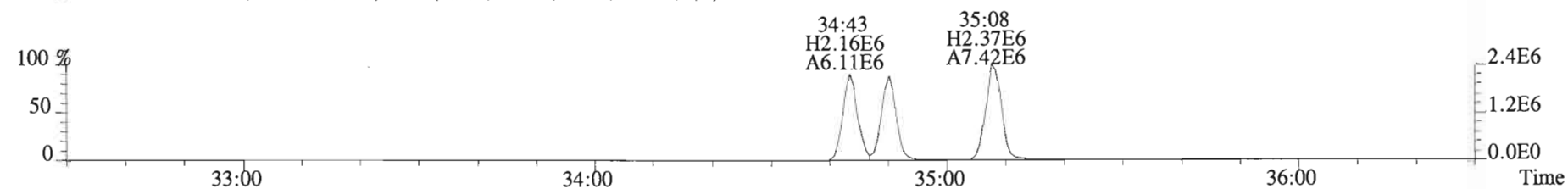
391.8127 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



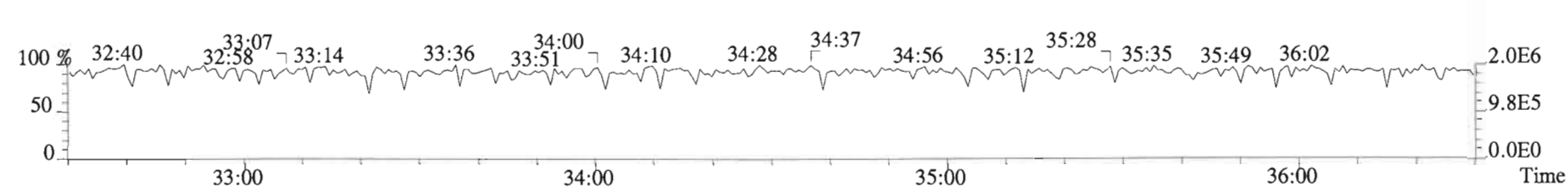
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

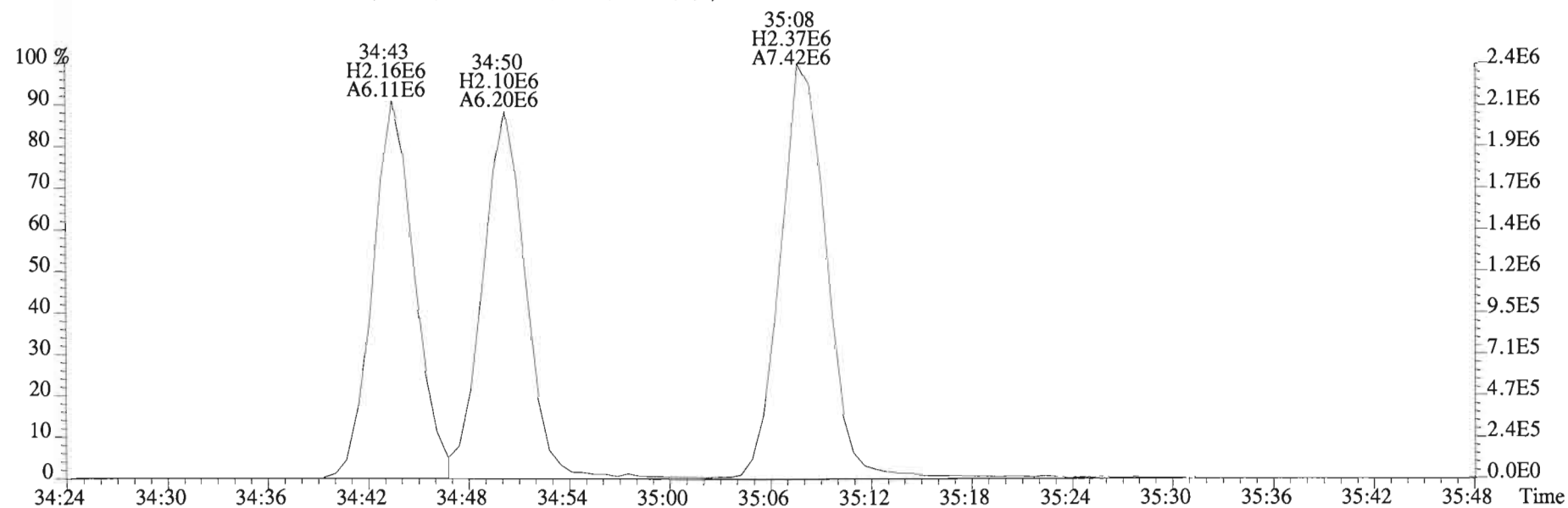
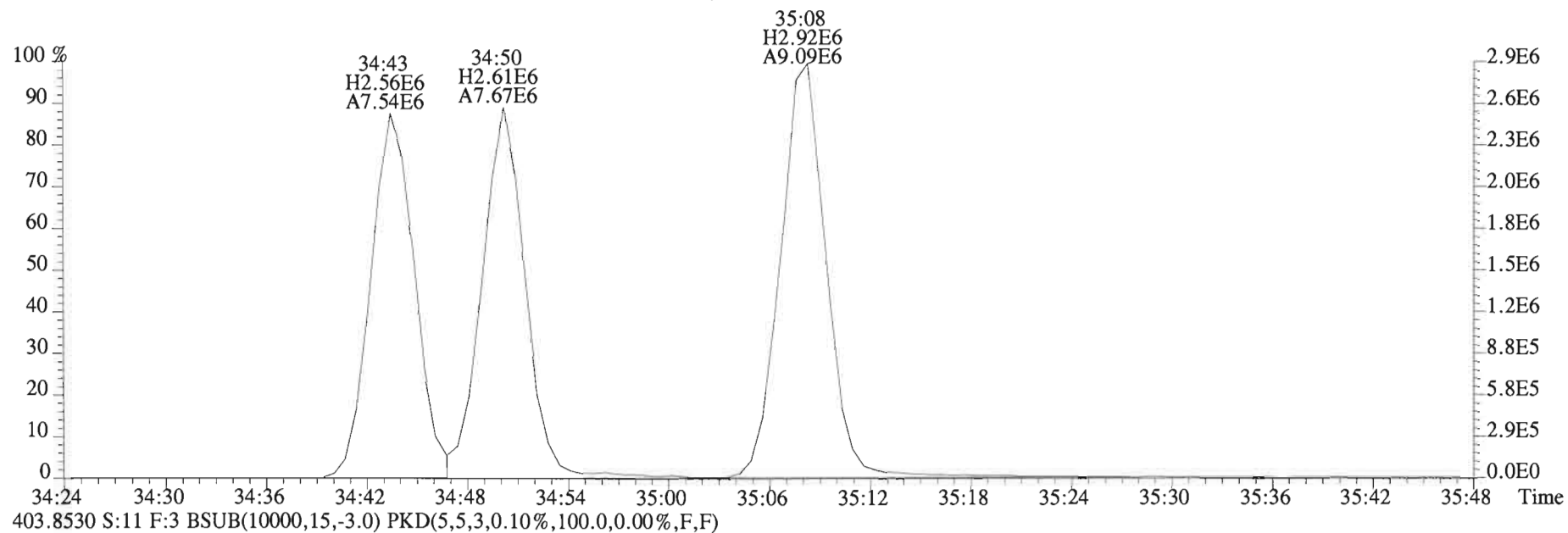


380.9760 S:11 F:3

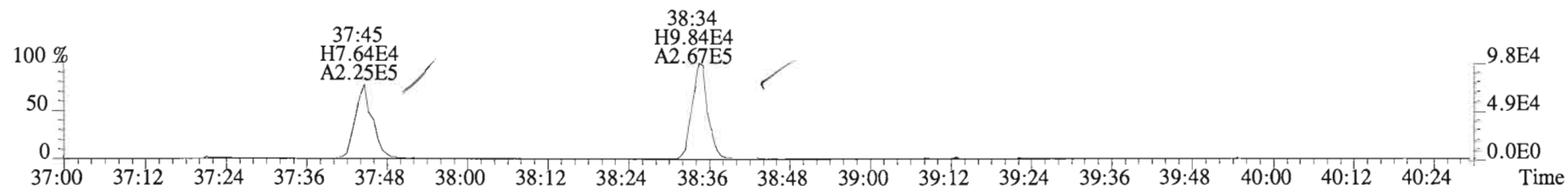




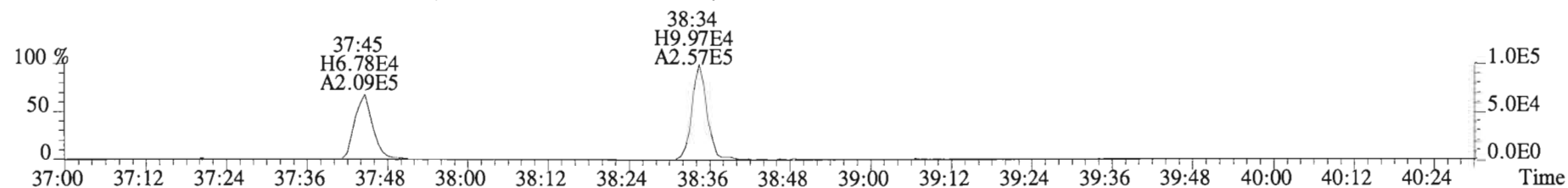
File:150130D2 #1-393 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



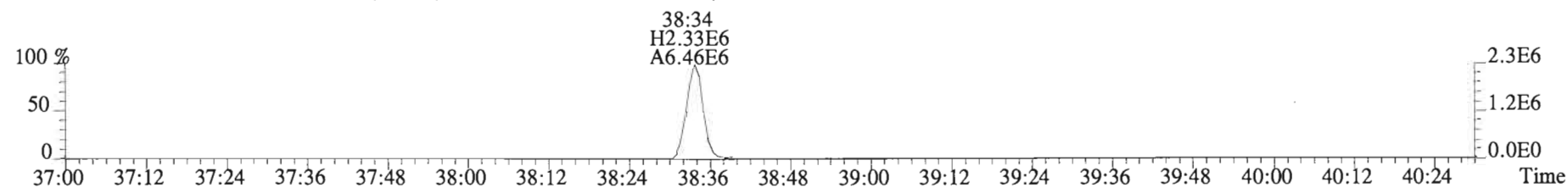
File:150130D2 #1-325 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



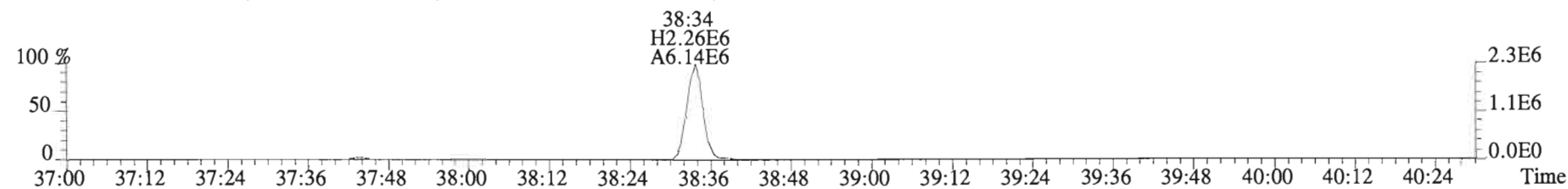
425.7737 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



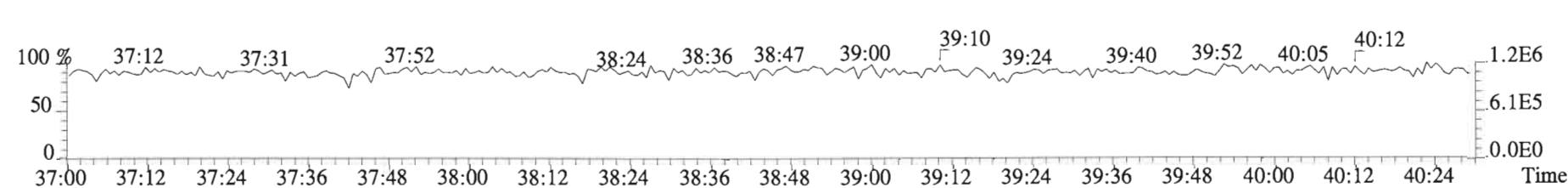
435.8169 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



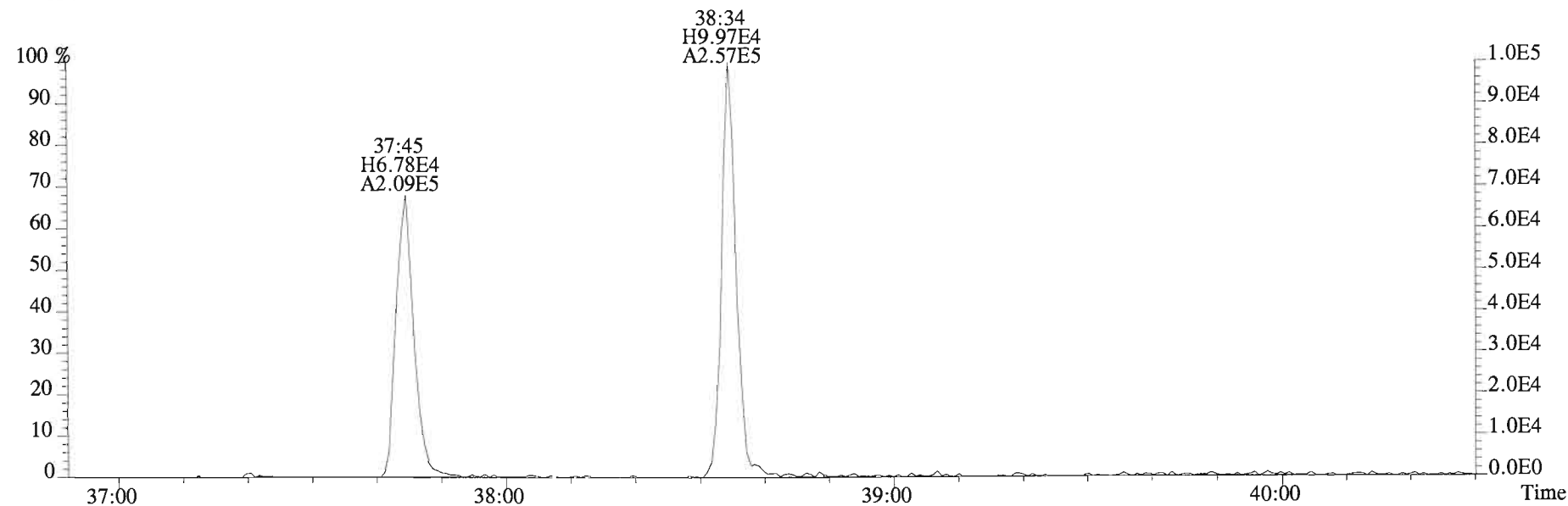
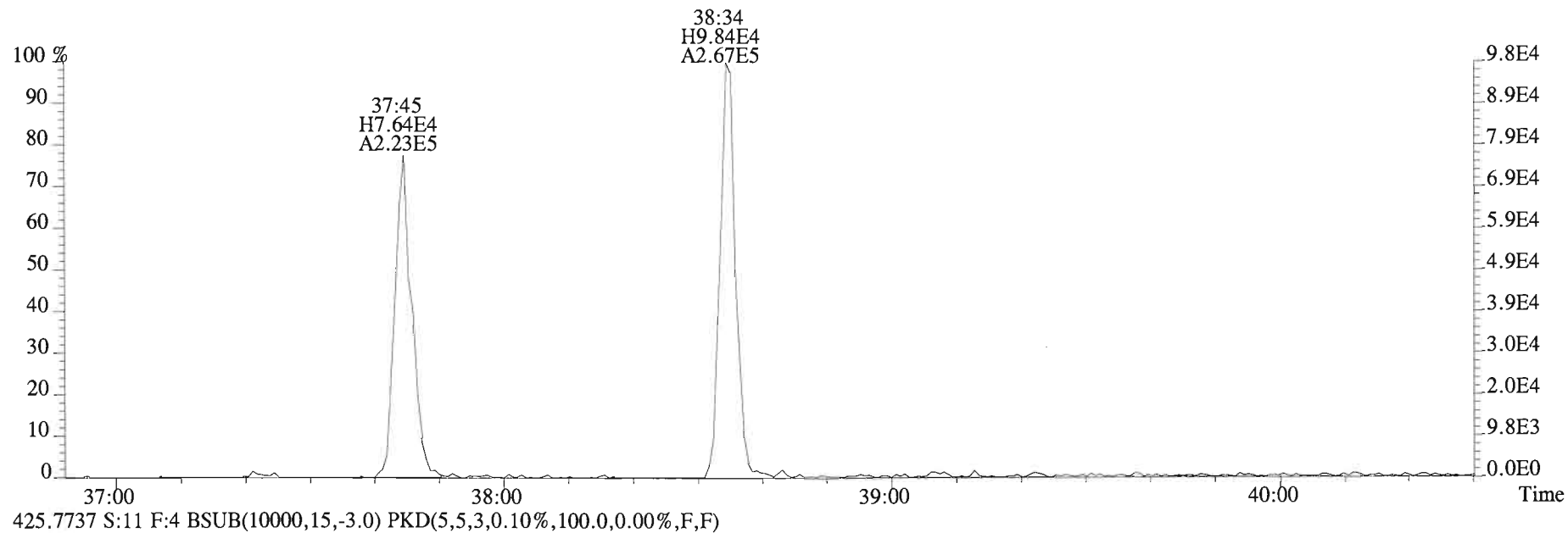
437.8140 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



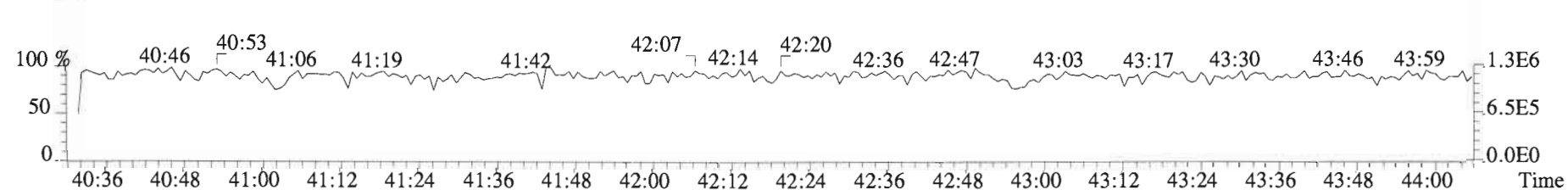
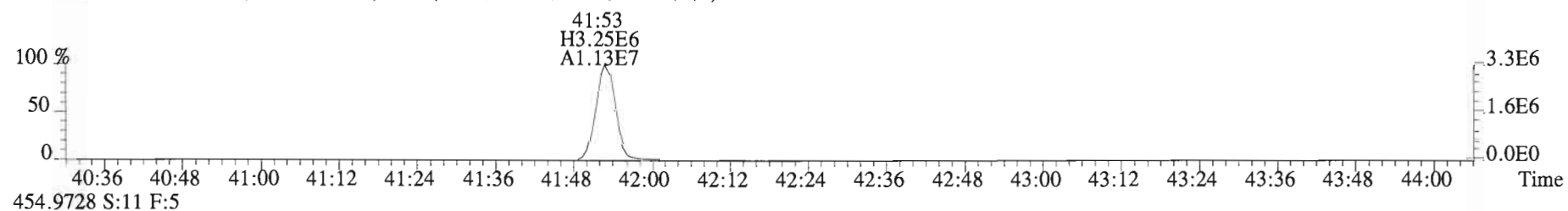
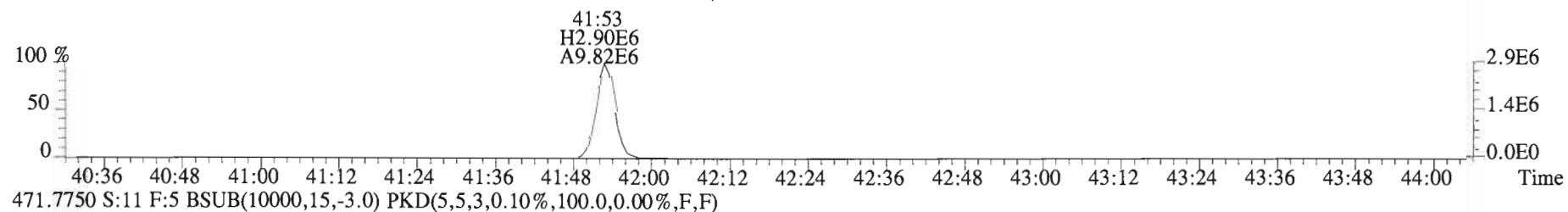
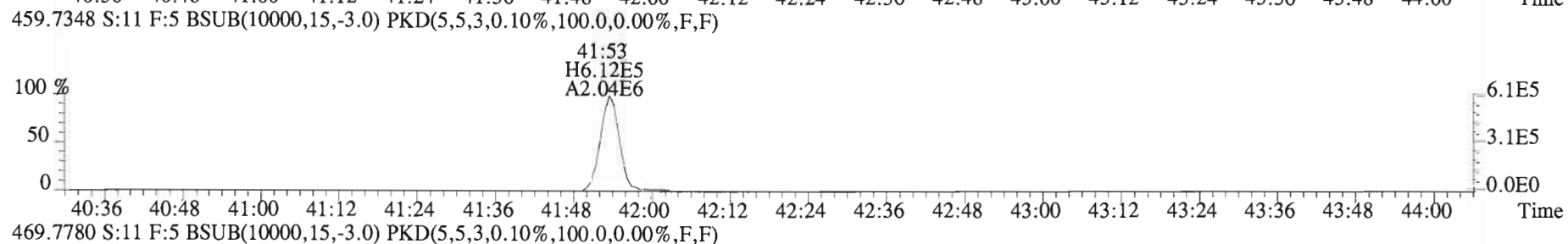
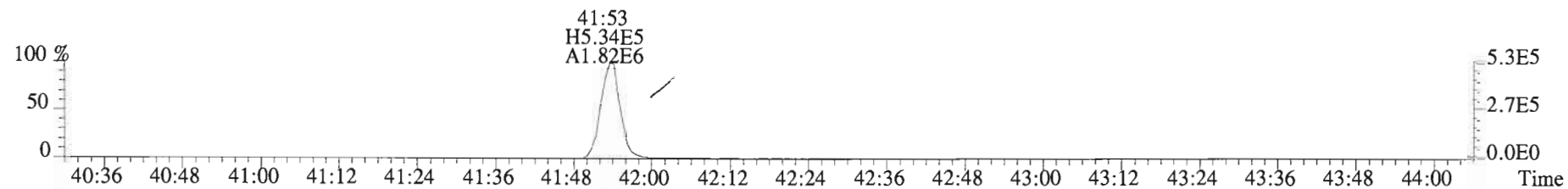
430.9728 S:11 F:4



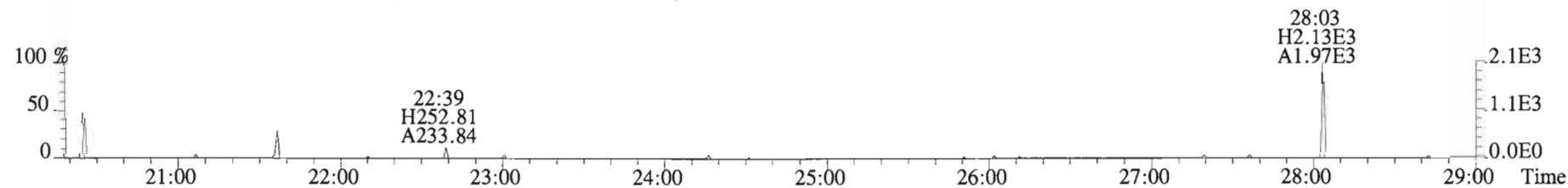
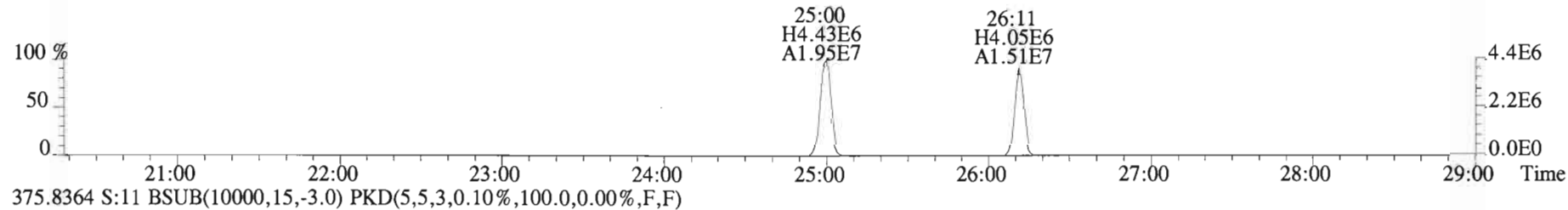
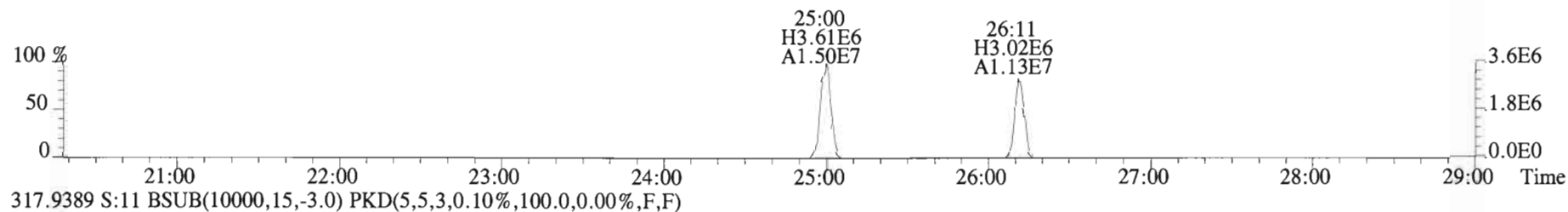
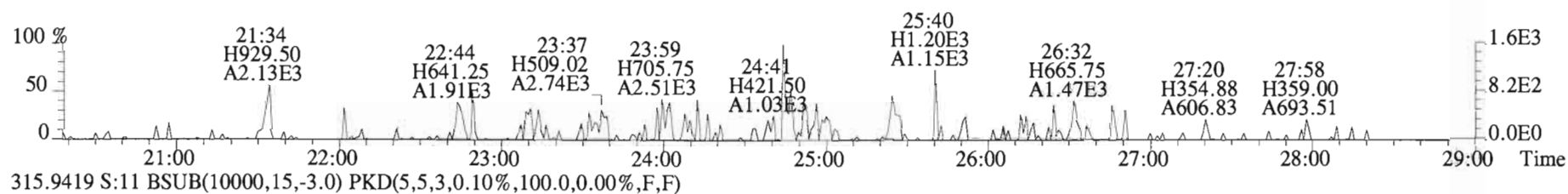
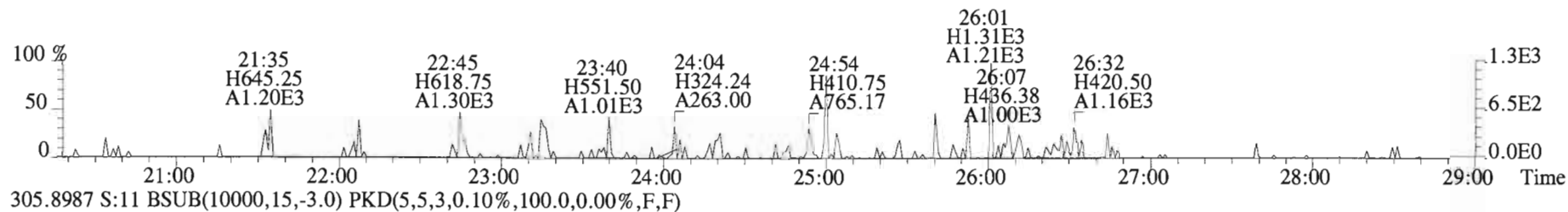
File:150130D2 #1-325 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



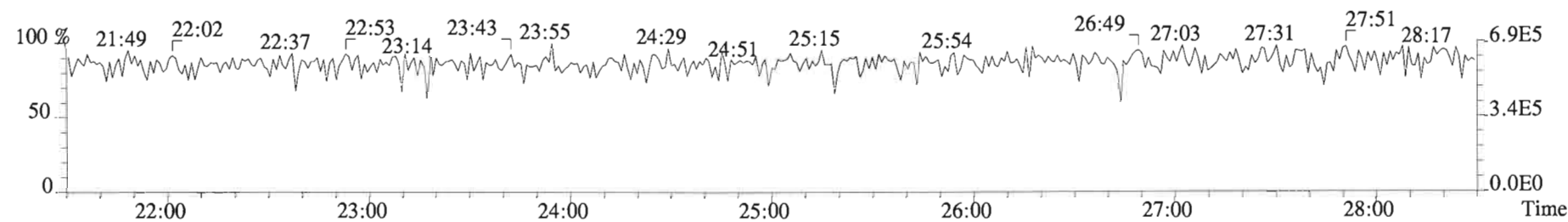
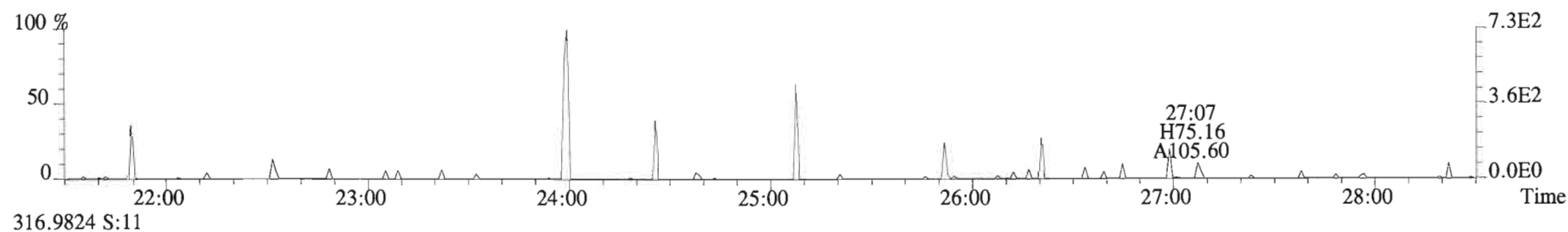
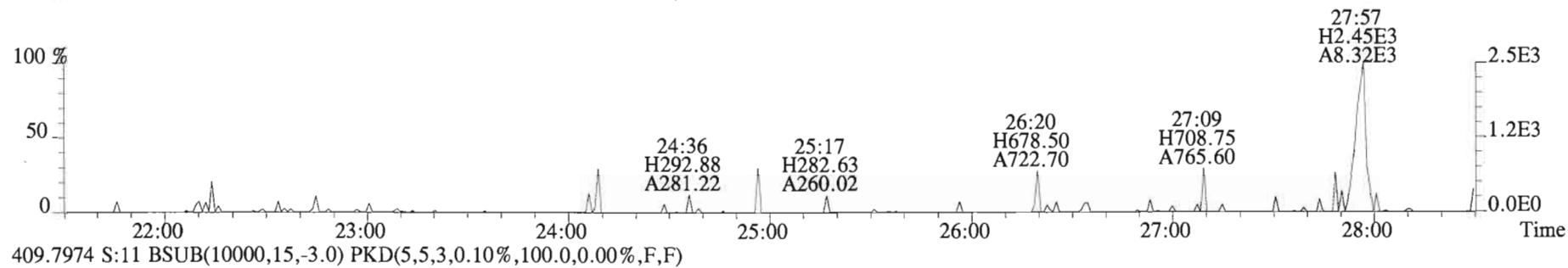
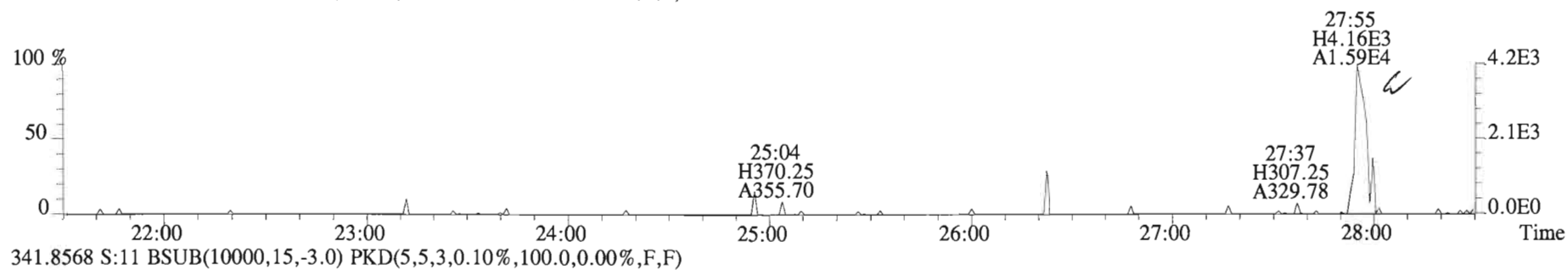
File:150130D2 #1-389 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



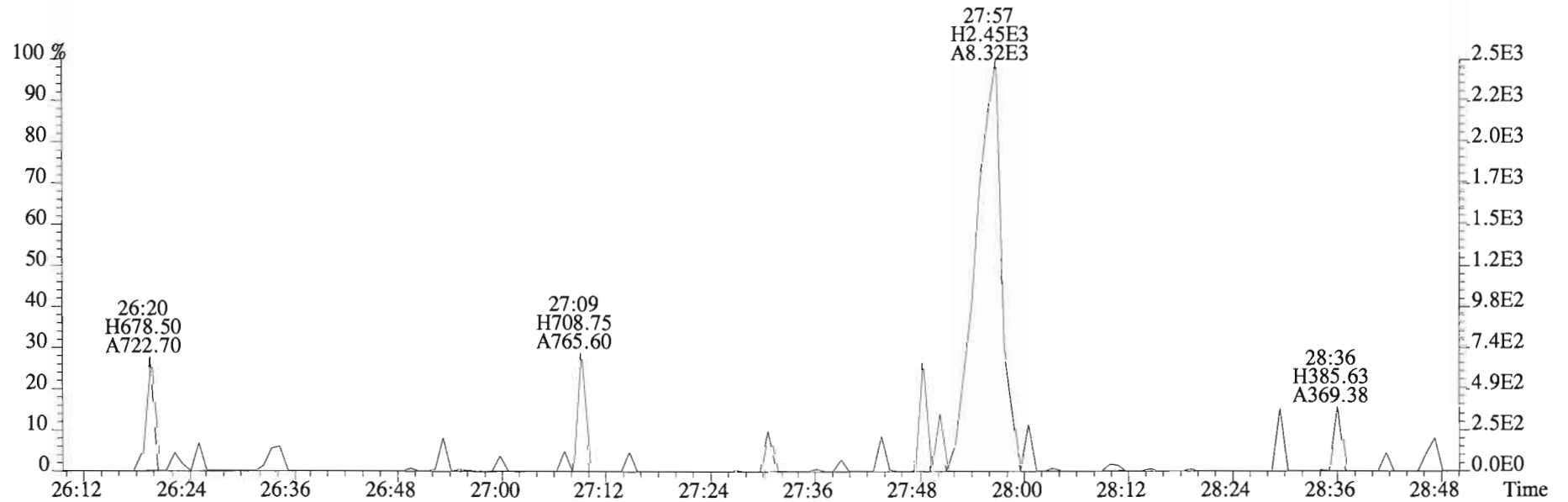
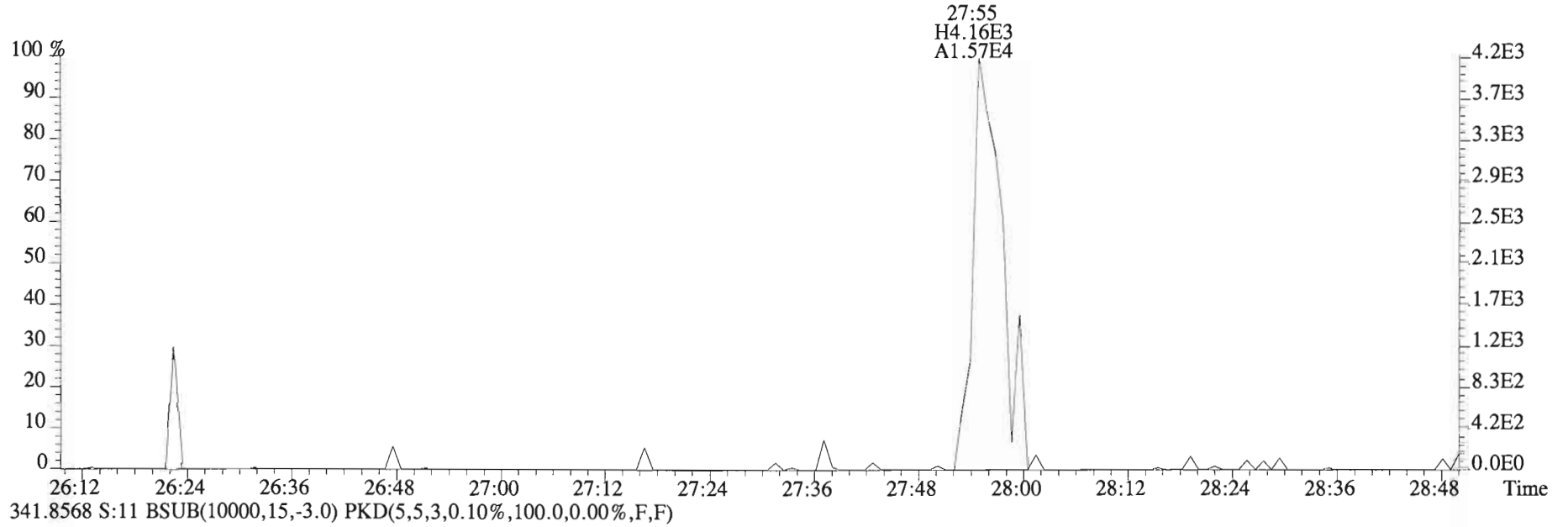
File:150130D2 #1-551 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text: Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



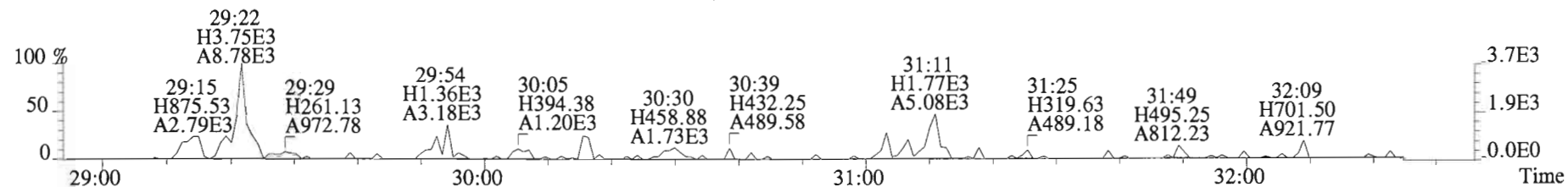
File:150130D2 #1-551 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



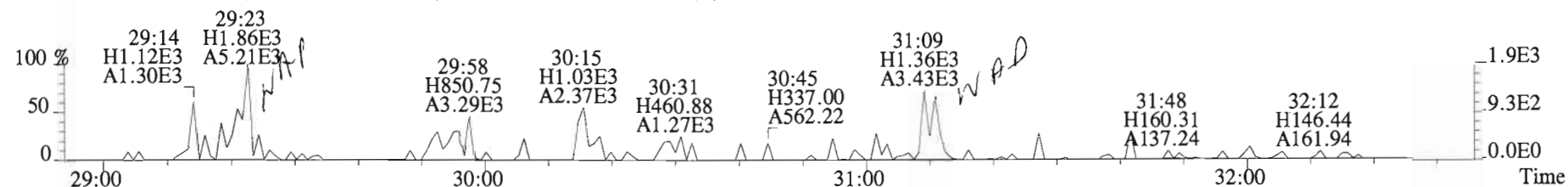
File:150130D2 #1-551 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



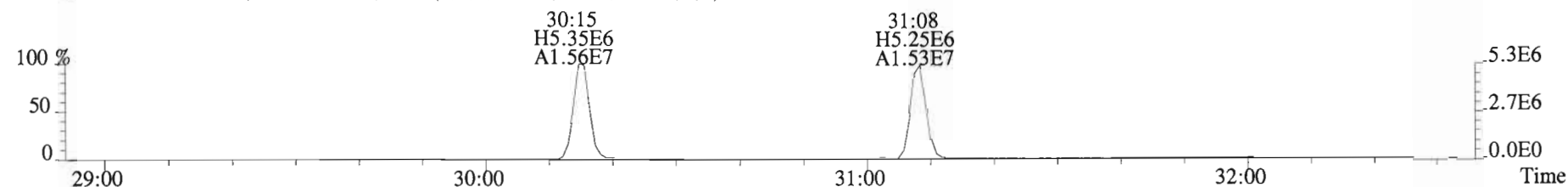
File:150130D2 #1-251 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-1B-20150122-W 1.00135 Exp:OCDD\_DB5  
 339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



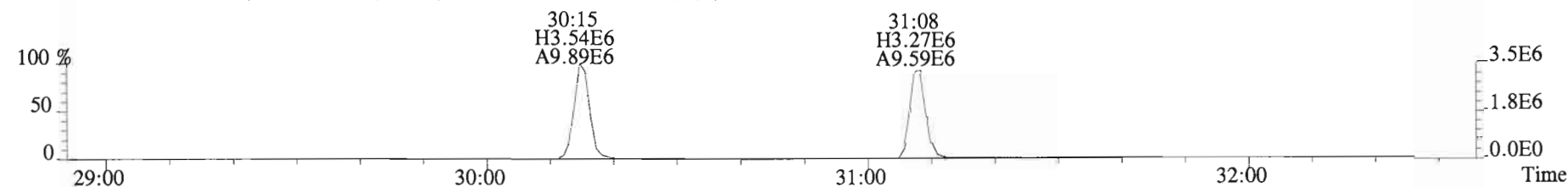
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



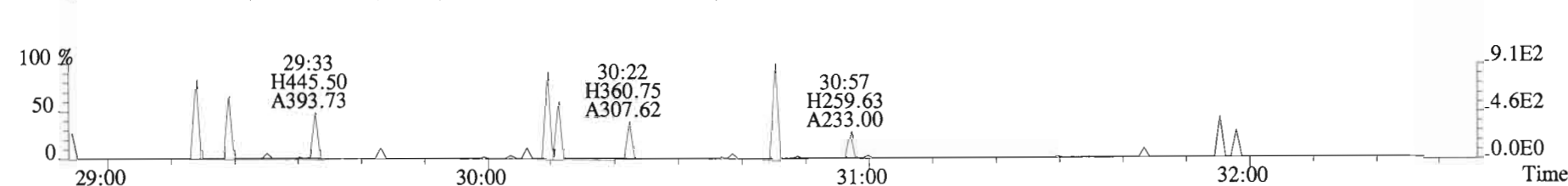
351.9000 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

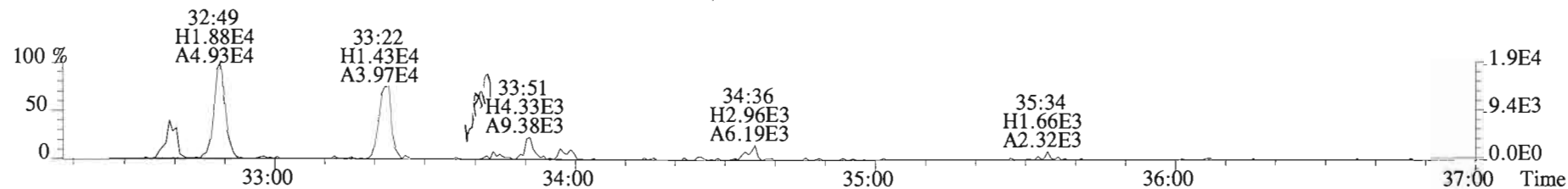


409.7974 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

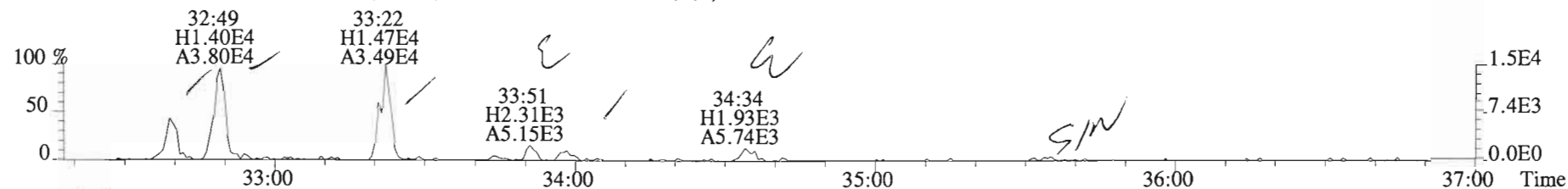




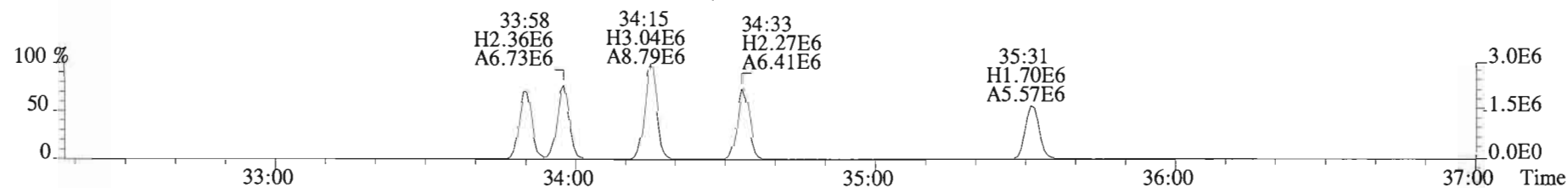
File:150130D2 #1-393 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



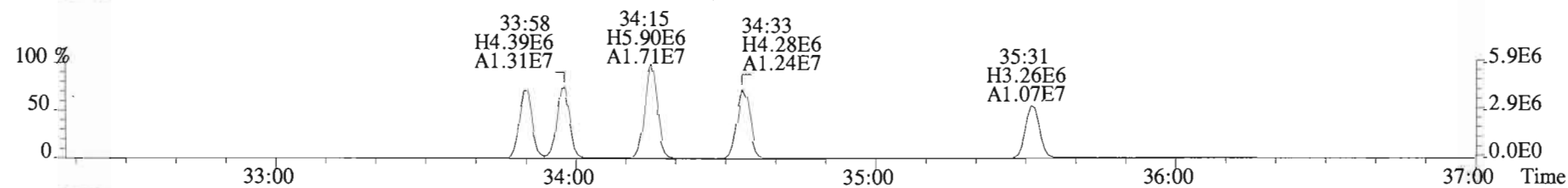
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



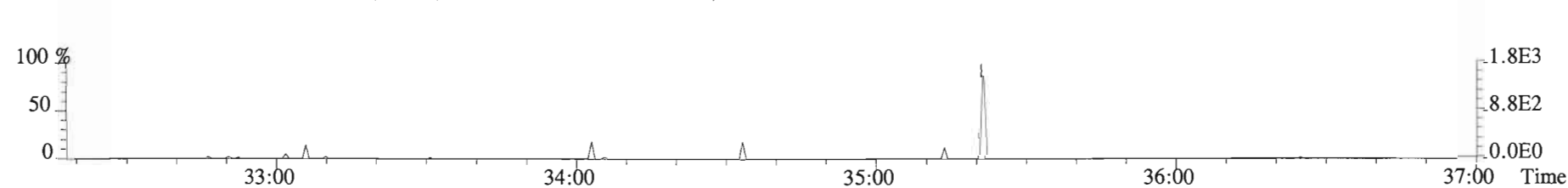
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



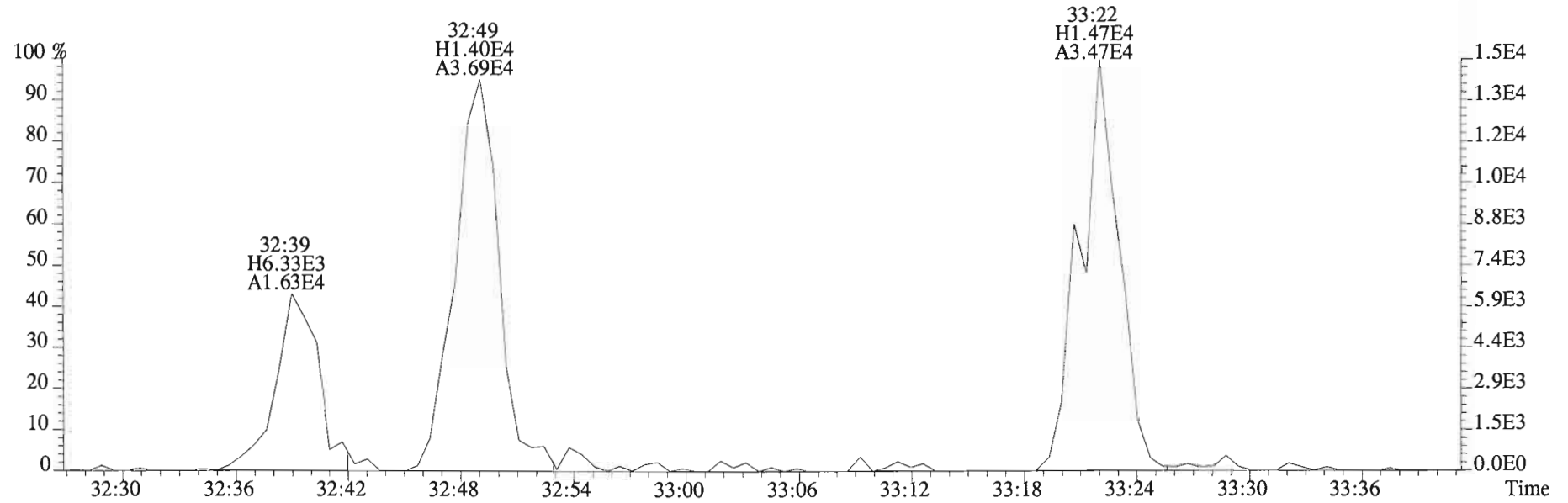
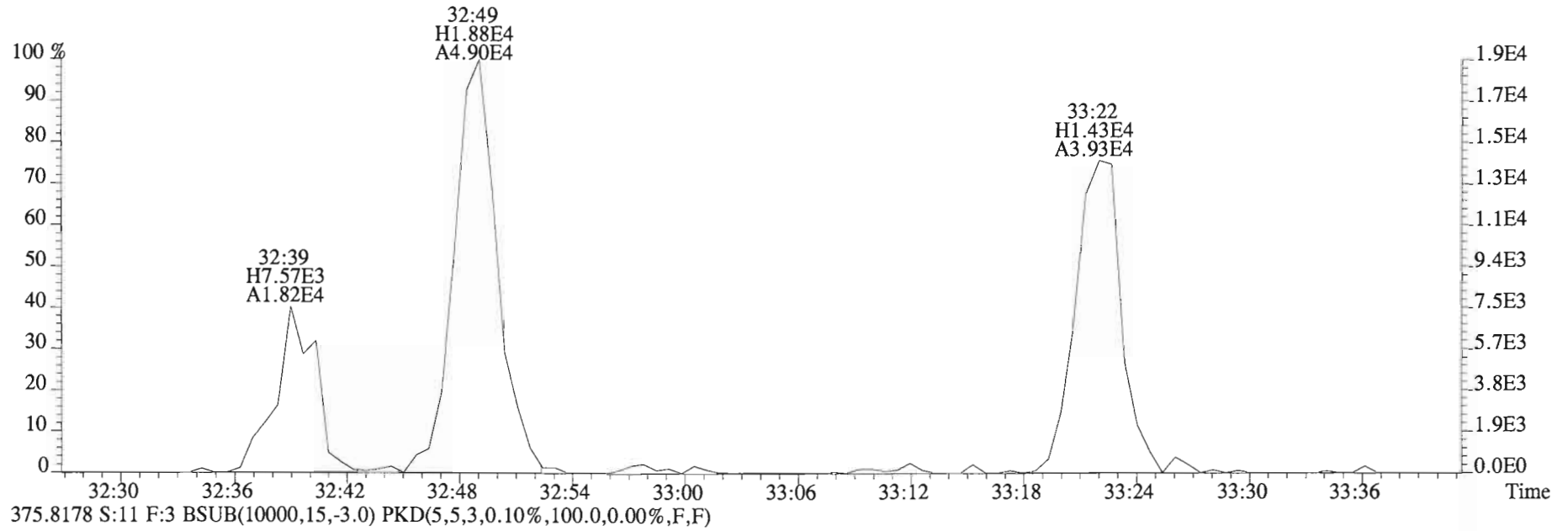
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



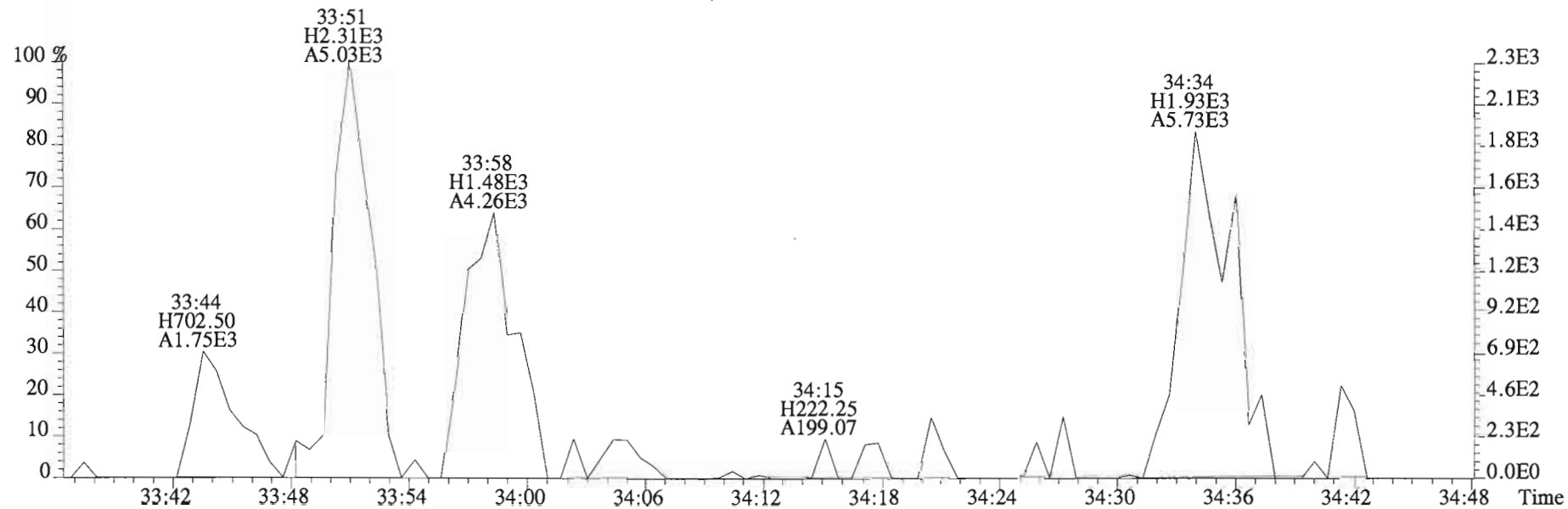
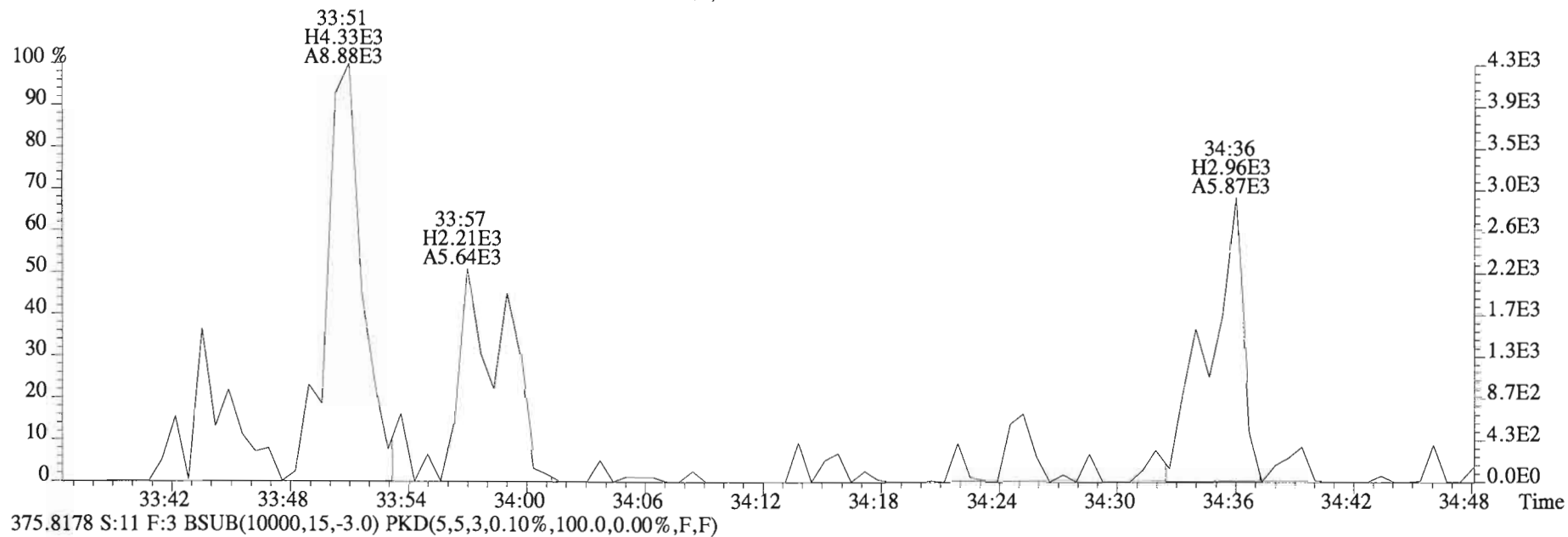
445.7555 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



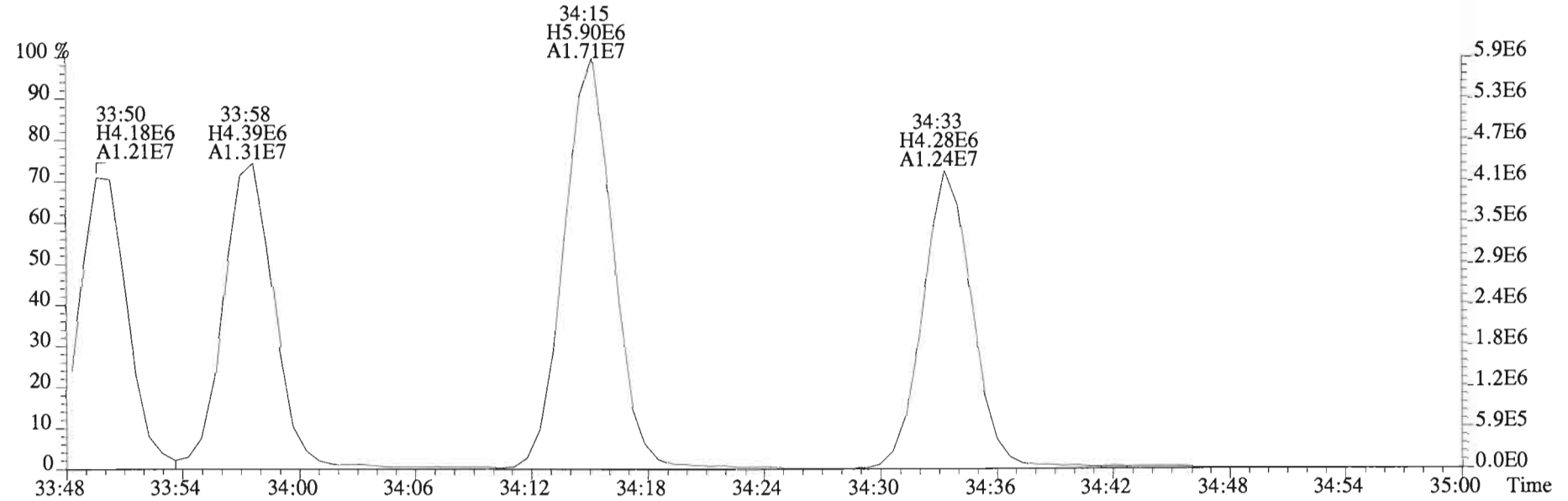
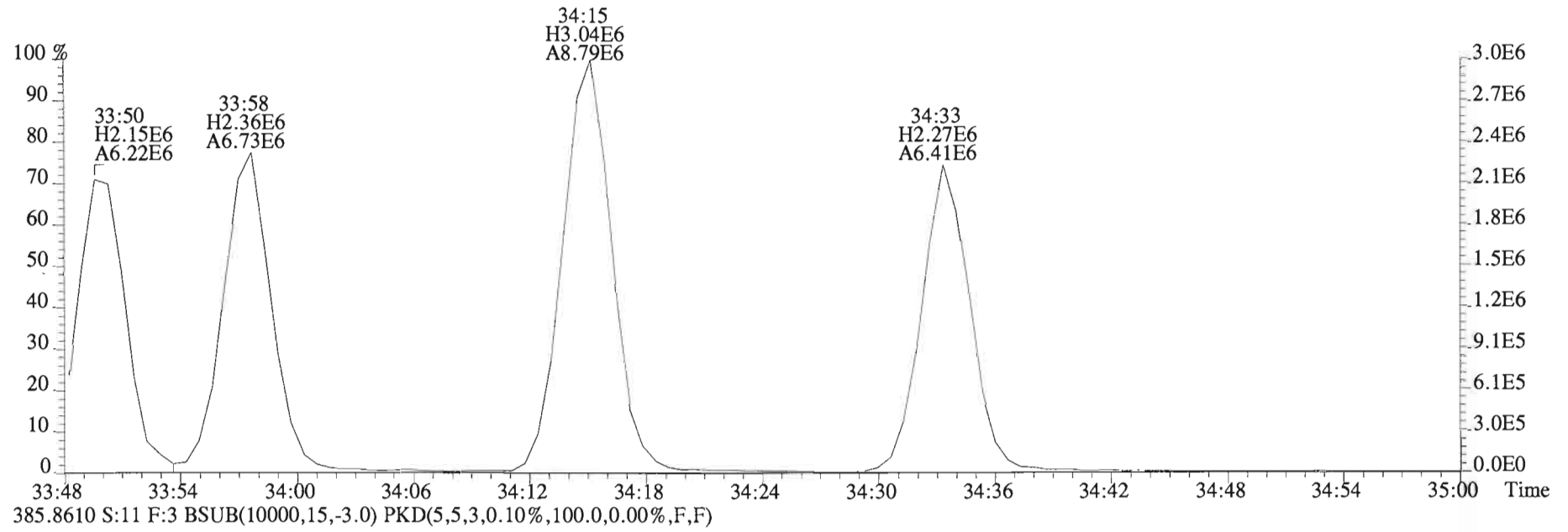
File:150130D2 #1-393 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



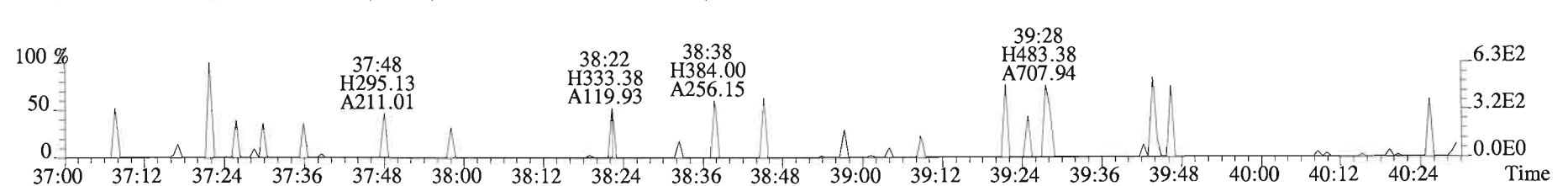
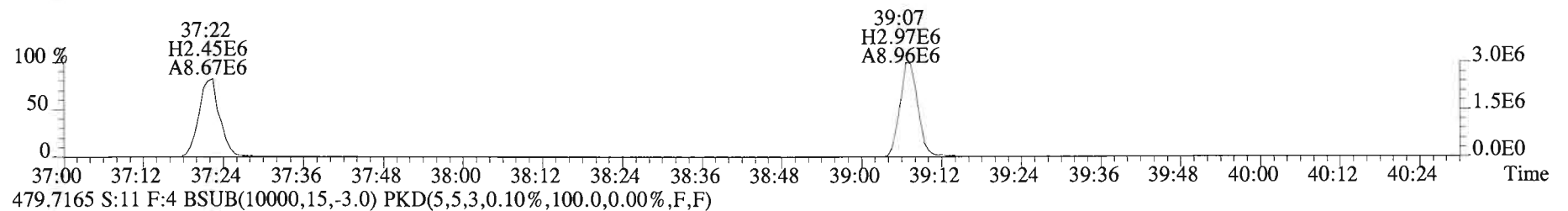
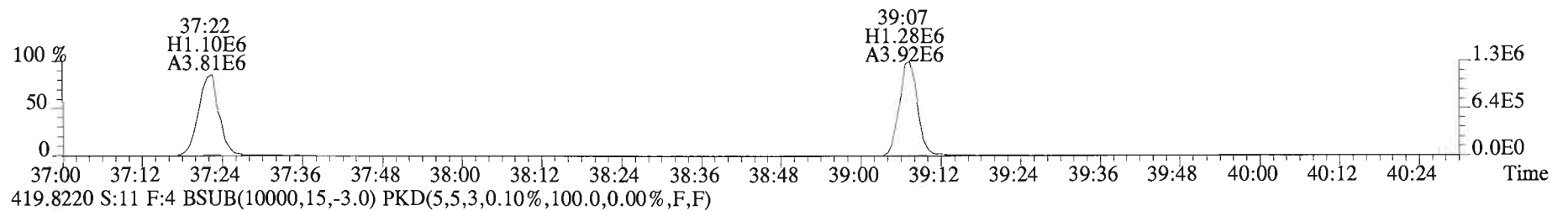
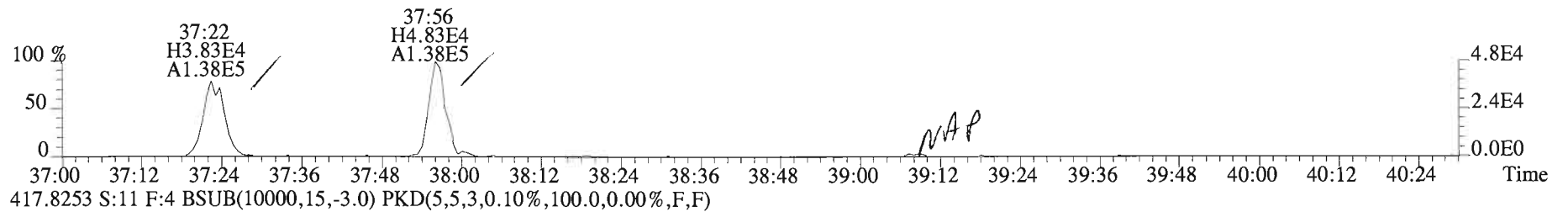
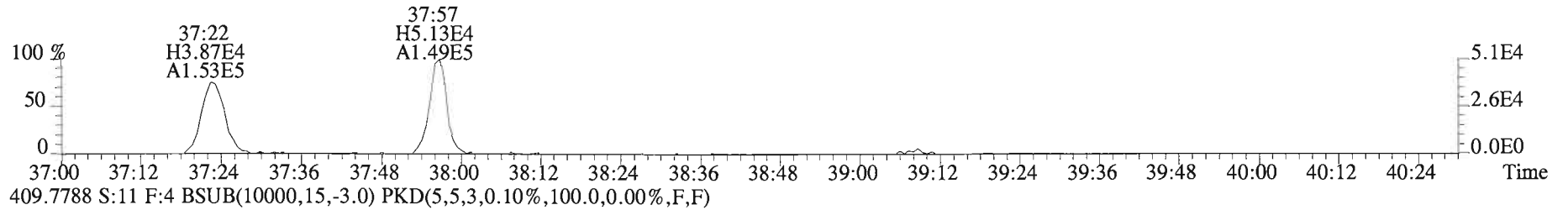
File:150130D2 #1-393 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



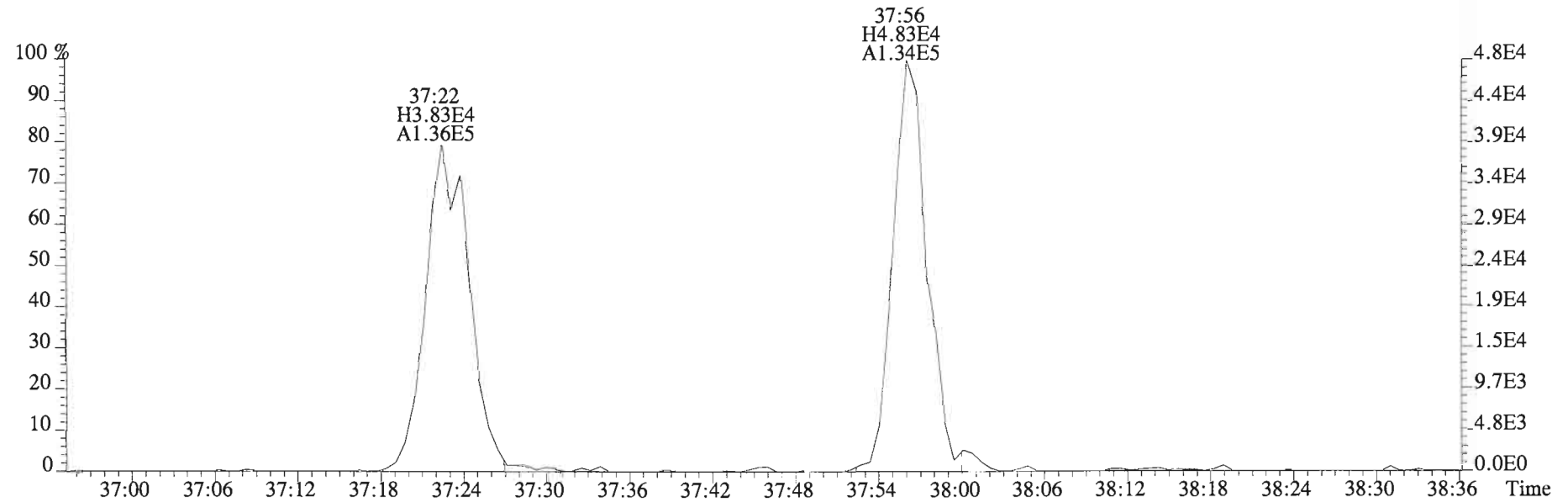
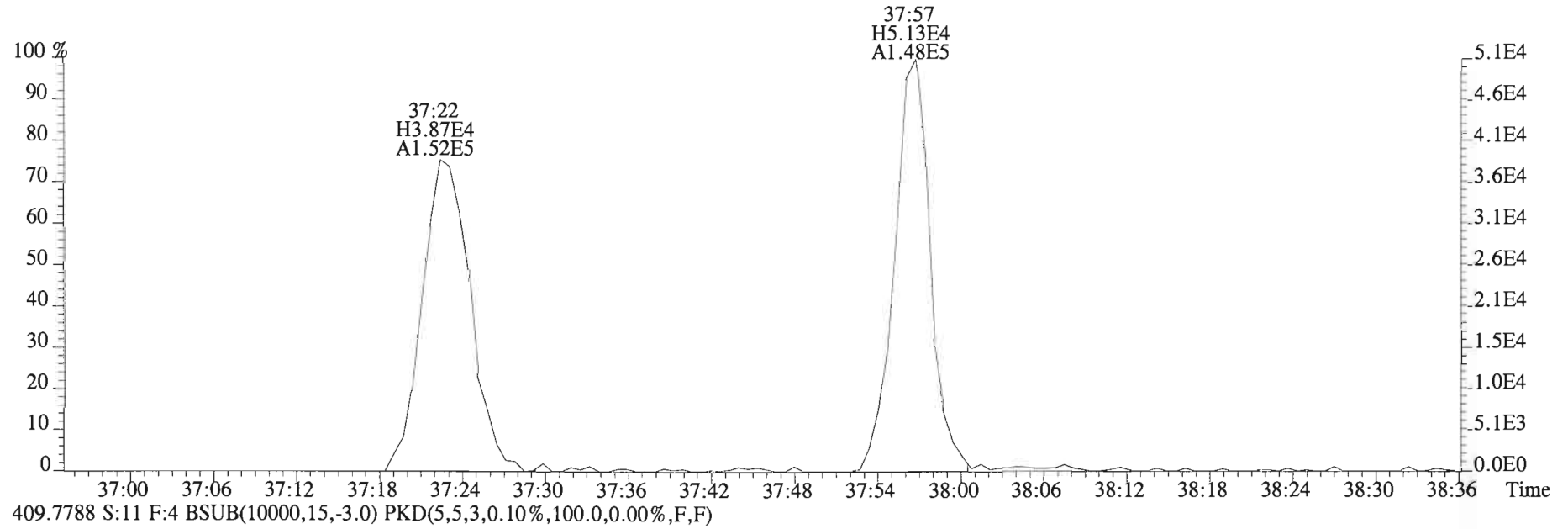
File:150130D2 #1-393 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



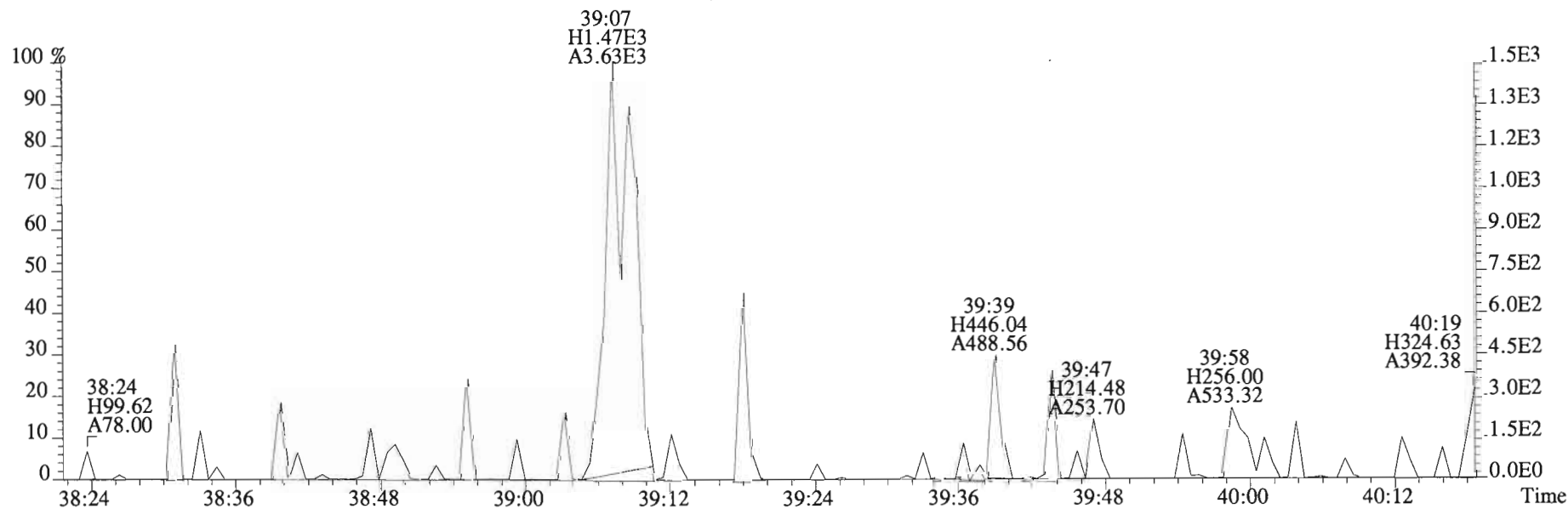
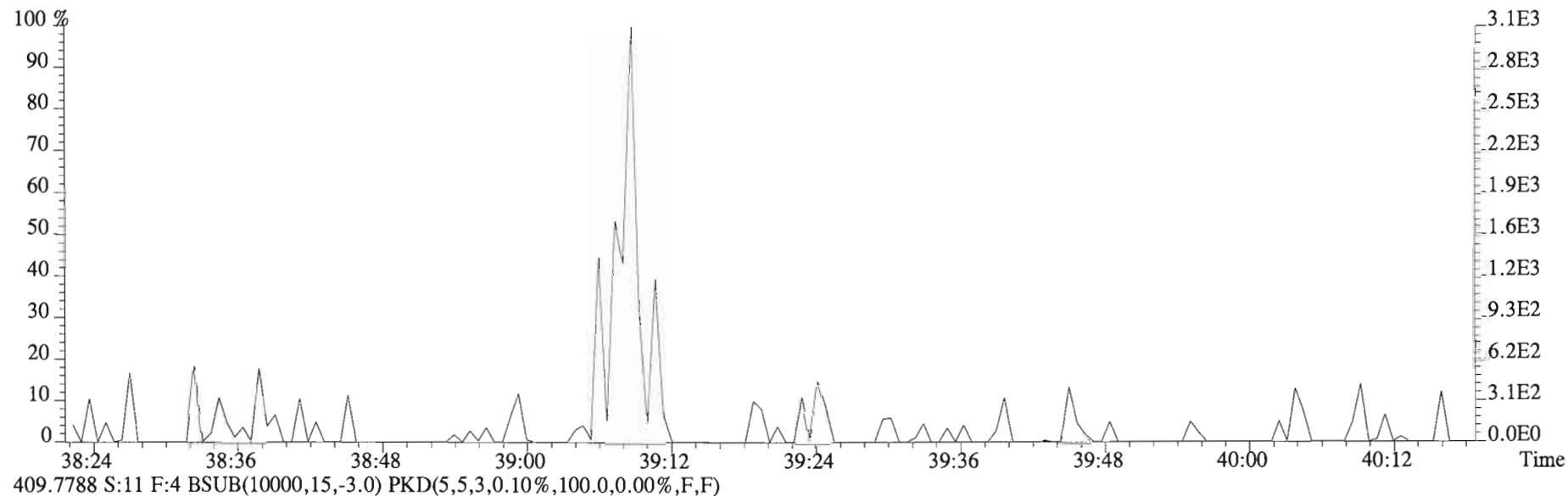
File:150130D2 #1-325 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



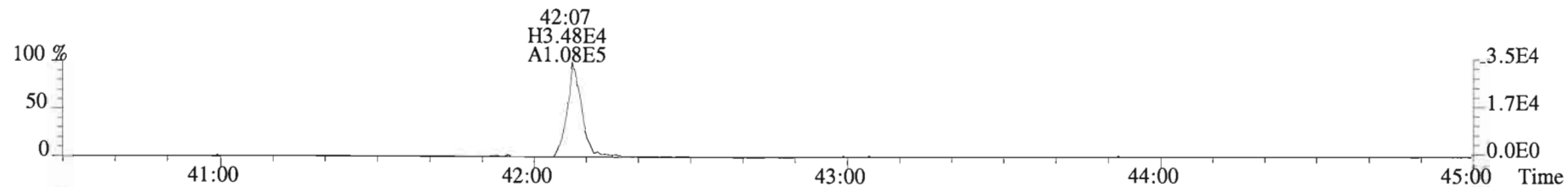
File:150130D2 #1-325 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



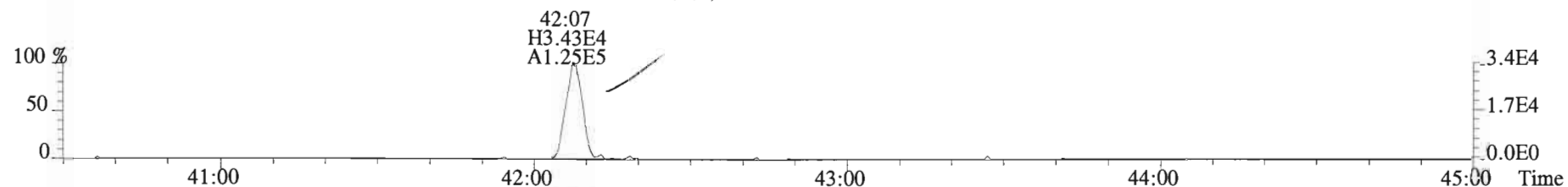
File:150130D2 #1-325 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



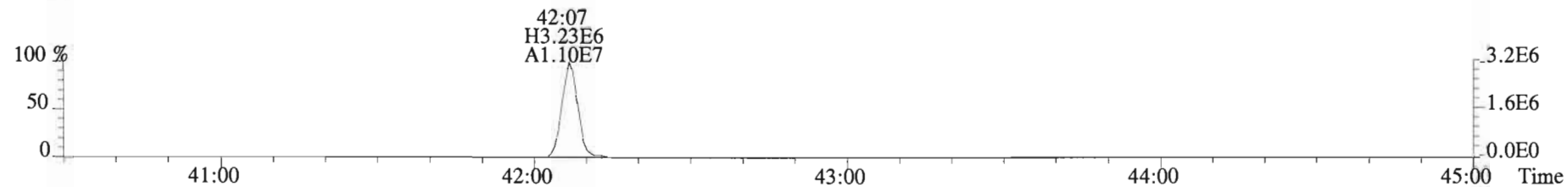
File:150130D2 #1-389 Acq:31-JAN-2015 06:14:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-7 Text:1500116-03 WM-FT-IB-20150122-W 1.00135 Exp:OCDD\_DB5  
441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



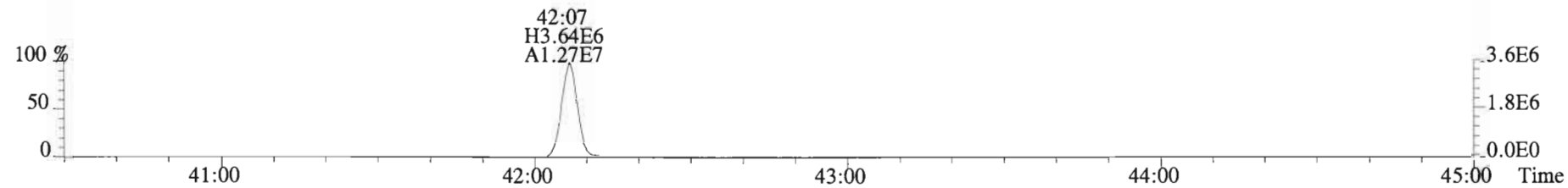
443.7398 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



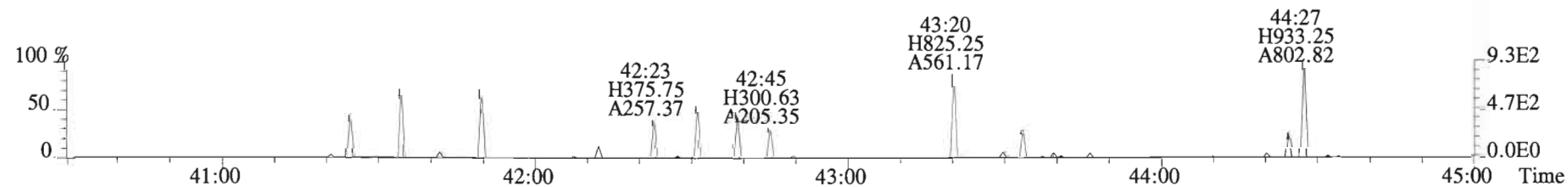
453.7831 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)





**SAMPLE DATA**  
**EPA Method 1668C**

Client ID: Method Blank  
Lab ID: B5A0115-BLK1

Filename: 150205E1 S:4 Acq: 5-FEB-15 12:12:16  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.000

ConCal: ST150205E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	* n	NotF $\eta$	1.19	*		3410	2.5	8.17	*	0.996-1.006	
Mono	PCB-2	*	* n	NotF $\eta$	1.18	*		3410	2.5	7.98	*	0.984-0.994	
Mono	PCB-3	*	* n	NotF $\eta$	1.43	*		3410	2.5	6.63	*	0.996-1.006	
Di	PCB-4/10	*	* n	NotF $\eta$	1.57	*		16100	2.5	31.3	*	0.997-1.007	
Di	PCB-7/9	*	* n	NotF $\eta$	1.21	*		16100	2.5	25.4	*	0.866-0.874	
Di	PCB-6	*	* n	NotF $\eta$	1.30	*		16100	2.5	23.6	*	0.890-0.899	
Di	PCB-5/8	*	* n	NotF $\eta$	1.15	*		16100	2.5	26.7	*	0.907-0.917	
Di	PCB-14	*	* n	NotF $\eta$	1.11	*		16100	2.5	26.0	*	0.949-0.959	
Di	PCB-11	*	* n	NotF $\eta$	1.09	*		16100	2.5	26.5	*	0.995-1.005	
Di	PCB-12/13	*	* n	NotF $\eta$	1.19	*		16100	2.5	24.2	*	1.011-1.021	
Di	PCB-15	*	* n	NotF $\eta$	1.28	*		16100	2.5	22.5	*	1.023-1.033	
Tri	PCB-19	*	* n	NotF $\eta$	1.04	*		1850	2.5	4.85	*	0.996-1.006	
Tri	PCB-30	*	* n	NotF $\eta$	1.71	*		1850	2.5	2.95	*	1.032-1.042	
Tri	PCB-18	*	* n	NotF $\eta$	0.78	*		1850	2.5	4.25	*	0.949-0.959	
Tri	PCB-17	*	* n	NotF $\eta$	0.92	*		1850	2.5	3.60	*	0.956-0.966	
Tri	PCB-24/27	*	* n	NotF $\eta$	1.19	*		1850	2.5	2.79	*	0.977-0.987	
Tri	PCB-16/32	8.06e+04	1.27	n	27:07	0.94	7.46	R	* 2.5	*	1.000	0.995-1.005	
Tri	PCB-34	*	* n	NotF $\eta$	1.14	*		1890	2.5	2.95	*	0.955-0.965	
Tri	PCB-23	*	* n	NotF $\eta$	1.28	*		1890	2.5	2.62	*	0.959-0.969	
Tri	PCB-29	*	* n	NotF $\eta$	1.08	*		1890	2.5	3.10	*	0.967-0.977	
Tri	PCB-20	*	* n	NotF $\eta$	1.21	*		1890	2.5	2.77	*	0.974-0.984	
Tri	PCB-25	*	* n	NotF $\eta$	1.26	*		1890	2.5	2.65	*	0.979-0.989	
Tri	PCB-31	*	* n	NotF $\eta$	1.28	*		1890	2.5	2.61	*	0.992-1.002	
Tri	PCB-28	7.27e+04	1.35	n	29:05	1.71	3.44	R	* 2.5	*	1.000	0.995-1.005	
Tri	PCB-20/21/33	6.58e+04	1.12	y	29:43	1.08	4.93		* 2.5	*	1.022	1.017-1.027	
Tri	PCB-22	*	* n	NotF $\eta$	1.21	*		1890	2.5	2.77	*	1.032-1.042	
Tri	PCB-36	*	* n	NotF $\eta$	1.14	*		1990	2.5	3.08	*	0.928-0.938	
Tri	PCB-39	*	* n	NotF $\eta$	1.12	*		1890	2.5	3.15	*	0.943-0.953	
Tri	PCB-38	*	* n	NotF $\eta$	1.20	*		1890	2.5	2.93	*	0.966-0.976	
Tri	PCB-35	*	* n	NotF $\eta$	1.23	*		1890	2.5	2.85	*	0.982-0.992	
Tri	PCB-37	*	* n	NotF $\eta$	1.23	*		1890	2.5	2.86	*	0.995-1.005	
Tetra	PCB-54	*	* n	NotF $\eta$	1.10	*		2190	2.5	4.08	*	0.996-1.006	
Tetra	PCB-50	*	* n	NotF $\eta$	0.88	*		2190	2.5	5.11	*	1.037-1.047	
Tetra	PCB-53	*	* n	NotF $\eta$	1.06	*		2190	2.5	4.98	*	0.942-0.952	
Tetra	PCB-51	*	* n	NotF $\eta$	0.99	*		2190	2.5	5.35	*	0.952-0.962	
Tetra	PCB-45	*	* n	NotF $\eta$	0.86	*		2190	2.5	6.13	*	0.966-0.976	
Tetra	PCB-46	*	* n	NotF $\eta$	0.85	*		2190	2.5	6.27	*	0.981-0.991	

Integrations by:

Analyst: DMS

Date: 2/9/15

Reviewed by: [Signature]

Date: 2/10/15

Client ID: Method Blank  
Lab ID: B5A0115-BLK1

Filename: 150205E1 S:4 Acq: 5-FEB-15 12:12:16  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.000

ConCal: ST150205E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	*	* n	NotF $\eta$	1.28	*		2190	2.5	4.13	*	0.996-1.006	
Tetra	PCB-73	*	* n	NotF $\eta$	1.35	*		2190	2.5	3.92	*	1.000-1.010	
Tetra	PCB-43/49	*	* n	NotF $\eta$	0.99	*		2190	2.5	5.33	*	1.005-1.015	
Tetra	PCB-47	*	* n	NotF $\eta$	1.06	*		2190	2.5	4.62	*	0.996-1.006	
Tetra	PCB-48/75	*	* n	NotF $\eta$	1.23	*		2190	2.5	3.98	*	0.999-1.009	
Tetra	PCB-65	*	* n	NotF $\eta$	1.22	*		2190	2.5	3.99	*	1.008-1.018	
Tetra	PCB-62	*	* n	NotF $\eta$	1.22	*		2190	2.5	4.00	*	1.011-1.021	
Tetra	PCB-44	*	* n	NotF $\eta$	0.86	*		2190	2.5	5.68	*	1.021-1.031	
Tetra	PCB-42/59	*	* n	NotF $\eta$	1.14	*		2190	2.5	4.30	*	1.028-1.038	
Tetra	PCB-41/64/71/72	*	* n	NotF $\eta$	1.21	*		2190	2.5	4.05	*	1.046-1.056	
Tetra	PCB-68	*	* n	NotF $\eta$	1.35	*		2190	2.5	3.63	*	1.054-1.064	
Tetra	PCB-40	*	* n	NotF $\eta$	0.70	*		2190	2.5	6.97	*	1.061-1.071	
Tetra	PCB-57	*	* n	NotF $\eta$	0.98	*		2190	2.5	3.92	*	0.965-0.975	
Tetra	PCB-67	*	* n	NotF $\eta$	1.11	*		2190	2.5	3.47	*	0.974-0.984	
Tetra	PCB-58	*	* n	NotF $\eta$	0.93	*		2190	2.5	4.14	*	0.977-0.987	
Tetra	PCB-63	*	* n	NotF $\eta$	0.95	*		2190	2.5	4.03	*	0.982-0.992	
Tetra	PCB-74	*	* n	NotF $\eta$	1.24	*		2190	2.5	3.09	*	0.990-1.000	
Tetra	PCB-61/70	*	* n	NotF $\eta$	0.95	*		2190	2.5	4.03	*	0.995-1.005	
Tetra	PCB-76/66	*	* n	NotF $\eta$	1.04	*		2190	2.5	3.67	*	1.001-1.011	
Tetra	PCB-80	*	* n	NotF $\eta$	1.19	*		2190	2.5	3.11	*	0.996-1.006	
Tetra	PCB-55	*	* n	NotF $\eta$	1.04	*		2190	2.5	3.56	*	1.005-1.015	
Tetra	PCB-56/60	*	* n	NotF $\eta$	1.01	*		2190	2.5	3.67	*	1.019-1.029	
Tetra	PCB-79	*	* n	NotF $\eta$	1.08	*		2190	2.5	3.43	*	1.048-1.058	
Tetra	PCB-78	*	* n	NotF $\eta$	1.27	*		2190	2.5	3.37	*	0.982-0.992	
Tetra	PCB-81	*	* n	NotF $\eta$	1.33	*		2190	2.5	3.21	*	0.995-1.005	
Tetra	PCB-77	*	* n	NotF $\eta$	1.10	*		2190	2.5	3.76	*	0.995-1.005	
Penta	PCB-104	*	* n	NotF $\eta$	1.18	*		1060	2.5	3.95	*	0.996-1.006	
Penta	PCB-96	*	* n	NotF $\eta$	1.14	*		1060	2.5	4.10	*	1.034-1.044	
Penta	PCB-103	*	* n	NotF $\eta$	0.96	*		1060	2.5	4.87	*	1.050-1.060	
Penta	PCB-100	*	* n	NotF $\eta$	0.94	*		1060	2.5	4.97	*	1.061-1.071	
Penta	PCB-94	*	* n	NotF $\eta$	1.06	*		1060	2.5	5.78	*	0.980-0.990	
Penta	PCB-95/98/102	*	* n	NotF $\eta$	1.22	*		1060	2.5	4.99	*	0.995-1.005	
Penta	PCB-93	*	* n	NotF $\eta$	0.84	*		1060	2.5	7.24	*	0.997-1.007	
Penta	PCB-88/91	*	* n	NotF $\eta$	1.12	*		1060	2.5	5.47	*	1.005-1.015	
Penta	PCB-121	*	* n	NotF $\eta$	1.62	*		1060	2.5	3.78	*	1.009-1.019	
Penta	PCB-84/92	*	* n	NotF $\eta$	1.05	*		1060	2.5	5.49	*	0.985-0.995	
Penta	PCB-89	*	* n	NotF $\eta$	1.13	*		1060	2.5	5.08	*	0.991-1.001	

Analyst: *DMS*

Date: *2/9/15*

Client ID: Method Blank  
Lab ID: B5A0115-BLK1

Filename: 150205E1 S:4 Acq: 5-FEB-15 12:12:16  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.000

ConCal: ST150205E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	*	*	n NotF $\eta$	1.10	*		1060	2.5	5.22	*	0.995-1.005	
Penta	PCB-113	*	*	n NotF $\eta$	1.41	*		1060	2.5	4.07	*	1.002-1.012	
Penta	PCB-99	*	*	n NotF $\eta$	1.34	*		1060	2.5	4.30	*	1.004-1.014	
Penta	PCB-119	*	*	n NotF $\eta$	1.53	*		1060	2.5	4.22	*	0.982-0.992	
Penta	PCB-108/112	*	*	n NotF $\eta$	1.28	*		1060	2.5	5.05	*	0.986-0.996	
Penta	PCB-83	*	*	n NotF $\eta$	1.52	*		1060	2.5	4.26	*	0.990-1.000	
Penta	PCB-97	*	*	n NotF $\eta$	1.18	*		1060	2.5	5.47	*	0.995-1.005	
Penta	PCB-86	*	*	n NotF $\eta$	0.84	*		1060	2.5	7.67	*	0.999-1.009	
Penta	PCB-87/117/125	*	*	n NotF $\eta$	1.55	*		1060	2.5	4.17	*	1.002-1.012	
Penta	PCB-111/115	*	*	n NotF $\eta$	1.63	*		1060	2.5	3.96	*	1.006-1.016	
Penta	PCB-85/116	*	*	n NotF $\eta$	1.30	*		1060	2.5	4.96	*	1.010-1.020	
Penta	PCB-120	*	*	n NotF $\eta$	1.68	*		1060	2.5	3.85	*	1.016-1.026	
Penta	PCB-110	*	*	n NotF $\eta$	1.56	*		1060	2.5	4.15	*	1.020-1.030	
Penta	PCB-82	*	*	n NotF $\eta$	0.76	*		1060	2.5	6.52	*	0.971-0.981	
Penta	PCB-124	*	*	n NotF $\eta$	1.47	*		1060	2.5	3.37	*	0.988-0.998	
Penta	PCB-107/109	*	*	n NotF $\eta$	1.32	*		1060	2.5	3.74	*	0.991-1.001	
Penta	PCB-123	*	*	n NotF $\eta$	1.17	*		1060	2.5	4.24	*	0.996-1.006	
Penta	PCB-106/118	*	*	n NotF $\eta$	1.17	*		1060	2.5	3.97	*	0.996-1.006	
Penta	PCB-114	*	*	n NotF $\eta$	1.30	*		1840	2.5	4.78	*	0.995-1.005	
Penta	PCB-122	*	*	n NotF $\eta$	1.12	*		1840	2.5	5.53	*	0.999-1.009	
Penta	PCB-105	*	*	n NotF $\eta$	1.30	*		1840	2.5	4.78	*	0.995-1.005	
Penta	PCB-127	*	*	n NotF $\eta$	1.33	*		1840	2.5	4.21	*	0.996-1.006	
Penta	PCB-126	*	*	n NotF $\eta$	1.18	*		1840	2.5	5.45	*	0.995-1.005	
Hexa	PCB-155	*	*	n NotF $\eta$	1.11	*		1050	2.5	5.28	*	0.966-1.006	
Hexa	PCB-150	*	*	n NotF $\eta$	1.00	*		1050	2.5	5.91	*	1.030-1.040	
Hexa	PCB-152	*	*	n NotF $\eta$	1.12	*		1050	2.5	5.29	*	1.043-1.053	
Hexa	PCB-145	*	*	n NotF $\eta$	1.20	*		1050	2.5	4.91	*	1.055-1.065	
Hexa	PCB-136	*	*	n NotF $\eta$	1.18	*		1050	2.5	5.01	*	1.064-1.074	
Hexa	PCB-148	*	*	n NotF $\eta$	0.74	*		1050	2.5	7.92	*	1.066-1.076	
Hexa	PCB-154	*	*	n NotF $\eta$	0.86	*		1050	2.5	6.87	*	1.080-1.090	
Hexa	PCB-151	*	*	n NotF $\eta$	0.75	*		1050	2.5	7.90	*	1.097-1.107	
Hexa	PCB-135	*	*	n NotF $\eta$	0.79	*		1050	2.5	7.44	*	1.103-1.113	
Hexa	PCB-144	*	*	n NotF $\eta$	0.76	*		1050	2.5	7.74	*	1.105-1.117	
Hexa	PCB-147	*	*	n NotF $\eta$	0.82	*		1050	2.5	7.19	*	1.109-1.121	
Hexa	PCB-139/149	*	*	n NotF $\eta$	0.76	*		1050	2.5	7.74	*	1.116-1.128	
Hexa	PCB-140	*	*	n NotF $\eta$	0.72	*		1050	2.5	8.17	*	1.121-1.133	
Hexa	PCB-134/143	*	*	n NotF $\eta$	0.92	*		1800	2.5	6.68	*	0.970-0.980	

Analyst: DMS

Date: 2/12/15

Client ID: Method Blank  
Lab ID: B5A0115-BLK1

Filename: 150205E1 S:4 Acq: 5-FEB-15 12:12:16  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.000

ConCal: ST150205E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	*	* n	NotF $\eta$	0.82	*		1800	2.5	7.47	*	0.977-0.987	
Hexa	PCB-131	*	* n	NotF $\eta$	0.91	*		1800	2.5	6.74	*	0.981-0.991	
Hexa	PCB-146/165	*	* n	NotF $\eta$	1.25	*		1800	2.5	4.91	*	0.986-0.996	
Hexa	PCB-132/161	*	* n	NotF $\eta$	1.10	*		1800	2.5	5.54	*	0.992-1.002	
Hexa	PCB-153	*	* n	NotF $\eta$	1.25	*		1800	2.5	4.90	*	0.995-1.005	
Hexa	PCB-168	*	* n	NotF $\eta$	1.45	*		1800	2.5	4.22	*	1.001-1.011	
Hexa	PCB-141	*	* n	NotF $\eta$	1.09	*		1800	2.5	6.12	*	0.995-1.005	
Hexa	PCB-137	*	* n	NotF $\eta$	1.06	*		1800	2.5	6.25	*	1.004-1.014	
Hexa	PCB-130	*	* n	NotF $\eta$	0.96	*		1800	2.5	6.88	*	1.006-1.016	
Hexa	PCB-138/163/164	*	* n	NotF $\eta$	1.29	*		1800	2.5	5.00	*	0.996-1.006	
Hexa	PCB-158/160	*	* n	NotF $\eta$	1.34	*		1800	2.5	4.82	*	1.001-1.011	
Hexa	PCB-129	*	* n	NotF $\eta$	0.85	*		1800	2.5	7.58	*	1.007-1.017	
Hexa	PCB-166	*	* n	NotF $\eta$	1.19	*		1800	2.5	4.87	*	0.988-0.998	
Hexa	PCB-159	*	* n	NotF $\eta$	1.11	*		1800	2.5	5.19	*	0.996-1.006	
Hexa	PCB-128/162	*	* n	NotF $\eta$	1.05	*		1800	2.5	5.51	*	1.002-1.012	
Hexa	PCB-167	*	* n	NotF $\eta$	1.20	*		1800	2.5	4.18	*	0.995-1.005	
Hexa	PCB-156	*	* n	NotF $\eta$	1.14	*		1800	2.5	4.76	*	0.996-1.006	
Hexa	PCB-157	*	* n	NotF $\eta$	1.16	*		1800	2.5	4.64	*	0.995-1.005	
Hexa	PCB-169	*	* n	NotF $\eta$	1.12	*		1800	2.5	4.71	*	0.995-1.005	
Hepta	PCB-188	*	* n	NotF $\eta$	1.58	*		1690	2.5	3.03	*	0.996-1.006	
Hepta	PCB-184	*	* n	NotF $\eta$	1.63	*		1690	2.5	2.94	*	1.006-1.016	
Hepta	PCB-179	*	* n	NotF $\eta$	1.30	*		1690	2.5	3.68	*	1.024-1.034	
Hepta	PCB-176	*	* n	NotF $\eta$	1.48	*		1690	2.5	3.25	*	1.035-1.045	
Hepta	PCB-186	*	* n	NotF $\eta$	1.45	*		1690	2.5	3.30	*	1.050-1.060	
Hepta	PCB-178	*	* n	NotF $\eta$	1.03	*		1690	2.5	4.63	*	1.061-1.071	
Hepta	PCB-175	*	* n	NotF $\eta$	1.01	*		1690	2.5	4.73	*	1.069-1.079	
Hepta	PCB-182/187	*	* n	NotF $\eta$	1.25	*		1690	2.5	3.83	*	1.073-1.083	
Hepta	PCB-183	*	* n	NotF $\eta$	1.21	*		1690	2.5	3.97	*	1.081-1.091	
Hepta	PCB-185	*	* n	NotF $\eta$	1.80	*		1690	2.5	3.68	*	0.951-0.961	
Hepta	PCB-174	*	* n	NotF $\eta$	1.38	*		1690	2.5	4.82	*	0.958-0.968	
Hepta	PCB-181	*	* n	NotF $\eta$	1.38	*		1690	2.5	4.81	*	0.960-0.970	
Hepta	PCB-177	*	* n	NotF $\eta$	1.26	*		1690	2.5	5.29	*	0.963-0.973	
Hepta	PCB-171	*	* n	NotF $\eta$	1.58	*		1690	2.5	4.19	*	0.970-0.980	
Hepta	PCB-173	*	* n	NotF $\eta$	1.11	*		1690	2.5	5.98	*	0.978-0.988	
Hepta	PCB-172	*	* n	NotF $\eta$	1.63	*		1690	2.5	4.06	*	0.987-0.997	
Hepta	PCB-192	*	* n	NotF $\eta$	1.74	*		1690	2.5	3.81	*	0.991-1.001	
Hepta	PCB-180	*	* n	NotF $\eta$	1.34	*		1690	2.5	4.94	*	0.995-1.005	

Analyst: Dms

Date: 2/9/15

Client ID: Method Blank  
Lab ID: B5A0115-BLK1

Filename: 150205E1 S:4 Acq: 5-FEB-15 12:12:16  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.000

ConCal: ST150205E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	* n	NotF $\eta$	1.72	*		1690	2.5	3.87	*	0.999-1.009	
Hepta	PCB-191	*	* n	NotF $\eta$	1.69	*		1690	2.5	3.92	*	1.004-1.014	
Hepta	PCB-170	*	* n	NotF $\eta$	1.60	*		1690	2.5	4.69	*	0.995-1.005	
Hepta	PCB-190	*	* n	NotF $\eta$	2.21	*		1690	2.5	3.39	*	0.998-1.008	
Hepta	PCB-189	*	* n	NotF $\eta$	1.55	*		1690	2.5	3.82	*	0.995-1.005	
Octa	PCB-202	*	* n	NotF $\eta$	1.08	*		1570	2.5	6.80	*	0.995-1.005	
Octa	PCB-201	*	* n	NotF $\eta$	1.15	*		1570	2.5	6.40	*	1.005-1.015	
Octa	PCB-204	*	* n	NotF $\eta$	1.14	*		1570	2.5	6.47	*	1.008-1.018	
Octa	PCB-197	*	* n	NotF $\eta$	1.07	*		1570	2.5	6.86	*	1.015-1.025	
Octa	PCB-200	*	* n	NotF $\eta$	1.06	*		1570	2.5	6.93	*	1.032-1.044	
Octa	PCB-198	*	* n	NotF $\eta$	0.76	*		1570	2.5	9.75	*	1.059-1.069	
Octa	PCB-199	*	* n	NotF $\eta$	0.80	*		1570	2.5	9.23	*	1.061-1.071	
Octa	PCB-196/203	*	* n	NotF $\eta$	0.80	*		1570	2.5	9.19	*	1.066-1.076	
Octa	PCB-195	*	* n	NotF $\eta$	1.23	*		1520	2.5	4.20	*	0.979-0.989	
Octa	PCB-194	*	* n	NotF $\eta$	1.21	*		1520	2.5	4.25	*	0.995-1.005	
Octa	PCB-205	*	* n	NotF $\eta$	1.54	*		1520	2.5	3.34	*	1.001-1.011	
Nona	PCB-208	*	* n	NotF $\eta$	0.93	*		1200	2.5	2.93	*	0.995-1.005	
Nona	PCB-207	*	* n	NotF $\eta$	1.08	*		1200	2.5	2.51	*	1.001-1.011	
Nona	PCB-206	*	* n	NotF $\eta$	1.02	*		1200	2.5	5.23	*	0.995-1.005	
Deca	PCB-209	*	* n	NotF $\eta$	1.17	*		942	2.5	4.66	*	0.995-1.005	

Analyst: DMS

Date: 2/9/15

Client ID: Method Blank  
Lab ID: B5A0115-BLK1

Filename: 150205E1 S:4 Acq: 5-FEB-15 12:12:16  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.0000 EndCAL: NA

ConCal: ST150205E1-1

Page 3 of

Name	Resp	RA	RT	RRF	Conc
Total Mono-PCB	*	* n	NotFnd	1.27	*
Total Di-PCB	*	* n	NotFnd	1.21	*
Total Tri-PCB	*	* n	NotFnd	1.10	*
Total Tri-PCB	6.58e+04	1.12 y	29:43	1.21	4.93065 Sum:4.93065
Total Tetra-PCB	*	* n	NotFnd	1.09	*
Total Penta-PCB	*	* n	NotFnd	1.18	*
Total Penta-PCB	*	* n	NotFnd	1.25	* Sum:0.00000
Total Hexa-PCB	*	* n	NotFnd	0.90	*
Total Hexa-PCB	*	* n	NotFnd	1.11	* Sum:0.00000
Total Hepta-PCB	*	* n	NotFnd	1.42	*
Total Octa-PCB	*	* n	NotFnd	0.96	*
Total Octa-PCB	*	* n	NotFnd	1.33	* Sum:0.00000
Total Nona-PCB	*	* n	NotFnd	1.01	*
Total Deca-PCB	*	* n	NotFnd	1.17	*

Total PCB Conc: ~~15.83046~~ 10000

4.93

Integrations

by

Analyst: DMS

Date: 2/9/15

Client ID: Method Blank  
Lab ID: B5A0115-BLK1

Filename: 150205E1 S:4 Acq: 5-FEB-15 12:12:16  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol:2.0000

ConCal: ST150205E1-1  
EndCAL: NA

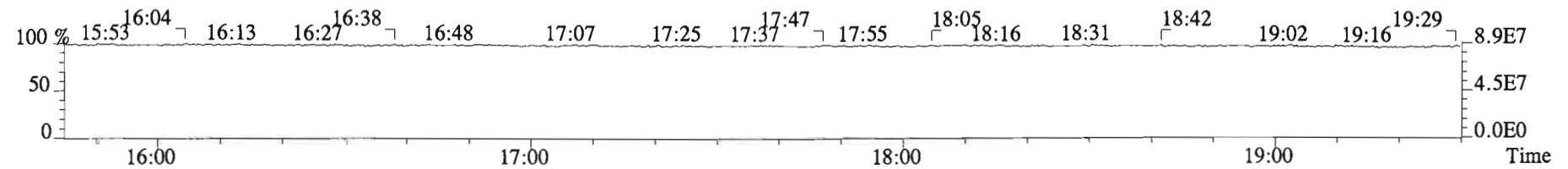
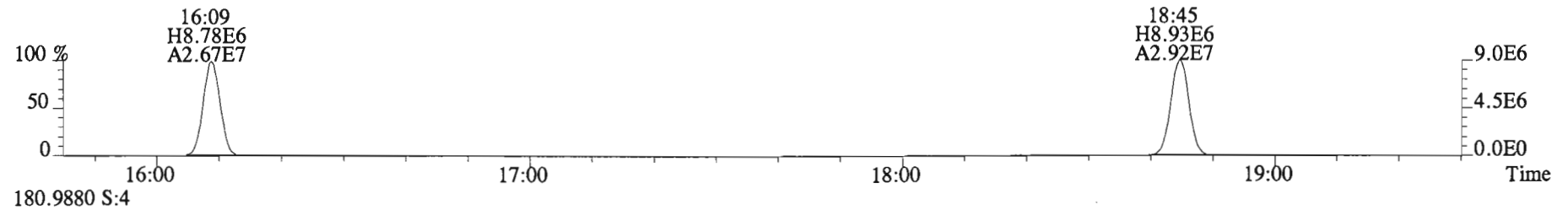
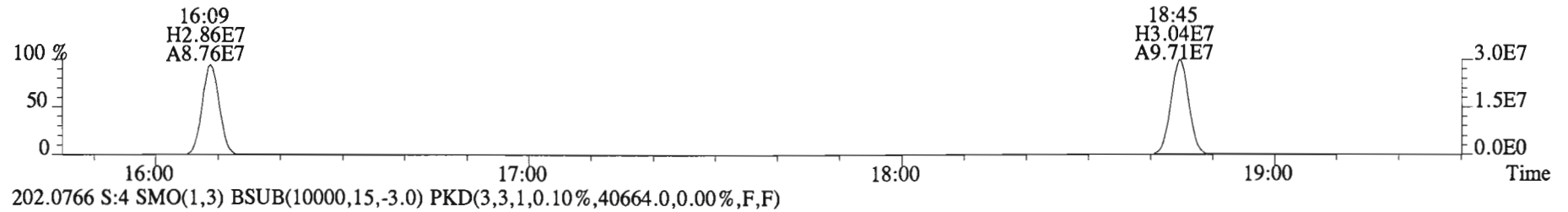
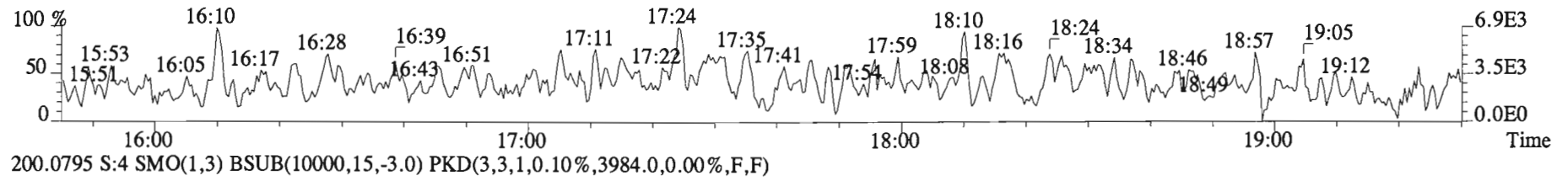
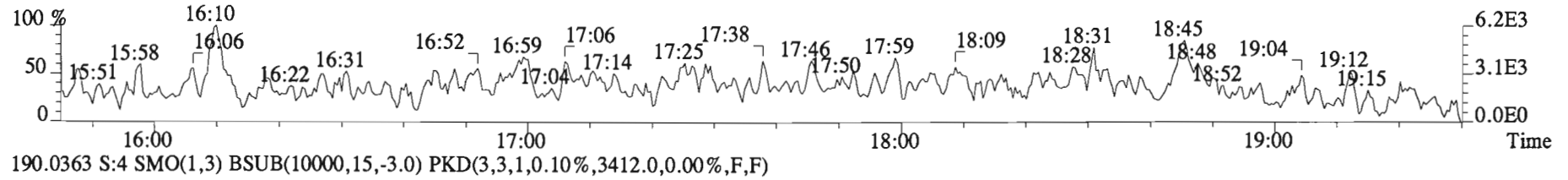
Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS		PS vs. IS							
13C-PCB-1	1.14e+08	3.28	y	0.87	16:09	0.623	0.629-0.635	7000	70.0	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-3	1.26e+08	3.33	y	0.91	18:45	0.723	0.725-0.733	7390	73.9	13C-PCB-79	1.37e+08	0.80	y	1.02	37:49	1.029	1.023-1.034	9150	91.5
13C-PCB-4	7.49e+07	1.61	y	0.59	20:04	0.774	0.775-0.783	6810	68.1	13C-PCB-178	4.46e+07	0.47	y	0.61	45:39	0.984	0.979-0.990	8640	86.4
13C-PCB-9	1.21e+08	1.60	y	0.90	21:51	0.843	0.842-0.850	7220	72.2	PS vs. IS									
13C-PCB-11	1.37e+08	1.58	y	0.94	25:13	0.973	0.968-0.978	7820	78.2	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-19	7.35e+07	1.09	y	0.53	24:12	0.933	0.930-0.940	7380	73.8	13C-PCB-79	1.37e+08	0.80	y	1.10	37:49	0.969	0.964-0.974	10300	103
13C-PCB-28	1.23e+08	1.06	y	0.93	29:04	1.003	0.999-1.009	7300	73.0	13C-PCB-178	4.46e+07	0.47	y	0.90	45:39	0.925	0.920-0.930	11000	110
13C-PCB-32	1.15e+08	1.08	y	0.80	27:07	1.046	1.040-1.050	7720	77.2	RS									
13C-PCB-37	1.36e+08	1.08	y	0.84	32:57	1.137	1.131-1.143	8920	89.2	Name	Resp	RA	RRF	RT	Conc				
13C-PCB-47	9.65e+07	0.79	y	0.81	31:59	0.870	0.866-0.874	8080	80.8	13C-PCB-15	1.87e+08	1.57	y	1.00	25:56	10000			
13C-PCB-52	9.02e+07	0.80	y	0.77	31:29	0.856	0.853-0.861	7960	79.6	13C-PCB-31	1.81e+08	1.05	y	1.00	28:58	10000			
13C-PCB-54	9.99e+07	0.80	y	0.97	27:57	0.761	0.758-0.766	7000	70.0	13C-PCB-60	1.47e+08	0.81	y	1.00	36:45	10000			
13C-PCB-70	1.28e+08	0.80	y	1.00	35:31	0.966	0.961-0.971	8690	86.9	13C-PCB-111	8.55e+07	1.59	y	1.00	39:13	10000			
13C-PCB-77	1.22e+08	0.80	y	0.94	39:38	1.078	1.073-1.083	8800	88.0	13C-PCB-128	8.41e+07	1.31	y	1.00	46:22	10000			
13C-PCB-80	1.33e+08	0.81	y	1.03	35:56	0.978	0.972-0.982	8790	87.9	13C-PCB-205	8.51e+07	0.92	y	1.00	54:03	10000			
13C-PCB-81	1.20e+08	0.80	y	0.92	39:02	1.062	1.057-1.067	8870	88.7	<i>* = OK within 1668 method limits</i>									
13C-PCB-95	5.55e+07	1.58	y	0.74	35:48	0.913	0.908-0.918	8760	87.6										
13C-PCB-97	5.40e+07	1.60	y	0.70	38:48	0.989	0.984-0.994	8960	89.6										
13C-PCB-101	6.01e+07	1.59	y	0.78	37:30	0.956	0.951-0.961	8960	89.6										
13C-PCB-104	7.22e+07	1.60	y	1.00	32:39	0.832	0.828-0.836	8430	84.3										
13C-PCB-105	9.99e+07	1.59	y	1.37	43:04	0.929	0.924-0.934	8700	87.0										
13C-PCB-114	1.01e+08	1.62	y	1.36	42:13	0.910	0.905-0.915	8830	88.3										
13C-PCB-118	7.43e+07	1.59	y	0.96	41:33	1.059	1.054-1.064	9060	90.6										
13C-PCB-123	7.08e+07	1.60	y	0.89	41:22	1.055	1.050-1.060	9250	92.5										
13C-PCB-126	9.57e+07	1.60	y	1.31	45:19	0.977	0.972-0.982	8710	87.1										
13C-PCB-127	1.08e+08	1.58	y	1.47	43:25	0.936	0.931-0.941	8710	87.1										
13C-PCB-138	8.18e+07	1.28	y	1.10	44:48	0.966	0.961-0.971	8850	88.5										
13C-PCB-141	7.86e+07	1.30	y	1.07	43:58	0.948	0.943-0.953	8700	87.0										
13C-PCB-153	8.57e+07	1.29	y	1.15	43:13	0.932	0.927-0.937	8890	88.9										
13C-PCB-155	5.38e+07	1.35	y	0.84	37:02	0.944	0.939-0.949	7490	74.9										
13C-PCB-156	9.61e+07	1.28	y	1.30	48:05	1.037	1.032-1.042	8810	88.1										
13C-PCB-157	9.99e+07	1.30	y	1.36	48:21	1.043	1.038-1.048	8750	87.5										
13C-PCB-159	9.35e+07	1.30	y	1.25	46:06	0.994	0.989-0.999	8920	89.2										
13C-PCB-167	1.01e+08	1.27	y	1.35	46:47	1.009	1.004-1.014	8920	89.2										
13C-PCB-169	9.23e+07	1.29	y	1.29	50:27	1.088	1.083-1.093	8540	85.4										
13C-PCB-170	3.69e+07	0.48	y	0.54	50:48	1.095	1.089-1.101	8100	81.0										
13C-PCB-180	4.49e+07	0.47	y	0.68	49:22	1.065	1.060-1.070	7820	78.2										
13C-PCB-188	6.42e+07	0.46	y	0.92	42:51	0.924	0.919-0.929	8330	83.3										
13C-PCB-189	4.69e+07	0.46	y	0.72	52:15	1.127	1.120-1.132	7780	77.8										
13C-PCB-194	6.04e+07	0.91	y	0.80	53:46	0.995	0.990-1.000	8900	89.0										
13C-PCB-202	5.11e+07	0.92	y	0.84	48:17	1.041	1.036-1.046	7250	72.5										
13C-PCB-206	4.89e+07	0.80	y	0.65	55:25	1.025	1.021-1.031	8850	88.5										
13C-PCB-208	7.33e+07	0.79	y	1.08	53:00	0.981	0.976-0.986	7970	79.7										
13C-PCB-209	4.88e+07	1.22	y	0.61	56:44	1.050	1.045-1.055	9400	94.0										

Analyst: DMS

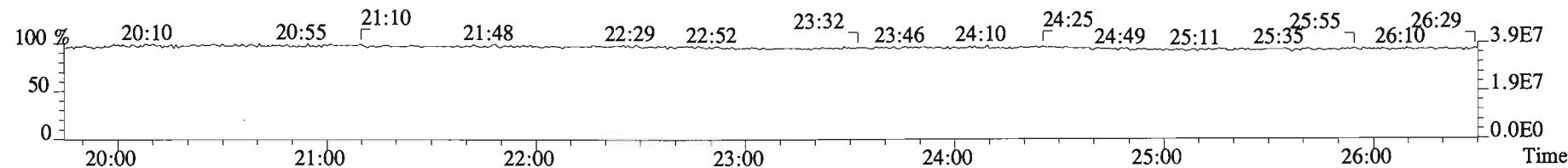
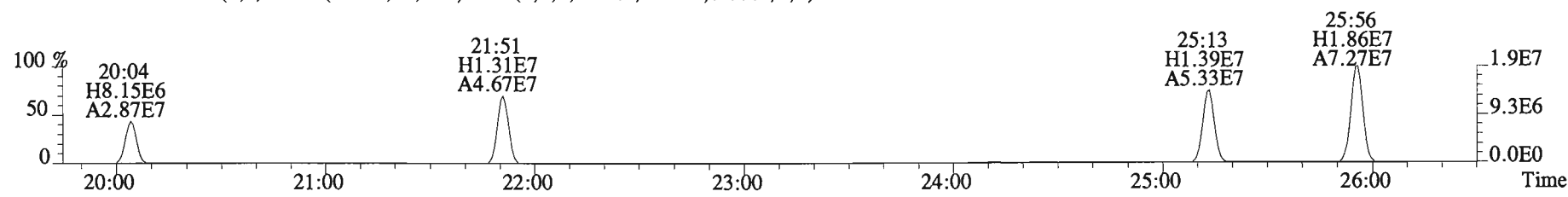
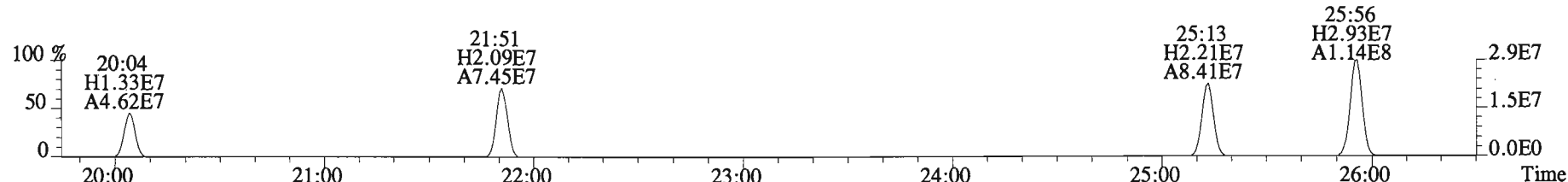
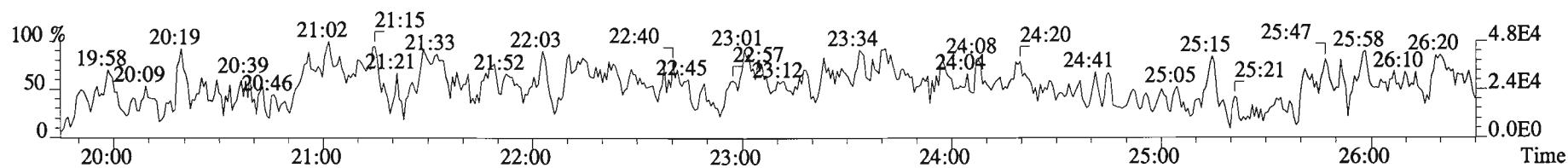
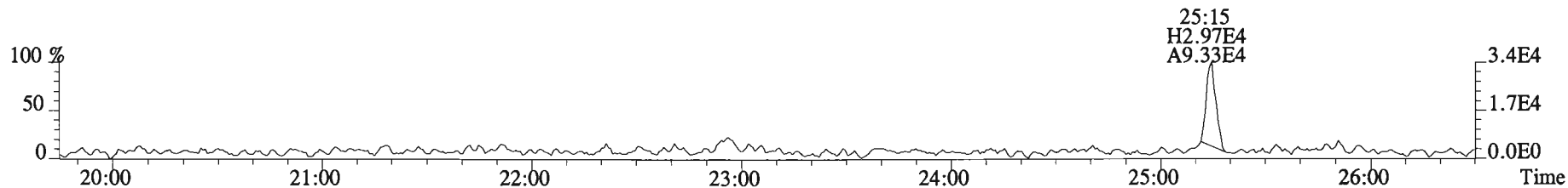
Date: 2/9/15



File:150205E1 #1-728 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
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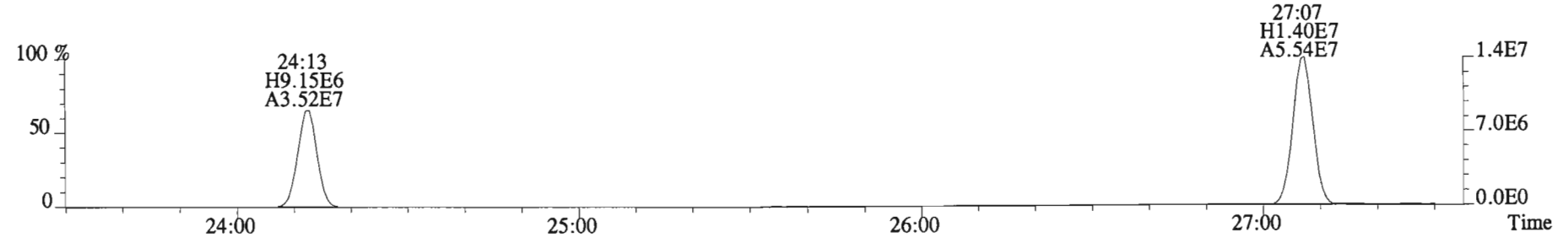
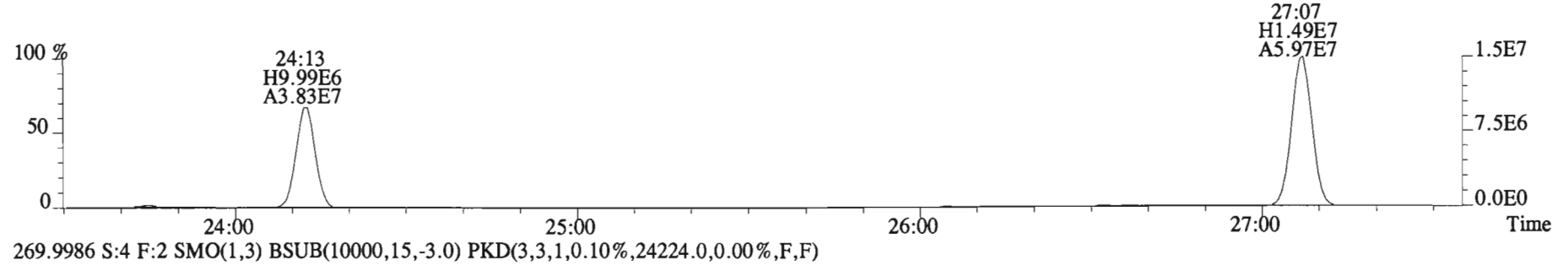
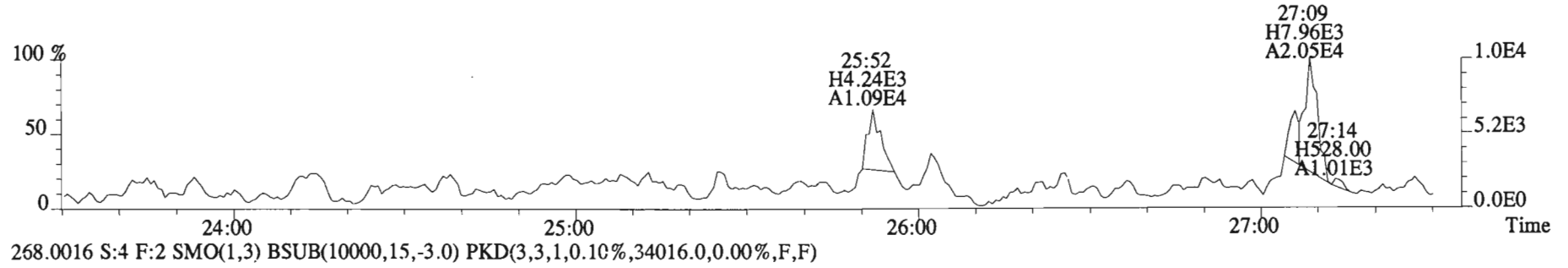
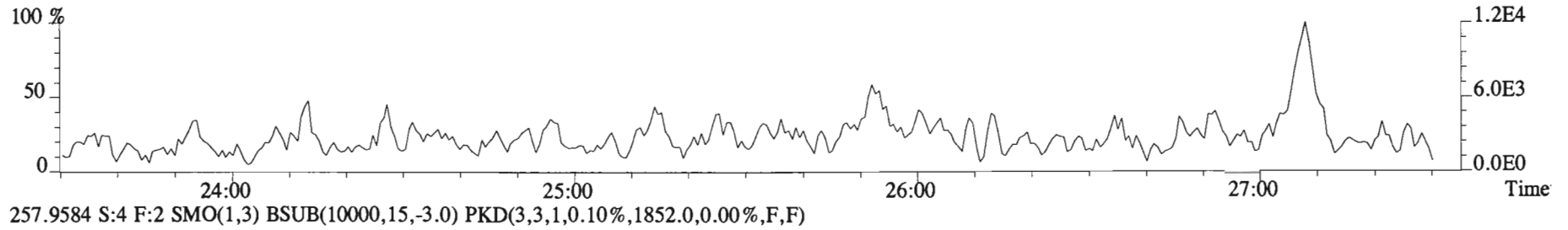


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222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3412.0,0.00%,F,F)

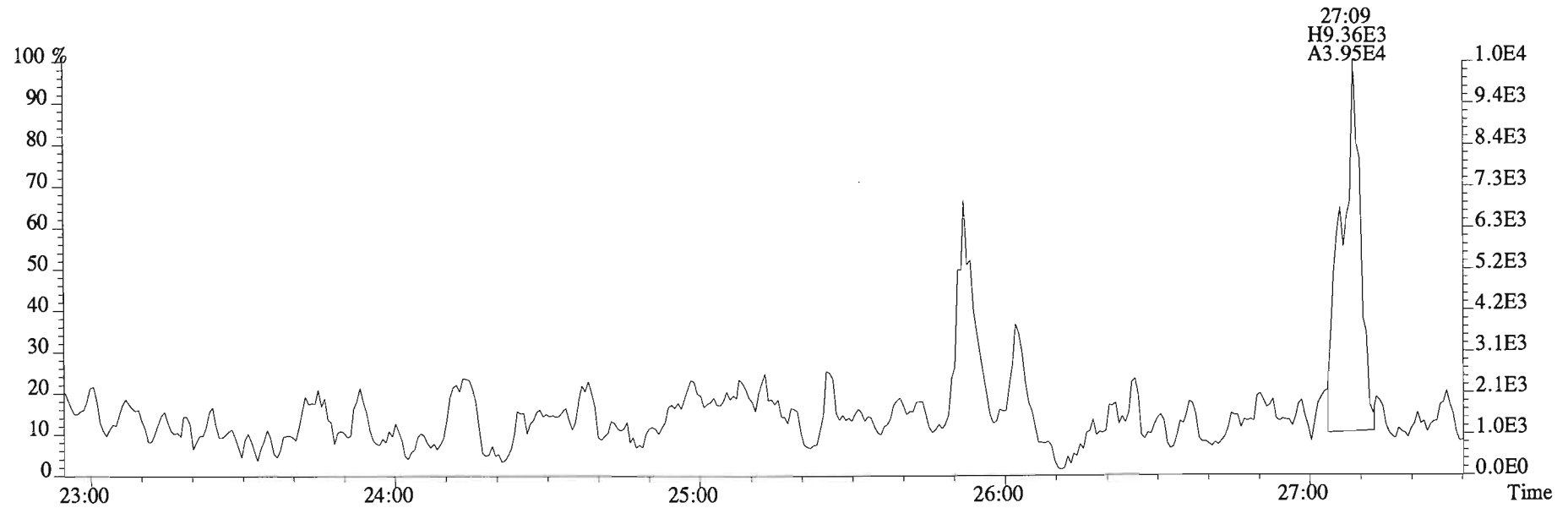
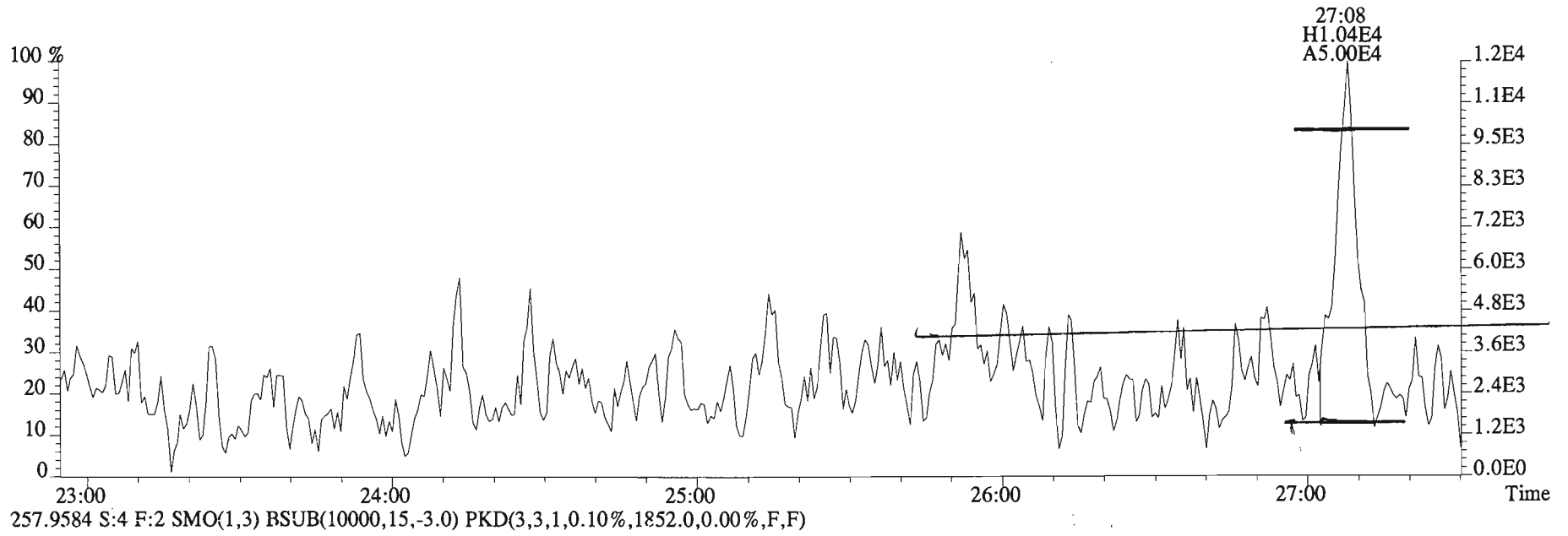


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Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
255.9613 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3320.0,0.00%,F,F)

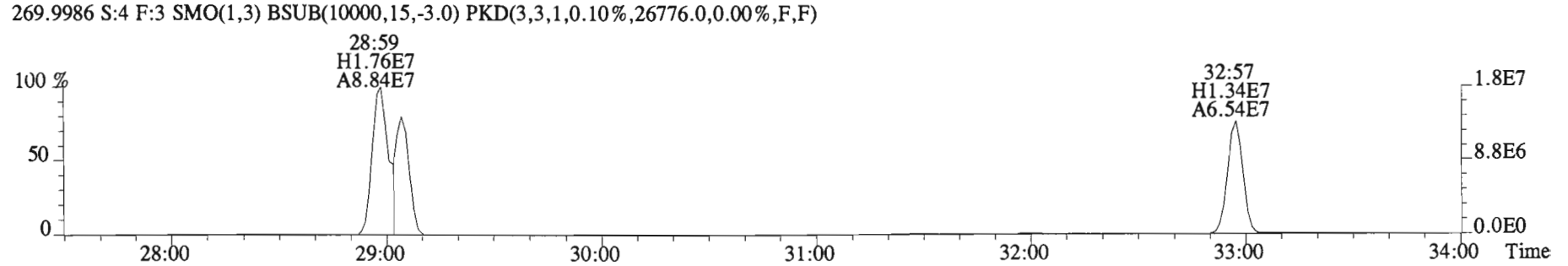
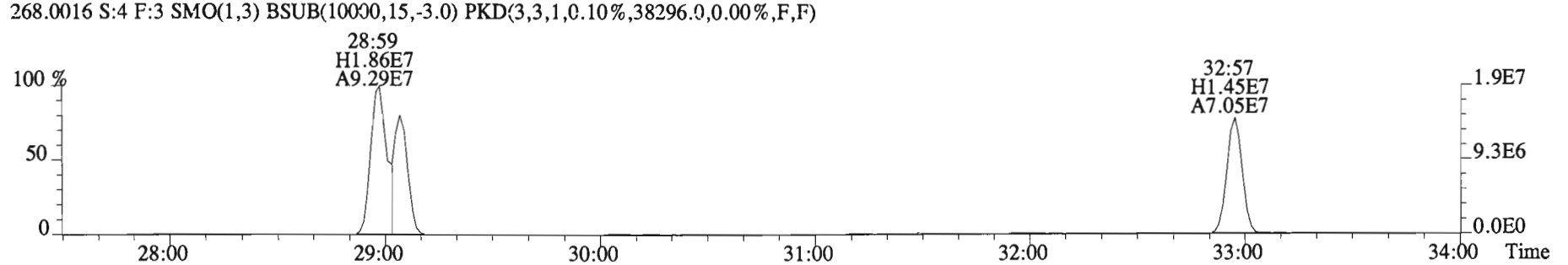
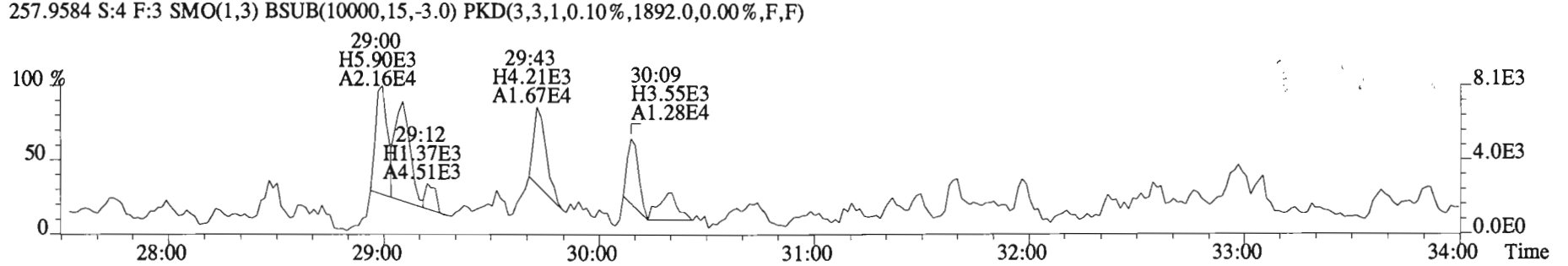
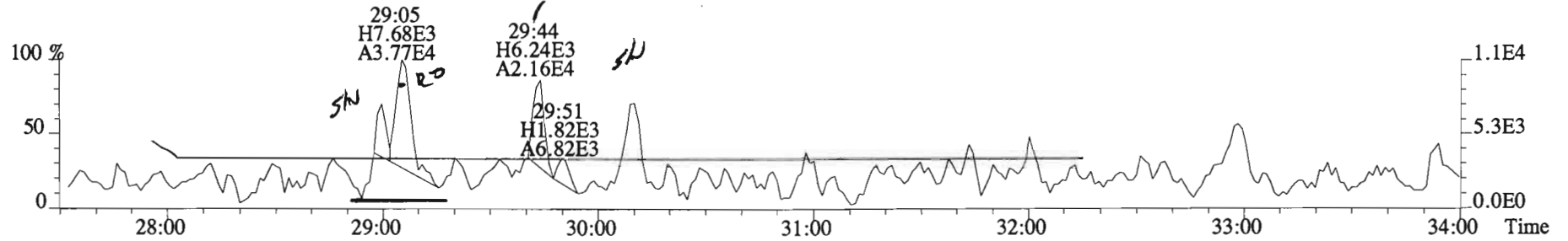
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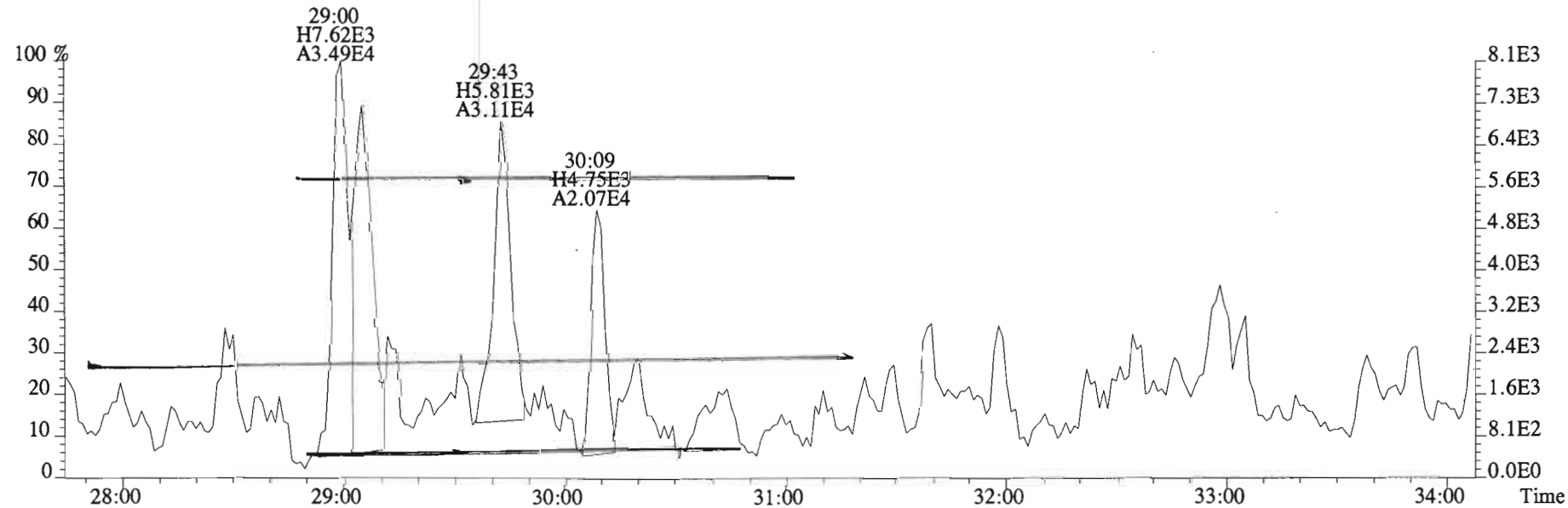
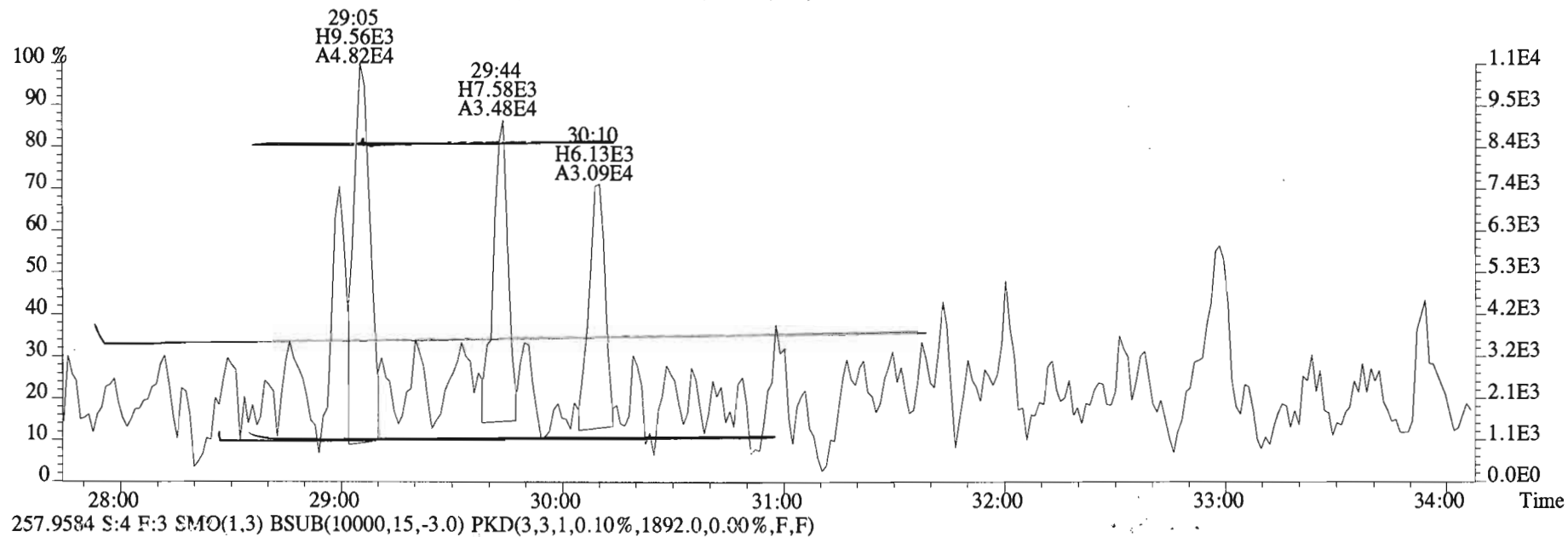
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Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
255.9613 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3320.0,0.00%,F,F)



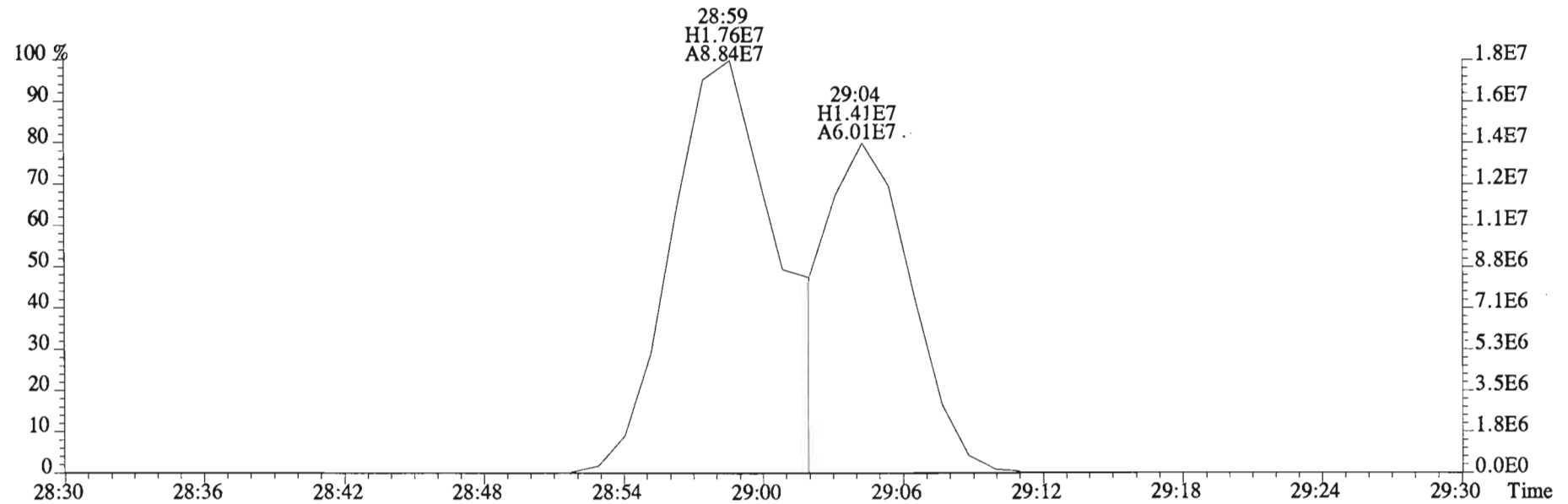
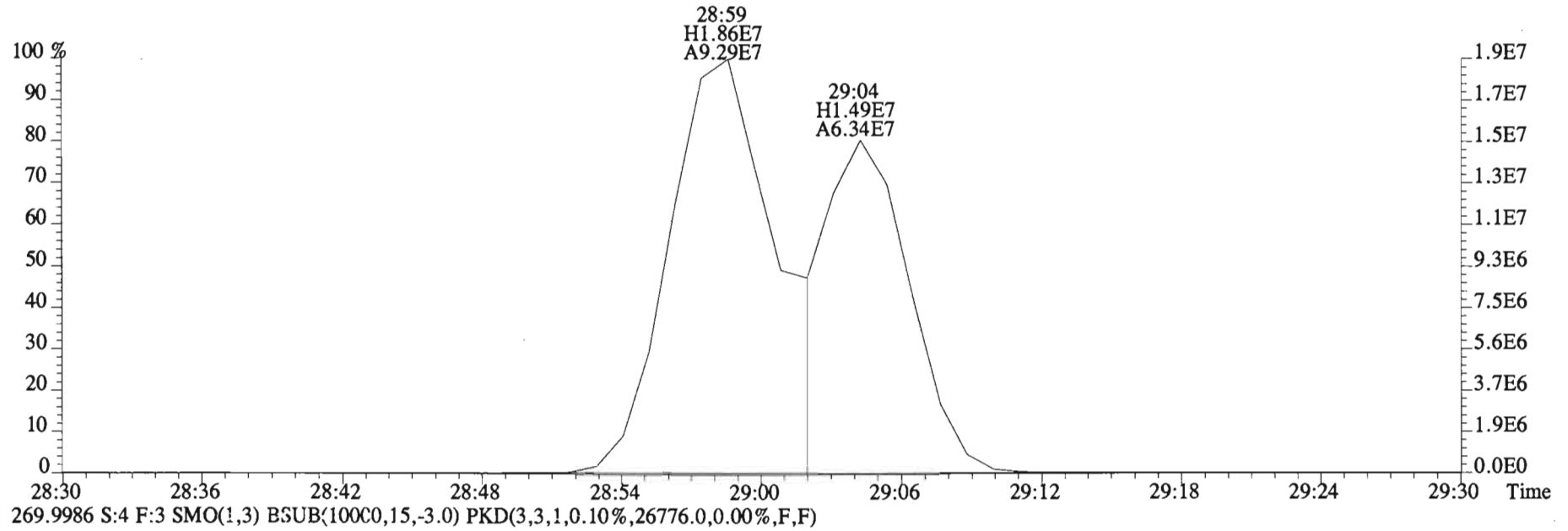
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Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2904.0,0.00%,F,F)



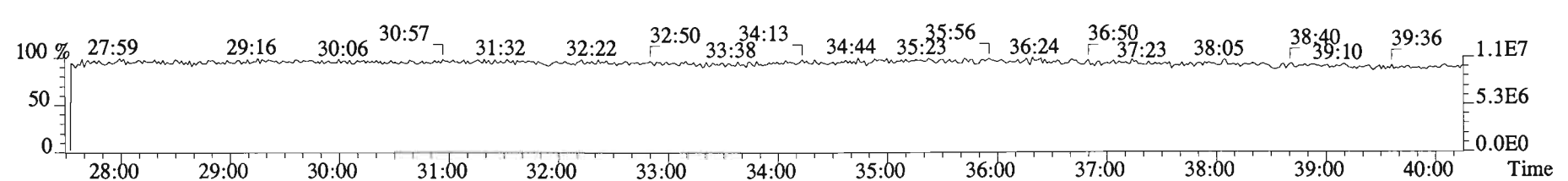
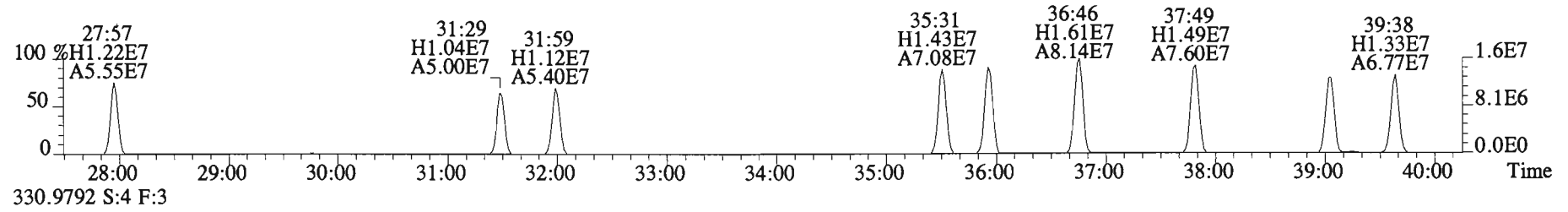
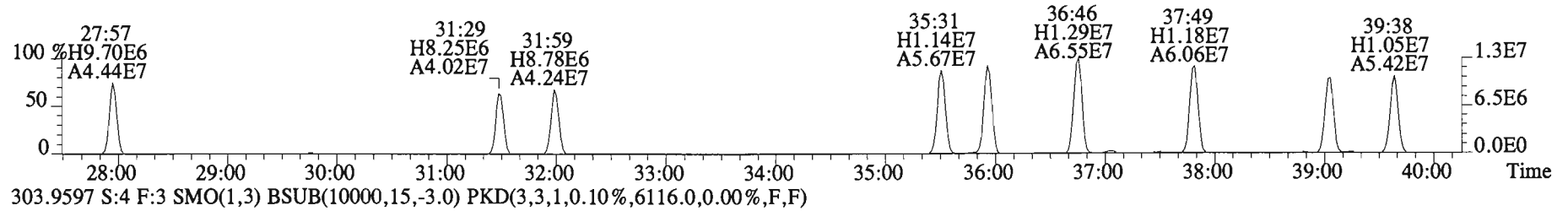
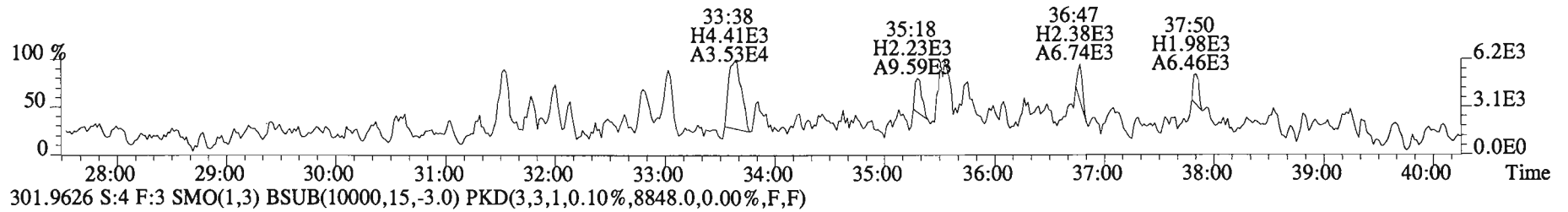
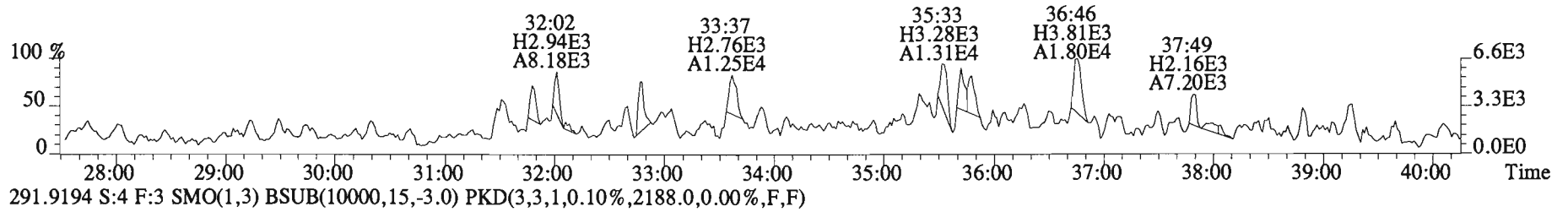
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#4 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BLK1 Method Blank 10 Exp: PCB\_ZB1  
 255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2904.0,0.00%,F,F)



File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,38296.0,0.00%,F,F)

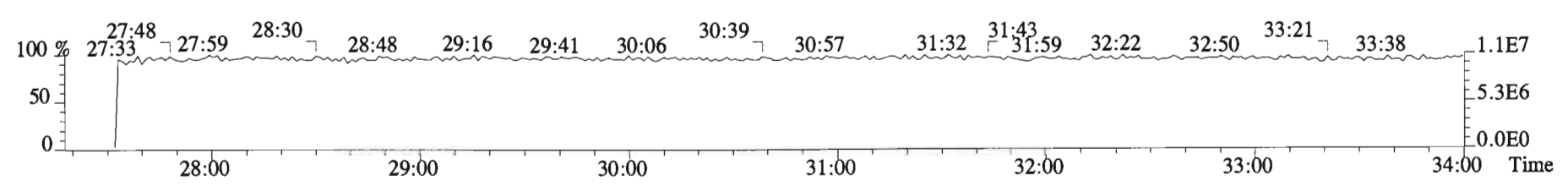
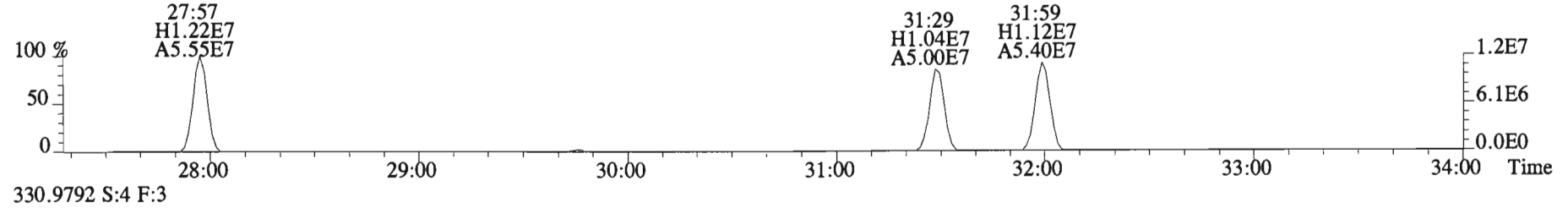
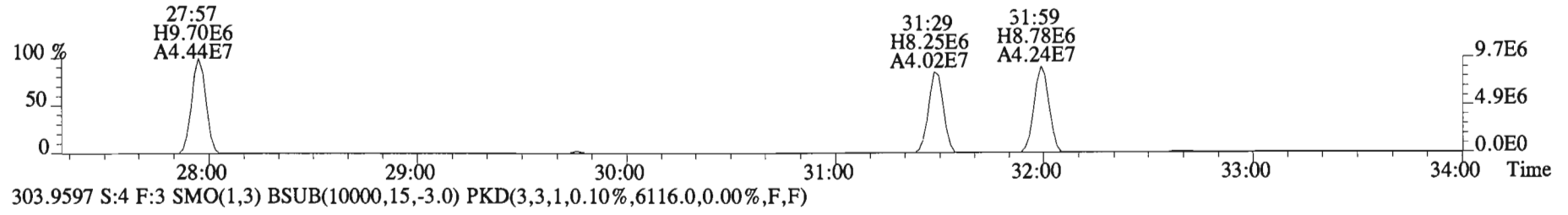
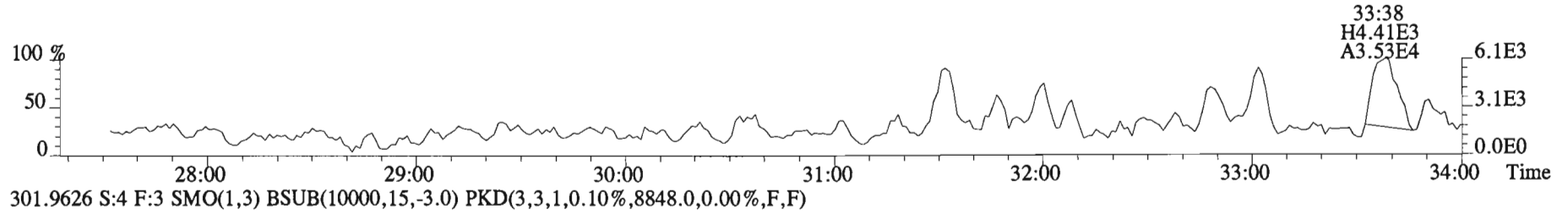
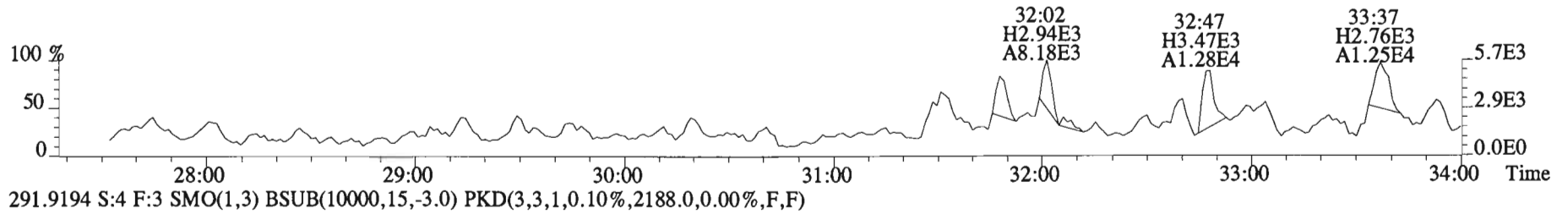


File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
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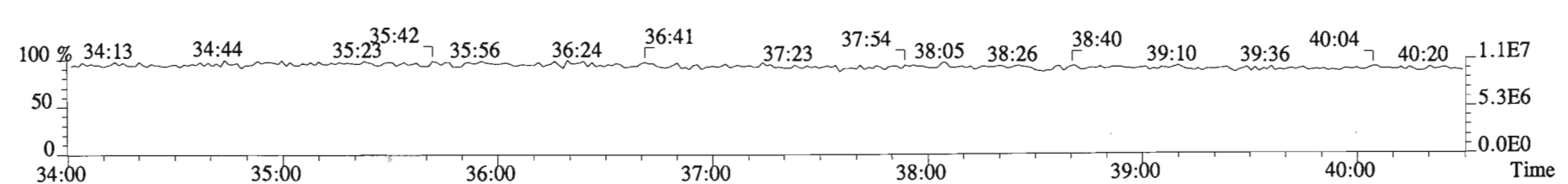
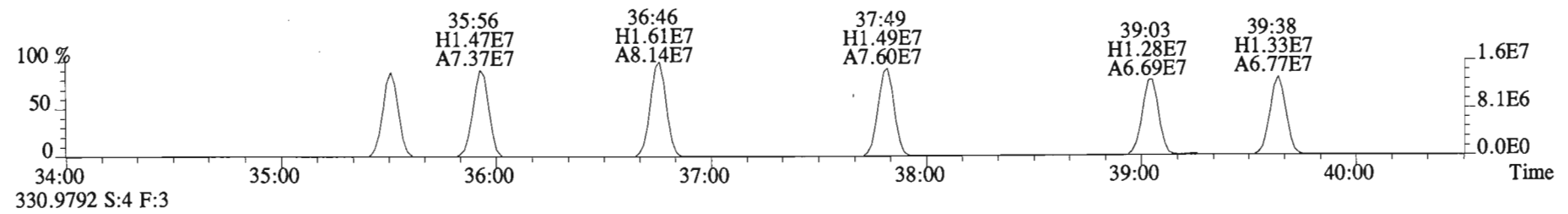
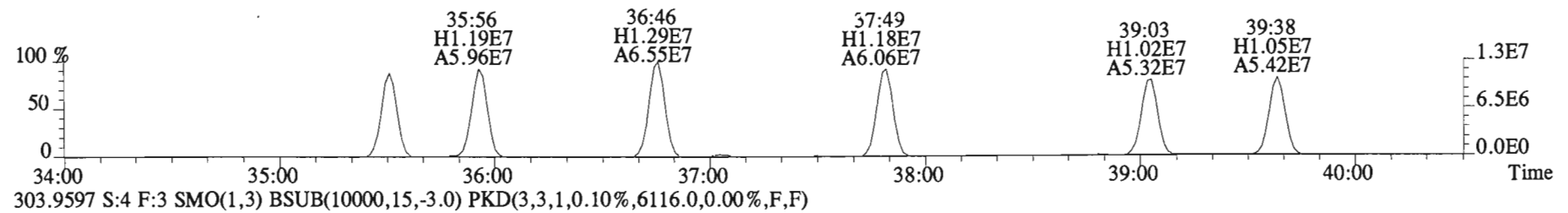
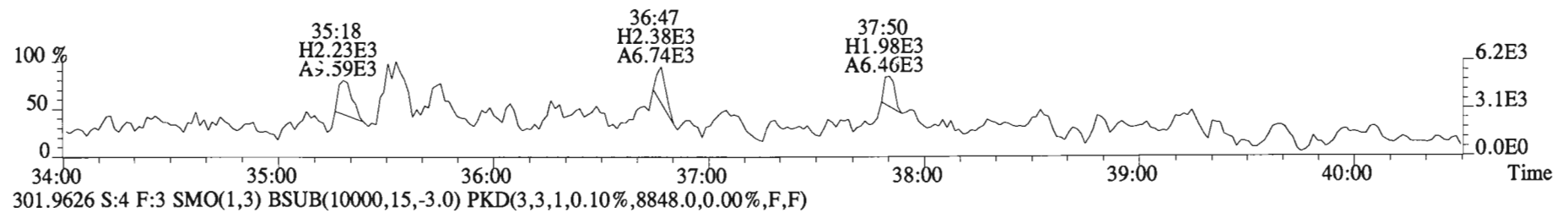
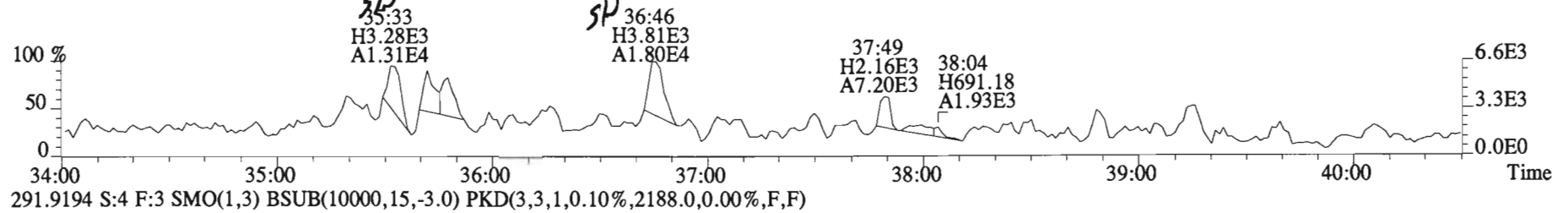




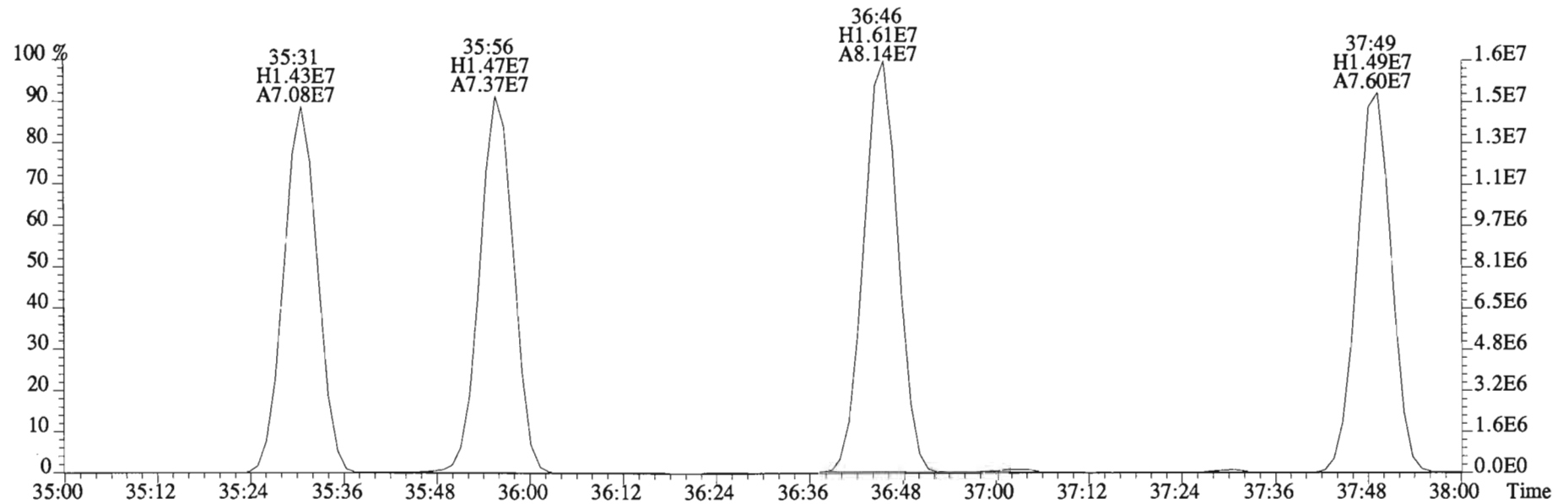
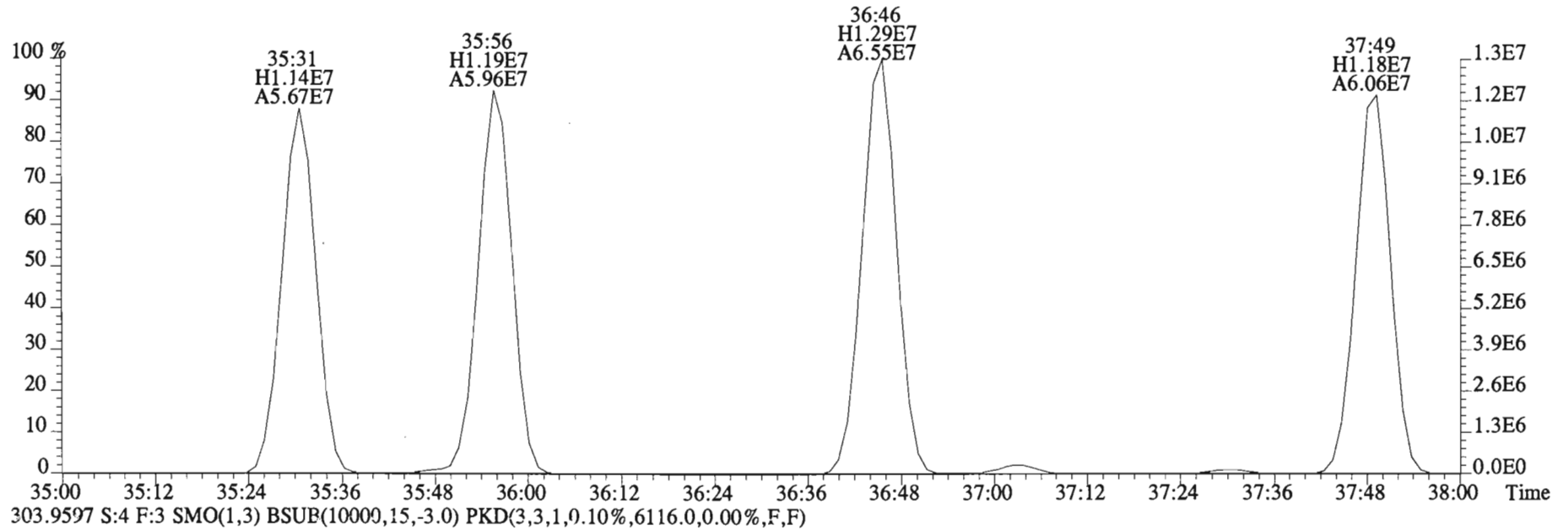
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
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289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2088.0,0.00%,F,F)



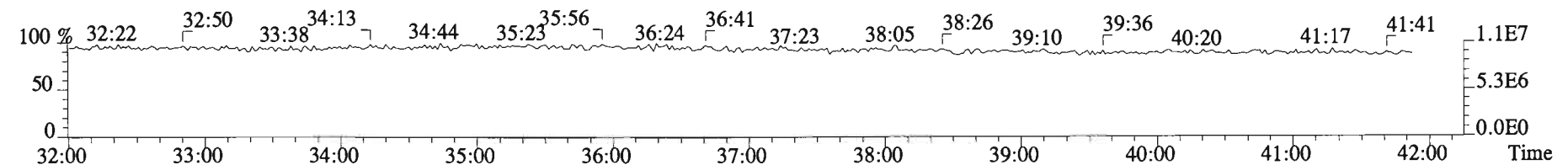
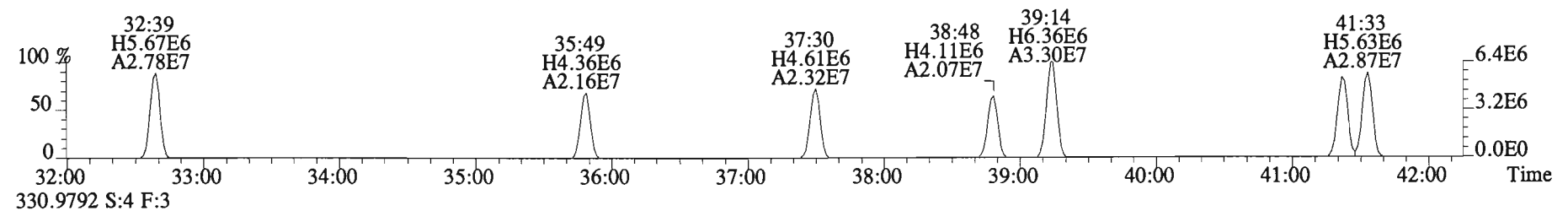
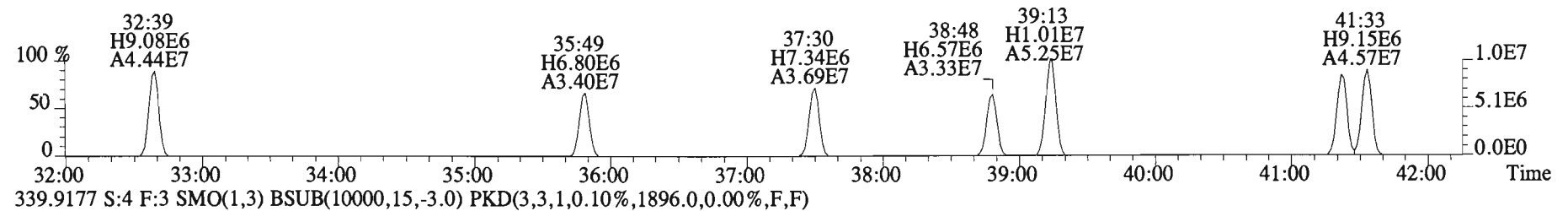
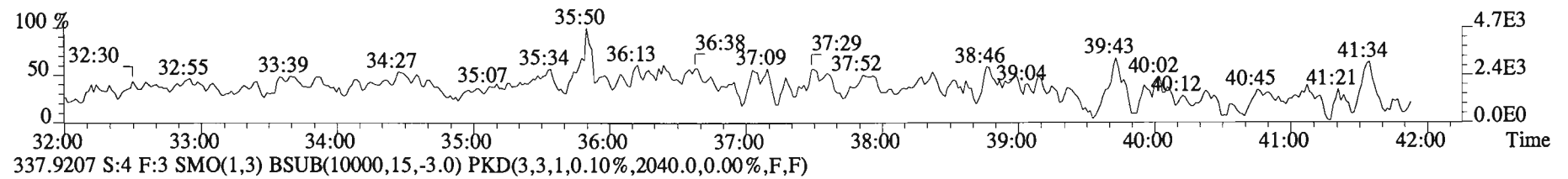
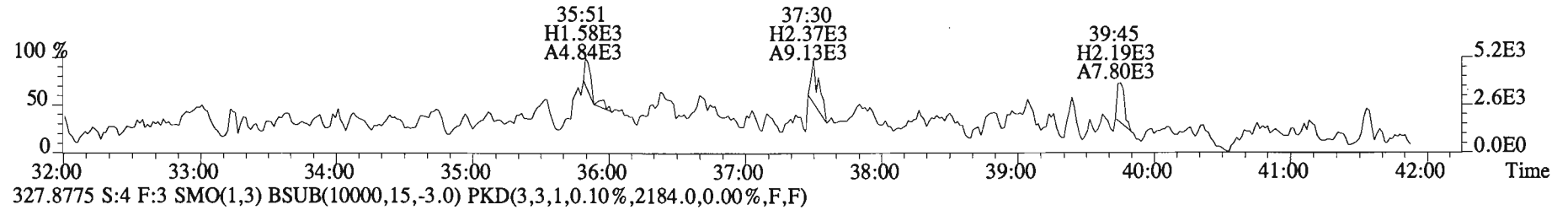
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 289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2088.0,0.00%,F,F)



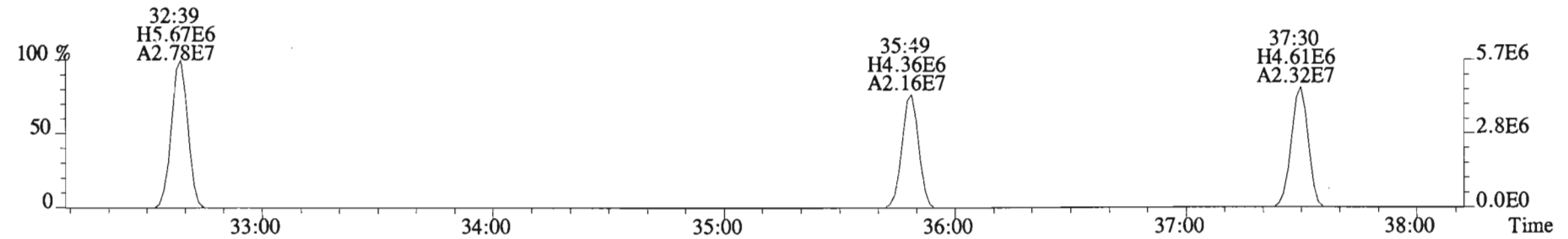
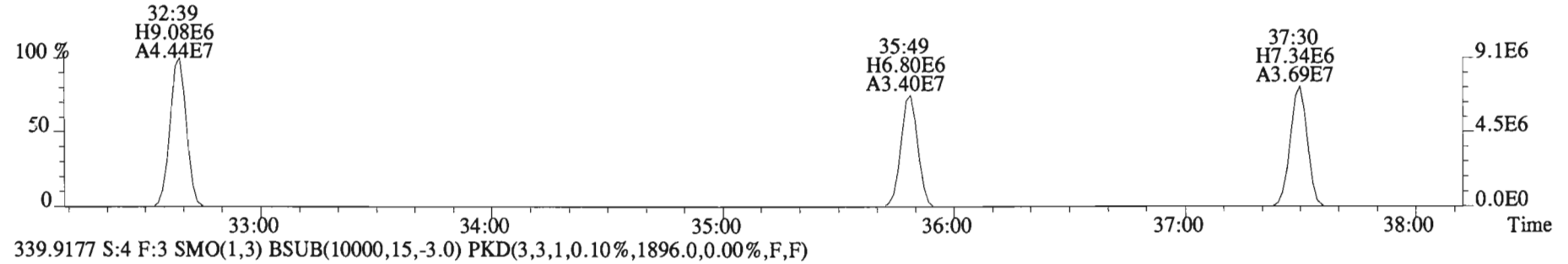
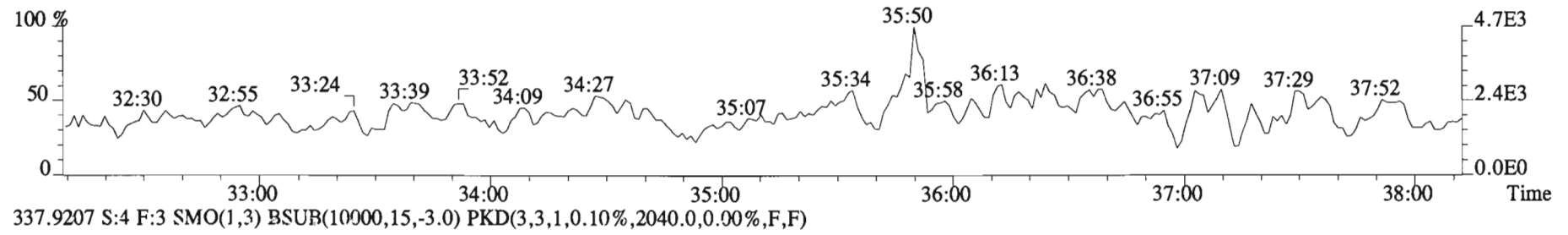
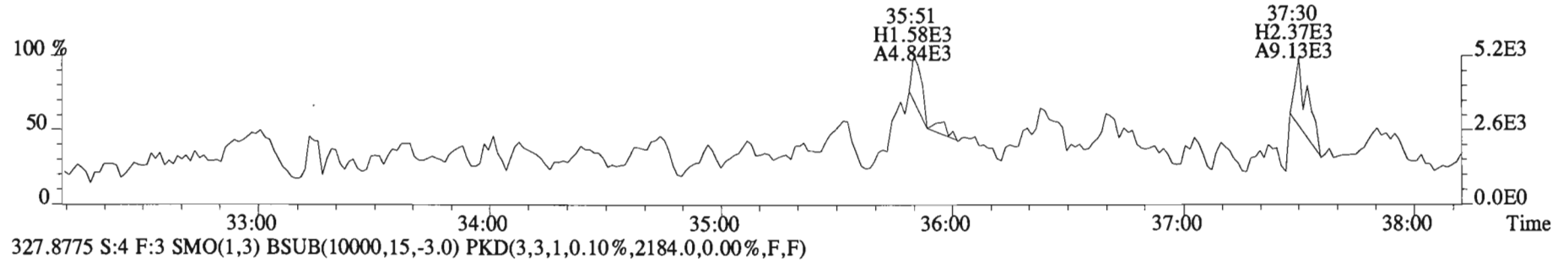
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8848.0,0.00%,F,F)



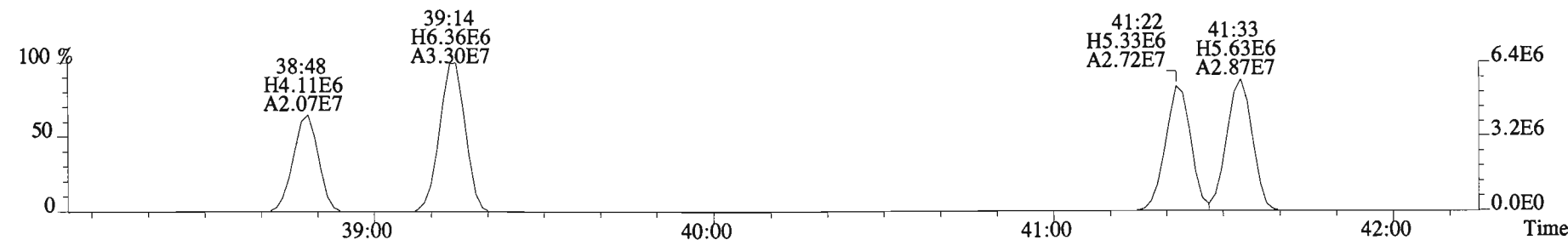
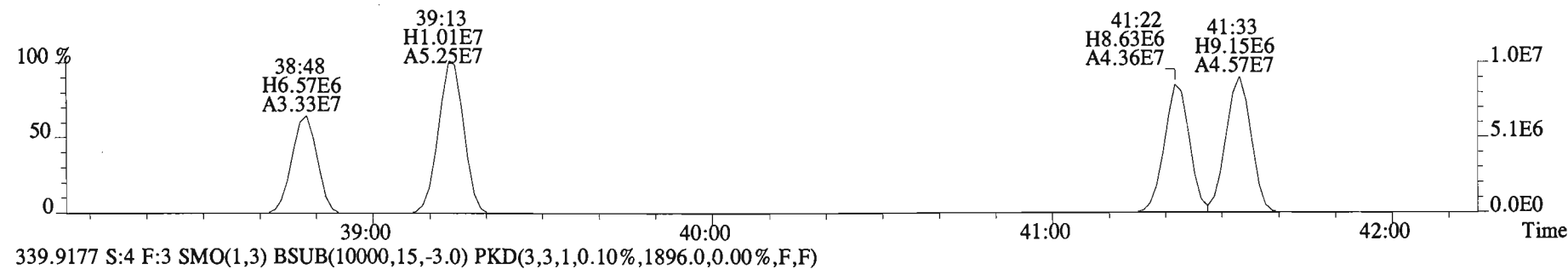
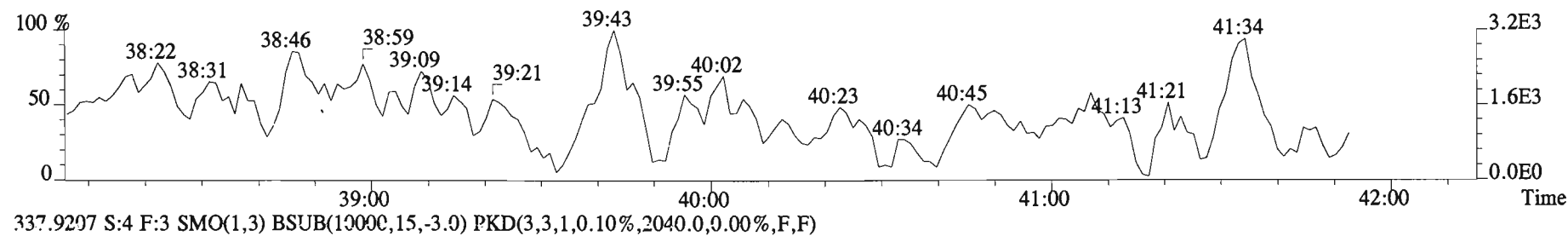
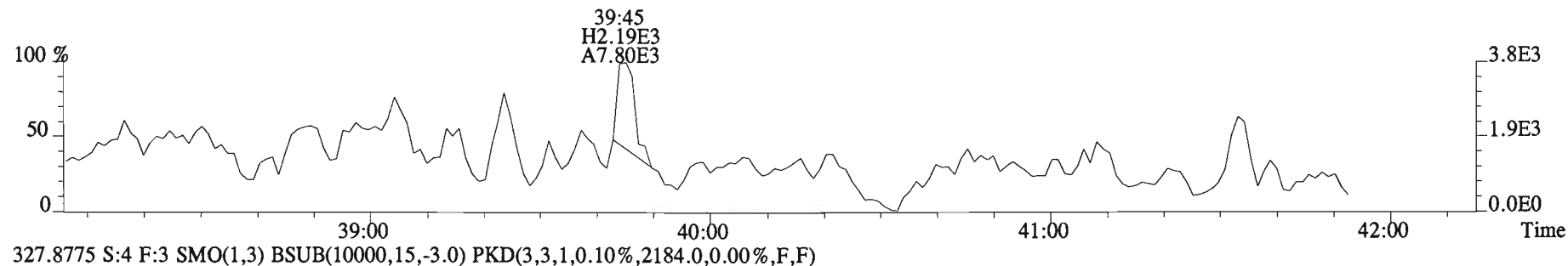
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976.0,0.00%,F,F)



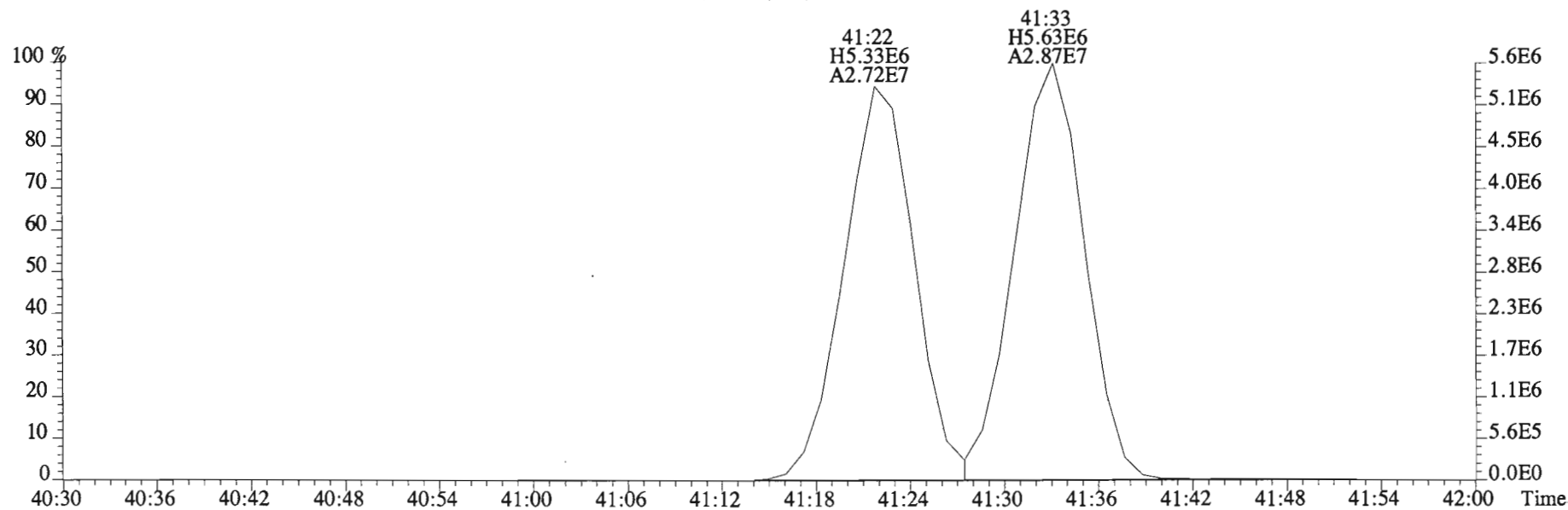
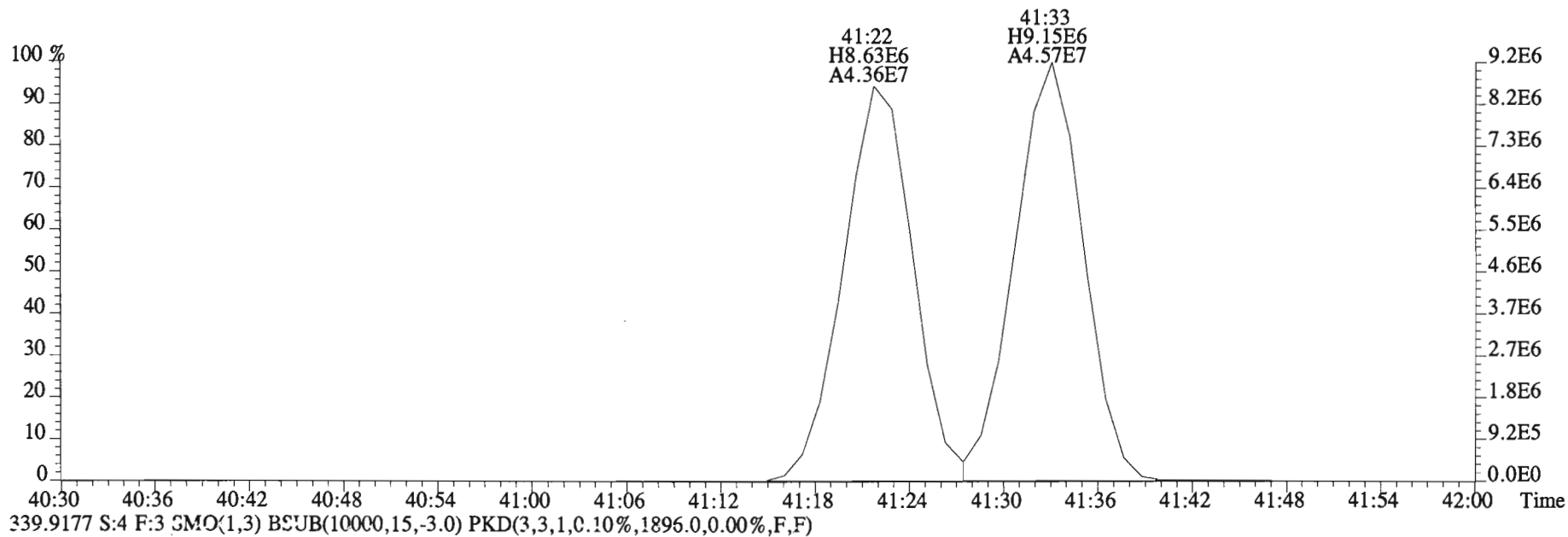
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Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976.0,0.00%,F,F)



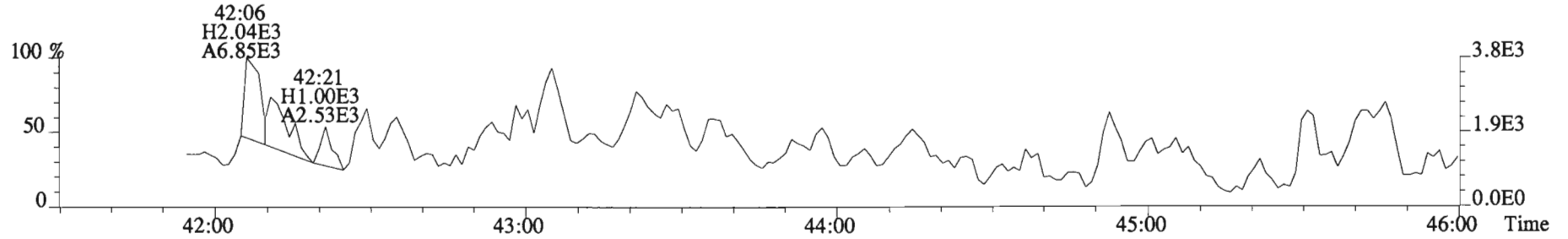
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
 325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976.0,0.00%,F,F)



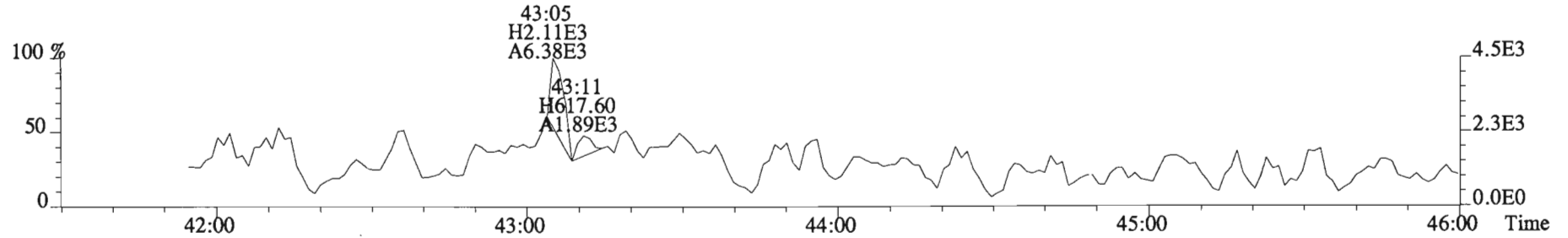
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2040.0,0.00%,F,F)



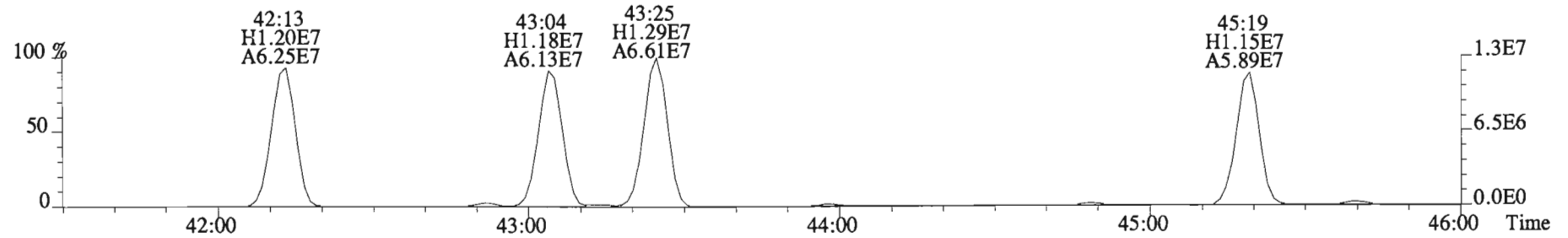
File:150205E1 #1-555 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
325.8804 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2076.0,0.00%,F,F)



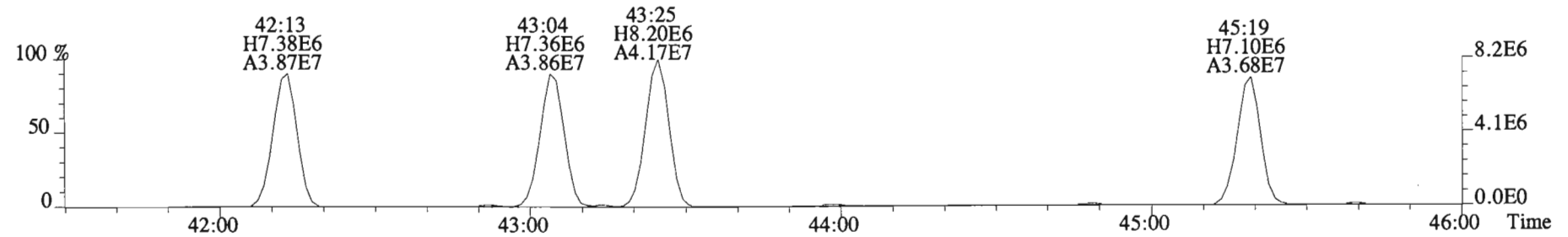
327.8775 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1836.0,0.00%,F,F)



337.9207 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6172.0,0.00%,F,F)

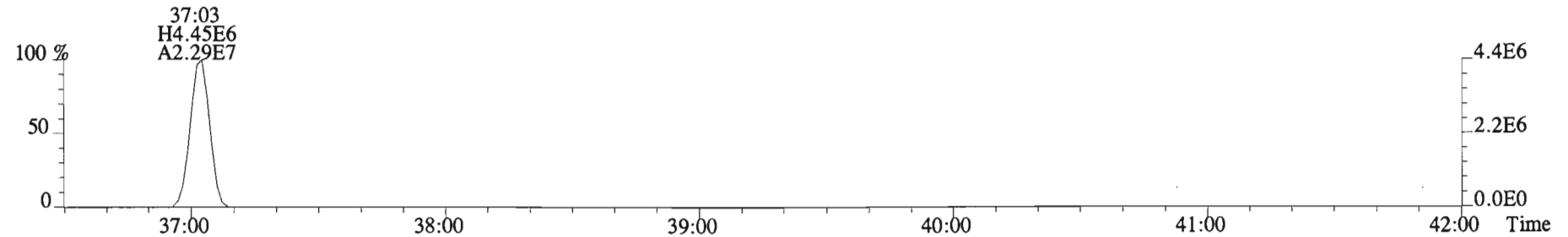
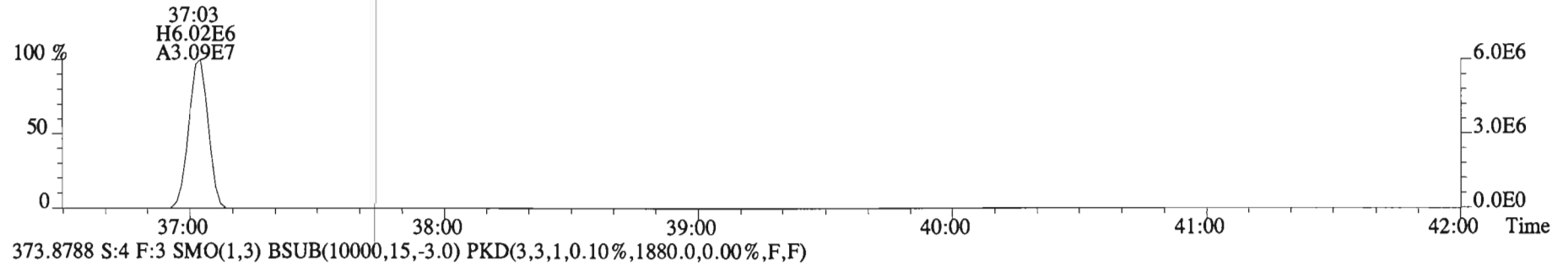
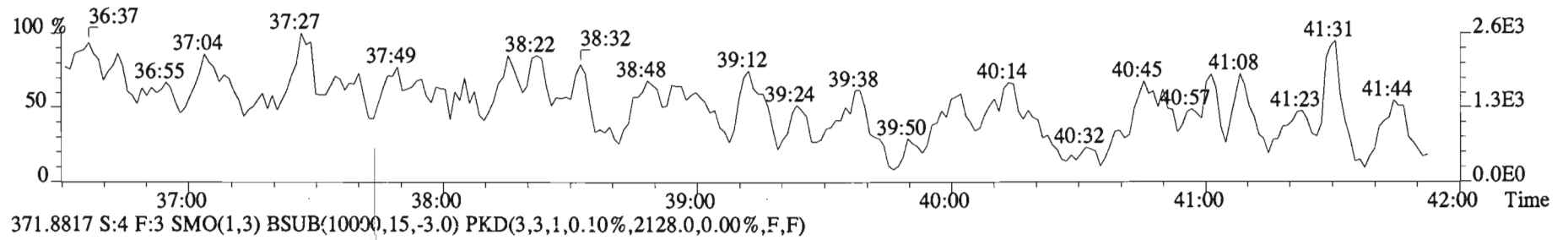
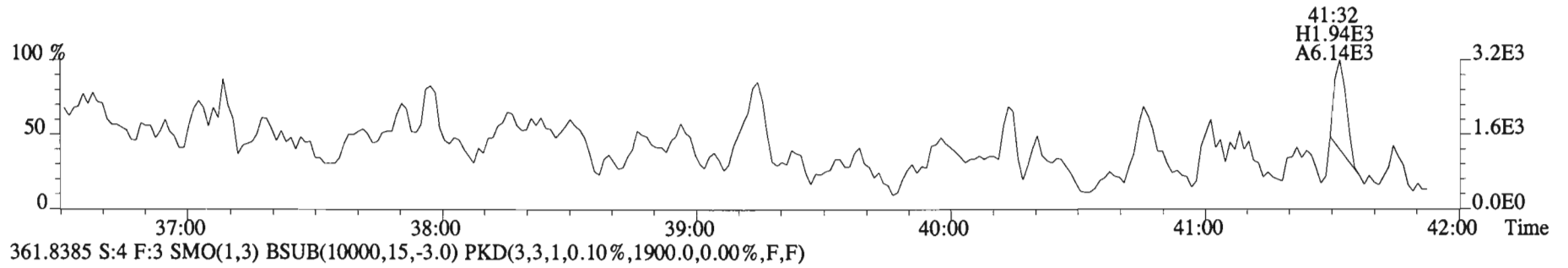


339.9177 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4572.0,0.00%,F,F)

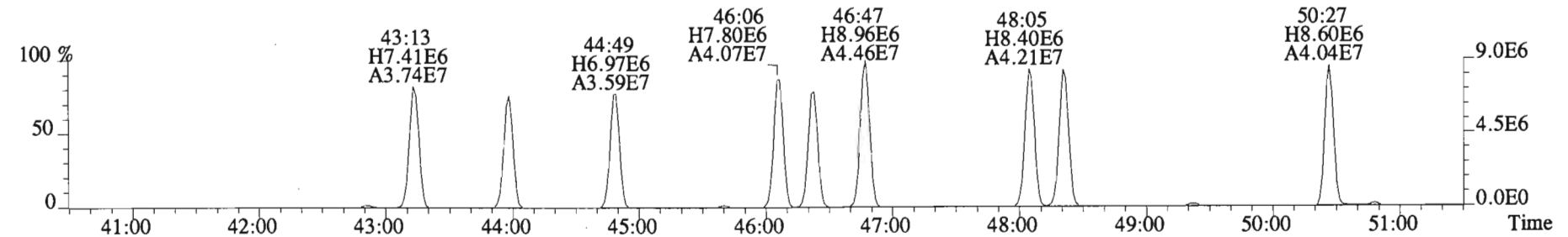
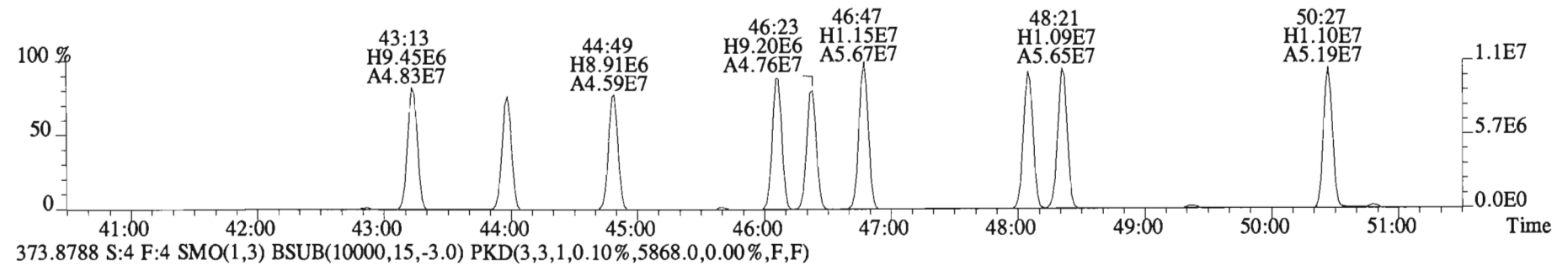
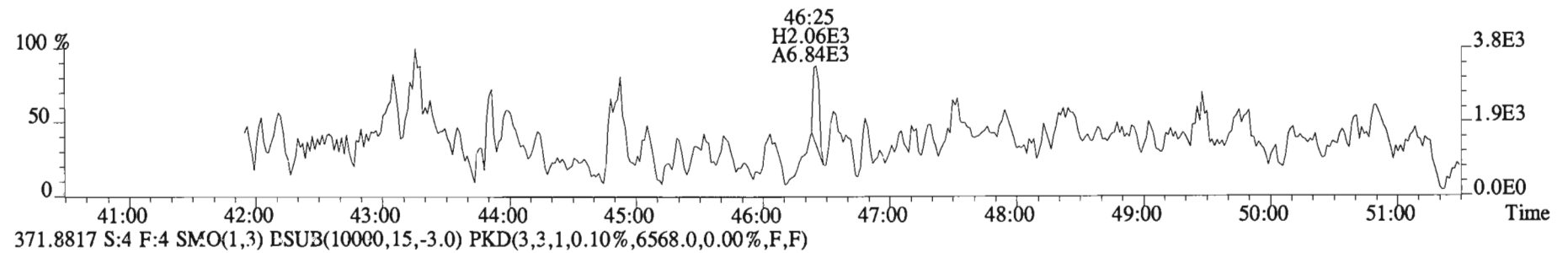
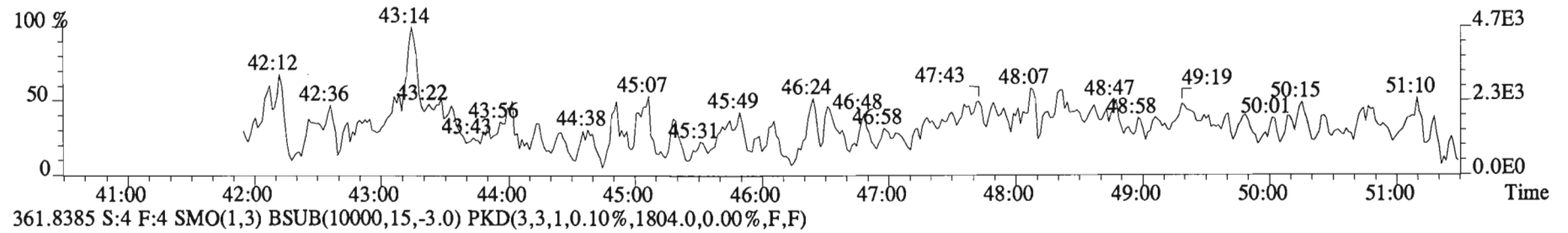




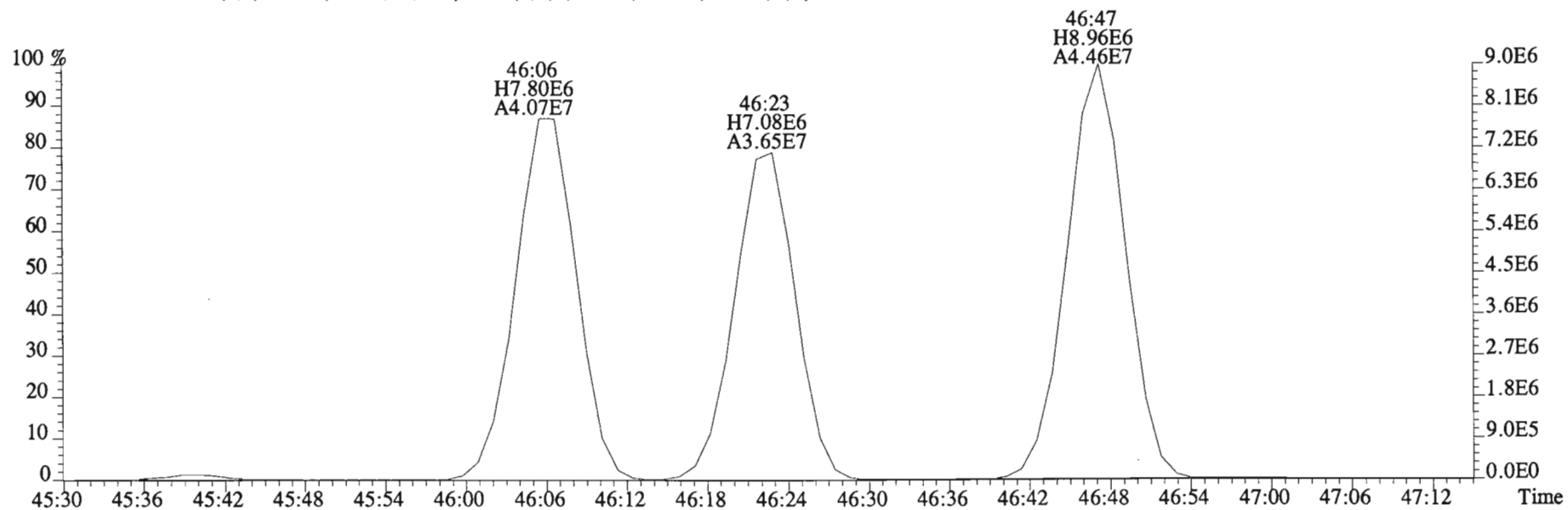
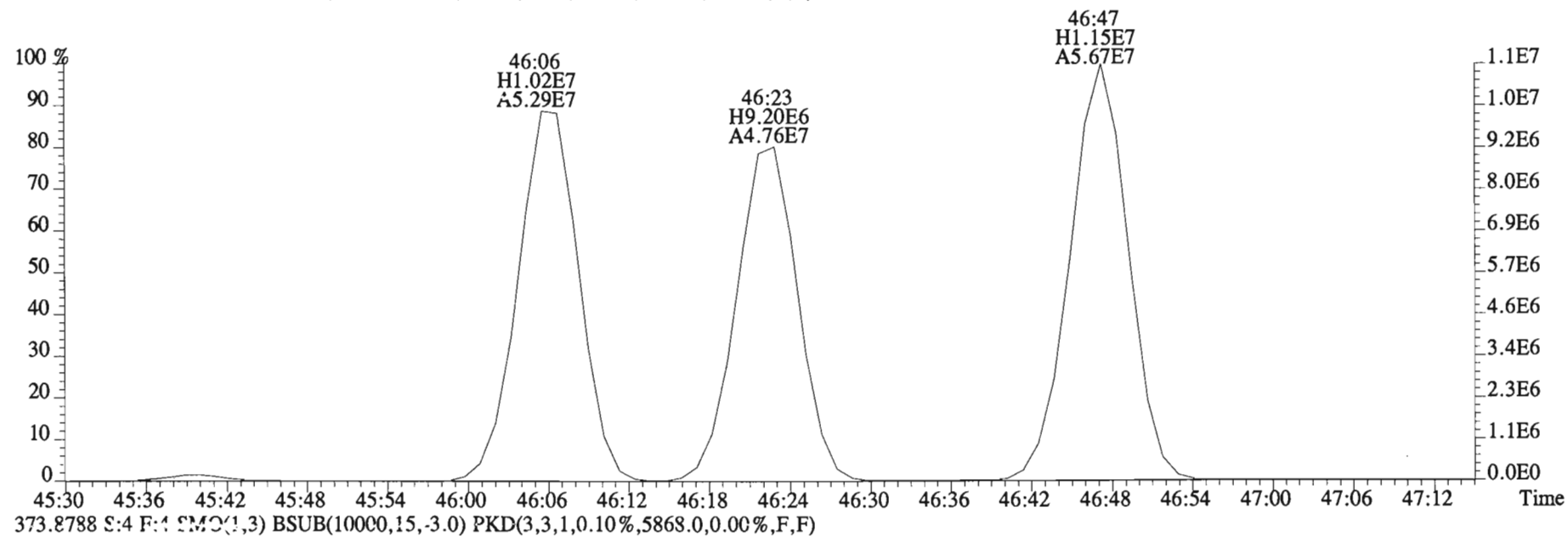
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
359.8415 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1876.0,0.00%,F,F)



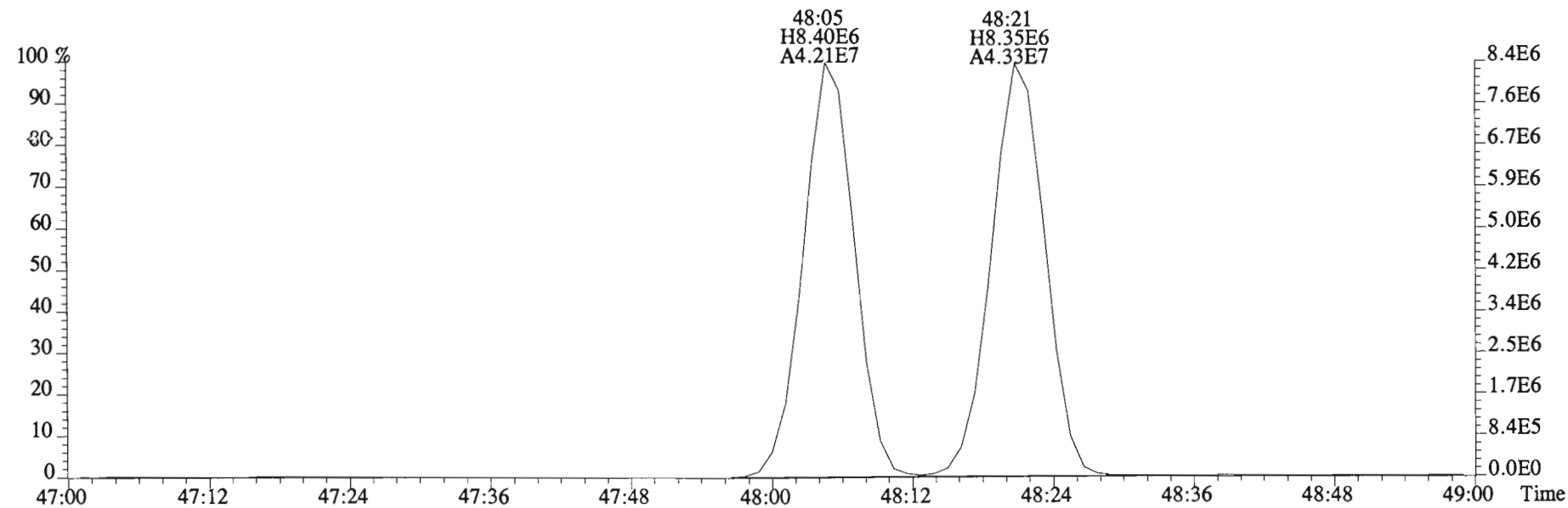
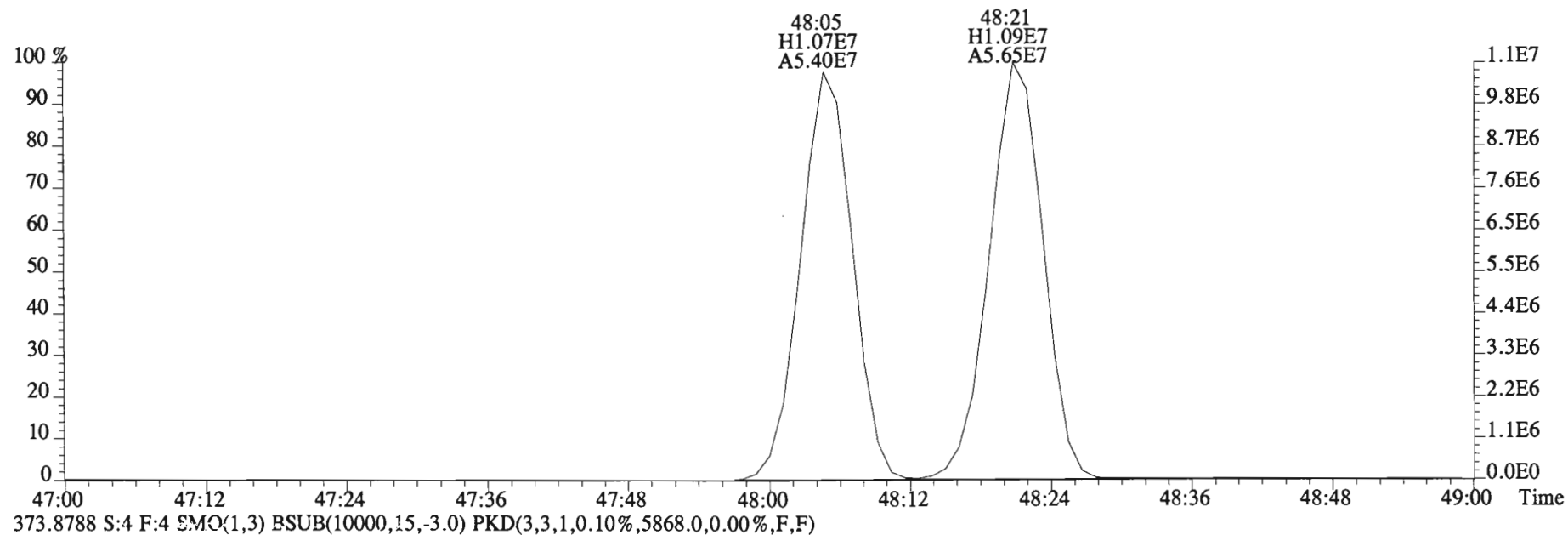
File:150205E1 #1-555 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
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 359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1920.0,0.00%,F,F)



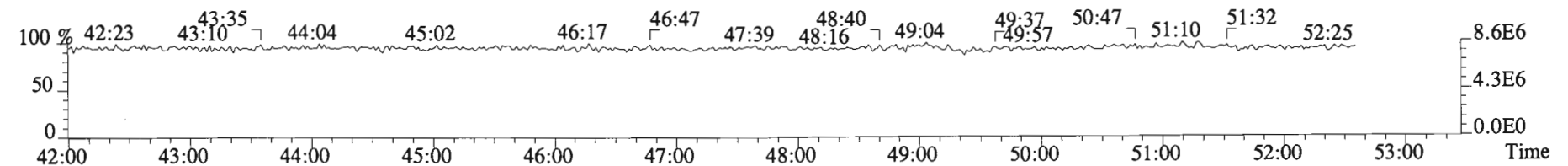
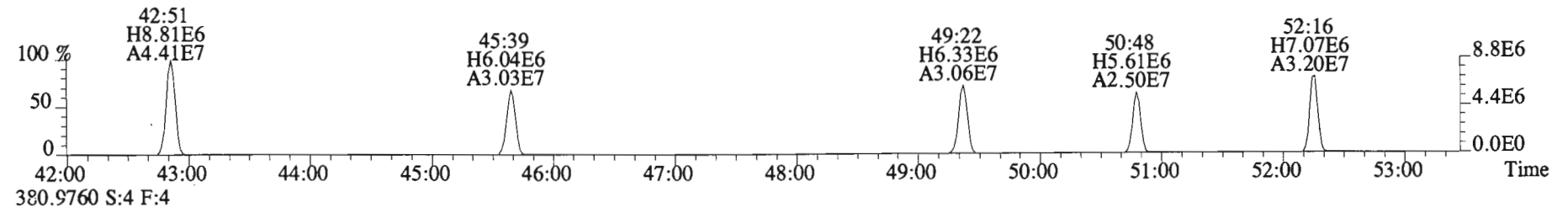
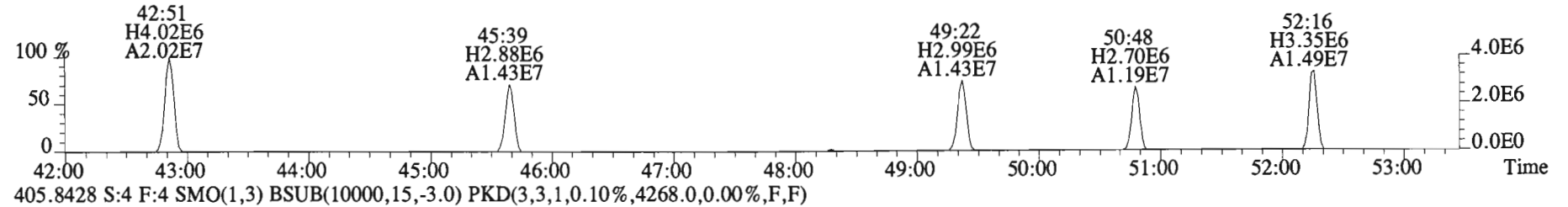
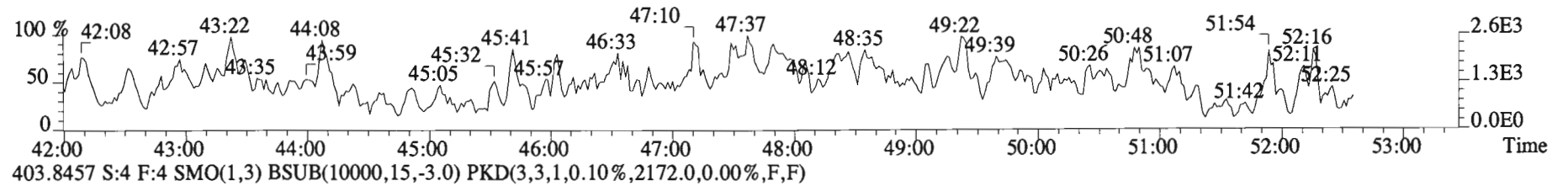
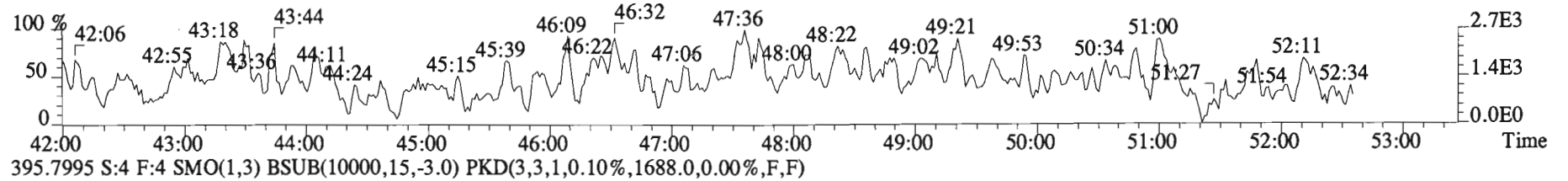
File:150205E1 #1-555 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6568.0,0.00%,F,F)



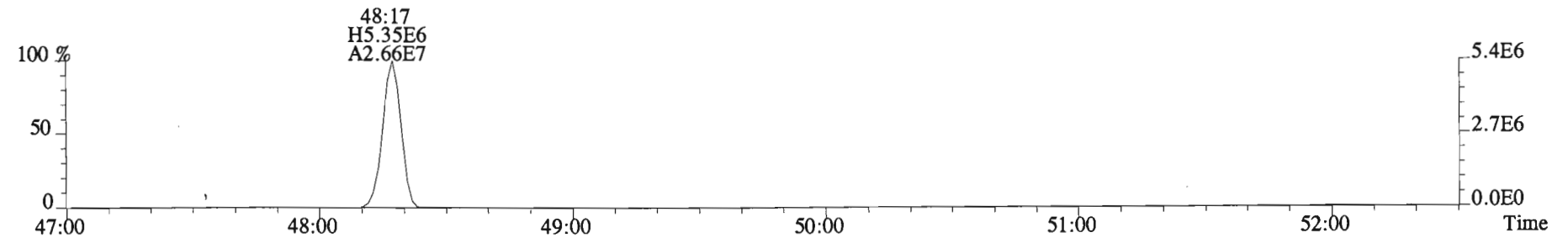
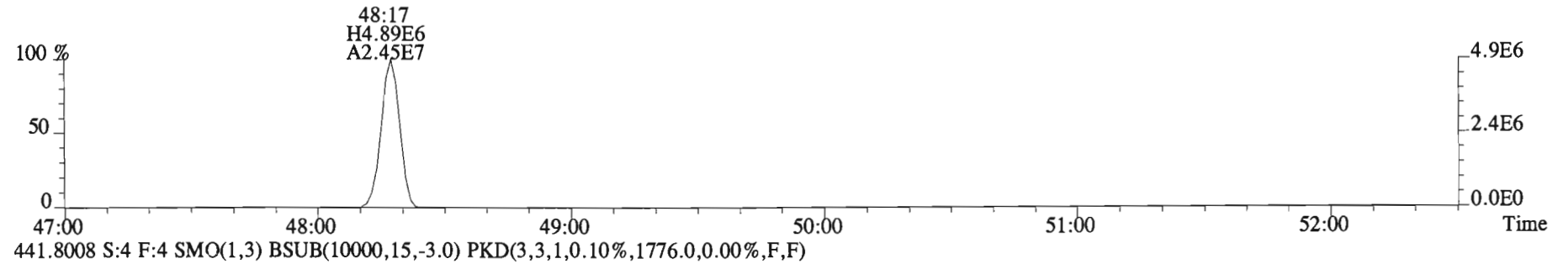
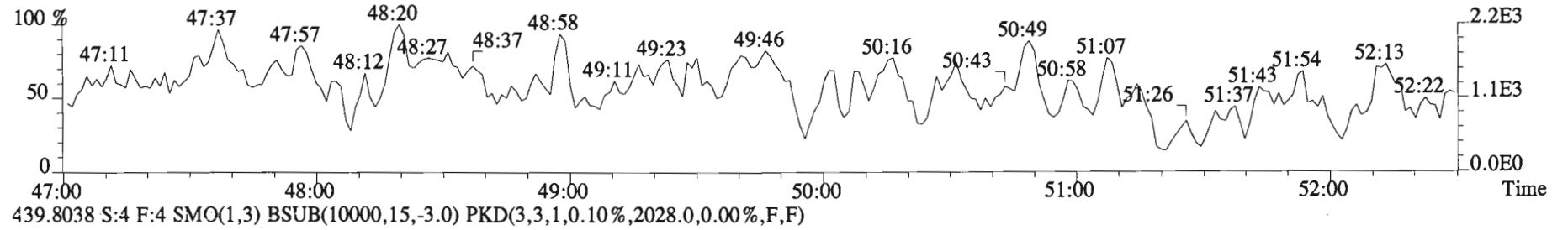
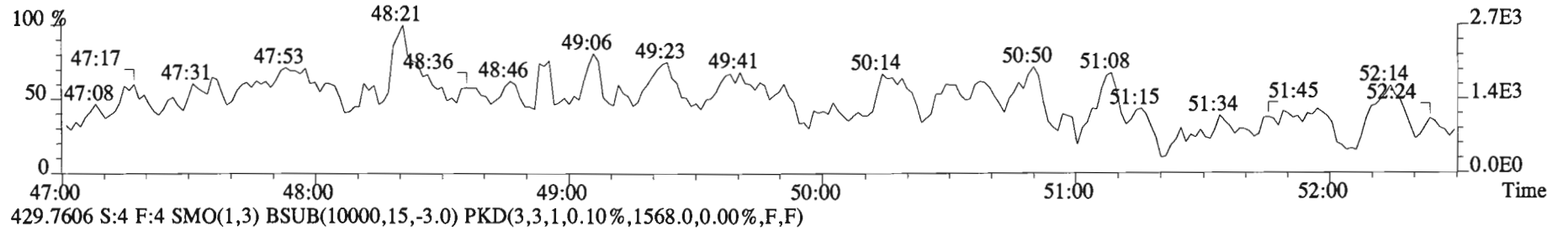
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371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6568.0,0.00%,F,F)



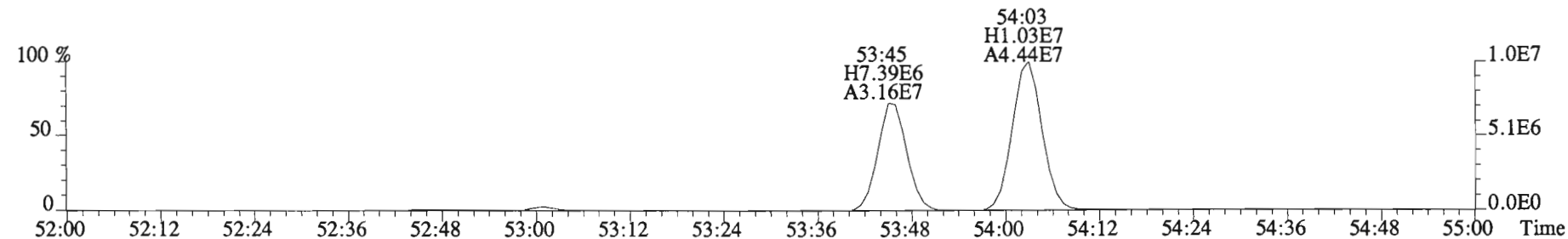
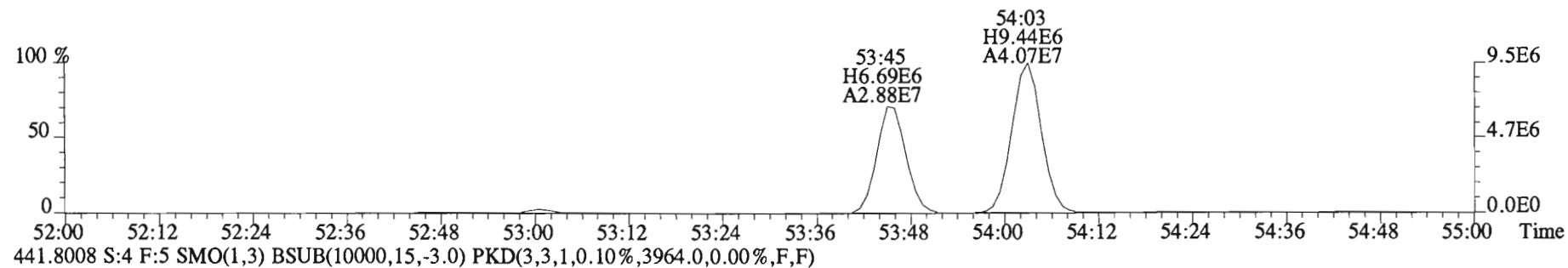
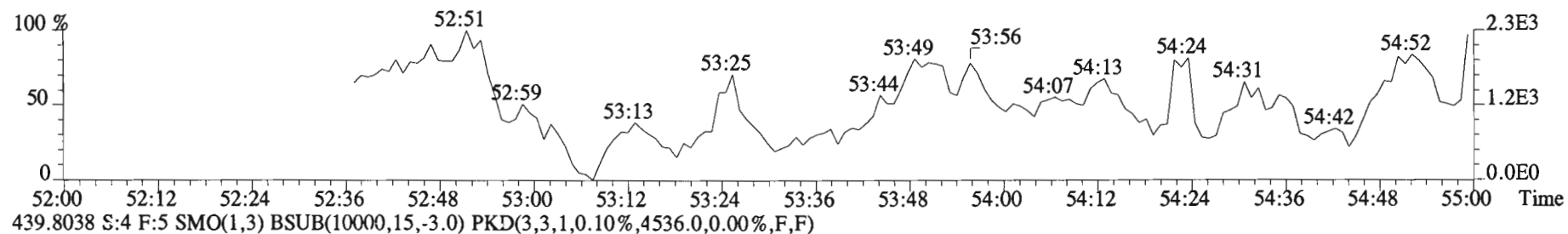
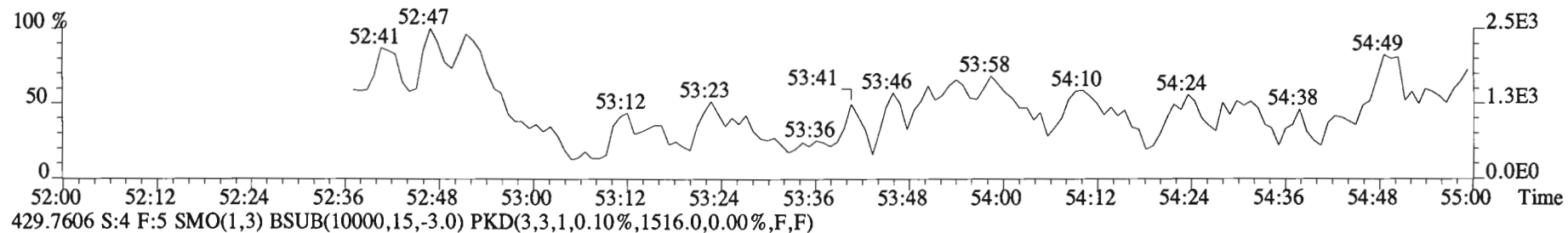
File:150205E1 #1-555 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
 393.8025 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1604.0,0.00%,F,F)



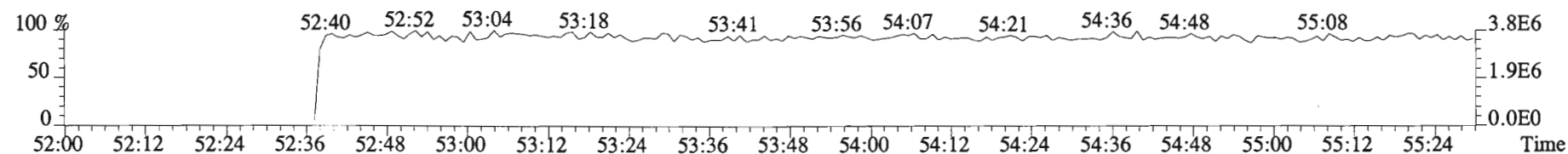
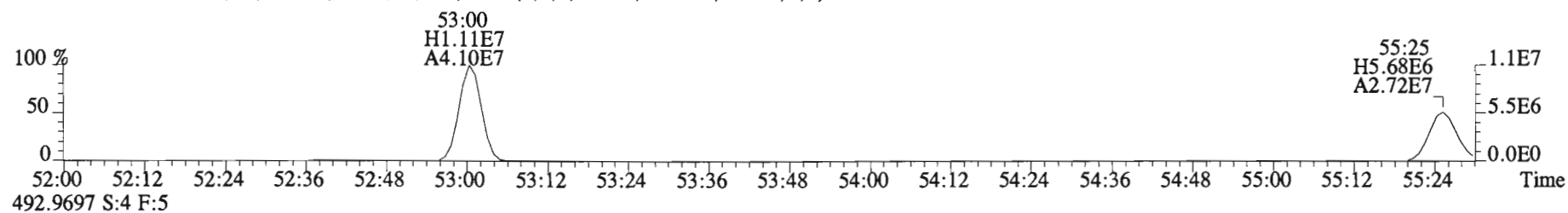
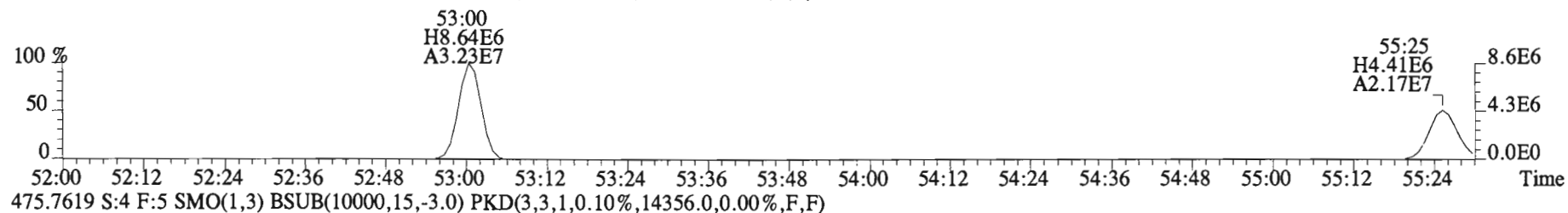
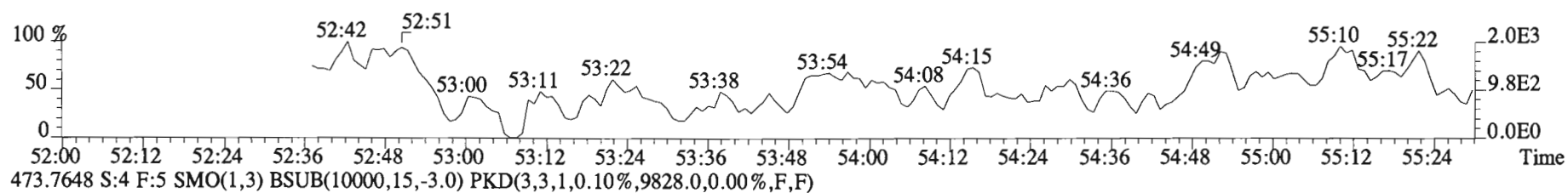
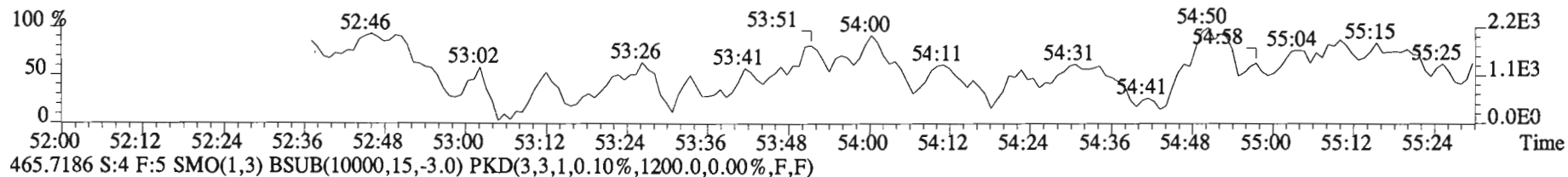
File:150205E1 #1-555 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
427.7635 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1632.0,0.00%,F,F)



File:150205E1 #1-430 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
 427.7635 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1444.0,0.00%,F,F)

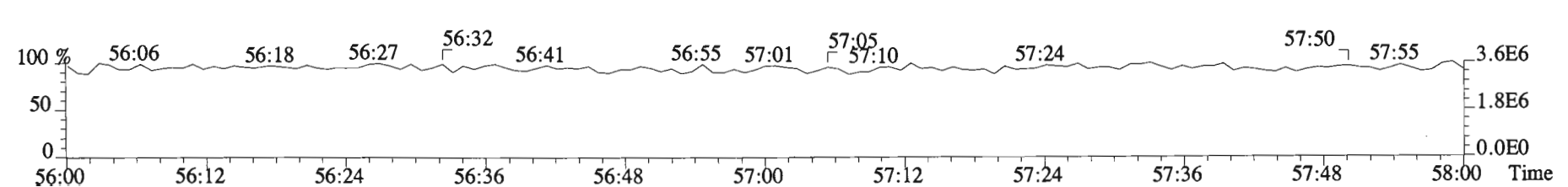
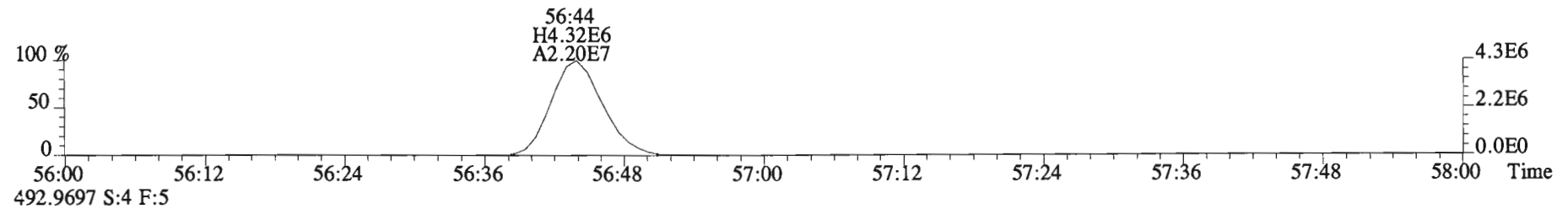
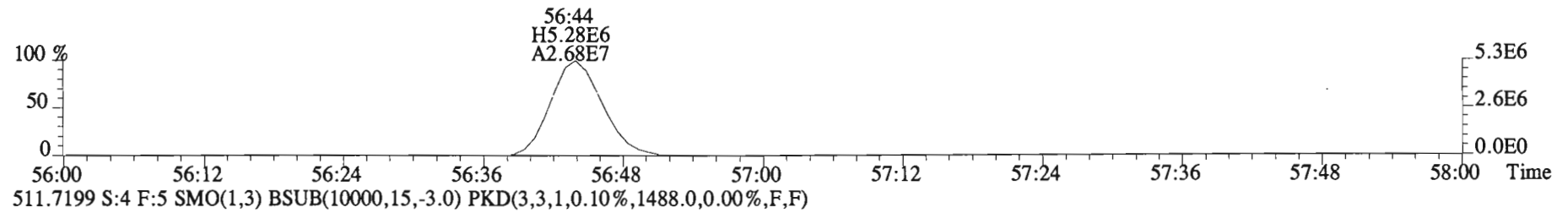
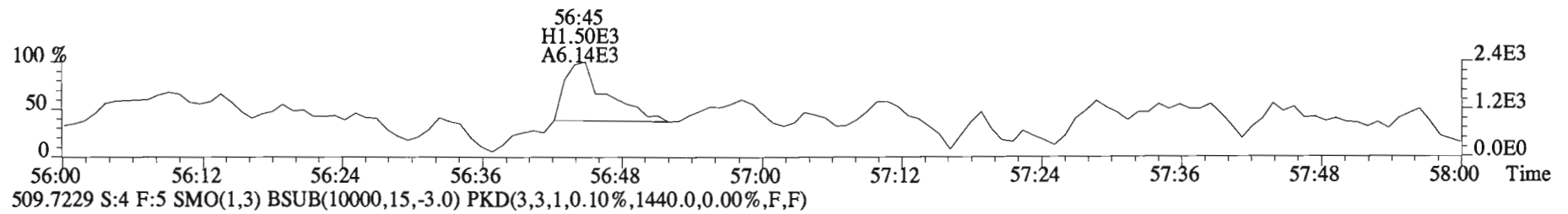
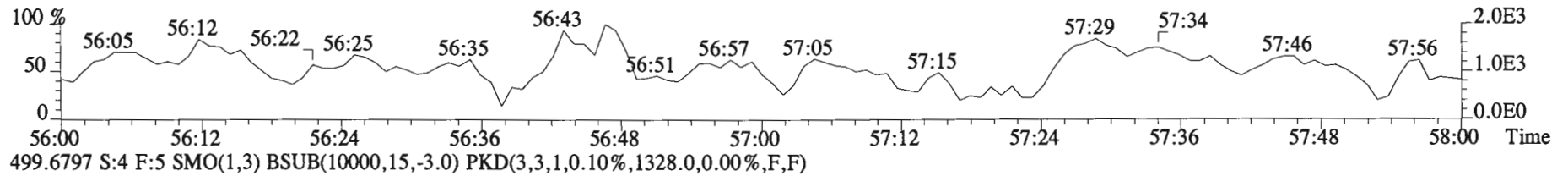


File:150205E1 #1-430 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
463.7216 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1480.0,0.00%,F,F)





File:150205E1 #1-430 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB\_ZB1  
497.6826 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)



Lab Name: Vista Analytical Laboratory OPR Data Filename: B5A0115-BS1

Matrix : SOLID Ext. Date: 1-29-15 Analysis Date: 5-FEB-15 Time: 10:04:19

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE	CONC.	OPR CONC.	Labeled Compounds	SPIKE	CONC.	OPR CONC.	Clean Up Standard	SPIKE	CONC.	OPR CONC.
	CONC.	FOUND	LIMITS		CONC.	FOUND	LIMITS		CONC.	FOUND	LIMITS
	(ng/mL)	(ng/mL)	(ng/mL)		(ng/mL)	(ng/mL)	(ng/mL)		(ng/mL)	(ng/mL)	(ng/mL)
PCB-1	50	46.6	30.0-67.5	13C-PCB-1	100	70.1	15-145	13C-PCB-79	100	87.8	40-145
PCB-3	50	46.3	30.0-67.5	13C-PCB-3	100	70.9	15-145	13C-PCB-178	100	82.0	40-145
PCB-4/10	200	209.7	120-270	13C-PCB-4	100	65.9	15-145				
PCB-15	100	104.3	60.0-135	13C-PCB-11	100	74.7	15-145				
PCB-19	50	50.3	30.0-67.5	13C-PCB-19	100	68.8	15-145				
PCB-37	50	54.5	30.0-67.5	13C-PCB-37	100	86.0	15-145				
PCB-54	50	51.0	30.0-67.5	13C-PCB-54	100	67.6	15-145				
PCB-81	50	50.2	30.0-67.5	13C-PCB-81	100	84.8	40-145				
PCB-77	50	51.6	30.0-67.5	13C-PCB-77	100	84.6	40-145				
PCB-104	50	53.6	30.0-67.5	13C-PCB-104	100	79.7	40-145				
PCB-123	50	53.4	30.0-67.5	13C-PCB-123	100	89.7	40-145				
PCB-106/118	100	105.5	60.0-135	13C-PCB-118	100	87.9	40-145				
PCB-114	50	52.5	30.0-67.5	13C-PCB-114	100	85.4	40-145				
PCB-105	50	53.7	30.0-67.5	13C-PCB-105	100	81.1	40-145				
PCB-126	50	55.3	30.0-67.5	13C-PCB-126	100	82.8	40-145				
PCB-155	50	52.7	30.0-67.5	13C-PCB-155	100	71.0	40-145				
PCB-167	50	49.2	30.0-67.5	13C-PCB-167	100	85.6	40-145				
PCB-156	50	49.4	30.0-67.5	13C-PCB-156	100	84.8	40-145				
PCB-157	50	47.8	30.0-67.5	13C-PCB-157	100	84.5	40-145				
PCB-169	50	46.5	30.0-67.5	13C-PCB-169	100	85.8	40-145				
PCB-188	50	50.1	30.0-67.5	13C-PCB-168	100	83.0	40-145				
PCB-189	50	49.7	30.0-67.5	13C-PCB-189	100	80.0	40-145				
PCB-202	50	50.0	30.0-67.5	13C-PCB-202	100	72.2	40-145				
PCB-205	50	50.4	30.0-67.5	13C-PCB-194	100	85.2	40-145				
PCB-208	50	51.9	30.0-67.5	13C-PCB-208	100	78.7	40-145				
PCB-206	50	51.7	30.0-67.5	13C-PCB-206	100	87.1	40-145				
PCB-209	50	51.6	30.0-67.5	13C-PCB-209	100	94.0	40-145				

Analyst: DMSDate: 2/9/15

Client ID: OPR  
Lab ID: B5A0115-BS1

Filename: 150205E1 S:2 Acq: 5-FEB-15 10:04:19  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 1.0000 EndCAL: NA

ConCal: ST150205E1-1

Page 2 of

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-1	6.85e+07	3.00	y	1.19	16:10	1.001	0.996-1.006	46.5671	PCB-52/69	1.24e+08	0.76	y	1.28	31:31	1.002	0.996-1.006	106.209
PCB-2	7.33e+07	3.02	y	1.18	18:32	0.988	0.984-0.994	47.4543	PCB-73	6.53e+07	0.77	y	1.35	31:38	1.005	1.000-1.010	53.0411
PCB-3	8.62e+07	2.98	y	1.43	18:46	1.001	0.996-1.006	46.3199	PCB-43/49	9.41e+07	0.76	y	0.99	31:48	1.010	1.005-1.015	103.873
PCB-4/10	2.57e+08	1.63	y	1.57	20:07	1.002	0.997-1.007	209.667	PCB-47	5.52e+07	0.77	y	1.06	32:00	1.001	0.996-1.006	53.4013
PCB-7/9	3.13e+08	1.62	y	1.21	21:54	0.868	0.866-0.874	208.093	PCB-48/75	1.24e+08	0.77	y	1.23	32:07	1.004	0.999-1.009	103.665
PCB-6	1.67e+08	1.63	y	1.30	22:33	0.894	0.890-0.899	102.800	PCB-65	6.45e+07	0.86	y	1.22	32:24	1.013	1.008-1.018	53.8959
PCB-5/8	3.02e+08	1.64	y	1.15	22:57	0.910	0.907-0.917	211.429	PCB-62	6.31e+07	0.68	y	1.22	32:31	1.016	1.011-1.021	52.8859
PCB-14	1.60e+08	1.64	y	1.11	24:03	0.953	0.949-0.959	102.009	PCB-44	4.51e+07	0.75	y	0.86	32:48	1.025	1.021-1.031	53.6840
PCB-11	1.59e+08	1.64	y	1.09	25:14	1.000	0.995-1.005	103.664	PCB-42/59	1.19e+08	0.77	y	1.14	33:02	1.033	1.028-1.038	106.899
PCB-12/13	3.50e+08	1.63	y	1.19	25:38	1.016	1.011-1.021	207.502	PCB-41/64/71/72	2.51e+08	0.77	y	1.21	33:37	1.051	1.046-1.056	213.213
PCB-15	1.89e+08	1.62	y	1.28	25:56	1.028	1.023-1.033	104.288	PCB-68	7.23e+07	0.77	y	1.35	33:53	1.059	1.054-1.064	54.9449
PCB-19	3.87e+07	1.04	y	1.04	24:14	1.001	0.996-1.006	50.2707	PCB-40	3.74e+07	0.76	y	0.70	34:05	1.066	1.061-1.071	54.5783
PCB-30	6.78e+07	1.05	y	1.71	25:07	1.038	1.032-1.042	53.6611	PCB-57	6.63e+07	0.77	y	0.98	34:27	0.970	0.965-0.975	53.6424
PCB-18	4.67e+07	1.06	y	0.78	25:52	0.954	0.949-0.959	49.7449	PCB-67	7.66e+07	0.76	y	1.11	34:46	0.979	0.974-0.984	54.8748
PCB-17	5.48e+07	1.06	y	0.92	26:03	0.960	0.956-0.966	49.4690	PCB-58	6.07e+07	0.78	y	0.93	34:53	0.982	0.977-0.987	51.8953
PCB-24/27	1.43e+08	1.05	y	1.19	26:37	0.981	0.977-0.987	99.9829	PCB-63	6.25e+07	0.77	y	0.95	35:02	0.987	0.982-0.992	52.0513
PCB-16/32	1.12e+08	1.05	y	0.94	27:07	1.000	0.995-1.005	99.7210	PCB-74	8.38e+07	0.77	y	1.24	35:19	0.995	0.990-1.000	53.4213
PCB-34	8.24e+07	1.06	y	1.14	27:55	0.960	0.955-0.965	56.2094	PCB-61/70	1.27e+08	0.77	y	0.95	35:29	0.999	0.995-1.005	105.815
PCB-23	9.04e+07	1.07	y	1.28	28:01	0.964	0.959-0.969	54.7929	PCB-76/66	1.38e+08	0.78	y	1.04	35:43	1.006	1.001-1.011	104.452
PCB-29	7.57e+07	1.05	y	1.08	28:15	0.972	0.967-0.977	54.3548	PCB-80	8.42e+07	0.77	y	1.19	35:57	1.001	0.996-1.006	53.0146
PCB-26	8.87e+07	1.06	y	1.21	28:28	0.979	0.974-0.984	56.9936	PCB-55	7.37e+07	0.77	y	1.04	36:16	1.009	1.005-1.015	53.1080
PCB-25	9.44e+07	1.06	y	1.26	28:38	0.985	0.979-0.989	58.0366	PCB-56/60	1.43e+08	0.77	y	1.01	36:46	1.023	1.019-1.029	106.277
PCB-31	8.52e+07	1.05	y	1.28	28:59	0.997	0.992-1.002	51.4190	PCB-79	7.62e+07	0.79	y	1.08	37:50	1.053	1.048-1.058	53.0118
PCB-28	1.31e+08	1.07	y	1.71	29:05	1.000	0.995-1.005	59.5271	PCB-78	7.86e+07	0.78	y	1.27	38:32	0.987	0.982-0.992	50.6056
PCB-20/21/33	2.46e+08	1.06	y	1.08	29:42	1.022	1.017-1.027	176.066	PCB-81	8.16e+07	0.78	y	1.33	39:03	1.000	0.995-1.005	50.1524
PCB-22	8.85e+07	1.06	y	1.21	30:09	1.037	1.032-1.042	56.7965	PCB-77	7.09e+07	0.79	y	1.10	39:39	1.000	0.995-1.005	51.6360
PCB-36	8.22e+07	1.06	y	1.14	30:45	0.933	0.928-0.938	52.8452	PCB-104	4.69e+07	1.61	y	1.18	32:39	1.000	0.996-1.006	53.5621
PCB-39	7.78e+07	1.07	y	1.12	31:14	0.948	0.943-0.953	51.1539	PCB-96	4.41e+07	1.60	y	1.14	33:55	1.039	1.034-1.044	52.3773
PCB-38	8.21e+07	1.06	y	1.20	32:00	0.971	0.966-0.976	50.2368	PCB-103	3.87e+07	1.60	y	0.96	34:27	1.055	1.050-1.060	54.7435
PCB-35	9.48e+07	1.05	y	1.23	32:31	0.987	0.982-0.992	56.4819	PCB-100	3.91e+07	1.62	y	0.94	34:49	1.067	1.061-1.071	56.5150
PCB-37	9.13e+07	1.05	y	1.23	32:58	1.000	0.995-1.005	54.4531	PCB-94	3.07e+07	1.60	y	1.06	35:17	0.985	0.980-0.990	51.5411
PCB-54	5.78e+07	0.78	y	1.10	27:58	1.001	0.996-1.006	51.0360	PCB-95/98/102	1.13e+08	1.61	y	1.22	35:46	0.999	0.995-1.005	163.812
PCB-50	4.92e+07	0.76	y	0.88	29:09	1.043	1.037-1.047	54.4710	PCB-93	2.41e+07	1.60	y	0.84	35:54	1.003	0.997-1.007	50.6975
PCB-53	4.82e+07	0.78	y	1.06	29:47	0.946	0.942-0.952	49.7634	PCB-88/91	7.17e+07	1.60	y	1.12	36:11	1.011	1.005-1.015	113.738
PCB-51	4.58e+07	0.77	y	0.99	30:08	0.957	0.952-0.962	50.7674	PCB-121	4.93e+07	1.60	y	1.62	36:18	1.014	1.009-1.019	54.0920
PCB-45	4.03e+07	0.77	y	0.86	30:34	0.971	0.966-0.976	51.2716	PCB-84/92	6.89e+07	1.59	y	1.05	37:07	0.990	0.985-0.995	106.797
PCB-46	3.93e+07	0.76	y	0.85	31:02	0.986	0.981-0.991	51.1110	PCB-89	3.70e+07	1.60	y	1.13	37:19	0.995	0.991-1.001	53.0705

RL: MONO, TRI - DECA: \_\_\_\_\_

RL: DI : \_\_\_\_\_

Integrations

by

Analyst: DMS

Date: 2/9/15

Reviewed

by

Analyst: [Signature]

Date: 2/10/15

Client ID: OPR  
Lab ID: B5A0115-BS1

Filename: 150205E1 S:2 Acq: 5-FEB-15 10:04:19  
GC Column ID: ZB-1 ICal: pcbv8-6-23-14 wt/vol: 1.0000 EndCAL: NA

ConCal: ST150205E1-1

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-90/101	7.32e+07	1.59	y	1.10	37:30	1.000	0.995-1.005	107.722	PCB-133/142	7.10e+07	1.27	y	0.82	42:27	0.982	0.977-0.987	100.464
PCB-113	4.92e+07	1.58	y	1.41	37:45	1.007	1.002-1.012	56.5325	PCB-131	3.87e+07	1.21	y	0.91	42:36	0.986	0.981-0.991	49.4057
PCB-99	4.31e+07	1.64	y	1.34	37:50	1.009	1.004-1.014	52.2953	PCB-146/165	1.05e+08	1.24	y	1.25	42:49	0.991	0.986-0.996	97.2969
PCB-119	4.57e+07	1.59	y	1.53	38:18	0.987	0.982-0.992	52.9684	PCB-132/161	9.32e+07	1.24	y	1.10	43:04	0.996	0.992-1.002	97.7245
PCB-108/112	7.84e+07	1.66	y	1.28	38:27	0.991	0.986-0.996	108.813	PCB-153	5.12e+07	1.25	y	1.25	43:14	1.000	0.995-1.005	47.5274
PCB-83	4.49e+07	1.56	y	1.52	38:37	0.995	0.990-1.000	52.5341	PCB-168	6.10e+07	1.23	y	1.45	43:27	1.005	1.001-1.011	48.7538
PCB-97	3.54e+07	1.58	y	1.18	38:48	1.000	0.995-1.005	53.1537	PCB-141	4.09e+07	1.23	y	1.09	43:58	1.000	0.995-1.005	47.8652
PCB-86	2.65e+07	1.54	y	0.84	38:57	1.004	0.999-1.009	55.9104	PCB-137	4.43e+07	1.24	y	1.06	44:21	1.009	1.004-1.014	52.9537
B-87/117/125	1.38e+08	1.62	y	1.55	39:05	1.007	1.002-1.012	158.598	PCB-130	3.44e+07	1.20	y	0.96	44:28	1.011	1.006-1.016	45.2821
PCB-111/115	9.56e+07	1.62	y	1.63	39:14	1.011	1.006-1.016	104.077	PCB-138/163/164	1.52e+08	1.22	y	1.29	44:50	1.001	0.996-1.006	143.435
PCB-85/116	8.02e+07	1.59	y	1.30	39:22	1.015	1.010-1.020	109.486	PCB-158/160	1.08e+08	1.23	y	1.34	45:05	1.006	1.001-1.011	98.3272
PCB-120	5.14e+07	1.60	y	1.68	39:37	1.021	1.016-1.026	54.5160	PCB-129	3.46e+07	1.24	y	0.85	45:19	1.012	1.007-1.017	49.6414
PCB-110	4.55e+07	1.60	y	1.56	39:45	1.025	1.020-1.030	51.9279	PCB-166	5.18e+07	1.24	y	1.19	45:47	0.993	0.988-0.998	47.5504
PCB-82	3.02e+07	1.56	y	0.76	40:23	0.976	0.971-0.981	53.6983	PCB-159	4.98e+07	1.24	y	1.11	46:07	1.001	0.996-1.006	48.6833
PCB-124	5.87e+07	1.59	y	1.47	41:04	0.993	0.988-0.998	53.8240	PCB-128/162	9.06e+07	1.23	y	1.05	46:24	1.007	1.002-1.012	94.1005
PCB-107/109	1.00e+08	1.59	y	1.32	41:13	0.996	0.991-1.001	101.949	PCB-167	5.90e+07	1.22	y	1.20	46:47	1.000	0.995-1.005	49.1744
PCB-123	4.63e+07	1.60	y	1.17	41:23	1.001	0.996-1.006	53.4020	PCB-156	5.33e+07	1.23	y	1.14	48:06	1.000	0.996-1.006	49.4288
- PCB-106/118	9.65e+07	1.59	y	1.17	41:35	1.001	0.996-1.006	105.480	PCB-157	5.51e+07	1.23	y	1.16	48:22	1.000	0.995-1.005	47.7728
- PCB-114	6.84e+07	1.63	y	1.30	42:13	1.000	0.995-1.005	52.4976	PCB-169	4.96e+07	1.21	y	1.12	50:27	1.000	0.995-1.005	46.4984
PCB-122	6.22e+07	1.60	y	1.12	42:21	1.003	0.999-1.009	55.1805									
PCB-105	6.67e+07	1.61	y	1.30	43:05	1.000	0.995-1.005	53.7379	PCB-188	5.22e+07	1.06	y	1.58	42:52	1.000	0.996-1.006	50.1288
PCB-127	7.47e+07	1.64	y	1.33	43:25	1.000	0.996-1.006	53.4237	PCB-184	5.37e+07	1.05	y	1.63	43:19	1.011	1.006-1.016	49.9530
PCB-126	6.11e+07	1.65	y	1.18	45:19	1.000	0.995-1.005	55.3035	PCB-179	4.17e+07	1.06	y	1.30	44:06	1.029	1.024-1.034	48.5649
									PCB-176	4.71e+07	1.05	y	1.48	44:34	1.040	1.035-1.045	48.4312
PCB-155	3.24e+07	1.28	y	1.11	37:03	1.001	0.966-1.006	52.7212	PCB-186	4.75e+07	1.07	y	1.45	45:11	1.054	1.050-1.060	49.6811
PCB-150	2.97e+07	1.30	y	1.00	38:19	1.035	1.030-1.040	53.8874	PCB-178	3.26e+07	1.06	y	1.03	45:40	1.066	1.061-1.071	47.8227
PCB-152	3.18e+07	1.29	y	1.12	38:48	1.048	1.043-1.053	51.6206	PCB-175	3.30e+07	1.06	y	1.01	46:01	1.074	1.069-1.079	49.5337
PCB-145	3.43e+07	1.29	y	1.20	39:14	1.060	1.055-1.065	51.7576	PCB-182/187	7.96e+07	1.05	y	1.25	46:11	1.078	1.073-1.083	96.5650
PCB-136	3.59e+07	1.40	y	1.18	39:34	1.069	1.064-1.074	55.3060	PCB-183	3.73e+07	1.06	y	1.21	46:30	1.085	1.081-1.091	46.9001
PCB-148	2.09e+07	1.09	y	0.74	39:41	1.072	1.066-1.076	50.8479	PCB-185	4.33e+07	1.06	y	1.80	47:10	0.956	0.951-0.961	51.2494
PCB-154	2.60e+07	1.29	y	0.86	40:10	1.085	1.080-1.090	55.0557	PCB-174	3.57e+07	1.06	y	1.38	47:32	0.963	0.958-0.968	55.1966
PCB-151	2.27e+07	1.33	y	0.75	40:48	1.102	1.097-1.107	55.1407	PCB-181	3.31e+07	1.08	y	1.38	47:39	0.965	0.960-0.970	51.1334
PCB-135	2.43e+07	1.28	y	0.79	41:01	1.108	1.103-1.113	55.4969	PCB-177	3.07e+07	1.06	y	1.26	47:48	0.968	0.963-0.973	52.1345
PCB-144	2.27e+07	1.27	y	0.76	41:08	1.111	1.105-1.117	54.0907	PCB-171	3.80e+07	1.04	y	1.58	48:06	0.974	0.970-0.980	51.1744
PCB-147	2.53e+07	1.29	y	0.82	41:16	1.114	1.109-1.121	55.9409	PCB-173	2.78e+07	1.04	y	1.11	48:32	0.983	0.978-0.988	53.3736
PCB-139/149	4.61e+07	1.28	y	0.76	41:32	1.122	1.116-1.128	109.753	PCB-172	4.03e+07	1.06	y	1.63	48:59	0.992	0.987-0.997	52.5082
- PCB-140	2.22e+07	1.30	y	0.72	41:43	1.127	1.121-1.133	55.6800	PCB-192	4.30e+07	1.06	y	1.74	49:10	0.996	0.991-1.001	52.6390
- PCB-134/143	7.87e+07	1.25	y	0.92	42:08	0.975	0.970-0.980	99.5156	PCB-180	3.23e+07	1.05	y	1.34	49:23	1.000	0.995-1.005	51.1998

Integrations

by

RL: MONO, TRI - DECA: \_\_\_\_\_

Analyst: DMS

Date: 2/19/15

Client ID: OPR  
Lab ID: B5A0115-BS1

Filename: 150205E1 S:2 Acq: 5-FEB-15 10:04:19  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 1.0000

ConCal: ST150205E1-1  
EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-193	4.01e+07	1.04 y	1.72	49:35	1.004	0.999-1.009		49.8218
PCB-191	3.99e+07	1.06 y	1.69	49:49	1.009	1.004-1.014		50.1619
PCB-170	3.08e+07	1.04 y	1.60	50:48	1.000	0.995-1.005		51.3352
PCB-190	4.17e+07	1.06 y	2.21	50:58	1.004	0.998-1.008		50.2501
PCB-189	3.81e+07	1.05 y	1.55	52:16	1.000	0.995-1.005		49.6989
PCB-202	2.83e+07	0.91 y	1.08	48:18	1.000	0.995-1.005		49.9988
PCB-201	3.07e+07	0.91 y	1.15	48:47	1.010	1.005-1.015		51.1300
PCB-204	3.02e+07	0.91 y	1.14	48:57	1.014	1.008-1.018		50.7295
PCB-197	2.85e+07	0.91 y	1.07	49:15	1.020	1.015-1.025		50.8007
PCB-200	2.78e+07	0.90 y	1.06	50:06	1.037	1.032-1.044		49.9676
PCB-198	2.09e+07	0.89 y	0.76	51:22	1.064	1.059-1.069		52.9933
PCB-199	2.11e+07	0.92 y	0.80	51:29	1.066	1.061-1.071		50.5356
- PCB-196/203	4.34e+07	0.93 y	0.80	51:44	1.072	1.066-1.076		103.598
- PCB-195	3.64e+07	0.91 y	1.23	52:53	0.984	0.979-0.989		49.6990
PCB-194	3.61e+07	0.90 y	1.21	53:46	1.000	0.995-1.005		49.7826
PCB-205	4.65e+07	0.93 y	1.54	54:03	1.006	1.001-1.011		50.4352
PCB-208	3.61e+07	1.35 y	0.93	53:01	1.000	0.995-1.005		51.9116
PCB-207	4.29e+07	1.35 y	1.08	53:20	1.006	1.001-1.011		53.0005
PCB-206	2.64e+07	1.34 y	1.02	55:27	1.000	0.995-1.005		51.6631
PCB-209	3.05e+07	1.20 y	1.17	56:45	1.000	0.995-1.005		51.6430

Name	Resp	RA	RT	RRF	Conc
Total Mono-PCB	2.28e+08	3.00 y	16:10	1.27	140.341
Total Di-PCB	1.90e+09	1.63 y	20:07	1.21	1250.86
Total Tri-PCB	4.63e+08	1.04 y	24:14	1.10	402.850
Total Tri-PCB	1.43e+09	1.06 y	27:55	1.21	903.791
Total Tetra-PCB	2.64e+09	0.78 y	27:58	1.09	2231.19
Total Penta-PCB	1.71e+09	1.61 y	32:39	1.18	2202.01
Total Penta-PCB	3.57e+08	1.63 y	42:13	1.25	289.188
Total Hexa-PCB	3.74e+08	1.28 y	37:03	0.90	757.299
Total Hexa-PCB	1.34e+09	1.25 y	42:08	1.11	1382.79
Total Hepta-PCB	9.49e+08	1.06 y	42:52	1.42	1221.57
Total Octa-PCB	2.31e+08	0.91 y	48:18	0.96	459.763
Total Octa-PCB	1.23e+08	0.91 y	52:53	1.33	154.685
Total Nona-PCB	1.07e+08	1.35 y	53:01	1.01	158.425
Total Deca-PCB	3.05e+07	1.20 y	56:45	1.17	51.6430

Total PCB Conc:11508.6990880

Integrations  
by  
RL: MONO, TRI - DECA: \_\_\_\_\_  
Analyst: DMS

Date: 2/9/15

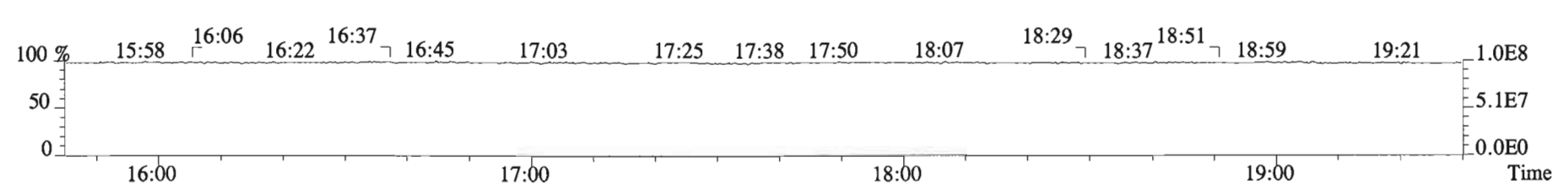
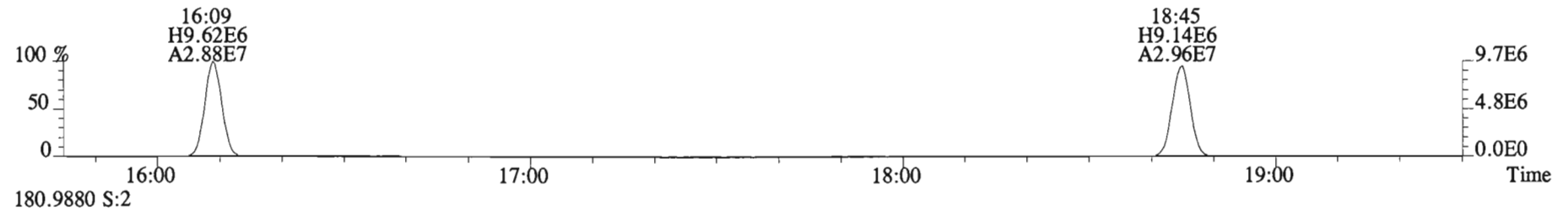
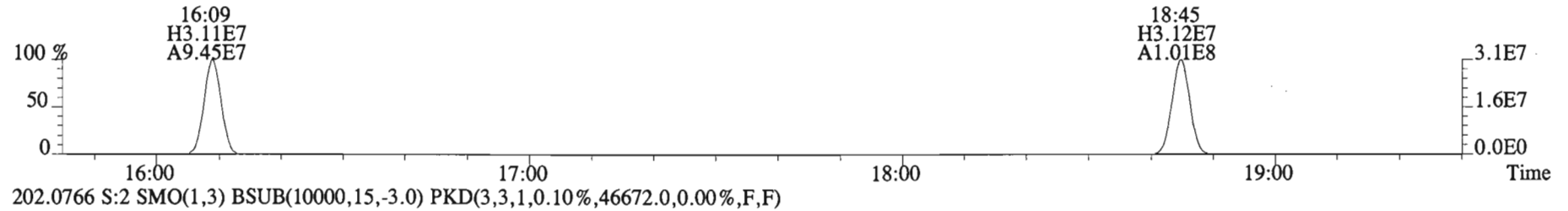
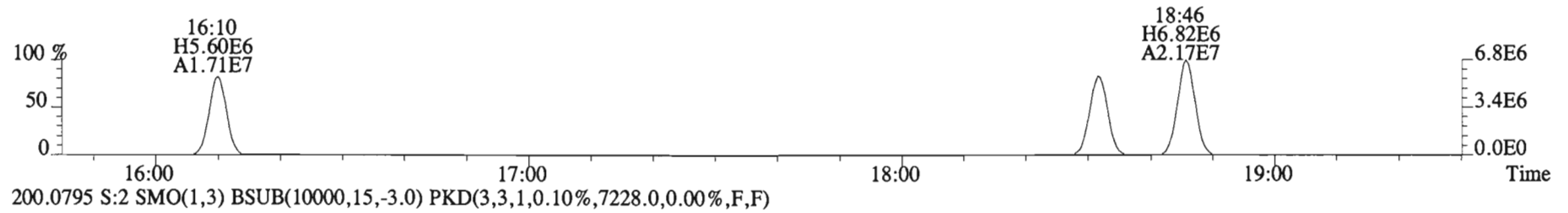
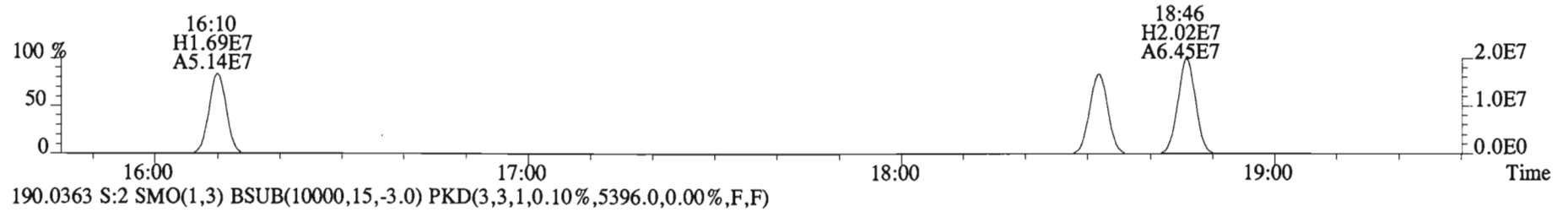
Client ID: OPR  
Lab ID: B5A0115-BS1

Filename: 150205E1 S:2 Acq: 5-FEB-15 10:04:19  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol:1.0000

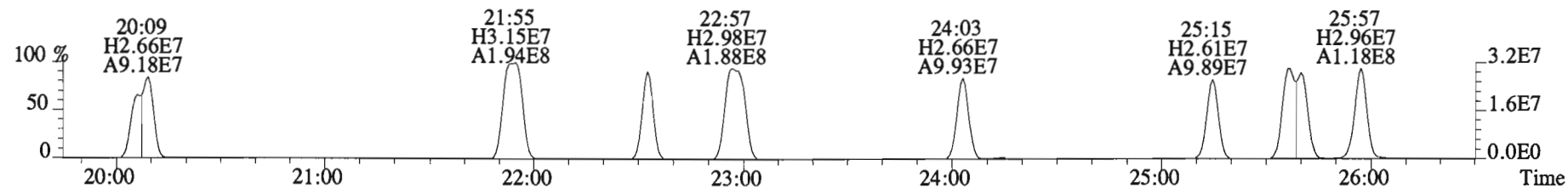
ConCal: ST150205E1-1  
EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.23e+08	3.28 y	0.87	16:09	0.623	0.629-0.635		70.1	70.1											
13C-PCB-3	1.30e+08	3.41 y	0.91	18:45	0.723	0.725-0.733		70.9	70.9		13C-PCB-79	1.39e+08	0.80 y	1.02	37:49	1.029	1.023-1.034		87.8	87.8
13C-PCB-4	7.81e+07	1.57 y	0.59	20:04	0.774	0.775-0.783		65.9	65.9		13C-PCB-178	4.35e+07	0.45 y	0.61	45:39	0.985	0.979-0.990		82.0	82.0
13C-PCB-9	1.24e+08	1.60 y	0.90	21:51	0.843	0.842-0.850		68.7	68.7											
13C-PCB-11	1.41e+08	1.56 y	0.94	25:13	0.973	0.968-0.978		74.7	74.7	PS vs. IS										
13C-PCB-19	7.38e+07	1.10 y	0.53	24:13	0.934	0.930-0.940		68.8	68.8		Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-28	1.29e+08	1.05 y	0.93	29:04	1.003	0.999-1.009		73.3	73.3		13C-PCB-79	1.39e+08	0.80 y	1.10	37:49	0.969	0.964-0.974		103	103
13C-PCB-32	1.20e+08	1.08 y	0.80	27:07	1.046	1.040-1.050		74.7	74.7		13C-PCB-178	4.35e+07	0.45 y	0.90	45:39	0.925	0.920-0.930		103	103
13C-PCB-37	1.36e+08	1.07 y	0.84	32:57	1.137	1.131-1.143		86.0	86.0	<i>x = OK within 1668 method limits.</i>										
13C-PCB-47	9.76e+07	0.78 y	0.81	31:59	0.870	0.866-0.874		76.9	76.9											
13C-PCB-52	9.11e+07	0.81 y	0.77	31:29	0.856	0.853-0.861		75.5	75.5	RS										
13C-PCB-54	1.03e+08	0.81 y	0.97	27:57	0.761	0.758-0.766		67.6	67.6		Name	Resp	RA	RRF	RT	Conc				
13C-PCB-70	1.26e+08	0.81 y	1.00	35:31	0.966	0.961-0.971		80.8	80.8		13C-PCB-15	2.02e+08	1.59 y	1.00	25:56	100				
13C-PCB-77	1.25e+08	0.81 y	0.94	39:38	1.078	1.073-1.083		84.6	84.6		13C-PCB-31	1.89e+08	1.06 y	1.00	28:58	100				
13C-PCB-80	1.33e+08	0.79 y	1.03	35:56	0.978	0.972-0.982		82.5	82.5		13C-PCB-60	1.56e+08	0.81 y	1.00	36:45	100				
13C-PCB-81	1.22e+08	0.80 y	0.92	39:02	1.062	1.057-1.067		84.8	84.8		13C-PCB-111	9.25e+07	1.62 y	1.00	39:13	100				
13C-PCB-95	5.64e+07	1.58 y	0.74	35:48	0.913	0.908-0.918		82.4	82.4		13C-PCB-128	8.64e+07	1.30 y	1.00	46:22	100				
13C-PCB-97	5.63e+07	1.63 y	0.70	38:48	0.989	0.984-0.994		86.3	86.3		13C-PCB-205	8.80e+07	0.92 y	1.00	54:02	100				
13C-PCB-101	6.17e+07	1.62 y	0.78	37:30	0.956	0.951-0.961		85.1	85.1											
13C-PCB-104	7.39e+07	1.62 y	1.00	32:39	0.832	0.828-0.836		79.7	79.7											
13C-PCB-105	9.57e+07	1.56 y	1.37	43:04	0.929	0.924-0.934		81.1	81.1											
13C-PCB-114	1.01e+08	1.59 y	1.36	42:13	0.910	0.905-0.915		85.4	85.4											
13C-PCB-118	7.80e+07	1.63 y	0.96	41:33	1.059	1.054-1.064		87.9	87.9											
13C-PCB-123	7.42e+07	1.58 y	0.89	41:22	1.055	1.050-1.060		89.7	89.7											
13C-PCB-126	9.35e+07	1.60 y	1.31	45:18	0.977	0.972-0.982		82.8	82.8											
13C-PCB-127	1.05e+08	1.59 y	1.47	43:24	0.936	0.931-0.941		82.4	82.4											
13C-PCB-138	8.18e+07	1.27 y	1.10	44:48	0.966	0.961-0.971		86.1	86.1											
13C-PCB-141	7.88e+07	1.27 y	1.07	43:58	0.948	0.943-0.953		84.8	84.8											
13C-PCB-153	8.63e+07	1.29 y	1.15	43:13	0.932	0.927-0.937		87.1	87.1											
13C-PCB-155	5.51e+07	1.30 y	0.84	37:01	0.944	0.939-0.949		71.0	71.0											
13C-PCB-156	9.50e+07	1.30 y	1.30	48:05	1.037	1.032-1.042		84.8	84.8											
13C-PCB-157	9.91e+07	1.29 y	1.36	48:21	1.043	1.038-1.048		84.5	84.5											
13C-PCB-159	9.20e+07	1.28 y	1.25	46:05	0.994	0.989-0.999		85.3	85.3											
13C-PCB-167	1.00e+08	1.28 y	1.35	46:47	1.009	1.004-1.014		85.6	85.6											
13C-PCB-169	9.54e+07	1.29 y	1.29	50:26	1.088	1.083-1.093		85.8	85.8											
13C-PCB-170	3.76e+07	0.46 y	0.54	50:47	1.096	1.089-1.101		80.1	80.1											
13C-PCB-180	4.69e+07	0.47 y	0.68	49:22	1.065	1.060-1.070		79.4	79.4											
13C-PCB-188	6.58e+07	0.46 y	0.92	42:51	0.924	0.919-0.929		83.0	83.0											
13C-PCB-189	4.95e+07	0.47 y	0.72	52:14	1.127	1.120-1.132		80.0	80.0											
13C-PCB-194	5.98e+07	0.93 y	0.80	53:45	0.995	0.990-1.000		85.2	85.2	Analyst: <u>DMS</u>										
13C-PCB-202	5.23e+07	0.94 y	0.84	48:17	1.041	1.036-1.046		72.2	72.2											
13C-PCB-206	4.98e+07	0.81 y	0.65	55:25	1.026	1.021-1.031		87.1	87.1											
13C-PCB-208	7.48e+07	0.78 y	1.08	53:00	0.981	0.976-0.986		78.7	78.7	Date: <u>2/9/15</u>										
13C-PCB-209	5.05e+07	1.21 y	0.61	56:45	1.050	1.045-1.055		94.0	94.0											

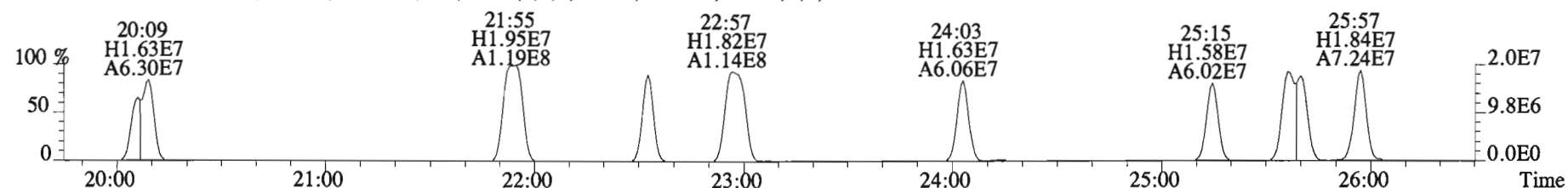
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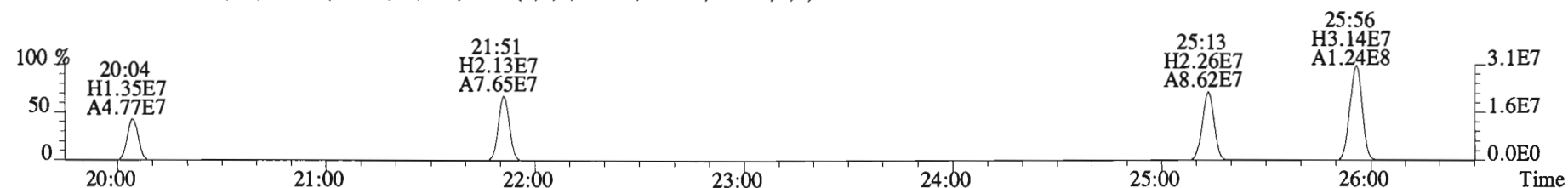
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 222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8148.0,0.00%,F,F)



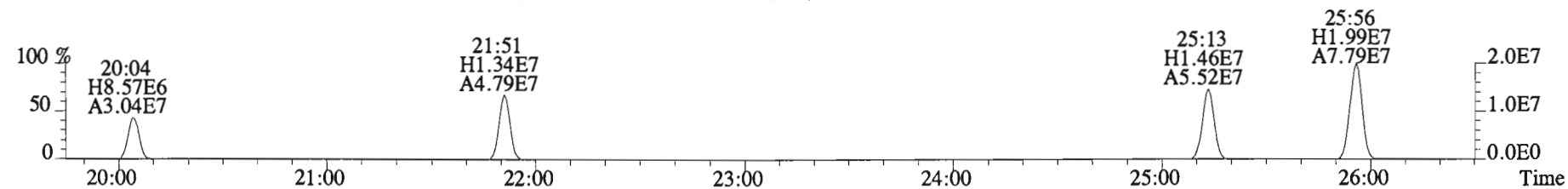
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,31256.0,0.00%,F,F)



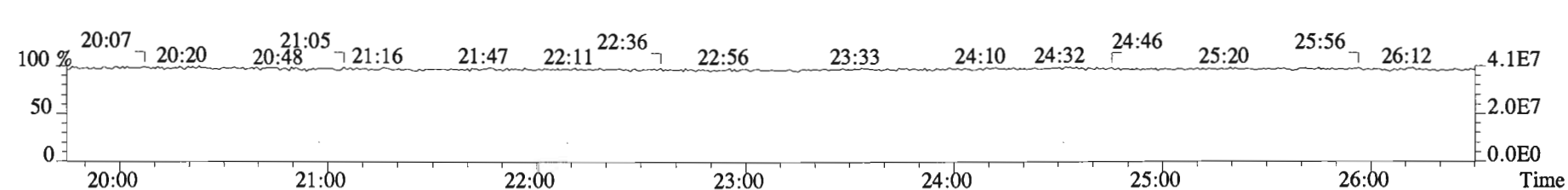
234.0406 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6008.0,0.00%,F,F)



236.0376 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6104.0,0.00%,F,F)

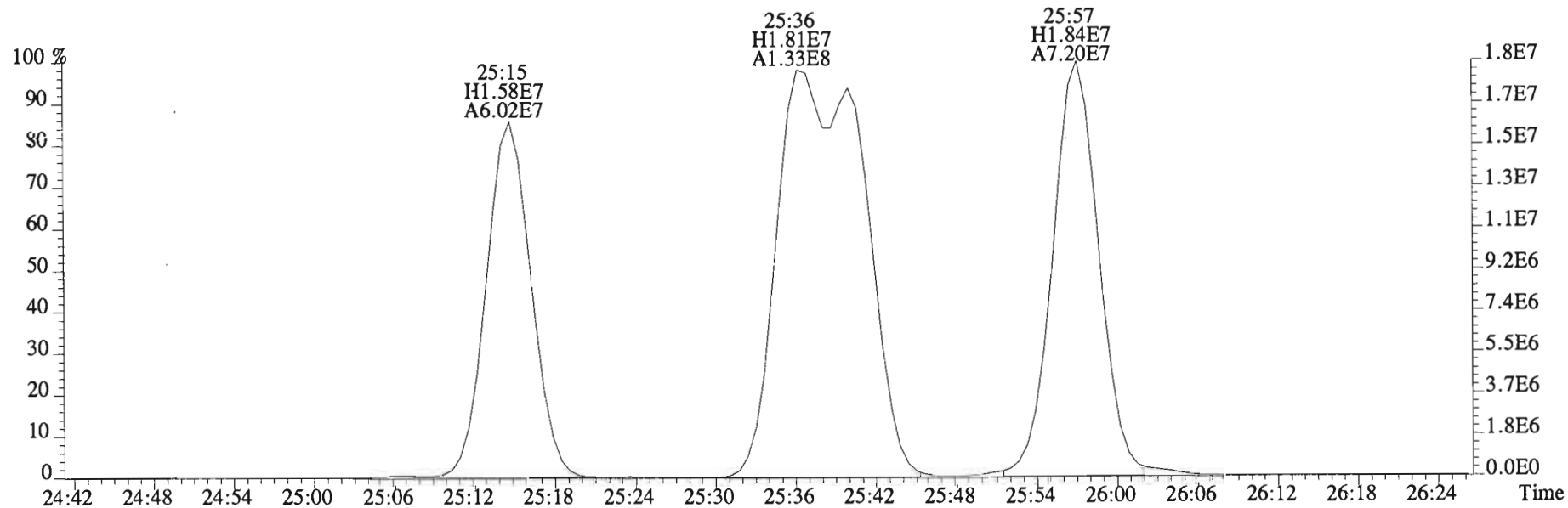
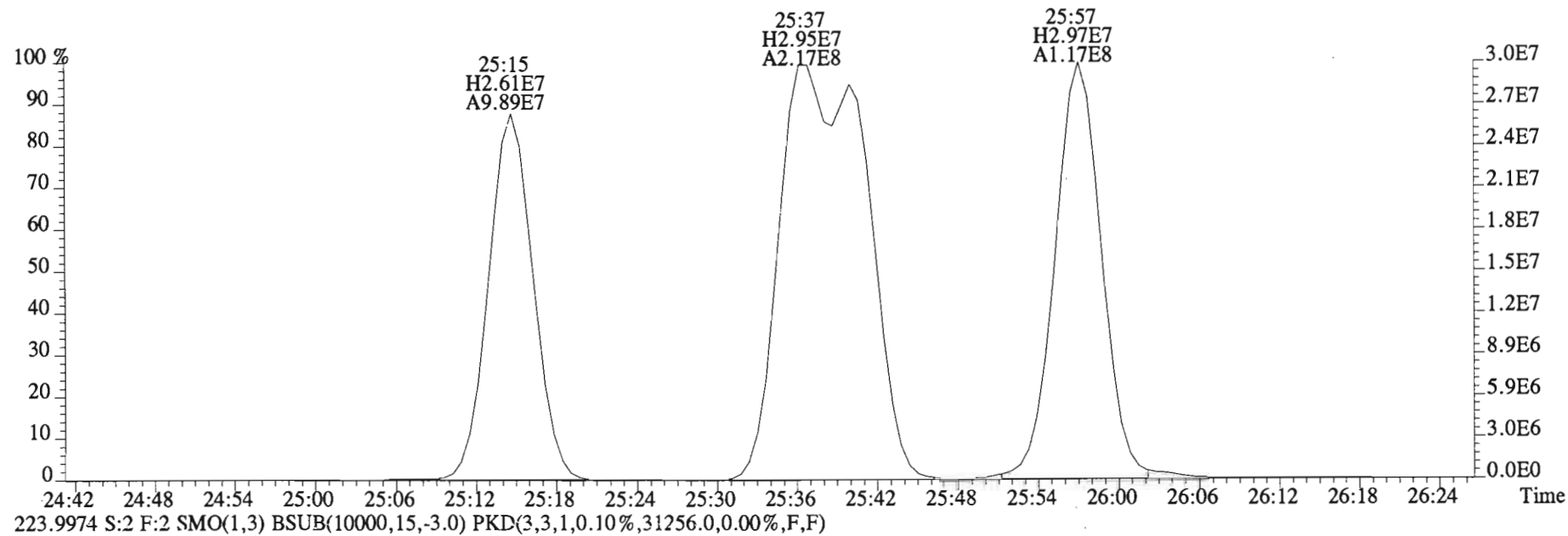


230.9856 S:2 F:2

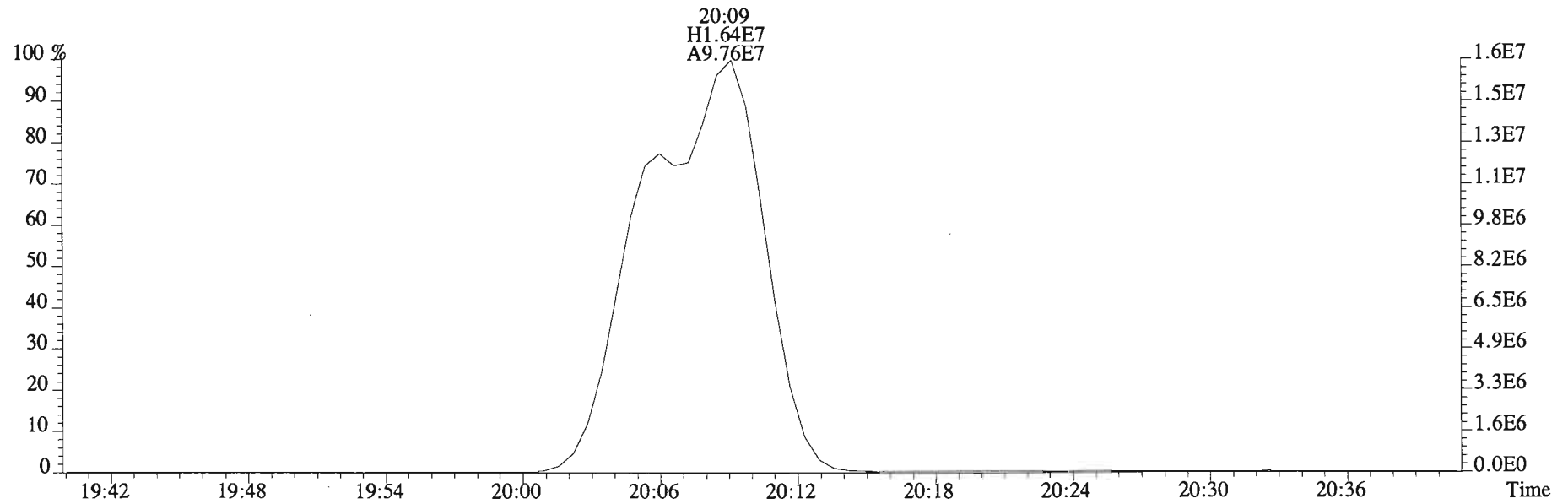
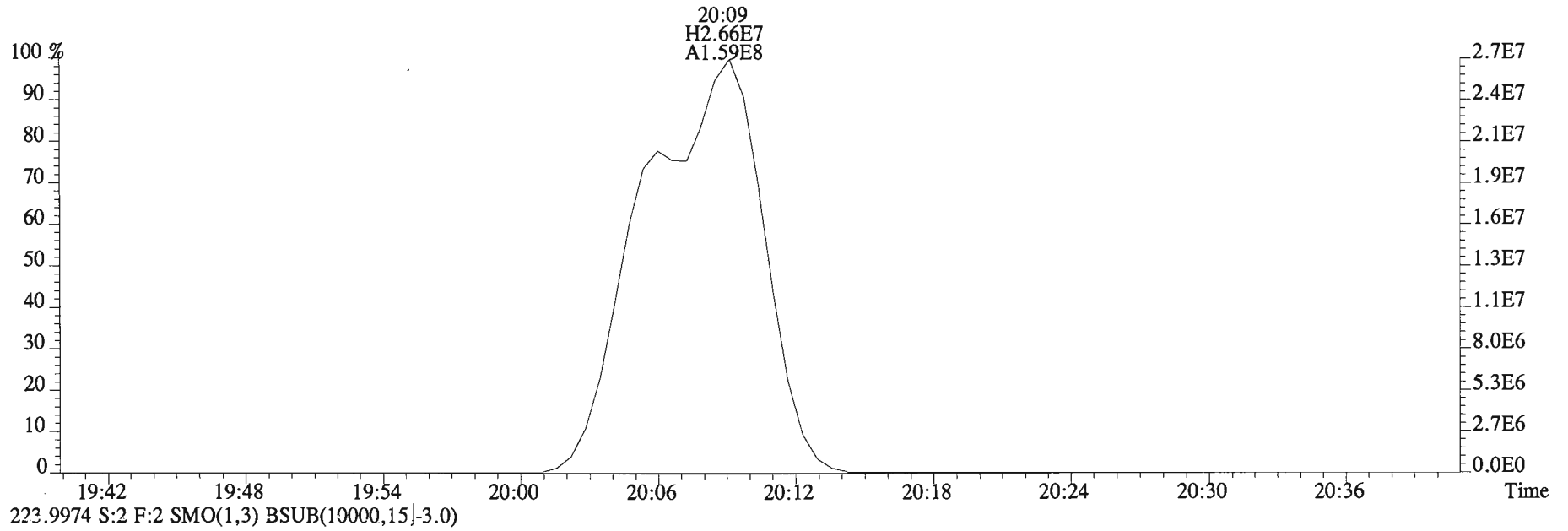




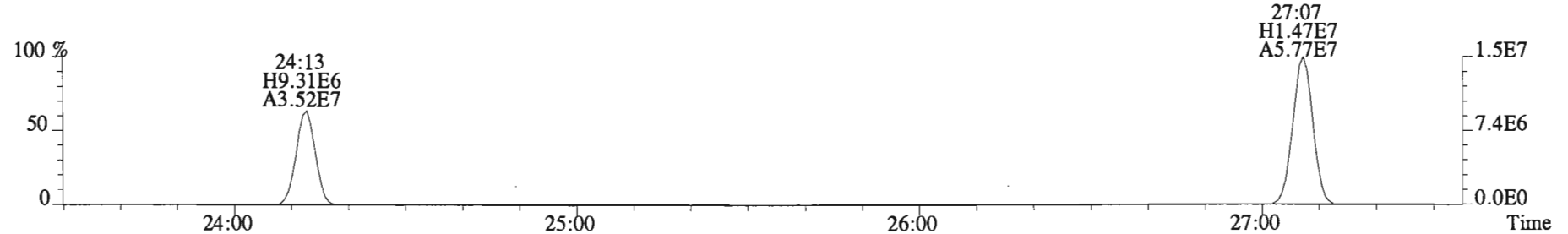
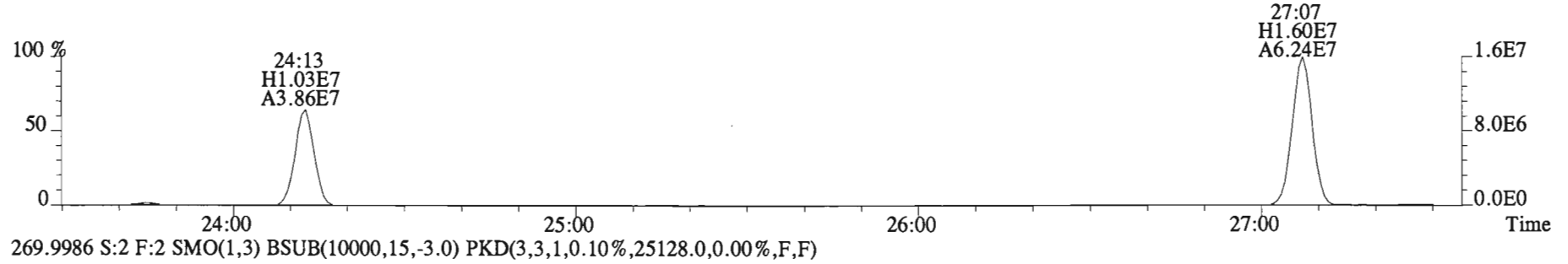
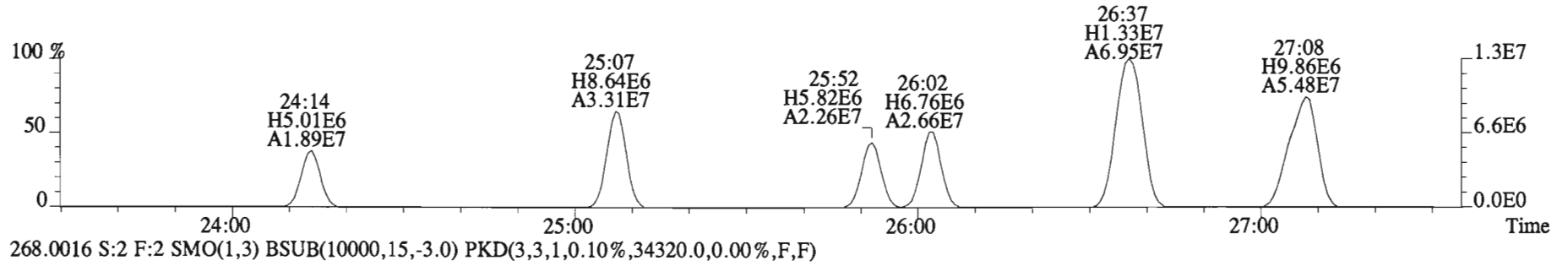
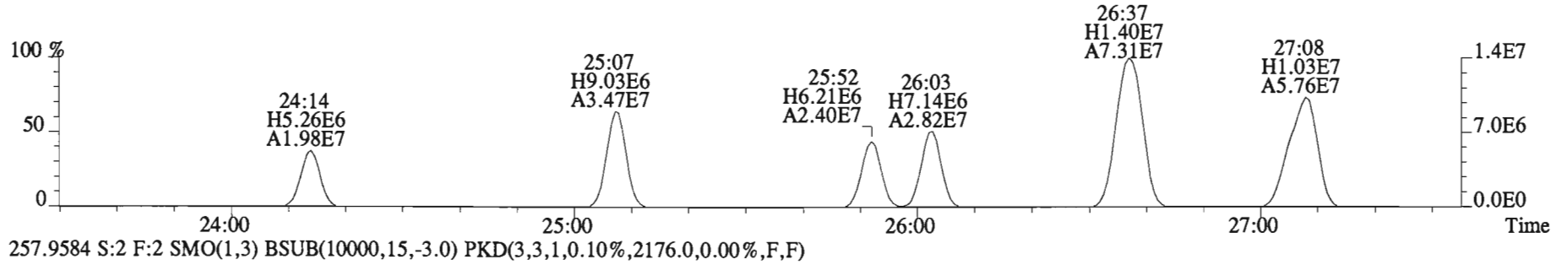
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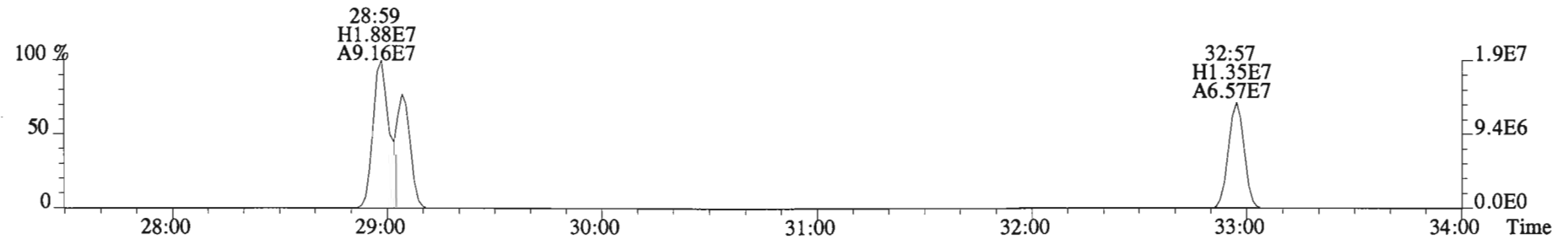
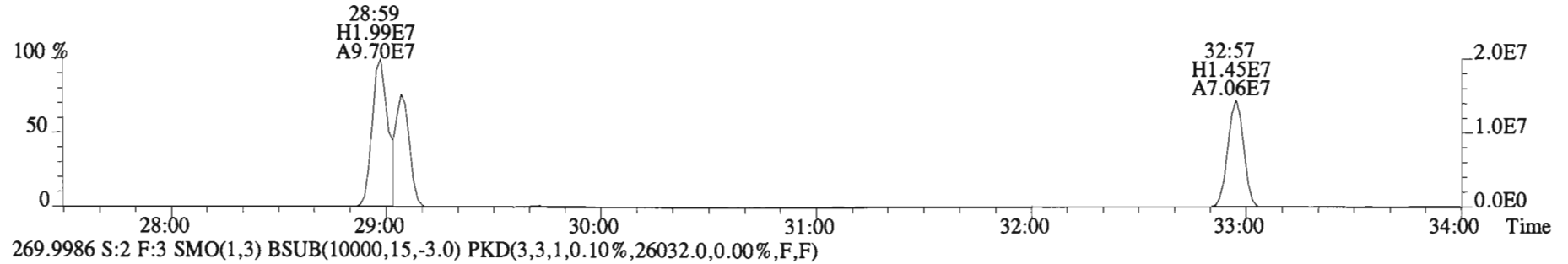
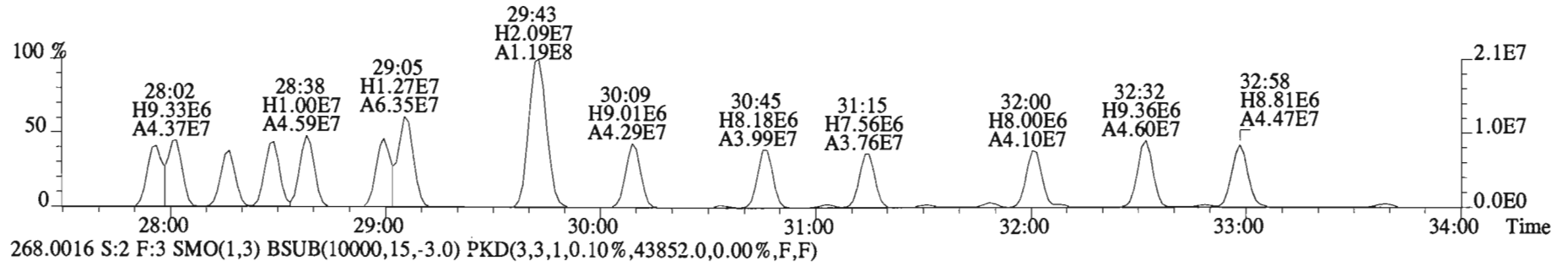
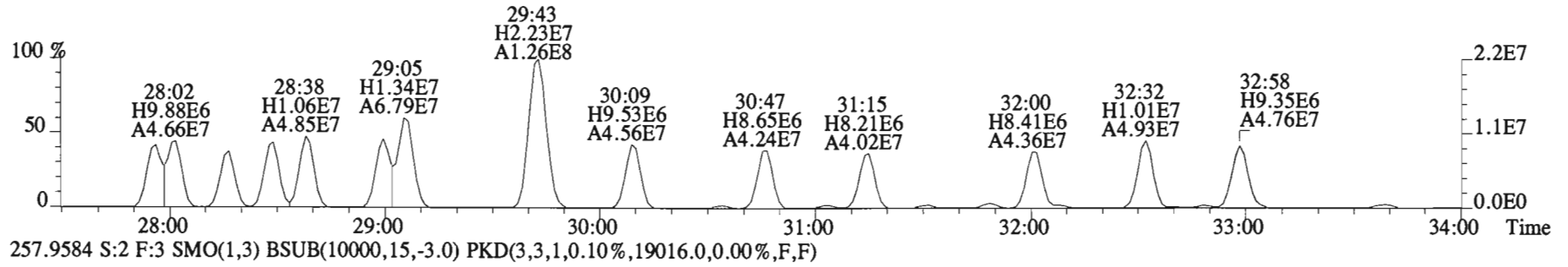
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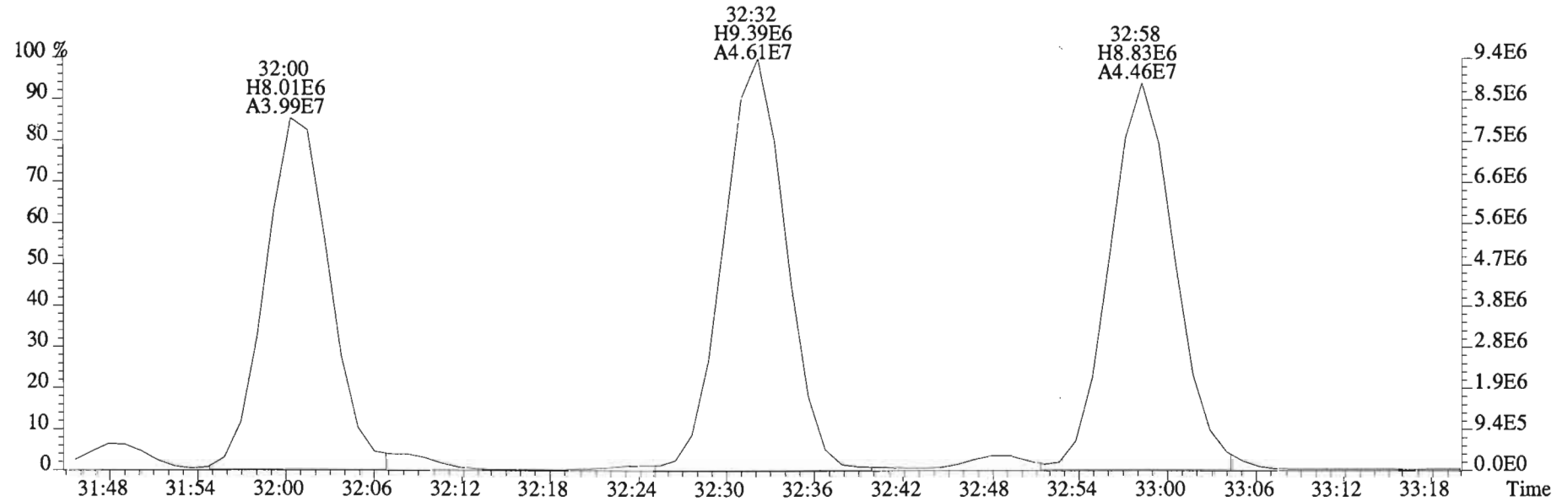
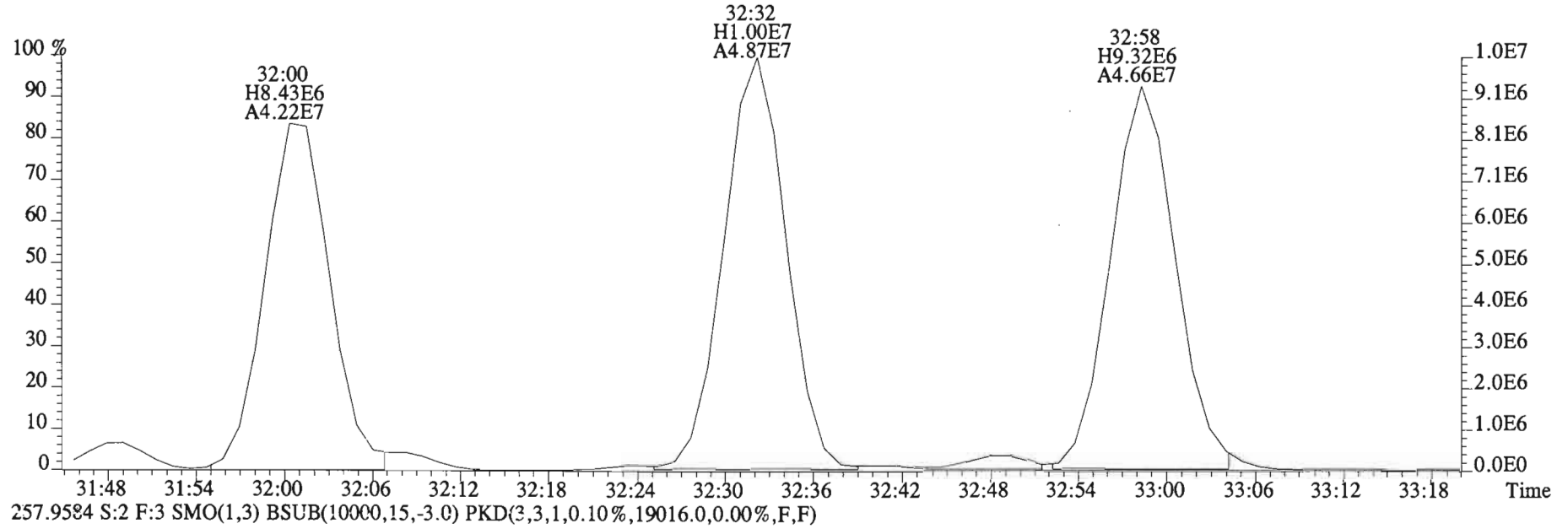
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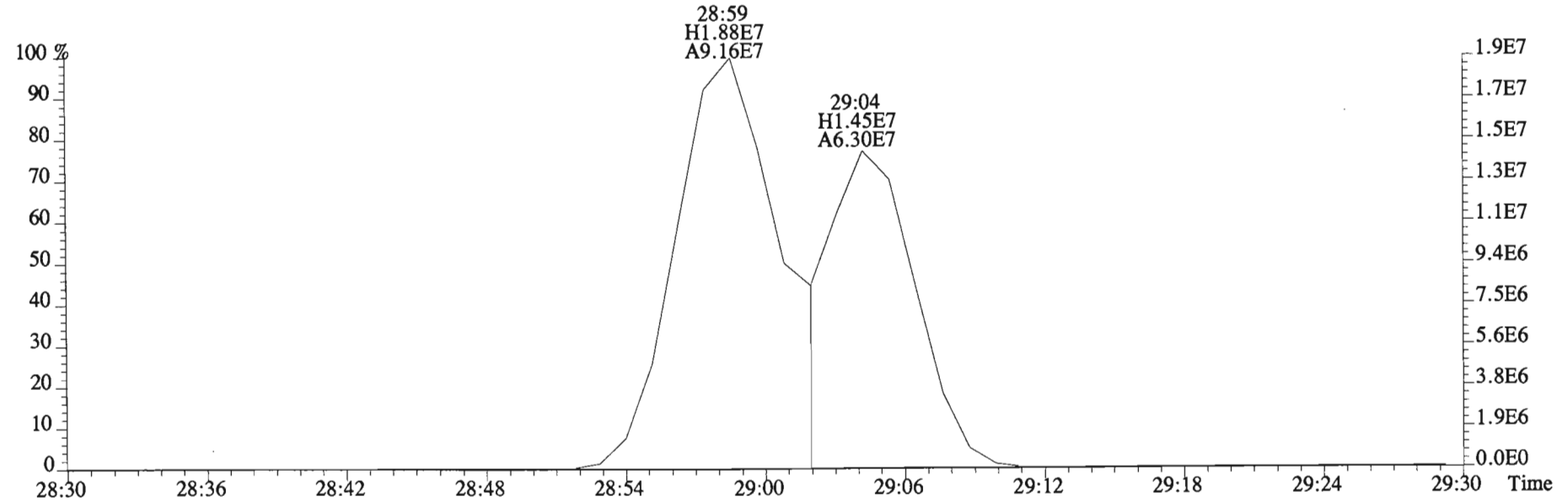
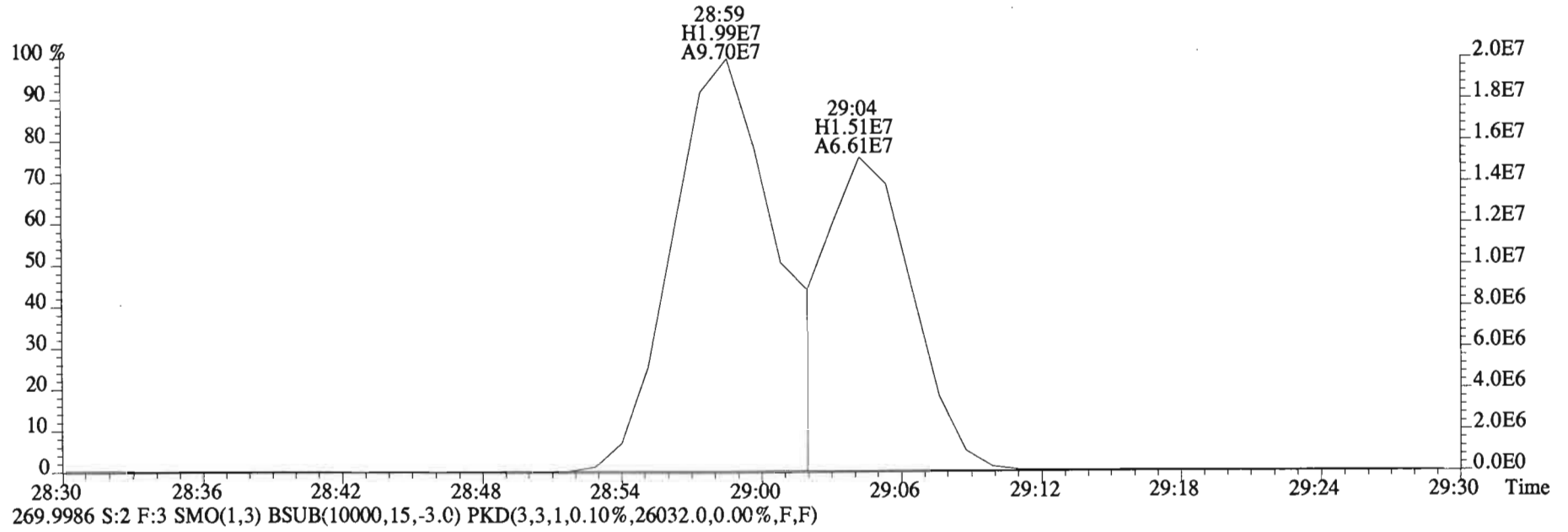
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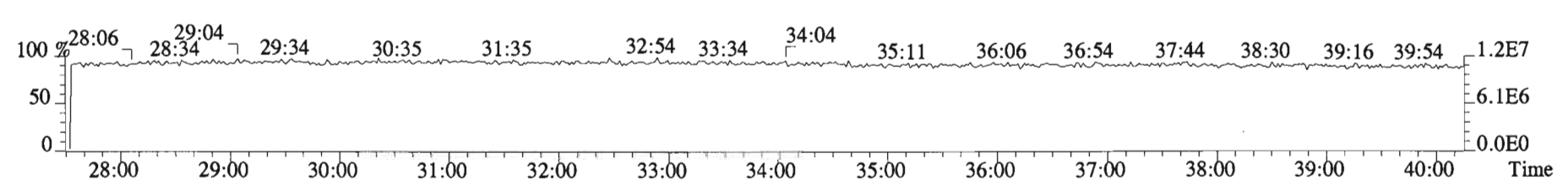
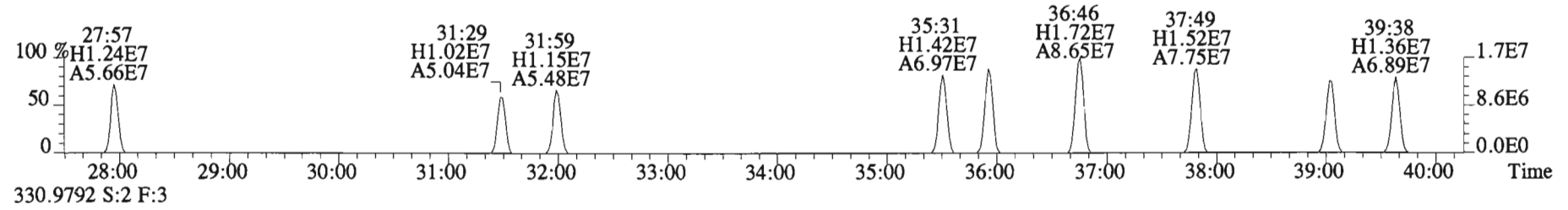
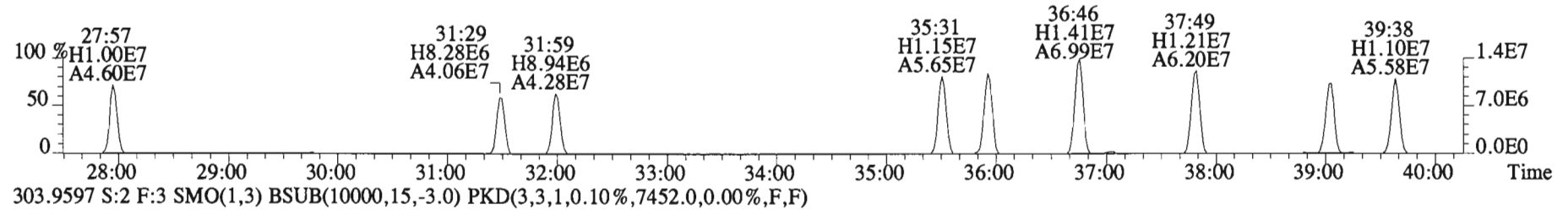
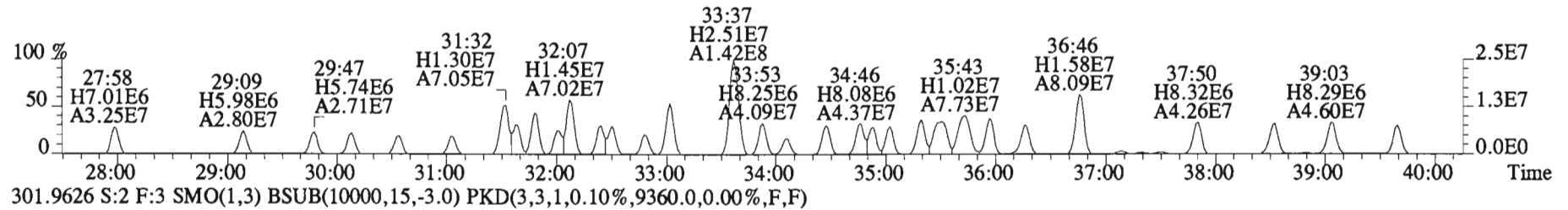
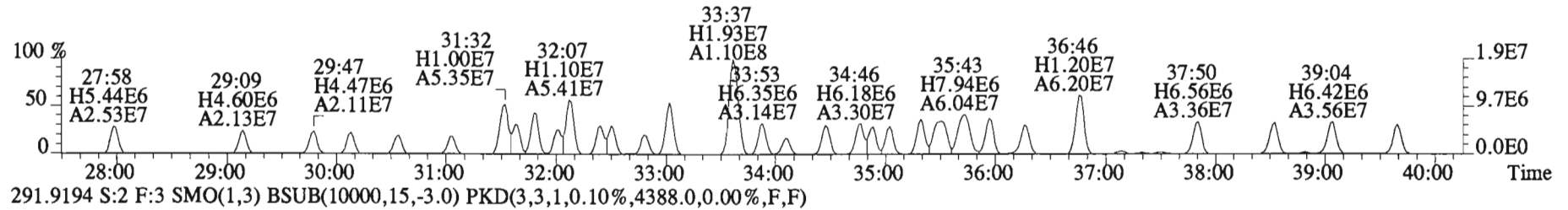
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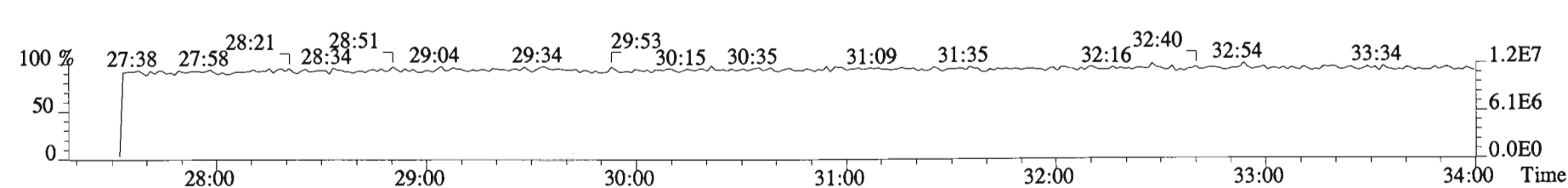
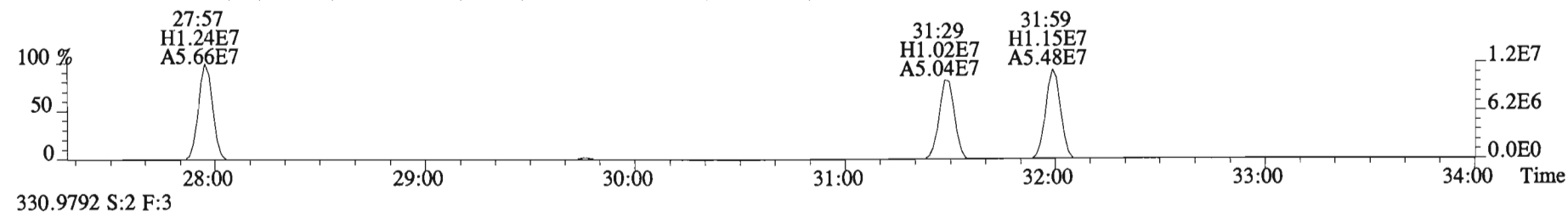
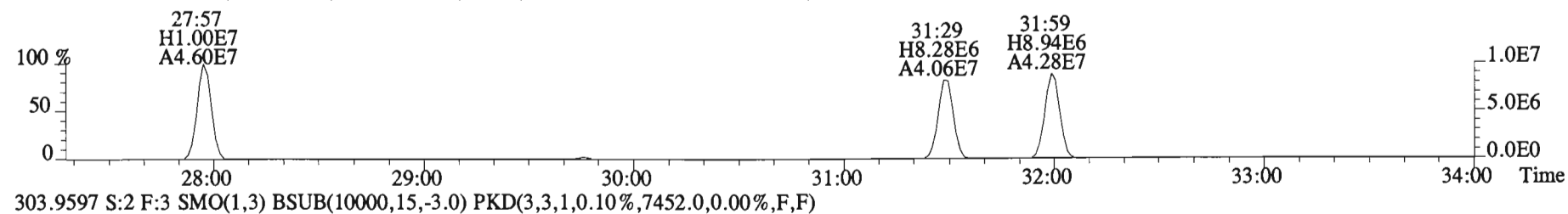
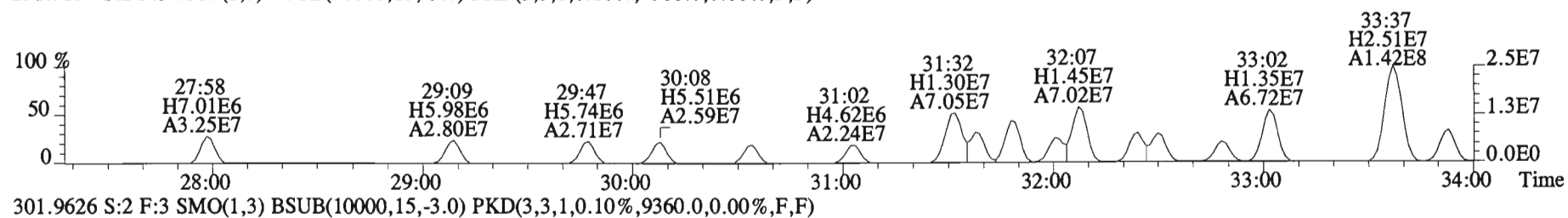
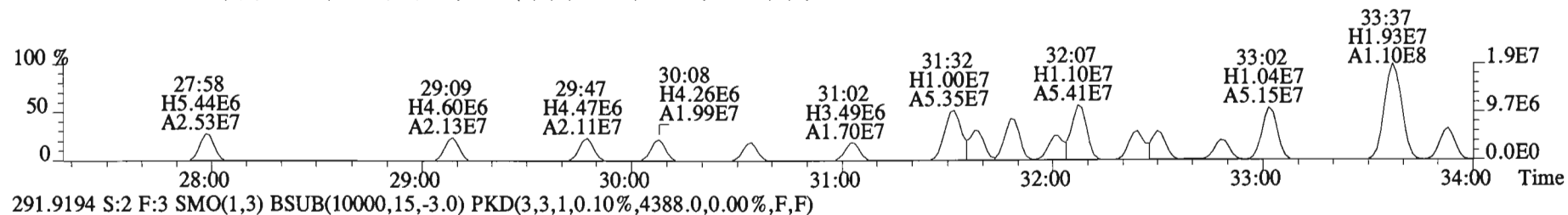
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268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,43852.0,0.00%,F,F)



File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
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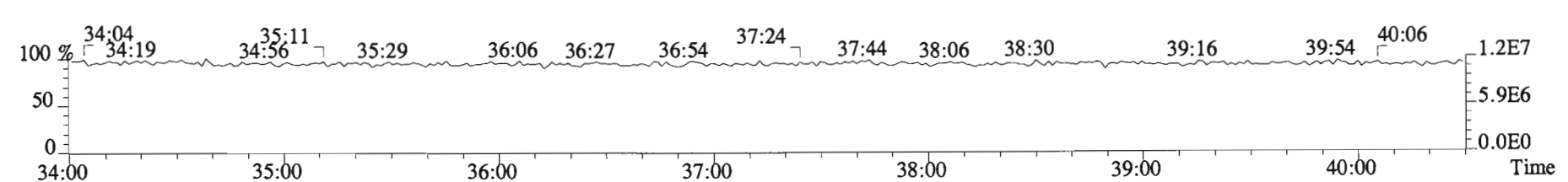
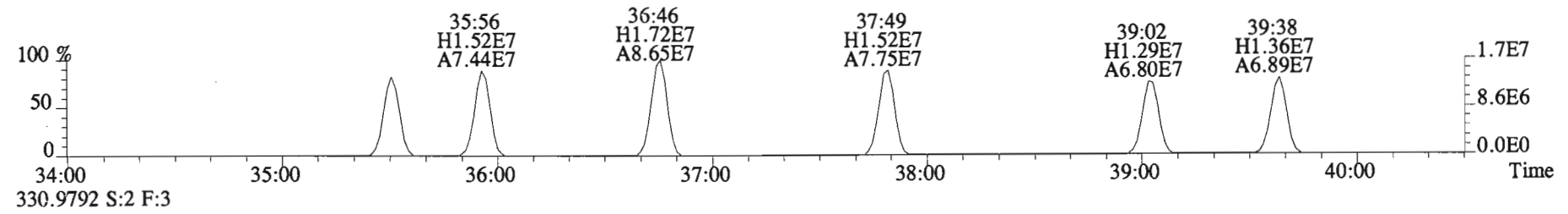
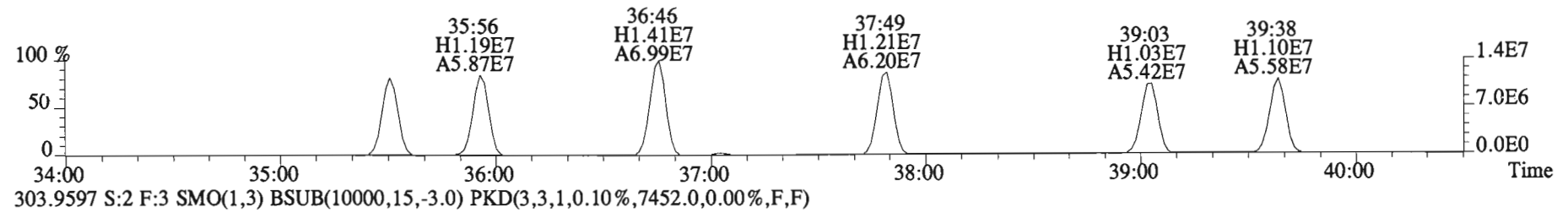
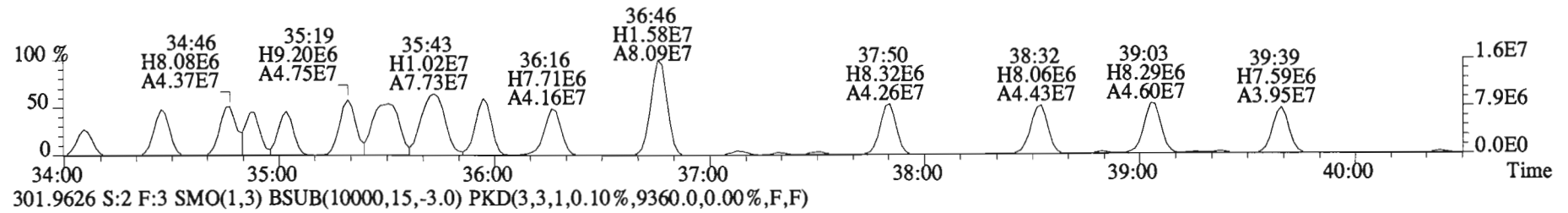
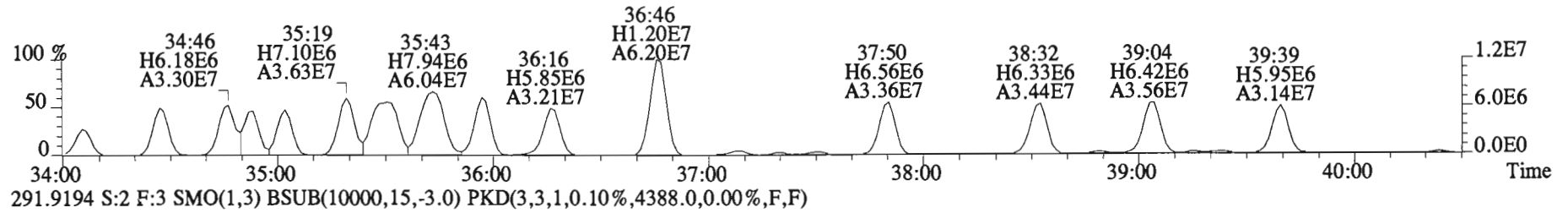


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289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6888.0,0.00%,F,F)

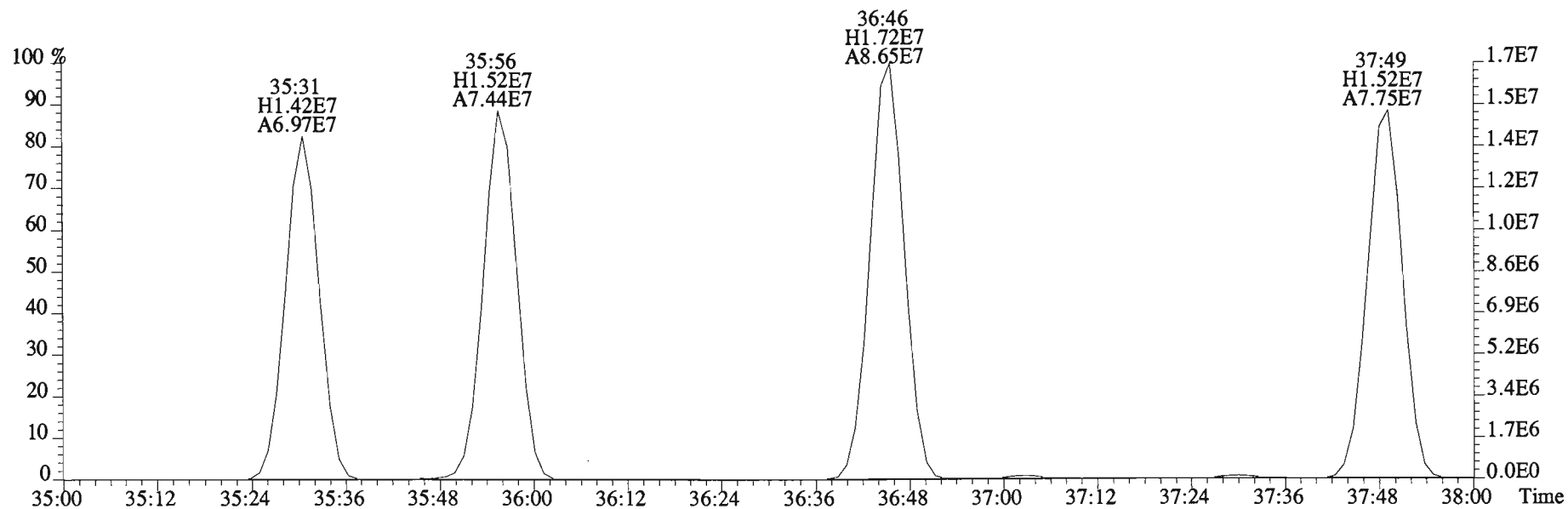
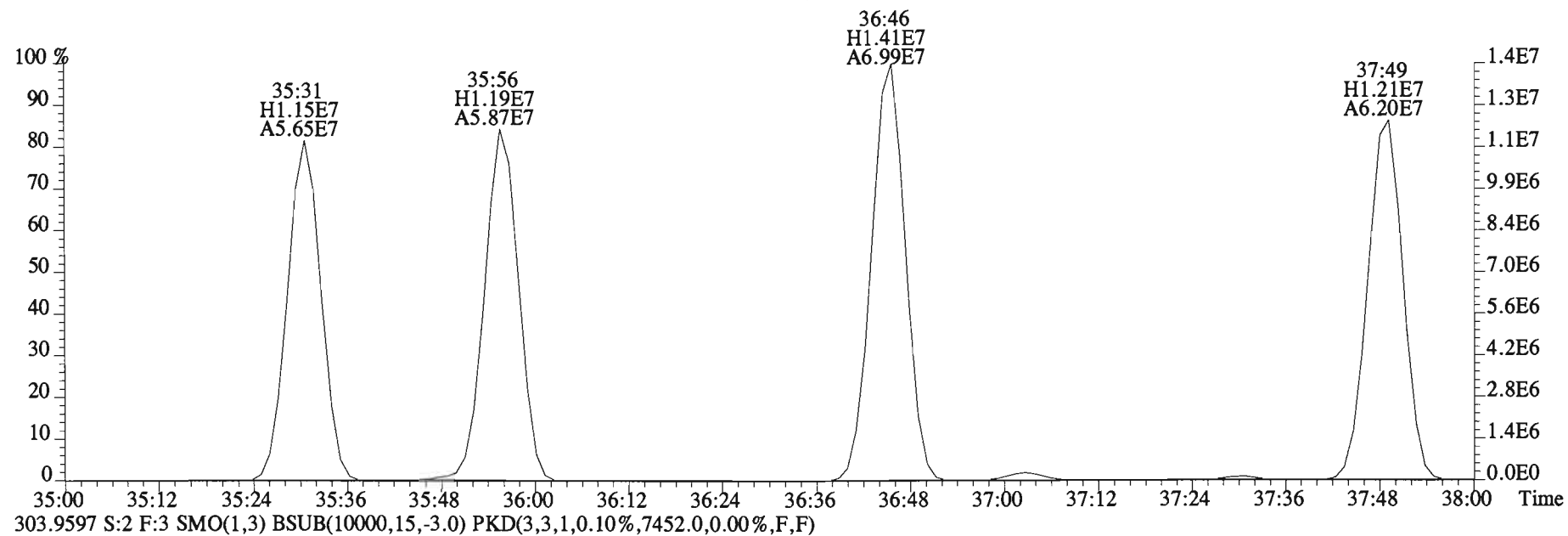




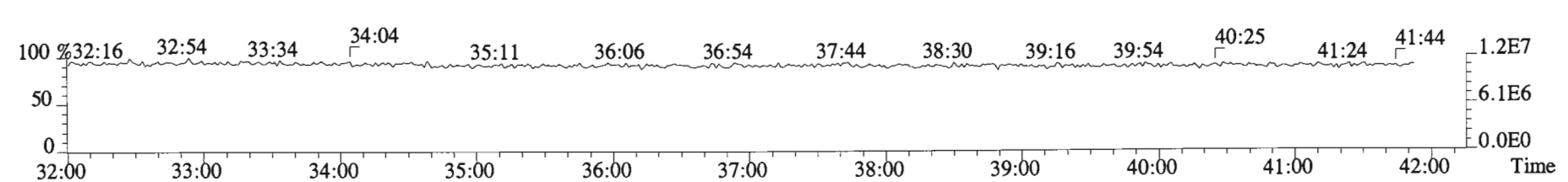
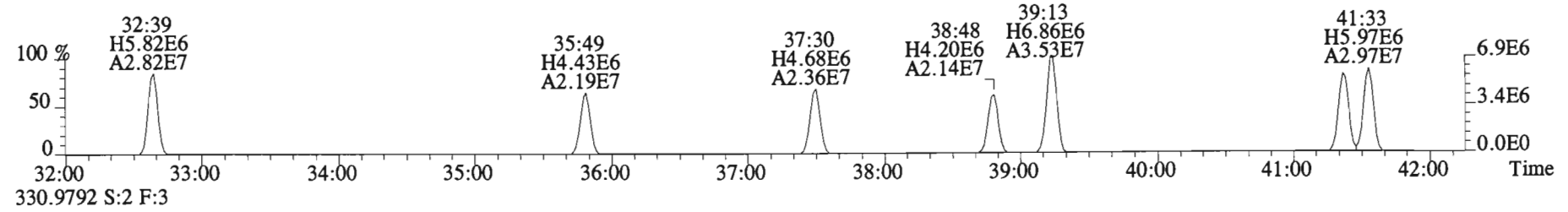
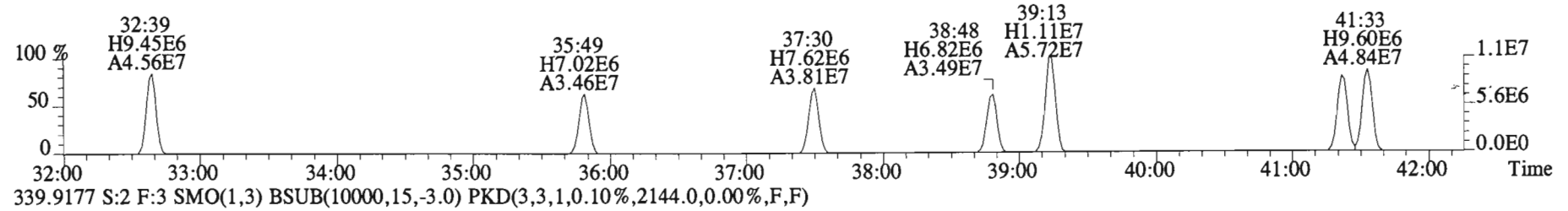
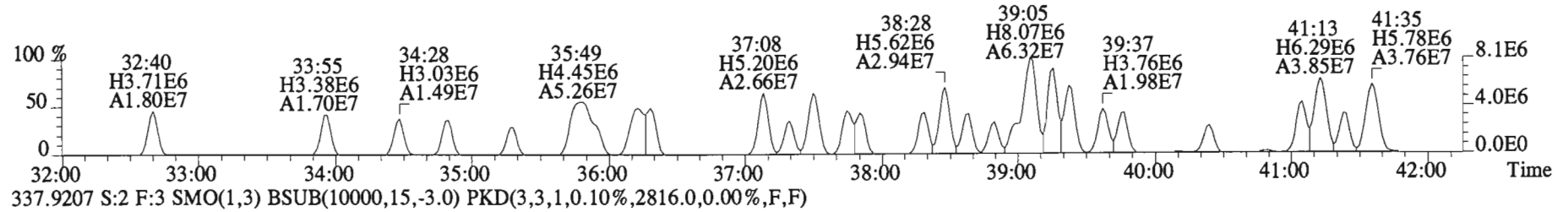
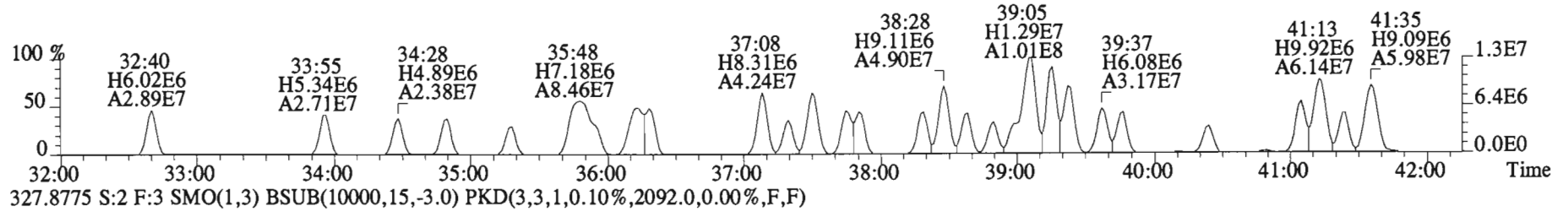
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
 289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6888.0,0.00%,F,F)



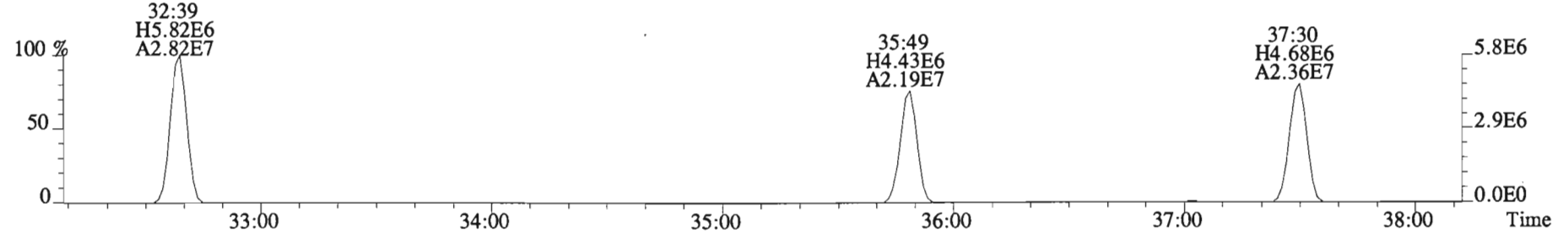
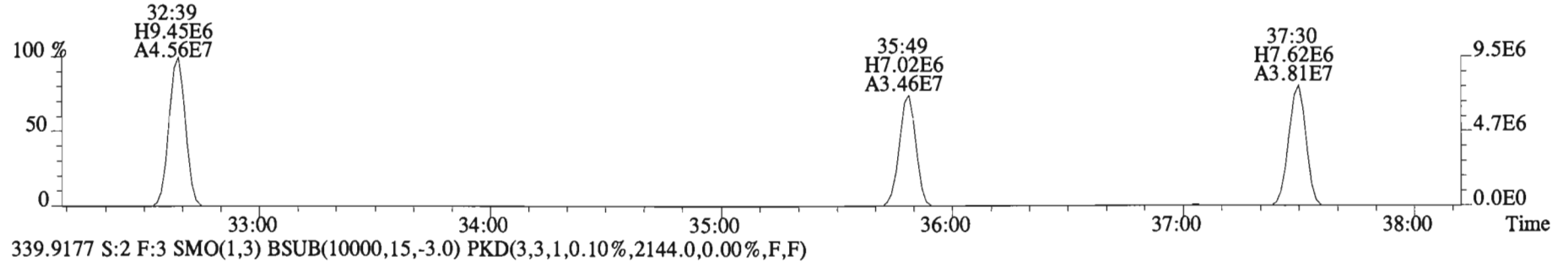
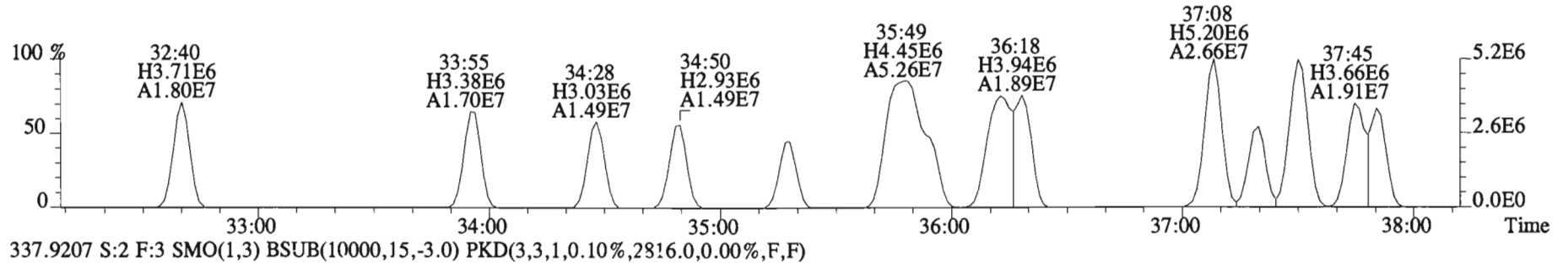
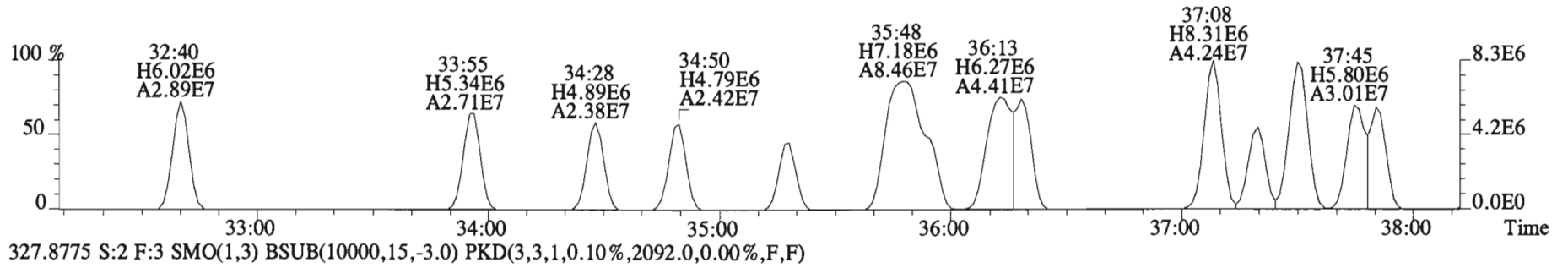
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB\_ZB1  
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9360.0,0.00%,F,F)



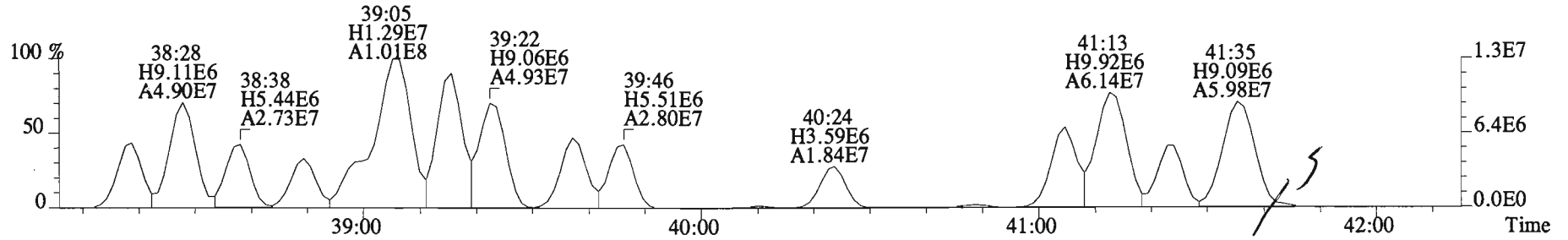
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
 325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)



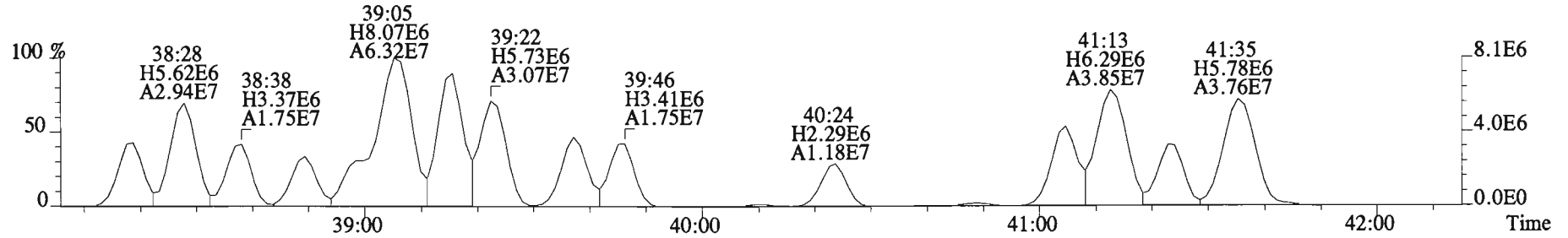
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
 325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)



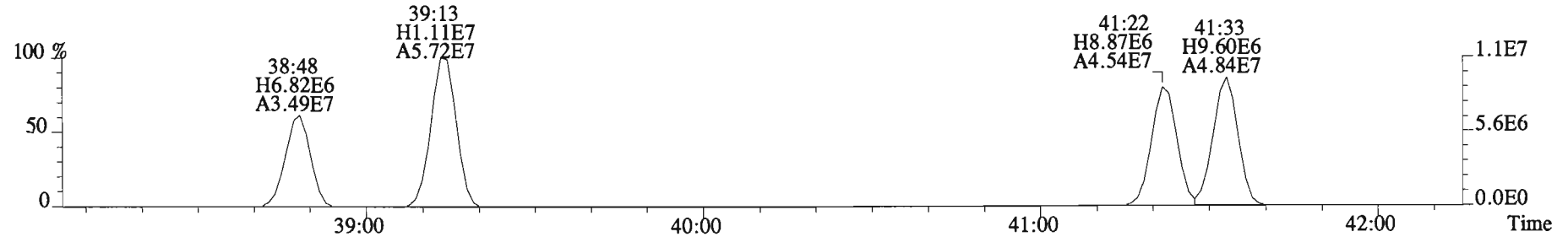
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
 325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)



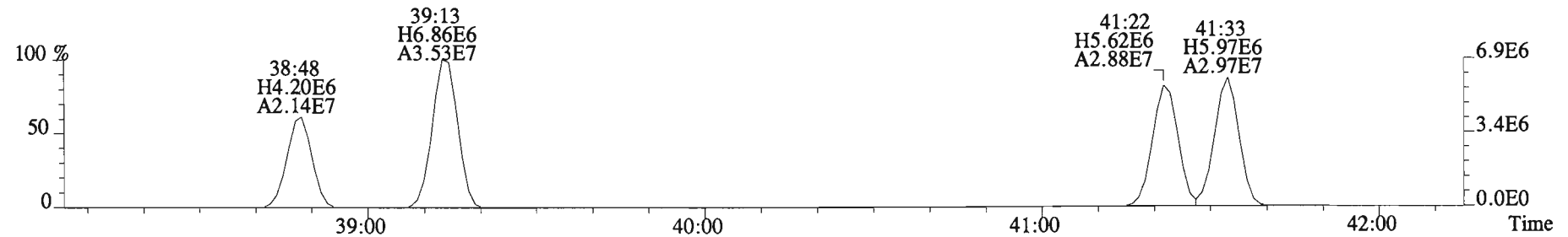
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2092.0,0.00%,F,F)



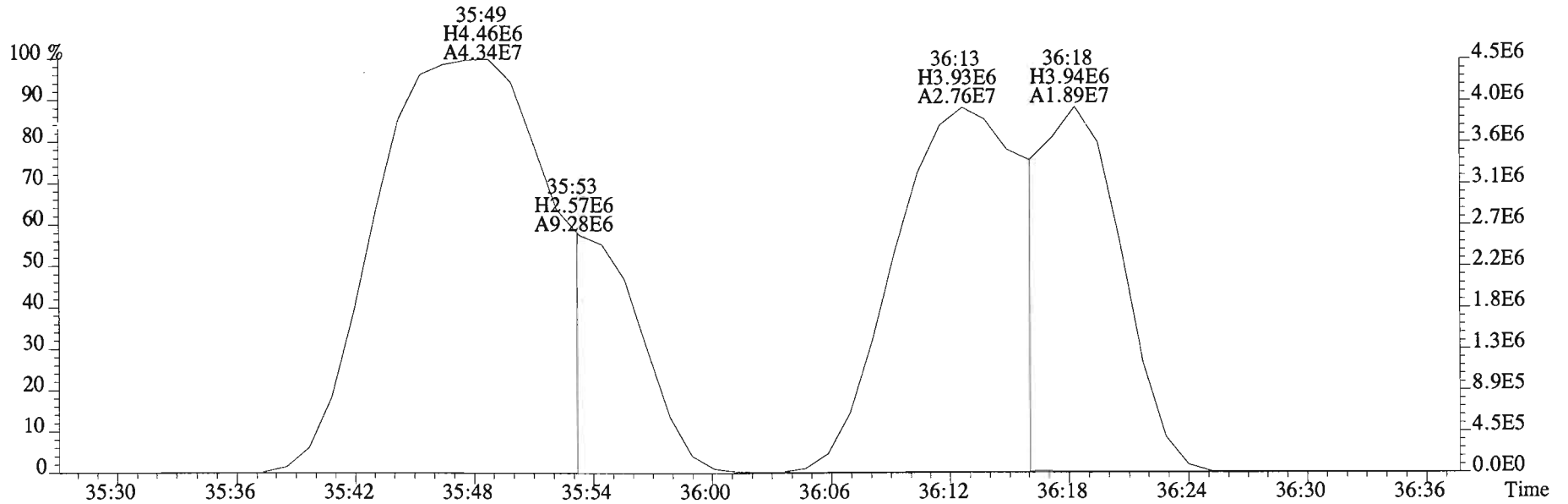
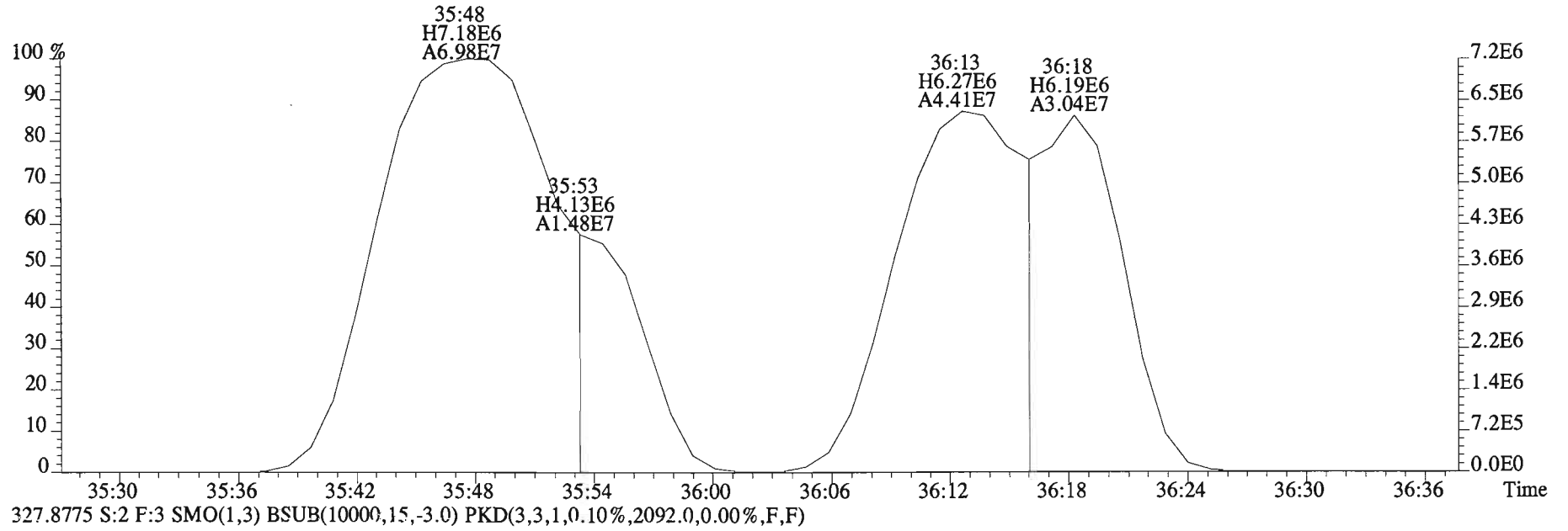
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2816.0,0.00%,F,F)



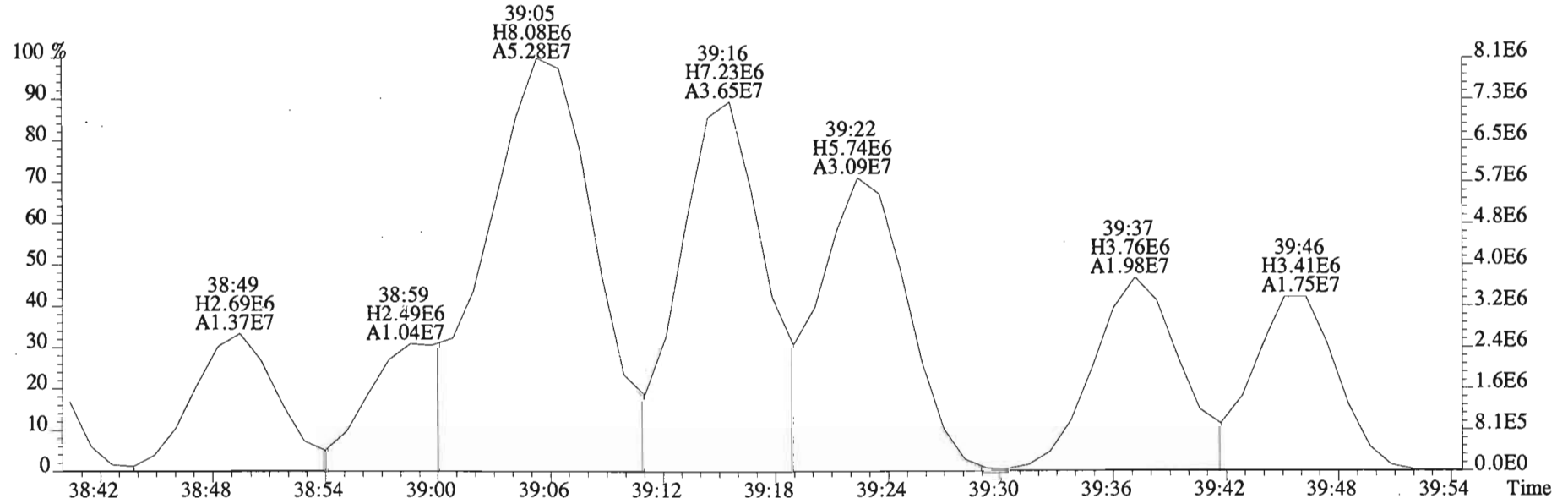
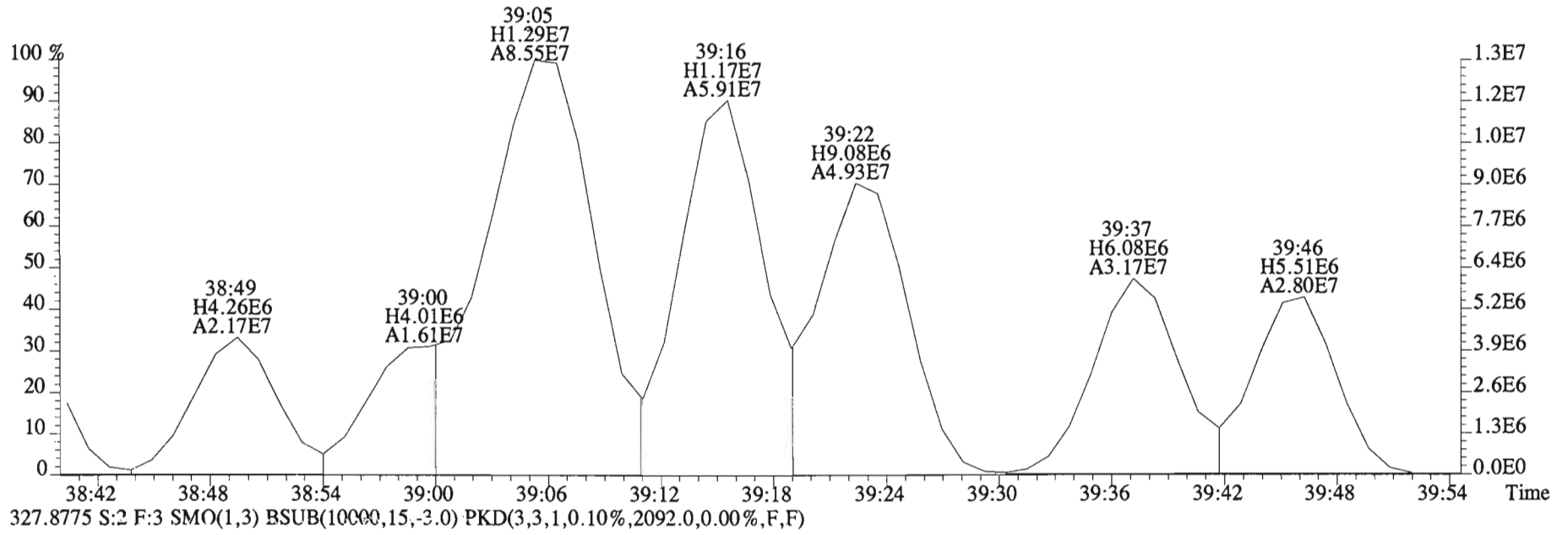
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2144.0,0.00%,F,F)



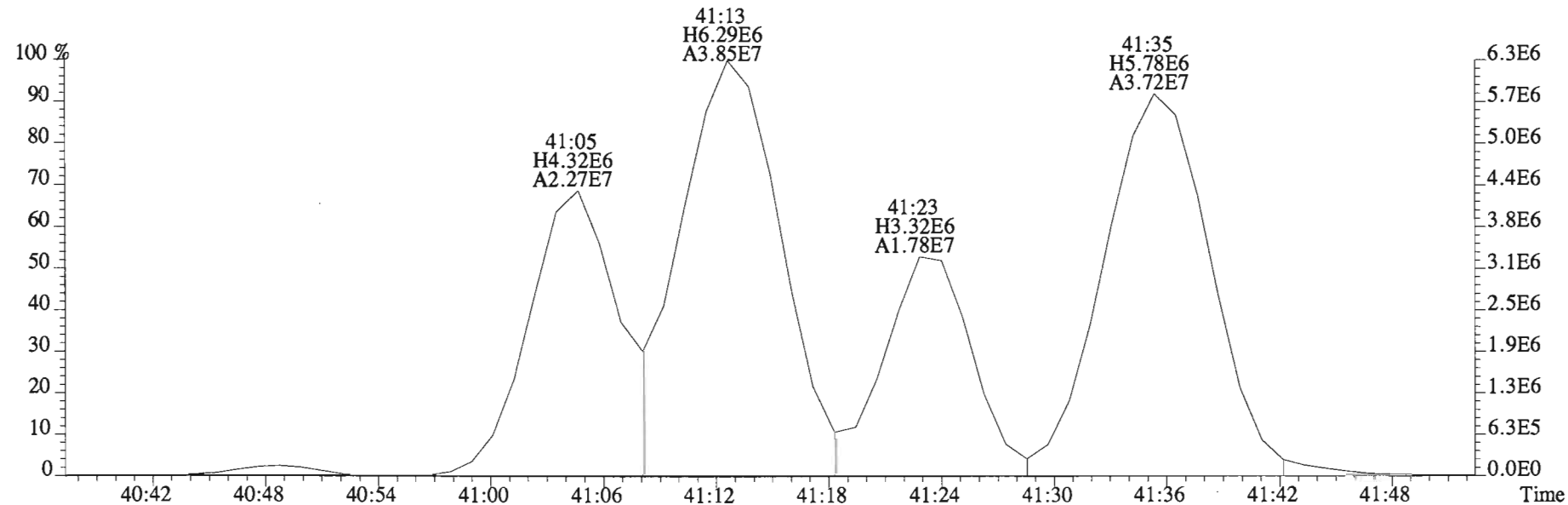
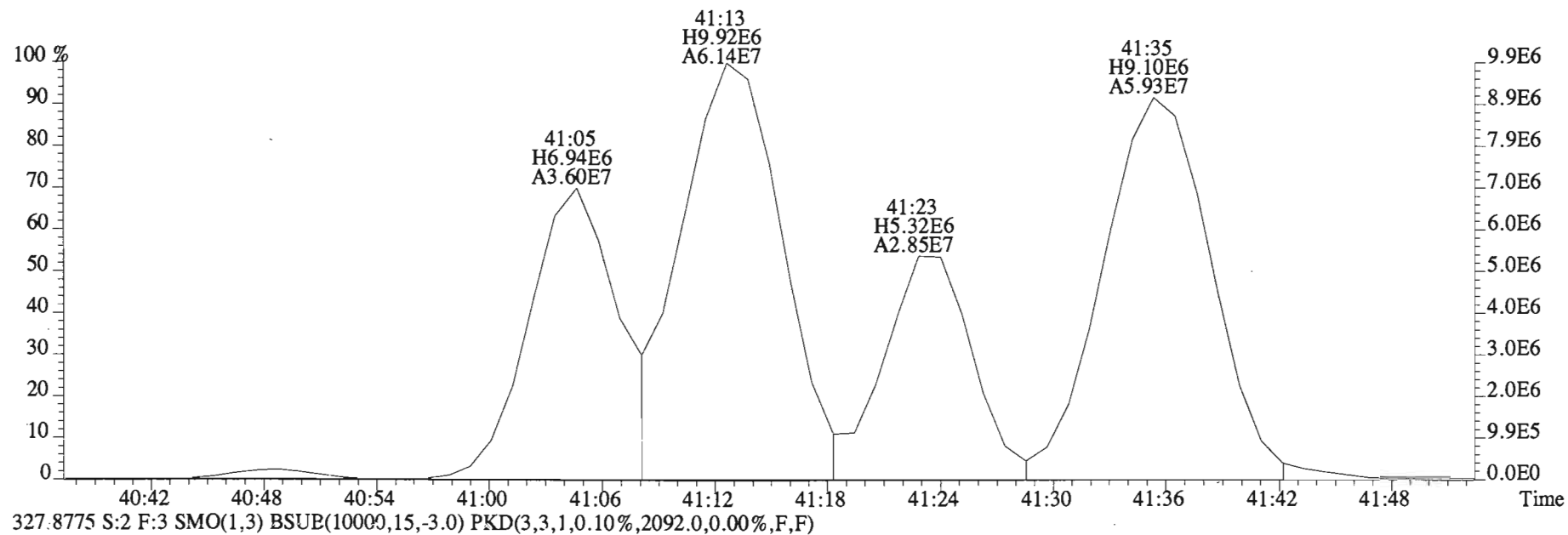
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB\_ZB1  
 325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)



File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
 325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)

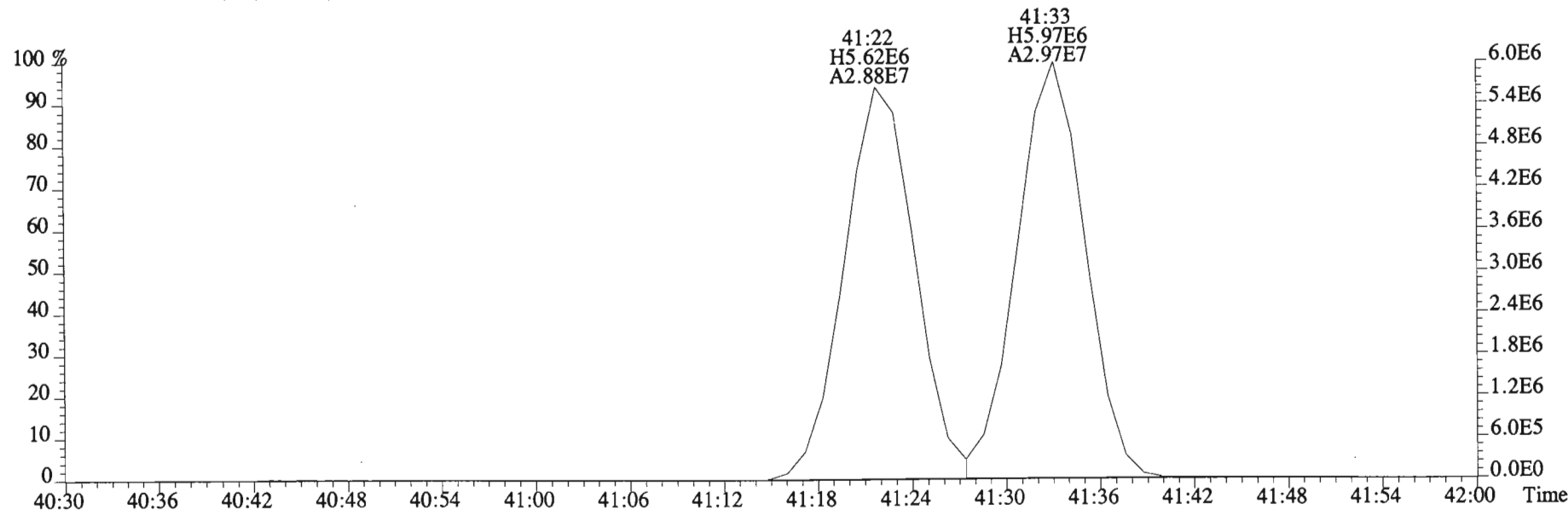
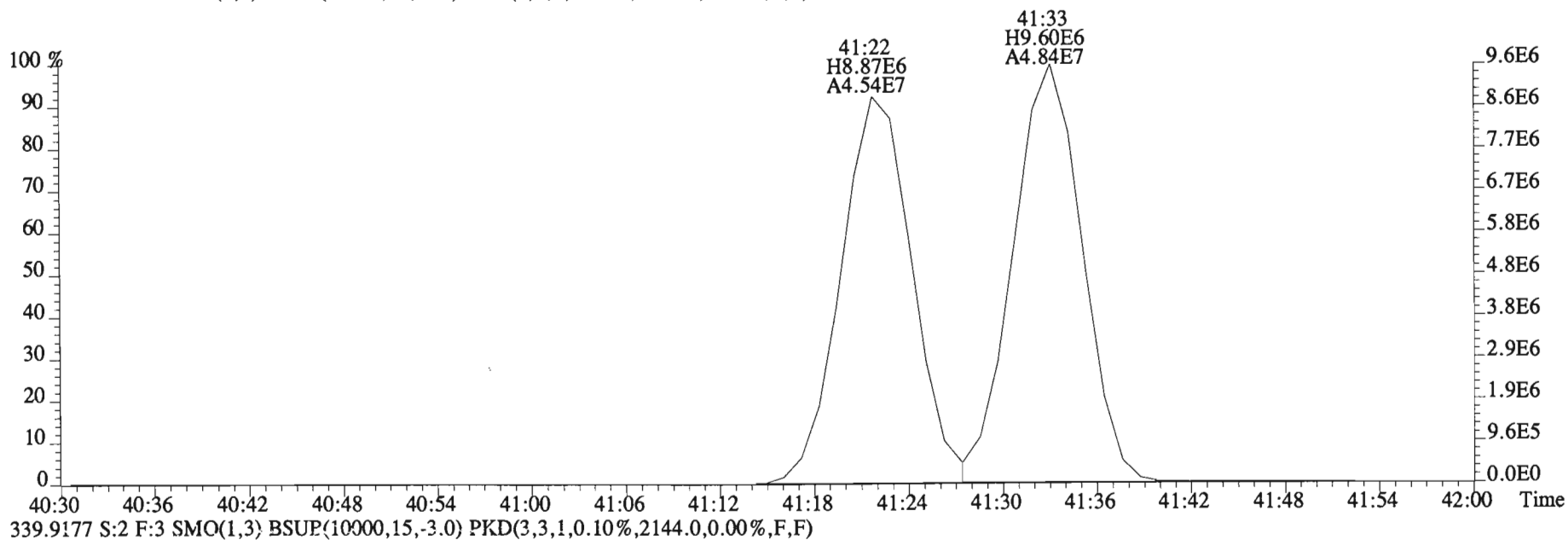


File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB\_ZB1  
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)

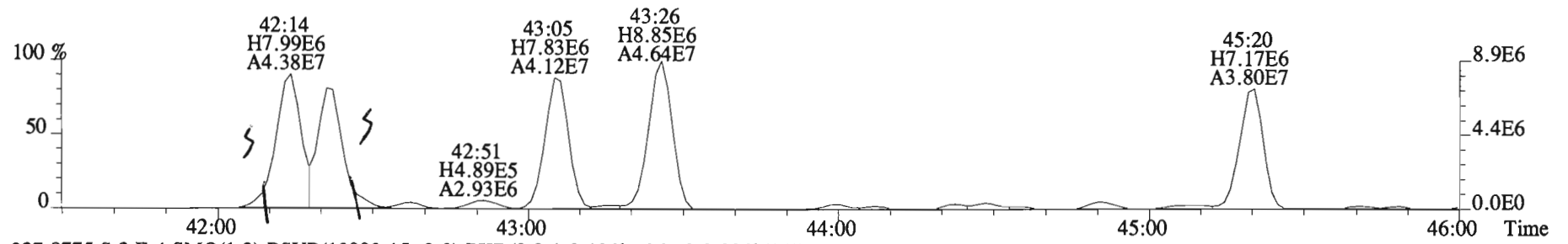




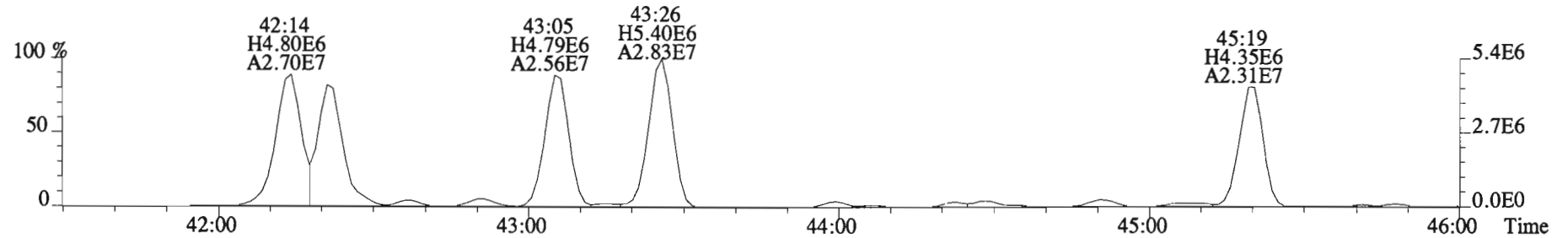
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB\_ZB1  
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2816.0,0.00%,F,F)



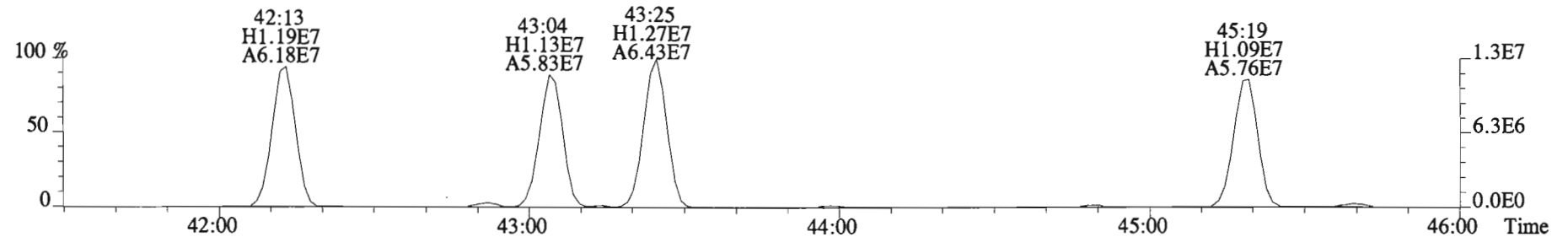
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6456.0,0.00%,F,F)



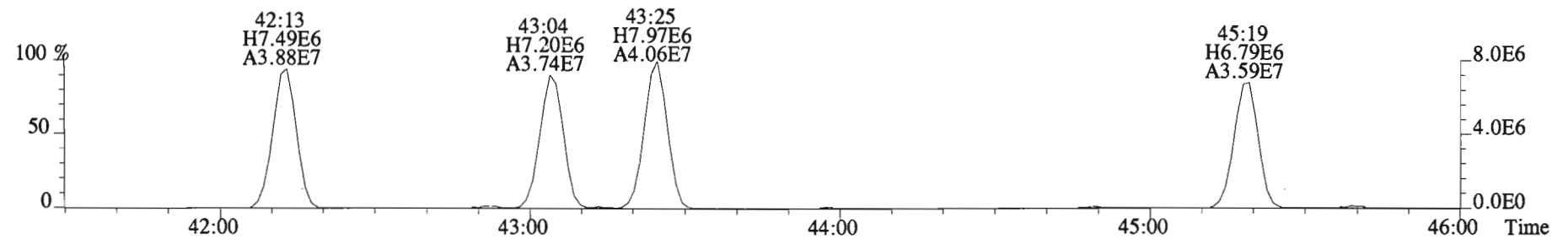
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5264.0,0.00%,F,F)



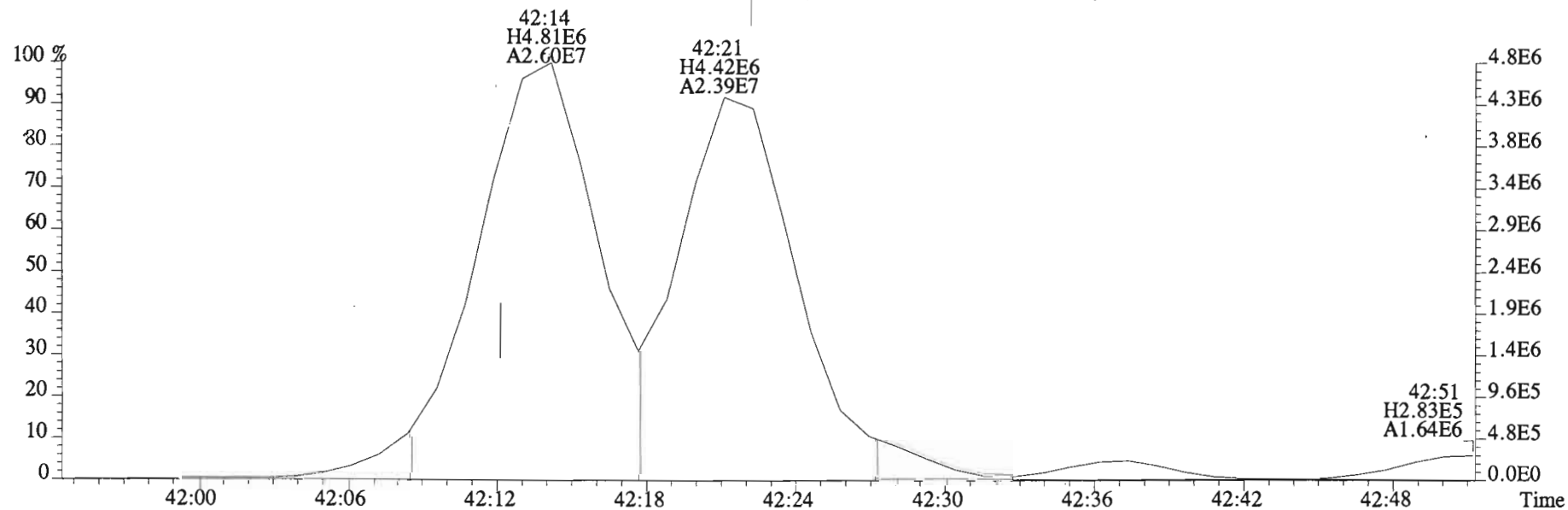
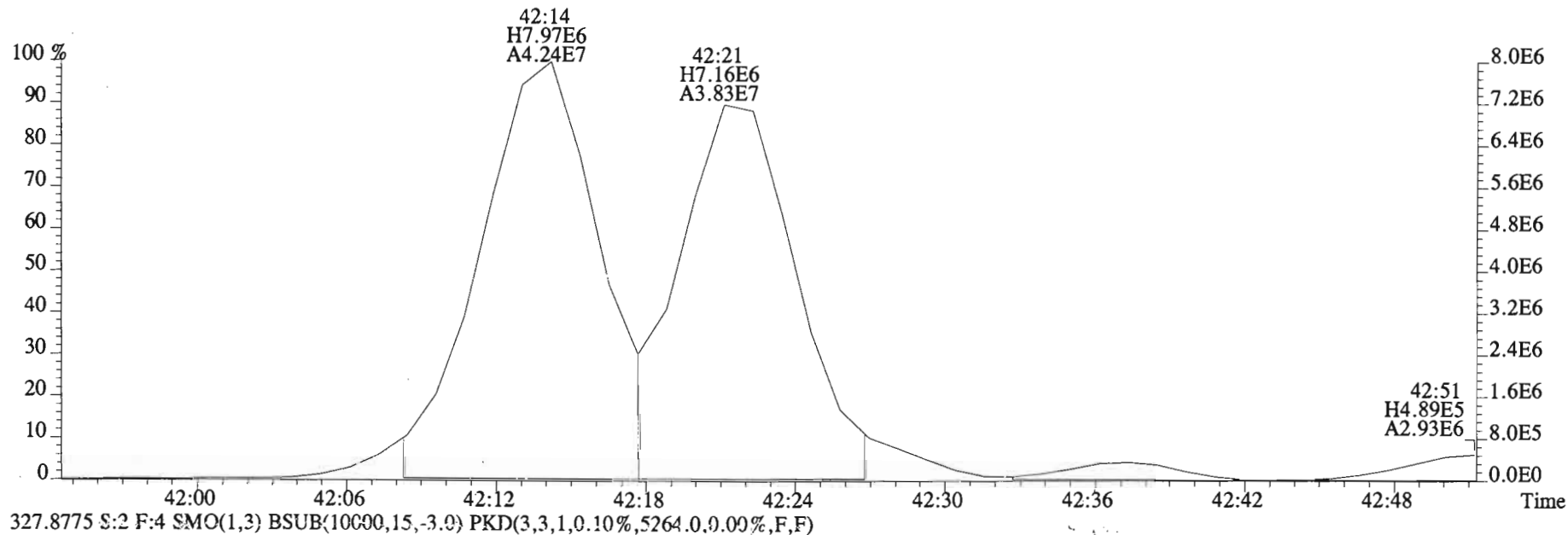
337.9207 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5684.0,0.00%,F,F)



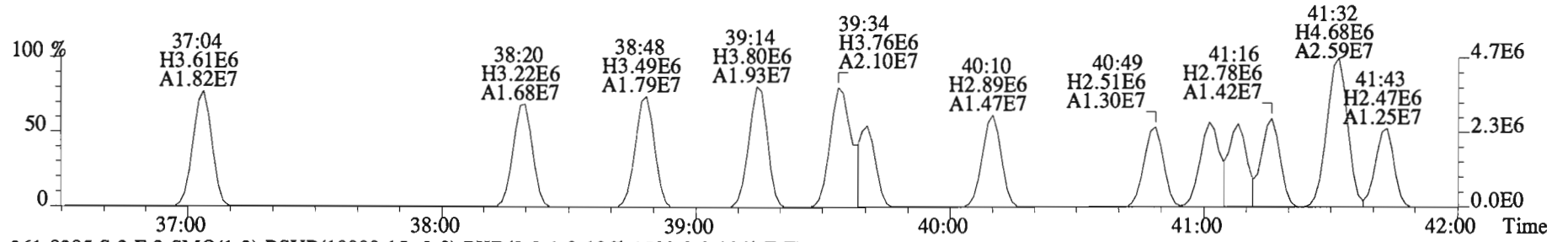
339.9177 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4420.0,0.00%,F,F)



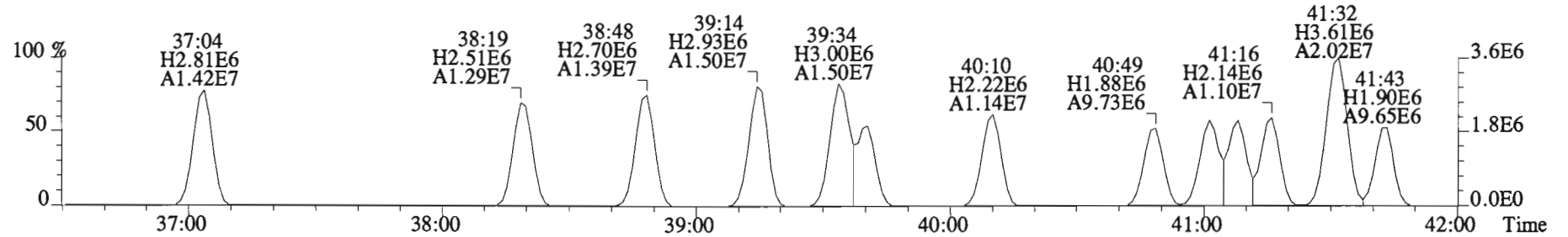
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB\_ZB1  
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6456.0,0.00%,F,F)



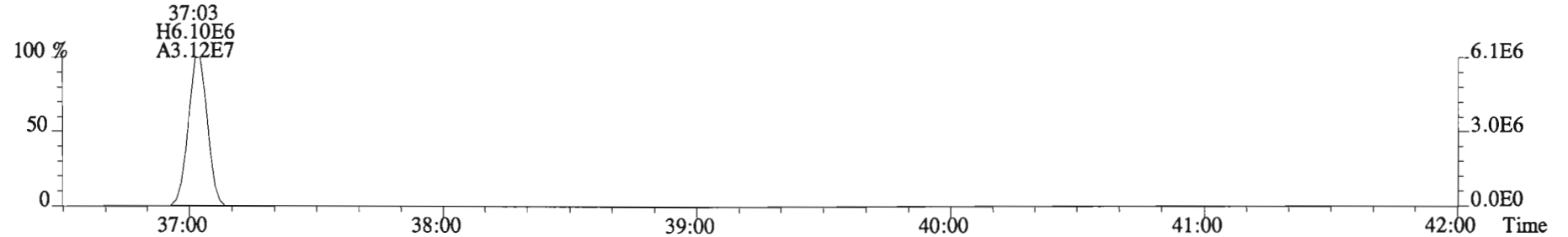
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
359.8415 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1480.0,0.00%,F,F)



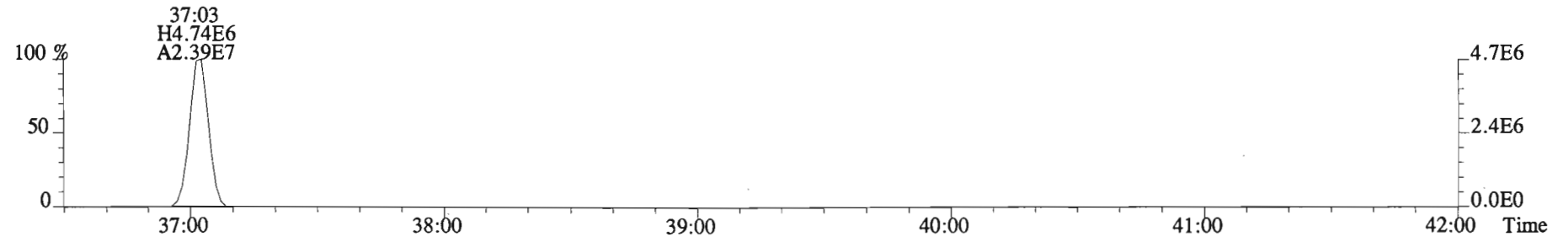
361.8385 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1520.0,0.00%,F,F)



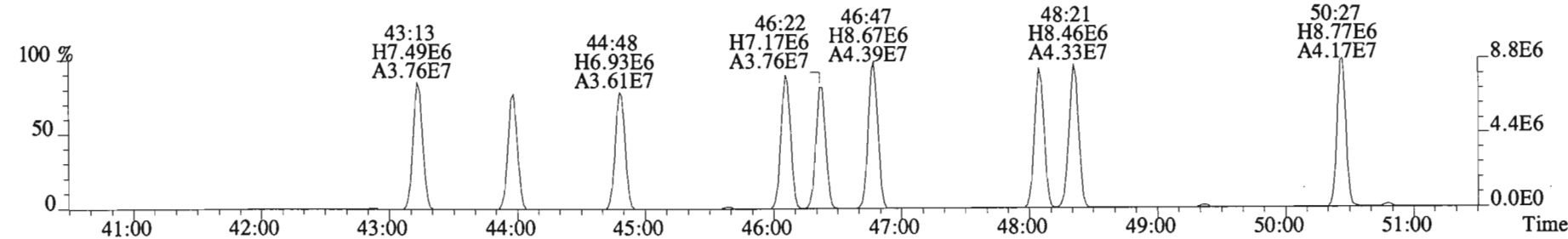
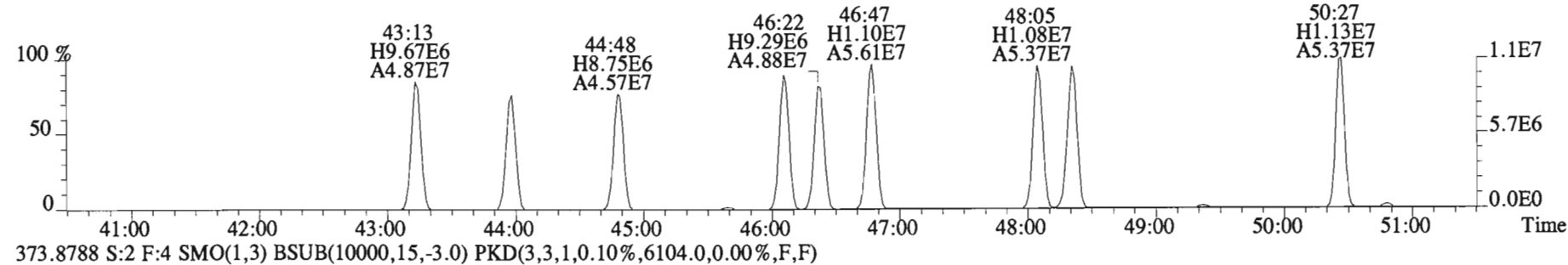
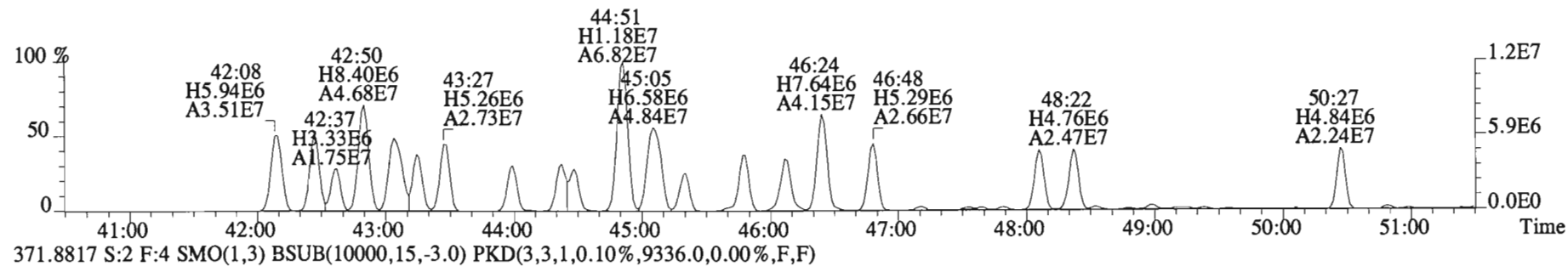
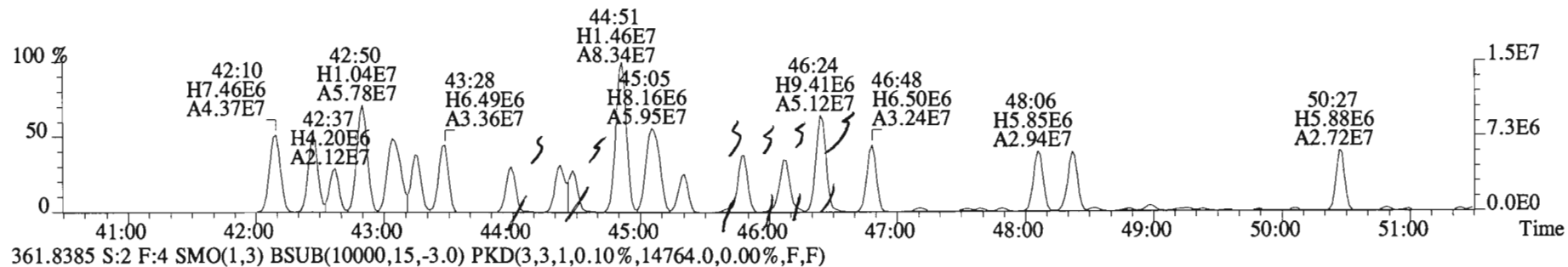
371.8817 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1448.0,0.00%,F,F)



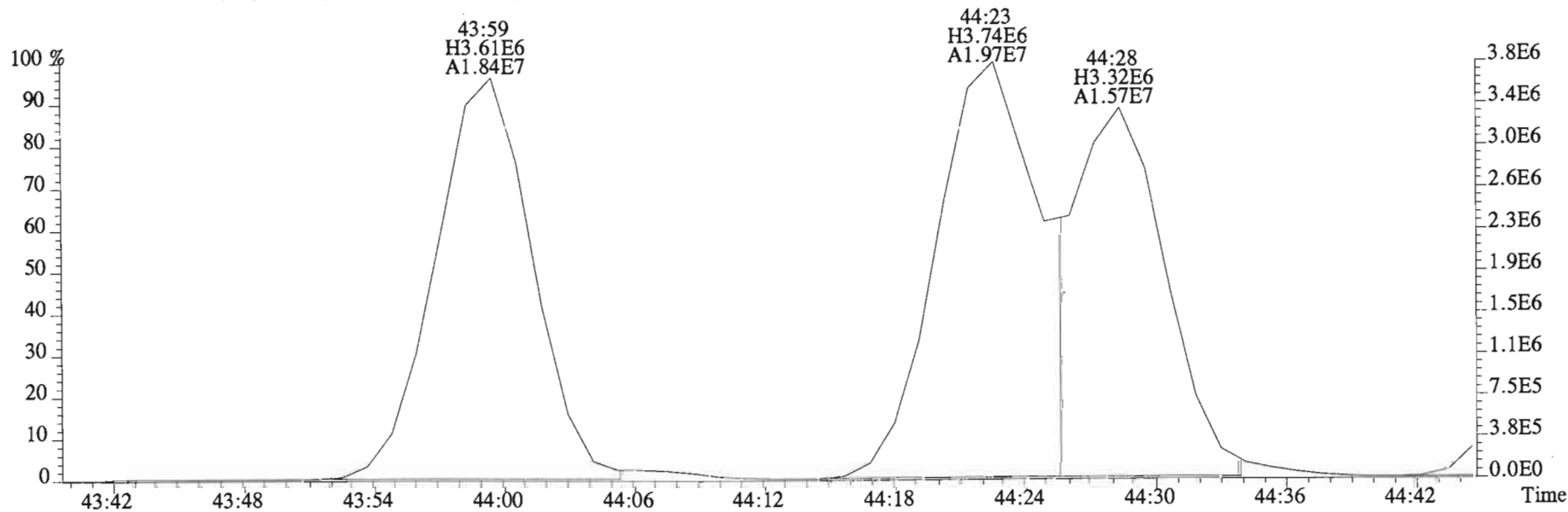
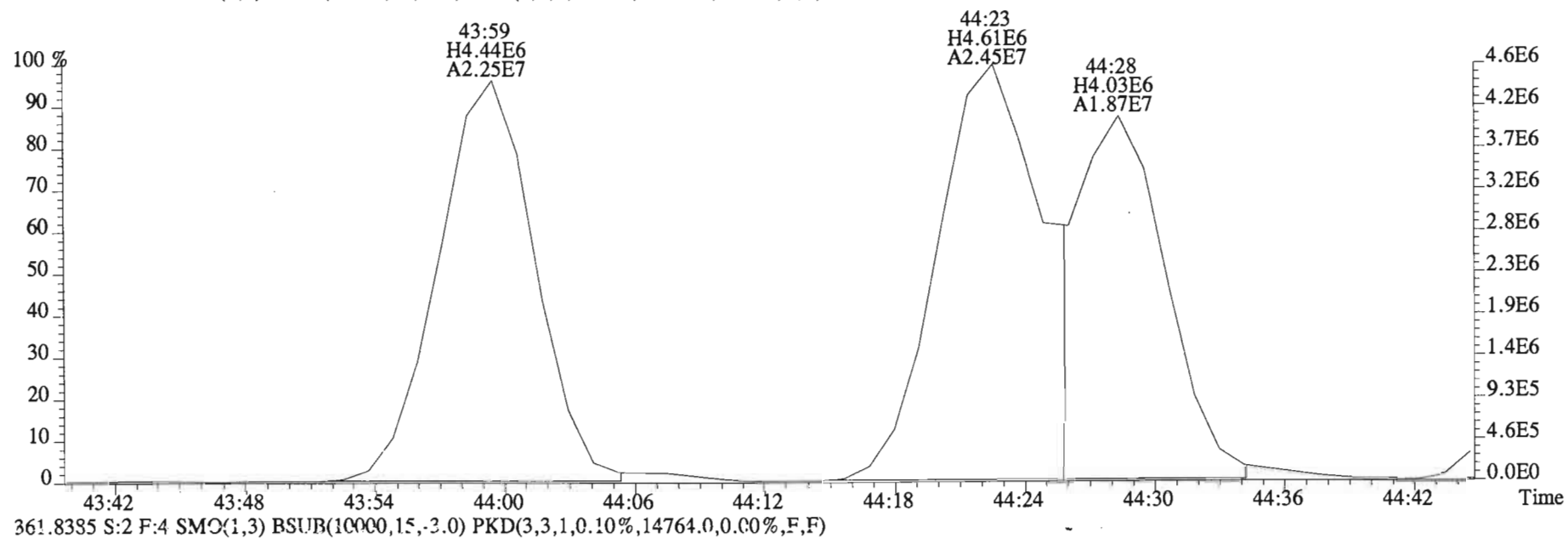
373.8788 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1584.0,0.00%,F,F)



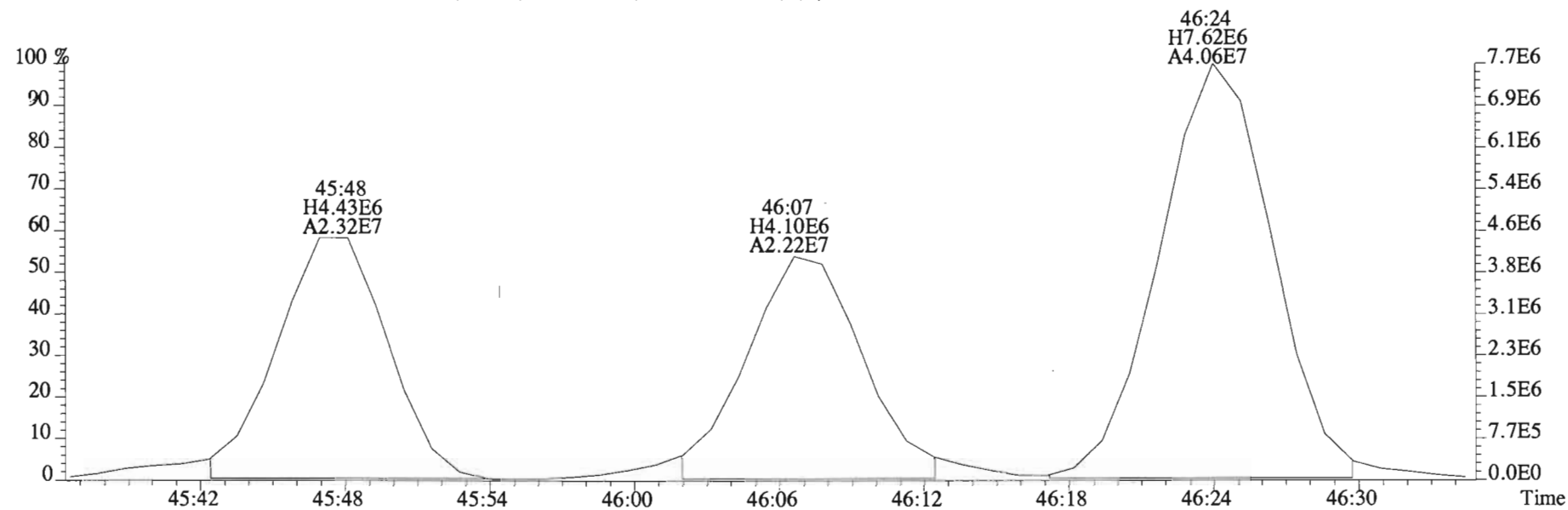
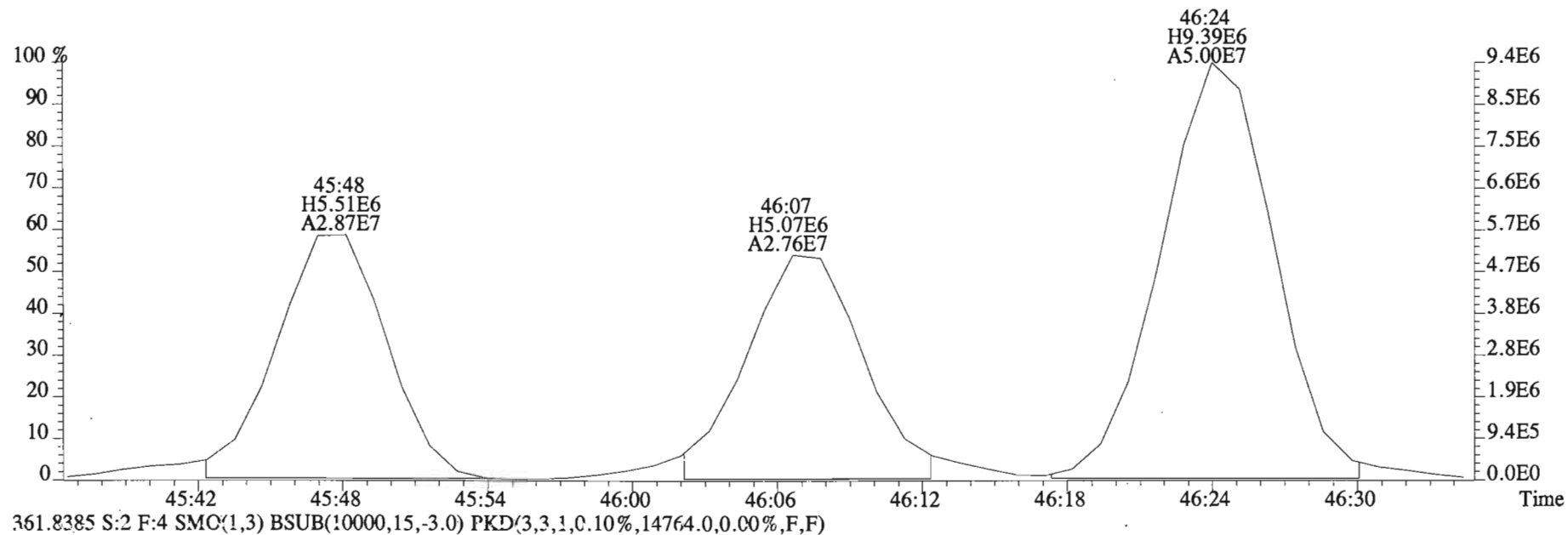
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB\_ZB1  
 359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,21804.0,0.00%,F,F)



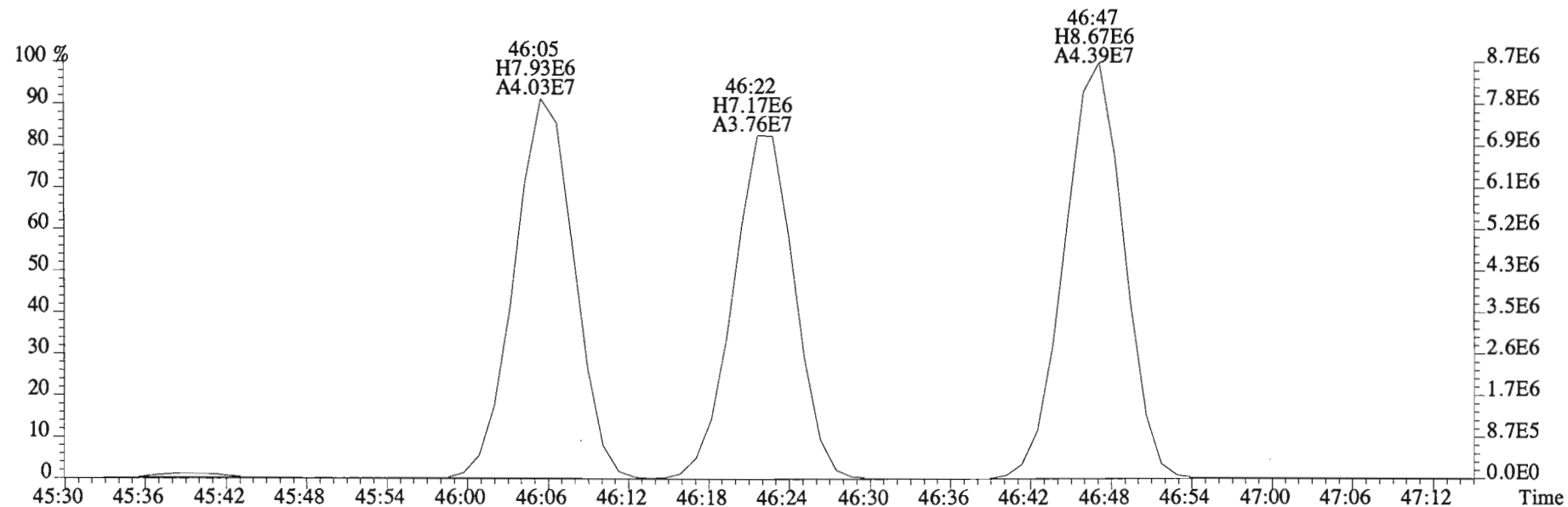
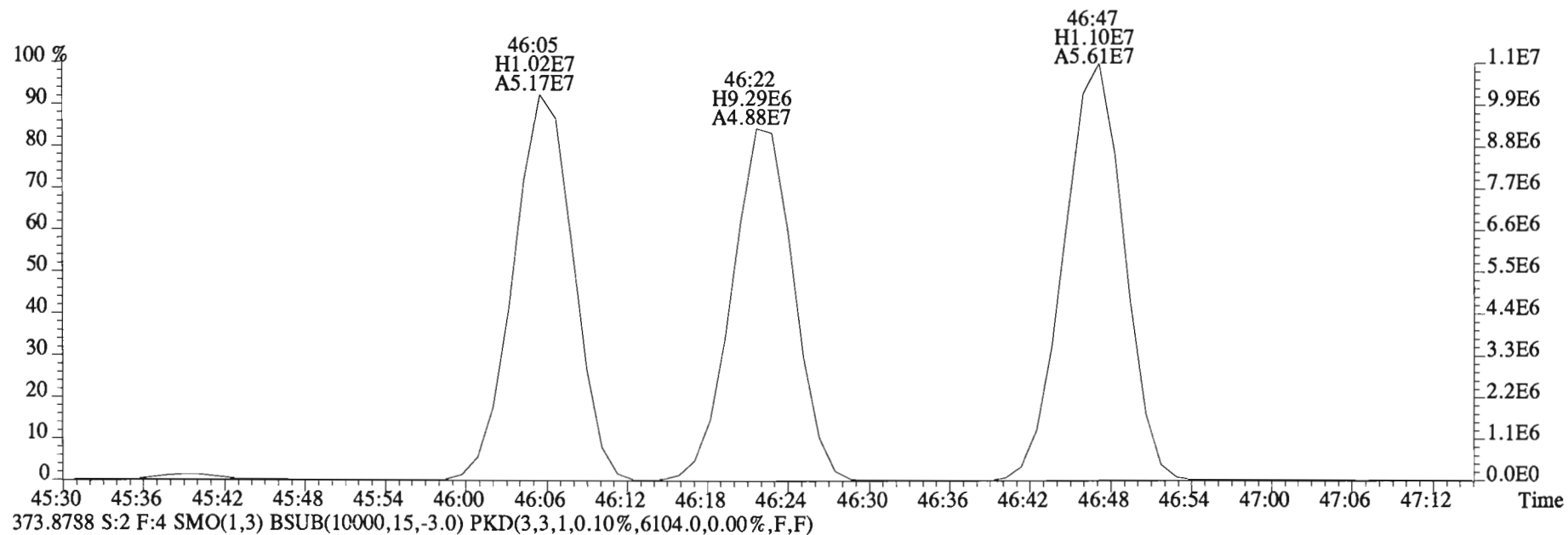
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,21804.0,0.00%,F,F)



File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,21804.0,0.00%,F,F)

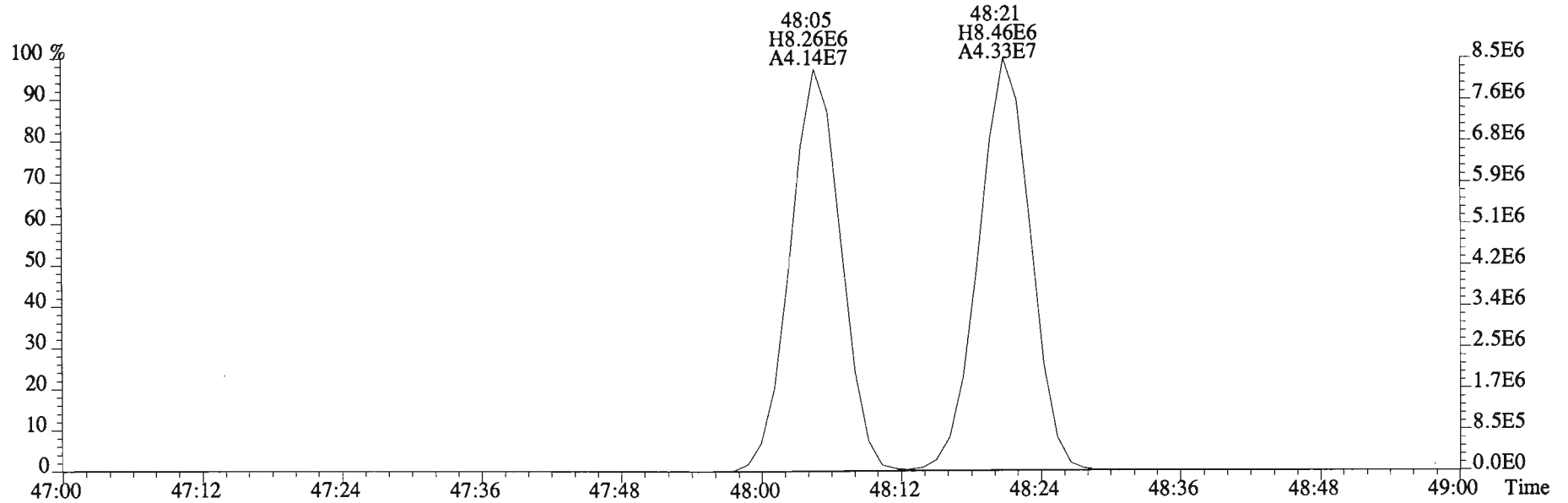
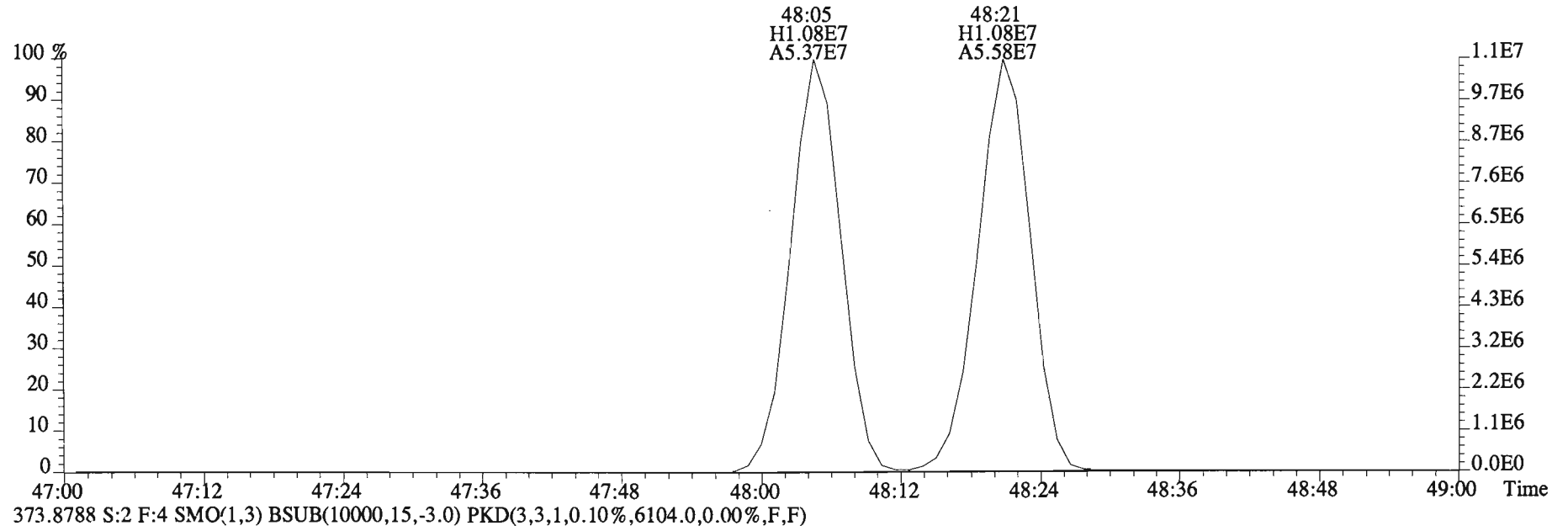


File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB\_ZB1  
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9336.0,0.00%,F,F)

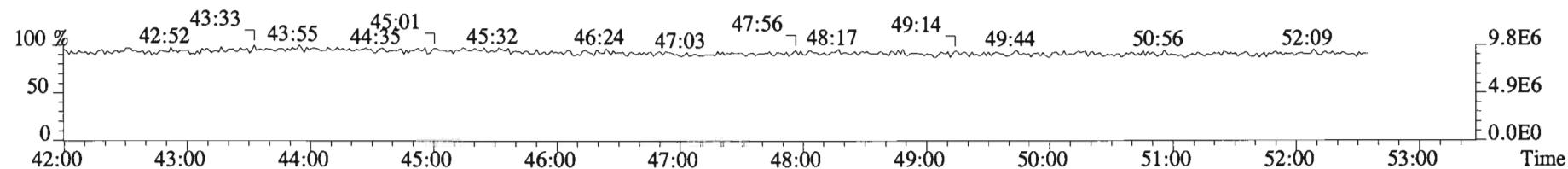
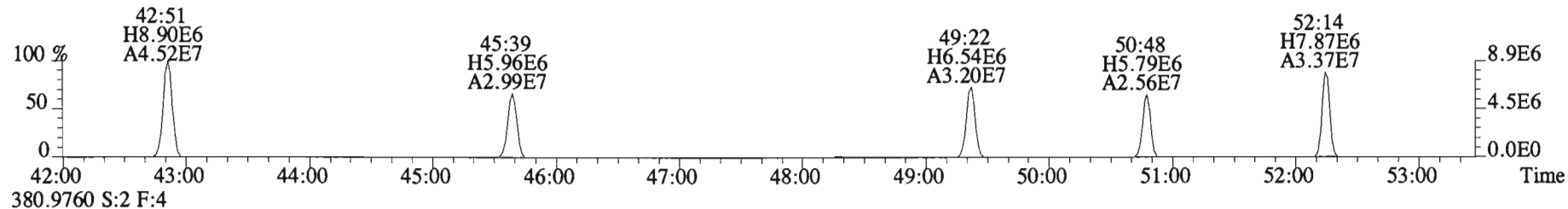
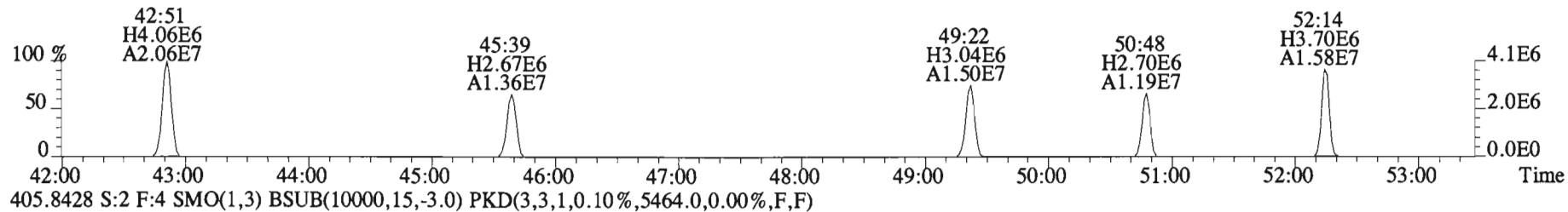
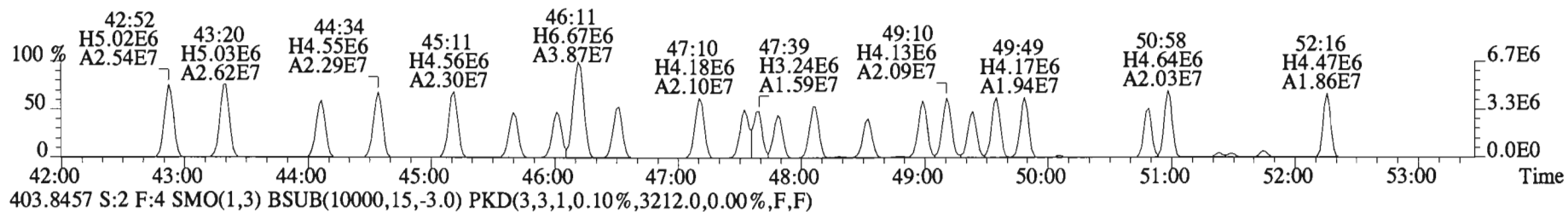
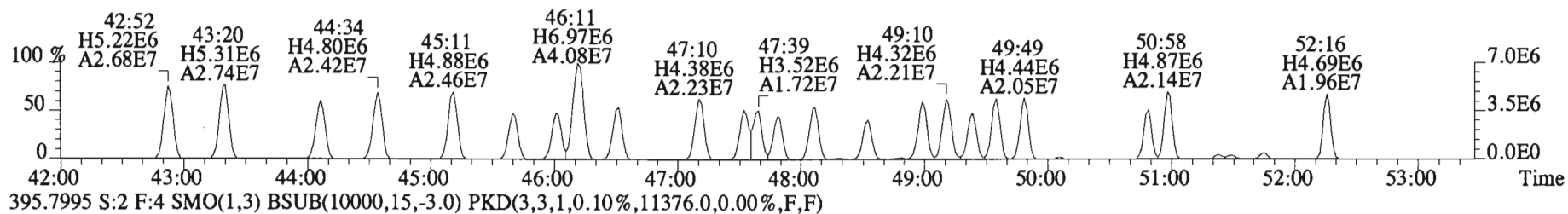




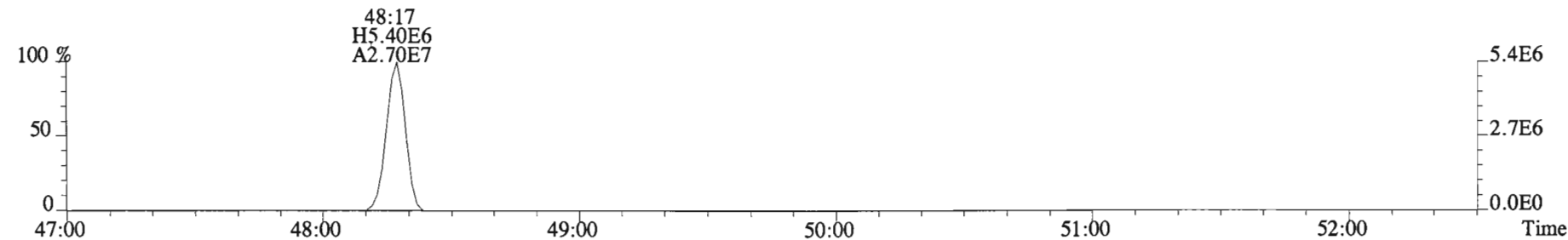
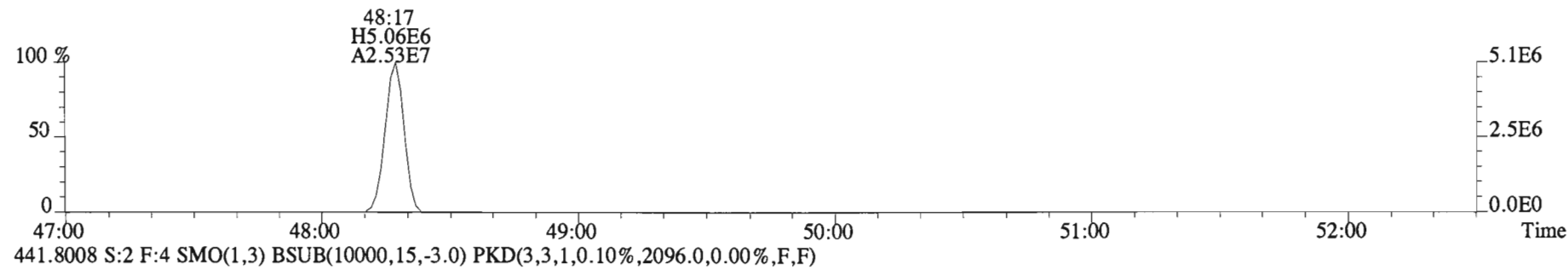
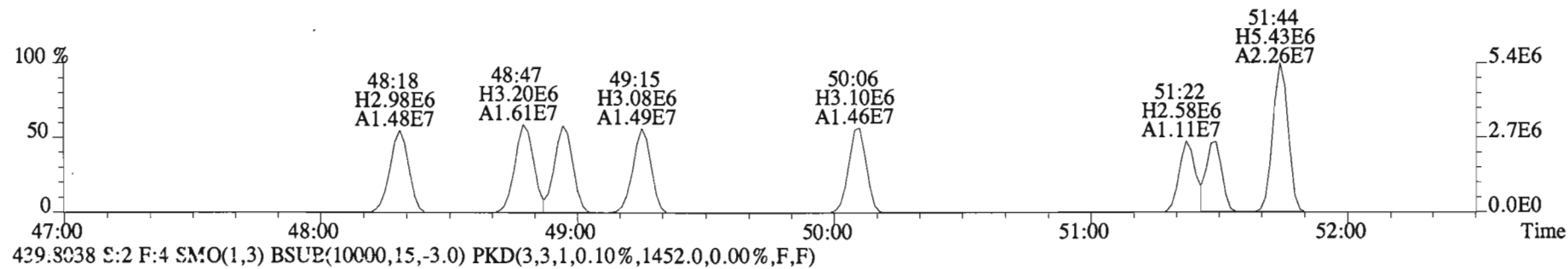
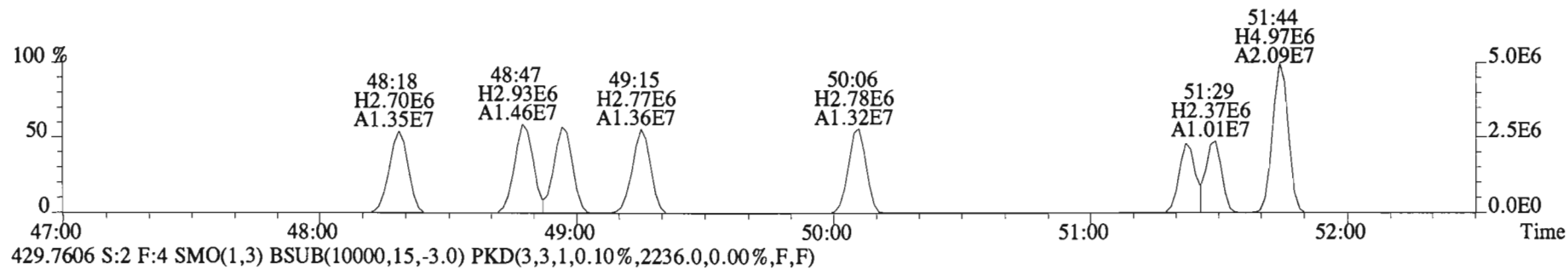
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9336.0,0.00%,F,F)



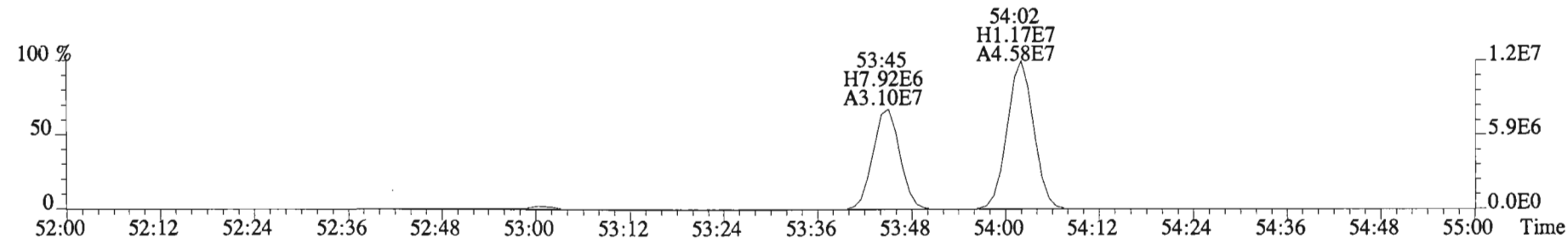
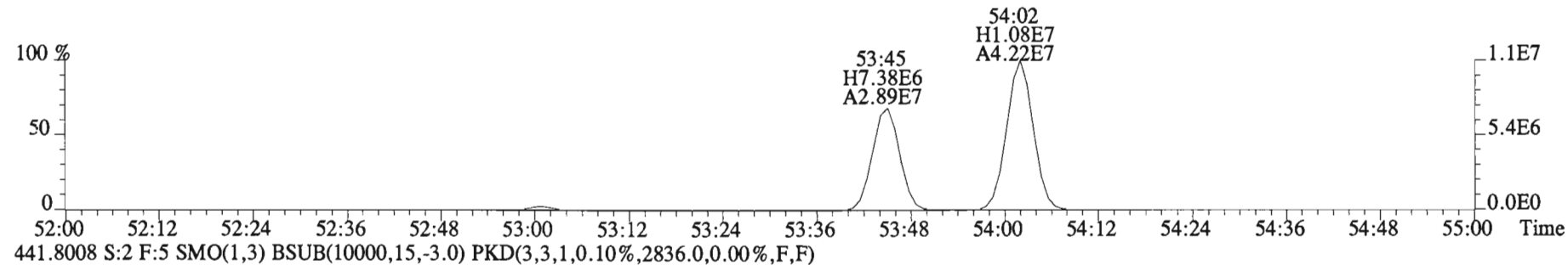
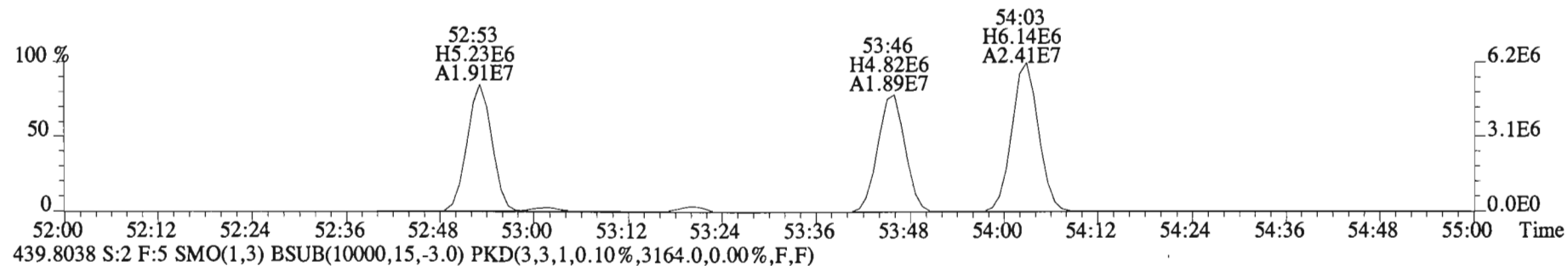
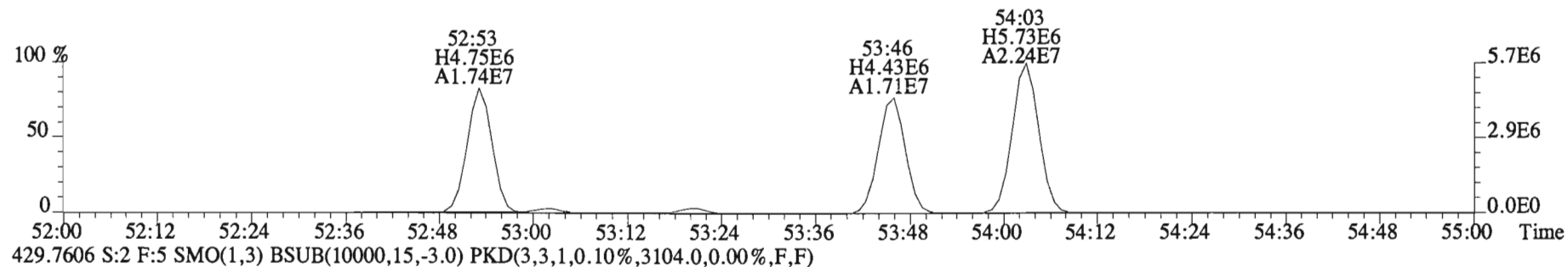
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
393.8025 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8884.0,0.00%,F,F)



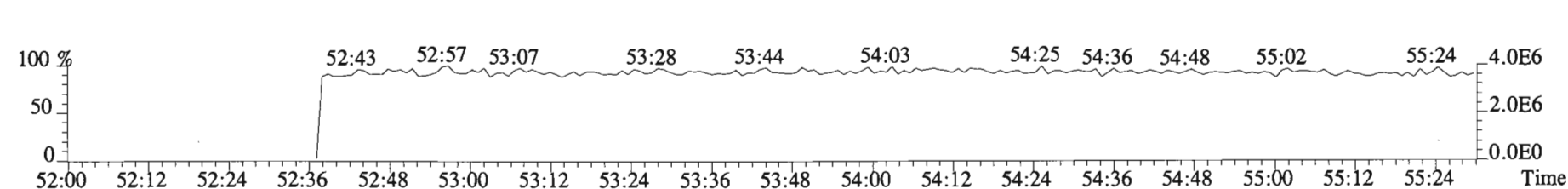
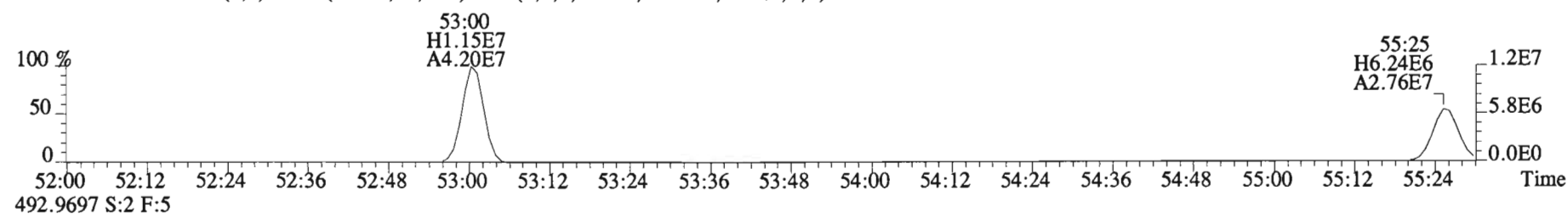
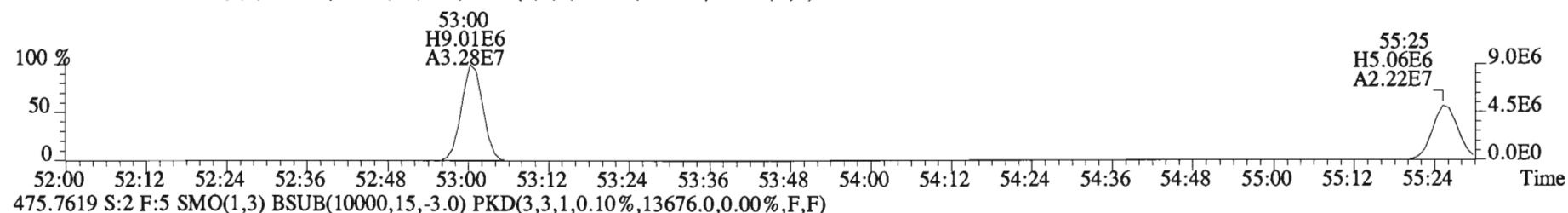
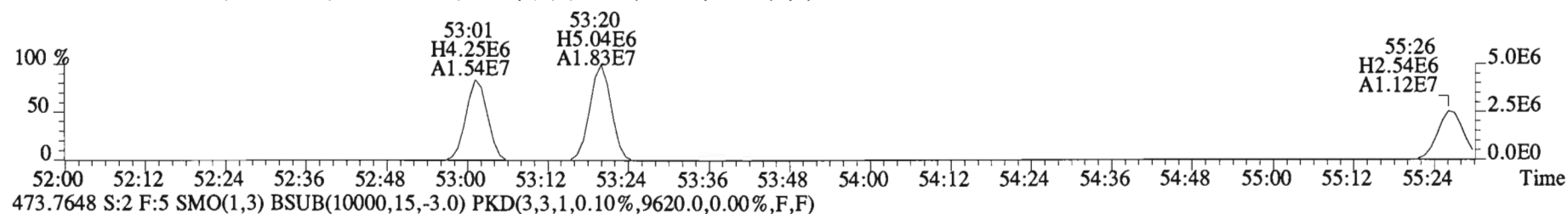
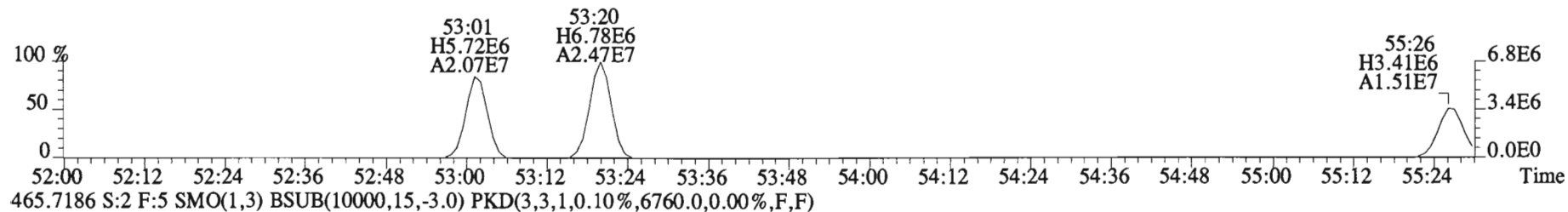
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
427.7635 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1540.0,0.00%,F,F)



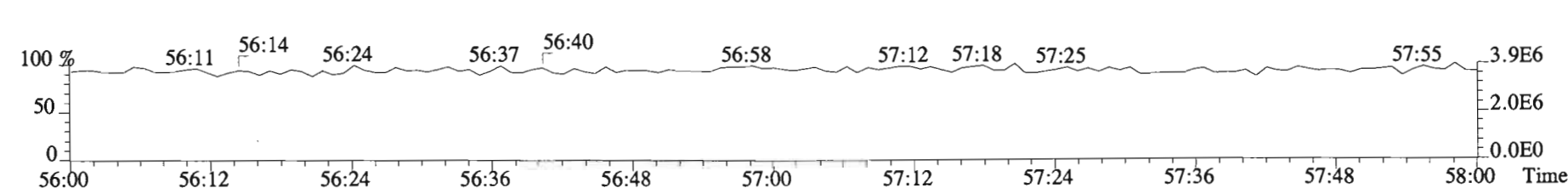
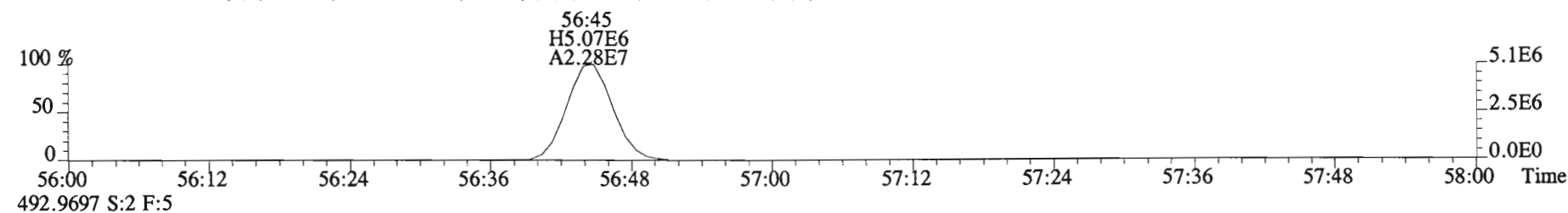
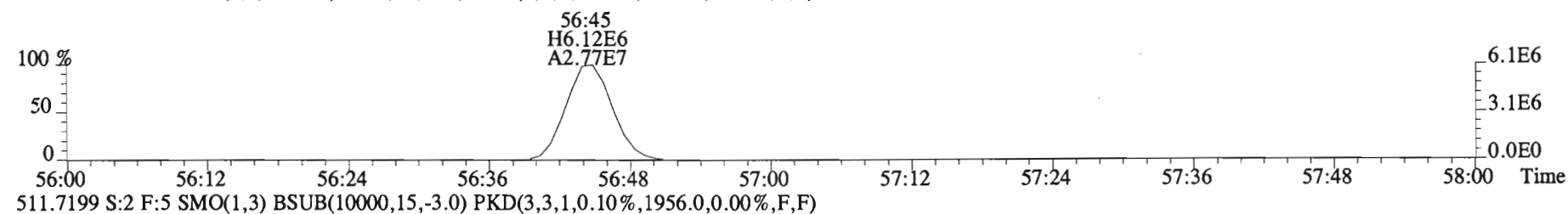
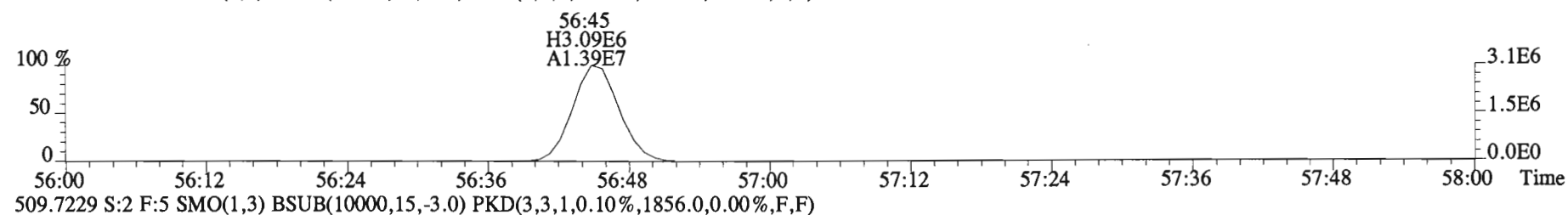
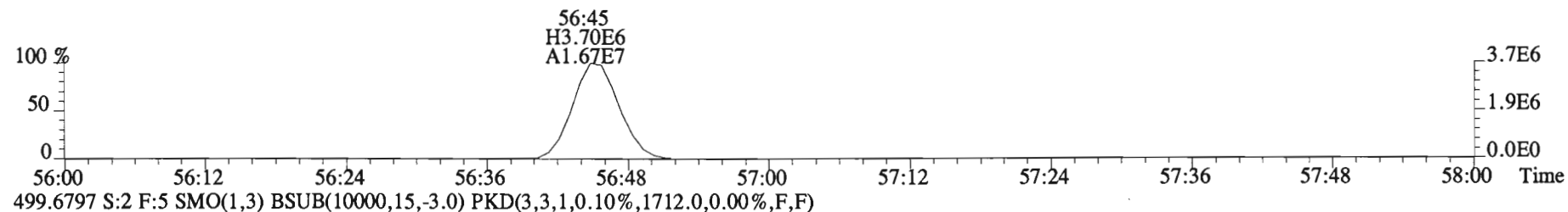
File:150205E1 #1-430 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB\_ZB1  
427.7635 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2844.0,0.00%,F,F)



File:150205E1 #1-430 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
 463.7216 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8596.0,0.00%,F,F)



File:150205E1 #1-430 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB\_ZB1  
497.6826 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1884.0,0.00%,F,F)



Client ID: WM-CB-03-20150122-S  
Lab ID: 1500116-01@10X

Filename: 150205E1 S:11 Acq: 5-FEB-15 19:40:04  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.013

ConCal: ST150205E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	5.69e+05	2.78	y 16:12	1.19	308	*	2.5	*	*	1.001	0.996-1.006	
Mono	PCB-2	2.20e+05	3.26	y 18:35	1.18	113	*	2.5	*	*	0.988	0.984-0.994	
Mono	PCB-3	6.24e+05	2.83	y 18:48	1.43	267	*	2.5	*	*	1.000	0.996-1.006	
Di	PCB-4/10	8.32e+05	1.36	y 20:09	1.57	510	*	2.5	*	*	1.001	0.997-1.007	
Di	PCB-7/9	5.57e+05	1.48	y 21:57	1.21	287	*	2.5	*	*	0.867	0.866-0.874	
Di	PCB-6	8.83e+05	1.51	y 22:37	1.30	421	*	2.5	*	*	0.893	0.890-0.899	
Di	PCB-5/8	3.86e+06	1.63	y 23:00	1.15	2090	*	2.5	*	*	0.908	0.907-0.917	
Di	PCB-14	*	*	n NotF $\eta$	1.11	*	14500	2.5	224	*	*	0.949-0.959	
Di	PCB-11	2.90e+07	1.63	y 25:20	1.09	16300	*	2.5	*	*	1.000	0.995-1.005	
Di	PCB-12/13	4.43e+05	1.64	y 25:43	1.19	227	*	2.5	*	*	1.016	1.011-1.021	
Di	PCB-15	2.56e+06	1.53	y 26:02	1.28	1220	*	2.5	*	*	1.028	1.023-1.033	
Tri	PCB-19	3.11e+05	1.17	y 24:18	1.04	363	*	2.5	*	*	1.001	0.996-1.006	
Tri	PCB-30	*	*	n NotF $\eta$	1.71	*	2070	2.5	31.6	*	*	1.032-1.042	
Tri	PCB-18	3.54e+06	1.05	y 25:57	0.78	3800	*	2.5	*	*	0.954	0.949-0.959	
Tri	PCB-17	1.39e+06	1.13	y 26:07	0.92	1260	*	2.5	*	*	0.960	0.956-0.966	
Tri	PCB-24/27	3.80e+05	0.95	y 26:40	1.19	268	*	2.5	*	*	0.980	0.977-0.987	
Tri	PCB-16/32	2.86e+06	1.10	y 27:11	0.94	2560	*	2.5	*	*	0.999	0.995-1.005	
Tri	PCB-34	*	*	n NotF $\eta$	1.14	*	2510	2.5	40.6	*	*	0.955-0.965	
Tri	PCB-23	*	*	n NotF $\eta$	1.28	*	2510	2.5	36.1	*	*	0.959-0.969	
Tri	PCB-29	*	*	n NotF $\eta$	1.08	*	2510	2.5	42.7	*	*	0.967-0.977	
Tri	PCB-26	1.54e+06	0.96	y 28:34	1.21	990	*	2.5	*	*	0.979	0.974-0.984	
Tri	PCB-25	6.66e+05	1.02	y 28:43	1.26	411	*	2.5	*	*	0.985	0.979-0.989	
Tri	PCB-31	9.01e+06	1.04	y 29:04	1.28	5450	*	2.5	*	*	0.997	0.992-1.002	
Tri	PCB-28	7.11e+06	1.10	y 29:11	1.71	3230	*	2.5	*	*	1.001	0.995-1.005	
Tri	PCB-20/21/33	5.61e+06	1.02	y 29:49	1.08	4030	*	2.5	*	*	1.022	1.017-1.027	
Tri	PCB-22	3.10e+06	0.96	y 30:15	1.21	2000	*	2.5	*	*	1.037	1.032-1.042	
Tri	PCB-36	*	*	n NotF $\eta$	1.14	*	2510	2.5	65.7	*	*	0.928-0.938	
Tri	PCB-39	*	*	n NotF $\eta$	1.12	*	2510	2.5	67.3	*	*	0.943-0.953	
Tri	PCB-38	*	*	n NotF $\eta$	1.20	*	2510	2.5	62.6	*	*	0.966-0.976	
Tri	PCB-35	4.76e+05	1.10	y 32:43	1.23	320	*	2.5	*	*	0.986	0.982-0.992	
Tri	PCB-37	3.00e+06	1.12	y 33:12	1.23	2020	*	2.5	*	*	1.001	0.995-1.005	
Tetra	PCB-54	*	*	n NotF $\eta$	1.10	*	2860	2.5	53.7	*	*	0.996-1.006	
Tetra	PCB-50	*	*	n NotF $\eta$	0.88	*	2860	2.5	67.3	*	*	1.037-1.047	
Tetra	PCB-53	6.76e+05	0.67	y 29:51	1.06	696	*	2.5	*	*	0.945	0.942-0.952	
Tetra	PCB-51	2.23e+05	0.69	y 30:13	0.99	246	*	2.5	*	*	0.957	0.952-0.962	
Tetra	PCB-45	7.00e+05	0.83	y 30:39	0.86	887	*	2.5	*	*	0.970	0.966-0.976	
Tetra	PCB-46	2.86e+05	0.81	y 31:07	0.85	370	*	2.5	*	*	0.985	0.981-0.991	

Integrations by:

Analyst: DMS

Date: 2/11/15

Reviewed by: [Signature]

Date: 2/11/15

Client ID: WM-CB-03-20150122-S  
Lab ID: 1500116-01@10X

Filename: 150205E1 S:11 Acq: 5-FEB-15 19:40:04  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.013

ConCal: ST150205E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	9.77e+06	0.76	y 31:37	1.28	8340	*	2.5	*	*	1.001	0.996-1.006	
Tetra	PCB-73	*	*	n NotF $\eta$	1.35	*	2860	2.5	67.0	*	*	1.000-1.010	
Tetra	PCB-43/49	3.84e+06	0.74	y 31:55	0.99	4230	*	2.5	*	*	1.011	1.005-1.015	
Tetra	PCB-47	1.33e+06	0.79	y 32:08	1.06	1360	*	2.5	*	*	1.001	0.996-1.006	
Tetra	PCB-48/75	1.12e+06	0.86	y 32:16	1.23	982	*	2.5	*	*	1.005	0.999-1.009	
Tetra	PCB-65	*	*	n NotF $\eta$	1.22	*	2860	2.5	73.2	*	*	1.008-1.018	
Tetra	PCB-62	*	*	n NotF $\eta$	1.22	*	2860	2.5	73.4	*	*	1.011-1.021	
Tetra	PCB-44	5.17e+06	0.77	y 33:00	0.86	6490	*	2.5	*	*	1.028	1.021-1.031	
Tetra	PCB-42/59	1.68e+06	0.78	y 33:15	1.14	1590	*	2.5	*	*	1.035	1.028-1.038	
Tetra	PCB-41/64/71/72	4.34e+06	0.75	y 33:56	1.21	3870	*	2.5	*	*	1.057	1.046-1.056	ok
Tetra	PCB-68	*	*	n NotF $\eta$	1.35	*	2860	2.5	66.5	*	*	1.054-1.064	
Tetra	PCB-40	4.26e+05	0.72	y 34:24	0.70	655	*	2.5	*	*	1.071	1.061-1.071	ok
Tetra	PCB-57	*	*	n NotF $\eta$	0.98	*	2860	2.5	63.0	*	*	0.965-0.975	
Tetra	PCB-67	2.48e+05	0.85	y 34:55	1.11	195	*	2.5	*	*	0.979	0.974-0.984	
Tetra	PCB-58	*	*	n NotF $\eta$	0.93	*	2860	2.5	66.5	*	*	0.977-0.987	
Tetra	PCB-63	2.47e+05	0.76	y 35:10	0.95	226	*	2.5	*	*	0.986	0.982-0.992	
Tetra	PCB-74	3.57e+06	0.76	y 35:27	1.24	2500	*	2.5	*	*	0.994	0.990-1.000	
Tetra	PCB-61/70	1.18e+07	0.75	y 35:40	0.95	10800	*	2.5	*	*	1.000	0.995-1.005	
Tetra	PCB-76/66	6.46e+06	0.75	y 35:52	1.04	5370	*	2.5	*	*	1.006	1.001-1.011	
Tetra	PCB-80	*	*	n NotF $\eta$	1.19	*	2860	2.5	55.6	*	*	0.996-1.006	
Tetra	PCB-55	2.07e+05	0.80	y 36:23	1.04	176	*	2.5	*	*	1.008	1.005-1.015	
Tetra	PCB-56/60	4.48e+06	0.80	y 36:54	1.01	3920	*	2.5	*	*	1.023	1.019-1.029	
Tetra	PCB-79	2.08e+05	0.79	y 37:58	1.08	170	*	2.5	*	*	1.052	1.048-1.058	
Tetra	PCB-78	*	*	n NotF $\eta$	1.27	*	2860	2.5	63.2	*	*	0.982-0.992	
Tetra	PCB-81	1.88e+05	0.66	y 39:11	1.33	153	*	2.5	*	*	1.000	0.995-1.005	
Tetra	PCB-77	1.05e+06	0.88	y 39:49	1.10	1070	*	2.5	*	*	1.001	0.995-1.005	
Penta	PCB-104	*	*	n NotF $\eta$	1.18	*	1610	2.5	94.8	*	*	0.996-1.006	
Penta	PCB-96	*	*	n NotF $\eta$	1.14	*	1610	2.5	98.7	*	*	1.034-1.044	
Penta	PCB-103	*	*	n NotF $\eta$	0.96	*	1610	2.5	117	*	*	1.050-1.060	
Penta	PCB-100	*	*	n NotF $\eta$	0.94	*	1610	2.5	120	*	*	1.061-1.071	
Penta	PCB-94	*	*	n NotF $\eta$	1.06	*	1610	2.5	112	*	*	0.980-0.990	
Penta	PCB-95/98/102	8.25e+06	1.60	y 35:57	1.22	14700	*	2.5	*	*	1.001	0.995-1.005	
Penta	PCB-93	*	*	n NotF $\eta$	0.84	*	1610	2.5	141	*	*	0.997-1.007	
Penta	PCB-88/91	1.16e+06	1.44	y 36:21	1.12	2260	*	2.5	*	*	1.012	1.005-1.015	
Penta	PCB-121	*	*	n NotF $\eta$	1.62	*	1610	2.5	73.6	*	*	1.009-1.019	
Penta	PCB-84/92	4.08e+06	1.56	y 37:15	1.05	7940	*	2.5	*	*	0.990	0.985-0.995	
Penta	PCB-89	5.66e+04	1.36	y 37:27	1.13	102	*	2.5	*	*	0.995	0.991-1.001	

Analyst: DM5

Date: 2/11/15



Client ID: WM-CB-03-20150122-S  
Lab ID: 1500116-01@10X

Filename: 150205E1 S:11 Acq: 5-FEB-15 19:40:04  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.013

ConCal: ST150205E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	1.15e+07	1.61	y 37:39	1.10	21300	*	2.5	*	*	1.001	0.995-1.005	
Penta	PCB-113	*	*	n NotF $\eta$	1.41	*	*	1610	2.5	85.3	*	1.002-1.012	
Penta	PCB-99	4.03e+06	1.57	y 37:58	1.34	6150	*	2.5	*	*	1.009	1.004-1.014	
Penta	PCB-119	1.90e+05	1.72	y 38:27	1.53	288	*	2.5	*	*	0.988	0.982-0.992	
Penta	PCB-108/112	4.39e+05	1.39	y 38:36	1.28	796	*	2.5	*	*	0.992	0.986-0.996	
Penta	PCB-83	*	*	n NotF $\eta$	1.52	*	*	1610	2.5	88.8	*	0.990-1.000	
Penta	PCB-97	2.97e+06	1.58	y 38:56	1.18	5830	*	2.5	*	*	1.000	0.995-1.005	
Penta	PCB-86	*	*	n NotF $\eta$	0.84	*	*	1610	2.5	160	*	0.999-1.009	
Penta	PCB-87/117/125	5.01e+06	1.65	y 39:13	1.55	7510	*	2.5	*	*	1.007	1.002-1.012	
Penta	PCB-111/115	2.98e+05	1.73	y 39:24	1.63	424	*	2.5	*	*	1.012	1.006-1.016	
Penta	PCB-85/116	1.39e+06	1.64	y 39:29	1.30	2480	*	2.5	*	*	1.014	1.010-1.020	
Penta	PCB-120	*	*	n NotF $\eta$	1.68	*	*	1610	2.5	80.4	*	1.016-1.026	
Penta	PCB-110	1.43e+07	1.60	y 39:53	1.56	21400	*	2.5	*	*	1.024	1.020-1.030	
Penta	PCB-82	1.00e+06	1.59	y 40:31	0.76	2680	*	2.5	*	*	0.976	0.971-0.981	
Penta	PCB-124	5.51e+05	1.53	y 41:14	1.47	760	*	2.5	*	*	0.993	0.988-0.998	
Penta	PCB-107/109	7.08e+05	1.58	y 41:24	1.32	1090	*	2.5	*	*	0.997	0.991-1.001	
Penta	PCB-123	1.76e+05	1.71	y 41:32	1.17	305	*	2.5	*	*	1.000	0.996-1.006	
Penta	PCB-106/118	1.07e+07	1.70	y 41:43	1.17	19100	*	2.5	*	*	1.000	0.996-1.006	
Penta	PCB-114	3.41e+05	1.42	y 42:24	1.30	370	*	2.5	*	*	1.001	0.995-1.005	
Penta	PCB-122	1.83e+05	1.61	y 42:32	1.12	230	*	2.5	*	*	1.004	0.999-1.009	
Penta	PCB-105	6.76e+06	1.70	y 43:16	1.30	8290	*	2.5	*	*	1.001	0.995-1.005	
Penta	PCB-127	*	*	n NotF $\eta$	1.33	*	*	2040	2.5	96.6	*	0.996-1.006	
Penta	PCB-126	1.50e+05	1.52	y 45:32	1.18	230	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-155	*	*	n NotF $\eta$	1.11	*	*	1160	2.5	85.0	*	0.966-1.006	
Hexa	PCB-150	*	*	n NotF $\eta$	1.00	*	*	1160	2.5	95.1	*	1.030-1.040	
Hexa	PCB-152	*	*	n NotF $\eta$	1.12	*	*	1160	2.5	85.1	*	1.043-1.053	
Hexa	PCB-145	*	*	n NotF $\eta$	1.20	*	*	1160	2.5	79.1	*	1.055-1.065	
Hexa	PCB-136	1.21e+06	1.35	y 39:41	1.18	2530	*	2.5	*	*	1.068	1.064-1.074	
Hexa	PCB-148	*	*	n NotF $\eta$	0.74	*	*	1160	2.5	128	*	1.066-1.076	
Hexa	PCB-154	6.73e+04	1.40	y 40:19	0.86	194	*	2.5	*	*	1.085	1.080-1.090	
Hexa	PCB-151	1.52e+06	1.21	y 40:56	0.75	5010	*	2.5	*	*	1.102	1.097-1.107	
Hexa	PCB-135	9.02e+05	1.28	y 41:09	0.79	2810	*	2.5	*	*	1.107	1.103-1.113	
Hexa	PCB-144	2.66e+05	1.40	y 41:17	0.76	861	*	2.5	*	*	1.111	1.105-1.117	
Hexa	PCB-147	1.24e+05	1.23	y 41:24	0.82	372	*	2.5	*	*	1.114	1.109-1.121	
Hexa	PCB-139/149	5.52e+06	1.24	y 41:39	0.76	17900	*	2.5	*	*	1.121	1.116-1.128	
Hexa	PCB-140	*	*	n NotF $\eta$	0.72	*	*	1160	2.5	132	*	1.121-1.133	
Hexa	PCB-134/143	7.03e+05	1.27	y 42:18	0.92	1380	*	2.5	*	*	0.975	0.970-0.980	

Analyst: DMS

Date: 2/11/15

Client ID: WM-CB-03-20150122-S  
Lab ID: 1500116-01@10X

Filename: 150205E1 S:11 Acq: 5-FEB-15 19:40:04  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.013

ConCal: ST150205E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	3.59e+05	1.32	y 42:36	0.82	791	*	2.5	*	*	0.981	0.977-0.987	
Hexa	PCB-131	*	*	n NotF $\eta$	0.91	*	*	1080	2.5	73.4	*	0.981-0.991	
Hexa	PCB-146/165	1.85e+06	1.31	y 43:01	1.25	2680	*	2.5	*	*	0.991	0.986-0.996	
Hexa	PCB-132/161	4.97e+06	1.22	y 43:16	1.10	8110	*	2.5	*	*	0.997	0.992-1.002	
Hexa	PCB-153	1.30e+07	1.21	y 43:25	1.25	18700	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-168	*	*	n NotF $\eta$	1.45	*	*	1080	2.5	45.8	*	1.001-1.011	
Hexa	PCB-141	2.81e+06	1.28	y 44:09	1.09	4990	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-137	7.29e+05	1.18	y 44:33	1.06	1320	*	2.5	*	*	1.009	1.004-1.014	
Hexa	PCB-130	6.83e+05	1.33	y 44:39	0.96	1360	*	2.5	*	*	1.011	1.006-1.016	
Hexa	PCB-138/163/164	1.51e+07	1.25	y 45:01	1.29	24100	*	2.5	*	*	1.001	0.996-1.006	
Hexa	PCB-158/160	1.77e+06	1.24	y 45:16	1.34	2710	*	2.5	*	*	1.006	1.001-1.011	
Hexa	PCB-129	5.71e+05	1.13	y 45:31	0.85	1380	*	2.5	*	*	1.012	1.007-1.017	
Hexa	PCB-166	*	*	n NotF $\eta$	1.19	*	*	1080	2.5	60.7	*	0.988-0.998	
Hexa	PCB-159	*	*	n NotF $\eta$	1.11	*	*	1080	2.5	64.7	*	0.996-1.006	
Hexa	PCB-128/162	2.17e+06	1.31	y 46:34	1.05	3950	*	2.5	*	*	1.005	1.002-1.012	
Hexa	PCB-167	5.61e+05	1.16	y 47:01	1.20	881	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-156	1.48e+06	1.26	y 48:20	1.14	2710	*	2.5	*	*	1.000	0.996-1.006	
Hexa	PCB-157	3.29e+05	1.42	y 48:35	1.16	547	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-169	*	*	n NotF $\eta$	1.12	*	*	1080	2.5	91.6	*	0.995-1.005	
Hepta	PCB-188	*	*	n NotF $\eta$	1.58	*	*	1640	2.5	51.3	*	0.996-1.006	
Hepta	PCB-184	*	*	n NotF $\eta$	1.63	*	*	1640	2.5	49.7	*	1.006-1.016	
Hepta	PCB-179	1.59e+06	1.02	y 44:15	1.30	3020	*	2.5	*	*	1.029	1.024-1.034	
Hepta	PCB-176	4.66e+05	0.99	y 44:43	1.48	783	*	2.5	*	*	1.040	1.035-1.045	
Hepta	PCB-186	*	*	n NotF $\eta$	1.45	*	*	1640	2.5	55.8	*	1.050-1.060	
Hepta	PCB-178	4.90e+05	1.05	y 45:51	1.03	1170	*	2.5	*	*	1.067	1.061-1.071	
Hepta	PCB-175	3.17e+05	1.25	n 46:15	1.01	776	R	*	2.5	*	1.076	1.069-1.079	
Hepta	PCB-182/187	3.39e+06	1.08	y 46:22	1.25	6720	*	2.5	*	*	1.079	1.073-1.083	
Hepta	PCB-183	1.50e+06	1.06	y 46:43	1.21	3080	*	2.5	*	*	1.087	1.081-1.091	
Hepta	PCB-185	2.69e+05	1.11	y 47:22	1.80	658	*	2.5	*	*	0.955	0.951-0.961	
Hepta	PCB-174	2.31e+06	1.03	y 47:43	1.38	7380	*	2.5	*	*	0.962	0.958-0.968	
Hepta	PCB-181	*	*	n NotF $\eta$	1.38	*	*	1640	2.5	122	*	0.960-0.970	
Hepta	PCB-177	1.14e+06	1.10	y 48:00	1.26	4010	*	2.5	*	*	0.968	0.963-0.973	
Hepta	PCB-171	5.45e+05	1.12	y 48:17	1.58	1520	*	2.5	*	*	0.973	0.970-0.980	
Hepta	PCB-173	4.00e+04	1.97	n 48:44	1.11	159	R	*	2.5	*	0.983	0.978-0.988	
Hepta	PCB-172	3.15e+05	0.99	y 49:13	1.63	848	*	2.5	*	*	0.992	0.987-0.997	
Hepta	PCB-192	*	*	n NotF $\eta$	1.74	*	*	1640	2.5	96.5	*	0.991-1.001	
Hepta	PCB-180	4.62e+06	1.03	y 49:37	1.34	15200	*	2.5	*	*	1.000	0.995-1.005	

Analyst: Dms

Date: 2/11/15

Client ID: WM-CB-03-20150122-S  
Lab ID: 1500116-01@10X

Filename: 150205E1 S:11 Acq: 5-FEB-15 19:40:04  
GC Column ID: ZB-1 ICal: pcbv8-6-23-14 wt/vol: 2.013

ConCal: ST150205E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	2.41e+05	1.12	y 49:48	1.72	619		*	2.5	*	1.004	0.999-1.009	
Hepta	PCB-191	6.29e+04	1.13	y 50:01	1.69	164		*	2.5	*	1.008	1.004-1.014	
Hepta	PCB-170	1.43e+06	1.06	y 51:00	1.60	5360		*	2.5	*	1.000	0.995-1.005	
Hepta	PCB-190	3.11e+05	1.12	y 51:11	2.21	841		*	2.5	*	1.004	0.998-1.008	
Hepta	PCB-189	5.32e+04	1.20	y 52:29	1.55	238		*	2.5	*	1.000	0.995-1.005	
Octa	PCB-202	4.41e+05	0.96	y 48:30	1.08	1420		*	2.5	*	1.000	0.995-1.005	
Octa	PCB-201	2.02e+05	1.01	y 49:00	1.15	611		*	2.5	*	1.011	1.005-1.015	
Octa	PCB-204	*	*	n NotF $\eta$	1.14	*	R	1360	2.5	116	*	1.008-1.018	
Octa	PCB-197	4.48e+04	1.22	n 49:28	1.07	145		*	2.5	*	1.020	1.015-1.025	
Octa	PCB-200	1.53e+05	0.97	y 50:15	1.06	500		*	2.5	*	1.037	1.032-1.044	
Octa	PCB-198	1.17e+05	0.92	y 51:35	0.76	541		*	2.5	*	1.064	1.059-1.069	
Octa	PCB-199	9.40e+05	0.90	y 51:41	0.80	4100		*	2.5	*	1.066	1.061-1.071	
Octa	PCB-196/203	1.01e+06	0.93	y 51:56	0.80	4410		*	2.5	*	1.071	1.066-1.076	
Octa	PCB-195	2.82e+05	0.93	y 53:04	1.23	1280		*	2.5	*	0.983	0.979-0.989	
Octa	PCB-194	8.60e+05	0.91	y 54:00	1.21	3950		*	2.5	*	1.000	0.995-1.005	
Octa	PCB-205	*	*	n NotF $\eta$	1.54	*		1570	2.5	145	*	1.001-1.011	
Nona	PCB-208	2.91e+05	1.37	y 53:12	0.93	1240		*	2.5	*	1.000	0.995-1.005	
Nona	PCB-207	1.23e+05	1.51	y 53:31	1.08	448		*	2.5	*	1.006	1.001-1.011	
Nona	PCB-206	5.80e+05	1.46	y 55:43	1.02	4040		*	2.5	*	1.000	0.995-1.005	
Deca	PCB-209	3.57e+05	1.12	y 57:03	1.17	1790		*	2.5	*	1.000	0.995-1.005	

Analyst: DMS

Date: 2/11/15

Client ID: WM-CB-03-20150122-S  
Lab ID: 1500116-01@10X

Filename: 150205E1 S:11 Acq: 5-FEB-15 19:40:04  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.0126 EndCAL: NA

ConCal: ST150205E1-1

Name	Resp	RA	RT	RRF	Conc	
Total Mono-PCB	1.41e+06	2.78 y	16:12	1.27	688.509	
Total Di-PCB	3.82e+07	1.36 y	20:09	1.21	21067.3	
Total Tri-PCB	8.48e+06	1.17 y	24:18	1.10	8257.24	
Total Tri-PCB	3.05e+07	0.96 y	28:34	1.21	18446.6	Sum:26703.9
Total Tetra-PCB	5.80e+07	0.67 y	29:51	1.09	54246.2	
Total Penta-PCB	6.69e+07	1.60 y	35:57	1.18	115199	
Total Penta-PCB	7.43e+06	1.42 y	42:24	1.25	9116.18	Sum:124315
Total Hexa-PCB	9.60e+06	1.35 y	39:41	0.90	29660.7	
Total Hexa-PCB	4.70e+07	1.27 y	42:18	1.11	75614.0	Sum:105275
Total Hepta-PCB	1.87e+07	1.02 y	44:15	1.42	51569.9	
Total Octa-PCB	2.87e+06	0.96 y	48:30	0.96	11579.0	
Total Octa-PCB	1.14e+06	0.93 y	53:04	1.33	5232.02	Sum:16811.0
Total Nona-PCB	9.94e+05	1.37 y	53:12	1.01	5722.03	
Total Deca-PCB	3.57e+05	1.12 y	57:03	1.17	1790.15	

Total PCB Conc: ~~405288~~ 427353

408000

Integrations

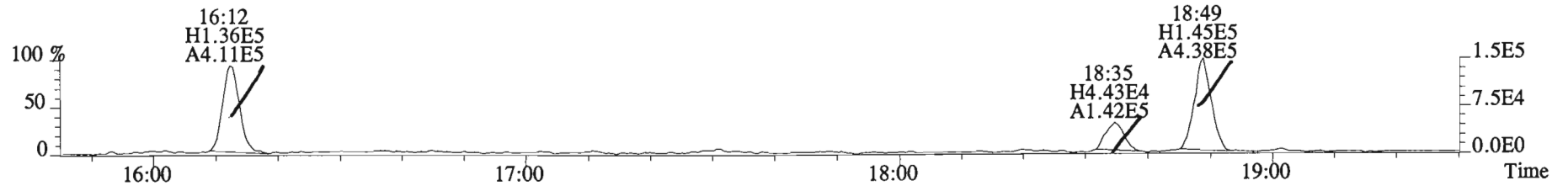
by

Analyst: DMS

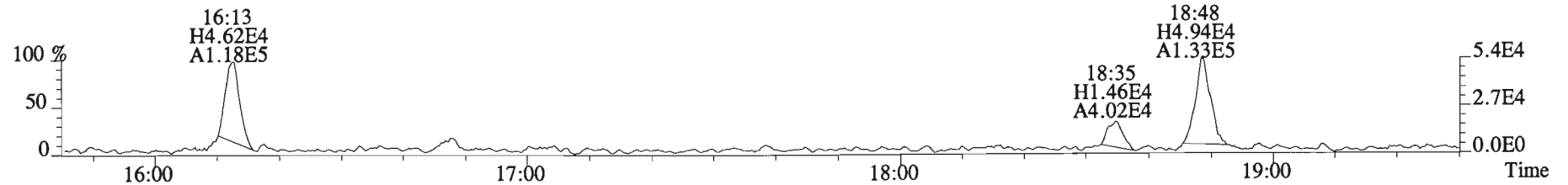
Date: 2/11/15

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.54e+07	3.09 y	0.87	16:11	0.622	0.629-0.635		9410	94.7											
13C-PCB-3	1.63e+07	3.31 y	0.91	18:48	0.723	0.725-0.733		9530	95.9		13C-PCB-79	1.09e+07	0.79 y	1.02	37:58	1.029	1.023-1.034		8740	88.0
13C-PCB-4	1.03e+07	1.57 y	0.59	20:07	0.773	0.775-0.783		9410	94.7		13C-PCB-178	2.55e+06	0.43 y	0.61	45:49	0.984	0.979-0.990		9240	93.0
13C-PCB-9	1.60e+07	1.58 y	0.90	21:55	0.842	0.842-0.850		9510	95.7											
13C-PCB-11	1.63e+07	1.59 y	0.94	25:19	0.973	0.968-0.978		9270	93.3	PS vs. IS										
13C-PCB-19	8.17e+06	1.09 y	0.53	24:17	0.933	0.930-0.940		8200	82.5		13C-PCB-79	1.09e+07	0.79 y	1.10	37:58	0.969	0.964-0.974		10700	107
13C-PCB-28	1.28e+07	1.03 y	0.93	29:10	1.003	0.999-1.009		7010	70.6		13C-PCB-178	2.55e+06	0.43 y	0.90	45:49	0.924	0.920-0.930		12500	126
13C-PCB-32	1.18e+07	1.09 y	0.80	27:12	1.045	1.040-1.050		7940	79.9											
13C-PCB-37	1.20e+07	1.05 y	0.84	33:11	1.142	1.131-1.143		7300	73.5											
13C-PCB-47	9.22e+06	0.79 y	0.81	32:07	0.871	0.866-0.874		9260	93.2											
13C-PCB-52	9.04e+06	0.80 y	0.77	31:35	0.856	0.853-0.861		9570	96.3											
13C-PCB-54	1.06e+07	0.81 y	0.97	28:02	0.760	0.758-0.766		8890	89.4											
13C-PCB-70	1.14e+07	0.81 y	1.00	35:39	0.966	0.961-0.971		9350	94.1											
13C-PCB-77	8.90e+06	0.80 y	0.94	39:47	1.079	1.073-1.083		7710	77.6											
13C-PCB-80	1.13e+07	0.81 y	1.03	36:05	0.978	0.972-0.982		8910	89.6											
13C-PCB-81	9.18e+06	0.77 y	0.92	39:11	1.062	1.057-1.067		8130	81.8											
13C-PCB-95	4.54e+06	1.55 y	0.74	35:56	0.912	0.908-0.918		10200	102	RS										
13C-PCB-97	4.28e+06	1.57 y	0.70	38:56	0.988	0.984-0.994		10100	101		13C-PCB-15	1.86e+07	1.59 y	1.00	26:01				9940	
13C-PCB-101	4.88e+06	1.59 y	0.78	37:38	0.955	0.951-0.961		10300	104		13C-PCB-31	1.94e+07	1.01 y	1.00	29:04				9940	
13C-PCB-104	6.23e+06	1.62 y	1.00	32:48	0.833	0.828-0.836		10300	104		13C-PCB-60	1.22e+07	0.80 y	1.00	36:54				9940	
13C-PCB-105	6.24e+06	1.61 y	1.37	43:14	0.929	0.924-0.934		10200	102		13C-PCB-111	6.00e+06	1.63 y	1.00	39:23				9940	
13C-PCB-114	7.06e+06	1.55 y	1.36	42:22	0.910	0.905-0.915		11500	116		13C-PCB-128	4.46e+06	1.38 y	1.00	46:33				9940	
13C-PCB-118	4.73e+06	1.51 y	0.96	41:43	1.059	1.054-1.064		8170	82.2		13C-PCB-205	2.35e+06	0.87 y	1.00	54:18				9940	
13C-PCB-123	4.90e+06	1.47 y	0.89	41:32	1.054	1.050-1.060		9070	91.3											
13C-PCB-126	5.48e+06	1.64 y	1.31	45:32	0.978	0.972-0.982		9340	94.0											
13C-PCB-127	6.24e+06	1.61 y	1.47	43:14	0.929	0.931-0.941		9440	95.0											
13C-PCB-138	4.83e+06	1.31 y	1.10	44:60	0.966	0.961-0.971		9770	98.4											
13C-PCB-141	5.16e+06	1.38 y	1.07	44:09	0.948	0.943-0.953		10700	108											
13C-PCB-153	5.51e+06	1.33 y	1.15	43:24	0.932	0.927-0.937		10700	108											
13C-PCB-155	4.03e+06	1.34 y	0.84	37:10	0.943	0.939-0.949		7940	79.9											
13C-PCB-156	4.77e+06	1.34 y	1.30	48:19	1.038	1.032-1.042		8190	82.4											
13C-PCB-157	5.14e+06	1.34 y	1.36	48:35	1.043	1.038-1.048		8430	84.8											
13C-PCB-159	5.21e+06	1.13 y	1.25	46:19	0.995	0.989-0.999		9300	93.6											
13C-PCB-167	5.27e+06	1.27 y	1.35	47:01	1.010	1.004-1.014		8680	87.4											
13C-PCB-169	3.50e+06	1.18 y	1.29	50:42	1.089	1.083-1.093		6060	61.0											
13C-PCB-170	1.66e+06	0.51 y	0.54	50:59	1.095	1.089-1.101		6830	68.7											
13C-PCB-180	2.25e+06	0.47 y	0.68	49:36	1.065	1.060-1.070		7340	73.9											
13C-PCB-188	4.01e+06	0.43 y	0.92	42:59	0.923	0.919-0.929		9730	97.9											
13C-PCB-189	1.43e+06	0.44 y	0.72	52:28	1.127	1.120-1.132		4450	44.8											
13C-PCB-194	1.79e+06	0.88 y	0.80	53:59	0.994	0.990-1.000		9460	95.2											
13C-PCB-202	2.85e+06	0.94 y	0.84	48:29	1.041	1.036-1.046		7590	76.3	Analyst: DMS										
13C-PCB-206	1.39e+06	0.78 y	0.65	55:43	1.026	1.021-1.031		9080	91.3											
13C-PCB-208	2.51e+06	0.76 y	1.08	53:11	0.980	0.976-0.986		9830	99.0	Date: 2/10/15										
13C-PCB-209	1.69e+06	1.17 y	0.61	57:02	1.050	1.045-1.055		11700	118											

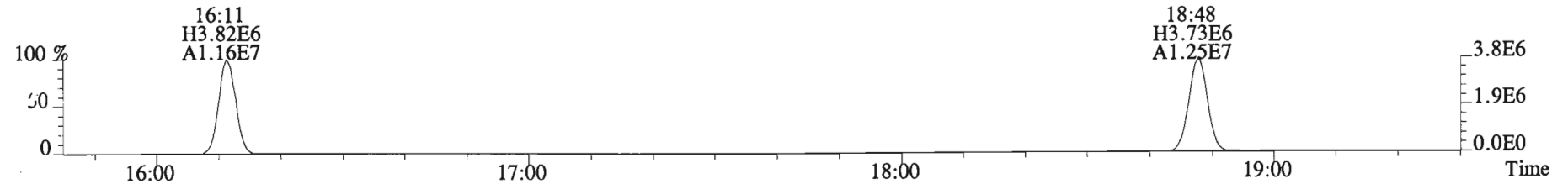
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188.0393 S:11 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4224.0,0.00%,F,F)



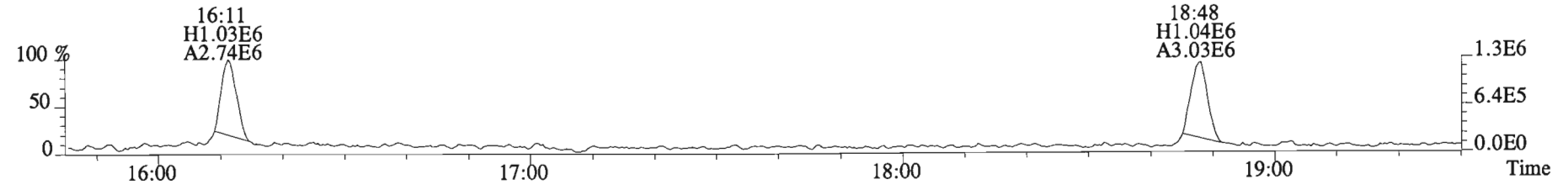
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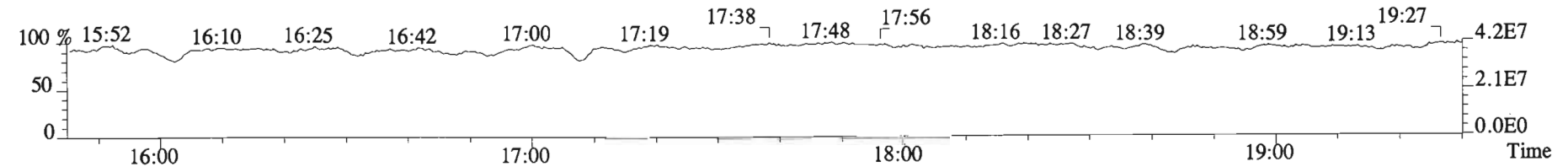
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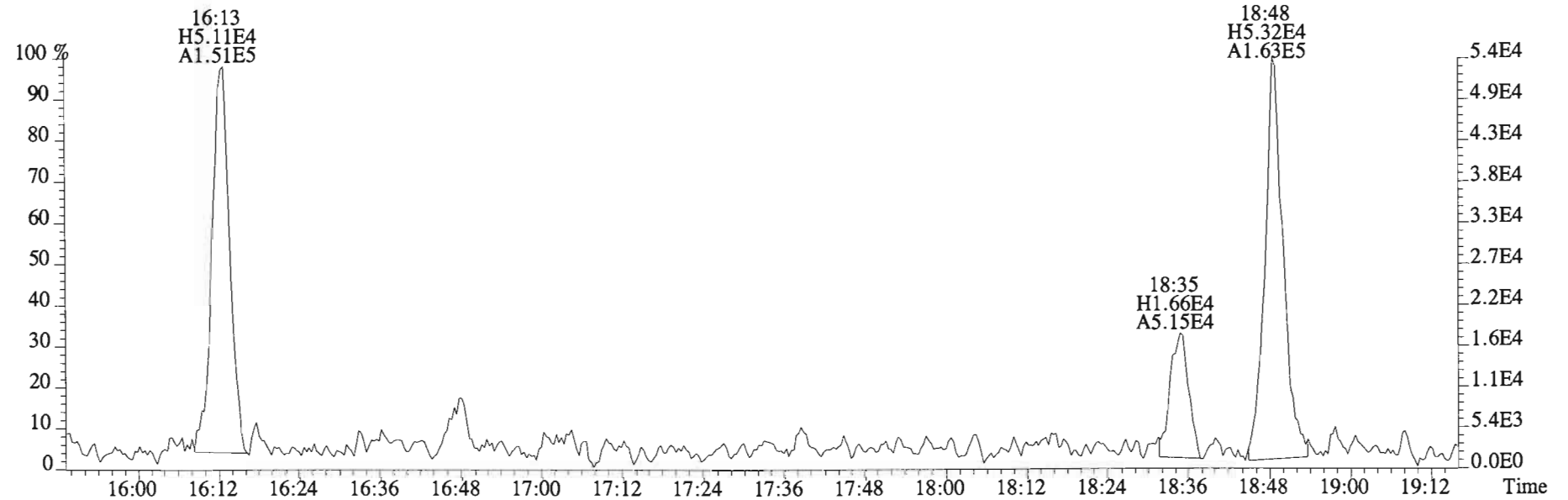
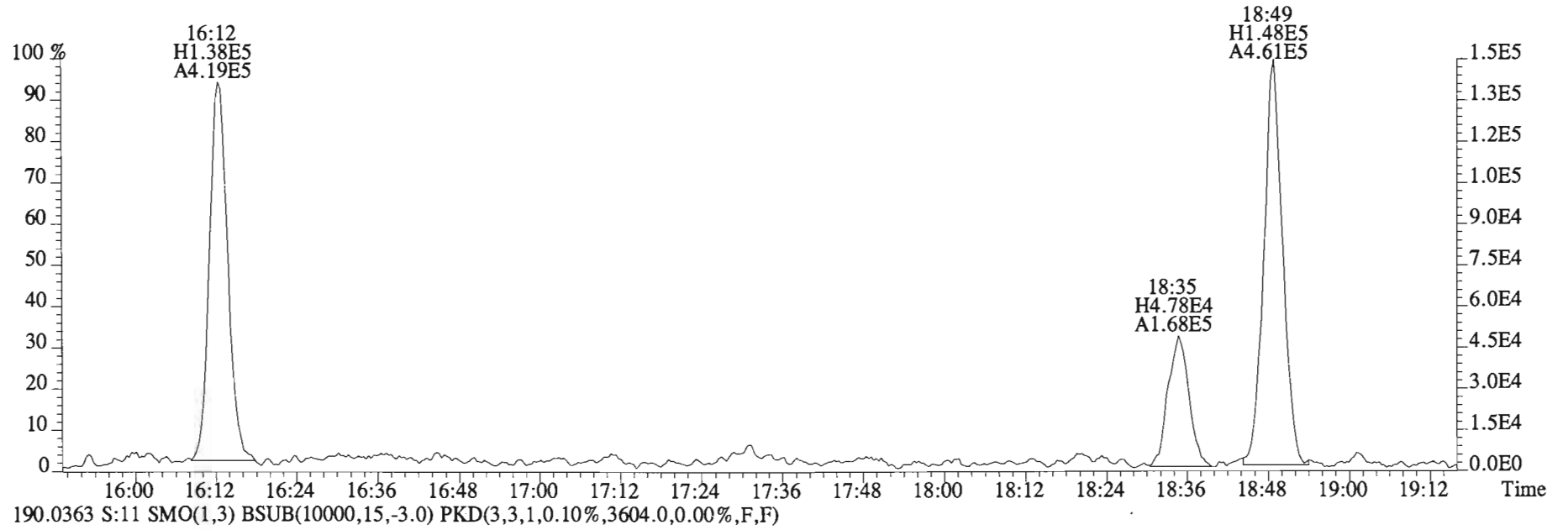
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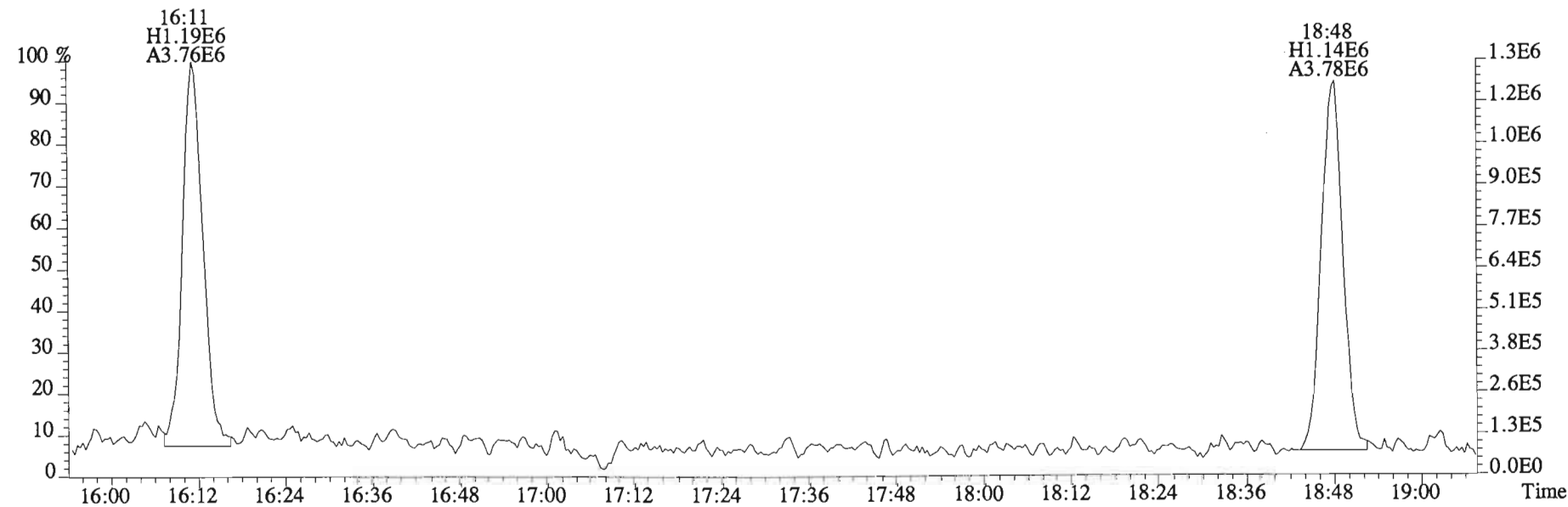
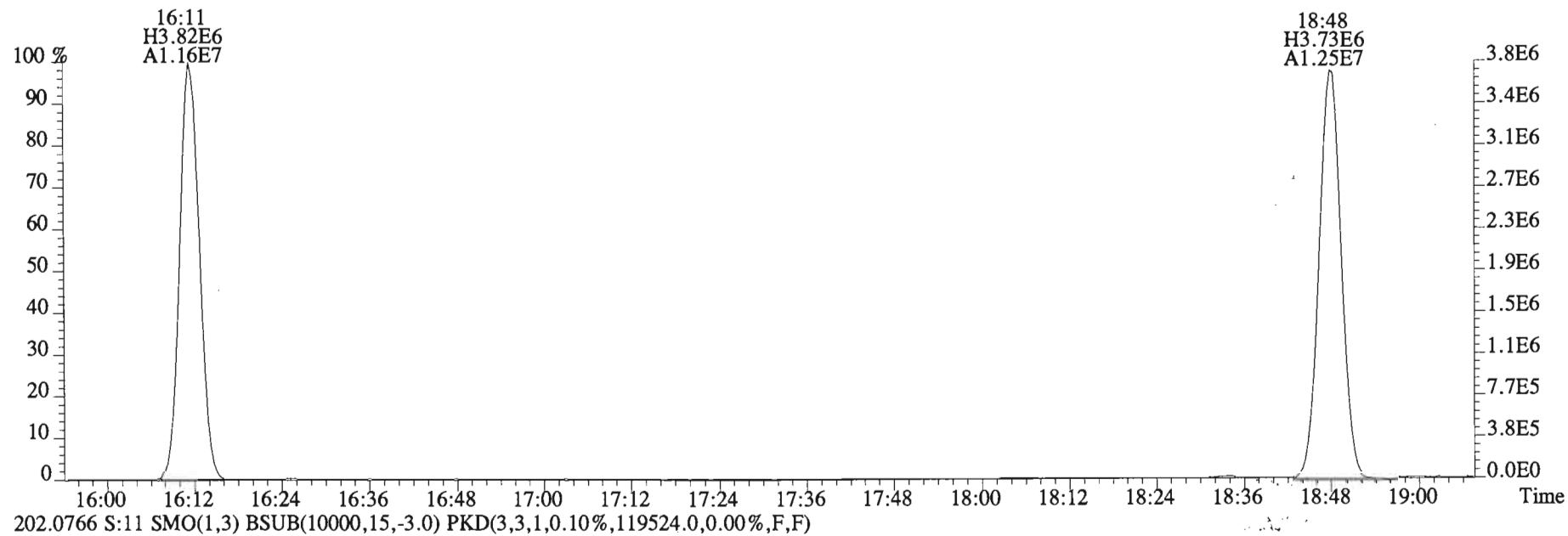
180.9880 S:11



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Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
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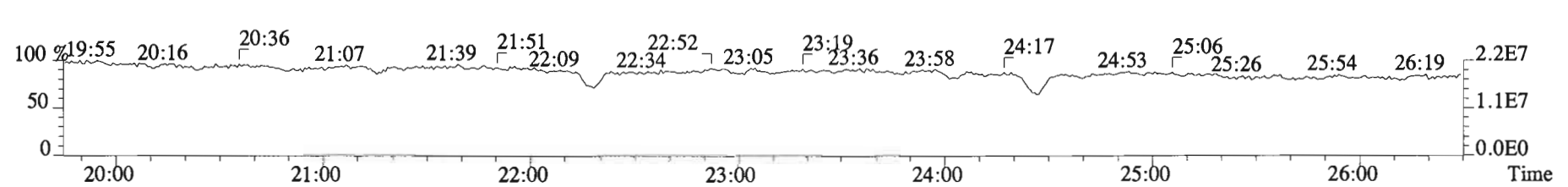
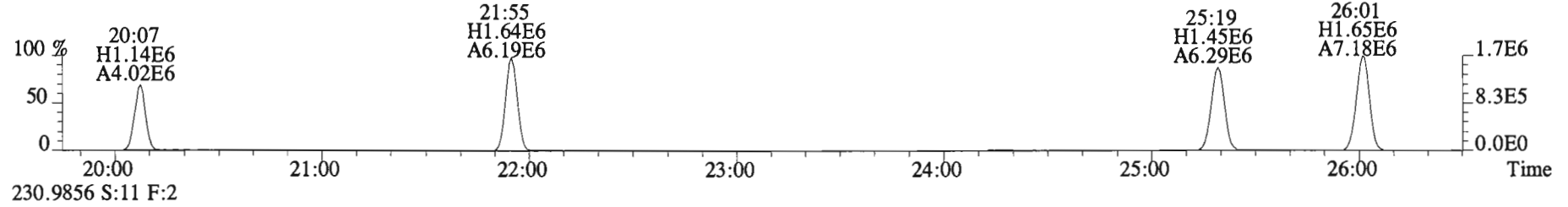
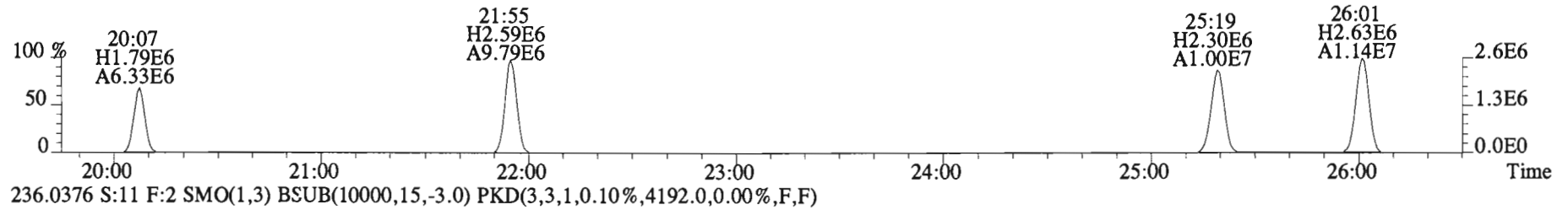
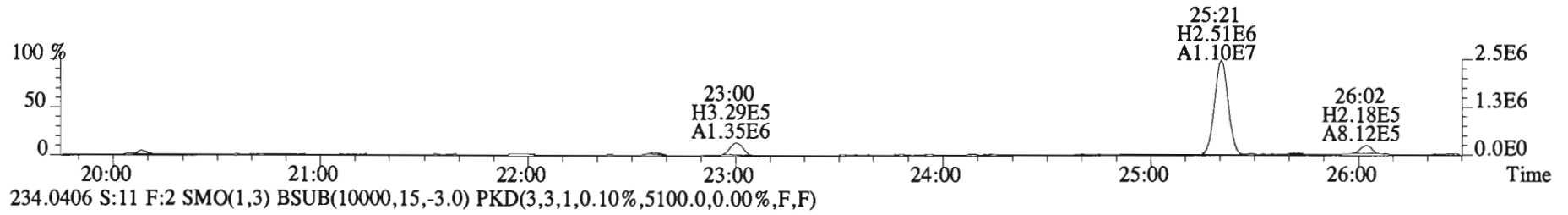
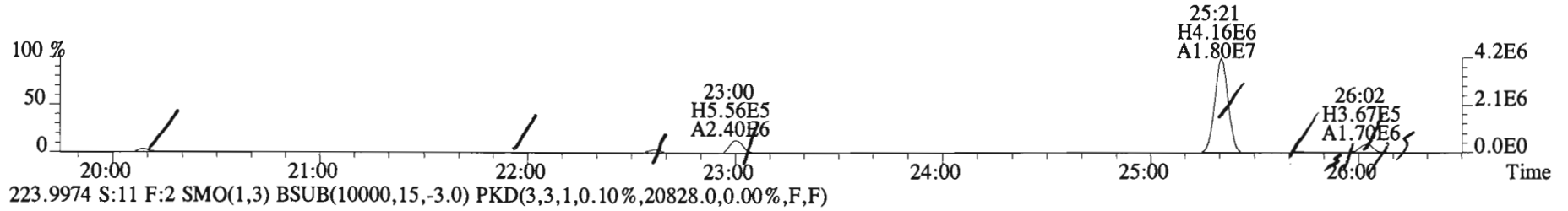


File:150205E1 #1-729 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
200.0795 S:11 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5464.0,0.00%,F,F)

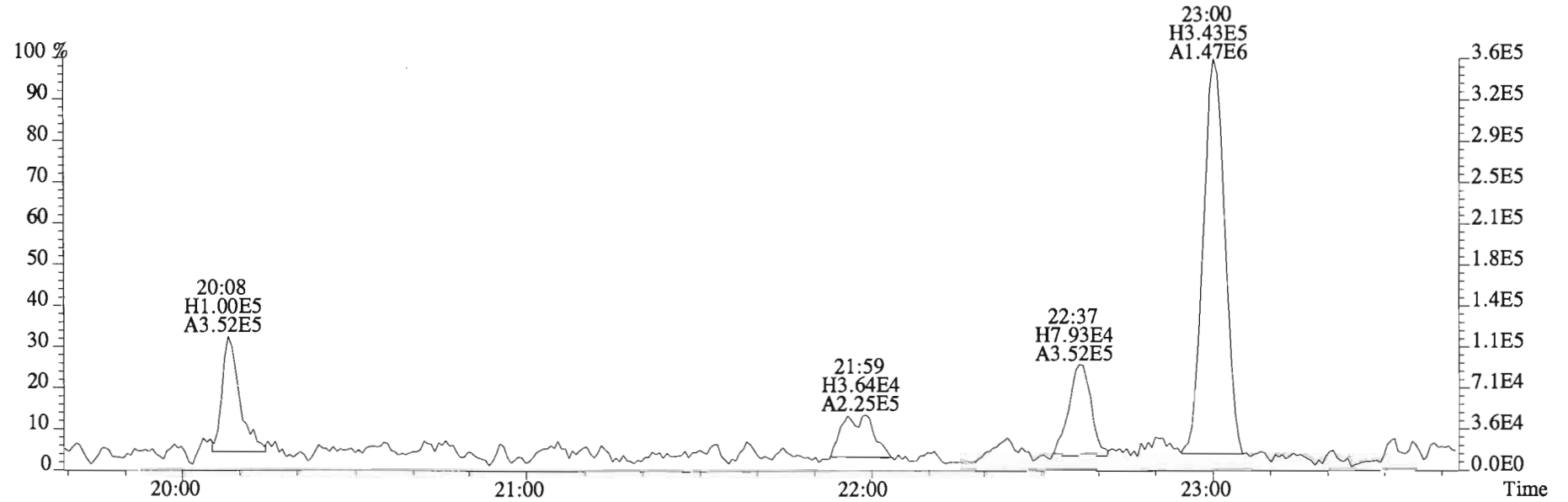
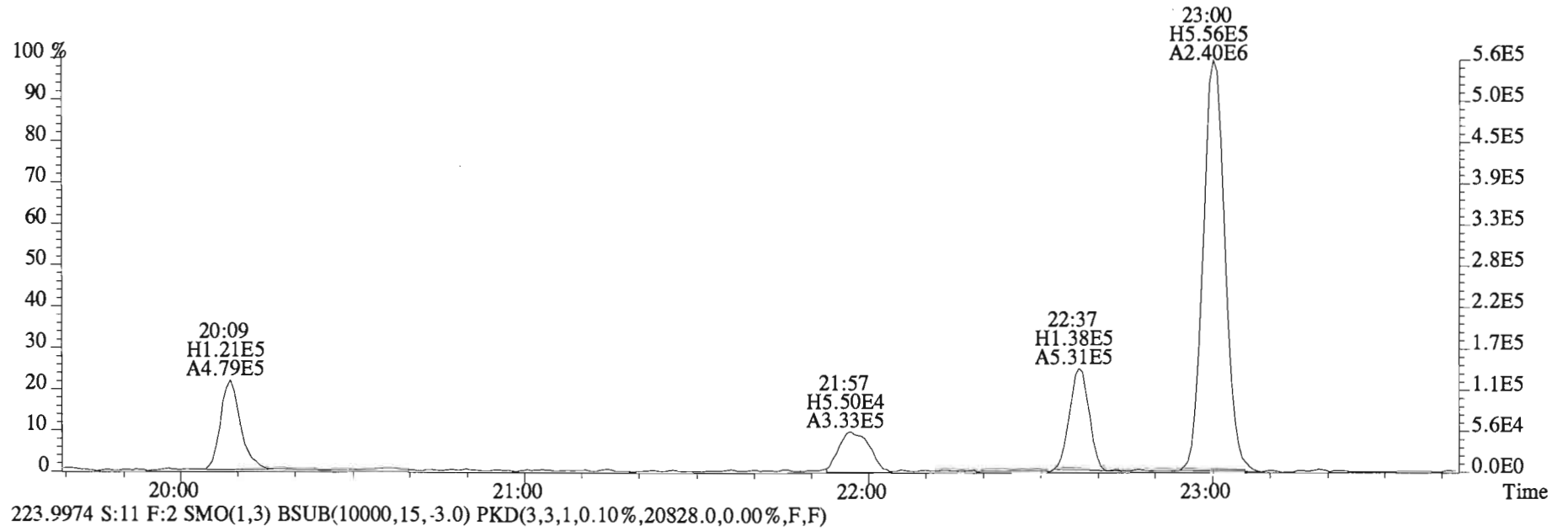




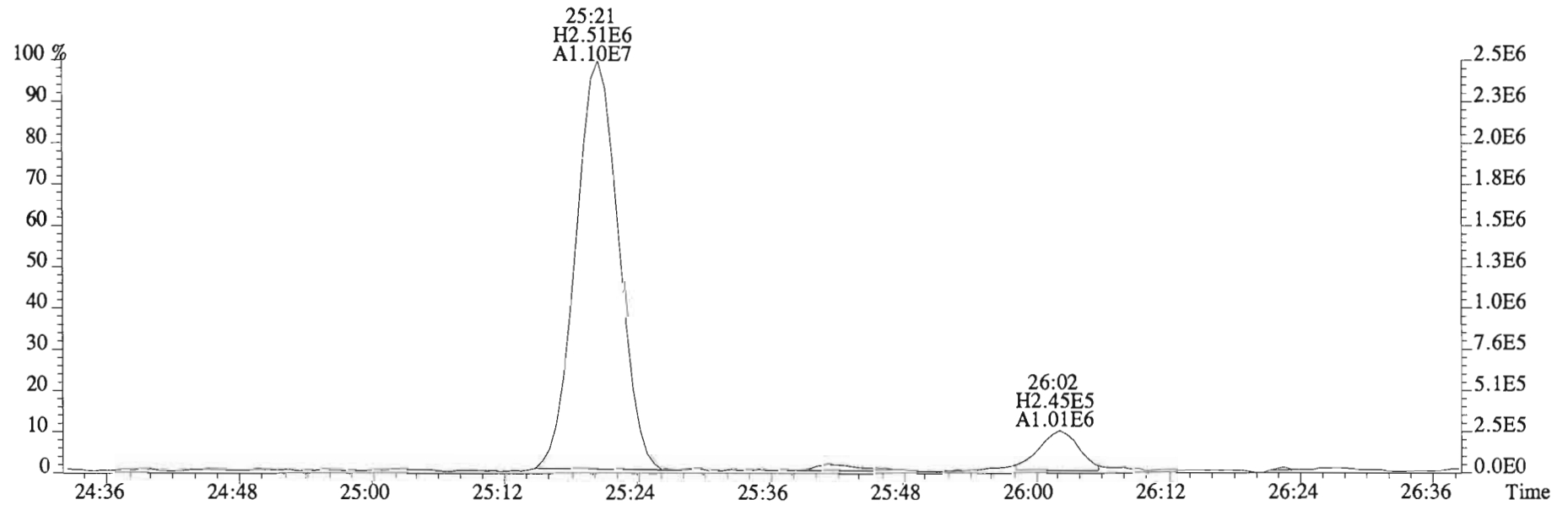
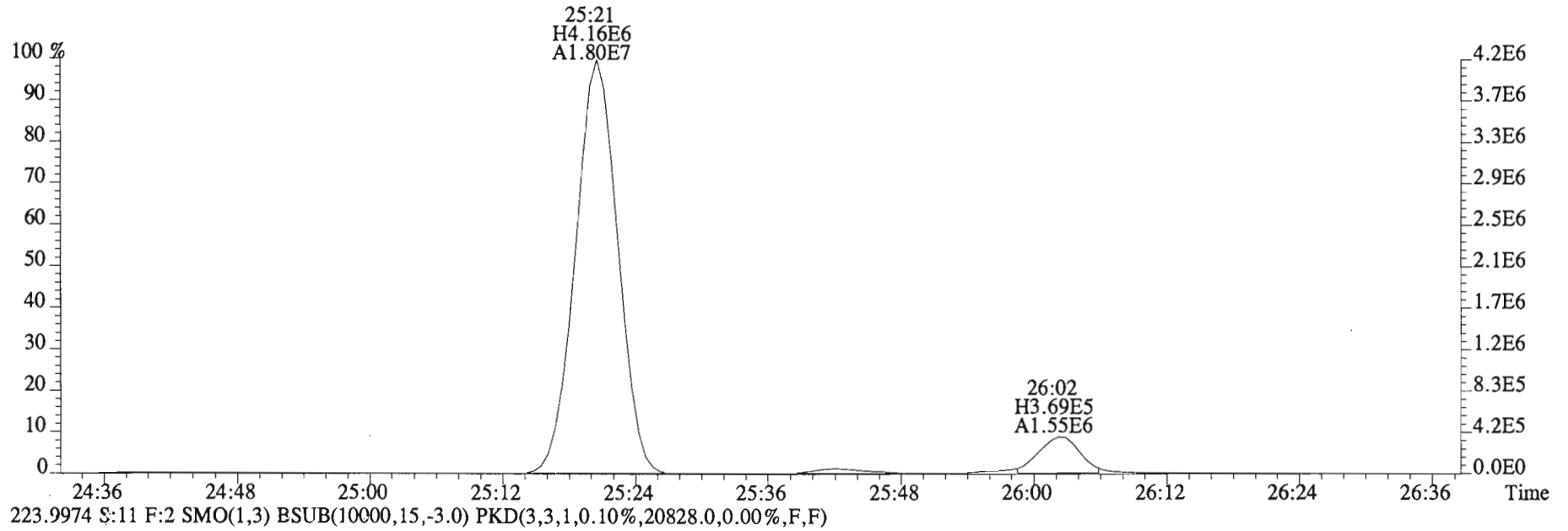
File:150205E1 #1-757 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
 222.0003 S:11 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3188.0,0.00%,F,F)



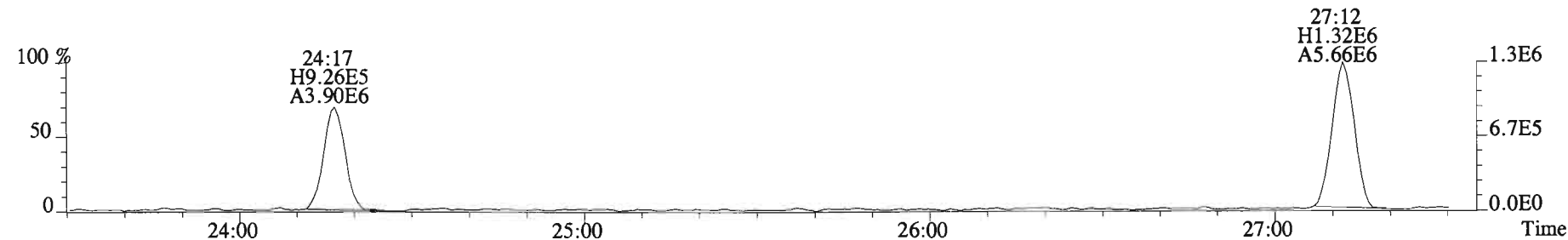
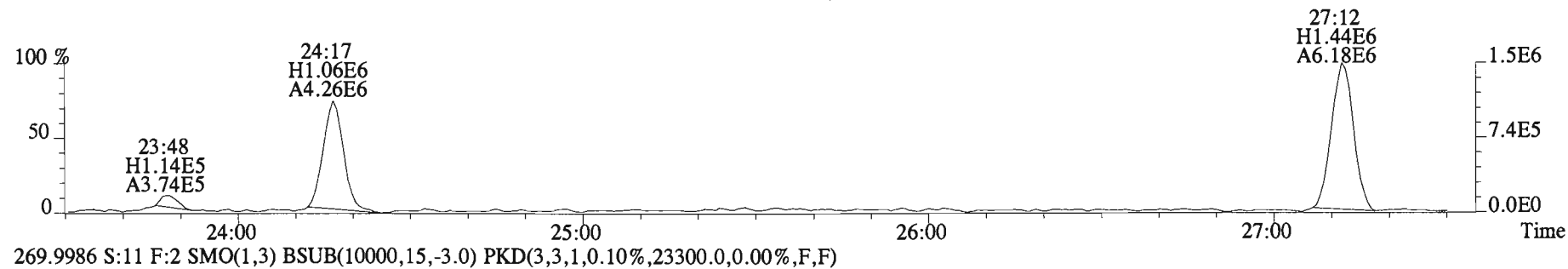
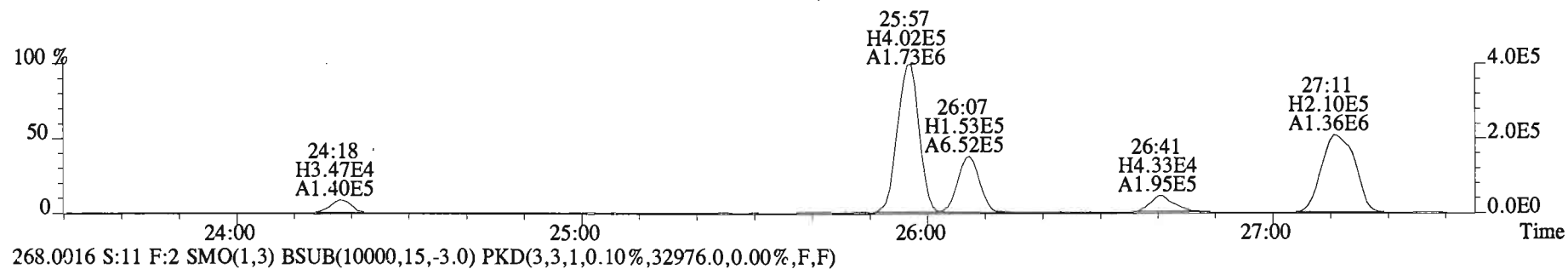
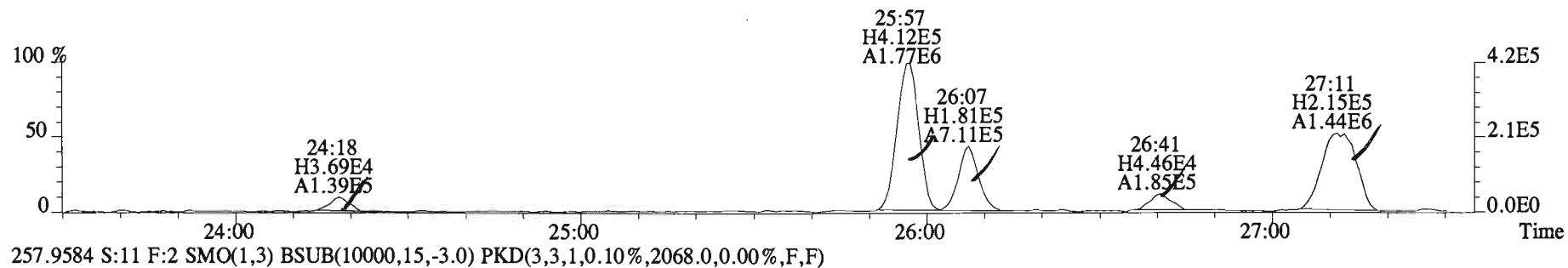
File:150205E1 #1-757 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text: Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
222.0003 S:11 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3188.0,0.00%,F,F)



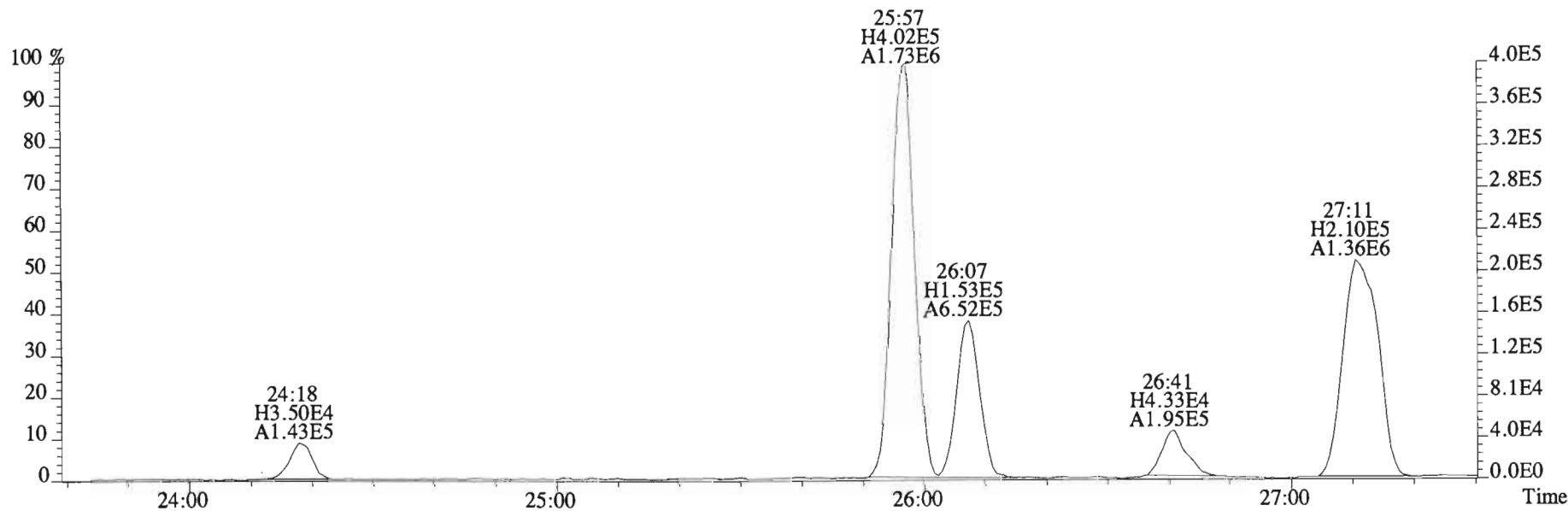
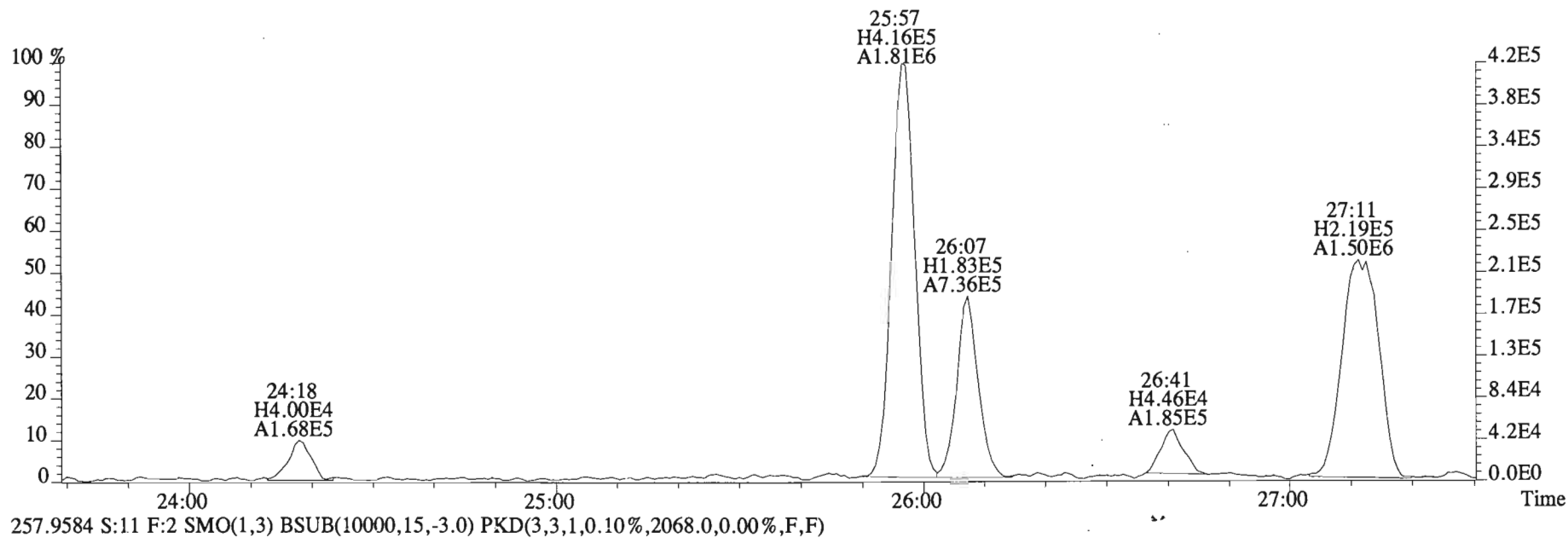
File:150205E1 #1-757 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
222.0003 S:11 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3188.0,0.00%,F,F)



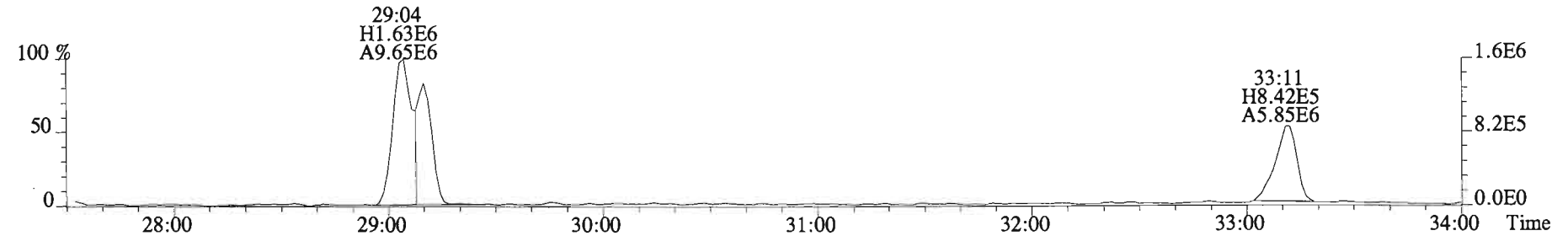
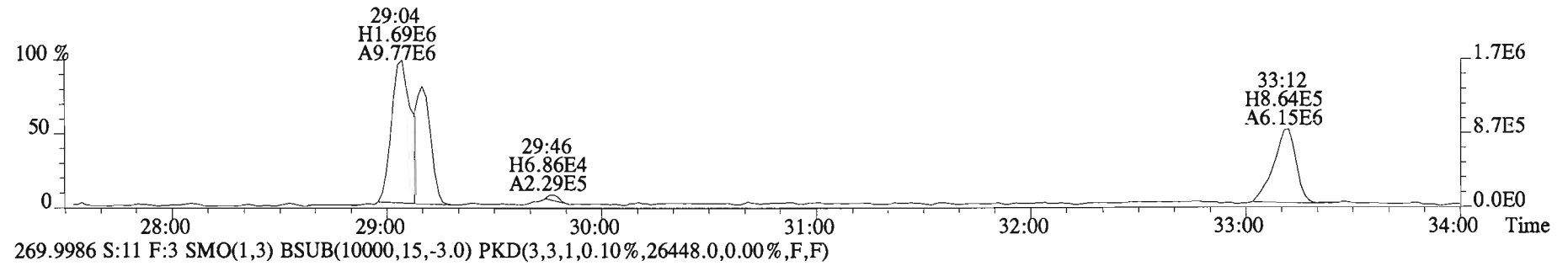
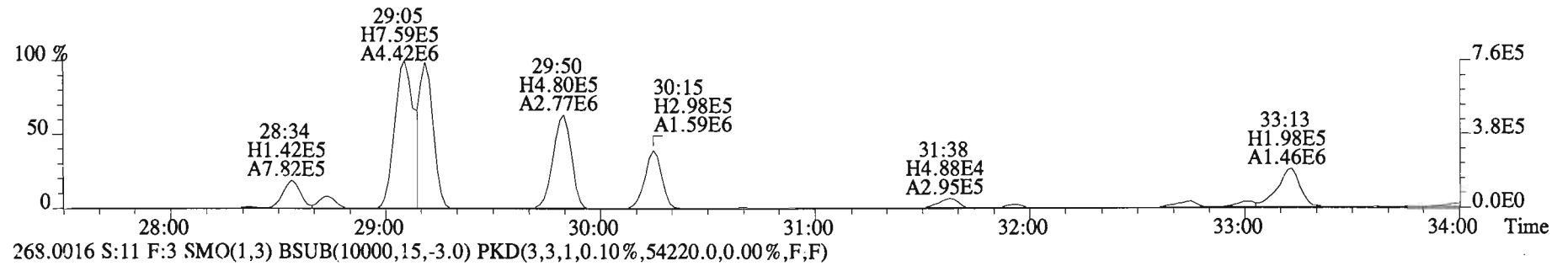
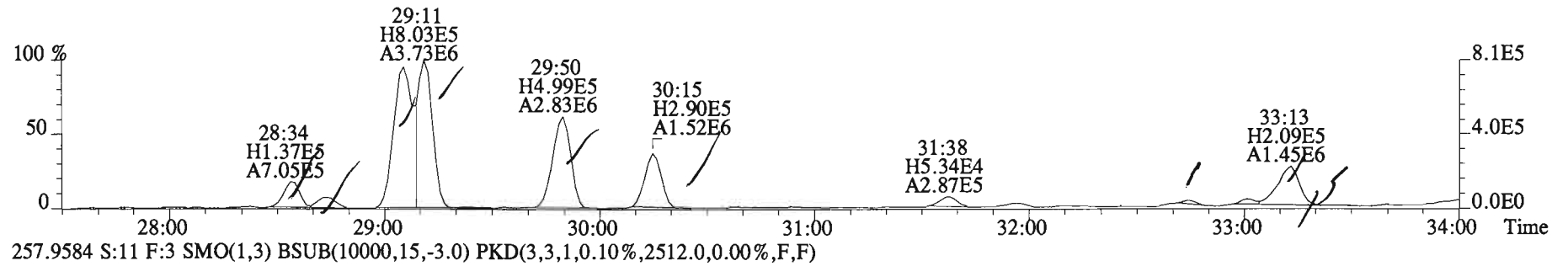
File:150205E1 #1-757 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
255.9613 S:11 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4732.0,0.00%,F,F)



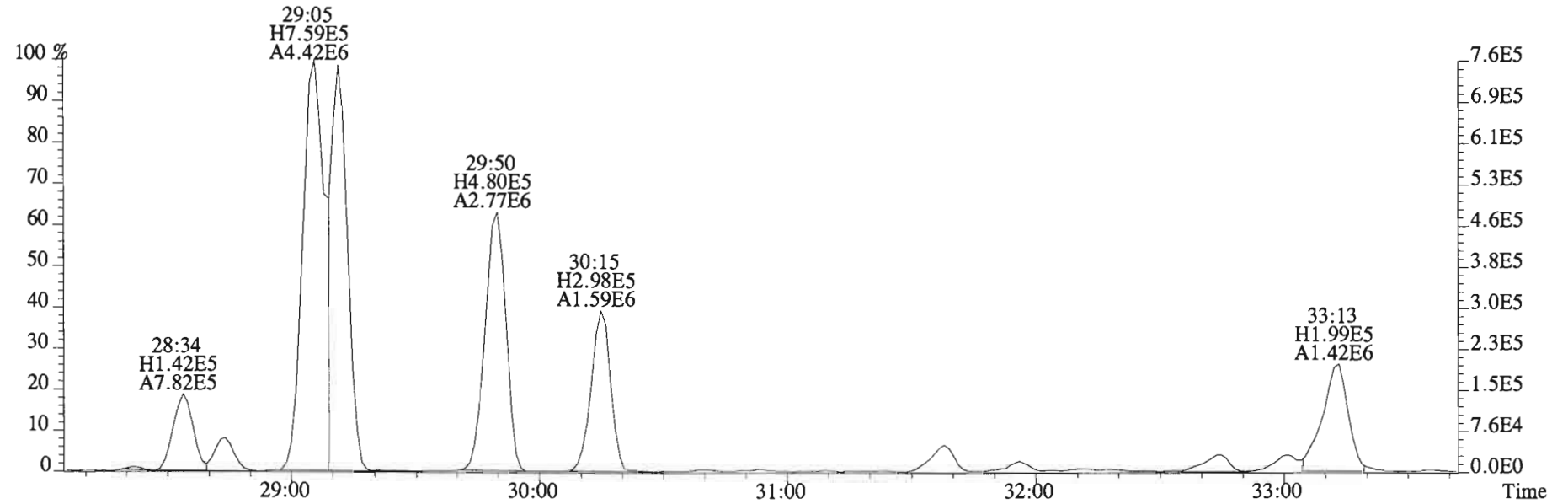
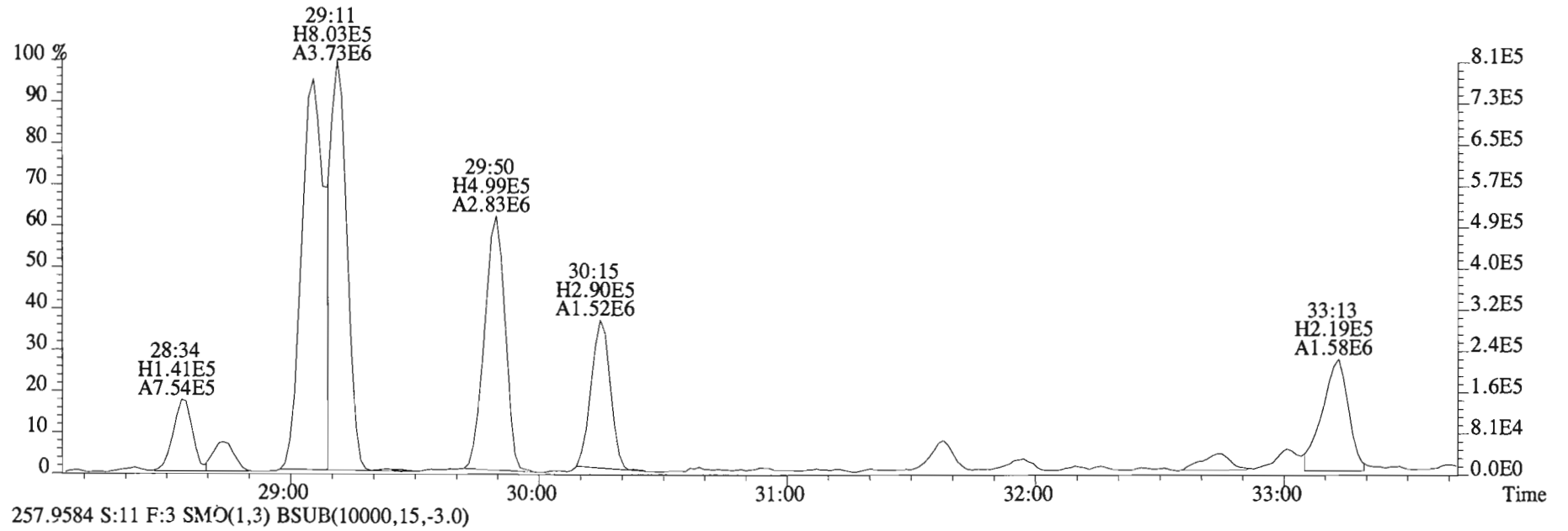
File:150205E1 #1-757 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
255.9613 S:11 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4732.0,0.00%,F,F)



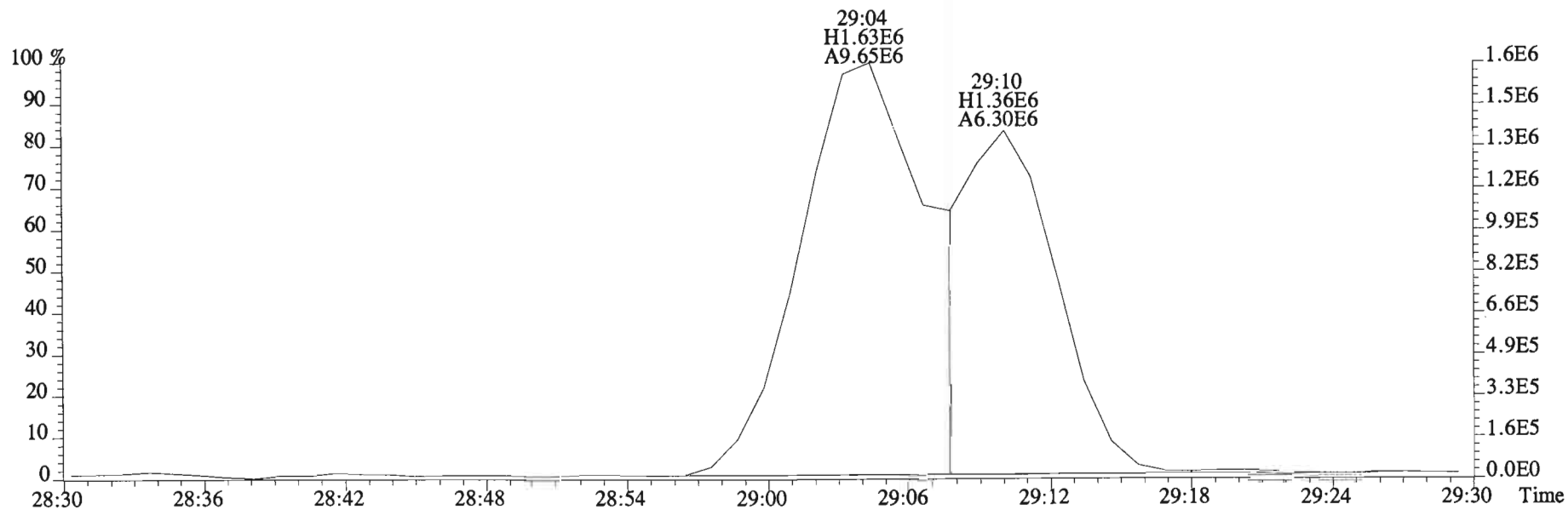
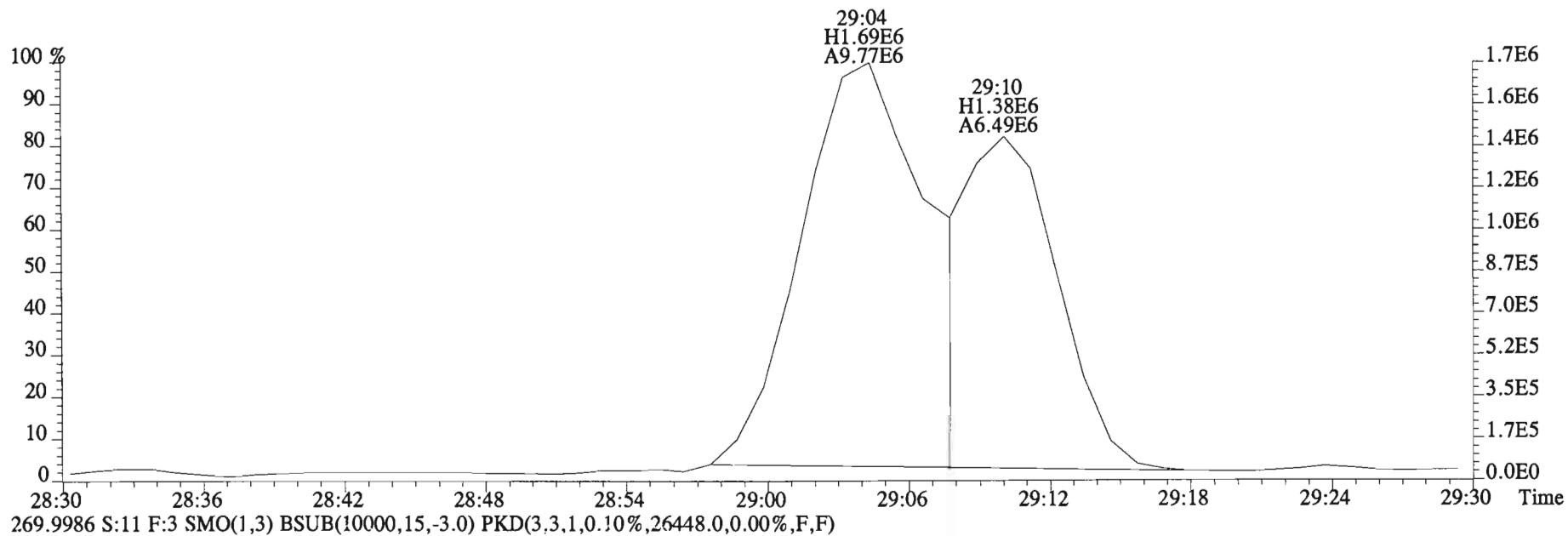
File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
255.9613 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,10096.0,0.00%,F,F)



File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
255.9613 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0)

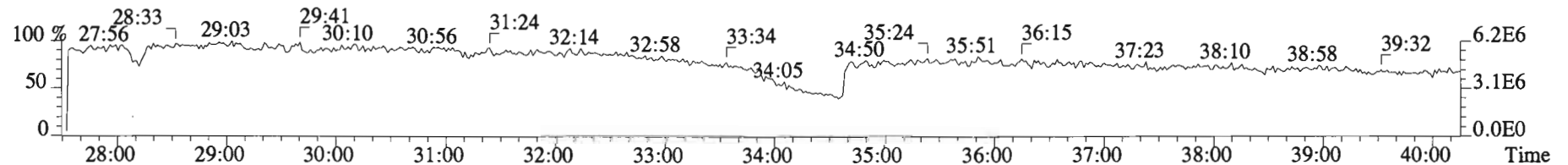
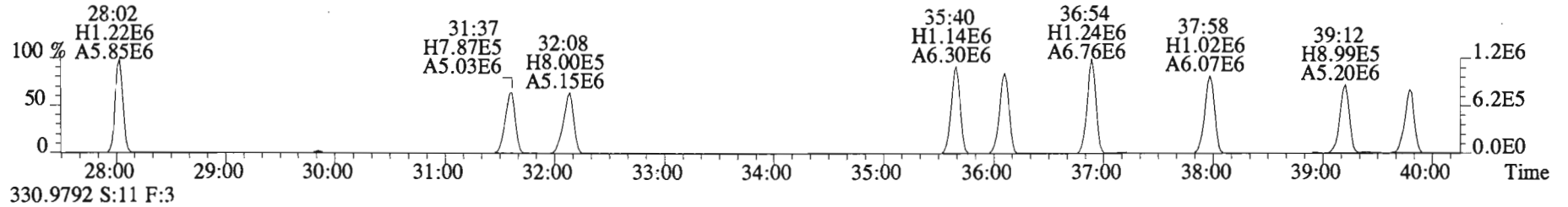
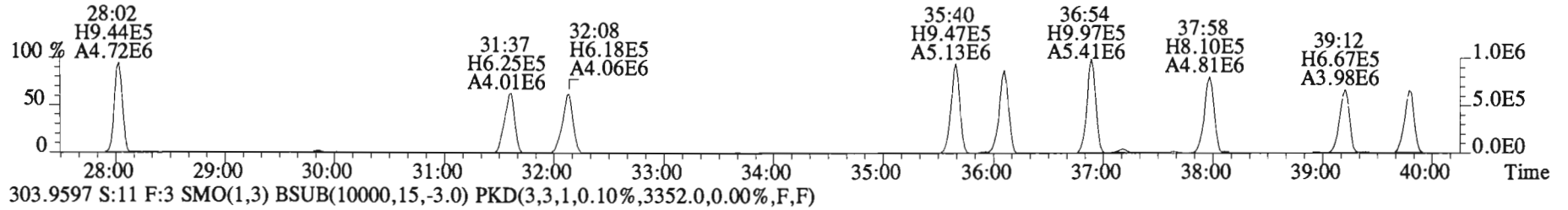
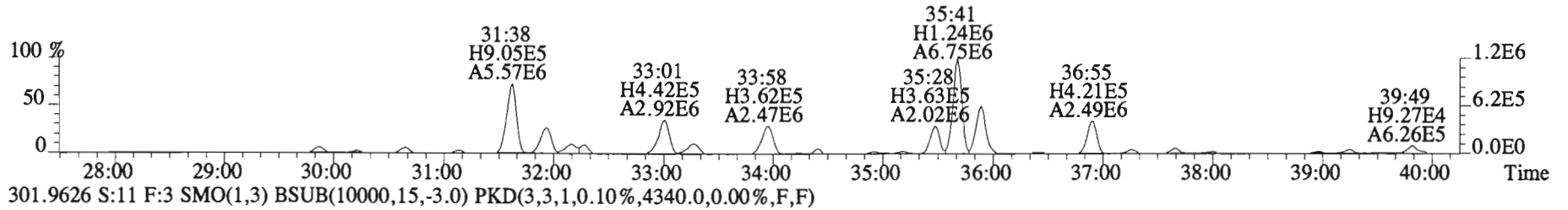
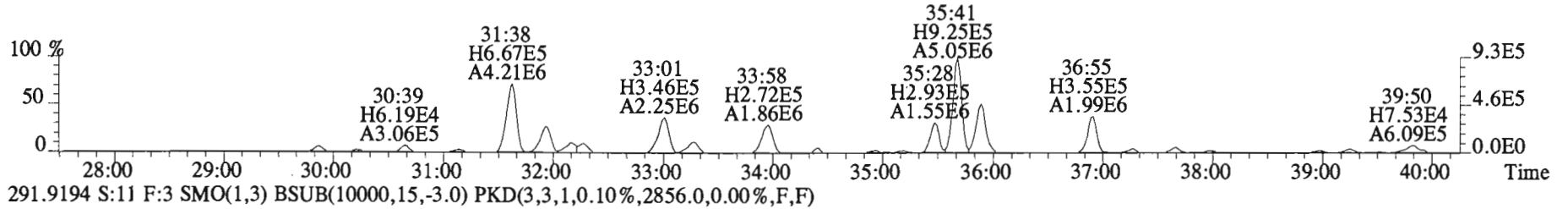


File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text: Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
268.0016 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,54220.0,0.00%,F,F)

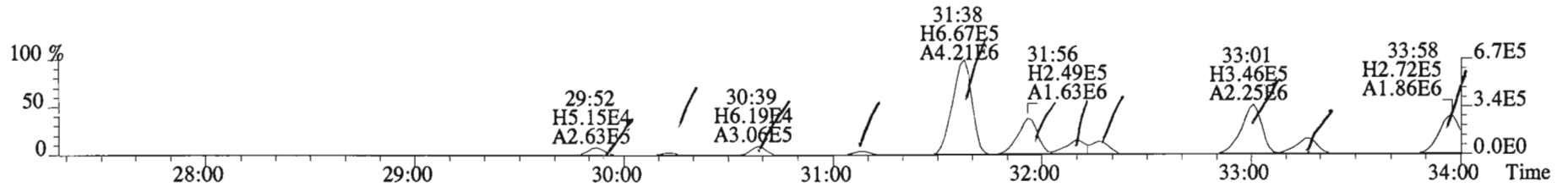




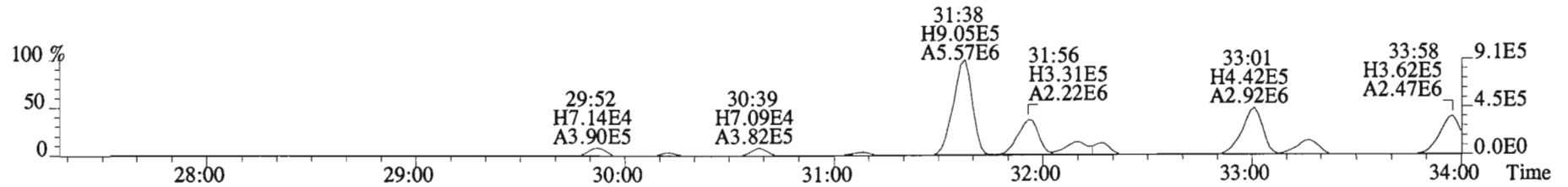
File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
289.9224 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2916.0,0.00%,F,F)



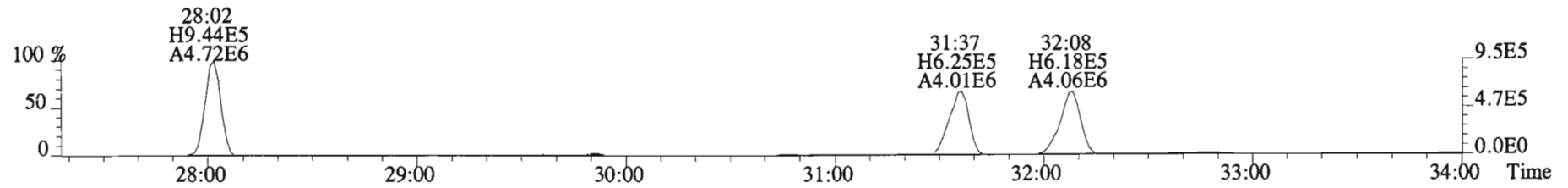
File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#11 File Text: Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
 289.9224 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2916.0,0.00%,F,F)



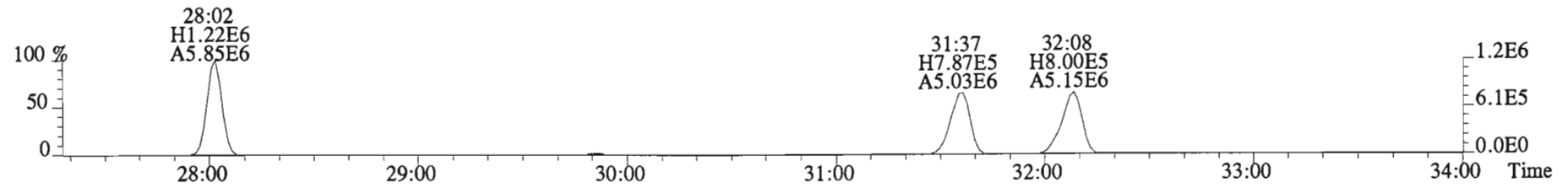
291.9194 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2856.0,0.00%,F,F)



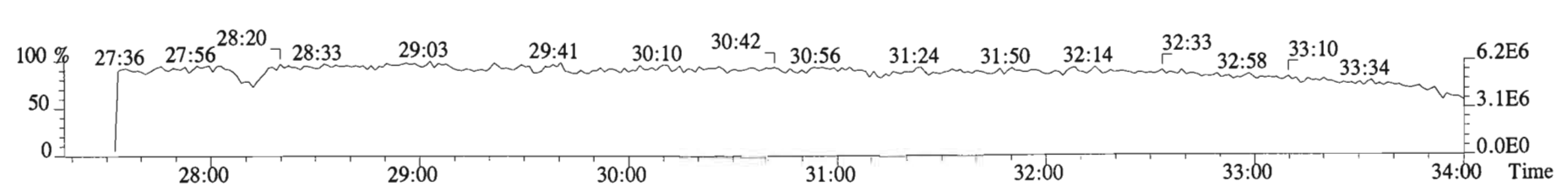
301.9626 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4340.0,0.00%,F,F)



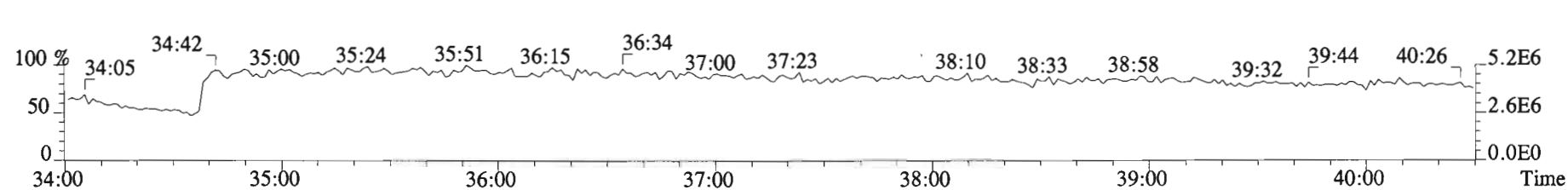
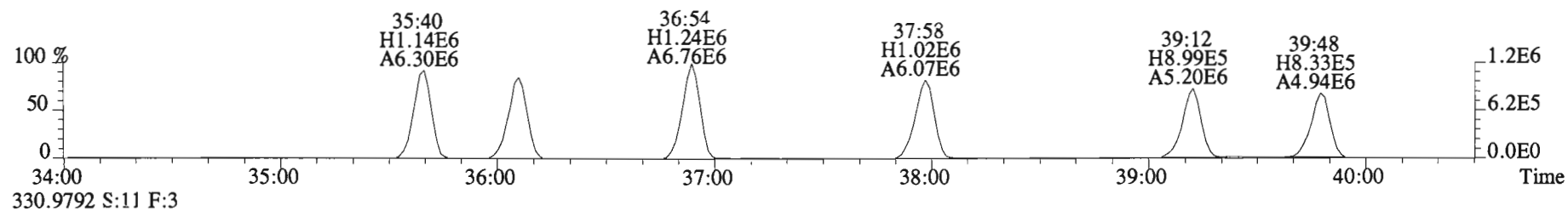
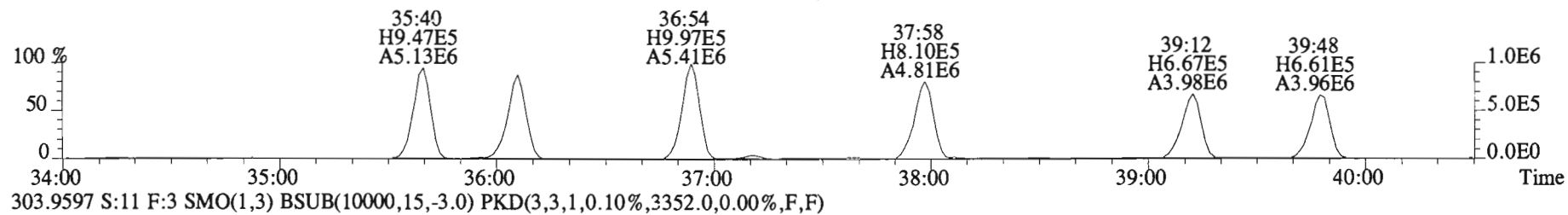
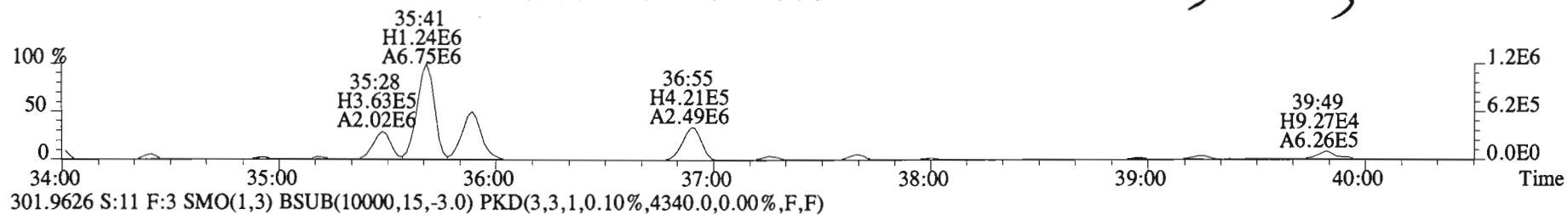
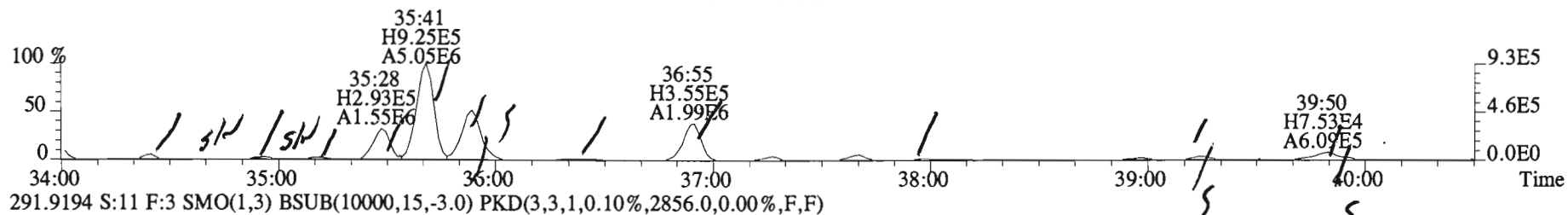
303.9597 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3352.0,0.00%,F,F)



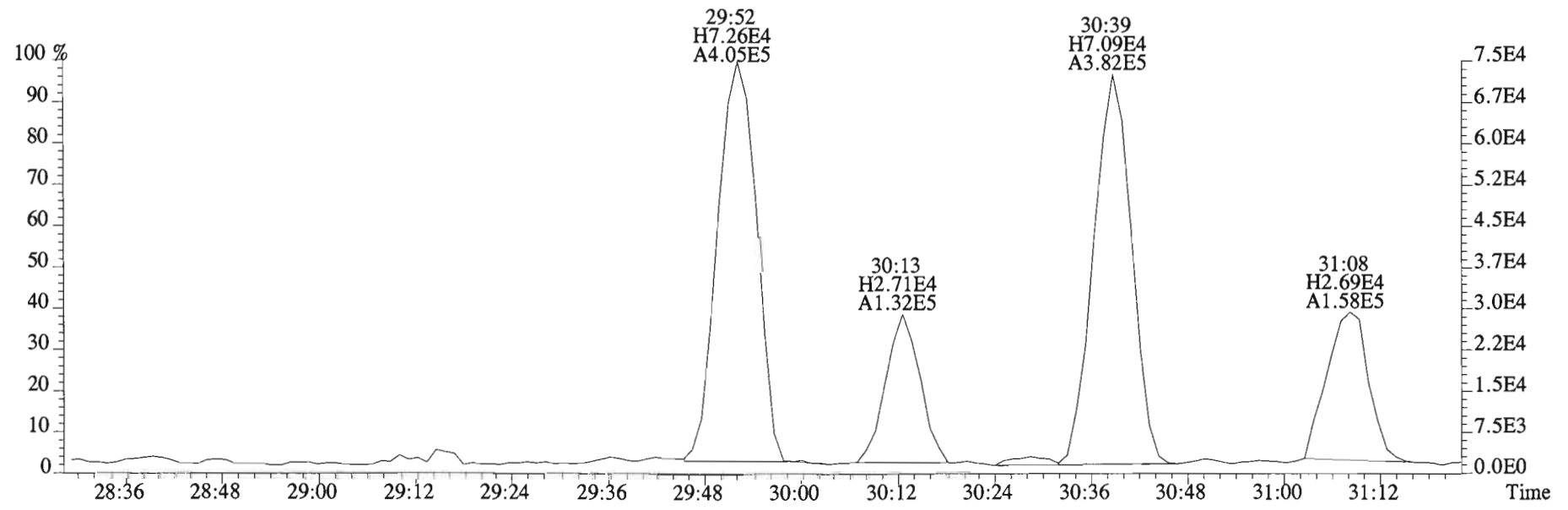
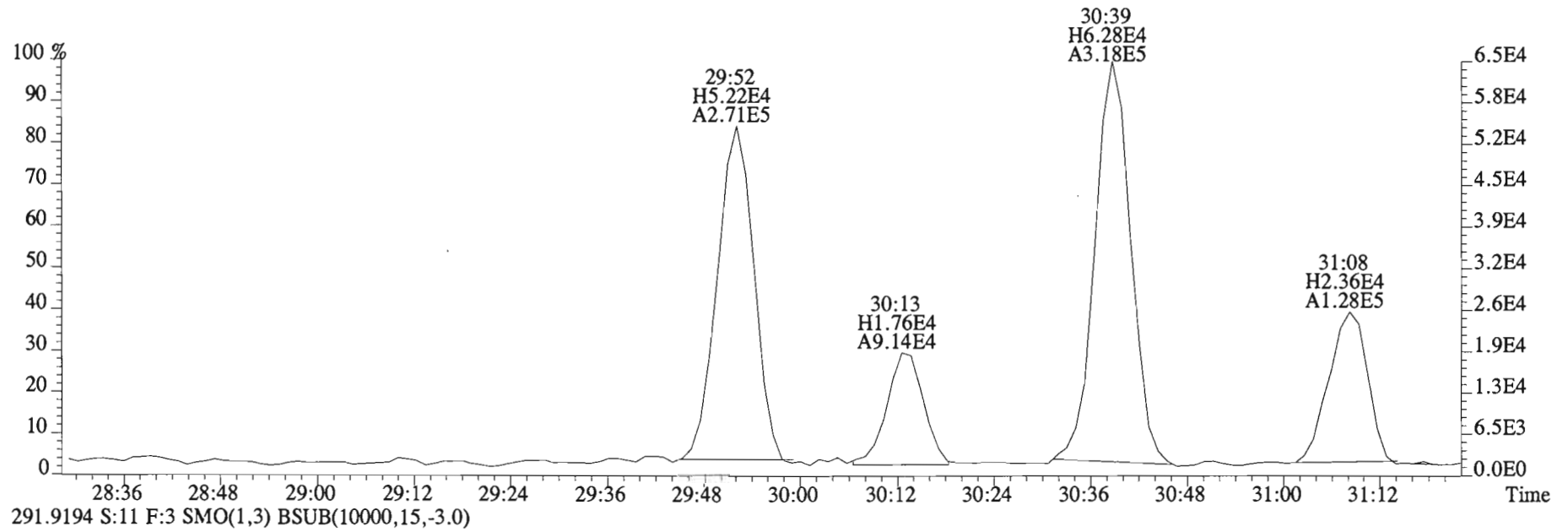
330.9792 S:11 F:3



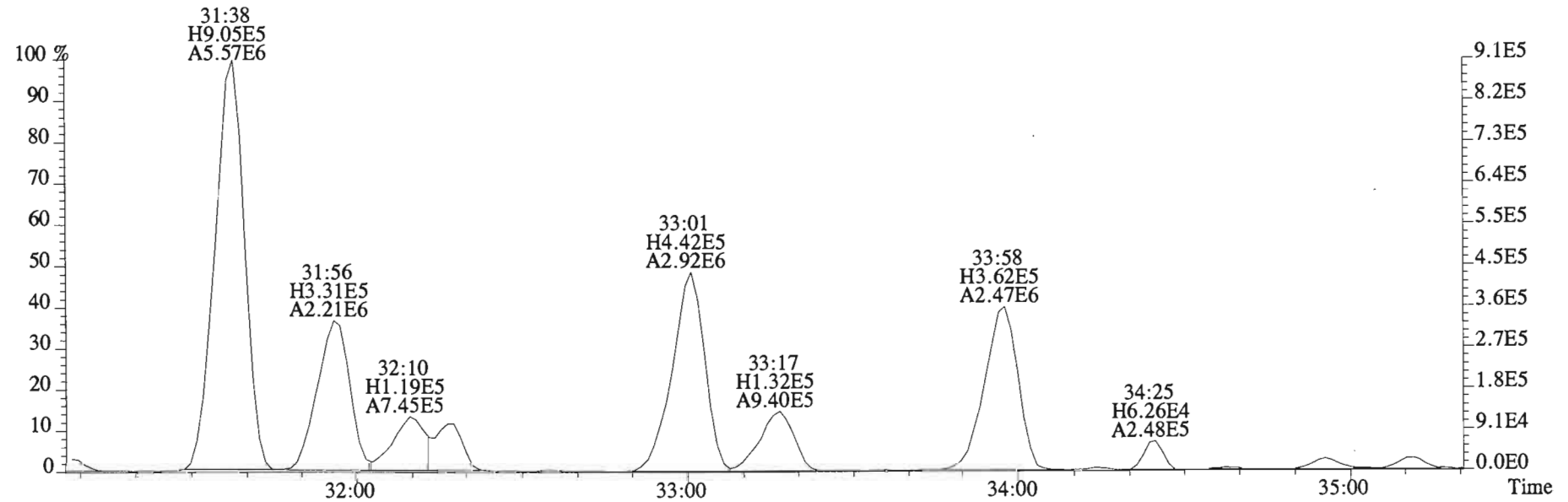
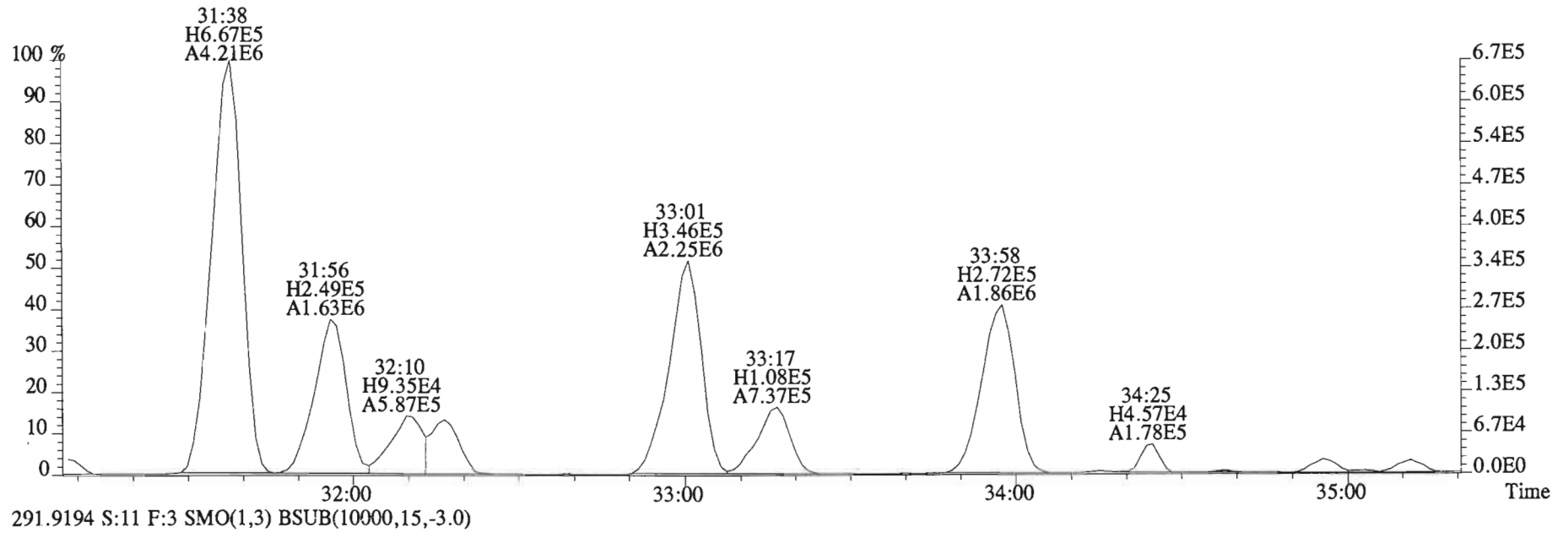
File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
289.9224 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2916.0,0.00%,F,F)



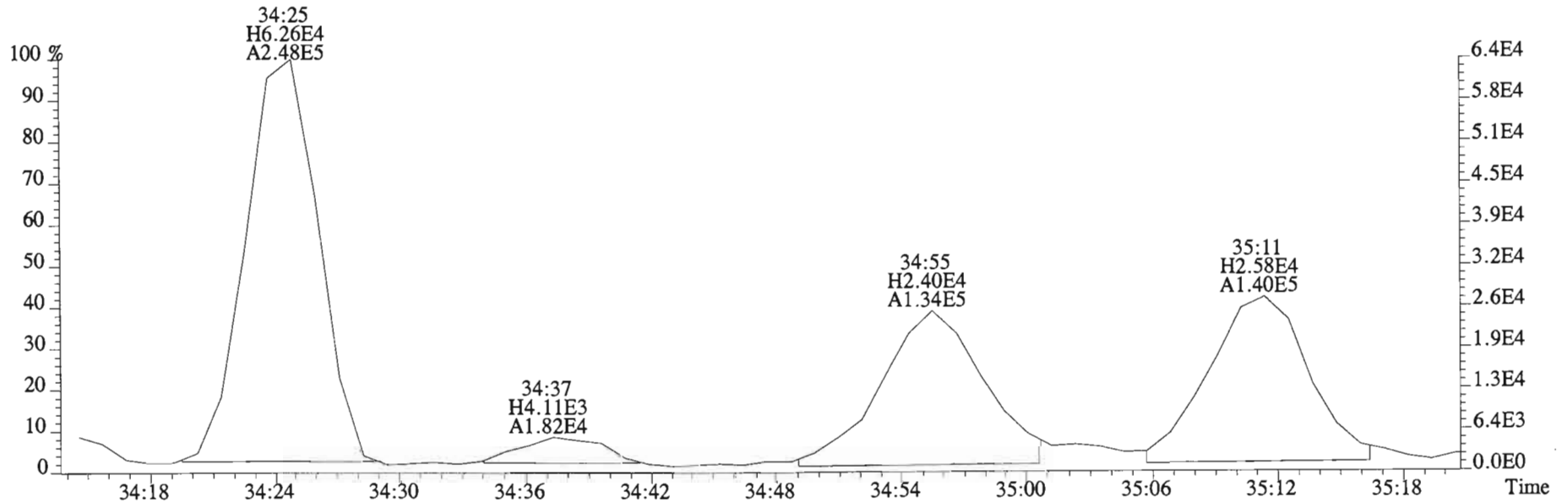
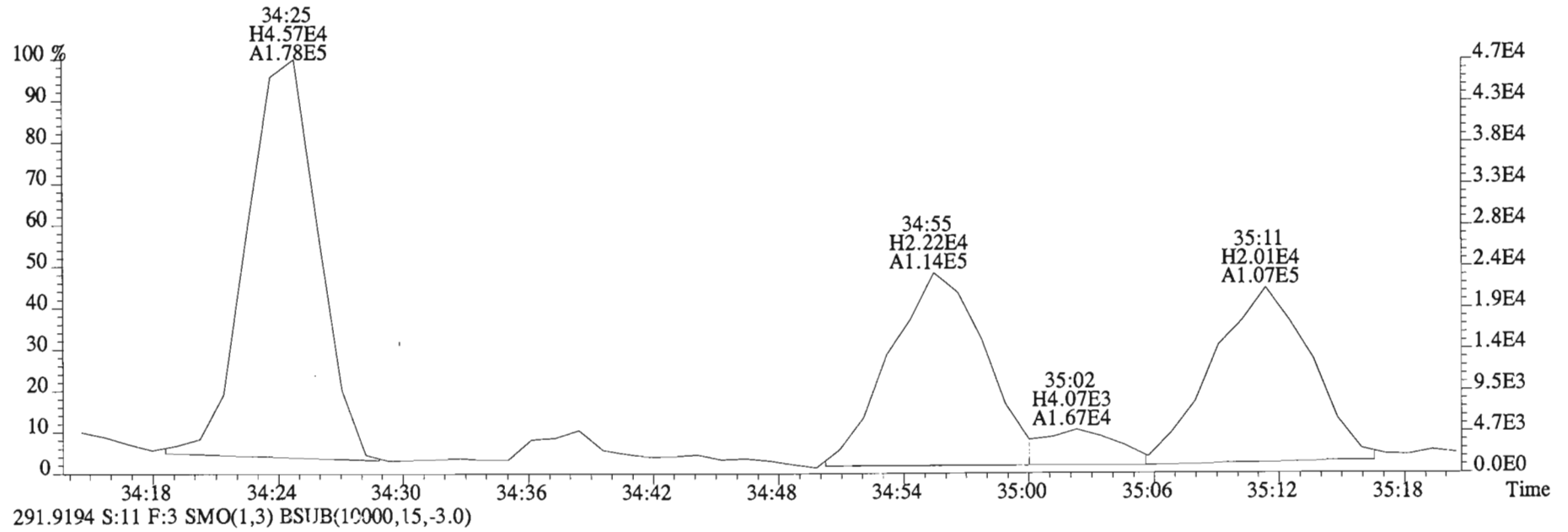
File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
289.9224 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0)



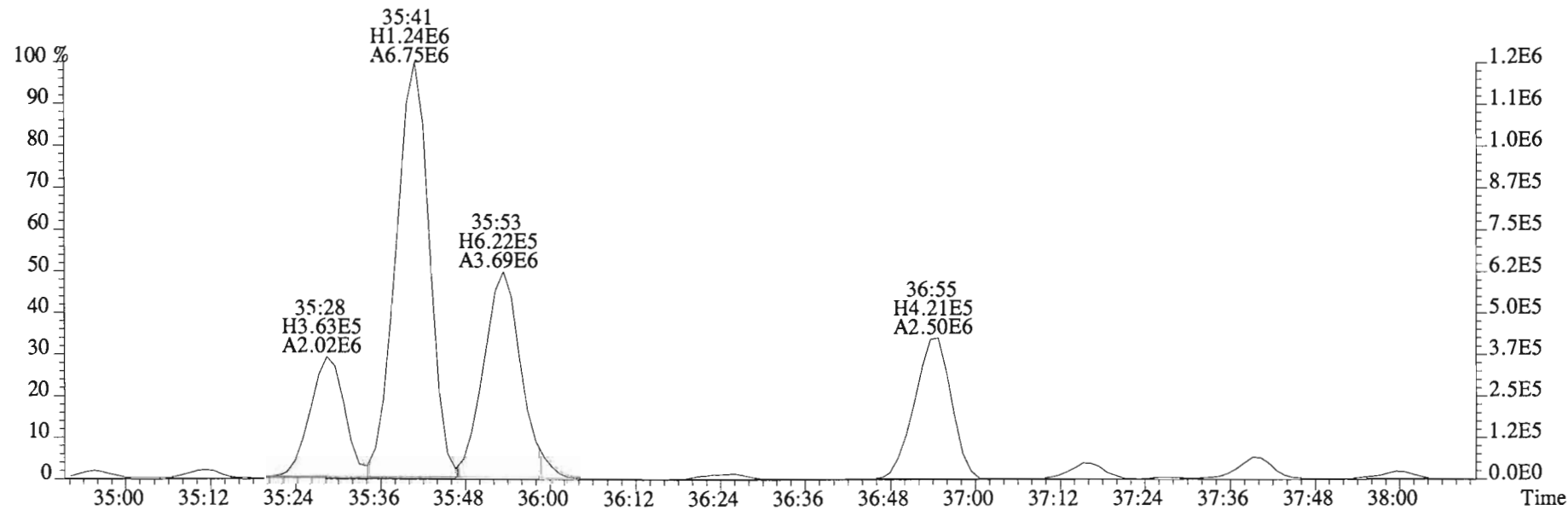
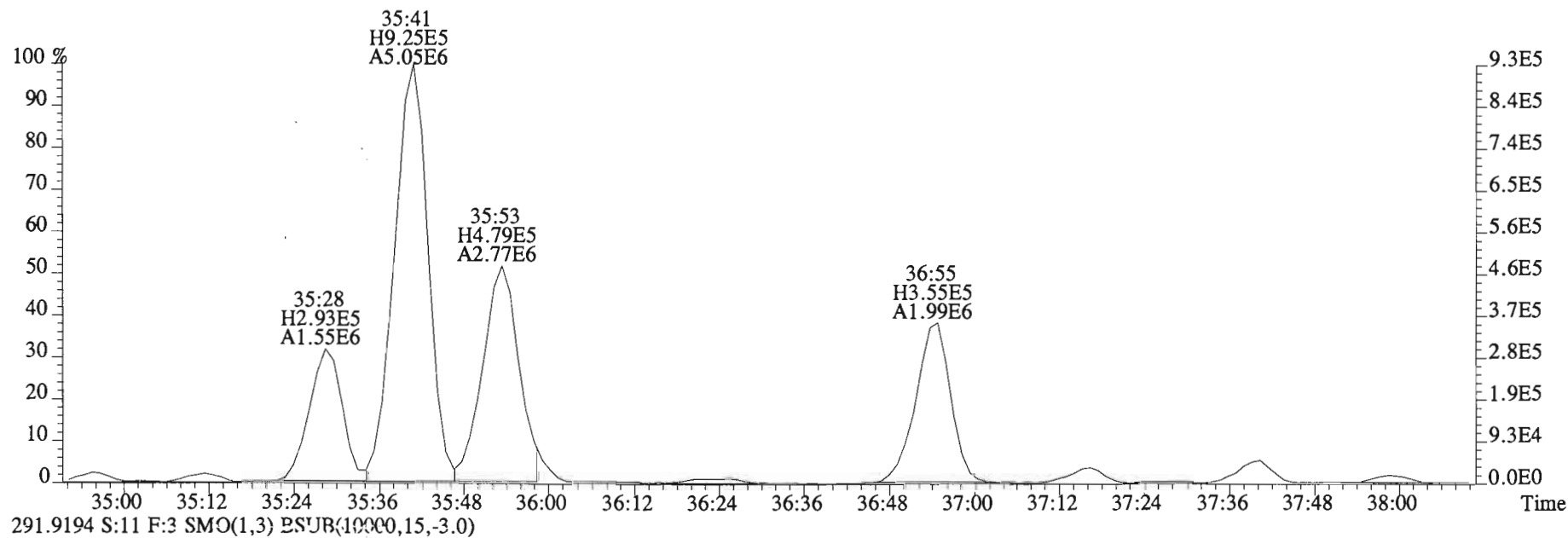
File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
 289.9224 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0)



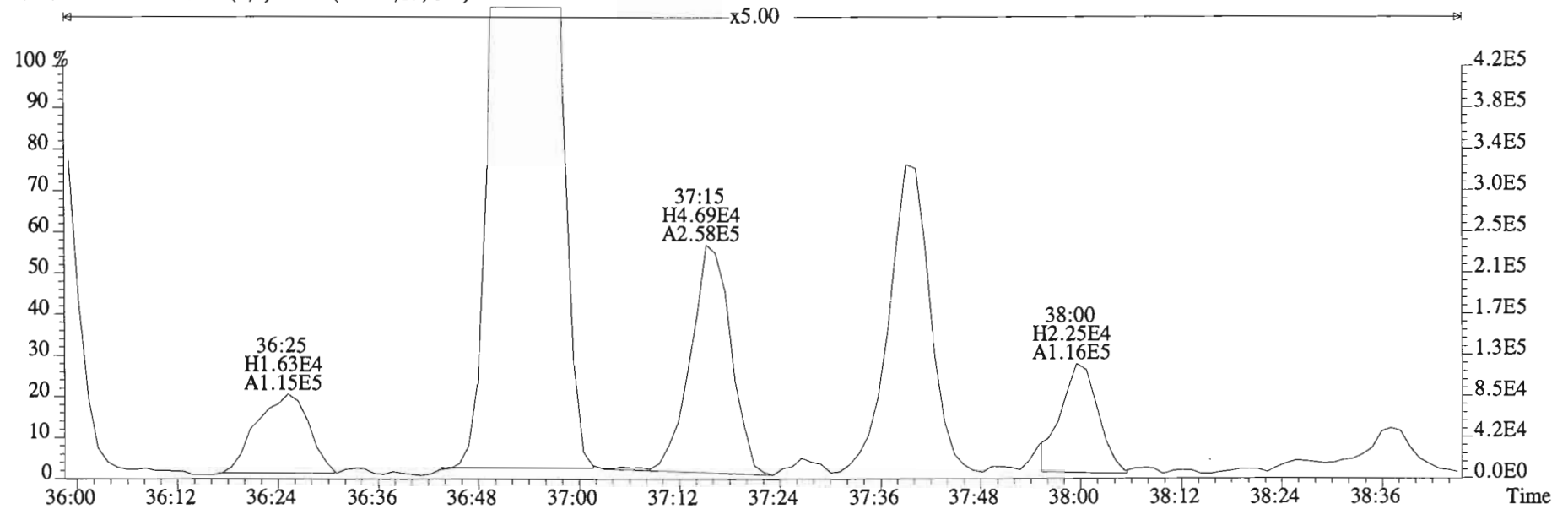
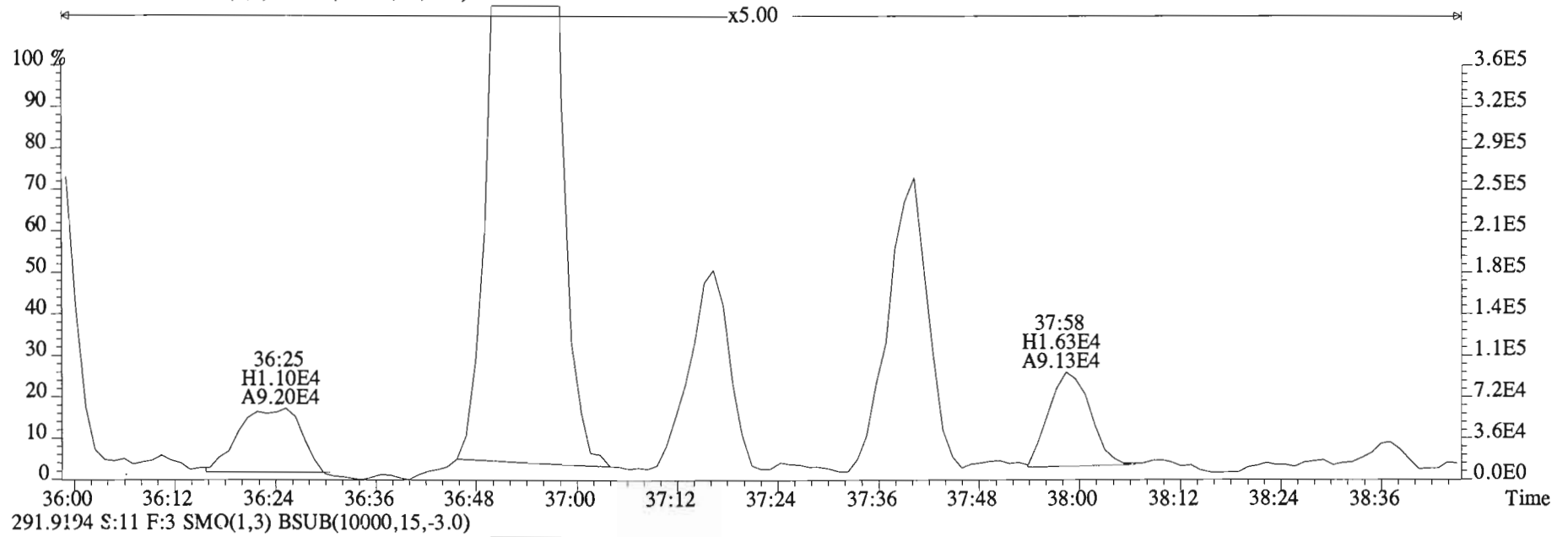
File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
289.9224 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0)



File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
289.9224 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0)

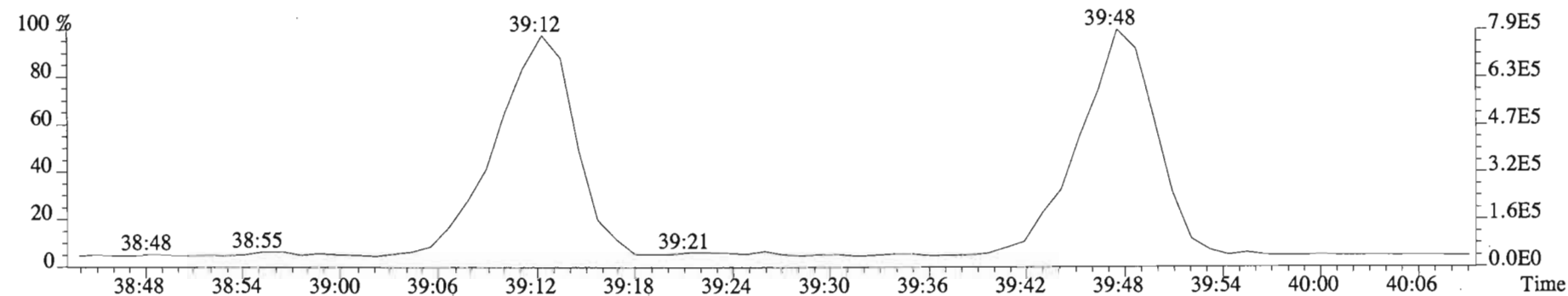
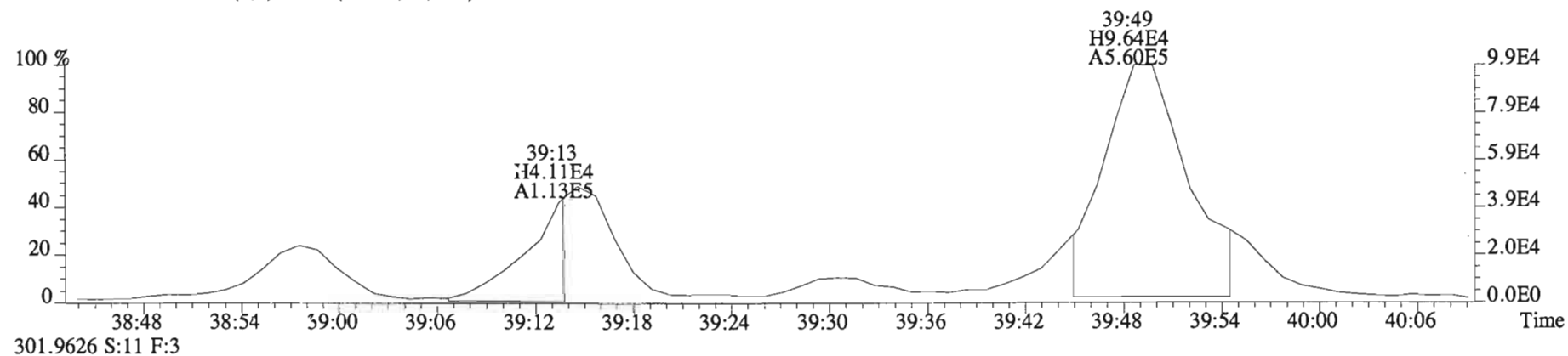
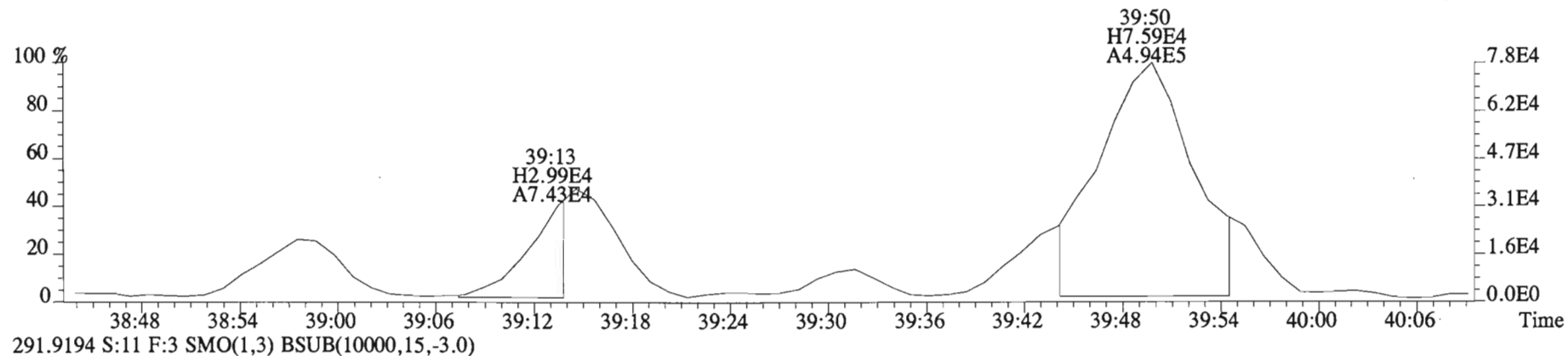


File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
289.9224 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0)

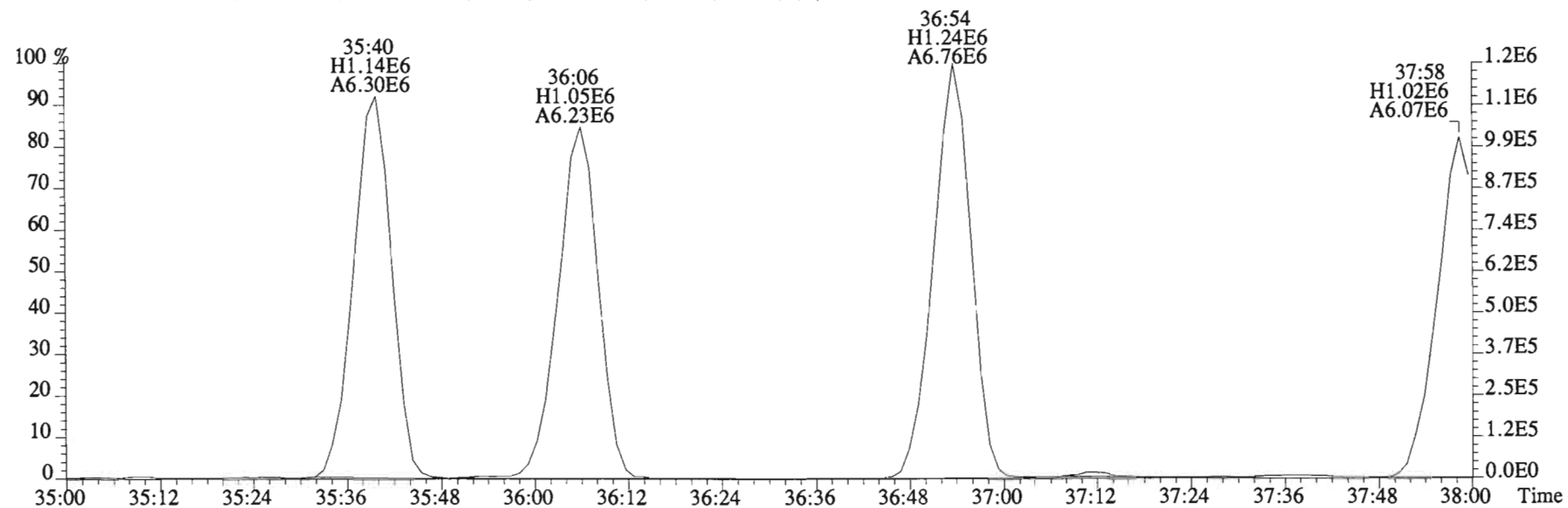
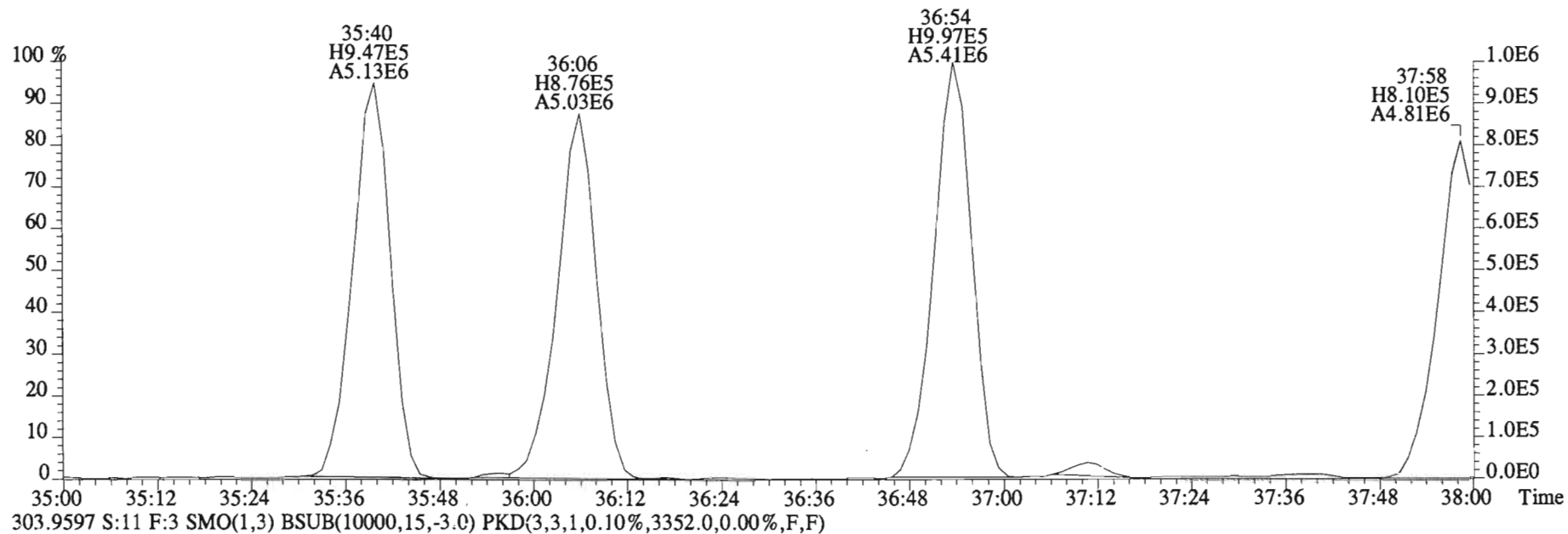




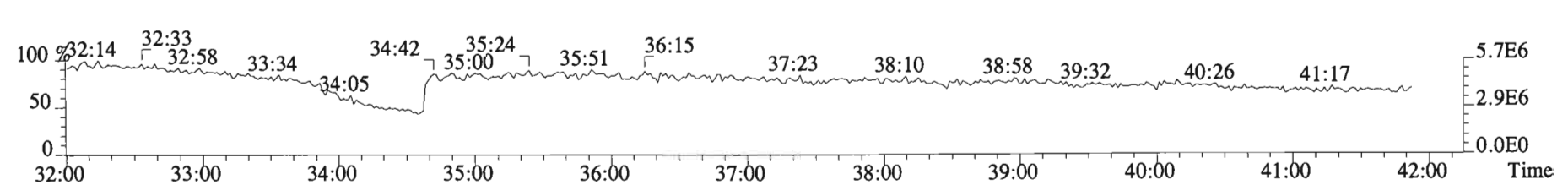
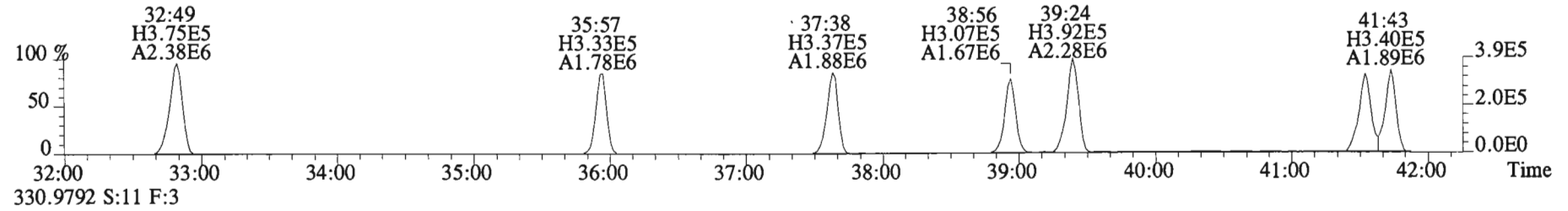
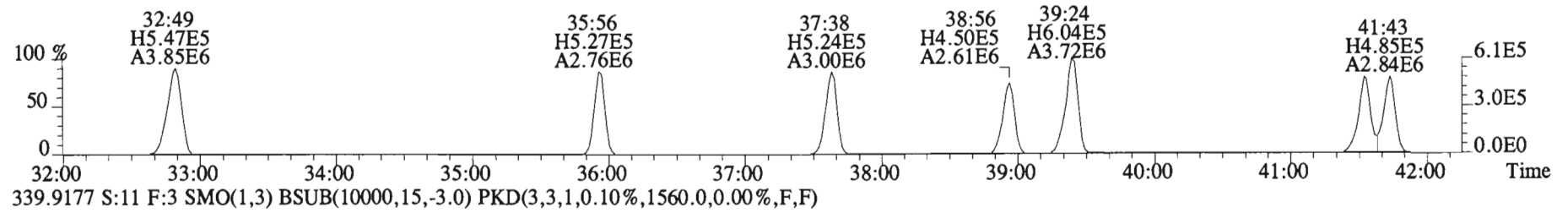
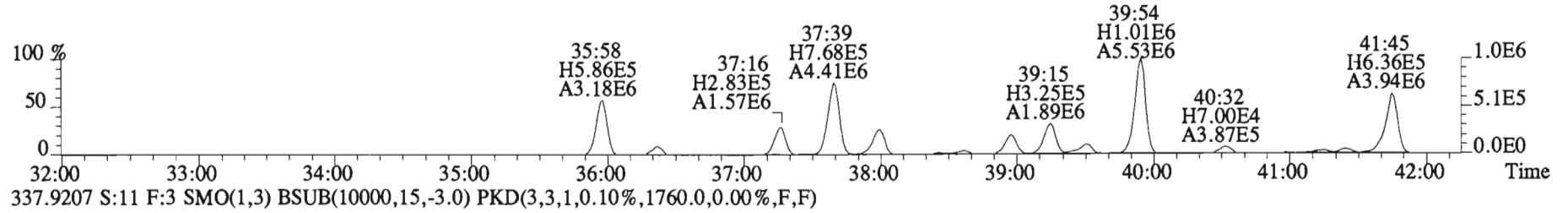
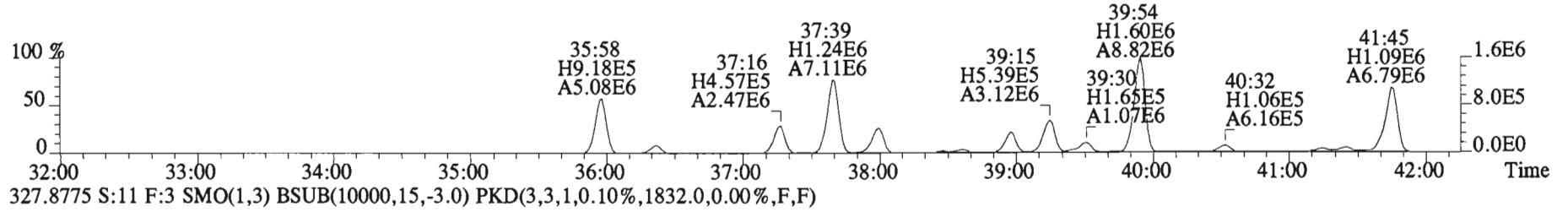
File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
289.9224 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0)



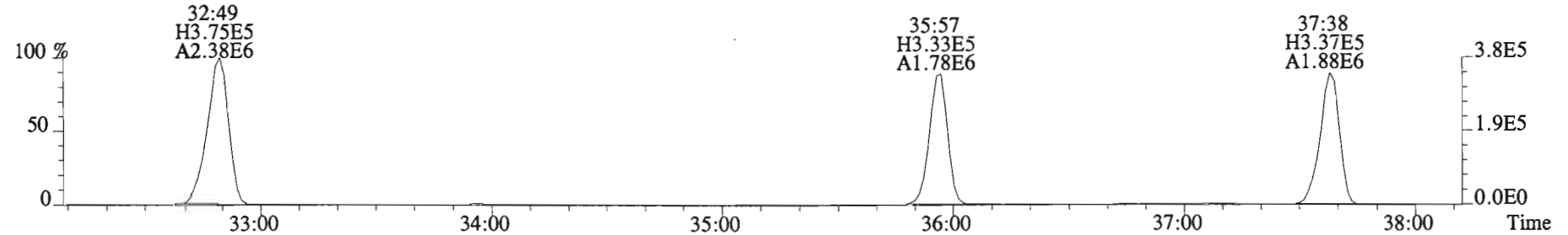
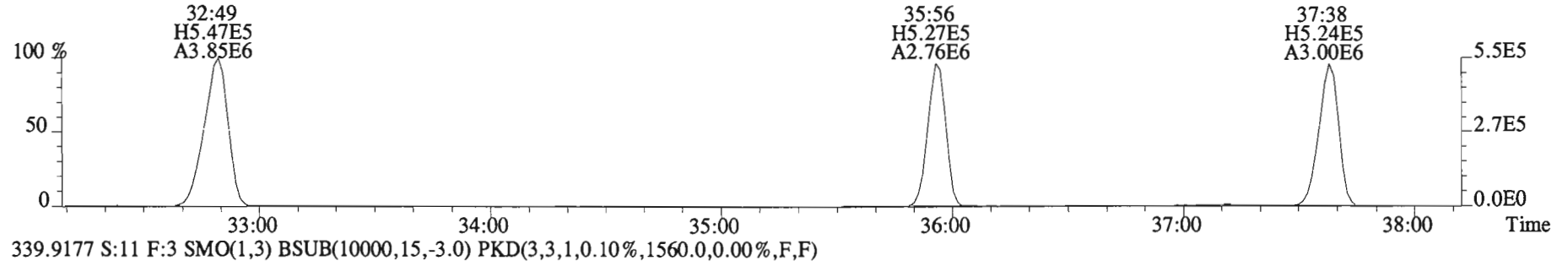
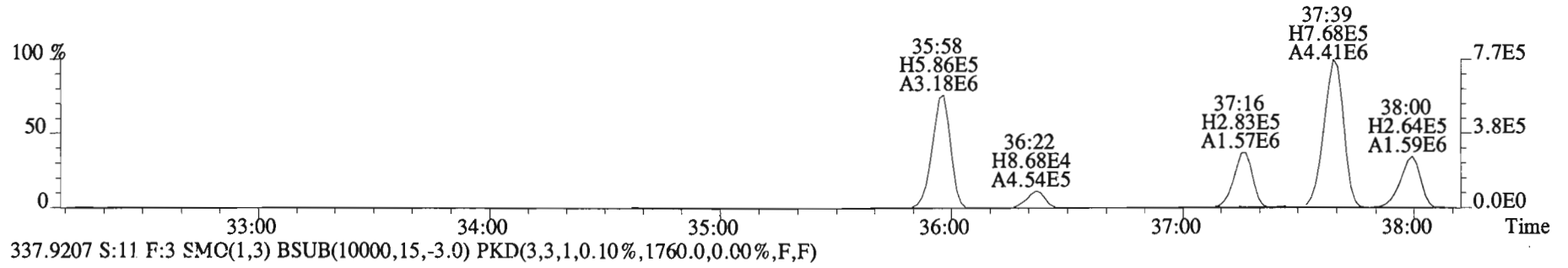
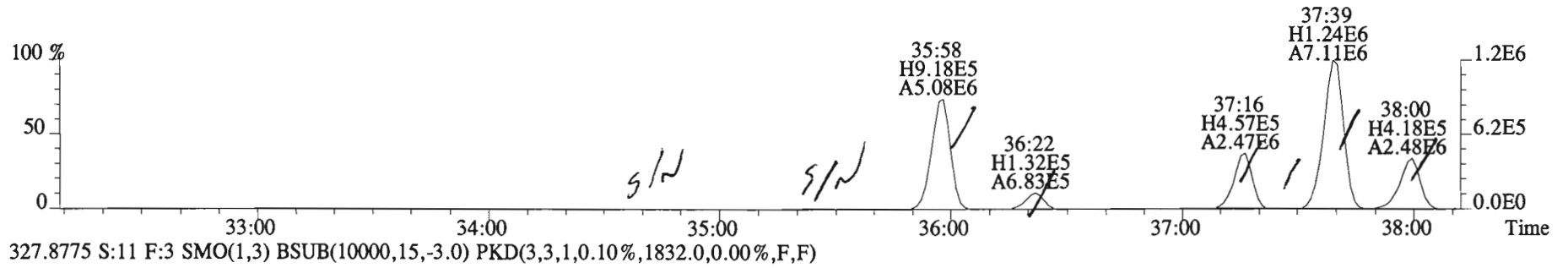
File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
301.9626 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4340.0,0.00%,F,F)



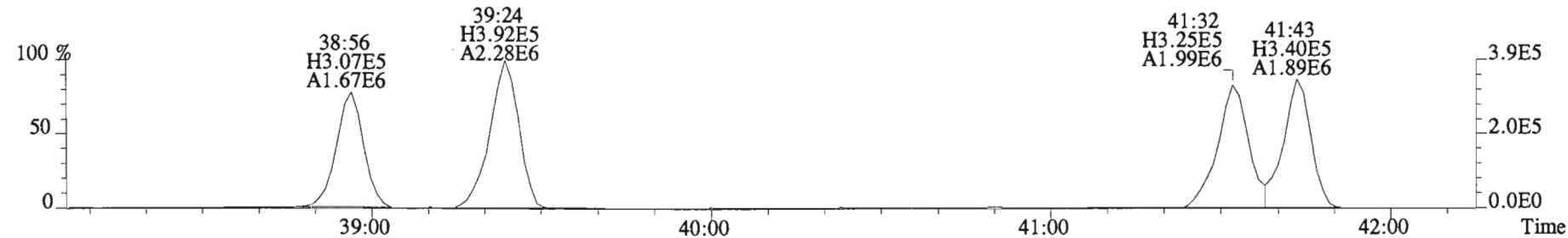
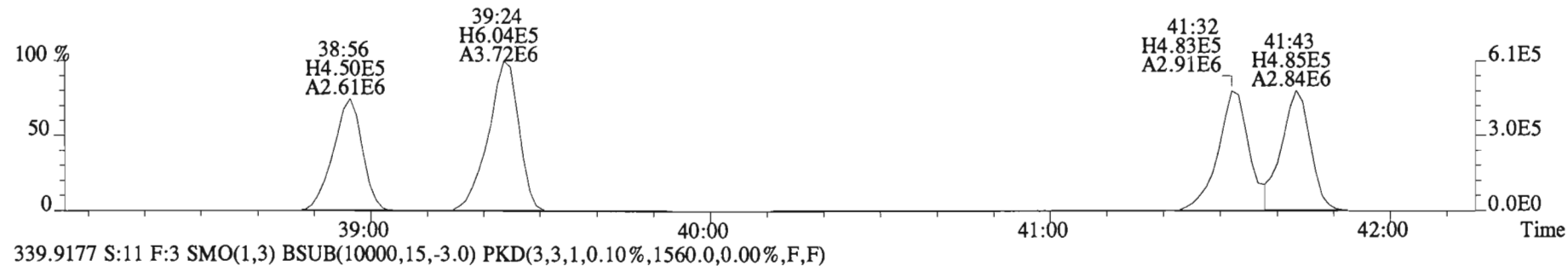
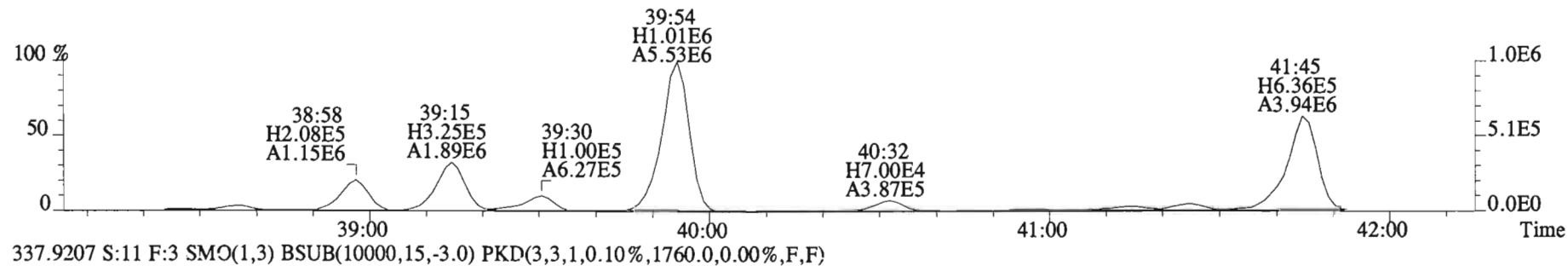
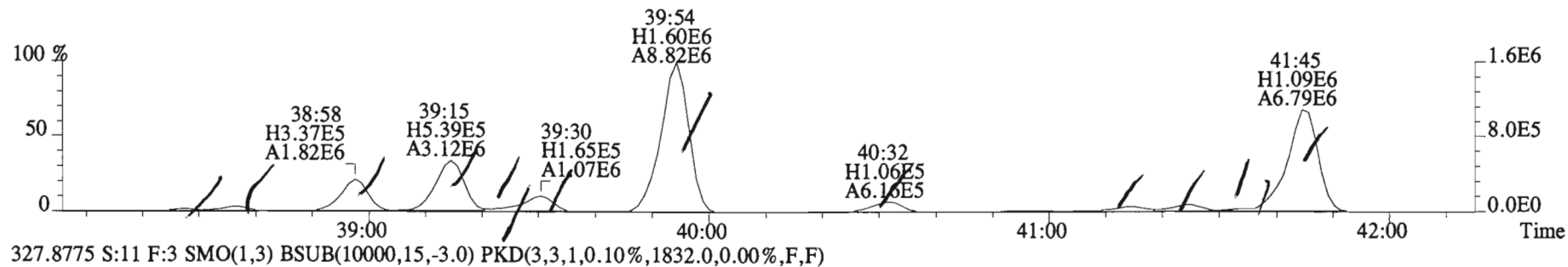
File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text: Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
325.8804 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1452.0,0.00%,F,F)



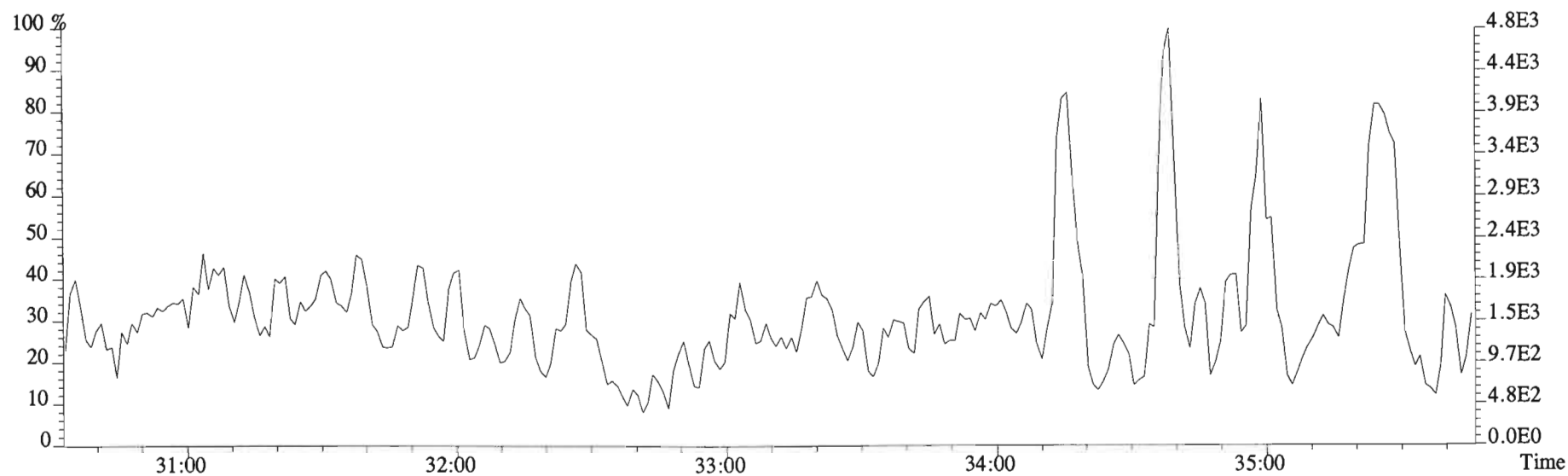
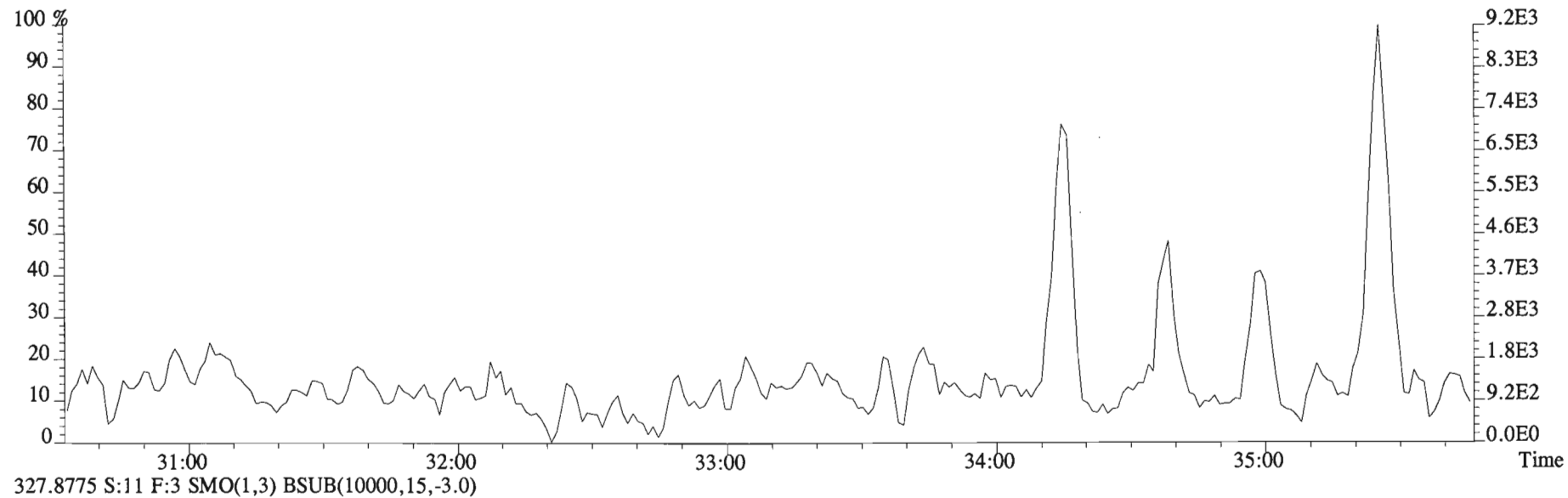
File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
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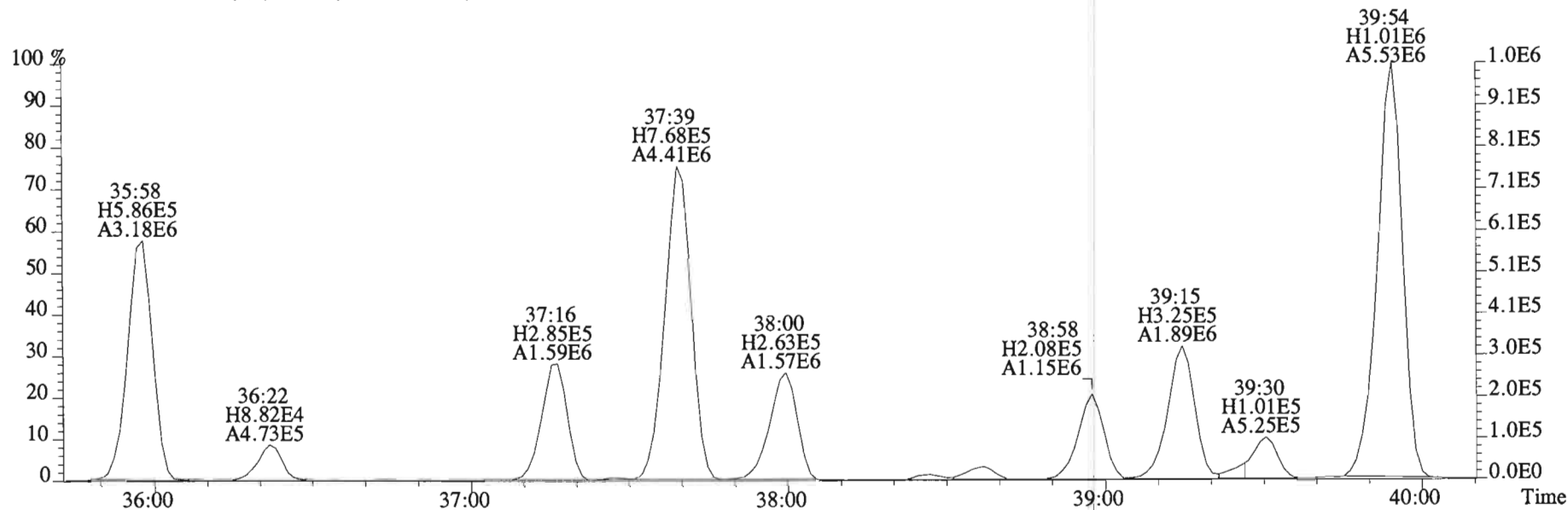
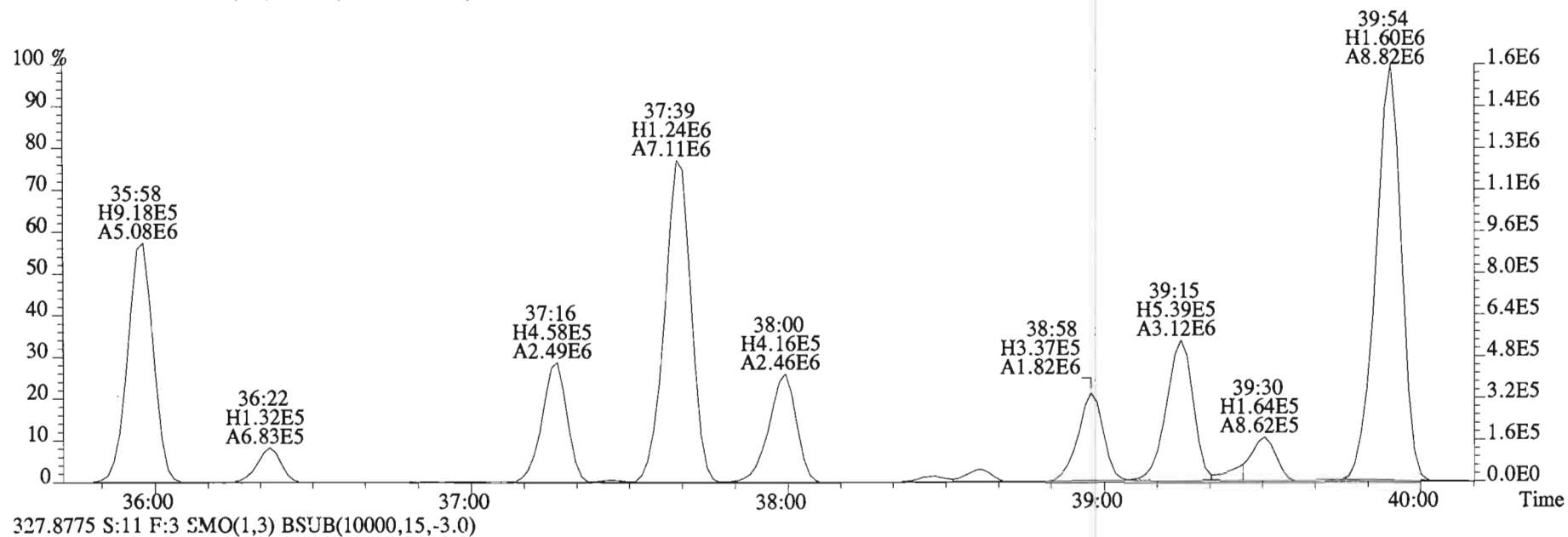
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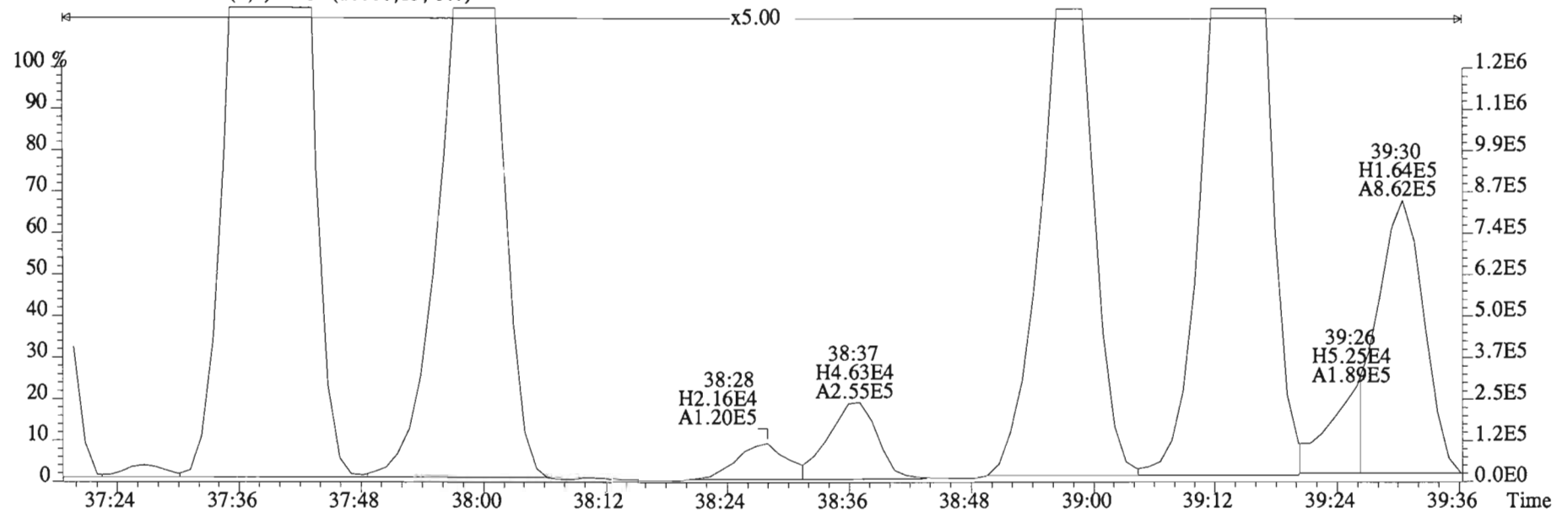
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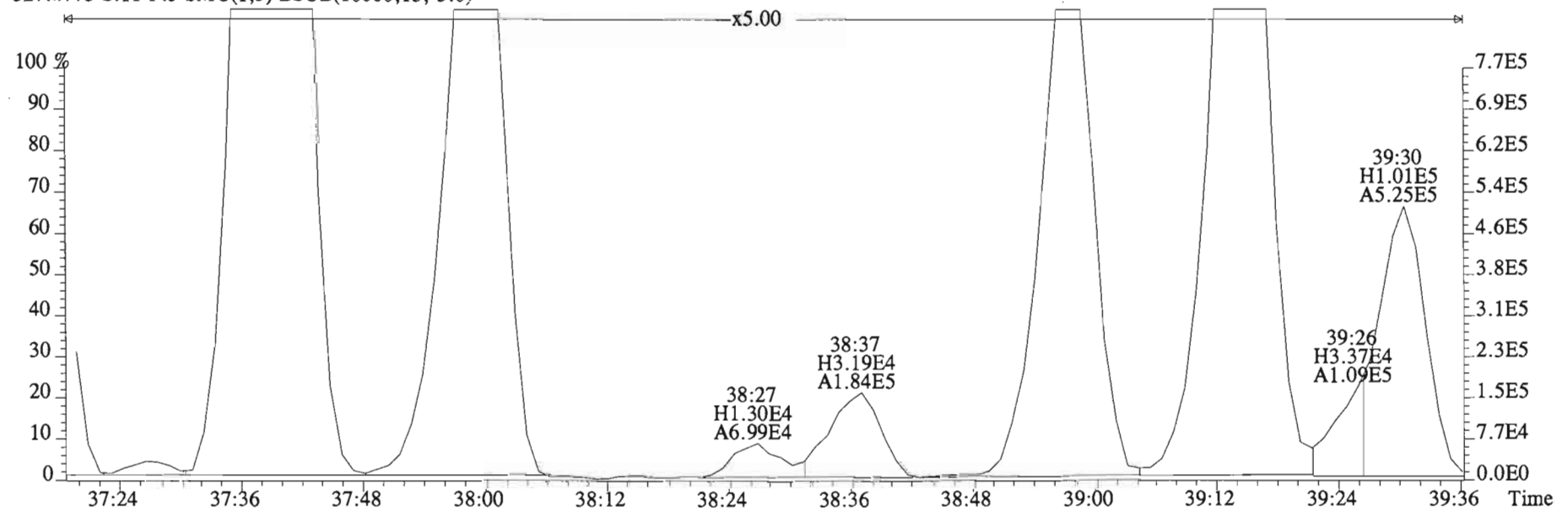
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 325.8804 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0)



File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
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325.8804 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0)

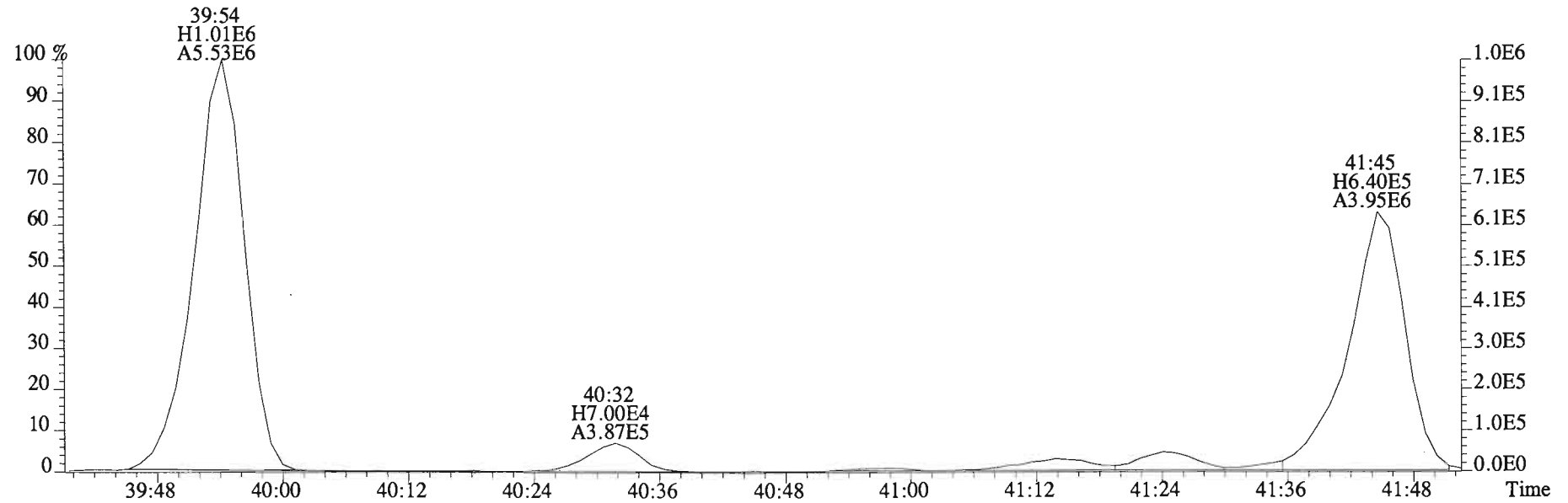
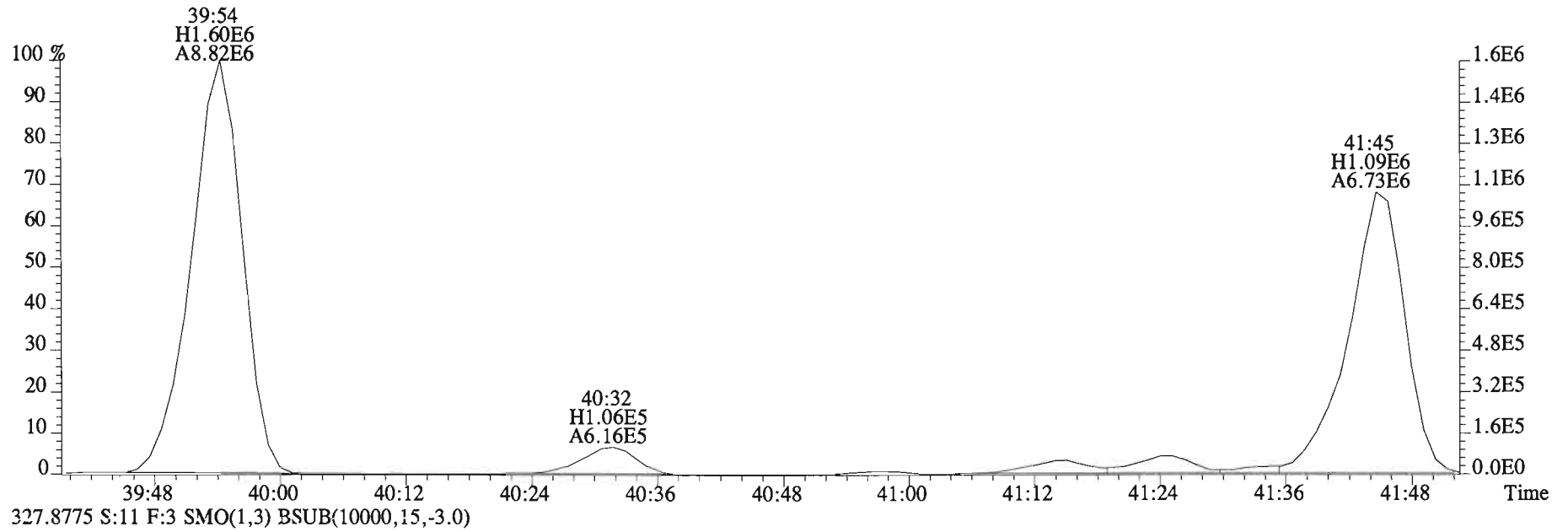


327.8775 S:11 F:3 SMC(1,3) BSUB(10000,15,-3.0)

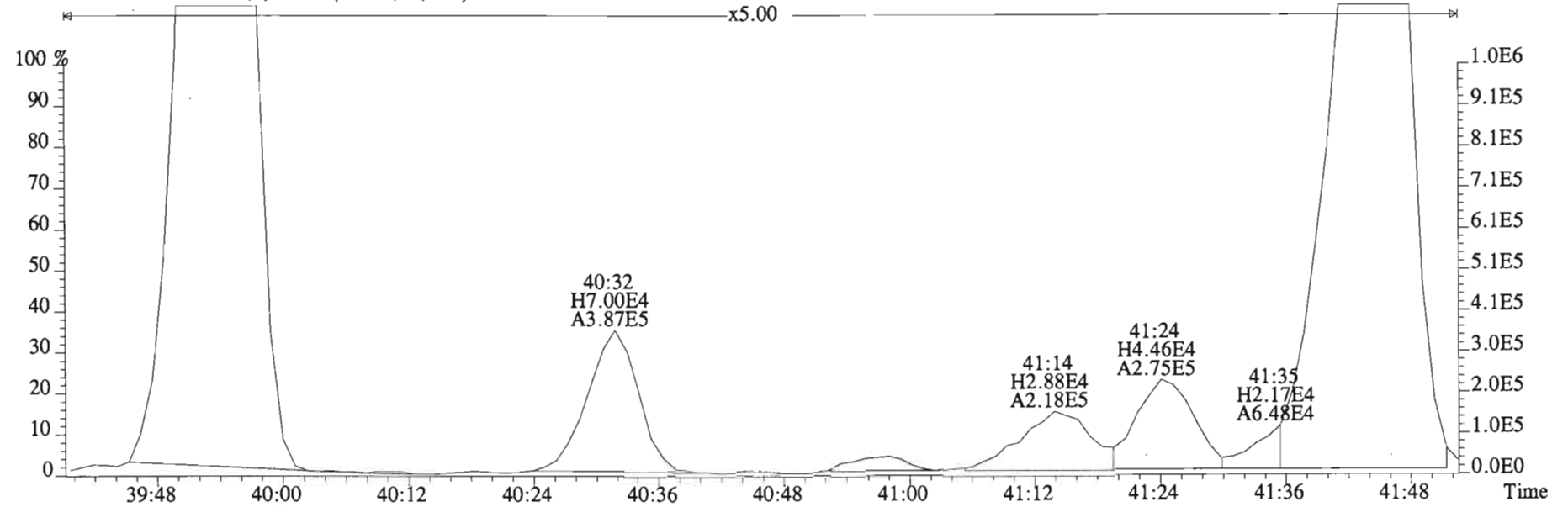
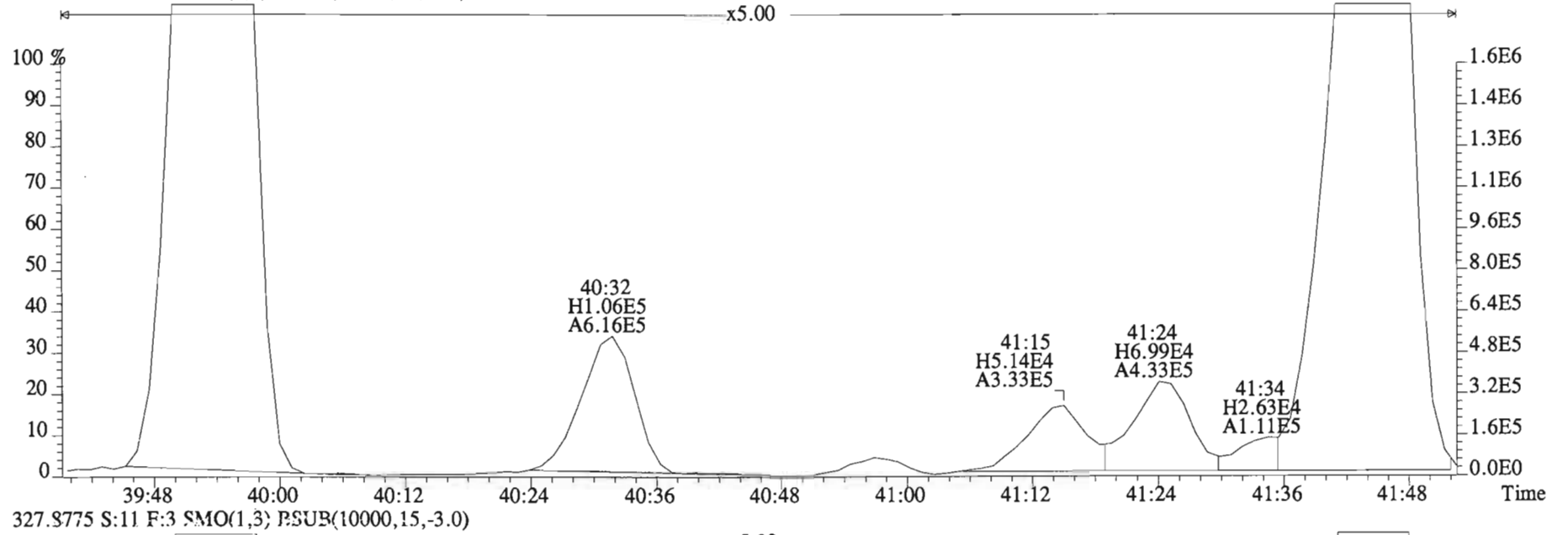




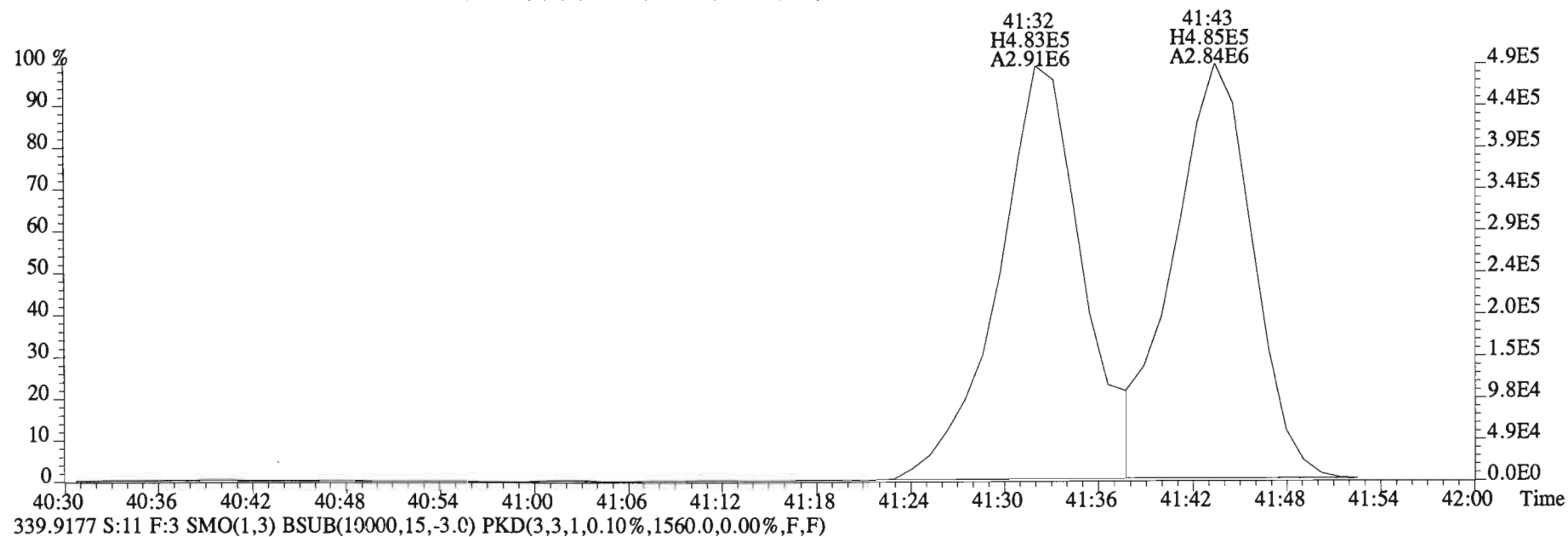
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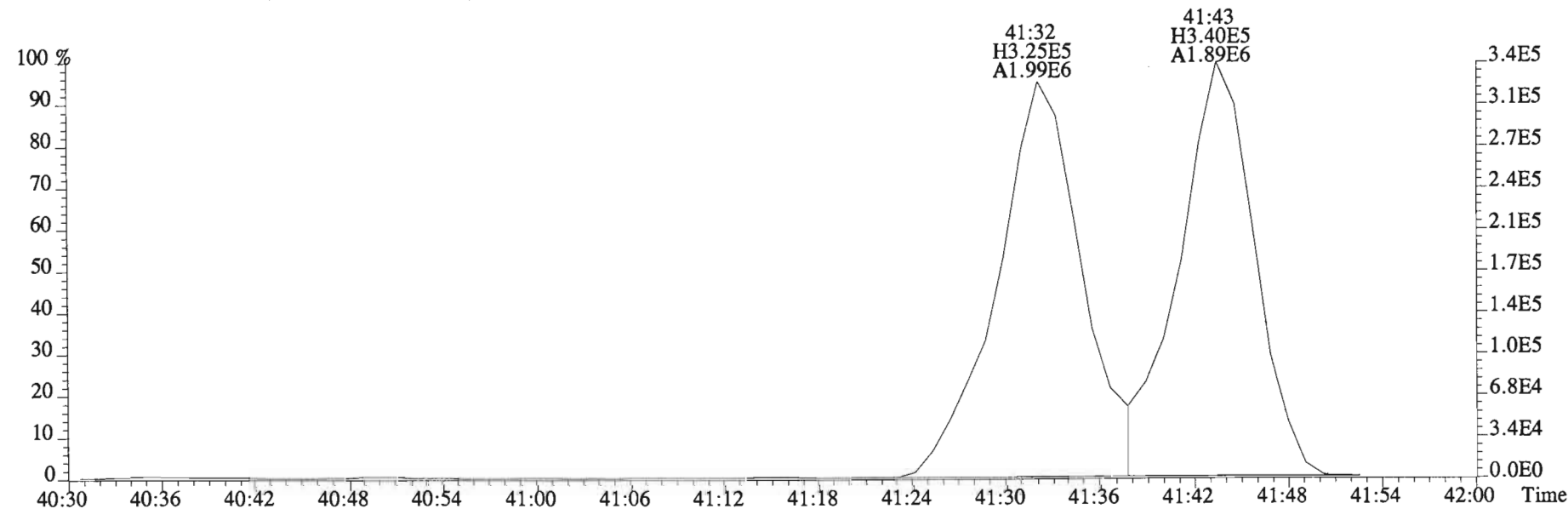
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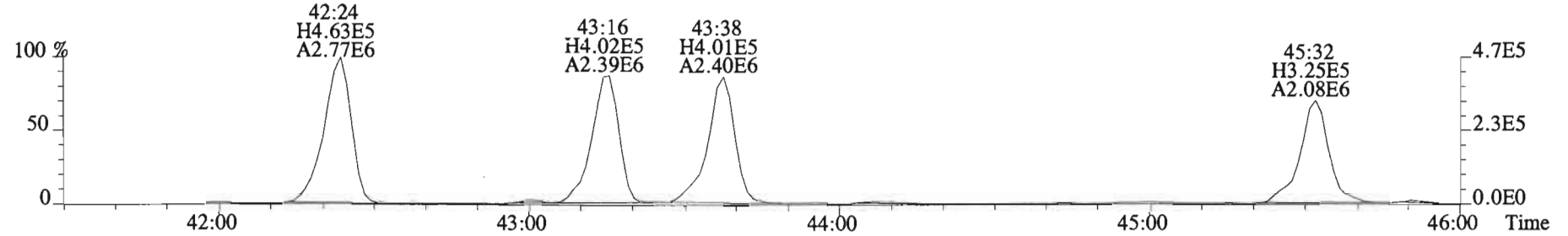
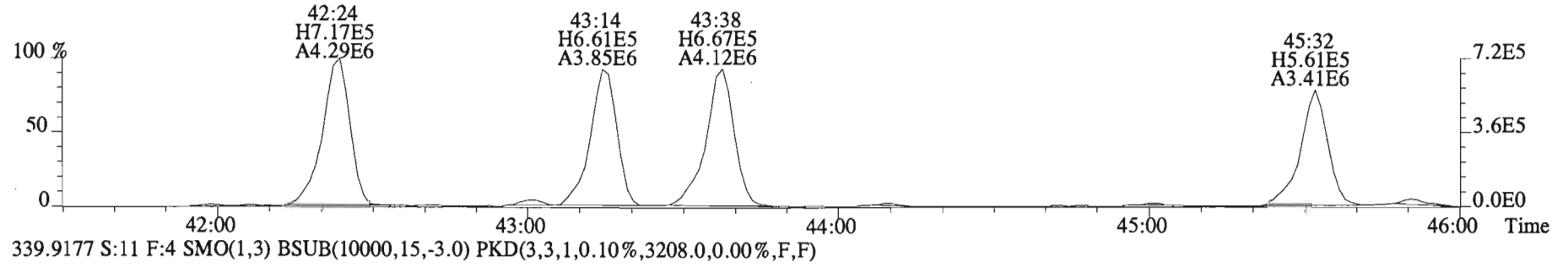
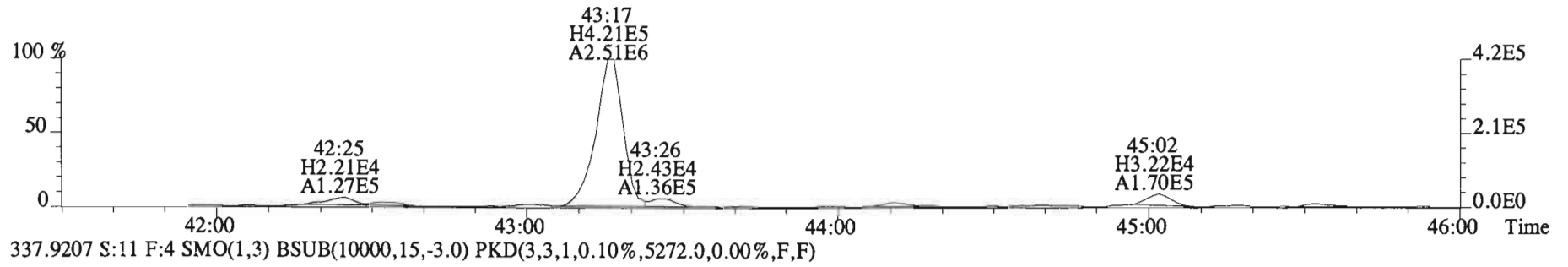
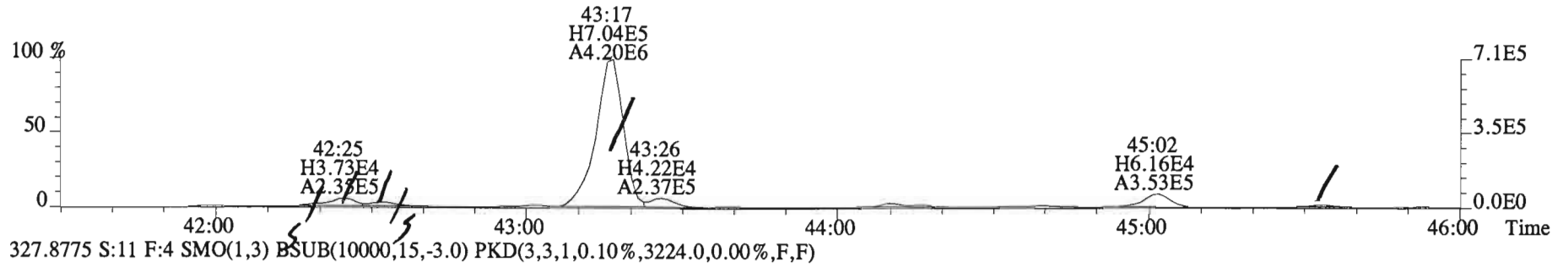
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Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
337.9207 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1760.0,0.00%,F,F)



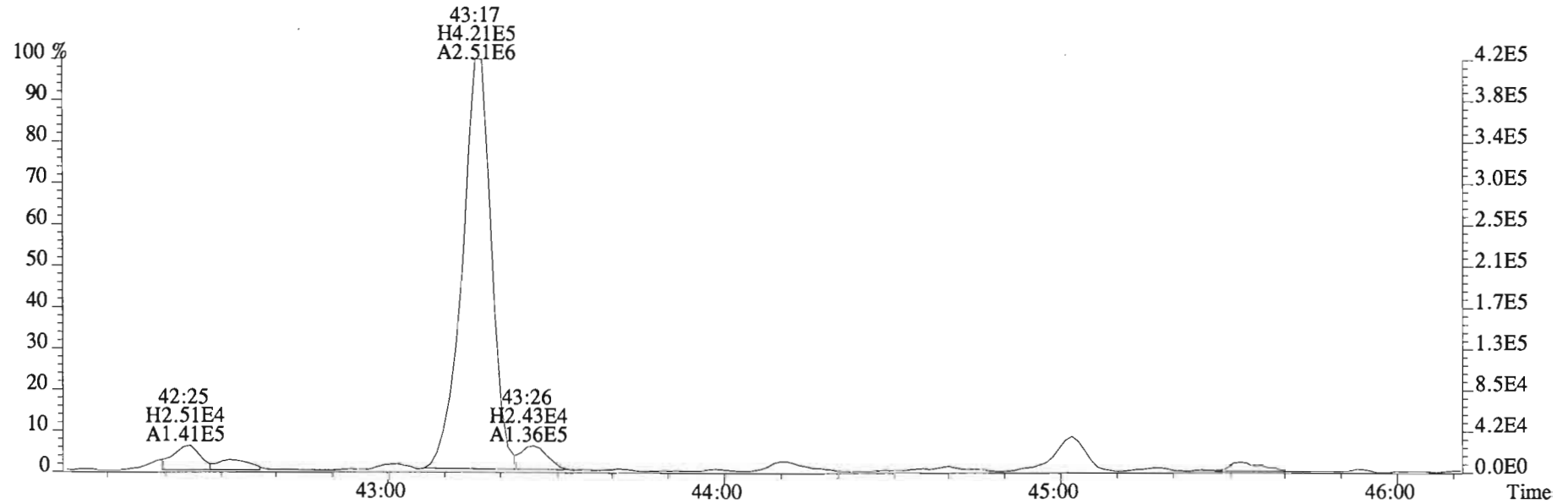
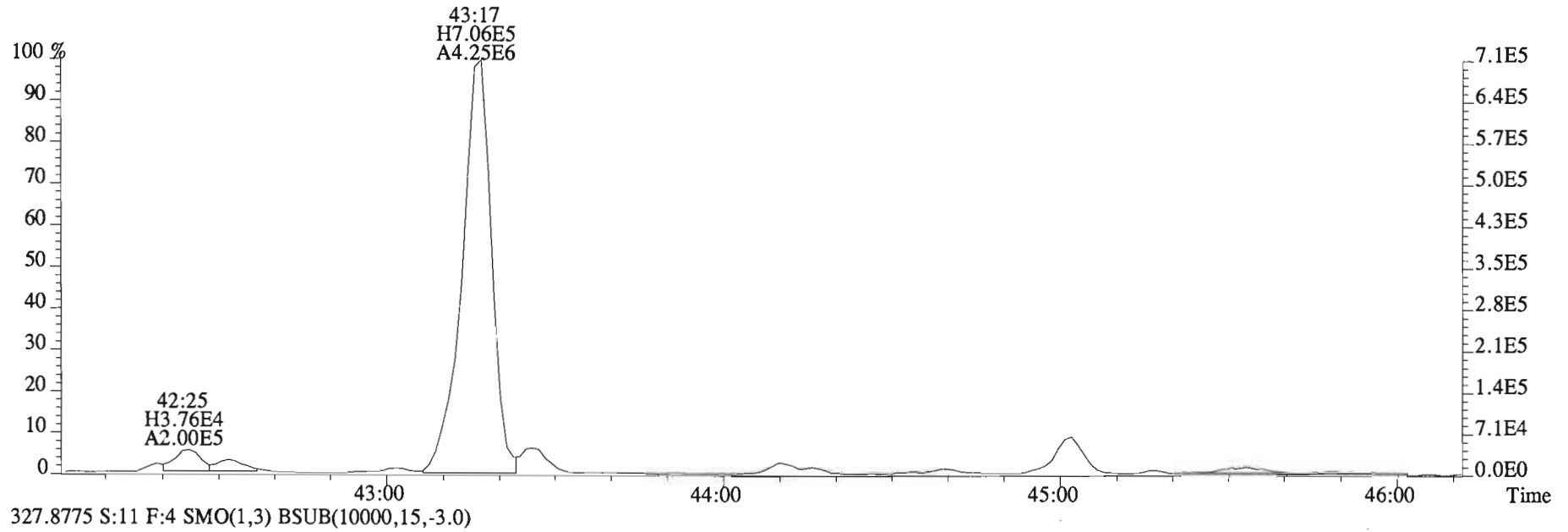
339.9177 S:11 F:3 SMO(1,3) BSUB(19000,15,-3.0) PKD(3,3,1,0.10%,1560.0,0.00%,F,F)



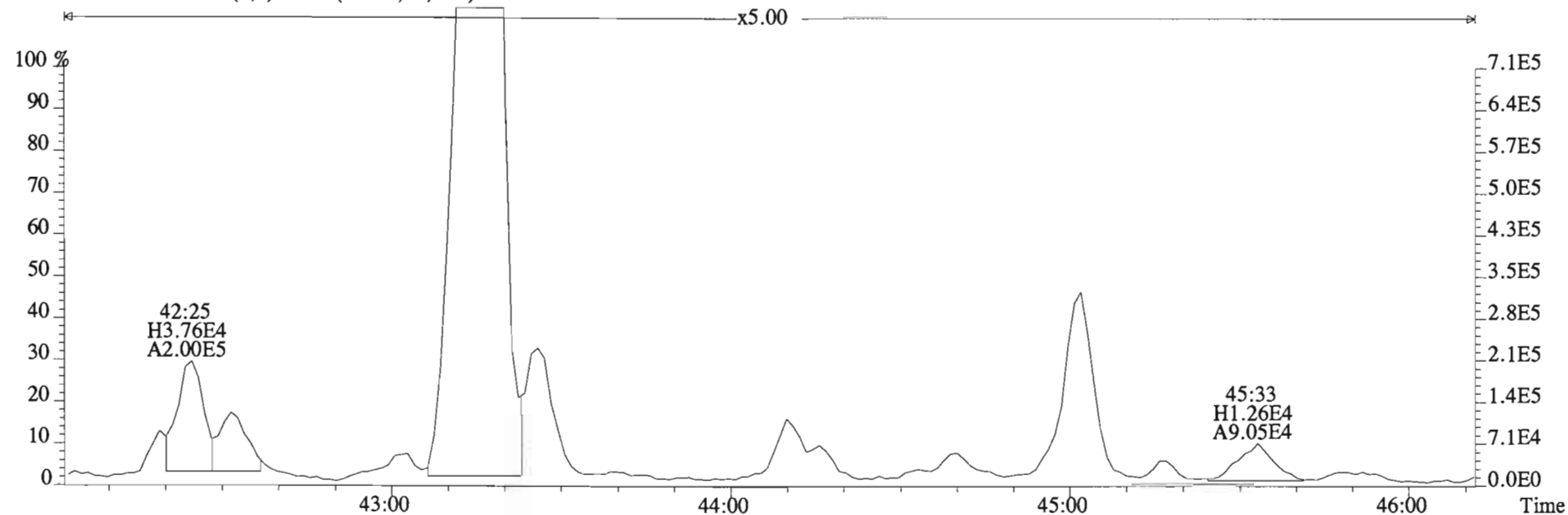
File:150205E1 #1-555 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text: Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
325.8804 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4632.0,0.00%,F,F)



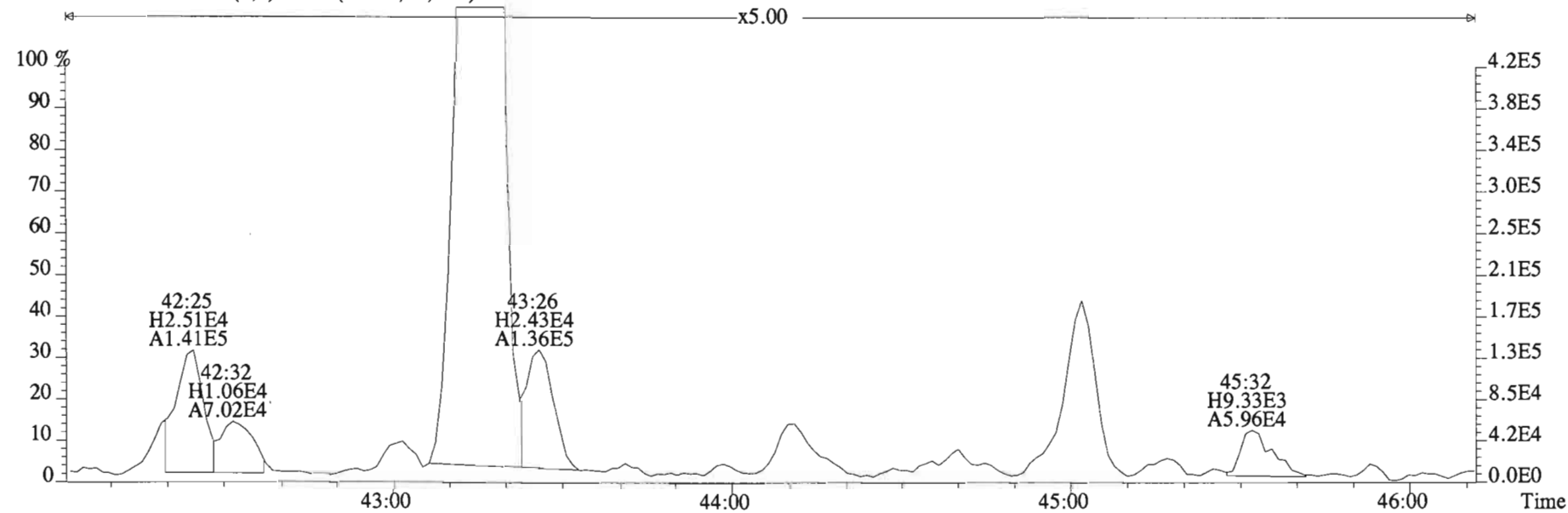
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325.8804 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0)



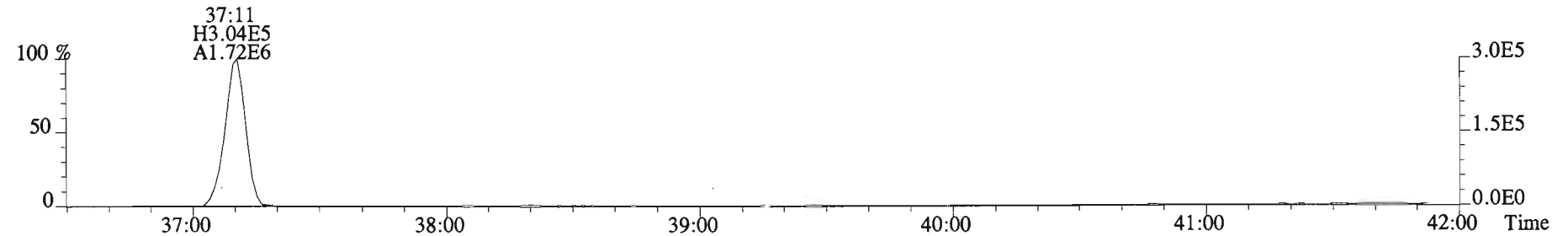
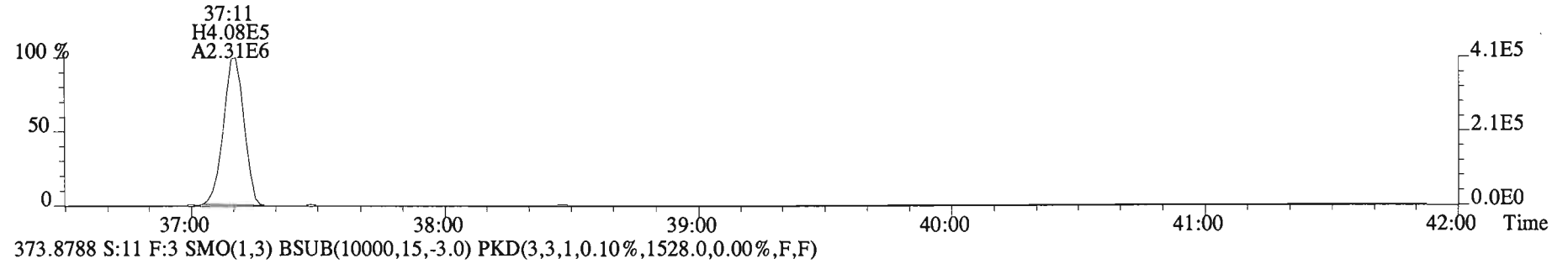
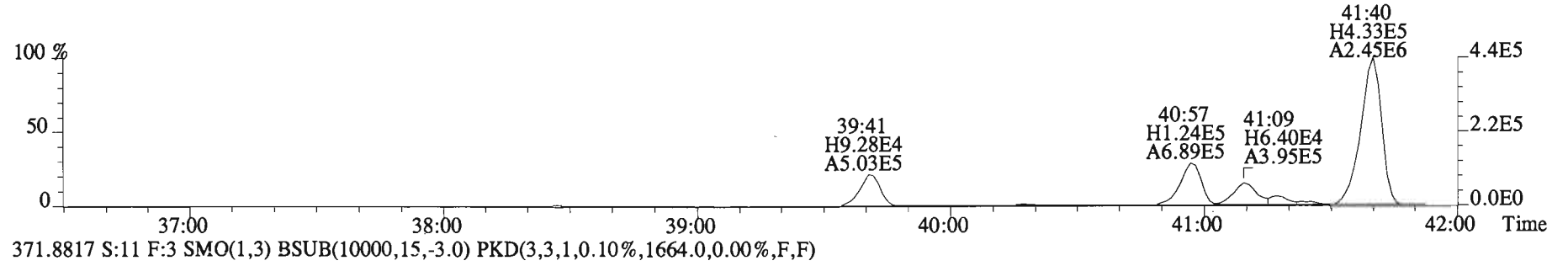
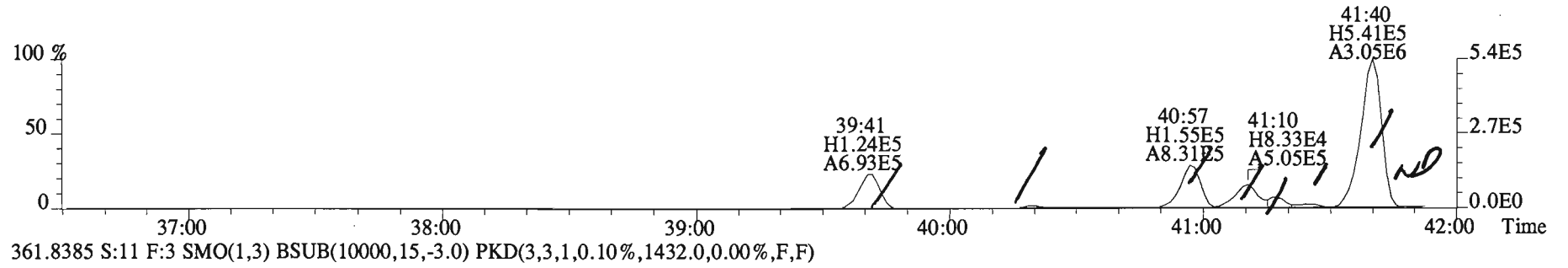
File:150205E1 #1-555 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
325.8804 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0)



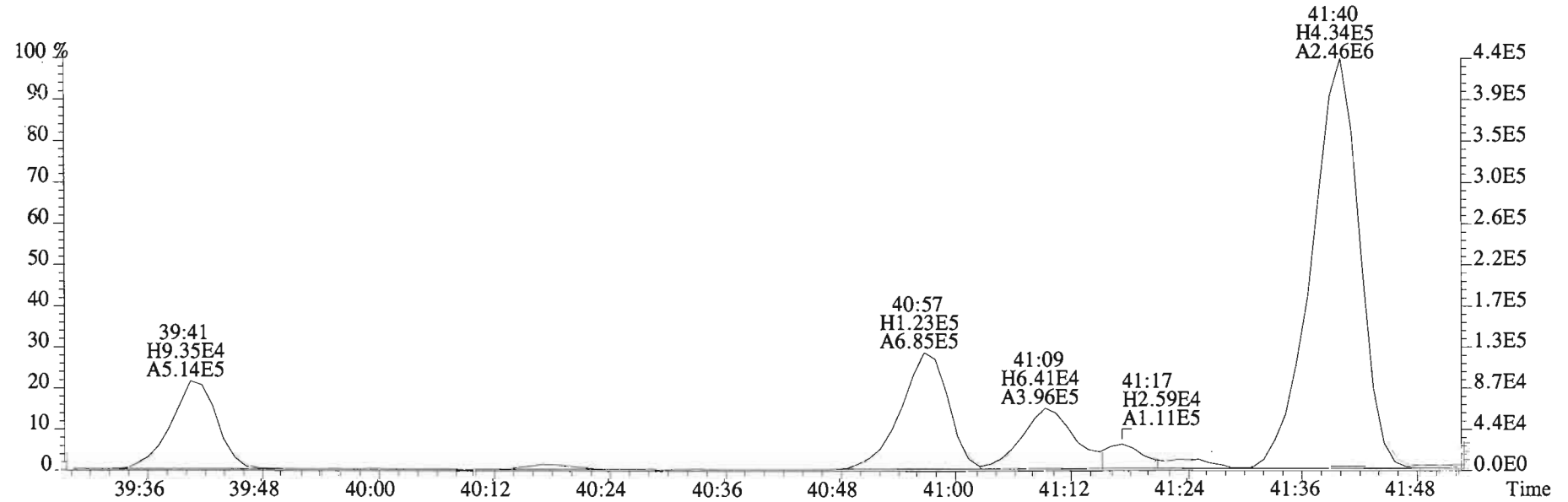
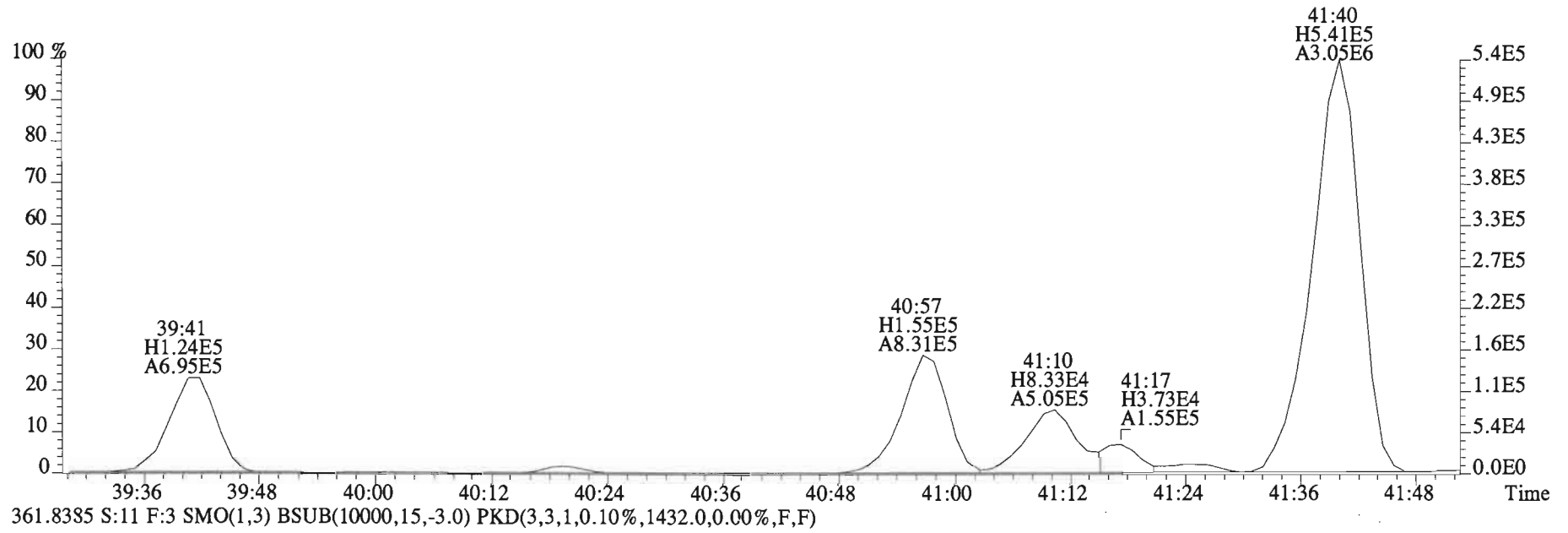
327.8775 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0)



File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
359.8415 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1652.0,0.00%,F,F)

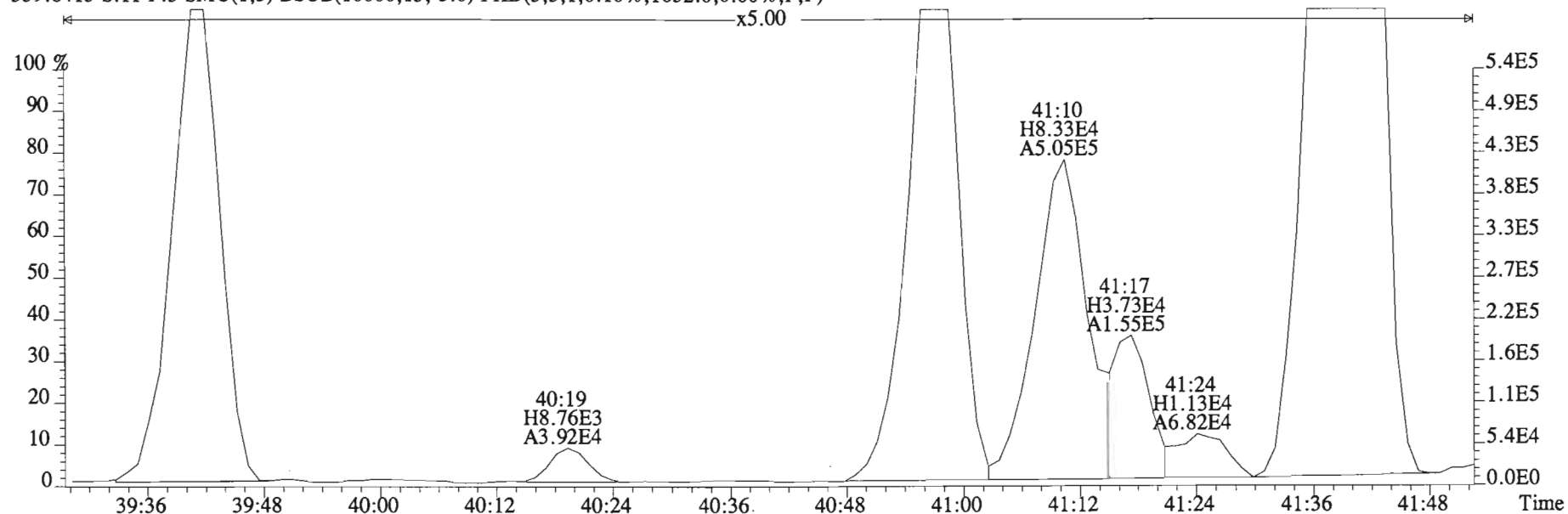


File:150205E1 #1-758 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
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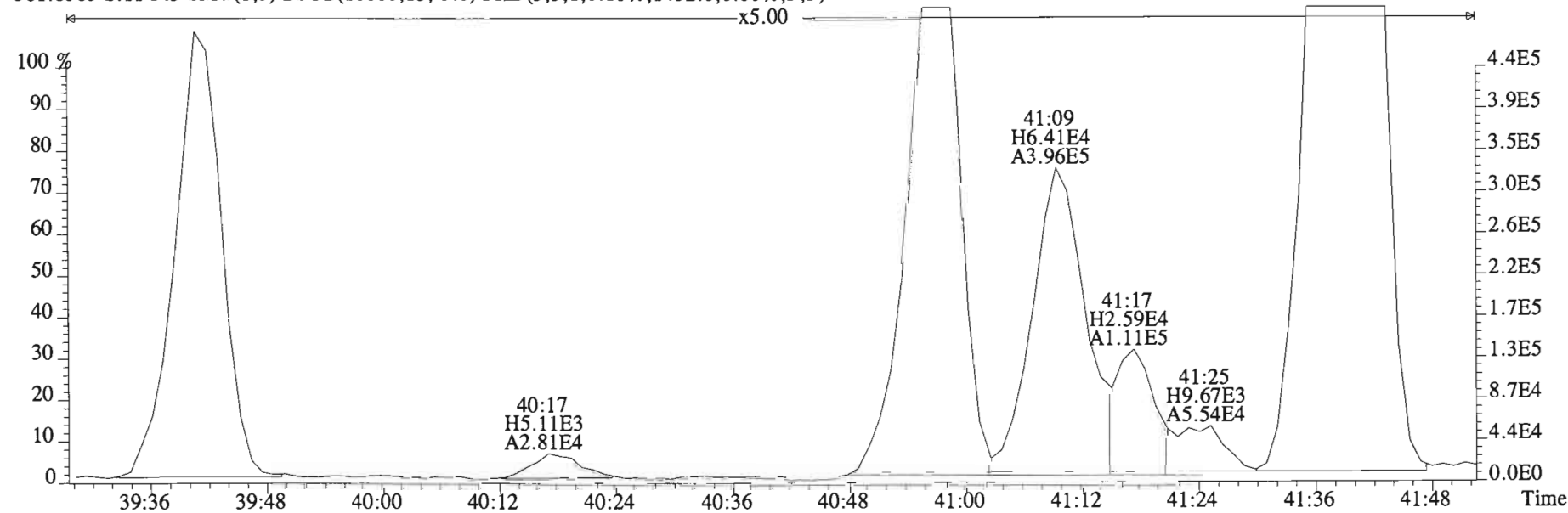




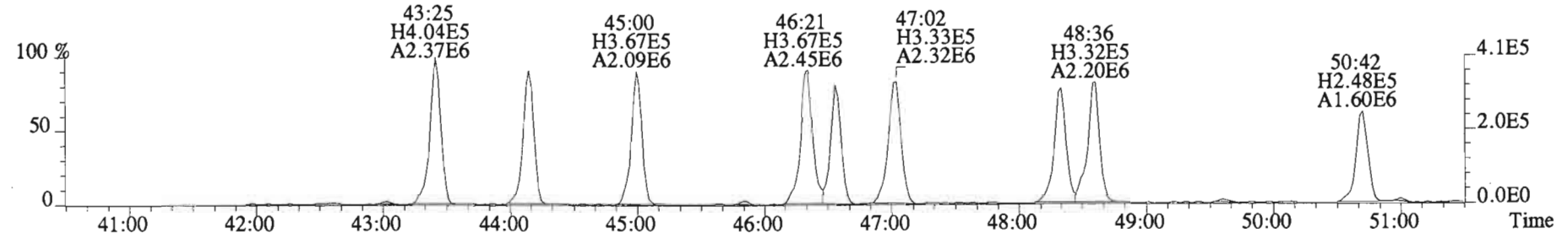
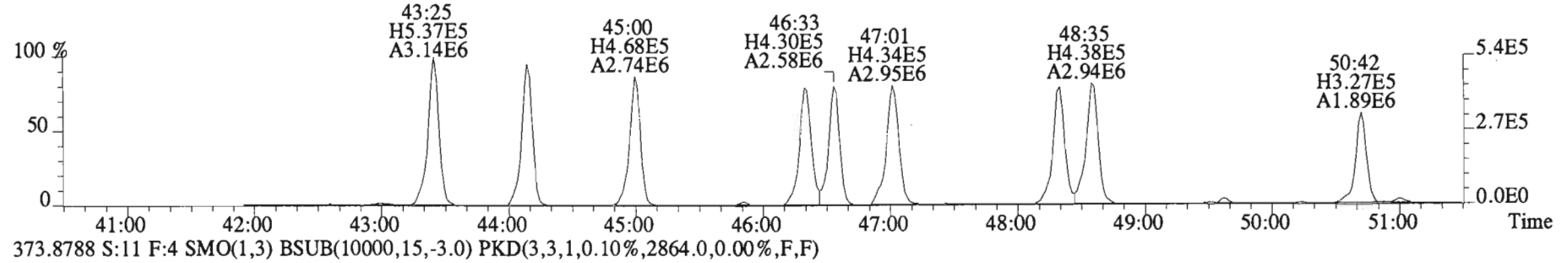
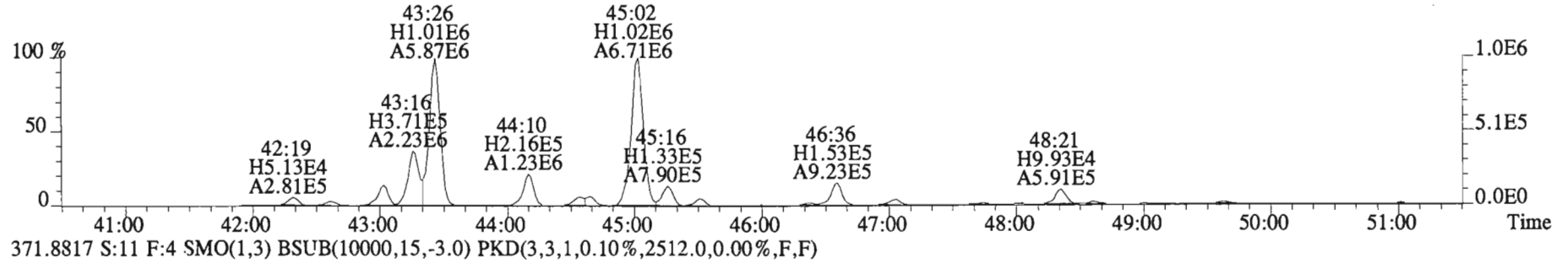
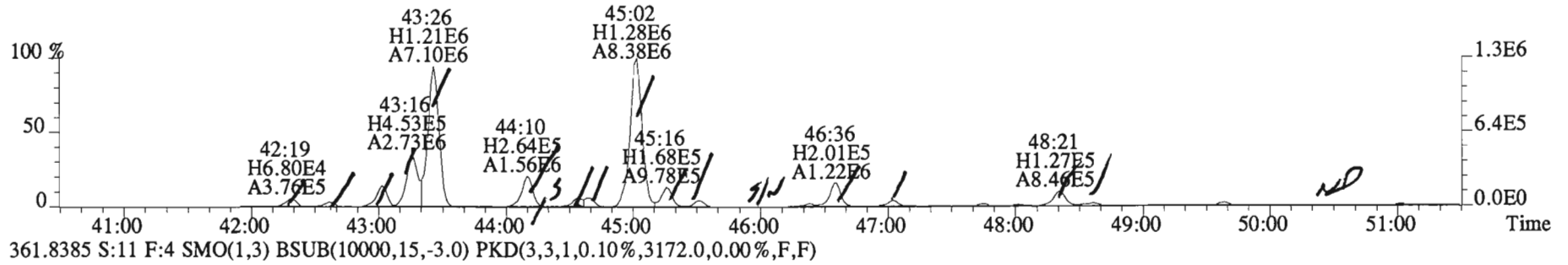
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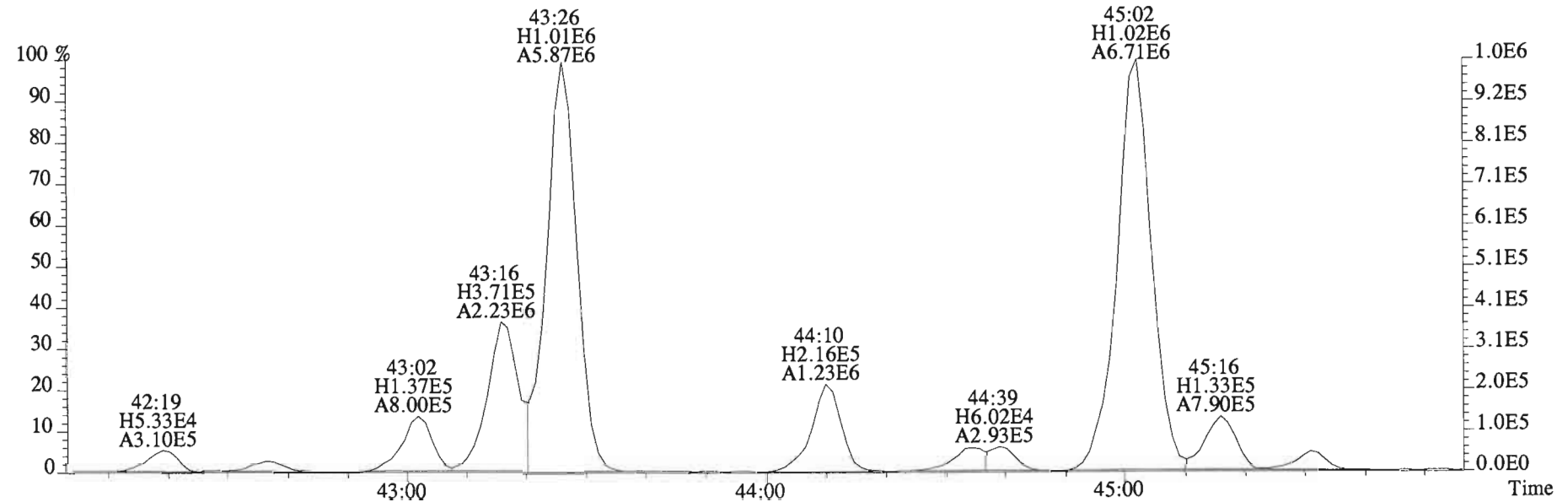
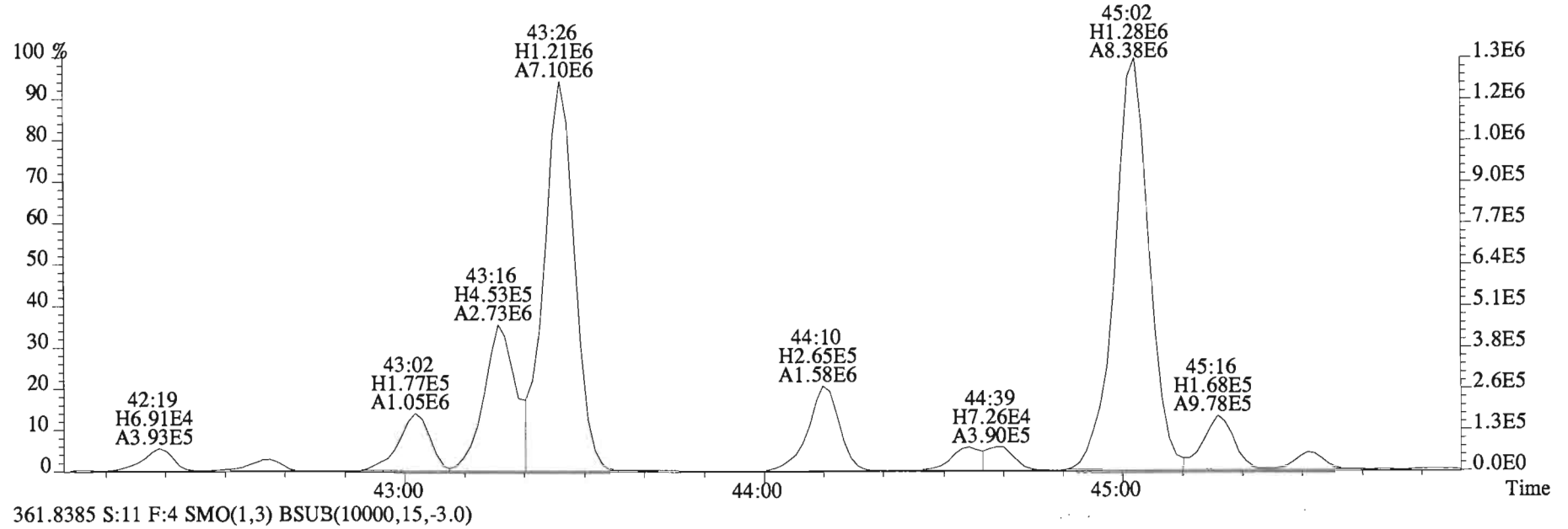
361.8385 S:11 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1432.0,0.00%,F,F)



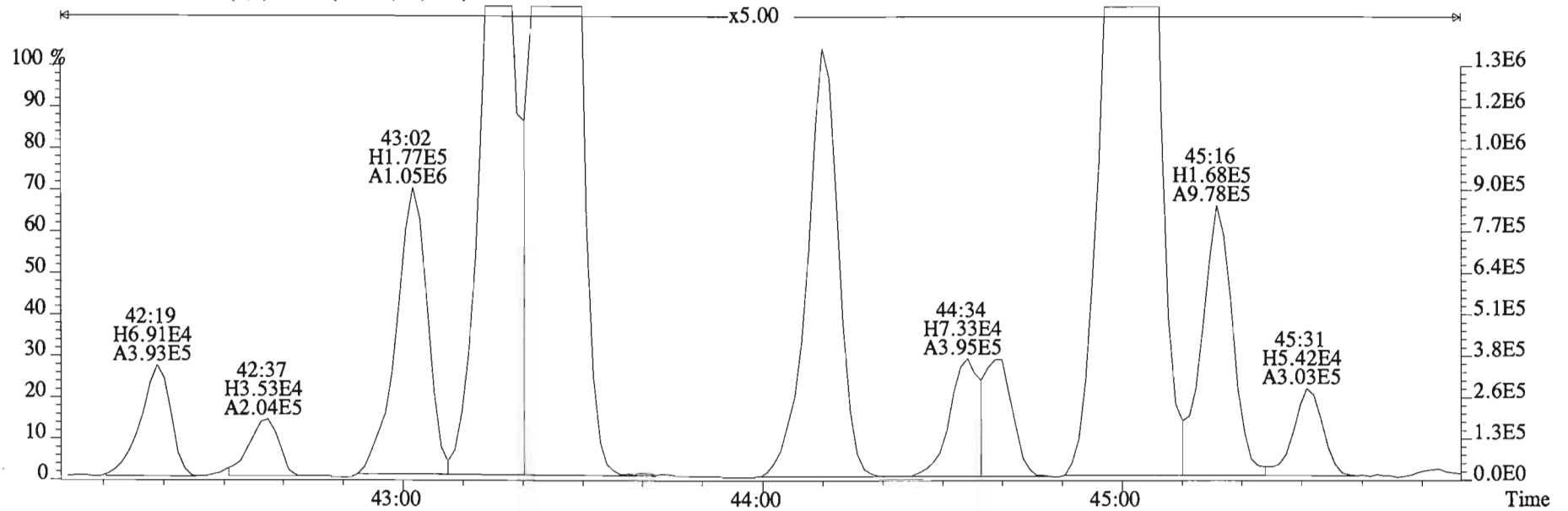
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Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
359.8415 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3528.0,0.00%,F,F)



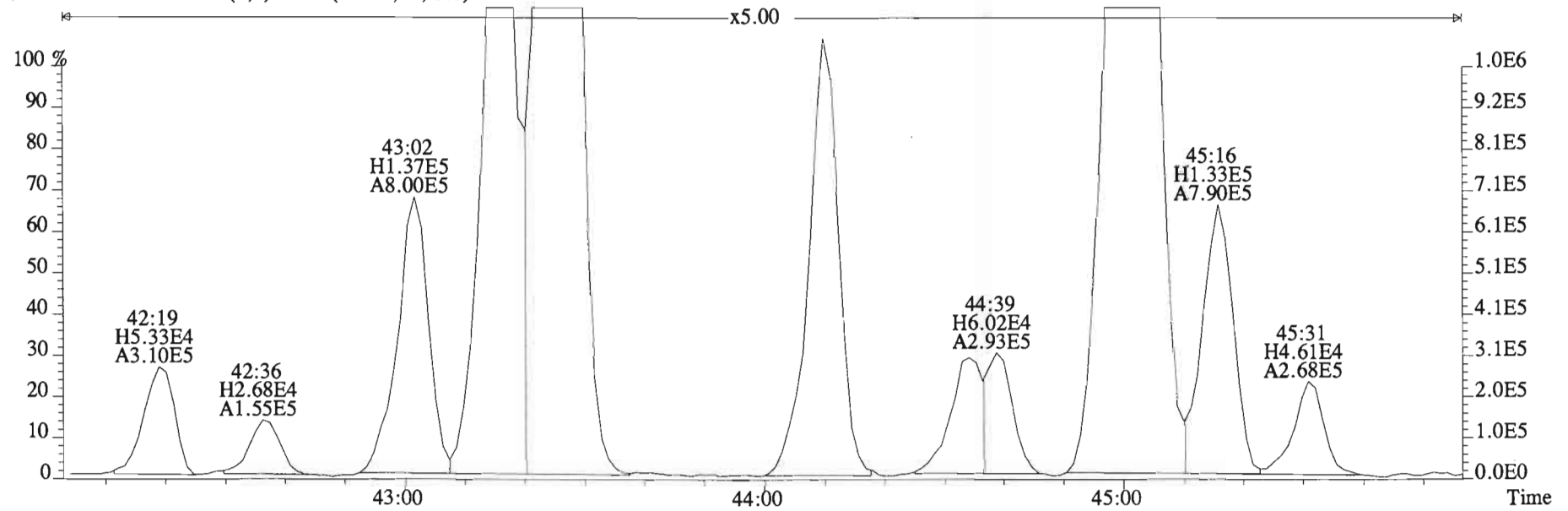
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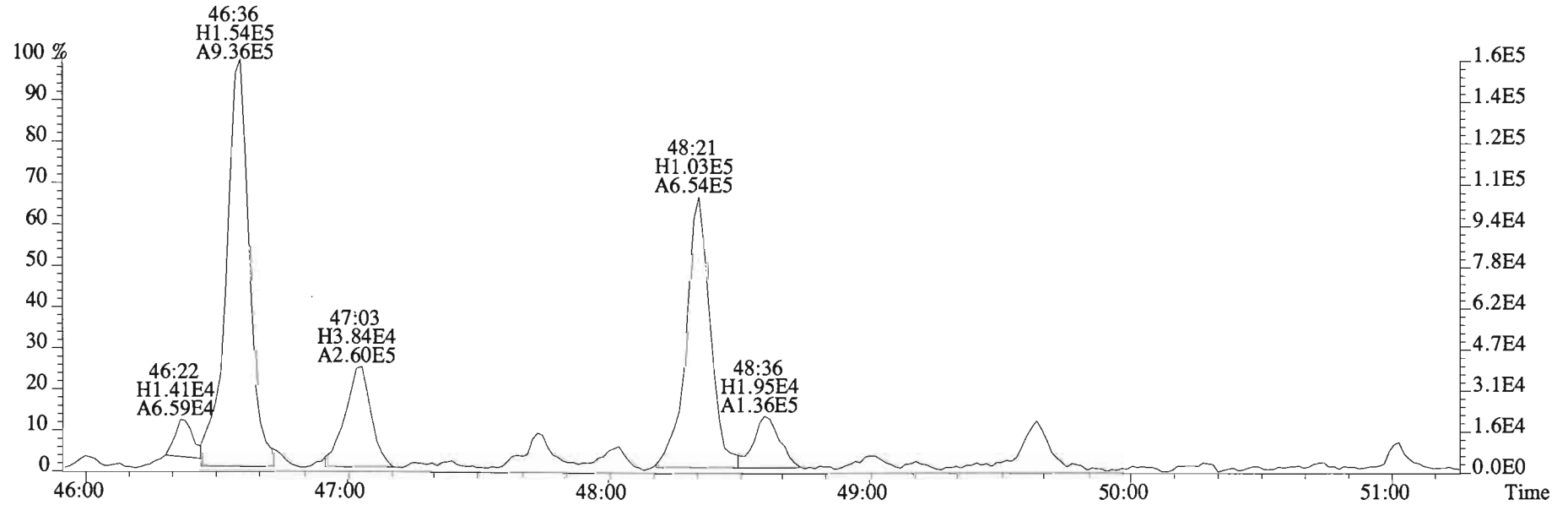
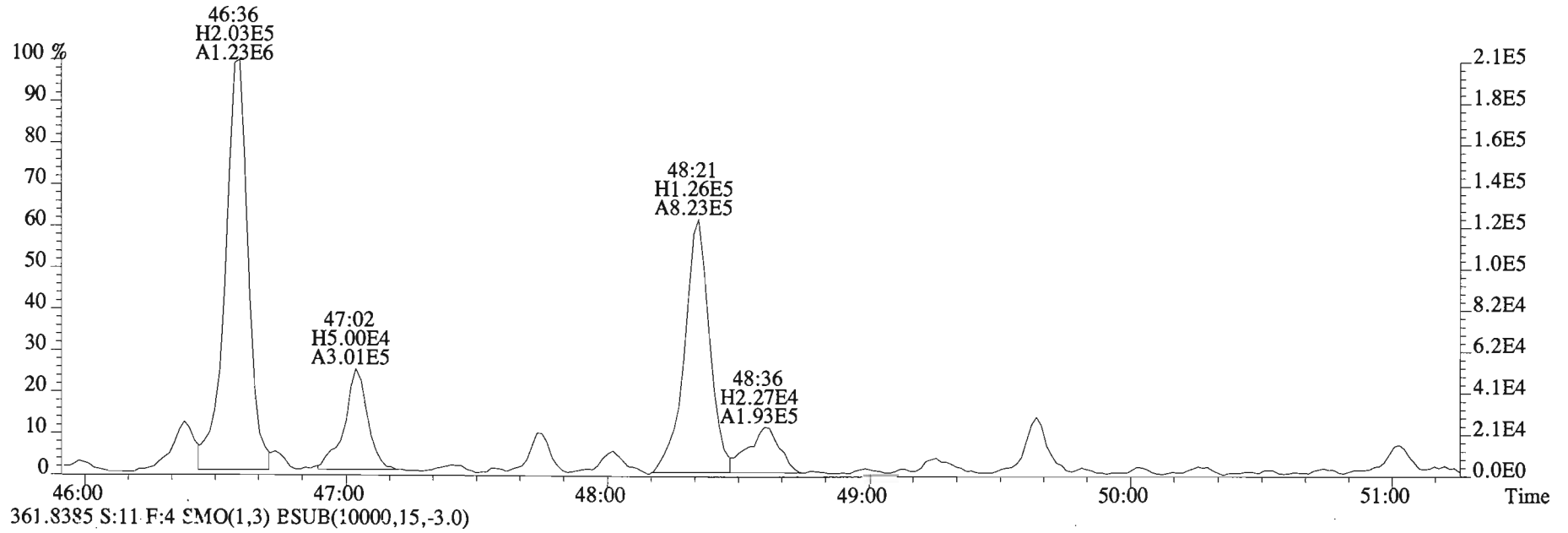
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Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
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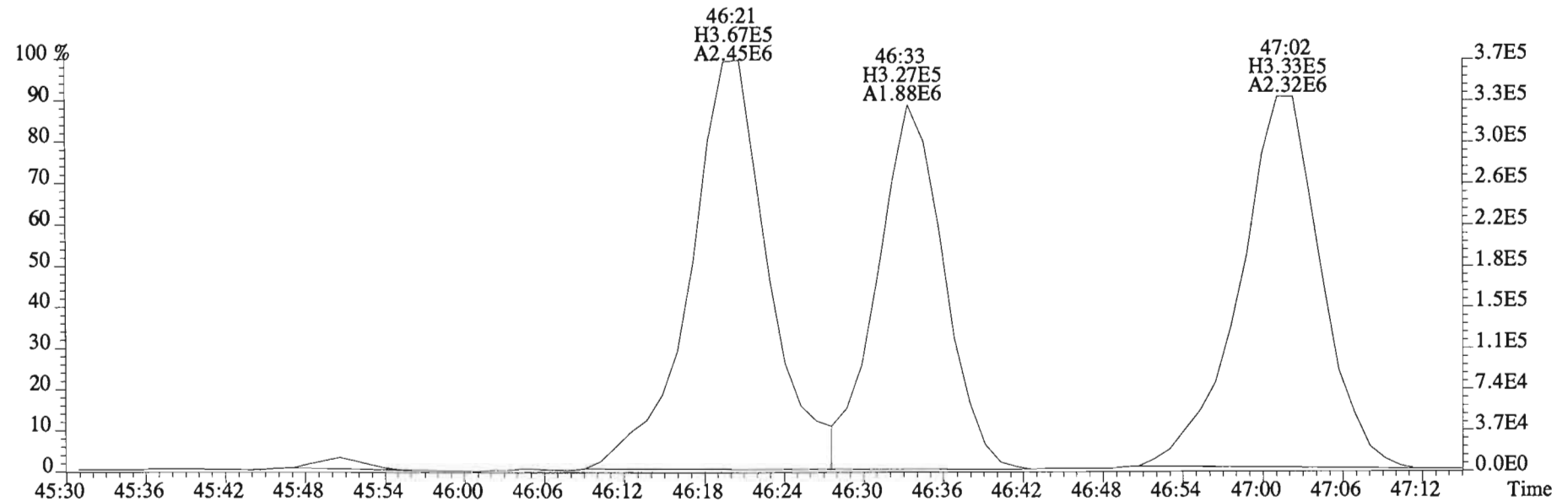
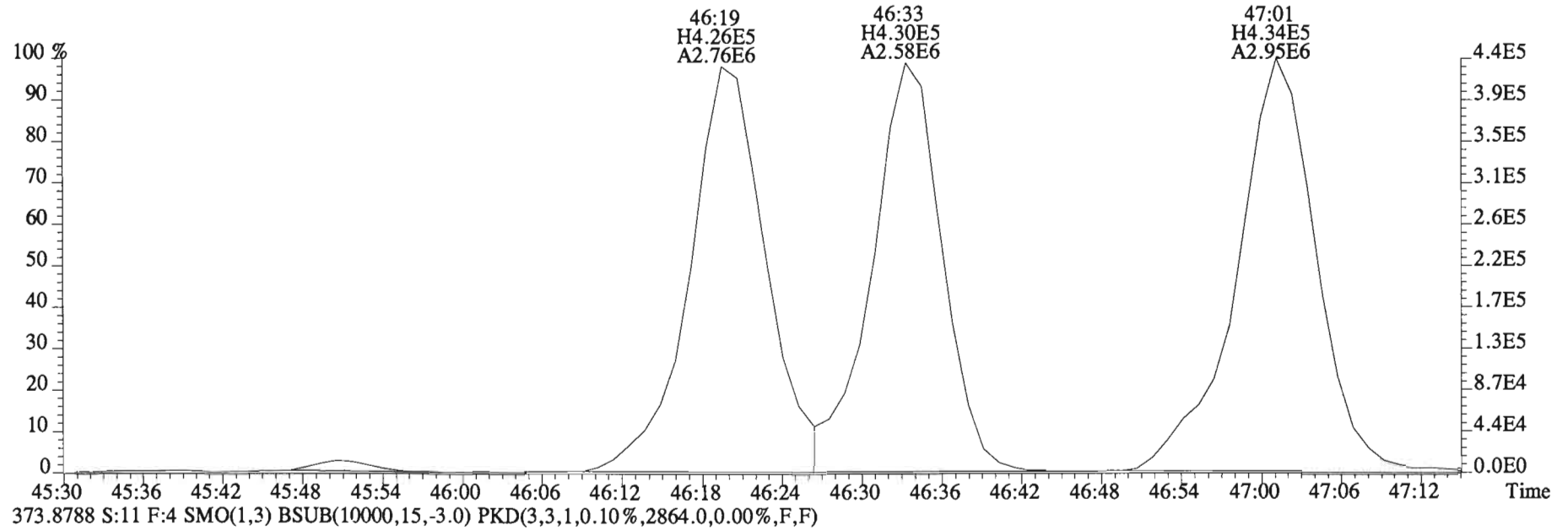
261.8385 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0)



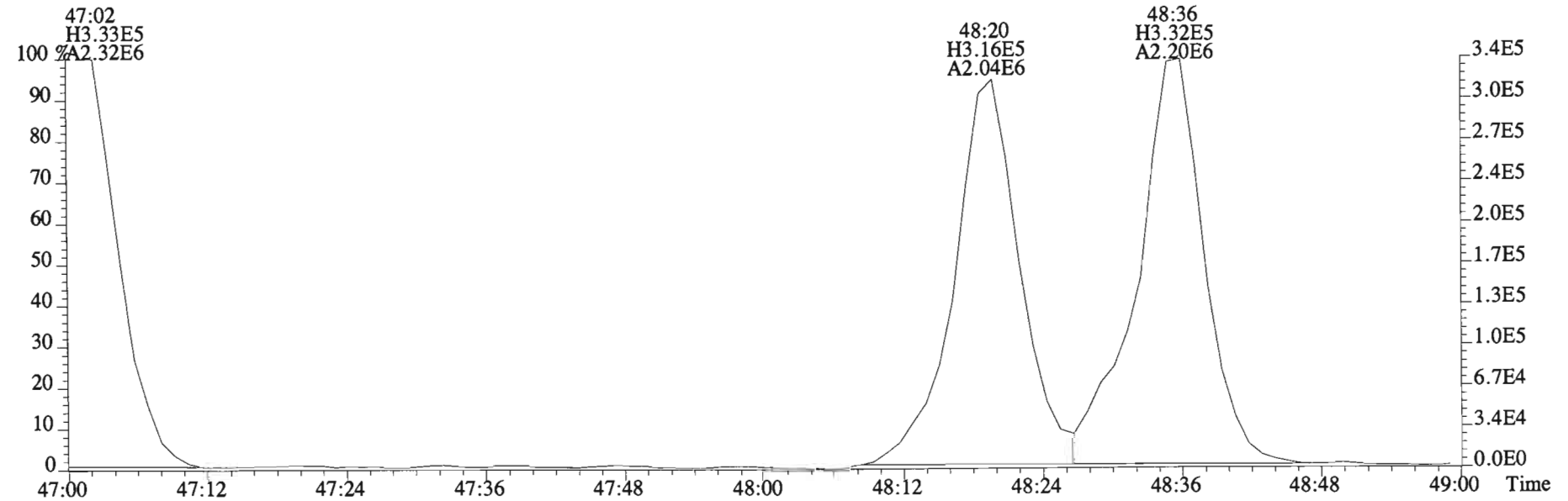
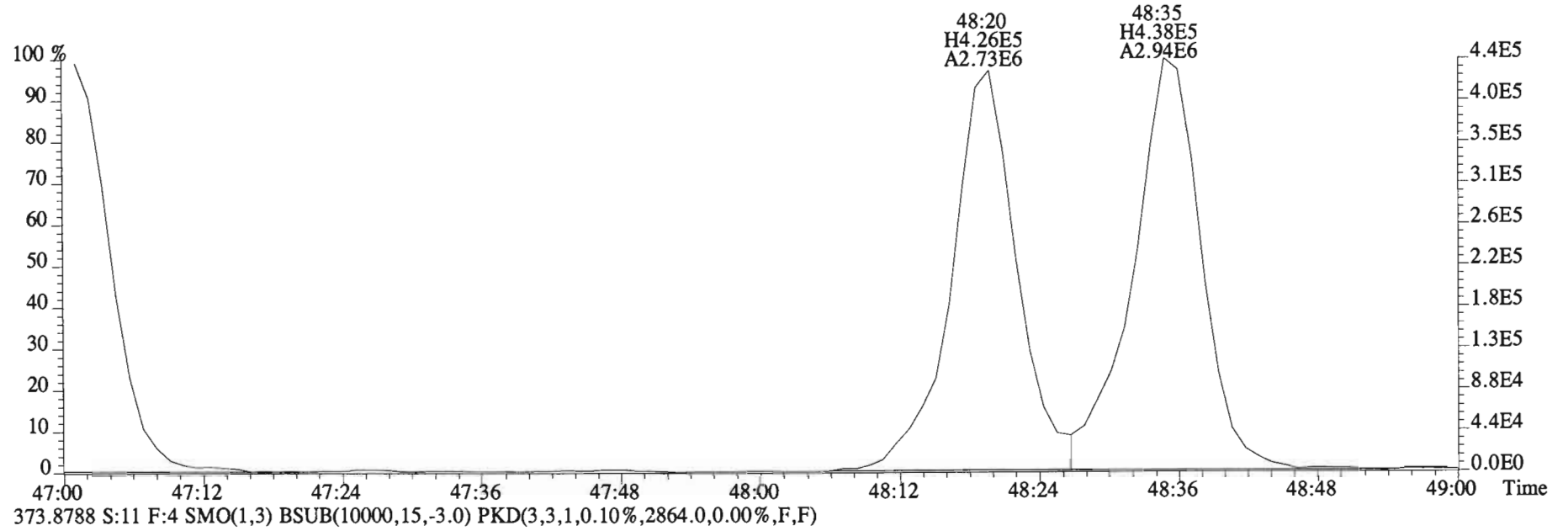
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Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
359.8415 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0)



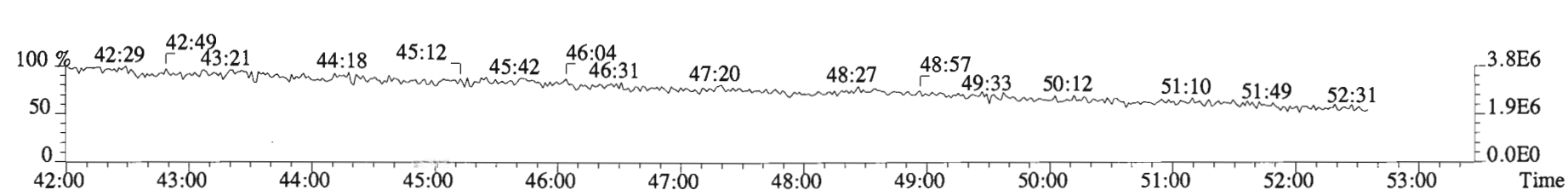
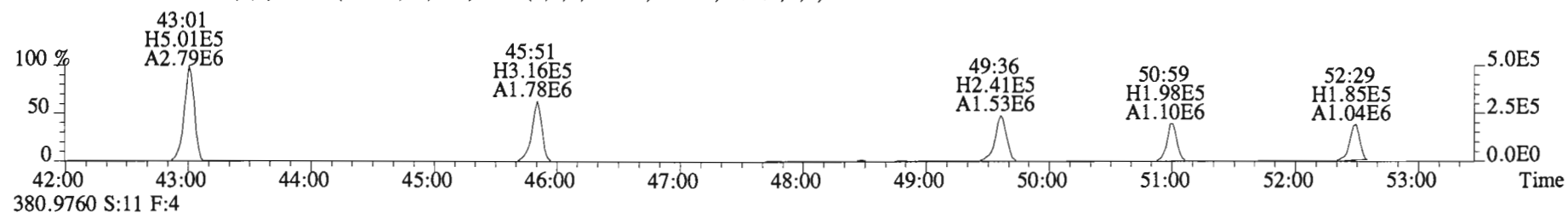
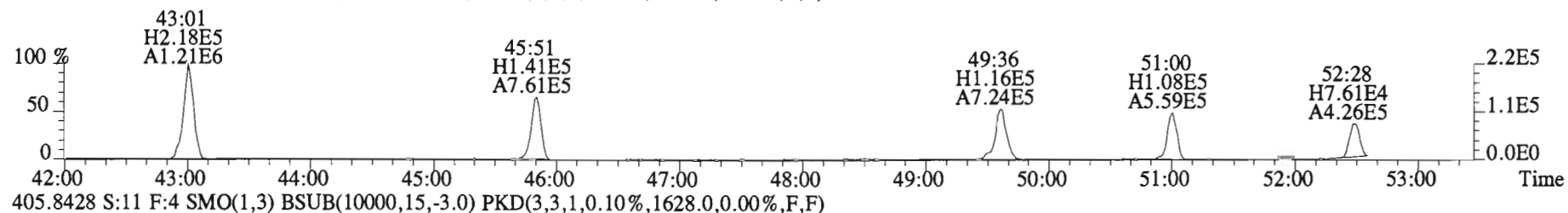
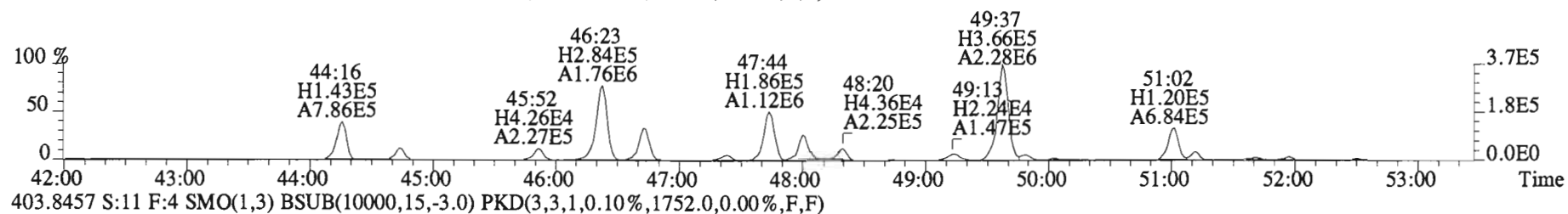
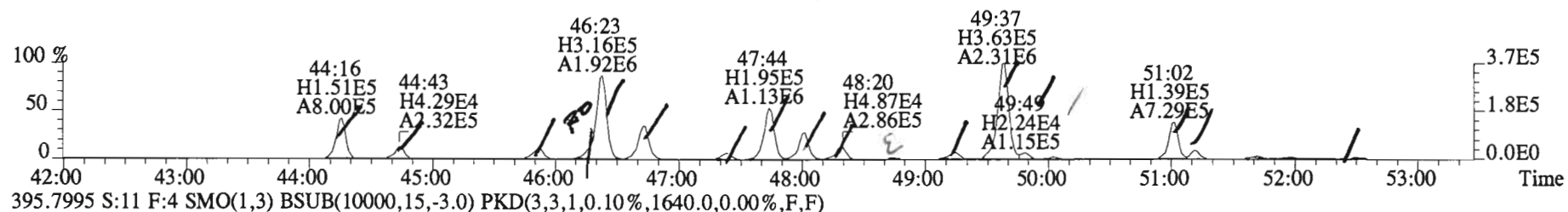
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371.8817 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2512.0,0.00%,F,F)



File:150205E1 #1-555 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
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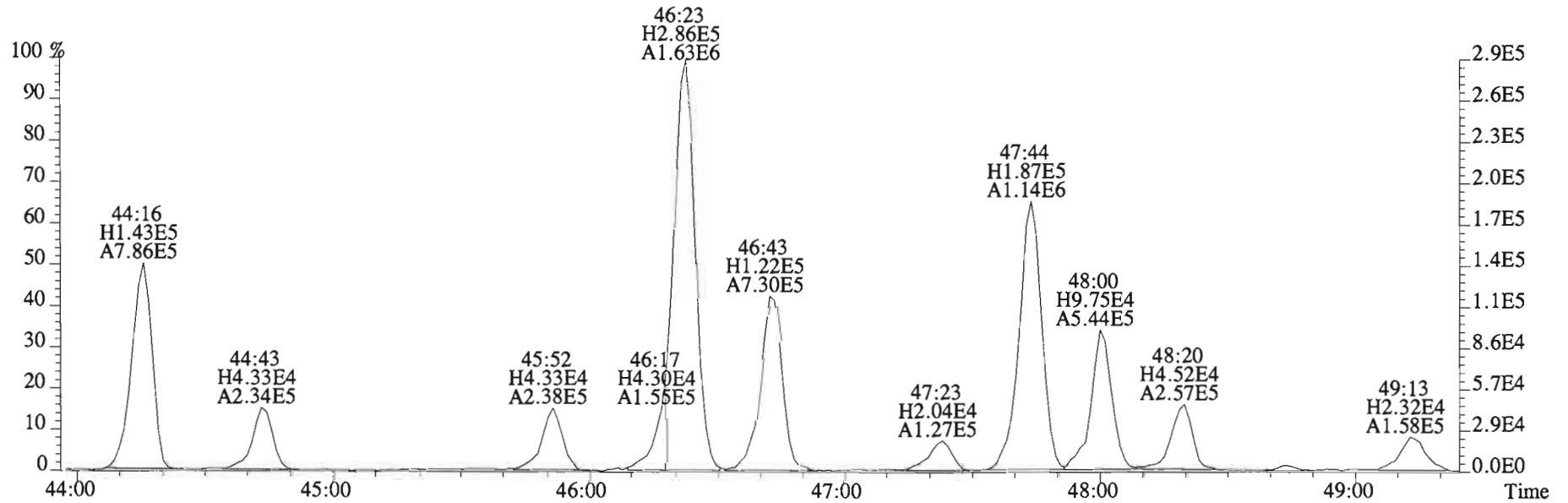
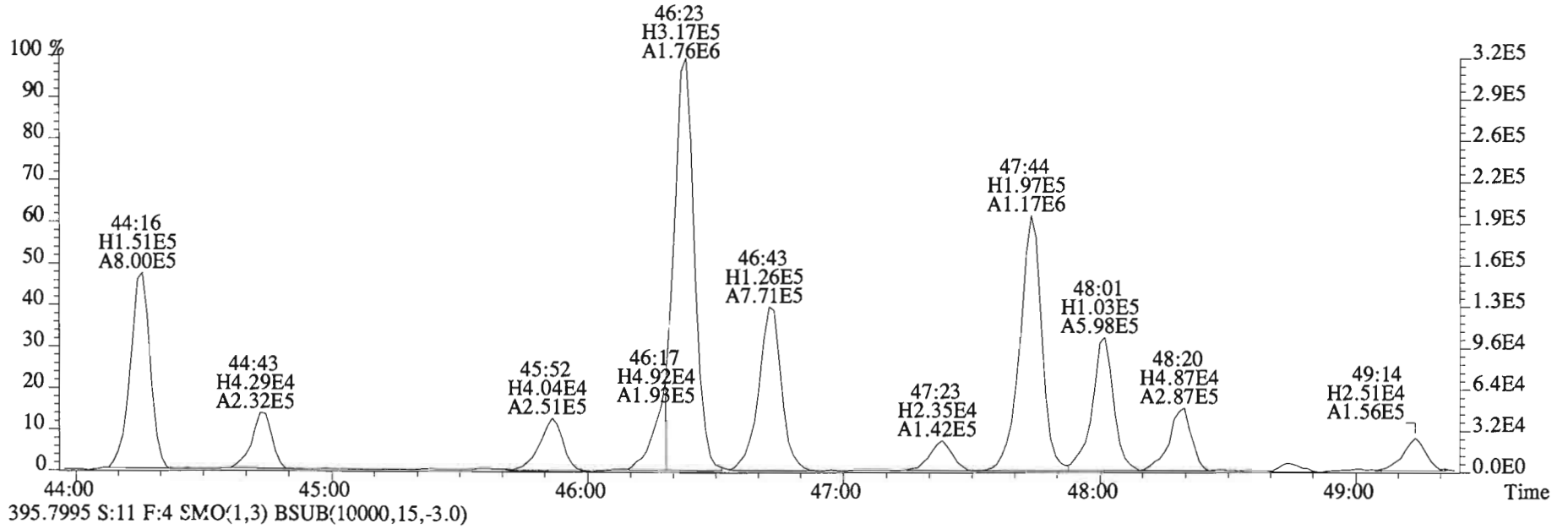


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 393.8025 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1968.0,0.00%,F,F)

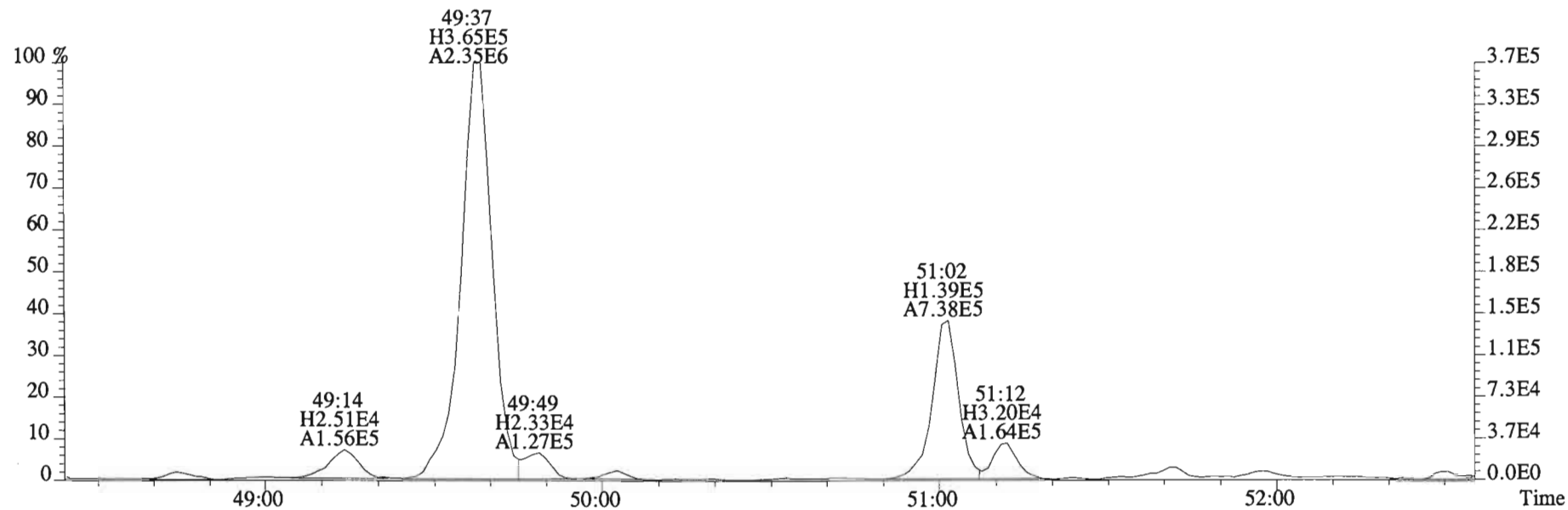




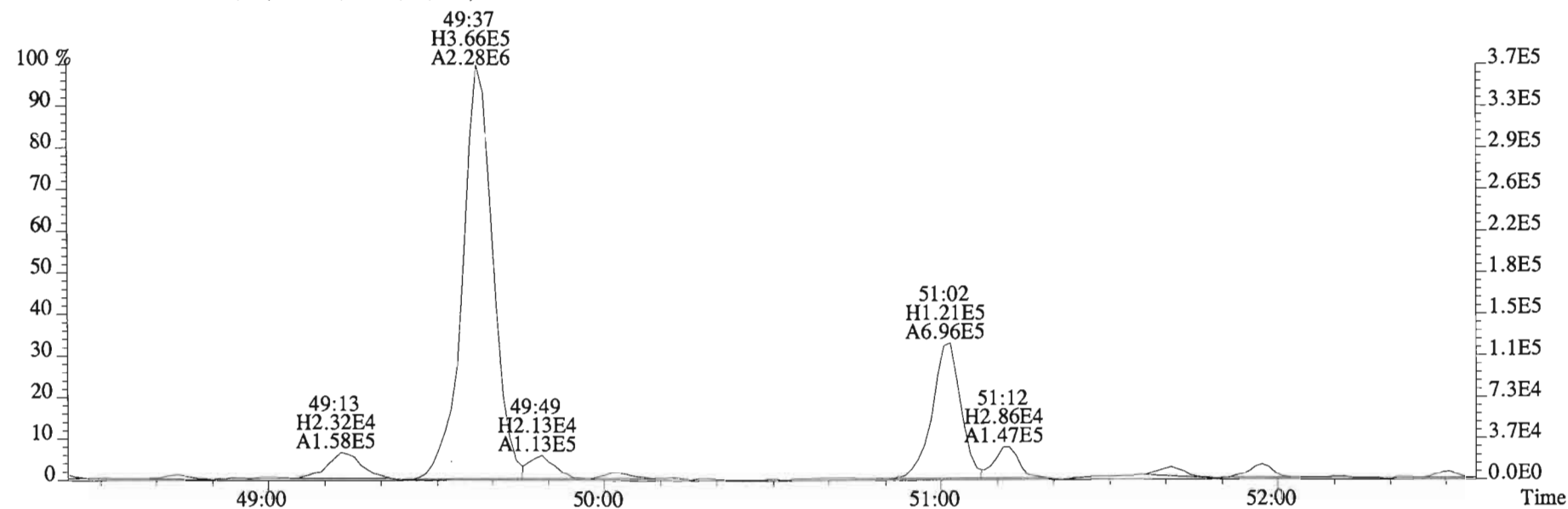
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 Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
 393.8025 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0)



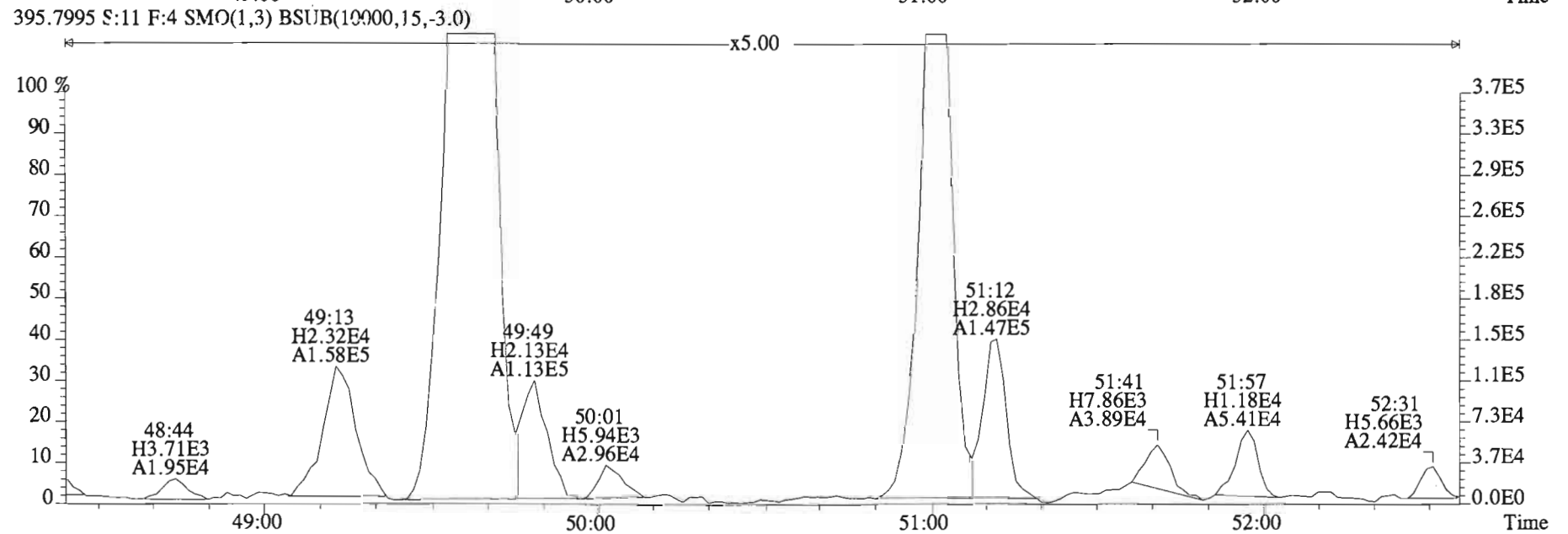
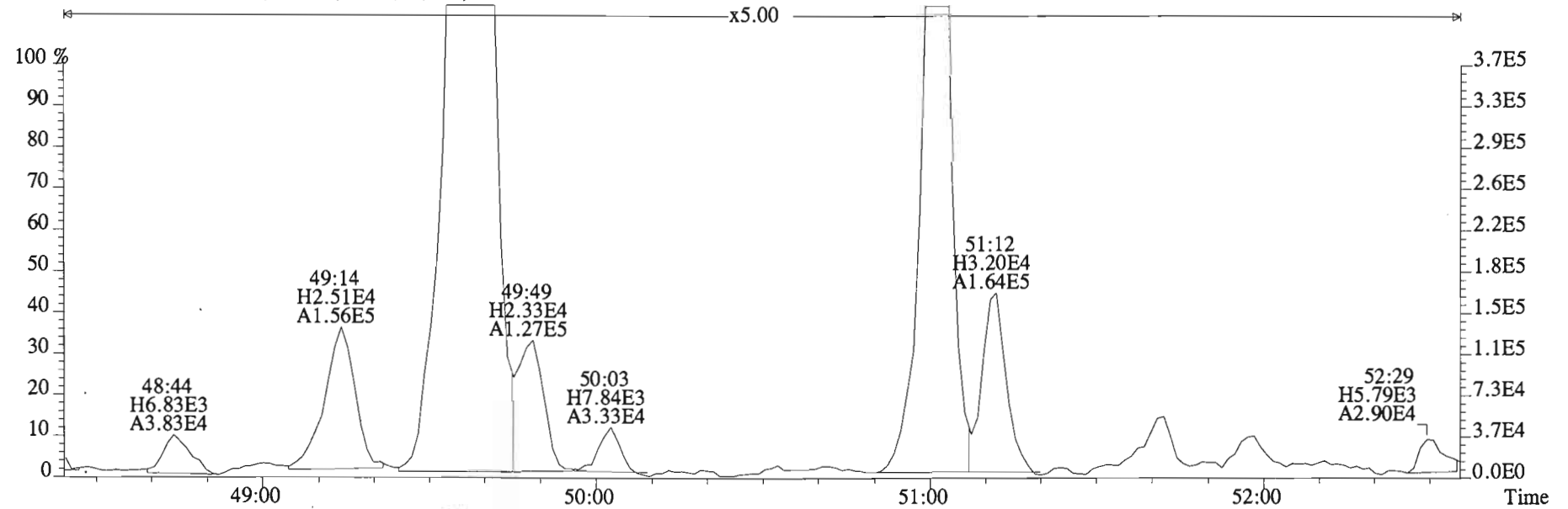
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393.8025 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0)



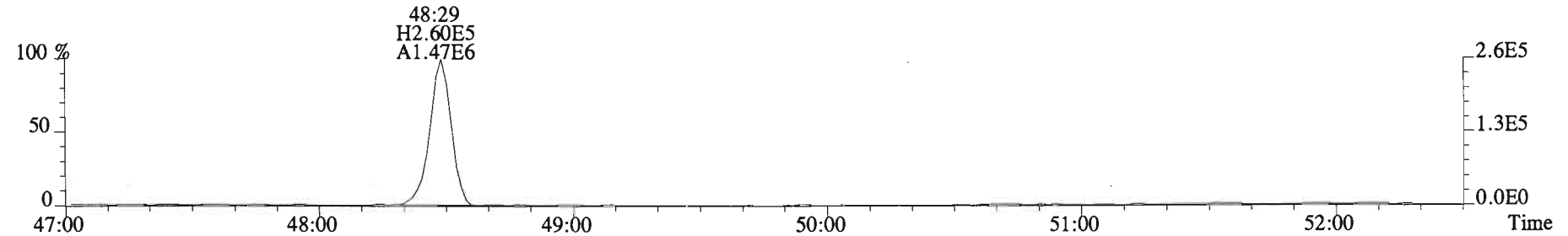
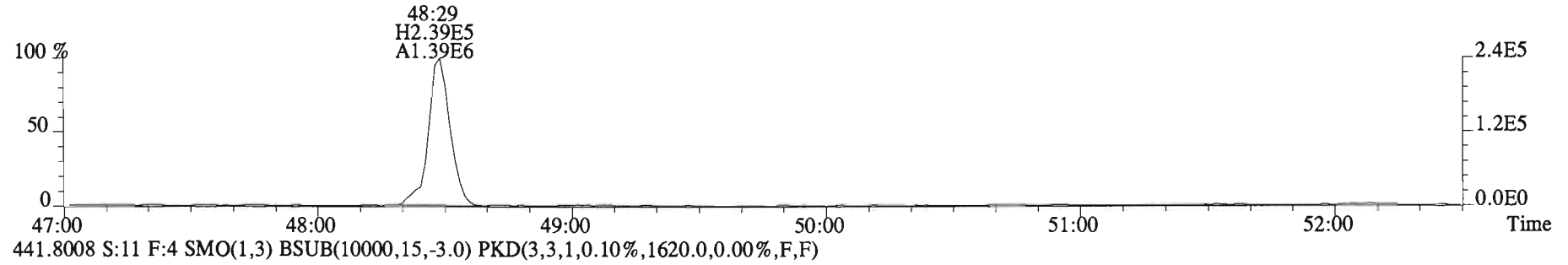
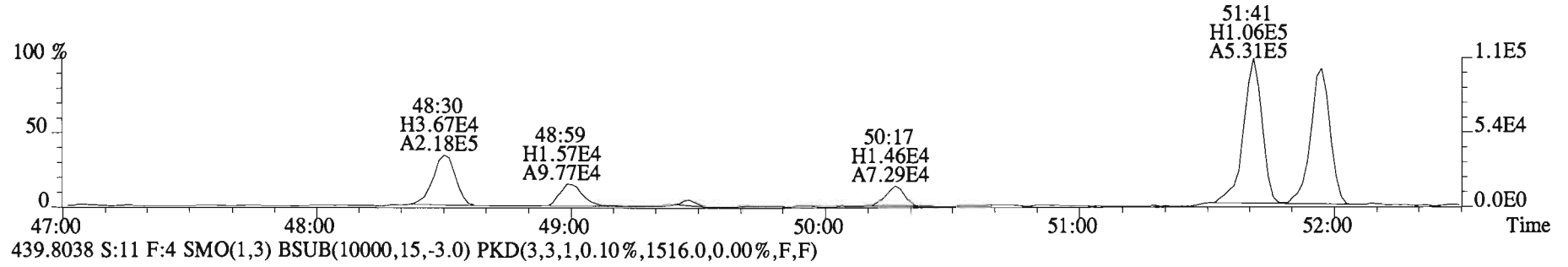
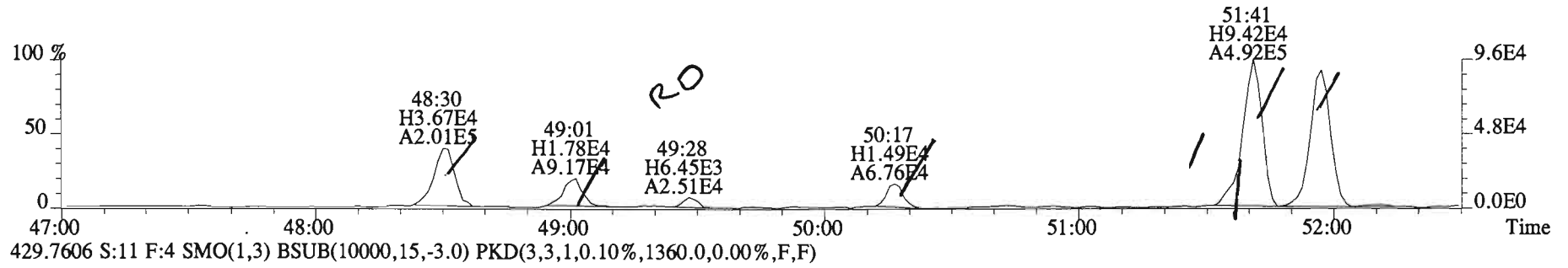
395.7995 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0)



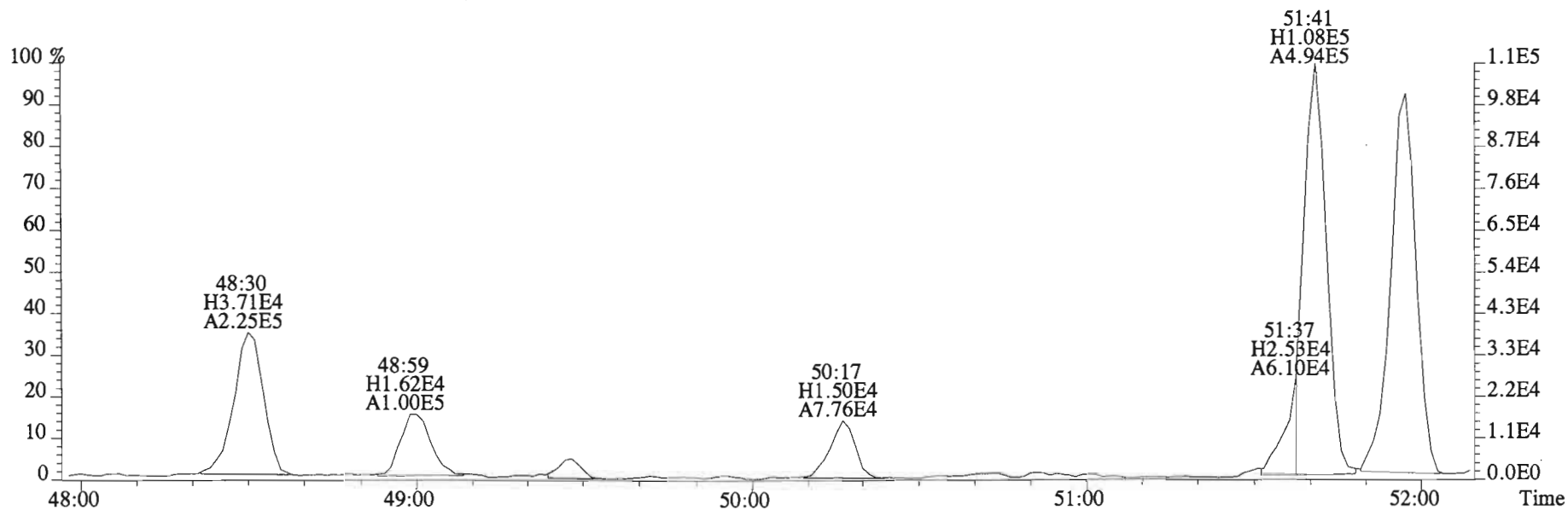
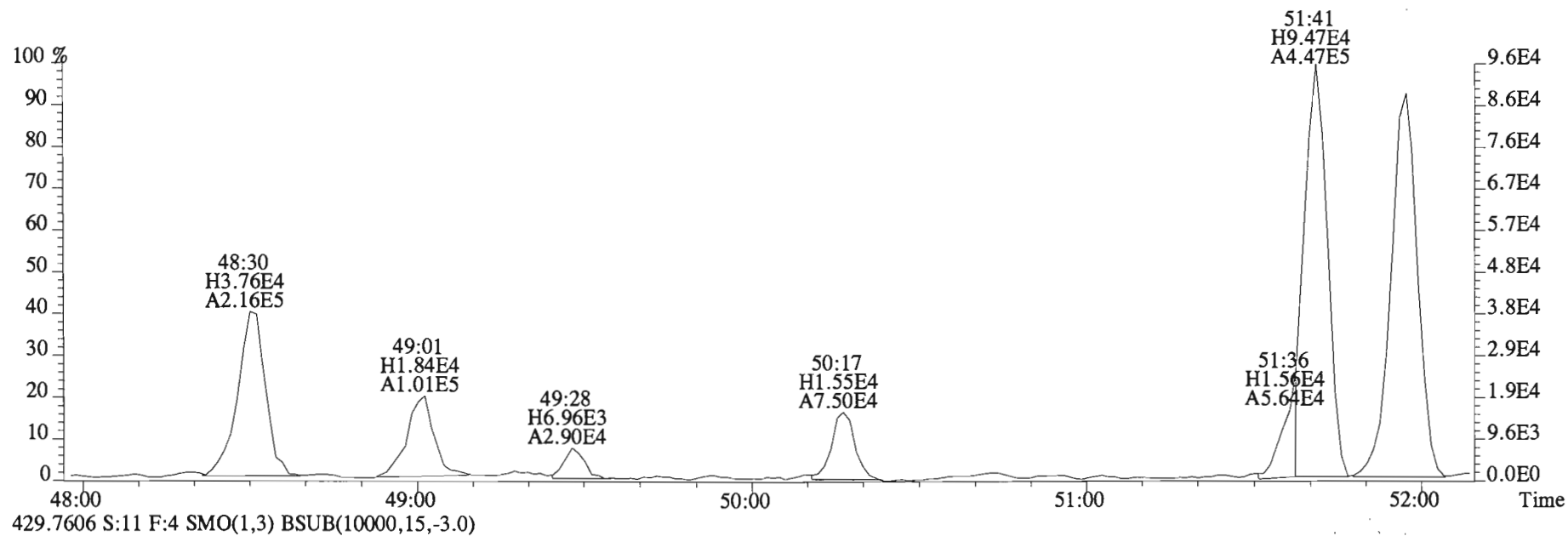
File:150205E1 #1-555 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
 393.8025 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0)



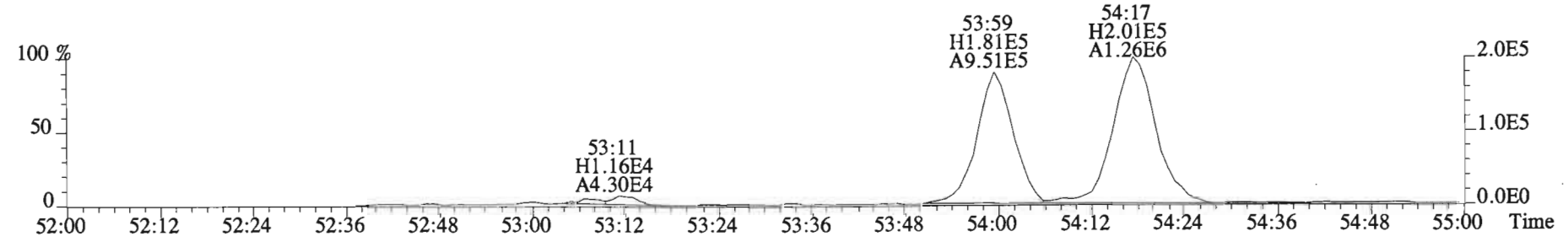
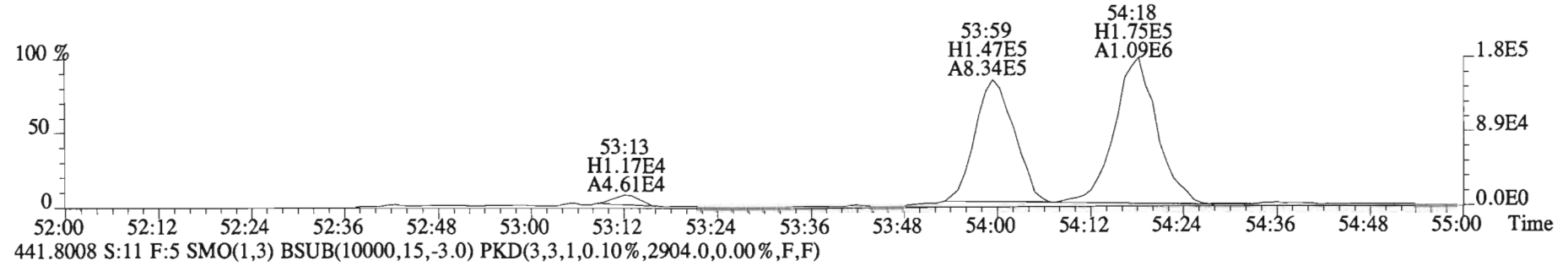
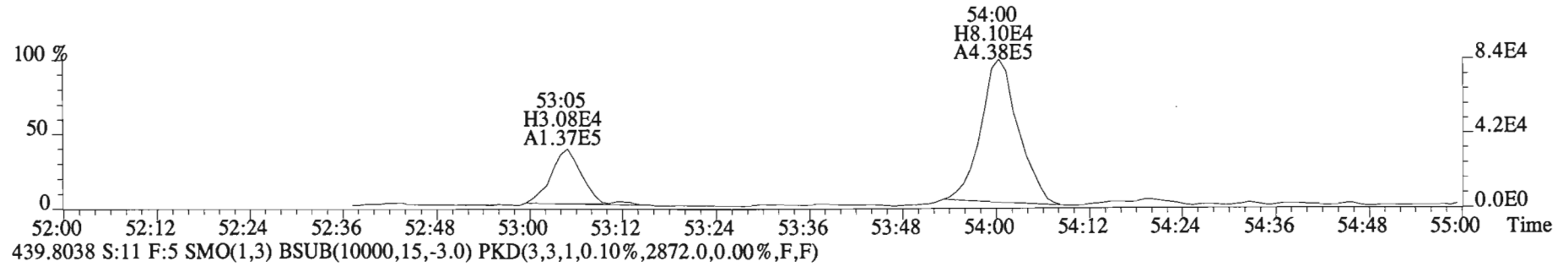
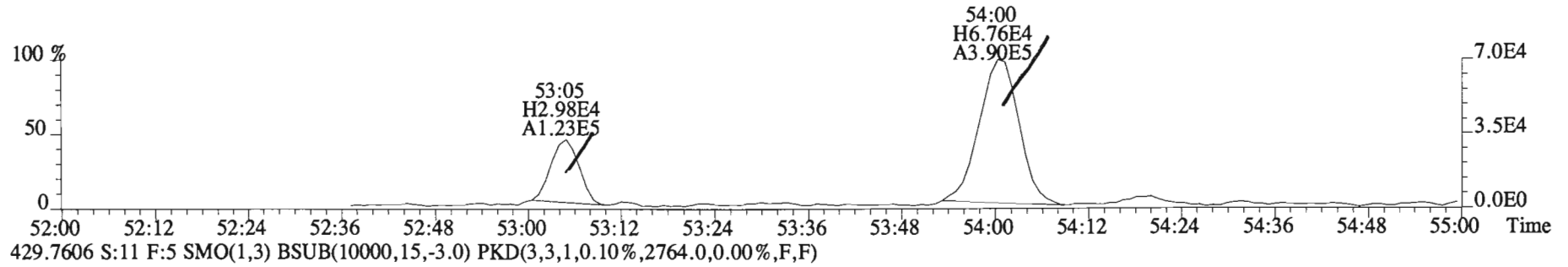
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Sample#11 File Text: Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
427.7635 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1348.0,0.00%,F,F)



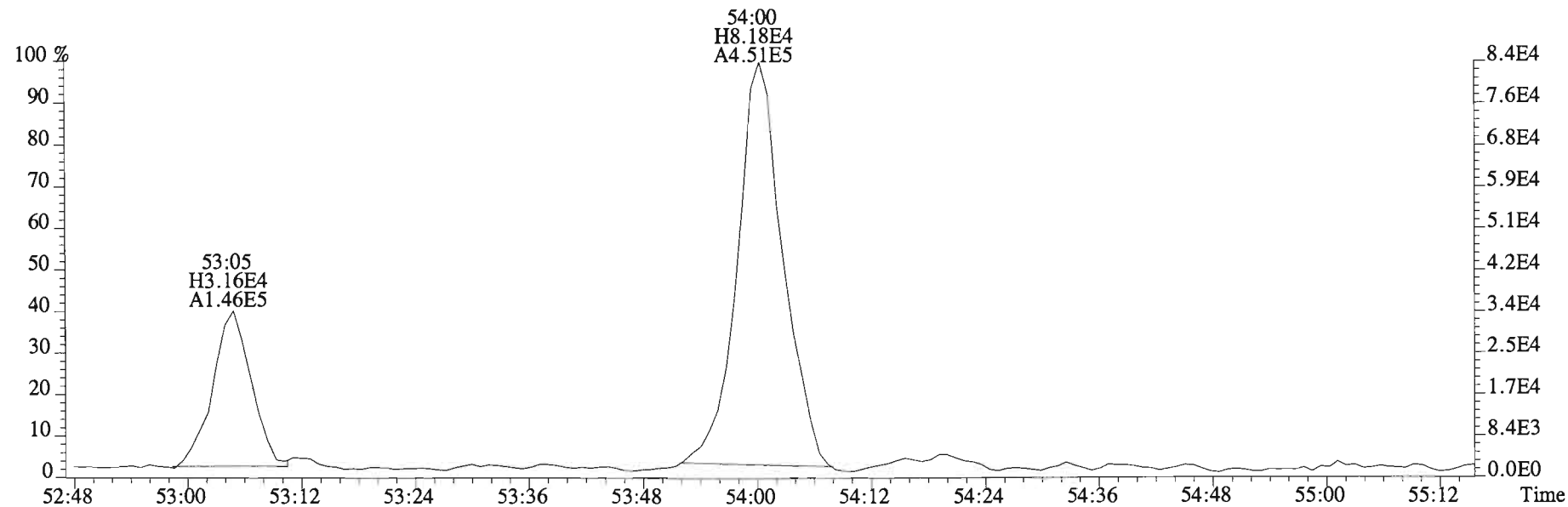
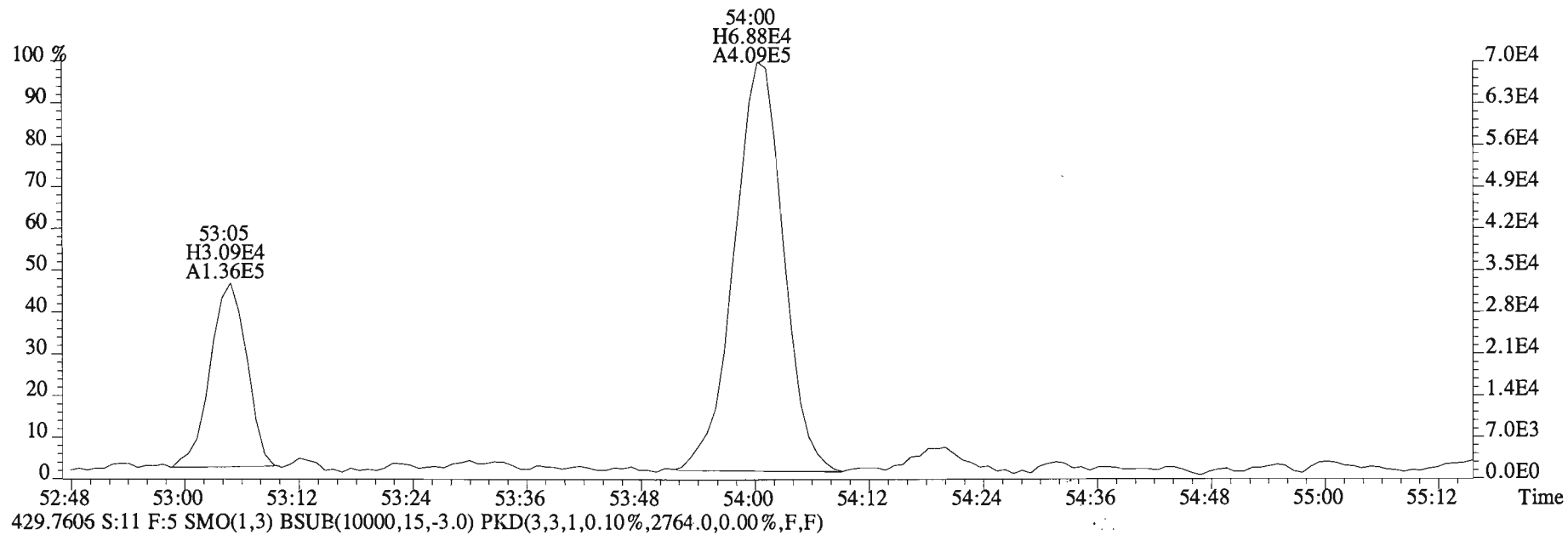
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 Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
 427.7635 S:11 F:4 SMO(1,3) BSUB(10000,15,-3.0)



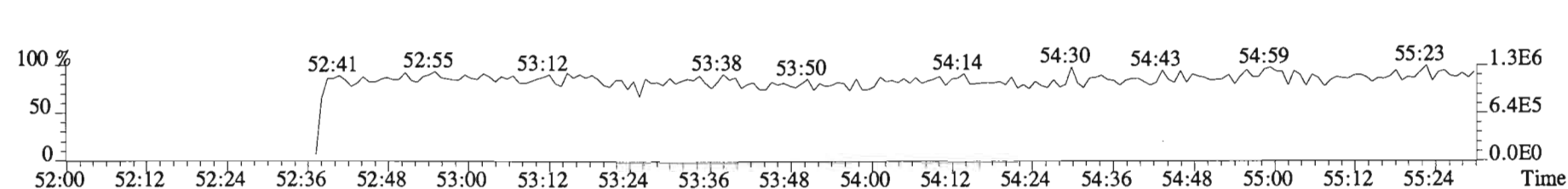
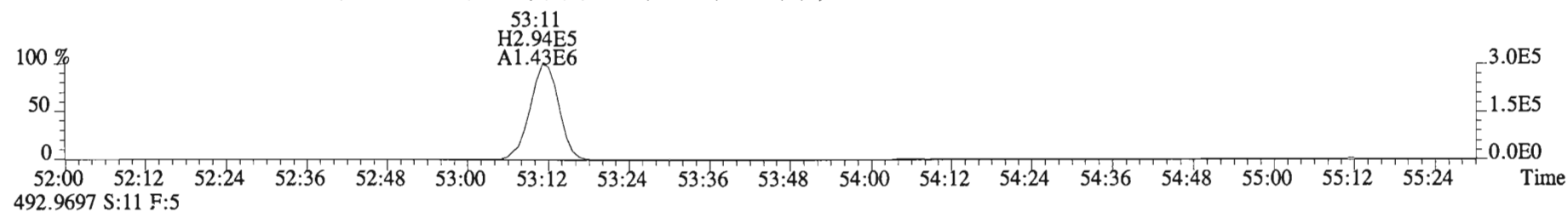
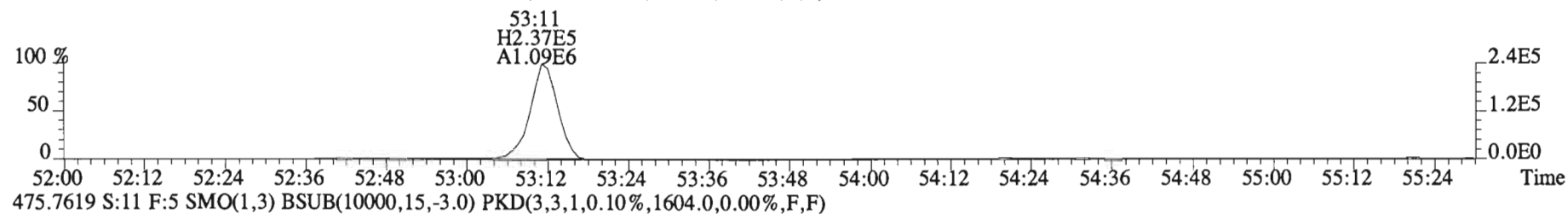
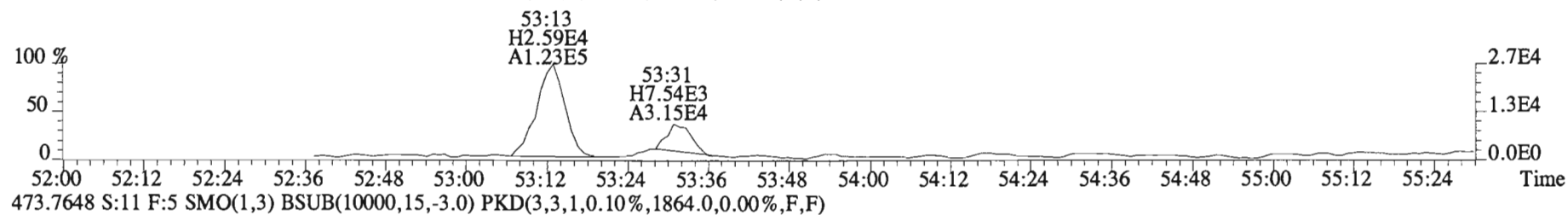
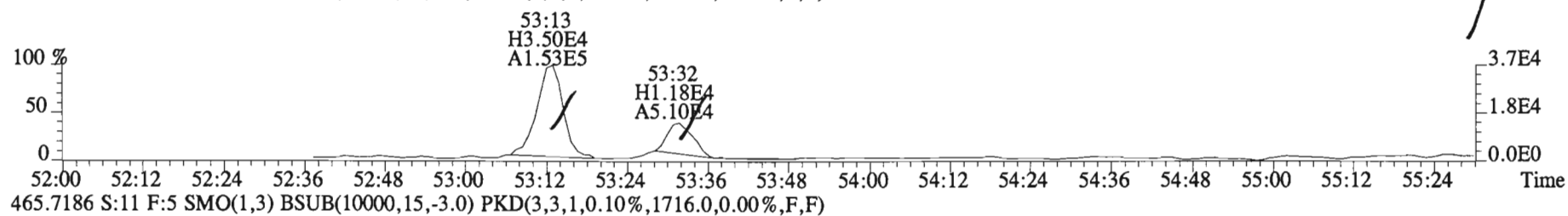
File:150205E1 #1-430 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
427.7635 S:11 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2552.0,0.00%,F,F)



File:150205E1 #1-430 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
427.7635 S:11 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2552.0,0.00%,F,F)

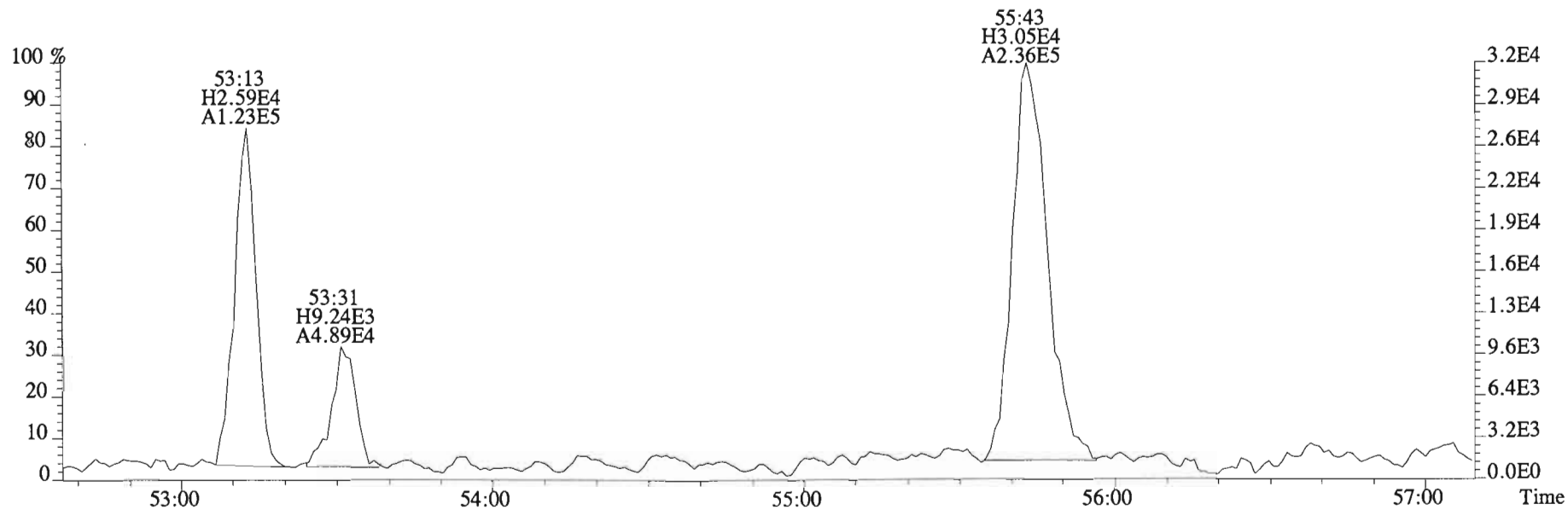
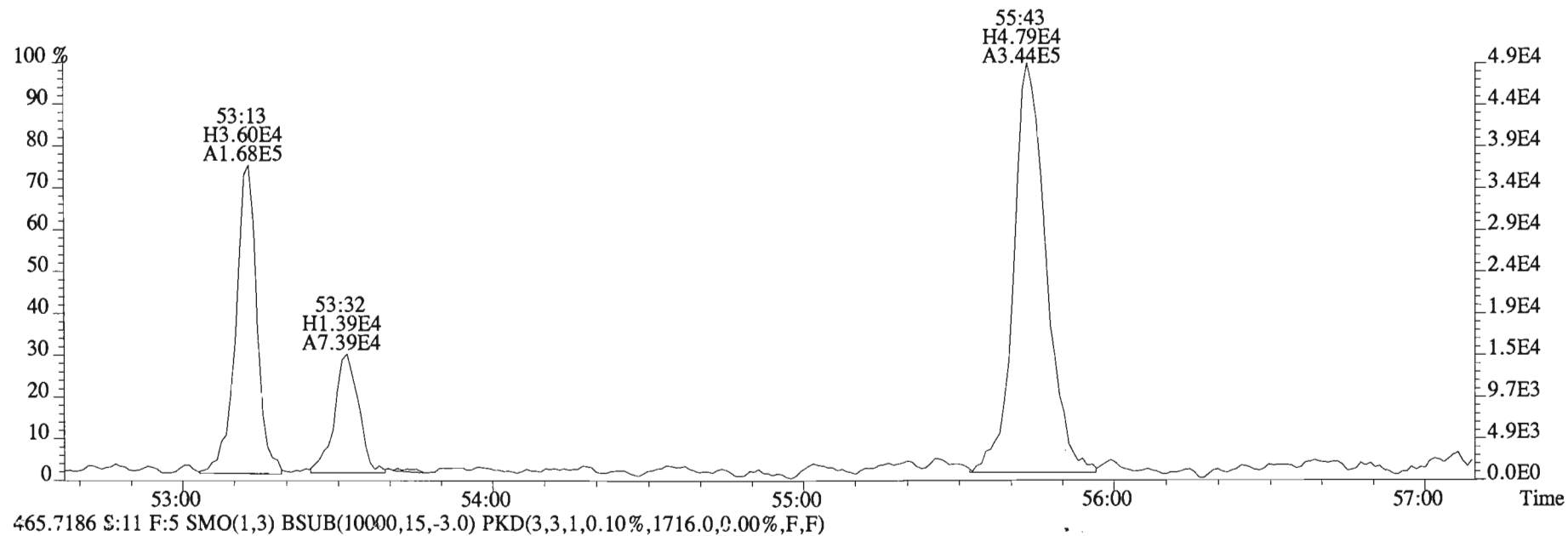


File:150205E1 #1-430 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text: Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
463.7216 S:11 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1704.0,0.00%,F,F)

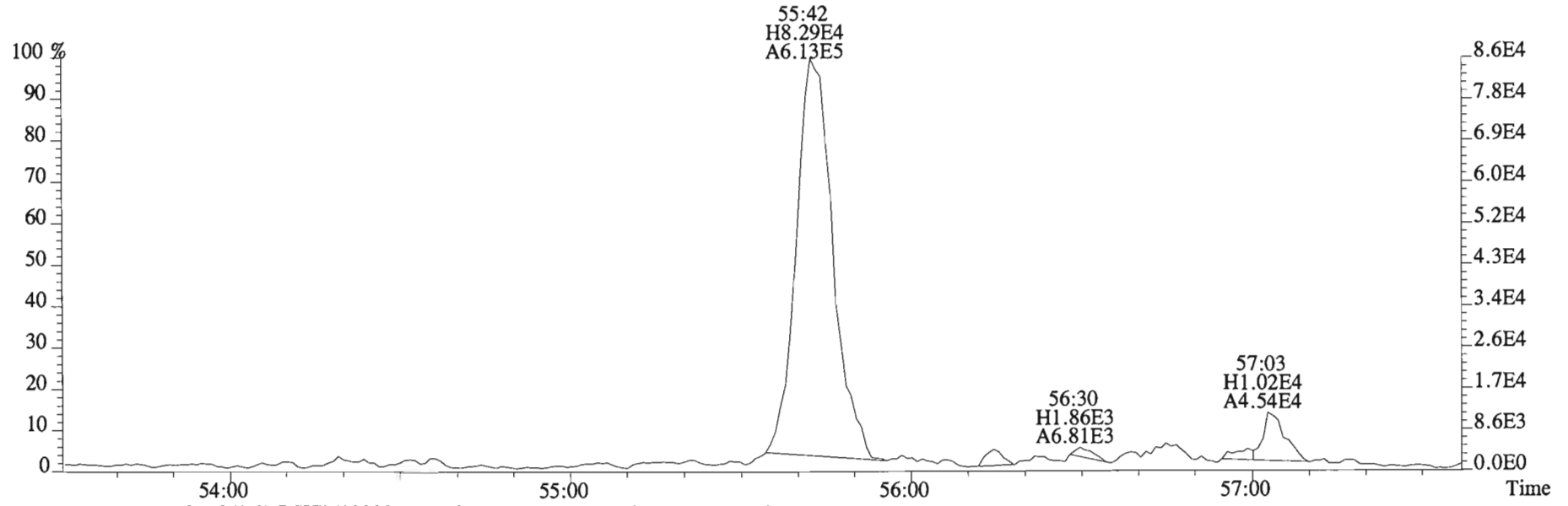




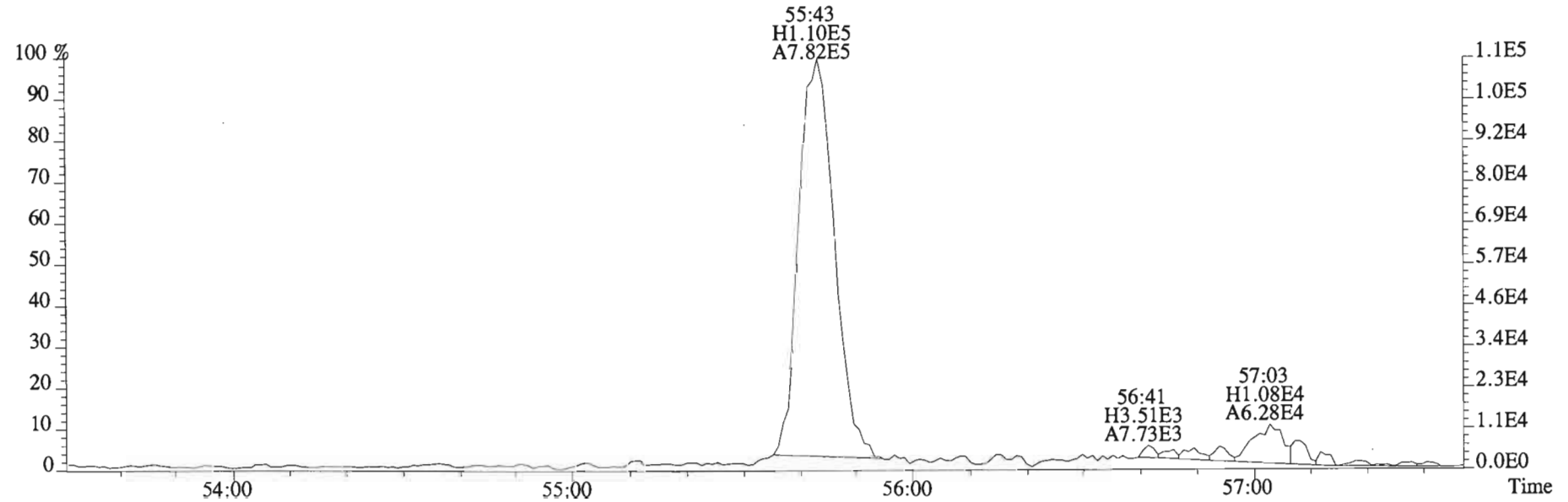
File:150205E1 #1-430 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
463.7216 S:11 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1704.0,0.00%,F,F)



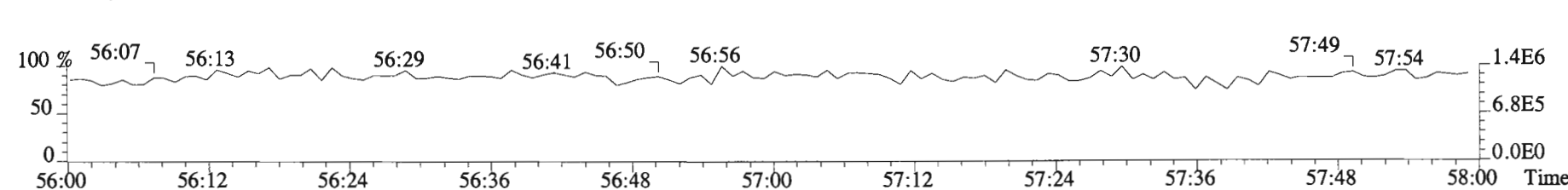
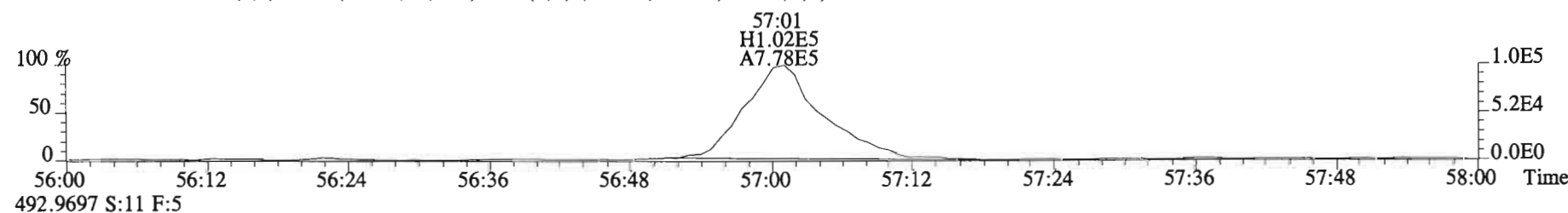
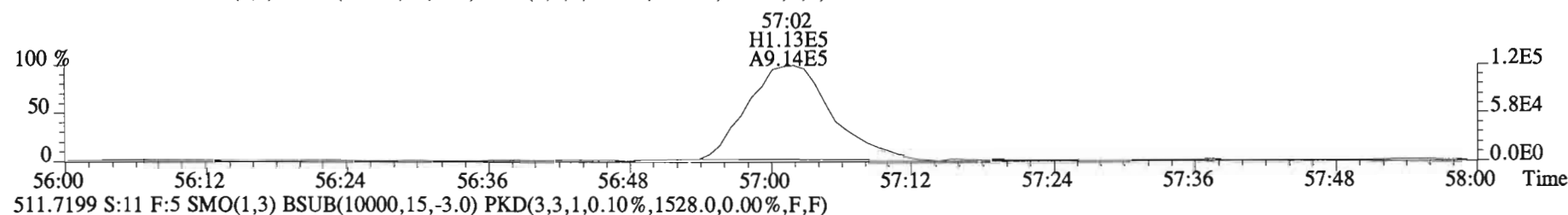
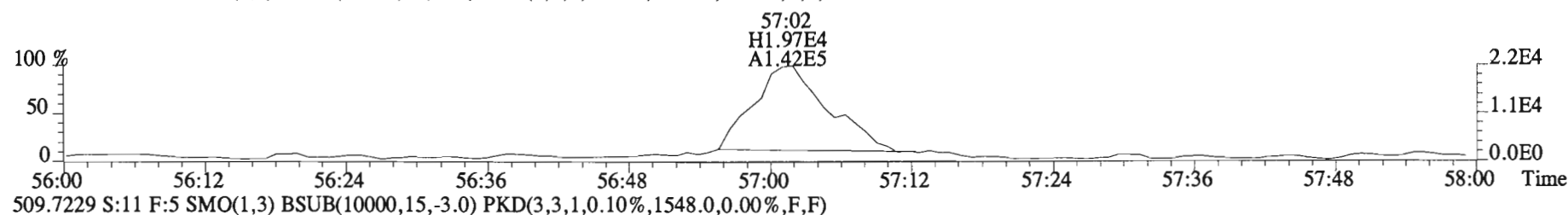
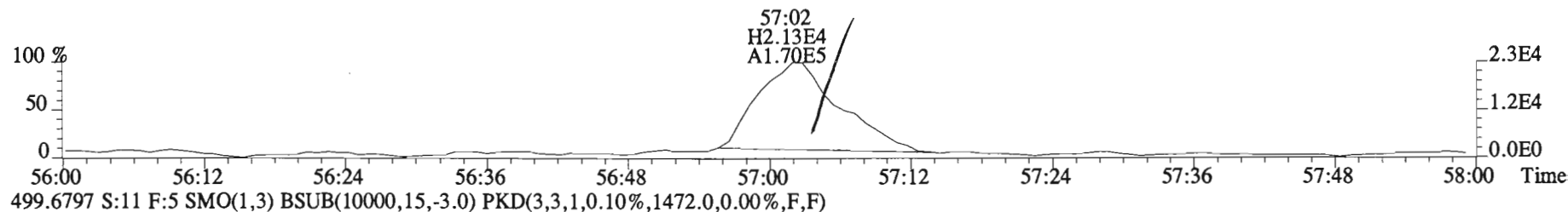
File:150205E1 #1-430 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
473.7648 S:11 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1864.0,0.00%,F,F)



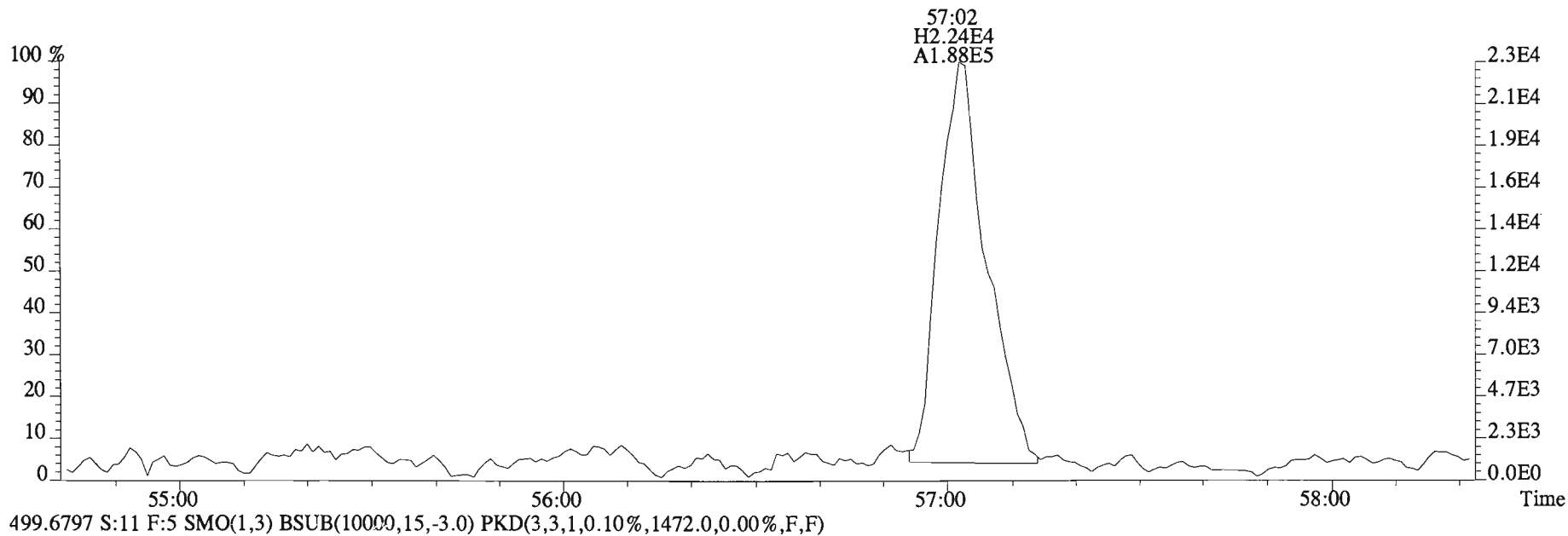
475.7619 S:11 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1604.0,0.00%,F,F)



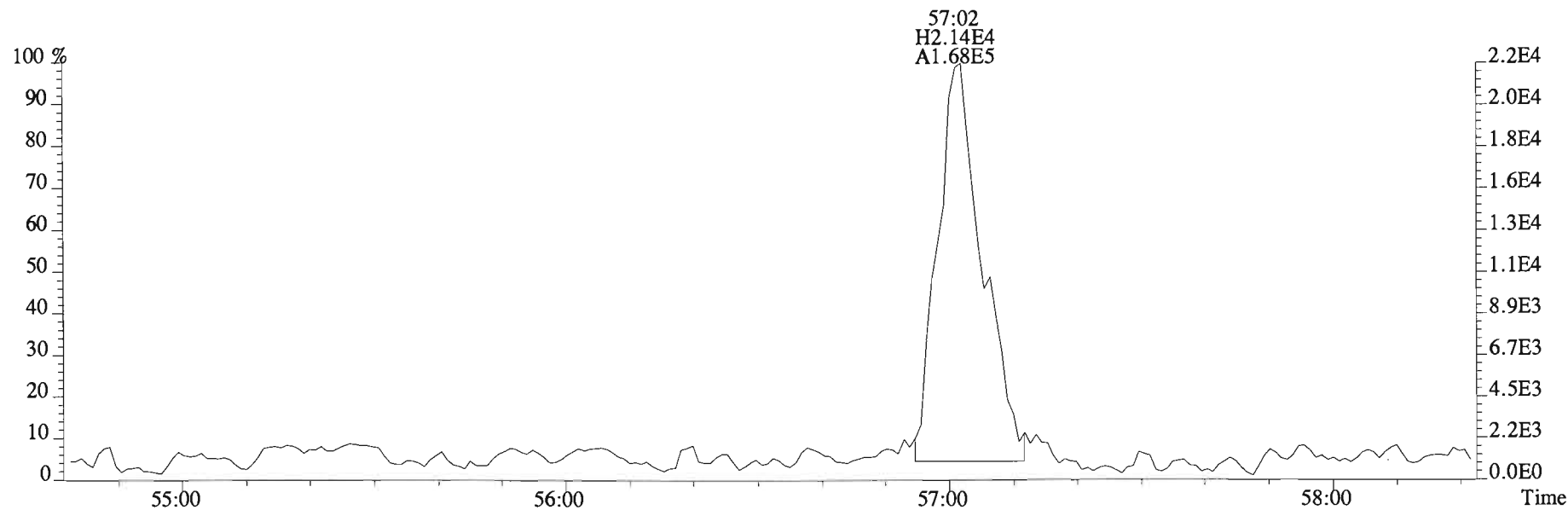
File:150205E1 #1-430 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text:Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
497.6826 S:11 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1236.0,0.00%,F,F)



File:150205E1 #1-430 Acq: 5-FEB-2015 19:40:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#11 File Text: Vista Analytical Laboratory VG-8 Text:1500116-01@10X WM-CB-03-20150122-S Exp:PCB\_ZB1  
497.6826 S:11 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1236.0,0.00%,F,F)



499.6797 S:11 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1472.0,0.00%,F,F)



Client ID: WM-FD-02-20150122-S  
Lab ID: 1500116-02@20X

Filename: 150204E1 S:10 Acq: 4-FEB-15 18:09:30  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.008

ConCal: ST150204E1-2  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	1.92e+05	2.85	y 16:11	1.19	454	*	2.5	*	*	1.001	0.996-1.006	
Mono	PCB-2	7.09e+04	2.79	y 18:33	1.18	165	*	2.5	*	*	0.988	0.984-0.994	
Mono	PCB-3	1.79e+05	3.01	y 18:47	1.43	346	*	2.5	*	*	1.001	0.996-1.006	
Di	PCB-4/10	4.06e+05	1.46	y 20:07	1.57	959	*	2.5	*	*	1.001	0.997-1.007	
Di	PCB-7/9	*	*	n NotF $\eta$	1.21	*	8150	2.5	409	*	*	0.866-0.874	
Di	PCB-6	2.94e+05	1.61	y 22:34	1.30	554	*	2.5	*	*	0.893	0.890-0.899	
Di	PCB-5/8	1.44e+06	1.73	y 22:58	1.15	3070	*	2.5	*	*	0.909	0.907-0.917	
Di	PCB-14	*	*	n NotF $\eta$	1.11	*	8150	2.5	455	*	*	0.949-0.959	
Di	PCB-11	7.67e+06	1.70	y 25:17	1.09	17100	*	2.5	*	*	1.001	0.995-1.005	
Di	PCB-12/13	*	*	n NotF $\eta$	1.19	*	8150	2.5	423	*	*	1.011-1.021	
Di	PCB-15	8.51e+05	1.64	y 25:59	1.28	1610	*	2.5	*	*	1.029	1.023-1.033	
Tri	PCB-19	1.56e+05	1.02	y 24:16	1.04	745	*	2.5	*	*	1.001	0.996-1.006	
Tri	PCB-30	*	*	n NotF $\eta$	1.71	*	1800	2.5	118	*	*	1.032-1.042	
Tri	PCB-18	1.58e+06	1.09	y 25:54	0.78	7120	*	2.5	*	*	0.954	0.949-0.959	
Tri	PCB-17	6.10e+05	1.11	y 26:04	0.92	2320	*	2.5	*	*	0.960	0.956-0.966	
Tri	PCB-24/27	1.51e+05	0.99	y 26:38	1.19	447	*	2.5	*	*	0.981	0.977-0.987	
Tri	PCB-16/32	1.15e+06	1.12	y 27:09	0.94	4310	*	2.5	*	*	1.000	0.995-1.005	
Tri	PCB-34	*	*	n NotF $\eta$	1.14	*	1820	2.5	124	*	*	0.955-0.965	
Tri	PCB-23	*	*	n NotF $\eta$	1.28	*	1820	2.5	111	*	*	0.959-0.969	
Tri	PCB-29	*	*	n NotF $\eta$	1.08	*	1820	2.5	131	*	*	0.967-0.977	
Tri	PCB-26	3.29e+05	0.82	n 28:30	1.21	866	R	2.5	*	*	0.979	0.974-0.984	
Tri	PCB-25	1.52e+05	1.15	y 28:40	1.26	383	*	2.5	*	*	0.985	0.979-0.989	
Tri	PCB-31	2.16e+06	1.01	y 29:01	1.28	5350	*	2.5	*	*	0.997	0.992-1.002	
Tri	PCB-28	1.90e+06	0.98	y 29:08	1.71	3520	*	2.5	*	*	1.001	0.995-1.005	
Tri	PCB-20/21/33	1.50e+06	1.05	y 29:45	1.08	4410	*	2.5	*	*	1.022	1.017-1.027	
Tri	PCB-22	8.78e+05	0.94	y 30:11	1.21	2310	*	2.5	*	*	1.037	1.032-1.042	
Tri	PCB-36	*	*	n NotF $\eta$	1.14	*	1820	2.5	131	*	*	0.928-0.938	
Tri	PCB-39	*	*	n NotF $\eta$	1.12	*	1820	2.5	134	*	*	0.943-0.953	
Tri	PCB-38	*	*	n NotF $\eta$	1.20	*	1820	2.5	124	*	*	0.966-0.976	
Tri	PCB-35	1.22e+05	1.22	n 32:34	1.23	322	R	2.5	*	*	0.987	0.982-0.992	
Tri	PCB-37	8.23e+05	1.00	y 33:02	1.23	2180	*	2.5	*	*	1.002	0.995-1.005	
Tetra	PCB-54	*	*	n NotF $\eta$	1.10	*	1980	2.5	160	*	*	0.996-1.006	
Tetra	PCB-50	*	*	n NotF $\eta$	0.88	*	1980	2.5	200	*	*	1.037-1.047	
Tetra	PCB-53	2.10e+05	0.71	y 29:49	1.06	1030	*	2.5	*	*	0.946	0.942-0.952	
Tetra	PCB-51	6.51e+04	0.95	n 30:09	0.99	344	R	2.5	*	*	0.957	0.952-0.962	
Tetra	PCB-45	1.88e+05	0.85	y 30:35	0.86	1140	*	2.5	*	*	0.970	0.966-0.976	
Tetra	PCB-46	9.61e+04	0.78	y 31:05	0.85	596	*	2.5	*	*	0.986	0.981-0.991	

Integrations by:

Analyst: DMS

Date: 2/11/15

Reviewed by: [Signature] Date: 2/11/15

Client ID: WM-FD-02-20150122-S  
Lab ID: 1500116-02@20X

Filename: 150204E1 S:10 Acq: 4-FEB-15 18:09:30  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.008

ConCal: ST150204E1-2  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	2.59e+06	0.77	y 31:32	1.28	10600		*	2.5	*	1.001	0.996-1.006	
Tetra	PCB-73	*	*	n NotF $\eta$	1.35	*		1980	2.5	185	*	1.000-1.010	
Tetra	PCB-43/49	9.54e+05	0.73	y 31:51	0.99	5020		*	2.5	*	1.011	1.005-1.015	
Tetra	PCB-47	3.19e+05	0.70	y 32:04	1.06	1490		*	2.5	*	1.001	0.996-1.006	
Tetra	PCB-48/75	2.63e+05	0.96	n 32:11	1.23	1060	R	*	2.5	*	1.004	0.999-1.009	
Tetra	PCB-65	*	*	n NotF $\eta$	1.22	*		1980	2.5	181	*	1.008-1.018	
Tetra	PCB-62	*	*	n NotF $\eta$	1.22	*		1980	2.5	182	*	1.011-1.021	
Tetra	PCB-44	1.41e+06	0.71	y 32:51	0.86	8100		*	2.5	*	1.025	1.021-1.031	
Tetra	PCB-42/59	4.84e+05	0.79	y 33:05	1.14	2110		*	2.5	*	1.032	1.028-1.038	
Tetra	PCB-41/64/71/72	1.54e+06	0.73	y 33:39	1.21	6320		*	2.5	*	1.050	1.046-1.056	
Tetra	PCB-68	*	*	n NotF $\eta$	1.35	*		1980	2.5	165	*	1.054-1.064	
Tetra	PCB-40	2.29e+05	0.71	y 34:08	0.70	1610		*	2.5	*	1.065	1.061-1.071	
Tetra	PCB-57	*	*	n NotF $\eta$	0.98	*		1980	2.5	179	*	0.965-0.975	
Tetra	PCB-67	6.35e+04	0.76	y 34:49	1.11	213		*	2.5	*	0.979	0.974-0.984	
Tetra	PCB-58	*	*	n NotF $\eta$	0.93	*		1980	2.5	189	*	0.977-0.987	
Tetra	PCB-63	6.68e+04	0.74	y 35:04	0.95	260		*	2.5	*	0.986	0.982-0.992	
Tetra	PCB-74	9.73e+05	0.71	y 35:21	1.24	2900		*	2.5	*	0.994	0.990-1.000	
Tetra	PCB-61/70	3.07e+06	0.75	y 35:34	0.95	11900		*	2.5	*	1.000	0.995-1.005	
Tetra	PCB-76/66	1.75e+06	0.72	y 35:46	1.04	6220		*	2.5	*	1.006	1.001-1.011	
Tetra	PCB-80	*	*	n NotF $\eta$	1.19	*		1980	2.5	139	*	0.996-1.006	
Tetra	PCB-55	6.54e+04	0.77	y 36:17	1.04	232		*	2.5	*	1.009	1.005-1.015	
Tetra	PCB-56/60	1.32e+06	0.72	y 36:48	1.01	4840		*	2.5	*	1.023	1.019-1.029	
Tetra	PCB-79	7.83e+04	0.76	y 37:53	1.08	268		*	2.5	*	1.053	1.048-1.058	
Tetra	PCB-78	*	*	n NotF $\eta$	1.27	*		1980	2.5	155	*	0.982-0.992	
Tetra	PCB-81	2.54e+04	0.61	n 39:05	1.33	81.9	R	*	2.5	*	1.000	0.995-1.005	
Tetra	PCB-77	3.06e+05	0.83	y 39:42	1.10	1140		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-104	*	*	n NotF $\eta$	1.18	*		1410	2.5	227	*	0.996-1.006	
Penta	PCB-96	*	*	n NotF $\eta$	1.14	*		1410	2.5	236	*	1.034-1.044	
Penta	PCB-103	*	*	n NotF $\eta$	0.96	*		1410	2.5	280	*	1.050-1.060	
Penta	PCB-100	*	*	n NotF $\eta$	0.94	*		1410	2.5	286	*	1.061-1.071	
Penta	PCB-94	*	*	n NotF $\eta$	1.06	*		1410	2.5	332	*	0.980-0.990	
Penta	PCB-95/98/102	2.30e+06	1.59	y 35:52	1.22	15600		*	2.5	*	1.001	0.995-1.005	
Penta	PCB-93	*	*	n NotF $\eta$	0.84	*		1410	2.5	416	*	0.997-1.007	
Penta	PCB-88/91	3.19e+05	1.70	y 36:16	1.12	2360		*	2.5	*	1.012	1.005-1.015	
Penta	PCB-121	*	*	n NotF $\eta$	1.62	*		1410	2.5	217	*	1.009-1.019	
Penta	PCB-84/92	1.18e+06	1.58	y 37:11	1.05	9260		*	2.5	*	0.991	0.985-0.995	
Penta	PCB-89	*	*	n NotF $\eta$	1.13	*		1410	2.5	378	*	0.991-1.001	

Analyst: Dms

Date: 2/11/15

Client ID: WM-FD-02-20150122-S  
Lab ID: 1500116-02@20X

Filename: 150204E1 S:10 Acq: 4-FEB-15 18:09:30  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.008

ConCal: ST150204E1-2  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	3.40e+06	1.57	y 37:33	1.10	25300		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-113	*	*	n NotF $\eta$	1.41	*		1410	2.5	303	*	1.002-1.012	
Penta	PCB-99	1.23e+06	1.61	y 37:53	1.34	7520		*	2.5	*	1.009	1.004-1.014	
Penta	PCB-119	6.55e+04	1.41	y 38:20	1.53	445		*	2.5	*	0.987	0.982-0.992	
Penta	PCB-108/112	1.46e+05	1.33	y 38:30	1.28	1190		*	2.5	*	0.991	0.986-0.996	
Penta	PCB-83	*	*	n NotF $\eta$	1.52	*		1410	2.5	376	*	0.990-1.000	
Penta	PCB-97	8.63e+05	1.64	y 38:52	1.18	7610		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-86	*	*	n NotF $\eta$	0.84	*		1410	2.5	677	*	0.999-1.009	
Penta	PCB-87/117/125	1.52e+06	1.56	y 39:09	1.55	10200		*	2.5	*	1.008	1.002-1.012	
Penta	PCB-111/115	6.16e+04	1.15	n 39:17	1.63	393	R	*	2.5	*	1.011	1.006-1.016	
Penta	PCB-85/116	4.33e+05	1.48	y 39:25	1.30	3460		*	2.5	*	1.015	1.010-1.020	
Penta	PCB-120	*	*	n NotF $\eta$	1.68	*		1410	2.5	340	*	1.016-1.026	
Penta	PCB-110	4.19e+06	1.60	y 39:49	1.56	28000		*	2.5	*	1.025	1.020-1.030	
Penta	PCB-82	3.44e+05	1.36	y 40:26	0.76	3270		*	2.5	*	0.976	0.971-0.981	
Penta	PCB-124	*	*	n NotF $\eta$	1.47	*		1410	2.5	254	*	0.988-0.998	
Penta	PCB-107/109	2.16e+05	1.76	y 41:17	1.32	1180		*	2.5	*	0.997	0.991-1.001	
Penta	PCB-123	1.87e+05	1.41	y 41:26	1.17	1160		*	2.5	*	1.000	0.996-1.006	
Penta	PCB-106/118	3.47e+06	1.58	y 41:36	1.17	23200		*	2.5	*	1.000	0.996-1.006	
Penta	PCB-114	1.45e+05	1.55	y 42:16	1.30	573		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-122	*	*	n NotF $\eta$	1.12	*		2780	2.5	434	*	0.999-1.009	
Penta	PCB-105	2.23e+06	1.58	y 43:09	1.30	8760		*	2.5	*	1.001	0.995-1.005	
Penta	PCB-127	*	*	n NotF $\eta$	1.33	*		2780	2.5	329	*	0.996-1.006	
Penta	PCB-126	5.93e+04	1.70	y 45:24	1.18	291		*	2.5	*	1.000	0.995-1.005	
Hexa	PCB-155	*	*	n NotF $\eta$	1.11	*		1100	2.5	245	*	0.966-1.006	
Hexa	PCB-150	*	*	n NotF $\eta$	1.00	*		1100	2.5	272	*	1.030-1.040	
Hexa	PCB-152	*	*	n NotF $\eta$	1.12	*		1100	2.5	244	*	1.043-1.053	
Hexa	PCB-145	*	*	n NotF $\eta$	1.20	*		1100	2.5	226	*	1.055-1.065	
Hexa	PCB-136	3.14e+05	1.47	n 39:36	1.18	2590	R	*	2.5	*	1.068	1.064-1.074	
Hexa	PCB-148	*	*	n NotF $\eta$	0.74	*		1100	2.5	365	*	1.066-1.076	
Hexa	PCB-154	*	*	n NotF $\eta$	0.86	*		1100	2.5	317	*	1.080-1.090	
Hexa	PCB-151	4.57e+05	1.21	y 40:51	0.75	5960		*	2.5	*	1.102	1.097-1.107	
Hexa	PCB-135	2.31e+05	1.17	y 41:03	0.79	2840		*	2.5	*	1.107	1.103-1.113	
Hexa	PCB-144	1.01e+05	1.13	y 41:10	0.76	1300		*	2.5	*	1.110	1.105-1.117	
Hexa	PCB-147	*	*	n NotF $\eta$	0.82	*		1100	2.5	332	*	1.109-1.121	
Hexa	PCB-139/149	1.72e+06	1.36	y 41:33	0.76	22000		*	2.5	*	1.121	1.116-1.128	
Hexa	PCB-140	*	*	n NotF $\eta$	0.72	*		1100	2.5	376	*	1.121-1.133	
Hexa	PCB-134/143	2.60e+05	1.14	y 42:12	0.92	1690		*	2.5	*	0.975	0.970-0.980	

Analyst: DMS

Date: 2/11/15

Client ID: WM-FD-02-20150122-S  
Lab ID: 1500116-02@20X

Filename: 150204E1 S:10 Acq: 4-FEB-15 18:09:30  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.008

ConCal: ST150204E1-2  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	1.27e+05	1.35	y 42:29	0.82	920	*	*	2.5	*	0.981	0.977-0.987	
Hexa	PCB-131	*	*	n NotF $\eta$	0.91	*	*	1760	2.5	373	*	0.981-0.991	
Hexa	PCB-146/165	7.04e+05	1.20	y 42:53	1.25	3350	*	*	2.5	*	0.991	0.986-0.996	
Hexa	PCB-132/161	1.52e+06	1.26	y 43:10	1.10	8180	*	*	2.5	*	0.997	0.992-1.002	
Hexa	PCB-153	4.89e+06	1.30	y 43:18	1.25	23200	*	*	2.5	*	1.000	0.995-1.005	
Hexa	PCB-168	*	*	n NotF $\eta$	1.45	*	*	1760	2.5	234	*	1.001-1.011	
Hexa	PCB-141	1.02e+06	1.26	y 44:03	1.09	6110	*	*	2.5	*	1.000	0.995-1.005	
Hexa	PCB-137	2.46e+05	1.41	y 44:26	1.06	1510	*	*	2.5	*	1.009	1.004-1.014	
Hexa	PCB-130	2.48e+05	1.16	y 44:32	0.96	1680	*	*	2.5	*	1.011	1.006-1.016	
Hexa	PCB-138/163/164	5.44e+06	1.18	y 44:54	1.29	28600	*	*	2.5	*	1.001	0.996-1.006	
Hexa	PCB-158/160	7.09e+05	1.23	y 45:08	1.34	3590	*	*	2.5	*	1.006	1.001-1.011	
Hexa	PCB-129	2.18e+05	1.32	y 45:24	0.85	1730	*	*	2.5	*	1.012	1.007-1.017	
Hexa	PCB-166	*	*	n NotF $\eta$	1.19	*	*	1760	2.5	262	*	0.988-0.998	
Hexa	PCB-159	*	*	n NotF $\eta$	1.11	*	*	1760	2.5	279	*	0.996-1.006	
Hexa	PCB-128/162	8.82e+05	1.21	y 46:27	1.05	5230	*	*	2.5	*	1.006	1.002-1.012	
Hexa	PCB-167	2.70e+05	1.16	y 46:53	1.20	1220	*	*	2.5	*	1.000	0.995-1.005	
Hexa	PCB-156	6.65e+05	1.18	y 48:11	1.14	3300	*	*	2.5	*	1.000	0.996-1.006	
Hexa	PCB-157	1.69e+05	1.18	y 48:28	1.16	736	*	*	2.5	*	1.001	0.995-1.005	
Hexa	PCB-169	*	*	n NotF $\eta$	1.12	*	*	1760	2.5	244	*	0.995-1.005	
Hepta	PCB-188	*	*	n NotF $\eta$	1.58	*	*	1710	2.5	168	*	0.996-1.006	
Hepta	PCB-184	*	*	n NotF $\eta$	1.63	*	*	1710	2.5	163	*	1.006-1.016	
Hepta	PCB-179	5.91e+05	0.98	y 44:09	1.30	3640	*	*	2.5	*	1.030	1.024-1.034	
Hepta	PCB-176	1.69e+05	1.09	y 44:38	1.48	917	*	*	2.5	*	1.041	1.035-1.045	
Hepta	PCB-186	*	*	n NotF $\eta$	1.45	*	*	1710	2.5	183	*	1.050-1.060	
Hepta	PCB-178	1.93e+05	0.98	y 45:45	1.03	1500	*	*	2.5	*	1.067	1.061-1.071	
Hepta	PCB-175	3.51e+04	0.92	y 46:04	1.01	278	*	*	2.5	*	1.074	1.069-1.079	
Hepta	PCB-182/187	1.41e+06	1.10	y 46:15	1.25	9060	*	*	2.5	*	1.079	1.073-1.083	
Hepta	PCB-183	6.09e+05	1.17	y 46:34	1.21	4040	*	*	2.5	*	1.086	1.081-1.091	
Hepta	PCB-185	1.11e+05	0.83	n 47:15	1.80	731	R	*	2.5	*	0.955	0.951-0.961	
Hepta	PCB-174	8.91e+05	1.06	y 47:37	1.38	7650	*	*	2.5	*	0.963	0.958-0.968	
Hepta	PCB-181	*	*	n NotF $\eta$	1.38	*	*	1710	2.5	302	*	0.960-0.970	
Hepta	PCB-177	4.20e+05	1.04	y 47:53	1.26	3960	*	*	2.5	*	0.968	0.963-0.973	
Hepta	PCB-171	2.20e+05	0.94	y 48:11	1.58	1640	*	*	2.5	*	0.974	0.970-0.980	
Hepta	PCB-173	2.64e+04	1.12	y 48:38	1.11	282	*	*	2.5	*	0.983	0.978-0.988	
Hepta	PCB-172	1.39e+05	1.12	y 49:04	1.63	1010	*	*	2.5	*	0.992	0.987-0.997	
Hepta	PCB-192	*	*	n NotF $\eta$	1.74	*	*	1710	2.5	239	*	0.991-1.001	
Hepta	PCB-180	2.03e+06	1.01	y 49:28	1.34	17900	*	*	2.5	*	1.000	0.995-1.005	

Analyst: DMS

Date: 2/11/15



Client ID: WM-FD-02-20150122-S  
Lab ID: 1500116-02@20X

Filename: 150204E1 S:10 Acq: 4-FEB-15 18:09:30  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.008

ConCal: ST150204E1-2  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	1.06e+05	0.99	y 49:39	1.72	730		*	2.5	*	1.004	0.999-1.009	
Hepta	PCB-191	4.84e+04	1.16	y 49:54	1.69	338		*	2.5	*	1.009	1.004-1.014	
Hepta	PCB-170	6.17e+05	0.91	y 50:53	1.60	5760		*	2.5	*	1.000	0.995-1.005	
Hepta	PCB-190	1.75e+05	1.03	y 51:04	2.21	1180		*	2.5	*	1.004	0.998-1.008	
Hepta	PCB-189	3.57e+04	1.11	y 52:21	1.55	309		*	2.5	*	1.000	0.995-1.005	
Octa	PCB-202	1.52e+05	1.00	y 48:23	1.08	1590		*	2.5	*	1.000	0.995-1.005	
Octa	PCB-201	6.30e+04	0.56	n 48:52	1.15	620	R	*	2.5	*	1.010	1.005-1.015	
Octa	PCB-204	*	*	n NotF $\eta$	1.14	*		1480	2.5	420	*	1.008-1.018	
Octa	PCB-197	*	*	n NotF $\eta$	1.07	*		1480	2.5	445	*	1.015-1.025	
Octa	PCB-200	9.16e+04	0.90	y 50:09	1.06	974		*	2.5	*	1.037	1.032-1.044	
Octa	PCB-198	*	*	n NotF $\eta$	0.76	*		1480	2.5	633	*	1.059-1.069	
Octa	PCB-199	3.85e+05	0.96	y 51:33	0.80	5450		*	2.5	*	1.066	1.061-1.071	
Octa	PCB-196/203	4.24e+05	0.93	y 51:49	0.80	5980		*	2.5	*	1.071	1.066-1.076	
Octa	PCB-195	1.66e+05	0.78	y 52:58	1.23	1530		*	2.5	*	0.984	0.979-0.989	
Octa	PCB-194	4.65e+05	0.97	y 53:51	1.21	4350		*	2.5	*	1.000	0.995-1.005	
Octa	PCB-205	*	*	n NotF $\eta$	1.54	*		1350	2.5	201	*	1.001-1.011	
Nona	PCB-208	1.49e+05	1.39	y 53:06	0.93	1320		*	2.5	*	1.000	0.995-1.005	
Nona	PCB-207	5.72e+04	1.30	y 53:24	1.08	434		*	2.5	*	1.006	1.001-1.011	
Nona	PCB-206	3.21e+05	1.34	y 55:32	1.02	4390		*	2.5	*	1.000	0.995-1.005	
Deca	PCB-209	1.56e+05	1.13	y 56:49	1.17	2130		*	2.5	*	1.000	0.995-1.005	

Analyst: DMS

Date: 2/11/15

Client ID: WM-FD-02-20150122-S  
Lab ID: 1500116-02@20X

Filename: 150204E1 S:10 Acq: 4-FEB-15 18:09:30  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 2.0080 EndCAL: NA

ConCal: ST150204E1-2

Name	Resp	RA	RT	RRF	Conc	
Total Mono-PCB	4.42e+05	2.85 y	16:11	1.27	964.728	
Total Di-PCB	1.07e+07	1.46 y	20:07	1.21	23258.1	
Total Tri-PCB	3.65e+06	1.02 y	24:16	1.10	14939.2	
Total Tri-PCB	7.41e+06	1.15 y	28:40	1.21	18143.7	Sum:33082.9
Total Tetra-PCB	1.57e+07	0.71 y	29:49	1.09	66011.0	
Total Penta-PCB	1.99e+07	1.59 y	35:52	1.18	139717	
Total Penta-PCB	2.43e+06	1.55 y	42:16	1.25	9625.69	Sum:149342
Total Hexa-PCB	2.51e+06	1.21 y	40:51	0.90	32068.2	
Total Hexa-PCB	1.74e+07	1.14 y	42:12	1.11	91069.1	Sum:123137
Total Hepta-PCB	7.72e+06	0.98 y	44:09	1.42	60173.8	
Total Octa-PCB	1.05e+06	1.00 y	48:23	0.96	13995.6	
Total Octa-PCB	6.31e+05	0.78 y	52:58	1.33	5883.48	Sum:19879.1
Total Nona-PCB	5.27e+05	1.39 y	53:06	1.01	6138.18	
Total Deca-PCB	1.56e+05	1.13 y	56:49	1.17	2130.43	

Total PCB Conc:491128.630358

484.000

Integrations

by

Analyst: DMS

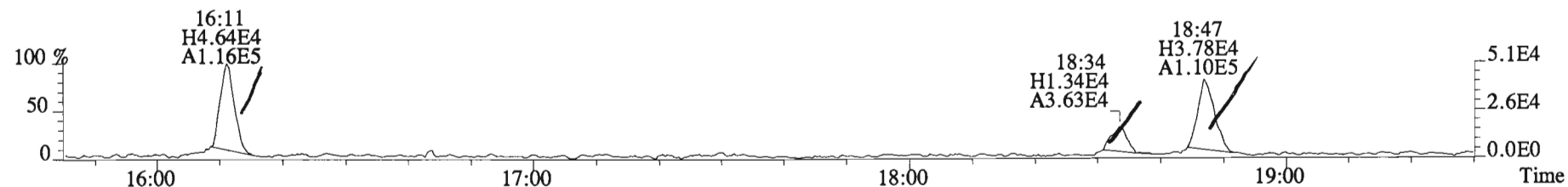
Date: 2/11/15

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	3.53e+06	2.90 y	0.87	16:10	0.623	0.629-0.635	8420	84.6												
13C-PCB-3	3.62e+06	3.05 y	0.91	18:46	0.723	0.725-0.733	8250	82.9			13C-PCB-79	2.80e+06	0.77 y	1.02	37:51	1.029	1.023-1.034	9750	97.9	
13C-PCB-4	2.69e+06	1.57 y	0.59	20:06	0.774	0.775-0.783	9530	95.7			13C-PCB-178	8.07e+05	0.49 y	0.61	45:42	0.984	0.979-0.990	8880	89.1	
13C-PCB-9	4.06e+06	1.65 y	0.90	21:53	0.843	0.842-0.850	9410	94.5												
13C-PCB-11	4.12e+06	1.63 y	0.94	25:16	0.973	0.968-0.978	9140	91.8												
13C-PCB-19	2.00e+06	1.16 y	0.53	24:15	0.934	0.930-0.940	7830	78.6												
13C-PCB-28	3.14e+06	1.07 y	0.93	29:06	1.003	0.999-1.009	8790	88.2												
13C-PCB-32	2.84e+06	1.10 y	0.80	27:09	1.046	1.040-1.050	7410	74.4												
13C-PCB-37	3.06e+06	1.07 y	0.84	32:59	1.137	1.131-1.143	9520	95.6												
13C-PCB-47	2.01e+06	0.81 y	0.81	32:03	0.871	0.866-0.874	8770	88.0												
13C-PCB-52	1.90e+06	0.84 y	0.77	31:31	0.856	0.853-0.861	8730	87.7												
13C-PCB-54	2.28e+06	0.78 y	0.97	27:58	0.760	0.758-0.766	8310	83.5												
13C-PCB-70	2.69e+06	0.89 y	1.00	35:33	0.966	0.961-0.971	9540	95.8												
13C-PCB-77	2.43e+06	0.74 y	0.94	39:41	1.078	1.073-1.083	9120	91.6												
13C-PCB-80	2.69e+06	0.79 y	1.03	35:58	0.977	0.972-0.982	9250	92.9												
13C-PCB-81	2.32e+06	0.75 y	0.92	39:05	1.062	1.057-1.067	8930	89.7												
13C-PCB-95	1.20e+06	1.56 y	0.74	35:50	0.912	0.908-0.918	10600	106												
13C-PCB-97	9.56e+05	1.77 y	0.70	38:51	0.989	0.984-0.994	8810	88.5												
13C-PCB-101	1.22e+06	1.75 y	0.78	37:32	0.955	0.951-0.961	10100	101												
13C-PCB-104	1.48e+06	1.45 y	1.00	32:41	0.832	0.828-0.836	9610	96.5												
13C-PCB-105	1.95e+06	1.53 y	1.37	43:07	0.929	0.924-0.934	9650	96.9												
13C-PCB-114	1.94e+06	1.54 y	1.36	42:16	0.910	0.905-0.915	9610	96.5												
13C-PCB-118	1.27e+06	1.60 y	0.96	41:35	1.059	1.054-1.064	8620	86.5												
13C-PCB-123	1.38e+06	1.77 y	0.89	41:25	1.054	1.050-1.060	10000	101												
13C-PCB-126	1.71e+06	1.52 y	1.31	45:23	0.977	0.972-0.982	8860	88.9												
13C-PCB-127	2.12e+06	1.50 y	1.47	43:28	0.936	0.931-0.941	9720	97.5												
13C-PCB-138	1.47e+06	1.28 y	1.10	44:52	0.966	0.961-0.971	9000	90.4												
13C-PCB-141	1.53e+06	1.32 y	1.07	44:02	0.948	0.943-0.953	9610	96.4												
13C-PCB-153	1.68e+06	1.42 y	1.15	43:17	0.932	0.927-0.937	9880	99.2												
13C-PCB-155	1.02e+06	1.19 y	0.84	37:05	0.944	0.939-0.949	7920	79.5												
13C-PCB-156	1.77e+06	1.16 y	1.30	48:10	1.037	1.032-1.042	9210	92.5												
13C-PCB-157	1.96e+06	1.36 y	1.36	48:26	1.043	1.038-1.048	9760	98.0												
13C-PCB-159	1.60e+06	1.16 y	1.25	46:11	0.995	0.989-0.999	8690	87.2												
13C-PCB-167	1.84e+06	1.31 y	1.35	46:52	1.009	1.004-1.014	9190	92.3												
13C-PCB-169	1.60e+06	1.09 y	1.29	50:33	1.088	1.083-1.093	8410	84.4												
13C-PCB-170	6.67e+05	0.45 y	0.54	50:52	1.095	1.089-1.101	8310	83.4												
13C-PCB-180	8.42e+05	0.47 y	0.68	49:28	1.065	1.060-1.070	8310	83.4												
13C-PCB-188	1.24e+06	0.40 y	0.92	42:53	0.923	0.919-0.929	9130	91.7												
13C-PCB-189	7.42e+05	0.44 y	0.72	52:20	1.127	1.120-1.132	7000	70.3												
13C-PCB-194	8.79e+05	0.92 y	0.80	53:50	0.995	0.990-1.000	9640	96.8												
13C-PCB-202	8.81e+05	0.93 y	0.84	48:22	1.042	1.036-1.046	7100	71.3												
13C-PCB-206	7.11e+05	0.79 y	0.65	55:31	1.026	1.021-1.031	9580	96.2												
13C-PCB-208	1.21e+06	0.74 y	1.08	53:05	0.981	0.976-0.986	9810	98.5												
13C-PCB-209	6.25e+05	1.29 y	0.61	56:49	1.050	1.045-1.055	8960	90.0												

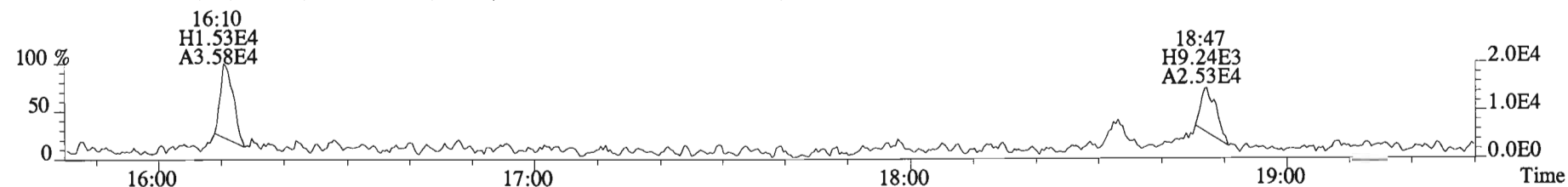
Analyst: DMJ

Date: 2/12/15

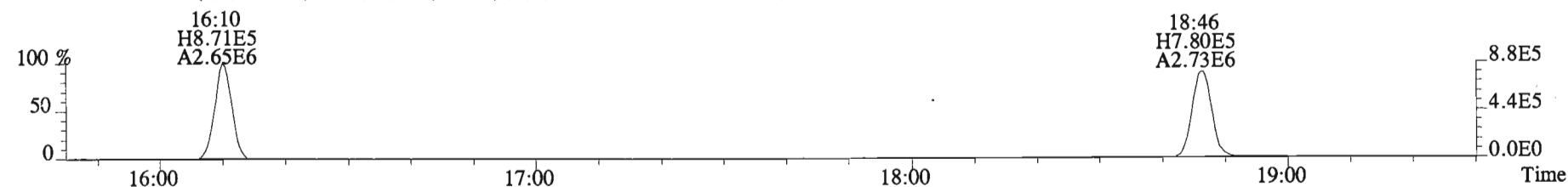
File:150204E1 #1-729 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
 188.0393 S:10 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2276.0,0.00%,F,F)



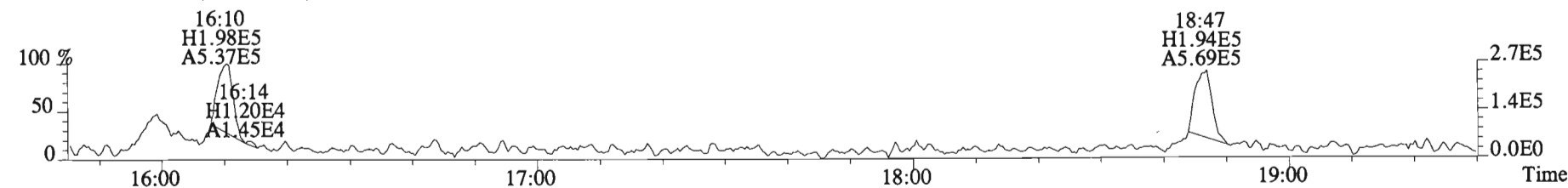
190.0363 S:10 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2764.0,0.00%,F,F)



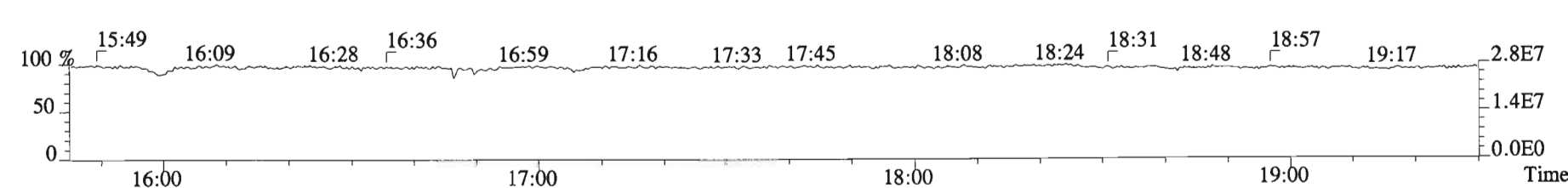
200.0795 S:10 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3268.0,0.00%,F,F)



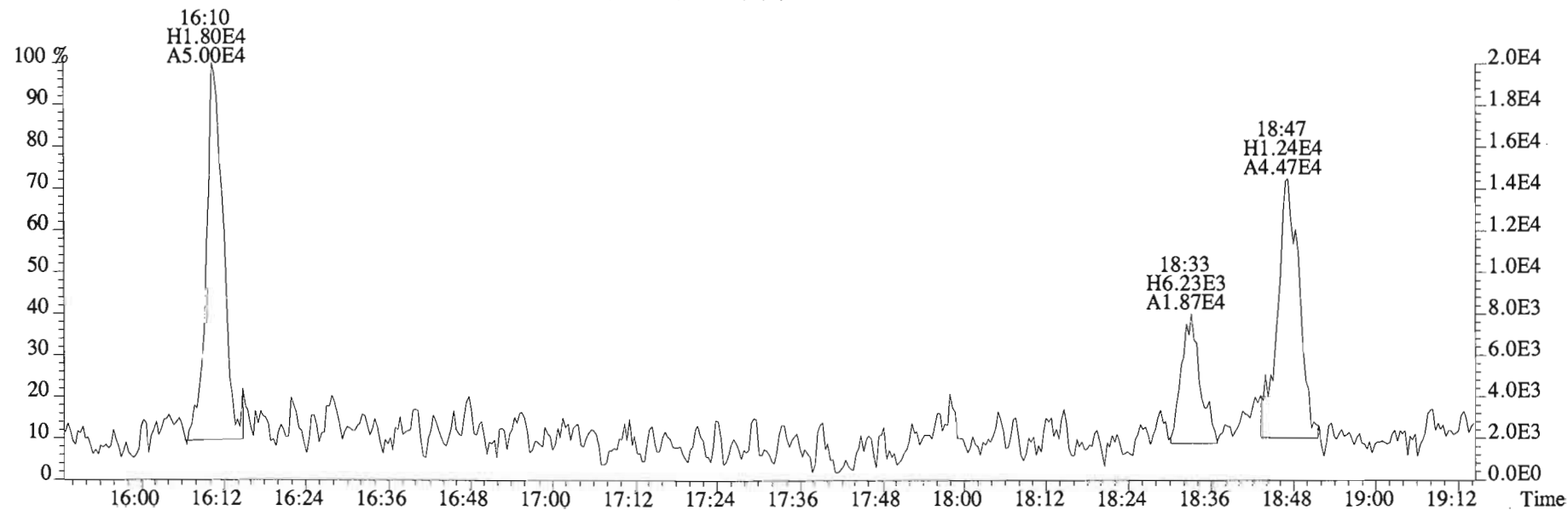
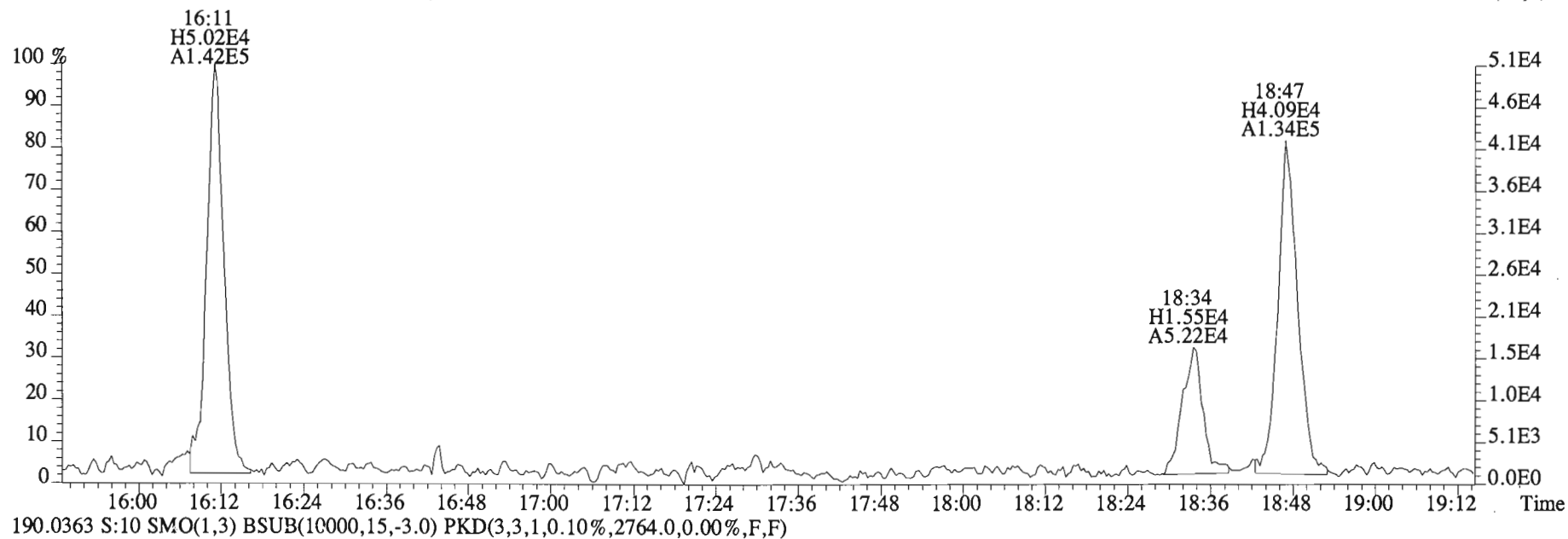
202.0766 S:10 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,35012.0,0.00%,F,F)



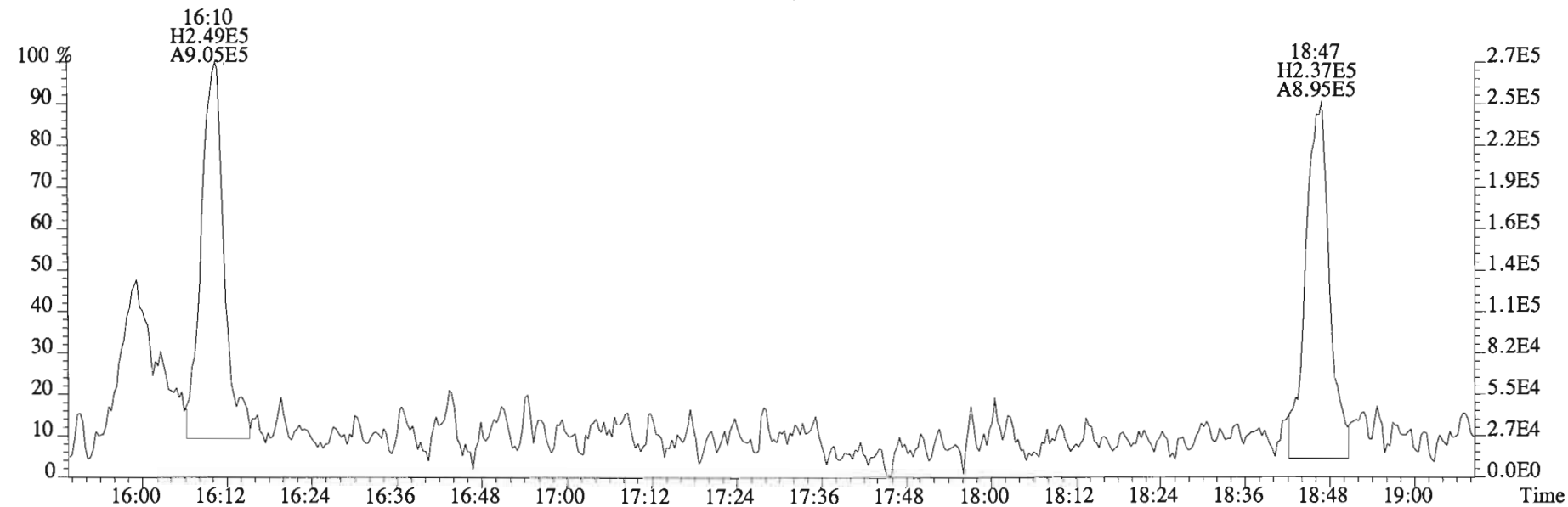
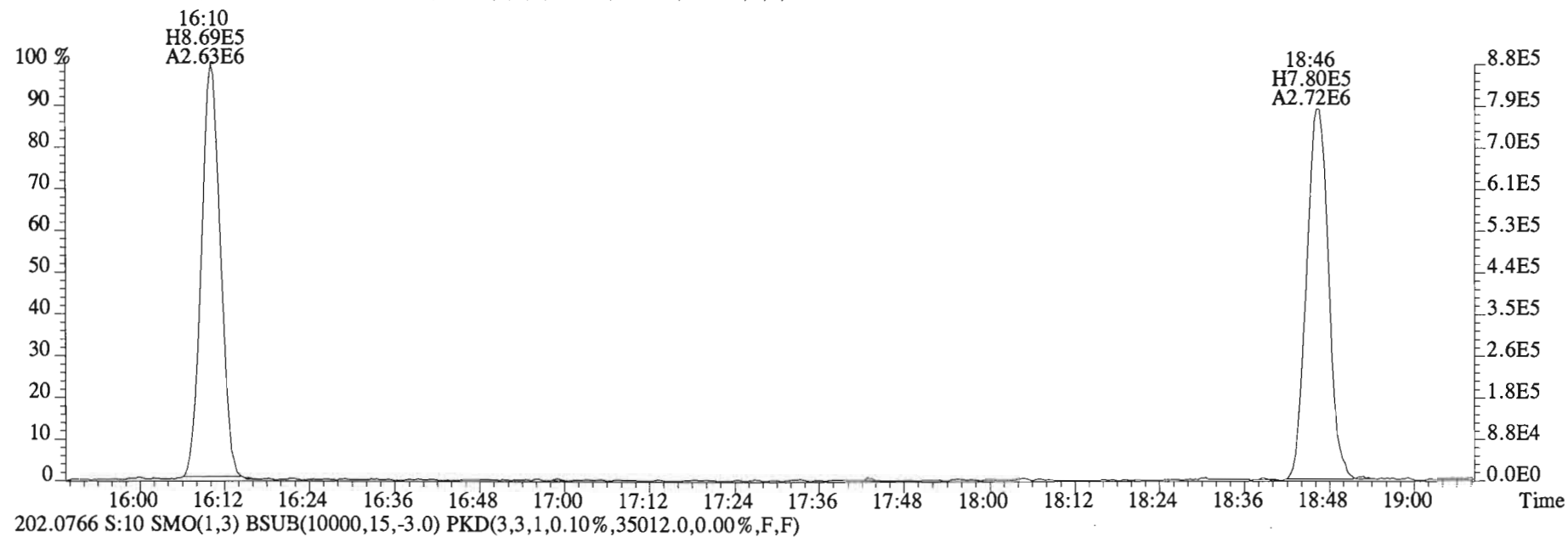
180.9880 S:10



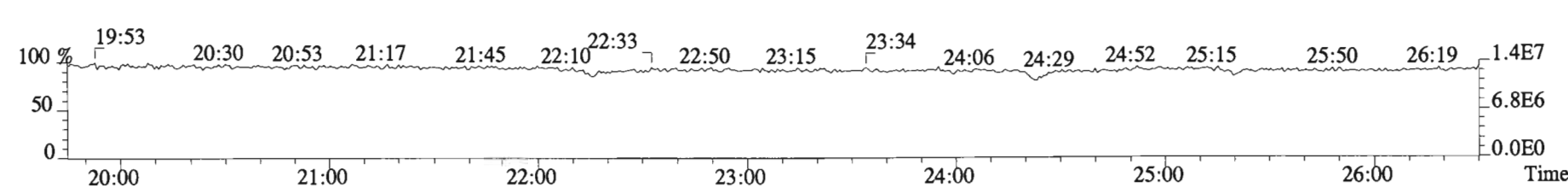
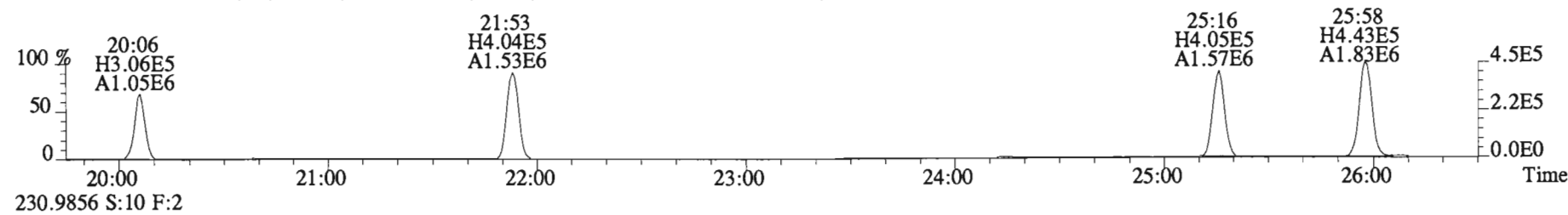
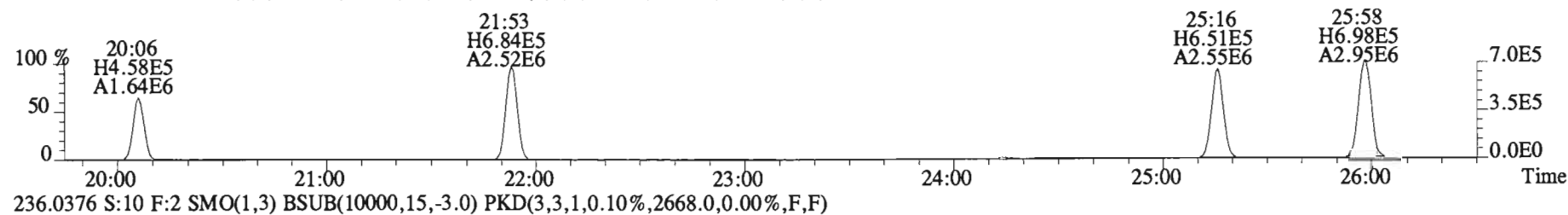
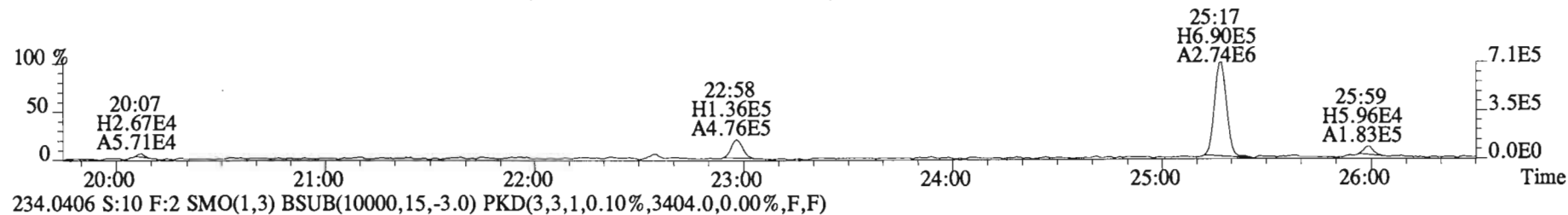
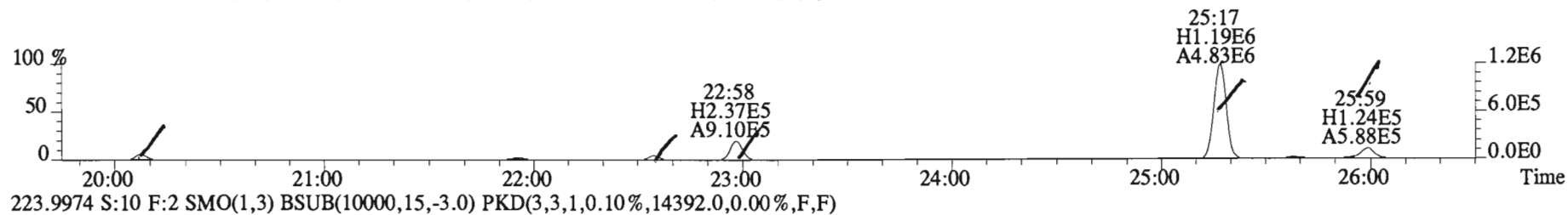
File:150204E1 #1-729 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
188.0393 S:10 SMO(1,3) BSUB(10000,15,-3.0)



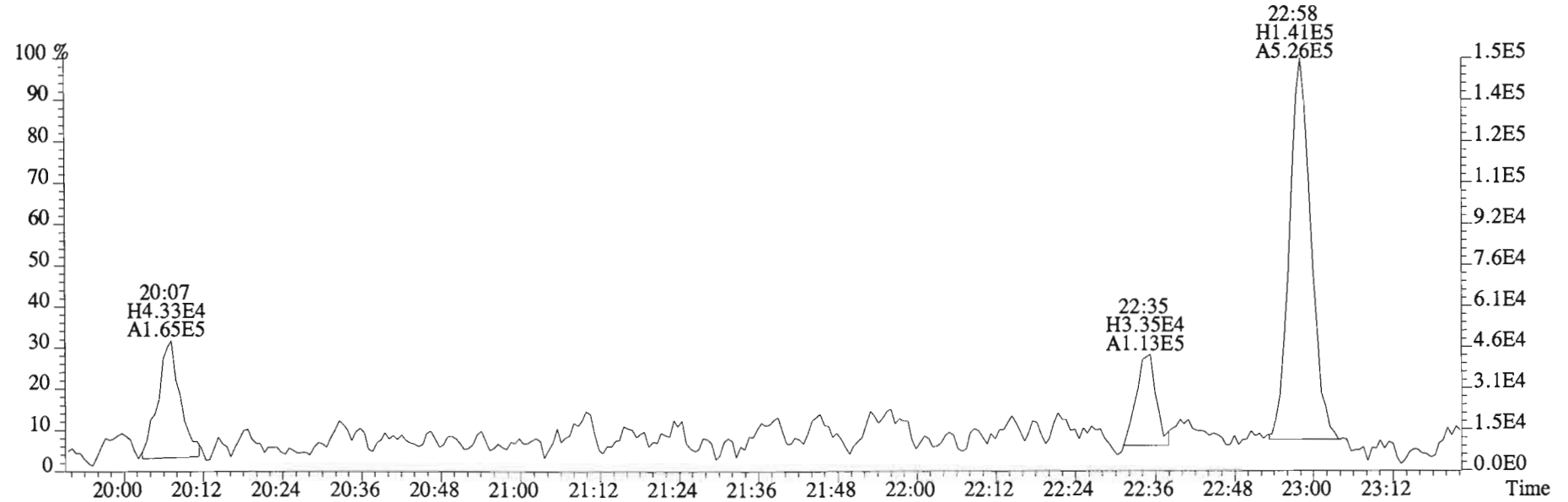
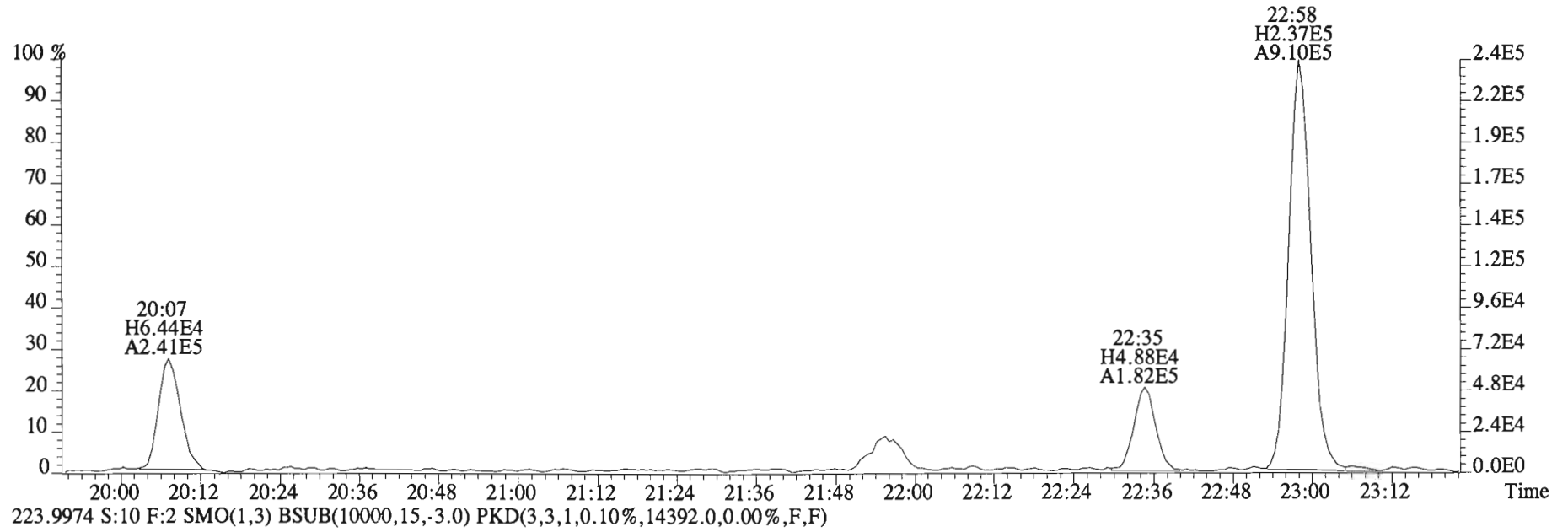
File:150204E1 #1-729 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
200.0795 S:10 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3268.0,0.00%,F,F)



File:150204E1 #1-757 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
 222.0003 S:10 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2588.0,0.00%,F,F)

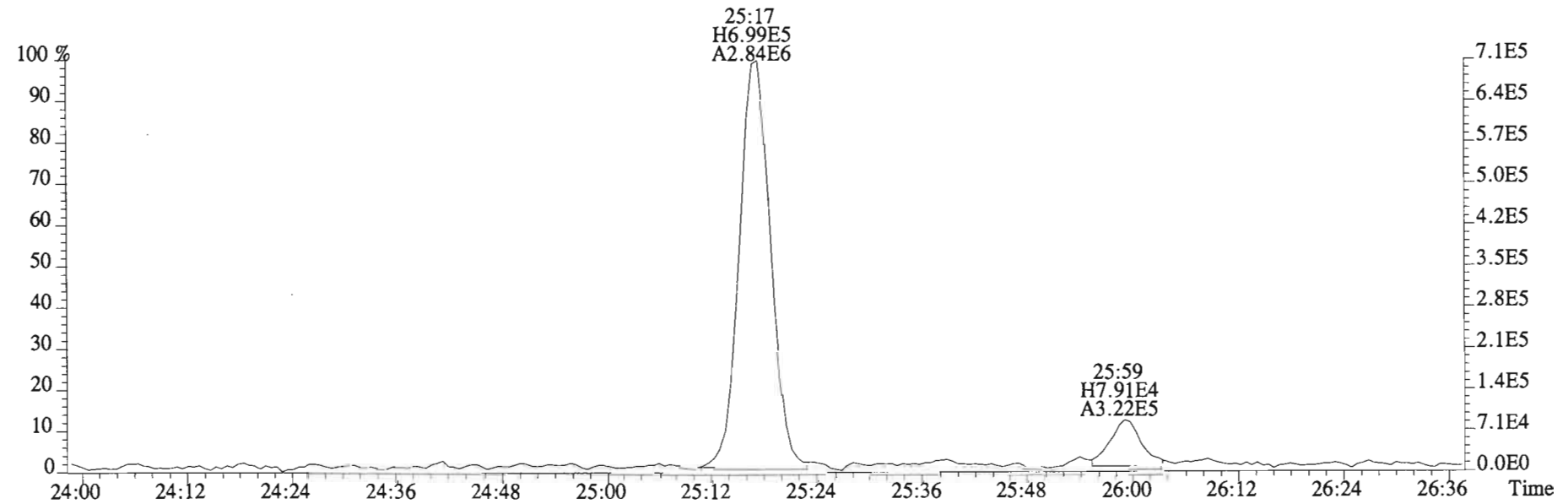
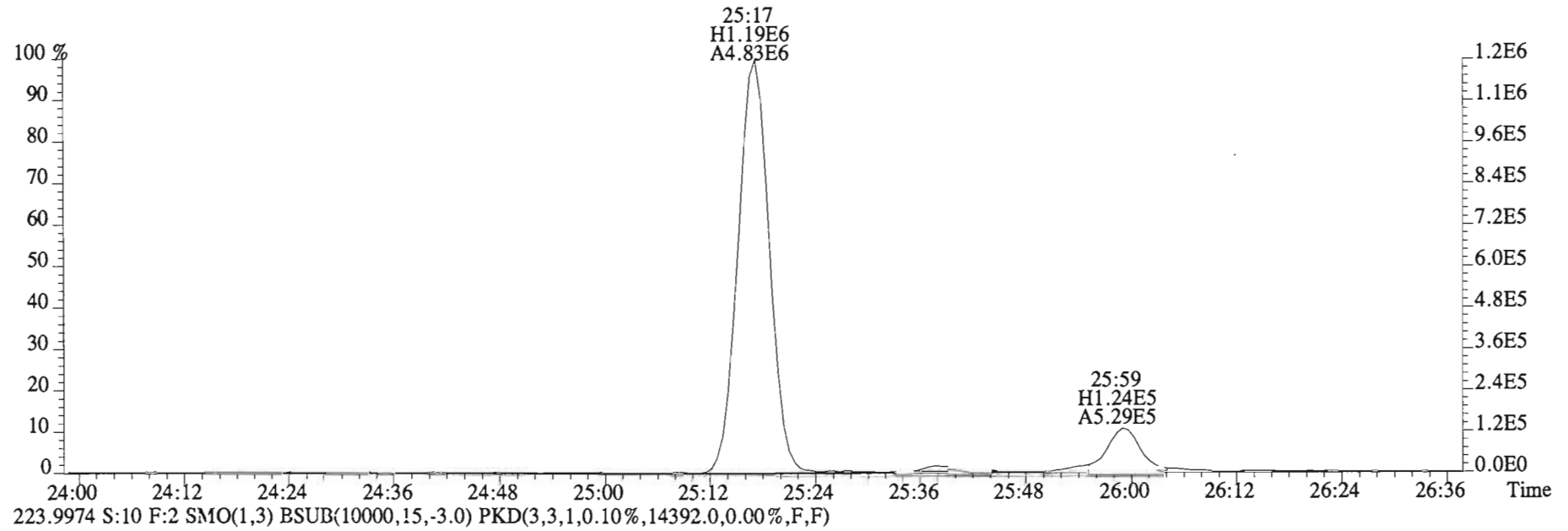


File:150204E1 #1-757 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
222.0003 S:10 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2588.0,0.00%,F,F)

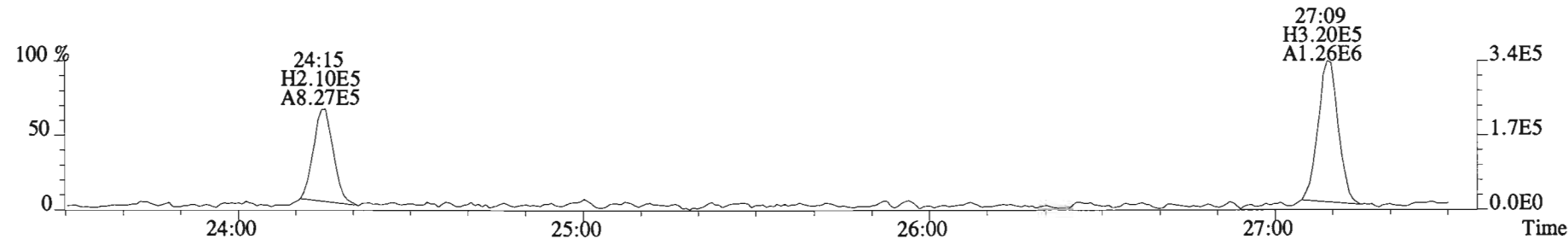
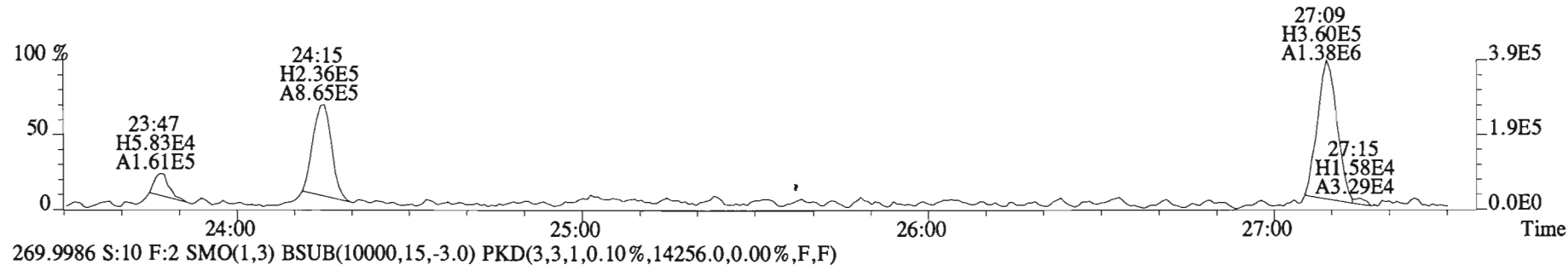
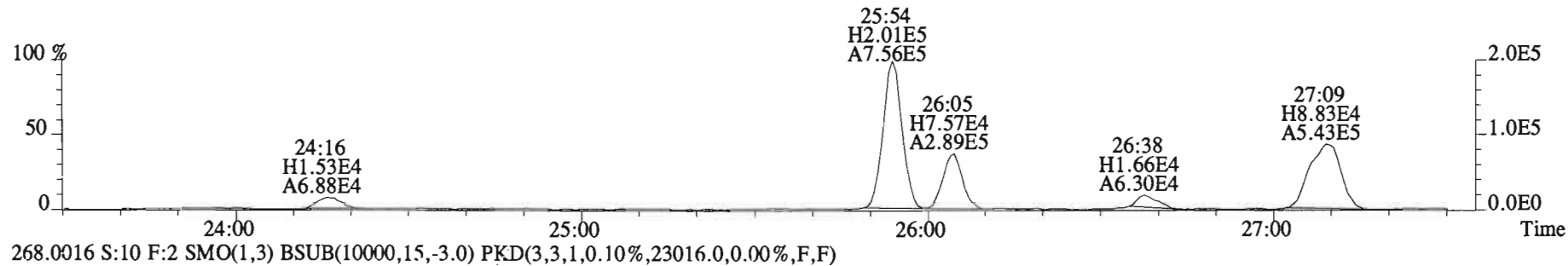
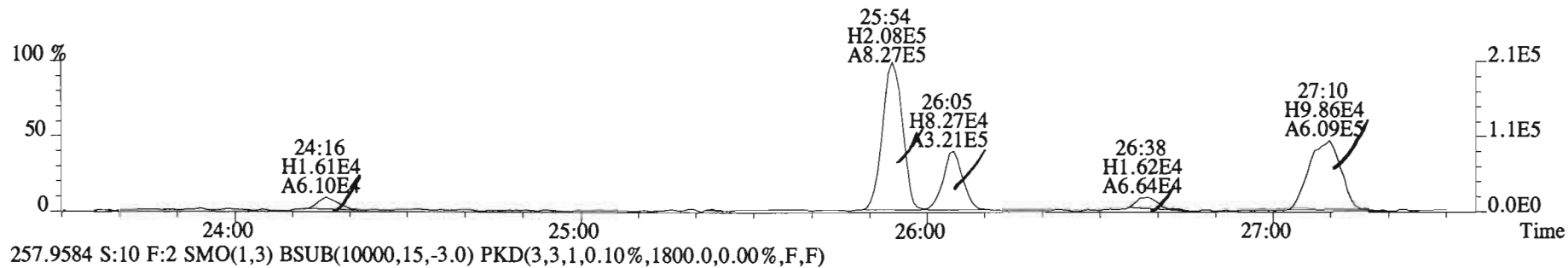




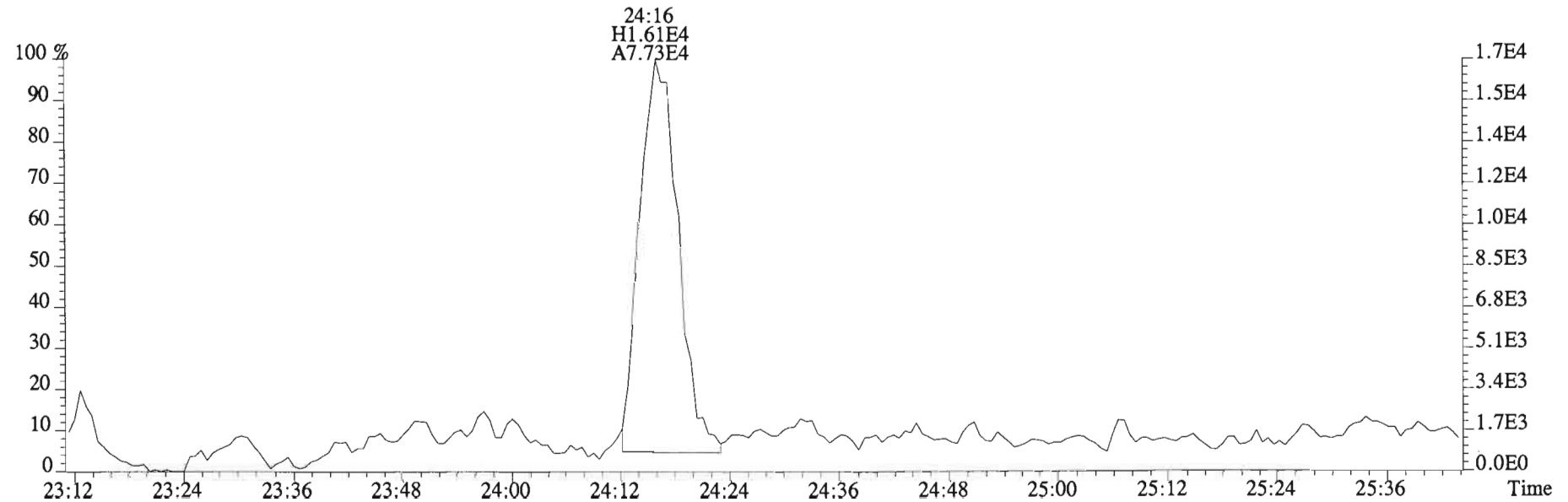
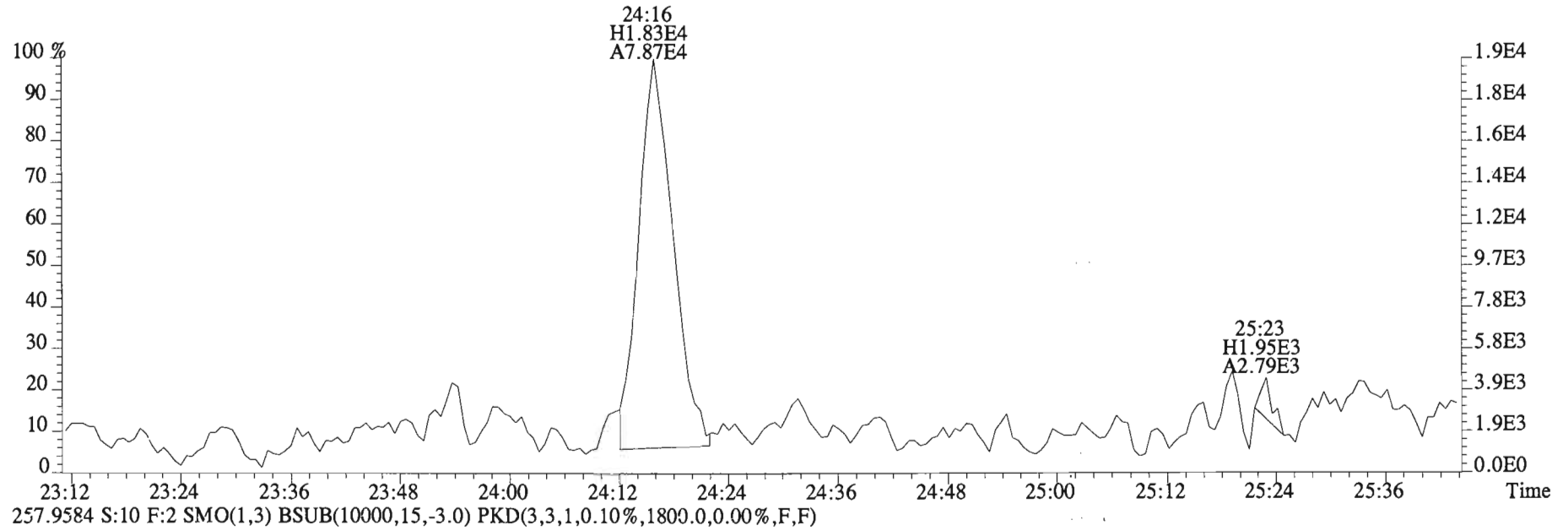
File:150204E1 #1-757 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
222.0003 S:10 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2588.0,0.00%,F,F)



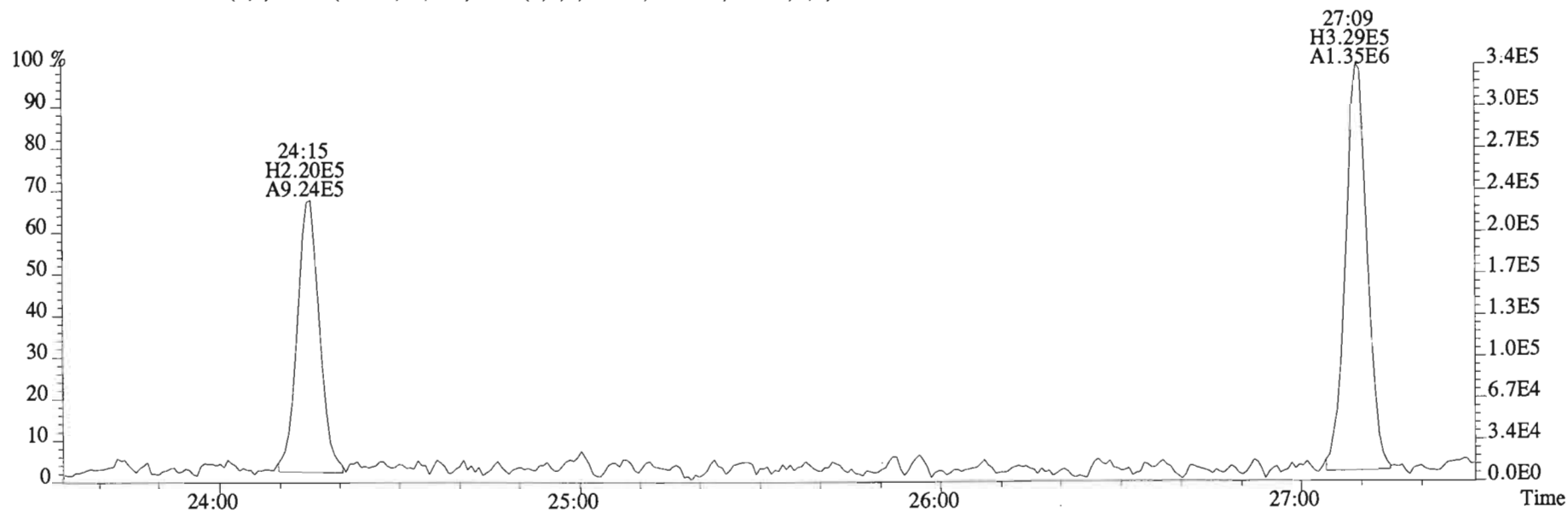
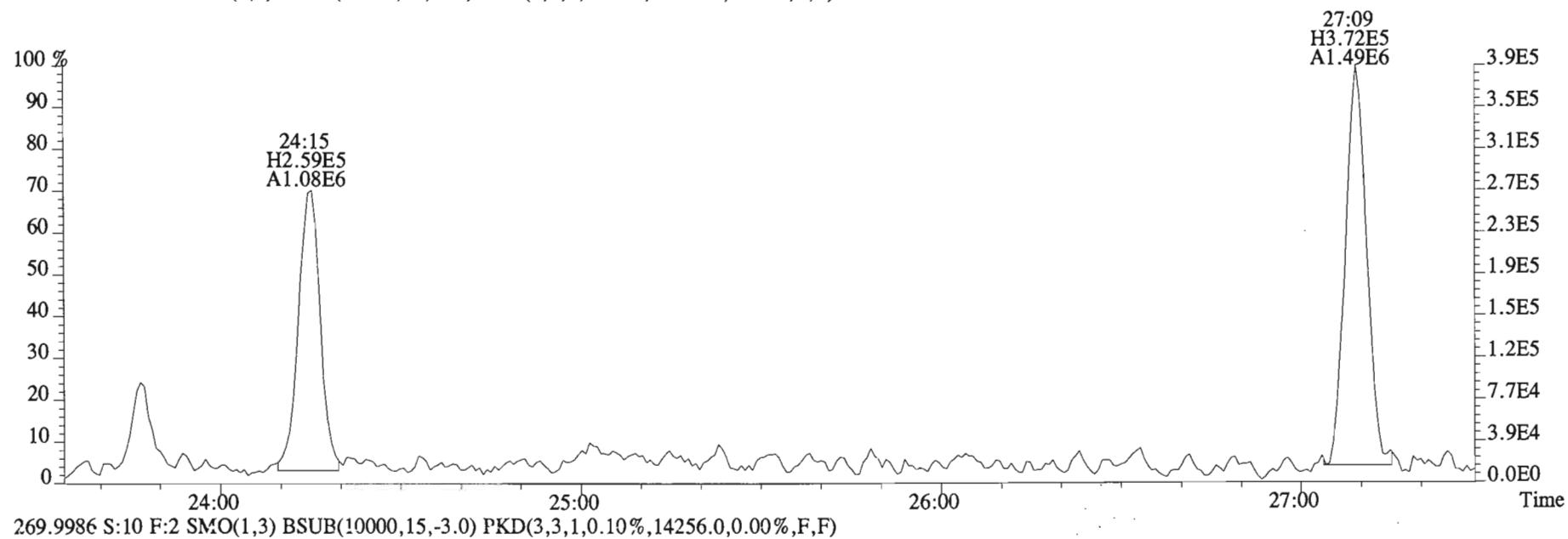
File:150204E1 #1-757 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
 255.9613 S:10 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2688.0,0.00%,F,F)



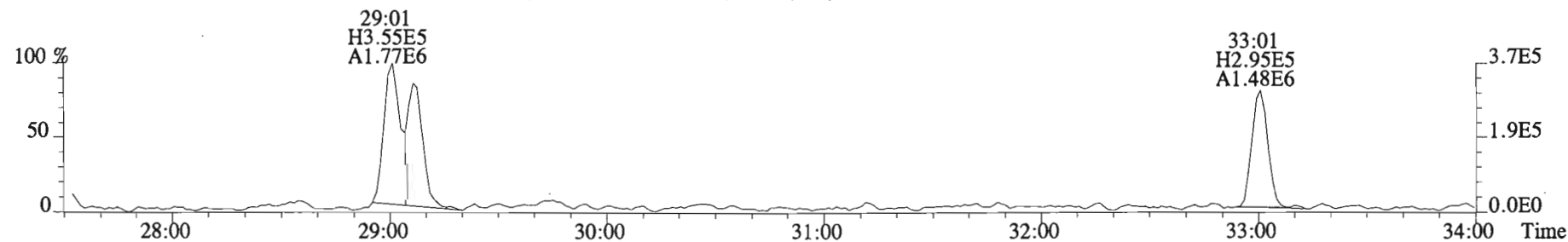
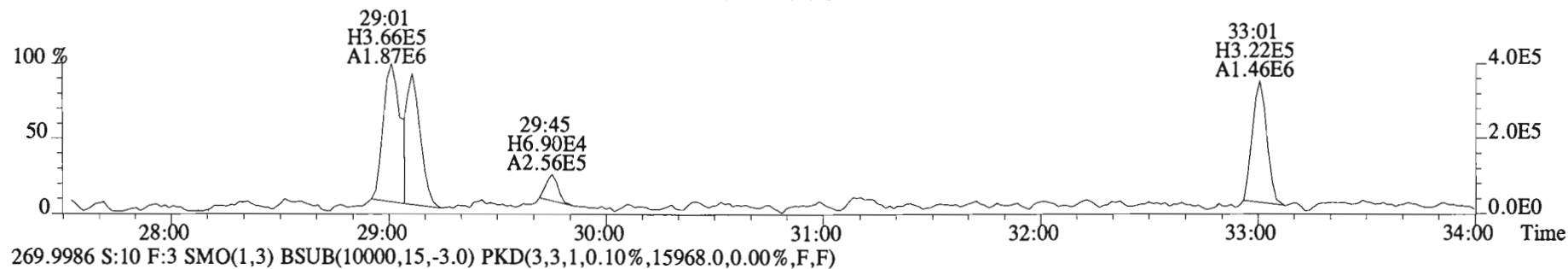
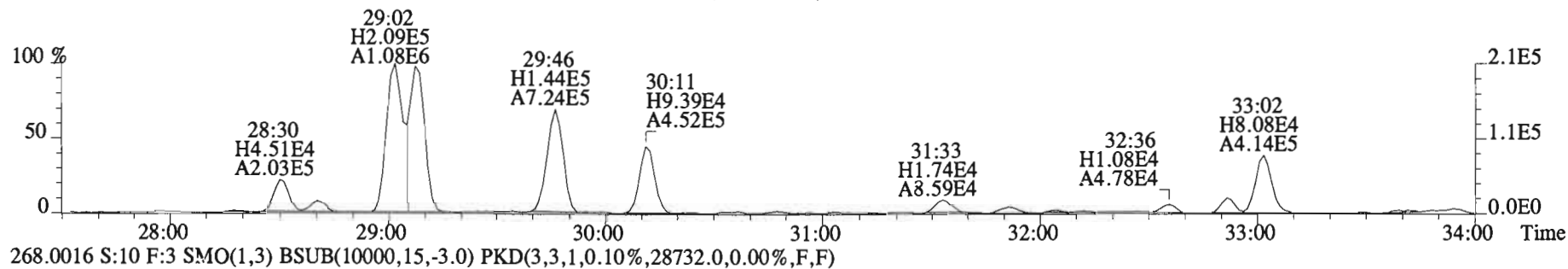
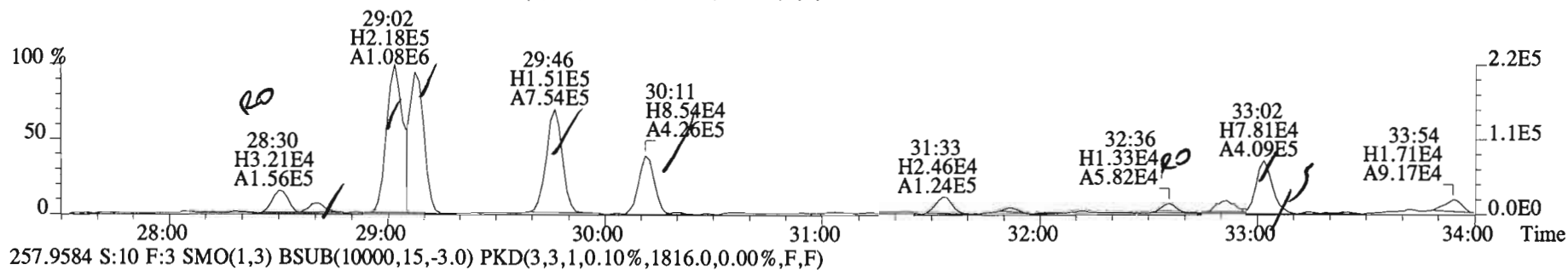
File:150204E1 #1-757 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
255.9613 S:10 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2688.0,0.00%,F,F)



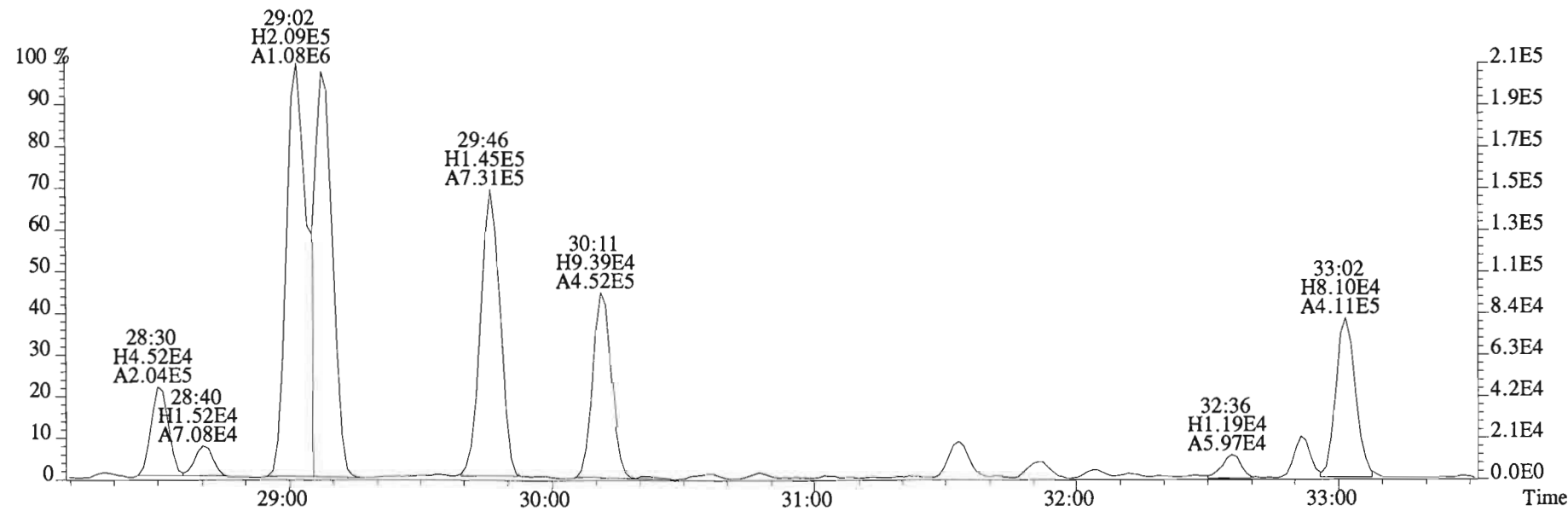
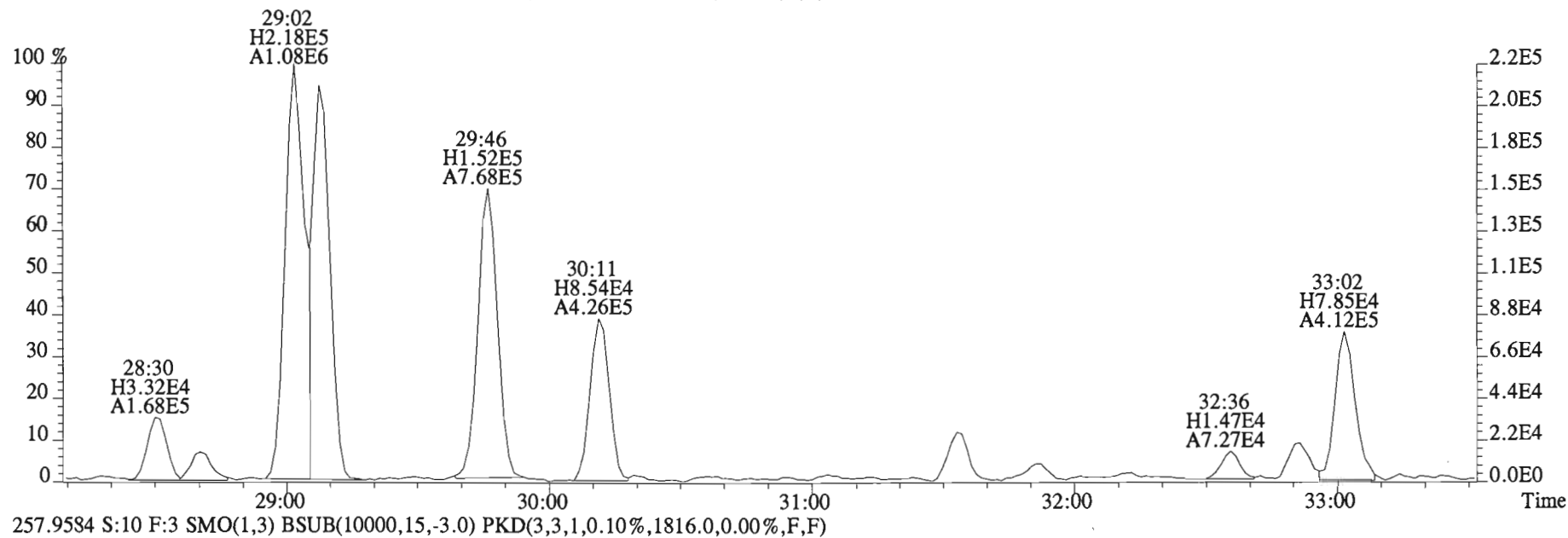
File:150204E1 #1-757 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
268.0016 S:10 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,23016.0,0.00%,F,F)



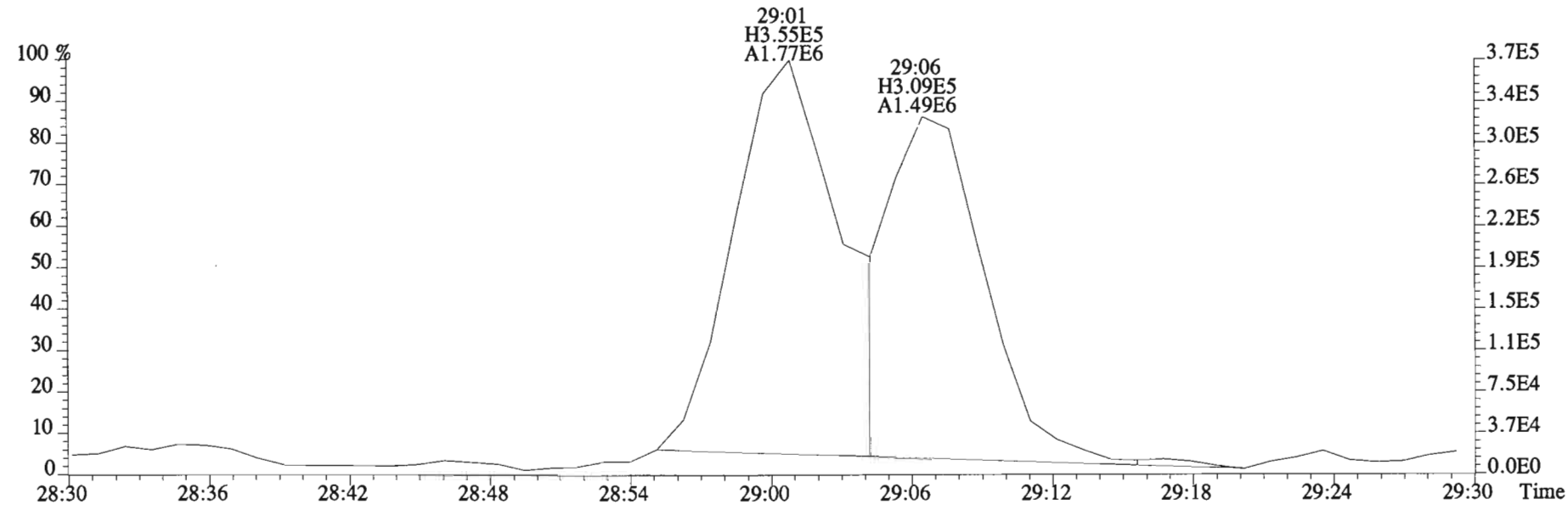
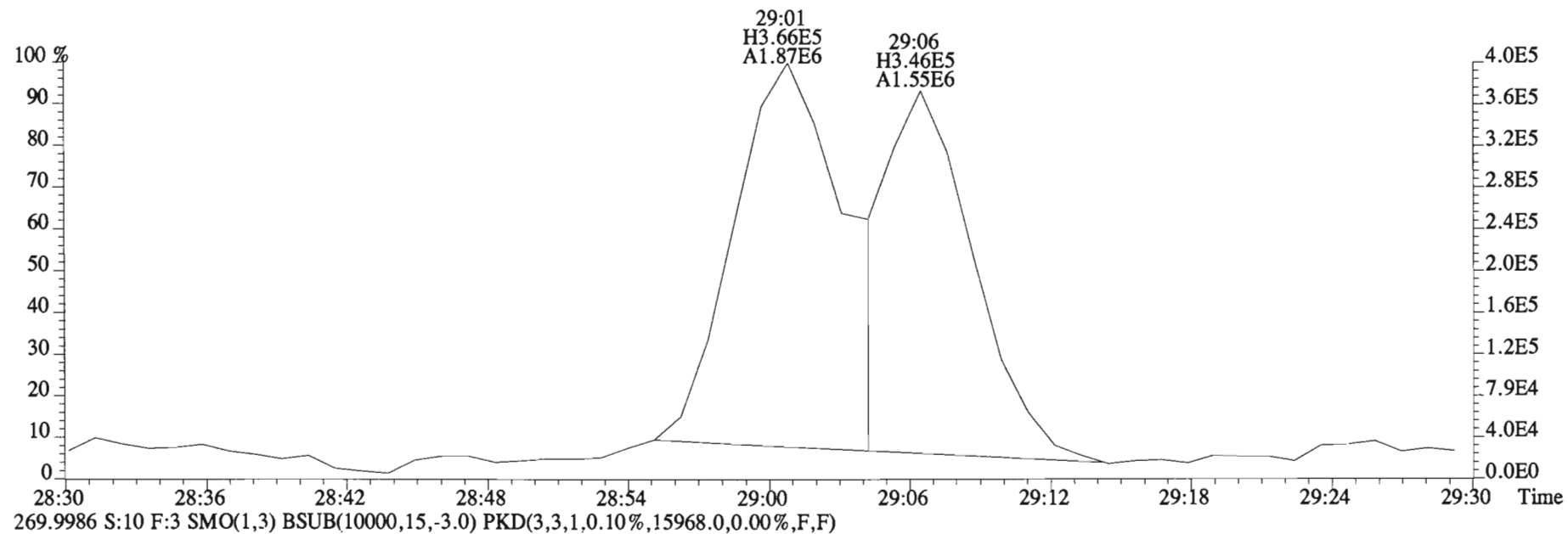
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
255.9613 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2808.0,0.00%,F,F)



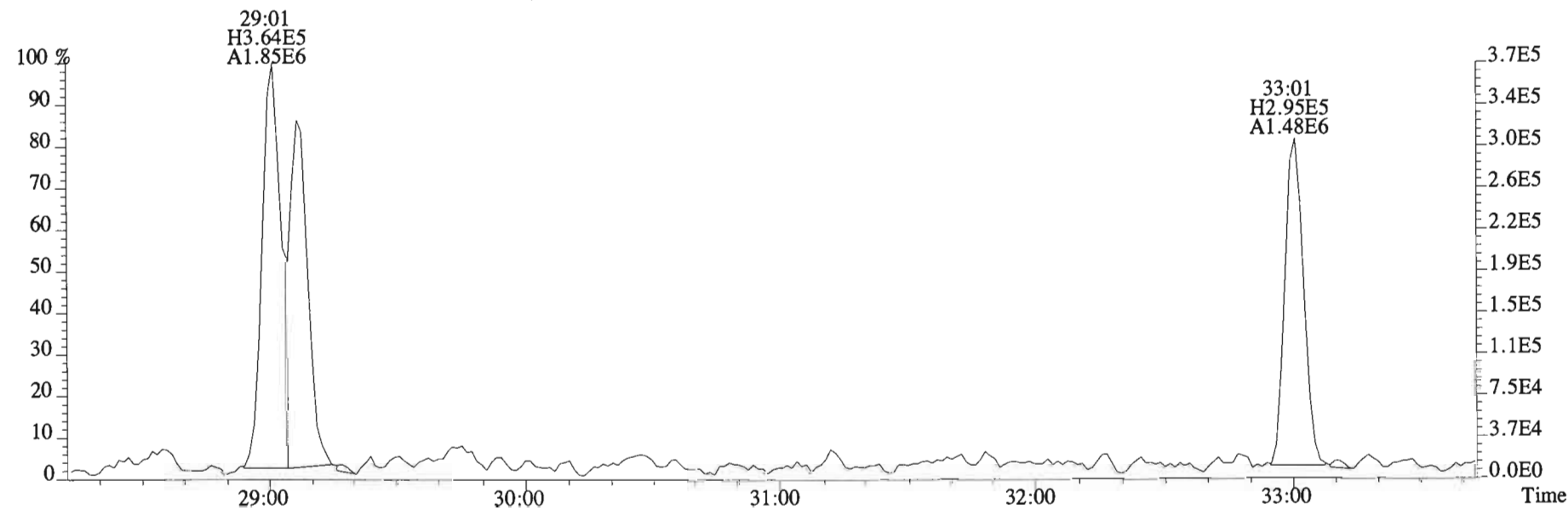
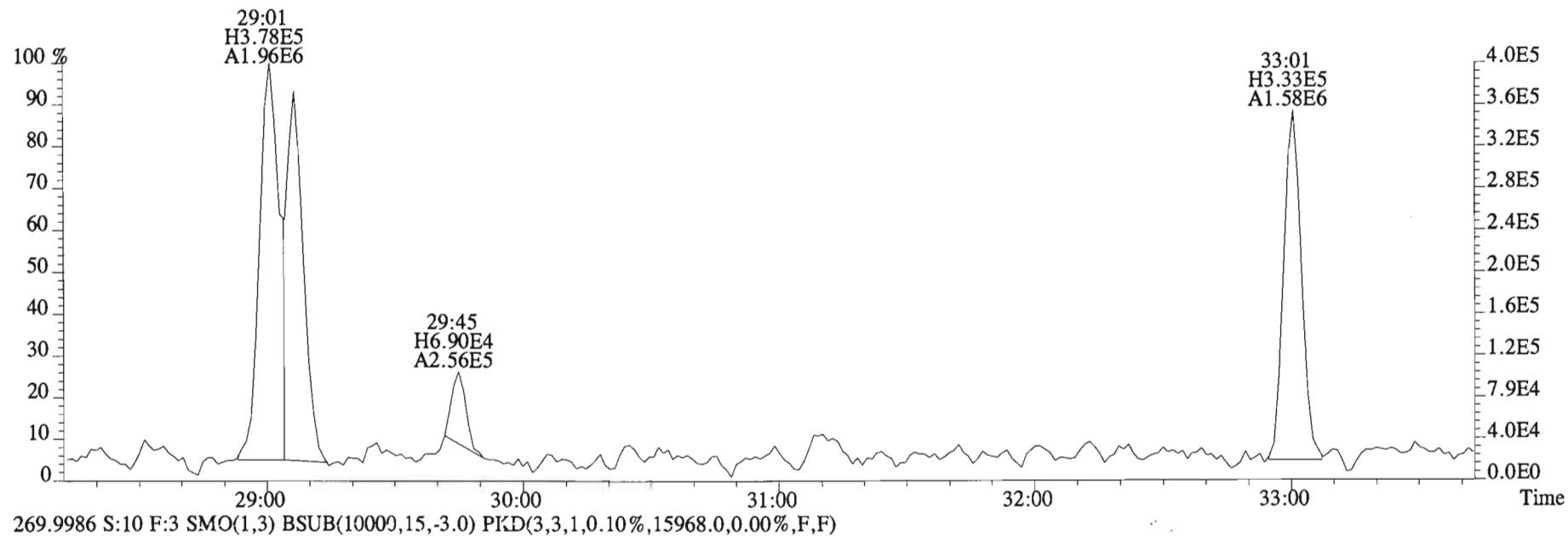
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
 255.9613 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2808.0,0.00%,F,F)



File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
268.0016 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,28732.0,0.00%,F,F)

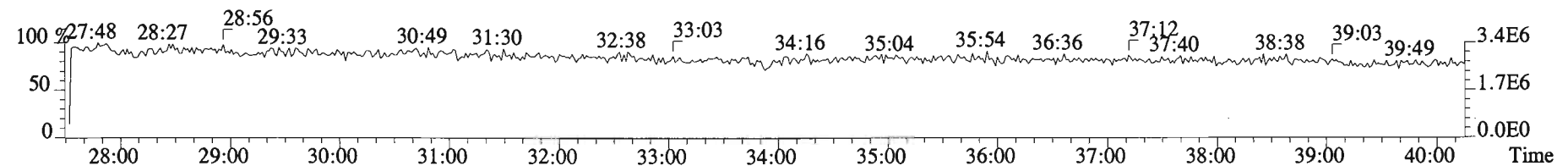
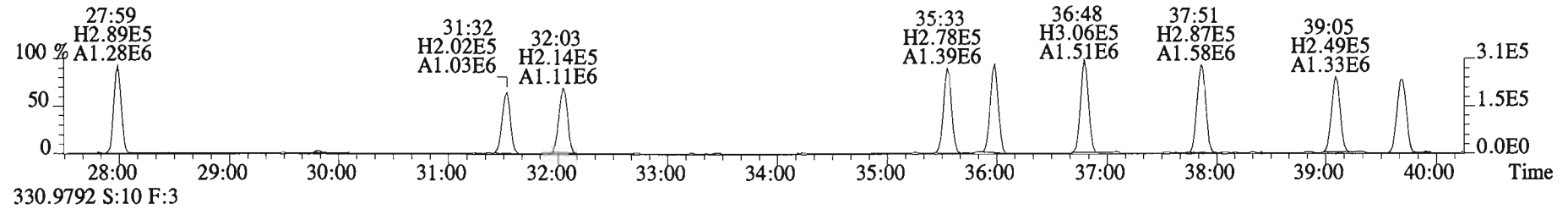
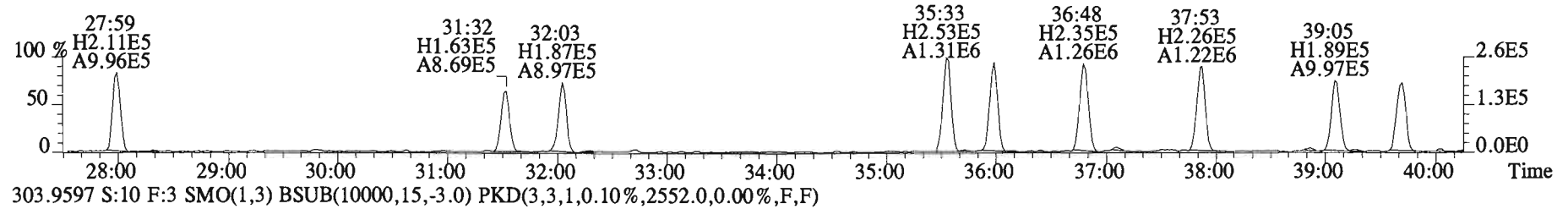
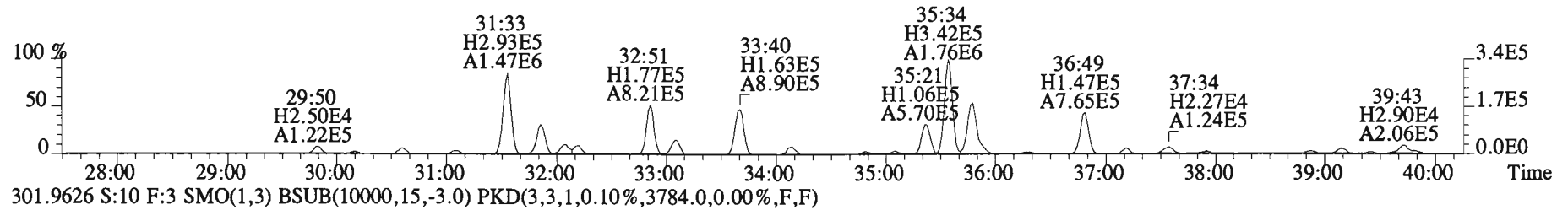
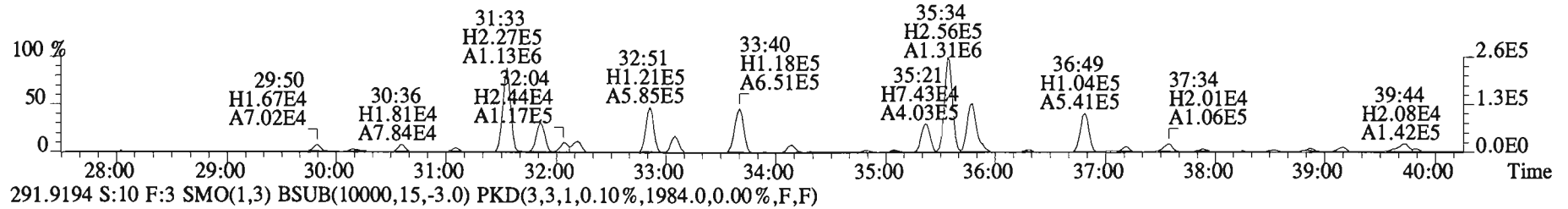


File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
268.0016 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,28732.0,0.00%,F,F)

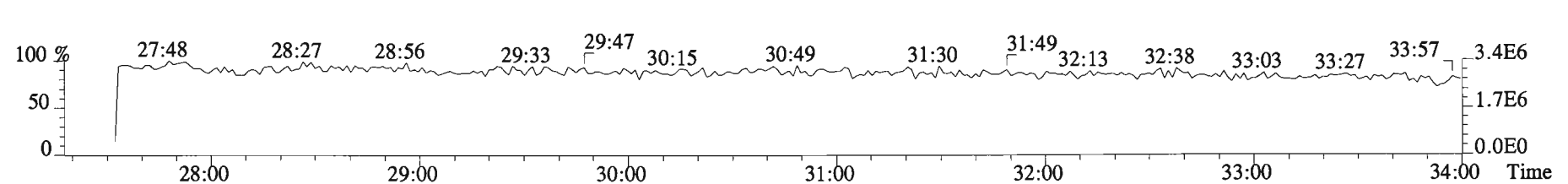
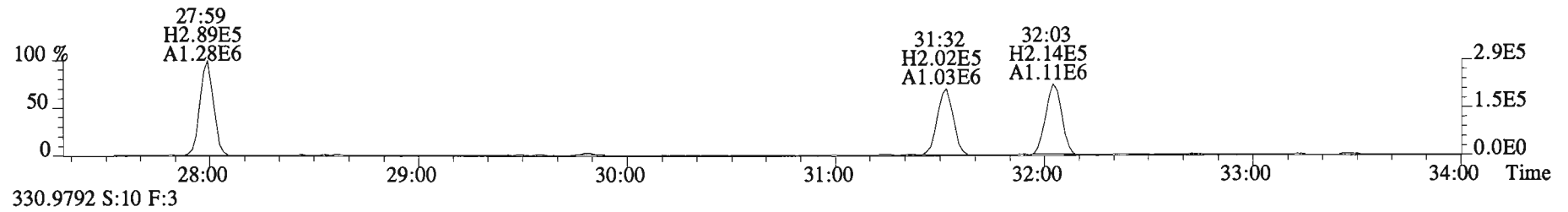
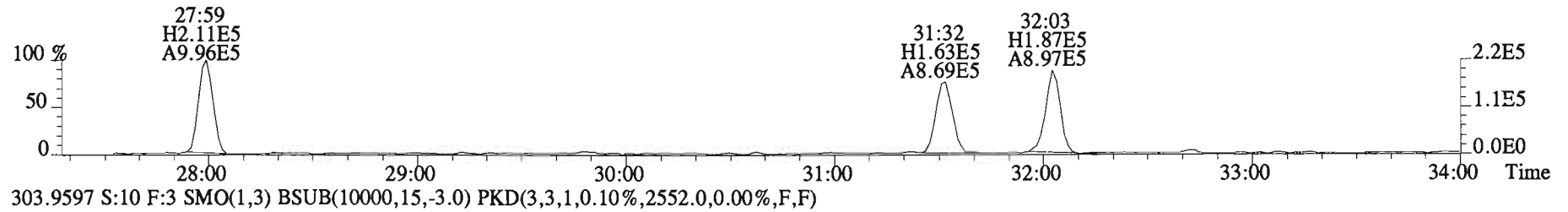
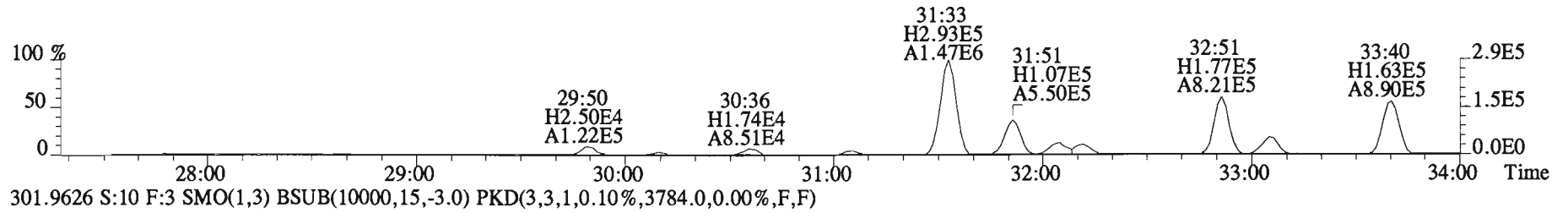
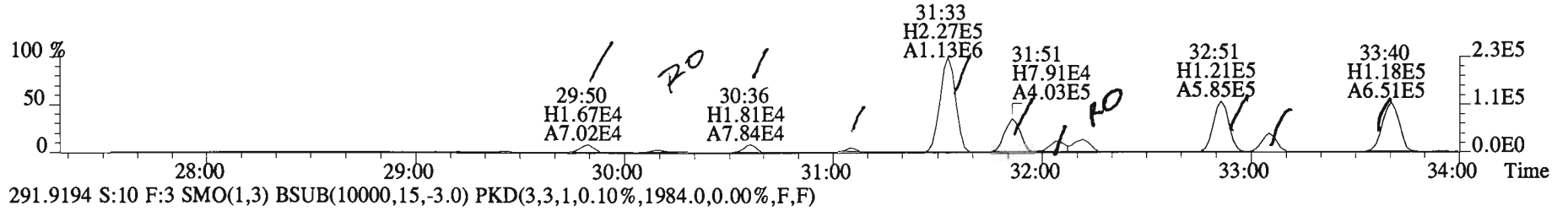




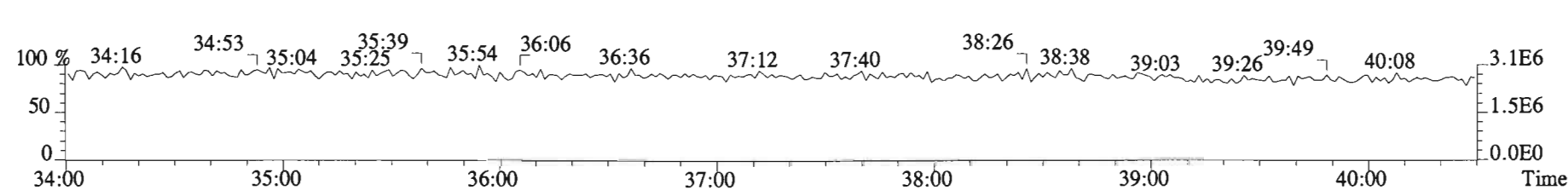
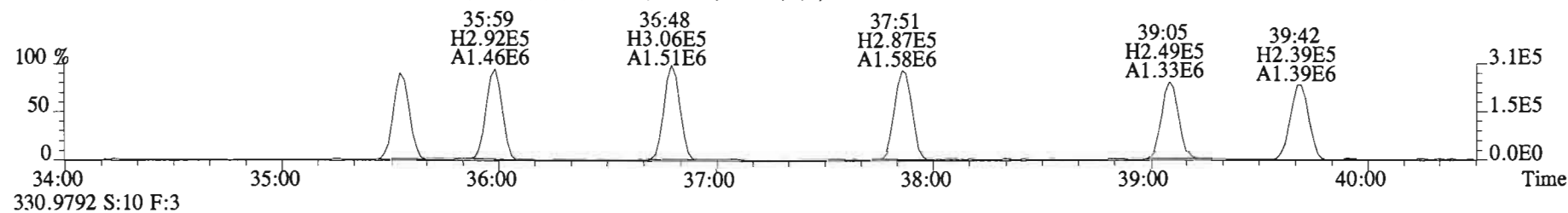
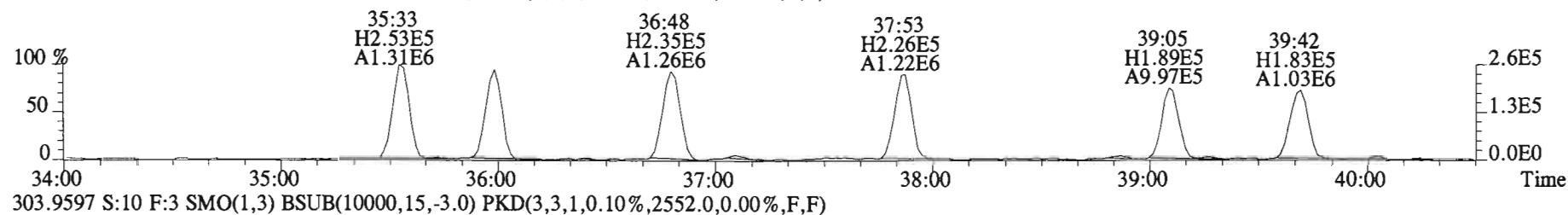
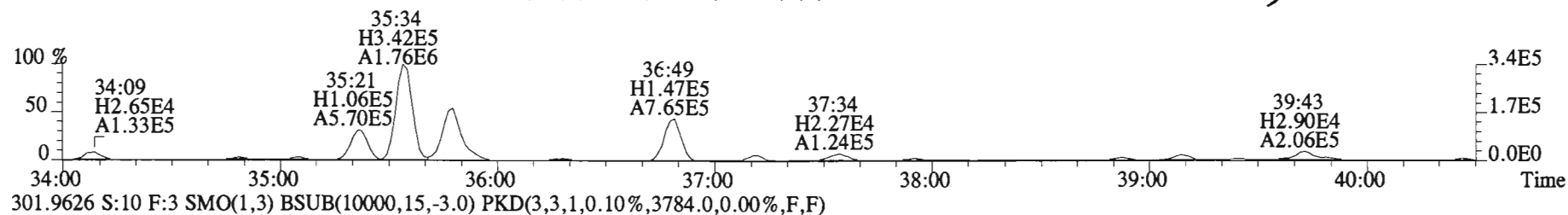
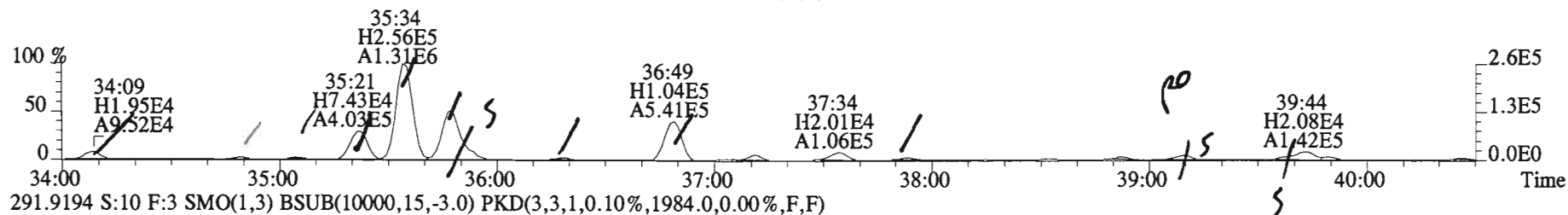
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
289.9224 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976.0,0.00%,F,F)



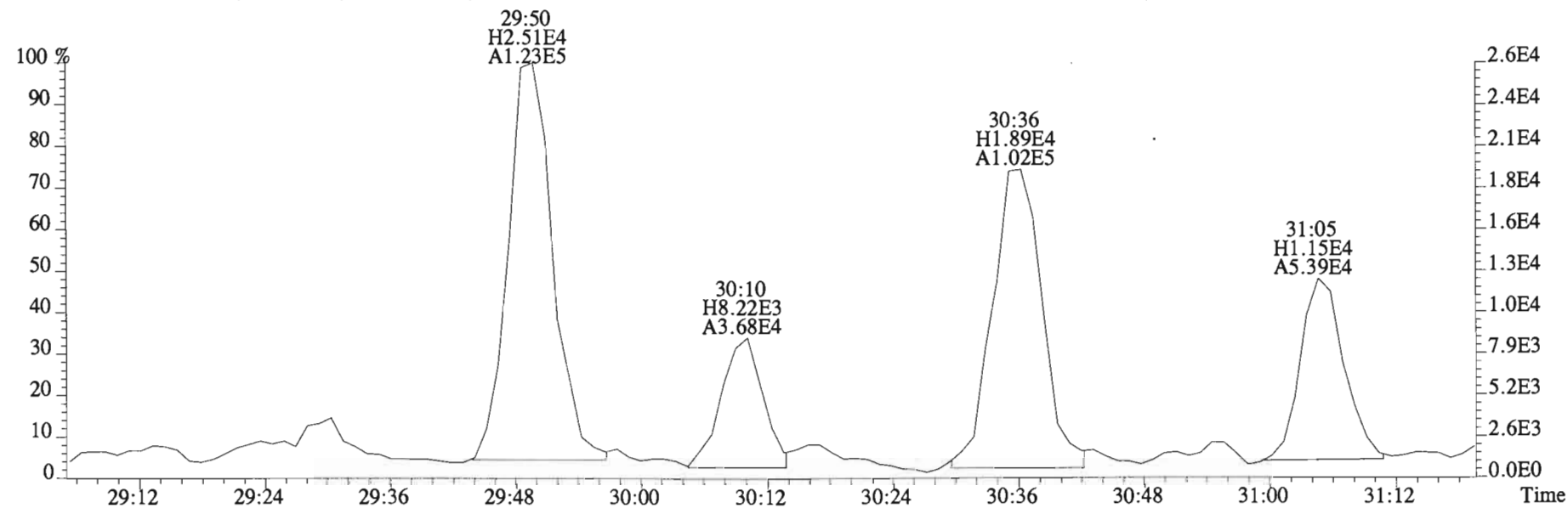
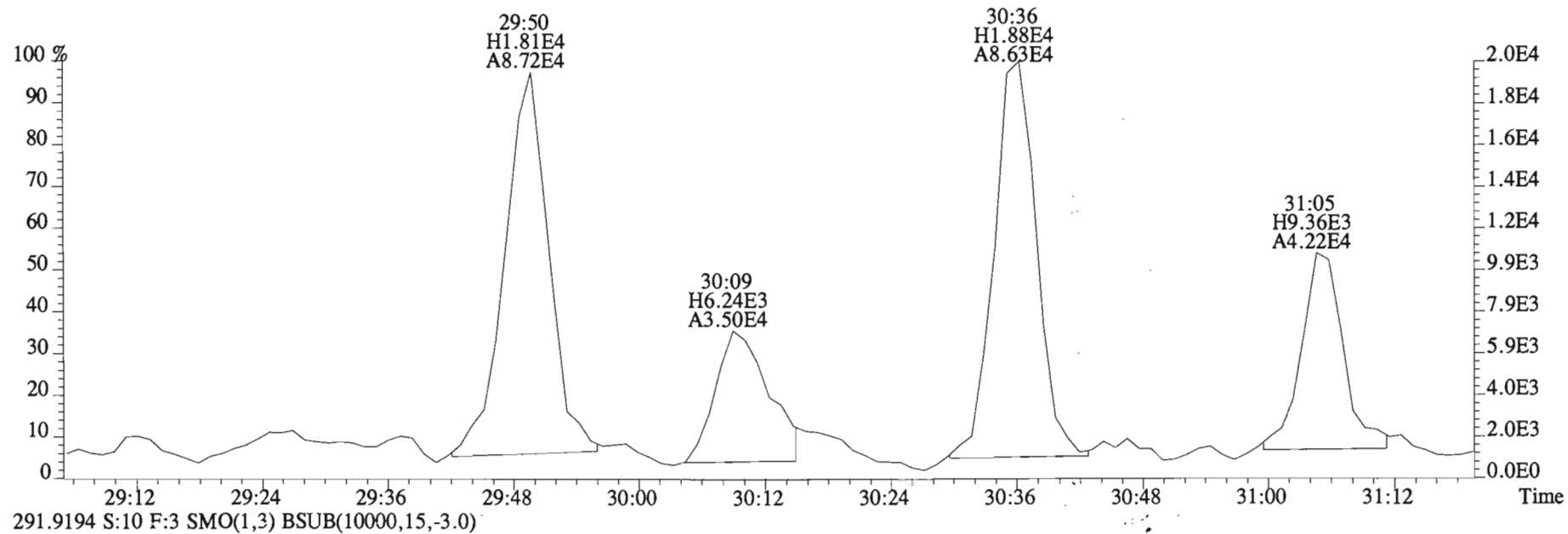
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
289.9224 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976.0,0.00%,F,F)



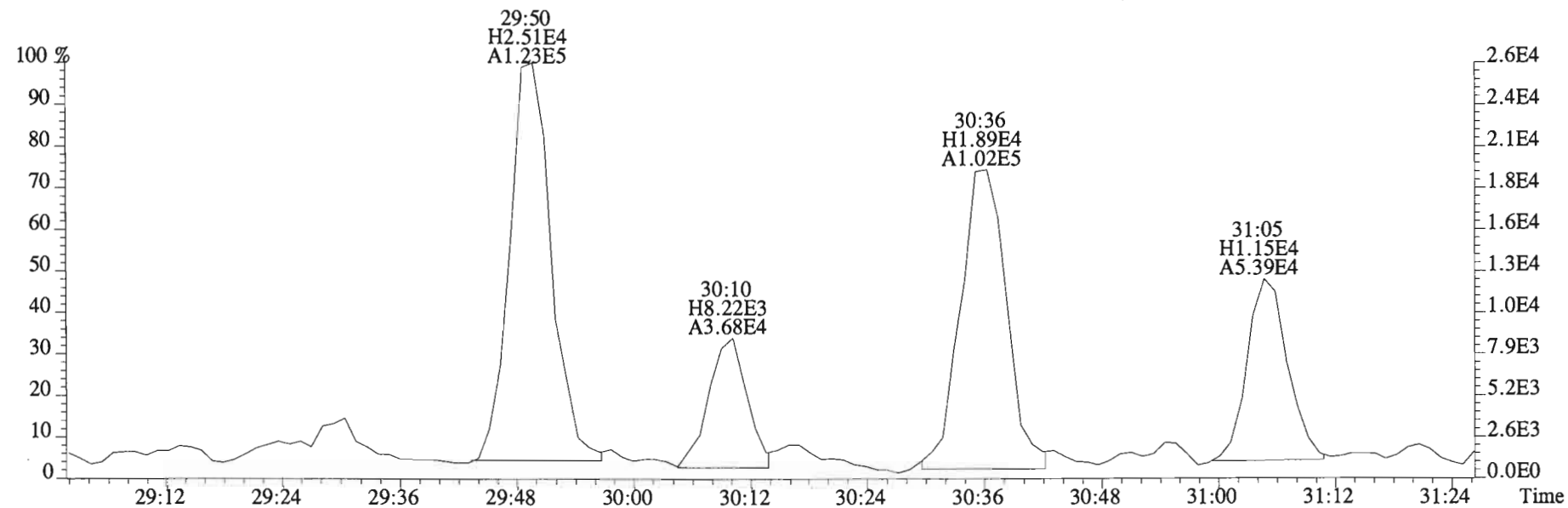
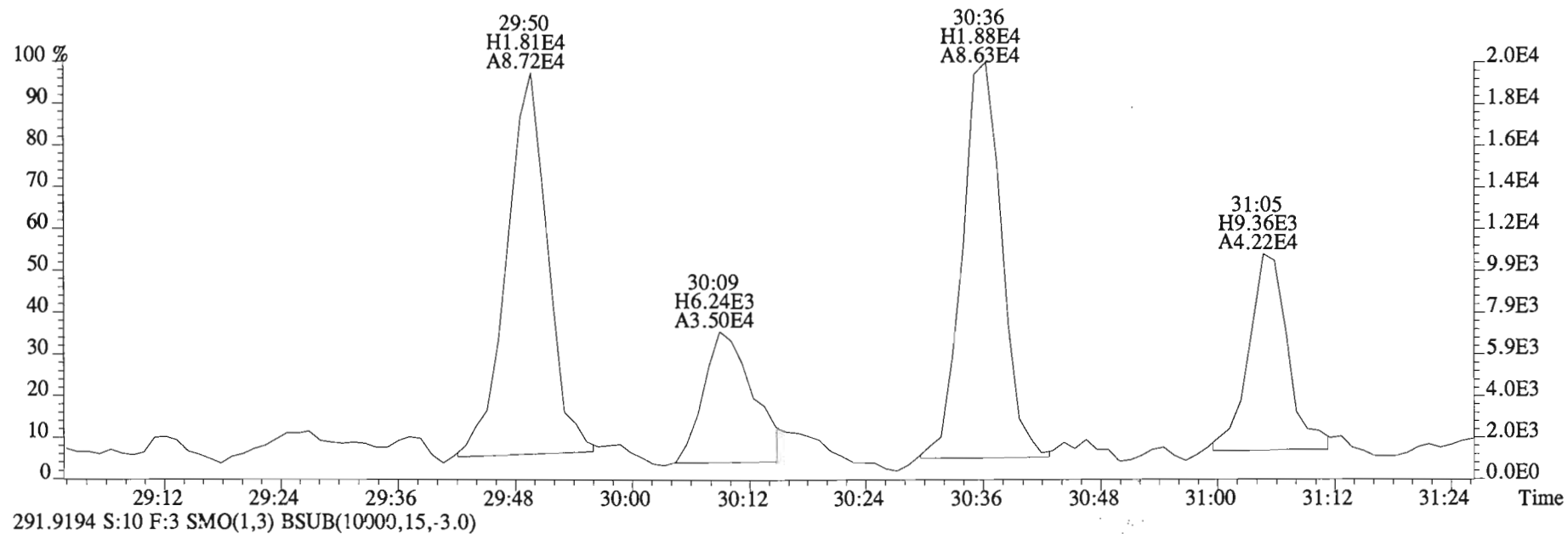
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZBI  
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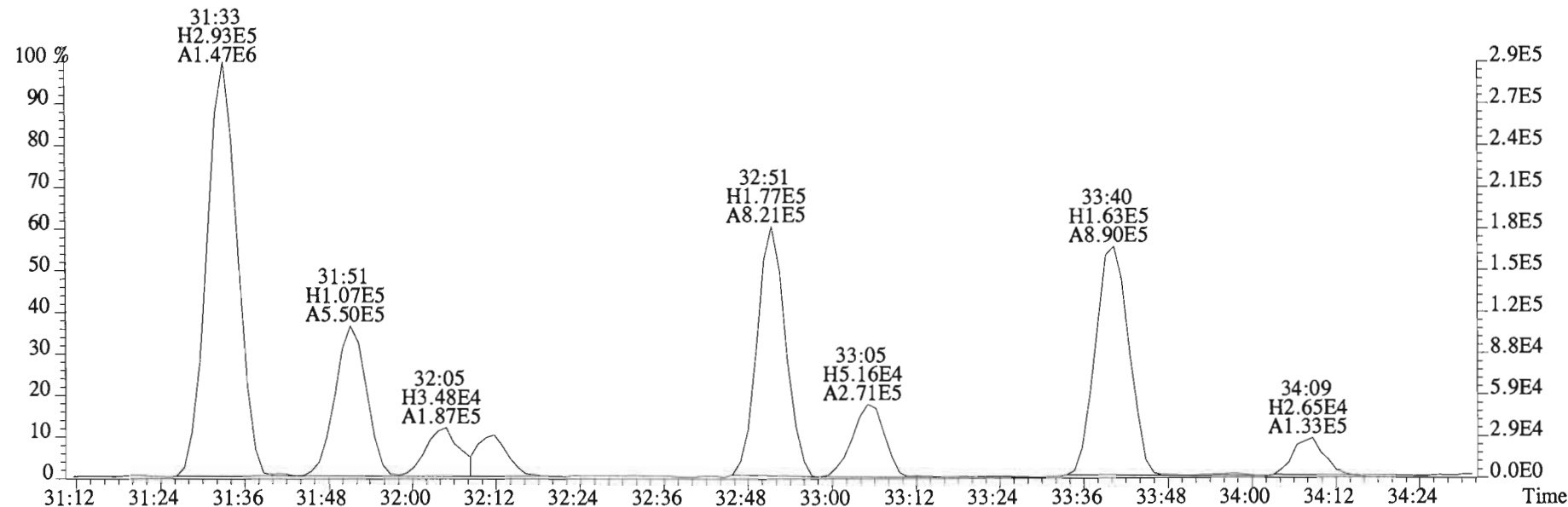
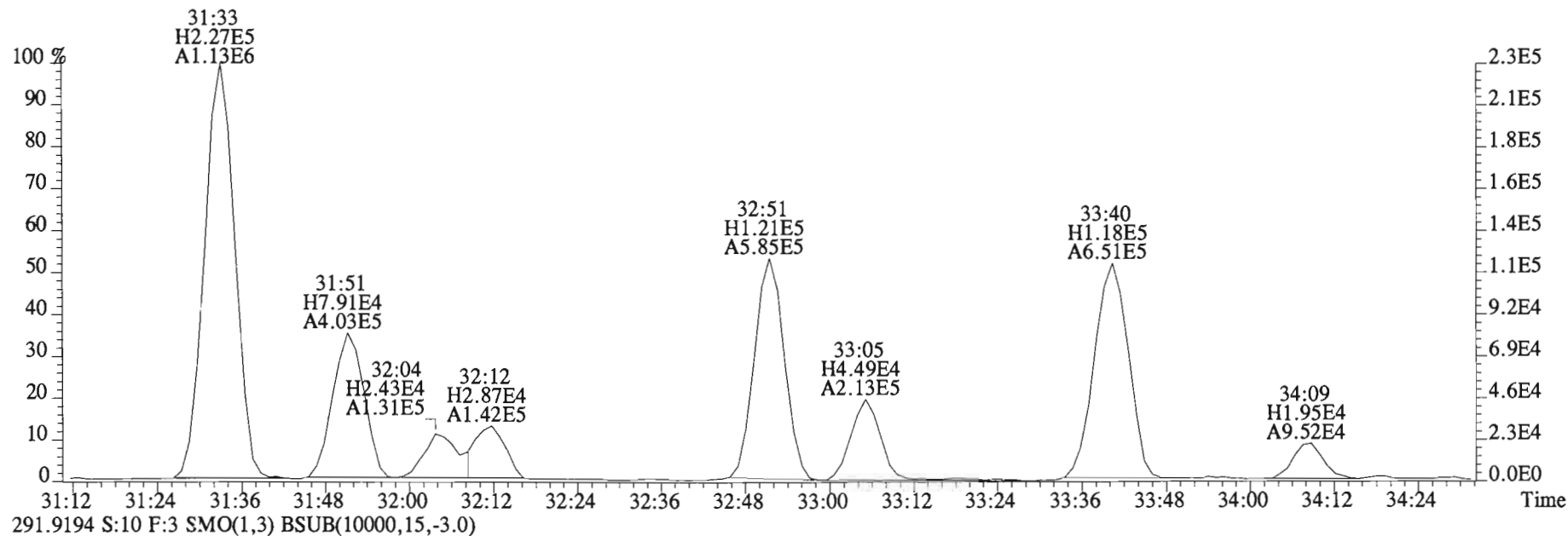
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
 289.9224 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0)



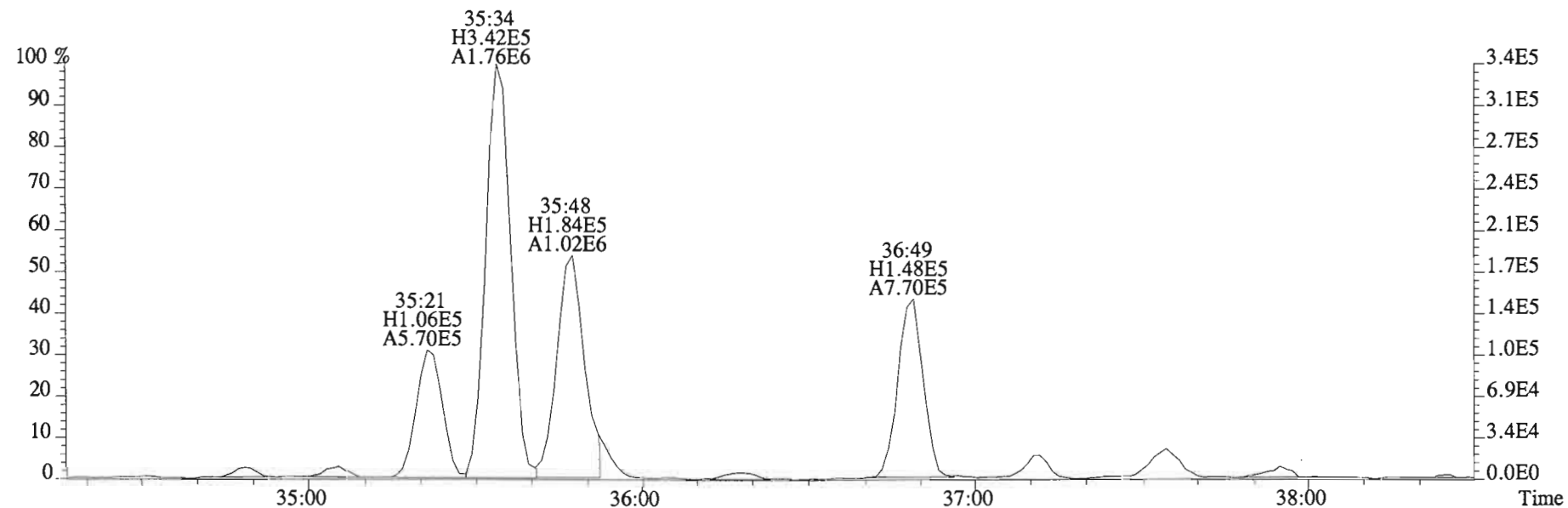
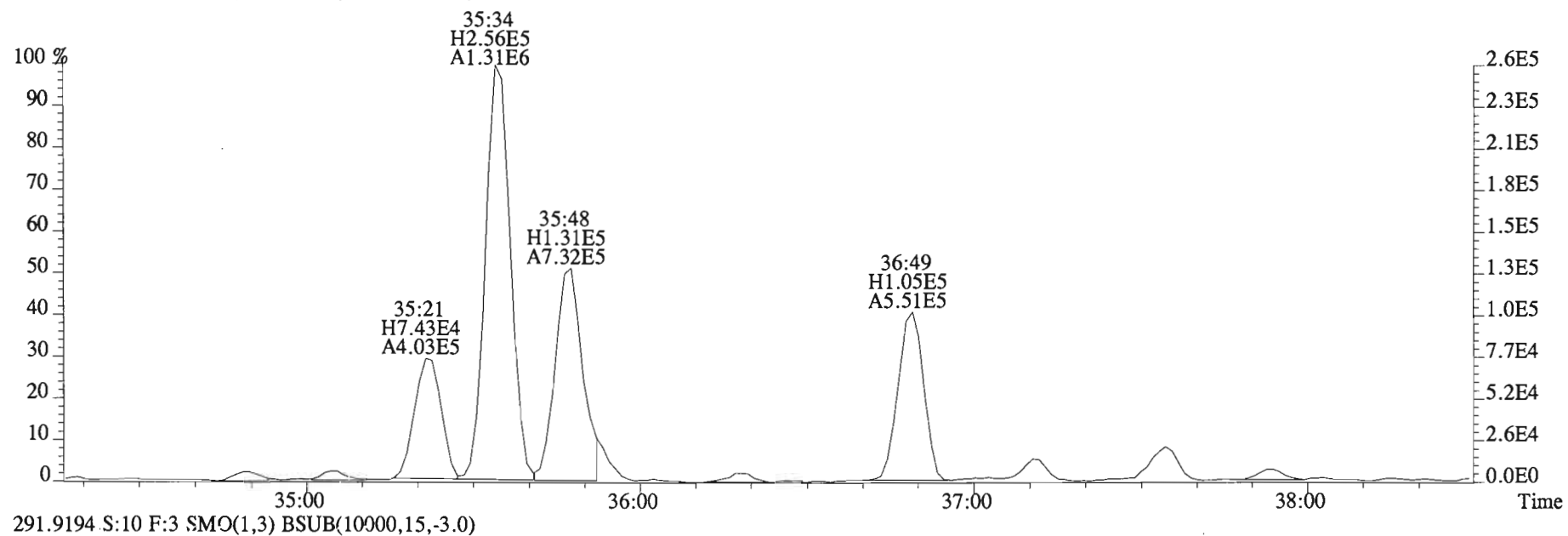
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
289.9224 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0)



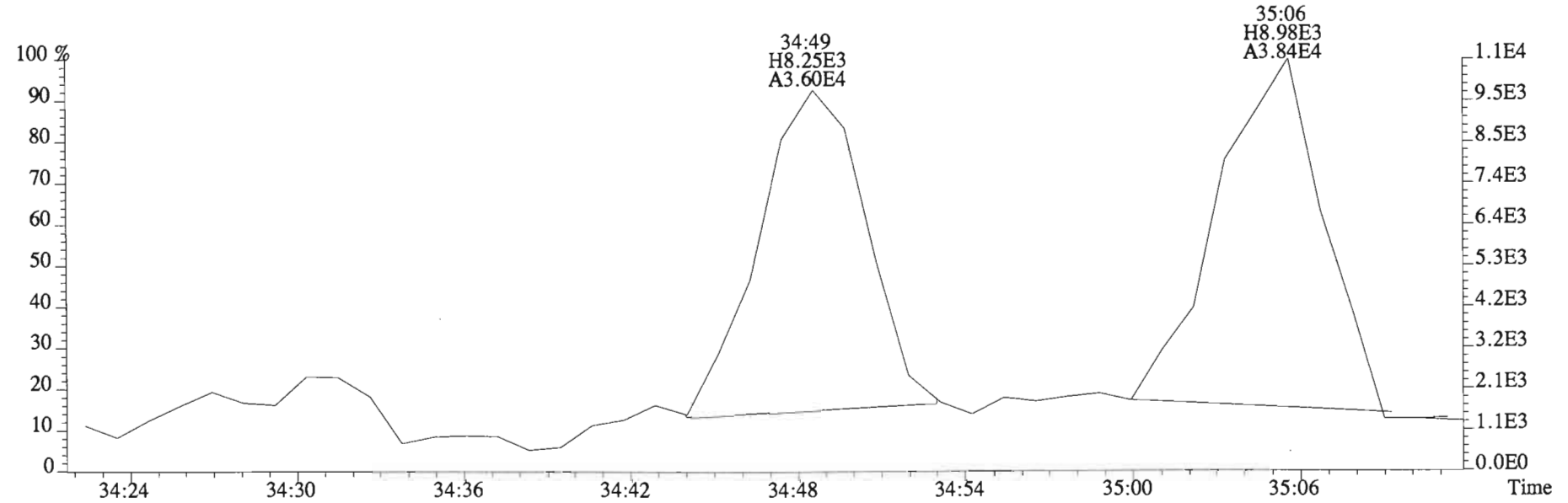
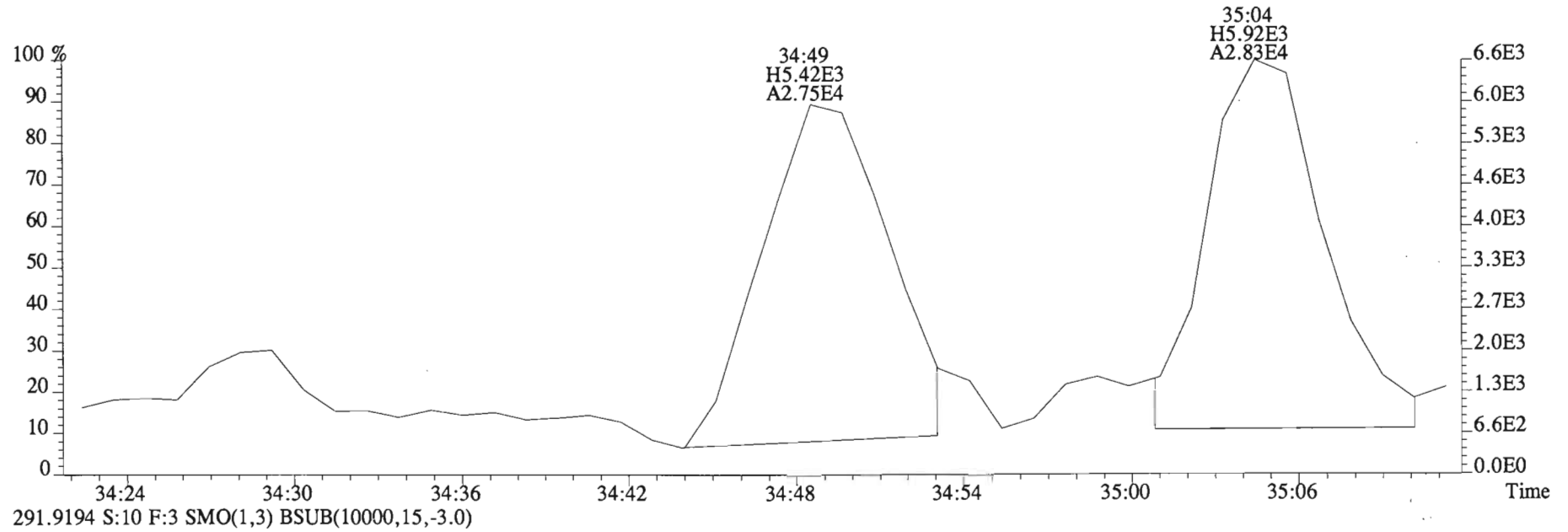
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
 289.9224 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0)



File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
289.9224 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0)

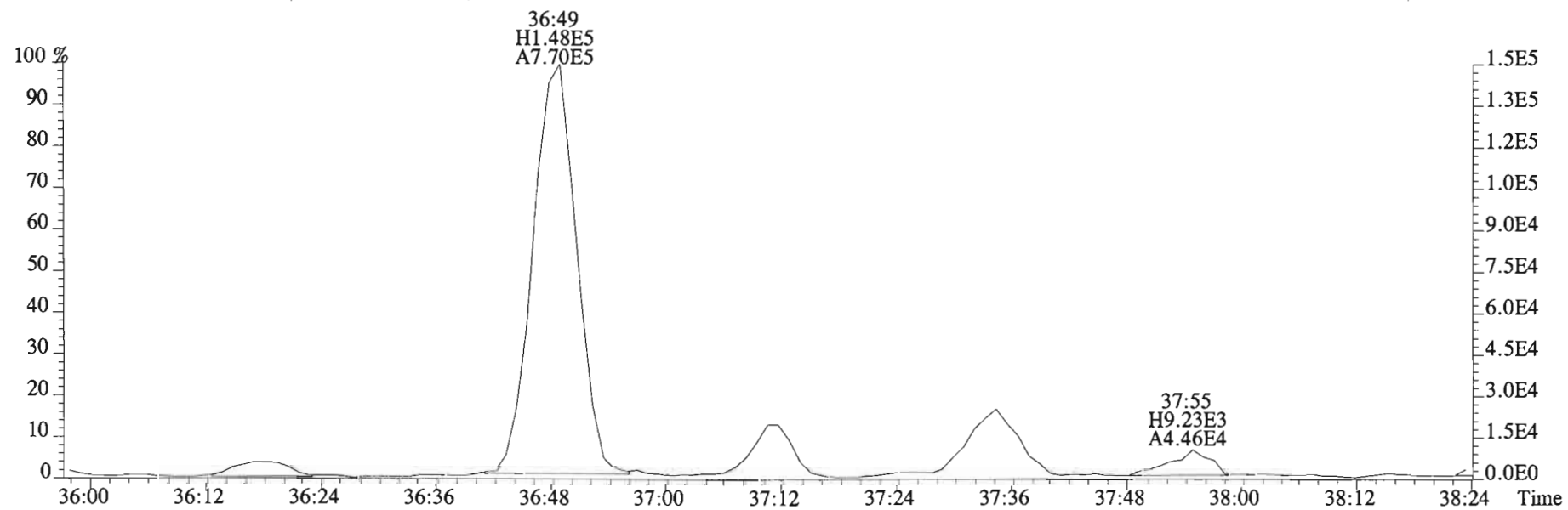
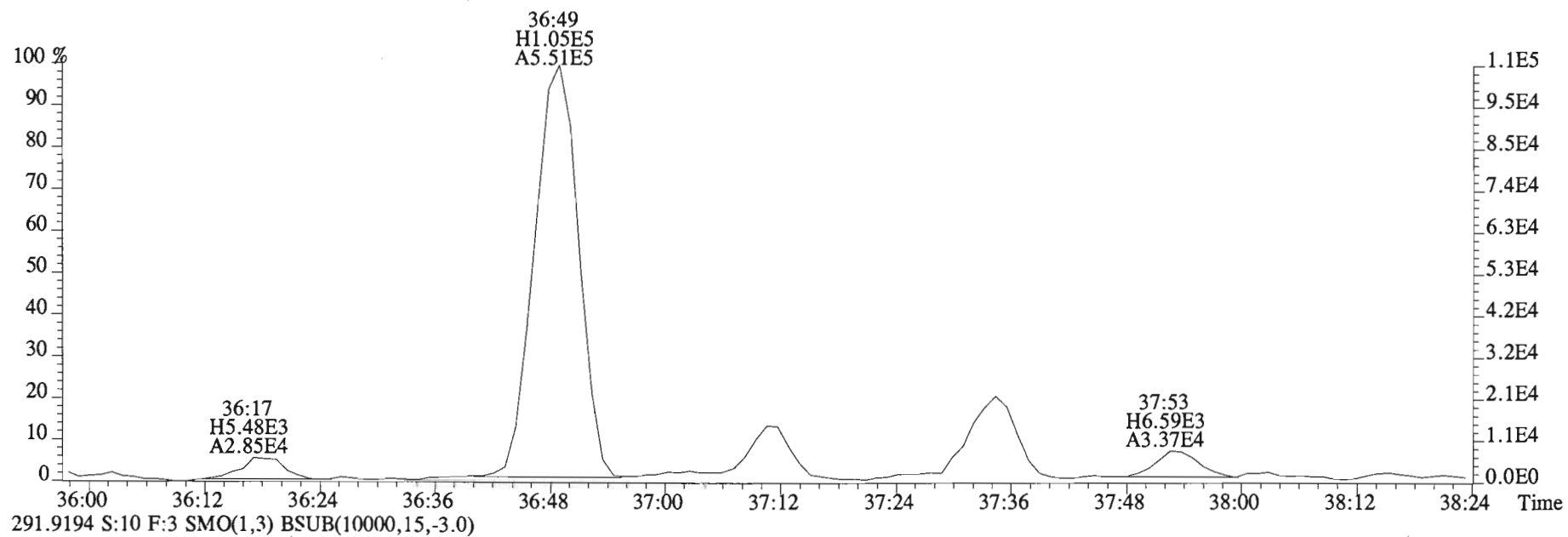


File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
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 289.9224 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0)

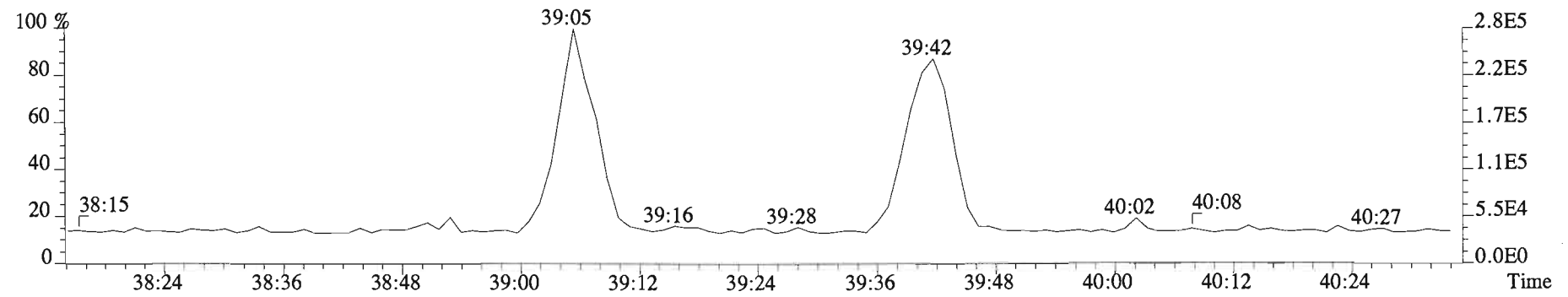
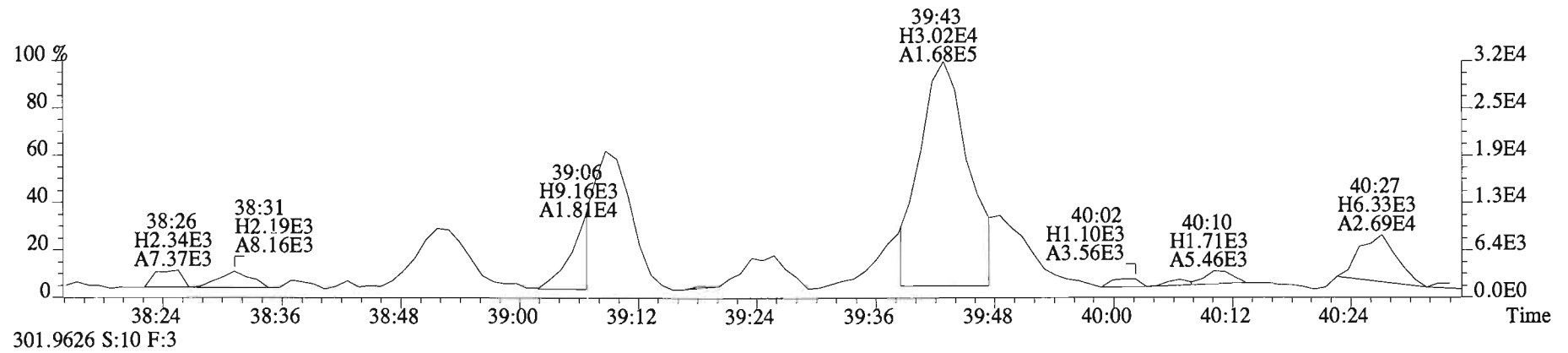
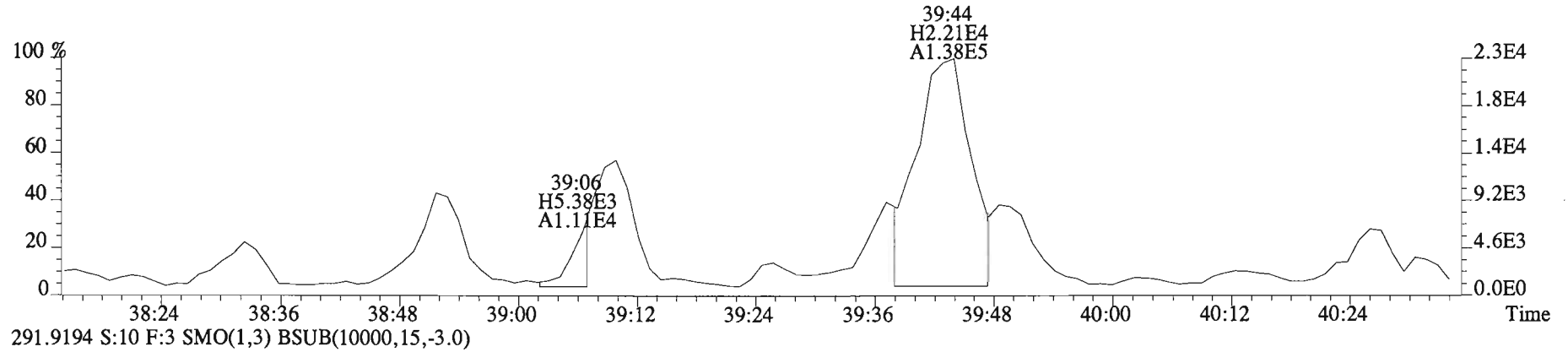




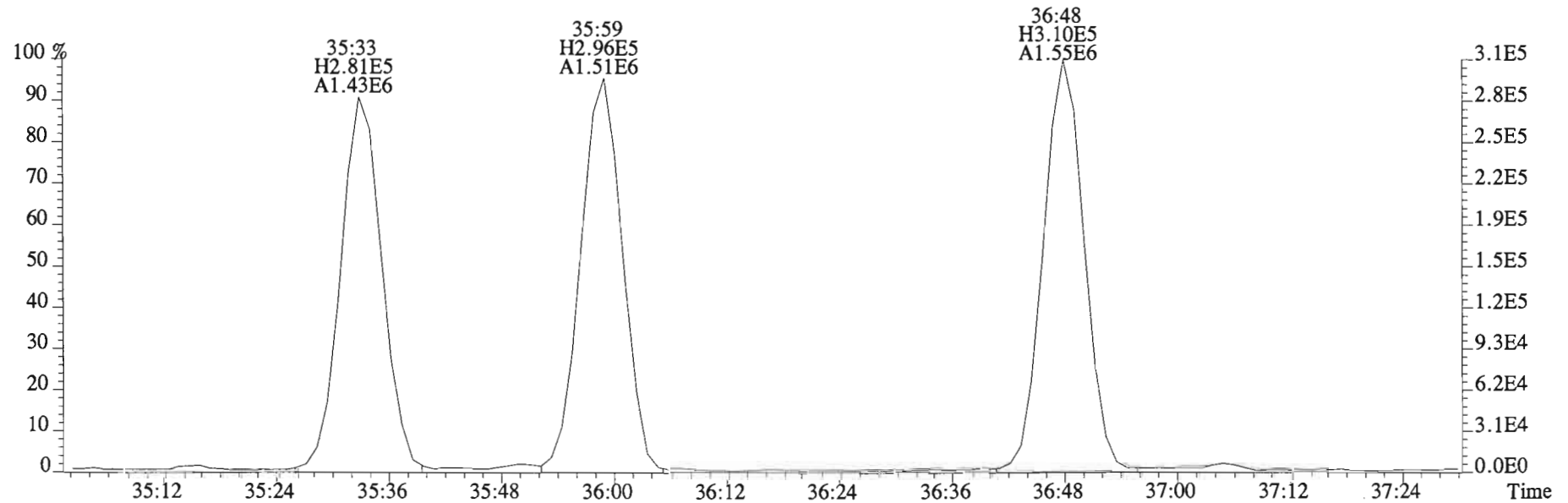
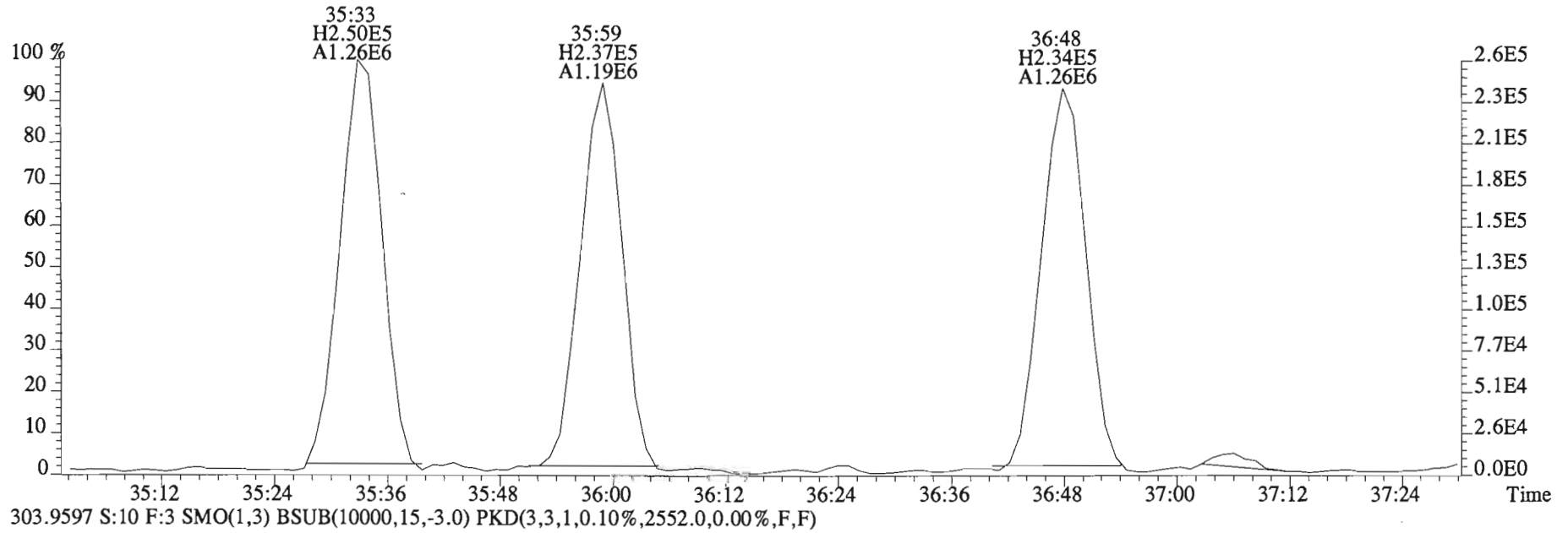
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
289.9224 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0)



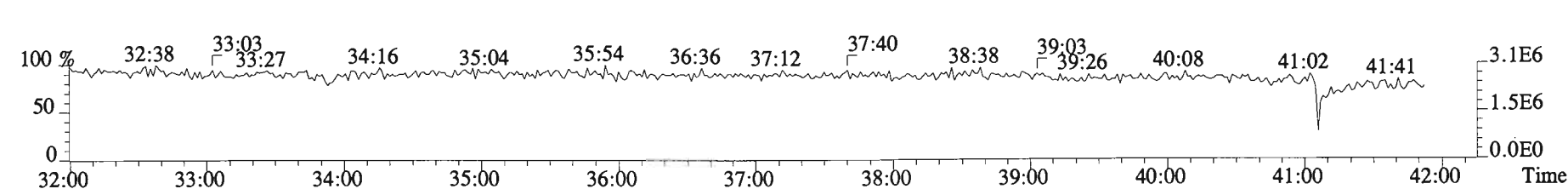
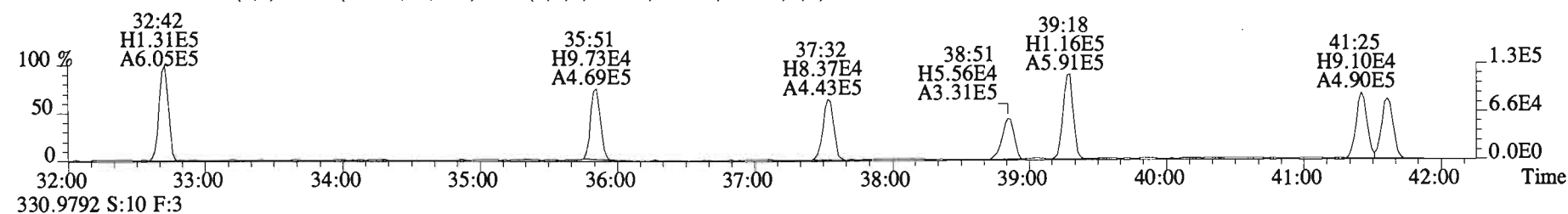
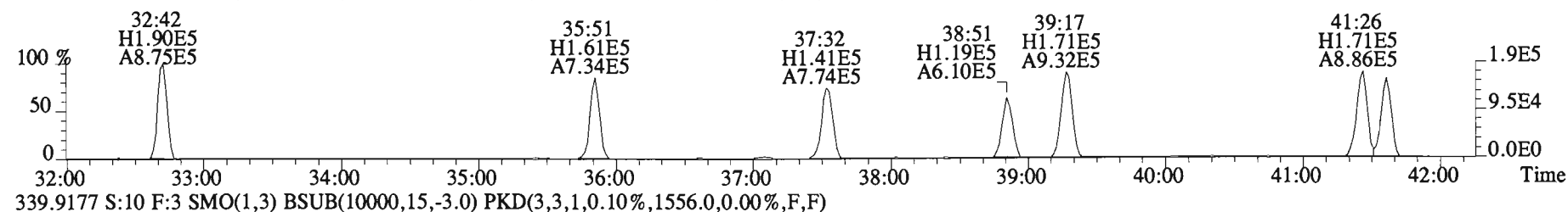
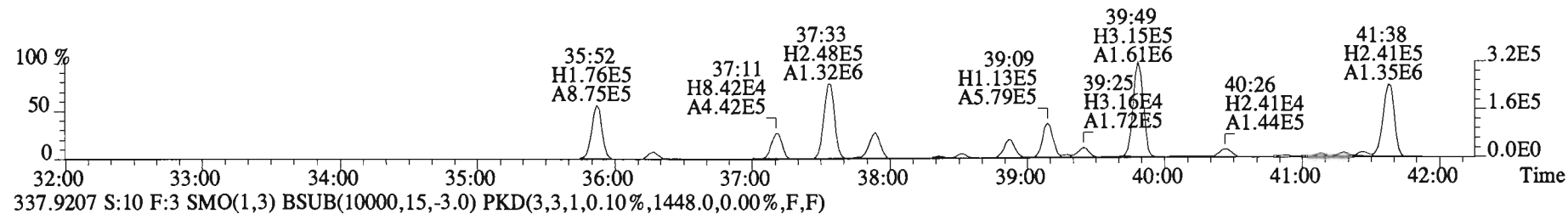
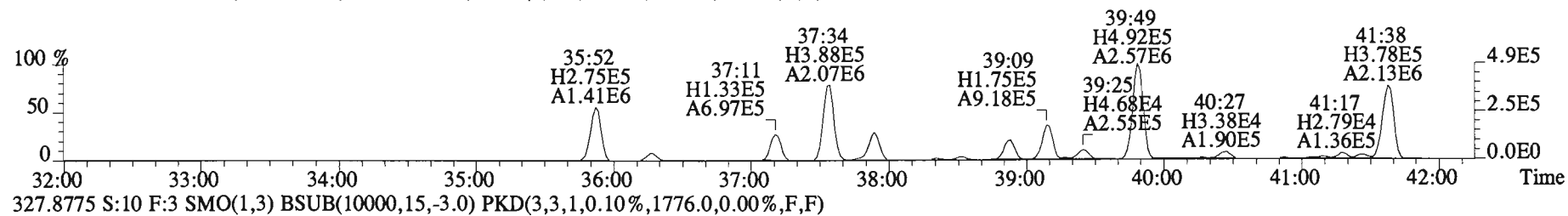
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 289.9224 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0)



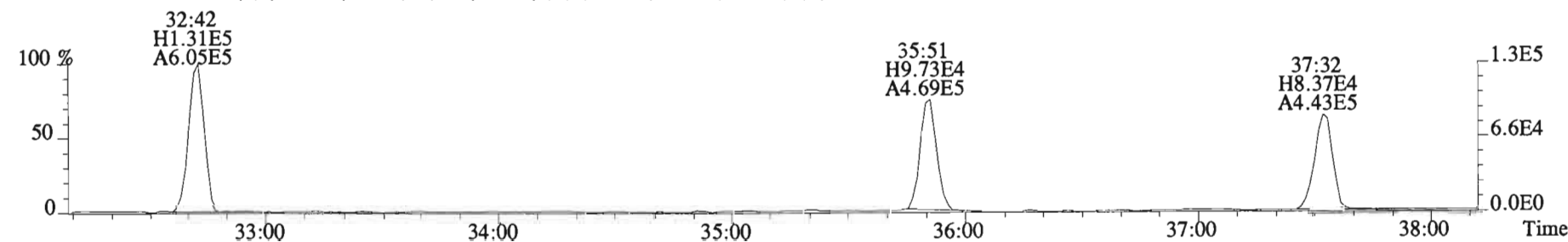
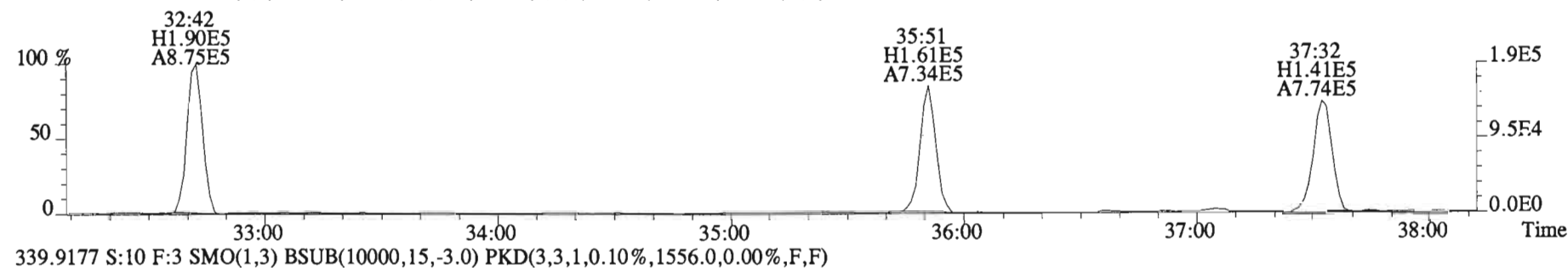
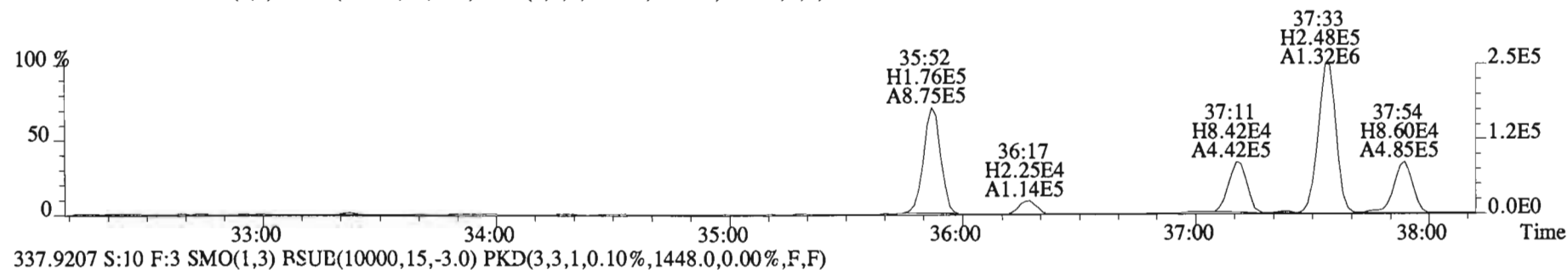
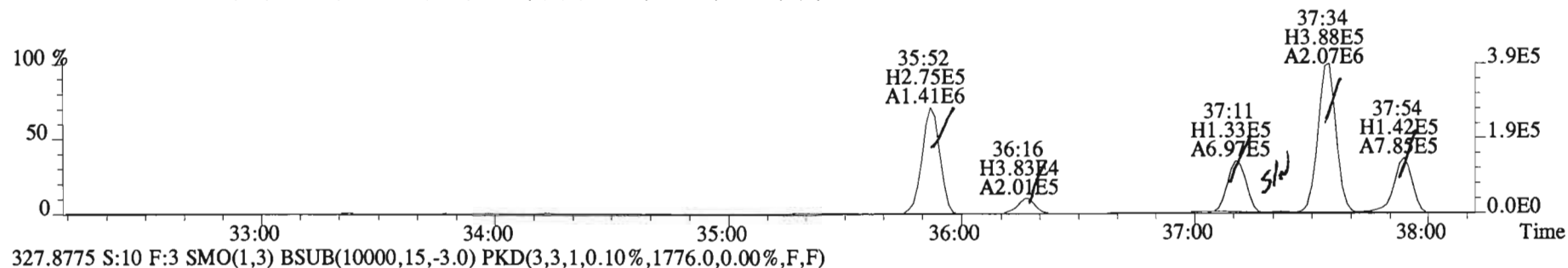
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
301.9626 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3784.0,0.00%,F,F)



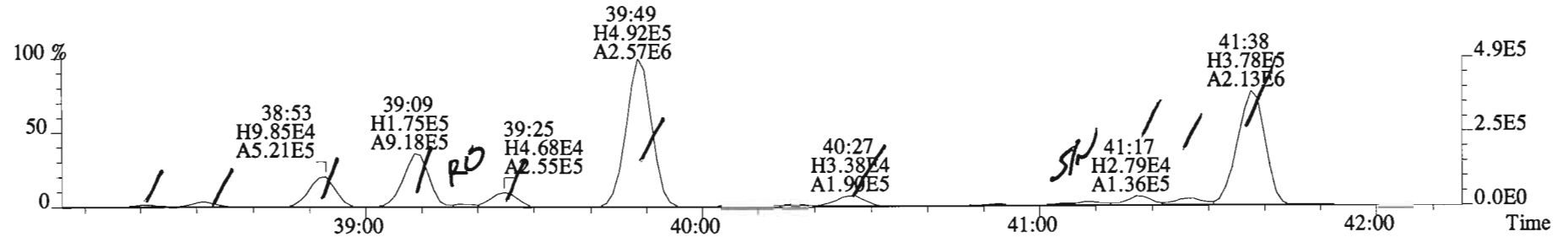
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Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
325.8804 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1716.0,0.00%,F,F)



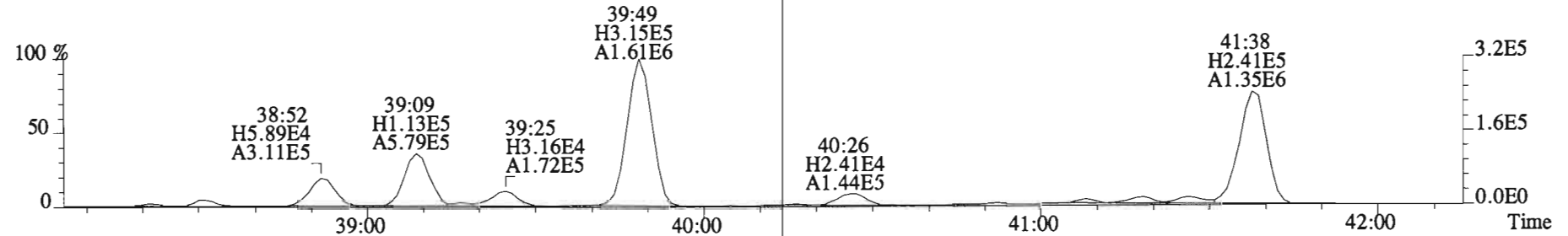
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
325.8804 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1716.0,0.00%,F,F)



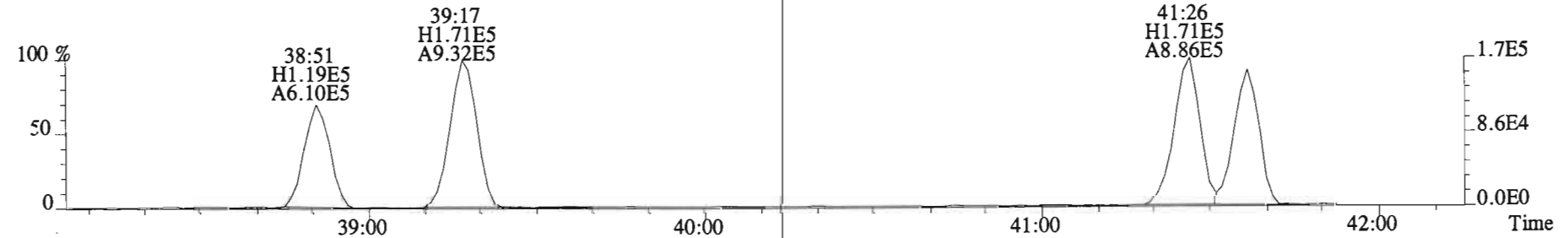
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
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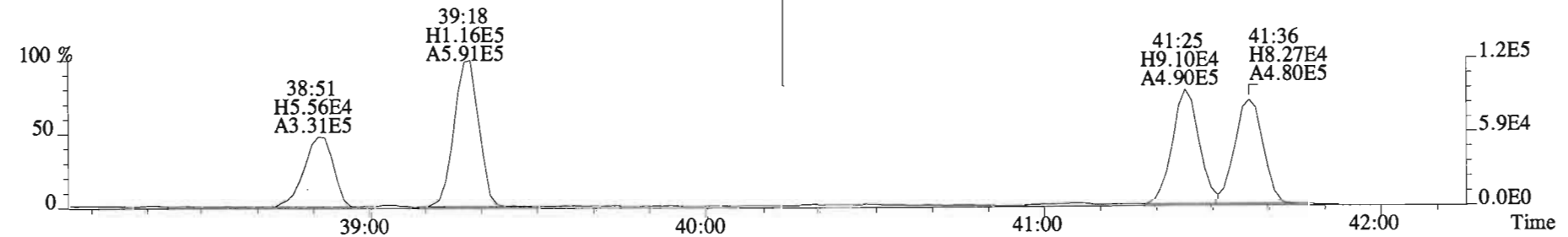
327.8775 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)



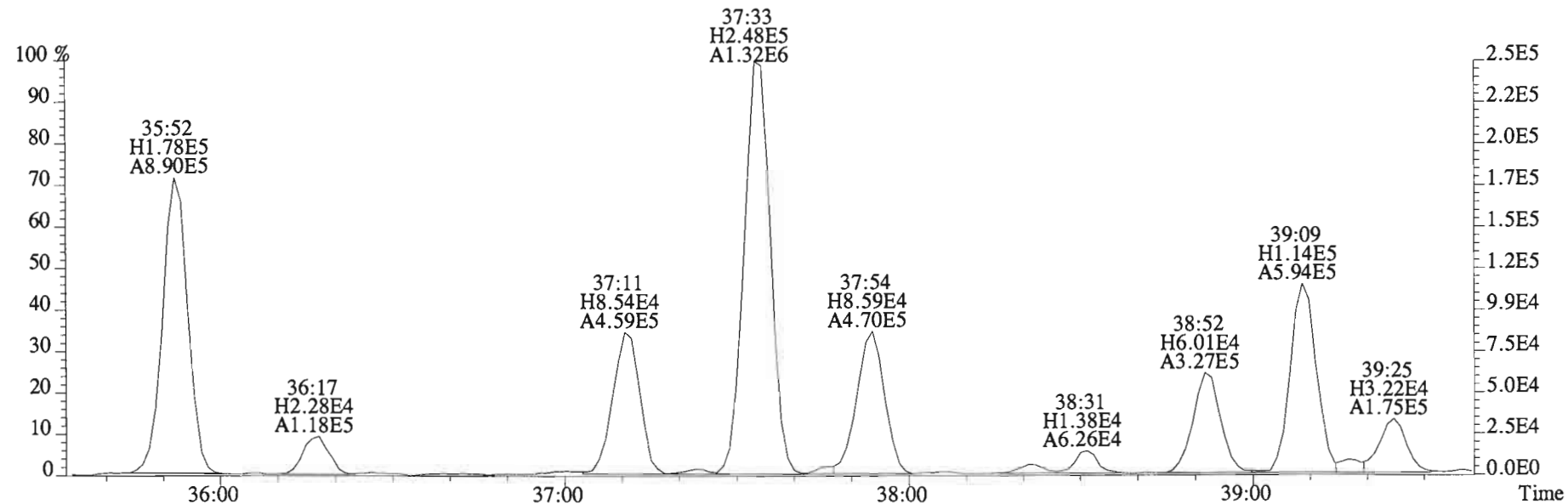
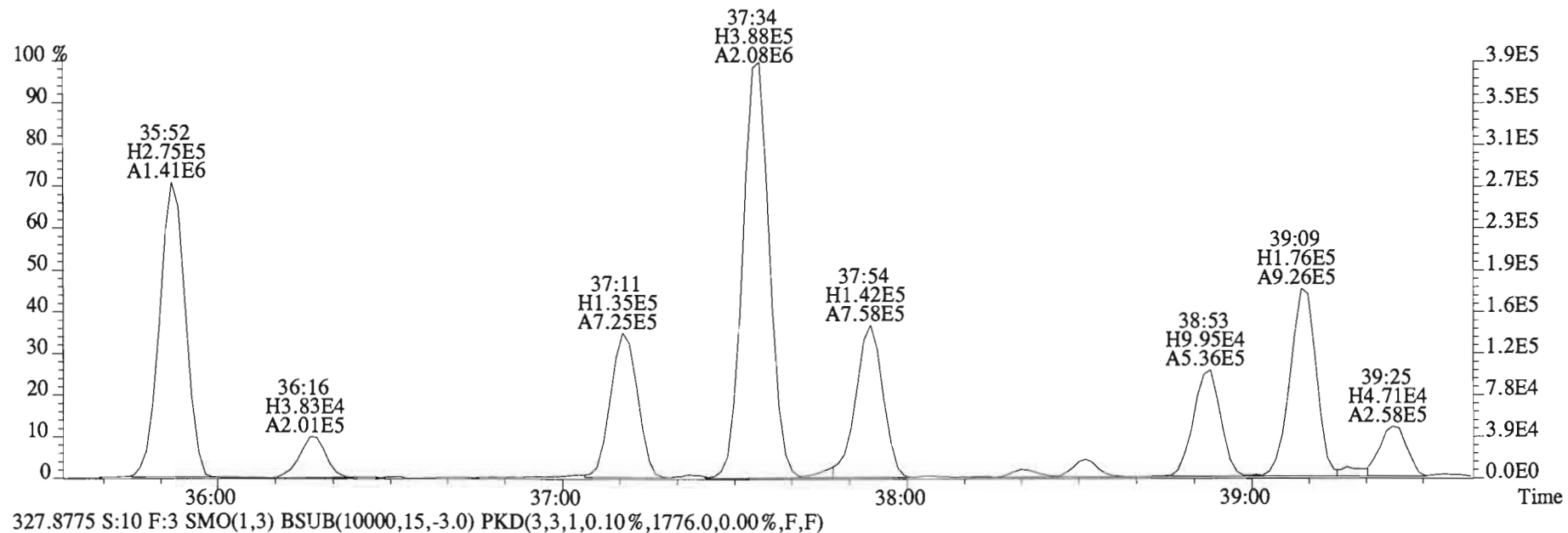
337.9207 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1448.0,0.00%,F,F)



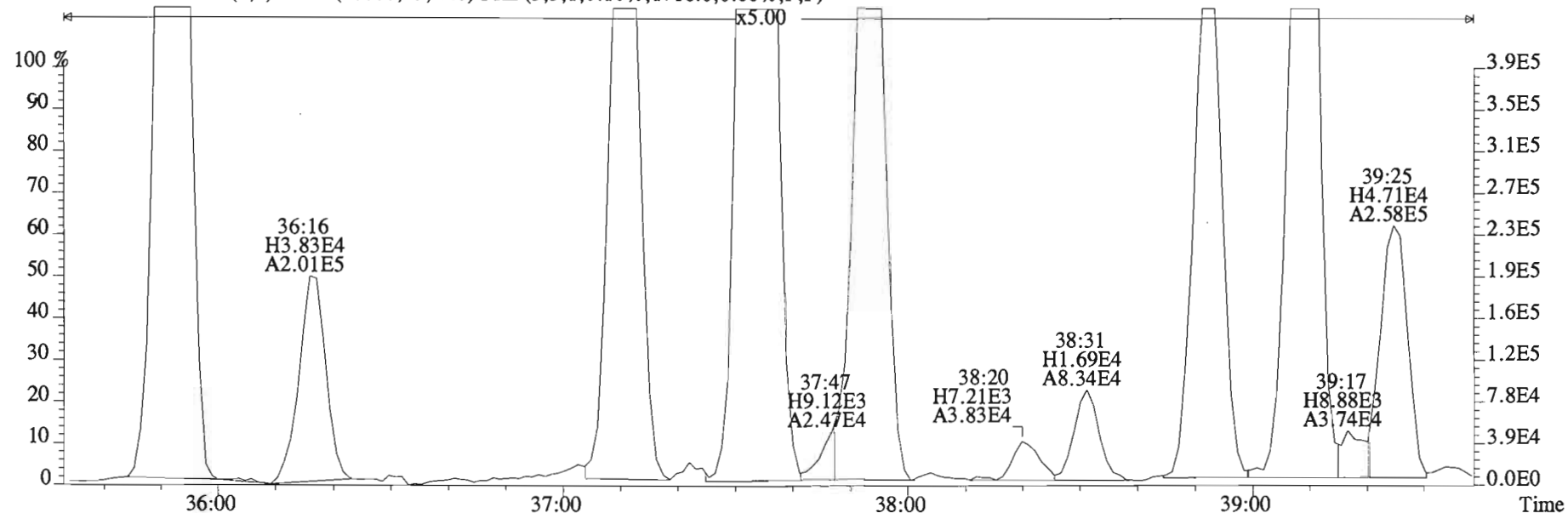
339.9177 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1556.0,0.00%,F,F)



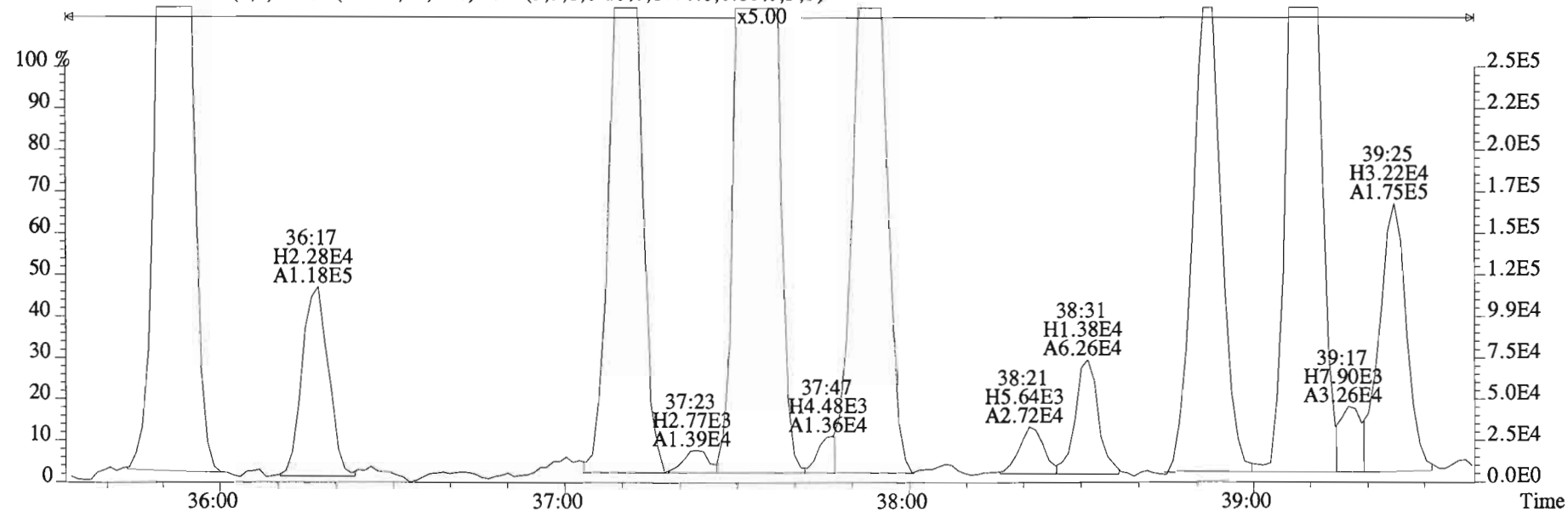
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
 325.8804 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1716.0,0.00%,F,F)



File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
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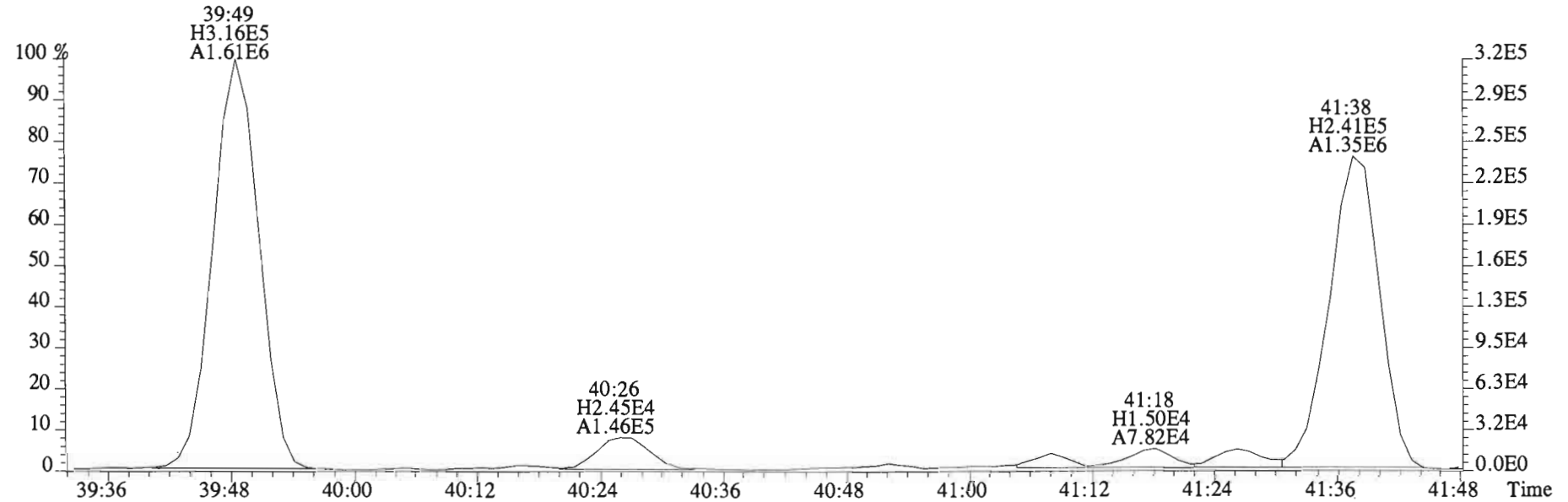
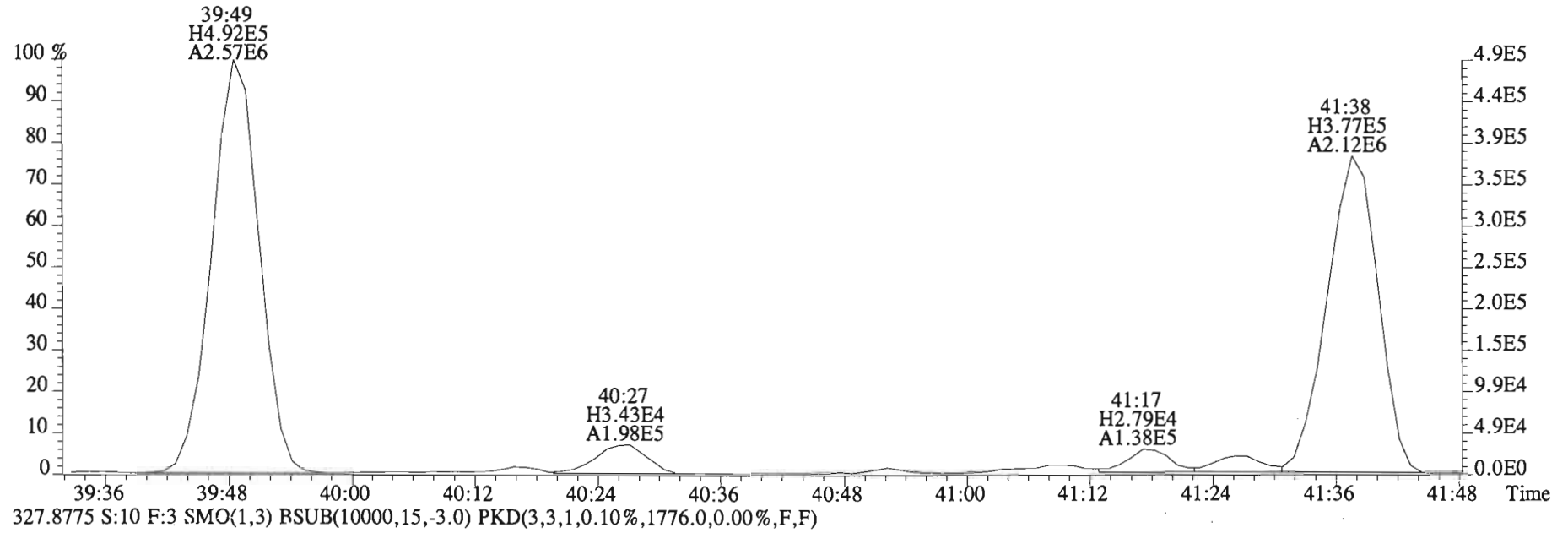


327.8775 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)

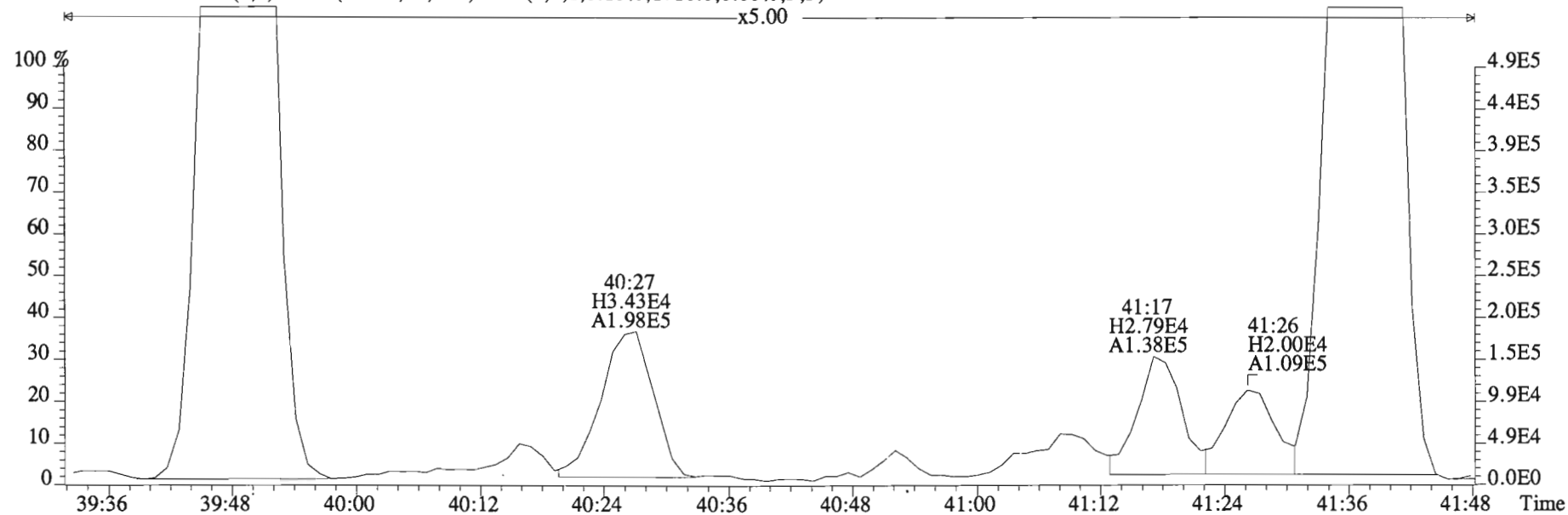




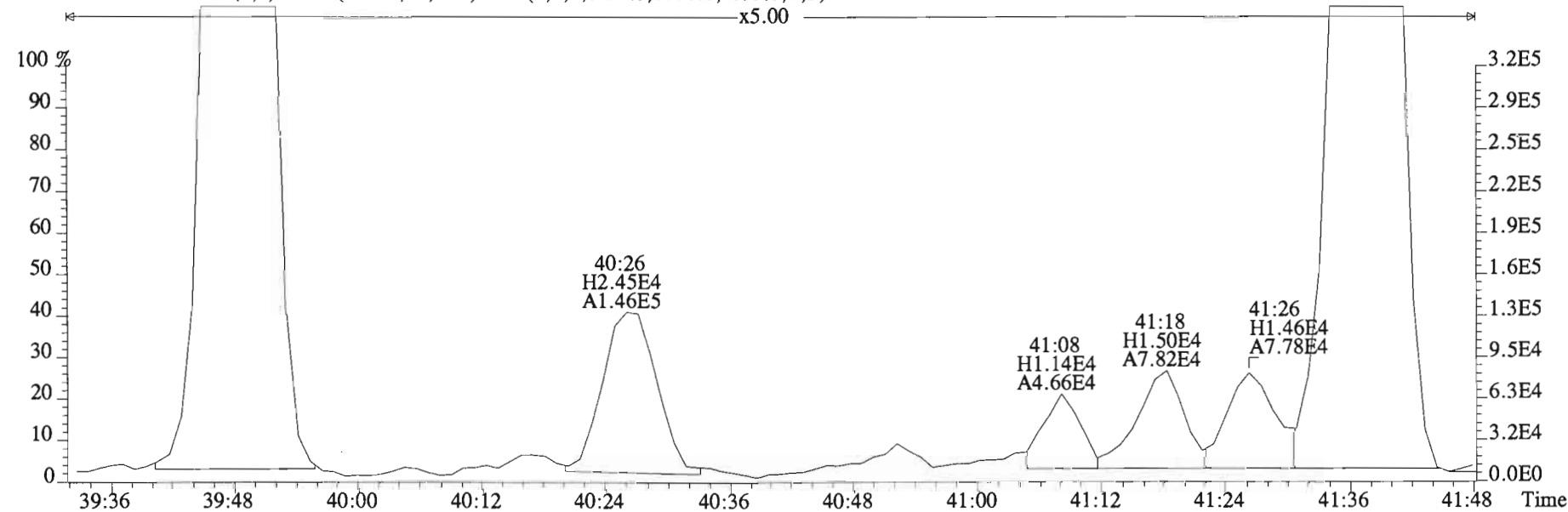
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Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
325.8804 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1716.0,0.00%,F,F)



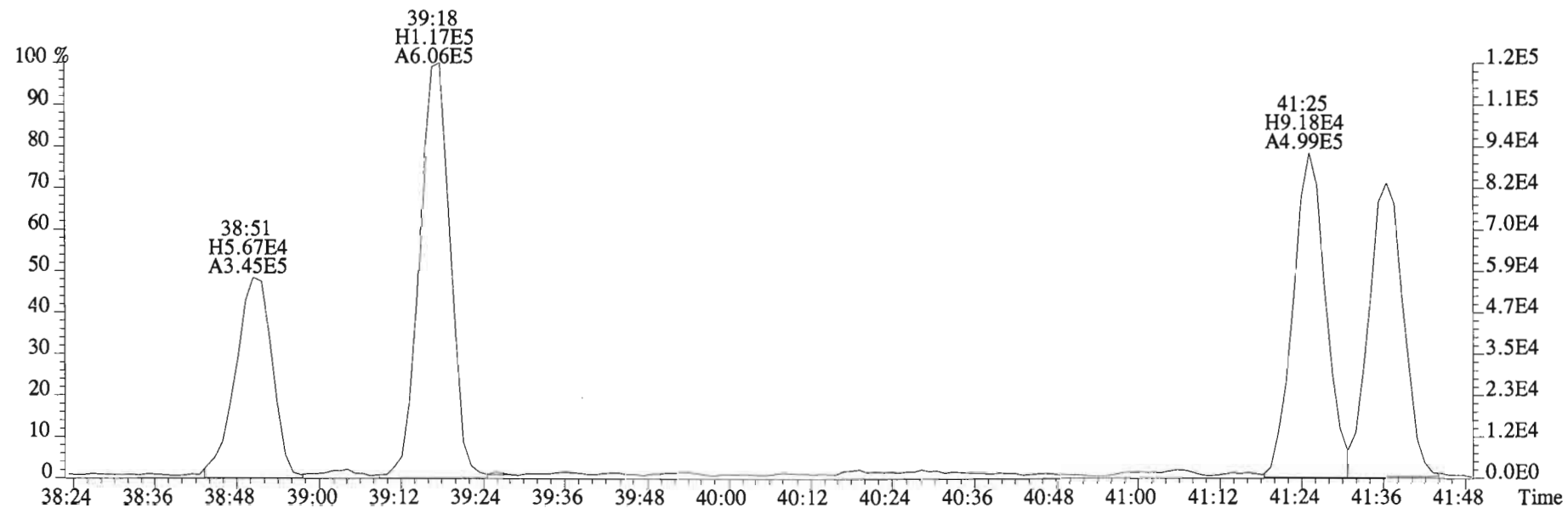
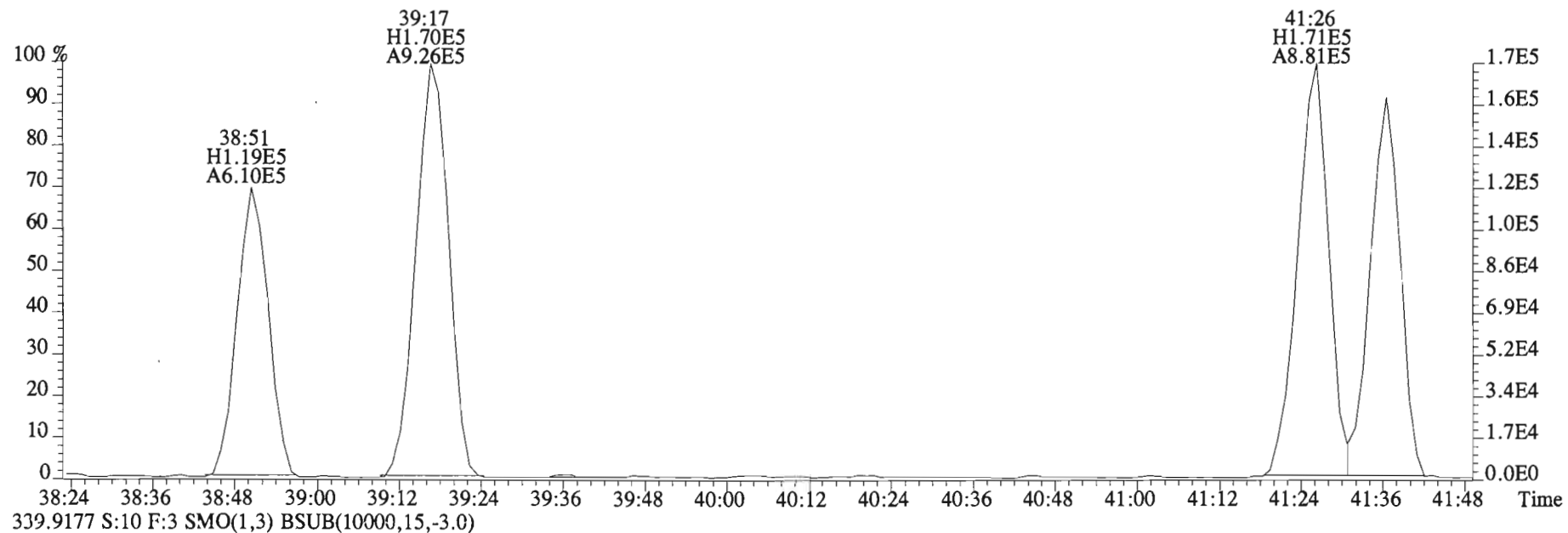
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
325.8804 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1716.0,0.00%,F,F)



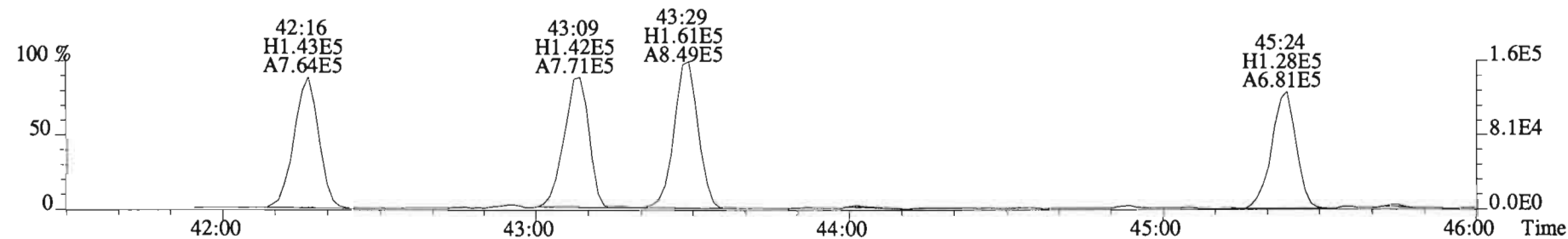
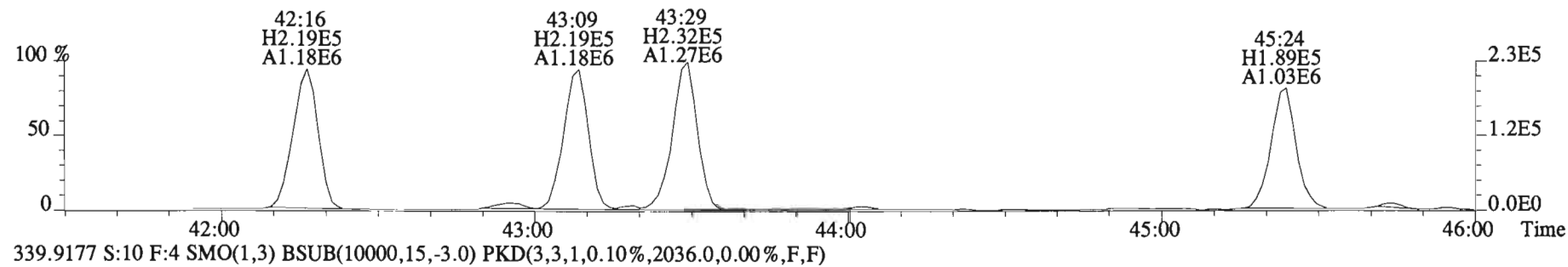
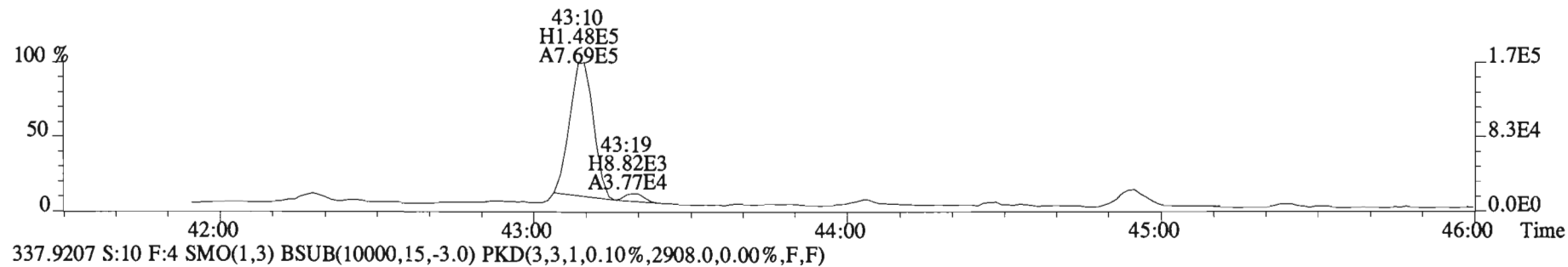
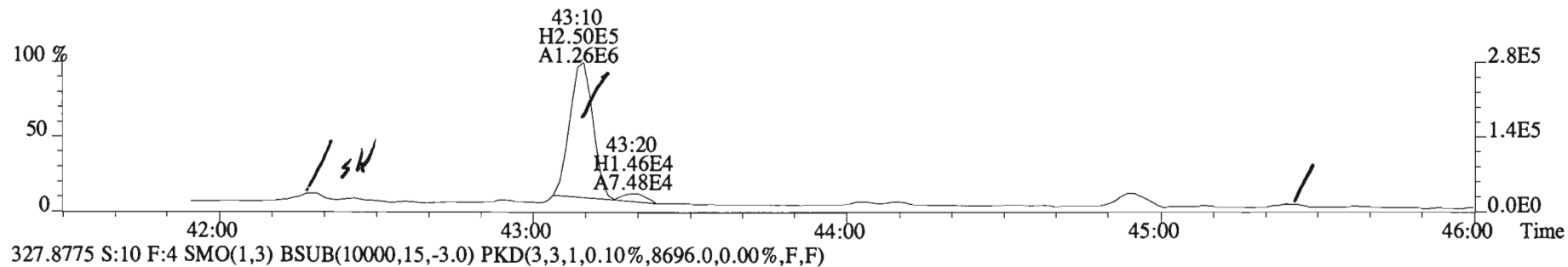
327.8775 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)



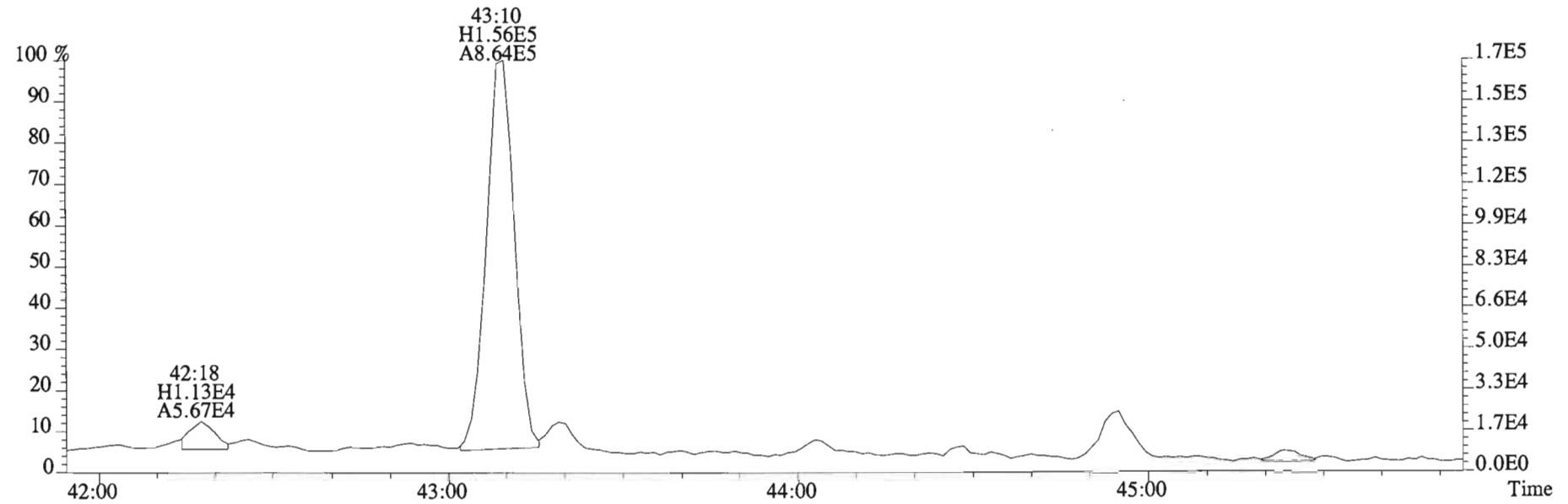
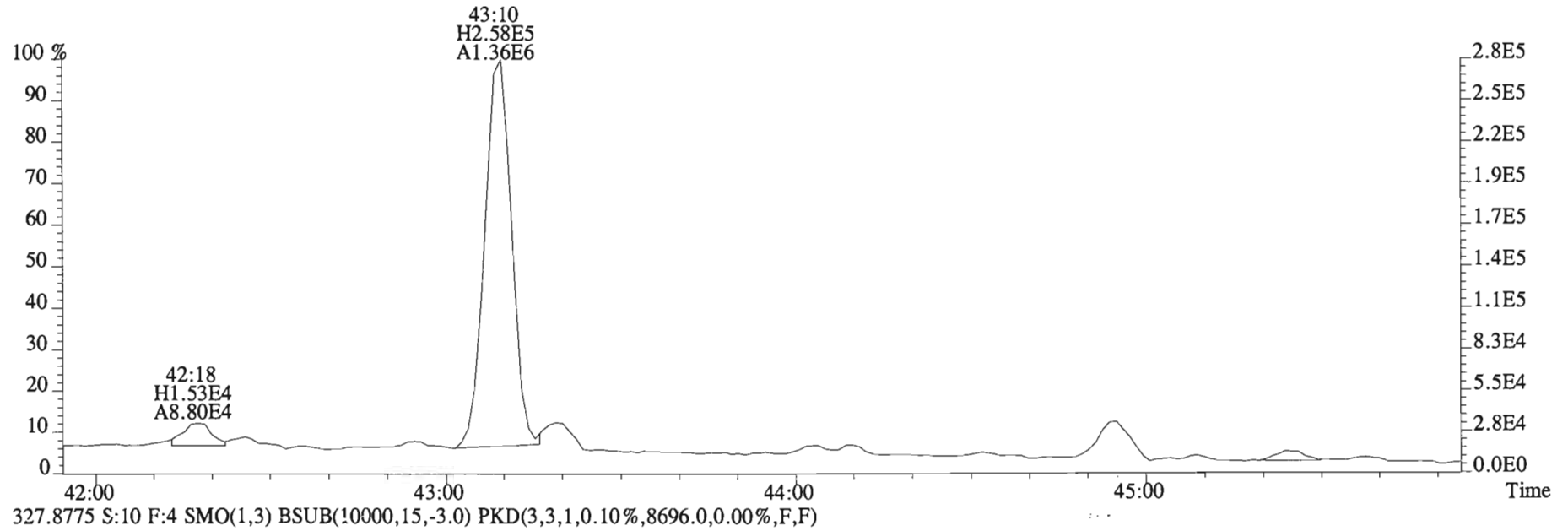
File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
337.9207 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0)



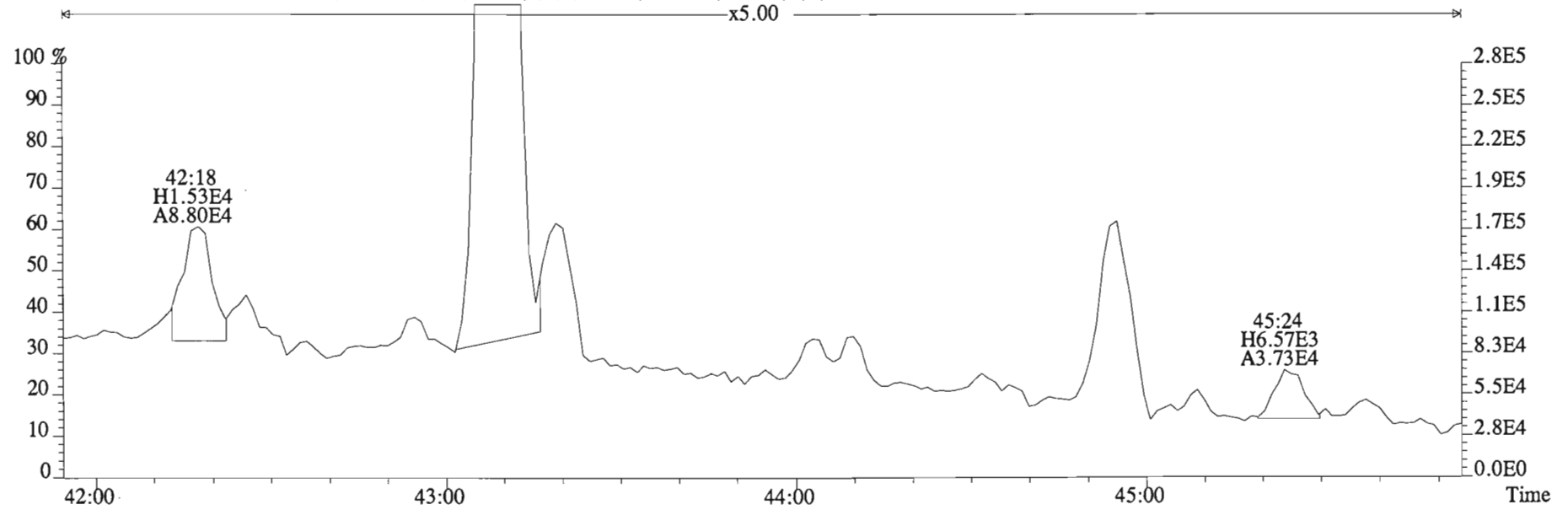
File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
325.8804 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,14108.0,0.00%,F,F)



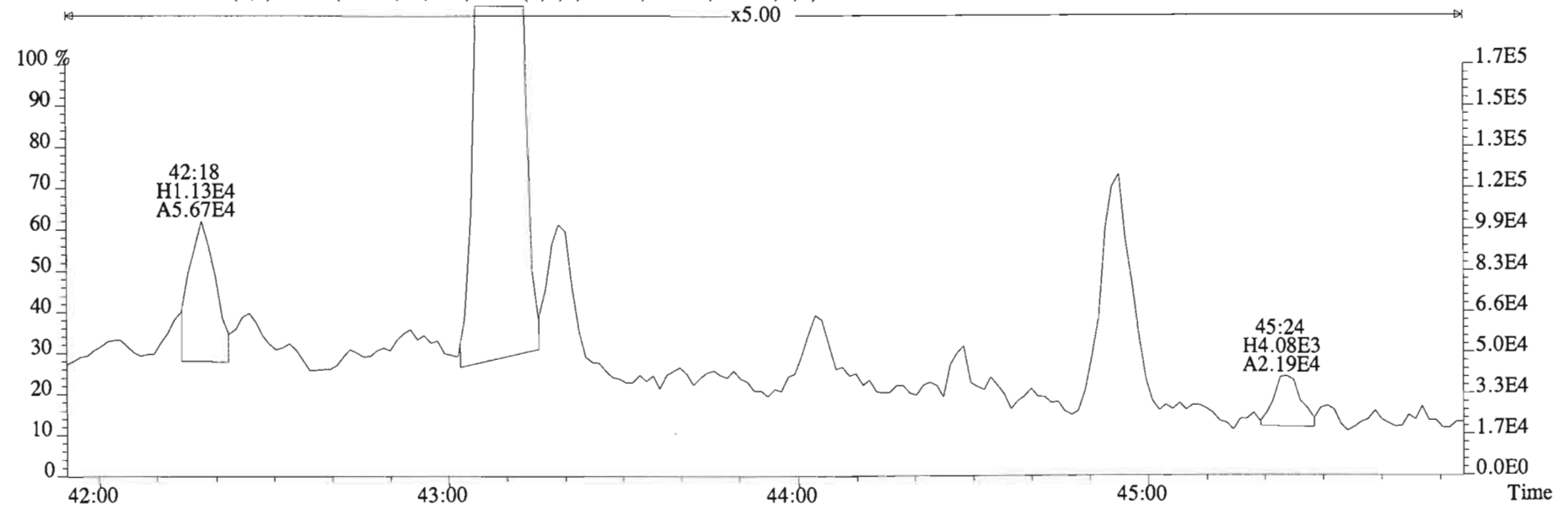
File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
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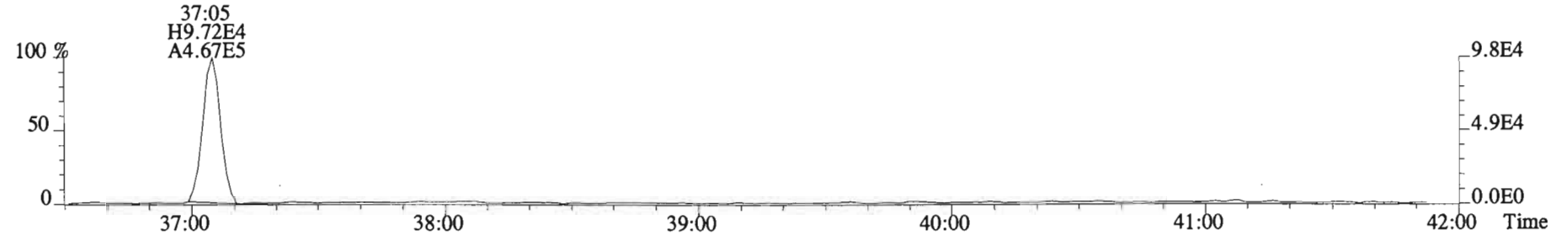
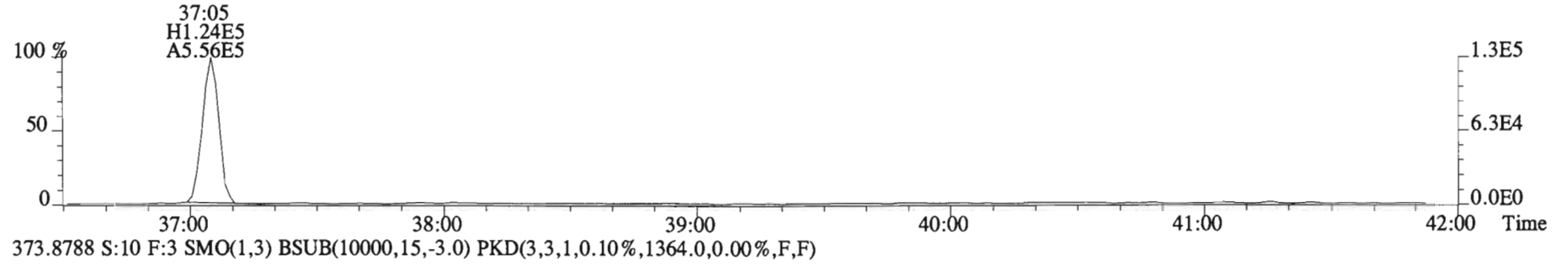
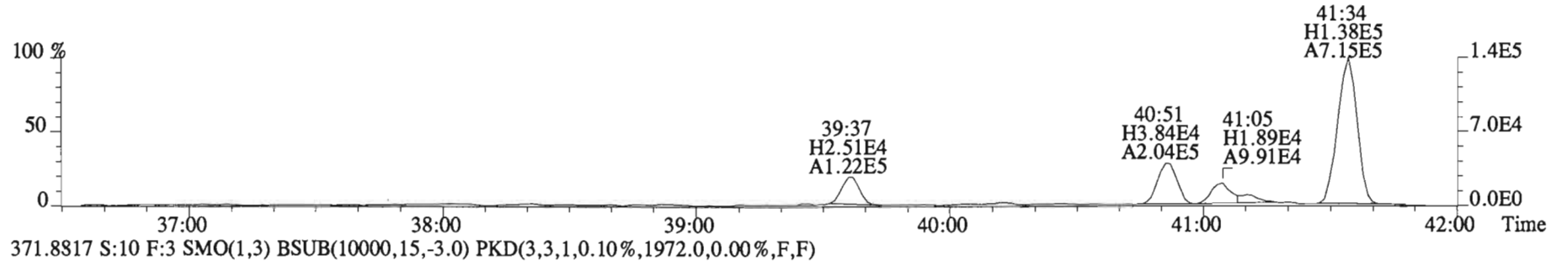
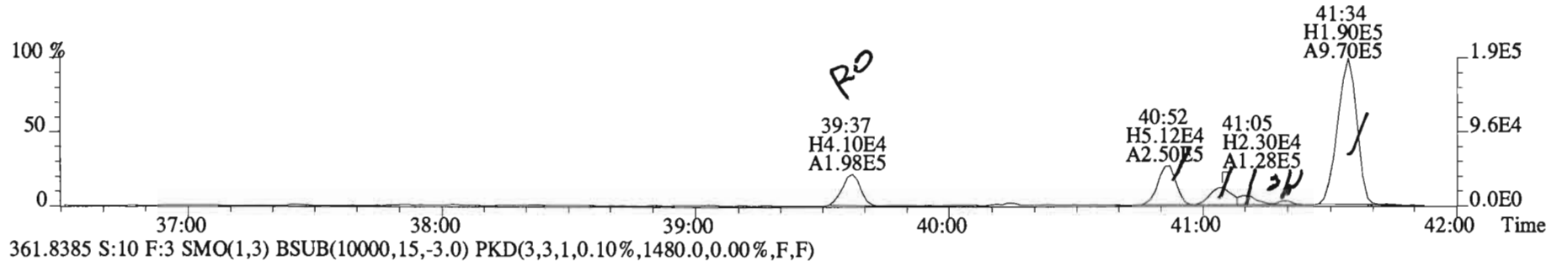
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Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
325.8804 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,14108.0,0.00%,F,F)



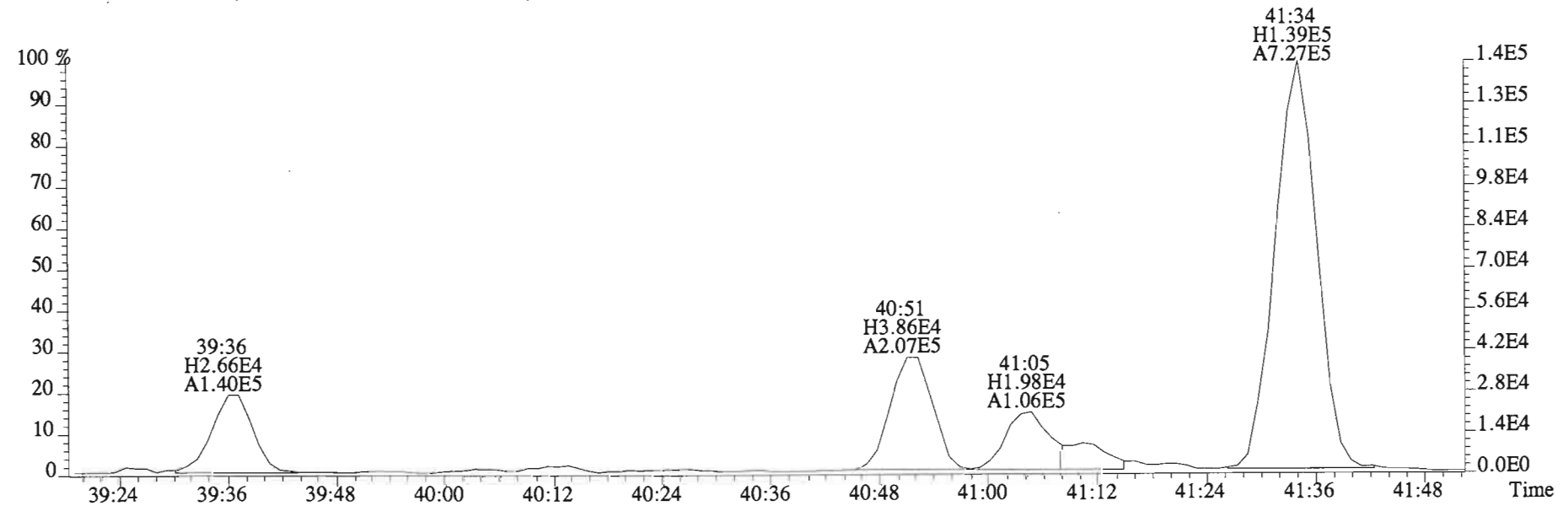
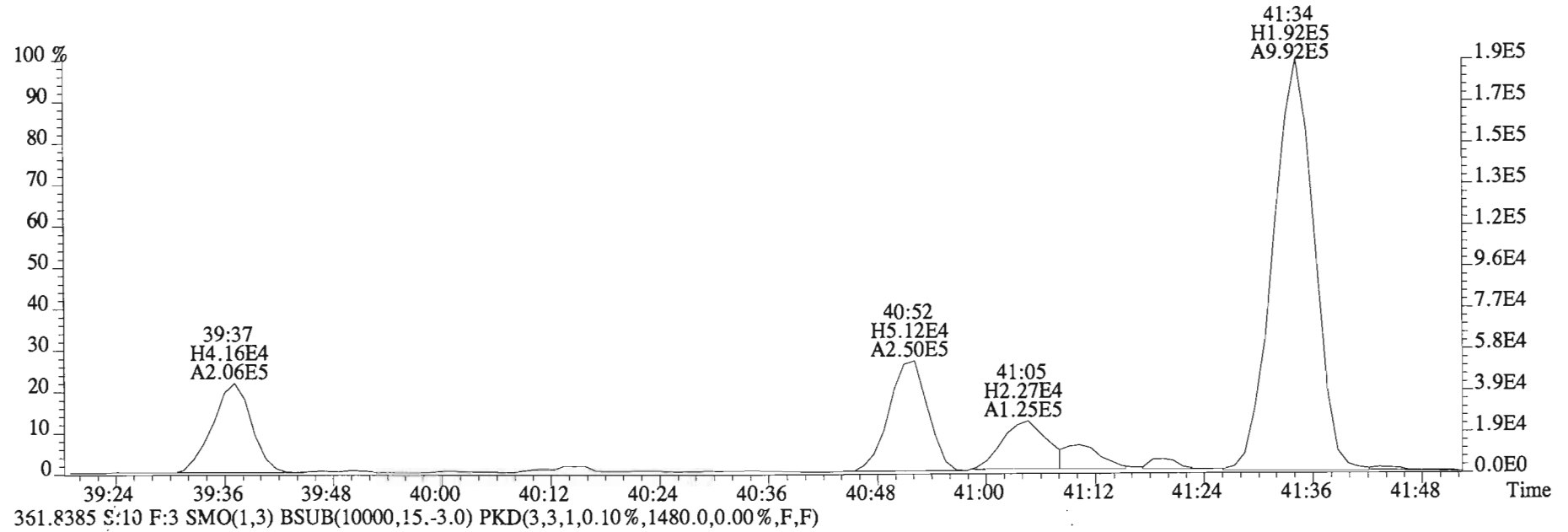
327.8775 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8696.0,0.00%,F,F)



File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
359.8415 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1540.0,0.00%,F,F)

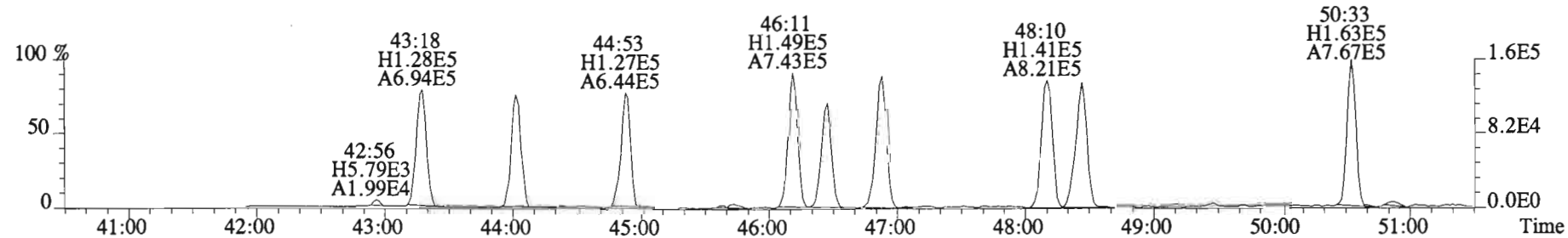
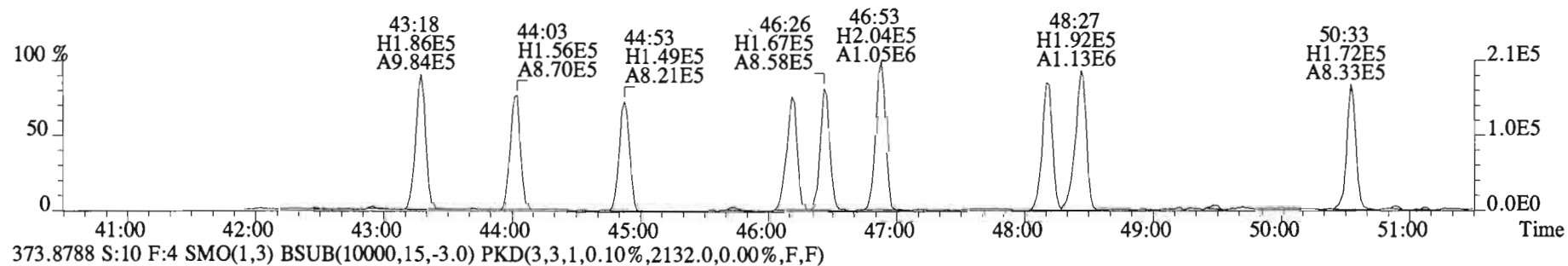
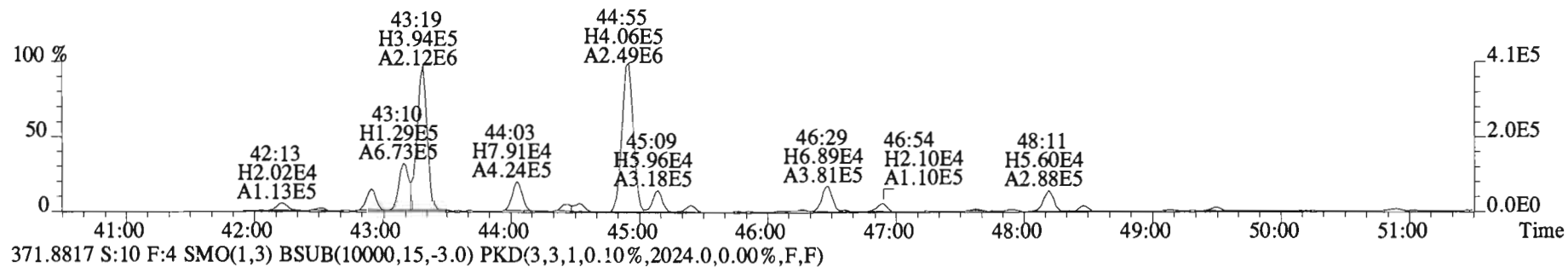
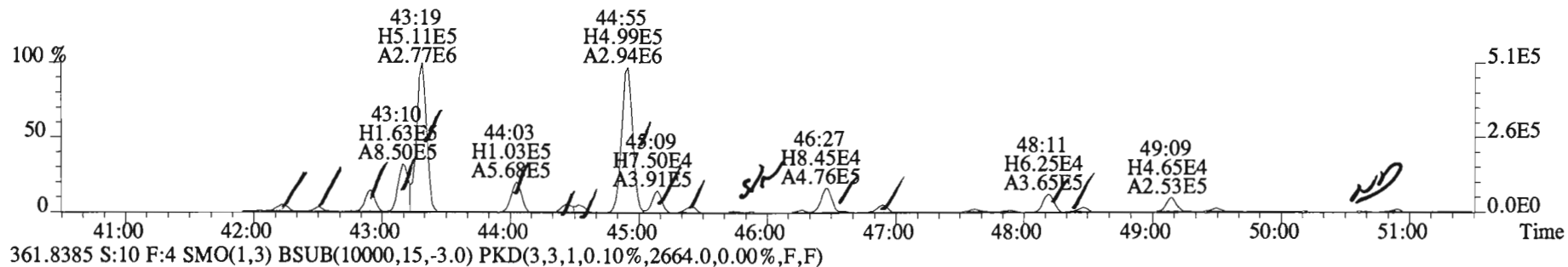


File:150204E1 #1-758 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
359.8415 S:10 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1540.0,0.00%,F,F)

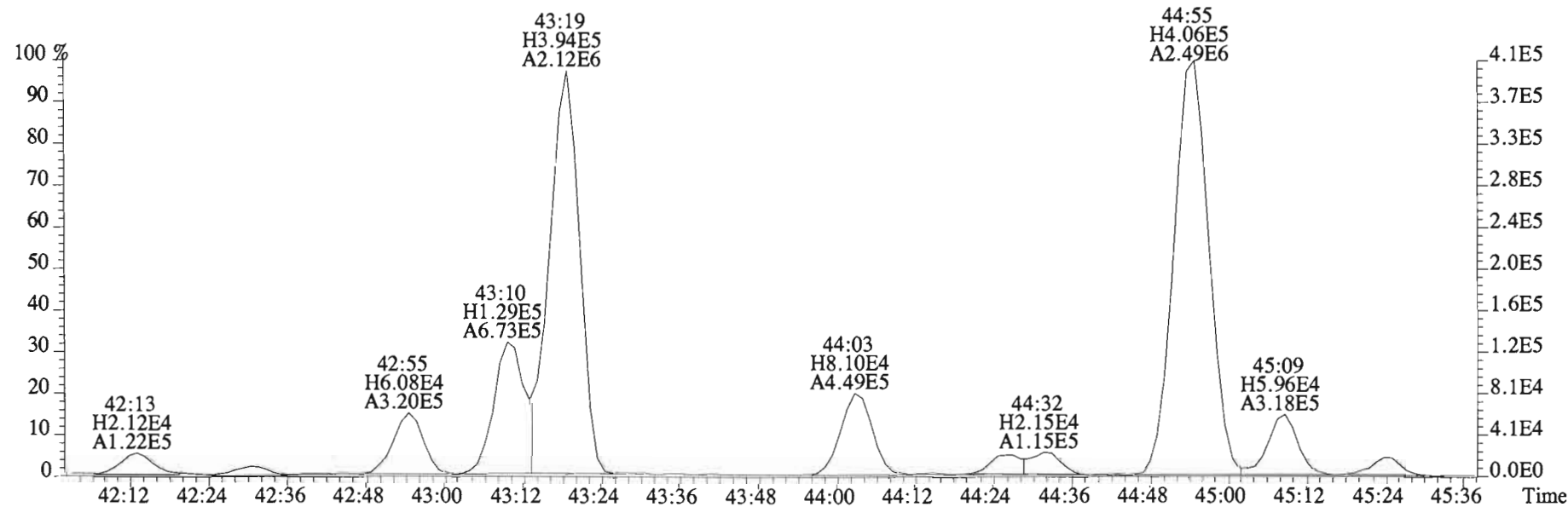
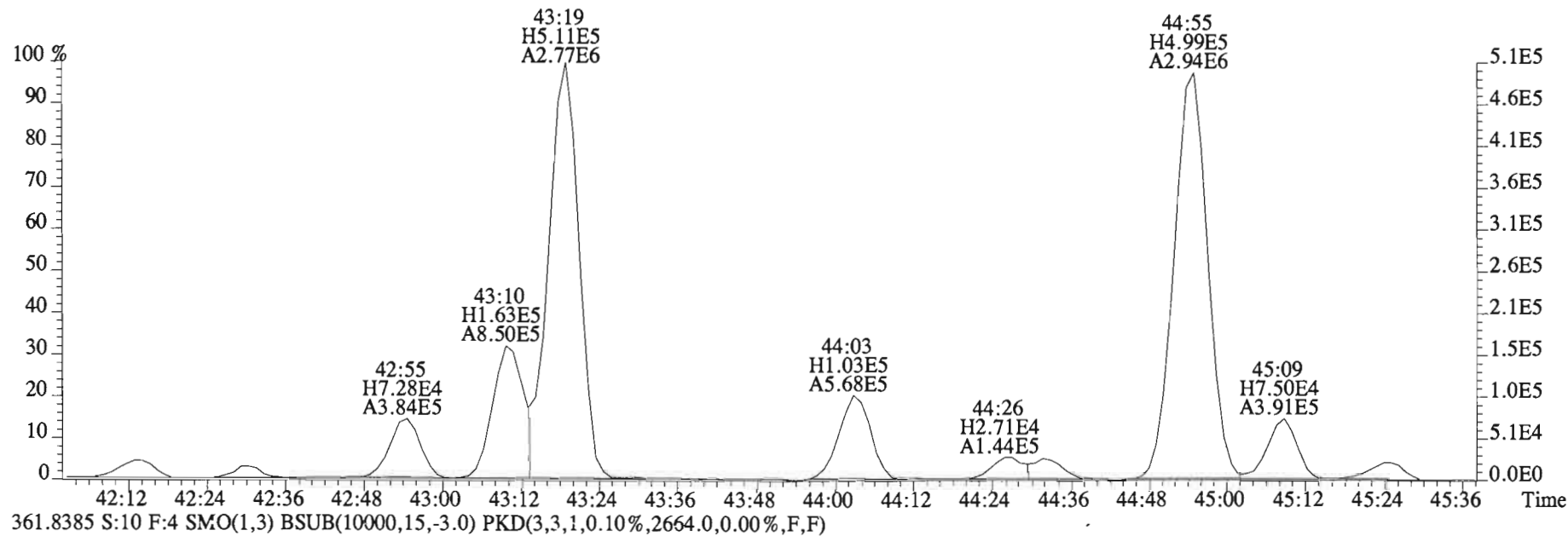




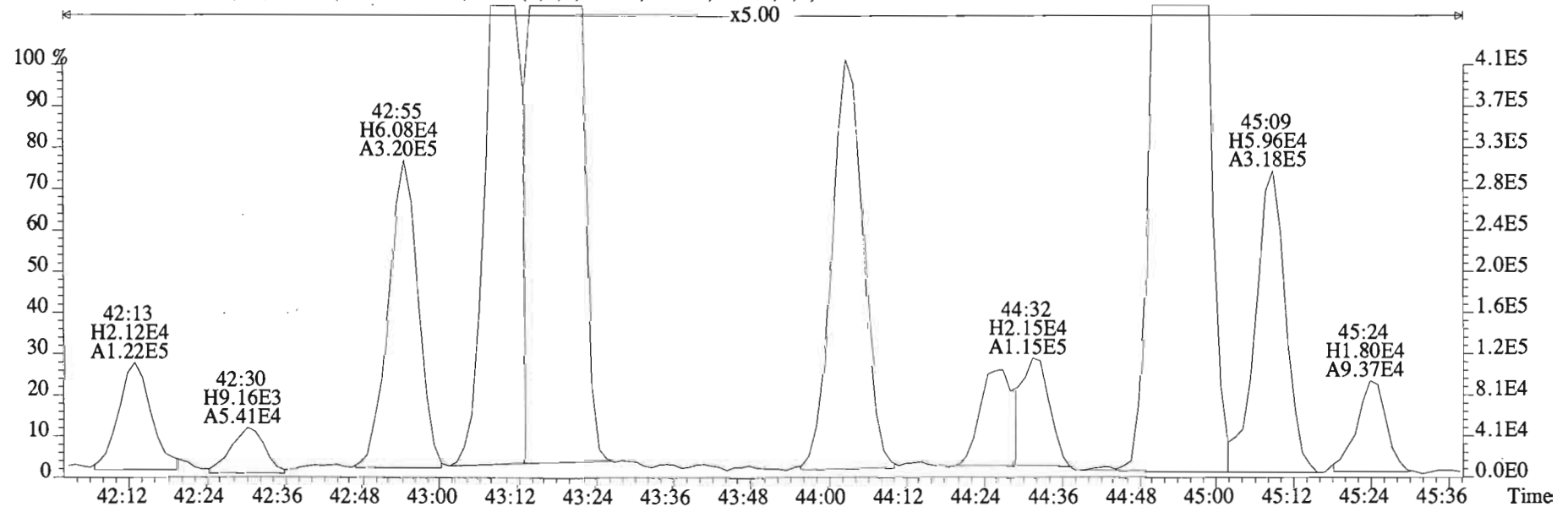
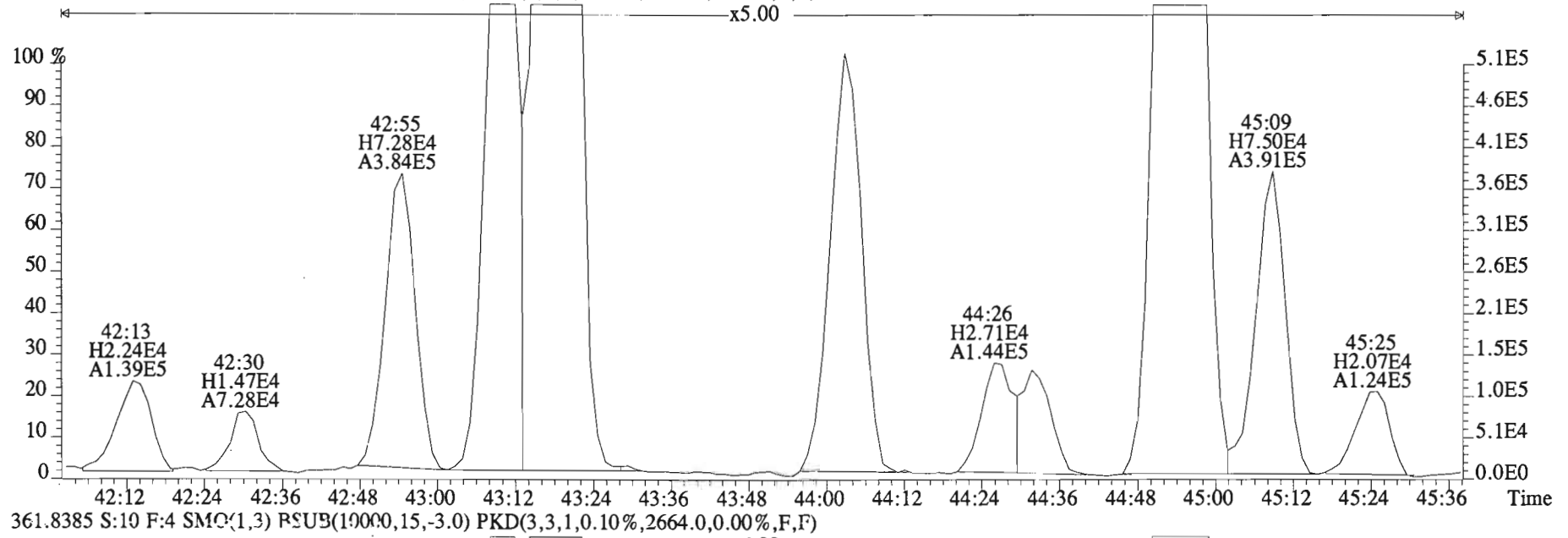
File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
 359.8415 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2292.0,0.00%,F,F)



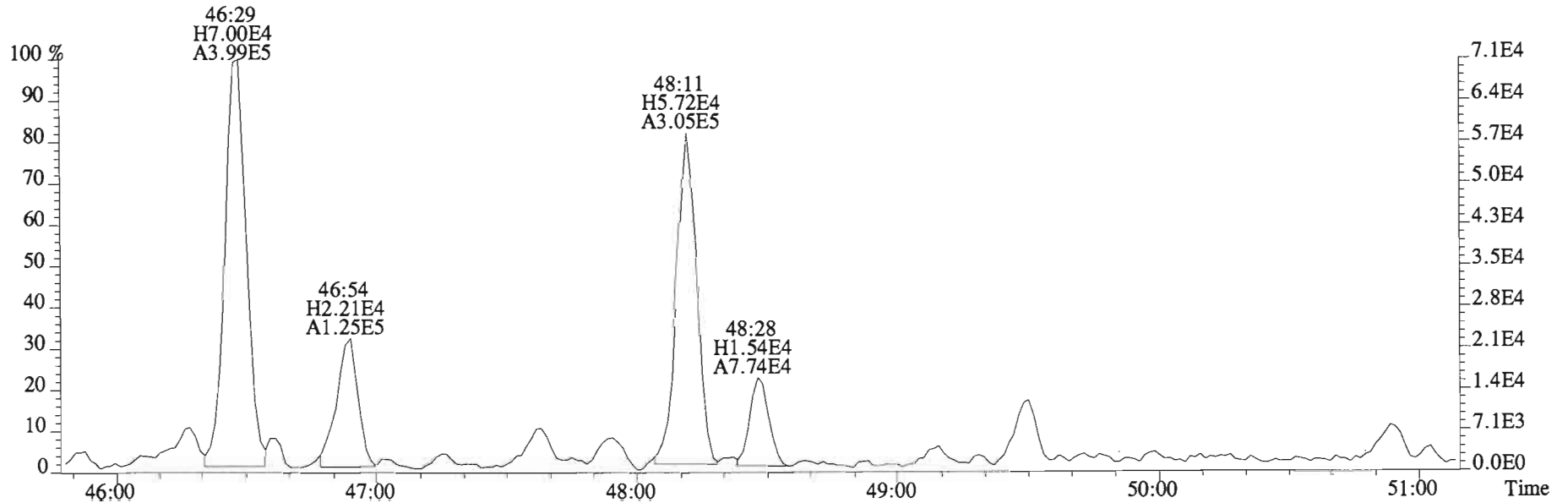
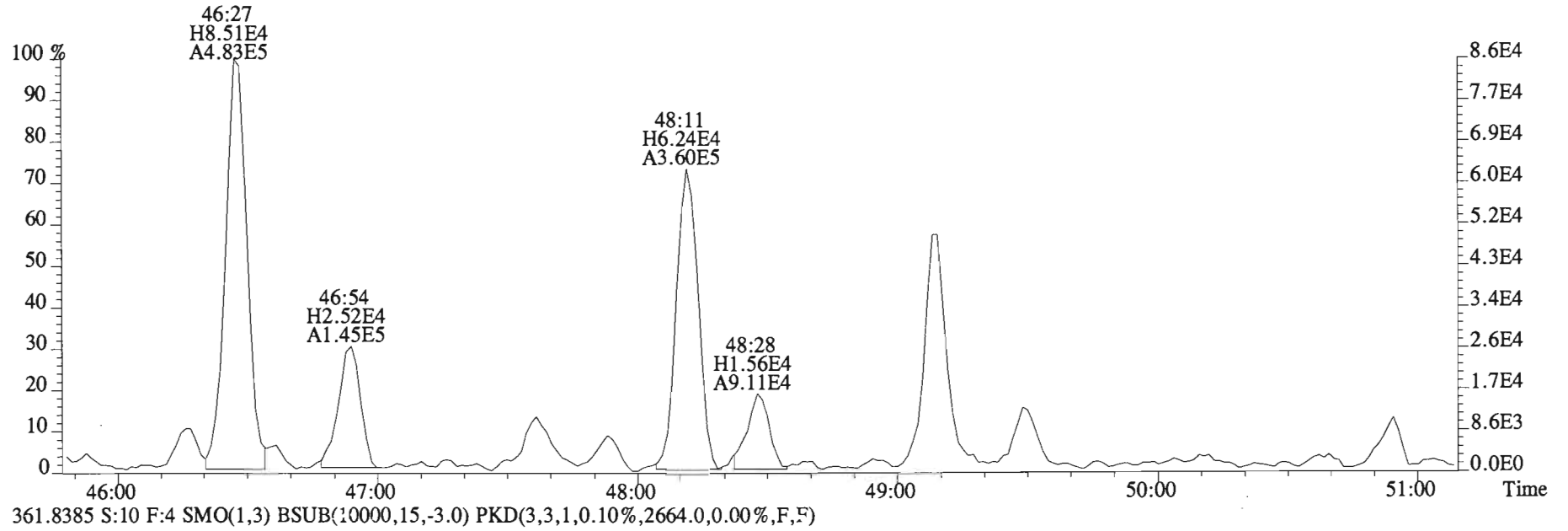
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 359.8415 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2292.0,0.00%,F,F)



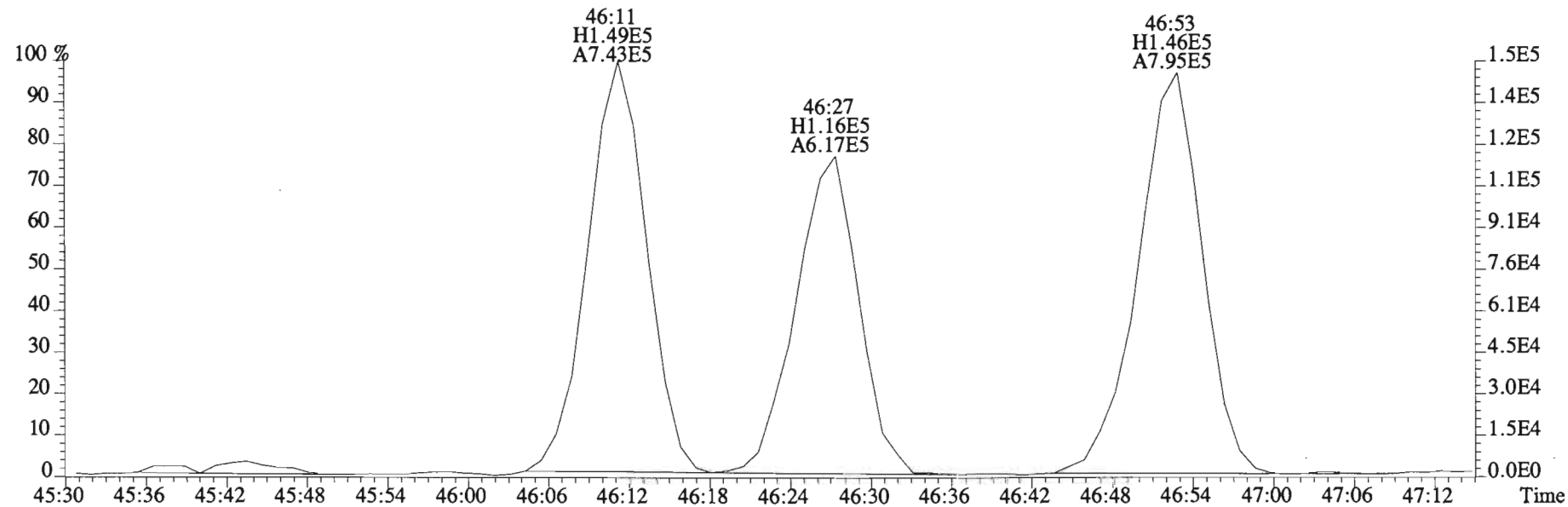
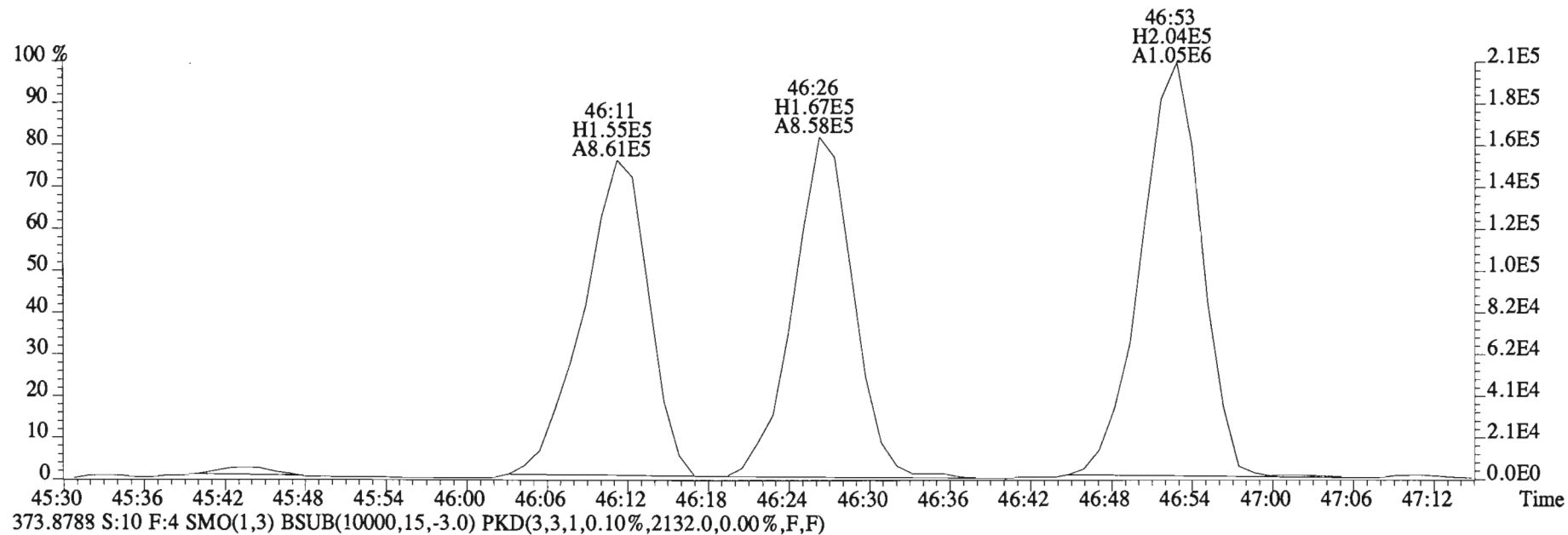
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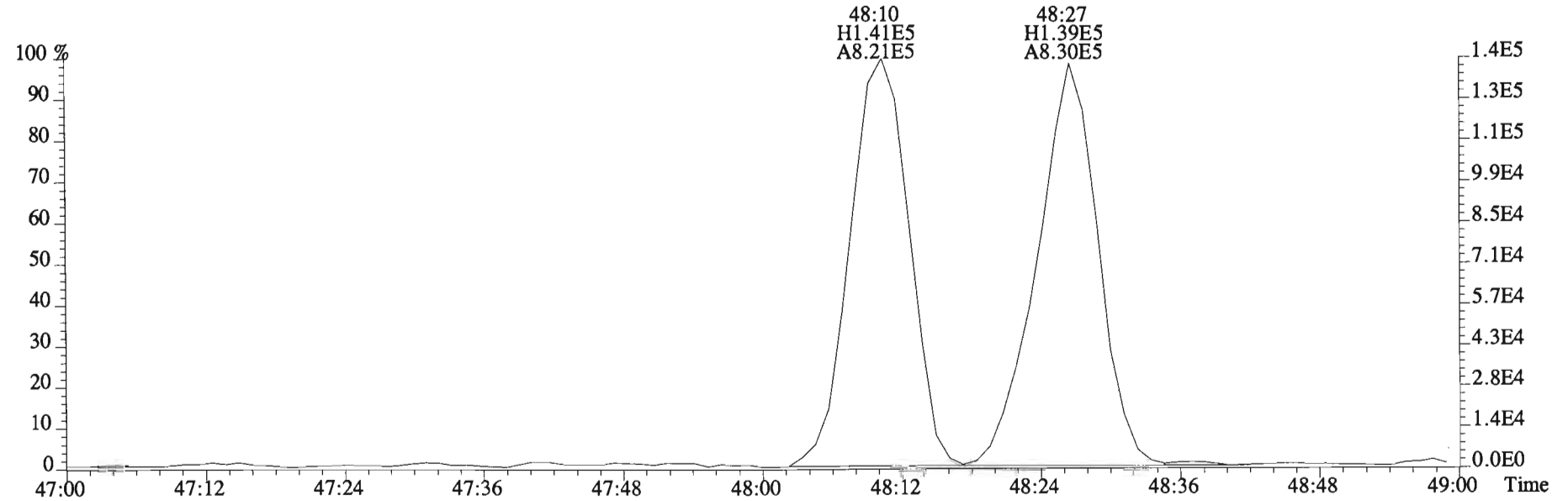
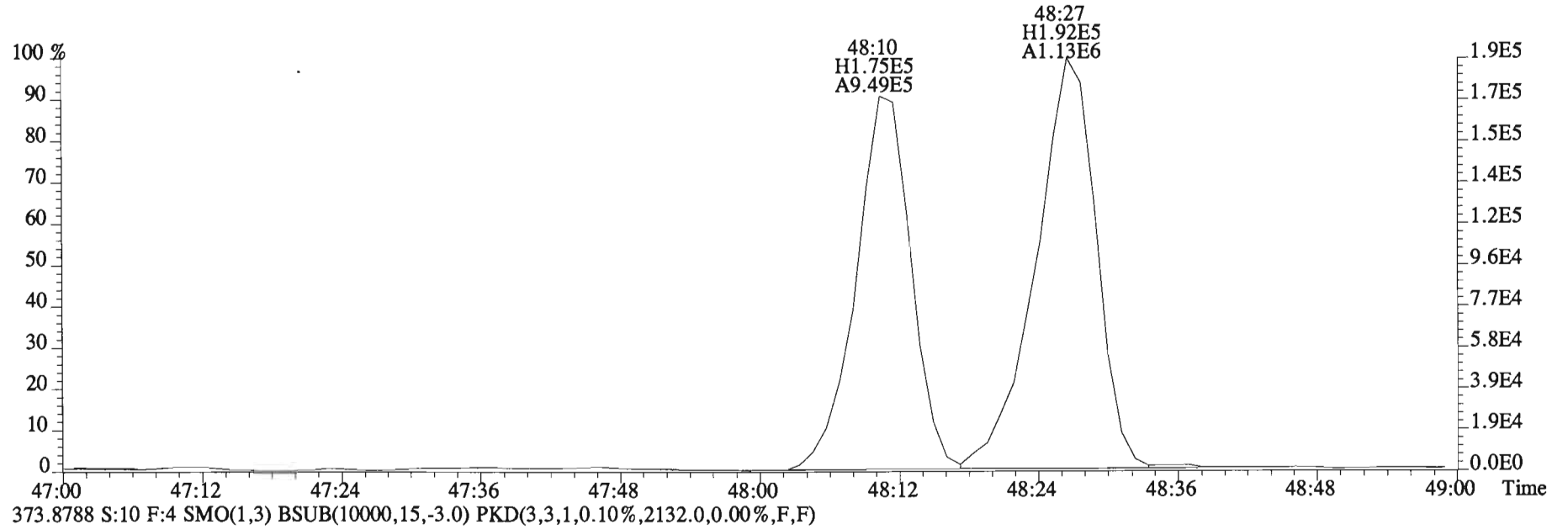
File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
 359.8415 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2292.0,0.00%,F,F)



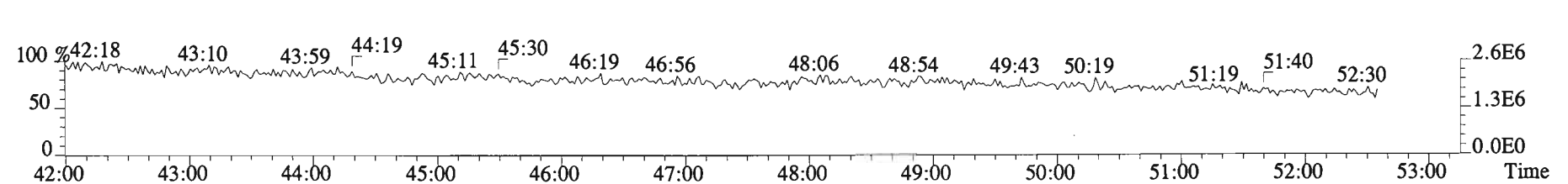
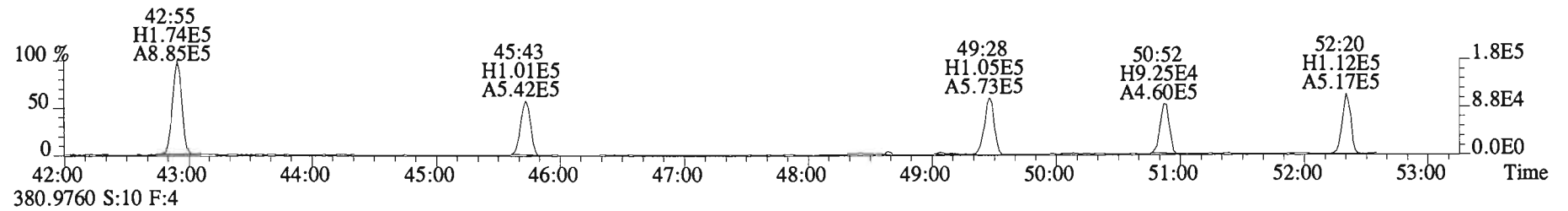
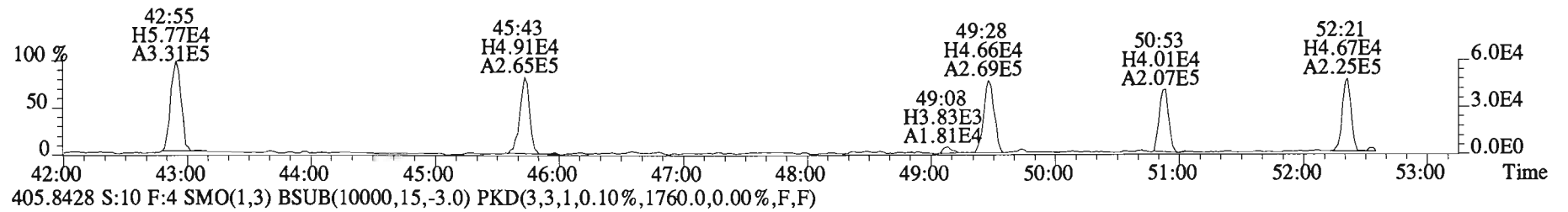
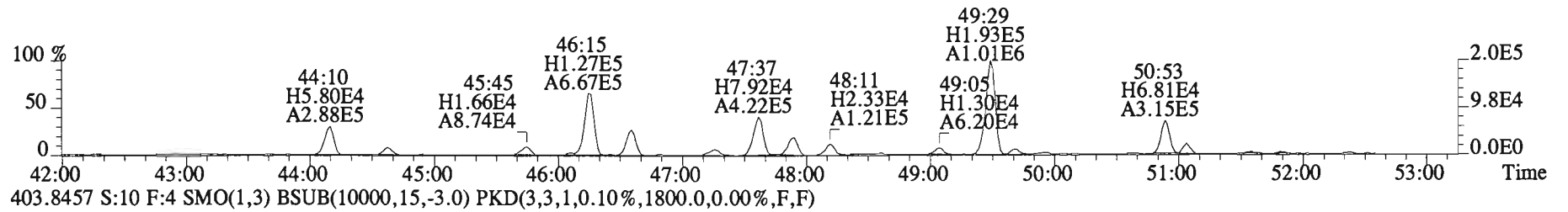
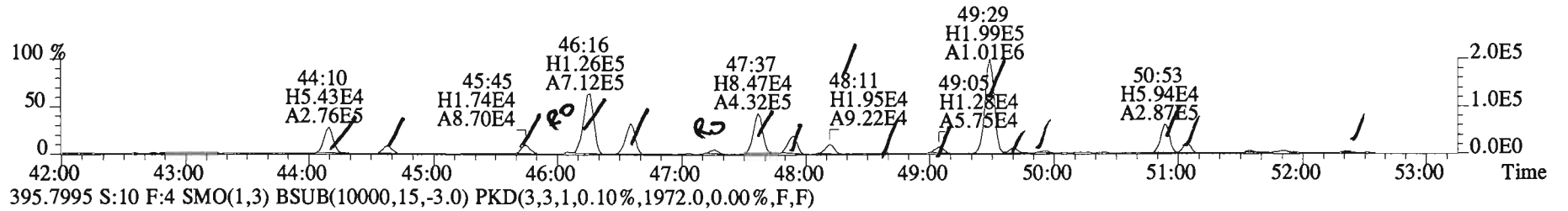
File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
371.8817 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)



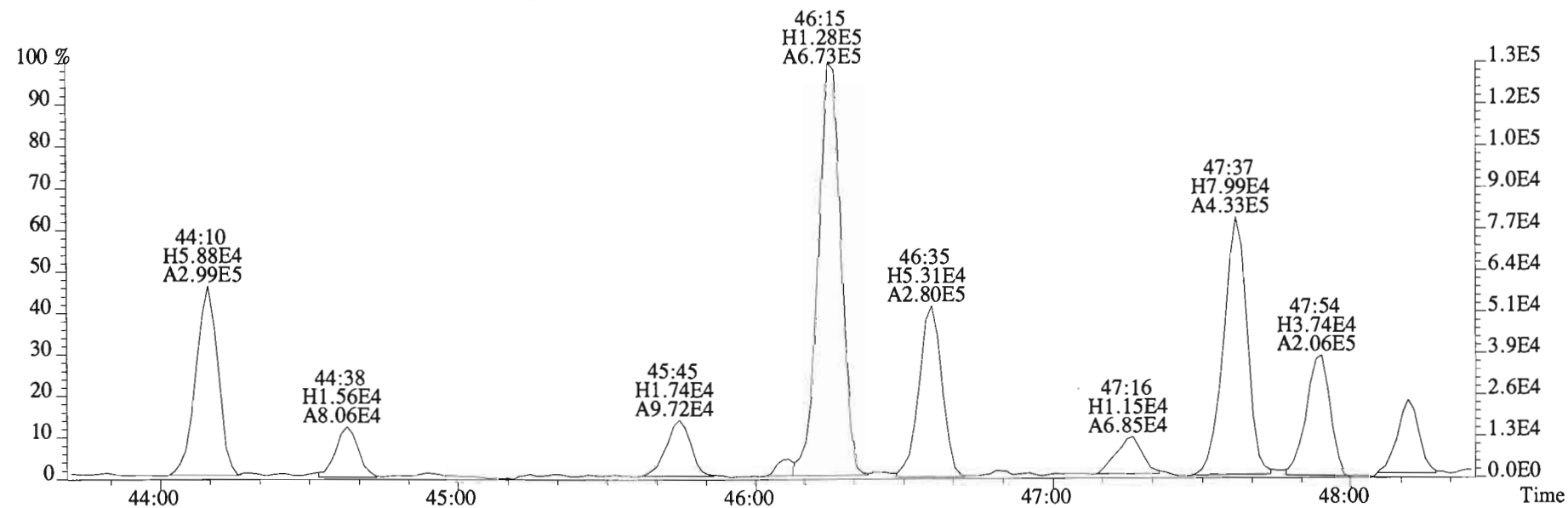
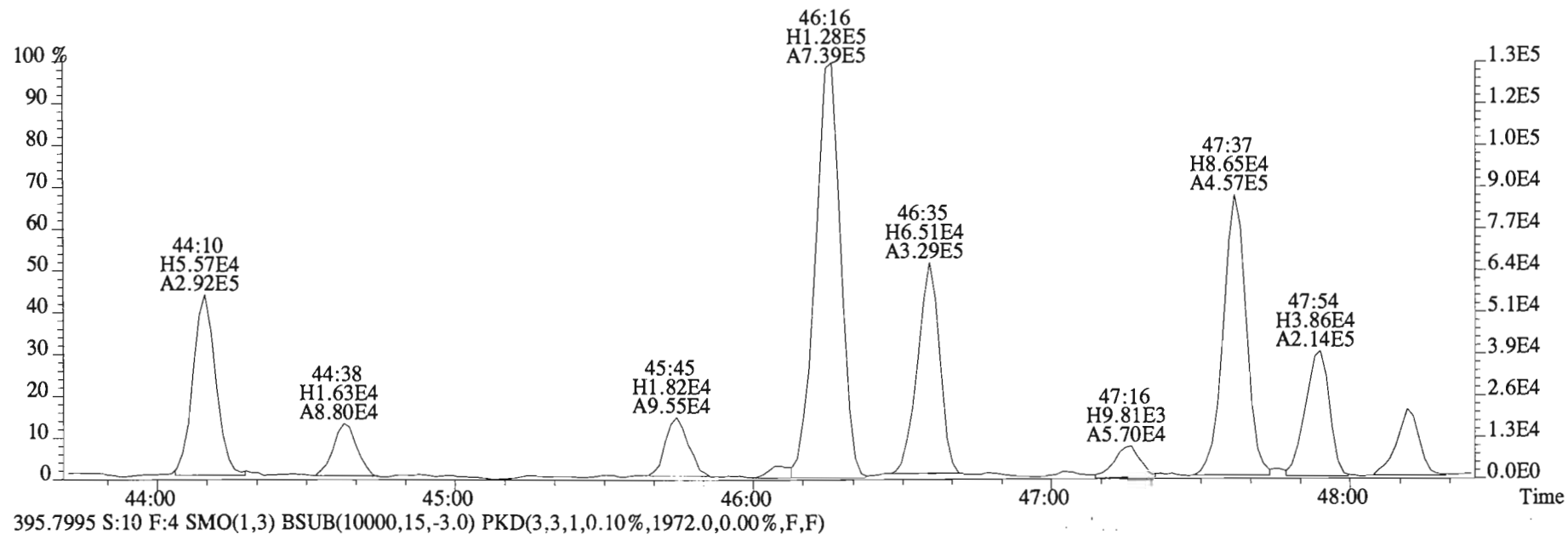
File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
371.8817 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)



File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
393.8025 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)

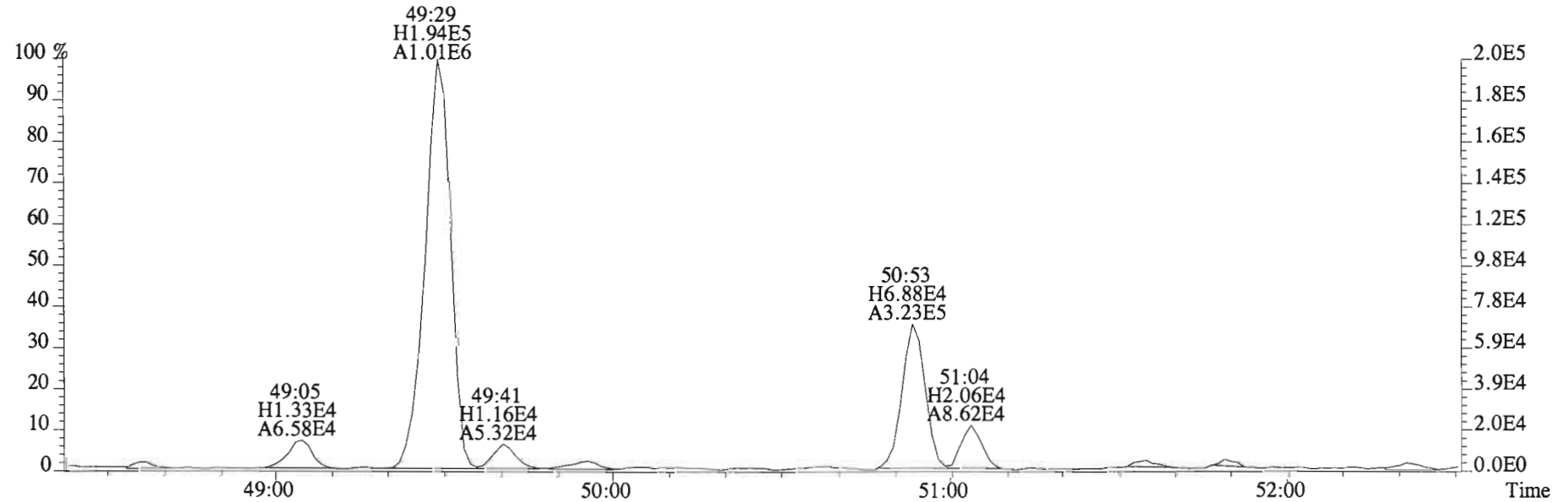
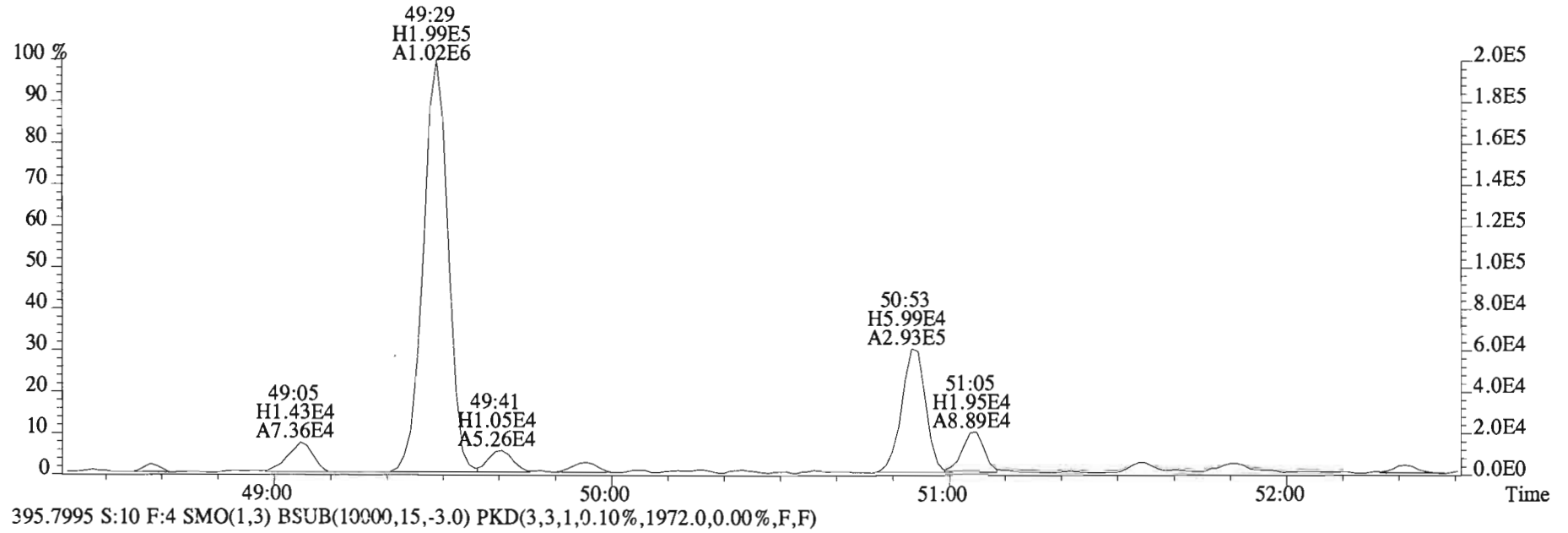


File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
393.8025 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)

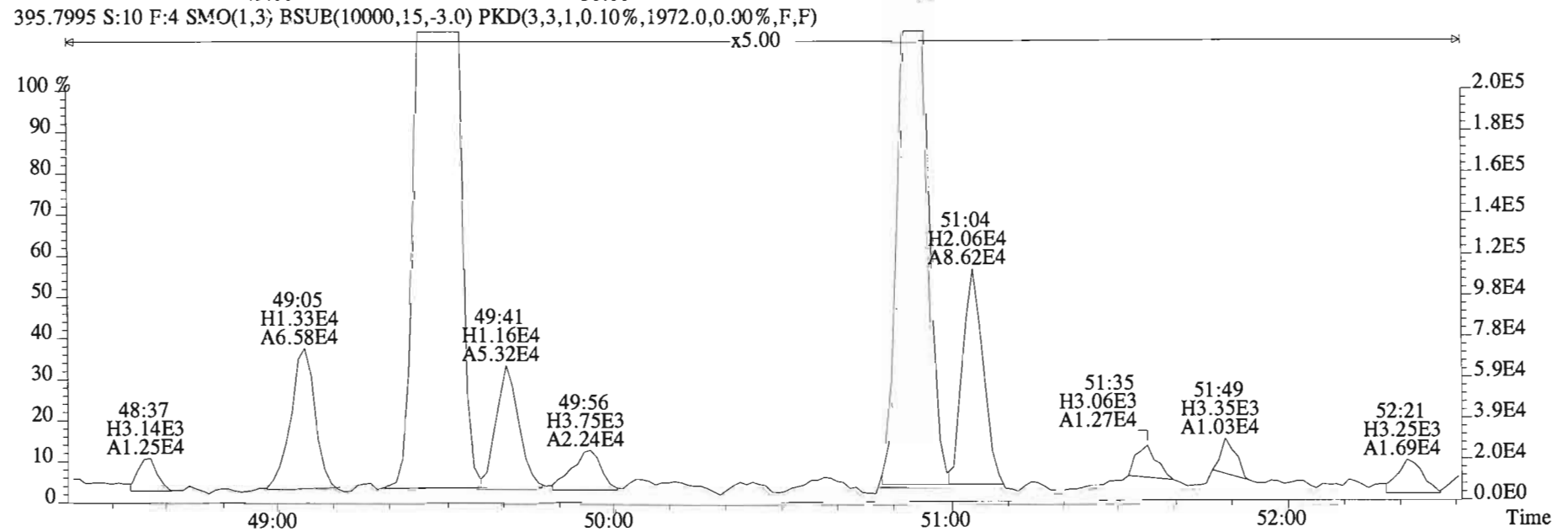
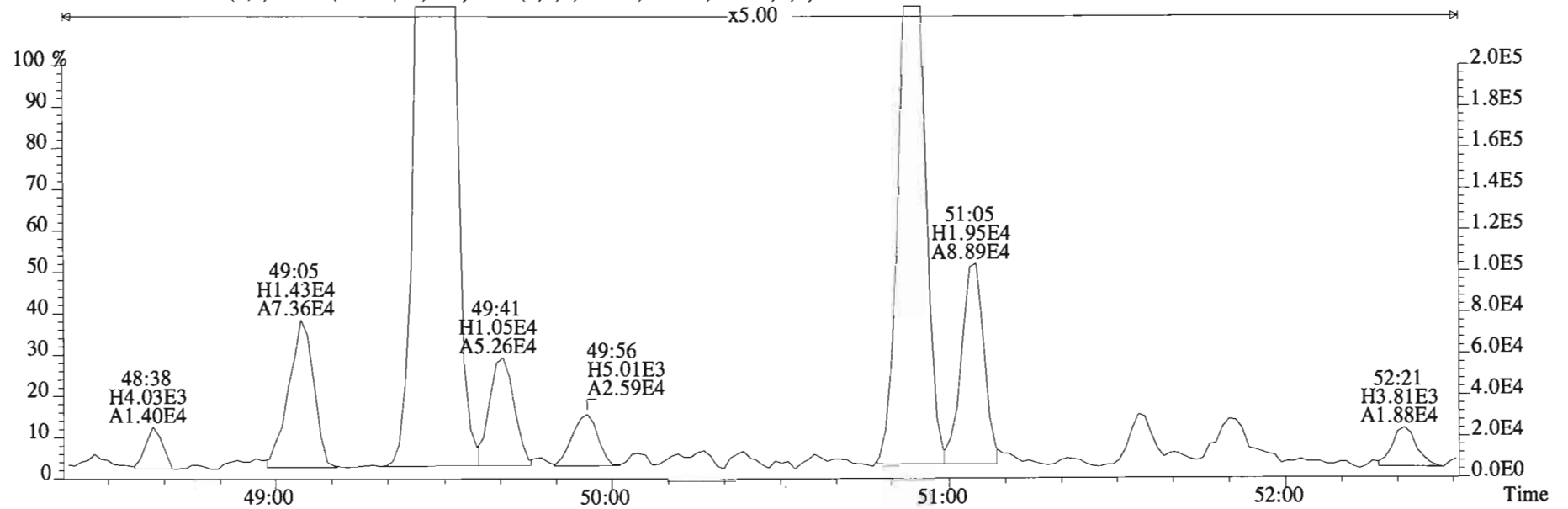




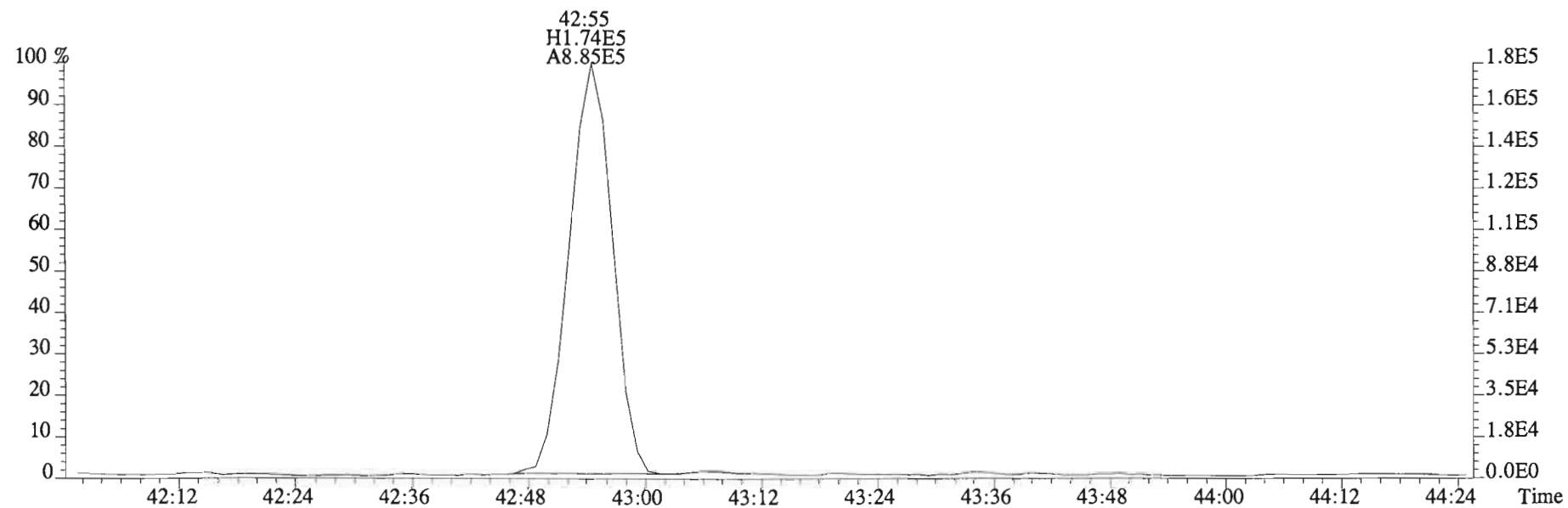
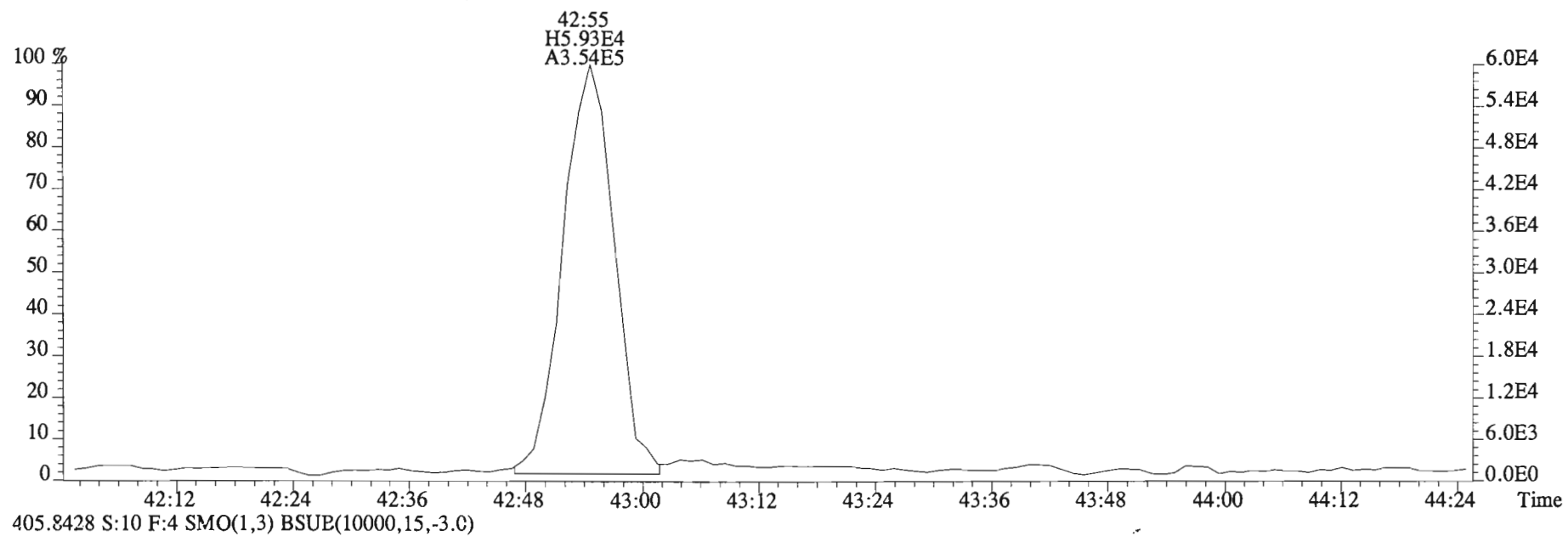
File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
393.8025 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)



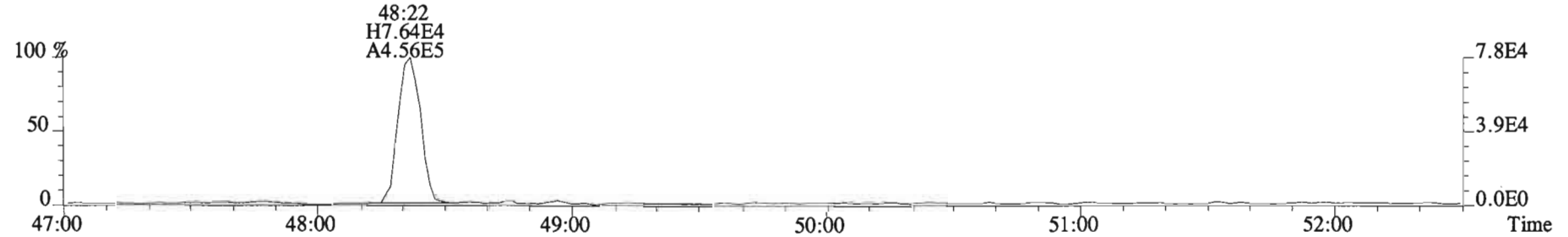
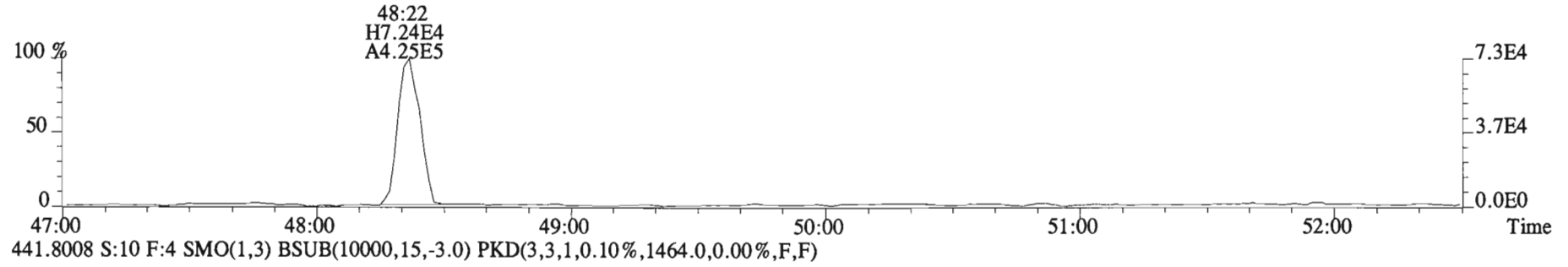
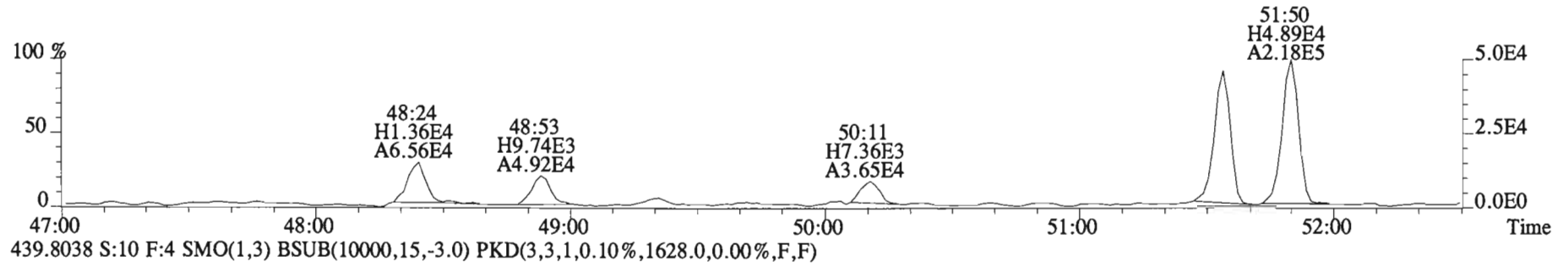
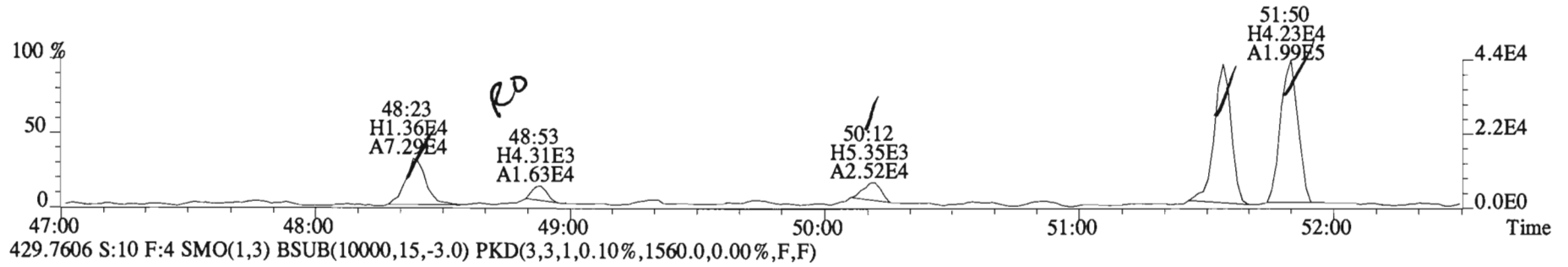
File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
 393.8025 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)



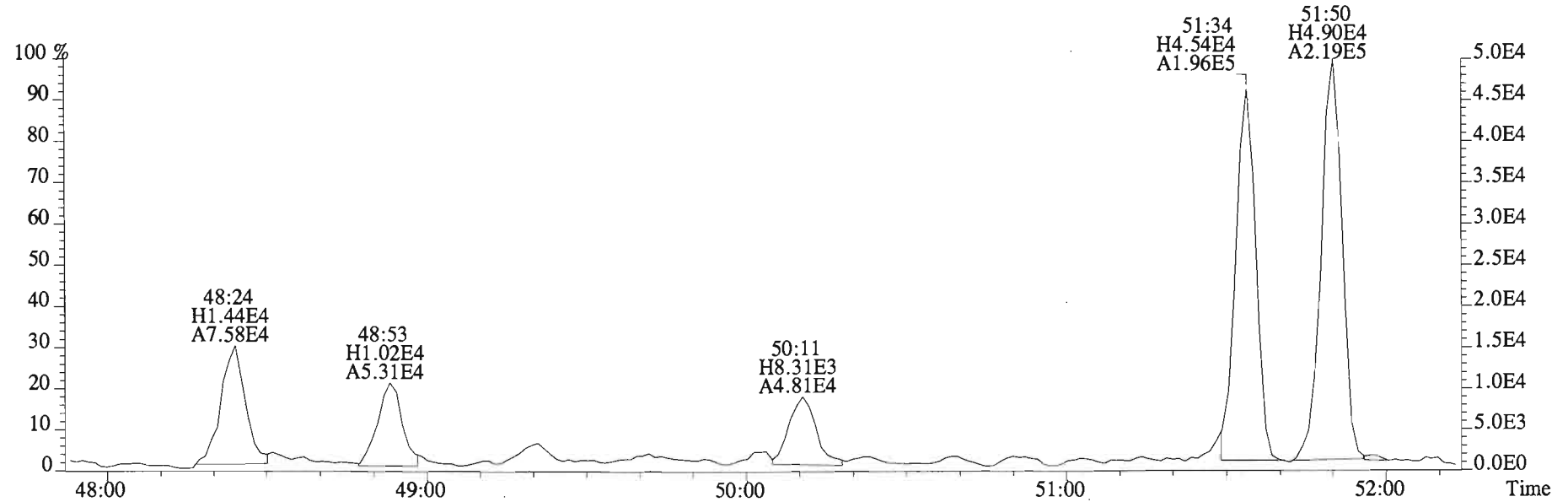
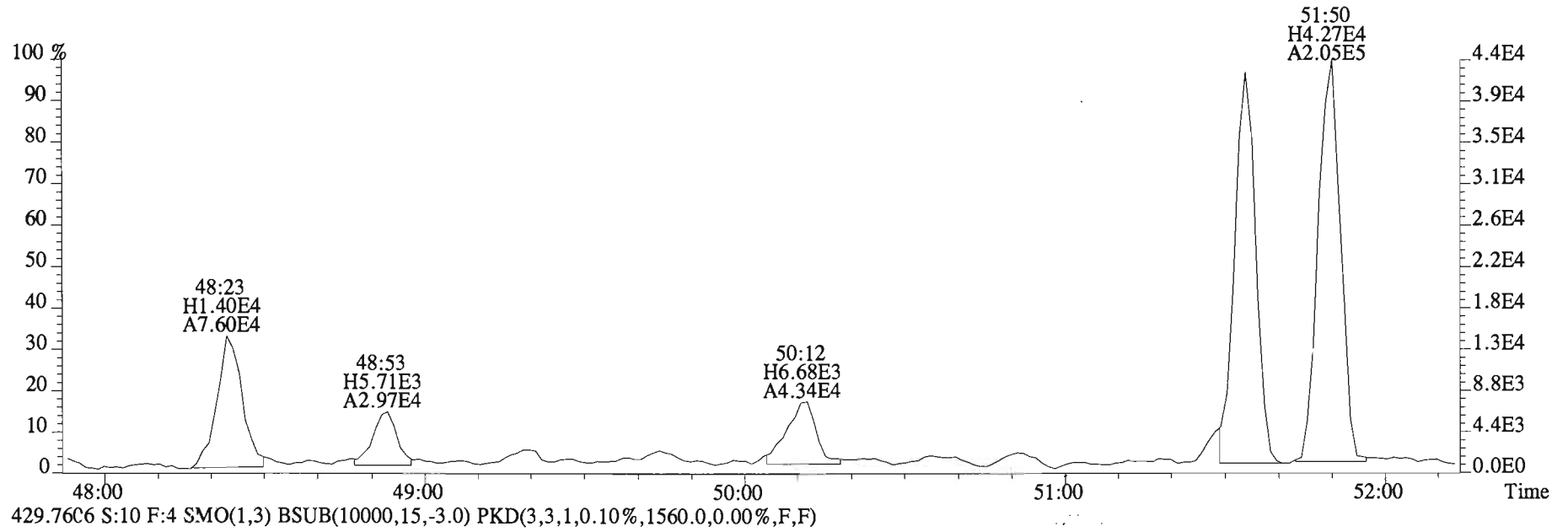
File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
403.8457 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0)



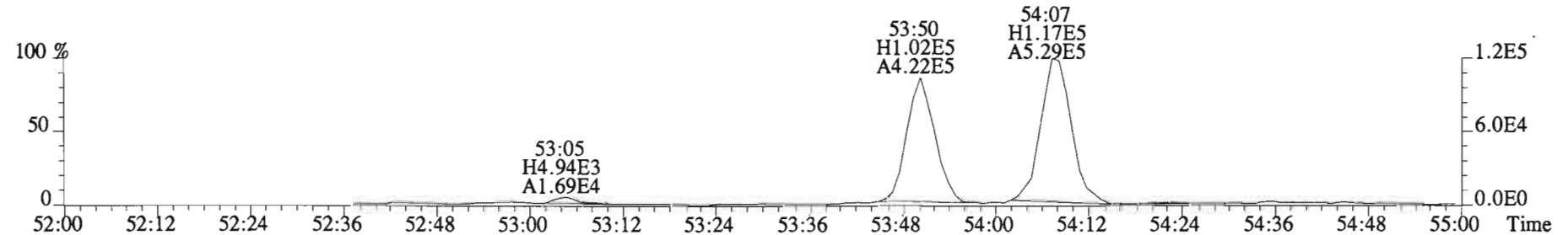
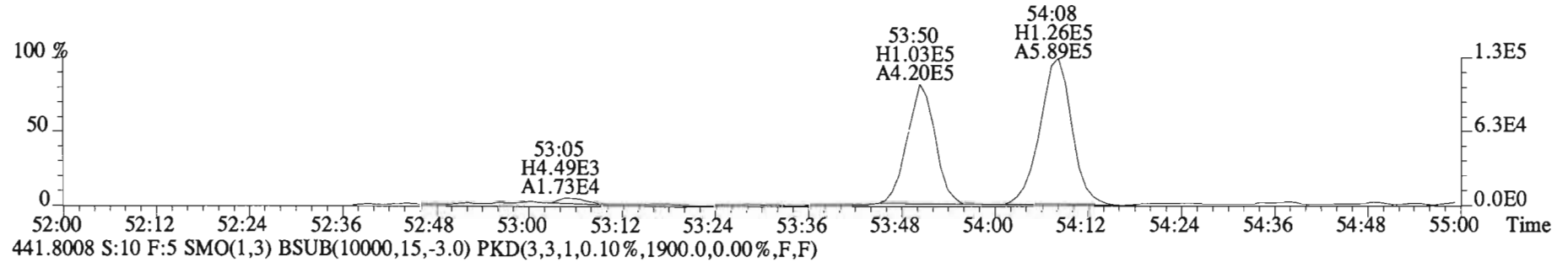
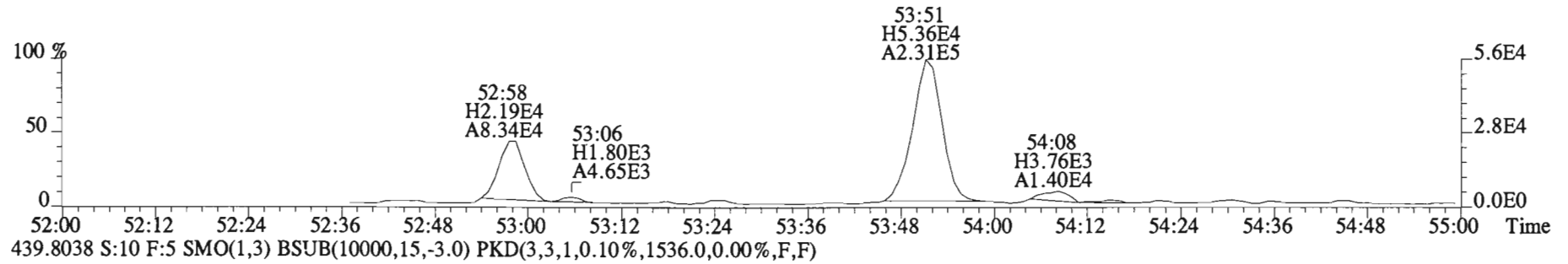
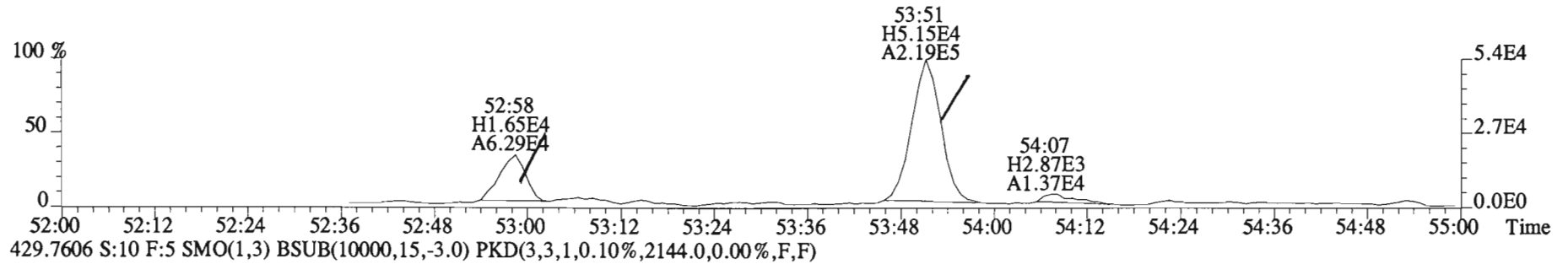
File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
427.7635 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1576.0,0.00%,F,F)



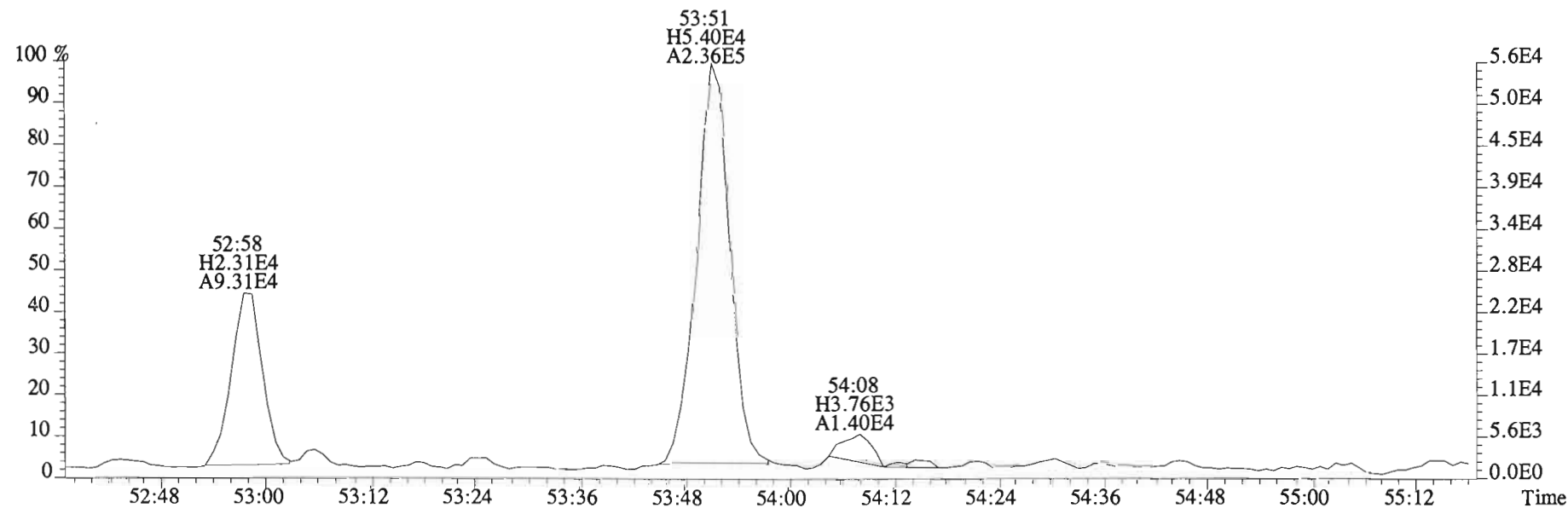
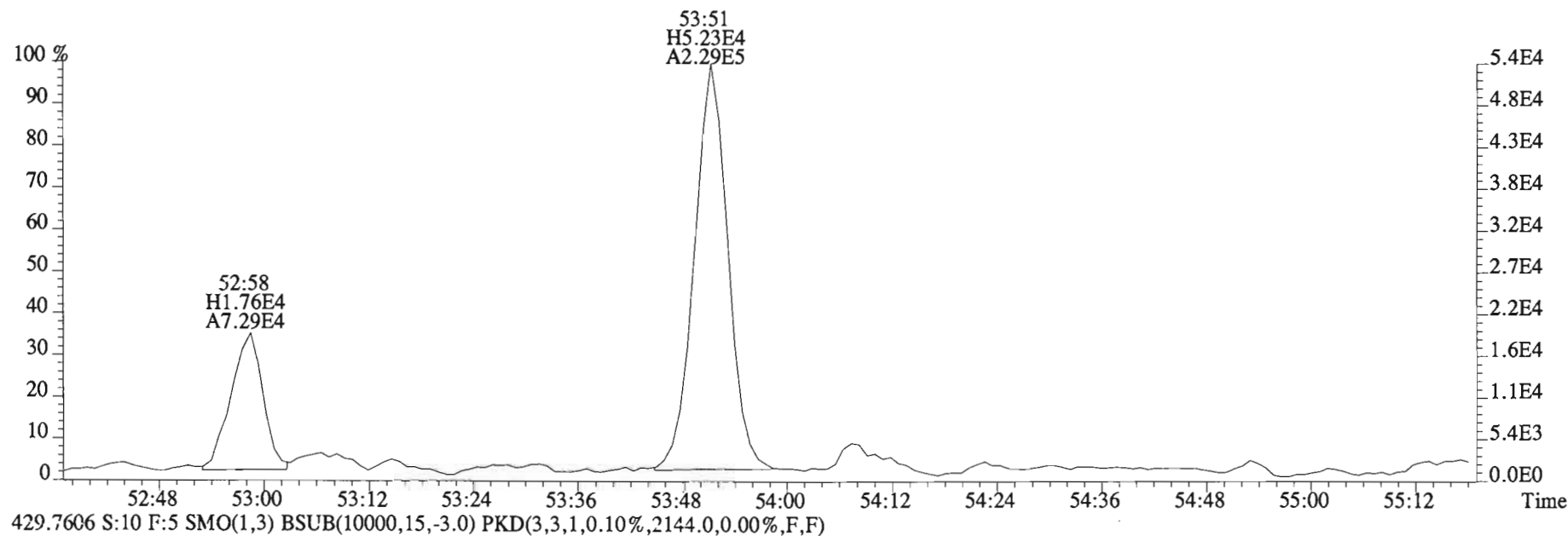
File:150204E1 #1-555 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1.  
427.7635 S:10 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1576.0,0.00%,F,F)



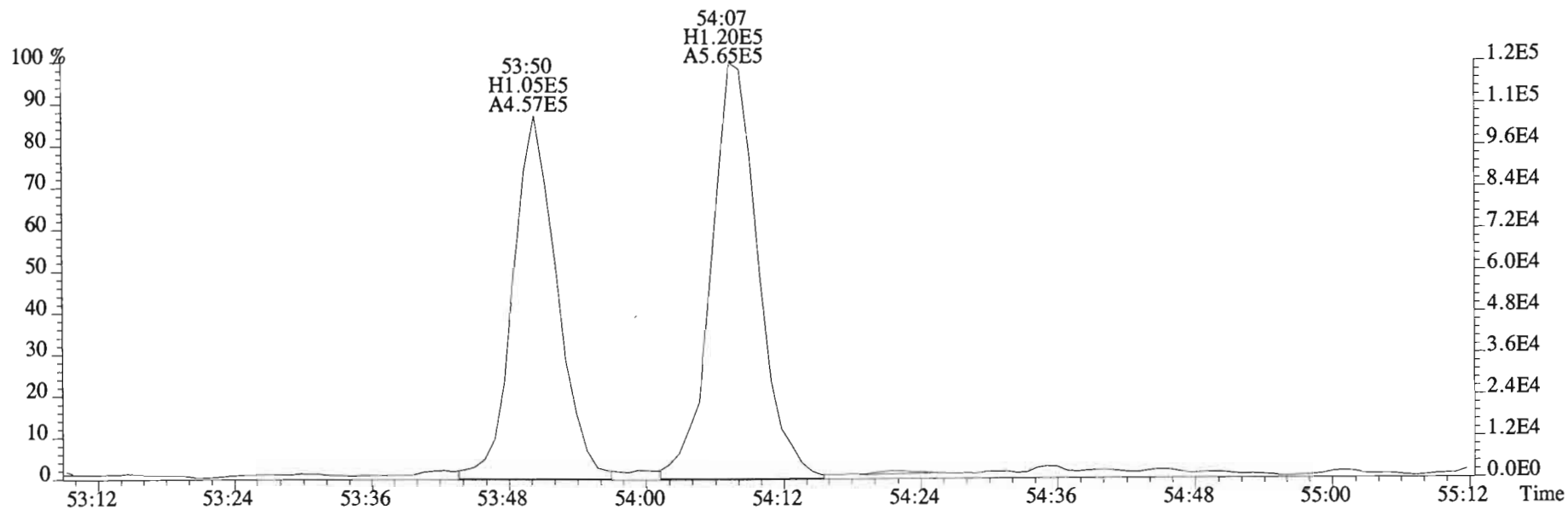
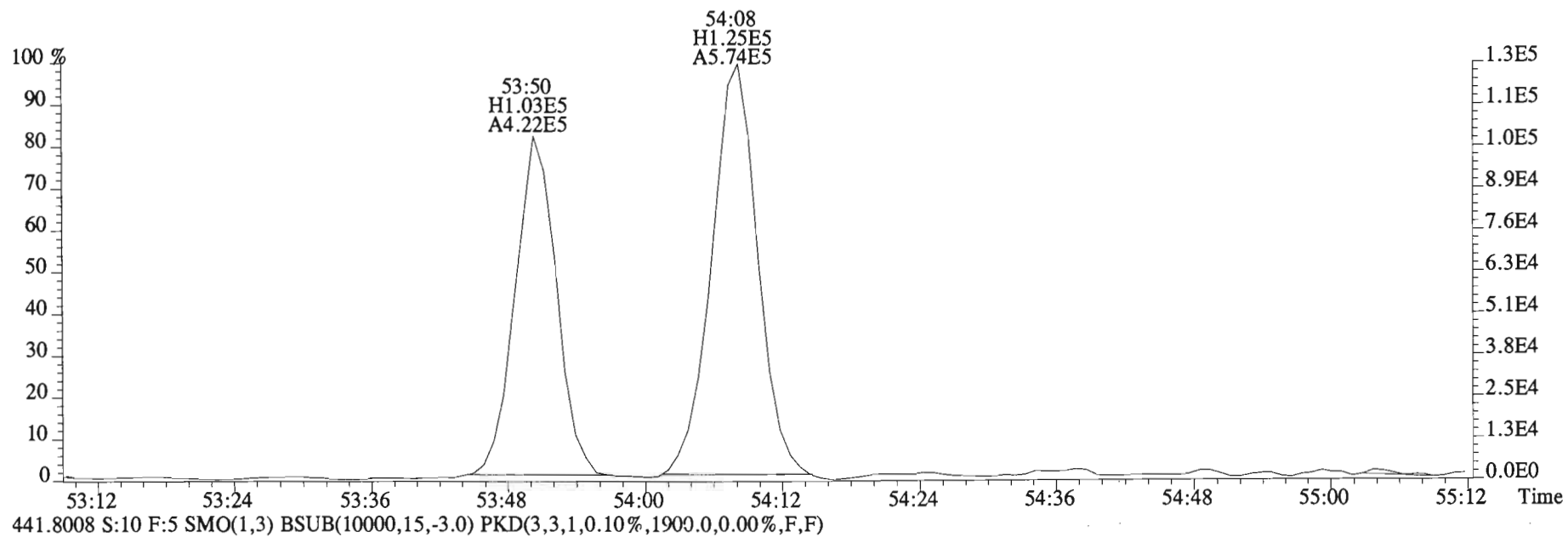
File:150204E1 #1-430 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
 427.7635 S:10 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2052.0,0.00%,F,F)



File:150204E1 #1-430 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
427.7635 S:10 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2052.0,0.00%,F,F)

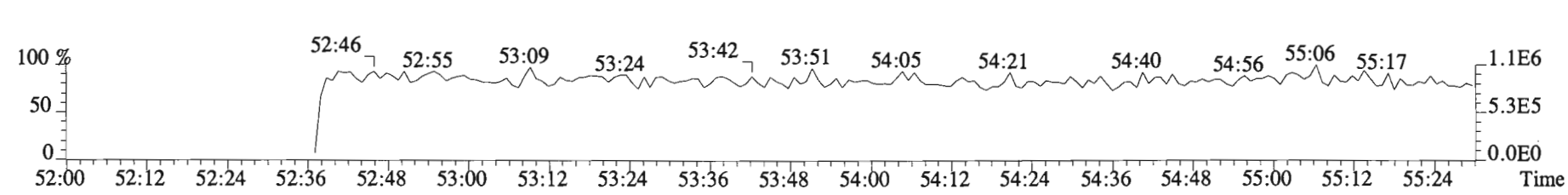
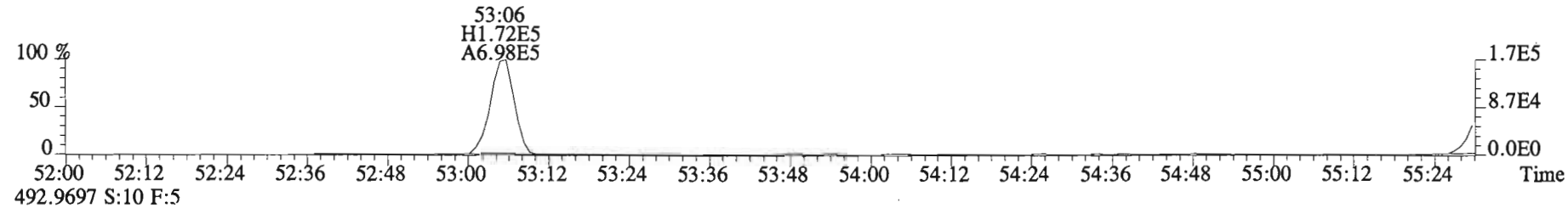
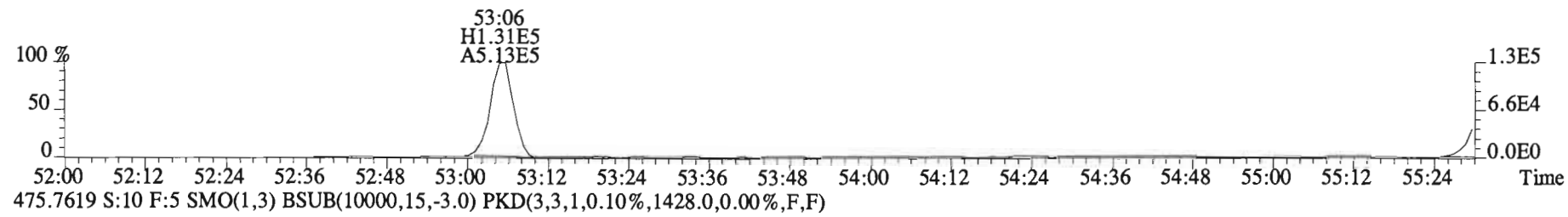
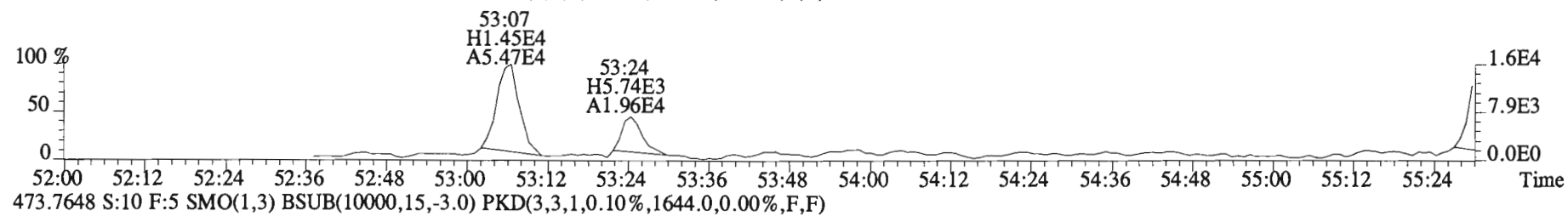
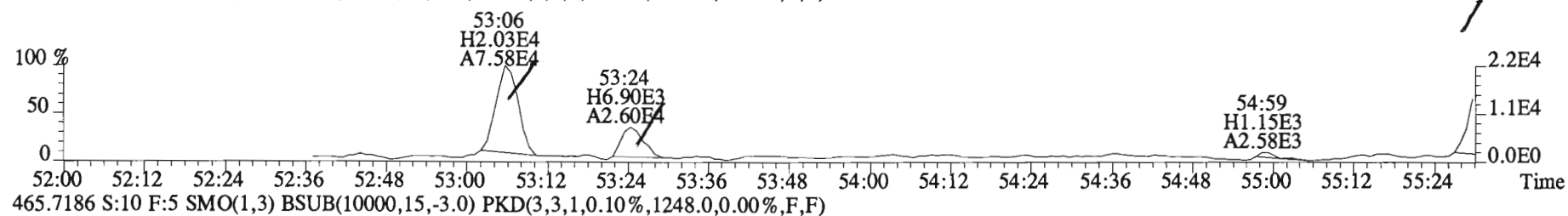


File:150204E1 #1-430 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
439.8038 S:10 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1536.0,0.00%,F,F)

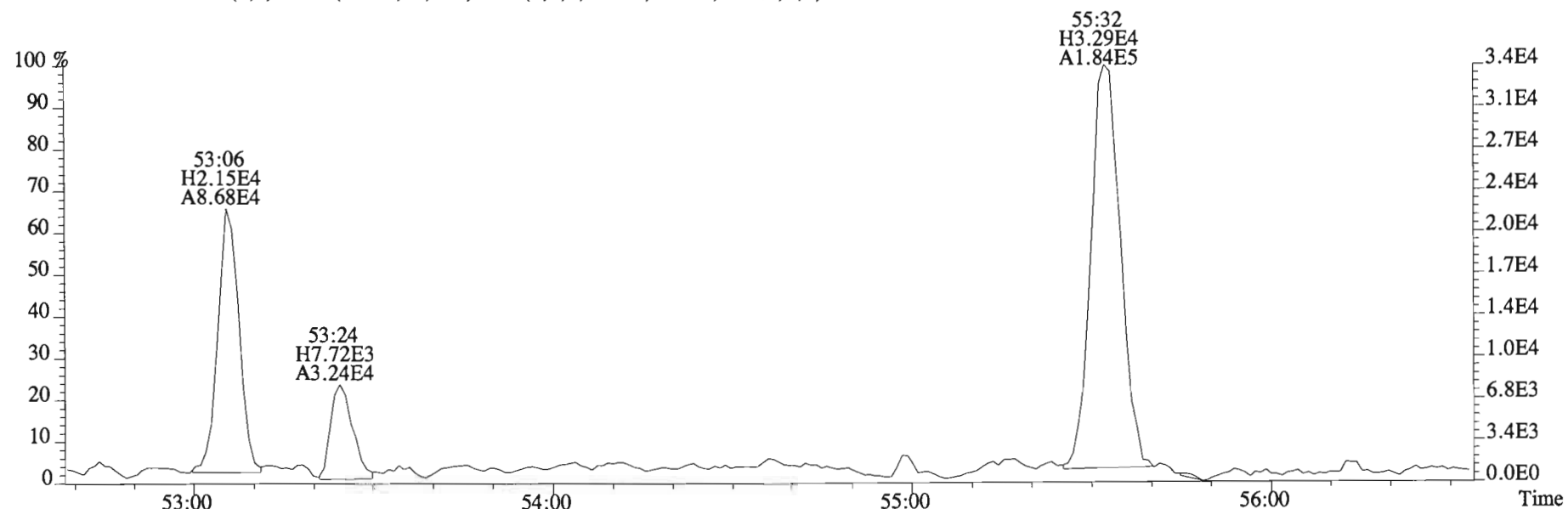




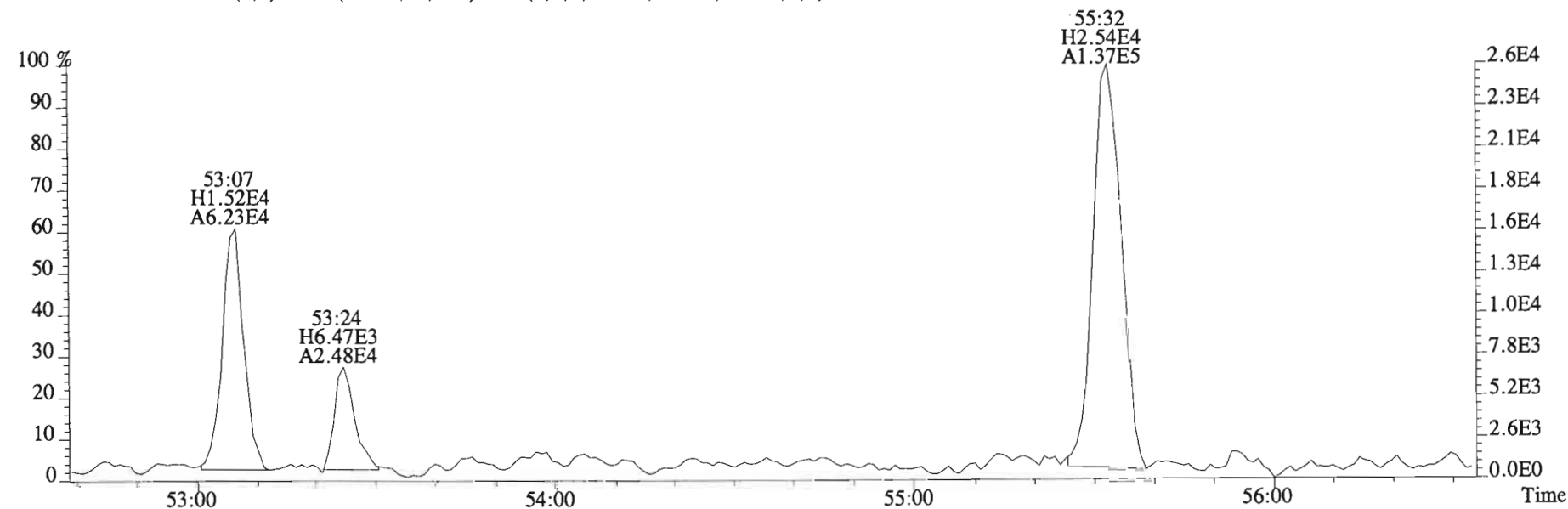
File:150204E1 #1-430 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
463.7216 S:10 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1520.0,0.00%,F,F)



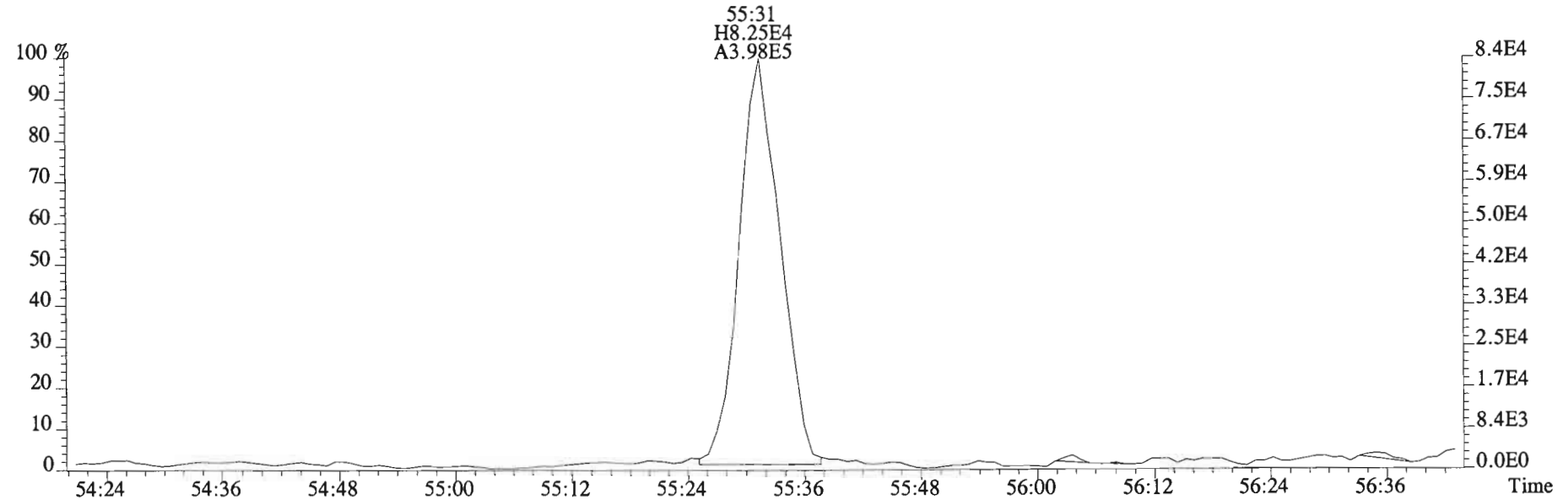
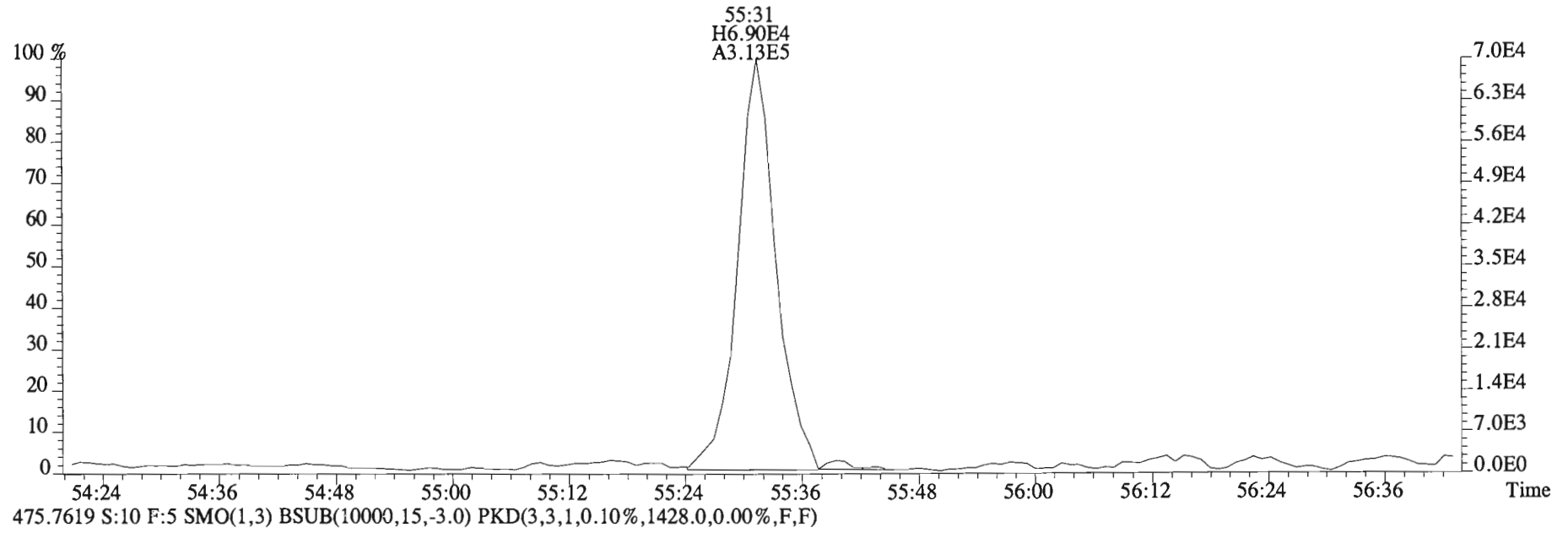
File:150204E1 #1-430 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text: Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
463.7216 S:10 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1520.0,0.00%,F,F)



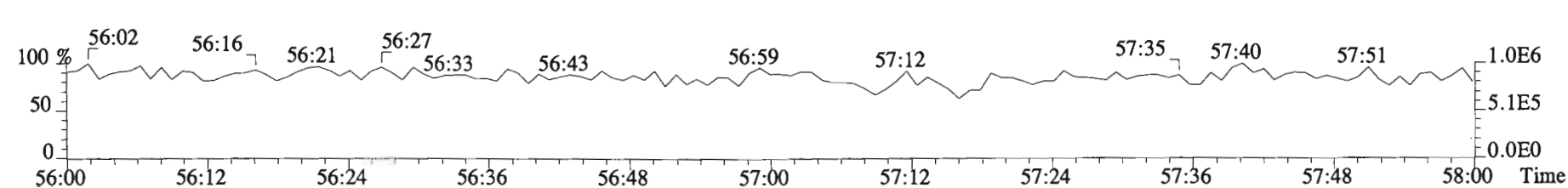
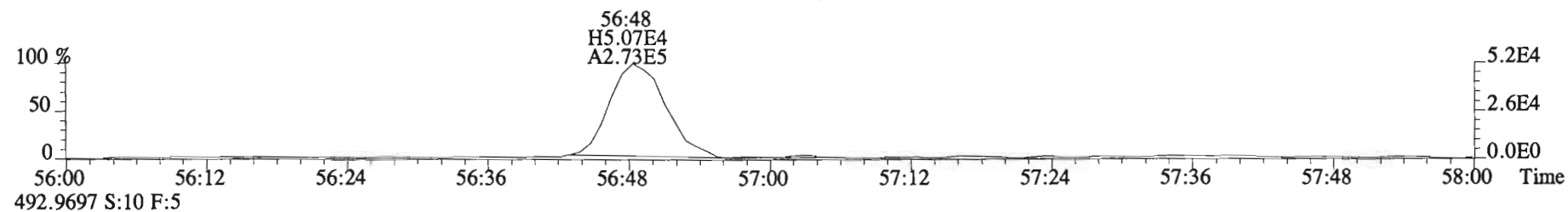
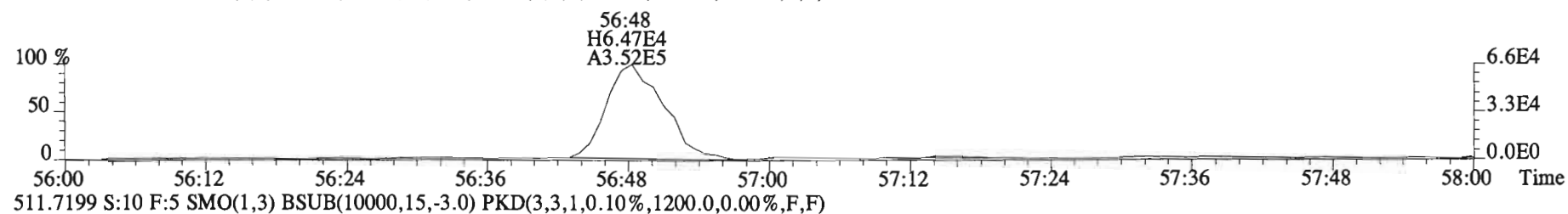
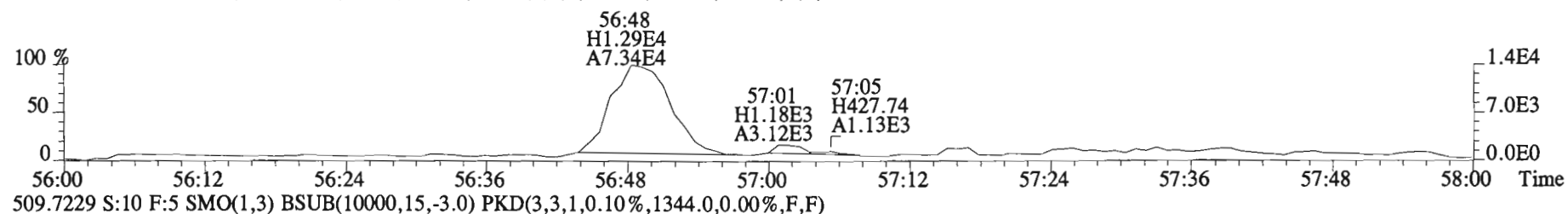
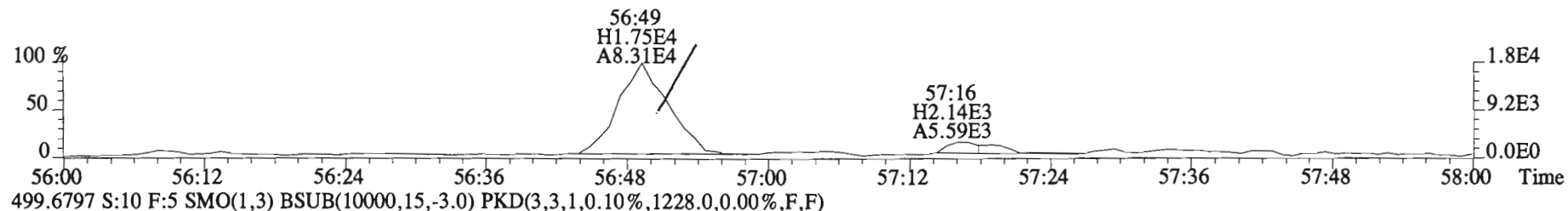
465.7186 S:10 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1248.0,0.00%,F,F)



File:150204E1 #1-430 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
473.7648 S:10 F:5 SMO(1,3) BSUB(10000,15,-3.0)



File:150204E1 #1-430 Acq: 4-FEB-2015 18:09:30 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#10 File Text:Vista Analytical Laboratory VG-8 Text:1500116-02@20X WM-FD-02-20150122-S Exp:PCB\_ZB1  
497.6826 S:10 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1252.0,0.00%,F,F)



Client ID: Method Blank  
Lab ID: B5A0099-BLK1

Filename: 150127E1 S:4 Acq:27-JAN-15 13:52:29  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.000

ConCal: ST150127E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n NotF $\eta$	1.33	*		2050	2.5	3.07	*	0.997-1.007	
Mono	PCB-2	*	*	n NotF $\eta$	1.30	*		2050	2.5	2.92	*	0.983-0.993	
Mono	PCB-3	*	*	n NotF $\eta$	1.30	*		2050	2.5	2.91	*	0.996-1.006	
Di	PCB-4/10	*	*	n NotF $\eta$	1.67	*		4460	2.5	5.35	*	0.997-1.007	
Di	PCB-7/9	*	*	n NotF $\eta$	1.25	*		4460	2.5	4.58	*	0.864-0.872	
Di	PCB-6	*	*	n NotF $\eta$	1.24	*		4460	2.5	4.63	*	0.888-0.897	
Di	PCB-5/8	*	*	n NotF $\eta$	1.27	*		4460	2.5	4.52	*	0.905-0.915	
Di	PCB-14	*	*	n NotF $\eta$	1.47	*		4460	2.5	3.78	*	0.948-0.958	
Di	PCB-11	*	*	n NotF $\eta$	1.28	*		12400	2.5	12.0	*	0.995-1.005	
Di	PCB-12/13	*	*	n NotF $\eta$	1.27	*		4460	2.5	4.39	*	1.011-1.021	
Di	PCB-15	*	*	n NotF $\eta$	1.44	*		4460	2.5	3.86	*	1.023-1.031	
Tri	PCB-19	*	*	n NotF $\eta$	1.18	*		1810	2.5	2.35	*	0.996-1.006	
Tri	PCB-30	*	*	n NotF $\eta$	1.87	*		1810	2.5	1.48	*	1.033-1.043	
Tri	PCB-18	*	*	n NotF $\eta$	0.89	*		1810	2.5	2.16	*	0.949-0.959	
Tri	PCB-17	*	*	n NotF $\eta$	0.96	*		1810	2.5	2.00	*	0.956-0.966	
Tri	PCB-24/27	*	*	n NotF $\eta$	1.30	*		1810	2.5	1.47	*	0.977-0.987	
Tri	PCB-16/32	*	*	n NotF $\eta$	1.05	*		1810	2.5	1.83	*	0.996-1.006	
Tri	PCB-34	*	*	n NotF $\eta$	1.30	*		1960	2.5	2.40	*	0.955-0.965	
Tri	PCB-23	*	*	n NotF $\eta$	1.21	*		1960	2.5	2.58	*	0.958-0.968	
Tri	PCB-29	*	*	n NotF $\eta$	1.21	*		1960	2.5	2.58	*	0.967-0.977	
Tri	PCB-26	*	*	n NotF $\eta$	1.24	*		1960	2.5	2.52	*	0.974-0.984	
Tri	PCB-25	*	*	n NotF $\eta$	1.10	*		1960	2.5	2.85	*	0.980-0.990	
Tri	PCB-31	*	*	n NotF $\eta$	1.25	*		1960	2.5	2.50	*	0.992-1.002	
Tri	PCB-28	*	*	n NotF $\eta$	1.24	*		1960	2.5	2.52	*	0.996-1.006	
Tri	PCB-20/21/33	*	*	n NotF $\eta$	1.16	*		1960	2.5	2.70	*	1.016-1.026	
Tri	PCB-22	*	*	n NotF $\eta$	1.16	*		1960	2.5	2.68	*	1.032-1.042	
Tri	PCB-36	*	*	n NotF $\eta$	1.30	*		1960	2.5	2.57	*	0.929-0.939	
Tri	PCB-39	*	*	n NotF $\eta$	1.26	*		1960	2.5	2.65	*	0.943-0.953	
Tri	PCB-38	*	*	n NotF $\eta$	1.24	*		1960	2.5	2.69	*	0.967-0.977	
Tri	PCB-35	*	*	n NotF $\eta$	1.26	*		1960	2.5	2.66	*	0.982-0.992	
Tri	PCB-37	*	*	n NotF $\eta$	1.35	*		1960	2.5	2.48	*	0.996-1.006	
Tetra	PCB-54	*	*	n NotF $\eta$	1.02	*		2120	2.5	2.55	*	0.996-1.006	
Tetra	PCB-50	*	*	n NotF $\eta$	0.78	*		2120	2.5	3.35	*	1.037-1.047	
Tetra	PCB-53	*	*	n NotF $\eta$	1.14	*		2120	2.5	2.98	*	0.941-0.951	
Tetra	PCB-51	*	*	n NotF $\eta$	1.16	*		2120	2.5	2.92	*	0.952-0.962	
Tetra	PCB-45	*	*	n NotF $\eta$	1.04	*		2120	2.5	3.26	*	0.965-0.975	
Tetra	PCB-46	*	*	n NotF $\eta$	0.95	*		2120	2.5	3.57	*	0.981-0.991	

Integrations by:

Analyst: DMS

Date: 1/29/15

Reviewed by: APZ

Date: 1/30/15

Client ID: Method Blank  
Lab ID: B5A0099-BLK1

Filename: 150127E1 S:4 Acq:27-JAN-15 13:52:29  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.000

ConCal: ST150127E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	*	* n	Not F $\eta$	1.29	*		2120	2.5	2.63	*	0.996-1.006	
Tetra	PCB-73	*	* n	Not F $\eta$	1.41	*		2120	2.5	2.40	*	0.999-1.009	
Tetra	PCB-43/49	*	* n	Not F $\eta$	1.14	*		2120	2.5	2.98	*	1.005-1.015	
Tetra	PCB-47	*	* n	Not F $\eta$	1.20	*		2120	2.5	2.75	*	0.996-1.006	
Tetra	PCB-48/75	*	* n	Not F $\eta$	1.33	*		2120	2.5	2.48	*	0.999-1.009	
Tetra	PCB-65	*	* n	Not F $\eta$	1.32	*		2120	2.5	2.50	*	1.007-1.017	
Tetra	PCB-62	*	* n	Not F $\eta$	1.36	*		2120	2.5	2.42	*	1.011-1.021	
Tetra	PCB-44	*	* n	Not F $\eta$	0.87	*		2120	2.5	3.78	*	1.020-1.030	
Tetra	PCB-42/59	*	* n	Not F $\eta$	1.24	*		2120	2.5	2.66	*	1.027-1.037	
Tetra	PCB-41/64/71/72	*	* n	Not F $\eta$	1.34	*		2120	2.5	2.46	*	1.045-1.055	
Tetra	PCB-68	*	* n	Not F $\eta$	1.61	*		2120	2.5	2.05	*	1.053-1.063	
Tetra	PCB-40	*	* n	Not F $\eta$	0.86	*		2120	2.5	3.84	*	1.061-1.071	
Tetra	PCB-57	*	* n	Not F $\eta$	1.12	*		2120	2.5	2.21	*	0.965-0.975	
Tetra	PCB-67	*	* n	Not F $\eta$	1.09	*		2120	2.5	2.27	*	0.974-0.984	
Tetra	PCB-58	*	* n	Not F $\eta$	1.14	*		2120	2.5	2.18	*	0.977-0.987	
Tetra	PCB-63	*	* n	Not F $\eta$	1.16	*		2120	2.5	2.13	*	0.981-0.991	
Tetra	PCB-74	*	* n	Not F $\eta$	1.21	*		2120	2.5	2.04	*	0.989-0.999	
Tetra	PCB-61/70	*	* n	Not F $\eta$	1.13	*		2120	2.5	2.20	*	0.995-1.005	
Tetra	PCB-76/66	*	* n	Not F $\eta$	1.18	*		2120	2.5	2.10	*	1.000-1.010	
Tetra	PCB-80	*	* n	Not F $\eta$	1.32	*		2120	2.5	1.84	*	0.995-1.005	
Tetra	PCB-55	*	* n	Not F $\eta$	1.23	*		2120	2.5	1.98	*	1.004-1.014	
Tetra	PCB-56/60	*	* n	Not F $\eta$	1.11	*		2120	2.5	2.21	*	1.018-1.028	
Tetra	PCB-79	*	* n	Not F $\eta$	1.16	*		2120	2.5	2.10	*	1.048-1.058	
Tetra	PCB-78	*	* n	Not F $\eta$	1.18	*		2120	2.5	2.07	*	0.982-0.992	
Tetra	PCB-81	*	* n	Not F $\eta$	1.29	*		2120	2.5	1.89	*	0.995-1.005	
Tetra	PCB-77	*	* n	Not F $\eta$	1.29	*		2120	2.5	1.92	*	0.995-1.005	
Penta	PCB-104	*	* n	Not F $\eta$	1.26	*		1390	2.5	2.62	*	0.996-1.006	
Penta	PCB-96	*	* n	Not F $\eta$	1.09	*		1390	2.5	3.03	*	1.034-1.044	
Penta	PCB-103	*	* n	Not F $\eta$	0.97	*		1390	2.5	3.42	*	1.051-1.061	
Penta	PCB-100	*	* n	Not F $\eta$	0.96	*		1390	2.5	3.43	*	1.061-1.071	
Penta	PCB-94	*	* n	Not F $\eta$	1.13	*		1390	2.5	3.79	*	0.980-0.990	
Penta	PCB-95/98/102	*	* n	Not F $\eta$	1.29	*		1390	2.5	3.33	*	0.994-1.004	
Penta	PCB-93	*	* n	Not F $\eta$	1.06	*		1390	2.5	4.04	*	0.998-1.008	
Penta	PCB-88/91	*	* n	Not F $\eta$	1.12	*		1390	2.5	3.81	*	1.006-1.016	
Penta	PCB-121	*	* n	Not F $\eta$	1.76	*		1390	2.5	2.43	*	1.009-1.019	
Penta	PCB-84/92	*	* n	Not F $\eta$	1.07	*		1390	2.5	3.47	*	0.985-0.995	
Penta	PCB-89	*	* n	Not F $\eta$	1.00	*		1390	2.5	3.73	*	0.990-1.000	

Analyst: DMS

Date: 1/29/15

Client ID: Method Blank  
Lab ID: B5A0099-BLK1

Filename: 150127E1 S:4 Acq:27-JAN-15 13:52:29  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.000

ConCal: ST150127E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	*	* n	NotF $\eta$	1.21	*		1390	2.5	3.08	*	0.995-1.005	
Penta	PCB-113	*	* n	NotF $\eta$	1.34	*		1390	2.5	2.77	*	1.002-1.012	
Penta	PCB-99	*	* n	NotF $\eta$	1.25	*		1390	2.5	2.97	*	1.004-1.014	
Penta	PCB-119	*	* n	NotF $\eta$	1.88	*		1390	2.5	2.18	*	0.982-0.992	
Penta	PCB-108/112	*	* n	NotF $\eta$	1.41	*		1390	2.5	2.92	*	0.986-0.996	
Penta	PCB-83	*	* n	NotF $\eta$	1.66	*		1390	2.5	2.47	*	0.990-1.000	
Penta	PCB-97	*	* n	NotF $\eta$	1.30	*		1390	2.5	3.16	*	0.995-1.005	
Penta	PCB-86	*	* n	NotF $\eta$	1.03	*		1390	2.5	3.97	*	0.999-1.009	
Penta	PCB-87/117/125	*	* n	NotF $\eta$	1.59	*		1390	2.5	2.58	*	1.002-1.012	
Penta	PCB-111/115	*	* n	NotF $\eta$	1.86	*		1390	2.5	2.21	*	1.006-1.016	
Penta	PCB-85/116	*	* n	NotF $\eta$	1.39	*		1390	2.5	2.95	*	1.010-1.020	
Penta	PCB-120	*	* n	NotF $\eta$	1.99	*		1390	2.5	2.07	*	1.016-1.026	
Penta	PCB-110	*	* n	NotF $\eta$	1.70	*		1390	2.5	2.41	*	1.019-1.029	
Penta	PCB-82	*	* n	NotF $\eta$	0.74	*		1390	2.5	4.06	*	0.971-0.981	
Penta	PCB-124	*	* n	NotF $\eta$	1.30	*		1390	2.5	2.31	*	0.988-0.998	
Penta	PCB-107/109	*	* n	NotF $\eta$	1.34	*		1390	2.5	2.26	*	0.991-1.001	
Penta	PCB-123	*	* n	NotF $\eta$	1.25	*		1390	2.5	2.41	*	0.995-1.005	
Penta	PCB-106/118	*	* n	NotF $\eta$	1.29	*		1390	2.5	2.39	*	0.996-1.006	
Penta	PCB-114	*	* n	NotF $\eta$	1.45	*		905	2.5	1.35	*	0.995-1.005	
Penta	PCB-122	*	* n	NotF $\eta$	1.22	*		905	2.5	1.61	*	0.999-1.009	
Penta	PCB-105	*	* n	NotF $\eta$	1.56	*		905	2.5	1.27	*	0.995-1.005	
Penta	PCB-127	*	* n	NotF $\eta$	1.31	*		905	2.5	1.44	*	0.995-1.005	
Penta	PCB-126	*	* n	NotF $\eta$	1.41	*		905	2.5	1.43	*	0.995-1.005	
Hexa	PCB-155	*	* n	NotF $\eta$	1.20	*		683	2.5	1.35	*	0.966-1.006	
Hexa	PCB-150	*	* n	NotF $\eta$	1.13	*		683	2.5	1.44	*	1.030-1.040	
Hexa	PCB-152	*	* n	NotF $\eta$	1.17	*		683	2.5	1.39	*	1.043-1.053	
Hexa	PCB-145	*	* n	NotF $\eta$	1.09	*		683	2.5	1.48	*	1.055-1.065	
Hexa	PCB-136	*	* n	NotF $\eta$	1.14	*		683	2.5	1.42	*	1.063-1.073	
Hexa	PCB-148	*	* n	NotF $\eta$	0.82	*		683	2.5	1.98	*	1.066-1.076	
Hexa	PCB-154	*	* n	NotF $\eta$	0.89	*		683	2.5	1.82	*	1.079-1.089	
Hexa	PCB-151	*	* n	NotF $\eta$	0.82	*		683	2.5	1.98	*	1.097-1.107	
Hexa	PCB-135	*	* n	NotF $\eta$	0.80	*		683	2.5	2.04	*	1.101-1.113	
Hexa	PCB-144	*	* n	NotF $\eta$	0.86	*		683	2.5	1.90	*	1.105-1.116	
Hexa	PCB-147	*	* n	NotF $\eta$	0.78	*		683	2.5	2.08	*	1.108-1.120	
Hexa	PCB-139/149	*	* n	NotF $\eta$	0.87	*		683	2.5	1.86	*	1.115-1.127	
Hexa	PCB-140	*	* n	NotF $\eta$	0.78	*		683	2.5	2.09	*	1.120-1.132	
Hexa	PCB-134/143	*	* n	NotF $\eta$	0.93	*		1050	2.5	2.01	*	0.970-0.980	

Analyst: DMS

Date: 1/29/15

Client ID: Method Blank  
Lab ID: B5A0099-BLK1

Filename: 150127E1 S:4 Acq:27-JAN-15 13:52:29  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.000

ConCal: ST150127E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	*	* n	Not F $\eta$	0.91	*		1050	2.5	2.06	*	0.977-0.987	
Hexa	PCB-131	*	* n	Not F $\eta$	0.85	*		1050	2.5	2.22	*	0.981-0.991	
Hexa	PCB-146/165	*	* n	Not F $\eta$	1.08	*		1050	2.5	1.73	*	0.986-0.996	
Hexa	PCB-132/161	*	* n	Not F $\eta$	1.12	*		1050	2.5	1.67	*	0.992-1.002	
Hexa	PCB-153	*	* n	Not F $\eta$	1.20	*		1050	2.5	1.56	*	0.996-1.006	
Hexa	PCB-168	*	* n	Not F $\eta$	1.36	*		1050	2.5	1.38	*	1.000-1.010	
Hexa	PCB-141	*	* n	Not F $\eta$	1.16	*		1050	2.5	1.81	*	0.995-1.005	
Hexa	PCB-137	*	* n	Not F $\eta$	1.18	*		1050	2.5	1.78	*	1.004-1.014	
Hexa	PCB-130	*	* n	Not F $\eta$	0.92	*		1050	2.5	2.28	*	1.006-1.016	
Hexa	PCB-138/163/164	*	* n	Not F $\eta$	1.38	*		1050	2.5	1.44	*	0.996-1.006	
Hexa	PCB-158/160	*	* n	Not F $\eta$	1.48	*		1050	2.5	1.34	*	1.001-1.011	
Hexa	PCB-129	*	* n	Not F $\eta$	0.99	*		1050	2.5	2.00	*	1.007-1.017	
Hexa	PCB-166	*	* n	Not F $\eta$	1.14	*		1050	2.5	1.42	*	0.988-0.998	
Hexa	PCB-159	*	* n	Not F $\eta$	1.22	*		1050	2.5	1.33	*	0.995-1.005	
Hexa	PCB-128/162	*	* n	Not F $\eta$	1.03	*		1050	2.5	1.57	*	1.002-1.012	
Hexa	PCB-167	*	* n	Not F $\eta$	1.18	*		1050	2.5	1.36	*	0.995-1.005	
Hexa	PCB-156	*	* n	Not F $\eta$	1.27	*		1050	2.5	1.26	*	0.995-1.005	
Hexa	PCB-157	*	* n	Not F $\eta$	1.22	*		1050	2.5	1.29	*	0.995-1.005	
Hexa	PCB-169	*	* n	Not F $\eta$	1.07	*		1050	2.5	1.36	*	0.995-1.005	
Hepta	PCB-188	*	* n	Not F $\eta$	1.52	*		991	2.5	1.01	*	0.996-1.006	
Hepta	PCB-184	*	* n	Not F $\eta$	1.34	*		991	2.5	1.15	*	1.006-1.016	
Hepta	PCB-179	*	* n	Not F $\eta$	1.39	*		991	2.5	1.11	*	1.024-1.034	
Hepta	PCB-176	*	* n	Not F $\eta$	1.45	*		991	2.5	1.06	*	1.035-1.045	
Hepta	PCB-186	*	* n	Not F $\eta$	1.46	*		991	2.5	1.06	*	1.049-1.059	
Hepta	PCB-178	*	* n	Not F $\eta$	1.07	*		991	2.5	1.43	*	1.061-1.071	
Hepta	PCB-175	*	* n	Not F $\eta$	1.05	*		991	2.5	1.47	*	1.069-1.079	
Hepta	PCB-182/187	*	* n	Not F $\eta$	1.14	*		991	2.5	1.36	*	1.073-1.083	
Hepta	PCB-183	*	* n	Not F $\eta$	1.22	*		991	2.5	1.26	*	1.080-1.090	
Hepta	PCB-185	*	* n	Not F $\eta$	1.40	*		991	2.5	1.18	*	0.950-0.960	
Hepta	PCB-174	*	* n	Not F $\eta$	1.29	*		991	2.5	1.28	*	0.958-0.968	
Hepta	PCB-181	*	* n	Not F $\eta$	1.35	*		991	2.5	1.22	*	0.960-0.970	
Hepta	PCB-177	*	* n	Not F $\eta$	1.27	*		991	2.5	1.30	*	0.963-0.973	
Hepta	PCB-171	*	* n	Not F $\eta$	1.46	*		991	2.5	1.13	*	0.969-0.979	
Hepta	PCB-173	*	* n	Not F $\eta$	1.10	*		991	2.5	1.49	*	0.978-0.988	
Hepta	PCB-172	*	* n	Not F $\eta$	1.35	*		991	2.5	1.22	*	0.987-0.997	
Hepta	PCB-192	*	* n	Not F $\eta$	1.74	*		991	2.5	0.950	*	0.991-1.001	
Hepta	PCB-180	*	* n	Not F $\eta$	1.45	*		991	2.5	1.14	*	0.995-1.005	

Analyst: DMJ

Date: 1/29/15



Client ID: Method Blank  
Lab ID: B5A0099-BLK1

Filename: 150127E1 S:4 Acq:27-JAN-15 13:52:29  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.000

ConCal: ST150127E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	*	n	Not F <sub>7</sub>	1.85	*	991	2.5	0.892	*	0.999-1.009	
Hepta	PCB-191	*	*	n	Not F <sub>7</sub>	1.86	*	991	2.5	0.887	*	1.005-1.015	
Hepta	PCB-170	*	*	n	Not F <sub>7</sub>	1.67	*	991	2.5	1.12	*	0.995-1.005	
Hepta	PCB-190	*	*	n	Not F <sub>7</sub>	2.25	*	991	2.5	0.835	*	0.999-1.009	
Hepta	PCB-189	*	*	n	Not F <sub>7</sub>	1.67	*	991	2.5	0.827	*	0.995-1.005	
Octa	PCB-202	*	*	n	Not F <sub>8</sub>	1.02	*	1100	2.5	2.07	*	0.995-1.005	
Octa	PCB-201	*	*	n	Not F <sub>8</sub>	1.10	*	1100	2.5	1.92	*	1.005-1.015	
Octa	PCB-204	*	*	n	Not F <sub>8</sub>	1.07	*	1100	2.5	1.96	*	1.009-1.019	
Octa	PCB-197	*	*	n	Not F <sub>8</sub>	1.17	*	1100	2.5	1.80	*	1.015-1.025	
Octa	PCB-200	*	*	n	Not F <sub>8</sub>	1.03	*	1100	2.5	2.03	*	1.034-1.044	
Octa	PCB-198	*	*	n	Not F <sub>8</sub>	0.75	*	1100	2.5	2.79	*	1.062-1.072	
Octa	PCB-199	*	*	n	Not F <sub>8</sub>	0.74	*	1100	2.5	2.84	*	1.064-1.074	
Octa	PCB-196/203	*	*	n	Not F <sub>8</sub>	0.83	*	1100	2.5	2.54	*	1.070-1.080	
Octa	PCB-195	*	*	n	Not F <sub>8</sub>	1.14	*	1050	2.5	1.73	*	0.979-0.989	
Octa	PCB-194	*	*	n	Not F <sub>8</sub>	1.29	*	1050	2.5	1.53	*	0.995-1.005	
Octa	PCB-205	*	*	n	Not F <sub>8</sub>	1.61	*	1050	2.5	1.23	*	1.001-1.010	
Nona	PCB-208	*	*	n	Not F <sub>9</sub>	1.01	*	900	2.5	0.992	*	0.995-1.005	
Nona	PCB-207	*	*	n	Not F <sub>9</sub>	1.03	*	900	2.5	0.979	*	1.001-1.011	
Nona	PCB-206	*	*	n	Not F <sub>9</sub>	0.88	*	900	2.5	1.90	*	0.995-1.005	
Deca	PCB-209	*	*	n	Not F <sub>10</sub>	1.35	*	849	2.5	1.54	*	0.995-1.005	

Analyst: DMS

Date: 1/29/15

Client ID: Method Blank  
Lab ID: B5A0099-BLK1

Filename: 150127E1 S:4 Acq:27-JAN-15 13:52:29  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000

ConCal: ST150127E1-1  
EndCAL: NA

Name	Resp	RA	RT	RRF	Conc
Total Mono-PCB	*	* n	NotFnd	1.31	*
Total Di-PCB	*	* n	NotFnd	1.32	*
Total Tri-PCB	*	* n	NotFnd	1.20	*
Total Tri-PCB	*	* n	NotFnd	1.23	* Sum:0.00000
Total Tetra-PCB	*	* n	NotFnd	1.17	*
Total Penta-PCB	*	* n	NotFnd	1.24	*
Total Penta-PCB	*	* n	NotFnd	1.39	* Sum:0.00000
Total Hexa-PCB	*	* n	NotFnd	0.94	*
Total Hexa-PCB	*	* n	NotFnd	1.13	* Sum:0.00000
Total Hepta-PCB	*	* n	NotFnd	1.37	*
Total Octa-PCB	*	* n	NotFnd	0.95	*
Total Octa-PCB	*	* n	NotFnd	1.35	* Sum:0.00000
Total Nona-PCB	*	* n	NotFnd	0.99	*
Total Deca-PCB	*	* n	NotFnd	1.35	*

Total PCB Conc:0.0000000000

Integrations

by

Analyst: *DMS*

Date: *1/29/15*

Client ID: Method Blank  
Lab ID: B5A0099-BLK1

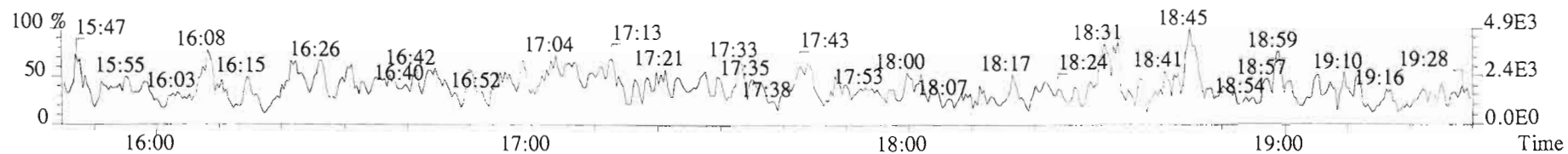
Filename: 150127E1 S:4 Acq:27-JAN-15 13:52:29  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol:1.0000

ConCal: ST150127E1-1  
EndCAL: NA

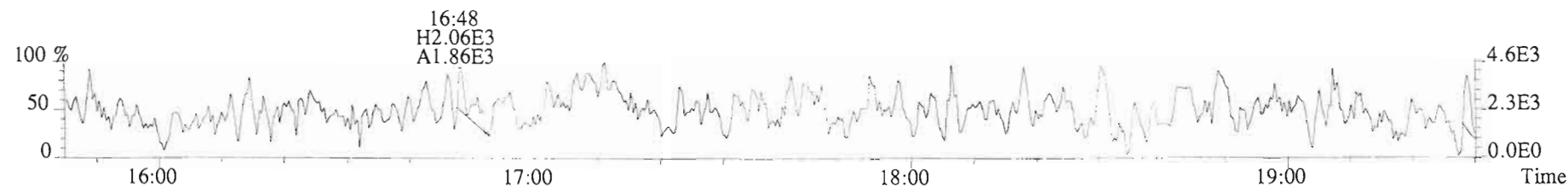
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Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	
13C-PCB-1	3.51e+07	3.47	y	0.91	16:08	0.622	0.619-0.625	1430	71.6												
13C-PCB-3	3.91e+07	3.41	y	0.94	18:44	0.722	0.718-0.726	1540	77.0		13C-PCB-79	4.23e+07	0.78	y	1.02	37:49	1.029	1.024-1.033	1780	88.8	
13C-PCB-4	2.28e+07	1.58	y	0.60	20:05	0.774	0.770-0.778	1410	70.7		13C-PCB-178	1.82e+07	0.48	y	0.64	45:38	0.985	0.980-0.989	1750	87.5	
13C-PCB-9	3.66e+07	1.56	y	0.96	21:52	0.843	0.839-0.847	1410	70.7												
13C-PCB-11	3.93e+07	1.56	y	0.95	25:14	0.973	0.968-0.978	1530	76.3	PS vs. IS											
13C-PCB-19	2.58e+07	1.11	y	0.56	24:13	0.934	0.929-0.939	1700	85.1												
13C-PCB-28	2.64e+07	1.01	y	1.07	29:05	1.003	0.999-1.009	1310	65.6		13C-PCB-79	4.23e+07	0.78	y	1.02	37:49	0.969	0.963-0.973	2130	106	
13C-PCB-32	3.92e+07	1.13	y	0.83	27:08	1.046	1.041-1.051	1760	88.0		13C-PCB-178	1.82e+07	0.48	y	0.84	45:38	0.925	0.920-0.930	2050	102	
13C-PCB-37	2.94e+07	1.06	y	0.96	32:58	1.137	1.131-1.143	1620	81.1												
13C-PCB-47	2.66e+07	0.80	y	0.77	32:00	0.871	0.867-0.875	1490	74.4												
13C-PCB-52	2.67e+07	0.78	y	0.71	31:30	0.857	0.853-0.861	1610	80.4												
13C-PCB-54	3.31e+07	0.80	y	1.06	27:58	0.761	0.757-0.765	1340	67.1												
13C-PCB-70	3.72e+07	0.81	y	0.99	35:31	0.966	0.961-0.971	1610	80.4												
13C-PCB-77	3.82e+07	0.81	y	0.96	39:38	1.078	1.073-1.083	1700	85.1												
13C-PCB-80	3.77e+07	0.81	y	1.02	35:57	0.978	0.973-0.983	1580	79.1												
13C-PCB-81	3.88e+07	0.80	y	1.00	39:02	1.062	1.057-1.067	1670	83.4												
13C-PCB-95	2.02e+07	1.60	y	0.70	35:49	0.913	0.908-0.918	1620	80.9	RS											
13C-PCB-97	2.08e+07	1.59	y	0.66	38:48	0.989	0.984-0.994	1770	88.4		Name	Resp	RA	RRF	RT	Conc					
13C-PCB-101	2.25e+07	1.53	y	0.77	37:30	0.956	0.951-0.961	1640	82.2		13C-PCB-15	5.40e+07	1.57	y	1.00	25:57	2000				
13C-PCB-104	2.55e+07	1.58	y	0.97	32:40	0.832	0.828-0.836	1480	73.8		13C-PCB-31	3.76e+07	1.04	y	1.00	28:60	2000				
13C-PCB-105	2.97e+07	1.62	y	1.20	43:04	0.929	0.924-0.934	1510	75.5		13C-PCB-60	4.66e+07	0.79	y	1.00	36:46	2000				
13C-PCB-114	2.91e+07	1.60	y	1.26	42:12	0.911	0.905-0.915	1420	71.0		13C-PCB-111	3.57e+07	1.61	y	1.00	39:14	2000				
13C-PCB-118	2.92e+07	1.62	y	0.94	41:33	1.059	1.054-1.064	1750	87.3		13C-PCB-128	3.27e+07	1.25	y	1.00	46:21	2000				
13C-PCB-123	2.79e+07	1.55	y	0.88	41:22	1.054	1.049-1.059	1770	88.6		13C-PCB-205	3.02e+07	0.90	y	1.00	54:12	2000				
13C-PCB-126	3.02e+07	1.62	y	1.13	45:18	0.977	0.972-0.982	1640	82.2												
13C-PCB-127	3.12e+07	1.62	y	1.26	43:24	0.936	0.931-0.941	1520	75.9												
13C-PCB-138	2.90e+07	1.29	y	1.12	44:48	0.967	0.961-0.971	1590	79.4												
13C-PCB-141	2.78e+07	1.25	y	1.09	43:57	0.948	0.943-0.953	1560	78.0												
13C-PCB-153	3.08e+07	1.31	y	1.27	43:13	0.933	0.927-0.937	1480	74.2												
13C-PCB-155	2.23e+07	1.24	y	0.87	37:03	0.944	0.939-0.949	1440	71.9												
13C-PCB-156	3.70e+07	1.31	y	1.35	48:03	1.037	1.032-1.042	1680	84.0												
13C-PCB-157	3.88e+07	1.31	y	1.42	48:19	1.043	1.037-1.047	1680	83.8												
13C-PCB-159	3.61e+07	1.27	y	1.37	46:05	0.994	0.989-0.999	1620	80.8												
13C-PCB-167	3.69e+07	1.29	y	1.38	46:46	1.009	1.004-1.014	1630	81.7												
13C-PCB-169	4.04e+07	1.26	y	1.38	50:30	1.090	1.084-1.094	1790	89.5												
13C-PCB-170	1.72e+07	0.46	y	0.60	50:52	1.098	1.091-1.103	1750	87.4												
13C-PCB-180	2.11e+07	0.46	y	0.76	49:21	1.065	1.059-1.069	1710	85.5												
13C-PCB-188	2.26e+07	0.46	y	1.01	42:51	0.925	0.919-0.929	1370	68.3												
13C-PCB-189	2.33e+07	0.45	y	0.80	52:24	1.131	1.124-1.136	1780	88.8												
13C-PCB-194	2.02e+07	0.92	y	0.75	53:56	0.995	0.990-1.000	1790	89.6	Analyst: <i>DMS</i>											
13C-PCB-202	2.37e+07	0.90	y	0.99	48:16	1.042	1.036-1.046	1470	73.3												
13C-PCB-206	2.16e+07	0.79	y	0.73	55:32	1.025	1.020-1.301	1950	97.4												
13C-PCB-208	2.88e+07	0.74	y	1.08	53:12	0.982	0.977-0.987	1760	88.0	Date: <i>1/29/15</i>											
13C-PCB-209	2.15e+07	1.16	y	0.71	56:54	1.050	1.045-1.055	2000	100												

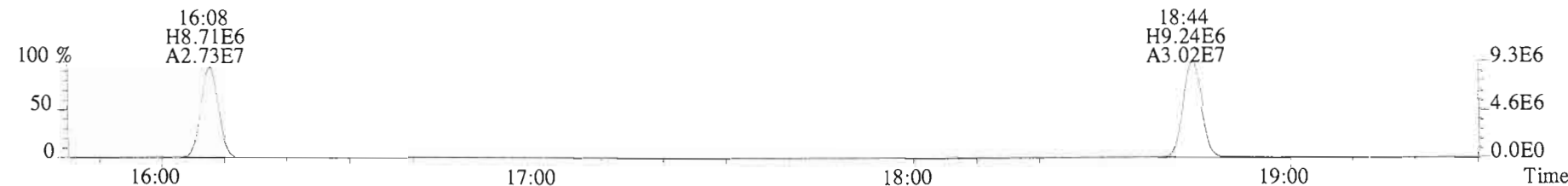
File:150127E1 #1-729 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
188.0393 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2264.0,0.00%,F,F)



190.0363 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2900.0,0.00%,F,F)



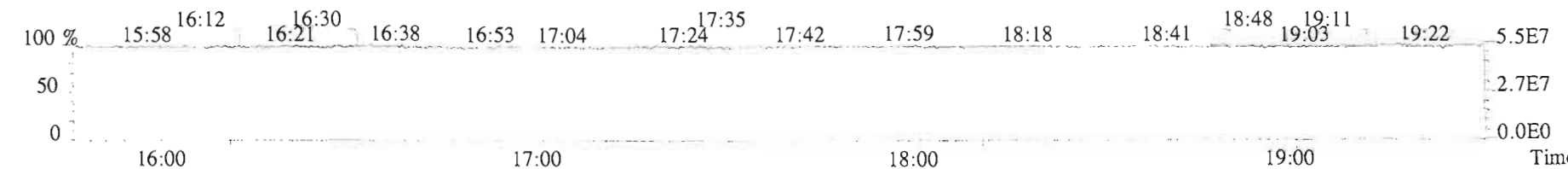
200.0795 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5436.0,0.00%,F,F)



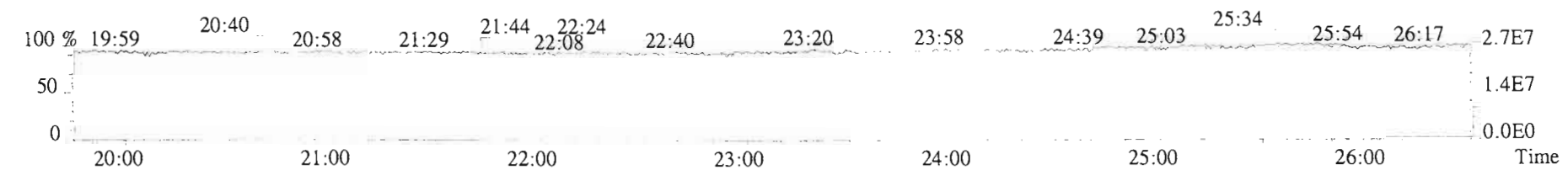
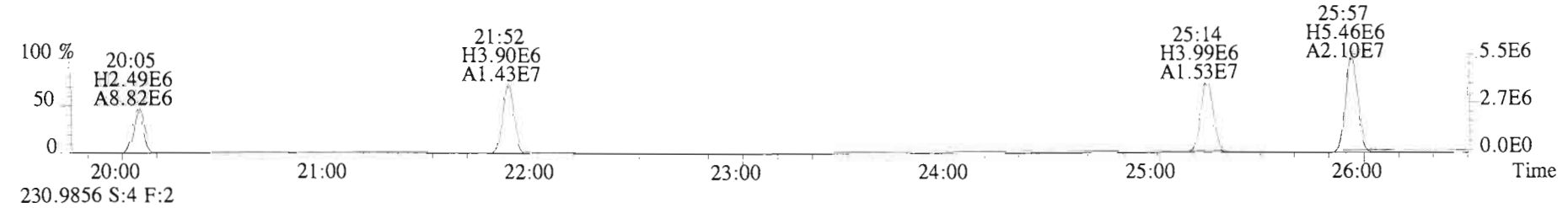
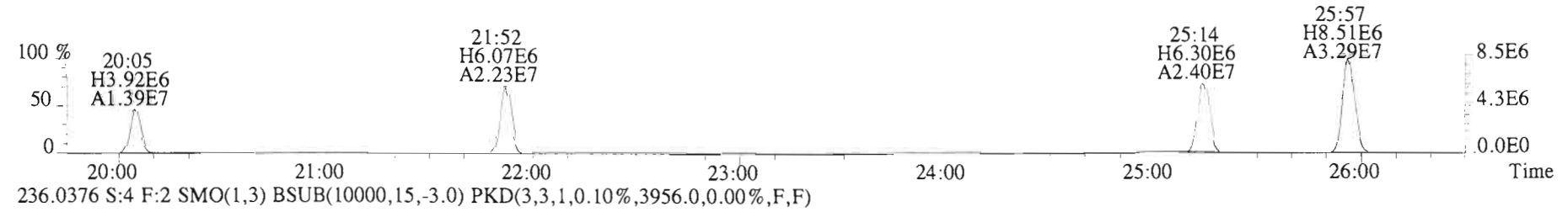
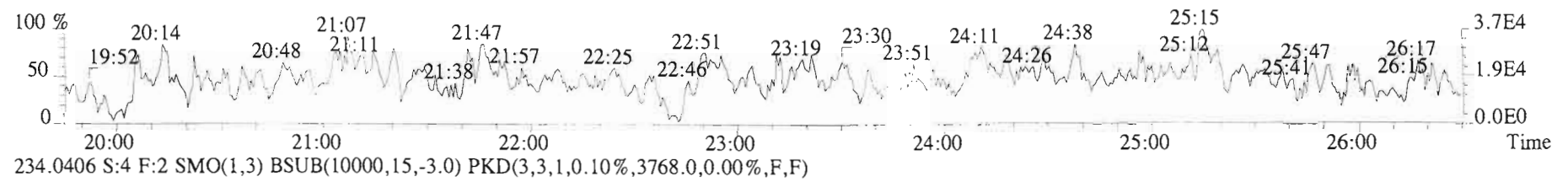
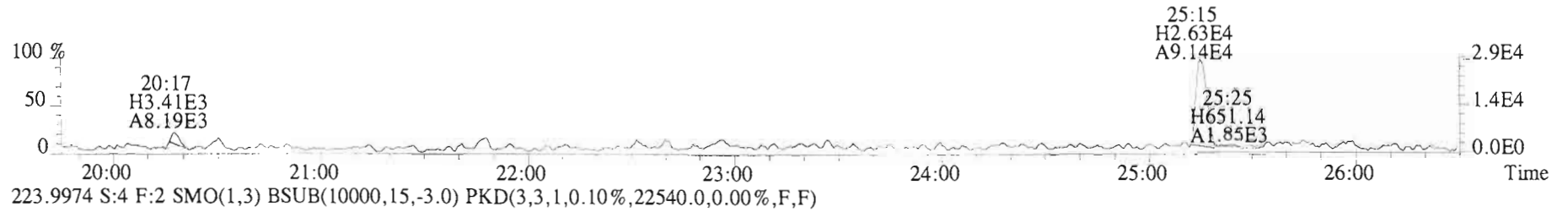
202.0766 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,25436.0,0.00%,F,F)



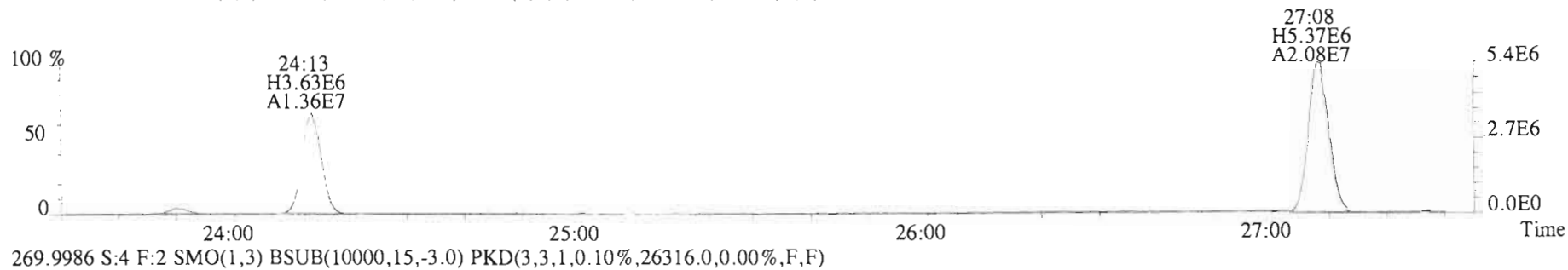
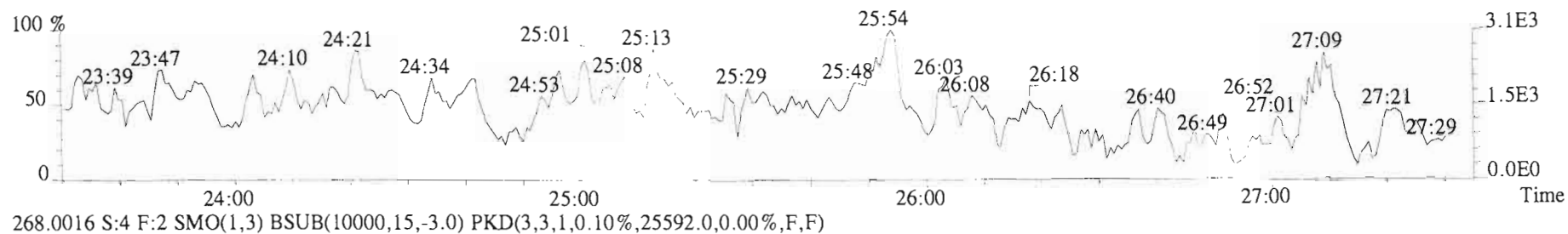
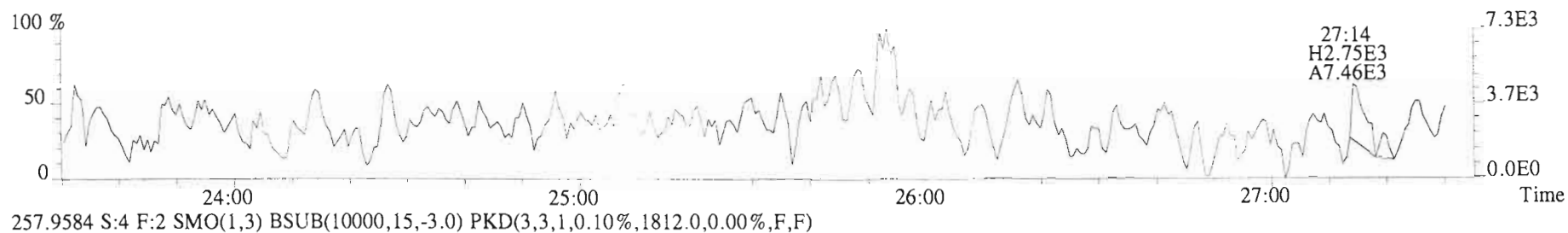
180.9880 S:4



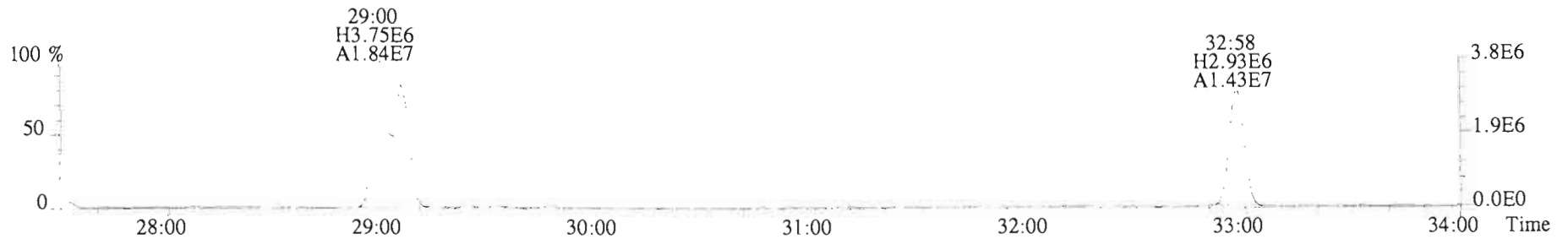
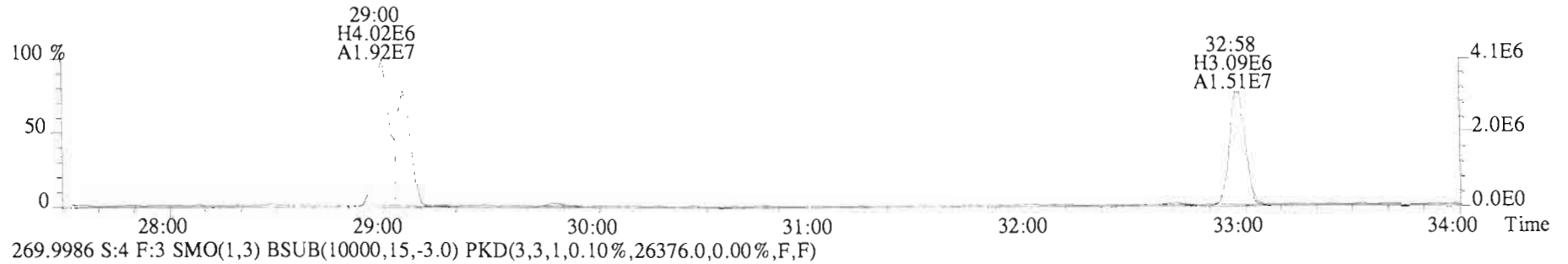
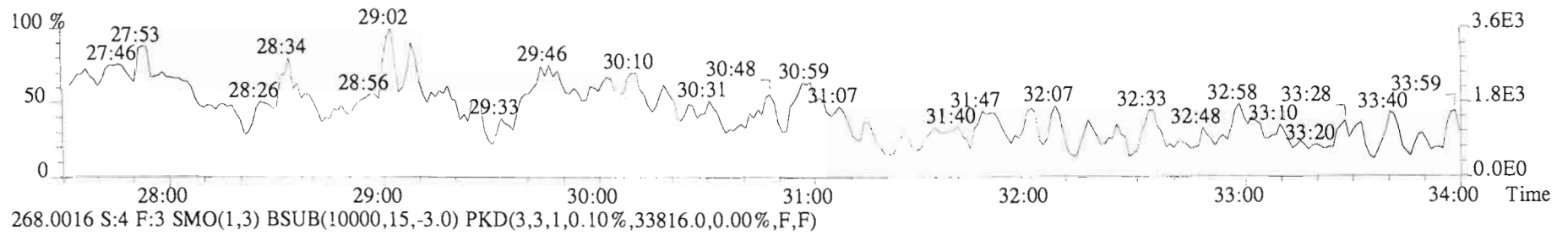
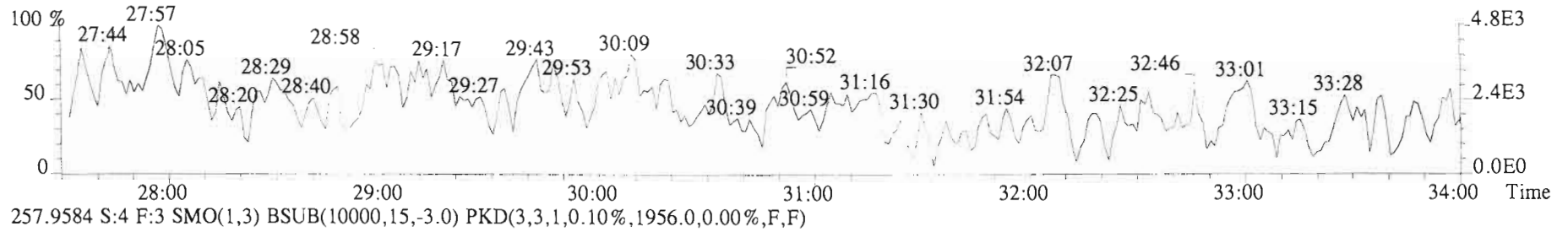
File:150127E1 #1-757 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2472.0,0.00%,F,F)



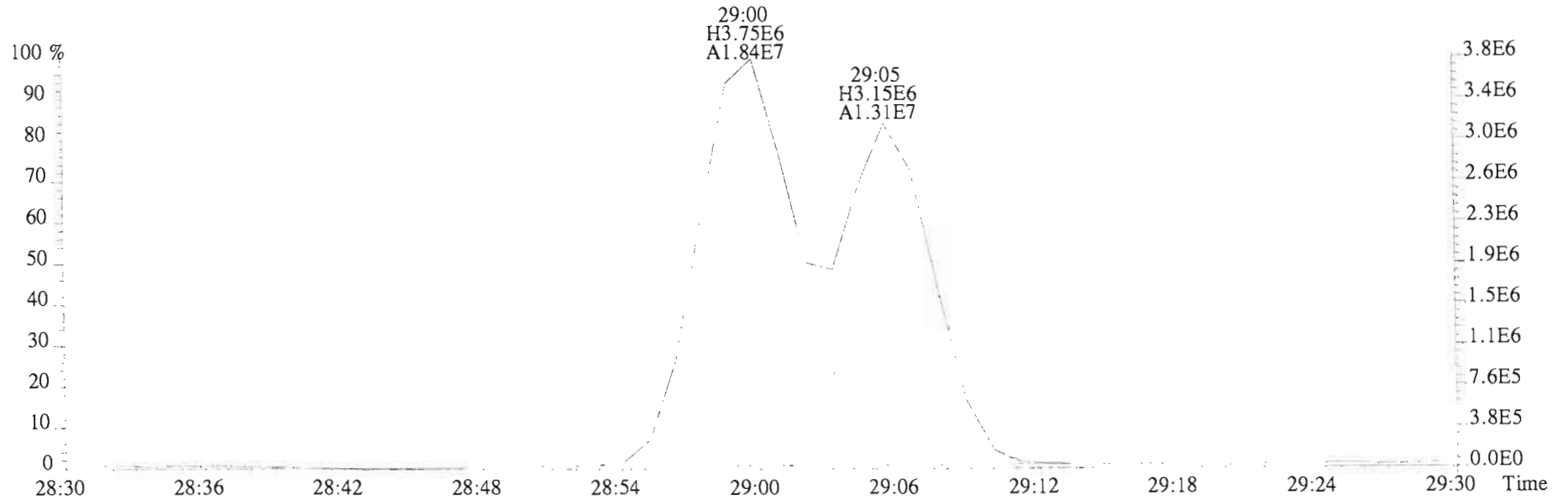
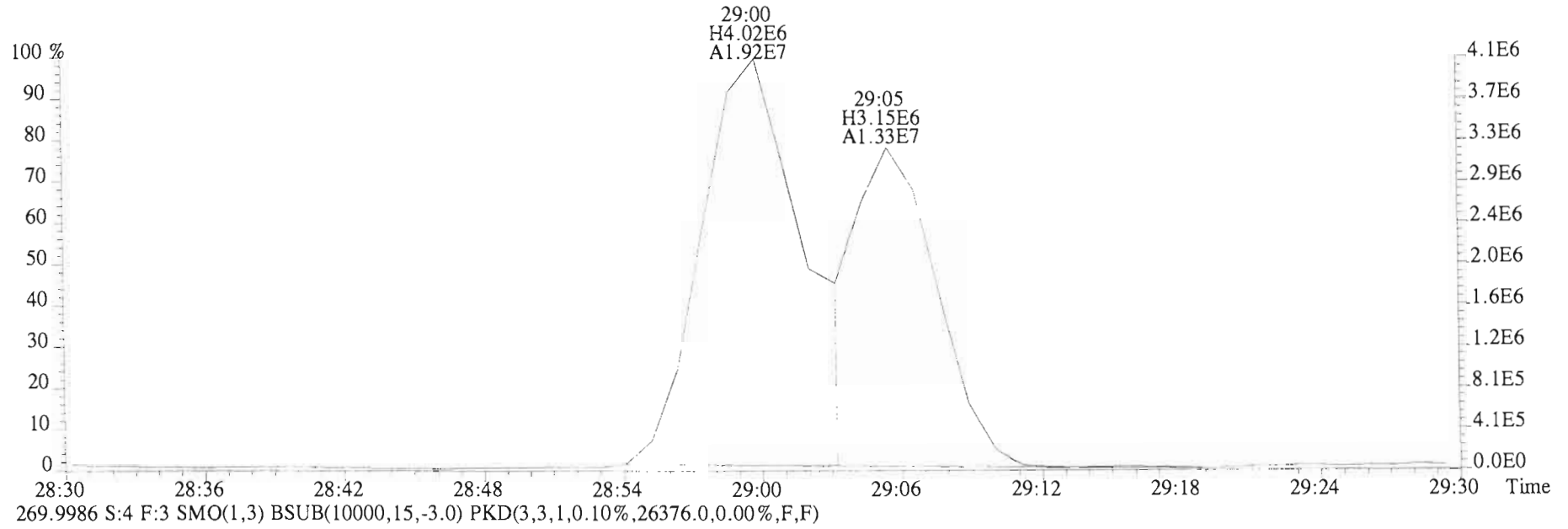
File:150127E1 #1-757 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
255.9613 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3268.0,0.00%,F,F)



File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZBI  
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2864.0,0.00%,F,F)

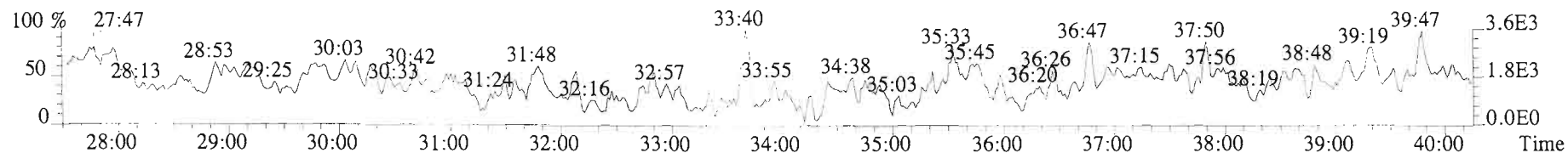


File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,33816.0,0.00%,F,F)

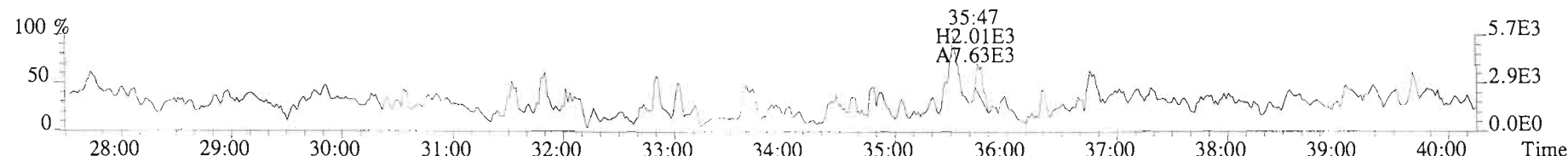




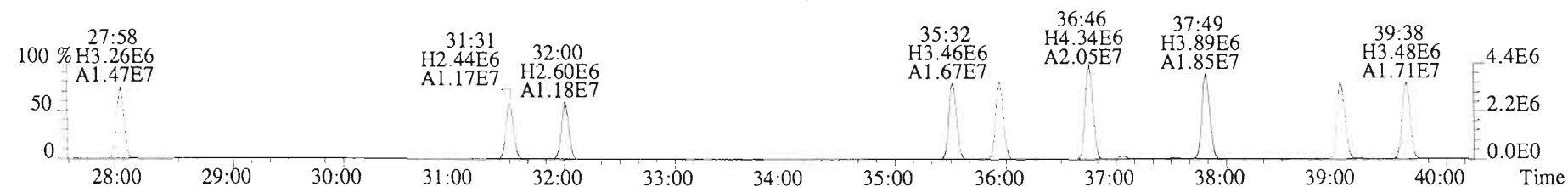
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
 289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2000.0,0.00%,F,F)



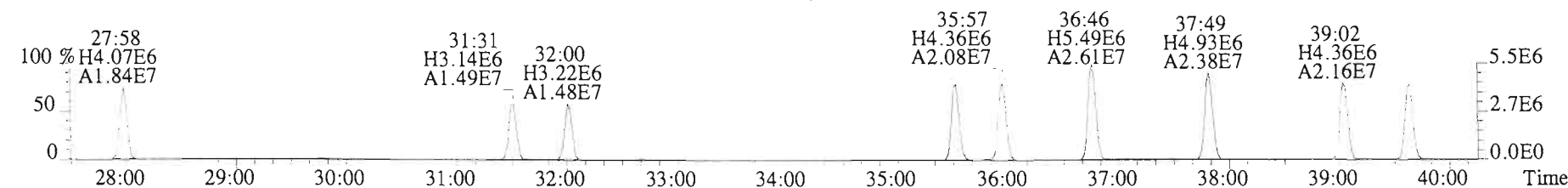
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



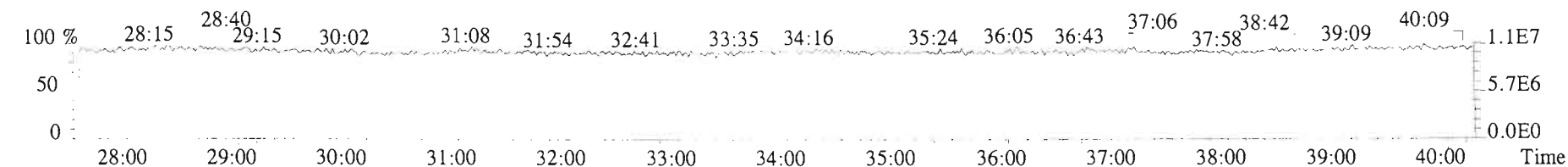
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6180.0,0.00%,F,F)



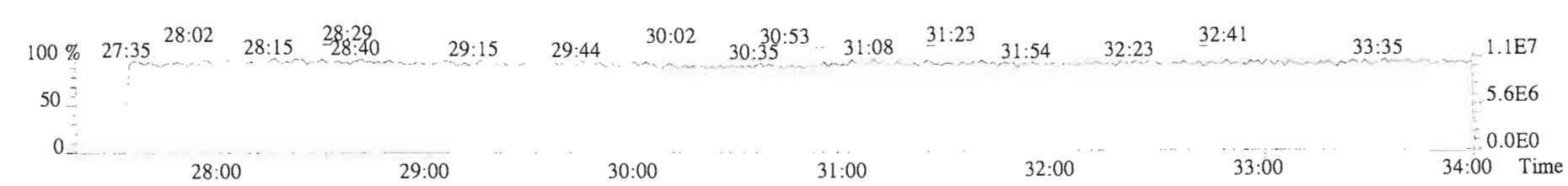
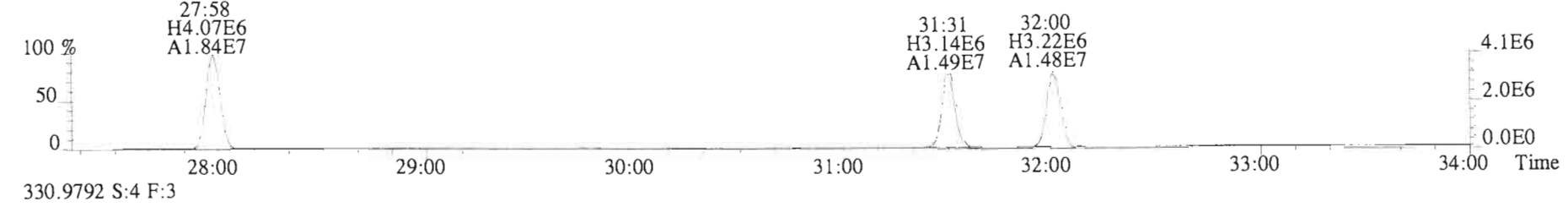
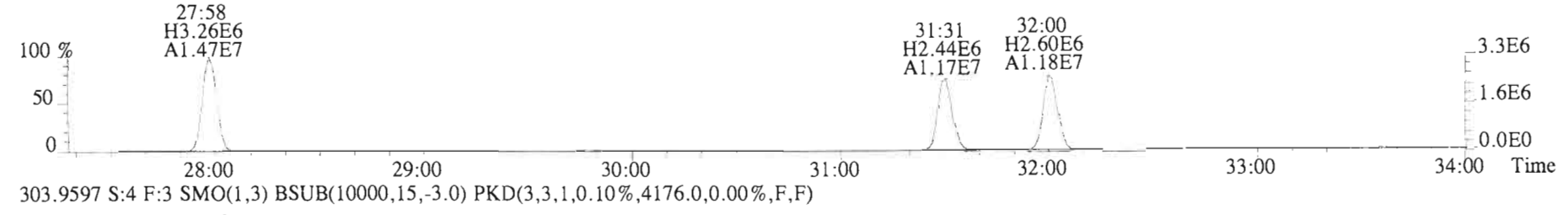
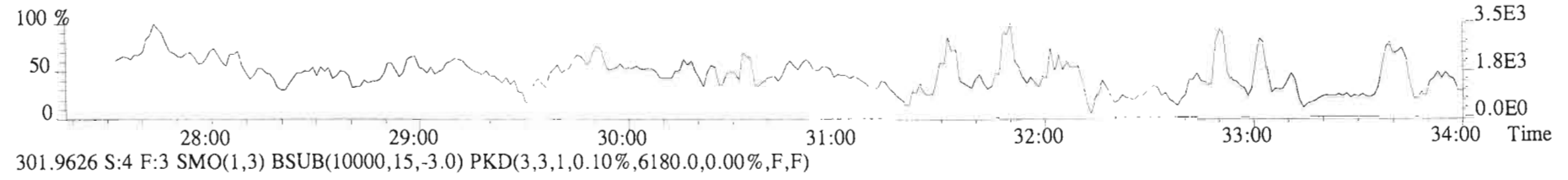
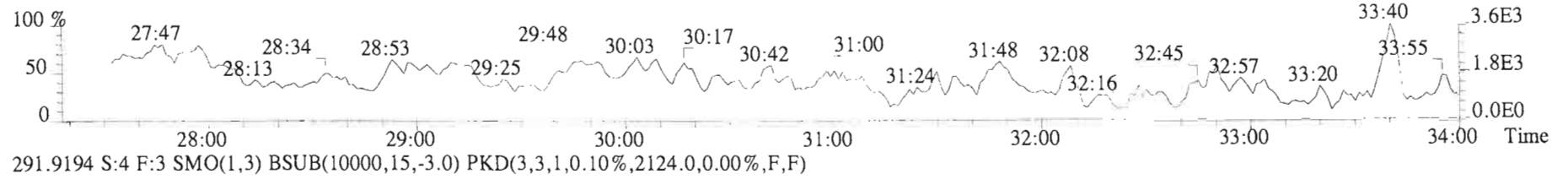
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4176.0,0.00%,F,F)



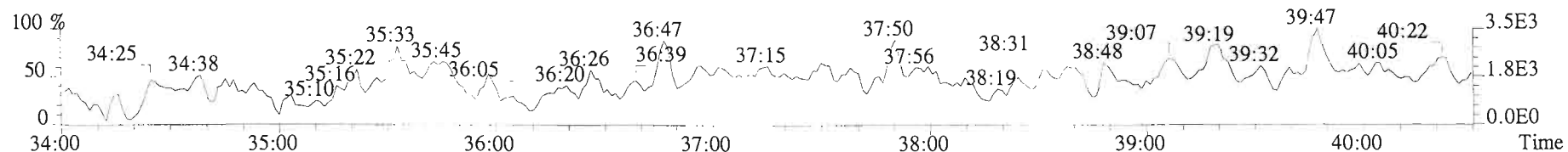
330.9792 S:4 F:3



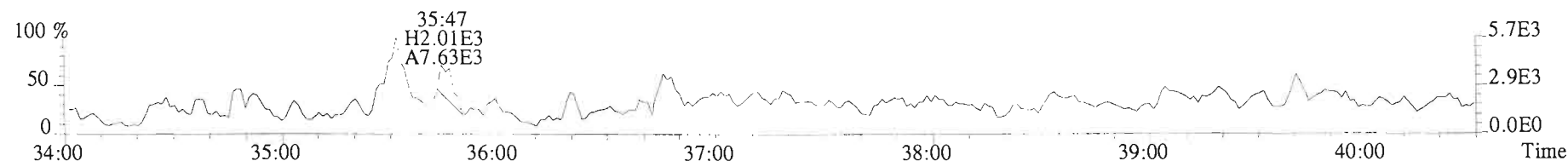
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#4 File Text: Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
 289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2000.0,0.00%,F,F)



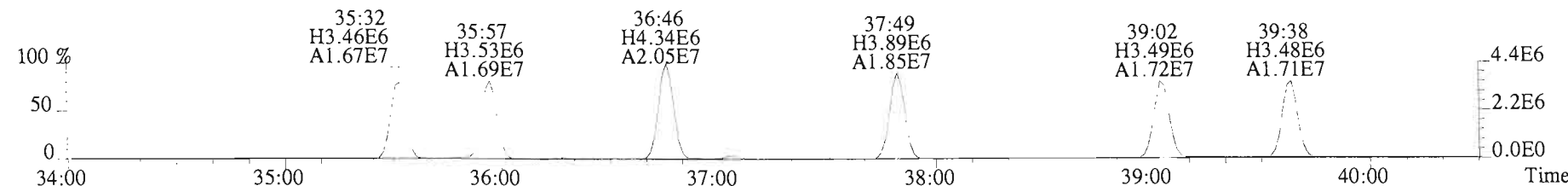
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2000.0,0.00%,F,F)



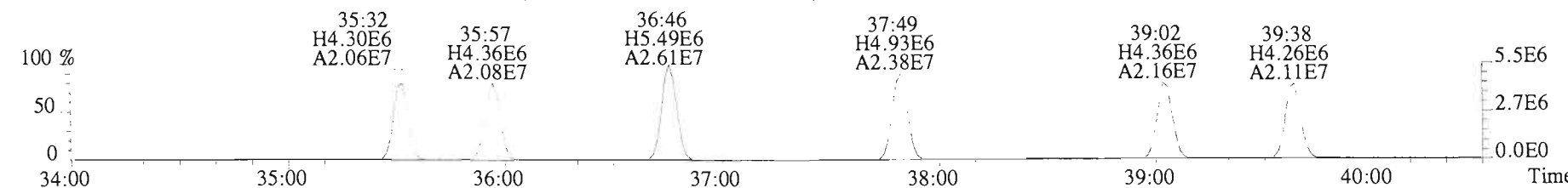
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



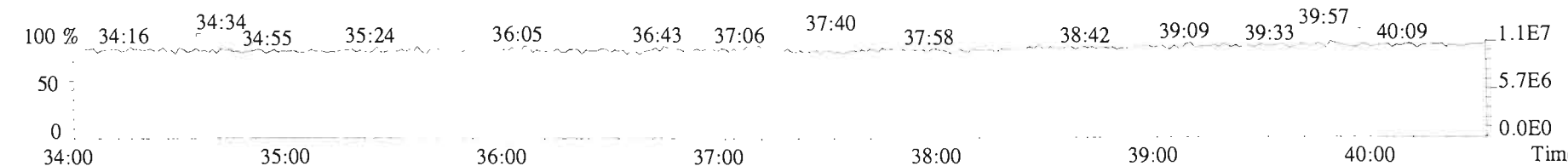
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6180.0,0.00%,F,F)



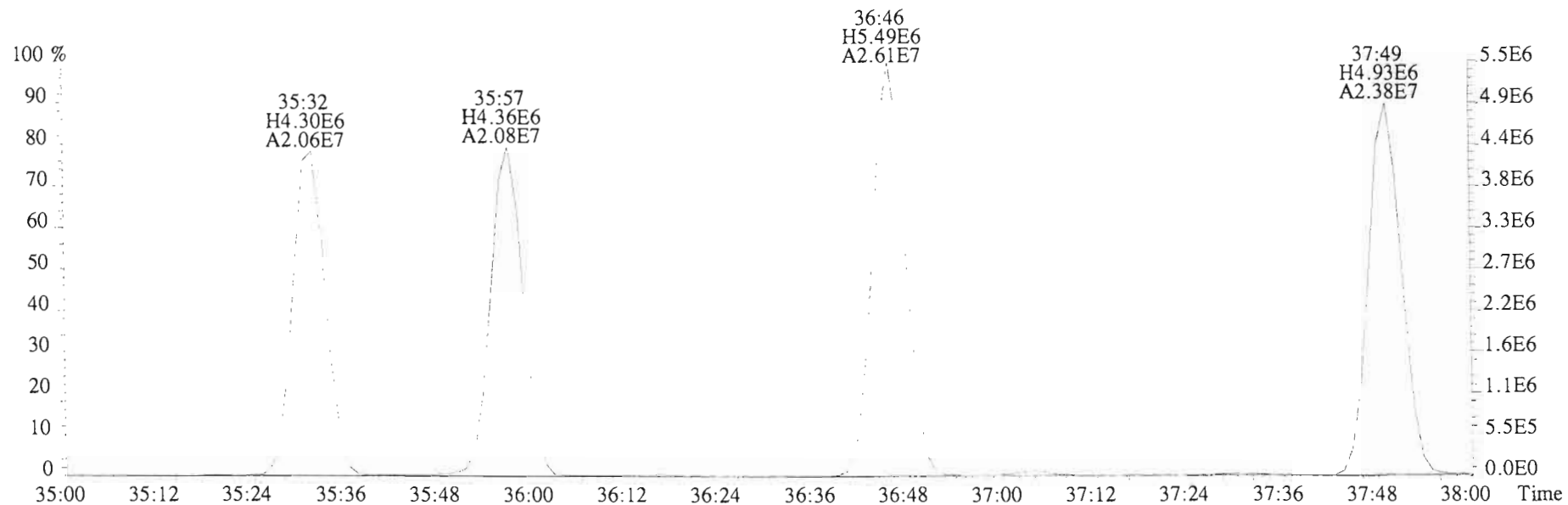
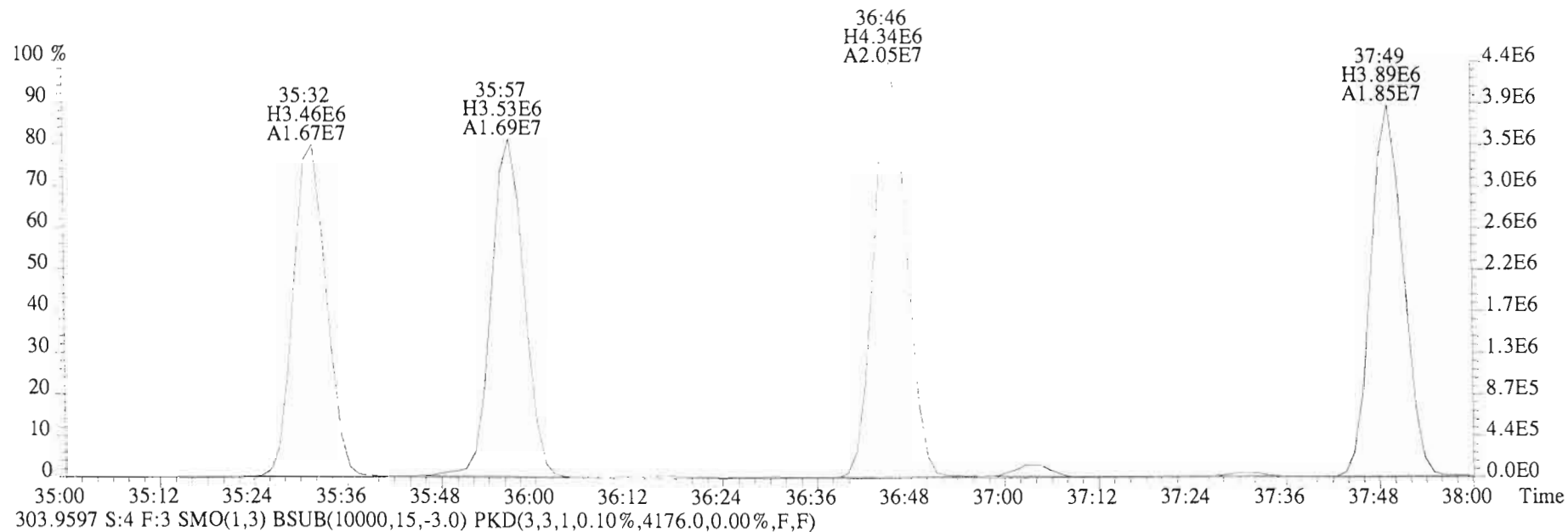
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4176.0,0.00%,F,F)



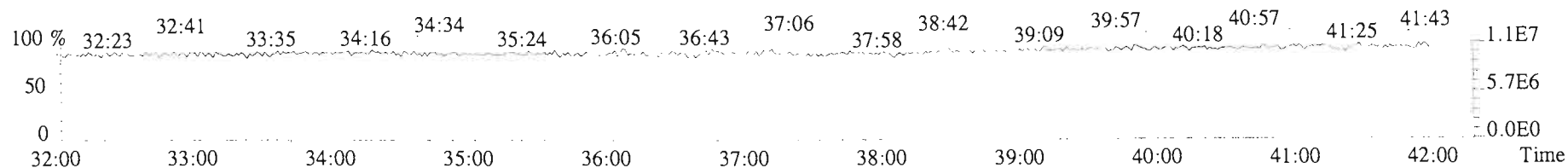
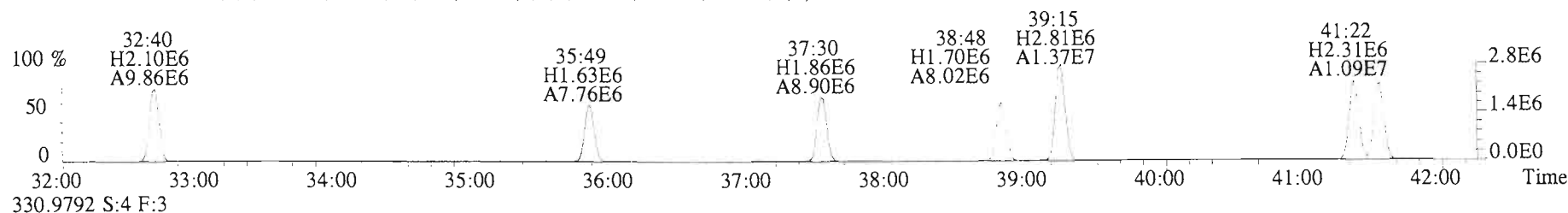
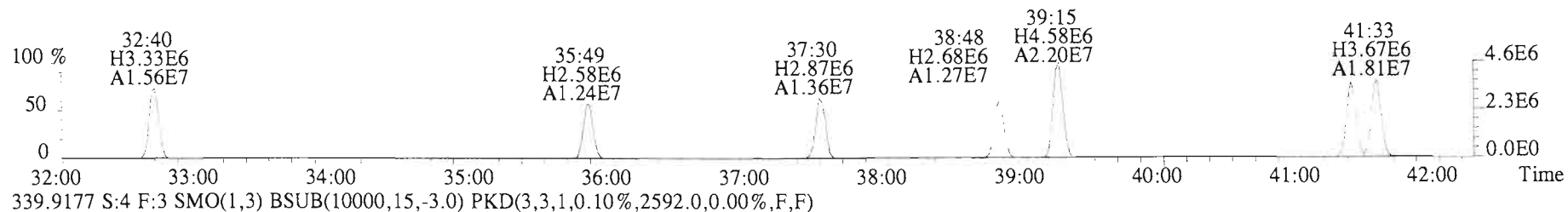
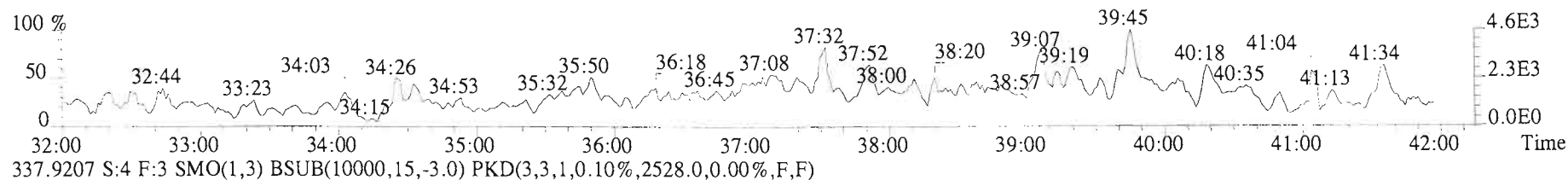
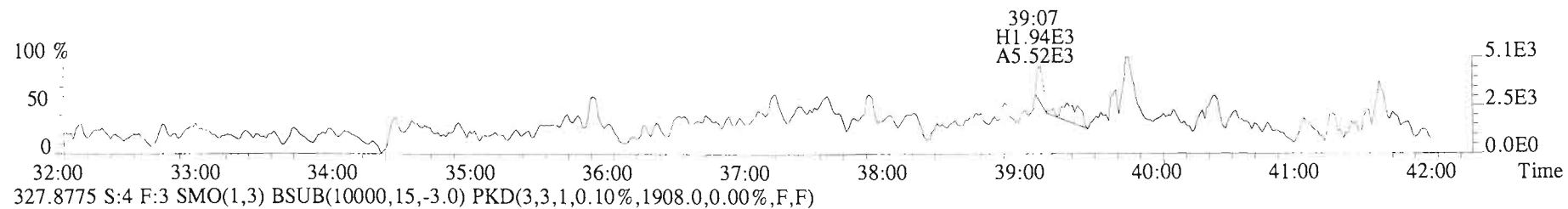
330.9792 S:4 F:3



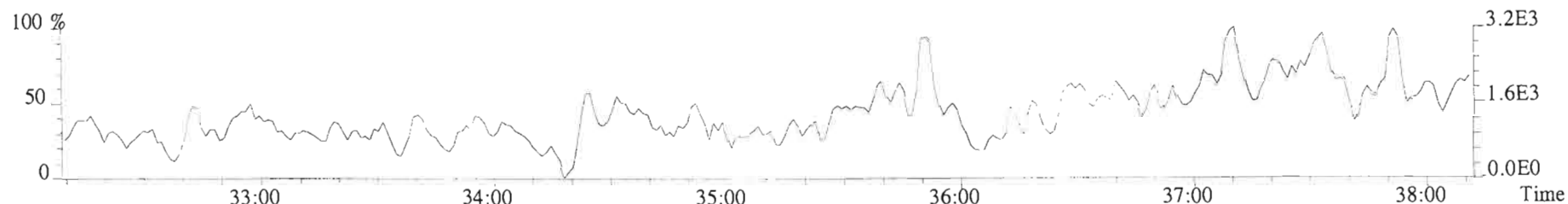
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6180.0,0.00%,F,F)



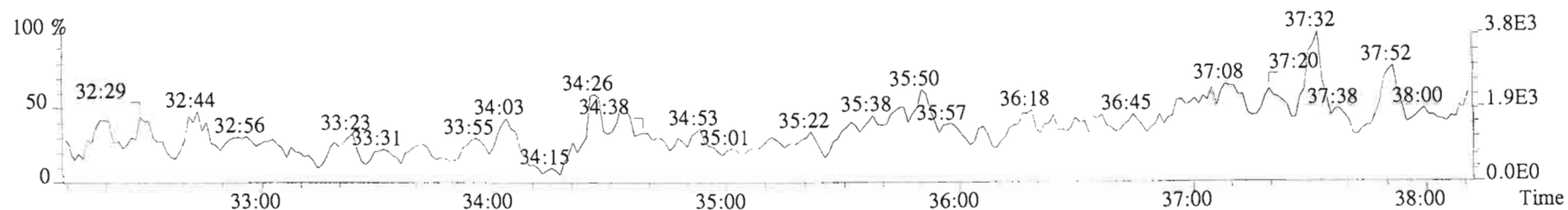
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text: Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2032.0,0.00%,F,F)



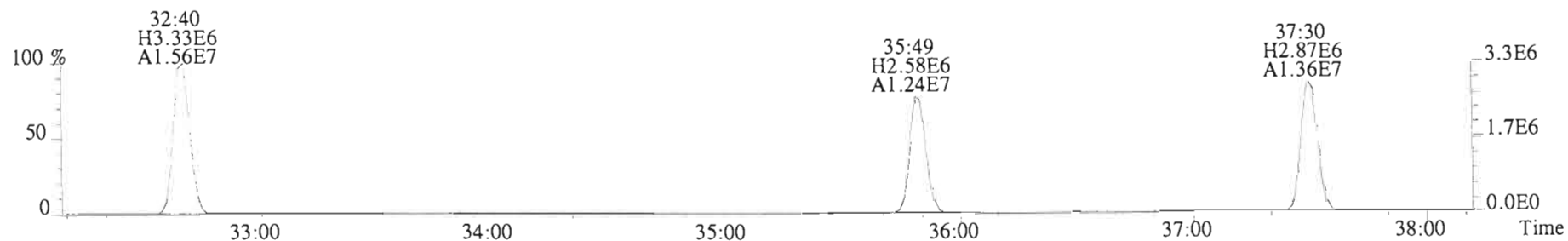
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2032.0,0.00%,F,F)



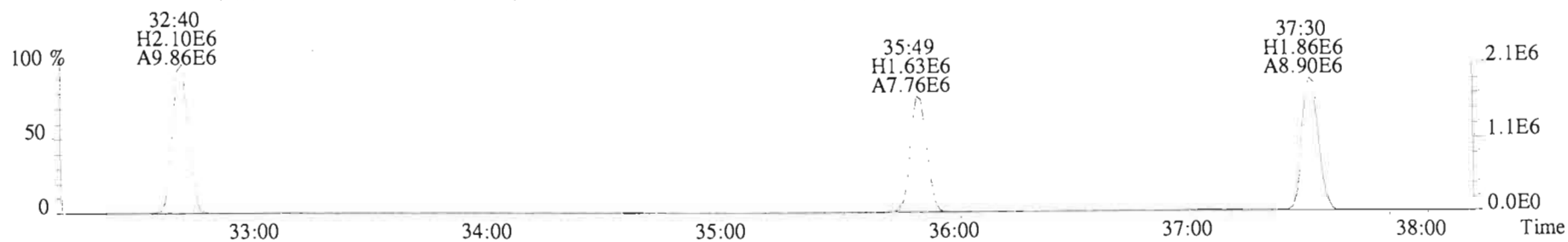
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)



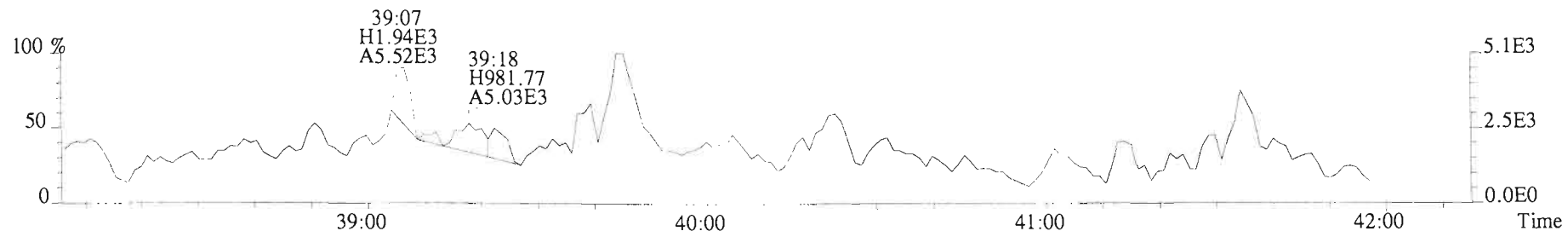
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2528.0,0.00%,F,F)



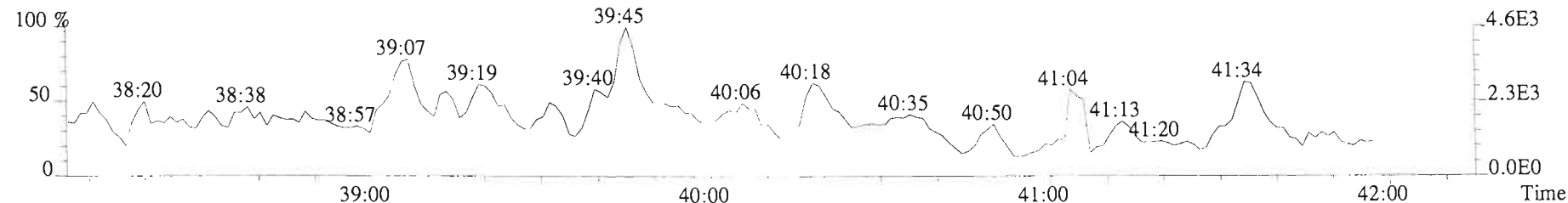
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2592.0,0.00%,F,F)



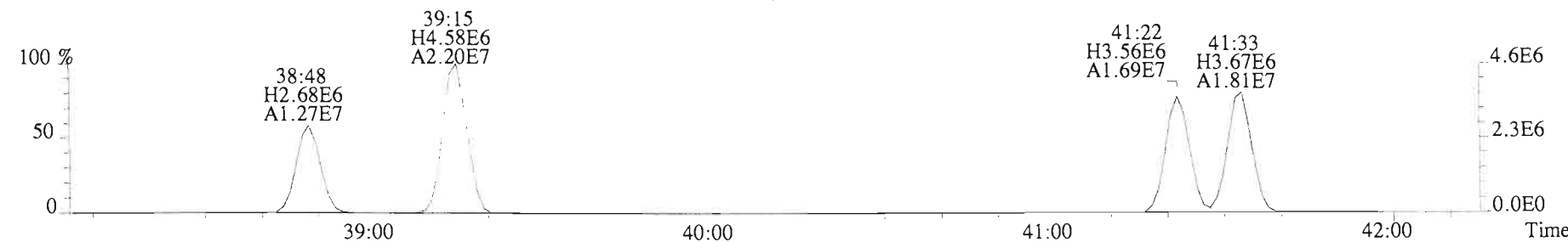
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2032.0,0.00%,F,F)



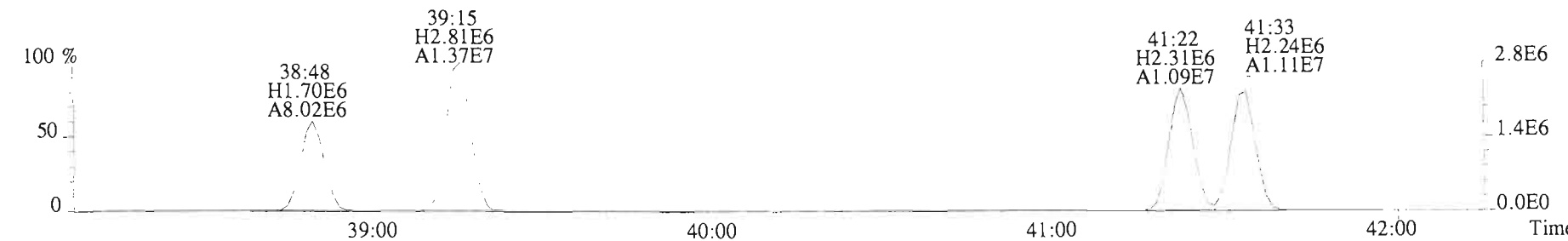
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)



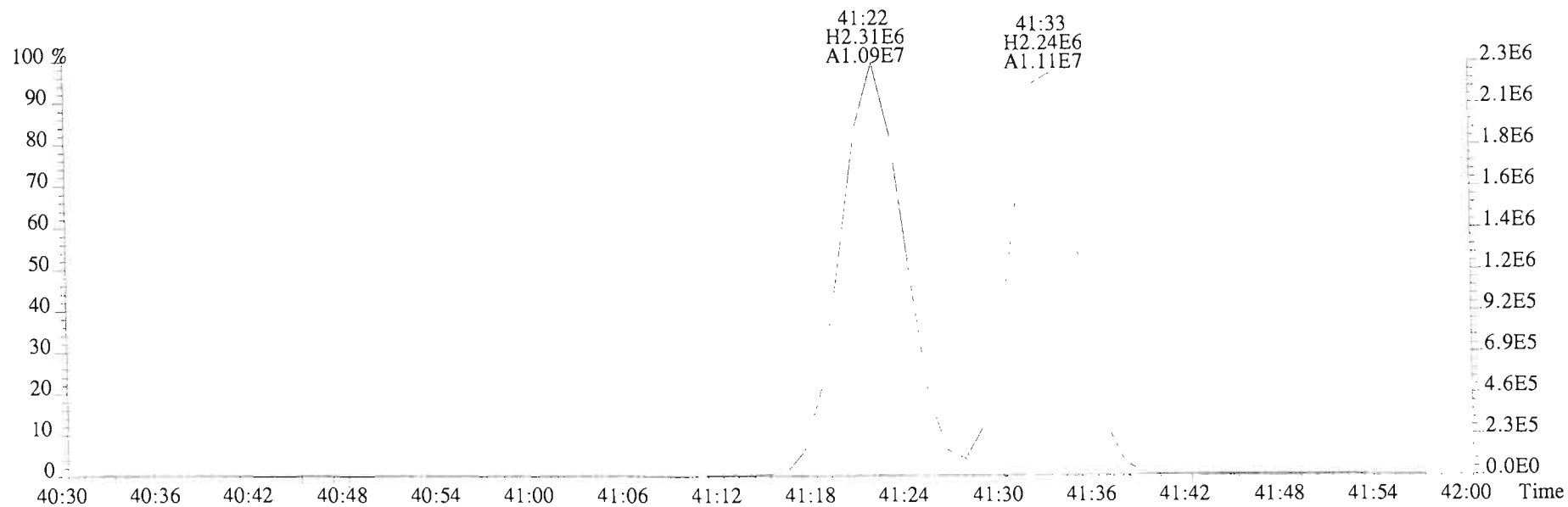
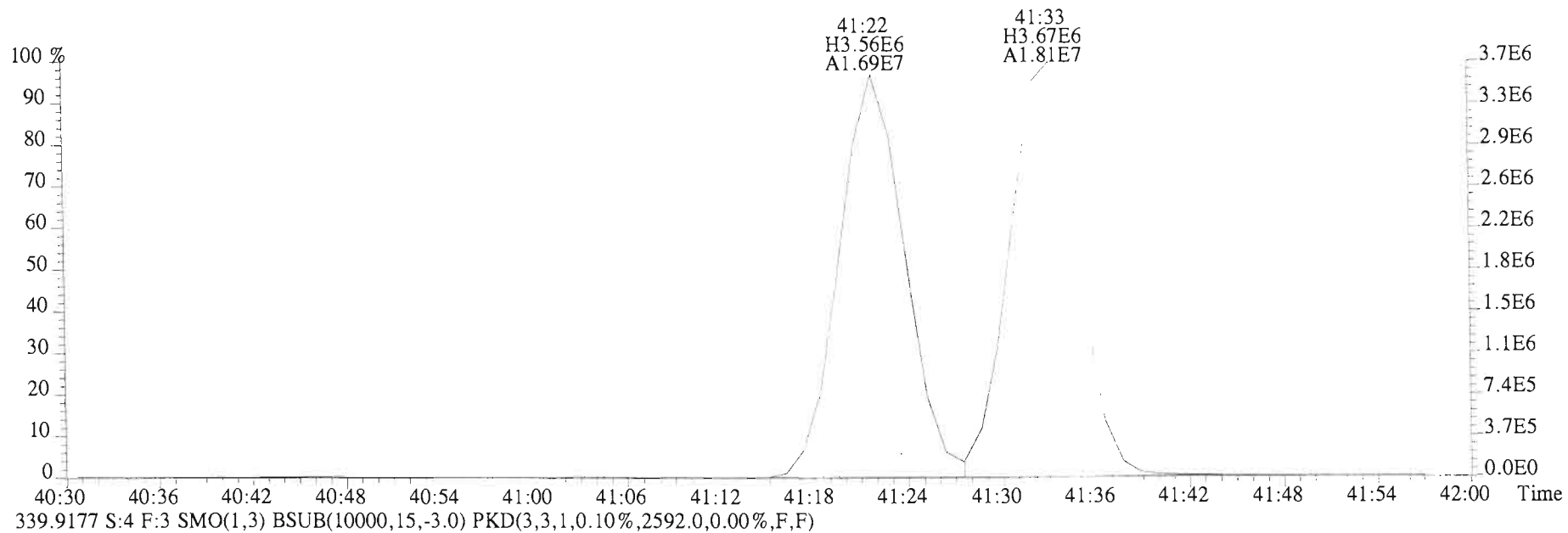
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2528.0,0.00%,F,F)



339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2592.0,0.00%,F,F)

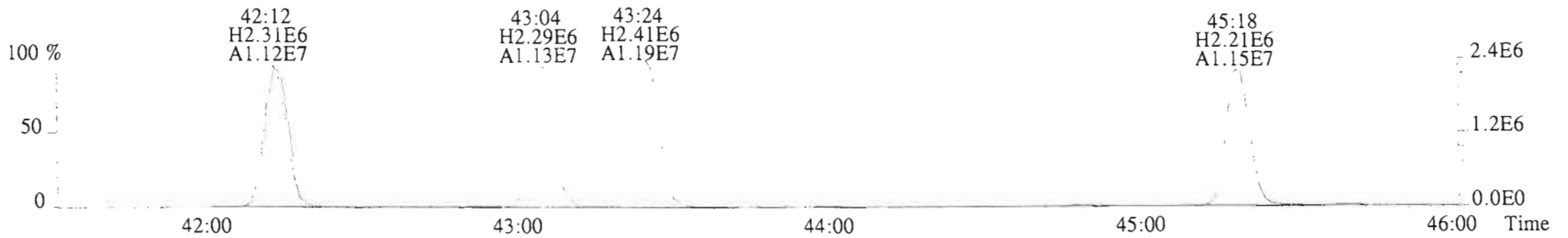
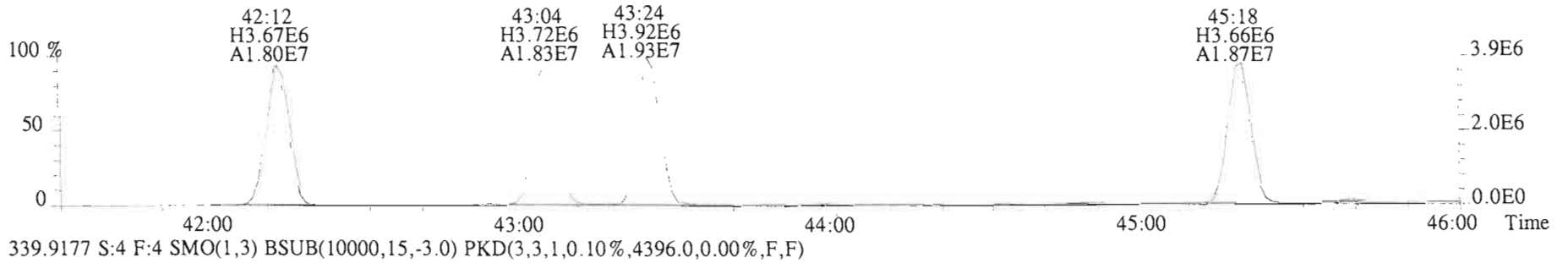
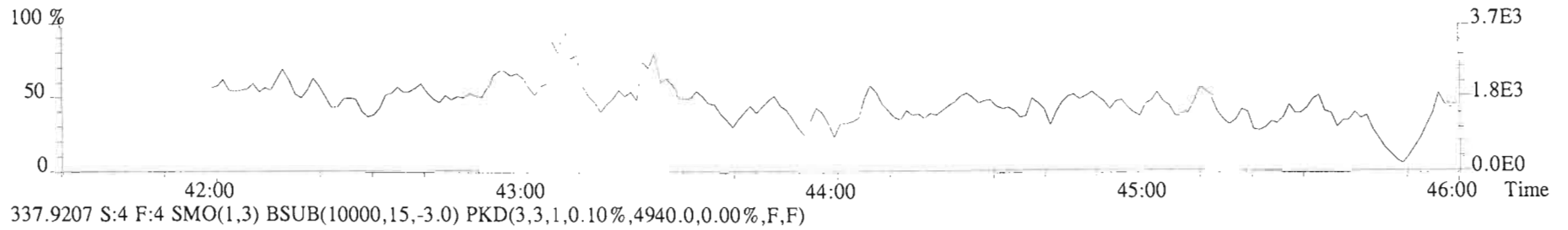
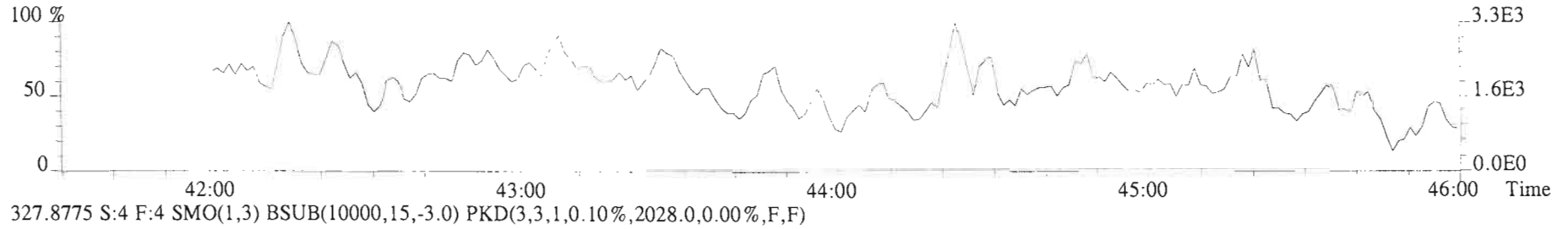


File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text: Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2528.0,0.00%,F,F)

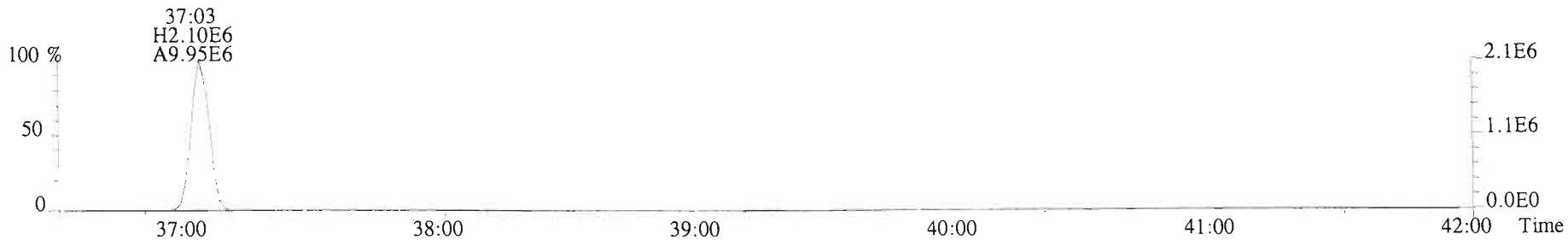
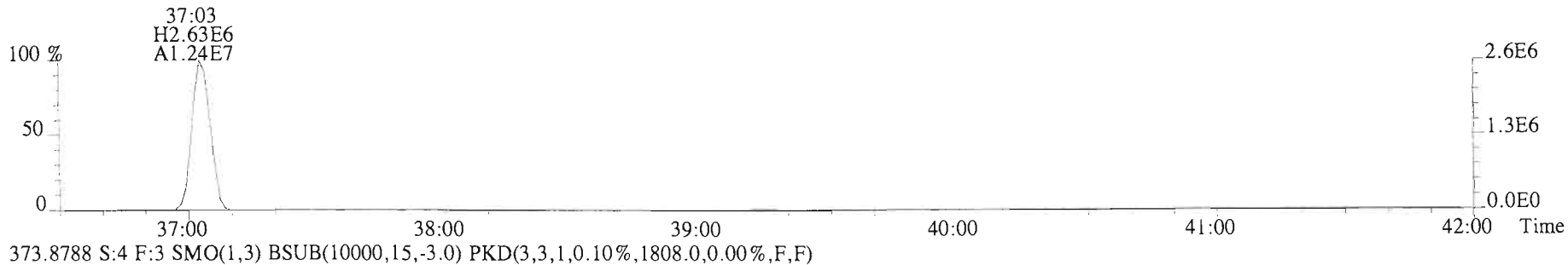
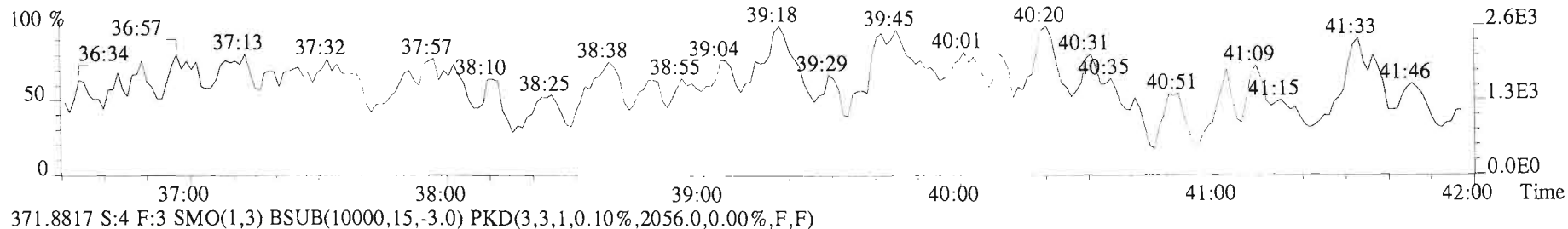
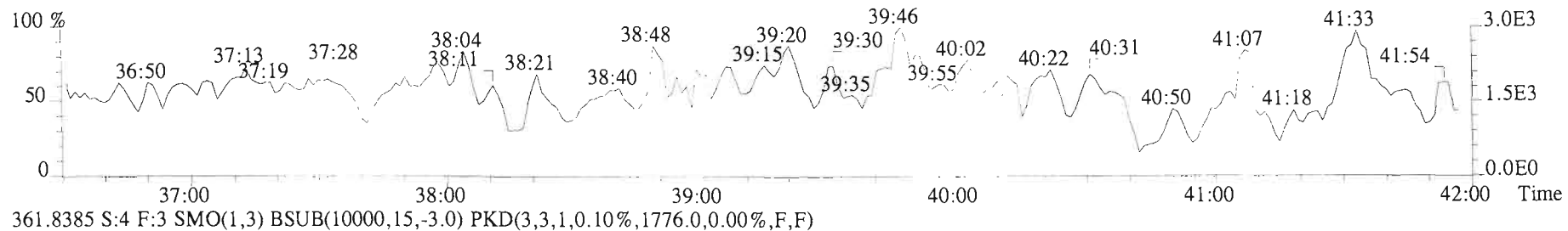




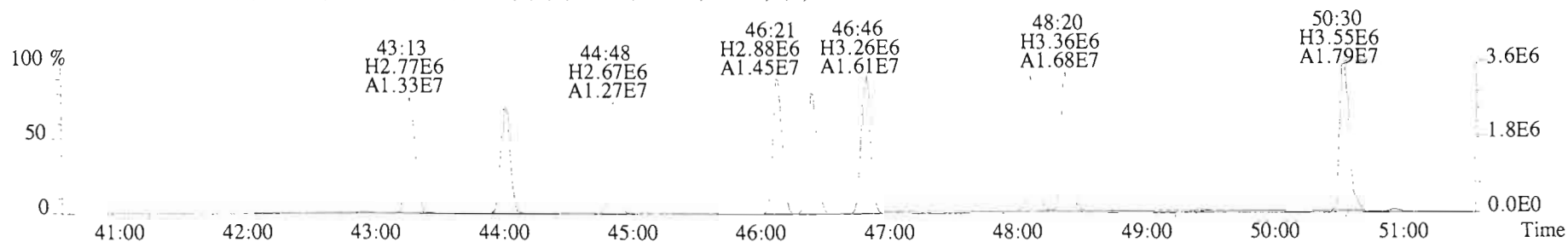
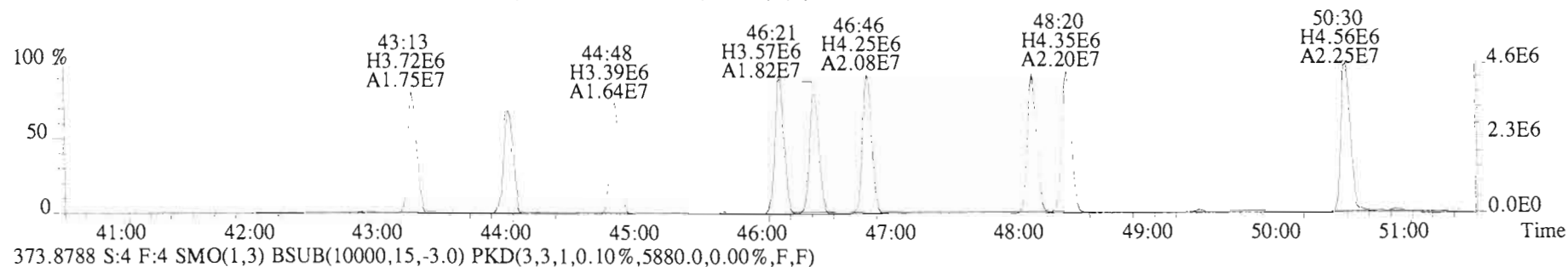
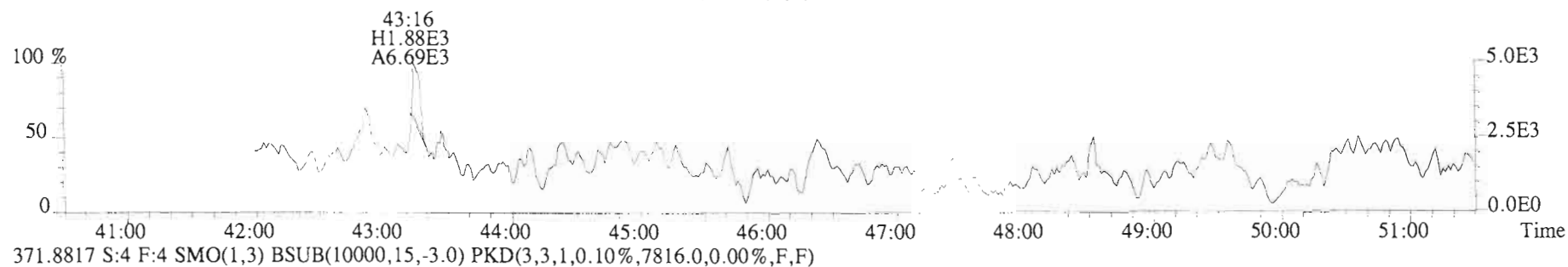
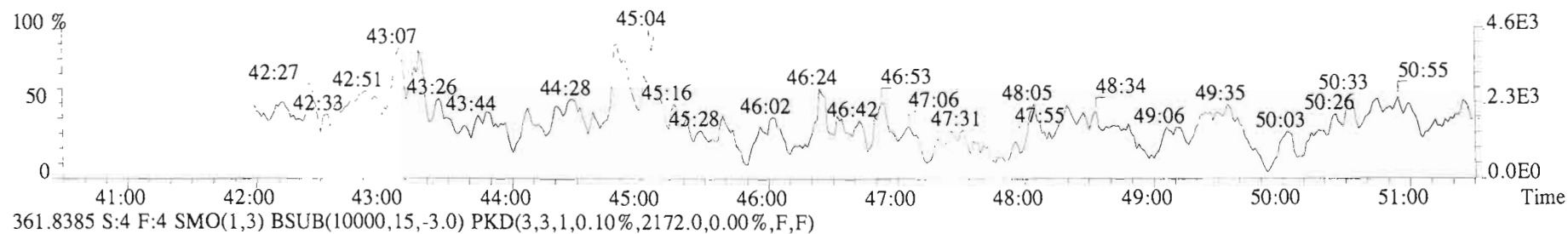
File:150127E1 #1-564 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text: Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
325.8804 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2288.0,0.00%,F,F)



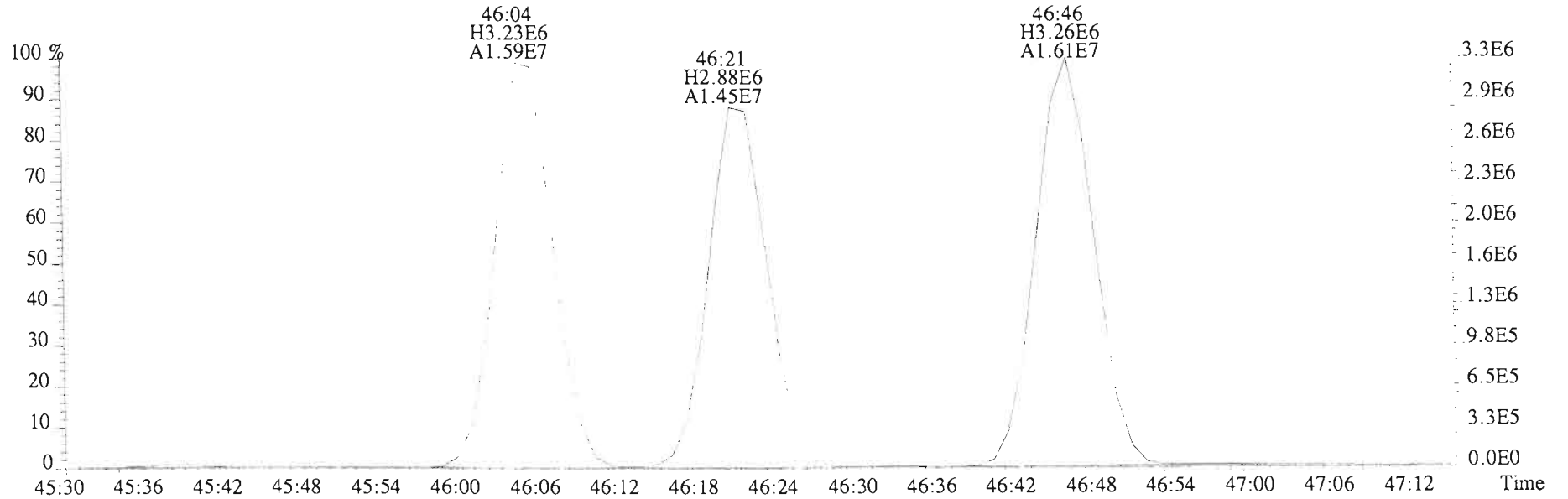
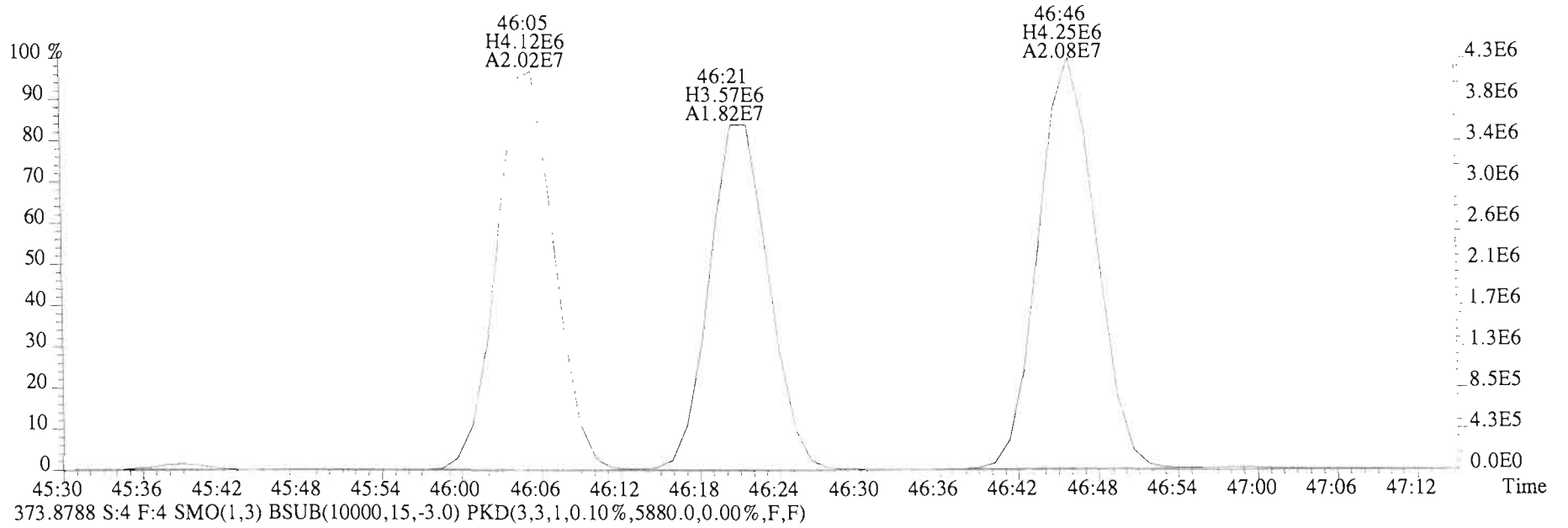
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
359.8415 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1920.0,0.00%,F,F)



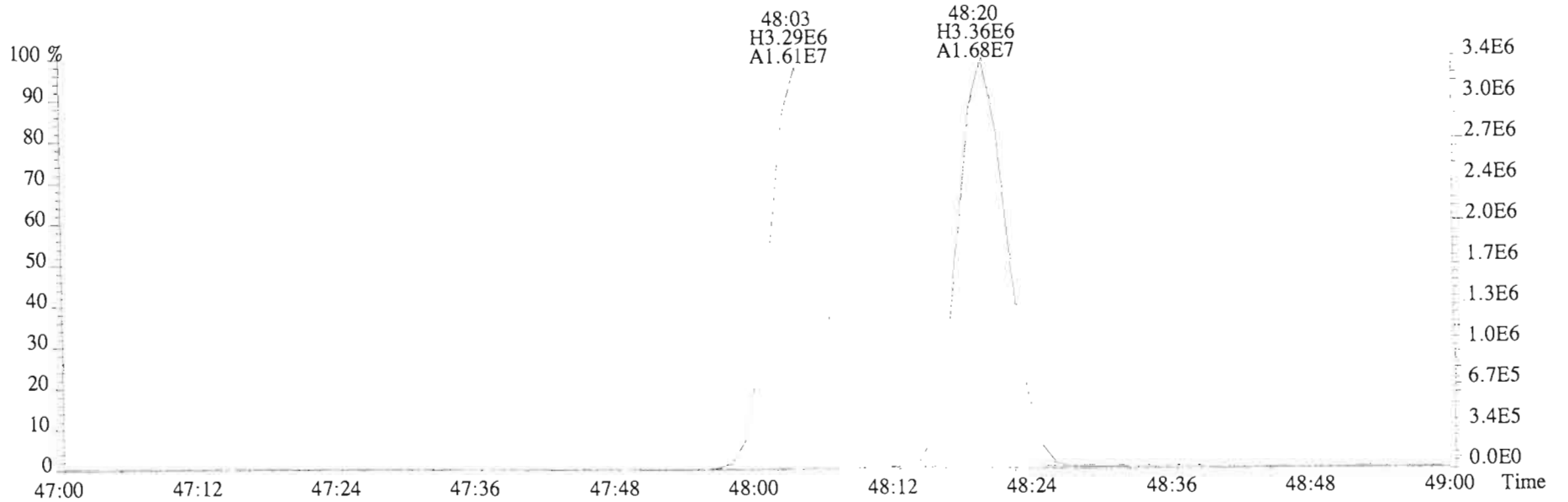
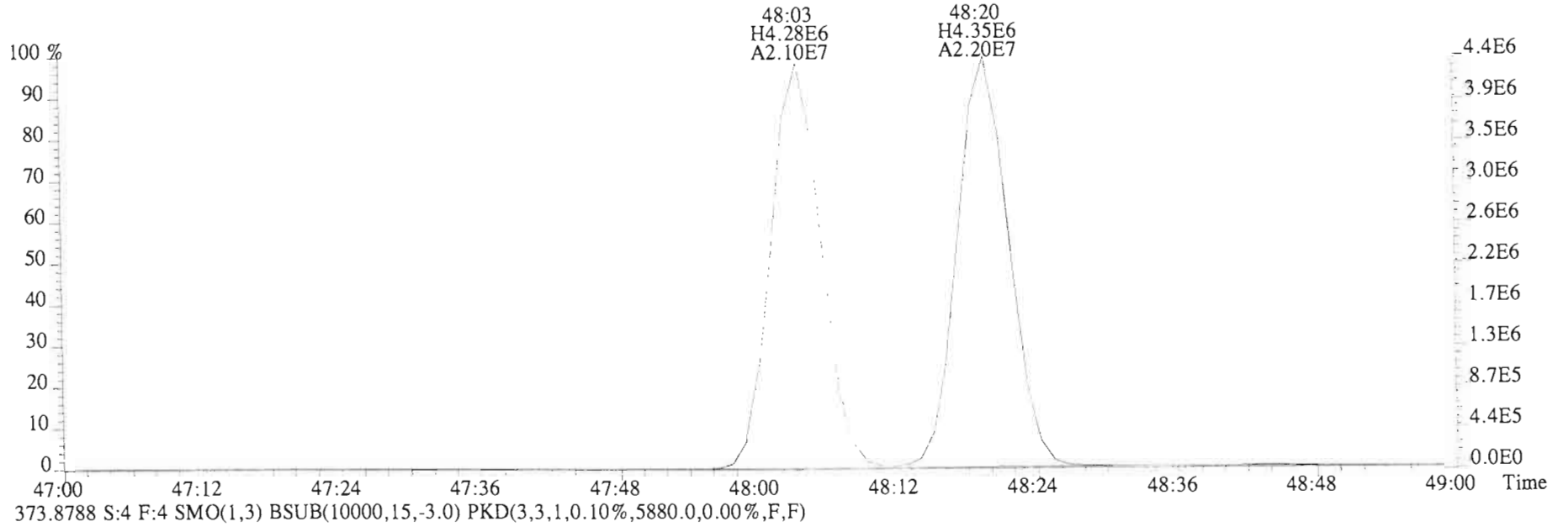
File:150127E1 #1-564 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#4 File Text: Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
 359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2264.0,0.00%,F,F)



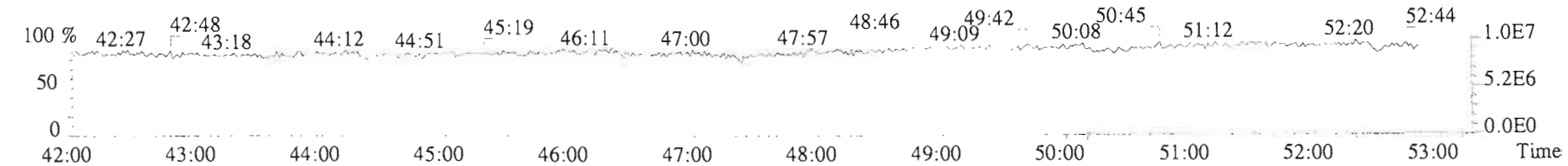
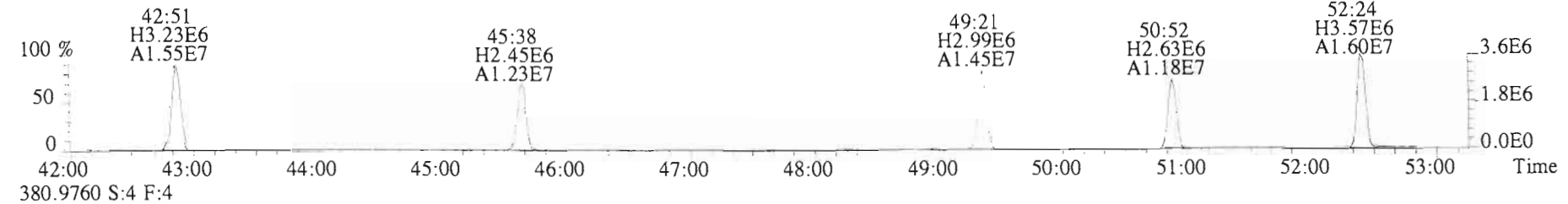
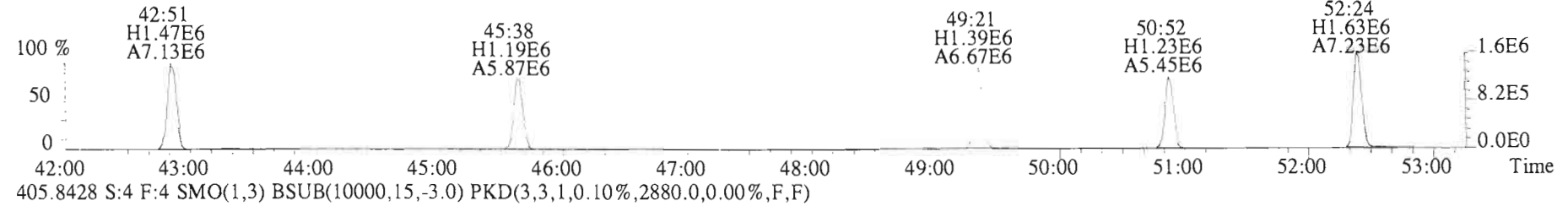
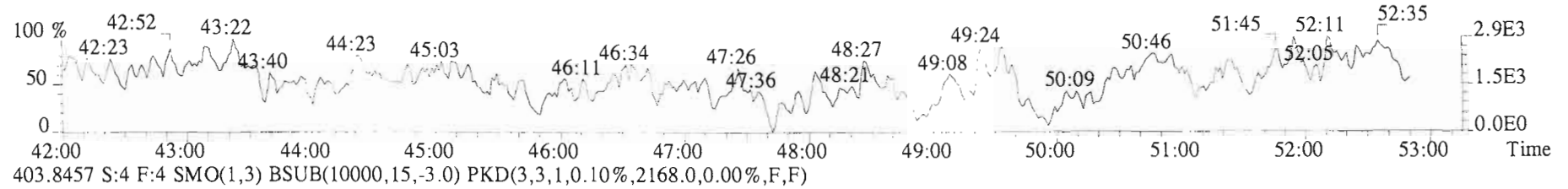
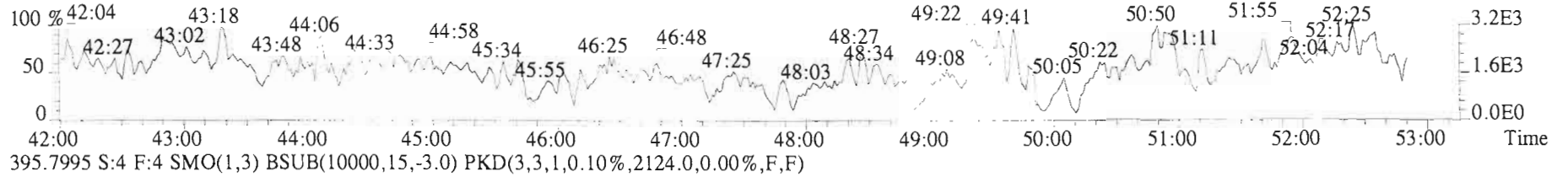
File:150127E1 #1-564 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7816.0,0.00%,F,F)



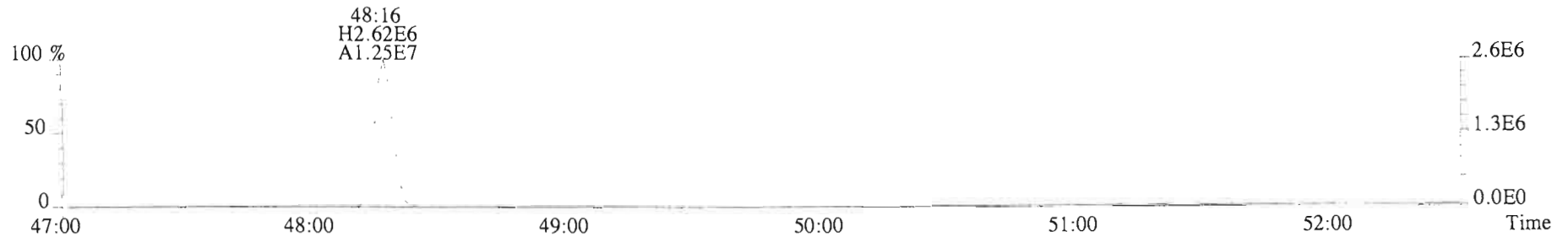
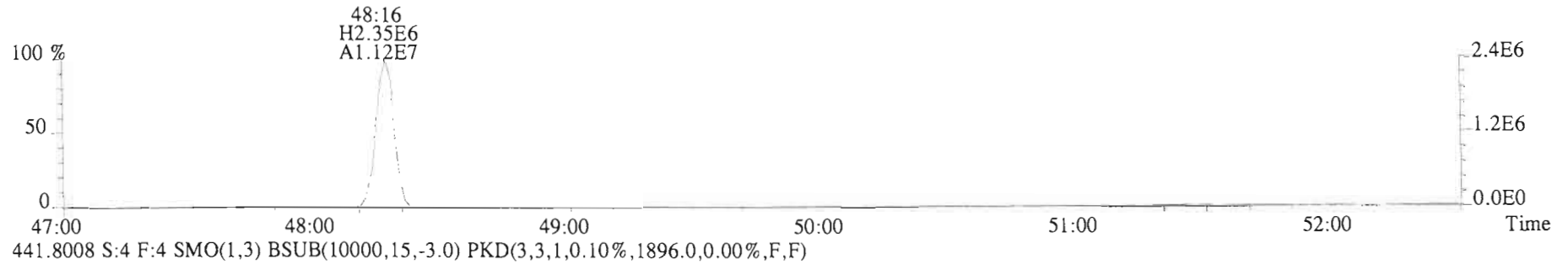
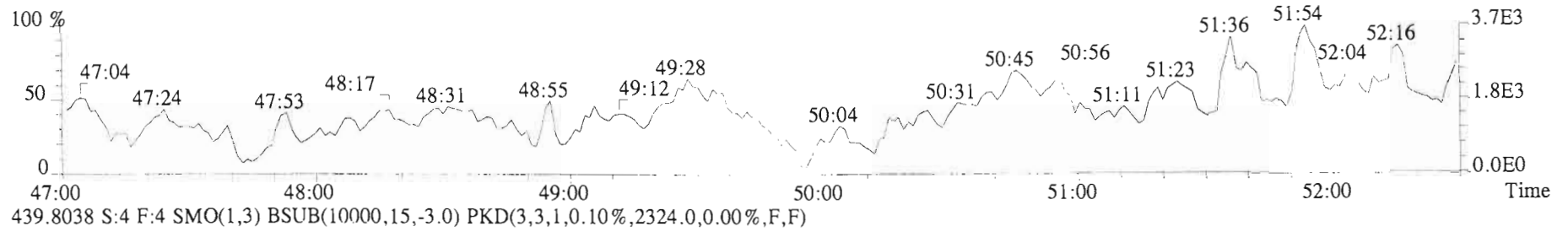
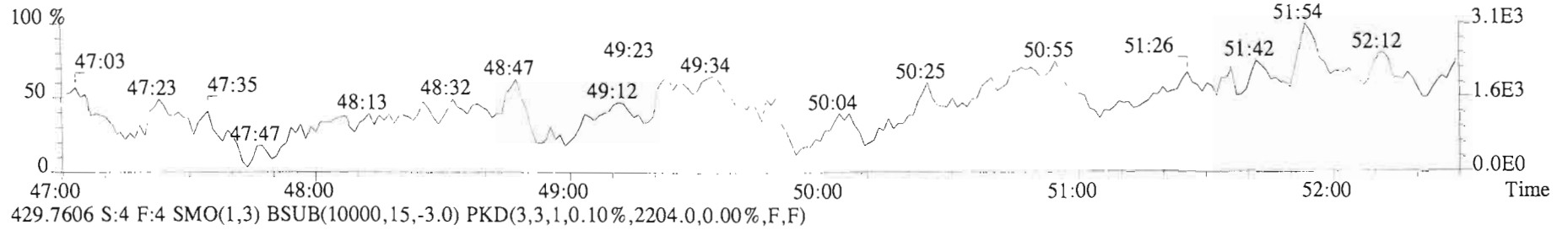
File:150127E1 #1-564 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7816.0,0.00%,F,F)



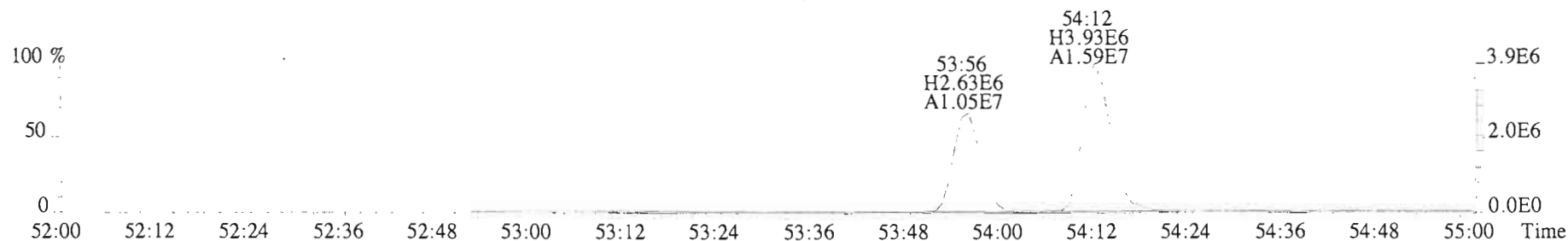
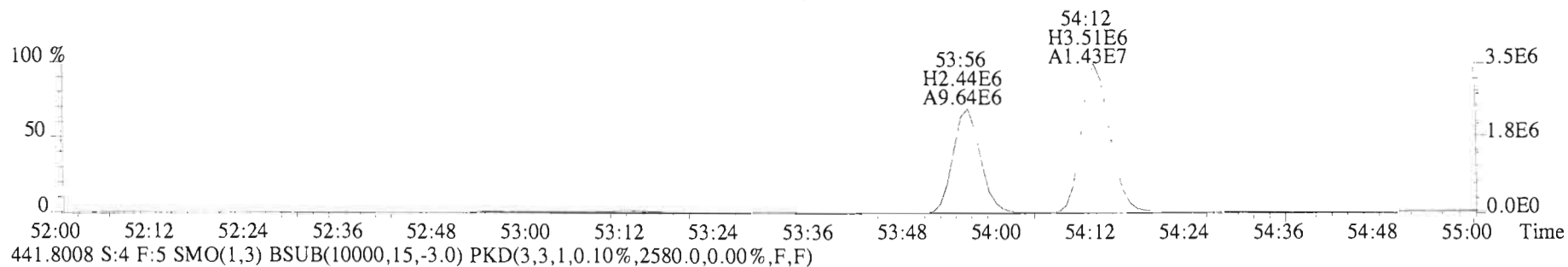
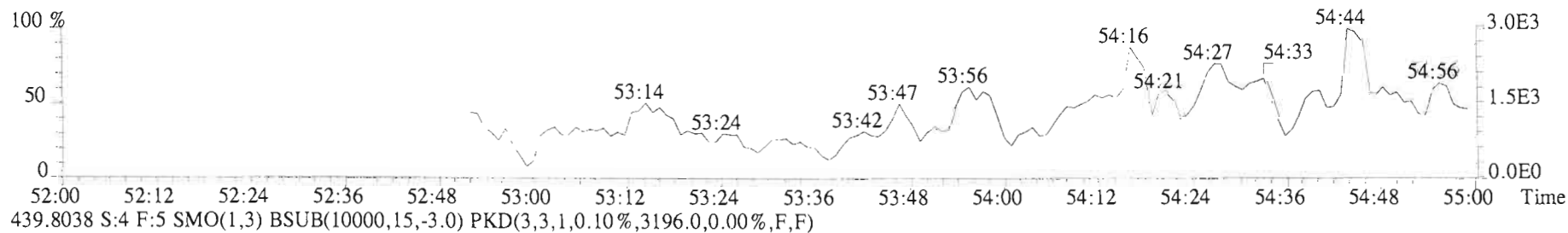
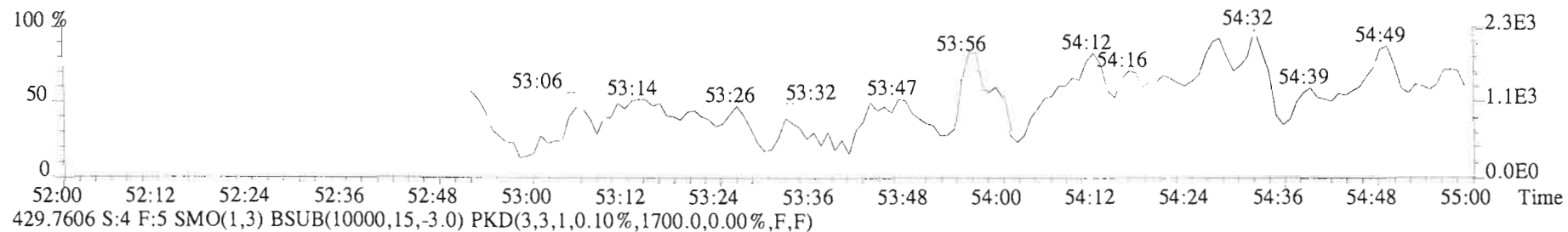
File:150127E1 #1-564 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
393.8025 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2284.0,0.00%,F,F)



File:150127E1 #1-564 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
427.7635 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2040.0,0.00%,F,F)

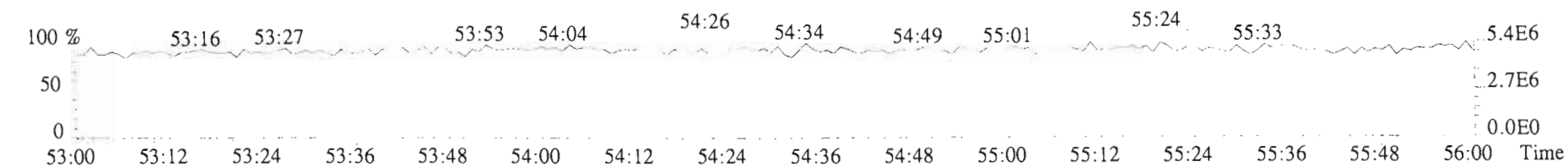
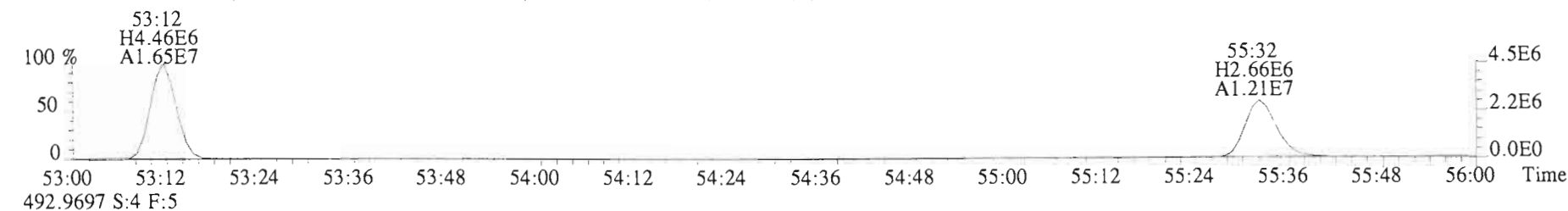
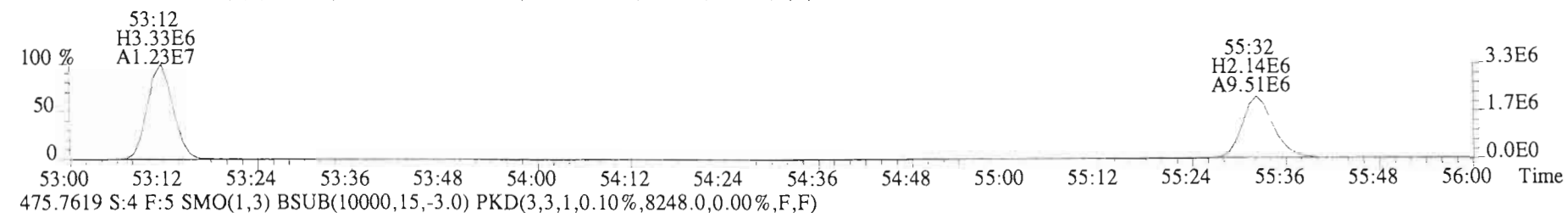
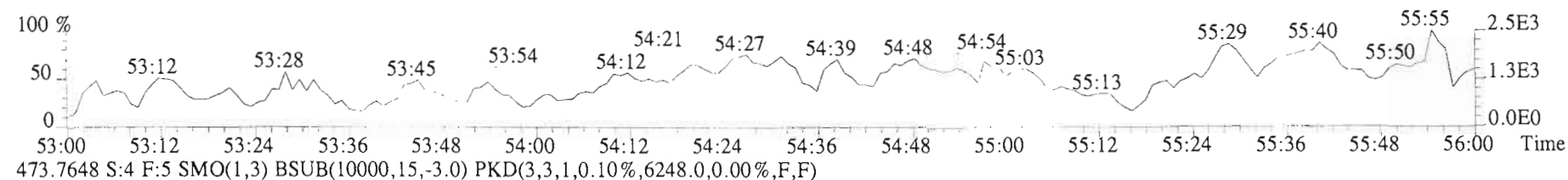
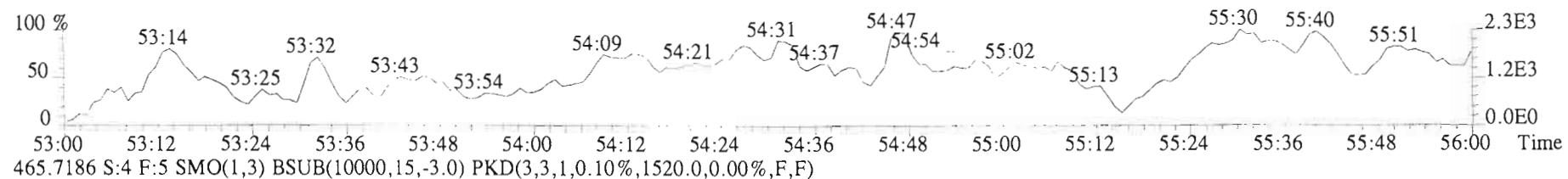


File:150127E1 #1-413 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:BSA0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
429.7635 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1608.0,0.00%,F,F)

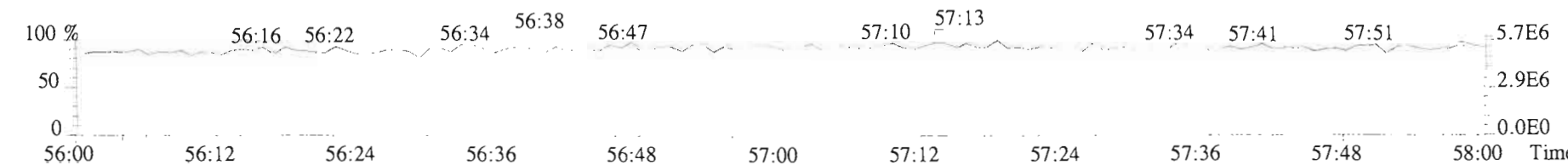
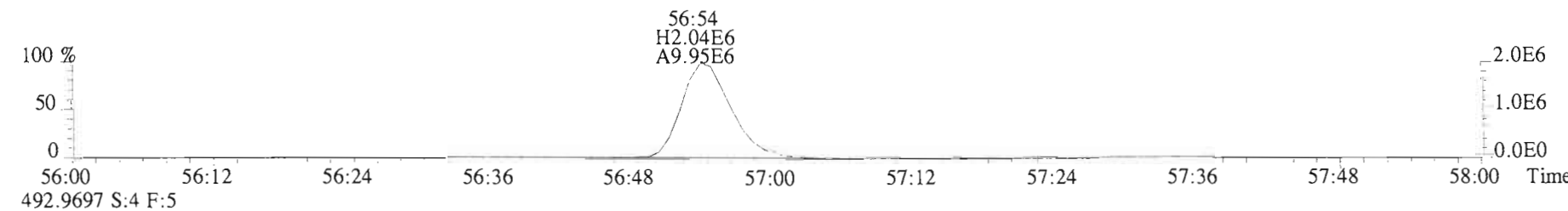
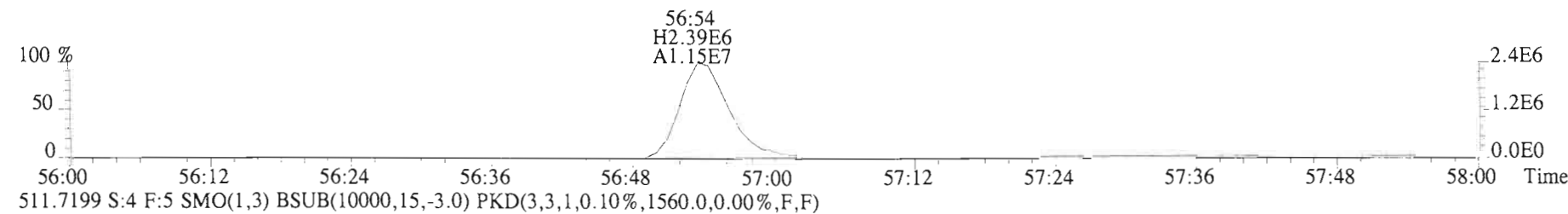
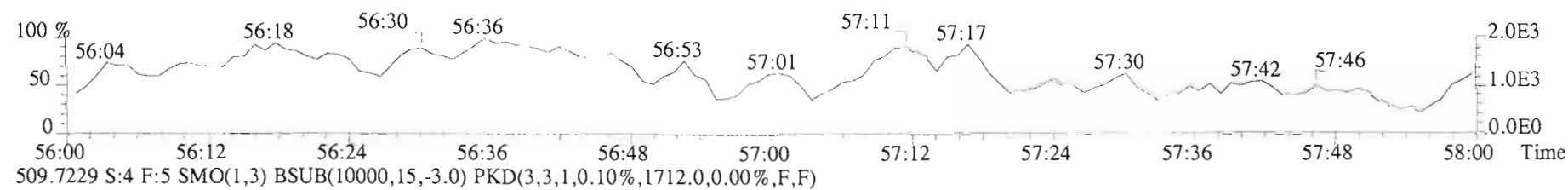
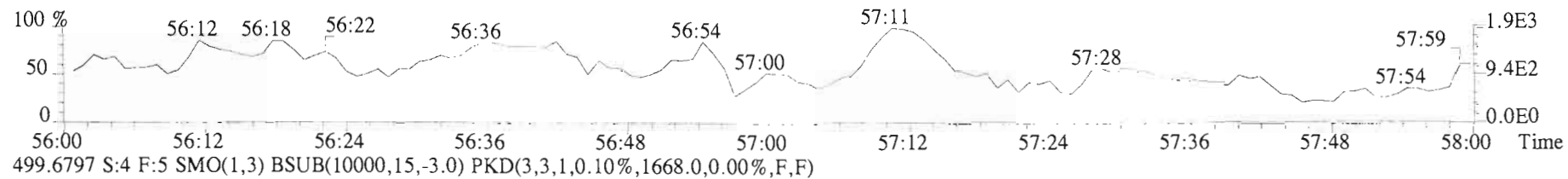




File:150127E1 #1-413 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
463.7216 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1596.0,0.00%,F,F)



File:150127E1 #1-413 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB\_ZB1  
497.6826 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1244.0,0.00%,F,F)



Lab Name: Vista Analytical Laboratory      OPR Data Filename: B5A0099-BS1

Matrix : AQUEOUS      Ext. Date: 1-26-15      Analysis Date: 27-JAN-15 Time: 11:43:13

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE	CONC.	OPR CONC.	Labeled Compounds	SPIKE	CONC.	OPR CONC.	Clean Up Standard	SPIKE	CONC.	OPR CONC.
	CONC.	FOUND	LIMITS		CONC.	FOUND	LIMITS		CONC.	FOUND	LIMITS
	(ng/mL)	(ng/mL)	(ng/mL)		(ng/mL)	(ng/mL)	(ng/mL)		(ng/mL)	(ng/mL)	(ng/mL)
PCB-1	50	39.5	30.0-67.5	13C-PCB-1	100	84.9	15-145	13C-PCB-79	100	98.3	40-145
PCB-3	50	39.3	30.0-67.5	13C-PCB-3	100	87.5	15-145	13C-PCB-178	100	99.9	40-145
PCB-4/10	100	87.1	60.0-135	13C-PCB-4	100	77.8	15-145				
PCB-15	50	43.5	30.0-67.5	13C-PCB-11	100	85.4	15-145				
PCB-19	50	48.5	30.0-67.5	13C-PCB-19	100	98.3	15-145				
PCB-37	50	41.4	30.0-67.5	13C-PCB-37	100	90.0	15-145				
PCB-54	50	46.2	30.0-67.5	13C-PCB-54	100	77.1	15-145				
PCB-81	50	45.0	30.0-67.5	13C-PCB-81	100	95.2	40-145				
PCB-77	50	45.3	30.0-67.5	13C-PCB-77	100	97.9	40-145				
PCB-104	50	47.2	30.0-67.5	13C-PCB-104	100	83.9	40-145				
PCB-123	50	48.6	30.0-67.5	13C-PCB-123	100	102.0	40-145				
PCB-106/118	100	95.3	60.0-135	13C-PCB-118	100	97.2	40-145				
PCB-114	50	42.5	30.0-67.5	13C-PCB-114	100	84.8	40-145				
PCB-105	50	40.6	30.0-67.5	13C-PCB-105	100	88.9	40-145				
PCB-126	50	41.2	30.0-67.5	13C-PCB-126	100	96.0	40-145				
PCB-155	50	48.4	30.0-67.5	13C-PCB-155	100	81.6	40-145				
PCB-167	50	46.0	30.0-67.5	13C-PCB-167	100	95.1	40-145				
PCB-156	50	45.7	30.0-67.5	13C-PCB-156	100	98.1	40-145				
PCB-157	50	46.7	30.0-67.5	13C-PCB-157	100	96.3	40-145				
PCB-169	50	48.1	30.0-67.5	13C-PCB-169	100	100.2	40-145				
PCB-188	50	47.8	30.0-67.5	13C-PCB-188	100	82.9	40-145				
PCB-189	50	48.6	30.0-67.5	13C-PCB-189	100	101.0	40-145				
PCB-202	50	49.8	30.0-67.5	13C-PCB-202	100	86.8	40-145				
PCB-205	50	44.9	30.0-67.5	13C-PCB-194	100	99.8	40-145				
PCB-208	50	45.5	30.0-67.5	13C-PCB-208	100	97.3	40-145				
PCB-206	50	45.9	30.0-67.5	13C-PCB-206	100	106.5	40-145				
PCB-209	50	46.1	30.0-67.5	13C-PCB-209	100	114.1	40-145				

Analyst: DmsDate: 1/29/15

Client ID: OPR  
Lab ID: B5A0099-BS1

Filename: 150127E1 S:2 Acq:27-JAN-15 11:43:13  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-1	2.96e+07	3.00	y	1.33	16:09	1.001	0.997-1.007	39.5240	PCB-52/69	4.55e+07	0.76	y	1.29	31:32	1.001	0.996-1.006	88.0183
PCB-2	3.14e+07	3.00	y	1.30	18:32	0.988	0.983-0.993	40.4460	PCB-73	2.58e+07	0.76	y	1.41	31:39	1.004	0.999-1.009	45.6156
PCB-3	3.06e+07	3.02	y	1.30	18:46	1.001	0.996-1.006	39.3092	PCB-43/49	4.20e+07	0.76	y	1.14	31:49	1.010	1.005-1.015	92.1238
PCB-4/10	4.93e+07	1.63	y	1.67	20:08	1.003	0.997-1.007	87.1429	PCB-47	2.26e+07	0.73	y	1.20	32:02	1.001	0.996-1.006	44.7627
PCB-7/9	6.04e+07	1.64	y	1.25	21:55	0.868	0.864-0.872	87.4406	PCB-48/75	5.03e+07	0.75	y	1.33	32:08	1.004	0.999-1.009	90.1322
PCB-6	2.99e+07	1.68	y	1.24	22:33	0.893	0.888-0.897	43.7965	PCB-65	2.40e+07	0.74	y	1.32	32:24	1.012	1.007-1.017	43.2472
PCB-5/8	6.36e+07	1.65	y	1.27	22:58	0.910	0.905-0.915	90.7673	PCB-62	2.65e+07	0.76	y	1.36	32:31	1.016	1.011-1.021	46.3114
PCB-14	3.73e+07	1.64	y	1.47	24:04	0.953	0.948-0.958	42.6958	PCB-44	1.80e+07	0.76	y	0.87	32:49	1.025	1.020-1.030	49.0356
PCB-11	3.29e+07	1.67	y	1.28	25:15	1.000	0.995-1.005	43.2249	PCB-42/59	4.95e+07	0.76	y	1.24	33:03	1.033	1.027-1.037	95.0525
PCB-12/13	6.66e+07	1.64	y	1.27	25:39	1.016	1.011-1.021	88.5990	PCB-41/64/71/72	1.06e+08	0.76	y	1.34	33:38	1.051	1.045-1.055	188.187
PCB-15	3.72e+07	1.67	y	1.44	25:58	1.029	1.023-1.031	43.5282	PCB-68	3.02e+07	0.75	y	1.61	33:53	1.059	1.053-1.063	44.6300
PCB-19	2.31e+07	1.07	y	1.18	24:15	1.001	0.996-1.006	48.5203	PCB-40	1.78e+07	0.74	y	0.86	34:07	1.066	1.061-1.071	49.2904
PCB-30	3.65e+07	1.07	y	1.87	25:08	1.038	1.033-1.043	48.4468	PCB-57	2.85e+07	0.75	y	1.12	34:28	0.970	0.965-0.975	44.5234
PCB-18	2.58e+07	1.05	y	0.89	25:53	0.954	0.949-0.959	48.3316	PCB-67	2.76e+07	0.74	y	1.09	34:46	0.979	0.974-0.984	44.3294
PCB-17	2.80e+07	1.08	y	0.96	26:03	0.960	0.956-0.966	48.5862	PCB-58	3.08e+07	0.75	y	1.14	34:53	0.982	0.977-0.987	47.4653
PCB-24/27	7.45e+07	1.07	y	1.30	26:38	0.981	0.977-0.987	95.1571	PCB-63	3.09e+07	0.77	y	1.16	35:02	0.986	0.981-0.991	46.5630
PCB-16/32	6.15e+07	1.06	y	1.05	27:09	1.000	0.996-1.006	97.3440	PCB-74	3.03e+07	0.74	y	1.21	35:19	0.994	0.989-0.999	43.7479
PCB-34	2.11e+07	1.00	y	1.30	27:56	0.960	0.955-0.965	39.2720	PCB-61/70	5.97e+07	0.74	y	1.13	35:31	1.000	0.995-1.005	92.8641
PCB-23	2.27e+07	1.02	y	1.21	28:02	0.964	0.958-0.968	45.3901	PCB-76/66	6.15e+07	0.76	y	1.18	35:43	1.005	1.000-1.010	91.3968
PCB-29	2.43e+07	1.00	y	1.21	28:17	0.972	0.967-0.977	48.5381	PCB-80	3.38e+07	0.76	y	1.32	35:57	1.000	0.995-1.005	44.2914
PCB-26	2.34e+07	1.02	y	1.24	28:29	0.979	0.974-0.984	45.8058	PCB-55	3.23e+07	0.74	y	1.23	36:16	1.009	1.004-1.014	45.5808
PCB-25	2.06e+07	1.03	y	1.10	28:39	0.985	0.980-0.990	45.3535	PCB-56/60	6.09e+07	0.75	y	1.11	36:46	1.023	1.018-1.028	95.5621
PCB-31	2.51e+07	1.02	y	1.25	29:01	0.997	0.992-1.002	48.5180	PCB-79	3.12e+07	0.76	y	1.16	37:50	1.053	1.048-1.058	46.6845
PCB-28	2.14e+07	1.02	y	1.24	29:07	1.001	0.996-1.006	41.7897	PCB-78	3.19e+07	0.76	y	1.18	38:31	0.987	0.982-0.992	44.4760
PCB-20/21/33	6.81e+07	1.03	y	1.16	29:43	1.022	1.016-1.026	142.313	PCB-81	3.54e+07	0.76	y	1.29	39:03	1.000	0.995-1.005	45.0454
PCB-22	2.40e+07	1.01	y	1.16	30:10	1.037	1.032-1.042	49.9165	PCB-77	3.54e+07	0.79	y	1.29	39:38	1.000	0.995-1.005	45.3385
PCB-36	2.49e+07	1.02	y	1.30	30:47	0.934	0.929-0.939	43.0818	PCB-104	2.37e+07	1.56	y	1.26	32:41	1.001	0.996-1.006	47.1911
PCB-39	2.38e+07	0.99	y	1.26	31:15	0.948	0.943-0.953	42.3266	PCB-96	2.20e+07	1.59	y	1.09	33:56	1.039	1.034-1.044	50.7384
PCB-38	2.23e+07	1.02	y	1.24	32:02	0.972	0.967-0.977	40.2299	PCB-103	1.99e+07	1.58	y	0.97	34:28	1.055	1.051-1.061	51.6854
PCB-35	2.26e+07	1.01	y	1.26	32:32	0.987	0.982-0.992	40.3642	PCB-100	1.94e+07	1.59	y	0.96	34:50	1.066	1.061-1.071	50.6179
PCB-37	2.49e+07	1.00	y	1.35	32:58	1.000	0.996-1.006	41.4399	PCB-94	1.74e+07	1.63	y	1.13	35:18	0.985	0.980-0.990	48.1368
PCB-54	2.47e+07	0.75	y	1.02	28:00	1.001	0.996-1.006	46.1722	PCB-95/98/102	5.68e+07	1.59	y	1.29	35:48	0.999	0.994-1.004	138.252
PCB-50	1.99e+07	0.73	y	0.78	29:09	1.042	1.037-1.047	48.8491	PCB-93	1.72e+07	1.63	y	1.06	35:56	1.003	0.998-1.008	50.6258
PCB-53	2.11e+07	0.75	y	1.14	29:47	0.945	0.941-0.951	46.3490	PCB-88/91	3.71e+07	1.58	y	1.12	36:13	1.011	1.006-1.016	103.369
PCB-51	2.20e+07	0.74	y	1.16	30:08	0.956	0.952-0.962	47.3408	PCB-121	2.40e+07	1.58	y	1.76	36:20	1.014	1.009-1.019	42.7787
PCB-45	1.97e+07	0.74	y	1.04	30:34	0.970	0.965-0.975	47.2758	PCB-84/92	3.67e+07	1.61	y	1.07	37:08	0.990	0.985-0.995	99.3717
PCB-46	1.85e+07	0.75	y	0.95	31:04	0.986	0.981-0.991	48.5967	PCB-89	1.75e+07	1.54	y	1.00	37:20	0.995	0.990-1.000	51.0282

RL: MONO, TRI - DECA: \_\_\_\_\_

RL: DI : \_\_\_\_\_

Integrations

by  
Analyst: *Dms*

Date: *1/29/15*

Reviewed

by  
Analyst: *[Signature]*

Date: *1/30/15*

Client ID: OPR  
Lab ID: B5A0099-BS1

Filename: 150127E1 S:2 Acq:27-JAN-15 11:43:13 ConCal: ST150127E1-1  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-90/101	3.92e+07	1.55	y	1.21	37:31	1.000	0.995-1.005	94.2648	PCB-133/142	4.02e+07	1.22	y	0.91	42:27	0.982	0.977-0.987	92.8590
PCB-113	2.48e+07	1.57	y	1.34	37:45	1.006	1.002-1.012	53.5559	PCB-131	1.99e+07	1.26	y	0.85	42:36	0.986	0.981-0.991	49.5574
PCB-99	1.80e+07	1.62	y	1.25	37:52	1.010	1.004-1.014	41.8760	PCB-146/165	4.82e+07	1.26	y	1.08	42:49	0.991	0.986-0.996	93.5673
PCB-119	2.68e+07	1.59	y	1.88	38:19	0.987	0.982-0.992	45.1394	PCB-132/161	4.93e+07	1.25	y	1.12	43:04	0.996	0.992-1.002	92.5763
PCB-108/112	4.14e+07	1.58	y	1.41	38:28	0.991	0.986-0.996	93.1738	PCB-153	2.40e+07	1.26	y	1.20	43:14	1.000	0.996-1.006	42.0939
PCB-83	2.46e+07	1.60	y	1.66	38:37	0.995	0.990-1.000	46.7950	PCB-168	2.92e+07	1.23	y	1.36	43:27	1.005	1.000-1.010	45.1637
PCB-97	1.88e+07	1.60	y	1.30	38:49	1.000	0.995-1.005	45.8089	PCB-141	2.23e+07	1.28	y	1.16	43:58	1.000	0.995-1.005	45.9518
PCB-86	1.61e+07	1.54	y	1.03	38:57	1.004	0.999-1.009	49.3733	PCB-137	2.35e+07	1.26	y	1.18	44:21	1.009	1.004-1.014	47.6770
B-87/117/125	6.92e+07	1.60	y	1.59	39:05	1.007	1.002-1.012	137.657	PCB-130	1.97e+07	1.26	y	0.92	44:27	1.011	1.006-1.016	50.9645
PCB-111/115	5.18e+07	1.58	y	1.86	39:14	1.011	1.006-1.016	88.3735	PCB-138/163/164	7.90e+07	1.26	y	1.38	44:50	1.001	0.996-1.006	132.206
PCB-85/116	4.36e+07	1.59	y	1.39	39:22	1.014	1.010-1.020	99.1466	PCB-158/160	5.91e+07	1.26	y	1.48	45:04	1.006	1.001-1.011	92.5131
PCB-120	2.80e+07	1.57	y	1.99	39:37	1.021	1.016-1.026	44.5773	PCB-129	2.00e+07	1.25	y	0.99	45:19	1.012	1.007-1.017	46.6407
PCB-110	2.51e+07	1.61	y	1.70	39:45	1.024	1.019-1.029	46.7601	PCB-166	2.91e+07	1.25	y	1.14	45:46	0.993	0.988-0.998	47.1847
PCB-82	1.62e+07	1.58	y	0.74	40:23	0.976	0.971-0.981	49.5186	PCB-159	3.02e+07	1.24	y	1.22	46:05	1.000	0.995-1.005	45.7528
PCB-124	2.74e+07	1.53	y	1.30	41:04	0.993	0.988-0.998	47.7538	PCB-128/162	5.14e+07	1.25	y	1.03	46:23	1.006	1.002-1.012	91.9365
PCB-107/109	5.35e+07	1.60	y	1.34	41:13	0.996	0.991-1.001	90.9792	PCB-167	2.97e+07	1.24	y	1.18	46:47	1.000	0.995-1.005	45.9930
PCB-123	2.68e+07	1.58	y	1.25	41:23	1.000	0.995-1.005	48.5531	PCB-156	3.20e+07	1.25	y	1.27	48:05	1.001	0.995-1.005	45.6745
- PCB-106/118	5.49e+07	1.58	y	1.29	41:35	1.001	0.996-1.006	95.2904	PCB-157	3.23e+07	1.24	y	1.22	48:21	1.000	0.995-1.005	46.7255
- PCB-114	2.74e+07	1.61	y	1.45	42:13	1.000	0.995-1.005	42.5135	PCB-169	2.98e+07	1.25	y	1.07	50:30	1.000	0.995-1.005	48.0508
PCB-122	2.33e+07	1.63	y	1.22	42:21	1.004	0.999-1.009	43.0566	PCB-188	2.54e+07	1.06	y	1.52	42:52	1.000	0.996-1.006	47.7564
PCB-105	2.81e+07	1.62	y	1.56	43:04	1.000	0.995-1.005	40.6223	PCB-184	2.29e+07	1.06	y	1.34	43:19	1.011	1.006-1.016	48.9279
PCB-127	2.61e+07	1.64	y	1.31	43:25	1.001	0.995-1.005	41.4235	PCB-179	2.50e+07	1.05	y	1.39	44:06	1.029	1.024-1.034	51.3318
PCB-126	2.62e+07	1.64	y	1.41	45:18	1.000	0.995-1.005	41.1874	PCB-176	2.60e+07	1.07	y	1.45	44:34	1.040	1.035-1.045	51.1135
PCB-155	2.02e+07	1.27	y	1.20	37:04	1.001	0.966-1.006	48.3824	PCB-186	2.66e+07	1.07	y	1.46	45:10	1.054	1.049-1.059	52.1578
PCB-150	2.01e+07	1.28	y	1.13	38:20	1.035	1.030-1.040	51.3145	PCB-178	2.01e+07	1.05	y	1.07	45:40	1.066	1.061-1.071	53.3929
PCB-152	2.02e+07	1.29	y	1.17	38:48	1.048	1.043-1.053	49.7277	PCB-175	2.00e+07	1.07	y	1.05	46:01	1.074	1.069-1.079	54.5869
PCB-145	1.93e+07	1.28	y	1.09	39:15	1.060	1.055-1.065	50.8211	PCB-182/187	4.20e+07	1.06	y	1.14	46:11	1.078	1.073-1.083	105.727
PCB-136	2.18e+07	1.25	y	1.14	39:35	1.068	1.063-1.073	54.9702	PCB-183	2.24e+07	1.06	y	1.22	46:30	1.085	1.080-1.090	52.3727
PCB-148	1.41e+07	1.28	y	0.82	39:41	1.071	1.066-1.076	49.6470	PCB-185	2.04e+07	1.06	y	1.40	47:10	0.956	0.950-0.960	46.6437
PCB-154	1.64e+07	1.27	y	0.89	40:10	1.084	1.079-1.089	53.0679	PCB-174	1.86e+07	1.05	y	1.29	47:31	0.963	0.958-0.968	46.4417
PCB-151	1.63e+07	1.25	y	0.82	40:49	1.102	1.097-1.107	57.2579	PCB-181	2.04e+07	1.06	y	1.35	47:38	0.965	0.960-0.970	48.6082
PCB-135	1.54e+07	1.26	y	0.80	41:01	1.107	1.101-1.113	55.6004	PCB-177	1.84e+07	1.04	y	1.27	47:47	0.968	0.963-0.973	46.8170
PCB-144	1.69e+07	1.40	y	0.86	41:08	1.110	1.105-1.116	56.8712	PCB-171	2.06e+07	1.06	y	1.46	48:05	0.974	0.969-0.979	45.6299
PCB-147	1.49e+07	1.22	y	0.78	41:16	1.114	1.108-1.120	55.1297	PCB-173	1.78e+07	1.05	y	1.10	48:31	0.983	0.978-0.988	51.8235
PCB-139/149	3.31e+07	1.26	y	0.87	41:32	1.121	1.115-1.127	109.135	PCB-172	2.05e+07	1.03	y	1.35	48:58	0.992	0.987-0.997	48.6834
- PCB-140	1.55e+07	1.27	y	0.78	41:43	1.126	1.120-1.132	57.3171	PCB-192	2.64e+07	1.07	y	1.74	49:09	0.996	0.991-1.001	48.9464
- PCB-134/143	4.06e+07	1.25	y	0.93	42:08	0.975	0.970-0.980	91.5263	PCB-180	2.10e+07	1.06	y	1.45	49:22	1.000	0.995-1.005	46.5488

Integrations

by

RL: MONO, TRI - DECA: \_\_\_\_\_

Analyst: Dms

Date: 1/29/15

Client ID: OPR  
Lab ID: B5A0099-BS1

Filename: 150127E1 S:2 Acq:27-JAN-15 11:43:13  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000

ConCal: ST150127E1-1  
EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-193	2.74e+07	1.06 y	1.85	49:34	1.005	0.999-1.009		47.6520
PCB-191	2.79e+07	1.06 y	1.86	49:50	1.010	1.005-1.015		48.2019
PCB-170	2.03e+07	1.04 y	1.67	50:53	1.000	0.995-1.005		47.8061
PCB-190	2.76e+07	1.04 y	2.25	51:04	1.004	0.999-1.009		48.4390
PCB-189	2.74e+07	1.05 y	1.67	52:25	1.000	0.995-1.005		48.5886
PCB-202	1.81e+07	0.89 y	1.02	48:17	1.000	0.995-1.005		49.7848
PCB-201	2.05e+07	0.93 y	1.10	48:47	1.011	1.005-1.015		52.4819
PCB-204	1.91e+07	0.89 y	1.07	48:56	1.014	1.009-1.019		49.8365
PCB-197	2.15e+07	0.91 y	1.17	49:14	1.020	1.015-1.025		51.7528
PCB-200	1.99e+07	0.89 y	1.03	50:08	1.039	1.034-1.044		53.7930
PCB-198	1.43e+07	0.90 y	0.75	51:29	1.067	1.062-1.072		53.3385
PCB-199	1.56e+07	0.93 y	0.74	51:36	1.069	1.064-1.074		58.8578
- PCB-196/203	3.22e+07	0.89 y	0.83	51:52	1.075	1.070-1.080		108.733
- PCB-195	1.57e+07	0.91 y	1.14	53:04	0.984	0.979-0.989		46.1965
PCB-194	1.71e+07	0.89 y	1.29	53:56	1.000	0.995-1.005		44.2921
PCB-205	2.16e+07	0.91 y	1.61	54:13	1.005	1.001-1.010		44.9382
PCB-208	1.96e+07	1.38 y	1.01	53:12	1.000	0.995-1.005		45.5428
PCB-207	1.98e+07	1.31 y	1.03	53:31	1.006	1.001-1.011		45.2839
PCB-206	1.27e+07	1.37 y	0.88	55:34	1.000	0.995-1.005		45.9428
PCB-209	2.02e+07	1.20 y	1.35	56:56	1.000	0.995-1.005		46.0671

Name	Resp	RA	RT	RRF	Conc
Total Mono-PCB	9.17e+07	3.00 y	16:09	1.31	119.279
Total Di-PCB	3.77e+08	1.63 y	20:08	1.32	527.195
Total Tri-PCB	2.50e+08	1.07 y	24:15	1.20	386.386
Total Tri-PCB	3.81e+08	1.00 y	27:56	1.23	737.878
Total Tetra-PCB	1.13e+09	0.75 y	28:00	1.17	1961.39
Total Penta-PCB	9.00e+08	1.56 y	32:41	1.24	1956.70
Total Penta-PCB	1.39e+08	1.61 y	42:13	1.39	220.666
Total Hexa-PCB	2.44e+08	1.27 y	37:04	0.94	749.242
Total Hexa-PCB	7.15e+08	1.25 y	42:08	1.13	1305.07
Total Hepta-PCB	5.49e+08	1.06 y	42:52	1.37	1197.22
Total Octa-PCB	1.61e+08	0.89 y	48:17	0.95	478.578
Total Octa-PCB	5.59e+07	0.91 y	53:04	1.35	138.950
Total Nona-PCB	5.21e+07	1.38 y	53:12	0.99	136.770
Total Deca-PCB	2.02e+07	1.20 y	56:56	1.35	46.0671

Total PCB Conc:9876.14757600

RL: MONO, TRI - DECA: \_\_\_\_\_

Integrations  
by

Analyst: DMS

Date: 1/29/15

Client ID: OPR  
Lab ID: B5A0099-BS1

Filename: 150127E1 S:2 Acq:27-JAN-15 11:43:13  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol:1.0000

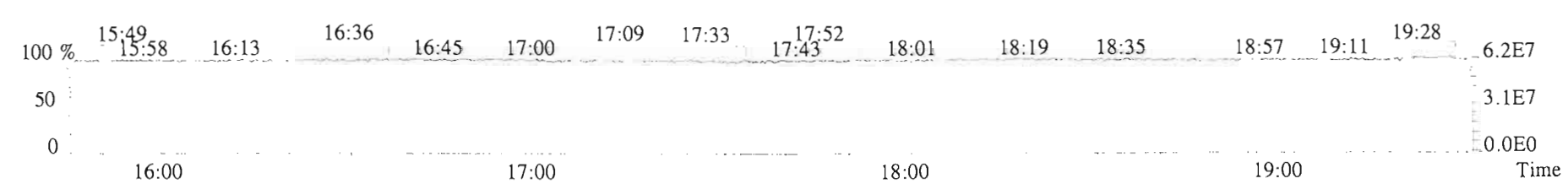
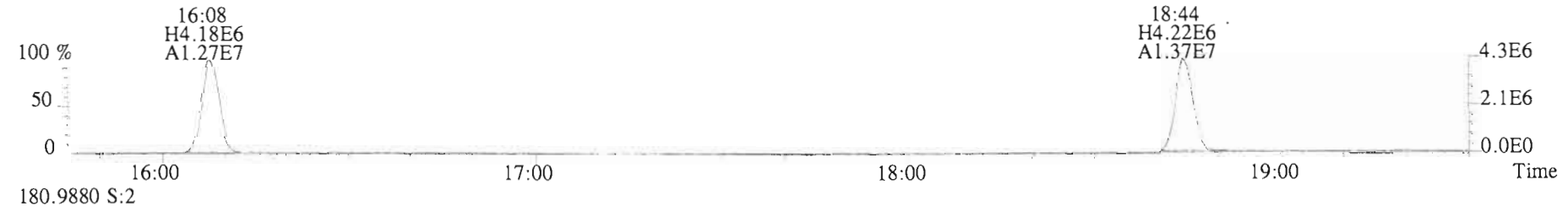
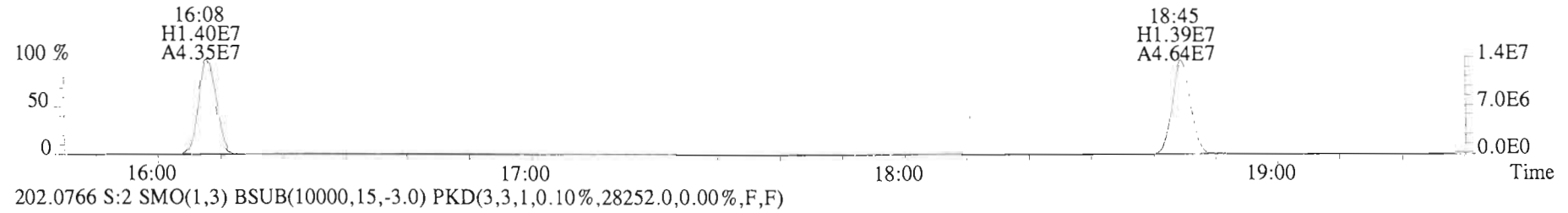
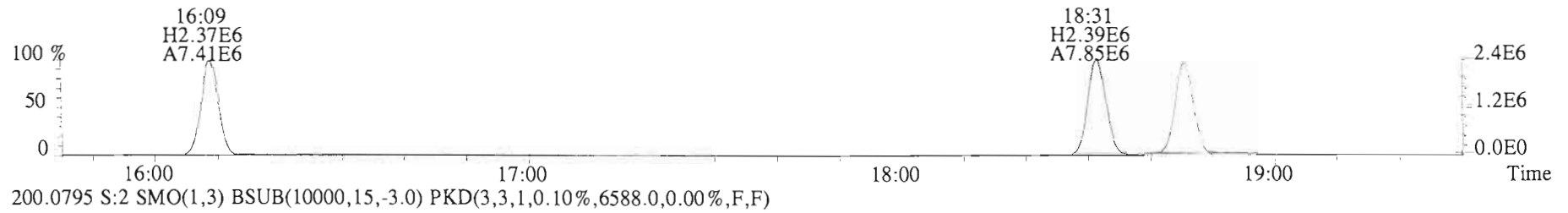
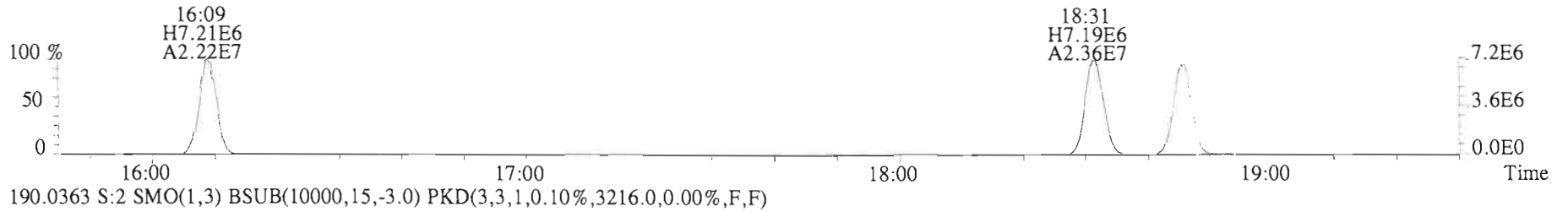
ConCal: ST150127E1-1  
EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	5.62e+07	3.41 y	0.91	16:08	0.622	0.619-0.625		84.9	84.9											
13C-PCB-3	6.00e+07	3.40 y	0.94	18:45	0.723	0.718-0.726		87.5	87.5		13C-PCB-79	6.43e+07	0.80 y	1.02	37:49	1.029	1.024-1.033		98.3	98.3
13C-PCB-4	3.38e+07	1.57 y	0.60	20:05	0.774	0.770-0.778		77.8	77.8		13C-PCB-178	2.65e+07	0.46 y	0.64	45:39	0.985	0.980-0.989		99.9	99.9
13C-PCB-9	5.52e+07	1.58 y	0.96	21:52	0.843	0.839-0.847		78.9	78.9											
13C-PCB-11	5.94e+07	1.57 y	0.95	25:15	0.973	0.968-0.978		85.4	85.4											
13C-PCB-19	4.02e+07	1.11 y	0.56	24:13	0.934	0.929-0.939		98.3	98.3											
13C-PCB-28	4.14e+07	1.05 y	1.07	29:05	1.003	0.999-1.009		75.3	75.3		13C-PCB-79	6.43e+07	0.80 y	1.02	37:49	0.969	0.963-0.973		103	103
13C-PCB-32	6.04e+07	1.09 y	0.83	27:08	1.046	1.041-1.051		100	100		13C-PCB-178	2.65e+07	0.46 y	0.84	45:39	0.925	0.920-0.930		101	101
13C-PCB-37	4.45e+07	1.06 y	0.96	32:58	1.137	1.131-1.143		90.0	90.0											
13C-PCB-47	4.21e+07	0.78 y	0.77	32:00	0.871	0.867-0.875		85.6	85.6											
13C-PCB-52	4.00e+07	0.79 y	0.71	31:31	0.857	0.853-0.861		87.7	87.7											
13C-PCB-54	5.24e+07	0.78 y	1.06	27:58	0.761	0.757-0.765		77.1	77.1											
13C-PCB-70	5.71e+07	0.80 y	0.99	35:32	0.966	0.961-0.971		89.7	89.7											
13C-PCB-77	6.05e+07	0.78 y	0.96	39:38	1.078	1.073-1.083		97.9	97.9											
13C-PCB-80	5.76e+07	0.80 y	1.02	35:57	0.978	0.973-0.983		88.0	88.0											
13C-PCB-81	6.09e+07	0.80 y	1.00	39:02	1.062	1.057-1.067		95.2	95.2											
13C-PCB-95	3.19e+07	1.61 y	0.70	35:49	0.913	0.908-0.918		93.1	93.1											
13C-PCB-97	3.16e+07	1.56 y	0.66	38:48	0.989	0.984-0.994		98.0	98.0											
13C-PCB-101	3.45e+07	1.59 y	0.77	37:31	0.956	0.951-0.961		91.8	91.8											
13C-PCB-104	3.97e+07	1.60 y	0.97	32:40	0.832	0.828-0.836		83.9	83.9		13C-PCB-15	7.28e+07	1.56 y	1.00	25:56			100		
13C-PCB-105	4.44e+07	1.59 y	1.20	43:04	0.929	0.924-0.934		88.9	88.9		13C-PCB-31	5.14e+07	1.04 y	1.00	28:60			100		
13C-PCB-114	4.43e+07	1.59 y	1.26	42:12	0.910	0.905-0.915		84.8	84.8		13C-PCB-60	6.41e+07	0.79 y	1.00	36:46			100		
13C-PCB-118	4.46e+07	1.61 y	0.94	41:33	1.059	1.054-1.064		97.2	97.2		13C-PCB-111	4.90e+07	1.60 y	1.00	39:14			100		
13C-PCB-123	4.40e+07	1.59 y	0.88	41:22	1.054	1.049-1.059		102	102		13C-PCB-128	4.16e+07	1.27 y	1.00	46:21			100		
13C-PCB-126	4.50e+07	1.55 y	1.13	45:18	0.977	0.972-0.982		96.0	96.0		13C-PCB-205	4.02e+07	0.93 y	1.00	54:12			100		
13C-PCB-127	4.82e+07	1.62 y	1.26	43:24	0.936	0.931-0.941		92.1	92.1											
13C-PCB-138	4.33e+07	1.30 y	1.12	44:48	0.966	0.961-0.971		93.1	93.1											
13C-PCB-141	4.19e+07	1.25 y	1.09	43:57	0.948	0.943-0.953		92.2	92.2											
13C-PCB-153	4.76e+07	1.30 y	1.27	43:13	0.932	0.927-0.937		89.9	89.9											
13C-PCB-155	3.48e+07	1.28 y	0.87	37:03	0.944	0.939-0.949		81.6	81.6											
13C-PCB-156	5.51e+07	1.31 y	1.35	48:03	1.037	1.032-1.042		98.1	98.1											
13C-PCB-157	5.68e+07	1.33 y	1.42	48:20	1.043	1.037-1.047		96.3	96.3											
13C-PCB-159	5.40e+07	1.26 y	1.37	46:05	0.994	0.989-0.999		94.8	94.8											
13C-PCB-167	5.46e+07	1.25 y	1.38	46:46	1.009	1.004-1.014		95.1	95.1											
13C-PCB-169	5.76e+07	1.30 y	1.38	50:30	1.089	1.084-1.094		100	100											
13C-PCB-170	2.54e+07	0.47 y	0.60	50:52	1.097	1.091-1.103		101	101											
13C-PCB-180	3.11e+07	0.46 y	0.76	49:21	1.065	1.059-1.069		98.8	98.8											
13C-PCB-188	3.50e+07	0.46 y	1.01	42:51	0.924	0.919-0.929		82.9	82.9											
13C-PCB-189	3.37e+07	0.45 y	0.80	52:24	1.130	1.124-1.136		101	101											
13C-PCB-194	2.99e+07	0.89 y	0.75	53:55	0.995	0.990-1.000		99.8	99.8											
13C-PCB-202	3.57e+07	0.95 y	0.99	48:16	1.041	1.036-1.046		86.8	86.8											
13C-PCB-206	3.14e+07	0.77 y	0.73	55:33	1.025	1.020-1.301		107	107											
13C-PCB-208	4.24e+07	0.78 y	1.08	53:12	0.981	0.977-0.987		97.3	97.3											
13C-PCB-209	3.26e+07	1.16 y	0.71	56:55	1.050	1.045-1.055		114	114											

Analyst Dms

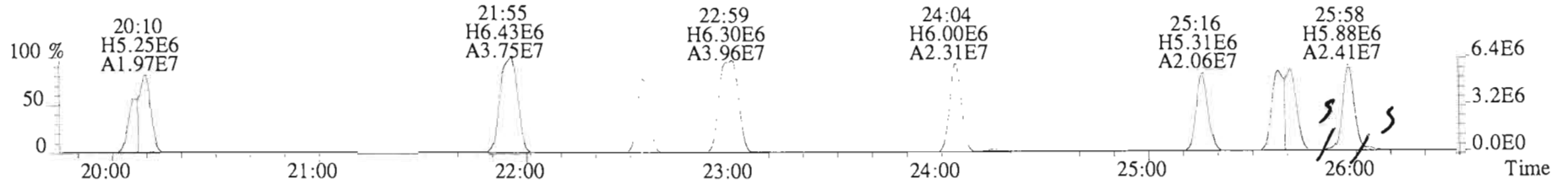
Date: 1/29/15

File:150127E1 #1-729 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
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188.0393 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2608.0,0.00%,F,F)

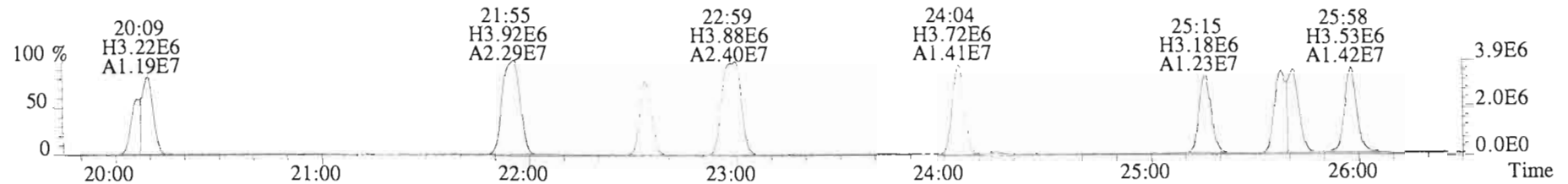




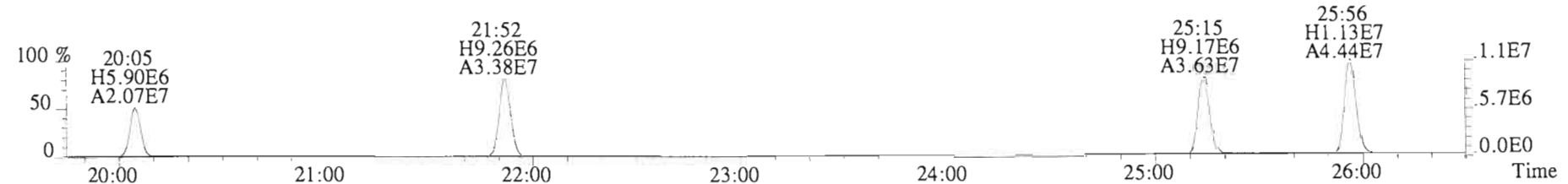
File:150127E1 #1-757 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
 222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3824.0,0.00%,F,F)



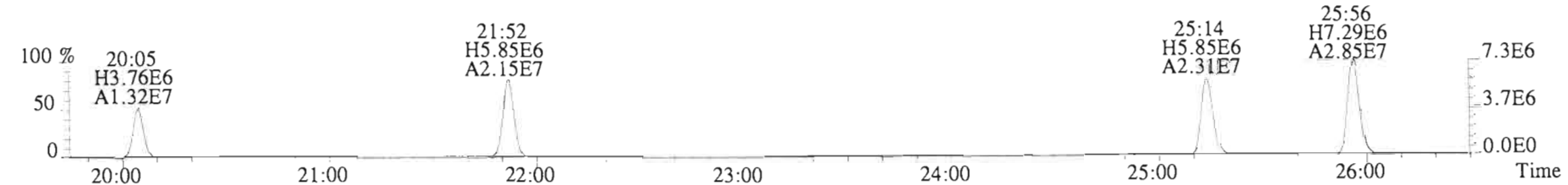
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,29916.0,0.00%,F,F)



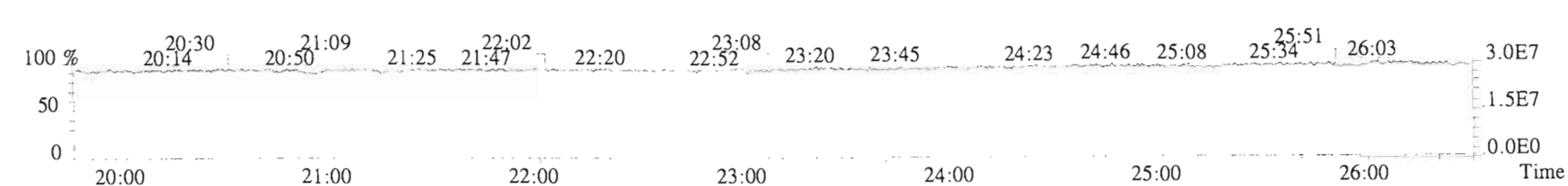
234.0406 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3120.0,0.00%,F,F)



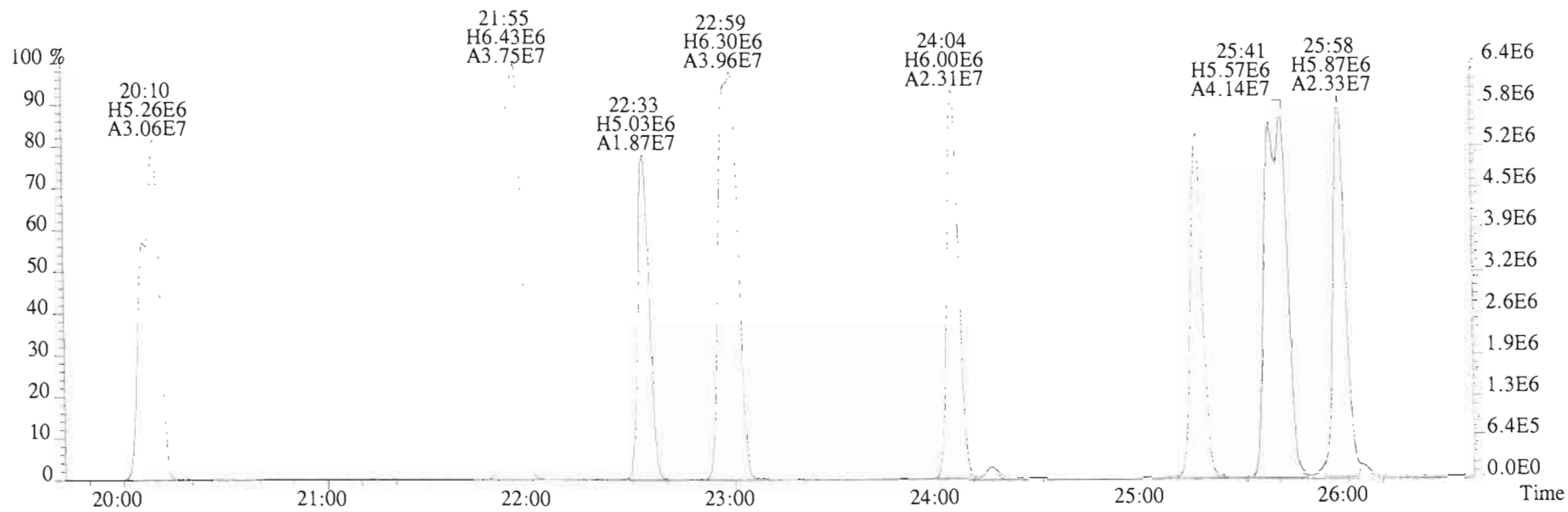
236.0376 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3820.0,0.00%,F,F)



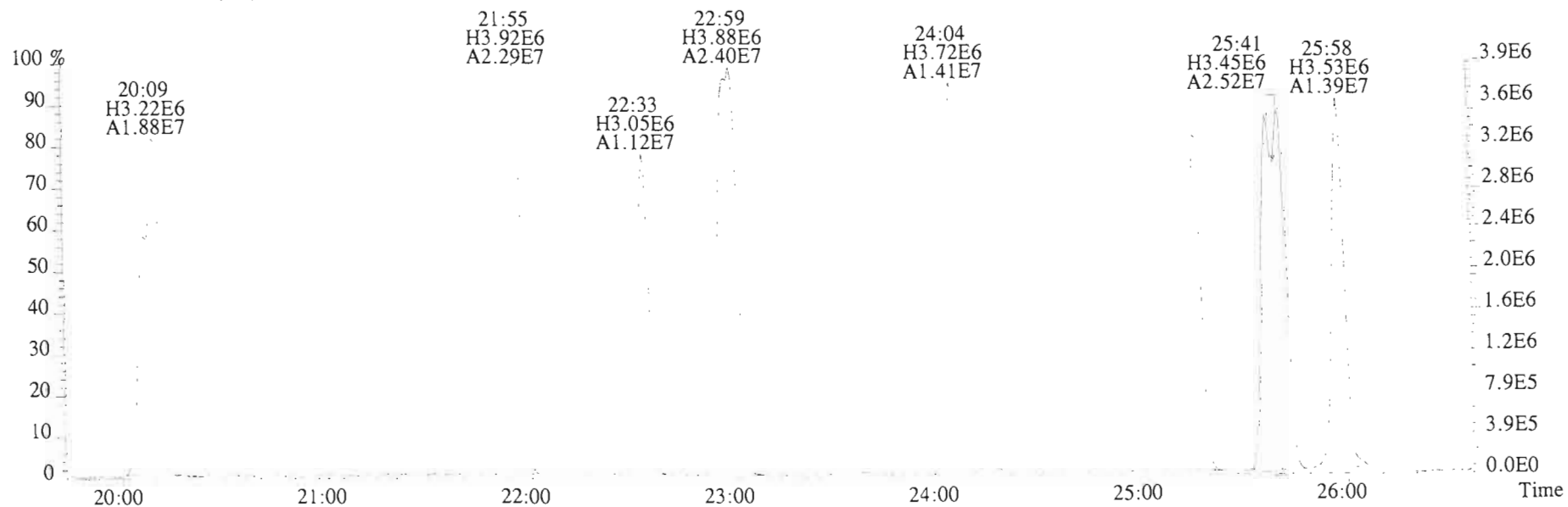
230.9856 S:2 F:2



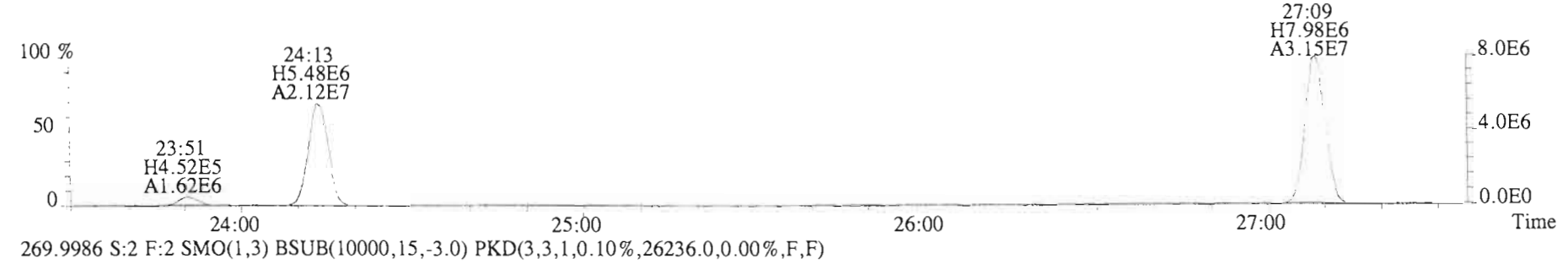
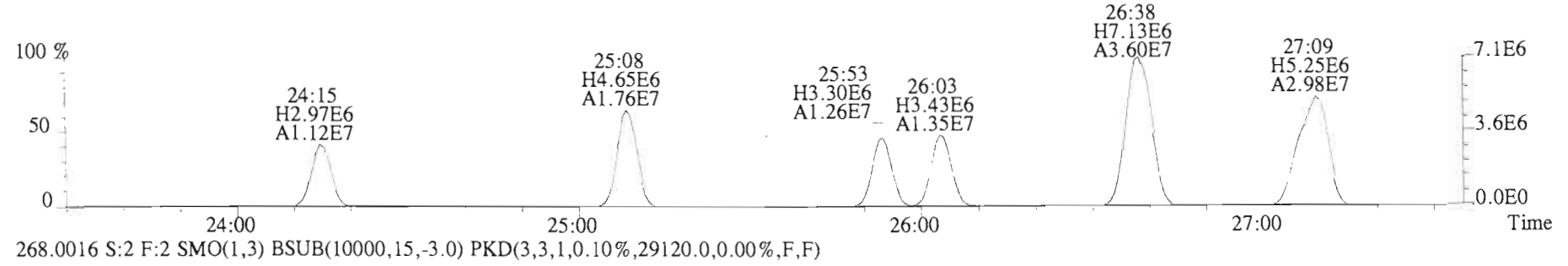
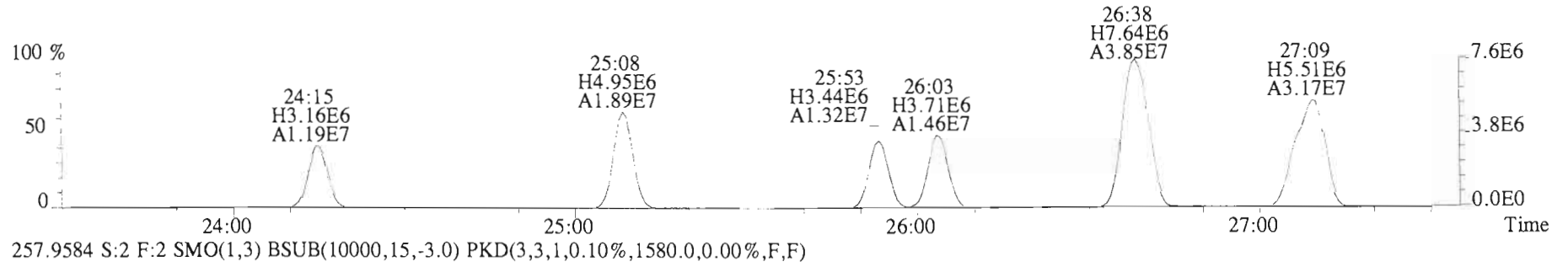
File:150127E1 #1-757 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
 222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3824.0,0.00%,F,F)



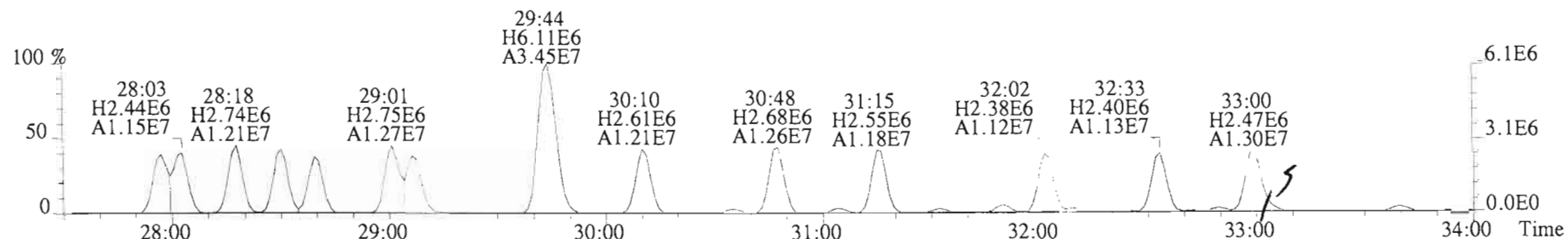
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,29916.0,0.00%,F,F)



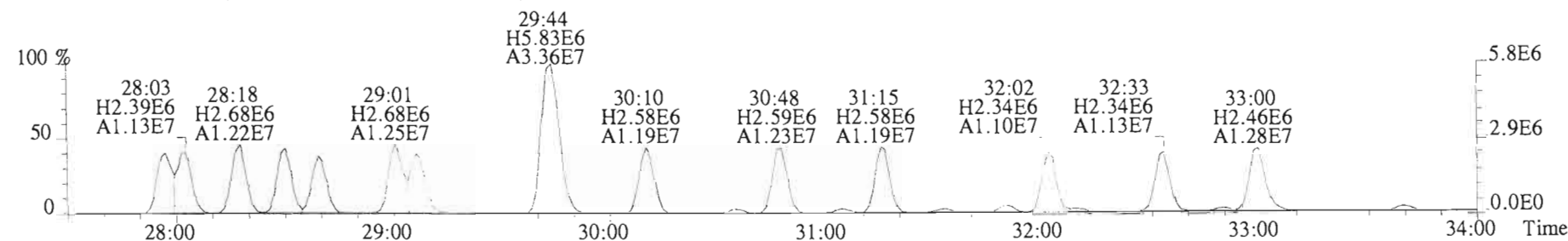
File:150127E1 #1-757 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
255.9613 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3348.0,0.00%,F,F)



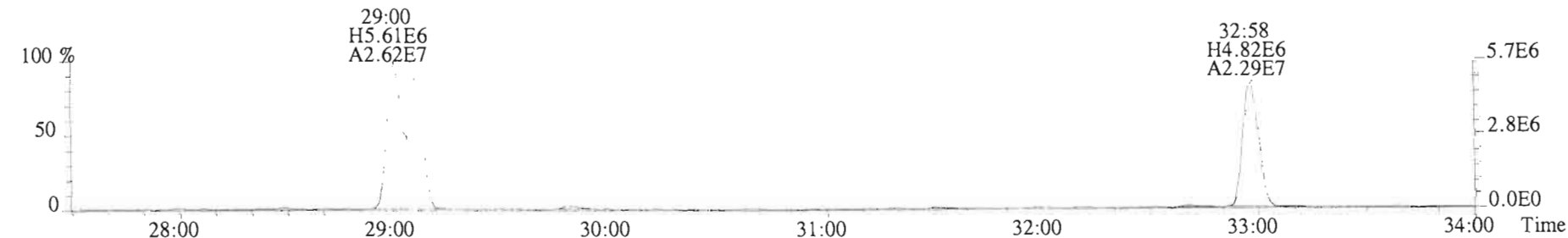
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4288.0,0.00%,F,F)



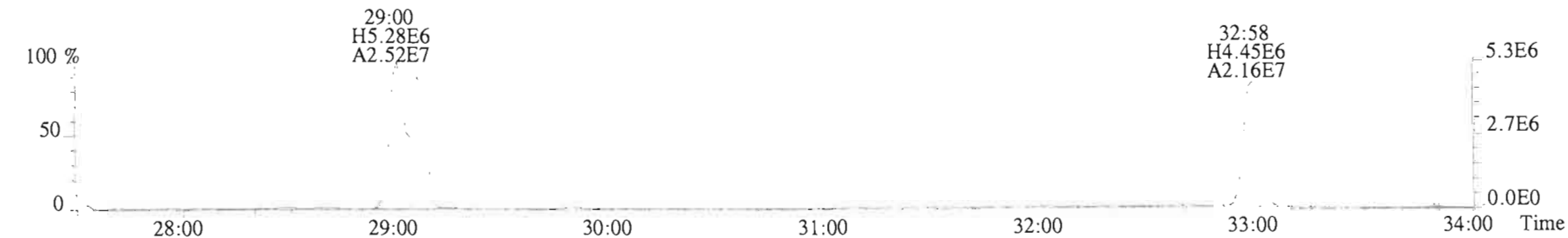
257.9584 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3868.0,0.00%,F,F)



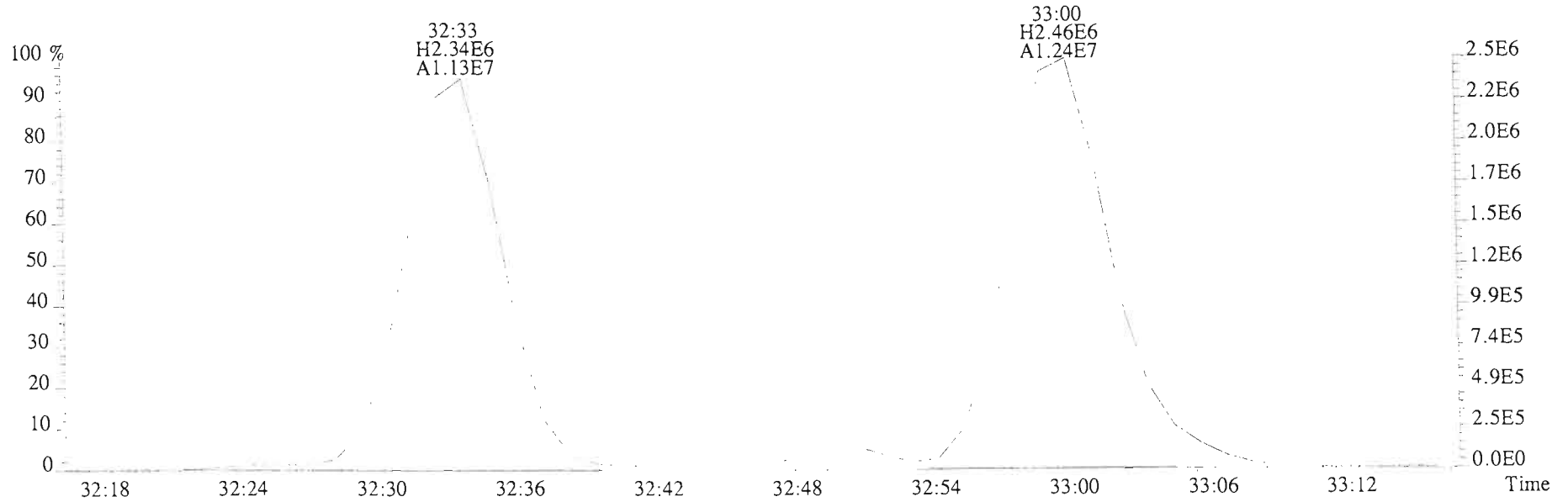
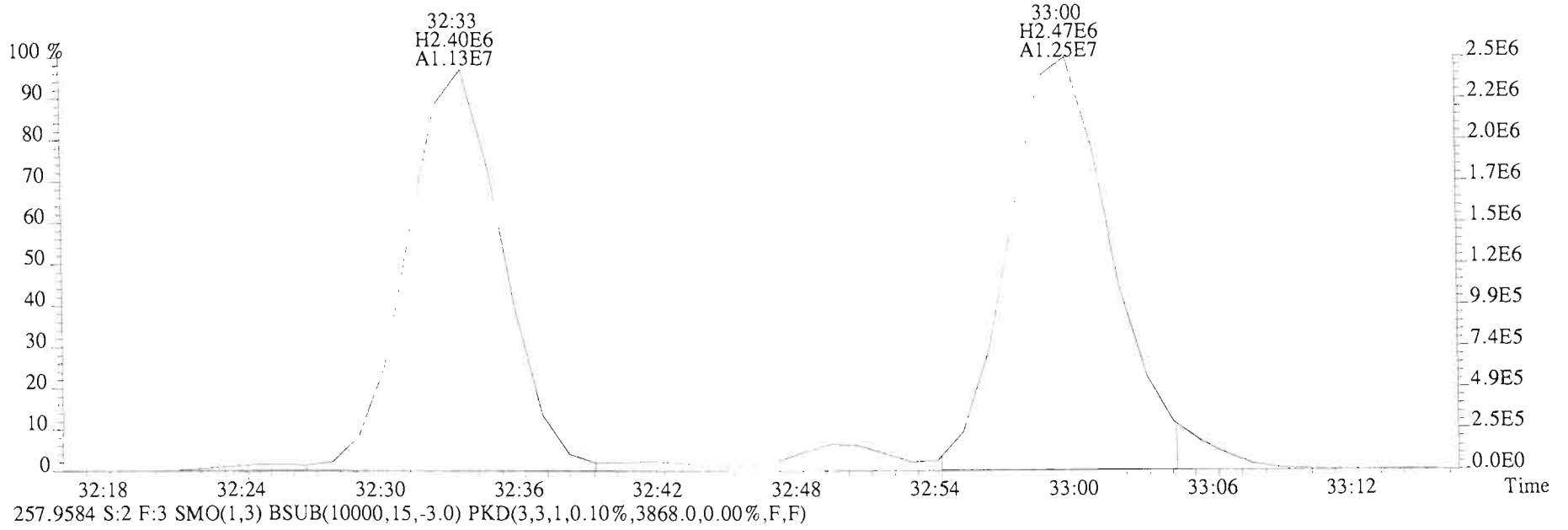
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,34820.0,0.00%,F,F)



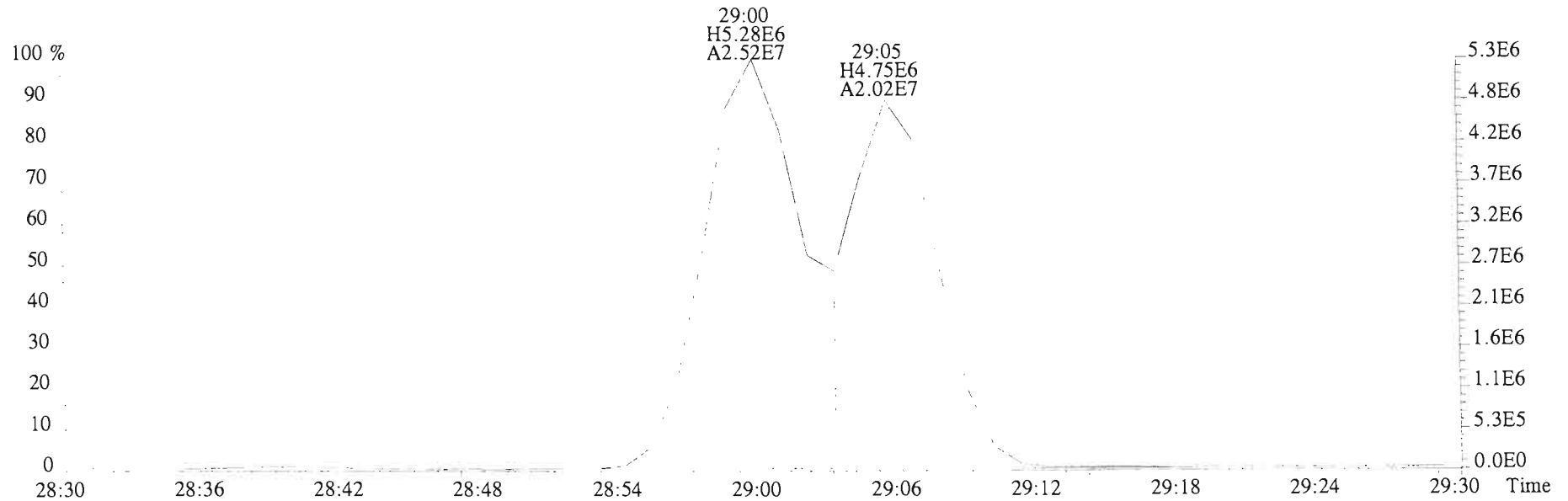
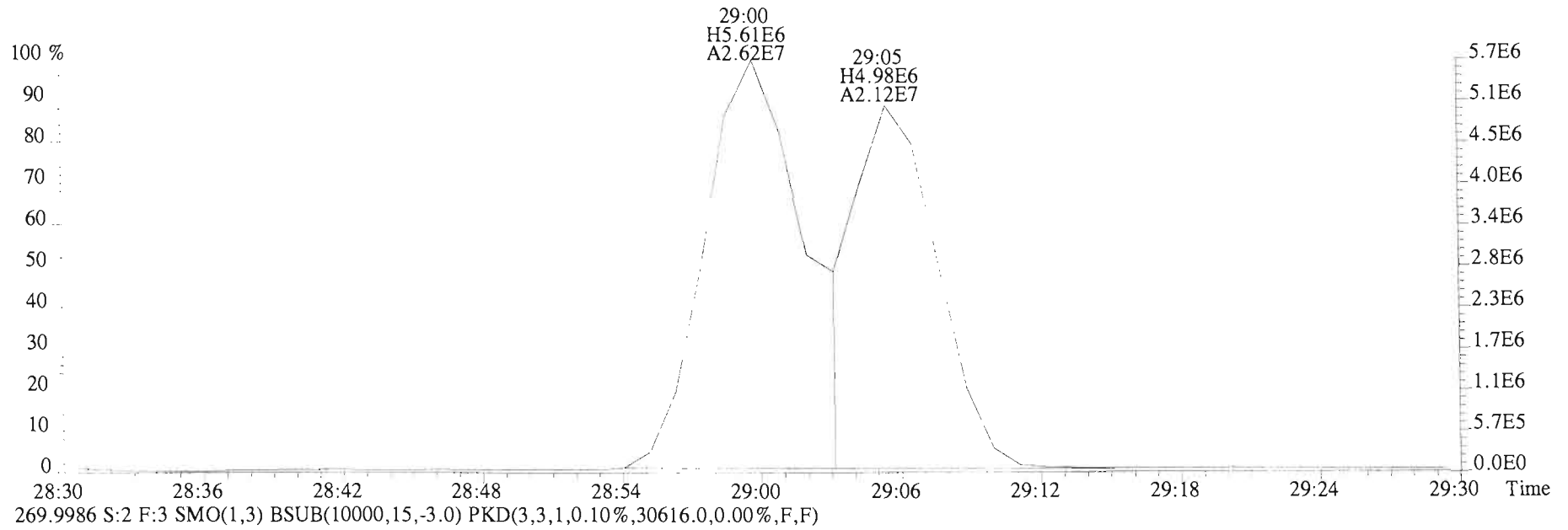
269.9986 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,30616.0,0.00%,F,F)



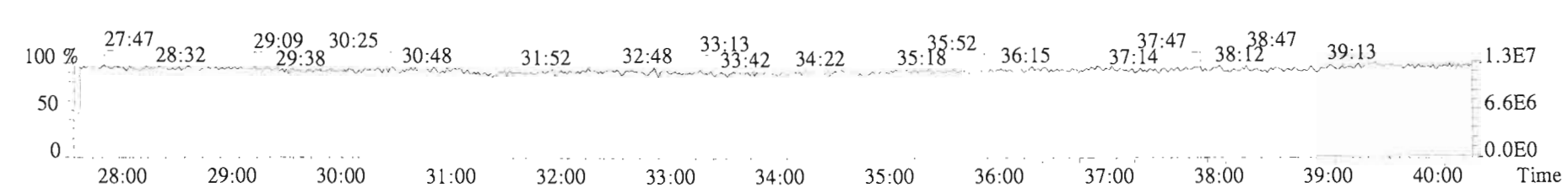
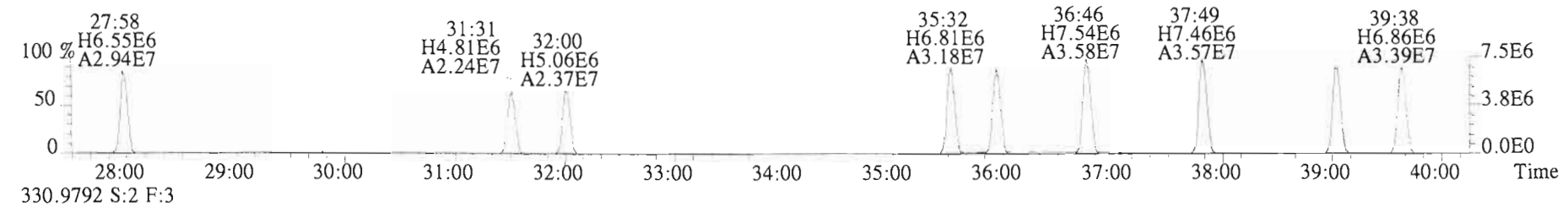
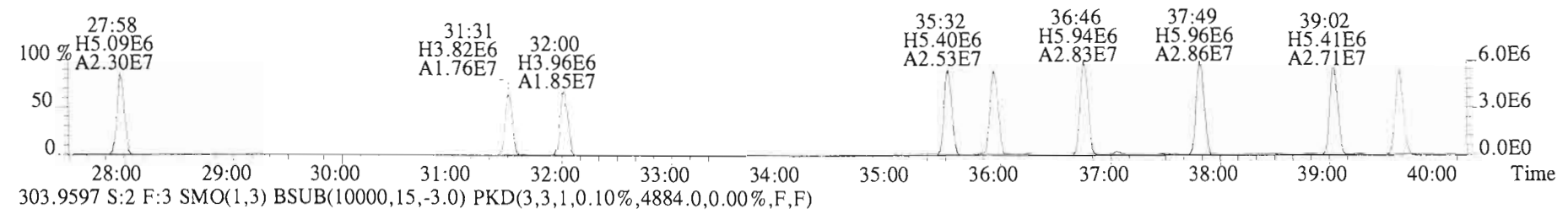
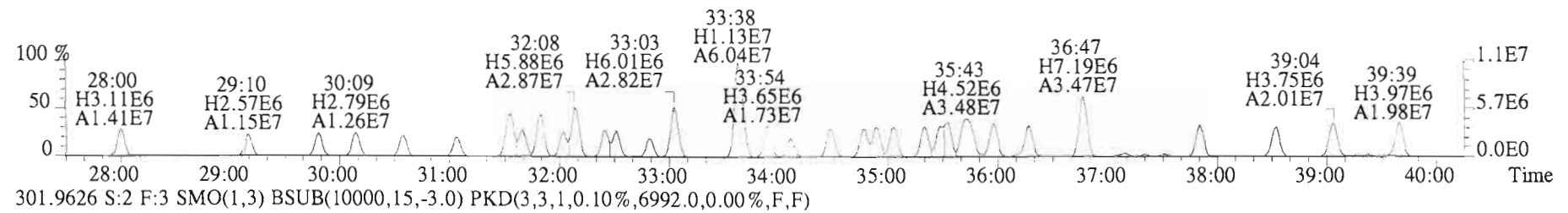
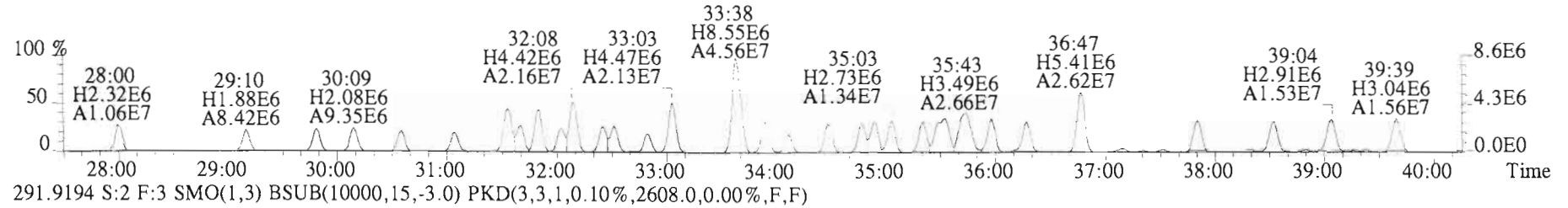
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4288.0,0.00%,F,F)



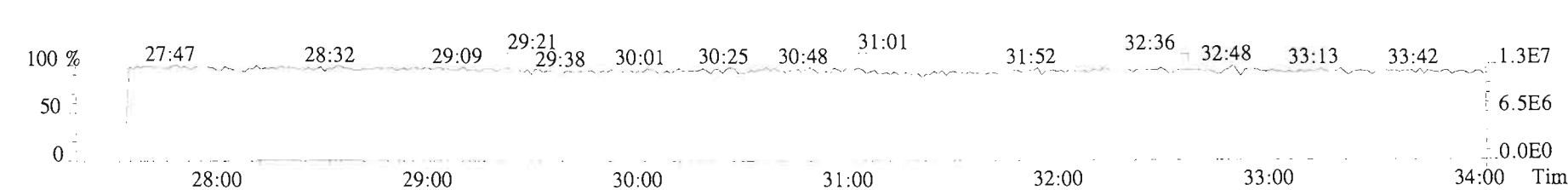
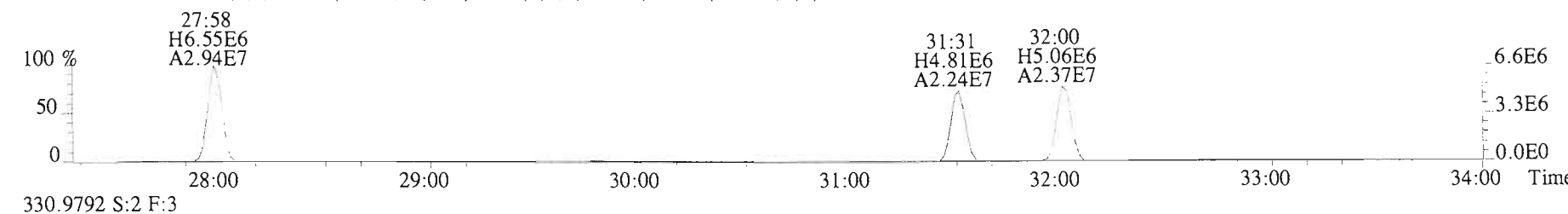
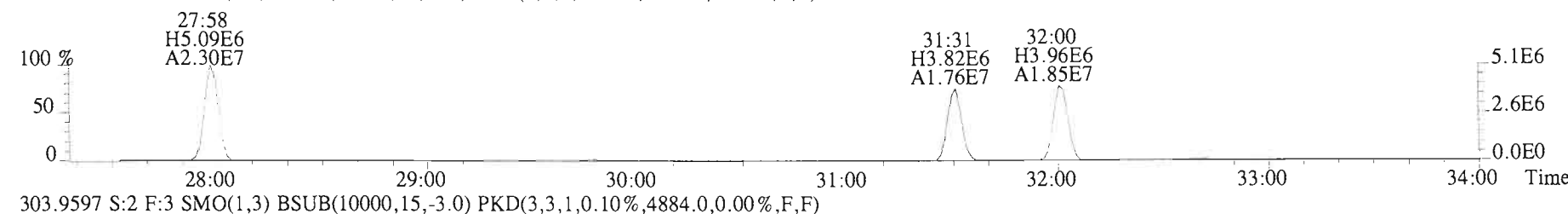
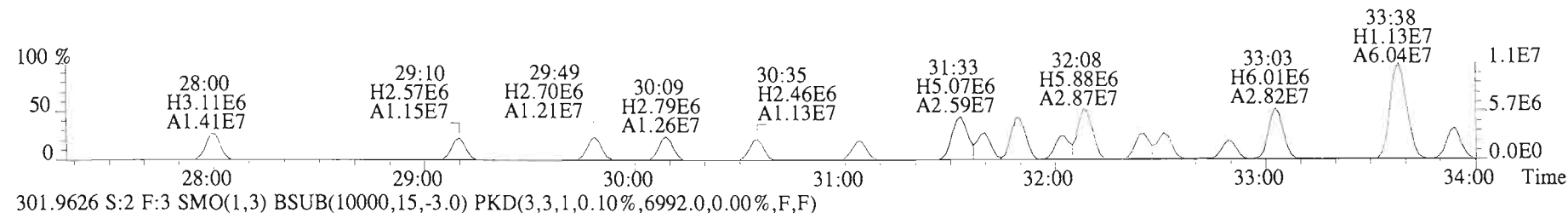
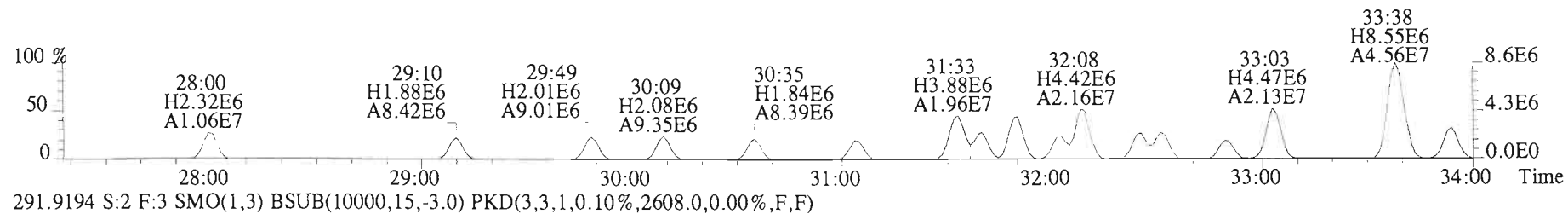
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,34820.0,0.00%,F,F)



File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
 289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2500.0,0.00%,F,F)

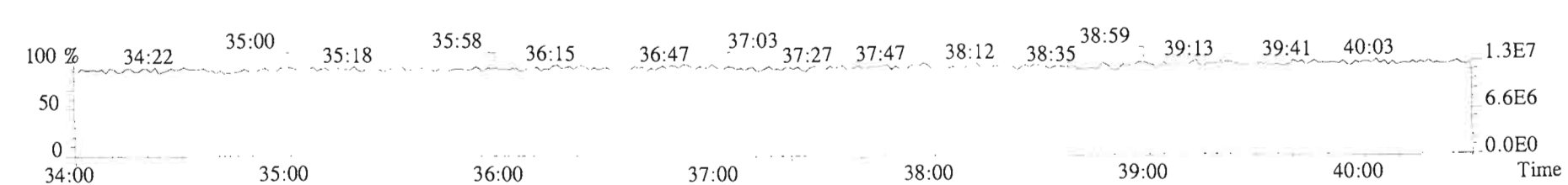
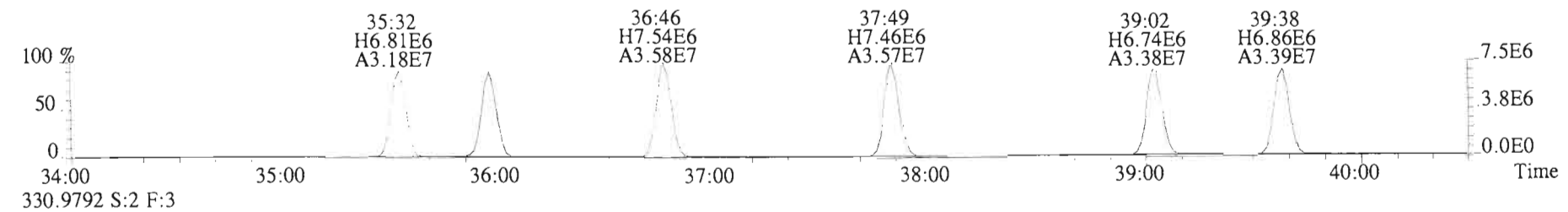
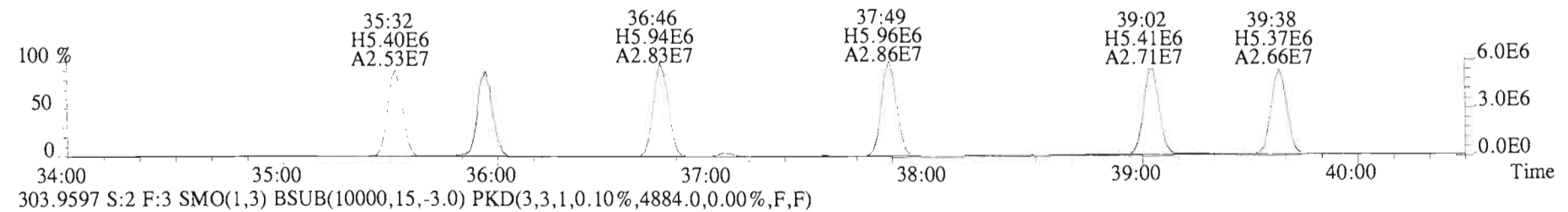
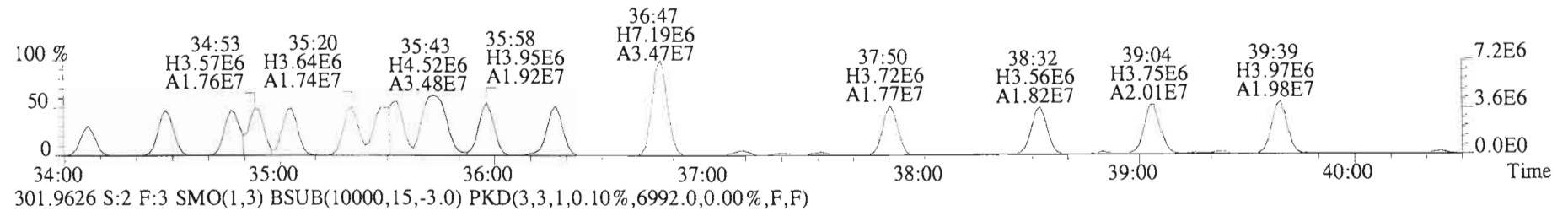
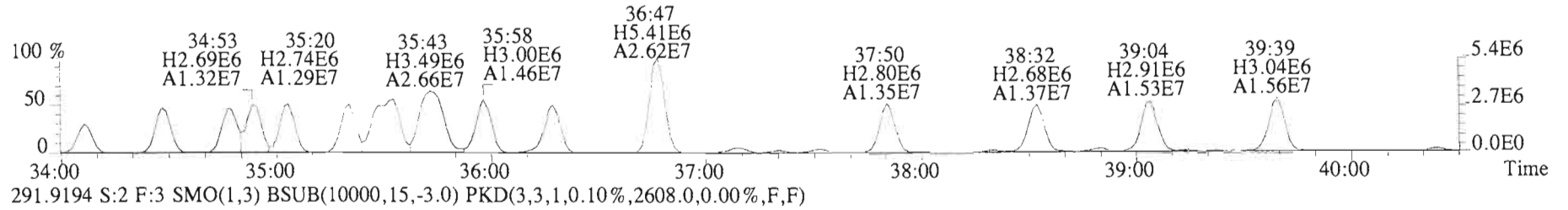


File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2500.0,0.00%,F,F)

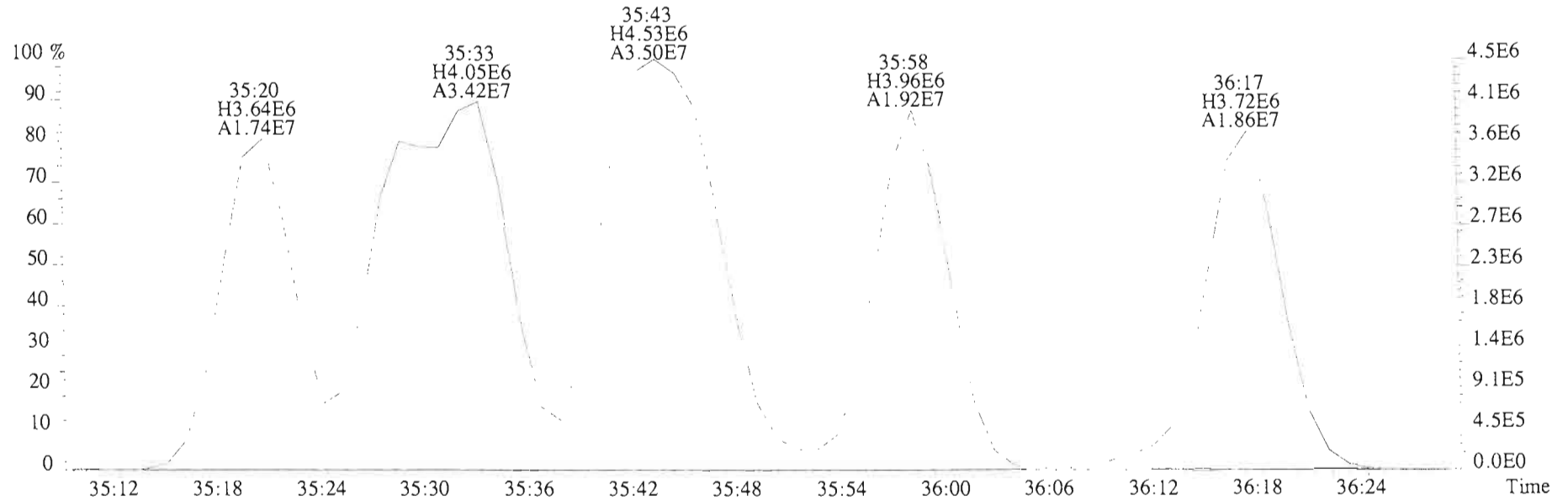
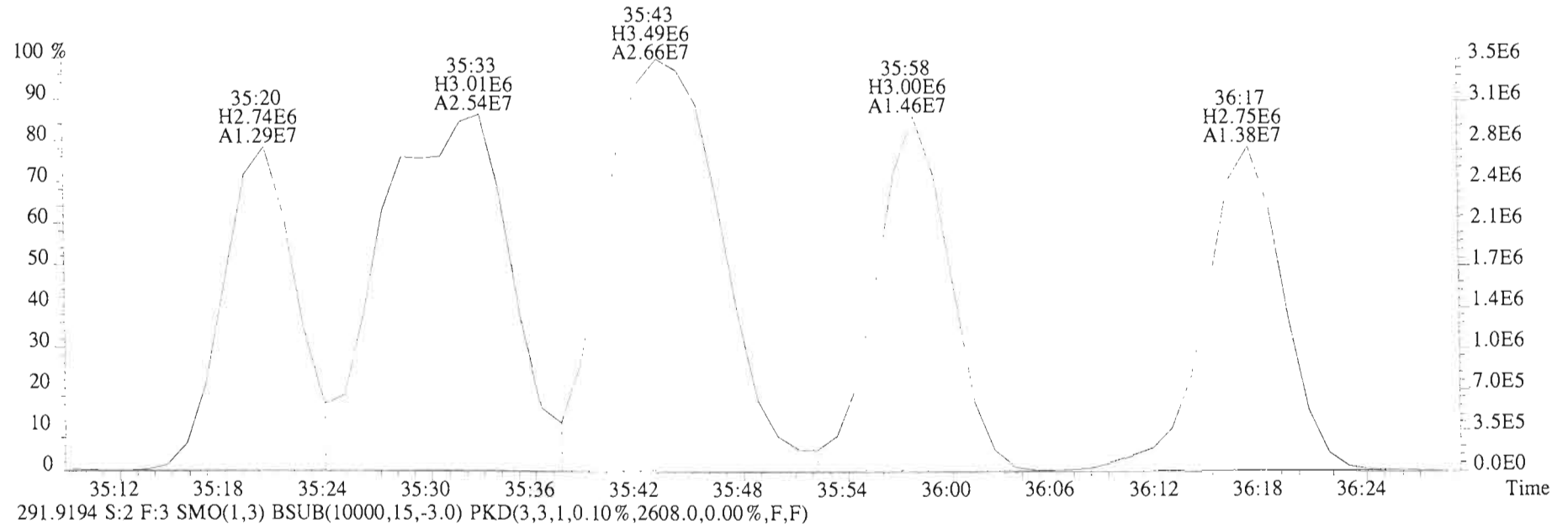




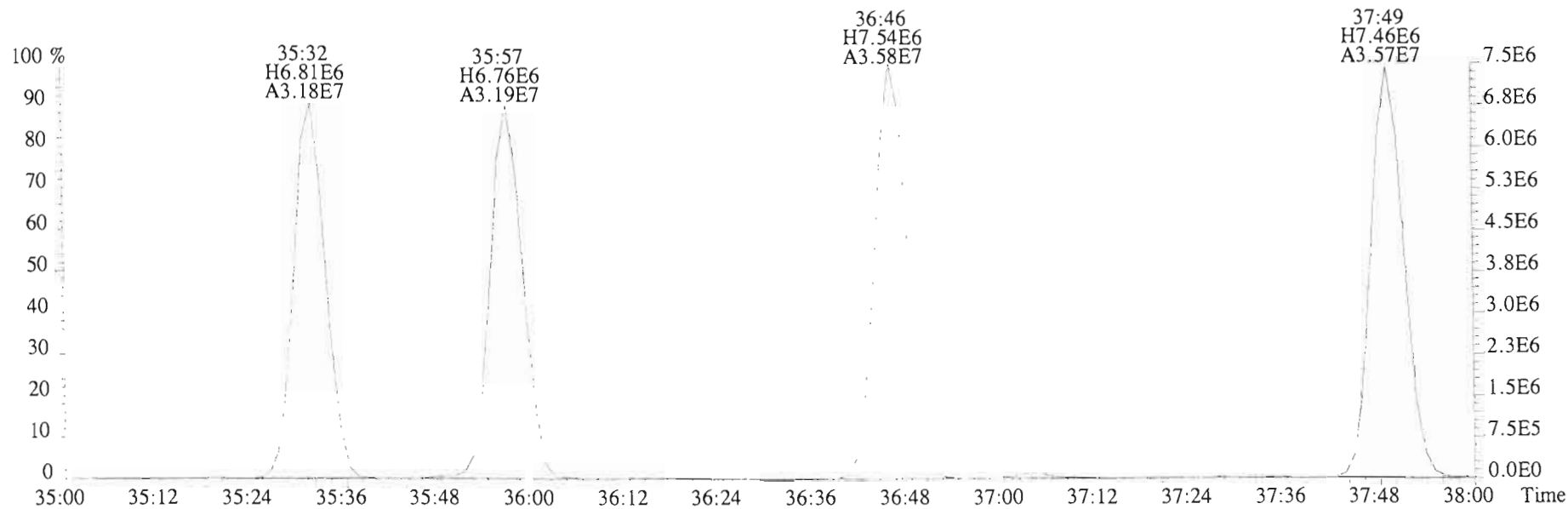
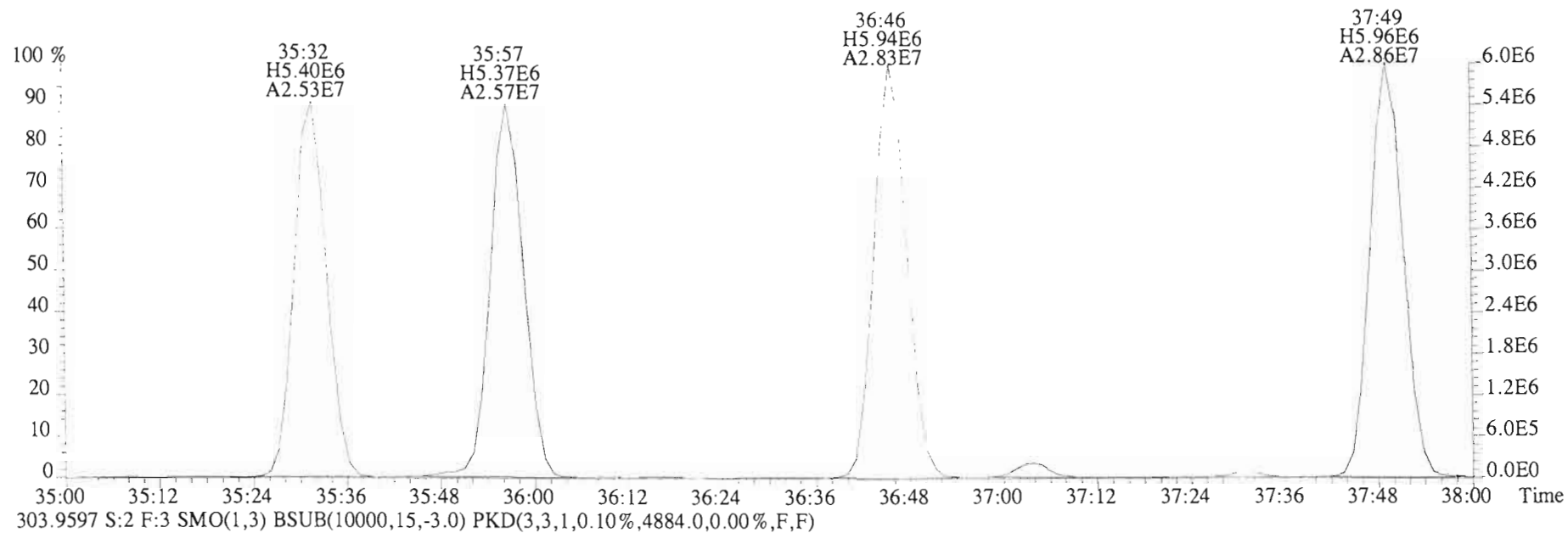
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2500.0,0.00%,F,F)



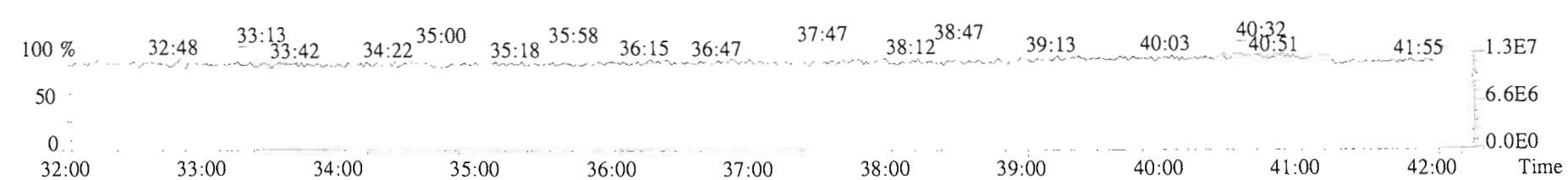
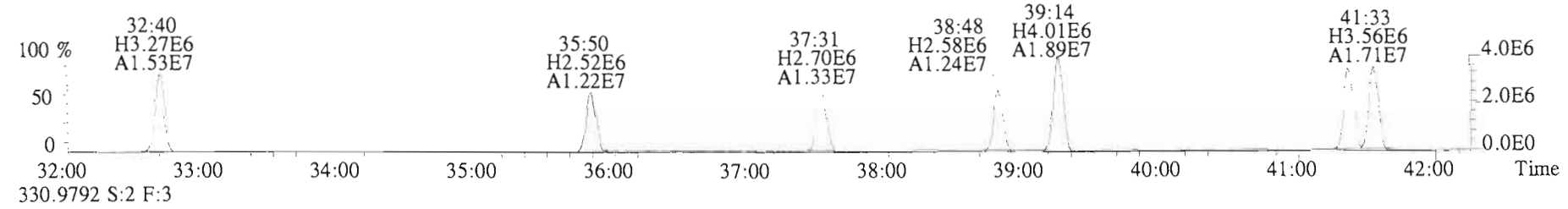
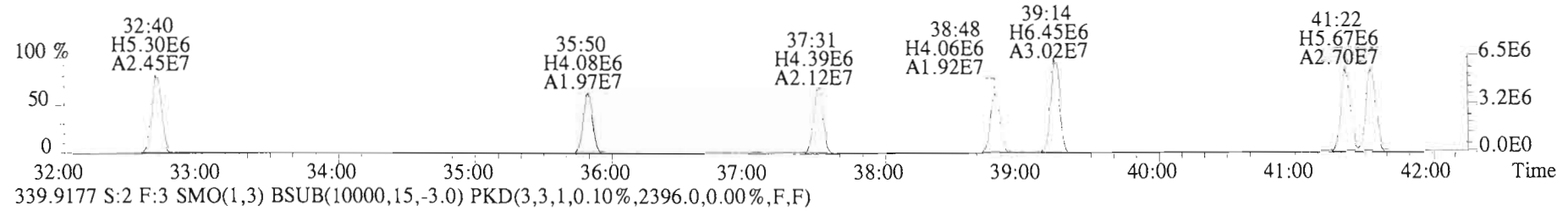
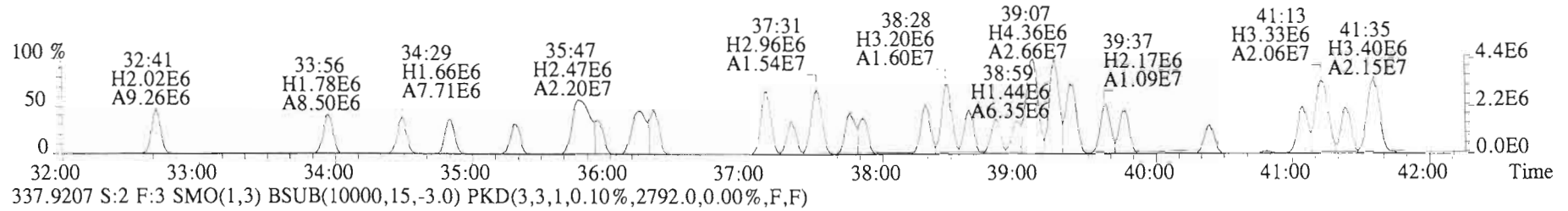
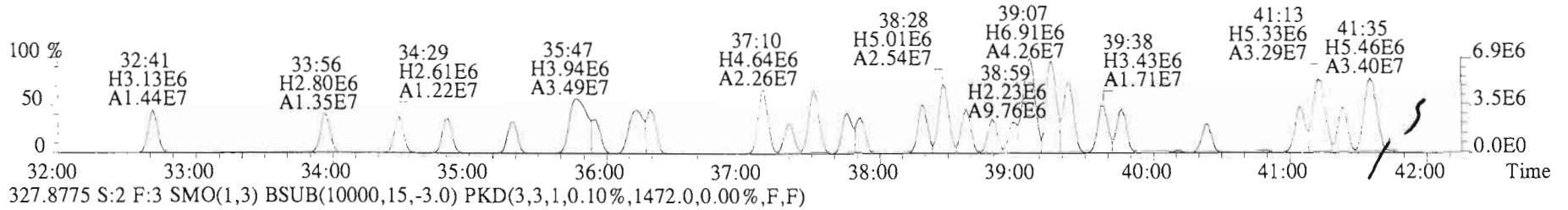
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
 289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2500.0,0.00%,F,F)



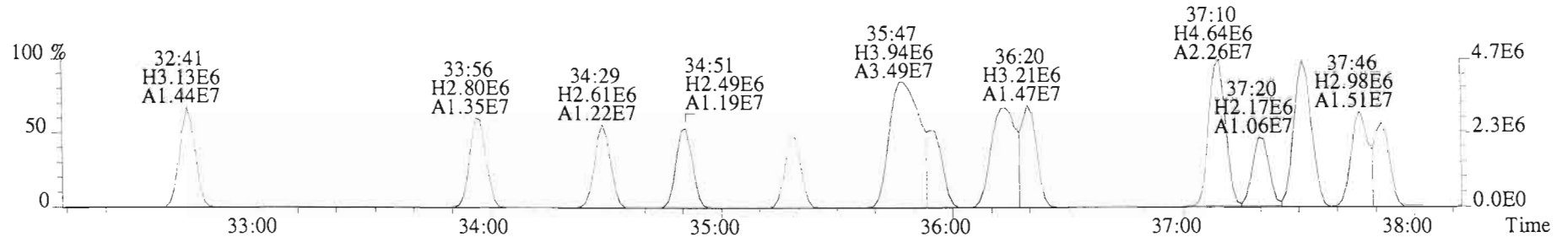
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6992.0,0.00%,F,F)



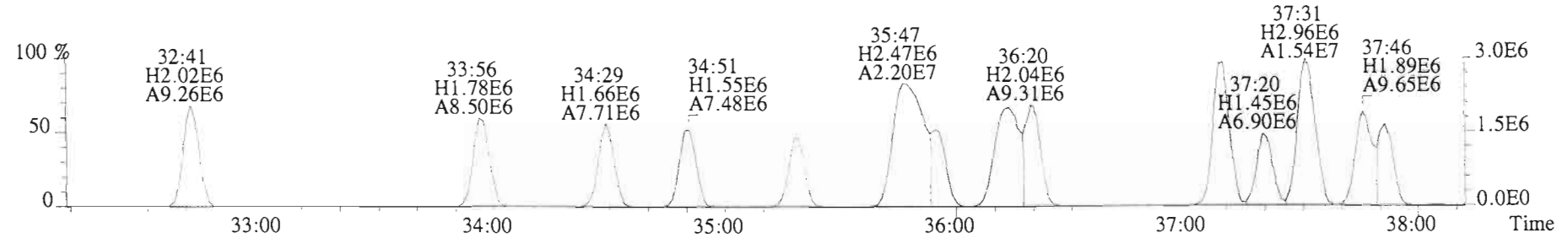
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1212.0,0.00%,F,F)



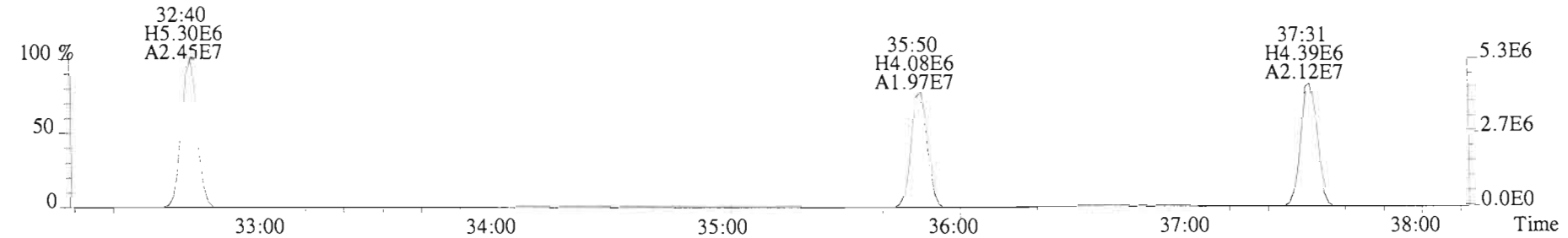
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1212.0,0.00%,F,F)



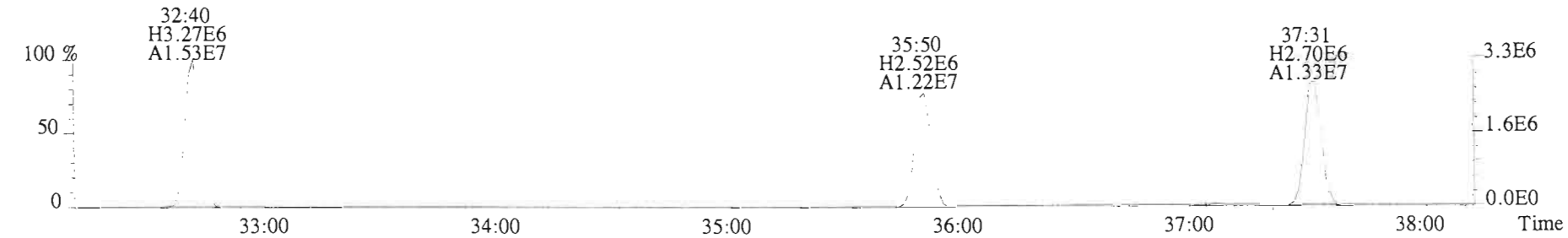
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1472.0,0.00%,F,F)



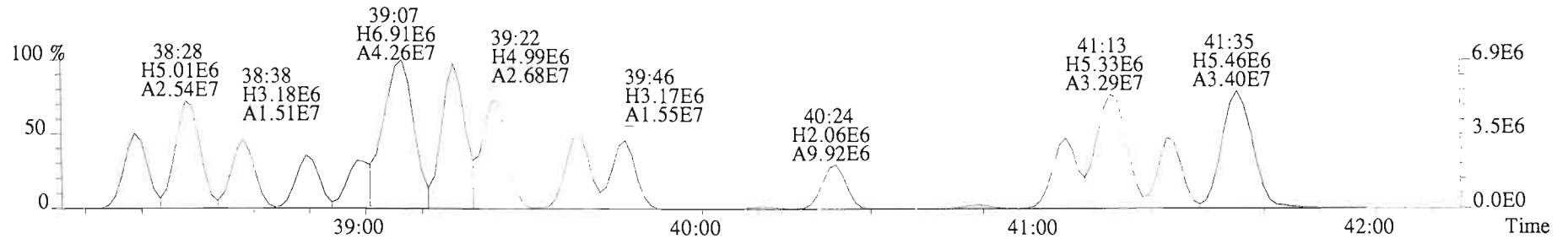
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2792.0,0.00%,F,F)



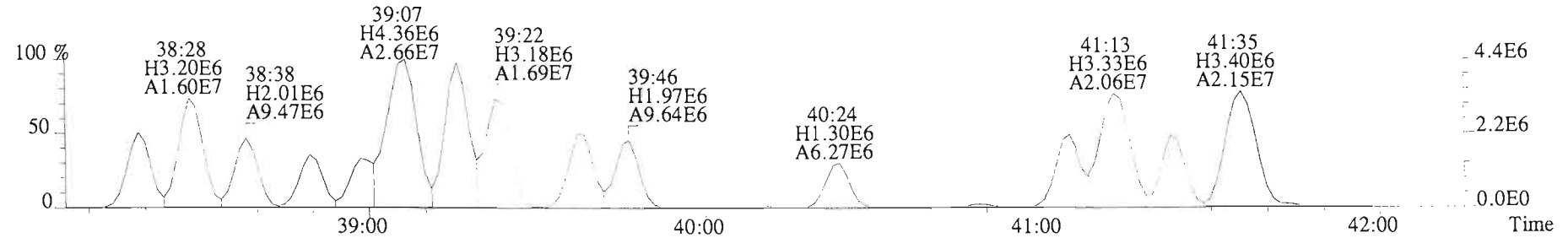
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2396.0,0.00%,F,F)



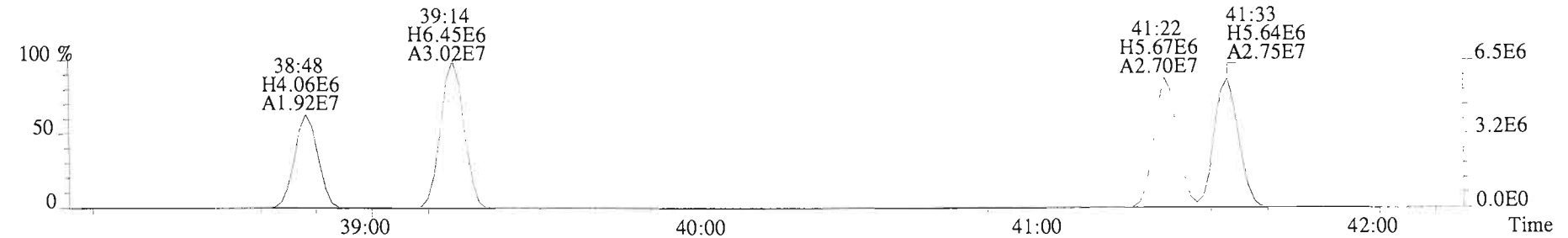
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
 325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1212.0,0.00%,F,F)



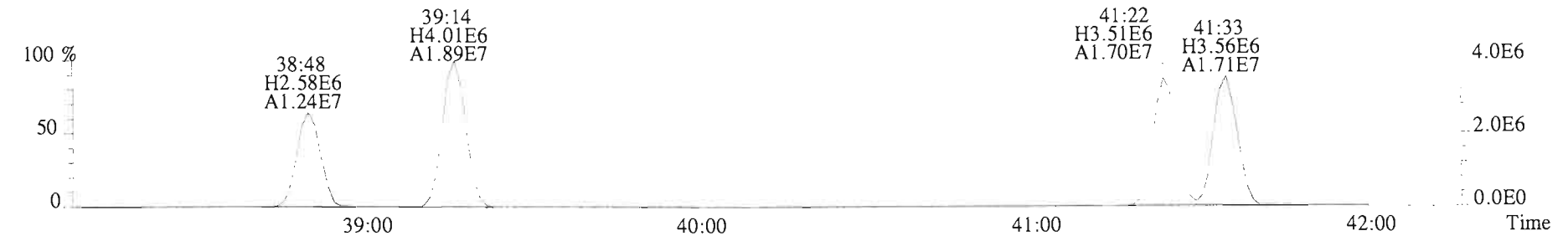
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1472.0,0.00%,F,F)



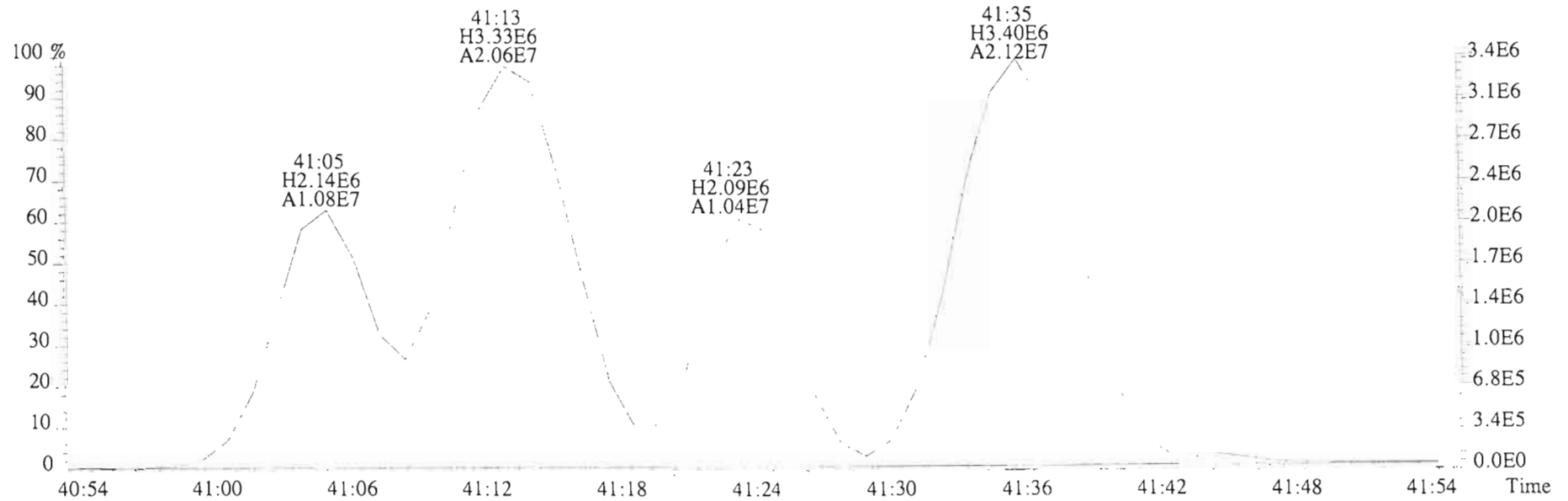
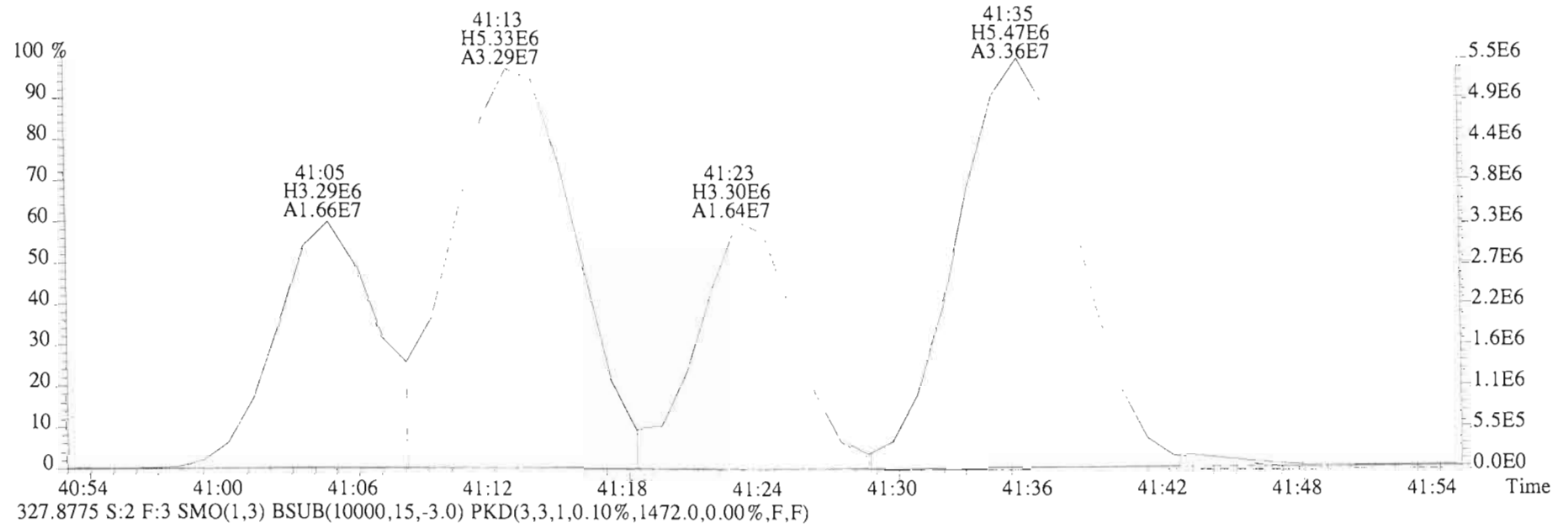
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2792.0,0.00%,F,F)



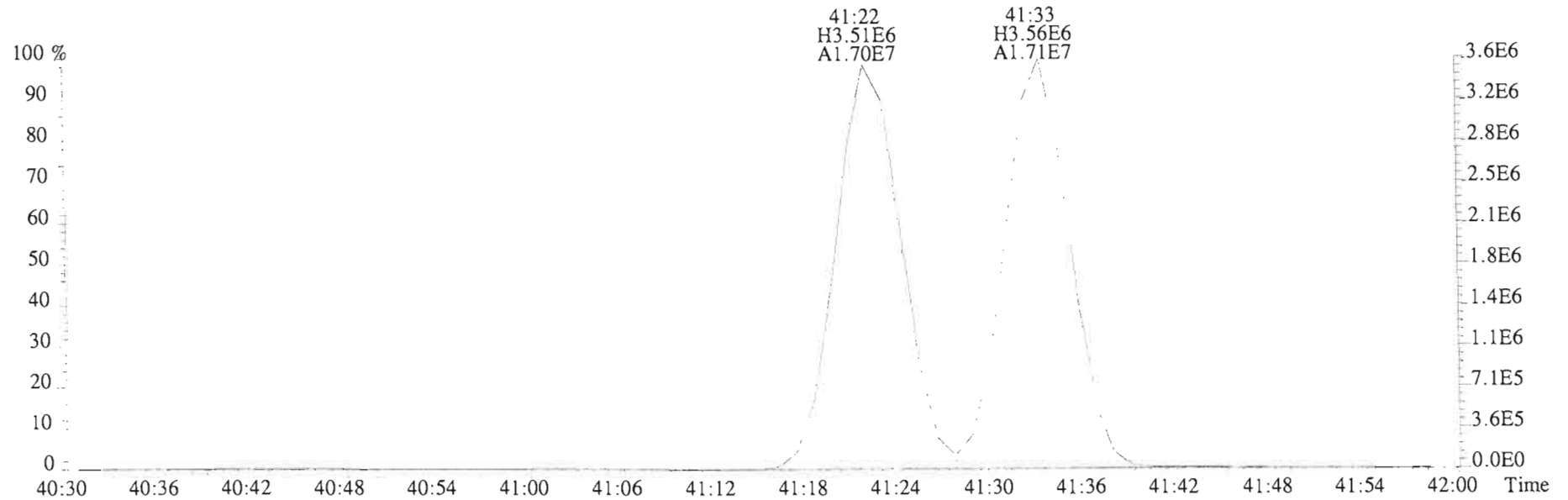
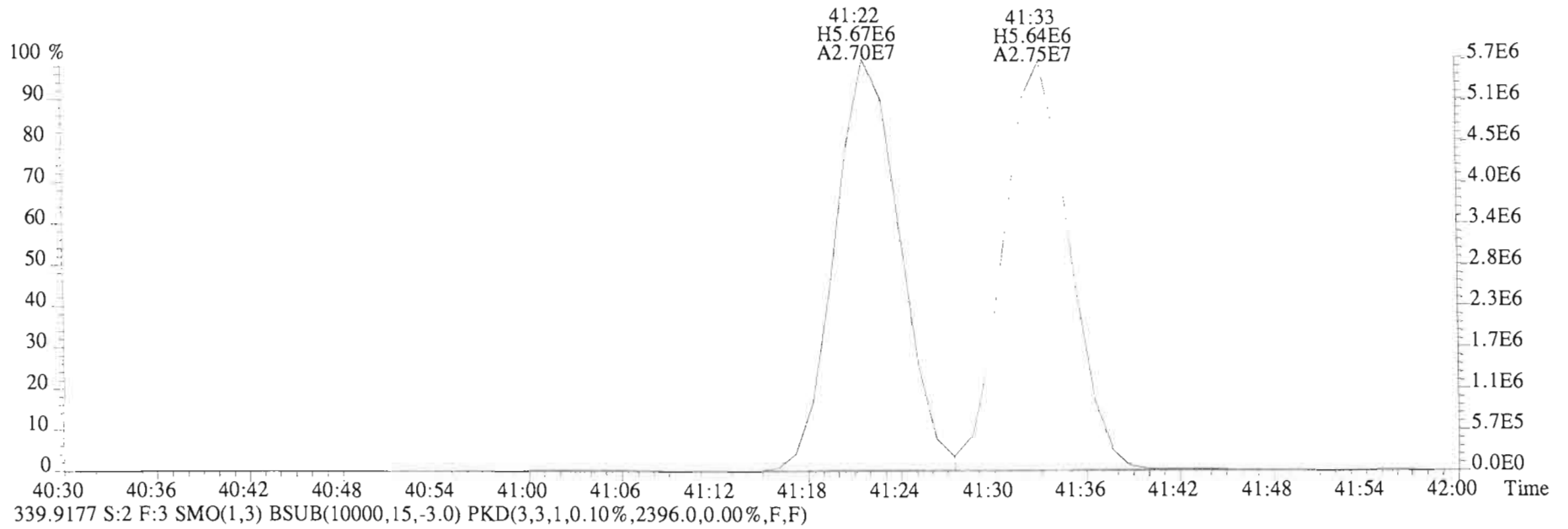
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2396.0,0.00%,F,F)



File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1212.0,0.00%,F,F)

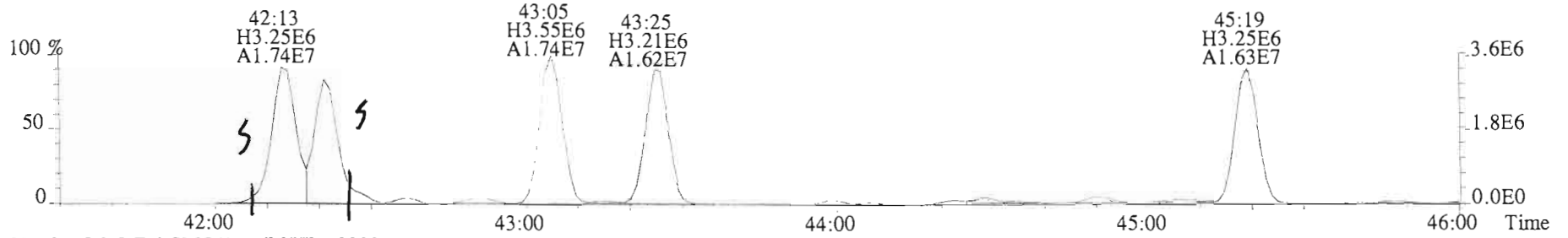


File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2792.0,0.00%,F,F)

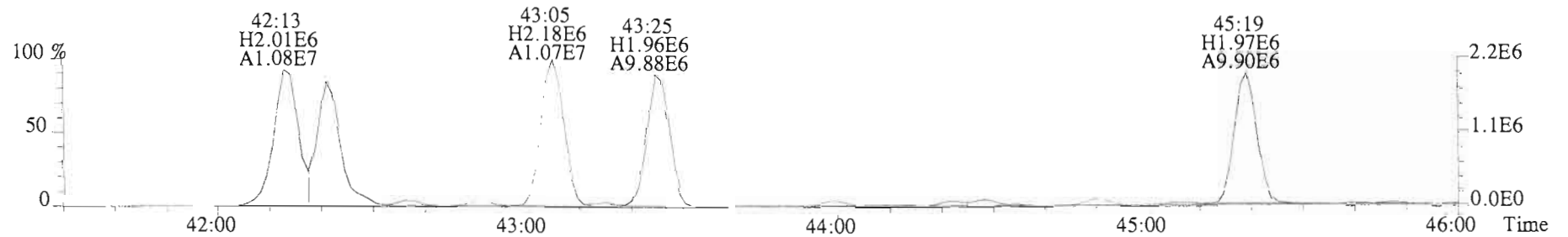




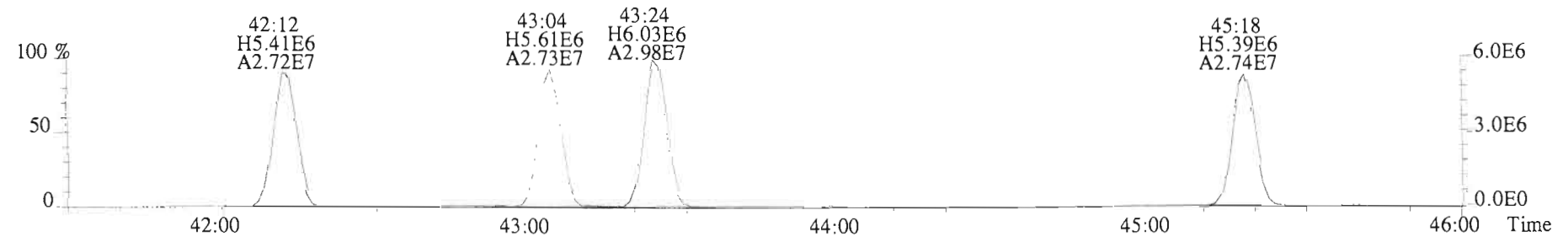
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC E1+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4264.0,0.00%,F,F)



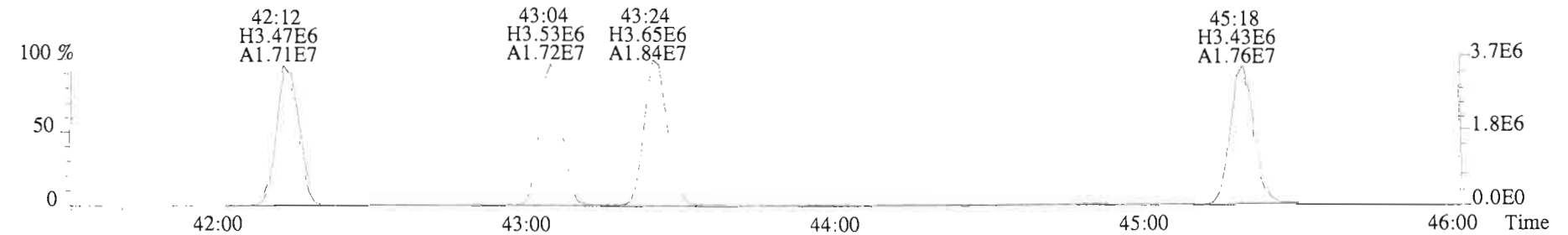
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3328.0,0.00%,F,F)



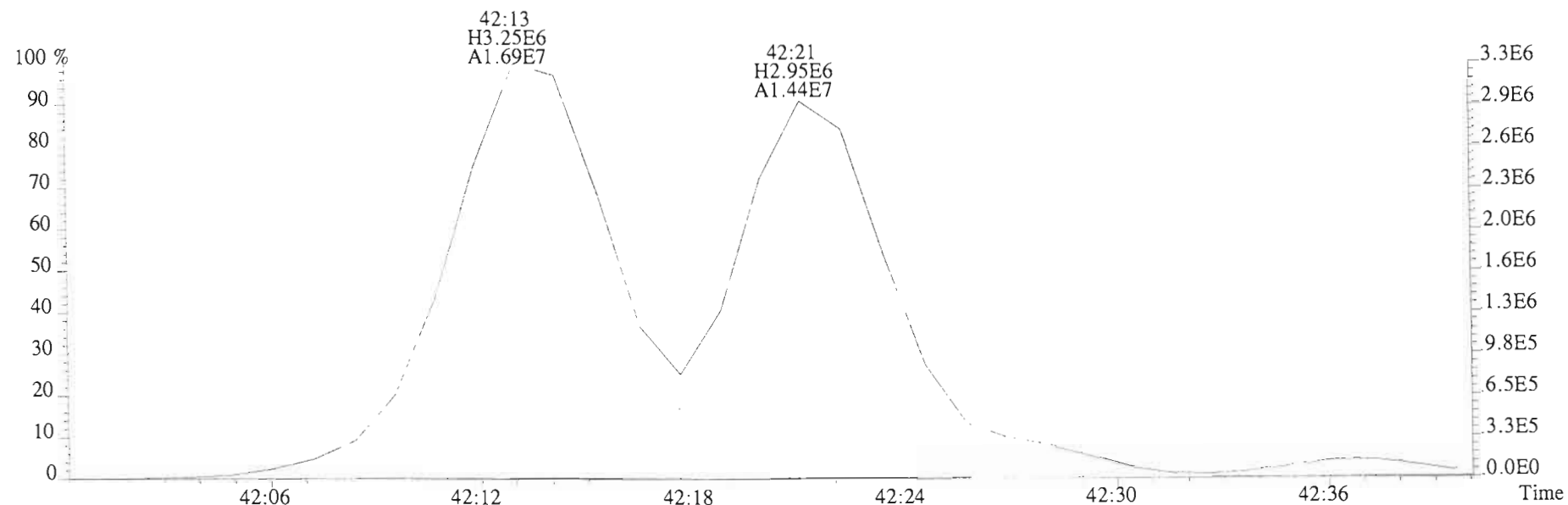
337.9207 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4020.0,0.00%,F,F)



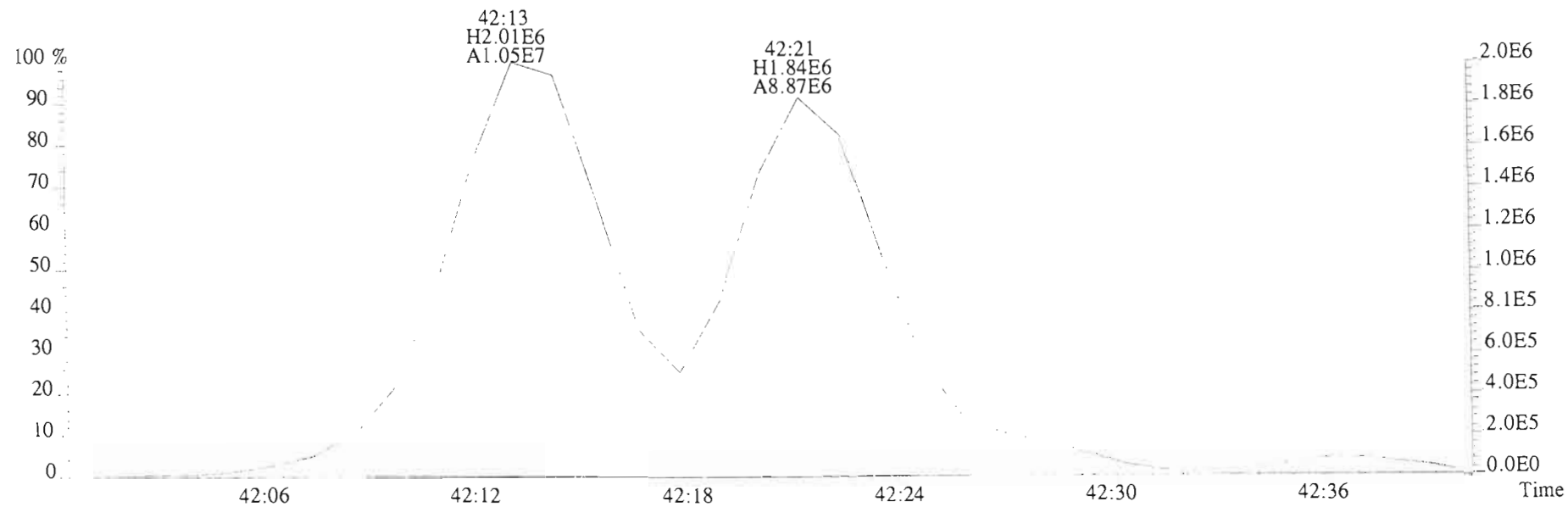
339.9177 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3612.0,0.00%,F,F)



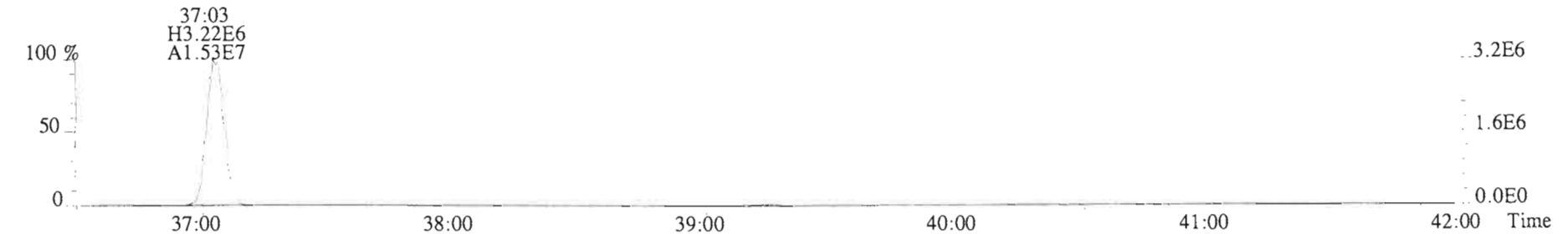
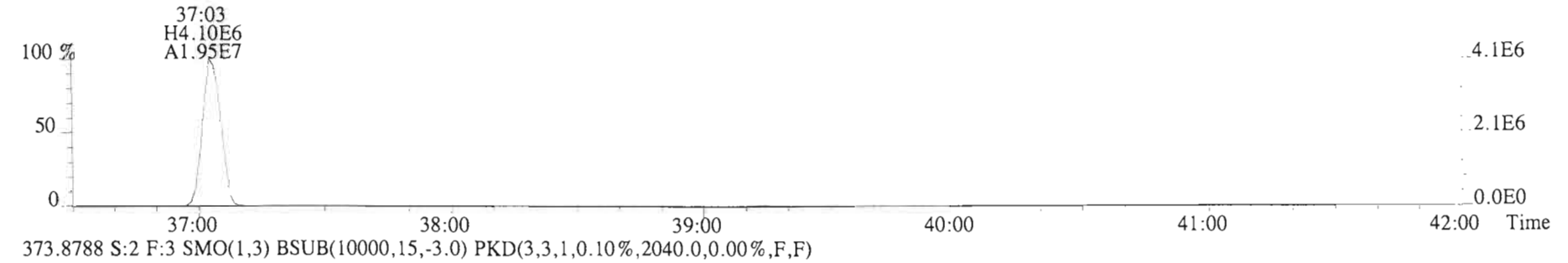
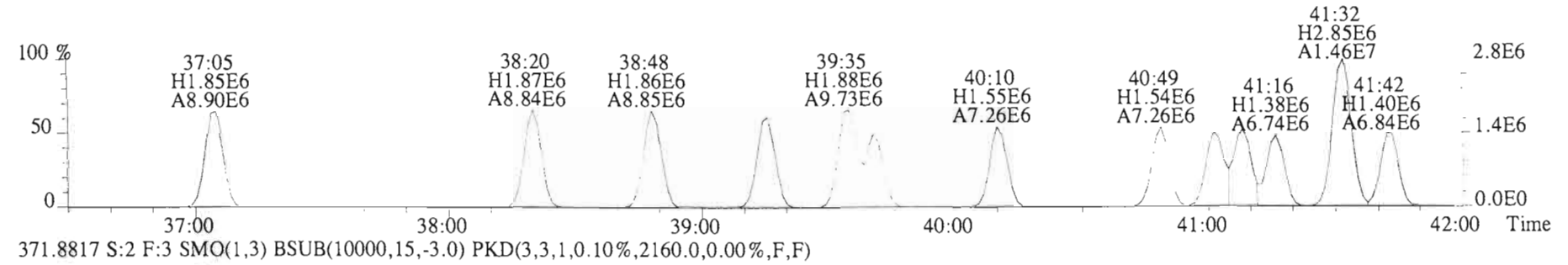
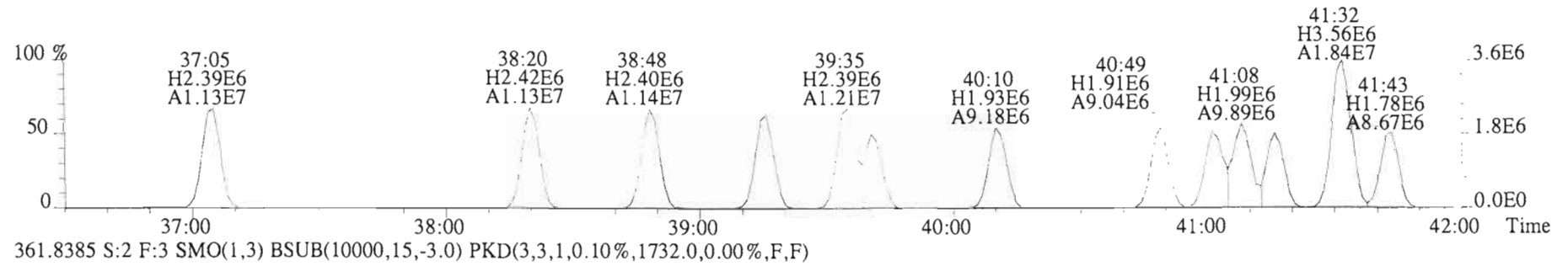
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4264.0,0.00%,F,F)



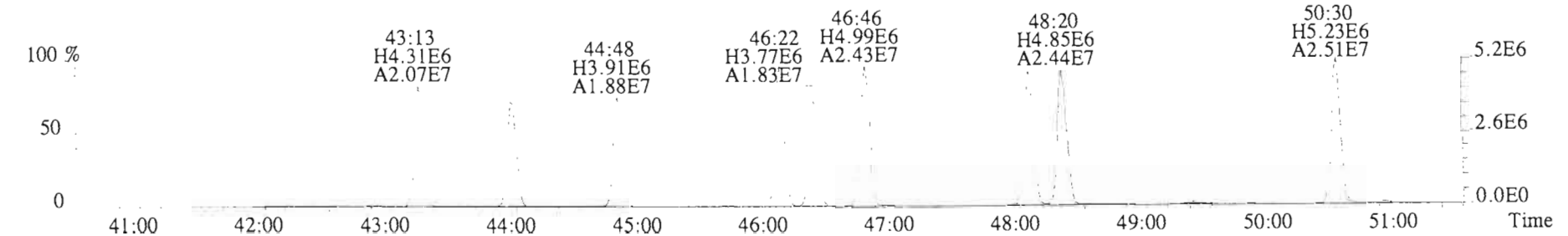
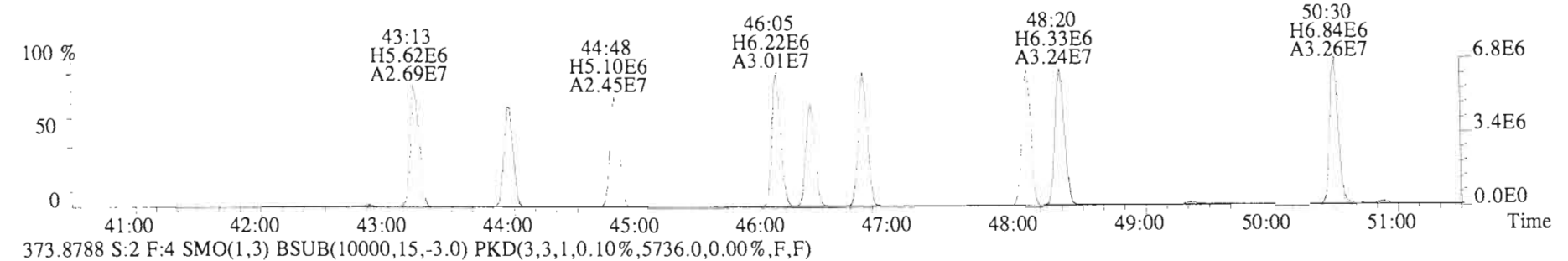
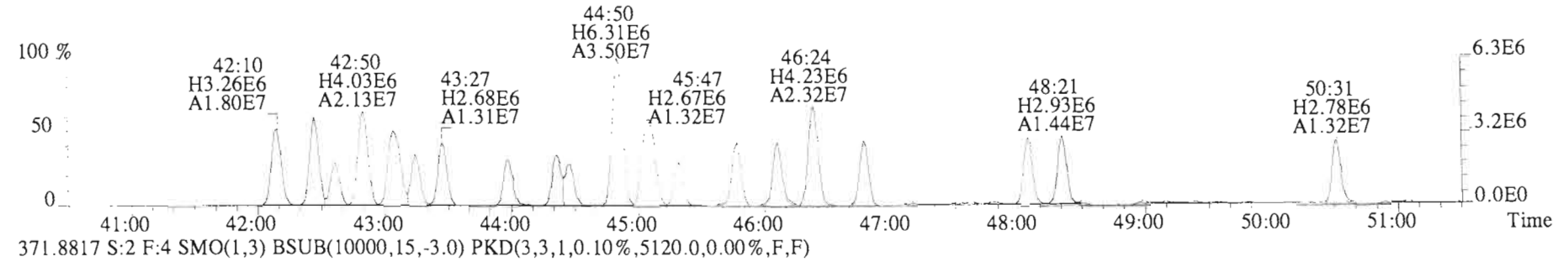
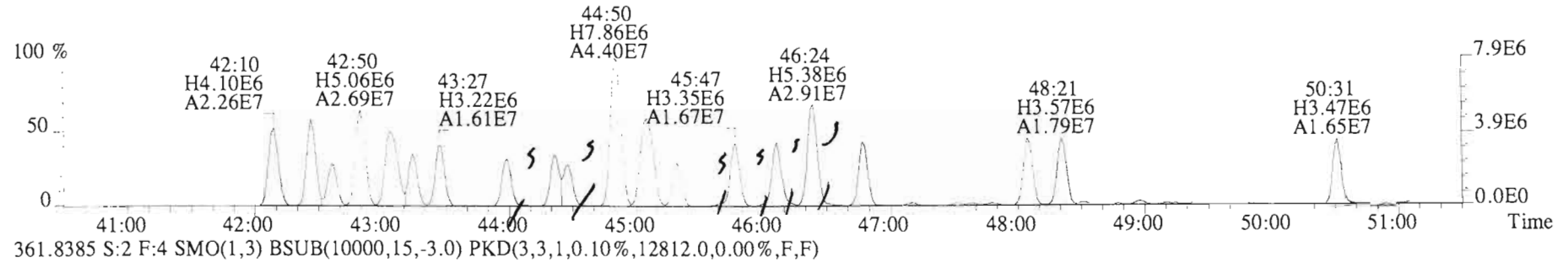
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3328.0,0.00%,F,F)



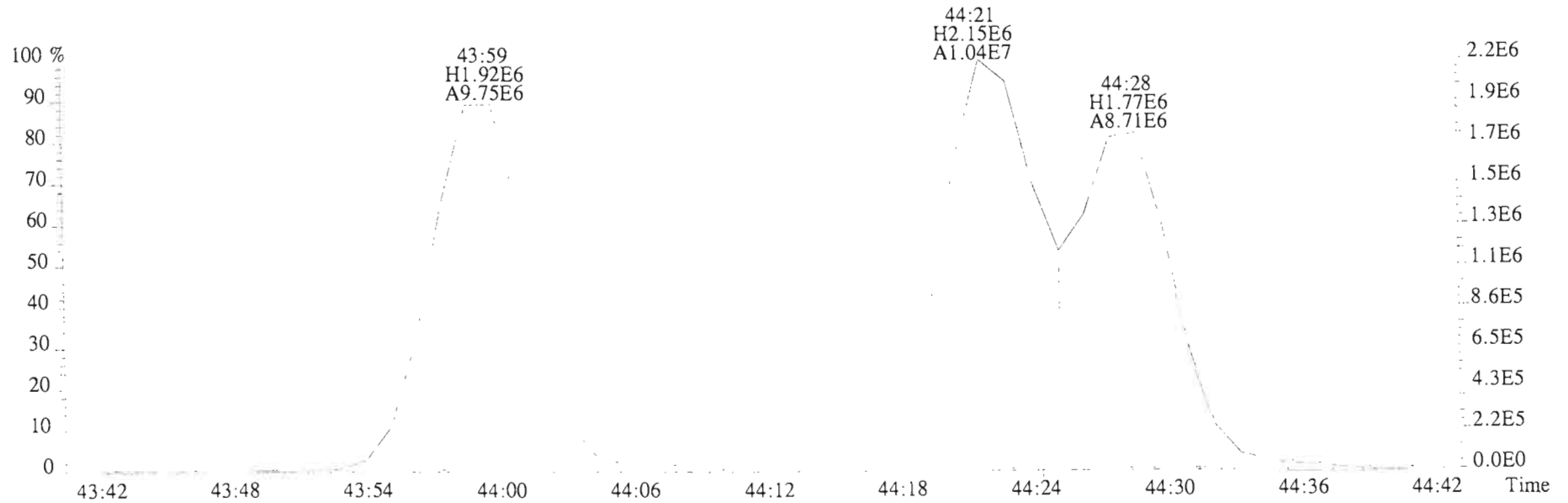
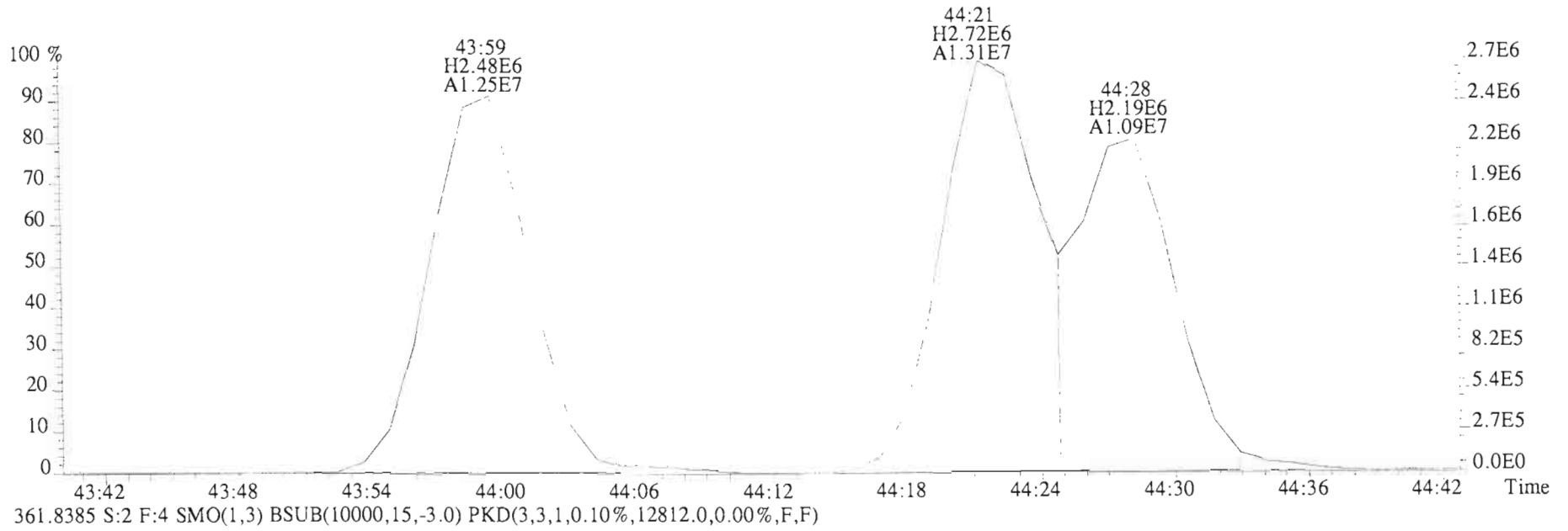
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
359.8415 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2084.0,0.00%,F,F)



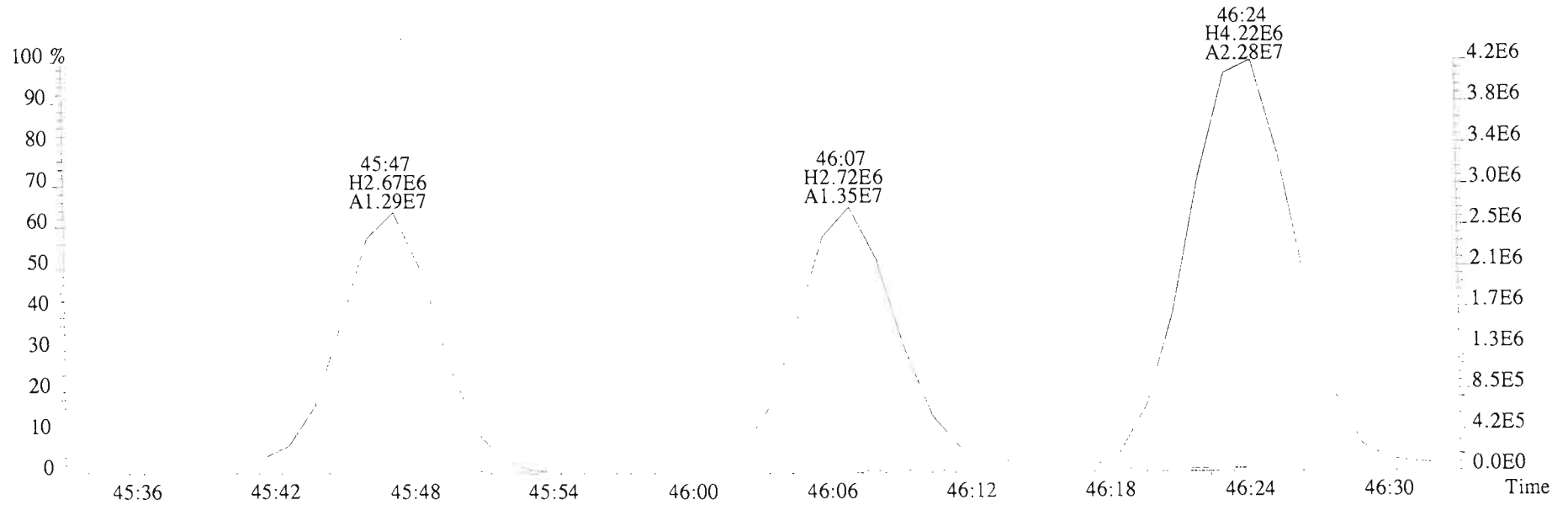
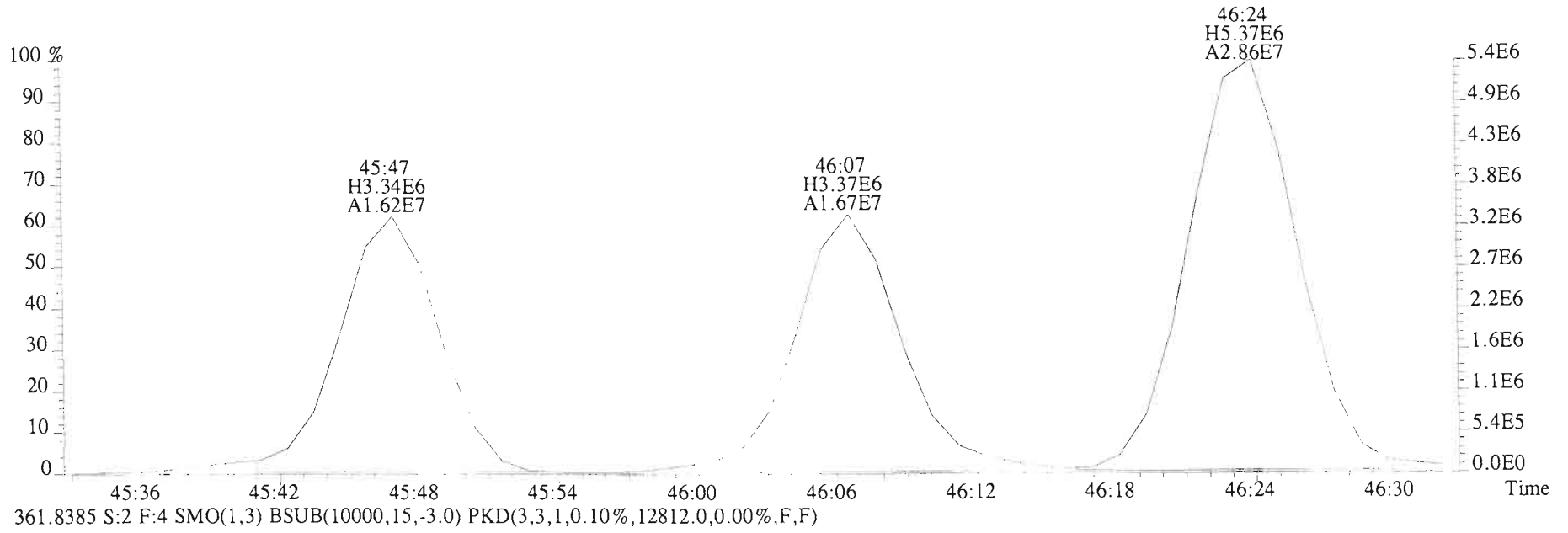
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6940.0,0.00%,F,F)



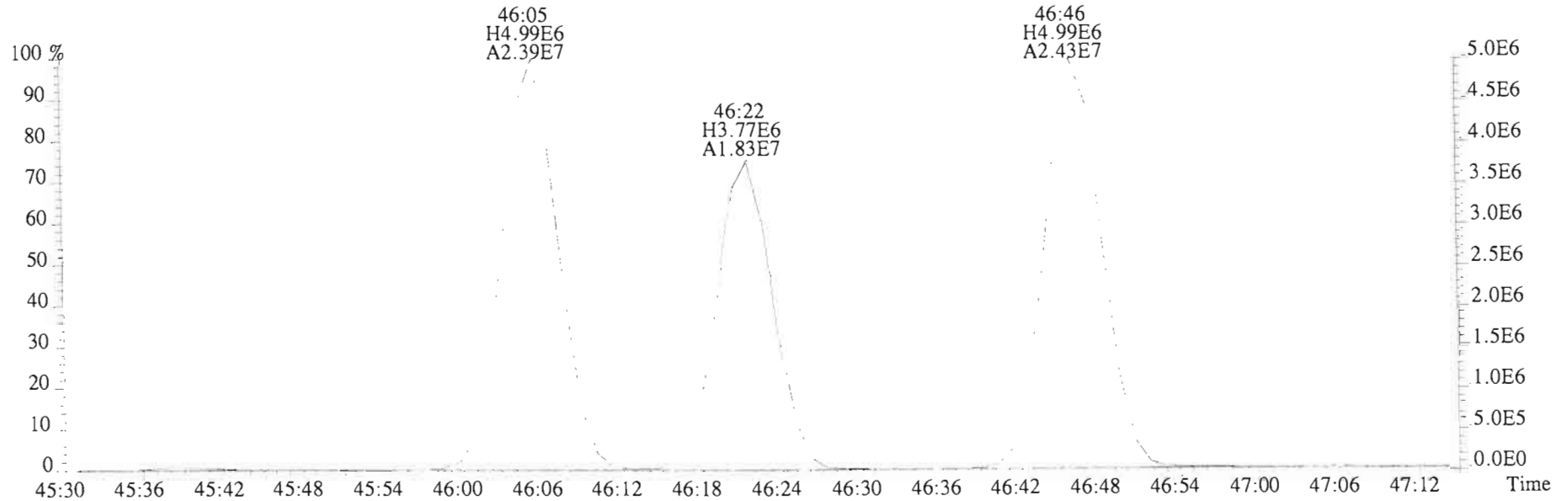
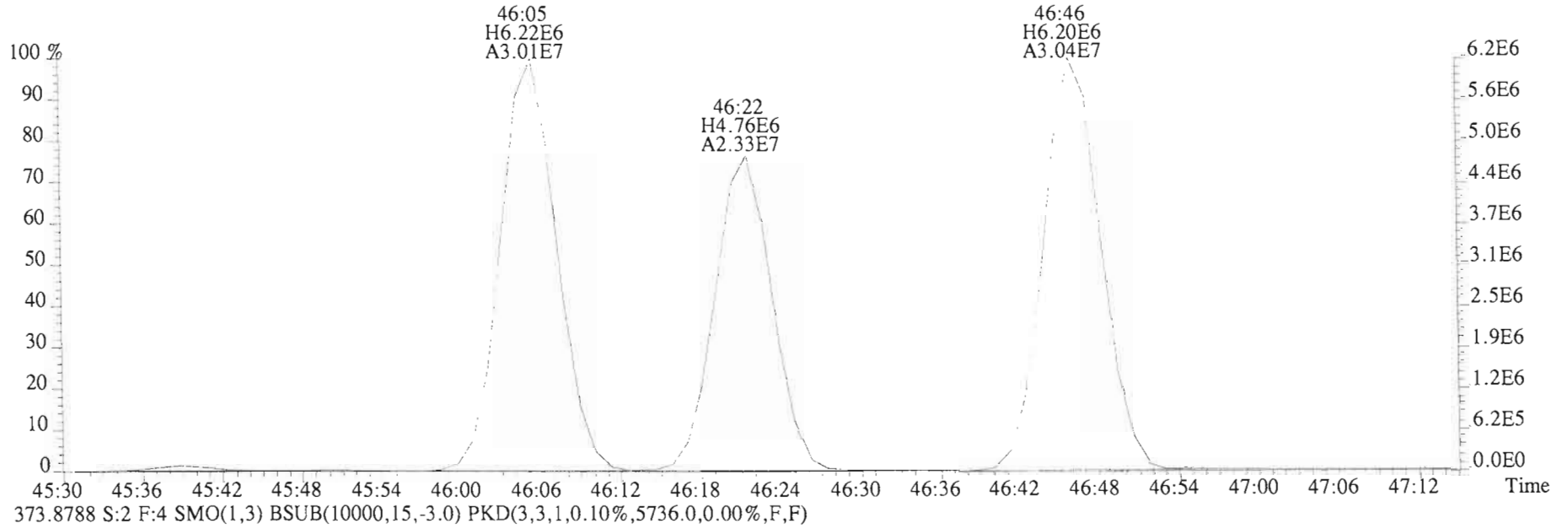
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6940.0,0.00%,F,F)



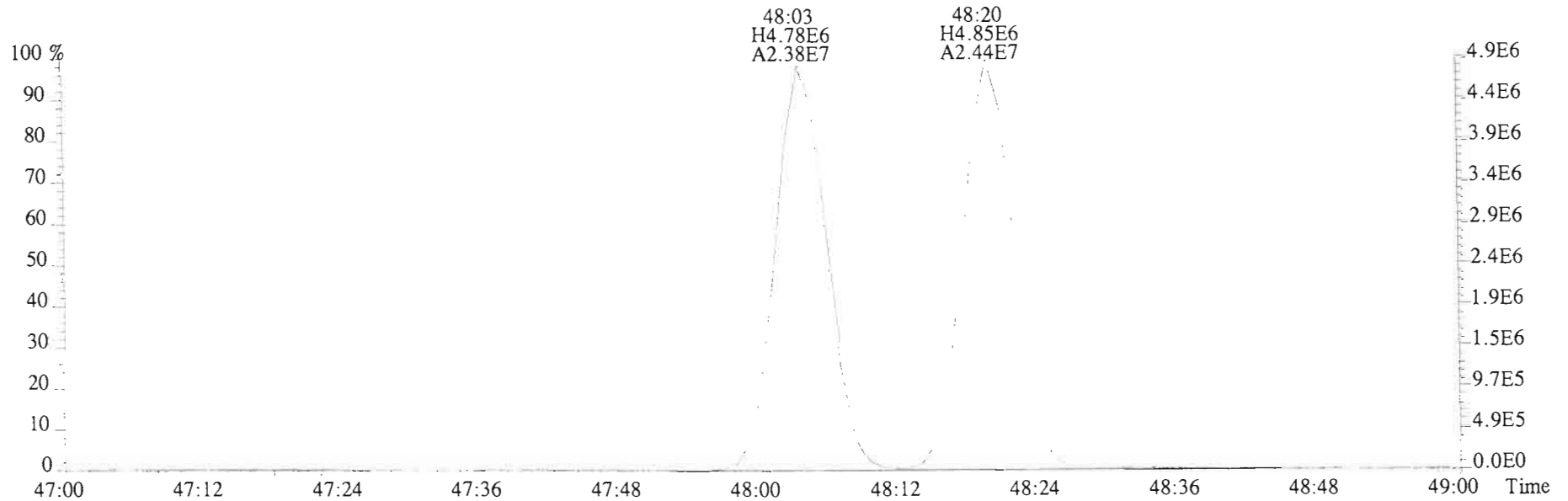
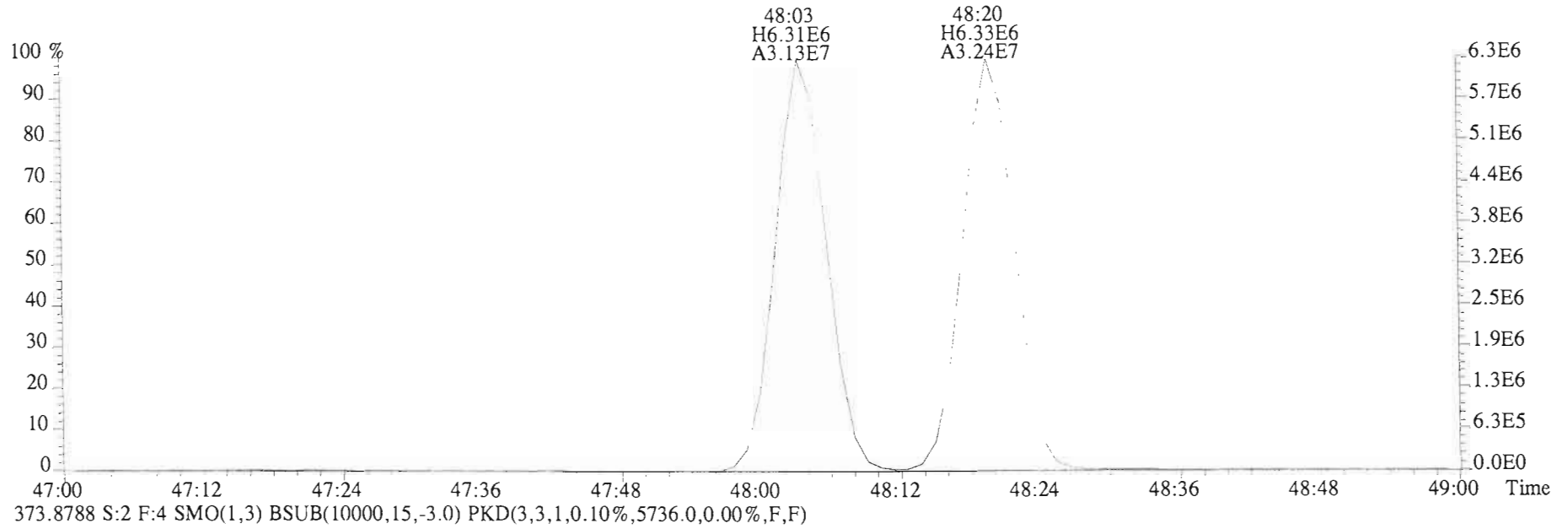
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6940.0,0.00%,F,F)



File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5120.0,0.00%,F,F)

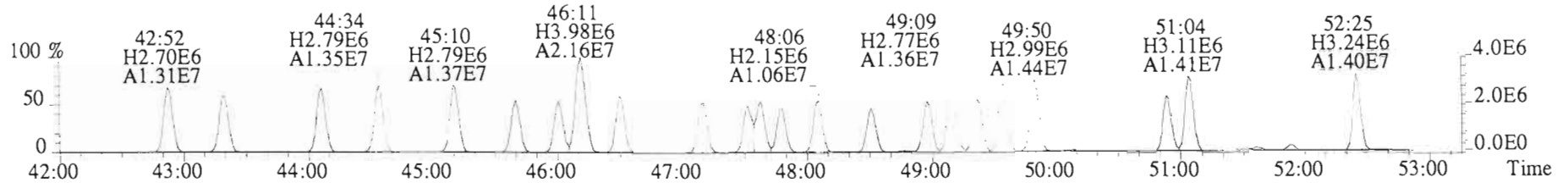


File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5120.0,0.00%,F,F)

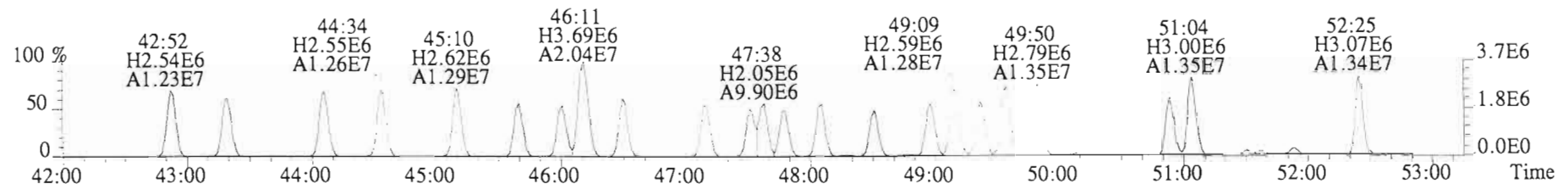




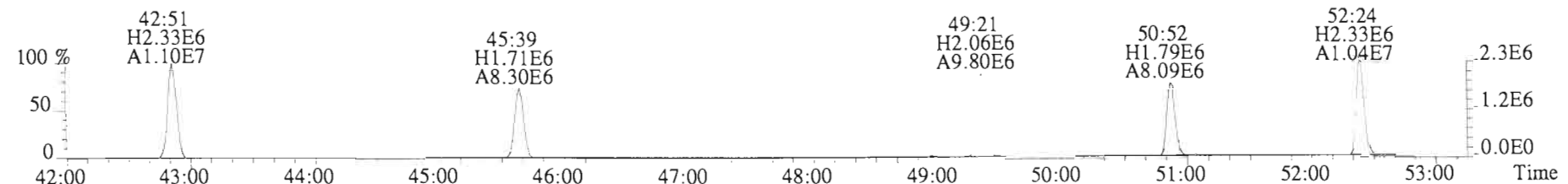
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
393.8025 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9172.0,0.00%,F,F)



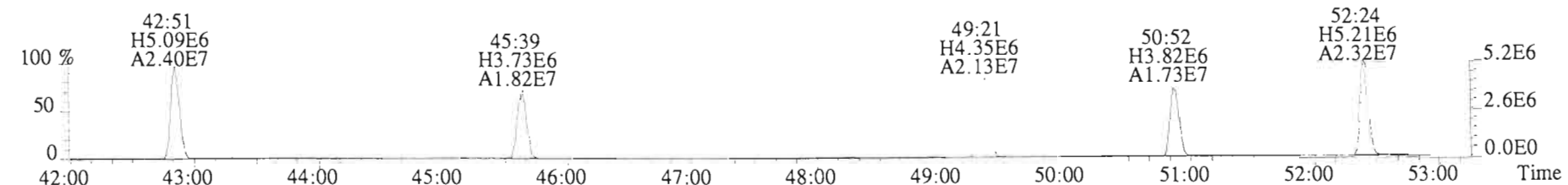
395.7995 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3172.0,0.00%,F,F)



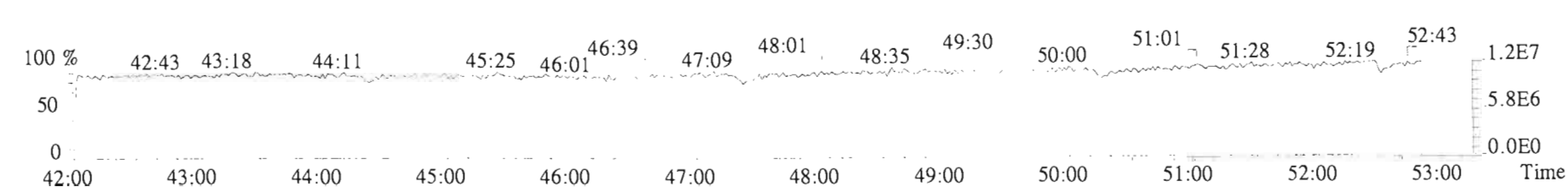
403.8457 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2772.0,0.00%,F,F)



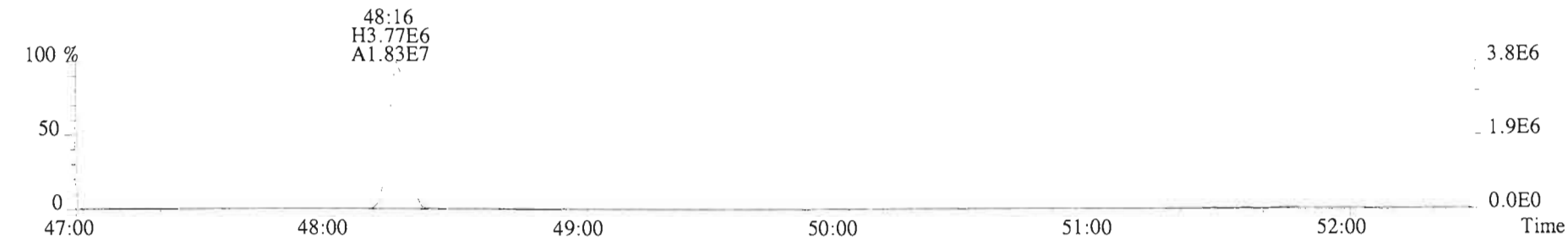
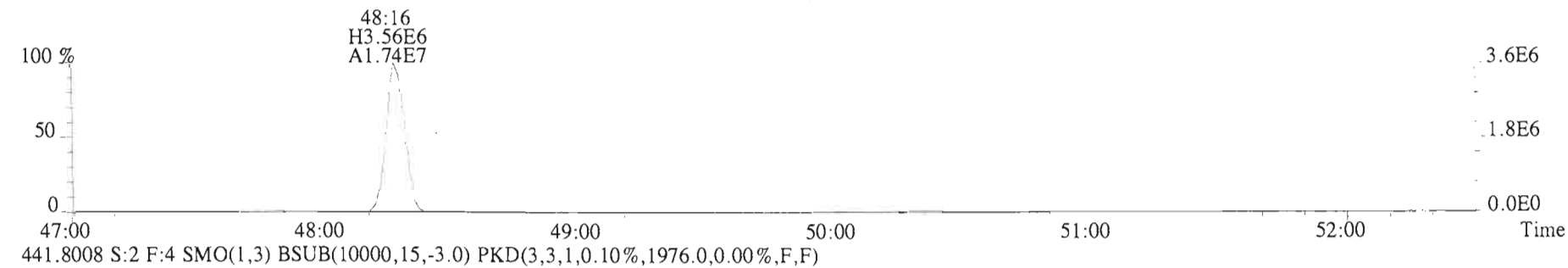
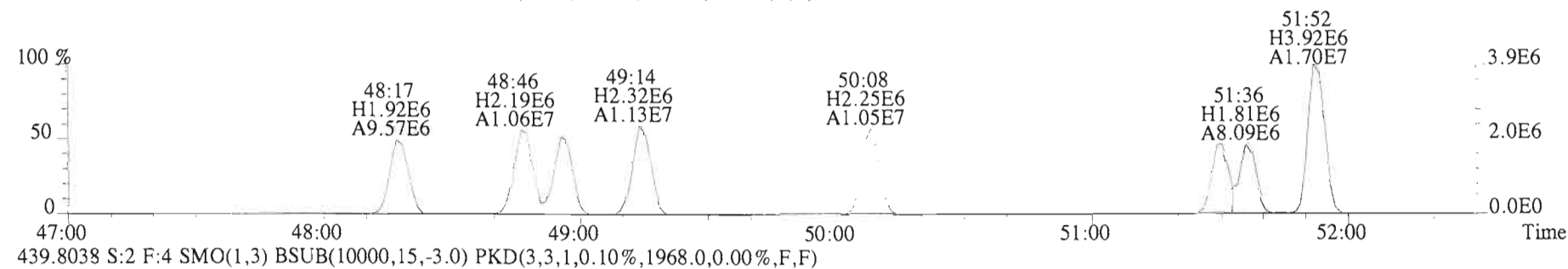
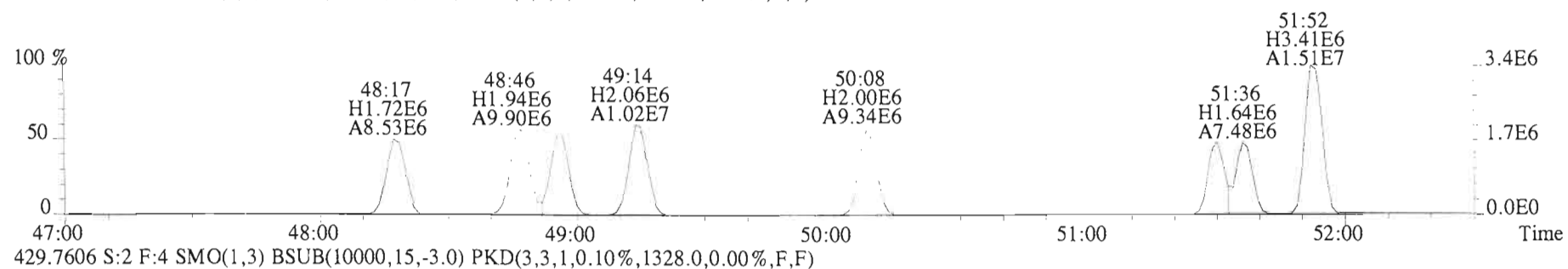
405.8428 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5616.0,0.00%,F,F)



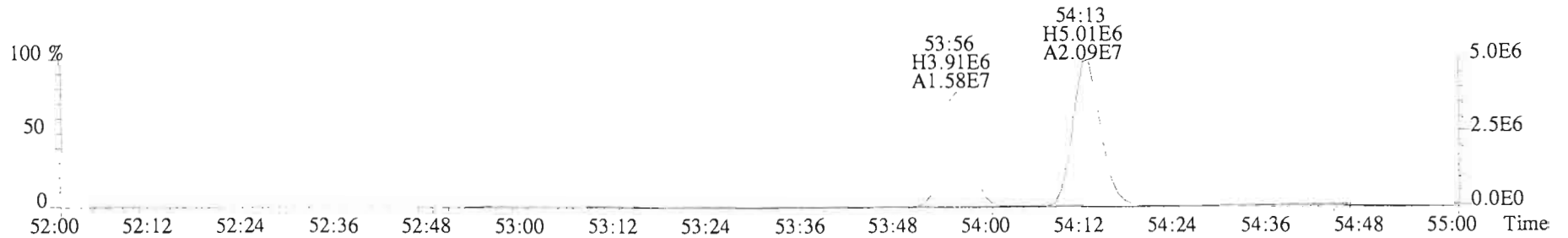
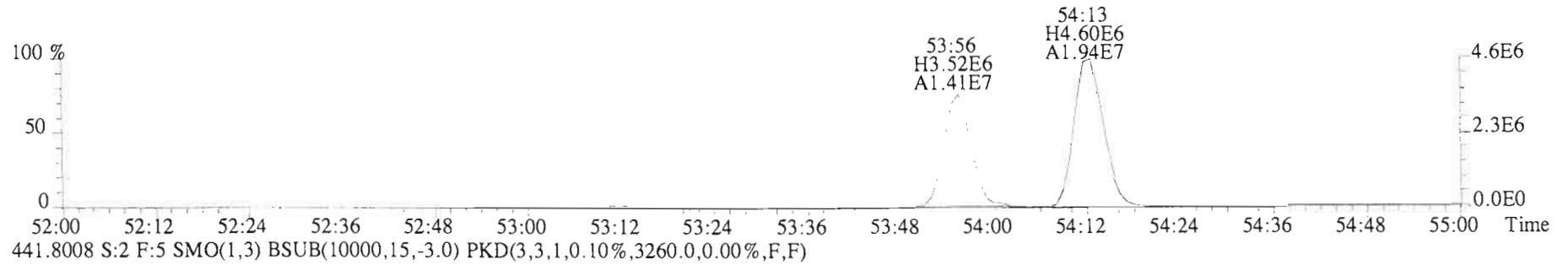
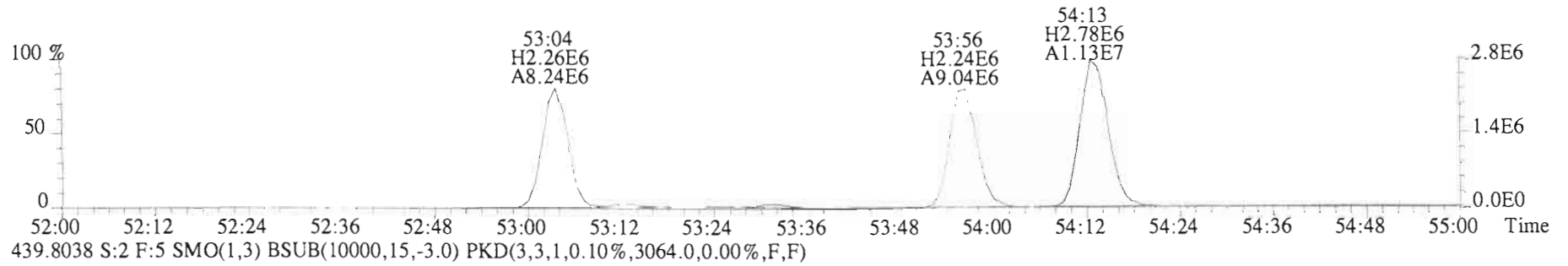
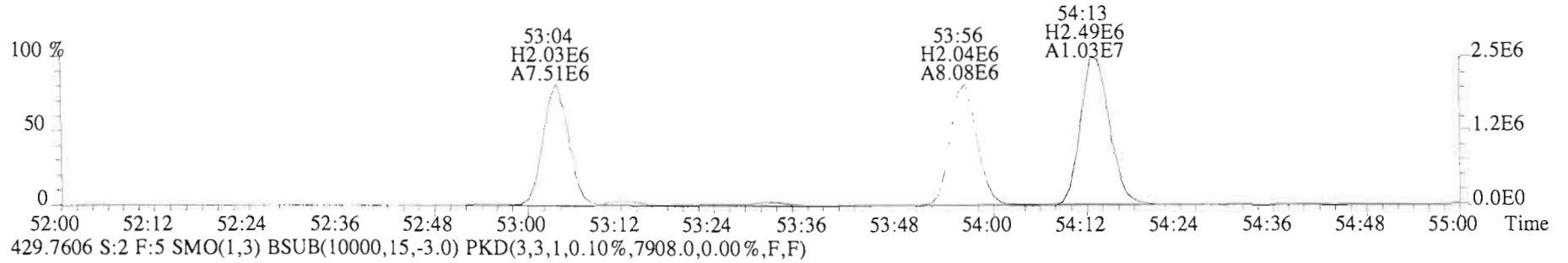
380.9760 S:2 F:4



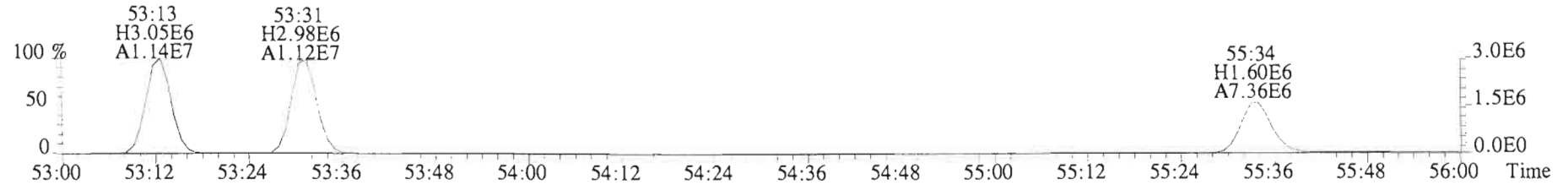
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
427.7635 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1232.0,0.00%,F,F)



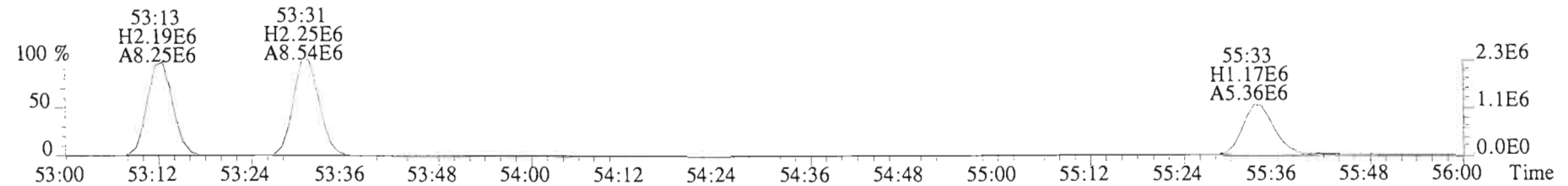
File:150127E1 #1-413 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
427.7635 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2108.0,0.00%,F,F)



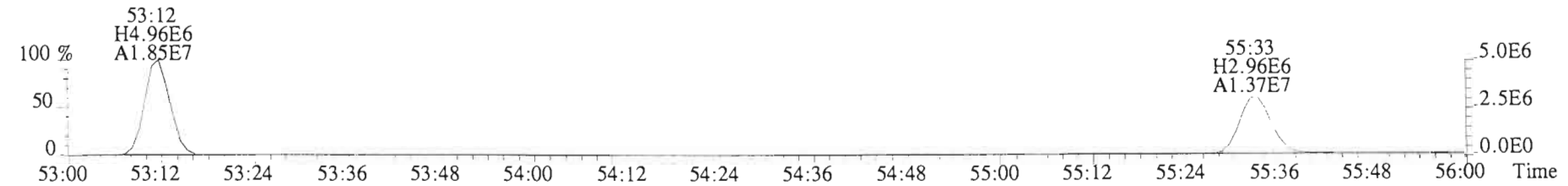
File:150127E1 #1-413 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
463.7216 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5248.0,0.00%,F,F)



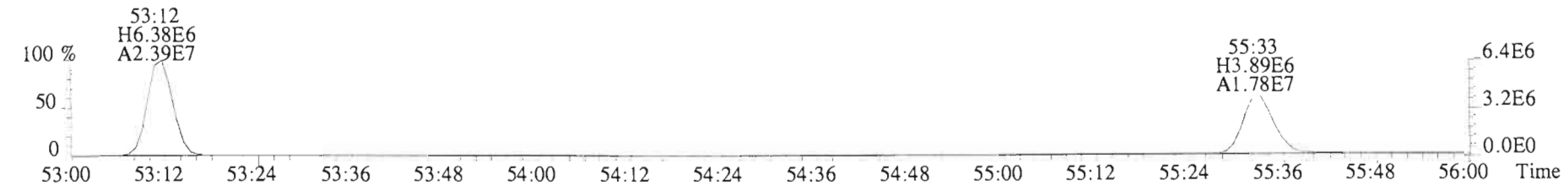
465.7186 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4000.0,0.00%,F,F)



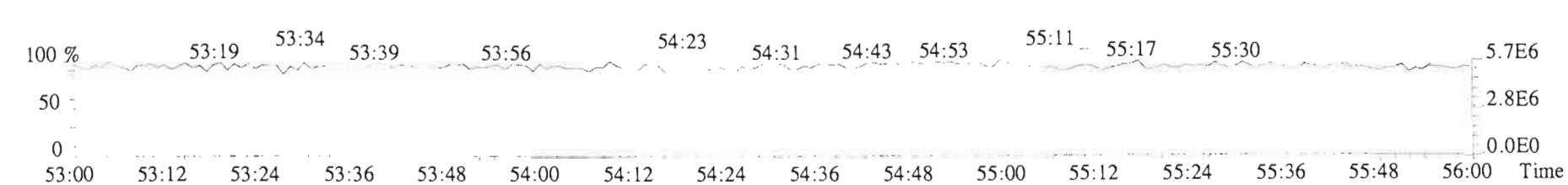
473.7648 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7500.0,0.00%,F,F)



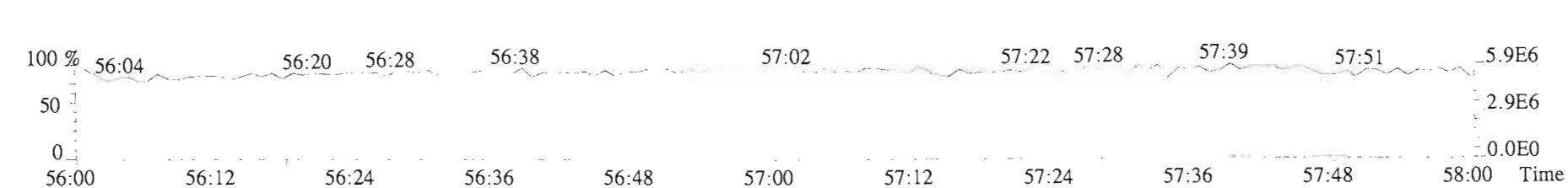
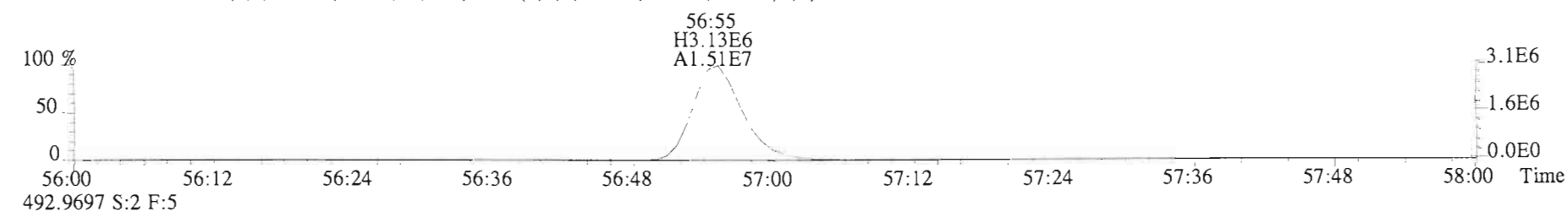
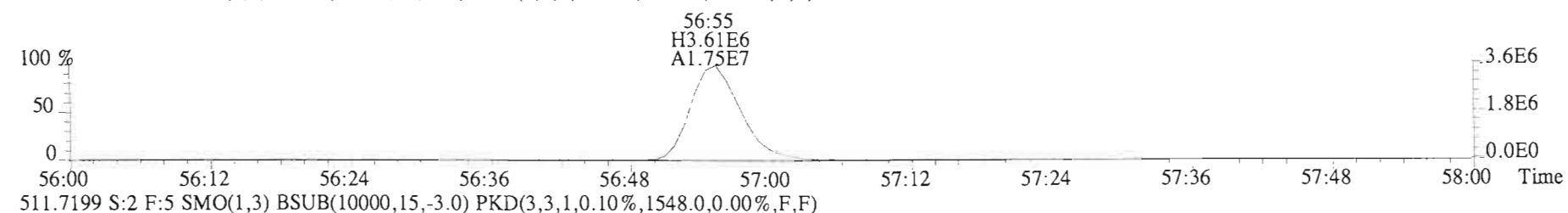
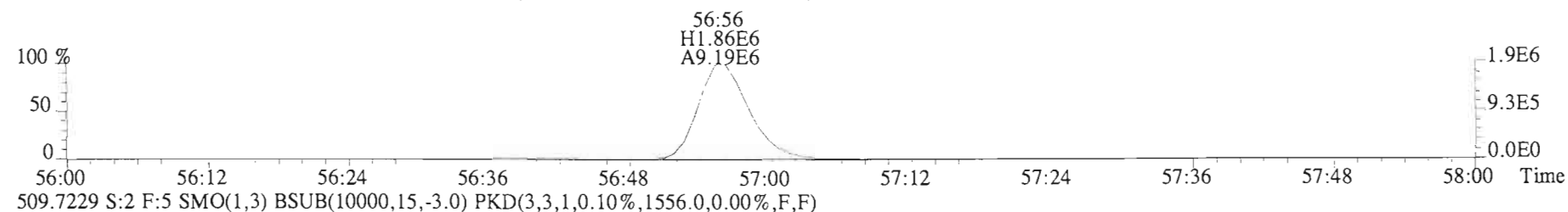
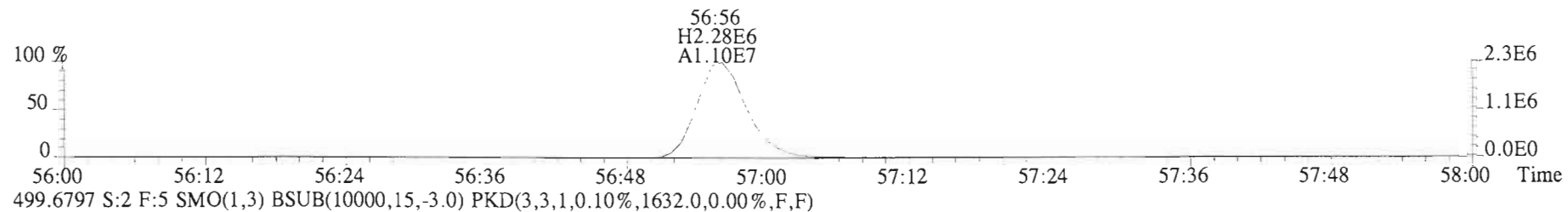
475.7619 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,10388.0,0.00%,F,F)



492.9697 S:2 F:5



File:150127E1 #1-413 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB\_ZB1  
497.6826 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1676.0,0.00%,F,F)



Client ID: WM-FT-IB-20150122-W  
Lab ID: 1500116-03

Filename: 150127E1 S:9 Acq:27-JAN-15 19:15:33  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 0.997

ConCal: ST150127E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	4.50e+05	2.97	y 16:11	1.33	15.4	*	2.5	*	*	1.001	0.997-1.007	
Mono	PCB-2	1.26e+05	3.08	y 18:35	1.30	4.09	*	2.5	*	*	0.988	0.983-0.993	
Mono	PCB-3	3.65e+05	3.02	y 18:49	1.30	11.8	*	2.5	*	*	1.001	0.996-1.006	
Di	PCB-4/10	6.95e+05	1.42	y 20:09	1.67	26.0	*	2.5	*	*	1.001	0.997-1.007	
Di	PCB-7/9	*	*	n NotF $\eta$	1.25	*	3040	2.5	2.46	*	*	0.864-0.872	
Di	PCB-6	5.36e+05	1.56	y 22:38	1.24	16.3	*	2.5	*	*	0.893	0.888-0.897	
Di	PCB-5/8	2.42e+06	1.74	y 23:01	1.27	71.7	*	2.5	*	*	0.909	0.905-0.915	
Di	PCB-14	*	*	n NotF $\eta$	1.47	*	3040	2.5	2.24	*	*	0.948-0.958	
Di	PCB-11	8.31e+06	1.59	y 25:21	1.28	239	*	2.5	*	*	1.001	0.995-1.005	
Di	PCB-12/13	*	*	n NotF $\eta$	1.27	*	3040	2.5	2.61	*	*	1.011-1.021	
Di	PCB-15	1.17e+06	1.69	y 26:03	1.44	30.1	*	2.5	*	*	1.028	1.023-1.031	
Tri	PCB-19	2.35e+05	1.15	y 24:19	1.18	14.1	*	2.5	*	*	1.001	0.996-1.006	
Tri	PCB-30	*	*	n NotF $\eta$	1.87	*	1020	2.5	0.909	*	*	1.033-1.043	
Tri	PCB-18	2.32e+06	1.06	y 25:58	0.89	121	*	2.5	*	*	0.953	0.949-0.959	
Tri	PCB-17	8.84e+05	0.98	y 26:09	0.96	42.9	*	2.5	*	*	0.960	0.956-0.966	
Tri	PCB-24/27	2.67e+05	0.94	y 26:42	1.30	9.54	*	2.5	*	*	0.980	0.977-0.987	
Tri	PCB-16/32	1.81e+06	1.07	y 27:13	1.05	80.2	*	2.5	*	*	0.999	0.996-1.006	
Tri	PCB-34	*	*	n NotF $\eta$	1.30	*	2410	2.5	3.21	*	*	0.955-0.965	
Tri	PCB-23	*	*	n NotF $\eta$	1.21	*	2410	2.5	3.45	*	*	0.958-0.968	
Tri	PCB-29	*	*	n NotF $\eta$	1.21	*	2410	2.5	3.45	*	*	0.967-0.977	
Tri	PCB-26	4.13e+05	1.15	y 28:36	1.24	21.8	*	2.5	*	*	0.979	0.974-0.984	
Tri	PCB-25	1.77e+05	1.10	y 28:45	1.10	10.5	*	2.5	*	*	0.985	0.980-0.990	
Tri	PCB-31	1.63e+06	0.98	y 29:07	1.25	84.7	*	2.5	*	*	0.997	0.992-1.002	
Tri	PCB-28	1.72e+06	1.01	y 29:12	1.24	90.5	*	2.5	*	*	1.000	0.996-1.006	
Tri	PCB-20/21/33	1.33e+06	1.03	y 29:51	1.16	74.8	*	2.5	*	*	1.022	1.016-1.026	
Tri	PCB-22	7.40e+05	0.92	y 30:16	1.16	41.5	*	2.5	*	*	1.037	1.032-1.042	
Tri	PCB-36	*	*	n NotF $\eta$	1.30	*	2410	2.5	3.17	*	*	0.929-0.939	
Tri	PCB-39	*	*	n NotF $\eta$	1.26	*	2410	2.5	3.26	*	*	0.943-0.953	
Tri	PCB-38	*	*	n NotF $\eta$	1.24	*	2410	2.5	3.31	*	*	0.967-0.977	
Tri	PCB-35	*	*	n NotF $\eta$	1.26	*	2410	2.5	3.27	*	*	0.982-0.992	
Tri	PCB-37	6.27e+05	0.97	y 33:08	1.35	31.4	*	2.5	*	*	1.001	0.996-1.006	
Tetra	PCB-54	*	*	n NotF $\eta$	1.02	*	2490	2.5	3.08	*	*	0.996-1.006	
Tetra	PCB-50	*	*	n NotF $\eta$	0.78	*	2490	2.5	4.05	*	*	1.037-1.047	
Tetra	PCB-53	2.89e+05	0.80	y 29:53	1.14	18.5	*	2.5	*	*	0.945	0.941-0.951	
Tetra	PCB-51	9.99e+04	0.86	y 30:14	1.16	6.28	*	2.5	*	*	0.956	0.952-0.962	
Tetra	PCB-45	2.37e+05	0.69	y 30:40	1.04	16.6	*	2.5	*	*	0.970	0.965-0.975	
Tetra	PCB-46	1.08e+05	0.88	y 31:08	0.95	8.28	*	2.5	*	*	0.985	0.981-0.991	

Integrations by:

Analyst: DMS

Date: 2/4/15

Reviewed by: [Signature] Date: 2/5/15

mono - 3<sup>rd</sup> F PentA only.  
DMS 2/5/15

Client ID: WM-FT-IB-20150122-W  
Lab ID: 1500116-03

Filename: 150127E1 S:9 Acq:27-JAN-15 19:15:33  
GC Column ID: ZB-1 ICAL: PCBVG8-1-14-15 wt/vol: 0.997

ConCal: ST150127E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	5.39e+06	0.76	y 31:38	1.29	305	*	2.5	*	*	1.001	0.996-1.006	
Tetra	PCB-73	*	*	n NotF $\eta$	1.41	*		2510	2.5	3.29	*	0.999-1.009	
Tetra	PCB-43/49	1.76e+06	0.72	y 31:56	1.14	113	*	2.5	*	*	1.010	1.005-1.015	
Tetra	PCB-47	5.47e+05	0.74	y 32:10	1.20	30.9	*	2.5	*	*	1.001	0.996-1.006	
Tetra	PCB-48/75	3.70e+05	0.66	y 32:16	1.33	18.8	*	2.5	*	*	1.004	0.999-1.009	
Tetra	PCB-65	*	*	n NotF $\eta$	1.32	*		2510	2.5	3.56	*	1.007-1.017	
Tetra	PCB-62	*	*	n NotF $\eta$	1.36	*		2510	2.5	3.45	*	1.011-1.021	
Tetra	PCB-44	2.63e+06	0.74	y 32:56	0.87	204	*	2.5	*	*	1.025	1.020-1.030	
Tetra	PCB-42/59	6.04e+05	0.69	y 33:10	1.24	33.0	*	2.5	*	*	1.032	1.027-1.037	
Tetra	PCB-41/64/71/72	2.32e+06	0.74	y 33:45	1.34	117	*	2.5	*	*	1.050	1.045-1.055	
Tetra	PCB-68	*	*	n NotF $\eta$	1.61	*		2510	2.5	2.91	*	1.053-1.063	
Tetra	PCB-40	2.84e+05	0.86	y 34:12	0.86	22.4	*	2.5	*	*	1.064	1.061-1.071	
Tetra	PCB-57	*	*	n NotF $\eta$	1.12	*		2510	2.5	3.03	*	0.965-0.975	
Tetra	PCB-67	9.97e+04	0.98	n 34:54	1.09	4.90	R	*	2.5	*	0.979	0.974-0.984	
Tetra	PCB-58	*	*	n NotF $\eta$	1.14	*		2510	2.5	2.98	*	0.977-0.987	
Tetra	PCB-63	8.60e+04	1.15	n 35:10	1.16	3.97	R	*	2.5	*	0.986	0.981-0.991	
Tetra	PCB-74	1.78e+06	0.75	y 35:27	1.21	78.5	*	2.5	*	*	0.994	0.989-0.999	
Tetra	PCB-61/70	6.75e+06	0.77	y 35:40	1.13	322	*	2.5	*	*	1.000	0.995-1.005	
Tetra	PCB-76/66	2.71e+06	0.80	y 35:52	1.18	123	*	2.5	*	*	1.006	1.000-1.010	
Tetra	PCB-80	*	*	n NotF $\eta$	1.32	*		2510	2.5	2.80	*	0.995-1.005	
Tetra	PCB-55	1.15e+05	0.67	y 36:22	1.23	4.84	*	2.5	*	*	1.007	1.004-1.014	
Tetra	PCB-56/60	1.88e+06	0.74	y 36:54	1.11	88.2	*	2.5	*	*	1.022	1.018-1.028	
Tetra	PCB-79	1.46e+05	0.80	y 38:00	1.16	6.53	*	2.5	*	*	1.053	1.048-1.058	
Tetra	PCB-78	*	*	n NotF $\eta$	1.18	*		2510	2.5	3.84	*	0.982-0.992	
Tetra	PCB-81	8.32e+04	0.69	y 39:11	1.29	4.10	*	2.5	*	*	1.000	0.995-1.005	
Tetra	PCB-77	2.75e+05	0.85	y 39:50	1.29	14.9	*	2.5	*	*	1.001	0.995-1.005	
Penta	PCB-104	*	*	n NotF $\eta$	1.26	*		2060	2.5	4.16	*	0.996-1.006	
Penta	PCB-96	*	*	n NotF $\eta$	1.09	*		2060	2.5	4.83	*	1.034-1.044	
Penta	PCB-103	*	*	n NotF $\eta$	0.97	*		2060	2.5	5.45	*	1.051-1.061	
Penta	PCB-100	*	*	n NotF $\eta$	0.96	*		2060	2.5	5.47	*	1.061-1.071	
Penta	PCB-94	*	*	n NotF $\eta$	1.13	*		2060	2.5	6.53	*	0.980-0.990	
Penta	PCB-95/98/102	6.23e+06	1.59	y 35:57	1.29	499	*	2.5	*	*	1.000	0.994-1.004	
Penta	PCB-93	*	*	n NotF $\eta$	1.06	*		2060	2.5	6.95	*	0.998-1.008	
Penta	PCB-88/91	8.66e+05	1.78	y 36:22	1.12	79.5	*	2.5	*	*	1.012	1.006-1.016	
Penta	PCB-121	*	*	n NotF $\eta$	1.76	*		2060	2.5	4.19	*	1.009-1.019	
Penta	PCB-84/92	3.01e+06	1.57	y 37:16	1.07	295	*	2.5	*	*	0.990	0.985-0.995	
Penta	PCB-89	5.64e+04	1.41	y 37:27	1.00	5.95	*	2.5	*	*	0.995	0.990-1.000	

Analyst: DMS

Date: 2/14/15

Client ID: WM-FT-IB-20150122-W  
Lab ID: 1500116-03

Filename: 150127E1 S:9 Acq:27-JAN-15 19:15:33  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 0.997

ConCal: ST150127E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	8.20e+06	1.65	y 37:40	1.21	714	*	2.5	*	*	1.000	0.995-1.005	
Penta	PCB-113	*	*	n NotF $\eta$	1.34	*	*	2060	2.5	5.81	*	1.002-1.012	
Penta	PCB-99	3.37e+06	1.59	y 38:00	1.25	283	*	2.5	*	*	1.009	1.004-1.014	
Penta	PCB-119	1.23e+05	1.35	y 38:28	1.88	7.80	*	2.5	*	*	0.988	0.982-0.992	
Penta	PCB-108/112	3.07e+05	1.38	y 38:37	1.41	26.1	*	2.5	*	*	0.991	0.986-0.996	
Penta	PCB-83	*	*	n NotF $\eta$	1.66	*	*	2060	2.5	5.48	*	0.990-1.000	
Penta	PCB-97	2.35e+06	1.53	y 38:57	1.30	216	*	2.5	*	*	1.000	0.995-1.005	
Penta	PCB-86	*	*	n NotF $\eta$	1.03	*	*	2060	2.5	8.82	*	0.999-1.009	
Penta	PCB-87/117/125	4.09e+06	1.55	y 39:15	1.59	306	*	2.5	*	*	1.008	1.002-1.012	
Penta	PCB-111/115	2.25e+05	1.58	y 39:25	1.86	14.5	*	2.5	*	*	1.012	1.006-1.016	
Penta	PCB-85/116	1.13e+06	1.73	y 39:30	1.39	97.0	*	2.5	*	*	1.014	1.010-1.020	
Penta	PCB-120	*	*	n NotF $\eta$	1.99	*	*	2060	2.5	4.59	*	1.016-1.026	
Penta	PCB-110	1.09e+07	1.56	y 39:54	1.70	762	*	2.5	*	*	1.024	1.019-1.029	
Penta	PCB-82	7.67e+05	1.75	y 40:32	0.74	123	*	2.5	*	*	0.976	0.971-0.981	
Penta	PCB-124	4.19e+05	1.41	y 41:15	1.30	38.3	*	2.5	*	*	0.993	0.988-0.998	
Penta	PCB-107/109	5.30e+05	1.60	y 41:25	1.34	47.3	*	2.5	*	*	0.997	0.991-1.001	
Penta	PCB-123	1.45e+05	1.54	y 41:35	1.25	13.8	*	2.5	*	*	1.001	0.995-1.005	
Penta	PCB-106/118	8.17e+06	1.61	y 41:46	1.29	744	*	2.5	*	*	1.000	0.996-1.006	
Penta	PCB-114	*	*	n NotF $\eta$	1.45	*	*	2.5	*	*	*	0.995-1.005	
Penta	PCB-122	*	*	n NotF $\eta$	1.22	*	*	2.5	*	*	*	0.999-1.009	
Penta	PCB-105	*	*	n NotF $\eta$	1.56	*	*	2.5	*	*	*	0.995-1.005	
Penta	PCB-127	*	*	n NotF $\eta$	1.31	*	*	2.5	*	*	*	0.995-1.005	
Penta	PCB-126	*	*	n NotF $\eta$	1.41	*	*	2.5	*	*	*	0.995-1.005	
Hexa	PCB-155	*	*	n NotF $\eta$	1.20	*	*	2.5	*	*	*	0.966-1.006	
Hexa	PCB-150	*	*	n NotF $\eta$	1.13	*	*	2.5	*	*	*	1.030-1.040	
Hexa	PCB-152	*	*	n NotF $\eta$	1.17	*	*	2.5	*	*	*	1.043-1.053	
Hexa	PCB-145	*	*	n NotF $\eta$	1.09	*	*	2.5	*	*	*	1.055-1.065	
Hexa	PCB-136	*	*	n NotF $\eta$	1.14	*	*	2.5	*	*	*	1.063-1.073	
Hexa	PCB-148	*	*	n NotF $\eta$	0.82	*	*	2.5	*	*	*	1.066-1.076	
Hexa	PCB-154	*	*	n NotF $\eta$	0.89	*	*	2.5	*	*	*	1.079-1.089	
Hexa	PCB-151	*	*	n NotF $\eta$	0.82	*	*	2.5	*	*	*	1.097-1.107	
Hexa	PCB-135	*	*	n NotF $\eta$	0.80	*	*	2.5	*	*	*	1.101-1.113	
Hexa	PCB-144	*	*	n NotF $\eta$	0.86	*	*	2.5	*	*	*	1.105-1.116	
Hexa	PCB-147	*	*	n NotF $\eta$	0.78	*	*	2.5	*	*	*	1.108-1.120	
Hexa	PCB-139/149	*	*	n NotF $\eta$	0.87	*	*	2.5	*	*	*	1.115-1.127	
Hexa	PCB-140	*	*	n NotF $\eta$	0.78	*	*	2.5	*	*	*	1.120-1.132	
Hexa	PCB-134/143	*	*	n NotF $\eta$	0.93	*	*	2.5	*	*	*	0.970-0.980	

see 110  
dilution



Analyst: DMS

Date: 2/4/15



Name	Resp	RA	RT	RRF	Conc
Total Mono-PCB	9.41e+05	2.97 y	16:11	1.31	31.3163
Total Di-PCB	1.31e+07	1.42 y	20:09	1.32	383.361
Total Tri-PCB	5.52e+06	1.15 y	24:19	1.20	267.990
Total Tri-PCB	6.63e+06	1.15 y	28:36	1.23	355.089
Sum: 623.079					
Total Tetra-PCB	2.84e+07	0.80 y	29:53	1.17	1535.90
Total Penta-PCB	5.09e+07	1.59 y	35:57	1.24	4272.37
Total Penta-PCB	*	* n	NotFnd	1.39	257.1*
Sum: <del>4272.37</del> 4529.5					
Total Hexa-PCB	*	* n	NotFnd	0.94	907.8*
Total Hexa-PCB	*	* n	NotFnd	1.13	2415.3*
Sum: <del>0.00000</del> 3323.18					
Total Hepta-PCB	*	* n	NotFnd	1.37	1280.8*
Total Octa-PCB	*	* n	NotFnd	0.95	304.0*
Total Octa-PCB	*	* n	NotFnd	1.35	55.4*
Sum: <del>0.00000</del> 359.7					
Total Nona-PCB	*	* n	NotFnd	0.99	123.6*
Total Deca-PCB	*	* n	NotFnd	1.35	41.0*

} See 1:10 Dilution

Total PCB Conc: 6854.88801800 + 5751.31 = ~~12606.2~~  
 12100

Integrations  
 by  
 Analyst: DMS  
 Date: 2/4/15

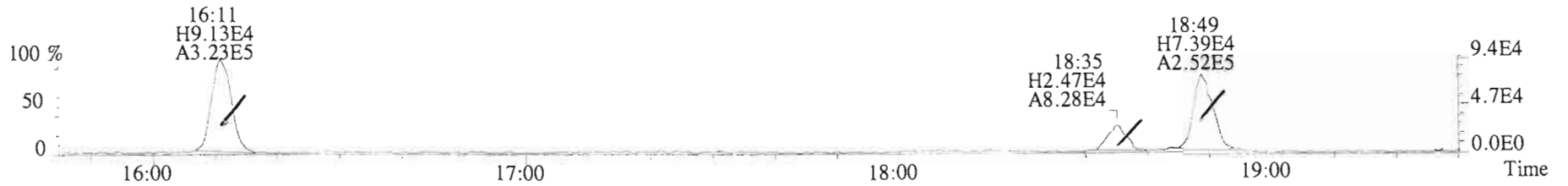
Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	
13C-PCB-1	4.39e+07	3.54 y	0.91	16:10	0.621	0.619-0.625		1500	74.7												
13C-PCB-3	4.78e+07	3.50 y	0.94	18:48	0.722	0.718-0.726		1570	78.4		13C-PCB-79	3.94e+07	0.78 y	1.02	37:59	1.029	1.024-1.033		1940	96.9	
13C-PCB-4	3.20e+07	1.54 y	0.60	20:08	0.773	0.770-0.778		1660	83.0		13C-PCB-178	*	* n	0.64	NotFnd	*	0.980-0.989		*	*	
13C-PCB-9	5.32e+07	1.56 y	0.96	21:56	0.843	0.839-0.847		1720	85.7												
13C-PCB-11	5.43e+07	1.59 y	0.95	25:20	0.973	0.968-0.978		1770	88.0												
13C-PCB-19	2.83e+07	1.13 y	0.56	24:18	0.933	0.929-0.939		1560	78.0												
13C-PCB-28	3.08e+07	1.04 y	1.07	29:12	1.004	0.999-1.009		1740	86.8		13C-PCB-79	3.94e+07	0.78 y	1.02	37:59	0.969	0.963-0.973		2440	122	
13C-PCB-32	4.33e+07	1.13 y	0.83	27:14	1.046	1.041-1.051		1630	81.1		13C-PCB-178	*	* n	0.84	NotFnd	*	0.920-0.930		*	*	
13C-PCB-37	2.97e+07	1.02 y	0.96	33:06	1.138	1.131-1.143		1860	92.9												
13C-PCB-47	2.97e+07	0.80 y	0.77	32:08	0.871	0.867-0.875		1950	97.3												
13C-PCB-52	2.75e+07	0.78 y	0.71	31:37	0.857	0.853-0.861		1950	97.0												
13C-PCB-54	3.64e+07	0.81 y	1.06	28:03	0.760	0.757-0.765		1730	86.4												
13C-PCB-70	3.74e+07	0.80 y	0.99	35:39	0.966	0.961-0.971		1900	94.7												
13C-PCB-77	2.87e+07	0.78 y	0.96	39:48	1.079	1.073-1.083		1500	74.8												
13C-PCB-80	3.87e+07	0.81 y	1.02	36:06	0.978	0.973-0.983		1910	95.2												
13C-PCB-81	3.15e+07	0.79 y	1.00	39:12	1.062	1.057-1.067		1590	79.5												
13C-PCB-95	1.94e+07	1.57 y	0.70	35:56	0.912	0.908-0.918		2240	112												
13C-PCB-97	1.68e+07	1.62 y	0.66	38:57	0.988	0.984-0.994		2060	103												
13C-PCB-101	1.91e+07	1.56 y	0.77	37:39	0.955	0.951-0.961		2100	100												
13C-PCB-104	2.59e+07	1.62 y	0.97	32:48	0.832	0.828-0.836		2160	108												
13C-PCB-105	*	* n	1.20	NotFnd	*	0.924-0.934		*	* <del>KA</del>												
13C-PCB-114	*	* n	1.26	NotFnd	*	0.905-0.915		*	* <del>L</del>												
13C-PCB-118	1.71e+07	1.60 y	0.94	41:45	1.059	1.054-1.064		1470	73.2												
13C-PCB-123	1.68e+07	1.53 y	0.88	41:33	1.054	1.049-1.059		1540	76.8												
13C-PCB-126	*	* n	1.13	NotFnd	*	0.972-0.982		*	* <del>KA</del>												
13C-PCB-127	1.90e+07	1.63 y	1.26	43:16	*	0.931-0.941		*	*												
13C-PCB-138	*	* n	1.12	NotFnd	*	0.961-0.971		*	*												
13C-PCB-141	*	* n	1.09	NotFnd	*	0.943-0.953		*	*												
13C-PCB-153	1.54e+05	1.91 n	1.27	43:02	*	0.927-0.937		*	*												
13C-PCB-155	1.90e+07	1.29 y	0.87	37:11	0.943	0.939-0.949		1760	87.6												
13C-PCB-156	*	* n	1.35	NotFnd	*	1.032-1.042		*	*												
13C-PCB-157	1.50e+07	1.15 y	1.42	48:29	*	1.037-1.047		*	*												
13C-PCB-159	3.57e+04	2.56 n	1.37	45:59	*	0.989-0.999		*	*												
13C-PCB-167	*	* n	1.38	NotFnd	*	1.004-1.014		*	*												
13C-PCB-169	*	* n	1.38	NotFnd	*	1.084-1.094		*	*												
13C-PCB-170	7.00e+05	0.60 n	0.60	51:07	*	1.091-1.103		*	*												
13C-PCB-180	*	* n	0.76	NotFnd	*	1.059-1.069		*	*												
13C-PCB-188	*	* n	1.01	NotFnd	*	0.919-0.929		*	*												
13C-PCB-189	3.16e+05	0.48 y	0.80	52:42	*	1.124-1.136		*	*												
13C-PCB-194	*	* n	0.75	NotFnd	*	0.990-1.000		*	*												
13C-PCB-202	*	* n	0.99	NotFnd	*	1.036-1.046		*	*												
13C-PCB-206	*	* n	0.73	NotFnd	*	1.020-1.301		*	*												
13C-PCB-208	*	* n	1.08	NotFnd	*	0.977-0.987		*	*												
13C-PCB-209	*	* n	0.71	NotFnd	*	1.045-1.055		*	*												

A = used only  
KA = Sec 1:10 dilution

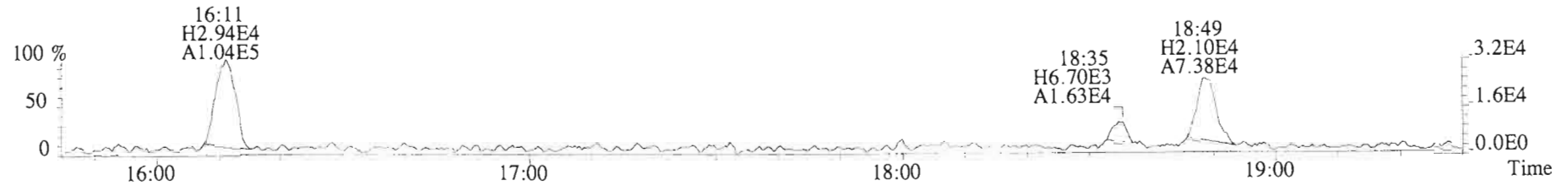
Analyst: Dms

Date: 2/4/15

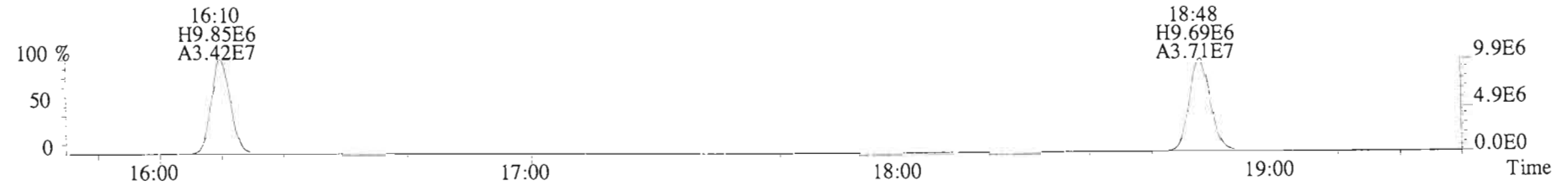
File:150127E1 #1-729 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
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188.0393 S:9 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1996.0,0.00%,F,F)



190.0363 S:9 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2472.0,0.00%,F,F)



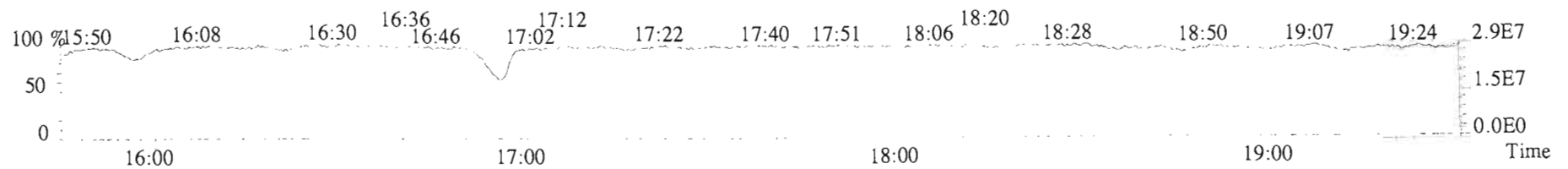
200.0795 S:9 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5360.0,0.00%,F,F)



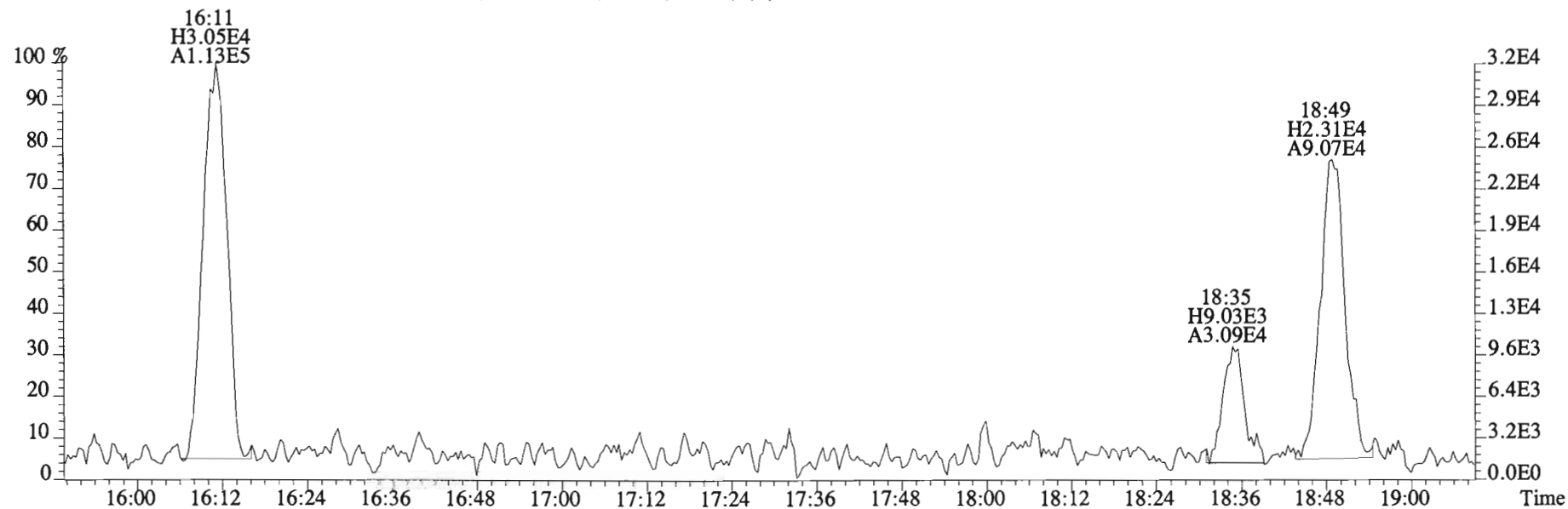
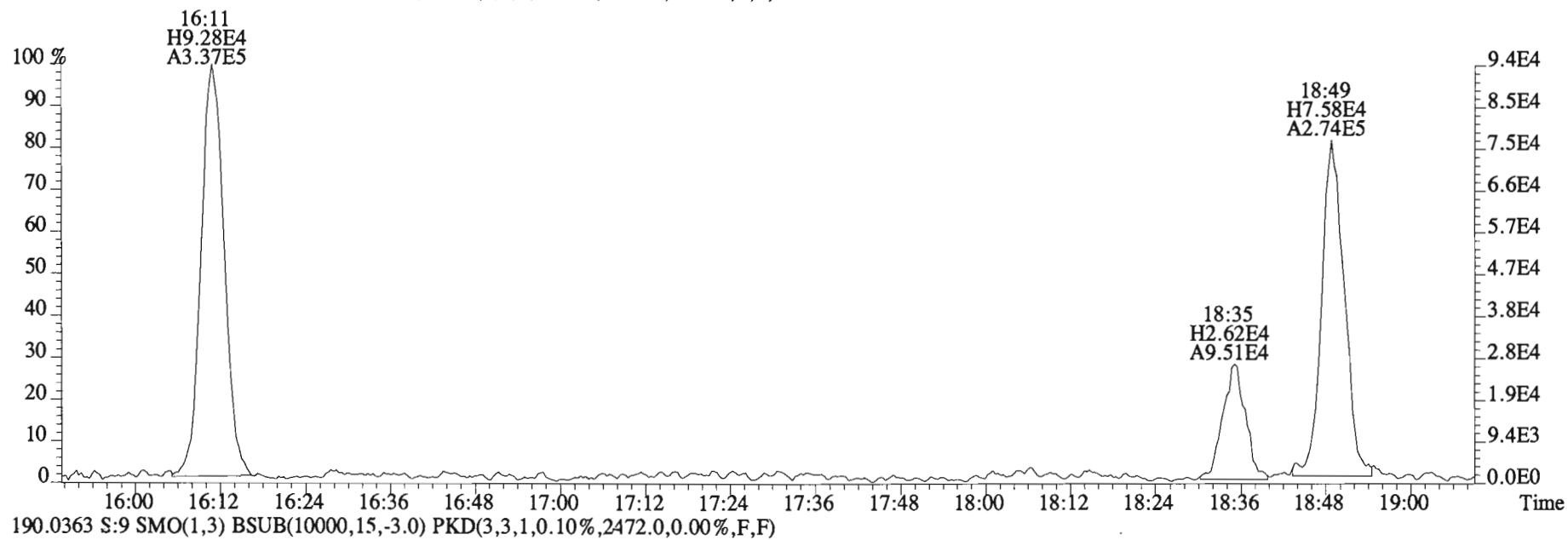
202.0766 S:9 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,39560.0,0.00%,F,F)



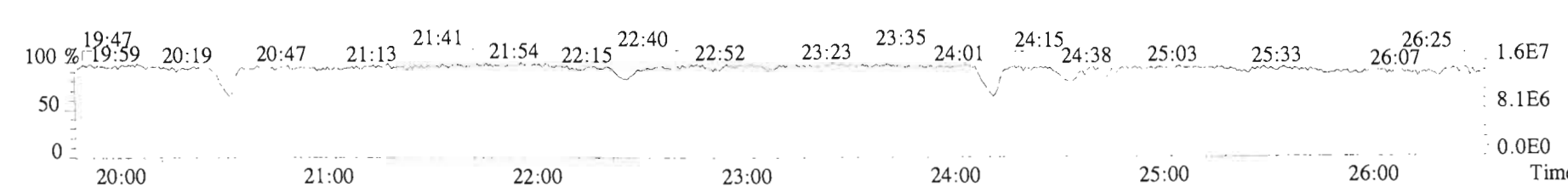
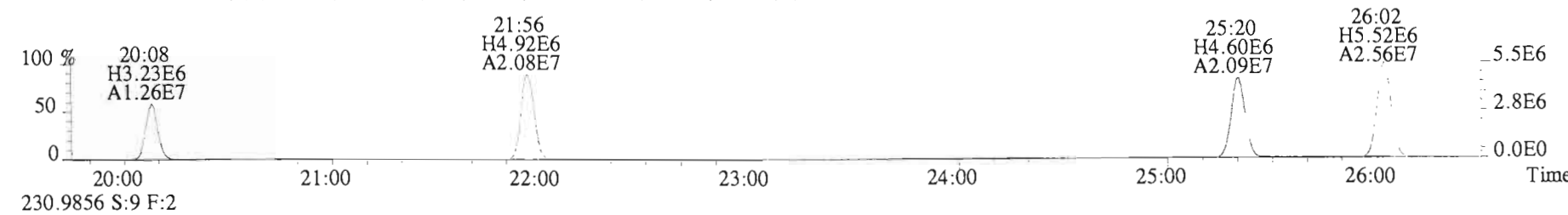
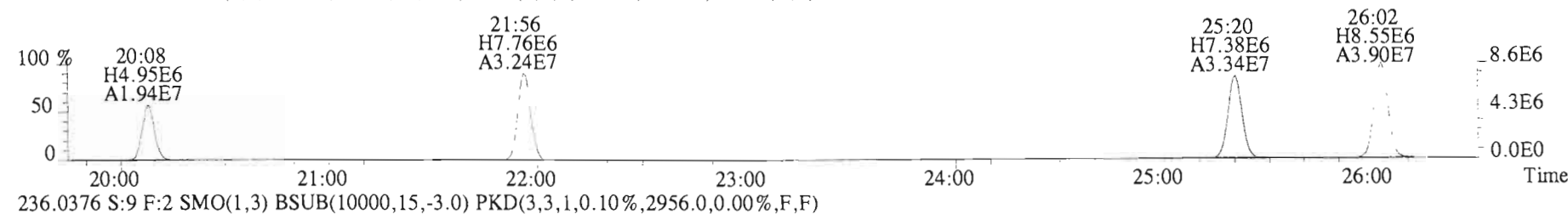
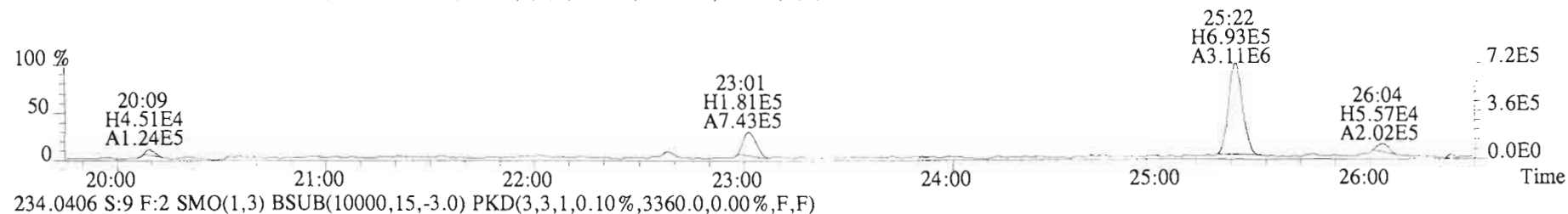
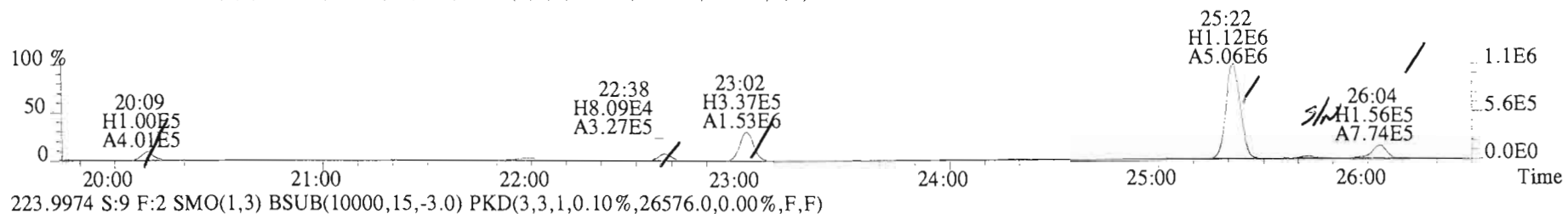
180.9880 S:9



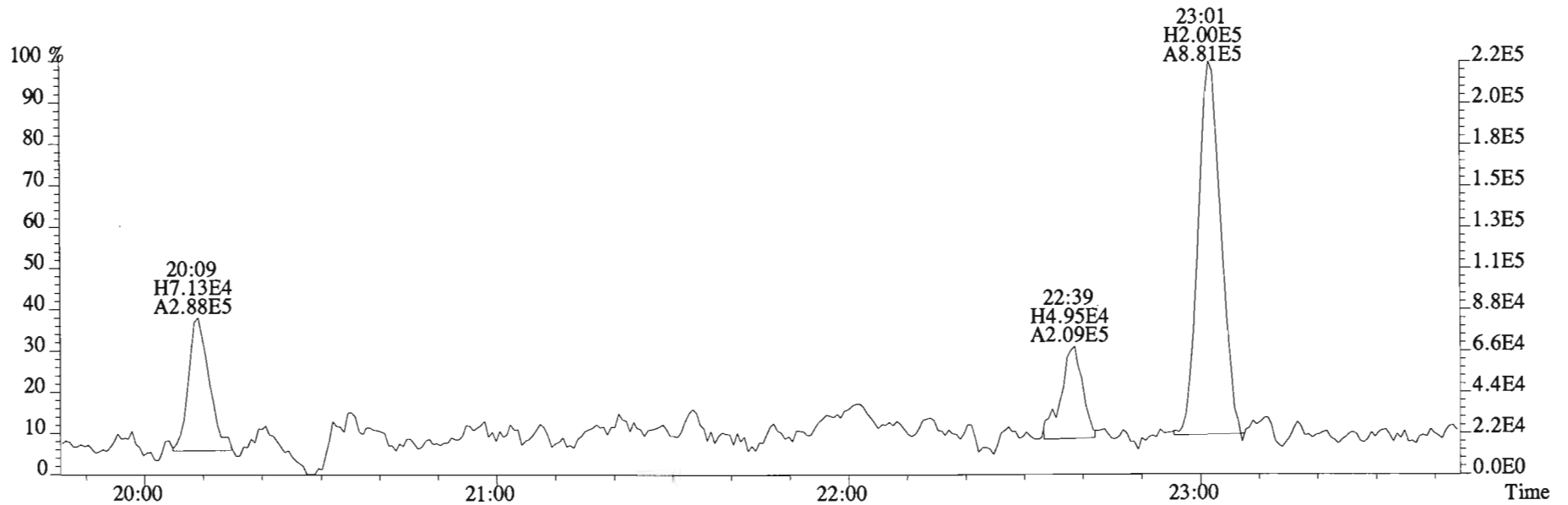
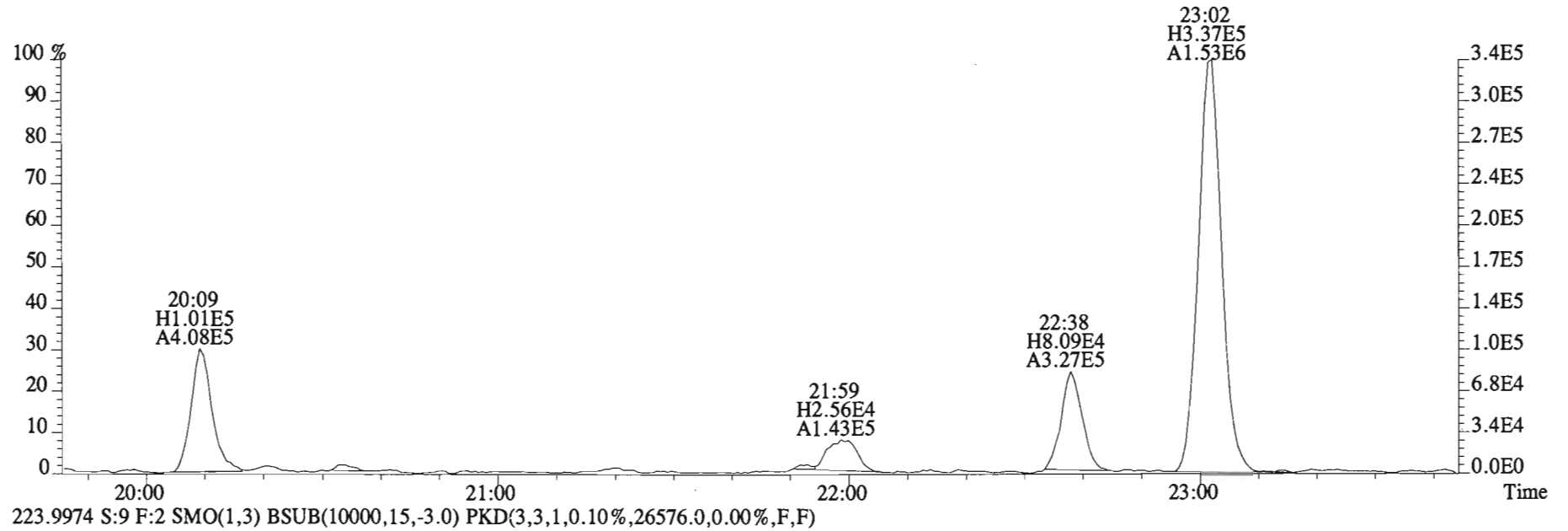
File:150127E1 #1-729 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
188.0393 S:9 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1996.0,0.00%,F,F)



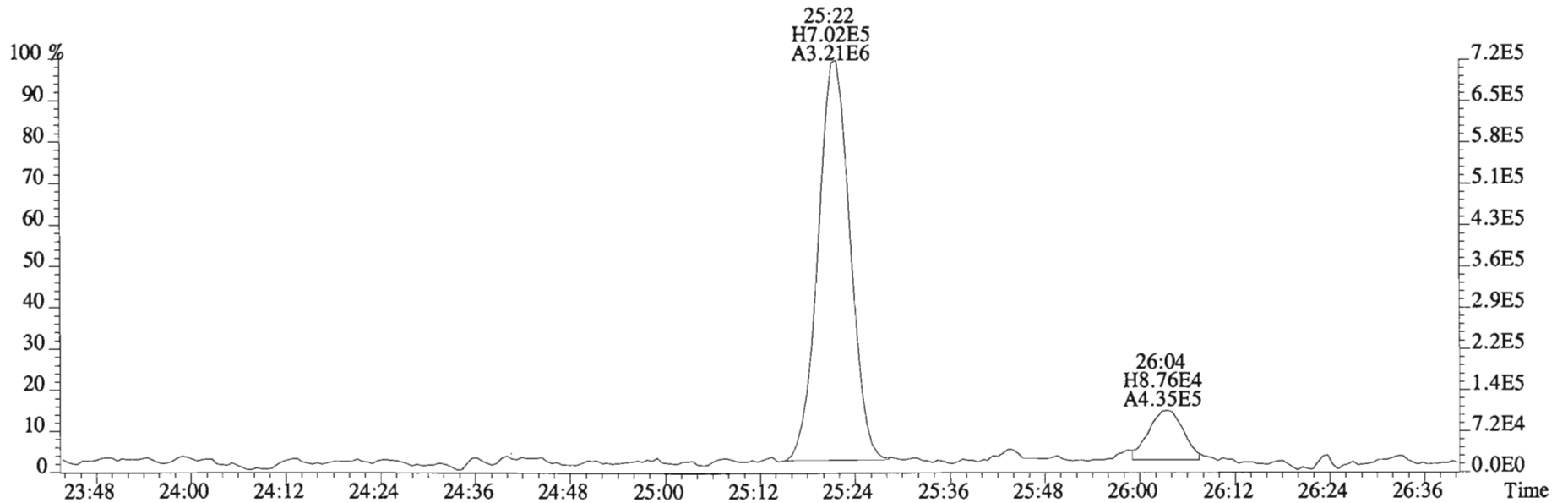
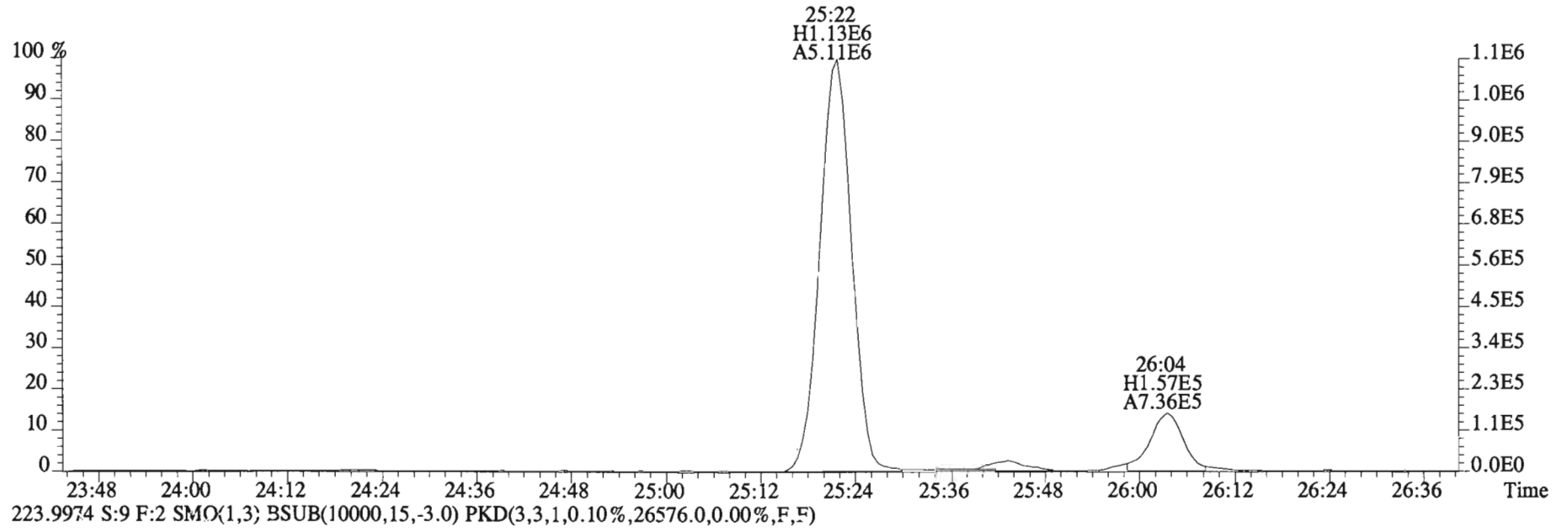
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 Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
 222.0003 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2376.0,0.00%,F,F)



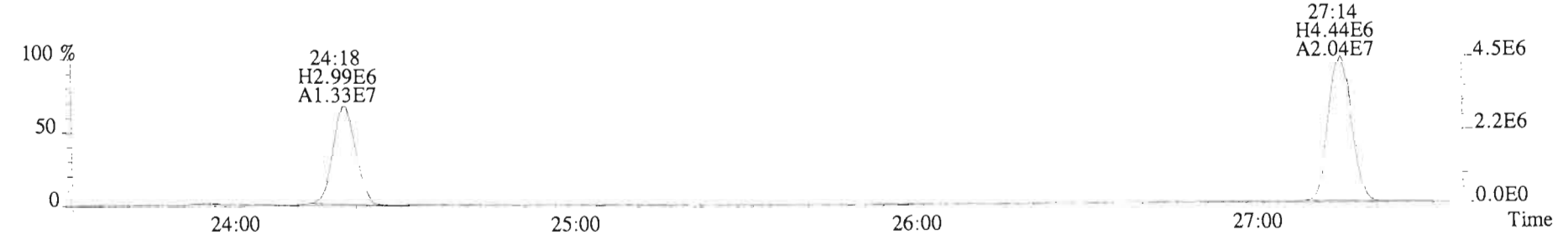
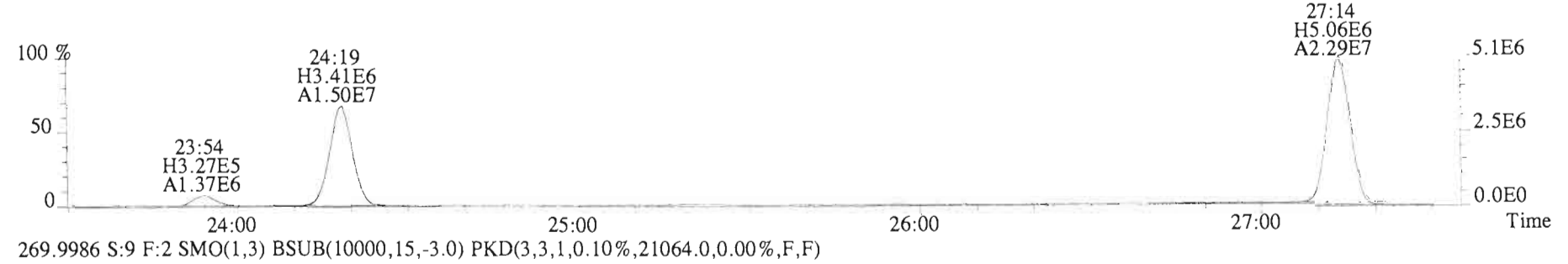
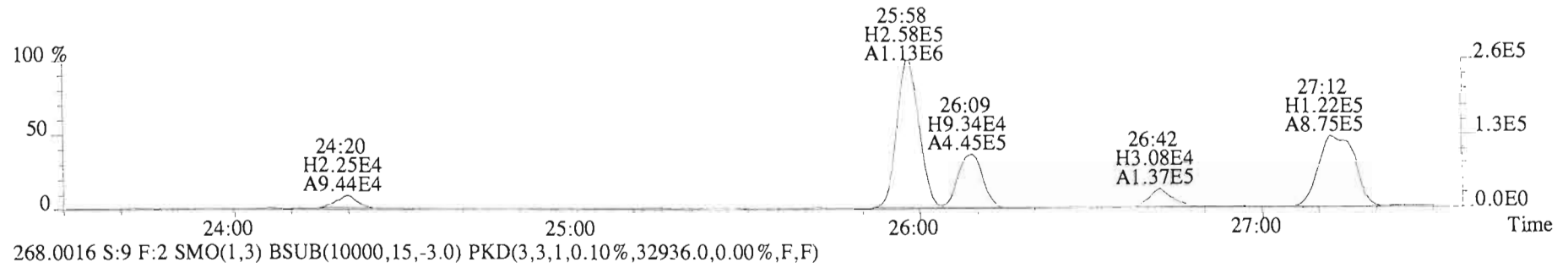
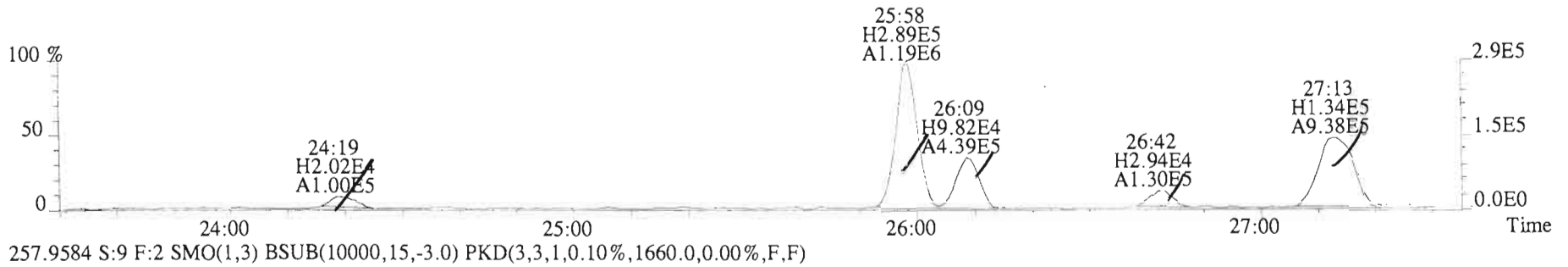
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Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
222.0003 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2376.0,0.00%,F,F)



File:150127E1 #1-757 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
222.0003 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2376.0,0.00%,F,F)

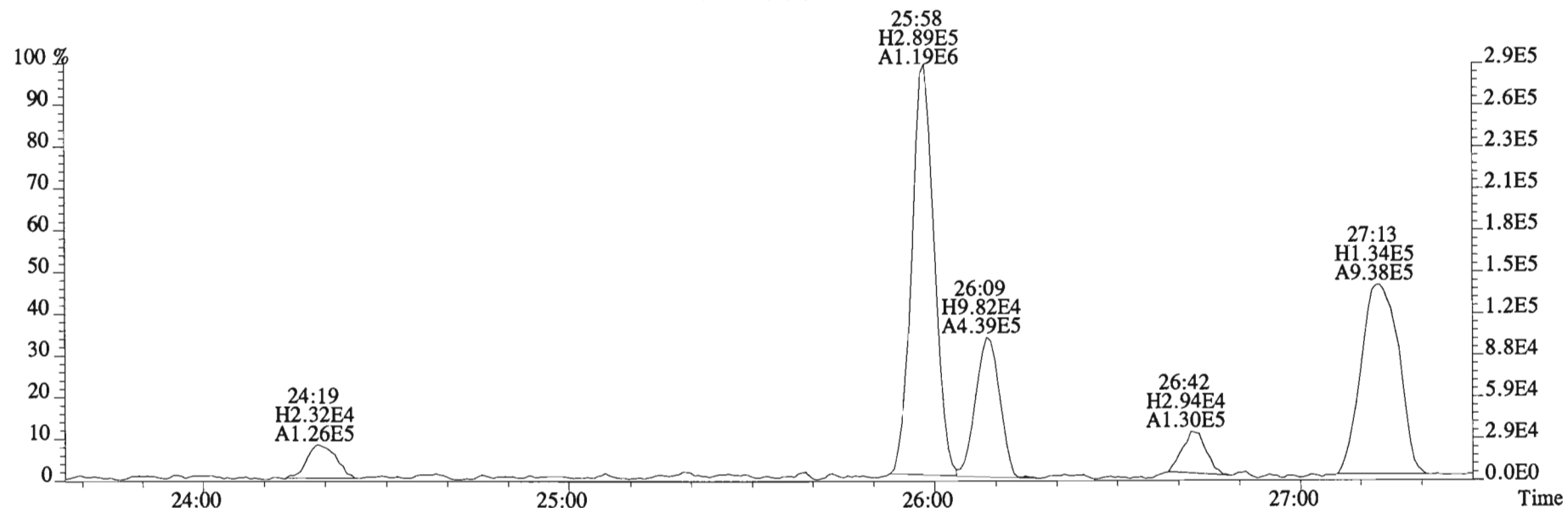


File:150127E1 #1-757 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
255.9613 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3692.0,0.00%,F,F)

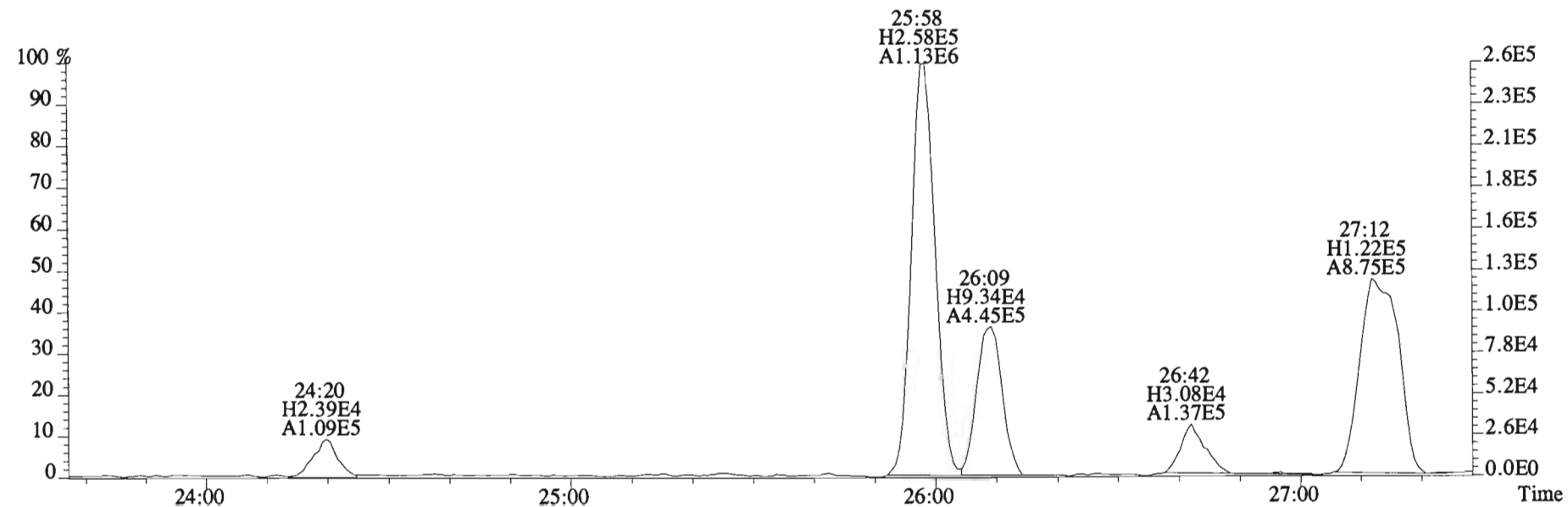




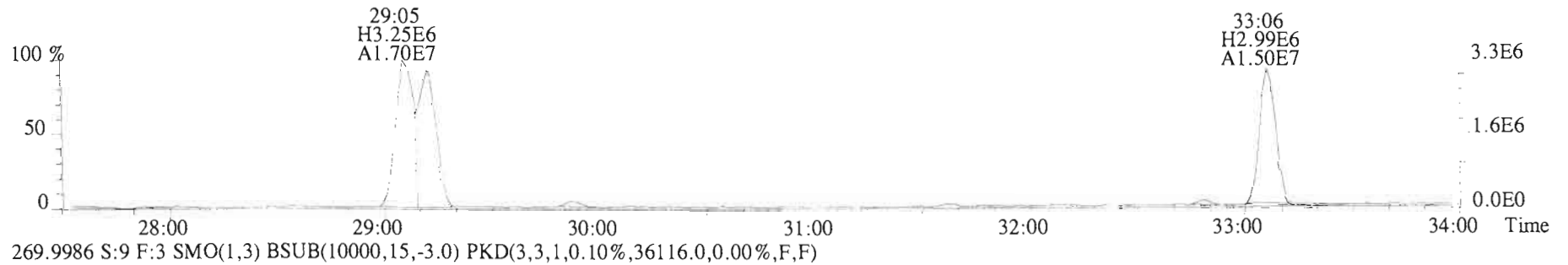
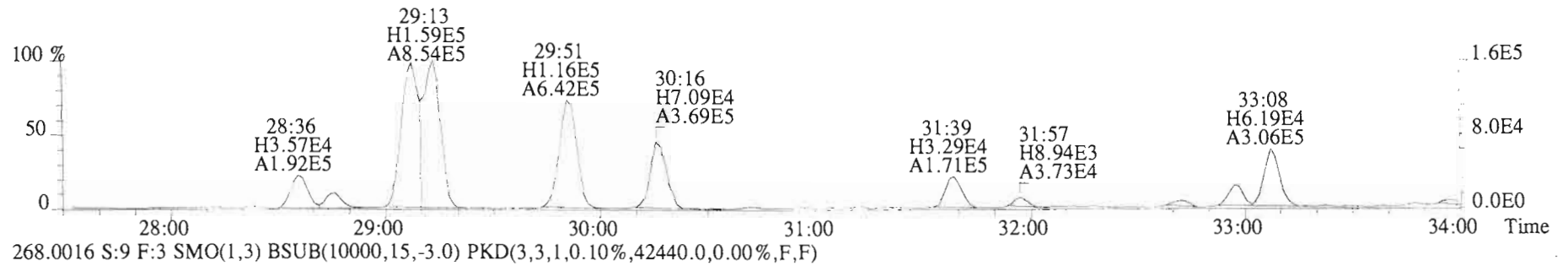
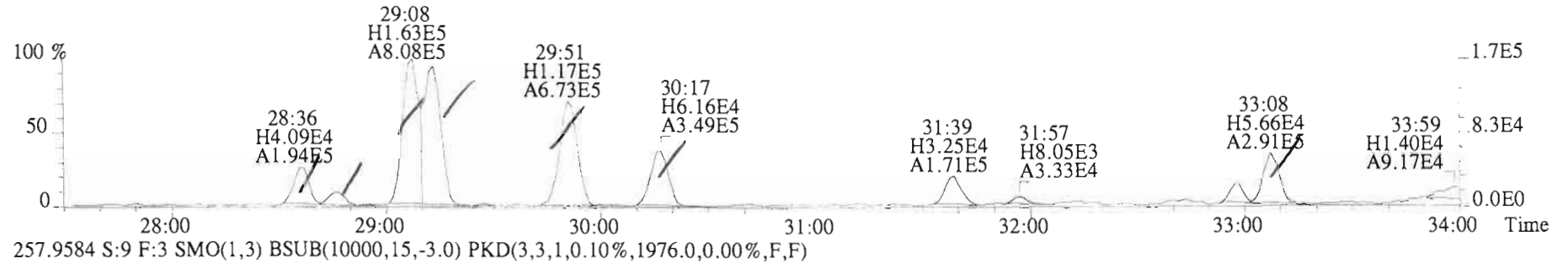
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255.9613 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3692.0,0.00%,F,F)



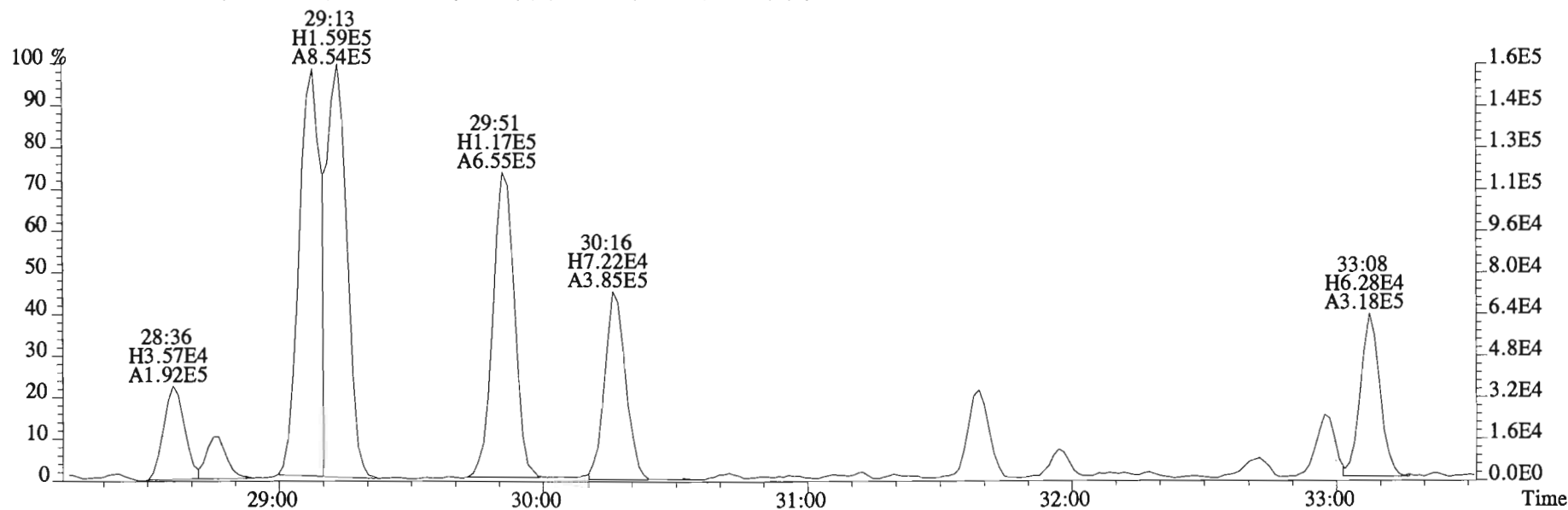
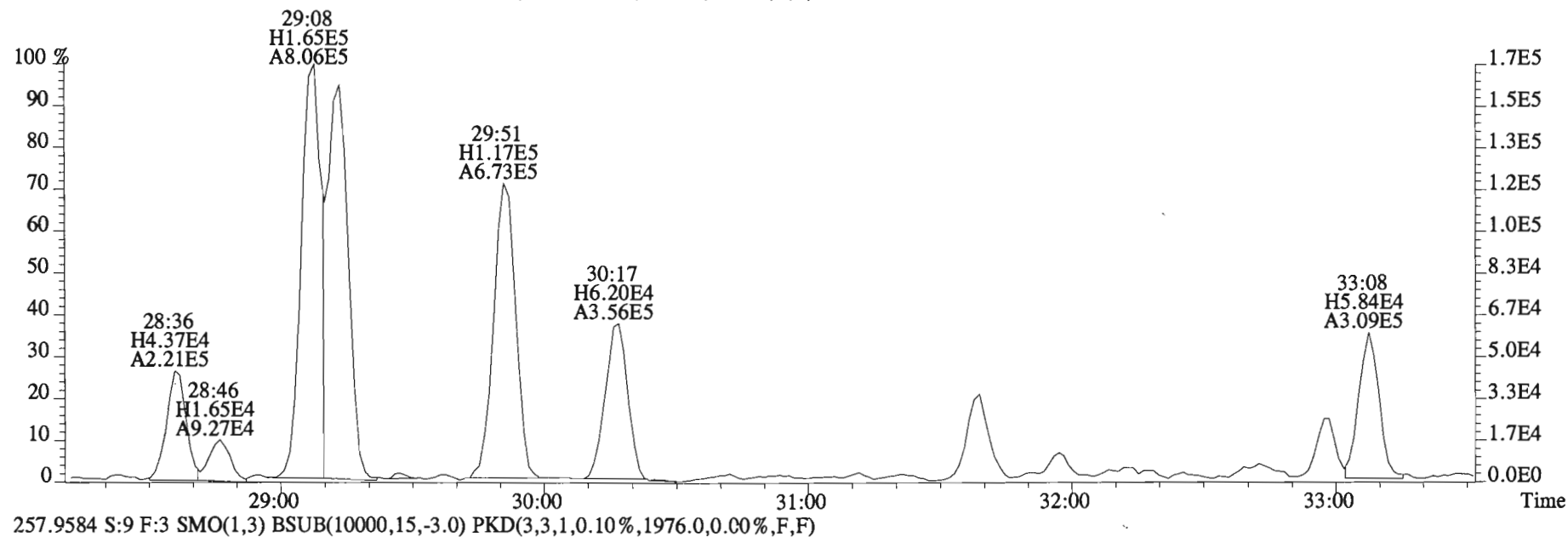
257.9584 S:9 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1660.0,0.00%,F,F)



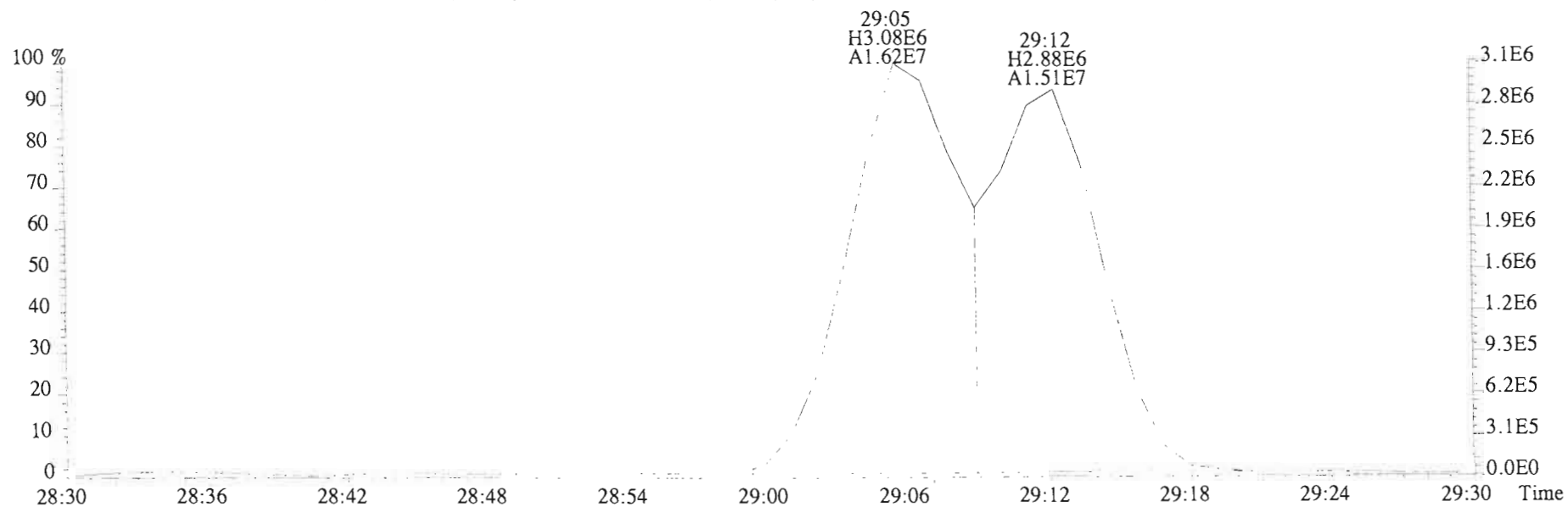
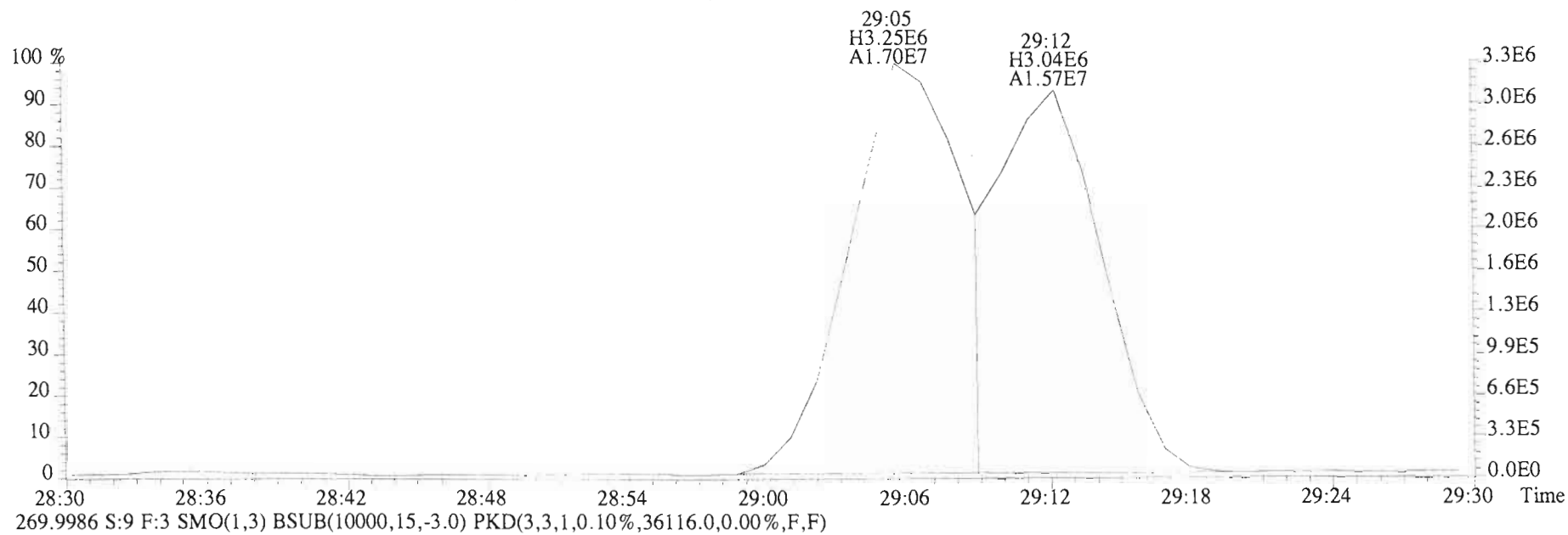
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Sample#9 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
255.9613 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2928.0,0.00%,F,F)



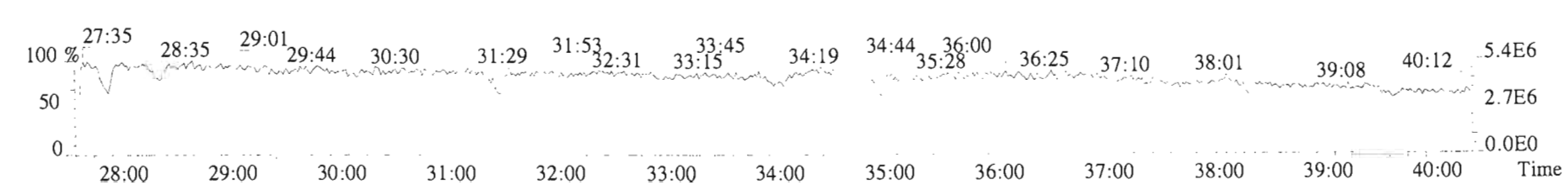
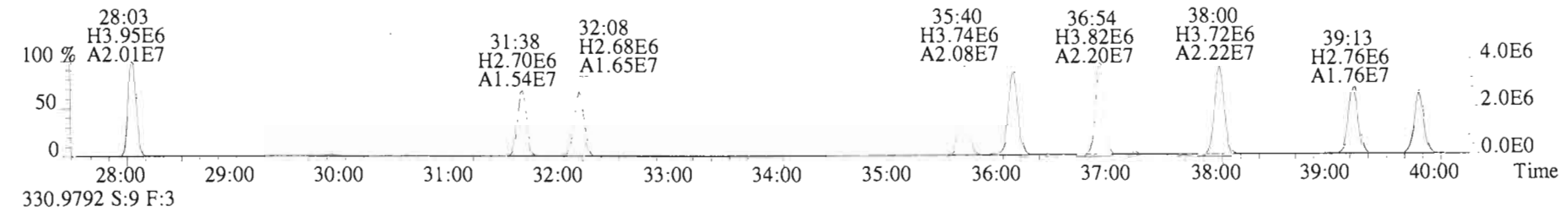
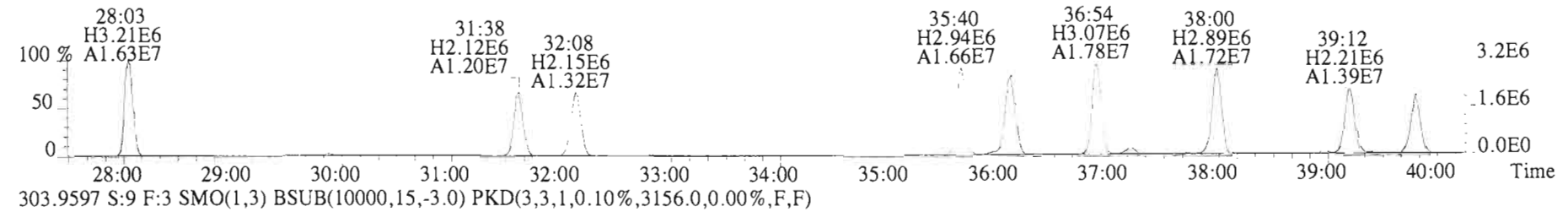
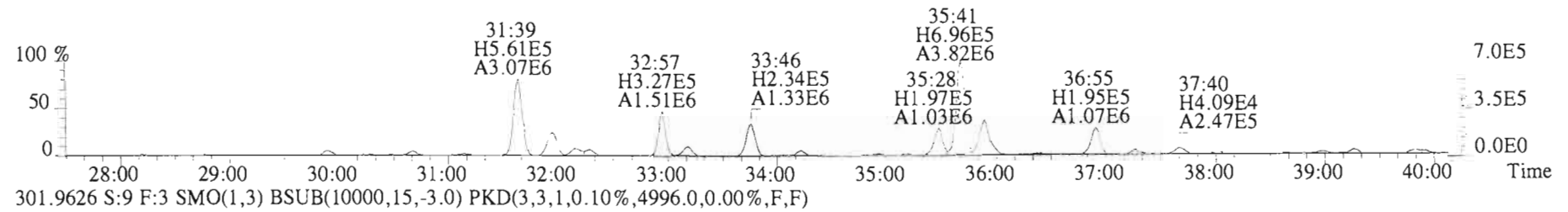
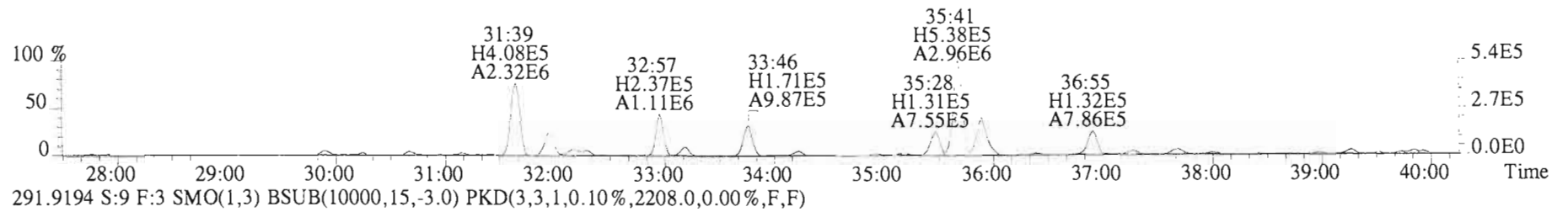
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255.9613 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2928.0,0.00%,F,F)



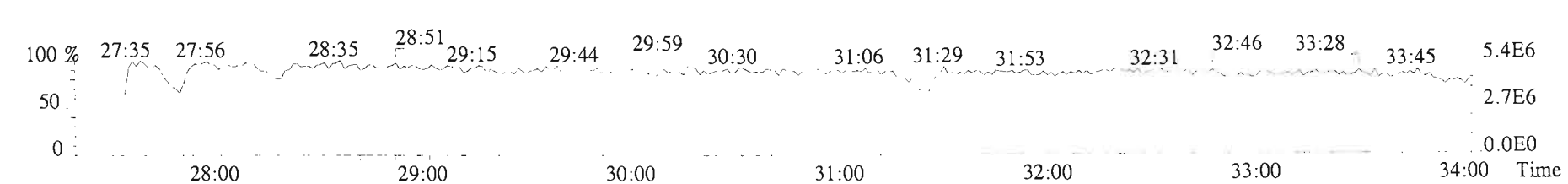
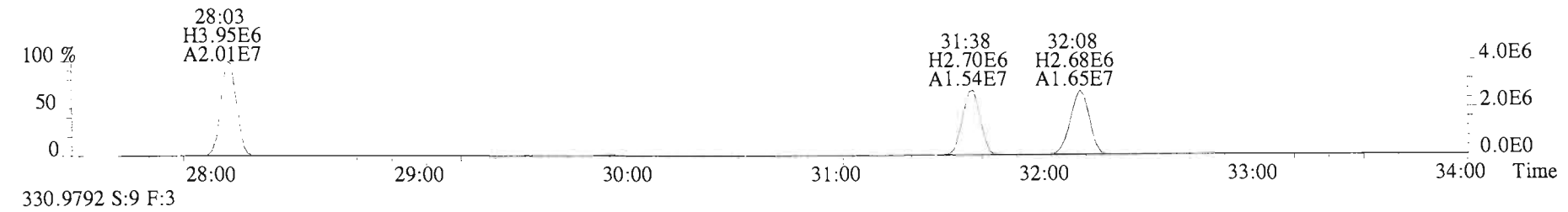
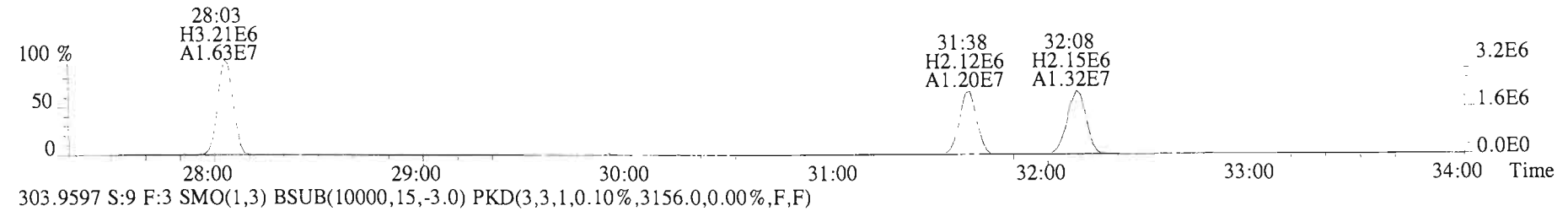
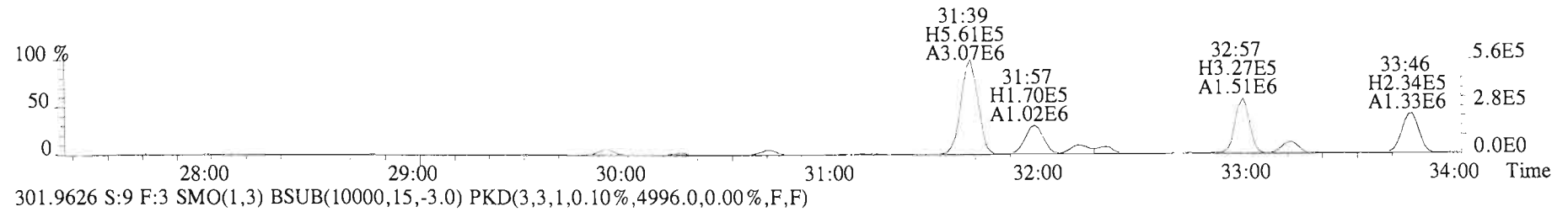
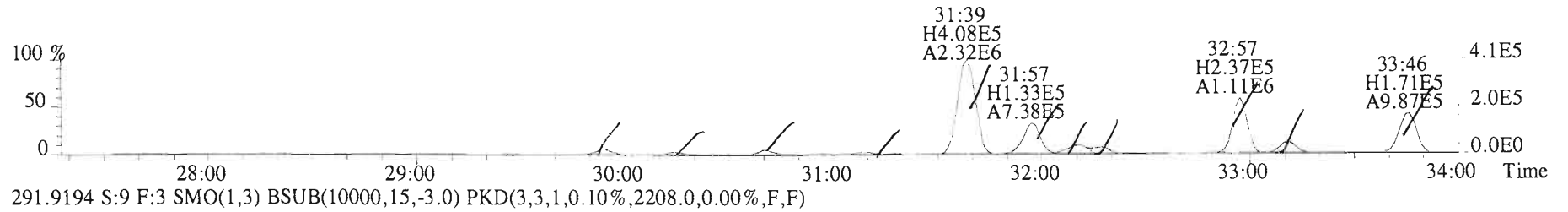
File:150127E1 #1-762 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
268.0016 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,42440.0,0.00%,F,F)



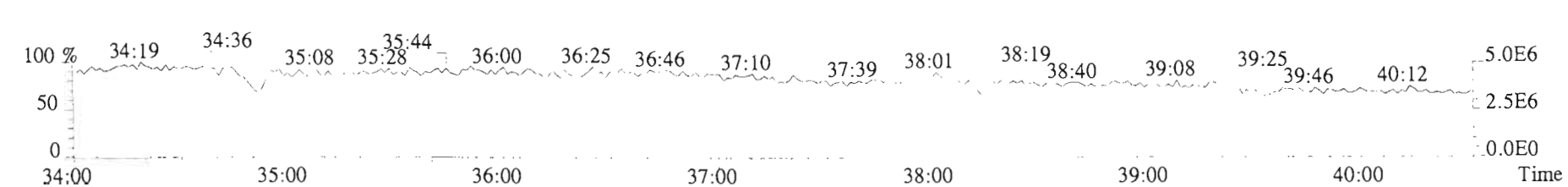
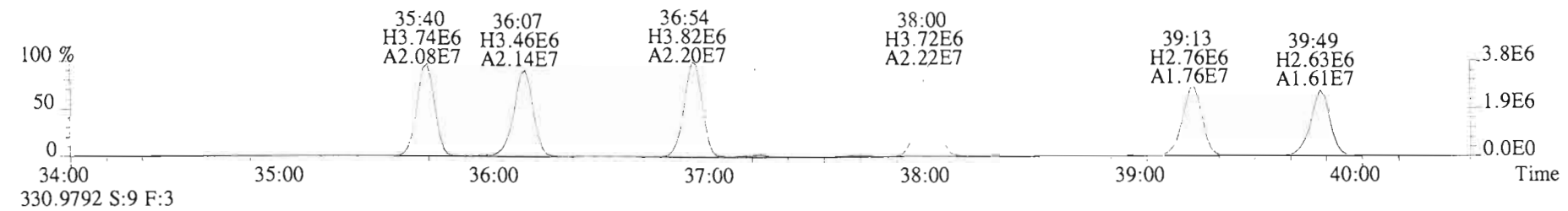
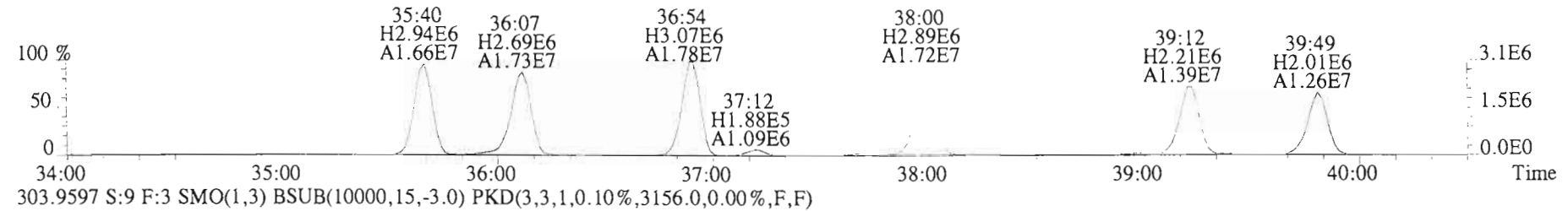
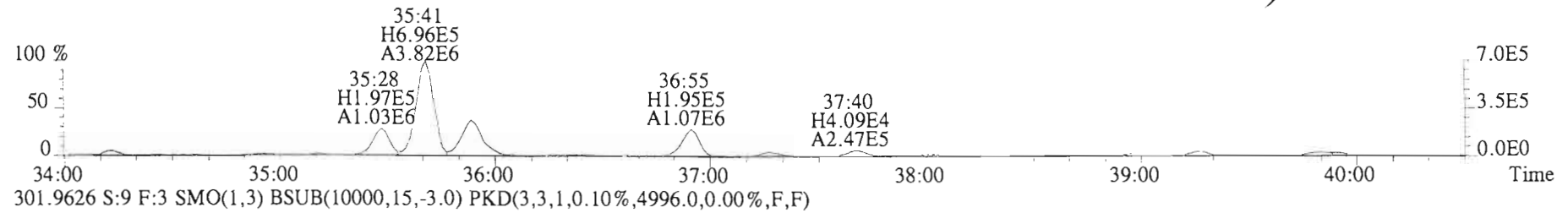
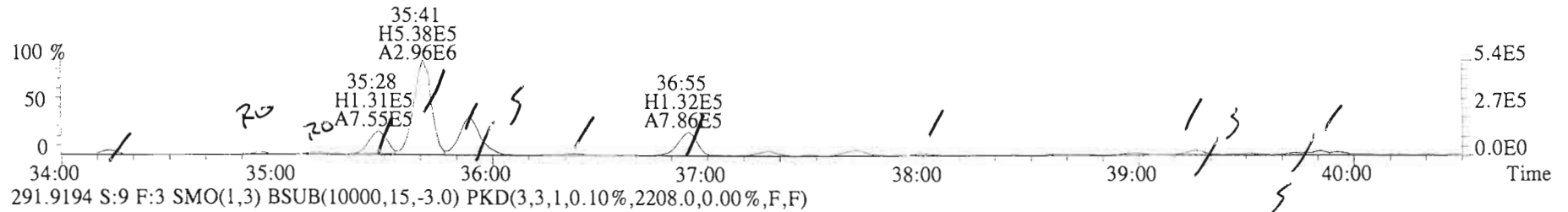
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Sample#9 File Text: Vista Analytical Laboratory VG-8 Text: 1500116-03 WM-FT-IB-20150122-W 1 Exp: PCB\_ZB1  
289.9224 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2044.0,0.00%,F,F)



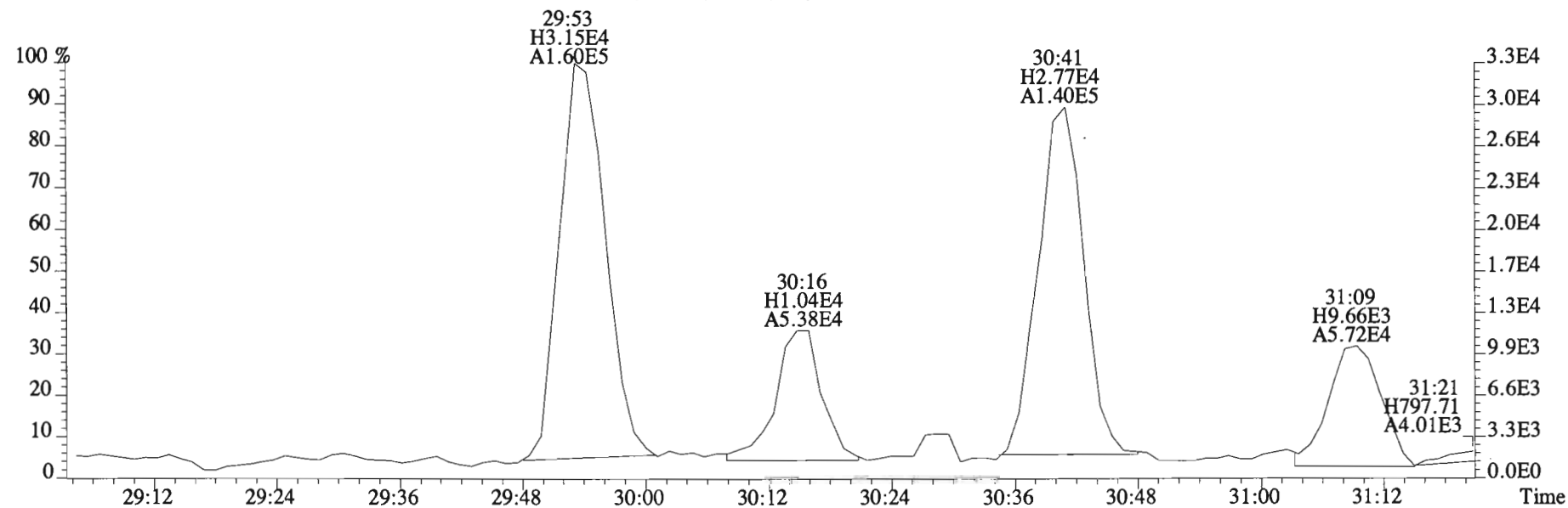
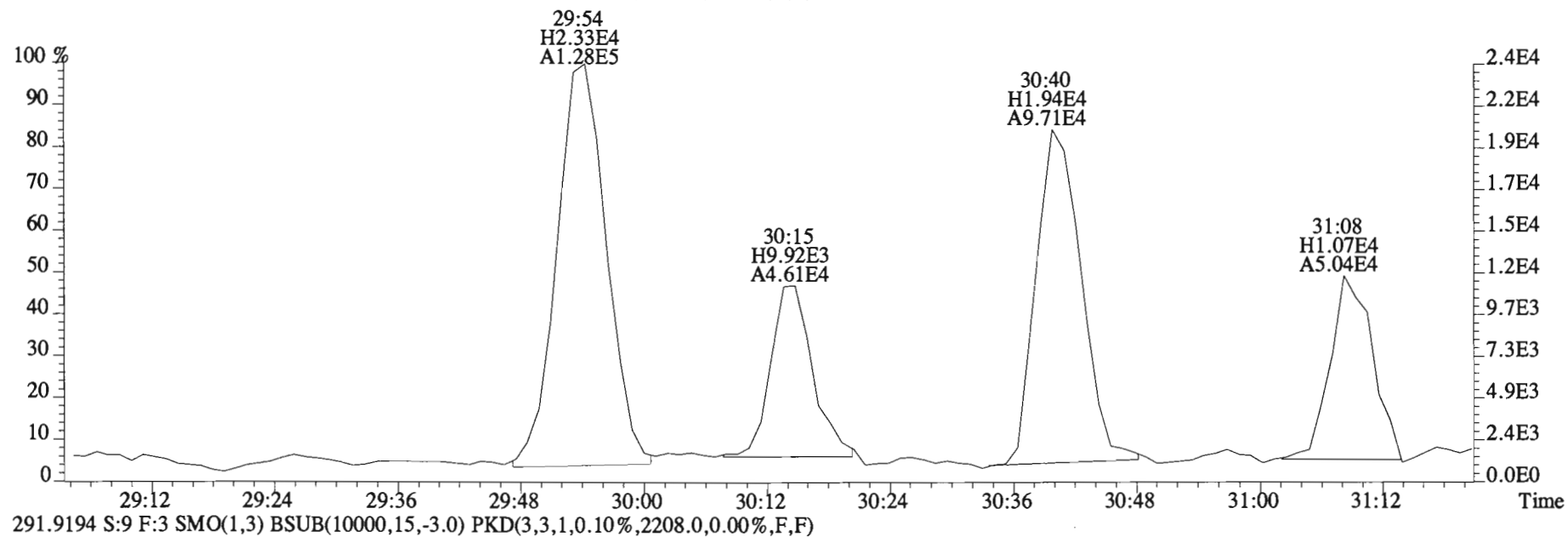
File:150127E1 #1-762 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
289.9224 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2044.0,0.00%,F,F)



File:150127E1 #1-762 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
289.9224 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2044.0,0.00%,F,F)

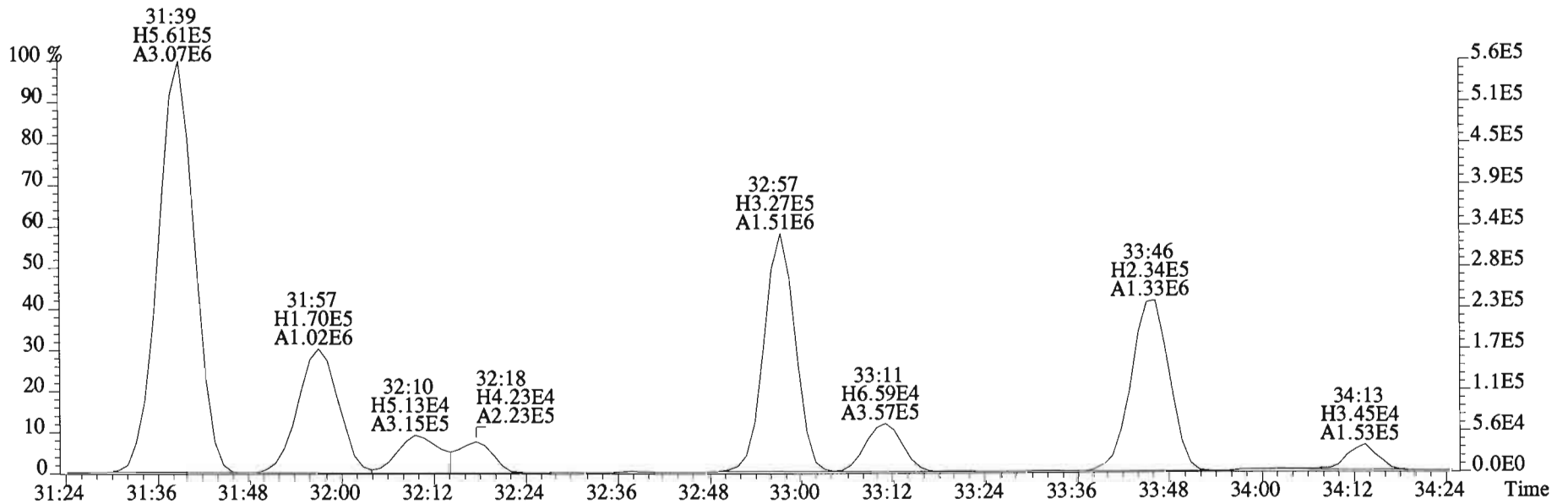
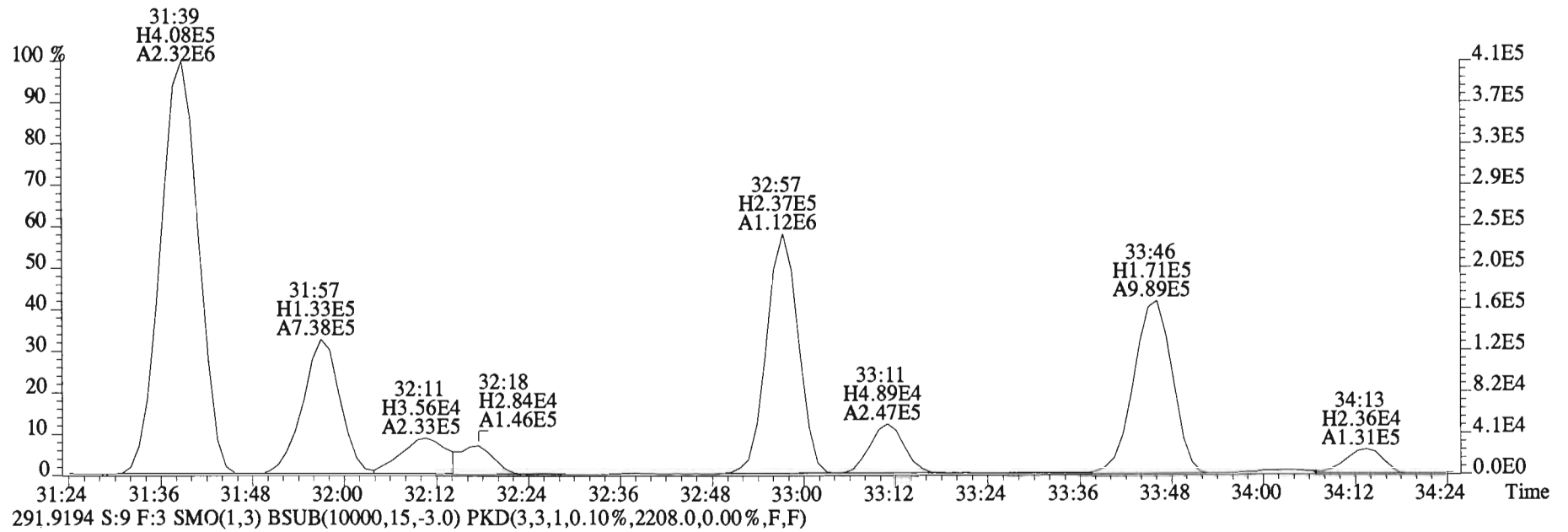


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Sample#9 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
289.9224 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2044.0,0.00%,F,F)

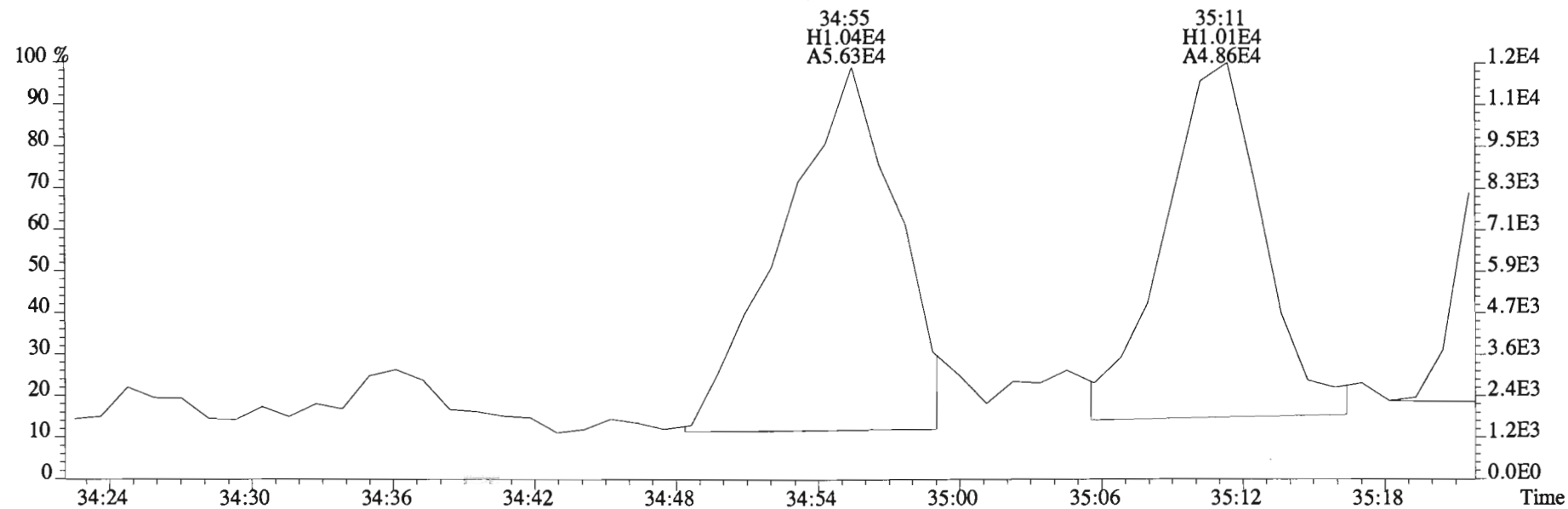
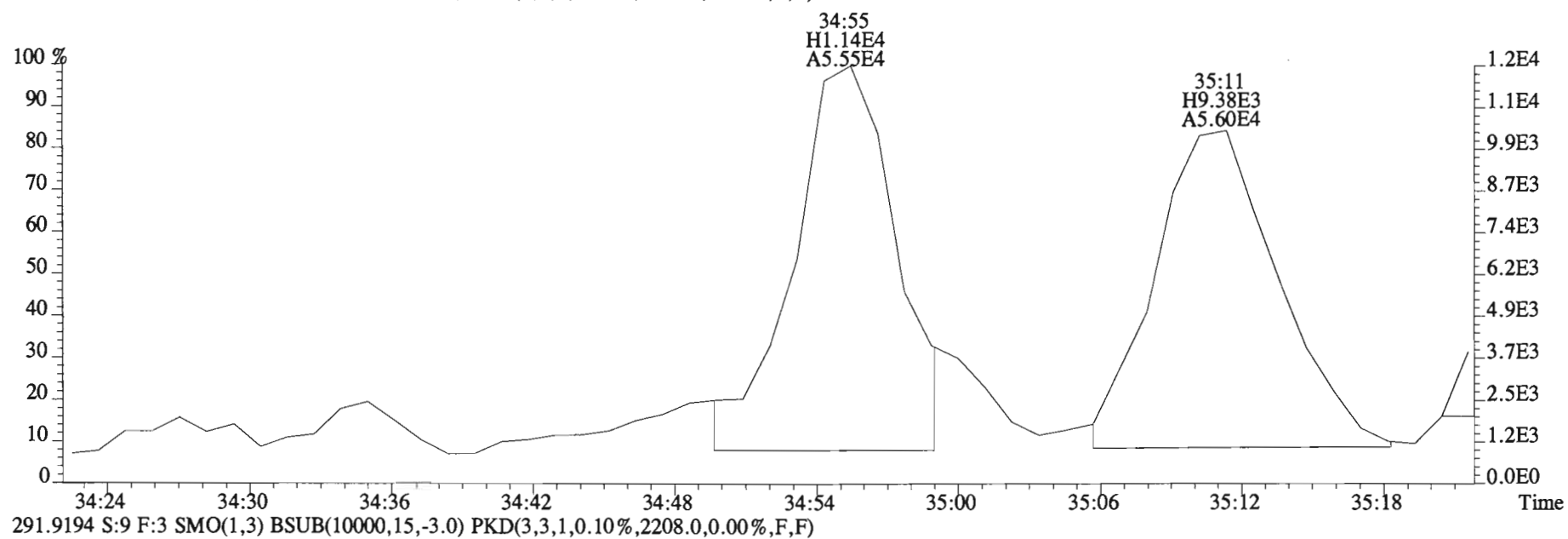




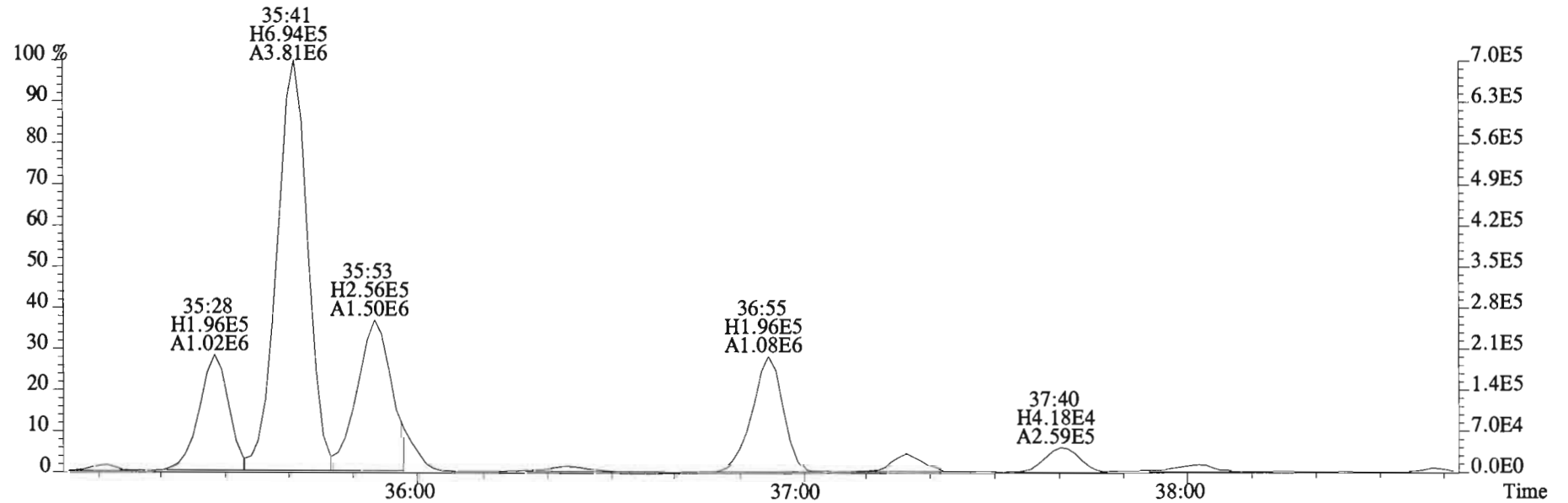
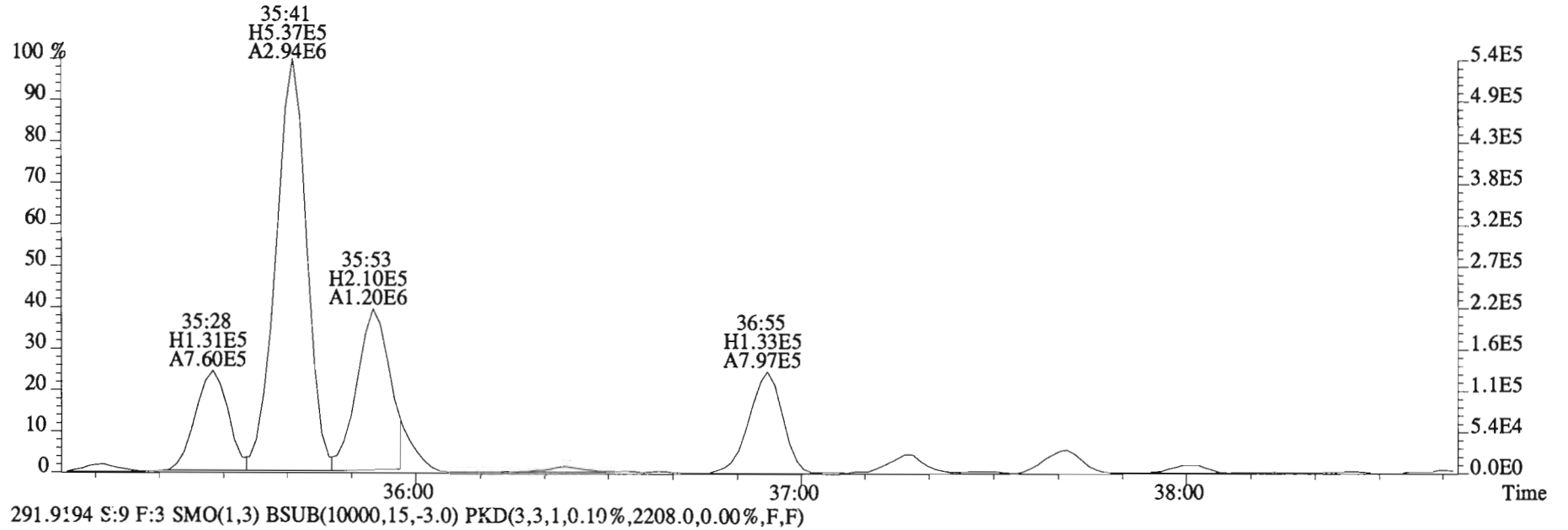
File:150127E1 #1-762 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
 289.9224 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2044.0,0.00%,F,F)



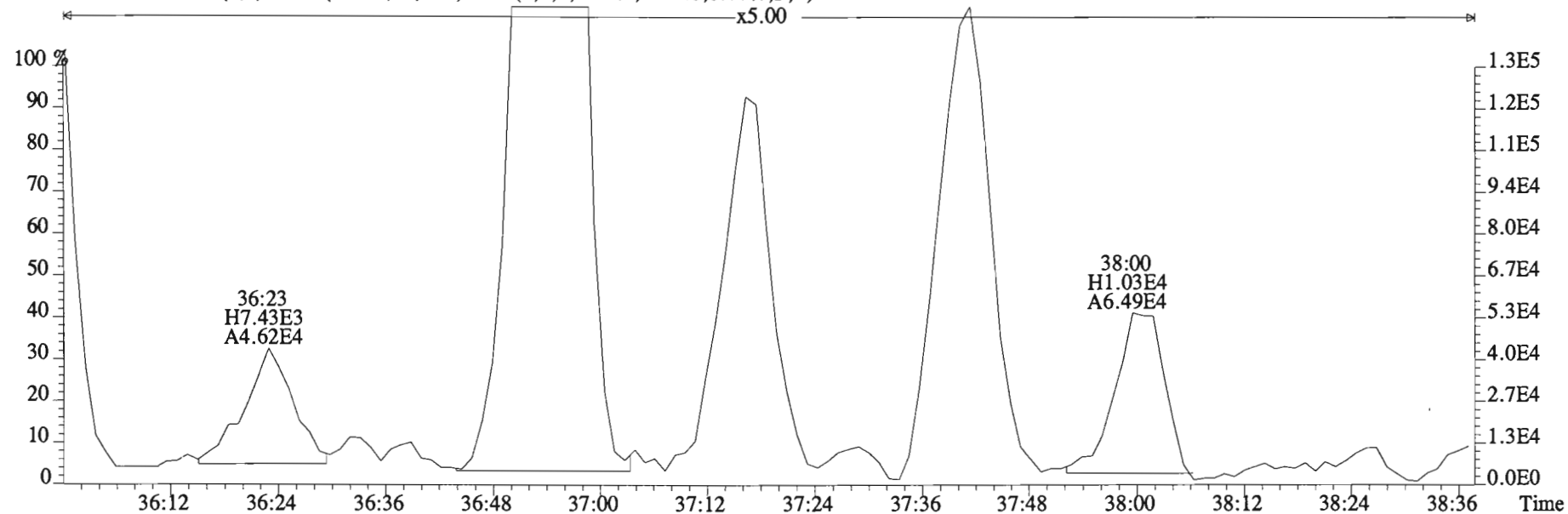
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Sample#9 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
289.9224 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2044.0,0.00%,F,F)



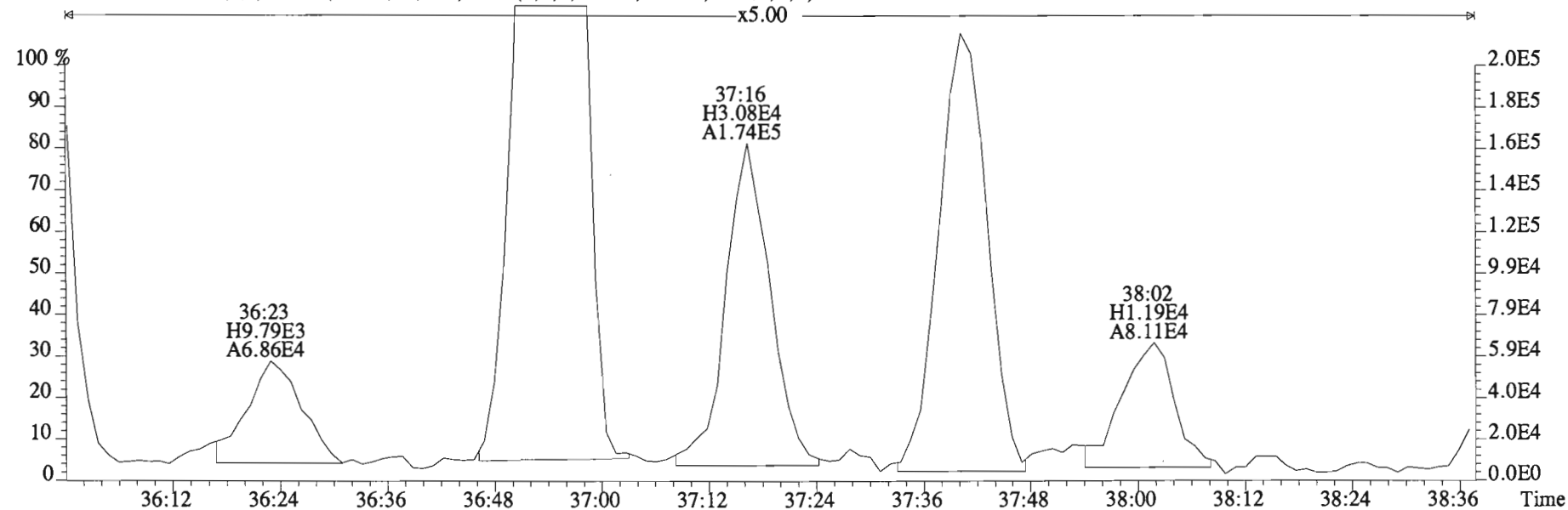
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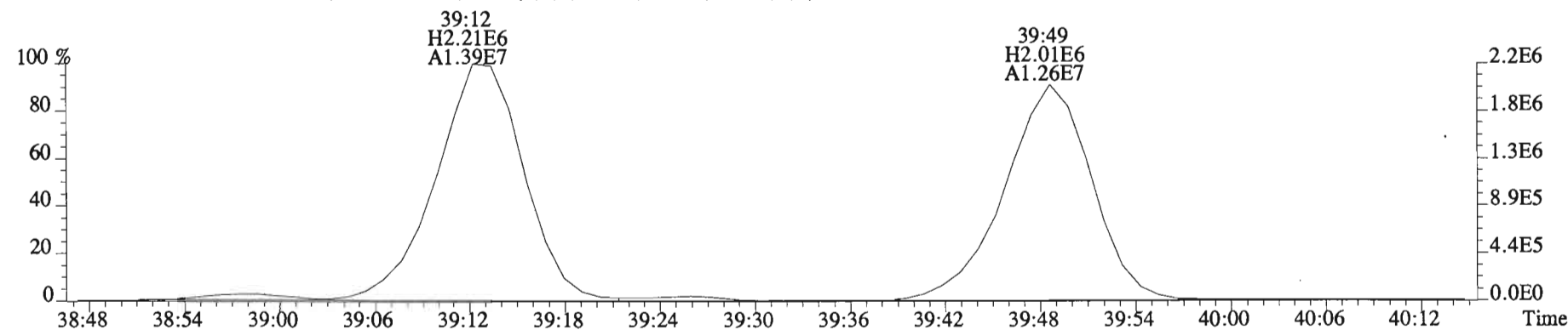
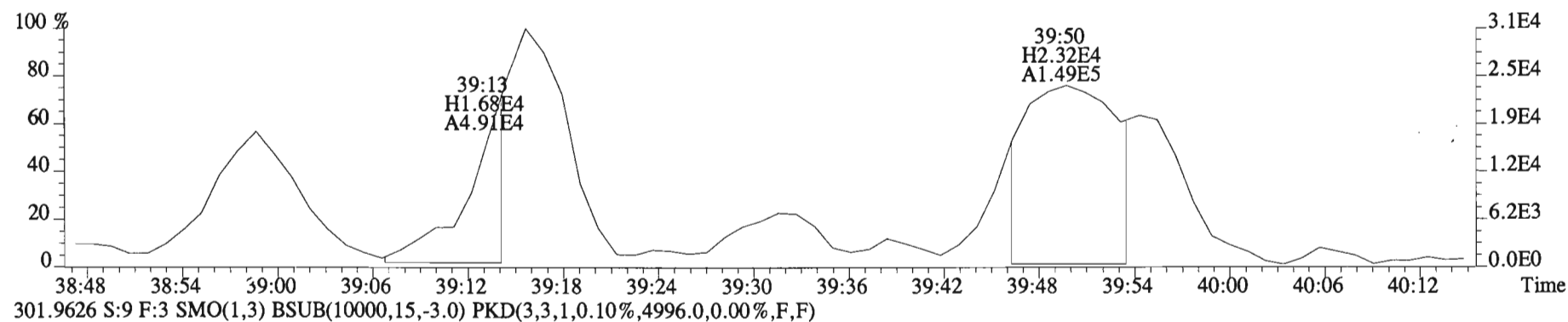
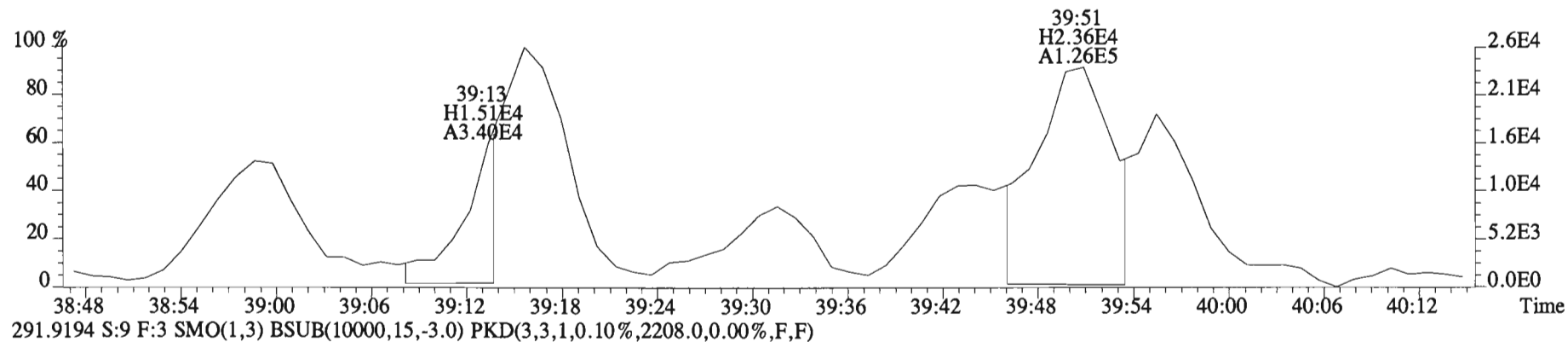
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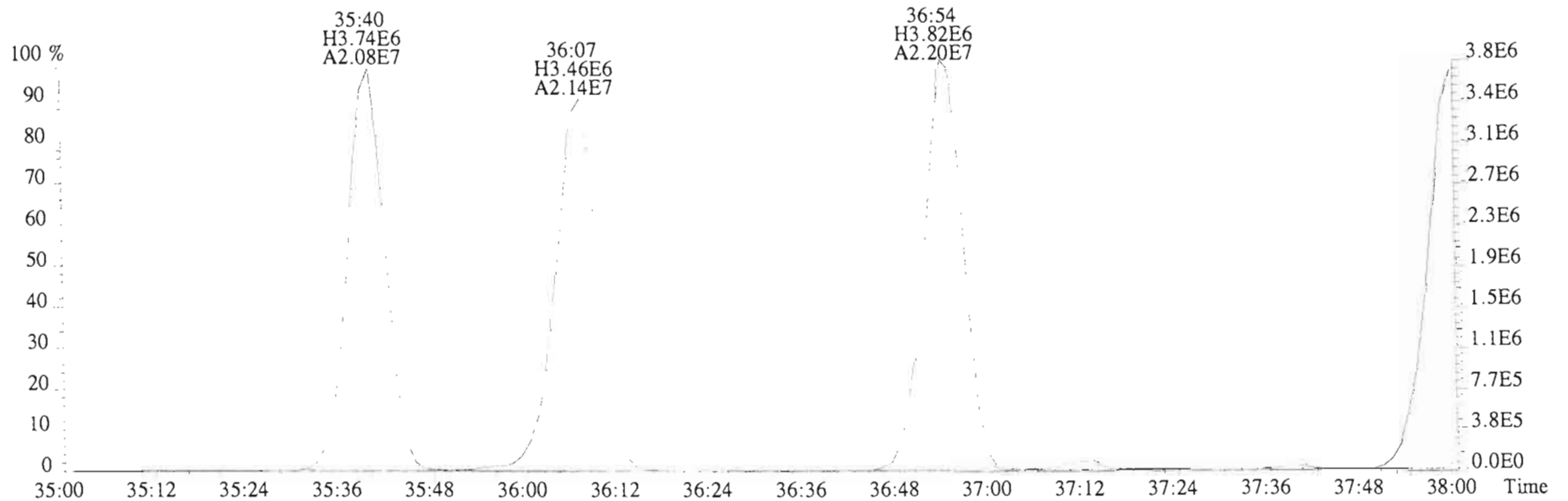
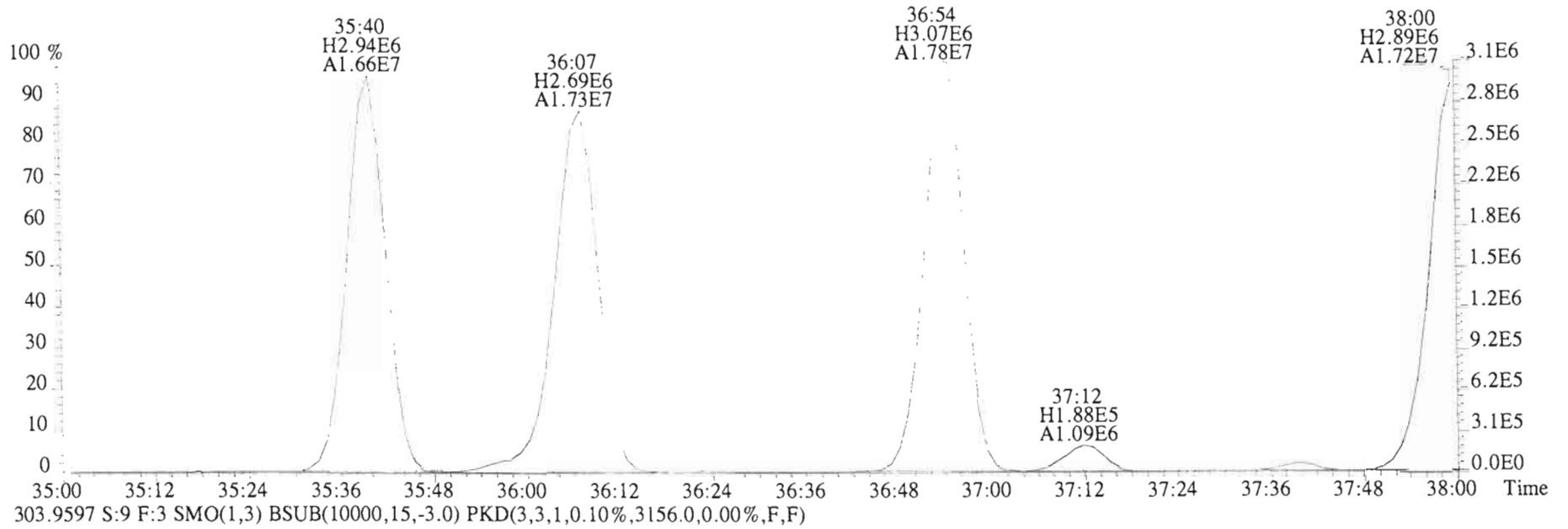
291.9194 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2208.0,0.00%,F,F)



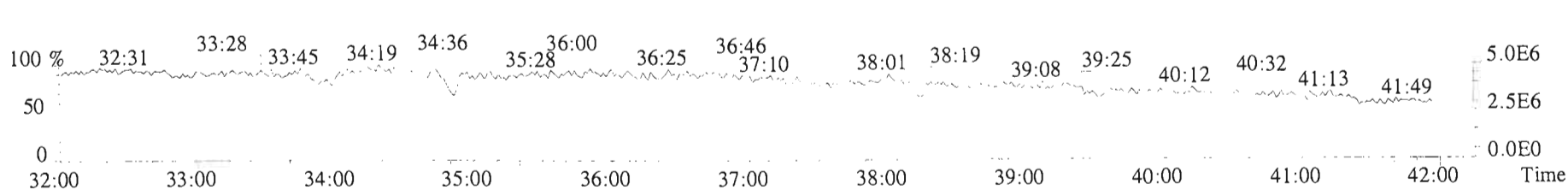
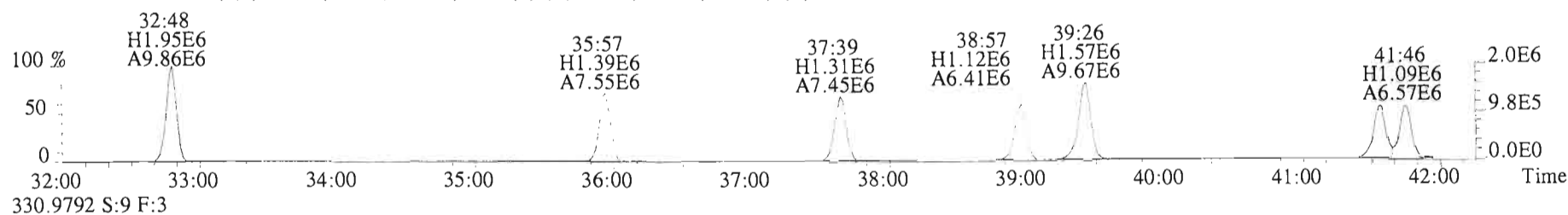
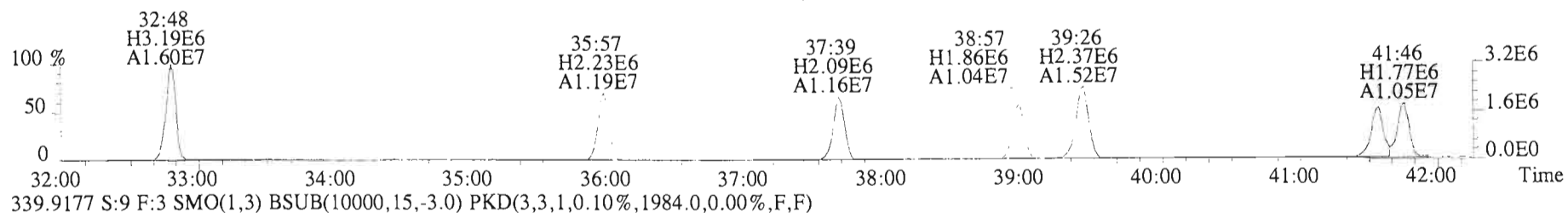
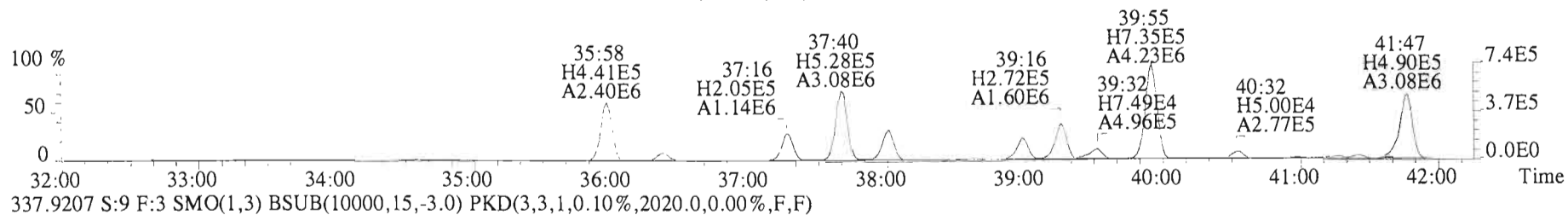
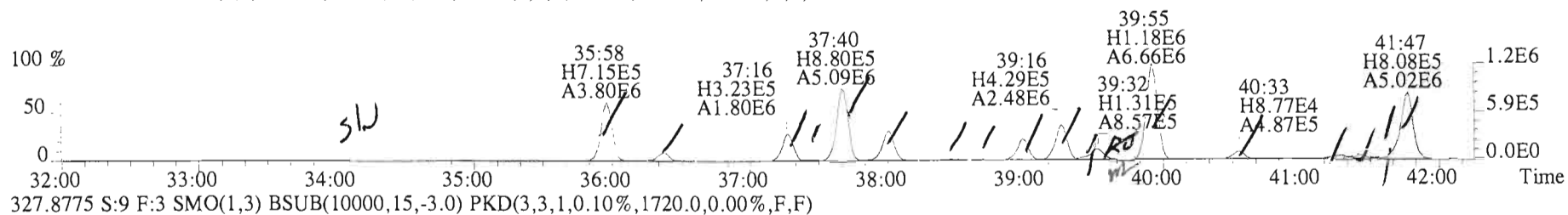
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Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
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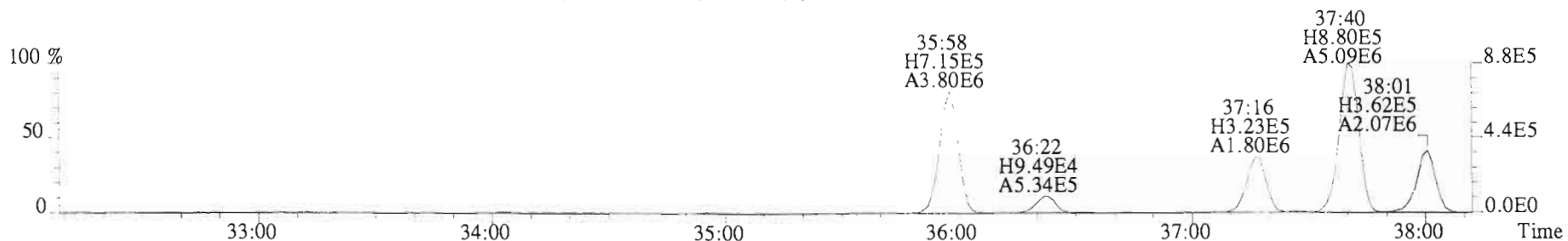
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Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
301.9626 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4996.0,0.00%,F,F)



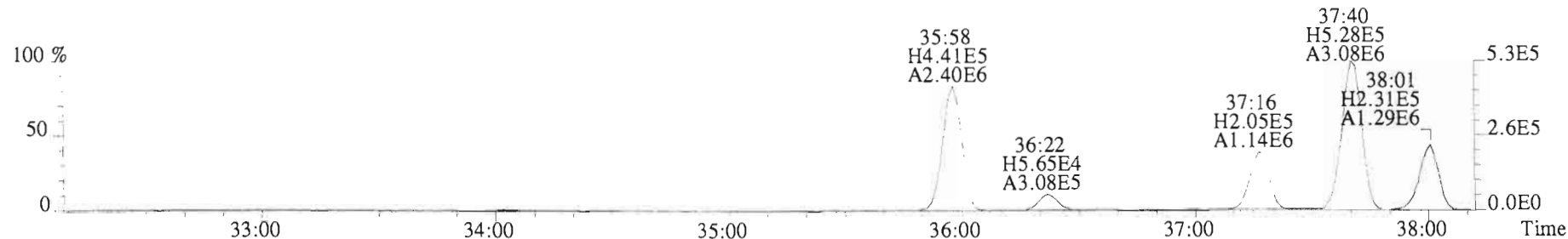
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325.8804 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2080.0,0.00%,F,F)



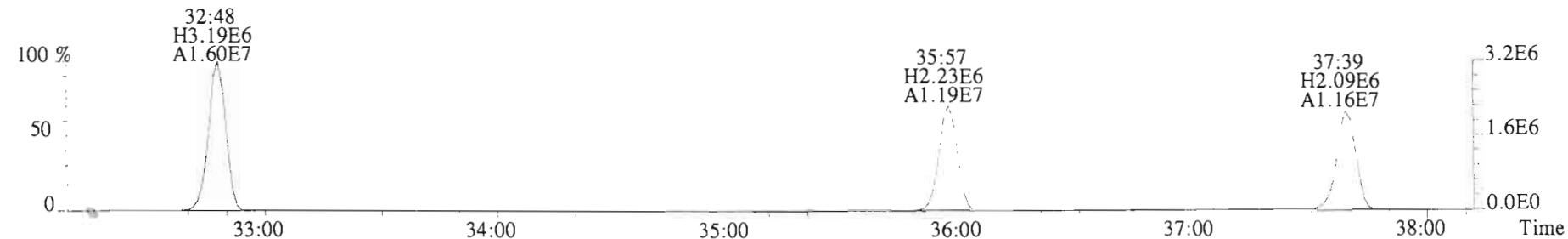
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 Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
 325.8804 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2080.0,0.00%,F,F)



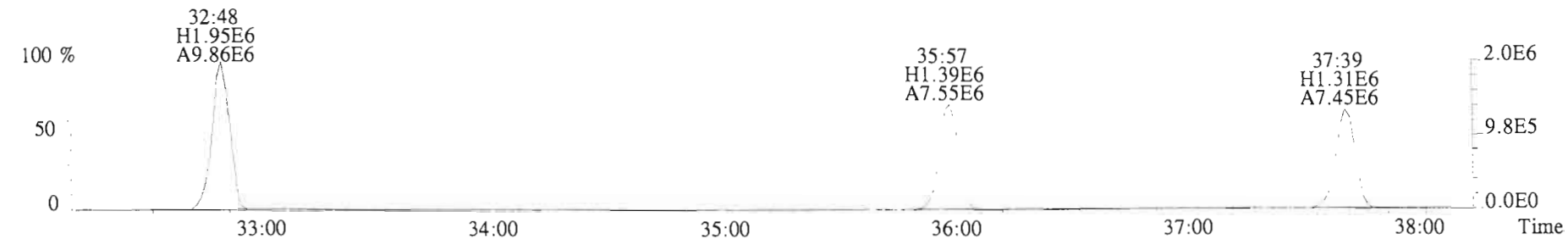
327.8775 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1720.0,0.00%,F,F)



337.9207 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2020.0,0.00%,F,F)

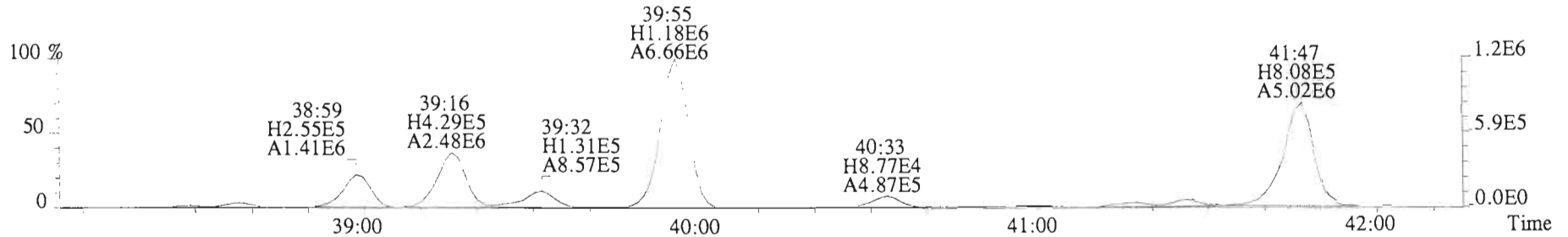


339.9177 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1984.0,0.00%,F,F)

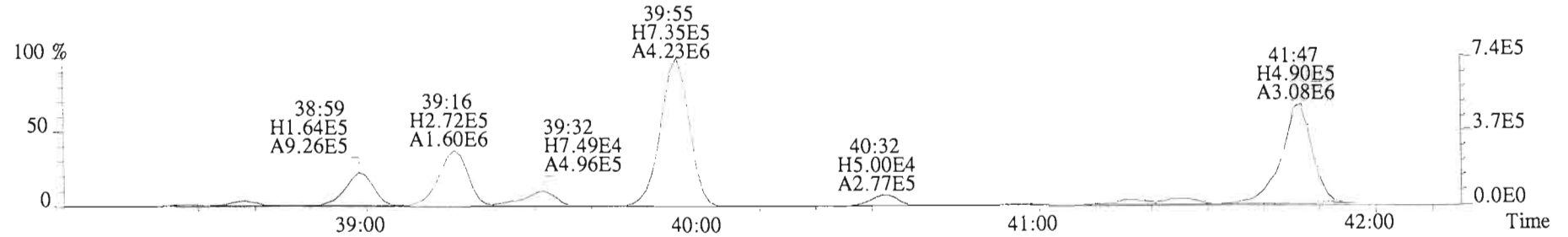




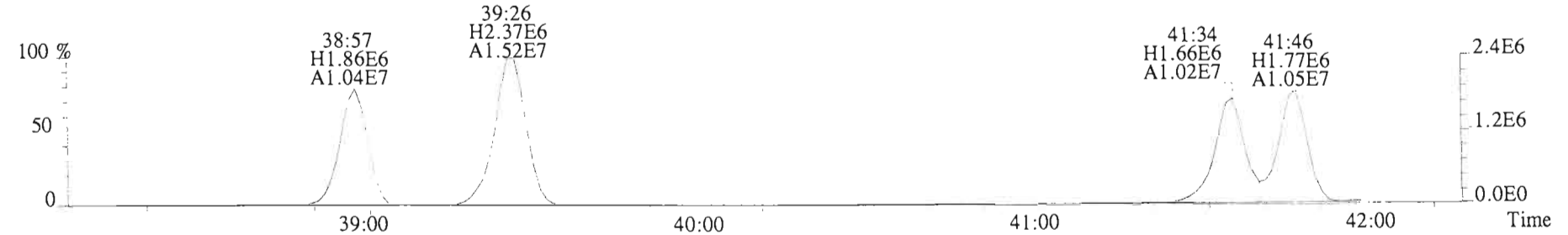
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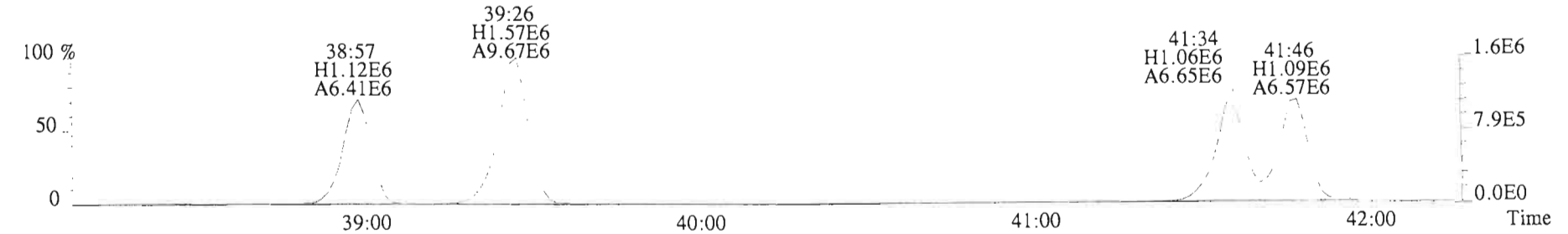
327.8775 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1720.0,0.00%,F,F)



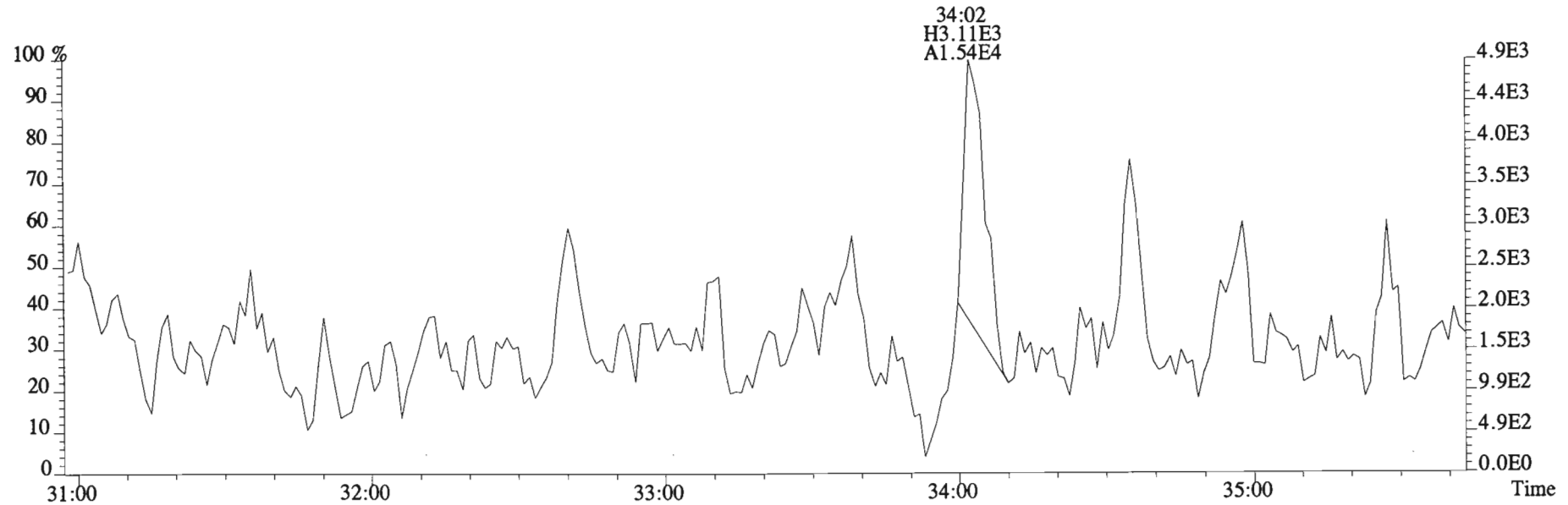
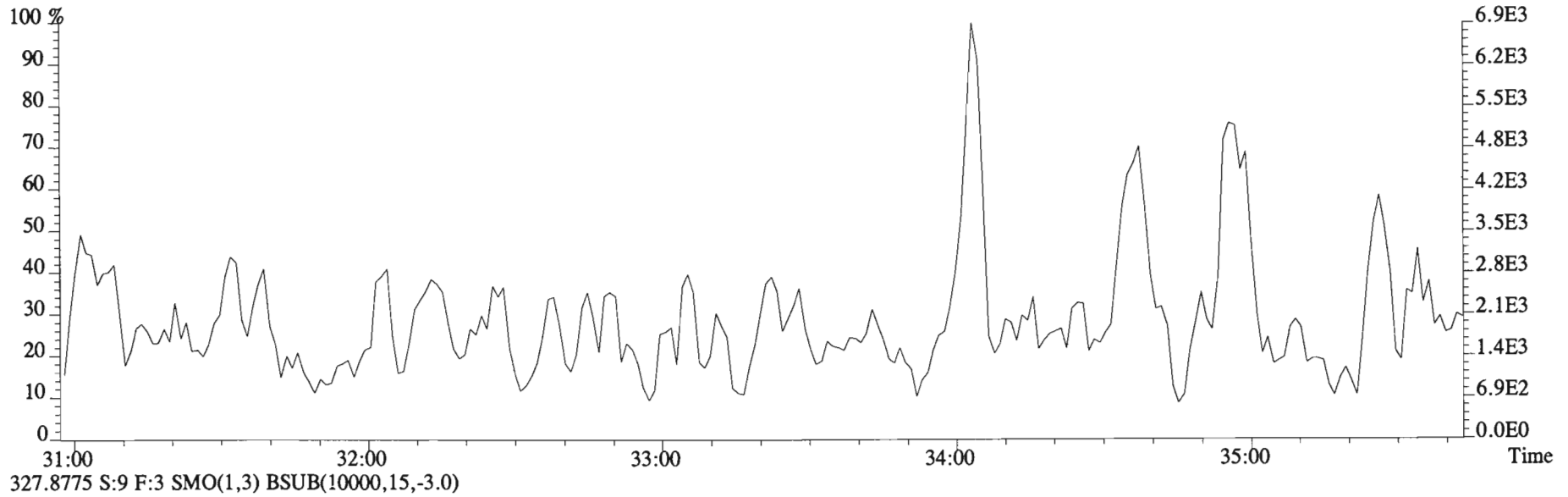
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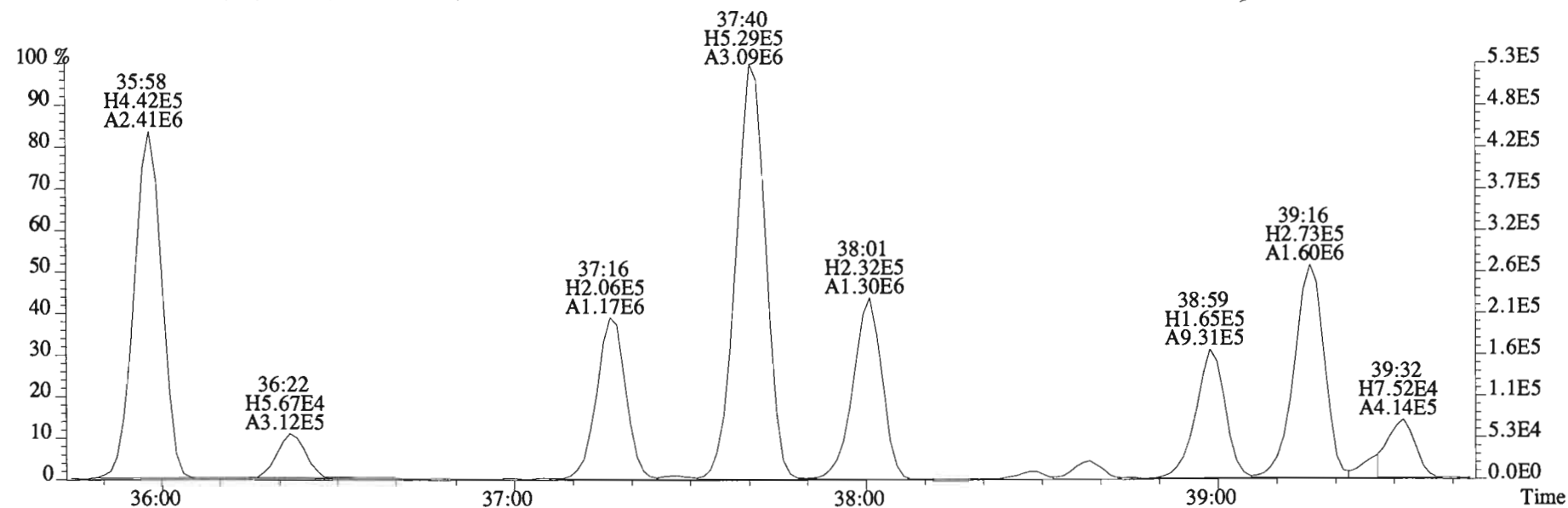
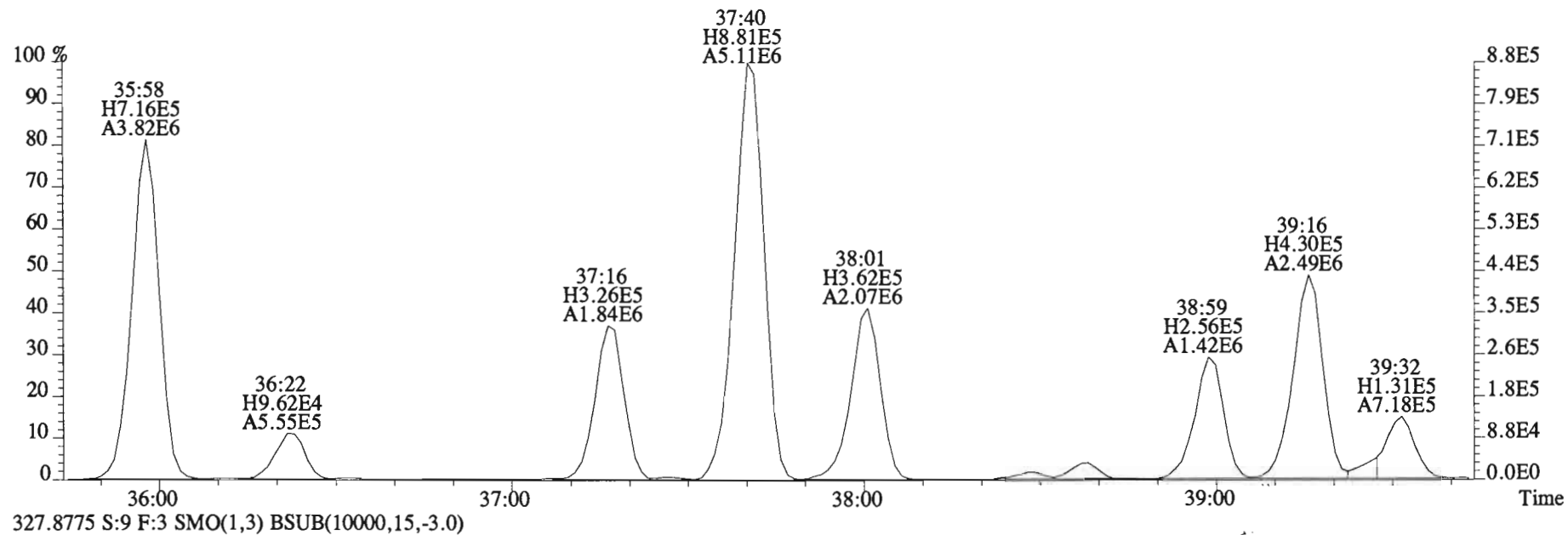
339.9177 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1984.0,0.00%,F,F)



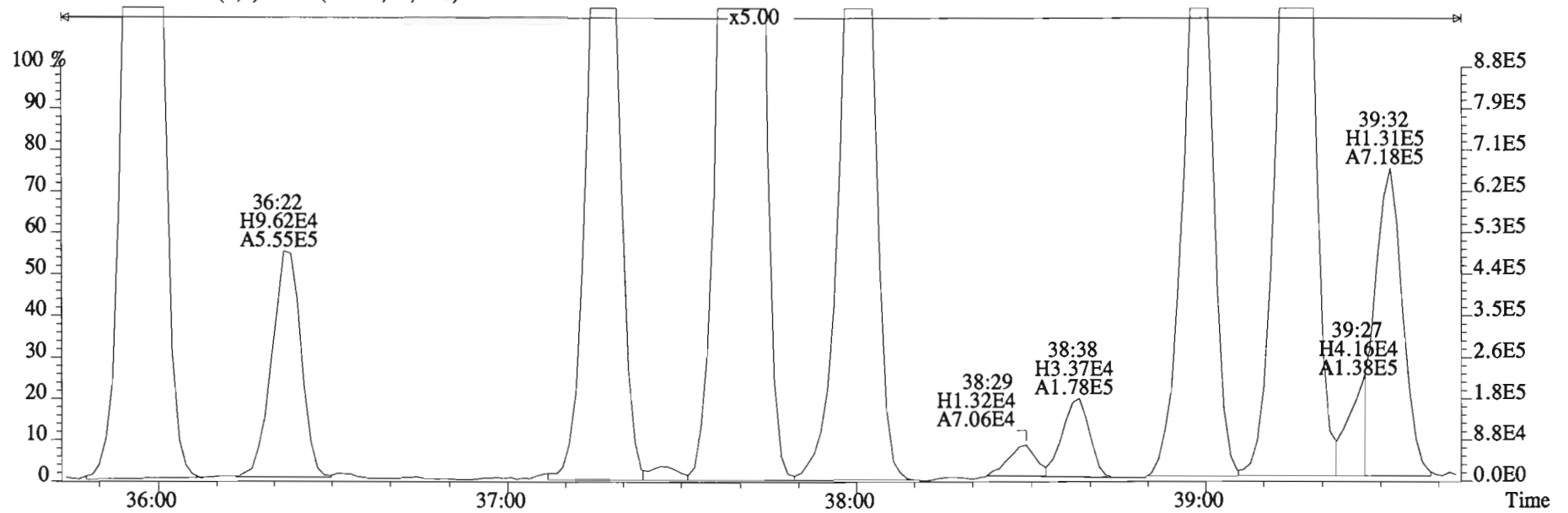
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325.8804 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0)



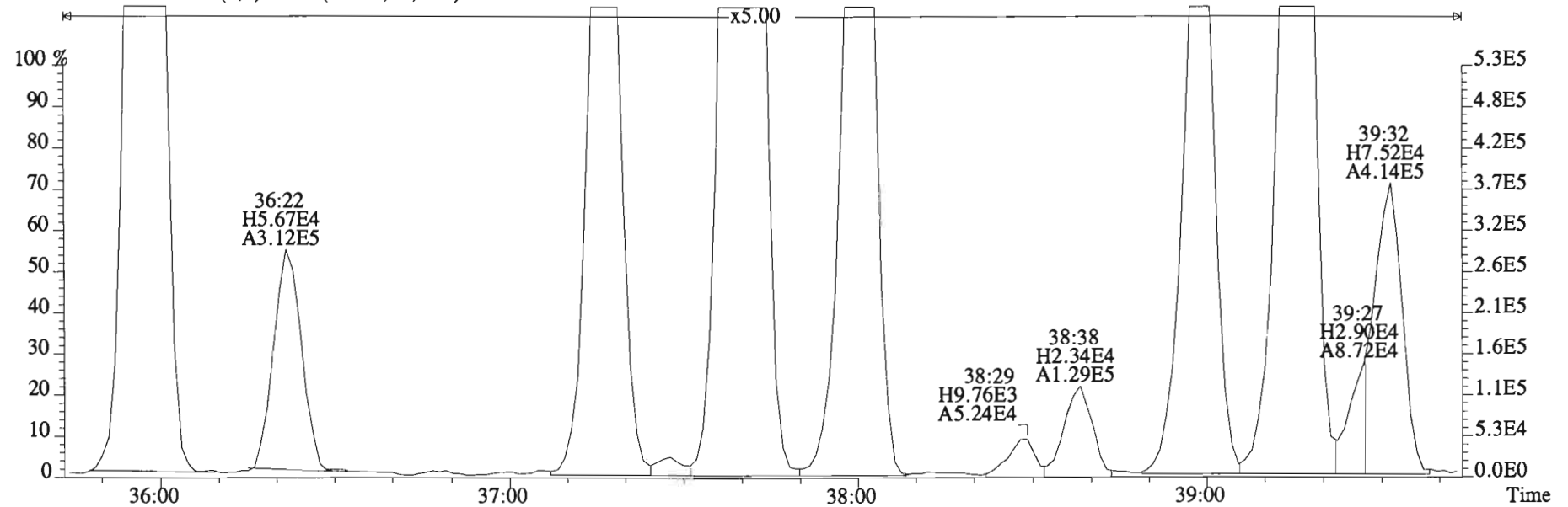
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 325.8804 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0)



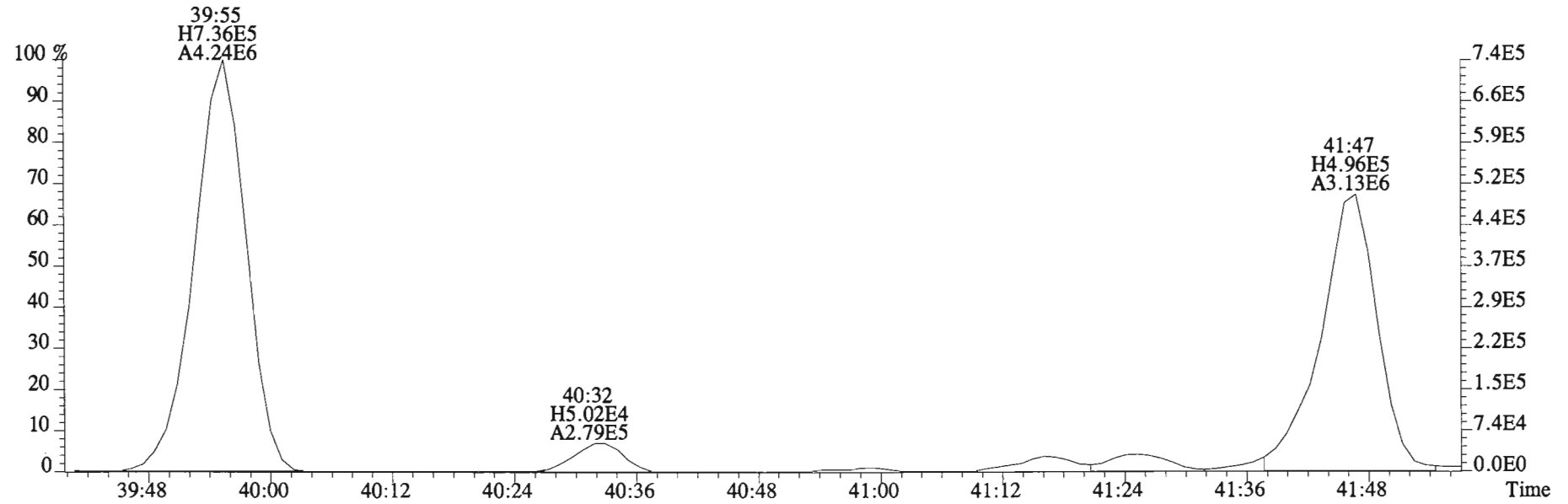
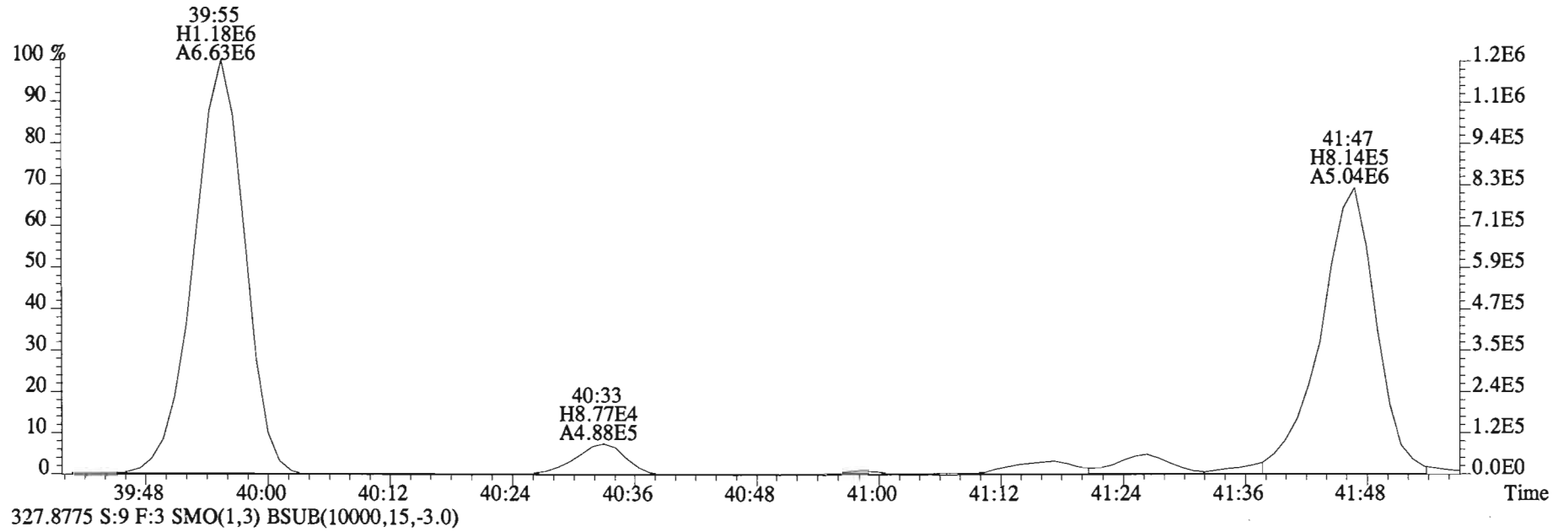
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325.8804 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0)



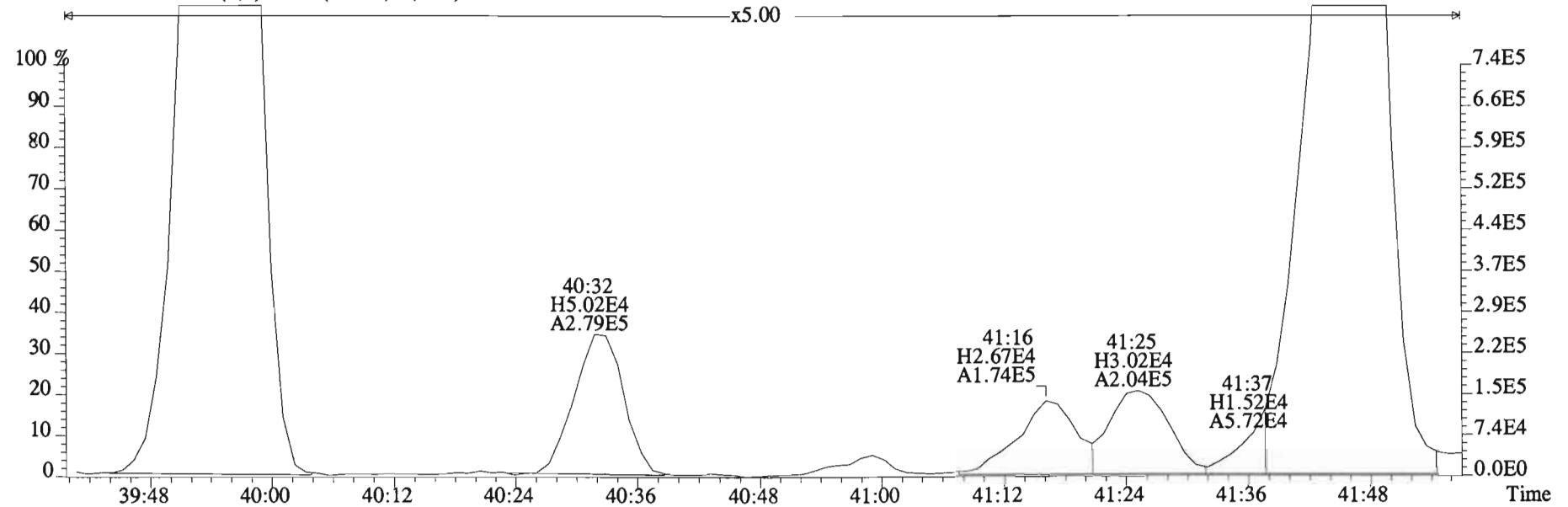
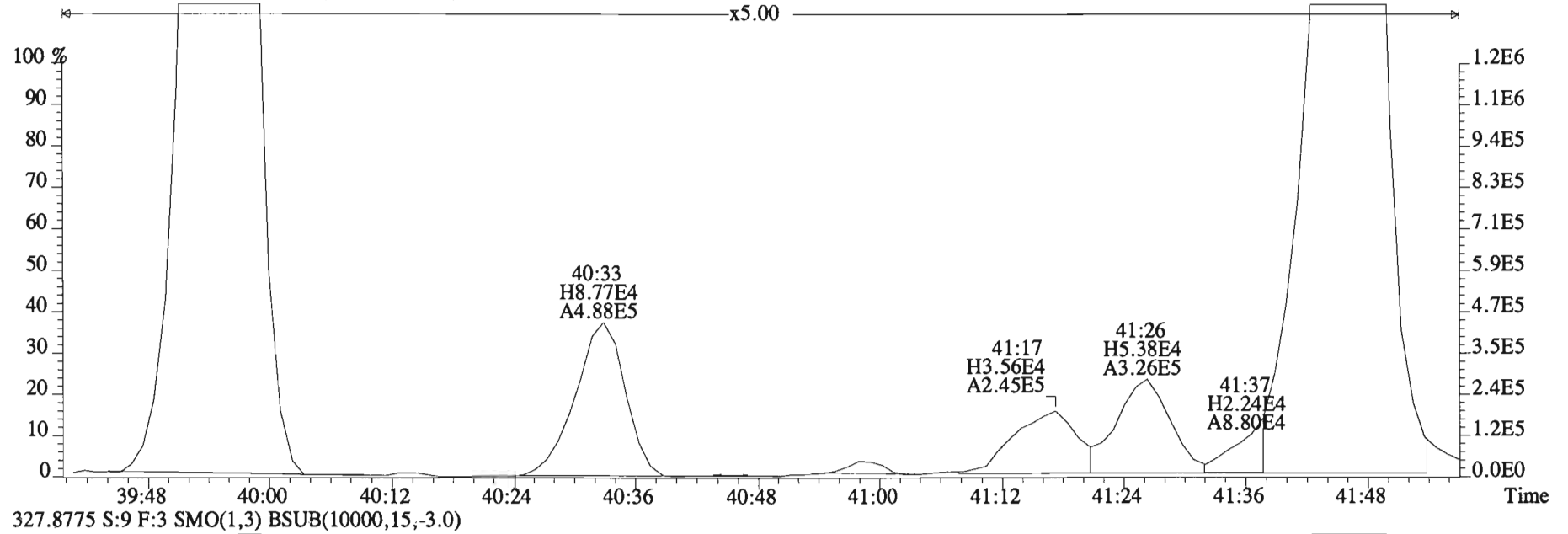
327.8775 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0)



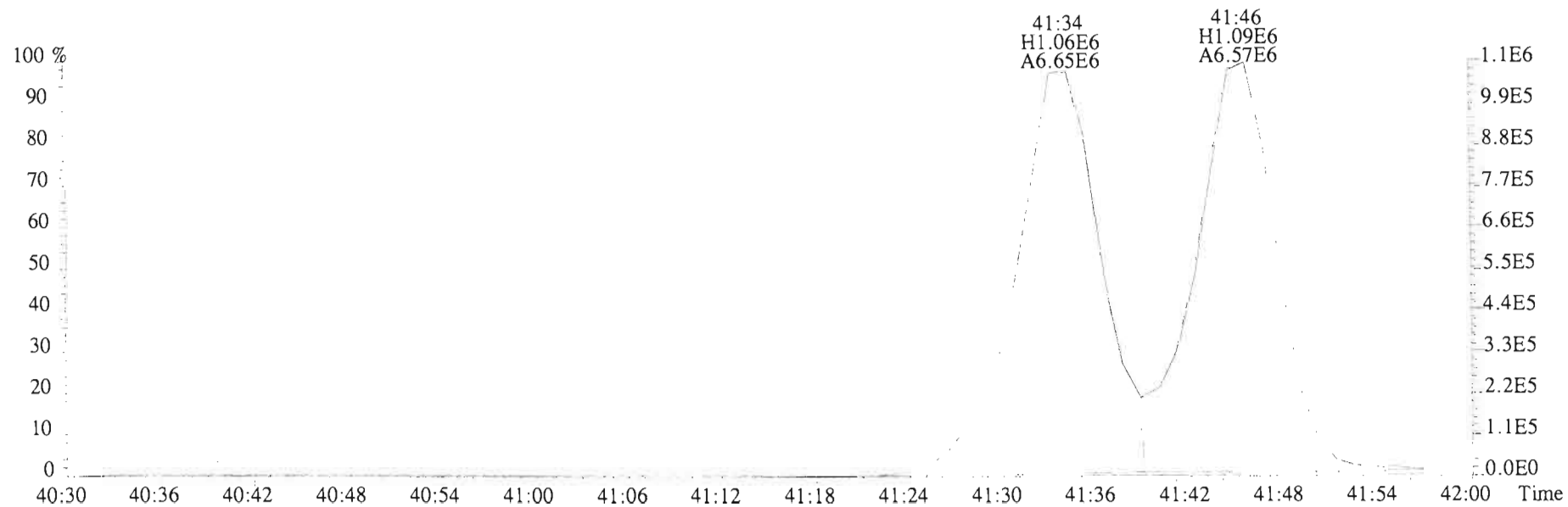
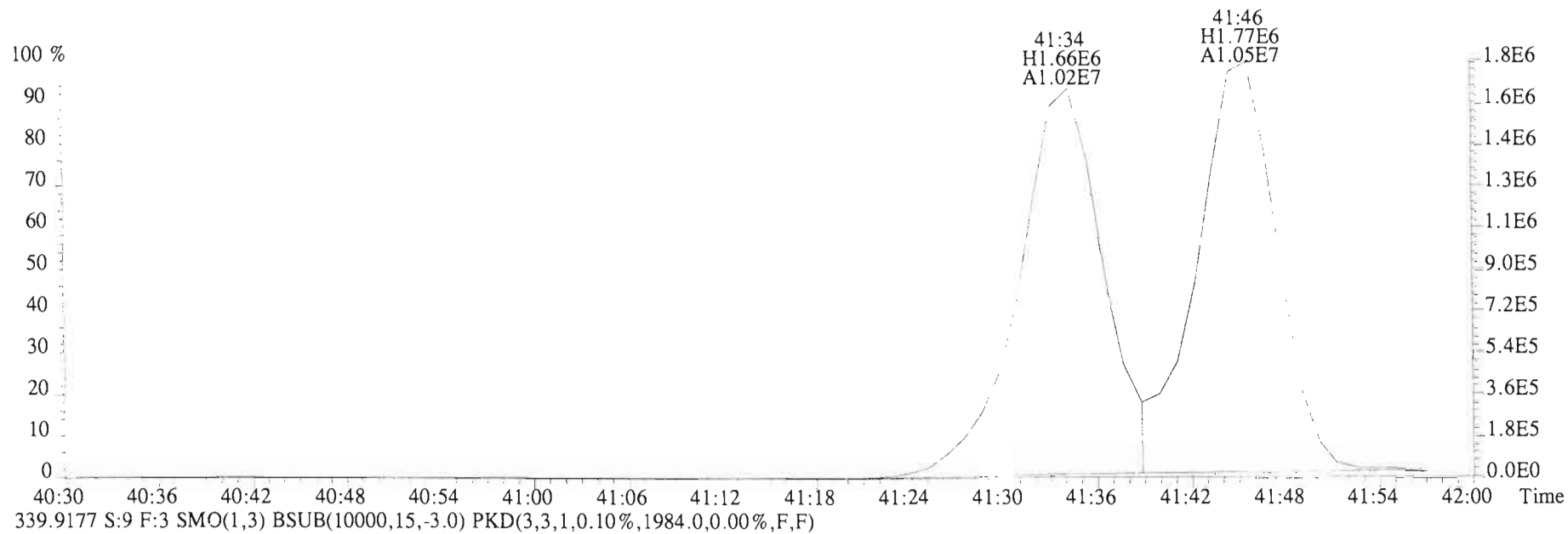
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325.8804 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0)



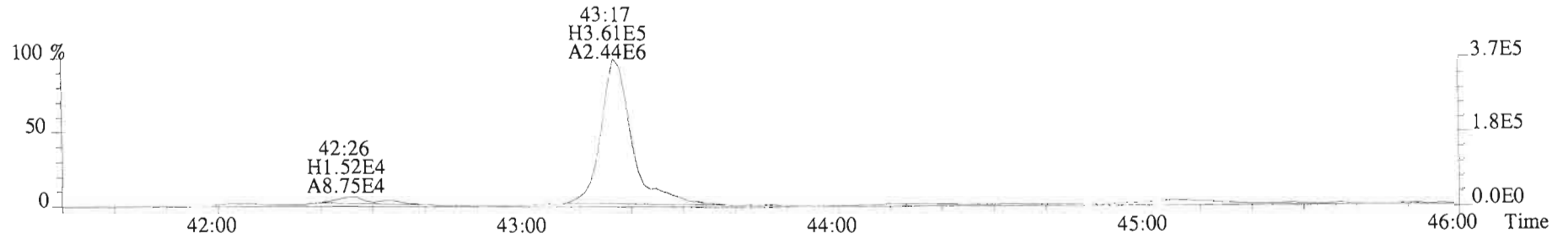
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325.8804 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0)



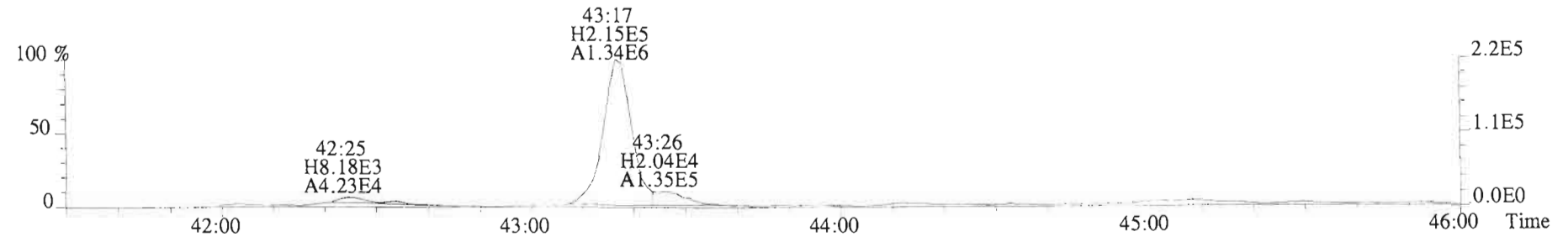
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Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
337.9207 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2020.0,0.00%,F,F)



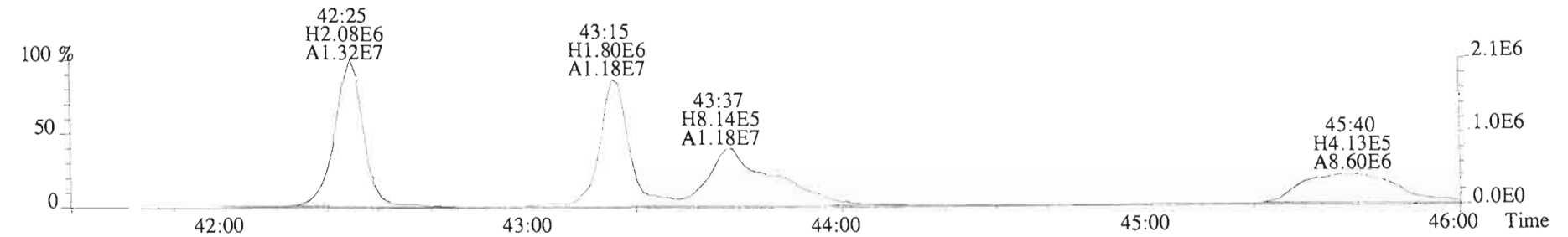
File:150127E1 #1-564 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
325.8804 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3552.0,0.00%,F,F)



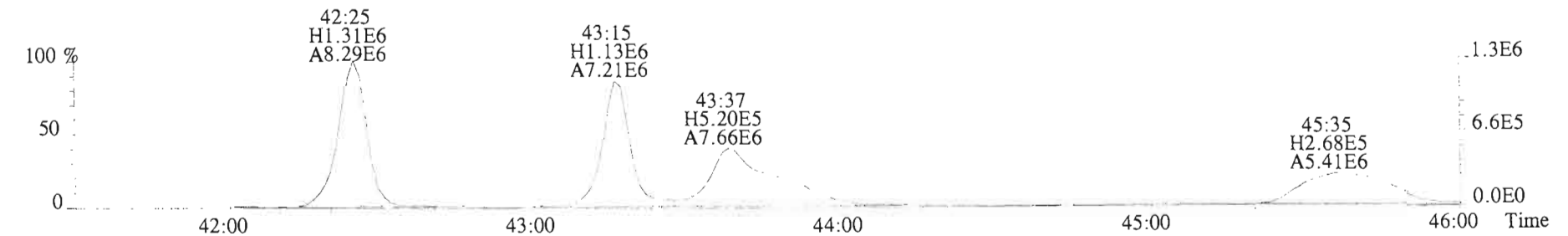
327.8775 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2656.0,0.00%,F,F)



337.9207 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,12232.0,0.00%,F,F)

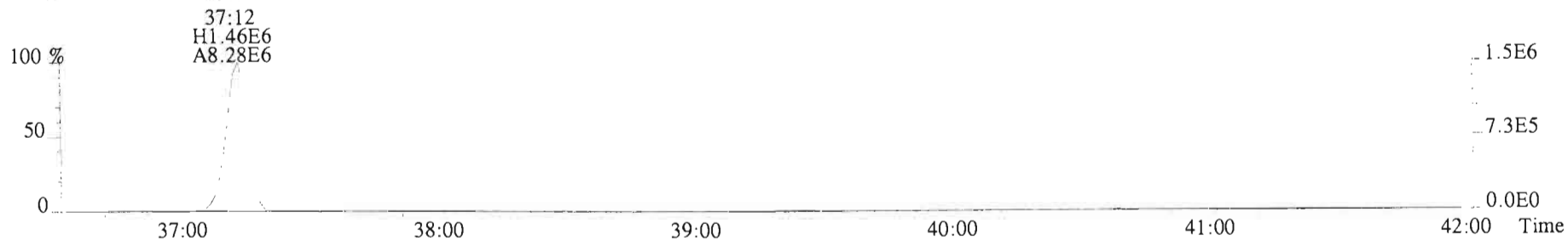
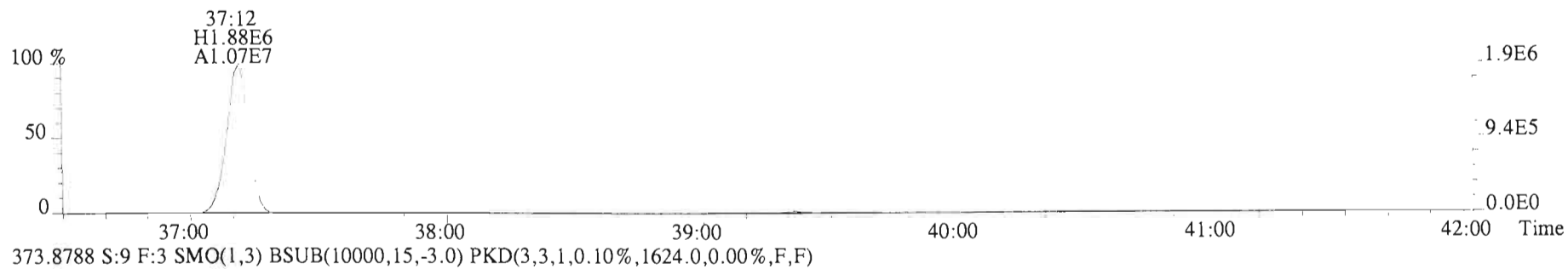
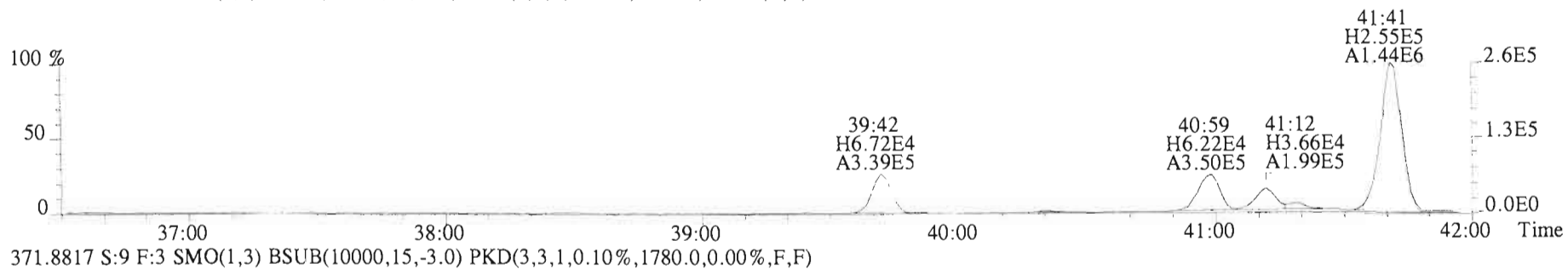
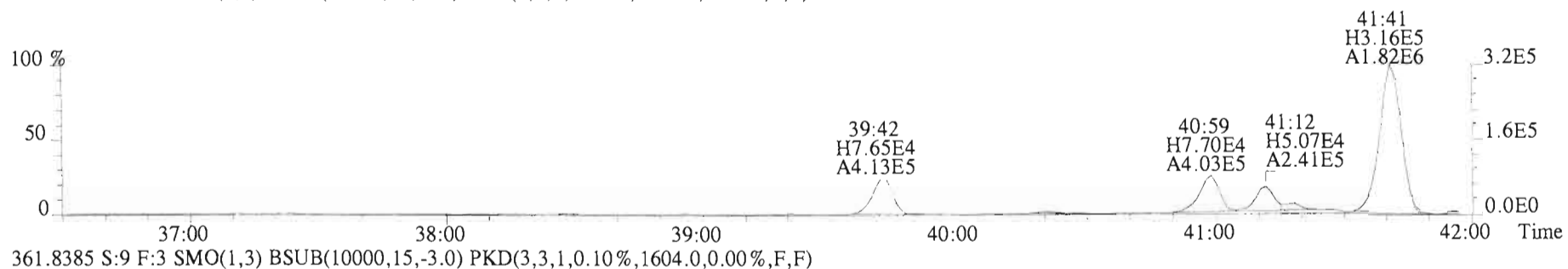


339.9177 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4308.0,0.00%,F,F)

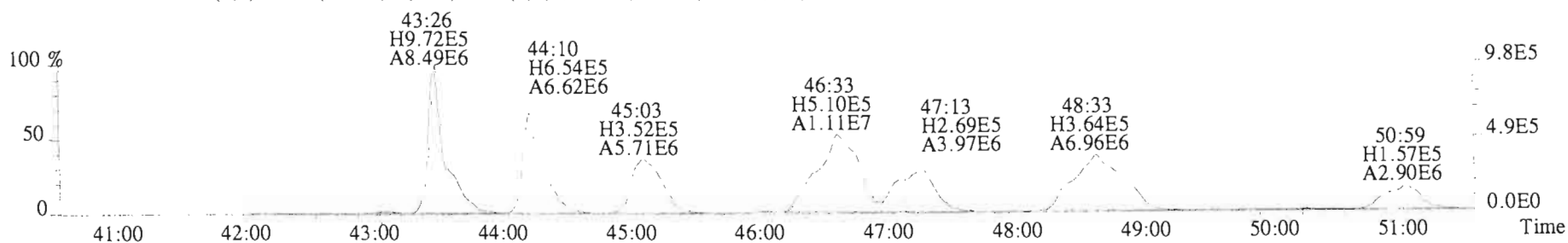
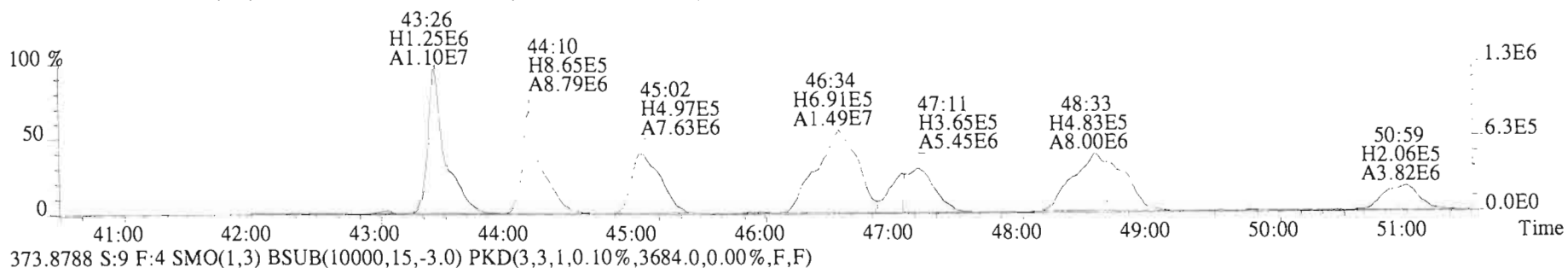
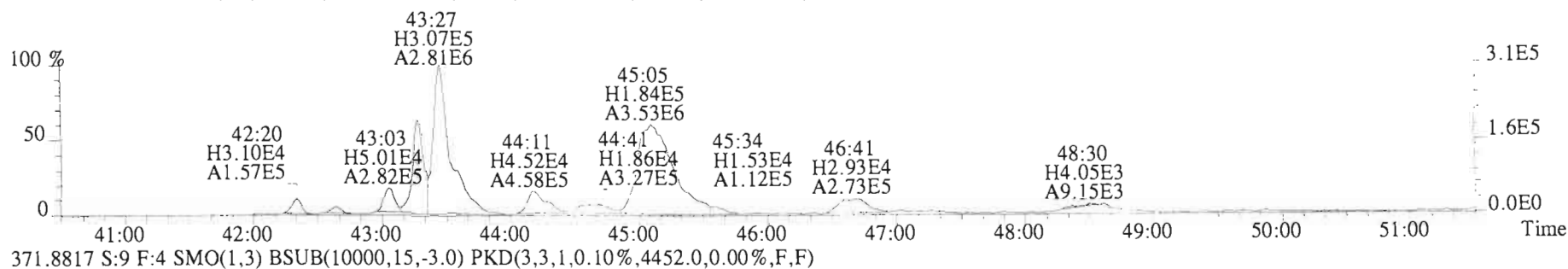
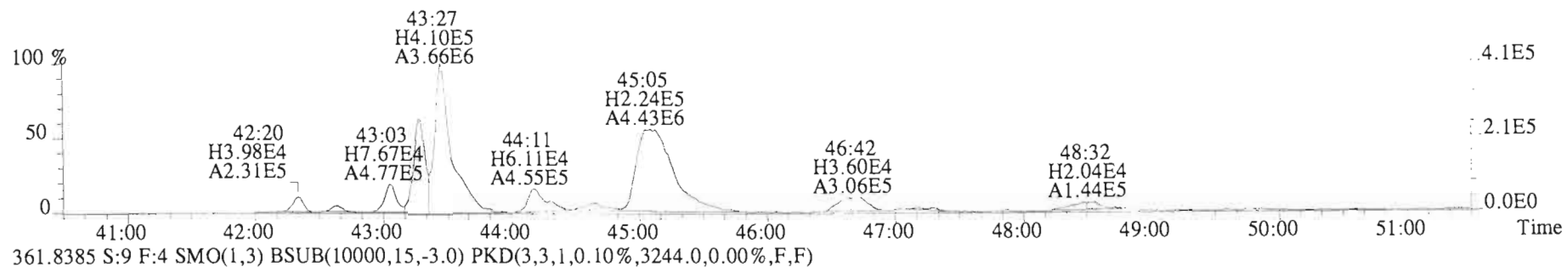




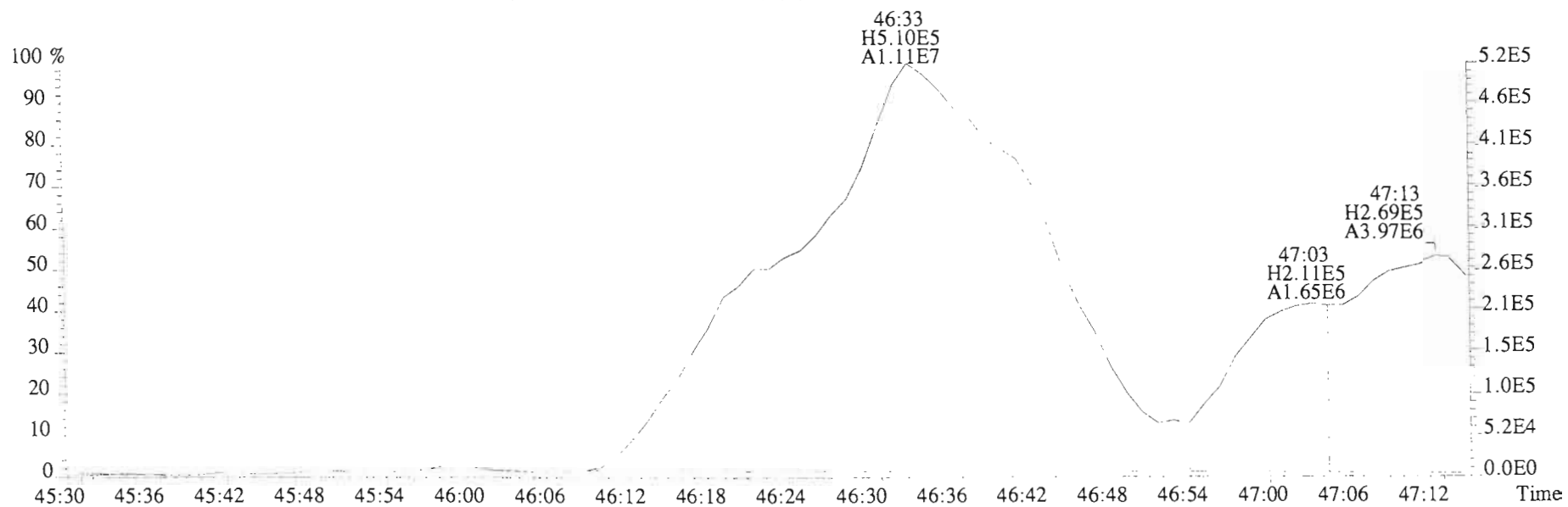
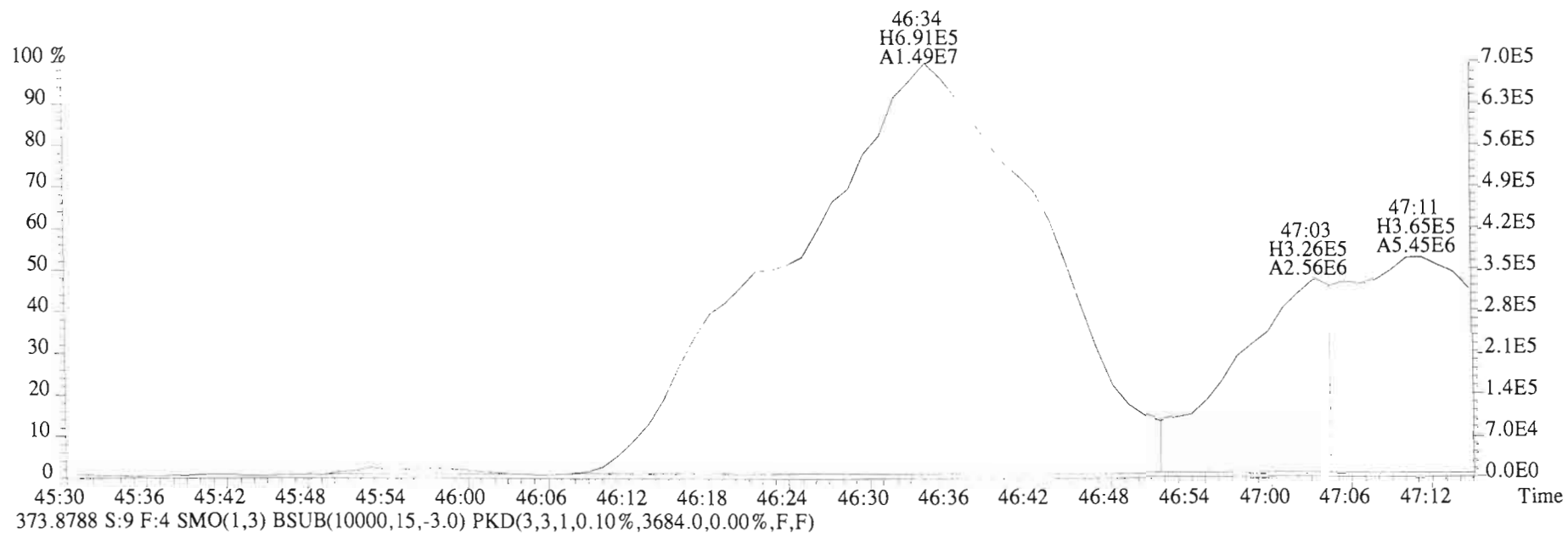
File:150127E1 #1-762 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
359.8415 S:9 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1580.0,0.00%,F,F)



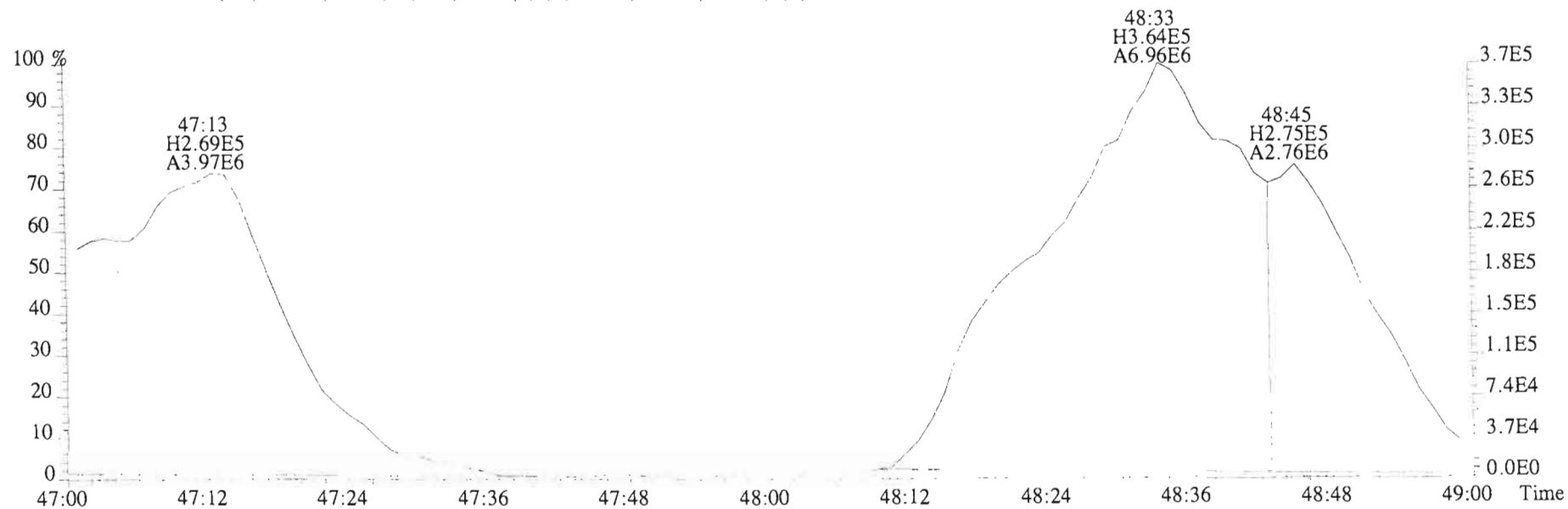
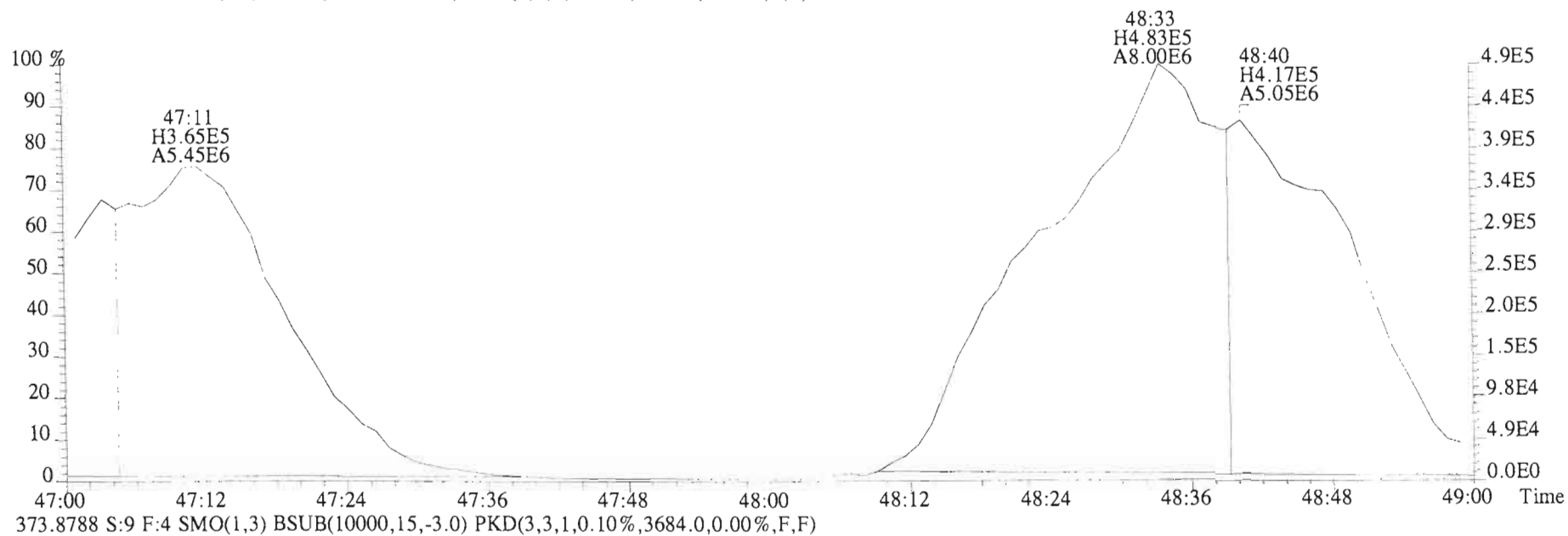
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 Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
 359.8415 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2732.0,0.00%,F,F)



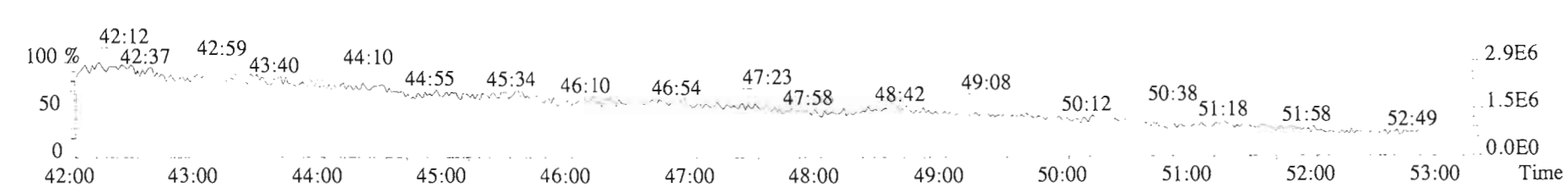
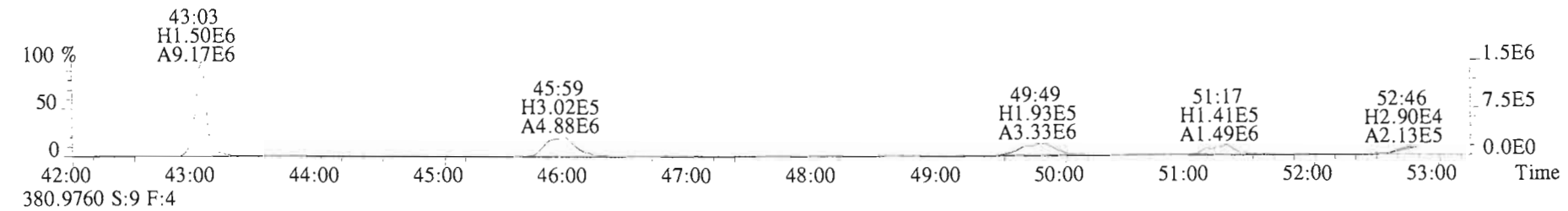
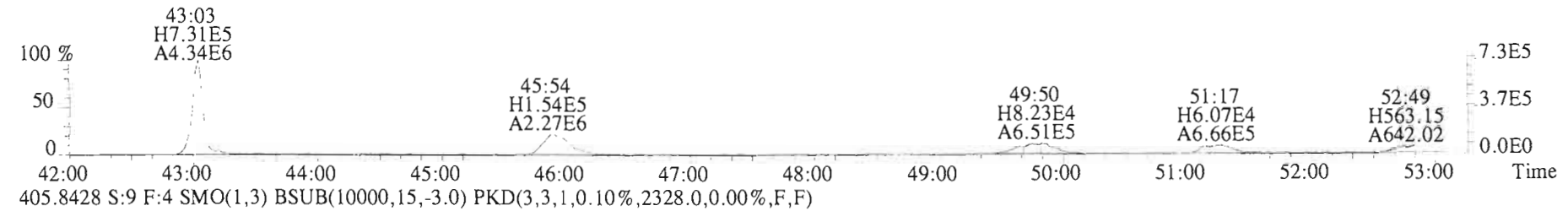
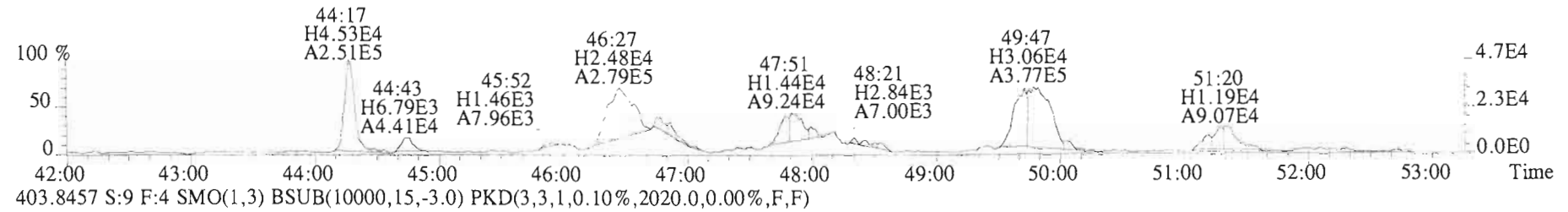
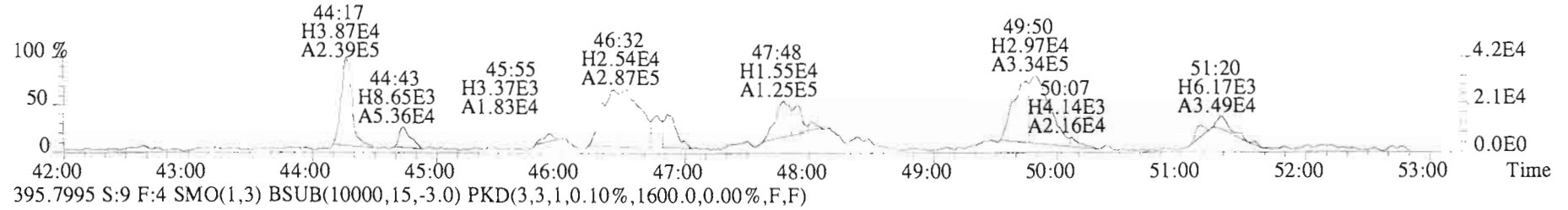
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Sample#9 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
371.8817 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4452.0,0.00%,F,F)



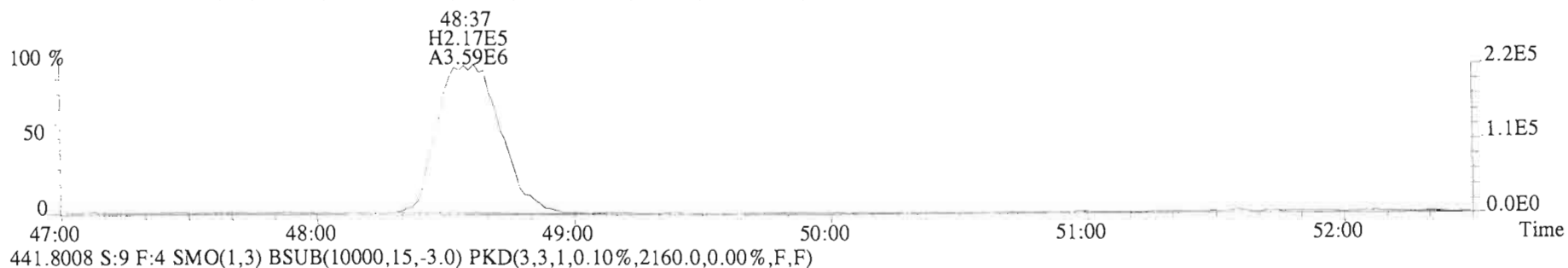
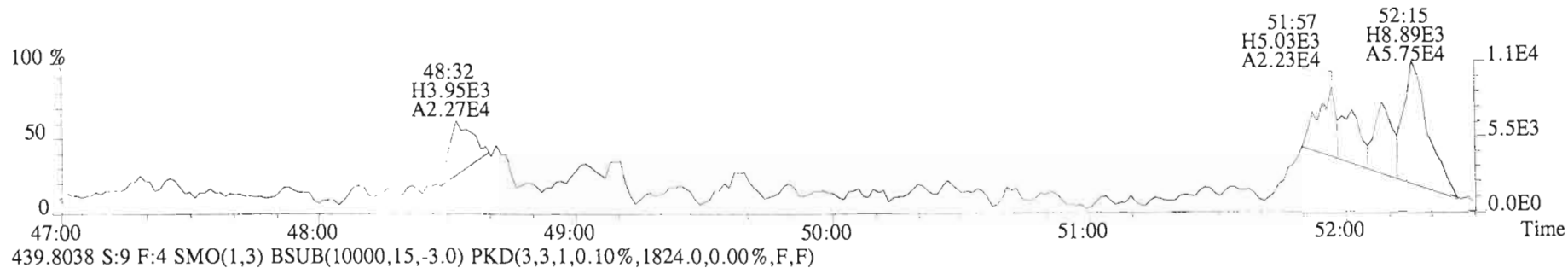
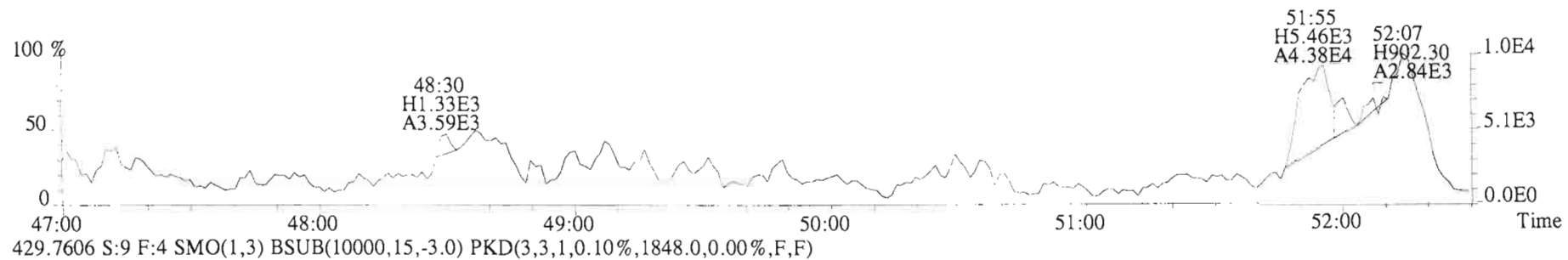
File:150127E1 #1-564 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
371.8817 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4452.0,0.00%,F,F)



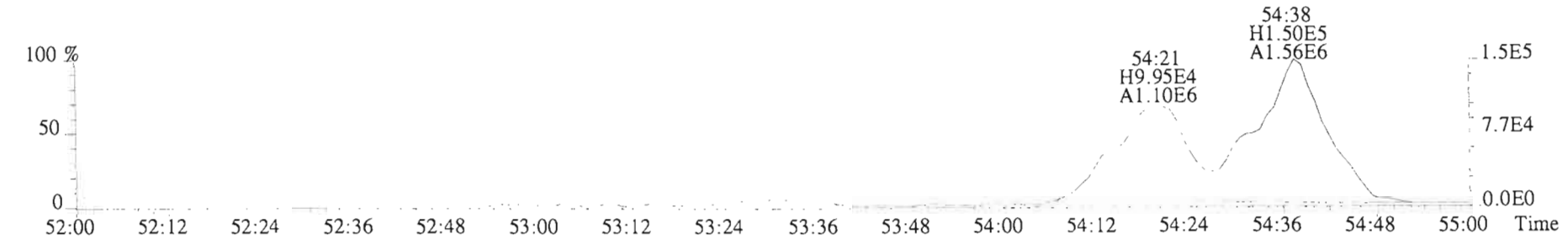
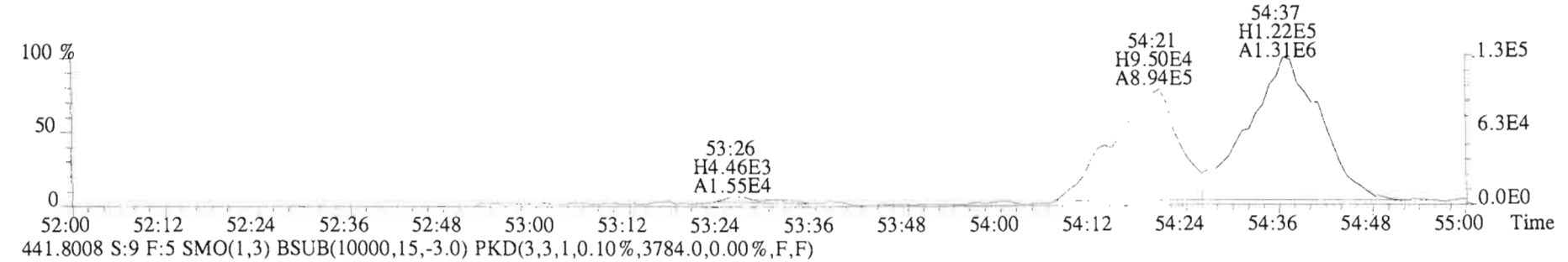
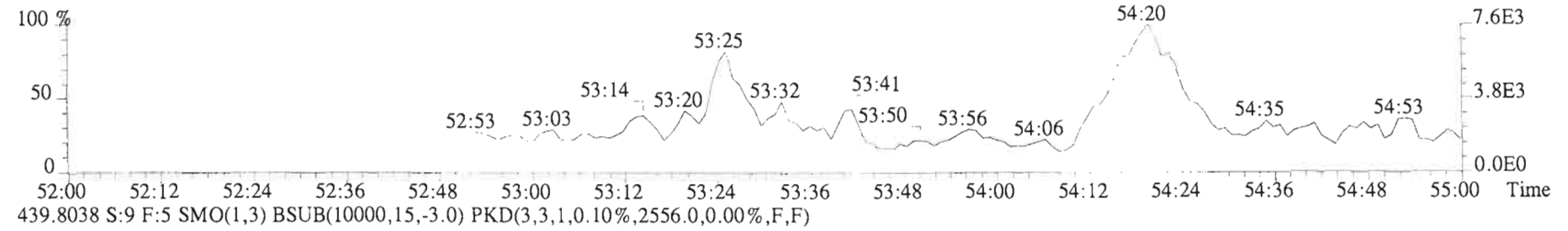
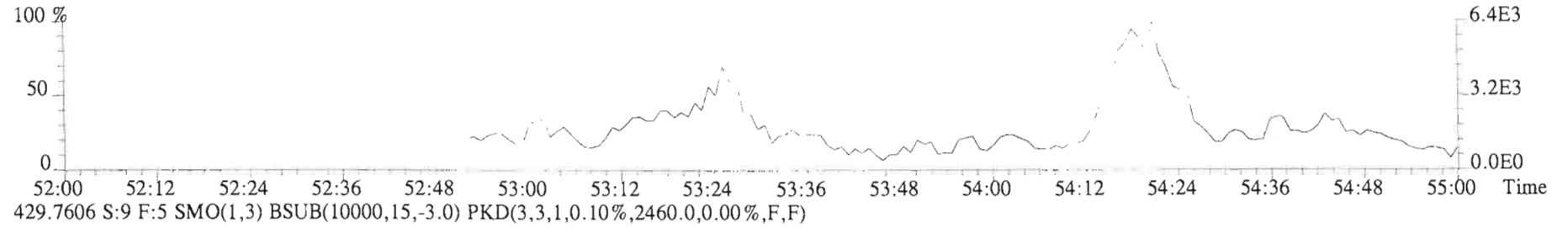
File:150127E1 #1-564 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
393.8025 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1968.0,0.00%,F,F)



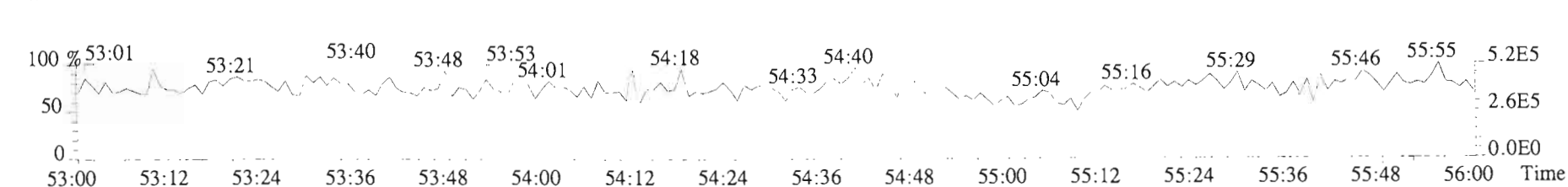
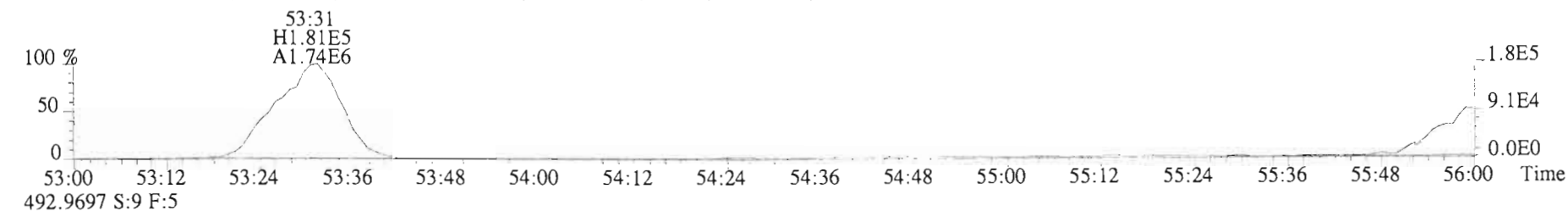
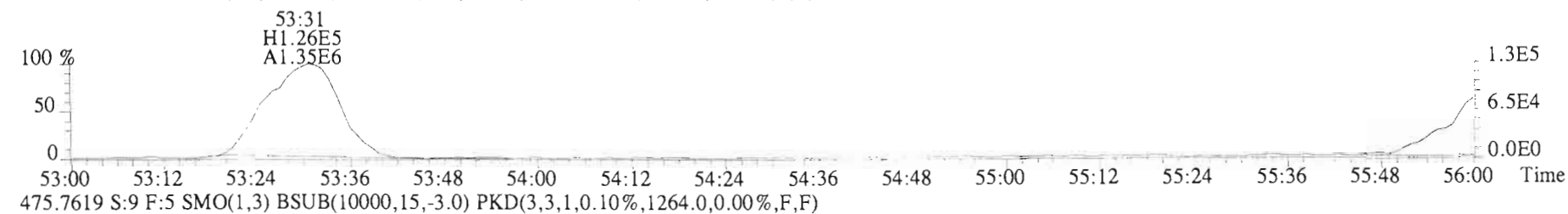
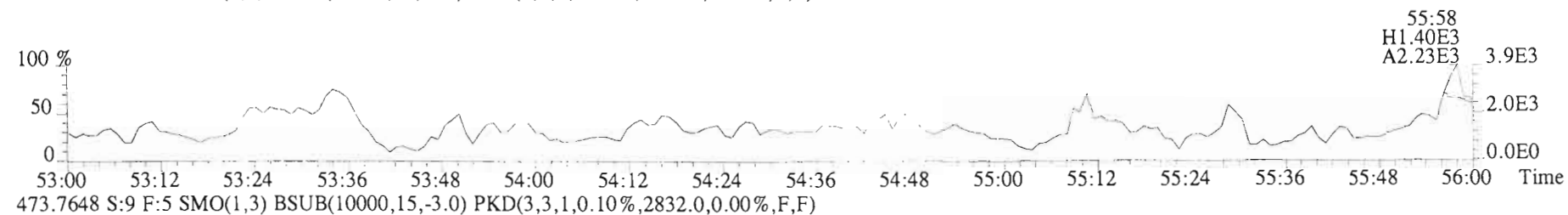
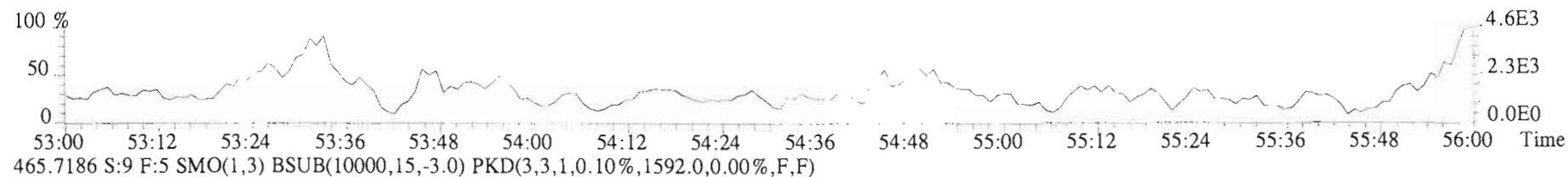
File:150127E1 #1-564 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
427.7635 S:9 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2152.0,0.00%,F,F)



File:150127E1 #1-413 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
427.7635 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1612.0,0.00%,F,F)

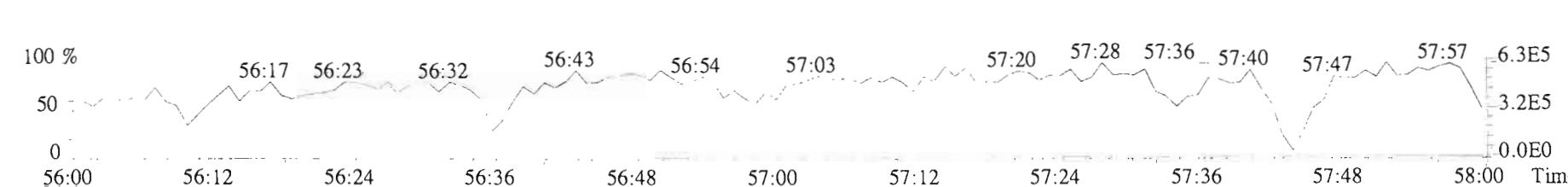
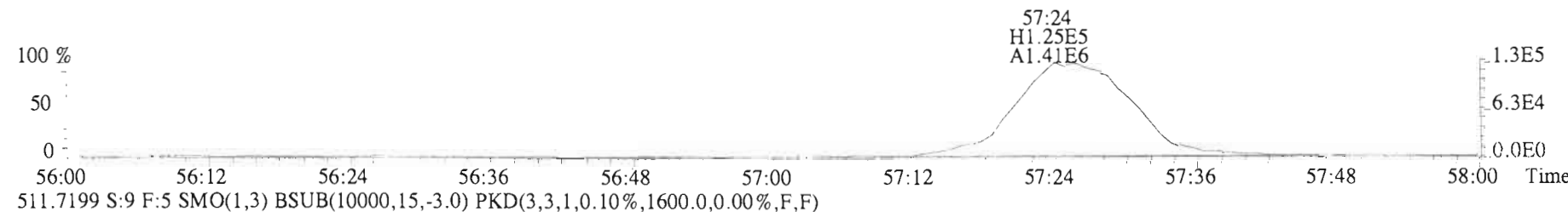
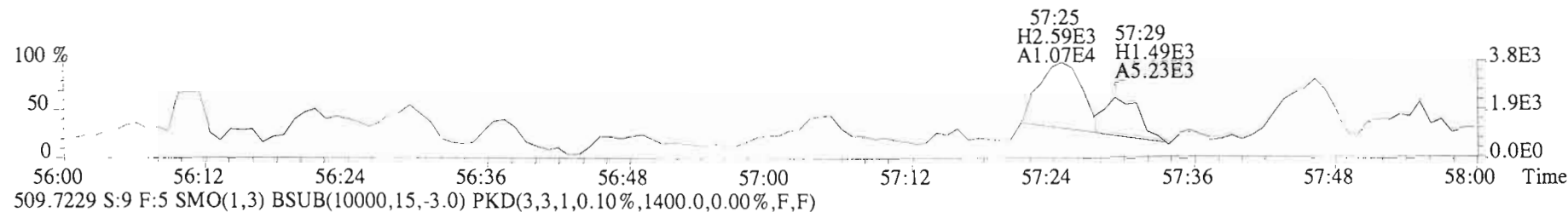
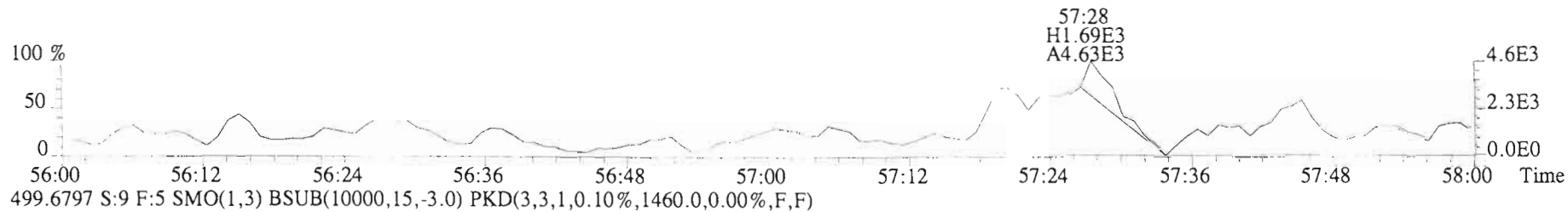


File:150127E1 #1-413 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
463.7216 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1776.0,0.00%,F,F)





File:150127E1 #1-413 Acq:27-JAN-2015 19:15:33 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#9 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03 WM-FT-IB-20150122-W 1 Exp:PCB\_ZB1  
 497.6826 S:9 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1444.0,0.00%,F,F)



Client ID: WM-FT-IB-20150122-W  
Lab ID: 1500116-03@10X

Filename: 150202E1 S:6 Acq:2-FEB-15 20:10:15  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 0.997

ConCal: ST150202E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	*	*	n NotF $\eta$	1.21	*		*	2.5	*	*	0.995-1.005	
Penta	PCB-113	*	*	n NotF $\eta$	1.34	*		*	2.5	*	*	1.002-1.012	
Penta	PCB-99	*	*	n NotF $\eta$	1.25	*		*	2.5	*	*	1.004-1.014	
Penta	PCB-119	*	*	n NotF $\eta$	1.88	*		*	2.5	*	*	0.982-0.992	
Penta	PCB-108/112	*	*	n NotF $\eta$	1.41	*		*	2.5	*	*	0.986-0.996	
Penta	PCB-83	*	*	n NotF $\eta$	1.66	*		*	2.5	*	*	0.990-1.000	
Penta	PCB-97	*	*	n NotF $\eta$	1.30	*		*	2.5	*	*	0.995-1.005	
Penta	PCB-86	*	*	n NotF $\eta$	1.03	*		*	2.5	*	*	0.999-1.009	
Penta	PCB-87/117/125	*	*	n NotF $\eta$	1.59	*		*	2.5	*	*	1.002-1.012	
Penta	PCB-111/115	*	*	n NotF $\eta$	1.86	*		*	2.5	*	*	1.006-1.016	
Penta	PCB-85/116	*	*	n NotF $\eta$	1.39	*		*	2.5	*	*	1.010-1.020	
Penta	PCB-120	*	*	n NotF $\eta$	1.99	*		*	2.5	*	*	1.016-1.026	
Penta	PCB-110	*	*	n NotF $\eta$	1.70	*		*	2.5	*	*	1.019-1.029	
Penta	PCB-82	*	*	n NotF $\eta$	0.74	*		*	2.5	*	*	0.971-0.981	
Penta	PCB-124	*	*	n NotF $\eta$	1.30	*		*	2.5	*	*	0.988-0.998	
Penta	PCB-107/109	*	*	n NotF $\eta$	1.34	*		*	2.5	*	*	0.991-1.001	
Penta	PCB-123	*	*	n NotF $\eta$	1.25	*		*	2.5	*	*	0.995-1.005	
Penta	PCB-106/118	*	*	n NotF $\eta$	1.29	*		*	2.5	*	*	0.996-1.006	
Penta	PCB-114	4.60e+04	1.95	n 42:12	1.45	13.0	R	*	2.5	*	1.000	0.995-1.005	
Penta	PCB-122	*	*	n NotF $\eta$	1.22	*		1920	2.5	22.5	*	0.999-1.009	
Penta	PCB-105	9.73e+05	1.77	y 43:05	1.56	257		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-127	*	*	n NotF $\eta$	1.31	*		1920	2.5	20.1	*	0.995-1.005	
Penta	PCB-126	*	*	n NotF $\eta$	1.41	*		1920	2.5	21.3	*	0.995-1.005	
Hexa	PCB-155	*	*	n NotF $\eta$	1.20	*		1350	2.5	22.8	*	0.966-1.006	
Hexa	PCB-150	*	*	n NotF $\eta$	1.13	*		1350	2.5	24.2	*	1.030-1.040	
Hexa	PCB-152	*	*	n NotF $\eta$	1.17	*		1350	2.5	23.4	*	1.043-1.053	
Hexa	PCB-145	*	*	n NotF $\eta$	1.09	*		1350	2.5	25.0	*	1.055-1.065	
Hexa	PCB-136	1.45e+05	1.36	y 39:33	1.14	90.7		*	2.5	*	1.068	1.063-1.073	
Hexa	PCB-148	*	*	n NotF $\eta$	0.82	*		1350	2.5	33.5	*	1.066-1.076	
Hexa	PCB-154	*	*	n NotF $\eta$	0.89	*		1350	2.5	30.7	*	1.079-1.089	
Hexa	PCB-151	1.51e+05	1.20	y 40:48	0.82	132		*	2.5	*	1.102	1.097-1.107	
Hexa	PCB-135	9.29e+04	1.25	y 41:00	0.80	83.3		*	2.5	*	1.107	1.101-1.113	
Hexa	PCB-144	4.97e+04	1.25	y 41:08	0.86	41.5		*	2.5	*	1.111	1.105-1.116	
Hexa	PCB-147	2.20e+04	1.15	y 41:15	0.78	20.2		*	2.5	*	1.114	1.108-1.120	
Hexa	PCB-139/149	6.58e+05	1.24	y 41:30	0.87	540		*	2.5	*	1.121	1.115-1.127	
Hexa	PCB-140	*	*	n NotF $\eta$	0.78	*		1350	2.5	35.2	*	1.120-1.132	
Hexa	PCB-134/143	1.00e+05	0.84	n 42:10	0.93	44.0	R	*	2.5	*	0.976	0.970-0.980	

Analyst: DMS MT  
Date: 2/5/15 2/12/15

4<sup>th</sup> F Penta - Deca only

Client ID: WM-FT-IB-20150122-W  
Lab ID: 1500116-03@10X

Filename: 150202E1 S:6 Acq:2-FEB-15 20:10:15  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 0.997

ConCal: ST150202E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	6.34e+04	1.38	y 42:26	0.91	28.5	*	2.5	*	*	0.982	0.977-0.987	
Hexa	PCB-131	*	*	n NotF $\eta$	0.85	*	1770	2.5	26.1	*	*	0.981-0.991	
Hexa	PCB-146/165	2.35e+05	1.24	y 42:50	1.08	88.7	*	2.5	*	*	0.991	0.986-0.996	
Hexa	PCB-132/161	5.72e+05	1.28	y 43:06	1.12	209	*	2.5	*	*	0.997	0.992-1.002	
Hexa	PCB-153	1.72e+06	1.31	y 43:14	1.20	586	*	2.5	*	*	1.000	0.996-1.006	
Hexa	PCB-168	*	*	n NotF $\eta$	1.36	*	1770	2.5	16.2	*	*	1.000-1.010	
Hexa	PCB-141	3.45e+05	1.09	y 43:58	1.16	138	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-137	1.34e+05	1.25	y 44:21	1.18	52.5	*	2.5	*	*	1.009	1.004-1.014	
Hexa	PCB-130	1.05e+05	1.28	y 44:28	0.92	52.8	*	2.5	*	*	1.011	1.006-1.016	
Hexa	PCB-138/163/164	2.22e+06	1.13	y 44:50	1.38	758	*	2.5	*	*	1.001	0.996-1.006	
Hexa	PCB-158/160	3.12e+05	1.40	y 45:04	1.48	99.6	*	2.5	*	*	1.006	1.001-1.011	
Hexa	PCB-129	1.17e+05	1.10	y 45:20	0.99	55.5	*	2.5	*	*	1.012	1.007-1.017	
Hexa	PCB-166	*	*	n NotF $\eta$	1.14	*	1770	2.5	19.2	*	*	0.988-0.998	
Hexa	PCB-159	*	*	n NotF $\eta$	1.22	*	1770	2.5	18.0	*	*	0.995-1.005	
Hexa	PCB-128/162	4.22e+05	1.38	y 46:23	1.03	171	*	2.5	*	*	1.006	1.002-1.012	
Hexa	PCB-167	1.23e+05	1.24	y 46:48	1.18	42.6	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-156	3.20e+05	1.23	y 48:07	1.27	107	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-157	7.55e+04	1.33	y 48:22	1.22	26.2	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-169	*	*	n NotF $\eta$	1.07	*	1770	2.5	24.9	*	*	0.995-1.005	
Hepta	PCB-188	*	*	n NotF $\eta$	1.52	*	1790	2.5	13.9	*	*	0.996-1.006	
Hepta	PCB-184	*	*	n NotF $\eta$	1.34	*	1790	2.5	15.9	*	*	1.006-1.016	
Hepta	PCB-179	1.69e+05	1.03	y 44:06	1.39	81.4	*	2.5	*	*	1.029	1.024-1.034	
Hepta	PCB-176	5.10e+04	0.67	n 44:34	1.45	23.5	R	*	2.5	*	1.040	1.035-1.045	
Hepta	PCB-186	*	*	n NotF $\eta$	1.46	*	1790	2.5	14.6	*	*	1.049-1.059	
Hepta	PCB-178	6.61e+04	1.03	y 45:40	1.07	41.2	*	2.5	*	*	1.066	1.061-1.071	
Hepta	PCB-175	*	*	n NotF $\eta$	1.05	*	1790	2.5	20.3	*	*	1.069-1.079	
Hepta	PCB-182/187	4.14e+05	1.01	y 46:10	1.14	244	*	2.5	*	*	1.077	1.073-1.083	
Hepta	PCB-183	1.72e+05	0.94	y 46:31	1.22	93.9	*	2.5	*	*	1.086	1.080-1.090	
Hepta	PCB-185	*	*	n NotF $\eta$	1.40	*	1790	2.5	24.8	*	*	0.950-0.960	
Hepta	PCB-174	2.55e+05	1.25	n 47:32	1.29	208	R	*	2.5	*	0.963	0.958-0.968	
Hepta	PCB-181	*	*	n NotF $\eta$	1.35	*	1790	2.5	25.8	*	*	0.960-0.970	
Hepta	PCB-177	1.37e+05	0.89	n 47:48	1.27	114	R	*	2.5	*	0.968	0.963-0.973	
Hepta	PCB-171	6.26e+04	0.75	n 48:06	1.46	45.4	R	*	2.5	*	0.974	0.969-0.979	
Hepta	PCB-173	*	*	n NotF $\eta$	1.10	*	1790	2.5	31.5	*	*	0.978-0.988	
Hepta	PCB-172	4.92e+04	1.19	y 48:59	1.35	38.4	*	2.5	*	*	0.992	0.987-0.997	
Hepta	PCB-192	*	*	n NotF $\eta$	1.74	*	1790	2.5	20.0	*	*	0.991-1.001	
Hepta	PCB-180	5.82e+05	0.93	y 49:23	1.45	424	*	2.5	*	*	1.000	0.995-1.005	

Analyst: DMS

Date: 2/5/15

Client ID: WM-FT-IB-20150122-W  
Lab ID: 1500116-03@10X

Filename: 150202E1 S:6 Acq:2-FEB-15 20:10:15  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 0.997

ConCal: ST150202E1-1  
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	3.58e+04	0.97	y 49:36	1.85	20.4		*	2.5	*	1.004	0.999-1.009	
Hepta	PCB-191	*	*	n NotF $\eta$	1.86	*		1790	2.5	18.7	*	1.005-1.015	
Hepta	PCB-170	2.25e+05	1.17	y 50:49	1.67	176		*	2.5	*	1.000	0.995-1.005	
Hepta	PCB-190	4.23e+04	0.71	n 50:58	2.25	24.5	R	*	2.5	*	1.003	0.999-1.009	
Hepta	PCB-189	*	*	n NotF $\eta$	1.67	*		1780	2.5	27.8	*	0.995-1.005	
Octa	PCB-202	5.09e+04	0.92	y 48:19	1.02	43.9		*	2.5	*	1.001	0.995-1.005	
Octa	PCB-201	*	*	n NotF $\eta$	1.10	*		1330	2.5	25.6	*	1.005-1.015	
Octa	PCB-204	*	*	n NotF $\eta$	1.07	*		1330	2.5	26.2	*	1.009-1.019	
Octa	PCB-197	*	*	n NotF $\eta$	1.17	*		1330	2.5	24.1	*	1.015-1.025	
Octa	PCB-200	*	*	n NotF $\eta$	1.03	*		1330	2.5	27.2	*	1.034-1.044	
Octa	PCB-198	*	*	n NotF $\eta$	0.75	*		1330	2.5	37.3	*	1.062-1.072	
Octa	PCB-199	1.07e+05	0.78	y 51:29	0.74	127		*	2.5	*	1.066	1.064-1.074	
Octa	PCB-196/203	1.26e+05	1.02	y 51:44	0.83	134		*	2.5	*	1.071	1.070-1.080	
Octa	PCB-195	4.78e+04	0.86	y 52:53	1.14	55.4		*	2.5	*	0.984	0.979-0.989	
Octa	PCB-194	5.39e+04	1.39	n 53:45	1.29	55.1	R	*	2.5	*	1.000	0.995-1.005	
Octa	PCB-205	*	*	n NotF $\eta$	1.61	*		1830	2.5	26.9	*	1.001-1.010	
Nona	PCB-208	3.38e+04	1.15	y 53:02	1.01	27.4		*	2.5	*	1.000	0.995-1.005	
Nona	PCB-207	*	*	n NotF $\eta$	1.03	*		1440	2.5	17.7	*	1.001-1.011	
Nona	PCB-206	7.26e+04	1.37	y 55:26	0.88	96.2		*	2.5	*	1.000	0.995-1.005	
Deca	PCB-209	4.48e+04	1.28	y 56:45	1.35	41.0		*	2.5	*	1.000	0.995-1.005	

Analyst: DMS

Date: 2/5/15

Client ID: WM-FT-IB-20150122-W  
Lab ID: 1500116-03@10X

Filename: 150202E1 S:6 Acq:2-FEB-15 20:10:15  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 0.9973  
ConCal: ST150202E1-1  
EndCAL: NA

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Name	Resp	RA	RT	RRF	Conc	
Total Mono-PCB	*	* n	NotFnd	1.31	*	
Total Di-PCB	*	* n	NotFnd	1.32	*	
Total Tri-PCB	*	* n	NotFnd	1.20	*	
Total Tri-PCB	*	* n	NotFnd	1.23	*	Sum:0.00000
Total Tetra-PCB	*	* n	NotFnd	1.17	*	
Total Penta-PCB	*	* n	NotFnd	1.24	*	
Total Penta-PCB	9.73e+05	1.77 y	43:05	1.39	257.126	Sum:257.126
Total Hexa-PCB	1.12e+06	1.36 y	39:33	0.94	907.843	
Total Hexa-PCB	6.76e+06	1.38 y	42:26	1.13	2415.33	Sum:3323.18
Total Hepta-PCB	1.71e+06	1.03 y	44:06	1.37	1118.80	
Total Octa-PCB	2.83e+05	0.92 y	48:19	0.95	304.005	
Total Octa-PCB	4.78e+04	0.86 y	52:53	1.35	55.3828	Sum:359.388
Total Nona-PCB	1.06e+05	1.15 y	53:02	0.99	123.577	
Total Deca-PCB	4.48e+04	1.28 y	56:45	1.35	41.0432	

Total PCB Conc:5751.31245500

Integrations

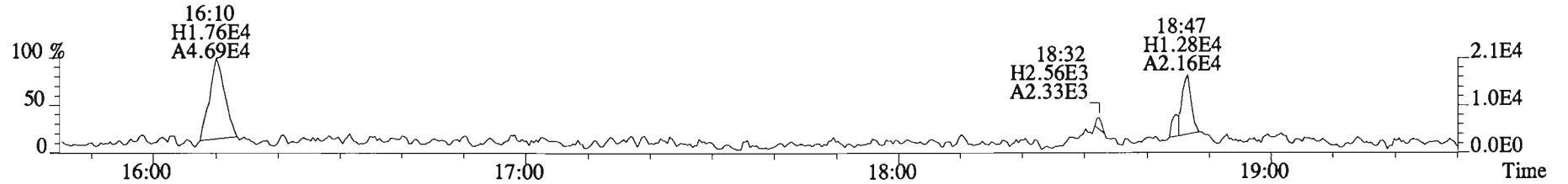
by

Analyst: *Dms*

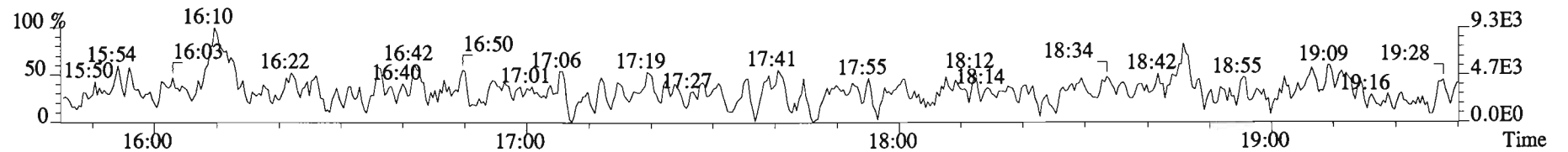
Date: *2/5/15*

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS
13C-PCB-1	5.70e+06	3.18 y	0.91	16:09	0.623	0.619-0.625		1340	66.6	
13C-PCB-3	6.24e+06	3.17 y	0.94	18:45	0.723	0.718-0.726		1410	70.5	
13C-PCB-4	4.67e+06	1.54 y	0.60	20:05	0.774	0.770-0.778		1670	83.3	X 13C-PCB-178 2.12e+06 0.46 y 0.64 45:39 0.984 0.980-0.989 1620 80.6
13C-PCB-9	7.71e+06	1.62 y	0.96	21:51	0.843	0.839-0.847		1710	85.4	
13C-PCB-11	8.12e+06	1.60 y	0.95	25:13	0.972	0.968-0.978		1820	90.6	PS vs. IS
13C-PCB-19	3.38e+06	1.12 y	0.56	24:13	0.934	0.929-0.939		1290	64.1	
13C-PCB-28	5.54e+06	1.03 y	1.07	29:04	1.003	0.999-1.009		2110	105	13C-PCB-79 6.53e+06 0.82 y 1.02 37:48 0.968 0.963-0.973 2210 110
13C-PCB-32	4.86e+06	1.11 y	0.83	27:07	1.046	1.041-1.051		1260	62.7	13C-PCB-178 2.12e+06 0.46 y 0.84 45:39 0.924 0.920-0.930 2650 132
13C-PCB-37	4.44e+06	0.98 y	0.96	32:57	1.138	1.131-1.143		1880	93.5	
13C-PCB-47	4.74e+06	0.82 y	0.77	31:59	0.870	0.867-0.875		1830	91.1	
13C-PCB-52	4.49e+06	0.78 y	0.71	31:29	0.857	0.853-0.861		1870	93.1	
13C-PCB-54	6.34e+06	0.75 y	1.06	27:57	0.761	0.757-0.765		1770	88.1	
13C-PCB-70	5.92e+06	0.79 y	0.99	35:30	0.966	0.961-0.971		1760	87.9	
13C-PCB-77	5.58e+06	0.72 y	0.96	39:38	1.078	1.073-1.083		1710	85.2	
13C-PCB-80	6.05e+06	0.80 y	1.02	35:55	0.977	0.973-0.983		1750	87.3	
13C-PCB-81	5.79e+06	0.77 y	1.00	39:02	1.062	1.057-1.067		1710	85.5	
13C-PCB-95	3.17e+06	1.47 y	0.70	35:48	0.913	0.908-0.918		1860	92.9	RS
13C-PCB-97	3.02e+06	1.70 y	0.66	38:47	0.989	0.984-0.994		1890	94.2	
13C-PCB-101	3.25e+06	1.74 y	0.77	37:29	0.956	0.951-0.961		1740	86.8	Name Resp RA RRF RT Conc
13C-PCB-104	4.11e+06	1.51 y	0.97	32:39	0.833	0.828-0.836		1750	87.2	13C-PCB-15 9.40e+06 1.64 y 1.00 25:56 2010
13C-PCB-105	4.87e+06	1.57 y	1.20	43:04	0.928	0.924-0.934		1970	98.5	X 13C-PCB-31 4.93e+06 1.00 y 1.00 28:58 2010
13C-PCB-114	4.90e+06	1.61 y	1.26	42:12	0.910	0.905-0.915		1900	94.7	X 13C-PCB-60 6.78e+06 0.78 y 1.00 36:45 2010
13C-PCB-118	4.00e+06	1.65 y	0.94	41:33	1.059	1.054-1.064		1750	87.4	X 13C-PCB-111 4.88e+06 1.52 y 1.00 39:13 2010
13C-PCB-123	4.02e+06	1.71 y	0.88	41:22	1.055	1.049-1.059		1870	93.5	13C-PCB-128 4.12e+06 1.27 y 1.00 46:23 2010
13C-PCB-126	4.19e+06	1.53 y	1.13	45:19	0.977	0.972-0.982		1810	90.4	X 13C-PCB-205 2.00e+06 0.89 y 1.00 54:03 2010
13C-PCB-127	4.90e+06	1.59 y	1.26	43:25	0.936	0.931-0.941		1900	94.7	
13C-PCB-138	4.26e+06	1.22 y	1.12	44:48	0.966	0.961-0.971		1850	92.4	
13C-PCB-141	4.33e+06	1.30 y	1.09	43:58	0.948	0.943-0.953		1930	96.2	
13C-PCB-153	4.91e+06	1.36 y	1.27	43:13	0.932	0.927-0.937		1880	93.6	
13C-PCB-155	2.81e+06	1.29 y	0.87	37:02	0.944	0.939-0.949		1320	66.1	
13C-PCB-156	4.71e+06	1.28 y	1.35	48:06	1.037	1.032-1.042		1700	84.7	
13C-PCB-157	4.73e+06	1.27 y	1.42	48:22	1.043	1.037-1.047		1630	81.1	
13C-PCB-159	4.80e+06	1.33 y	1.37	46:07	0.994	0.989-0.999		1710	85.1	X = used only
13C-PCB-167	4.88e+06	1.33 y	1.38	46:47	1.009	1.004-1.014		1720	85.7	
13C-PCB-169	3.58e+06	1.22 y	1.38	50:28	1.088	1.084-1.094		1260	62.9	
13C-PCB-170	1.54e+06	0.42 y	0.60	50:48	1.095	1.091-1.103		1240	62.0	
13C-PCB-180	1.90e+06	0.50 y	0.76	49:23	1.065	1.059-1.069		1220	61.0	
13C-PCB-188	2.99e+06	0.43 y	1.01	42:51	0.924	0.919-0.929		1440	71.7	
13C-PCB-189	1.54e+06	0.45 y	0.80	52:16	1.127	1.124-1.136		938	46.8	
13C-PCB-194	1.52e+06	0.88 y	0.75	53:46	0.995	0.990-1.000		2050	102	Analyst: <u>DMS</u>
13C-PCB-202	2.28e+06	0.83 y	0.99	48:17	1.041	1.036-1.046		1120	56.0	
13C-PCB-206	1.72e+06	0.83 y	0.73	55:26	1.026	1.020-1.301		2350	117	
13C-PCB-208	2.44e+06	0.78 y	1.08	53:01	0.981	0.977-0.987		2260	113	Date: <u>2/4/15</u>
13C-PCB-209	1.62e+06	1.19 y	0.71	56:44	1.050	1.045-1.055		2300	115	

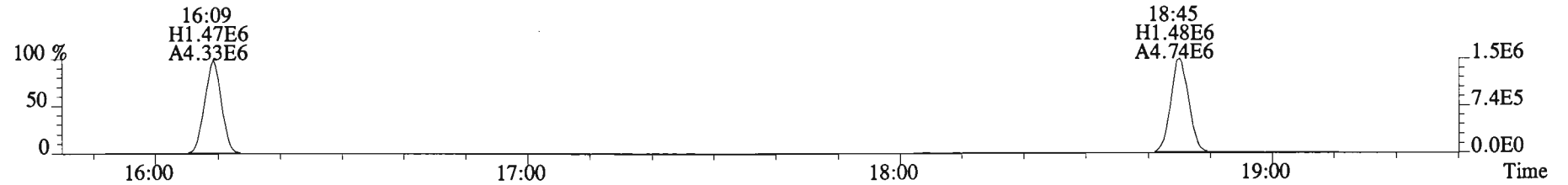
File:150202E1 #1-729 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
188.0393 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3176.0,0.00%,F,F)



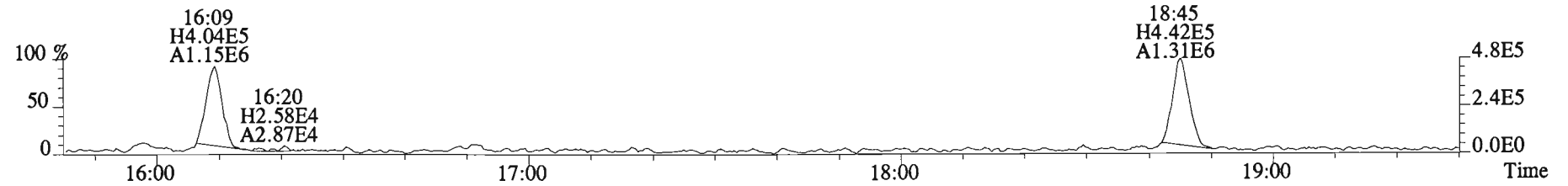
190.0363 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3812.0,0.00%,F,F)



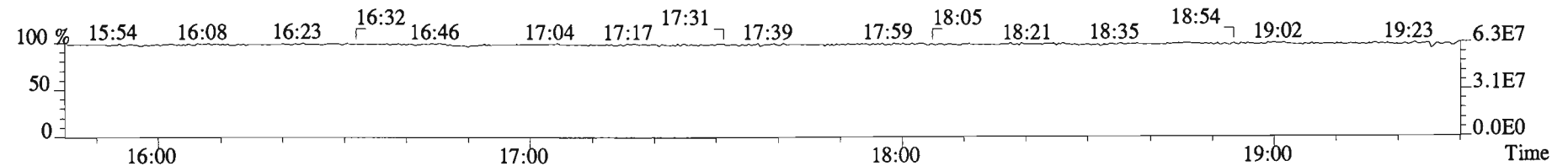
200.0795 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4064.0,0.00%,F,F)



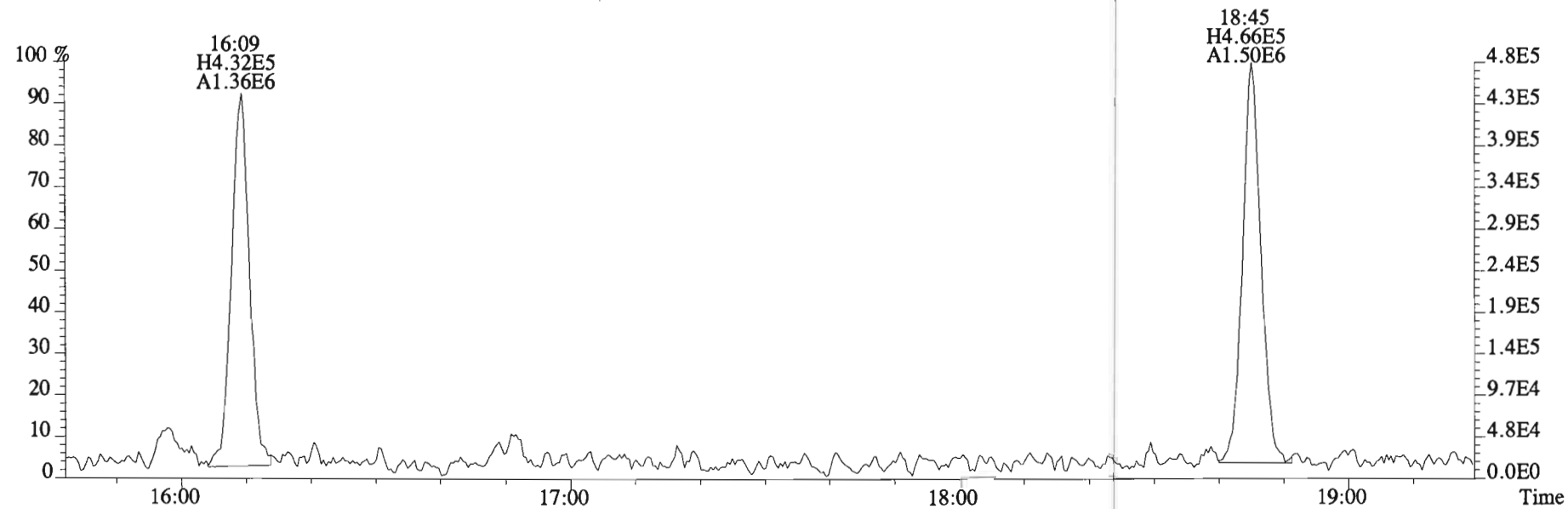
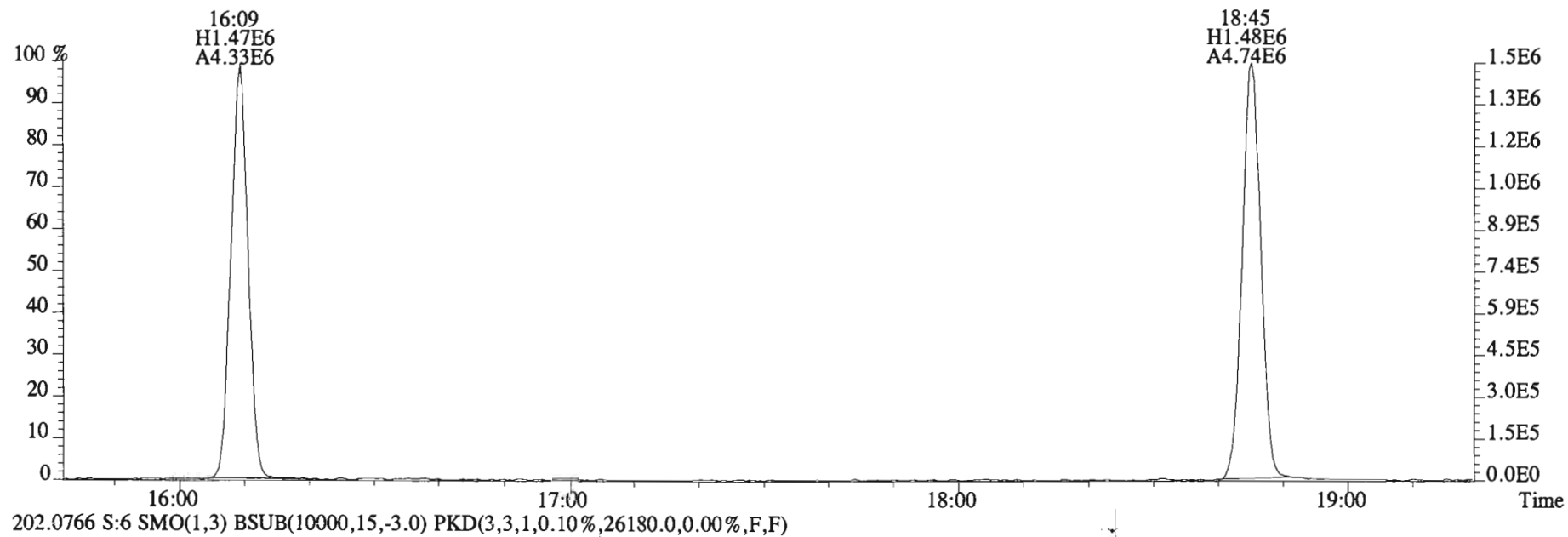
202.0766 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,26180.0,0.00%,F,F)



180.9880 S:6

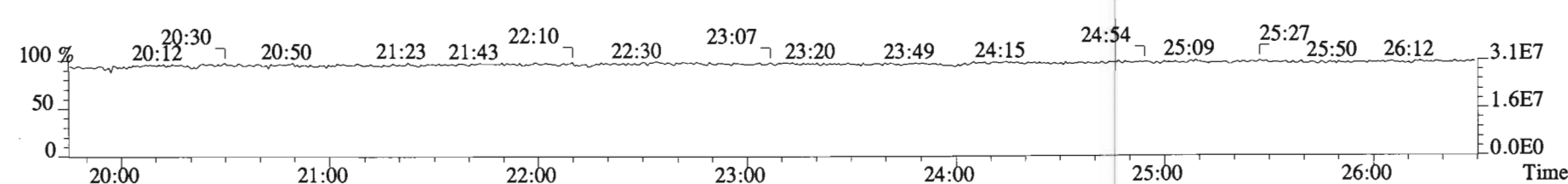
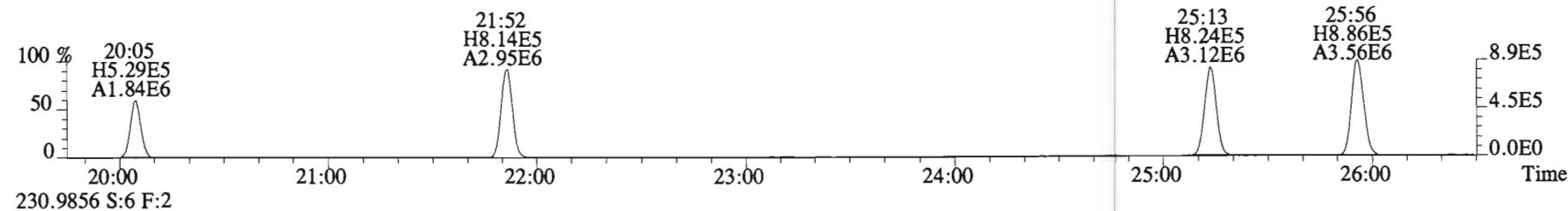
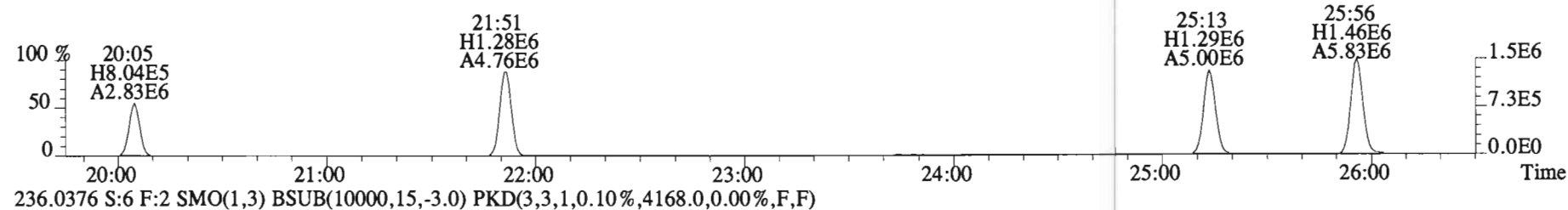
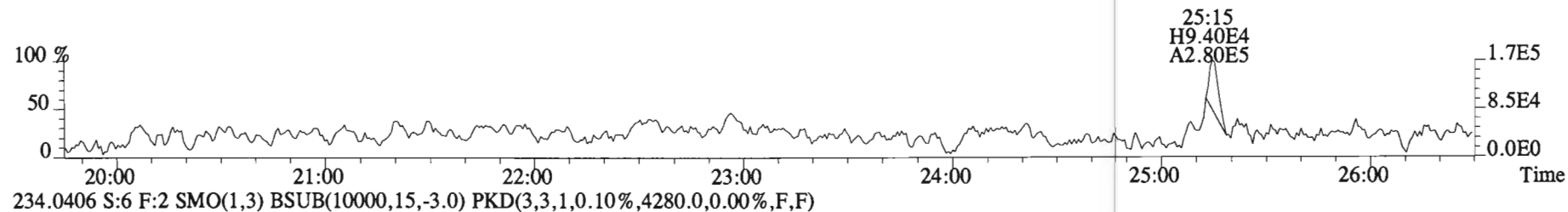
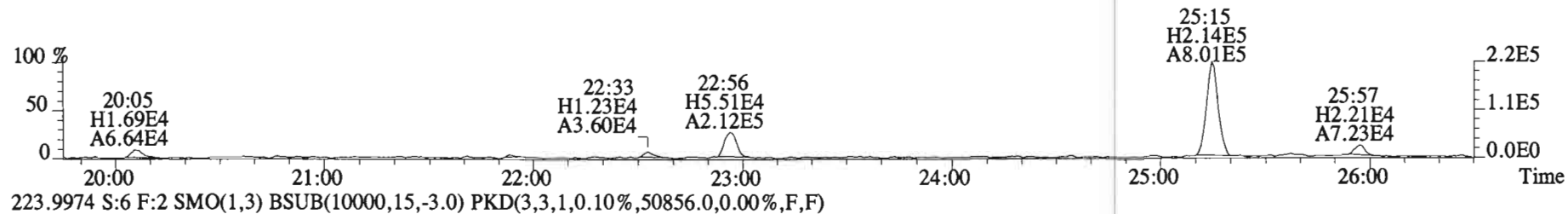


File:150202E1 #1-729 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
200.0795 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4064.0,0.00%,F,F)

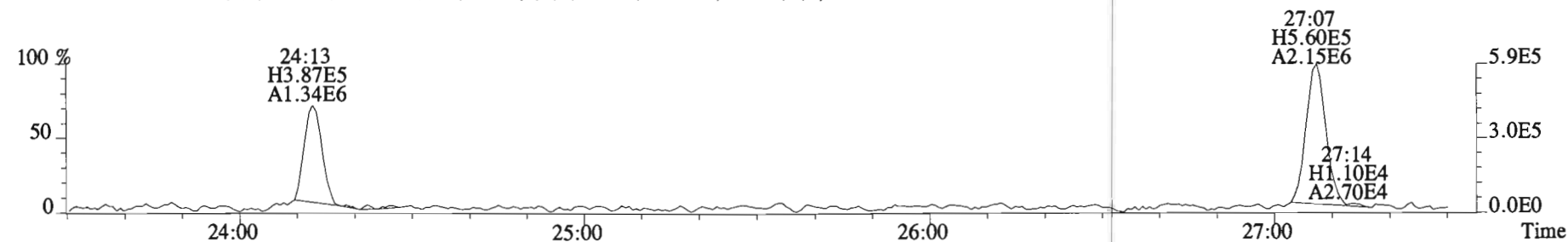
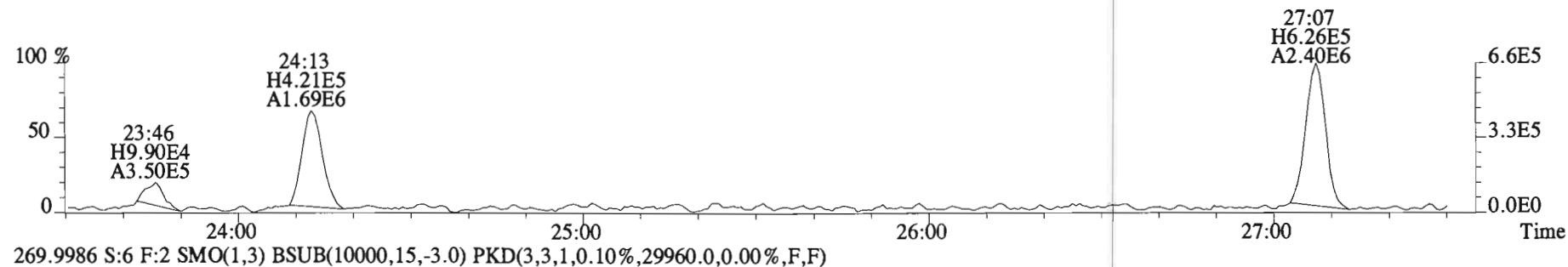
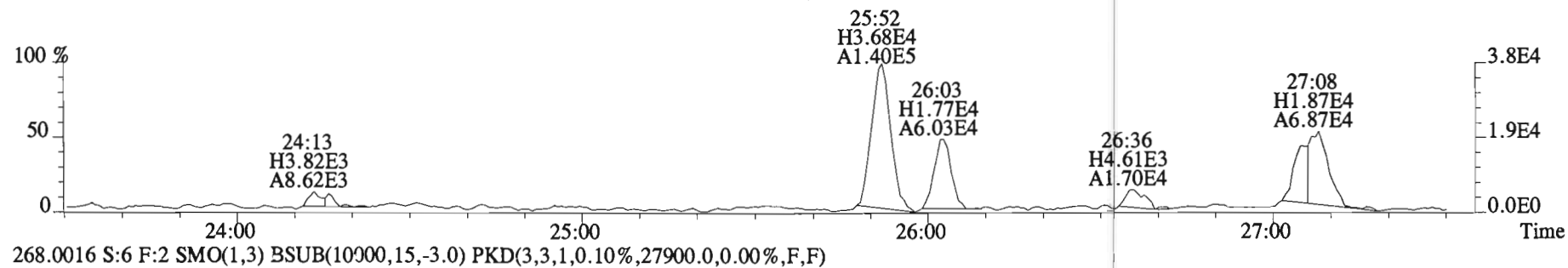
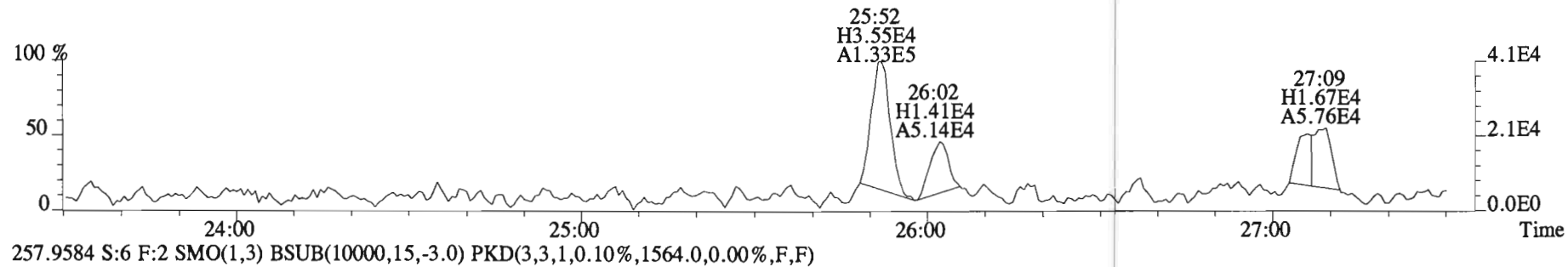




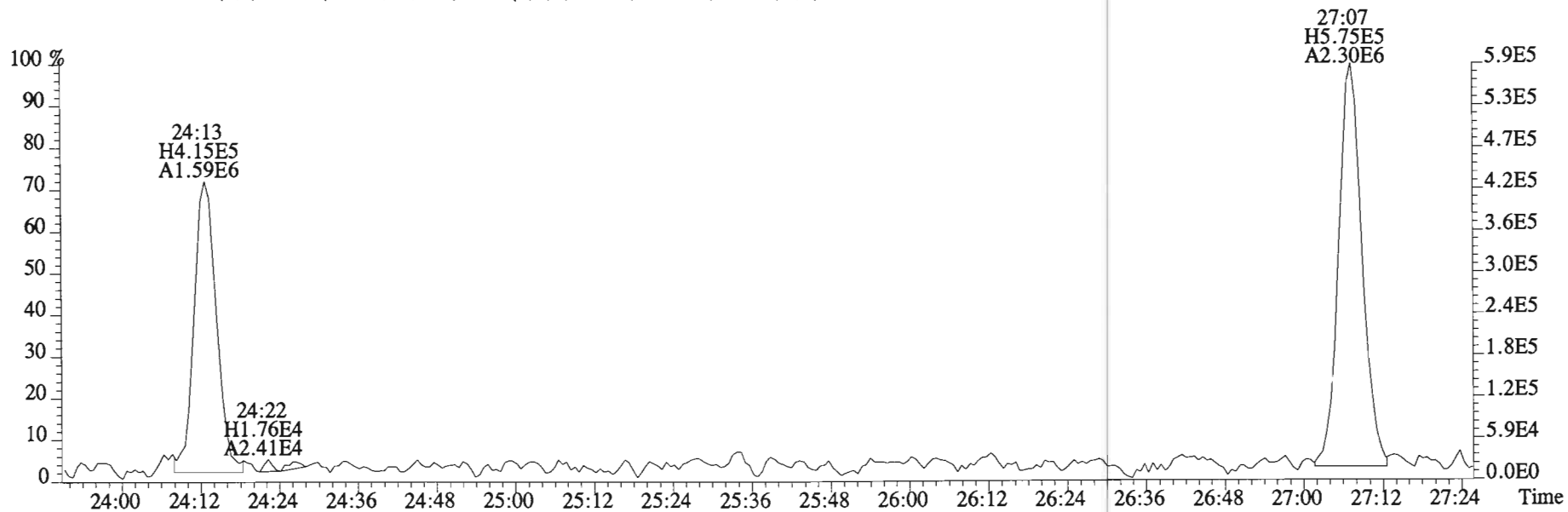
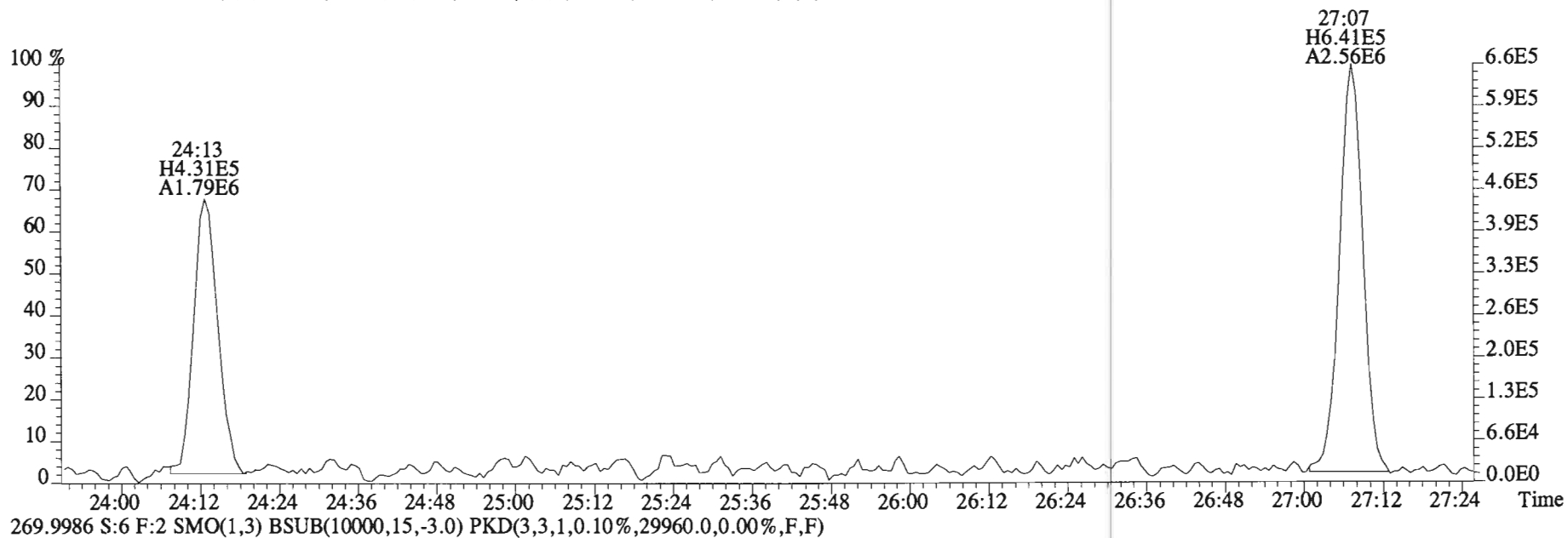
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 Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
 222.0003 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4156.0,0.00%,F,F)



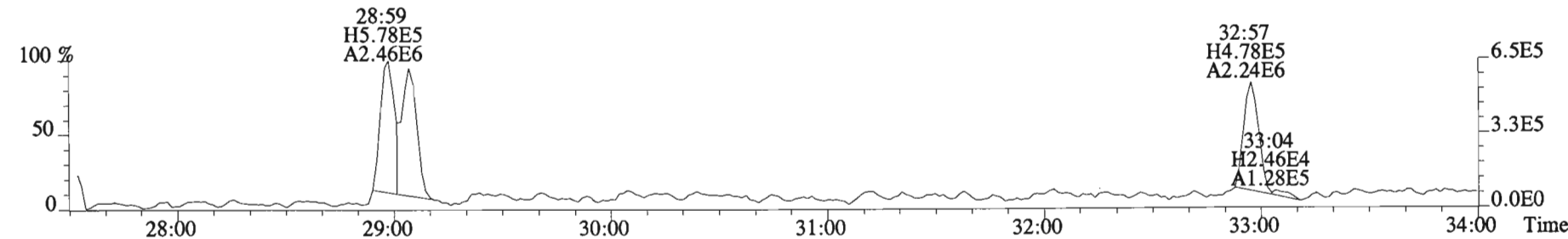
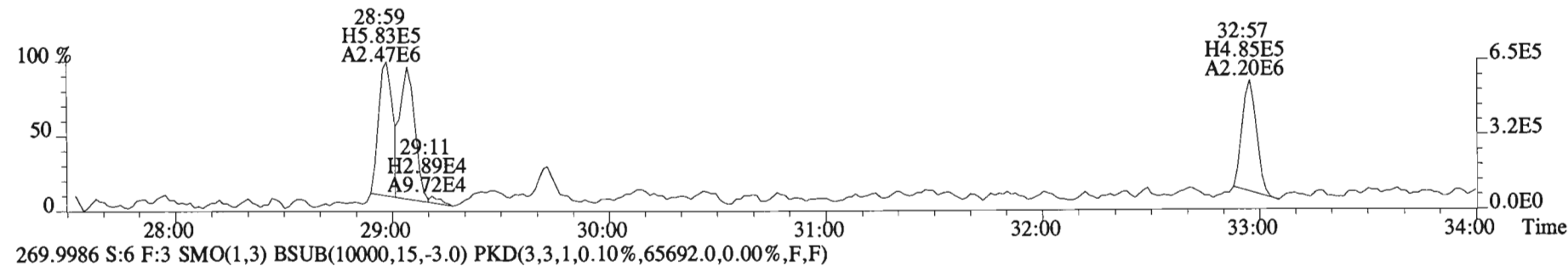
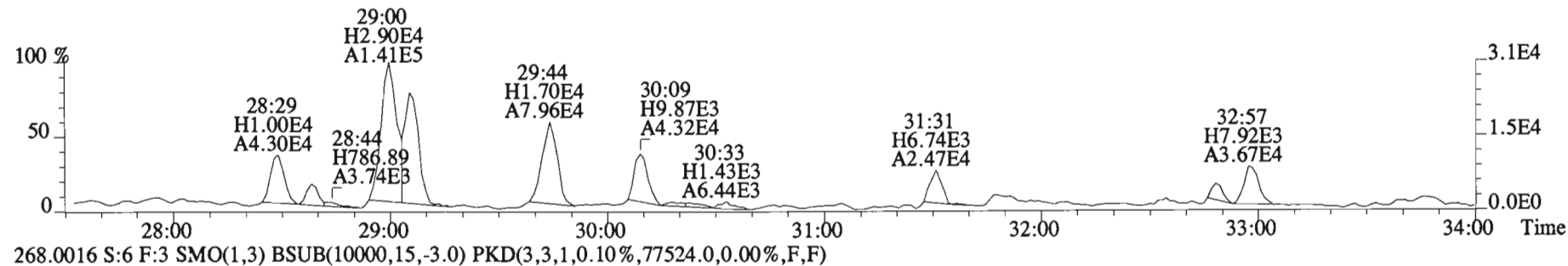
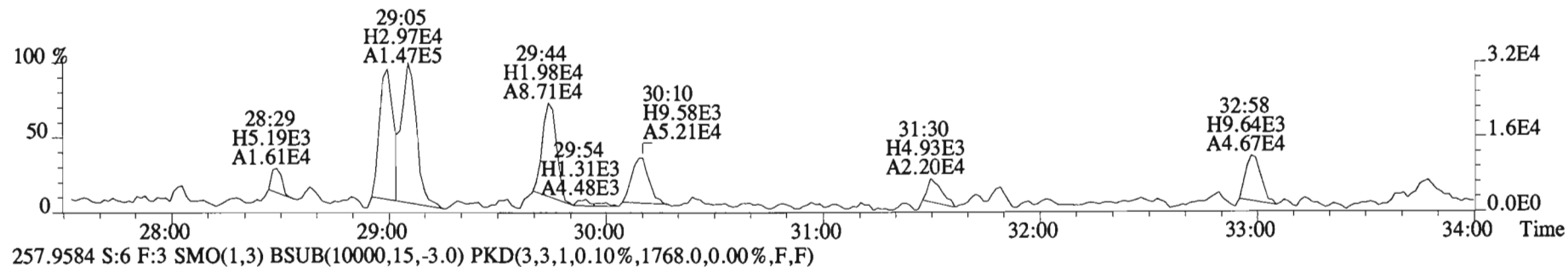
File:150202E1 #1-757 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
 255.9613 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5256.0,0.00%,F,F)



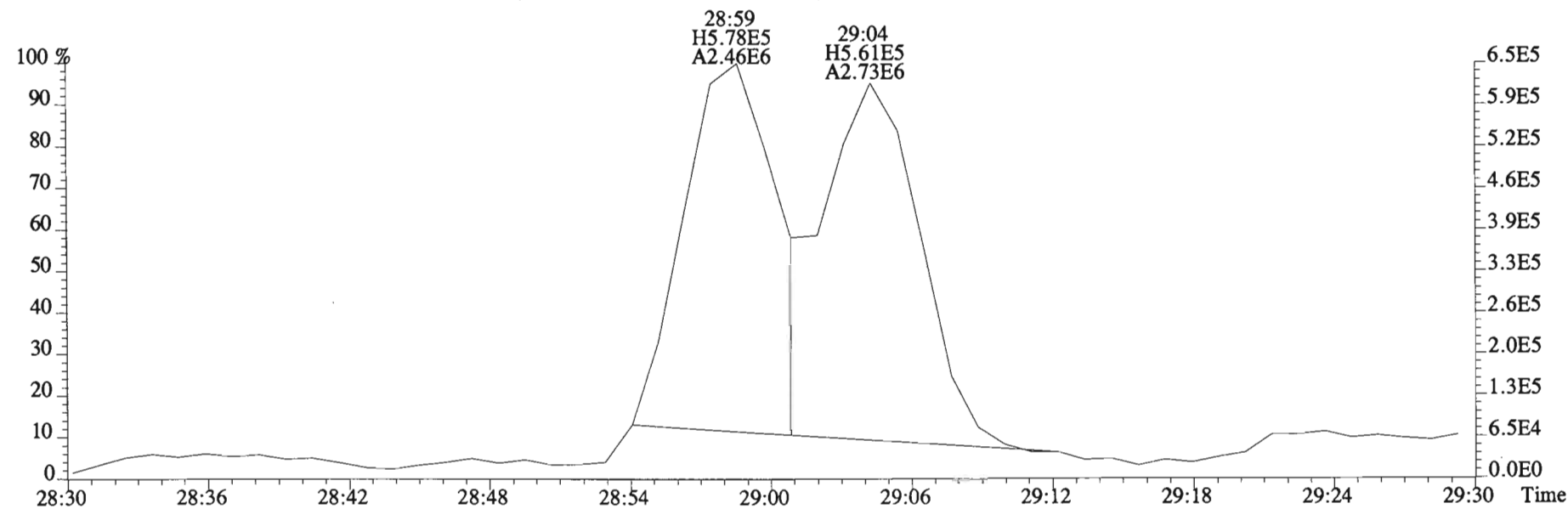
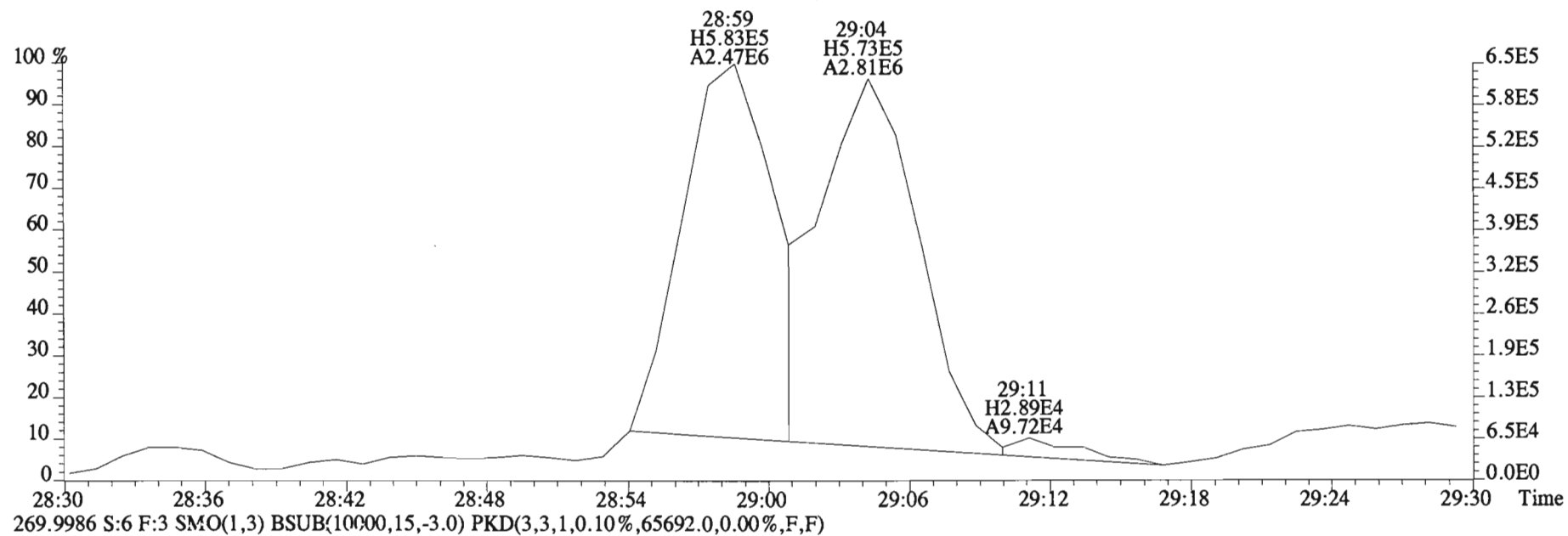
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Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
268.0016 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,27900.0,0.00%,F,F)



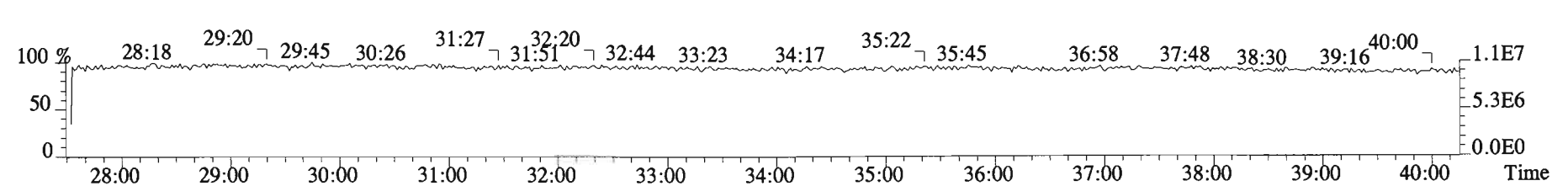
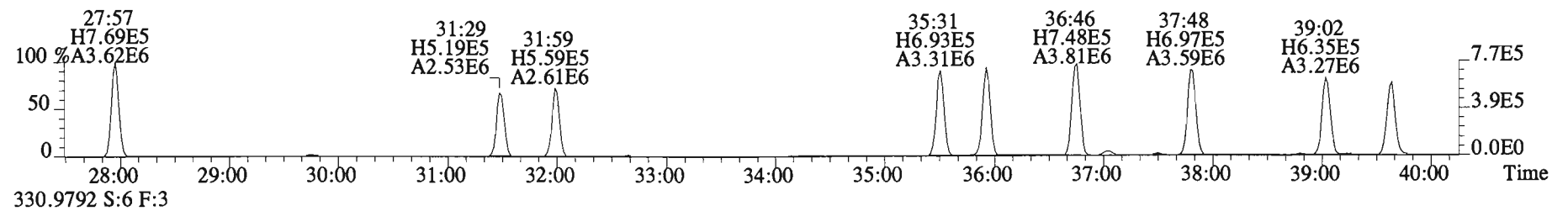
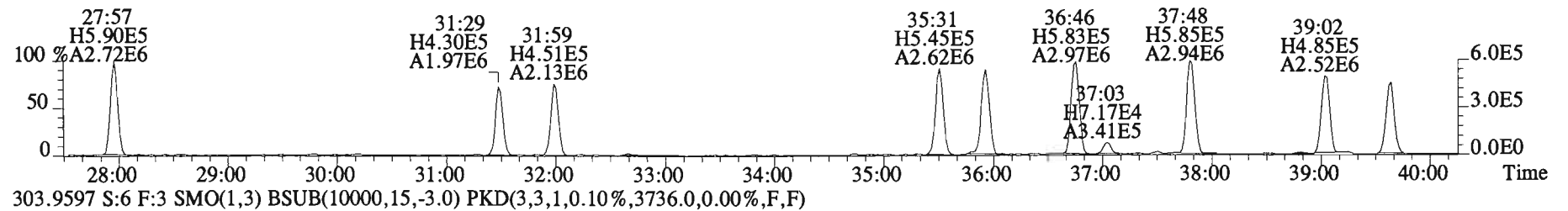
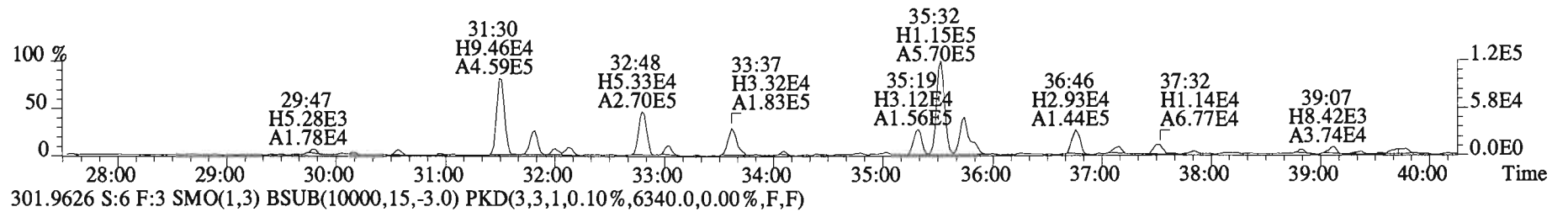
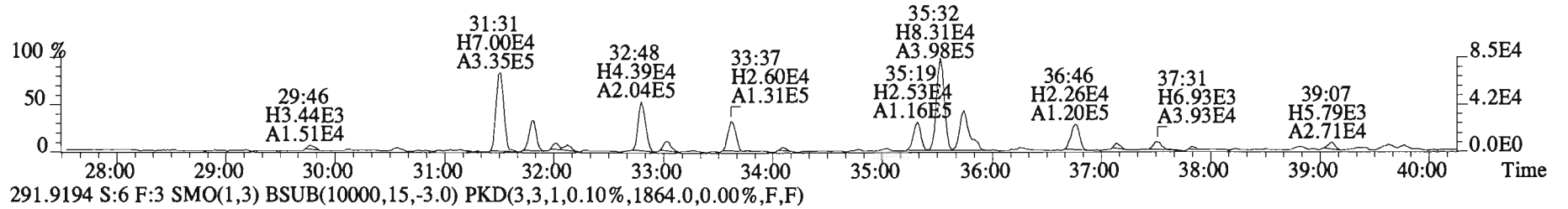
File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
255.9613 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2592.0,0.00%,F,F)



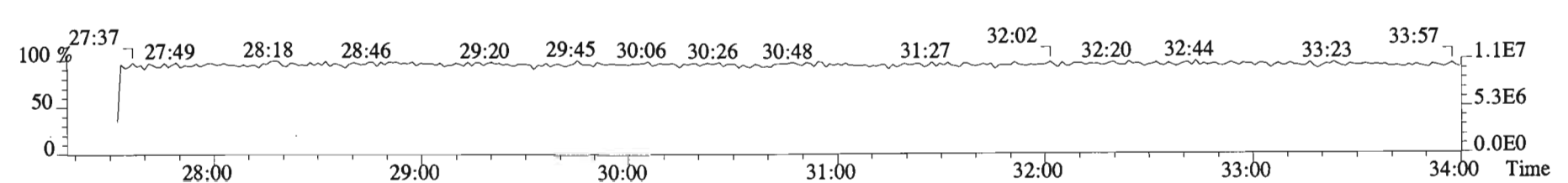
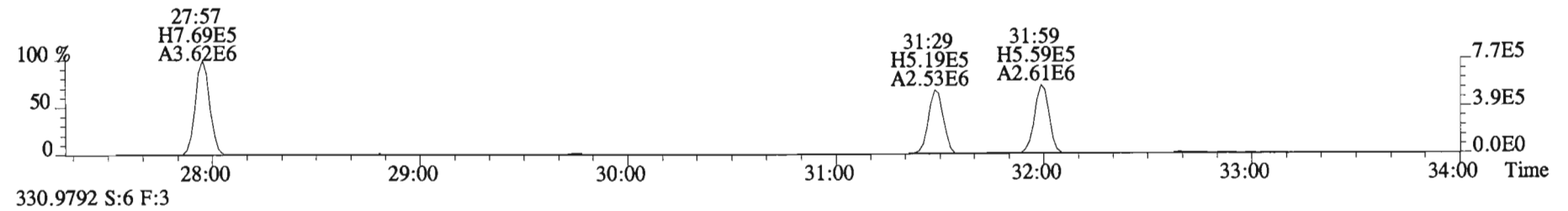
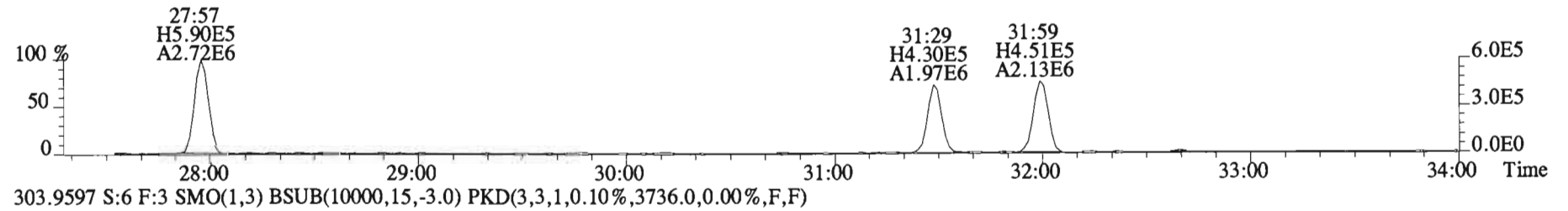
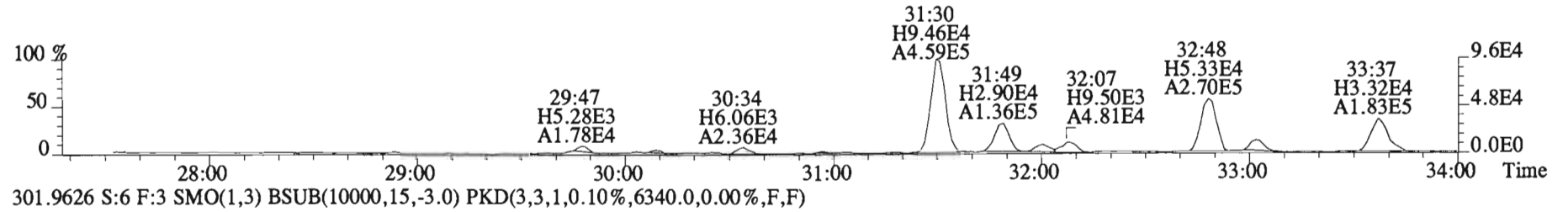
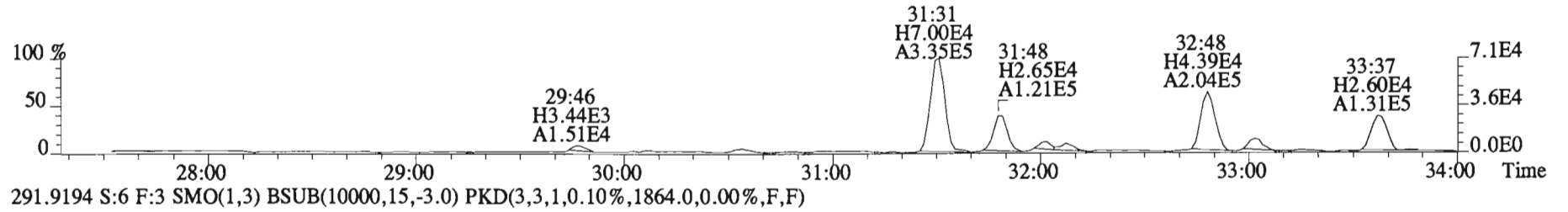
File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
268.0016 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,77524.0,0.00%,F,F)



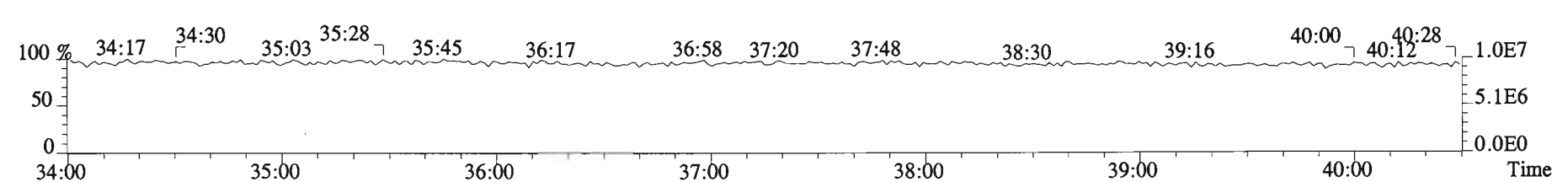
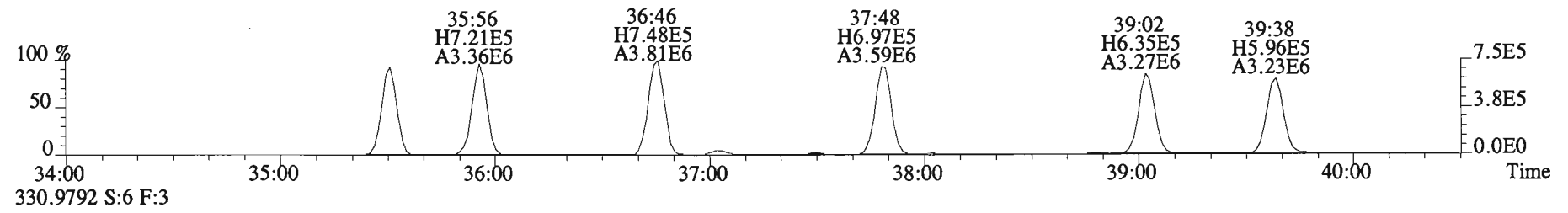
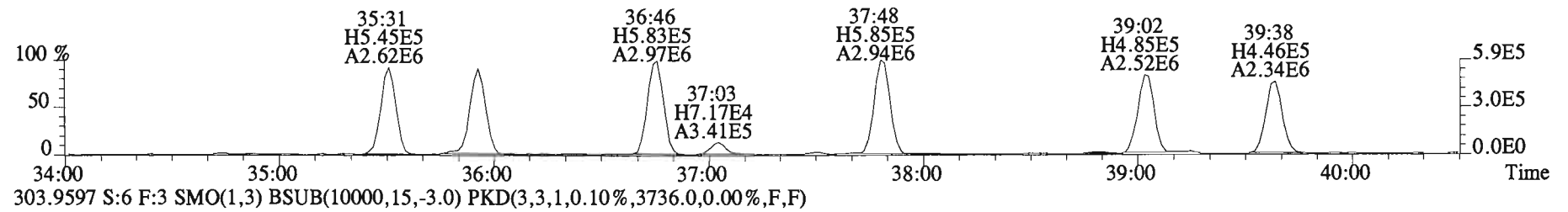
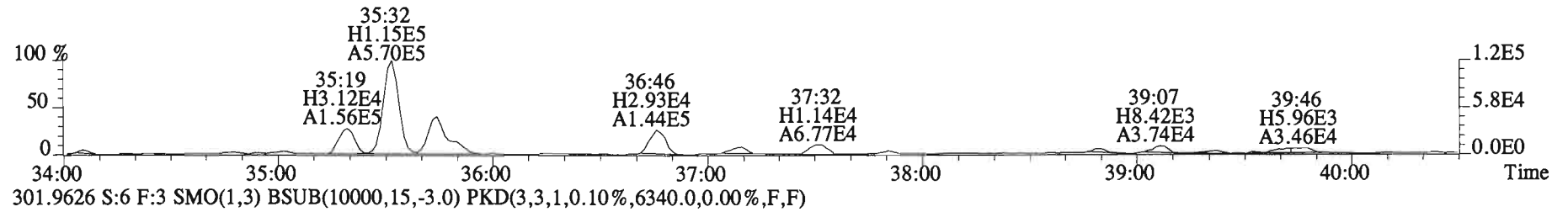
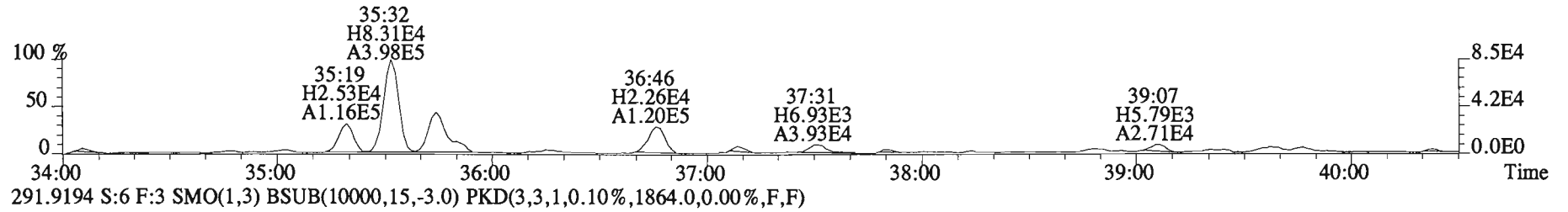
File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
 289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1944.0,0.00%,F,F)



File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
 289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1944.0,0.00%,F,F)

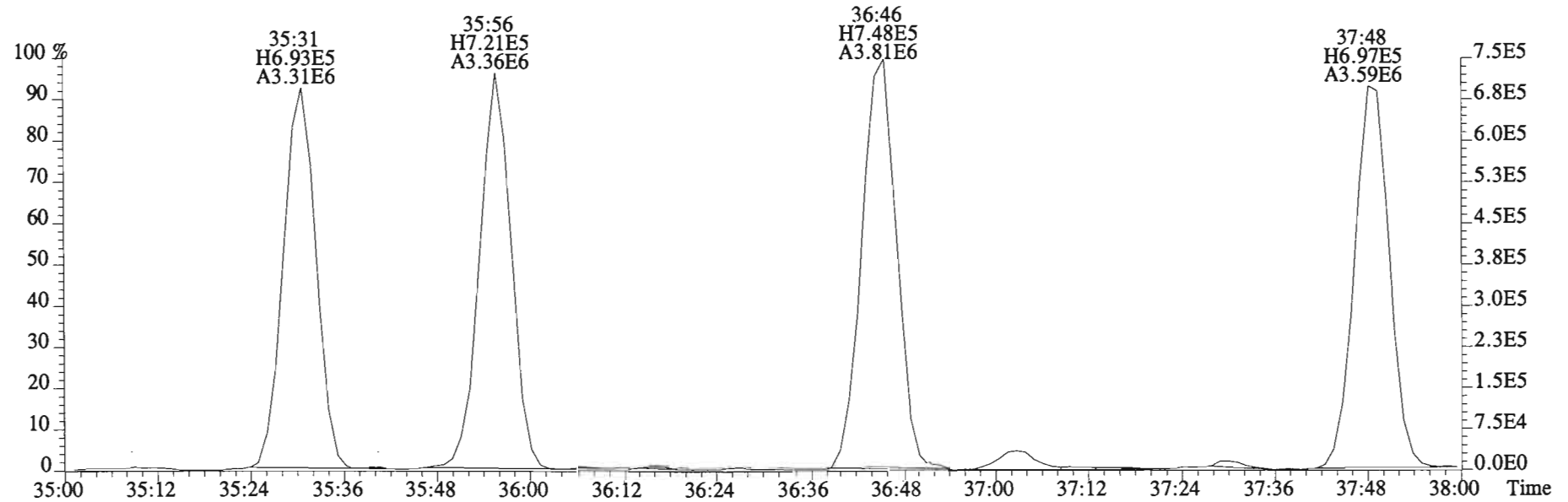
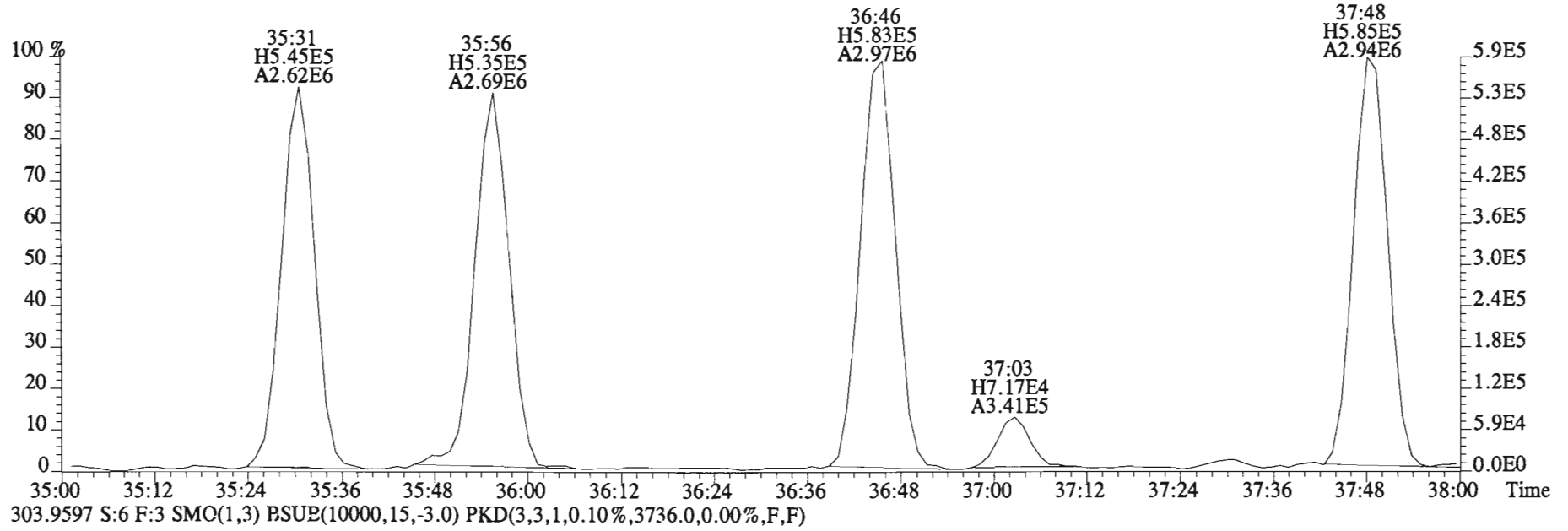


File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
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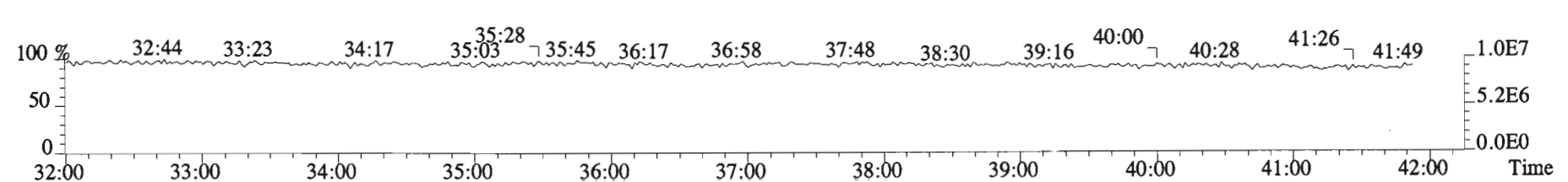
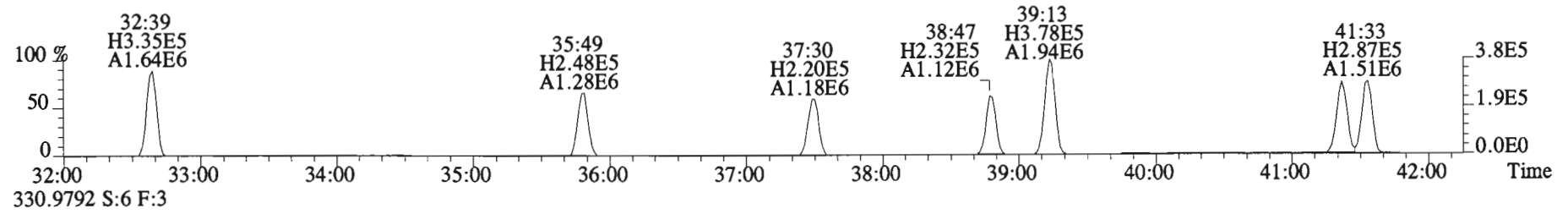
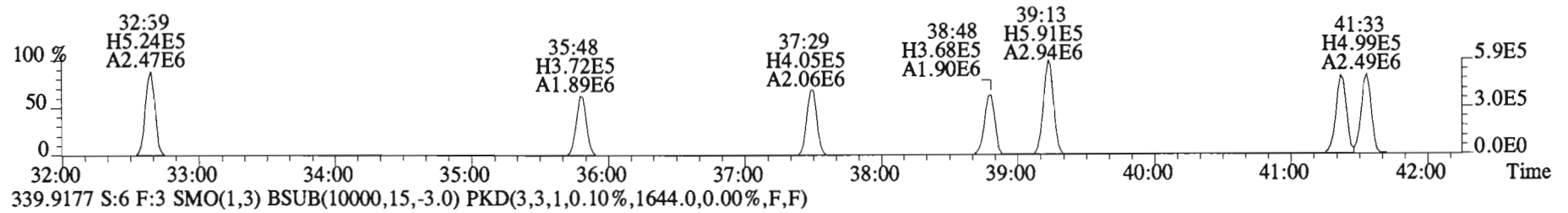
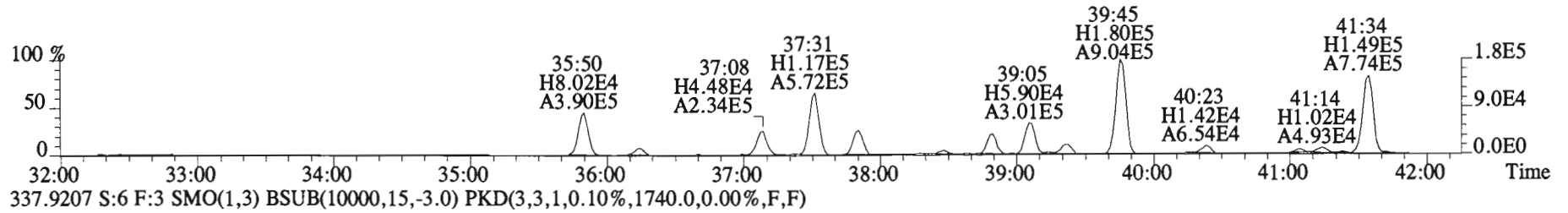
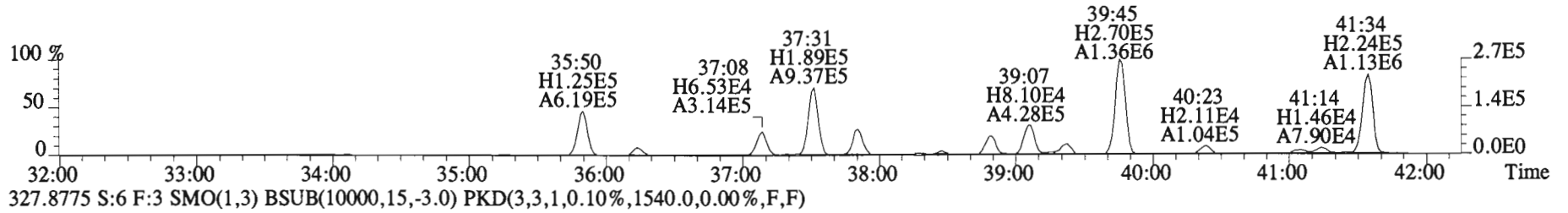




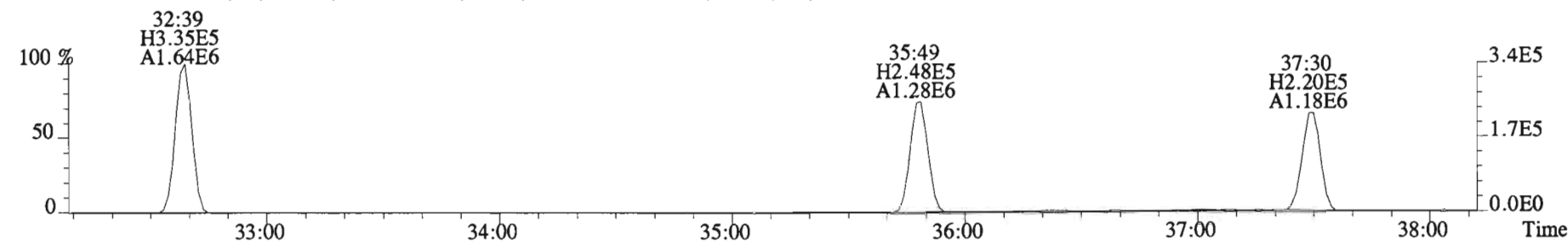
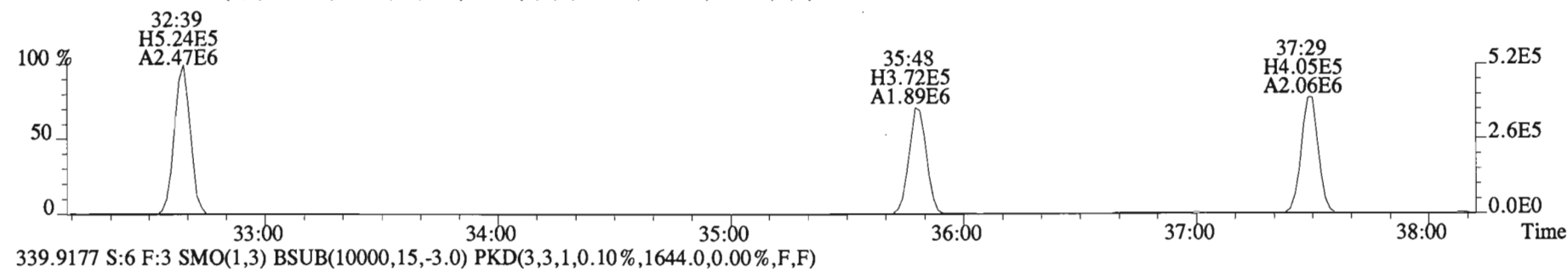
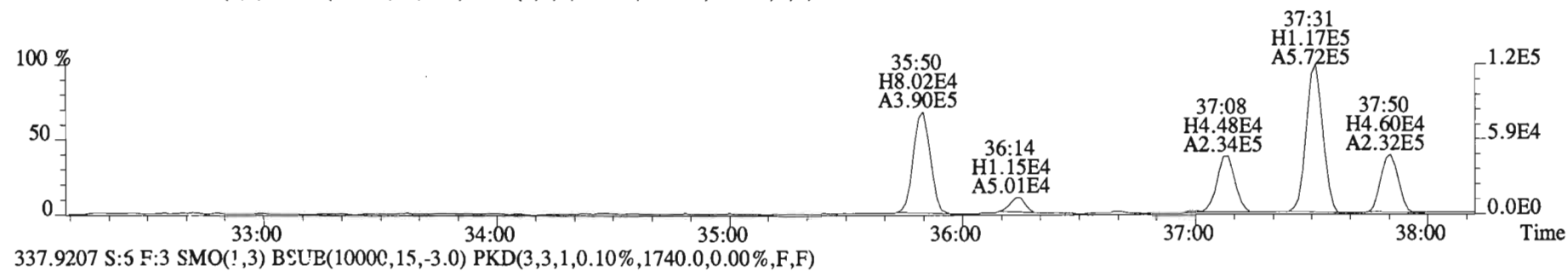
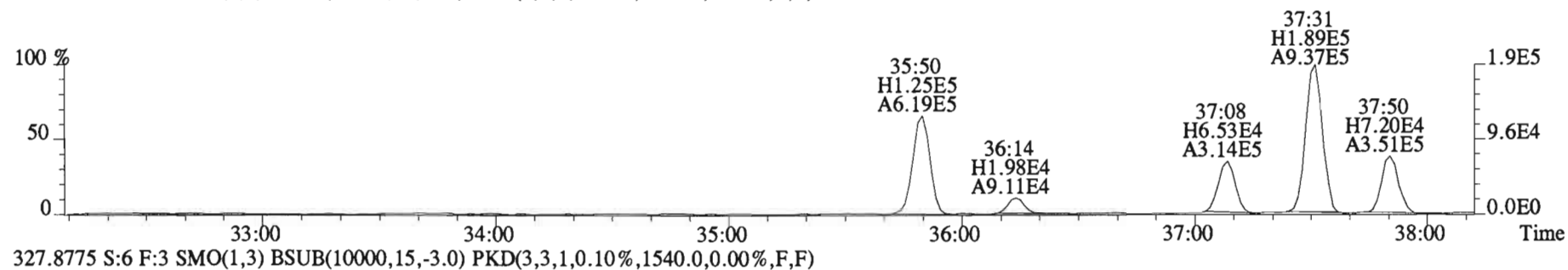
File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
301.9626 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6340.0,0.00%,F,F)



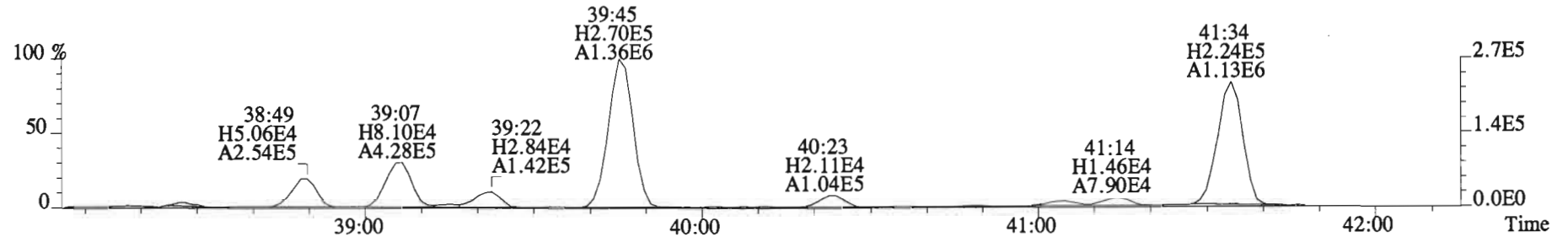
File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1828.0,0.00%,F,F)



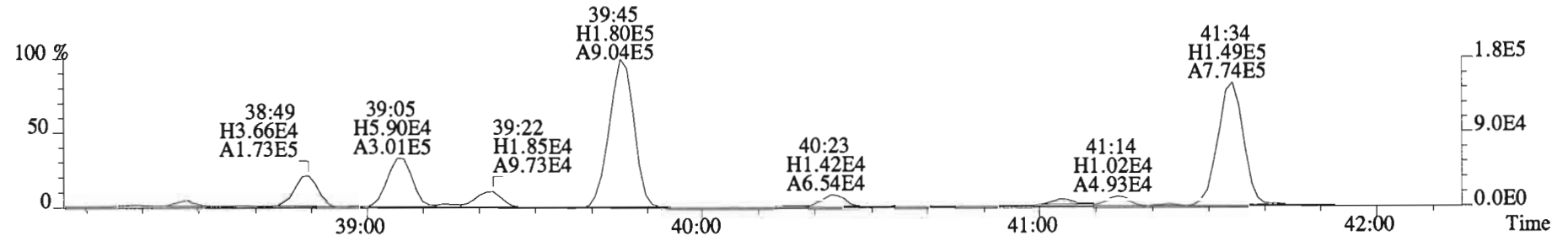
File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1828.0,0.00%,F,F)



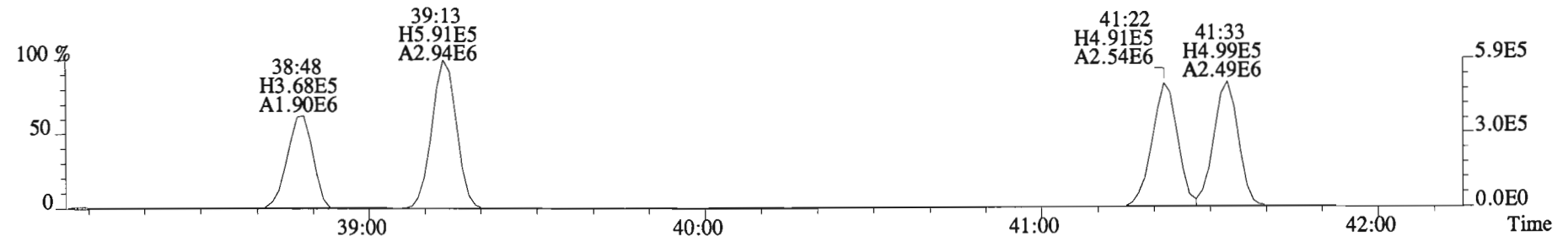
File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
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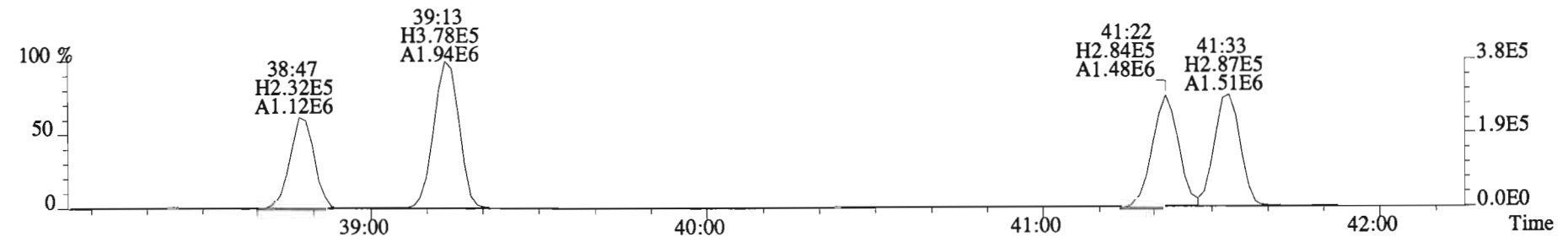
327.8775 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1540.0,0.00%,F,F)



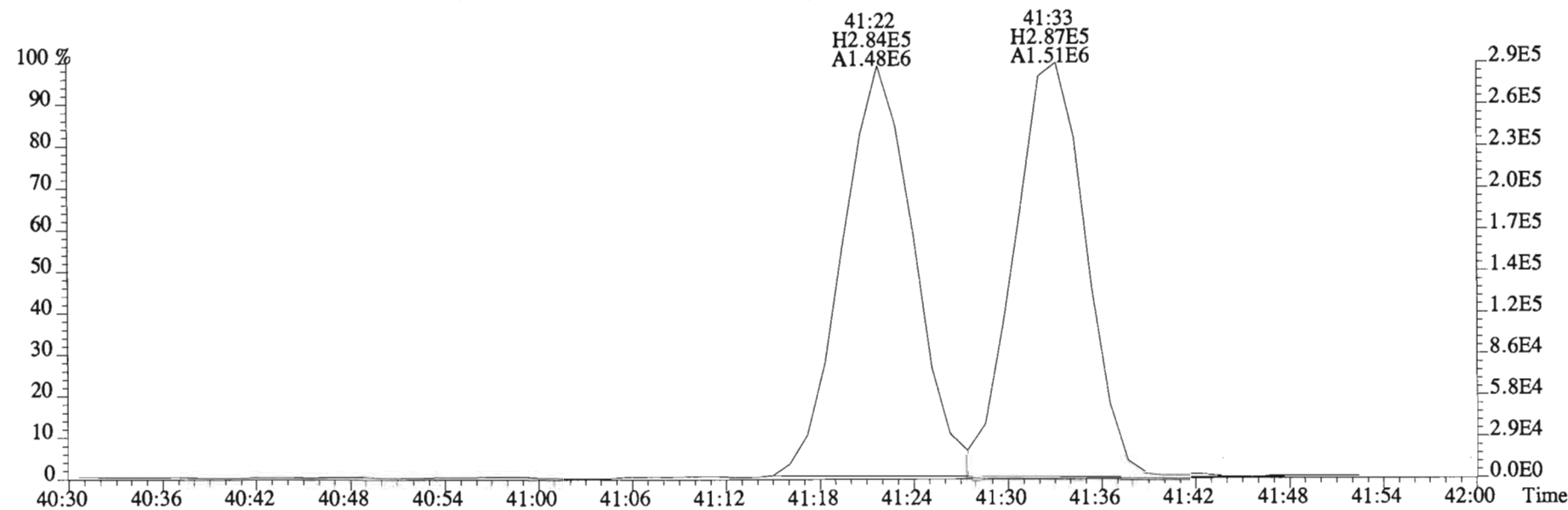
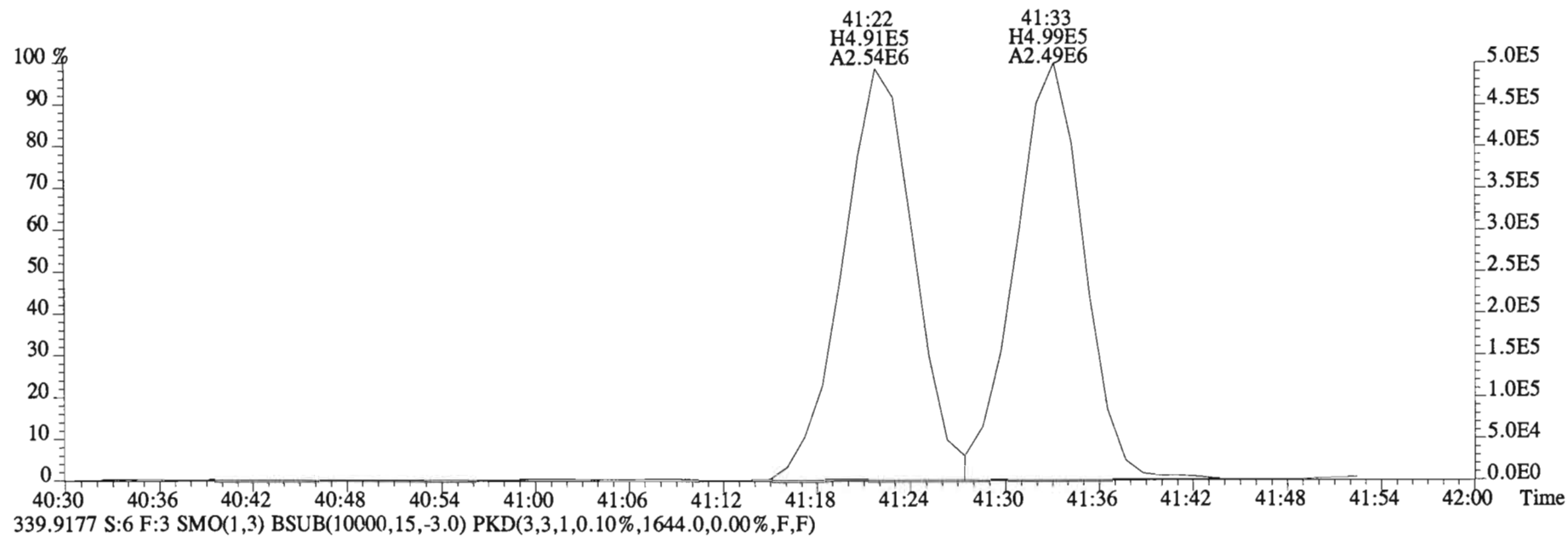
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1740.0,0.00%,F,F)



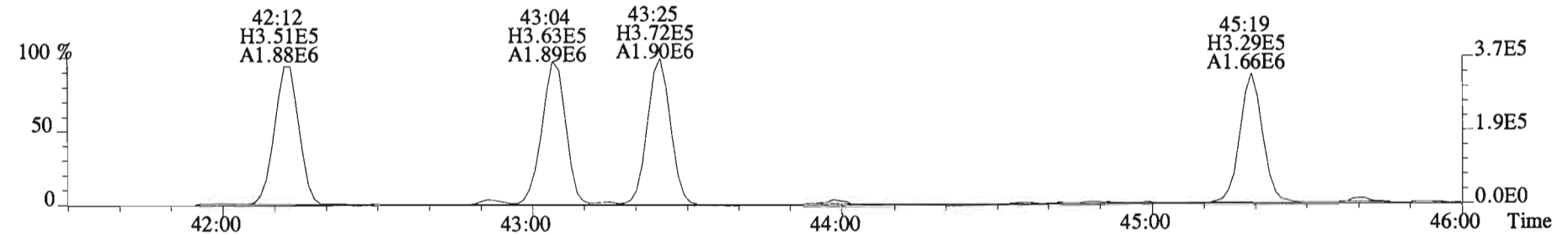
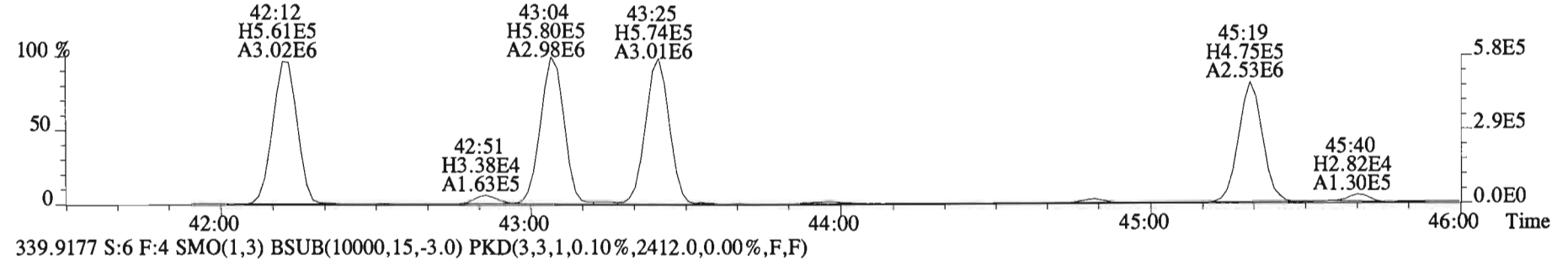
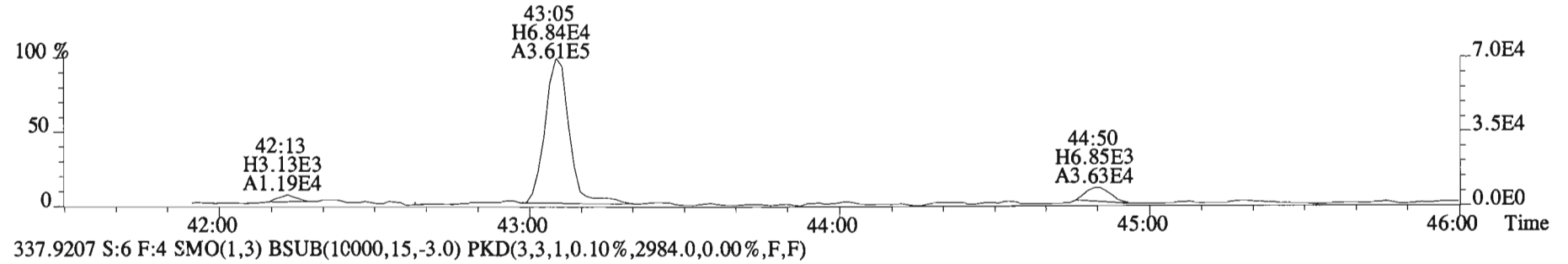
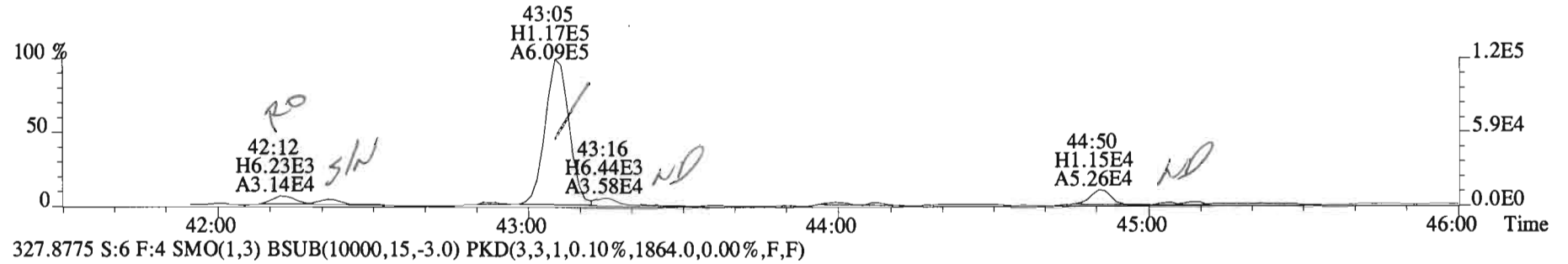
339.9177 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1644.0,0.00%,F,F)



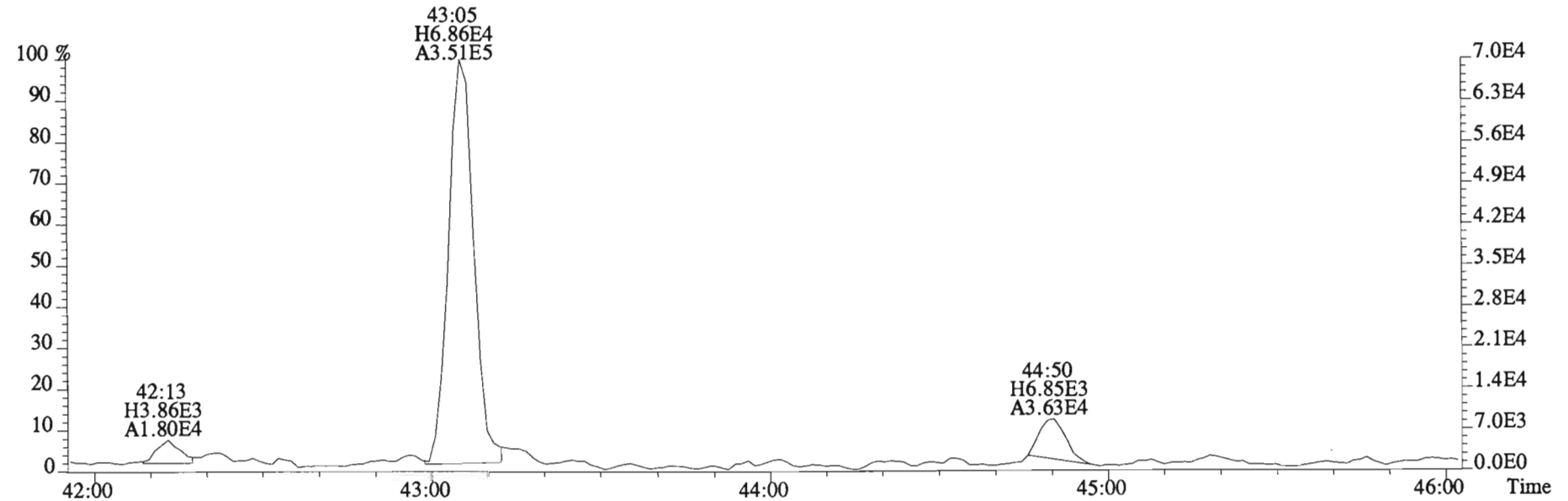
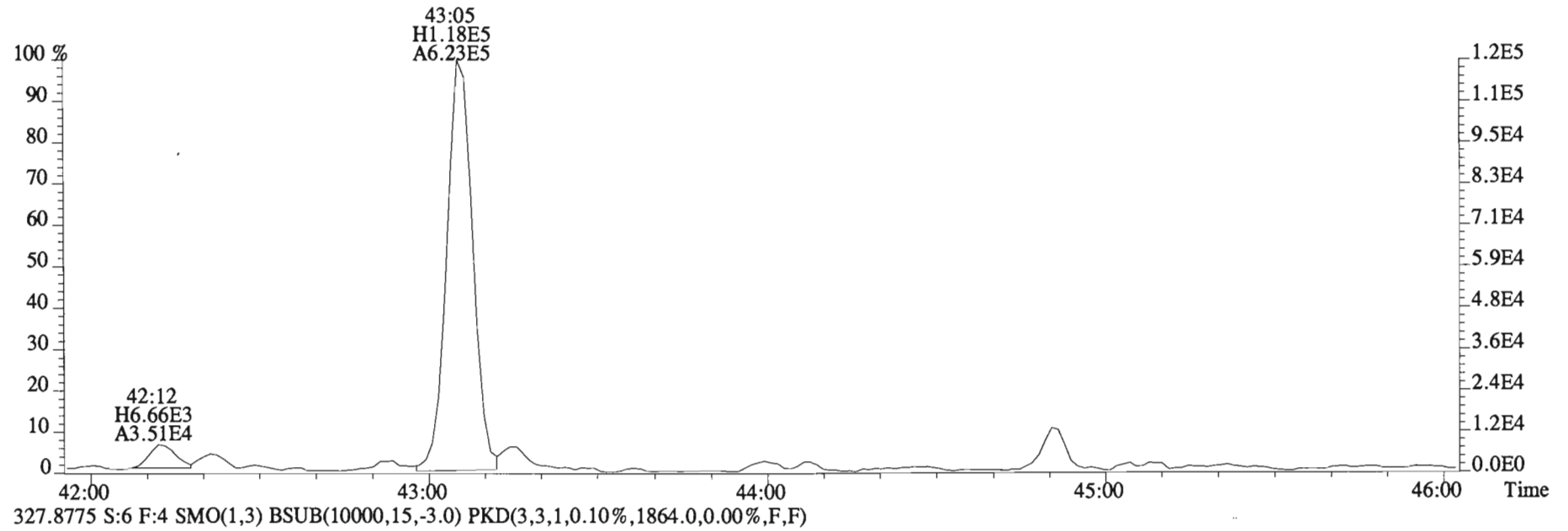
File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
337.9207 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1740.0,0.00%,F,F)



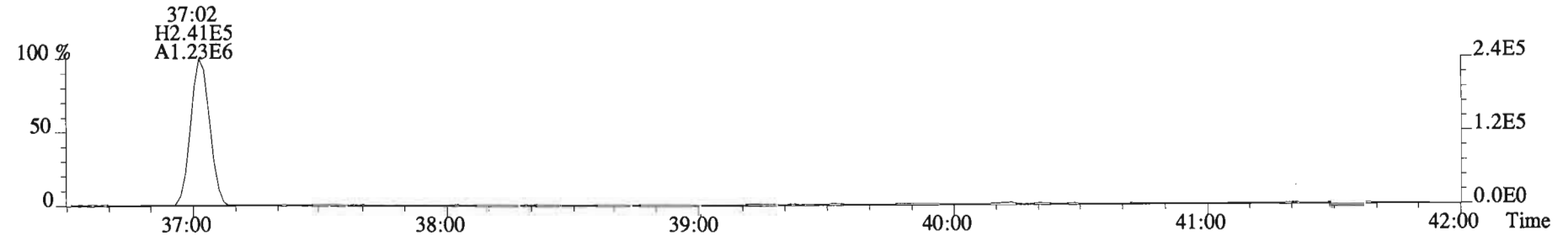
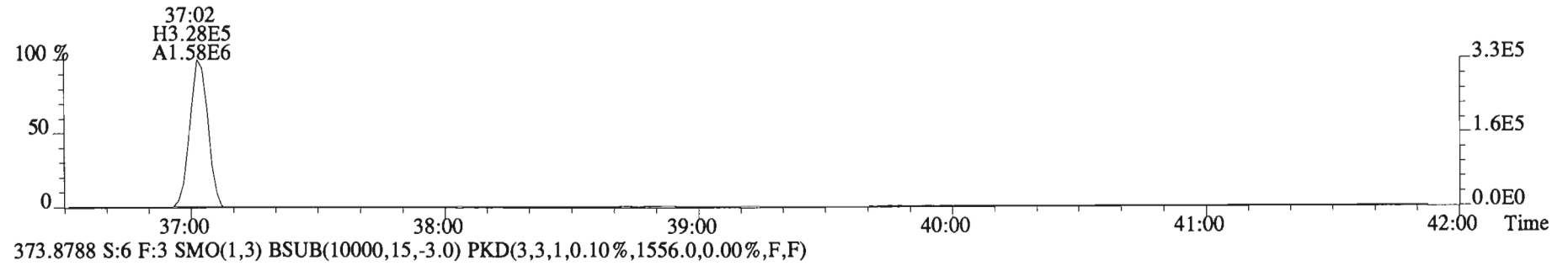
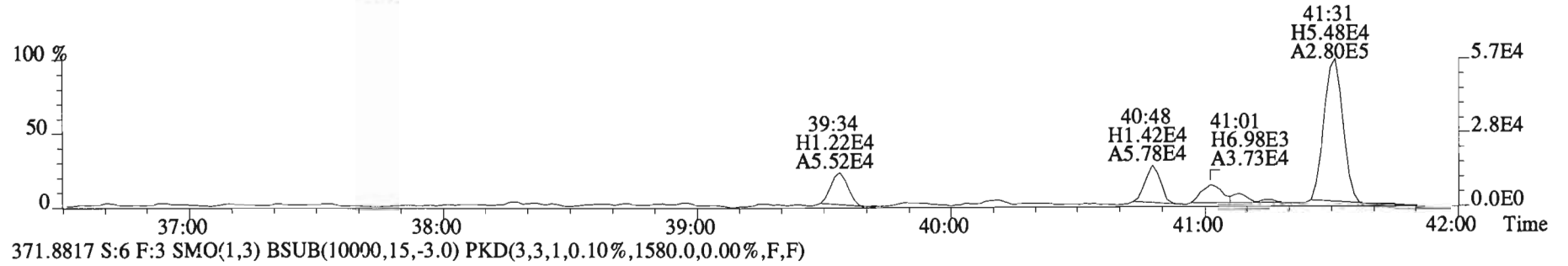
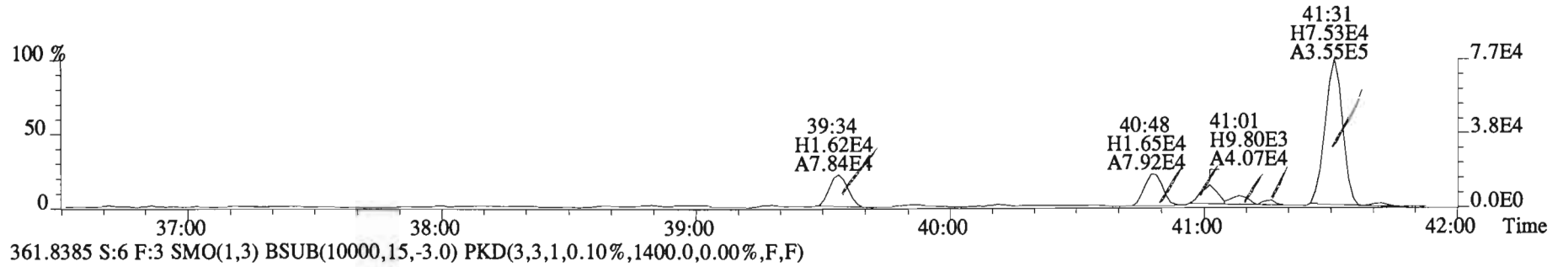
File:150202E1 #1-555 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
325.8804 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1752.0,0.00%,F,F)



File:150202E1 #1-555 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
325.8804 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1752.0,0.00%,F,F)

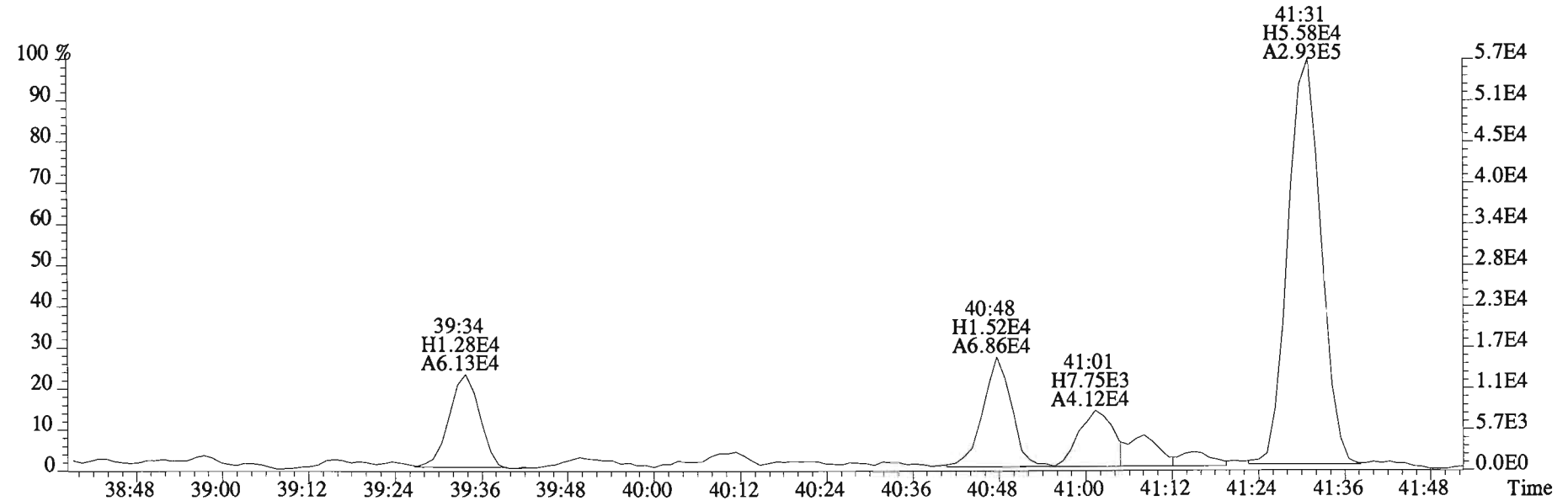
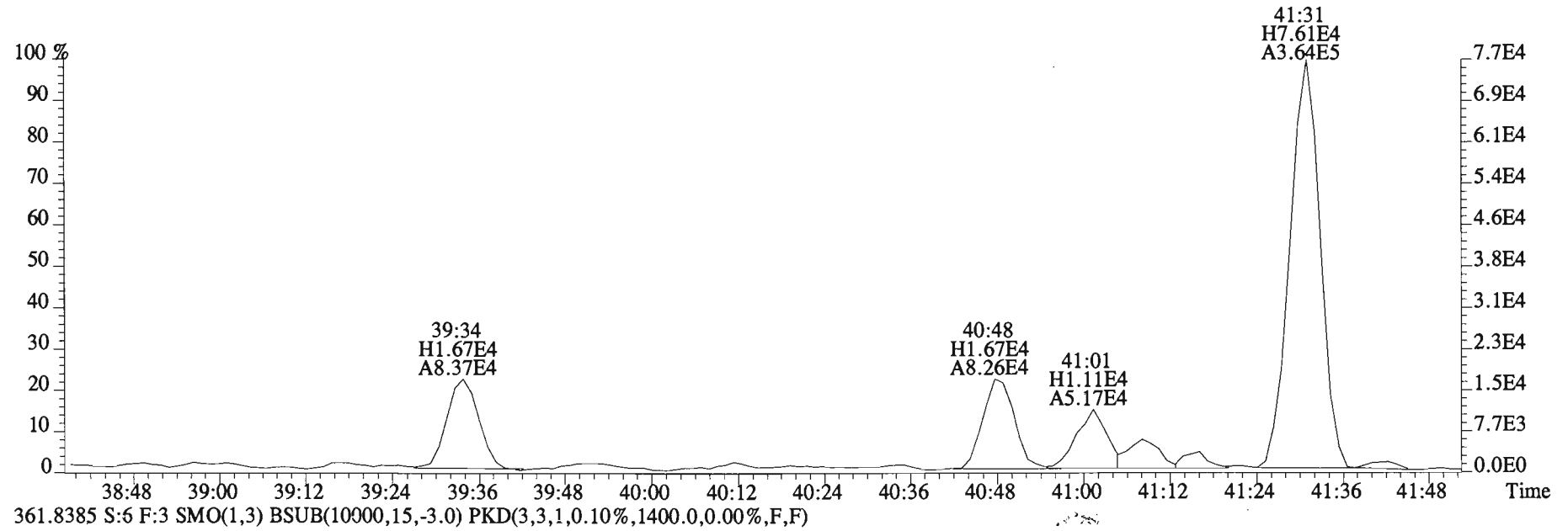


File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
359.8415 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)

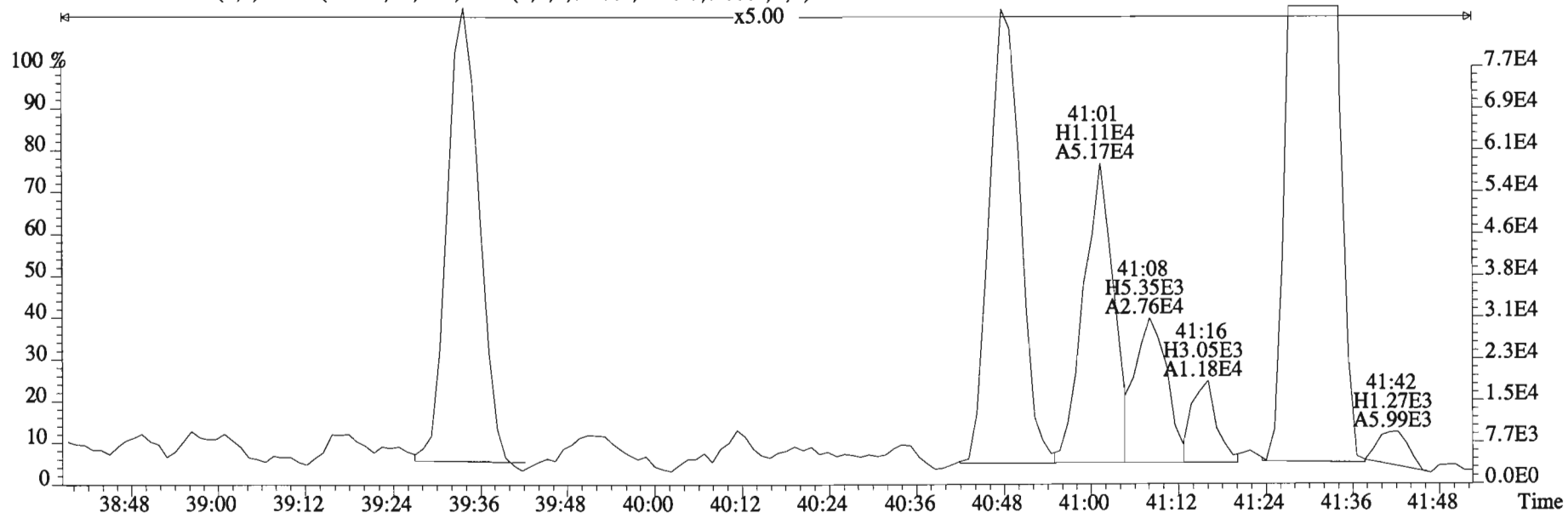




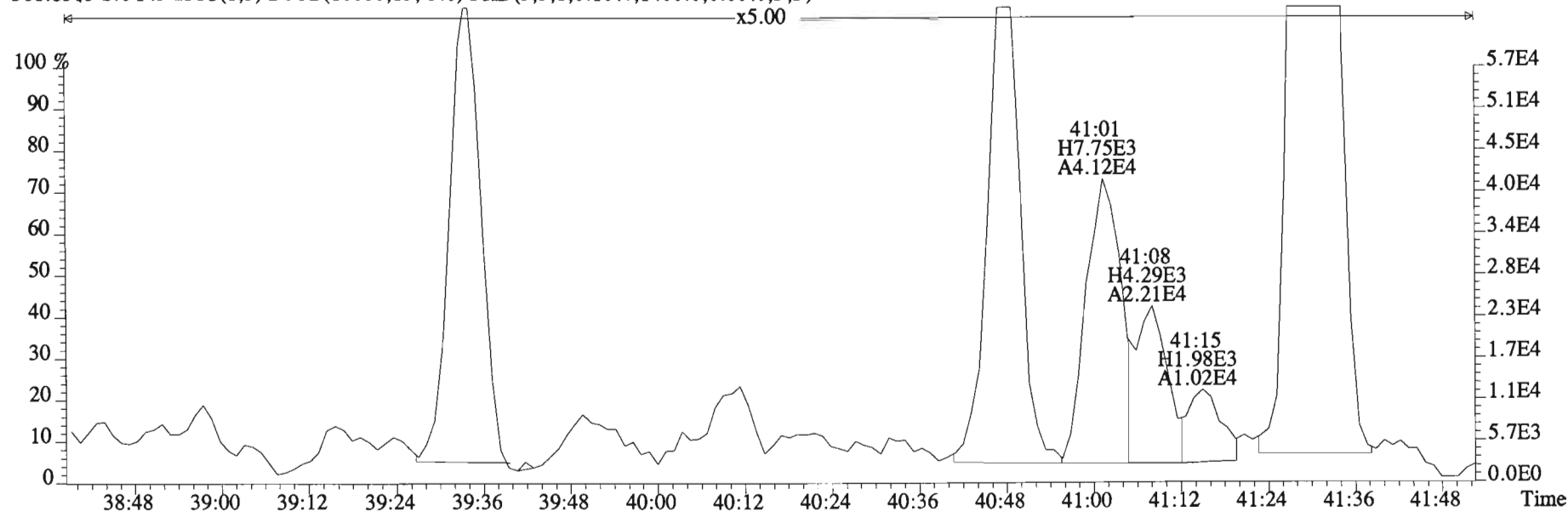
File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
359.8415 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)



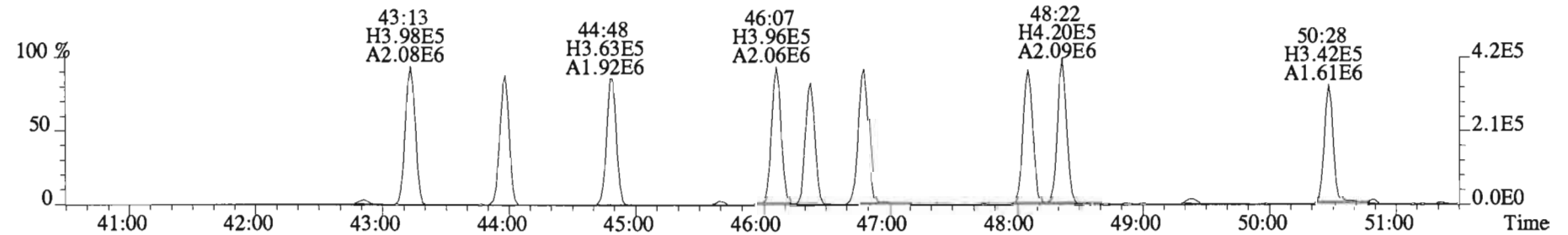
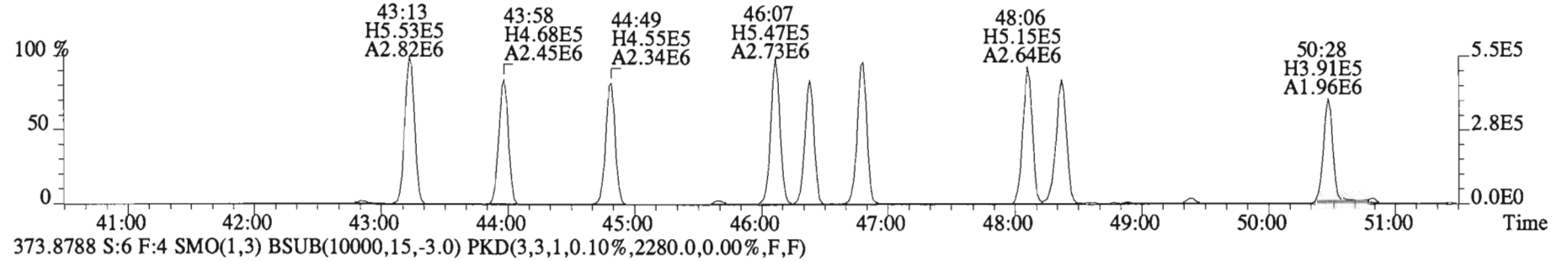
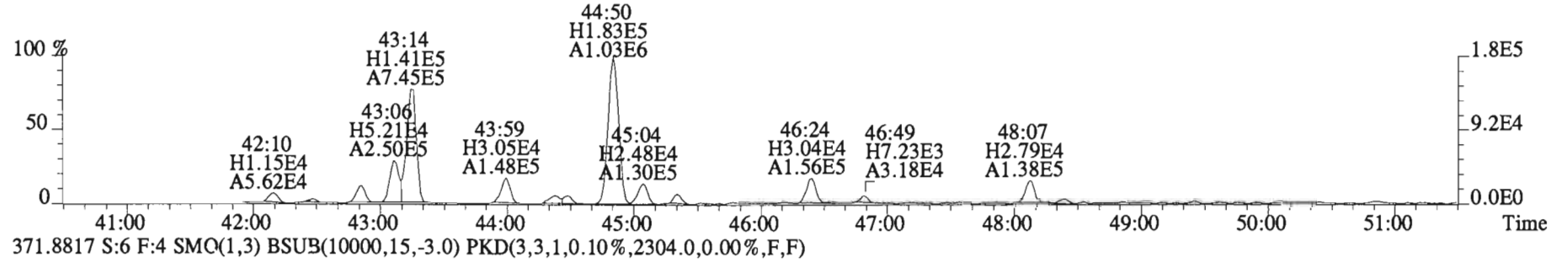
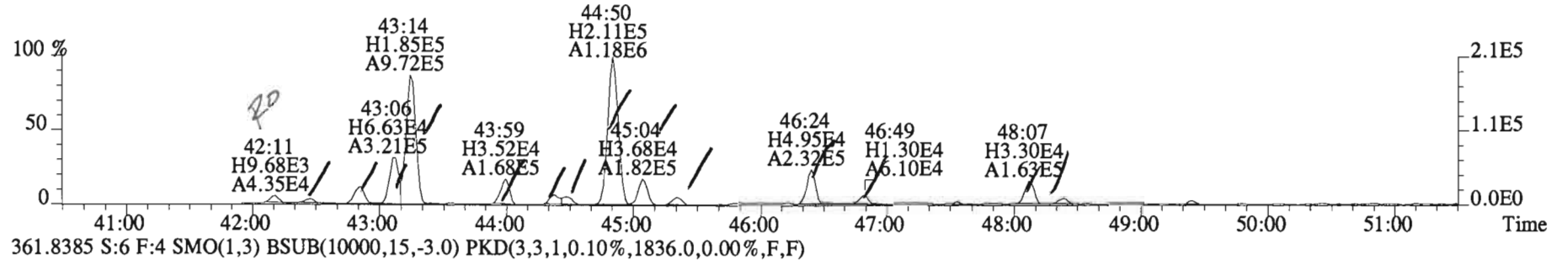
File:150202E1 #1-758 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
359.8415 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1396.0,0.00%,F,F)



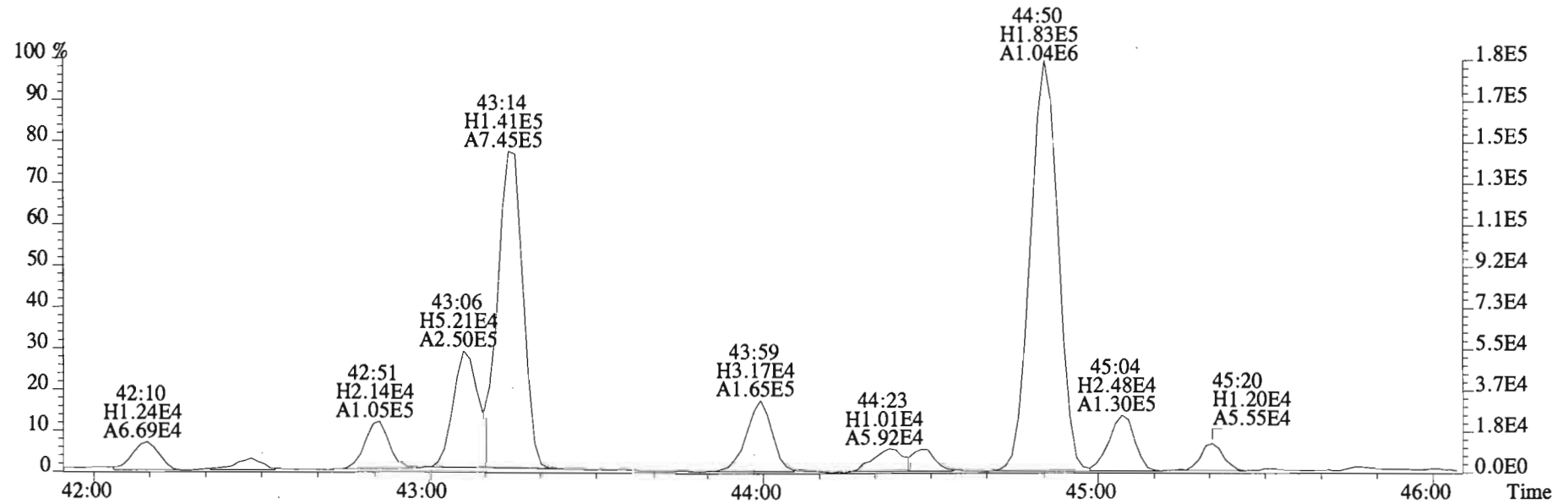
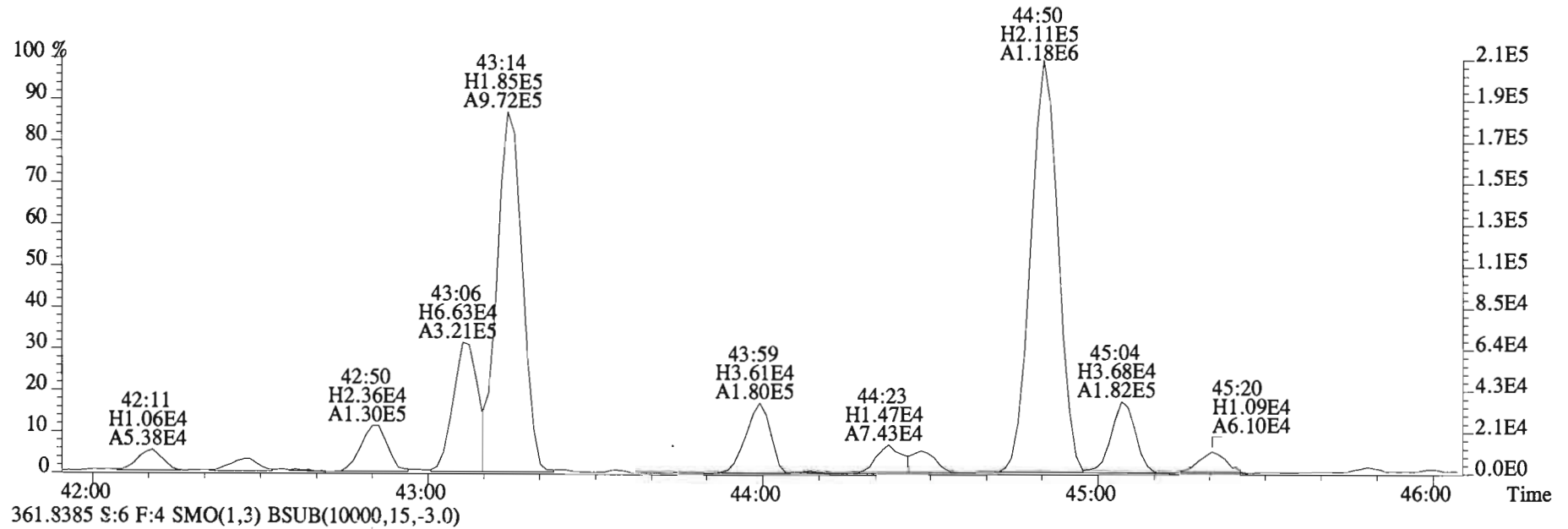
361.8385 S:6 F:3 SMO(1,3) ESUB(10000,15,-3.0) PKD(3,3,1,0.10%,1400.0,0.00%,F,F)



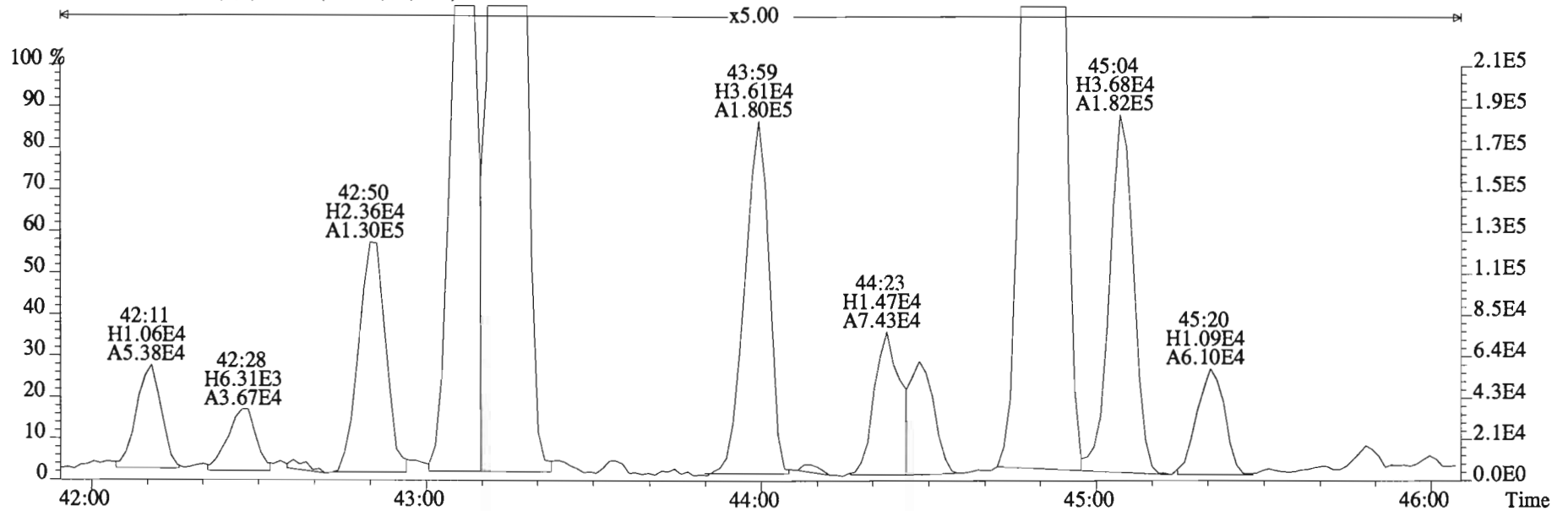
File:150202E1 #1-555 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
 359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1836.0,0.00%,F,F)



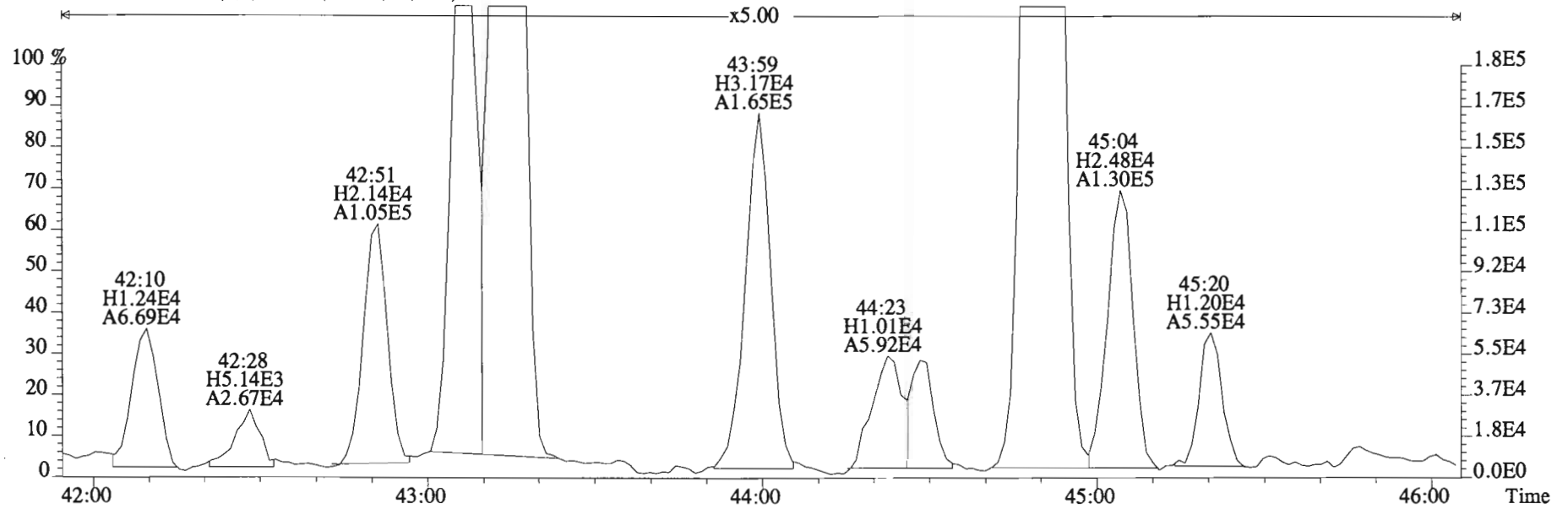
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 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
 359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



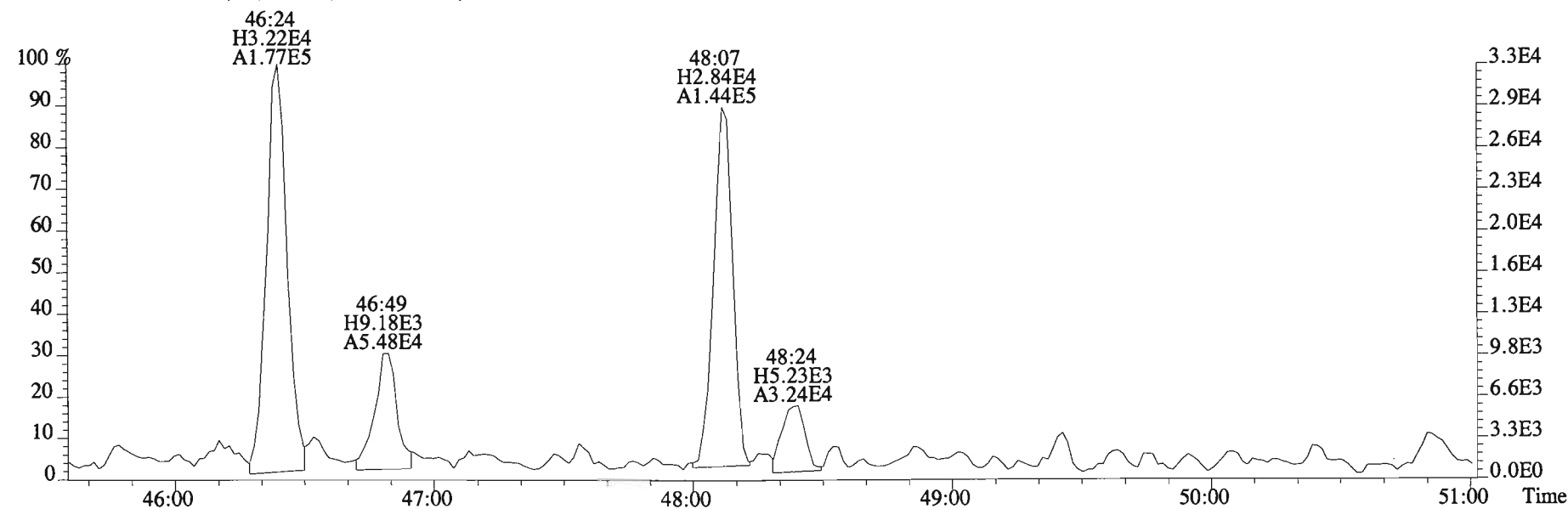
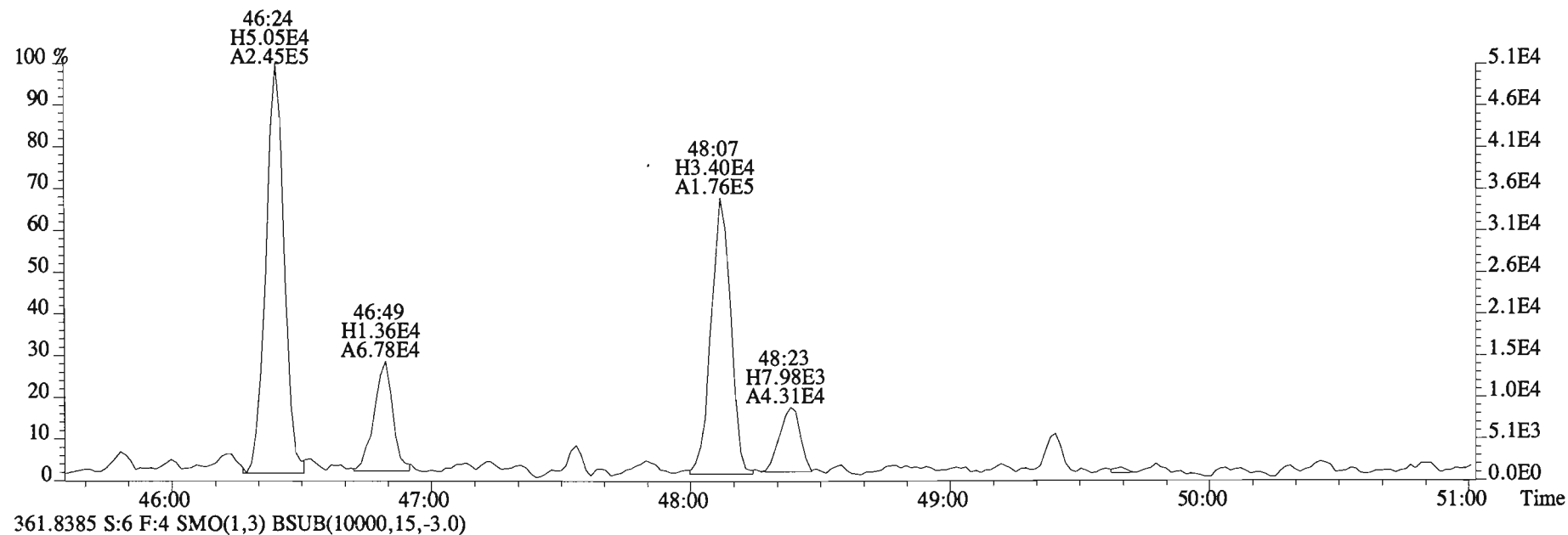
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 359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



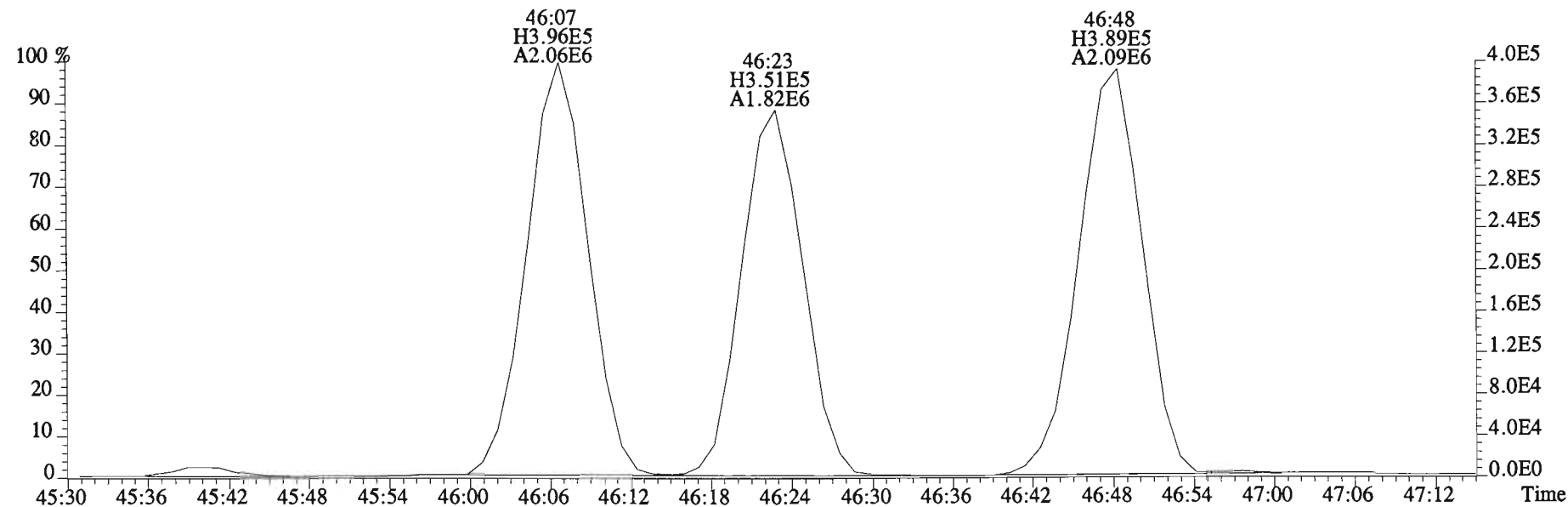
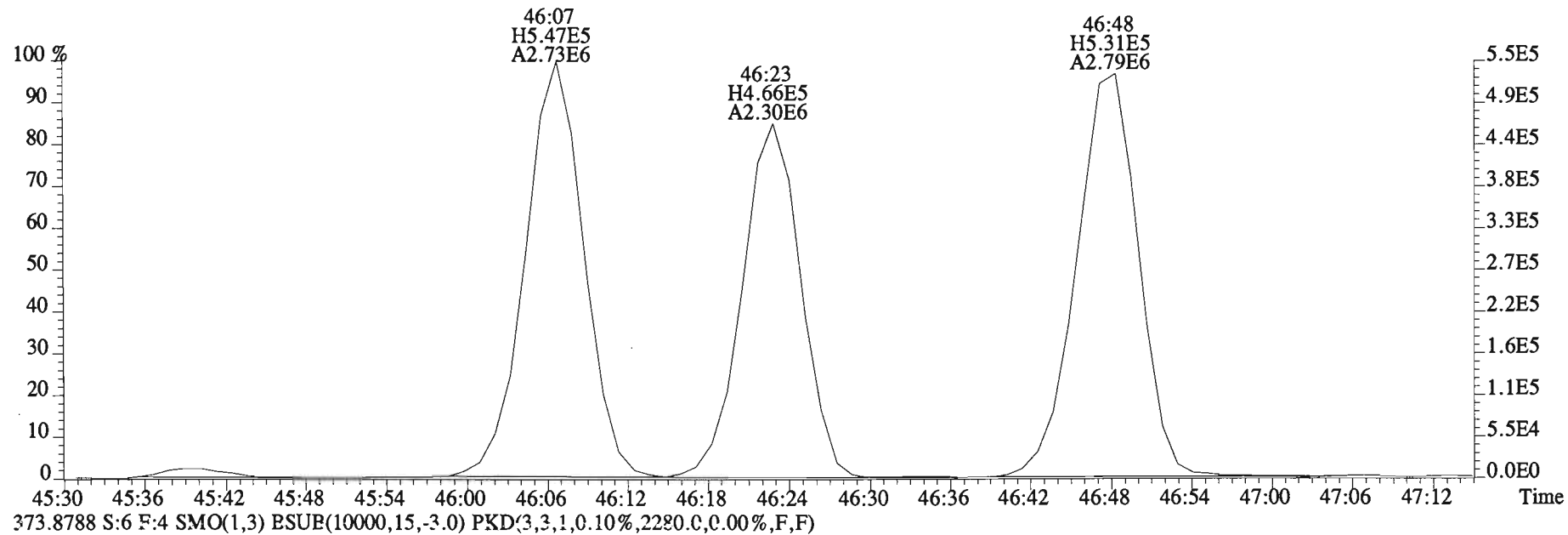
361.8385 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



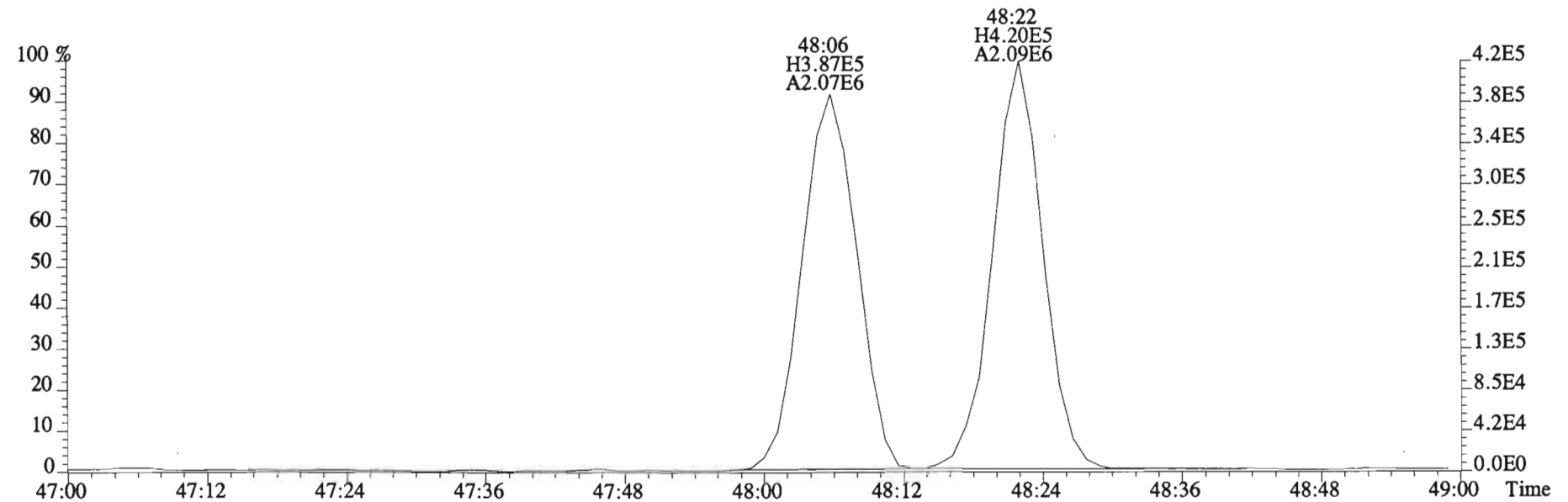
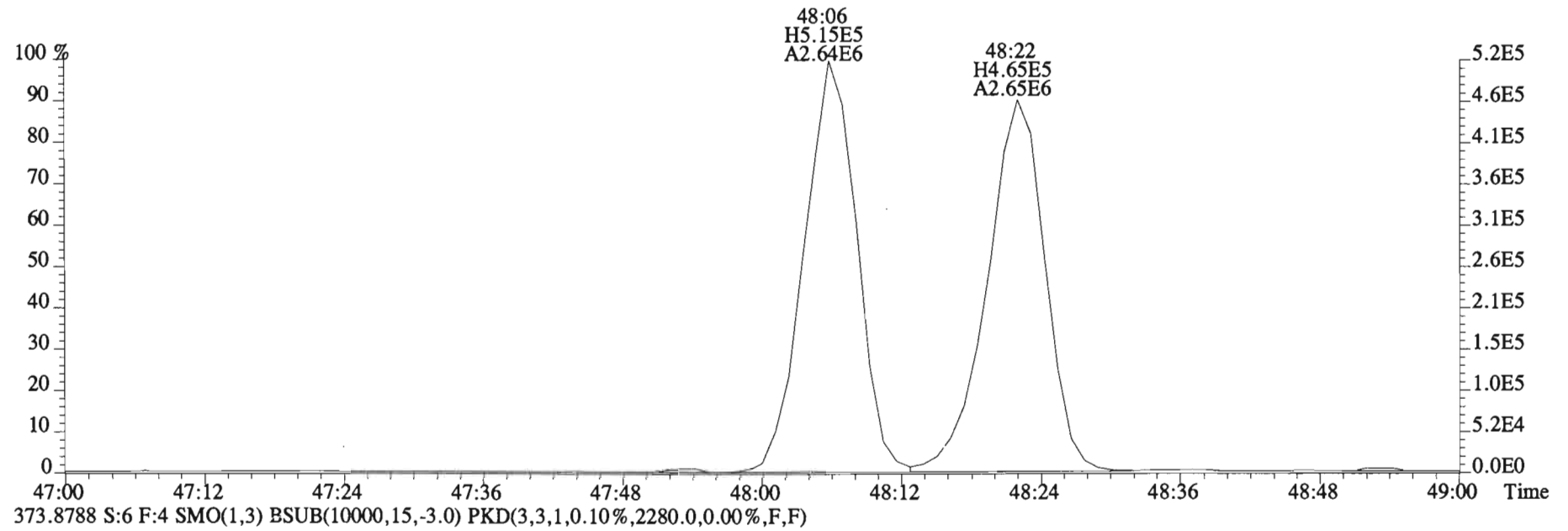
File:150202E1 #1-555 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
359.8415 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0)



File:150202E1 #1-555 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2304.0,0.00%,F,F)

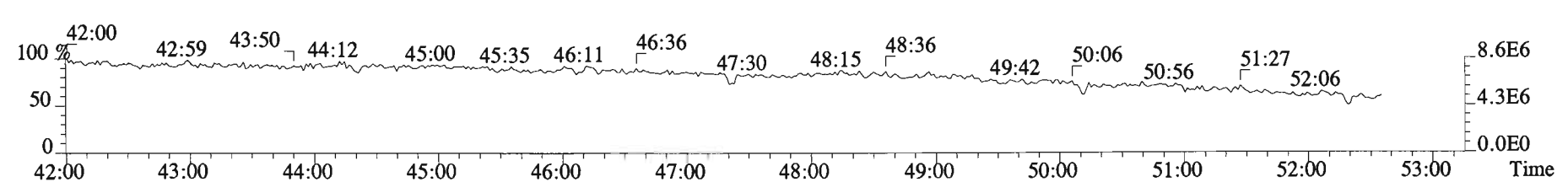
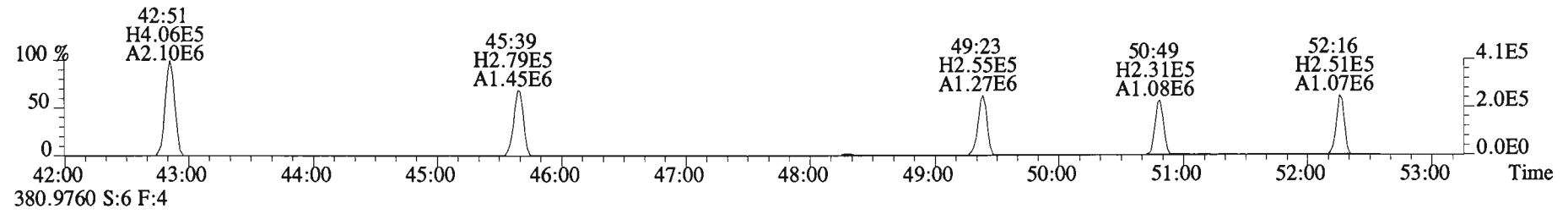
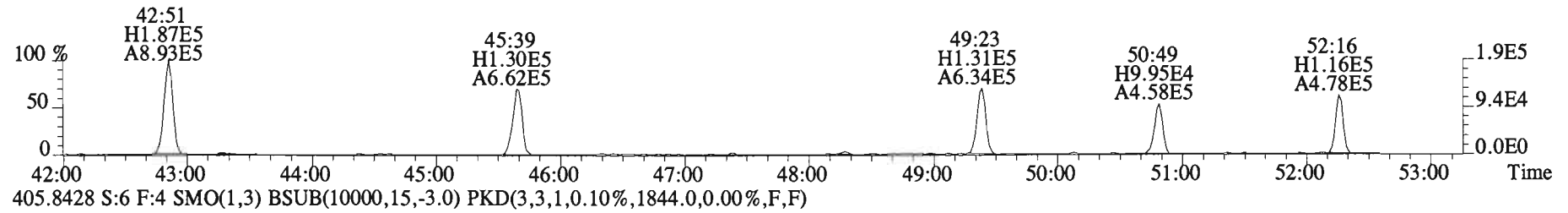
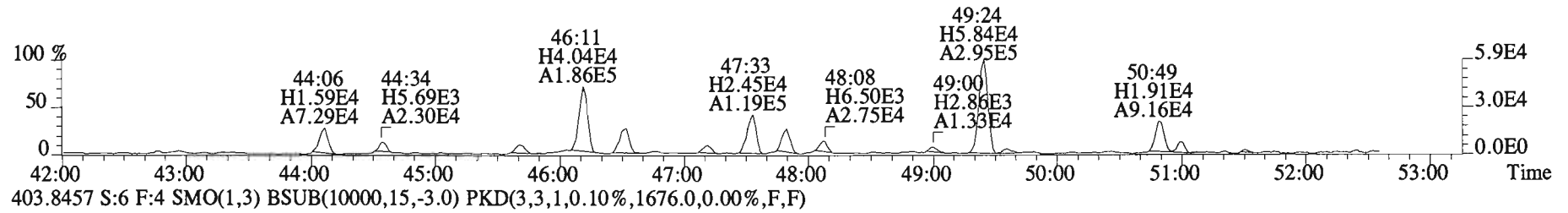
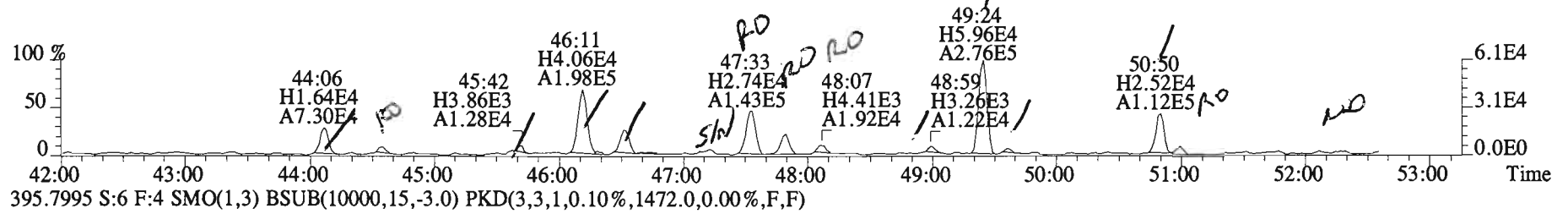


File:150202E1 #1-555 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
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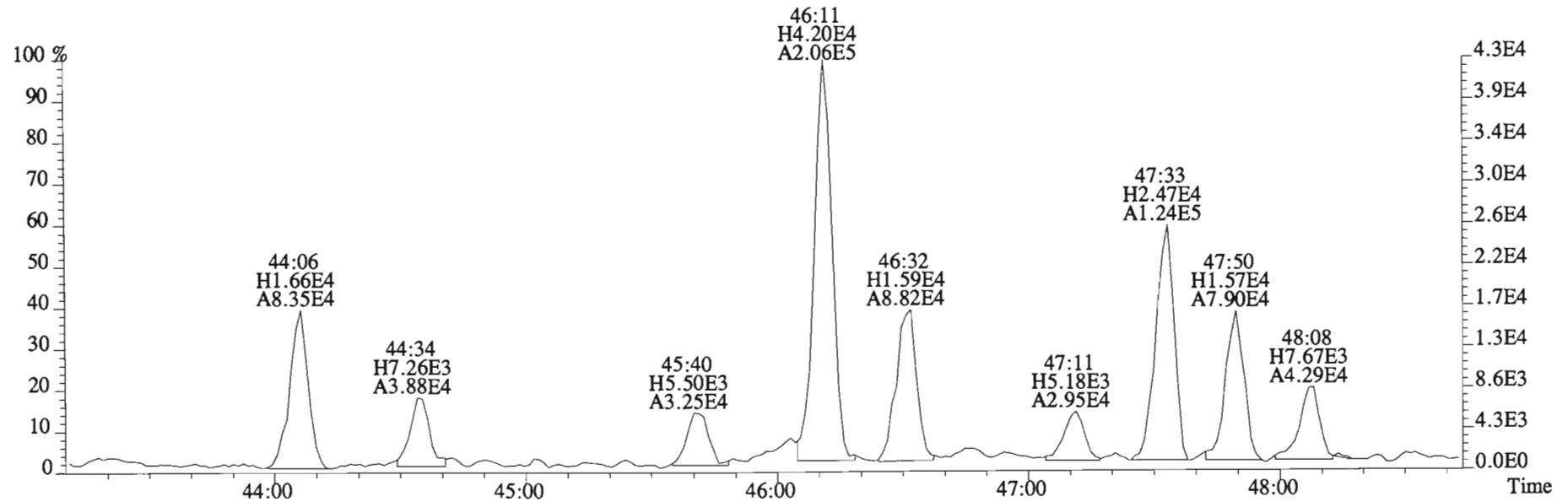
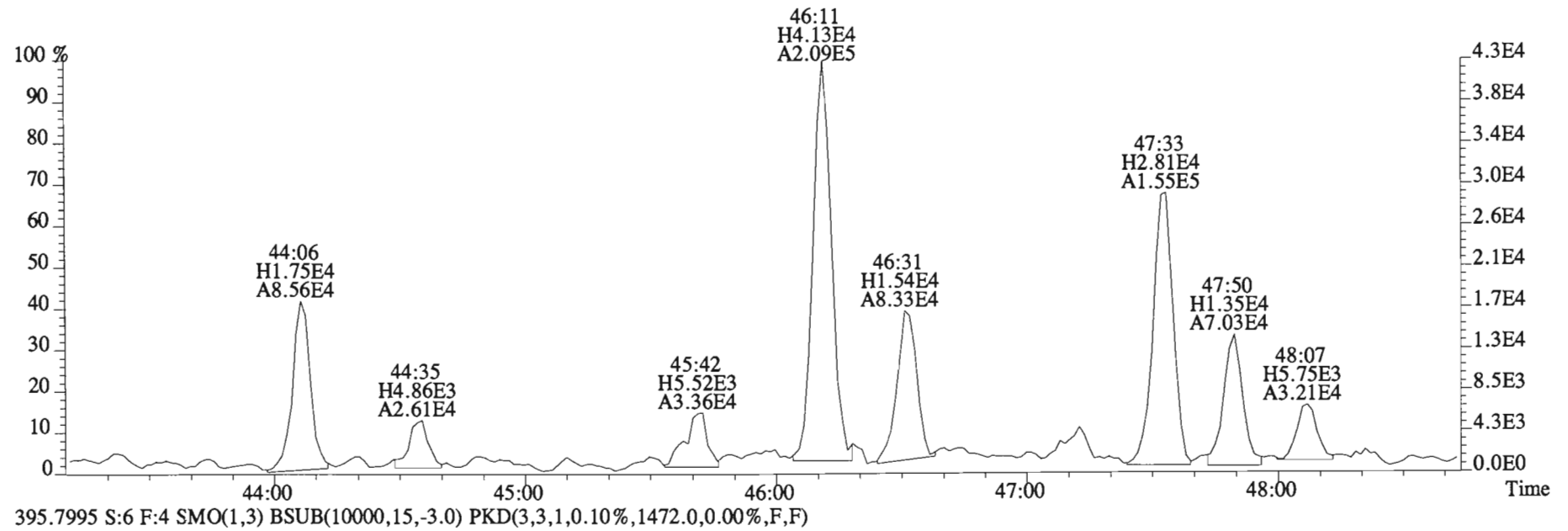




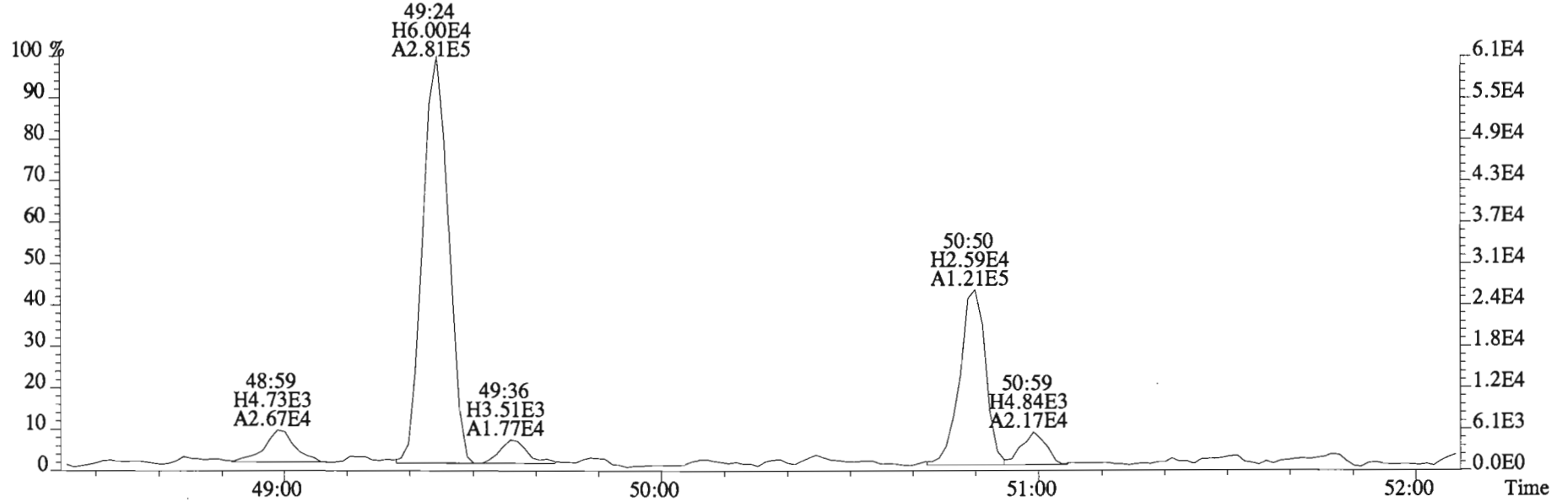
File:150202E1 #1-555 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1784.0,0.00%,F,F)



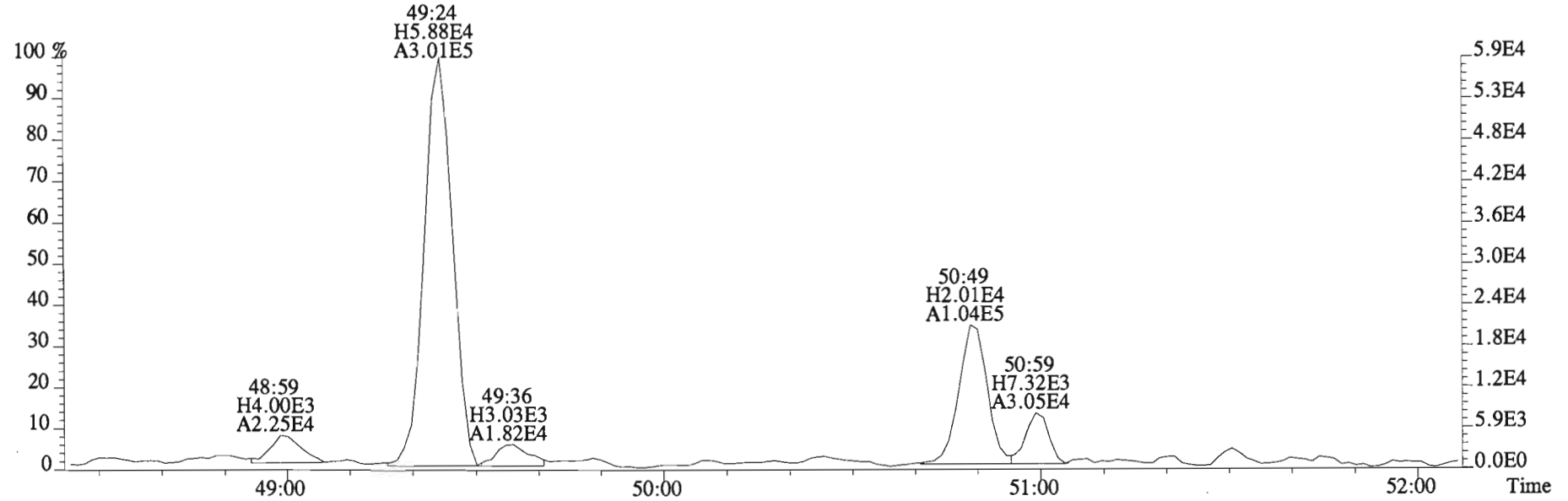
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 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
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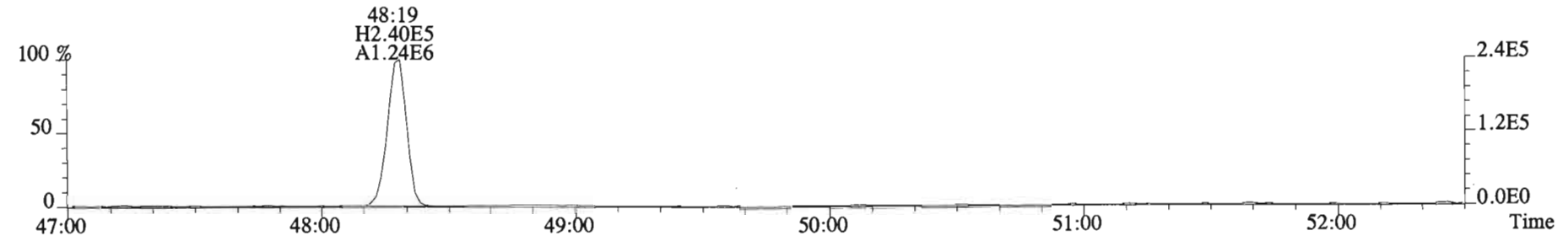
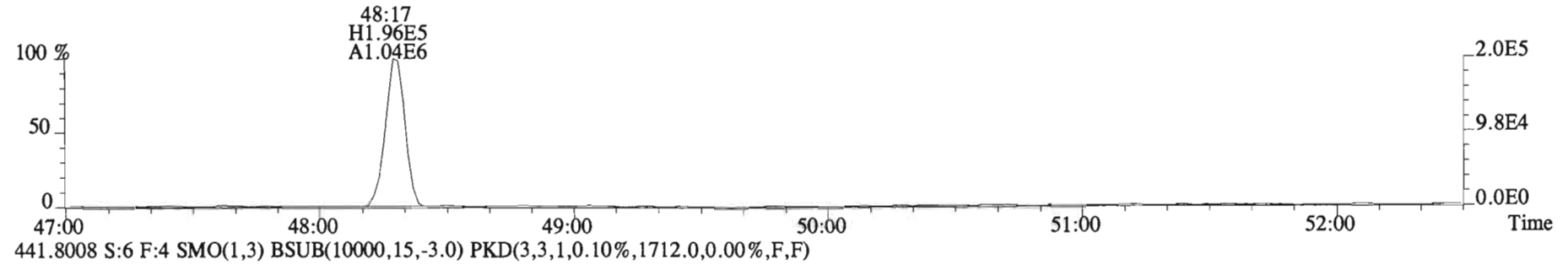
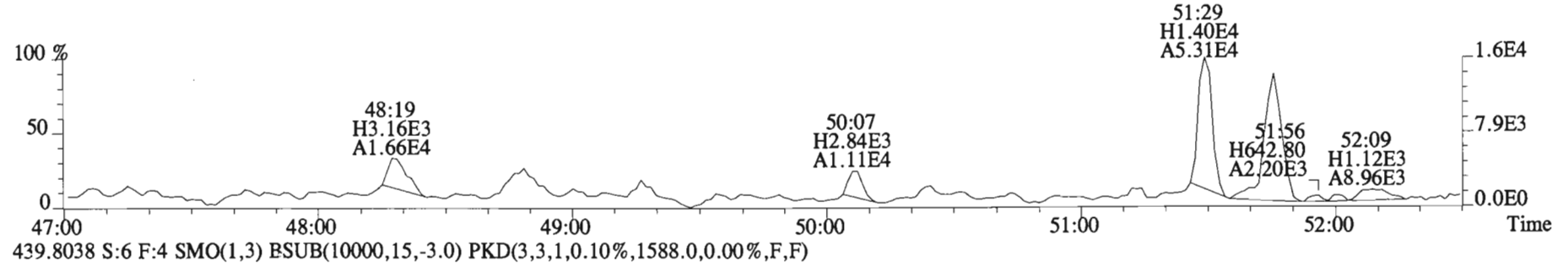
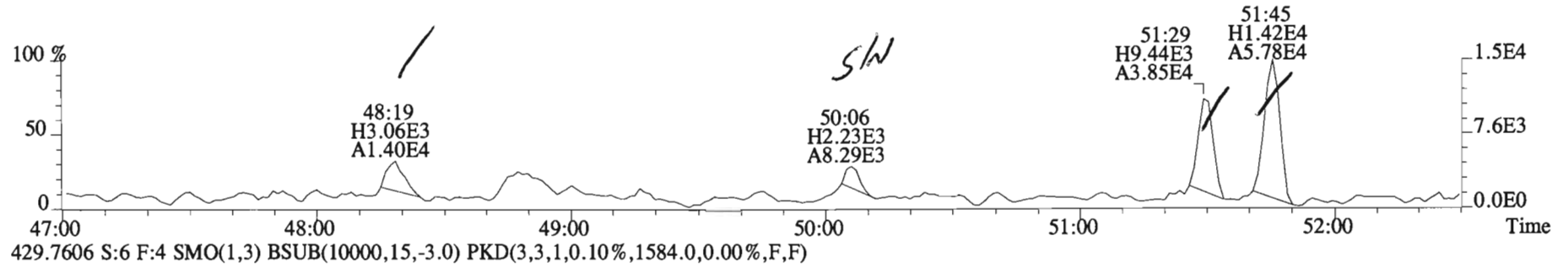
File:150202E1 #1-555 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
 393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1784.0,0.00%,F,F)



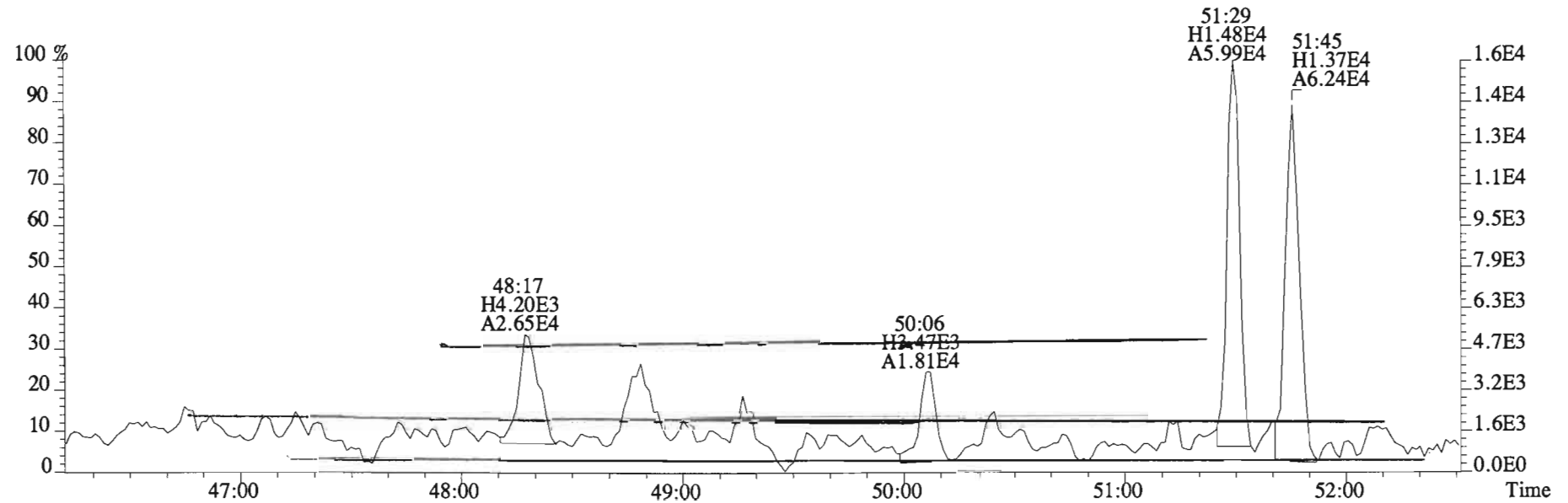
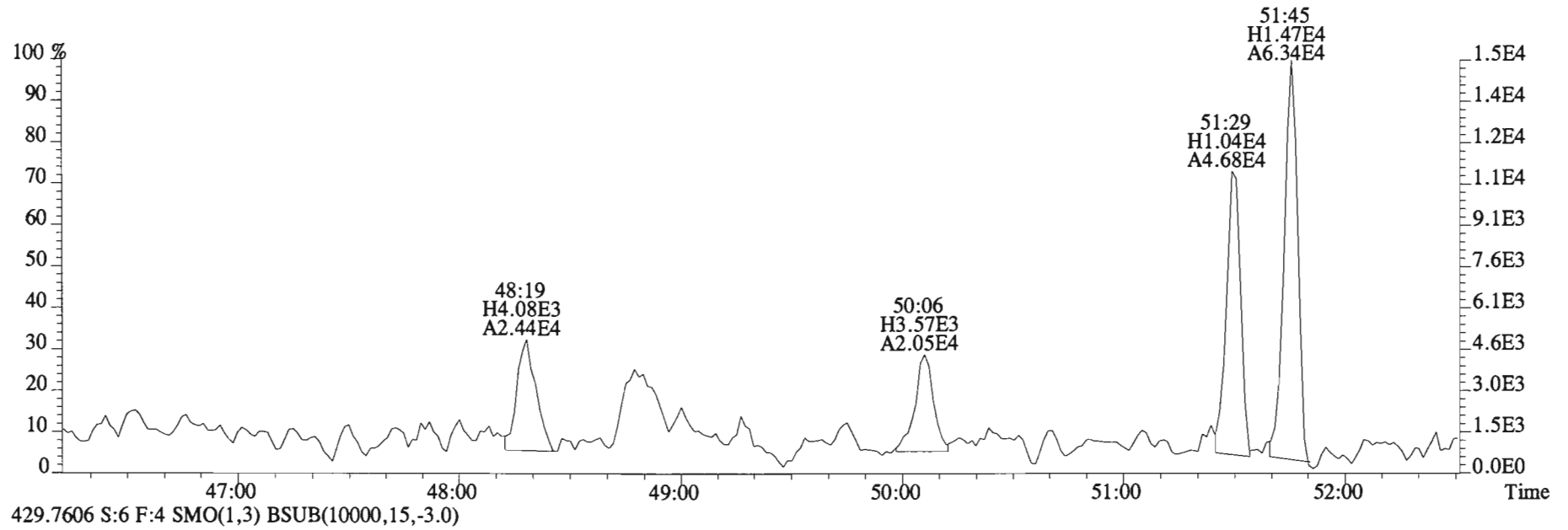
395.7995 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1472.0,0.00%,F,F)



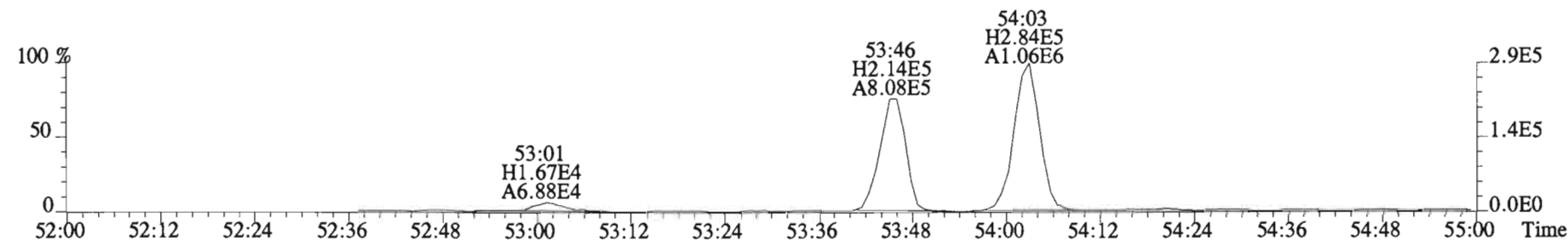
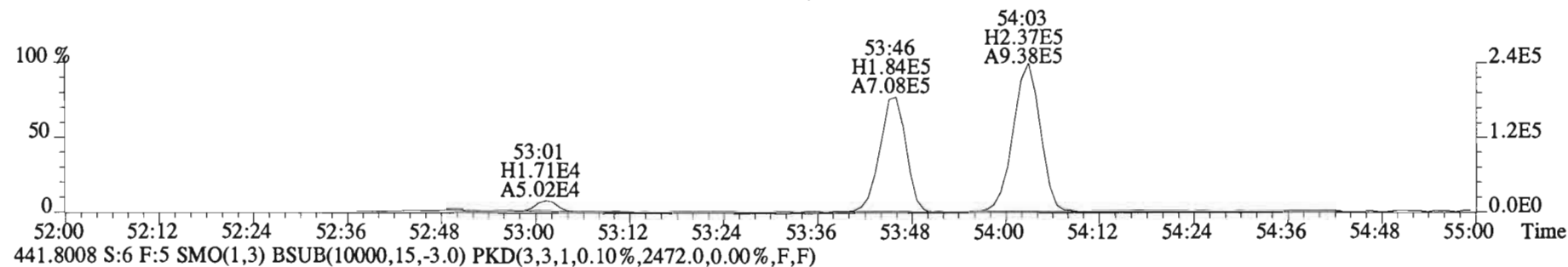
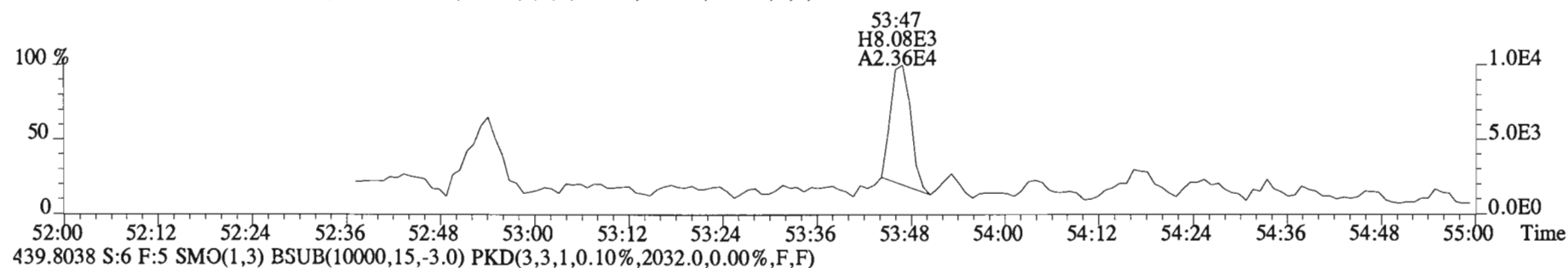
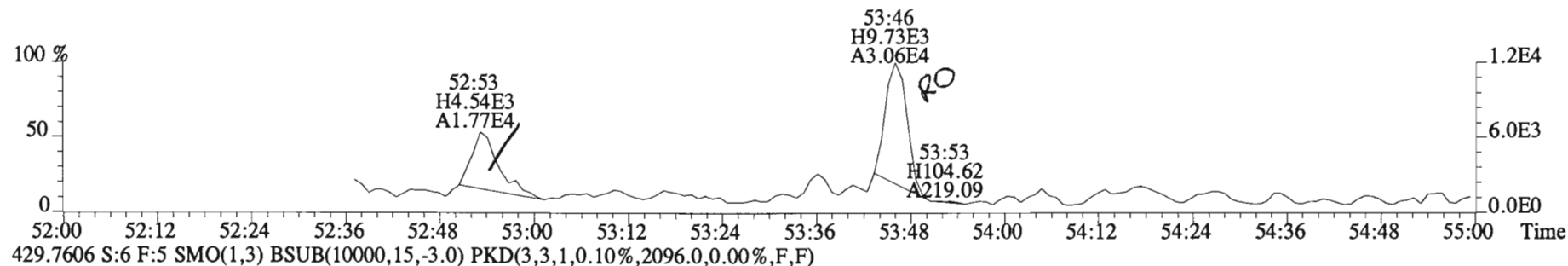
File:150202E1 #1-555 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
 427.7635 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1528.0,0.00%,F,F)



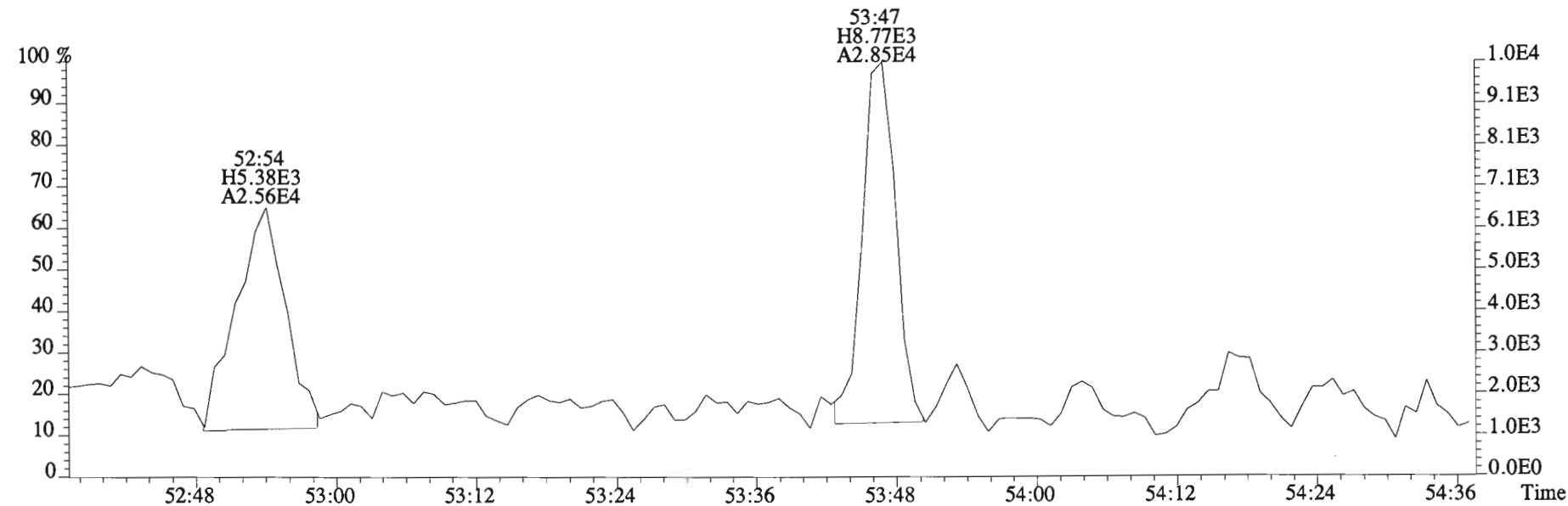
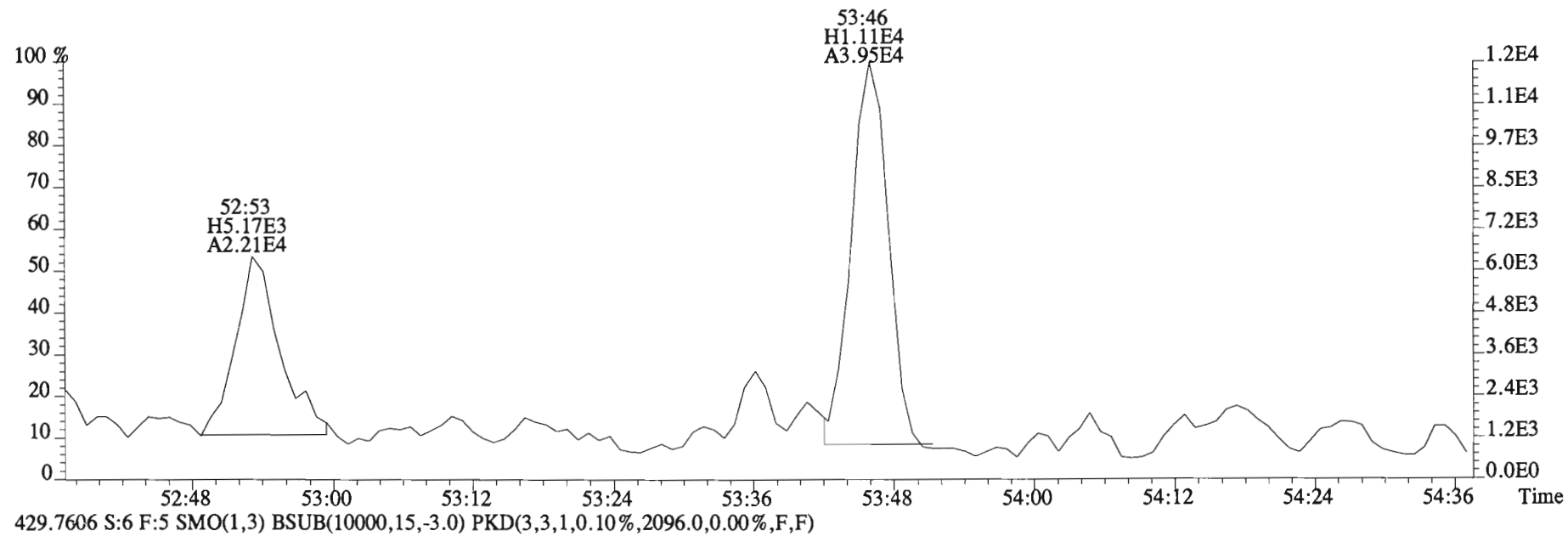
File:150202E1 #1-555 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
 427.7635 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1528.0,0.00%,F,F)



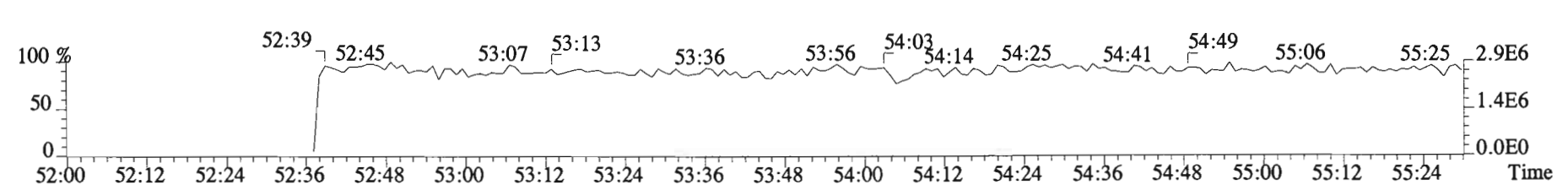
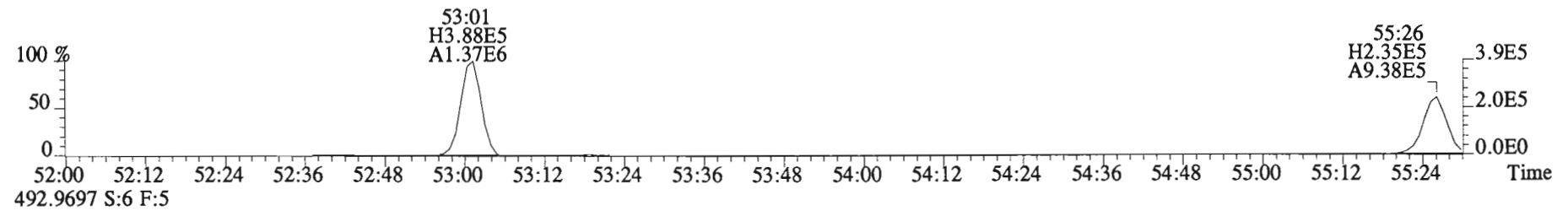
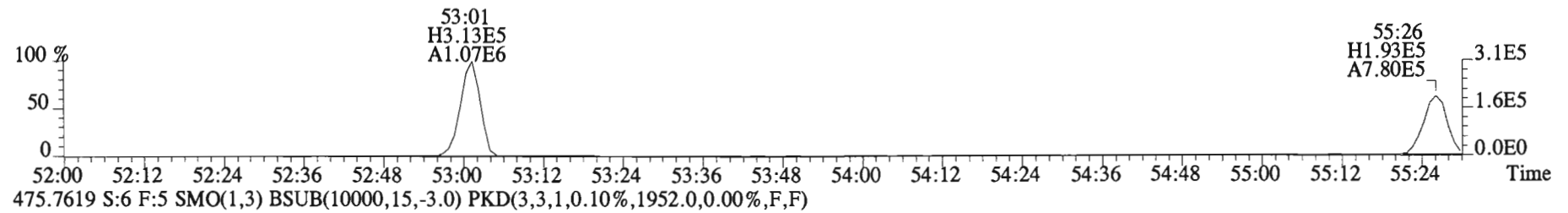
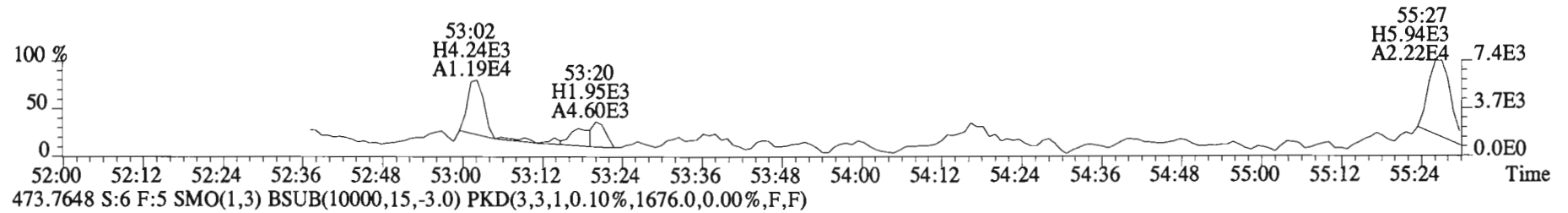
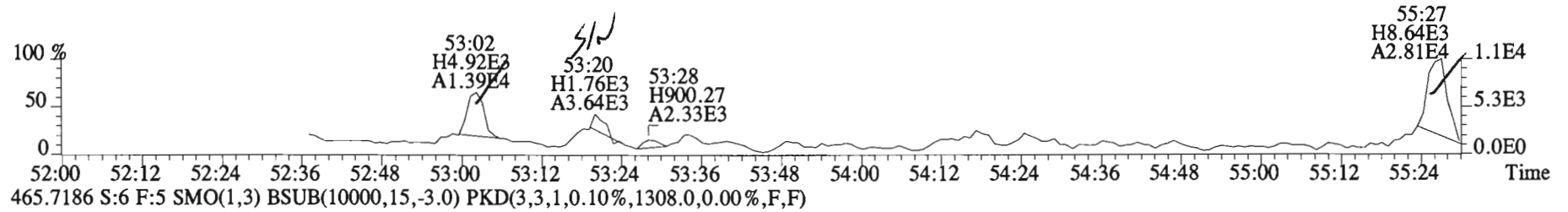
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Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
427.7635 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1592.0,0.00%,F,F)



File:150202E1 #1-430 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
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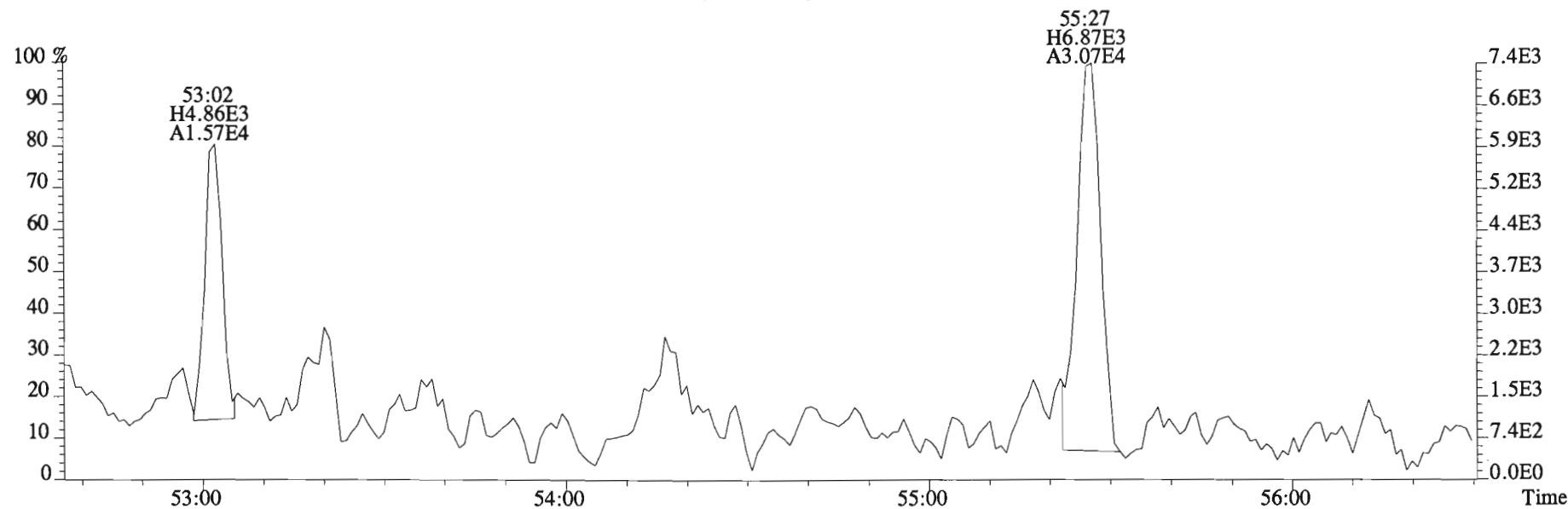
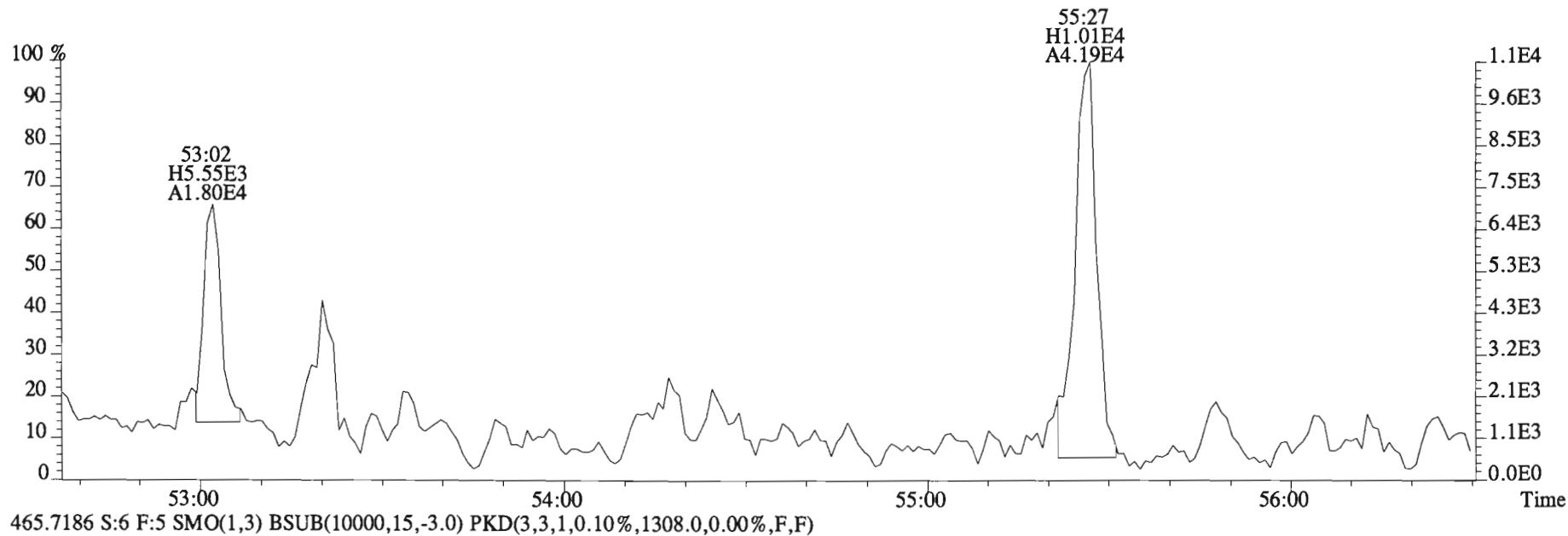


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Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
463.7216 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1404.0,0.00%,F,F)

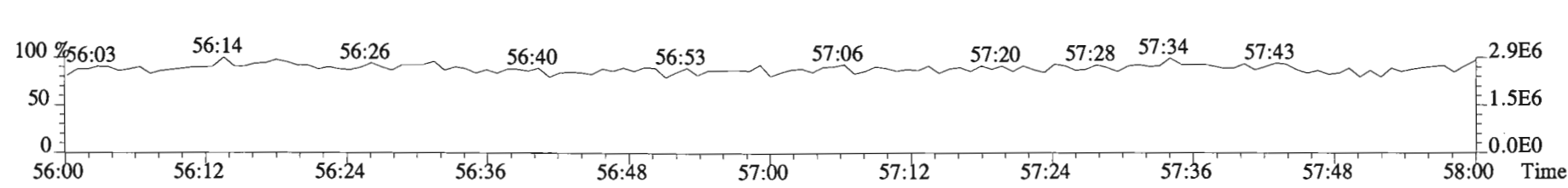
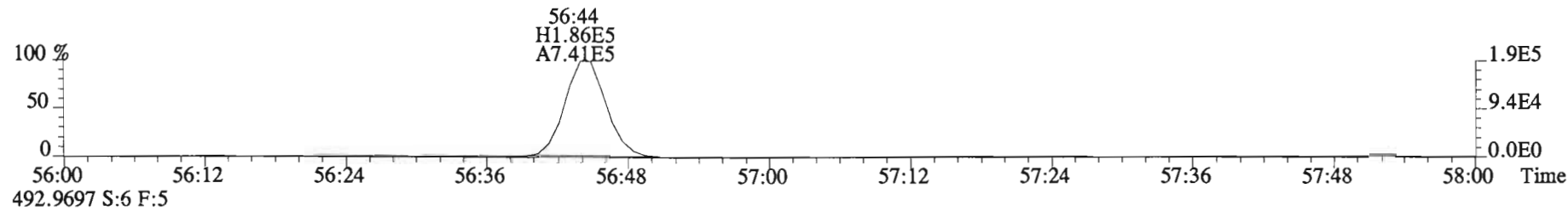
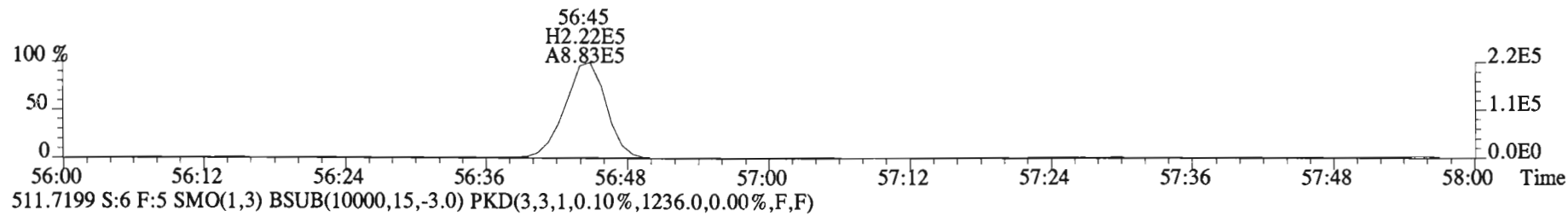
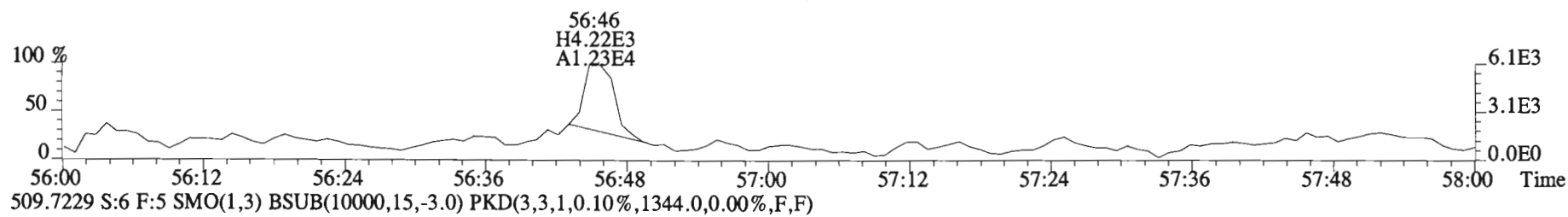
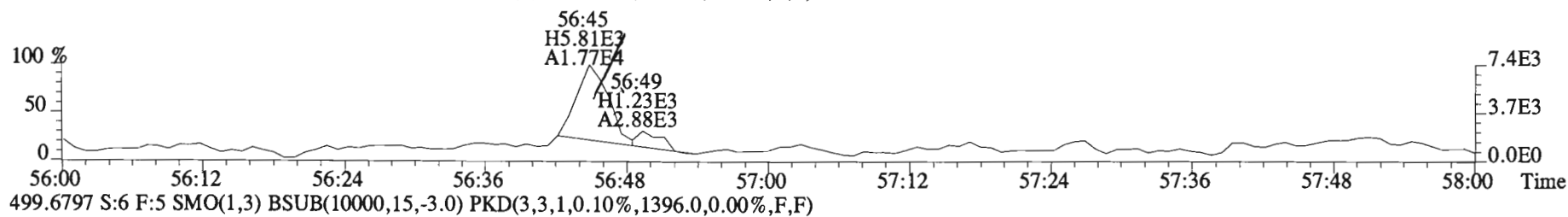




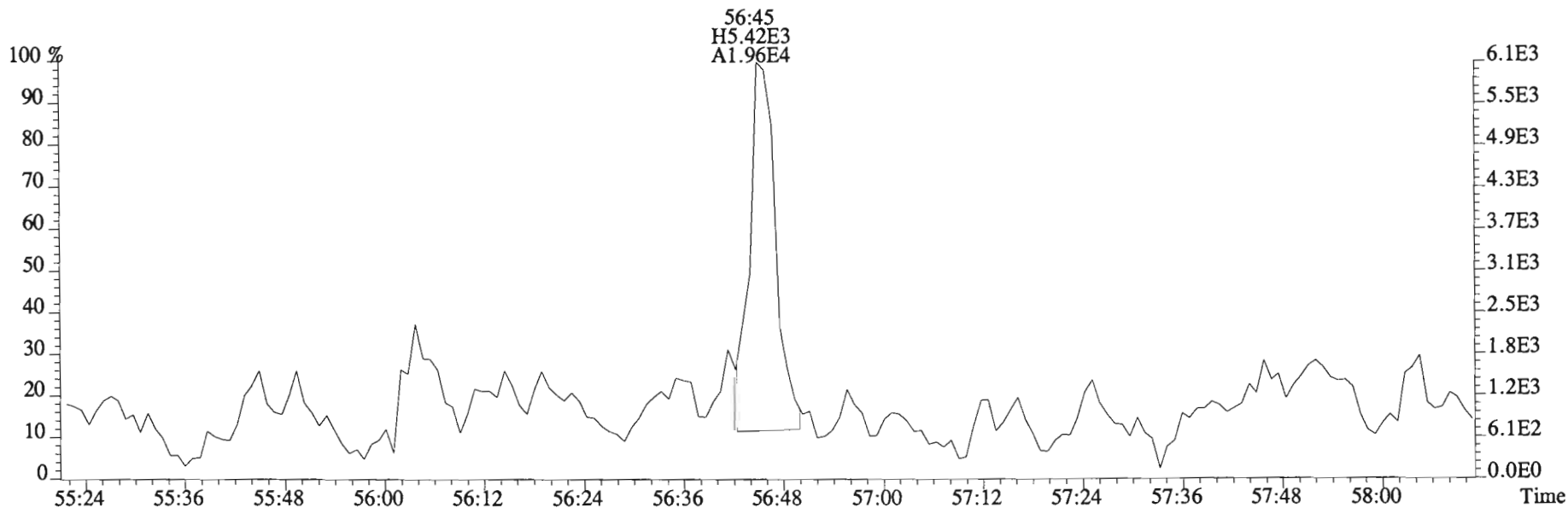
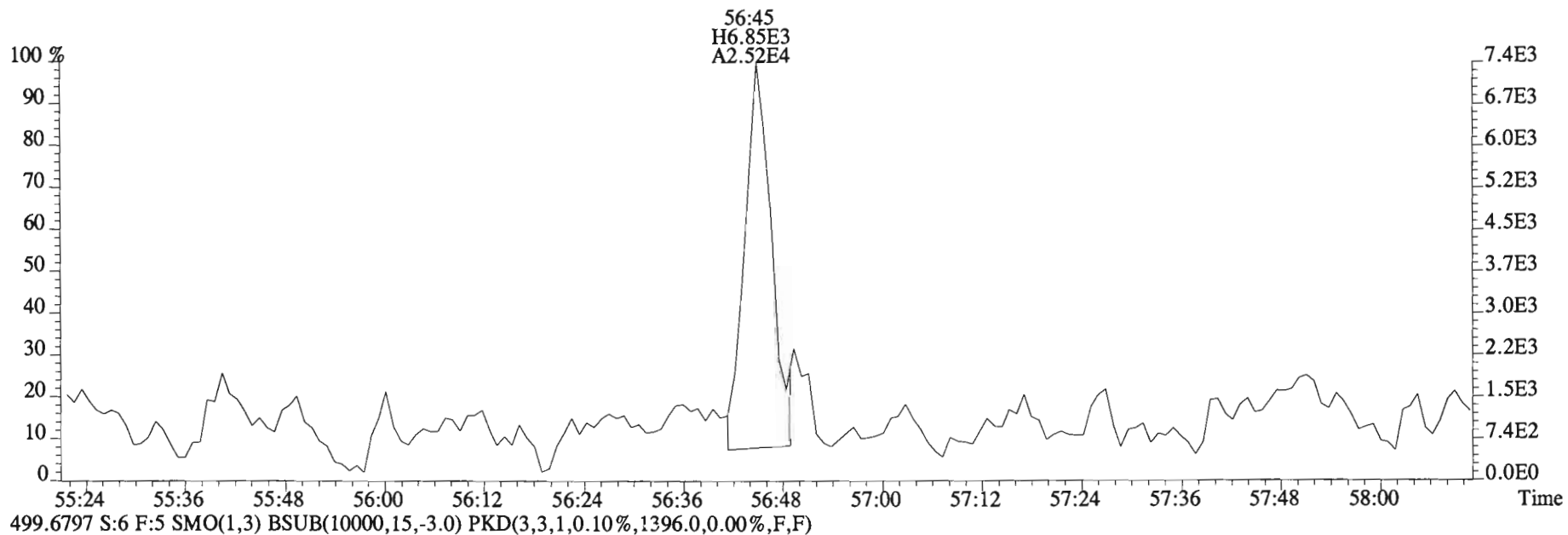
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Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
463.7216 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1404.0,0.00%,F,F)



File:150202E1 #1-430 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
497.6826 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1456.0,0.00%,F,F)



File:150202E1 #1-430 Acq: 2-FEB-2015 20:10:15 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1500116-03@10X WM-FT-IB-20150122-W Exp:PCB\_ZB1  
497.6826 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1456.0,0.00%,F,F)



## **CONFIRMATION**

Dataset:      C:\MassLynx\Default.pro\Results\150205F2\150205F2\_8.qld

Last Altered:    Friday, February 06, 2015 09:49:34 Pacific Standard Time

Printed:      Friday, February 06, 2015 09:50:03 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 27 Jan 2015 16:23:49

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225\_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 150205F2\_8, Date: 05-Feb-2015, Time: 18:34:46, ID: 1500116-01RE1 WM-CB-03-20150122-S CF 34.48, Description: WM-CB-03-20150122-S CF

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	2.32e4	0.74	NO	1.10	10.013	17.55	3.3106		0.132
2	2 13C-2,3,7,8-TCDF	1.27e6	0.75	NO	0.844	10.013	17.52	172.83	86.5	0.430
3	3 13C-1,2,3,4-TCDF	1.74e6	0.79	NO	1.00	10.013	15.29	199.73	100	0.363

*cy 2/6/15*

*nt 2/9/15 -*

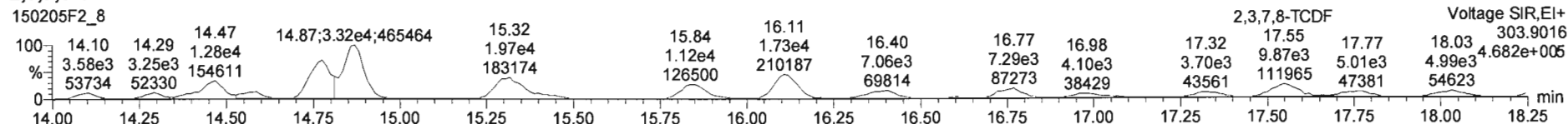
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Last Altered: Friday, February 06, 2015 09:14:07 Pacific Standard Time

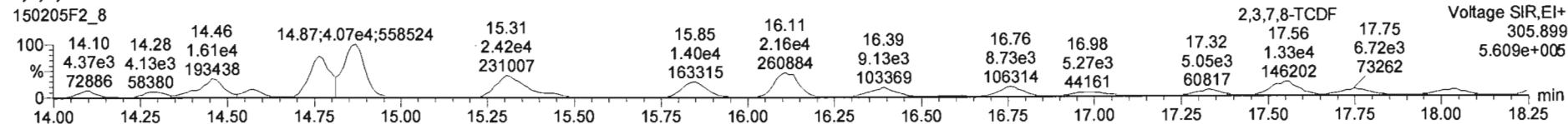
Printed: Friday, February 06, 2015 09:14:47 Pacific Standard Time

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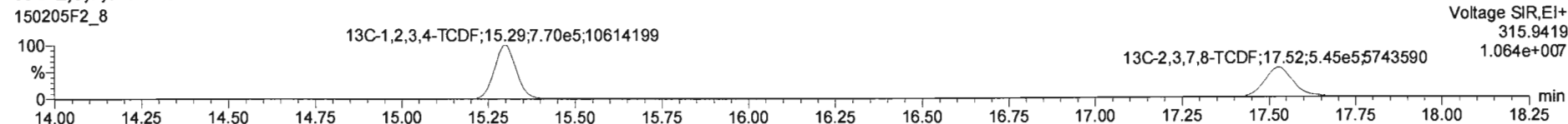
**2,3,7,8-TCDF**



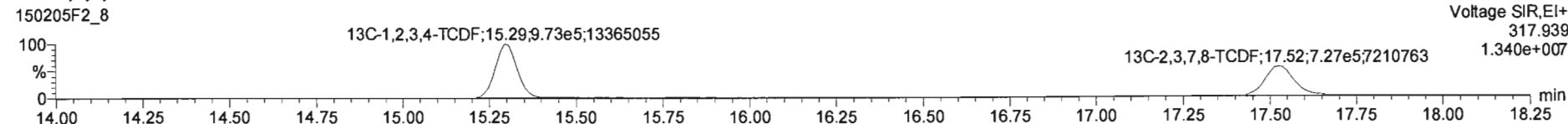
**2,3,7,8-TCDF**

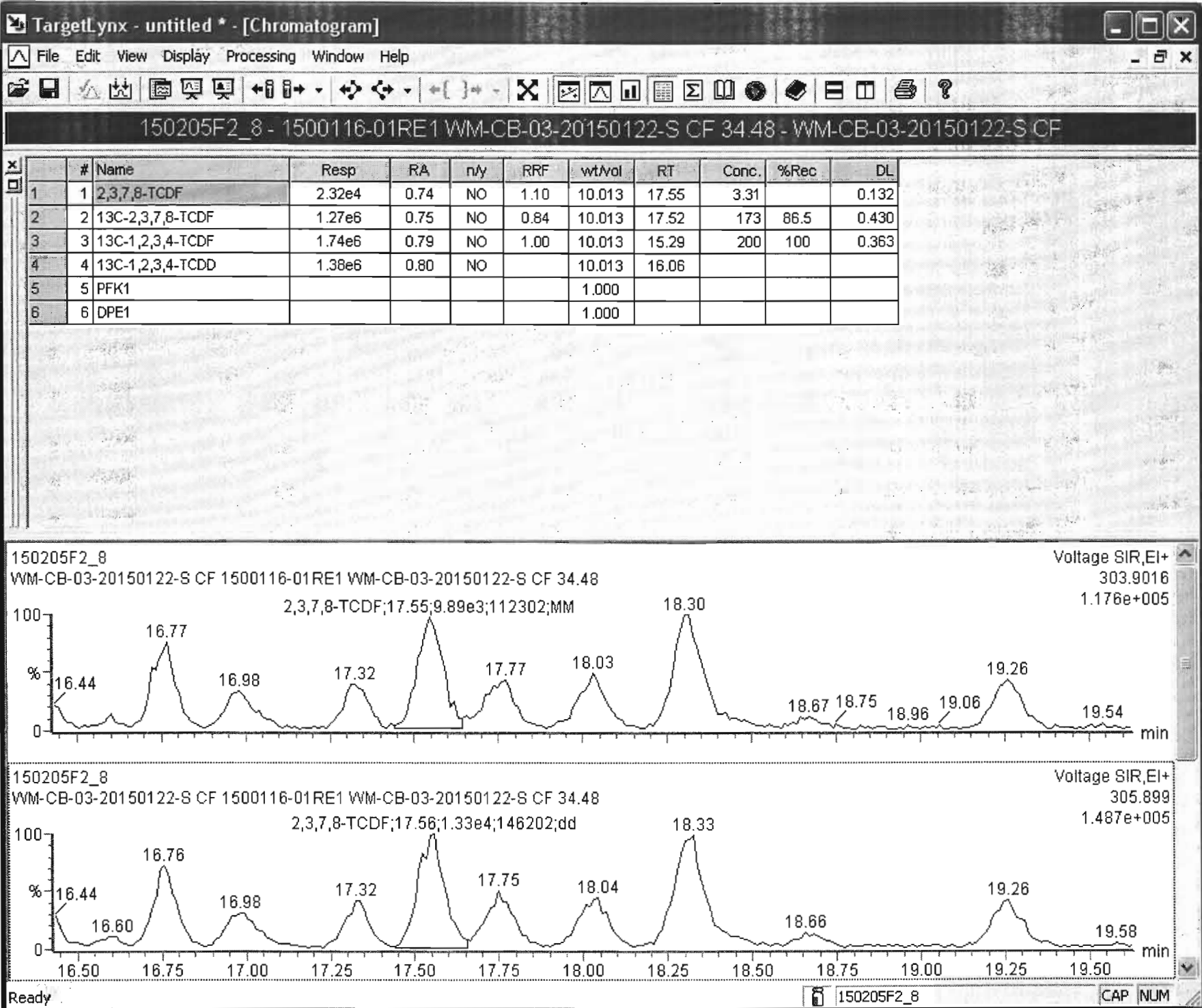


**13C-2,3,7,8-TCDF**



**13C-2,3,7,8-TCDF**





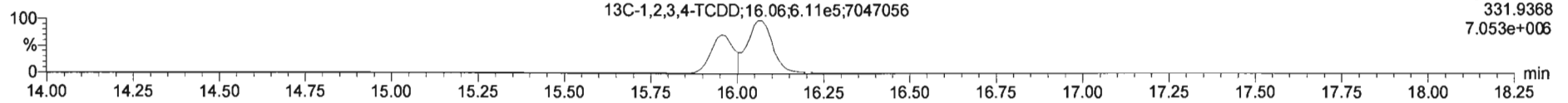
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Last Altered: Friday, February 06, 2015 09:14:07 Pacific Standard Time  
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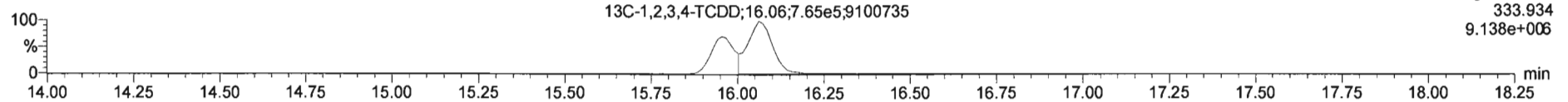
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150205F2\_8



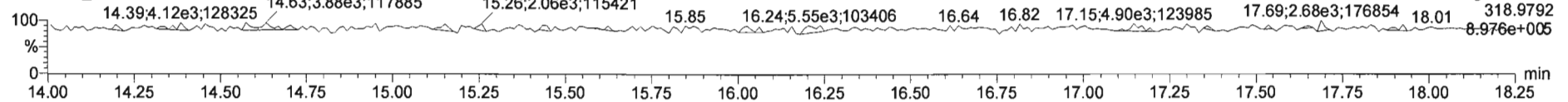
**13C-1,2,3,4-TCDD**

150205F2\_8



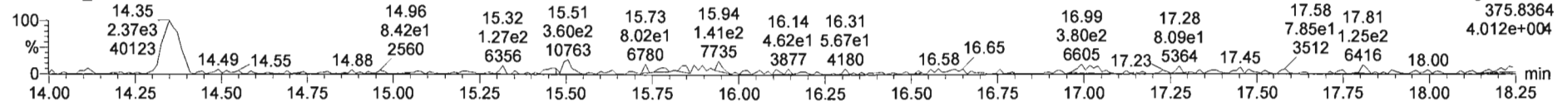
**PFK1**

150205F2\_8



**DPE1**

150205F2\_8





Dataset:      C:\MassLynx\Default.pro\Results\150205F2\150205F2\_9.qld

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Printed:      Friday, February 06, 2015 09:51:13 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 27 Jan 2015 16:23:49

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225\_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 150205F2\_9, Date: 05-Feb-2015, Time: 19:07:08, ID: 1500116-02RE1 WM-FD-02-20150122-S CF 33.89, Description: WM-FD-02-20150122-S CF

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	2.40e4	0.82	NO	1.10	10.039	17.57	3.4302		0.153
2	2 13C-2,3,7,8-TCDF	1.27e6	0.78	NO	0.844	10.039	17.56	185.44	93.1	0.463
3	3 13C-1,2,3,4-TCDF	1.62e6	0.77	NO	1.00	10.039	15.32	199.23	100	0.391

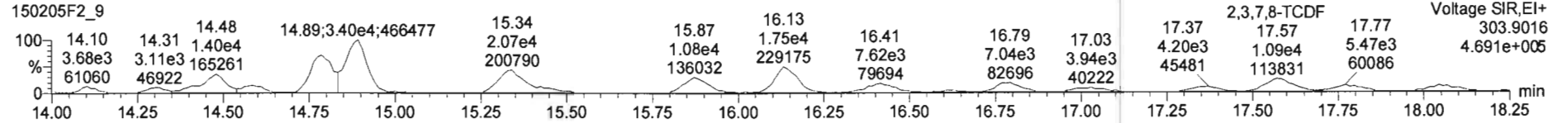
*CS* 2/6/15  
*VPJ*  
 2/9/15

Dataset: Untitled

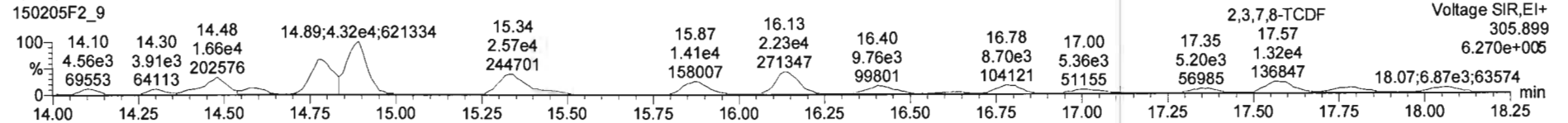
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Printed: Friday, February 06, 2015 09:14:47 Pacific Standard Time

Name: 150205F2\_9, Date: 05-Feb-2015, Time: 19:07:08, ID: 1500116-02RE1 WM-FD-02-20150122-S CF 33.89, Description: WM-FD-02-20150122-S CF

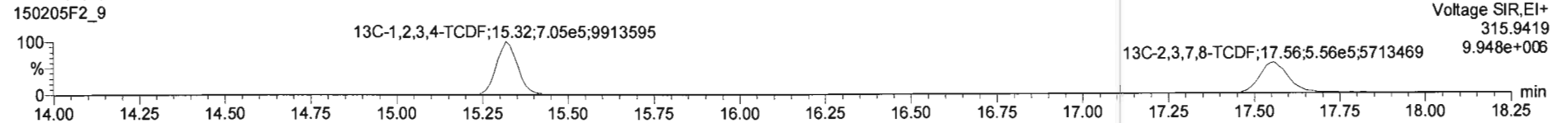
2,3,7,8-TCDF



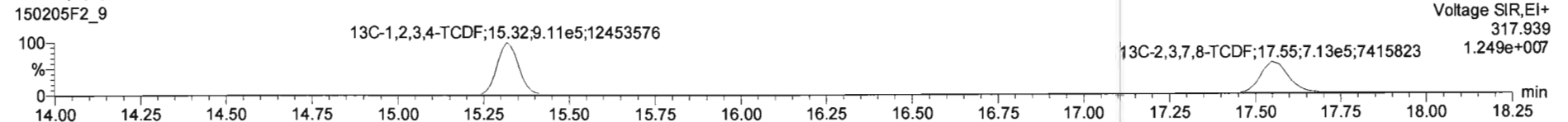
2,3,7,8-TCDF



13C-2,3,7,8-TCDF



13C-2,3,7,8-TCDF



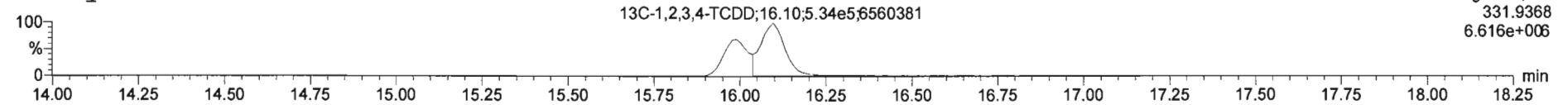
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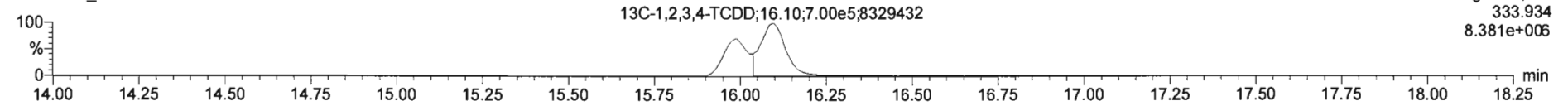
**13C-1,2,3,4-TCDD**

150205F2\_9



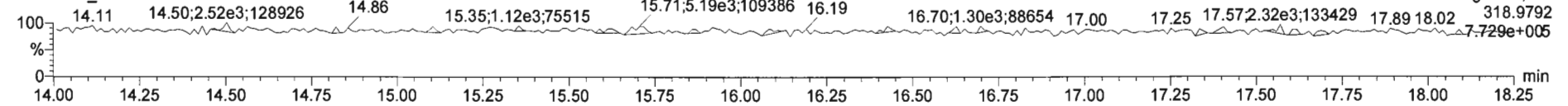
**13C-1,2,3,4-TCDD**

150205F2\_9



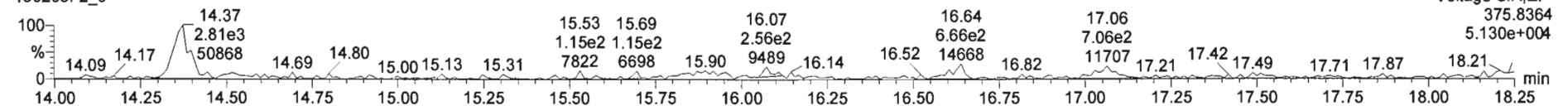
**PFK1**

150205F2\_9



**DPE1**

150205F2\_9



## **CONTINUING CALIBRATION**

FORM 4A  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory

Episode No.:

CCAL ID: ST150130D2-1

Contract No.:

SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 150130D2 S#1 Analysis Date: 30-JAN-15 Time: 22:12:48


NATIVE ANALYTES	M/Z'S	ION	QC	Pass	CONC. FOUND	CONC. RANGE (3)
	FORMING RATIO (1)	ABUND. RATIO	LIMITS (2)			
2,3,7,8-TCDD	M/M+2	0.75	0.65-0.89	y	8.76	7.8 - 12.9
1,2,3,7,8-PeCDD	M/M+2	0.60	0.54-0.72	y	46.2	8.2 - 12.3 (4) 39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	50.0	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	50.7	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	50.3	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	47.4	43.0 - 58.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	98.2	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.13	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	43.6	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	45.0	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	50.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.32	1.05-1.43	y	49.9	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	49.3	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.31	1.05-1.43	y	49.6	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	50.5	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.08	0.88-1.20	y	50.6	43.0 - 58.0
OCDF	M+2/M+4	0.93	0.76-1.02	y	99.3	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: Date: 1/31/15

FORM 4B  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS


VER Data Filename: 150130D2 S#1 Analysis Date: 30-JAN-15 Time: 22:12:48

LABELLED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	99.7	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	90.8	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	102	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	103	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	104	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	112	72.0 - 138.0
13C-OCDD	M/M+2	0.86	0.76-1.02	y	196	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.76	0.65-0.89	y	104	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	103	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	98.9	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	93.2	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	97.8	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	95.9	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	101	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.44	0.37-0.51	y	105	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.44	0.37-0.51	y	104	77.0 - 129.0
13C-OCDF	M+2/M+4	0.88	0.76-1.02	y	187	96.0 - 415.0
CLEANUP STANDARD (3) 37C1-2,3,7,8-TCDD					10.7	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: 

Date: 1/31/15

FORM 6A  
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150130D2 S#1 Analysis Date: 30-JAN-15 Time: 22:12:48

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.000	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002

(1) Contract-required limits for  
Relative Retention Times (RRT)  
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.021	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.191	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.147	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.180	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: AP

Date: 11/31/15

## FORM 5

## PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 1-7-15

RT Window Data Filename: 150130D2 S#1 Analysis Date: 30-JAN-15 Time: 22:12:48

ZB-5MS IS Data Filename: 150130D2 S#1 Analysis Date: 30-JAN-15 Time: 22:12:48

DB\_225 IS Data Filename: Analysis Date: Time:

## ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:36	1,3,6,8-TCDF (F)	21:29
1,2,8,9-TCDD (L)	27:49	1,2,8,9-TCDF (L)	27:58
1,2,4,7,9-PeCDD (F)	29:23	1,3,4,6,8-PeCDF (F)	27:53
1,2,3,8,9-PeCDD (L)	31:46	1,2,3,8,9-PeCDF (L)	32:02
1,2,4,6,7,9-HxCDD (F)	33:11	1,2,3,4,6,8-HxCDF (F)	32:39
1,2,3,7,8,9-HxCDD (L)	35:09	1,2,3,7,8,9-HxCDF (L)	35:33
1,2,3,4,6,7,9-HpCDD (F)	37:45	1,2,3,4,6,7,8-HpCDF (F)	37:23
1,2,3,4,6,7,8-HpCDD (L)	38:35	1,2,3,4,7,8,9-HpCDF (L)	39:08

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).


## =====

## ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT  
BETWEEN  
COMPARED PEAKS (1)

&lt;25%

(1) To meet contract requirements, %Valley Height Between Compared  
Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: Date: 1/31/15



FORM 6A  
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150130D2 S#1 Analysis Date: 30-JAN-15 Time: 22:12:48


Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME		RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.000	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002

(1) Contract-required limits for  
Relative Retention Times (RRT)  
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.021	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.191	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.147	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.180	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: 

Date: 1/31/15

FORM 6B  
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150130D2 S#1 Analysis Date: 30-JAN-15 Time: 22:12:48

NATIVE ANALYTES	RETENTION TIME		RRT	QC LIMITS (1)
	REFERENCE	RRT		
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001	
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005	
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001	
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001	
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004	
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004	
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001	
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001	
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001	
OCDD	13C-OCDD	1.000	0.999-1.001	
OCDF	13C-OCDF	1.000	0.999-1.001	

(1) Contract-required limits for  
Relative Retention Times (RRT)  
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.026	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.091	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.142	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.126	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.223	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.230	1.091-1.371

Analyst: AR

Date: 1/30/15

Client ID: 1613 CS3 15A0501  
Lab ID: ST150130D2-1

Filename: 150130D2 S:1 Acq:30-JAN-15 22:12:48  
GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000

ConCal: ST150130D2-1  
EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	2.51e+06	0.75 y	1.17	26:57	1.000	8.7588	*	2.5	*	*	Total Tetra-Dioxins	48.6	48.8	*	*	
1,2,3,7,8-PeCDD	1.04e+07	0.60 y	0.91	31:26	1.001	46.164	*	2.5	*	*	Total Penta-Dioxins	144	144	*	*	
1,2,3,4,7,8-HxCDD	1.02e+07	1.25 y	1.08	34:44	1.000	49.959	*	2.5	*	*	Total Hexa-Dioxins	196	196	*	*	
1,2,3,6,7,8-HxCDD	1.05e+07	1.27 y	1.06	34:51	1.000	50.744	*	2.5	*	*	Total Hepta-Dioxins	119	119	*	*	
1,2,3,7,8,9-HxCDD	1.07e+07	1.23 y	0.93	35:09	1.000	50.275	*	2.5	*	*	Total Tetra-Furans	27.6	27.8	*	*	
1,2,3,4,6,7,8-HpCDD	9.82e+06	1.03 y	1.10	38:35	1.000	47.352	*	2.5	*	*	Total Penta-Furans	186.78	186.99	*	*	
OCDD	1.79e+07	0.89 y	0.95	41:54	1.000	98.221	*	2.5	*	*	Total Hexa-Furans	249	249	*	*	
											Total Hepta-Furans	101	102	*	*	
2,3,7,8-TCDF	3.22e+06	0.80 y	1.07	26:11	1.001	9.1305	*	2.5	*	*						
1,2,3,7,8-PeCDF	1.53e+07	1.60 y	1.07	30:16	1.000	43.576	*	2.5	*	*						
2,3,4,7,8-PeCDF	1.48e+07	1.59 y	1.03	31:09	1.000	45.020	*	2.5	*	*						
1,2,3,4,7,8-HxCDF	1.63e+07	1.31 y	1.38	33:51	1.000	50.096	*	2.5	*	*						
1,2,3,6,7,8-HxCDF	1.71e+07	1.32 y	1.26	33:59	1.000	49.930	*	2.5	*	*						
2,3,4,6,7,8-HxCDF	1.61e+07	1.31 y	1.29	34:34	1.000	49.288	*	2.5	*	*						
1,2,3,7,8,9-HxCDF	1.32e+07	1.31 y	1.19	35:33	1.001	49.594	*	2.5	*	*						
1,2,3,4,6,7,8-HpCDF	1.59e+07	1.08 y	1.61	37:23	1.000	50.491	*	2.5	*	*						
1,2,3,4,7,8,9-HpCDF	1.44e+07	1.08 y	1.53	39:08	1.000	50.563	*	2.5	*	*						
OCDF	2.22e+07	0.93 y	1.10	42:08	1.000	99.342	*	2.5	*	*						
IS	13C-2,3,7,8-TCDD	2.45e+07	0.80 y	1.06	26:56	1.021	99.723				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	2.48e+07	0.62 y	1.18	31:25	1.191	90.821				99.7					
IS	13C-1,2,3,4,7,8-HxCDD	1.89e+07	1.25 y	0.72	34:44	1.014	101.98				90.8					
IS	13C-1,2,3,6,7,8-HxCDD	1.94e+07	1.24 y	0.74	34:50	1.017	102.61				102					
IS	13C-1,2,3,7,8,9-HxCDD	2.28e+07	1.25 y	0.85	35:08	1.026	103.82				103					
IS	13C-1,2,3,4,6,7,8-HpCDD	1.88e+07	1.06 y	0.65	38:34	1.126	111.70				104					
IS	13C-OCDD	3.85e+07	0.86 y	0.76	41:53	1.223	195.87				112					
IS	13C-2,3,7,8-TCDF	3.30e+07	0.76 y	0.92	26:10	0.992	104.17				97.9					
IS	13C-1,2,3,7,8-PeCDF	3.26e+07	1.54 y	0.92	30:15	1.147	102.67				104					
IS	13C-2,3,4,7,8-PeCDF	3.17e+07	1.54 y	0.93	31:08	1.180	98.898				103					
IS	13C-1,2,3,4,7,8-HxCDF	2.35e+07	0.51 y	0.98	33:50	0.988	93.236				98.9					
IS	13C-1,2,3,6,7,8-HxCDF	2.72e+07	0.51 y	1.08	33:58	0.992	97.776				93.2					
IS	13C-2,3,4,6,7,8-HxCDF	2.53e+07	0.52 y	1.03	34:34	1.009	95.854				97.8					
IS	13C-1,2,3,7,8,9-HxCDF	2.25e+07	0.51 y	0.86	35:31	1.037	101.48				95.9					
IS	13C-1,2,3,4,6,7,8-HpCDF	1.96e+07	0.44 y	0.72	37:23	1.091	105.43				101					
IS	13C-1,2,3,4,7,8,9-HpCDF	1.86e+07	0.44 y	0.70	39:08	1.142	103.97				105					
IS	13C-OCDF	4.08e+07	0.88 y	0.85	42:07	1.230	186.63				104					
C/Up	37Cl-2,3,7,8-TCDD	2.76e+06		1.12	26:57	1.022	10.675				93.3					
RS/RT	13C-1,2,3,4-TCDD	2.32e+07	0.81 y	1.00	26:23	*	100.00				107					
RS	13C-1,2,3,4-TCDF	3.45e+07	0.76 y	1.00	24:58	*	100.00				Integrations					
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.57e+07	0.52 y	1.00	34:15	*	100.00				by					

Analyst:  Analyst: \_\_\_\_\_

Date: 1/31/15 Date: \_\_\_\_\_

Vista Analytical Laboratory - Injection Log Run file: 150130D2 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150130D2	1	ST150130D2-1	MAS	30-JAN-15	22:12:48	ST150130D2-1	NA
150130D2	2	B5A0110-BS1	MAS	30-JAN-15	23:00:58	ST150130D2-1	NA
150130D2	3	SOLVENT BLANK	MAS	30-JAN-15	23:49:11	ST150130D2-1	NA
150130D2	4	B5A0110-BLK1	MAS	31-JAN-15	00:37:21	ST150130D2-1	NA
150130D2	5	1500115-01	MAS	31-JAN-15	01:25:32	ST150130D2-1	NA
150130D2	6	1500107-01	MAS	31-JAN-15	02:13:44	ST150130D2-1	NA
150130D2	7	1500107-02	MAS	31-JAN-15	03:01:55	ST150130D2-1	NA
150130D2	8	1500109-01	MAS	31-JAN-15	03:50:06	ST150130D2-1	NA
150130D2	9	1500121-02	MAS	31-JAN-15	04:38:21	ST150130D2-1	NA
150130D2	10	1500121-03	MAS	31-JAN-15	05:26:36	ST150130D2-1	NA
150130D2	11	1500116-03	MAS	31-JAN-15	06:14:51	ST150130D2-1	NA
150130D2	12	1400970-01	MAS	31-JAN-15	07:03:05	ST150130D2-1	NA
150130D2	13	1500108-04	MAS	31-JAN-15	07:51:20	ST150130D2-1	NA
150130D2	14	SOLVENT BLANK	MAS	31-JAN-15	08:39:33	ST150130D2-1	NA

# CALIBRATION STANDARDS REVIEW CHECKLIST



Beg. Calibration ID: ST150130D2-1

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Concentration within range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
First and last eluters present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Retention Times within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forms signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Correct ICAL referenced?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Run Log:		
-Data file matches Conc Cal ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-Correct instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-Samples within 12-hour clock?	<input checked="" type="checkbox"/> y	<input type="checkbox"/> n

	<u>Beg.</u>	<u>End</u>
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TCDD/TCDF valleys < 25%?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Peaks integrated correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Manual integrations included?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8280 CS1 Ending Standard		
-Ratios within limits		<input type="checkbox"/> NA
-S/N > 2.5:1		<input type="checkbox"/>
-CS1 within 12-hour clock		<input type="checkbox"/>

**Comments:**

Reviewed by: CT 2/2/2015  
Initials & Date

\* Ending standard criteria applicable to 8290 only.

FORM 4A  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Episode No.:

CCAL ID: ST150130D3-1

Contract No.:                      SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 150130D3    S#1 Analysis Date: 31-JAN-15 Time: 09:57:51

NATIVE ANALYTES	M/Z'S	ION	QC	Pass	CONC. FOUND	CONC.
	FORMING RATIO (1)	ABUND. RATIO	LIMITS (2)			RANGE (3)
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	8.93	7.8 - 12.9
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	49.4	8.2 - 12.3 (4) 39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	51.6	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	51.9	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	51.4	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	49.1	43.0 - 58.0
OCDD	M+2/M+4	0.88	0.76-1.02	y	102	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	y	9.24	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	48.8	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	48.1	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	y	49.6	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.6	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.32	1.05-1.43	y	49.5	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.32	1.05-1.43	y	49.8	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	y	48.8	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	50.9	43.0 - 58.0
OCDF	M+2/M+4	0.94	0.76-1.02	y	100	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst:                     

Date: 1/31/15

FORM 4B  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 150130D3 S#1 Analysis Date: 31-JAN-15 Time: 09:57:51

LABELLED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	y	101	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	91.7	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	95.7	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	96.1	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	96.4	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	108	72.0 - 138.0
13C-OCDD	M/M+2	0.90	0.76-1.02	y	191	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.77	0.65-0.89	y	101	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	98.8	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	96.8	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	98.8	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	96.8	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	92.9	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.50	0.43-0.59	y	97.5	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.45	0.37-0.51	y	107	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	105	77.0 - 129.0
13C-OCDF	M+2/M+4	0.88	0.76-1.02	y	192	96.0 - 415.0
CLEANUP STANDARD (3) 37Cl-2,3,7,8-TCDD					10.7	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst:                     

Date: 11/31/15

## EPA METHOD 8290

## PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory

Episode No.:

CCAL ID: ST150130D3-1

Contract No.:

SAS No.:


Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 150130D3 S#1 Analysis Date: 31-JAN-15 Time: 09:57:51

NATIVE ANALYTES	M/Z'S	ION	QC	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
	FORMING RATIO	ABUND. RATIO	LIMITS			
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	8.93	8.00 - 12.0
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	49.4	40.0 - 60.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	51.6	40.0 - 60.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	51.9	40.0 - 60.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	51.4	40.0 - 60.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	49.1	40.0 - 60.0
OCDD	M+2/M+4	0.88	0.76-1.02	y	102	80.0 - 120
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	y	9.24	8.00 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	48.8	40.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	48.1	40.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	y	49.6	40.0 - 60.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.6	40.0 - 60.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.32	1.05-1.43	y	49.5	40.0 - 60.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.32	1.05-1.43	y	49.8	40.0 - 60.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	y	48.8	40.0 - 60.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	50.9	40.0 - 60.0
OCDF	M+2/M+4	0.94	0.76-1.02	y	100	80.0 - 120

Analyst: Date: 2/11/15



Client ID: 1613 CS3 15A0501  
 Lab ID: ST150130D3-1

Filename: 150130D3 S:1 Acq:31-JAN-15 09:57:51  
 GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000

ConCal: ST150130D3-1  
 EndCAL: ST150130D3-2

Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	2.07e+06	0.76 y	1.17	26:55	1.001	8.9330	*	2.5	*	*	Total Tetra-Dioxins	50.0	50.2	*	*	
1,2,3,7,8-PeCDD	8.94e+06	0.62 y	0.91	31:24	1.000	49.440	*	2.5	*	*	Total Penta-Dioxins	151	152	*	*	
1,2,3,4,7,8-HxCDD	8.39e+06	1.27 y	1.08	34:43	1.000	51.630	*	2.5	*	*	Total Hexa-Dioxins	200	201	*	*	
1,2,3,6,7,8-HxCDD	8.54e+06	1.27 y	1.06	34:50	1.000	51.881	*	2.5	*	*	Total Hepta-Dioxins	122	122	*	*	
1,2,3,7,8,9-HxCDD	8.59e+06	1.26 y	0.93	35:08	1.000	51.380	*	2.5	*	*	Total Tetra-Furans	28.8	29.2	*	*	
1,2,3,4,6,7,8-HpCDD	8.39e+06	1.03 y	1.10	38:34	1.000	49.071	*	2.5	*	*	Total Penta-Furans	196.45	196.73	*	*	
OCDD	1.54e+07	0.88 y	0.95	41:53	1.000	101.54	*	2.5	*	*	Total Hexa-Furans	250	251	*	*	
											Total Hepta-Furans	100.0	101	*	*	
2,3,7,8-TCDF	2.77e+06	0.76 y	1.07	26:09	1.001	9.2400	*	2.5	*	*						
1,2,3,7,8-PeCDF	1.44e+07	1.62 y	1.07	30:14	1.000	48.779	*	2.5	*	*						
2,3,4,7,8-PeCDF	1.36e+07	1.61 y	1.03	31:07	1.000	48.128	*	2.5	*	*						
1,2,3,4,7,8-HxCDF	1.45e+07	1.30 y	1.38	33:49	1.001	49.585	*	2.5	*	*						
1,2,3,6,7,8-HxCDF	1.46e+07	1.29 y	1.26	33:57	1.000	50.633	*	2.5	*	*						
2,3,4,6,7,8-HxCDF	1.33e+07	1.32 y	1.29	34:33	1.001	49.546	*	2.5	*	*						
1,2,3,7,8,9-HxCDF	1.08e+07	1.32 y	1.19	35:31	1.000	49.830	*	2.5	*	*						
1,2,3,4,6,7,8-HpCDF	1.32e+07	1.06 y	1.61	37:22	1.000	48.841	*	2.5	*	*						
1,2,3,4,7,8,9-HpCDF	1.24e+07	1.07 y	1.53	39:07	1.000	50.928	*	2.5	*	*						
OCDF	1.96e+07	0.94 y	1.10	42:07	1.000	100.36	*	2.5	*	*						
											Rec	Qual				
IS 13C-2,3,7,8-TCDD	1.98e+07	0.81 y	1.06	26:54	1.021	101.20					101					
IS 13C-1,2,3,7,8-PeCDD	1.99e+07	0.62 y	1.18	31:23	1.191	91.669					91.7					
IS 13C-1,2,3,4,7,8-HxCDD	1.51e+07	1.27 y	0.72	34:42	1.014	95.746					95.7					
IS 13C-1,2,3,6,7,8-HxCDD	1.55e+07	1.27 y	0.74	34:49	1.017	96.105					96.1					
IS 13C-1,2,3,7,8,9-HxCDD	1.80e+07	1.24 y	0.85	35:07	1.026	96.361					96.4					
IS 13C-1,2,3,4,6,7,8-HpCDD	1.55e+07	1.06 y	0.65	38:33	1.126	108.39					108					
IS 13C-OCDD	3.19e+07	0.90 y	0.76	41:52	1.223	191.36					95.7					
IS 13C-2,3,7,8-TCDF	2.80e+07	0.77 y	0.92	26:08	0.992	100.86					101					
IS 13C-1,2,3,7,8-PeCDF	2.76e+07	1.56 y	0.92	30:13	1.147	98.760					98.8					
IS 13C-2,3,4,7,8-PeCDF	2.73e+07	1.60 y	0.93	31:06	1.181	96.849					96.8					
IS 13C-1,2,3,4,7,8-HxCDF	2.12e+07	0.53 y	0.98	33:48	0.988	98.790					98.8					
IS 13C-1,2,3,6,7,8-HxCDF	2.29e+07	0.51 y	1.08	33:56	0.992	96.752					96.8					
IS 13C-2,3,4,6,7,8-HxCDF	2.08e+07	0.53 y	1.03	34:32	1.009	92.855					92.9					
IS 13C-1,2,3,7,8,9-HxCDF	1.83e+07	0.50 y	0.86	35:30	1.037	97.518					97.5					
IS 13C-1,2,3,4,6,7,8-HpCDF	1.68e+07	0.45 y	0.72	37:21	1.091	106.58					107					
IS 13C-1,2,3,4,7,8,9-HpCDF	1.60e+07	0.45 y	0.70	39:07	1.143	104.98					105					
IS 13C-OCDF	3.57e+07	0.88 y	0.85	42:06	1.230	192.16					96.1					
C/Up 37Cl-2,3,7,8-TCDD	2.20e+06		1.12	26:55	1.022	10.677					26.7					
											Integrations		Reviewed			
											by		by			
RS/RT 13C-1,2,3,4-TCDD	1.84e+07	0.80 y	1.00	26:21	*	100.00					Analyst: <u>  <i>A</i>  </u>		Analyst: <u>  <i>CT</i>  </u>			
RS 13C-1,2,3,4-TCDF	3.03e+07	0.79 y	1.00	24:55	*	100.00										
RS/RT 13C-1,2,3,4,6,9-HxCDF	2.19e+07	0.52 y	1.00	34:14	*	100.00										
											Date: <u>  <i>11/31/15</i>  </u>		Date: <u>  <i>2/9/15</i>  </u>			

Vista Analytical Laboratory - Injection Log Run file: 150130D3 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150130D3	1	ST150130D3-1	MAS	31-JAN-15	09:57:51	ST150130D3-1	ST150130D3-2
150130D3	2	B5A0101-BS1	MAS	31-JAN-15	10:46:04	ST150130D3-1	NA
150130D3	3	B5A0089-BS1	MAS	31-JAN-15	11:34:22	ST150130D3-1	NA
150130D3	4	SOLVENT BLANK	MAS	31-JAN-15	12:22:34	NA	NA
150130D3	5	B5A0101-BLK1	MAS	31-JAN-15	13:10:47	ST150130D3-1	NA
150130D3	6	B5A0089-BLK1	MAS	31-JAN-15	13:59:02	ST150130D3-1	NA
150130D3	7	B5A0112-BLK1	MAS	31-JAN-15	14:47:15	ST150130D3-1	ST150130D3-2
150130D3	8	B5A0112-BS2	MAS	31-JAN-15	15:35:29	ST150130D3-1	ST150130D3-2
150130D3	9	B5A0112-BS3	MAS	31-JAN-15	16:23:43	ST150130D3-1	ST150130D3-2
150130D3	10	1500057-03	MAS	31-JAN-15	17:11:56	ST150130D3-1	NA
150130D3	11	1500057-03RE1	MAS	31-JAN-15	18:00:10	ST150130D3-1	NA
150130D3	12	1500057-03RE2	MAS	31-JAN-15	18:48:23	ST150130D3-1	NA
150130D3	13	1400970-02@20X	MAS	31-JAN-15	19:36:39	ST150130D3-1	NA
150130D3	14	1400970-03@20X	MAS	31-JAN-15	20:24:55	ST150130D3-1	NA
150130D3	15	1400970-04@20X	MAS	31-JAN-15	21:13:10	ST150130D3-1	NA
150130D3	16	SOLVENT BLANK	MAS	31-JAN-15	22:01:27	NA	NA
150130D3	17	SOLVENT BLANK	MAS	31-JAN-15	22:49:39	NA	NA
150130D3	18	ST150130D3-2	MAS	31-JAN-15	23:37:50	ST150130D3-1	ST150130D3-2

# CALIBRATION STANDARDS REVIEW CHECKLIST



Beg. Calibration ID: ST150130D3-1

End Calibration ID: ST150130D3-2

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Concentration within range?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
First and last eluters present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Retention Times within criteria?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Forms signed and dated?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Correct ICAL referenced?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Run Log:		
-Data file matches Conc Cal ID?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-Correct instrument listed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-Samples within 12-hour clock?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	<u>Beg.</u>	<u>End</u>
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TCDD/TCDF valleys < 25%?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Peaks integrated correctly?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Manual integrations included?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8280 CS1 Ending Standard		
-Ratios within limits		<input checked="" type="checkbox"/>
-S/N > 2.5:1		<input checked="" type="checkbox"/>
-CS1 within 12-hour clock		<input checked="" type="checkbox"/>

*Comments:*

Reviewed by: CT 2/9/15  
Initials & Date

*\* Ending standard criteria applicable to 8290 only.*

FORM 4A  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: ST150203D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 150203D1 S#1 Analysis Date: 3-FEB-15 Time: 08:36:48


NATIVE ANALYTES	M/Z'S	ION	QC	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
	FORMING RATIO (1)	ABUND. RATIO	LIMITS (2)			
2,3,7,8-TCDD	M/M+2	0.74	0.65-0.89	y	8.84	7.8 - 12.9
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	45.9	8.2 - 12.3 (4) 39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	51.1	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	51.0	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	y	50.1	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	47.2	43.0 - 58.0
OCDD	M+2/M+4	0.87	0.76-1.02	y	100	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	y	9.31	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.64	1.32-1.78	y	46.3	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	46.6	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	49.0	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	49.0	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	y	48.3	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.32	1.05-1.43	y	48.4	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.10	0.88-1.20	y	50.4	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	y	50.8	43.0 - 58.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	95.7	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: 

Date: 2/3/15

FORM 4B  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

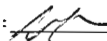
VER Data Filename: 150203D1 S#1 Analysis Date: 3-FEB-15 Time: 08:36:48

LABELLED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	y	96.7	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.60	0.54-0.72	y	86.3	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	95.2	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	97.6	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	99.6	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	104	72.0 - 138.0
13C-OCDD	M/M+2	0.89	0.76-1.02	y	187	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.75	0.65-0.89	y	116	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	98.3	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	95.1	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	108	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	105	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	97.0	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.50	0.43-0.59	y	103	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.44	0.37-0.51	y	102	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.44	0.37-0.51	y	98.1	77.0 - 129.0
13C-OCDF	M+2/M+4	0.86	0.76-1.02	y	188	96.0 - 415.0
CLEANUP STANDARD (3) 37Cl-2,3,7,8-TCDD					9.87	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: 

Date: 2/3/15

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 1-7-15

RT Window Data Filename: 150203D1 S#1 Analysis Date: 3-FEB-15 Time: 08:36:48

ZB-5MS IS Data Filename: 150203D1 S#1 Analysis Date: 3-FEB-15 Time: 08:36:48

DB\_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:37	1,3,6,8-TCDF (F)	21:30
1,2,8,9-TCDD (L)	27:47	1,2,8,9-TCDF (L)	27:56
1,2,4,7,9-PeCDD (F)	29:22	1,3,4,6,8-PeCDF (F)	27:53
1,2,3,8,9-PeCDD (L)	31:46	1,2,3,8,9-PeCDF (L)	32:00
1,2,4,6,7,9-HxCDD (F)	33:10	1,2,3,4,6,8-HxCDF (F)	32:38
1,2,3,7,8,9-HxCDD (L)	35:07	1,2,3,7,8,9-HxCDF (L)	35:30
1,2,3,4,6,7,9-HpCDD (F)	37:43	1,2,3,4,6,7,8-HpCDF (F)	37:21
1,2,3,4,6,7,8-HpCDD (L)	38:33	1,2,3,4,7,8,9-HpCDF (L)	39:07

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT  
BETWEEN  
COMPARED PEAKS (1)

<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: WJ

Date: 2/3/15

FORM 6A  
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150203D1 S#1 Analysis Date: 3-FEB-15 Time: 08:36:48

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002

(1) Contract-required limits for  
Relative Retention Times (RRT)  
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.021	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.190	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.146	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.180	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: AK

Date: 2/3/15

FORM 6B  
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 150203D1 S#1 Analysis Date: 3-FEB-15 Time: 08:36:48

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.001	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001

(1) Contract-required limits for  
Relative Retention Times (RRT)  
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.991	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.026	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.091	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.142	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.126	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.223	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.230	1.091-1.371

Analyst: 

Date: 2/3/15



Client ID: 1613 CS3 15A0501  
Lab ID: ST150203D1-1

Filename: 150203D1 S:1 Acq: 3-FEB-15 08:36:48  
GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000

ConCal: ST150203D1-1  
EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	1.55e+06	0.74 y	1.17	26:57	8.8381		* 2.5		*	Total Tetra-Dioxins	50.6	50.8		*	*
1,2,3,7,8-PeCDD	6.19e+06	0.61 y	0.91	31:24	45.903		* 2.5		*	Total Penta-Dioxins	147	148		*	*
1,2,3,4,7,8-HxCDD	5.26e+06	1.28 y	1.08	34:43	51.052		* 2.5		*	Total Hexa-Dioxins	200	201		*	*
1,2,3,6,7,8-HxCDD	5.43e+06	1.24 y	1.06	34:49	50.987		* 2.5		*	Total Hepta-Dioxins	132	133		*	*
1,2,3,7,8,9-HxCDD	5.53e+06	1.28 y	0.93	35:07	50.095		* 2.5		*	Total Tetra-Furans	26.4	26.4		*	*
1,2,3,4,6,7,8-HpCDD	4.94e+06	1.02 y	1.10	38:33	47.230		* 2.5		*	Total Penta-Furans	195.17	196.08		*	*
OCDD	9.45e+06	0.87 y	0.95	41:52	100.25		* 2.5		*	Total Hexa-Furans	242	244		*	*
										Total Hepta-Furans	102	104		*	*
2,3,7,8-TCDF	2.36e+06	0.75 y	1.07	26:11	9.3108		* 2.5		*						
1,2,3,7,8-PeCDF	1.01e+07	1.64 y	1.07	30:14	46.343		* 2.5		*						
2,3,4,7,8-PeCDF	9.50e+06	1.60 y	1.03	31:08	46.610		* 2.5		*						
1,2,3,4,7,8-HxCDF	1.01e+07	1.31 y	1.38	33:49	49.033		* 2.5		*						
1,2,3,6,7,8-HxCDF	9.75e+06	1.31 y	1.26	33:57	48.973		* 2.5		*						
2,3,4,6,7,8-HxCDF	8.63e+06	1.28 y	1.29	34:33	48.288		* 2.5		*						
1,2,3,7,8,9-HxCDF	7.09e+06	1.32 y	1.19	35:31	48.408		* 2.5		*						
1,2,3,4,6,7,8-HpCDF	8.29e+06	1.10 y	1.61	37:21	50.361		* 2.5		*						
1,2,3,4,7,8,9-HpCDF	7.39e+06	1.06 y	1.53	39:07	50.832		* 2.5		*						
OCDF	1.17e+07	0.91 y	1.10	42:06	95.723		* 2.5		*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	1.50e+07	0.82 y	1.06	26:56	96.689					96.7					
IS 13C-1,2,3,7,8-PeCDD	1.48e+07	0.60 y	1.18	31:23	86.270					86.3					
IS 13C-1,2,3,4,7,8-HxCDD	9.55e+06	1.29 y	0.72	34:42	95.184					95.2					
IS 13C-1,2,3,6,7,8-HxCDD	1.00e+07	1.25 y	0.74	34:49	97.601					97.6					
IS 13C-1,2,3,7,8,9-HxCDD	1.18e+07	1.23 y	0.85	35:06	99.636					99.6					
IS 13C-1,2,3,4,6,7,8-HpCDD	9.46e+06	1.07 y	0.65	38:32	103.90					104					
IS 13C-OCDD	1.99e+07	0.89 y	0.76	41:51	186.71					93.4					
IS 13C-2,3,7,8-TCDF	2.37e+07	0.75 y	0.92	26:10	115.69					116					
IS 13C-1,2,3,7,8-PeCDF	2.02e+07	1.54 y	0.92	30:14	98.326					98.3					
IS 13C-2,3,4,7,8-PeCDF	1.97e+07	1.55 y	0.93	31:06	95.144					95.1					
IS 13C-1,2,3,4,7,8-HxCDF	1.48e+07	0.50 y	0.98	33:48	108.46					108					
IS 13C-1,2,3,6,7,8-HxCDF	1.58e+07	0.51 y	1.08	33:56	104.95					105					
IS 13C-2,3,4,6,7,8-HxCDF	1.39e+07	0.52 y	1.03	34:32	96.997					97.0					
IS 13C-1,2,3,7,8,9-HxCDF	1.23e+07	0.50 y	0.86	35:30	102.94					103					
IS 13C-1,2,3,4,6,7,8-HpCDF	1.02e+07	0.44 y	0.72	37:20	101.61					102					
IS 13C-1,2,3,4,7,8,9-HpCDF	9.53e+06	0.44 y	0.70	39:06	98.073					98.1					
IS 13C-OCDF	2.22e+07	0.86 y	0.85	42:05	187.70					93.9					
C/Up 37Cl-2,3,7,8-TCDD	1.61e+06		1.12	26:57	9.8685					24.7					
RS/RT 13C-1,2,3,4-TCDD	1.46e+07	0.80 y	1.00	26:22	100.00						Integrations	Reviewed			
RS 13C-1,2,3,4-TCDF	2.23e+07	0.77 y	1.00	24:58	100.00						by	by			
RS/RT 13C-1,2,3,4,6,9-HxCDF	1.39e+07	0.52 y	1.00	34:13	100.00						Analyst: <i>[Signature]</i>	Analyst: _____			

Date: 2/4/15 Date: \_\_\_\_\_

Vista Analytical Laboratory - Injection Log Run file: 150203D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150203D1	1	ST150203D1-1	WJL	3-FEB-15	08:36:48	ST150203D1-1	NA
150203D1	2	SOLVENT BLANK	WJL	3-FEB-15	09:24:59	ST150203D1-1	NA
150203D1	3	1500108-01	WJL	3-FEB-15	10:13:12	ST150203D1-1	NA
150203D1	4	1500108-02	WJL	3-FEB-15	11:01:23	ST150203D1-1	NA
150203D1	5	1500108-03	WJL	3-FEB-15	11:49:35	ST150203D1-1	NA
150203D1	6	1500116-01	WJL	3-FEB-15	12:37:47	ST150203D1-1	NA
150203D1	7	1500116-02	WJL	3-FEB-15	13:25:59	ST150203D1-1	NA
150203D1	8	1500057-01	WJL	3-FEB-15	14:14:11	ST150203D1-1	NA
150203D1	9	1500057-01	WJL	3-FEB-15	15:02:24	ST150203D1-1	NA
150203D1	10	1500057-01	WJL	3-FEB-15	15:50:35	ST150203D1-1	NA
150203D1	11	1500057-02	WJL	3-FEB-15	16:38:46	ST150203D1-1	NA
150203D1	12	1500057-02	WJL	3-FEB-15	17:26:56	ST150203D1-1	NA
150203D1	13	1500057-02	WJL	3-FEB-15	18:15:07	ST150203D1-1	NA
150203D1	14	SOLVENT BLANK	WJL	3-FEB-15	19:03:20	ST150203D1-1	NA
150203D1	15	SOLVENT BLANK	WJL	3-FEB-15	19:51:31	ST150203D1-1	NA

# CALIBRATION STANDARDS REVIEW CHECKLIST



Beg. Calibration ID: ST150203DI-1

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Concentration within range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
First and last eluters present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Retention Times within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forms signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Correct ICAL referenced?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Run Log:		
-Data file matches Conc Cal ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-Correct instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-Samples within 12-hour clock?	<input checked="" type="checkbox"/> y	<input type="checkbox"/> n

	<u>Beg.</u>	<u>End</u>
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TCDD/TCDF valleys < 25%?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Peaks integrated correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Manual integrations included?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8280 CS1 Ending Standard		
-Ratios within limits		<input type="checkbox"/>
-S/N > 2.5:1		<input type="checkbox"/>
-CS1 within 12-hour clock		<input checked="" type="checkbox"/>

*Comments:*

Reviewed by: DMS 2/4/15  
*Initials & Date*

\* Ending standard criteria applicable to 8290 only.

FORM 4A  
 PCDD/PCDF CALIBRATION VERIFICATION  
 CCAL ID: ST150205F2-1

Vista Analytical Laboratory  
 Initial Calibration Date: 11/13/2014  
 Instrument ID: VG-9  
 VER Data file name: 150205F2\_3

GC Column ID: DB-225  
 Analysis Date: 05-Feb-15 Analysis Time: 15:52:47

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC.	CONC.	CONC.	CONC.	Yes	Yes
						RANGE (3)	RANGE (3)	RANGE (ng/ml)	RANGE (ng/ml)		
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	8.46	8.4 8.6	12.0 11.6 (4)	8290 Min	8290 Max		

- (1) See Table 8. Method 1613, for m/z specifications
- (2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
- (3) Contract required concentration range as specified in Table 6, Method 1613
- (4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: CJS  
 Date: 2/6/15

FORM 4B  
 PCDD/PCDF CALIBRATION VERIFICATION  
 CCAL ID: ST150205F2-1

Vista Analytical Laboratory  
 Initial Calibration Date: 11/13/2014  
 Instrument ID: VG-9  
 VER Data file name: 150205F2\_3

GC Column ID: DB-225  
 Analysis Date: 05-Feb-15      Analysis Time: 15:52:47

Labeled Compounds	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3)	CONC. RANGE (3)	CONC. RANGE (ng/ml)	CONC. RANGE (ng/ml)	Yes	Yes
						1613 Min	1613 Max	8290 Min	8290 Max		
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	106	71.0	140.0	70.0	130.0		
						76.0	131.0 (5)				

- (1) See Table 8. Method 1613, for m/z specifications
- (2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
- (3) Contract required concentration range as specified in Table 6, Method 1613
- (4) No ion abundance ratio; report concentration found
- (5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: CA  
 Date: 2/6/15

Dataset: C:\MassLynx\Default.pro\Results\150205F2\150205F2\_3.qld

Last Altered: Friday, February 06, 2015 09:35:11 Pacific Standard Time

Printed: Friday, February 06, 2015 09:35:46 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 27 Jan 2015 16:23:49

Calibration: C:\MassLynx\Default.pro\Curvedb\db-225\_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 150205F2\_3, Date: 05-Feb-2015, Time: 15:52:47, ID: ST150205F2-1 1613 CS3 14I1102, Description: 1613 CS3 14I1102

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	1.04e5	0.78	NO	1.10	1.002	17.56	8.4648	84.8	0.0733
2	2 13C-2,3,7,8-TCDF	1.12e6	0.78	NO	0.844	1.002	17.54	105.80	106	0.253
3	3 13C-1,2,3,4-TCDF	1.25e6	0.75	NO	1.00	1.002	15.31	99.801	100	0.214
4	4 13C-1,2,3,4-TCDD	1.07e6	0.78	NO		1.002	16.07			

CS 2/6/15

Dataset: Untitled

Last Altered: Friday, February 06, 2015 09:14:07 Pacific Standard Time

Printed: Friday, February 06, 2015 09:15:16 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 27 Jan 2015 16:23:49

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225\_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Compound name: 2,3,7,8-TCDF

	Name	ID	Acq.Date	Acq.Time
1	150205F2_1	SOLVENT BLANK	05-Feb-15	14:49:55
2	150205F2_2	CP150205F2-1 DB-225 CPSM	05-Feb-15	15:20:25
3	150205F2_3	ST150205F2-1 1613 CS3 1411102	05-Feb-15	15:52:47
4	150205F2_4	SOLVENT BLANK	05-Feb-15	16:25:08
5	150205F2_5	1500108-01RE1 AS-CB-02-20150120-S CF 2...	05-Feb-15	16:57:30
6	150205F2_6	1500108-02RE1 AS-CB-05-20150120-S CF 2...	05-Feb-15	17:29:52
7	150205F2_7	1500108-03RE1 AS-CB-UNR-20150120-S CF ...	05-Feb-15	18:02:19
8	150205F2_8	1500116-01RE1 WM-CB-03-20150122-S CF ...	05-Feb-15	18:34:46
9	150205F2_9	1500116-02RE1 WM-FD-02-20150122-S CF 3...	05-Feb-15	19:07:08
10	150205F2_10	1400970-02RE1 DS-TD-01-20141216-S CF 1...	05-Feb-15	19:39:35
11	150205F2_11	1400970-03RE1 DS-CB-I3-20141216-S CF 19...	05-Feb-15	20:12:02
12	150205F2_12	1400970-04RE1 DS-CB-H1-20141216-S CF 3...	05-Feb-15	20:44:24

# CALIBRATION STANDARDS REVIEW CHECKLIST



Beg. Calibration ID: ST150205F2-1

End Calibration ID: N/A

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> N/A
Concentration within range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
First and last eluters present?	<input type="checkbox"/> N/A	<input type="checkbox"/>
Retention Times within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forms signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Correct ICAL referenced?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Run Log:		
-Data file matches Conc Cal ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-Correct instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-Samples within 12-hour clock?	<input checked="" type="checkbox"/> y	<input type="checkbox"/> n

	<u>Beg.</u>	<u>End</u>
Mass resolution > <u>10,000</u> ? ▪ Method 1614 > 5,000; CARB 429 > 8,000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TCDD/TCDF valleys < 25%?	<input checked="" type="checkbox"/>	<input type="checkbox"/> N/A
Peaks integrated correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Manual integrations included?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8280 CS1 Ending Standard		
-Ratios within limits		<input type="checkbox"/>
-S/N > 2.5:1		<input type="checkbox"/>
-CS1 within 12-hour clock		<input type="checkbox"/>

Comments:

Reviewed by: AC 2/6/15  
Initials & Date

\* Ending standard criteria applicable to 8290 only.



NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150127E1-1      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICal ID: PCBVG8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150127E1 SH1 Analysis Date: 27-JAN-15 Time: 10:38:35

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	3.00	2.66-3.60	y	40.9	37.5-62.5	PCB-52/69	0.75	0.65-0.89	y	90.8	75.0-125
PCB-2	3.05	2.66-3.60	y	40.4	37.5-62.5	PCB-73	0.76	0.65-0.89	y	47.4	37.5-62.5
PCB-3	3.02	2.66-3.60	y	40.2	37.5-62.5	PCB-43/49	0.75	0.65-0.89	y	94.2	75.0-125
PCB-4/10	1.62	1.33-1.79	y	87.6	75-125	PCB-47	0.76	0.65-0.89	y	43.4	37.5-62.5
PCB-7/9	1.65	1.33-1.79	y	89.8	75-125	PCB-48/75	0.76	0.65-0.89	y	91.7	75.0-125
PCB-6	1.65	1.33-1.79	y	44.7	37.5-62.5	PCB-65	0.75	0.65-0.89	y	48.2	37.5-62.5
PCB-5/8	1.62	1.33-1.79	y	90.2	75-125	PCB-62	0.77	0.65-0.89	y	43.0	37.5-62.5
PCB-14	1.62	1.33-1.79	y	44.9	37.5-62.5	PCB-44	0.76	0.65-0.89	y	48.7	37.5-62.5
PCB-11	1.64	1.33-1.79	y	43.9	37.5-62.5	PCB-42/59	0.76	0.65-0.89	y	94.3	75.0-125
PCB-12/13	1.64	1.33-1.79	y	89.8	75-125	PCB-41/64/71/72	0.76	0.65-0.89	y	186.0	150-250
PCB-15	1.63	1.33-1.79	y	44.6	37.5-62.5	PCB-68	0.75	0.65-0.89	y	44.6	37.5-62.5
PCB-19	1.08	0.88-1.20	y	50.7	37.5-62.5	PCB-40	0.77	0.65-0.89	y	47.7	37.5-62.5
PCB-30	1.07	0.88-1.20	y	51.6	37.5-62.5	PCB-57	0.76	0.65-0.89	y	46.0	37.5-62.5
PCB-18	1.08	0.88-1.20	y	50.1	37.5-62.5	PCB-67	0.84	0.65-0.89	y	45.5	37.5-62.5
PCB-17	1.07	0.88-1.20	y	50.1	37.5-62.5	PCB-58	0.71	0.65-0.89	y	48.2	37.5-62.5
PCB-24/27	1.07	0.88-1.20	y	95.4	75.0-125	PCB-63	0.75	0.65-0.89	y	46.6	37.5-62.5
PCB-16/32	1.06	0.88-1.20	y	98.7	75.0-125	PCB-74	0.77	0.65-0.89	y	46.2	37.5-62.5
PCB-34	1.01	0.88-1.20	y	38.6	37.5-62.5	PCB-61/70	0.76	0.65-0.89	y	92.5	75.0-125
PCB-23	1.01	0.88-1.20	y	44.7	37.5-62.5	PCB-76/66	0.76	0.65-0.89	y	91.9	75.0-125
PCB-29	0.99	0.88-1.20	y	41.6	37.5-62.5	PCB-80	0.76	0.65-0.89	y	45.6	37.5-62.5
PCB-26	1.03	0.88-1.20	y	43.0	37.5-62.5	PCB-55	0.76	0.65-0.89	y	45.6	37.5-62.5
PCB-25	1.03	0.88-1.20	y	41.3	37.5-62.5	PCB-56/60	0.76	0.65-0.89	y	93.3	75.0-125
PCB-31	1.00	0.88-1.20	y	45.4	37.5-62.5	PCB-79	0.76	0.65-0.89	y	47.5	37.5-62.5
PCB-28	1.01	0.88-1.20	y	44.7	37.5-62.5	PCB-78	0.77	0.65-0.89	y	46.4	37.5-62.5
PCB-20/21/33	1.00	0.88-1.20	y	135.1	112.5-225	PCB-81	0.76	0.65-0.89	y	44.4	37.5-62.5
PCB-22	1.01	0.88-1.20	y	40.2	37.5-62.5	PCB-77	0.79	0.65-0.89	y	46.1	37.5-62.5
PCB-36	0.99	0.88-1.20	y	39.2	37.5-62.5	PCB-104	1.57	1.32-1.78	y	48.0	37.5-62.5
PCB-39	1.01	0.88-1.20	y	42.4	37.5-62.5	PCB-96	1.57	1.32-1.78	y	49.1	37.5-62.5
PCB-38	1.01	0.88-1.20	y	41.6	37.5-62.5	PCB-103	1.62	1.32-1.78	y	50.6	37.5-62.5
PCB-35	1.02	0.88-1.20	y	41.8	37.5-62.5	PCB-100	1.58	1.32-1.78	y	51.2	37.5-62.5
PCB-37	1.00	0.88-1.20	y	42.6	37.5-62.5	PCB-94	1.58	1.32-1.78	y	49.3	37.5-62.5
PCB-54	0.74	0.65-0.89	y	47.2	37.5-62.5	PCB-95/98/102	1.59	1.32-1.78	y	140.9	112.5-225
PCB-50	0.75	0.65-0.89	y	52.1	37.5-62.5	PCB-93	1.59	1.32-1.78	y	55.4	37.5-62.5
PCB-53	0.77	0.65-0.89	y	46.4	37.5-62.5	PCB-88/91	1.59	1.32-1.78	y	103.1	75.0-125
PCB-51	0.75	0.65-0.89	y	44.1	37.5-62.5	PCB-121	1.62	1.32-1.78	y	47.2	37.5-62.5
PCB-45	0.75	0.65-0.89	y	45.1	37.5-62.5						
PCB-46	0.75	0.65-0.89	y	47.5	37.5-62.5						

Analyst: DMS

Date: 1/27/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150127E1-1      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICal ID: PCBVG8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150127E1    SH1    Analysis Date: 27-JAN-15 Time: 10:38:35

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.58	1.32-1.78	y	99.3	75.0-125	PCB-140	1.28	1.05-1.43	y	52.6	37.5-62.5
PCB-89	1.57	1.32-1.78	y	51.4	37.5-62.5	PCB-134/143	1.24	1.05-1.43	y	92.5	75.0-125
PCB-90/101	1.57	1.32-1.78	y	95.9	75.0-125	PCB-133/142	1.24	1.05-1.43	y	94.9	75.0-125
PCB-113	1.57	1.32-1.78	y	52.2	37.5-62.5	PCB-131	1.25	1.05-1.43	y	48.8	37.5-62.5
PCB-99	1.61	1.32-1.78	y	44.5	37.5-62.5	PCB-146/165	1.25	1.05-1.43	y	94.0	75.0-125
PCB-119	1.57	1.32-1.78	y	46.1	37.5-62.5	PCB-132/161	1.23	1.05-1.43	y	91.3	75.0-125
PCB-108/112	1.57	1.32-1.78	y	95.5	75.0-125	PCB-153	1.26	1.05-1.43	y	42.8	37.5-62.5
PCB-83	1.55	1.32-1.78	y	48.9	37.5-62.5	PCB-168	1.24	1.05-1.43	y	46.0	37.5-62.5
PCB-97	1.56	1.32-1.78	y	48.5	37.5-62.5	PCB-141	1.22	1.05-1.43	y	45.5	37.5-62.5
PCB-86	1.58	1.32-1.78	y	44.7	37.5-62.5	PCB-137	1.27	1.05-1.43	y	47.8	37.5-62.5
PCB-87/117/125	1.59	1.32-1.78	y	138.7	112.5-225	PCB-130	1.23	1.05-1.43	y	49.9	37.5-62.5
PCB-111/115	1.56	1.32-1.78	y	95.1	75.0-125	PCB-138/163/164	1.25	1.05-1.43	y	131.6	112.5-225
PCB-85/116	1.61	1.32-1.78	y	90.2	75.0-125	PCB-158/160	1.24	1.05-1.43	y	90.4	75.0-125
PCB-120	1.57	1.32-1.78	y	43.7	37.5-62.5	PCB-129	1.25	1.05-1.43	y	45.7	37.5-62.5
PCB-110	1.62	1.32-1.78	y	46.4	37.5-62.5	PCB-166	1.24	1.05-1.43	y	47.1	37.5-62.5
PCB-82	1.61	1.32-1.78	y	48.7	37.5-62.5	PCB-159	1.28	1.05-1.43	y	45.8	37.5-62.5
PCB-124	1.60	1.32-1.78	y	47.4	37.5-62.5	PCB-128/162	1.27	1.05-1.43	y	93.5	75.0-125
PCB-107/109	1.59	1.32-1.78	y	93.0	75.0-125	PCB-167	1.25	1.05-1.43	y	46.7	37.5-62.5
PCB-123	1.57	1.32-1.78	y	47.7	37.5-62.5	PCB-156	1.24	1.05-1.43	y	45.2	37.5-62.5
PCB-106/118	1.59	1.32-1.78	y	96.3	75.0-125	PCB-157	1.27	1.05-1.43	y	46.9	37.5-62.5
PCB-114	1.61	1.32-1.78	y	43.6	37.5-62.5	PCB-169	1.25	1.05-1.43	y	47.7	37.5-62.5
PCB-122	1.67	1.32-1.78	y	45.8	37.5-62.5	PCB-188	1.06	0.89-1.21	y	47.4	37.5-62.5
PCB-105	1.61	1.32-1.78	y	41.7	37.5-62.5	PCB-184	1.06	0.89-1.21	y	49.1	37.5-62.5
PCB-127	1.63	1.32-1.78	y	42.8	37.5-62.5	PCB-179	1.06	0.89-1.21	y	48.9	37.5-62.5
PCB-126	1.61	1.32-1.78	y	43.3	37.5-62.5	PCB-176	1.06	0.89-1.21	y	50.0	37.5-62.5
PCB-155	1.26	1.05-1.43	y	48.0	37.5-62.5	PCB-186	1.07	0.89-1.21	y	49.7	37.5-62.5
PCB-150	1.27	1.05-1.43	y	48.3	37.5-62.5	PCB-178	1.05	0.89-1.21	y	49.7	37.5-62.5
PCB-152	1.26	1.05-1.43	y	47.2	37.5-62.5	PCB-175	1.06	0.89-1.21	y	50.6	37.5-62.5
PCB-145	1.28	1.05-1.43	y	48.2	37.5-62.5	PCB-182/187	1.05	0.89-1.21	y	100.2	75.0-125
PCB-136	1.26	1.05-1.43	y	50.0	37.5-62.5	PCB-183	1.05	0.89-1.21	y	49.0	37.5-62.5
PCB-148	1.29	1.05-1.43	y	48.2	37.5-62.5	PCB-185	1.06	0.89-1.21	y	48.9	37.5-62.5
PCB-154	1.26	1.05-1.43	y	50.4	37.5-62.5	PCB-174	1.04	0.89-1.21	y	46.5	37.5-62.5
PCB-151	1.28	1.05-1.43	y	52.7	37.5-62.5	PCB-181	1.05	0.89-1.21	y	51.4	37.5-62.5
PCB-135	1.26	1.05-1.43	y	49.9	37.5-62.5	PCB-177	1.06	0.89-1.21	y	48.3	37.5-62.5
PCB-144	1.27	1.05-1.43	y	53.8	37.5-62.5	PCB-171	1.06	0.89-1.21	y	46.7	37.5-62.5
PCB-147	1.26	1.05-1.43	y	49.7	37.5-62.5	PCB-173	1.06	0.89-1.21	y	52.0	37.5-62.5
PCB-139/149	1.27	1.05-1.43	y	100.3	75.0-125	PCB-172	1.06	0.89-1.21	y	47.6	37.5-62.5

Analyst: Dms

Date: 1/27/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150127E1-1      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICal ID: PCBVG8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150127E1    S#1    Analysis Date: 27-JAN-15 Time: 10:38:35

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-192	1.05	0.89-1.21	y	47.9	37.5-62.5
PCB-180	1.04	0.89-1.21	y	46.6	37.5-62.5
PCB-193	1.06	0.89-1.21	y	47.3	37.5-62.5
PCB-191	1.07	0.89-1.21	y	48.1	37.5-62.5
PCB-170	1.06	0.89-1.21	y	46.4	37.5-62.5
PCB-190	1.04	0.89-1.21	y	47.0	37.5-62.5
PCB-189	1.03	0.89-1.21	y	48.1	37.5-62.5
PCB-202	0.90	0.76-1.02	y	49.8	37.5-62.5
PCB-201	0.91	0.76-1.02	y	52.3	37.5-62.5
PCB-204	0.89	0.76-1.02	y	49.1	37.5-62.5
PCB-197	0.91	0.76-1.02	y	50.8	37.5-62.5
PCB-200	0.91	0.76-1.02	y	52.2	37.5-62.5
PCB-198	0.91	0.76-1.02	y	55.8	37.5-62.5
PCB-199	0.91	0.76-1.02	y	52.7	37.5-62.5
PCB-196/203	0.89	0.76-1.02	y	104.9	75.0-125
PCB-195	0.89	0.76-1.02	y	49.8	37.5-62.5
PCB-194	0.90	0.76-1.02	y	45.9	37.5-62.5
PCB-205	0.90	0.76-1.02	y	45.9	37.5-62.5
PCB-208	1.32	1.14-1.54	y	46.4	37.5-62.5
PCB-207	1.35	1.14-1.54	y	44.9	37.5-62.5
PCB-206	1.31	1.14-1.54	y	47.3	37.5-62.5
PCB-209	1.19	0.99-1.33	y	46.4	37.5-62.5

Analyst: DMS

Date: 1/27/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150127E1-1      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICal ID: PCBVG8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150127E1    S#1    Analysis Date: 27-JAN-15 Time: 10:38:35

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.34	2.66-3.60	Y	114.3	50.0-145	13C-PCB-169	1.28	1.05-1.43	Y	97.7	50 - 145
13C-PCB-3	3.42	2.66-3.60	Y	113.8	50.0-145	13C-PCB-188	0.46	0.38-0.52	Y	92.4	50 - 145
13C-PCB-4	1.60	1.33-1.79	Y	100.8	50.0-145	13C-PCB-180	0.47	0.38-0.52	Y	98.1	50 - 145
13C-PCB-9	1.59	1.33-1.79	Y	98.6	50.0-145	13C-PCB-170	0.46	0.38-0.52	Y	102.2	50 - 145
13C-PCB-11	1.56	1.33-1.79	Y	99.6	50.0-145	13C-PCB-189	0.45	0.38-0.52	Y	98.3	50 - 145
13C-PCB-19	1.09	0.88-1.20	Y	108.5	50.0-145	13C-PCB-202	0.94	0.76-1.02	Y	91.6	50 - 145
13C-PCB-32	1.10	0.88-1.20	Y	112.7	50.0-145	13C-PCB-194	0.92	0.76-1.02	Y	101.6	50 - 145
13C-PCB-28	1.02	0.88-1.20	Y	91.5	50.0-145	13C-PCB-208	0.76	0.65-0.89	Y	104.2	50 - 145
13C-PCB-37	1.04	0.88-1.20	Y	97.6	50.0-145	13C-PCB-206	0.77	0.65-0.89	Y	116.7	50 - 145
13C-PCB-54	0.78	0.65-0.89	Y	91.1	50.0-145	13C-PCB-209	1.19	0.99-1.33	Y	120.0	50 - 145
13C-PCB-52	0.80	0.65-0.89	Y	101.3	50.0-145						
13C-PCB-47	0.79	0.65-0.89	Y	100.3	50.0-145						
13C-PCB-70	0.81	0.65-0.89	Y	99.2	50.0-145						
13C-PCB-80	0.80	0.65-0.89	Y	97.5	50.0-145						
13C-PCB-81	0.78	0.65-0.89	Y	98.2	50.0-145						
13C-PCB-77	0.80	0.65-0.89	Y	95.9	50.0-145						
13C-PCB-104	1.60	1.32-1.78	Y	99.0	50.0-145						
13C-PCB-95	1.54	1.32-1.78	Y	101.6	50.0-145						
13C-PCB-101	1.64	1.32-1.78	Y	101.3	50.0-145						
13C-PCB-97	1.60	1.32-1.78	Y	106.0	50.0-145	CRS vs. RS					
13C-PCB-123	1.60	1.32-1.78	Y	109.1	50.0-145	13C-PCB-79	0.79	0.65-0.89	Y	98.1	75 - 125
13C-PCB-118	1.63	1.32-1.78	Y	104.1	50.0-145	13C-PCB-178	0.47	0.38-0.52	Y	99.9	75 - 125
13C-PCB-114	1.63	1.32-1.78	Y	89.2	50.0-145						
13C-PCB-105	1.62	1.32-1.78	Y	92.2	50.0-145						
13C-PCB-127	1.60	1.32-1.78	Y	92.6	50.0-145						
13C-PCB-126	1.63	1.32-1.78	Y	97.2	50.0-145						
13C-PCB-155	1.27	1.05-1.43	Y	97.9	50.0-145						
13C-PCB-153	1.30	1.05-1.43	Y	95.1	50.0-145						
13C-PCB-141	1.32	1.05-1.43	Y	96.3	50.0-145						
13C-PCB-138	1.28	1.05-1.43	Y	97.9	50.0-145						
13C-PCB-159	1.27	1.05-1.43	Y	95.9	50.0-145						
13C-PCB-167	1.30	1.05-1.43	Y	95.4	50.0-145						
13C-PCB-156	1.31	1.05-1.43	Y	97.4	50.0-145						
13C-PCB-157	1.31	1.05-1.43	Y	94.8	50.0-145						

Analyst: Dms

Date: 1/27/15

Client ID: PCB CS3 14L1801  
 Lab ID: ST150127E1-1

Filename: 150127E1 S:1 Acq:27-JAN-15 10:38:35 ConCal: ST150127E1-1  
 GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-1	5.47e+07	3.00	y 1.33	16:08	1.001	0.997-1.007		40.9068	PCB-52/69	7.04e+07	0.75	y 1.29	31:31	1.000	0.996-1.006		90.7731
PCB-2	5.41e+07	3.05	y 1.30	18:31	0.988	0.983-0.993		40.3714	PCB-73	4.02e+07	0.76	y 1.41	31:38	1.004	0.999-1.009		47.4149
PCB-3	5.41e+07	3.02	y 1.30	18:45	1.001	0.996-1.006		40.2482	PCB-43/49	6.45e+07	0.75	y 1.14	31:48	1.009	1.005-1.015		94.2489
PCB-4/10	8.52e+07	1.62	y 1.67	20:07	1.003	0.997-1.007		87.5905	PCB-47	3.34e+07	0.76	y 1.20	32:01	1.000	0.996-1.006		43.4094
PCB-7/9	1.03e+08	1.65	y 1.25	21:54	0.868	0.864-0.872		89.7626	PCB-48/75	7.80e+07	0.76	y 1.33	32:08	1.004	0.999-1.009		91.6774
PCB-6	5.05e+07	1.65	y 1.24	22:33	0.894	0.888-0.897		44.7033	PCB-65	4.07e+07	0.75	y 1.32	32:24	1.012	1.007-1.017		48.1762
PCB-5/8	1.05e+08	1.62	y 1.27	22:58	0.910	0.905-0.915		90.1971	PCB-62	3.75e+07	0.77	y 1.36	32:30	1.015	1.011-1.021		43.0136
PCB-14	6.05e+07	1.62	y 1.47	24:03	0.953	0.948-0.958		44.9042	PCB-44	2.72e+07	0.76	y 0.87	32:49	1.025	1.020-1.030		48.7186
PCB-11	5.16e+07	1.64	y 1.28	25:15	1.001	0.995-1.005		43.8664	PCB-42/59	7.48e+07	0.76	y 1.24	33:02	1.032	1.027-1.037		94.2944
PCB-12/13	1.04e+08	1.64	y 1.27	25:39	1.017	1.011-1.021		89.8068	PCB-41/64/71/72	1.60e+08	0.76	y 1.34	33:37	1.050	1.045-1.055		186.047
PCB-15	5.89e+07	1.63	y 1.44	25:57	1.028	1.023-1.031		44.6159	PCB-68	4.60e+07	0.75	y 1.61	33:53	1.059	1.053-1.063		44.5860
PCB-19	3.53e+07	1.08	y 1.18	24:14	1.001	0.996-1.006		50.6938	PCB-40	2.62e+07	0.77	y 0.86	34:06	1.065	1.061-1.071		47.7334
PCB-30	5.69e+07	1.07	y 1.87	25:08	1.038	1.033-1.043		51.6030	PCB-57	4.24e+07	0.76	y 1.12	34:27	0.970	0.965-0.975		46.0496
PCB-18	3.99e+07	1.08	y 0.89	25:53	0.954	0.949-0.959		50.1394	PCB-67	4.08e+07	0.84	y 1.09	34:46	0.979	0.974-0.984		45.4730
PCB-17	4.30e+07	1.07	y 0.96	26:03	0.960	0.956-0.966		50.1262	PCB-58	4.50e+07	0.71	y 1.14	34:52	0.982	0.977-0.987		48.1868
PCB-24/27	1.11e+08	1.07	y 1.30	26:37	0.981	0.977-0.987		95.3538	PCB-63	4.45e+07	0.75	y 1.16	35:02	0.986	0.981-0.991		46.6119
PCB-16/32	9.28e+07	1.06	y 1.05	27:08	1.000	0.996-1.006		98.7466	PCB-74	4.60e+07	0.77	y 1.21	35:20	0.995	0.989-0.999		46.2113
PCB-34	3.57e+07	1.01	y 1.30	27:55	0.960	0.955-0.965		38.6435	PCB-61/70	8.55e+07	0.76	y 1.13	35:30	0.999	0.995-1.005		92.5183
PCB-23	3.84e+07	1.01	y 1.21	28:01	0.963	0.958-0.968		44.6634	PCB-76/66	8.91e+07	0.76	y 1.18	35:42	1.005	1.000-1.010		91.9228
PCB-29	3.58e+07	0.99	y 1.21	28:16	0.972	0.967-0.977		41.6446	PCB-80	5.02e+07	0.76	y 1.32	35:57	1.000	0.995-1.005		45.6469
PCB-26	3.78e+07	1.03	y 1.24	28:28	0.979	0.974-0.984		42.9857	PCB-55	4.65e+07	0.76	y 1.23	36:15	1.009	1.004-1.014		45.5748
PCB-25	3.22e+07	1.03	y 1.10	28:39	0.985	0.980-0.990		41.2951	PCB-56/60	8.56e+07	0.76	y 1.11	36:46	1.023	1.018-1.028		93.2828
PCB-31	4.04e+07	1.00	y 1.25	29:00	0.997	0.992-1.002		45.3726	PCB-79	4.58e+07	0.76	y 1.16	37:50	1.053	1.048-1.058		47.5165
PCB-28	3.93e+07	1.01	y 1.24	29:06	1.000	0.996-1.006		44.6883	PCB-78	4.46e+07	0.77	y 1.18	38:32	0.987	0.982-0.992		46.3949
PCB-20/21/33	1.11e+08	1.00	y 1.16	29:43	1.022	1.016-1.026		135.059	PCB-81	4.68e+07	0.76	y 1.29	39:02	1.000	0.995-1.005		44.4280
PCB-22	3.33e+07	1.01	y 1.16	30:10	1.037	1.032-1.042		40.2471	PCB-77	4.59e+07	0.79	y 1.29	39:39	1.001	0.995-1.005		46.1367
PCB-36	3.49e+07	0.99	y 1.30	30:46	0.934	0.929-0.939		39.2038	PCB-104	3.60e+07	1.57	y 1.26	32:41	1.001	0.996-1.006		48.0431
PCB-39	3.66e+07	1.01	y 1.26	31:14	0.948	0.943-0.953		42.4326	PCB-96	3.19e+07	1.57	y 1.09	33:56	1.039	1.034-1.044		49.1326
PCB-38	3.54e+07	1.01	y 1.24	32:01	0.971	0.967-0.977		41.6159	PCB-103	2.91e+07	1.62	y 0.97	34:29	1.056	1.051-1.061		50.5950
PCB-35	3.59e+07	1.02	y 1.26	32:32	0.987	0.982-0.992		41.8105	PCB-100	2.93e+07	1.58	y 0.96	34:49	1.066	1.061-1.071		51.1995
PCB-37	3.93e+07	1.00	y 1.35	32:58	1.000	0.996-1.006		42.6195	PCB-94	2.45e+07	1.58	y 1.13	35:17	0.985	0.980-0.990		49.2611
PCB-54	3.89e+07	0.74	y 1.02	27:59	1.001	0.996-1.006		47.2038	PCB-95/98/102	8.00e+07	1.59	y 1.29	35:47	0.999	0.994-1.004		140.904
PCB-50	3.26e+07	0.75	y 0.78	29:09	1.042	1.037-1.047		52.1093	PCB-93	2.59e+07	1.59	y 1.06	35:55	1.003	0.998-1.008		55.4334
PCB-53	3.17e+07	0.77	y 1.14	29:48	0.946	0.941-0.951		46.4152	PCB-88/91	5.10e+07	1.59	y 1.12	36:12	1.011	1.006-1.016		103.081
PCB-51	3.08e+07	0.75	y 1.16	30:08	0.957	0.952-0.962		44.0813	PCB-121	3.66e+07	1.62	y 1.76	36:19	1.014	1.009-1.019		47.1828
PCB-45	2.82e+07	0.75	y 1.04	30:33	0.970	0.965-0.975		45.1038	PCB-84/92	5.13e+07	1.58	y 1.07	37:08	0.990	0.985-0.995		99.3318
PCB-46	2.71e+07	0.75	y 0.95	31:03	0.986	0.981-0.991		47.5173	PCB-89	2.47e+07	1.57	y 1.00	37:19	0.995	0.990-1.000		51.4143

RL: MONO, TRI - DECA: \_\_\_\_\_

RL: DI : \_\_\_\_\_

Integrations

by

Analyst: DMJ

Date: 1/27/15

Reviewed

by

Analyst: \_\_\_\_\_

Date: \_\_\_\_\_

Client ID: PCB CS3 14L1801  
Lab ID: ST150127E1-1

Filename: 150127E1 S:1 Acq:27-JAN-15 10:38:35  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

ConCal: ST150127E1-1

Page 2 of

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-90/101	5.58e+07	1.57	y	1.21	37:30	1.000	0.995-1.005	95.9372	PCB-133/142	5.46e+07	1.24	y	0.91	42:26	0.982	0.977-0.987	94.8854
PCB-113	3.37e+07	1.57	y	1.34	37:45	1.007	1.002-1.012	52.1827	PCB-131	2.62e+07	1.25	y	0.85	42:35	0.986	0.981-0.991	48.8303
PCB-99	2.67e+07	1.61	y	1.25	37:51	1.009	1.004-1.014	44.4677	PCB-146/165	6.44e+07	1.25	y	1.08	42:49	0.991	0.986-0.996	94.0271
PCB-119	3.75e+07	1.57	y	1.88	38:18	0.987	0.982-0.992	46.1410	PCB-132/161	6.47e+07	1.23	y	1.12	43:03	0.996	0.992-1.002	91.2960
PCB-108/112	5.81e+07	1.57	y	1.41	38:27	0.991	0.986-0.996	95.4878	PCB-153	3.25e+07	1.26	y	1.20	43:14	1.001	0.996-1.006	42.8487
PCB-83	3.51e+07	1.55	y	1.66	38:37	0.995	0.990-1.000	48.8946	PCB-168	3.95e+07	1.24	y	1.36	43:26	1.005	1.000-1.010	46.0202
PCB-97	2.72e+07	1.56	y	1.30	38:49	1.001	0.995-1.005	48.5299	PCB-141	2.90e+07	1.22	y	1.16	43:58	1.000	0.995-1.005	45.5447
PCB-86	1.99e+07	1.58	y	1.03	38:58	1.004	0.999-1.009	44.6515	PCB-137	3.09e+07	1.27	y	1.18	44:21	1.009	1.004-1.014	47.7506
B-87/117/125	9.54e+07	1.59	y	1.59	39:05	1.007	1.002-1.012	138.653	PCB-130	2.53e+07	1.23	y	0.92	44:28	1.012	1.006-1.016	49.9214
PCB-111/115	7.64e+07	1.56	y	1.86	39:15	1.012	1.006-1.016	95.1099	PCB-138/163/164	1.04e+08	1.25	y	1.38	44:50	1.001	0.996-1.006	131.637
PCB-85/116	5.43e+07	1.61	y	1.39	39:22	1.015	1.010-1.020	90.1797	PCB-158/160	7.64e+07	1.24	y	1.48	45:05	1.007	1.001-1.011	90.3669
PCB-120	3.75e+07	1.57	y	1.99	39:37	1.021	1.016-1.026	43.6889	PCB-129	2.59e+07	1.25	y	0.99	45:19	1.012	1.007-1.017	45.6662
PCB-110	3.42e+07	1.62	y	1.70	39:45	1.025	1.019-1.029	46.4162	PCB-166	3.70e+07	1.24	y	1.14	45:46	0.993	0.988-0.998	47.1002
PCB-82	2.15e+07	1.61	y	0.74	40:22	0.976	0.971-0.981	48.6641	PCB-159	3.85e+07	1.28	y	1.22	46:06	1.000	0.995-1.005	45.8373
PCB-124	3.68e+07	1.60	y	1.30	41:03	0.993	0.988-0.998	47.4005	PCB-128/162	6.65e+07	1.27	y	1.03	46:22	1.006	1.002-1.012	93.5480
PCB-107/109	7.40e+07	1.59	y	1.34	41:12	0.996	0.991-1.001	92.9760	PCB-167	3.81e+07	1.25	y	1.18	46:46	1.000	0.995-1.005	46.6820
PCB-123	3.56e+07	1.57	y	1.25	41:22	1.000	0.995-1.005	47.7383	PCB-156	3.95e+07	1.24	y	1.27	48:04	1.000	0.995-1.005	45.2388
- PCB-106/118	7.52e+07	1.59	y	1.29	41:35	1.001	0.996-1.006	96.3479	PCB-157	4.02e+07	1.27	y	1.22	48:20	1.000	0.995-1.005	46.9049
- PCB-114	3.72e+07	1.61	y	1.45	42:12	1.000	0.995-1.005	43.6153	PCB-169	3.62e+07	1.25	y	1.07	50:30	1.000	0.995-1.005	47.7008
PCB-122	3.28e+07	1.67	y	1.22	42:20	1.003	0.999-1.009	45.8095									
PCB-105	3.76e+07	1.61	y	1.56	43:04	1.000	0.995-1.005	41.6800	PCB-188	3.54e+07	1.06	y	1.52	42:52	1.000	0.996-1.006	47.4220
PCB-127	3.41e+07	1.63	y	1.31	43:24	1.000	0.995-1.005	42.7931	PCB-184	3.22e+07	1.06	y	1.34	43:19	1.011	1.006-1.016	49.0503
PCB-126	3.51e+07	1.61	y	1.41	45:19	1.001	0.995-1.005	43.3476	PCB-179	3.33e+07	1.06	y	1.39	44:06	1.029	1.024-1.034	48.9203
									PCB-176	3.56e+07	1.06	y	1.45	44:33	1.040	1.035-1.045	49.9577
PCB-155	3.04e+07	1.26	y	1.20	37:04	1.001	0.966-1.006	47.9774	PCB-186	3.55e+07	1.07	y	1.46	45:10	1.054	1.049-1.059	49.7031
PCB-150	2.88e+07	1.27	y	1.13	38:19	1.034	1.030-1.040	48.2958	PCB-178	2.62e+07	1.05	y	1.07	45:39	1.066	1.061-1.071	49.7286
PCB-152	2.91e+07	1.26	y	1.17	38:48	1.047	1.043-1.053	47.1969	PCB-175	2.60e+07	1.06	y	1.05	46:00	1.074	1.069-1.079	50.5887
PCB-145	2.78e+07	1.28	y	1.09	39:15	1.059	1.055-1.065	48.1770	PCB-182/187	5.58e+07	1.05	y	1.14	46:11	1.078	1.073-1.083	100.232
PCB-136	3.01e+07	1.26	y	1.14	39:34	1.068	1.063-1.073	49.9864	PCB-183	2.94e+07	1.05	y	1.22	46:30	1.085	1.080-1.090	48.9601
PCB-148	2.08e+07	1.29	y	0.82	39:41	1.071	1.066-1.076	48.1849	PCB-185	2.67e+07	1.06	y	1.40	47:09	0.956	0.950-0.960	48.9174
PCB-154	2.37e+07	1.26	y	0.89	40:10	1.084	1.079-1.089	50.3670	PCB-174	2.32e+07	1.04	y	1.29	47:30	0.963	0.958-0.968	46.4710
PCB-151	2.28e+07	1.28	y	0.82	40:48	1.101	1.097-1.107	52.6911	PCB-181	2.69e+07	1.05	y	1.35	47:37	0.965	0.960-0.970	51.3818
PCB-135	2.10e+07	1.26	y	0.80	41:01	1.107	1.101-1.113	49.9063	PCB-177	2.37e+07	1.06	y	1.27	47:47	0.969	0.963-0.973	48.2979
PCB-144	2.43e+07	1.27	y	0.86	41:07	1.110	1.105-1.116	53.8116	PCB-171	2.64e+07	1.06	y	1.46	48:05	0.975	0.969-0.979	46.7148
PCB-147	2.04e+07	1.26	y	0.78	41:15	1.114	1.108-1.120	49.6827	PCB-173	2.23e+07	1.06	y	1.10	48:30	0.983	0.978-0.988	52.0106
PCB-139/149	4.61e+07	1.27	y	0.87	41:31	1.121	1.115-1.127	100.344	PCB-172	2.50e+07	1.06	y	1.35	48:57	0.992	0.987-0.997	47.6271
- PCB-140	2.16e+07	1.28	y	0.78	41:42	1.126	1.120-1.132	52.5936	PCB-192	3.23e+07	1.05	y	1.74	49:09	0.996	0.991-1.001	47.8622
- PCB-134/143	5.45e+07	1.24	y	0.93	42:08	0.975	0.970-0.980	92.4566	PCB-180	2.62e+07	1.04	y	1.45	49:21	1.000	0.995-1.005	46.5968

Integrations

by

RL: MONO, TRI - DECA: \_\_\_\_\_

Analyst: DMS

Date: 1/27/15

Client ID: PCB CS3 14L1801  
Lab ID: ST150127E1-1

Filename: 150127E1 S:1 Acq:27-JAN-15 10:38:35  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000 EndCAL: NA

ConCal: ST150127E1-1

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-193	3.40e+07	1.06 y	1.85	49:34	1.005	0.999-1.009		47.3230
PCB-191	3.48e+07	1.07 y	1.86	49:49	1.010	1.005-1.015		48.1208
PCB-170	2.50e+07	1.06 y	1.67	50:53	1.000	0.995-1.005		46.3590
PCB-190	3.40e+07	1.04 y	2.25	51:04	1.004	0.999-1.009		46.9551
PCB-189	3.32e+07	1.03 y	1.67	52:25	1.000	0.995-1.005		48.1387
PCB-202	2.40e+07	0.90 y	1.02	48:17	1.001	0.995-1.005		49.7766
PCB-201	2.71e+07	0.91 y	1.10	48:46	1.011	1.005-1.015		52.2611
PCB-204	2.50e+07	0.89 y	1.07	48:55	1.014	1.009-1.019		49.1474
PCB-197	2.81e+07	0.91 y	1.17	49:13	1.020	1.015-1.025		50.8189
PCB-200	2.56e+07	0.91 y	1.03	50:08	1.039	1.034-1.044		52.1512
PCB-198	1.99e+07	0.91 y	0.75	51:30	1.067	1.062-1.072		55.8352
PCB-199	1.85e+07	0.91 y	0.74	51:36	1.069	1.064-1.074		52.6900
- PCB-196/203	4.12e+07	0.89 y	0.83	51:53	1.075	1.070-1.080		104.916
- PCB-195	2.03e+07	0.89 y	1.14	53:03	0.984	0.979-0.989		49.7679
PCB-194	2.12e+07	0.90 y	1.29	53:55	1.000	0.995-1.005		45.9333
PCB-205	2.64e+07	0.90 y	1.61	54:12	1.006	1.001-1.010		45.9369
PCB-208	2.51e+07	1.32 y	1.01	53:12	1.000	0.995-1.005		46.4058
PCB-207	2.46e+07	1.35 y	1.03	53:31	1.006	1.001-1.011		44.9084
PCB-206	1.68e+07	1.31 y	0.88	55:33	1.000	0.995-1.005		47.2990
PCB-209	2.51e+07	1.19 y	1.35	56:55	1.000	0.995-1.005		46.4096

Name	Resp	RA	RT	RRF	Conc
Total Mono-PCB	1.63e+08	3.00 y	16:08	1.31	121.526
Total Di-PCB	6.18e+08	1.62 y	20:07	1.32	535.447
Total Tri-PCB	3.79e+08	1.08 y	24:14	1.20	396.663
Total Tri-PCB	6.04e+08	1.01 y	27:55	1.23	703.147
Total Tetra-PCB	1.65e+09	0.74 y	27:59	1.17	1957.88
Total Penta-PCB	1.26e+09	1.57 y	32:41	1.24	1973.23
Total Penta-PCB	1.88e+08	1.61 y	42:12	1.39	230.993
Total Hexa-PCB	3.47e+08	1.26 y	37:04	0.94	699.215
Total Hexa-PCB	9.34e+08	1.24 y	42:08	1.13	1308.02
Total Hepta-PCB	7.09e+08	1.06 y	42:52	1.37	1176.78
Total Octa-PCB	2.09e+08	0.90 y	48:17	0.95	467.627
Total Octa-PCB	6.91e+07	0.89 y	53:03	1.35	144.108
Total Nona-PCB	6.71e+07	1.32 y	53:12	0.99	139.726
Total Deca-PCB	2.51e+07	1.19 y	56:55	1.35	46.4096

Total PCB Conc:9825.76118400

Integrations

by

RL: MONO, TRI - DECA: \_\_\_\_\_

Analyst: DMS

Date: 1/27/15

Client ID: PCB CS3 14L1801  
Lab ID: ST150127E1-1

Filename: 150127E1 S:1 Acq:27-JAN-15 10:38:35  
GC Column ID: ZB-1 ICAL: PCBVG8-1-14-15 wt/vol:1.0000

ConCal: ST150127E1-1  
EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.00e+08	3.34 y	0.91	16:07	0.621	0.619-0.625		114	114											
13C-PCB-3	1.04e+08	3.42 y	0.94	18:44	0.722	0.718-0.726		114	114		13C-PCB-79	8.35e+07	0.79 y	1.02	37:49	1.029	1.024-1.033		98.1	98.1
13C-PCB-4	5.81e+07	1.60 y	0.60	20:04	0.774	0.770-0.778		101	101		13C-PCB-178	3.33e+07	0.47 y	0.64	45:38	0.985	0.980-0.989		99.9	99.9
13C-PCB-9	9.14e+07	1.59 y	0.96	21:51	0.843	0.839-0.847		98.6	98.6											
13C-PCB-11	9.17e+07	1.56 y	0.95	25:14	0.973	0.968-0.978		99.6	99.6	PS vs. IS										
13C-PCB-19	5.88e+07	1.09 y	0.56	24:13	0.934	0.929-0.939		109	109											
13C-PCB-28	7.12e+07	1.02 y	1.07	29:05	1.004	0.999-1.009		91.5	91.5		13C-PCB-79	8.35e+07	0.79 y	1.02	37:49	0.969	0.963-0.973		99.9	99.9
13C-PCB-32	8.98e+07	1.10 y	0.83	27:08	1.046	1.041-1.051		113	113		13C-PCB-178	3.33e+07	0.47 y	0.84	45:38	0.925	0.920-0.930		102	102
13C-PCB-37	6.83e+07	1.04 y	0.96	32:57	1.137	1.131-1.143		97.6	97.6											
13C-PCB-47	6.42e+07	0.79 y	0.77	32:00	0.871	0.867-0.875		100	100											
13C-PCB-52	6.01e+07	0.80 y	0.71	31:30	0.857	0.853-0.861		101	101											
13C-PCB-54	8.05e+07	0.78 y	1.06	27:58	0.761	0.757-0.765		91.1	91.1											
13C-PCB-70	8.22e+07	0.81 y	0.99	35:31	0.967	0.961-0.971		99.2	99.2											
13C-PCB-77	7.71e+07	0.80 y	0.96	39:38	1.078	1.073-1.083		95.9	95.9											
13C-PCB-80	8.31e+07	0.80 y	1.02	35:56	0.978	0.973-0.983		97.5	97.5											
13C-PCB-81	8.17e+07	0.78 y	1.00	39:02	1.062	1.057-1.067		98.2	98.2											
13C-PCB-95	4.40e+07	1.54 y	0.70	35:49	0.913	0.908-0.918		102	102	RS										
13C-PCB-97	4.32e+07	1.60 y	0.66	38:48	0.989	0.984-0.994		106	106		Name	Resp	RA	RRF	RT	Conc				
13C-PCB-101	4.82e+07	1.64 y	0.77	37:30	0.956	0.951-0.961		101	101		13C-PCB-15	9.66e+07	1.59 y	1.00	25:56	100				
13C-PCB-104	5.93e+07	1.60 y	0.97	32:39	0.832	0.828-0.836		99.0	99.0		13C-PCB-31	7.28e+07	1.02 y	1.00	28:59	100				
13C-PCB-105	5.79e+07	1.62 y	1.20	43:03	0.929	0.924-0.934		92.2	92.2		13C-PCB-60	8.33e+07	0.79 y	1.00	36:45	100				
13C-PCB-114	5.86e+07	1.63 y	1.26	42:12	0.910	0.905-0.915		89.2	89.2		13C-PCB-111	6.20e+07	1.63 y	1.00	39:14	100				
13C-PCB-118	6.04e+07	1.63 y	0.94	41:32	1.059	1.054-1.064		104	104		13C-PCB-128	5.23e+07	1.28 y	1.00	46:21	100				
13C-PCB-123	5.96e+07	1.60 y	0.88	41:21	1.054	1.049-1.059		109	109		13C-PCB-205	4.72e+07	0.94 y	1.00	54:11	100				
13C-PCB-126	5.72e+07	1.63 y	1.13	45:17	0.977	0.972-0.982		97.2	97.2											
13C-PCB-127	6.10e+07	1.60 y	1.26	43:24	0.936	0.931-0.941		92.6	92.6											
13C-PCB-138	5.73e+07	1.28 y	1.12	44:47	0.966	0.961-0.971		97.9	97.9											
13C-PCB-141	5.50e+07	1.32 y	1.09	43:57	0.948	0.943-0.953		96.3	96.3											
13C-PCB-153	6.34e+07	1.30 y	1.27	43:12	0.932	0.927-0.937		95.1	95.1											
13C-PCB-155	5.28e+07	1.27 y	0.87	37:03	0.944	0.939-0.949		97.9	97.9											
13C-PCB-156	6.88e+07	1.31 y	1.35	48:03	1.037	1.032-1.042		97.4	97.4											
13C-PCB-157	7.03e+07	1.31 y	1.42	48:19	1.042	1.037-1.047		94.8	94.8											
13C-PCB-159	6.87e+07	1.27 y	1.37	46:05	0.994	0.989-0.999		95.9	95.9											
13C-PCB-167	6.89e+07	1.30 y	1.38	46:45	1.009	1.004-1.014		95.4	95.4											
13C-PCB-169	7.06e+07	1.28 y	1.38	50:30	1.089	1.084-1.094		97.7	97.7											
13C-PCB-170	3.22e+07	0.46 y	0.60	50:52	1.098	1.091-1.103		102	102											
13C-PCB-180	3.88e+07	0.47 y	0.76	49:20	1.064	1.059-1.069		98.1	98.1											
13C-PCB-188	4.90e+07	0.46 y	1.01	42:50	0.924	0.919-0.929		92.4	92.4											
13C-PCB-189	4.12e+07	0.45 y	0.80	52:24	1.131	1.124-1.136		98.3	98.3											
13C-PCB-194	3.57e+07	0.92 y	0.75	53:54	0.995	0.990-1.000		102	102											
13C-PCB-202	4.74e+07	0.94 y	0.99	48:15	1.041	1.036-1.046		91.6	91.6											
13C-PCB-206	4.04e+07	0.77 y	0.73	55:32	1.025	1.020-1.301		117	117											
13C-PCB-208	5.33e+07	0.76 y	1.08	53:10	0.981	0.977-0.987		104	104											
13C-PCB-209	4.02e+07	1.19 y	0.71	56:54	1.050	1.045-1.055		120	120											

Analyst: DMS

Date: 1/27/15



Vista Analytical Laboratory - Injection Log Run file: 150127E1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150127E1	1	ST150127E1-1	DMS	27-JAN-15	10:38:35	ST150127E1-1	NA
150127E1	2	B5A0099-BS1	DMS	27-JAN-15	11:43:13	ST150127E1-1	NA
150127E1	3	SOLVENT BLANK	DMS	27-JAN-15	12:47:51	ST150127E1-1	NA
150127E1	4	B5A0099-BLK1	DMS	27-JAN-15	13:52:29	ST150127E1-1	NA
150127E1	5	1400970-01	DMS	27-JAN-15	14:57:06	ST150127E1-1	NA
150127E1	6	1500084-01	DMS	27-JAN-15	16:01:43	ST150127E1-1	NA
150127E1	7	1500084-02	DMS	27-JAN-15	17:06:20	ST150127E1-1	NA
150127E1	8	1500108-04	DMS	27-JAN-15	18:10:58	ST150127E1-1	NA
150127E1	9	1500116-03	DMS	27-JAN-15	19:15:33	ST150127E1-1	NA
150127E1	10	1400960-09@5X	DMS	27-JAN-15	20:20:10	ST150127E1-1	NA
150127E1	11	SOLVENT BLANK	DMS	27-JAN-15	21:24:47	ST150127E1-1	NA

# CALIBRATION STANDARDS REVIEW CHECKLIST



Beg. Calibration ID: ST150127E1-1

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Concentration within range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
First and last eluters present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Retention Times within criteria?	<input checked="" type="checkbox"/> 5.7 4.2/1.5	<input type="checkbox"/>
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forms signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Correct ICAL referenced?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Run Log:		
-Data file matches Conc Cal ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-Correct instrument listed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-Samples within 12-hour clock?	<input checked="" type="checkbox"/> y	<input type="checkbox"/> n

	<u>Beg.</u>	<u>End</u>
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TCDD/TCDF valleys < 25%?	<input checked="" type="checkbox"/> NA	<input checked="" type="checkbox"/> NA
Peaks integrated correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Manual integrations included?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8280 CS1 Ending Standard		<input type="checkbox"/>
-Ratios within limits		<input type="checkbox"/>
-S/N > 2.5:1		<input type="checkbox"/>
-CS1 within 12-hour clock		<input checked="" type="checkbox"/>

*Comments:*

Reviewed by: ms 1/29/15  
*Initials & Date*

\* Ending standard criteria applicable to 8290 only.

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150202E1-1      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICal ID: PCBVG8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150202E1    S#1    Analysis Date: 2-FEB-15 Time: 14:50:27

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.97	2.66-3.60	y	44.0	37.5-62.5	PCB-52/69	0.77	0.65-0.89	y	98.8	75.0-125
PCB-2	2.99	2.66-3.60	y	44.0	37.5-62.5	PCB-73	0.77	0.65-0.89	y	51.5	37.5-62.5
PCB-3	2.97	2.66-3.60	y	43.8	37.5-62.5	PCB-43/49	0.78	0.65-0.89	y	99.6	75.0-125
PCB-4/10	1.63	1.33-1.79	y	92.7	75-125	PCB-47	0.77	0.65-0.89	y	47.5	37.5-62.5
PCB-7/9	1.64	1.33-1.79	y	94.9	75-125	PCB-48/75	0.77	0.65-0.89	y	96.5	75.0-125
PCB-6	1.64	1.33-1.79	y	47.7	37.5-62.5	PCB-65	0.75	0.65-0.89	y	48.8	37.5-62.5
PCB-5/8	1.63	1.33-1.79	y	94.5	75-125	PCB-62	0.77	0.65-0.89	y	44.8	37.5-62.5
PCB-14	1.66	1.33-1.79	y	47.5	37.5-62.5	PCB-44	0.75	0.65-0.89	y	50.6	37.5-62.5
PCB-11	1.69	1.33-1.79	y	46.7	37.5-62.5	PCB-42/59	0.78	0.65-0.89	y	97.8	75.0-125
PCB-12/13	1.65	1.33-1.79	y	93.9	75-125	PCB-41/64/71/72	0.77	0.65-0.89	y	192.8	150-250
PCB-15	1.68	1.33-1.79	y	47.6	37.5-62.5	PCB-68	0.78	0.65-0.89	y	44.2	37.5-62.5
PCB-19	1.07	0.88-1.20	y	52.5	37.5-62.5	PCB-40	0.76	0.65-0.89	y	49.1	37.5-62.5
PCB-30	1.05	0.88-1.20	y	51.8	37.5-62.5	PCB-57	0.78	0.65-0.89	y	49.2	37.5-62.5
PCB-18	1.05	0.88-1.20	y	53.1	37.5-62.5	PCB-67	0.87	0.65-0.89	y	47.6	37.5-62.5
PCB-17	1.07	0.88-1.20	y	53.6	37.5-62.5	PCB-58	0.73	0.65-0.89	y	51.4	37.5-62.5
PCB-24/27	1.06	0.88-1.20	y	101.4	75.0-125	PCB-63	0.77	0.65-0.89	y	49.6	37.5-62.5
PCB-16/32	1.06	0.88-1.20	y	104.3	75.0-125	PCB-74	0.78	0.65-0.89	y	48.6	37.5-62.5
PCB-34	1.06	0.88-1.20	y	44.7	37.5-62.5	PCB-61/70	0.78	0.65-0.89	y	96.6	75.0-125
PCB-23	1.07	0.88-1.20	y	52.8	37.5-62.5	PCB-76/66	0.77	0.65-0.89	y	95.3	75.0-125
PCB-29	1.07	0.88-1.20	y	52.2	37.5-62.5	PCB-80	0.77	0.65-0.89	y	49.1	37.5-62.5
PCB-26	1.04	0.88-1.20	y	49.1	37.5-62.5	PCB-55	0.79	0.65-0.89	y	48.2	37.5-62.5
PCB-25	1.06	0.88-1.20	y	51.7	37.5-62.5	PCB-56/60	0.77	0.65-0.89	y	96.9	75.0-125
PCB-31	1.04	0.88-1.20	y	52.5	37.5-62.5	PCB-79	0.78	0.65-0.89	y	48.4	37.5-62.5
PCB-28	1.06	0.88-1.20	y	51.4	37.5-62.5	PCB-78	0.76	0.65-0.89	y	48.9	37.5-62.5
PCB-20/21/33	1.04	0.88-1.20	y	143.8	112.5-225	PCB-81	0.78	0.65-0.89	y	48.5	37.5-62.5
PCB-22	1.04	0.88-1.20	y	47.2	37.5-62.5	PCB-77	0.81	0.65-0.89	y	51.6	37.5-62.5
PCB-36	1.07	0.88-1.20	y	45.2	37.5-62.5	PCB-104	1.57	1.32-1.78	y	49.6	37.5-62.5
PCB-39	1.04	0.88-1.20	y	49.0	37.5-62.5	PCB-96	1.60	1.32-1.78	y	49.2	37.5-62.5
PCB-38	1.04	0.88-1.20	y	45.9	37.5-62.5	PCB-103	1.58	1.32-1.78	y	49.9	37.5-62.5
PCB-35	1.04	0.88-1.20	y	44.7	37.5-62.5	PCB-100	1.61	1.32-1.78	y	49.9	37.5-62.5
PCB-37	1.04	0.88-1.20	y	46.5	37.5-62.5	PCB-94	1.58	1.32-1.78	y	49.8	37.5-62.5
PCB-54	0.77	0.65-0.89	y	51.1	37.5-62.5	PCB-95/98/102	1.58	1.32-1.78	y	141.8	112.5-225
PCB-50	0.76	0.65-0.89	y	52.8	37.5-62.5	PCB-93	1.63	1.32-1.78	y	58.0	37.5-62.5
PCB-53	0.77	0.65-0.89	y	50.3	37.5-62.5	PCB-88/91	1.58	1.32-1.78	y	102.8	75.0-125
PCB-51	0.75	0.65-0.89	y	50.5	37.5-62.5	PCB-121	1.61	1.32-1.78	y	46.8	37.5-62.5
PCB-45	0.75	0.65-0.89	y	49.5	37.5-62.5						
PCB-46	0.77	0.65-0.89	y	51.3	37.5-62.5						

Analyst: DMS

Date: 2/13/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150202E1-1      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICal ID: PCBVG8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150202E1    S#1    Analysis Date: 2-FEB-15    Time: 14:50:27

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.60	1.32-1.78	Y	102.6	75.0-125	PCB-140	1.28	1.05-1.43	Y	49.4	37.5-62.5
PCB-89	1.57	1.32-1.78	Y	52.8	37.5-62.5	PCB-134/143	1.25	1.05-1.43	Y	95.3	75.0-125
PCB-90/101	1.57	1.32-1.78	Y	100.5	75.0-125	PCB-133/142	1.23	1.05-1.43	Y	97.0	75.0-125
PCB-113	1.60	1.32-1.78	Y	51.6	37.5-62.5	PCB-131	1.25	1.05-1.43	Y	50.9	37.5-62.5
PCB-99	1.63	1.32-1.78	Y	46.7	37.5-62.5	PCB-146/165	1.23	1.05-1.43	Y	97.3	75.0-125
PCB-119	1.57	1.32-1.78	Y	48.2	37.5-62.5	PCB-132/161	1.25	1.05-1.43	Y	94.2	75.0-125
PCB-108/112	1.58	1.32-1.78	Y	99.2	75.0-125	PCB-153	1.26	1.05-1.43	Y	46.1	37.5-62.5
PCB-83	1.60	1.32-1.78	Y	50.4	37.5-62.5	PCB-168	1.24	1.05-1.43	Y	47.8	37.5-62.5
PCB-97	1.65	1.32-1.78	Y	50.2	37.5-62.5	PCB-141	1.21	1.05-1.43	Y	48.8	37.5-62.5
PCB-86	1.55	1.32-1.78	Y	43.7	37.5-62.5	PCB-137	1.24	1.05-1.43	Y	50.5	37.5-62.5
PCB-87/117/125	1.62	1.32-1.78	Y	150.4	112.5-225	PCB-130	1.25	1.05-1.43	Y	51.9	37.5-62.5
PCB-111/115	1.55	1.32-1.78	Y	96.6	75.0-125	PCB-138/163/164	1.25	1.05-1.43	Y	141.4	112.5-225
PCB-85/116	1.60	1.32-1.78	Y	97.6	75.0-125	PCB-158/160	1.25	1.05-1.43	Y	93.2	75.0-125
PCB-120	1.66	1.32-1.78	Y	46.3	37.5-62.5	PCB-129	1.23	1.05-1.43	Y	49.0	37.5-62.5
PCB-110	1.63	1.32-1.78	Y	46.2	37.5-62.5	PCB-166	1.23	1.05-1.43	Y	49.9	37.5-62.5
PCB-82	1.58	1.32-1.78	Y	53.5	37.5-62.5	PCB-159	1.22	1.05-1.43	Y	50.3	37.5-62.5
PCB-124	1.55	1.32-1.78	Y	47.6	37.5-62.5	PCB-128/162	1.24	1.05-1.43	Y	103.8	75.0-125
PCB-107/109	1.62	1.32-1.78	Y	98.4	75.0-125	PCB-167	1.22	1.05-1.43	Y	49.8	37.5-62.5
PCB-123	1.58	1.32-1.78	Y	50.8	37.5-62.5	PCB-156	1.24	1.05-1.43	Y	50.0	37.5-62.5
PCB-106/118	1.61	1.32-1.78	Y	99.2	75.0-125	PCB-157	1.26	1.05-1.43	Y	48.4	37.5-62.5
PCB-114	1.63	1.32-1.78	Y	46.6	37.5-62.5	PCB-169	1.23	1.05-1.43	Y	50.7	37.5-62.5
PCB-122	1.62	1.32-1.78	Y	47.5	37.5-62.5	PCB-188	1.06	0.89-1.21	Y	54.2	37.5-62.5
PCB-105	1.61	1.32-1.78	Y	44.1	37.5-62.5	PCB-184	1.10	0.89-1.21	Y	54.7	37.5-62.5
PCB-127	1.61	1.32-1.78	Y	45.5	37.5-62.5	PCB-179	1.07	0.89-1.21	Y	52.8	37.5-62.5
PCB-126	1.67	1.32-1.78	Y	46.0	37.5-62.5	PCB-176	1.10	0.89-1.21	Y	54.1	37.5-62.5
PCB-155	1.25	1.05-1.43	Y	49.5	37.5-62.5	PCB-186	1.08	0.89-1.21	Y	53.9	37.5-62.5
PCB-150	1.31	1.05-1.43	Y	48.3	37.5-62.5	PCB-178	1.07	0.89-1.21	Y	52.8	37.5-62.5
PCB-152	1.31	1.05-1.43	Y	45.9	37.5-62.5	PCB-175	1.09	0.89-1.21	Y	52.5	37.5-62.5
PCB-145	1.32	1.05-1.43	Y	47.3	37.5-62.5	PCB-182/187	1.07	0.89-1.21	Y	103.5	75.0-125
PCB-136	1.24	1.05-1.43	Y	46.8	37.5-62.5	PCB-183	1.07	0.89-1.21	Y	53.7	37.5-62.5
PCB-148	1.29	1.05-1.43	Y	47.5	37.5-62.5	PCB-185	1.02	0.89-1.21	Y	54.0	37.5-62.5
PCB-154	1.29	1.05-1.43	Y	47.0	37.5-62.5	PCB-174	1.07	0.89-1.21	Y	53.9	37.5-62.5
PCB-151	1.34	1.05-1.43	Y	47.9	37.5-62.5	PCB-181	1.06	0.89-1.21	Y	55.6	37.5-62.5
PCB-135	1.25	1.05-1.43	Y	50.6	37.5-62.5	PCB-177	1.09	0.89-1.21	Y	52.7	37.5-62.5
PCB-144	1.28	1.05-1.43	Y	46.5	37.5-62.5	PCB-171	1.08	0.89-1.21	Y	53.3	37.5-62.5
PCB-147	1.31	1.05-1.43	Y	47.8	37.5-62.5	PCB-173	1.07	0.89-1.21	Y	56.0	37.5-62.5
PCB-139/149	1.29	1.05-1.43	Y	95.7	75.0-125	PCB-172	1.04	0.89-1.21	Y	52.8	37.5-62.5

Analyst: *DMS*

Date: *2/3/15*

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150202E1-1      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICal ID: PCBVG8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150202E1    S#1    Analysis Date: 2-FEB-15 Time: 14:50:27

ANALYTES	ION	QC	PASS	CONC.	CONC.
	ABUND.	LIMITS		FOUND	RANGE
	RATIO				(ng/mL)
PCB-192	1.07	0.89-1.21	y	51.6	37.5-62.5
PCB-180	1.06	0.89-1.21	y	51.4	37.5-62.5
PCB-193	1.05	0.89-1.21	y	51.9	37.5-62.5
PCB-191	1.06	0.89-1.21	y	51.4	37.5-62.5
PCB-170	1.09	0.89-1.21	y	51.0	37.5-62.5
PCB-190	1.07	0.89-1.21	y	49.4	37.5-62.5
PCB-189	1.09	0.89-1.21	y	52.0	37.5-62.5
PCB-202	0.96	0.76-1.02	y	48.4	37.5-62.5
PCB-201	0.91	0.76-1.02	y	47.2	37.5-62.5
PCB-204	0.93	0.76-1.02	y	46.8	37.5-62.5
PCB-197	0.92	0.76-1.02	y	48.2	37.5-62.5
PCB-200	0.92	0.76-1.02	y	47.7	37.5-62.5
PCB-198	0.90	0.76-1.02	y	48.1	37.5-62.5
PCB-199	0.94	0.76-1.02	y	45.3	37.5-62.5
PCB-196/203	0.93	0.76-1.02	y	91.8	75.0-125
PCB-195	0.92	0.76-1.02	y	53.5	37.5-62.5
PCB-194	0.91	0.76-1.02	y	47.1	37.5-62.5
PCB-205	0.91	0.76-1.02	y	48.1	37.5-62.5
PCB-208	1.34	1.14-1.54	y	50.3	37.5-62.5
PCB-207	1.34	1.14-1.54	y	47.3	37.5-62.5
PCB-206	1.28	1.14-1.54	y	50.5	37.5-62.5
PCB-209	1.19	0.99-1.33	y	48.9	37.5-62.5

Analyst: Dm

Date: 2/3/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150202E1-1      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICal ID: PCBVG8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150202E1    S#1    Analysis Date: 2-FEB-15 Time: 14:50:27

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. CONC. FOUND	CONC. RANGE (ng/mL)	LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.24	2.66-3.60	Y	107.7	50.0-145						
13C-PCB-3	3.20	2.66-3.60	Y	107.0	50.0-145	13C-PCB-169	1.26	1.05-1.43	Y	84.9	50 - 145
13C-PCB-4	1.55	1.33-1.79	Y	102.9	50.0-145	13C-PCB-188	0.46	0.38-0.52	Y	84.8	50 - 145
13C-PCB-9	1.55	1.33-1.79	Y	100.3	50.0-145	13C-PCB-180	0.48	0.38-0.52	Y	81.7	50 - 145
13C-PCB-11	1.56	1.33-1.79	Y	99.6	50.0-145	13C-PCB-170	0.46	0.38-0.52	Y	82.0	50 - 145
13C-PCB-19	1.05	0.88-1.20	Y	95.5	50.0-145	13C-PCB-189	0.46	0.38-0.52	Y	77.9	50 - 145
13C-PCB-32	1.10	0.88-1.20	Y	93.4	50.0-145	13C-PCB-202	0.87	0.76-1.02	Y	79.8	50 - 145
13C-PCB-28	1.05	0.88-1.20	Y	92.9	50.0-145	13C-PCB-194	0.91	0.76-1.02	Y	102.8	50 - 145
13C-PCB-37	1.06	0.88-1.20	Y	92.7	50.0-145	13C-PCB-208	0.78	0.65-0.89	Y	98.6	50 - 145
13C-PCB-54	0.80	0.65-0.89	Y	105.6	50.0-145	13C-PCB-206	0.78	0.65-0.89	Y	106.4	50 - 145
13C-PCB-52	0.81	0.65-0.89	Y	107.7	50.0-145	13C-PCB-209	1.21	0.99-1.33	Y	101.2	50 - 145
13C-PCB-47	0.81	0.65-0.89	Y	105.7	50.0-145						
13C-PCB-70	0.78	0.65-0.89	Y	100.3	50.0-145						
13C-PCB-80	0.82	0.65-0.89	Y	99.3	50.0-145						
13C-PCB-81	0.79	0.65-0.89	Y	94.8	50.0-145						
13C-PCB-77	0.81	0.65-0.89	Y	95.0	50.0-145						
13C-PCB-104	1.55	1.32-1.78	Y	108.8	50.0-145						
13C-PCB-95	1.60	1.32-1.78	Y	108.9	50.0-145						
13C-PCB-101	1.62	1.32-1.78	Y	104.0	50.0-145						
13C-PCB-97	1.56	1.32-1.78	Y	105.5	50.0-145	CRS vs. RS					
13C-PCB-123	1.61	1.32-1.78	Y	101.8	50.0-145						
13C-PCB-118	1.60	1.32-1.78	Y	99.4	50.0-145	13C-PCB-79	0.81	0.65-0.89	Y	97.6	75 - 125
13C-PCB-114	1.63	1.32-1.78	Y	110.6	50.0-145	13C-PCB-178	0.46	0.38-0.52	Y	85.7	75 - 125
13C-PCB-105	1.59	1.32-1.78	Y	115.8	50.0-145						
13C-PCB-127	1.58	1.32-1.78	Y	112.5	50.0-145						
13C-PCB-126	1.56	1.32-1.78	Y	109.8	50.0-145						
13C-PCB-155	1.28	1.05-1.43	Y	94.9	50.0-145						
13C-PCB-153	1.27	1.05-1.43	Y	103.0	50.0-145						
13C-PCB-141	1.29	1.05-1.43	Y	97.8	50.0-145						
13C-PCB-138	1.30	1.05-1.43	Y	99.4	50.0-145						
13C-PCB-159	1.29	1.05-1.43	Y	94.0	50.0-145						
13C-PCB-167	1.28	1.05-1.43	Y	95.2	50.0-145						
13C-PCB-156	1.25	1.05-1.43	Y	91.3	50.0-145						
13C-PCB-157	1.33	1.05-1.43	Y	96.6	50.0-145						

Analyst: Dms

Date: 2/3/15

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-1	4.06e+07	2.97	y	1.33	16:09	1.001	0.997-1.007	44.0055
PCB-2	4.05e+07	2.99	y	1.30	18:31	0.988	0.983-0.993	43.9595
PCB-3	4.05e+07	2.97	y	1.30	18:45	1.001	0.996-1.006	43.8201
PCB-4/10	6.73e+07	1.63	y	1.67	20:07	1.003	0.997-1.007	92.6910
PCB-7/9	8.08e+07	1.64	y	1.25	21:53	0.868	0.864-0.872	94.9237
PCB-6	4.01e+07	1.64	y	1.24	22:31	0.893	0.888-0.897	47.6993
PCB-5/8	8.16e+07	1.63	y	1.27	22:57	0.911	0.905-0.915	94.5193
PCB-14	4.68e+07	1.66	y	1.47	24:02	0.954	0.948-0.958	47.4629
PCB-11	4.02e+07	1.69	y	1.28	25:13	1.001	0.995-1.005	46.6529
PCB-12/13	7.98e+07	1.65	y	1.27	25:37	1.016	1.011-1.021	93.8847
PCB-15	4.60e+07	1.68	y	1.44	25:56	1.029	1.023-1.031	47.5835
PCB-19	2.35e+07	1.07	y	1.18	24:13	1.001	0.996-1.006	52.4751
PCB-30	3.67e+07	1.05	y	1.87	25:06	1.038	1.033-1.043	51.7924
PCB-18	2.56e+07	1.05	y	0.89	25:51	0.954	0.949-0.959	53.0727
PCB-17	2.79e+07	1.07	y	0.96	26:01	0.960	0.956-0.966	53.6346
PCB-24/27	7.16e+07	1.06	y	1.30	26:36	0.981	0.977-0.987	101.392
PCB-16/32	5.94e+07	1.06	y	1.05	27:06	1.000	0.996-1.006	104.296
PCB-34	3.59e+07	1.06	y	1.30	27:53	0.960	0.955-0.965	44.7380
PCB-23	3.94e+07	1.07	y	1.21	27:59	0.963	0.958-0.968	52.7984
PCB-29	3.89e+07	1.07	y	1.21	28:14	0.972	0.967-0.977	52.2220
PCB-26	3.75e+07	1.04	y	1.24	28:26	0.979	0.974-0.984	49.1241
PCB-25	3.50e+07	1.06	y	1.10	28:36	0.984	0.980-0.990	51.7346
PCB-31	4.05e+07	1.04	y	1.25	28:58	0.997	0.992-1.002	52.4890
PCB-28	3.92e+07	1.06	y	1.24	29:04	1.000	0.996-1.006	51.3774
PCB-20/21/33	1.03e+08	1.04	y	1.16	29:41	1.022	1.016-1.026	143.837
PCB-22	3.38e+07	1.04	y	1.16	30:07	1.037	1.032-1.042	47.1513
PCB-36	3.26e+07	1.07	y	1.30	30:44	0.933	0.929-0.939	45.1791
PCB-39	3.43e+07	1.04	y	1.26	31:12	0.948	0.943-0.953	49.0058
PCB-38	3.17e+07	1.04	y	1.24	31:59	0.971	0.967-0.977	45.9355
PCB-35	3.12e+07	1.04	y	1.26	32:30	0.987	0.982-0.992	44.7109
PCB-37	3.48e+07	1.04	y	1.35	32:57	1.001	0.996-1.006	46.4765
PCB-54	3.17e+07	0.77	y	1.02	27:58	1.001	0.996-1.006	51.1249
PCB-50	2.49e+07	0.76	y	0.78	29:07	1.042	1.037-1.047	52.8260
PCB-53	2.37e+07	0.77	y	1.14	29:46	0.946	0.941-0.951	50.2935
PCB-51	2.43e+07	0.75	y	1.16	30:06	0.957	0.952-0.962	50.4896
PCB-45	2.13e+07	0.75	y	1.04	30:32	0.971	0.965-0.975	49.4873
PCB-46	2.02e+07	0.77	y	0.95	31:02	0.986	0.981-0.991	51.2777

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-52/69	5.29e+07	0.77	y	1.29	31:30	1.001	0.996-1.006	98.8416
PCB-73	3.01e+07	0.77	y	1.41	31:37	1.005	0.999-1.009	51.5290
PCB-43/49	4.70e+07	0.78	y	1.14	31:47	1.010	1.005-1.015	99.5668
PCB-47	2.49e+07	0.77	y	1.20	31:59	1.001	0.996-1.006	47.4931
PCB-48/75	5.61e+07	0.77	y	1.33	32:06	1.004	0.999-1.009	96.4657
PCB-65	2.82e+07	0.75	y	1.32	32:22	1.013	1.007-1.017	48.8115
PCB-62	2.66e+07	0.77	y	1.36	32:29	1.016	1.011-1.021	44.7737
PCB-44	1.93e+07	0.75	y	0.87	32:46	1.025	1.020-1.030	50.6225
PCB-42/59	5.30e+07	0.78	y	1.24	32:60	1.033	1.027-1.037	97.7687
PCB-41/64/71/72	1.13e+08	0.77	y	1.34	33:35	1.051	1.045-1.055	192.819
PCB-68	3.12e+07	0.78	y	1.61	33:51	1.059	1.053-1.063	44.2099
PCB-40	1.84e+07	0.76	y	0.86	34:04	1.066	1.061-1.071	49.0577
PCB-57	2.96e+07	0.78	y	1.12	34:25	0.970	0.965-0.975	49.1887
PCB-67	2.79e+07	0.87	y	1.09	34:44	0.979	0.974-0.984	47.5919
PCB-58	3.14e+07	0.73	y	1.14	34:51	0.982	0.977-0.987	51.3645
PCB-63	3.10e+07	0.77	y	1.16	35:00	0.987	0.981-0.991	49.5888
PCB-74	3.17e+07	0.78	y	1.21	35:17	0.995	0.989-0.999	48.6141
PCB-61/70	5.85e+07	0.78	y	1.13	35:28	0.999	0.995-1.005	96.6469
PCB-76/66	6.05e+07	0.77	y	1.18	35:41	1.006	1.000-1.010	95.2675
PCB-80	3.56e+07	0.77	y	1.32	35:55	1.001	0.995-1.005	49.0915
PCB-55	3.25e+07	0.79	y	1.23	36:14	1.010	1.004-1.014	48.1768
PCB-56/60	5.87e+07	0.77	y	1.11	36:44	1.023	1.018-1.028	96.8811
PCB-79	3.08e+07	0.78	y	1.16	37:48	1.053	1.048-1.058	48.3658
PCB-78	2.94e+07	0.76	y	1.18	38:30	0.987	0.982-0.992	48.8953
PCB-81	3.20e+07	0.78	y	1.29	39:01	1.000	0.995-1.005	48.5315
PCB-77	3.29e+07	0.81	y	1.29	39:38	1.000	0.995-1.005	51.6070
PCB-104	2.36e+07	1.57	y	1.26	32:38	1.000	0.996-1.006	49.5877
PCB-96	2.03e+07	1.60	y	1.09	33:53	1.039	1.034-1.044	49.1601
PCB-103	1.83e+07	1.58	y	0.97	34:26	1.056	1.051-1.061	49.9373
PCB-100	1.81e+07	1.61	y	0.96	34:47	1.066	1.061-1.071	49.8824
PCB-94	1.54e+07	1.58	y	1.13	35:15	0.985	0.980-0.990	49.7721
PCB-95/98/102	5.00e+07	1.58	y	1.29	35:45	0.999	0.994-1.004	141.845
PCB-93	1.68e+07	1.63	y	1.06	35:53	1.003	0.998-1.008	57.9669
PCB-88/91	3.16e+07	1.58	y	1.12	36:10	1.011	1.006-1.016	102.850
PCB-121	2.25e+07	1.61	y	1.76	36:17	1.014	1.009-1.019	46.7514
PCB-84/92	3.14e+07	1.60	y	1.07	37:05	0.990	0.985-0.995	102.610
PCB-89	1.50e+07	1.57	y	1.00	37:17	0.995	0.990-1.000	52.7846

RL: MONO, TRI - DECA: \_\_\_\_\_

RL: DI : \_\_\_\_\_

Integrations  
by

Analyst: DMS

Date: 2/3/15

Reviewed  
by

Analyst: \_\_\_\_\_

Date: \_\_\_\_\_





Client ID: PCB CS3 14L1801  
Lab ID: ST150202E1-1

Filename: 150202E1 S:1 Acq: 2-FEB-15 14:50:27  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0000  
ConCal: ST150202E1-1  
EndCAL: ST150202E1-2

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-193	1.86e+07	1.05 y	1.85	49:32	1.004	0.999-1.009		51.9384
PCB-191	1.85e+07	1.06 y	1.86	49:46	1.009	1.005-1.015		51.4425
PCB-170	1.31e+07	1.09 y	1.67	50:46	1.000	0.995-1.005		51.0227
PCB-190	1.71e+07	1.07 y	2.25	50:56	1.004	0.999-1.009		49.4208
PCB-189	1.69e+07	1.09 y	1.67	52:14	1.000	0.995-1.005		51.9986
PCB-202	1.21e+07	0.96 y	1.02	48:16	1.000	0.995-1.005		48.3713
PCB-201	1.27e+07	0.91 y	1.10	48:44	1.010	1.005-1.015		47.2061
PCB-204	1.24e+07	0.93 y	1.07	48:54	1.014	1.009-1.019		46.8056
PCB-197	1.39e+07	0.92 y	1.17	49:12	1.020	1.015-1.025		48.2123
PCB-200	1.21e+07	0.92 y	1.03	50:03	1.038	1.034-1.044		47.6536
PCB-198	8.94e+06	0.90 y	0.75	51:20	1.064	1.062-1.072		48.1336
PCB-199	8.27e+06	0.94 y	0.74	51:27	1.067	1.064-1.074		45.2907
- PCB-196/203	1.87e+07	0.93 y	0.83	51:42	1.072	1.070-1.080		91.7522
- PCB-195	1.44e+07	0.92 y	1.14	52:51	0.984	0.979-0.989		53.4602
PCB-194	1.44e+07	0.91 y	1.29	53:43	1.000	0.995-1.005		47.1343
PCB-205	1.83e+07	0.91 y	1.61	53:60	1.006	1.001-1.010		48.1446
PCB-208	1.68e+07	1.34 y	1.01	52:59	1.000	0.995-1.005		50.3163
PCB-207	1.60e+07	1.34 y	1.03	53:18	1.006	1.001-1.011		47.3234
PCB-206	1.07e+07	1.28 y	0.88	55:23	1.000	0.995-1.005		50.4892
PCB-209	1.46e+07	1.19 y	1.35	56:42	1.000	0.995-1.005		48.9119

Name	Resp	RA	RT	RRF	Conc
Total Mono-PCB	1.22e+08	2.97 y	16:09	1.31	131.785
Total Di-PCB	4.83e+08	1.63 y	20:07	1.32	565.417
Total Tri-PCB	2.45e+08	1.07 y	24:13	1.20	416.663
Total Tri-PCB	5.79e+08	1.06 y	27:53	1.23	793.249
Total Tetra-PCB	1.18e+09	0.77 y	27:58	1.17	2068.53
Total Penta-PCB	7.59e+08	1.57 y	32:38	1.24	2032.07
Total Penta-PCB	1.46e+08	1.63 y	42:11	1.39	247.304
Total Hexa-PCB	1.87e+08	1.25 y	37:02	0.94	670.153
Total Hexa-PCB	5.76e+08	1.25 y	42:07	1.13	1330.89
Total Hepta-PCB	3.97e+08	1.06 y	42:50	1.37	1277.49
Total Octa-PCB	9.92e+07	0.96 y	48:16	0.95	423.425
Total Octa-PCB	4.81e+07	0.92 y	52:51	1.35	151.927
Total Nona-PCB	4.39e+07	1.34 y	52:59	0.99	149.563
Total Deca-PCB	1.46e+07	1.19 y	56:42	1.35	48.9119

Total PCB Conc:10235.1659380

RL: MONO, TRI - DECA: \_\_\_\_\_

Integrations

by

Analyst: DMS

Date: 2/3/15

Client ID: PCB CS3 14L1801  
Lab ID: ST150202E1-1

Filename: 150202E1 S:1 Acq: 2-FEB-15 14:50:27  
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol:1.0000

ConCal: ST150202E1-1  
EndCAL: ST150202E1-2

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	6.91e+07	3.24 y	0.91	16:08	0.623	0.619-0.625		108	108											
13C-PCB-3	7.12e+07	3.20 y	0.94	18:44	0.723	0.718-0.726		107	107		13C-PCB-79	5.39e+07	0.81 y	1.02	37:47	1.029	1.024-1.033		97.6	97.6
13C-PCB-4	4.34e+07	1.55 y	0.60	20:03	0.774	0.770-0.778		103	103		13C-PCB-178	1.70e+07	0.46 y	0.64	45:37	0.984	0.980-0.989		85.7	85.7
13C-PCB-9	6.81e+07	1.55 y	0.96	21:50	0.843	0.839-0.847		100	100											
13C-PCB-11	6.71e+07	1.56 y	0.95	25:12	0.973	0.968-0.978		99.6	99.6	PS vs. IS										
13C-PCB-19	3.78e+07	1.05 y	0.56	24:11	0.934	0.929-0.939		95.5	95.5											
13C-PCB-28	6.17e+07	1.05 y	1.07	29:03	1.004	0.999-1.009		92.9	92.9		13C-PCB-79	5.39e+07	0.81 y	1.02	37:47	0.969	0.963-0.973		103	103
13C-PCB-32	5.44e+07	1.10 y	0.83	27:06	1.046	1.041-1.051		93.4	93.4		13C-PCB-178	1.70e+07	0.46 y	0.84	45:37	0.925	0.920-0.930		105	105
13C-PCB-37	5.54e+07	1.06 y	0.96	32:55	1.137	1.131-1.143		92.7	92.7											
13C-PCB-47	4.38e+07	0.81 y	0.77	31:57	0.870	0.867-0.875		106	106											
13C-PCB-52	4.14e+07	0.81 y	0.71	31:28	0.857	0.853-0.861		108	108											
13C-PCB-54	6.05e+07	0.80 y	1.06	27:56	0.761	0.757-0.765		106	106											
13C-PCB-70	5.38e+07	0.78 y	0.99	35:29	0.966	0.961-0.971		100	100											
13C-PCB-77	4.95e+07	0.81 y	0.96	39:37	1.078	1.073-1.083		95.0	95.0											
13C-PCB-80	5.49e+07	0.82 y	1.02	35:54	0.977	0.973-0.983		99.3	99.3											
13C-PCB-81	5.11e+07	0.79 y	1.00	39:00	1.062	1.057-1.067		94.8	94.8											
13C-PCB-95	2.73e+07	1.60 y	0.70	35:47	0.913	0.908-0.918		109	109	RS										
13C-PCB-97	2.49e+07	1.56 y	0.66	38:46	0.989	0.984-0.994		105	105		Name	Resp	RA	RRF	RT	Conc				
13C-PCB-101	2.86e+07	1.62 y	0.77	37:28	0.956	0.951-0.961		104	104		13C-PCB-15	7.06e+07	1.56 y	1.00	25:54	100				
13C-PCB-104	3.77e+07	1.55 y	0.97	32:37	0.832	0.828-0.836		109	109		13C-PCB-31	6.21e+07	1.05 y	1.00	28:57	100				
13C-PCB-105	4.34e+07	1.59 y	1.20	43:02	0.929	0.924-0.934		116	116		13C-PCB-60	5.40e+07	0.80 y	1.00	36:44	100				
13C-PCB-114	4.34e+07	1.63 y	1.26	42:10	0.910	0.905-0.915		111	111		13C-PCB-111	3.59e+07	1.53 y	1.00	39:12	100				
13C-PCB-118	3.34e+07	1.60 y	0.94	41:31	1.059	1.054-1.064		99.4	99.4		13C-PCB-128	3.12e+07	1.28 y	1.00	46:20	100				
13C-PCB-123	3.22e+07	1.61 y	0.88	41:20	1.055	1.049-1.059		102	102		13C-PCB-205	3.08e+07	0.91 y	1.00	53:59	100				
13C-PCB-126	3.86e+07	1.56 y	1.13	45:16	0.977	0.972-0.982		110	110											
13C-PCB-127	4.42e+07	1.58 y	1.26	43:22	0.936	0.931-0.941		113	113											
13C-PCB-138	3.47e+07	1.30 y	1.12	44:46	0.966	0.961-0.971		99.4	99.4											
13C-PCB-141	3.34e+07	1.29 y	1.09	43:55	0.948	0.943-0.953		97.8	97.8											
13C-PCB-153	4.09e+07	1.27 y	1.27	43:11	0.932	0.927-0.937		103	103											
13C-PCB-155	2.96e+07	1.28 y	0.87	37:00	0.944	0.939-0.949		94.9	94.9											
13C-PCB-156	3.85e+07	1.25 y	1.35	48:02	1.037	1.032-1.042		91.3	91.3											
13C-PCB-157	4.27e+07	1.33 y	1.42	48:18	1.042	1.037-1.047		96.6	96.6											
13C-PCB-159	4.02e+07	1.29 y	1.37	46:03	0.994	0.989-0.999		94.0	94.0											
13C-PCB-167	4.11e+07	1.28 y	1.38	46:44	1.009	1.004-1.014		95.2	95.2											
13C-PCB-169	3.66e+07	1.26 y	1.38	50:24	1.088	1.084-1.094		84.9	84.9											
13C-PCB-170	1.54e+07	0.46 y	0.60	50:45	1.096	1.091-1.103		82.0	82.0											
13C-PCB-180	1.93e+07	0.48 y	0.76	49:19	1.064	1.059-1.069		81.7	81.7											
13C-PCB-188	2.68e+07	0.46 y	1.01	42:49	0.924	0.919-0.929		84.8	84.8											
13C-PCB-189	1.95e+07	0.46 y	0.80	52:13	1.127	1.124-1.136		77.9	77.9											
13C-PCB-194	2.36e+07	0.91 y	0.75	53:42	0.995	0.990-1.000		103	103											
13C-PCB-202	2.46e+07	0.87 y	0.99	48:14	1.041	1.036-1.046		79.8	79.8											
13C-PCB-206	2.40e+07	0.78 y	0.73	55:22	1.026	1.020-1.301		106	106											
13C-PCB-208	3.29e+07	0.78 y	1.08	52:58	0.981	0.977-0.987		98.6	98.6											
13C-PCB-209	2.21e+07	1.21 y	0.71	56:41	1.050	1.045-1.055		101	101											

Analyst: DMS

Date: 2/3/15

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150202E1	1	ST150202E1-1	DMS	2-FEB-15	14:50:27	ST150202E1-1	ST150202E2-1
150202E1	2	SOLVENT BLANK	DMS	2-FEB-15	15:54:25	ST150202E1-1	NA
150202E1	3	B5A0012-BLK1	DMS	2-FEB-15	16:58:20	ST150202E1-1	NA
150202E1	4	1500065-01	DMS	2-FEB-15	18:02:19	ST150202E1-1	ST150202E2-1
150202E1	5	1500108-04@5X	DMS	2-FEB-15	19:06:18	ST150202E1-1	NA
150202E1	6	1500116-03@10X	DMS	2-FEB-15	20:10:15	ST150202E1-1	NA
150202E1	7	1500116-03@20X	DMS	2-FEB-15	21:14:15	ST150202E1-1	NA
150202E1	8	SOLVENT BLANK	DMS	2-FEB-15	22:18:13	ST150202E1-1	NA
150202E1	9	SOLVENT BLANK	DMS	2-FEB-15	23:22:12	ST150202E1-1	NA
150202E1	10	ST150202E1-2	DMS	3-FEB-15	00:26:11	ST150202E1-1	NA
150202E2	1	ST150202E2-1	DMS	3-FEB-15	01:43:27	ST150202E1-1	ST150202E2-1

## CALIBRATION STANDARDS REVIEW CHECKLIST

 Beg. Calibration ID: ST150202E1-1

 End Calibration ID: ST150202E2-1CA

	<b>Beg.</b>	<b>End</b>		<b>Beg.</b>	<b>End</b>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Concentration within range?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TCDD/TCDF valleys < 25%?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
First and last eluters present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Peaks integrated correctly?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Retention Times within criteria?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Manual integrations included?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8280 CS1 Ending Standard		
Forms signed and dated?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-Ratios within limits		<input checked="" type="checkbox"/>
Correct ICAL referenced?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-S/N > 2.5:1		<input checked="" type="checkbox"/>
Run Log:			-CS1 within 12-hour clock		<input checked="" type="checkbox"/>
-Data file matches Conc Cal ID?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Comments:</b>     		
-Correct instrument listed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
-Samples within 12-hour clock?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

 Reviewed by: *MPK* 2/13/15  
*Initials & Date*

\* Ending standard criteria applicable to 8290 only.

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150204E1-2      Instrument ID: VG-8  
 Initial Calibration Date: 6-23-14      ICal ID: PCBVG8-6-23-14      GC Column ID: ZB-1  
 VER Data Filename: 150204E1    SH2    Analysis Date: 4-FEB-15 Time: 09:37:36

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. CONC. FOUND	RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. CONC. FOUND	RANGE (ng/mL)
PCB-1	3.00	2.66-3.60	y	53.1	37.5-62.5	PCB-52/69	0.74	0.65-0.89	y	102.9	75.0-125
PCB-2	3.05	2.66-3.60	y	51.1	37.5-62.5	PCB-73	0.75	0.65-0.89	y	44.3	37.5-62.5
PCB-3	3.01	2.66-3.60	y	50.6	37.5-62.5	PCB-43/49	0.75	0.65-0.89	y	92.4	75.0-125
PCB-4/10	1.64	1.33-1.79	y	205.1	150-250	PCB-47	0.73	0.65-0.89	y	45.3	37.5-62.5
PCB-7/9	1.64	1.33-1.79	y	202.5	150-250	PCB-48/75	0.75	0.65-0.89	y	102.7	75.0-125
PCB-6	1.64	1.33-1.79	y	97.5	75.0-125	PCB-65	0.75	0.65-0.89	y	49.8	37.5-62.5
PCB-5/8	1.63	1.33-1.79	y	203.0	150-250	PCB-62	0.76	0.65-0.89	y	50.5	37.5-62.5
PCB-14	1.66	1.33-1.79	y	102.1	75.0-125	PCB-44	0.78	0.65-0.89	y	50.7	37.5-62.5
PCB-11	1.64	1.33-1.79	y	101.1	75.0-125	PCB-42/59	0.76	0.65-0.89	y	100.0	75.0-125
PCB-12/13	1.64	1.33-1.79	y	200.5	150-250	PCB-41/64/71/72	0.76	0.65-0.89	y	196.9	150-250
PCB-15	1.63	1.33-1.79	y	100.6	75.0-125	PCB-68	0.74	0.65-0.89	y	50.9	37.5-62.5
PCB-19	1.08	0.88-1.20	y	52.3	37.5-62.5	PCB-40	0.77	0.65-0.89	y	52.6	37.5-62.5
PCB-30	1.07	0.88-1.20	y	53.7	37.5-62.5	PCB-57	0.76	0.65-0.89	y	51.2	37.5-62.5
PCB-18	1.05	0.88-1.20	y	52.6	37.5-62.5	PCB-67	0.74	0.65-0.89	y	48.8	37.5-62.5
PCB-17	1.06	0.88-1.20	y	52.9	37.5-62.5	PCB-58	0.76	0.65-0.89	y	51.6	37.5-62.5
PCB-24/27	1.05	0.88-1.20	y	105.4	75.0-125	PCB-63	0.76	0.65-0.89	y	49.7	37.5-62.5
PCB-16/32	1.07	0.88-1.20	y	103.8	75.0-125	PCB-74	0.76	0.65-0.89	y	48.7	37.5-62.5
PCB-34	1.03	0.88-1.20	y	50.9	37.5-62.5	PCB-61/70	0.78	0.65-0.89	y	101.8	75.0-125
PCB-23	1.02	0.88-1.20	y	45.1	37.5-62.5	PCB-76/66	0.74	0.65-0.89	y	100.0	75.0-125
PCB-29	1.03	0.88-1.20	y	48.0	37.5-62.5	PCB-80	0.76	0.65-0.89	y	52.0	37.5-62.5
PCB-26	1.02	0.88-1.20	y	47.8	37.5-62.5	PCB-55	0.76	0.65-0.89	y	53.0	37.5-62.5
PCB-25	1.02	0.88-1.20	y	50.4	37.5-62.5	PCB-56/60	0.75	0.65-0.89	y	101.6	75.0-125
PCB-31	0.99	0.88-1.20	y	46.9	37.5-62.5	PCB-79	0.76	0.65-0.89	y	51.0	37.5-62.5
PCB-28	1.02	0.88-1.20	y	46.8	37.5-62.5	PCB-78	0.76	0.65-0.89	y	49.6	37.5-62.5
PCB-20/21/33	1.02	0.88-1.20	y	143.7	112.5-225	PCB-81	0.76	0.65-0.89	y	49.0	37.5-62.5
PCB-22	1.01	0.88-1.20	y	48.1	37.5-62.5	PCB-77	0.77	0.65-0.89	y	51.2	37.5-62.5
PCB-36	1.02	0.88-1.20	y	47.1	37.5-62.5	PCB-104	1.56	1.32-1.78	y	52.1	37.5-62.5
PCB-39	1.03	0.88-1.20	y	47.9	37.5-62.5	PCB-96	1.59	1.32-1.78	y	52.1	37.5-62.5
PCB-38	1.00	0.88-1.20	y	43.7	37.5-62.5	PCB-103	1.63	1.32-1.78	y	52.0	37.5-62.5
PCB-35	0.99	0.88-1.20	y	49.4	37.5-62.5	PCB-100	1.55	1.32-1.78	y	52.3	37.5-62.5
PCB-37	1.02	0.88-1.20	y	47.2	37.5-62.5	PCB-94	1.60	1.32-1.78	y	50.5	37.5-62.5
PCB-54	0.76	0.65-0.89	y	49.5	37.5-62.5	PCB-95/98/102	1.58	1.32-1.78	y	153.7	112.5-225
PCB-50	0.74	0.65-0.89	y	50.4	37.5-62.5	PCB-93	1.58	1.32-1.78	y	57.2	37.5-62.5
PCB-53	0.74	0.65-0.89	y	47.2	37.5-62.5	PCB-88/91	1.61	1.32-1.78	y	115.9	75.0-125
PCB-51	0.75	0.65-0.89	y	47.5	37.5-62.5	PCB-121	1.53	1.32-1.78	y	47.7	37.5-62.5
PCB-45	0.75	0.65-0.89	y	48.9	37.5-62.5						
PCB-46	0.77	0.65-0.89	y	47.6	37.5-62.5						

Analyst: DMS

Date: 2/4/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150204E1-2      Instrument ID: VG-8

Initial Calibration Date: 6-23-14      ICal ID: PCBVG8-6-23-14      GC Column ID: ZB-1

VER Data Filename: 150204E1    SH2    Analysis Date: 4-FEB-15 Time: 09:37:36

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.58	1.32-1.78	y	104.1	75.0-125	PCB-140	1.31	1.05-1.43	y	55.8	37.5-62.5
PCB-89	1.55	1.32-1.78	y	51.9	37.5-62.5	PCB-134/143	1.25	1.05-1.43	y	99.3	75.0-125
PCB-90/101	1.63	1.32-1.78	y	102.5	75.0-125	PCB-133/142	1.23	1.05-1.43	y	96.8	75.0-125
PCB-113	1.56	1.32-1.78	y	50.3	37.5-62.5	PCB-131	1.21	1.05-1.43	y	46.8	37.5-62.5
PCB-99	1.57	1.32-1.78	y	55.6	37.5-62.5	PCB-146/165	1.25	1.05-1.43	y	96.2	75.0-125
PCB-119	1.57	1.32-1.78	y	53.1	37.5-62.5	PCB-132/161	1.22	1.05-1.43	y	95.3	75.0-125
PCB-108/112	1.58	1.32-1.78	y	104.0	75.0-125	PCB-153	1.20	1.05-1.43	y	47.8	37.5-62.5
PCB-83	1.59	1.32-1.78	y	50.5	37.5-62.5	PCB-168	1.24	1.05-1.43	y	48.6	37.5-62.5
PCB-97	1.61	1.32-1.78	y	52.3	37.5-62.5	PCB-141	1.22	1.05-1.43	y	46.6	37.5-62.5
PCB-86	1.53	1.32-1.78	y	59.5	37.5-62.5	PCB-137	1.19	1.05-1.43	y	48.2	37.5-62.5
PCB-87/117/125	1.59	1.32-1.78	y	153.1	112.5-225	PCB-130	1.23	1.05-1.43	y	45.3	37.5-62.5
PCB-111/115	1.60	1.32-1.78	y	99.1	75.0-125	PCB-138/163/164	1.23	1.05-1.43	y	141.4	112.5-225
PCB-85/116	1.58	1.32-1.78	y	109.9	75.0-125	PCB-158/160	1.21	1.05-1.43	y	97.1	75.0-125
PCB-120	1.60	1.32-1.78	y	51.2	37.5-62.5	PCB-129	1.23	1.05-1.43	y	48.4	37.5-62.5
PCB-110	1.59	1.32-1.78	y	52.0	37.5-62.5	PCB-166	1.22	1.05-1.43	y	46.7	37.5-62.5
PCB-82	1.60	1.32-1.78	y	53.6	37.5-62.5	PCB-159	1.21	1.05-1.43	y	48.9	37.5-62.5
PCB-124	1.58	1.32-1.78	y	50.7	37.5-62.5	PCB-128/162	1.22	1.05-1.43	y	92.9	75.0-125
PCB-107/109	1.60	1.32-1.78	y	102.0	75.0-125	PCB-167	1.22	1.05-1.43	y	48.2	37.5-62.5
PCB-123	1.59	1.32-1.78	y	50.4	37.5-62.5	PCB-156	1.25	1.05-1.43	y	48.5	37.5-62.5
PCB-106/118	1.58	1.32-1.78	y	102.3	75.0-125	PCB-157	1.23	1.05-1.43	y	47.0	37.5-62.5
PCB-114	1.59	1.32-1.78	y	50.3	37.5-62.5	PCB-169	1.22	1.05-1.43	y	47.5	37.5-62.5
PCB-122	1.68	1.32-1.78	y	49.0	37.5-62.5	PCB-188	1.04	0.89-1.21	y	49.6	37.5-62.5
PCB-105	1.66	1.32-1.78	y	49.6	37.5-62.5	PCB-184	1.06	0.89-1.21	y	49.7	37.5-62.5
PCB-127	1.63	1.32-1.78	y	50.2	37.5-62.5	PCB-179	1.04	0.89-1.21	y	49.1	37.5-62.5
PCB-126	1.63	1.32-1.78	y	50.0	37.5-62.5	PCB-176	1.06	0.89-1.21	y	48.9	37.5-62.5
PCB-155	1.27	1.05-1.43	y	50.3	37.5-62.5	PCB-186	1.04	0.89-1.21	y	49.4	37.5-62.5
PCB-150	1.27	1.05-1.43	y	52.8	37.5-62.5	PCB-178	1.05	0.89-1.21	y	50.3	37.5-62.5
PCB-152	1.28	1.05-1.43	y	50.8	37.5-62.5	PCB-175	1.08	0.89-1.21	y	50.4	37.5-62.5
PCB-145	1.31	1.05-1.43	y	51.2	37.5-62.5	PCB-182/187	1.06	0.89-1.21	y	98.3	75.0-125
PCB-136	1.26	1.05-1.43	y	53.3	37.5-62.5	PCB-183	1.07	0.89-1.21	y	49.0	37.5-62.5
PCB-148	1.28	1.05-1.43	y	48.8	37.5-62.5	PCB-185	1.06	0.89-1.21	y	50.3	37.5-62.5
PCB-154	1.28	1.05-1.43	y	55.3	37.5-62.5	PCB-174	1.04	0.89-1.21	y	51.4	37.5-62.5
PCB-151	1.27	1.05-1.43	y	52.8	37.5-62.5	PCB-181	1.07	0.89-1.21	y	51.4	37.5-62.5
PCB-135	1.30	1.05-1.43	y	50.9	37.5-62.5	PCB-177	1.07	0.89-1.21	y	51.6	37.5-62.5
PCB-144	1.29	1.05-1.43	y	57.5	37.5-62.5	PCB-171	1.07	0.89-1.21	y	50.1	37.5-62.5
PCB-147	1.27	1.05-1.43	y	54.7	37.5-62.5	PCB-173	1.04	0.89-1.21	y	52.5	37.5-62.5
PCB-139/149	1.29	1.05-1.43	y	107.5	75.0-125	PCB-172	1.05	0.89-1.21	y	52.1	37.5-62.5

Analyst: Dms

Date: 2/4/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150204E1-2      Instrument ID: VG-8

Initial Calibration Date: 6-23-14      ICal ID: PCBVG8-6-23-14      GC Column ID: ZB-1

VER Data Filename: 150204E1    S#2    Analysis Date: 4-FEB-15 Time: 09:37:36

ANALYTES	ION	QC	PASS	CONC.	CONC.
	ABUND.	LIMITS		FOUND	RANGE
	RATIO			(ng/mL)	
PCB-192	1.07	0.89-1.21	y	50.9	37.5-62.5
PCB-180	1.05	0.89-1.21	y	50.9	37.5-62.5
PCB-193	1.07	0.89-1.21	y	50.0	37.5-62.5
PCB-191	1.08	0.89-1.21	y	50.8	37.5-62.5
PCB-170	1.07	0.89-1.21	y	49.1	37.5-62.5
PCB-190	1.08	0.89-1.21	y	48.3	37.5-62.5
PCB-189	1.06	0.89-1.21	y	48.1	37.5-62.5
PCB-202	0.93	0.76-1.02	y	48.8	37.5-62.5
PCB-201	0.95	0.76-1.02	y	49.3	37.5-62.5
PCB-204	0.91	0.76-1.02	y	49.2	37.5-62.5
PCB-197	0.90	0.76-1.02	y	49.5	37.5-62.5
PCB-200	0.86	0.76-1.02	y	49.2	37.5-62.5
PCB-198	0.88	0.76-1.02	y	47.5	37.5-62.5
PCB-199	0.94	0.76-1.02	y	52.2	37.5-62.5
PCB-196/203	0.91	0.76-1.02	y	101.3	75.0-125
PCB-195	0.92	0.76-1.02	y	49.5	37.5-62.5
PCB-194	0.91	0.76-1.02	y	47.6	37.5-62.5
PCB-205	0.91	0.76-1.02	y	49.2	37.5-62.5
PCB-208	1.35	1.14-1.54	y	50.0	37.5-62.5
PCB-207	1.31	1.14-1.54	y	49.0	37.5-62.5
PCB-206	1.35	1.14-1.54	y	49.5	37.5-62.5
PCB-209	1.20	0.99-1.33	y	51.9	37.5-62.5

Analyst: Dms

Date: 2/4/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150204E1-2      Instrument ID: VG-8  
 Initial Calibration Date: 6-23-14      ICal ID: PCBVG8-6-23-14      GC Column ID: ZB-1

VER Data Filename: 150204E1 S#2 Analysis Date: 4-FEB-15 Time: 09:37:36

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.35	2.66-3.60	y	94.1	50.0-145	13C-PCB-169	1.29	1.05-1.43	y	95.2	50 - 145
13C-PCB-3	3.37	2.66-3.60	y	96.7	50.0-145	13C-PCB-188	0.47	0.38-0.52	y	93.0	50 - 145
13C-PCB-4	1.62	1.33-1.79	y	98.3	50.0-145	13C-PCB-180	0.47	0.38-0.52	y	91.7	50 - 145
13C-PCB-9	1.60	1.33-1.79	y	98.7	50.0-145	13C-PCB-170	0.47	0.38-0.52	y	96.0	50 - 145
13C-PCB-11	1.56	1.33-1.79	y	98.6	50.0-145	13C-PCB-189	0.45	0.38-0.52	y	94.3	50 - 145
13C-PCB-19	1.12	0.88-1.20	y	87.0	50.0-145	13C-PCB-202	0.91	0.76-1.02	y	87.3	50 - 145
13C-PCB-32	1.09	0.88-1.20	y	89.7	50.0-145	13C-PCB-194	0.90	0.76-1.02	y	97.2	50 - 145
13C-PCB-28	1.08	0.88-1.20	y	102.9	50.0-145	13C-PCB-208	0.78	0.65-0.89	y	98.4	50 - 145
13C-PCB-37	1.10	0.88-1.20	y	106.0	50.0-145	13C-PCB-206	0.75	0.65-0.89	y	103.2	50 - 145
13C-PCB-54	0.81	0.65-0.89	y	91.1	50.0-145	13C-PCB-209	1.27	0.99-1.33	y	107.9	50 - 145
13C-PCB-52	0.78	0.65-0.89	y	98.0	50.0-145						
13C-PCB-47	0.77	0.65-0.89	y	94.6	50.0-145						
13C-PCB-70	0.80	0.65-0.89	y	97.5	50.0-145						
13C-PCB-80	0.79	0.65-0.89	y	97.4	50.0-145						
13C-PCB-81	0.81	0.65-0.89	y	101.3	50.0-145						
13C-PCB-77	0.82	0.65-0.89	y	101.7	50.0-145						
13C-PCB-104	1.62	1.32-1.78	y	97.3	50.0-145						
13C-PCB-95	1.59	1.32-1.78	y	99.7	50.0-145						
13C-PCB-101	1.55	1.32-1.78	y	100.6	50.0-145	CRS vs. RS					
13C-PCB-97	1.66	1.32-1.78	y	101.8	50.0-145						
13C-PCB-123	1.65	1.32-1.78	y	103.8	50.0-145	13C-PCB-79	0.82	0.65-0.89	y	99.3	75 - 125
13C-PCB-118	1.66	1.32-1.78	y	102.0	50.0-145	13C-PCB-178	0.47	0.38-0.52	y	92.2	75 - 125
13C-PCB-114	1.57	1.32-1.78	y	92.1	50.0-145						
13C-PCB-105	1.54	1.32-1.78	y	92.4	50.0-145						
13C-PCB-127	1.54	1.32-1.78	y	93.6	50.0-145						
13C-PCB-126	1.60	1.32-1.78	y	92.1	50.0-145						
13C-PCB-155	1.36	1.05-1.43	y	89.0	50.0-145						
13C-PCB-153	1.30	1.05-1.43	y	98.4	50.0-145						
13C-PCB-141	1.29	1.05-1.43	y	97.8	50.0-145						
13C-PCB-138	1.29	1.05-1.43	y	96.9	50.0-145						
13C-PCB-159	1.25	1.05-1.43	y	97.5	50.0-145						
13C-PCB-167	1.28	1.05-1.43	y	97.2	50.0-145						
13C-PCB-156	1.28	1.05-1.43	y	96.1	50.0-145						
13C-PCB-157	1.31	1.05-1.43	y	95.2	50.0-145						

Analyst: Dms

Date: 2/4/15



Client ID: PCB CS3 14K1102  
Lab ID: ST150204E1-2

Filename: 150204E1 S:2 Acq: 4-FEB-15 09:37:36  
GC Column ID: ZB-1 ICAL: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

ConCal: ST150204E1-2

Page 1 of

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-1	3.98e+07	3.00	y	1.19	16:11	1.001	0.996-1.006	53.0940	PCB-52/69	5.36e+07	0.74	y	1.28	31:32	1.001	0.996-1.006	102.942
PCB-2	4.08e+07	3.05	y	1.18	18:33	0.988	0.984-0.994	51.1224	PCB-73	2.44e+07	0.75	y	1.35	31:39	1.005	1.000-1.010	44.2856
PCB-3	4.86e+07	3.01	y	1.43	18:46	1.001	0.996-1.006	50.5658	PCB-43/49	3.74e+07	0.75	y	0.99	31:49	1.010	1.005-1.015	92.4042
PCB-4/10	1.42e+08	1.64	y	1.57	20:08	1.002	0.997-1.007	205.076	PCB-47	1.98e+07	0.73	y	1.06	32:01	1.001	0.996-1.006	45.2675
PCB-7/9	1.66e+08	1.64	y	1.21	21:55	0.869	0.866-0.874	202.514	PCB-48/75	5.21e+07	0.75	y	1.23	32:08	1.004	0.999-1.009	102.662
PCB-6	8.62e+07	1.64	y	1.30	22:33	0.894	0.890-0.899	97.5202	PCB-65	2.52e+07	0.75	y	1.22	32:24	1.013	1.008-1.018	49.7732
PCB-5/8	1.58e+08	1.63	y	1.15	22:58	0.910	0.907-0.917	202.981	PCB-62	2.55e+07	0.76	y	1.22	32:31	1.016	1.011-1.021	50.4863
PCB-14	8.01e+07	1.66	y	1.11	24:04	0.954	0.949-0.959	102.126	PCB-44	1.80e+07	0.78	y	0.86	32:49	1.025	1.021-1.031	50.6774
PCB-11	7.77e+07	1.64	y	1.09	25:15	1.001	0.995-1.005	101.087	PCB-42/59	4.70e+07	0.76	y	1.14	33:03	1.033	1.028-1.038	99.9808
PCB-12/13	1.69e+08	1.64	y	1.19	25:39	1.017	1.011-1.021	200.472	PCB-41/64/71/72	9.83e+07	0.76	y	1.21	33:38	1.051	1.046-1.056	196.918
PCB-15	9.11e+07	1.63	y	1.28	25:58	1.029	1.023-1.033	100.560	PCB-68	2.83e+07	0.74	y	1.35	33:53	1.059	1.054-1.064	50.9017
PCB-19	1.93e+07	1.08	y	1.04	24:15	1.001	0.996-1.006	52.2925	PCB-40	1.52e+07	0.77	y	0.70	34:06	1.066	1.061-1.071	52.5764
PCB-30	3.25e+07	1.07	y	1.71	25:08	1.038	1.032-1.042	53.6759	PCB-57	2.63e+07	0.76	y	0.98	34:28	0.971	0.965-0.975	51.2182
PCB-18	2.24e+07	1.05	y	0.78	25:53	0.954	0.949-0.959	52.5670	PCB-67	2.83e+07	0.74	y	1.11	34:46	0.979	0.974-0.984	48.7936
PCB-17	2.66e+07	1.06	y	0.92	26:03	0.960	0.956-0.966	52.8707	PCB-58	2.51e+07	0.76	y	0.93	34:53	0.982	0.977-0.987	51.6177
PCB-24/27	6.84e+07	1.05	y	1.19	26:37	0.981	0.977-0.987	105.430	PCB-63	2.48e+07	0.76	y	0.95	35:02	0.987	0.982-0.992	49.7140
PCB-16/32	5.33e+07	1.07	y	0.94	27:08	1.000	0.995-1.005	103.764	PCB-74	3.17e+07	0.76	y	1.24	35:19	0.995	0.990-1.000	48.7217
PCB-34	3.69e+07	1.03	y	1.14	27:56	0.960	0.955-0.965	50.9120	PCB-61/70	5.08e+07	0.78	y	0.95	35:30	1.000	0.995-1.005	101.786
PCB-23	3.69e+07	1.02	y	1.28	28:02	0.964	0.959-0.969	45.1385	PCB-76/66	5.47e+07	0.74	y	1.04	35:43	1.006	1.001-1.011	100.011
PCB-29	3.31e+07	1.03	y	1.08	28:16	0.972	0.967-0.977	47.9531	PCB-80	3.36e+07	0.76	y	1.19	35:57	1.000	0.996-1.006	52.0479
PCB-26	3.68e+07	1.02	y	1.21	28:29	0.979	0.974-0.984	47.7583	PCB-55	2.99e+07	0.76	y	1.04	36:17	1.010	1.005-1.015	53.0296
PCB-25	4.06e+07	1.02	y	1.26	28:38	0.984	0.979-0.989	50.3892	PCB-56/60	5.55e+07	0.75	y	1.01	36:47	1.023	1.019-1.029	101.570
PCB-31	3.85e+07	0.99	y	1.28	29:00	0.997	0.992-1.002	46.9275	PCB-79	2.98e+07	0.76	y	1.08	37:50	1.053	1.048-1.058	50.9606
PCB-28	5.12e+07	1.02	y	1.71	29:06	1.000	0.995-1.005	46.8307	PCB-78	3.16e+07	0.76	y	1.27	38:32	0.987	0.982-0.992	49.5591
PCB-20/21/33	9.92e+07	1.02	y	1.08	29:43	1.022	1.017-1.027	143.651	PCB-81	3.28e+07	0.76	y	1.33	39:04	1.001	0.995-1.005	49.0153
PCB-22	3.71e+07	1.01	y	1.21	30:09	1.037	1.032-1.042	48.1123	PCB-77	2.91e+07	0.77	y	1.10	39:39	1.000	0.995-1.005	51.2168
PCB-36	3.19e+07	1.02	y	1.14	30:46	0.933	0.928-0.938	47.0520	PCB-104	1.94e+07	1.56	y	1.18	32:40	1.001	0.996-1.006	52.1194
PCB-39	3.17e+07	1.03	y	1.12	31:15	0.948	0.943-0.953	47.8849	PCB-96	1.86e+07	1.59	y	1.14	33:56	1.039	1.034-1.044	52.1145
PCB-38	3.11e+07	1.00	y	1.20	32:01	0.971	0.966-0.976	43.6507	PCB-103	1.56e+07	1.63	y	0.96	34:28	1.056	1.050-1.060	51.9824
PCB-35	3.61e+07	0.99	y	1.23	32:32	0.987	0.982-0.992	49.3803	PCB-100	1.54e+07	1.55	y	0.94	34:50	1.067	1.061-1.071	52.3265
PCB-37	3.44e+07	1.02	y	1.23	32:58	1.000	0.995-1.005	47.1572	PCB-94	1.27e+07	1.60	y	1.06	35:18	0.986	0.980-0.990	50.4817
PCB-54	2.60e+07	0.76	y	1.10	27:59	1.001	0.996-1.006	49.5069	PCB-95/98/102	4.47e+07	1.58	y	1.22	35:48	1.000	0.995-1.005	153.686
PCB-50	2.11e+07	0.74	y	0.88	29:09	1.042	1.037-1.047	50.3773	PCB-93	1.15e+07	1.58	y	0.84	35:56	1.003	0.997-1.007	57.1749
PCB-53	2.04e+07	0.74	y	1.06	29:48	0.946	0.942-0.952	47.2496	PCB-88/91	3.07e+07	1.61	y	1.12	36:13	1.011	1.005-1.015	115.901
PCB-51	1.91e+07	0.75	y	0.99	30:08	0.957	0.952-0.962	47.5388	PCB-121	1.83e+07	1.53	y	1.62	36:19	1.014	1.009-1.019	47.6555
PCB-45	1.72e+07	0.75	y	0.86	30:34	0.971	0.966-0.976	48.8570	PCB-84/92	2.76e+07	1.58	y	1.05	37:08	0.990	0.985-0.995	104.129
PCB-46	1.64e+07	0.77	y	0.85	31:03	0.986	0.981-0.991	47.6381	PCB-89	1.49e+07	1.55	y	1.13	37:20	0.996	0.991-1.001	51.9330

RL: MONO, TRI - DECA: \_\_\_\_\_

RL: DI: \_\_\_\_\_

Integrations  
by

Analyst: Dmj

Date: 2/4/15

Reviewed  
by

Analyst: [Signature]

Date: 2/5/15

Client ID: PCB CS3 14K1102  
Lab ID: ST150204E1-2

Filename: 150204E1 S:2 Acq: 4-FEB-15 09:37:36 ConCal: ST150204E1-2  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-90/101	2.86e+07	1.63	y	1.10	37:30	1.000	0.995-1.005	102.542	PCB-133/142	2.83e+07	1.23	y	0.82	42:27	0.982	0.977-0.987	96.8082
PCB-113	1.80e+07	1.56	y	1.41	37:45	1.007	1.002-1.012	50.3043	PCB-131	1.52e+07	1.21	y	0.91	42:36	0.985	0.981-0.991	46.8087
PCB-99	1.88e+07	1.57	y	1.34	37:50	1.009	1.004-1.014	55.6361	PCB-146/165	4.28e+07	1.25	y	1.25	42:50	0.991	0.986-0.996	96.1885
PCB-119	1.88e+07	1.57	y	1.53	38:19	0.987	0.982-0.992	53.1301	PCB-132/161	3.76e+07	1.22	y	1.10	43:05	0.997	0.992-1.002	95.2932
PCB-108/112	3.07e+07	1.58	y	1.28	38:28	0.991	0.986-0.996	103.980	PCB-153	2.13e+07	1.20	y	1.25	43:14	1.000	0.995-1.005	47.7795
PCB-83	1.77e+07	1.59	y	1.52	38:38	0.996	0.990-1.000	50.5110	PCB-168	2.52e+07	1.24	y	1.45	43:27	1.005	1.001-1.011	48.6281
PCB-97	1.43e+07	1.61	y	1.18	38:49	1.000	0.995-1.005	52.3447	PCB-141	1.68e+07	1.22	y	1.09	43:59	1.000	0.995-1.005	46.6154
PCB-86	1.16e+07	1.53	y	0.84	38:57	1.004	0.999-1.009	59.4647	PCB-137	1.70e+07	1.19	y	1.06	44:22	1.009	1.004-1.014	48.2154
B-87/117/125	5.48e+07	1.59	y	1.55	39:05	1.007	1.002-1.012	153.116	PCB-130	1.45e+07	1.23	y	0.96	44:28	1.011	1.006-1.016	45.3236
PCB-111/115	3.74e+07	1.60	y	1.63	39:14	1.011	1.006-1.016	99.1047	PCB-138/163/164	6.16e+07	1.23	y	1.29	44:51	1.001	0.996-1.006	141.360
PCB-85/116	3.30e+07	1.58	y	1.30	39:22	1.014	1.010-1.020	109.896	PCB-158/160	4.40e+07	1.21	y	1.34	45:05	1.006	1.001-1.011	97.1110
PCB-120	1.98e+07	1.60	y	1.68	39:37	1.021	1.016-1.026	51.2492	PCB-129	1.39e+07	1.23	y	0.85	45:19	1.011	1.007-1.017	48.4261
PCB-110	1.87e+07	1.59	y	1.56	39:45	1.024	1.020-1.030	52.0106	PCB-166	2.13e+07	1.22	y	1.19	45:47	0.993	0.988-0.998	46.6715
PCB-82	1.21e+07	1.60	y	0.76	40:24	0.977	0.971-0.981	53.5781	PCB-159	2.09e+07	1.21	y	1.11	46:07	1.000	0.996-1.006	48.9249
PCB-124	2.23e+07	1.58	y	1.47	41:03	0.992	0.988-0.998	50.7499	PCB-128/162	3.75e+07	1.22	y	1.05	46:24	1.006	1.002-1.012	92.9108
PCB-107/109	4.03e+07	1.60	y	1.32	41:13	0.996	0.991-1.001	101.999	PCB-167	2.41e+07	1.22	y	1.20	46:48	1.000	0.995-1.005	48.2156
PCB-123	1.76e+07	1.59	y	1.17	41:23	1.000	0.996-1.006	50.4310	PCB-156	2.17e+07	1.25	y	1.14	48:06	1.001	0.996-1.006	48.4704
- PCB-106/118	3.78e+07	1.58	y	1.17	41:35	1.001	0.996-1.006	102.269	PCB-157	2.24e+07	1.23	y	1.16	48:22	1.000	0.995-1.005	47.0325
- PCB-114	2.59e+07	1.59	y	1.30	42:13	1.000	0.995-1.005	50.2730	PCB-169	2.06e+07	1.22	y	1.12	50:27	1.000	0.995-1.005	47.5174
PCB-122	2.18e+07	1.68	y	1.12	42:21	1.003	0.999-1.009	48.9880									
PCB-105	2.58e+07	1.66	y	1.30	43:05	1.000	0.995-1.005	49.6350	PCB-188	2.12e+07	1.04	y	1.58	42:53	1.001	0.996-1.006	49.5999
PCB-127	2.92e+07	1.63	y	1.33	43:25	1.000	0.996-1.006	50.2126	PCB-184	2.19e+07	1.06	y	1.63	43:20	1.011	1.006-1.016	49.7454
PCB-126	2.25e+07	1.63	y	1.18	45:19	1.000	0.995-1.005	50.0420	PCB-179	1.73e+07	1.04	y	1.30	44:06	1.029	1.024-1.034	49.1394
									PCB-176	1.95e+07	1.06	y	1.48	44:34	1.040	1.035-1.045	48.8589
PCB-155	1.35e+07	1.27	y	1.11	37:04	1.001	0.966-1.006	50.2741	PCB-186	1.94e+07	1.04	y	1.45	45:11	1.054	1.050-1.060	49.4469
PCB-150	1.27e+07	1.27	y	1.00	38:20	1.035	1.030-1.040	52.7762	PCB-178	1.41e+07	1.05	y	1.03	45:41	1.066	1.061-1.071	50.3042
PCB-152	1.36e+07	1.28	y	1.12	38:48	1.048	1.043-1.053	50.8250	PCB-175	1.38e+07	1.08	y	1.01	46:02	1.074	1.069-1.079	50.4053
PCB-145	1.48e+07	1.31	y	1.20	39:15	1.060	1.055-1.065	51.2095	PCB-182/187	3.33e+07	1.06	y	1.25	46:12	1.078	1.073-1.083	98.3425
PCB-136	1.51e+07	1.26	y	1.18	39:35	1.068	1.064-1.074	53.2777	PCB-183	1.60e+07	1.07	y	1.21	46:31	1.085	1.081-1.091	48.9821
PCB-148	8.73e+06	1.28	y	0.74	39:41	1.071	1.066-1.076	48.7688	PCB-185	1.80e+07	1.06	y	1.80	47:11	0.956	0.951-0.961	50.2737
PCB-154	1.14e+07	1.28	y	0.86	40:10	1.084	1.080-1.090	55.2605	PCB-174	1.41e+07	1.04	y	1.38	47:32	0.963	0.958-0.968	51.3687
PCB-151	9.48e+06	1.27	y	0.75	40:49	1.102	1.097-1.107	52.8269	PCB-181	1.41e+07	1.07	y	1.38	47:39	0.965	0.960-0.970	51.4322
PCB-135	9.70e+06	1.30	y	0.79	41:01	1.107	1.103-1.113	50.8924	PCB-177	1.29e+07	1.07	y	1.26	47:49	0.969	0.963-0.973	51.6169
PCB-144	1.05e+07	1.29	y	0.76	41:08	1.110	1.105-1.117	57.5001	PCB-171	1.58e+07	1.07	y	1.58	48:07	0.975	0.970-0.980	50.1389
PCB-147	1.08e+07	1.27	y	0.82	41:16	1.114	1.109-1.121	54.6957	PCB-173	1.16e+07	1.04	y	1.11	48:32	0.983	0.978-0.988	52.5128
PCB-139/149	1.97e+07	1.29	y	0.76	41:32	1.121	1.116-1.128	107.536	PCB-172	1.69e+07	1.05	y	1.63	48:59	0.992	0.987-0.997	52.1484
- PCB-140	9.68e+06	1.31	y	0.72	41:43	1.126	1.121-1.133	55.7557	PCB-192	1.76e+07	1.07	y	1.74	49:10	0.996	0.991-1.001	50.9209
- PCB-134/143	3.25e+07	1.25	y	0.92	42:08	0.975	0.970-0.980	99.2668	PCB-180	1.36e+07	1.05	y	1.34	49:23	1.000	0.995-1.005	50.8807

Integrations

by

RL: MONO, TRI - DECA: \_\_\_\_\_

Analyst: DMS

Date: 2/4/15

Client ID: PCB CS3 14K1102  
Lab ID: ST150204E1-2

Filename: 150204E1 S:2 Acq: 4-FEB-15 09:37:36  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000  
ConCal: ST150204E1-2 EndCAL: NA

Page 1 of

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-193	1.70e+07	1.07 y	1.72	49:35	1.004	0.999-1.009	50.0277	
PCB-191	1.71e+07	1.08 y	1.69	49:49	1.009	1.004-1.014	50.8341	
PCB-170	1.29e+07	1.07 y	1.60	50:49	1.000	0.995-1.005	49.0735	
PCB-190	1.76e+07	1.08 y	2.21	50:59	1.004	0.998-1.008	48.2994	
PCB-189	1.59e+07	1.06 y	1.55	52:15	1.000	0.995-1.005	48.0763	
PCB-202	1.22e+07	0.93 y	1.08	48:18	1.000	0.995-1.005	48.7524	
PCB-201	1.31e+07	0.95 y	1.15	48:48	1.011	1.005-1.015	49.3158	
PCB-204	1.30e+07	0.91 y	1.14	48:57	1.014	1.008-1.018	49.2171	
PCB-197	1.23e+07	0.90 y	1.07	49:15	1.020	1.015-1.025	49.4625	
PCB-200	1.21e+07	0.86 y	1.06	50:06	1.038	1.032-1.044	49.1678	
PCB-198	8.31e+06	0.88 y	0.76	51:23	1.064	1.059-1.069	47.5103	
PCB-199	9.65e+06	0.94 y	0.80	51:29	1.066	1.061-1.071	52.2223	
- PCB-196/203	1.88e+07	0.91 y	0.80	51:44	1.071	1.066-1.076	101.287	
- PCB-195	1.42e+07	0.92 y	1.23	52:53	0.984	0.979-0.989	49.5143	
PCB-194	1.35e+07	0.91 y	1.21	53:46	1.000	0.995-1.005	47.6069	
PCB-205	1.77e+07	0.91 y	1.54	54:03	1.006	1.001-1.011	49.1884	
PCB-208	1.49e+07	1.35 y	0.93	53:01	1.000	0.995-1.005	50.0470	
PCB-207	1.70e+07	1.31 y	1.08	53:20	1.006	1.001-1.011	49.0253	
PCB-206	1.02e+07	1.35 y	1.02	55:26	1.000	0.995-1.005	49.4515	
PCB-209	1.20e+07	1.20 y	1.17	56:45	1.000	0.995-1.005	51.8540	

Name	Resp	RA	RT	RRF	Conc	
Total Mono-PCB	1.29e+08	3.00 y	16:11	1.27	154.782	
Total Di-PCB	9.71e+08	1.64 y	20:08	1.21	1214.17	
Total Tri-PCB	2.23e+08	1.08 y	24:15	1.10	420.600	
Total Tri-PCB	5.85e+08	1.03 y	27:56	1.21	775.006	Sum:1195.61
Total Tetra-PCB	1.06e+09	0.76 y	27:59	1.09	2112.53	
Total Penta-PCB	6.82e+08	1.56 y	32:40	1.18	2143.55	
Total Penta-PCB	1.34e+08	1.59 y	42:13	1.25	266.845	Sum:2410.39
Total Hexa-PCB	1.60e+08	1.27 y	37:04	0.90	741.599	
Total Hexa-PCB	5.48e+08	1.25 y	42:08	1.11	1359.33	Sum:2100.93
Total Hepta-PCB	3.96e+08	1.04 y	42:53	1.42	1215.39	
Total Octa-PCB	9.95e+07	0.93 y	48:18	0.96	446.935	
Total Octa-PCB	4.79e+07	0.92 y	52:53	1.33	154.746	Sum:601.681
Total Nona-PCB	4.29e+07	1.35 y	53:01	1.01	151.262	
Total Deca-PCB	1.20e+07	1.20 y	56:45	1.17	51.8540	

Total PCB Conc:11106.0112580

Integrations  
by  
Analyst: DMJ  
Date: 2/4/15  
RL: MONO, TRI - DECA: \_\_\_\_\_

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	6.28e+07	3.35	y	0.87	16:10	0.623	0.629-0.635	94.1	94.1											
13C-PCB-3	6.75e+07	3.37	y	0.91	18:46	0.723	0.725-0.733	96.7	96.7		13C-PCB-79	5.43e+07	0.82	y	1.02	37:49	1.029	1.023-1.034	99.3	99.3
13C-PCB-4	4.41e+07	1.62	y	0.59	20:05	0.774	0.775-0.783	98.3	98.3		13C-PCB-178	1.79e+07	0.47	y	0.61	45:39	0.984	0.979-0.990	92.2	92.2
13C-PCB-9	6.77e+07	1.60	y	0.90	21:52	0.843	0.842-0.850	98.7	98.7											
13C-PCB-11	7.08e+07	1.56	y	0.94	25:14	0.973	0.968-0.978	98.6	98.6	PS vs. IS										
13C-PCB-19	3.54e+07	1.12	y	0.53	24:13	0.934	0.930-0.940	87.0	87.0											
13C-PCB-28	6.39e+07	1.08	y	0.93	29:05	1.004	0.999-1.009	103	103		13C-PCB-79	5.43e+07	0.82	y	1.10	37:49	0.969	0.964-0.974	98.0	98.0
13C-PCB-32	5.46e+07	1.09	y	0.80	27:08	1.046	1.040-1.050	89.7	89.7		13C-PCB-178	1.79e+07	0.47	y	0.90	45:39	0.925	0.920-0.930	100	100
13C-PCB-37	5.93e+07	1.10	y	0.84	32:58	1.138	1.131-1.143	106	106											
13C-PCB-47	4.13e+07	0.77	y	0.81	32:00	0.871	0.866-0.874	94.6	94.6											
13C-PCB-52	4.07e+07	0.78	y	0.77	31:30	0.857	0.853-0.861	98.0	98.0											
13C-PCB-54	4.75e+07	0.81	y	0.97	27:58	0.761	0.758-0.766	91.1	91.1											
13C-PCB-70	5.24e+07	0.80	y	1.00	35:31	0.966	0.961-0.971	97.5	97.5											
13C-PCB-77	5.15e+07	0.82	y	0.94	39:38	1.078	1.073-1.083	102	102											
13C-PCB-80	5.41e+07	0.79	y	1.03	35:56	0.978	0.972-0.982	97.4	97.4											
13C-PCB-81	5.02e+07	0.81	y	0.92	39:03	1.062	1.057-1.067	101	101											
13C-PCB-95	2.38e+07	1.59	y	0.74	35:49	0.913	0.908-0.918	99.7	99.7	RS										
13C-PCB-97	2.31e+07	1.66	y	0.70	38:48	0.989	0.984-0.994	102	102		Name	Resp	RA	RRF	RT	Conc				
13C-PCB-101	2.54e+07	1.55	y	0.78	37:30	0.956	0.951-0.961	101	101		13C-PCB-15	7.65e+07	1.61	y	1.00	25:56	100			
13C-PCB-104	3.14e+07	1.62	y	1.00	32:39	0.832	0.828-0.836	97.3	97.3		13C-PCB-31	6.66e+07	1.08	y	1.00	28:58	100			
13C-PCB-105	4.00e+07	1.54	y	1.37	43:05	0.929	0.924-0.934	92.4	92.4		13C-PCB-60	5.38e+07	0.79	y	1.00	36:46	100			
13C-PCB-114	3.98e+07	1.57	y	1.36	42:13	0.910	0.905-0.915	92.1	92.1		13C-PCB-111	3.22e+07	1.64	y	1.00	39:14	100			
13C-PCB-118	3.15e+07	1.66	y	0.96	41:33	1.059	1.054-1.064	102	102		13C-PCB-128	3.17e+07	1.25	y	1.00	46:23	100			
13C-PCB-123	2.99e+07	1.65	y	0.89	41:22	1.054	1.050-1.060	104	104		13C-PCB-205	3.01e+07	0.92	y	1.00	54:02	100			
13C-PCB-126	3.81e+07	1.60	y	1.31	45:19	0.977	0.972-0.982	92.1	92.1											
13C-PCB-127	4.37e+07	1.54	y	1.47	43:25	0.936	0.931-0.941	93.6	93.6											
13C-PCB-138	3.37e+07	1.29	y	1.10	44:49	0.966	0.961-0.971	96.9	96.9											
13C-PCB-141	3.33e+07	1.29	y	1.07	43:58	0.948	0.943-0.953	97.8	97.8											
13C-PCB-153	3.57e+07	1.30	y	1.15	43:14	0.932	0.927-0.937	98.4	98.4											
13C-PCB-155	2.40e+07	1.36	y	0.84	37:03	0.944	0.939-0.949	89.0	89.0											
13C-PCB-156	3.95e+07	1.28	y	1.30	48:05	1.037	1.032-1.042	96.1	96.1											
13C-PCB-157	4.10e+07	1.31	y	1.36	48:21	1.042	1.038-1.048	95.2	95.2											
13C-PCB-159	3.85e+07	1.25	y	1.25	46:06	0.994	0.989-0.999	97.5	97.5											
13C-PCB-167	4.16e+07	1.28	y	1.35	46:47	1.009	1.004-1.014	97.2	97.2											
13C-PCB-169	3.87e+07	1.29	y	1.29	50:27	1.088	1.083-1.093	95.2	95.2											
13C-PCB-170	1.65e+07	0.47	y	0.54	50:48	1.095	1.089-1.101	96.0	96.0											
13C-PCB-180	1.99e+07	0.47	y	0.68	49:22	1.064	1.060-1.070	91.7	91.7											
13C-PCB-188	2.70e-07	0.47	y	0.92	42:51	0.924	0.919-0.929	93.0	93.0											
13C-PCB-189	2.14e+07	0.45	y	0.72	52:14	1.126	1.120-1.132	94.3	94.3											
13C-PCB-194	2.33e+07	0.90	y	0.80	53:45	0.995	0.990-1.000	97.2	97.2											
13C-PCB-202	2.32e+07	0.91	y	0.84	48:17	1.041	1.036-1.046	87.3	87.3											
13C-PCB-206	2.02e+07	0.75	y	0.65	55:25	1.026	1.021-1.031	103	103											
13C-PCB-208	3.20e+07	0.78	y	1.08	53:00	0.981	0.976-0.986	98.4	98.4											
13C-PCB-209	1.98e+07	1.27	y	0.61	56:44	1.050	1.045-1.055	108	108											

\* OK = within 1000 limits.  
 Dms 2/5/15

Analyst: Dms  
 Date: 2/4/15

Vista Analytical Laboratory - Injection Log Run file: 150204E1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150204E1	1	ST150204E1-1	DMS	4-FEB-15	08:33:38	ST150204E1-1	NA
150204E1	2	ST150204E1-2	DMS	4-FEB-15	09:37:36	ST150204E1-2	NA
150204E1	3	SOLVENT BLANK	DMS	4-FEB-15	10:41:35	NA	NA
150204E1	4	1400904-02RE1@10X	DMS	4-FEB-15	11:45:32	ST150204E1-1	NA
150204E1	5	1400904-04RE1@10X	DMS	4-FEB-15	12:49:30	ST150204E1-1	NA
150204E1	6	1400904-16RE1@10X	DMS	4-FEB-15	13:53:26	ST150204E1-1	NA
150204E1	7	1400904-17RE1@10X	DMS	4-FEB-15	14:57:27	ST150204E1-1	NA
150204E1	8	1400904-18RE1@20X	DMS	4-FEB-15	16:01:28	ST150204E1-1	NA
150204E1	9	1400904-20RE1@10X	DMS	4-FEB-15	17:05:30	ST150204E1-1	NA
150204E1	10	1500116-02@20X	DMS	4-FEB-15	18:09:30	ST150204E1-2	NA
150204E1	11	SOLVENT BLANK	DMS	4-FEB-15	19:13:29	NA	NA
150204E1	12	SOLVENT BLANK	DMS	4-FEB-15	20:17:26	NA	NA

## CALIBRATION STANDARDS REVIEW CHECKLIST

 Beg. Calibration ID: ST150204E1-2

 End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>		<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox" value="NA"/>	Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	<input checked="" type="checkbox"/>	<input type="checkbox" value="NA"/>
Concentration within range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TCDD/TCDF valleys < 25%?	<input type="checkbox" value="NA"/>	<input type="checkbox" value="NA"/>
First and last eluters present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Peaks integrated correctly?	<input type="checkbox" value="NA"/>	<input type="checkbox"/>
Retention Times within criteria?	<input checked="" type="checkbox" value="DMS 2/5/15"/>	<input type="checkbox"/>	Manual integrations included?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8280 CS1 Ending Standard		<input type="checkbox"/>
Forms signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-Ratios within limits		<input type="checkbox"/>
Correct ICAL referenced?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-S/N > 2.5:1		<input type="checkbox"/>
Run Log:			-CS1 within 12-hour clock		<input checked="" type="checkbox"/>
-Data file matches Conc Cal ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Comments:</i>   		
-Correct instrument listed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
-Samples within 12-hour clock?	<input checked="" type="checkbox"/>	<input type="checkbox" value="n"/>			

 Reviewed by: *[Signature]* 2/5/15  
*Initials & Date*

\* Ending standard criteria applicable to 8290 only.

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150205E1-1      Instrument ID: VG-8

Initial Calibration Date: 6-23-14      ICal ID: pcbvg8-6-23-14      GC Column ID: ZB-1

VER Data Filename: 150205E1    S#1    Analysis Date: 5-FEB-15 Time: 09:00:21

ANALYTES	ION	QC	PASS	CONC.	CONC.	ANALYTES	ION	QC	PASS	CONC.	CONC.
	ABUND.	LIMITS		FOUND			RANGE	ABUND.		LIMITS	
	RATIO			(ng/mL)			RATIO			(ng/mL)	
PCB-1	2.98	2.66-3.60	y	44.2	37.5-62.5	PCB-52/69	0.76	0.65-0.89	y	104.3	75.0-125
PCB-2	3.00	2.66-3.60	y	43.5	37.5-62.5	PCB-73	0.77	0.65-0.89	y	45.9	37.5-62.5
PCB-3	2.98	2.66-3.60	y	43.2	37.5-62.5	PCB-43/49	0.78	0.65-0.89	y	99.5	75.0-125
PCB-4/10	1.65	1.33-1.79	y	198.0	150-250	PCB-47	0.75	0.65-0.89	y	47.9	37.5-62.5
PCB-7/9	1.64	1.33-1.79	y	198.6	150-250	PCB-48/75	0.76	0.65-0.89	y	106.8	75.0-125
PCB-6	1.62	1.33-1.79	y	97.0	75.0-125	PCB-65	0.76	0.65-0.89	y	52.8	37.5-62.5
PCB-5/8	1.63	1.33-1.79	y	198.1	150-250	PCB-62	0.77	0.65-0.89	y	51.6	37.5-62.5
PCB-14	1.64	1.33-1.79	y	100.8	75.0-125	PCB-44	0.80	0.65-0.89	y	52.8	37.5-62.5
PCB-11	1.66	1.33-1.79	y	100.0	75.0-125	PCB-42/59	0.77	0.65-0.89	y	104.6	75.0-125
PCB-12/13	1.65	1.33-1.79	y	196.9	150-250	PCB-41/64/71/72	0.78	0.65-0.89	y	205.6	150-250
PCB-15	1.65	1.33-1.79	y	99.1	75.0-125	PCB-68	0.78	0.65-0.89	y	51.4	37.5-62.5
PCB-19	1.05	0.88-1.20	y	48.4	37.5-62.5	PCB-40	0.76	0.65-0.89	y	54.3	37.5-62.5
PCB-30	1.05	0.88-1.20	y	47.5	37.5-62.5	PCB-57	0.78	0.65-0.89	y	51.2	37.5-62.5
PCB-18	1.04	0.88-1.20	y	50.1	37.5-62.5	PCB-67	0.76	0.65-0.89	y	49.2	37.5-62.5
PCB-17	1.05	0.88-1.20	y	49.2	37.5-62.5	PCB-58	0.79	0.65-0.89	y	52.7	37.5-62.5
PCB-24/27	1.05	0.88-1.20	y	97.9	75.0-125	PCB-63	0.77	0.65-0.89	y	50.2	37.5-62.5
PCB-16/32	1.05	0.88-1.20	y	98.0	75.0-125	PCB-74	0.79	0.65-0.89	y	49.2	37.5-62.5
PCB-34	1.06	0.88-1.20	y	49.9	37.5-62.5	PCB-61/70	0.79	0.65-0.89	y	104.3	75.0-125
PCB-23	1.07	0.88-1.20	y	55.2	37.5-62.5	PCB-76/66	0.76	0.65-0.89	y	100.8	75.0-125
PCB-29	1.08	0.88-1.20	y	53.7	37.5-62.5	PCB-80	0.78	0.65-0.89	y	51.7	37.5-62.5
PCB-26	1.09	0.88-1.20	y	53.6	37.5-62.5	PCB-55	0.77	0.65-0.89	y	52.3	37.5-62.5
PCB-25	1.09	0.88-1.20	y	56.1	37.5-62.5	PCB-56/60	0.77	0.65-0.89	y	103.7	75.0-125
PCB-31	1.06	0.88-1.20	y	54.0	37.5-62.5	PCB-79	0.80	0.65-0.89	y	51.4	37.5-62.5
PCB-28	1.09	0.88-1.20	y	54.3	37.5-62.5	PCB-78	0.77	0.65-0.89	y	49.5	37.5-62.5
PCB-20/21/33	1.07	0.88-1.20	y	168.8	112.5-225	PCB-81	0.76	0.65-0.89	y	49.9	37.5-62.5
PCB-22	1.06	0.88-1.20	y	54.4	37.5-62.5	PCB-77	0.80	0.65-0.89	y	51.5	37.5-62.5
PCB-36	1.07	0.88-1.20	y	52.4	37.5-62.5	PCB-104	1.62	1.32-1.78	y	53.0	37.5-62.5
PCB-39	1.07	0.88-1.20	y	53.3	37.5-62.5	PCB-96	1.61	1.32-1.78	y	51.9	37.5-62.5
PCB-38	1.07	0.88-1.20	y	49.4	37.5-62.5	PCB-103	1.60	1.32-1.78	y	52.7	37.5-62.5
PCB-35	1.07	0.88-1.20	y	55.7	37.5-62.5	PCB-100	1.62	1.32-1.78	y	53.4	37.5-62.5
PCB-37	1.08	0.88-1.20	y	53.2	37.5-62.5	PCB-94	1.62	1.32-1.78	y	51.6	37.5-62.5
PCB-54	0.78	0.65-0.89	y	50.0	37.5-62.5	PCB-95/98/102	1.58	1.32-1.78	y	156.5	112.5-225
PCB-50	0.77	0.65-0.89	y	50.9	37.5-62.5	PCB-93	1.67	1.32-1.78	y	57.4	37.5-62.5
PCB-53	0.76	0.65-0.89	y	50.9	37.5-62.5	PCB-88/91	1.61	1.32-1.78	y	116.6	75.0-125
PCB-51	0.76	0.65-0.89	y	49.7	37.5-62.5	PCB-121	1.63	1.32-1.78	y	48.2	37.5-62.5
PCB-45	0.78	0.65-0.89	y	51.0	37.5-62.5						
PCB-46	0.77	0.65-0.89	y	51.1	37.5-62.5						

Analyst: Dms

Date: 2/9/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150205E1-1      Instrument ID: VG-8

Initial Calibration Date: 6-23-14      ICal ID: pcbvg8-6-23-14      GC Column ID: ZB-1

VER Data Filename: 150205E1    S#1    Analysis Date: 5-FEB-15 Time: 09:00:21

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.62	1.32-1.78	y	105.1	75.0-125	PCB-140	1.27	1.05-1.43	y	55.8	37.5-62.5
PCB-89	1.62	1.32-1.78	y	52.4	37.5-62.5	PCB-134/143	1.23	1.05-1.43	y	98.5	75.0-125
PCB-90/101	1.58	1.32-1.78	y	104.6	75.0-125	PCB-133/142	1.24	1.05-1.43	y	98.1	75.0-125
PCB-113	1.56	1.32-1.78	y	50.2	37.5-62.5	PCB-131	1.22	1.05-1.43	y	47.9	37.5-62.5
PCB-99	1.61	1.32-1.78	y	56.8	37.5-62.5	PCB-146/165	1.24	1.05-1.43	y	95.4	75.0-125
PCB-119	1.59	1.32-1.78	y	51.7	37.5-62.5	PCB-132/161	1.23	1.05-1.43	y	95.4	75.0-125
PCB-108/112	1.62	1.32-1.78	y	104.2	75.0-125	PCB-153	1.23	1.05-1.43	y	48.3	37.5-62.5
PCB-83	1.59	1.32-1.78	y	50.4	37.5-62.5	PCB-168	1.24	1.05-1.43	y	48.5	37.5-62.5
PCB-97	1.64	1.32-1.78	y	50.8	37.5-62.5	PCB-141	1.25	1.05-1.43	y	47.9	37.5-62.5
PCB-86	1.60	1.32-1.78	y	58.5	37.5-62.5	PCB-137	1.22	1.05-1.43	y	50.5	37.5-62.5
PCB-87/117/125	1.59	1.32-1.78	y	153.9	112.5-225	PCB-130	1.26	1.05-1.43	y	47.3	37.5-62.5
PCB-111/115	1.59	1.32-1.78	y	104.3	75.0-125	PCB-138/163/164	1.21	1.05-1.43	y	142.0	112.5-225
PCB-85/116	1.60	1.32-1.78	y	98.6	75.0-125	PCB-158/160	1.22	1.05-1.43	y	97.8	75.0-125
PCB-120	1.60	1.32-1.78	y	50.5	37.5-62.5	PCB-129	1.20	1.05-1.43	y	49.3	37.5-62.5
PCB-110	1.60	1.32-1.78	y	52.0	37.5-62.5	PCB-166	1.23	1.05-1.43	y	47.7	37.5-62.5
PCB-82	1.60	1.32-1.78	y	53.0	37.5-62.5	PCB-159	1.21	1.05-1.43	y	47.6	37.5-62.5
PCB-124	1.58	1.32-1.78	y	50.7	37.5-62.5	PCB-128/162	1.20	1.05-1.43	y	94.5	75.0-125
PCB-107/109	1.62	1.32-1.78	y	104.3	75.0-125	PCB-167	1.22	1.05-1.43	y	49.1	37.5-62.5
PCB-123	1.60	1.32-1.78	y	51.4	37.5-62.5	PCB-156	1.25	1.05-1.43	y	49.2	37.5-62.5
PCB-106/118	1.61	1.32-1.78	y	104.2	75.0-125	PCB-157	1.22	1.05-1.43	y	48.3	37.5-62.5
PCB-114	1.64	1.32-1.78	y	52.1	37.5-62.5	PCB-169	1.24	1.05-1.43	y	46.6	37.5-62.5
PCB-122	1.62	1.32-1.78	y	51.6	37.5-62.5	PCB-188	1.07	0.89-1.21	y	50.0	37.5-62.5
PCB-105	1.63	1.32-1.78	y	52.6	37.5-62.5	PCB-184	1.07	0.89-1.21	y	50.3	37.5-62.5
PCB-127	1.64	1.32-1.78	y	52.4	37.5-62.5	PCB-179	1.06	0.89-1.21	y	49.4	37.5-62.5
PCB-126	1.64	1.32-1.78	y	53.9	37.5-62.5	PCB-176	1.06	0.89-1.21	y	48.4	37.5-62.5
PCB-155	1.28	1.05-1.43	y	51.5	37.5-62.5	PCB-186	1.07	0.89-1.21	y	49.7	37.5-62.5
PCB-150	1.32	1.05-1.43	y	53.1	37.5-62.5	PCB-178	1.06	0.89-1.21	y	49.7	37.5-62.5
PCB-152	1.29	1.05-1.43	y	51.3	37.5-62.5	PCB-175	1.05	0.89-1.21	y	52.2	37.5-62.5
PCB-145	1.32	1.05-1.43	y	51.9	37.5-62.5	PCB-182/187	1.05	0.89-1.21	y	98.9	75.0-125
PCB-136	1.29	1.05-1.43	y	54.6	37.5-62.5	PCB-183	1.07	0.89-1.21	y	49.0	37.5-62.5
PCB-148	1.28	1.05-1.43	y	50.2	37.5-62.5	PCB-185	1.07	0.89-1.21	y	48.6	37.5-62.5
PCB-154	1.22	1.05-1.43	y	54.0	37.5-62.5	PCB-174	1.06	0.89-1.21	y	49.2	37.5-62.5
PCB-151	1.31	1.05-1.43	y	54.5	37.5-62.5	PCB-181	1.06	0.89-1.21	y	51.1	37.5-62.5
PCB-135	1.28	1.05-1.43	y	51.6	37.5-62.5	PCB-177	1.04	0.89-1.21	y	50.8	37.5-62.5
PCB-144	1.31	1.05-1.43	y	58.7	37.5-62.5	PCB-171	1.05	0.89-1.21	y	49.8	37.5-62.5
PCB-147	1.29	1.05-1.43	y	53.7	37.5-62.5	PCB-173	1.05	0.89-1.21	y	50.4	37.5-62.5
PCB-139/149	1.28	1.05-1.43	y	107.1	75.0-125	PCB-172	1.09	0.89-1.21	y	50.1	37.5-62.5

Analyst: *Dmf*

Date: *2/9/15*



NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150205E1-1      Instrument ID: VG-8

Initial Calibration Date: 6-23-14      ICal ID: pcbvg8-6-23-14      GC Column ID: ZB-1

VER Data Filename: 150205E1    S#1    Analysis Date: 5-FEB-15 Time: 09:00:21

ANALYTES	ION	QC	PASS	CONC.	CONC.
	ABUND.	LIMITS		FOUND	RANGE
	RATIO			(ng/mL)	
PCB-192	1.06	0.89-1.21	y	50.8	37.5-62.5
PCB-180	1.08	0.89-1.21	y	49.7	37.5-62.5
PCB-193	1.07	0.89-1.21	y	48.7	37.5-62.5
PCB-191	1.07	0.89-1.21	y	48.7	37.5-62.5
PCB-170	1.04	0.89-1.21	y	50.9	37.5-62.5
PCB-190	1.08	0.89-1.21	y	49.3	37.5-62.5
PCB-189	1.03	0.89-1.21	y	48.8	37.5-62.5
PCB-202	0.92	0.76-1.02	y	49.4	37.5-62.5
PCB-201	0.90	0.76-1.02	y	50.2	37.5-62.5
PCB-204	0.92	0.76-1.02	y	48.2	37.5-62.5
PCB-197	0.88	0.76-1.02	y	49.6	37.5-62.5
PCB-200	0.89	0.76-1.02	y	49.7	37.5-62.5
PCB-198	0.89	0.76-1.02	y	52.1	37.5-62.5
PCB-199	0.89	0.76-1.02	y	49.4	37.5-62.5
PCB-196/203	0.90	0.76-1.02	y	101.3	75.0-125
PCB-195	0.91	0.76-1.02	y	47.2	37.5-62.5
PCB-194	0.91	0.76-1.02	y	48.3	37.5-62.5
PCB-205	0.94	0.76-1.02	y	48.8	37.5-62.5
PCB-208	1.35	1.14-1.54	y	50.8	37.5-62.5
PCB-207	1.35	1.14-1.54	y	52.5	37.5-62.5
PCB-206	1.34	1.14-1.54	y	50.5	37.5-62.5
PCB-209	1.18	0.99-1.33	y	51.4	37.5-62.5

Analyst: Dms

Date: 2/9/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150205E1-1      Instrument ID: VG-8

Initial Calibration Date: 6-23-14      ICal ID: pcbvg8-6-23-14      GC Column ID: ZB-1

VER Data Filename: 150205E1    S#1    Analysis Date: 5-FEB-15 Time: 09:00:21

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. CONC. FOUND	CONC. RANGE (ng/mL)	LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.27	2.66-3.60	y	116.5	50.0-145	13C-PCB-169	1.30	1.05-1.43	y	101.3	50 - 145
13C-PCB-3	3.23	2.66-3.60	y	116.6	50.0-145	13C-PCB-188	0.43	0.38-0.52	y	93.3	50 - 145
13C-PCB-4	1.60	1.33-1.79	y	104.3	50.0-145	13C-PCB-180	0.46	0.38-0.52	y	96.6	50 - 145
13C-PCB-9	1.60	1.33-1.79	y	102.0	50.0-145	13C-PCB-170	0.47	0.38-0.52	y	97.0	50 - 145
13C-PCB-11	1.57	1.33-1.79	y	100.0	50.0-145	13C-PCB-189	0.46	0.38-0.52	y	96.9	50 - 145
13C-PCB-19	1.08	0.88-1.20	y	102.0	50.0-145	13C-PCB-202	0.94	0.76-1.02	y	89.1	50 - 145
13C-PCB-32	1.08	0.88-1.20	y	97.9	50.0-145	13C-PCB-194	0.89	0.76-1.02	y	100.1	50 - 145
13C-PCB-28	1.07	0.88-1.20	y	97.4	50.0-145	13C-PCB-208	0.77	0.65-0.89	y	93.2	50 - 145
13C-PCB-37	1.06	0.88-1.20	y	102.4	50.0-145	13C-PCB-206	0.80	0.65-0.89	y	105.0	50 - 145
13C-PCB-54	0.81	0.65-0.89	y	93.8	50.0-145	13C-PCB-209	1.23	0.99-1.33	y	115.4	50 - 145
13C-PCB-52	0.80	0.65-0.89	y	98.1	50.0-145						
13C-PCB-47	0.80	0.65-0.89	y	96.2	50.0-145						
13C-PCB-70	0.79	0.65-0.89	y	98.4	50.0-145						
13C-PCB-80	0.82	0.65-0.89	y	97.4	50.0-145						
13C-PCB-81	0.80	0.65-0.89	y	99.0	50.0-145						
13C-PCB-77	0.81	0.65-0.89	y	97.5	50.0-145						
13C-PCB-104	1.61	1.32-1.78	y	97.5	50.0-145						
13C-PCB-95	1.60	1.32-1.78	y	97.6	50.0-145						
13C-PCB-101	1.64	1.32-1.78	y	97.8	50.0-145	CRS vs. RS					
13C-PCB-97	1.62	1.32-1.78	y	101.2	50.0-145						
13C-PCB-123	1.63	1.32-1.78	y	102.2	50.0-145	13C-PCB-79	0.80	0.65-0.89	y	99.0	75 - 125
13C-PCB-118	1.57	1.32-1.78	y	100.2	50.0-145	13C-PCB-178	0.48	0.38-0.52	y	94.7	75 - 125
13C-PCB-114	1.62	1.32-1.78	y	93.4	50.0-145						
13C-PCB-105	1.57	1.32-1.78	y	90.5	50.0-145						
13C-PCB-127	1.63	1.32-1.78	y	90.4	50.0-145						
13C-PCB-126	1.58	1.32-1.78	y	93.3	50.0-145						
13C-PCB-155	1.31	1.05-1.43	y	83.3	50.0-145						
13C-PCB-153	1.27	1.05-1.43	y	97.1	50.0-145						
13C-PCB-141	1.28	1.05-1.43	y	95.5	50.0-145						
13C-PCB-138	1.30	1.05-1.43	y	97.5	50.0-145						
13C-PCB-159	1.30	1.05-1.43	y	99.1	50.0-145						
13C-PCB-167	1.28	1.05-1.43	y	98.1	50.0-145						
13C-PCB-156	1.28	1.05-1.43	y	99.9	50.0-145						
13C-PCB-157	1.28	1.05-1.43	y	97.1	50.0-145						

Analyst: Dms

Date: 2/19/15

Client ID: PCB CS3 14K1102  
Lab ID: ST150205E1-1

Filename: 150205E1 S:1 Acq: 5-FEB-15 09:00:21  
GC Column ID: ZB-1 ICAL: pcbvg8-6-23-14 wt/vol: 1.0000 EndCAL: NA

ConCal: ST150205E1-1

Page 1 of 6

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-1	4.89e+07	2.98	y	1.19	16:09	1.001	0.996-1.006	44.2040	PCB-52/69	6.97e+07	0.76	y	1.28	31:31	1.001	0.996-1.006	104.265
PCB-2	5.00e+07	3.00	y	1.18	18:31	0.988	0.984-0.994	43.5057	PCB-73	3.24e+07	0.77	y	1.35	31:38	1.005	1.000-1.010	45.8638
PCB-3	5.98e+07	2.98	y	1.43	18:45	1.001	0.996-1.006	43.2440	PCB-43/49	5.17e+07	0.78	y	0.99	31:48	1.010	1.005-1.015	99.5463
									PCB-47	2.73e+07	0.75	y	1.06	31:60	1.001	0.996-1.006	47.9433
PCB-4/10	1.73e+08	1.65	y	1.57	20:07	1.003	0.997-1.007	197.966	PCB-48/75	7.06e+07	0.76	y	1.23	32:07	1.004	0.999-1.009	106.755
PCB-7/9	2.01e+08	1.64	y	1.21	21:53	0.868	0.866-0.874	198.623	PCB-65	3.48e+07	0.76	y	1.22	32:23	1.013	1.008-1.018	52.7763
PCB-6	1.06e+08	1.62	y	1.30	22:31	0.893	0.890-0.899	97.0445	PCB-62	3.40e+07	0.77	y	1.22	32:30	1.016	1.011-1.021	51.6427
PCB-5/8	1.90e+08	1.63	y	1.15	22:57	0.910	0.907-0.917	198.052	PCB-44	2.45e+07	0.80	y	0.86	32:48	1.025	1.021-1.031	52.7941
PCB-14	9.57e+07	1.64	y	1.11	24:02	0.953	0.949-0.959	100.771	PCB-42/59	6.41e+07	0.77	y	1.14	33:01	1.033	1.028-1.038	104.617
PCB-11	9.30e+07	1.66	y	1.09	25:13	1.000	0.995-1.005	100.024	PCB-41/64/71/72	1.34e+08	0.78	y	1.21	33:37	1.051	1.046-1.056	205.623
PCB-12/13	2.01e+08	1.65	y	1.19	25:37	1.016	1.011-1.021	196.924	PCB-68	3.73e+07	0.78	y	1.35	33:52	1.059	1.054-1.064	51.4396
PCB-15	1.09e+08	1.65	y	1.28	25:56	1.029	1.023-1.033	99.0549	PCB-40	2.05e+07	0.76	y	0.70	34:05	1.066	1.061-1.071	54.2717
									PCB-57	3.39e+07	0.78	y	0.98	34:27	0.970	0.965-0.975	51.2063
PCB-19	2.50e+07	1.05	y	1.04	24:13	1.001	0.996-1.006	48.3657	PCB-67	3.68e+07	0.76	y	1.11	34:45	0.979	0.974-0.984	49.1597
PCB-30	4.02e+07	1.05	y	1.71	25:06	1.038	1.032-1.042	47.4557	PCB-58	3.31e+07	0.79	y	0.93	34:52	0.982	0.977-0.987	52.6748
PCB-18	2.79e+07	1.04	y	0.78	25:51	0.954	0.949-0.959	50.1458	PCB-63	3.23e+07	0.77	y	0.95	35:01	0.986	0.982-0.992	50.1790
PCB-17	3.23e+07	1.05	y	0.92	26:01	0.960	0.956-0.966	49.1995	PCB-74	4.14e+07	0.79	y	1.24	35:19	0.995	0.990-1.000	49.2341
PCB-24/27	8.28e+07	1.05	y	1.19	26:36	0.981	0.977-0.987	97.8671	PCB-61/70	6.73e+07	0.79	y	0.95	35:29	1.000	0.995-1.005	104.334
PCB-16/32	6.55e+07	1.05	y	0.94	27:07	1.000	0.995-1.005	97.9906	PCB-76/66	7.13e+07	0.76	y	1.04	35:42	1.006	1.001-1.011	100.794
PCB-34	4.37e+07	1.06	y	1.14	27:54	0.960	0.955-0.965	49.8873	PCB-80	4.27e+07	0.78	y	1.19	35:56	1.001	0.996-1.006	51.6676
PCB-23	5.44e+07	1.07	y	1.28	27:59	0.963	0.959-0.969	55.1711	PCB-55	3.78e+07	0.77	y	1.04	36:16	1.009	1.005-1.015	52.3161
PCB-29	4.47e+07	1.08	y	1.08	28:15	0.972	0.967-0.977	53.7440	PCB-56/60	7.26e+07	0.77	y	1.01	36:45	1.023	1.019-1.029	103.724
PCB-26	4.99e+07	1.09	y	1.21	28:28	0.979	0.974-0.984	53.6246	PCB-79	3.84e+07	0.80	y	1.08	37:49	1.053	1.048-1.058	51.3632
PCB-25	5.46e+07	1.09	y	1.26	28:37	0.985	0.979-0.989	56.1301	PCB-78	3.95e+07	0.77	y	1.27	38:31	0.987	0.982-0.992	49.4519
PCB-31	5.35e+07	1.06	y	1.28	28:59	0.997	0.992-1.002	54.0330	PCB-81	4.18e+07	0.76	y	1.33	39:03	1.000	0.995-1.005	49.9321
PCB-28	7.16e+07	1.09	y	1.71	29:04	1.000	0.995-1.005	54.2756	PCB-77	3.59e+07	0.80	y	1.10	39:38	1.000	0.995-1.005	51.4536
PCB-20/21/33	1.41e+08	1.07	y	1.08	29:42	1.022	1.017-1.027	168.751									
PCB-22	5.07e+07	1.06	y	1.21	30:08	1.037	1.032-1.042	54.3984	PCB-104	2.56e+07	1.62	y	1.18	32:39	1.001	0.996-1.006	53.0238
PCB-36	4.37e+07	1.07	y	1.14	30:45	0.933	0.928-0.938	52.3510	PCB-96	2.41e+07	1.61	y	1.14	33:55	1.039	1.034-1.044	51.8946
PCB-39	4.34e+07	1.07	y	1.12	31:14	0.948	0.943-0.953	53.3094	PCB-103	2.06e+07	1.60	y	0.96	34:27	1.056	1.050-1.060	52.7405
PCB-38	4.33e+07	1.07	y	1.20	32:00	0.971	0.966-0.976	49.4301	PCB-100	2.04e+07	1.62	y	0.94	34:48	1.066	1.061-1.071	53.4401
PCB-35	5.01e+07	1.07	y	1.23	32:31	0.987	0.982-0.992	55.7127	PCB-94	1.65e+07	1.62	y	1.06	35:17	0.986	0.980-0.990	51.5714
PCB-37	4.78e+07	1.08	y	1.23	32:57	1.000	0.995-1.005	53.2390	PCB-95/98/102	5.79e+07	1.58	y	1.22	35:46	0.999	0.995-1.005	156.535
									PCB-93	1.46e+07	1.67	y	0.84	35:54	1.003	0.997-1.007	57.3905
PCB-54	3.46e+07	0.78	y	1.10	27:58	1.001	0.996-1.006	50.0266	PCB-88/91	3.93e+07	1.61	y	1.12	36:11	1.011	1.005-1.015	116.593
PCB-50	2.81e+07	0.77	y	0.88	29:08	1.042	1.037-1.047	50.8730	PCB-121	2.35e+07	1.63	y	1.62	36:18	1.014	1.009-1.019	48.2118
PCB-53	2.83e+07	0.76	y	1.06	29:46	0.946	0.942-0.952	50.9438	PCB-84/92	3.52e+07	1.62	y	1.05	37:07	0.990	0.985-0.995	105.086
PCB-51	2.57e+07	0.76	y	0.99	30:07	0.957	0.952-0.962	49.7183	PCB-89	1.90e+07	1.62	y	1.13	37:18	0.995	0.991-1.001	52.4369
PCB-45	2.30e+07	0.78	y	0.86	30:33	0.971	0.966-0.976	50.9773									
PCB-46	2.25e+07	0.77	y	0.85	31:02	0.986	0.981-0.991	51.1100									

RL: MONO, TRI - DECA: \_\_\_\_\_

RL: DI : \_\_\_\_\_

Integrations

by

Analyst: Dms

Date: 2/9/15

Reviewed

by

Analyst: [Signature]

Date: 2/16/15

Client ID: PCB CS3 14K1102  
Lab ID: ST150205E1-1

Filename: 150205E1 S:1 Acq: 5-FEB-15 09:00:21  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 1.0000 EndCAL: NA

ConCal: ST150205E1-1

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-90/101	3.69e+07	1.58	y	1.10	37:29	1.000	0.995-1.005	104.641	PCB-133/142	3.57e+07	1.24	y	0.82	42:26	0.982	0.977-0.987	98.1263
PCB-113	2.27e+07	1.56	y	1.41	37:43	1.006	1.002-1.012	50.1899	PCB-131	1.93e+07	1.22	y	0.91	42:35	0.985	0.981-0.991	47.8661
PCB-99	2.43e+07	1.61	y	1.34	37:49	1.009	1.004-1.014	56.8193	PCB-146/165	5.29e+07	1.24	y	1.25	42:49	0.991	0.986-0.996	95.3967
PCB-119	2.36e+07	1.59	y	1.53	38:18	0.987	0.982-0.992	51.7068	PCB-132/161	4.69e+07	1.23	y	1.10	43:04	0.997	0.992-1.002	95.4059
PCB-108/112	3.97e+07	1.62	y	1.28	38:27	0.991	0.986-0.996	104.172	PCB-153	2.68e+07	1.23	y	1.25	43:13	1.000	0.995-1.005	48.2582
PCB-83	2.28e+07	1.59	y	1.52	38:37	0.996	0.990-1.000	50.4141	PCB-168	3.13e+07	1.24	y	1.45	43:26	1.005	1.001-1.011	48.5037
PCB-97	1.79e+07	1.64	y	1.18	38:48	1.000	0.995-1.005	50.8246	PCB-141	2.13e+07	1.25	y	1.09	43:58	1.000	0.995-1.005	47.8793
PCB-86	1.47e+07	1.60	y	0.84	38:56	1.004	0.999-1.009	58.5206	PCB-137	2.20e+07	1.22	y	1.06	44:21	1.009	1.004-1.014	50.5202
B-87/117/125	7.11e+07	1.59	y	1.55	39:04	1.007	1.002-1.012	153.889	PCB-130	1.87e+07	1.26	y	0.96	44:27	1.011	1.006-1.016	47.2947
PCB-111/115	5.08e+07	1.59	y	1.63	39:14	1.012	1.006-1.016	104.326	PCB-138/163/164	7.86e+07	1.21	y	1.29	44:50	1.001	0.996-1.006	142.029
PCB-85/116	3.83e+07	1.60	y	1.30	39:22	1.015	1.010-1.020	98.5982	PCB-158/160	5.62e+07	1.22	y	1.34	45:04	1.006	1.001-1.011	97.8285
PCB-120	2.52e+07	1.60	y	1.68	39:36	1.021	1.016-1.026	50.4761	PCB-129	1.80e+07	1.20	y	0.85	45:19	1.012	1.007-1.017	49.2584
PCB-110	2.41e+07	1.60	y	1.56	39:44	1.024	1.020-1.030	51.9829	PCB-166	2.79e+07	1.23	y	1.19	45:46	0.993	0.988-0.998	47.6964
PCB-82	1.54e+07	1.60	y	0.76	40:23	0.977	0.971-0.981	53.0463	PCB-159	2.62e+07	1.21	y	1.11	46:05	1.000	0.996-1.006	47.6284
PCB-124	2.85e+07	1.58	y	1.47	41:02	0.992	0.988-0.998	50.6700	PCB-128/162	4.89e+07	1.20	y	1.05	46:23	1.006	1.002-1.012	94.4989
PCB-107/109	5.27e+07	1.62	y	1.32	41:11	0.996	0.991-1.001	104.269	PCB-167	3.12e+07	1.22	y	1.20	46:47	1.000	0.995-1.005	49.1441
PCB-123	2.29e+07	1.60	y	1.17	41:22	1.000	0.996-1.006	51.4287	PCB-156	2.89e+07	1.25	y	1.14	48:05	1.000	0.996-1.006	49.2321
- PCB-106/118	4.91e+07	1.61	y	1.17	41:34	1.001	0.996-1.006	104.202	PCB-157	2.96e+07	1.22	y	1.16	48:21	1.000	0.995-1.005	48.3285
- PCB-114	3.44e+07	1.64	y	1.30	42:13	1.000	0.995-1.005	52.0806	PCB-169	2.71e+07	1.24	y	1.12	50:27	1.000	0.995-1.005	46.6119
PCB-122	2.94e+07	1.62	y	1.12	42:21	1.004	0.999-1.009	51.6241									
PCB-105	3.37e+07	1.63	y	1.30	43:04	1.000	0.995-1.005	52.6346	PCB-188	2.71e+07	1.07	y	1.58	42:52	1.001	0.996-1.006	50.0023
PCB-127	3.72e+07	1.64	y	1.33	43:25	1.001	0.996-1.006	52.4037	PCB-184	2.81e+07	1.07	y	1.63	43:19	1.011	1.006-1.016	50.2856
PCB-126	3.10e+07	1.64	y	1.18	45:19	1.000	0.995-1.005	53.8807	PCB-179	2.20e+07	1.06	y	1.30	44:05	1.029	1.024-1.034	49.3979
									PCB-176	2.45e+07	1.06	y	1.48	44:33	1.040	1.035-1.045	48.4187
PCB-155	1.68e+07	1.28	y	1.11	37:03	1.001	0.966-1.006	51.5308	PCB-186	2.47e+07	1.07	y	1.45	45:10	1.054	1.050-1.060	49.6794
PCB-150	1.55e+07	1.32	y	1.00	38:19	1.035	1.030-1.040	53.1322	PCB-178	1.76e+07	1.06	y	1.03	45:40	1.066	1.061-1.071	49.7302
PCB-152	1.67e+07	1.29	y	1.12	38:47	1.048	1.043-1.053	51.2995	PCB-175	1.81e+07	1.05	y	1.01	46:01	1.074	1.069-1.079	52.2202
PCB-145	1.82e+07	1.32	y	1.20	39:14	1.060	1.055-1.065	51.9305	PCB-182/187	4.24e+07	1.05	y	1.25	46:11	1.078	1.073-1.083	98.9352
PCB-136	1.88e+07	1.29	y	1.18	39:33	1.068	1.064-1.074	54.6295	PCB-183	2.02e+07	1.07	y	1.21	46:30	1.085	1.081-1.091	48.9502
PCB-148	1.09e+07	1.28	y	0.74	39:39	1.071	1.066-1.076	50.2157	PCB-185	2.31e+07	1.07	y	1.80	47:10	0.956	0.951-0.961	48.6170
PCB-154	1.35e+07	1.22	y	0.86	40:09	1.084	1.080-1.090	53.9837	PCB-174	1.79e+07	1.06	y	1.38	47:31	0.963	0.958-0.968	49.2123
PCB-151	1.19e+07	1.31	y	0.75	40:48	1.102	1.097-1.107	54.4510	PCB-181	1.86e+07	1.06	y	1.38	47:38	0.965	0.960-0.970	51.1364
PCB-135	1.20e+07	1.28	y	0.79	41:00	1.107	1.103-1.113	51.6169	PCB-177	1.69e+07	1.04	y	1.26	47:48	0.969	0.963-0.973	50.8177
PCB-144	1.31e+07	1.31	y	0.76	41:07	1.110	1.105-1.117	58.7374	PCB-171	2.08e+07	1.05	y	1.58	48:06	0.975	0.970-0.980	49.7763
PCB-147	1.29e+07	1.29	y	0.82	41:15	1.114	1.109-1.121	53.6820	PCB-173	1.48e+07	1.05	y	1.11	48:31	0.983	0.978-0.988	50.3930
PCB-139/149	2.39e+07	1.28	y	0.76	41:31	1.121	1.116-1.128	107.126	PCB-172	2.16e+07	1.09	y	1.63	48:58	0.992	0.987-0.997	50.0622
- PCB-140	1.18e+07	1.27	y	0.72	41:42	1.126	1.121-1.133	55.8053	PCB-192	2.34e+07	1.06	y	1.74	49:10	0.996	0.991-1.001	50.8289
- PCB-134/143	4.02e+07	1.23	y	0.92	42:08	0.975	0.970-0.980	98.5009	PCB-180	1.76e+07	1.08	y	1.34	49:22	1.000	0.995-1.005	49.6723

Integrations

by

RL: MONO, TRI - DECA: \_\_\_\_\_

Analyst: *DMJ*

Date: *2/9/15*

Client ID: PCB CS3 14K1102  
Lab ID: ST150205E1-1

Filename: 150205E1 S:1 Acq: 5-FEB-15 09:00:21  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 1.0000

ConCal: ST150205E1-1  
EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-193	2.20e+07	1.07 y	1.72	49:34	1.004	0.999-1.009		48.6547
PCB-191	2.18e+07	1.07 y	1.69	49:48	1.009	1.004-1.014		48.7165
PCB-170	1.71e+07	1.04 y	1.60	50:48	1.000	0.995-1.005		50.8836
PCB-190	2.29e+07	1.08 y	2.21	50:58	1.004	0.998-1.008		49.3122
PCB-189	2.10e+07	1.03 y	1.55	52:15	1.000	0.995-1.005		48.8242
PCB-202	1.60e+07	0.92 y	1.08	48:17	1.000	0.995-1.005		49.4290
PCB-201	1.72e+07	0.90 y	1.15	48:47	1.011	1.005-1.015		50.1592
PCB-204	1.64e+07	0.92 y	1.14	48:56	1.014	1.008-1.018		48.2257
PCB-197	1.59e+07	0.88 y	1.07	49:15	1.020	1.015-1.025		49.6186
PCB-200	1.58e+07	0.89 y	1.06	50:05	1.038	1.032-1.044		49.6900
PCB-198	1.18e+07	0.89 y	0.76	51:22	1.064	1.059-1.069		52.1377
PCB-199	1.18e+07	0.89 y	0.80	51:22	1.064	1.061-1.071		49.3709
- PCB-196/203	2.42e+07	0.90 y	0.80	51:44	1.072	1.066-1.076		101.349
- PCB-195	1.91e+07	0.91 y	1.23	52:53	0.984	0.979-0.989		47.2263
PCB-194	1.93e+07	0.91 y	1.21	53:45	1.000	0.995-1.005		48.2965
PCB-205	2.48e+07	0.94 y	1.54	54:02	1.006	1.001-1.011		48.8254
PCB-208	1.97e+07	1.35 y	0.93	53:01	1.000	0.995-1.005		50.7741
PCB-207	2.37e+07	1.35 y	1.08	53:19	1.006	1.001-1.011		52.4942
PCB-206	1.46e+07	1.34 y	1.02	55:26	1.000	0.995-1.005		50.4673
PCB-209	1.75e+07	1.18 y	1.17	56:45	1.000	0.995-1.005		51.3623

Name	Resp	RA	RT	RRF	Conc
Total Mono-PCB	1.59e+08	2.98 y	16:09	1.27	130.954
Total Di-PCB	1.17e+09	1.65 y	20:07	1.21	1190.36
Total Tri-PCB	2.74e+08	1.05 y	24:13	1.10	391.024
Total Tetra-PCB	8.03e+08	1.06 y	27:54	1.21	875.983
Total Penta-PCB	1.40e+09	0.78 y	27:58	1.09	2166.52
Total Hexa-PCB	8.79e+08	1.62 y	32:39	1.18	2153.05
Total Hepta-PCB	1.77e+08	1.64 y	42:13	1.25	281.155
Total Octa-PCB	1.96e+08	1.28 y	37:03	0.90	748.140
Total Nona-PCB	7.01e+08	1.23 y	42:08	1.11	1375.78
Total Deca-PCB	5.09e+08	1.07 y	42:52	1.42	1206.54
	1.29e+08	0.92 y	48:17	0.96	438.782
	6.52e+07	0.91 y	52:53	1.33	148.762
	5.86e+07	1.35 y	53:01	1.01	155.489
	1.75e+07	1.18 y	56:45	1.17	51.3623

Total PCB Conc:11226.9989390

Integrations  
by  
Analyst: DMS  
Date: 2/9/15  
RL: MONO, TRI - DECA: \_\_\_\_\_

Client ID: PCB CS3 14K1102  
Lab ID: ST150205E1-1

Filename: 150205E1 S:1 Acq: 5-FEB-15 09:00:21  
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol:1.0000

ConCal: ST150205E1-1  
EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	9.28e+07	3.27 y	0.87	16:08	0.622	0.629-0.635	116	116	
13C-PCB-3	9.71e+07	3.23 y	0.91	18:44	0.723	0.725-0.733	117	117	
13C-PCB-4	5.59e+07	1.60 y	0.59	20:03	0.774	0.775-0.783	104	104	
13C-PCB-9	8.35e+07	1.60 y	0.90	21:50	0.843	0.842-0.850	102	102	
13C-PCB-11	8.57e+07	1.57 y	0.94	25:13	0.973	0.968-0.978	100	100	
13C-PCB-19	4.95e+07	1.08 y	0.53	24:12	0.934	0.930-0.940	102	102	
13C-PCB-28	7.71e+07	1.07 y	0.93	29:04	1.004	0.999-1.009	97.4	97.4	
13C-PCB-32	7.12e+07	1.08 y	0.80	27:06	1.046	1.040-1.050	97.9	97.9	
13C-PCB-37	7.30e+07	1.06 y	0.84	32:57	1.138	1.131-1.143	102	102	
13C-PCB-47	5.39e+07	0.80 y	0.81	31:59	0.871	0.866-0.874	96.2	96.2	
13C-PCB-52	5.22e+07	0.80 y	0.77	31:28	0.857	0.853-0.861	98.1	98.1	
13C-PCB-54	6.27e+07	0.81 y	0.97	27:57	0.761	0.758-0.766	93.8	93.8	
13C-PCB-70	6.77e+07	0.79 y	1.00	35:30	0.966	0.961-0.971	98.4	98.4	
13C-PCB-77	6.33e+07	0.81 y	0.94	39:37	1.078	1.073-1.083	97.5	97.5	
13C-PCB-80	6.93e+07	0.82 y	1.03	35:55	0.978	0.972-0.982	97.4	97.4	
13C-PCB-81	6.29e+07	0.80 y	0.92	39:02	1.062	1.057-1.067	99.0	99.0	
13C-PCB-95	3.02e+07	1.60 y	0.74	35:48	0.913	0.908-0.918	97.6	97.6	
13C-PCB-97	2.98e+07	1.62 y	0.70	38:47	0.989	0.984-0.994	101	101	
13C-PCB-101	3.20e+07	1.64 y	0.78	37:29	0.956	0.951-0.961	97.8	97.8	
13C-PCB-104	4.08e+07	1.61 y	1.00	32:38	0.832	0.828-0.836	97.5	97.5	
13C-PCB-105	4.94e+07	1.57 y	1.37	43:04	0.929	0.924-0.934	90.5	90.5	
13C-PCB-114	5.09e+07	1.62 y	1.36	42:12	0.910	0.905-0.915	93.4	93.4	
13C-PCB-118	4.02e+07	1.57 y	0.96	41:32	1.059	1.054-1.064	100	100	
13C-PCB-123	3.82e+07	1.63 y	0.89	41:21	1.054	1.050-1.060	102	102	
13C-PCB-126	4.88e+07	1.58 y	1.31	45:18	0.977	0.972-0.982	93.3	93.3	
13C-PCB-127	5.32e+07	1.63 y	1.47	43:24	0.936	0.931-0.941	90.4	90.4	
13C-PCB-138	4.28e+07	1.30 y	1.10	44:48	0.966	0.961-0.971	97.5	97.5	
13C-PCB-141	4.10e+07	1.28 y	1.07	43:57	0.948	0.943-0.953	95.5	95.5	
13C-PCB-153	4.45e+07	1.27 y	1.15	43:13	0.932	0.927-0.937	97.1	97.1	
13C-PCB-155	2.92e+07	1.31 y	0.84	37:01	0.944	0.939-0.949	83.3	83.3	
13C-PCB-156	5.18e+07	1.28 y	1.30	48:04	1.037	1.032-1.042	99.9	99.9	
13C-PCB-157	5.27e+07	1.28 y	1.36	48:20	1.043	1.038-1.048	97.1	97.1	
13C-PCB-159	4.94e+07	1.30 y	1.25	46:05	0.994	0.989-0.999	99.1	99.1	
13C-PCB-167	5.30e+07	1.28 y	1.35	46:46	1.009	1.004-1.014	98.1	98.1	
13C-PCB-169	5.20e+07	1.30 y	1.29	50:26	1.088	1.083-1.093	101	101	
13C-PCB-170	2.10e+07	0.47 y	0.54	50:47	1.095	1.089-1.101	97.0	97.0	
13C-PCB-180	2.64e+07	0.46 y	0.68	49:21	1.064	1.060-1.070	96.6	96.6	
13C-PCB-188	3.42e+07	0.43 y	0.92	42:50	0.924	0.919-0.929	93.3	93.3	
13C-PCB-189	2.78e+07	0.46 y	0.72	52:14	1.127	1.120-1.132	96.9	96.9	
13C-PCB-194	3.30e+07	0.89 y	0.80	53:44	0.995	0.990-1.000	100	100	
13C-PCB-202	2.98e+07	0.94 y	0.84	48:16	1.041	1.036-1.046	89.1	89.1	
13C-PCB-206	2.82e+07	0.80 y	0.65	55:25	1.026	1.021-1.031	105	105	
13C-PCB-208	4.16e+07	0.77 y	1.08	53:00	0.981	0.976-0.986	93.2	93.2	
13C-PCB-209	2.91e+07	1.23 y	0.61	56:44	1.050	1.045-1.055	115	115	

CRS vs. RS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	6.93e+07	0.80 y	1.02	37:48	1.029	1.023-1.034	99.0	99.0	
13C-PCB-178	2.32e+07	0.48 y	0.61	45:38	0.984	0.979-0.990	94.7	94.7	

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	6.93e+07	0.80 y	1.10	37:48	0.968	0.964-0.974	99.9	99.9	
13C-PCB-178	2.32e+07	0.48 y	0.90	45:38	0.925	0.920-0.930	97.9	97.9	

RS

Name	Resp	RA	RRF	RT	Conc
13C-PCB-15	9.13e+07	1.59 y	1.00	25:55	100
13C-PCB-31	8.48e+07	1.07 y	1.00	28:57	100
13C-PCB-60	6.89e+07	0.80 y	1.00	36:44	100
13C-PCB-111	4.18e+07	1.64 y	1.00	39:13	100
13C-PCB-128	4.00e+07	1.25 y	1.00	46:22	100
13C-PCB-205	4.13e+07	0.93 y	1.00	54:01	100

\* = OK within method limits.  
DMS 2/9/15

Analyst: DMS

Date: 2/9/15

Vista Analytical Laboratory - Injection Log Run file: 150205e1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150205E1	1	ST150205E1-1	dms	5-FEB-15	09:00:21	ST150205E1-1	NA
150205E1	2	B5A0115-BS1	dms	5-FEB-15	10:04:19	ST150205E1-1	NA
150205E1	3	SOLVENT BLANK	dms	5-FEB-15	11:08:18	ST150205E1-1	NA
150205E1	4	B5A0115-BLK1	dms	5-FEB-15	12:12:16	ST150205E1-1	NA
150205E1	5	1400970-02@10X	dms	5-FEB-15	13:16:16	ST150205E1-1	NA
150205E1	6	1400970-03@10X	dms	5-FEB-15	14:20:13	ST150205E1-1	NA
150205E1	7	1400970-04@10X	dms	5-FEB-15	15:24:13	ST150205E1-1	NA
150205E1	8	1500108-01@10X	dms	5-FEB-15	16:28:11	ST150205E1-1	NA
150205E1	9	1500108-02@10X	dms	5-FEB-15	17:32:09	ST150205E1-1	NA
150205E1	10	1500108-03@10X	dms	5-FEB-15	18:36:06	ST150205E1-1	NA
150205E1	11	1500116-01@10X	dms	5-FEB-15	19:40:04	ST150205E1-1	NA
150205E1	12	SOLVENT BLANK	dms	5-FEB-15	20:44:03	ST150205E1-1	NA

# CALIBRATION STANDARDS REVIEW CHECKLIST



Beg. Calibration ID: ST150205E1-1

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Concentration within range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
First and last eluters present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Retention Times within criteria?	<input checked="" type="checkbox"/> DMS 2/9/15	<input type="checkbox"/>
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forms signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Correct ICAL referenced?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Run Log:		
-Data file matches Conc Cal ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-Correct instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/> n
-Samples within 12-hour clock?	<input checked="" type="checkbox"/> y	<input type="checkbox"/> n

	<u>Beg.</u>	<u>End</u>
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	<input checked="" type="checkbox"/>	<input type="checkbox"/> *
TCDD/TCDF valleys < 25%?	<input type="checkbox"/> NA	<input type="checkbox"/> NA
Peaks integrated correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Manual integrations included?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8280 CS1 Ending Standard		<input type="checkbox"/>
-Ratios within limits		<input type="checkbox"/>
-S/N > 2.5:1		<input type="checkbox"/>
-CS1 within 12-hour clock		<input checked="" type="checkbox"/>

Comments: \* Lost S105 connection only 1st function RES. check PRINTED. DMS 2/9/15

Reviewed by: [Signature] 2/11/15  
Initials & Date

\* Ending standard criteria applicable to 8290 only.



## **INITIAL CALIBRATION**

Run: 140623E2

Analyte: PCBNEW

Cal: PCBVG8-6-23-14

Inst. ID: VG R

Data filename: 140623E2

Name	Mean RRF	%RSD	Samp# 1	Samp# 2	Samp# 3	Samp# 4	Samp# 5	Samp# 6
			0.25	1.0	2.5	50	400	750
PCB-1	1.19	8.06 %	1.04	1.13	1.18	1.23	1.29	1.29
PCB-2	1.18	7.35 %	1.05	1.12	1.16	1.23	1.28	1.26
PCB-3	1.43	5.11 %	1.34	1.37	1.37	1.46	1.49	1.51
PCB-4/10	1.57	2.14 %	1.53	1.54	1.55	1.57	1.60	1.62
PCB-7/9	1.21	2.44 %	1.22	1.17	1.19	1.21	1.22	1.26
PCB-6	1.30	2.87 %	1.25	1.28	1.31	1.31	1.34	1.35
PCB-5/8	1.15	2.31 %	1.13	1.12	1.15	1.15	1.16	1.19
PCB-14	1.11	3.28 %	1.05	1.09	1.11	1.14	1.12	1.15
PCB-11	1.09	2.23 %	1.05	1.09	1.07	1.10	1.09	1.12
PCB-12/13	1.19	2.18 %	1.17	1.17	1.18	1.20	1.20	1.24
PCB-15	1.28	3.09 %	1.29	1.22	1.26	1.28	1.30	1.34
PCB-19	1.04	3.02 %	1.04	1.01	1.01	1.04	1.07	1.09
PCB-30	1.71	4.54 %	1.67	1.64	1.66	1.69	1.79	1.83
PCB-18	0.78	5.11 %	0.71	0.79	0.79	0.80	0.78	0.82
PCB-17	0.92	2.36 %	0.90	0.90	0.94	0.93	0.91	0.95
PCB-24/27	1.19	3.36 %	1.13	1.17	1.19	1.20	1.18	1.25
PCB-16/32	0.94	1.56 %	0.92	0.93	0.94	0.94	0.94	0.96
PCB-34	1.14	3.58 %	1.15	1.19	1.13	1.09	1.16	1.09
PCB-23	1.28	4.96 %	1.38	1.28	1.22	1.23	1.24	1.33
PCB-29	1.08	3.94 %	1.11	1.13	1.09	1.06	1.01	1.06
PCB-26	1.21	4.37 %	1.25	1.23	1.27	1.18	1.12	1.19
PCB-25	1.26	7.07 %	1.39	1.25	1.30	1.27	1.25	1.11
PCB-31	1.28	11.62 %	1.50	1.29	1.36	1.24	1.27	1.05
PCB-28	1.71	5.40 %	1.81	1.76	1.78	1.70	1.63	1.57
PCB-20/21/33	1.08	5.41 %	1.15	1.07	1.11	1.08	1.11	0.98
PCB-22	1.21	8.00 %	1.36	1.24	1.17	1.23	1.06	1.18
PCB-36	1.14	11.01 %	1.36	1.16	1.11	1.18	1.05	0.99
PCB-39	1.12	11.88 %	1.31	1.12	1.09	1.20	0.92	1.05
PCB-38	1.20	13.44 %	1.44	1.25	1.24	1.23	1.03	1.00
PCB-35	1.23	8.27 %	1.40	1.18	1.31	1.18	1.15	1.17
PCB-37	1.23	8.23 %	1.38	1.30	1.25	1.19	1.12	1.13
PCB-54	1.10	3.74 %	1.18	1.06	1.10	1.10	1.09	1.09
PCB-50	0.88	6.30 %	0.97	0.83	0.92	0.88	0.86	0.83
PCB-53	1.06	1.53 %	1.06	1.05	1.06	1.08	1.09	1.05
PCB-51	0.99	4.28 %	0.95	1.06	0.97	0.98	0.96	1.02
PCB-45	0.86	5.46 %	0.95	0.85	0.83	0.89	0.84	0.82
PCB-46	0.85	4.52 %	0.90	0.89	0.82	0.83	0.83	0.81
PCB-52/69	1.28	3.90 %	1.23	1.29	1.27	1.28	1.25	1.37
PCB-73	1.35	5.47 %	1.44	1.30	1.43	1.38	1.30	1.27
PCB-43/49	0.99	4.35 %	1.07	1.01	0.96	0.97	0.95	1.02
PCB-47	1.06	4.72 %	1.12	1.10	1.07	1.04	1.04	0.98

Dms 6/24/14

MS 6/25/14

PCB-48/75	1.23	5.03 %	1.34	1.24	1.21	1.17	1.17	1.24
PCB-65	1.22	5.52 %	1.22	1.30	1.29	1.23	1.12	1.19
PCB-62	1.22	11.22 %	1.47	1.10	1.25	1.09	1.22	1.19
PCB-44	0.86	9.00 %	1.00	0.90	0.84	0.80	0.79	0.83
PCB-42/59	1.14	4.85 %	1.20	1.19	1.08	1.08	1.11	1.17
PCB-41/64/71/72	1.21	4.49 %	1.24	1.25	1.16	1.13	1.19	1.26
PCB-68	1.35	3.60 %	1.42	1.35	1.32	1.29	1.31	1.38
PCB-40	0.70	2.83 %	0.69	0.73	0.70	0.68	0.69	0.71
PCB-57	0.98	1.87 %	0.97	0.96	1.00	0.99	0.96	0.99
PCB-67	1.11	4.07 %	1.19	1.11	1.11	1.09	1.09	1.05
PCB-58	0.93	3.04 %	0.90	0.95	0.94	0.93	0.88	0.96

PCB-63	0.95	8.80 %	1.12	0.95	0.91	0.93	0.88	0.92
PCB-74	1.24	4.15 %	1.34	1.21	1.25	1.20	1.23	1.23
PCB-61/70	0.95	2.14 %	0.96	0.96	0.98	0.95	0.92	0.94
PCB-76/66	1.04	3.20 %	1.11	1.04	1.04	1.03	1.03	1.02
PCB-80	1.19	2.93 %	1.13	1.22	1.22	1.22	1.18	1.18
PCB-55	1.04	3.47 %	1.00	0.99	1.07	1.08	1.05	1.06
PCB-56/60	1.01	3.48 %	1.01	1.06	1.05	1.00	0.97	0.98
PCB-79	1.08	3.24 %	1.12	1.07	1.13	1.07	1.04	1.06
PCB-78	1.27	5.24 %	1.40	1.26	1.27	1.25	1.20	1.24
PCB-81	1.33	5.94 %	1.49	1.32	1.29	1.29	1.27	1.33
PCB-77	1.10	4.03 %	1.19	1.07	1.11	1.08	1.07	1.09
PCB-104	1.18	2.54 %	1.13	1.18	1.20	1.20	1.19	1.21
PCB-96	1.14	2.81 %	1.10	1.15	1.11	1.13	1.16	1.19
PCB-103	0.96	4.05 %	0.99	0.93	0.92	0.93	0.95	1.02
PCB-100	0.94	4.52 %	0.97	0.90	0.89	0.92	0.95	1.00
PCB-94	1.06	5.71 %	1.17	1.08	1.03	1.02	1.00	1.05
PCB-95/98/102	1.22	0.35 %	1.23	1.23	1.22	1.22	1.23	1.23
PCB-93	0.84	6.35 %	0.80	0.85	0.86	0.85	0.77	0.93
PCB-88/91	1.12	3.65 %	1.05	1.11	1.15	1.12	1.16	1.10
PCB-121	1.62	5.39 %	1.66	1.53	1.61	1.62	1.52	1.75
PCB-84/92	1.05	3.37 %	1.10	1.00	1.04	1.04	1.04	1.06
PCB-89	1.13	4.67 %	1.23	1.07	1.13	1.14	1.11	1.10
PCB-90/101	1.10	1.29 %	1.11	1.08	1.12	1.10	1.08	1.11
PCB-113	1.41	6.93 %	1.52	1.30	1.46	1.49	1.29	1.41
PCB-99	1.34	8.14 %	1.19	1.49	1.27	1.27	1.42	1.36
PCB-119	1.53	3.61 %	1.51	1.46	1.54	1.52	1.53	1.63
PCB-108/112	1.28	3.29 %	1.26	1.25	1.25	1.28	1.29	1.36
PCB-83	1.52	3.93 %	1.64	1.49	1.52	1.49	1.48	1.49
PCB-97	1.18	4.68 %	1.29	1.13	1.14	1.17	1.17	1.19
PCB-86	0.84	7.14 %	0.84	0.82	0.81	0.80	0.83	0.96
PCB-87/117/125	1.55	5.06 %	1.46	1.50	1.49	1.59	1.59	1.66
PCB-111/115	1.63	1.45 %	1.61	1.64	1.61	1.61	1.65	1.67
PCB-85/116	1.30	4.51 %	1.35	1.21	1.27	1.31	1.31	1.37
PCB-120	1.68	3.52 %	1.67	1.69	1.60	1.63	1.70	1.77
PCB-110	1.56	2.67 %	1.63	1.50	1.56	1.56	1.54	1.55
PCB-82	0.76	2.07 %	0.78	0.75	0.74	0.76	0.76	0.76
PCB-124	1.47	4.97 %	1.43	1.40	1.45	1.43	1.51	1.60
PCB-107/109	1.32	3.64 %	1.31	1.24	1.29	1.35	1.37	1.36
PCB-123	1.17	1.49 %	1.14	1.16	1.18	1.18	1.16	1.19
PCB-106/118	1.17	2.46 %	1.20	1.13	1.19	1.17	1.15	1.20
PCB-114	1.30	1.22 %	1.29	1.31	1.31	1.31	1.28	1.28
PCB-122	1.12	0.66 %	1.13	1.12	1.12	1.11	1.11	1.12
PCB-105	1.30	1.61 %	1.32	1.28	1.31	1.28	1.28	1.33
PCB-127	1.33	5.30 %	1.46	1.31	1.37	1.27	1.28	1.32
PCB-126	1.18	1.24 %	1.18	1.16	1.19	1.17	1.18	1.21
PCB-155	1.11	2.06 %	1.10	1.11	1.10	1.11	1.11	1.16
PCB-150	1.00	4.51 %	0.93	0.99	0.98	1.00	1.03	1.06
PCB-152	1.12	4.70 %	1.15	1.02	1.12	1.10	1.12	1.18
PCB-145	1.20	4.85 %	1.17	1.13	1.18	1.19	1.23	1.30
PCB-136	1.18	1.51 %	1.17	1.17	1.17	1.15	1.21	1.19

PCB-148	0.74	7.90 %	0.70	0.72	0.74	0.74	0.72	0.86
PCB-154	0.86	3.14 %	0.85	0.86	0.88	0.83	0.83	0.90
PCB-151	0.75	8.09 %	0.86	0.69	0.73	0.71	0.71	0.77
PCB-135	0.79	9.11 %	0.89	0.82	0.70	0.77	0.73	0.84
PCB-144	0.76	6.76 %	0.70	0.75	0.76	0.71	0.82	0.82
PCB-147	0.82	6.64 %	0.80	0.80	0.78	0.79	0.83	0.93
PCB-139/149	0.76	6.06 %	0.79	0.71	0.73	0.74	0.77	0.84
PCB-140	0.72	3.18 %	0.70	0.73	0.73	0.70	0.71	0.76
PCB-134/143	0.92	3.43 %	0.95	0.89	0.89	0.89	0.94	0.95
PCB-133/142	0.82	3.97 %	0.86	0.78	0.79	0.80	0.83	0.85
PCB-131	0.91	1.88 %	0.92	0.93	0.90	0.89	0.90	0.90

PCB-146/165	1.25	4.47 %	1.32	1.16	1.22	1.23	1.26	1.29
PCB-132/161	1.10	4.39 %	1.19	1.06	1.07	1.08	1.09	1.14
PCB-153	1.25	3.90 %	1.19	1.33	1.24	1.23	1.27	1.24
PCB-168	1.45	3.18 %	1.40	1.41	1.43	1.45	1.48	1.52
PCB-141	1.09	4.31 %	1.16	1.12	1.04	1.06	1.05	1.09
PCB-137	1.06	4.15 %	1.07	1.02	1.03	1.05	1.06	1.14
PCB-130	0.96	5.65 %	1.06	0.91	0.99	0.97	0.96	0.90
PCB-138/163/164	1.29	4.03 %	1.26	1.23	1.30	1.27	1.31	1.38
PCB-158/160	1.34	4.62 %	1.24	1.30	1.39	1.34	1.37	1.41
PCB-129	0.85	2.93 %	0.85	0.82	0.87	0.84	0.86	0.89
PCB-166	1.19	1.02 %	1.19	1.18	1.18	1.17	1.18	1.21
PCB-159	1.11	2.18 %	1.10	1.09	1.11	1.11	1.10	1.16
PCB-128/162	1.05	3.89 %	1.12	1.04	1.00	1.02	1.03	1.07
PCB-167	1.20	2.55 %	1.15	1.21	1.21	1.20	1.19	1.24
PCB-156	1.14	4.58 %	1.06	1.09	1.18	1.14	1.16	1.19
PCB-157	1.16	5.07 %	1.28	1.16	1.14	1.13	1.12	1.15
PCB-169	1.12	7.20 %	1.28	1.07	1.09	1.08	1.07	1.12
PCB-188	1.58	3.04 %	1.58	1.66	1.55	1.56	1.52	1.61
PCB-184	1.63	2.34 %	1.61	1.66	1.69	1.60	1.60	1.64
PCB-179	1.30	4.28 %	1.27	1.41	1.29	1.30	1.26	1.29
PCB-176	1.48	4.46 %	1.61	1.46	1.45	1.46	1.45	1.44
PCB-186	1.45	8.39 %	1.69	1.34	1.36	1.45	1.46	1.43
PCB-178	1.03	3.35 %	1.03	1.05	1.10	1.02	1.00	1.00
PCB-175	1.01	1.89 %	1.05	1.02	1.00	1.01	0.99	1.01
PCB-182/187	1.25	2.08 %	1.28	1.25	1.24	1.21	1.26	1.28
PCB-183	1.21	5.09 %	1.33	1.19	1.21	1.15	1.18	1.19
PCB-185	1.60	4.35 %	1.77	1.68	1.87	1.78	1.82	1.89
PCB-174	1.38	4.65 %	1.34	1.30	1.33	1.42	1.47	1.40
PCB-181	1.38	7.65 %	1.25	1.33	1.44	1.36	1.35	1.56
PCB-177	1.26	3.80 %	1.18	1.23	1.28	1.26	1.28	1.32
PCB-171	1.58	6.45 %	1.43	1.54	1.57	1.59	1.61	1.74
PCB-173	1.11	6.27 %	0.97	1.11	1.14	1.13	1.13	1.17
PCB-172	1.63	10.65 %	1.31	1.67	1.66	1.64	1.70	1.83
PCB-192	1.74	6.94 %	1.52	1.71	1.77	1.78	1.79	1.87
PCB-180	1.34	3.01 %	1.35	1.27	1.37	1.35	1.34	1.39
PCB-193	1.72	3.48 %	1.81	1.65	1.67	1.72	1.69	1.76
PCB-191	1.69	2.79 %	1.73	1.62	1.71	1.68	1.67	1.75
PCB-170	1.60	3.31 %	1.54	1.53	1.63	1.62	1.61	1.66
PCB-190	2.21	4.63 %	2.14	2.04	2.28	2.23	2.23	2.33
PCB-189	1.55	1.89 %	1.58	1.50	1.54	1.55	1.55	1.58
PCB-202	1.08	3.14 %	1.09	1.05	1.05	1.06	1.10	1.14
PCB-201	1.15	2.55 %	1.11	1.14	1.16	1.13	1.16	1.20
PCB-204	1.14	6.76 %	1.02	1.10	1.14	1.14	1.18	1.25
PCB-197	1.07	2.46 %	1.09	1.04	1.05	1.07	1.09	1.11
PCB-200	1.06	2.80 %	1.08	1.01	1.05	1.06	1.09	1.09
PCB-198	0.76	5.28 %	0.74	0.69	0.76	0.77	0.76	0.81
PCB-199	0.80	5.91 %	0.76	0.86	0.75	0.76	0.82	0.83
PCB-196/203	0.80	9.29 %	0.71	0.75	0.77	0.80	0.86	0.91
PCB-195	1.23	4.42 %	1.15	1.18	1.24	1.24	1.25	1.30
PCB-194	1.21	4.43 %	1.32	1.19	1.18	1.19	1.18	1.20

PCB-205	1.54	2.37 %	1.51	1.58	1.53	1.52	1.51	1.60
PCB-208	0.93	1.86 %	0.95	0.92	0.91	0.92	0.94	0.94
PCB-207	1.08	2.65 %	1.07	1.07	1.05	1.08	1.12	1.12
PCB-206	1.02	4.52 %	1.11	1.03	0.99	1.01	0.97	1.03
PCB-209	1.17	3.05 %	1.15	1.12	1.17	1.20	1.17	1.22
Total Mono-PCB	1.27	6.66 %	1.15	1.21	1.24	1.31	1.35	1.36
Total Di-PCB	1.21	2.10 %	1.19	1.18	1.20	1.21	1.22	1.25
Total Tri-PCB	1.10	2.76 %	1.06	1.08	1.09	1.10	1.10	1.15

Total Tri-PCB	1.21	6.05 %	1.33	1.23	1.24	1.21	1.15	1.12
Total Tetra-PCB	1.09	2.96 %	1.14	1.10	1.08	1.06	1.06	1.09
Total Penta-PCB	1.18	1.93 %	1.18	1.16	1.17	1.18	1.18	1.23
Total Penta-PCB	1.25	1.50 %	1.28	1.24	1.26	1.23	1.23	1.25
Total Hexa-PCB	0.90	3.60 %	0.90	0.87	0.88	0.88	0.90	0.96
Total Hexa-PCB	1.11	2.03 %	1.13	1.08	1.10	1.09	1.11	1.14
Total Hepta-PCB	1.42	1.47 %	1.41	1.40	1.42	1.41	1.41	1.46
Total Octa-PCB	0.96	4.13 %	0.92	0.93	0.95	0.96	0.99	1.03
Total Octa-PCB	1.33	1.46 %	1.33	1.31	1.32	1.32	1.32	1.36
Total Nona-PCB	1.01	1.96 %	1.03	1.00	0.98	1.00	1.02	1.03
Total Deca-PCB	1.17	3.05 %	1.15	1.12	1.17	1.20	1.17	1.22
13C-PCB-1	0.87	10.59 %	1.00	0.92	0.91	0.86	0.77	0.77
13C-PCB-3	0.91	9.90 %	1.04	0.97	0.96	0.86	0.81	0.83
13C-PCB-4	0.59	1.89 %	0.60	0.60	0.60	0.59	0.57	0.57
13C-PCB-9	0.90	1.45 %	0.90	0.91	0.91	0.89	0.88	0.88
13C-PCB-11	0.94	1.14 %	0.95	0.94	0.95	0.92	0.93	0.94
13C-PCB-19	0.53	8.18 %	0.58	0.56	0.56	0.53	0.48	0.48
13C-PCB-32	0.80	5.62 %	0.87	0.82	0.80	0.78	0.77	0.74
13C-PCB-28	0.93	4.96 %	0.92	0.91	0.93	0.92	0.89	1.02
13C-PCB-37	0.84	6.29 %	0.87	0.84	0.79	0.79	0.82	0.93
13C-PCB-54	0.97	0.69 %	0.96	0.96	0.97	0.98	0.97	0.98
13C-PCB-52	0.77	2.27 %	0.80	0.77	0.77	0.78	0.76	0.75
13C-PCB-47	0.81	2.56 %	0.85	0.80	0.81	0.82	0.81	0.78
13C-PCB-70	1.00	1.92 %	1.03	0.99	0.99	0.98	1.00	1.02
13C-PCB-80	1.03	1.60 %	1.05	1.02	1.02	1.01	1.04	1.05
13C-PCB-81	0.92	3.24 %	0.91	0.91	0.92	0.89	0.93	0.98
13C-PCB-77	0.94	2.93 %	0.95	0.93	0.92	0.91	0.98	0.97
13C-PCB-104	1.00	2.32 %	1.02	1.02	1.01	1.00	1.00	0.96
13C-PCB-95	0.74	1.65 %	0.74	0.73	0.73	0.74	0.77	0.74
13C-PCB-101	0.78	1.28 %	0.79	0.79	0.77	0.77	0.80	0.79
13C-PCB-97	0.70	1.19 %	0.72	0.71	0.71	0.69	0.71	0.70
13C-PCB-123	0.89	2.20 %	0.92	0.90	0.89	0.87	0.88	0.89
13C-PCB-118	0.96	2.66 %	0.96	0.97	0.95	0.92	0.98	0.99
13C-PCB-114	1.36	3.25 %	1.33	1.33	1.35	1.35	1.37	1.45
13C-PCB-105	1.37	3.32 %	1.34	1.34	1.36	1.32	1.38	1.45
13C-PCB-127	1.47	2.80 %	1.42	1.48	1.48	1.45	1.48	1.54
13C-PCB-126	1.31	1.41 %	1.29	1.30	1.31	1.31	1.30	1.34
13C-PCB-155	0.84	3.94 %	0.89	0.85	0.84	0.83	0.83	0.79
13C-PCB-153	1.15	1.31 %	1.15	1.16	1.15	1.14	1.12	1.15
13C-PCB-141	1.07	1.13 %	1.07	1.09	1.09	1.07	1.06	1.07
13C-PCB-138	1.10	0.94 %	1.10	1.11	1.09	1.11	1.09	1.09
13C-PCB-159	1.25	1.27 %	1.26	1.27	1.25	1.22	1.24	1.25
13C-PCB-167	1.35	1.38 %	1.36	1.37	1.35	1.33	1.37	1.33
13C-PCB-156	1.30	1.09 %	1.30	1.30	1.29	1.28	1.30	1.32
13C-PCB-157	1.36	1.30 %	1.37	1.36	1.35	1.33	1.36	1.38
13C-PCB-169	1.29	2.02 %	1.32	1.28	1.29	1.24	1.28	1.29
13C-PCB-188	0.92	2.20 %	0.95	0.90	0.91	0.92	0.91	0.91
13C-PCB-180	0.68	5.20 %	0.75	0.70	0.67	0.67	0.67	0.65
13C-PCB-170	0.54	5.16 %	0.59	0.56	0.53	0.53	0.53	0.52
13C-PCB-189	0.72	4.14 %	0.77	0.74	0.71	0.69	0.69	0.70
13C-PCB-202	0.84	6.77 %	0.94	0.87	0.83	0.81	0.80	0.78



13C-PCB-194	0.80	1.04 %	0.79	0.81	0.80	0.79	0.80	0.79
13C-PCB-208	1.08	1.09 %	1.09	1.09	1.09	1.08	1.07	1.07
13C-PCB-206	0.65	2.52 %	0.65	0.66	0.65	0.65	0.67	0.62
13C-PCB-209	0.61	3.41 %	0.62	0.62	0.63	0.59	0.63	0.58
13C-PCB-15	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-31	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-60	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-111	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-128	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-205	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

13C-PCB-79	1.02	1.30 %	1.02	1.02	1.02	1.00	1.01	1.04
13C-PCB-178	0.61	3.59 %	0.64	0.63	0.61	0.62	0.60	0.58
13C-PCB-79	1.10	2.04 %	1.11	1.12	1.11	1.12	1.09	1.06
13C-PCB-178	0.90	2.70 %	0.86	0.90	0.92	0.93	0.89	0.90

Filename: 140623E2 S: 1      Acquired: 23-JUN-14 11:41:57  
 Run: 140623E2    Analyte:            ICal: PCBVG8-6-23-14      Results: 140623E2  
 Sample text: ST140623E2-1 PCB CS0 14F1602

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	0.25	4.81e+05	2.67 y	16:24	-	1.04
2	Mono	PCB-2	0.25	5.03e+05	3.50 y	18:40	-	1.05
3	Mono	PCB-3	0.25	6.38e+05	2.83 y	18:54	-	1.34
4	Di	PCB-4/10	1.00	1.68e+06	1.64 y	20:13	-	1.53
5	Di	PCB-7/9	1.00	2.03e+06	1.59 y	21:57	-	1.22
6	Di	PCB-6	0.50	1.04e+06	1.77 y	22:34	-	1.25
7	Di	PCB-5/8	1.00	1.87e+06	1.60 y	22:59	-	1.13
8	Di	PCB-14	0.50	9.15e+05	1.73 y	24:03	-	1.05
9	Di	PCB-11	0.50	9.14e+05	1.60 y	25:13	-	1.05
10	Di	PCB-12/13	1.00	2.03e+06	1.71 y	25:37	-	1.17
11	Di	PCB-15	0.50	1.13e+06	1.70 y	25:55	-	1.29
12	Tri	PCB-19	0.25	2.77e+05	1.03 y	24:14	-	1.04
13	Tri	PCB-30	0.25	4.46e+05	1.08 y	25:06	-	1.67
14	Tri	PCB-18	0.25	2.82e+05	1.17 y	25:50	-	0.71
15	Tri	PCB-17	0.25	3.59e+05	0.95 y	26:01	-	0.90
16	Tri	PCB-24/27	0.50	9.03e+05	1.12 y	26:35	-	1.13
17	Tri	PCB-16/32	0.50	7.35e+05	1.02 y	27:05	-	0.92
18	Tri	PCB-34	0.25	4.46e+05	1.14 y	27:51	-	1.15
19	Tri	PCB-23	0.25	5.33e+05	1.13 y	27:57	-	1.38
20	Tri	PCB-29	0.25	4.32e+05	1.02 y	28:12	-	1.11
21	Tri	PCB-26	0.25	4.83e+05	0.94 y	28:24	-	1.25
22	Tri	PCB-25	0.25	5.38e+05	0.92 y	28:33	-	1.39
23	Tri	PCB-31	0.25	5.81e+05	0.96 y	28:55	-	1.50
24	Tri	PCB-28	0.25	7.03e+05	1.16 y	29:01	-	1.81
25	Tri	PCB-20/21/33	0.75	1.33e+06	1.03 y	29:38	-	1.15
26	Tri	PCB-22	0.25	5.26e+05	1.01 y	30:04	-	1.36
27	Tri	PCB-36	0.25	4.96e+05	1.00 y	30:41	-	1.36
28	Tri	PCB-39	0.25	4.79e+05	1.13 y	31:08	-	1.31
29	Tri	PCB-38	0.25	5.28e+05	1.17 y	31:55	-	1.44
30	Tri	PCB-35	0.25	5.13e+05	0.95 y	32:25	-	1.40
31	Tri	PCB-37	0.25	5.06e+05	1.03 y	32:51	-	1.38
32	Tetra	PCB-54	0.25	3.83e+05	0.67 y	27:55	-	1.18
33	Tetra	PCB-50	0.25	3.14e+05	0.72 y	29:04	-	0.97
34	Tetra	PCB-53	0.25	2.86e+05	0.85 y	29:42	-	1.06
35	Tetra	PCB-51	0.25	2.57e+05	0.85 y	30:03	-	0.95
36	Tetra	PCB-45	0.25	2.55e+05	0.84 y	30:28	-	0.95
37	Tetra	PCB-46	0.25	2.42e+05	0.82 y	30:58	-	0.90
38	Tetra	PCB-52/69	0.50	6.62e+05	0.73 y	31:25	-	1.23
39	Tetra	PCB-73	0.25	3.88e+05	0.72 y	31:32	-	1.44
40	Tetra	PCB-43/49	0.50	5.73e+05	0.83 y	31:42	-	1.07

41	Tetra	PCB-47	0.25	3.18e+05	0.79 y	31:55	-	1.12
42	Tetra	PCB-48/75	0.50	7.61e+05	0.81 y	32:01	-	1.34
43	Tetra	PCB-65	0.25	3.48e+05	0.88 y	32:17	-	1.22
44	Tetra	PCB-62	0.25	4.17e+05	0.79 y	32:24	-	1.47
45	Tetra	PCB-44	0.25	2.83e+05	0.73 y	32:42	-	1.00
46	Tetra	PCB-42/59	0.50	6.84e+05	0.76 y	32:55	-	1.20
47	Tetra	PCB-41/64/71/72	1.00	1.41e+06	0.76 y	33:30	-	1.24
48	Tetra	PCB-68	0.25	4.05e+05	0.81 y	33:46	-	1.42
49	Tetra	PCB-40	0.25	1.96e+05	0.70 y	34:00	-	0.69
50	Tetra	PCB-57	0.25	3.33e+05	0.87 y	34:20	-	0.97
51	Tetra	PCB-67	0.25	4.09e+05	0.84 y	34:38	-	1.19

52	Tetra	PCB-58	0.25	3.10e+05	0.67 y	34:45	-	0.90
53	Tetra	PCB-63	0.25	3.84e+05	0.79 y	34:55	-	1.12
54	Tetra	PCB-74	0.25	4.62e+05	0.82 y	35:12	-	1.34
55	Tetra	PCB-61/70	0.50	6.62e+05	0.77 y	35:23	-	0.96
56	Tetra	PCB-76/66	0.50	7.64e+05	0.73 y	35:35	-	1.11
57	Tetra	PCB-80	0.25	4.01e+05	0.75 y	35:49	-	1.13
58	Tetra	PCB-55	0.25	3.54e+05	0.77 y	36:09	-	1.00
59	Tetra	PCB-56/60	0.50	7.14e+05	0.78 y	36:39	-	1.01
60	Tetra	PCB-79	0.25	3.94e+05	0.76 y	37:42	-	1.12
61	Tetra	PCB-78	0.25	4.28e+05	0.69 y	38:24	-	1.40
62	Tetra	PCB-81	0.25	4.55e+05	0.75 y	38:56	-	1.49
63	Tetra	PCB-77	0.25	3.79e+05	0.71 y	39:31	-	1.19
64	Penta	PCB-104	0.25	2.69e+05	1.51 y	32:34	-	1.13
65	Penta	PCB-96	0.25	2.62e+05	1.46 y	33:49	-	1.10
66	Penta	PCB-103	0.25	2.37e+05	1.63 y	34:21	-	0.99
67	Penta	PCB-100	0.25	2.32e+05	1.75 y	34:43	-	0.97
68	Penta	PCB-94	0.25	2.02e+05	1.62 y	35:10	-	1.17
69	Penta	PCB-95/98/102	0.75	6.38e+05	1.53 y	35:40	-	1.23
70	Penta	PCB-93	0.25	1.38e+05	1.68 y	35:48	-	0.80
71	Penta	PCB-88/91	0.50	3.63e+05	1.40 y	36:05	-	1.05
72	Penta	PCB-121	0.25	2.89e+05	1.74 y	36:10	-	1.66
73	Penta	PCB-84/92	0.50	4.09e+05	1.74 y	37:00	-	1.10
74	Penta	PCB-89	0.25	2.28e+05	1.35 y	37:12	-	1.23
75	Penta	PCB-90/101	0.50	4.11e+05	1.60 y	37:22	-	1.11
76	Penta	PCB-113	0.25	2.82e+05	1.48 y	37:38	-	1.52
77	Penta	PCB-99	0.25	2.22e+05	1.49 y	37:43	-	1.19
78	Penta	PCB-119	0.25	2.54e+05	1.74 y	38:11	-	1.51
79	Penta	PCB-108/112	0.50	4.22e+05	1.43 y	38:20	-	1.26
80	Penta	PCB-82	0.25	2.75e+05	1.61 y	38:30	-	1.64
81	Penta	PCB-97	0.25	2.16e+05	1.33 y	38:41	-	1.29
82	Penta	PCB-86	0.25	1.41e+05	1.33 y	38:50	-	0.84
83	Penta	PCB-87/117/125	0.75	7.34e+05	1.43 y	38:57	-	1.46
84	Penta	PCB-111/115	0.50	5.41e+05	1.52 y	39:08	-	1.61
85	Penta	PCB-85/116	0.50	4.52e+05	1.76 y	39:15	-	1.35
86	Penta	PCB-120	0.25	2.81e+05	1.77 y	39:29	-	1.67
87	Penta	PCB-110	0.25	2.74e+05	1.56 y	39:38	-	1.63
88	Penta	PCB-82	0.25	1.70e+05	1.65 y	40:16	-	0.78
89	Penta	PCB-124	0.25	3.10e+05	1.57 y	40:57	-	1.43
90	Penta	PCB-107/109	0.50	5.68e+05	1.59 y	41:05	-	1.31
91	Penta	PCB-123	0.25	2.47e+05	1.58 y	41:16	-	1.14
92	Penta	PCB-106/118	0.50	5.38e+05	1.47 y	41:27	-	1.20
93	Penta	PCB-114	0.25	3.15e+05	1.48 y	42:06	-	1.29
94	Penta	PCB-122	0.25	2.77e+05	1.67 y	42:14	-	1.13
95	Penta	PCB-105	0.25	3.23e+05	1.61 y	42:58	-	1.32
96	Penta	PCB-127	0.25	3.79e+05	1.59 y	43:18	-	1.46
97	Penta	PCB-126	0.25	2.78e+05	1.58 y	45:12	-	1.18
98	Hexa	PCB-155	0.25	2.29e+05	1.14 y	36:56	-	1.10
99	Hexa	PCB-150	0.25	1.94e+05	1.23 y	38:12	-	0.93
100	Hexa	PCB-152	0.25	2.40e+05	1.08 y	38:40	-	1.15
101	Hexa	PCB-145	0.25	2.45e+05	1.20 y	39:08	-	1.17

102	Hexa	PCB-136	0.25	2.45e+05	1.20 y	39:27	-	1.17
103	Hexa	PCB-148	0.25	1.45e+05	1.15 y	39:33	-	0.70
104	Hexa	PCB-154	0.25	1.77e+05	1.37 y	40:02	-	0.85
105	Hexa	PCB-151	0.25	1.79e+05	1.18 y	40:41	-	0.86
106	Hexa	PCB-135	0.25	1.86e+05	1.13 y	40:54	-	0.89
107	Hexa	PCB-144	0.25	1.47e+05	1.40 y	41:00	-	0.70
108	Hexa	PCB-147	0.25	1.67e+05	1.07 y	41:08	-	0.80
109	Hexa	PCB-139/149	0.50	3.29e+05	1.16 y	41:24	-	0.79
110	Hexa	PCB-140	0.25	1.47e+05	1.10 y	41:35	-	0.70
111	Hexa	PCB-134/143	0.50	4.01e+05	1.40 y	42:01	-	0.95
112	Hexa	PCB-133/142	0.50	3.65e+05	1.40 y	42:19	-	0.86

113	Hexa	PCB-131	0.25	1.96e+05	1.21 y	42:29	-	0.92
114	Hexa	PCB-146/165	0.50	5.59e+05	1.30 y	42:42	-	1.32
115	Hexa	PCB-132/161	0.50	5.02e+05	1.30 y	42:57	-	1.19
116	Hexa	PCB-153	0.25	2.51e+05	1.25 y	43:06	-	1.19
117	Hexa	PCB-168	0.25	2.97e+05	1.27 y	43:20	-	1.40
118	Hexa	PCB-141	0.25	2.26e+05	1.36 y	43:51	-	1.16
119	Hexa	PCB-137	0.25	2.10e+05	1.21 y	44:14	-	1.07
120	Hexa	PCB-130	0.25	2.06e+05	1.15 y	44:20	-	1.06
121	Hexa	PCB-138/163/164	0.75	7.59e+05	1.25 y	44:43	-	1.26
122	Hexa	PCB-158/160	0.50	5.00e+05	1.32 y	44:58	-	1.24
123	Hexa	PCB-129	0.25	1.71e+05	1.19 y	45:12	-	0.85
124	Hexa	PCB-166	0.25	2.74e+05	1.28 y	45:40	-	1.19
125	Hexa	PCB-159	0.25	2.53e+05	1.29 y	46:00	-	1.10
126	Hexa	PCB-128/162	0.50	5.15e+05	1.18 y	46:17	-	1.12
127	Hexa	PCB-167	0.25	2.86e+05	1.19 y	46:40	-	1.15
128	Hexa	PCB-156	0.25	2.51e+05	1.34 y	47:59	-	1.06
129	Hexa	PCB-157	0.25	3.21e+05	1.29 y	48:15	-	1.28
130	Hexa	PCB-169	0.25	3.10e+05	1.35 y	50:19	-	1.28
131	Hepta	PCB-188	0.25	2.77e+05	1.01 y	42:45	-	1.58
132	Hepta	PCB-184	0.25	2.81e+05	1.07 y	43:12	-	1.61
133	Hepta	PCB-179	0.25	2.22e+05	0.95 y	43:58	-	1.27
134	Hepta	PCB-176	0.25	2.82e+05	1.14 y	44:27	-	1.61
135	Hepta	PCB-186	0.25	2.95e+05	1.09 y	45:04	-	1.69
136	Hepta	PCB-178	0.25	1.81e+05	0.95 y	45:33	-	1.03
137	Hepta	PCB-175	0.25	1.83e+05	1.03 y	45:54	-	1.05
138	Hepta	PCB-182/187	0.50	4.48e+05	0.94 y	46:04	-	1.28
139	Hepta	PCB-183	0.25	2.33e+05	1.14 y	46:23	-	1.33
140	Hepta	PCB-185	0.25	2.42e+05	0.91 y	47:03	-	1.77
141	Hepta	PCB-174	0.25	1.84e+05	0.97 y	47:25	-	1.34
142	Hepta	PCB-181	0.25	1.71e+05	0.89 y	47:31	-	1.25
143	Hepta	PCB-177	0.25	1.62e+05	1.15 y	47:41	-	1.18
144	Hepta	PCB-171	0.25	1.96e+05	0.95 y	48:00	-	1.43
145	Hepta	PCB-173	0.25	1.34e+05	1.04 y	48:25	-	0.97
146	Hepta	PCB-172	0.25	1.79e+05	1.06 y	48:52	-	1.31
147	Hepta	PCB-192	0.25	2.08e+05	1.05 y	49:03	-	1.52
148	Hepta	PCB-180	0.25	1.86e+05	1.04 y	49:15	-	1.35
149	Hepta	PCB-193	0.25	2.48e+05	1.20 y	49:27	-	1.81
150	Hepta	PCB-191	0.25	2.37e+05	0.93 y	49:42	-	1.73
151	Hepta	PCB-170	0.25	1.67e+05	1.00 y	50:41	-	1.54
152	Hepta	PCB-190	0.25	2.32e+05	1.20 y	50:51	-	2.14
153	Hepta	PCB-189	0.25	2.21e+05	0.99 y	52:07	-	1.58
154	Octa	PCB-202	0.25	1.87e+05	0.90 y	48:11	-	1.09
155	Octa	PCB-201	0.25	1.91e+05	0.96 y	48:40	-	1.11
156	Octa	PCB-204	0.25	1.75e+05	0.89 y	48:50	-	1.02
157	Octa	PCB-197	0.25	1.86e+05	1.01 y	49:08	-	1.09
158	Octa	PCB-200	0.25	1.85e+05	1.02 y	49:59	-	1.08
159	Octa	PCB-198	0.25	1.27e+05	0.92 y	51:14	-	0.74
160	Octa	PCB-199	0.25	1.30e+05	0.87 y	51:21	-	0.76
161	Octa	PCB-196/203	0.50	2.45e+05	0.96 y	51:36	-	0.71
162	Octa	PCB-195	0.25	1.54e+05	0.94 y	52:45	-	1.15

163	Octa	PCB-194	0.25	1.77e+05	0.95 y	53:38	-	1.32
164	Octa	PCB-205	0.25	2.02e+05	0.89 y	53:56	-	1.51
165	Nona	PCB-208	0.25	1.76e+05	1.45 y	52:54	-	0.95
166	Nona	PCB-207	0.25	1.98e+05	1.16 y	53:13	-	1.07
167	Nona	PCB-206	0.25	1.21e+05	1.45 y	55:20	-	1.11
168	Deca	PCB-209	0.25	1.20e+05	1.18 y	56:37	-	1.15
169	Tot $\eta$	Total Mono-PCB	0.00	-	- n	-	-	1.15
170	Tot $\eta$	Total Di-PCB	0.00	-	- n	-	-	1.19



171	Tot	η	Total Tri-PCB	0.00	-	-	n	-	-	1.06
172	Tot	η	Total Tri-PCB	0.00	-	-	n	-	-	1.33
173	Tot	η	Total Tetra-PCB	0.00	-	-	n	-	-	1.14
174	Tot	η	Total Penta-PCB	0.00	-	-	n	-	-	1.18
175	Tot	η	Total Penta-PCB	0.00	-	-	n	-	-	1.28
176	Tot	η	Total Hexa-PCB	0.00	-	-	n	-	-	0.90
177	Tot	η	Total Hexa-PCB	0.00	-	-	n	-	-	1.13
178	Tot	η	Total Hepta-PCB	0.00	-	-	n	-	-	1.41
179	Tot	η	Total Octa-PCB	0.00	-	-	n	-	-	0.92
180	Tot	η	Total Octa-PCB	0.00	-	-	n	-	-	1.33
181	Tot	η	Total Nona-PCB	0.00	-	-	n	-	-	1.03
182	Tot	η	Total Deca-PCB	0.25	1.20e+05	1.18	y	56:37	-	1.15
183	Mono	η	13C-PCB-1	100.00	1.84e+08	3.30	y	16:23	-	1.00
184	Mono	η	13C-PCB-3	100.00	1.91e+08	3.30	y	18:53	-	1.04
185	Di	-IS	13C-PCB-4	100.00	1.10e+08	1.58	y	20:10	-	0.60
186	Di	-IS	13C-PCB-9	100.00	1.66e+08	1.58	y	21:54	-	0.90
187	Di	-IS	13C-PCB-11	100.00	1.74e+08	1.56	y	25:12	-	0.95
188	Tri	-η	13C-PCB-19	100.00	1.07e+08	1.08	y	24:13	-	0.58
189	Tri	-η	13C-PCB-32	100.00	1.60e+08	1.07	y	27:05	-	0.87
190	Tri	-η	13C-PCB-28	100.00	1.55e+08	1.06	y	29:00	-	0.92
191	Tri	-η	13C-PCB-37	100.00	1.46e+08	1.07	y	32:51	-	0.87
192	Tetr	η	13C-PCB-54	100.00	1.29e+08	0.80	y	27:54	-	0.96
193	Tetr	η	13C-PCB-52	100.00	1.08e+08	0.80	y	31:23	-	0.80
194	Tetr	η	13C-PCB-47	100.00	1.14e+08	0.80	y	31:53	-	0.85
195	Tetr	η	13C-PCB-70	100.00	1.38e+08	0.80	y	35:24	-	1.03
196	Tetr	η	13C-PCB-80	100.00	1.41e+08	0.80	y	35:48	-	1.05
197	Tetr	η	13C-PCB-81	100.00	1.22e+08	0.80	y	38:55	-	0.91
198	Tetr	η	13C-PCB-77	100.00	1.28e+08	0.80	y	39:31	-	0.95
199	Pent	η	13C-PCB-104	100.00	9.53e+07	1.55	y	32:33	-	1.02
200	Pent	η	13C-PCB-95	100.00	6.94e+07	1.58	y	35:42	-	0.74
201	Pent	η	13C-PCB-101	100.00	7.42e+07	1.61	y	37:22	-	0.79
202	Pent	η	13C-PCB-97	100.00	6.72e+07	1.62	y	38:40	-	0.72
203	Pent	η	13C-PCB-123	100.00	8.66e+07	1.59	y	41:15	-	0.92
204	Pent	η	13C-PCB-118	100.00	9.00e+07	1.59	y	41:25	-	0.96
205	Pent	η	13C-PCB-114	100.00	9.79e+07	1.62	y	42:05	-	1.33
206	Pent	η	13C-PCB-105	100.00	9.84e+07	1.62	y	42:57	-	1.34
207	Pent	η	13C-PCB-127	100.00	1.04e+08	1.60	y	43:17	-	1.42
208	Pent	η	13C-PCB-126	100.00	9.44e+07	1.59	y	45:11	-	1.29
209	Hexa	η	13C-PCB-155	100.00	8.36e+07	1.29	y	36:55	-	0.89
210	Hexa	η	13C-PCB-153	100.00	8.47e+07	1.26	y	43:06	-	1.15
211	Hexa	η	13C-PCB-141	100.00	7.81e+07	1.26	y	43:50	-	1.07
212	Hexa	η	13C-PCB-138	100.00	8.05e+07	1.27	y	44:41	-	1.10
213	Hexa	η	13C-PCB-159	100.00	9.21e+07	1.27	y	45:58	-	1.26
214	Hexa	η	13C-PCB-167	100.00	9.97e+07	1.26	y	46:40	-	1.36
215	Hexa	η	13C-PCB-156	100.00	9.50e+07	1.29	y	47:58	-	1.30
216	Hexa	η	13C-PCB-157	100.00	1.00e+08	1.32	y	48:14	-	1.37
217	Hexa	η	13C-PCB-169	100.00	9.71e+07	1.27	y	50:19	-	1.32
218	Hept	η	13C-PCB-188	100.00	7.00e+07	0.47	y	42:44	-	0.95
219	Hept	η	13C-PCB-180	100.00	5.49e+07	0.46	y	49:15	-	0.75
220	Hept	η	13C-PCB-170	100.00	4.33e+07	0.46	y	50:40	-	0.59
221	Hept	η	13C-PCB-189	100.00	5.61e+07	0.46	y	52:07	-	0.77

222	Octaη	13C-PCB-202	100.00	6.86e+07	0.93 y	48:10	-	0.94
223	Octaη	13C-PCB-194	100.00	5.37e+07	0.93 y	53:37	-	0.79
224	Nonaη	13C-PCB-208	100.00	7.40e+07	0.78 y	52:53	-	1.09
225	Nonaη	13C-PCB-206	100.00	4.38e+07	0.78 y	55:20	-	0.65
226	Decaη	13C-PCB-209	100.00	4.18e+07	1.19 y	56:37	-	0.62
227	DI-RS	13C-PCB-15	100.00	1.84e+08	1.59 y	25:54	-	1.00
228	Tri-η	13C-PCB-31	100.00	1.69e+08	1.07 y	28:54	-	1.00
229	Tetrη	13C-PCB-60	100.00	1.34e+08	0.80 y	36:38	-	1.00
230	Penta	13C-PCB-111	100.00	9.38e+07	1.57 y	39:06	-	1.00
231	Hexaη	13C-PCB-128	100.00	7.33e+07	1.25 y	46:16	-	1.00

232	Octaπ	13C-PCB-205	100.00	6.77e+07	0.90 y	53:55	-	1.00
233	CRS	13C-PCB-79	100.00	1.36e+08	0.80 y	37:41	-	1.02
234	CRS	13C-PCB-178	100.00	4.71e+07	0.46 y	45:32	-	0.64
235	PS	13C-PCB-79	100.00	1.36e+08	0.80 y	37:41	-	1.11
236	PS	13C-PCB-178	100.00	4.71e+07	0.46 y	45:32	-	0.86

Filename: 140623E2 S: 2      Acquired: 23-JUN-14 12:45:53  
 Run: 140623E2    Analyte:            ICal: PCBVG8-6-23-14      Results: 140623E2  
 Sample text: ST140623E2-2 PCB CS1 14F1603

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	1.00	1.92e+06	3.07 y	16:24	-	1.13
2	Mono	PCB-2	1.00	2.00e+06	3.10 y	18:41	-	1.12
3	Mono	PCB-3	1.00	2.45e+06	2.99 y	18:54	-	1.37
4	Di	PCB-4/10	4.00	6.76e+06	1.61 y	20:14	-	1.54
5	Di	PCB-7/9	4.00	7.85e+06	1.66 y	21:57	-	1.17
6	Di	PCB-6	2.00	4.27e+06	1.72 y	22:35	-	1.28
7	Di	PCB-5/8	4.00	7.47e+06	1.65 y	22:59	-	1.12
8	Di	PCB-14	2.00	3.76e+06	1.62 y	24:03	-	1.09
9	Di	PCB-11	2.00	3.76e+06	1.61 y	25:13	-	1.09
10	Di	PCB-12/13	4.00	8.12e+06	1.62 y	25:37	-	1.17
11	Di	PCB-15	2.00	4.22e+06	1.64 y	25:55	-	1.22
12	Tri	PCB-19	1.00	1.05e+06	1.10 y	24:15	-	1.01
13	Tri	PCB-30	1.00	1.69e+06	1.10 y	25:06	-	1.64
14	Tri	PCB-18	1.00	1.19e+06	1.03 y	25:51	-	0.79
15	Tri	PCB-17	1.00	1.36e+06	1.06 y	26:01	-	0.90
16	Tri	PCB-24/27	2.00	3.54e+06	1.03 y	26:35	-	1.17
17	Tri	PCB-16/32	2.00	2.81e+06	1.04 y	27:05	-	0.93
18	Tri	PCB-34	1.00	1.77e+06	1.02 y	27:52	-	1.19
19	Tri	PCB-23	1.00	1.91e+06	1.05 y	27:58	-	1.28
20	Tri	PCB-29	1.00	1.69e+06	1.03 y	28:13	-	1.13
21	Tri	PCB-26	1.00	1.83e+06	1.06 y	28:25	-	1.23
22	Tri	PCB-25	1.00	1.86e+06	1.03 y	28:35	-	1.25
23	Tri	PCB-31	1.00	1.92e+06	1.03 y	28:55	-	1.29
24	Tri	PCB-28	1.00	2.63e+06	1.05 y	29:02	-	1.76
25	Tri	PCB-20/21/33	3.00	4.78e+06	1.06 y	29:38	-	1.07
26	Tri	PCB-22	1.00	1.85e+06	1.03 y	30:05	-	1.24
27	Tri	PCB-36	1.00	1.58e+06	0.96 y	30:41	-	1.16
28	Tri	PCB-39	1.00	1.53e+06	1.03 y	31:09	-	1.12
29	Tri	PCB-38	1.00	1.71e+06	0.96 y	31:56	-	1.25
30	Tri	PCB-35	1.00	1.61e+06	1.02 y	32:27	-	1.18
31	Tri	PCB-37	1.00	1.78e+06	0.99 y	32:53	-	1.30
32	Tetra	PCB-54	1.00	1.33e+06	0.85 y	27:56	-	1.06
33	Tetra	PCB-50	1.00	1.04e+06	0.83 y	29:04	-	0.83
34	Tetra	PCB-53	1.00	1.06e+06	0.75 y	29:43	-	1.05
35	Tetra	PCB-51	1.00	1.07e+06	0.77 y	30:03	-	1.06
36	Tetra	PCB-45	1.00	8.56e+05	0.81 y	30:29	-	0.85
37	Tetra	PCB-46	1.00	8.89e+05	0.82 y	30:58	-	0.89
38	Tetra	PCB-52/69	2.00	2.58e+06	0.75 y	31:26	-	1.29
39	Tetra	PCB-73	1.00	1.30e+06	0.82 y	31:33	-	1.30
40	Tetra	PCB-43/49	2.00	2.01e+06	0.79 y	31:43	-	1.01
41	Tetra	PCB-47	1.00	1.15e+06	0.76 y	31:55	-	1.10

42	Tetra	PCB-48/75	2.00	2.58e+06	0.79 y	32:02	-	1.24
43	Tetra	PCB-65	1.00	1.36e+06	0.70 y	32:18	-	1.30
44	Tetra	PCB-62	1.00	1.15e+06	0.75 y	32:25	-	1.10
45	Tetra	PCB-44	1.00	9.43e+05	0.71 y	32:42	-	0.90
46	Tetra	PCB-42/59	2.00	2.48e+06	0.73 y	32:56	-	1.19
47	Tetra	PCB-41/64/71/72	4.00	5.23e+06	0.81 y	33:31	-	1.25
48	Tetra	PCB-68	1.00	1.41e+06	0.83 y	33:46	-	1.35
49	Tetra	PCB-40	1.00	7.66e+05	0.68 y	34:00	-	0.73
50	Tetra	PCB-57	1.00	1.23e+06	0.73 y	34:21	-	0.96
51	Tetra	PCB-67	1.00	1.43e+06	0.70 y	34:39	-	1.11
52	Tetra	PCB-58	1.00	1.22e+06	0.81 y	34:46	-	0.95

53	Tetra	PCB-63	1.00	1.23e+06	0.72 y	34:55	-	0.95
54	Tetra	PCB-74	1.00	1.56e+06	0.79 y	35:12	-	1.21
55	Tetra	PCB-61/70	2.00	2.47e+06	0.75 y	35:23	-	0.96
56	Tetra	PCB-76/66	2.00	2.68e+06	0.76 y	35:36	-	1.04
57	Tetra	PCB-80	1.00	1.62e+06	0.71 y	35:50	-	1.22
58	Tetra	PCB-55	1.00	1.32e+06	0.77 y	36:09	-	0.99
59	Tetra	PCB-56/60	2.00	2.80e+06	0.73 y	36:39	-	1.06
60	Tetra	PCB-79	1.00	1.42e+06	0.79 y	37:42	-	1.07
61	Tetra	PCB-78	1.00	1.49e+06	0.78 y	38:25	-	1.26
62	Tetra	PCB-81	1.00	1.56e+06	0.81 y	38:56	-	1.32
63	Tetra	PCB-77	1.00	1.28e+06	0.77 y	39:32	-	1.07
64	Penta	PCB-104	1.00	1.07e+06	1.55 y	32:35	-	1.18
65	Penta	PCB-96	1.00	1.05e+06	1.49 y	33:50	-	1.15
66	Penta	PCB-103	1.00	8.47e+05	1.59 y	34:21	-	0.93
67	Penta	PCB-100	1.00	8.14e+05	1.70 y	34:42	-	0.90
68	Penta	PCB-94	1.00	7.01e+05	1.52 y	35:10	-	1.08
69	Penta	PCB-95/98/102	3.00	2.40e+06	1.45 y	35:40	-	1.23
70	Penta	PCB-93	1.00	5.56e+05	1.74 y	35:48	-	0.85
71	Penta	PCB-88/91	2.00	1.45e+06	1.50 y	36:05	-	1.11
72	Penta	PCB-121	1.00	9.97e+05	1.56 y	36:12	-	1.53
73	Penta	PCB-84/92	2.00	1.39e+06	1.53 y	37:00	-	1.00
74	Penta	PCB-89	1.00	7.51e+05	1.52 y	37:13	-	1.07
75	Penta	PCB-90/101	2.00	1.52e+06	1.60 y	37:23	-	1.08
76	Penta	PCB-113	1.00	9.10e+05	1.52 y	37:37	-	1.30
77	Penta	PCB-99	1.00	1.04e+06	1.45 y	37:42	-	1.49
78	Penta	PCB-119	1.00	9.16e+05	1.51 y	38:11	-	1.46
79	Penta	PCB-108/112	2.00	1.56e+06	1.62 y	38:20	-	1.25
80	Penta	PCB-83	1.00	9.33e+05	1.71 y	38:30	-	1.49
81	Penta	PCB-97	1.00	7.11e+05	1.49 y	38:42	-	1.13
82	Penta	PCB-86	1.00	5.14e+05	1.35 y	38:51	-	0.82
83	Penta	PCB-87/117/125	3.00	2.83e+06	1.57 y	38:57	-	1.50
84	Penta	PCB-111/115	2.00	2.06e+06	1.59 y	39:08	-	1.64
85	Penta	PCB-85/116	2.00	1.52e+06	1.65 y	39:16	-	1.21
86	Penta	PCB-120	1.00	1.06e+06	1.54 y	39:29	-	1.69
87	Penta	PCB-110	1.00	9.43e+05	1.47 y	39:38	-	1.50
88	Penta	PCB-82	1.00	6.04e+05	1.60 y	40:16	-	0.75
89	Penta	PCB-124	1.00	1.13e+06	1.50 y	40:56	-	1.40
90	Penta	PCB-107/109	2.00	2.00e+06	1.63 y	41:05	-	1.24
91	Penta	PCB-123	1.00	9.34e+05	1.64 y	41:15	-	1.16
92	Penta	PCB-106/118	2.00	1.94e+06	1.53 y	41:27	-	1.13
93	Penta	PCB-114	1.00	1.25e+06	1.49 y	42:06	-	1.31
94	Penta	PCB-122	1.00	1.07e+06	1.65 y	42:14	-	1.12
95	Penta	PCB-105	1.00	1.23e+06	1.59 y	42:58	-	1.28
96	Penta	PCB-127	1.00	1.38e+06	1.64 y	43:18	-	1.31
97	Penta	PCB-126	1.00	1.08e+06	1.55 y	45:12	-	1.16
98	Hexa	PCB-155	1.00	8.37e+05	1.10 y	36:56	-	1.11
99	Hexa	PCB-150	1.00	7.52e+05	1.14 y	38:12	-	0.99
100	Hexa	PCB-152	1.00	7.75e+05	1.29 y	38:40	-	1.02
101	Hexa	PCB-145	1.00	8.56e+05	1.22 y	39:08	-	1.13
102	Hexa	PCB-136	1.00	8.87e+05	1.27 y	39:27	-	1.17

103	Hexa	PCB-148	1.00	5.42e+05	1.31 y	39:33	-	0.72
104	Hexa	PCB-154	1.00	6.51e+05	1.13 y	40:02	-	0.86
105	Hexa	PCB-151	1.00	5.25e+05	1.34 y	40:41	-	0.69
106	Hexa	PCB-135	1.00	6.20e+05	1.16 y	40:53	-	0.82
107	Hexa	PCB-144	1.00	5.68e+05	1.14 y	41:00	-	0.75
108	Hexa	PCB-147	1.00	6.03e+05	1.39 y	41:08	-	0.80
109	Hexa	PCB-139/149	2.00	1.07e+06	1.35 y	41:24	-	0.71
110	Hexa	PCB-140	1.00	5.54e+05	1.12 y	41:35	-	0.73
111	Hexa	PCB-134/143	2.00	1.48e+06	1.32 y	42:02	-	0.89
112	Hexa	PCB-133/142	2.00	1.31e+06	1.23 y	42:19	-	0.78
113	Hexa	PCB-131	1.00	7.77e+05	1.25 y	42:29	-	0.93

114	Hexa	PCB-146/165	2.00	1.94e+06	1.26 y	42:42	-	1.16
115	Hexa	PCB-132/161	2.00	1.76e+06	1.27 y	42:57	-	1.06
116	Hexa	PCB-153	1.00	1.11e+06	1.29 y	43:06	-	1.33
117	Hexa	PCB-168	1.00	1.18e+06	1.25 y	43:19	-	1.41
118	Hexa	PCB-141	1.00	8.76e+05	1.23 y	43:51	-	1.12
119	Hexa	PCB-137	1.00	7.99e+05	1.23 y	44:15	-	1.02
120	Hexa	PCB-130	1.00	7.15e+05	1.22 y	44:20	-	0.91
121	Hexa	PCB-138/163/164	3.00	2.94e+06	1.28 y	44:43	-	1.23
122	Hexa	PCB-158/160	2.00	2.07e+06	1.39 y	44:58	-	1.30
123	Hexa	PCB-129	1.00	6.52e+05	1.17 y	45:12	-	0.82
124	Hexa	PCB-166	1.00	1.08e+06	1.25 y	45:40	-	1.18
125	Hexa	PCB-159	1.00	9.95e+05	1.26 y	46:00	-	1.09
126	Hexa	PCB-128/162	2.00	1.90e+06	1.35 y	46:17	-	1.04
127	Hexa	PCB-167	1.00	1.19e+06	1.26 y	46:40	-	1.21
128	Hexa	PCB-156	1.00	1.01e+06	1.15 y	47:59	-	1.09
129	Hexa	PCB-157	1.00	1.13e+06	1.24 y	48:15	-	1.16
130	Hexa	PCB-169	1.00	9.84e+05	1.29 y	50:19	-	1.07
131	Hepta	PCB-188	1.00	1.07e+06	1.08 y	42:44	-	1.66
132	Hepta	PCB-184	1.00	1.07e+06	1.01 y	43:12	-	1.66
133	Hepta	PCB-179	1.00	9.11e+05	1.11 y	43:58	-	1.41
134	Hepta	PCB-176	1.00	9.38e+05	1.19 y	44:27	-	1.46
135	Hepta	PCB-186	1.00	8.65e+05	1.07 y	45:04	-	1.34
136	Hepta	PCB-178	1.00	6.76e+05	1.13 y	45:32	-	1.05
137	Hepta	PCB-175	1.00	6.57e+05	1.07 y	45:54	-	1.02
138	Hepta	PCB-182/187	2.00	1.61e+06	1.10 y	46:04	-	1.25
139	Hepta	PCB-183	1.00	7.65e+05	1.02 y	46:23	-	1.19
140	Hepta	PCB-185	1.00	8.43e+05	0.96 y	47:03	-	1.68
141	Hepta	PCB-174	1.00	6.52e+05	1.02 y	47:25	-	1.30
142	Hepta	PCB-181	1.00	6.66e+05	1.08 y	47:31	-	1.33
143	Hepta	PCB-177	1.00	6.16e+05	1.08 y	47:42	-	1.23
144	Hepta	PCB-171	1.00	7.73e+05	0.96 y	47:59	-	1.54
145	Hepta	PCB-173	1.00	5.56e+05	0.90 y	48:25	-	1.11
146	Hepta	PCB-172	1.00	8.39e+05	1.07 y	48:52	-	1.67
147	Hepta	PCB-192	1.00	8.60e+05	1.06 y	49:04	-	1.71
148	Hepta	PCB-180	1.00	6.37e+05	0.90 y	49:15	-	1.27
149	Hepta	PCB-193	1.00	8.28e+05	1.14 y	49:27	-	1.65
150	Hepta	PCB-191	1.00	8.11e+05	1.07 y	49:42	-	1.62
151	Hepta	PCB-170	1.00	6.14e+05	0.96 y	50:41	-	1.53
152	Hepta	PCB-190	1.00	8.22e+05	1.03 y	50:50	-	2.04
153	Hepta	PCB-189	1.00	7.94e+05	1.03 y	52:07	-	1.50
154	Octa	PCB-202	1.00	6.55e+05	1.00 y	48:12	-	1.05
155	Octa	PCB-201	1.00	7.12e+05	0.86 y	48:42	-	1.14
156	Octa	PCB-204	1.00	6.82e+05	0.95 y	48:50	-	1.10
157	Octa	PCB-197	1.00	6.44e+05	0.88 y	49:08	-	1.04
158	Octa	PCB-200	1.00	6.28e+05	0.92 y	49:59	-	1.01
159	Octa	PCB-198	1.00	4.28e+05	0.78 y	51:15	-	0.69
160	Octa	PCB-199	1.00	5.35e+05	0.89 y	51:21	-	0.86
161	Octa	PCB-196/203	2.00	9.29e+05	0.93 y	51:37	-	0.75
162	Octa	PCB-195	1.00	6.48e+05	0.85 y	52:45	-	1.18
163	Octa	PCB-194	1.00	6.56e+05	0.96 y	53:38	-	1.19



164	Octa	PCB-205	1.00	8.69e+05	0.98 y	53:56	-	1.58
165	Nona	PCB-208	1.00	6.83e+05	1.14 y	52:54	-	0.92
166	Nona	PCB-207	1.00	7.94e+05	1.46 y	53:12	-	1.07
167	Nona	PCB-206	1.00	4.60e+05	1.50 y	55:20	-	1.03
168	Deca	PCB-209	1.00	4.74e+05	1.30 y	56:37	-	1.12
169	Tot η	Total Mono-PCB	0.00	-	- n	-	-	1.21
170	Tot η	Total Di-PCB	0.00	-	- n	-	-	1.18
171	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.08

172	Tot	η	Total Tri-PCB	0.00	-	-	n	-	-	-	1.23
173	Tot	η	Total Tetra-PCB	0.00	-	-	n	-	-	-	1.10
174	Tot	η	Total Penta-PCB	0.00	-	-	n	-	-	-	1.16
175	Tot	η	Total Penta-PCB	0.00	-	-	n	-	-	-	1.24
176	Tot	η	Total Hexa-PCB	0.00	-	-	n	-	-	-	0.87
177	Tot	η	Total Hexa-PCB	0.00	-	-	n	-	-	-	1.08
178	Tot	η	Total Hepta-PCB	0.00	-	-	n	-	-	-	1.40
179	Tot	η	Total Octa-PCB	0.00	-	-	n	-	-	-	0.93
180	Tot	η	Total Octa-PCB	0.00	-	-	n	-	-	-	1.31
181	Tot	η	Total Nona-PCB	0.00	-	-	n	-	-	-	1.00
182	Tot	η	Total Deca-PCB	1.00	4.74e+05	1.30	y	56:37	-	-	1.12
183	Mono	η	13C-PCB-1	100.00	1.69e+08	3.26	y	16:23	-	-	0.92
184	Mono	η	13C-PCB-3	100.00	1.78e+08	3.34	y	18:53	-	-	0.97
185	Di	-IS	13C-PCB-4	100.00	1.10e+08	1.59	y	20:11	-	-	0.60
186	Di	-IS	13C-PCB-9	100.00	1.67e+08	1.58	y	21:54	-	-	0.91
187	Di	-IS	13C-PCB-11	100.00	1.73e+08	1.56	y	25:13	-	-	0.94
188	Tri	-η	13C-PCB-19	100.00	1.03e+08	1.08	y	24:13	-	-	0.56
189	Tri	-η	13C-PCB-32	100.00	1.51e+08	1.08	y	27:05	-	-	0.82
190	Tri	-η	13C-PCB-28	100.00	1.49e+08	1.05	y	29:01	-	-	0.91
191	Tri	-η	13C-PCB-37	100.00	1.36e+08	1.07	y	32:51	-	-	0.84
192	Tetr	η	13C-PCB-54	100.00	1.25e+08	0.80	y	27:55	-	-	0.96
193	Tetr	η	13C-PCB-52	100.00	1.00e+08	0.79	y	31:24	-	-	0.77
194	Tetr	η	13C-PCB-47	100.00	1.04e+08	0.79	y	31:54	-	-	0.80
195	Tetr	η	13C-PCB-70	100.00	1.29e+08	0.80	y	35:24	-	-	0.99
196	Tetr	η	13C-PCB-80	100.00	1.33e+08	0.79	y	35:49	-	-	1.02
197	Tetr	η	13C-PCB-81	100.00	1.18e+08	0.79	y	38:55	-	-	0.91
198	Tetr	η	13C-PCB-77	100.00	1.20e+08	0.79	y	39:30	-	-	0.93
199	Pent	η	13C-PCB-104	100.00	9.09e+07	1.57	y	32:33	-	-	1.02
200	Pent	η	13C-PCB-95	100.00	6.52e+07	1.56	y	35:42	-	-	0.73
201	Pent	η	13C-PCB-101	100.00	7.00e+07	1.57	y	37:22	-	-	0.79
202	Pent	η	13C-PCB-97	100.00	6.28e+07	1.60	y	38:40	-	-	0.71
203	Pent	η	13C-PCB-123	100.00	8.04e+07	1.57	y	41:15	-	-	0.90
204	Pent	η	13C-PCB-118	100.00	8.60e+07	1.62	y	41:25	-	-	0.97
205	Pent	η	13C-PCB-114	100.00	9.51e+07	1.64	y	42:05	-	-	1.33
206	Pent	η	13C-PCB-105	100.00	9.62e+07	1.60	y	42:57	-	-	1.34
207	Pent	η	13C-PCB-127	100.00	1.06e+08	1.61	y	43:17	-	-	1.48
208	Pent	η	13C-PCB-126	100.00	9.30e+07	1.60	y	45:11	-	-	1.30
209	Hexa	η	13C-PCB-155	100.00	7.57e+07	1.27	y	36:55	-	-	0.85
210	Hexa	η	13C-PCB-153	100.00	8.33e+07	1.30	y	43:06	-	-	1.16
211	Hexa	η	13C-PCB-141	100.00	7.82e+07	1.28	y	43:50	-	-	1.09
212	Hexa		13C-PCB-138	100.00	7.98e+07	1.28	y	44:41	-	-	1.11
213	Hexa	η	13C-PCB-159	100.00	9.11e+07	1.28	y	45:59	-	-	1.27
214	Hexa	η	13C-PCB-167	100.00	9.84e+07	1.27	y	46:40	-	-	1.37
215	Hexa	η	13C-PCB-156	100.00	9.34e+07	1.28	y	47:58	-	-	1.30
216	Hexa	η	13C-PCB-157	100.00	9.73e+07	1.29	y	48:14	-	-	1.36
217	Hexa	η	13C-PCB-169	100.00	9.18e+07	1.27	y	50:19	-	-	1.28
218	Hept	η	13C-PCB-188	100.00	6.44e+07	0.46	y	42:44	-	-	0.90
219	Hept	η	13C-PCB-180	100.00	5.02e+07	0.46	y	49:15	-	-	0.70
220	Hept	η	13C-PCB-170	100.00	4.02e+07	0.48	y	50:40	-	-	0.56
221	Hept	η	13C-PCB-189	100.00	5.29e+07	0.47	y	52:06	-	-	0.74
222	Octa	η	13C-PCB-202	100.00	6.22e+07	0.90	y	48:10	-	-	0.87

223	Octaη	13C-PCB-194	100.00	5.51e+07	0.92 y	53:37	-	0.81
224	Nonaη	13C-PCB-208	100.00	7.43e+07	0.77 y	52:53	-	1.09
225	Nonaη	13C-PCB-206	100.00	4.47e+07	0.79 y	55:19	-	0.66
226	Decaη	13C-PCB-209	100.00	4.24e+07	1.24 y	56:36	-	0.62
227	DI-RS	13C-PCB-15	100.00	1.84e+08	1.57 y	25:54	-	1.00
228	Tri-η	13C-PCB-31	100.00	1.63e+08	1.05 y	28:54	-	1.00
229	Tetraη	13C-PCB-60	100.00	1.30e+08	0.80 y	36:39	-	1.00
230	Penta	13C-PCB-111	100.00	8.89e+07	1.60 y	39:06	-	1.00
231	Hexaη	13C-PCB-128	100.00	7.17e+07	1.30 y	46:16	-	1.00
232	Octaη	13C-PCB-205	100.00	6.82e+07	0.91 y	53:55	-	1.00

233	CRS	13C-PCB-79	100.00	1.32e+08	0.79 y	37:41	-	1.02
234	CRS	13C-PCB-178	100.00	4.49e+07	0.45 y	45:32	-	0.63
235	PS	13C-PCB-79	100.00	1.32e+08	0.79 y	37:41	-	1.12
236	PS	13C-PCB-178	100.00	4.49e+07	0.45 y	45:32	-	0.90

Filename: 140623E2 S: 3      Acquired: 23-JUN-14 13:49:52  
 Run: 140623E2    Analyte:                    ICal: PCBVG8-6-23-14      Results: 140623E2  
 Sample text: ST140623E2-3 PCB CS2 14F1604

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	2.50	4.75e+06	3.02 y	16:24	-	1.18
2	Mono	PCB-2	2.50	4.92e+06	2.98 y	18:41	-	1.16
3	Mono	PCB-3	2.50	5.82e+06	3.06 y	18:54	-	1.37
4	Di	PCB-4/10	10.00	1.63e+07	1.69 y	20:13	-	1.55
5	Di	PCB-7/9	10.00	1.91e+07	1.66 y	21:57	-	1.19
6	Di	PCB-6	5.00	1.05e+07	1.63 y	22:35	-	1.31
7	Di	PCB-5/8	10.00	1.85e+07	1.65 y	22:59	-	1.15
8	Di	PCB-14	5.00	9.28e+06	1.67 y	24:03	-	1.11
9	Di	PCB-11	5.00	8.97e+06	1.69 y	25:13	-	1.07
10	Di	PCB-12/13	10.00	1.98e+07	1.68 y	25:37	-	1.18
11	Di	PCB-15	5.00	1.05e+07	1.70 y	25:55	-	1.26
12	Tri	PCB-19	2.50	2.48e+06	1.07 y	24:14	-	1.01
13	Tri	PCB-30	2.50	4.07e+06	1.08 y	25:06	-	1.66
14	Tri	PCB-18	2.50	2.77e+06	1.08 y	25:50	-	0.79
15	Tri	PCB-17	2.50	3.32e+06	1.02 y	26:01	-	0.94
16	Tri	PCB-24/27	5.00	8.36e+06	1.04 y	26:35	-	1.19
17	Tri	PCB-16/32	5.00	6.64e+06	1.06 y	27:05	-	0.94
18	Tri	PCB-34	2.50	4.10e+06	1.00 y	27:52	-	1.13
19	Tri	PCB-23	2.50	4.41e+06	1.05 y	27:58	-	1.22
20	Tri	PCB-29	2.50	3.95e+06	1.06 y	28:13	-	1.09
21	Tri	PCB-26	2.50	4.58e+06	1.04 y	28:24	-	1.27
22	Tri	PCB-25	2.50	4.69e+06	1.09 y	28:35	-	1.30
23	Tri	PCB-31	2.50	4.94e+06	1.06 y	28:55	-	1.36
24	Tri	PCB-28	2.50	6.44e+06	1.05 y	29:02	-	1.78
25	Tri	PCB-20/21/33	7.50	1.21e+07	1.07 y	29:38	-	1.11
26	Tri	PCB-22	2.50	4.25e+06	1.06 y	30:04	-	1.17
27	Tri	PCB-36	2.50	3.41e+06	1.03 y	30:41	-	1.11
28	Tri	PCB-39	2.50	3.35e+06	1.04 y	31:09	-	1.09
29	Tri	PCB-38	2.50	3.81e+06	1.11 y	31:56	-	1.24
30	Tri	PCB-35	2.50	4.04e+06	1.02 y	32:26	-	1.31
31	Tri	PCB-37	2.50	3.84e+06	0.98 y	32:53	-	1.25
32	Tetra	PCB-54	2.50	3.28e+06	0.79 y	27:56	-	1.10
33	Tetra	PCB-50	2.50	2.75e+06	0.77 y	29:04	-	0.92
34	Tetra	PCB-53	2.50	2.52e+06	0.76 y	29:43	-	1.06
35	Tetra	PCB-51	2.50	2.31e+06	0.79 y	30:03	-	0.97
36	Tetra	PCB-45	2.50	1.97e+06	0.72 y	30:29	-	0.83
37	Tetra	PCB-46	2.50	1.95e+06	0.75 y	30:58	-	0.82
38	Tetra	PCB-52/69	5.00	6.07e+06	0.78 y	31:26	-	1.27
39	Tetra	PCB-73	2.50	3.40e+06	0.77 y	31:33	-	1.43
40	Tetra	PCB-43/49	5.00	4.57e+06	0.77 y	31:43	-	0.96
41	Tetra	PCB-47	2.50	2.67e+06	0.72 y	31:55	-	1.07

42	Tetra	PCB-48/75	5.00	6.04e+06	0.80 y	32:01	-	1.21
43	Tetra	PCB-65	2.50	3.21e+06	0.86 y	32:18	-	1.29
44	Tetra	PCB-62	2.50	3.13e+06	0.70 y	32:25	-	1.25
45	Tetra	PCB-44	2.50	2.09e+06	0.75 y	32:42	-	0.84
46	Tetra	PCB-42/59	5.00	5.38e+06	0.76 y	32:56	-	1.08
47	Tetra	PCB-41/64/71/72	10.00	1.16e+07	0.76 y	33:31	-	1.16
48	Tetra	PCB-68	2.50	3.30e+06	0.76 y	33:46	-	1.32
49	Tetra	PCB-40	2.50	1.74e+06	0.77 y	34:00	-	0.70
50	Tetra	PCB-57	2.50	3.04e+06	0.75 y	34:21	-	1.00
51	Tetra	PCB-67	2.50	3.37e+06	0.81 y	34:39	-	1.11
52	Tetra	PCB-58	2.50	2.87e+06	0.75 y	34:46	-	0.94

53	Tetra	PCB-63	2.50	2.77e+06	0.73 y	34:55	-	0.91
54	Tetra	PCB-74	2.50	3.80e+06	0.75 y	35:12	-	1.25
55	Tetra	PCB-61/70	5.00	5.98e+06	0.74 y	35:23	-	0.98
56	Tetra	PCB-76/66	5.00	6.31e+06	0.76 y	35:36	-	1.04
57	Tetra	PCB-80	2.50	3.85e+06	0.79 y	35:50	-	1.22
58	Tetra	PCB-55	2.50	3.37e+06	0.77 y	36:09	-	1.07
59	Tetra	PCB-56/60	5.00	6.58e+06	0.79 y	36:39	-	1.05
60	Tetra	PCB-79	2.50	3.55e+06	0.78 y	37:42	-	1.13
61	Tetra	PCB-78	2.50	3.58e+06	0.75 y	38:24	-	1.27
62	Tetra	PCB-81	2.50	3.64e+06	0.71 y	38:56	-	1.29
63	Tetra	PCB-77	2.50	3.13e+06	0.84 y	39:32	-	1.11
64	Penta	PCB-104	2.50	2.54e+06	1.55 y	32:34	-	1.20
65	Penta	PCB-96	2.50	2.37e+06	1.57 y	33:49	-	1.11
66	Penta	PCB-103	2.50	1.95e+06	1.62 y	34:21	-	0.92
67	Penta	PCB-100	2.50	1.89e+06	1.58 y	34:42	-	0.89
68	Penta	PCB-94	2.50	1.59e+06	1.56 y	35:10	-	1.03
69	Penta	PCB-95/98/102	7.50	5.65e+06	1.58 y	35:40	-	1.22
70	Penta	PCB-93	2.50	1.33e+06	1.59 y	35:48	-	0.86
71	Penta	PCB-88/91	5.00	3.54e+06	1.56 y	36:05	-	1.15
72	Penta	PCB-121	2.50	2.47e+06	1.61 y	36:11	-	1.61
73	Penta	PCB-84/92	5.00	3.35e+06	1.58 y	37:00	-	1.04
74	Penta	PCB-89	2.50	1.82e+06	1.44 y	37:13	-	1.13
75	Penta	PCB-90/101	5.00	3.61e+06	1.57 y	37:23	-	1.12
76	Penta	PCB-113	2.50	2.36e+06	1.55 y	37:38	-	1.46
77	Penta	PCB-99	2.50	2.05e+06	1.54 y	37:43	-	1.27
78	Penta	PCB-119	2.50	2.29e+06	1.50 y	38:11	-	1.54
79	Penta	PCB-108/112	5.00	3.72e+06	1.60 y	38:20	-	1.25
80	Penta	PCB-83	2.50	2.26e+06	1.63 y	38:30	-	1.52
81	Penta	PCB-97	2.50	1.70e+06	1.65 y	38:41	-	1.14
82	Penta	PCB-86	2.50	1.20e+06	1.61 y	38:50	-	0.81
83	Penta	PCB-87/117/125	7.50	6.65e+06	1.64 y	38:57	-	1.49
84	Penta	PCB-111/115	5.00	4.80e+06	1.62 y	39:08	-	1.61
85	Penta	PCB-85/116	5.00	3.77e+06	1.61 y	39:15	-	1.27
86	Penta	PCB-120	2.50	2.37e+06	1.56 y	39:29	-	1.60
87	Penta	PCB-110	2.50	2.32e+06	1.42 y	39:38	-	1.56
88	Penta	PCB-82	2.50	1.39e+06	1.53 y	40:16	-	0.74
89	Penta	PCB-124	2.50	2.74e+06	1.58 y	40:57	-	1.45
90	Penta	PCB-107/109	5.00	4.89e+06	1.55 y	41:05	-	1.29
91	Penta	PCB-123	2.50	2.23e+06	1.54 y	41:15	-	1.18
92	Penta	PCB-106/118	5.00	4.74e+06	1.58 y	41:27	-	1.19
93	Penta	PCB-114	2.50	3.01e+06	1.74 y	42:06	-	1.31
94	Penta	PCB-122	2.50	2.58e+06	1.66 y	42:14	-	1.12
95	Penta	PCB-105	2.50	3.03e+06	1.56 y	42:58	-	1.31
96	Penta	PCB-127	2.50	3.44e+06	1.56 y	43:18	-	1.37
97	Penta	PCB-126	2.50	2.65e+06	1.69 y	45:12	-	1.19
98	Hexa	PCB-155	2.50	1.95e+06	1.25 y	36:56	-	1.10
99	Hexa	PCB-150	2.50	1.74e+06	1.30 y	38:12	-	0.98
100	Hexa	PCB-152	2.50	1.99e+06	1.35 y	38:40	-	1.12
101	Hexa	PCB-145	2.50	2.09e+06	1.25 y	39:08	-	1.18
102	Hexa	PCB-136	2.50	2.08e+06	1.27 y	39:27	-	1.17

103	Hexa	PCB-148	2.50	1.31e+06	1.34 y	39:33	-	0.74
104	Hexa	PCB-154	2.50	1.55e+06	1.20 y	40:02	-	0.88
105	Hexa	PCB-151	2.50	1.29e+06	1.35 y	40:41	-	0.73
106	Hexa	PCB-135	2.50	1.24e+06	1.27 y	40:53	-	0.70
107	Hexa	PCB-144	2.50	1.35e+06	1.29 y	41:00	-	0.76
108	Hexa	PCB-147	2.50	1.38e+06	1.27 y	41:08	-	0.78
109	Hexa	PCB-139/149	5.00	2.58e+06	1.32 y	41:24	-	0.73
110	Hexa	PCB-140	2.50	1.29e+06	1.21 y	41:35	-	0.73
111	Hexa	PCB-134/143	5.00	3.48e+06	1.21 y	42:01	-	0.89
112	Hexa	PCB-133/142	5.00	3.10e+06	1.24 y	42:19	-	0.79
113	Hexa	PCB-131	2.50	1.76e+06	1.30 y	42:29	-	0.90



114	Hexa	PCB-146/165	5.00	4.77e+06	1.25 y	42:42	-	1.22
115	Hexa	PCB-132/161	5.00	4.19e+06	1.28 y	42:57	-	1.07
116	Hexa	PCB-153	2.50	2.42e+06	1.18 y	43:07	-	1.24
117	Hexa	PCB-168	2.50	2.79e+06	1.31 y	43:20	-	1.43
118	Hexa	PCB-141	2.50	1.92e+06	1.24 y	43:51	-	1.04
119	Hexa	PCB-137	2.50	1.90e+06	1.26 y	44:14	-	1.03
120	Hexa	PCB-130	2.50	1.82e+06	1.20 y	44:20	-	0.99
121	Hexa	PCB-138/163/164	7.50	7.26e+06	1.17 y	44:43	-	1.30
122	Hexa	PCB-158/160	5.00	5.17e+06	1.21 y	44:58	-	1.39
123	Hexa	PCB-129	2.50	1.61e+06	1.27 y	45:12	-	0.87
124	Hexa	PCB-166	2.50	2.51e+06	1.17 y	45:40	-	1.18
125	Hexa	PCB-159	2.50	2.37e+06	1.27 y	46:00	-	1.11
126	Hexa	PCB-128/162	5.00	4.28e+06	1.21 y	46:17	-	1.00
127	Hexa	PCB-167	2.50	2.79e+06	1.21 y	46:40	-	1.21
128	Hexa	PCB-156	2.50	2.59e+06	1.29 y	47:59	-	1.18
129	Hexa	PCB-157	2.50	2.63e+06	1.28 y	48:15	-	1.14
130	Hexa	PCB-169	2.50	2.41e+06	1.20 y	50:20	-	1.09
131	Hepta	PCB-188	2.50	2.41e+06	0.99 y	42:44	-	1.55
132	Hepta	PCB-184	2.50	2.63e+06	1.06 y	43:12	-	1.69
133	Hepta	PCB-179	2.50	2.01e+06	1.01 y	43:59	-	1.29
134	Hepta	PCB-176	2.50	2.25e+06	1.03 y	44:27	-	1.45
135	Hepta	PCB-186	2.50	2.12e+06	0.99 y	45:04	-	1.36
136	Hepta	PCB-178	2.50	1.70e+06	1.03 y	45:33	-	1.10
137	Hepta	PCB-175	2.50	1.56e+06	1.13 y	45:54	-	1.00
138	Hepta	PCB-182/187	5.00	3.83e+06	1.06 y	46:04	-	1.24
139	Hepta	PCB-183	2.50	1.88e+06	0.99 y	46:23	-	1.21
140	Hepta	PCB-185	2.50	2.14e+06	1.08 y	47:03	-	1.87
141	Hepta	PCB-174	2.50	1.52e+06	1.09 y	47:25	-	1.33
142	Hepta	PCB-181	2.50	1.64e+06	1.06 y	47:31	-	1.44
143	Hepta	PCB-177	2.50	1.46e+06	1.12 y	47:41	-	1.28
144	Hepta	PCB-171	2.50	1.80e+06	1.10 y	47:59	-	1.57
145	Hepta	PCB-173	2.50	1.30e+06	1.02 y	48:25	-	1.14
146	Hepta	PCB-172	2.50	1.89e+06	1.10 y	48:52	-	1.66
147	Hepta	PCB-192	2.50	2.02e+06	1.05 y	49:03	-	1.77
148	Hepta	PCB-180	2.50	1.56e+06	1.03 y	49:15	-	1.37
149	Hepta	PCB-193	2.50	1.90e+06	1.14 y	49:27	-	1.67
150	Hepta	PCB-191	2.50	1.95e+06	1.08 y	49:42	-	1.71
151	Hepta	PCB-170	2.50	1.48e+06	1.03 y	50:41	-	1.63
152	Hepta	PCB-190	2.50	2.08e+06	1.01 y	50:51	-	2.28
153	Hepta	PCB-189	2.50	1.87e+06	1.06 y	52:07	-	1.54
154	Octa	PCB-202	2.50	1.49e+06	0.93 y	48:11	-	1.05
155	Octa	PCB-201	2.50	1.64e+06	0.88 y	48:41	-	1.16
156	Octa	PCB-204	2.50	1.62e+06	0.92 y	48:51	-	1.14
157	Octa	PCB-197	2.50	1.49e+06	0.97 y	49:09	-	1.05
158	Octa	PCB-200	2.50	1.49e+06	0.95 y	49:59	-	1.05
159	Octa	PCB-198	2.50	1.08e+06	0.86 y	51:15	-	0.76
160	Octa	PCB-199	2.50	1.06e+06	0.98 y	51:22	-	0.75
161	Octa	PCB-196/203	5.00	2.18e+06	0.94 y	51:37	-	0.77
162	Octa	PCB-195	2.50	1.58e+06	0.94 y	52:46	-	1.24
163	Octa	PCB-194	2.50	1.51e+06	0.87 y	53:39	-	1.18

164	Octa	PCB-205	2.50	1.95e+06	0.91 y	53:56	-	1.53
165	Nona	PCB-208	2.50	1.57e+06	1.28 y	52:54	-	0.91
166	Nona	PCB-207	2.50	1.82e+06	1.42 y	53:13	-	1.05
167	Nona	PCB-206	2.50	1.03e+06	1.32 y	55:21	-	0.99
168	Deca	PCB-209	2.50	1.17e+06	1.22 y	56:39	-	1.17
169	Tot η	Total Mono-PCB	0.00	-	- n	-	-	1.24
170	Tot η	Total Di-PCB	0.00	-	- n	-	-	1.20
171	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.09

172	Tot	η	Total Tri-PCB	0.00	-	- n	-	-	1.24
173	Tot	η	Total Tetra-PCB	0.00	-	- n	-	-	1.08
174	Tot	η	Total Penta-PCB	0.00	-	- n	-	-	1.17
175	Tot	η	Total Penta-PCB	0.00	-	- n	-	-	1.26
176	Tot	η	Total Hexa-PCB	0.00	-	- n	-	-	0.88
177	Tot	η	Total Hexa-PCB	0.00	-	- n	-	-	1.10
178	Tot	η	Total Hepta-PCB	0.00	-	- n	-	-	1.42
179	Tot	η	Total Octa-PCB	0.00	-	- n	-	-	0.95
180	Tot	η	Total Octa-PCB	0.00	-	- n	-	-	1.32
181	Tot	η	Total Nona-PCB	0.00	-	- n	-	-	0.98
182	Tot	η	Total Deca-PCB	2.50	1.17e+06	1.22 y	56:39	-	1.17
183	Mono	η	13C-PCB-1	100.00	1.61e+08	3.34 y	16:23	-	0.91
184	Mono	η	13C-PCB-3	100.00	1.70e+08	3.41 y	18:53	-	0.96
185	Di-IS		13C-PCB-4	100.00	1.05e+08	1.60 y	20:11	-	0.60
186	Di-IS		13C-PCB-9	100.00	1.61e+08	1.58 y	21:54	-	0.91
187	Di-IS		13C-PCB-11	100.00	1.68e+08	1.55 y	25:12	-	0.95
188	Tri-η		13C-PCB-19	100.00	9.81e+07	1.09 y	24:13	-	0.56
189	Tri-η		13C-PCB-32	100.00	1.41e+08	1.10 y	27:05	-	0.80
190	Tri-η		13C-PCB-28	100.00	1.45e+08	1.05 y	29:00	-	0.93
191	Tri-η		13C-PCB-37	100.00	1.23e+08	1.05 y	32:51	-	0.79
192	Tetrη		13C-PCB-54	100.00	1.19e+08	0.80 y	27:55	-	0.97
193	Tetrη		13C-PCB-52	100.00	9.54e+07	0.79 y	31:24	-	0.77
194	Tetrη		13C-PCB-47	100.00	9.99e+07	0.78 y	31:53	-	0.81
195	Tetrη		13C-PCB-70	100.00	1.22e+08	0.79 y	35:24	-	0.99
196	Tetrη		13C-PCB-80	100.00	1.26e+08	0.79 y	35:48	-	1.02
197	Tetrη		13C-PCB-81	100.00	1.13e+08	0.80 y	38:55	-	0.92
198	Tetrη		13C-PCB-77	100.00	1.13e+08	0.81 y	39:31	-	0.92
199	Pentη		13C-PCB-104	100.00	8.51e+07	1.58 y	32:33	-	1.01
200	Pentη		13C-PCB-95	100.00	6.16e+07	1.60 y	35:42	-	0.73
201	Pentη		13C-PCB-101	100.00	6.46e+07	1.61 y	37:22	-	0.77
202	Pentη		13C-PCB-97	100.00	5.95e+07	1.56 y	38:40	-	0.71
203	Pentη		13C-PCB-123	100.00	7.57e+07	1.60 y	41:14	-	0.90
204	Pentη		13C-PCB-118	100.00	7.96e+07	1.58 y	41:25	-	0.95
205	Pentη		13C-PCB-114	100.00	9.23e+07	1.63 y	42:05	-	1.35
206	Pentη		13C-PCB-105	100.00	9.25e+07	1.61 y	42:57	-	1.36
207	Pentη		13C-PCB-127	100.00	1.01e+08	1.61 y	43:17	-	1.48
208	Pentη		13C-PCB-126	100.00	8.91e+07	1.60 y	45:11	-	1.31
209	Hexaη		13C-PCB-155	100.00	7.08e+07	1.28 y	36:55	-	0.84
210	Hexaη		13C-PCB-153	100.00	7.84e+07	1.29 y	43:06	-	1.15
211	Hexaη		13C-PCB-141	100.00	7.40e+07	1.27 y	43:50	-	1.09
212	Hexa		13C-PCB-138	100.00	7.43e+07	1.26 y	44:41	-	1.09
213	Hexaη		13C-PCB-159	100.00	8.52e+07	1.28 y	45:58	-	1.25
214	Hexaη		13C-PCB-167	100.00	9.23e+07	1.29 y	46:40	-	1.35
215	Hexaη		13C-PCB-156	100.00	8.80e+07	1.30 y	47:58	-	1.29
216	Hexaη		13C-PCB-157	100.00	9.23e+07	1.29 y	48:14	-	1.35
217	Hexaη		13C-PCB-169	100.00	8.83e+07	1.28 y	50:19	-	1.29
218	Heptη		13C-PCB-188	100.00	6.20e+07	0.47 y	42:44	-	0.91
219	Heptη		13C-PCB-180	100.00	4.56e+07	0.47 y	49:15	-	0.67
220	Heptη		13C-PCB-170	100.00	3.64e+07	0.46 y	50:40	-	0.53
221	Heptη		13C-PCB-189	100.00	4.86e+07	0.48 y	52:07	-	0.71
222	Octaη		13C-PCB-202	100.00	5.66e+07	0.90 y	48:10	-	0.83

223	Octaη	13C-PCB-194	100.00	5.12e+07	0.92 y	53:38	-	0.80
224	Nonaη	13C-PCB-208	100.00	6.94e+07	0.78 y	52:53	-	1.09
225	Nonaη	13C-PCB-206	100.00	4.16e+07	0.79 y	55:20	-	0.65
226	Decaη	13C-PCB-209	100.00	3.99e+07	1.19 y	56:38	-	0.63
227	DI-RS	13C-PCB-15	100.00	1.76e+08	1.60 y	25:54	-	1.00
228	Tri-η	13C-PCB-31	100.00	1.55e+08	1.05 y	28:54	-	1.00
229	Tetrη	13C-PCB-60	100.00	1.23e+08	0.79 y	36:38	-	1.00
230	Penta	13C-PCB-111	100.00	8.39e+07	1.60 y	39:06	-	1.00
231	Hexaη	13C-PCB-128	100.00	6.82e+07	1.27 y	46:16	-	1.00
232	Octaη	13C-PCB-205	100.00	6.36e+07	0.91 y	53:55	-	1.00

233	CRS	13C-PCB-79	100.00	1.25e+08	0.79 y	37:41	-	1.02
234	CRS	13C-PCB-178	100.00	4.19e+07	0.47 y	45:32	-	0.51
235	PS	13C-PCB-79	100.00	1.25e+08	0.79 y	37:41	-	1.11
236	PS	13C-PCB-178	100.00	4.19e+07	0.47 y	45:32	-	0.92

Filename: 140623E2 S: 4      Acquired: 23-JUN-14 14:53:49  
 Run: 140623E2    Analyte:            ICal: PCBVG8-6-23-14      Results: 140623E2  
 Sample text: ST140623E2-4 PCB CS3 14F1302

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	50.00	9.40e+07	3.00 y	16:25	-	1.23
2	Mono	PCB-2	50.00	9.45e+07	3.01 y	18:41	-	1.23
3	Mono	PCB-3	50.00	1.13e+08	3.01 y	18:55	-	1.46
4	Di	PCB-4/10	200.00	3.27e+08	1.65 y	20:14	-	1.57
5	Di	PCB-7/9	200.00	3.82e+08	1.65 y	21:57	-	1.21
6	Di	PCB-6	100.00	2.07e+08	1.66 y	22:35	-	1.31
7	Di	PCB-5/8	200.00	3.65e+08	1.64 y	23:00	-	1.15
8	Di	PCB-14	100.00	1.87e+08	1.66 y	24:04	-	1.14
9	Di	PCB-11	100.00	1.81e+08	1.65 y	25:14	-	1.10
10	Di	PCB-12/13	200.00	3.92e+08	1.65 y	25:38	-	1.20
11	Di	PCB-15	100.00	2.11e+08	1.66 y	25:56	-	1.28
12	Tri	PCB-19	50.00	4.92e+07	1.05 y	24:15	-	1.04
13	Tri	PCB-30	50.00	7.99e+07	1.06 y	25:07	-	1.69
14	Tri	PCB-18	50.00	5.58e+07	1.05 y	25:51	-	0.80
15	Tri	PCB-17	50.00	6.48e+07	1.05 y	26:02	-	0.93
16	Tri	PCB-24/27	100.00	1.68e+08	1.05 y	26:36	-	1.20
17	Tri	PCB-16/32	100.00	1.31e+08	1.06 y	27:06	-	0.94
18	Tri	PCB-34	50.00	7.59e+07	1.03 y	27:52	-	1.09
19	Tri	PCB-23	50.00	8.55e+07	1.06 y	27:58	-	1.23
20	Tri	PCB-29	50.00	7.42e+07	1.04 y	28:13	-	1.06
21	Tri	PCB-26	50.00	8.24e+07	1.04 y	28:25	-	1.18
22	Tri	PCB-25	50.00	8.85e+07	1.06 y	28:34	-	1.27
23	Tri	PCB-31	50.00	8.65e+07	1.02 y	28:56	-	1.24
24	Tri	PCB-28	50.00	1.19e+08	1.04 y	29:02	-	1.70
25	Tri	PCB-20/21/33	150.00	2.26e+08	1.03 y	29:39	-	1.08
26	Tri	PCB-22	50.00	8.60e+07	1.04 y	30:05	-	1.23
27	Tri	PCB-36	50.00	7.12e+07	1.03 y	30:40	-	1.18
28	Tri	PCB-39	50.00	7.20e+07	1.02 y	31:09	-	1.20
29	Tri	PCB-38	50.00	7.37e+07	1.03 y	31:55	-	1.23
30	Tri	PCB-35	50.00	7.10e+07	1.03 y	32:26	-	1.18
31	Tri	PCB-37	50.00	7.16e+07	1.02 y	32:53	-	1.19
32	Tetra	PCB-54	50.00	6.73e+07	0.78 y	27:57	-	1.10
33	Tetra	PCB-50	50.00	5.38e+07	0.77 y	29:05	-	0.88
34	Tetra	PCB-53	50.00	5.23e+07	0.75 y	29:44	-	1.08
35	Tetra	PCB-51	50.00	4.77e+07	0.77 y	30:04	-	0.98
36	Tetra	PCB-45	50.00	4.32e+07	0.77 y	30:30	-	0.89
37	Tetra	PCB-46	50.00	4.05e+07	0.76 y	30:59	-	0.83
38	Tetra	PCB-52/69	100.00	1.24e+08	0.76 y	31:27	-	1.28
39	Tetra	PCB-73	50.00	6.71e+07	0.78 y	31:34	-	1.38
40	Tetra	PCB-43/49	100.00	9.43e+07	0.76 y	31:44	-	0.97
41	Tetra	PCB-47	50.00	5.35e+07	0.76 y	31:55	-	1.04

42	Tetra	PCB-48/75	100.00	1.20e+08	0.77 y	32:02	-	1.17
43	Tetra	PCB-65	50.00	6.30e+07	0.76 y	32:19	-	1.23
44	Tetra	PCB-62	50.00	5.58e+07	0.76 y	32:26	-	1.09
45	Tetra	PCB-44	50.00	4.12e+07	0.77 y	32:43	-	0.80
46	Tetra	PCB-42/59	100.00	1.11e+08	0.76 y	32:57	-	1.08
47	Tetra	PCB-41/64/71/72	200.00	2.33e+08	0.77 y	33:32	-	1.13
48	Tetra	PCB-68	50.00	6.63e+07	0.76 y	33:47	-	1.29
49	Tetra	PCB-40	50.00	3.48e+07	0.77 y	34:00	-	0.68
50	Tetra	PCB-57	50.00	6.06e+07	0.76 y	34:22	-	0.99
51	Tetra	PCB-67	50.00	6.65e+07	0.76 y	34:40	-	1.09
52	Tetra	PCB-58	50.00	5.67e+07	0.79 y	34:47	-	0.93

53	Tetra	PCB-63	50.00	5.70e+07	0.76 y	34:56	-	0.93
54	Tetra	PCB-74	50.00	7.34e+07	0.77 y	35:13	-	1.20
55	Tetra	PCB-61/70	100.00	1.16e+08	0.77 y	35:24	-	0.95
56	Tetra	PCB-76/66	100.00	1.26e+08	0.77 y	35:37	-	1.03
57	Tetra	PCB-80	50.00	7.72e+07	0.77 y	35:50	-	1.22
58	Tetra	PCB-55	50.00	6.84e+07	0.77 y	36:10	-	1.08
59	Tetra	PCB-56/60	100.00	1.27e+08	0.77 y	36:40	-	1.00
60	Tetra	PCB-79	50.00	6.79e+07	0.78 y	37:43	-	1.07
61	Tetra	PCB-78	50.00	6.97e+07	0.77 y	38:25	-	1.25
62	Tetra	PCB-81	50.00	7.20e+07	0.78 y	38:57	-	1.29
63	Tetra	PCB-77	50.00	6.19e+07	0.79 y	39:33	-	1.08
64	Penta	PCB-104	50.00	5.11e+07	1.57 y	32:35	-	1.20
65	Penta	PCB-96	50.00	4.80e+07	1.56 y	33:50	-	1.13
66	Penta	PCB-103	50.00	3.98e+07	1.56 y	34:22	-	0.93
67	Penta	PCB-100	50.00	3.93e+07	1.58 y	34:42	-	0.92
68	Penta	PCB-94	50.00	3.18e+07	1.55 y	35:11	-	1.02
69	Penta	PCB-95/98/102	150.00	1.14e+08	1.55 y	35:42	-	1.22
70	Penta	PCB-93	50.00	2.65e+07	1.58 y	35:48	-	0.85
71	Penta	PCB-88/91	100.00	7.03e+07	1.58 y	36:05	-	1.12
72	Penta	PCB-121	50.00	5.08e+07	1.60 y	36:12	-	1.62
73	Penta	PCB-84/92	100.00	6.82e+07	1.56 y	37:01	-	1.04
74	Penta	PCB-89	50.00	3.73e+07	1.58 y	37:14	-	1.14
75	Penta	PCB-90/101	100.00	7.26e+07	1.56 y	37:24	-	1.10
76	Penta	PCB-113	50.00	4.88e+07	1.57 y	37:39	-	1.49
77	Penta	PCB-99	50.00	4.19e+07	1.60 y	37:44	-	1.27
78	Penta	PCB-119	50.00	4.49e+07	1.56 y	38:12	-	1.52
79	Penta	PCB-108/112	100.00	7.56e+07	1.58 y	38:21	-	1.28
80	Penta	PCB-83	50.00	4.40e+07	1.57 y	38:31	-	1.49
81	Penta	PCB-97	50.00	3.44e+07	1.55 y	38:42	-	1.17
82	Penta	PCB-86	50.00	2.35e+07	1.55 y	38:51	-	0.80
83	Penta	PCB-87/117/125	150.00	1.40e+08	1.62 y	38:58	-	1.59
84	Penta	PCB-111/115	100.00	9.49e+07	1.51 y	39:08	-	1.61
85	Penta	PCB-85/116	100.00	7.71e+07	1.58 y	39:16	-	1.31
86	Penta	PCB-120	50.00	4.81e+07	1.59 y	39:30	-	1.63
87	Penta	PCB-110	50.00	4.58e+07	1.57 y	39:39	-	1.56
88	Penta	PCB-82	50.00	2.78e+07	1.55 y	40:17	-	0.76
89	Penta	PCB-124	50.00	5.28e+07	1.58 y	40:57	-	1.43
90	Penta	PCB-107/109	100.00	9.93e+07	1.59 y	41:05	-	1.35
91	Penta	PCB-123	50.00	4.35e+07	1.59 y	41:17	-	1.18
92	Penta	PCB-106/118	100.00	9.15e+07	1.59 y	41:28	-	1.17
93	Penta	PCB-114	50.00	6.12e+07	1.65 y	42:07	-	1.31
94	Penta	PCB-122	50.00	5.19e+07	1.66 y	42:15	-	1.11
95	Penta	PCB-105	50.00	5.88e+07	1.64 y	42:59	-	1.28
96	Penta	PCB-127	50.00	6.36e+07	1.67 y	43:19	-	1.27
97	Penta	PCB-126	50.00	5.32e+07	1.63 y	45:13	-	1.17
98	Hexa	PCB-155	50.00	3.92e+07	1.27 y	36:57	-	1.11
99	Hexa	PCB-150	50.00	3.54e+07	1.29 y	38:13	-	1.00
100	Hexa	PCB-152	50.00	3.90e+07	1.30 y	38:42	-	1.10
101	Hexa	PCB-145	50.00	4.21e+07	1.28 y	39:08	-	1.19
102	Hexa	PCB-136	50.00	4.09e+07	1.29 y	39:28	-	1.15



103	Hexa	PCB-148	50.00	2.62e+07	1.30 y	39:33	-	0.74
104	Hexa	PCB-154	50.00	2.94e+07	1.28 y	40:03	-	0.83
105	Hexa	PCB-151	50.00	2.53e+07	1.29 y	40:42	-	0.71
106	Hexa	PCB-135	50.00	2.73e+07	1.26 y	40:55	-	0.77
107	Hexa	PCB-144	50.00	2.52e+07	1.30 y	41:02	-	0.71
108	Hexa	PCB-147	50.00	2.80e+07	1.30 y	41:09	-	0.79
109	Hexa	PCB-139/149	100.00	5.22e+07	1.28 y	41:25	-	0.74
110	Hexa	PCB-140	50.00	2.47e+07	1.27 y	41:36	-	0.70
111	Hexa	PCB-134/143	100.00	7.05e+07	1.25 y	42:02	-	0.89
112	Hexa	PCB-133/142	100.00	6.32e+07	1.24 y	42:20	-	0.80
113	Hexa	PCB-131	50.00	3.53e+07	1.23 y	42:30	-	0.89

114	Hexa	PCB-146/165	100.00	9.72e+07	1.25 y	42:43	-	1.23
115	Hexa	PCB-132/161	100.00	8.58e+07	1.31 y	42:58	-	1.08
116	Hexa	PCB-153	50.00	4.86e+07	1.16 y	43:08	-	1.23
117	Hexa	PCB-168	50.00	5.75e+07	1.25 y	43:21	-	1.45
118	Hexa	PCB-141	50.00	3.94e+07	1.24 y	43:52	-	1.06
119	Hexa	PCB-137	50.00	3.90e+07	1.23 y	44:15	-	1.05
120	Hexa	PCB-130	50.00	3.61e+07	1.23 y	44:21	-	0.97
121	Hexa	PCB-138/163/164	150.00	1.47e+08	1.24 y	44:44	-	1.27
122	Hexa	PCB-158/160	100.00	1.03e+08	1.23 y	44:59	-	1.34
123	Hexa	PCB-129	50.00	3.23e+07	1.24 y	45:13	-	0.84
124	Hexa	PCB-166	50.00	4.98e+07	1.24 y	45:41	-	1.17
125	Hexa	PCB-159	50.00	4.70e+07	1.23 y	46:01	-	1.11
126	Hexa	PCB-128/162	100.00	8.65e+07	1.23 y	46:18	-	1.02
127	Hexa	PCB-167	50.00	5.55e+07	1.22 y	46:41	-	1.20
128	Hexa	PCB-156	50.00	5.05e+07	1.25 y	48:00	-	1.14
129	Hexa	PCB-157	50.00	5.18e+07	1.24 y	48:16	-	1.13
130	Hexa	PCB-169	50.00	4.66e+07	1.27 y	50:20	-	1.08
131	Hepta	PCB-188	50.00	4.99e+07	1.05 y	42:46	-	1.56
132	Hepta	PCB-184	50.00	5.13e+07	1.06 y	43:13	-	1.60
133	Hepta	PCB-179	50.00	4.15e+07	1.06 y	44:00	-	1.30
134	Hepta	PCB-176	50.00	4.68e+07	1.04 y	44:28	-	1.46
135	Hepta	PCB-186	50.00	4.64e+07	1.05 y	45:05	-	1.45
136	Hepta	PCB-178	50.00	3.27e+07	1.05 y	45:34	-	1.02
137	Hepta	PCB-175	50.00	3.22e+07	1.05 y	45:55	-	1.01
138	Hepta	PCB-182/187	100.00	7.77e+07	1.05 y	46:05	-	1.21
139	Hepta	PCB-183	50.00	3.68e+07	1.05 y	46:24	-	1.15
140	Hepta	PCB-185	50.00	4.12e+07	1.07 y	47:04	-	1.78
141	Hepta	PCB-174	50.00	3.30e+07	1.02 y	47:26	-	1.42
142	Hepta	PCB-181	50.00	3.14e+07	1.06 y	47:33	-	1.36
143	Hepta	PCB-177	50.00	2.91e+07	1.05 y	47:42	-	1.26
144	Hepta	PCB-171	50.00	3.69e+07	1.07 y	48:00	-	1.59
145	Hepta	PCB-173	50.00	2.61e+07	1.04 y	48:26	-	1.13
146	Hepta	PCB-172	50.00	3.80e+07	1.07 y	48:53	-	1.64
147	Hepta	PCB-192	50.00	4.11e+07	1.06 y	49:04	-	1.78
148	Hepta	PCB-180	50.00	3.12e+07	1.05 y	49:17	-	1.35
149	Hepta	PCB-193	50.00	3.98e+07	1.07 y	49:27	-	1.72
150	Hepta	PCB-191	50.00	3.90e+07	1.07 y	49:42	-	1.68
151	Hepta	PCB-170	50.00	2.97e+07	1.05 y	50:41	-	1.62
152	Hepta	PCB-190	50.00	4.08e+07	1.06 y	50:51	-	2.23
153	Hepta	PCB-189	50.00	3.71e+07	1.05 y	52:08	-	1.55
154	Octa	PCB-202	50.00	3.01e+07	0.94 y	48:12	-	1.06
155	Octa	PCB-201	50.00	3.19e+07	0.91 y	48:41	-	1.13
156	Octa	PCB-204	50.00	3.22e+07	0.91 y	48:50	-	1.14
157	Octa	PCB-197	50.00	3.03e+07	0.91 y	49:09	-	1.07
158	Octa	PCB-200	50.00	3.01e+07	0.90 y	49:59	-	1.06
159	Octa	PCB-198	50.00	2.18e+07	0.92 y	51:15	-	0.77
160	Octa	PCB-199	50.00	2.16e+07	0.91 y	51:21	-	0.76
161	Octa	PCB-196/203	100.00	4.53e+07	0.92 y	51:36	-	0.80
162	Octa	PCB-195	50.00	3.20e+07	0.89 y	52:45	-	1.24
163	Octa	PCB-194	50.00	3.08e+07	0.92 y	53:37	-	1.19

164	Octa	PCB-205	50.00	3.93e+07	0.92 y	53:55	-	1.52
165	Nona	PCB-208	50.00	3.24e+07	1.34 y	52:53	-	0.92
166	Nona	PCB-207	50.00	3.78e+07	1.32 y	53:12	-	1.08
167	Nona	PCB-206	50.00	2.13e+07	1.36 y	55:20	-	1.01
168	Deca	PCB-209	50.00	2.30e+07	1.21 y	56:38	-	1.20
169	Tot η	Total Mono-PCB	0.00	-	- n	-	-	1.31
170	Tot η	Total Di-PCB	0.00	-	- n	-	-	1.21
171	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.10

172	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.21
173	Tot η	Total Tetra-PCB	0.00	-	- n	-	-	1.06
174	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.18
175	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.23
176	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	0.88
177	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	1.09
178	Tot η	Total Hepta-PCB	0.00	-	- n	-	-	1.41
179	Tot η	Total Octa-PCB	0.00	-	- n	-	-	0.96
180	Tot η	Total Octa-PCB	0.00	-	- n	-	-	1.32
181	Tot η	Total Nona-PCB	0.00	-	- n	-	-	1.00
182	Tot η	Total Deca-PCB	50.00	2.30e+07	1.21 y	56:38	-	1.20
183	Monoη	13C-PCB-1	100.00	1.53e+08	3.37 y	16:24	-	0.86
184	Monoη	13C-PCB-3	100.00	1.54e+08	3.41 y	18:54	-	0.86
185	Di-IS	13C-PCB-4	100.00	1.04e+08	1.58 y	20:11	-	0.59
186	Di-IS	13C-PCB-9	100.00	1.59e+08	1.59 y	21:55	-	0.89
187	Di-IS	13C-PCB-11	100.00	1.64e+08	1.57 y	25:13	-	0.92
188	Tri-η	13C-PCB-19	100.00	9.46e+07	1.07 y	24:14	-	0.53
189	Tri-η	13C-PCB-32	100.00	1.39e+08	1.09 y	27:06	-	0.78
190	Tri-η	13C-PCB-28	100.00	1.40e+08	1.06 y	29:01	-	0.92
191	Tri-η	13C-PCB-37	100.00	1.20e+08	1.07 y	32:52	-	0.79
192	Tetrη	13C-PCB-54	100.00	1.23e+08	0.81 y	27:55	-	0.98
193	Tetrη	13C-PCB-52	100.00	9.72e+07	0.80 y	31:24	-	0.78
194	Tetrη	13C-PCB-47	100.00	1.02e+08	0.79 y	31:54	-	0.82
195	Tetrη	13C-PCB-70	100.00	1.22e+08	0.78 y	35:25	-	0.98
196	Tetrη	13C-PCB-80	100.00	1.27e+08	0.80 y	35:49	-	1.01
197	Tetrη	13C-PCB-81	100.00	1.12e+08	0.79 y	38:56	-	0.89
198	Tetη	13C-PCB-77	100.00	1.14e+08	0.78 y	39:32	-	0.91
199	Pentη	13C-PCB-104	100.00	8.52e+07	1.57 y	32:34	-	1.00
200	Pentη	13C-PCB-95	100.00	6.27e+07	1.59 y	35:43	-	0.74
201	Pentη	13C-PCB-101	100.00	6.57e+07	1.54 y	37:23	-	0.77
202	Pentη	13C-PCB-97	100.00	5.89e+07	1.59 y	38:42	-	0.69
203	Pentη	13C-PCB-123	100.00	7.37e+07	1.61 y	41:15	-	0.87
204	Pentη	13C-PCB-118	100.00	7.79e+07	1.58 y	41:26	-	0.92
205	Pentη	13C-PCB-114	100.00	9.33e+07	1.60 y	42:06	-	1.35
206	Pentη	13C-PCB-105	100.00	9.17e+07	1.60 y	42:58	-	1.32
207	Pentη	13C-PCB-127	100.00	1.00e+08	1.57 y	43:17	-	1.45
208	Pentη	13C-PCB-126	100.00	9.05e+07	1.58 y	45:12	-	1.31
209	Hexaη	13C-PCB-155	100.00	7.08e+07	1.29 y	36:55	-	0.83
210	Hexaη	13C-PCB-153	100.00	7.92e+07	1.29 y	43:07	-	1.14
211	Hexaη	13C-PCB-141	100.00	7.45e+07	1.28 y	43:51	-	1.07
212	Hexa	13C-PCB-138	100.00	7.71e+07	1.29 y	44:42	-	1.11
213	Hexaη	13C-PCB-159	100.00	8.48e+07	1.27 y	45:59	-	1.22
214	Hexaη	13C-PCB-167	100.00	9.22e+07	1.30 y	46:40	-	1.33
215	Hexaη	13C-PCB-156	100.00	8.85e+07	1.29 y	47:58	-	1.28
216	Hexaη	13C-PCB-157	100.00	9.20e+07	1.29 y	48:15	-	1.33
217	Hexaη	13C-PCB-169	100.00	8.62e+07	1.27 y	50:19	-	1.24
218	Heptη	13C-PCB-188	100.00	6.40e+07	0.46 y	42:45	-	0.92
219	Heptη	13C-PCB-180	100.00	4.63e+07	0.47 y	49:15	-	0.67
220	Heptη	13C-PCB-170	100.00	3.66e+07	0.47 y	50:40	-	0.53
221	Heptη	13C-PCB-189	100.00	4.78e+07	0.47 y	52:07	-	0.69
222	Octaη	13C-PCB-202	100.00	5.65e+07	0.94 y	48:11	-	0.81

223	Octaη	13C-PCB-194	100.00	5.16e+07	0.92 y	53:36	-	0.79
224	Nonaη	13C-PCB-208	100.00	7.00e+07	0.78 y	52:53	-	1.08
225	Nonaη	13C-PCB-206	100.00	4.23e+07	0.78 y	55:19	-	0.65
226	Decaη	13C-PCB-209	100.00	3.85e+07	1.23 y	56:37	-	0.59
227	DI-RS	13C-PCB-15	100.00	1.78e+08	1.59 y	25:55	-	1.00
228	Tri-η	13C-PCB-31	100.00	1.52e+08	1.05 y	28:55	-	1.00
229	Tetraη	13C-PCB-60	100.00	1.25e+08	0.79 y	36:39	-	1.00
230	Penta	13C-PCB-111	100.00	8.51e+07	1.57 y	39:07	-	1.00
231	Hexaη	13C-PCB-128	100.00	6.93e+07	1.27 y	46:16	-	1.00
232	Octaη	13C-PCB-205	100.00	6.51e+07	0.91 y	53:54	-	1.00

233	CRS	13C-PCB-79	100.00	1.25e+08	0.79 y	37:42	-	1.00
234	CRS	13C-PCB-178	100.00	4.30e+07	0.46 y	45:33	-	0.62
235	PS	13C-PCB-79	100.00	1.25e+08	0.79 y	37:42	-	1.12
236	PS	13C-PCB-178	100.00	4.30e+07	0.46 y	45:33	-	0.93

Filename: 140623E2 S: 5      Acquired: 23-JUN-14 15:57:45  
 Run: 140623E2    Analyte:            ICal: PCBVG8-6-23-14      Results: 140623E2  
 Sample text: ST140623E2-5 PCB CS4 14F1605

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	400.00	7.39e+08	3.02 y	16:25	-	1.29
2	Mono	PCB-2	400.00	7.73e+08	3.00 y	18:41	-	1.28
3	Mono	PCB-3	400.00	9.04e+08	3.01 y	18:55	-	1.49
4	Di	PCB-4/10	1600.00	2.74e+09	1.64 y	20:14	-	1.60
5	Di	PCB-7/9	1600.00	3.22e+09	1.65 y	21:58	-	1.22
6	Di	PCB-6	800.00	1.77e+09	1.65 y	22:36	-	1.34
7	Di	PCB-5/8	1600.00	3.07e+09	1.65 y	23:01	-	1.16
8	Di	PCB-14	800.00	1.56e+09	1.66 y	24:04	-	1.12
9	Di	PCB-11	800.00	1.52e+09	1.66 y	25:15	-	1.09
10	Di	PCB-12/13	1600.00	3.35e+09	1.64 y	25:37	-	1.20
11	Di	PCB-15	800.00	1.81e+09	1.65 y	25:56	-	1.30
12	Tri	PCB-19	400.00	3.88e+08	1.06 y	24:15	-	1.07
13	Tri	PCB-30	400.00	6.46e+08	1.07 y	25:08	-	1.79
14	Tri	PCB-18	400.00	4.49e+08	1.07 y	25:51	-	0.78
15	Tri	PCB-17	400.00	5.20e+08	1.07 y	26:02	-	0.91
16	Tri	PCB-24/27	800.00	1.36e+09	1.07 y	26:36	-	1.18
17	Tri	PCB-16/32	800.00	1.07e+09	1.06 y	27:06	-	0.94
18	Tri	PCB-34	400.00	6.31e+08	1.04 y	27:53	-	1.16
19	Tri	PCB-23	400.00	6.73e+08	1.03 y	27:58	-	1.24
20	Tri	PCB-29	400.00	5.51e+08	1.00 y	28:13	-	1.01
21	Tri	PCB-26	400.00	6.09e+08	1.01 y	28:26	-	1.12
22	Tri	PCB-25	400.00	6.81e+08	1.01 y	28:35	-	1.25
23	Tri	PCB-31	400.00	6.90e+08	1.00 y	28:56	-	1.27
24	Tri	PCB-28	400.00	8.88e+08	1.03 y	29:02	-	1.63
25	Tri	PCB-20/21/33	1200.00	1.80e+09	1.00 y	29:38	-	1.11
26	Tri	PCB-22	400.00	5.78e+08	1.01 y	30:06	-	1.06
27	Tri	PCB-36	400.00	5.30e+08	1.01 y	30:41	-	1.05
28	Tri	PCB-39	400.00	4.63e+08	0.99 y	31:09	-	0.92
29	Tri	PCB-38	400.00	5.20e+08	1.00 y	31:56	-	1.03
30	Tri	PCB-35	400.00	5.75e+08	0.99 y	32:27	-	1.15
31	Tri	PCB-37	400.00	5.64e+08	1.01 y	32:53	-	1.12
32	Tetra	PCB-54	400.00	5.49e+08	0.77 y	27:57	-	1.09
33	Tetra	PCB-50	400.00	4.32e+08	0.76 y	29:05	-	0.86
34	Tetra	PCB-53	400.00	4.28e+08	0.76 y	29:44	-	1.09
35	Tetra	PCB-51	400.00	3.77e+08	0.76 y	30:04	-	0.96
36	Tetra	PCB-45	400.00	3.32e+08	0.76 y	30:30	-	0.84
37	Tetra	PCB-46	400.00	3.25e+08	0.77 y	30:59	-	0.83
38	Tetra	PCB-52/69	800.00	9.79e+08	0.75 y	31:27	-	1.25
39	Tetra	PCB-73	400.00	5.09e+08	0.76 y	31:34	-	1.30
40	Tetra	PCB-43/49	800.00	7.49e+08	0.75 y	31:43	-	0.95
41	Tetra	PCB-47	400.00	4.38e+08	0.76 y	31:56	-	1.04

42	Tetra	PCB-48/75	800.00	9.87e+08	0.76 y	32:03	-	1.17
43	Tetra	PCB-65	400.00	4.70e+08	0.75 y	32:19	-	1.12
44	Tetra	PCB-62	400.00	5.15e+08	0.76 y	32:25	-	1.22
45	Tetra	PCB-44	400.00	3.32e+08	0.76 y	32:44	-	0.79
46	Tetra	PCB-42/59	800.00	9.34e+08	0.76 y	32:57	-	1.11
47	Tetra	PCB-41/64/71/72	1600.00	2.01e+09	0.77 y	33:32	-	1.19
48	Tetra	PCB-68	400.00	5.53e+08	0.76 y	33:47	-	1.31
49	Tetra	PCB-40	400.00	2.93e+08	0.77 y	34:01	-	0.69
50	Tetra	PCB-57	400.00	4.98e+08	0.76 y	34:21	-	0.96
51	Tetra	PCB-67	400.00	5.63e+08	0.76 y	34:40	-	1.09
52	Tetra	PCB-58	400.00	4.58e+08	0.78 y	34:47	-	0.88



53	Tetra	PCB-63	400.00	4.57e+08	0.76 y	34:56	-	0.88
54	Tetra	PCB-74	400.00	6.33e+08	0.76 y	35:14	-	1.23
55	Tetra	PCB-61/70	800.00	9.54e+08	0.76 y	35:24	-	0.92
56	Tetra	PCB-76/66	800.00	1.06e+09	0.77 y	35:37	-	1.03
57	Tetra	PCB-80	400.00	6.36e+08	0.77 y	35:51	-	1.18
58	Tetra	PCB-55	400.00	5.68e+08	0.76 y	36:10	-	1.05
59	Tetra	PCB-56/60	800.00	1.04e+09	0.76 y	36:40	-	0.97
60	Tetra	PCB-79	400.00	5.59e+08	0.77 y	37:44	-	1.04
61	Tetra	PCB-78	400.00	5.77e+08	0.76 y	38:26	-	1.20
62	Tetra	PCB-81	400.00	6.11e+08	0.76 y	38:58	-	1.27
63	Tetra	PCB-77	400.00	5.41e+08	0.79 y	39:33	-	1.07
64	Penta	PCB-104	400.00	4.22e+08	1.58 y	32:35	-	1.19
65	Penta	PCB-96	400.00	4.08e+08	1.59 y	33:51	-	1.16
66	Penta	PCB-103	400.00	3.36e+08	1.56 y	34:23	-	0.95
67	Penta	PCB-100	400.00	3.34e+08	1.58 y	34:43	-	0.95
68	Penta	PCB-94	400.00	2.70e+08	1.58 y	35:11	-	1.00
69	Penta	PCB-95/98/102	1200.00	9.97e+08	1.58 y	35:41	-	1.23
70	Penta	PCB-93	400.00	2.10e+08	1.55 y	35:49	-	0.77
71	Penta	PCB-88/91	800.00	6.29e+08	1.54 y	36:06	-	1.16
72	Penta	PCB-121	400.00	4.11e+08	1.62 y	36:13	-	1.52
73	Penta	PCB-84/92	800.00	5.85e+08	1.57 y	37:02	-	1.04
74	Penta	PCB-89	400.00	3.12e+08	1.58 y	37:13	-	1.11
75	Penta	PCB-90/101	800.00	6.09e+08	1.57 y	37:23	-	1.08
76	Penta	PCB-113	400.00	3.62e+08	1.56 y	37:38	-	1.29
77	Penta	PCB-99	400.00	4.00e+08	1.57 y	37:44	-	1.42
78	Penta	PCB-119	400.00	3.82e+08	1.57 y	38:12	-	1.53
79	Penta	PCB-108/112	800.00	6.45e+08	1.57 y	38:21	-	1.29
80	Penta	PCB-83	400.00	3.69e+08	1.56 y	38:31	-	1.48
81	Penta	PCB-97	400.00	2.93e+08	1.58 y	38:43	-	1.17
82	Penta	PCB-86	400.00	2.07e+08	1.53 y	38:52	-	0.83
83	Penta	PCB-87/117/125	1200.00	1.19e+09	1.57 y	38:59	-	1.59
84	Penta	PCB-111/115	800.00	8.24e+08	1.65 y	39:09	-	1.65
85	Penta	PCB-85/116	800.00	6.56e+08	1.48 y	39:17	-	1.31
86	Penta	PCB-120	400.00	4.25e+08	1.57 y	39:30	-	1.70
87	Penta	PCB-110	400.00	3.85e+08	1.58 y	39:40	-	1.54
88	Penta	PCB-82	400.00	2.39e+08	1.57 y	40:17	-	0.76
89	Penta	PCB-124	400.00	4.72e+08	1.57 y	40:57	-	1.51
90	Penta	PCB-107/109	800.00	8.57e+08	1.57 y	41:06	-	1.37
91	Penta	PCB-123	400.00	3.63e+08	1.58 y	41:16	-	1.16
92	Penta	PCB-106/118	800.00	7.95e+08	1.58 y	41:29	-	1.15
93	Penta	PCB-114	400.00	5.21e+08	1.63 y	42:07	-	1.28
94	Penta	PCB-122	400.00	4.51e+08	1.65 y	42:16	-	1.11
95	Penta	PCB-105	400.00	5.21e+08	1.62 y	42:59	-	1.28
96	Penta	PCB-127	400.00	5.57e+08	1.64 y	43:19	-	1.28
97	Penta	PCB-126	400.00	4.53e+08	1.65 y	45:14	-	1.18
98	Hexa	PCB-155	400.00	3.27e+08	1.28 y	36:57	-	1.11
99	Hexa	PCB-150	400.00	3.03e+08	1.28 y	38:13	-	1.03
100	Hexa	PCB-152	400.00	3.29e+08	1.27 y	38:42	-	1.12
101	Hexa	PCB-145	400.00	3.63e+08	1.28 y	39:09	-	1.23
102	Hexa	PCB-136	400.00	3.55e+08	1.28 y	39:28	-	1.21

103	Hexa	PCB-148	400.00	2.11e+08	1.30 y	39:34	-	0.72
104	Hexa	PCB-154	400.00	2.46e+08	1.28 y	40:03	-	0.83
105	Hexa	PCB-151	400.00	2.09e+08	1.29 y	40:42	-	0.71
106	Hexa	PCB-135	400.00	2.14e+08	1.26 y	40:55	-	0.73
107	Hexa	PCB-144	400.00	2.42e+08	1.27 y	41:01	-	0.82
108	Hexa	PCB-147	400.00	2.44e+08	1.29 y	41:09	-	0.83
109	Hexa	PCB-139/149	800.00	4.56e+08	1.27 y	41:25	-	0.77
110	Hexa	PCB-140	400.00	2.10e+08	1.30 y	41:37	-	0.71
111	Hexa	PCB-134/143	800.00	6.18e+08	1.24 y	42:03	-	0.94
112	Hexa	PCB-133/142	800.00	5.46e+08	1.24 y	42:20	-	0.83
113	Hexa	PCB-131	400.00	2.97e+08	1.24 y	42:31	-	0.90

114	Hexa	PCB-146/165	800.00	8.31e+08	1.24 y	42:43	-	1.26
115	Hexa	PCB-132/161	800.00	7.22e+08	1.24 y	42:58	-	1.09
116	Hexa	PCB-153	400.00	4.21e+08	1.25 y	43:08	-	1.27
117	Hexa	PCB-168	400.00	4.88e+08	1.24 y	43:20	-	1.48
118	Hexa	PCB-141	400.00	3.29e+08	1.24 y	43:53	-	1.05
119	Hexa	PCB-137	400.00	3.31e+08	1.24 y	44:16	-	1.06
120	Hexa	PCB-130	400.00	3.00e+08	1.24 y	44:22	-	0.96
121	Hexa	PCB-138/163/164	1200.00	1.27e+09	1.25 y	44:45	-	1.31
122	Hexa	PCB-158/160	800.00	8.83e+08	1.24 y	45:00	-	1.37
123	Hexa	PCB-129	400.00	2.76e+08	1.24 y	45:14	-	0.86
124	Hexa	PCB-166	400.00	4.30e+08	1.24 y	45:41	-	1.18
125	Hexa	PCB-159	400.00	4.02e+08	1.27 y	46:00	-	1.10
126	Hexa	PCB-128/162	800.00	7.56e+08	1.24 y	46:18	-	1.03
127	Hexa	PCB-167	400.00	4.81e+08	1.24 y	46:41	-	1.19
128	Hexa	PCB-156	400.00	4.44e+08	1.24 y	47:59	-	1.16
129	Hexa	PCB-157	400.00	4.52e+08	1.25 y	48:16	-	1.12
130	Hexa	PCB-169	400.00	4.05e+08	1.24 y	50:20	-	1.07
131	Hepta	PCB-188	400.00	4.10e+08	1.06 y	42:46	-	1.52
132	Hepta	PCB-184	400.00	4.29e+08	1.05 y	43:13	-	1.60
133	Hepta	PCB-179	400.00	3.39e+08	1.06 y	44:01	-	1.26
134	Hepta	PCB-176	400.00	3.89e+08	1.05 y	44:28	-	1.45
135	Hepta	PCB-186	400.00	3.92e+08	1.05 y	45:05	-	1.46
136	Hepta	PCB-178	400.00	2.70e+08	1.06 y	45:34	-	1.00
137	Hepta	PCB-175	400.00	2.66e+08	1.05 y	45:55	-	0.99
138	Hepta	PCB-182/187	800.00	6.75e+08	1.05 y	46:06	-	1.26
139	Hepta	PCB-183	400.00	3.18e+08	1.06 y	46:24	-	1.18
140	Hepta	PCB-185	400.00	3.60e+08	1.05 y	47:05	-	1.82
141	Hepta	PCB-174	400.00	2.91e+08	1.05 y	47:26	-	1.47
142	Hepta	PCB-181	400.00	2.68e+08	1.07 y	47:33	-	1.35
143	Hepta	PCB-177	400.00	2.53e+08	1.05 y	47:43	-	1.28
144	Hepta	PCB-171	400.00	3.19e+08	1.05 y	48:00	-	1.61
145	Hepta	PCB-173	400.00	2.24e+08	1.05 y	48:27	-	1.13
146	Hepta	PCB-172	400.00	3.36e+08	1.06 y	48:53	-	1.70
147	Hepta	PCB-192	400.00	3.55e+08	1.05 y	49:05	-	1.79
148	Hepta	PCB-180	400.00	2.65e+08	1.05 y	49:16	-	1.34
149	Hepta	PCB-193	400.00	3.34e+08	1.06 y	49:28	-	1.69
150	Hepta	PCB-191	400.00	3.32e+08	1.06 y	49:42	-	1.67
151	Hepta	PCB-170	400.00	2.49e+08	1.04 y	50:42	-	1.61
152	Hepta	PCB-190	400.00	3.45e+08	1.05 y	50:51	-	2.23
153	Hepta	PCB-189	400.00	3.17e+08	1.06 y	52:08	-	1.55
154	Octa	PCB-202	400.00	2.60e+08	0.91 y	48:13	-	1.10
155	Octa	PCB-201	400.00	2.75e+08	0.90 y	48:42	-	1.16
156	Octa	PCB-204	400.00	2.80e+08	0.91 y	48:51	-	1.18
157	Octa	PCB-197	400.00	2.59e+08	0.92 y	49:09	-	1.09
158	Octa	PCB-200	400.00	2.59e+08	0.91 y	49:59	-	1.09
159	Octa	PCB-198	400.00	1.81e+08	1.01 y	51:16	-	0.76
160	Octa	PCB-199	400.00	1.96e+08	0.84 y	51:21	-	0.82
161	Octa	PCB-196/203	800.00	4.10e+08	0.91 y	51:37	-	0.86
162	Octa	PCB-195	400.00	2.74e+08	0.91 y	52:46	-	1.25
163	Octa	PCB-194	400.00	2.60e+08	0.92 y	53:38	-	1.18

164	Octa	PCB-205	400.00	3.32e+08	0.92 y	53:55	-	1.51
165	Nona	PCB-208	400.00	2.75e+08	1.33 y	52:54	-	0.94
166	Nona	PCB-207	400.00	3.26e+08	1.32 y	53:12	-	1.12
167	Nona	PCB-206	400.00	1.78e+08	1.32 y	55:19	-	0.97
168	Deca	PCB-209	400.00	2.00e+08	1.19 y	56:35	-	1.17
169	Tot η	Total Mono-PCB	0.00	-	- n	-	-	1.35
170	Tot η	Total Di-PCB	0.00	-	- n	-	-	1.22
171	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.10

172	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.15
173	Tot η	Total Tetra-PCB	0.00	-	- n	-	-	1.06
174	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.18
175	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.23
176	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	0.90
177	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	1.11
178	Tot η	Total Hepta-PCB	0.00	-	- n	-	-	1.41
179	Tot η	Total Octa-PCB	0.00	-	- n	-	-	0.99
180	Tot η	Total Octa-PCB	0.00	-	- n	-	-	1.32
181	Tot η	Total Nona-PCB	0.00	-	- n	-	-	1.02
182	Tot η	Total Deca-PCB	400.00	2.00e+08	1.19 y	56:35	-	1.17
183	Monoη	13C-PCB-1	100.00	1.43e+08	3.35 y	16:24	-	0.77
184	Monoη	13C-PCB-3	100.00	1.51e+08	3.41 y	18:54	-	0.81
185	Di-IS	13C-PCB-4	100.00	1.07e+08	1.60 y	20:12	-	0.57
186	Di-IS	13C-PCB-9	100.00	1.65e+08	1.57 y	21:55	-	0.88
187	Di-IS	13C-PCB-11	100.00	1.74e+08	1.58 y	25:13	-	0.93
188	Tri-η	13C-PCB-19	100.00	9.04e+07	1.10 y	24:14	-	0.48
189	Tri-η	13C-PCB-32	100.00	1.43e+08	1.10 y	27:06	-	0.77
190	Tri-η	13C-PCB-28	100.00	1.36e+08	1.05 y	29:02	-	0.89
191	Tri-η	13C-PCB-37	100.00	1.26e+08	1.06 y	32:52	-	0.82
192	Tetrη	13C-PCB-54	100.00	1.26e+08	0.81 y	27:55	-	0.97
193	Tetrη	13C-PCB-52	100.00	9.82e+07	0.78 y	31:24	-	0.76
194	Tetrη	13C-PCB-47	100.00	1.05e+08	0.77 y	31:55	-	0.81
195	Tetrη	13C-PCB-70	100.00	1.29e+08	0.79 y	35:25	-	1.00
196	Tetrη	13C-PCB-80	100.00	1.35e+08	0.80 y	35:50	-	1.04
197	Tetrη	13C-PCB-81	100.00	1.20e+08	0.78 y	38:56	-	0.93
198	Tetrη	13C-PCB-77	100.00	1.27e+08	0.80 y	39:32	-	0.98
199	Pentη	13C-PCB-104	100.00	8.83e+07	1.55 y	32:34	-	1.00
200	Pentη	13C-PCB-95	100.00	6.77e+07	1.62 y	35:43	-	0.77
201	Pentη	13C-PCB-101	100.00	7.03e+07	1.56 y	37:23	-	0.80
202	Pentη	13C-PCB-97	100.00	6.24e+07	1.61 y	38:42	-	0.71
203	Pentη	13C-PCB-123	100.00	7.82e+07	1.58 y	41:16	-	0.88
204	Pentη	13C-PCB-118	100.00	8.64e+07	1.60 y	41:26	-	0.98
205	Pentη	13C-PCB-114	100.00	1.01e+08	1.61 y	42:06	-	1.37
206	Pentη	13C-PCB-105	100.00	1.02e+08	1.58 y	42:58	-	1.38
207	Pentη	13C-PCB-127	100.00	1.09e+08	1.60 y	43:18	-	1.48
208	Pentη	13C-PCB-126	100.00	9.62e+07	1.57 y	45:12	-	1.30
209	Hexaη	13C-PCB-155	100.00	7.37e+07	1.30 y	36:56	-	0.83
210	Hexaη	13C-PCB-153	100.00	8.26e+07	1.29 y	43:07	-	1.12
211	Hexaη	13C-PCB-141	100.00	7.81e+07	1.29 y	43:51	-	1.06
212	Hexa	13C-PCB-138	100.00	8.07e+07	1.29 y	44:42	-	1.09
213	Hexaη	13C-PCB-159	100.00	9.15e+07	1.26 y	46:00	-	1.24
214	Hexaη	13C-PCB-167	100.00	1.01e+08	1.25 y	46:40	-	1.37
215	Hexaη	13C-PCB-156	100.00	9.58e+07	1.27 y	47:59	-	1.30
216	Hexaη	13C-PCB-157	100.00	1.01e+08	1.31 y	48:15	-	1.36
217	Hexaη	13C-PCB-169	100.00	9.47e+07	1.29 y	50:19	-	1.28
218	Heptη	13C-PCB-188	100.00	6.72e+07	0.46 y	42:45	-	0.91
219	Heptη	13C-PCB-180	100.00	4.95e+07	0.46 y	49:15	-	0.67
220	Heptη	13C-PCB-170	100.00	3.88e+07	0.47 y	50:41	-	0.53
221	Heptη	13C-PCB-189	100.00	5.10e+07	0.48 y	52:07	-	0.69
222	Octaη	13C-PCB-202	100.00	5.93e+07	0.90 y	48:11	-	0.80

223	Octaη	13C-PCB-194	100.00	5.48e+07	0.91 y	53:37	-	0.80
224	Nonaη	13C-PCB-208	100.00	7.31e+07	0.78 y	52:53	-	1.07
225	Nonaη	13C-PCB-206	100.00	4.59e+07	0.80 y	55:18	-	0.67
226	Decaη	13C-PCB-209	100.00	4.28e+07	1.18 y	56:34	-	0.63
227	DI-RS	13C-PCB-15	100.00	1.87e+08	1.59 y	25:55	-	1.00
228	Tri-η	13C-PCB-31	100.00	1.53e+08	1.05 y	28:55	-	1.00
229	Tetrη	13C-PCB-60	100.00	1.30e+08	0.78 y	36:40	-	1.00
230	Penta	13C-PCB-111	100.00	8.84e+07	1.58 y	39:07	-	1.00
231	Hexaη	13C-PCB-128	100.00	7.38e+07	1.22 y	46:17	-	1.00
232	Octaη	13C-PCB-205	100.00	6.83e+07	0.90 y	53:54	-	1.00

233	CRS	13C-PCB-79	100.00	1.31e+08	0.78 y	37:43	-	1.01
234	CRS	13C-PCB-178	100.00	4.40e+07	0.47 y	45:33	-	0.60
235	PS	13C-PCB-79	100.00	1.31e+08	0.78 y	37:43	-	1.09
236	PS	13C-PCB-178	100.00	4.40e+07	0.47 y	45:33	-	0.89

Filename: 140623E2 S: 6      Acquired: 23-JUN-14 17:01:39  
 Run: 140623E2    Analyte:            ICal: PCBVG8-6-23-14      Results: 140623E2  
 Sample text: ST140623E2-6 PCB CS5 14F1606

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	750.00	1.47e+09	3.03 y	16:25	- 1.29
2	Mono	PCB-2	750.00	1.54e+09	3.03 y	18:42	- 1.26
3	Mono	PCB-3	750.00	1.85e+09	3.03 y	18:55	- 1.51
4	Di	PCB-4/10	3000.00	5.45e+09	1.65 y	20:15	- 1.62
5	Di	PCB-7/9	3000.00	6.53e+09	1.65 y	21:58	- 1.26
6	Di	PCB-6	1500.00	3.51e+09	1.66 y	22:36	- 1.35
7	Di	PCB-5/8	3000.00	6.19e+09	1.65 y	23:01	- 1.19
8	Di	PCB-14	1500.00	3.16e+09	1.66 y	24:04	- 1.15
9	Di	PCB-11	1500.00	3.07e+09	1.65 y	25:14	- 1.12
10	Di	PCB-12/13	3000.00	6.82e+09	1.65 y	25:38	- 1.24
11	Di	PCB-15	1500.00	3.68e+09	1.66 y	25:56	- 1.34
12	Tri	PCB-19	750.00	7.61e+08	1.06 y	24:15	- 1.09
13	Tri	PCB-30	750.00	1.28e+09	1.06 y	25:08	- 1.83
14	Tri	PCB-18	750.00	8.96e+08	1.06 y	25:51	- 0.82
15	Tri	PCB-17	750.00	1.03e+09	1.07 y	26:02	- 0.95
16	Tri	PCB-24/27	1500.00	2.73e+09	1.07 y	26:36	- 1.25
17	Tri	PCB-16/32	1500.00	2.10e+09	1.07 y	27:06	- 0.96
18	Tri	PCB-34	750.00	1.12e+09	1.02 y	27:52	- 1.09
19	Tri	PCB-23	750.00	1.37e+09	1.02 y	27:58	- 1.33
20	Tri	PCB-29	750.00	1.10e+09	1.00 y	28:13	- 1.06
21	Tri	PCB-26	750.00	1.23e+09	1.02 y	28:25	- 1.19
22	Tri	PCB-25	750.00	1.15e+09	0.98 y	28:35	- 1.11
23	Tri	PCB-31	750.00	1.08e+09	0.96 y	28:56	- 1.05
24	Tri	PCB-28	750.00	1.62e+09	1.02 y	29:03	- 1.57
25	Tri	PCB-20/21/33	2250.00	3.02e+09	0.99 y	29:39	- 0.98
26	Tri	PCB-22	750.00	1.22e+09	1.01 y	30:05	- 1.18
27	Tri	PCB-36	750.00	9.30e+08	0.97 y	30:41	- 0.99
28	Tri	PCB-39	750.00	9.84e+08	1.03 y	31:10	- 1.05
29	Tri	PCB-38	750.00	9.41e+08	0.97 y	31:56	- 1.00
30	Tri	PCB-35	750.00	1.09e+09	0.98 y	32:27	- 1.17
31	Tri	PCB-37	750.00	1.06e+09	0.97 y	32:53	- 1.13
32	Tetra	PCB-54	750.00	1.06e+09	0.76 y	27:57	- 1.09
33	Tetra	PCB-50	750.00	8.12e+08	0.76 y	29:06	- 0.83
34	Tetra	PCB-53	750.00	7.83e+08	0.75 y	29:44	- 1.05
35	Tetra	PCB-51	750.00	7.61e+08	0.75 y	30:04	- 1.02
36	Tetra	PCB-45	750.00	6.16e+08	0.75 y	30:30	- 0.82
37	Tetra	PCB-46	750.00	6.05e+08	0.76 y	30:59	- 0.81
38	Tetra	PCB-52/69	1500.00	2.06e+09	0.76 y	31:27	- 1.37
39	Tetra	PCB-73	750.00	9.51e+08	0.78 y	31:34	- 1.27
40	Tetra	PCB-43/49	1500.00	1.52e+09	0.76 y	31:44	- 1.02
41	Tetra	PCB-47	750.00	7.65e+08	0.74 y	31:56	- 0.98



42	Tetra	PCB-48/75	1500.00	1.93e+09	0.76 y	32:03	-	1.24
43	Tetra	PCB-65	750.00	9.32e+08	0.75 y	32:19	-	1.19
44	Tetra	PCB-62	750.00	9.33e+08	0.76 y	32:26	-	1.19
45	Tetra	PCB-44	750.00	6.53e+08	0.76 y	32:44	-	0.83
46	Tetra	PCB-42/59	1500.00	1.82e+09	0.76 y	32:57	-	1.17
47	Tetra	PCB-41/64/71/72	3000.00	3.95e+09	0.77 y	33:32	-	1.26
48	Tetra	PCB-68	750.00	1.08e+09	0.76 y	33:47	-	1.38
49	Tetra	PCB-40	750.00	5.59e+08	0.77 y	34:00	-	0.71
50	Tetra	PCB-57	750.00	1.01e+09	0.77 y	34:22	-	0.99
51	Tetra	PCB-67	750.00	1.07e+09	0.76 y	34:40	-	1.05
52	Tetra	PCB-58	750.00	9.72e+08	0.77 y	34:47	-	0.96

53	Tetra	PCB-63	750.00	9.30e+08	0.77 y	34:56	-	0.92
54	Tetra	PCB-74	750.00	1.25e+09	0.76 y	35:13	-	1.23
55	Tetra	PCB-61/70	1500.00	1.91e+09	0.76 y	35:24	-	0.94
56	Tetra	PCB-76/66	1500.00	2.06e+09	0.76 y	35:37	-	1.02
57	Tetra	PCB-80	750.00	1.23e+09	0.76 y	35:51	-	1.18
58	Tetra	PCB-55	750.00	1.10e+09	0.75 y	36:10	-	1.06
59	Tetra	PCB-56/60	1500.00	2.06e+09	0.76 y	36:40	-	0.98
60	Tetra	PCB-79	750.00	1.10e+09	0.77 y	37:44	-	1.06
61	Tetra	PCB-78	750.00	1.22e+09	0.77 y	38:26	-	1.24
62	Tetra	PCB-81	750.00	1.30e+09	0.78 y	38:58	-	1.33
63	Tetra	PCB-77	750.00	1.06e+09	0.79 y	39:33	-	1.09
64	Penta	PCB-104	750.00	8.02e+08	1.57 y	32:35	-	1.21
65	Penta	PCB-96	750.00	7.85e+08	1.58 y	33:50	-	1.19
66	Penta	PCB-103	750.00	6.73e+08	1.58 y	34:22	-	1.02
67	Penta	PCB-100	750.00	6.59e+08	1.58 y	34:44	-	1.00
68	Penta	PCB-94	750.00	5.35e+08	1.58 y	35:12	-	1.05
69	Penta	PCB-95/98/102	2250.00	1.88e+09	1.56 y	35:41	-	1.23
70	Penta	PCB-93	750.00	4.72e+08	1.58 y	35:49	-	0.93
71	Penta	PCB-88/91	1500.00	1.12e+09	1.56 y	36:05	-	1.10
72	Penta	PCB-121	750.00	8.92e+08	1.59 y	36:12	-	1.75
73	Penta	PCB-84/92	1500.00	1.15e+09	1.58 y	37:02	-	1.06
74	Penta	PCB-89	750.00	5.99e+08	1.56 y	37:14	-	1.10
75	Penta	PCB-90/101	1500.00	1.20e+09	1.56 y	37:24	-	1.11
76	Penta	PCB-113	750.00	7.64e+08	1.55 y	37:39	-	1.41
77	Penta	PCB-99	750.00	7.39e+08	1.58 y	37:44	-	1.36
78	Penta	PCB-119	750.00	7.86e+08	1.58 y	38:11	-	1.63
79	Penta	PCB-108/112	1500.00	1.31e+09	1.58 y	38:22	-	1.36
80	Penta	PCB-83	750.00	7.22e+08	1.58 y	38:31	-	1.49
81	Penta	PCB-97	750.00	5.75e+08	1.58 y	38:43	-	1.19
82	Penta	PCB-86	750.00	4.64e+08	1.55 y	38:51	-	0.96
83	Penta	PCB-87/117/125	2250.00	2.41e+09	1.59 y	38:59	-	1.66
84	Penta	PCB-111/115	1500.00	1.61e+09	1.57 y	39:08	-	1.67
85	Penta	PCB-85/116	1500.00	1.32e+09	1.57 y	39:16	-	1.37
86	Penta	PCB-120	750.00	8.54e+08	1.57 y	39:30	-	1.77
87	Penta	PCB-110	750.00	7.47e+08	1.59 y	39:39	-	1.55
88	Penta	PCB-82	750.00	4.68e+08	1.56 y	40:16	-	0.76
89	Penta	PCB-124	750.00	9.82e+08	1.56 y	40:57	-	1.60
90	Penta	PCB-107/109	1500.00	1.67e+09	1.57 y	41:06	-	1.36
91	Penta	PCB-123	750.00	7.28e+08	1.57 y	41:17	-	1.19
92	Penta	PCB-106/118	1500.00	1.64e+09	1.59 y	41:29	-	1.20
93	Penta	PCB-114	750.00	1.06e+09	1.62 y	42:07	-	1.28
94	Penta	PCB-122	750.00	9.29e+08	1.66 y	42:15	-	1.12
95	Penta	PCB-105	750.00	1.10e+09	1.63 y	42:59	-	1.33
96	Penta	PCB-127	750.00	1.16e+09	1.65 y	43:18	-	1.32
97	Penta	PCB-126	750.00	9.26e+08	1.64 y	45:13	-	1.21
98	Hexa	PCB-155	750.00	6.31e+08	1.29 y	36:58	-	1.16
99	Hexa	PCB-150	750.00	5.78e+08	1.28 y	38:13	-	1.06
100	Hexa	PCB-152	750.00	6.42e+08	1.29 y	38:42	-	1.18
101	Hexa	PCB-145	750.00	7.08e+08	1.29 y	39:09	-	1.30
102	Hexa	PCB-136	750.00	6.49e+08	1.27 y	39:28	-	1.19

103	Hexa	PCB-148	750.00	4.68e+08	1.28 y	39:34	-	0.86
104	Hexa	PCB-154	750.00	4.91e+08	1.28 y	40:03	-	0.90
105	Hexa	PCB-151	750.00	4.20e+08	1.28 y	40:42	-	0.77
106	Hexa	PCB-135	750.00	4.60e+08	1.27 y	40:55	-	0.84
107	Hexa	PCB-144	750.00	4.48e+08	1.29 y	41:02	-	0.82
108	Hexa	PCB-147	750.00	5.04e+08	1.28 y	41:10	-	0.93
109	Hexa	PCB-139/149	1500.00	9.10e+08	1.28 y	41:26	-	0.84
110	Hexa	PCB-140	750.00	4.13e+08	1.28 y	41:37	-	0.76
111	Hexa	PCB-134/143	1500.00	1.26e+09	1.24 y	42:02	-	0.95
112	Hexa	PCB-133/142	1500.00	1.12e+09	1.25 y	42:21	-	0.85
113	Hexa	PCB-131	750.00	5.92e+08	1.24 y	42:30	-	0.90

114	Hexa	PCB-146/165	1500.00	1.70e+09	1.24 y	42:43	-	1.29
115	Hexa	PCB-132/161	1500.00	1.50e+09	1.24 y	42:58	-	1.14
116	Hexa	PCB-153	750.00	8.18e+08	1.25 y	43:08	-	1.24
117	Hexa	PCB-168	750.00	1.00e+09	1.24 y	43:21	-	1.52
118	Hexa	PCB-141	750.00	6.67e+08	1.24 y	43:52	-	1.09
119	Hexa	PCB-137	750.00	7.01e+08	1.23 y	44:15	-	1.14
120	Hexa	PCB-130	750.00	5.55e+08	1.25 y	44:22	-	0.90
121	Hexa	PCB-138/163/164	2250.00	2.58e+09	1.24 y	44:44	-	1.38
122	Hexa	PCB-158/160	1500.00	1.76e+09	1.24 y	44:59	-	1.41
123	Hexa	PCB-129	750.00	5.55e+08	1.24 y	45:14	-	0.89
124	Hexa	PCB-166	750.00	8.60e+08	1.24 y	45:41	-	1.21
125	Hexa	PCB-159	750.00	8.27e+08	1.24 y	46:00	-	1.16
126	Hexa	PCB-128/162	1500.00	1.52e+09	1.24 y	46:18	-	1.07
127	Hexa	PCB-167	750.00	9.41e+08	1.24 y	46:42	-	1.24
128	Hexa	PCB-156	750.00	8.95e+08	1.24 y	47:59	-	1.19
129	Hexa	PCB-157	750.00	9.06e+08	1.25 y	48:16	-	1.15
130	Hexa	PCB-169	750.00	8.21e+08	1.25 y	50:21	-	1.12
131	Hepta	PCB-188	750.00	8.34e+08	1.05 y	42:46	-	1.61
132	Hepta	PCB-184	750.00	8.48e+08	1.06 y	43:13	-	1.64
133	Hepta	PCB-179	750.00	6.69e+08	1.06 y	44:00	-	1.29
134	Hepta	PCB-176	750.00	7.45e+08	1.06 y	44:28	-	1.44
135	Hepta	PCB-186	750.00	7.39e+08	1.05 y	45:05	-	1.43
136	Hepta	PCB-178	750.00	5.20e+08	1.06 y	45:34	-	1.00
137	Hepta	PCB-175	750.00	5.24e+08	1.06 y	45:55	-	1.01
138	Hepta	PCB-182/187	1500.00	1.33e+09	1.05 y	46:05	-	1.28
139	Hepta	PCB-183	750.00	6.17e+08	1.06 y	46:25	-	1.19
140	Hepta	PCB-185	750.00	7.01e+08	1.06 y	47:04	-	1.89
141	Hepta	PCB-174	750.00	5.17e+08	1.05 y	47:26	-	1.40
142	Hepta	PCB-181	750.00	5.76e+08	1.06 y	47:33	-	1.56
143	Hepta	PCB-177	750.00	4.88e+08	1.06 y	47:42	-	1.32
144	Hepta	PCB-171	750.00	6.45e+08	1.06 y	48:01	-	1.74
145	Hepta	PCB-173	750.00	4.34e+08	1.05 y	48:26	-	1.17
146	Hepta	PCB-172	750.00	6.78e+08	1.06 y	48:53	-	1.83
147	Hepta	PCB-192	750.00	6.93e+08	1.05 y	49:04	-	1.87
148	Hepta	PCB-180	750.00	5.13e+08	1.05 y	49:17	-	1.39
149	Hepta	PCB-193	750.00	6.52e+08	1.06 y	49:29	-	1.76
150	Hepta	PCB-191	750.00	6.47e+08	1.05 y	49:42	-	1.75
151	Hepta	PCB-170	750.00	4.90e+08	1.06 y	50:41	-	1.66
152	Hepta	PCB-190	750.00	6.88e+08	1.05 y	50:52	-	2.33
153	Hepta	PCB-189	750.00	6.33e+08	1.05 y	52:08	-	1.58
154	Octa	PCB-202	750.00	5.06e+08	0.91 y	48:13	-	1.14
155	Octa	PCB-201	750.00	5.32e+08	0.91 y	48:42	-	1.20
156	Octa	PCB-204	750.00	5.54e+08	0.92 y	48:52	-	1.25
157	Octa	PCB-197	750.00	4.91e+08	0.92 y	49:10	-	1.11
158	Octa	PCB-200	750.00	4.81e+08	0.92 y	50:00	-	1.09
159	Octa	PCB-198	750.00	3.58e+08	0.91 y	51:16	-	0.81
160	Octa	PCB-199	750.00	3.69e+08	0.92 y	51:23	-	0.83
161	Octa	PCB-196/203	1500.00	8.08e+08	0.92 y	51:38	-	0.91
162	Octa	PCB-195	750.00	5.64e+08	0.92 y	52:47	-	1.30
163	Octa	PCB-194	750.00	5.18e+08	0.92 y	53:40	-	1.20

164	Octa	PCB-205	750.00	6.92e+08	0.92 y	53:57	-	1.60
165	Nona	PCB-208	750.00	5.53e+08	1.33 y	52:55	-	0.94
166	Nona	PCB-207	750.00	6.58e+08	1.33 y	53:14	-	1.12
167	Nona	PCB-206	750.00	3.54e+08	1.32 y	55:22	-	1.03
168	Deca	PCB-209	750.00	3.89e+08	1.19 y	56:40	-	1.22
169	Tot η	Total Mono-PCB	0.00	-	- n	-	-	1.36
170	Tot η	Total Di-PCB	0.00	-	- n	-	-	1.25
171	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.15

172	Tot	η	Total Tri-PCB	0.00	-	-	n	-	-	1.12
173	Tot	η	Total Tetra-PCB	0.00	-	-	n	-	-	1.09
174	Tot	η	Total Penta-PCB	0.00	-	-	n	-	-	1.23
175	Tot	η	Total Penta-PCB	0.00	-	-	n	-	-	1.25
176	Tot	η	Total Hexa-PCB	0.00	-	-	n	-	-	0.96
177	Tot	η	Total Hexa-PCB	0.00	-	-	n	-	-	1.14
178	Tot	η	Total Hepta-PCB	0.00	-	-	n	-	-	1.46
179	Tot	η	Total Octa-PCB	0.00	-	-	n	-	-	1.03
180	Tot	η	Total Octa-PCB	0.00	-	-	n	-	-	1.36
181	Tot	η	Total Nona-PCB	0.00	-	-	n	-	-	1.03
182	Tot	η	Total Deca-PCB	750.00	3.89e+08	1.19	y	56:40	-	1.22
183	Mono	η	13C-PCB-1	100.00	1.51e+08	3.37	y	16:24	-	0.77
184	Mono	η	13C-PCB-3	100.00	1.63e+08	3.42	y	18:54	-	0.83
185	Di-IS		13C-PCB-4	100.00	1.12e+08	1.60	y	20:12	-	0.57
186	Di-IS		13C-PCB-9	100.00	1.73e+08	1.58	y	21:55	-	0.88
187	Di-IS		13C-PCB-11	100.00	1.84e+08	1.56	y	25:13	-	0.94
188	Tri-η		13C-PCB-19	100.00	9.33e+07	1.09	y	24:14	-	0.48
189	Tri-η		13C-PCB-32	100.00	1.45e+08	1.09	y	27:05	-	0.74
190	Tri-η		13C-PCB-28	100.00	1.37e+08	1.03	y	29:01	-	1.02
191	Tri-η		13C-PCB-37	100.00	1.25e+08	1.07	y	32:52	-	0.93
192	Tetrη		13C-PCB-54	100.00	1.30e+08	0.80	y	27:56	-	0.98
193	Tetrη		13C-PCB-52	100.00	9.99e+07	0.80	y	31:25	-	0.75
194	Tetrη		13C-PCB-47	100.00	1.04e+08	0.77	y	31:55	-	0.78
195	Tetrη		13C-PCB-70	100.00	1.35e+08	0.78	y	35:24	-	1.02
196	Tetrη		13C-PCB-80	100.00	1.39e+08	0.80	y	35:49	-	1.05
197	Tetrη		13C-PCB-81	100.00	1.30e+08	0.79	y	38:56	-	0.98
198	Tetrη		13C-PCB-77	100.00	1.29e+08	0.80	y	39:32	-	0.97
199	Pentη		13C-PCB-104	100.00	8.83e+07	1.59	y	32:34	-	0.96
200	Pentη		13C-PCB-95	100.00	6.79e+07	1.55	y	35:43	-	0.74
201	Pentη		13C-PCB-101	100.00	7.25e+07	1.55	y	37:23	-	0.79
202	Pentη		13C-PCB-97	100.00	6.44e+07	1.57	y	38:42	-	0.70
203	Pentη		13C-PCB-123	100.00	8.18e+07	1.58	y	41:16	-	0.89
204	Pentη		13C-PCB-118	100.00	9.11e+07	1.59	y	41:27	-	0.99
205	Pentη		13C-PCB-114	100.00	1.10e+08	1.61	y	42:06	-	1.45
206	Pentη		13C-PCB-105	100.00	1.10e+08	1.59	y	42:58	-	1.45
207	Pentη		13C-PCB-127	100.00	1.18e+08	1.61	y	43:18	-	1.54
208	Pentη		13C-PCB-126	100.00	1.02e+08	1.57	y	45:13	-	1.34
209	Hexaη		13C-PCB-155	100.00	7.27e+07	1.27	y	36:56	-	0.79
210	Hexaη		13C-PCB-153	100.00	8.79e+07	1.29	y	43:07	-	1.15
211	Hexaη		13C-PCB-141	100.00	8.18e+07	1.28	y	43:52	-	1.07
212	Hexa		13C-PCB-138	100.00	8.32e+07	1.27	y	44:43	-	1.09
213	Hexaη		13C-PCB-159	100.00	9.51e+07	1.28	y	45:59	-	1.25
214	Hexaη		13C-PCB-167	100.00	1.01e+08	1.26	y	46:41	-	1.33
215	Hexaη		13C-PCB-156	100.00	1.01e+08	1.27	y	47:59	-	1.32
216	Hexaη		13C-PCB-157	100.00	1.05e+08	1.31	y	48:15	-	1.38
217	Hexaη		13C-PCB-169	100.00	9.82e+07	1.28	y	50:20	-	1.29
218	Heptη		13C-PCB-188	100.00	6.91e+07	0.47	y	42:45	-	0.91
219	Heptη		13C-PCB-180	100.00	4.94e+07	0.48	y	49:16	-	0.65
220	Heptη		13C-PCB-170	100.00	3.94e+07	0.46	y	50:41	-	0.52
221	Heptη		13C-PCB-189	100.00	5.34e+07	0.46	y	52:08	-	0.70
222	Octaη		13C-PCB-202	100.00	5.91e+07	0.90	y	48:12	-	0.78

223	Octaη	13C-PCB-194	100.00	5.78e+07	0.93 y	53:39	-	0.79
224	Nonaη	13C-PCB-208	100.00	7.83e+07	0.77 y	52:54	-	1.07
225	Nonaη	13C-PCB-206	100.00	4.57e+07	0.77 y	55:21	-	0.62
226	Decaη	13C-PCB-209	100.00	4.25e+07	1.20 y	56:39	-	0.58
227	DI-RS	13C-PCB-15	100.00	1.96e+08	1.59 y	25:55	-	1.00
228	Tri-η	13C-PCB-31	100.00	1.34e+08	1.04 y	28:55	-	1.00
229	Tetraη	13C-PCB-60	100.00	1.33e+08	0.78 y	36:39	-	1.00
230	Penta	13C-PCB-111	100.00	9.21e+07	1.57 y	39:07	-	1.00
231	Hexaη	13C-PCB-128	100.00	7.63e+07	1.27 y	46:17	-	1.00
232	Octaη	13C-PCB-205	100.00	7.35e+07	0.92 y	53:56	-	1.00

233	CRS	13C-PCB-79	100.00	1.38e+08	0.77 y	37:43	-	1.04
234	CRS	13C-PCB-178	100.00	4.43e+07	0.45 y	45:33	-	0.58
235	PS	13C-PCB-79	100.00	1.38e+08	0.77 y	37:43	-	1.06
236	PS	13C-PCB-178	100.00	4.43e+07	0.45 y	45:33	-	0.90



Lab Name: Vista Analytical Laboratory      Lab ID: ST140623E2-4      Instrument ID: VG-8

Initial Calibration Date: 6-23-14      ICal ID: PCBVG8-6-23-14      GC Column ID: ZB-1

VER Data Filename: 140623E2    S#4    Analysis Date: 23-JUN-14 Time: 14:53:49

ANALYTES	ION	QC	PASS	CONC.		ANALYTES	ION	QC	PASS	CONC.	
	ABUND.	LIMITS		FOUND	RANGE		ABUND.	LIMITS		FOUND	RANGE
	RATIO			(ng/mL)		RATIO				(ng/mL)	
PCB-1	3.00	2.66-3.60	y	51.3	37.5-62.5	PCB-52/69	0.76	0.65-0.89	y	99.8	75.0-125
PCB-2	3.01	2.66-3.60	y	51.8	37.5-62.5	PCB-73	0.78	0.65-0.89	y	51.0	37.5-62.5
PCB-3	3.01	2.66-3.60	y	51.3	37.5-62.5	PCB-43/49	0.76	0.65-0.89	y	97.5	75.0-125
PCB-4/10	1.65	1.33-1.79	y	200.1	150-250	PCB-47	0.76	0.65-0.89	y	49.3	37.5-62.5
PCB-7/9	1.65	1.33-1.79	y	199.3	150-250	PCB-48/75	0.77	0.65-0.89	y	95.6	75.0-125
PCB-6	1.66	1.33-1.79	y	100.0	75.0-125	PCB-65	0.76	0.65-0.89	y	50.2	37.5-62.5
PCB-5/8	1.64	1.33-1.79	y	200.2	150-250	PCB-62	0.76	0.65-0.89	y	44.6	37.5-62.5
PCB-14	1.66	1.33-1.79	y	102.7	75.0-125	PCB-44	0.77	0.65-0.89	y	46.7	37.5-62.5
PCB-11	1.65	1.33-1.79	y	101.7	75.0-125	PCB-42/59	0.76	0.65-0.89	y	95.3	75.0-125
PCB-12/13	1.65	1.33-1.79	y	200.4	150-250	PCB-41/64/71/72	0.77	0.65-0.89	y	187.9	150-250
PCB-15	1.66	1.33-1.79	y	100.2	75.0-125	PCB-68	0.76	0.65-0.89	y	48.0	37.5-62.5
PCB-19	1.05	0.88-1.20	y	49.8	37.5-62.5	PCB-40	0.77	0.65-0.89	y	48.5	37.5-62.5
PCB-30	1.06	0.88-1.20	y	49.4	37.5-62.5	PCB-57	0.76	0.65-0.89	y	50.7	37.5-62.5
PCB-18	1.05	0.88-1.20	y	51.3	37.5-62.5	PCB-67	0.76	0.65-0.89	y	49.2	37.5-62.5
PCB-17	1.05	0.88-1.20	y	50.5	37.5-62.5	PCB-58	0.79	0.65-0.89	y	50.1	37.5-62.5
PCB-24/27	1.05	0.88-1.20	y	101.3	75.0-125	PCB-63	0.76	0.65-0.89	y	49.0	37.5-62.5
PCB-16/32	1.06	0.88-1.20	y	100.2	75.0-125	PCB-74	0.77	0.65-0.89	y	48.3	37.5-62.5
PCB-34	1.03	0.88-1.20	y	47.9	37.5-62.5	PCB-61/70	0.77	0.65-0.89	y	99.9	75.0-125
PCB-23	1.06	0.88-1.20	y	47.9	37.5-62.5	PCB-76/66	0.77	0.65-0.89	y	99.0	75.0-125
PCB-29	1.04	0.88-1.20	y	49.2	37.5-62.5	PCB-80	0.77	0.65-0.89	y	51.1	37.5-62.5
PCB-26	1.04	0.88-1.20	y	48.9	37.5-62.5	PCB-55	0.77	0.65-0.89	y	51.8	37.5-62.5
PCB-25	1.06	0.88-1.20	y	50.3	37.5-62.5	PCB-56/60	0.77	0.65-0.89	y	98.9	75.0-125
PCB-31	1.02	0.88-1.20	y	48.2	37.5-62.5	PCB-79	0.78	0.65-0.89	y	49.6	37.5-62.5
PCB-28	1.04	0.88-1.20	y	49.8	37.5-62.5	PCB-78	0.77	0.65-0.89	y	49.1	37.5-62.5
PCB-20/21/33	1.03	0.88-1.20	y	149.6	112.5-225	PCB-81	0.78	0.65-0.89	y	48.4	37.5-62.5
PCB-22	1.04	0.88-1.20	y	50.9	37.5-62.5	PCB-77	0.79	0.65-0.89	y	49.2	37.5-62.5
PCB-36	1.03	0.88-1.20	y	51.8	37.5-62.5	PCB-104	1.57	1.32-1.78	y	50.6	37.5-62.5
PCB-39	1.02	0.88-1.20	y	53.7	37.5-62.5	PCB-96	1.56	1.32-1.78	y	49.5	37.5-62.5
PCB-38	1.03	0.88-1.20	y	51.1	37.5-62.5	PCB-103	1.56	1.32-1.78	y	48.8	37.5-62.5
PCB-35	1.03	0.88-1.20	y	47.9	37.5-62.5	PCB-100	1.58	1.32-1.78	y	49.2	37.5-62.5
PCB-37	1.02	0.88-1.20	y	48.4	37.5-62.5	PCB-94	1.55	1.32-1.78	y	48.1	37.5-62.5
PCB-54	0.78	0.65-0.89	y	49.7	37.5-62.5	PCB-95/98/102	1.55	1.32-1.78	y	149.1	112.5-225
PCB-50	0.77	0.65-0.89	y	49.7	37.5-62.5	PCB-93	1.58	1.32-1.78	y	50.1	37.5-62.5
PCB-53	0.75	0.65-0.89	y	50.5	37.5-62.5	PCB-88/91	1.58	1.32-1.78	y	100.5	75.0-125
PCB-51	0.77	0.65-0.89	y	49.6	37.5-62.5	PCB-121	1.60	1.32-1.78	y	50.2	37.5-62.5
PCB-45	0.77	0.65-0.89	y	51.4	37.5-62.5						
PCB-46	0.76	0.65-0.89	y	49.3	37.5-62.5						

Analyst: *DMS*

Date: 6/24/14

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST140623E2-4      Instrument ID: VG-8

Initial Calibration Date: 6-23-14      ICal ID: PCBVG8-6-23-14      GC Column ID: ZB-1

VER Data Filename: 140623E2    S#4    Analysis Date: 23-JUN-14 Time: 14:53:49

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.56	1.32-1.78	y	99.2	75.0-125	PCB-140	1.27	1.05-1.43	y	48.3	37.5-62.5
PCB-89	1.58	1.32-1.78	y	50.3	37.5-62.5	PCB-134/143	1.25	1.05-1.43	y	97.1	75.0-125
PCB-90/101	1.56	1.32-1.78	y	100.3	75.0-125	PCB-133/142	1.24	1.05-1.43	y	97.4	75.0-125
PCB-113	1.57	1.32-1.78	y	52.7	37.5-62.5	PCB-131	1.23	1.05-1.43	y	49.1	37.5-62.5
PCB-99	1.60	1.32-1.78	y	47.7	37.5-62.5	PCB-146/165	1.25	1.05-1.43	y	98.5	75.0-125
PCB-119	1.56	1.32-1.78	y	49.8	37.5-62.5	PCB-132/161	1.31	1.05-1.43	y	98.0	75.0-125
PCB-108/112	1.58	1.32-1.78	y	100.2	75.0-125	PCB-153	1.16	1.05-1.43	y	49.2	37.5-62.5
PCB-83	1.57	1.32-1.78	y	49.2	37.5-62.5	PCB-168	1.25	1.05-1.43	y	50.1	37.5-62.5
PCB-97	1.55	1.32-1.78	y	49.4	37.5-62.5	PCB-141	1.24	1.05-1.43	y	48.7	37.5-62.5
PCB-86	1.55	1.32-1.78	y	47.3	37.5-62.5	PCB-137	1.23	1.05-1.43	y	49.3	37.5-62.5
PCB-87/117/125	1.62	1.32-1.78	y	153.7	112.5-225	PCB-130	1.23	1.05-1.43	y	50.2	37.5-62.5
PCB-111/115	1.51	1.32-1.78	y	98.7	75.0-125	PCB-138/163/164	1.24	1.05-1.43	y	147.8	112.5-225
PCB-85/116	1.58	1.32-1.78	y	100.6	75.0-125	PCB-158/160	1.23	1.05-1.43	y	99.9	75.0-125
PCB-120	1.59	1.32-1.78	y	48.7	37.5-62.5	PCB-129	1.24	1.05-1.43	y	49.1	37.5-62.5
PCB-110	1.57	1.32-1.78	y	50.0	37.5-62.5	PCB-166	1.24	1.05-1.43	y	49.5	37.5-62.5
PCB-82	1.55	1.32-1.78	y	49.8	37.5-62.5	PCB-159	1.23	1.05-1.43	y	49.9	37.5-62.5
PCB-124	1.58	1.32-1.78	y	48.7	37.5-62.5	PCB-128/162	1.23	1.05-1.43	y	97.4	75.0-125
PCB-107/109	1.59	1.32-1.78	y	102.0	75.0-125	PCB-167	1.22	1.05-1.43	y	50.2	37.5-62.5
PCB-123	1.59	1.32-1.78	y	50.6	37.5-62.5	PCB-156	1.25	1.05-1.43	y	50.3	37.5-62.5
PCB-106/118	1.59	1.32-1.78	y	100.2	75.0-125	PCB-157	1.24	1.05-1.43	y	48.4	37.5-62.5
PCB-114	1.65	1.32-1.78	y	50.6	37.5-62.5	PCB-169	1.27	1.05-1.43	y	48.4	37.5-62.5
PCB-122	1.66	1.32-1.78	y	49.6	37.5-62.5	PCB-188	1.05	0.89-1.21	y	49.3	37.5-62.5
PCB-105	1.64	1.32-1.78	y	49.4	37.5-62.5	PCB-184	1.06	0.89-1.21	y	49.1	37.5-62.5
PCB-127	1.67	1.32-1.78	y	47.6	37.5-62.5	PCB-179	1.06	0.89-1.21	y	49.7	37.5-62.5
PCB-126	1.63	1.32-1.78	y	49.7	37.5-62.5	PCB-176	1.04	0.89-1.21	y	49.5	37.5-62.5
PCB-155	1.27	1.05-1.43	y	49.7	37.5-62.5	PCB-186	1.05	0.89-1.21	y	49.8	37.5-62.5
PCB-150	1.29	1.05-1.43	y	50.1	37.5-62.5	PCB-178	1.05	0.89-1.21	y	49.4	37.5-62.5
PCB-152	1.30	1.05-1.43	y	49.4	37.5-62.5	PCB-175	1.05	0.89-1.21	y	49.6	37.5-62.5
PCB-145	1.28	1.05-1.43	y	49.5	37.5-62.5	PCB-182/187	1.05	0.89-1.21	y	96.9	75.0-125
PCB-136	1.29	1.05-1.43	y	49.0	37.5-62.5	PCB-183	1.05	0.89-1.21	y	47.6	37.5-62.5
PCB-148	1.30	1.05-1.43	y	49.6	37.5-62.5	PCB-185	1.07	0.89-1.21	y	49.3	37.5-62.5
PCB-154	1.28	1.05-1.43	y	48.4	37.5-62.5	PCB-174	1.02	0.89-1.21	y	51.7	37.5-62.5
PCB-151	1.29	1.05-1.43	y	47.9	37.5-62.5	PCB-181	1.06	0.89-1.21	y	49.2	37.5-62.5
PCB-135	1.26	1.05-1.43	y	48.7	37.5-62.5	PCB-177	1.05	0.89-1.21	y	50.0	37.5-62.5
PCB-144	1.30	1.05-1.43	y	46.6	37.5-62.5	PCB-171	1.07	0.89-1.21	y	50.3	37.5-62.5
PCB-147	1.30	1.05-1.43	y	48.2	37.5-62.5	PCB-173	1.04	0.89-1.21	y	50.8	37.5-62.5
PCB-139/149	1.28	1.05-1.43	y	96.8	75.0-125	PCB-172	1.07	0.89-1.21	y	50.2	37.5-62.5

Analyst: *Dms*

Date: *6/24/14*

## NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST140623E2-4      Instrument ID: VG-8

Initial Calibration Date: 6-23-14      ICal ID: PCBVG8-6-23-14      GC Column ID: ZB-1

VER Data Filename: 140623E2    S#4    Analysis Date: 23-JUN-14    Time: 14:53:49

ANALYTES	ION	QC	PASS	CONC.	CONC.
	ABUND.	LIMITS		FOUND	RANGE
	RATIO				(ng/mL)
PCB-192	1.06	0.89-1.21	y	51.0	37.5-62.5
PCB-180	1.05	0.89-1.21	y	50.1	37.5-62.5
PCB-193	1.07	0.89-1.21	y	50.1	37.5-62.5
PCB-191	1.07	0.89-1.21	y	49.6	37.5-62.5
PCB-170	1.05	0.89-1.21	y	50.8	37.5-62.5
PCB-190	1.06	0.89-1.21	y	50.5	37.5-62.5
PCB-189	1.05	0.89-1.21	y	50.0	37.5-62.5
PCB-202	0.94	0.76-1.02	y	49.2	37.5-62.5
PCB-201	0.91	0.76-1.02	y	49.1	37.5-62.5
PCB-204	0.91	0.76-1.02	y	50.1	37.5-62.5
PCB-197	0.91	0.76-1.02	y	49.9	37.5-62.5
PCB-200	0.90	0.76-1.02	y	50.1	37.5-62.5
PCB-198	0.92	0.76-1.02	y	51.1	37.5-62.5
PCB-199	0.91	0.76-1.02	y	47.9	37.5-62.5
PCB-196/203	0.92	0.76-1.02	y	100.1	75.0-125
PCB-195	0.89	0.76-1.02	y	50.7	37.5-62.5
PCB-194	0.92	0.76-1.02	y	49.2	37.5-62.5
PCB-205	0.92	0.76-1.02	y	49.4	37.5-62.5
PCB-208	1.34	1.14-1.54	y	49.7	37.5-62.5
PCB-207	1.32	1.14-1.54	y	49.8	37.5-62.5
PCB-206	1.36	1.14-1.54	y	49.3	37.5-62.5
PCB-209	1.21	0.99-1.33	y	51.1	37.5-62.5

Analyst: DMSDate: 6/24/14

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST140623E2-4      Instrument ID: VG-8  
 Initial Calibration Date: 6-23-14      ICal ID: PCBVG8-6-23-14      GC Column ID: ZB-1  
 VER Data Filename: 140623E2 S#4 Analysis Date: 23-JUN-14 Time: 14:53:49

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. CONC. FOUND	RANGE (ng/mL)	LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. CONC. FOUND	RANGE (ng/mL)
13C-PCB-1	3.37	2.66-3.60	y	98.7	50.0-145	13C-PCB-169	1.27	1.05-1.43	y	96.7	50 - 145
13C-PCB-3	3.41	2.66-3.60	y	94.8	50.0-145	13C-PCB-188	0.46	0.38-0.52	y	100.6	50 - 145
13C-PCB-4	1.58	1.33-1.79	y	99.7	50.0-145	13C-PCB-180	0.47	0.38-0.52	y	97.7	50 - 145
13C-PCB-9	1.59	1.33-1.79	y	99.2	50.0-145	13C-PCB-170	0.47	0.38-0.52	y	97.2	50 - 145
13C-PCB-11	1.57	1.33-1.79	y	98.2	50.0-145	13C-PCB-189	0.47	0.38-0.52	y	96.3	50 - 145
13C-PCB-19	1.07	0.88-1.20	y	99.8	50.0-145	13C-PCB-202	0.94	0.76-1.02	y	97.2	50 - 145
13C-PCB-32	1.09	0.88-1.20	y	98.2	50.0-145	13C-PCB-194	0.92	0.76-1.02	y	99.4	50 - 145
13C-PCB-28	1.06	0.88-1.20	y	98.7	50.0-145	13C-PCB-208	0.78	0.65-0.89	y	99.5	50 - 145
13C-PCB-37	1.07	0.88-1.20	y	94.4	50.0-145	13C-PCB-206	0.78	0.65-0.89	y	100.0	50 - 145
13C-PCB-54	0.81	0.65-0.89	y	100.9	50.0-145	13C-PCB-209	1.23	0.99-1.33	y	96.9	50 - 145
13C-PCB-52	0.80	0.65-0.89	y	100.5	50.0-145						
13C-PCB-47	0.79	0.65-0.89	y	100.7	50.0-145						
13C-PCB-70	0.78	0.65-0.89	y	97.6	50.0-145						
13C-PCB-80	0.80	0.65-0.89	y	98.0	50.0-145						
13C-PCB-81	0.79	0.65-0.89	y	96.6	50.0-145						
13C-PCB-77	0.78	0.65-0.89	y	96.6	50.0-145						
13C-PCB-104	1.57	1.32-1.78	y	100.0	50.0-145						
13C-PCB-95	1.59	1.32-1.78	y	99.4	50.0-145						
13C-PCB-101	1.54	1.32-1.78	y	98.6	50.0-145	CRS vs. RS					
13C-PCB-97	1.59	1.32-1.78	y	98.2	50.0-145						
13C-PCB-123	1.61	1.32-1.78	y	96.8	50.0-145	13C-PCB-79	0.79	0.65-0.89	y	98.3	75 - 125
13C-PCB-118	1.58	1.32-1.78	y	95.4	50.0-145	13C-PCB-178	0.46	0.38-0.52	y	101.1	75 - 125
13C-PCB-114	1.60	1.32-1.78	y	98.7	50.0-145						
13C-PCB-105	1.60	1.32-1.78	y	96.9	50.0-145						
13C-PCB-127	1.57	1.32-1.78	y	98.2	50.0-145						
13C-PCB-126	1.58	1.32-1.78	y	99.9	50.0-145						
13C-PCB-155	1.29	1.05-1.43	y	99.1	50.0-145						
13C-PCB-153	1.29	1.05-1.43	y	99.7	50.0-145						
13C-PCB-141	1.28	1.05-1.43	y	100.0	50.0-145						
13C-PCB-138	1.29	1.05-1.43	y	101.1	50.0-145						
13C-PCB-159	1.27	1.05-1.43	y	98.0	50.0-145						
13C-PCB-167	1.30	1.05-1.43	y	98.4	50.0-145						
13C-PCB-156	1.29	1.05-1.43	y	98.4	50.0-145						
13C-PCB-157	1.29	1.05-1.43	y	97.7	50.0-145						

Analyst: DMJ

Date: 6/24/14

Client ID: PCB CS3 14F1302  
Lab ID: ST140623E2-4

Filename: 140623E2 S:4 Acq:23-JUN-14 14:53:49 ConCal: NA  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-1	9.40e+07	3.00	y	1.19	16:25	1.001	0.996-1.006	51.3300	PCB-52/69	1.24e+08	0.76	y	1.28	31:27	1.001	0.996-1.006	99.8332
PCB-2	9.45e+07	3.01	y	1.18	18:41	0.989	0.984-0.994	51.8481	PCB-73	6.71e+07	0.78	y	1.35	31:34	1.005	1.000-1.010	51.0170
PCB-3	1.13e+08	3.01	y	1.43	18:55	1.001	0.996-1.006	51.3028	PCB-43/49	9.43e+07	0.76	y	0.99	31:44	1.010	1.005-1.015	97.5221
PCB-4/10	3.27e+08	1.65	y	1.57	20:14	1.002	0.997-1.007	200.078	PCB-47	5.35e+07	0.76	y	1.06	31:55	1.001	0.996-1.006	49.2976
PCB-7/9	3.82e+08	1.65	y	1.21	21:57	0.870	0.866-0.874	199.310	PCB-48/75	1.20e+08	0.77	y	1.23	32:02	1.004	0.999-1.009	95.5705
PCB-6	2.07e+08	1.66	y	1.30	22:35	0.895	0.890-0.899	100.033	PCB-65	6.30e+07	0.76	y	1.22	32:19	1.013	1.008-1.018	50.1860
PCB-5/8	3.65e+08	1.64	y	1.15	23:00	0.912	0.907-0.917	200.175	PCB-62	5.58e+07	0.76	y	1.22	32:26	1.016	1.011-1.021	44.5973
PCB-14	1.87e+08	1.66	y	1.11	24:04	0.954	0.949-0.959	102.750	PCB-44	4.12e+07	0.77	y	0.86	32:43	1.026	1.021-1.031	46.6811
PCB-11	1.81e+08	1.65	y	1.09	25:14	1.000	0.995-1.005	101.723	PCB-42/59	1.11e+08	0.76	y	1.14	32:57	1.033	1.028-1.038	95.2591
PCB-12/13	3.92e+08	1.65	y	1.19	25:38	1.016	1.011-1.021	200.431	PCB-41/64/71/72	2.33e+08	0.77	y	1.21	33:32	1.051	1.046-1.056	187.913
PCB-15	2.11e+08	1.66	y	1.28	25:56	1.028	1.023-1.033	100.196	PCB-68	6.63e+07	0.76	y	1.35	33:47	1.059	1.054-1.064	47.9757
PCB-19	4.92e+07	1.05	y	1.04	24:15	1.001	0.996-1.006	49.8495	PCB-40	3.48e+07	0.77	y	0.70	34:00	1.066	1.061-1.071	48.4517
PCB-30	7.99e+07	1.06	y	1.71	25:07	1.037	1.032-1.042	49.3635	PCB-57	6.06e+07	0.76	y	0.98	34:22	0.970	0.965-0.975	50.6920
PCB-18	5.58e+07	1.05	y	0.78	25:51	0.954	0.949-0.959	51.2756	PCB-67	6.65e+07	0.76	y	1.11	34:40	0.979	0.974-0.984	49.1755
PCB-17	6.48e+07	1.05	y	0.92	26:02	0.961	0.956-0.966	50.4844	PCB-58	5.67e+07	0.79	y	0.93	34:47	0.982	0.977-0.987	50.1141
PCB-24/27	1.68e+08	1.05	y	1.19	26:36	0.982	0.977-0.987	101.312	PCB-63	5.70e+07	0.76	y	0.95	34:56	0.987	0.982-0.992	48.9977
PCB-16/32	1.31e+08	1.06	y	0.94	27:06	1.000	0.995-1.005	100.158	PCB-74	7.34e+07	0.77	y	1.24	35:13	0.995	0.990-1.000	48.3011
PCB-34	7.59e+07	1.03	y	1.14	27:52	0.960	0.955-0.965	47.8540	PCB-61/70	1.16e+08	0.77	y	0.95	35:24	1.000	0.995-1.005	99.8888
PCB-23	8.55e+07	1.06	y	1.28	27:58	0.964	0.959-0.969	47.9079	PCB-76/66	1.26e+08	0.77	y	1.04	35:37	1.006	1.001-1.011	99.0361
PCB-29	7.42e+07	1.04	y	1.08	28:13	0.972	0.967-0.977	49.2142	PCB-80	7.72e+07	0.77	y	1.19	35:50	1.001	0.996-1.006	51.1089
PCB-26	8.24e+07	1.04	y	1.21	28:25	0.975	0.974-0.984	48.9217	PCB-55	6.84e+07	0.77	y	1.04	36:10	1.010	1.005-1.015	51.7926
PCB-25	8.85e+07	1.06	y	1.26	28:34	0.984	0.979-0.989	50.2567	PCB-56/60	1.27e+08	0.77	y	1.01	36:40	1.024	1.019-1.029	98.8614
PCB-31	8.64e+07	1.02	y	1.28	28:56	0.997	0.992-1.002	48.1924	PCB-79	6.79e+07	0.78	y	1.08	37:43	1.053	1.048-1.058	49.6313
PCB-28	1.19e+08	1.04	y	1.71	29:02	1.000	0.995-1.005	49.7990	PCB-78	6.97e+07	0.77	y	1.27	38:25	0.987	0.982-0.992	49.0861
PCB-20/21/33	2.26e+08	1.03	y	1.08	29:39	1.022	1.017-1.027	149.601	PCB-81	7.20e+07	0.78	y	1.33	38:57	1.000	0.995-1.005	48.4278
PCB-22	8.60e+07	1.04	y	1.21	30:05	1.037	1.032-1.042	50.9455	PCB-77	6.19e+07	0.79	y	1.10	39:33	1.000	0.995-1.005	49.2464
PCB-36	7.12e+07	1.03	y	1.14	30:40	0.933	0.928-0.938	51.8469	PCB-104	5.11e+07	1.57	y	1.18	32:35	1.001	0.996-1.006	50.6145
PCB-39	7.20e+07	1.02	y	1.12	31:09	0.948	0.943-0.953	53.6838	PCB-96	4.80e+07	1.56	y	1.14	33:50	1.039	1.034-1.044	49.4868
PCB-38	7.37e+07	1.03	y	1.20	31:55	0.971	0.966-0.976	51.1156	PCB-103	3.98e+07	1.56	y	0.96	34:22	1.055	1.050-1.060	48.8016
PCB-35	7.10e+07	1.03	y	1.23	32:26	0.987	0.982-0.992	47.9376	PCB-100	3.93e+07	1.58	y	0.94	34:42	1.066	1.061-1.071	49.1824
PCB-37	7.16e+07	1.02	y	1.23	32:53	1.000	0.995-1.005	48.3854	PCB-94	3.18e+07	1.55	y	1.06	35:11	0.985	0.980-0.990	48.0705
PCB-54	6.73e+07	0.78	y	1.10	27:57	1.001	0.996-1.006	49.6981	PCB-95/98/102	1.14e+08	1.55	y	1.22	35:42	1.000	0.995-1.005	149.073
PCB-50	5.38e+07	0.77	y	0.88	29:05	1.042	1.037-1.047	49.7280	PCB-93	2.65e+07	1.58	y	0.84	35:48	1.002	0.997-1.007	50.1439
PCB-53	5.23e+07	0.75	y	1.06	29:44	0.947	0.942-0.952	50.5493	PCB-88/91	7.03e+07	1.58	y	1.12	36:05	1.010	1.005-1.015	100.529
PCB-51	4.77e+07	0.77	y	0.99	30:04	0.957	0.952-0.962	49.5846	PCB-121	5.08e+07	1.60	y	1.62	36:12	1.014	1.009-1.019	50.2163
PCB-45	4.32e+07	0.77	y	0.86	30:30	0.971	0.966-0.976	51.4204	PCB-84/92	6.82e+07	1.56	y	1.05	37:01	0.990	0.985-0.995	99.2072
PCB-46	4.05e+07	0.76	y	0.85	30:59	0.986	0.981-0.991	49.2764	PCB-89	3.73e+07	1.58	y	1.13	37:14	0.996	0.991-1.001	50.2710

RL: MONO, TRI - DECA: \_\_\_\_\_

RL: DI : \_\_\_\_\_

Integrations  
by

Analyst: *DMS*

Date: *6/24/14*

Reviewed  
by

Analyst: \_\_\_\_\_

Date: \_\_\_\_\_

Client ID: PCB CS3 14F1302  
Lab ID: ST140623E2-4

Filename: 140623E2 S:4 Acq:23-JUN-14 14:53:49 ConCal: NA  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-90/101	7.26e+07	1.56	y	1.10	37:24	1.000	0.995-1.005	100.338	PCB-133/142	6.32e+07	1.24	y	0.82	42:20	0.982	0.977-0.987	97.4225
PCB-113	4.88e+07	1.57	y	1.41	37:39	1.007	1.002-1.012	52.6770	PCB-131	3.53e+07	1.23	y	0.91	42:30	0.986	0.981-0.991	49.1208
PCB-99	4.19e+07	1.60	y	1.34	37:44	1.009	1.004-1.014	47.7406	PCB-146/165	9.72e+07	1.25	y	1.25	42:43	0.991	0.986-0.996	98.5088
PCB-119	4.49e+07	1.56	y	1.53	38:12	0.987	0.982-0.992	49.7646	PCB-132/161	8.58e+07	1.31	y	1.10	42:58	0.997	0.992-1.002	98.0024
PCB-108/112	7.56e+07	1.58	y	1.28	38:21	0.991	0.986-0.996	100.241	PCB-153	4.86e+07	1.16	y	1.25	43:08	1.000	0.995-1.005	49.1545
PCB-83	4.40e+07	1.57	y	1.52	38:31	0.995	0.990-1.000	49.2175	PCB-168	5.75e+07	1.25	y	1.45	43:21	1.006	1.001-1.011	50.0689
PCB-97	3.44e+07	1.55	y	1.18	38:42	1.000	0.995-1.005	49.3584	PCB-141	3.94e+07	1.24	y	1.09	43:52	1.000	0.995-1.005	48.7397
PCB-86	2.35e+07	1.55	y	0.84	38:51	1.004	0.999-1.009	47.2868	PCB-137	3.90e+07	1.23	y	1.06	44:15	1.009	1.004-1.014	49.2894
B-87/117/125	1.40e+08	1.62	y	1.55	38:58	1.007	1.002-1.012	153.661	PCB-130	3.61e+07	1.23	y	0.96	44:21	1.011	1.006-1.016	50.1859
PCB-111/115	9.49e+07	1.51	y	1.63	39:08	1.011	1.006-1.016	98.7316	PCB-138/163/164	1.47e+08	1.24	y	1.29	44:44	1.001	0.996-1.006	147.764
PCB-85/116	7.71e+07	1.58	y	1.30	39:16	1.015	1.010-1.020	100.601	PCB-158/160	1.03e+08	1.23	y	1.34	44:59	1.006	1.001-1.011	99.9483
PCB-120	4.81e+07	1.59	y	1.68	39:30	1.021	1.016-1.026	48.6800	PCB-129	3.23e+07	1.24	y	0.85	45:13	1.012	1.007-1.017	49.1140
PCB-110	4.58e+07	1.57	y	1.56	39:39	1.025	1.020-1.030	50.0059	PCB-166	4.98e+07	1.24	y	1.19	45:41	0.993	0.988-0.998	49.5492
PCB-82	2.78e+07	1.55	y	0.76	40:17	0.976	0.971-0.981	49.7616	PCB-159	4.70e+07	1.23	y	1.11	46:01	1.001	0.996-1.006	49.8539
PCB-124	5.28e+07	1.58	y	1.47	40:57	0.993	0.988-0.998	48.7175	PCB-128/162	8.65e+07	1.23	y	1.05	46:18	1.007	1.002-1.012	97.4214
PCB-107/109	9.93e+07	1.59	y	1.32	41:05	0.996	0.991-1.001	102.042	PCB-167	5.55e+07	1.22	y	1.20	46:41	1.000	0.995-1.005	50.1954
PCB-123	4.35e+07	1.59	y	1.17	41:17	1.001	0.996-1.006	50.5524	PCB-156	5.05e+07	1.25	y	1.14	48:00	1.001	0.996-1.006	50.3349
PCB-106/118	9.15e+07	1.59	y	1.17	41:28	1.001	0.996-1.006	100.161	PCB-157	5.18e+07	1.24	y	1.16	48:16	1.000	0.995-1.005	48.3867
PCB-114	6.12e+07	1.65	y	1.30	42:07	1.000	0.995-1.005	50.6258	PCB-169	4.66e+07	1.27	y	1.12	50:20	1.000	0.995-1.005	48.3941
PCB-122	5.19e+07	1.66	y	1.12	42:15	1.004	0.999-1.009	49.6469									
PCB-105	5.88e+07	1.64	y	1.30	42:59	1.000	0.995-1.005	49.4039	PCB-188	4.99e+07	1.05	y	1.58	42:46	1.001	0.996-1.006	49.3061
PCB-127	6.36e+07	1.67	y	1.33	43:19	1.001	0.996-1.006	47.5787	PCB-184	5.13e+07	1.06	y	1.63	43:13	1.011	1.006-1.016	49.1029
PCB-126	5.32e+07	1.63	y	1.18	45:13	1.000	0.995-1.005	49.7195	PCB-179	4.15e+07	1.06	y	1.30	44:00	1.029	1.024-1.034	49.7059
									PCB-176	4.68e+07	1.04	y	1.48	44:28	1.040	1.035-1.045	49.4886
PCB-155	3.92e+07	1.27	y	1.11	36:57	1.001	0.966-1.006	49.6608	PCB-186	4.64e+07	1.05	y	1.45	45:05	1.055	1.050-1.060	49.8177
PCB-150	3.54e+07	1.29	y	1.00	38:13	1.035	1.030-1.040	50.0537	PCB-178	3.27e+07	1.05	y	1.03	45:34	1.066	1.061-1.071	49.3595
PCB-152	3.90e+07	1.30	y	1.12	38:42	1.048	1.043-1.053	49.3510	PCB-175	3.22e+07	1.05	y	1.01	45:55	1.074	1.069-1.079	49.6213
PCB-145	4.21e+07	1.28	y	1.20	39:08	1.060	1.055-1.065	49.5203	PCB-182/187	7.77e+07	1.05	y	1.25	46:05	1.078	1.073-1.083	96.9439
PCB-136	4.09e+07	1.29	y	1.18	39:28	1.069	1.064-1.074	48.9891	PCB-183	3.68e+07	1.05	y	1.21	46:24	1.086	1.081-1.091	47.6012
PCB-148	2.62e+07	1.30	y	0.74	39:33	1.071	1.066-1.076	49.6483	PCB-185	4.12e+07	1.07	y	1.80	47:04	0.956	0.951-0.961	49.3457
PCB-154	2.94e+07	1.28	y	0.86	40:03	1.085	1.080-1.090	48.3589	PCB-174	3.30e+07	1.02	y	1.38	47:26	0.963	0.958-0.968	51.6599
PCB-151	2.53e+07	1.29	y	0.75	40:42	1.102	1.097-1.107	47.8747	PCB-181	3.14e+07	1.06	y	1.38	47:33	0.965	0.960-0.970	49.1713
PCB-135	2.73e+07	1.26	y	0.79	40:55	1.108	1.103-1.113	48.6888	PCB-177	2.91e+07	1.05	y	1.26	47:42	0.968	0.963-0.973	50.0451
PCB-144	2.52e+07	1.30	y	0.76	41:02	1.111	1.105-1.117	46.6300	PCB-171	3.69e+07	1.07	y	1.58	48:00	0.975	0.970-0.980	50.3499
PCB-147	2.80e+07	1.30	y	0.82	41:09	1.115	1.109-1.121	48.1949	PCB-173	2.61e+07	1.04	y	1.11	48:26	0.983	0.978-0.988	50.8218
PCB-139/149	5.22e+07	1.28	y	0.76	41:25	1.122	1.116-1.128	96.7904	PCB-172	3.80e+07	1.07	y	1.63	48:53	0.992	0.987-0.997	50.2115
PCB-140	2.47e+07	1.27	y	0.72	41:36	1.127	1.121-1.133	48.2707	PCB-192	4.11e+07	1.06	y	1.74	49:04	0.996	0.991-1.001	51.0155
PCB-134/143	7.05e+07	1.25	y	0.92	42:02	0.975	0.970-0.980	97.1084	PCB-180	3.12e+07	1.05	y	1.34	49:17	1.000	0.995-1.005	50.1142

Integrations

by

RL: MONO, TRI - DECA: \_\_\_\_\_

Analyst: *DMS*

Date: *6/24/14*

Client ID: PCB CS3 14F1302  
Lab ID: ST140623E2-4

Filename: 140623E2 S:4 Acq:23-JUN-14 14:53:49  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.0000  
ConCal: NA EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RT	RRF	Conc	
PCB-193	3.98e+07	1.07 y	1.72	49:27	1.004	0.999-1.009		50.0826	Total Mono-PCB	3.01e+08	3.00 y	16:25	1.27	154.481	
PCB-191	3.90e+07	1.07 y	1.69	49:42	1.009	1.004-1.014		49.6416	Total Di-PCB	2.26e+09	1.65 y	20:14	1.21	1208.89	
PCB-170	2.97e+07	1.05 y	1.60	50:41	1.000	0.995-1.005		50.7863	Total Tri-PCB	5.48e+08	1.05 y	24:15	1.10	402.442	
PCB-190	4.08e+07	1.06 y	2.21	50:51	1.003	0.998-1.008		50.4671	Total Tri-PCB	1.30e+09	1.03 y	27:52	1.21	807.063	Sum:1209.50
PCB-189	3.71e+07	1.05 y	1.55	52:08	1.000	0.995-1.005		50.0142	Total Tetra-PCB	2.49e+09	0.78 y	27:57	1.09	2080.43	
									Total Penta-PCB	1.69e+09	1.57 y	32:35	1.18	2047.61	
PCB-202	3.01e+07	0.94 y	1.08	48:12	1.000	0.995-1.005		49.1569	Total Penta-PCB	3.13e+08	1.65 y	42:07	1.25	268.155	Sum:2315.77
PCB-201	3.19e+07	0.91 y	1.15	48:41	1.010	1.005-1.015		49.1361	Total Hexa-PCB	4.35e+08	1.27 y	36:57	0.90	682.032	
PCB-204	3.22e+07	0.91 y	1.14	48:50	1.014	1.008-1.018		50.0554	Total Hexa-PCB	1.26e+09	1.25 y	42:02	1.11	1398.33	Sum:2080.36
PCB-197	3.03e+07	0.91 y	1.07	49:09	1.020	1.015-1.025		49.8625	Total Hepta-PCB	9.18e+08	1.05 y	42:46	1.42	1205.33	
PCB-200	3.01e+07	0.90 y	1.06	49:59	1.037	1.032-1.044		50.0631	Total Octa-PCB	2.43e+08	0.94 y	48:12	0.96	447.388	
PCB-198	2.18e+07	0.92 y	0.76	51:15	1.064	1.059-1.069		51.1487	Total Octa-PCB	1.04e+08	0.89 y	52:45	1.33	151.653	Sum:599.041
PCB-199	2.16e+07	0.91 y	0.80	51:21	1.066	1.061-1.071		47.8578	Total Nona-PCB	9.23e+07	1.34 y	52:53	1.01	150.101	
- PCB-196/203	4.53e+07	0.92 y	0.80	51:37	1.071	1.066-1.076		100.108	Total Deca-PCB	2.30e+07	1.21 y	56:38	1.17	51.1001	
- PCB-195	3.20e+07	0.89 y	1.23	52:45	0.984	0.979-0.989		50.6536							
PCB-194	3.08e+07	0.92 y	1.21	53:37	1.000	0.995-1.005		49.2456							
PCB-205	3.93e+07	0.92 y	1.54	53:55	1.006	1.001-1.011		49.3837							Total PCB Conc:10960.1670500
PCB-208	3.24e+07	1.34 y	0.93	52:53	1.000	0.995-1.005		49.6730							
PCB-207	3.78e+07	1.32 y	1.08	53:12	1.006	1.001-1.011		49.8284							
PCB-206	2.13e+07	1.36 y	1.02	55:20	1.000	0.995-1.005		49.3149							
PCB-209	2.30e+07	1.21 y	1.17	56:38	1.000	0.995-1.005		51.1001							

Integrations  
by  
Analyst: DMS  
Date: 6/24/14  
RL: MONO, TRI - DECA: \_\_\_\_\_

Client ID: PCB CS3 14F1302  
Lab ID: ST140623E2-4

Filename: 140623E2 S:4 Acq:23-JUN-14 14:53:49 ConCal: NA  
GC Column ID: ZB-1 ICal: PCBVG8-6-23-14 wt/vol: 1.000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.53e+08	3.37 y	0.87	16:24	0.632	0.629-0.635		98.7	98.7											
13C-PCB-3	1.54e+08	3.41 y	0.91	18:54	0.729	0.725-0.733		94.8	94.8		13C-PCB-79	1.25e+08	0.79 y	1.02	37:42	1.028	1.023-1.034		98.3	98.3
13C-PCB-4	1.04e+08	1.58 y	0.59	20:11	0.779	0.775-0.783		99.7	99.7		13C-PCB-178	4.30e+07	0.46 y	0.61	45:33	0.984	0.979-0.990		101	101
13C-PCB-9	1.59e+08	1.59 y	0.90	21:55	0.846	0.842-0.850		99.2	99.2											
13C-PCB-11	1.64e+08	1.57 y	0.94	25:13	0.973	0.968-0.978		98.2	98.2											
13C-PCB-19	9.46e+07	1.07 y	0.53	24:14	0.935	0.930-0.940		99.8	99.8											
13C-PCB-28	1.40e+08	1.06 y	0.93	29:01	1.004	0.999-1.009		98.7	98.7											
13C-PCB-32	1.39e+08	1.09 y	0.80	27:06	1.045	1.040-1.050		98.2	98.2											
13C-PCB-37	1.20e+08	1.07 y	0.84	32:52	1.137	1.131-1.143		94.4	94.4											
13C-PCB-47	1.02e+08	0.79 y	0.81	31:54	0.870	0.866-0.874		101	101											
13C-PCB-52	9.72e+07	0.80 y	0.77	31:24	0.857	0.853-0.861		101	101											
13C-PCB-54	1.23e+08	0.81 y	0.97	27:55	0.762	0.758-0.766		101	101											
13C-PCB-70	1.22e+08	0.78 y	1.00	35:25	0.966	0.961-0.971		97.6	97.6											
13C-PCB-77	1.14e+08	0.78 y	0.94	39:32	1.078	1.073-1.083		96.6	96.6											
13C-PCB-80	1.27e+08	0.80 y	1.03	35:49	0.977	0.972-0.982		98.0	98.0											
13C-PCB-81	1.12e+08	0.79 y	0.92	38:56	1.062	1.057-1.067		96.6	96.6											
13C-PCB-95	6.27e+07	1.59 y	0.74	35:43	0.913	0.908-0.918		99.4	99.4											
13C-PCB-97	5.89e+07	1.59 y	0.70	38:42	0.989	0.984-0.994		98.2	98.2											
13C-PCB-101	6.57e+07	1.54 y	0.78	37:23	0.956	0.951-0.961		98.6	98.6											
13C-PCB-104	8.52e+07	1.57 y	1.00	32:34	0.832	0.828-0.836		100.0	100.0											
13C-PCB-105	9.17e+07	1.60 y	1.37	42:58	0.929	0.924-0.934		96.9	96.9											
13C-PCB-114	9.33e+07	1.60 y	1.36	42:06	0.910	0.905-0.915		98.7	98.7											
13C-PCB-118	7.79e+07	1.58 y	0.96	41:26	1.059	1.054-1.064		95.4	95.4											
13C-PCB-123	7.37e+07	1.61 y	0.89	41:15	1.055	1.050-1.060		96.8	96.8											
13C-PCB-126	9.05e+07	1.58 y	1.31	45:12	0.977	0.972-0.982		99.9	99.9											
13C-PCB-127	1.00e+08	1.57 y	1.47	43:17	0.936	0.931-0.941		98.2	98.2											
13C-PCB-138	7.71e+07	1.29 y	1.10	44:42	0.966	0.961-0.971		101	101											
13C-PCB-141	7.45e+07	1.28 y	1.07	43:51	0.948	0.943-0.953		100.0	100.0											
13C-PCB-153	7.92e+07	1.29 y	1.15	43:07	0.932	0.927-0.937		99.7	99.7											
13C-PCB-155	7.08e+07	1.29 y	0.84	36:55	0.944	0.939-0.949		99.1	99.1											
13C-PCB-156	8.85e+07	1.29 y	1.30	47:58	1.037	1.032-1.042		98.4	98.4											
13C-PCB-157	9.20e+07	1.29 y	1.36	48:15	1.043	1.038-1.048		97.7	97.7											
13C-PCB-159	8.48e+07	1.27 y	1.25	45:59	0.994	0.989-0.999		98.0	98.0											
13C-PCB-167	9.22e+07	1.30 y	1.35	46:40	1.009	1.004-1.014		98.4	98.4											
13C-PCB-169	8.62e+07	1.27 y	1.29	50:19	1.088	1.083-1.093		96.7	96.7											
13C-PCB-170	3.66e+07	0.47 y	0.54	50:40	1.095	1.089-1.101		97.2	97.2											
13C-PCB-180	4.63e+07	0.47 y	0.68	49:15	1.065	1.060-1.070		97.7	97.7											
13C-PCB-188	6.40e+07	0.46 y	0.92	42:45	0.924	0.919-0.929		101	101											
13C-PCB-189	4.78e+07	0.47 y	0.72	52:07	1.126	1.120-1.132		96.3	96.3											
13C-PCB-194	5.16e+07	0.92 y	0.80	53:36	0.995	0.990-1.000		99.4	99.4											
13C-PCB-202	5.65e+07	0.94 y	0.84	48:11	1.041	1.036-1.046		97.2	97.2											
13C-PCB-206	4.23e+07	0.78 y	0.65	55:19	1.026	1.021-1.031		100.0	100.0											
13C-PCB-208	7.00e+07	0.78 y	1.08	52:53	0.981	0.976-0.986		99.5	99.5											
13C-PCB-209	3.85e+07	1.23 y	0.61	56:37	1.050	1.045-1.055		96.9	96.9											

Analyst: Dms

Date: 6/24/14



Vista Analytical Laboratory - Injection Log Run file: 140623E2 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
140623E2	1	ST140623E2-1	DMS	23-JUN-14	11:41:57	NA	NA
140623E2	2	ST140623E2-2	DMS	23-JUN-14	12:45:53	NA	NA
140623E2	3	ST140623E2-3	DMS	23-JUN-14	13:49:52	NA	NA
140623E2	4	ST140623E2-4	DMS	23-JUN-14	14:53:49	NA	NA
140623E2	5	ST140623E2-5	DMS	23-JUN-14	15:57:45	NA	NA
140623E2	6	ST140623E2-6	DMS	23-JUN-14	17:01:39	NA	NA
140623E2	7	SOLVENT BLANK	DMS	23-JUN-14	18:05:37	NA	NA
140623E2	8	ST140623E2-7	DMS	23-JUN-14	19:09:28	NA	NA
140623E2	9	B4F0051-BS1	DMS	23-JUN-14	20:13:23	ST140623E2-4	NA
140623E2	10	SOLVENT BLANK	DMS	23-JUN-14	21:17:15	NA	NA
140623E2	11	B4F0051-BLK1	DMS	23-JUN-14	22:21:11	ST140623E2-4	NA
140623E2	12	1400418-01 1:10	DMS	23-JUN-14	23:25:05	ST140623E2-4	NA
140623E2	13	1400418-02 1:10	DMS	24-JUN-14	00:29:00	ST140623E2-4	NA
140623E2	14	1400418-03 1:10	DMS	24-JUN-14	01:32:54	ST140623E2-4	NA
140623E2	15	SOLVENT BLANK	DMS	24-JUN-14	02:36:47	NA	NA

Data filename: 150114E1

Name	Mean RRF	%RSD	Samp# 4	Samp# 5	Samp# 6	Samp# 7	Samp# 8	Samp# 2
			1.0	2.5	50	400	1000	0.25 *
			RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
PCB-1	1.33	4.52 %	1.38	1.32	1.23	1.32	1.34	1.40
PCB-2	1.30	5.65 %	1.42	1.31	1.26	1.21	1.33	1.25
PCB-3	1.30	4.28 %	1.38	1.33	1.26	1.23	1.31	1.27
PCB-4/10	1.67	10.28 %	1.75	1.67	1.56	1.54	1.54	1.98
PCB-7/9	1.25	8.26 %	1.30	1.26	1.18	1.16	1.18	1.43
PCB-6	1.24	9.18 %	1.34	1.24	1.18	1.14	1.13	1.41
PCB-5/8	1.27	10.47 %	1.34	1.25	1.17	1.17	1.17	1.50
PCB-14	1.47	7.78 %	1.58	1.45	1.41	1.37	1.36	1.64
PCB-11	1.28	10.60 %	1.39	1.25	1.21	1.17	1.17	1.51
PCB-12/13	1.27	7.89 %	1.33	1.25	1.20	1.18	1.20	1.44
PCB-15	1.44	10.40 %	1.50	1.41	1.36	1.32	1.35	1.72
PCB-19	1.18	7.51 %	1.25	1.20	1.13	1.11	1.10	1.32
PCB-30	1.87	8.54 %	2.03	1.85	1.80	1.72	1.75	2.11
PCB-18	0.89	9.45 %	0.98	0.90	0.85	0.82	0.78	0.98
PCB-17	0.96	10.12 %	1.03	0.97	0.92	0.86	0.86	1.10
PCB-24/27	1.30	9.45 %	1.34	1.31	1.23	1.21	1.18	1.52
PCB-16/32	1.05	11.15 %	1.10	1.04	0.98	0.95	0.95	1.25
PCB-34	1.30	11.06 %	1.30	1.41	1.19	1.16	1.21	1.53
PCB-23	1.21	8.15 %	1.26	1.14	1.16	1.22	1.10	1.37
PCB-29	1.21	10.43 %	1.29	1.31	1.06	1.14	1.10	1.36
PCB-26	1.24	7.44 %	1.31	1.30	1.11	1.14	1.24	1.32
PCB-25	1.10	6.57 %	1.21	1.09	1.00	1.13	1.10	1.04
PCB-31	1.25	8.92 %	1.30	1.32	1.13	1.26	1.10	1.38
PCB-28	1.24	9.99 %	1.34	1.30	1.07	1.20	1.13	1.38
PCB-20/21/33	1.16	9.64 %	1.21	1.23	1.05	1.19	0.98	1.26
PCB-22	1.16	10.72 %	1.23	1.17	1.09	1.13	0.99	1.36
PCB-36	1.30	9.13 %	1.25	1.36	1.40	1.10	1.27	1.42
PCB-39	1.26	10.29 %	1.36	1.38	1.28	1.07	1.13	1.35
PCB-38	1.24	2.89 %	1.26	1.22	1.31	1.22	1.24	1.22
PCB-35	1.26	5.42 %	1.19	1.19	1.28	1.23	1.31	1.35
PCB-37	1.35	8.86 %	1.43	1.33	1.28	1.27	1.23	1.55
PCB-54	1.02	10.31 %	1.04	1.07	0.95	0.94	0.94	1.21
PCB-50	0.78	8.21 %	0.84	0.78	0.73	0.75	0.70	0.87
PCB-53	1.14	10.76 %	1.14	1.15	1.09	1.09	0.99	1.36
PCB-51	1.16	7.07 %	1.26	1.16	1.11	1.15	1.04	1.25
PCB-45	1.04	10.54 %	1.02	1.04	1.01	0.92	1.00	1.25
PCB-46	0.95	12.05 %	0.99	0.98	0.87	0.85	0.86	1.15
PCB-52/69	1.29	11.02 %	1.38	1.38	1.20	1.15	1.15	1.49
PCB-73	1.41	11.96 %	1.52	1.25	1.42	1.40	1.22	1.67
PCB-43/49	1.14	10.50 %	1.14	1.11	1.06	1.10	1.05	1.37
PCB-47	1.20	15.31 %	1.29	1.11	1.09	1.04	1.13	1.53

*Dms 1/20/15*  
*\*=CSD Rejected due to PCB 153 contamination.*  
*& M 1/20/15*

PCB-48/75	1.33	10.00 %	1.39	1.32	1.20	1.24	1.23	1.56
PCB-65	1.32	14.66 %	1.41	1.33	1.13	1.22	1.15	1.64
PCB-62	1.36	13.10 %	1.46	1.27	1.28	1.15	1.31	1.66
PCB-44	0.87	16.44 %	0.91	0.87	0.80	0.76	0.75	1.13
PCB-42/59	1.24	17.44 %	1.33	1.27	1.05	1.09	1.07	1.61
PCB-41/64/71/72	1.34	13.28 %	1.39	1.35	1.14	1.28	1.21	1.65
PCB-68	1.61	19.92 %	1.69	1.57	1.30	1.45	1.43	2.21
PCB-40	0.86	17.24 %	0.93	0.84	0.71	0.78	0.77	1.11
PCB-57	1.12	17.03 %	1.23	1.12	1.03	1.00	0.90	1.44
PCB-67	1.09	14.59 %	1.18	1.11	1.00	0.99	0.91	1.35
PCB-58	1.14	12.88 %	1.24	1.09	1.12	1.00	1.00	1.37

PCB-63	1.16	14.60 %	1.26	1.16	1.10	1.05	0.96	1.44
PCB-74	1.21	14.89 %	1.31	1.20	1.08	1.12	1.04	1.52
PCB-61/70	1.13	14.67 %	1.22	1.08	1.04	0.97	1.01	1.42
PCB-76/66	1.18	16.88 %	1.25	1.12	1.06	1.06	1.03	1.55
PCB-80	1.32	13.55 %	1.40	1.32	1.20	1.18	1.20	1.65
PCB-55	1.23	13.61 %	1.29	1.19	1.13	1.08	1.15	1.54
PCB-56/60	1.11	15.55 %	1.17	1.12	0.98	1.03	0.93	1.40
PCB-79	1.16	11.65 %	1.23	1.21	1.03	1.01	1.11	1.37
PCB-78	1.18	15.63 %	1.24	1.16	1.03	1.11	1.01	1.51
PCB-81	1.29	14.36 %	1.31	1.29	1.17	1.15	1.17	1.64
PCB-77	1.29	15.01 %	1.32	1.31	1.18	1.14	1.14	1.65
PCB-104	1.26	11.04 %	1.36	1.24	1.16	1.16	1.17	1.50
PCB-96	1.09	9.21 %	1.16	1.09	0.96	1.08	1.02	1.25
PCB-103	0.97	9.45 %	1.10	0.96	0.86	0.94	0.89	1.05
PCB-100	0.96	7.05 %	1.03	0.99	0.87	0.92	0.92	1.04
PCB-94	1.13	8.09 %	1.21	1.14	1.06	1.08	1.03	1.26
PCB-95/98/102	1.29	10.92 %	1.37	1.31	1.16	1.22	1.16	1.52
PCB-93	1.06	13.28 %	1.14	1.05	1.13	0.82	1.01	1.23
PCB-88/91	1.12	10.49 %	1.27	1.11	1.12	1.00	0.99	1.26
PCB-121	1.76	11.27 %	1.84	1.74	1.57	1.55	1.79	2.09
PCB-84/92	1.07	8.45 %	1.11	1.12	1.04	1.01	0.95	1.20
PCB-89	1.00	10.58 %	1.05	1.04	0.95	0.91	0.87	1.15
PCB-90/101	1.21	11.77 %	1.28	1.22	1.13	1.09	1.07	1.45
PCB-113	1.34	9.13 %	1.37	1.42	1.39	1.24	1.15	1.48
PCB-99	1.25	17.56 %	1.42	1.22	1.03	1.05	1.17	1.59
PCB-119	1.88	8.86 %	2.00	1.89	1.77	1.76	1.72	2.15
PCB-108/112	1.41	6.60 %	1.50	1.45	1.33	1.37	1.29	1.51
PCB-83	1.66	6.92 %	1.76	1.70	1.58	1.64	1.49	1.80
PCB-97	1.30	10.69 %	1.38	1.32	1.20	1.20	1.17	1.53
PCB-86	1.03	17.33 %	1.08	0.93	0.99	0.90	0.93	1.38
PCB-87/117/125	1.59	6.14 %	1.67	1.60	1.52	1.53	1.50	1.74
PCB-111/115	1.86	9.78 %	1.89	1.86	1.77	1.72	1.71	2.20
PCB-85/116	1.39	12.01 %	1.44	1.31	1.33	1.23	1.34	1.71
PCB-120	1.99	10.45 %	2.06	2.00	1.83	1.83	1.84	2.36
PCB-110	1.70	12.10 %	1.82	1.69	1.62	1.50	1.54	2.05
PCB-82	0.74	11.63 %	0.78	0.74	0.73	0.68	0.64	0.89
PCB-124	1.30	5.43 %	1.41	1.29	1.29	1.20	1.28	1.36
PCB-107/109	1.34	11.92 %	1.40	1.33	1.21	1.22	1.24	1.62
PCB-123	1.25	9.48 %	1.24	1.29	1.21	1.15	1.15	1.47
PCB-106/118	1.29	12.71 %	1.36	1.30	1.20	1.15	1.16	1.58
PCB-114	1.45	9.74 %	1.52	1.46	1.36	1.32	1.36	1.70
PCB-122	1.22	8.66 %	1.24	1.30	1.12	1.17	1.11	1.38
PCB-105	1.56	9.15 %	1.62	1.62	1.47	1.44	1.41	1.79
PCB-127	1.31	10.47 %	1.40	1.30	1.24	1.19	1.18	1.53
PCB-126	1.41	6.08 %	1.42	1.46	1.39	1.32	1.33	1.55
PCB-155	1.20	7.21 %	1.27	1.21	1.12	1.14	1.12	1.33
PCB-150	1.13	8.78 %	1.15	1.07	1.02	1.12	1.10	1.31
PCB-152	1.17	14.36 %	1.21	1.11	1.03	1.09	1.08	1.49
PCB-145	1.09	6.93 %	1.10	1.09	1.00	1.07	1.08	1.23
PCB-136	1.14	7.24 %	1.16	1.12	1.09	1.08	1.11	1.30

PCB-148	0.82	8.69 %	0.87	0.81	0.71	0.79	0.80	0.92
PCB-154	0.89	11.57 %	0.89	0.89	0.80	0.84	0.84	1.09
PCB-151	0.82	6.55 %	0.85	0.80	0.75	0.79	0.80	0.91
PCB-135	0.80	7.09 %	0.78	0.80	0.72	0.78	0.81	0.89
PCB-144	0.86	9.26 %	0.87	0.77	0.78	0.85	0.87	0.99
PCB-147	0.78	10.69 %	0.80	0.72	0.68	0.75	0.81	0.92
PCB-139/149	0.87	8.00 %	0.87	0.85	0.77	0.86	0.88	0.99
PCB-140	0.78	8.58 %	0.80	0.76	0.70	0.76	0.76	0.90
PCB-134/143	0.93	8.74 %	0.93	0.94	0.85	0.90	0.88	1.08
PCB-133/142	0.91	6.06 %	0.95	0.89	0.85	0.89	0.88	1.00
PCB-131	0.85	6.74 %	0.94	0.85	0.79	0.81	0.80	0.89

PCB-146/165	1.08	4.94 %	1.13	1.08	1.01	1.05	1.06	1.15
PCB-132/161	1.12	8.35 %	1.19	1.12	1.04	1.03	1.07	1.26
PCB-153	1.20	18.86 %	1.31	1.19	1.04	1.03	1.02	1.60
PCB-168	1.36	6.98 %	1.37	1.39	1.27	1.28	1.31	1.52
PCB-141	1.16	10.89 %	1.25	1.16	1.05	1.06	1.06	1.36
PCB-137	1.18	10.18 %	1.27	1.16	1.07	1.09	1.10	1.38
PCB-130	0.92	9.18 %	0.95	0.80	0.89	0.90	0.92	1.06
PCB-138/163/164	1.38	11.94 %	1.43	1.35	1.27	1.28	1.26	1.69
PCB-158/160	1.48	12.88 %	1.51	1.44	1.37	1.35	1.34	1.84
PCB-129	0.99	13.56 %	1.06	0.96	0.88	0.94	0.87	1.23
PCB-166	1.14	10.59 %	1.18	1.10	1.06	1.06	1.08	1.37
PCB-159	1.22	9.93 %	1.21	1.22	1.17	1.13	1.15	1.46
PCB-128/162	1.03	8.90 %	1.07	1.05	0.97	0.97	0.96	1.20
PCB-167	1.18	10.96 %	1.23	1.18	1.10	1.09	1.09	1.42
PCB-156	1.27	7.87 %	1.31	1.30	1.19	1.19	1.19	1.44
PCB-157	1.22	9.73 %	1.29	1.24	1.13	1.12	1.13	1.41
PCB-169	1.07	6.63 %	1.08	1.10	1.02	1.02	1.03	1.20
PCB-188	1.52	12.80 %	1.60	1.46	1.43	1.38	1.38	1.88
PCB-184	1.34	8.74 %	1.42	1.37	1.27	1.23	1.22	1.51
PCB-179	1.39	10.02 %	1.47	1.41	1.33	1.27	1.25	1.62
PCB-176	1.45	9.52 %	1.52	1.46	1.40	1.34	1.32	1.69
PCB-186	1.46	10.56 %	1.52	1.44	1.37	1.33	1.34	1.73
PCB-178	1.07	12.94 %	1.18	1.07	1.00	0.96	0.94	1.30
PCB-175	1.05	10.07 %	1.12	1.03	1.01	0.94	0.97	1.22
PCB-182/187	1.14	9.45 %	1.21	1.15	1.06	1.05	1.03	1.31
PCB-183	1.22	10.61 %	1.33	1.26	1.16	1.10	1.08	1.40
PCB-185	1.40	10.38 %	1.43	1.40	1.34	1.32	1.27	1.68
PCB-174	1.29	7.93 %	1.34	1.26	1.25	1.19	1.22	1.47
PCB-181	1.35	6.04 %	1.34	1.43	1.30	1.31	1.25	1.46
PCB-177	1.27	12.30 %	1.27	1.32	1.16	1.17	1.13	1.55
PCB-171	1.46	8.76 %	1.52	1.43	1.34	1.38	1.38	1.68
PCB-173	1.10	5.77 %	1.13	1.10	1.08	1.04	1.06	1.22
PCB-172	1.35	12.56 %	1.35	1.24	1.27	1.30	1.27	1.69
PCB-192	1.74	9.92 %	1.83	1.64	1.61	1.67	1.63	2.05
PCB-180	1.45	14.04 %	1.57	1.42	1.32	1.30	1.29	1.80
PCB-193	1.85	10.11 %	1.97	1.77	1.72	1.74	1.72	2.18
PCB-191	1.86	7.62 %	1.97	1.81	1.76	1.76	1.77	2.10
PCB-170	1.67	11.07 %	1.73	1.65	1.56	1.52	1.55	2.01
PCB-190	2.25	7.94 %	2.26	2.12	2.17	2.15	2.18	2.60
PCB-189	1.67	7.88 %	1.76	1.69	1.58	1.56	1.55	1.88
PCB-202	1.02	8.62 %	1.09	0.99	0.96	0.95	0.96	1.16
PCB-201	1.10	8.30 %	1.14	1.10	1.01	1.06	1.02	1.25
PCB-204	1.07	12.15 %	1.08	1.02	0.96	1.06	1.00	1.33
PCB-197	1.17	8.84 %	1.18	1.12	1.08	1.14	1.11	1.37
PCB-200	1.03	10.36 %	1.06	1.01	0.97	0.97	0.96	1.24
PCB-198	0.75	8.91 %	0.73	0.69	0.73	0.73	0.75	0.88
PCB-199	0.74	10.59 %	0.80	0.68	0.68	0.71	0.71	0.87
PCB-196/203	0.83	11.76 %	0.84	0.74	0.75	0.82	0.81	1.01
PCB-195	1.14	9.26 %	1.10	1.04	1.07	1.14	1.16	1.34
PCB-194	1.29	13.97 %	1.37	1.30	1.16	1.15	1.14	1.61

PCB-205	1.61	8.14 %	1.58	1.56	1.55	1.56	1.53	1.88
PCB-208	1.01	10.69 %	1.10	1.03	0.94	0.92	0.91	1.18
PCB-207	1.03	10.99 %	1.07	1.00	0.96	0.95	0.95	1.24
PCB-206	0.88	12.49 %	0.89	0.91	0.82	0.79	0.79	1.08
PCB-209	1.35	13.71 %	1.42	1.31	1.21	1.22	1.23	1.69
Total Mono-PCB	1.31	4.13 %	1.39	1.32	1.25	1.25	1.33	1.30
Total Di-PCB	1.32	9.07 %	1.39	1.31	1.25	1.22	1.23	1.52
Total Tri-PCB	1.20	9.46 %	1.28	1.21	1.14	1.11	1.10	1.39

Total Tri-PCB	1.23	6.59	%	1.28	1.27	1.16	1.18	1.13	1.34
Total Tetra-PCB	1.17	12.41	%	1.23	1.16	1.06	1.08	1.04	1.42
Total Penta-PCB	1.24	9.06	%	1.32	1.25	1.15	1.16	1.14	1.42
Total Hexa-PCB	0.94	8.69	%	1.44	1.43	1.31	1.29	1.28	1.59
Total Hepta-PCB	1.13	9.33	%	0.96	0.92	0.85	0.91	0.93	1.09
Total Octa-PCB	1.13	9.33	%	1.17	1.12	1.05	1.06	1.06	1.32
Total Nona-PCB	1.37	9.78	%	1.44	1.36	1.29	1.27	1.26	1.61
Total Deca-PCB	0.95	9.73	%	0.98	0.90	0.88	0.92	0.90	1.12
Total Tri-PCB	1.35	9.69	%	1.35	1.30	1.27	1.28	1.28	1.61
Total Tetra-PCB	0.99	10.97	%	1.04	0.99	0.92	0.90	0.90	1.18
Total Penta-PCB	1.35	13.71	%	1.42	1.31	1.21	1.22	1.23	1.69
13C-PCB-1	0.91	8.84	%	0.97	0.98	0.98	0.87	0.78	0.87
13C-PCB-3	0.94	7.32	%	0.95	0.94	0.95	0.99	0.81	1.01
13C-PCB-4	0.60	4.10	%	0.61	0.61	0.62	0.61	0.57	0.57
13C-PCB-9	0.96	2.48	%	0.97	0.98	0.98	0.97	0.92	0.95
13C-PCB-11	0.95	1.55	%	0.95	0.97	0.96	0.96	0.93	0.95
13C-PCB-19	0.56	2.90	%	0.57	0.58	0.56	0.57	0.54	0.54
13C-PCB-32	0.83	2.16	%	0.84	0.83	0.82	0.85	0.81	0.80
13C-PCB-28	1.07	9.16	%	1.09	1.00	1.21	0.96	1.15	1.00
13C-PCB-37	0.96	6.55	%	1.03	0.89	1.00	0.88	1.02	0.96
13C-PCB-54	1.06	5.00	%	1.00	1.08	1.15	1.03	1.08	1.03
13C-PCB-52	0.71	4.14	%	0.71	0.73	0.76	0.68	0.69	0.70
13C-PCB-47	0.77	5.19	%	0.74	0.74	0.84	0.78	0.79	0.73
13C-PCB-70	0.99	4.52	%	0.99	0.95	0.99	0.99	1.08	0.96
13C-PCB-80	1.02	3.31	%	1.02	0.99	1.03	1.00	1.08	1.02
13C-PCB-81	1.00	4.12	%	0.96	0.96	1.02	0.97	1.07	1.00
13C-PCB-77	0.96	4.93	%	0.94	0.94	0.98	0.93	1.06	0.95
13C-PCB-104	0.97	5.43	%	0.97	0.98	1.05	0.95	0.89	0.96
13C-PCB-95	0.70	2.72	%	0.71	0.71	0.72	0.71	0.67	0.68
13C-PCB-101	0.77	2.41	%	0.77	0.80	0.76	0.75	0.75	0.76
13C-PCB-97	0.66	1.72	%	0.66	0.67	0.66	0.65	0.64	0.66
13C-PCB-123	0.88	1.37	%	0.87	0.90	0.87	0.88	0.87	0.88
13C-PCB-118	0.94	2.58	%	0.90	0.95	0.93	0.97	0.95	0.91
13C-PCB-114	1.26	2.59	%	1.25	1.24	1.25	1.23	1.25	1.32
13C-PCB-105	1.20	4.66	%	1.21	1.20	1.19	1.11	1.21	1.29
13C-PCB-127	1.26	4.39	%	1.23	1.25	1.22	1.19	1.30	1.34
13C-PCB-126	1.13	5.54	%	1.12	1.07	1.06	1.16	1.12	1.23
13C-PCB-155	0.87	5.64	%	0.88	0.92	0.93	0.84	0.81	0.84
13C-PCB-153	1.27	2.20	%	1.26	1.27	1.29	1.23	1.27	1.31
13C-PCB-141	1.09	1.88	%	1.09	1.12	1.11	1.06	1.08	1.10
13C-PCB-138	1.12	2.25	%	1.09	1.11	1.11	1.10	1.16	1.14
13C-PCB-159	1.37	1.53	%	1.35	1.36	1.35	1.37	1.41	1.38
13C-PCB-167	1.38	2.42	%	1.37	1.39	1.41	1.33	1.37	1.42
13C-PCB-156	1.35	2.75	%	1.30	1.34	1.33	1.35	1.41	1.37
13C-PCB-157	1.42	3.06	%	1.39	1.35	1.41	1.42	1.48	1.45
13C-PCB-169	1.38	3.38	%	1.35	1.36	1.37	1.34	1.41	1.46
13C-PCB-188	1.01	2.32	%	0.99	1.00	1.01	1.03	1.05	1.01
13C-PCB-180	0.76	2.20	%	0.73	0.75	0.76	0.75	0.78	0.77
13C-PCB-170	0.60	2.12	%	0.60	0.59	0.59	0.61	0.62	0.62
13C-PCB-189	0.80	3.20	%	0.78	0.78	0.78	0.80	0.83	0.84
13C-PCB-202	0.99	1.63	%	0.96	0.98	1.00	0.98	1.00	1.00



13C-PCB-194	0.75	3.67 %	0.78	0.77	0.75	0.72	0.72	0.73
13C-PCB-208	1.08	5.55 %	1.08	1.09	1.11	1.12	1.13	0.97
13C-PCB-206	0.73	4.68 %	0.75	0.76	0.73	0.75	0.74	0.67
13C-PCB-209	0.71	4.81 %	0.71	0.69	0.75	0.72	0.74	0.66
13C-PCB-15	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-31	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-60	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-111	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-128	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-PCB-205	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

13C-PCB-79	1.02	5.92 %	1.04	1.02	0.99	0.97	1.13	0.97
13C-PCB-178	0.64	1.49 %	0.64	0.63	0.63	0.64	0.63	0.65
13C-PCB-79	1.02	4.88 %	1.08	1.07	0.97	0.99	1.06	0.97
13C-PCB-178	0.84	2.93 %	0.88	0.85	0.83	0.85	0.80	0.84

Filename: 150114E1 S: 4 Acquired: 14-JAN-15 15:50:46  
 Run: 150114e1 Analyte: ICal: pcbvg8-1-14-15 Results: 150114e1  
 Sample text: ST150114E1-3 PCB CS1 14L2903

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	1.00	2.35e+06	3.11 y	16:11	-	1.38
2	Mono	PCB-2	1.00	2.36e+06	3.10 y	18:34	-	1.42
3	Mono	PCB-3	1.00	2.30e+06	3.03 y	18:48	-	1.38
4	Di	PCB-4/10	2.00	3.70e+06	1.55 y	20:10	-	1.75
5	Di	PCB-7/9	2.00	4.37e+06	1.61 y	21:57	-	1.30
6	Di	PCB-6	1.00	2.25e+06	1.47 y	22:36	-	1.34
7	Di	PCB-5/8	2.00	4.52e+06	1.59 y	23:01	-	1.34
8	Di	PCB-14	1.00	2.63e+06	1.54 y	24:06	-	1.58
9	Di	PCB-11	1.00	2.31e+06	1.75 y	25:18	-	1.39
10	Di	PCB-12/13	2.00	4.44e+06	1.62 y	25:42	-	1.33
11	Di	PCB-15	1.00	2.50e+06	1.76 y	26:00	-	1.50
12	Tri	PCB-19	1.00	1.25e+06	1.01 y	24:18	-	1.25
13	Tri	PCB-30	1.00	2.02e+06	1.05 y	25:11	-	2.03
14	Tri	PCB-18	1.00	1.43e+06	1.13 y	25:56	-	0.98
15	Tri	PCB-17	1.00	1.51e+06	1.06 y	26:06	-	1.03
16	Tri	PCB-24/27	2.00	3.91e+06	1.01 y	26:41	-	1.34
17	Tri	PCB-16/32	2.00	3.23e+06	1.10 y	27:11	-	1.10
18	Tri	PCB-34	1.00	1.63e+06	0.97 y	27:59	-	1.30
19	Tri	PCB-23	1.00	1.58e+06	0.97 y	28:05	-	1.26
20	Tri	PCB-29	1.00	1.62e+06	0.88 y	28:20	-	1.29
21	Tri	PCB-26	1.00	1.64e+06	1.03 y	28:32	-	1.31
22	Tri	PCB-25	1.00	1.52e+06	0.98 y	28:43	-	1.21
23	Tri	PCB-31	1.00	1.63e+06	1.07 y	29:03	-	1.30
24	Tri	PCB-28	1.00	1.68e+06	1.05 y	29:10	-	1.34
25	Tri	PCB-20/21/33	3.00	4.56e+06	1.03 y	29:46	-	1.21
26	Tri	PCB-22	1.00	1.54e+06	1.02 y	30:12	-	1.23
27	Tri	PCB-36	1.00	1.47e+06	1.12 y	30:50	-	1.25
28	Tri	PCB-39	1.00	1.60e+06	1.04 y	31:18	-	1.36
29	Tri	PCB-38	1.00	1.49e+06	1.01 y	32:05	-	1.26
30	Tri	PCB-35	1.00	1.40e+06	1.06 y	32:36	-	1.19
31	Tri	PCB-37	1.00	1.68e+06	1.09 y	33:02	-	1.43
32	Tetra	PCB-54	1.00	1.33e+06	0.82 y	28:03	-	1.04
33	Tetra	PCB-50	1.00	1.07e+06	0.70 y	29:12	-	0.84
34	Tetra	PCB-53	1.00	1.03e+06	0.70 y	29:51	-	1.14
35	Tetra	PCB-51	1.00	1.14e+06	0.66 y	30:11	-	1.26
36	Tetra	PCB-45	1.00	9.30e-05	0.74 y	30:37	-	1.02
37	Tetra	PCB-46	1.00	9.02e-05	0.68 y	31:07	-	0.99
38	Tetra	PCB-52/69	2.00	2.51e+06	0.71 y	31:35	-	1.38
39	Tetra	PCB-73	1.00	1.38e+06	0.76 y	31:42	-	1.52
40	Tetra	PCB-43/49	2.00	2.07e+06	0.78 y	31:52	-	1.14

41	Tetra	PCB-47	1.00	1.22e+06	0.78 y	32:05	-	1.29
42	Tetra	PCB-48/75	2.00	2.65e+06	0.70 y	32:12	-	1.39
43	Tetra	PCB-65	1.00	1.34e+06	0.70 y	32:28	-	1.41
44	Tetra	PCB-62	1.00	1.39e+06	0.79 y	32:33	-	1.46
45	Tetra	PCB-44	1.00	8.60e+05	0.85 y	32:53	-	0.91
46	Tetra	PCB-42/59	2.00	2.53e+06	0.74 y	33:06	-	1.33
47	Tetra	PCB-41/64/71/72	4.00	5.28e+06	0.74 y	33:40	-	1.39
48	Tetra	PCB-68	1.00	1.60e+06	0.69 y	33:56	-	1.69
49	Tetra	PCB-40	1.00	8.85e+05	0.77 y	34:09	-	0.93
50	Tetra	PCB-57	1.00	1.55e+06	0.69 y	34:31	-	1.23
51	Tetra	PCB-67	1.00	1.49e+06	0.76 y	34:50	-	1.18

52	Tetra	PCB-58	1.00	1.57e+06	0.74 y	34:56	-	1.24
53	Tetra	PCB-63	1.00	1.60e+06	0.74 y	35:06	-	1.26
54	Tetra	PCB-74	1.00	1.66e+06	0.79 y	35:23	-	1.31
55	Tetra	PCB-61/70	2.00	3.08e+06	0.69 y	35:33	-	1.22
56	Tetra	PCB-76/66	2.00	3.16e+06	0.76 y	35:46	-	1.25
57	Tetra	PCB-80	1.00	1.83e+06	0.80 y	36:00	-	1.40
58	Tetra	PCB-55	1.00	1.69e+06	0.72 y	36:19	-	1.29
59	Tetra	PCB-56/60	2.00	3.05e+06	0.71 y	36:49	-	1.17
60	Tetra	PCB-79	1.00	1.60e+06	0.78 y	37:53	-	1.23
61	Tetra	PCB-78	1.00	1.54e+06	0.78 y	38:35	-	1.24
62	Tetra	PCB-81	1.00	1.62e+06	0.72 y	39:06	-	1.31
63	Tetra	PCB-77	1.00	1.58e+06	0.76 y	39:42	-	1.32
64	Penta	PCB-104	1.00	1.21e+06	1.62 y	32:44	-	1.36
65	Penta	PCB-96	1.00	1.03e+06	1.56 y	34:00	-	1.16
66	Penta	PCB-103	1.00	9.77e+05	1.45 y	34:31	-	1.10
67	Penta	PCB-100	1.00	9.21e+05	1.70 y	34:53	-	1.03
68	Penta	PCB-94	1.00	7.88e+05	1.43 y	35:21	-	1.21
69	Penta	PCB-95/98/102	3.00	2.67e+06	1.60 y	35:51	-	1.37
70	Penta	PCB-93	1.00	7.41e+05	1.72 y	35:59	-	1.14
71	Penta	PCB-88/91	2.00	1.65e+06	1.45 y	36:16	-	1.27
72	Penta	PCB-121	1.00	1.20e+06	1.67 y	36:23	-	1.84
73	Penta	PCB-84/92	2.00	1.58e+06	1.55 y	37:12	-	1.11
74	Penta	PCB-89	1.00	7.49e+05	1.60 y	37:23	-	1.05
75	Penta	PCB-90/101	2.00	1.82e+06	1.49 y	37:33	-	1.28
76	Penta	PCB-113	1.00	9.71e+05	1.64 y	37:48	-	1.37
77	Penta	PCB-99	1.00	1.01e+06	1.55 y	37:54	-	1.42
78	Penta	PCB-119	1.00	1.22e+06	1.57 y	38:22	-	2.00
79	Penta	PCB-108/112	2.00	1.82e+06	1.55 y	38:31	-	1.50
80	Penta	PCB-83	1.00	1.07e+06	1.64 y	38:40	-	1.76
81	Penta	PCB-97	1.00	8.40e+05	1.56 y	38:53	-	1.38
82	Penta	PCB-86	1.00	6.57e+05	1.43 y	39:01	-	1.08
83	Penta	PCB-87/117/125	3.00	3.05e+06	1.55 y	39:09	-	1.67
84	Penta	PCB-111/115	2.00	2.31e+06	1.56 y	39:18	-	1.89
85	Penta	PCB-85/116	2.00	1.75e+06	1.73 y	39:26	-	1.44
86	Penta	PCB-120	1.00	1.26e+06	1.71 y	39:41	-	2.06
87	Penta	PCB-110	1.00	1.11e+06	1.71 y	39:49	-	1.82
88	Penta	PCB-82	1.00	6.26e+05	1.67 y	40:26	-	0.78
89	Penta	PCB-124	1.00	1.13e+06	1.44 y	41:07	-	1.41
90	Penta	PCB-107/109	2.00	2.24e+06	1.54 y	41:16	-	1.40
91	Penta	PCB-123	1.00	1.00e+06	1.62 y	41:26	-	1.24
92	Penta	PCB-106/118	2.00	2.26e+06	1.67 y	41:38	-	1.36
93	Penta	PCB-114	1.00	1.30e+06	1.74 y	42:16	-	1.52
94	Penta	PCB-122	1.00	1.06e+06	1.71 y	42:23	-	1.24
95	Penta	PCB-105	1.00	1.35e+06	1.66 y	43:07	-	1.62
96	Penta	PCB-127	1.00	1.18e+06	1.71 y	43:28	-	1.40
97	Penta	PCB-126	1.00	1.09e+06	1.69 y	45:21	-	1.42
98	Hexa	PCB-155	1.00	1.03e+06	1.24 y	37:07	-	1.27
99	Hexa	PCB-150	1.00	9.30e+05	1.32 y	38:22	-	1.15
100	Hexa	PCB-152	1.00	9.81e+05	1.24 y	38:52	-	1.21
101	Hexa	PCB-145	1.00	8.92e+05	1.38 y	39:18	-	1.10

102	Hexa	PCB-136	1.00	9.41e+05	1.33 y	39:37	-	1.16
103	Hexa	PCB-148	1.00	7.03e+05	1.35 y	39:43	-	0.87
104	Hexa	PCB-154	1.00	7.18e+05	1.19 y	40:14	-	0.89
105	Hexa	PCB-151	1.00	6.88e+05	1.33 y	40:51	-	0.85
106	Hexa	PCB-135	1.00	6.28e+05	1.20 y	41:05	-	0.78
107	Hexa	PCB-144	1.00	7.04e+05	1.27 y	41:10	-	0.87
108	Hexa	PCB-147	1.00	6.51e+05	1.41 y	41:18	-	0.80
109	Hexa	PCB-139/149	2.00	1.40e+06	1.21 y	41:34	-	0.87
110	Hexa	PCB-140	1.00	6.48e+05	1.30 y	41:46	-	0.80
111	Hexa	PCB-134/143	2.00	1.60e+06	1.14 y	42:12	-	0.93
112	Hexa	PCB-133/142	2.00	1.64e+06	1.33 y	42:29	-	0.95

113	Hexa	PCB-131	1.00	8.08e+05	1.26	y	42:38	-	0.94
114	Hexa	PCB-146/165	2.00	1.96e+06	1.28	y	42:52	-	1.13
115	Hexa	PCB-132/161	2.00	2.06e+06	1.27	y	43:07	-	1.19
116	Hexa	PCB-153	1.00	1.13e+06	1.23	y	43:18	-	1.31
117	Hexa	PCB-168	1.00	1.18e+06	1.09	y	43:30	-	1.37
118	Hexa	PCB-141	1.00	9.29e+05	1.17	y	44:02	-	1.25
119	Hexa	PCB-137	1.00	9.45e+05	1.20	y	44:25	-	1.27
120	Hexa	PCB-130	1.00	7.07e+05	1.13	y	44:31	-	0.95
121	Hexa	PCB-138/163/164	3.00	3.22e+06	1.21	y	44:54	-	1.43
122	Hexa	PCB-158/160	2.00	2.26e+06	1.24	y	45:08	-	1.51
123	Hexa	PCB-129	1.00	7.93e+05	1.31	y	45:23	-	1.06
124	Hexa	PCB-166	1.00	1.09e+06	1.28	y	45:49	-	1.18
125	Hexa	PCB-159	1.00	1.13e+06	1.11	y	46:09	-	1.21
126	Hexa	PCB-128/162	2.00	1.98e+06	1.23	y	46:26	-	1.07
127	Hexa	PCB-167	1.00	1.15e+06	1.12	y	46:50	-	1.23
128	Hexa	PCB-156	1.00	1.17e+06	1.37	y	48:07	-	1.31
129	Hexa	PCB-157	1.00	1.24e+06	1.29	y	48:23	-	1.29
130	Hexa	PCB-169	1.00	1.00e+06	1.13	y	50:32	-	1.08
131	Hepta	PCB-188	1.00	1.09e+06	1.07	y	42:56	-	1.60
132	Hepta	PCB-184	1.00	9.60e+05	1.07	y	43:22	-	1.42
133	Hepta	PCB-179	1.00	9.94e+05	0.98	y	44:09	-	1.47
134	Hepta	PCB-176	1.00	1.03e+06	1.02	y	44:37	-	1.52
135	Hepta	PCB-186	1.00	1.03e+06	1.08	y	45:13	-	1.52
136	Hepta	PCB-178	1.00	7.97e+05	0.98	y	45:43	-	1.18
137	Hepta	PCB-175	1.00	7.60e+05	1.10	y	46:04	-	1.12
138	Hepta	PCB-182/187	2.00	1.64e+06	0.98	y	46:14	-	1.21
139	Hepta	PCB-183	1.00	9.02e+05	1.10	y	46:33	-	1.33
140	Hepta	PCB-185	1.00	7.20e+05	1.10	y	47:12	-	1.43
141	Hepta	PCB-174	1.00	6.73e+05	0.92	y	47:34	-	1.34
142	Hepta	PCB-181	1.00	6.72e+05	0.96	y	47:41	-	1.34
143	Hepta	PCB-177	1.00	6.37e+05	1.01	y	47:51	-	1.27
144	Hepta	PCB-171	1.00	7.64e+05	1.06	y	48:08	-	1.52
145	Hepta	PCB-173	1.00	5.68e+05	0.94	y	48:34	-	1.13
146	Hepta	PCB-172	1.00	6.81e+05	1.09	y	49:01	-	1.35
147	Hepta	PCB-192	1.00	9.21e+05	1.03	y	49:13	-	1.83
148	Hepta	PCB-180	1.00	7.89e+05	0.96	y	49:25	-	1.57
149	Hepta	PCB-193	1.00	9.90e+05	0.98	y	49:37	-	1.97
150	Hepta	PCB-191	1.00	9.89e+05	0.99	y	49:53	-	1.97
151	Hepta	PCB-170	1.00	7.14e+05	0.92	y	50:56	-	1.73
152	Hepta	PCB-190	1.00	9.30e+05	1.10	y	51:06	-	2.26
153	Hepta	PCB-189	1.00	9.45e+05	1.11	y	52:27	-	1.76
154	Octa	PCB-202	1.00	7.24e+05	0.77	y	48:21	-	1.09
155	Octa	PCB-201	1.00	7.55e+05	0.84	y	48:50	-	1.14
156	Octa	PCB-204	1.00	7.15e+05	0.96	y	48:59	-	1.08
157	Octa	PCB-197	1.00	7.78e+05	0.82	y	49:16	-	1.18
158	Octa	PCB-200	1.00	7.01e+05	0.87	y	50:10	-	1.06
159	Octa	PCB-198	1.00	4.84e+05	0.84	y	51:31	-	0.73
160	Octa	PCB-199	1.00	5.29e+05	0.89	y	51:38	-	0.80
161	Octa	PCB-196/203	2.00	1.12e+06	0.95	y	51:55	-	0.84
162	Octa	PCB-195	1.00	5.76e+05	0.88	y	53:05	-	1.10

163	Octa	PCB-194	1.00	7.18e+05	0.90 y	53:57	-	1.37
164	Octa	PCB-205	1.00	8.28e+05	0.91 y	54:14	-	1.58
165	Nona	PCB-208	1.00	7.99e+05	1.27 y	53:14	-	1.10
166	Nona	PCB-207	1.00	7.76e+05	1.14 y	53:33	-	1.07
167	Nona	PCB-206	1.00	4.50e+05	1.29 y	55:35	-	0.89
168	Deca	PCB-209	1.00	6.79e+05	1.05 y	56:57	-	1.42
169	Tot η	Total Mono-PCB	0.00	-	- n	-	-	1.39
170	Tot η	Total Di-PCB	0.00	-	- n	-	-	1.39



171	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.28
172	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.28
173	Tot η	Total Tetra-PCB	0.00	-	- n	-	-	1.23
174	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.32
175	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.44
176	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	0.96
177	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	1.17
178	Tot η	Total Hepta-PCB	0.00	-	- n	-	-	1.44
179	Tot η	Total Octa-PCB	0.00	-	- n	-	-	0.98
180	Tot η	Total Octa-PCB	0.00	-	- n	-	-	1.35
181	Tot η	Total Nona-PCB	0.00	-	- n	-	-	1.04
182	Tot η	Total Deca-PCB	1.00	6.79e+05	1.05 y	56:57	-	1.42
183	Monoη	13C-PCB-1	100.00	1.70e+08	3.57 y	16:10	-	0.97
184	Monoη	13C-PCB-3	100.00	1.67e+08	3.59 y	18:47	-	0.95
185	Di-IS	13C-PCB-4	100.00	1.06e+08	1.60 y	20:07	-	0.61
186	Di-IS	13C-PCB-9	100.00	1.69e+08	1.58 y	21:55	-	0.97
187	Di-IS	13C-PCB-11	100.00	1.67e+08	1.56 y	25:17	-	0.95
188	Tri-η	13C-PCB-19	100.00	9.99e+07	1.10 y	24:16	-	0.57
189	Tri-η	13C-PCB-32	100.00	1.46e+08	1.10 y	27:11	-	0.84
190	Tri-η	13C-PCB-28	100.00	1.25e+08	1.03 y	29:09	-	1.09
191	Tri-η	13C-PCB-37	100.00	1.18e+08	1.04 y	33:01	-	1.03
192	Tetrη	13C-PCB-54	100.00	1.28e+08	0.77 y	28:02	-	1.00
193	Tetrη	13C-PCB-52	100.00	9.09e+07	0.78 y	31:33	-	0.71
194	Tetrη	13C-PCB-47	100.00	9.50e+07	0.76 y	32:04	-	0.74
195	Tetrη	13C-PCB-70	100.00	1.26e+08	0.78 y	35:35	-	0.99
196	Tetrη	13C-PCB-80	100.00	1.30e+08	0.79 y	36:00	-	1.02
197	Tetrη	13C-PCB-81	100.00	1.24e+08	0.77 y	39:05	-	0.96
198	Tetrη	13C-PCB-77	100.00	1.20e+08	0.79 y	39:41	-	0.94
199	Pentη	13C-PCB-104	100.00	8.90e+07	1.62 y	32:43	-	0.97
200	Pentη	13C-PCB-95	100.00	6.51e+07	1.60 y	35:52	-	0.71
201	Pentη	13C-PCB-101	100.00	7.10e+07	1.68 y	37:33	-	0.77
202	Pentη	13C-PCB-97	100.00	6.10e+07	1.61 y	38:52	-	0.66
203	Pentη	13C-PCB-123	100.00	8.03e+07	1.65 y	41:25	-	0.87
204	Pentη	13C-PCB-118	100.00	8.33e+07	1.62 y	41:36	-	0.90
205	Pentη	13C-PCB-114	100.00	8.57e+07	1.57 y	42:15	-	1.25
206	Pentη	13C-PCB-105	100.00	8.29e+07	1.58 y	43:07	-	1.21
207	Pentη	13C-PCB-127	100.00	8.47e+07	1.60 y	43:27	-	1.23
208	Pentη	13C-PCB-126	100.00	7.66e+07	1.55 y	45:21	-	1.12
209	Hexaη	13C-PCB-155	100.00	8.10e+07	1.26 y	37:06	-	0.88
210	Hexaη	13C-PCB-153	100.00	8.63e+07	1.26 y	43:16	-	1.26
211	Hexaη	13C-PCB-141	100.00	7.46e+07	1.29 y	44:00	-	1.09
212	Hexa	13C-PCB-138	100.00	7.51e+07	1.24 y	44:51	-	1.09
213	Hexaη	13C-PCB-159	100.00	9.27e+07	1.26 y	46:08	-	1.35
214	Hexaη	13C-PCB-167	100.00	9.41e+07	1.25 y	46:49	-	1.37
215	Hexaη	13C-PCB-156	100.00	8.95e+07	1.29 y	48:07	-	1.30
216	Hexaη	13C-PCB-157	100.00	9.57e+07	1.30 y	48:23	-	1.39
217	Hexaη	13C-PCB-169	100.00	9.25e+07	1.28 y	50:32	-	1.35
218	Heptη	13C-PCB-188	100.00	6.78e+07	0.45 y	42:54	-	0.99
219	Heptη	13C-PCB-180	100.00	5.03e+07	0.47 y	49:24	-	0.73
220	Heptη	13C-PCB-170	100.00	4.12e+07	0.45 y	50:54	-	0.60
221	Heptη	13C-PCB-189	100.00	5.36e+07	0.47 y	52:26	-	0.78

222	Octaη	13C-PCB-202	100.00	6.61e+07	0.92 y	48:19	-	0.96
223	Octaη	13C-PCB-194	100.00	5.23e+07	0.90 y	53:56	-	0.78
224	Nonaη	13C-PCB-208	100.00	7.26e+07	0.77 y	53:13	-	1.08
225	Nonaη	13C-PCB-206	100.00	5.04e+07	0.78 y	55:34	-	0.75
226	Decaη	13C-PCB-209	100.00	4.78e+07	1.19 y	56:56	-	0.71
227	DI-RS	13C-PCB-15	100.00	1.75e+08	1.56 y	26:00	-	1.00
228	Tri-η	13C-PCB-31	100.00	1.15e+08	1.03 y	29:02	-	1.00
229	Tetrη	13C-PCB-60	100.00	1.28e+08	0.78 y	36:49	-	1.00
230	Penta	13C-PCB-111	100.00	9.21e+07	1.63 y	39:17	-	1.00
231	Hexaη	13C-PCB-128	100.00	6.87e+07	1.27 y	46:25	-	1.00

232	Octaη	13C-PCB-205	100.00	6.70e+07	0.88 y	54:13	-	1.00
233	CRS	13C-PCB-79	100.00	1.34e+08	0.79 y	37:52	-	1.04
234	CRS	13C-PCB-178	100.00	4.42e+07	0.46 y	45:42	-	0.64
235	PS	13C-PCB-79	100.00	1.34e+08	0.79 y	37:52	-	1.08
236	PS	13C-PCB-178	100.00	4.42e+07	0.46 y	45:42	-	0.88

Filename: 150114E1 S: 5      Acquired: 14-JAN-15 16:55:24  
 Run: 150114e1    Analyte:            ICal: pcbvg8-1-14-15      Results: 150114e1  
 Sample text: ST150114E1-4 PCB CS2 14L2904

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1 Mono	PCB-1	2.50	5.57e+06	3.10 y	16:11	-	1.32
2 Mono	PCB-2	2.50	5.30e+06	3.00 y	18:33	-	1.31
3 Mono	PCB-3	2.50	5.37e+06	3.04 y	18:48	-	1.33
4 Di	PCB-4/10	5.00	8.76e+06	1.64 y	20:10	-	1.67
5 Di	PCB-7/9	5.00	1.06e+07	1.75 y	21:57	-	1.26
6 Di	PCB-6	2.50	5.18e+06	1.70 y	22:36	-	1.24
7 Di	PCB-5/8	5.00	1.05e+07	1.64 y	23:01	-	1.25
8 Di	PCB-14	2.50	6.03e+06	1.67 y	24:06	-	1.45
9 Di	PCB-11	2.50	5.22e+06	1.71 y	25:18	-	1.25
10 Di	PCB-12/13	5.00	1.04e+07	1.62 y	25:41	-	1.25
11 Di	PCB-15	2.50	5.86e+06	1.59 y	26:00	-	1.41
12 Tri	PCB-19	2.50	3.00e+06	1.04 y	24:17	-	1.20
13 Tri	PCB-30	2.50	4.60e+06	1.06 y	25:11	-	1.85
14 Tri	PCB-18	2.50	3.22e+06	1.05 y	25:56	-	0.90
15 Tri	PCB-17	2.50	3.45e+06	1.03 y	26:06	-	0.97
16 Tri	PCB-24/27	5.00	9.33e+06	1.06 y	26:41	-	1.31
17 Tri	PCB-16/32	5.00	7.45e+06	1.05 y	27:11	-	1.04
18 Tri	PCB-34	2.50	4.16e+06	1.01 y	27:59	-	1.41
19 Tri	PCB-23	2.50	3.35e+06	1.05 y	28:05	-	1.14
20 Tri	PCB-29	2.50	3.86e+06	1.02 y	28:20	-	1.31
21 Tri	PCB-26	2.50	3.84e+06	1.08 y	28:32	-	1.30
22 Tri	PCB-25	2.50	3.22e+06	1.07 y	28:41	-	1.09
23 Tri	PCB-31	2.50	3.90e+06	1.02 y	29:03	-	1.32
24 Tri	PCB-28	2.50	3.83e+06	1.03 y	29:09	-	1.30
25 Tri	PCB-20/21/33	7.50	1.09e+07	1.03 y	29:46	-	1.23
26 Tri	PCB-22	2.50	3.46e+06	1.06 y	30:12	-	1.17
27 Tri	PCB-36	2.50	3.56e+06	1.01 y	30:50	-	1.36
28 Tri	PCB-39	2.50	3.61e+06	1.03 y	31:17	-	1.38
29 Tri	PCB-38	2.50	3.19e+06	1.11 y	32:04	-	1.22
30 Tri	PCB-35	2.50	3.11e+06	1.13 y	32:36	-	1.19
31 Tri	PCB-37	2.50	3.49e+06	1.03 y	33:02	-	1.33
32 Tetra	PCB-54	2.50	3.51e+06	0.73 y	28:02	-	1.07
33 Tetra	PCB-50	2.50	2.59e+06	0.74 y	29:12	-	0.78
34 Tetra	PCB-53	2.50	2.54e+06	0.71 y	29:51	-	1.15
35 Tetra	PCB-51	2.50	2.57e+06	0.77 y	30:11	-	1.16
36 Tetra	PCB-45	2.50	2.31e+06	0.78 y	30:37	-	1.04
37 Tetra	PCB-46	2.50	2.17e+06	0.77 y	31:07	-	0.98
38 Tetra	PCB-52/69	5.00	6.13e+06	0.74 y	31:35	-	1.38
39 Tetra	PCB-73	2.50	2.77e+06	0.78 y	31:42	-	1.25
40 Tetra	PCB-43/49	5.00	4.93e+06	0.75 y	31:52	-	1.11
41 Tetra	PCB-47	2.50	2.50e+06	0.77 y	32:04	-	1.11

42	Tetra	PCB-48/75	5.00	5.98e+06	0.73 y	32:11	-	1.32
43	Tetra	PCB-65	2.50	3.01e+06	0.69 y	32:28	-	1.33
44	Tetra	PCB-62	2.50	2.87e+06	0.75 y	32:34	-	1.27
45	Tetra	PCB-44	2.50	1.97e+06	0.67 y	32:52	-	0.87
46	Tetra	PCB-42/59	5.00	5.75e+06	0.74 y	33:06	-	1.27
47	Tetra	PCB-41/64/71/72	10.00	1.22e+07	0.74 y	33:41	-	1.35
48	Tetra	PCB-68	2.50	3.54e+06	0.72 y	33:56	-	1.57
49	Tetra	PCB-40	2.50	1.90e+06	0.77 y	34:09	-	0.84
50	Tetra	PCB-57	2.50	3.26e+06	0.80 y	34:31	-	1.12
51	Tetra	PCB-67	2.50	3.25e+06	0.70 y	34:49	-	1.11
52	Tetra	PCB-58	2.50	3.17e+06	0.72 y	34:56	-	1.09

53	Tetra	PCB-63	2.50	3.38e+06	0.69 y	35:06	-	1.16
54	Tetra	PCB-74	2.50	3.48e+06	0.73 y	35:23	-	1.20
55	Tetra	PCB-61/70	5.00	6.32e+06	0.68 y	35:33	-	1.08
56	Tetra	PCB-76/66	5.00	6.53e+06	0.75 y	35:46	-	1.12
57	Tetra	PCB-80	2.50	3.97e+06	0.74 y	36:00	-	1.32
58	Tetra	PCB-55	2.50	3.60e+06	0.75 y	36:19	-	1.19
59	Tetra	PCB-56/60	5.00	6.76e+06	0.76 y	36:49	-	1.12
60	Tetra	PCB-79	2.50	3.65e+06	0.72 y	37:53	-	1.21
61	Tetra	PCB-78	2.50	3.42e+06	0.74 y	38:35	-	1.16
62	Tetra	PCB-81	2.50	3.78e+06	0.73 y	39:06	-	1.29
63	Tetra	PCB-77	2.50	3.77e+06	0.76 y	39:42	-	1.31
64	Penta	PCB-104	2.50	2.66e+06	1.51 y	32:44	-	1.24
65	Penta	PCB-96	2.50	2.34e+06	1.66 y	33:59	-	1.09
66	Penta	PCB-103	2.50	2.06e+06	1.55 y	34:31	-	0.96
67	Penta	PCB-100	2.50	2.12e+06	1.63 y	34:53	-	0.99
68	Penta	PCB-94	2.50	1.77e+06	1.57 y	35:20	-	1.14
69	Penta	PCB-95/98/102	7.50	6.08e+06	1.61 y	35:50	-	1.31
70	Penta	PCB-93	2.50	1.62e+06	1.42 y	35:58	-	1.05
71	Penta	PCB-88/91	5.00	3.44e+06	1.55 y	36:15	-	1.11
72	Penta	PCB-121	2.50	2.69e+06	1.55 y	36:22	-	1.74
73	Penta	PCB-84/92	5.00	3.93e+06	1.62 y	37:12	-	1.12
74	Penta	PCB-89	2.50	1.84e+06	1.52 y	37:22	-	1.04
75	Penta	PCB-90/101	5.00	4.29e+06	1.56 y	37:33	-	1.22
76	Penta	PCB-113	2.50	2.50e+06	1.56 y	37:48	-	1.42
77	Penta	PCB-99	2.50	2.14e+06	1.54 y	37:54	-	1.22
78	Penta	PCB-119	2.50	2.79e+06	1.62 y	38:21	-	1.89
79	Penta	PCB-108/112	5.00	4.27e+06	1.62 y	38:30	-	1.45
80	Penta	PCB-83	2.50	2.51e+06	1.64 y	38:40	-	1.70
81	Penta	PCB-97	2.50	1.95e+06	1.50 y	38:52	-	1.32
82	Penta	PCB-86	2.50	1.37e+06	1.47 y	39:01	-	0.93
83	Penta	PCB-87/117/125	7.50	7.08e+06	1.62 y	39:08	-	1.60
84	Penta	PCB-111/115	5.00	5.48e+06	1.46 y	39:18	-	1.86
85	Penta	PCB-85/116	5.00	3.87e+06	1.60 y	39:26	-	1.31
86	Penta	PCB-120	2.50	2.96e+06	1.50 y	39:39	-	2.00
87	Penta	PCB-110	2.50	2.50e+06	1.58 y	39:48	-	1.69
88	Penta	PCB-82	2.50	1.46e+06	1.65 y	40:26	-	0.74
89	Penta	PCB-124	2.50	2.56e+06	1.52 y	41:06	-	1.29
90	Penta	PCB-107/109	5.00	5.26e+06	1.53 y	41:15	-	1.33
91	Penta	PCB-123	2.50	2.55e+06	1.55 y	41:25	-	1.29
92	Penta	PCB-106/118	5.00	5.39e+06	1.55 y	41:38	-	1.30
93	Penta	PCB-114	2.50	3.07e+06	1.72 y	42:15	-	1.46
94	Penta	PCB-122	2.50	2.74e+06	1.68 y	42:23	-	1.30
95	Penta	PCB-105	2.50	3.30e+06	1.60 y	43:07	-	1.62
96	Penta	PCB-127	2.50	2.77e+06	1.59 y	43:27	-	1.30
97	Penta	PCB-126	2.50	2.66e+06	1.59 y	45:21	-	1.46
98	Hexa	PCB-155	2.50	2.45e+06	1.27 y	37:07	-	1.21
99	Hexa	PCB-150	2.50	2.17e+06	1.23 y	38:22	-	1.07
100	Hexa	PCB-152	2.50	2.24e+06	1.23 y	38:51	-	1.11
101	Hexa	PCB-145	2.50	2.20e+06	1.31 y	39:18	-	1.09
102	Hexa	PCB-136	2.50	2.25e+06	1.25 y	39:36	-	1.12

103	Hexa	PCB-148	2.50	1.64e+06	1.30 y	39:43	-	0.81
104	Hexa	PCB-154	2.50	1.79e+06	1.26 y	40:12	-	0.89
105	Hexa	PCB-151	2.50	1.62e+06	1.28 y	40:51	-	0.80
106	Hexa	PCB-135	2.50	1.62e+06	1.09 y	41:03	-	0.80
107	Hexa	PCB-144	2.50	1.56e+06	1.28 y	41:10	-	0.77
108	Hexa	PCB-147	2.50	1.45e+06	1.24 y	41:18	-	0.72
109	Hexa	PCB-139/149	5.00	3.45e+06	1.23 y	41:34	-	0.85
110	Hexa	PCB-140	2.50	1.53e+06	1.14 y	41:46	-	0.76
111	Hexa	PCB-134/143	5.00	4.05e+06	1.23 y	42:12	-	0.94
112	Hexa	PCB-133/142	5.00	3.84e+06	1.20 y	42:29	-	0.89
113	Hexa	PCB-131	2.50	1.83e+06	1.25 y	42:38	-	0.85

114	Hexa	PCB-146/165	5.00	4.66e+06	1.26 y	42:52	-	1.08
115	Hexa	PCB-132/161	5.00	4.84e+06	1.19 y	43:07	-	1.12
116	Hexa	PCB-153	2.50	2.56e+06	1.27 y	43:17	-	1.19
117	Hexa	PCB-168	2.50	3.00e+06	1.22 y	43:29	-	1.39
118	Hexa	PCB-141	2.50	2.20e+06	1.20 y	44:00	-	1.16
119	Hexa	PCB-137	2.50	2.20e+06	1.31 y	44:24	-	1.16
120	Hexa	PCB-130	2.50	1.53e+06	1.23 y	44:31	-	0.80
121	Hexa	PCB-138/163/164	7.50	7.63e+06	1.22 y	44:52	-	1.35
122	Hexa	PCB-158/160	5.00	5.45e+06	1.20 y	45:08	-	1.44
123	Hexa	PCB-129	2.50	1.82e+06	1.23 y	45:21	-	0.96
124	Hexa	PCB-166	2.50	2.53e+06	1.20 y	45:49	-	1.10
125	Hexa	PCB-159	2.50	2.81e+06	1.30 y	46:09	-	1.22
126	Hexa	PCB-128/162	5.00	4.82e+06	1.23 y	46:26	-	1.05
127	Hexa	PCB-167	2.50	2.78e+06	1.23 y	46:49	-	1.18
128	Hexa	PCB-156	2.50	2.96e+06	1.27 y	48:07	-	1.30
129	Hexa	PCB-157	2.50	2.84e+06	1.24 y	48:23	-	1.24
130	Hexa	PCB-169	2.50	2.53e+06	1.17 y	50:32	-	1.10
131	Hepta	PCB-188	2.50	2.47e+06	1.00 y	42:55	-	1.46
132	Hepta	PCB-184	2.50	2.33e+06	1.04 y	43:22	-	1.37
133	Hepta	PCB-179	2.50	2.38e+06	1.02 y	44:09	-	1.41
134	Hepta	PCB-176	2.50	2.48e+06	0.98 y	44:36	-	1.46
135	Hepta	PCB-186	2.50	2.44e+06	1.11 y	45:13	-	1.44
136	Hepta	PCB-178	2.50	1.82e+06	1.06 y	45:42	-	1.07
137	Hepta	PCB-175	2.50	1.74e+06	1.03 y	46:03	-	1.03
138	Hepta	PCB-182/187	5.00	3.90e+06	1.11 y	46:13	-	1.15
139	Hepta	PCB-183	2.50	2.14e+06	1.05 y	46:33	-	1.26
140	Hepta	PCB-185	2.50	1.77e+06	1.02 y	47:12	-	1.40
141	Hepta	PCB-174	2.50	1.60e+06	1.07 y	47:34	-	1.26
142	Hepta	PCB-181	2.50	1.81e+06	1.12 y	47:40	-	1.43
143	Hepta	PCB-177	2.50	1.67e+06	1.13 y	47:50	-	1.32
144	Hepta	PCB-171	2.50	1.81e+06	1.05 y	48:08	-	1.43
145	Hepta	PCB-173	2.50	1.39e+06	0.93 y	48:33	-	1.10
146	Hepta	PCB-172	2.50	1.57e+06	1.02 y	49:00	-	1.24
147	Hepta	PCB-192	2.50	2.08e+06	0.99 y	49:12	-	1.64
148	Hepta	PCB-180	2.50	1.80e+06	1.01 y	49:24	-	1.42
149	Hepta	PCB-193	2.50	2.24e+06	1.07 y	49:37	-	1.77
150	Hepta	PCB-191	2.50	2.29e+06	1.00 y	49:52	-	1.81
151	Hepta	PCB-170	2.50	1.64e+06	1.01 y	50:56	-	1.65
152	Hepta	PCB-190	2.50	2.11e+06	1.07 y	51:06	-	2.12
153	Hepta	PCB-189	2.50	2.24e+06	1.04 y	52:27	-	1.69
154	Octa	PCB-202	2.50	1.65e+06	0.92 y	48:20	-	0.99
155	Octa	PCB-201	2.50	1.83e+06	0.88 y	48:49	-	1.10
156	Octa	PCB-204	2.50	1.71e+06	0.88 y	48:59	-	1.02
157	Octa	PCB-197	2.50	1.87e+06	0.88 y	49:17	-	1.12
158	Octa	PCB-200	2.50	1.68e+06	0.82 y	50:10	-	1.01
159	Octa	PCB-198	2.50	1.15e+06	0.85 y	51:31	-	0.69
160	Octa	PCB-199	2.50	1.14e+06	0.89 y	51:38	-	0.68
161	Octa	PCB-196/203	5.00	2.48e+06	0.93 y	51:55	-	0.74
162	Octa	PCB-195	2.50	1.33e+06	0.94 y	53:05	-	1.04
163	Octa	PCB-194	2.50	1.66e+06	0.88 y	53:57	-	1.30



164	Octa	PCB-205	2.50	1.99e+06	0.92 y	54:14	-	1.56
165	Nona	PCB-208	2.50	1.85e+06	1.33 y	53:14	-	1.03
166	Nona	PCB-207	2.50	1.79e+06	1.27 y	53:32	-	1.00
167	Nona	PCB-206	2.50	1.13e+06	1.21 y	55:34	-	0.91
168	Deca	PCB-209	2.50	1.48e+06	1.16 y	56:55	-	1.31
169	Tot η	Total Mono-PCB	0.00	-	- n	-	-	1.32
170	Tot η	Total Di-PCB	0.00	-	- n	-	-	1.31
171	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.21

172	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.27
173	Tot η	Total Tetra-PCB	0.00	-	- n	-	-	1.16
174	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.25
175	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.43
176	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	0.92
177	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	1.12
178	Tot η	Total Hepta-PCB	0.00	-	- n	-	-	1.36
179	Tot η	Total Octa-PCB	0.00	-	- n	-	-	0.90
180	Tot η	Total Octa-PCB	0.00	-	- n	-	-	1.30
181	Tot η	Total Nona-PCB	0.00	-	- n	-	-	0.99
182	Tot η	Total Deca-PCB	2.50	1.48e+06	1.16 y	56:55	-	1.31
183	Monoη	13C-PCB-1	100.00	1.69e+08	3.58 y	16:10	-	0.98
184	Monoη	13C-PCB-3	100.00	1.62e+08	3.60 y	18:46	-	0.94
185	Di-IS	13C-PCB-4	100.00	1.05e+08	1.60 y	20:07	-	0.61
186	Di-IS	13C-PCB-9	100.00	1.68e+08	1.58 y	21:54	-	0.98
187	Di-IS	13C-PCB-11	100.00	1.66e+08	1.56 y	25:17	-	0.97
188	Tri-η	13C-PCB-19	100.00	9.97e+07	1.10 y	24:16	-	0.58
189	Tri-η	13C-PCB-32	100.00	1.43e+08	1.10 y	27:11	-	0.83
190	Tri-η	13C-PCB-28	100.00	1.18e+08	1.06 y	29:08	-	1.00
191	Tri-η	13C-PCB-37	100.00	1.05e+08	1.05 y	33:01	-	0.89
192	Tetrη	13C-PCB-54	100.00	1.32e+08	0.77 y	28:01	-	1.08
193	Tetrη	13C-PCB-52	100.00	8.88e+07	0.77 y	31:33	-	0.73
194	Tetrη	13C-PCB-47	100.00	9.03e+07	0.76 y	32:03	-	0.74
195	Tetrη	13C-PCB-70	100.00	1.16e+08	0.77 y	35:34	-	0.95
196	Tetrη	13C-PCB-80	100.00	1.21e+08	0.78 y	35:59	-	0.99
197	Tetrη	13C-PCB-81	100.00	1.17e+08	0.79 y	39:05	-	0.96
198	Tetrη	13C-PCB-77	100.00	1.15e+08	0.78 y	39:41	-	0.94
199	Pentη	13C-PCB-104	100.00	8.57e+07	1.62 y	32:42	-	0.98
200	Pentη	13C-PCB-95	100.00	6.19e+07	1.62 y	35:52	-	0.71
201	Pentη	13C-PCB-101	100.00	7.03e+07	1.60 y	37:33	-	0.80
202	Pentη	13C-PCB-97	100.00	5.90e+07	1.61 y	38:51	-	0.67
203	Pentη	13C-PCB-123	100.00	7.92e+07	1.59 y	41:25	-	0.90
204	Pentη	13C-PCB-118	100.00	8.31e+07	1.61 y	41:35	-	0.95
205	Pentη	13C-PCB-114	100.00	8.41e+07	1.59 y	42:15	-	1.24
206	Pentη	13C-PCB-105	100.00	8.15e+07	1.57 y	43:06	-	1.20
207	Pentη	13C-PCB-127	100.00	8.51e+07	1.56 y	43:27	-	1.25
208	Pentη	13C-PCB-126	100.00	7.30e+07	1.52 y	45:20	-	1.07
209	Hexaη	13C-PCB-155	100.00	8.08e+07	1.29 y	37:06	-	0.92
210	Hexaη	13C-PCB-153	100.00	8.63e+07	1.25 y	43:16	-	1.27
211	Hexaη	13C-PCB-141	100.00	7.58e+07	1.27 y	44:00	-	1.12
212	Hexa	13C-PCB-138	100.00	7.56e+07	1.27 y	44:51	-	1.11
213	Hexaη	13C-PCB-159	100.00	9.21e+07	1.26 y	46:08	-	1.36
214	Hexaη	13C-PCB-167	100.00	9.42e+07	1.28 y	46:49	-	1.39
215	Hexaη	13C-PCB-156	100.00	9.08e+07	1.28 y	48:06	-	1.34
216	Hexaη	13C-PCB-157	100.00	9.19e+07	1.25 y	48:22	-	1.35
217	Hexaη	13C-PCB-169	100.00	9.21e+07	1.27 y	50:32	-	1.36
218	Heptη	13C-PCB-188	100.00	6.77e+07	0.45 y	42:54	-	1.00
219	Heptη	13C-PCB-180	100.00	5.07e+07	0.45 y	49:23	-	0.75
220	Heptη	13C-PCB-170	100.00	3.98e+07	0.46 y	50:54	-	0.59
221	Heptη	13C-PCB-189	100.00	5.32e+07	0.47 y	52:26	-	0.78
222	Octaη	13C-PCB-202	100.00	6.68e+07	0.92 y	48:19	-	0.98

223	Octaη	13C-PCB-194	100.00	5.10e+07	0.91 y	53:56	-	0.77
224	Nonaη	13C-PCB-208	100.00	7.15e+07	0.76 y	53:13	-	1.09
225	Nonaη	13C-PCB-206	100.00	4.98e+07	0.77 y	55:33	-	0.76
226	Decaη	13C-PCB-209	100.00	4.53e+07	1.18 y	56:54	-	0.69
227	DI-RS	13C-PCB-15	100.00	1.72e+08	1.58 y	25:59	-	1.00
228	Tri-η	13C-PCB-31	100.00	1.18e+08	1.05 y	29:02	-	1.00
229	Tetraη	13C-PCB-60	100.00	1.22e+08	0.78 y	36:48	-	1.00
230	Penta	13C-PCB-111	100.00	8.77e+07	1.62 y	39:17	-	1.00
231	Hexaη	13C-PCB-128	100.00	6.80e+07	1.29 y	46:24	-	1.00
232	Octaη	13C-PCB-205	100.00	6.58e+07	0.89 y	54:13	-	1.00

233	CRS	13C-PCB-79	100.00	1.25e+08	0.78 y	37:51	-	1.02
234	CRS	13C-PCB-178	100.00	4.29e+07	0.46 y	45:41	-	0.63
235	PS	13C-PCB-79	100.00	1.25e+08	0.78 y	37:51	-	1.07
236	PS	13C-PCB-178	100.00	4.29e+07	0.46 y	45:41	-	0.85

Filename: 150114E1 S: 6 Acquired: 14-JAN-15 18:00:03  
 Run: 150114e1 Analyte: ICal: pcbvg8-1-14-15 Results: 150114e1  
 Sample text: ST150114E1-5 PCB CS3 14L1801

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1 Mono	PCB-1	50.00	8.07e+07	2.99 y	16:11	-	1.23
2 Mono	PCB-2	50.00	8.02e+07	2.99 y	18:33	-	1.26
3 Mono	PCB-3	50.00	8.03e+07	2.98 y	18:47	-	1.26
4 Di	PCB-4/10	100.00	1.30e+08	1.64 y	20:10	-	1.56
5 Di	PCB-7/9	100.00	1.56e+08	1.63 y	21:57	-	1.18
6 Di	PCB-6	50.00	7.76e+07	1.65 y	22:35	-	1.18
7 Di	PCB-5/8	100.00	1.55e+08	1.64 y	23:00	-	1.17
8 Di	PCB-14	50.00	9.12e+07	1.64 y	24:06	-	1.41
9 Di	PCB-11	50.00	7.80e+07	1.68 y	25:17	-	1.21
10 Di	PCB-12/13	100.00	1.55e+08	1.65 y	25:41	-	1.20
11 Di	PCB-15	50.00	8.75e+07	1.65 y	26:00	-	1.36
12 Tri	PCB-19	50.00	4.22e+07	1.06 y	24:17	-	1.13
13 Tri	PCB-30	50.00	6.72e+07	1.05 y	25:11	-	1.80
14 Tri	PCB-18	50.00	4.67e+07	1.06 y	25:55	-	0.85
15 Tri	PCB-17	50.00	5.08e+07	1.05 y	26:06	-	0.92
16 Tri	PCB-24/27	100.00	1.36e+08	1.06 y	26:40	-	1.23
17 Tri	PCB-16/32	100.00	1.08e+08	1.05 y	27:11	-	0.98
18 Tri	PCB-34	50.00	5.36e+07	1.01 y	27:58	-	1.19
19 Tri	PCB-23	50.00	5.23e+07	1.06 y	28:04	-	1.16
20 Tri	PCB-29	50.00	4.77e+07	1.01 y	28:19	-	1.06
21 Tri	PCB-26	50.00	5.01e+07	1.00 y	28:31	-	1.11
22 Tri	PCB-25	50.00	4.54e+07	1.01 y	28:41	-	1.00
23 Tri	PCB-31	50.00	5.13e+07	1.03 y	29:03	-	1.13
24 Tri	PCB-28	50.00	4.84e+07	1.04 y	29:09	-	1.07
25 Tri	PCB-20/21/33	150.00	1.42e+08	1.02 y	29:45	-	1.05
26 Tri	PCB-22	50.00	4.91e+07	1.03 y	30:12	-	1.09
27 Tri	PCB-36	50.00	5.22e+07	1.05 y	30:49	-	1.40
28 Tri	PCB-39	50.00	4.78e+07	1.05 y	31:17	-	1.28
29 Tri	PCB-38	50.00	4.87e+07	1.03 y	32:04	-	1.31
30 Tri	PCB-35	50.00	4.75e+07	1.03 y	32:34	-	1.28
31 Tri	PCB-37	50.00	4.79e+07	1.08 y	33:01	-	1.28
32 Tetra	PCB-54	50.00	4.77e+07	0.74 y	28:02	-	0.95
33 Tetra	PCB-50	50.00	3.65e+07	0.72 y	29:11	-	0.73
34 Tetra	PCB-53	50.00	3.64e+07	0.75 y	29:51	-	1.09
35 Tetra	PCB-51	50.00	3.70e+07	0.72 y	30:11	-	1.11
36 Tetra	PCB-45	50.00	3.37e+07	0.73 y	30:36	-	1.01
37 Tetra	PCB-46	50.00	2.89e+07	0.73 y	31:06	-	0.87
38 Tetra	PCB-52/69	100.00	8.00e+07	0.74 y	31:34	-	1.20
39 Tetra	PCB-73	50.00	4.72e+07	0.75 y	31:41	-	1.42
40 Tetra	PCB-43/49	100.00	7.08e+07	0.73 y	31:51	-	1.06
41 Tetra	PCB-47	50.00	3.98e+07	0.74 y	32:04	-	1.09

42	Tetra	PCB-48/75	100.00	8.76e+07	0.73 y	32:11	-	1.20
43	Tetra	PCB-65	50.00	4.12e+07	0.73 y	32:26	-	1.13
44	Tetra	PCB-62	50.00	4.67e+07	0.74 y	32:33	-	1.28
45	Tetra	PCB-44	50.00	2.93e+07	0.74 y	32:51	-	0.80
46	Tetra	PCB-42/59	100.00	7.65e+07	0.74 y	33:05	-	1.05
47	Tetra	PCB-41/64/71/72	200.00	1.66e+08	0.73 y	33:40	-	1.14
48	Tetra	PCB-68	50.00	4.75e+07	0.73 y	33:55	-	1.30
49	Tetra	PCB-40	50.00	2.57e+07	0.73 y	34:09	-	0.71
50	Tetra	PCB-57	50.00	4.47e+07	0.74 y	34:30	-	1.03
51	Tetra	PCB-67	50.00	4.34e+07	0.73 y	34:49	-	1.00
52	Tetra	PCB-58	50.00	4.85e+07	0.76 y	34:55	-	1.12

53	Tetra	PCB-63	50.00	4.77e+07	0.71 y	35:04	-	1.10
54	Tetra	PCB-74	50.00	4.68e+07	0.74 y	35:21	-	1.08
55	Tetra	PCB-61/70	100.00	9.06e+07	0.73 y	35:33	-	1.04
56	Tetra	PCB-76/66	100.00	9.21e+07	0.74 y	35:45	-	1.06
57	Tetra	PCB-80	50.00	5.39e+07	0.74 y	35:59	-	1.20
58	Tetra	PCB-55	50.00	5.08e+07	0.74 y	36:18	-	1.13
59	Tetra	PCB-56/60	100.00	8.80e+07	0.73 y	36:48	-	0.98
60	Tetra	PCB-79	50.00	4.65e+07	0.73 y	37:53	-	1.03
61	Tetra	PCB-78	50.00	4.56e+07	0.74 y	38:34	-	1.03
62	Tetra	PCB-81	50.00	5.20e+07	0.75 y	39:05	-	1.17
63	Tetra	PCB-77	50.00	5.01e+07	0.76 y	39:41	-	1.18
64	Penta	PCB-104	50.00	4.01e+07	1.59 y	32:44	-	1.16
65	Penta	PCB-96	50.00	3.32e+07	1.56 y	33:59	-	0.96
66	Penta	PCB-103	50.00	2.97e+07	1.54 y	34:31	-	0.86
67	Penta	PCB-100	50.00	3.02e+07	1.57 y	34:52	-	0.87
68	Penta	PCB-94	50.00	2.48e+07	1.56 y	35:20	-	1.06
69	Penta	PCB-95/98/102	150.00	8.16e+07	1.52 y	35:50	-	1.16
70	Penta	PCB-93	50.00	2.65e+07	1.68 y	35:58	-	1.13
71	Penta	PCB-88/91	100.00	5.25e+07	1.56 y	36:15	-	1.12
72	Penta	PCB-121	50.00	3.68e+07	1.57 y	36:22	-	1.57
73	Penta	PCB-84/92	100.00	5.15e+07	1.54 y	37:11	-	1.04
74	Penta	PCB-89	50.00	2.34e+07	1.53 y	37:22	-	0.95
75	Penta	PCB-90/101	100.00	5.59e+07	1.56 y	37:33	-	1.13
76	Penta	PCB-113	50.00	3.44e+07	1.55 y	37:48	-	1.39
77	Penta	PCB-99	50.00	2.56e+07	1.60 y	37:54	-	1.03
78	Penta	PCB-119	50.00	3.83e+07	1.56 y	38:21	-	1.77
79	Penta	PCB-108/112	100.00	5.74e+07	1.56 y	38:30	-	1.33
80	Penta	PCB-83	50.00	3.43e+07	1.57 y	38:40	-	1.58
81	Penta	PCB-97	50.00	2.60e+07	1.55 y	38:52	-	1.20
82	Penta	PCB-86	50.00	2.15e+07	1.46 y	39:00	-	0.99
83	Penta	PCB-87/117/125	150.00	9.85e+07	1.59 y	39:08	-	1.52
84	Penta	PCB-111/115	100.00	7.67e+07	1.56 y	39:17	-	1.77
85	Penta	PCB-85/116	100.00	5.77e+07	1.60 y	39:25	-	1.33
86	Penta	PCB-120	50.00	3.97e+07	1.53 y	39:39	-	1.83
87	Penta	PCB-110	50.00	3.50e+07	1.56 y	39:47	-	1.62
88	Penta	PCB-82	50.00	2.08e+07	1.56 y	40:25	-	0.73
89	Penta	PCB-124	50.00	3.69e+07	1.57 y	41:06	-	1.29
90	Penta	PCB-107/109	100.00	6.93e+07	1.58 y	41:15	-	1.21
91	Penta	PCB-123	50.00	3.47e+07	1.55 y	41:25	-	1.21
92	Penta	PCB-106/118	100.00	7.35e+07	1.54 y	41:38	-	1.20
93	Penta	PCB-114	50.00	4.27e+07	1.62 y	42:15	-	1.36
94	Penta	PCB-122	50.00	3.51e+07	1.63 y	42:23	-	1.12
95	Penta	PCB-105	50.00	4.36e+07	1.65 y	43:07	-	1.47
96	Penta	PCB-127	50.00	3.79e+07	1.69 y	43:27	-	1.24
97	Penta	PCB-126	50.00	3.67e+07	1.64 y	45:20	-	1.39
98	Hexa	PCB-155	50.00	3.43e+07	1.23 y	37:07	-	1.12
99	Hexa	PCB-150	50.00	3.11e+07	1.24 y	38:22	-	1.02
100	Hexa	PCB-152	50.00	3.16e+07	1.25 y	38:51	-	1.03
101	Hexa	PCB-145	50.00	3.04e+07	1.24 y	39:18	-	1.00
102	Hexa	PCB-136	50.00	3.31e+07	1.23 y	39:37	-	1.09

103	Hexa	PCB-148	50.00	2.18e+07	1.24 y	39:43	-	0.71
104	Hexa	PCB-154	50.00	2.45e+07	1.23 y	40:12	-	0.80
105	Hexa	PCB-151	50.00	2.30e+07	1.25 y	40:51	-	0.75
106	Hexa	PCB-135	50.00	2.19e+07	1.23 y	41:04	-	0.72
107	Hexa	PCB-144	50.00	2.39e+07	1.33 y	41:10	-	0.78
108	Hexa	PCB-147	50.00	2.07e+07	1.15 y	41:18	-	0.68
109	Hexa	PCB-139/149	100.00	4.69e+07	1.23 y	41:34	-	0.77
110	Hexa	PCB-140	50.00	2.12e+07	1.24 y	41:45	-	0.70
111	Hexa	PCB-134/143	100.00	5.52e+07	1.22 y	42:11	-	0.85
112	Hexa	PCB-133/142	100.00	5.46e+07	1.24 y	42:29	-	0.85
113	Hexa	PCB-131	50.00	2.55e+07	1.16 y	42:38	-	0.79



Filename: 150114E1 S: 6      Acquired: 14-JAN-15 18:00:03  
 Run: 150114E1    Analyte:            ICal: pcbvg8-1-14-15      Results: 150114e1  
 Sample text: ST150114E1-5 PCB CS3 14L1801

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	50.00	8.07e+07	2.99 y	16:11	-	1.23
2	Mono	PCB-2	50.00	8.02e+07	2.99 y	18:33	-	1.26
3	Mono	PCB-3	50.00	8.03e+07	2.98 y	18:47	-	1.26
4	Di	PCB-4/10	100.00	1.30e+08	1.64 y	20:10	-	1.56
5	Di	PCB-7/9	100.00	1.56e+08	1.63 y	21:57	-	1.18
6	Di	PCB-6	50.00	7.76e+07	1.65 y	22:35	-	1.18
7	Di	PCB-5/8	100.00	1.55e+08	1.64 y	23:00	-	1.17
8	Di	PCB-14	50.00	9.12e+07	1.64 y	24:06	-	1.41
9	Di	PCB-11	50.00	7.80e+07	1.68 y	25:17	-	1.21
10	Di	PCB-12/13	100.00	1.55e+08	1.65 y	25:41	-	1.20
11	Di	PCB-15	50.00	8.75e+07	1.65 y	26:00	-	1.36
12	Tri	PCB-19	50.00	4.22e+07	1.06 y	24:17	-	1.13
13	Tri	PCB-30	50.00	6.72e+07	1.05 y	25:11	-	1.80
14	Tri	PCB-18	50.00	4.67e+07	1.06 y	25:55	-	0.85
15	Tri	PCB-17	50.00	5.08e+07	1.05 y	26:06	-	0.92
16	Tri	PCB-24/27	100.00	1.36e+08	1.06 y	26:40	-	1.23
17	Tri	PCB-16/32	100.00	1.08e+08	1.05 y	27:11	-	0.98
18	Tri	PCB-34	50.00	5.36e+07	1.01 y	27:58	-	1.19
19	Tri	PCB-23	50.00	5.23e+07	1.06 y	28:04	-	1.16
20	Tri	PCB-29	50.00	4.77e+07	1.01 y	28:19	-	1.06
21	Tri	PCB-26	50.00	5.01e+07	1.00 y	28:31	-	1.11
22	Tri	PCB-25	50.00	4.54e+07	1.01 y	28:41	-	1.00
23	Tri	PCB-31	50.00	5.13e+07	1.03 y	29:03	-	1.13
24	Tri	PCB-28	50.00	4.84e+07	1.04 y	29:09	-	1.07
25	Tri	PCB-20/21/33	150.00	1.42e+08	1.02 y	29:45	-	1.05
26	Tri	PCB-22	50.00	4.91e+07	1.03 y	30:12	-	1.09
27	Tri	PCB-36	50.00	5.22e+07	1.05 y	30:49	-	1.40
28	Tri	PCB-39	50.00	4.78e+07	1.05 y	31:17	-	1.28
29	Tri	PCB-38	50.00	4.87e+07	1.03 y	32:04	-	1.31
30	Tri	PCB-35	50.00	4.75e+07	1.03 y	32:34	-	1.28
31	Tri	PCB-37	50.00	4.79e+07	1.08 y	33:01	-	1.28
32	Tetra	PCB-54	50.00	4.77e+07	0.74 y	28:02	-	0.95
33	Tetra	PCB-50	50.00	3.65e+07	0.72 y	29:11	-	0.73
34	Tetra	PCB-53	50.00	3.64e+07	0.75 y	29:51	-	1.09
35	Tetra	PCB-51	50.00	3.70e+07	0.72 y	30:11	-	1.11
36	Tetra	PCB-45	50.00	3.37e+07	0.73 y	30:36	-	1.01
37	Tetra	PCB-46	50.00	2.89e+07	0.73 y	31:06	-	0.87
38	Tetra	PCB-52/69	100.00	8.00e+07	0.74 y	31:34	-	1.20
39	Tetra	PCB-73	50.00	4.72e+07	0.75 y	31:41	-	1.42
40	Tetra	PCB-43/49	100.00	7.08e-07	0.73 y	31:51	-	1.06

41	Tetra	PCB-47	50.00	3.98e+07	0.74 y	32:04	-	1.09
42	Tetra	PCB-48/75	100.00	8.76e+07	0.73 y	32:11	-	1.20
43	Tetra	PCB-65	50.00	4.12e+07	0.73 y	32:26	-	1.13
44	Tetra	PCB-62	50.00	4.67e+07	0.74 y	32:33	-	1.28
45	Tetra	PCB-44	50.00	2.93e+07	0.74 y	32:51	-	0.80
46	Tetra	PCB-42/59	100.00	7.65e+07	0.74 y	33:05	-	1.05
47	Tetra	PCB-41/64/71/72	200.00	1.66e+08	0.73 y	33:40	-	1.14
48	Tetra	PCB-68	50.00	4.75e+07	0.73 y	33:55	-	1.30
49	Tetra	PCB-40	50.00	2.57e+07	0.73 y	34:09	-	0.71
50	Tetra	PCB-57	50.00	4.47e+07	0.74 y	34:30	-	1.03
51	Tetra	PCB-67	50.00	4.34e+07	0.73 y	34:49	-	1.00

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52	Tetra	PCB-58	50.00	4.85e+07	0.76 y	34:55	-	1.12
53	Tetra	PCB-63	50.00	4.77e+07	0.71 y	35:04	-	1.10
54	Tetra	PCB-74	50.00	4.68e+07	0.74 y	35:21	-	1.08
55	Tetra	PCB-61/70	100.00	9.06e+07	0.73 y	35:33	-	1.04
56	Tetra	PCB-76/66	100.00	9.21e+07	0.74 y	35:45	-	1.06
57	Tetra	PCB-80	50.00	5.39e+07	0.74 y	35:59	-	1.20
58	Tetra	PCB-55	50.00	5.08e+07	0.74 y	36:18	-	1.13
59	Tetra	PCB-56/60	100.00	8.80e+07	0.73 y	36:48	-	0.98
60	Tetra	PCB-79	50.00	4.65e+07	0.73 y	37:53	-	1.03
61	Tetra	PCB-78	50.00	4.56e+07	0.74 y	38:34	-	1.03
62	Tetra	PCB-81	50.00	5.20e+07	0.75 y	39:05	-	1.17
63	Tetra	PCB-77	50.00	5.01e+07	0.76 y	39:41	-	1.18
64	Penta	PCB-104	50.00	4.01e+07	1.59 y	32:44	-	1.16
65	Penta	PCB-96	50.00	3.32e+07	1.56 y	33:59	-	0.96
66	Penta	PCB-103	50.00	2.97e+07	1.54 y	34:31	-	0.86
67	Penta	PCB-100	50.00	3.02e+07	1.57 y	34:52	-	0.87
68	Penta	PCB-94	50.00	2.48e+07	1.56 y	35:20	-	1.06
69	Penta	PCB-95/98/102	150.00	8.16e+07	1.52 y	35:50	-	1.16
70	Penta	PCB-93	50.00	2.65e+07	1.68 y	35:58	-	1.13
71	Penta	PCB-88/91	100.00	5.25e+07	1.56 y	36:15	-	1.12
72	Penta	PCB-121	50.00	3.68e+07	1.57 y	36:22	-	1.57
73	Penta	PCB-84/92	100.00	5.15e+07	1.54 y	37:11	-	1.04
74	Penta	PCB-89	50.00	2.34e+07	1.53 y	37:22	-	0.95
75	Penta	PCB-90/101	100.00	5.59e+07	1.56 y	37:33	-	1.13
76	Penta	PCB-113	50.00	3.44e+07	1.55 y	37:48	-	1.39
77	Penta	PCB-99	50.00	2.56e+07	1.60 y	37:54	-	1.03
78	Penta	PCB-119	50.00	3.83e+07	1.56 y	38:21	-	1.77
79	Penta	PCB-108/112	100.00	5.74e+07	1.56 y	38:30	-	1.33
80	Penta	PCB-83	50.00	3.43e+07	1.57 y	38:40	-	1.58
81	Penta	PCB-97	50.00	2.60e+07	1.55 y	38:52	-	1.20
82	Penta	PCB-86	50.00	2.15e+07	1.46 y	39:00	-	0.99
83	Penta	PCB-87/117/125	150.00	9.85e+07	1.59 y	39:08	-	1.52
84	Penta	PCB-111/115	100.00	7.67e+07	1.56 y	39:17	-	1.77
85	Penta	PCB-85/116	100.00	5.77e+07	1.60 y	39:25	-	1.33
86	Penta	PCB-120	50.00	3.97e+07	1.53 y	39:39	-	1.83
87	Penta	PCB-110	50.00	3.50e+07	1.56 y	39:47	-	1.62
88	Penta	PCB-82	50.00	2.08e+07	1.56 y	40:25	-	0.73
89	Penta	PCB-124	50.00	3.69e+07	1.57 y	41:06	-	1.29
90	Penta	PCB-107/109	100.00	6.93e+07	1.58 y	41:15	-	1.21
91	Penta	PCB-123	50.00	3.47e+07	1.55 y	41:25	-	1.21
92	Penta	PCB-106/118	100.00	7.35e+07	1.54 y	41:38	-	1.20
93	Penta	PCB-114	50.00	4.27e+07	1.62 y	42:15	-	1.36
94	Penta	PCB-122	50.00	3.51e+07	1.63 y	42:23	-	1.12
95	Penta	PCB-105	50.00	4.36e+07	1.65 y	43:07	-	1.47
96	Penta	PCB-127	50.00	3.79e+07	1.69 y	43:27	-	1.24
97	Penta	PCB-126	50.00	3.67e+07	1.64 y	45:20	-	1.39
98	Hexa	PCB-155	50.00	3.43e+07	1.23 y	37:07	-	1.12
99	Hexa	PCB-150	50.00	3.11e+07	1.24 y	38:22	-	1.02
100	Hexa	PCB-152	50.00	3.16e+07	1.25 y	38:51	-	1.03
101	Hexa	PCB-145	50.00	3.04e+07	1.24 y	39:18	-	1.00

102	Hexa	PCB-136	50.00	3.31e+07	1.23 y	39:37	-	1.09
103	Hexa	PCB-148	50.00	2.18e+07	1.24 y	39:43	-	0.71
104	Hexa	PCB-154	50.00	2.45e+07	1.23 y	40:12	-	0.80
105	Hexa	PCB-151	50.00	2.30e+07	1.25 y	40:51	-	0.75
106	Hexa	PCB-135	50.00	2.19e+07	1.23 y	41:04	-	0.72
107	Hexa	PCB-144	50.00	2.39e+07	1.33 y	41:10	-	0.78
108	Hexa	PCB-147	50.00	2.07e+07	1.15 y	41:18	-	0.68
109	Hexa	PCB-139/149	100.00	4.69e+07	1.23 y	41:34	-	0.77
110	Hexa	PCB-140	50.00	2.12e+07	1.24 y	41:45	-	0.70
111	Hexa	PCB-134/143	100.00	5.52e+07	1.22 y	42:11	-	0.85
112	Hexa	PCB-133/142	100.00	5.46e+07	1.24 y	42:29	-	0.85

113	Hexa	PCB-131	50.00	2.55e+07	1.16 y	42:38	-	0.79
114	Hexa	PCB-146/165	100.00	6.52e+07	1.22 y	42:51	-	1.01
115	Hexa	PCB-132/161	100.00	6.70e+07	1.22 y	43:06	-	1.04
116	Hexa	PCB-153	50.00	3.34e+07	1.21 y	43:17	-	1.04
117	Hexa	PCB-168	50.00	4.08e+07	1.22 y	43:29	-	1.27
118	Hexa	PCB-141	50.00	2.90e+07	1.22 y	44:00	-	1.05
119	Hexa	PCB-137	50.00	2.95e+07	1.18 y	44:24	-	1.07
120	Hexa	PCB-130	50.00	2.45e+07	1.22 y	44:29	-	0.89
121	Hexa	PCB-138/163/164	150.00	1.05e+08	1.21 y	44:52	-	1.27
122	Hexa	PCB-158/160	100.00	7.63e+07	1.22 y	45:06	-	1.37
123	Hexa	PCB-129	50.00	2.45e+07	1.20 y	45:21	-	0.88
124	Hexa	PCB-166	50.00	3.59e+07	1.21 y	45:48	-	1.06
125	Hexa	PCB-159	50.00	3.96e+07	1.22 y	46:08	-	1.17
126	Hexa	PCB-128/162	100.00	6.57e+07	1.20 y	46:25	-	0.97
127	Hexa	PCB-167	50.00	3.85e+07	1.17 y	46:49	-	1.10
128	Hexa	PCB-156	50.00	3.93e+07	1.19 y	48:07	-	1.19
129	Hexa	PCB-157	50.00	3.97e+07	1.21 y	48:23	-	1.13
130	Hexa	PCB-169	50.00	3.46e+07	1.20 y	50:32	-	1.02
131	Hepta	PCB-188	50.00	3.60e+07	1.06 y	42:55	-	1.43
132	Hepta	PCB-184	50.00	3.21e+07	1.05 y	43:21	-	1.27
133	Hepta	PCB-179	50.00	3.36e+07	1.03 y	44:08	-	1.33
134	Hepta	PCB-176	50.00	3.52e+07	1.04 y	44:36	-	1.40
135	Hepta	PCB-186	50.00	3.45e+07	1.05 y	45:12	-	1.37
136	Hepta	PCB-178	50.00	2.51e+07	1.06 y	45:42	-	1.00
137	Hepta	PCB-175	50.00	2.54e+07	1.06 y	46:03	-	1.01
138	Hepta	PCB-182/187	100.00	5.34e+07	1.05 y	46:13	-	1.06
139	Hepta	PCB-183	50.00	2.93e+07	1.04 y	46:32	-	1.16
140	Hepta	PCB-185	50.00	2.52e+07	1.05 y	47:11	-	1.34
141	Hepta	PCB-174	50.00	2.35e+07	1.05 y	47:33	-	1.25
142	Hepta	PCB-181	50.00	2.45e+07	1.08 y	47:40	-	1.30
143	Hepta	PCB-177	50.00	2.19e+07	1.04 y	47:49	-	1.16
144	Hepta	PCB-171	50.00	2.53e+07	1.05 y	48:07	-	1.34
145	Hepta	PCB-173	50.00	2.04e+07	1.04 y	48:33	-	1.08
146	Hepta	PCB-172	50.00	2.39e+07	1.04 y	49:00	-	1.27
147	Hepta	PCB-192	50.00	3.03e+07	1.05 y	49:12	-	1.61
148	Hepta	PCB-180	50.00	2.48e+07	1.03 y	49:24	-	1.32
149	Hepta	PCB-193	50.00	3.25e+07	1.04 y	49:36	-	1.72
150	Hepta	PCB-191	50.00	3.32e+07	1.04 y	49:52	-	1.76
151	Hepta	PCB-170	50.00	2.30e+07	1.02 y	50:55	-	1.56
152	Hepta	PCB-190	50.00	3.20e+07	1.07 y	51:06	-	2.17
153	Hepta	PCB-189	50.00	3.08e+07	1.05 y	52:26	-	1.58
154	Octa	PCB-202	50.00	2.38e-07	0.91 y	48:19	-	0.96
155	Octa	PCB-201	50.00	2.52e-07	0.87 y	48:48	-	1.01
156	Octa	PCB-204	50.00	2.39e-07	0.89 y	48:58	-	0.96
157	Octa	PCB-197	50.00	2.70e-07	0.91 y	49:16	-	1.08
158	Octa	PCB-200	50.00	2.41e-07	0.87 y	50:10	-	0.97
159	Octa	PCB-198	50.00	1.82e-07	0.89 y	51:31	-	0.73
160	Octa	PCB-199	50.00	1.68e-07	0.90 y	51:38	-	0.68
161	Octa	PCB-196/203	100.00	3.74e+07	0.89 y	51:54	-	0.75
162	Octa	PCB-195	50.00	1.90e-07	0.91 y	53:04	-	1.07

163	Octa	PCB-194	50.00	2.09e+07	0.92 y	53:56	-	1.18
164	Octa	PCB-205	50.00	2.74e+07	0.92 y	54:13	-	1.55
165	Nona	PCB-208	50.00	2.49e+07	1.31 y	53:13	-	0.94
166	Nona	PCB-207	50.00	2.55e+07	1.33 y	53:32	-	0.96
167	Nona	PCB-206	50.00	1.42e+07	1.31 y	55:34	-	0.82
168	Deca	PCB-209	50.00	2.15e+07	1.16 y	56:55	-	1.21
169	Tot $\eta$	Total Mono-PCB	0.00	-	- n	-	-	1.25
170	Tot $\eta$	Total Di-PCB	0.00	-	- n	-	-	1.25

171	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.14
172	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.16
173	Tot η	Total Tetra-PCB	0.00	-	- n	-	-	1.06
174	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.15
175	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.31
176	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	0.85
177	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	1.05
178	Tot η	Total Hepta-PCB	0.00	-	- n	-	-	1.29
179	Tot η	Total Octa-PCB	0.00	-	- n	-	-	0.88
180	Tot η	Total Octa-PCB	0.00	-	- n	-	-	1.27
181	Tot η	Total Nona-PCB	0.00	-	- n	-	-	0.92
182	Tot η	Total Deca-PCB	50.00	2.15e+07	1.16 y	56:55	-	1.21
183	Monoη	13C-PCB-1	100.00	1.31e+08	3.59 y	16:09	-	0.98
184	Monoη	13C-PCB-3	100.00	1.27e+08	3.55 y	18:46	-	0.95
185	Di-IS	13C-PCB-4	100.00	8.37e+07	1.59 y	20:07	-	0.62
186	Di-IS	13C-PCB-9	100.00	1.32e+08	1.58 y	21:54	-	0.98
187	Di-IS	13C-PCB-11	100.00	1.29e+08	1.57 y	25:17	-	0.96
188	Tri-η	13C-PCB-19	100.00	7.48e+07	1.10 y	24:16	-	0.56
189	Tri-η	13C-PCB-32	100.00	1.10e+08	1.10 y	27:10	-	0.82
190	Tri-η	13C-PCB-28	100.00	9.04e+07	1.03 y	29:08	-	1.21
191	Tri-η	13C-PCB-37	100.00	7.45e+07	1.04 y	33:00	-	1.00
192	Tetraη	13C-PCB-54	100.00	1.00e+08	0.78 y	28:01	-	1.15
193	Tetraη	13C-PCB-52	100.00	6.66e+07	0.76 y	31:33	-	0.76
194	Tetraη	13C-PCB-47	100.00	7.29e+07	0.77 y	32:03	-	0.84
195	Tetraη	13C-PCB-70	100.00	8.67e+07	0.76 y	35:34	-	0.99
196	Tetraη	13C-PCB-80	100.00	9.01e+07	0.78 y	35:59	-	1.03
197	Tetraη	13C-PCB-81	100.00	8.87e+07	0.77 y	39:05	-	1.02
198	Tetraη	13C-PCB-77	100.00	8.51e+07	0.79 y	39:40	-	0.98
199	Pentaη	13C-PCB-104	100.00	6.91e+07	1.61 y	32:42	-	1.05
200	Pentaη	13C-PCB-95	100.00	4.69e+07	1.61 y	35:52	-	0.72
201	Pentaη	13C-PCB-101	100.00	4.96e+07	1.62 y	37:33	-	0.76
202	Pentaη	13C-PCB-97	100.00	4.33e+07	1.65 y	38:51	-	0.66
203	Pentaη	13C-PCB-123	100.00	5.73e+07	1.61 y	41:24	-	0.87
204	Pentaη	13C-PCB-118	100.00	6.14e+07	1.60 y	41:35	-	0.93
205	Pentaη	13C-PCB-114	100.00	6.26e+07	1.57 y	42:14	-	1.25
206	Pentaη	13C-PCB-105	100.00	5.94e+07	1.58 y	43:06	-	1.19
207	Pentaη	13C-PCB-127	100.00	6.10e+07	1.55 y	43:26	-	1.22
208	Pentaη	13C-PCB-126	100.00	5.27e+07	1.61 y	45:20	-	1.06
209	Hexaη	13C-PCB-155	100.00	6.10e+07	1.23 y	37:05	-	0.93
210	Hexaη	13C-PCB-153	100.00	6.45e+07	1.29 y	43:15	-	1.29
211	Hexaη	13C-PCB-141	100.00	5.52e+07	1.29 y	43:59	-	1.11
212	Hexa	13C-PCB-138	100.00	5.55e+07	1.26 y	44:50	-	1.11
213	Hexaη	13C-PCB-159	100.00	6.75e+07	1.31 y	46:07	-	1.35
214	Hexaη	13C-PCB-167	100.00	7.02e+07	1.27 y	46:48	-	1.41
215	Hexaη	13C-PCB-156	100.00	6.63e+07	1.27 y	48:06	-	1.33
216	Hexaη	13C-PCB-157	100.00	7.04e+07	1.32 y	48:22	-	1.41
217	Hexaη	13C-PCB-169	100.00	6.82e+07	1.25 y	50:31	-	1.37
218	Heptaη	13C-PCB-188	100.00	5.04e+07	0.46 y	42:53	-	1.01
219	Heptaη	13C-PCB-180	100.00	3.77e+07	0.46 y	49:23	-	0.76
220	Heptaη	13C-PCB-170	100.00	2.95e+07	0.47 y	50:54	-	0.59
221	Heptaη	13C-PCB-189	100.00	3.89e+07	0.45 y	52:25	-	0.78

222	Octaη	13C-PCB-202	100.00	4.98e+07	0.89 y	48:18	-	1.00
223	Octaη	13C-PCB-194	100.00	3.54e+07	0.90 y	53:56	-	0.75
224	Nonaη	13C-PCB-208	100.00	5.30e+07	0.77 y	53:13	-	1.11
225	Nonaη	13C-PCB-206	100.00	3.47e+07	0.77 y	55:33	-	0.73
226	Decaη	13C-PCB-209	100.00	3.56e+07	1.18 y	56:55	-	0.75
227	DI-RS	13C-PCB-15	100.00	1.34e+08	1.56 y	25:59	-	1.00
228	Tri-η	13C-PCB-31	100.00	7.47e+07	1.02 y	29:01	-	1.00
229	Tetrη	13C-PCB-60	100.00	8.72e+07	0.74 y	36:48	-	1.00
230	Penta	13C-PCB-111	100.00	6.56e+07	1.64 y	39:17	-	1.00
231	Hexaη	13C-PCB-128	100.00	4.99e+07	1.27 y	46:24	-	1.00



232	Octaη	13C-PCB-205	100.00	4.76e+07	0.89 y	54:12	-	1.00
233	CRS	13C-PCB-79	100.00	8.64e+07	0.77 y	37:51	-	0.99
234	CRS	13C-PCB-178	100.00	3.14e+07	0.45 y	45:41	-	0.63
235	PS	13C-PCB-79	100.00	8.64e+07	0.77 y	37:51	-	0.97
236	PS	13C-PCB-178	100.00	3.14e+07	0.45 y	45:41	-	0.83

Filename: 150114E1 S: 7      Acquired: 14-JAN-15 19:04:40  
 Run: 150114e1    Analyte:            ICal: pcbvg8-1-14-15      Results: 150114e1  
 Sample text: ST150114E1-6 PCB CS4 14L2905

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	400.00	6.94e+08	2.96 y	16:11	-	1.32
2	Mono	PCB-2	400.00	7.15e+08	2.99 y	18:34	-	1.21
3	Mono	PCB-3	400.00	7.26e+08	2.99 y	18:48	-	1.23
4	Di	PCB-4/10	800.00	1.13e+09	1.63 y	20:10	-	1.54
5	Di	PCB-7/9	800.00	1.36e+09	1.64 y	21:57	-	1.16
6	Di	PCB-6	400.00	6.64e+08	1.65 y	22:36	-	1.14
7	Di	PCB-5/8	800.00	1.37e+09	1.63 y	23:01	-	1.17
8	Di	PCB-14	400.00	7.93e+08	1.64 y	24:06	-	1.37
9	Di	PCB-11	400.00	6.78e+08	1.65 y	25:18	-	1.17
10	Di	PCB-12/13	800.00	1.36e+09	1.63 y	25:42	-	1.18
11	Di	PCB-15	400.00	7.60e+08	1.64 y	26:00	-	1.32
12	Tri	PCB-19	400.00	3.81e+08	1.06 y	24:17	-	1.11
13	Tri	PCB-30	400.00	5.91e+08	1.06 y	25:11	-	1.72
14	Tri	PCB-18	400.00	4.19e+08	1.05 y	25:56	-	0.82
15	Tri	PCB-17	400.00	4.40e+08	1.06 y	26:06	-	0.86
16	Tri	PCB-24/27	800.00	1.23e+09	1.06 y	26:41	-	1.21
17	Tri	PCB-16/32	800.00	9.74e+08	1.05 y	27:11	-	0.95
18	Tri	PCB-34	400.00	4.41e+08	1.02 y	27:59	-	1.16
19	Tri	PCB-23	400.00	4.64e+08	1.03 y	28:04	-	1.22
20	Tri	PCB-29	400.00	4.32e+08	1.03 y	28:19	-	1.14
21	Tri	PCB-26	400.00	4.32e+08	1.01 y	28:32	-	1.14
22	Tri	PCB-25	400.00	4.27e+08	1.03 y	28:42	-	1.13
23	Tri	PCB-31	400.00	4.79e+08	1.03 y	29:04	-	1.26
24	Tri	PCB-28	400.00	4.54e+08	1.04 y	29:09	-	1.20
25	Tri	PCB-20/21/33	1200.00	1.36e+09	1.02 y	29:47	-	1.19
26	Tri	PCB-22	400.00	4.30e+08	1.01 y	30:13	-	1.13
27	Tri	PCB-36	400.00	3.85e+08	1.00 y	30:49	-	1.10
28	Tri	PCB-39	400.00	3.74e+08	1.01 y	31:18	-	1.07
29	Tri	PCB-38	400.00	4.25e+08	1.04 y	32:04	-	1.22
30	Tri	PCB-35	400.00	4.27e+08	1.04 y	32:35	-	1.23
31	Tri	PCB-37	400.00	4.44e+08	1.06 y	33:02	-	1.27
32	Tetra	PCB-54	400.00	4.13e+08	0.74 y	28:02	-	0.94
33	Tetra	PCB-50	400.00	3.31e+08	0.73 y	29:13	-	0.75
34	Tetra	PCB-53	400.00	3.18e+08	0.73 y	29:51	-	1.09
35	Tetra	PCB-51	400.00	3.35e+08	0.74 y	30:12	-	1.15
36	Tetra	PCB-45	400.00	2.67e+08	0.73 y	30:38	-	0.92
37	Tetra	PCB-46	400.00	2.47e+08	0.72 y	31:07	-	0.85
38	Tetra	PCB-52/69	800.00	6.65e+08	0.72 y	31:36	-	1.15
39	Tetra	PCB-73	400.00	4.07e+08	0.73 y	31:43	-	1.40
40	Tetra	PCB-43/49	800.00	6.39e+08	0.74 y	31:53	-	1.10
41	Tetra	PCB-47	400.00	3.44e+08	0.73 y	32:05	-	1.04

42	Tetra	PCB-48/75	800.00	8.25e+08	0.74 y	32:12	-	1.24
43	Tetra	PCB-65	400.00	4.06e+08	0.73 y	32:28	-	1.22
44	Tetra	PCB-62	400.00	3.83e+08	0.74 y	32:35	-	1.15
45	Tetra	PCB-44	400.00	2.51e+08	0.73 y	32:53	-	0.76
46	Tetra	PCB-42/59	800.00	7.21e+08	0.73 y	33:06	-	1.09
47	Tetra	PCB-41/64/71/72	1600.00	1.70e+09	0.74 y	33:41	-	1.28
48	Tetra	PCB-68	400.00	4.83e+08	0.74 y	33:57	-	1.45
49	Tetra	PCB-40	400.00	2.58e+08	0.74 y	34:09	-	0.78
50	Tetra	PCB-57	400.00	4.23e+08	0.73 y	34:31	-	1.00
51	Tetra	PCB-67	400.00	4.16e+08	0.73 y	34:50	-	0.99
52	Tetra	PCB-58	400.00	4.23e+08	0.74 y	34:57	-	1.00

53	Tetra	PCB-63	400.00	4.44e+08	0.74 y	35:06	-	1.05
54	Tetra	PCB-74	400.00	4.75e+08	0.73 y	35:23	-	1.12
55	Tetra	PCB-61/70	800.00	8.24e+08	0.73 y	35:33	-	0.97
56	Tetra	PCB-76/66	800.00	8.98e+08	0.74 y	35:47	-	1.06
57	Tetra	PCB-80	400.00	5.02e+08	0.75 y	36:01	-	1.18
58	Tetra	PCB-55	400.00	4.59e+08	0.74 y	36:20	-	1.08
59	Tetra	PCB-56/60	800.00	8.76e+08	0.74 y	36:49	-	1.03
60	Tetra	PCB-79	400.00	4.30e+08	0.73 y	37:53	-	1.01
61	Tetra	PCB-78	400.00	4.62e+08	0.73 y	38:35	-	1.11
62	Tetra	PCB-81	400.00	4.78e+08	0.75 y	39:07	-	1.15
63	Tetra	PCB-77	400.00	4.50e+08	0.76 y	39:42	-	1.14
64	Penta	PCB-104	400.00	3.46e+08	1.56 y	32:44	-	1.16
65	Penta	PCB-96	400.00	3.23e+08	1.56 y	33:59	-	1.08
66	Penta	PCB-103	400.00	2.83e+08	1.56 y	34:32	-	0.94
67	Penta	PCB-100	400.00	2.76e+08	1.56 y	34:52	-	0.92
68	Penta	PCB-94	400.00	2.45e+08	1.57 y	35:21	-	1.08
69	Penta	PCB-95/98/102	1200.00	8.28e+08	1.54 y	35:50	-	1.22
70	Penta	PCB-93	400.00	1.85e+08	1.63 y	35:58	-	0.82
71	Penta	PCB-88/91	800.00	4.53e+08	1.54 y	36:15	-	1.00
72	Penta	PCB-121	400.00	3.50e+08	1.58 y	36:22	-	1.55
73	Penta	PCB-84/92	800.00	4.81e+08	1.56 y	37:11	-	1.01
74	Penta	PCB-89	400.00	2.17e+08	1.57 y	37:22	-	0.91
75	Penta	PCB-90/101	800.00	5.22e+08	1.57 y	37:34	-	1.09
76	Penta	PCB-113	400.00	2.96e+08	1.55 y	37:49	-	1.24
77	Penta	PCB-99	400.00	2.51e+08	1.57 y	37:54	-	1.05
78	Penta	PCB-119	400.00	3.64e+08	1.57 y	38:22	-	1.76
79	Penta	PCB-108/112	800.00	5.68e+08	1.57 y	38:31	-	1.37
80	Penta	PCB-83	400.00	3.40e+08	1.58 y	38:41	-	1.64
81	Penta	PCB-97	400.00	2.48e+08	1.55 y	38:52	-	1.20
82	Penta	PCB-86	400.00	1.86e+08	1.65 y	39:01	-	0.90
83	Penta	PCB-87/117/125	1200.00	9.47e+08	1.57 y	39:08	-	1.53
84	Penta	PCB-111/115	800.00	7.12e+08	1.52 y	39:18	-	1.72
85	Penta	PCB-85/116	800.00	5.09e+08	1.62 y	39:26	-	1.23
86	Penta	PCB-120	400.00	3.79e+08	1.56 y	39:40	-	1.83
87	Penta	PCB-110	400.00	3.10e+08	1.58 y	39:49	-	1.50
88	Penta	PCB-82	400.00	1.91e+08	1.57 y	40:27	-	0.68
89	Penta	PCB-124	400.00	3.36e+08	1.55 y	41:07	-	1.20
90	Penta	PCB-107/109	800.00	6.83e+08	1.56 y	41:15	-	1.22
91	Penta	PCB-123	400.00	3.22e+08	1.56 y	41:26	-	1.15
92	Penta	PCB-106/118	800.00	7.08e+08	1.56 y	41:38	-	1.15
93	Penta	PCB-114	400.00	4.01e+08	1.63 y	42:16	-	1.32
94	Penta	PCB-122	400.00	3.55e+08	1.68 y	42:24	-	1.17
95	Penta	PCB-105	400.00	3.96e+08	1.67 y	43:08	-	1.44
96	Penta	PCB-127	400.00	3.51e+08	1.68 y	43:27	-	1.19
97	Penta	PCB-126	400.00	3.80e+08	1.65 y	45:22	-	1.32
98	Hexa	PCB-155	400.00	3.03e+08	1.24 y	37:08	-	1.14
99	Hexa	PCB-150	400.00	2.98e+08	1.23 y	38:23	-	1.12
100	Hexa	PCB-152	400.00	2.90e+08	1.24 y	38:52	-	1.09
101	Hexa	PCB-145	400.00	2.84e+08	1.24 y	39:18	-	1.07
102	Hexa	PCB-136	400.00	2.87e+08	1.24 y	39:38	-	1.08

103	Hexa	PCB-148	400.00	2.10e+08	1.25 y	39:44	-	0.79
104	Hexa	PCB-154	400.00	2.24e+08	1.24 y	40:14	-	0.84
105	Hexa	PCB-151	400.00	2.11e+08	1.25 y	40:52	-	0.79
106	Hexa	PCB-135	400.00	2.08e+08	1.40 y	41:05	-	0.78
107	Hexa	PCB-144	400.00	2.26e+08	1.10 y	41:12	-	0.85
108	Hexa	PCB-147	400.00	1.99e+08	1.23 y	41:19	-	0.75
109	Hexa	PCB-139/149	800.00	4.60e+08	1.23 y	41:35	-	0.86
110	Hexa	PCB-140	400.00	2.02e+08	1.22 y	41:46	-	0.76
111	Hexa	PCB-134/143	800.00	5.51e+08	1.24 y	42:12	-	0.90
112	Hexa	PCB-133/142	800.00	5.43e+08	1.22 y	42:30	-	0.89
113	Hexa	PCB-131	400.00	2.46e+08	1.21 y	42:39	-	0.81

114	Hexa	PCB-146/165	800.00	6.43e+08	1.22 y	42:53	-	1.05
115	Hexa	PCB-132/161	800.00	6.26e+08	1.21 y	43:07	-	1.03
116	Hexa	PCB-153	400.00	3.15e+08	1.21 y	43:17	-	1.03
117	Hexa	PCB-168	400.00	3.92e+08	1.21 y	43:30	-	1.28
118	Hexa	PCB-141	400.00	2.79e+08	1.22 y	44:01	-	1.06
119	Hexa	PCB-137	400.00	2.87e+08	1.17 y	44:24	-	1.09
120	Hexa	PCB-130	400.00	2.37e+08	1.26 y	44:31	-	0.90
121	Hexa	PCB-138/163/164	1200.00	1.05e+09	1.20 y	44:53	-	1.28
122	Hexa	PCB-158/160	800.00	7.31e+08	1.20 y	45:08	-	1.35
123	Hexa	PCB-129	400.00	2.54e+08	1.23 y	45:22	-	0.94
124	Hexa	PCB-166	400.00	3.59e+08	1.21 y	45:50	-	1.06
125	Hexa	PCB-159	400.00	3.81e+08	1.21 y	46:09	-	1.13
126	Hexa	PCB-128/162	800.00	6.54e+08	1.21 y	46:26	-	0.97
127	Hexa	PCB-167	400.00	3.57e+08	1.21 y	46:50	-	1.09
128	Hexa	PCB-156	400.00	3.98e+08	1.22 y	48:07	-	1.19
129	Hexa	PCB-157	400.00	3.91e+08	1.22 y	48:23	-	1.12
130	Hexa	PCB-169	400.00	3.39e+08	1.22 y	50:33	-	1.02
131	Hepta	PCB-188	400.00	3.52e+08	1.05 y	42:56	-	1.38
132	Hepta	PCB-184	400.00	3.14e+08	1.04 y	43:23	-	1.23
133	Hepta	PCB-179	400.00	3.24e+08	1.05 y	44:09	-	1.27
134	Hepta	PCB-176	400.00	3.41e+08	1.04 y	44:37	-	1.34
135	Hepta	PCB-186	400.00	3.41e+08	1.05 y	45:13	-	1.33
136	Hepta	PCB-178	400.00	2.45e+08	1.05 y	45:43	-	0.96
137	Hepta	PCB-175	400.00	2.39e+08	1.05 y	46:04	-	0.94
138	Hepta	PCB-182/187	800.00	5.39e+08	1.05 y	46:14	-	1.05
139	Hepta	PCB-183	400.00	2.80e+08	1.05 y	46:32	-	1.10
140	Hepta	PCB-185	400.00	2.45e+08	1.05 y	47:13	-	1.32
141	Hepta	PCB-174	400.00	2.22e+08	1.04 y	47:34	-	1.19
142	Hepta	PCB-181	400.00	2.44e+08	1.05 y	47:41	-	1.31
143	Hepta	PCB-177	400.00	2.18e+08	1.04 y	47:51	-	1.17
144	Hepta	PCB-171	400.00	2.57e+08	1.04 y	48:08	-	1.38
145	Hepta	PCB-173	400.00	1.93e+08	1.06 y	48:34	-	1.04
146	Hepta	PCB-172	400.00	2.43e+08	1.05 y	49:00	-	1.30
147	Hepta	PCB-192	400.00	3.11e+08	1.04 y	49:12	-	1.67
148	Hepta	PCB-180	400.00	2.42e+08	1.05 y	49:25	-	1.30
149	Hepta	PCB-193	400.00	3.25e+08	1.05 y	49:37	-	1.74
150	Hepta	PCB-191	400.00	3.28e+08	1.04 y	49:53	-	1.76
151	Hepta	PCB-170	400.00	2.28e+08	1.05 y	50:56	-	1.52
152	Hepta	PCB-190	400.00	3.23e+08	1.05 y	51:07	-	2.15
153	Hepta	PCB-189	400.00	3.10e+08	1.04 y	52:27	-	1.56
154	Octa	PCB-202	400.00	2.31e+08	0.89 y	48:21	-	0.95
155	Octa	PCB-201	400.00	2.56e+08	0.88 y	48:50	-	1.06
156	Octa	PCB-204	400.00	2.56e+08	0.88 y	48:50	-	1.06
157	Octa	PCB-197	400.00	2.77e+08	0.89 y	49:17	-	1.14
158	Octa	PCB-200	400.00	2.35e+08	0.89 y	50:11	-	0.97
159	Octa	PCB-198	400.00	1.78e+08	0.90 y	51:32	-	0.73
160	Octa	PCB-199	400.00	1.72e+08	0.89 y	51:39	-	0.71
161	Octa	PCB-196/203	800.00	3.96e+08	0.88 y	51:55	-	0.82
162	Octa	PCB-195	400.00	1.92e+08	0.91 y	53:06	-	1.14
163	Octa	PCB-194	400.00	1.94e+08	0.91 y	53:58	-	1.15

164	Octa	PCB-205	400.00	2.64e+08	0.91 y	54:14	-	1.56
165	Nona	PCB-208	400.00	2.44e+08	1.30 y	53:14	-	0.92
166	Nona	PCB-207	400.00	2.51e+08	1.30 y	53:33	-	0.95
167	Nona	PCB-206	400.00	1.40e+08	1.30 y	55:36	-	0.79
168	Deca	PCB-209	400.00	2.07e+08	1.17 y	56:58	-	1.22
169	Tot η	Total Mono-PCB	0.00	-	- n	-	-	1.25
170	Tot η	Total Di-PCB	0.00	-	- n	-	-	1.22
171	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.11

172	Tot	η	Total Tri-PCB	0.00	-	-	n	-	-	-	1.18
173	Tot	η	Total Tetra-PCB	0.00	-	-	n	-	-	-	1.08
174	Tot	η	Total Penta-PCB	0.00	-	-	n	-	-	-	1.16
175	Tot	η	Total Penta-PCB	0.00	-	-	n	-	-	-	1.29
176	Tot	η	Total Hexa-PCB	0.00	-	-	n	-	-	-	0.91
177	Tot	η	Total Hexa-PCB	0.00	-	-	n	-	-	-	1.06
178	Tot	η	Total Hepta-PCB	0.00	-	-	n	-	-	-	1.27
179	Tot	η	Total Octa-PCB	0.00	-	-	n	-	-	-	0.92
180	Tot	η	Total Octa-PCB	0.00	-	-	n	-	-	-	1.28
181	Tot	η	Total Nona-PCB	0.00	-	-	n	-	-	-	0.90
182	Tot	η	Total Deca-PCB	400.00	2.07e+08	1.17	y	56:58	-	-	1.22
183	Mono	η	13C-PCB-1	100.00	1.31e+08	3.58	y	16:10	-	-	0.87
184	Mono	η	13C-PCB-3	100.00	1.48e+08	3.55	y	18:47	-	-	0.99
185	Di	-IS	13C-PCB-4	100.00	9.18e+07	1.61	y	20:07	-	-	0.61
186	Di	-IS	13C-PCB-9	100.00	1.46e+08	1.57	y	21:55	-	-	0.97
187	Di	-IS	13C-PCB-11	100.00	1.45e+08	1.56	y	25:17	-	-	0.96
188	Tri	-η	13C-PCB-19	100.00	8.61e+07	1.11	y	24:16	-	-	0.57
189	Tri	-η	13C-PCB-32	100.00	1.28e+08	1.10	y	27:11	-	-	0.85
190	Tri	-η	13C-PCB-28	100.00	9.48e+07	1.03	y	29:09	-	-	0.96
191	Tri	-η	13C-PCB-37	100.00	8.72e+07	1.04	y	33:01	-	-	0.88
192	Tetr	η	13C-PCB-54	100.00	1.10e+08	0.77	y	28:01	-	-	1.03
193	Tetr	η	13C-PCB-52	100.00	7.25e+07	0.77	y	31:34	-	-	0.68
194	Tetr	η	13C-PCB-47	100.00	8.30e+07	0.77	y	32:04	-	-	0.78
195	Tetr	η	13C-PCB-70	100.00	1.06e+08	0.76	y	35:34	-	-	0.99
196	Tetr	η	13C-PCB-80	100.00	1.06e+08	0.75	y	35:59	-	-	1.00
197	Tetr	η	13C-PCB-81	100.00	1.04e+08	0.78	y	39:06	-	-	0.97
198	Tetr	η	13C-PCB-77	100.00	9.87e+07	0.76	y	39:41	-	-	0.93
199	Pent	η	13C-PCB-104	100.00	7.49e+07	1.60	y	32:43	-	-	0.95
200	Pent	η	13C-PCB-95	100.00	5.64e+07	1.61	y	35:53	-	-	0.71
201	Pent	η	13C-PCB-101	100.00	5.96e+07	1.61	y	37:34	-	-	0.75
202	Pent	η	13C-PCB-97	100.00	5.17e+07	1.63	y	38:51	-	-	0.65
203	Pent	η	13C-PCB-123	100.00	7.00e+07	1.62	y	41:25	-	-	0.88
204	Pent	η	13C-PCB-118	100.00	7.68e+07	1.66	y	41:36	-	-	0.97
205	Pent	η	13C-PCB-114	100.00	7.59e+07	1.59	y	42:15	-	-	1.23
206	Pent	η	13C-PCB-105	100.00	6.87e+07	1.58	y	43:07	-	-	1.11
207	Pent	η	13C-PCB-127	100.00	7.37e+07	1.55	y	43:27	-	-	1.19
208	Pent	η	13C-PCB-126	100.00	7.18e+07	1.55	y	45:21	-	-	1.16
209	Hexa	η	13C-PCB-155	100.00	6.66e+07	1.26	y	37:06	-	-	0.84
210	Hexa	η	13C-PCB-153	100.00	7.63e+07	1.28	y	43:16	-	-	1.23
211	Hexa	η	13C-PCB-141	100.00	6.56e+07	1.29	y	44:01	-	-	1.06
212	Hexa		13C-PCB-138	100.00	6.79e+07	1.28	y	44:51	-	-	1.10
213	Hexa	η	13C-PCB-159	100.00	8.47e+07	1.26	y	46:08	-	-	1.37
214	Hexa	η	13C-PCB-167	100.00	8.20e+07	1.28	y	46:49	-	-	1.33
215	Hexa	η	13C-PCB-156	100.00	8.33e+07	1.29	y	48:06	-	-	1.35
216	Hexa	η	13C-PCB-157	100.00	8.77e+07	1.28	y	48:22	-	-	1.42
217	Hexa	η	13C-PCB-169	100.00	8.32e+07	1.28	y	50:33	-	-	1.34
218	Hept	η	13C-PCB-188	100.00	6.38e+07	0.45	y	42:54	-	-	1.03
219	Hept	η	13C-PCB-180	100.00	4.66e+07	0.47	y	49:24	-	-	0.75
220	Hept	η	13C-PCB-170	100.00	3.75e+07	0.47	y	50:55	-	-	0.61
221	Hept	η	13C-PCB-189	100.00	4.95e+07	0.46	y	52:26	-	-	0.80
222	Octa	η	13C-PCB-202	100.00	6.06e+07	0.91	y	48:19	-	-	0.98



223	Octaη	13C-PCB-194	100.00	4.22e+07	0.89 y	53:57	-	0.72
224	Nonaη	13C-PCB-208	100.00	6.60e+07	0.76 y	53:14	-	1.12
225	Nonaη	13C-PCB-206	100.00	4.43e+07	0.76 y	55:35	-	0.75
226	Decaη	13C-PCB-209	100.00	4.22e+07	1.18 y	56:57	-	0.72
227	DI-RS	13C-PCB-15	100.00	1.50e+08	1.58 y	25:59	-	1.00
228	Tri-η	13C-PCB-31	100.00	9.85e+07	1.04 y	29:02	-	1.00
229	Tetraη	13C-PCB-60	100.00	1.07e+08	0.78 y	36:49	-	1.00
230	Penta	13C-PCB-111	100.00	7.92e+07	1.60 y	39:17	-	1.00
231	Hexaη	13C-PCB-128	100.00	6.19e+07	1.30 y	46:24	-	1.00
232	Octaη	13C-PCB-205	100.00	5.88e+07	0.91 y	54:14	-	1.00

233	CRS	13C-PCB-79	100.00	1.03e+08	0.76 y	37:52	-	0.97
234	CRS	13C-PCB-178	100.00	3.98e+07	0.46 y	45:42	-	0.64
235	PS	13C-PCB-79	100.00	1.03e+08	0.76 y	37:52	-	0.99
236	PS	13C-PCB-178	100.00	3.98e+07	0.46 y	45:42	-	0.85

Filename: 150114E1 S: 8      Acquired: 14-JAN-15 20:09:16  
 Run: 150114E1    Analyte:            ICal: pcbvg8-1-14-15      Results: 150114e1  
 Sample text: ST150114E1-7 PCB CS5 14L2906

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	1000.00	1.39e+09	2.97 y	16:11	- 1.34
2	Mono	PCB-2	1000.00	1.43e+09	2.99 y	18:34	- 1.33
3	Mono	PCB-3	1000.00	1.41e+09	2.98 y	18:48	- 1.31
4	Di	PCB-4/10	2000.00	2.31e+09	1.62 y	20:11	- 1.54
5	Di	PCB-7/9	2000.00	2.86e+09	1.64 y	21:57	- 1.18
6	Di	PCB-6	1000.00	1.37e+09	1.64 y	22:36	- 1.13
7	Di	PCB-5/8	2000.00	2.86e+09	1.64 y	23:01	- 1.17
8	Di	PCB-14	1000.00	1.67e+09	1.63 y	24:06	- 1.36
9	Di	PCB-11	1000.00	1.43e+09	1.65 y	25:19	- 1.17
10	Di	PCB-12/13	2000.00	2.95e+09	1.62 y	25:42	- 1.20
11	Di	PCB-15	1000.00	1.65e+09	1.61 y	26:01	- 1.35
12	Tri	PCB-19	1000.00	7.86e+08	1.06 y	24:18	- 1.10
13	Tri	PCB-30	1000.00	1.25e+09	1.07 y	25:12	- 1.75
14	Tri	PCB-18	1000.00	8.43e+08	1.06 y	25:56	- 0.78
15	Tri	PCB-17	1000.00	9.23e+08	1.06 y	26:07	- 0.86
16	Tri	PCB-24/27	2000.00	2.55e+09	1.06 y	26:41	- 1.18
17	Tri	PCB-16/32	2000.00	2.05e+09	1.06 y	27:12	- 0.95
18	Tri	PCB-34	1000.00	9.86e+08	1.02 y	28:00	- 1.21
19	Tri	PCB-23	1000.00	8.98e+08	1.04 y	28:05	- 1.10
20	Tri	PCB-29	1000.00	8.94e+08	1.02 y	28:20	- 1.10
21	Tri	PCB-26	1000.00	1.01e+09	1.03 y	28:32	- 1.24
22	Tri	PCB-25	1000.00	8.93e+08	1.01 y	28:43	- 1.10
23	Tri	PCB-31	1000.00	8.93e+08	1.14 y	29:03	- 1.10
24	Tri	PCB-28	1000.00	9.16e+08	0.92 y	29:10	- 1.13
25	Tri	PCB-20/21/33	3000.00	2.41e+09	1.02 y	29:46	- 0.98
26	Tri	PCB-22	1000.00	8.07e+08	1.02 y	30:14	- 0.99
27	Tri	PCB-36	1000.00	9.15e+08	1.01 y	30:50	- 1.27
28	Tri	PCB-39	1000.00	8.14e+08	1.02 y	31:18	- 1.13
29	Tri	PCB-38	1000.00	8.90e+08	1.03 y	32:05	- 1.24
30	Tri	PCB-35	1000.00	9.47e+08	1.02 y	32:36	- 1.31
31	Tri	PCB-37	1000.00	8.87e+08	1.02 y	33:02	- 1.23
32	Tetra	PCB-54	1000.00	8.93e+08	0.74 y	28:03	- 0.94
33	Tetra	PCB-50	1000.00	6.66e+08	0.73 y	29:13	- 0.70
34	Tetra	PCB-53	1000.00	6.07e+08	0.71 y	29:52	- 0.99
35	Tetra	PCB-51	1000.00	6.35e+08	0.73 y	30:12	- 1.04
36	Tetra	PCB-45	1000.00	6.11e+08	0.73 y	30:38	- 1.00
37	Tetra	PCB-46	1000.00	5.24e+08	0.72 y	31:07	- 0.86
38	Tetra	PCB-52/69	2000.00	1.41e+09	0.71 y	31:36	- 1.15
39	Tetra	PCB-73	1000.00	7.43e+08	0.72 y	31:43	- 1.22
40	Tetra	PCB-43/49	2000.00	1.28e+09	0.73 y	31:53	- 1.05

41	Tetra	PCB-47	1000.00	7.82e+08	0.72 y	32:05	-	1.13
42	Tetra	PCB-48/75	2000.00	1.71e+09	0.73 y	32:12	-	1.23
43	Tetra	PCB-65	1000.00	7.98e+08	0.73 y	32:28	-	1.15
44	Tetra	PCB-62	1000.00	9.11e+08	0.74 y	32:35	-	1.31
45	Tetra	PCB-44	1000.00	5.20e+08	0.73 y	32:53	-	0.75
46	Tetra	PCB-42/59	2000.00	1.48e+09	0.73 y	33:06	-	1.07
47	Tetra	PCB-41/64/71/72	4000.00	3.37e+09	0.74 y	33:42	-	1.21
48	Tetra	PCB-68	1000.00	9.93e+08	0.74 y	33:57	-	1.43
49	Tetra	PCB-40	1000.00	5.33e+08	0.73 y	34:10	-	0.77
50	Tetra	PCB-57	1000.00	8.58e+08	0.72 y	34:32	-	0.90
51	Tetra	PCB-67	1000.00	8.68e+08	0.72 y	34:50	-	0.91

52	Tetra	PCB-58	1000.00	9.49e+08	0.74	y	34:57	-	1.00
53	Tetra	PCB-63	1000.00	9.14e+08	0.73	y	35:06	-	0.96
54	Tetra	PCB-74	1000.00	9.90e+08	0.72	y	35:23	-	1.04
55	Tetra	PCB-61/70	2000.00	1.93e+09	0.73	y	35:34	-	1.01
56	Tetra	PCB-76/66	2000.00	1.96e+09	0.74	y	35:47	-	1.03
57	Tetra	PCB-80	1000.00	1.15e+09	0.72	y	36:01	-	1.20
58	Tetra	PCB-55	1000.00	1.10e+09	0.74	y	36:20	-	1.15
59	Tetra	PCB-56/60	2000.00	1.77e+09	0.73	y	36:50	-	0.93
60	Tetra	PCB-79	1000.00	1.06e+09	0.74	y	37:54	-	1.11
61	Tetra	PCB-78	1000.00	9.51e+08	0.73	y	38:36	-	1.01
62	Tetra	PCB-81	1000.00	1.11e+09	0.74	y	39:07	-	1.17
63	Tetra	PCB-77	1000.00	1.06e+09	0.75	y	39:43	-	1.14
64	Penta	PCB-104	1000.00	7.52e+08	1.57	y	32:44	-	1.17
65	Penta	PCB-96	1000.00	6.57e+08	1.58	y	34:00	-	1.02
66	Penta	PCB-103	1000.00	5.75e+08	1.55	y	34:32	-	0.89
67	Penta	PCB-100	1000.00	5.96e+08	1.56	y	34:53	-	0.92
68	Penta	PCB-94	1000.00	5.00e+08	1.57	y	35:22	-	1.03
69	Penta	PCB-95/98/102	3000.00	1.69e+09	1.56	y	35:51	-	1.16
70	Penta	PCB-93	1000.00	4.91e+08	1.60	y	35:59	-	1.01
71	Penta	PCB-88/91	2000.00	9.64e+08	1.55	y	36:15	-	0.99
72	Penta	PCB-121	1000.00	8.72e+08	1.59	y	36:22	-	1.79
73	Penta	PCB-84/92	2000.00	1.03e+09	1.54	y	37:12	-	0.95
74	Penta	PCB-89	1000.00	4.76e+08	1.58	y	37:23	-	0.87
75	Penta	PCB-90/101	2000.00	1.17e+09	1.56	y	37:33	-	1.07
76	Penta	PCB-113	1000.00	6.26e+08	1.54	y	37:48	-	1.15
77	Penta	PCB-99	1000.00	6.40e+08	1.57	y	37:54	-	1.17
78	Penta	PCB-119	1000.00	7.94e+08	1.57	y	38:22	-	1.72
79	Penta	PCB-108/112	2000.00	1.19e+09	1.57	y	38:31	-	1.29
80	Penta	PCB-83	1000.00	6.87e+08	1.56	y	38:40	-	1.49
81	Penta	PCB-97	1000.00	5.38e+08	1.56	y	38:53	-	1.17
82	Penta	PCB-86	1000.00	4.30e+08	1.55	y	39:01	-	0.93
83	Penta	PCB-87/117/125	3000.00	2.08e+09	1.58	y	39:09	-	1.50
84	Penta	PCB-111/115	2000.00	1.58e+09	1.55	y	39:18	-	1.71
85	Penta	PCB-85/116	2000.00	1.24e+09	1.58	y	39:26	-	1.34
86	Penta	PCB-120	1000.00	8.48e+08	1.57	y	39:41	-	1.84
87	Penta	PCB-110	1000.00	7.10e+08	1.58	y	39:49	-	1.54
88	Penta	PCB-82	1000.00	4.02e+08	1.56	y	40:26	-	0.64
89	Penta	PCB-124	1000.00	8.06e+08	1.55	y	41:07	-	1.28
90	Penta	PCB-107/109	2000.00	1.56e+09	1.57	y	41:16	-	1.24
91	Penta	PCB-123	1000.00	7.24e+08	1.56	y	41:26	-	1.15
92	Penta	PCB-106/118	2000.00	1.59e+09	1.57	y	41:38	-	1.16
93	Penta	PCB-114	1000.00	9.36e+08	1.65	y	42:17	-	1.36
94	Penta	PCB-122	1000.00	7.65e+08	1.67	y	42:25	-	1.11
95	Penta	PCB-105	1000.00	9.43e+08	1.66	y	43:07	-	1.41
96	Penta	PCB-127	1000.00	8.39e+08	1.66	y	43:28	-	1.18
97	Penta	PCB-126	1000.00	8.19e+08	1.68	y	45:22	-	1.33
98	Hexa	PCB-155	1000.00	6.54e+08	1.24	y	37:08	-	1.12
99	Hexa	PCB-150	1000.00	6.42e+08	1.24	y	38:23	-	1.10
100	Hexa	PCB-152	1000.00	6.30e+08	1.24	y	38:52	-	1.08
101	Hexa	PCB-145	1000.00	6.31e+08	1.25	y	39:15	-	1.08

102	Hexa	PCB-136	1000.00	6.49e+08	1.38 y	39:38	-	1.11
103	Hexa	PCB-148	1000.00	4.68e+08	1.07 y	39:44	-	0.80
104	Hexa	PCB-154	1000.00	4.88e+08	1.24 y	40:14	-	0.84
105	Hexa	PCB-151	1000.00	4.67e+08	1.25 y	40:52	-	0.80
106	Hexa	PCB-135	1000.00	4.74e+08	1.23 y	41:05	-	0.81
107	Hexa	PCB-144	1000.00	5.08e+08	1.24 y	41:11	-	0.87
108	Hexa	PCB-147	1000.00	4.71e+08	1.25 y	41:19	-	0.81
109	Hexa	PCB-139/149	2000.00	1.03e+09	1.24 y	41:35	-	0.88
110	Hexa	PCB-140	1000.00	4.41e+08	1.24 y	41:46	-	0.76
111	Hexa	PCB-134/143	2000.00	1.22e+09	1.22 y	42:12	-	0.88
112	Hexa	PCB-133/142	2000.00	1.23e+09	1.22 y	42:29	-	0.88

113	Hexa	PCB-131	1000.00	5.60e+08	1.22 y	42:40	-	0.80
114	Hexa	PCB-146/165	2000.00	1.48e+09	1.21 y	42:52	-	1.06
115	Hexa	PCB-132/161	2000.00	1.49e+09	1.22 y	43:07	-	1.07
116	Hexa	PCB-153	1000.00	7.14e+08	1.23 y	43:18	-	1.02
117	Hexa	PCB-168	1000.00	9.13e+08	1.23 y	43:31	-	1.31
118	Hexa	PCB-141	1000.00	6.28e+08	1.20 y	44:02	-	1.06
119	Hexa	PCB-137	1000.00	6.54e+08	1.18 y	44:25	-	1.10
120	Hexa	PCB-130	1000.00	5.46e+08	1.23 y	44:31	-	0.92
121	Hexa	PCB-138/163/164	3000.00	2.41e+09	1.21 y	44:54	-	1.26
122	Hexa	PCB-158/160	2000.00	1.71e+09	1.21 y	45:08	-	1.34
123	Hexa	PCB-129	1000.00	5.54e+08	1.21 y	45:22	-	0.87
124	Hexa	PCB-166	1000.00	8.34e+08	1.21 y	45:49	-	1.08
125	Hexa	PCB-159	1000.00	8.85e+08	1.18 y	46:09	-	1.15
126	Hexa	PCB-128/162	2000.00	1.48e+09	1.19 y	46:26	-	0.96
127	Hexa	PCB-167	1000.00	8.20e+08	1.22 y	46:49	-	1.09
128	Hexa	PCB-156	1000.00	9.21e+08	1.23 y	48:08	-	1.19
129	Hexa	PCB-157	1000.00	9.13e+08	1.23 y	48:23	-	1.13
130	Hexa	PCB-169	1000.00	7.98e+08	1.22 y	50:33	-	1.03
131	Hepta	PCB-188	1000.00	7.95e+08	1.05 y	42:56	-	1.38
132	Hepta	PCB-184	1000.00	7.03e+08	1.05 y	43:22	-	1.22
133	Hepta	PCB-179	1000.00	7.20e+08	1.05 y	44:09	-	1.25
134	Hepta	PCB-176	1000.00	7.64e+08	1.05 y	44:37	-	1.32
135	Hepta	PCB-186	1000.00	7.73e+08	1.05 y	45:13	-	1.34
136	Hepta	PCB-178	1000.00	5.43e+08	1.05 y	45:43	-	0.94
137	Hepta	PCB-175	1000.00	5.58e+08	1.04 y	46:04	-	0.97
138	Hepta	PCB-182/187	2000.00	1.19e+09	1.05 y	46:14	-	1.03
139	Hepta	PCB-183	1000.00	6.25e+08	1.04 y	46:33	-	1.08
140	Hepta	PCB-185	1000.00	5.42e+08	1.05 y	47:13	-	1.27
141	Hepta	PCB-174	1000.00	5.22e+08	1.04 y	47:35	-	1.22
142	Hepta	PCB-181	1000.00	5.36e+08	1.05 y	47:41	-	1.25
143	Hepta	PCB-177	1000.00	4.84e+08	1.05 y	47:51	-	1.13
144	Hepta	PCB-171	1000.00	5.90e+08	1.05 y	48:08	-	1.38
145	Hepta	PCB-173	1000.00	4.55e+08	1.05 y	48:34	-	1.06
146	Hepta	PCB-172	1000.00	5.42e+08	1.04 y	49:01	-	1.27
147	Hepta	PCB-192	1000.00	6.95e+08	1.06 y	49:13	-	1.63
148	Hepta	PCB-180	1000.00	5.49e+08	1.04 y	49:25	-	1.29
149	Hepta	PCB-193	1000.00	7.36e+08	1.05 y	49:37	-	1.72
150	Hepta	PCB-191	1000.00	7.57e+08	1.05 y	49:53	-	1.77
151	Hepta	PCB-170	1000.00	5.24e+08	1.04 y	50:56	-	1.55
152	Hepta	PCB-190	1000.00	7.39e+08	1.05 y	51:06	-	2.18
153	Hepta	PCB-189	1000.00	7.06e+08	1.05 y	52:27	-	1.55
154	Octa	PCB-202	1000.00	5.29e+08	0.89 y	48:21	-	0.96
155	Octa	PCB-201	1000.00	5.60e+08	0.88 y	48:50	-	1.02
156	Octa	PCB-204	1000.00	5.48e+08	0.88 y	48:59	-	1.00
157	Octa	PCB-197	1000.00	6.09e+08	0.89 y	49:17	-	1.11
158	Octa	PCB-200	1000.00	5.29e+08	0.88 y	50:11	-	0.96
159	Octa	PCB-198	1000.00	4.13e+08	0.96 y	51:32	-	0.75
160	Octa	PCB-199	1000.00	3.88e+08	0.81 y	51:38	-	0.71
161	Octa	PCB-196/203	2000.00	8.89e+08	0.89 y	51:55	-	0.81
162	Octa	PCB-195	1000.00	4.52e+08	0.91 y	53:05	-	1.16

163	Octa	PCB-194	1000.00	4.45e+08	0.90 y	53:58	-	1.14
164	Octa	PCB-205	1000.00	5.99e+08	0.92 y	54:15	-	1.53
165	Nona	PCB-208	1000.00	5.57e+08	1.30 y	53:14	-	0.91
166	Nona	PCB-207	1000.00	5.77e+08	1.31 y	53:33	-	0.95
167	Nona	PCB-206	1000.00	3.20e+08	1.30 y	55:35	-	0.79
168	Deca	PCB-209	1000.00	4.90e+08	1.17 y	56:57	-	1.23
169	Tot $\eta$	Total Mono-PCB	0.00	-	- n	-	-	1.33
170	Tot $\eta$	Total Di-PCB	0.00	-	- n	-	-	1.23



171	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.10
172	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.13
173	Tot η	Total Tetra-PCB	0.00	-	- n	-	-	1.04
174	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.14
175	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.28
176	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	0.93
177	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	1.06
178	Tot η	Total Hepta-PCB	0.00	-	- n	-	-	1.26
179	Tot η	Total Octa-PCB	0.00	-	- n	-	-	0.90
180	Tot η	Total Octa-PCB	0.00	-	- n	-	-	1.28
181	Tot η	Total Nona-PCB	0.00	-	- n	-	-	0.90
182	Tot η	Total Deca-PCB	1000.00	4.90e+08	1.17 y	56:57	-	1.23
183	Monoη	13C-PCB-1	100.00	1.04e+08	3.59 y	16:10	-	0.78
184	Monoη	13C-PCB-3	100.00	1.08e+08	3.59 y	18:47	-	0.81
185	Di-IS	13C-PCB-4	100.00	7.50e+07	1.62 y	20:07	-	0.57
186	Di-IS	13C-PCB-9	100.00	1.22e+08	1.57 y	21:55	-	0.92
187	Di-IS	13C-PCB-11	100.00	1.23e+08	1.57 y	25:17	-	0.93
188	Tri-η	13C-PCB-19	100.00	7.15e+07	1.09 y	24:17	-	0.54
189	Tri-η	13C-PCB-32	100.00	1.08e+08	1.10 y	27:12	-	0.81
190	Tri-η	13C-PCB-28	100.00	8.14e+07	1.06 y	29:09	-	1.15
191	Tri-η	13C-PCB-37	100.00	7.21e+07	1.00 y	33:01	-	1.02
192	Tetrη	13C-PCB-54	100.00	9.52e+07	0.76 y	28:02	-	1.08
193	Tetrη	13C-PCB-52	100.00	6.10e+07	0.76 y	31:34	-	0.69
194	Tetrη	13C-PCB-47	100.00	6.93e+07	0.76 y	32:04	-	0.79
195	Tetrη	13C-PCB-70	100.00	9.52e+07	0.77 y	35:35	-	1.08
196	Tetrη	13C-PCB-80	100.00	9.56e+07	0.77 y	36:00	-	1.08
197	Tetrη	13C-PCB-81	100.00	9.43e+07	0.77 y	39:06	-	1.07
198	Tetrη	13C-PCB-77	100.00	9.31e+07	0.78 y	39:42	-	1.06
199	Pentη	13C-PCB-104	100.00	6.44e+07	1.60 y	32:43	-	0.89
200	Pentη	13C-PCB-95	100.00	4.86e+07	1.62 y	35:53	-	0.67
201	Pentη	13C-PCB-101	100.00	5.46e+07	1.67 y	37:33	-	0.75
202	Pentη	13C-PCB-97	100.00	4.62e+07	1.66 y	38:52	-	0.64
203	Pentη	13C-PCB-123	100.00	6.30e+07	1.65 y	41:25	-	0.87
204	Pentη	13C-PCB-118	100.00	6.84e+07	1.63 y	41:36	-	0.95
205	Pentη	13C-PCB-114	100.00	6.88e+07	1.63 y	42:15	-	1.25
206	Pentη	13C-PCB-105	100.00	6.67e+07	1.58 y	43:07	-	1.21
207	Pentη	13C-PCB-127	100.00	7.14e+07	1.58 y	43:27	-	1.30
208	Pentη	13C-PCB-126	100.00	6.15e+07	1.59 y	45:21	-	1.12
209	Hexaη	13C-PCB-155	100.00	5.83e+07	1.23 y	37:06	-	0.81
210	Hexaη	13C-PCB-153	100.00	6.98e+07	1.26 y	43:17	-	1.27
211	Hexaη	13C-PCB-141	100.00	5.93e+07	1.28 y	44:01	-	1.08
212	Hexa	13C-PCB-138	100.00	6.37e+07	1.29 y	44:51	-	1.16
213	Hexaη	13C-PCB-159	100.00	7.72e+07	1.27 y	46:08	-	1.41
214	Hexaη	13C-PCB-167	100.00	7.55e+07	1.27 y	46:49	-	1.37
215	Hexaη	13C-PCB-156	100.00	7.74e+07	1.26 y	48:07	-	1.41
216	Hexaη	13C-PCB-157	100.00	8.11e+07	1.28 y	48:23	-	1.48
217	Hexaη	13C-PCB-169	100.00	7.75e+07	1.26 y	50:33	-	1.41
218	Heptη	13C-PCB-188	100.00	5.77e+07	0.46 y	42:55	-	1.05
219	Heptη	13C-PCB-180	100.00	4.27e+07	0.47 y	49:24	-	0.78
220	Heptη	13C-PCB-170	100.00	3.39e+07	0.46 y	50:55	-	0.62
221	Heptη	13C-PCB-189	100.00	4.55e+07	0.47 y	52:26	-	0.83

222	Octaη	13C-PCB-202	100.00	5.50e+07	0.90 y	48:20	-	1.00
223	Octaη	13C-PCB-194	100.00	3.90e+07	0.88 y	53:57	-	0.72
224	Nonaη	13C-PCB-208	100.00	6.09e+07	0.76 y	53:14	-	1.13
225	Nonaη	13C-PCB-206	100.00	4.02e+07	0.78 y	55:35	-	0.74
226	Decaη	13C-PCB-209	100.00	3.99e+07	1.19 y	56:56	-	0.74
227	DI-RS	13C-PCB-15	100.00	1.33e+08	1.59 y	26:00	-	1.00
228	Tri-η	13C-PCB-31	100.00	7.06e+07	1.04 y	29:03	-	1.00
229	Tetraη	13C-PCB-60	100.00	8.83e+07	0.76 y	36:49	-	1.00
230	Penta	13C-PCB-111	100.00	7.23e+07	1.63 y	39:18	-	1.00
231	Hexaη	13C-PCB-128	100.00	5.49e+07	1.27 y	46:25	-	1.00

232	Octaη	13C-PCB-205	100.00	5.41e+07	0.88 y	54:14	-	1.00
233	CRS	13C-PCB-79	100.00	9.97e+07	0.78 y	37:53	-	1.13
234	CRS	13C-PCB-178	100.00	3.44e+07	0.46 y	45:42	-	0.63
235	PS	13C-PCB-79	100.00	9.97e+07	0.78 y	37:53	-	1.06
236	PS	13C-PCB-178	100.00	3.44e+07	0.46 y	45:42	-	0.80

Filename: 150116E1 S: 2      Acquired: 16-JAN-15 08:51:27  
 Run: 150114e1    Analyte:                    ICal: pcbvg8-1-14-15      Results: 150114e1  
 Sample text: ST150116E1-2 PCB CS0 14L2902

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Mono	PCB-1	0.25	8.23e+05	2.94 y	16:10	-	1.40
2	Mono	PCB-2	0.25	8.54e+05	2.97 y	18:33	-	1.25
3	Mono	PCB-3	0.25	8.73e+05	2.80 y	18:47	-	1.27
4	Di	PCB-4/10	0.50	1.52e+06	1.35 y	20:10	-	1.98
5	Di	PCB-7/9	0.50	1.84e+06	1.60 y	21:57	-	1.43
6	Di	PCB-6	0.25	9.02e+05	1.49 y	22:35	-	1.41
7	Di	PCB-5/8	0.50	1.93e+06	1.40 y	23:00	-	1.50
8	Di	PCB-14	0.25	1.06e+06	1.71 y	24:06	-	1.64
9	Di	PCB-11	0.25	9.73e+05	1.71 y	25:18	-	1.51
10	Di	PCB-12/13	0.50	1.86e+06	1.64 y	25:41	-	1.44
11	Di	PCB-15	0.25	1.11e+06	1.59 y	25:59	-	1.72
12	Tri	PCB-19	0.25	4.86e+05	1.00 y	24:16	-	1.32
13	Tri	PCB-30	0.25	7.78e+05	1.01 y	25:10	-	2.11
14	Tri	PCB-18	0.25	5.31e+05	1.06 y	25:55	-	0.98
15	Tri	PCB-17	0.25	5.95e+05	0.99 y	26:05	-	1.10
16	Tri	PCB-24/27	0.50	1.64e+06	1.07 y	26:40	-	1.52
17	Tri	PCB-16/32	0.50	1.35e+06	1.01 y	27:10	-	1.25
18	Tri	PCB-34	0.25	6.39e+05	1.00 y	27:59	-	1.53
19	Tri	PCB-23	0.25	5.74e+05	1.11 y	28:05	-	1.37
20	Tri	PCB-29	0.25	5.69e+05	0.97 y	28:19	-	1.36
21	Tri	PCB-26	0.25	5.52e+05	1.11 y	28:32	-	1.32
22	Tri	PCB-25	0.25	4.36e+05	1.04 y	28:41	-	1.04
23	Tri	PCB-31	0.25	5.79e+05	1.08 y	29:02	-	1.38
24	Tri	PCB-28	0.25	5.76e+05	1.10 y	29:08	-	1.38
25	Tri	PCB-20/21/33	0.75	1.58e+06	1.08 y	29:46	-	1.26
26	Tri	PCB-22	0.25	5.67e+05	1.08 y	30:12	-	1.36
27	Tri	PCB-36	0.25	5.70e+05	0.95 y	30:49	-	1.42
28	Tri	PCB-39	0.25	5.42e+05	0.91 y	31:18	-	1.35
29	Tri	PCB-38	0.25	4.87e+05	1.13 y	32:03	-	1.22
30	Tri	PCB-35	0.25	5.42e+05	0.99 y	32:35	-	1.35
31	Tri	PCB-37	0.25	6.21e+05	1.00 y	33:01	-	1.55
32	Tetra	PCB-54	0.25	5.77e+05	0.67 y	28:01	-	1.21
33	Tetra	PCB-50	0.25	4.13e+05	0.75 y	29:12	-	0.87
34	Tetra	PCB-53	0.25	4.43e+05	0.78 y	29:50	-	1.36
35	Tetra	PCB-51	0.25	4.07e+05	0.88 y	30:11	-	1.25
36	Tetra	PCB-45	0.25	4.06e+05	0.68 y	30:37	-	1.25
37	Tetra	PCB-46	0.25	3.73e+05	0.69 y	31:06	-	1.15
38	Tetra	PCB-52/69	0.50	9.67e+05	0.72 y	31:35	-	1.49
39	Tetra	PCB-73	0.25	5.44e+05	0.66 y	31:42	-	1.67
40	Tetra	PCB-43/49	0.50	8.95e+05	0.73 y	31:52	-	1.37
41	Tetra	PCB-47	0.25	5.18e+05	0.66 y	32:04	-	1.53

42	Tetra	PCB-48/75	0.50	1.05e+06	0.73 y	32:11	-	1.56
43	Tetra	PCB-65	0.25	5.56e+05	0.78 y	32:27	-	1.64
44	Tetra	PCB-62	0.25	5.62e+05	0.80 y	32:33	-	1.66
45	Tetra	PCB-44	0.25	3.84e+05	0.80 y	32:52	-	1.13
46	Tetra	PCB-42/59	0.50	1.09e+06	0.73 y	33:05	-	1.61
47	Tetra	PCB-41/64/71/72	1.00	2.24e+06	0.68 y	33:40	-	1.65
48	Tetra	PCB-68	0.25	7.48e+05	0.76 y	33:56	-	2.21
49	Tetra	PCB-40	0.25	3.78e+05	0.77 y	34:08	-	1.11
50	Tetra	PCB-57	0.25	6.40e+05	0.76 y	34:30	-	1.44
51	Tetra	PCB-67	0.25	6.01e+05	0.76 y	34:48	-	1.35
52	Tetra	PCB-58	0.25	6.11e+05	0.84 y	34:56	-	1.37

53	Tetra	PCB-63	0.25	6.42e+05	0.73 y	35:05	-	1.44
54	Tetra	PCB-74	0.25	6.79e+05	0.76 y	35:22	-	1.52
55	Tetra	PCB-61/70	0.50	1.26e+06	0.79 y	35:32	-	1.42
56	Tetra	PCB-76/66	0.50	1.38e+06	0.72 y	35:46	-	1.55
57	Tetra	PCB-80	0.25	7.76e+05	0.66 y	36:00	-	1.65
58	Tetra	PCB-55	0.25	7.25e+05	0.69 y	36:19	-	1.54
59	Tetra	PCB-56/60	0.50	1.33e+06	0.69 y	36:48	-	1.40
60	Tetra	PCB-79	0.25	6.44e+05	0.72 y	37:52	-	1.37
61	Tetra	PCB-78	0.25	7.03e+05	0.86 y	38:34	-	1.51
62	Tetra	PCB-81	0.25	7.65e+05	0.71 y	39:06	-	1.64
63	Tetra	PCB-77	0.25	7.30e+05	0.72 y	39:41	-	1.65
64	Penta	PCB-104	0.25	5.67e+05	1.55 y	32:43	-	1.50
65	Penta	PCB-96	0.25	4.70e+05	1.56 y	33:59	-	1.25
66	Penta	PCB-103	0.25	3.98e+05	1.40 y	34:31	-	1.05
67	Penta	PCB-100	0.25	3.93e+05	1.57 y	34:52	-	1.04
68	Penta	PCB-94	0.25	3.35e+05	1.51 y	35:21	-	1.26
69	Penta	PCB-95/98/102	0.75	1.21e+06	1.44 y	35:49	-	1.52
70	Penta	PCB-93	0.25	3.27e+05	1.57 y	35:58	-	1.23
71	Penta	PCB-88/91	0.50	6.67e+05	1.73 y	36:14	-	1.26
72	Penta	PCB-121	0.25	5.54e+05	1.37 y	36:21	-	2.09
73	Penta	PCB-84/92	0.50	7.20e+05	1.52 y	37:11	-	1.20
74	Penta	PCB-89	0.25	3.45e+05	1.57 y	37:22	-	1.15
75	Penta	PCB-90/101	0.50	8.67e+05	1.49 y	37:33	-	1.45
76	Penta	PCB-113	0.25	4.42e+05	1.63 y	37:47	-	1.48
77	Penta	PCB-99	0.25	4.77e+05	1.32 y	37:53	-	1.59
78	Penta	PCB-119	0.25	5.55e+05	1.73 y	38:22	-	2.15
79	Penta	PCB-108/112	0.50	7.83e+05	1.67 y	38:31	-	1.51
80	Penta	PCB-83	0.25	4.64e+05	1.57 y	38:40	-	1.80
81	Penta	PCB-97	0.25	3.95e+05	1.40 y	38:52	-	1.53
82	Penta	PCB-86	0.25	3.56e+05	1.44 y	39:00	-	1.38
83	Penta	PCB-87/117/125	0.75	1.35e+06	1.64 y	39:08	-	1.74
84	Penta	PCB-111/115	0.50	1.14e+06	1.55 y	39:17	-	2.20
85	Penta	PCB-85/116	0.50	8.83e+05	1.60 y	39:25	-	1.71
86	Penta	PCB-120	0.25	6.10e+05	1.61 y	39:40	-	2.36
87	Penta	PCB-110	0.25	5.31e+05	1.49 y	39:48	-	2.05
88	Penta	PCB-82	0.25	3.08e+05	1.51 y	40:25	-	0.89
89	Penta	PCB-124	0.25	4.70e+05	1.54 y	41:06	-	1.36
90	Penta	PCB-107/109	0.50	1.12e+06	1.59 y	41:14	-	1.62
91	Penta	PCB-123	0.25	5.08e+05	1.71 y	41:26	-	1.47
92	Penta	PCB-106/118	0.50	1.14e+06	1.54 y	41:37	-	1.58
93	Penta	PCB-114	0.25	6.35e+05	1.49 y	42:16	-	1.70
94	Penta	PCB-122	0.25	5.14e+05	1.72 y	42:23	-	1.38
95	Penta	PCB-105	0.25	6.49e+05	1.73 y	43:07	-	1.79
96	Penta	PCB-127	0.25	5.82e+05	1.76 y	43:28	-	1.53
97	Penta	PCB-126	0.25	5.40e+05	1.61 y	45:21	-	1.55
98	Hexa	PCB-155	0.25	4.38e+05	1.32 y	37:07	-	1.33
99	Hexa	PCB-150	0.25	4.32e+05	1.10 y	38:22	-	1.31
100	Hexa	PCB-152	0.25	4.91e+05	1.20 y	38:51	-	1.49
101	Hexa	PCB-145	0.25	4.05e+05	1.30 y	39:17	-	1.23
102	Hexa	PCB-136	0.25	4.29e+05	1.20 y	39:37	-	1.30

103	Hexa	PCB-148	0.25	3.04e+05	1.36 y	39:43	-	0.92
104	Hexa	PCB-154	0.25	3.60e+05	1.19 y	40:13	-	1.09
105	Hexa	PCB-151	0.25	3.00e+05	1.24 y	40:50	-	0.91
106	Hexa	PCB-135	0.25	2.94e+05	1.38 y	41:04	-	0.89
107	Hexa	PCB-144	0.25	3.27e+05	1.29 y	41:10	-	0.99
108	Hexa	PCB-147	0.25	3.02e+05	1.31 y	41:18	-	0.92
109	Hexa	PCB-139/149	0.50	6.50e+05	1.18 y	41:34	-	0.99
110	Hexa	PCB-140	0.25	2.95e+05	1.42 y	41:45	-	0.90
111	Hexa	PCB-134/143	0.50	8.06e+05	1.27 y	42:11	-	1.08
112	Hexa	PCB-133/142	0.50	7.42e+05	1.18 y	42:29	-	1.00
113	Hexa	PCB-131	0.25	3.29e+05	1.26 y	42:39	-	0.89

114	Hexa	PCB-146/165	0.50	8.57e+05	1.23 y	42:52	-	1.15
115	Hexa	PCB-132/161	0.50	9.37e+05	1.30 y	43:07	-	1.26
116	Hexa	PCB-153	0.25	5.93e+05	1.35 y	43:16	-	1.60
117	Hexa	PCB-168	0.25	5.66e+05	1.42 y	43:30	-	1.52
118	Hexa	PCB-141	0.25	4.25e+05	1.18 y	44:01	-	1.36
119	Hexa	PCB-137	0.25	4.29e+05	1.26 y	44:24	-	1.38
120	Hexa	PCB-130	0.25	3.31e+05	1.11 y	44:30	-	1.06
121	Hexa	PCB-138/163/164	0.75	1.63e+06	1.16 y	44:53	-	1.69
122	Hexa	PCB-158/160	0.50	1.19e+06	1.31 y	45:07	-	1.84
123	Hexa	PCB-129	0.25	3.95e+05	1.21 y	45:21	-	1.23
124	Hexa	PCB-166	0.25	5.35e+05	1.28 y	45:49	-	1.37
125	Hexa	PCB-159	0.25	5.69e+05	1.35 y	46:08	-	1.46
126	Hexa	PCB-128/162	0.50	9.34e+05	1.12 y	46:26	-	1.20
127	Hexa	PCB-167	0.25	5.71e+05	1.24 y	46:49	-	1.42
128	Hexa	PCB-156	0.25	5.58e+05	1.24 y	48:06	-	1.44
129	Hexa	PCB-157	0.25	5.78e+05	1.29 y	48:22	-	1.41
130	Hexa	PCB-169	0.25	4.98e+05	1.30 y	50:32	-	1.20
131	Hepta	PCB-188	0.25	5.36e+05	0.97 y	42:55	-	1.88
132	Hepta	PCB-184	0.25	4.31e+05	1.00 y	43:22	-	1.51
133	Hepta	PCB-179	0.25	4.62e+05	1.08 y	44:08	-	1.62
134	Hepta	PCB-176	0.25	4.83e+05	1.07 y	44:36	-	1.69
135	Hepta	PCB-186	0.25	4.94e+05	1.00 y	45:13	-	1.73
136	Hepta	PCB-178	0.25	3.70e+05	1.00 y	45:42	-	1.30
137	Hepta	PCB-175	0.25	3.47e+05	1.08 y	46:02	-	1.22
138	Hepta	PCB-182/187	0.50	7.45e+05	1.05 y	46:13	-	1.31
139	Hepta	PCB-183	0.25	4.00e+05	0.93 y	46:33	-	1.40
140	Hepta	PCB-185	0.25	3.66e+05	0.97 y	47:12	-	1.68
141	Hepta	PCB-174	0.25	3.21e+05	1.06 y	47:34	-	1.47
142	Hepta	PCB-181	0.25	3.20e+05	1.15 y	47:40	-	1.46
143	Hepta	PCB-177	0.25	3.38e+05	1.05 y	47:50	-	1.55
144	Hepta	PCB-171	0.25	3.67e+05	1.16 y	48:07	-	1.68
145	Hepta	PCB-173	0.25	2.66e+05	1.19 y	48:33	-	1.22
146	Hepta	PCB-172	0.25	3.69e+05	0.98 y	48:59	-	1.69
147	Hepta	PCB-192	0.25	4.47e+05	1.15 y	49:11	-	2.05
148	Hepta	PCB-180	0.25	3.93e+05	1.10 y	49:24	-	1.80
149	Hepta	PCB-193	0.25	4.76e+05	0.93 y	49:36	-	2.18
150	Hepta	PCB-191	0.25	4.59e+05	1.01 y	49:51	-	2.10
151	Hepta	PCB-170	0.25	3.50e+05	0.92 y	50:55	-	2.01
152	Hepta	PCB-190	0.25	4.53e+05	1.20 y	51:05	-	2.60
153	Hepta	PCB-189	0.25	4.45e+05	1.16 y	52:25	-	1.88
154	Octa	PCB-202	0.25	3.30e+05	0.89 y	48:20	-	1.16
155	Octa	PCB-201	0.25	3.56e+05	0.82 y	48:49	-	1.25
156	Octa	PCB-204	0.25	3.77e+05	0.86 y	48:58	-	1.33
157	Octa	PCB-197	0.25	3.89e+05	0.83 y	49:17	-	1.37
158	Octa	PCB-200	0.25	3.52e+05	0.82 y	50:10	-	1.24
159	Octa	PCB-198	0.25	2.51e+05	0.98 y	51:31	-	0.88
160	Octa	PCB-199	0.25	2.48e+05	0.90 y	51:38	-	0.87
161	Octa	PCB-196/203	0.50	5.74e+05	0.85 y	51:54	-	1.01
162	Octa	PCB-195	0.25	2.88e-05	0.95 y	53:05	-	1.34
163	Octa	PCB-194	0.25	3.47e+05	0.88 y	53:57	-	1.61



164	Octa	PCB-205	0.25	4.05e+05	0.83 y	54:13	-	1.88
165	Nona	PCB-208	0.25	3.37e+05	1.26 y	53:14	-	1.18
166	Nona	PCB-207	0.25	3.54e+05	1.38 y	53:33	-	1.24
167	Nona	PCB-206	0.25	2.13e+05	1.52 y	55:34	-	1.08
168	Deca	PCB-209	0.25	3.27e+05	1.27 y	56:56	-	1.69
169	Tot η	Total Mono-PCB	0.00	-	- n	-	-	1.30
170	Tot η	Total Di-PCB	0.00	-	- n	-	-	1.52
171	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.39

172	Tot η	Total Tri-PCB	0.00	-	- n	-	-	1.34
173	Tot η	Total Tetra-PCB	0.00	-	- n	-	-	1.42
174	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.42
175	Tot η	Total Penta-PCB	0.00	-	- n	-	-	1.59
176	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	1.09
177	Tot η	Total Hexa-PCB	0.00	-	- n	-	-	1.32
178	Tot η	Total Hepta-PCB	0.00	-	- n	-	-	1.61
179	Tot η	Total Octa-PCB	0.00	-	- n	-	-	1.12
180	Tot η	Total Octa-PCB	0.00	-	- n	-	-	1.61
181	Tot η	Total Nona-PCB	0.00	-	- n	-	-	1.18
182	Tot η	Total Deca-PCB	0.25	3.27e+05	1.27 y	56:56	-	1.69
183	Monoη	13C-PCB-1	100.00	2.35e+08	3.49 y	16:09	-	0.87
184	Monoη	13C-PCB-3	100.00	2.74e+08	3.42 y	18:46	-	1.01
185	Di-IS	13C-PCB-4	100.00	1.53e+08	1.60 y	20:06	-	0.57
186	Di-IS	13C-PCB-9	100.00	2.57e+08	1.58 y	21:53	-	0.95
187	Di-IS	13C-PCB-11	100.00	2.58e+08	1.57 y	25:16	-	0.95
188	Tri-η	13C-PCB-19	100.00	1.47e+08	1.12 y	24:15	-	0.54
189	Tri-η	13C-PCB-32	100.00	2.16e+08	1.11 y	27:10	-	0.80
190	Tri-η	13C-PCB-28	100.00	1.67e+08	1.03 y	29:08	-	1.00
191	Tri-η	13C-PCB-37	100.00	1.60e+08	1.04 y	33:00	-	0.96
192	Tetraη	13C-PCB-54	100.00	1.91e+08	0.76 y	28:01	-	1.03
193	Tetraη	13C-PCB-52	100.00	1.30e+08	0.78 y	31:32	-	0.70
194	Tetraη	13C-PCB-47	100.00	1.36e+08	0.78 y	32:03	-	0.73
195	Tetraη	13C-PCB-70	100.00	1.78e+08	0.78 y	35:33	-	0.96
196	Tetraη	13C-PCB-80	100.00	1.89e+08	0.79 y	35:59	-	1.02
197	Tetraη	13C-PCB-81	100.00	1.86e+08	0.78 y	39:05	-	1.00
198	Tetraη	13C-PCB-77	100.00	1.77e+08	0.79 y	39:41	-	0.95
199	Pentη	13C-PCB-104	100.00	1.51e+08	1.58 y	32:42	-	0.96
200	Pentη	13C-PCB-95	100.00	1.06e+08	1.59 y	35:52	-	0.68
201	Pentη	13C-PCB-101	100.00	1.20e+08	1.60 y	37:33	-	0.76
202	Pentη	13C-PCB-97	100.00	1.03e+08	1.63 y	38:51	-	0.66
203	Pentη	13C-PCB-123	100.00	1.38e+08	1.61 y	41:25	-	0.88
204	Pentη	13C-PCB-118	100.00	1.44e+08	1.62 y	41:35	-	0.91
205	Pentη	13C-PCB-114	100.00	1.49e+08	1.59 y	42:15	-	1.32
206	Pentη	13C-PCB-105	100.00	1.45e+08	1.60 y	43:06	-	1.29
207	Pentη	13C-PCB-127	100.00	1.52e+08	1.58 y	43:26	-	1.34
208	Pentη	13C-PCB-126	100.00	1.39e+08	1.58 y	45:20	-	1.23
209	Hexaη	13C-PCB-155	100.00	1.32e+08	1.26 y	37:05	-	0.84
210	Hexaη	13C-PCB-153	100.00	1.49e+08	1.28 y	43:16	-	1.31
211	Hexaη	13C-PCB-141	100.00	1.25e+08	1.29 y	44:00	-	1.10
212	Hexa	13C-PCB-138	100.00	1.29e+08	1.29 y	44:51	-	1.14
213	Hexaη	13C-PCB-159	100.00	1.56e+08	1.29 y	46:07	-	1.38
214	Hexaη	13C-PCB-167	100.00	1.61e+08	1.27 y	46:49	-	1.42
215	Hexaη	13C-PCB-156	100.00	1.55e+08	1.30 y	48:06	-	1.37
216	Hexaη	13C-PCB-157	100.00	1.64e+08	1.33 y	48:22	-	1.45
217	Hexaη	13C-PCB-169	100.00	1.66e+08	1.26 y	50:32	-	1.46
218	Heptη	13C-PCB-188	100.00	1.14e+08	0.45 y	42:54	-	1.01
219	Heptη	13C-PCB-180	100.00	8.73e+07	0.47 y	49:23	-	0.77
220	Heptη	13C-PCB-170	100.00	6.97e+07	0.45 y	50:54	-	0.62
221	Heptη	13C-PCB-189	100.00	9.47e-07	0.46 y	52:25	-	0.84
222	Octaη	13C-PCB-202	100.00	1.14e+08	0.93 y	48:19	-	1.00

223	Octaη	13C-PCB-194	100.00	8.63e+07	0.90 y	53:56	-	0.73
224	Nonaη	13C-PCB-208	100.00	1.14e+08	0.77 y	53:13	-	0.97
225	Nonaη	13C-PCB-206	100.00	7.88e+07	0.76 y	55:34	-	0.67
226	Decaη	13C-PCB-209	100.00	7.76e+07	1.20 y	56:55	-	0.66
227	DI-RS	13C-PCB-15	100.00	2.71e+08	1.57 y	25:59	-	1.00
228	Tri-η	13C-PCB-31	100.00	1.67e+08	1.05 y	29:01	-	1.00
229	Tetrη	13C-PCB-60	100.00	1.85e+08	0.79 y	36:48	-	1.00
230	Penta	13C-PCB-111	100.00	1.57e+08	1.61 y	39:17	-	1.00
231	Hexaη	13C-PCB-128	100.00	1.13e+08	1.27 y	46:23	-	1.00
232	Octaη	13C-PCB-205	100.00	1.18e+08	0.91 y	54:13	-	1.00

233	CRS	13C-PCB-79	100.00	1.81e+08	0.78 y	37:52	-	0.97
234	CRS	13C-PCB-178	100.00	7.34e+07	0.47 y	45:41	-	0.65
235	PS	13C-PCB-79	100.00	1.81e+08	0.78 y	37:52	-	0.97
236	PS	13C-PCB-178	100.00	7.34e+07	0.47 y	45:41	-	0.84

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150114E1-5      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICAL ID: PCBVG8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150114E1    SH6    Analysis Date: 14-JAN-15 Time: 18:00:03

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	2.99	2.66-3.60	y	46.1	37.5-62.5	PCB-52/69	0.74	0.65-0.89	y	93.1	75.0-125
PCB-2	2.99	2.66-3.60	y	48.8	37.5-62.5	PCB-73	0.75	0.65-0.89	y	50.2	37.5-62.5
PCB-3	2.98	2.66-3.60	y	48.7	37.5-62.5	PCB-43/49	0.73	0.65-0.89	y	93.4	75.0-125
PCB-4/10	1.64	1.33-1.79	y	93.0	75-125	PCB-47	0.74	0.65-0.89	y	45.6	37.5-62.5
PCB-7/9	1.63	1.33-1.79	y	94.5	75-125	PCB-48/75	0.73	0.65-0.89	y	90.7	75.0-125
PCB-6	1.65	1.33-1.79	y	47.6	37.5-62.5	PCB-65	0.73	0.65-0.89	y	42.9	37.5-62.5
PCB-5/8	1.64	1.33-1.79	y	92.5	75-125	PCB-62	0.74	0.65-0.89	y	47.2	37.5-62.5
PCB-14	1.64	1.33-1.79	y	48.1	37.5-62.5	PCB-44	0.74	0.65-0.89	y	46.2	37.5-62.5
PCB-11	1.68	1.33-1.79	y	47.1	37.5-62.5	PCB-42/59	0.74	0.65-0.89	y	85.0	75.0-125
PCB-12/13	1.65	1.33-1.79	y	94.6	75-125	PCB-41/64/71/72	0.73	0.65-0.89	y	170.4	150-250
PCB-15	1.65	1.33-1.79	y	47.1	37.5-62.5	PCB-68	0.73	0.65-0.89	y	40.2	37.5-62.5
PCB-19	1.06	0.88-1.20	y	47.6	37.5-62.5	PCB-40	0.73	0.65-0.89	y	40.8	37.5-62.5
PCB-30	1.05	0.88-1.20	y	47.9	37.5-62.5	PCB-57	0.74	0.65-0.89	y	46.0	37.5-62.5
PCB-18	1.06	0.88-1.20	y	47.8	37.5-62.5	PCB-67	0.73	0.65-0.89	y	45.9	37.5-62.5
PCB-17	1.05	0.88-1.20	y	48.2	37.5-62.5	PCB-58	0.76	0.65-0.89	y	49.2	37.5-62.5
PCB-24/27	1.06	0.88-1.20	y	95.1	75.0-125	PCB-63	0.71	0.65-0.89	y	47.3	37.5-62.5
PCB-16/32	1.05	0.88-1.20	y	93.3	75.0-125	PCB-74	0.74	0.65-0.89	y	44.5	37.5-62.5
PCB-34	1.01	0.88-1.20	y	45.7	37.5-62.5	PCB-61/70	0.73	0.65-0.89	y	92.8	75.0-125
PCB-23	1.06	0.88-1.20	y	47.9	37.5-62.5	PCB-76/66	0.74	0.65-0.89	y	90.0	75.0-125
PCB-29	1.01	0.88-1.20	y	43.7	37.5-62.5	PCB-80	0.74	0.65-0.89	y	45.2	37.5-62.5
PCB-26	1.00	0.88-1.20	y	44.9	37.5-62.5	PCB-55	0.74	0.65-0.89	y	45.9	37.5-62.5
PCB-25	1.01	0.88-1.20	y	45.8	37.5-62.5	PCB-56/60	0.73	0.65-0.89	y	88.4	75.0-125
PCB-31	1.03	0.88-1.20	y	45.4	37.5-62.5	PCB-79	0.73	0.65-0.89	y	44.5	37.5-62.5
PCB-28	1.04	0.88-1.20	y	43.3	37.5-62.5	PCB-78	0.74	0.65-0.89	y	43.6	37.5-62.5
PCB-20/21/33	1.02	0.88-1.20	y	136.2	112.5-225	PCB-81	0.75	0.65-0.89	y	45.5	37.5-62.5
PCB-22	1.03	0.88-1.20	y	46.7	37.5-62.5	PCB-77	0.76	0.65-0.89	y	45.7	37.5-62.5
PCB-36	1.05	0.88-1.20	y	53.8	37.5-62.5	PCB-104	1.59	1.32-1.78	y	45.9	37.5-62.5
PCB-39	1.05	0.88-1.20	y	50.8	37.5-62.5	PCB-96	1.56	1.32-1.78	y	43.9	37.5-62.5
PCB-38	1.03	0.88-1.20	y	52.5	37.5-62.5	PCB-103	1.54	1.32-1.78	y	44.4	37.5-62.5
PCB-35	1.03	0.88-1.20	y	50.7	37.5-62.5	PCB-100	1.57	1.32-1.78	y	45.3	37.5-62.5
PCB-37	1.08	0.88-1.20	y	47.6	37.5-62.5	PCB-94	1.56	1.32-1.78	y	46.8	37.5-62.5
PCB-54	0.74	0.65-0.89	y	46.6	37.5-62.5	PCB-95/98/102	1.52	1.32-1.78	y	134.8	112.5-225
PCB-50	0.72	0.65-0.89	y	46.9	37.5-62.5	PCB-93	1.68	1.32-1.78	y	53.0	37.5-62.5
PCB-53	0.75	0.65-0.89	y	48.1	37.5-62.5	PCB-88/91	1.56	1.32-1.78	y	99.5	75.0-125
PCB-51	0.72	0.65-0.89	y	47.8	37.5-62.5	PCB-121	1.57	1.32-1.78	y	44.4	37.5-62.5
PCB-45	0.73	0.65-0.89	y	48.7	37.5-62.5						
PCB-46	0.73	0.65-0.89	y	45.8	37.5-62.5						

Analyst: DMS

Date: 1/20/15

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150114E1-5      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICal ID: pcbvg8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150114E1    S#6    Analysis Date: 14-JAN-15 Time: 18:00:03

ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	ANALYTES	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-84/92	1.54	1.32-1.78	y	97.1	75.0-125	PCB-140	1.24	1.05-1.43	y	44.8	37.5-62.5
PCB-89	1.53	1.32-1.78	y	47.5	37.5-62.5	PCB-134/143	1.22	1.05-1.43	y	91.8	75.0-125
PCB-90/101	1.56	1.32-1.78	y	93.5	75.0-125	PCB-133/142	1.24	1.05-1.43	y	93.1	75.0-125
PCB-113	1.55	1.32-1.78	y	51.7	37.5-62.5	PCB-131	1.16	1.05-1.43	y	46.7	37.5-62.5
PCB-99	1.60	1.32-1.78	y	41.4	37.5-62.5	PCB-146/165	1.22	1.05-1.43	y	93.5	75.0-125
PCB-119	1.56	1.32-1.78	y	47.0	37.5-62.5	PCB-132/161	1.22	1.05-1.43	y	92.8	75.0-125
PCB-108/112	1.56	1.32-1.78	y	94.2	75.0-125	PCB-153	1.21	1.05-1.43	y	43.2	37.5-62.5
PCB-83	1.57	1.32-1.78	y	47.6	37.5-62.5	PCB-168	1.22	1.05-1.43	y	46.7	37.5-62.5
PCB-97	1.55	1.32-1.78	y	46.2	37.5-62.5	PCB-141	1.22	1.05-1.43	y	45.4	37.5-62.5
PCB-86	1.46	1.32-1.78	y	48.0	37.5-62.5	PCB-137	1.18	1.05-1.43	y	45.4	37.5-62.5
PCB-87/117/125	1.59	1.32-1.78	y	142.8	112.5-225	PCB-130	1.21	1.05-1.43	y	48.2	37.5-62.5
PCB-111/115	1.56	1.32-1.78	y	95.3	75.0-125	PCB-138/163/164	1.21	1.05-1.43	y	137.7	112.5-225
PCB-85/116	1.60	1.32-1.78	y	95.6	75.0-125	PCB-158/160	1.22	1.05-1.43	y	93.2	75.0-125
PCB-120	1.53	1.32-1.78	y	46.1	37.5-62.5	PCB-129	1.20	1.05-1.43	y	44.6	37.5-62.5
PCB-110	1.56	1.32-1.78	y	47.5	37.5-62.5	PCB-166	1.21	1.05-1.43	y	46.6	37.5-62.5
PCB-82	1.56	1.32-1.78	y	48.9	37.5-62.5	PCB-159	1.22	1.05-1.43	y	47.9	37.5-62.5
PCB-124	1.57	1.32-1.78	y	49.4	37.5-62.5	PCB-128/162	1.20	1.05-1.43	y	94.0	75.0-125
PCB-107/109	1.58	1.32-1.78	y	90.6	75.0-125	PCB-167	1.17	1.05-1.43	y	46.3	37.5-62.5
PCB-123	1.55	1.32-1.78	y	48.4	37.5-62.5	PCB-156	1.19	1.05-1.43	y	46.7	37.5-62.5
PCB-106/118	1.54	1.32-1.78	y	92.8	75.0-125	PCB-157	1.21	1.05-1.43	y	46.2	37.5-62.5
PCB-114	1.62	1.32-1.78	y	46.9	37.5-62.5	PCB-169	1.20	1.05-1.43	y	47.2	37.5-62.5
PCB-122	1.63	1.32-1.78	y	45.9	37.5-62.5	PCB-188	1.06	0.89-1.21	y	47.0	37.5-62.5
PCB-105	1.65	1.32-1.78	y	47.1	37.5-62.5	PCB-184	1.05	0.89-1.21	y	47.6	37.5-62.5
PCB-127	1.69	1.32-1.78	y	47.5	37.5-62.5	PCB-179	1.03	0.89-1.21	y	47.9	37.5-62.5
PCB-126	1.64	1.32-1.78	y	49.3	37.5-62.5	PCB-176	1.04	0.89-1.21	y	48.0	37.5-62.5
PCB-155	1.23	1.05-1.43	y	46.8	37.5-62.5	PCB-186	1.05	0.89-1.21	y	46.9	37.5-62.5
PCB-150	1.24	1.05-1.43	y	45.2	37.5-62.5	PCB-178	1.06	0.89-1.21	y	46.4	37.5-62.5
PCB-152	1.25	1.05-1.43	y	44.2	37.5-62.5	PCB-175	1.06	0.89-1.21	y	48.1	37.5-62.5
PCB-145	1.24	1.05-1.43	y	45.5	37.5-62.5	PCB-182/187	1.05	0.89-1.21	y	93.3	75.0-125
PCB-136	1.23	1.05-1.43	y	47.5	37.5-62.5	PCB-183	1.04	0.89-1.21	y	47.4	37.5-62.5
PCB-148	1.24	1.05-1.43	y	43.6	37.5-62.5	PCB-185	1.05	0.89-1.21	y	47.6	37.5-62.5
PCB-154	1.23	1.05-1.43	y	45.1	37.5-62.5	PCB-174	1.05	0.89-1.21	y	48.5	37.5-62.5
PCB-151	1.25	1.05-1.43	y	46.1	37.5-62.5	PCB-181	1.08	0.89-1.21	y	48.3	37.5-62.5
PCB-135	1.23	1.05-1.43	y	45.1	37.5-62.5	PCB-177	1.04	0.89-1.21	y	45.9	37.5-62.5
PCB-144	1.33	1.05-1.43	y	45.7	37.5-62.5	PCB-171	1.05	0.89-1.21	y	46.1	37.5-62.5
PCB-147	1.15	1.05-1.43	y	43.6	37.5-62.5	PCB-173	1.04	0.89-1.21	y	49.0	37.5-62.5
PCB-139/149	1.23	1.05-1.43	y	88.3	75.0-125	PCB-172	1.04	0.89-1.21	y	46.8	37.5-62.5

Analyst: *DMS*

Date: *1/16/15*

NATIVE 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150114E1-5      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICal ID: pcbvg8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150114E1    S#6    Analysis Date: 14-JAN-15 Time: 18:00:03

ANALYTES	ION	QC	PASS	CONC.	CONC.
	ABUND.	LIMITS		FOUND	RANGE
	RATIO				(ng/mL)
PCB-192	1.05	0.89-1.21	y	46.3	37.5-62.5
PCB-180	1.03	0.89-1.21	y	45.4	37.5-62.5
PCB-193	1.04	0.89-1.21	y	46.5	37.5-62.5
PCB-191	1.04	0.89-1.21	y	47.3	37.5-62.5
PCB-170	1.02	0.89-1.21	y	46.7	37.5-62.5
PCB-190	1.07	0.89-1.21	y	48.3	37.5-62.5
PCB-189	1.05	0.89-1.21	y	47.3	37.5-62.5
PCB-202	0.91	0.76-1.02	y	47.0	37.5-62.5
PCB-201	0.87	0.76-1.02	y	46.2	37.5-62.5
PCB-204	0.89	0.76-1.02	y	44.7	37.5-62.5
PCB-197	0.91	0.76-1.02	y	46.5	37.5-62.5
PCB-200	0.87	0.76-1.02	y	46.9	37.5-62.5
PCB-198	0.89	0.76-1.02	y	48.5	37.5-62.5
PCB-199	0.90	0.76-1.02	y	45.7	37.5-62.5
PCB-196/203	0.89	0.76-1.02	y	90.5	75.0-125
PCB-195	0.91	0.76-1.02	y	46.9	37.5-62.5
PCB-194	0.92	0.76-1.02	y	45.7	37.5-62.5
PCB-205	0.92	0.76-1.02	y	48.0	37.5-62.5
PCB-208	1.31	1.14-1.54	y	46.2	37.5-62.5
PCB-207	1.33	1.14-1.54	y	46.8	37.5-62.5
PCB-206	1.31	1.14-1.54	y	46.5	37.5-62.5
PCB-209	1.16	0.99-1.33	y	44.9	37.5-62.5

Analyst: DM S

Date: 1/20/15

LABELED 1668C CONTINUING CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory      Lab ID: ST150114E1-5      Instrument ID: VG-8

Initial Calibration Date: 1-14-15      ICal ID: pcbvg8-1-14-15      GC Column ID: ZB-1

VER Data Filename: 150114E1    S#6    Analysis Date: 14-JAN-15 Time: 18:00:03

LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)	LABELED IS	ION ABUND. RATIO	QC LIMITS	PASS	CONC. FOUND	CONC. RANGE (ng/mL)
13C-PCB-1	3.59	2.66-3.60	y	107.5	50.0-145	13C-PCB-169	1.25	1.05-1.43	y	99.0	50 - 145
13C-PCB-3	3.55	2.66-3.60	y	100.5	50.0-145	13C-PCB-188	0.46	0.38-0.52	y	99.7	50 - 145
13C-PCB-4	1.59	1.33-1.79	y	104.5	50.0-145	13C-PCB-180	0.46	0.38-0.52	y	100.0	50 - 145
13C-PCB-9	1.58	1.33-1.79	y	102.4	50.0-145	13C-PCB-170	0.47	0.38-0.52	y	98.2	50 - 145
13C-PCB-11	1.57	1.33-1.79	y	100.8	50.0-145	13C-PCB-189	0.45	0.38-0.52	y	97.3	50 - 145
13C-PCB-19	1.10	0.88-1.20	y	99.4	50.0-145	13C-PCB-202	0.89	0.76-1.02	y	101.0	50 - 145
13C-PCB-32	1.10	0.88-1.20	y	99.7	50.0-145	13C-PCB-194	0.90	0.76-1.02	y	100.0	50 - 145
13C-PCB-28	1.03	0.88-1.20	y	113.1	50.0-145	13C-PCB-208	0.77	0.65-0.89	y	102.9	50 - 145
13C-PCB-37	1.04	0.88-1.20	y	103.7	50.0-145	13C-PCB-206	0.77	0.65-0.89	y	99.6	50 - 145
13C-PCB-54	0.78	0.65-0.89	y	108.1	50.0-145	13C-PCB-209	1.18	0.99-1.33	y	105.5	50 - 145
13C-PCB-52	0.76	0.65-0.89	y	107.2	50.0-145						
13C-PCB-47	0.77	0.65-0.89	y	108.7	50.0-145						
13C-PCB-70	0.76	0.65-0.89	y	100.0	50.0-145						
13C-PCB-80	0.78	0.65-0.89	y	101.0	50.0-145						
13C-PCB-81	0.77	0.65-0.89	y	101.8	50.0-145						
13C-PCB-77	0.79	0.65-0.89	y	101.1	50.0-145						
13C-PCB-104	1.61	1.32-1.78	y	109.1	50.0-145						
13C-PCB-95	1.61	1.32-1.78	y	102.4	50.0-145						
13C-PCB-101	1.62	1.32-1.78	y	98.6	50.0-145						
13C-PCB-97	1.65	1.32-1.78	y	100.4	50.0-145	CRS vs. RS					
13C-PCB-123	1.61	1.32-1.78	y	99.1	50.0-145	13C-PCB-79	0.77	0.65-0.89	y	97.0	75 - 125
13C-PCB-118	1.60	1.32-1.78	y	99.9	50.0-145	13C-PCB-178	0.45	0.38-0.52	y	98.8	75 - 125
13C-PCB-114	1.57	1.32-1.78	y	99.9	50.0-145						
13C-PCB-105	1.58	1.32-1.78	y	99.1	50.0-145						
13C-PCB-127	1.55	1.32-1.78	y	97.3	50.0-145						
13C-PCB-126	1.61	1.32-1.78	y	93.9	50.0-145						
13C-PCB-155	1.23	1.05-1.43	y	106.9	50.0-145						
13C-PCB-153	1.29	1.05-1.43	y	101.6	50.0-145						
13C-PCB-141	1.29	1.05-1.43	y	101.3	50.0-145						
13C-PCB-138	1.26	1.05-1.43	y	99.4	50.0-145						
13C-PCB-159	1.31	1.05-1.43	y	98.9	50.0-145						
13C-PCB-167	1.27	1.05-1.43	y	101.9	50.0-145						
13C-PCB-156	1.27	1.05-1.43	y	98.5	50.0-145						
13C-PCB-157	1.32	1.05-1.43	y	99.7	50.0-145						

Analyst: DMS

Date: 1/20/15



Client ID: PCB CS3 14L1801  
Lab ID: ST150114E1-5

Filename: 150114E1 S:6 Acq:14-JAN-15 18:00:03  
GC Column ID: ZB-1 ICal: pcbvg8-1-14-15 wt/vol: 1.0000 EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-1	8.07e+07	2.99	y	1.33	16:11	1.001	0.997-1.007	52.0249	PCB-52/69	8.00e+07	0.74	y	1.29	31:35	1.001	0.996-1.006	93.0967
PCB-2	8.02e+07	2.99	y	1.30	18:33	0.988	0.983-0.993	54.7140	PCB-73	4.72e+07	0.75	y	1.41	31:42	1.005	0.999-1.009	50.2177
PCB-3	8.03e+07	2.98	y	1.30	18:47	1.001	0.996-1.006	54.6072	PCB-43/49	7.08e+07	0.73	y	1.14	31:52	1.010	1.005-1.015	93.3696
PCB-4/10	1.30e+08	1.64	y	1.67	20:10	1.002	0.997-1.007	93.0306	PCB-47	3.98e+07	0.74	y	1.20	32:04	1.001	0.996-1.006	45.5825
PCB-7/9	1.56e+08	1.63	y	1.25	21:57	0.868	0.864-0.872	94.4847	PCB-48/75	8.76e+07	0.73	y	1.33	32:11	1.004	0.999-1.009	90.7089
PCB-6	7.76e+07	1.65	y	1.24	22:35	0.893	0.888-0.897	47.5758	PCB-65	4.12e+07	0.73	y	1.32	32:26	1.012	1.007-1.017	42.9478
PCB-5/8	1.55e+08	1.64	y	1.27	23:00	0.910	0.905-0.915	92.4994	PCB-62	4.67e+07	0.74	y	1.36	32:33	1.016	1.011-1.021	47.2058
PCB-14	9.12e+07	1.64	y	1.47	24:06	0.953	0.948-0.958	48.1061	PCB-44	2.93e+07	0.74	y	0.87	32:51	1.025	1.020-1.030	46.1675
PCB-11	7.80e+07	1.68	y	1.28	25:17	1.000	0.995-1.005	47.0854	PCB-42/59	7.65e+07	0.74	y	1.24	33:05	1.032	1.027-1.037	85.0074
PCB-12/13	1.55e+08	1.65	y	1.27	25:41	1.016	1.011-1.021	94.5607	PCB-41/64/71/72	1.66e+08	0.73	y	1.34	33:40	1.050	1.045-1.055	170.423
PCB-15	8.75e+07	1.65	y	1.44	26:00	1.028	1.023-1.031	47.1177	PCB-68	4.72e+07	0.73	y	1.61	33:56	1.059	1.053-1.063	40.2479
PCB-19	4.22e+07	1.06	y	1.18	24:17	1.001	0.996-1.006	47.5975	PCB-40	2.55e+07	0.73	y	0.86	34:09	1.066	1.061-1.071	40.7920
PCB-30	6.72e+07	1.05	y	1.87	25:11	1.038	1.033-1.043	47.8879	PCB-57	4.47e+07	0.74	y	1.12	34:30	0.970	0.965-0.975	46.0101
PCB-18	4.67e+07	1.06	y	0.89	25:55	0.954	0.949-0.959	47.7748	PCB-67	4.34e+07	0.73	y	1.09	34:49	0.979	0.974-0.984	45.9086
PCB-17	5.08e+07	1.05	y	0.96	26:06	0.961	0.956-0.966	48.1501	PCB-58	4.85e+07	0.76	y	1.14	34:55	0.982	0.977-0.987	49.2155
PCB-24/27	1.36e+08	1.06	y	1.30	26:40	0.982	0.977-0.987	95.1310	PCB-63	4.77e+07	0.71	y	1.16	35:05	0.986	0.981-0.991	47.3221
PCB-16/32	1.08e+08	1.05	y	1.05	27:11	1.001	0.996-1.006	93.2649	PCB-74	4.68e+07	0.74	y	1.21	35:22	0.994	0.989-0.999	44.4585
PCB-34	5.36e+07	1.01	y	1.30	27:58	0.960	0.955-0.965	45.6626	PCB-61/70	9.06e+07	0.73	y	1.13	35:33	1.000	0.995-1.005	92.8240
PCB-23	5.23e+07	1.06	y	1.21	28:04	0.963	0.958-0.968	47.8931	PCB-76/66	9.21e+07	0.74	y	1.18	35:46	1.006	1.000-1.010	90.0496
PCB-29	4.77e+07	1.01	y	1.21	28:19	0.972	0.967-0.977	43.6736	PCB-80	5.39e+07	0.74	y	1.32	36:00	1.000	0.995-1.005	45.2354
PCB-26	5.01e+07	1.00	y	1.24	28:31	0.979	0.974-0.984	44.8563	PCB-55	5.08e+07	0.74	y	1.23	36:19	1.009	1.004-1.014	45.9074
PCB-25	4.54e+07	1.01	y	1.10	28:41	0.985	0.980-0.990	45.8240	PCB-56/60	8.80e+07	0.73	y	1.11	36:49	1.023	1.018-1.028	88.4456
PCB-31	5.13e+07	1.03	y	1.25	29:03	0.997	0.992-1.002	45.3770	PCB-79	4.65e+07	0.73	y	1.16	37:53	1.053	1.048-1.058	44.5110
PCB-28	4.84e+07	1.04	y	1.24	29:09	1.001	0.996-1.006	43.3229	PCB-78	4.56e+07	0.74	y	1.18	38:34	0.987	0.982-0.992	43.6493
PCB-20/21/33	1.42e+08	1.02	y	1.16	29:45	1.021	1.016-1.026	136.238	PCB-81	5.20e+07	0.75	y	1.29	39:06	1.000	0.995-1.005	45.4820
PCB-22	4.91e+07	1.03	y	1.16	30:12	1.037	1.032-1.042	46.7230	PCB-77	5.01e+07	0.76	y	1.29	39:42	1.001	0.995-1.005	45.6501
PCB-36	5.22e+07	1.05	y	1.30	30:49	0.934	0.929-0.939	53.8213	PCB-104	4.01e+07	1.59	y	1.26	32:44	1.001	0.996-1.006	45.8646
PCB-39	4.78e+07	1.05	y	1.26	31:17	0.948	0.943-0.953	50.8404	PCB-96	3.32e+07	1.56	y	1.09	33:59	1.039	1.034-1.044	43.9315
PCB-38	4.87e+07	1.03	y	1.24	32:04	0.972	0.967-0.977	52.5442	PCB-103	2.97e+07	1.54	y	0.97	34:31	1.056	1.051-1.061	44.3834
PCB-35	4.75e+07	1.03	y	1.26	32:34	0.987	0.982-0.992	50.7102	PCB-100	3.02e+07	1.57	y	0.96	34:52	1.066	1.061-1.071	45.2813
PCB-37	4.79e+07	1.08	y	1.35	33:01	1.001	0.996-1.006	47.5517	PCB-94	2.48e+07	1.56	y	1.13	35:20	0.985	0.980-0.990	46.7663
PCB-54	4.77e+07	0.74	y	1.02	28:02	1.001	0.996-1.006	46.5543	PCB-95/98/102	8.16e+07	1.52	y	1.29	35:50	0.999	0.994-1.004	134.832
PCB-50	3.65e+07	0.72	y	0.78	29:12	1.042	1.037-1.047	46.9035	PCB-93	2.65e+07	1.68	y	1.06	35:58	1.003	0.998-1.008	53.0450
PCB-53	3.64e+07	0.75	y	1.14	29:51	0.946	0.941-0.951	48.0525	PCB-88/91	5.25e+07	1.56	y	1.12	36:15	1.011	1.006-1.016	99.4803
PCB-51	3.70e+07	0.72	y	1.16	30:11	0.957	0.952-0.962	47.8251	PCB-121	3.67e+07	1.57	y	1.76	36:22	1.014	1.009-1.019	44.4163
PCB-45	3.37e+07	0.73	y	1.04	30:37	0.970	0.965-0.975	48.6868	PCB-84/92	5.15e+07	1.54	y	1.07	37:11	0.990	0.985-0.995	97.0520
PCB-46	2.89e+07	0.73	y	0.95	31:06	0.986	0.981-0.991	45.7766	PCB-89	2.34e+07	1.53	y	1.00	37:22	0.995	0.990-1.000	47.4938

RL: MONO, TRI - DECA: \_\_\_\_\_

RL: DI : \_\_\_\_\_

Integrations  
by

Analyst: Dms

Date: 1/16/15

Reviewed  
by

Analyst: \_\_\_\_\_

Date: \_\_\_\_\_

Client ID: PCB CS3 14L1801  
Lab ID: ST150114E1-5

Filename: 150114E1 S:6 Acq:14-JAN-15 18:00:03 ConCal: NA  
GC Column ID: ZB-1 ICal: pcbvg8-1-14-15 wt/vol: 1.0000 EndCAL: NA

Page 1 of

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-90/101	5.59e+07	1.56	y	1.21	37:33	1.000	0.995-1.005	93.4510	PCB-133/142	5.46e+07	1.24	y	0.91	42:29	0.982	0.977-0.987	93.0668
PCB-113	3.44e+07	1.55	y	1.34	37:48	1.007	1.002-1.012	51.7174	PCB-131	2.55e+07	1.16	y	0.85	42:38	0.986	0.981-0.991	46.7153
PCB-99	2.56e+07	1.60	y	1.25	37:54	1.009	1.004-1.014	41.4323	PCB-146/165	6.52e+07	1.22	y	1.08	42:51	0.991	0.986-0.996	93.4865
PCB-119	3.83e+07	1.56	y	1.88	38:21	0.987	0.982-0.992	46.9690	PCB-132/161	6.70e+07	1.22	y	1.12	43:06	0.997	0.992-1.002	92.8456
PCB-108/112	5.74e+07	1.56	y	1.41	38:30	0.991	0.986-0.996	94.2376	PCB-153	3.34e+07	1.21	y	1.20	43:17	1.001	0.996-1.006	43.2433
PCB-83	3.43e+07	1.57	y	1.66	38:40	0.995	0.990-1.000	47.6313	PCB-168	4.08e+07	1.22	y	1.36	43:29	1.005	1.000-1.010	46.6695
PCB-97	2.60e+07	1.55	y	1.30	38:52	1.000	0.995-1.005	46.2488	PCB-141	2.90e+07	1.22	y	1.16	44:00	1.000	0.995-1.005	45.4172
PCB-86	2.15e+07	1.46	y	1.03	39:00	1.004	0.999-1.009	47.9826	PCB-137	2.95e+07	1.18	y	1.18	44:24	1.009	1.004-1.014	45.3841
B-87/117/125	9.85e+07	1.59	y	1.59	39:08	1.007	1.002-1.012	142.777	PCB-130	2.45e+07	1.21	y	0.92	44:29	1.011	1.006-1.016	48.1957
PCB-111/115	7.67e+07	1.56	y	1.86	39:17	1.011	1.006-1.016	95.2753	PCB-138/163/164	1.05e+08	1.21	y	1.38	44:52	1.001	0.996-1.006	137.688
PCB-85/116	5.77e+07	1.60	y	1.39	39:25	1.015	1.010-1.020	95.6148	PCB-158/160	7.63e+07	1.22	y	1.48	45:06	1.006	1.001-1.011	93.2016
PCB-120	3.97e+07	1.53	y	1.99	39:39	1.021	1.016-1.026	46.1066	PCB-129	2.45e+07	1.20	y	0.99	45:21	1.012	1.007-1.017	44.6385
PCB-110	3.50e+07	1.56	y	1.70	39:47	1.024	1.019-1.029	47.4714	PCB-166	3.59e+07	1.21	y	1.14	45:48	0.993	0.988-0.998	46.5698
PCB-82	2.08e+07	1.56	y	0.74	40:25	0.976	0.971-0.981	48.9430	PCB-159	3.96e+07	1.22	y	1.22	46:08	1.000	0.995-1.005	47.9497
PCB-124	3.69e+07	1.57	y	1.30	41:06	0.993	0.988-0.998	49.3629	PCB-128/162	6.57e+07	1.20	y	1.03	46:25	1.007	1.002-1.012	94.0179
PCB-107/109	6.93e+07	1.58	y	1.34	41:15	0.996	0.991-1.001	90.5539	PCB-167	3.85e+07	1.17	y	1.18	46:49	1.000	0.995-1.005	46.3110
PCB-123	3.47e+07	1.55	y	1.25	41:25	1.000	0.995-1.005	48.3609	PCB-156	3.93e+07	1.19	y	1.27	48:07	1.000	0.995-1.005	46.6553
- PCB-106/118	7.35e+07	1.54	y	1.29	41:38	1.001	0.996-1.006	92.8153	PCB-157	3.97e+07	1.21	y	1.22	48:23	1.000	0.995-1.005	46.2329
- PCB-114	4.27e+07	1.62	y	1.45	42:15	1.000	0.995-1.005	46.8884	PCB-169	3.46e+07	1.20	y	1.07	50:32	1.000	0.995-1.005	47.2196
PCB-122	3.51e+07	1.63	y	1.22	42:23	1.004	0.999-1.009	45.9413	PCB-188	3.60e+07	1.06	y	1.52	42:55	1.001	0.996-1.006	46.9710
PCB-105	4.36e+07	1.65	y	1.56	43:07	1.000	0.995-1.005	47.0955	PCB-184	3.21e+07	1.05	y	1.34	43:21	1.011	1.006-1.016	47.6292
PCB-127	3.79e+07	1.69	y	1.31	43:27	1.000	0.995-1.005	47.5187	PCB-179	3.36e+07	1.03	y	1.39	44:08	1.029	1.024-1.034	47.9352
PCB-126	3.67e+07	1.64	y	1.41	45:20	1.000	0.995-1.005	49.2617	PCB-176	3.52e+07	1.04	y	1.45	44:36	1.040	1.035-1.045	48.0468
PCB-155	3.43e+07	1.23	y	1.20	37:07	1.001	0.966-1.006	46.8420	PCB-186	3.45e+07	1.05	y	1.46	45:12	1.054	1.049-1.059	46.9300
PCB-150	3.11e+07	1.24	y	1.13	38:22	1.035	1.030-1.040	45.1927	PCB-178	2.51e+07	1.06	y	1.07	45:42	1.066	1.061-1.071	46.3910
PCB-152	3.16e+07	1.25	y	1.17	38:51	1.048	1.043-1.053	44.2320	PCB-175	2.54e+07	1.06	y	1.05	46:03	1.074	1.069-1.079	48.0617
PCB-145	3.04e+07	1.24	y	1.09	39:18	1.060	1.055-1.065	45.5249	PCB-182/187	5.34e+07	1.05	y	1.14	46:13	1.078	1.073-1.083	93.2941
PCB-136	3.31e+07	1.23	y	1.14	39:37	1.068	1.063-1.073	47.5060	PCB-183	2.93e+07	1.04	y	1.22	46:32	1.085	1.080-1.090	47.4465
PCB-148	2.18e+07	1.24	y	0.82	39:43	1.071	1.066-1.076	43.6154	PCB-185	2.52e+07	1.05	y	1.40	47:11	0.955	0.950-0.960	47.6023
PCB-154	2.45e+07	1.23	y	0.89	40:12	1.084	1.079-1.089	45.0618	PCB-174	2.35e+07	1.05	y	1.29	47:33	0.963	0.958-0.968	48.4673
PCB-151	2.30e+07	1.25	y	0.82	40:51	1.102	1.097-1.107	46.1089	PCB-181	2.45e+07	1.08	y	1.35	47:40	0.965	0.960-0.970	48.2534
PCB-135	2.19e+07	1.23	y	0.80	41:04	1.107	1.101-1.113	45.0763	PCB-177	2.19e+07	1.04	y	1.27	47:49	0.968	0.963-0.973	45.9044
PCB-144	2.39e+07	1.33	y	0.86	41:10	1.110	1.105-1.116	45.7102	PCB-171	2.53e+07	1.05	y	1.46	48:07	0.974	0.969-0.979	46.0900
PCB-147	2.07e+07	1.15	y	0.78	41:18	1.114	1.108-1.120	43.6051	PCB-173	2.04e+07	1.04	y	1.10	48:33	0.983	0.978-0.988	48.9835
PCB-139/149	4.69e+07	1.23	y	0.87	41:34	1.121	1.115-1.127	88.2749	PCB-172	2.39e+07	1.04	y	1.35	49:00	0.992	0.987-0.997	46.7746
- PCB-140	2.12e+07	1.24	y	0.78	41:45	1.126	1.120-1.132	44.7555	PCB-192	3.03e+07	1.05	y	1.74	49:12	0.996	0.991-1.001	46.2733
- PCB-134/143	5.52e+07	1.22	y	0.93	42:11	0.975	0.970-0.980	91.8432	PCB-180	2.48e+07	1.03	y	1.45	49:24	1.000	0.995-1.005	45.3976

Integrations

by

RL: MONO, TRI - DECA: \_\_\_\_\_

Analyst: DMS

Date: 1/16/15

Client ID: PCB CS3 14L1801  
Lab ID: ST150114E1-5

Filename: 150114E1 S:6 Acq:14-JAN-15 18:00:03  
GC Column ID: ZB-1 ICal: pcbvg8-1-14-15 wt/vol: 1.0000  
ConCal: NA  
EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc
PCB-193	3.25e+07	1.04 y	1.85	49:36	1.004	0.999-1.009		46.5289
PCB-191	3.32e+07	1.04 y	1.86	49:52	1.010	1.005-1.015		47.3156
PCB-170	2.30e+07	1.02 y	1.67	50:55	1.000	0.995-1.005		46.7443
PCB-190	3.20e+07	1.07 y	2.25	51:06	1.004	0.999-1.009		48.2533
PCB-189	3.08e+07	1.05 y	1.67	52:26	1.000	0.995-1.005		47.3113
PCB-202	2.38e+07	0.91 y	1.02	48:19	1.000	0.995-1.005		46.9721
PCB-201	2.52e+07	0.87 y	1.10	48:48	1.010	1.005-1.015		46.1751
PCB-204	2.39e+07	0.89 y	1.07	48:58	1.014	1.009-1.019		44.7059
PCB-197	2.70e+07	0.91 y	1.17	49:16	1.020	1.015-1.025		46.4964
PCB-200	2.41e+07	0.87 y	1.03	50:10	1.039	1.034-1.044		46.8569
PCB-198	1.82e+07	0.89 y	0.75	51:31	1.067	1.062-1.072		48.5071
PCB-199	1.68e+07	0.90 y	0.74	51:38	1.069	1.064-1.074		45.6525
- PCB-196/203	3.74e+07	0.89 y	0.83	51:54	1.075	1.070-1.080		90.5292
- PCB-195	1.90e+07	0.91 y	1.14	53:04	0.984	0.979-0.989		46.9126
PCB-194	2.09e+07	0.92 y	1.29	53:56	1.000	0.995-1.005		45.7200
PCB-205	2.74e+07	0.92 y	1.61	54:13	1.005	1.001-1.010		48.0015
PCB-208	2.49e+07	1.31 y	1.01	53:13	1.000	0.995-1.005		46.1981
PCB-207	2.55e+07	1.33 y	1.03	53:32	1.006	1.001-1.011		46.8056
PCB-206	1.42e+07	1.31 y	0.88	55:34	1.000	0.995-1.005		46.5433
PCB-209	2.15e+07	1.16 y	1.35	56:55	1.000	0.995-1.005		44.8746

Name	Resp	RA	RT	RRF	Conc
Total Mono-PCB	2.41e+08	2.99 y	16:11	1.31	143.595
Total Di-PCB	9.32e+08	1.64 y	20:10	1.32	565.796
Total Tri-PCB	4.51e+08	1.06 y	24:17	1.20	379.806
Total Tri-PCB	8.18e+08	1.01 y	27:58	1.23	787.958
Total Tetra-PCB	1.80e+09	0.74 y	28:02	1.17	1928.65
Total Penta-PCB	1.27e+09	1.59 y	32:44	1.24	1932.56
Total Penta-PCB	2.15e+08	1.62 y	42:15	1.39	259.871
Total Hexa-PCB	3.64e+08	1.23 y	37:07	0.94	631.506
Total Hexa-PCB	9.40e+08	1.22 y	42:11	1.13	1319.24
Total Hepta-PCB	6.80e+08	1.06 y	42:55	1.37	1139.00
Total Octa-PCB	1.96e+08	0.91 y	48:19	0.95	415.895
Total Octa-PCB	6.97e+07	0.91 y	53:04	1.35	145.548
Total Nona-PCB	6.53e+07	1.31 y	53:13	0.99	140.996
Total Deca-PCB	2.15e+07	1.16 y	56:55	1.35	44.8746

Total PCB Conc:9715.75044600

RL: MONO, TRI - DECA: \_\_\_\_\_

Integrations

by

Analyst: DMS

Date: 1/20/15

Client ID: PCB CS3 14L1801  
Lab ID: ST150114E1-5

Filename: 150114E1 S:6 Acq:14-JAN-15 18:00:03  
GC Column ID: ZB-1 ICal: pcbvg8-1-14-15 wt/vol:1.0000

ConCal: NA  
EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec	CRS vs. RS	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.31e+08	3.59 y	0.91	16:09	0.622	0.619-0.625		108	108											
13C-PCB-3	1.27e+08	3.55 y	0.94	18:46	0.722	0.718-0.726		101	101		13C-PCB-79	8.64e+07	0.77 y	1.02	37:51	1.029	1.024-1.033		97.0	97.0
13C-PCB-4	8.37e+07	1.59 y	0.60	20:07	0.774	0.770-0.778		104	104		13C-PCB-178	3.14e+07	0.45 y	0.64	45:41	0.985	0.980-0.989		98.8	98.8
13C-PCB-9	1.32e+08	1.58 y	0.96	21:54	0.843	0.839-0.847		102	102											
13C-PCB-11	1.29e+08	1.57 y	0.95	25:17	0.973	0.968-0.978		101	101	PS vs. IS										
13C-PCB-19	7.48e+07	1.10 y	0.56	24:16	0.934	0.929-0.939		99.4	99.4											
13C-PCB-28	9.04e+07	1.03 y	1.07	29:08	1.004	0.999-1.009		113	113		13C-PCB-79	8.64e+07	0.77 y	1.02	37:51	0.968	0.963-0.973		95.2	95.2
13C-PCB-32	1.10e+08	1.10 y	0.83	27:10	1.046	1.041-1.051		99.7	99.7		13C-PCB-178	3.14e+07	0.45 y	0.84	45:41	0.925	0.920-0.930		98.7	98.7
13C-PCB-37	7.45e+07	1.04 y	0.96	33:00	1.137	1.131-1.143		104	104											
13C-PCB-47	7.29e+07	0.77 y	0.77	32:03	0.871	0.867-0.875		109	109											
13C-PCB-52	6.66e+07	0.76 y	0.71	31:33	0.857	0.853-0.861		107	107											
13C-PCB-54	1.00e+08	0.78 y	1.06	28:01	0.761	0.757-0.765		108	108											
13C-PCB-70	8.67e+07	0.76 y	0.99	35:34	0.966	0.961-0.971		100	100											
13C-PCB-77	8.51e+07	0.79 y	0.96	39:40	1.078	1.073-1.083		101	101											
13C-PCB-80	9.01e+07	0.78 y	1.02	35:59	0.978	0.973-0.983		101	101											
13C-PCB-81	8.87e+07	0.77 y	1.00	39:05	1.062	1.057-1.067		102	102											
13C-PCB-95	4.69e+07	1.61 y	0.70	35:52	0.913	0.908-0.918		102	102	RS										
13C-PCB-97	4.33e+07	1.65 y	0.66	38:51	0.989	0.984-0.994		100	100											
13C-PCB-101	4.96e+07	1.62 y	0.77	37:33	0.956	0.951-0.961		98.6	98.6		Name	Resp	RA	RRF	RT	Conc				
13C-PCB-104	6.91e+07	1.61 y	0.97	32:42	0.832	0.828-0.836		109	109		13C-PCB-15	1.34e+08	1.56 y	1.00	25:59	100				
13C-PCB-105	5.94e+07	1.58 y	1.20	43:06	0.929	0.924-0.934		99.1	99.1		13C-PCB-31	7.47e+07	1.02 y	1.00	29:01	100				
13C-PCB-114	6.26e+07	1.57 y	1.26	42:14	0.910	0.905-0.915		99.9	99.9		13C-PCB-60	8.72e+07	0.74 y	1.00	36:48	100				
13C-PCB-118	6.14e+07	1.60 y	0.94	41:35	1.059	1.054-1.064		99.9	99.9		13C-PCB-111	6.56e+07	1.64 y	1.00	39:17	100				
13C-PCB-123	5.73e+07	1.61 y	0.88	41:24	1.054	1.049-1.059		99.1	99.1		13C-PCB-128	4.99e+07	1.27 y	1.00	46:24	100				
13C-PCB-126	5.27e+07	1.61 y	1.13	45:20	0.977	0.972-0.982		93.9	93.9		13C-PCB-205	4.76e+07	0.89 y	1.00	54:12	100				
13C-PCB-127	6.10e+07	1.55 y	1.26	43:26	0.936	0.931-0.941		97.3	97.3											
13C-PCB-138	5.55e+07	1.26 y	1.12	44:50	0.966	0.961-0.971		99.4	99.4											
13C-PCB-141	5.52e+07	1.29 y	1.09	43:59	0.948	0.943-0.953		101	101											
13C-PCB-153	6.45e+07	1.29 y	1.27	43:15	0.932	0.927-0.937		102	102											
13C-PCB-155	6.10e+07	1.23 y	0.87	37:05	0.944	0.939-0.949		107	107											
13C-PCB-156	6.63e+07	1.27 y	1.35	48:06	1.037	1.032-1.042		98.5	98.5											
13C-PCB-157	7.04e+07	1.32 y	1.42	48:22	1.042	1.037-1.047		99.7	99.7											
13C-PCB-159	6.75e+07	1.31 y	1.37	46:07	0.994	0.989-0.999		98.9	98.9											
13C-PCB-167	7.02e+07	1.27 y	1.38	46:48	1.009	1.004-1.014		102	102											
13C-PCB-169	6.82e+07	1.25 y	1.38	50:31	1.089	1.084-1.094		99.0	99.0											
13C-PCB-170	2.95e+07	0.47 y	0.60	50:54	1.097	1.091-1.103		98.2	98.2											
13C-PCB-180	3.77e+07	0.46 y	0.76	49:23	1.064	1.059-1.069		100.0	100.0											
13C-PCB-188	5.04e+07	0.46 y	1.01	42:53	0.924	0.919-0.929		99.7	99.7											
13C-PCB-189	3.89e+07	0.45 y	0.80	52:25	1.130	1.124-1.136		97.3	97.3											
13C-PCB-194	3.54e+07	0.90 y	0.75	53:56	0.995	0.990-1.000		100	100											
13C-PCB-202	4.98e+07	0.89 y	0.99	48:18	1.041	1.036-1.046		101	101											
13C-PCB-206	3.47e+07	0.77 y	0.73	55:33	1.025	1.020-1.301		99.6	99.6											
13C-PCB-208	5.30e+07	0.77 y	1.08	53:13	0.982	0.977-0.987		103	103											
13C-PCB-209	3.56e+07	1.18 y	0.71	56:55	1.050	1.045-1.055		105	105											

Analyst: Dms

Date: 1/22/15

Vista Analytical Laboratory - Injection Log Run file:

Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150114E1	4	ST150114E1-3	dms	14-JAN-15	15:50:46	NA	NA
150114E1	5	ST150114E1-4	dms	14-JAN-15	16:55:24	NA	NA
150114E1	6	ST150114E1-5	dms	14-JAN-15	18:00:03	NA	NA
150114E1	7	ST150114E1-6	dms	14-JAN-15	19:04:40	NA	NA
150114E1	8	ST150114E1-7	dms	14-JAN-15	20:09:16	NA	NA
150114E1	9	SOLVENT BLANK	dms	14-JAN-15	21:13:53	NA	NA
150114E1	10	ST150114E1-8	dms	14-JAN-15	22:18:30	NA	NA
150114E1	11	SOLVENT BLANK	dms	14-JAN-15	23:23:07	NA	NA

Vista Analytical Laboratory - Injection Log Run file: 150116E1 Instrument ID: VG-8 GC Column ID: ZB-1

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	Ecal
150116E1	2	STi50116E1-2	dms	16-JAN-15	08:51:27	NA	NA

Initial Calibration RRF Summary (ICAL)

Vista Analytical Laboratory

Run: 141016D1

Analyte:

Cal: 1613VG7-1-7-15

Inst. ID. VG-7

Data filename: 141016D1

			Samp# 1	Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 1
			10	0.25	0.50	2.0	40	300
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
2,3,7,8-TCDD	1.17	9.14 %	1.11	1.36	1.22	1.06	1.16	1.12
1,2,3,7,8-PeCDD	0.91	4.03 %	0.93	0.94	0.93	0.84	0.93	0.89
1,2,3,4,7,8-HxCDD	1.08	5.35 %	1.08	1.18	1.07	1.00	1.08	1.07
1,2,3,6,7,8-HxCDD	1.06	5.61 %	1.06	1.06	1.06	0.96	1.13	1.12
1,2,3,7,8,9-HxCDD	0.93	4.13 %	0.92	0.98	0.95	0.86	0.93	0.95
1,2,3,4,6,7,8-HpCDD	1.10	3.57 %	1.12	1.04	1.14	1.07	1.14	1.11
OCDD	0.95	4.86 %	0.97	0.96	0.97	0.85	0.97	0.97
2,3,7,8-TCDF	1.07	6.82 %	1.00	1.16	1.15	0.99	1.08	1.04
1,2,3,7,8-PeCDF	1.07	4.51 %	1.10	1.13	1.05	1.00	1.11	1.06
2,3,4,7,8-PeCDF	1.03	3.55 %	1.05	1.04	1.06	0.96	1.07	1.02
1,2,3,4,7,8-HxCDF	1.38	3.14 %	1.40	1.42	1.37	1.31	1.42	1.39
1,2,3,6,7,8-HxCDF	1.26	5.25 %	1.26	1.34	1.29	1.14	1.26	1.27
2,3,4,6,7,8-HxCDF	1.29	3.82 %	1.28	1.30	1.33	1.20	1.34	1.29
1,2,3,7,8,9-HxCDF	1.19	3.32 %	1.16	1.25	1.18	1.13	1.20	1.19
1,2,3,4,6,7,8-HpCDF	1.61	4.02 %	1.59	1.67	1.66	1.49	1.64	1.61
1,2,3,4,7,8,9-HpCDF	1.53	4.55 %	1.54	1.58	1.55	1.39	1.53	1.57
OCDF	1.10	3.96 %	1.11	1.09	1.13	1.01	1.13	1.11
13C-2,3,7,8-TCDD	1.06	3.81 %	1.05	1.00	1.07	1.04	1.10	1.10
13C-1,2,3,7,8-PeCDD	1.18	9.13 %	1.06	1.09	1.23	1.23	1.34	1.11
13C-1,2,3,4,7,8-HxCDD	0.72	5.98 %	0.70	0.69	0.70	0.70	0.73	0.80
13C-1,2,3,6,7,8-HxCDD	0.74	6.30 %	0.72	0.71	0.71	0.71	0.73	0.83
13C-1,2,3,7,8,9-HxCDD	0.85	6.05 %	0.83	0.81	0.83	0.83	0.86	0.95
13C-1,2,3,4,6,7,8-HpCDD	0.65	10.75 %	0.63	0.61	0.61	0.62	0.66	0.79
13C-OCDD	0.76	5.80 %	0.70	0.73	0.76	0.77	0.79	0.82
13C-2,3,7,8-TCDF	0.92	2.26 %	0.93	0.89	0.91	0.91	0.94	0.93
13C-1,2,3,7,8-PeCDF	0.92	6.20 %	0.86	0.87	0.90	0.95	1.01	0.94
13C-2,3,4,7,8-PeCDF	0.93	5.50 %	0.89	0.89	0.91	0.96	1.02	0.92
13C-1,2,3,4,7,8-HxCDF	0.98	5.30 %	0.92	0.94	0.96	0.98	1.01	1.07
13C-1,2,3,6,7,8-HxCDF	1.08	5.13 %	1.07	1.00	1.05	1.09	1.12	1.16
13C-2,3,4,6,7,8-HxCDF	1.03	4.15 %	0.97	1.00	1.02	1.01	1.04	1.10
13C-1,2,3,7,8,9-HxCDF	0.86	7.80 %	0.84	0.82	0.82	0.83	0.87	0.99
13C-1,2,3,4,6,7,8-HpCDF	0.72	9.95 %	0.70	0.69	0.67	0.69	0.72	0.86
13C-1,2,3,4,7,8,9-HpCDF	0.70	6.18 %	0.65	0.69	0.67	0.67	0.74	0.76
13C-OCDF	0.85	5.23 %	0.82	0.80	0.83	0.85	0.88	0.92
37Cl-2,3,7,8-TCDD	1.12	13.99 %	1.22	1.08	1.03	1.24	1.27	0.86
13C-1,2,3,4-TCDD	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4-TCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4,6,9-HxCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

ms 1/9/15  
 J 1/9/15  
 CT 1/21/15

Filename: 141016D1 S: 1 Acquired: 16-OCT-14 11:05:57  
 Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Results:  
 Sample text: ST141016D1-1 1613 CS3 14I1102

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	10.00	2.08e+06	0.73 y	26:60	-	1.11
2	Unk	1,2,3,7,8-PeCDD	50.00	8.78e+06	0.61 y	31:30	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	50.00	7.82e+06	1.26 y	34:50	-	1.08
4	Unk	1,2,3,6,7,8-HxCDD	50.00	7.94e+06	1.25 y	34:57	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	50.00	7.97e+06	1.24 y	35:15	-	0.92
6	Unk	1,2,3,4,6,7,8-HpCDD	50.00	7.29e+06	1.04 y	38:42	-	1.12
7	Unk	OCDD	100.00	1.40e+07	0.89 y	42:02	-	0.97
8	Unk	2,3,7,8-TCDF	10.00	2.78e+06	0.80 y	26:13	-	1.00
9	Unk	1,2,3,7,8-PeCDF	50.00	1.40e+07	1.59 y	30:20	-	1.10
10	Unk	2,3,4,7,8-PeCDF	50.00	1.38e+07	1.59 y	31:14	-	1.05
11	Unk	1,2,3,4,7,8-HxCDF	50.00	1.34e+07	1.29 y	33:56	-	1.40
12	Unk	1,2,3,6,7,8-HxCDF	50.00	1.40e+07	1.29 y	34:04	-	1.26
13	Unk	2,3,4,6,7,8-HxCDF	50.00	1.29e+07	1.31 y	34:40	-	1.28
14	Unk	1,2,3,7,8,9-HxCDF	50.00	1.01e+07	1.27 y	35:39	-	1.16
15	Unk	1,2,3,4,6,7,8-HpCDF	50.00	1.16e+07	1.08 y	37:30	-	1.59
16	Unk	1,2,3,4,7,8,9-HpCDF	50.00	1.04e+07	1.07 y	39:16	-	1.54
17	Unk	OCDF	100.00	1.88e+07	0.91 y	42:16	-	1.11
36	IS	13C-2,3,7,8-TCDD	100.00	1.87e+07	0.79 y	26:58	-	1.05
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.90e+07	0.63 y	31:29	-	1.06
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.44e+07	1.25 y	34:49	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.50e+07	1.25 y	34:56	-	0.72
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.72e+07	1.23 y	35:14	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.30e+07	1.07 y	38:42	-	0.63
42	IS	13C-OCDD	200.00	2.89e+07	0.89 y	42:02	-	0.70
43	IS	13C-2,3,7,8-TCDF	100.00	2.77e+07	0.74 y	26:12	-	0.93
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.54e+07	1.55 y	30:19	-	0.86
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.63e+07	1.61 y	31:13	-	0.89
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.92e+07	0.51 y	33:55	-	0.92
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.23e+07	0.50 y	34:03	-	1.07
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.02e+07	0.52 y	34:39	-	0.97
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.73e+07	0.51 y	35:38	-	0.84
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.46e+07	0.43 y	37:29	-	0.70
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.35e+07	0.45 y	39:15	-	0.65
52	IS	13C-OCDF	200.00	3.39e+07	0.92 y	42:15	-	0.82
53	C/Up	37Cl-2,3,7,8-TCDD	10.00	2.18e+06		26:59	-	1.22
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.79e+07	0.80 y	26:24	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.97e+07	0.78 y	24:58	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	2.08e+07	0.51 y	34:21	-	1.00



Filename: 141016D1 S: 3 Acquired: 16-OCT-14 12:42:43

Run: 141016D1 Analyte:

Cal:

Results:

Sample text: ST141016D1-2 1613 CS0 1411819

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.25	5.01e+04	0.71 y	27:03	-	1.36
2	Unk	1,2,3,7,8-PeCDD	1.25	1.89e+05	0.58 y	31:32	-	0.94
3	Unk	1,2,3,4,7,8-HxCDD	1.25	1.80e+05	1.38 y	34:52	-	1.18
4	Unk	1,2,3,6,7,8-HxCDD	1.25	1.66e+05	1.38 y	34:59	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	1.25	1.76e+05	1.42 y	35:17	-	0.98
6	Unk	1,2,3,4,6,7,8-HpCDD	1.25	1.40e+05	0.92 y	38:44	-	1.04
7	Unk	OCDD	2.50	3.13e+05	0.92 y	42:04	-	0.96
8	Unk	2,3,7,8-TCDF	0.25	6.52e+04	0.82 y	26:17	-	1.16
9	Unk	1,2,3,7,8-PeCDF	1.25	3.11e+05	1.49 y	30:22	-	1.13
10	Unk	2,3,4,7,8-PeCDF	1.25	2.91e+05	1.54 y	31:15	-	1.04
11	Unk	1,2,3,4,7,8-HxCDF	1.25	2.95e+05	1.36 y	33:58	-	1.42
12	Unk	1,2,3,6,7,8-HxCDF	1.25	2.95e+05	1.26 y	34:06	-	1.34
13	Unk	2,3,4,6,7,8-HxCDF	1.25	2.89e+05	1.31 y	34:43	-	1.30
14	Unk	1,2,3,7,8,9-HxCDF	1.25	2.25e+05	1.36 y	35:41	-	1.25
15	Unk	1,2,3,4,6,7,8-HpCDF	1.25	2.54e+05	1.14 y	37:32	-	1.67
16	Unk	1,2,3,4,7,8,9-HpCDF	1.25	2.39e+05	1.08 y	39:18	-	1.58
17	Unk	OCDF	2.50	3.84e+05	0.91 y	42:18	-	1.09
36	IS	13C-2,3,7,8-TCDD	100.00	1.47e+07	0.79 y	27:02	-	1.00
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.61e+07	0.64 y	31:32	-	1.09
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.22e+07	1.24 y	34:51	-	0.69
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.25e+07	1.31 y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.44e+07	1.29 y	35:16	-	0.81
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.07e+07	1.03 y	38:43	-	0.61
42	IS	13C-OCDD	200.00	2.60e+07	0.89 y	42:03	-	0.73
43	IS	13C-2,3,7,8-TCDF	100.00	2.24e+07	0.75 y	26:16	-	0.89
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.20e+07	1.59 y	30:21	-	0.87
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.24e+07	1.61 y	31:15	-	0.89
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.66e+07	0.52 y	33:57	-	0.94
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.77e+07	0.51 y	34:05	-	1.00
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.77e+07	0.51 y	34:42	-	1.00
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.45e+07	0.52 y	35:40	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.22e+07	0.44 y	37:31	-	0.69
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.21e+07	0.43 y	39:17	-	0.69
52	IS	13C-OCDF	200.00	2.81e+07	0.92 y	42:17	-	0.80
53	C/Up	37Cl-2,3,7,8-TCDD	0.25	4.00e+04		27:03	-	1.08
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.48e+07	0.80 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.52e+07	0.78 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.77e+07	0.53 y	34:23	-	1.00

Filename: 141016D1 S: 4 Acquired: 16-OCT-14 13:31:08

Run: 141016D1 Analyte: Cal: Results:

Sample text: ST141016D1-3 1613 CS1 14I1820

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.50	9.47e+04	0.71 y	27:03	-	1.22
2	Unk	1,2,3,7,8-PeCDD	2.50	4.17e+05	0.58 y	31:32	-	0.93
3	Unk	1,2,3,4,7,8-HxCDD	2.50	3.52e+05	1.23 y	34:52	-	1.07
4	Unk	1,2,3,6,7,8-HxCDD	2.50	3.56e+05	1.22 y	34:59	-	1.06
5	Unk	1,2,3,7,8,9-HxCDD	2.50	3.72e+05	1.18 y	35:17	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	2.50	3.28e+05	1.04 y	38:44	-	1.14
7	Unk	OCDD	5.00	7.00e+05	0.91 y	42:03	-	0.97
8	Unk	2,3,7,8-TCDF	0.50	1.35e+05	0.76 y	26:17	-	1.15
9	Unk	1,2,3,7,8-PeCDF	2.50	6.14e+05	1.75 y	30:22	-	1.05
10	Unk	2,3,4,7,8-PeCDF	2.50	6.26e+05	1.44 y	31:15	-	1.06
11	Unk	1,2,3,4,7,8-HxCDF	2.50	6.24e+05	1.23 y	33:58	-	1.37
12	Unk	1,2,3,6,7,8-HxCDF	2.50	6.42e+05	1.32 y	34:06	-	1.29
13	Unk	2,3,4,6,7,8-HxCDF	2.50	6.41e+05	1.24 y	34:42	-	1.33
14	Unk	1,2,3,7,8,9-HxCDF	2.50	4.56e+05	1.22 y	35:40	-	1.18
15	Unk	1,2,3,4,6,7,8-HpCDF	2.50	5.24e+05	1.07 y	37:32	-	1.66
16	Unk	1,2,3,4,7,8,9-HpCDF	2.50	4.91e+05	1.14 y	39:17	-	1.55
17	Unk	OCDF	5.00	8.91e+05	0.93 y	42:17	-	1.13
36	IS	13C-2,3,7,8-TCDD	100.00	1.56e+07	0.78 y	27:02	-	1.07
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.79e+07	0.63 y	31:31	-	1.23
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.32e+07	1.27 y	34:51	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.35e+07	1.26 y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.56e+07	1.27 y	35:16	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.15e+07	1.05 y	38:43	-	0.61
42	IS	13C-OCDD	200.00	2.89e+07	0.89 y	42:03	-	0.76
43	IS	13C-2,3,7,8-TCDF	100.00	2.36e+07	0.78 y	26:16	-	0.91
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.34e+07	1.58 y	30:21	-	0.90
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.37e+07	1.54 y	31:14	-	0.91
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.82e+07	0.52 y	33:57	-	0.96
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.99e+07	0.52 y	34:05	-	1.05
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.93e+07	0.52 y	34:41	-	1.02
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.55e+07	0.53 y	35:40	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.26e+07	0.43 y	37:31	-	0.67
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.27e+07	0.44 y	39:16	-	0.67
52	IS	13C-OCDF	200.00	3.15e+07	0.89 y	42:17	-	0.83
53	C/Up	37Cl-2,3,7,8-TCDD	0.50	7.54e+04		27:03	-	1.03
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.46e+07	0.79 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.60e+07	0.77 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.89e+07	0.52 y	34:22	-	1.00



Filename: 141016D1 S: 6 Acquired: 16-OCT-14 15:08:00

Run: 141016D1 Analyte: Cal: Results:

Sample text: ST141016D1-5 1613 CS4 1411822

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1 Unk	2,3,7,8-TCDD	40.00	6.36e+06	0.79 y	27:03	-	1.16
2 Unk	1,2,3,7,8-PeCDD	200.00	3.08e+07	0.61 y	31:32	-	0.93
3 Unk	1,2,3,4,7,8-HxCDD	200.00	2.57e+07	1.25 y	34:52	-	1.08
4 Unk	1,2,3,6,7,8-HxCDD	200.00	2.66e+07	1.26 y	34:59	-	1.13
5 Unk	1,2,3,7,8,9-HxCDD	200.00	2.59e+07	1.24 y	35:17	-	0.93
6 Unk	1,2,3,4,6,7,8-HpCDD	200.00	2.46e+07	1.04 y	38:44	-	1.14
7 Unk	OCDD	400.00	5.00e+07	0.89 y	42:03	-	0.97
8 Unk	2,3,7,8-TCDF	40.00	8.92e+06	0.77 y	26:17	-	1.08
9 Unk	1,2,3,7,8-PeCDF	200.00	4.90e+07	1.58 y	30:22	-	1.11
10 Unk	2,3,4,7,8-PeCDF	200.00	4.76e+07	1.60 y	31:15	-	1.07
11 Unk	1,2,3,4,7,8-HxCDF	200.00	4.66e+07	1.28 y	33:58	-	1.42
12 Unk	1,2,3,6,7,8-HxCDF	200.00	4.56e+07	1.28 y	34:06	-	1.26
13 Unk	2,3,4,6,7,8-HxCDF	200.00	4.54e+07	1.26 y	34:42	-	1.34
14 Unk	1,2,3,7,8,9-HxCDF	200.00	3.40e+07	1.28 y	35:40	-	1.20
15 Unk	1,2,3,4,6,7,8-HpCDF	200.00	3.84e+07	1.09 y	37:32	-	1.64
16 Unk	1,2,3,4,7,8,9-HpCDF	200.00	3.69e+07	1.08 y	39:17	-	1.53
17 Unk	OCDF	400.00	6.50e+07	0.92 y	42:18	-	1.13
36 IS	13C-2,3,7,8-TCDD	100.00	1.37e+07	0.81 y	27:02	-	1.10
37 IS	13C-1,2,3,7,8-PeCDD	100.00	1.66e+07	0.63 y	31:31	-	1.34
38 IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.19e+07	1.25 y	34:51	-	0.73
39 IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.18e+07	1.26 y	34:58	-	0.73
40 IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.40e+07	1.24 y	35:16	-	0.86
41 IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.08e+07	1.07 y	38:43	-	0.66
42 IS	13C-OCDD	200.00	2.58e+07	0.89 y	42:03	-	0.79
43 IS	13C-2,3,7,8-TCDF	100.00	2.07e+07	0.77 y	26:16	-	0.94
44 IS	13C-1,2,3,7,8-PeCDF	100.00	2.21e+07	1.61 y	30:21	-	1.01
45 IS	13C-2,3,4,7,8-PeCDF	100.00	2.23e+07	1.57 y	31:14	-	1.02
46 IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.64e+07	0.51 y	33:57	-	1.01
47 IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.82e+07	0.50 y	34:05	-	1.12
48 IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.69e+07	0.51 y	34:41	-	1.04
49 IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.41e+07	0.52 y	35:40	-	0.87
50 IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.17e+07	0.45 y	37:31	-	0.72
51 IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.20e+07	0.44 y	39:16	-	0.74
52 IS	13C-OCDF	200.00	2.87e+07	0.89 y	42:17	-	0.88
53 C/Up	37Cl-2,3,7,8-TCDD	40.00	6.31e+06		27:03	-	1.27
54 RS/RT	13C-1,2,3,4-TCDD	100.00	1.24e+07	0.82 y	26:28	-	1.00
55 RS	13C-1,2,3,4-TCDF	100.00	2.19e+07	0.79 y	25:03	-	1.00
56 RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.63e+07	0.51 y	34:22	-	1.00

Filename: 150107D1 S: 1 Acquired: 7-JAN-15 10:43:31  
 Run: 141016D1 Analyte: Cal: 1613VG7-1-7-15 Results:  
 Sample text: ST150107D1-1 1613 CS5 15A0502

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	300.00	9.22e+07	0.77 y	26:59	-	1.12
2	Unk	1,2,3,7,8-PeCDD	1500.00	3.69e+08	0.62 y	31:40	-	0.89
3	Unk	1,2,3,4,7,8-HxCDD	1500.00	3.48e+08	1.26 y	34:59	-	1.07
4	Unk	1,2,3,6,7,8-HxCDD	1500.00	3.80e+08	1.25 y	35:06	-	1.12
5	Unk	1,2,3,7,8,9-HxCDD	1500.00	3.67e+08	1.25 y	35:23	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	1500.00	3.56e+08	1.05 y	38:54	-	1.11
7	Unk	OCDD	3000.00	6.47e+08	0.90 y	42:09	-	0.97
8	Unk	2,3,7,8-TCDF	300.00	1.19e+08	0.78 y	26:09	-	1.04
9	Unk	1,2,3,7,8-PeCDF	1500.00	6.12e+08	1.59 y	30:27	-	1.06
10	Unk	2,3,4,7,8-PeCDF	1500.00	5.74e+08	1.56 y	31:23	-	1.02
11	Unk	1,2,3,4,7,8-HxCDF	1500.00	6.02e+08	1.28 y	34:06	-	1.39
12	Unk	1,2,3,6,7,8-HxCDF	1500.00	5.99e+08	1.28 y	34:14	-	1.27
13	Unk	2,3,4,6,7,8-HxCDF	1500.00	5.77e+08	1.29 y	34:50	-	1.29
14	Unk	1,2,3,7,8,9-HxCDF	1500.00	4.82e+08	1.30 y	35:46	-	1.19
15	Unk	1,2,3,4,6,7,8-HpCDF	1500.00	5.67e+08	1.07 y	37:34	-	1.61
16	Unk	1,2,3,4,7,8,9-HpCDF	1500.00	4.84e+08	1.07 y	39:27	-	1.57
17	Unk	OCDF	3000.00	8.27e+08	0.92 y	42:22	-	1.11
36	IS	13C-2,3,7,8-TCDD	100.00	2.74e+07	0.80 y	26:57	-	1.10
37	IS	13C-1,2,3,7,8-PeCDD	100.00	2.75e+07	0.62 y	31:39	-	1.11
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	2.18e+07	1.22 y	34:58	-	0.80
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.25e+07	1.30 y	35:05	-	0.83
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	2.59e+07	1.25 y	35:22	-	0.95
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	2.15e+07	1.07 y	38:53	-	0.79
42	IS	13C-OCDD	200.00	4.45e+07	0.91 y	42:08	-	0.82
43	IS	13C-2,3,7,8-TCDF	100.00	3.80e+07	0.75 y	26:08	-	0.93
44	IS	13C-1,2,3,7,8-PeCDF	100.00	3.84e+07	1.58 y	30:27	-	0.94
45	IS	13C-2,3,4,7,8-PeCDF	100.00	3.74e+07	1.62 y	31:22	-	0.92
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	2.90e+07	0.52 y	34:05	-	1.07
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	3.15e+07	0.52 y	34:13	-	1.16
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.98e+07	0.51 y	34:49	-	1.10
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	2.69e+07	0.51 y	35:45	-	0.99
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.34e+07	0.44 y	37:34	-	0.86
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	2.06e+07	0.45 y	39:26	-	0.76
52	IS	13C-OCDF	200.00	4.97e+07	0.90 y	42:22	-	0.92
53	C/Up	37Cl-2,3,7,8-TCDD	300.00	6.41e+07		26:59	-	0.86
54	RS/RT	13C-1,2,3,4-TCDD	100.00	2.48e+07	0.80 y	26:21	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	4.08e+07	0.78 y	24:48	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	2.71e+07	0.51 y	34:30	-	1.00

Run: 141016D1      Analyte:      Cal: 1613VG7-1-7-15      Inst. ID. VG-7

Data filename: 141016D1

Samp# 1    Samp# 3    Samp# 4    Samp# 5    Samp# 6    Samp# 1  
10        0.25      0.50      2.0        40        300

Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
Total Tetra-Dioxins	1.17	9.14 %	1.11	1.36	1.22	1.06	1.16	1.12
TCDD EMPC	1.17	9.14 %	1.11	1.36	1.22	1.06	1.16	1.12
Total Penta-Dioxins	0.91	4.03 %	0.93	0.94	0.93	0.84	0.93	0.89
PeCDD EMPC	0.91	4.03 %	0.93	0.94	0.93	0.84	0.93	0.89
Total Hexa-Dioxins	1.02	4.32 %	1.02	1.07	1.02	0.94	1.04	1.04
HxCDD EMPC	1.02	4.32 %	1.02	1.07	1.02	0.94	1.04	1.04
Total Hepta-Dioxins	1.10	3.57 %	1.12	1.04	1.14	1.07	1.14	1.11
HpCDD EMPC	1.10	3.57 %	1.12	1.04	1.14	1.07	1.14	1.11
Total Tetra-Furans	1.07	6.82 %	1.00	1.16	1.15	0.99	1.08	1.04
TCDF EMPC	1.07	6.82 %	1.00	1.16	1.15	0.99	1.08	1.04
1st Func. Penta-Furans	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
1st Func. PeCDF EMPC	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
Total Penta-Furans	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
PeCDF EMPC	1.05	3.80 %	1.07	1.08	1.05	0.98	1.09	1.04
Total Hexa-Furans	1.28	3.62 %	1.28	1.33	1.30	1.19	1.31	1.29
HxCDF EMPC	1.28	3.62 %	1.28	1.33	1.30	1.19	1.31	1.29
Total Hepta-Furans	1.57	4.17 %	1.57	1.62	1.60	1.44	1.59	1.59
HpCDF EMPC	1.57	4.17 %	1.57	1.62	1.60	1.44	1.59	1.59

Analyte:

Inst. ID. VG-7

Data filename: 141016D1

Name	RRT Limits		Samp# 1	Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 1
	Lower	Upper	10	0.25	0.50	2.0	40	300
			RRT#1	RRT#2	RRT#3	RRT#4	RRT#5	RRT#6
2,3,7,8-TCDD	0.999	-1.002	1.001	1.001	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDD	0.999	-1.002	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,7,8-HxCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,6,7,8-HxCDD	0.998	-1.004	1.001	1.000	1.000	1.000	1.000	1.001
1,2,3,7,8,9-HxCDD	0.998	-1.004	1.000	1.000	1.000	1.000	1.000	1.001
1,2,3,4,6,7,8-HpCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
2,3,7,8-TCDF	0.999	-1.003	1.001	1.001	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDF	0.999	-1.002	1.000	1.001	1.000	1.000	1.000	1.000
2,3,4,7,8-PeCDF	0.999	-1.002	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,7,8-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,6,7,8-HxCDF	0.997	-1.005	1.001	1.000	1.001	1.001	1.001	1.000
2,3,4,6,7,8-HxCDF	0.999	-1.001	1.001	1.000	1.000	1.001	1.001	1.000
1,2,3,7,8,9-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.001	1.000	1.000
1,2,3,4,6,7,8-HpCDF	0.999	-1.001	1.000	1.001	1.000	1.000	1.000	1.000
1,2,3,4,7,8,9-HpCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
13C-2,3,7,8-TCDD	0.976	-1.043	1.021	1.021	1.021	1.021	1.021	1.023
13C-1,2,3,7,8-PeCDD	1.000	-1.567	1.192	1.191	1.191	1.191	1.191	1.201
13C-1,2,3,4,7,8-HxCDD	1.002	-1.026	1.014	1.014	1.014	1.014	1.014	1.014
13C-1,2,3,6,7,8-HxCDD	1.007	-1.029	1.017	1.017	1.017	1.017	1.017	1.017
13C-1,2,3,7,8,9-HxCDD	1.014	-1.038	1.026	1.026	1.026	1.026	1.026	1.025
13C-1,2,3,4,6,7,8-HpCDD	1.117	-1.141	1.127	1.126	1.126	1.126	1.126	1.127
13C-OCDD	1.085	-1.365	1.224	1.223	1.223	1.223	1.223	1.222
13C-2,3,7,8-TCDF	0.923	-1.103	0.992	0.992	0.992	0.992	0.992	0.992
13C-1,2,3,7,8-PeCDF	1.000	-1.425	1.148	1.147	1.147	1.147	1.147	1.155
13C-2,3,4,7,8-PeCDF	1.011	-1.526	1.182	1.181	1.180	1.180	1.180	1.190
13C-1,2,3,4,7,8-HxCDF	0.975	-1.001	0.988	0.988	0.988	0.988	0.988	0.988
13C-1,2,3,6,7,8-HxCDF	0.979	-1.005	0.991	0.991	0.992	0.992	0.992	0.992
13C-2,3,4,6,7,8-HxCDF	1.001	-1.020	1.009	1.009	1.009	1.009	1.009	1.009
13C-1,2,3,7,8,9-HxCDF	1.002	-1.072	1.037	1.037	1.038	1.038	1.037	1.037
13C-1,2,3,4,6,7,8-HpCDF	1.069	-1.111	1.091	1.091	1.091	1.091	1.091	1.089
13C-1,2,3,4,7,8,9-HpCDF	1.098	-1.192	1.143	1.142	1.143	1.143	1.143	1.143
13C-OCDF	1.091	-1.371	1.230	1.230	1.230	1.230	1.230	1.228
37Cl-2,3,7,8-TCDD	0.989	-1.052	1.022	1.022	1.022	1.022	1.022	1.024
13C-1,2,3,4-TCDD	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4-TCDF	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4,6,9-HxCDF	0.000	-0.000	*	*	*	*	*	*

FORM 4A  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory

Episode No.:

CCAL ID: ST141016D1-1

Contract No.:

SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)	
2,3,7,8-TCDD	M/M+2	0.73	0.65-0.89	y	9.45	7.8 - 12.9	(1) See Table 8, Method 1613, for m/z specifications.
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	50.9	8.2 - 12.3 (4) 39.0 - 65.0	(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	50.2	39.0 - 64.0	(3) Contract-required concentration range as specified in Table 6, Method 1613.
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	49.6	39.0 - 64.0	
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	49.6	41.0 - 61.0	
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	50.8	43.0 - 58.0	(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.
OCDD	M+2/M+4	0.89	0.76-1.02	y	102	79.0 - 126.0	
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.38	8.4 - 12.0 8.6 - 11.6 (4)	
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	51.3	41.0 - 60.0	
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	50.7	41.0 - 61.0	
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.6	45.0 - 56.0	
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.2	44.0 - 57.0	
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	49.6	44.0 - 57.0	
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	49.1	45.0 - 56.0	
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	49.4	45.0 - 55.0	
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	50.4	43.0 - 58.0	
OCDF	M+2/M+4	0.91	0.76-1.02	y	101	63.0 - 159.0	

Analyst: MDDate: 1/8/15



FORM 4B  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	98.9	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	90.0	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	96.6	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	98.4	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	97.3	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	95.7	72.0 - 138.0
13C-OCDD	M/M+2	0.89	0.76-1.02	y	182	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.74	0.65-0.89	y	102	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	92.8	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	95.2	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	94.1	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	99.0	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	94.9	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	97.1	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	97.2	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	93.4	77.0 - 129.0
13C-OCDF	M+2/M+4	0.92	0.76-1.02	y	192	96.0 - 415.0
CLEANUP STANDARD (3) 37Cl-2,3,7,8-TCDD					10.9	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: m)

Date: 1/8/15

## EPA METHOD 8290

## PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory

Episode No.:

CCAL ID: ST141016D1-1

Contract No.:

SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC.
						RANGE (ng/mL)
2,3,7,8-TCDD	M/M+2	0.73	0.65-0.89	y	9.45	8.00 - 12.0
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	50.9	40.0 - 60.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	50.2	40.0 - 60.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	49.6	40.0 - 60.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	49.6	40.0 - 60.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	50.8	40.0 - 60.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	102	80.0 - 120
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.38	8.00 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	51.3	40.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	50.7	40.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.6	40.0 - 60.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.2	40.0 - 60.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	49.6	40.0 - 60.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	49.1	40.0 - 60.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	49.4	40.0 - 60.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	50.4	40.0 - 60.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	101	80.0 - 120

Analyst: msDate: 1/8/15

## EPA METHOD 8290

## PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

LABELLED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	98.9	70.0 - 130
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	90.0	70.0 - 130
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	96.6	70.0 - 130
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	98.4	70.0 - 130
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	97.3	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	95.7	70.0 - 130
13C-OCDD	M+2/M+4	0.89	0.76-1.02	y	182	140 - 260
13C-2,3,7,8-TCDF	M/M+2	0.74	0.65-0.89	y	102	70.0 - 130
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	92.8	70.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	95.2	70.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	94.1	70.0 - 130
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	99.0	70.0 - 130
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	94.9	70.0 - 130
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	97.1	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	y	97.2	70.0 - 130
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	y	93.4	70.0 - 130
13C-OCDF	M+2/M+4	0.92	0.76-1.02	y	192	140 - 260
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD					10.9	7.00 - 13.0

Analyst: mDate: 1/8/15

FORM 6A  
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME		RRT
	REFERENCE	RRT	QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002

(1) Contract-required limits for  
Relative Retention Times (RRT)  
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.021	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.192	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.148	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.182	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: mm

Date: 1/8/15

FORM 6B  
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 141016D1 S#1 Analysis Date: 16-OCT-14 Time: 11:05:57

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001

(1) Contract-required limits for  
Relative Retention Times (RRT)  
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.991	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.026	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.091	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.143	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.127	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.224	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.230	1.091-1.371

Analyst: M

Date: 1/9/15

Client ID: 1613 CS3 14I1102  
Lab ID: ST141016D1-1

Filename: 141016D1 S:1 Acq:16-OCT-14 11:05:57  
GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000

ConCal: NA  
EndCAL: NA

Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	2.08e+06	0.73 y	1.17	26:60	1.001	9.4477	*	2.5	*	*	Total Tetra-Dioxins	54.8	55.1	*	*	
1,2,3,7,8-PeCDD	8.78e+06	0.61 y	0.91	31:30	1.000	50.922	*	2.5	*	*	Total Penta-Dioxins	159	159	*	*	
1,2,3,4,7,8-HxCDD	7.82e+06	1.26 y	1.08	34:50	1.000	50.237	*	2.5	*	*	Total Hexa-Dioxins	194	195	*	*	
1,2,3,6,7,8-HxCDD	7.94e+06	1.25 y	1.06	34:57	1.001	49.601	*	2.5	*	*	Total Hepta-Dioxins	128	128	*	*	
1,2,3,7,8,9-HxCDD	7.97e+06	1.24 y	0.93	35:15	1.000	49.631	*	2.5	*	*	Total Tetra-Furans	30.0	30.3	*	*	
1,2,3,4,6,7,8-HpCDD	7.29e+06	1.04 y	1.10	38:42	1.000	50.805	*	2.5	*	*	Total Penta-Furans	209.92	210.51	*	*	
OCDD	1.40e+07	0.89 y	0.95	42:02	1.000	102.06	*	2.5	*	*	Total Hexa-Furans	248	249	*	*	
											Total Hepta-Furans	102	102	*	*	
2,3,7,8-TCDF	2.78e+06	0.80 y	1.07	26:13	1.001	9.3791	*	2.5	*	*						
1,2,3,7,8-PeCDF	1.40e+07	1.59 y	1.07	30:20	1.000	51.276	*	2.5	*	*						
2,3,4,7,8-PeCDF	1.38e+07	1.59 y	1.03	31:14	1.000	50.741	*	2.5	*	*						
1,2,3,4,7,8-HxCDF	1.34e+07	1.29 y	1.38	33:56	1.000	50.629	*	2.5	*	*						
1,2,3,6,7,8-HxCDF	1.40e+07	1.29 y	1.26	34:04	1.001	50.176	*	2.5	*	*						
2,3,4,6,7,8-HxCDF	1.29e+07	1.31 y	1.29	34:40	1.001	49.592	*	2.5	*	*						
1,2,3,7,8,9-HxCDF	1.01e+07	1.27 y	1.19	35:39	1.000	49.090	*	2.5	*	*						
1,2,3,4,6,7,8-HpCDF	1.16e+07	1.08 y	1.61	37:30	1.000	49.399	*	2.5	*	*						
1,2,3,4,7,8,9-HpCDF	1.04e+07	1.07 y	1.53	39:16	1.000	50.426	*	2.5	*	*						
OCDF	1.88e+07	0.91 y	1.10	42:16	1.000	100.89	*	2.5	*	*						
											Rec	Qual				
IS	13C-2,3,7,8-TCDD	1.87e+07	0.79 y	1.06	26:58	1.021	98.865				98.9					
IS	13C-1,2,3,7,8-PeCDD	1.90e+07	0.63 y	1.18	31:29	1.192	90.040				90.0					
IS	13C-1,2,3,4,7,8-HxCDD	1.44e+07	1.25 y	0.72	34:49	1.014	96.577				96.6					
IS	13C-1,2,3,6,7,8-HxCDD	1.50e+07	1.25 y	0.74	34:56	1.017	98.426				98.4					
IS	13C-1,2,3,7,8,9-HxCDD	1.72e+07	1.23 y	0.85	35:14	1.026	97.305				97.3					
IS	13C-1,2,3,4,6,7,8-HpCDD	1.30e+07	1.07 y	0.65	38:42	1.127	95.724				95.7					
IS	13C-OCDD	2.89e+07	0.89 y	0.76	42:02	1.224	182.02				91.0					
IS	13C-2,3,7,8-TCDF	2.77e+07	0.74 y	0.92	26:12	0.992	101.61				102					
IS	13C-1,2,3,7,8-PeCDF	2.54e+07	1.55 y	0.92	30:19	1.148	92.843				92.8					
IS	13C-2,3,4,7,8-PeCDF	2.63e+07	1.61 y	0.93	31:13	1.182	95.246				95.2					
IS	13C-1,2,3,4,7,8-HxCDF	1.92e+07	0.51 y	0.98	33:55	0.988	94.089				94.1					
IS	13C-1,2,3,6,7,8-HxCDF	2.23e+07	0.50 y	1.08	34:03	0.991	99.047				99.0					
IS	13C-2,3,4,6,7,8-HxCDF	2.02e+07	0.52 y	1.03	34:39	1.009	94.921				94.9					
IS	13C-1,2,3,7,8,9-HxCDF	1.73e+07	0.51 y	0.86	35:38	1.037	97.069				97.1					
IS	13C-1,2,3,4,6,7,8-HpCDF	1.46e+07	0.43 y	0.72	37:29	1.091	97.247				97.2					
IS	13C-1,2,3,4,7,8,9-HpCDF	1.35e+07	0.45 y	0.70	39:15	1.143	93.423				93.4					
IS	13C-OCDF	3.39e+07	0.92 y	0.85	42:15	1.230	192.38				96.2					
C/Up	37C1-2,3,7,8-TCDD	2.18e+06		1.12	26:59	1.022	10.884				2180					
											Integrations					
											by					
RS/RT	13C-1,2,3,4-TCDD	1.79e+07	0.80 y	1.00	26:24	*	100.00				Analyst: <u>ms</u>					
RS	13C-1,2,3,4-TCDF	2.97e+07	0.78 y	1.00	24:58	*	100.00				Analyst: <u>CT</u>					
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.08e+07	0.51 y	1.00	34:21	*	100.00				Date: <u>1/9/15</u>					
											Date: <u>1/12/15</u>					

Vista Analytical Laboratory - Injection Log Run file: 141016D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
141016D1	1	ST141016D1-1	MAS	16-OCT-14	11:05:57	ST141016D1-1	NA
141016D1	2	SOLVENT BLANK	MAS	16-OCT-14	11:54:17	ST141016D1-1	NA
141016D1	3	ST141016D1-2	MAS	16-OCT-14	12:42:43	ST141016D1-1	NA
141016D1	4	ST141016D1-3	MAS	16-OCT-14	13:31:08	ST141016D1-1	NA
141016D1	5	ST141016D1-4	MAS	16-OCT-14	14:19:34	ST141016D1-1	NA
141016D1	6	ST141016D1-5	MAS	16-OCT-14	15:08:00	ST141016D1-1	NA
141016D1	8	SOLVENT BLANK	MAS	16-OCT-14	16:44:52	ST141016D1-1	NA
141016D1	9	SS141016D1-1	MAS	16-OCT-14	17:33:17	ST141016D1-1	NA
150107D1	1	ST150107D1-1	MAS	7-JAN-15	10:43:31	ST141016D1-1	NA

Dataset: C:\MassLynx\Default.pro\Results\141113F1\141113F1\_CRV.qld

Last Altered: Friday, November 14, 2014 07:50:29 Pacific Standard Time  
Printed: Friday, November 14, 2014 08:18:43 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 13 Nov 2014 15:04:53  
Calibration: C:\MassLynx\Default.pro\Curvedb\ldb-225\_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Compound name: 2,3,7,8-TCDF  
Response Factor: 1.10023  
RRF SD: 0.100726, Relative SD: 9.15499  
Response type: Internal Std ( Ref 2 ), Area \* ( IS Conc. / IS Area )  
Curve type: RF

#	Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1 141113F1_2	0.250	0.76	NO	17.52	2.58e3	9.20e5	0.255	1.12
2	2 141113F1_3	0.500	0.88	NO	17.54	5.25e3	1.05e6	0.455	1.00
3	3 141113F1_4	2.00	0.76	NO	17.52	2.24e4	1.16e6	1.76	0.968
4	4 141113F1_5	40.0	0.78	NO	17.52	5.36e5	1.16e6	41.8	1.15
5	5 141113F1_6	200	0.80	NO	17.52	3.07e6	1.24e6	226	1.24
6	6 141113F1_7	10.0	0.86	NO	17.55	1.30e5	1.16e6	10.2	1.12

CS 11/14/14  
11/14/14

Compound name: 13C-2,3,7,8-TCDF  
Response Factor: 0.843843  
RRF SD: 0.0230178, Relative SD: 2.72774  
Response type: Internal Std ( Ref 3 ), Area \* ( IS Conc. / IS Area )  
Curve type: RF

#	Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1 141113F1_2	100	0.79	NO	17.51	9.20e5	1.11e6	98.2	0.829
2	2 141113F1_3	100	0.79	NO	17.51	1.05e6	1.28e6	97.4	0.822
3	3 141113F1_4	100	0.79	NO	17.51	1.16e6	1.37e6	99.6	0.840
4	4 141113F1_5	100	0.80	NO	17.51	1.16e6	1.31e6	105	0.885
5	5 141113F1_6	100	0.81	NO	17.51	1.24e6	1.45e6	101	0.853
6	6 141113F1_7	100	0.81	NO	17.52	1.16e6	1.39e6	98.8	0.833



Vista Analytical Laboratory VG-9

Dataset: C:\MassLynx\Default.pro\Results\141113F1\141113F1\_CRV.qld

Last Altered: Friday, November 14, 2014 07:50:29 Pacific Standard Time

Printed: Friday, November 14, 2014 08:18:43 Pacific Standard Time

**Compound name: 13C-1,2,3,4-TCDF**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 3 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

#	Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1 141113F1_2	100	0.81	NO	15.25	1.11e6	1.11e6	100	1.00
2	2 141113F1_3	100	0.81	NO	15.23	1.28e6	1.28e6	100	1.00
3	3 141113F1_4	100	0.80	NO	15.23	1.37e6	1.37e6	100	1.00
4	4 141113F1_5	100	0.80	NO	15.23	1.31e6	1.31e6	100	1.00
5	5 141113F1_6	100	0.82	NO	15.23	1.45e6	1.45e6	100	1.00
6	6 141113F1_7	100	0.81	NO	15.25	1.39e6	1.39e6	100	1.00

**Compound name: 13C-1,2,3,4-TCDD**

No Calibration

Response type: External Std, Area

Curve type: RF

#	Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1 141113F1_2	0.000	0.80	NO	16.00	7.79e5			0.000
2	2 141113F1_3	0.000	0.78	NO	16.00	9.07e5			0.000
3	3 141113F1_4	0.000	0.80	NO	16.00	9.36e5			0.000
4	4 141113F1_5	0.000	0.80	NO	16.00	9.46e5			0.000
5	5 141113F1_6	0.000	0.79	NO	16.00	1.03e6			0.000
6	6 141113F1_7	0.000	0.79	NO	16.00	9.83e5			0.000

Dataset: C:\MassLynx\Default.pro\Results\141113F1\141113F1\_CRV.qld

Last Altered: Friday, November 14, 2014 07:50:29 Pacific Standard Time

Printed: Friday, November 14, 2014 08:16:25 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 13 Nov 2014 15:04:53

Calibration: C:\MassLynx\Default.pro\Curvedb\db-225\_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 141113F1\_7, Date: 13-Nov-2014, Time: 17:16:30, ID: ST141113F1-6 1613 CS3 1411102, Description: 1613 CS3 1411102

#	Name	Resp	RA	n/y	RRF M...	wi/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	1.30e5	0.86	NO	1.10	1.000	17.55	10.185	102	0.217
2	2 13C-2,3,7,8-TCDF	1.16e6	0.81	NO	0.844	1.000	17.52	98.766	98.8	0.302
3	3 13C-1,2,3,4-TCDF	1.39e6	0.81	NO	1.00	1.000	15.25	100.00	100	0.255
4	4 13C-1,2,3,4-TCDD	9.83e5	0.79	NO		1.000	16.00			

*CS 11/14/14*

Dataset: Untitled

Last Altered: Friday, November 14, 2014 07:58:55 Pacific Standard Time

Printed: Friday, November 14, 2014 08:07:25 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 13 Nov 2014 15:04:53  
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\11-13-TEST.cdb 14 Nov 2014 07:50:26

Compound name: 2,3,7,8-TCDF

	Name	ID	Acq.Date	Acq.Time
1	141113F1_1	CP141113F1-1 DB-225 CPSM	13-Nov-14	14:06:21
2	141113F1_2	ST141113F1-1 1613 CS0 14I1819	13-Nov-14	14:37:32
3	141113F1_3	ST141113F1-2 1613 CS1 14I1820	13-Nov-14	15:09:19
4	141113F1_4	ST141113F1-3 1613 CS2 14I1821	13-Nov-14	15:41:06
5	141113F1_5	ST141113F1-4 1613 CS4 14I1822	13-Nov-14	16:12:54
6	141113F1_6	ST141113F1-5 1613 CS5 14I1823	13-Nov-14	16:44:42
7	141113F1_7	ST141113F1-6 1613 CS3 14I1102	13-Nov-14	17:16:30
8	141113F1_8	SOLVENT BLANK	13-Nov-14	17:48:17
9	141113F1_9	SS141113F1-1 1613 SSS 13J3107	13-Nov-14	18:20:05
10	141113F1_10	SOLVENT BLANK	13-Nov-14	18:53:47
11	141113F1_11	1400819-01RE1 DP-1 CF 0.93853	13-Nov-14	19:23:48
12	141113F1_12	1400819-02RE1 RP-4 CF 0.95774	13-Nov-14	19:55:36
13	141113F1_13	1400824-02RE1 Secondary Sludge CF 19.78	13-Nov-14	20:27:24
14	141113F1_14	1400785-01RE1 DU1SU2 CF 29.92	13-Nov-14	20:59:12
15	141113F1_15	1400785-02RE1 DU1SU4 CF 31.78	13-Nov-14	21:31:00
16	141113F1_16	1400789-01RE1 DU1SU5 CF 33.89	13-Nov-14	22:02:48
17	141113F1_17	1400789-02RE1 DU2SU17 CF 30.06	13-Nov-14	22:34:35
18	141113F1_18	1400789-03RE1 DU2SU9 CF 29.99	13-Nov-14	23:06:23
19	141113F1_19	1400789-04RE1 DU2SU10 CF 30.04	13-Nov-14	23:38:10
20	141113F1_20	SOLVENT BLANK	14-Nov-14	00:09:58
21	141113F1_21	1400798-01RE1 DU2SU19 CF 31.55	14-Nov-14	00:43:33
22	141113F1_22	1400798-02RE1 DU2SU28 CF 33.04	14-Nov-14	01:13:41
23	141113F1_23	1400798-03RE1 DU2SU36 CF 30.86	14-Nov-14	01:45:28
24	141113F1_24	1400798-04RE1 DU2SU30-1 CF 32.41	14-Nov-14	02:17:16
25	141113F1_25	1400798-05RE1 DU2SU30-2 CF 33.37	14-Nov-14	02:49:03
26	141113F1_26	1400798-06RE1 DU2SU30-3 CF 30.24	14-Nov-14	03:20:52
27	141113F1_27	SOLVENT BLANK	14-Nov-14	03:52:41
28	141113F1_28	SOLVENT BLANK	14-Nov-14	04:24:29
29	141113F1_29	SOLVENT BLANK	14-Nov-14	04:56:17

Dataset: C:\MassLynx\Default.pro\Results\141113F1\141113F1\_9.qld

Last Altered: Friday, November 14, 2014 08:14:45 Pacific Standard Time

Printed: Friday, November 14, 2014 08:22:47 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 13 Nov 2014 15:04:53

Calibration: C:\MassLynx\Default.pro\Curvedbldb-225\_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 141113F1\_9, Date: 13-Nov-2014, Time: 18:20:05, ID: SS141113F1-1 1613 SSS 13J3107, Description: 1613 SSS 13J3107

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	2,3,7,8-TCDF	1.48e5	0.81	NO	1.10	1.000	17.54	8.9493	89.5	0.0832
2	13C-2,3,7,8-TCDF	1.51e6	0.81	NO	0.844	1.000	17.52	109.62	110	0.171
3	13C-1,2,3,4-TCDF	1.63e6	0.81	NO	1.00	1.000	15.25	100.00	100	0.145
4	13C-1,2,3,4-TCDD	1.29e6	0.78	NO		1.000	16.00			

JS 11/14/14