

Lower Duwamish Waterway

NPDES Inspection Sampling Support 2014/2015

Prepared for



Toxics Cleanup Program
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Washington State Department of Ecology
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Appendix T

Duwamish Substation

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T-1 Introduction and Background

Facility Name	Duwamish Substation
Facility/Site ID	17593
Address	1000 West Marginal Way SW Seattle, WA 98106
NPDES Permit Type	Phase I Municipal Stormwater Permit
NPDES Permit No.	WAR044503
Permit Monitoring Requirements	Unknown
SIC Code	Unknown
Inspection Date	December 16, 2014
Grab Samples	1 water sample; 3 solids samples
Sample ID(s)	DS-CB-F3-20141216-W DS-CB-H1-20141216-S DS-CB-I3-20141216-S DS-TD-01-20141216-S
Water Sample Analytes	Total metals, mercury, PCB congeners, dioxins/furans, alkalinity/carbonate/bicarbonate, anions, specific conductance, pH, TOC, DOC, TSS
Solids Sample Analytes	Total metals, mercury, PCB Aroclors, PCB congeners, dioxins/furans, SVOCs, VOCs (DS-TD-01 only), TPH-diesel/motor oil, TPH-gasoline (DS-TD-01 only), grain size, TOC
Split Samples with Facility	Yes

The Seattle City Light Duwamish Substation is located adjacent to the Lower Duwamish Waterway at River Mile 4.3 West. The 2.7-acre property is a power transmission and distribution facility for Seattle City Light. The facility is a mix of gravel, paved, and grassy surfaces. A materials storage area is located at the southern end of the property. The facility handles PCB-containing products. Site activities include power washing, vegetation management, and stormwater system/oil containment system maintenance. An overview of the facility is presented in Figure T-1.

T-1.1 Stormwater Conveyance

Stormwater at the Duwamish Substation is collected in catch basins and trench drains and discharges to the LDW via four separate storm drain lines including lines I, H, and G. Storm drain line I drains a small impervious surface area at the north end of the facility which is used for vehicle traffic and also receives runoff from two bus capacitor areas when water does not infiltrate into the ground. Storm drain line H drains an impervious surface area used for vehicle parking, roof runoff from the Control Building, and pumped water from a sump that collects seepage in the basement of the Control Building. Storm drain line G drains an impervious area

associated with a perimeter access road. Storm drain lines A and B drain impervious areas used for site vehicle access on the north and west central portion of the facility, respectively. Stormwater is conveyed to a municipal stormwater system that is not owned or operated by the City of Seattle, which ultimately discharges to the LDW. Storm drain lines C, D, and E drain areas used for a large transformer bank. The lines connect to storm drain line F which discharges to the LDW through a municipal stormwater system not owned or operated by the City of Seattle. Storm drain line F connects to an oil/water separator prior to discharge offsite. Each drainage line at the facility contains automatic shut-off valves designed to prevent discharge in the event of an oil spill (Ecology 2015). A facility drainage map is presented in Figure T-1.

T-1.2 Recent Compliance History

Recent compliance information was not available for review.

T-2 Inspection and Sampling

T-2.1 December 2014 Stormwater Compliance Inspection

On December 16, 2014, Ecology conducted a stormwater compliance inspection at Duwamish Substation. 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 T-2 using geographic information system software. An inspection photographic log and field documentation are presented in Attachments T-1 and T-2, respectively.

The field team inspected the following stormwater conveyance structures at Duwamish Substation, as shown in Figure T-2 (locations where samples were collected are shown in bold font):

- **Manhole F3 (DS-CB-F3)**
- Manhole 06 (DS-MH-06)
- Oil/water separator F (DS-OWS-F)
- **Trench drains (DS-TD-01) at bank 77, 78, and 79**
- **Catch basin I3 (DS-CB-I3)**
- **Catch basin H1 (DS-CB-H1).**

Location DS-CB-F3 contained sufficient water to collect a grab water sample. Locations DS-TD-01, DS-CB-H1, and DS-CB-I3 contained sufficient sampleable material to collect solids samples. Storm drain structure inspection locations are presented in Figure T-2.

T-2.2 Stormwater Conveyance System Sampling

Ecology collected one water sample and three solids samples from the stormwater conveyance system at Duwamish Substation. Sample locations, analytes, and analytical methods are listed on Table T-1. Results for the water sample are presented in Tables T-2 through T-6. Results for the solids samples are presented in Tables T-7 through T-10. Chain of custody forms and the laboratory reports are provided as Attachments T-3 and T-4, respectively. Split sample results provided by Seattle City Light are presented in Attachment T-6.

T-2.2.1 Water Sample

Water sample DS-CB-F3-20141216-W was collected from structure CB-F3 (Figure T-2 and Attachment T-1). CB-F3 is a manhole located at the southwest area of the Duwamish Substation. CB-F3 receives stormwater from F2 and MH-06, areas that drain asphalt paved driving lanes. Stormwater is conveyed from CB-F3 to OWS-F and conveyed to a municipal storm drain that discharges to the LDW. The location was labeled as a catch basin on the map provided by the facility staff.

T-2.2.2 Solids Samples

Solids sample DS-TD-01-20141216-S was a composite sample collected from trench drains at banks 77, 78, and 79 (Figure T-2 and Attachment T-1). The banks provide secondary containment for transmission substations. An equal amount of solids was collected from each trench drain and composited. Banks 77, 78, and 79 are located in the central area of the facility. The trench drains at banks 77, 78, and 79 receive storm drain solids from the surrounding concrete pad. The solids sample consisted of black sandy solids with organic matter.

Solids sample DS-CB-H1-20141216-S was collected from CB-H1, which is located in the central area of the Duwamish Substation. CB-H1 receives stormwater drainage from the surrounding paved driving lane. The sample consisted of dark brown to black and coarse to medium grain sandy solids. A slight sheen was observed on the water surface during sample collection.

Solids sample DS-CB-I3-20141216-S was collected from CB-I3, which is located in the north area of the Duwamish Substation. CB-I3 receives stormwater drainage from driving areas and bus capacitors at the facility. The stormwater discharge from CB-I3 to the LDW is plugged. The solids sample consisted of dark brown to black sandy sediment with some cobble and gravel mixed in. A slight sheen was observed on the water surface during sample collection.

T-3 Results

T-3.1 Chemical Analysis

Ecology collected one water sample and three solids samples during the December 16, 2014 stormwater compliance inspection at Duwamish Substation. Analytical methods, chemical results and regulatory criteria are presented in Tables T-1 through T-10.

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, copper and total PCB congeners exceeded a screening value (Table T-4). Dry weight concentrations of the following chemicals exceeded a screening level in one or more solids samples (Table T-8).

- Metals: cadmium, lead, silver, zinc;
- PCBs: total PCB congeners;
- Dioxin/furan TEQ;
- PAHs: acenaphthene, anthracene, benzo(a)anthracene, benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene, total benzofluoranthenes, total HPAHs, total LPAHs, total cPAHs;
- Phthalates: bis(2-ethylhexyl)phthalate, butylbenzylphthalate, di-n-butylphthalate, dimethylphthalate;
- TPH: motor oil-range hydrocarbons.

T-3.2 Inspection Results and Permit Compliance Requirements

At the time of the December 2014 inspection, Ecology reviewed site plans and information for compliance with the City of Seattle's Phase I Municipal Stormwater Permit. As part of the review, Ecology identified the following corrective actions (Ecology 2015):

- Ensure policies and procedures are implemented, including site-specific BMPs where appropriate to prevent and/or minimize stormwater pollution.
- Evaluate whether the facility meets the definition of a "heavy equipment maintenance or storage yard" and/or "material storage facility".
- Ensure comprehensive mapping and identification of all drainage-related structures, active and historical.

T-4 References

Ecology (Washington State Department of Ecology). 2015. Municipal Stormwater Inspection Report: Seattle City Light Duwamish Substation, 10000 W Marginal Pl S, Seattle, WA 98168. January 29, 2015.

EPA (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.

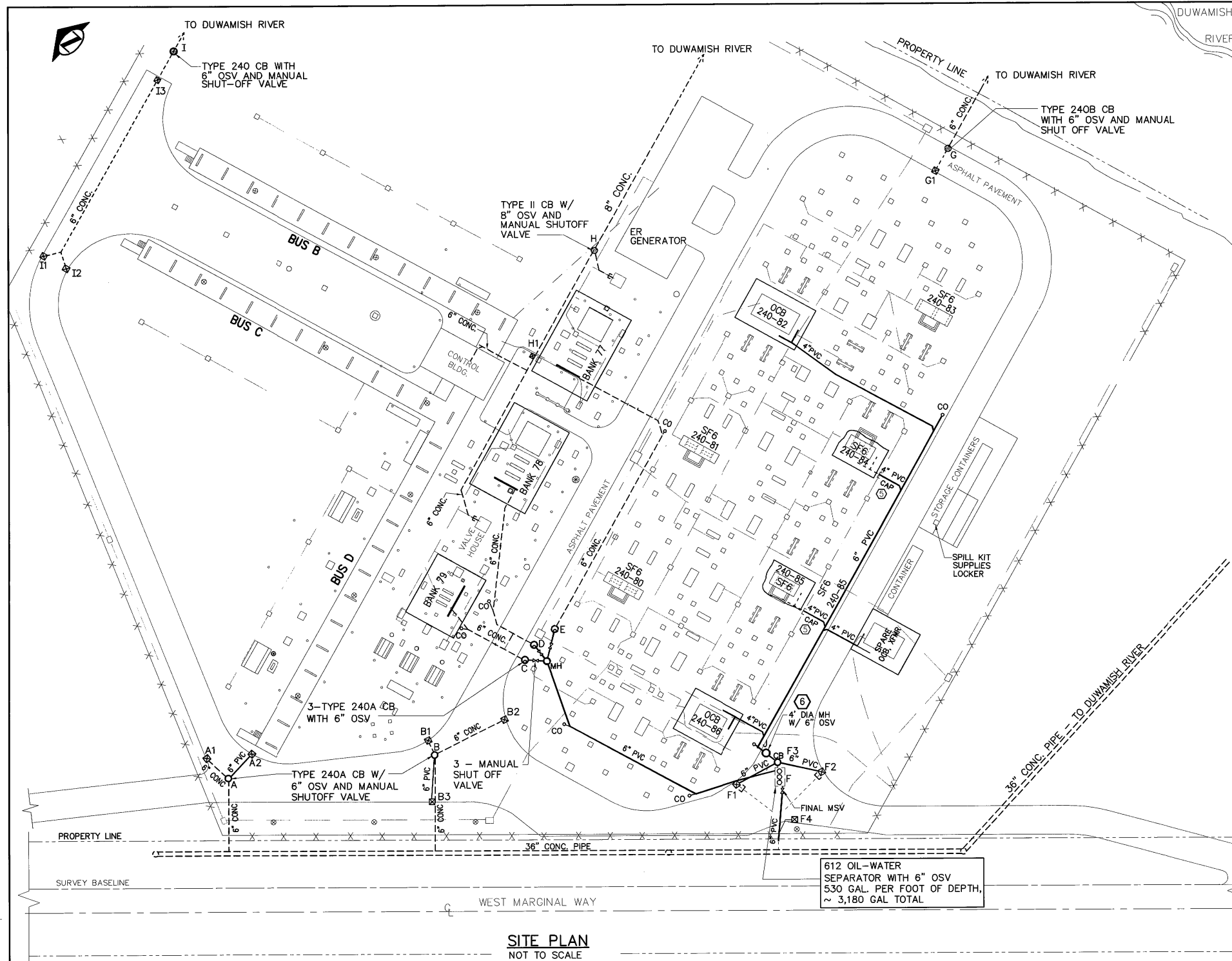
EPA. 2009. *Guidance for labeling externally validated laboratory analytical data for Superfund use*. EPA-540-R-08-005. Office of Emergency and Remedial Response. January 2009.

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.

Figures

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 Oct/03/2012 2:25pm

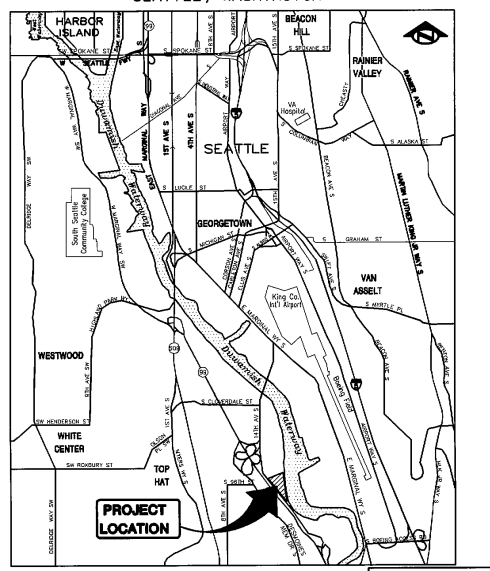


REFERENCE
 D-17719 DRAINAGE PLAN.
 D-31738 OIL CONTAINMENT SYSTEM
 XFMR BANKS 77, 78 & 79
 SITE PLAN

NOTE
 1. THIS DRAWING IS PREPARED AS AN ATTACHMENT TO THE SPCC PLAN FOR THIS FACILITY SHOWING OVERALL GENERAL ARRANGEMENT OF MAJOR FACILITY COMPONENTS. ALL INFORMATION SHOULD BE CONSIDERED APPROXIMATE, NOT AS A SOURCE FOR TECHNICAL INFORMATION.
 2. CAPACITY OF XFMR SUMPS:
 BANK 77 ~ 17,950 GAL/FOOT OF SUMP DEPTH
 BANK 78 ~ 17,950 GAL/FOOT OF SUMP DEPTH
 BANK 79 ~ 11,850 GAL/FOOT OF SUMP DEPTH

- LEGEND**
- DIRECT BURIAL CABLE TRENCH
 - DIRECT BURIAL CONDUITS
 - CONCRETE ENCASED PVC DUCTS
 - OSV OIL STOP VALVE
 - MSV MANUAL SHUT OFF VALVE
 - CB CATCH BASIN
 - MH MANHOLE
 - ⊗ CATCH BASIN W/ OIL STOP VALVE
 - ⊗ CATCH BASIN
 - MANHOLE OR CATCH BASIN
 - CO CLEAN OUT
 - ⊗ MANUAL SHUT OFF VALVE
 - ⊗ MANUAL SHUT-OFF VALVE UNDER MH COVER
 - ⊗ PLUGGED PIPE
 - PVC PIPE
 - CONC. PIPE
 - UNDERGROUND
 - CONCRETE FOUNDATION
 - EXISTING FENCE

VICINITY MAP
 ADDRESS: 10000 WEST MARGINAL WAY SOUTH
 SEATTLE, WASHINGTON



REV	DATE	BY	APP	DESCRIPTION
0	9/8/2000			DESCRIPTION
1	10/3/2001			DESCRIPTION
2	8/27/05			DESCRIPTION
3	10/3/2012			DESCRIPTION

W.O.#	DATE	BY	APP	DESCRIPTION
0	9/8/2000			DESCRIPTION
1	10/3/2001			DESCRIPTION
2	8/27/05			DESCRIPTION
3	10/3/2012			DESCRIPTION

ENDORSEMENTS	
SIGNATURE	DATE
DR : D. EMOTO	9/8/2000
CK : S. RIPPEE	9/8/2000
DSGN: R. HALL	9/8/2000
CK : S. McLEAN	9/8/2000

CITY OF SEATTLE	
CITY LIGHT DEPARTMENT	
APPROVED FOR CITY LIGHT DEPARTMENT	
S. McLEAN	9/8/2000

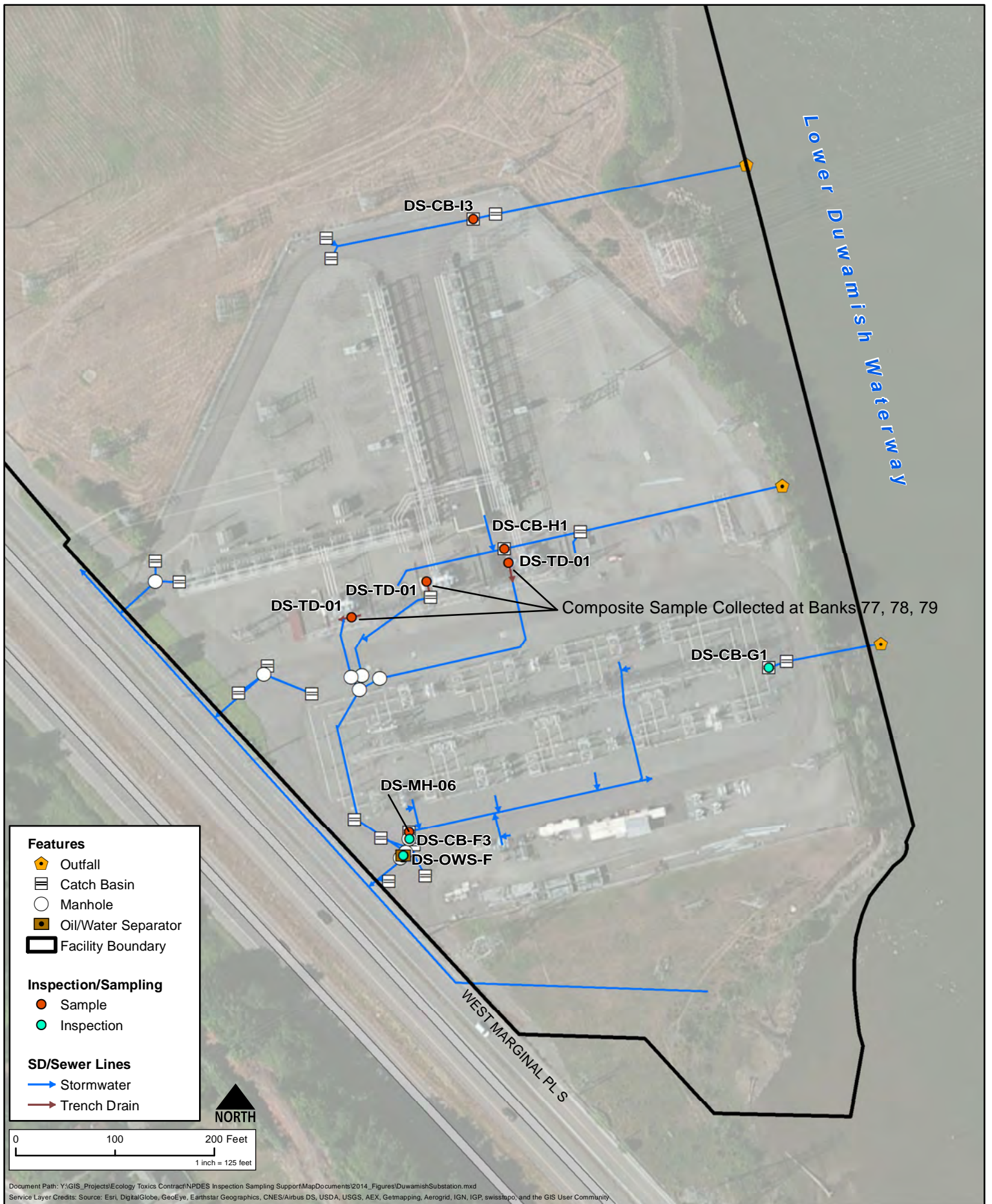
SPILL PREVENTION CONTROL COUNTERMEASURE PLAN	
DUWAMISH SUBSTATION	
OIL CONTAINMENT SYSTEM	
SHEET CLASS: G-2	OF 6
DRAWING NO. D-35108	REV. NO. 6
SCALE: NONE	



Figure T-1. Duwamish Substation SWPPP Map



Source: SCL 2015



**Figure T-2. Duwamish Substation
Inspection and Sampling Locations**

Tables

Acronyms and Abbreviations Used in Tables

<	not detected
%	percent
2LAET	Second Lowest Apparent Effects Threshold
CaCO ₃	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 T-1
Sampling Locations and Analytical Methods
Duwamish Substation

Analyte	Method	Sample Location / Collection Date			
		DS-CB-F3 12/16/2014	DS-CB-H1 12/16/2014	DS-CB-I3 12/16/2014	DS-TD-01 12/16/2014
Water Samples					
Metals (total)	EPA 200.8	●			
Mercury (total, dissolved)	EPA 245.1	●			
PCB Congeners	EPA 1668C	●			
Dioxins/furans	EPA 1613B	●			
Alkalinity/Bicarbonate/Carbonate	SM 2320B	●			
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	●			
Solids Samples					
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 T-2. Water Quality Data - Field Measurements
Duwamish Substation**

Location ID			DS-CB-F3
Collection Date			12/16/2014
Analyte	ISGP Benchmark	Units	Result
Field Parameters			
Flow	--	Yes/No	No
pH	5.0 to 9.0	std units	5.6
Conductivity	--	mS/cm	0.07
Temperature	--	degrees C	10.8
Total Dissolved Solids	--	mg/L	46
Turbidity	25	NTU	0.0
Oil & Grease	No visible sheen	Yes/No	No
Dissolved Oxygen	--	mg/L	11
ORP	--	mV	209

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

**Table T-3. Water Sample Results
Duwamish Substation**

	Location ID					DS-CB-F3
	Collection Date					12/16/2014
Analyte	ISGP Benchmark	WA WQC		NTR WQC	NR WQC	Result
		Marine		HHO	HHO	
		Chronic	Acute			
Total Metals (µg/L)						
Antimony	--	--	--	--	--	0.30 J
Arsenic	150	36	69	--	--	1.8
Beryllium	--	--	--	--	--	< 0.40 U
Cadmium	2.1	9.4	42	--	--	0.043 J
Chromium	--	--	--	--	--	0.30 J
Chromium, hexavalent	--	--	--	--	--	na
Copper	14	3.7	5.8	--	--	4.0
Lead	81.6	8.5	221	--	--	0.20 J
Mercury	1.4	0.025	2.1	--	--	< 0.20 U
Nickel	--	8.3	75	--	--	< 3.0 U
Selenium	5	71	291	--	--	< 1.0 U
Silver	3.8	--	2.2	--	--	< 0.40 U
Thallium	--	--	--	--	--	< 1.0 U
Zinc	117	86	95	--	--	20
PCB Congeners (µg/L) ^a						
Total PCB Congeners	--	0.03	10	1.70E-04	6.40E-05	2.17E-04 J
PCB TEQ, nd SDL*0	--	0.03	10	--	--	4.30E-10 J
PCB TEQ, nd SDL*0.5	--	0.03	10	--	--	1.67E-07 J
PCB TEQ, nd SDL*1	--	0.03	10	--	--	3.34E-07 J
Dioxins and Furans (pg/L) ^a						
2,3,7,8-TCDD	--	--	--	0.014	0.0051	< 0.729 U
1,2,3,7,8-PeCDD	--	--	--	--	--	< 0.878 U
1,2,3,4,7,8-HxCDD	--	--	--	--	--	< 0.899 U
1,2,3,6,7,8-HxCDD	--	--	--	--	--	< 0.957 U
1,2,3,7,8,9-HxCDD	--	--	--	--	--	< 0.966 U
1,2,3,4,6,7,8-HpCDD	--	--	--	--	--	26.0
OCDD	--	--	--	--	--	221
2,3,7,8-TCDF	--	--	--	--	--	< 0.640 U
1,2,3,7,8-PeCDF	--	--	--	--	--	< 0.640 U
2,3,4,7,8-PeCDF	--	--	--	--	--	< 0.647 U
1,2,3,4,7,8-HxCDF	--	--	--	--	--	< 0.478 U
1,2,3,6,7,8-HxCDF	--	--	--	--	--	< 0.523 U
1,2,3,7,8,9-HxCDF	--	--	--	--	--	< 0.721 U
2,3,4,6,7,8-HxCDF	--	--	--	--	--	< 0.525 U
1,2,3,4,6,7,8-HpCDF	--	--	--	--	--	6.52 J
1,2,3,4,7,8,9-HpCDF	--	--	--	--	--	< 0.532 U
OCDF	--	--	--	--	--	18.7 J
Total TCDD	--	--	--	--	--	< 0.730 U
Total PeCDD	--	--	--	--	--	< 0.878 U
Total HxCDD	--	--	--	--	--	1.06
Total HpCDD	--	--	--	--	--	45.9
Total TCDF	--	--	--	--	--	< 0.640 U
Total PeCDF	--	--	--	--	--	< 0.683 U
Total HxCDF	--	--	--	--	--	3.59 J
Total HpCDF	--	--	--	--	--	13.9
Dioxin/Furan TEQ, nd SDL*0	--	--	--	--	--	0.397 J
Dioxin/Furan TEQ, nd SDL*0.5	--	--	--	--	--	1.60 J
Dioxin/Furan TEQ, nd SDL*1	--	--	--	--	--	2.79 J

**Table T-3. Water Sample Results
Duwamish Substation**

	Location ID				DS-CB-F3	
	Collection Date				12/16/2014	
Analyte	ISGP Benchmark	WA WQC		NTR WQC	NR WQC	Result
		Marine		HHO	HHO	
		Chronic	Acute			

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"

**Table T-4. Water Sample Results Compared to Criteria
Duwamish Substation**

Location ID	DS-CB-F3				
Collection Date	12/16/2014				
Analyte	Exceedance Factor				
	ISGP Benchmark	WA Marine Chronic	WA Marine Acute	NTR Human Health - Organisms	NR Human Health - Organisms
Total Metals					
Copper		1.1			
PCB Congeners					
Total PCB Congeners				1.3	3.4

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 T-5. Water Sample Results - PCB Congeners
Duwamish Substation**

Location ID	DS-CB-F3
Collection Date	12/16/2014
Analyte	Result
Total PCB Congeners (µg/L)	0.000217 J
Total PCB Congeners (pg/L)	217 J
Total Mono-CB (pg/L)	< 3.62 U
PCB-1	< 3.62 U
PCB-2	< 3.11 U
PCB-3	< 3.10 U
Total Di-CB (pg/L)	< 4.21 U
PCB-4/10	< 4.21 U
PCB-5/8	< 3.46 U
PCB-6	< 3.56 U
PCB-7/9	< 3.51 U
PCB-11	< 3.19 U
PCB-12/13	< 3.23 U
PCB-14	< 2.79 U
PCB-15	< 2.84 U
Total Tri-CB (pg/L)	< 2.96 U
PCB-16/32	< 2.06 U
PCB-17	< 2.25 U
PCB-18	< 2.43 U
PCB-19	< 2.89 U
PCB-20/21/33	< 2.81 U
PCB-22	< 2.79 U
PCB-23	< 2.68 U
PCB-24/27	< 1.66 U
PCB-25	< 2.96 U
PCB-26	< 2.62 U
PCB-28	< 2.62 U
PCB-29	< 2.68 U
PCB-30	< 1.83 U
PCB-31	< 2.59 U
PCB-34	< 2.50 U
PCB-35	< 2.53 U
PCB-36	< 2.44 U
PCB-37	< 2.35 U
PCB-38	< 2.55 U
PCB-39	< 2.52 U
Total Tetra-CB (pg/L)	30.9 J
PCB-40	< 3.59 U
PCB-41/64/71/72	5.02 J
PCB-42/59	< 2.49 U
PCB-43/49	< 2.93 U*
PCB-44	6.05
PCB-45	< 3.15 U
PCB-46	< 2.43 U
PCB-47	< 2.57 U
PCB-48/75	< 2.32 U
PCB-50	< 3.20 U
PCB-51	< 2.82 U
PCB-52/69	10.4
PCB-53	< 2.88 U
PCB-54	< 2.43 U
PCB-55	< 1.90 U

**Table T-5. Water Sample Results - PCB Congeners
Duwamish Substation**

Location ID	DS-CB-F3
Collection Date	12/16/2014
Analyte	Result
PCB-56/60	< 2.12 U
PCB-57	< 2.10 U
PCB-58	< 2.07 U
PCB-61/70	2.89 J
PCB-62	< 2.26 U
PCB-63	< 2.02 U
PCB-65	< 2.34 U
PCB-67	< 2.16 U
PCB-68	< 1.91 U
PCB-73	< 2.32 U
PCB-74	2.25 J
PCB-76/66	4.27 J
PCB-77	< 1.92 U
PCB-78	< 1.94 U
PCB-79	< 2.02 U
PCB-80	< 1.77 U
PCB-81	< 1.77 U
Total Penta-CB (pg/L)	84.0 J
PCB-82	< 4.28 U
PCB-83	< 2.66 U
PCB-84/92	9.18 J
PCB-85/116	< 3.47 U*
PCB-86	< 4.28 U
PCB-87/117/125	4.11 J
PCB-88/91	< 5.69 U*
PCB-89	< 3.75 U
PCB-90/101	15.5
PCB-93	< 3.82 U
PCB-94	< 3.59 U
PCB-95/98/102	21.1
PCB-96	< 2.74 U
PCB-97	< 3.41 U
PCB-99	< 4.68 U*
PCB-100	< 3.11 U
PCB-103	< 3.09 U
PCB-104	< 2.37 U
PCB-105	4.49 J
PCB-106/118	9.85
PCB-107/109	< 2.38 U
PCB-108/112	< 3.15 U
PCB-110	19.8
PCB-111/115	< 2.38 U
PCB-113	< 2.78 U
PCB-114	< 2.44 U
PCB-119	< 2.35 U
PCB-120	< 2.23 U
PCB-121	< 2.30 U
PCB-122	< 2.90 U
PCB-123	< 2.54 U
PCB-124	< 2.44 U
PCB-126	< 2.59 U
PCB-127	< 2.49 U

**Table T-5. Water Sample Results - PCB Congeners
Duwamish Substation**

Location ID	DS-CB-F3	
Collection Date	12/16/2014	
Analyte	Result	
Total Hexa-CB (pg/L)	59.9	J
PCB-128/162	5.01	J
PCB-129	< 3.33	U
PCB-130	< 3.73	U
PCB-131	< 3.58	U
PCB-132/161	< 6.30	U*
PCB-133/142	< 3.33	U
PCB-134/143	< 3.25	U
PCB-135	< 5.24	U
PCB-136	< 3.66	U
PCB-137	< 2.91	U
PCB-138/163/164	21.5	
PCB-139/149	16.3	
PCB-140	< 5.38	U
PCB-141	3.73	J
PCB-144	< 4.89	U
PCB-145	< 3.82	U
PCB-146/165	< 3.13	U*
PCB-147	< 5.37	U
PCB-148	< 5.12	U
PCB-150	< 3.71	U
PCB-151	< 5.11	U
PCB-152	< 3.58	U
PCB-153	13.4	
PCB-154	< 4.70	U
PCB-155	< 3.59	U
PCB-156	< 2.15	U
PCB-157	< 2.20	U
PCB-158/160	< 2.23	U
PCB-159	< 2.18	U
PCB-166	< 2.33	U
PCB-167	< 2.24	U
PCB-168	< 2.23	U
PCB-169	< 2.45	U
Total Hepta-CB (pg/L)	42.5	J
PCB-170	4.94	
PCB-171	< 1.64	U
PCB-172	< 1.77	U
PCB-173	< 2.17	U
PCB-174	6.11	
PCB-175	< 1.89	U
PCB-176	< 1.36	U
PCB-177	5.10	
PCB-178	< 1.84	U
PCB-179	< 1.42	U
PCB-180	14.2	
PCB-181	< 1.77	U
PCB-182/187	8.47	J
PCB-183	3.67	J
PCB-184	< 1.48	U
PCB-185	< 1.70	U
PCB-186	< 1.36	U

**Table T-5. Water Sample Results - PCB Congeners
Duwamish Substation**

Location ID	DS-CB-F3
Collection Date	12/16/2014
Analyte	Result
PCB-188	< 1.30 U
PCB-189	< 1.11 U
PCB-190	< 1.14 U
PCB-191	< 1.29 U
PCB-192	< 1.38 U
PCB-193	< 1.29 U
Total Octa-CB (pg/L)	< 4.47 U*
PCB-194	< 2.65 U*
PCB-195	< 2.56 U
PCB-196/203	< 3.63 U
PCB-197	< 2.58 U
PCB-198	< 3.99 U
PCB-199	< 4.47 U*
PCB-200	< 2.91 U
PCB-201	< 2.75 U
PCB-202	< 2.95 U
PCB-204	< 2.80 U
PCB-205	< 1.81 U
Total Nona-CB (pg/L)	< 2.60 U
PCB-206	< 2.60 U
PCB-207	< 1.40 U
PCB-208	< 1.42 U
Deca-CB (pg/L)	< 2.39 U
PCB-209	< 2.39 U
PCB TEQ, nd SDL*0	0.000430 J
PCB TEQ, nd SDL*0.5	0.167 J
PCB TEQ, nd SDL*1	0.334 J

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

**Table T-6. Water Sample Results - Conventionals
Duwamish Substation**

		Location ID	DS-CB-F3
		Collection	12/16/2014
Analyte	ISGP Benchmark	Units	Result
Conventionals			
Alkalinity	--	mg/L	11
Bicarbonate	--	mg/L CaCO ₃	11
Carbonate	--	mg/L CaCO ₃	< 5 U
Chloride	--	mg/L	0.34 J
Specific Conductance	--	µmhos/cm	27
Hydroxide	--	mg/L CaCO ₃	na
Nitrate	--	mg/L	0.35 J
pH	5-9	std units	6.71 J
Salinity	--	mg/L	na
Sulfate	--	mg/L	1 J
Dissolved Organic Carbon	--	mg/L	0.83 J
Total Organic Carbon	--	mg/L	0.98 J
Total Suspended Solids ^a	30	mg/L	< 5 U
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 T-7. Solids Sample Results
Duwamish Substation**

Location ID				DS-CB-H1	DS-CB-I3	DS-TD-O1
Collection Date				12/16/2014	12/16/2014	12/16/2014
Analyte	SMS Criteria		Unit	Result	Result	Result
	SCO/ LAET ^a	CSL/ 2LAET				
Metals (Total) (mg/kg)						
Antimony	--	--	mg/kg	6.7	1.9	17
Arsenic	57	93	mg/kg	10	4.9	12
Beryllium	--	--	mg/kg	0.19 J	0.12 J	0.43
Cadmium	5.1	6.7	mg/kg	1.1	0.51	7.2
Chromium	260	270	mg/kg	60	21	100
Copper	390	390	mg/kg	120	82	320
Lead	450	530	mg/kg	150	48	500
Mercury	0.41	0.59	mg/kg	0.050	0.019 J	0.061
Nickel	--	--	mg/kg	38	21	72
Selenium	--	--	mg/kg	0.79 J	0.62 J	1.1
Silver	6.1	6.1	mg/kg	1.4	0.63	7.3
Thallium	--	--	mg/kg	< 1.3 U	< 0.75 U	< 0.64 U
Zinc	410	960	mg/kg	550	240	4,200
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	µg/kg	< 32 U	< 18 U	< 15 U
Aroclor 1221	--	--	µg/kg	< 35 U	< 20 U	< 17 U
Aroclor 1232	--	--	µg/kg	< 35 U	< 20 U	< 17 U
Aroclor 1242	--	--	µg/kg	< 32 U	< 18 U	< 15 U
Aroclor 1248	--	--	µg/kg	< 32 U	< 18 U	< 15 U
Aroclor 1254	--	--	µg/kg	62 J	35 J	77 J
Aroclor 1260	--	--	µg/kg	< 32 UJ	< 18 UJ	< 15 UJ
Total PCB Aroclors	130	1,000	µg/kg	62 J	35 J	77 J
PCB Congeners (µg/kg) ^b						
Total PCB Congeners	130	1,000	µg/kg	147 J	47.2 J	84.4 J
PCB TEQ, nd SDL*0	--	--	µg/kg	0.0181 J	0.0092 J	0.0217 J
PCB TEQ, nd SDL*0.5	--	--	µg/kg	0.0192 J	0.0105 J	0.022 J
PCB TEQ, nd SDL*1	--	--	µg/kg	0.0203 J	0.011 J	0.0222 J
Dioxins and Furans (ng/kg)						
2,3,7,8-TCDD	--	--	ng/kg	3.72	0.997	4.06
1,2,3,7,8-PeCDD	--	--	ng/kg	15.3	3.72	15.2
1,2,3,4,7,8-HxCDD	--	--	ng/kg	23.1	5.54	20.6
1,2,3,6,7,8-HxCDD	--	--	ng/kg	45.7	9.36	38.6
1,2,3,7,8,9-HxCDD	--	--	ng/kg	37	8.6	34.1
1,2,3,4,6,7,8-HpCDD	--	--	ng/kg	925	157	766
OCDD	--	--	ng/kg	10,300 J	1,100	8,950 J
2,3,7,8-TCDF	--	--	ng/kg	6.91	3.44	5.2
1,2,3,7,8-PeCDF	--	--	ng/kg	4.66	1.53 J	3.23
2,3,4,7,8-PeCDF	--	--	ng/kg	9.89	3.45	5.61
1,2,3,4,7,8-HxCDF	--	--	ng/kg	14.4	3.44	7.83
1,2,3,6,7,8-HxCDF	--	--	ng/kg	16	3.9	8.63
1,2,3,7,8,9-HxCDF	--	--	ng/kg	4.94	1.06 J	2.31 J
2,3,4,6,7,8-HxCDF	--	--	ng/kg	26.5	6.18	10.8
1,2,3,4,6,7,8-HpCDF	--	--	ng/kg	151	32.7	124
1,2,3,4,7,8,9-HpCDF	--	--	ng/kg	9.26	1.95 J	5.32
OCDF	--	--	ng/kg	246	47.8	199
Dioxin/Furan TEQ, nd SDL*0	25	--	ng/kg	53.6 J	12.2 J	45.5 J
Dioxin/Furan TEQ, nd SDL*0.5	25	--	ng/kg	53.6 J	12.2 J	45.5 J
Dioxin/Furan TEQ, nd SDL*1	25	--	ng/kg	53.6 J	12.2 J	45.5 J

**Table T-7. Solids Sample Results
Duwamish Substation**

Analyte	Location ID			DS-CB-H1	DS-CB-I3	DS-TD-O1
	Collection Date			12/16/2014	12/16/2014	12/16/2014
	SMS Criteria		Unit	Result	Result	Result
SCO/ LAET ^a	CSL/ 2LAET					
Total TCDD	--	--	ng/kg	38.9 J	7.9 J	33.1 J
Total TCDF	--	--	ng/kg	242 J	56.3 J	88 J
Total PeCDD	--	--	ng/kg	108	29.6	108
Total PeCDF	--	--	ng/kg	507 J	105	96.1 J
Total HxCDD	--	--	ng/kg	416	103	405
Total HxCDF	--	--	ng/kg	434 J	98 J	183 J
Total HpCDD	--	--	ng/kg	1,860	336	1,600
Total HpCDF	--	--	ng/kg	364	73.4	273
PAHs (µg/kg)						
1-Methylnaphthalene	--	--	µg/kg	250 J	< 530 U	< 470 U
2-Chloronaphthalene	--	--	µg/kg	< 650 U	< 360 U	< 310 U
2-Methylnaphthalene	670	1,400	µg/kg	280 J	< 360 U	< 310 U
Acenaphthene	500	730	µg/kg	3,200	< 360 U	87 J
Acenaphthylene	1,300	1,300	µg/kg	< 650 U	< 360 U	< 310 U
Anthracene	960	4,400	µg/kg	4,900	< 360 U	160 J
Benzo(a)anthracene	1,300	1,600	µg/kg	12,000	190 J	730
Benzo(a)pyrene	1,600	3,000	µg/kg	13,000	180 J	900
Benzo(g,h,i)perylene	670	720	µg/kg	4,000	94 J	400
Chrysene	1,400	2,800	µg/kg	14,000	300 J	1100
Dibenz(a,h)anthracene	230	540	µg/kg	1,400	< 710 U	120 J
Dibenzofuran	540	700	µg/kg	1,400 J	< 1,800 U	< 1,600 U
Fluoranthene	1,700	2,500	µg/kg	36,000	470	2000
Fluorene	540	1,000	µg/kg	2,600	< 360 U	99 J
Indeno(1,2,3-cd)pyrene	600	690	µg/kg	5,100	120 J	490 J
Naphthalene	2,100	2,400	µg/kg	530 J	< 360 U	< 310 U
Phenanthrene	1,500	5,400	µg/kg	28,000	310 J	1,200
Pyrene	2,600	3,300	µg/kg	30,000	420	1,600
Total Benzofluoranthenes	3,200	3,600	µg/kg	28,000	480 J	2,100
Total HPAHs	12,000	17,000	µg/kg	140,000	2,300 J	9,400 J
Total LPAHs	5,200	13,000	µg/kg	39,000 J	310 J	1,500 J
cPAHs, nd RL*0	1,000	--	µg/kg	18,000	260 J	1,300 J
cPAHs, nd RL*0.5	1,000	--	µg/kg	18,000	300 J	1,300 J
cPAHs, nd RL*1	1,000	--	µg/kg	18,000	330 J	1,300 J
Phthalates (µg/kg)						
bis(2-Ethylhexyl)phthalate	1,300	1,900	µg/kg	< 19,000 U	< 11,000 U	7,200 J
Butylbenzylphthalate	63	900	µg/kg	< 6,500 U	< 3,600 U	1,300 J
Di-n-Butylphthalate	1,400	5,100	µg/kg	< 16,000 U	< 8,900 U	6,500 J
Diethylphthalate	200	1,200	µg/kg	< 6,500 U	< 3,600 U	< 3,100 U
Dimethylphthalate	71	160	µg/kg	390 J	260 J	< 1,600 U
Di-n-Octyl phthalate	6,200	--	µg/kg	< 16,000 U	< 8,900 U	< 7,800 U
Phenols (µg/kg)						
2,4,5-Trichlorophenol	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U
2,4,6-Trichlorophenol	--	--	µg/kg	< 4,900 U	< 2,700 U	< 2,300 U
2,4-Dichlorophenol	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U
2,4-Dimethylphenol	29	29	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U
2,4-Dinitrophenol	--	--	µg/kg	< 32,000 U	< 18,000 U	< 16,000 U
2-Chlorophenol	--	--	µg/kg	< 3,200 U	< 18,00 U	< 1,600 U
2-Methylphenol	63	63	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U
2-Nitrophenol	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U

**Table T-7. Solids Sample Results
Duwamish Substation**

				Location ID	DS-CB-H1	DS-CB-I3	DS-TD-O1
				Collection Date	12/16/2014	12/16/2014	12/16/2014
Analyte	SMS Criteria		Unit	Result	Result	Result	Result
	SCO/ LAET ^a	CSL/ 2LAET					
4,6-Dinitro-2-Methylphenol	--	--	µg/kg	< 32,000 U	< 18,000 U	< 16,000 U	
4-Chloro-3-methylphenol	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
4-Methylphenol	670	670	µg/kg	< 6,500 U	< 3,600 U	< 3,100 U	
4-Nitrophenol	--	--	µg/kg	< 32,000 U	< 18,000 U	< 16,000 U	
Pentachlorophenol	360	690	µg/kg	< 6,500 U	< 3,600 U	< 3,100 U	
Phenol	420	1,200	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
Other SVOCs (µg/kg)							
1,2,4-Trichlorobenzene	31	51	µg/kg	< 1,600 U	< 890 U	< 780 U	
1,2-Dichlorobenzene	35	50	µg/kg	< 1,800 U	< 980 U	< 860 U	
1,3-Dichlorobenzene	--	--	µg/kg	< 1,600 U	< 890 U	< 780 U	
1,4-Dichlorobenzene	110	120	µg/kg	< 1,600 U	< 890 U	< 780 U	
2,4-Dinitrotoluene	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
2,6-Dinitrotoluene	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
2-Nitroaniline	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
3,3'-Dichlorobenzidine	--	--	µg/kg	< 6,500 U	< 3,600 U	< 3,100 U	
3-Nitroaniline	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
4-Bromophenyl-phenylether	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
4-Chloroaniline	--	--	µg/kg	< 3,200 UJ	< 1,800 UJ	< 1,600 UJ	
4-Chlorophenyl-phenylether	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
4-Nitroaniline	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
Benzoic Acid	650	650	µg/kg	< 81,000 U	< 44,000 U	< 39,000 U	
Benzyl Alcohol	57	73	µg/kg	< 3,200 U	< 1800 U	< 1,600 U	
2,2'-Oxybis(1-Chloropropane)	--	--	µg/kg	< 8,100 U	< 4,400 U	< 3,900 U	
bis(2-Chloroethoxy) Methane	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
Bis-(2-Chloroethyl) Ether	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
Carbazole	--	--	µg/kg	4,200	< 1,800 U	230 J	
Hexachlorobenzene	22	70	µg/kg	< 1,600 U	< 890 U	< 780 U	
Hexachlorobutadiene	11	120	µg/kg	< 1,600 U	< 890 U	< 780 U	
Hexachlorocyclopentadiene	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
Hexachloroethane	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
Isophorone	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
Nitrobenzene	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
N-Nitrosodimethylamine	--	--	µg/kg	< 32,000 U	< 18,000 U	< 16,000 U	
N-Nitroso-Di-N-Propylamine	--	--	µg/kg	< 3,200 U	< 1,800 U	< 1,600 U	
N-Nitrosodiphenylamine	28	40	µg/kg	< 1,600 U	< 890 U	< 780 U	
VOCs (µg/kg)							
1,1,1,2-Tetrachloroethane	--	--	µg/kg	na	na	< 1.8 U	
1,1,1-Trichloroethane	--	--	µg/kg	na	na	< 1.8 U	
1,1,2,2-Tetrachloroethane	--	--	µg/kg	na	na	< 3.6 UJ	
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	µg/kg	na	na	< 1.8 U	
1,1,2-Trichloroethane	--	--	µg/kg	na	na	< 3.6 U	
1,1-Dichloroethane	--	--	µg/kg	na	na	< 1.8 U	
1,1-Dichloroethene	--	--	µg/kg	na	na	< 9.0 U	
1,1-Dichloropropene	--	--	µg/kg	na	na	< 1.8 U	
1,2,3-Trichlorobenzene	--	--	µg/kg	na	na	< 3.6 UJ	
1,2,3-Trichloropropane	--	--	µg/kg	na	na	< 1.8 UJ	
1,2,4-Trimethylbenzene	--	--	µg/kg	na	na	< 3.6 UJ	
1,2-Dibromo-3-chloropropane	--	--	µg/kg	na	na	< 3.6 UJ	
1,2-Dibromoethane	--	--	µg/kg	na	na	< 1.8 U	
1,2-Dichloroethane	--	--	µg/kg	na	na	< 1.8 U	

**Table T-7. Solids Sample Results
Duwamish Substation**

Analyte	Location ID			DS-CB-H1	DS-CB-I3	DS-TD-O1
	Collection Date			12/16/2014	12/16/2014	12/16/2014
	SMS Criteria		Unit	Result	Result	Result
SCO/ LAET ^a	CSL/ 2LAET					
1,2-Dichloropropane	--	--	µg/kg	na	na	< 1.8 U
1,3,5-Trimethylbenzene	--	--	µg/kg	na	na	< 9 UJ
1,3-Dichloropropane	--	--	µg/kg	na	na	< 3.6 U
2,2-Dichloropropane	--	--	µg/kg	na	na	< 9 U
2-Chloroethylvinylether	--	--	µg/kg	na	na	< 9 U
2-Chlorotoluene	--	--	µg/kg	na	na	< 3.6 UJ
2-Hexanone	--	--	µg/kg	na	na	< 9 U
4-Chlorotoluene	--	--	µg/kg	na	na	< 3.6 UJ
Acetone	--	--	µg/kg	na	na	11 J
Acrolein	--	--	µg/kg	na	na	< 54 U
Acrylonitrile	--	--	µg/kg	na	na	< 18 U
Benzene	--	--	µg/kg	na	na	< 1.8 U
Bromobenzene	--	--	µg/kg	na	na	< 3.6 UJ
Bromochloromethane	--	--	µg/kg	na	na	< 3.6 U
Bromoform	--	--	µg/kg	na	na	< 1.8 U
Bromomethane	--	--	µg/kg	na	na	< 1.8 U
Carbon Disulfide	--	--	µg/kg	na	na	< 1.8 U
Carbon Tetrachloride	--	--	µg/kg	na	na	< 1.8 U
Chlorobenzene	--	--	µg/kg	na	na	< 1.8 U
Dibromochloromethane	--	--	µg/kg	na	na	< 1.8 U
Chloroethane	--	--	µg/kg	na	na	< 1.8 U
Chloroform	--	--	µg/kg	na	na	< 1.8 U
Chloromethane	--	--	µg/kg	na	na	< 1.8 U
cis-1,2-Dichloroethene	--	--	µg/kg	na	na	< 1.8 U
cis-1,3-Dichloropropene	--	--	µg/kg	na	na	< 1.8 U
Dibromomethane	--	--	µg/kg	na	na	< 1.8 U
Bromodichloromethane	--	--	µg/kg	na	na	< 1.8 U
Dichlorodifluoromethane	--	--	µg/kg	na	na	< 1.8 U
Ethylbenzene	--	--	µg/kg	na	na	< 1.8 U
Isopropylbenzene	--	--	µg/kg	na	na	< 3.6 U
m,p-Xylene	--	--	µg/kg	na	na	< 3.6 U
2-Butanone	--	--	µg/kg	na	na	< 18 U
Iodomethane	--	--	µg/kg	na	na	< 27 U
4-Methyl-2-Pentanone (MIBK)	--	--	µg/kg	na	na	< 9 U
Methyl tert-Butyl Ether	--	--	µg/kg	na	na	< 1.8 U
Methylene Chloride	--	--	µg/kg	na	na	< 27 U
n-Butylbenzene	--	--	µg/kg	na	na	< 3.6 UJ
n-Propylbenzene	--	--	µg/kg	na	na	< 3.6 UJ
o-Xylene	--	--	µg/kg	na	na	< 3.6 U
4-Isopropyltoluene	--	--	µg/kg	na	na	< 3.6 UJ
sec-Butylbenzene	--	--	µg/kg	na	na	< 3.6 UJ
Styrene	--	--	µg/kg	na	na	< 3.6 U
tert-Butylbenzene	--	--	µg/kg	na	na	< 3.6 UJ
Tetrachloroethene	--	--	µg/kg	na	na	< 1.8 U
Toluene	--	--	µg/kg	na	na	< 3.6 U
Total Xylenes	--	--	µg/kg	na	na	< 3.6 U
trans-1,2-Dichloroethene	--	--	µg/kg	na	na	< 1.8 U
trans-1,3-Dichloropropene	--	--	µg/kg	na	na	< 1.8 U
trans-1,4-Dichloro-2-butene	--	--	µg/kg	na	na	< 9 UJ
Trichloroethene	--	--	µg/kg	na	na	< 1.8 U

**Table T-7. Solids Sample Results
Duwamish Substation**

				Location ID	DS-CB-H1	DS-CB-I3	DS-TD-O1
				Collection Date	12/16/2014	12/16/2014	12/16/2014
Analyte	SMS Criteria		Unit	Result	Result	Result	
	SCO/ LAET ^a	CSL/ 2LAET					
Trichlorofluoromethane	--	--	µg/kg	na	na	< 1.8	U
Vinyl Acetate	--	--	µg/kg	na	na	< 9.0	U
Vinyl Chloride	--	--	µg/kg	na	na	< 1.8	U
TPH (mg/kg)							
Gasoline-Range Hydrocarbons	30/100	--	mg/kg	7.6 J	< 4.2 U	< 0.1	U
Diesel-Range Hydrocarbons	2,000	--	mg/kg	1,400 J	220 J	950 J	J
Motor Oil-Range Hydrocarbons	2,000	--	mg/kg	4,900 J	1,400 J	1,400 J	J
Grain size (%)							
Clay	--	--	%	2.2	1.5	1.0	
Silt	--	--	%	48	22	20	
Sand	--	--	%	42	66	62	
Gravel	--	--	%	8.4	10	17	
Cobbles	--	--	%	0.0	0.0	0.0	
Conventionals (%)							
Total Organic Carbon	--	--	%	13	3.1	6.4	
Total Solids	--	--	%	30.6	55.2	63.9	

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.

Results **shaded in gray** exceed one or more criteria.

**Table T-8. Solids Sample Results Compared to Dry Weight Criteria
Duwamish Substation**

Location ID	DS-CB-H1		DS-CB-I3		DS-TD-O1	
Collection Date	12/16/2014		12/16/2014		12/16/2014	
Analyte	Exceedance Factor		Exceedance Factor		Exceedance Factor	
	SCO/ LAET	CSL/ 2LAET	SCO/ LAET	CSL/ 2LAET	SCO/ LAET	CSL/ 2LAET
Metals (Total)						
Cadmium					1.4	1.1
Lead					1.1	
Silver					1.2	1.2
Zinc	1.3				10	4.4
PCBs						
Total PCB Congeners	1.1					
Dioxins and Furans						
Dioxin/Furan TEQ, nd SDL*0	2.1				1.8	
Dioxin/Furan TEQ, nd SDL*0.5	2.1				1.8	
Dioxin/Furan TEQ, nd SDL*1	2.1				1.8	
PAHs						
Acenaphthene	6.4	4.4				
Anthracene	5.1	1.1				
Benzo(a)anthracene	9.2	7.5				
Benzo(a)pyrene	8.1	4.3				
Benzo(g,h,i)perylene	6.0	5.6				
Chrysene	10	5.0				
Dibenz(a,h)anthracene	6.1	2.6				
Dibenzofuran	2.6	2.0				
Fluoranthene	21	14				
Fluorene	4.8	2.6				
Indeno(1,2,3-cd)pyrene	8.5	7.4				
Phenanthrene	19	5.2				
Pyrene	12	9.1				
Total Benzofluoranthenes	8.8	7.8				
Total HPAHs	12	8.2				
Total LPAHs	7.5	3.0				
cPAHs, nd RL*0	18				1.3	
cPAHs, nd RL*0.5	18				1.3	
cPAHs, nd RL*1	18				1.3	
Phthalates						
bis(2-Ethylhexyl)phthalate					5.5	3.8
Butylbenzylphthalate					21	1.4
Di-n-Butylphthalate					4.6	1.3
Dimethylphthalate	5.5	2.4	3.7	1.6		
TPH						
Motor Oil-Range Hydrocarbons	2.5					

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 T-9. Solids Sample Results Compared to
Organic Carbon-Normalized Criteria
Duwamish Substation**

Location ID			DS-CB-I3			
Collection Date			12/16/2014			
Analyte	SMS Criteria		Result	EF		
	SCO	CSL		SCO	CSL	
PAHs (mg/kg OC)						
2-Methylnaphthalene	38	64	< 12	U		
Acenaphthene	16	57	< 12	U		
Acenaphthylene	66	66	< 12	U		
Anthracene	220	1,200	< 12	U		
Benzo(a)anthracene	110	270	6.1	J		
Benzo(a)pyrene	99	210	5.8	J		
Benzo(g,h,i)perylene	31	78	3.0	J		
Chrysene	110	460	9.7	J		
Dibenz(a,h)anthracene	12	33	< 23	U		
Dibenzofuran	15	58	< 58	U		
Fluoranthene	160	1,200	15			
Fluorene	23	79	< 12	U		
Indeno(1,2,3-cd)pyrene	34	88	3.9	J		
Naphthalene	99	170	< 12	U		
Phenanthrene	100	480	10	J		
Pyrene	1,000	1,400	14			
Total Benzofluoranthenes	230	450	15	J		
Total HPAHs	960	5,300	74	J		
Total LPAHs	370	780	10	J		
Phthalates (mg/kg OC)						
bis(2-Ethylhexyl)phthalate	47	78	< 355	U		
Butylbenzylphthalate	4.9	64	< 116	U		
Di-n-Butylphthalate	220	1,700	< 287	U		
Diethylphthalate	61	110	< 116	U		
Dimethylphthalate	53	53	8.4	J		
Di-n-Octyl phthalate	58	4,500	< 287	U		
Other SVOCs (mg/kg OC)						
1,2,4-Trichlorobenzene	0.81	1.8	< 29	U		
1,2-Dichlorobenzene	2.3	2.3	< 32	U		
1,4-Dichlorobenzene	3.1	9	< 29	U		
Hexachlorobenzene	0.38	2.3	< 29	U		
Hexachlorobutadiene	3.9	6.2	< 29	U		
N-Nitrosodiphenylamine	11	11	< 29	U		
PCB Aroclors (mg/kg OC)						
Total PCB Aroclors	12	65	1.1	J		

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

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

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

**Table T-10. Solids Sample Results - PCB Congeners
Duwamish Substation**

Location ID	DS-CB-H1	DS-CB-I3	DS-TD-O1
Collection Date	12/16/2014	12/16/2014	12/16/2014
Analyte	Result	Result	Result
Total PCB Congeners (ng/kg) ^a	147,000 J	47,200 J	84,400 J
Total Monochlorobiphenyl (ng/kg)^a	345 J	< 61.7 U	< 63.1 U
PCB-1	129	< 61.7 U	< 63.1 U
PCB-2	63.3 J	< 61.4 U	< 62.5 U
PCB-3	153	< 51.0 U	< 51.9 U
Total Dichlorobiphenyl (ng/kg)^a	3,310 J	435 J	1,160 J
PCB-4/10	< 188 U*	< 55.3 U	< 263 U
PCB-5/8	731	< 47.5 U	< 255 U*
PCB-6	151	< 41.8 U	< 201 U
PCB-7/9	< 201 U	< 45.1 U	< 217 U
PCB-11	1,380	435	656
PCB-12/13	< 200 U	< 42.3 U	< 234 U
PCB-14	< 216 U	< 45.5 U	< 251 U
PCB-15	1,050	< 211 U*	502
Total Trichlorobiphenyl (ng/kg)^a	10,000 J	1,430 J	2,950 J
PCB-16/32	780	124 J	196 J
PCB-17	358	78.9 J	103 J
PCB-18	1,110	165	303
PCB-19	< 115 U*	< 44.3 U	< 40.0 U
PCB-20/21/33	1,420	194 J	338 J
PCB-22	822	122 J	232
PCB-23	< 26.7 U	< 22.0 U	< 33.9 U
PCB-24/27	77.3 J	< 26.4 U	< 22.7 U
PCB-25	131	< 22.3 U	27.6 J
PCB-26	302	< 46.8 U*	92.1 J
PCB-28	1,250	178	427
PCB-29	< 31.7 U	< 26.1 U	< 40.2 U
PCB-30	< 27.0 U	< 27.0 U	< 24.4 U
PCB-31	1,600	222	404
PCB-34	< 30.1 U	< 24.8 U	< 38.2 U
PCB-35	151	39.7 J	61.8 J
PCB-36	< 33.6 U	< 26.8 U	< 43.7 U
PCB-37	2,000	310	767
PCB-38	< 32.0 U	< 25.5 U	< 41.6 U
PCB-39	< 34.4 U	< 27.4 U	< 44.7 U
Total Tetrachlorobiphenyl (ng/kg)^a	23,300 J	4,110 J	8,290 J
PCB-40	433	< 33.4 U	150
PCB-41/64/71/72	1,800	272 J	688
PCB-42/59	624	< 86.0 U*	247
PCB-43/49	1,360	237 J	525
PCB-44	2,070	416	821
PCB-45	286	57.9 J	119 J
PCB-46	122 J	< 29.0 U	63.1 J
PCB-47	386	< 60.1 U*	173
PCB-48/75	302	< 47.5 U*	104 J
PCB-50	< 43.0 U	< 24.0 U	< 52.1 U
PCB-51	86.0 J	< 24.8 U	< 58.6 U
PCB-52/69	2,360	478	1,090
PCB-53	220	< 37.1 U*	< 80.7 U*
PCB-54	< 34.3 U	< 19.2 U	< 41.6 U
PCB-55	< 93.3 U*	< 19.9 U	< 42.9 U
PCB-56/60	2,670	418	707

**Table T-10. Solids Sample Results - PCB Congeners
Duwamish Substation**

Location ID	DS-CB-H1	DS-CB-I3	DS-TD-O1
Collection Date	12/16/2014	12/16/2014	12/16/2014
Analyte	Result	Result	Result
PCB-57	< 38.7 U	< 20.6 U	< 46.1 U
PCB-58	< 18.6 U*	< 21.8 U	< 48.7 U
PCB-61/70	4,800	1,030	1,410
PCB-62	< 34.6 U	< 19.2 U	< 44.9 U
PCB-63	124 J	< 21.2 U	< 47.5 U
PCB-65	< 34.5 U	< 19.1 U	< 44.8 U
PCB-67	< 109 U*	< 18.2 U	< 40.8 U
PCB-68	< 31.4 U	< 17.4 U	< 40.7 U
PCB-73	< 34.8 U	< 18.1 U	< 42.9 U
PCB-74	1,320	219	385
PCB-76/66	3,190	537	919
PCB-77	1,170	424	810
PCB-78	< 33.3 U	< 17.4 U	< 39.9 U
PCB-79	< 82.3 U*	< 19.2 U	82.2 J
PCB-80	< 31.3 U	< 17.4 U	< 37.4 U
PCB-81	< 38.5 U*	15.7 J	< 35.0 U*
Total Pentachlorobiphenyl (ng/kg)^a	43,800 J	17,300 J	30,200 J
PCB-82	1,060	< 325 U*	647
PCB-83	< 62.6 U	< 109 U	< 46.9 U
PCB-84/92	2,390	806	1,680
PCB-85/116	1,090	421	689
PCB-86	< 113 U	< 196 U	< 84.6 U
PCB-87/117/125	2,630	1,020	1,750
PCB-88/91	652	233 J	502
PCB-89	50.9 J	< 131 U	< 56.6 U
PCB-90/101	6,690	2,260	4,850
PCB-93	< 122 U	< 200 U	< 82.6 U
PCB-94	< 97.2 U	< 160 U	< 65.8 U
PCB-95/98/102	3,910	1,200	2,400
PCB-96	< 64.4 U	< 100 U	< 41.7 U
PCB-97	1,910	769	1,450
PCB-99	2,090	761	1,500
PCB-100	< 78.2 U	< 121 U	< 50.6 U
PCB-103	< 76.6 U	< 119 U	< 49.6 U
PCB-104	< 61.9 U	< 96.1 U	< 40.2 U
PCB-105	3,580	1,810	2,230
PCB-106/118	7,970	3,930	5,340
PCB-107/109	535	264	379
PCB-108/112	317	128 J	233 J
PCB-110	7,990	3,440	5,920
PCB-111/115	126 J	< 101 U	99.1 J
PCB-113	< 72.1 U	< 105 U	< 45.3 U
PCB-114	195	< 58.5 U*	108 J
PCB-119	91.7 J	< 108 U	< 52.9 U*
PCB-120	< 56.7 U	< 98.6 U	< 42.5 U
PCB-121	< 63.6 U	< 104 U	< 43.1 U
PCB-122	< 91.3 U*	37.4 J	< 85.1 U
PCB-123	< 92.2 U*	< 118 U	< 51.5 U
PCB-124	323	119 J	204
PCB-126	176	96.6 J	214
PCB-127	< 83.5 U	< 55.4 U	< 70.0 U

**Table T-10. Solids Sample Results - PCB Congeners
Duwamish Substation**

Location ID	DS-CB-H1	DS-CB-I3	DS-TD-O1
Collection Date	12/16/2014	12/16/2014	12/16/2014
Analyte	Result	Result	Result
Total Hexachlorobiphenyl (ng/kg)^a	39,500 J	17,400 J	26,800 J
PCB-128/162	1,860	919	1,250
PCB-129	566	329	404
PCB-130	604	352	445
PCB-131	< 98.0 U	< 54.3 U	< 24.9 U
PCB-132/161	2,380	1,170	1,670
PCB-133/142	288	129 J	212 J
PCB-134/143	433	171 J	312
PCB-135	913	< 265 U*	< 636 U*
PCB-136	749	259	495
PCB-137	646	279	428
PCB-138/163/164	9,730	4,930	6,510
PCB-139/149	6,390	2,320	4,540
PCB-140	< 120 U	< 82.0 U	151
PCB-141	1,850	727	1,160
PCB-144	319	< 130 U*	< 217 U*
PCB-145	< 72.3 U	< 49.3 U	< 52.9 U
PCB-146/165	1,060	454	836
PCB-147	148	< 72.2 U	< 142 U*
PCB-148	< 117 U	< 79.6 U	< 85.5 U
PCB-150	< 87.0 U	< 59.3 U	< 63.7 U
PCB-151	1,370	495	959
PCB-152	< 77.9 U	< 53.1 U	< 57.0 U
PCB-153	7,030	3,000	5,180
PCB-154	92.0 J	< 69.0 U	166
PCB-155	< 78.0 U	< 53.2 U	< 57.1 U
PCB-156	1,320	746	749
PCB-157	< 269 U*	187	171
PCB-158/160	1,210	624	781
PCB-159	< 71.2 U	< 38.9 U	< 18.8 U
PCB-166	< 66.8 U	< 36.5 U	< 17.7 U
PCB-167	495	285	339
PCB-168	< 61.4 U	< 34.1 U	< 15.6 U
PCB-169	< 73.1 U	< 36.9 U	< 16.9 U
Total Heptachlorobiphenyl (ng/kg)^a	19,400 J	5,490 J	10,700 J
PCB-170	2,640	873	1,370
PCB-171	492	222	275
PCB-172	362	108 J	243
PCB-173	< 73.7 U*	< 50.8 U	< 66.6 U
PCB-174	2,220	583	1,170
PCB-175	90.3 J	58.6 J	< 56.3 U
PCB-176	218	65.9 J	135
PCB-177	1,350	377	792
PCB-178	463	148	307
PCB-179	714	184	456
PCB-180	6,120	1,690	3,160
PCB-181	< 58.6 U	< 40.8 U	< 53.5 U
PCB-182/187	2,350	668	1,570
PCB-183	1,100	344	621
PCB-184	< 33.8 U	< 26.8 U	< 35.0 U
PCB-185	208	< 55.2 U*	103 J
PCB-186	< 37.9 U	< 30.1 U	< 39.2 U

**Table T-10. Solids Sample Results - PCB Congeners
Duwamish Substation**

Location ID	DS-CB-H1	DS-CB-I3	DS-TD-O1
Collection Date	12/16/2014	12/16/2014	12/16/2014
Analyte	Result	Result	Result
PCB-188	< 34.9 U	< 28.1 U	< 36.1 U
PCB-189	149	54.1 J	< 72.7 U*
PCB-190	492	< 169 U*	292
PCB-191	150	42.4 J	86.9 J
PCB-192	< 46.4 U	< 32.4 U	< 42.4 U
PCB-193	309	72.4 J	156
Total Octachlorobiphenyl (ng/kg)^a	5,690 J	782 J	3,020 J
PCB-194	1,360	375	763
PCB-195	412	< 91.3 U*	242
PCB-196/203	1,760	< 350 U*	856
PCB-197	< 51.9 U	< 88.6 U	< 50.9 U
PCB-198	< 73.8 U	< 126 U	< 72.4 U
PCB-199	1,550	407	751
PCB-200	183	< 89.5 U	98.5 J
PCB-201	< 174 U*	< 82.7 U	120 J
PCB-202	357	< 87.8 U	193
PCB-204	< 49.0 U	< 83.6 U	< 48.0 U
PCB-205	70.5 J	< 50.2 U	< 36.9 U*
Total Nonachlorobiphenyl (ng/kg)^a	1,240	316 J	816 J
PCB-206	877	222	570
PCB-207	128	< 22.4 U	63.6 J
PCB-208	231	94.0 J	182
Decachlorobiphenyl (ng/kg)	223	< 57.6 U	433
PCB-209	223	< 57.6 U	433
PCB TEQ, nd SDL*0	18.1 J	9.92 J	21.7 J
PCB TEQ, nd SDL*0.5	19.2 J	10.5 J	22.0 J
PCB TEQ, nd SDL*1	20.3 J	11.0 J	22.2 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 T-1
Inspection Photographic Log

Conveyance Structure Information

Structure Identification Number:
DS-CB-F3

Structure Type:
Manhole

General Location:
Southwest area of facility

Characteristics:
9.3' to bottom of structure, 7' to depth of water, no sediment

Pump Capacity (gpm):
--

Design Storm:
--

Access:
Manhole Grate

Volume Gauge:
--

Sample ID:
DS-CB-F3-20141216-W

N →



Drainage Information:

CB-F3 is located at the southwest area of the SCL Duwamish Substation. CB-F3 receives stormwater from CB-F2 and MH-06, areas that drain asphalt paved driving lanes. Stormwater is conveyed from CB-F3 to an OWS.

NE ↙



Conveyance Structure Information

Structure Identification Number:
 TD at Bank 77, Bank 78, Bank 79

Structure Type:
 Trench Drains

General Location:
 Central area of facility

Characteristics:
 3-4" of sediment

Pump Capacity (gpm):
 --

Design Storm:
 --

Access:
 Trench Drain Grate

Volume Gauge:
 --

Sample ID:
 DS-TD-01-20141216-S

N ←



12/16/2014, 13:42:19
 TD at Bank 77

Drainage Information:

The three trench drains are located in the secondary containment areas for transformers at the facility. Stormwater is collected by the trench drains and conveyed to an 8" concrete drainage line that discharges to the LDW.

N ←



12/16/2014, 13:46:16
 TD at Bank 78

Conveyance Structure Information

Structure Identification Number: DS-CB-I3
Structure Type: Catch Basin
General Location: North area of facility
Characteristics: 5' to bottom of structure, 4' to depth of water, 3" of sediment
Pump Capacity (gpm): --
Design Storm: --
Access: Catch Basin Grate
Volume Gauge: --
Sample ID: DS-CB-I3-20141216-S



Drainage Information:

CB-I3 is located in the north area of the SCL Duwamish Substation. CB-I3 receives surface stormwater drainage. The stormwater discharge from CB-I3 to the LDW is plugged.



Conveyance Structure Information

Structure Identification Number:
DS-CB-H1

Structure Type:
Catch Basin

General Location:
Central area of facility

Characteristics:
4' to bottom of structure, 2' to depth of water, 2-3" of sediment

Pump Capacity (gpm):
--

Design Storm:
--

Access:
Catch Basin Grate

Volume Gauge:
--

Sample ID:
DS-CB-H1-20141216-S

N ←



Drainage Information:

CB-H1 is located in the central area of the SCL Duwamish Substation. CB-H1 receives surface stormwater drainage. It was unclear during the field inspection what drainage line the catch basin connected with.

N ←



Attachment T-2
Field Documentation

Location SCL Duwamish Substation Date 12/16/15 47

Project / Client NPDES/Ecology

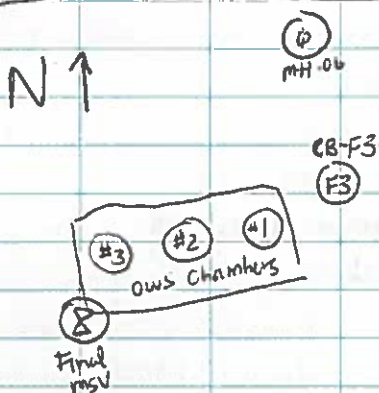
- 0650 C. Wilson departs home and stops to purchase ice.
- 0710 C. Wilson arrives at storage unit and begins to mobilize for field event
- 0735 M. Ivancevich arrives on site
- 0800 Field team departs field office for SCL Duwamish South Substation
- 0826 C. Wilson & M. Ivancevich arrive at SCL Duwamish South Substation. Mahbub Khan Ecology & SCL representative ^(Gary) on site already.
- 0830 Rachel/Ecology briefed C. Wilson & M. Ivancevich. Site did not provide a drainage map, map that site said it will provide is titled "oil containment system".
- 0851 C. Nancarrow onsite - Leidos, Ecology, SCL & SPU enter site.
- 0856 Substation training.
- 0900 Introductions:
Felipe Butarola (SCL)
Rodney Dunlap (SCL)
Ben Bouchard (SCL)
- 1010 Mopped to OWS at SE end of site
- 1015 Investigating CB F3. 9.3" to bottom. Inlet from NE S, 6". Outlet E

to OWS

1020 Investigating Mtl immediately N of F3. Inlet from N, outlet S. 8' to bottom. Water very clear.

1027 Investigating inflow chamber ^(#1) to OWS. Inlet from F3 to the West. Negligible solids. Approx 12' to bottom. Approx 7-8' to water surface. 3 chambers, #1-3, W to E.

1037 Investigating chamber #3. Approx 11' deep, to bottom. Negligible solids.



1045 Leidos setting up at F3 to collect a water sample. Labeled CB on site map, actually a Mtl.

1100 C. Wilson calibrated WA meter w/ INV provided solution.

1110 Began collecting water sample at F3. Sample ID: DS-CB-F3-20141216-W.

1144 Sampling completed at CB F3. Breaking for lunch.

1245 Back on site from lunch. Leidos begins to set up for a composite solids sample of the trench drains E of each bank (Bank 77, 78, & 79).

1300 Probing CB N of Bank 77 (H1). 6' inlet from S, 2" outlet E & W. Approx 3-4" solids. 2' deep. 1.5' to water surface.

1320 Began solids sample of trench drains. Sample ID: DS-TD-01-20141216-S

1403 Completed composite solids sample of trench drains. Mapped to CB I3. Investigating CB drain E ~~top~~ of CB I3, with ^{shutoff} valve before outfall.

1409 Investigating CB I3. Approx 4' to bottom. Solids pockets in corners. No apparent inlets; outlet plugged. Inlet in drain to East. CB's tie into drain via a main

- line pipe (PVC). Will collect a solids sample from CB I3, reduced list if necessary. Can eliminate VOAs, TDC, & particle size. Analyze for PCBs, metals, PAHs, VOCs.
- 1435 Began collecting solids sample at CB I3. Sample ID: DS-CB-I3-20141216-S. Able to collect enough material to analyze for all analytes except VOAs.
- 1500 Completed sampling at CB I3. Muddled to CB H1 for solids sampling.
- 1515 Began solids sampling at CB H1. Sample ID: DS-CB-H1-20141216-S. Prioritizing analytes due to low sample volume - no VOAs collected.
- 1530 Completed sampling at CB H1. Leidos prepares COCs for split samples.
- 1537 Leidos relinquished split samples to Gary/SCL.
- 1545 Leidos offsite, en route to field storage unit.
- 1600 C. Wilson & M. Ivancovich arrive at field storage unit, unload sampling van & prepares samples for shipment.

- 1615 C. Wilson offsite return WQ meter, pump, & sampling van.
- 1700 M. Ivancovich secures field storage unit, departs for FedEx.
- 1706 M. Ivancovich relinquishes Vista sample cooler to FedEx.

MA 12/16/14



Sediment Collection Form

Project: NPDES Sampling Support

Location ID: H1

Facility Name: SCL Dunsmuir Substation

Sample ID: DS-CB-H1-20141216-S

Sampled By: MI, CW

Date: 12/16/2014 Time: 1515

Structure Type: <u>CB</u>	Dimensions: W <u>2'</u> L <u>3'</u>	Standing Water: <input checked="" type="radio"/> Y <input type="radio"/> N	Flow: Y/ <input checked="" type="radio"/> N
Conveyance System Sketch ↑N			
Depth to Bottom: <u>~4</u> ft	Depth to Water: <u>~2</u> ft	Depth of Sediment: <u>2-3</u> in	Sampled <input checked="" type="radio"/> Y / <input type="radio"/> N Discrete / <u>Composite</u> (circle one)
Sediment type: Cobble Gravel <u>Sand C M F</u> Silt/clay Organic matter Debris	Sediment color: Drab olive Brown Brown surface Gray <u>Black</u> Tan	Sediment Odor: None <u>ML</u> <u>Slight</u> Moderate Strong Overwhelming H ₂ S Petroleum	Comments: Photo ID(s): _____ GPS ID: _____

NOTES: Surface drainage. Slight sheen observed.

Recorded By/Date: MI 12/16/14

Reviewed By/Date: [Signature] 12/17/14



Sediment Collection Form

Project: NPDES Sampling Support

Location ID: CB F3

Facility Name: SCL Duwamish Substation

Sample ID: DS-CB-F3-20141216-W

Sampled By: MI, CW

Date: 12/16/2014 Time: 1110

Structure Type: <u>MH</u>	Dimensions: <u>standard</u> W _____ L _____	Standing Water: <u>Y</u> N	Flow: <u>Y</u> N
Conveyance System Sketch			↑N
Depth to Bottom: <u>9.3</u> ft	Depth to Water: <u>7</u> ft	Depth of Sediment: <u>—</u> in	Sampled: Y / N Discrete / Composite (circle one)
Sediment type:	Sediment color:	Sediment Odor:	Comments:
Cobble	Drab olive	None	Photo ID(s): <input checked="" type="checkbox"/> _____ GPS ID: _____
Gravel	Brown	Slight	
Sand C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	Black	Overwhelming	
Debris	Tan	H ₂ S	
		Petroleum	

NOTES: Location labeled as a catch basin on facility provided map, actually a manhole. Paved area.

Water sample collected

Recorded By/Date: MI 12/14/14

Reviewed By/Date: [Signature] 12/17/14



Sediment Collection Form

Project: NPDES Sampling Support

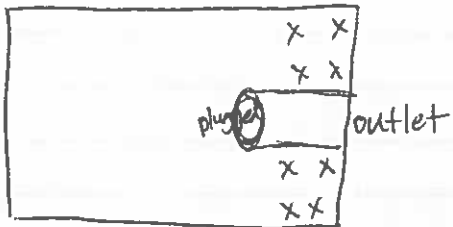
Location ID: CB I 3

Facility Name: SCL Duwamish Substation

Sample ID: DS-CB-I3-20141216-S

Sampled By: MI, CW

Date: 12/16/2014 Time: 1435

Structure Type: <u>CB</u>	Dimensions: W <u>2'</u> L <u>3'</u>	Standing Water: <input checked="" type="radio"/> Y <input type="radio"/> N	Flow: Y <input checked="" type="radio"/> N <input type="radio"/>
Conveyance System Sketch ↑N			
			
x = sampling location		x = sampling nel	
Depth to Bottom: <u>5</u> ft	Depth to Water: <u>4</u> ft	Depth of Sediment: <u>3</u> in <i>on NE & SE corner</i>	Sampled <input checked="" type="radio"/> Y <input type="radio"/> N Discrete / <u>Composite</u> (circle one)
Sediment type: <input checked="" type="radio"/> Cobble <input checked="" type="radio"/> Gravel <input checked="" type="radio"/> Sand C M F <input type="radio"/> Silt/clay <input type="radio"/> Organic matter <input type="radio"/> Debris	Sediment color: <input type="radio"/> Drab olive <input type="radio"/> Brown <input type="radio"/> Brown surface <input type="radio"/> Gray <input checked="" type="radio"/> Black <input type="radio"/> Tan	Sediment Odor: <input checked="" type="radio"/> None <input type="radio"/> Slight <input type="radio"/> Moderate <input type="radio"/> Strong <input type="radio"/> Overwhelming <input type="radio"/> H ₂ S <input type="radio"/> Petroleum	Comments: Photo ID(s): _____ GPS ID: _____

NOTES: Slight sheen observed.

Recorded By/Date: MI 12/16/14

Reviewed By/Date: [Signature] 12/17/14



Sediment Collection Form

Project: NPDES Sampling Support

Location ID: ID's for each Bank (T7, T8, T9)

Facility Name: SCL Duwamish Substation

Sample ID: DS-TD-01-20141216-S

Sampled By: MI, CW

Date: 12/16/2014 Time: 1320

Structure Type: <u>Trench Drain</u>	Dimensions: W _____ L _____	Standing Water: Y/ <u>N</u>	Flow: Y/ <u>N</u>
Conveyance System Sketch ↑N			
Depth to Bottom: _____ ft	Depth to Water: _____ ft	Depth of Sediment: <u>3-4</u> in	Sampled <u>Y/N</u> Discrete / <u>Composite</u> (circle one)
Sediment type:	Sediment color:	Sediment Odor:	Comments:
Cobble Gravel <u>Sand C M F</u> Silt/clay <u>Organic matter</u> <u>Debris</u>	Drab olive Brown Brown surface Gray <u>Black</u> Tan	<u>None</u> Slight Moderate Strong Overwhelming H ₂ S Petroleum	Photo ID(s): _____ GPS ID: _____

NOTES: Solids sample composited from trench drain for each Bank: Bank T7, T8, & T9

Sample team collected equal solids volume from each drainage structure

Recorded By/Date: MI 12/16/14

Reviewed By/Date: _____

12/17/14

Attachment T-3
Chain of Custody Forms

Regulatory Program: DW NPDES RCRA Other:

Client Contact	Project Manager: Christine Nancarrow	Site Contact: Melissa Ivancevich	Date: 12/16/14	COC No:
Leidos	Tel/Fax: 206.300.2144	Lab Contact: Kris Allen	Carrier: Courier	<u>2</u> of <u>2</u> COCs
18912 N Creek Pkwy, Ste. 101	Analysis Turnaround Time			Sampler:
Bothell, WA 98011	<input type="checkbox"/> CALENDAR DAYS <input checked="" type="checkbox"/> WORKING DAYS	TAT if different from Below 3 Weeks		For Lab Use Only:
425.398.2101 Phone	<input type="checkbox"/> 2 weeks			Walk-in Client:
425.485.5566 FAX	<input type="checkbox"/> 1 week			Lab Sampling:
Project Name: NPDES Sampling Support	<input type="checkbox"/> 2 days			Job / SDG No.:
Site: Lower Duwamish Waterway	<input type="checkbox"/> 1 day			
P O # P010163427				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	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)	Sample Specific Notes:
DS-TD-01-20141216-S	12/16/14	1720	C	Sed	6				1				1	2	1	1	
DS-CB-E3-20141216-S	12/16/14	1425	^{12/16/14} G	sed	3			✓	✓	✓	✓	✓			1	1	
DS-CB-H1-20141216-S	12/16/14	1515	G	Sed	3			✓	✓	✓	✓	✓			1	1	
<i>[Handwritten signature and date 12/16/14]</i>																	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH 6

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

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:

Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corrd: _____	Therm ID No.: _____
Relinquished by: <i>[Signature]</i> Corey Wilson	Company: Leidos	Date/Time: 12/17/14 1155	Received by: <i>[Signature]</i>
Relinquished by:	Company:	Date/Time:	Received by:
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:

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Christine Nancarrow				Site Contact: Melissa Ivancevich				Date: 12/16/14				COC No:							
Leidos		Tel/Fax: 206.300.2144				Lab Contact: Kris Allen				Carrier: Courier				1 of 2 COCs							
18912 N Creek Pkwy, Ste. 101		Analysis Turnaround Time																			
Bothell, WA 98011		<input type="checkbox"/> CALENDAR DAYS <input checked="" type="checkbox"/> WORKING DAYS TAT if different from Below 3 Weeks <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day																			
425.398.2101 Phone		Filtered Sample (Y/N) Perform MS / MSD (Y/N) SVOCs (Method 8270D) Metals (Method 200.87/470A) 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)																			
425.485.5566 FAX																					
Project Name: NPDES Sampling Support																					
Site: Lower Duwamish Waterway																					
P O # P010163427																					
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	SVOCs (Method 8270D)	Metals (Method 200.87/470A)	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:			
DS-CB-F3-20141216-W		12/16/14	1110	G	W	9	N	2	1	2					1	2	1				
Preservation Used: 1= Ice, 2= HCl; 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.										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)											
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown										<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months											
Special Instructions/QC Requirements & Comments:																					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:				Cooler Temp. (°C): Obs'd: _____ Cor'd: _____				Therm ID No.:											
Relinquished by:		Company: Leidos				Date/Time: 12/17/14 1155				Received by:				Company: TASA				Date/Time: 12/17/14 1155			
Relinquished by:		Company:				Date/Time:				Received by:				Company:				Date/Time:			
Relinquished by:		Company:				Date/Time:				Received in Laboratory by:				Company:				Date/Time:			

12-197

Regulatory Program: DW NPDES RCRA Other:

Client Contact <i>Gary Lockwood-SCL</i>		Project Manager:		Site Contact:		Date: <i>12/16/14</i>		COC No:																					
Tel/Fax:		Analysis Turnaround Time		Lab Contact:		Carrier: Courier		1 of 2 COCs																					
Phone <i>206 684-3293</i>		<input checked="" type="checkbox"/> CALENDAR DAYS <input checked="" type="checkbox"/> WORKING DAYS		TAT if different from Below 3 Weeks				Sampler: <i>MI, CW</i>																					
FAX		TAT if different from Below 3 Weeks						For Lab Use Only:																					
Project Name: <i>stormwater inspection</i>		<input type="checkbox"/> 2 weeks <i>standard</i>						Walk-in Client:																					
Site: <i>Duwamish Substation</i>		<input type="checkbox"/> 1 week						Lab Sampling:																					
PO#		<input type="checkbox"/> 2 days						Job / SDG No.:																					
		<input type="checkbox"/> 1 day																											
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	SVOCs (Method 8270D)	Metals (Method 200.817470A)	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:											
1 DS-CB-F3-20141216-W		12/16/14	1110	G	W	13	N	2	1	2	1	2	1	2	1	2	1	2	* Nitrates, Sulfate										
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other MeOH <i>as marked on sample container</i>							4	3																					
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)																						
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown							<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for <i>71</i> Months																						
Special Instructions/QC Requirements & Comments:																													
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No					Custody Seal No.:					Cooler Temp. (°C): Obs'd: _____ Cor'd: _____					Therm ID No.:														
Relinquished by: <i>Melissa Ivancovich</i>					Company: <i>Leidos</i>					Date/Time: <i>12/16/14 1537</i>					Received by: <i>Gary Lockwood</i>					Company: <i>SCL</i>					Date/Time: <i>12/16/14 1350</i>				
Relinquished by: <i>Gary Lockwood</i>					Company: <i>SCL</i>					Date/Time: <i>12/17/14 11:47</i>					Received by: <i>[Signature]</i>					Company: <i>[Signature]</i>					Date/Time: <i>12/17/14 1147</i>				
Relinquished by:					Company:					Date/Time:					Received in Laboratory by:					Company:					Date/Time:				

12-197

Regulatory Program: DW NPDES RCRA Other:

Client Contact Gary Lockwood - SCL		Project Manager: Tel/Fax:		Site Contact: Lab Contact:		Date: 12/16/14		COC No: 2 of 2 COCs	
Phone 206 684-3293 FAX		Analysis Turnaround Time <input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below 3 Weeks <input type="checkbox"/> 2 weeks standard <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Filtered Sample (Y/N)		Perform MS / MSD (Y/N)		PCB Aroclors (Method 8082)	
Project Name:		SVOC (Method 8270D/8270D-SIM)		TPH-Diesel (NWTPH-Dx)		Metals (Method 6020/7471A) PCRA-2		Total Solids (Method SM2540B)	
Site:		TPH-Gasoline (NWTPH-Gx)		VOCs (EPA 8260B)		TOC (Plumb1981/9060)		Particle Size (PSEP_Plumb1981)	
P O #		VOCs (EPA 8260B)		TOC (Plumb1981/9060)		Particle Size (PSEP_Plumb1981)		For Lab Use Only: Sampler: ML, CW Walk-in Client: Lab Sampling: Job / SDG No.:	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	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) PCRA-2	Total Solids (Method SM2540B)	TPH-Gasoline (NWTPH-Gx)	VOCs (EPA 8260B)	TOC (Plumb1981/9060)	Particle Size (PSEP_Plumb1981)	For Lab Use Only: Sampler: ML, CW Walk-in Client: Lab Sampling: Job / SDG No.:
2 DS-TD-01-20141216-S	12/16/14	1320	C	Sed	7												X
3 DS-CB-I3-20141216-S	12/16/14	1435	C	sed	4			✓	✓	✓	✓						↓
4 DS-CB-H1-20141216-S	12/16/14	1515	C	sed	4			✓	✓	✓	✓						↓

Preservation Used: 1=Ice, 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other MeOH **Gas marked**

Possible Hazard Identification: **on sample container**
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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for **71** Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Cor'd: _____	Therm ID No.:
Relinquished by: Melissa Ivancovich Melissa Ivancovich	Company: Leidos	Date/Time: 12/16/14 1537	Received by: Gary Lockwood Gary Lockwood
Relinquished by: Gary Lockwood Gary Lockwood	Company: SCL	Date/Time: 12/17/14 11:49	Received by: MVou MVou
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:



CHAIN OF CUSTODY

FOR LABORATORY USE ONLY

Storage Secured

Laboratory Project ID: _____ Yes No
Storage ID _____ Temp _____ °C

TAT: (Check One):

Standard: 21 Days

Rush (surcharge may apply):

14 days 7 days Specify: _____

Project I.D.: _____ P.O.# _____ Sampler: M. Ivancevich, C. Wilson
(Name)

Invoice to: Name Christine Nancarrow Company Leidos Address 17412 N. Creek Pkwy City Bothell State WA Zip 98011 Ph# 206.300.2144 Fax# _____

Relinquished by: (Signature and Printed Name) Melissa Ivancevich Date: 12/16/14 Time: 1648 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: Sample Custodian

Tracking No.: 806459792415

Container(s)			EPA1613	EPA8290	EPA8280	EPA1668	EPA1614	CARB429						
Quantity	Type	Matrix	2378-TCDD	2378-TCDF/TCDF	2378-TCDD	2378-TCDF/TCDF	2378-TCDD	2378-TCDF/TCDF	TOTALS	COPLANAR PCB's	209 CONGENERS	PBDE	PAH	WHO-29

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TCDD	2378-TCDF/TCDF	2378-TCDD	2378-TCDF/TCDF	2378-TCDD	2378-TCDF/TCDF	TOTALS	COPLANAR PCB's	209 CONGENERS	PBDE	PAH	WHO-29	
DS-CB-F3-20141216-W	12/16/14	1110	Duwamish Substation	4	A	EF	✓						✓	✓					
DS-TD-01-20141216-S	12/16/14	1320	Duwamish Substation	1	G	SD	✓						✓	✓					
DS-CB-I3-20141216-S	12/16/14	1435	Duwamish Substation	1	G	SD	✓						✓	✓					
DS-CB-H1-20141216-S	12/16/14	1515	Duwamish Substation	1	G	SD	✓						✓	✓					

Special Instructions/Comments: _____

SEND DOCUMENTATION AND RESULTS TO:

Name: same as above
Company: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____
Email: nancarrowc@leidos.com

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

*Bottle Preservative Type: T = Thiosulfate,
O = Other _____

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 _____

Attachment T-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: 580-46739-1

Client Project/Site: Lower Duwamish Waterway

For:

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

Attn: Christine Nancarrow

Kristine D. Allen

Authorized for release by:
1/13/2015 6:06:52 PM

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

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



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Case Narrative

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Job ID: 580-46739-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative 580-46739-1

Comments

No additional comments.

Receipt

The samples were received on 12/17/2014 2:41 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.4° C.

Except:

The following sample(s) was cancelled due to and extractions/equipment issue that resulted in the first sample being lost. DS-CB-F3-20141216-W (580-46739-1). There was no available volume for re-extraction.

GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for batch 179079 recovered outside control limits for multiple analytes. 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 continuing calibration verification (CCV) associated with batch 179079 recovered above the upper control limit for Toluene, tert-Butylbenzene, 1,1-Dichloroethene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCVIS 580-179079/2), DS-TD-O1-20141216-S (580-46739-2).

Method(s) 8260B: 8260B: The associated sample DS-TD-O1-20141216-S (580-46739-2) had recoveries of the internal standard 1,4-Dichlorobenzene-d4 below acceptance limits indicating a potential high bias for compounds associated with the IS. All target compounds associated with the low ISTD 1,4-Dichlorobenzene-d4 (IS group 51) were non detect therefore the data was reported.

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside control limits: DS-TD-O1-20141216-S (580-46739-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) NWTPH-Gx: Gasoline was detected in the method blank at a level above the method detection limit and below the reporting limit. The data have been "J" flagged and reported.

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 batch 178585 recovered outside relative response factor (RRF) acceptance criteria, low biased, for several analytes. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D: 4-Chloroaniline recovered below control limits for the LCS and LCSD associated with batch 178277. This random marginal exceedance is not indicative of a systemic control problem; qualified results have been reported.

Method(s) 8270D: The following samples were diluted due to the nature of the sample matrix: (580-46739-2 MS), (580-46739-2 MSD), DS-CB-H1-20141216-S (580-46739-4), DS-CB-I3-20141216-S (580-46739-3), DS-TD-O1-20141216-S (580-46739-2). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: Surrogate recovery for the following samples was outside control limits: (580-46739-2 MSD), DS-CB-I3-20141216-S (580-46739-3). Chromatographic evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Case Narrative

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Job ID: 580-46739-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

Method(s) 8082: In batch 179005, the following sample(s) contained more than one Aroclor (PCB 1254 and 1260) with insufficient separation to quantify individually. The PCBs present are quantified as the predominant Aroclor: DS-CB-H1-20141216-S (580-46739-4), DS-CB-I3-20141216-S (580-46739-3), DS-TD-O1-20141216-S (580-46739-2).

Method(s) NWTPH-Dx: In analysis batch 178726, for the following sample(s) from preparation batch 178532: 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: DS-CB-H1-20141216-S (580-46739-4), DS-CB-I3-20141216-S (580-46739-3), DS-TD-O1-20141216-S (580-46739-2).

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

Metals

Method(s) 200.8: The method blank for batch 180028 contained Cu 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.

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.

Organic Prep

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



Definitions/Glossary

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
*	ISTD response or retention time outside acceptable limits
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
*	LCS or LCSD exceeds the control limits
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
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.
F2	MS/MSD RPD exceeds control limits
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.
F2	MS/MSD RPD exceeds control limits

GC Semi VOA

Qualifier	Qualifier Description
Y	The chromatographic response resembles a typical fuel pattern.
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.
B	Compound was found in the blank and sample.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

General Chemistry

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.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
F3	Duplicate RPD exceeds the control limit

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)
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

TestAmerica Seattle

Definitions/Glossary

Client: Leidos, Inc.

TestAmerica Job ID: 580-46739-1

Project/Site: Lower Duwamish Waterway

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-CB-F3-20141216-W

Lab Sample ID: 580-46739-1

Date Collected: 12/16/14 11:10

Matrix: Water

Date Received: 12/17/14 14:41

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0018		0.0010	0.00075	mg/L		01/12/15 14:14	01/13/15 08:15	1
Antimony	0.00033	J	0.00040	0.000080	mg/L		01/12/15 14:14	01/13/15 08:15	1
Beryllium	ND		0.00040	0.00010	mg/L		01/12/15 14:14	01/13/15 08:15	1
Cadmium	0.000043	J	0.00040	0.000028	mg/L		01/12/15 14:14	01/13/15 08:15	1
Chromium	0.00032	J	0.00040	0.00027	mg/L		01/12/15 14:14	01/13/15 08:15	1
Copper	0.0040	B	0.0010	0.00011	mg/L		01/12/15 14:14	01/13/15 08:15	1
Lead	0.00017	J	0.00040	0.000034	mg/L		01/12/15 14:14	01/13/15 08:15	1
Nickel	ND		0.0030	0.00040	mg/L		01/12/15 14:14	01/13/15 08:15	1
Selenium	ND		0.0010	0.00071	mg/L		01/12/15 14:14	01/13/15 08:15	1
Silver	ND		0.00040	0.000030	mg/L		01/12/15 14:14	01/13/15 08:15	1
Thallium	ND		0.0010	0.00028	mg/L		01/12/15 14:14	01/13/15 08:15	1
Zinc	0.020		0.0040	0.0019	mg/L		01/12/15 14:14	01/13/15 08:15	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000041	mg/L		12/23/14 11:21	12/23/14 14:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	27		10	10	umhos/cm			12/23/14 20:10	1
Chloride	0.34	J	0.90	0.30	mg/L			12/17/14 16:36	1
Nitrate as N	0.35	J	0.90	0.20	mg/L			12/17/14 16:36	1
Sulfate	1.0	J	1.2	0.40	mg/L			12/17/14 16:36	1
Alkalinity	11		5.0	5.0	mg/L			12/29/14 10:16	1
Bicarbonate Alkalinity as CaCO3	11		5.0	5.0	mg/L			12/29/14 10:16	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			12/29/14 10:16	1
Total Suspended Solids	ND		5.0	5.0	mg/L			12/22/14 18:21	1
pH	6.71	HF	0.0100	0.0100	SU			12/18/14 10:50	1
Total Organic Carbon	0.83	J	1.0	0.33	mg/L			12/21/14 10:10	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.98	J	1.0	0.33	mg/L			12/21/14 10:10	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-TD-O1-20141216-S

Lab Sample ID: 580-46739-2

Date Collected: 12/16/14 13:20

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 63.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	*	1.8	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,1,1-Trichloroethane	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,1,2,2-Tetrachloroethane	ND	*	3.6	1.6	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.8	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,1,2-Trichloroethane	ND	*	3.6	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,1-Dichloroethane	ND		1.8	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,1-Dichloroethene	ND	^	9.0	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,1-Dichloropropene	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,2,3-Trichlorobenzene	ND	*	3.6	1.1	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,2,3-Trichloropropane	ND	*	1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,2,4-Trichlorobenzene	ND	*	3.6	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,2,4-Trimethylbenzene	ND	*	3.6	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,2-Dibromo-3-Chloropropane	ND	*	3.6	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,2-Dibromoethane	ND	*	1.8	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,2-Dichlorobenzene	ND	*	3.6	1.1	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,2-Dichloroethane	ND		1.8	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,2-Dichloropropane	ND		1.8	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,3,5-Trimethylbenzene	ND	*	9.0	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,3-Dichlorobenzene	ND	*	3.6	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,3-Dichloropropane	ND	*	3.6	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
1,4-Dichlorobenzene	ND	*	1.8	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
2,2-Dichloropropane	ND		9.0	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
2-Butanone	ND		18	5.4	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
2-Chloroethyl vinyl ether	ND		9.0	2.5	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
2-Chlorotoluene	ND	*	3.6	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
2-Hexanone	ND	*	9.0	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
4-Chlorotoluene	ND	*	3.6	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
4-Isopropyltoluene	ND	*	3.6	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
4-Methyl-2-pentanone	ND		9.0	2.7	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Acetone	11	J	27	4.3	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Acrolein	ND		54	15	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Acrylonitrile	ND	*	18	5.0	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Benzene	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Bromobenzene	ND	*	3.6	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Bromochloromethane	ND	*	3.6	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Bromodichloromethane	ND		1.8	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Bromoform	ND	*	1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Bromomethane	ND		1.8	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Carbon disulfide	ND		1.8	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Carbon tetrachloride	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Chlorobenzene	ND	*	1.8	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Chlorodibromomethane	ND	*	3.6	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Chloroethane	ND		1.8	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Chloroform	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Chloromethane	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
cis-1,2-Dichloroethene	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
cis-1,3-Dichloropropene	ND	*	1.8	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Dibromomethane	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Dichlorodifluoromethane	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1

TestAmerica Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-TD-O1-20141216-S

Lab Sample ID: 580-46739-2

Date Collected: 12/16/14 13:20

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 63.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.8	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Hexachloro-1,3-butadiene	ND	*	3.6	1.1	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Iodomethane	ND		27	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Isopropylbenzene	ND		3.6	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Methyl tert-butyl ether	ND	*	1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Methylene Chloride	ND		27	5.4	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
m-Xylene & p-Xylene	ND	*	3.6	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Naphthalene	ND	*	9.0	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
n-Butylbenzene	ND	*	3.6	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
N-Propylbenzene	ND	*	3.6	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
o-Xylene	ND	*	3.6	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
sec-Butylbenzene	ND	*	3.6	0.90	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Styrene	ND	*	3.6	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
tert-Butylbenzene	ND	* ^	3.6	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Tetrachloroethene	ND		1.8	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Toluene	ND	^	3.6	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
trans-1,2-Dichloroethene	ND		1.8	0.72	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
trans-1,3-Dichloropropene	ND	*	1.8	0.36	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
trans-1,4-Dichloro-2-butene	ND	*	9.0	3.1	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Trichloroethene	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Trichlorofluoromethane	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Vinyl acetate	ND		9.0	1.1	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1
Vinyl chloride	ND		1.8	0.54	ug/Kg	☼	12/17/14 14:17	12/29/14 16:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		71 - 136	12/17/14 14:17	12/29/14 16:36	1
4-Bromofluorobenzene (Surr)	132	* X	70 - 120	12/17/14 14:17	12/29/14 16:36	1
Dibromofluoromethane (Surr)	101		75 - 132	12/17/14 14:17	12/29/14 16:36	1
Toluene-d8 (Surr)	126	X	80 - 120	12/17/14 14:17	12/29/14 16:36	1
Trifluorotoluene (Surr)	87		65 - 140	12/17/14 14:17	12/29/14 16:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		780	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
1,2-Dichlorobenzene	ND		860	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
1,3-Dichlorobenzene	ND		780	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
1,4-Dichlorobenzene	ND		780	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
1-Methylnaphthalene	ND		470	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2,2'-oxybis[1-chloropropane]	ND		3900	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2,4,5-Trichlorophenol	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2,4,6-Trichlorophenol	ND		2300	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2,4-Dichlorophenol	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2,4-Dimethylphenol	ND	^	1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2,4-Dinitrophenol	ND		16000	3100	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2,4-Dinitrotoluene	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2,6-Dinitrotoluene	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2-Chloronaphthalene	ND		310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2-Chlorophenol	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2-Methylnaphthalene	ND		310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2-Methylphenol	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100

TestAmerica Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-TD-O1-20141216-S

Lab Sample ID: 580-46739-2

Date Collected: 12/16/14 13:20

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 63.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
2-Nitrophenol	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
3 & 4 Methylphenol	ND		3100	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
3,3'-Dichlorobenzidine	ND		3100	470	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
3-Nitroaniline	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
4,6-Dinitro-2-methylphenol	ND		16000	1600	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
4-Bromophenyl phenyl ether	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
4-Chloro-3-methylphenol	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
4-Chloroaniline	ND	*	1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
4-Chlorophenyl phenyl ether	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
4-Nitroaniline	ND		1600	310	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
4-Nitrophenol	ND		16000	3900	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Acenaphthene	87	J	310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Acenaphthylene	ND		310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Anthracene	160	J	310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Benzo[a]anthracene	730		310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Benzo[a]pyrene	900		470	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Benzo[b]fluoranthene	1400		310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Benzo[g,h,i]perylene	400		390	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Benzo[k]fluoranthene	660		390	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Benzoic acid	ND		39000	12000	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Benzyl alcohol	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Bis(2-chloroethoxy)methane	ND	^	1600	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Bis(2-chloroethyl)ether	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Bis(2-ethylhexyl) phthalate	7200	J	9400	780	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Butyl benzyl phthalate	1300	J	3100	780	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Carbazole	230	J	1600	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Chrysene	1100		390	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Dibenz(a,h)anthracene	120	J	620	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Dibenzofuran	ND		1600	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Diethyl phthalate	ND		3100	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Dimethyl phthalate	ND		1600	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Di-n-butyl phthalate	6500	J	7800	780	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Di-n-octyl phthalate	ND		7800	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Fluoranthene	2000		310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Fluorene	99	J	310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Hexachlorobenzene	ND		780	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Hexachlorobutadiene	ND		780	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Hexachlorocyclopentadiene	ND		1600	160	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Hexachloroethane	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Indeno[1,2,3-cd]pyrene	490	J	620	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Isophorone	ND	^	1600	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Naphthalene	ND		310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Nitrobenzene	ND	^	1600	530	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
N-Nitrosodimethylamine	ND		16000	3900	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
N-Nitrosodi-n-propylamine	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
N-Nitrosodiphenylamine	ND		780	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Pentachlorophenol	ND		3100	310	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Phenanthrene	1200		310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100

TestAmerica Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-TD-O1-20141216-S

Lab Sample ID: 580-46739-2

Date Collected: 12/16/14 13:20

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 63.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		1600	230	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Pyrene	1600		310	78	ug/Kg	☼	12/18/14 16:00	12/19/14 21:01	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	106		28 - 143				12/18/14 16:00	12/19/14 21:01	100
2-Fluorobiphenyl	98		42 - 140				12/18/14 16:00	12/19/14 21:01	100
2-Fluorophenol	96		36 - 145				12/18/14 16:00	12/19/14 21:01	100
Nitrobenzene-d5	95		38 - 141				12/18/14 16:00	12/19/14 21:01	100
Phenol-d5	98		38 - 149				12/18/14 16:00	12/19/14 21:01	100
Terphenyl-d14	144		42 - 151				12/18/14 16:00	12/19/14 21:01	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.10	J B	0.26	0.032	mg/Kg	☼	12/18/14 13:38	12/19/14 11:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		50 - 150				12/18/14 13:38	12/19/14 11:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.015	0.0049	mg/Kg	☼	12/18/14 15:18	12/25/14 01:03	1
Arochlor 1221	ND		0.017	0.012	mg/Kg	☼	12/18/14 15:18	12/25/14 01:03	1
Arochlor 1232	ND		0.017	0.011	mg/Kg	☼	12/18/14 15:18	12/25/14 01:03	1
Arochlor 1242	ND		0.015	0.0032	mg/Kg	☼	12/18/14 15:18	12/25/14 01:03	1
Arochlor 1248	ND		0.015	0.0046	mg/Kg	☼	12/18/14 15:18	12/25/14 01:03	1
Arochlor 1254	0.077		0.015	0.0032	mg/Kg	☼	12/18/14 15:18	12/25/14 01:03	1
Arochlor 1260	ND		0.015	0.0046	mg/Kg	☼	12/18/14 15:18	12/25/14 01:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	95		45 - 135				12/18/14 15:18	12/25/14 01:03	1
DCB Decachlorobiphenyl	94		50 - 140				12/18/14 15:18	12/25/14 01:03	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)	950	Y	39	8.8	mg/Kg	☼	12/18/14 15:37	12/22/14 16:48	1
Motor Oil (>C24-C36)	1400	Y	77	14	mg/Kg	☼	12/18/14 15:37	12/22/14 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				12/18/14 15:37	12/22/14 16:48	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		0.64	0.23	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10
Lead	500		0.26	0.017	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10
Antimony	17		0.26	0.054	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10
Beryllium	0.43		0.26	0.045	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10
Cadmium	7.2		0.26	0.010	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10
Chromium	100		0.26	0.14	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10
Copper	320		0.51	0.13	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10
Nickel	72		0.64	0.10	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10
Selenium	1.1		0.89	0.26	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10

TestAmerica Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-TD-O1-20141216-S

Lab Sample ID: 580-46739-2

Date Collected: 12/16/14 13:20

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 63.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	7.3		0.26	0.015	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10
Thallium	ND		0.64	0.17	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10
Zinc	4200		2.6	1.4	mg/Kg	☼	01/06/15 11:07	01/07/15 15:36	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.061		0.024	0.0076	mg/Kg	☼	01/08/15 11:54	01/08/15 13:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	64		0.10	0.10	%			12/23/14 17:11	1
Total Organic Carbon	64000		2000	250	mg/Kg			12/20/14 14:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobbles	0.00				%			12/18/14 18:36	1
Gravel	17				%			12/18/14 18:36	1
Sand	62				%			12/18/14 18:36	1
Silt	20				%			12/18/14 18:36	1
Clay	1.0				%			12/18/14 18:36	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-CB-I3-20141216-S

Lab Sample ID: 580-46739-3

Date Collected: 12/16/14 14:35

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 55.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		890	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
1,2-Dichlorobenzene	ND		980	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
1,3-Dichlorobenzene	ND		890	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
1,4-Dichlorobenzene	ND		890	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
1-Methylnaphthalene	ND		530	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2,2'-oxybis[1-chloropropane]	ND		4400	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2,4,5-Trichlorophenol	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2,4,6-Trichlorophenol	ND		2700	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2,4-Dichlorophenol	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2,4-Dimethylphenol	ND	^	1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2,4-Dinitrophenol	ND		18000	3600	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2,4-Dinitrotoluene	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2,6-Dinitrotoluene	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2-Chloronaphthalene	ND		360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2-Chlorophenol	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2-Methylnaphthalene	ND		360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2-Methylphenol	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2-Nitroaniline	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
2-Nitrophenol	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
3 & 4 Methylphenol	ND		3600	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
3,3'-Dichlorobenzidine	ND		3600	530	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
3-Nitroaniline	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
4,6-Dinitro-2-methylphenol	ND		18000	1800	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
4-Bromophenyl phenyl ether	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
4-Chloro-3-methylphenol	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
4-Chloroaniline	ND	*	1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
4-Chlorophenyl phenyl ether	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
4-Nitroaniline	ND		1800	360	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
4-Nitrophenol	ND		18000	4400	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Acenaphthene	ND		360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Acenaphthylene	ND		360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Anthracene	ND		360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Benzo[a]anthracene	190	J	360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Benzo[a]pyrene	180	J	530	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Benzo[b]fluoranthene	360		360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Benzo[g,h,i]perylene	94	J	440	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Benzo[k]fluoranthene	120	J	440	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Benzoic acid	ND		44000	13000	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Benzyl alcohol	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Bis(2-chloroethoxy)methane	ND	^	1800	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Bis(2-chloroethyl)ether	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Bis(2-ethylhexyl) phthalate	ND		11000	890	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Butyl benzyl phthalate	ND		3600	890	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Carbazole	ND		1800	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Chrysene	300	J	440	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Dibenz(a,h)anthracene	ND		710	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Dibenzofuran	ND		1800	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Diethyl phthalate	ND		3600	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Dimethyl phthalate	260	J	1800	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100

TestAmerica Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-CB-I3-20141216-S

Lab Sample ID: 580-46739-3

Date Collected: 12/16/14 14:35

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 55.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		8900	890	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Di-n-octyl phthalate	ND		8900	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Fluoranthene	470		360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Fluorene	ND		360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Hexachlorobenzene	ND		890	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Hexachlorobutadiene	ND		890	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Hexachlorocyclopentadiene	ND		1800	180	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Hexachloroethane	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Indeno[1,2,3-cd]pyrene	120 J		710	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Isophorone	ND ^		1800	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Naphthalene	ND		360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Nitrobenzene	ND ^		1800	600	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
N-Nitrosodimethylamine	ND		18000	4400	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
N-Nitrosodi-n-propylamine	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
N-Nitrosodiphenylamine	ND		890	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Pentachlorophenol	ND		3600	360	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Phenanthrene	310 J		360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Phenol	ND		1800	270	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100
Pyrene	420		360	89	ug/Kg	☼	12/18/14 16:00	12/19/14 23:32	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	144	X	28 - 143	12/18/14 16:00	12/19/14 23:32	100
2-Fluorobiphenyl	94		42 - 140	12/18/14 16:00	12/19/14 23:32	100
2-Fluorophenol	78		36 - 145	12/18/14 16:00	12/19/14 23:32	100
Nitrobenzene-d5	95		38 - 141	12/18/14 16:00	12/19/14 23:32	100
Phenol-d5	85		38 - 149	12/18/14 16:00	12/19/14 23:32	100
Terphenyl-d14	116		42 - 151	12/18/14 16:00	12/19/14 23:32	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	4.2 J B		10	1.3	mg/Kg	☼	12/18/14 13:38	12/19/14 15:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		50 - 150	12/18/14 13:38	12/19/14 15:04	1
Trifluorotoluene (Surr)	135		50 - 150	12/18/14 13:38	12/19/14 15:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.018	0.0057	mg/Kg	☼	12/18/14 15:18	12/25/14 01:18	1
Arochlor 1221	ND		0.020	0.014	mg/Kg	☼	12/18/14 15:18	12/25/14 01:18	1
Arochlor 1232	ND		0.020	0.013	mg/Kg	☼	12/18/14 15:18	12/25/14 01:18	1
Arochlor 1242	ND		0.018	0.0038	mg/Kg	☼	12/18/14 15:18	12/25/14 01:18	1
Arochlor 1248	ND		0.018	0.0054	mg/Kg	☼	12/18/14 15:18	12/25/14 01:18	1
Arochlor 1254	0.035		0.018	0.0038	mg/Kg	☼	12/18/14 15:18	12/25/14 01:18	1
Arochlor 1260	ND		0.018	0.0054	mg/Kg	☼	12/18/14 15:18	12/25/14 01:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		45 - 135	12/18/14 15:18	12/25/14 01:18	1
DCB Decachlorobiphenyl	78		50 - 140	12/18/14 15:18	12/25/14 01:18	1

TestAmerica Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-CB-I3-20141216-S

Lab Sample ID: 580-46739-3

Date Collected: 12/16/14 14:35

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 55.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	220	Y	45	10	mg/Kg	☼	12/18/14 15:37	12/22/14 17:42	1
Motor Oil (>C24-C36)	1400	Y	89	16	mg/Kg	☼	12/18/14 15:37	12/22/14 17:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	87		50 - 150				12/18/14 15:37	12/22/14 17:42	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.9		0.75	0.27	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10
Lead	48		0.30	0.020	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10
Antimony	1.9		0.30	0.063	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10
Beryllium	0.12	J	0.30	0.053	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10
Cadmium	0.51		0.30	0.012	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10
Chromium	21		0.30	0.17	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10
Copper	82		0.60	0.15	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10
Nickel	21		0.75	0.12	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10
Selenium	0.62	J	1.1	0.30	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10
Silver	0.63		0.30	0.018	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10
Thallium	ND		0.75	0.20	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10
Zinc	240		3.0	1.7	mg/Kg	☼	01/06/15 11:07	01/07/15 15:40	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.019	J	0.026	0.0083	mg/Kg	☼	01/08/15 11:54	01/08/15 13:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	55		0.10	0.10	%			12/23/14 17:11	1
Total Organic Carbon	31000		2000	250	mg/Kg			12/20/14 14:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobbles	0.00				%			12/18/14 18:36	1
Gravel	10				%			12/18/14 18:36	1
Sand	66				%			12/18/14 18:36	1
Silt	22				%			12/18/14 18:36	1
Clay	1.5				%			12/18/14 18:36	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-CB-H1-20141216-S

Lab Sample ID: 580-46739-4

Date Collected: 12/16/14 15:15

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 30.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1600	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
1,2-Dichlorobenzene	ND		1800	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
1,3-Dichlorobenzene	ND		1600	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
1,4-Dichlorobenzene	ND		1600	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
1-Methylnaphthalene	250	J	970	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2,2'-oxybis[1-chloropropane]	ND		8100	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2,4,5-Trichlorophenol	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2,4,6-Trichlorophenol	ND		4900	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2,4-Dichlorophenol	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2,4-Dimethylphenol	ND	^	3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2,4-Dinitrophenol	ND		32000	6500	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2,4-Dinitrotoluene	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2,6-Dinitrotoluene	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2-Chloronaphthalene	ND		650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2-Chlorophenol	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2-Methylnaphthalene	280	J	650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2-Methylphenol	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2-Nitroaniline	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
2-Nitrophenol	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
3 & 4 Methylphenol	ND		6500	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
3,3'-Dichlorobenzidine	ND		6500	970	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
3-Nitroaniline	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
4,6-Dinitro-2-methylphenol	ND		32000	3200	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
4-Bromophenyl phenyl ether	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
4-Chloro-3-methylphenol	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
4-Chloroaniline	ND	*	3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
4-Chlorophenyl phenyl ether	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
4-Nitroaniline	ND		3200	650	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
4-Nitrophenol	ND		32000	8100	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Acenaphthene	3200		650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Acenaphthylene	ND		650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Anthracene	4900		650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Benzo[a]anthracene	12000		650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Benzo[a]pyrene	13000		970	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Benzo[b]fluoranthene	20000		650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Benzo[g,h,i]perylene	4000		810	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Benzo[k]fluoranthene	7500		810	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Benzoic acid	ND		81000	24000	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Benzyl alcohol	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Bis(2-chloroethoxy)methane	ND	^	3200	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Bis(2-chloroethyl)ether	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Bis(2-ethylhexyl) phthalate	ND		19000	1600	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Butyl benzyl phthalate	ND		6500	1600	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Carbazole	4200		3200	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Chrysene	14000		810	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Dibenz(a,h)anthracene	1400		1300	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Dibenzofuran	1400	J	3200	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Diethyl phthalate	ND		6500	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Dimethyl phthalate	390	J	3200	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100

TestAmerica Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-CB-H1-20141216-S

Lab Sample ID: 580-46739-4

Date Collected: 12/16/14 15:15

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 30.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		16000	1600	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Di-n-octyl phthalate	ND		16000	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Fluoranthene	36000		650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Fluorene	2600		650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Hexachlorobenzene	ND		1600	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Hexachlorobutadiene	ND		1600	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Hexachlorocyclopentadiene	ND		3200	320	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Hexachloroethane	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Indeno[1,2,3-cd]pyrene	5100		1300	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Isophorone	ND	^	3200	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Naphthalene	530	J	650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Nitrobenzene	ND	^	3200	1100	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
N-Nitrosodimethylamine	ND		32000	8100	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
N-Nitrosodi-n-propylamine	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
N-Nitrosodiphenylamine	ND		1600	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Pentachlorophenol	ND		6500	650	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Phenanthrene	28000		650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Phenol	ND		3200	490	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100
Pyrene	30000		650	160	ug/Kg	☼	12/18/14 16:00	12/20/14 00:22	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	102		28 - 143	12/18/14 16:00	12/20/14 00:22	100
2-Fluorobiphenyl	107		42 - 140	12/18/14 16:00	12/20/14 00:22	100
2-Fluorophenol	115		36 - 145	12/18/14 16:00	12/20/14 00:22	100
Nitrobenzene-d5	81		38 - 141	12/18/14 16:00	12/20/14 00:22	100
Phenol-d5	103		38 - 149	12/18/14 16:00	12/20/14 00:22	100
Terphenyl-d14	136		42 - 151	12/18/14 16:00	12/20/14 00:22	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	7.6	J B	21	2.6	mg/Kg	☼	12/18/14 13:38	12/19/14 15:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		50 - 150	12/18/14 13:38	12/19/14 15:37	1
Trifluorotoluene (Surr)	140		50 - 150	12/18/14 13:38	12/19/14 15:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.032	0.010	mg/Kg	☼	12/18/14 15:18	12/25/14 01:34	1
Arochlor 1221	ND		0.035	0.025	mg/Kg	☼	12/18/14 15:18	12/25/14 01:34	1
Arochlor 1232	ND		0.035	0.022	mg/Kg	☼	12/18/14 15:18	12/25/14 01:34	1
Arochlor 1242	ND		0.032	0.0066	mg/Kg	☼	12/18/14 15:18	12/25/14 01:34	1
Arochlor 1248	ND		0.032	0.0095	mg/Kg	☼	12/18/14 15:18	12/25/14 01:34	1
Arochlor 1254	0.062		0.032	0.0066	mg/Kg	☼	12/18/14 15:18	12/25/14 01:34	1
Arochlor 1260	ND		0.032	0.0095	mg/Kg	☼	12/18/14 15:18	12/25/14 01:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85		45 - 135	12/18/14 15:18	12/25/14 01:34	1
DCB Decachlorobiphenyl	88		50 - 140	12/18/14 15:18	12/25/14 01:34	1

TestAmerica Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-CB-H1-20141216-S

Lab Sample ID: 580-46739-4

Date Collected: 12/16/14 15:15

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 30.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1400	Y	81	18	mg/Kg	☼	12/18/14 15:37	12/22/14 18:00	1
Motor Oil (>C24-C36)	4900	Y	160	29	mg/Kg	☼	12/18/14 15:37	12/22/14 18:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	93		50 - 150				12/18/14 15:37	12/22/14 18:00	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		1.3	0.47	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10
Lead	150		0.52	0.034	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10
Antimony	6.7		0.52	0.11	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10
Beryllium	0.19	J	0.52	0.091	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10
Cadmium	1.1		0.52	0.021	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10
Chromium	60		0.52	0.29	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10
Copper	120		1.0	0.25	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10
Nickel	38		1.3	0.21	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10
Selenium	0.79	J	1.8	0.52	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10
Silver	1.4		0.52	0.031	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10
Thallium	ND		1.3	0.34	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10
Zinc	550		5.2	2.9	mg/Kg	☼	01/06/15 11:07	01/07/15 15:44	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.050		0.048	0.015	mg/Kg	☼	01/08/15 11:54	01/08/15 13:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	31		0.10	0.10	%			12/23/14 17:11	1
Total Organic Carbon	130000		2000	250	mg/Kg			12/22/14 08:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobbles	0.00				%			12/18/14 18:36	1
Gravel	8.4				%			12/18/14 18:36	1
Sand	42				%			12/18/14 18:36	1
Silt	48				%			12/18/14 18:36	1
Clay	2.2				%			12/18/14 18:36	1

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: MB 580-179077/1-A

Matrix: Solid

Analysis Batch: 179079

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 179077

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,1,1-Trichloroethane	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.90	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,1,2-Trichloroethane	ND		2.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,1-Dichloroethane	ND		1.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,1-Dichloroethene	ND		5.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,1-Dichloropropene	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,2,3-Trichlorobenzene	ND		2.0	0.60	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,2,3-Trichloropropane	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,2,4-Trichlorobenzene	ND		2.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,2,4-Trimethylbenzene	ND		2.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,2-Dibromoethane	ND		1.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,2-Dichlorobenzene	ND		2.0	0.60	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,2-Dichloroethane	ND		1.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,2-Dichloropropane	ND		1.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,3,5-Trimethylbenzene	ND		5.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,3-Dichlorobenzene	ND		2.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,3-Dichloropropane	ND		2.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
1,4-Dichlorobenzene	ND		1.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
2,2-Dichloropropane	ND		5.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
2-Butanone	ND		10	3.0	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
2-Chloroethyl vinyl ether	ND		5.0	1.4	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
2-Chlorotoluene	ND		2.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
2-Hexanone	ND		5.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
4-Chlorotoluene	ND		2.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
4-Isopropyltoluene	ND		2.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
4-Methyl-2-pentanone	ND		5.0	1.5	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Acetone	ND		15	2.4	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Acrolein	ND		30	8.2	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Acrylonitrile	ND		10	2.8	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Benzene	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Bromobenzene	ND		2.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Bromochloromethane	ND		2.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Bromodichloromethane	ND		1.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Bromoform	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Bromomethane	ND		1.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Carbon disulfide	ND		1.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Carbon tetrachloride	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Chlorobenzene	ND		1.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Chlorodibromomethane	ND		2.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Chloroethane	ND		1.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Chloroform	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Chloromethane	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Dibromomethane	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: MB 580-179077/1-A

Matrix: Solid

Analysis Batch: 179079

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 179077

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Ethylbenzene	ND		1.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Hexachloro-1,3-butadiene	ND		2.0	0.60	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Iodomethane	ND		15	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Isopropylbenzene	ND		2.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Methyl tert-butyl ether	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Methylene Chloride	ND		15	3.0	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
m-Xylene & p-Xylene	ND		2.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Naphthalene	ND		5.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
n-Butylbenzene	ND		2.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
N-Propylbenzene	ND		2.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
o-Xylene	ND		2.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
sec-Butylbenzene	ND		2.0	0.50	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Styrene	ND		2.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
tert-Butylbenzene	ND		2.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Tetrachloroethene	ND		1.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Toluene	ND		2.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
trans-1,2-Dichloroethene	ND		1.0	0.40	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
trans-1,3-Dichloropropene	ND		1.0	0.20	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
trans-1,4-Dichloro-2-butene	ND		5.0	1.7	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Trichloroethene	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Trichlorofluoromethane	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Vinyl acetate	ND		5.0	0.60	ug/Kg		12/29/14 13:49	12/29/14 15:16	1
Vinyl chloride	ND		1.0	0.30	ug/Kg		12/29/14 13:49	12/29/14 15:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		71 - 136	12/29/14 13:49	12/29/14 15:16	1
4-Bromofluorobenzene (Surr)	95		70 - 120	12/29/14 13:49	12/29/14 15:16	1
Dibromofluoromethane (Surr)	94		75 - 132	12/29/14 13:49	12/29/14 15:16	1
Toluene-d8 (Surr)	103		80 - 120	12/29/14 13:49	12/29/14 15:16	1
Trifluorotoluene (Surr)	100		65 - 140	12/29/14 13:49	12/29/14 15:16	1

Lab Sample ID: LCS 580-179077/2-A

Matrix: Solid

Analysis Batch: 179079

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 179077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	30.0	36.7		ug/Kg		122	72 - 123
1,1,1-Trichloroethane	30.0	31.6		ug/Kg		105	63 - 135
1,1,1,2,2-Tetrachloroethane	30.0	39.8	*	ug/Kg		133	73 - 125
1,1,2-Trichloro-1,2,2-trifluoroethane	30.0	36.1		ug/Kg		120	66 - 163
1,1,2-Trichloroethane	30.0	38.4	*	ug/Kg		128	77 - 124
1,1-Dichloroethane	30.0	34.8		ug/Kg		116	70 - 128
1,1-Dichloroethene	30.0	36.9		ug/Kg		123	70 - 133
1,1-Dichloropropene	30.0	35.1		ug/Kg		117	77 - 125
1,2,3-Trichlorobenzene	30.0	36.2		ug/Kg		121	61 - 130
1,2,3-Trichloropropane	30.0	36.8		ug/Kg		123	77 - 123

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: LCS 580-179077/2-A

Matrix: Solid

Analysis Batch: 179079

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 179077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	30.0	35.7		ug/Kg		119	61 - 130
1,2,4-Trimethylbenzene	30.0	35.4		ug/Kg		118	79 - 124
1,2-Dibromo-3-Chloropropane	30.0	36.2		ug/Kg		121	53 - 132
1,2-Dibromoethane	30.0	38.6	*	ug/Kg		129	69 - 126
1,2-Dichlorobenzene	30.0	35.8	*	ug/Kg		119	79 - 117
1,2-Dichloroethane	30.0	30.1		ug/Kg		100	71 - 128
1,2-Dichloropropane	30.0	37.2		ug/Kg		124	76 - 161
1,3,5-Trimethylbenzene	30.0	36.0		ug/Kg		120	80 - 125
1,3-Dichlorobenzene	30.0	34.9		ug/Kg		116	79 - 119
1,3-Dichloropropane	30.0	38.0	*	ug/Kg		127	77 - 123
1,4-Dichlorobenzene	30.0	36.4	*	ug/Kg		121	79 - 117
2,2-Dichloropropane	30.0	30.4		ug/Kg		101	56 - 144
2-Butanone	120	167		ug/Kg		139	30 - 160
2-Chloroethyl vinyl ether	30.0	39.9		ug/Kg		133	60 - 150
2-Chlorotoluene	30.0	36.2		ug/Kg		121	79 - 122
2-Hexanone	120	155		ug/Kg		129	45 - 145
4-Chlorotoluene	30.0	34.9		ug/Kg		116	80 - 122
4-Isopropyltoluene	30.0	36.7		ug/Kg		122	78 - 126
4-Methyl-2-pentanone	120	154		ug/Kg		128	45 - 145
Acetone	120	126		ug/Kg		105	20 - 160
Acrolein	178	193		ug/Kg		109	10 - 125
Acrylonitrile	300	369	*	ug/Kg		123	74 - 117
Benzene	30.0	36.4		ug/Kg		121	70 - 128
Bromobenzene	30.0	37.0	*	ug/Kg		123	80 - 120
Bromochloromethane	30.0	36.9		ug/Kg		123	78 - 123
Bromodichloromethane	30.0	35.2		ug/Kg		117	58 - 133
Bromoform	30.0	35.7		ug/Kg		119	50 - 124
Bromomethane	30.0	28.4		ug/Kg		95	57 - 148
Carbon disulfide	30.0	38.7		ug/Kg		129	45 - 160
Carbon tetrachloride	30.0	33.1		ug/Kg		110	59 - 145
Chlorobenzene	30.0	36.8	*	ug/Kg		123	75 - 120
Chlorodibromomethane	30.0	39.7	*	ug/Kg		132	42 - 129
Chloroethane	30.0	29.5		ug/Kg		98	48 - 167
Chloroform	30.0	33.1		ug/Kg		110	78 - 125
Chloromethane	30.0	26.6		ug/Kg		89	55 - 136
cis-1,2-Dichloroethene	30.0	35.4		ug/Kg		118	70 - 130
cis-1,3-Dichloropropene	30.0	39.2	*	ug/Kg		131	69 - 129
Dibromomethane	30.0	35.2		ug/Kg		117	78 - 126
Dichlorodifluoromethane	30.0	19.6		ug/Kg		65	38 - 150
Ethylbenzene	30.0	36.2		ug/Kg		121	78 - 126
Hexachloro-1,3-butadiene	30.0	35.3		ug/Kg		118	68 - 134
Iodomethane	30.0	36.8		ug/Kg		123	44 - 148
Isopropylbenzene	30.0	36.4		ug/Kg		121	79 - 127
Methyl tert-butyl ether	30.0	36.2		ug/Kg		121	65 - 125
Methylene Chloride	30.0	34.0		ug/Kg		113	57 - 146
m-Xylene & p-Xylene	30.0	36.8		ug/Kg		123	78 - 126
Naphthalene	30.0	39.0		ug/Kg		130	14 - 170
n-Butylbenzene	30.0	35.7		ug/Kg		119	78 - 128

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: LCS 580-179077/2-A

Matrix: Solid

Analysis Batch: 179079

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 179077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Propylbenzene	30.0	36.7		ug/Kg		122	81 - 127
o-Xylene	30.0	37.0		ug/Kg		123	77 - 127
sec-Butylbenzene	30.0	37.3		ug/Kg		124	78 - 128
Styrene	30.0	37.8		ug/Kg		126	79 - 127
tert-Butylbenzene	30.0	39.7		ug/Kg		132	71 - 136
Tetrachloroethene	30.0	36.1		ug/Kg		120	56 - 155
Toluene	30.0	36.4		ug/Kg		121	75 - 126
trans-1,2-Dichloroethene	30.0	36.3		ug/Kg		121	76 - 131
trans-1,3-Dichloropropene	30.0	40.6	*	ug/Kg		135	72 - 129
trans-1,4-Dichloro-2-butene	30.0	39.4		ug/Kg		131	42 - 160
Trichloroethene	30.0	35.9		ug/Kg		120	83 - 124
Trichlorofluoromethane	30.0	27.7		ug/Kg		92	47 - 165
Vinyl acetate	60.5	67.9		ug/Kg		112	19 - 144
Vinyl chloride	30.0	28.2		ug/Kg		94	67 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90		71 - 136
4-Bromofluorobenzene (Surr)	98		70 - 120
Dibromofluoromethane (Surr)	95		75 - 132
Toluene-d8 (Surr)	103		80 - 120
Trifluorotoluene (Surr)	99		65 - 140

Lab Sample ID: LCSD 580-179077/3-A

Matrix: Solid

Analysis Batch: 179079

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 179077

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	30.0	38.4	*	ug/Kg		128	72 - 123	5	20
1,1,1-Trichloroethane	30.0	33.4		ug/Kg		111	63 - 135	6	20
1,1,2,2-Tetrachloroethane	30.0	43.5	*	ug/Kg		145	73 - 125	9	22
1,1,2-Trichloro-1,2,2-trifluoroethane	30.0	37.4		ug/Kg		125	66 - 163	3	30
1,1,2-Trichloroethane	30.0	41.0	*	ug/Kg		137	77 - 124	7	18
1,1-Dichloroethane	30.0	35.5		ug/Kg		118	70 - 128	2	21
1,1-Dichloroethene	30.0	38.2		ug/Kg		127	70 - 133	3	23
1,1-Dichloropropene	30.0	36.1		ug/Kg		120	77 - 125	3	16
1,2,3-Trichlorobenzene	30.0	38.5		ug/Kg		128	61 - 130	6	23
1,2,3-Trichloropropane	30.0	38.7	*	ug/Kg		129	77 - 123	5	23
1,2,4-Trichlorobenzene	30.0	37.4		ug/Kg		125	61 - 130	5	22
1,2,4-Trimethylbenzene	30.0	36.7		ug/Kg		122	79 - 124	4	18
1,2-Dibromo-3-Chloropropane	30.0	40.3	*	ug/Kg		134	53 - 132	11	27
1,2-Dibromoethane	30.0	41.3	*	ug/Kg		138	69 - 126	7	21
1,2-Dichlorobenzene	30.0	37.3	*	ug/Kg		124	79 - 117	4	17
1,2-Dichloroethane	30.0	32.3		ug/Kg		108	71 - 128	7	18
1,2-Dichloropropane	30.0	38.2		ug/Kg		127	76 - 161	2	15
1,3,5-Trimethylbenzene	30.0	37.3		ug/Kg		124	80 - 125	4	18
1,3-Dichlorobenzene	30.0	36.2	*	ug/Kg		121	79 - 119	4	17
1,3-Dichloropropane	30.0	39.7	*	ug/Kg		132	77 - 123	4	19

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: LCSD 580-179077/3-A

Matrix: Solid

Analysis Batch: 179079

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 179077

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
							Limits	RPD	RPD	Limit
1,4-Dichlorobenzene	30.0	37.2	*	ug/Kg		124	79 - 117	2	18	
2,2-Dichloropropane	30.0	34.4		ug/Kg		115	56 - 144	12	21	
2-Butanone	120	190		ug/Kg		158	30 - 160	13	30	
2-Chloroethyl vinyl ether	30.0	44.2		ug/Kg		147	60 - 150	10	30	
2-Chlorotoluene	30.0	36.9	*	ug/Kg		123	79 - 122	2	18	
2-Hexanone	120	176	*	ug/Kg		147	45 - 145	13	30	
4-Chlorotoluene	30.0	36.1		ug/Kg		120	80 - 122	3	18	
4-Isopropyltoluene	30.0	38.0	*	ug/Kg		127	78 - 126	3	18	
4-Methyl-2-pentanone	120	174		ug/Kg		145	45 - 145	12	30	
Acetone	120	152		ug/Kg		127	20 - 160	19	30	
Acrolein	178	202		ug/Kg		113	10 - 125	4	30	
Acrylonitrile	300	412	*	ug/Kg		137	74 - 117	11	30	
Benzene	30.0	37.4		ug/Kg		125	70 - 128	3	19	
Bromobenzene	30.0	38.4	*	ug/Kg		128	80 - 120	4	19	
Bromochloromethane	30.0	38.1	*	ug/Kg		127	78 - 123	3	19	
Bromodichloromethane	30.0	35.5		ug/Kg		118	58 - 133	1	19	
Bromoform	30.0	37.9	*	ug/Kg		126	50 - 124	6	25	
Bromomethane	30.0	29.1		ug/Kg		97	57 - 148	2	29	
Carbon disulfide	30.0	40.2		ug/Kg		134	45 - 160	4	30	
Carbon tetrachloride	30.0	34.8		ug/Kg		116	59 - 145	5	19	
Chlorobenzene	30.0	38.1	*	ug/Kg		127	75 - 120	4	21	
Chlorodibromomethane	30.0	42.3	*	ug/Kg		141	42 - 129	6	23	
Chloroethane	30.0	30.4		ug/Kg		101	48 - 167	3	53	
Chloroform	30.0	34.6		ug/Kg		115	78 - 125	4	17	
Chloromethane	30.0	26.7		ug/Kg		89	55 - 136	0	26	
cis-1,2-Dichloroethene	30.0	36.9		ug/Kg		123	70 - 130	4	19	
cis-1,3-Dichloropropene	30.0	41.1	*	ug/Kg		137	69 - 129	5	19	
Dibromomethane	30.0	37.5		ug/Kg		125	78 - 126	6	18	
Dichlorodifluoromethane	30.0	19.4		ug/Kg		65	38 - 150	1	26	
Ethylbenzene	30.0	37.5		ug/Kg		125	78 - 126	3	23	
Hexachloro-1,3-butadiene	30.0	36.8		ug/Kg		123	68 - 134	4	21	
Iodomethane	30.0	38.0		ug/Kg		127	44 - 148	3	30	
Isopropylbenzene	30.0	38.2		ug/Kg		127	79 - 127	5	20	
Methyl tert-butyl ether	30.0	38.7	*	ug/Kg		129	65 - 125	7	30	
Methylene Chloride	30.0	35.4		ug/Kg		118	57 - 146	4	21	
m-Xylene & p-Xylene	30.0	38.2	*	ug/Kg		127	78 - 126	4	23	
Naphthalene	30.0	42.0		ug/Kg		140	14 - 170	7	50	
n-Butylbenzene	30.0	37.0		ug/Kg		123	78 - 128	4	17	
N-Propylbenzene	30.0	38.6	*	ug/Kg		129	81 - 127	5	20	
o-Xylene	30.0	39.0	*	ug/Kg		130	77 - 127	5	22	
sec-Butylbenzene	30.0	38.6	*	ug/Kg		129	78 - 128	3	17	
Styrene	30.0	39.4	*	ug/Kg		131	79 - 127	4	21	
tert-Butylbenzene	30.0	41.4	*	ug/Kg		138	71 - 136	4	27	
Tetrachloroethene	30.0	39.2		ug/Kg		131	56 - 155	8	27	
Toluene	30.0	37.7		ug/Kg		126	75 - 126	4	19	
trans-1,2-Dichloroethene	30.0	37.3		ug/Kg		124	76 - 131	3	18	
trans-1,3-Dichloropropene	30.0	41.5	*	ug/Kg		138	72 - 129	2	20	
trans-1,4-Dichloro-2-butene	30.0	42.3		ug/Kg		141	42 - 160	7	30	

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: LCSD 580-179077/3-A
Matrix: Solid
Analysis Batch: 179079

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 179077

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloroethene	30.0	36.9		ug/Kg		123	83 - 124	3	17
Trichlorofluoromethane	30.0	29.0		ug/Kg		97	47 - 165	5	54
Vinyl acetate	60.5	72.7		ug/Kg		120	19 - 144	7	30
Vinyl chloride	30.0	27.8		ug/Kg		93	67 - 131	2	22

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	91		71 - 136
4-Bromofluorobenzene (Surr)	98		70 - 120
Dibromofluoromethane (Surr)	96		75 - 132
Toluene-d8 (Surr)	103		80 - 120
Trifluorotoluene (Surr)	102		65 - 140

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

Lab Sample ID: MB 580-178277/1-A
Matrix: Solid
Analysis Batch: 178585

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 178277

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
1,2-Dichlorobenzene	ND		5.5	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
1,3-Dichlorobenzene	ND		5.0	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
1,4-Dichlorobenzene	ND		5.0	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
1-Methylnaphthalene	ND		3.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2,2'-oxybis[1-chloropropane]	ND		25	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2,4,5-Trichlorophenol	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2,4,6-Trichlorophenol	ND		15	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2,4-Dichlorophenol	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2,4-Dimethylphenol	ND	^	10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2,4-Dinitrophenol	ND		100	20	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2,4-Dinitrotoluene	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2,6-Dinitrotoluene	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2-Chloronaphthalene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2-Chlorophenol	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2-Methylnaphthalene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2-Methylphenol	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2-Nitroaniline	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
2-Nitrophenol	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
3 & 4 Methylphenol	ND		20	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
3,3'-Dichlorobenzidine	ND		20	3.0	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
3-Nitroaniline	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
4,6-Dinitro-2-methylphenol	ND		100	10	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
4-Bromophenyl phenyl ether	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
4-Chloro-3-methylphenol	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
4-Chloroaniline	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
4-Chlorophenyl phenyl ether	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
4-Nitroaniline	ND		10	2.0	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
4-Nitrophenol	ND		100	25	ug/Kg		12/18/14 16:00	12/19/14 15:34	1

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: MB 580-178277/1-A

Matrix: Solid

Analysis Batch: 178585

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 178277

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Acenaphthylene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Anthracene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Benzo[a]anthracene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Benzo[a]pyrene	ND		3.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Benzo[b]fluoranthene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Benzo[g,h,i]perylene	ND		2.5	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Benzo[k]fluoranthene	ND		2.5	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Benzoic acid	ND		250	75	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Benzyl alcohol	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Bis(2-chloroethoxy)methane	ND	^	10	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Bis(2-chloroethyl)ether	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Bis(2-ethylhexyl) phthalate	ND		60	5.0	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Butyl benzyl phthalate	ND		20	5.0	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Carbazole	ND		10	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Chrysene	ND		2.5	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Dibenz(a,h)anthracene	ND		4.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Dibenzofuran	ND		10	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Diethyl phthalate	ND		20	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Dimethyl phthalate	ND		10	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Di-n-butyl phthalate	ND		50	5.0	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Di-n-octyl phthalate	ND		50	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Fluoranthene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Fluorene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Hexachlorobenzene	ND		5.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Hexachlorobutadiene	ND		5.0	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Hexachloroethane	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Isophorone	ND	^	10	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Naphthalene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Nitrobenzene	ND	^	10	3.4	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
N-Nitrosodimethylamine	ND		100	25	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
N-Nitrosodiphenylamine	ND		5.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Pentachlorophenol	ND		20	2.0	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Phenanthrene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Phenol	ND		10	1.5	ug/Kg		12/18/14 16:00	12/19/14 15:34	1
Pyrene	ND		2.0	0.50	ug/Kg		12/18/14 16:00	12/19/14 15:34	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol	64		28 - 143	12/18/14 16:00	12/19/14 15:34	1
2-Fluorobiphenyl	59		42 - 140	12/18/14 16:00	12/19/14 15:34	1
2-Fluorophenol	62		36 - 145	12/18/14 16:00	12/19/14 15:34	1
Nitrobenzene-d5	60		38 - 141	12/18/14 16:00	12/19/14 15:34	1
Phenol-d5	57		38 - 149	12/18/14 16:00	12/19/14 15:34	1
Terphenyl-d14	66		42 - 151	12/18/14 16:00	12/19/14 15:34	1

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: LCS 580-178277/2-A

Matrix: Solid

Analysis Batch: 178585

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 178277

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	100	88.1		ug/Kg		88	66 - 115
1,2-Dichlorobenzene	100	75.4		ug/Kg		75	64 - 112
1,3-Dichlorobenzene	100	73.9		ug/Kg		74	64 - 111
1,4-Dichlorobenzene	100	75.1		ug/Kg		75	65 - 110
1-Methylnaphthalene	100	85.6		ug/Kg		86	62 - 118
2,2'-oxybis[1-chloropropane]	100	72.2		ug/Kg		72	41 - 126
2,4,5-Trichlorophenol	100	92.6		ug/Kg		93	57 - 133
2,4,6-Trichlorophenol	100	82.5		ug/Kg		83	62 - 133
2,4-Dichlorophenol	100	91.2		ug/Kg		91	68 - 125
2,4-Dimethylphenol	100	87.8	^	ug/Kg		88	54 - 139
2,4-Dinitrophenol	200	135		ug/Kg		68	20 - 141
2,4-Dinitrotoluene	100	83.1		ug/Kg		83	68 - 121
2,6-Dinitrotoluene	100	84.6		ug/Kg		85	66 - 123
2-Chloronaphthalene	100	84.2		ug/Kg		84	68 - 112
2-Chlorophenol	100	79.5		ug/Kg		80	68 - 117
2-Methylnaphthalene	100	81.7		ug/Kg		82	64 - 119
2-Methylphenol	100	77.1		ug/Kg		77	71 - 116
2-Nitroaniline	100	86.2		ug/Kg		86	64 - 112
2-Nitrophenol	100	89.0		ug/Kg		89	67 - 127
3 & 4 Methylphenol	100	78.5		ug/Kg		78	70 - 116
3,3'-Dichlorobenzidine	200	99.7		ug/Kg		50	20 - 103
3-Nitroaniline	100	42.5		ug/Kg		42	27 - 103
4,6-Dinitro-2-methylphenol	200	164		ug/Kg		82	48 - 130
4-Bromophenyl phenyl ether	100	89.7		ug/Kg		90	68 - 122
4-Chloro-3-methylphenol	100	83.9		ug/Kg		84	69 - 121
4-Chloroaniline	100	17.0	*	ug/Kg		17	20 - 103
4-Chlorophenyl phenyl ether	100	79.5		ug/Kg		79	75 - 108
4-Nitroaniline	100	59.9		ug/Kg		60	58 - 108
4-Nitrophenol	200	166		ug/Kg		83	20 - 165
Acenaphthene	100	86.3		ug/Kg		86	68 - 116
Acenaphthylene	100	79.0		ug/Kg		79	68 - 120
Anthracene	100	85.4		ug/Kg		85	73 - 116
Benzo[a]anthracene	100	86.2		ug/Kg		86	76 - 119
Benzo[a]pyrene	100	95.2		ug/Kg		95	72 - 117
Benzo[b]fluoranthene	100	95.8		ug/Kg		96	63 - 132
Benzo[g,h,i]perylene	100	110		ug/Kg		110	55 - 139
Benzo[k]fluoranthene	100	86.2		ug/Kg		86	63 - 119
Benzoic acid	200	128	J	ug/Kg		64	29 - 158
Benzyl alcohol	100	80.6		ug/Kg		81	55 - 123
Bis(2-chloroethoxy)methane	100	84.3	^	ug/Kg		84	69 - 107
Bis(2-chloroethyl)ether	100	71.1		ug/Kg		71	62 - 110
Bis(2-ethylhexyl) phthalate	100	101		ug/Kg		101	62 - 144
Butyl benzyl phthalate	100	96.4		ug/Kg		96	69 - 142
Carbazole	100	91.6		ug/Kg		92	76 - 135
Chrysene	100	90.7		ug/Kg		91	75 - 114
Dibenz(a,h)anthracene	100	107		ug/Kg		107	56 - 134
Dibenzofuran	100	82.2		ug/Kg		82	72 - 109
Diethyl phthalate	100	77.1		ug/Kg		77	73 - 116

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: LCS 580-178277/2-A

Matrix: Solid

Analysis Batch: 178585

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 178277

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Dimethyl phthalate	100	81.9		ug/Kg		82	78 - 117	
Di-n-butyl phthalate	100	93.7		ug/Kg		94	66 - 140	
Di-n-octyl phthalate	100	98.2		ug/Kg		98	65 - 141	
Fluoranthene	100	86.0		ug/Kg		86	73 - 125	
Fluorene	100	81.2		ug/Kg		81	70 - 121	
Hexachlorobenzene	100	91.5		ug/Kg		91	66 - 117	
Hexachlorobutadiene	100	89.7		ug/Kg		90	65 - 116	
Hexachlorocyclopentadiene	100	81.0		ug/Kg		81	46 - 131	
Hexachloroethane	100	71.6		ug/Kg		72	62 - 120	
Indeno[1,2,3-cd]pyrene	100	104		ug/Kg		104	56 - 127	
Isophorone	100	83.9	^	ug/Kg		84	67 - 119	
Naphthalene	100	83.5		ug/Kg		83	62 - 112	
Nitrobenzene	100	85.1	^	ug/Kg		85	64 - 118	
N-Nitrosodimethylamine	100	86.5	J	ug/Kg		87	38 - 133	
N-Nitrosodi-n-propylamine	100	77.2		ug/Kg		77	62 - 116	
N-Nitrosodiphenylamine	100	88.1		ug/Kg		88	73 - 115	
Pentachlorophenol	200	155		ug/Kg		78	45 - 117	
Phenanthrene	100	88.7		ug/Kg		89	73 - 106	
Phenol	100	73.4		ug/Kg		73	63 - 111	
Pyrene	100	86.4		ug/Kg		86	70 - 120	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	93		28 - 143
2-Fluorobiphenyl	79		42 - 140
2-Fluorophenol	87		36 - 145
Nitrobenzene-d5	83		38 - 141
Phenol-d5	78		38 - 149
Terphenyl-d14	94		42 - 151

Lab Sample ID: LCSD 580-178277/3-A

Matrix: Solid

Analysis Batch: 178585

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 178277

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
									RPD	Limit
1,2,4-Trichlorobenzene	100	87.6		ug/Kg		88	66 - 115	1	28	
1,2-Dichlorobenzene	100	81.1		ug/Kg		81	64 - 112	7	30	
1,3-Dichlorobenzene	100	77.9		ug/Kg		78	64 - 111	5	30	
1,4-Dichlorobenzene	100	80.7		ug/Kg		81	65 - 110	7	30	
1-Methylnaphthalene	100	85.9		ug/Kg		86	62 - 118	0	30	
2,2'-oxybis[1-chloropropane]	100	72.8		ug/Kg		73	41 - 126	1	57	
2,4,5-Trichlorophenol	100	97.8		ug/Kg		98	57 - 133	6	30	
2,4,6-Trichlorophenol	100	90.3		ug/Kg		90	62 - 133	9	30	
2,4-Dichlorophenol	100	92.2		ug/Kg		92	68 - 125	1	30	
2,4-Dimethylphenol	100	92.2	^	ug/Kg		92	54 - 139	5	30	
2,4-Dinitrophenol	200	129		ug/Kg		64	20 - 141	5	36	
2,4-Dinitrotoluene	100	95.0		ug/Kg		95	68 - 121	13	30	
2,6-Dinitrotoluene	100	87.8		ug/Kg		88	66 - 123	4	30	
2-Chloronaphthalene	100	88.6		ug/Kg		89	68 - 112	5	25	

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: LCSD 580-178277/3-A

Matrix: Solid

Analysis Batch: 178585

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 178277

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
2-Chlorophenol	100	82.5		ug/Kg		83	68 - 117	4	27	
2-Methylnaphthalene	100	86.8		ug/Kg		87	64 - 119	6	27	
2-Methylphenol	100	83.5		ug/Kg		83	71 - 116	8	25	
2-Nitroaniline	100	84.0		ug/Kg		84	64 - 112	3	22	
2-Nitrophenol	100	88.6		ug/Kg		89	67 - 127	0	30	
3 & 4 Methylphenol	100	86.7		ug/Kg		87	70 - 116	10	27	
3,3'-Dichlorobenzidine	200	108		ug/Kg		54	20 - 103	8	60	
3-Nitroaniline	100	45.1		ug/Kg		45	27 - 103	6	33	
4,6-Dinitro-2-methylphenol	200	178		ug/Kg		89	48 - 130	8	22	
4-Bromophenyl phenyl ether	100	95.5		ug/Kg		95	68 - 122	6	30	
4-Chloro-3-methylphenol	100	85.6		ug/Kg		86	69 - 121	2	27	
4-Chloroaniline	100	17.5	*	ug/Kg		18	20 - 103	3	60	
4-Chlorophenyl phenyl ether	100	87.5		ug/Kg		88	75 - 108	10	30	
4-Nitroaniline	100	69.3		ug/Kg		69	58 - 108	14	32	
4-Nitrophenol	200	176		ug/Kg		88	20 - 165	6	30	
Acenaphthene	100	89.3		ug/Kg		89	68 - 116	3	27	
Acenaphthylene	100	82.6		ug/Kg		83	68 - 120	4	28	
Anthracene	100	93.5		ug/Kg		94	73 - 116	9	27	
Benzo[a]anthracene	100	94.0		ug/Kg		94	76 - 119	9	27	
Benzo[a]pyrene	100	97.3		ug/Kg		97	72 - 117	2	30	
Benzo[b]fluoranthene	100	90.6		ug/Kg		91	63 - 132	6	30	
Benzo[g,h,i]perylene	100	112		ug/Kg		112	55 - 139	3	28	
Benzo[k]fluoranthene	100	94.0		ug/Kg		94	63 - 119	9	30	
Benzoic acid	200	131	J	ug/Kg		66	29 - 158	3	28	
Benzyl alcohol	100	73.0		ug/Kg		73	55 - 123	10	60	
Bis(2-chloroethoxy)methane	100	85.8	^	ug/Kg		86	69 - 107	2	30	
Bis(2-chloroethyl)ether	100	76.4		ug/Kg		76	62 - 110	7	22	
Bis(2-ethylhexyl) phthalate	100	110		ug/Kg		110	62 - 144	9	30	
Butyl benzyl phthalate	100	106		ug/Kg		106	69 - 142	9	30	
Carbazole	100	97.0		ug/Kg		97	76 - 135	6	30	
Chrysene	100	96.6		ug/Kg		97	75 - 114	6	26	
Dibenz(a,h)anthracene	100	109		ug/Kg		109	56 - 134	1	30	
Dibenzofuran	100	87.2		ug/Kg		87	72 - 109	6	30	
Diethyl phthalate	100	81.6		ug/Kg		82	73 - 116	6	26	
Dimethyl phthalate	100	88.8		ug/Kg		89	78 - 117	8	30	
Di-n-butyl phthalate	100	101		ug/Kg		101	66 - 140	8	30	
Di-n-octyl phthalate	100	102		ug/Kg		102	65 - 141	4	30	
Fluoranthene	100	90.8		ug/Kg		91	73 - 125	5	30	
Fluorene	100	88.8		ug/Kg		89	70 - 121	9	30	
Hexachlorobenzene	100	101		ug/Kg		101	66 - 117	10	30	
Hexachlorobutadiene	100	93.4		ug/Kg		93	65 - 116	4	30	
Hexachlorocyclopentadiene	100	84.9		ug/Kg		85	46 - 131	5	29	
Hexachloroethane	100	78.2		ug/Kg		78	62 - 120	9	30	
Indeno[1,2,3-cd]pyrene	100	108		ug/Kg		108	56 - 127	4	29	
Isophorone	100	86.4	^	ug/Kg		86	67 - 119	3	30	
Naphthalene	100	85.7		ug/Kg		86	62 - 112	3	26	
Nitrobenzene	100	90.8	^	ug/Kg		91	64 - 118	7	30	
N-Nitrosodimethylamine	100	90.4	J	ug/Kg		90	38 - 133	4	30	

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: LCSD 580-178277/3-A

Matrix: Solid

Analysis Batch: 178585

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 178277

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Nitrosodi-n-propylamine	100	84.6		ug/Kg		85	62 - 116	9	28
N-Nitrosodiphenylamine	100	95.8		ug/Kg		96	73 - 115	8	30
Pentachlorophenol	200	172		ug/Kg		86	45 - 117	10	23
Phenanthrene	100	93.7		ug/Kg		94	73 - 106	5	28
Phenol	100	79.5		ug/Kg		80	63 - 111	8	26
Pyrene	100	91.5		ug/Kg		92	70 - 120	6	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol	97		28 - 143
2-Fluorobiphenyl	82		42 - 140
2-Fluorophenol	87		36 - 145
Nitrobenzene-d5	82		38 - 141
Phenol-d5	82		38 - 149
Terphenyl-d14	100		42 - 151

Lab Sample ID: 580-46739-2 MS

Matrix: Solid

Analysis Batch: 178585

Client Sample ID: DS-TD-O1-20141216-S

Prep Type: Total/NA

Prep Batch: 178277

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND		155	ND		ug/Kg	☼	NC	66 - 115
1,2-Dichlorobenzene	ND		155	ND		ug/Kg	☼	NC	64 - 112
1,3-Dichlorobenzene	ND		155	ND		ug/Kg	☼	NC	64 - 111
1,4-Dichlorobenzene	ND		155	ND		ug/Kg	☼	NC	65 - 110
1-Methylnaphthalene	ND		155	197	J F1	ug/Kg	☼	127	62 - 118
2,2'-oxybis[1-chloropropane]	ND		155	ND		ug/Kg	☼	NC	41 - 126
2,4,5-Trichlorophenol	ND		155	ND		ug/Kg	☼	NC	57 - 133
2,4,6-Trichlorophenol	ND		155	ND		ug/Kg	☼	NC	62 - 133
2,4-Dichlorophenol	ND		155	ND		ug/Kg	☼	NC	68 - 125
2,4-Dimethylphenol	ND	^	155	ND	^	ug/Kg	☼	NC	54 - 139
2,4-Dinitrophenol	ND		310	ND		ug/Kg	☼	NC	20 - 141
2,4-Dinitrotoluene	ND		155	ND		ug/Kg	☼	NC	68 - 121
2,6-Dinitrotoluene	ND		155	ND		ug/Kg	☼	NC	66 - 123
2-Chloronaphthalene	ND		155	204	J F1	ug/Kg	☼	132	68 - 112
2-Chlorophenol	ND		155	ND		ug/Kg	☼	NC	68 - 117
2-Methylnaphthalene	ND		155	228	J F1	ug/Kg	☼	147	64 - 119
2-Methylphenol	ND		155	ND		ug/Kg	☼	NC	71 - 116
2-Nitroaniline	ND		155	ND		ug/Kg	☼	NC	64 - 112
2-Nitrophenol	ND		155	ND		ug/Kg	☼	NC	67 - 127
3 & 4 Methylphenol	ND		155	ND		ug/Kg	☼	NC	70 - 116
3,3'-Dichlorobenzidine	ND		310	ND		ug/Kg	☼	NC	20 - 103
3-Nitroaniline	ND		155	ND		ug/Kg	☼	NC	27 - 103
4,6-Dinitro-2-methylphenol	ND		310	ND		ug/Kg	☼	NC	48 - 130
4-Bromophenyl phenyl ether	ND		155	ND		ug/Kg	☼	NC	68 - 122
4-Chloro-3-methylphenol	ND		155	450	J	ug/Kg	☼	NC	69 - 121
4-Chloroaniline	ND	*	155	ND		ug/Kg	☼	NC	20 - 103
4-Chlorophenyl phenyl ether	ND		155	ND		ug/Kg	☼	NC	75 - 108
4-Nitroaniline	ND		155	ND		ug/Kg	☼	NC	58 - 108

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: 580-46739-2 MSD

Matrix: Solid

Analysis Batch: 178585

Client Sample ID: DS-TD-O1-20141216-S

Prep Type: Total/NA

Prep Batch: 178277

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
1,2,4-Trichlorobenzene	ND		153	ND		ug/Kg	☼	NC	66 - 115	NC	28
1,2-Dichlorobenzene	ND		153	ND		ug/Kg	☼	NC	64 - 112	NC	60
1,3-Dichlorobenzene	ND		153	ND		ug/Kg	☼	NC	64 - 111	NC	60
1,4-Dichlorobenzene	ND		153	ND		ug/Kg	☼	NC	65 - 110	NC	32
1-Methylnaphthalene	ND		153	558	F1 F2	ug/Kg	☼	364	62 - 118	96	30
2,2'-oxybis[1-chloropropane]	ND		153	ND		ug/Kg	☼	NC	41 - 126	NC	60
2,4,5-Trichlorophenol	ND		153	ND		ug/Kg	☼	NC	57 - 133	NC	60
2,4,6-Trichlorophenol	ND		153	ND		ug/Kg	☼	NC	62 - 133	NC	60
2,4-Dichlorophenol	ND		153	ND		ug/Kg	☼	NC	68 - 125	NC	60
2,4-Dimethylphenol	ND	^	153	ND	^	ug/Kg	☼	NC	54 - 139	NC	60
2,4-Dinitrophenol	ND		306	ND		ug/Kg	☼	NC	20 - 141	NC	60
2,4-Dinitrotoluene	ND		153	ND		ug/Kg	☼	NC	68 - 121	NC	31
2,6-Dinitrotoluene	ND		153	ND		ug/Kg	☼	NC	66 - 123	NC	60
2-Chloronaphthalene	ND		153	200	J F1	ug/Kg	☼	131	68 - 112	2	25
2-Chlorophenol	ND		153	ND		ug/Kg	☼	NC	68 - 117	NC	27
2-Methylnaphthalene	ND		153	717	F1 F2	ug/Kg	☼	468	64 - 119	104	27
2-Methylphenol	ND		153	ND		ug/Kg	☼	NC	71 - 116	NC	25
2-Nitroaniline	ND		153	ND		ug/Kg	☼	NC	64 - 112	NC	60
2-Nitrophenol	ND		153	ND		ug/Kg	☼	NC	67 - 127	NC	60
3 & 4 Methylphenol	ND		153	ND		ug/Kg	☼	NC	70 - 116	NC	27
3,3'-Dichlorobenzidine	ND		306	ND		ug/Kg	☼	NC	20 - 103	NC	60
3-Nitroaniline	ND		153	ND		ug/Kg	☼	NC	27 - 103	NC	60
4,6-Dinitro-2-methylphenol	ND		306	ND		ug/Kg	☼	NC	48 - 130	NC	60
4-Bromophenyl phenyl ether	ND		153	ND		ug/Kg	☼	NC	68 - 122	NC	60
4-Chloro-3-methylphenol	ND		153	473	J	ug/Kg	☼	NC	69 - 121	5	27
4-Chloroaniline	ND	*	153	ND		ug/Kg	☼	NC	20 - 103	NC	60
4-Chlorophenyl phenyl ether	ND		153	ND		ug/Kg	☼	NC	75 - 108	NC	60
4-Nitroaniline	ND		153	ND		ug/Kg	☼	NC	58 - 108	NC	60
4-Nitrophenol	ND		306	ND		ug/Kg	☼	NC	20 - 165	NC	33
Acenaphthene	87	J	153	4620	F1 F2	ug/Kg	☼	2961	68 - 116	172	27
Acenaphthylene	ND		153	218	J F1	ug/Kg	☼	143	68 - 120	16	28
Anthracene	160	J	153	7400	F1 F2	ug/Kg	☼	4730	73 - 116	182	27
Benzo[a]anthracene	730		153	11700	4 F2	ug/Kg	☼	7180	76 - 119	171	27
Benzo[a]pyrene	900		153	12100	4 F2	ug/Kg	☼	7333	72 - 117	163	30
Benzo[b]fluoranthene	1400		153	16700	4 F2	ug/Kg	☼	9967	63 - 132	154	31
Benzo[g,h,i]perylene	400		153	3840	F1 F2	ug/Kg	☼	2240	55 - 139	152	28
Benzo[k]fluoranthene	660		153	6870	4 F2	ug/Kg	☼	4058	63 - 119	163	31
Benzoic acid	ND		306	ND		ug/Kg	☼	NC	29 - 158	NC	60
Benzyl alcohol	ND		153	498	J	ug/Kg	☼	NC	55 - 123	7	60
Bis(2-chloroethoxy)methane	ND	^	153	168	J ^ F1	ug/Kg	☼	110	69 - 107	23	60
Bis(2-chloroethyl)ether	ND		153	ND		ug/Kg	☼	NC	62 - 110	NC	60
Bis(2-ethylhexyl) phthalate	7200	J	153	1210	J 4	ug/Kg	☼	-3896	62 - 144	2	60
Butyl benzyl phthalate	1300	J	153	995	J 4	ug/Kg	☼	-204	69 - 142	10	60
Carbazole	230	J	153	5350	F1 F2	ug/Kg	☼	3339	76 - 135	170	60
Chrysene	1100		153	12000	4 F2	ug/Kg	☼	7120	75 - 114	162	26
Dibenz(a,h)anthracene	120	J	153	807	F1 F2	ug/Kg	☼	448	56 - 134	122	30
Dibenzofuran	ND		153	2430	F1 F2	ug/Kg	☼	1584	72 - 109	166	60
Diethyl phthalate	ND		153	ND		ug/Kg	☼	NC	73 - 116	NC	26

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: 580-46739-2 MSD

Matrix: Solid

Analysis Batch: 178585

Client Sample ID: DS-TD-O1-20141216-S

Prep Type: Total/NA

Prep Batch: 178277

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Dimethyl phthalate	ND		153	397	J F1	ug/Kg	*	259	78 - 117	2	60
Di-n-butyl phthalate	6500	J	153	ND	4	ug/Kg	*	0	66 - 140	NC	60
Di-n-octyl phthalate	ND		153	267	J F1	ug/Kg	*	174	65 - 141	25	31
Fluoranthene	2000		153	30800	4 F2	ug/Kg	*	18823	73 - 125	169	36
Fluorene	99	J	153	3780	F1 F2	ug/Kg	*	2401	70 - 121	174	31
Hexachlorobenzene	ND		153	182	J F1	ug/Kg	*	119	66 - 117	3	60
Hexachlorobutadiene	ND		153	ND		ug/Kg	*	NC	65 - 116	NC	60
Hexachlorocyclopentadiene	ND		153	ND	F1	ug/Kg	*	0	46 - 131	NC	60
Hexachloroethane	ND		153	ND		ug/Kg	*	NC	62 - 120	NC	60
Indeno[1,2,3-cd]pyrene	490	J	153	4870	F1 F2	ug/Kg	*	2862	56 - 127	157	29
Isophorone	ND	^	153	170	J ^	ug/Kg	*	111	67 - 119	14	60
Naphthalene	ND		153	1230	F1 F2	ug/Kg	*	802	62 - 112	139	26
Nitrobenzene	ND	^	153	ND	^	ug/Kg	*	NC	64 - 118	NC	60
N-Nitrosodimethylamine	ND		153	ND		ug/Kg	*	NC	38 - 133	NC	60
N-Nitrosodi-n-propylamine	ND		153	ND		ug/Kg	*	NC	62 - 116	NC	28
N-Nitrosodiphenylamine	ND		153	278	J F1	ug/Kg	*	182	73 - 115	56	60
Pentachlorophenol	ND		306	1260	J	ug/Kg	*	NC	45 - 117	3	68
Phenanthrene	1200		153	32200	4 F2	ug/Kg	*	20270	73 - 106	182	28
Phenol	ND		153	ND		ug/Kg	*	NC	63 - 111	NC	26
Pyrene	1600		153	25700	4 F2	ug/Kg	*	15753	70 - 120	170	31

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	154	X	28 - 143
2-Fluorobiphenyl	102		42 - 140
2-Fluorophenol	110		36 - 145
Nitrobenzene-d5	91		38 - 141
Phenol-d5	109		38 - 149
Terphenyl-d14	182	X	42 - 151

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

Lab Sample ID: MB 580-178520/1-A

Matrix: Solid

Analysis Batch: 178559

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 178520

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Gasoline	0.951	J	4.0	0.50	mg/Kg		12/18/14 13:38	12/19/14 09:02	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		50 - 150	12/18/14 13:38	12/19/14 09:02	1
Trifluorotoluene (Surr)	76		50 - 150	12/18/14 13:38	12/19/14 09:02	1

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: LCS 580-178520/2-A

Matrix: Solid

Analysis Batch: 178559

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 178520

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	40.0	35.2		mg/Kg		88	68 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		50 - 150
Trifluorotoluene (Surr)	98		50 - 150

Lab Sample ID: LCSD 580-178520/3-A

Matrix: Solid

Analysis Batch: 178559

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 178520

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Gasoline	40.0	33.5		mg/Kg		84	68 - 120	5	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		50 - 150
Trifluorotoluene (Surr)	95		50 - 150

Lab Sample ID: 580-46739-4 MS

Matrix: Solid

Analysis Batch: 178559

Client Sample ID: DS-CB-H1-20141216-S

Prep Type: Total/NA

Prep Batch: 178520

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	7.6	JB	121	143		mg/Kg	☒	111	50 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		50 - 150
Trifluorotoluene (Surr)	134		50 - 150

Lab Sample ID: 580-46739-4 MSD

Matrix: Solid

Analysis Batch: 178559

Client Sample ID: DS-CB-H1-20141216-S

Prep Type: Total/NA

Prep Batch: 178520

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Gasoline	7.6	JB	127	94.4	F2	mg/Kg	☒	68	50 - 150	41	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		50 - 150
Trifluorotoluene (Surr)	91		50 - 150

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

Lab Sample ID: MB 580-178279/1-A

Matrix: Solid

Analysis Batch: 179005

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 178279

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1016	ND		0.010	0.0032	mg/Kg		12/18/14 13:20	12/24/14 21:18	1

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: MB 580-178279/1-A
Matrix: Solid
Analysis Batch: 179005

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 178279

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arochlor 1221	ND		0.011	0.0080	mg/Kg		12/18/14 13:20	12/24/14 21:18	1
Arochlor 1232	ND		0.011	0.0070	mg/Kg		12/18/14 13:20	12/24/14 21:18	1
Arochlor 1242	ND		0.010	0.0021	mg/Kg		12/18/14 13:20	12/24/14 21:18	1
Arochlor 1248	ND		0.010	0.0030	mg/Kg		12/18/14 13:20	12/24/14 21:18	1
Arochlor 1254	ND		0.010	0.0021	mg/Kg		12/18/14 13:20	12/24/14 21:18	1
Arochlor 1260	ND		0.010	0.0030	mg/Kg		12/18/14 13:20	12/24/14 21:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	81		45 - 135	12/18/14 13:20	12/24/14 21:18	1
DCB Decachlorobiphenyl	104		50 - 140	12/18/14 13:20	12/24/14 21:18	1

Lab Sample ID: LCS 580-178279/2-A
Matrix: Solid
Analysis Batch: 179005

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 178279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arochlor 1016	0.100	0.0889		mg/Kg		89	40 - 140
Arochlor 1260	0.100	0.106		mg/Kg		106	60 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	91		45 - 135
DCB Decachlorobiphenyl	114		50 - 140

Lab Sample ID: LCSD 580-178279/3-A
Matrix: Solid
Analysis Batch: 179005

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 178279

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arochlor 1016	0.100	0.0942		mg/Kg		94	40 - 140	6	20
Arochlor 1260	0.100	0.107		mg/Kg		107	60 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	98		45 - 135
DCB Decachlorobiphenyl	114		50 - 140

Lab Sample ID: 580-46739-4 MS
Matrix: Solid
Analysis Batch: 179005

Client Sample ID: DS-CB-H1-20141216-S
Prep Type: Total/NA
Prep Batch: 178279

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arochlor 1016	ND		0.321	0.261		mg/Kg	✱	81	40 - 140
Arochlor 1260	ND		0.321	0.359		mg/Kg	✱	112	60 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	89		45 - 135
DCB Decachlorobiphenyl	82		50 - 140

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: 580-46739-4 MSD

Matrix: Solid

Analysis Batch: 179005

Client Sample ID: DS-CB-H1-20141216-S

Prep Type: Total/NA

Prep Batch: 178279

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier							
Arochlor 1016	ND		0.323	0.252		mg/Kg	☼	78		40 - 140	4	20
Arochlor 1260	ND		0.323	0.332		mg/Kg	☼	103		60 - 130	8	20
Surrogate	%Recovery	Qualifier	Limits									
Tetrachloro-m-xylene	85		45 - 135									
DCB Decachlorobiphenyl	82		50 - 140									

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

Lab Sample ID: MB 580-178532/1-A

Matrix: Solid

Analysis Batch: 178726

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 178532

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
#2 Diesel (C10-C24)	ND		25	5.7	mg/Kg		12/18/14 15:37	12/22/14 12:51	1
Motor Oil (>C24-C36)	ND		50	9.1	mg/Kg		12/18/14 15:37	12/22/14 12:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				12/18/14 15:37	12/22/14 12:51	1

Lab Sample ID: LCS 580-178532/2-A

Matrix: Solid

Analysis Batch: 178726

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 178532

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
		Result	Qualifier							
#2 Diesel (C10-C24)	500	416		mg/Kg		83		70 - 125		
Motor Oil (>C24-C36)	502	434		mg/Kg		87		64 - 127		
Surrogate	%Recovery	Qualifier	Limits							
o-Terphenyl	88		50 - 150							

Lab Sample ID: LCSD 580-178532/3-A

Matrix: Solid

Analysis Batch: 178726

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 178532

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
		Result	Qualifier							
#2 Diesel (C10-C24)	500	455		mg/Kg		91		70 - 125	9	16
Motor Oil (>C24-C36)	502	475		mg/Kg		95		64 - 127	9	17
Surrogate	%Recovery	Qualifier	Limits							
o-Terphenyl	93		50 - 150							

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: 580-46739-2 MS

Matrix: Solid

Analysis Batch: 178726

Client Sample ID: DS-TD-O1-20141216-S

Prep Type: Total/NA

Prep Batch: 178532

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.		
	Result	Qualifier	Added	Result	Qualifier				Limits	Limits	
#2 Diesel (C10-C24)	950	Y	773	1290	F1	mg/Kg	☼	44	70 - 125		
Motor Oil (>C24-C36)	1400	Y	775	1750	F1	mg/Kg	☼	42	64 - 127		
		MS	MS								
Surrogate	%Recovery	Qualifier	Limits								
<i>o</i> -Terphenyl	75		50 - 150								

Lab Sample ID: 580-46739-2 MSD

Matrix: Solid

Analysis Batch: 178726

Client Sample ID: DS-TD-O1-20141216-S

Prep Type: Total/NA

Prep Batch: 178532

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	Limits	Limit	Limit
#2 Diesel (C10-C24)	950	Y	768	1400	F1	mg/Kg	☼	59	70 - 125		8	16
Motor Oil (>C24-C36)	1400	Y	771	1950		mg/Kg	☼	69	64 - 127		11	17
		MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits									
<i>o</i> -Terphenyl	80		50 - 150									

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-180028/22-A

Matrix: Water

Analysis Batch: 180058

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 180028

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		0.0010	0.00075	mg/L		01/12/15 14:14	01/13/15 07:36	1
Antimony	ND		0.00040	0.000080	mg/L		01/12/15 14:14	01/13/15 07:36	1
Beryllium	ND		0.00040	0.00010	mg/L		01/12/15 14:14	01/13/15 07:36	1
Cadmium	ND		0.00040	0.000028	mg/L		01/12/15 14:14	01/13/15 07:36	1
Chromium	ND		0.00040	0.00027	mg/L		01/12/15 14:14	01/13/15 07:36	1
Copper	0.000136	J	0.0010	0.00011	mg/L		01/12/15 14:14	01/13/15 07:36	1
Lead	ND		0.00040	0.000034	mg/L		01/12/15 14:14	01/13/15 07:36	1
Nickel	ND		0.0030	0.00040	mg/L		01/12/15 14:14	01/13/15 07:36	1
Selenium	ND		0.0010	0.00071	mg/L		01/12/15 14:14	01/13/15 07:36	1
Silver	ND		0.00040	0.000030	mg/L		01/12/15 14:14	01/13/15 07:36	1
Thallium	ND		0.0010	0.00028	mg/L		01/12/15 14:14	01/13/15 07:36	1
Zinc	ND		0.0040	0.0019	mg/L		01/12/15 14:14	01/13/15 07:36	1

Lab Sample ID: LCS 580-180028/23-A

Matrix: Water

Analysis Batch: 180058

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 180028

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	Limits
Arsenic	0.100	0.0949		mg/L		95	85 - 115	
Antimony	0.100	0.0897		mg/L		90	85 - 115	
Beryllium	0.100	0.0957		mg/L		96	85 - 115	
Cadmium	0.100	0.0915		mg/L		91	85 - 115	
Chromium	0.100	0.0981		mg/L		98	85 - 115	

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: LCS 580-180028/23-A
Matrix: Water
Analysis Batch: 180058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 180028

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Copper	0.100	0.100		mg/L		100	85 - 115	
Lead	0.100	0.0938		mg/L		94	85 - 115	
Nickel	0.100	0.0995		mg/L		99	85 - 115	
Selenium	0.100	0.0906		mg/L		91	85 - 115	
Silver	0.100	0.0933		mg/L		93	85 - 115	
Thallium	0.100	0.0936		mg/L		94	85 - 115	
Zinc	0.100	0.0945		mg/L		94	85 - 115	

Lab Sample ID: LCSD 580-180028/24-A
Matrix: Water
Analysis Batch: 180058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 180028

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
							Limits		RPD	Limit
Arsenic	0.100	0.0957		mg/L		96	85 - 115	1	20	
Antimony	0.100	0.0905		mg/L		91	85 - 115	1	20	
Beryllium	0.100	0.0944		mg/L		94	85 - 115	1	20	
Cadmium	0.100	0.0915		mg/L		92	85 - 115	0	20	
Chromium	0.100	0.0993		mg/L		99	85 - 115	1	20	
Copper	0.100	0.101		mg/L		101	85 - 115	0	20	
Lead	0.100	0.0944		mg/L		94	85 - 115	1	20	
Nickel	0.100	0.0996		mg/L		100	85 - 115	0	20	
Selenium	0.100	0.0913		mg/L		91	85 - 115	1	20	
Silver	0.100	0.0939		mg/L		94	85 - 115	1	20	
Thallium	0.100	0.0941		mg/L		94	85 - 115	1	20	
Zinc	0.100	0.0959		mg/L		96	85 - 115	1	20	

Lab Sample ID: 580-46739-1 MS
Matrix: Water
Analysis Batch: 180058

Client Sample ID: DS-CB-F3-20141216-W
Prep Type: Total/NA
Prep Batch: 180028

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	
									Limits	
Arsenic	0.0018		0.100	0.0944		mg/L		93	70 - 130	
Antimony	0.00033	J	0.100	0.0888		mg/L		89	70 - 130	
Beryllium	ND		0.100	0.0936		mg/L		94	70 - 130	
Cadmium	0.000043	J	0.100	0.0889		mg/L		89	70 - 130	
Chromium	0.00032	J	0.100	0.0967		mg/L		96	70 - 130	
Copper	0.0040	B	0.100	0.100		mg/L		96	70 - 130	
Lead	0.00017	J	0.100	0.0916		mg/L		91	70 - 130	
Nickel	ND		0.100	0.0963		mg/L		96	70 - 130	
Selenium	ND		0.100	0.0883		mg/L		88	70 - 130	
Silver	ND		0.100	0.0913		mg/L		91	70 - 130	
Thallium	ND		0.100	0.0918		mg/L		92	70 - 130	
Zinc	0.020		0.100	0.112		mg/L		91	70 - 130	

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: 580-46739-1 MSD

Matrix: Water

Analysis Batch: 180058

Client Sample ID: DS-CB-F3-20141216-W

Prep Type: Total/NA

Prep Batch: 180028

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Arsenic	0.0018		0.100	0.0932		mg/L		91	70 - 130	1	20	
Antimony	0.00033	J	0.100	0.0870		mg/L		87	70 - 130	2	20	
Beryllium	ND		0.100	0.0925		mg/L		93	70 - 130	1	20	
Cadmium	0.000043	J	0.100	0.0875		mg/L		87	70 - 130	2	20	
Chromium	0.00032	J	0.100	0.0952		mg/L		95	70 - 130	2	20	
Copper	0.0040	B	0.100	0.0985		mg/L		94	70 - 130	2	20	
Lead	0.00017	J	0.100	0.0913		mg/L		91	70 - 130	0	20	
Nickel	ND		0.100	0.0946		mg/L		95	70 - 130	2	20	
Selenium	ND		0.100	0.0878		mg/L		88	70 - 130	1	20	
Silver	ND		0.100	0.0891		mg/L		89	70 - 130	2	20	
Thallium	ND		0.100	0.0921		mg/L		92	70 - 130	0	20	
Zinc	0.020		0.100	0.107		mg/L		87	70 - 130	4	20	

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 580-178854/23-A

Matrix: Water

Analysis Batch: 178881

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 178854

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.00020	0.000041	mg/L		12/23/14 11:21	12/23/14 13:56	1

Lab Sample ID: LCS 580-178854/24-A

Matrix: Water

Analysis Batch: 178881

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 178854

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Mercury	0.00200	0.00193		mg/L		96	85 - 115	

Lab Sample ID: LCSD 580-178854/25-A

Matrix: Water

Analysis Batch: 178881

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 178854

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
Mercury	0.00200	0.00188		mg/L		94	85 - 115	2	20	

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 580-179557/11-A

Matrix: Solid

Analysis Batch: 179749

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 179557

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		0.50	0.18	mg/Kg		01/06/15 11:07	01/07/15 14:48	10
Lead	ND		0.20	0.013	mg/Kg		01/06/15 11:07	01/07/15 14:48	10
Antimony	ND		0.20	0.042	mg/Kg		01/06/15 11:07	01/07/15 14:48	10
Beryllium	ND		0.20	0.035	mg/Kg		01/06/15 11:07	01/07/15 14:48	10
Cadmium	ND		0.20	0.0080	mg/Kg		01/06/15 11:07	01/07/15 14:48	10

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: MB 580-179557/11-A
Matrix: Solid
Analysis Batch: 179749

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 179557

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.20	0.11	mg/Kg		01/06/15 11:07	01/07/15 14:48	10
Copper	ND		0.40	0.098	mg/Kg		01/06/15 11:07	01/07/15 14:48	10
Nickel	ND		0.50	0.081	mg/Kg		01/06/15 11:07	01/07/15 14:48	10
Selenium	ND		0.70	0.20	mg/Kg		01/06/15 11:07	01/07/15 14:48	10
Silver	ND		0.20	0.012	mg/Kg		01/06/15 11:07	01/07/15 14:48	10
Thallium	ND		0.50	0.13	mg/Kg		01/06/15 11:07	01/07/15 14:48	10
Zinc	ND		2.0	1.1	mg/Kg		01/06/15 11:07	01/07/15 14:48	10

Lab Sample ID: LCS 580-179557/12-A
Matrix: Solid
Analysis Batch: 179749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179557

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	196		mg/Kg		98	80 - 120
Lead	50.0	48.7		mg/Kg		97	80 - 120
Antimony	150	145		mg/Kg		96	80 - 120
Beryllium	5.00	4.79		mg/Kg		96	80 - 120
Cadmium	5.00	4.90		mg/Kg		98	80 - 120
Chromium	20.0	18.7		mg/Kg		94	80 - 120
Copper	25.0	23.7		mg/Kg		95	80 - 120
Nickel	50.0	49.3		mg/Kg		99	80 - 120
Selenium	200	195		mg/Kg		98	80 - 120
Silver	30.0	28.3		mg/Kg		94	80 - 120
Thallium	200	189		mg/Kg		95	80 - 120
Zinc	200	194		mg/Kg		97	80 - 120

Lab Sample ID: LCSD 580-179557/13-A
Matrix: Solid
Analysis Batch: 179749

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 179557

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	194		mg/Kg		97	80 - 120	1	20
Lead	50.0	48.2		mg/Kg		96	80 - 120	1	20
Antimony	150	145		mg/Kg		96	80 - 120	0	20
Beryllium	5.00	4.84		mg/Kg		97	80 - 120	1	20
Cadmium	5.00	4.87		mg/Kg		97	80 - 120	1	20
Chromium	20.0	18.8		mg/Kg		94	80 - 120	0	20
Copper	25.0	23.3		mg/Kg		93	80 - 120	2	20
Nickel	50.0	49.2		mg/Kg		98	80 - 120	0	20
Selenium	200	192		mg/Kg		96	80 - 120	2	20
Silver	30.0	28.3		mg/Kg		94	80 - 120	0	20
Thallium	200	184		mg/Kg		92	80 - 120	3	20
Zinc	200	191		mg/Kg		96	80 - 120	1	20

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-179785/13-A
Matrix: Solid
Analysis Batch: 179819

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 179785

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0053	mg/Kg		01/08/15 11:54	01/08/15 13:17	1

Lab Sample ID: LCS 580-179785/14-A
Matrix: Solid
Analysis Batch: 179819

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179785

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.148		mg/Kg		88	80 - 120

Lab Sample ID: LCSD 580-179785/15-A
Matrix: Solid
Analysis Batch: 179819

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 179785

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	0.167	0.144		mg/Kg		87	80 - 120	2	20

Lab Sample ID: 580-46739-2 MS
Matrix: Solid
Analysis Batch: 179819

Client Sample ID: DS-TD-O1-20141216-S
Prep Type: Total/NA
Prep Batch: 179785

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.061		0.227	0.274		mg/Kg	☼	94	80 - 120

Lab Sample ID: 580-46739-2 MSD
Matrix: Solid
Analysis Batch: 179819

Client Sample ID: DS-TD-O1-20141216-S
Prep Type: Total/NA
Prep Batch: 179785

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	0.061		0.244	0.282		mg/Kg	☼	91	80 - 120	3	20

Lab Sample ID: 580-46739-2 DU
Matrix: Solid
Analysis Batch: 179819

Client Sample ID: DS-TD-O1-20141216-S
Prep Type: Total/NA
Prep Batch: 179785

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Mercury	0.061		0.0495	F5	mg/Kg	☼	21	20

Method: 120.1 - Conductivity, Specific Conductance

Lab Sample ID: MB 580-178918/1
Matrix: Water
Analysis Batch: 178918

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			12/23/14 20:10	1

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Method: 120.1 - Conductivity, Specific Conductance (Continued)

Lab Sample ID: LCS 580-178918/2

Matrix: Water

Analysis Batch: 178918

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	519		umhos/cm		104	90 - 110

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-178511/1

Matrix: Water

Analysis Batch: 178511

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			12/17/14 11:14	1

Lab Sample ID: LCS 580-178511/2

Matrix: Water

Analysis Batch: 178511

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	1.88		mg/L		104	90 - 110

Lab Sample ID: LCSD 580-178511/3

Matrix: Water

Analysis Batch: 178511

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	1.87		mg/L		104	90 - 110	1	15

Method: 9060_PSEP - TOC (Puget Sound)

Lab Sample ID: MB 580-178703/3

Matrix: Solid

Analysis Batch: 178703

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			12/20/14 14:14	1

Lab Sample ID: LCS 580-178703/4

Matrix: Solid

Analysis Batch: 178703

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	3430		mg/Kg		120	27.8 - 170

Lab Sample ID: LCSD 580-178703/5

Matrix: Solid

Analysis Batch: 178703

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	3420		mg/Kg		120	27.8 - 170	0	35

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: 580-46739-2 MS
Matrix: Solid
Analysis Batch: 178703

Client Sample ID: DS-TD-O1-20141216-S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	64000		110000	164000		mg/Kg		90	50 - 140

Lab Sample ID: 580-46739-2 MSD
Matrix: Solid
Analysis Batch: 178703

Client Sample ID: DS-TD-O1-20141216-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	64000		119000	173000		mg/Kg		91	50 - 140	6	35

Lab Sample ID: 580-46739-2 DU
Matrix: Solid
Analysis Batch: 178703

Client Sample ID: DS-TD-O1-20141216-S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	64000		78900		mg/Kg		20	50

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 580-179034/2
Matrix: Water
Analysis Batch: 179034

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	100	107		mg/L		107	85 - 115

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

Lab Sample ID: MB 580-178800/1
Matrix: Water
Analysis Batch: 178800

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			12/22/14 18:21	1

Lab Sample ID: LCS 580-178800/2
Matrix: Water
Analysis Batch: 178800

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: LCSD 580-178800/19
Matrix: Water
Analysis Batch: 178800

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 Suspended Solids	30.0	34.0		mg/L		113	70.6 - 120	17	20

TestAmerica Seattle

QC Sample Results

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Lab Sample ID: 580-46739-1 DU
Matrix: Water
Analysis Batch: 178800

Client Sample ID: DS-CB-F3-20141216-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	ND		ND		mg/L		NC	20

Method: SM 4500 H+ B - pH

Lab Sample ID: 580-46739-1 DU
Matrix: Water
Analysis Batch: 178611

Client Sample ID: DS-CB-F3-20141216-W
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	6.71	HF	6.930	F3	SU		3	1

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

Lab Sample ID: MB 580-178694/1
Matrix: Water
Analysis Batch: 178694

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			12/21/14 10:10	1

Lab Sample ID: LCS 580-178694/2
Matrix: Water
Analysis Batch: 178694

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	16.8		mg/L		112	85 - 115

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-CB-F3-20141216-W

Lab Sample ID: 580-46739-1

Date Collected: 12/16/14 11:10

Matrix: Water

Date Received: 12/17/14 14:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			180028	01/12/15 14:14	PAB	TAL SEA
Total/NA	Analysis	200.8		1	180058	01/13/15 08:15	FCW	TAL SEA
Total/NA	Prep	245.1			178854	12/23/14 11:21	PAB	TAL SEA
Total/NA	Analysis	245.1		1	178881	12/23/14 14:34	FCW	TAL SEA
Total/NA	Analysis	120.1		1	178918	12/23/14 20:10	LKC	TAL SEA
Total/NA	Analysis	300.0		1	178440	12/17/14 16:36	JLS	TAL SEA
Total/NA	Analysis	300.0		1	178511	12/17/14 16:36	JLS	TAL SEA
Total/NA	Analysis	SM 2320B		1	179034	12/29/14 10:16	SPP	TAL SEA
Total/NA	Analysis	SM 2540D		1	178800	12/22/14 18:21	LKC	TAL SEA
Total/NA	Analysis	SM 4500 H+ B		1	178611	12/18/14 10:50	LKC	TAL SEA
Dissolved	Analysis	SM 5310B		1	178694	12/21/14 10:10	JLS	TAL SEA
Total/NA	Analysis	SM 5310B		1	178694	12/21/14 10:10	JLS	TAL SEA

Client Sample ID: DS-TD-O1-20141216-S

Lab Sample ID: 580-46739-2

Date Collected: 12/16/14 13:20

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 63.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			179077	12/17/14 14:17	IWH	TAL SEA
Total/NA	Analysis	8260B		1	179079	12/29/14 16:36	CJ	TAL SEA
Total/NA	Prep	3550B			178277	12/18/14 16:00	ALL	TAL SEA
Total/NA	Analysis	8270D		100	178585	12/19/14 21:01	ERB	TAL SEA
Total/NA	Prep	5035			178520	12/18/14 13:38	MMH	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	178559	12/19/14 11:14	MMH	TAL SEA
Total/NA	Prep	3550B			178279	12/18/14 15:18	ALL	TAL SEA
Total/NA	Analysis	8082		1	179005	12/25/14 01:03	ALC	TAL SEA
Total/NA	Prep	3546			178532	12/18/14 15:37	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	178726	12/22/14 16:48	CGM	TAL SEA
Total/NA	Prep	3050B			179557	01/06/15 11:07	PAB	TAL SEA
Total/NA	Analysis	6020		10	179749	01/07/15 15:36	FCW	TAL SEA
Total/NA	Prep	7471A			179785	01/08/15 11:54	PAB	TAL SEA
Total/NA	Analysis	7471A		1	179819	01/08/15 13:25	FCW	TAL SEA
Total/NA	Analysis	2540B		1	178904	12/23/14 17:11	MMH	TAL SEA
Total/NA	Analysis	9060_PSEP		1	178703	12/20/14 14:14	JLS	TAL SEA
Total/NA	Analysis	PSEP Plumb 1981		1	178555	12/18/14 18:36	LKC	TAL SEA

Client Sample ID: DS-CB-I3-20141216-S

Lab Sample ID: 580-46739-3

Date Collected: 12/16/14 14:35

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 55.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550B			178277	12/18/14 16:00	ALL	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

Client Sample ID: DS-CB-I3-20141216-S

Lab Sample ID: 580-46739-3

Date Collected: 12/16/14 14:35

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 55.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D		100	178585	12/19/14 23:32	ERB	TAL SEA
Total/NA	Prep	5035			178520	12/18/14 13:38	MMH	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	178559	12/19/14 15:04	MMH	TAL SEA
Total/NA	Prep	3550B			178279	12/18/14 15:18	ALL	TAL SEA
Total/NA	Analysis	8082		1	179005	12/25/14 01:18	ALC	TAL SEA
Total/NA	Prep	3546			178532	12/18/14 15:37	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	178726	12/22/14 17:42	CGM	TAL SEA
Total/NA	Prep	3050B			179557	01/06/15 11:07	PAB	TAL SEA
Total/NA	Analysis	6020		10	179749	01/07/15 15:40	FCW	TAL SEA
Total/NA	Prep	7471A			179785	01/08/15 11:54	PAB	TAL SEA
Total/NA	Analysis	7471A		1	179819	01/08/15 13:34	FCW	TAL SEA
Total/NA	Analysis	2540B		1	178904	12/23/14 17:11	MMH	TAL SEA
Total/NA	Analysis	9060_PSEP		1	178703	12/20/14 14:14	JLS	TAL SEA
Total/NA	Analysis	PSEP Plumb 1981		1	178555	12/18/14 18:36	LKC	TAL SEA

Client Sample ID: DS-CB-H1-20141216-S

Lab Sample ID: 580-46739-4

Date Collected: 12/16/14 15:15

Matrix: Solid

Date Received: 12/17/14 14:41

Percent Solids: 30.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550B			178277	12/18/14 16:00	ALL	TAL SEA
Total/NA	Analysis	8270D		100	178585	12/20/14 00:22	ERB	TAL SEA
Total/NA	Prep	5035			178520	12/18/14 13:38	MMH	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	178559	12/19/14 15:37	MMH	TAL SEA
Total/NA	Prep	3550B			178279	12/18/14 15:18	ALL	TAL SEA
Total/NA	Analysis	8082		1	179005	12/25/14 01:34	ALC	TAL SEA
Total/NA	Prep	3546			178532	12/18/14 15:37	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	178726	12/22/14 18:00	CGM	TAL SEA
Total/NA	Prep	3050B			179557	01/06/15 11:07	PAB	TAL SEA
Total/NA	Analysis	6020		10	179749	01/07/15 15:44	FCW	TAL SEA
Total/NA	Prep	7471A			179785	01/08/15 11:54	PAB	TAL SEA
Total/NA	Analysis	7471A		1	179819	01/08/15 13:36	FCW	TAL SEA
Total/NA	Analysis	2540B		1	178904	12/23/14 17:11	MMH	TAL SEA
Total/NA	Analysis	9060_PSEP		1	178703	12/22/14 08:56	JLS	TAL SEA
Total/NA	Analysis	PSEP Plumb 1981		1	178555	12/18/14 18:36	LKC	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: Lower Duwamish Waterway

TestAmerica Job ID: 580-46739-1

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

Sample Summary

Client: Leidos, Inc.

TestAmerica Job ID: 580-46739-1

Project/Site: Lower Duwamish Waterway

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-46739-1	DS-CB-F3-20141216-W	Water	12/16/14 11:10	12/17/14 14:41
580-46739-2	DS-TD-O1-20141216-S	Solid	12/16/14 13:20	12/17/14 14:41
580-46739-3	DS-CB-I3-20141216-S	Solid	12/16/14 14:35	12/17/14 14:41
580-46739-4	DS-CB-H1-20141216-S	Solid	12/16/14 15:15	12/17/14 14:41

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

Tacoma, WA 98424
phone 253.922.2310 fax

Regulatory Program: DW NPDES RCRA Other:

Date: 12/16/14

TestAmerica Laboratories, Inc.

Client Contact
Leidos
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

Carrier: Courier

COC No: 1 of 2 COCS

Analysis Turnaround Time
 CALENDAR DAYS
 WORKING DAYS
TAT if different from Below 3 Weeks
 2 weeks
 1 week
 2 days
 1 day

Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.
12/16/14	1116	G	W	9

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 2640D)
		2	1	2				1	2	1

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

Sample Identification
DS-CB-F3-20141216-W

Sample Specific Notes:

Sample ID	Sample Date	Sample Time	Sample Type	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 2640D)
182	12/16/14	1116	G	W	9			2	1	2				1	2	1



580-46739 Chain of Custody

COOL TB Dig 1.4' unc 2.8' w/cs
Cooler Disc by Blue/white @ Lab 1350
Vet/Packs Packing Bubble

Preservation Used: 1=Ice, 2=HCl, 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.

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: [Signature] Corey Wilson
Relinquished by: [Signature] Leidos
Relinquished by: [Signature] Leidos
Relinquished by: [Signature] Leidos

Custody Seal No.:
Date/Time: 12/17/14 1155
Received by: [Signature]
Received in Laboratory by: [Signature]

Company: Leidos
Company: Leidos
Company: THS
Company: THS
Date/Time: 12/17/14 1155
Date/Time: 12/17/14 1155

TestAmerica Seattle
5755 8th Street East

Tacoma, WA 98424
phone 253.922.2310 fax

Regulatory Program: DW NPDES RCRA Other:

416-739

TestAmerica Laboratories, Inc.

Client Contact

Leidos
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

Site Contact: Melissa Ivancevich
Lab Contact: Kris Allen

Date: 12/16/14
Carrier: Courier

COC No.: 2 of 2 COCs

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 ID	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.
DS-TD-01-20141216-5	12/16/14	1920	C	Sed	6
DS-CB-ES-3-20141216-5	12/16/14	1435	DS	Sed	3
DS-CB-HI-20141216-5	12/16/14	1515	G	Sd	3

Sample Specific Notes:

Sample ID	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	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)
DS-TD-01-20141216-5	12/16/14	1920	C	Sed	6											
DS-CB-ES-3-20141216-5	12/16/14	1435	DS	Sed	3											
DS-CB-HI-20141216-5	12/16/14	1515	G	Sd	3											

Preservation Used: 1=Ice 2=HCl 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

Custody Seals Intact: Yes No

Relinquished by: *Grey Lubin* Company: *Leidos* Date/Time: *12/17/14 1155*

Relinquished by: _____ Company: _____ Date/Time: _____

Relinquished by: _____ Company: _____ Date/Time: _____

Cooler Temp. (°C): _____ Obs'd: _____ Cor'd: _____ Therm ID No.: _____

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 580-46739-1

Login Number: 46739

List Source: TestAmerica Seattle

List Number: 1

Creator: Vance, Diane R

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
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?	True	
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.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

February 17, 2015

Vista Project I.D.: 1400970

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 December 17, 2014. This sample set was analyzed on a standard turn-around time.

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.

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. 1400970

Case Narrative

Sample Condition on Receipt:

One effluent sample and three sediment samples 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

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1400970-01	DS-CB-F3-20141216-W	16-Dec-14 11:10	17-Dec-14 09:16	Amber Glass NM Bottle, 1L Amber Glass NM Bottle, 1L Amber Glass NM Bottle, 1L Amber Glass NM Bottle, 1L
1400970-02	DS-TD-01-20141216-S	16-Dec-14 13:20	17-Dec-14 09:16	Amber Glass, 250mL
1400970-03	DS-CB-I3-20141216-S	16-Dec-14 14:35	17-Dec-14 09:16	Amber Glass, 250mL
1400970-04	DS-CB-H1-20141216-S	16-Dec-14 15:15	17-Dec-14 09:16	Amber Glass, 250mL

ANALYTICAL RESULTS

Sample ID: Method Blank **EPA Method 1613B**

Matrix: Aqueous	QC Batch: B5A0110	Lab Sample: B5A0110-BLK1
Sample Size: 1.00 L	Date Extracted: 29-Jan-2015 8:12	Date Analyzed: 31-Jan-15 00:37 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	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	

Toxic Equivalent Quotient (TEQ) Data
 TEQMinWHO2005Dioxin 0.00

TOTALS		
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 Sample Size: 1.00 L		QC Batch: B5A0110 Date Extracted: 29-Jan-2015 8:12		Lab Sample: B5A0110-BS1 Date Analyzed: 30-Jan-15 23:00 Column: ZB-5MS Analyst: WJL			
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: DS-CB-F3-20141216-W **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Leidos	Matrix: Effluent	Lab Sample: 1400970-01 Date Received: 17-Dec-2014 9:16
Project:	Sample Size: 1.01 L	QC Batch: B5A0110 Date Extracted: 29-Jan-2015 8:12
Date Collected: 16-Dec-2014 11:10		Date Analyzed: 31-Jan-15 07:03 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	4.97	0.729		0.943		IS 13C-2,3,7,8-TCDD	80.7	25 - 164	
1,2,3,7,8-PeCDD	ND	24.8	0.878		4.51		13C-1,2,3,7,8-PeCDD	69.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	24.8	0.899		2.21		13C-1,2,3,4,7,8-HxCDD	74.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	24.8	0.957		1.93		13C-1,2,3,6,7,8-HxCDD	72.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	24.8	0.966		2.02		13C-1,2,3,7,8,9-HxCDD	75.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	26.0	24.8			2.98		13C-1,2,3,4,6,7,8-HpCDD	75.7	23 - 140	
OCDD	221	49.7			3.57		13C-OCDD	56.0	17 - 157	
2,3,7,8-TCDF	ND	4.97	0.640		0.984		13C-2,3,7,8-TCDF	83.6	24 - 169	
1,2,3,7,8-PeCDF	ND	24.8	0.640		2.50		13C-1,2,3,7,8-PeCDF	78.1	24 - 185	
2,3,4,7,8-PeCDF	ND	24.8	0.647		1.73		13C-2,3,4,7,8-PeCDF	76.2	21 - 178	
1,2,3,4,7,8-HxCDF	ND	24.8	0.478		1.36		13C-1,2,3,4,7,8-HxCDF	71.5	26 - 152	
1,2,3,6,7,8-HxCDF	ND	24.8	0.523		1.56		13C-1,2,3,6,7,8-HxCDF	71.3	26 - 123	
2,3,4,6,7,8-HxCDF	ND	24.8	0.525		2.05		13C-2,3,4,6,7,8-HxCDF	69.8	28 - 136	
1,2,3,7,8,9-HxCDF	ND	24.8	0.721		1.34		13C-1,2,3,7,8,9-HxCDF	72.5	29 - 147	
1,2,3,4,6,7,8-HpCDF	6.52	24.8			1.46	J	13C-1,2,3,4,6,7,8-HpCDF	70.8	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	24.8	0.532		1.75		13C-1,2,3,4,7,8,9-HpCDF	72.3	26 - 138	
OCDF	18.7	49.7			2.98	J	13C-OCDF	56.8	17 - 157	
							CRS 37Cl-2,3,7,8-TCDD	94.7	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin	0.397
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TOTALS			
Total TCDD	ND	0.730	
Total PeCDD	ND	0.878	
Total HxCDD	1.06		
Total HpCDD	45.9		
Total TCDF	ND	0.640	
Total PeCDF	ND	0.683	
Total HxCDF	3.59	4.34	
Total HpCDF	13.9		

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 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		
							Toxic Equivalent Quotient (TEQ) Data				
							TEQMinWHO2005Dioxin		0.00		
TOTALS											
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: DS-TD-01-20141216-S **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Leidos	Matrix: Sediment	Lab Sample: 1400970-02 Date Received: 17-Dec-2014 9:16
Project:	Sample Size: 16.2 g	QC Batch: B5A0101 Date Extracted: 27-Jan-2015 11:06
Date Collected: 16-Dec-2014 13:20	% Solids: 62.8	Date Analyzed : 04-Feb-15 13:54 Column: ZB-5MS Analyst: WJL 05-Feb-15 19:39 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	4.06	0.492			0.0778		IS 13C-2,3,7,8-TCDD	85.7	25 - 164	
1,2,3,7,8-PeCDD	15.2	2.46			0.230		13C-1,2,3,7,8-PeCDD	80.8	25 - 181	
1,2,3,4,7,8-HxCDD	20.6	2.46			0.231		13C-1,2,3,4,7,8-HxCDD	77.8	32 - 141	
1,2,3,6,7,8-HxCDD	38.6	2.46			0.126		13C-1,2,3,6,7,8-HxCDD	78.9	28 - 130	
1,2,3,7,8,9-HxCDD	34.1	2.46			0.173		13C-1,2,3,7,8,9-HxCDD	83.1	32 - 141	
1,2,3,4,6,7,8-HpCDD	766	2.46			0.263		13C-1,2,3,4,6,7,8-HpCDD	91.9	23 - 140	
OCDD	8950	4.92			0.167	E	13C-OCDD	73.9	17 - 157	
2,3,7,8-TCDF	5.20	0.492			0.0289		13C-2,3,7,8-TCDF	85.3	24 - 169	
1,2,3,7,8-PeCDF	3.23	2.46			0.254		13C-1,2,3,7,8-PeCDF	93.0	24 - 185	
2,3,4,7,8-PeCDF	5.61	2.46			0.211		13C-2,3,4,7,8-PeCDF	87.9	21 - 178	
1,2,3,4,7,8-HxCDF	7.83	2.46			0.154		13C-1,2,3,4,7,8-HxCDF	81.0	26 - 152	
1,2,3,6,7,8-HxCDF	8.63	2.46			0.195		13C-1,2,3,6,7,8-HxCDF	81.6	26 - 123	
2,3,4,6,7,8-HxCDF	10.8	2.46			0.0805		13C-2,3,4,6,7,8-HxCDF	77.5	28 - 136	
1,2,3,7,8,9-HxCDF	2.31	2.46			0.195	J	13C-1,2,3,7,8,9-HxCDF	81.6	29 - 147	
1,2,3,4,6,7,8-HpCDF	124	2.46			0.230		13C-1,2,3,4,6,7,8-HpCDF	84.5	28 - 143	
1,2,3,4,7,8,9-HpCDF	5.32	2.46			0.211		13C-1,2,3,4,7,8,9-HpCDF	88.2	26 - 138	
OCDF	199	4.92			0.470		13C-OCDF	71.4	17 - 157	
							CRS 37Cl-2,3,7,8-TCDD	90.8	35 - 197	

Toxic Equivalent Quotient (TEQ) Data

TEQMinWHO2005Dioxin 45.7

TOTALS		
Total TCDD	33.1	33.5
Total PeCDD	108	
Total HxCDD	405	
Total HpCDD	1600	
Total TCDF	88.0	89.4
Total PeCDF	96.1	97.5
Total HxCDF	183	186
Total HpCDF	273	

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: DS-CB-I3-20141216-S **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Leidos	Matrix: Sediment	Lab Sample: 1400970-03 Date Received: 17-Dec-2014 9:16
Project:	Sample Size: 19.1 g	QC Batch: B5A0101 Date Extracted: 27-Jan-2015 11:06
Date Collected: 16-Dec-2014 14:35	% Solids: 53.1	Date Analyzed: 04-Feb-15 14:42 Column: ZB-5MS Analyst: WJL 05-Feb-15 20:12 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	0.997	0.494			0.0778		IS 13C-2,3,7,8-TCDD	81.8	25 - 164	
1,2,3,7,8-PeCDD	3.72	2.47			0.230		13C-1,2,3,7,8-PeCDD	77.4	25 - 181	
1,2,3,4,7,8-HxCDD	5.54	2.47			0.231		13C-1,2,3,4,7,8-HxCDD	71.1	32 - 141	
1,2,3,6,7,8-HxCDD	9.36	2.47			0.126		13C-1,2,3,6,7,8-HxCDD	72.6	28 - 130	
1,2,3,7,8,9-HxCDD	8.60	2.47			0.173		13C-1,2,3,7,8,9-HxCDD	73.0	32 - 141	
1,2,3,4,6,7,8-HpCDD	157	2.47			0.263		13C-1,2,3,4,6,7,8-HpCDD	74.7	23 - 140	
OCDD	1100	4.94			0.167		13C-OCDD	55.0	17 - 157	
2,3,7,8-TCDF	3.44	0.494			0.0289		13C-2,3,7,8-TCDF	82.4	24 - 169	
1,2,3,7,8-PeCDF	1.53	2.47			0.254	J	13C-1,2,3,7,8-PeCDF	88.5	24 - 185	
2,3,4,7,8-PeCDF	3.45	2.47			0.211		13C-2,3,4,7,8-PeCDF	83.9	21 - 178	
1,2,3,4,7,8-HxCDF	3.44	2.47			0.154		13C-1,2,3,4,7,8-HxCDF	73.9	26 - 152	
1,2,3,6,7,8-HxCDF	3.90	2.47			0.195		13C-1,2,3,6,7,8-HxCDF	73.8	26 - 123	
2,3,4,6,7,8-HxCDF	6.18	2.47			0.0805		13C-2,3,4,6,7,8-HxCDF	64.3	28 - 136	
1,2,3,7,8,9-HxCDF	1.06	2.47			0.195	J	13C-1,2,3,7,8,9-HxCDF	71.4	29 - 147	
1,2,3,4,6,7,8-HpCDF	32.7	2.47			0.230		13C-1,2,3,4,6,7,8-HpCDF	75.3	28 - 143	
1,2,3,4,7,8,9-HpCDF	1.95	2.47			0.211	J	13C-1,2,3,4,7,8,9-HpCDF	73.8	26 - 138	
OCDF	47.8	4.94			0.470		13C-OCDF	56.0	17 - 157	
							CRS 37Cl-2,3,7,8-TCDD	84.1	35 - 197	

Toxic Equivalent Quotient (TEQ) Data	
TEQMinWHO2005Dioxin	12.2

TOTALS			
Total TCDD	7.90		10.1
Total PeCDD	29.6		
Total HxCDD	103		
Total HpCDD	336		
Total TCDF	56.3		58.6
Total PeCDF	105		
Total HxCDF	98.0		98.5
Total HpCDF	73.4		

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: DS-CB-H1-20141216-S **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Leidos	Matrix: Sediment	Lab Sample: 1400970-04 Date Received: 17-Dec-2014 9:16
Project:	Sample Size: 33.4 g	QC Batch: B5A0101 Date Extracted: 27-Jan-2015 11:06
Date Collected: 16-Dec-2014 15:15	% Solids: 30.0	Date Analyzed : 04-Feb-15 15:30 Column: ZB-5MS Analyst: WJL 05-Feb-15 20:44 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	3.72	0.499			0.0778		IS 13C-2,3,7,8-TCDD	53.1	25 - 164	
1,2,3,7,8-PeCDD	15.3	2.50			0.230		13C-1,2,3,7,8-PeCDD	46.1	25 - 181	
1,2,3,4,7,8-HxCDD	23.1	2.50			0.231		13C-1,2,3,4,7,8-HxCDD	38.6	32 - 141	
1,2,3,6,7,8-HxCDD	45.7	2.50			0.126		13C-1,2,3,6,7,8-HxCDD	37.6	28 - 130	
1,2,3,7,8,9-HxCDD	37.0	2.50			0.173		13C-1,2,3,7,8,9-HxCDD	36.7	32 - 141	
1,2,3,4,6,7,8-HpCDD	925	2.50			0.263		13C-1,2,3,4,6,7,8-HpCDD	34.5	23 - 140	
OCDD	10300	4.99			0.167	E	13C-OCDD	23.5	17 - 157	
2,3,7,8-TCDF	6.91	0.499			0.0289		13C-2,3,7,8-TCDF	52.1	24 - 169	
1,2,3,7,8-PeCDF	4.66	2.50			0.254		13C-1,2,3,7,8-PeCDF	53.2	24 - 185	
2,3,4,7,8-PeCDF	9.89	2.50			0.211		13C-2,3,4,7,8-PeCDF	44.7	21 - 178	
1,2,3,4,7,8-HxCDF	14.4	2.50			0.154		13C-1,2,3,4,7,8-HxCDF	39.4	26 - 152	
1,2,3,6,7,8-HxCDF	16.0	2.50			0.195		13C-1,2,3,6,7,8-HxCDF	38.4	26 - 123	
2,3,4,6,7,8-HxCDF	26.5	2.50			0.0805		13C-2,3,4,6,7,8-HxCDF	30.9	28 - 136	
1,2,3,7,8,9-HxCDF	4.94	2.50			0.195		13C-1,2,3,7,8,9-HxCDF	35.9	29 - 147	
1,2,3,4,6,7,8-HpCDF	151	2.50			0.230		13C-1,2,3,4,6,7,8-HpCDF	35.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	9.26	2.50			0.211		13C-1,2,3,4,7,8,9-HpCDF	33.3	26 - 138	
OCDF	246	4.99			0.470		13C-OCDF	22.9	17 - 157	
							CRS 37Cl-2,3,7,8-TCDD	59.4	35 - 197	

Toxic Equivalent Quotient (TEQ) Data											
								TEQMinWHO2005Dioxin	53.7		

TOTALS										
Total TCDD	38.9			39.3						
Total PeCDD	108									
Total HxCDD	416									
Total HpCDD	1860									
Total TCDF	242			244						
Total PeCDF	507			509						
Total HxCDF	434			438						
Total HpCDF	364									

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 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 LQC Batch: B5A0099
Date Extracted: 26-Jan-2015 10:29Lab 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: DS-CB-F3-20141216-W

EPA Method 1668C

Client Data				Sample Data			Laboratory Data					
Name:	Leidos			Matrix:	Effluent		Lab Sample:	1400970-01		Date Received: 17-Dec-2014 9:16		
Project:				Sample Size:	1.03 L		QC Batch:	B5A0099		Date Extracted: 26-Jan-2015 10:29		
Date Collected:	16-Dec-2014 11:10						Date Analyzed : 27-Jan-15 14:57 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	4.85	3.62		1.21		PCB-44	6.05	4.85			2.48	
PCB-2	ND	4.85	3.11		1.75		PCB-45	ND	4.85	3.15		1.96	
PCB-3	ND	4.85	3.10		1.49		PCB-46	ND	4.85	2.43		2.49	
PCB-4/10	ND	9.70	4.21		5.64		PCB-47	ND	4.85	2.57		4.42	
PCB-5/8	ND	9.70	3.46		3.59		PCB-48/75	ND	9.70	2.32		2.09	
PCB-6	ND	4.85	3.56		3.10		PCB-50	ND	4.85	3.20		1.40	
PCB-7/9	ND	9.70	3.51		6.22		PCB-51	ND	4.85	2.82		1.42	
PCB-11	ND	4.85	3.19		3.86		PCB-52/69	10.4	9.70			3.64	
PCB-12/13	ND	9.70	3.23		5.01		PCB-53	ND	4.85	2.88		1.12	
PCB-14	ND	4.85	2.79		3.98		PCB-54	ND	4.85	2.43		1.51	
PCB-15	ND	4.85	2.84		2.53		PCB-55	ND	4.85	1.90		1.19	
PCB-16/32	ND	9.70	2.06		2.87		PCB-56/60	ND	9.70	2.12		2.19	
PCB-17	ND	4.85	2.25		1.37		PCB-57	ND	4.85	2.10		0.857	
PCB-18	ND	4.85	2.43		2.57		PCB-58	ND	4.85	2.07		1.81	
PCB-19	ND	4.85	2.89		2.38		PCB-61/70	2.89	9.70			2.40	J
PCB-20/21/33	ND	14.5	2.81		10.3		PCB-62	ND	4.85	2.26		1.46	
PCB-22	ND	4.85	2.79		3.17		PCB-63	ND	4.85	2.02		0.696	
PCB-23	ND	4.85	2.68		1.35		PCB-65	ND	4.85	2.34		0.953	
PCB-24/27	ND	9.70	1.66		3.16		PCB-66/76	4.27	9.70			2.82	J
PCB-25	ND	4.85	2.96		3.34		PCB-67	ND	4.85	2.16		1.22	
PCB-26	ND	4.85	2.62		2.19		PCB-68	ND	4.85	1.91		1.24	
PCB-28	ND	4.85	2.62		2.90		PCB-73	ND	4.85	2.32		1.56	
PCB-29	ND	4.85	2.68		1.60		PCB-74	2.25	4.85			1.53	J
PCB-30	ND	4.85	1.83		2.09		PCB-77	ND	4.85	1.92		1.34	
PCB-31	ND	4.85	2.59		4.29		PCB-78	ND	4.85	1.94		0.990	
PCB-34	ND	4.85	2.50		2.34		PCB-79	ND	4.85	2.02		1.60	
PCB-35	ND	4.85	2.53		1.65		PCB-80	ND	4.85	1.77		1.98	
PCB-36	ND	4.85	2.44		2.69		PCB-81	ND	4.85	1.77		2.34	
PCB-37	ND	4.85	2.35		1.92		PCB-82	ND	4.85	4.28		1.69	
PCB-38	ND	4.85	2.55		1.56		PCB-83	ND	4.85	2.66		1.32	
PCB-39	ND	4.85	2.52		2.60		PCB-84/92	9.18	9.70			3.38	J
PCB-40	ND	4.85	3.59		3.08		PCB-85/116	ND	9.70		3.47	2.83	
PCB-41/64/71/72	5.02	19.4			5.57	J	PCB-86	ND	4.85	4.28		2.34	
PCB-42/59	ND	9.70	2.49		2.84		PCB-87/117/125	4.11	14.5			3.79	J
PCB-43/49	ND	9.70		2.93	3.38		PCB-88/91	ND	4.85		5.69	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: DS-CB-F3-20141216-W

EPA Method 1668C

Client Data				Sample Data			Laboratory Data						
Name:	Leidos			Matrix:	Effluent		Lab Sample:	1400970-01		Date Received:	17-Dec-2014 9:16		
Project:				Sample Size:	1.03 L		QC Batch:	B5A0099		Date Extracted:	26-Jan-2015 10:29		
Date Collected:	16-Dec-2014 11:10						Date Analyzed :	27-Jan-15 14:57		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	ND	4.85	3.75		1.84		PCB-136	ND	4.85	3.66		2.89	
PCB-90/101	15.5	9.70			1.92		PCB-137	ND	4.85	2.91		2.08	
PCB-93	ND	4.85	3.82		1.47		PCB-138/163/164	21.5	14.5			2.68	
PCB-94	ND	4.85	3.59		1.91		PCB-139/149	16.3	9.70			7.87	
PCB-95/98/102	21.1	14.5			6.58		PCB-140	ND	4.85	5.38		3.52	
PCB-96	ND	4.85	2.74		2.16		PCB-141	3.73	4.85			1.15	J
PCB-97	ND	4.85	3.41		1.24		PCB-144	ND	4.85	4.89		3.22	
PCB-99	ND	4.85		4.68	1.94		PCB-145	ND	4.85	3.82		1.73	
PCB-100	ND	4.85	3.11		2.03		PCB-146/165	ND	9.70		3.13	1.91	
PCB-103	ND	4.85	3.09		2.28		PCB-147	ND	4.85	5.37		3.62	
PCB-104	ND	4.85	2.37		0.931		PCB-148	ND	4.85	5.12		1.68	
PCB-105	4.49	4.85			2.21	J	PCB-150	ND	4.85	3.71		1.14	
PCB-106/118	9.85	9.70			2.44		PCB-151	ND	4.85	5.11		3.59	
PCB-107/109	ND	9.70	2.38		1.98		PCB-152	ND	4.85	3.58		1.82	
PCB-108/112	ND	9.70	3.15		1.86		PCB-153	13.4	4.85			1.83	
PCB-110	19.8	4.85			1.94		PCB-154	ND	4.85	4.70		2.78	
PCB-111/115	ND	9.70	2.38		0.768		PCB-155	ND	4.85	3.59		1.45	
PCB-113	ND	4.85	2.78		1.31		PCB-156	ND	4.85	2.15		1.74	
PCB-114	ND	4.85	2.44		1.81		PCB-157	ND	4.85	2.20		1.17	
PCB-119	ND	4.85	2.35		0.949		PCB-158/160	ND	9.70	2.23		1.99	
PCB-120	ND	4.85	2.23		1.01		PCB-159	ND	4.85	2.18		1.20	
PCB-121	ND	4.85	2.30		1.94		PCB-166	ND	4.85	2.33		0.920	
PCB-122	ND	4.85	2.90		1.84		PCB-167	ND	4.85	2.24		1.65	
PCB-123	ND	4.85	2.54		1.35		PCB-168	ND	4.85	2.23		0.933	
PCB-124	ND	4.85	2.44		1.79		PCB-169	ND	4.85	2.45		1.12	
PCB-126	ND	4.85	2.59		2.05		PCB-170	4.94	4.85			1.38	
PCB-127	ND	4.85	2.49		0.808		PCB-171	ND	4.85	1.64		1.61	
PCB-128/162	5.01	9.70			1.68	J	PCB-172	ND	4.85	1.77		1.46	
PCB-129	ND	4.85	3.33		1.11		PCB-173	ND	4.85	2.17		1.49	
PCB-130	ND	4.85	3.73		2.21		PCB-174	6.11	4.85			1.42	
PCB-131	ND	4.85	3.58		1.46		PCB-175	ND	4.85	1.89		3.15	
PCB-132/161	ND	9.70		6.30	2.34		PCB-176	ND	4.85	1.36		2.17	
PCB-133/142	ND	9.70	3.33		2.19		PCB-177	5.10	4.85			1.34	
PCB-134/143	ND	9.70	3.25		2.40		PCB-178	ND	4.85	1.84		2.25	
PCB-135	ND	4.85	5.24		2.90		PCB-179	ND	4.85	1.42		1.57	

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: DS-CB-F3-20141216-W

EPA Method 1668C

Client Data				Sample Data			Laboratory Data				
Name:	Leidos			Matrix:	Effluent		Lab Sample:	1400970-01	Date Received:	17-Dec-2014 9:16	
Project:				Sample Size:	1.03 L		QC Batch:	B5A0099	Date Extracted:	26-Jan-2015 10:29	
Date Collected:	16-Dec-2014 11:10						Date Analyzed :	27-Jan-15 14:57		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	14.2	4.85			0.610		Total octaCB	ND	4.85		7.12		
PCB-181	ND	4.85	1.77		1.01		Total nonaCB	ND	4.85	2.60			
PCB-182/187	8.47	9.70			6.20	J	DecaCB	ND	4.85	2.39			
PCB-183	3.67	4.85			3.29	J	Total PCB	217	4.85				
PCB-184	ND	4.85	1.48		1.25								
PCB-185	ND	4.85	1.70		1.47								
PCB-186	ND	4.85	1.36		2.43								
PCB-188	ND	4.85	1.30		1.08								
PCB-189	ND	4.85	1.11		1.49								
PCB-190	ND	4.85	1.14		1.70								
PCB-191	ND	4.85	1.29		1.96								
PCB-192	ND	4.85	1.38		1.69								
PCB-193	ND	4.85	1.29		1.46								
PCB-194	ND	4.85		2.65	1.71								
PCB-195	ND	4.85	2.56		1.47								
PCB-196/203	ND	9.70	3.63		6.35								
PCB-197	ND	4.85	2.58		1.80								
PCB-198	ND	4.85	3.99		3.78								
PCB-199	ND	4.85		4.47	4.05								
PCB-200	ND	4.85	2.91		1.75								
PCB-201	ND	4.85	2.75		1.02								
PCB-202	ND	4.85	2.95		1.55								
PCB-204	ND	4.85	2.80		1.48								
PCB-205	ND	4.85	1.81		1.53								
PCB-206	ND	4.85	2.60		1.32								
PCB-207	ND	4.85	1.40		1.51								
PCB-208	ND	4.85	1.42		1.34								
PCB-209	ND	4.85	2.39		1.86								
Total monoCB	ND	4.85	3.62										
Total diCB	ND	4.85	4.21										
Total triCB	ND	4.85	2.96										
Total tetraCB	30.9	4.85		33.8									
Total pentaCB	84.1	4.85		97.9									
Total hexaCB	59.9	4.85		69.3									
Total heptaCB	42.5	4.85											

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: DS-CB-F3-20141216-W

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	Leidos	Matrix:	Effluent	Lab Sample:	1400970-01
Project:		Sample Size:	1.03 L	Date Received:	17-Dec-2014 9:16
Date Collected:	16-Dec-2014 11:10			QC Batch:	B5A0099
				Date Analyzed:	27-Jan-15 14:57
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	62.5	5 -145		13C-PCB-170	94.0	10 -145	
13C-PCB-3	73.6	5 -145		13C-PCB-180	88.3	10 -145	
13C-PCB-4	69.9	5 -145		13C-PCB-188	78.3	10 -145	
13C-PCB-11	80.1	5 -145		13C-PCB-189	95.0	10 -145	
13C-PCB-9	72.0	5 -145		13C-PCB-194	94.6	10 -145	
13C-PCB-19	84.6	5 -145		13C-PCB-202	82.9	10 -145	
13C-PCB-28	81.6	5 -145		13C-PCB-206	103	10 -145	
13C-PCB-32	91.9	5 -145		13C-PCB-208	91.0	10 -145	
13C-PCB-37	95.0	5 -145		13C-PCB-209	109	10 -145	
13C-PCB-47	82.8	5 -145		CRS 13C-PCB-79	92.4	10 -145	
13C-PCB-52	84.1	5 -145		13C-PCB-178	91.2	10 -145	
13C-PCB-54	74.8	5 -145					
13C-PCB-70	85.9	5 -145					
13C-PCB-77	88.0	10 -145					
13C-PCB-80	86.4	10 -145					
13C-PCB-81	88.4	10 -145					
13C-PCB-95	89.2	10 -145					
13C-PCB-97	94.7	10 -145					
13C-PCB-101	90.4	10 -145					
13C-PCB-104	85.5	10 -145					
13C-PCB-105	85.1	10 -145					
13C-PCB-114	81.8	10 -145					
13C-PCB-118	94.3	10 -145					
13C-PCB-123	96.3	10 -145					
13C-PCB-126	88.8	10 -145					
13C-PCB-127	86.8	10 -145					
13C-PCB-138	87.2	10 -145					
13C-PCB-141	85.3	10 -145					
13C-PCB-153	84.1	10 -145					
13C-PCB-155	86.7	10 -145					
13C-PCB-156	88.9	10 -145					
13C-PCB-157	87.4	10 -145					
13C-PCB-159	86.4	10 -145					
13C-PCB-167	88.3	10 -145					
13C-PCB-169	87.6	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

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: DS-TD-01-20141216-S

EPA Method 1668C

Client Data				Sample Data			Laboratory Data						
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1400970-02		Date Received:	17-Dec-2014 9:16		
Project:				Sample Size:	3.23 g		QC Batch:	B5A0115		Date Extracted:	29-Jan-2015 10:19		
Date Collected:	16-Dec-2014 13:20			% Solids:	62.8		Date Analyzed:	05-Feb-15 13:16		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	123	63.1		0.320	D	PCB-44	821	123			0.745	D
PCB-2	ND	123	62.5		0.240	D	PCB-45	119	123			0.402	J, D
PCB-3	ND	123	51.9		0.323	D	PCB-46	63.1	123			0.537	J, D
PCB-4/10	ND	247	263		1.14	D	PCB-47	173	123			2.19	D
PCB-5/8	ND	247		255	1.76	D	PCB-48/75	104	247			0.983	J, D
PCB-6	ND	123	201		1.00	D	PCB-50	ND	123	52.1		0.603	D
PCB-7/9	ND	247	217		1.34	D	PCB-51	ND	123	58.6		0.789	D
PCB-11	656	123			3.48	D	PCB-52/69	1090	247			0.722	D
PCB-12/13	ND	247	234		1.37	D	PCB-53	ND	123		80.7	0.331	D
PCB-14	ND	123	251		0.337	D	PCB-54	ND	123	41.6		0.275	D
PCB-15	502	123			0.634	D	PCB-55	ND	123	42.9		0.416	D
PCB-16/32	196	247			0.430	J, D	PCB-56/60	707	247			0.825	D
PCB-17	103	123			0.658	J, D	PCB-57	ND	123	46.1		0.354	D
PCB-18	303	123			0.696	D	PCB-58	ND	123	48.7		0.589	D
PCB-19	ND	123	40.0		0.612	D	PCB-61/70	1410	247			1.20	D
PCB-20/21/33	338	370			2.47	J, B, D	PCB-62	ND	123	44.9		0.597	D
PCB-22	232	123			0.964	D	PCB-63	ND	123	47.5		0.524	D
PCB-23	ND	123	33.9		0.543	D	PCB-65	ND	123	44.8		0.842	D
PCB-24/27	ND	247	22.7		0.742	D	PCB-66/76	919	247			1.31	D
PCB-25	27.6	123			0.768	J, D	PCB-67	ND	123	40.8		0.486	D
PCB-26	92.1	123			0.766	J, D	PCB-68	ND	123	40.7		0.658	D
PCB-28	427	123			1.12	D	PCB-73	ND	123	42.9		0.454	D
PCB-29	ND	123	40.2		0.949	D	PCB-74	385	123			0.781	D
PCB-30	ND	123	24.4		0.355	D	PCB-77	810	123			0.748	D
PCB-31	404	123			0.809	D	PCB-78	ND	123	39.9		0.385	D
PCB-34	ND	123	38.2		1.57	D	PCB-79	82.2	123			0.633	J, D
PCB-35	61.8	123			0.565	J, D	PCB-80	ND	123	37.4		0.336	D
PCB-36	ND	123	43.7		0.406	D	PCB-81	ND	123		35.0	0.674	D
PCB-37	767	123			0.389	D	PCB-82	647	123			0.981	D
PCB-38	ND	123	41.6		0.528	D	PCB-83	ND	123	46.9		0.440	D
PCB-39	ND	123	44.7		0.461	D	PCB-84/92	1680	247			1.01	D
PCB-40	150	123			0.927	D	PCB-85/116	689	247			1.64	D
PCB-41/64/71/72	688	493			1.70	D	PCB-86	ND	123	84.6		1.79	D
PCB-42/59	247	247			0.899	D	PCB-87/117/125	1750	370			0.880	D
PCB-43/49	525	247			0.879	D	PCB-88/91	502	247			1.25	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: DS-TD-01-20141216-S

EPA Method 1668C

Client Data				Sample Data			Laboratory Data						
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1400970-02		Date Received:	17-Dec-2014 9:16		
Project:				Sample Size:	3.23 g		QC Batch:	B5A0115		Date Extracted:	29-Jan-2015 10:19		
Date Collected:	16-Dec-2014 13:20			% Solids:	62.8		Date Analyzed:	05-Feb-15 13:16		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	123	56.6		1.22	D	PCB-136	495	123			0.776	D
PCB-90/101	4850	247			1.19	D	PCB-137	428	123			0.541	D
PCB-93	ND	123	82.6		2.53	D	PCB-138/163/164	6510	370			0.809	D
PCB-94	ND	123	65.8		0.874	D	PCB-139/149	4540	247			1.49	D
PCB-95/98/102	2400	370			1.38	D	PCB-140	151	123			1.20	D
PCB-96	ND	123	41.7		0.588	D	PCB-141	1160	123			0.678	D
PCB-97	1450	123			0.675	D	PCB-144	ND	123		217	1.38	D
PCB-99	1500	123			0.474	D	PCB-145	ND	123	52.9		1.05	D
PCB-100	ND	123	50.6		0.511	D	PCB-146/165	836	247			0.792	D
PCB-103	ND	123	49.6		0.428	D	PCB-147	ND	123		142	5.26	D
PCB-104	ND	123	40.2		0.876	D	PCB-148	ND	123	85.5		1.45	D
PCB-105	2230	123			0.462	D	PCB-150	ND	123	63.7		0.801	D
PCB-106/118	5340	247			0.728	D	PCB-151	959	123			1.16	D
PCB-107/109	379	247			0.631	D	PCB-152	ND	123	57.0		0.744	D
PCB-108/112	233	247			0.844	J, D	PCB-153	5180	123			0.484	D
PCB-110	5920	123			0.555	D	PCB-154	166	123			0.837	D
PCB-111/115	99.1	247			1.24	J, D	PCB-155	ND	123	57.1		0.767	D
PCB-113	ND	123	45.3		0.495	D	PCB-156	749	123			0.534	D
PCB-114	108	123			0.418	J, D	PCB-157	171	123			0.485	D
PCB-119	ND	123		52.9	0.383	D	PCB-158/160	781	247			0.915	D
PCB-120	ND	123	42.5		0.622	D	PCB-159	ND	123	18.8		0.578	D
PCB-121	ND	123	43.1		0.978	D	PCB-166	ND	123	17.7		0.425	D
PCB-122	ND	123	85.1		0.619	D	PCB-167	339	123			0.653	D
PCB-123	ND	123	51.5		0.494	D	PCB-168	ND	123	15.6		0.502	D
PCB-124	204	123			0.813	D	PCB-169	ND	123	16.9		0.767	D
PCB-126	214	123			0.543	D	PCB-170	1370	123			0.758	D
PCB-127	ND	123	70.0		0.326	D	PCB-171	275	123			0.372	D
PCB-128/162	1250	247			1.08	D	PCB-172	243	123			0.857	D
PCB-129	404	123			0.567	D	PCB-173	ND	123	66.6		0.507	D
PCB-130	445	123			0.798	D	PCB-174	1170	123			0.797	D
PCB-131	ND	123	24.9		0.731	D	PCB-175	ND	123	56.3		0.679	D
PCB-132/161	1670	247			1.05	D	PCB-176	135	123			0.729	D
PCB-133/142	212	247			1.04	J, D	PCB-177	792	123			0.404	D
PCB-134/143	312	247			1.05	D	PCB-178	307	123			0.610	D
PCB-135	ND	123		636	1.47	D	PCB-179	456	123			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: DS-TD-01-20141216-S

EPA Method 1668C

Client Data				Sample Data			Laboratory Data						
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1400970-02		Date Received:		17-Dec-2014 9:16	
Project:				Sample Size:	3.23 g		QC Batch:	B5A0115		Date Extracted:		29-Jan-2015 10:19	
Date Collected:	16-Dec-2014 13:20			% Solids:	62.8		Date Analyzed :	05-Feb-15 13:16		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	3160	123			0.420	D	Total octaCB	3020	123		3060		
PCB-181	ND	123	53.5		1.26	D	Total nonaCB	816	123				
PCB-182/187	1570	247			1.33	D	DecaCB	433	123				
PCB-183	621	123			0.638	D	Total PCB	84400	123				B
PCB-184	ND	123	35.0		0.597	D							
PCB-185	103	123			0.557	J, D							
PCB-186	ND	123	39.2		0.421	D							
PCB-188	ND	123	36.1		0.759	D							
PCB-189	ND	123		72.7	0.483	D							
PCB-190	292	123			0.686	D							
PCB-191	86.9	123			0.447	J, D							
PCB-192	ND	123	42.4		0.528	D							
PCB-193	156	123			0.836	D							
PCB-194	763	123			0.645	D							
PCB-195	242	123			0.722	D							
PCB-196/203	856	247			0.983	D							
PCB-197	ND	123	50.9		0.794	D							
PCB-198	ND	123	72.4		0.792	D							
PCB-199	751	123			0.615	D							
PCB-200	98.5	123			0.795	J, D							
PCB-201	120	123			0.317	J, D							
PCB-202	193	123			0.759	D							
PCB-204	ND	123	48.0		0.543	D							
PCB-205	ND	123		36.9	0.471	D							
PCB-206	570	123			0.852	D							
PCB-207	63.6	123			0.402	J, D							
PCB-208	182	123			0.441	D							
PCB-209	433	123			1.10	D							
Total monoCB	ND	123	63.1										
Total diCB	1160	123		1410									
Total triCB	2950	123				B							
Total tetraCB	8290	123		8410									
Total pentaCB	30200	123											
Total hexaCB	26800	123		27800									
Total heptaCB	10700	123		10800									

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: DS-TD-01-20141216-S

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	Leidos	Matrix:	Sediment	Lab Sample:	1400970-02
Project:		Sample Size:	3.23 g	Date Received:	17-Dec-2014 9:16
Date Collected:	16-Dec-2014 13:20	% Solids:	62.8	QC Batch:	B5A0115
				Date Analyzed:	05-Feb-15 13:16
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	82.9	5 -145	D	13C-PCB-170	74.4	10 -145	D
13C-PCB-3	84.7	5 -145	D	13C-PCB-180	75.1	10 -145	D
13C-PCB-4	80.0	5 -145	D	13C-PCB-188	76.4	10 -145	D
13C-PCB-11	85.0	5 -145	D	13C-PCB-189	71.7	10 -145	D
13C-PCB-9	84.8	5 -145	D	13C-PCB-194	85.6	10 -145	D
13C-PCB-19	75.1	5 -145	D	13C-PCB-202	70.3	10 -145	D
13C-PCB-28	73.1	5 -145	D	13C-PCB-206	83.9	10 -145	D
13C-PCB-32	82.3	5 -145	D	13C-PCB-208	81.0	10 -145	D
13C-PCB-37	84.3	5 -145	D	13C-PCB-209	87.4	10 -145	D
13C-PCB-47	84.3	5 -145	D	CRS 13C-PCB-79	91.8	10 -145	D
13C-PCB-52	87.3	5 -145	D	13C-PCB-178	83.7	10 -145	D
13C-PCB-54	81.1	5 -145	D				
13C-PCB-70	87.8	5 -145	D				
13C-PCB-77	86.6	10 -145	D				
13C-PCB-80	88.9	10 -145	D				
13C-PCB-81	85.3	10 -145	D				
13C-PCB-95	91.2	10 -145	D				
13C-PCB-97	88.2	10 -145	D				
13C-PCB-101	89.6	10 -145	D				
13C-PCB-104	92.0	10 -145	D				
13C-PCB-105	82.0	10 -145	D				
13C-PCB-114	85.0	10 -145	D				
13C-PCB-118	85.9	10 -145	D				
13C-PCB-123	89.5	10 -145	D				
13C-PCB-126	78.7	10 -145	D				
13C-PCB-127	81.8	10 -145	D				
13C-PCB-138	84.0	10 -145	D				
13C-PCB-141	84.5	10 -145	D				
13C-PCB-153	81.5	10 -145	D				
13C-PCB-155	67.1	10 -145	D				
13C-PCB-156	81.9	10 -145	D				
13C-PCB-157	85.1	10 -145	D				
13C-PCB-159	81.3	10 -145	D				
13C-PCB-167	83.6	10 -145	D				
13C-PCB-169	82.6	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: DS-CB-I3-20141216-S

EPA Method 1668C

Client Data				Sample Data			Laboratory Data						
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1400970-03		Date Received:	17-Dec-2014 9:16		
Project:				Sample Size:	3.84 g		QC Batch:	B5A0115		Date Extracted:	29-Jan-2015 10:19		
Date Collected:	16-Dec-2014 14:35			% Solids:	53.1		Date Analyzed :	05-Feb-15 14:20		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	123	61.7		0.320	D	PCB-44	416	123			0.745	D
PCB-2	ND	123	61.4		0.240	D	PCB-45	57.9	123			0.402	J, D
PCB-3	ND	123	51.0		0.323	D	PCB-46	ND	123	29.0		0.537	D
PCB-4/10	ND	245	55.3		1.14	D	PCB-47	ND	123		60.1	2.19	D
PCB-5/8	ND	245	47.5		1.76	D	PCB-48/75	ND	245		47.5	0.983	D
PCB-6	ND	123	41.8		1.00	D	PCB-50	ND	123	24.0		0.603	D
PCB-7/9	ND	245	45.1		1.34	D	PCB-51	ND	123	24.8		0.789	D
PCB-11	435	123			3.48	D	PCB-52/69	478	245			0.722	D
PCB-12/13	ND	245	42.3		1.37	D	PCB-53	ND	123		37.1	0.331	D
PCB-14	ND	123	45.5		0.337	D	PCB-54	ND	123	19.2		0.275	D
PCB-15	ND	123		211	0.634	D	PCB-55	ND	123	19.9		0.416	D
PCB-16/32	124	245			0.430	J, D	PCB-56/60	418	245			0.825	D
PCB-17	78.9	123			0.658	J, D	PCB-57	ND	123	20.6		0.354	D
PCB-18	165	123			0.696	D	PCB-58	ND	123	21.8		0.589	D
PCB-19	ND	123	44.3		0.612	D	PCB-61/70	1030	245			1.20	D
PCB-20/21/33	194	368			2.47	J, B, D	PCB-62	ND	123	19.2		0.597	D
PCB-22	122	123			0.964	J, D	PCB-63	ND	123	21.2		0.524	D
PCB-23	ND	123	22.0		0.543	D	PCB-65	ND	123	19.1		0.842	D
PCB-24/27	ND	245	26.4		0.742	D	PCB-66/76	537	245			1.31	D
PCB-25	ND	123	22.3		0.768	D	PCB-67	ND	123	18.2		0.486	D
PCB-26	ND	123		46.8	0.766	D	PCB-68	ND	123	17.4		0.658	D
PCB-28	178	123			1.12	D	PCB-73	ND	123	18.1		0.454	D
PCB-29	ND	123	26.1		0.949	D	PCB-74	219	123			0.781	D
PCB-30	ND	123	27.0		0.355	D	PCB-77	424	123			0.748	D
PCB-31	222	123			0.809	D	PCB-78	ND	123	17.4		0.385	D
PCB-34	ND	123	24.8		1.57	D	PCB-79	ND	123	19.2		0.633	D
PCB-35	39.7	123			0.565	J, D	PCB-80	ND	123	17.4		0.336	D
PCB-36	ND	123	26.8		0.406	D	PCB-81	15.7	123			0.674	J, D
PCB-37	310	123			0.389	D	PCB-82	ND	123		325	0.981	D
PCB-38	ND	123	25.5		0.528	D	PCB-83	ND	123	109		0.440	D
PCB-39	ND	123	27.4		0.461	D	PCB-84/92	806	245			1.01	D
PCB-40	ND	123	33.4		0.927	D	PCB-85/116	421	245			1.64	D
PCB-41/64/71/72	272	490			1.70	J, D	PCB-86	ND	123	196		1.79	D
PCB-42/59	ND	245		86.0	0.899	D	PCB-87/117/125	1020	368			0.880	D
PCB-43/49	237	245			0.879	J, D	PCB-88/91	233	245			1.25	J, 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: DS-CB-I3-20141216-S

EPA Method 1668C

Client Data				Sample Data			Laboratory Data					
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1400970-03	Date Received:	17-Dec-2014 9:16		
Project:				Sample Size:	3.84 g		QC Batch:	B5A0115	Date Extracted:	29-Jan-2015 10:19		
Date Collected:	16-Dec-2014 14:35			% Solids:	53.1		Date Analyzed :	05-Feb-15 14:20 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	123	131		1.22	D	PCB-136	259	123			0.776	D
PCB-90/101	2260	245			1.19	D	PCB-137	279	123			0.541	D
PCB-93	ND	123	200		2.53	D	PCB-138/163/164	4930	368			0.809	D
PCB-94	ND	123	160		0.874	D	PCB-139/149	2320	245			1.49	D
PCB-95/98/102	1200	368			1.38	D	PCB-140	ND	123	82.0		1.20	D
PCB-96	ND	123	100		0.588	D	PCB-141	727	123			0.678	D
PCB-97	769	123			0.675	D	PCB-144	ND	123		130	1.38	D
PCB-99	761	123			0.474	D	PCB-145	ND	123	49.3		1.05	D
PCB-100	ND	123	121		0.511	D	PCB-146/165	454	245			0.792	D
PCB-103	ND	123	119		0.428	D	PCB-147	ND	123	72.2		5.26	D
PCB-104	ND	123	96.1		0.876	D	PCB-148	ND	123	79.6		1.45	D
PCB-105	1810	123			0.462	D	PCB-150	ND	123	59.3		0.801	D
PCB-106/118	3930	245			0.728	D	PCB-151	495	123			1.16	D
PCB-107/109	264	245			0.631	D	PCB-152	ND	123	53.1		0.744	D
PCB-108/112	128	245			0.844	J, D	PCB-153	3000	123			0.484	D
PCB-110	3440	123			0.555	D	PCB-154	ND	123	69.0		0.837	D
PCB-111/115	ND	245	101		1.24	D	PCB-155	ND	123	53.2		0.767	D
PCB-113	ND	123	105		0.495	D	PCB-156	746	123			0.534	D
PCB-114	ND	123		58.5	0.418	D	PCB-157	187	123			0.485	D
PCB-119	ND	123	108		0.383	D	PCB-158/160	624	245			0.915	D
PCB-120	ND	123	98.6		0.622	D	PCB-159	ND	123	38.9		0.578	D
PCB-121	ND	123	104		0.978	D	PCB-166	ND	123	36.5		0.425	D
PCB-122	37.4	123			0.619	J, D	PCB-167	285	123			0.653	D
PCB-123	ND	123	118		0.494	D	PCB-168	ND	123	34.1		0.502	D
PCB-124	119	123			0.813	J, D	PCB-169	ND	123	36.9		0.767	D
PCB-126	96.6	123			0.543	J, D	PCB-170	873	123			0.758	D
PCB-127	ND	123	55.4		0.326	D	PCB-171	222	123			0.372	D
PCB-128/162	919	245			1.08	D	PCB-172	108	123			0.857	J, D
PCB-129	329	123			0.567	D	PCB-173	ND	123	50.8		0.507	D
PCB-130	352	123			0.798	D	PCB-174	583	123			0.797	D
PCB-131	ND	123	54.3		0.731	D	PCB-175	58.6	123			0.679	J, D
PCB-132/161	1170	245			1.05	D	PCB-176	65.9	123			0.729	J, D
PCB-133/142	129	245			1.04	J, D	PCB-177	377	123			0.404	D
PCB-134/143	171	245			1.05	J, D	PCB-178	148	123			0.610	D
PCB-135	ND	123		265	1.47	D	PCB-179	184	123			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: DS-CB-I3-20141216-S

EPA Method 1668C

Client Data				Sample Data			Laboratory Data					
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1400970-03	Date Received:	17-Dec-2014 9:16		
Project:				Sample Size:	3.84 g		QC Batch:	B5A0115	Date Extracted:	29-Jan-2015 10:19		
Date Collected:	16-Dec-2014 14:35			% Solids:	53.1		Date Analyzed :	05-Feb-15 14:20 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	1690	123			0.420	D	Total octaCB	782	123		1220		
PCB-181	ND	123	40.8		1.26	D	Total nonaCB	316	123				
PCB-182/187	668	245			1.33	D	DecaCB	ND	123	57.6			
PCB-183	344	123			0.638	D	Total PCB	47200	123				B
PCB-184	ND	123	26.8		0.597	D							
PCB-185	ND	123		55.2	0.557	D							
PCB-186	ND	123	30.1		0.421	D							
PCB-188	ND	123	28.1		0.759	D							
PCB-189	54.1	123			0.483	J, D							
PCB-190	ND	123		169	0.686	D							
PCB-191	42.4	123			0.447	J, D							
PCB-192	ND	123	32.4		0.528	D							
PCB-193	72.4	123			0.836	J, D							
PCB-194	375	123			0.645	D							
PCB-195	ND	123		91.3	0.722	D							
PCB-196/203	ND	245		350	0.983	D							
PCB-197	ND	123	88.6		0.794	D							
PCB-198	ND	123	126		0.792	D							
PCB-199	407	123			0.615	D							
PCB-200	ND	123	89.5		0.795	D							
PCB-201	ND	123	82.7		0.317	D							
PCB-202	ND	123	87.8		0.759	D							
PCB-204	ND	123	83.6		0.543	D							
PCB-205	ND	123	50.2		0.471	D							
PCB-206	222	123			0.852	D							
PCB-207	ND	123	22.4		0.402	D							
PCB-208	94.0	123			0.441	J, D							
PCB-209	ND	123	57.6		1.10	D							
Total monoCB	ND	123	61.7										
Total diCB	435	123		645									
Total triCB	1430	123		1480		B							
Total tetraCB	4100	123		4330									
Total pentaCB	17300	123		17700									
Total hexaCB	17400	123		17800									
Total heptaCB	5490	123		5710									

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: DS-CB-I3-20141216-S

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	Leidos	Matrix:	Sediment	Lab Sample:	1400970-03
Project:		Sample Size:	3.84 g	Date Received:	17-Dec-2014 9:16
Date Collected:	16-Dec-2014 14:35	% Solids:	53.1	QC Batch:	B5A0115
				Date Analyzed:	05-Feb-15 14:20
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	68.9	5 -145	D	13C-PCB-170	78.6	10 -145	D
13C-PCB-3	74.7	5 -145	D	13C-PCB-180	80.7	10 -145	D
13C-PCB-4	73.6	5 -145	D	13C-PCB-188	77.1	10 -145	D
13C-PCB-11	83.4	5 -145	D	13C-PCB-189	78.4	10 -145	D
13C-PCB-9	76.6	5 -145	D	13C-PCB-194	86.7	10 -145	D
13C-PCB-19	80.0	5 -145	D	13C-PCB-202	72.6	10 -145	D
13C-PCB-28	86.5	5 -145	D	13C-PCB-206	85.3	10 -145	D
13C-PCB-32	79.4	5 -145	D	13C-PCB-208	79.5	10 -145	D
13C-PCB-37	90.2	5 -145	D	13C-PCB-209	91.4	10 -145	D
13C-PCB-47	85.1	5 -145	D	CRS 13C-PCB-79	86.5	10 -145	D
13C-PCB-52	82.5	5 -145	D	13C-PCB-178	84.1	10 -145	D
13C-PCB-54	76.1	5 -145	D				
13C-PCB-70	82.7	5 -145	D				
13C-PCB-77	81.4	10 -145	D				
13C-PCB-80	80.2	10 -145	D				
13C-PCB-81	79.8	10 -145	D				
13C-PCB-95	80.2	10 -145	D				
13C-PCB-97	82.2	10 -145	D				
13C-PCB-101	84.1	10 -145	D				
13C-PCB-104	84.3	10 -145	D				
13C-PCB-105	76.1	10 -145	D				
13C-PCB-114	81.1	10 -145	D				
13C-PCB-118	83.6	10 -145	D				
13C-PCB-123	84.7	10 -145	D				
13C-PCB-126	77.8	10 -145	D				
13C-PCB-127	79.1	10 -145	D				
13C-PCB-138	84.2	10 -145	D				
13C-PCB-141	85.8	10 -145	D				
13C-PCB-153	83.6	10 -145	D				
13C-PCB-155	69.4	10 -145	D				
13C-PCB-156	86.0	10 -145	D				
13C-PCB-157	85.9	10 -145	D				
13C-PCB-159	87.5	10 -145	D				
13C-PCB-167	83.3	10 -145	D				
13C-PCB-169	83.7	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: DS-CB-H1-20141216-S

EPA Method 1668C

Client Data				Sample Data			Laboratory Data						
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1400970-04		Date Received:	17-Dec-2014 9:16		
Project:				Sample Size:	6.69 g		QC Batch:	B5A0115		Date Extracted:	29-Jan-2015 10:19		
Date Collected:	16-Dec-2014 15:15			% Solids:	30.0		Date Analyzed :	05-Feb-15 15:24		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	129	125			0.320	D	PCB-44	2070	125			0.745	D
PCB-2	63.3	125			0.240	J, D	PCB-45	286	125			0.402	D
PCB-3	153	125			0.323	D	PCB-46	122	125			0.537	J, D
PCB-4/10	ND	249		188	1.14	D	PCB-47	386	125			2.19	D
PCB-5/8	731	249			1.76	D	PCB-48/75	302	249			0.983	D
PCB-6	151	125			1.00	D	PCB-50	ND	125	43.0		0.603	D
PCB-7/9	ND	249	201		1.34	D	PCB-51	86.0	125			0.789	J, D
PCB-11	1380	125			3.48	D	PCB-52/69	2360	249			0.722	D
PCB-12/13	ND	249	200		1.37	D	PCB-53	220	125			0.331	D
PCB-14	ND	125	216		0.337	D	PCB-54	ND	125	34.3		0.275	D
PCB-15	1050	125			0.634	D	PCB-55	ND	125		93.3	0.416	D
PCB-16/32	780	249			0.430	D	PCB-56/60	2670	249			0.825	D
PCB-17	358	125			0.658	D	PCB-57	ND	125	38.7		0.354	D
PCB-18	1110	125			0.696	D	PCB-58	ND	125		18.6	0.589	D
PCB-19	ND	125		115	0.612	D	PCB-61/70	4800	249			1.20	D
PCB-20/21/33	1420	374			2.47	B, D	PCB-62	ND	125	34.6		0.597	D
PCB-22	822	125			0.964	D	PCB-63	124	125			0.524	J, D
PCB-23	ND	125	26.7		0.543	D	PCB-65	ND	125	34.5		0.842	D
PCB-24/27	77.3	249			0.742	J, D	PCB-66/76	3190	249			1.31	D
PCB-25	131	125			0.768	D	PCB-67	ND	125		109	0.486	D
PCB-26	302	125			0.766	D	PCB-68	ND	125	31.4		0.658	D
PCB-28	1250	125			1.12	D	PCB-73	ND	125	34.8		0.454	D
PCB-29	ND	125	31.7		0.949	D	PCB-74	1320	125			0.781	D
PCB-30	ND	125	27.0		0.355	D	PCB-77	1170	125			0.748	D
PCB-31	1600	125			0.809	D	PCB-78	ND	125	33.3		0.385	D
PCB-34	ND	125	30.1		1.57	D	PCB-79	ND	125		82.3	0.633	D
PCB-35	151	125			0.565	D	PCB-80	ND	125	31.3		0.336	D
PCB-36	ND	125	33.6		0.406	D	PCB-81	ND	125		38.5	0.674	D
PCB-37	2000	125			0.389	D	PCB-82	1060	125			0.981	D
PCB-38	ND	125	32.0		0.528	D	PCB-83	ND	125	62.6		0.440	D
PCB-39	ND	125	34.4		0.461	D	PCB-84/92	2390	249			1.01	D
PCB-40	433	125			0.927	D	PCB-85/116	1090	249			1.64	D
PCB-41/64/71/72	1800	499			1.70	D	PCB-86	ND	125	113		1.79	D
PCB-42/59	624	249			0.899	D	PCB-87/117/125	2630	374			0.880	D
PCB-43/49	1360	249			0.879	D	PCB-88/91	652	249			1.25	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: DS-CB-H1-20141216-S

EPA Method 1668C

Client Data				Sample Data			Laboratory Data					
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1400970-04		Date Received: 17-Dec-2014 9:16		
Project:				Sample Size:	6.69 g		QC Batch:	B5A0115		Date Extracted: 29-Jan-2015 10:19		
Date Collected:	16-Dec-2014 15:15			% Solids:	30.0		Date Analyzed: 05-Feb-15 15:24 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	50.9	125			1.22	J, D	PCB-136	749	125			0.776	D
PCB-90/101	6690	249			1.19	D	PCB-137	646	125			0.541	D
PCB-93	ND	125	122		2.53	D	PCB-138/163/164	9730	374			0.809	D
PCB-94	ND	125	97.2		0.874	D	PCB-139/149	6390	249			1.49	D
PCB-95/98/102	3910	374			1.38	D	PCB-140	ND	125	120		1.20	D
PCB-96	ND	125	64.4		0.588	D	PCB-141	1850	125			0.678	D
PCB-97	1910	125			0.675	D	PCB-144	319	125			1.38	D
PCB-99	2090	125			0.474	D	PCB-145	ND	125	72.3		1.05	D
PCB-100	ND	125	78.2		0.511	D	PCB-146/165	1060	249			0.792	D
PCB-103	ND	125	76.6		0.428	D	PCB-147	148	125			5.26	D
PCB-104	ND	125	61.9		0.876	D	PCB-148	ND	125	117		1.45	D
PCB-105	3580	125			0.462	D	PCB-150	ND	125	87.0		0.801	D
PCB-106/118	7970	249			0.728	D	PCB-151	1370	125			1.16	D
PCB-107/109	535	249			0.631	D	PCB-152	ND	125	77.9		0.744	D
PCB-108/112	317	249			0.844	D	PCB-153	7030	125			0.484	D
PCB-110	7990	125			0.555	D	PCB-154	92.0	125			0.837	J, D
PCB-111/115	126	249			1.24	J, D	PCB-155	ND	125	78.0		0.767	D
PCB-113	ND	125	72.1		0.495	D	PCB-156	1320	125			0.534	D
PCB-114	195	125			0.418	D	PCB-157	ND	125		269	0.485	D
PCB-119	91.7	125			0.383	J, D	PCB-158/160	1210	249			0.915	D
PCB-120	ND	125	56.7		0.622	D	PCB-159	ND	125	71.2		0.578	D
PCB-121	ND	125	63.6		0.978	D	PCB-166	ND	125	66.8		0.425	D
PCB-122	ND	125		91.3	0.619	D	PCB-167	495	125			0.653	D
PCB-123	ND	125		92.2	0.494	D	PCB-168	ND	125	61.4		0.502	D
PCB-124	323	125			0.813	D	PCB-169	ND	125	73.1		0.767	D
PCB-126	176	125			0.543	D	PCB-170	2640	125			0.758	D
PCB-127	ND	125	83.5		0.326	D	PCB-171	492	125			0.372	D
PCB-128/162	1860	249			1.08	D	PCB-172	362	125			0.857	D
PCB-129	566	125			0.567	D	PCB-173	ND	125		73.7	0.507	D
PCB-130	604	125			0.798	D	PCB-174	2220	125			0.797	D
PCB-131	ND	125	98.0		0.731	D	PCB-175	90.3	125			0.679	J, D
PCB-132/161	2380	249			1.05	D	PCB-176	218	125			0.729	D
PCB-133/142	288	249			1.04	D	PCB-177	1350	125			0.404	D
PCB-134/143	433	249			1.05	D	PCB-178	463	125			0.610	D
PCB-135	913	125			1.47	D	PCB-179	714	125			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: DS-CB-H1-20141216-S

EPA Method 1668C

Client Data				Sample Data			Laboratory Data					
Name:	Leidos			Matrix:	Sediment		Lab Sample:	1400970-04	Date Received:	17-Dec-2014 9:16		
Project:				Sample Size:	6.69 g		QC Batch:	B5A0115	Date Extracted:	29-Jan-2015 10:19		
Date Collected:	16-Dec-2014 15:15			% Solids:	30.0		Date Analyzed :	05-Feb-15 15:24 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	6120	125			0.420	D	Total octaCB	5690	125		5860		
PCB-181	ND	125	58.6		1.26	D	Total nonaCB	1240	125				
PCB-182/187	2350	249			1.33	D	DecaCB	223	125				
PCB-183	1100	125			0.638	D	Total PCB	147000	125				B
PCB-184	ND	125	33.8		0.597	D							
PCB-185	208	125			0.557	D							
PCB-186	ND	125	37.9		0.421	D							
PCB-188	ND	125	34.9		0.759	D							
PCB-189	149	125			0.483	D							
PCB-190	492	125			0.686	D							
PCB-191	150	125			0.447	D							
PCB-192	ND	125	46.4		0.528	D							
PCB-193	309	125			0.836	D							
PCB-194	1360	125			0.645	D							
PCB-195	412	125			0.722	D							
PCB-196/203	1760	249			0.983	D							
PCB-197	ND	125	51.9		0.794	D							
PCB-198	ND	125	73.8		0.792	D							
PCB-199	1550	125			0.615	D							
PCB-200	183	125			0.795	D							
PCB-201	ND	125		174	0.317	D							
PCB-202	357	125			0.759	D							
PCB-204	ND	125	49.0		0.543	D							
PCB-205	70.5	125			0.471	J, D							
PCB-206	877	125			0.852	D							
PCB-207	128	125			0.402	D							
PCB-208	231	125			0.441	D							
PCB-209	223	125			1.10	D							
Total monoCB	346	125											
Total diCB	3310	125		3500									
Total triCB	10000	125		10100		B							
Total tetraCB	23300	125		23700									
Total pentaCB	43800	125		44000									
Total hexaCB	39400	125		39700									
Total heptaCB	19400	125		19500									

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: DS-CB-H1-20141216-S

EPA Method 1668C

Client Data		Sample Data		Laboratory Data	
Name:	Leidos	Matrix:	Sediment	Lab Sample:	1400970-04
Project:		Sample Size:	6.69 g	Date Received:	17-Dec-2014 9:16
Date Collected:	16-Dec-2014 15:15	% Solids:	30.0	QC Batch:	B5A0115
				Date Analyzed:	05-Feb-15 15:24
				Column:	ZB-1
				Analyst:	DMS

Labeled Standard	%R	LCL-UCL	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
IS 13C-PCB-1	95.6	5 -145	D	13C-PCB-170	80.4	10 -145	D
13C-PCB-3	94.1	5 -145	D	13C-PCB-180	81.4	10 -145	D
13C-PCB-4	88.1	5 -145	D	13C-PCB-188	85.1	10 -145	D
13C-PCB-11	90.7	5 -145	D	13C-PCB-189	80.5	10 -145	D
13C-PCB-9	87.9	5 -145	D	13C-PCB-194	90.7	10 -145	D
13C-PCB-19	81.2	5 -145	D	13C-PCB-202	72.1	10 -145	D
13C-PCB-28	84.0	5 -145	D	13C-PCB-206	89.0	10 -145	D
13C-PCB-32	84.4	5 -145	D	13C-PCB-208	83.8	10 -145	D
13C-PCB-37	90.3	5 -145	D	13C-PCB-209	94.8	10 -145	D
13C-PCB-47	91.3	5 -145	D	CRS 13C-PCB-79	92.2	10 -145	D
13C-PCB-52	88.0	5 -145	D	13C-PCB-178	89.4	10 -145	D
13C-PCB-54	82.8	5 -145	D				
13C-PCB-70	85.3	5 -145	D				
13C-PCB-77	87.7	10 -145	D				
13C-PCB-80	86.8	10 -145	D				
13C-PCB-81	89.4	10 -145	D				
13C-PCB-95	88.9	10 -145	D				
13C-PCB-97	99.7	10 -145	D				
13C-PCB-101	92.1	10 -145	D				
13C-PCB-104	89.6	10 -145	D				
13C-PCB-105	89.2	10 -145	D				
13C-PCB-114	90.2	10 -145	D				
13C-PCB-118	96.6	10 -145	D				
13C-PCB-123	92.3	10 -145	D				
13C-PCB-126	86.6	10 -145	D				
13C-PCB-127	85.7	10 -145	D				
13C-PCB-138	94.0	10 -145	D				
13C-PCB-141	90.7	10 -145	D				
13C-PCB-153	92.2	10 -145	D				
13C-PCB-155	75.6	10 -145	D				
13C-PCB-156	90.1	10 -145	D				
13C-PCB-157	90.8	10 -145	D				
13C-PCB-159	91.9	10 -145	D				
13C-PCB-167	88.6	10 -145	D				
13C-PCB-169	90.5	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.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
H	Recovery was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	Method Detection Limit as determined by 40 CFR 136, Appendix B.
EMPC	Estimated Maximum Possible Concentration
M	Estimated Maximum Possible Concentration (CA Region 2)
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
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

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1400970 TAT Std

Samples Arrival:	Date/Time 12/17/14 0916	Initials: UBB	Location: WR-2
			Shelf/Rack: NA
Logged In:	Date/Time 12/18/14 1349	Initials: UBB	Location: WR-2
			Shelf/Rack: C4 / E6
Delivered By:	<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		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: 2.0 (uncorrected)	Time: 0922		Thermometer ID: IR-1
Temp °C: 2.0 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill	✓		
Trk #	0064 5979 2415		
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 ₂ S ₂ O ₃ Preservation Documented?	NA	COC	Sample Container
		None	
Shipping Container	<input checked="" type="checkbox"/> Vista	Client	<input checked="" type="checkbox"/> Retain
		Return	<input type="checkbox"/> Dispose

Comments:

EXTRACTION INFORMATION

Process Sheet
Workorder: **1400970**

Prep Expiration: 12/16/2015
Client: Leidos

Workorder Due: 13-Feb-15 00:00

TAT: 58

Method: **1613 Full List**
Matrix: **Aqueous**
Client Matrix: Effluent
Also run: **Percent Solids**

Prep Batch: B5A0110

Prep Data Entered: M.T 1/30/15
Date and Initials

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400970-01	"A" <input checked="" type="checkbox"/>	DS-CB-F3-20141216-W	17-Dec-14 09:16	WR-2 C-4	

Vista PM: Martha Maier

Vial Box ID: Delph-1

Sample Reconciled By: B Smith 1/29/15

Percent Moisture/ Percent Solids

D2216-90

BATCH ID

B5A0109

Analyst: B. Smith

Test Code: %Moist/%Solids

Analyte:

Units: %

Dried at 110°C+/-5°C

Date/Time IN: 1/29/15 08:51 Date/Time OUT: 1/30/15 15:15

HRMS-4

B	C	D	E	F	G	H	K	M	N	O	P
Pan #	SamplID	Source ID	SampType	Intial and Date:	BMSV/29/15	MIT/30/15	%Solids RawVal	BMSV/29/15			
				Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)		pH Before	pH After	Acid Added	Cl-
1400970-01RE1			Sample	1.30	14.93	1.30		5	NANA		0
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	19.40	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			

PREPARATION BENCH SHEET

B5A0110

Chemist: B. Smith

Prep Date/Time: 29-Jan-15 08:12

Matrix: Aqueous

Method: 1613 Full List

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	Florisil CHEM/ DATE	
<input type="checkbox"/>	B5A0110-BLK1	MA	MA	1.020	BMS 1/29/15	M.T. 1/30/15	NA	M.T. 1/30/15	M.T. 1/30/15	M.T. 1/30/15	M.T. 1/30/15
<input type="checkbox"/>	B5A0110-BS1	J	J	J							
<input type="checkbox"/>	1400970-01	1569.29	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	1505.08	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, 10µL</u>	PCDD/F <u>1341101, 110µL</u>	PCDD/F <u>14H2705, 10µL</u>	PCDD/F <u>14H2706, 10µL</u>	Start Date/Time <u>1/29/15 1602</u>	SOLV: <u>Tol</u>	Chemist/Date: <u>BMS 1/29/15</u>
PCB _____	PCB _____	PCB _____	PCB _____	Stop Date/Time <u>1/30/15 0825</u>	Other <u>NA</u>	Check In: <u>empty</u>
PAH _____	PAH _____	PAH _____	PAH _____	Final Volume(s) <u>20µL</u>	<u>C14</u>	Chemist/Date: <u>Mensy</u>
Comments:						Balance ID: <u>Mensy</u>

Process Sheet
Workorder: **1400970**

Prep Expiration: 12/16/2015
Client: Leidos

Workorder Due: 13-Feb-15 00:00

TAT: 58

Method: **1613 Full List**
Matrix: **Solid**
Client Matrix: Sediment
Also run: **Percent Solids**

Prep Batch: BSA0101

Prep Data Entered: MT 1/29/15
Date and Initials

Initial Sequence: 65A0047

LabSampleID	Recgn	ClientSampleID	Date Received	Location	Comments
1400970-02	<input checked="" type="checkbox"/>	DS-TD-01-20141216-S	17-Dec-14 09:16	WR-2 E-6	
1400970-03	<input checked="" type="checkbox"/>	DS-CB-I3-20141216-S	17-Dec-14 09:16	WR-2 E-6	
1400970-04	<input checked="" type="checkbox"/>	DS-CB-H1-20141216-S	17-Dec-14 09:16	WR-2 E-6	

Vista PM: Martha Maier

Vial Box ID: Strange clouds

Sample Reconciled By: B. Roberts 1/26/15

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 ^{SR 1/27/15} ₂₀	↓	↓	↓	↓	↓	↓	↓
<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	Check Out: SR 1/27/15
PCDD/F 14H2704, 10ml	PCDD/F 13L1101, 10ml	PCDD/F 14H2705, 10ml	PCDD/F 14H2706, 10ml	Start Date/Time 1/27/15 1450	SOLV: Tol	Chemist/Date: SR 1/27/15
PCB	PCB	PCB	PCB	Stop Date/Time 1/29/15 0710	Other: N/A	Check In: ↓
PAH	PAH	PAH	PAH	Final Volume(s) 20ml	C14	Chemist/Date:
						Balance ID: HRMS-2

Comments:

Process Sheet
Workorder: **1400970**

Prep Expiration: 12/16/2015
Client: Leidos

Workorder Due: 13-Feb-15 00:00

TAT: 58

Method: **1668C Full List**
Matrix: **Aqueous**
Client Matrix: Effluent
Also run: **Percent Solids**

Prep Batch: B5A0099

Prep Data Entered: M.T 1/27/15
Date and Initials

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400970-01	<input checked="" type="checkbox"/>	DS-CB-F3-20141216-W	17-Dec-14 09:16	WR-2 C-4	

Vista PM: Martha Maier

Vial Box ID: WOOD BRAIN

Sample Reconciled By: M.T 1/29/15

D2216-90

BATCH ID

B5A0098

Analyst: MJT	Test Code: %Moist/%Solids
Analyte: Dried at 110°C+/-5°C	Units: %

INST HRMS-4
 Date/Time IN: 1/26/15 0:00
 Date/Time OUT: 1/27/15 8:35
 11:05

Pan #	SampleID	Source ID	SampType	Initial and Date:		Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	MJT 1/26/2015			Cl-
				Pan Tare Wt. (gms)	MJT 1/26/2015					pH Before	pH After	Acid Added	
	1400970-01		Sample	1.33	MJT 1/27/15	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
	1500108-0104	M.T. 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

B5A0099

Chemist: M.T

Prep Date/Time: 26-Jan-15 10:29

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	C5A0086	NA	N/A	RS CHEM/WIT DATE
							AP CHEM/DATE	ABSG CHEM/DATE	AA CHEM/DATE	Florisil CHEM/DATE	
<input type="checkbox"/>	B5A0099-BLK (A)	NA	NA	(1.000)	M.T SR 1/26/15	M.T SR 1/26/15	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: Chemist/Date: <u>M.T 1/26/15</u>
PCDD/F <u>(V3)</u>	PCDD/F <u>(V8)</u>	PCDD/F <u>(V4)</u>	PCDD/F <u>(V4)</u>	Start Date/Time: <u>NA</u>	SOLV: <u>DCM</u>	Check In: Chemist/Date: <u>Empty</u>
PCB <u>14L 2202, 10ul</u>	PCB <u>14L 2204, 10ul</u>	PCB <u>14L 2201, 10ul</u>	PCB <u>14L 2203, 10ul</u>	Stop Date/Time: <u>NA</u>	Other: <u>NA</u>	Balance ID: <u>HRMS-4</u>
PAH	PAH	PAH	PAH		Final Volume(s): <u>20ul</u>	
					<u>C9</u>	

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.

RX

Process Sheet

Workorder: **1400970**

Prep Expiration: 12/16/2015

Client: Leidos

Workorder Due: 13-Feb-15 00:00

TAT: 58

Method: **1668C Full List**

Matrix: **Solid**

Client Matrix: Sediment

Also run: **Percent Solids**

Prep Batch: B5A0115

Prep Data Entered: 1/30/15 ED
Date and Initials

Initial Sequence: SSR0002E

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1400970-02	'A' <input checked="" type="checkbox"/>	DS-TD-01-20141216-S	17-Dec-14 09:16	WR-2 E-6	
1400970-03	'A' <input checked="" type="checkbox"/>	DS-CB-I3-20141216-S	17-Dec-14 09:16	WR-2 E-6	
1400970-04	'A' <input checked="" type="checkbox"/>	DS-CB-H1-20141216-S	17-Dec-14 09:16	WR-2 E-6	

2g (2x spike) m

Vista PM: Martha Maier

Vial Box ID: Grip 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

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) ^{M.T} (10.00)	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 ~160µL. 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>	PS CRS Name <u>ZX</u> PCDD/F <u>(V2)</u>	RS Name <u>ZX</u> PCDD/F <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>7:38</u>	APP: SEFUN SOX (SDS) 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:

SAMPLE DATA

EPA Method 1613

Client ID: Method Blank
Lab ID: B5A0110-BLK1

Filename: 150130D2 S:4 Acq:31-JAN-15 00:37:21
GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15

wt/vol: 1.000

ConCal: ST150130D2-1
EndCAL: NA

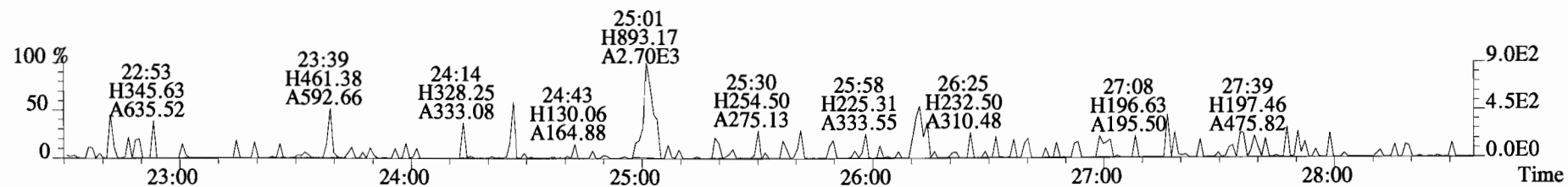
Page 3 of 3

Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	1.17	NotF η	*	*	*	643	2.5	0.857	Total Tetra-Dioxins	*	*	*	643	0.857
1,2,3,7,8-PeCDD	*	* n	0.91	NotF η	*	*	*	638	2.5	0.692	Total Penta-Dioxins	*	*	*	638	0.692
1,2,3,4,7,8-HxCDD	*	* n	1.08	NotF η	*	*	*	601	2.5	1.21	Total Hexa-Dioxins	*	*	*	631	1.27
1,2,3,6,7,8-HxCDD	*	* n	1.06	NotF η	*	*	*	601	2.5	1.19	Total Hepta-Dioxins	*	*	*	639	1.23
1,2,3,7,8,9-HxCDD	*	* n	0.93	NotF η	*	*	*	601	2.5	1.22	Total Tetra-Furans	*	*	*	594	0.644
1,2,3,4,6,7,8-HpCDD	*	* n	1.10	NotF η	*	*	*	639	2.5	1.23	Total Penta-Furans	0.0000	0.0000	*	601	0.753
OCDD	*	* n	0.95	NotF η	*	*	*	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 η	*	*	*	594	2.5	0.643						
1,2,3,7,8-PeCDF	*	* n	1.07	NotF η	*	*	*	571	2.5	0.766						
2,3,4,7,8-PeCDF	*	* n	1.03	NotF η	*	*	*	571	2.5	0.665						
1,2,3,4,7,8-HxCDF	*	* n	1.38	NotF η	*	*	*	547	2.5	0.421						
1,2,3,6,7,8-HxCDF	*	* n	1.26	NotF η	*	*	*	547	2.5	0.484						
2,3,4,6,7,8-HxCDF	*	* n	1.29	NotF η	*	*	*	547	2.5	0.497						
1,2,3,7,8,9-HxCDF	*	* n	1.19	NotF η	*	*	*	547	2.5	0.618						
1,2,3,4,6,7,8-HpCDF	*	* n	1.61	NotF η	*	*	*	487	2.5	0.516						
1,2,3,4,7,8,9-HpCDF	*	* n	1.53	NotF η	*	*	*	487	2.5	0.478						
OCDF	*	* n	1.10	NotF η	*	*	*	412	2.5	0.926						
											Rec	Qual				
IS 13C-2,3,7,8-TCDD	2.17e+07	0.79 y	1.06	26:59	1.021	1601.4					80.1					
IS 13C-1,2,3,7,8-PeCDD	2.18e+07	0.62 y	1.18	31:26	1.190	1450.1					72.5					
IS 13C-1,2,3,4,7,8-HxCDD	1.52e+07	1.25 y	0.72	34:45	1.014	1538.3					76.9					
IS 13C-1,2,3,6,7,8-HxCDD	1.55e+07	1.24 y	0.74	34:51	1.017	1535.3					76.8					
IS 13C-1,2,3,7,8,9-HxCDD	1.75e+07	1.24 y	0.85	35:09	1.026	1487.2					74.4					
IS 13C-1,2,3,4,6,7,8-HpCDD	1.38e+07	1.06 y	0.65	38:35	1.126	1536.4					76.8					
IS 13C-OCDD	2.37e+07	0.89 y	0.76	41:54	1.223	2253.6					56.3					
IS 13C-2,3,7,8-TCDF	2.86e+07	0.76 y	0.92	26:12	0.992	1567.9					78.4					
IS 13C-1,2,3,7,8-PeCDF	2.70e+07	1.56 y	0.92	30:16	1.146	1474.1					73.7					
IS 13C-2,3,4,7,8-PeCDF	2.78e+07	1.58 y	0.93	31:09	1.179	1504.3					75.2					
IS 13C-1,2,3,4,7,8-HxCDF	2.07e+07	0.51 y	0.98	33:51	0.988	1534.5					76.7					
IS 13C-1,2,3,6,7,8-HxCDF	2.19e+07	0.52 y	1.08	33:58	0.991	1467.4					73.4					
IS 13C-2,3,4,6,7,8-HxCDF	2.06e+07	0.51 y	1.03	34:35	1.009	1459.0					72.9					
IS 13C-1,2,3,7,8,9-HxCDF	1.83e+07	0.50 y	0.86	35:33	1.037	1544.1					77.2					
IS 13C-1,2,3,4,6,7,8-HpCDF	1.41e+07	0.44 y	0.72	37:23	1.091	1419.0					70.9					
IS 13C-1,2,3,4,7,8,9-HpCDF	1.43e+07	0.45 y	0.70	39:09	1.142	1489.6					74.5					
IS 13C-OCDF	2.71e+07	0.89 y	0.85	42:08	1.230	2321.8					58.0					
C/Up 37C1-2,3,7,8-TCDD	1.05e+07		1.12	26:60	1.022	734.36					91.8					
RS/RT 13C-1,2,3,4-TCDD	2.55e+07	0.80 y	1.00	26:25	*	2000.0							Integrations	Reviewed		
RS 13C-1,2,3,4-TCDF	3.97e+07	0.76 y	1.00	25:01	*	2000.0							by	by		
RS/RT 13C-1,2,3,4,6,9-HxCDF	2.75e+07	0.52 y	1.00	34:16	*	2000.0							Analyst: <u>AP</u>	Analyst: <u>CT</u>		

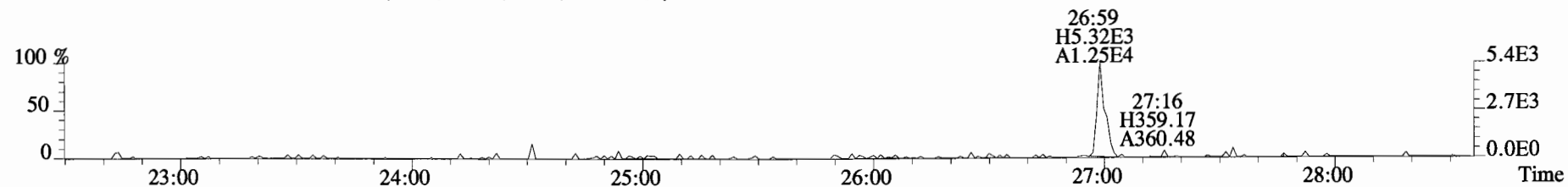
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Date: 2/2/15

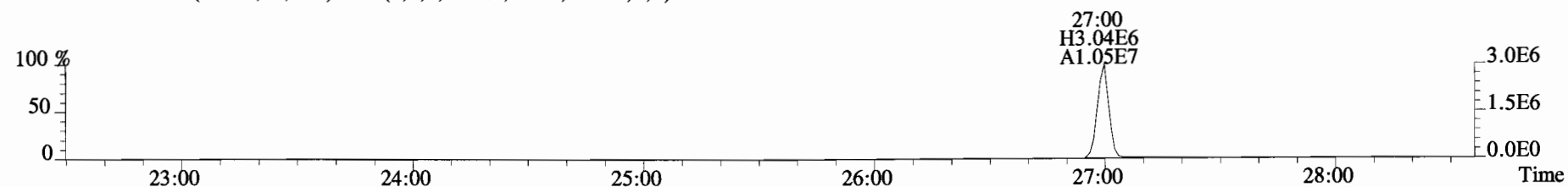
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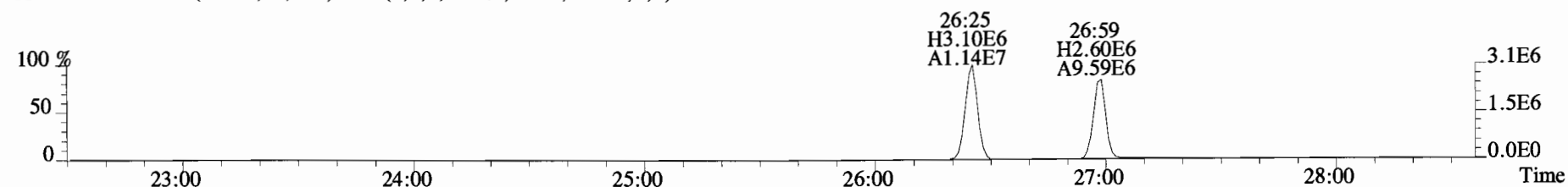
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



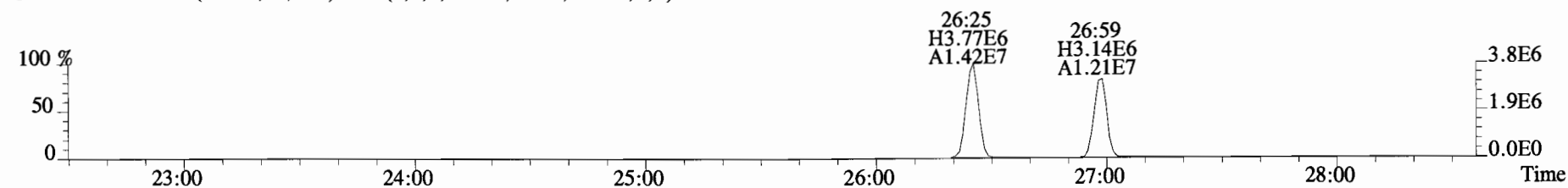
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



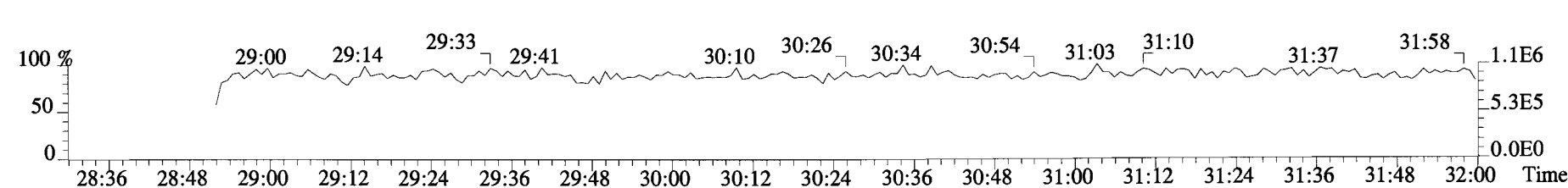
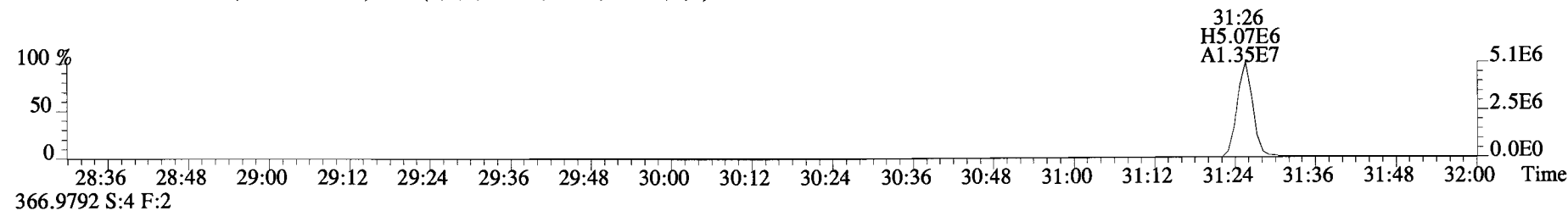
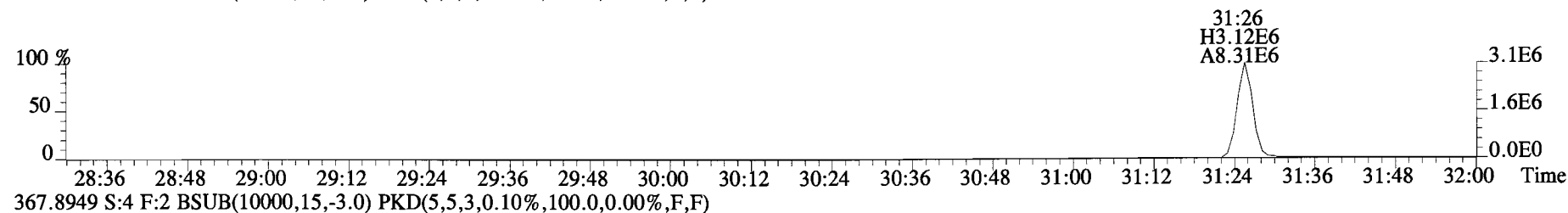
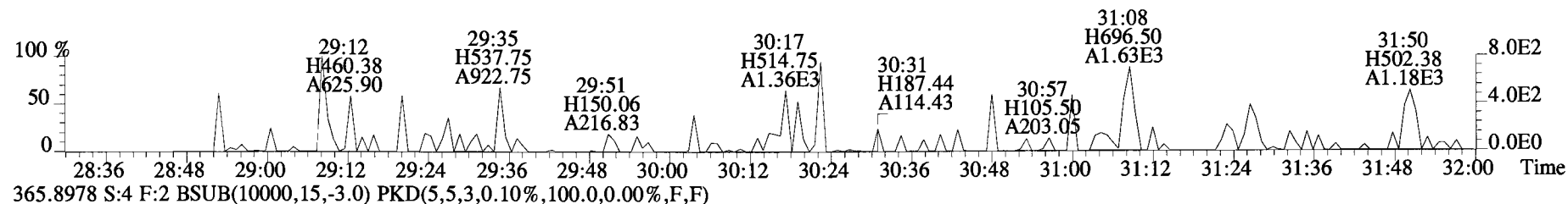
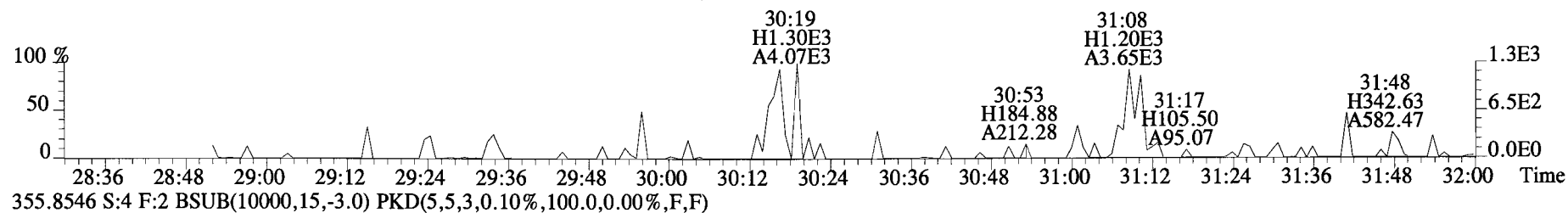
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



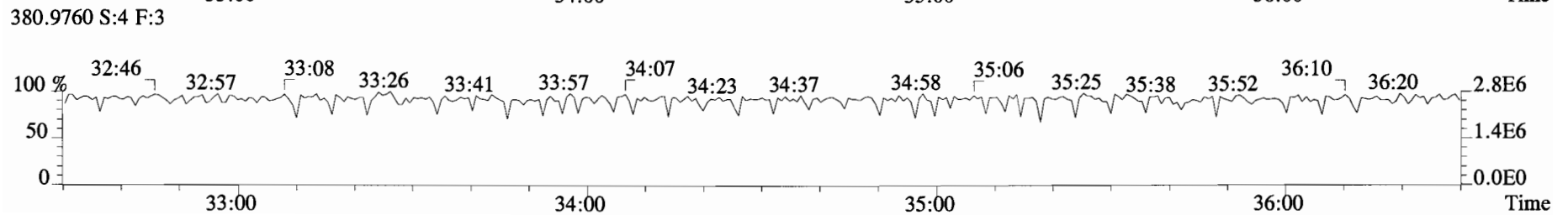
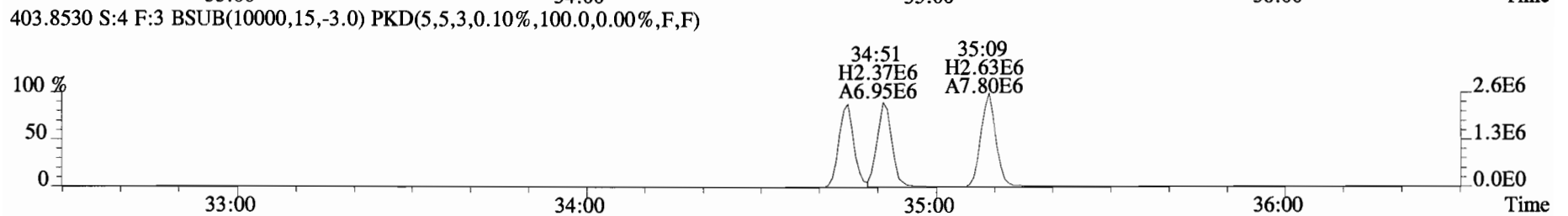
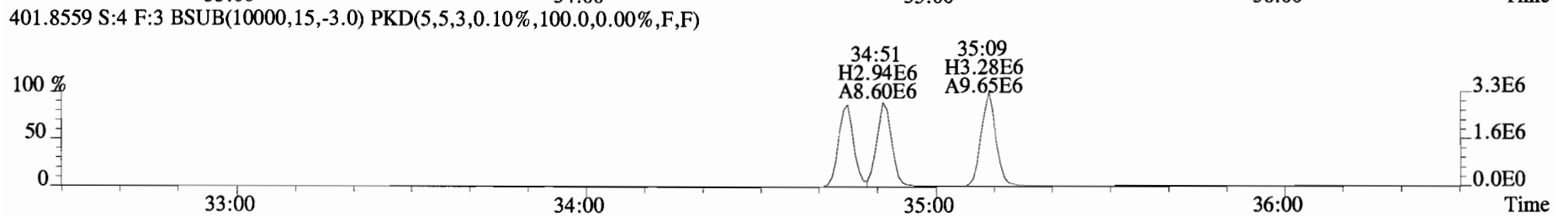
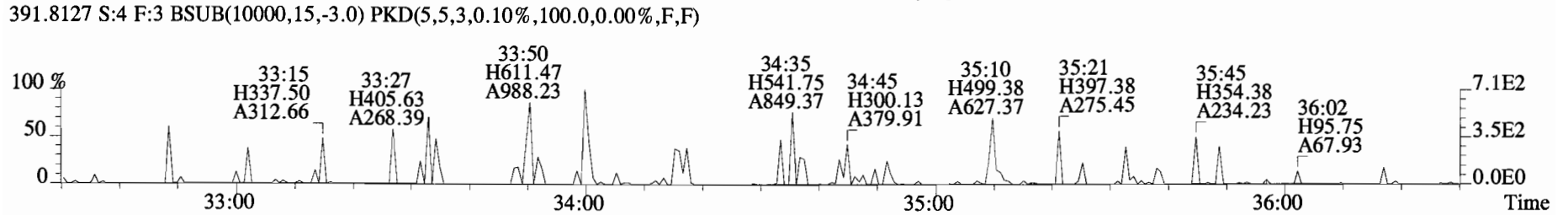
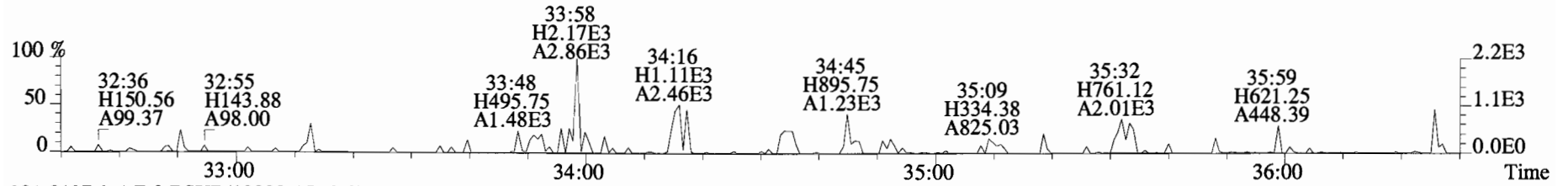
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



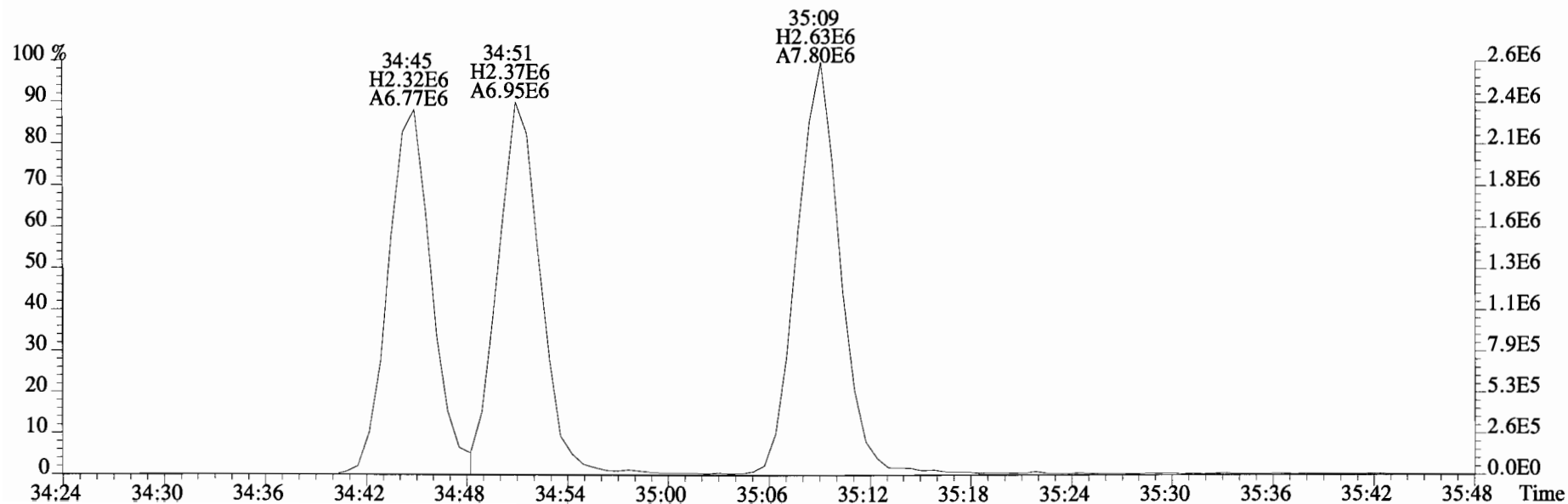
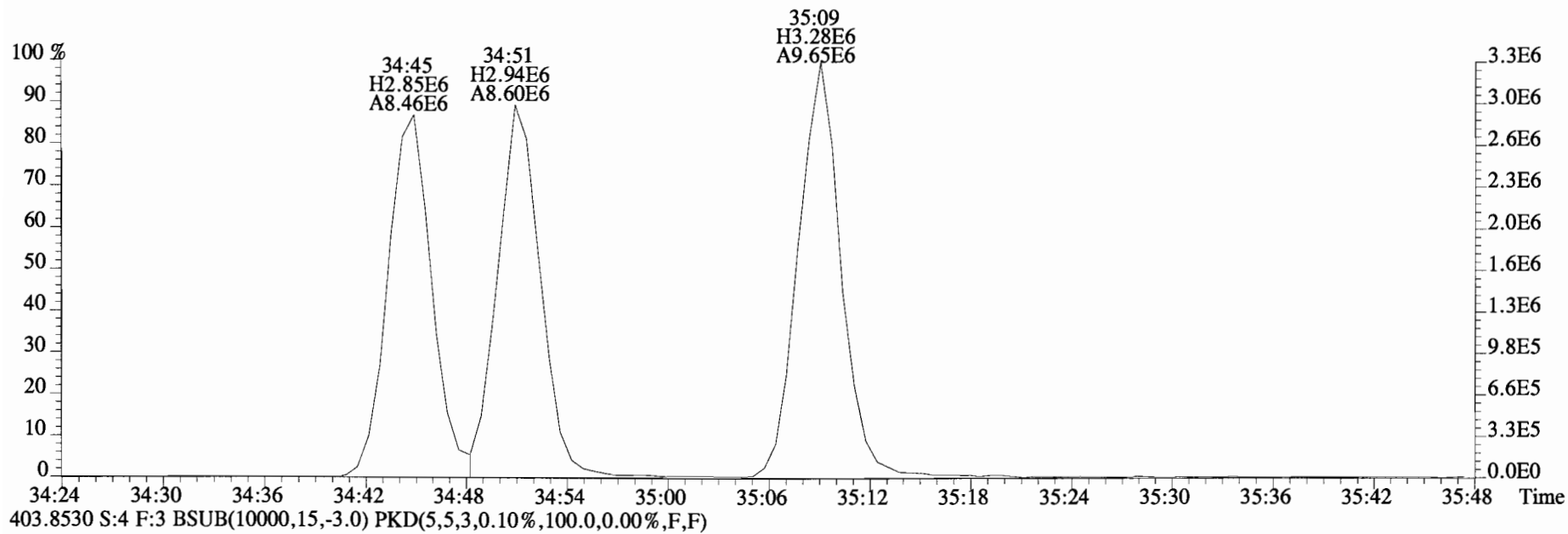
File:150130D2 #1-251 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



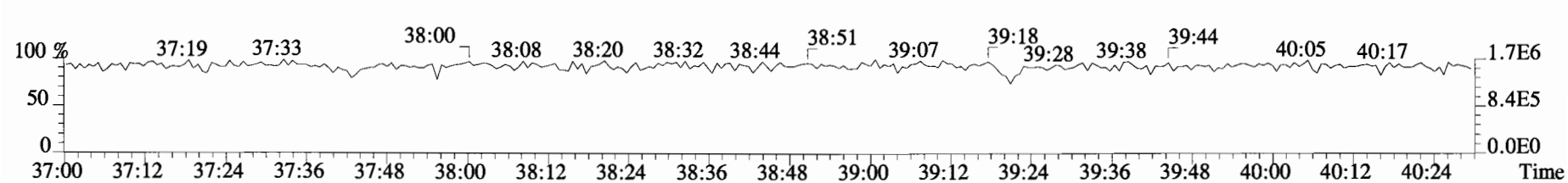
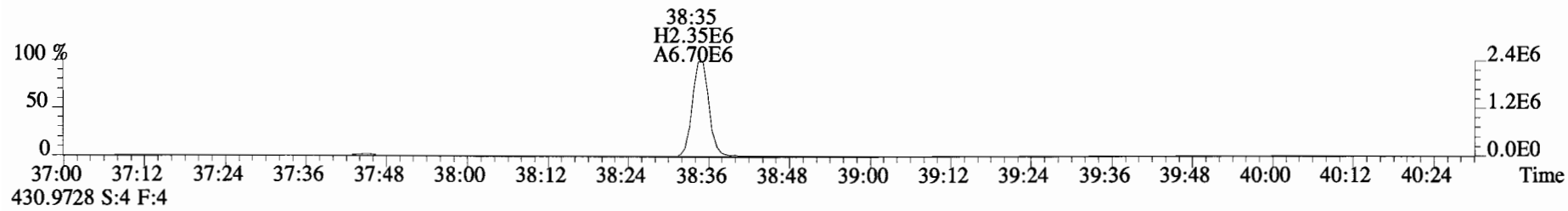
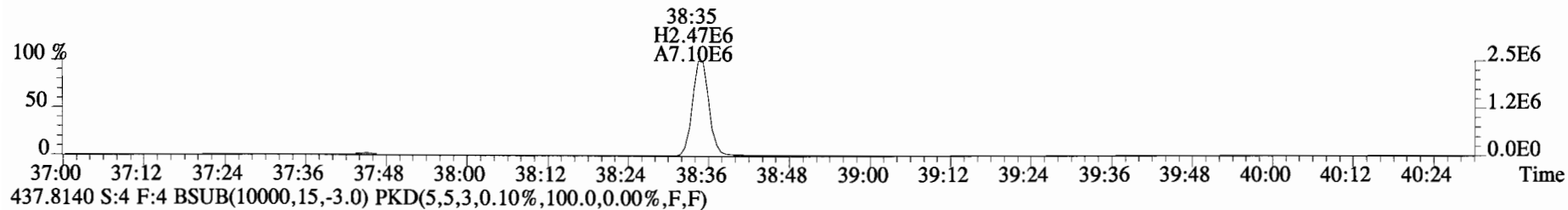
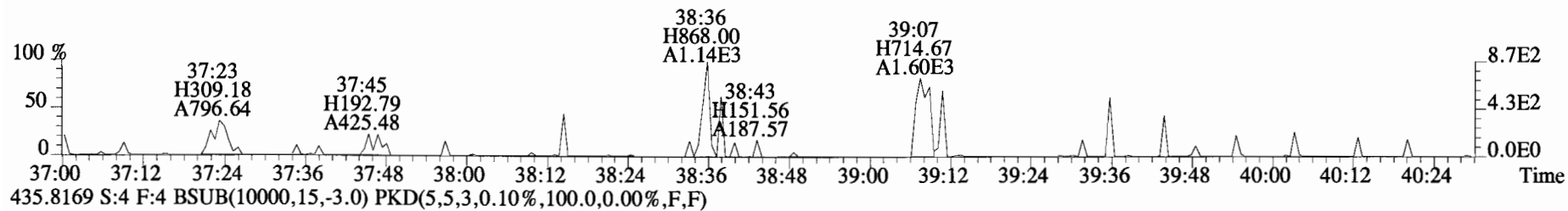
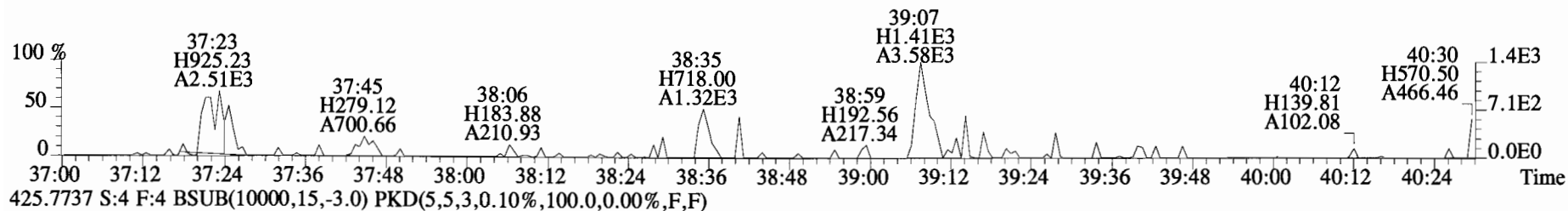
File:150130D2 #1-393 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



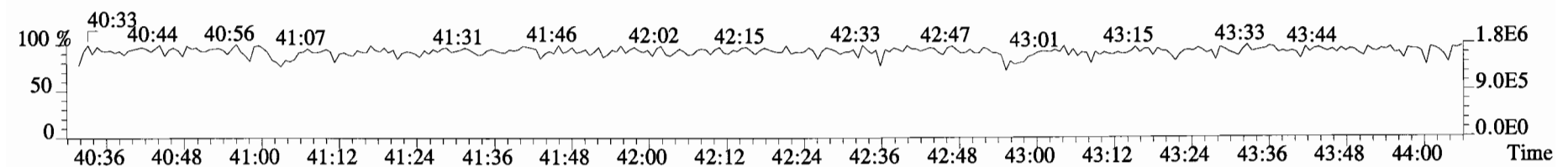
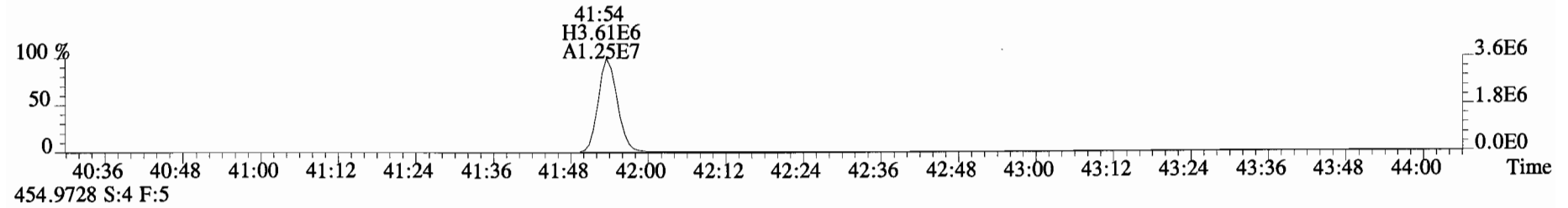
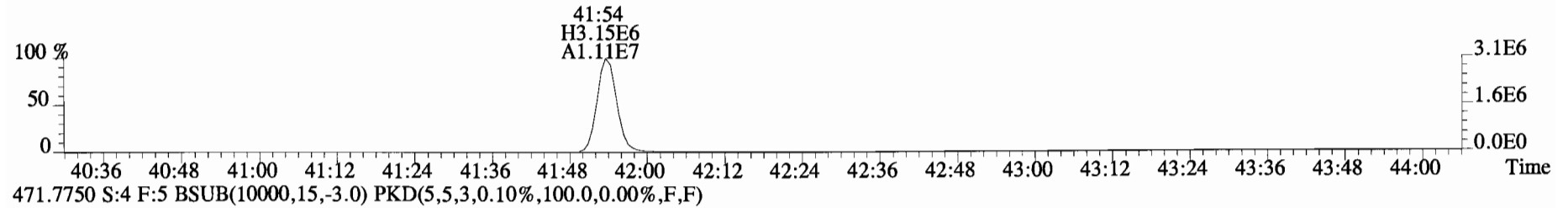
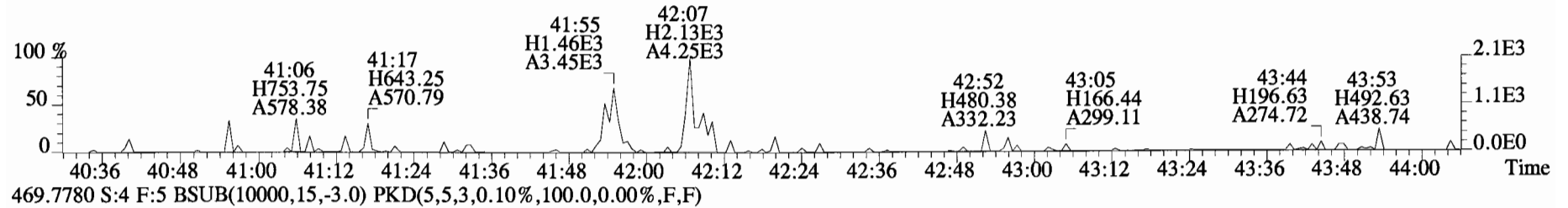
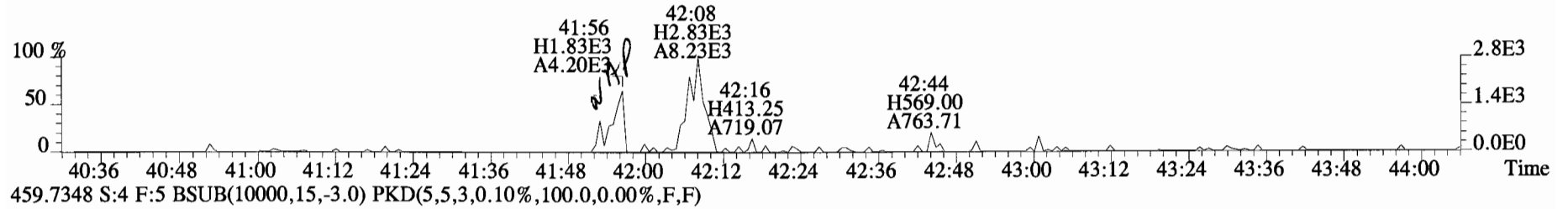
File:150130D2 #1-393 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text: Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



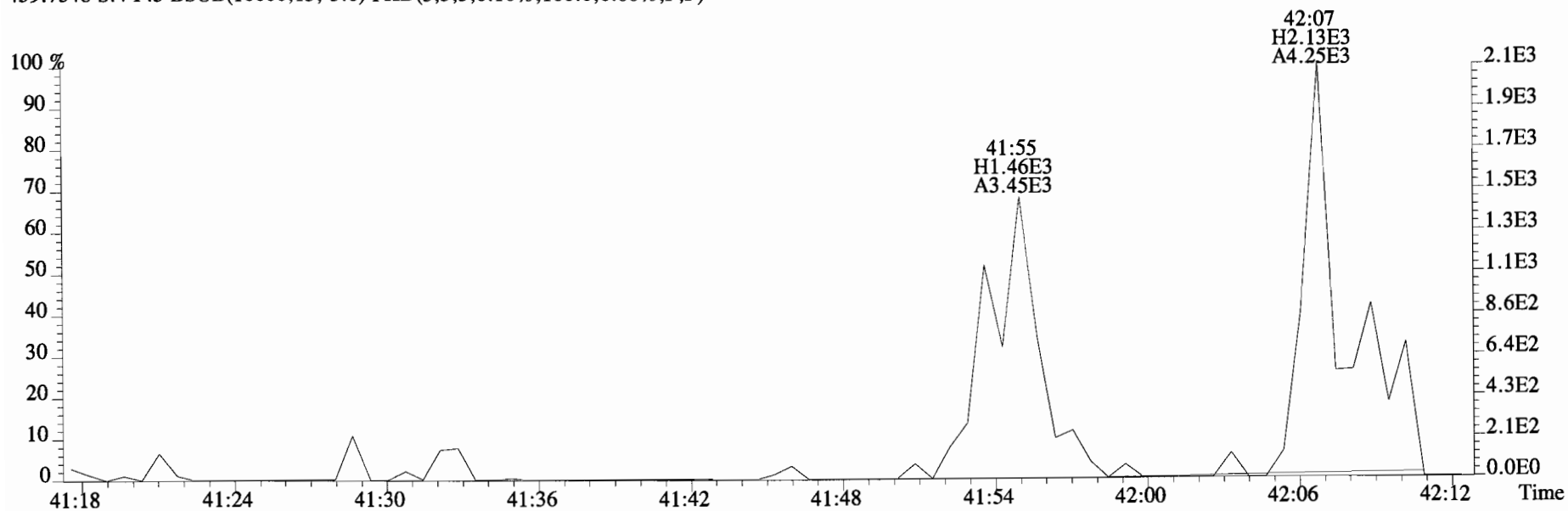
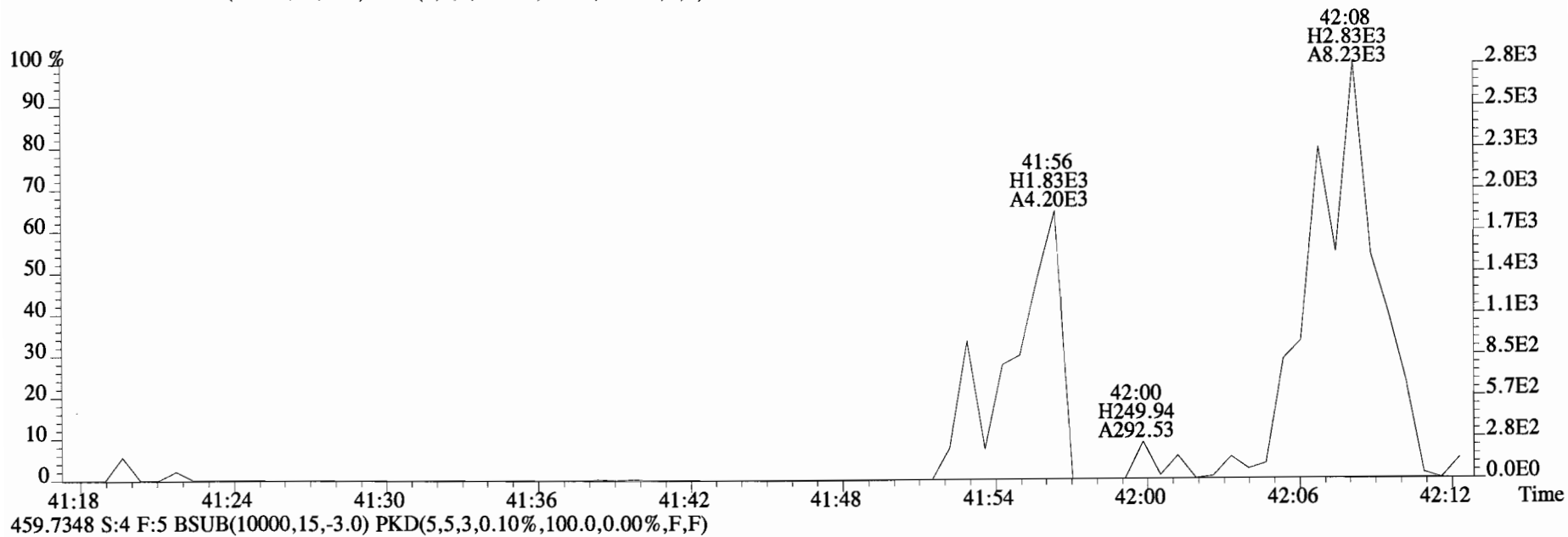
File:150130D2 #1-325 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



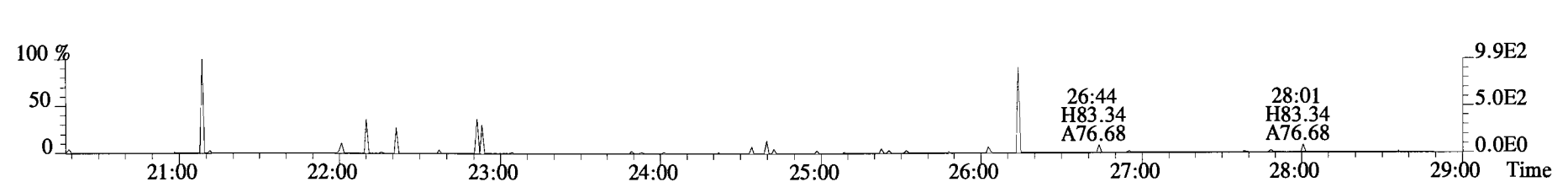
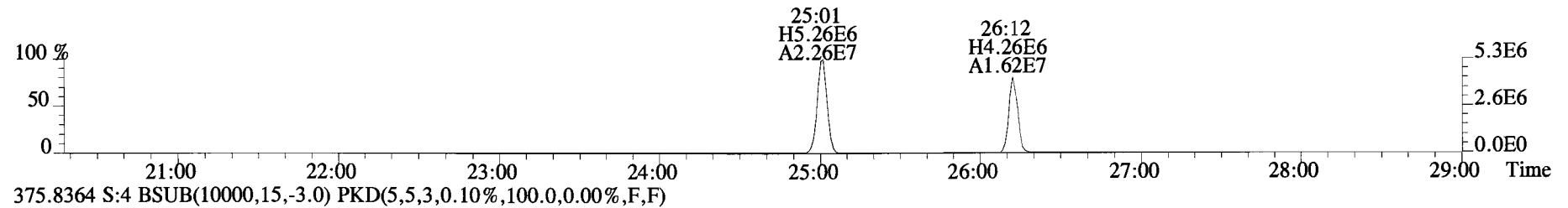
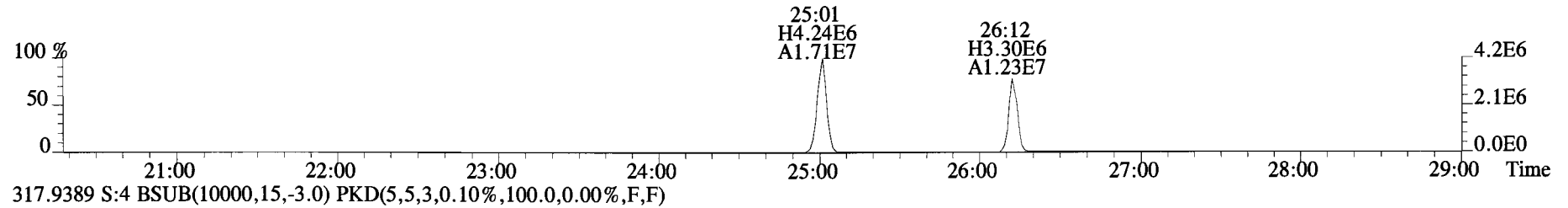
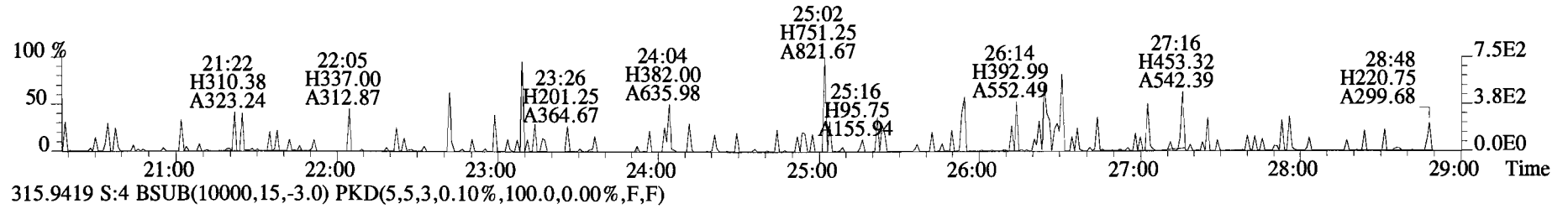
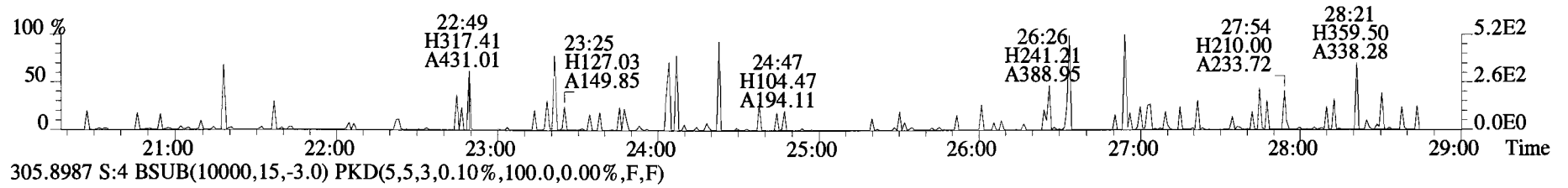
File:150130D2 #1-389 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text: Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



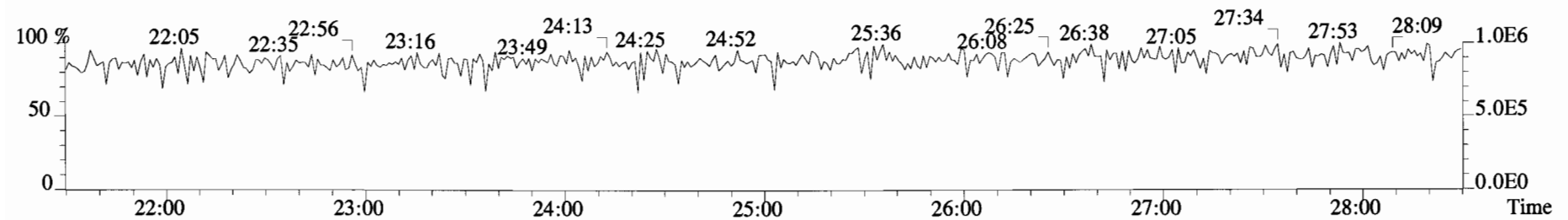
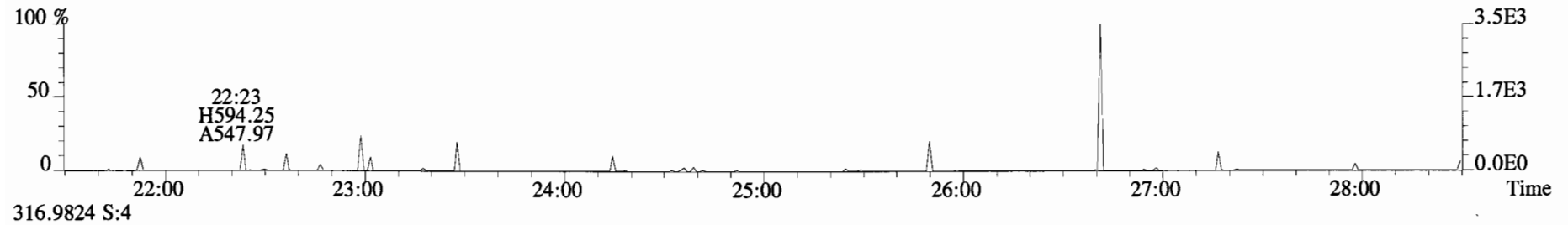
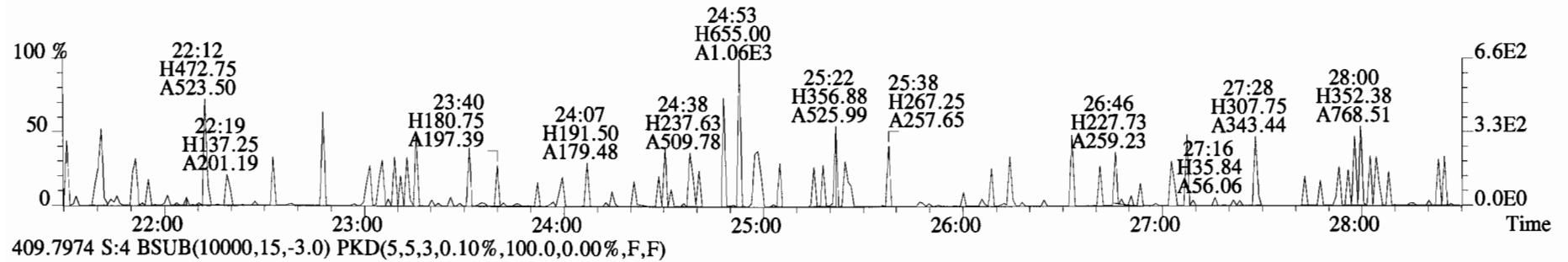
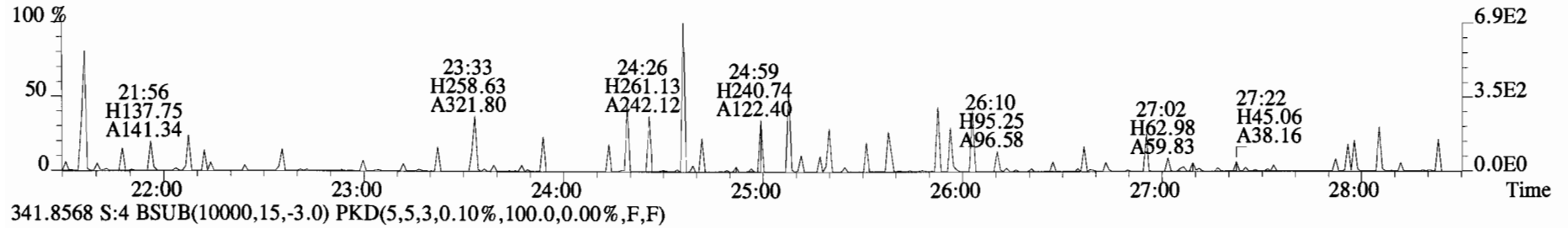
File:150130D2 #1-389 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



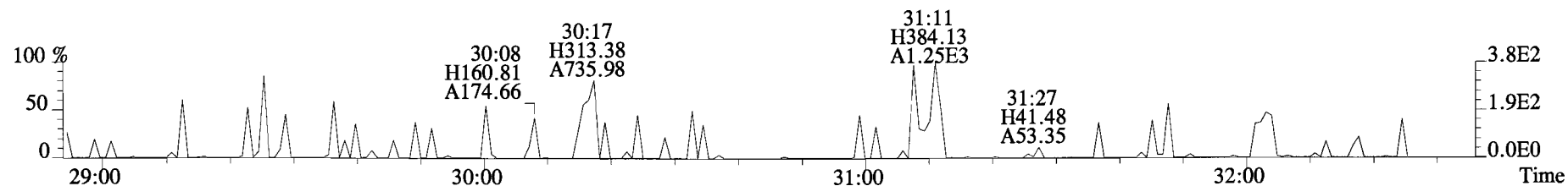
File:150130D2 #1-551 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



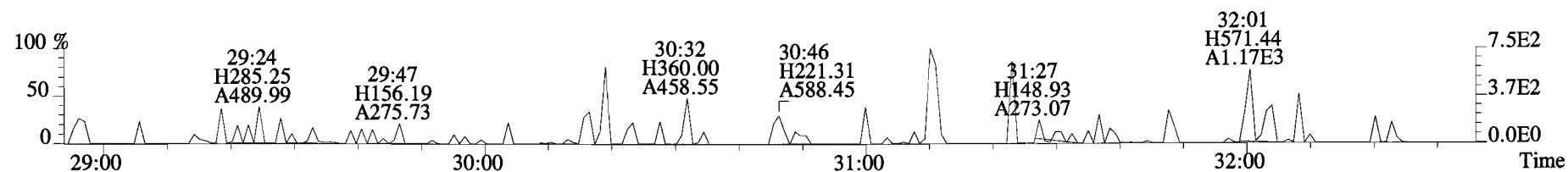
File:150130D2 #1-551 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



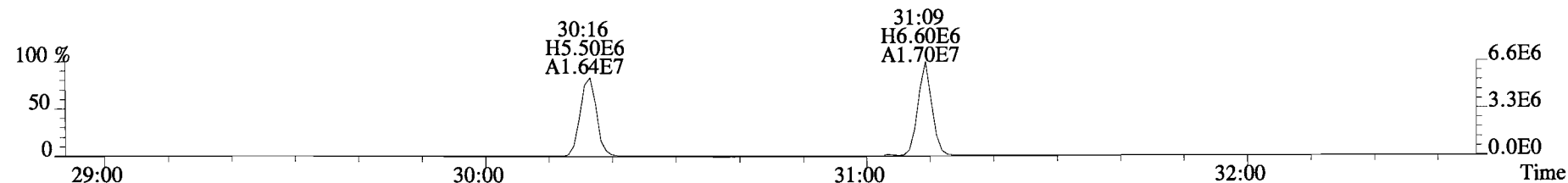
File:150130D2 #1-251 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



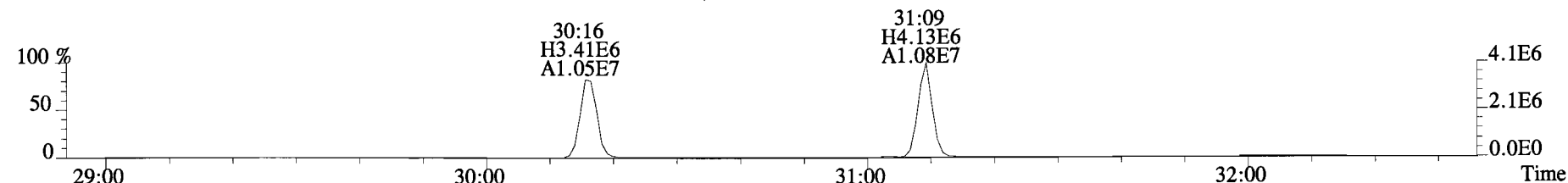
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



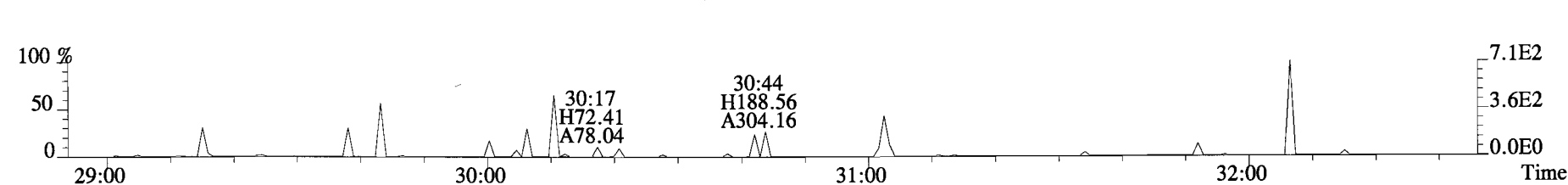
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



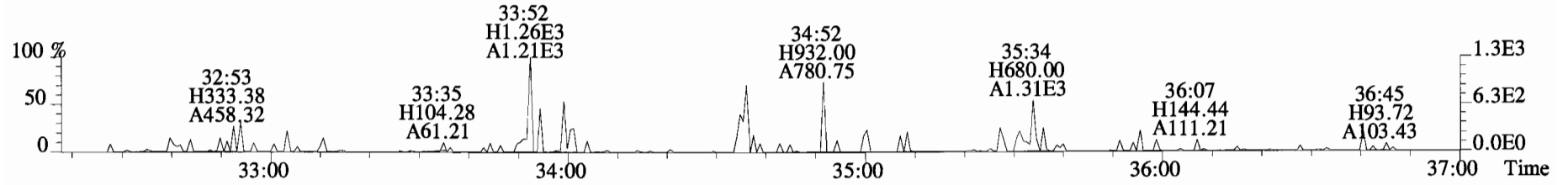
353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



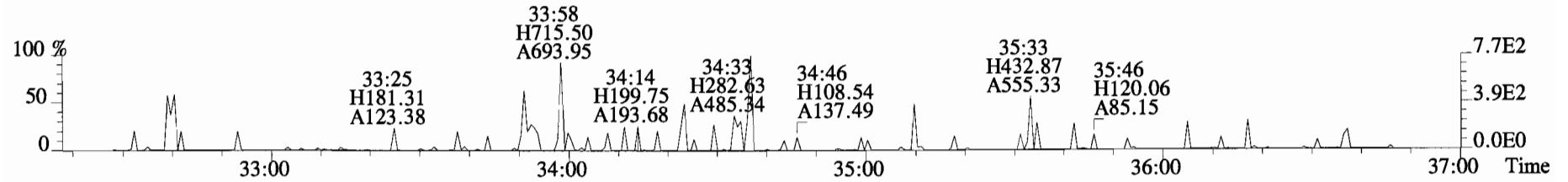
409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



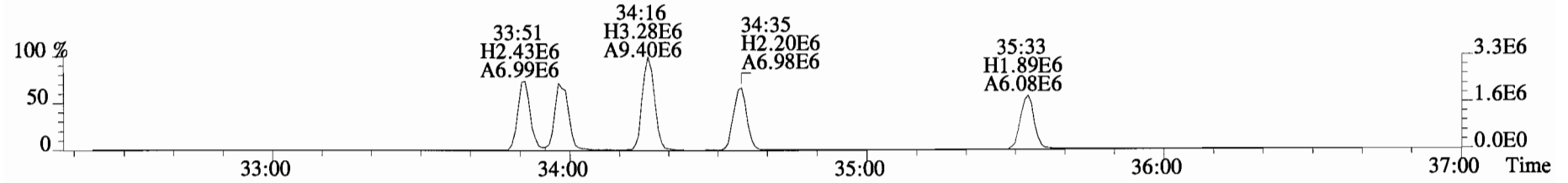
File:150130D2 #1-393 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



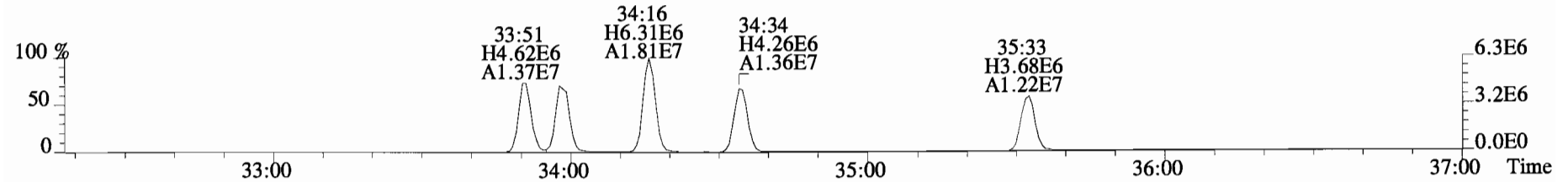
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



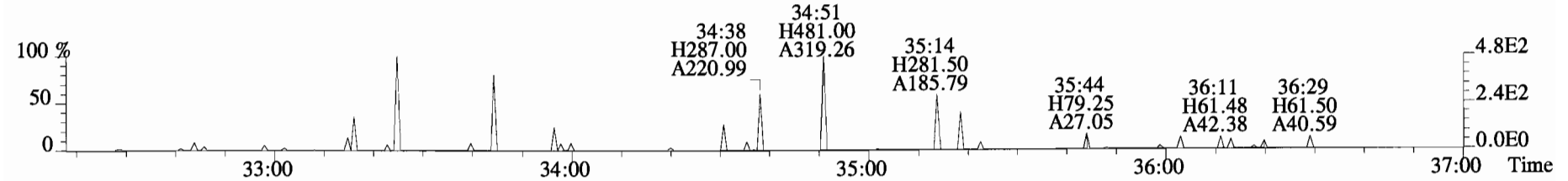
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



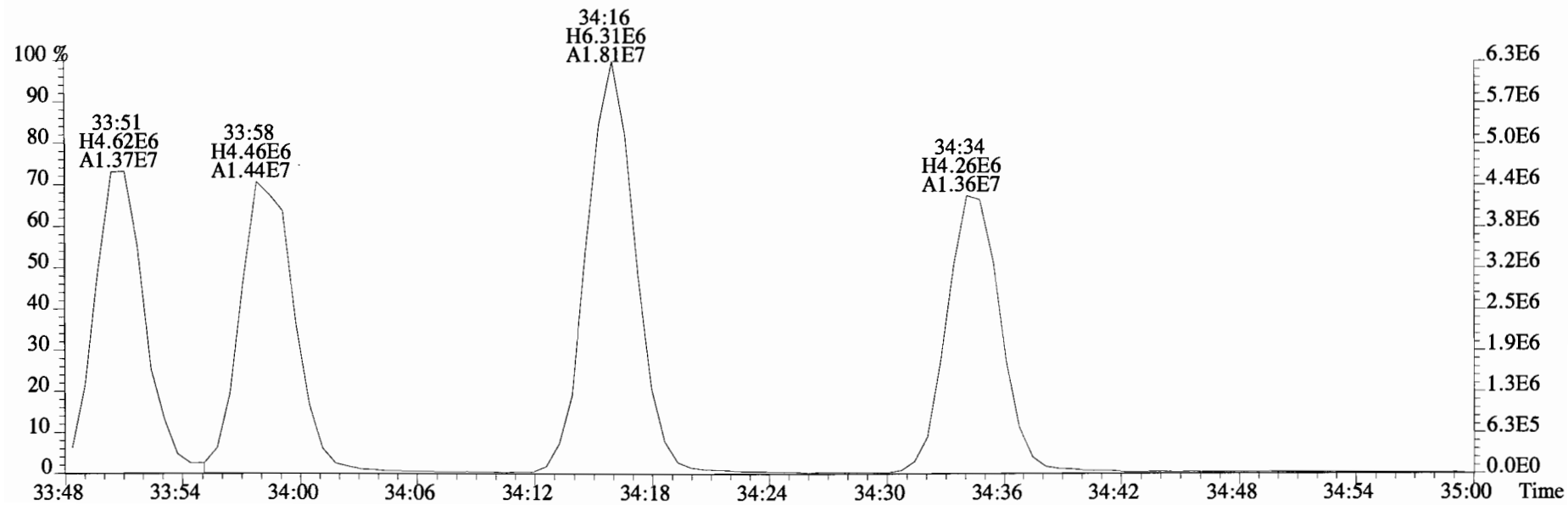
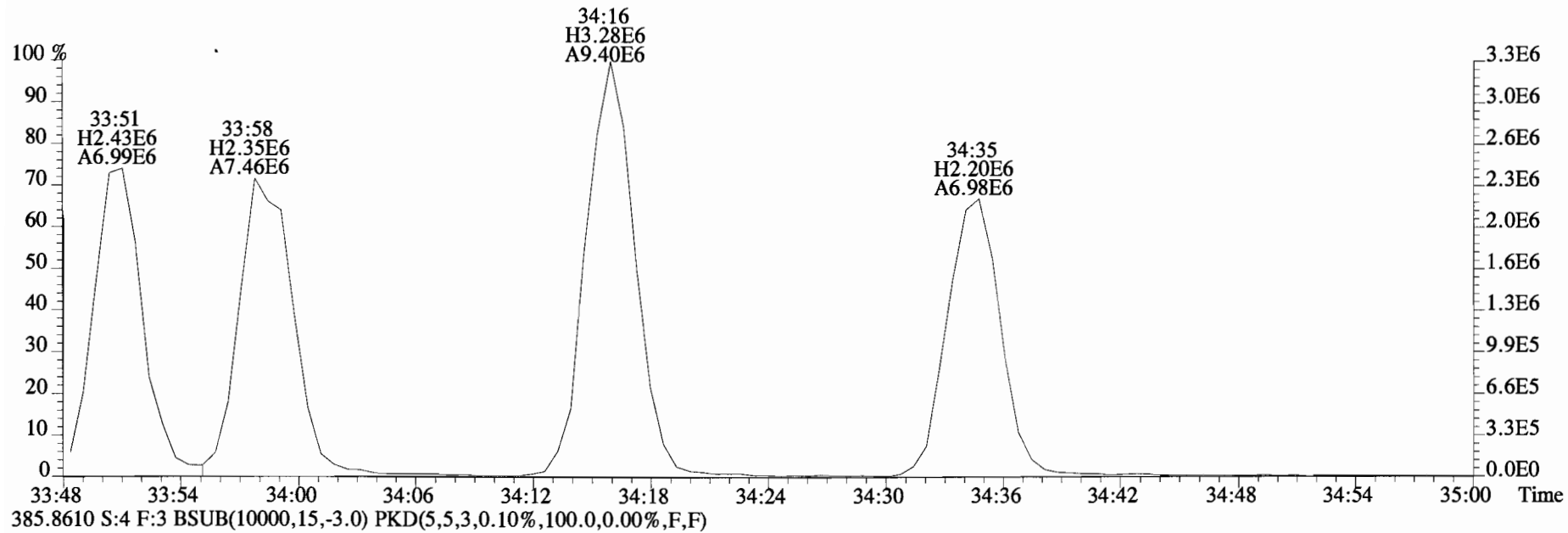
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



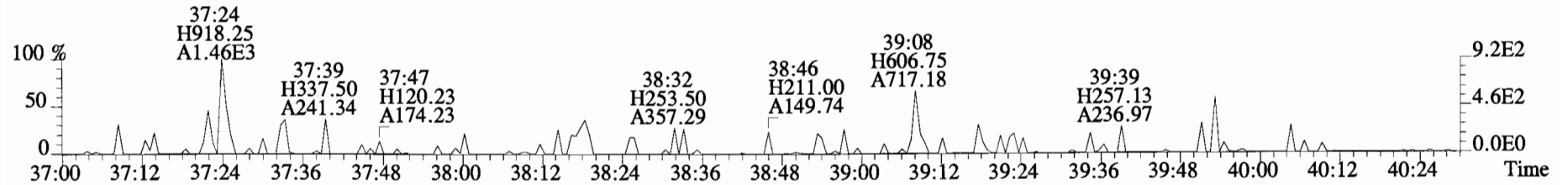
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



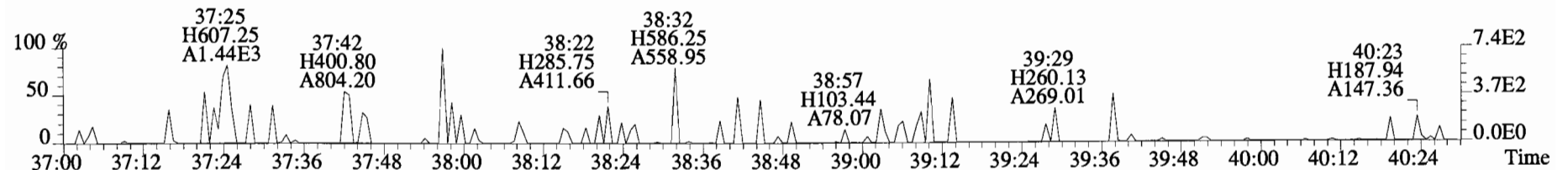
File:150130D2 #1-393 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
383.8639 S:4 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



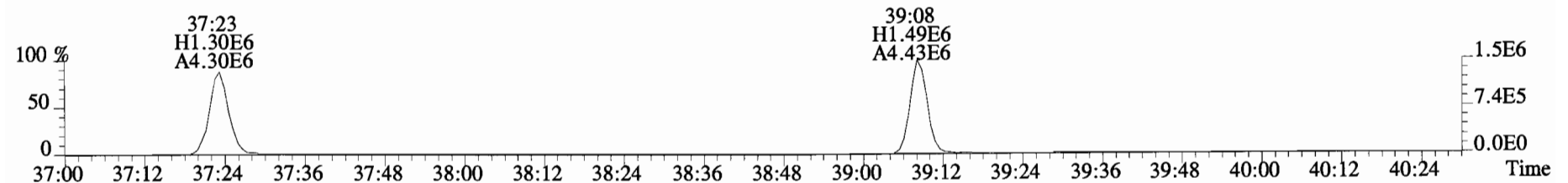
File:150130D2 #1-325 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
407.7818 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



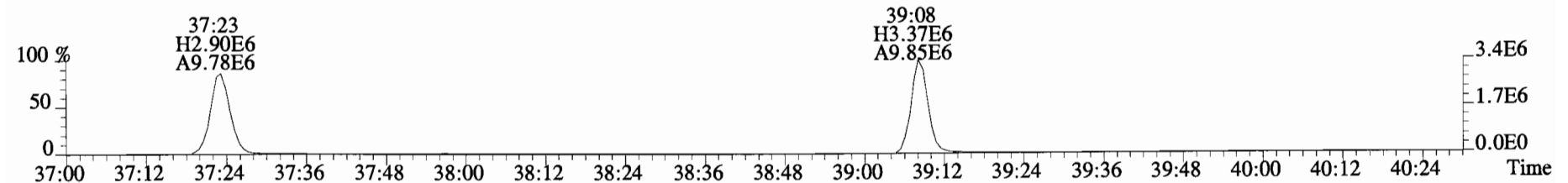
409.7788 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



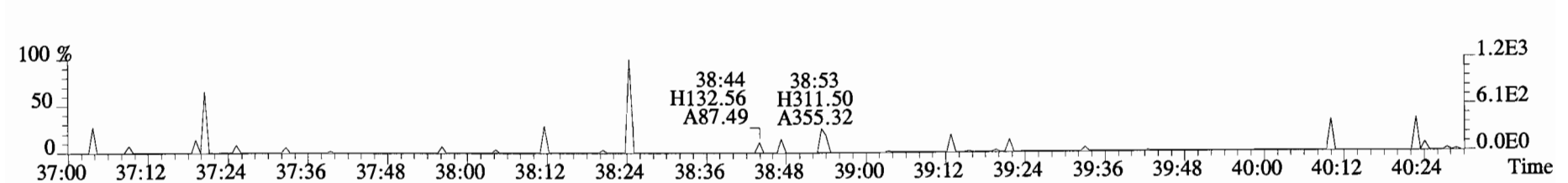
417.8253 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



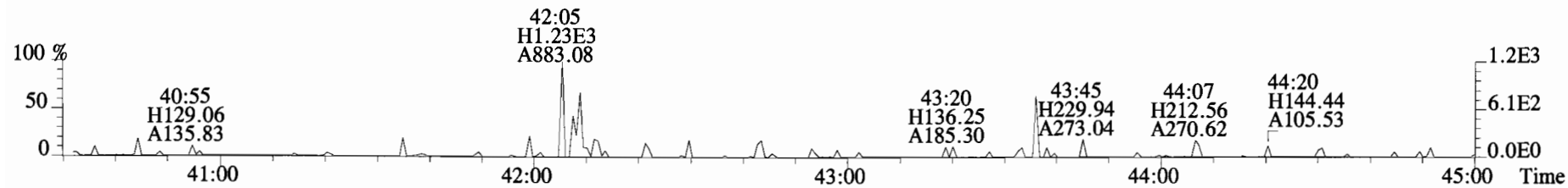
419.8220 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



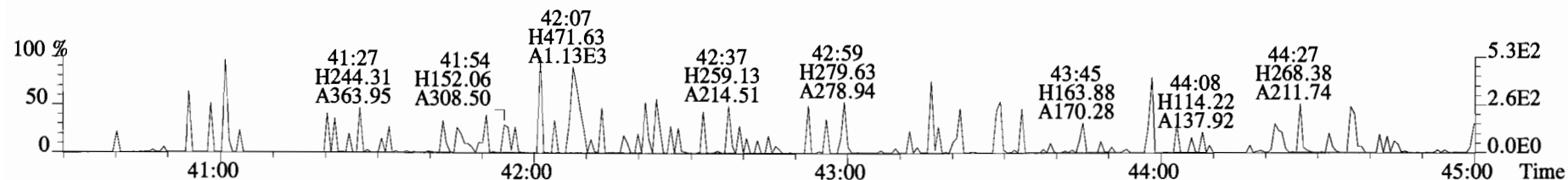
479.7165 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



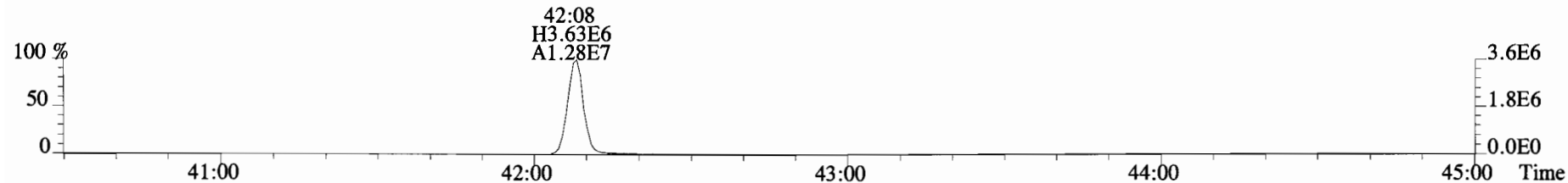
File:150130D2 #1-389 Acq:31-JAN-2015 00:37:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BLK1 Method Blank 1 Exp:OCDD_DB5
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



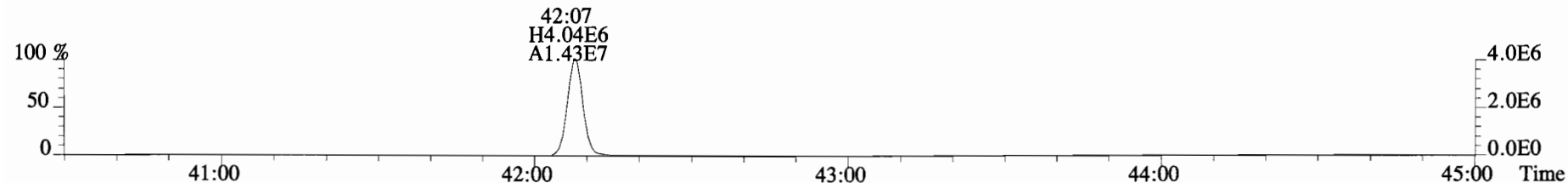
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



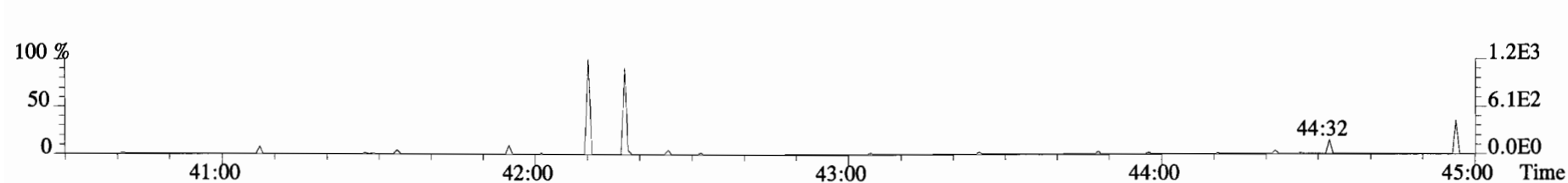
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

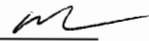
Ext. Date: 1-29-15 Shift: Day Analysis Date: 30-JAN-15 Time: 23:00:58

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

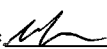
Ext. Date: 1-29-15 Shift: Day Analysis Date: 30-JAN-15 Time: 23:00:58

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELLED 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

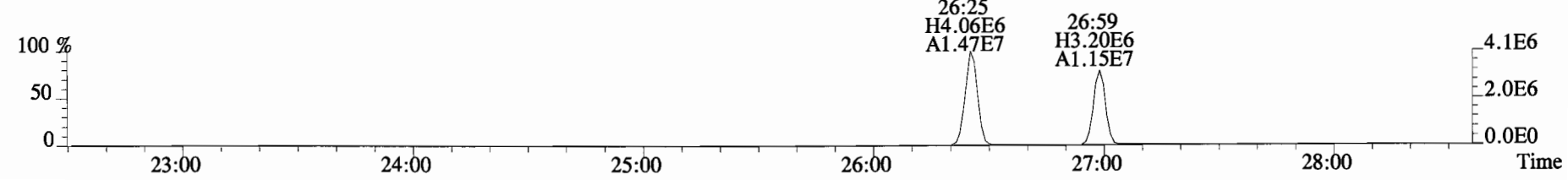
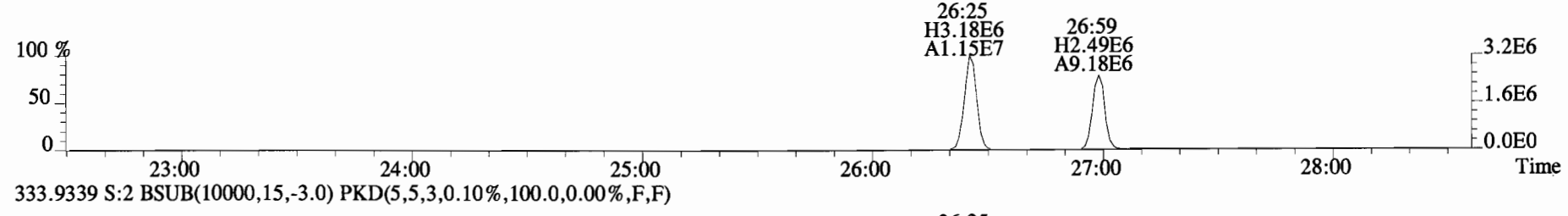
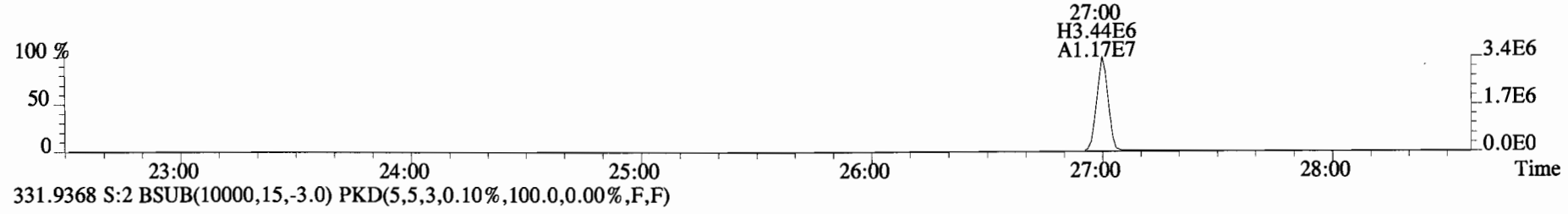
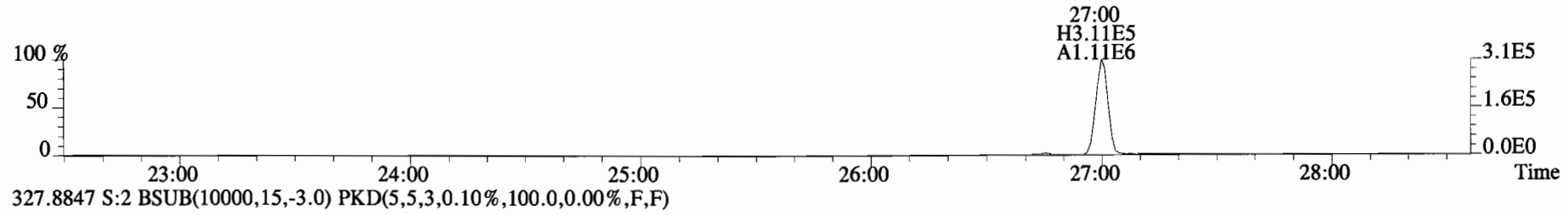
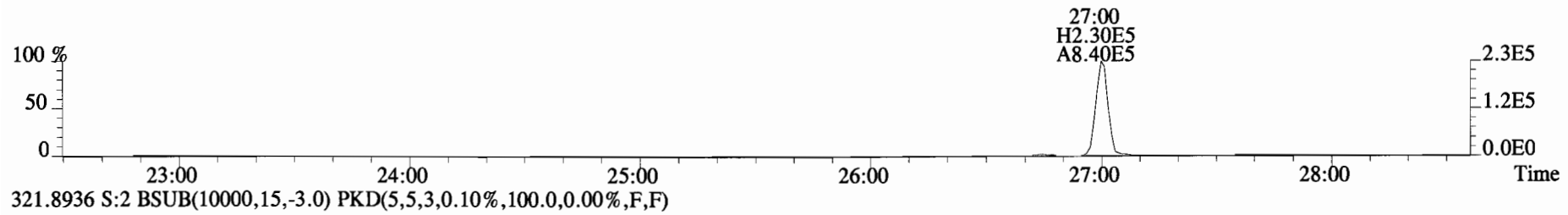
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ConCal: ST150130D2-1
EndCAL: NA

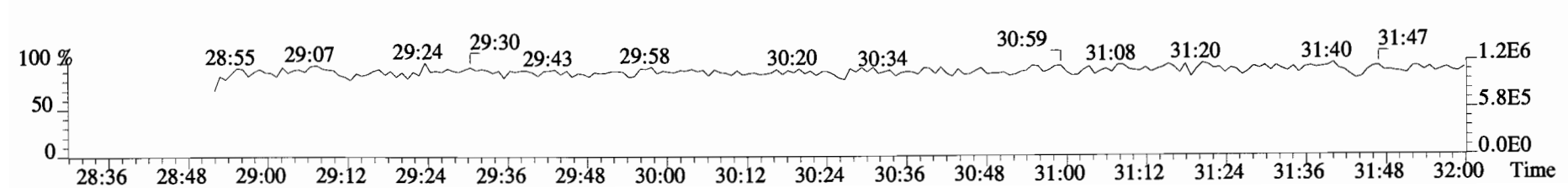
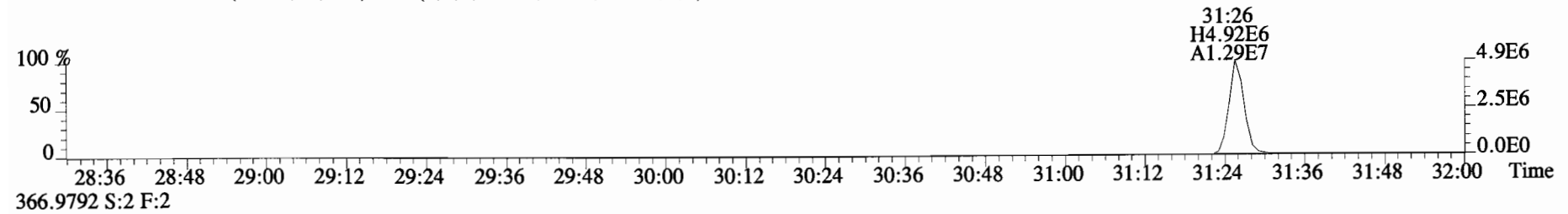
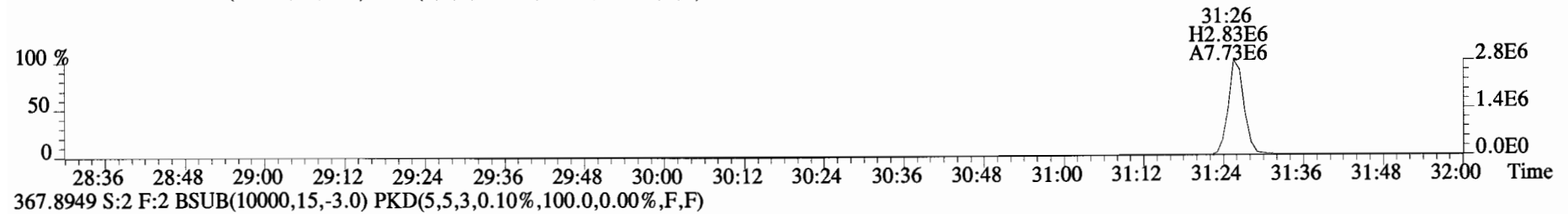
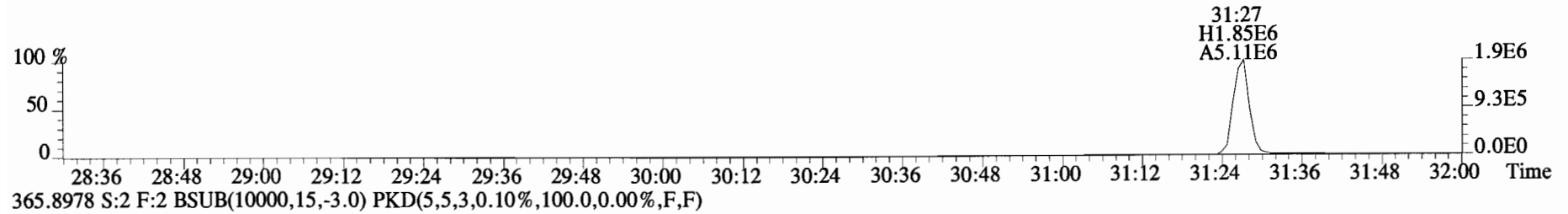
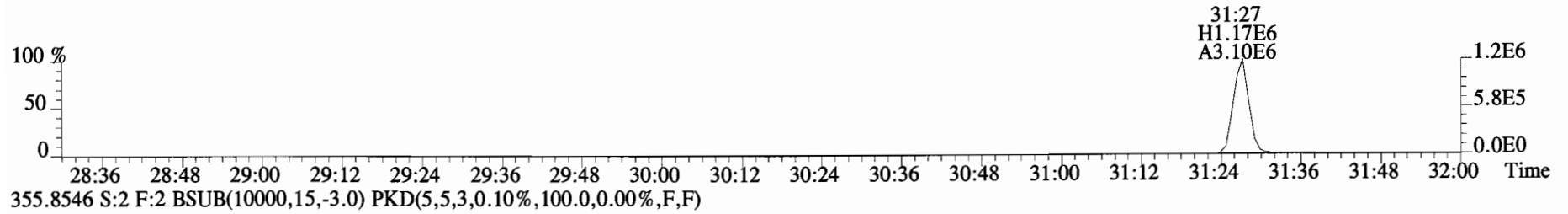
Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	1.95e+06	0.76 y	1.17	26:60	1.001	161.59	*	*	2.5	*	Total Tetra-Dioxins	168	168	*	*	
1,2,3,7,8-PeCDD	8.21e+06	0.61 y	0.91	31:27	1.001	877.56	*	*	2.5	*	Total Penta-Dioxins	879	882	*	*	
1,2,3,4,7,8-HxCDD	7.44e+06	1.23 y	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

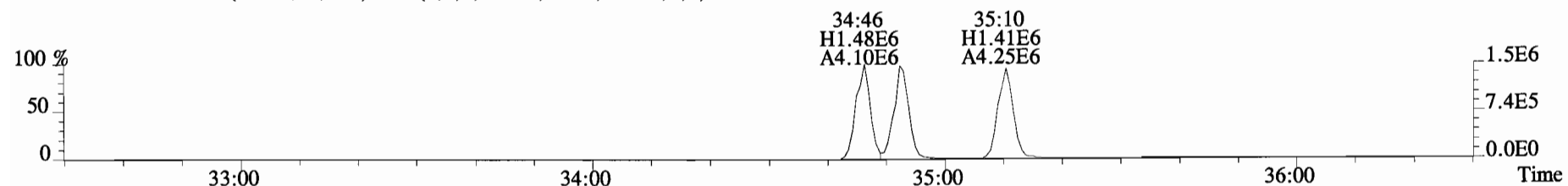
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Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



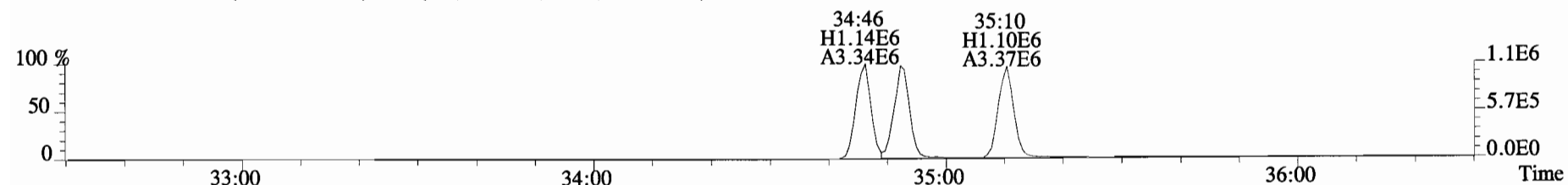
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Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



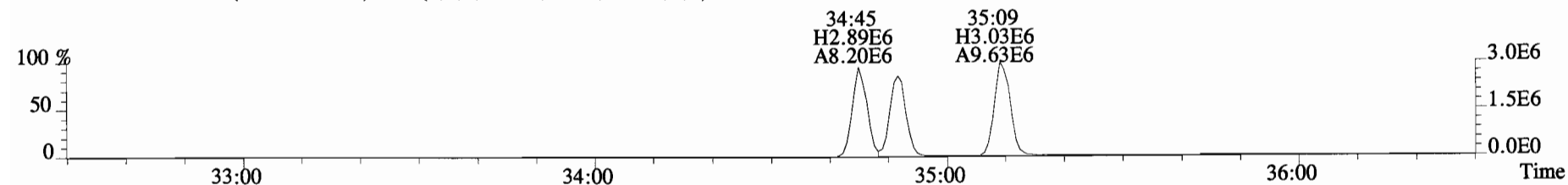
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Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



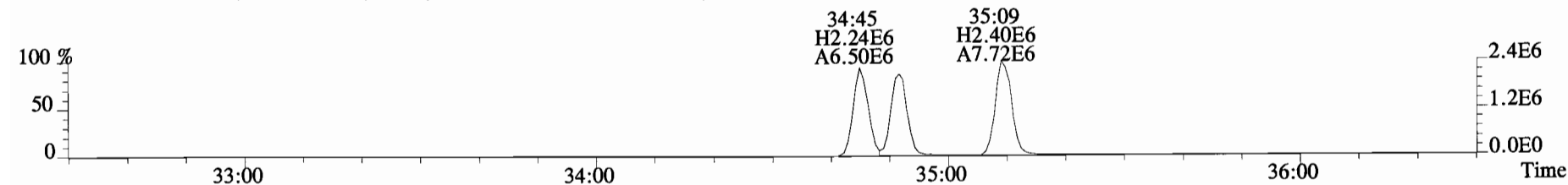
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



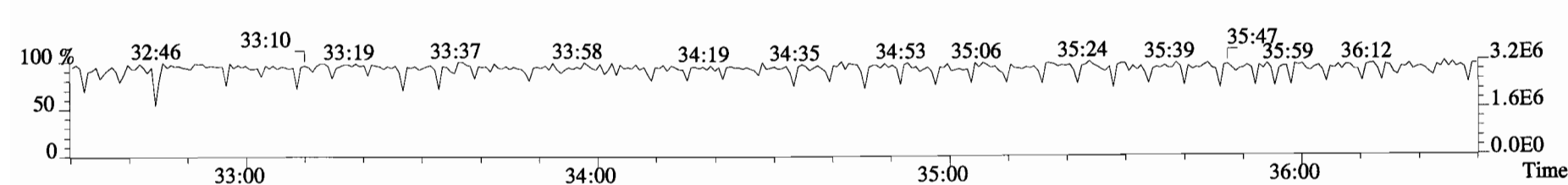
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



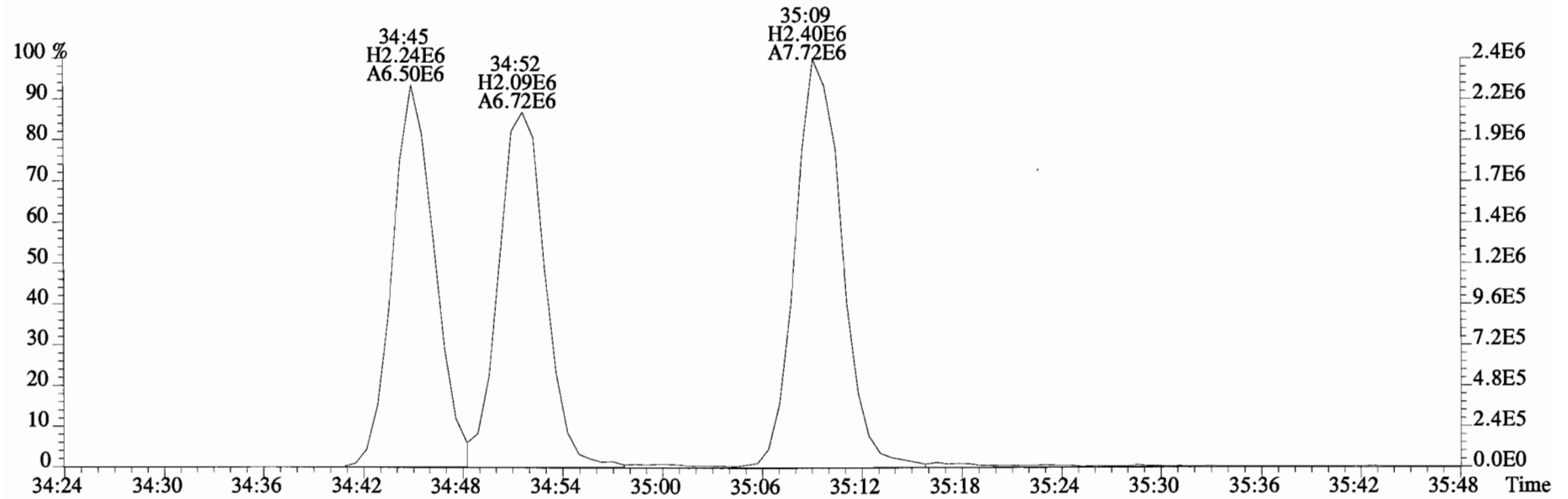
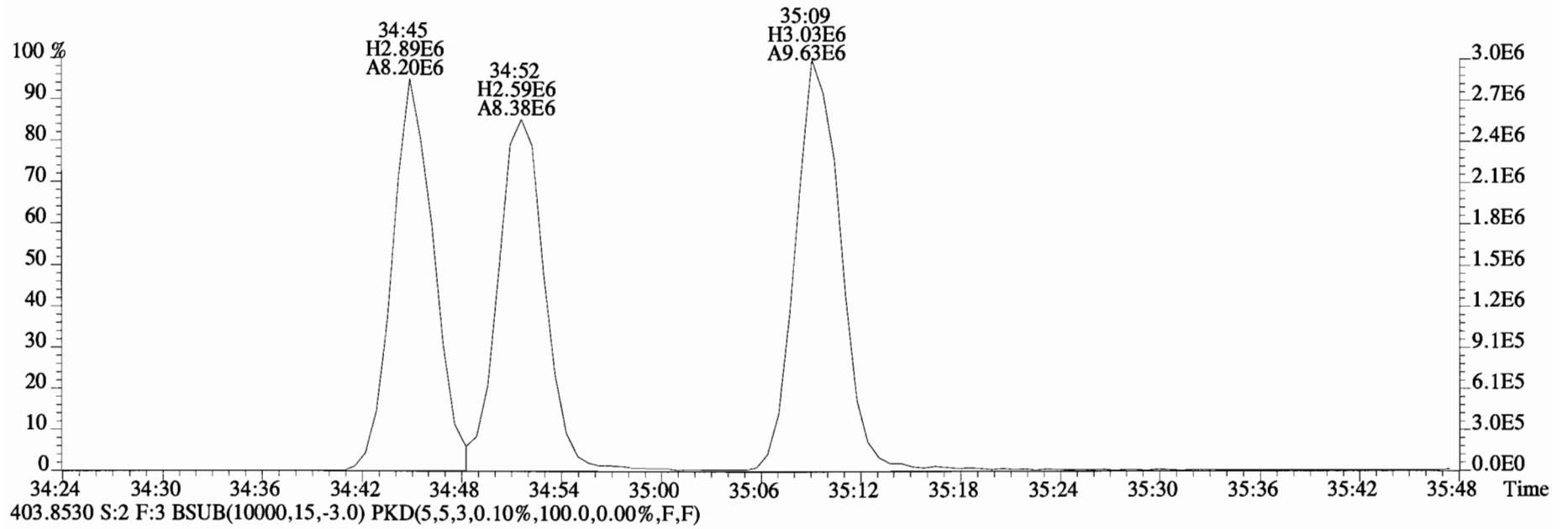
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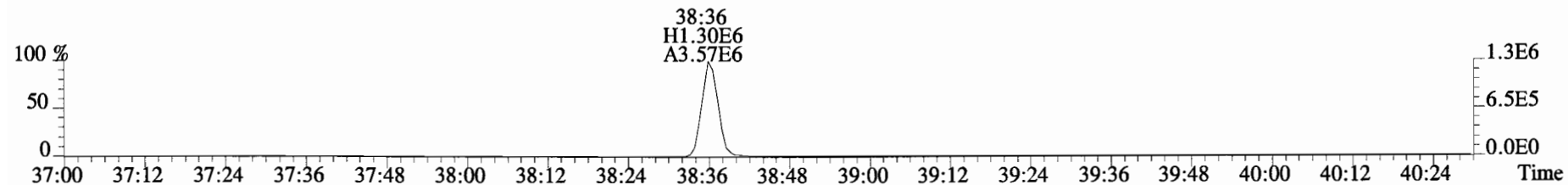
380.9760 S:2 F:3



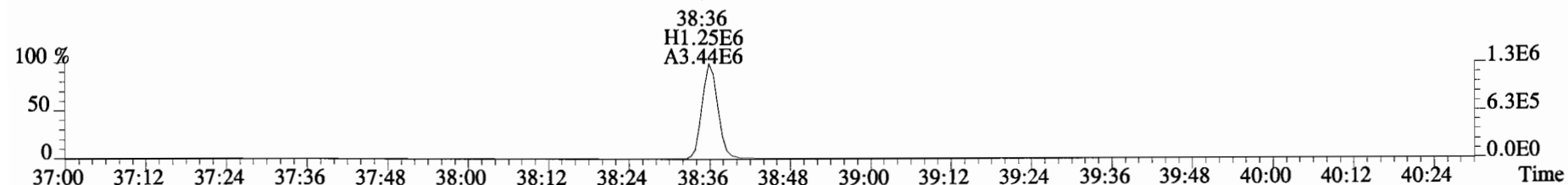
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Sample#2 File Text: Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
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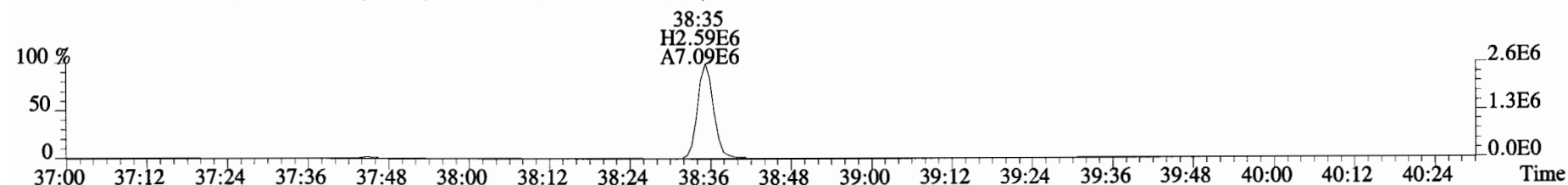
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Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



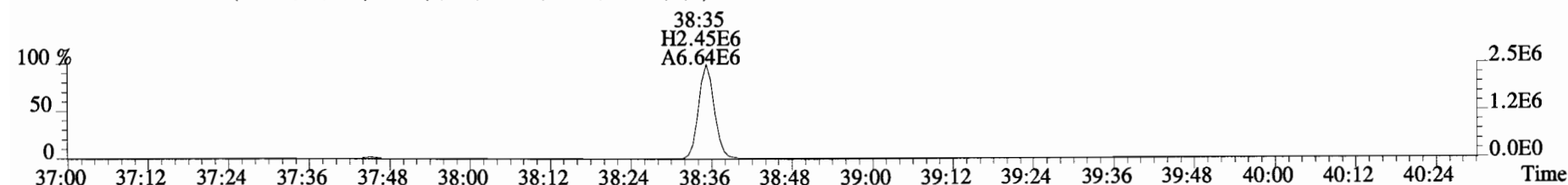
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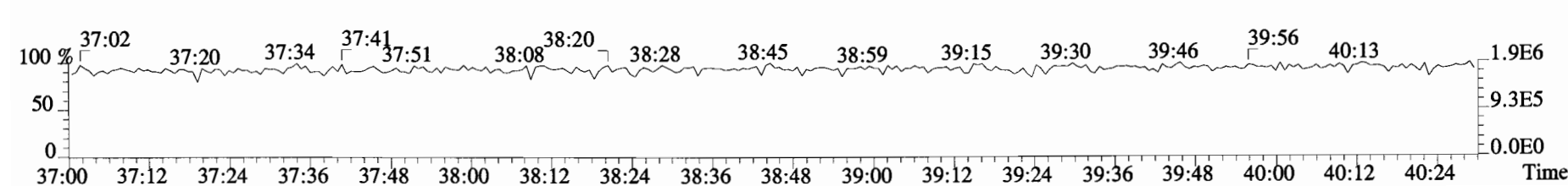
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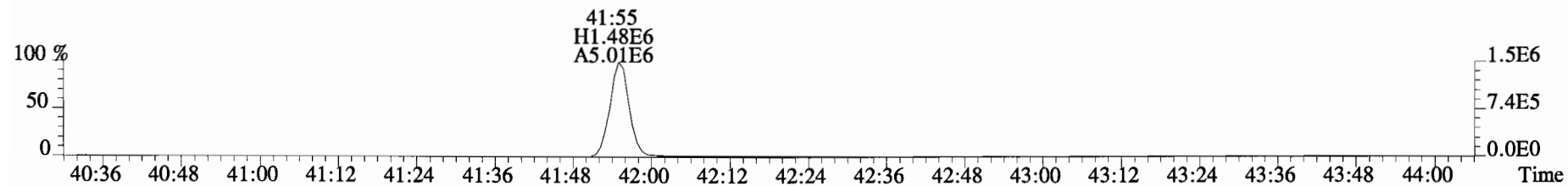
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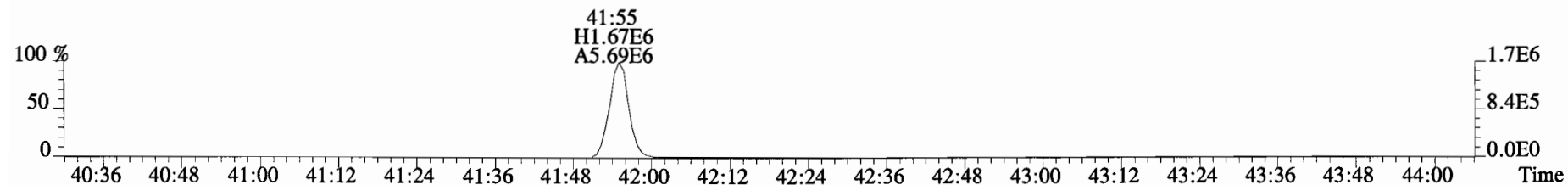
430.9728 S:2 F:4



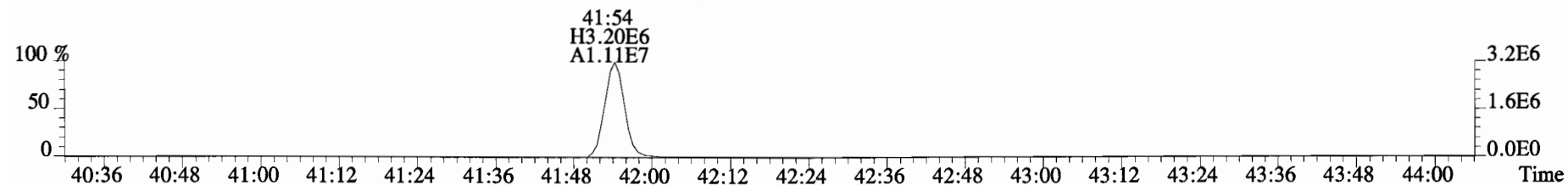
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Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



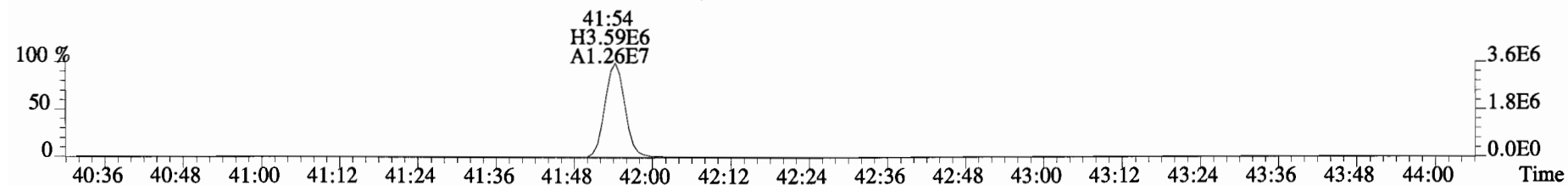
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



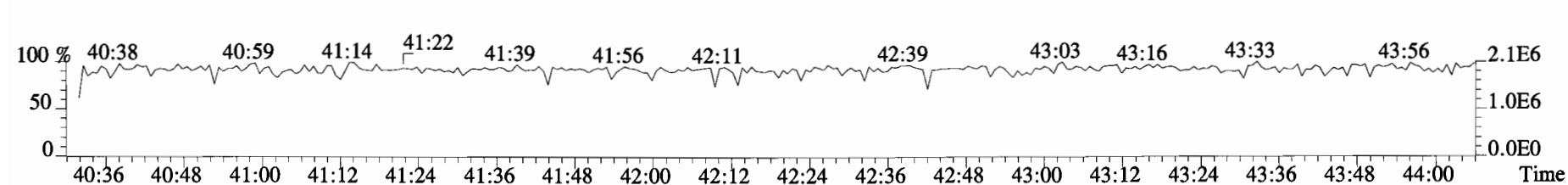
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



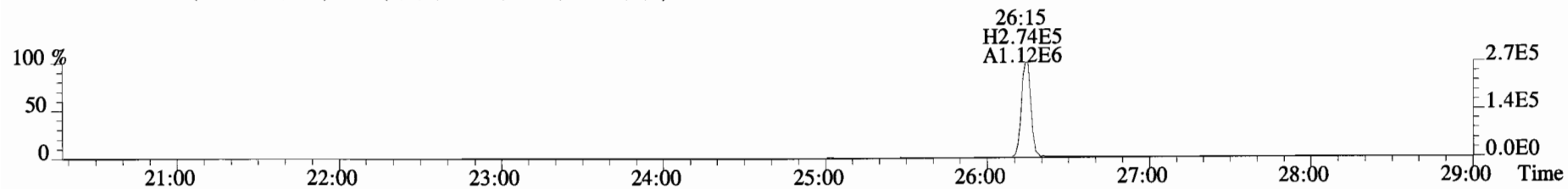
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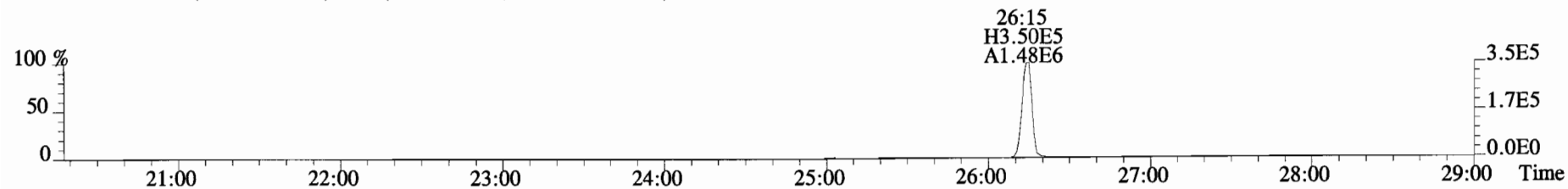
454.9728 S:2 F:5



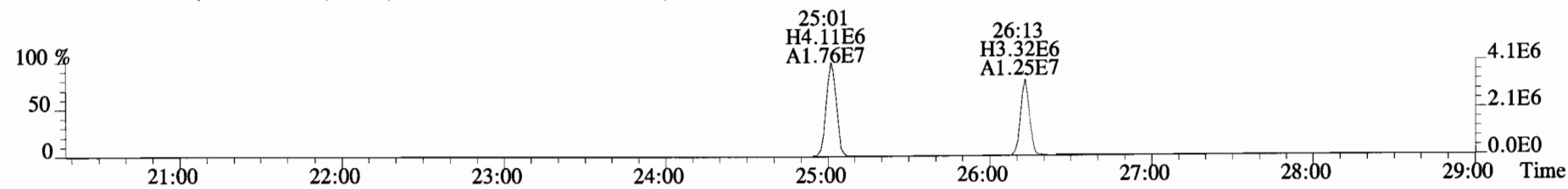
File:150130D2 #1-551 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
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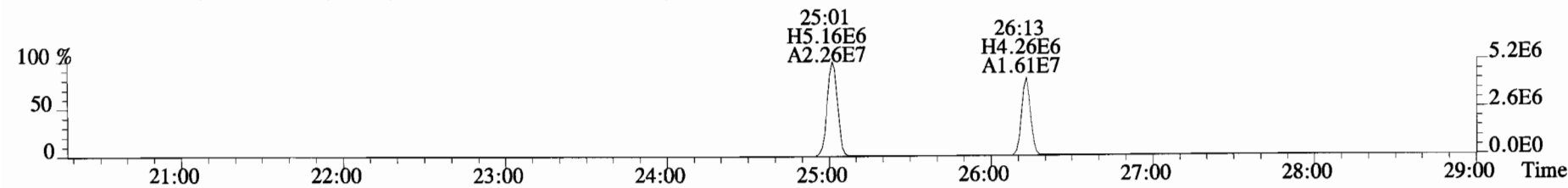
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



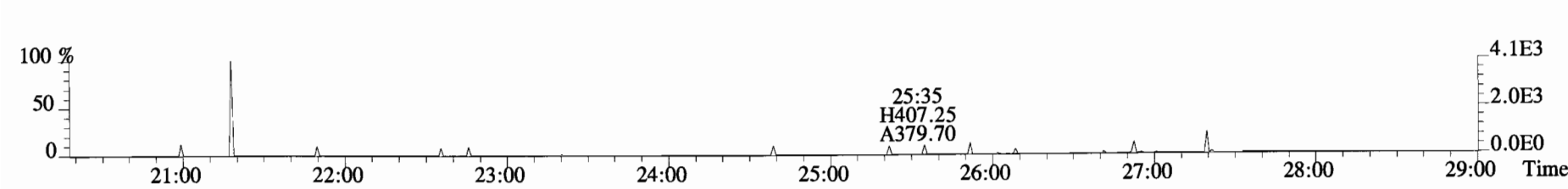
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



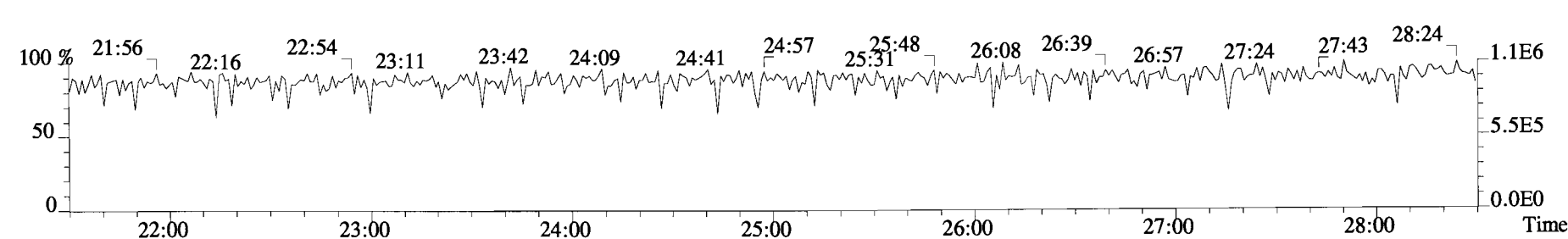
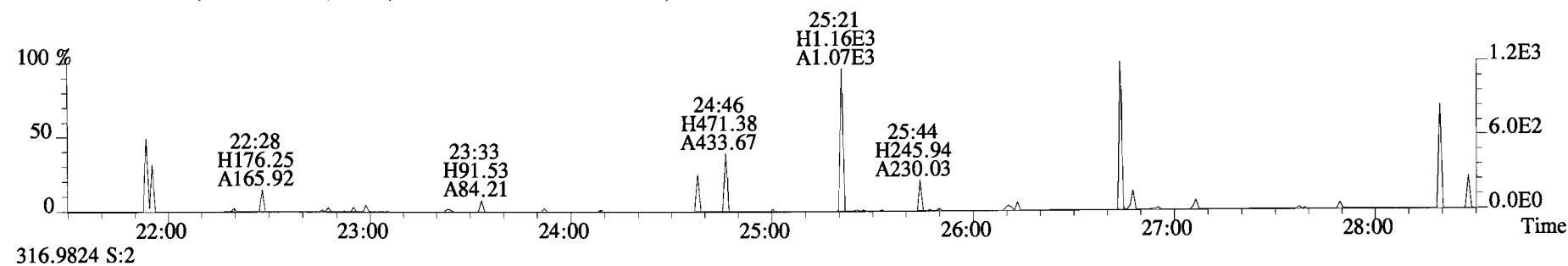
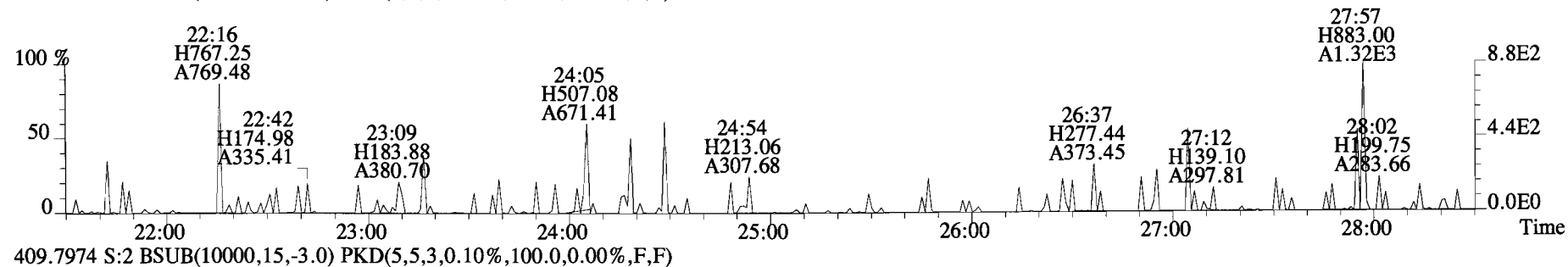
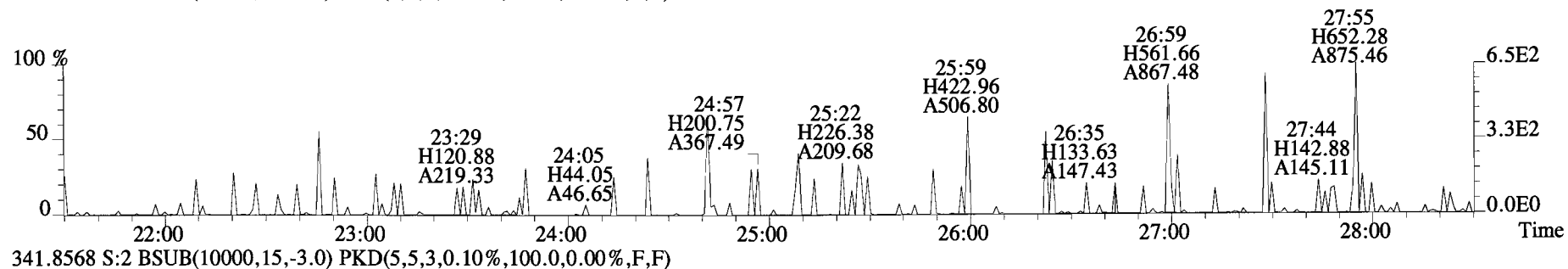
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



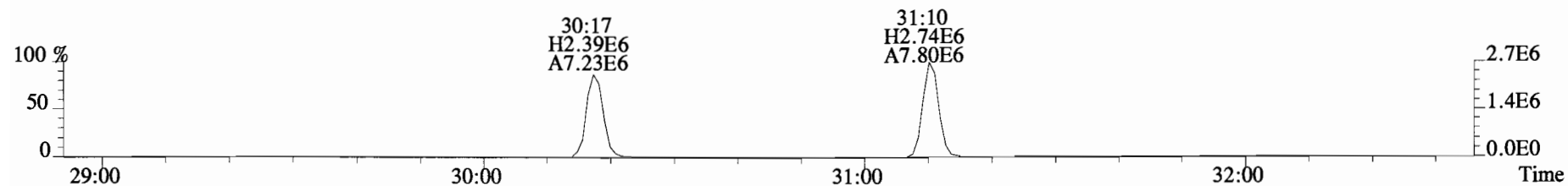
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



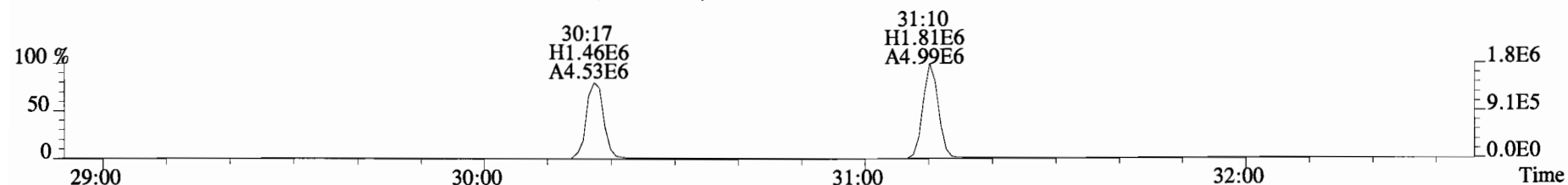
File:150130D2 #1-551 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
 339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



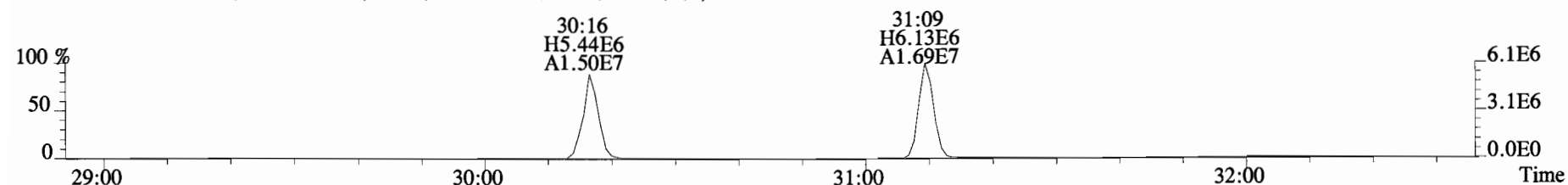
File:150130D2 #1-251 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



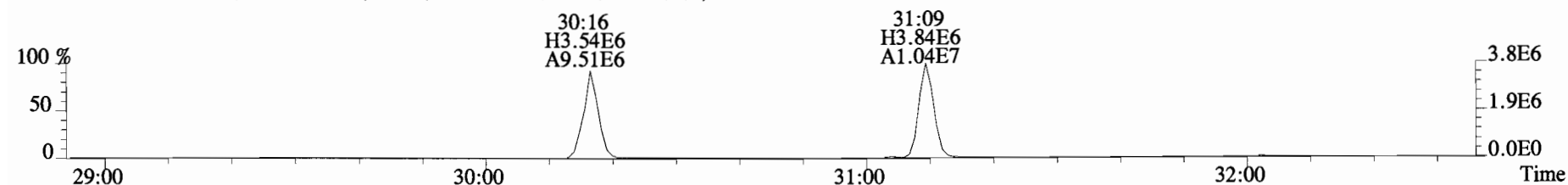
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



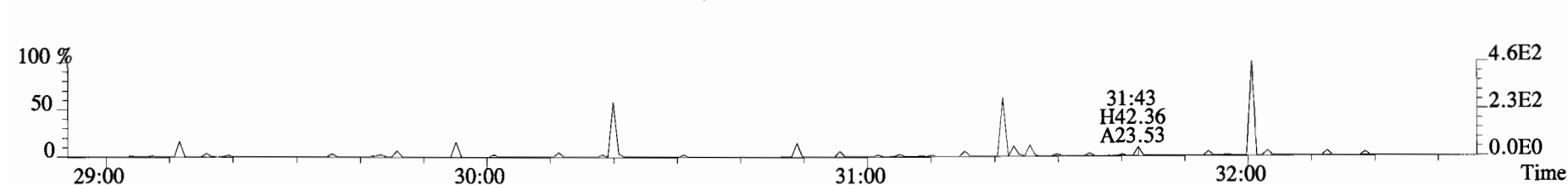
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



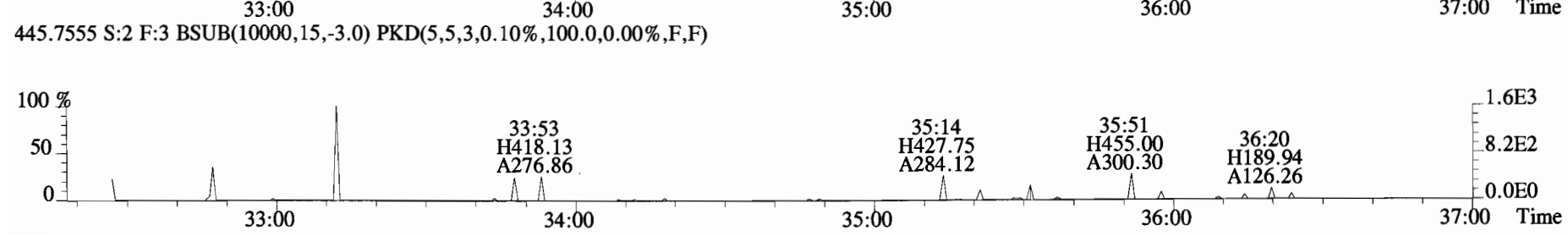
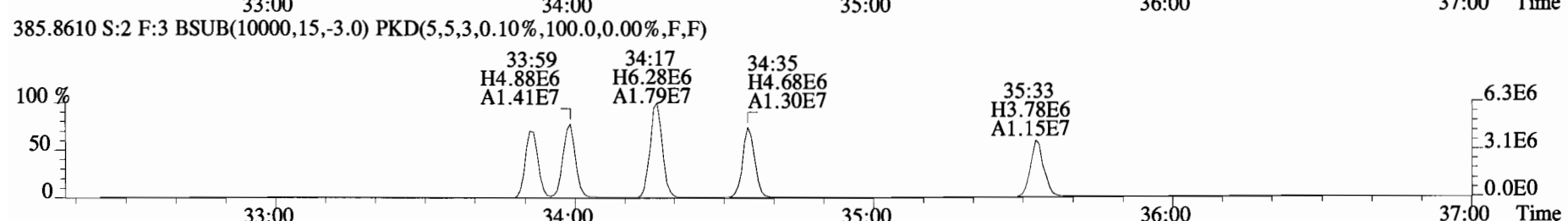
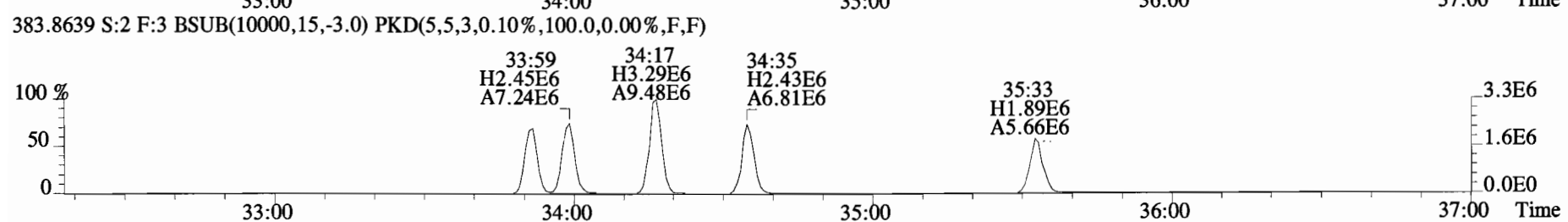
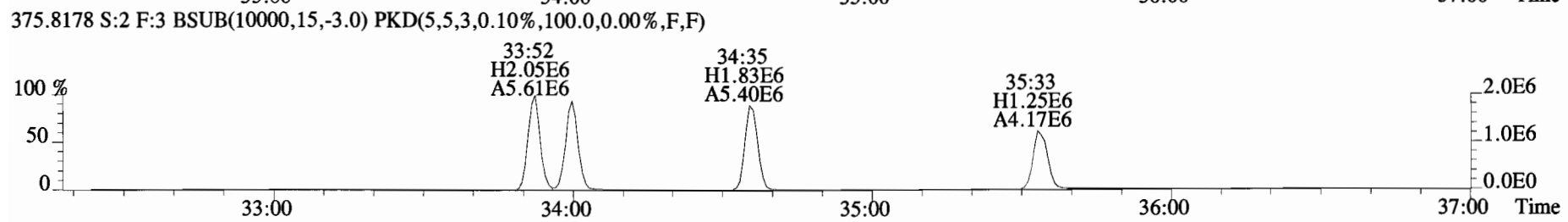
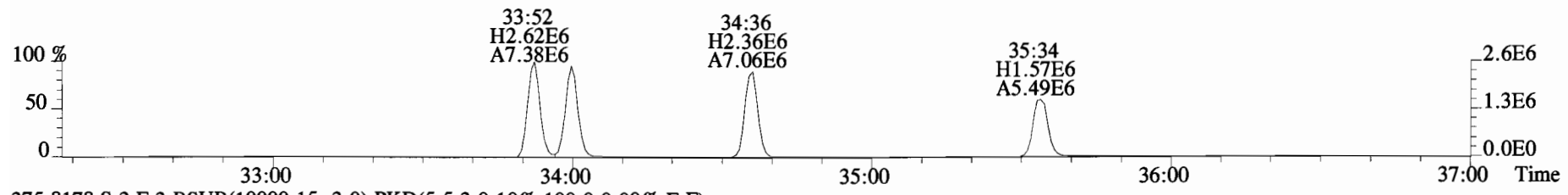
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



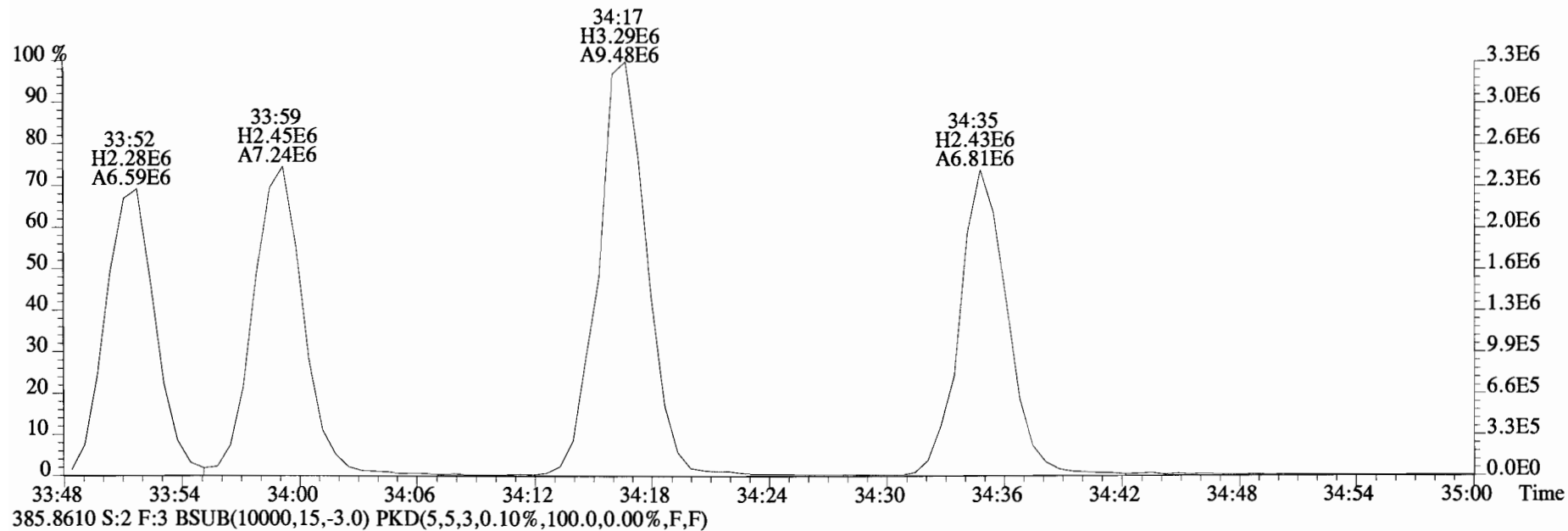
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



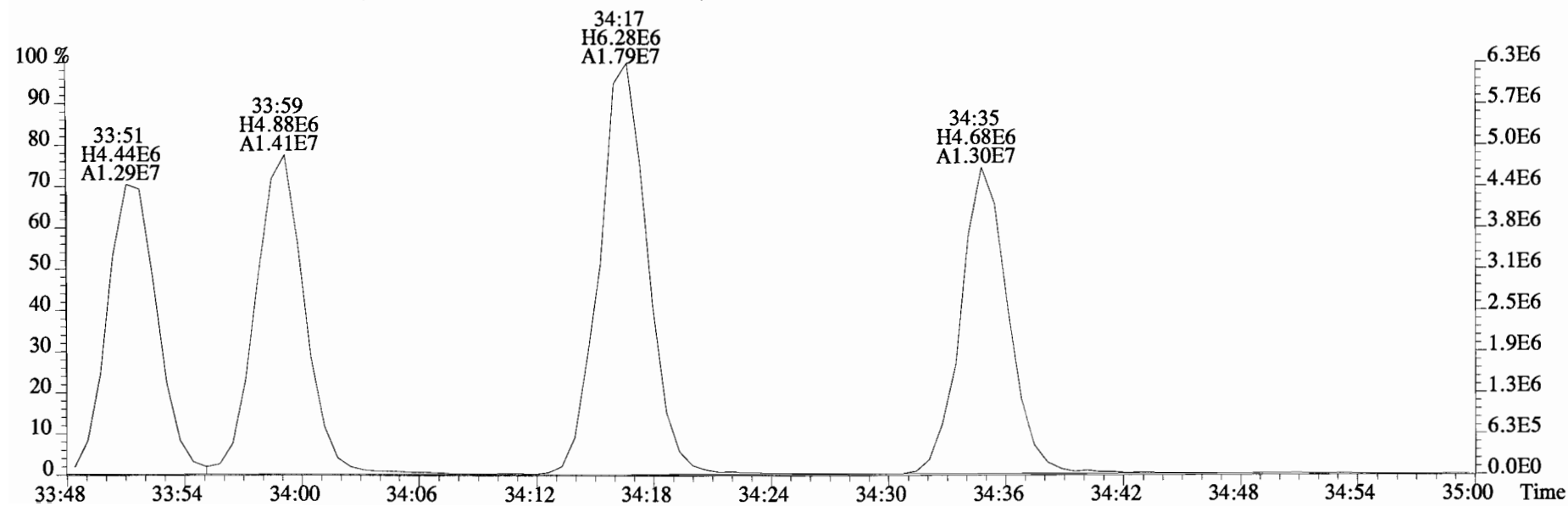
File:150130D2 #1-393 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
 373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



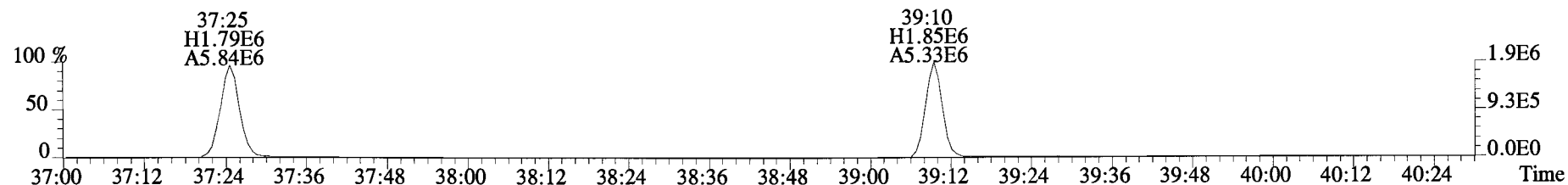
File:150130D2 #1-393 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-7 Text: B5A0110-BS1 OPR 1 Exp: OCDD_DB5
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



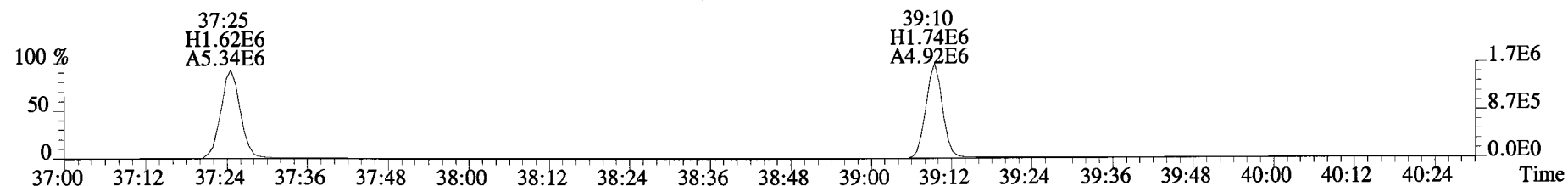
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



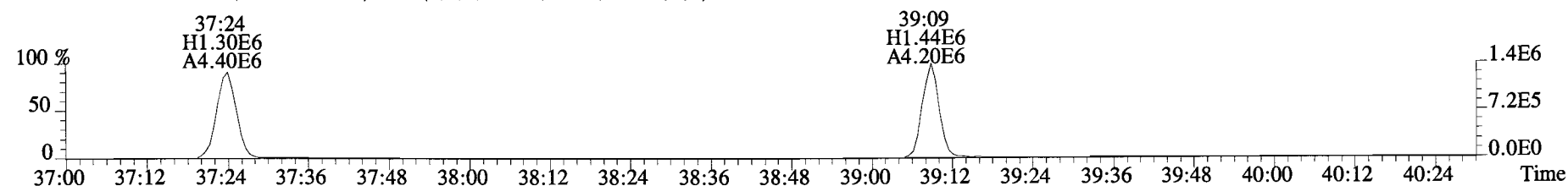
File:150130D2 #1-325 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



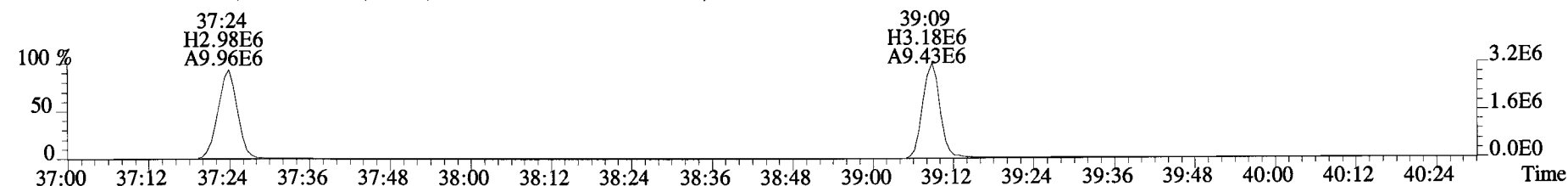
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



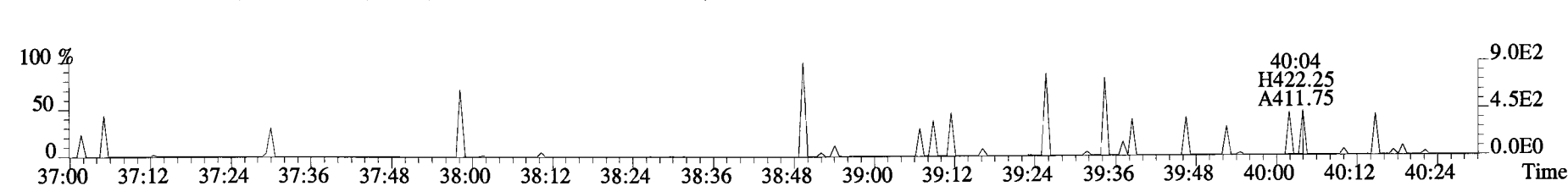
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



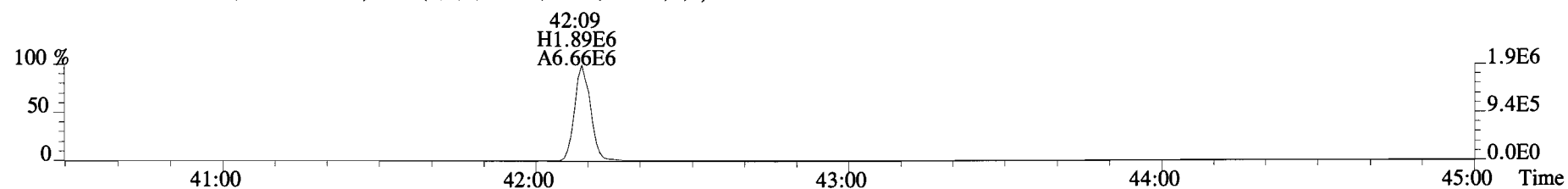
419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



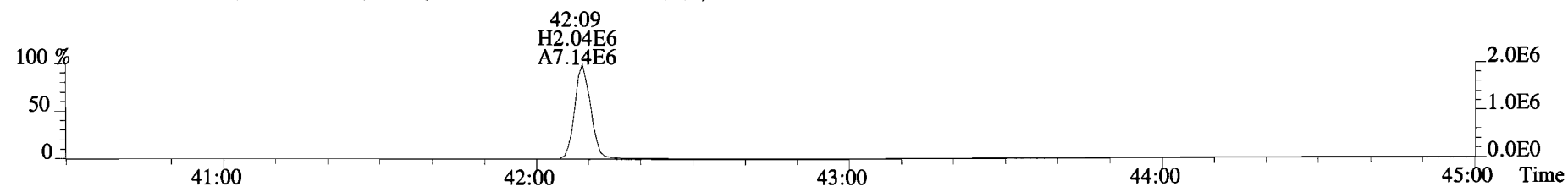
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



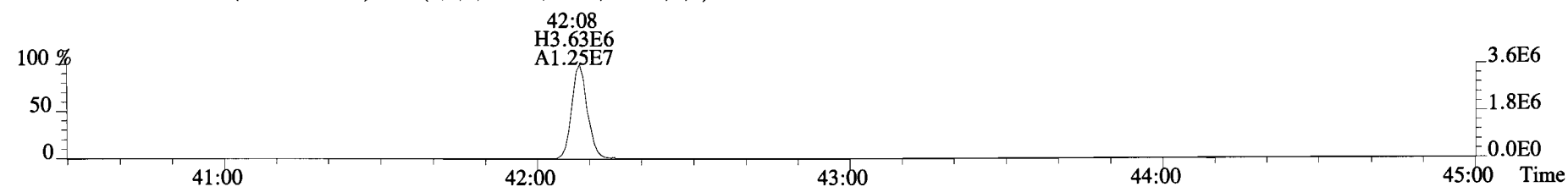
File:150130D2 #1-389 Acq:30-JAN-2015 23:00:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-7 Text:B5A0110-BS1 OPR 1 Exp:OCDD_DB5
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



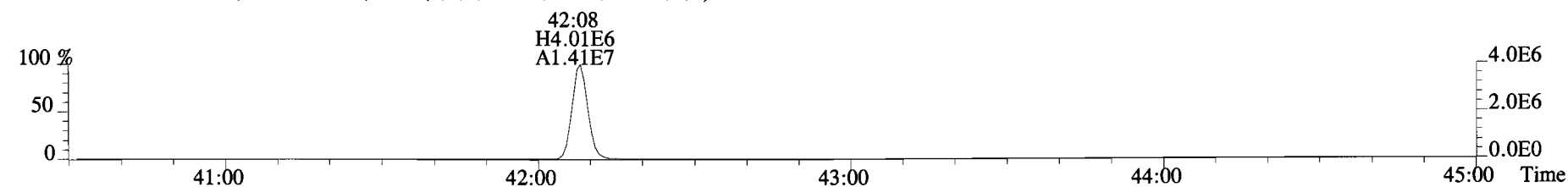
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



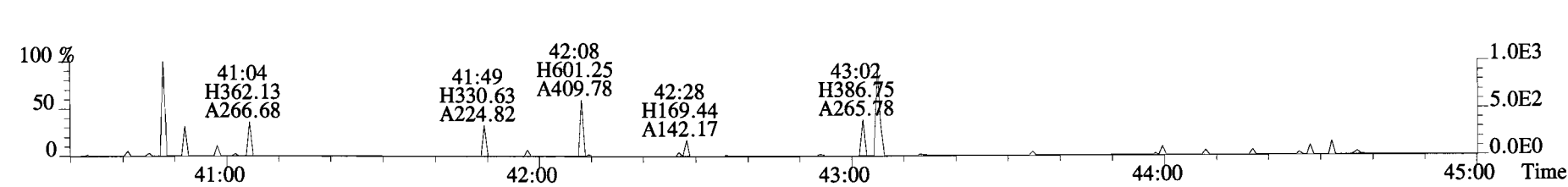
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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)



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 η	*	*		584	2.5	0.729	Total Tetra-Dioxins	*	*		584	0.730
1,2,3,7,8-PeCDD	*	* n	0.91	NotF η	*	*		731	2.5	0.878	Total Penta-Dioxins	*	*		731	0.878
1,2,3,4,7,8-HxCDD	*	* n	1.08	NotF η	*	*		451	2.5	0.899	Total Hexa-Dioxins	1.06	1.06		*	*
1,2,3,6,7,8-HxCDD	*	* n	1.06	NotF η	*	*		451	2.5	0.957	Total Hepta-Dioxins	45.9	45.9		*	*
1,2,3,7,8,9-HxCDD	*	* n	0.93	NotF η	*	*		451	2.5	0.966	Total Tetra-Furans	*	*		567	0.640
1,2,3,4,6,7,8-HpCDD	1.98e+05	1.01 y	1.10	38:34	1.000	26.039		*	2.5	*	Total Penta-Furans	0.0000	0.0000		524	0.683
OCDD	1.25e+06	0.86 y	0.95	41:53	1.000	220.74		*	2.5	*	Total Hexa-Furans	3.59	4.34		*	*
											Total Hepta-Furans	13.9	13.9		*	*
2,3,7,8-TCDF	*	* n	1.07	NotF η	*	*		567	2.5	0.640						
1,2,3,7,8-PeCDF	*	* n	1.07	NotF η	*	*		494	2.5	0.640						
2,3,4,7,8-PeCDF	*	* n	1.03	NotF η	*	*		494	2.5	0.647						
1,2,3,4,7,8-HxCDF	*	* n	1.38	NotF η	*	*		611	2.5	0.478						
1,2,3,6,7,8-HxCDF	*	* n	1.26	NotF η	*	*		611	2.5	0.523						
2,3,4,6,7,8-HxCDF	*	* n	1.29	NotF η	*	*		611	2.5	0.525						
1,2,3,7,8,9-HxCDF	*	* n	1.19	NotF η	*	*		611	2.5	0.721						
1,2,3,4,6,7,8-HpCDF	7.49e+04	1.04 y	1.61	37:22	1.000	6.5247		*	2.5	*						
1,2,3,4,7,8,9-HpCDF	*	* n	1.53	NotF η	*	*		521	2.5	0.532						
OCDF	1.38e+05	0.92 y	1.10	42:07	1.000	18.677		*	2.5	*						
IS	13C-2,3,7,8-TCDD	2.15e+07	0.79 y	1.06	26:57	1.021	1603.1				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	2.07e+07	0.62 y	1.18	31:24	1.190	1385.2				80.7					
IS	13C-1,2,3,4,7,8-HxCDD	1.48e+07	1.24 y	0.72	34:43	1.014	1471.5				69.7					
IS	13C-1,2,3,6,7,8-HxCDD	1.47e+07	1.24 y	0.74	34:50	1.017	1435.6				74.1					
IS	13C-1,2,3,7,8,9-HxCDD	1.79e+07	1.26 y	0.85	35:08	1.026	1508.7				72.3					
IS	13C-1,2,3,4,6,7,8-HpCDD	1.37e+07	1.07 y	0.65	38:33	1.126	1504.5				75.9					
IS	13C-OCDD	2.37e+07	0.89 y	0.76	41:52	1.223	2225.9				75.7					
IS	13C-2,3,7,8-TCDF	2.85e+07	0.78 y	0.92	26:11	0.992	1660.6				56.0					
IS	13C-1,2,3,7,8-PeCDF	2.68e+07	1.58 y	0.92	30:15	1.146	1550.9				83.6					
IS	13C-2,3,4,7,8-PeCDF	2.64e+07	1.60 y	0.93	31:08	1.180	1514.8				78.1					
IS	13C-1,2,3,4,7,8-HxCDF	1.94e+07	0.51 y	0.98	33:49	0.988	1421.4				76.2					
IS	13C-1,2,3,6,7,8-HxCDF	2.14e+07	0.51 y	1.08	33:57	0.992	1416.3				71.5					
IS	13C-2,3,4,6,7,8-HxCDF	1.98e+07	0.52 y	1.03	34:33	1.009	1387.5				71.3					
IS	13C-1,2,3,7,8,9-HxCDF	1.73e+07	0.51 y	0.86	35:31	1.037	1440.7				69.8					
IS	13C-1,2,3,4,6,7,8-HpCDF	1.41e+07	0.44 y	0.72	37:21	1.091	1406.0				72.5					
IS	13C-1,2,3,4,7,8,9-HpCDF	1.40e+07	0.45 y	0.70	39:07	1.142	1437.3				70.8					
IS	13C-OCDF	2.67e+07	0.88 y	0.85	42:06	1.230	2255.1				72.3					
C/Up	37C1-2,3,7,8-TCDD	1.07e+07		1.12	26:58	1.022	752.98				56.8					
RS/RT	13C-1,2,3,4-TCDD	2.52e+07	0.80 y	1.00	26:23	*	1986.8						Integrations			Reviewed
RS	13C-1,2,3,4-TCDF	3.72e+07	0.76 y	1.00	24:58	*	1986.8						by			by
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.77e+07	0.52 y	1.00	34:14	*	1986.8						Analyst: <u>AK</u>			Analyst: <u>QT</u>
													Date: <u>2/11/15</u>			Date: <u>2/2/15</u>

Totals class: HxCDD EMPC

Entry #: 23

Run: 17 File: 150130D2 S: 12 I: 1 F: 3
Acquired: 31-JAN-15 07:03:05 Processed: 1-FEB-15 09:20:57

Total Concentration: 1.0575 Unnamed Concentration: 1.058

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
33:11	4.451e+03	4.132e+03	1.08 y	8.583e+03	1.0575

Totals class: HpCDD EMPC

Entry #: 25

Run: 17 File: 150130D2 S: 12 I: 1 F: 4
Acquired: 31-JAN-15 07:03:05 Processed: 1-FEB-15 09:20:57

Total Concentration: 45.929 Unnamed Concentration: 19.890

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:44	8.176e+04	6.981e+04	1.17 y	1.516e+05	19.890	
38:34	9.976e+04	9.866e+04	1.01 y	1.984e+05	26.039	1,2,3,4,6,7,8-HpCDD

Totals class: HxCDF EMPC

Entry #: 33

Run: 17 File: 150130D2 S: 12 I: 1 F: 3
Acquired: 31-JAN-15 07:03:05 Processed: 1-FEB-15 09:20:57

Total Concentration: 4.3393 Unnamed Concentration: 4.339

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
32:38	5.230e+03	5.171e+03	1.01	n	9.447e+03	0.75167
32:48	1.807e+04	1.538e+04	1.17	y	3.346e+04	2.6620
33:21	6.403e+03	5.231e+03	1.22	y	1.163e+04	0.92563

Totals class: HpCDF EMPC

Entry #: 35

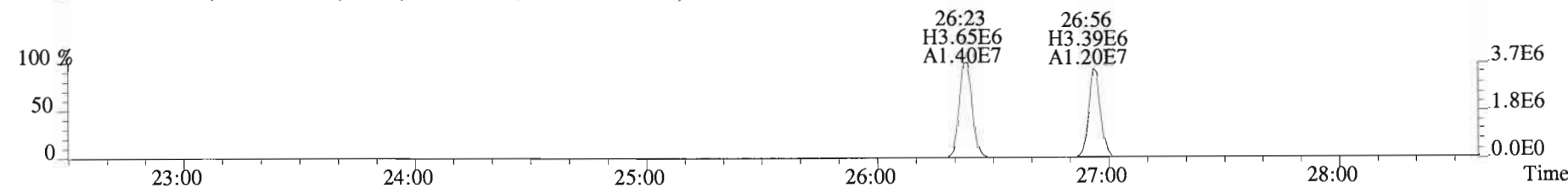
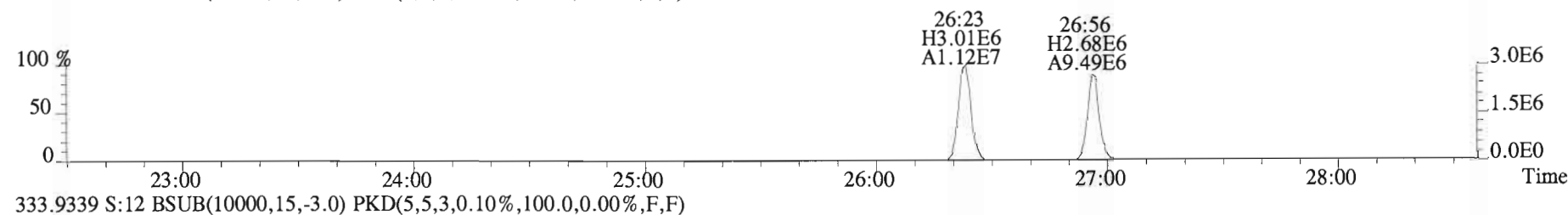
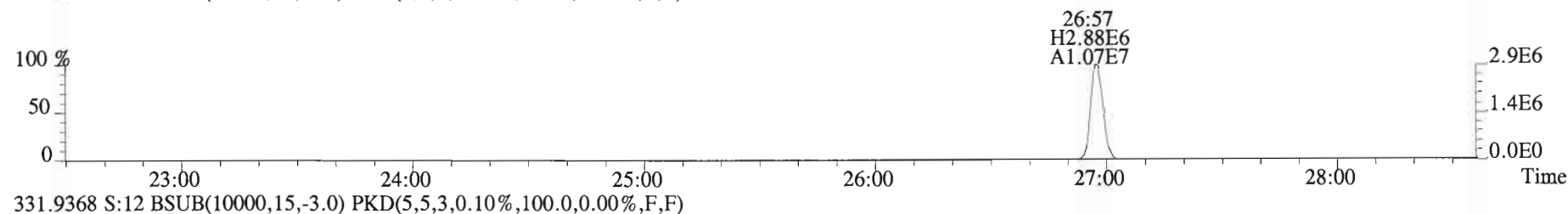
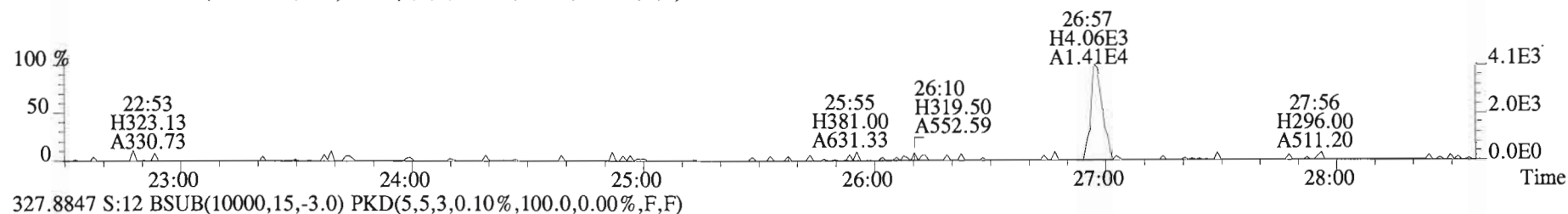
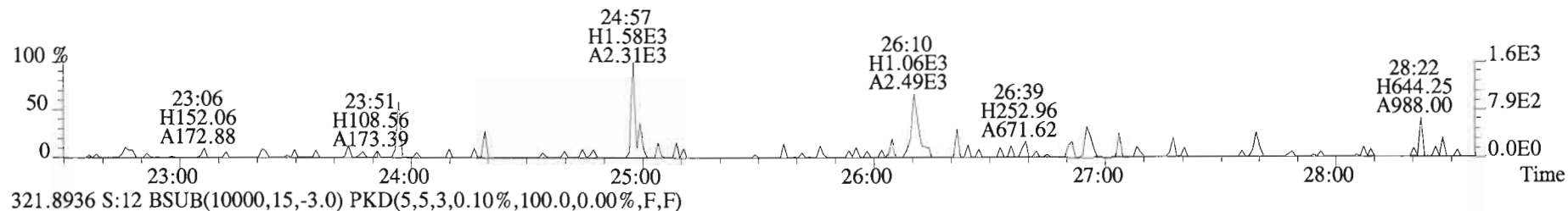
Run: 17 File: 150130D2 S: 12 I: 1 F: 4
Acquired: 31-JAN-15 07:03:05 Processed: 1-FEB-15 09:20:57

Total Concentration: 13.898

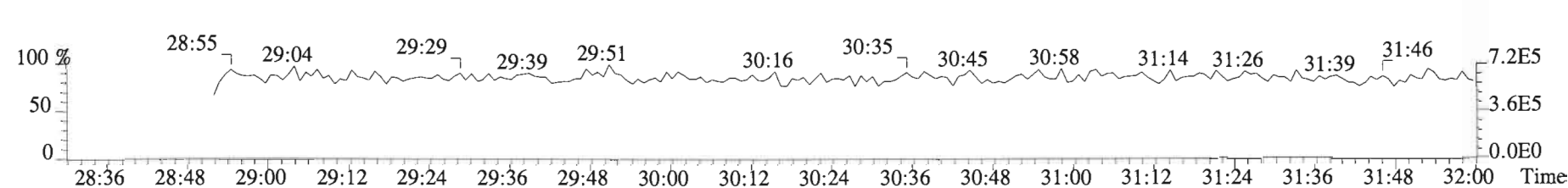
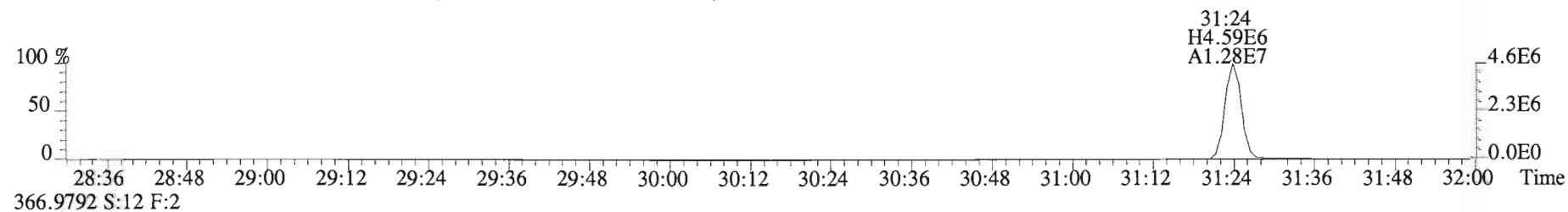
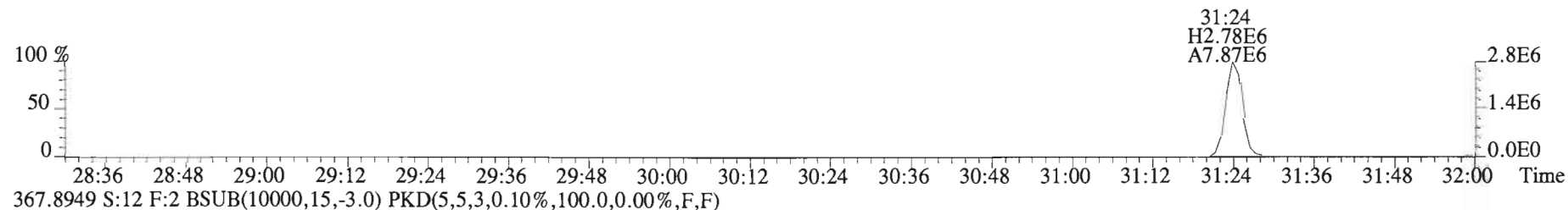
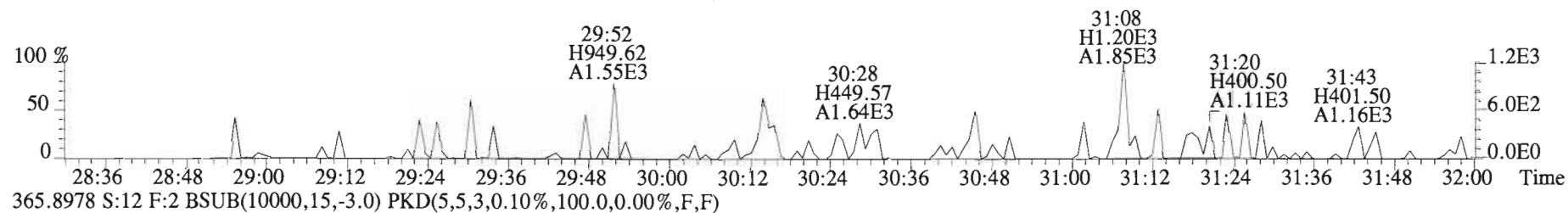
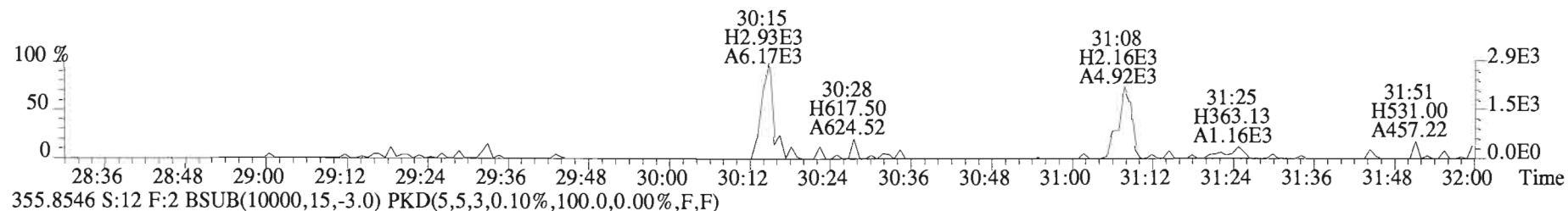
Unnamed Concentration: 7.373

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Resp Concentration	Name
37:22	3.824e+04	3.664e+04	1.04 y	7.488e+04	6.5247	1,2,3,4,6,7,8-HpCDF
37:55	4.115e+04	4.071e+04	1.01 y	8.186e+04	7.3732	

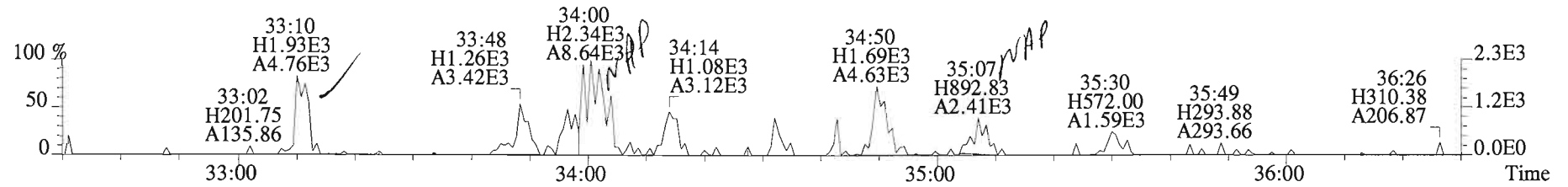
File:150130D2 #1-551 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



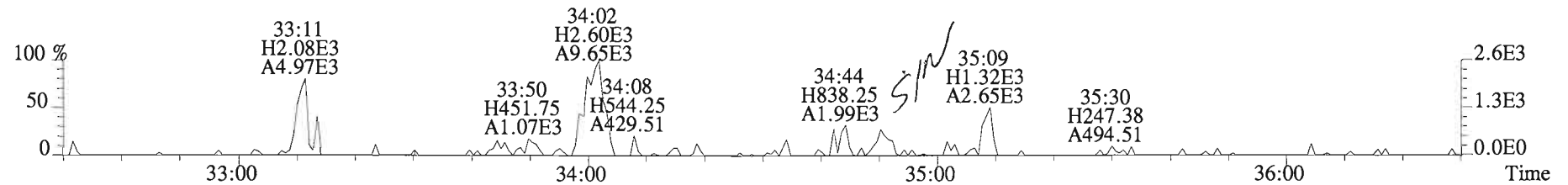
File:150130D2 #1-251 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
353.8576 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



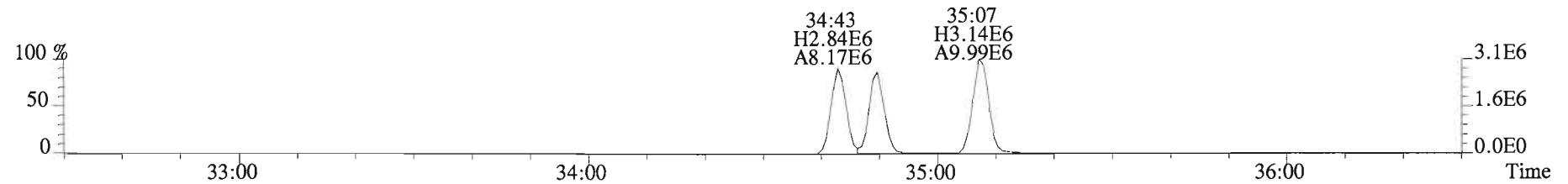
File:150130D2 #1-393 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
 389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



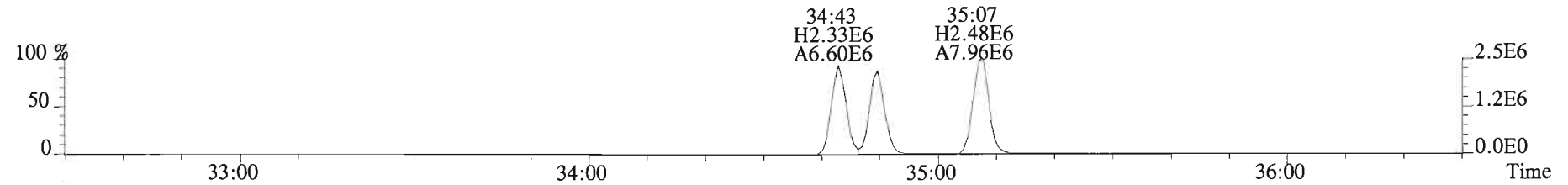
391.8127 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



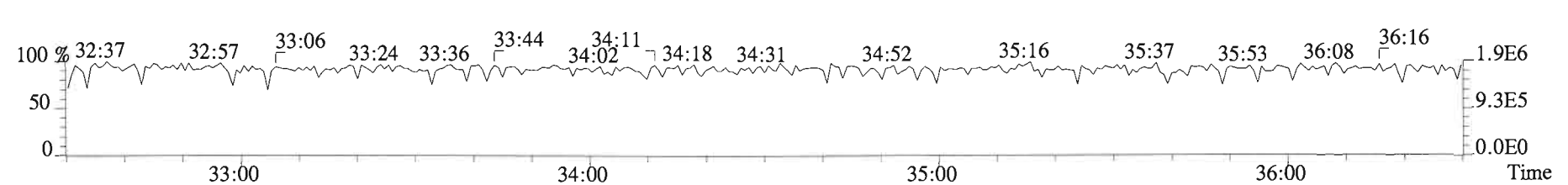
401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



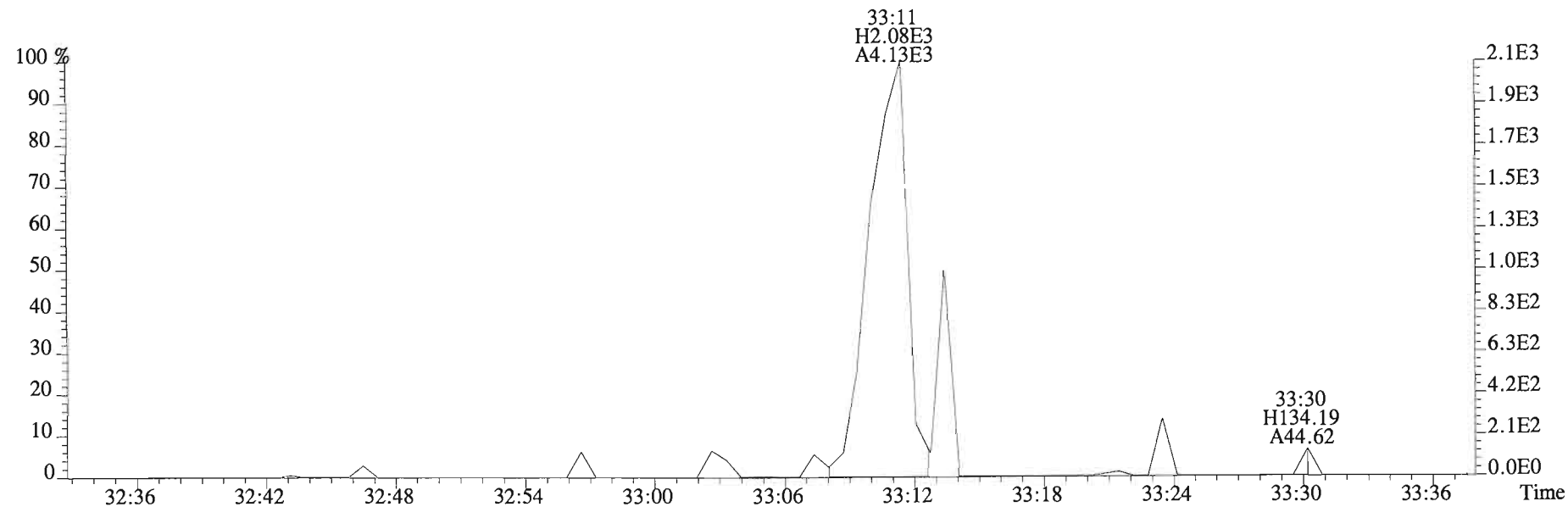
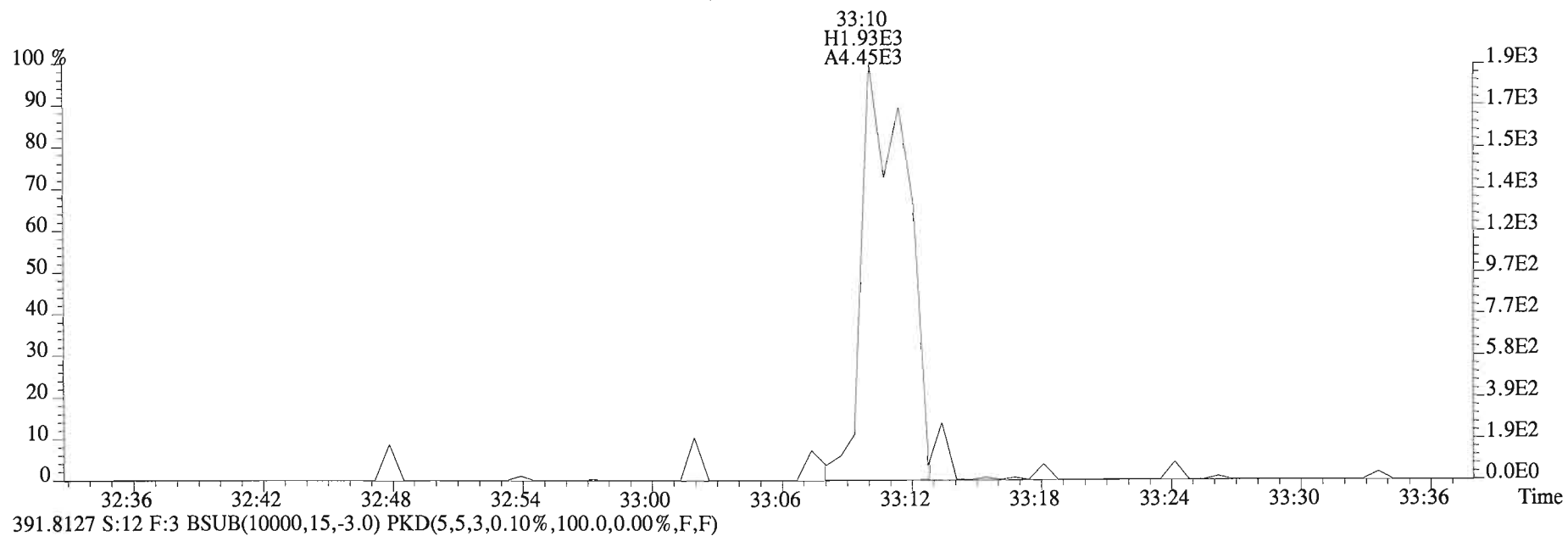
403.8530 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



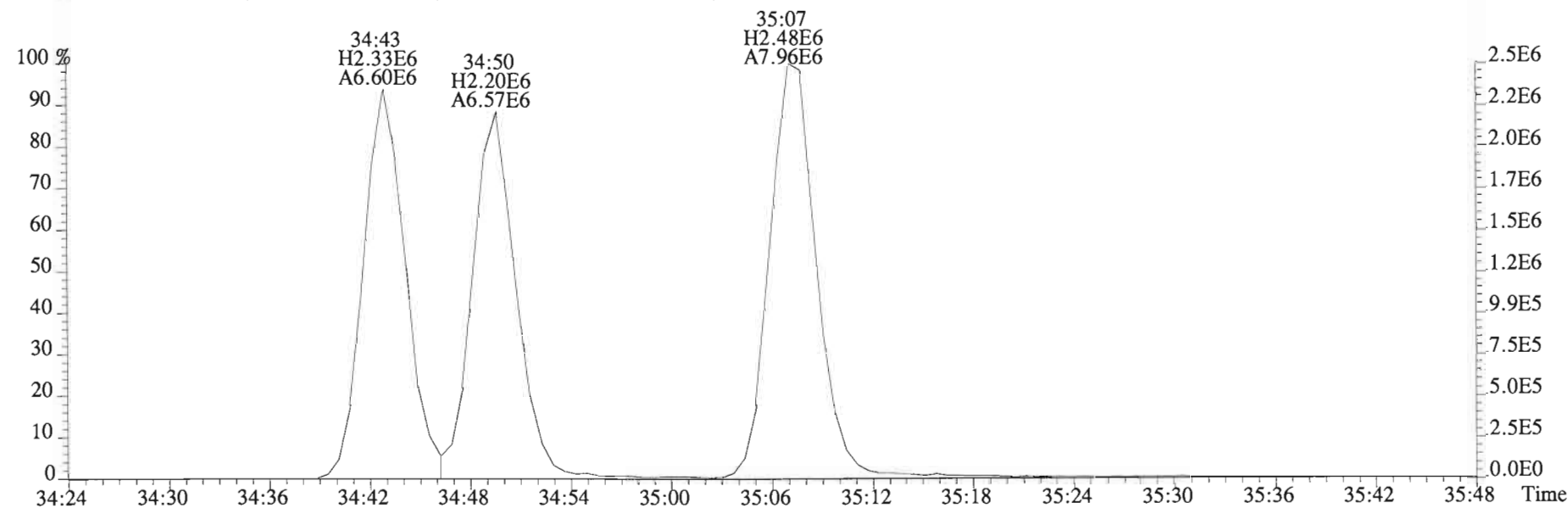
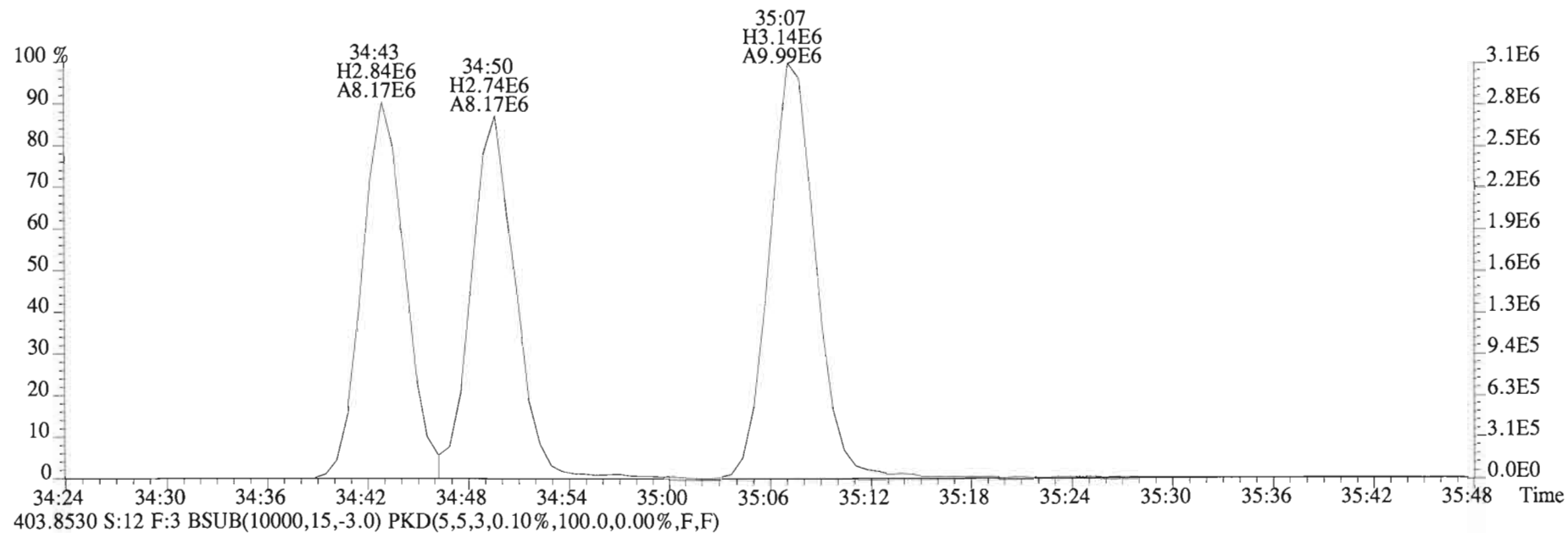
380.9760 S:12 F:3



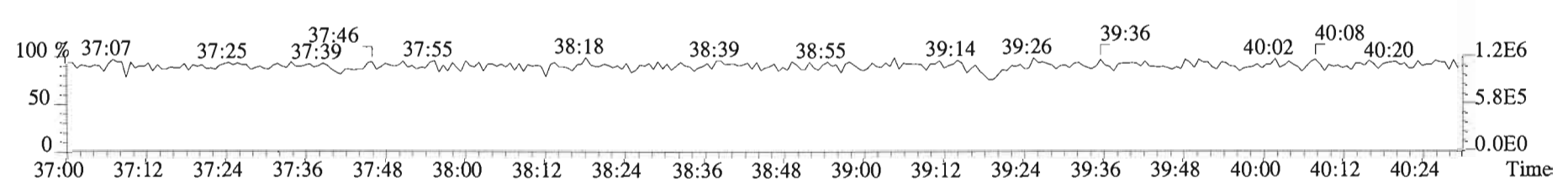
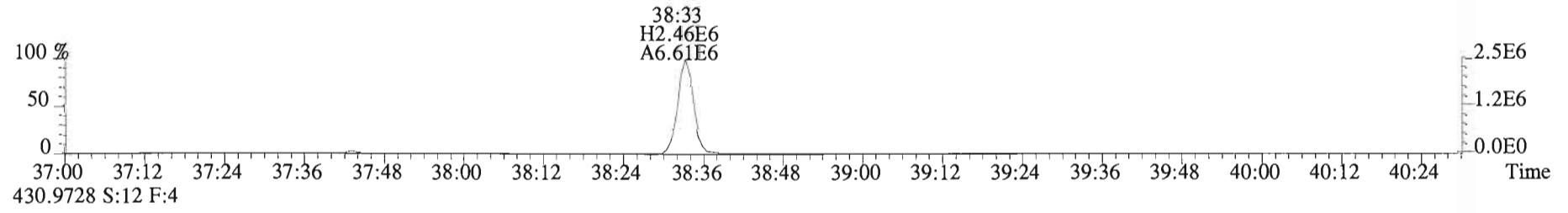
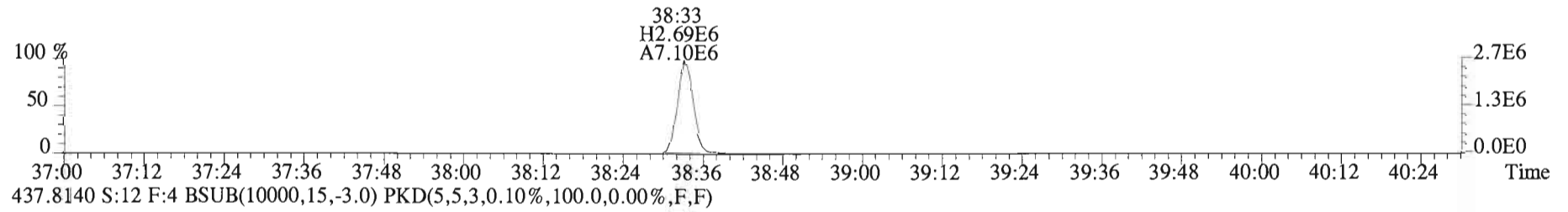
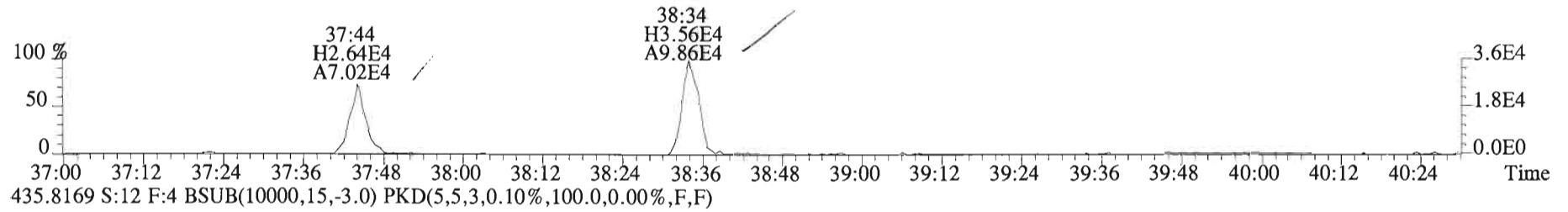
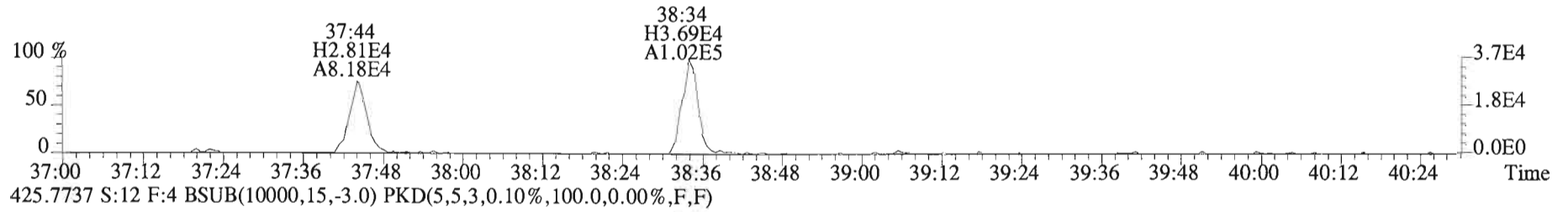
File:150130D2 #1-393 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



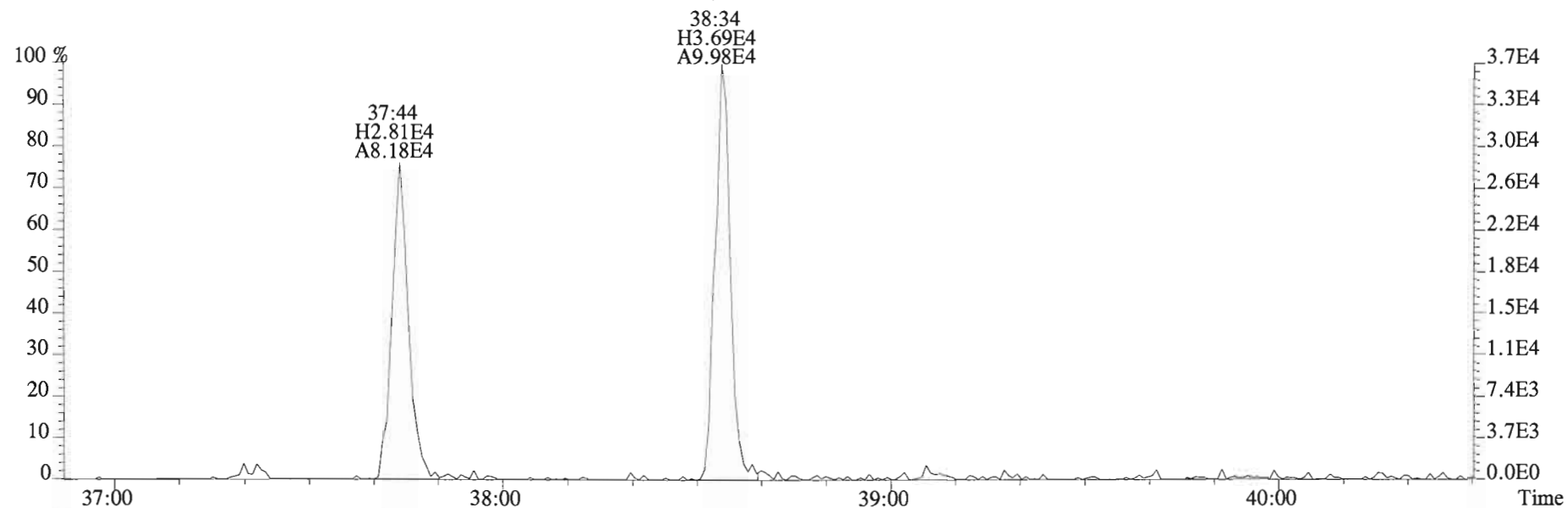
File:150130D2 #1-393 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



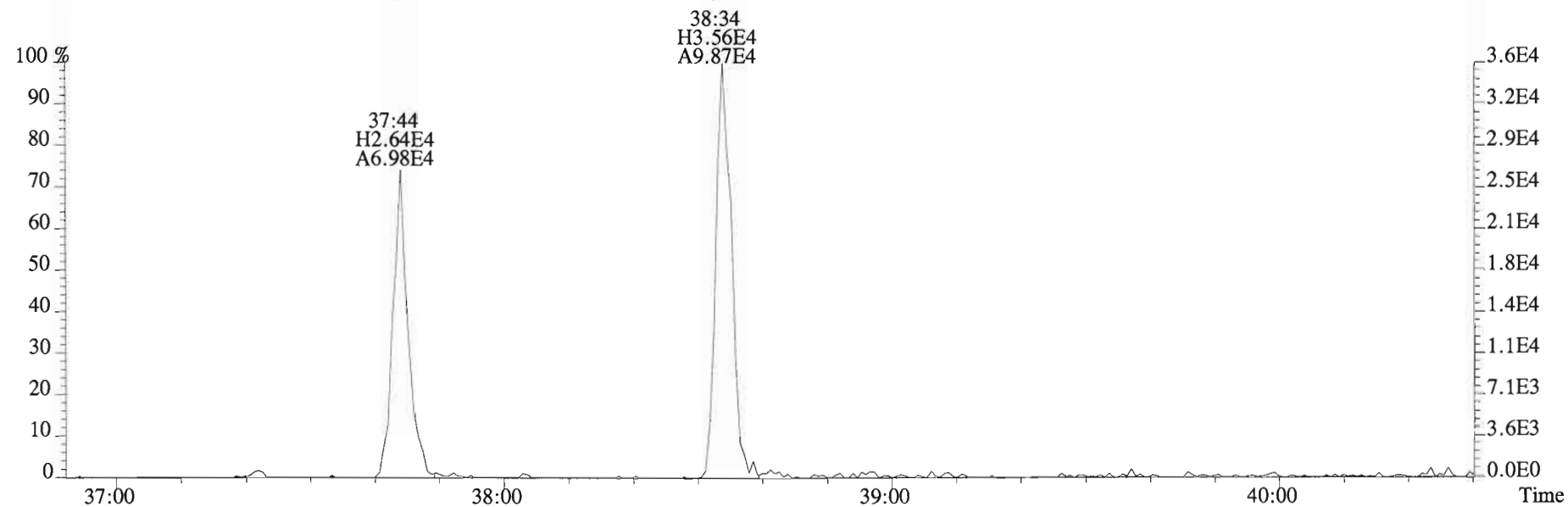
File:150130D2 #1-325 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



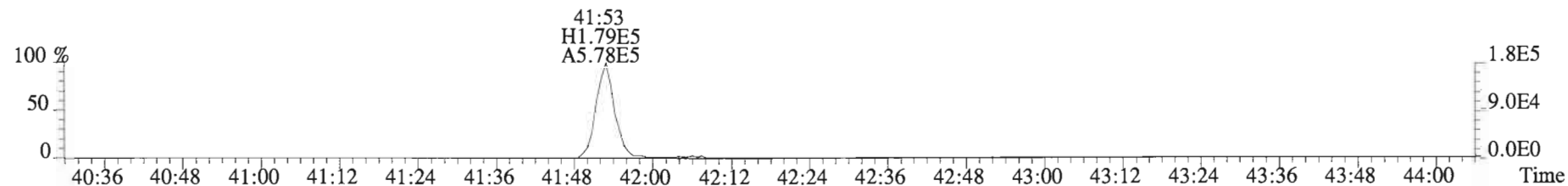
File:150130D2 #1-325 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



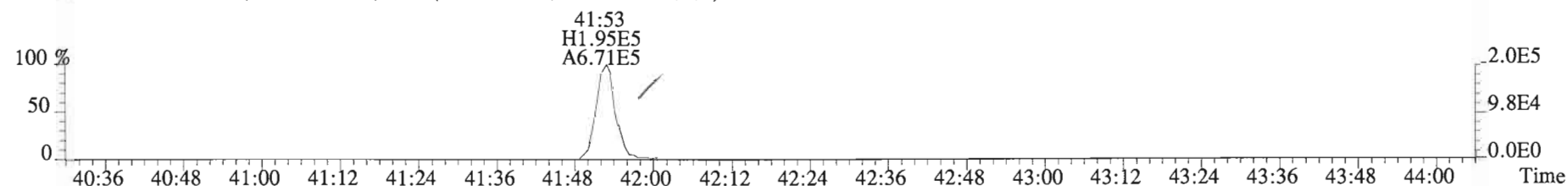
425.7737 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



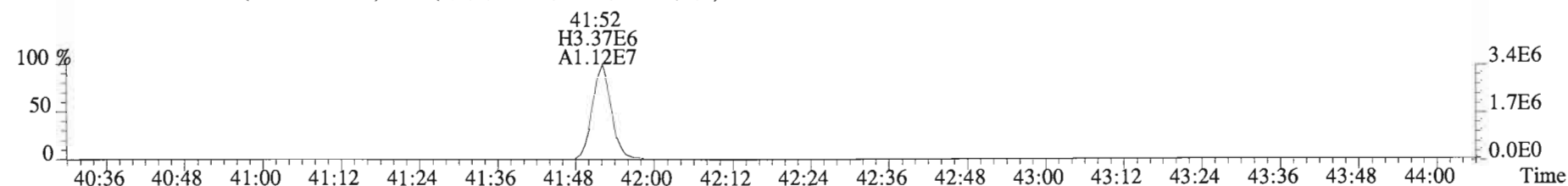
File:150130D2 #1-389 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
457.7377 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



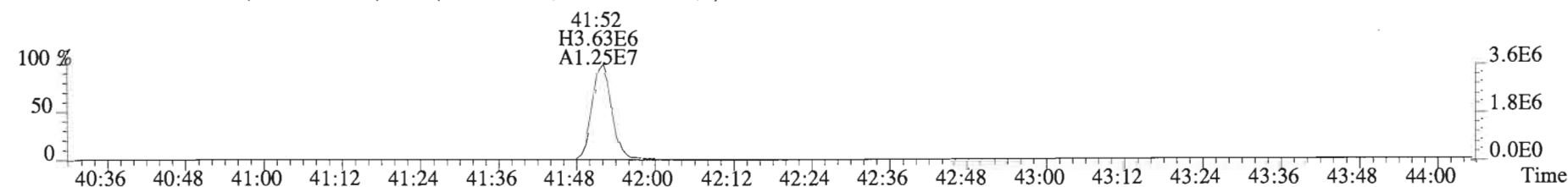
459.7348 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



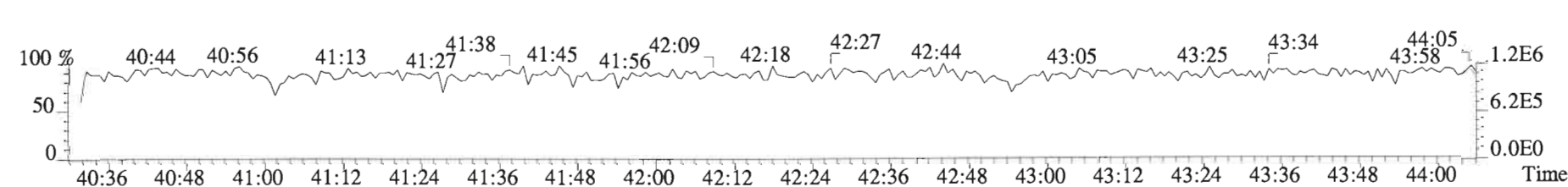
469.7780 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



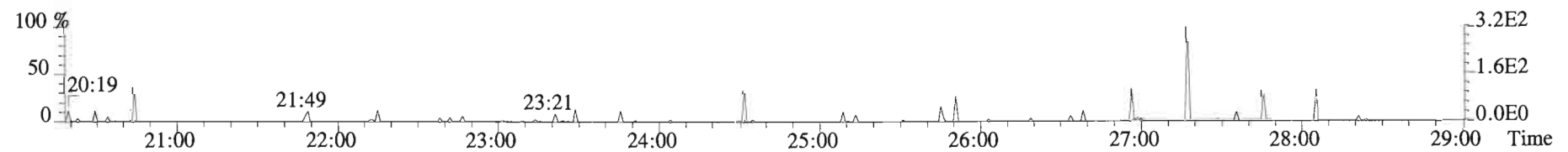
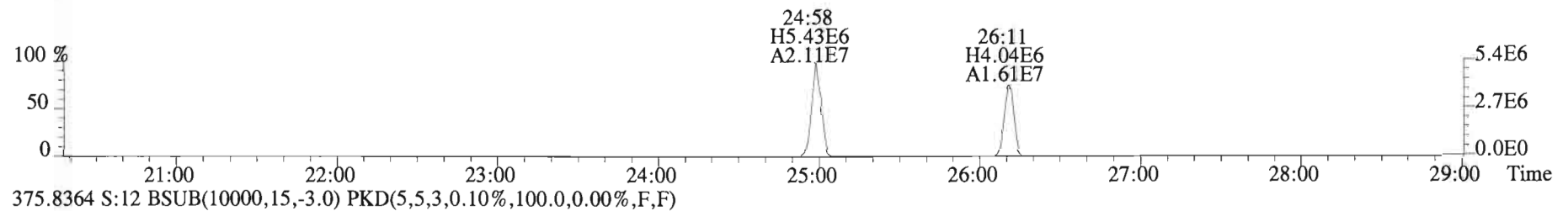
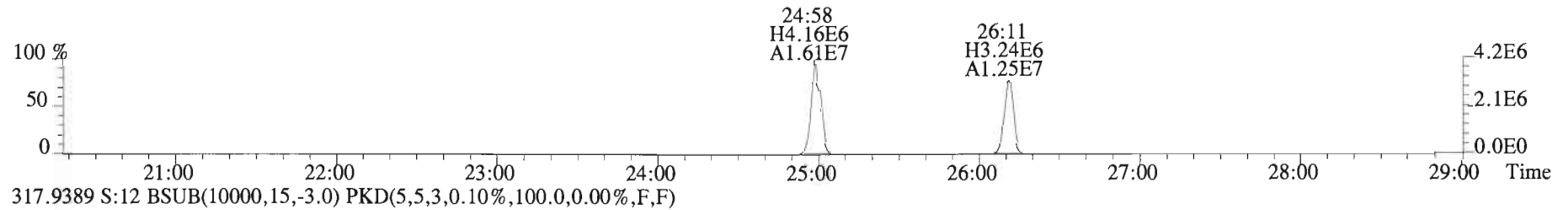
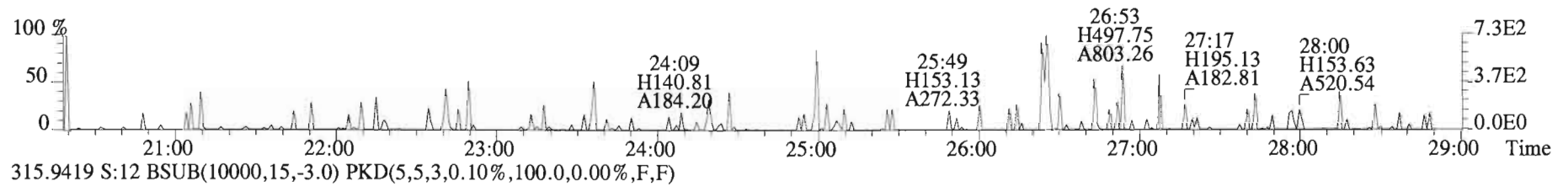
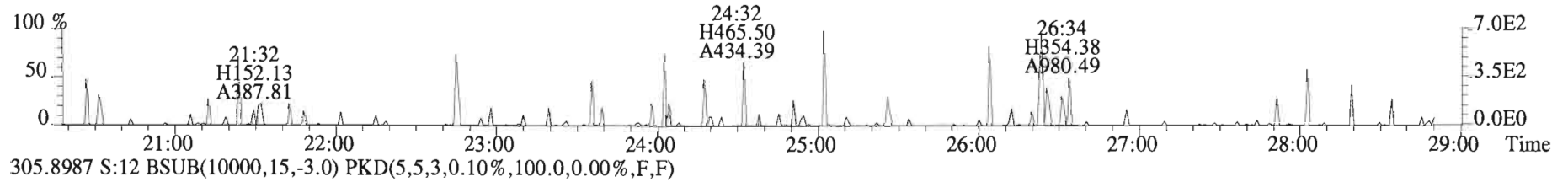
471.7750 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



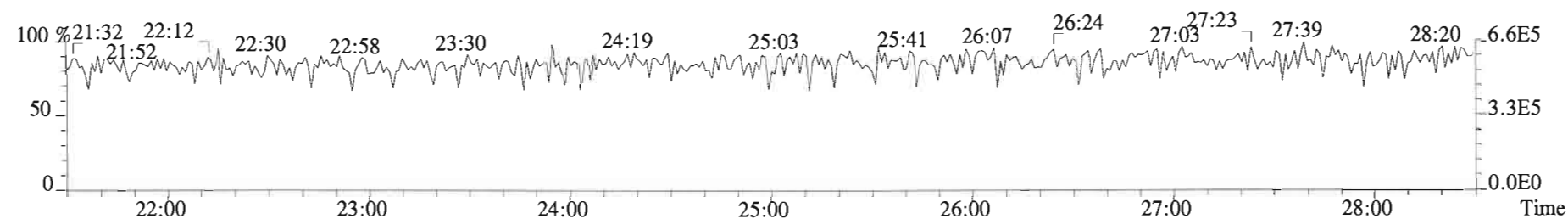
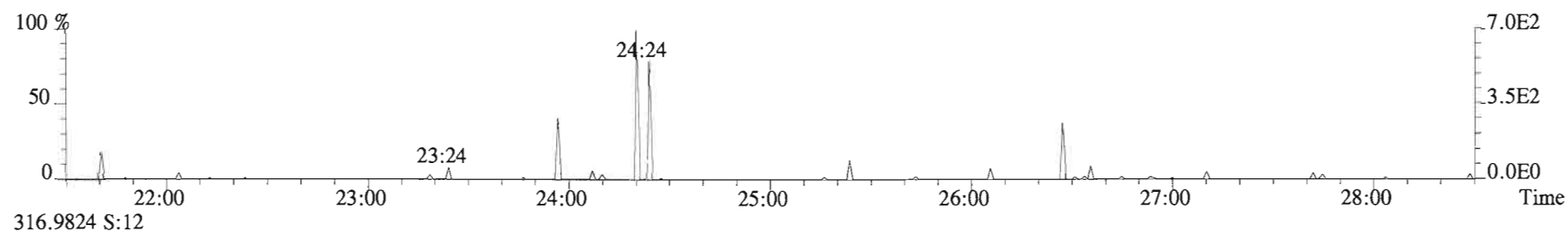
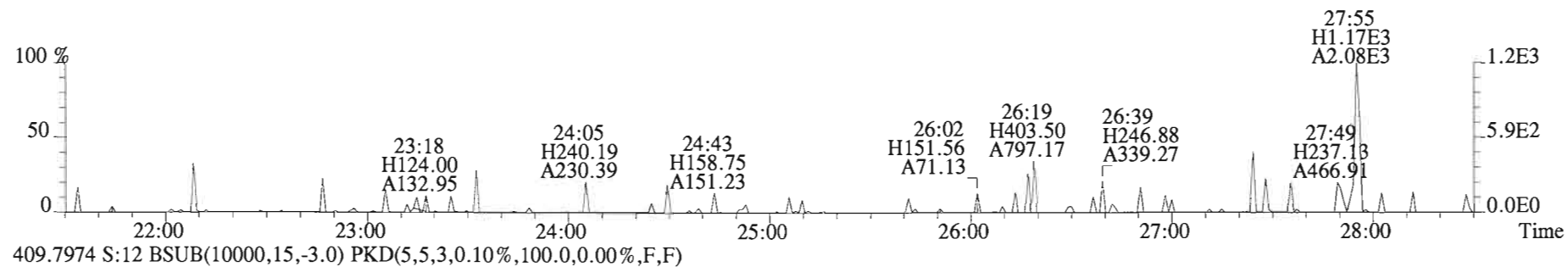
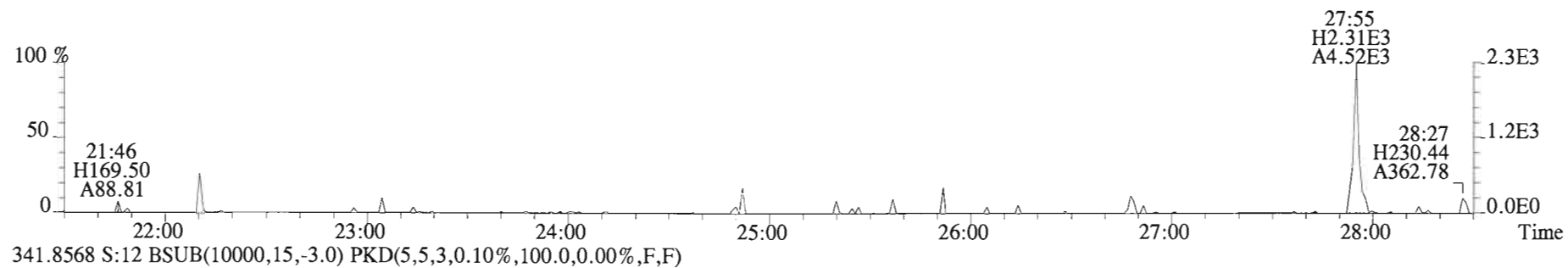
454.9728 S:12 F:5



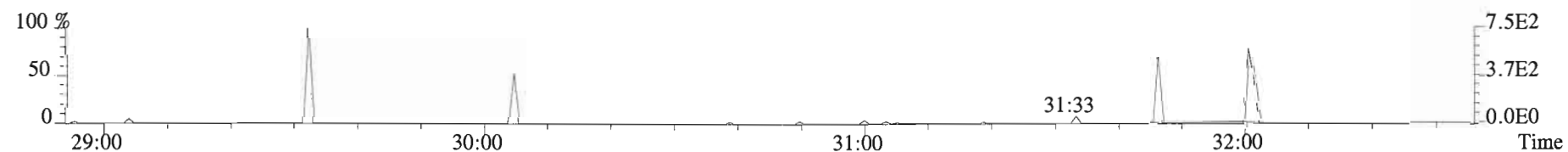
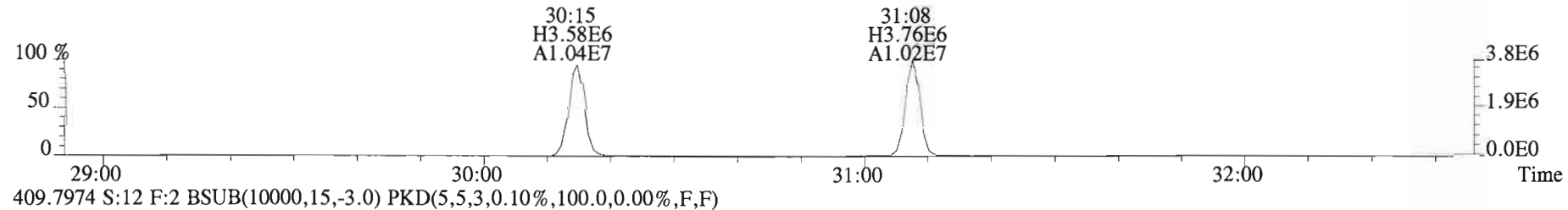
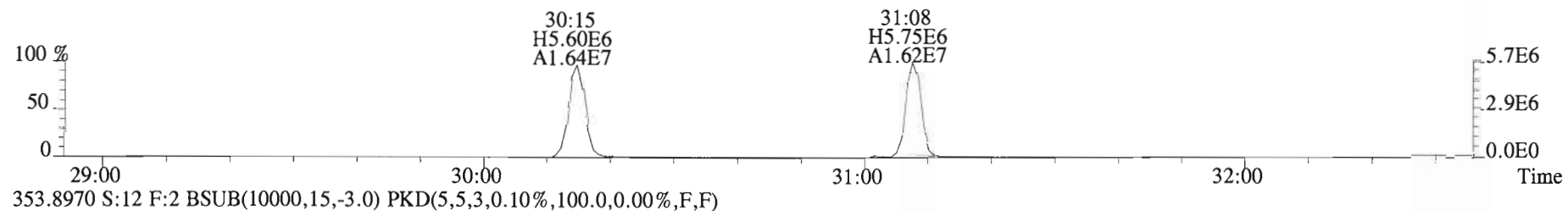
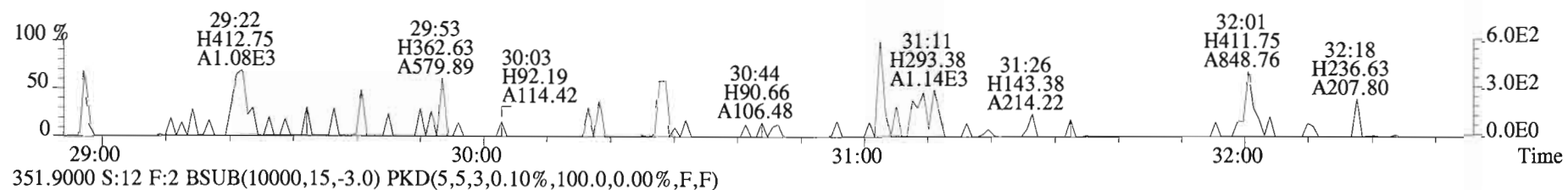
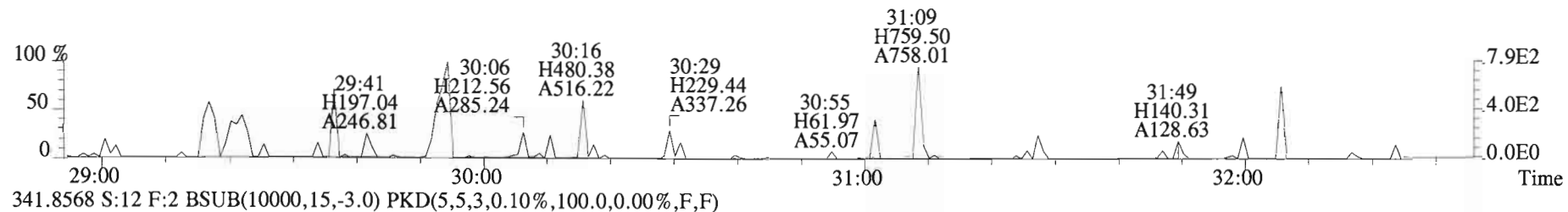
File:150130D2 #1-551 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



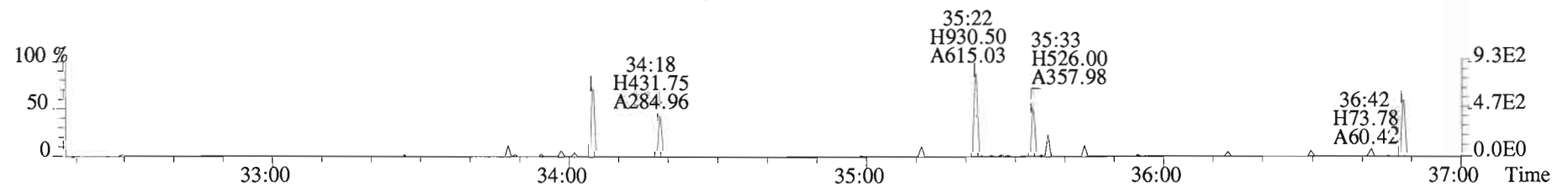
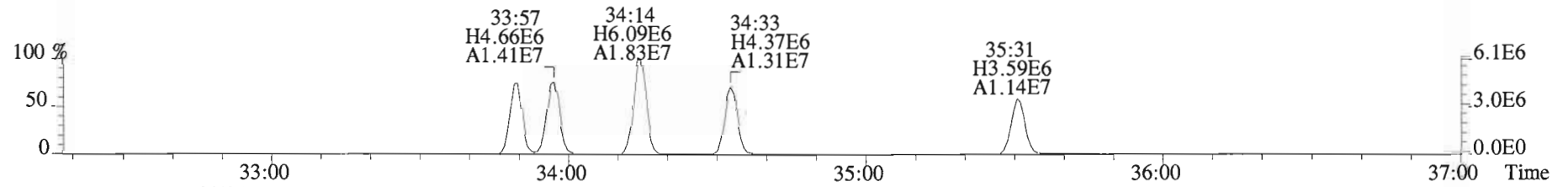
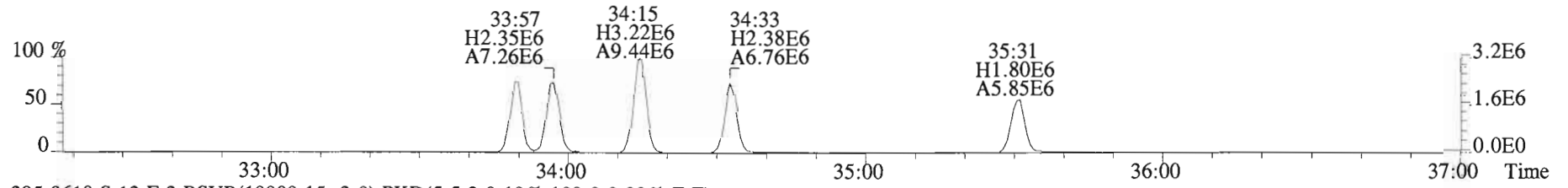
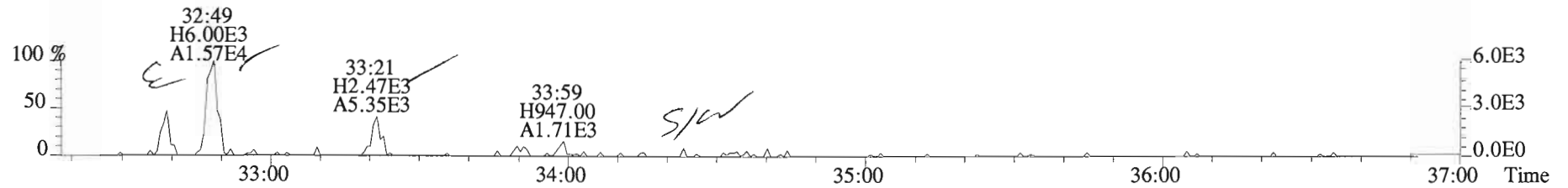
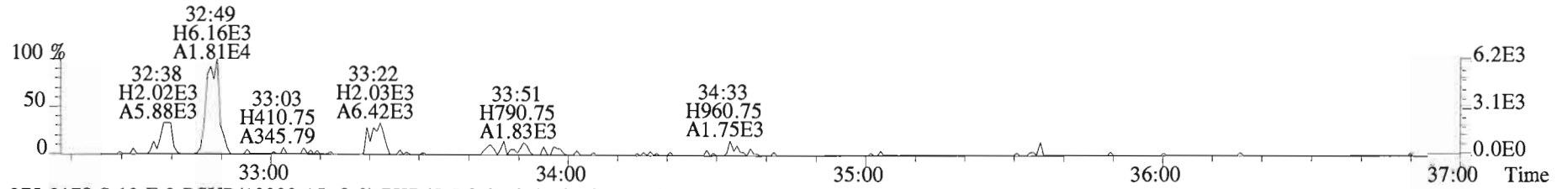
File:150130D2 #1-551 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
339.8597 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



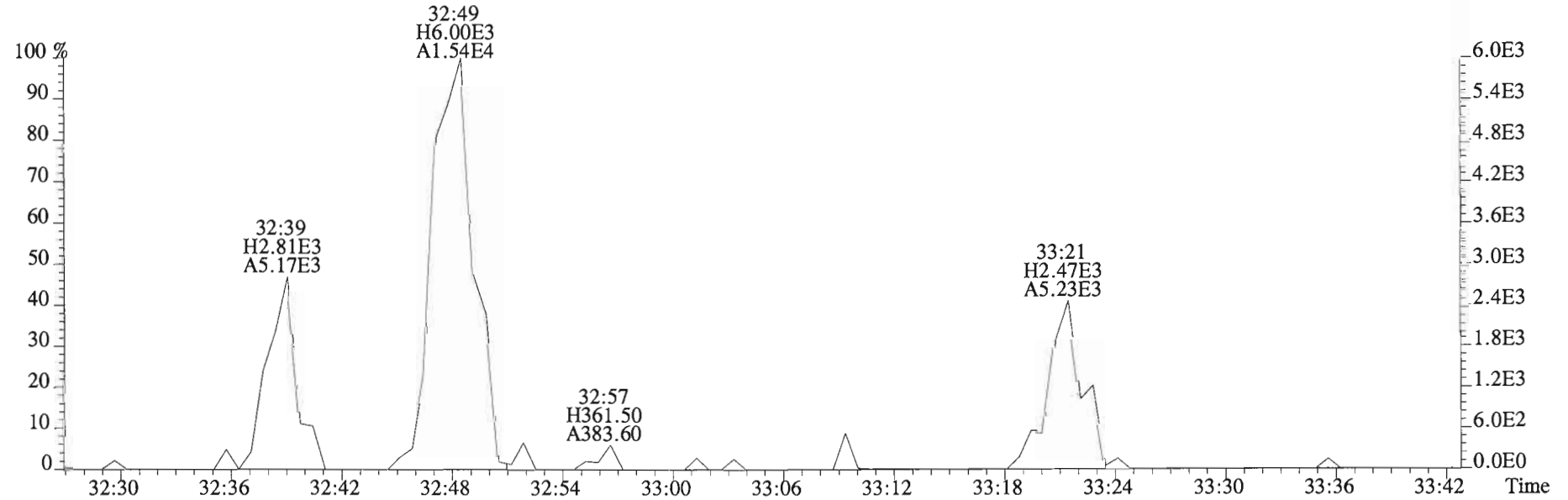
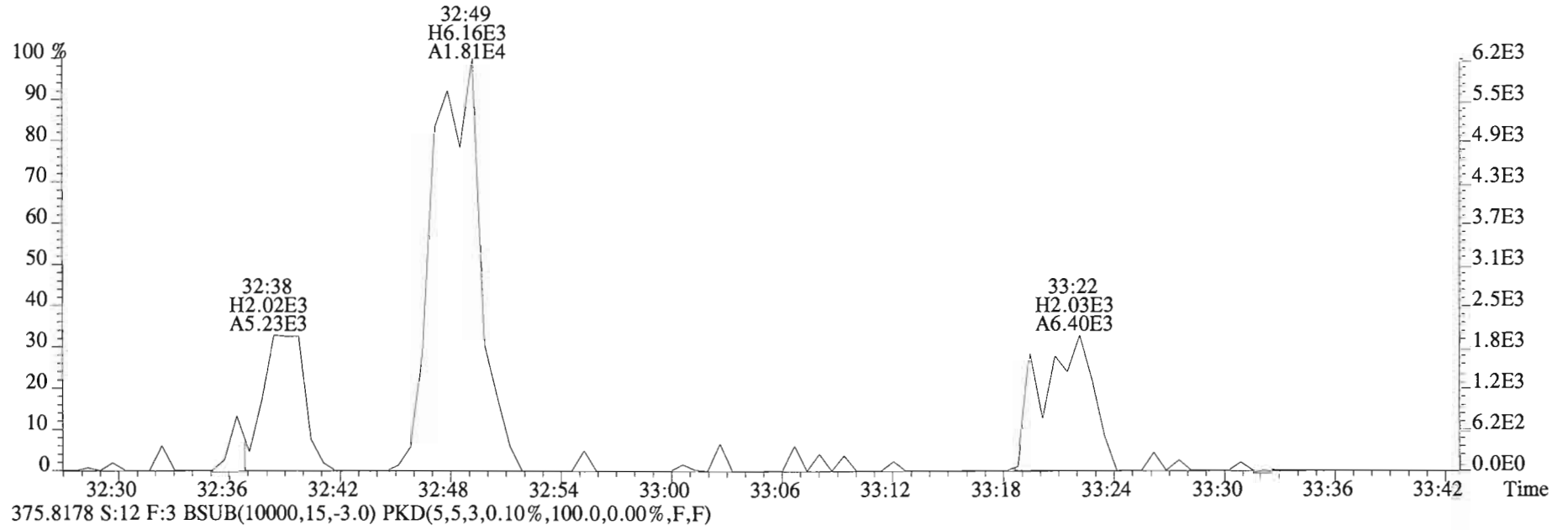
File:150130D2 #1-251 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



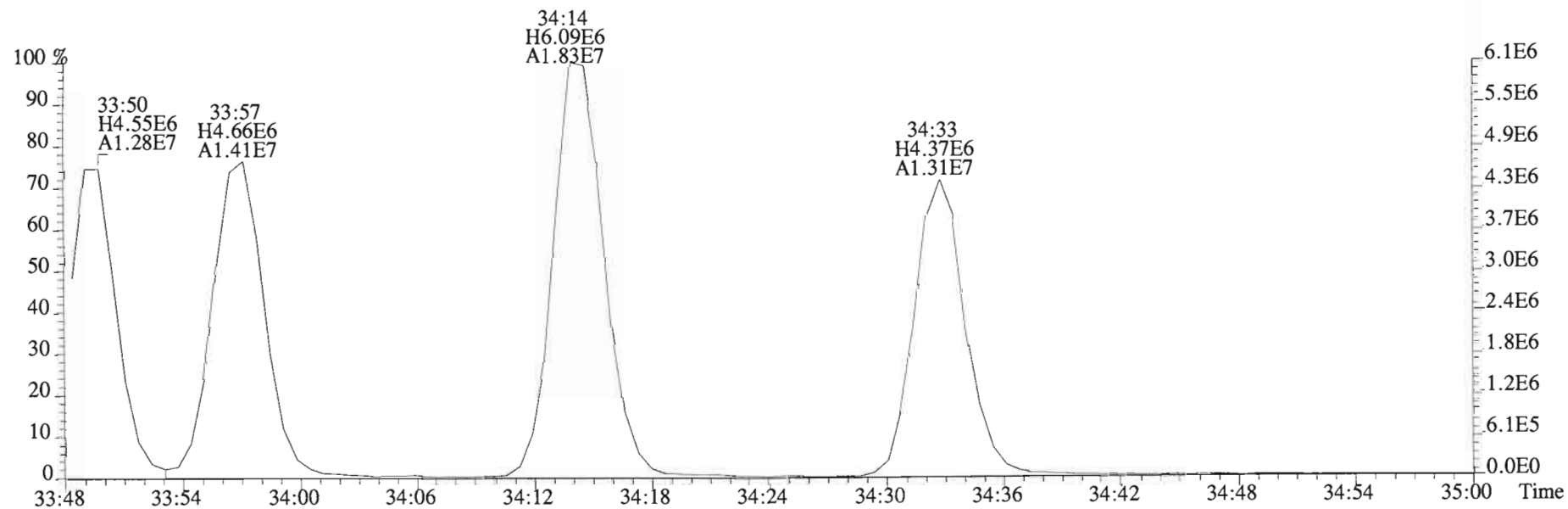
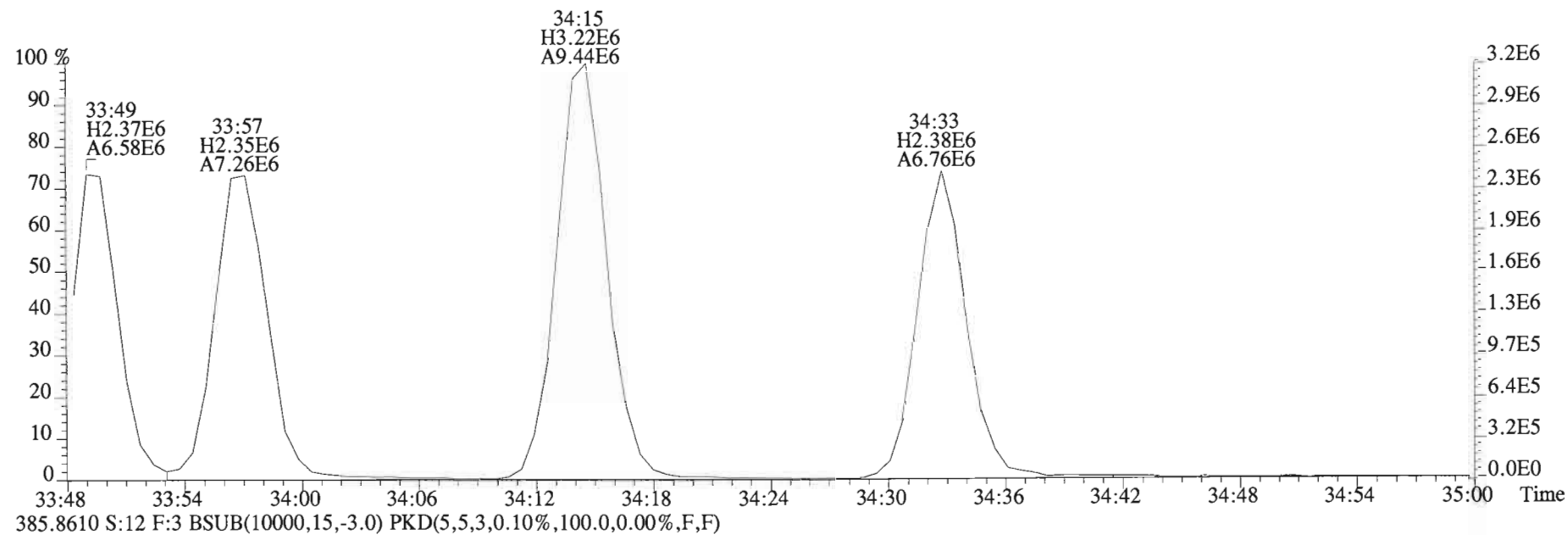
File:150130D2 #1-393 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



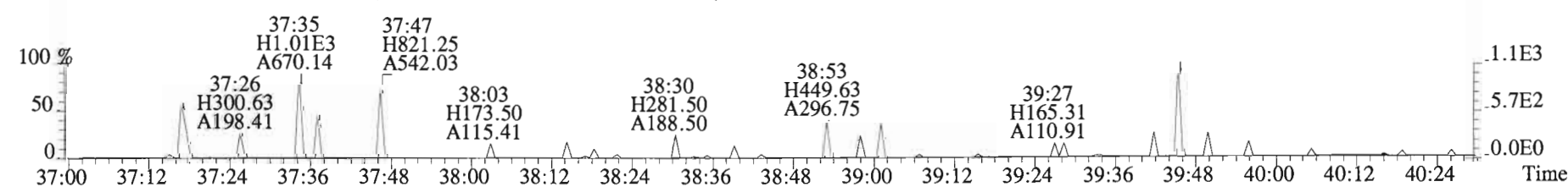
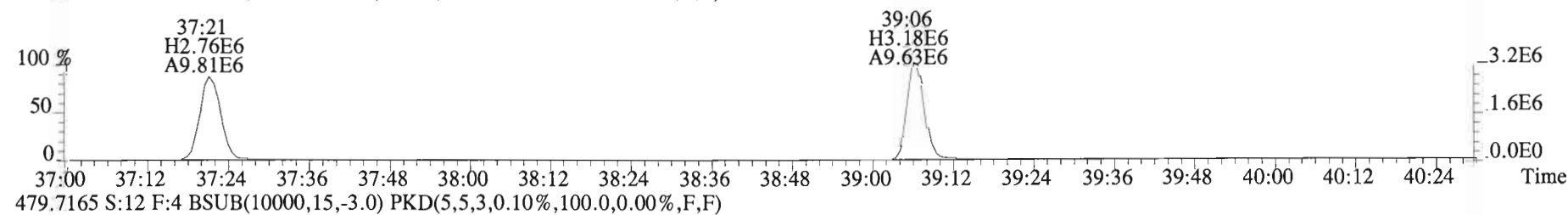
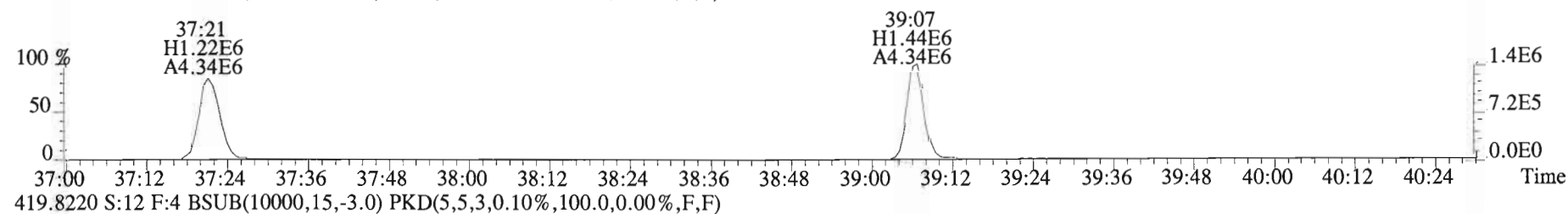
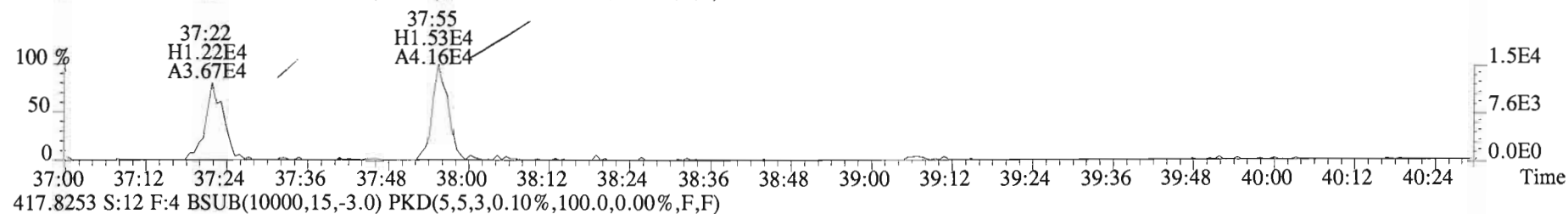
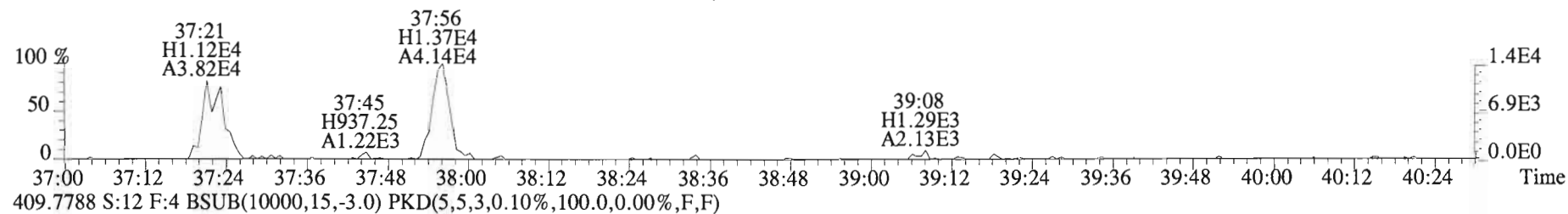
File:150130D2 #1-393 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



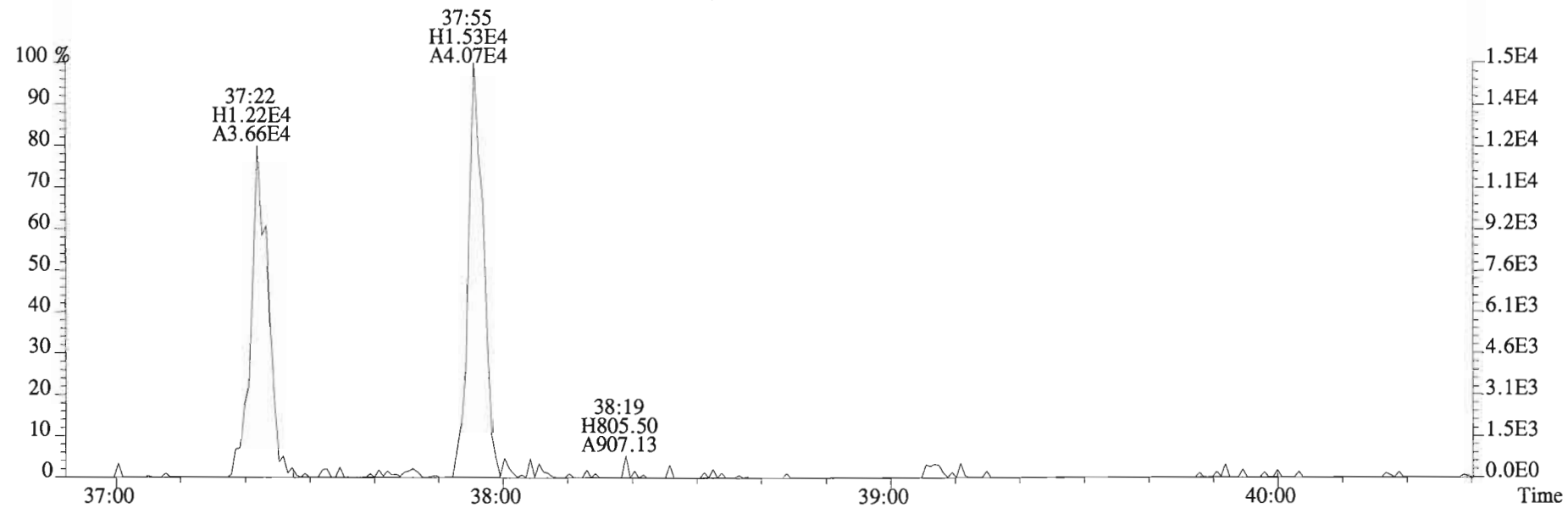
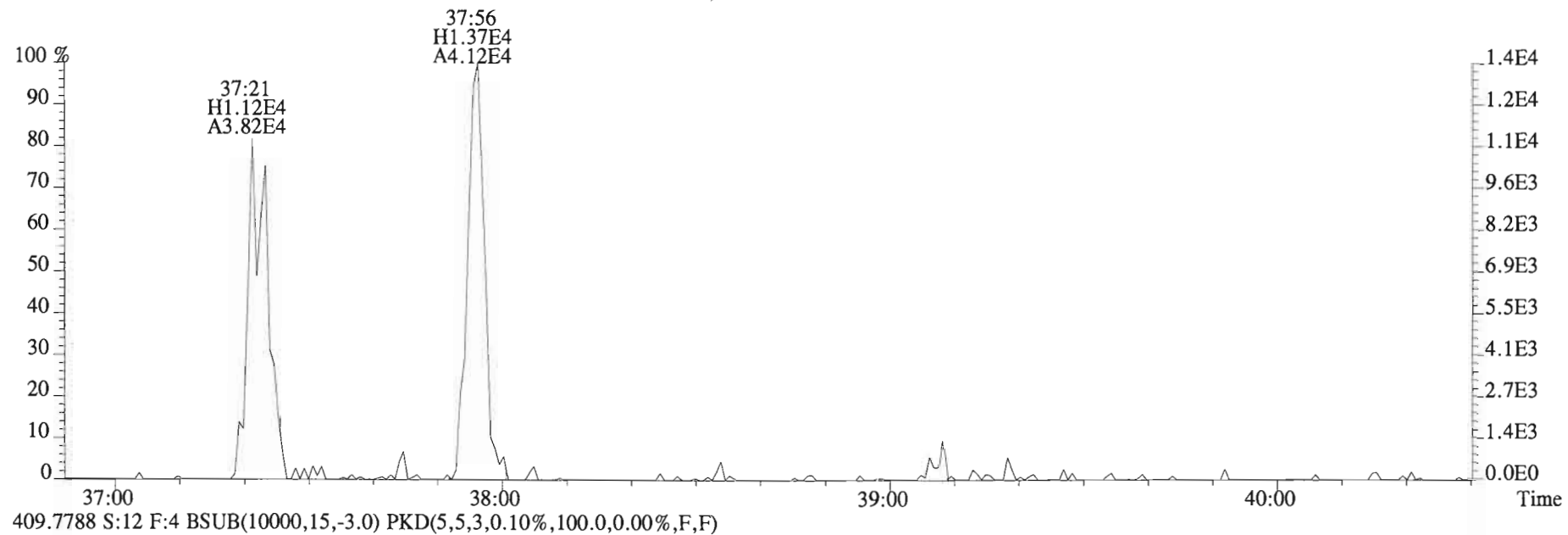
File:150130D2 #1-393 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
383.8639 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



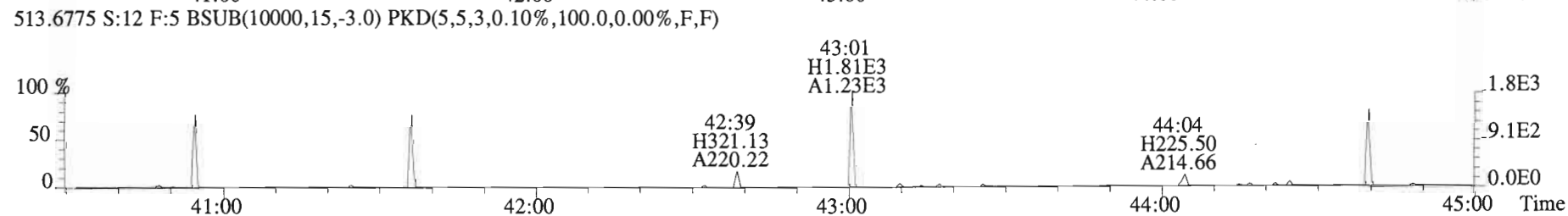
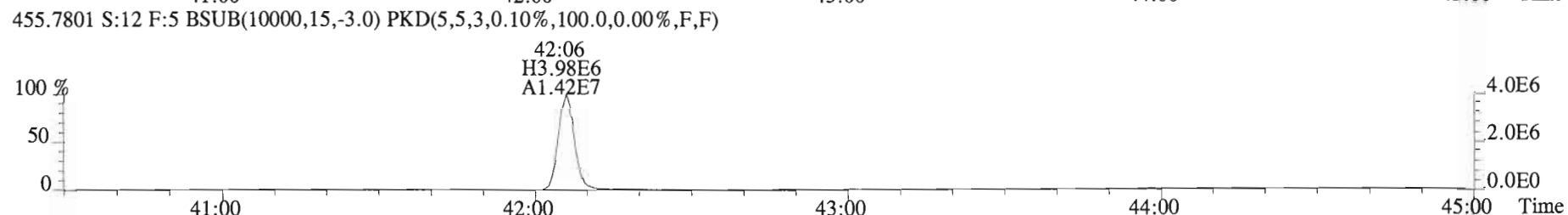
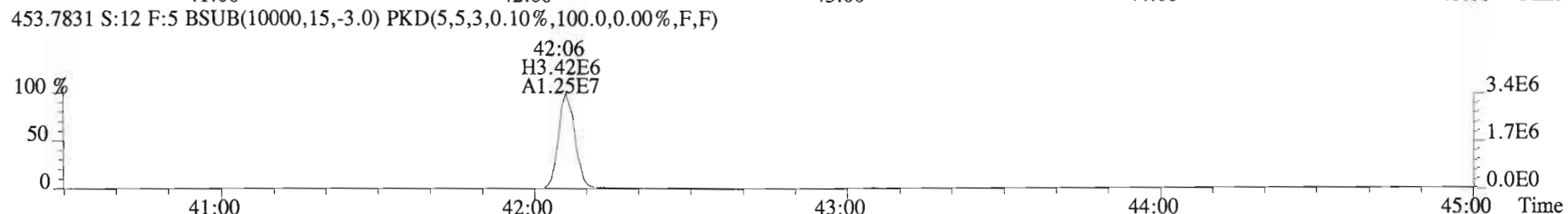
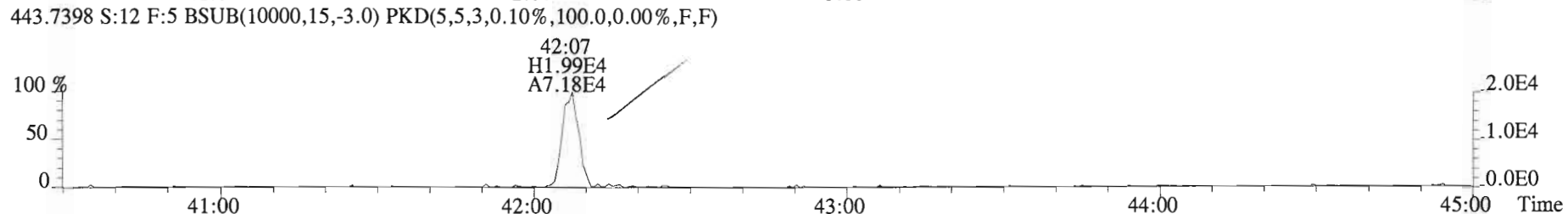
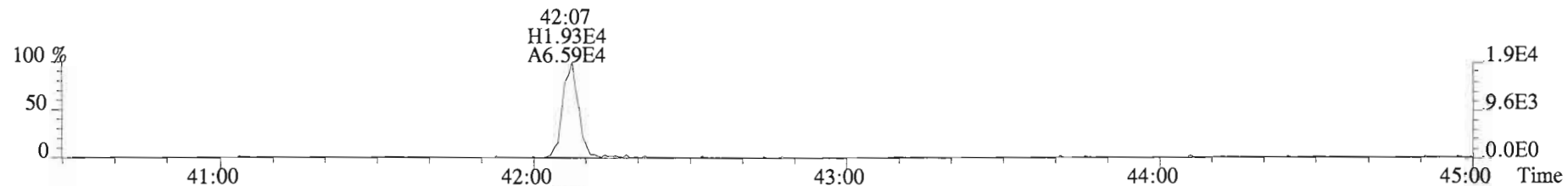
File:150130D2 #1-325 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
407.7818 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:150130D2 #1-325 Acq:31-JAN-2015 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text: Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
407.7818 S:12 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 07:03:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG-7 Text:1400970-01 DS-CB-F3-20141216-W 1.00665 Exp:OCDD_DB5
441.7428 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

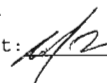



Client ID: Method Blank
Lab ID: B5A0101-BLK1

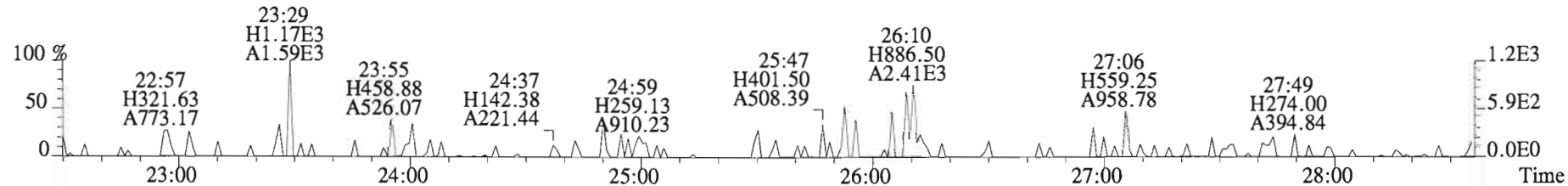
Filename: 150130D3 S:5 Acq:31-JAN-15 13:10:47
GC Column ID: ZB-5MS ICAL: 1613VG7-1-7-15 wt/vol:10.000

ConCal: ST150130D3-1
EndCAL: NA

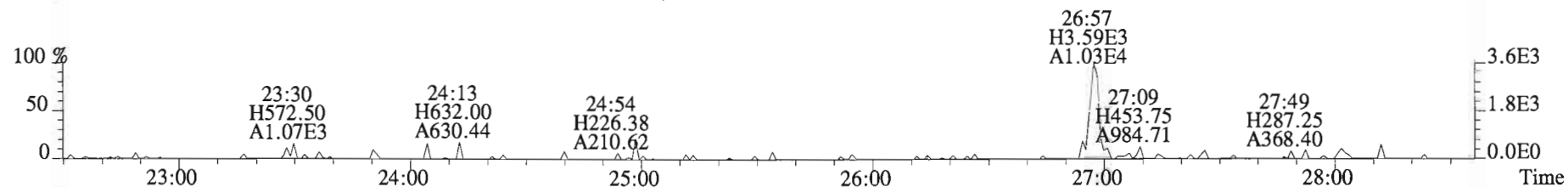
Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	1.17	Not F η	*	*	615	2.5	0.0921		Total Tetra-Dioxins	*	*		615	0.0921
1,2,3,7,8-PeCDD	*	* n	0.91	Not F η	*	*	625	2.5	0.0837		Total Penta-Dioxins	*	*		625	0.0836
1,2,3,4,7,8-HxCDD	*	* n	1.08	Not F η	*	*	595	2.5	0.143		Total Hexa-Dioxins	*	*		652	0.156
1,2,3,6,7,8-HxCDD	*	* n	1.06	Not F η	*	*	595	2.5	0.137		Total Hepta-Dioxins	*	*		656	0.136
1,2,3,7,8,9-HxCDD	*	* n	0.93	Not F η	*	*	595	2.5	0.146		Total Tetra-Furans	*	*		428	0.0497
1,2,3,4,6,7,8-HpCDD	*	* n	1.10	Not F η	*	*	656	2.5	0.136		Total Penta-Furans	0.0000	0.0000		506	0.0693
OCDD	*	* n	0.95	Not F η	*	*	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 η	*	*	428	2.5	0.0497							
1,2,3,7,8-PeCDF	*	* n	1.07	Not F η	*	*	476	2.5	0.0648							
2,3,4,7,8-PeCDF	*	* n	1.03	Not F η	*	*	476	2.5	0.0655							
1,2,3,4,7,8-HxCDF	*	* n	1.38	Not F η	*	*	552	2.5	0.0449							
1,2,3,6,7,8-HxCDF	*	* n	1.26	Not F η	*	*	552	2.5	0.0472							
2,3,4,6,7,8-HxCDF	*	* n	1.29	Not F η	*	*	552	2.5	0.0541							
1,2,3,7,8,9-HxCDF	*	* n	1.19	Not F η	*	*	552	2.5	0.0705							
1,2,3,4,6,7,8-HpCDF	*	* n	1.61	Not F η	*	*	752	2.5	0.0859							
1,2,3,4,7,8,9-HpCDF	*	* n	1.53	Not F η	*	*	752	2.5	0.0823							
OCDF	*	* n	1.10	Not F η	*	*	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 Analyst: 
Date: 2/2/15 Date: 2/2/15

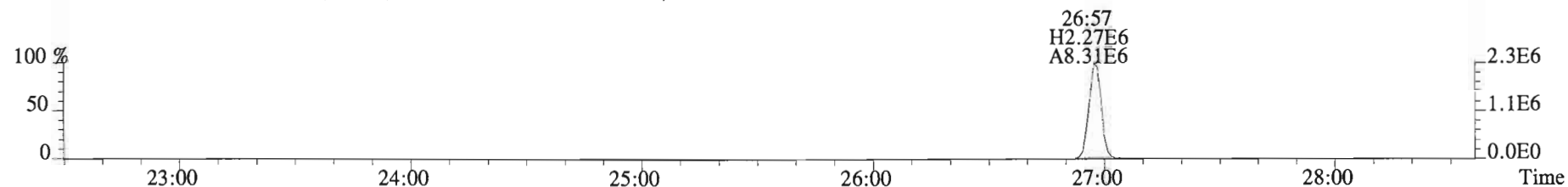
File:150130D3 #1-551 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



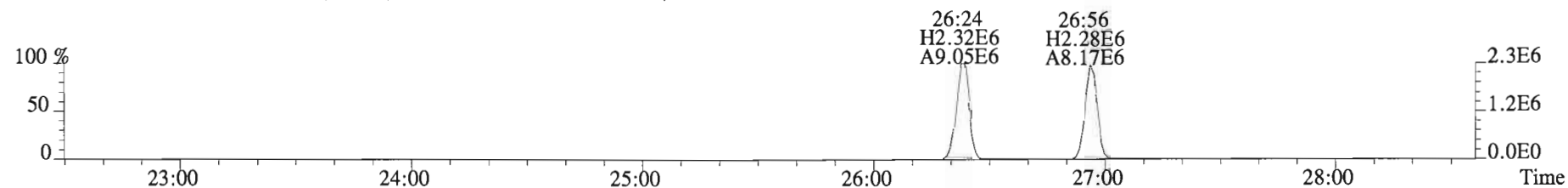
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



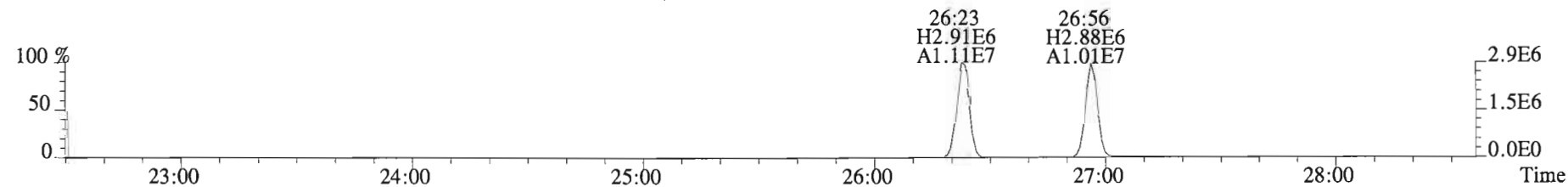
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



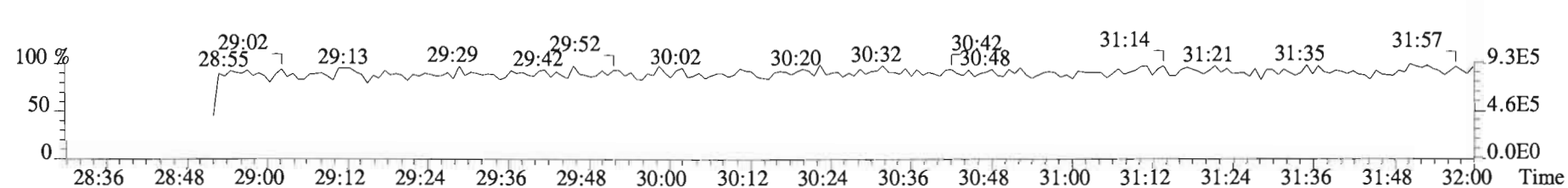
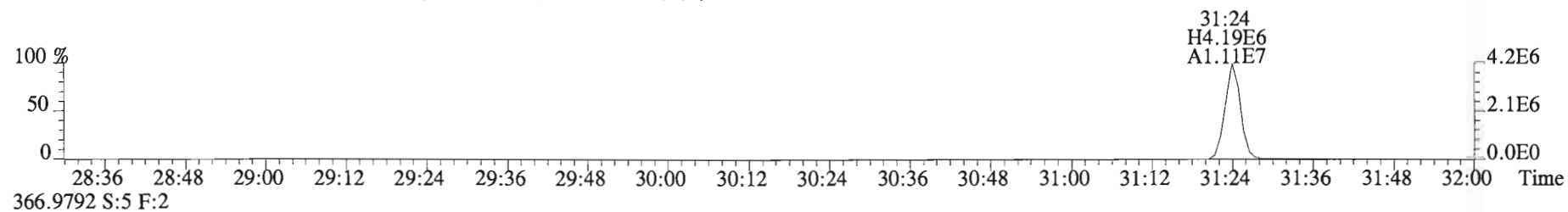
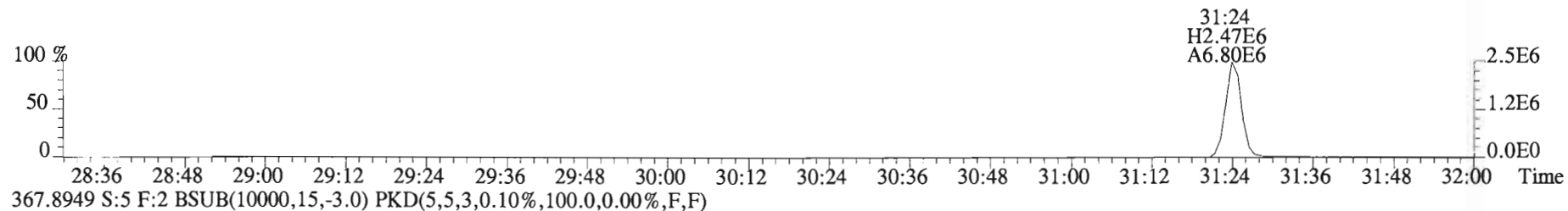
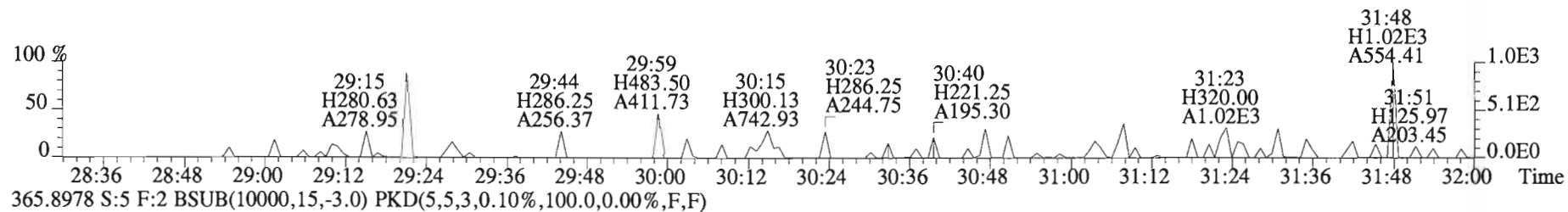
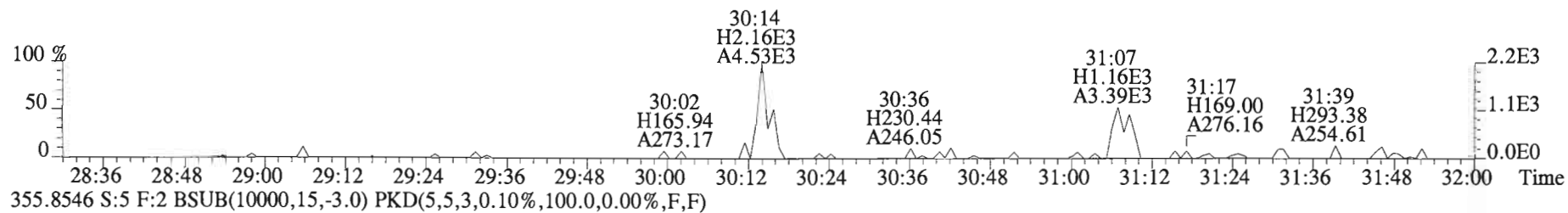
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



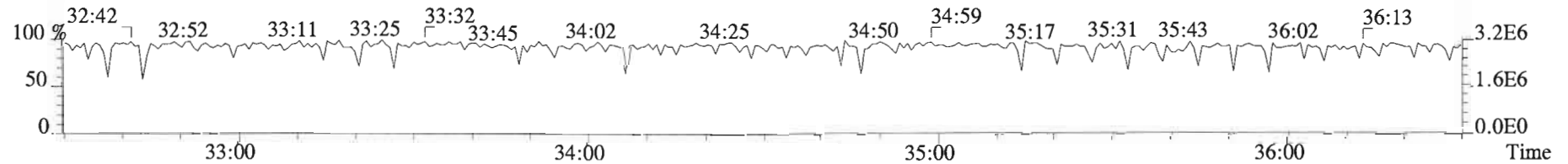
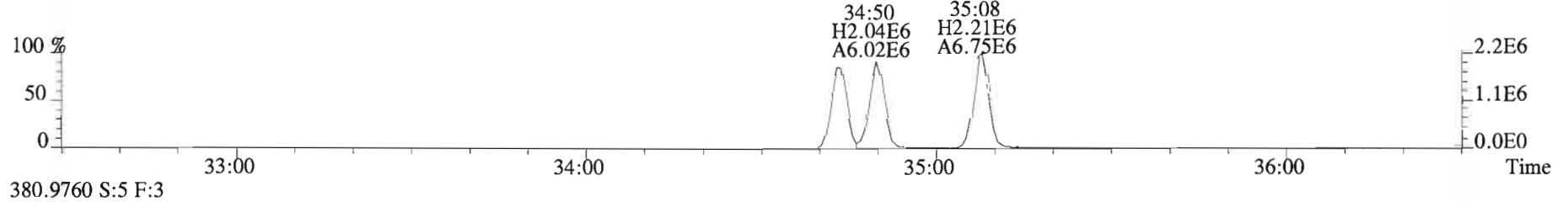
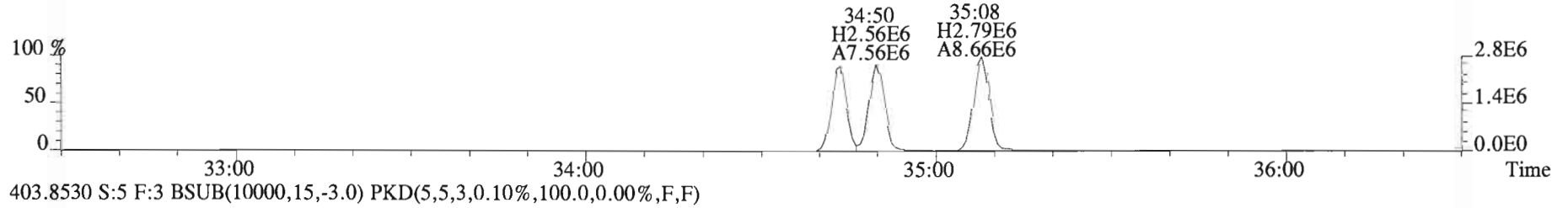
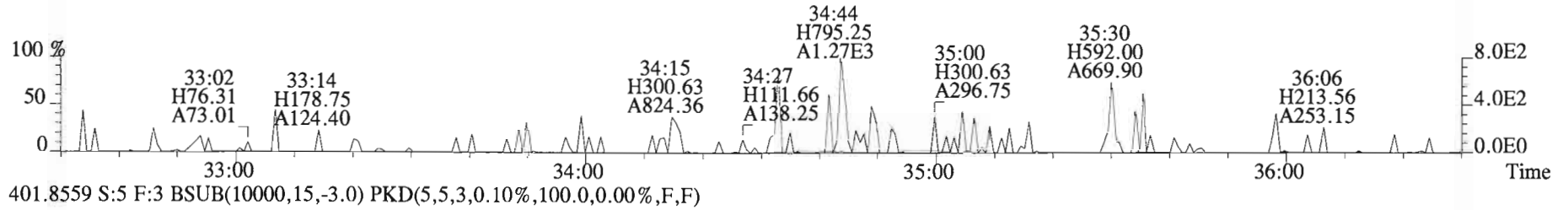
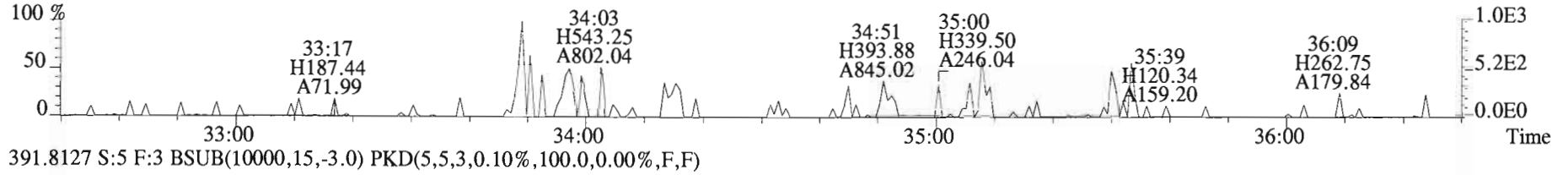
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



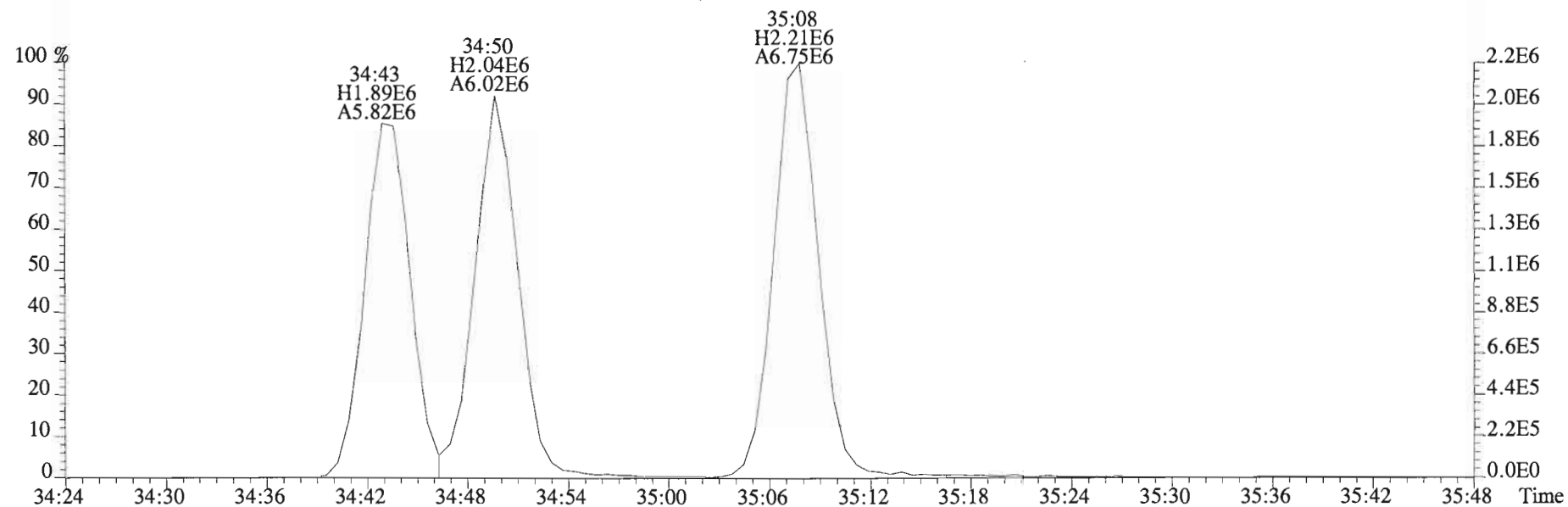
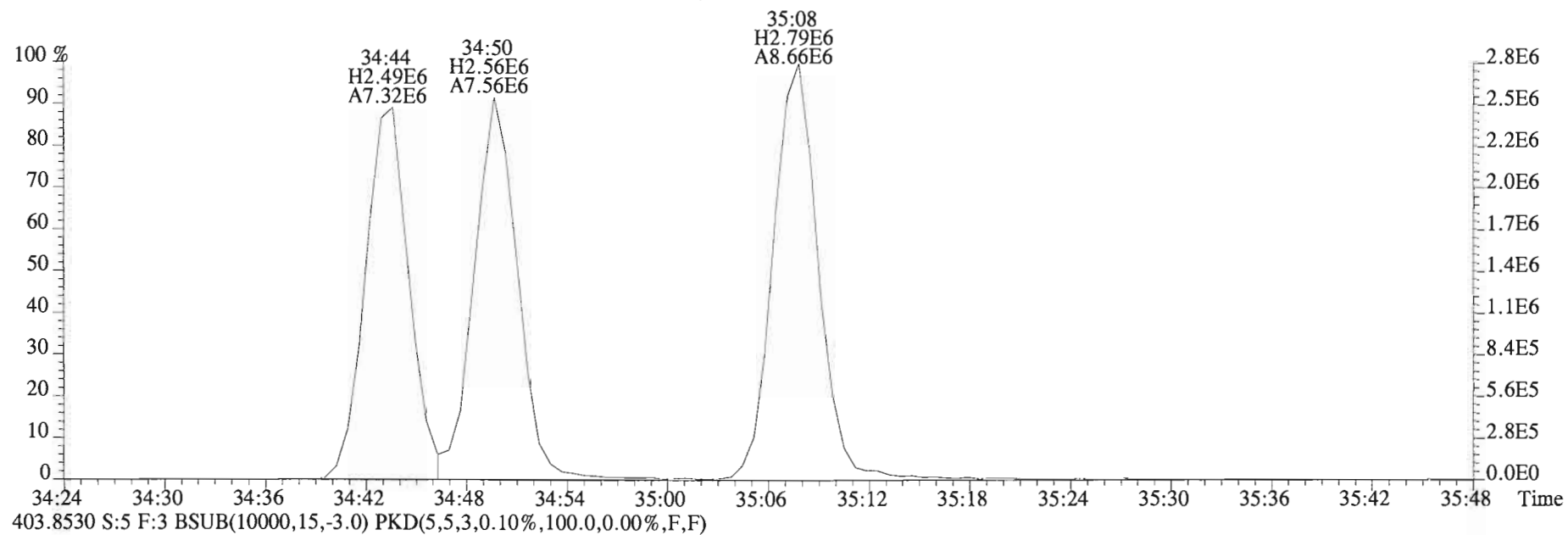
File:150130D3 #1-251 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



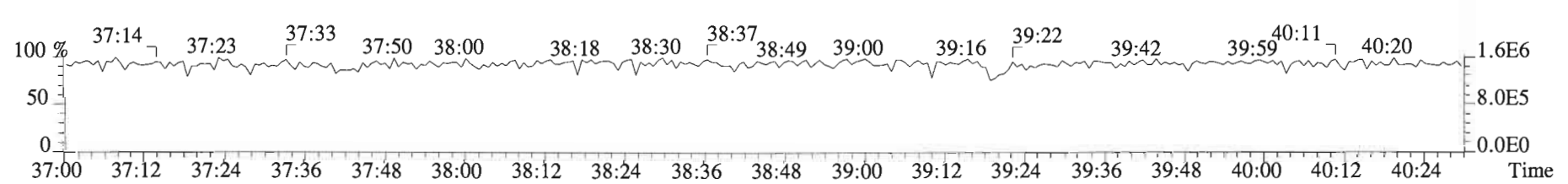
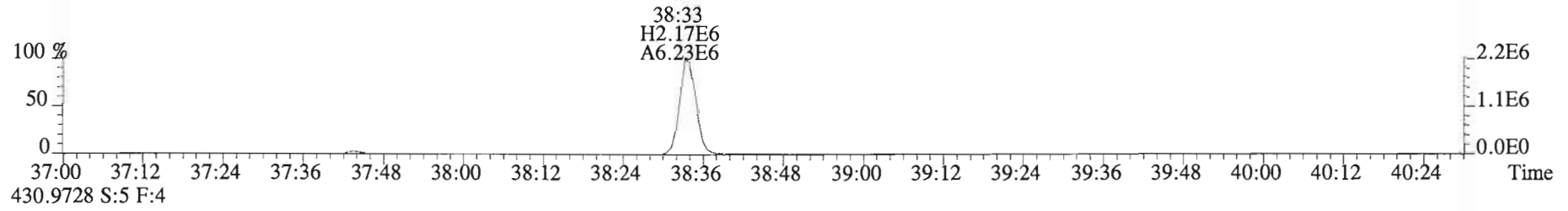
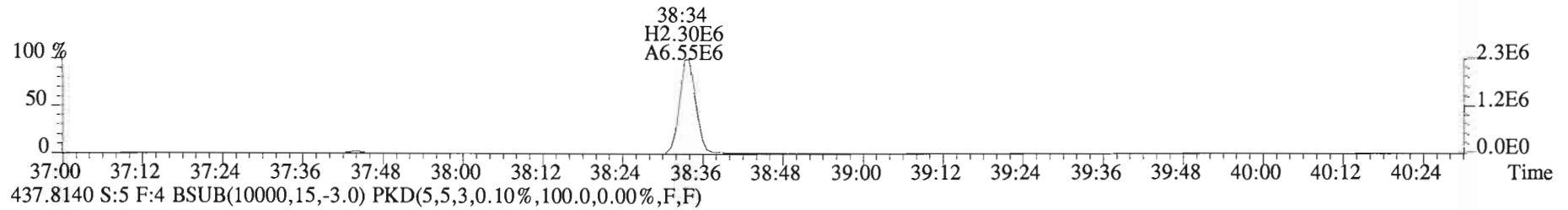
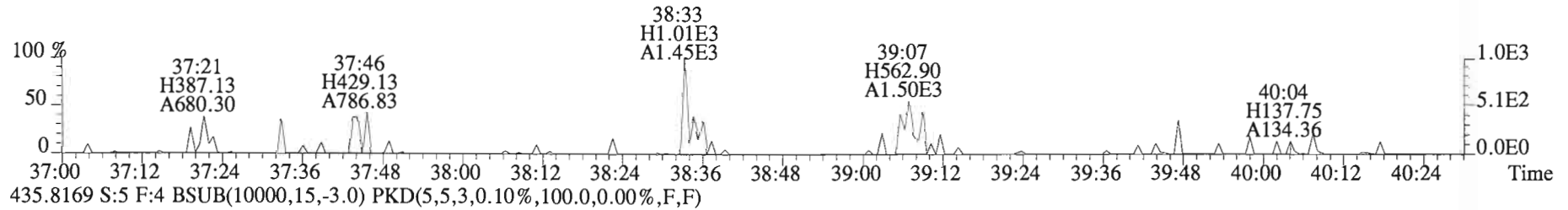
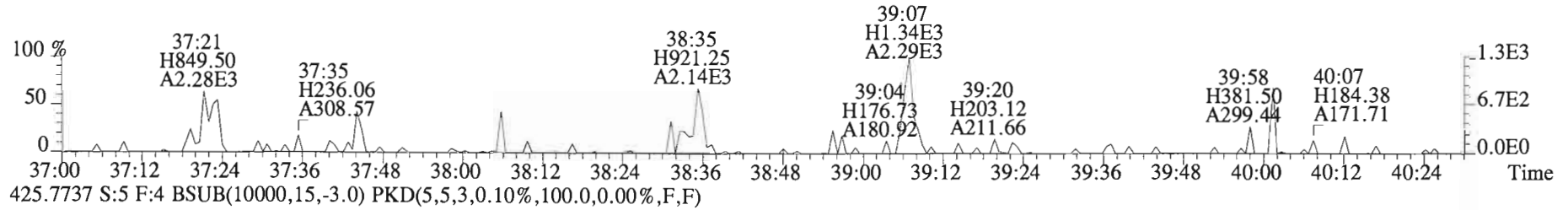
File:150130D3 #1-392 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



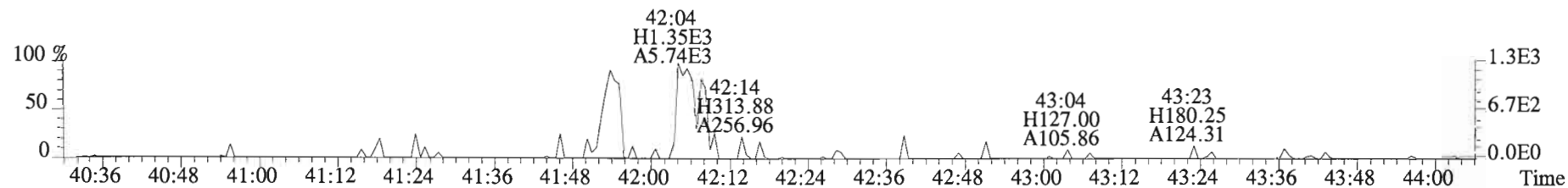
File:150130D3 #1-392 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



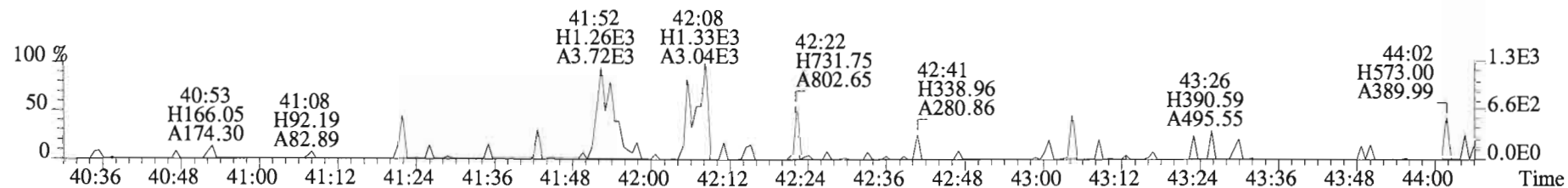
File:150130D3 #1-326 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



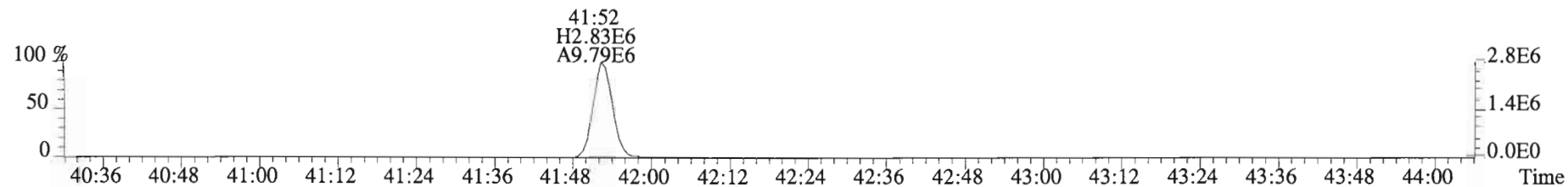
File:150130D3 #1-389 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



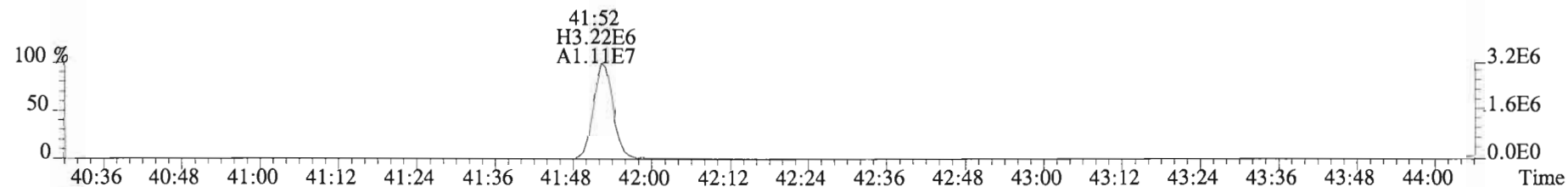
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



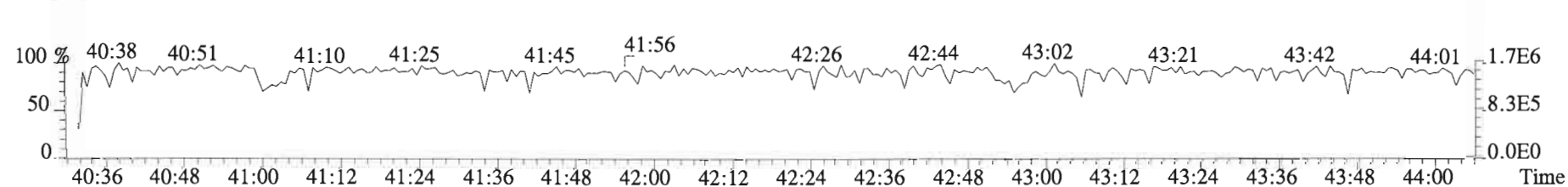
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



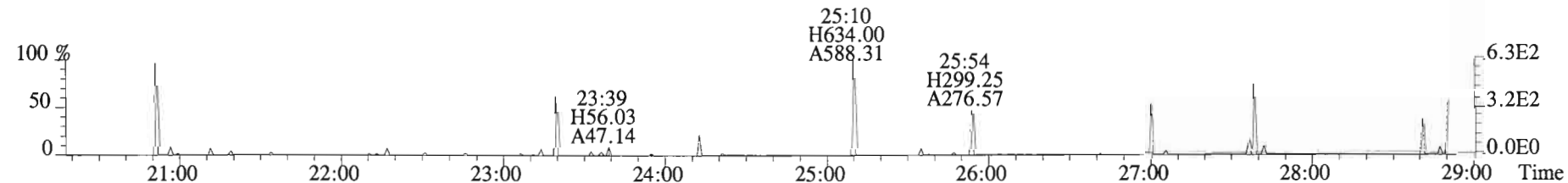
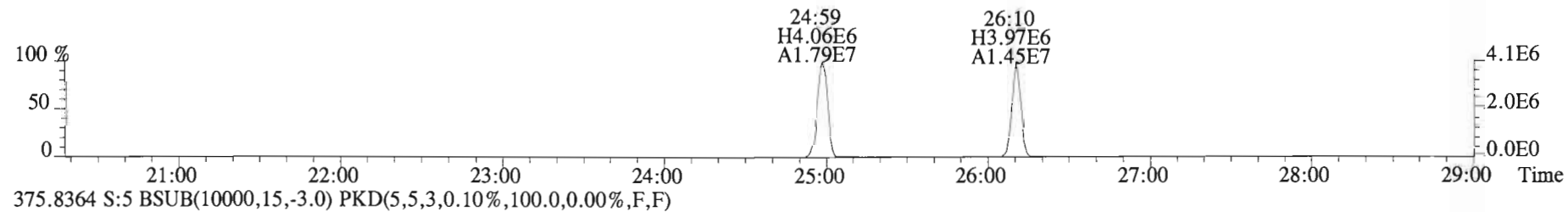
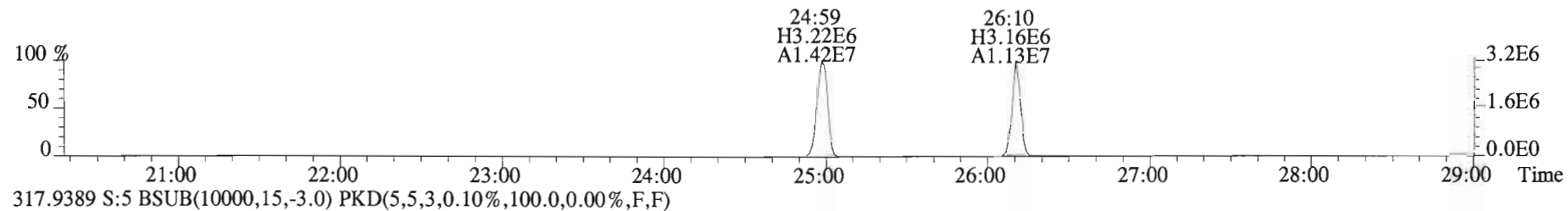
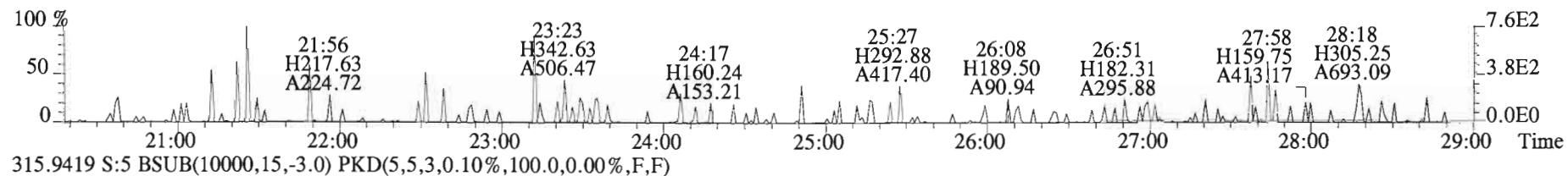
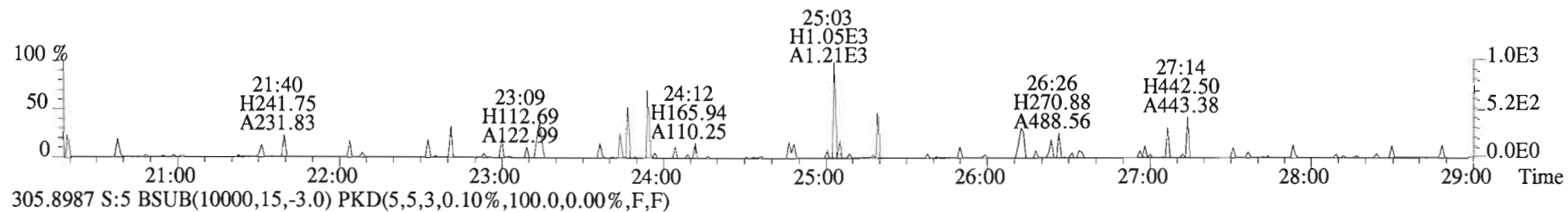
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



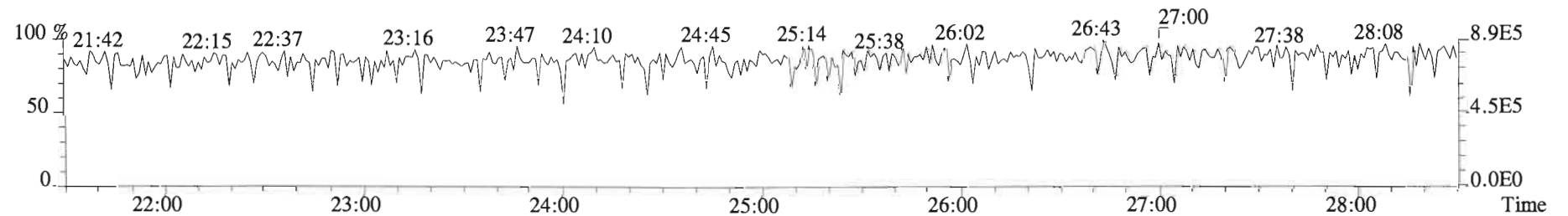
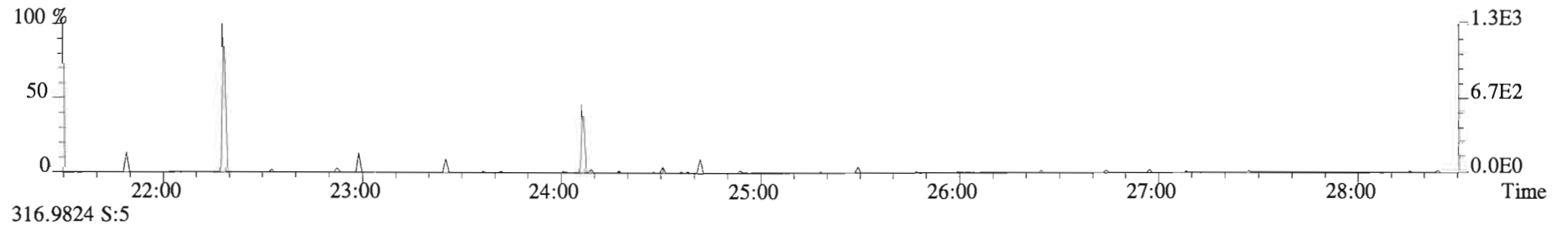
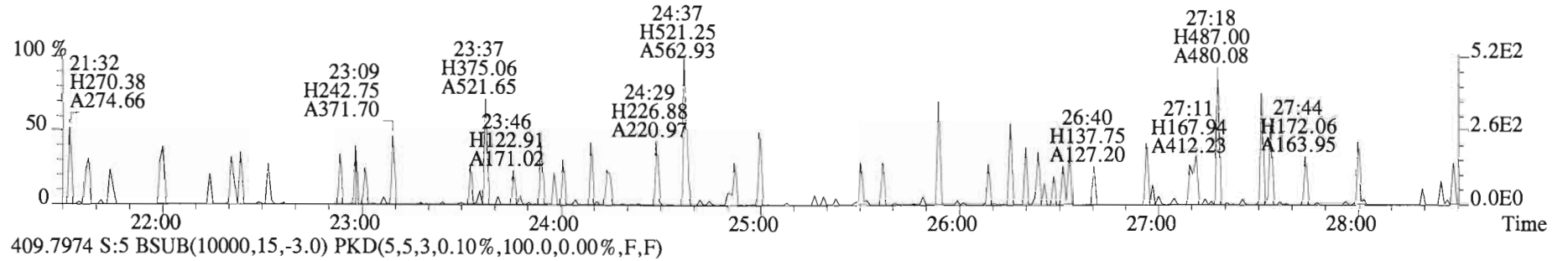
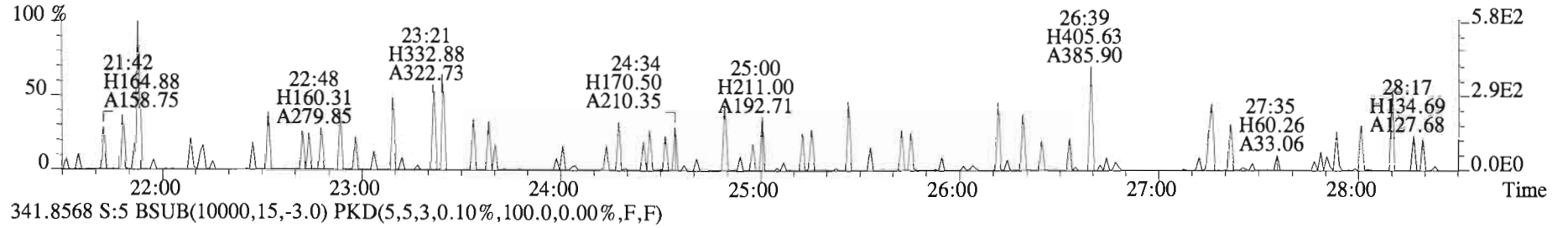
454.9728 S:5 F:5



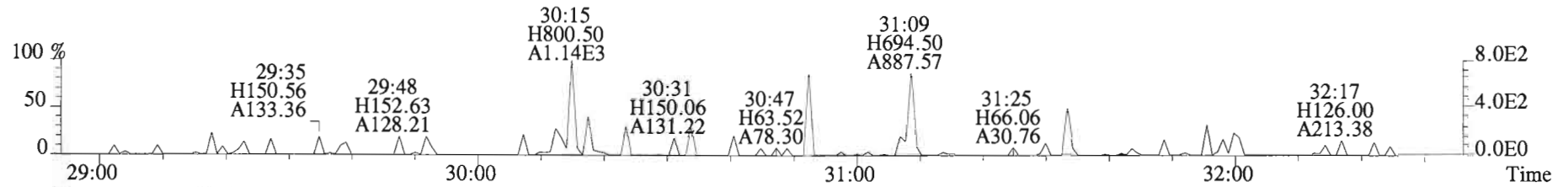
File:150130D3 #1-551 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



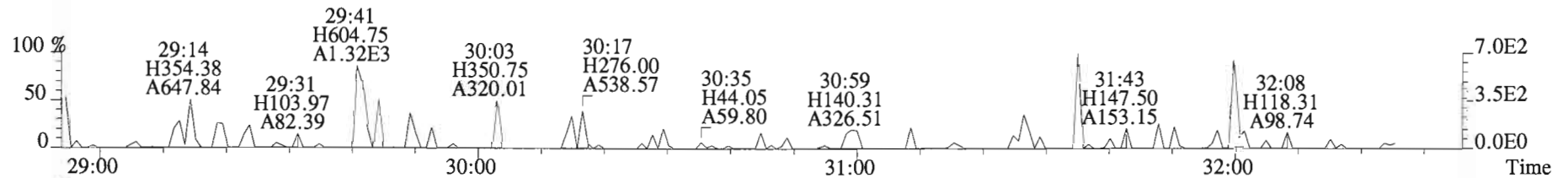
File:150130D3 #1-551 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



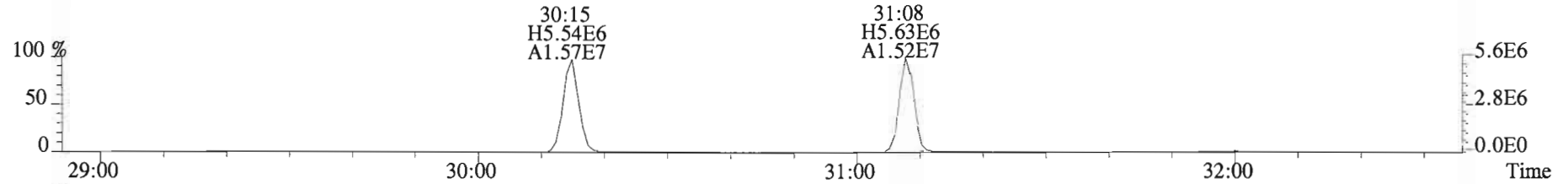
File:150130D3 #1-251 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



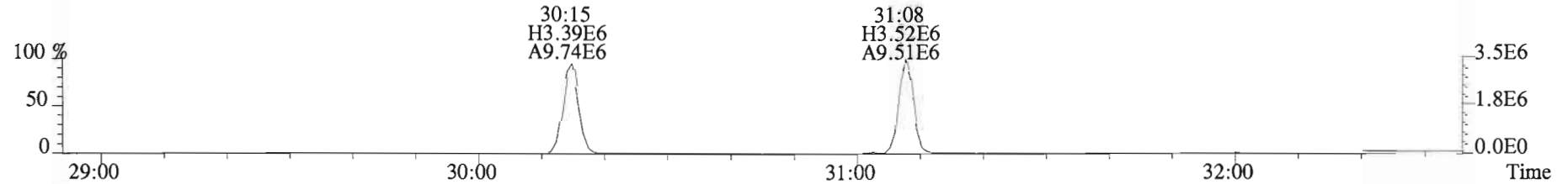
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



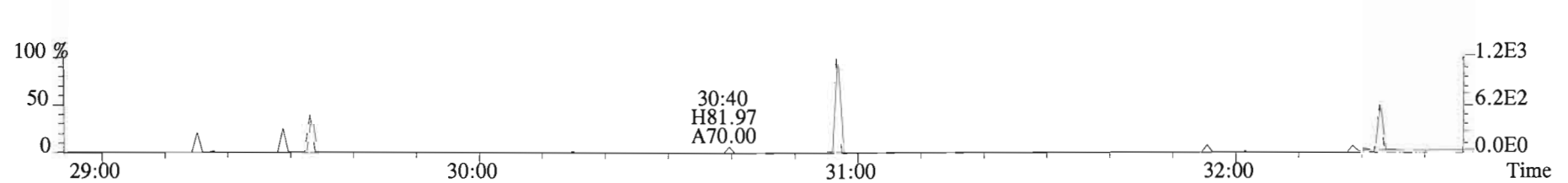
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



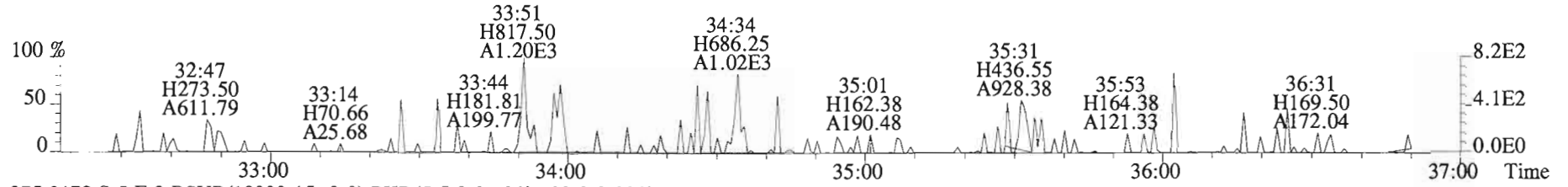
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



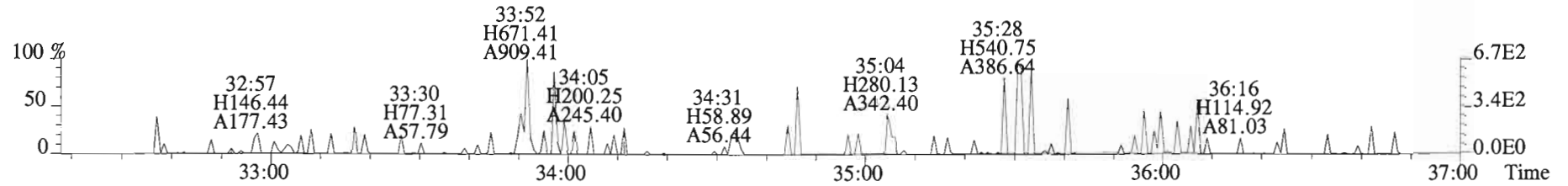
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



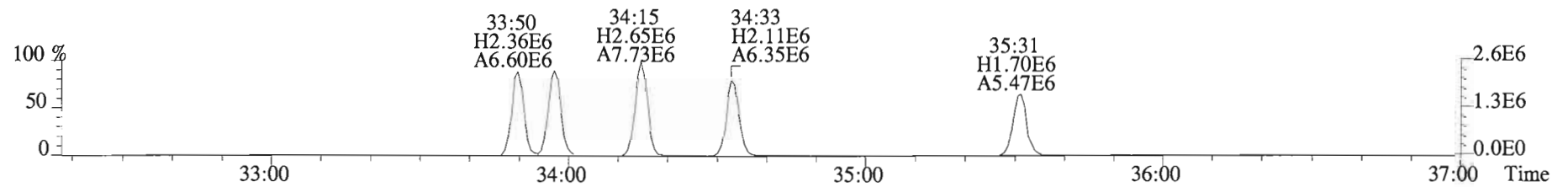
File:150130D3 #1-392 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



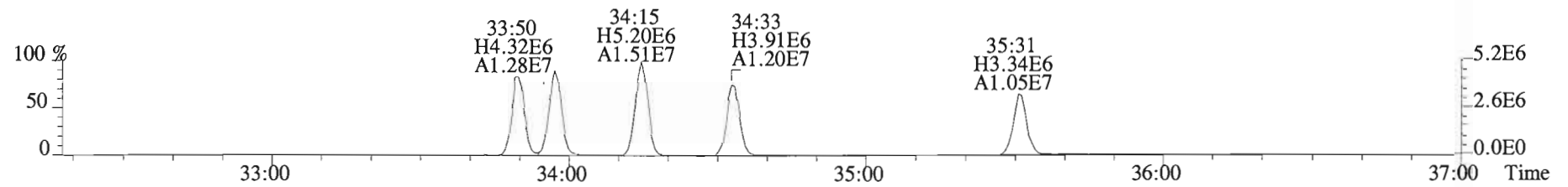
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



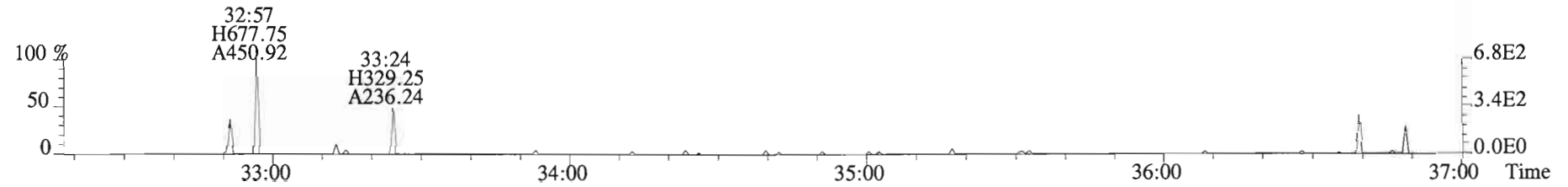
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



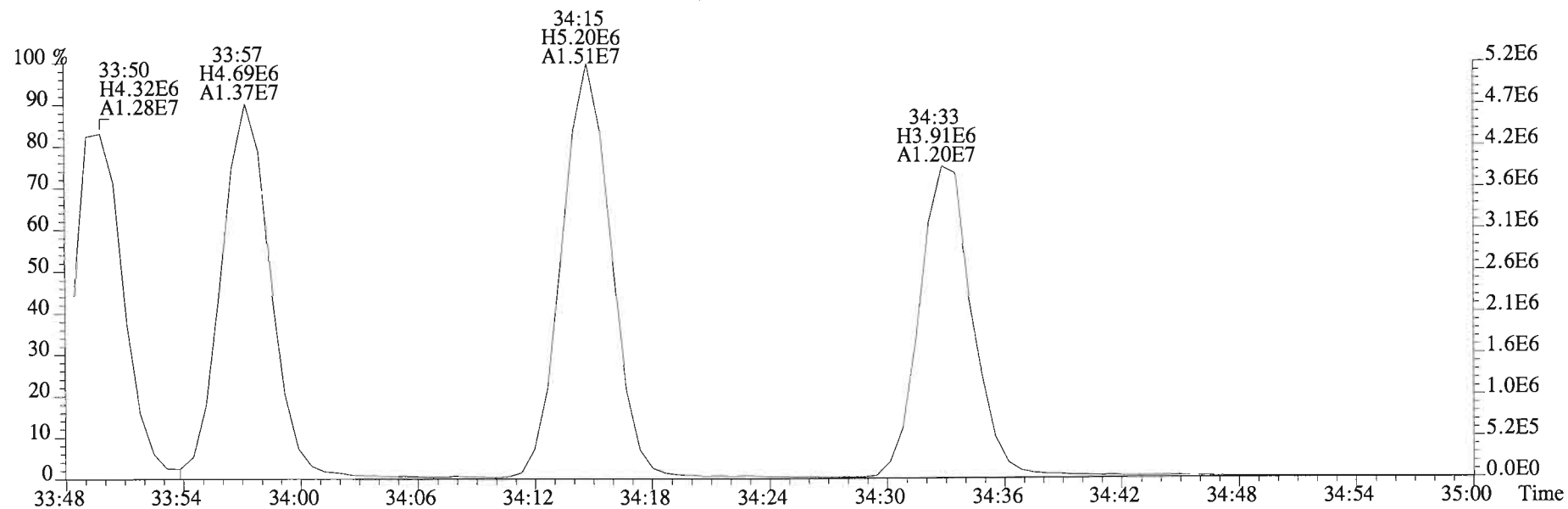
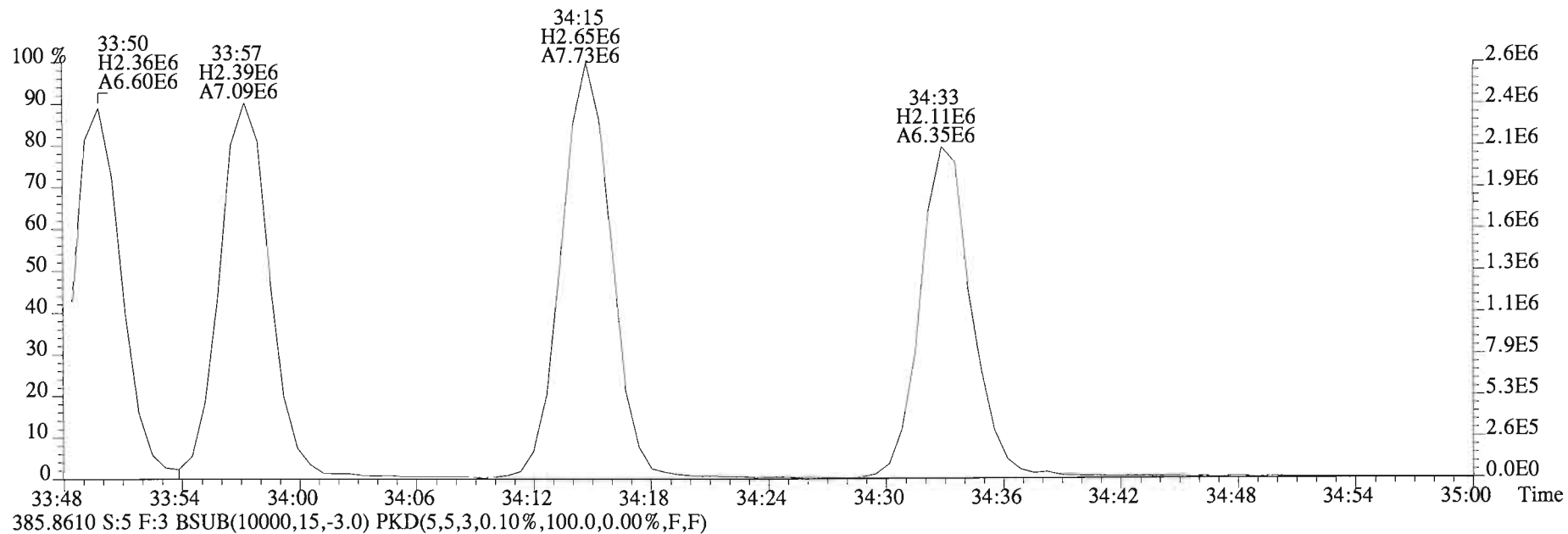
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



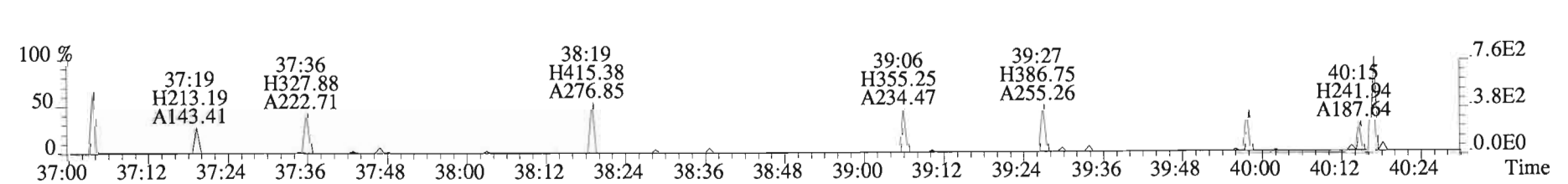
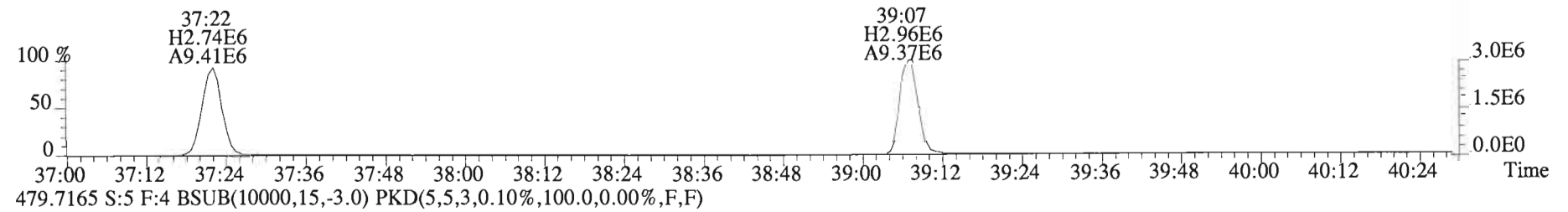
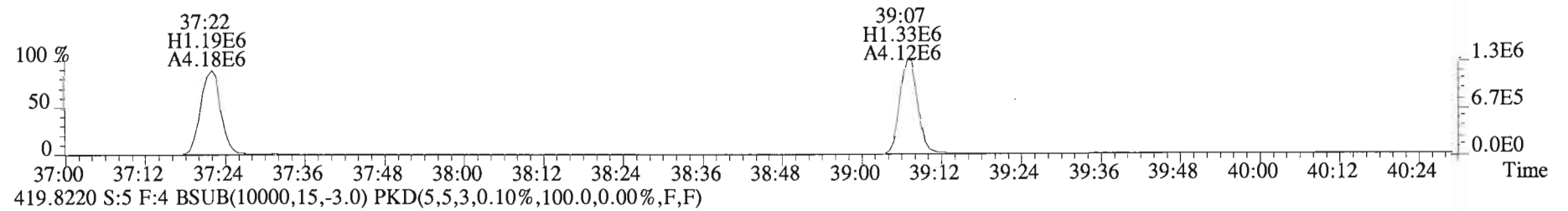
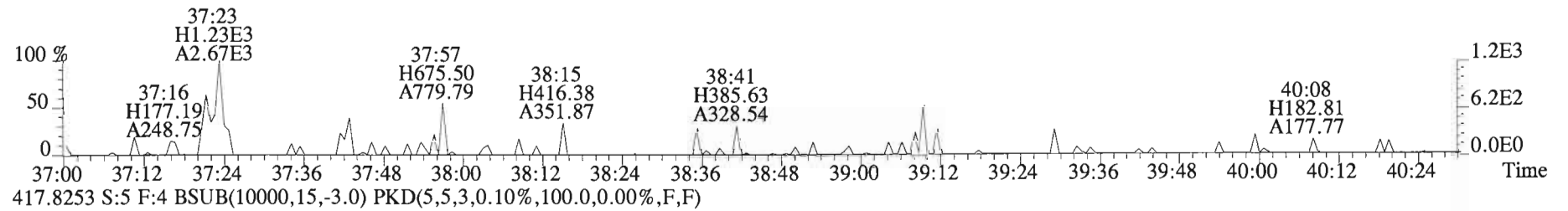
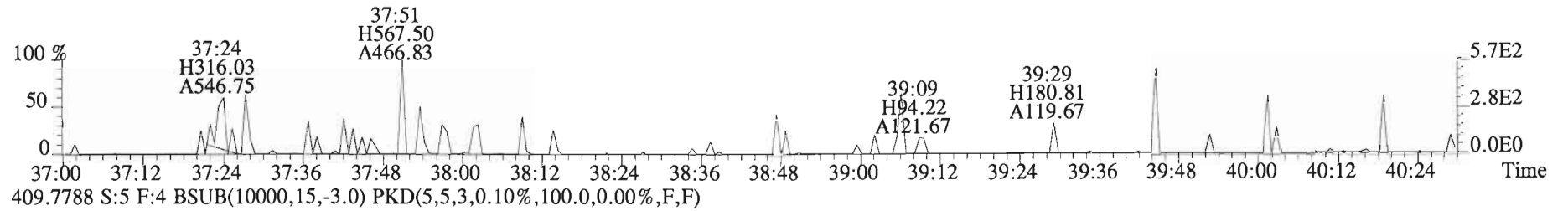
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



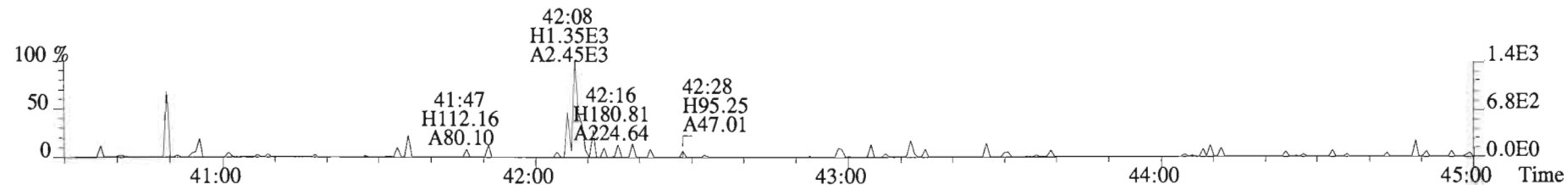
File:150130D3 #1-392 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



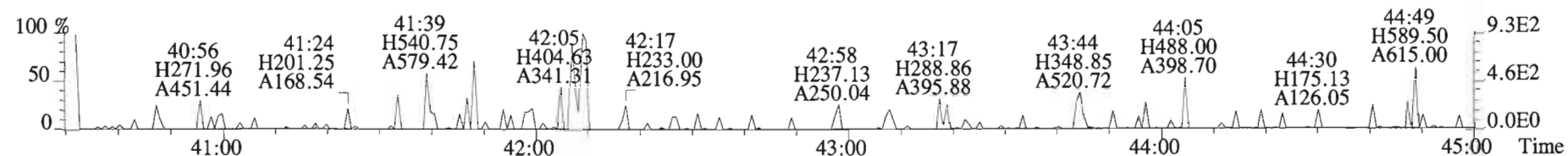
File:150130D3 #1-326 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
407.7818 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



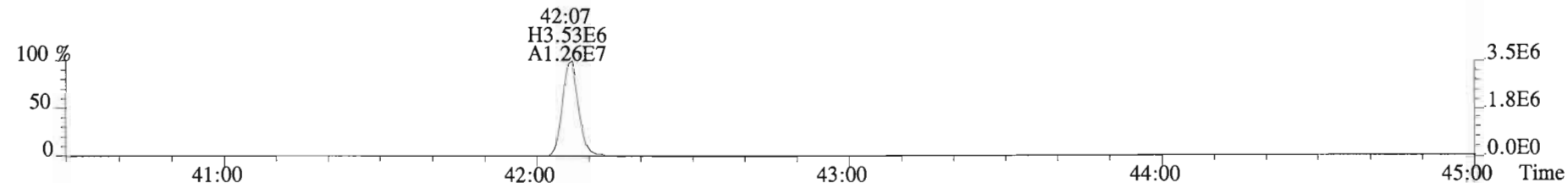
File:150130D3 #1-389 Acq:31-JAN-2015 13:10:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BLK1 Method Blank 10 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



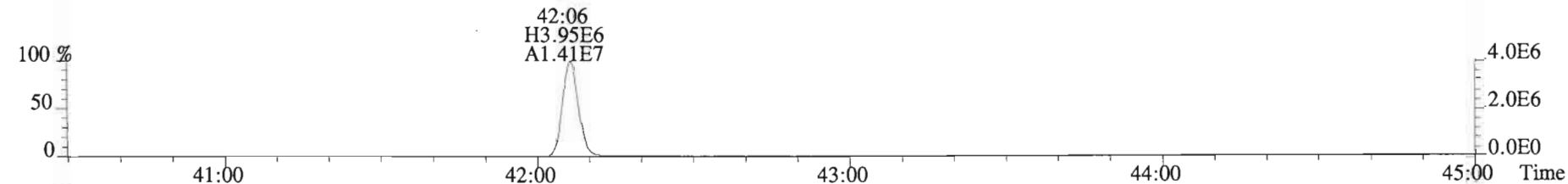
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



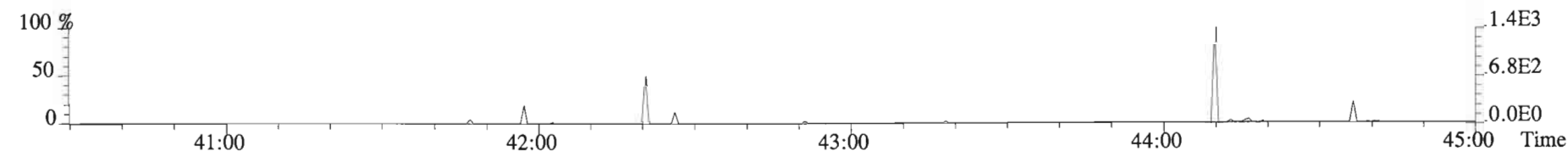
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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 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

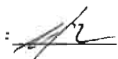
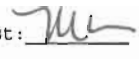
(1) Contract-required concentration limits for OPR
as specified in Table 6, Method 1613. 10/94(2) Contract-required concentration limits for OPR
as specified in Table 6a, Method 1613. 10/94Analyst: AKDate: 2/4/15

Client ID: OPR
Lab ID: B5A0101-BS1

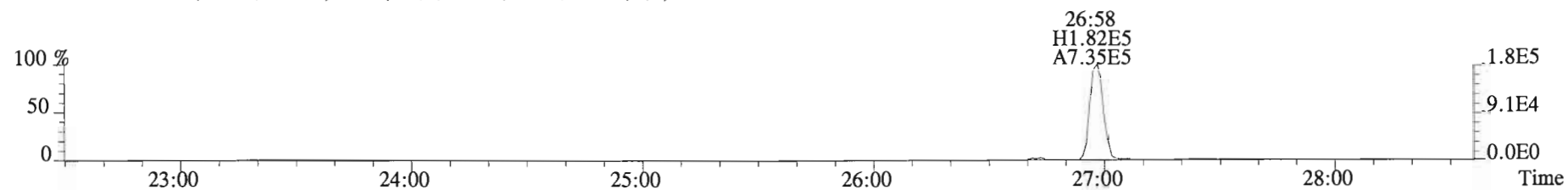
Filename: 150130D3 S:2 Acq:31-JAN-15 10:46:04
GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000

ConCal: ST150130D3-1
EndCAL: NA

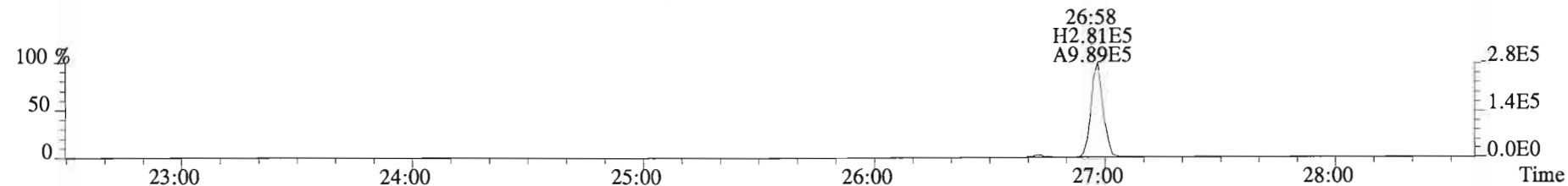
Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	1.72e+06	0.74 y	1.17	26:58	1.001	8.2308	*	2.5	*	*	Total Tetra-Dioxins	8.49	8.54	*	*	
1,2,3,7,8-PeCDD	8.06e+06	0.63 y	0.91	31:26	1.000	48.989	*	2.5	*	*	Total Penta-Dioxins	49.0	49.3	*	*	
1,2,3,4,7,8-HxCDD	7.23e+06	1.26 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: 
Date: 2/2/15
Reviewed
by
Analyst: 
Date: 2/2/15

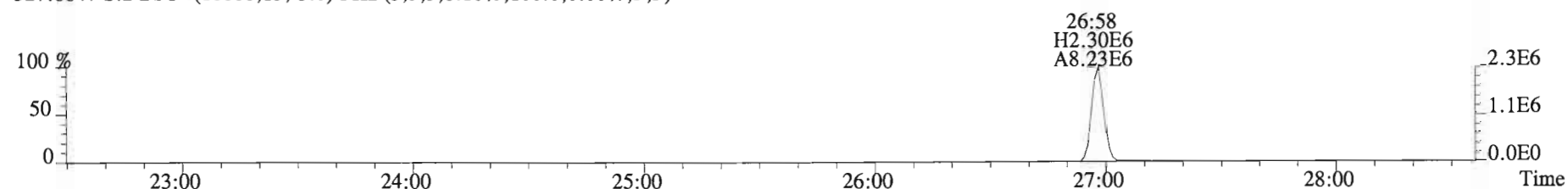
File:150130D3 #1-551 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



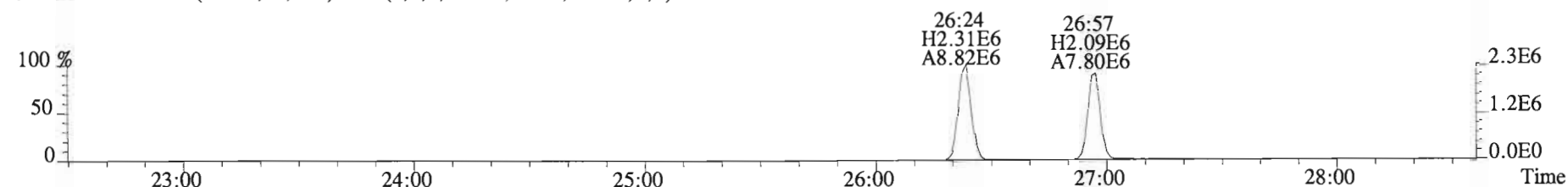
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



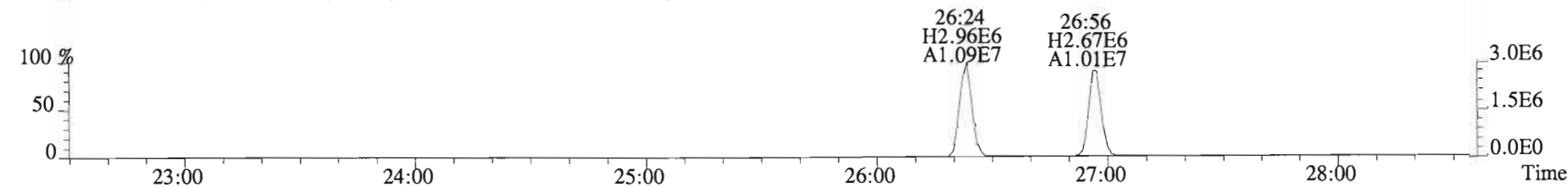
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



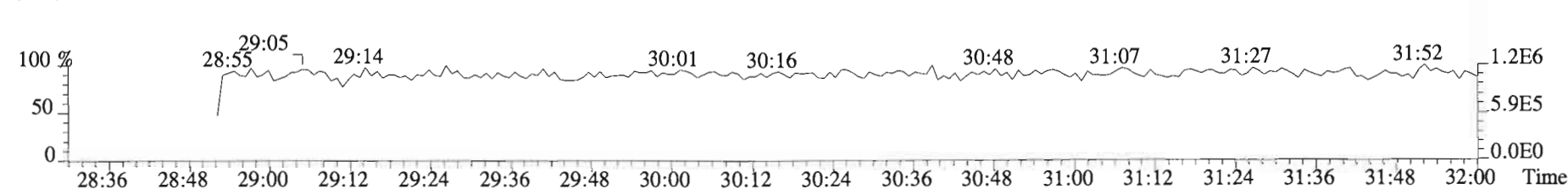
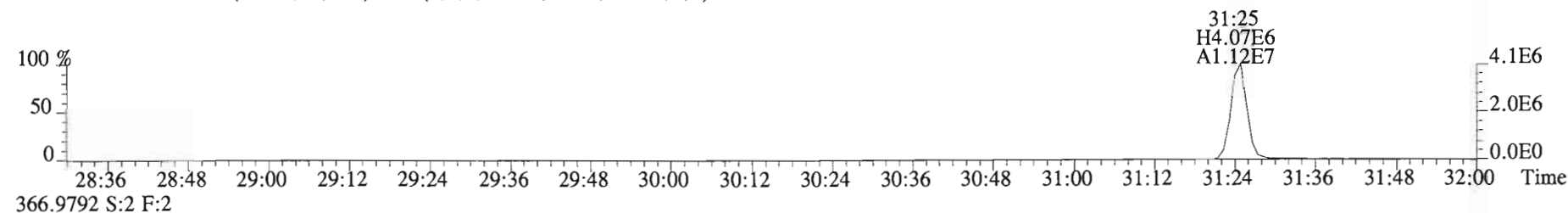
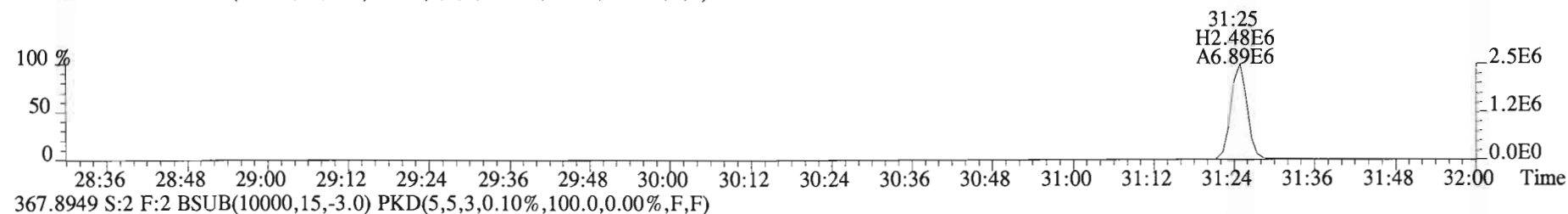
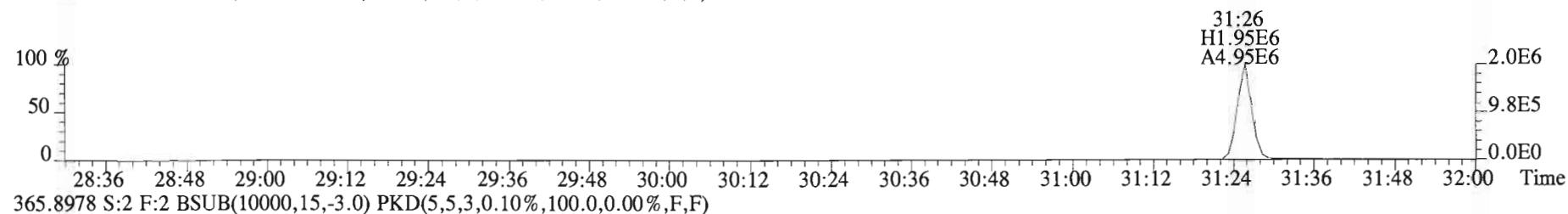
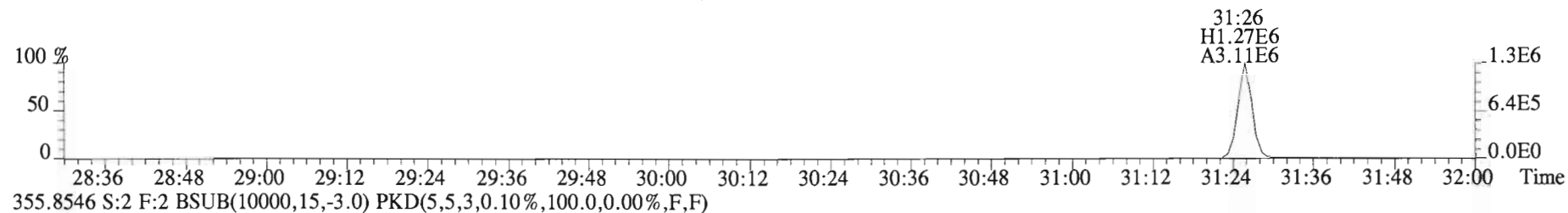
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



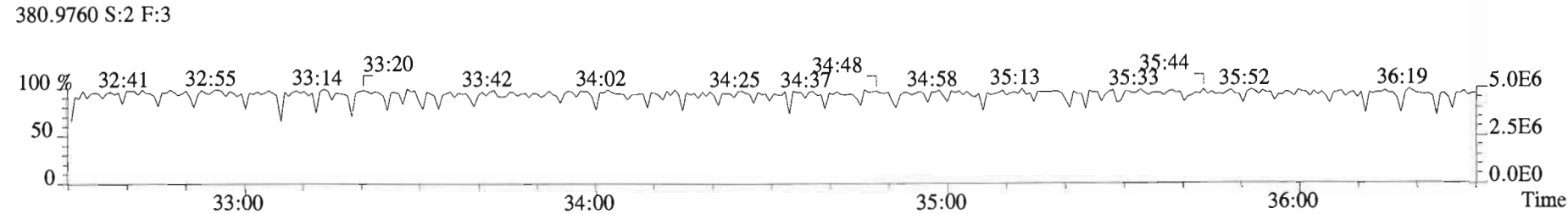
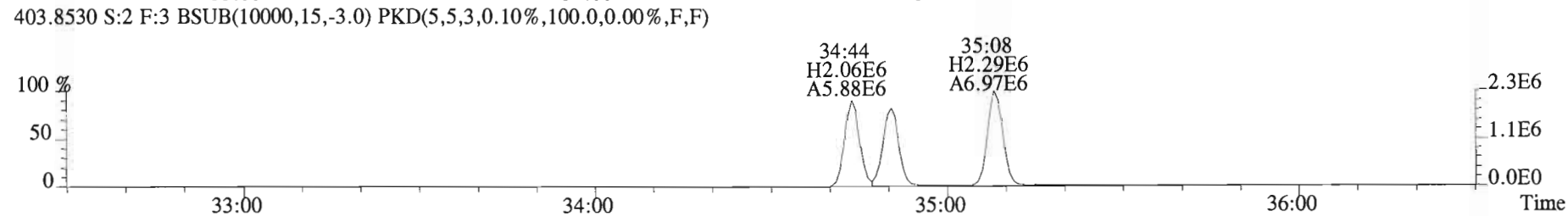
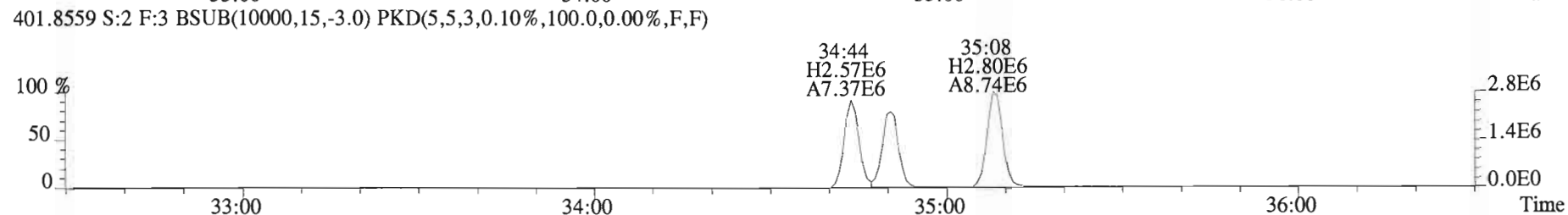
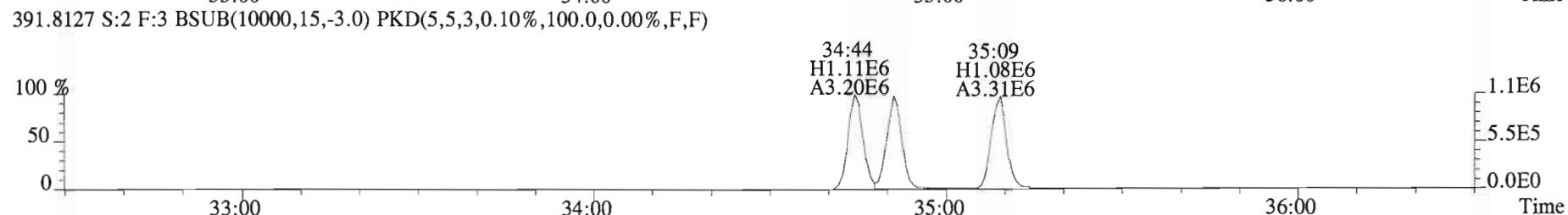
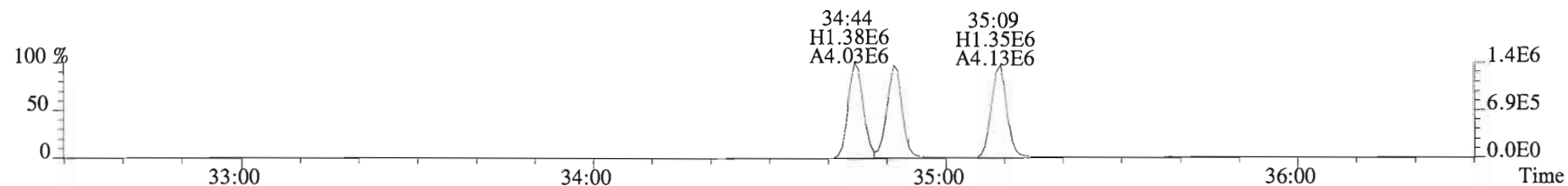
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



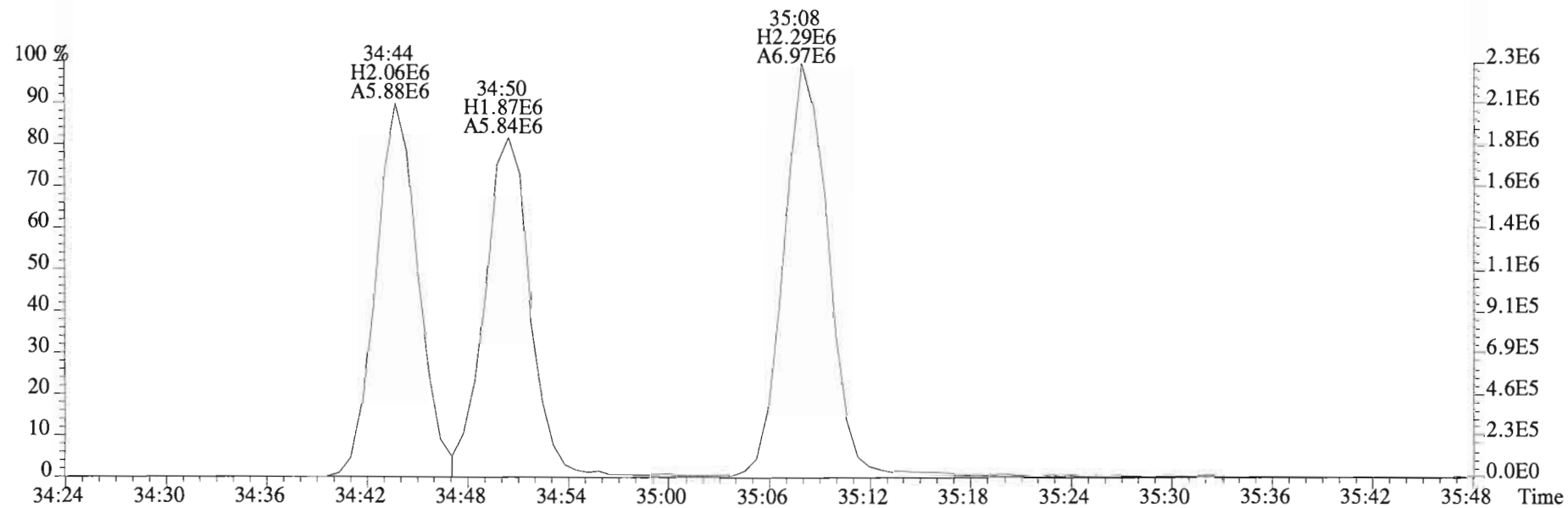
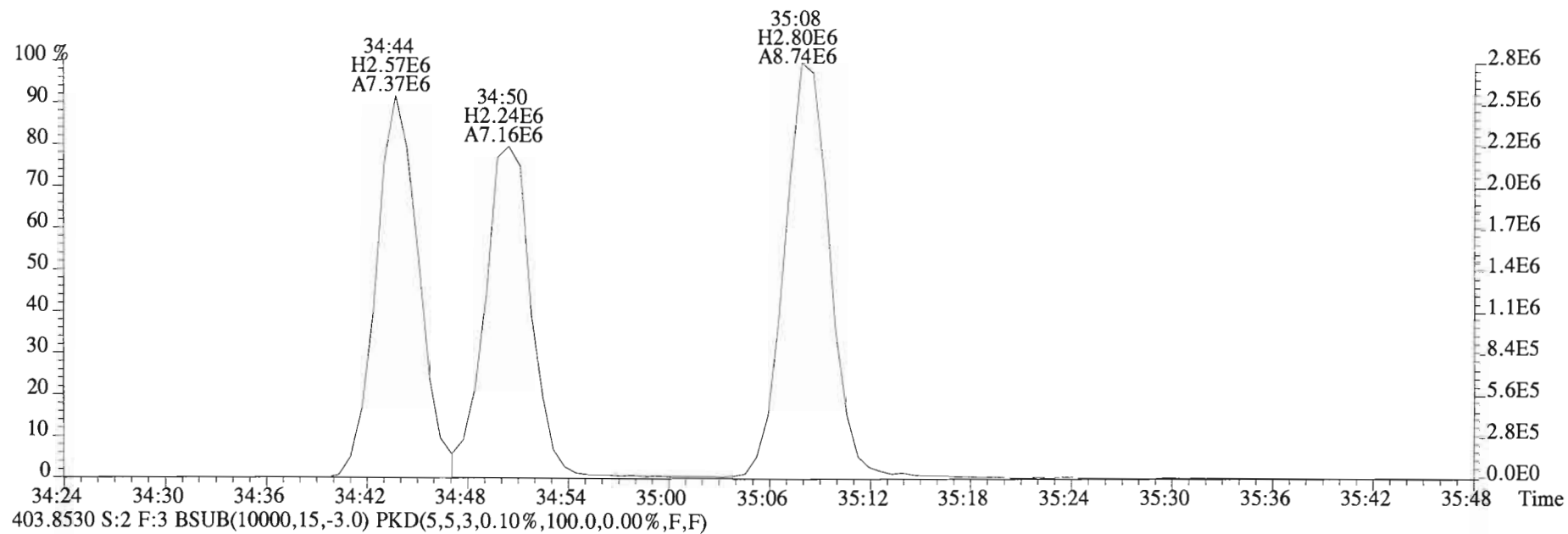
File:150130D3 #1-251 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



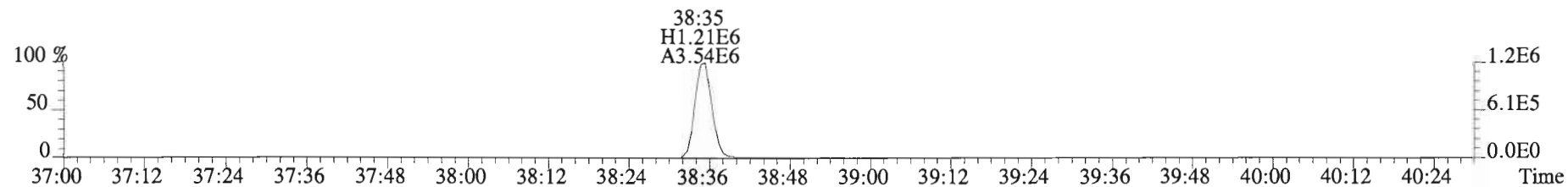
File:150130D3 #1-392 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



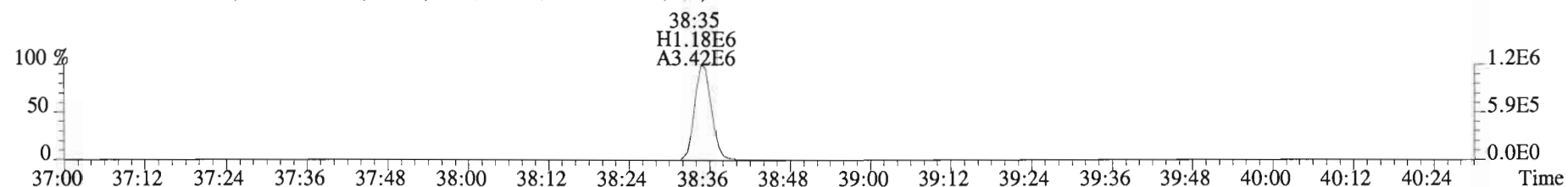
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Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



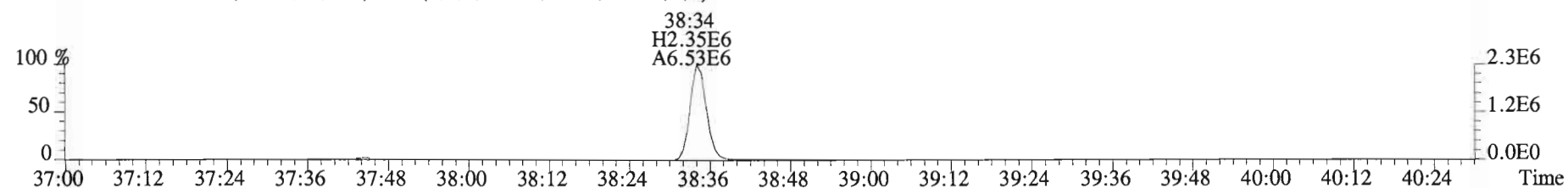
File:150130D3 #1-326 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



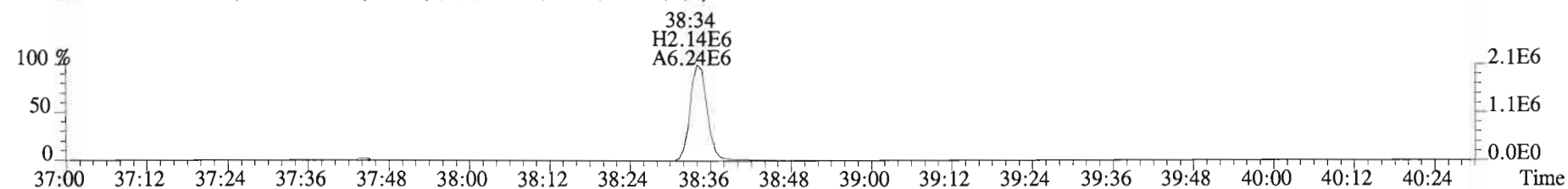
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



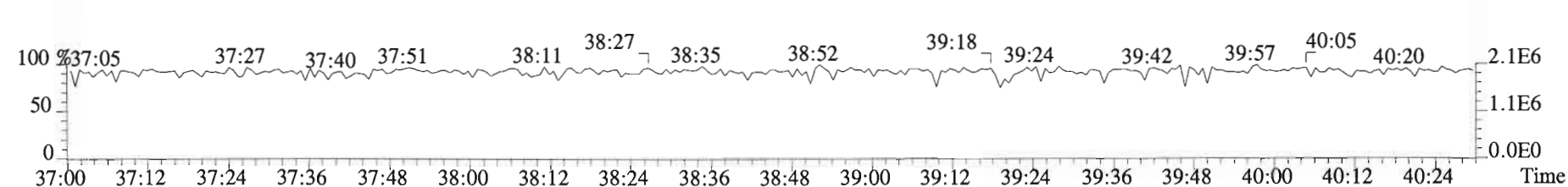
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



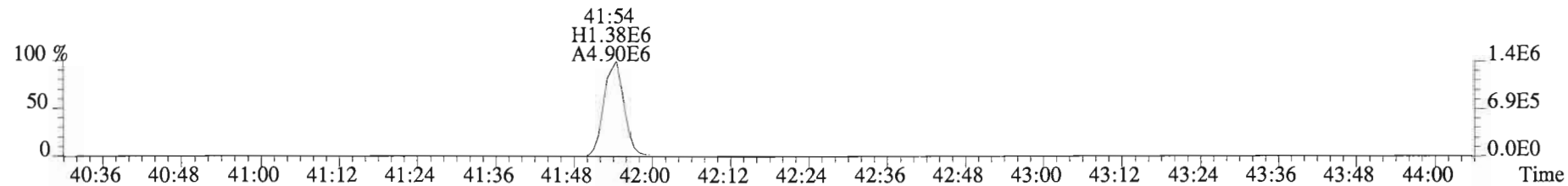
437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



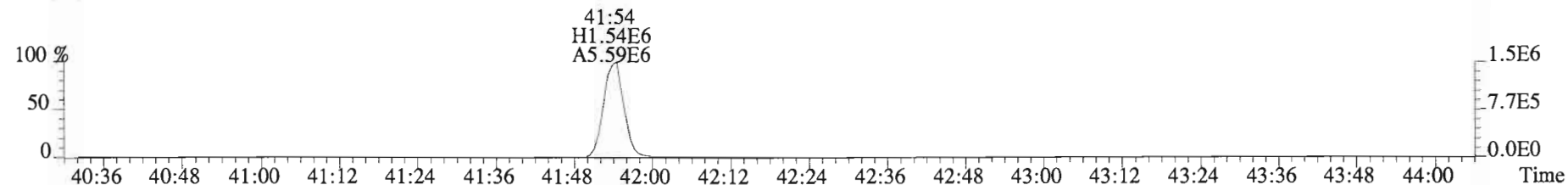
430.9728 S:2 F:4



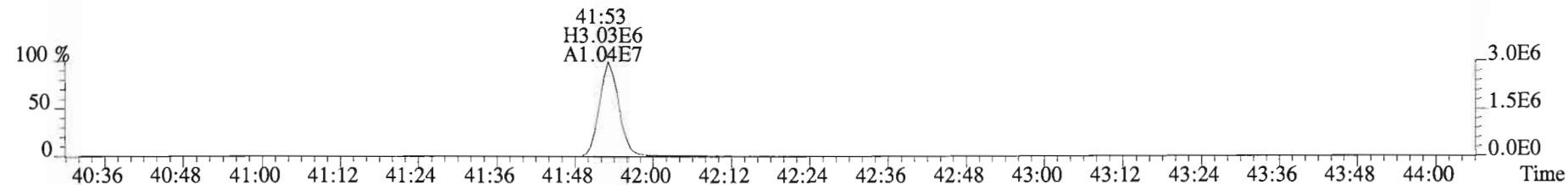
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Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



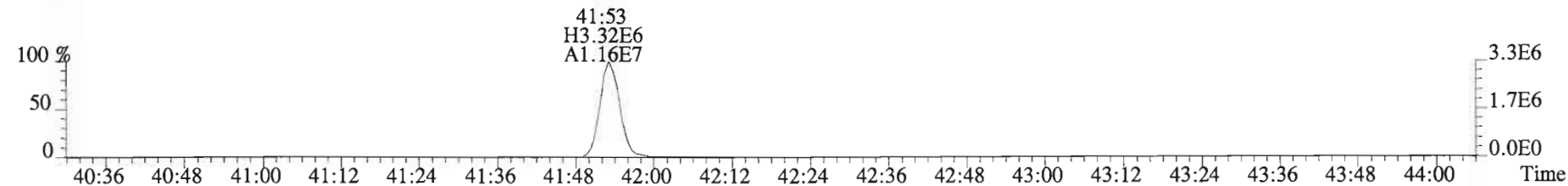
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



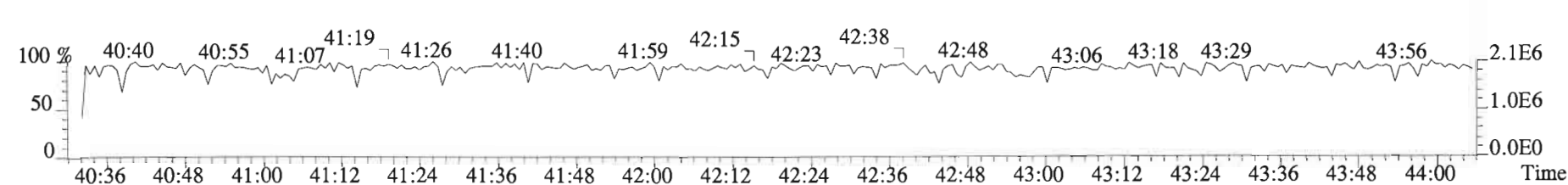
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



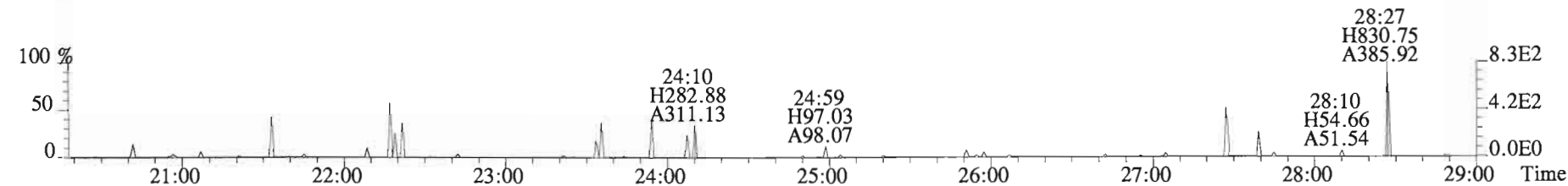
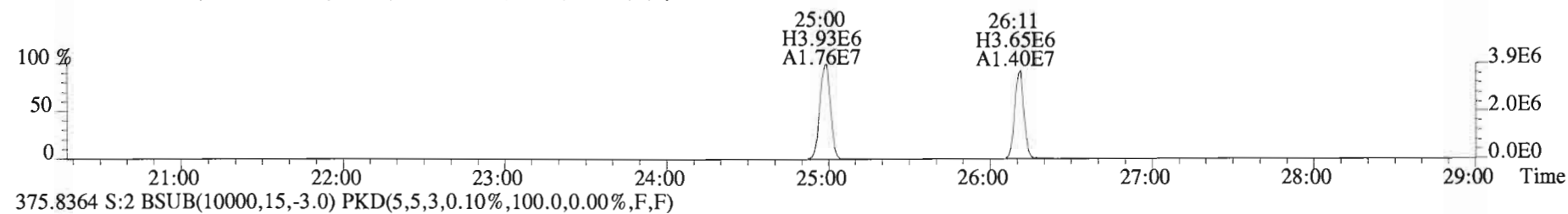
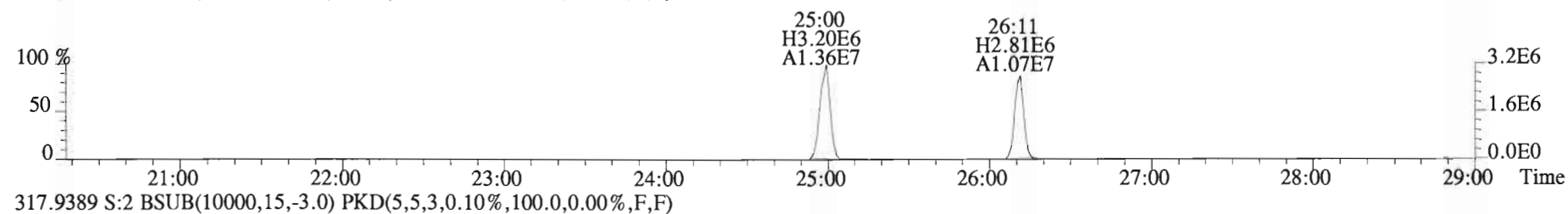
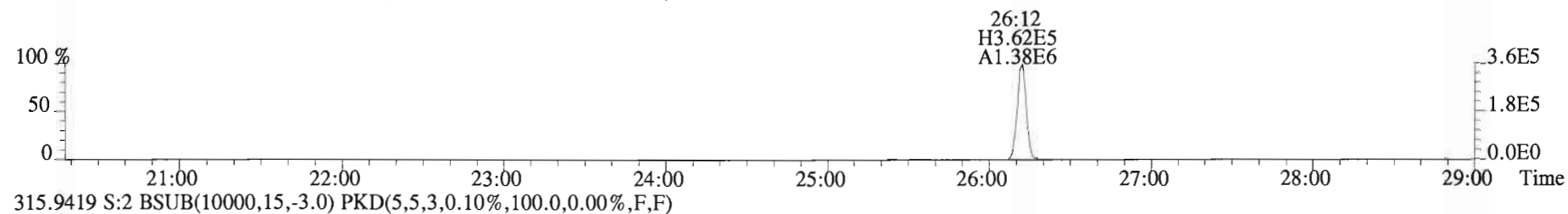
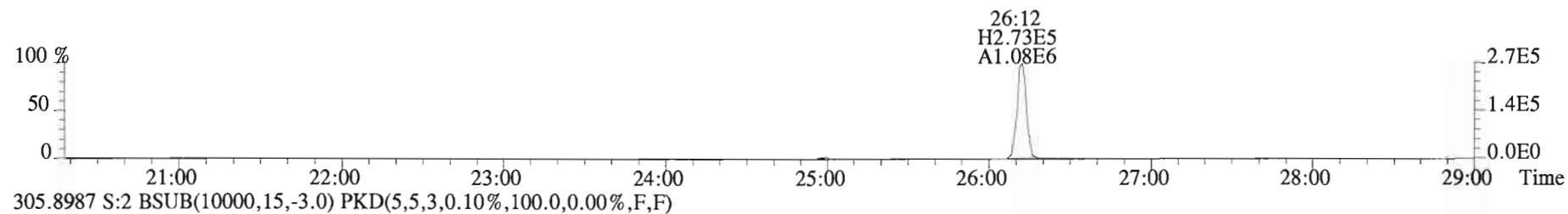
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



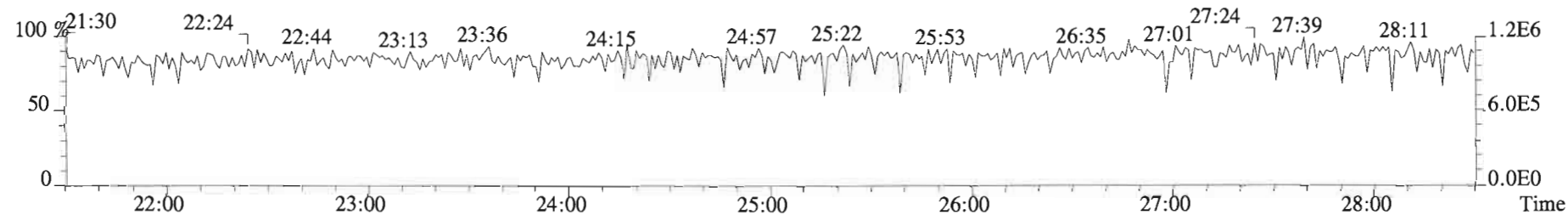
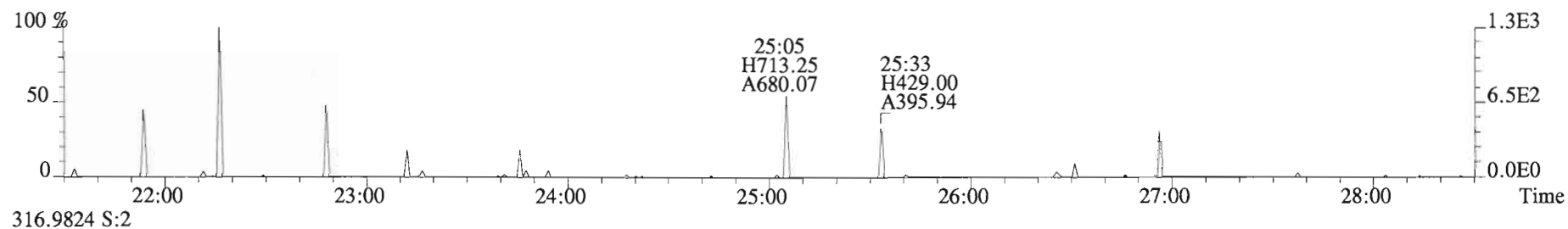
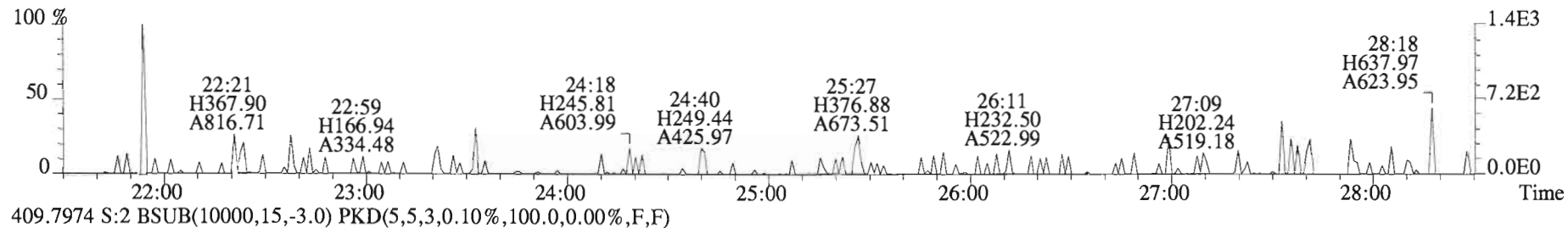
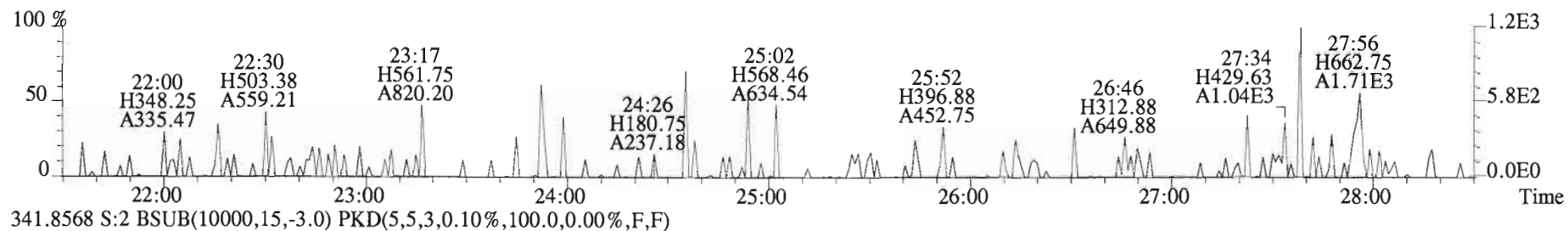
454.9728 S:2 F:5



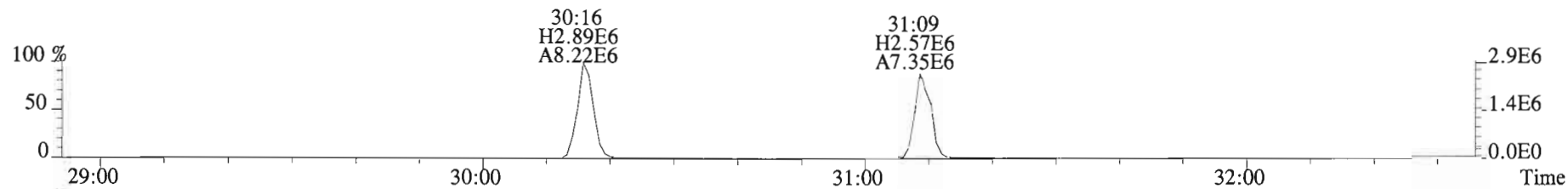
File:150130D3 #1-551 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



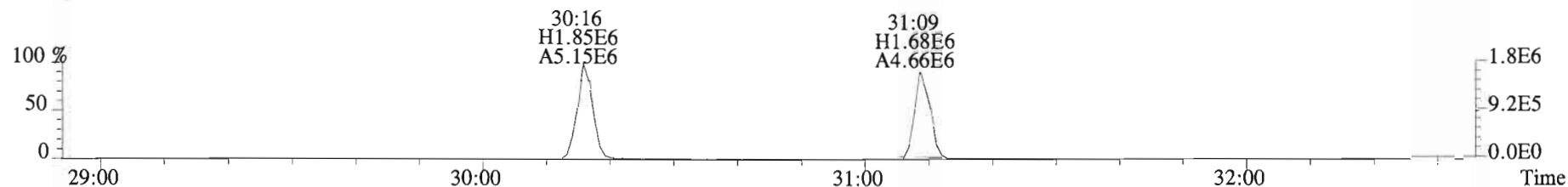
File:150130D3 #1-551 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



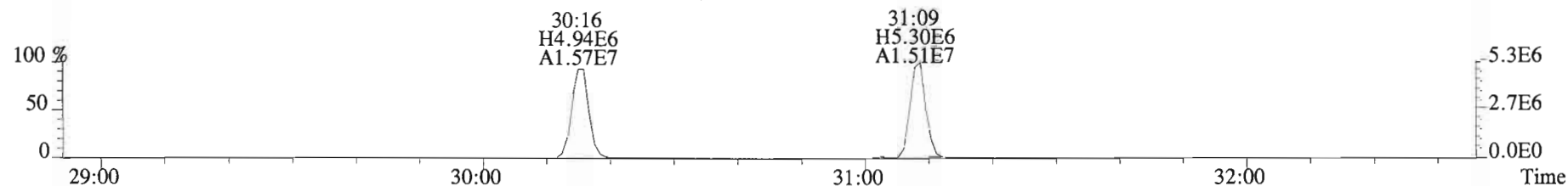
File:150130D3 #1-251 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



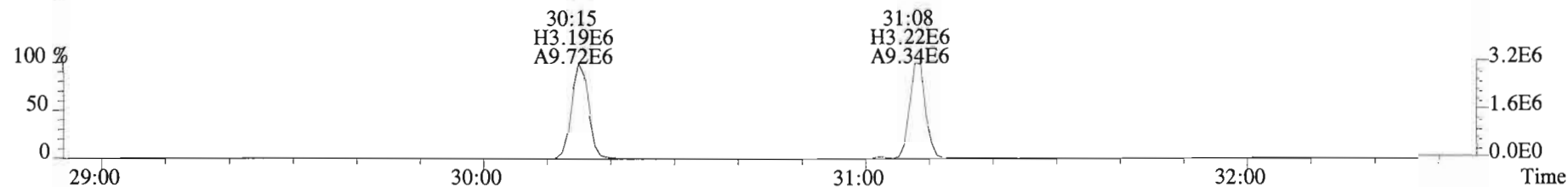
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



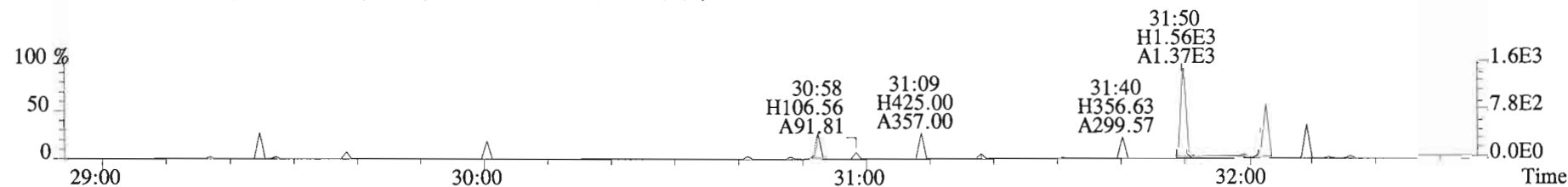
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



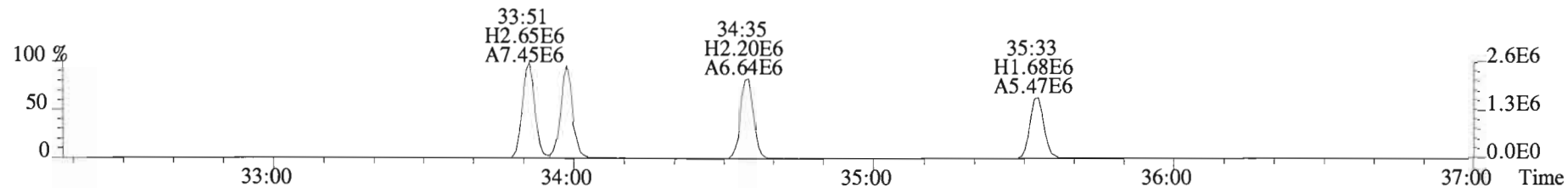
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



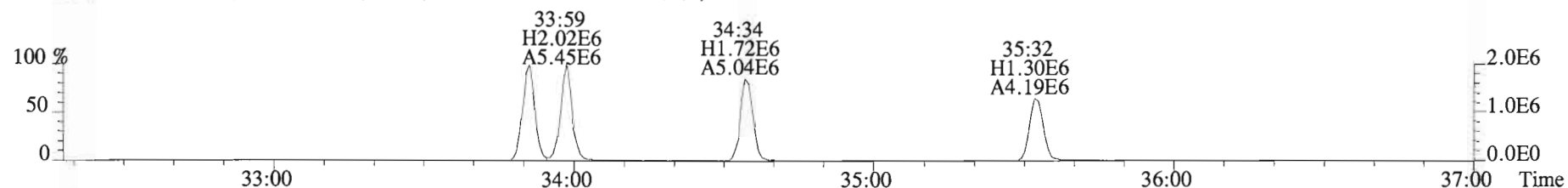
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



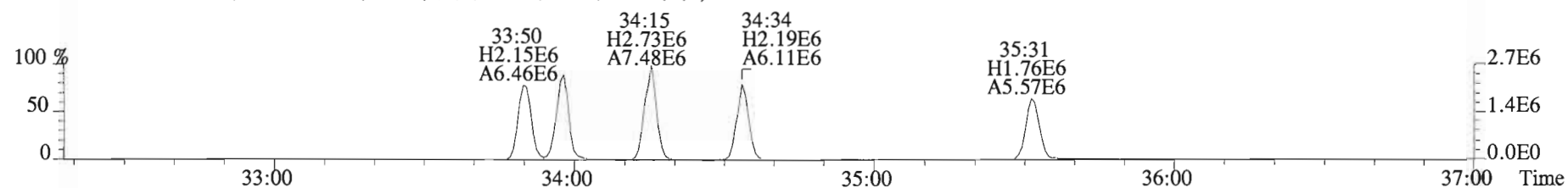
File:150130D3 #1-392 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



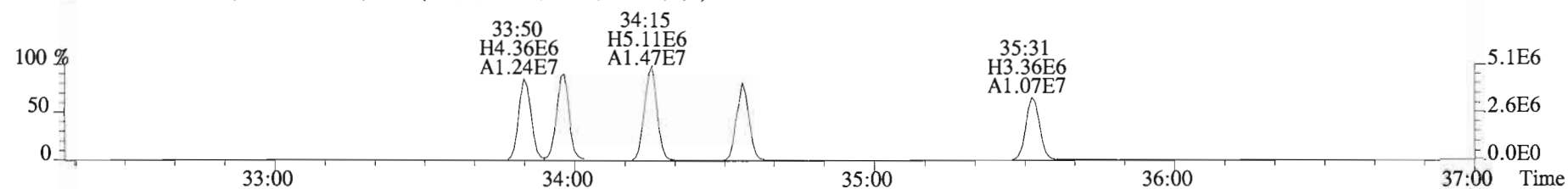
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



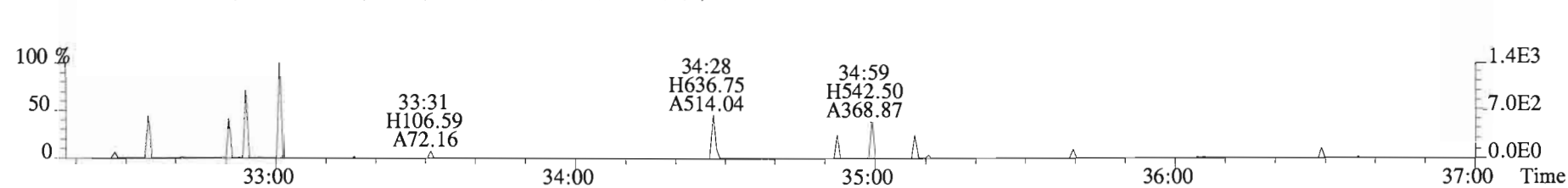
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



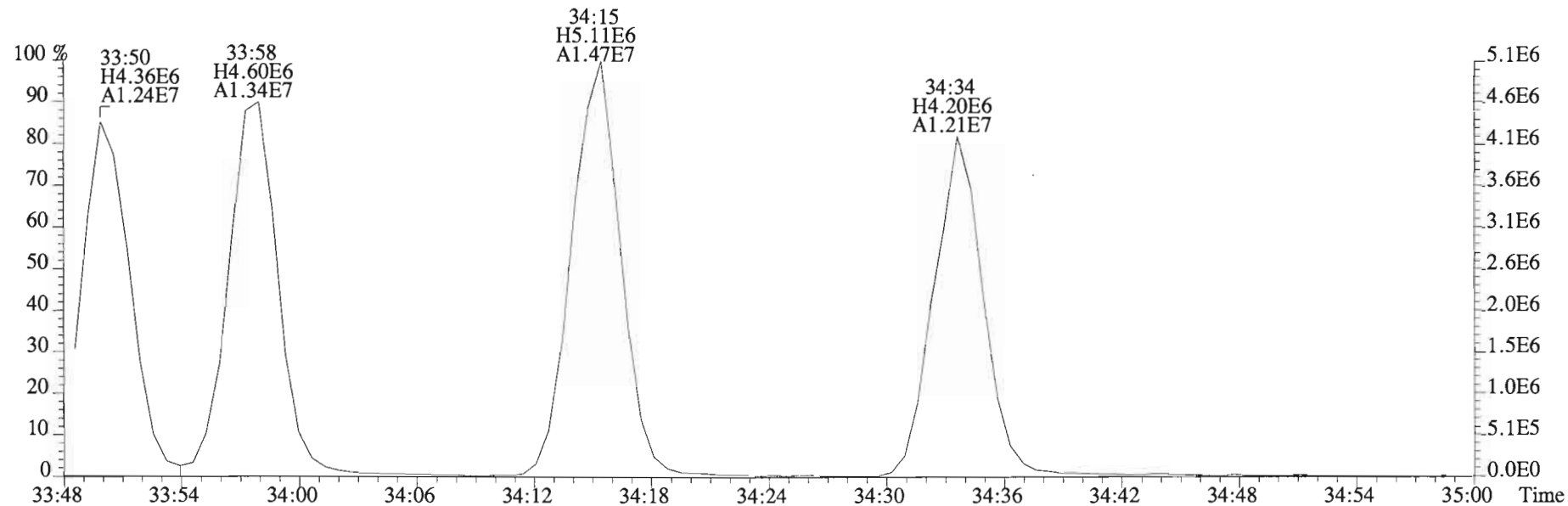
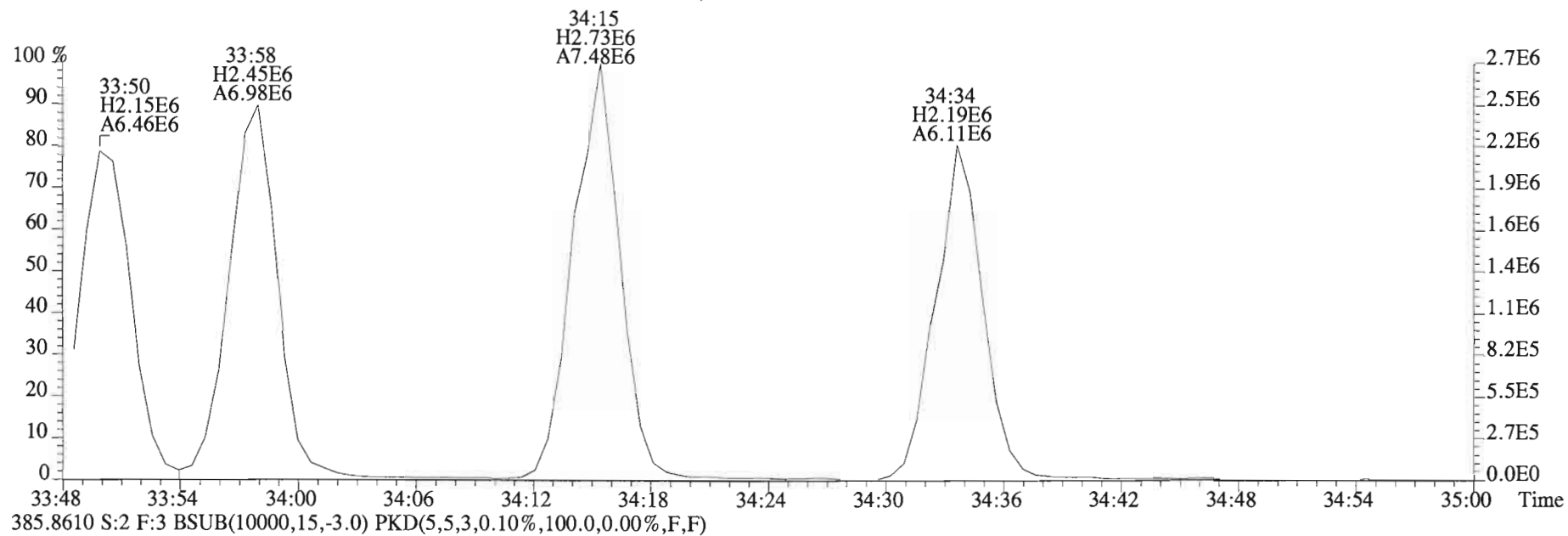
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



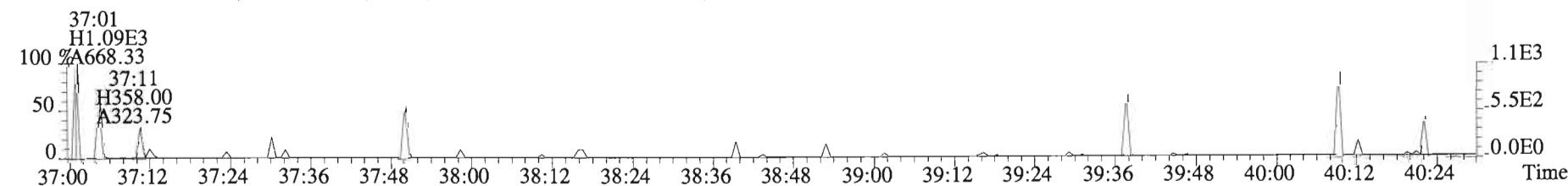
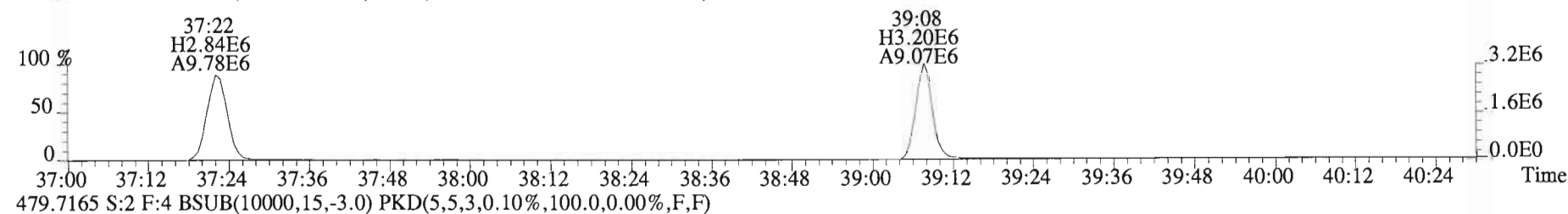
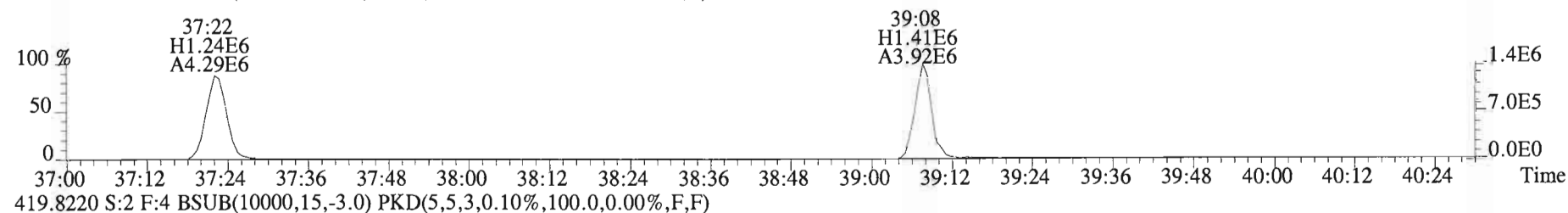
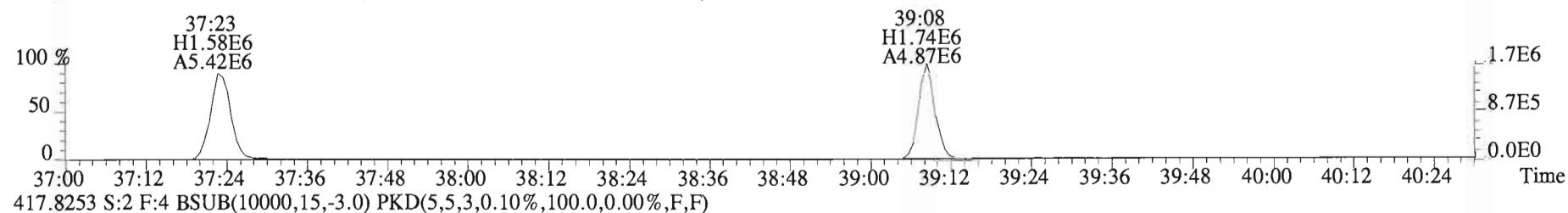
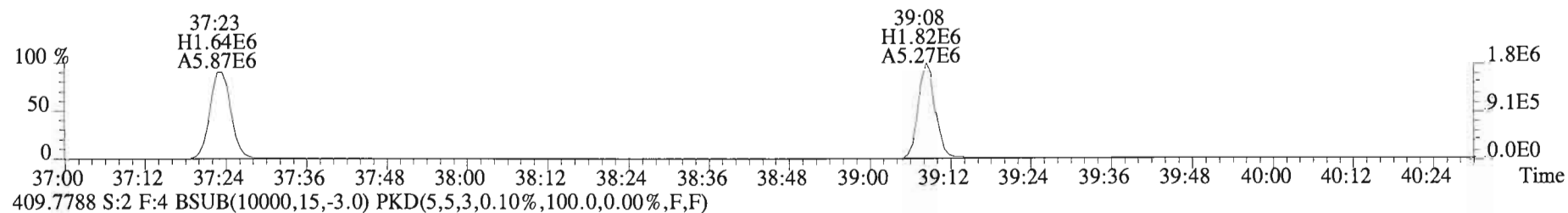
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



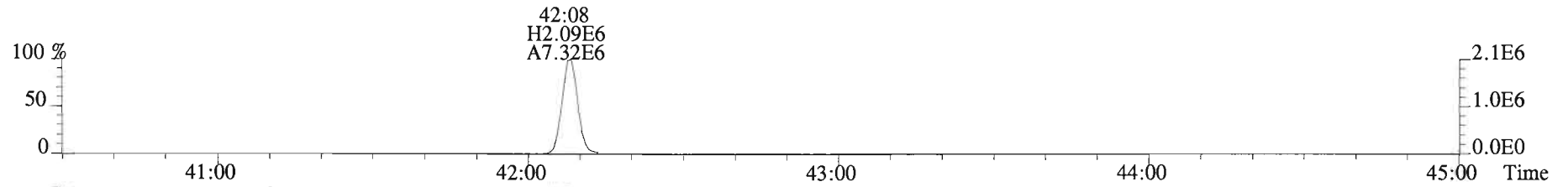
File:150130D3 #1-392 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



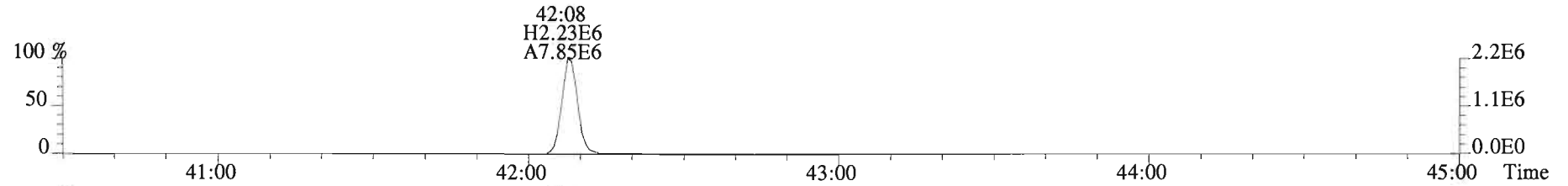
File:150130D3 #1-326 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:B5A0101-BS1 OPR 10 Exp:OCDD_DB5
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



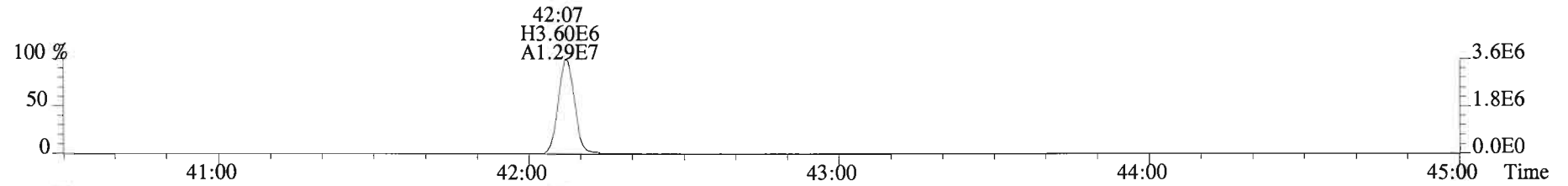
File:150130D3 #1-388 Acq:31-JAN-2015 10:46:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-7 Text:BSA0101-BS1 OPR 10 Exp:OCDD_DB5
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



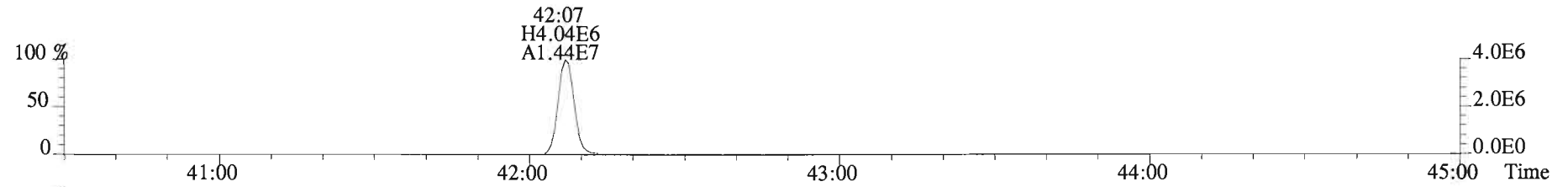
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



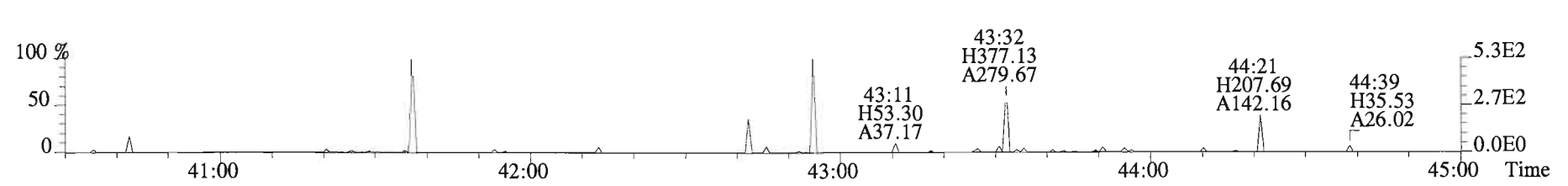
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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)



Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	3.76e+05	0.73 y	1.17	26:58	1.001	4.0623	*	2.5	*	*	Total Tetra-Dioxins	33.1	33.5	*	*	*
1,2,3,7,8-PeCDD	1.14e+06	0.59 y	0.91	31:25	1.000	15.160	*	2.5	*	*	Total Penta-Dioxins	108	108	*	*	*
1,2,3,4,7,8-HxCDD	1.33e+06	1.26 y	1.08	34:43	1.000	20.557	*	2.5	*	*	Total Hexa-Dioxins	405	405	*	*	*
1,2,3,6,7,8-HxCDD	2.56e+06	1.21 y	1.06	34:50	1.000	38.645	*	2.5	*	*	Total Hepta-Dioxins	1600	1600	*	*	*
1,2,3,7,8,9-HxCDD	2.41e+06	1.18 y	0.93	35:08	1.000	34.116	*	2.5	*	*	Total Tetra-Furans	88.0	89.4	*	*	*
1,2,3,4,6,7,8-HpCDD	5.43e+07	1.02 y	1.10	38:34	1.000	765.54	*	2.5	*	*	Total Penta-Furans	96.122	97.469	*	*	*
OCDD	5.12e+08	0.89 y	0.95	41:53	1.000	8945.8	*	2.5	*	*	Total Hexa-Furans	183	186	*	*	*
											Total Hepta-Furans	273	273	*	*	*
2,3,7,8-TCDF	7.20e+05	0.77 y	1.07	26:12	1.000	6.3207 <i>5,20</i>	*	2.5	*	*						
1,2,3,7,8-PeCDF	4.03e+05	1.52 y	1.07	30:15	1.000	3.2276	*	2.5	*	*						
2,3,4,7,8-PeCDF	6.43e+05	1.58 y	1.03	31:08	1.000	5.6109	*	2.5	*	*						
1,2,3,4,7,8-HxCDF	9.21e+05	1.32 y	1.38	33:50	1.000	7.8305	*	2.5	*	*						
1,2,3,6,7,8-HxCDF	1.02e+06	1.28 y	1.26	33:58	1.001	8.6267	*	2.5	*	*						
2,3,4,6,7,8-HxCDF	1.19e+06	1.31 y	1.29	34:34	1.000	10.829	*	2.5	*	*						
1,2,3,7,8,9-HxCDF	2.06e+05	1.33 y	1.19	35:33	1.001	2.3090	*	2.5	*	*						
1,2,3,4,6,7,8-HpCDF	1.31e+07	1.08 y	1.61	37:22	1.000	124.35	*	2.5	*	*						
1,2,3,4,7,8,9-HpCDF	5.34e+05	1.10 y	1.53	39:07	1.000	5.3180	*	2.5	*	*						
OCDF	1.42e+07	0.90 y	1.10	42:07	1.000	199.16	*	2.5	*	*						
											Rec	Qual				
IS	13C-2,3,7,8-TCDD	1.56e+07	0.79 y	1.06	26:57	1.021	168.57				85.7					
IS	13C-1,2,3,7,8-PeCDD	1.63e+07	0.61 y	1.18	31:24	1.190	158.82				80.8					
IS	13C-1,2,3,4,7,8-HxCDD	1.18e+07	1.26 y	0.72	34:43	1.014	152.96				77.8					
IS	13C-1,2,3,6,7,8-HxCDD	1.22e+07	1.26 y	0.74	34:50	1.017	155.17				78.9					
IS	13C-1,2,3,7,8,9-HxCDD	1.49e+07	1.26 y	0.85	35:07	1.026	163.41				83.1					
IS	13C-1,2,3,4,6,7,8-HpCDD	1.26e+07	1.08 y	0.65	38:34	1.126	180.69				91.9					
IS	13C-OCDD	2.38e+07	0.91 y	0.76	41:53	1.223	290.84				73.9					
IS	13C-2,3,7,8-TCDF	2.09e+07	0.77 y	0.92	26:12	0.992	167.84				85.3					
IS	13C-1,2,3,7,8-PeCDF	2.29e+07	1.59 y	0.92	30:15	1.146	182.83				93.0					
IS	13C-2,3,4,7,8-PeCDF	2.18e+07	1.61 y	0.93	31:07	1.179	172.82				87.9					
IS	13C-1,2,3,4,7,8-HxCDF	1.67e+07	0.52 y	0.98	33:49	0.988	159.34				81.0					
IS	13C-1,2,3,6,7,8-HxCDF	1.86e+07	0.52 y	1.08	33:57	0.991	160.52				81.6					
IS	13C-2,3,4,6,7,8-HxCDF	1.67e+07	0.52 y	1.03	34:33	1.009	152.52				77.5					
IS	13C-1,2,3,7,8,9-HxCDF	1.48e+07	0.50 y	0.86	35:31	1.037	160.53				81.6					
IS	13C-1,2,3,4,6,7,8-HpCDF	1.28e+07	0.44 y	0.72	37:21	1.091	166.26				84.5					
IS	13C-1,2,3,4,7,8,9-HpCDF	1.29e+07	0.45 y	0.70	39:07	1.142	173.53				88.2					
IS	13C-OCDF	2.55e+07	0.89 y	0.85	42:07	1.230	280.69				71.4					
C/Up	37Cl-2,3,7,8-TCDD	6.95e+06		1.12	26:58	1.022	71.397				90.8					
RS/RT	13C-1,2,3,4-TCDD	1.71e+07	0.84 y	1.00	26:24	*	196.68									
RS	13C-1,2,3,4-TCDF	2.67e+07	0.78 y	1.00	24:60	*	196.68									
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.10e+07	0.52 y	1.00	34:14	*	196.68									

Integrations Reviewed
 by
 Analyst: *[Signature]* Analyst: C7
 Date: 2/17/15 Date: 2/9/15

Totals class: TCDD EMPC

Entry #: 19

Run: 9 File: 150204D1 S: 7 I: 1 F: 1
 Acquired: 4-FEB-15 13:54:34 Processed: 7-FEB-15 11:08:21

Total Concentration: 33.506

Unnamed Concentration: 29.444

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
23:38	2.211e+05	3.142e+05	0.70	y	5.352e+05	5.7761	
23:59	1.679e+05	2.285e+05	0.73	y	3.965e+05	4.2783	
24:24	6.194e+04	8.404e+04	0.74	y	1.460e+05	1.5753	
25:07	2.216e+04	2.642e+04	0.84	y	4.857e+04	0.52419	
25:20	1.070e+05	1.431e+05	0.75	y	2.500e+05	2.6982	
25:30	1.622e+05	2.333e+05	0.70	y	3.955e+05	4.2680	
25:41	4.946e+04	6.002e+04	0.82	y	1.095e+05	1.1815	
25:54	3.340e+04	5.016e+04	0.67	y	8.355e+04	0.90168	
26:04	5.943e+04	8.625e+04	0.69	y	1.457e+05	1.5720	
26:23	6.525e+04	7.904e+04	0.83	y	1.443e+05	1.5570	
26:30	7.522e+03	1.411e+04	0.53	n	1.729e+04	0.18660	
26:43	7.472e+04	1.062e+05	0.70	y	1.809e+05	1.9522	
26:58	1.592e+05	2.173e+05	0.73	y	3.764e+05	4.0623	2,3,7,8-TCDD
27:15	9.329e+04	1.129e+05	0.83	y	2.062e+05	2.2250	
27:22	1.284e+04	1.344e+04	0.96	n	2.378e+04	0.25664	
27:48	2.101e+04	2.449e+04	0.86	y	4.550e+04	0.49101	

Totals class: PeCDD EMPC

Entry #: 21

Run: 9 File: 150204D1 S: 7 I: 1 F: 2
Acquired: 4-FEB-15 13:54:34 Processed: 7-FEB-15 11:08:21

Total Concentration: 108.01 Unnamed Concentration: 92.855

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:23	6.775e+05	1.147e+06	0.59 y	1.824e+06	24.245
29:50	1.715e+05	2.862e+05	0.60 y	4.577e+05	6.0842
30:16	2.753e+05	4.402e+05	0.63 y	7.155e+05	9.5110
30:26	6.009e+05	9.575e+05	0.63 y	1.558e+06	20.715
30:31	3.089e+05	4.757e+05	0.65 y	7.846e+05	10.430
30:44	3.640e+05	6.074e+05	0.60 y	9.714e+05	12.912
31:01	8.051e+04	1.357e+05	0.59 y	2.162e+05	2.8740
31:25	4.238e+05	7.168e+05	0.59 y	1.141e+06	15.160
31:30	6.879e+04	1.167e+05	0.59 y	1.854e+05	2.4650
31:46	1.077e+05	1.646e+05	0.65 y	2.723e+05	3.6194

Totals class: HxCDD EMPC

Entry #: 23

Run: 9 File: 150204D1 S: 7 I: 1 F: 3
 Acquired: 4-FEB-15 13:54:34 Processed: 7-FEB-15 11:08:21

Total Concentration: 405.22 Unnamed Concentration: 311.900

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
33:10	4.465e+06	3.545e+06	1.26	y	8.009e+06	119.17
33:45	9.373e+05	7.550e+05	1.24	y	1.692e+06	25.178
34:01	5.671e+06	4.553e+06	1.25	y	1.022e+07	152.12
34:08	2.559e+05	2.253e+05	1.14	y	4.812e+05	7.1594
34:43	7.387e+05	5.884e+05	1.26	y	1.327e+06	20.557 1,2,3,4,7,8-HxCDD
34:50	1.398e+06	1.157e+06	1.21	y	2.555e+06	38.645 1,2,3,6,7,8-HxCDD
35:02	3.048e+05	2.516e+05	1.21	y	5.564e+05	8.2778
35:08	1.304e+06	1.104e+06	1.18	y	2.408e+06	34.116 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 9 File: 150204D1 S: 7 I: 1 F: 4

Acquired: 4-FEB-15 13:54:34 Processed: 7-FEB-15 11:08:21

Total Concentration: 1602.2

Unnamed Concentration: 836.664

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:44	3.025e+07	2.907e+07	1.04	y	5.933e+07	836.66
38:34	2.736e+07	2.692e+07	1.02	y	5.428e+07	765.54

Totals class: TCDF EMPC

Entry #: 27

Run: 9 File: 150204D1 S: 7 I: 1 F: 1
 Acquired: 4-FEB-15 13:54:34 Processed: 7-FEB-15 11:08:21

Total Concentration: 89.362 Unnamed Concentration: 83.042

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
21:33	9.472e+04	1.236e+05	0.77	y	2.183e+05	1.9165	
22:07	1.059e+05	1.338e+05	0.79	y	2.397e+05	2.1044	
22:45	7.496e+04	9.644e+05	0.78	y	1.714e+06	15.049	
23:08	6.694e+04	1.007e+05	0.66	y	1.676e+05	1.4719	
23:16	3.189e+05	4.186e+05	0.76	y	7.375e+05	6.4754	
23:37	3.249e+05	4.126e+05	0.79	y	7.375e+05	6.4752	
24:01	3.185e+05	4.075e+05	0.78	y	7.260e+05	6.3744	
24:10	1.301e+05	1.709e+05	0.76	y	3.011e+05	2.6434	
24:18	1.546e+05	1.932e+05	0.80	y	3.479e+05	3.0544	
24:39	8.506e+04	8.544e+04	1.00	n	1.512e+05	1.3278	
24:46	1.342e+05	1.698e+05	0.79	y	3.040e+05	2.6688	
24:54	3.992e+05	5.335e+05	0.75	y	9.327e+05	8.1888	
25:01	2.418e+05	3.052e+05	0.79	y	5.470e+05	4.8029	
25:25	2.210e+05	2.907e+05	0.76	y	5.117e+05	4.4923	
25:40	1.424e+05	1.857e+05	0.77	y	3.280e+05	2.8802	
25:50	7.268e+04	9.878e+04	0.74	y	1.715e+05	1.5055	
26:01	7.985e+04	1.110e+05	0.72	y	1.908e+05	1.6755	
26:06	6.583e+04	8.809e+04	0.75	y	1.539e+05	1.3514	
26:12	3.126e+05	4.073e+05	0.77	y	7.199e+05	6.3207	2,3,7,8-TCDF
26:32	3.765e+05	5.040e+05	0.75	y	8.805e+05	7.7312	
26:45	1.647e+04	2.123e+04	0.78	y	3.771e+04	0.33105	
27:57	2.621e+04	3.320e+04	0.79	y	5.941e+04	0.52163	

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 9 File: 150204D1 S: 7 I: 1 F: 1
Acquired: 4-FEB-15 13:54:34 Processed: 7-FEB-15 11:08:21

Total Concentration: 37.961 Unnamed Concentration: 37.961

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:56	2.780e+06	1.766e+06	1.57 y	4.546e+06	37.961

Totals class: PeCDF EMPC

Entry #: 31

Run: 9 File: 150204D1 S: 7 I: 1 F: 2
 Acquired: 4-FEB-15 13:54:34 Processed: 7-FEB-15 11:08:21

Total Concentration: 59.508

Unnamed Concentration: 50.670

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:13	4.554e+05	2.810e+05	1.62 y	7.364e+05	6.1498
29:21	1.716e+06	1.061e+06	1.62 y	2.777e+06	23.188
29:53	7.483e+05	4.802e+05	1.56 y	1.228e+06	10.258
30:05	9.208e+04	5.912e+04	1.56 y	1.512e+05	1.2626
30:15	2.433e+05	1.600e+05	1.52 y	4.033e+05	3.2276
30:29	4.311e+05	2.736e+05	1.58 y	7.047e+05	5.8846
30:57	1.811e+04	1.417e+04	1.28 n	2.979e+04	0.24875
31:02	1.949e+05	1.139e+05	1.71 y	3.088e+05	2.5785
31:08	3.939e+05	2.496e+05	1.58 y	6.435e+05	5.6109
31:12	5.412e+04	2.667e+04	2.03 n	6.801e+04	0.56797
31:25	2.205e+04	1.022e+04	2.16 n	2.605e+04	0.21755
32:00	2.279e+04	1.776e+04	1.28 n	3.749e+04	0.31309

Totals class: HxCDF EMPC

Entry #: 33

Run: 9 File: 150204D1 S: 7 I: 1 F: 3
 Acquired: 4-FEB-15 13:54:34 Processed: 7-FEB-15 11:08:21

Total Concentration: 186.08 Unnamed Concentration: 156.485

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name	
32:38	1.619e+06	1.230e+06	1.32 y	2.849e+06	26.188	
32:48	5.417e+06	4.216e+06	1.28 y	9.633e+06	88.533	
33:21	2.388e+06	1.832e+06	1.30 y	4.220e+06	38.786	
33:44	2.145e+05	1.447e+05	1.48 n	3.241e+05	2.9790	
33:50	5.243e+05	3.966e+05	1.32 y	9.209e+05	7.8305	1,2,3,4,7,8-HxCDF
33:58	5.747e+05	4.503e+05	1.28 y	1.025e+06	8.6267	1,2,3,6,7,8-HxCDF
34:34	6.741e+05	5.136e+05	1.31 y	1.188e+06	10.829	2,3,4,6,7,8-HxCDF
35:33	1.176e+05	8.807e+04	1.33 y	2.056e+05	2.3090	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

Entry #: 35

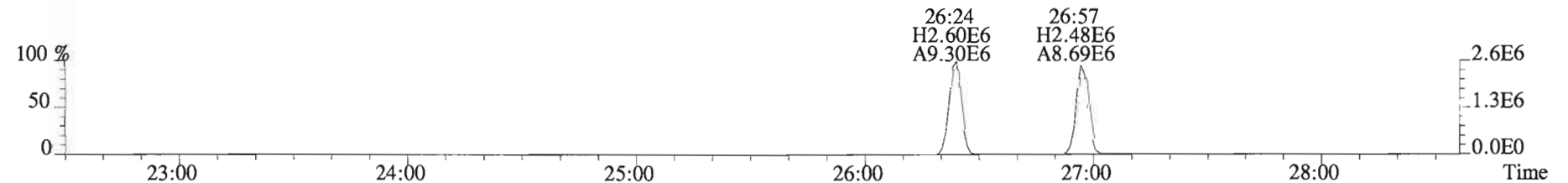
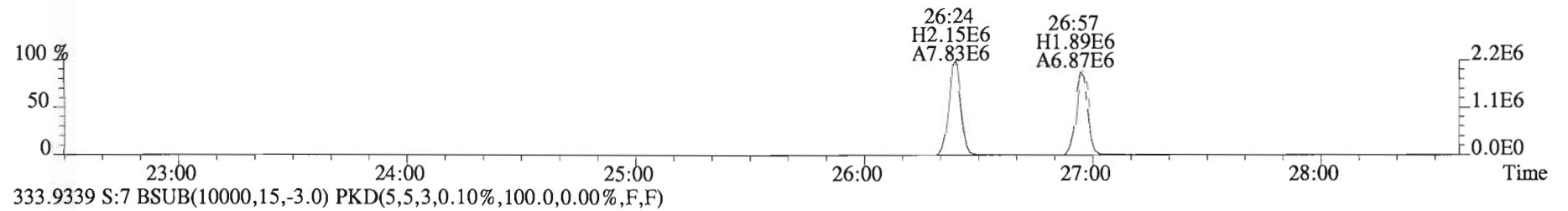
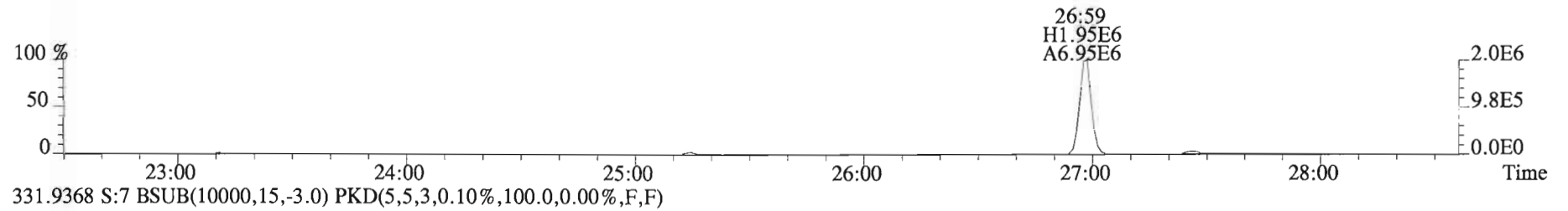
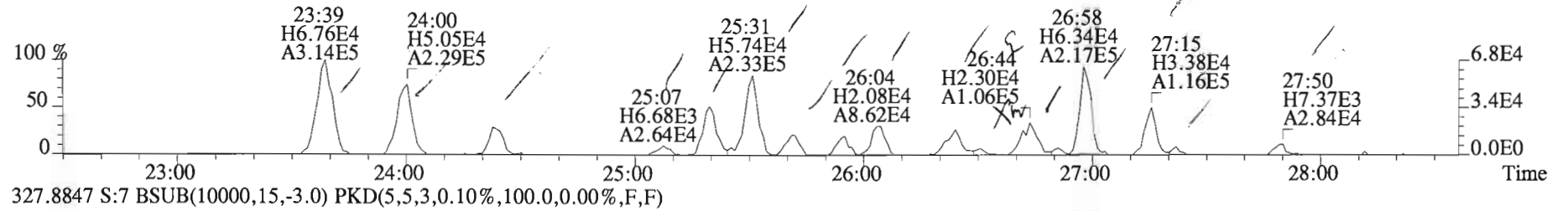
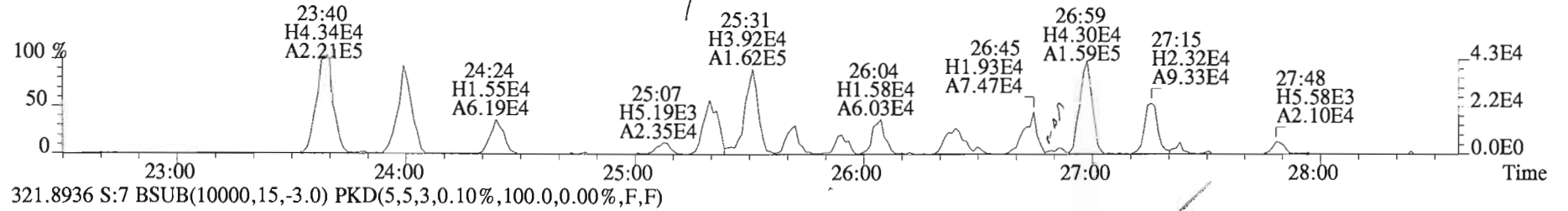
Run: 9 File: 150204D1 S: 7 I: 1 F: 4
Acquired: 4-FEB-15 13:54:34 Processed: 7-FEB-15 11:08:21

Total Concentration: 272.98

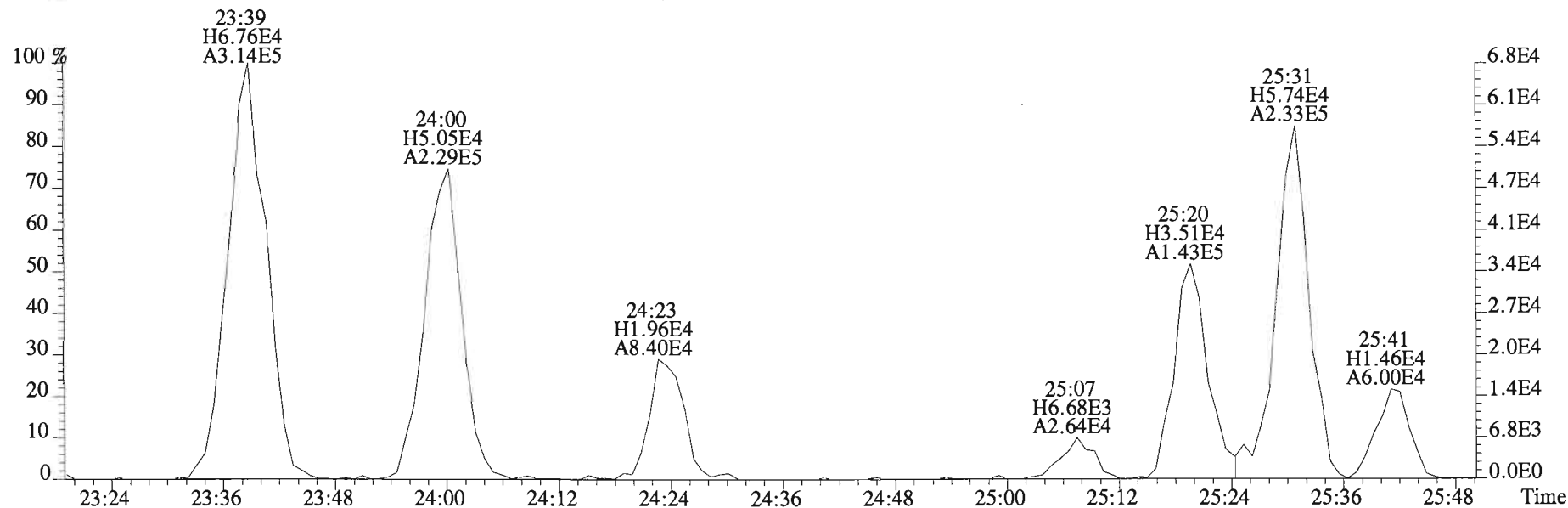
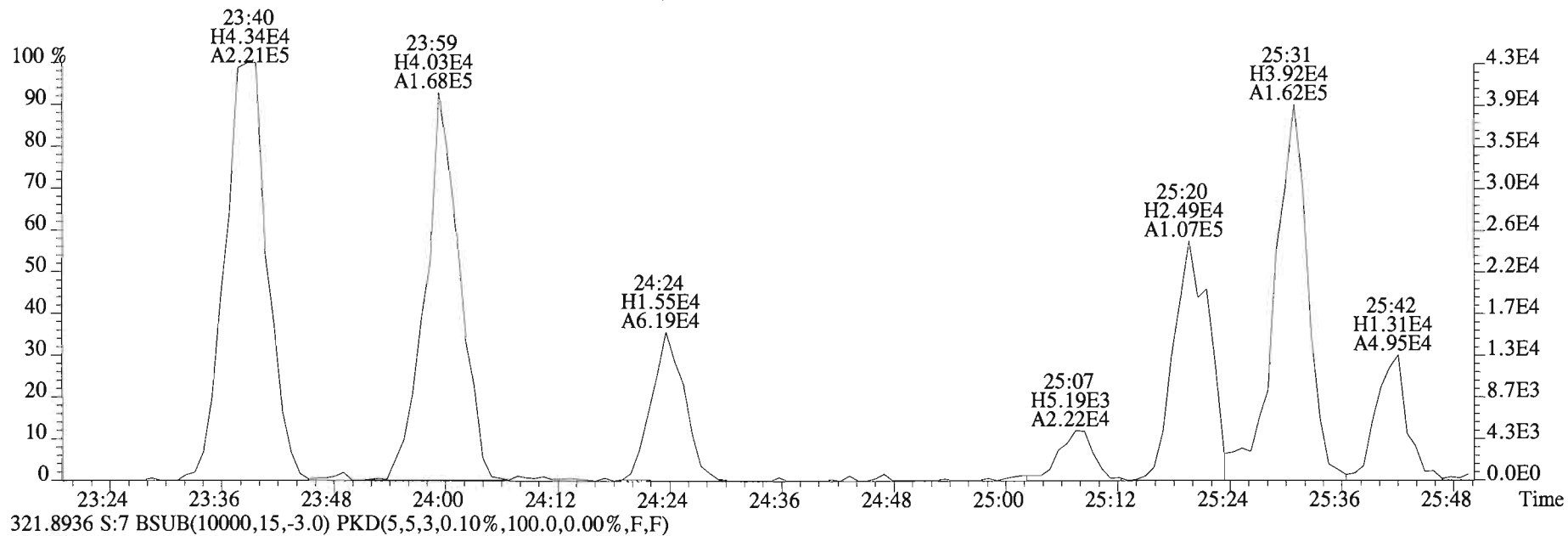
Unnamed Concentration: 143.315

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
37:22	6.785e+06	6.289e+06	1.08	y	1.307e+07	124.35	1,2,3,4,6,7,8-HpCDF
37:45	2.315e+05	1.960e+05	1.18	y	4.275e+05	4.1598	
37:56	7.414e+06	6.888e+06	1.08	y	1.430e+07	139.15	
39:07	2.795e+05	2.541e+05	1.10	y	5.336e+05	5.3180	1,2,3,4,7,8,9-HpCDF

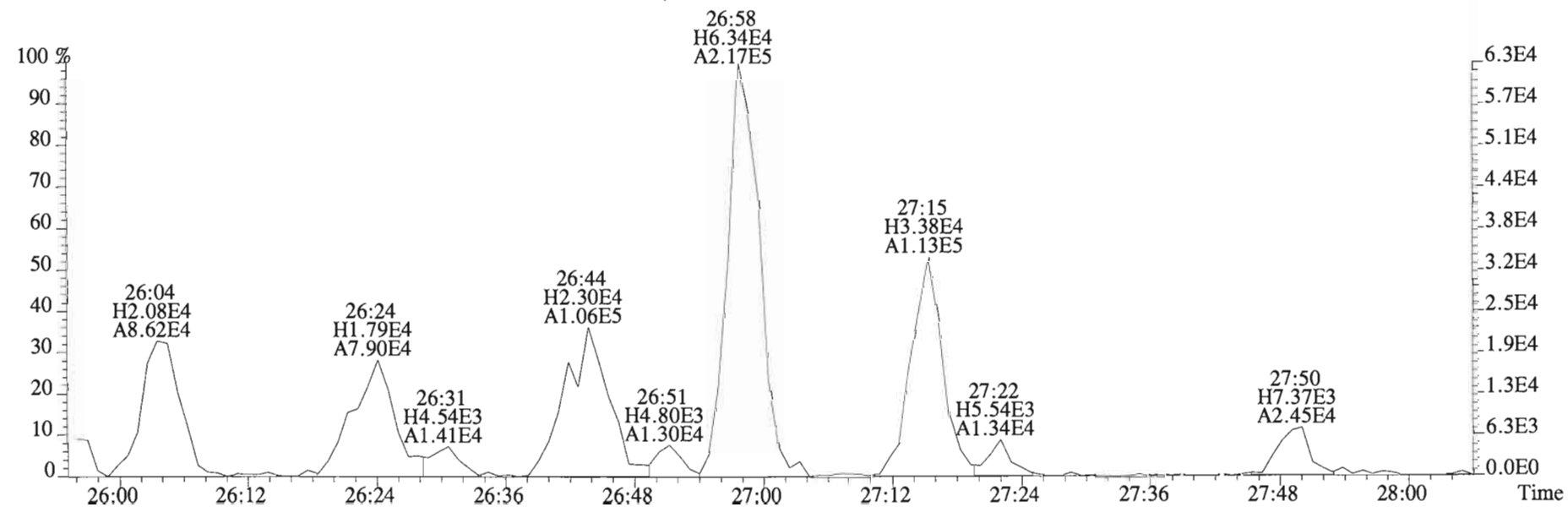
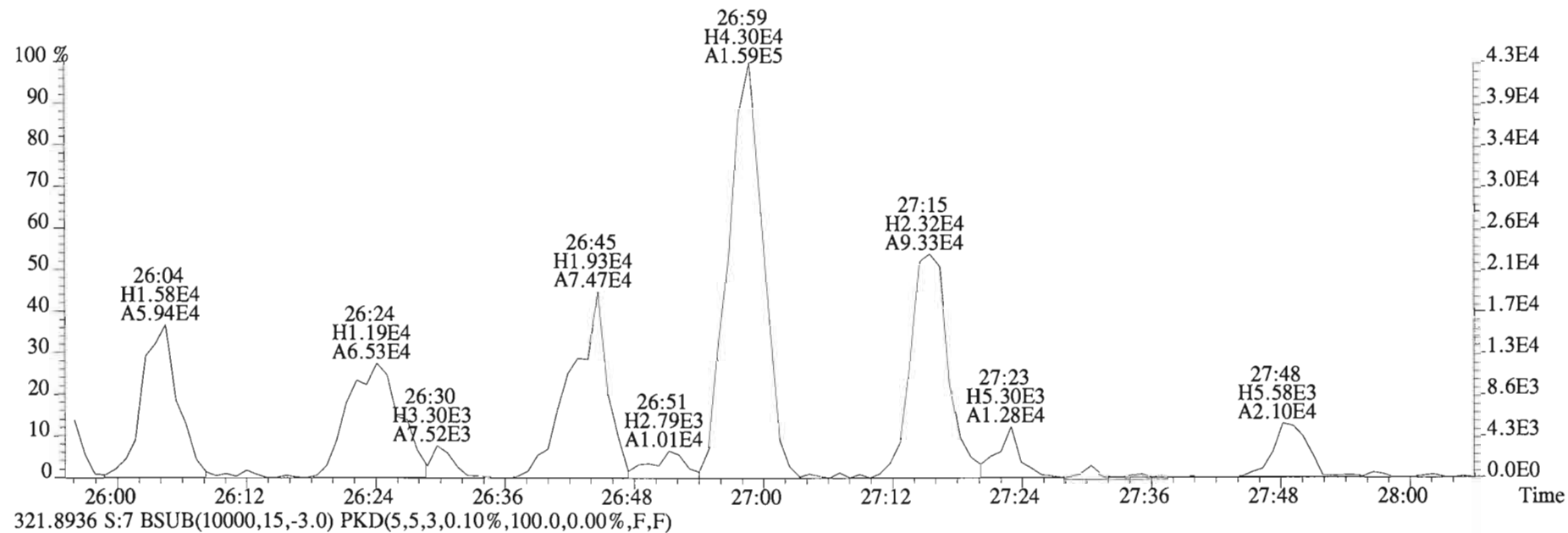
File:150204D1 #1-552 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) *217117*



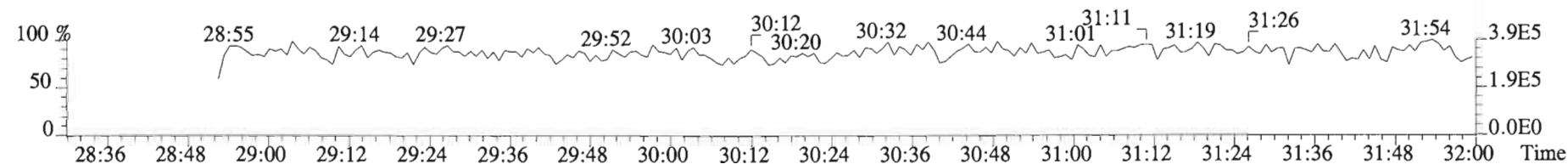
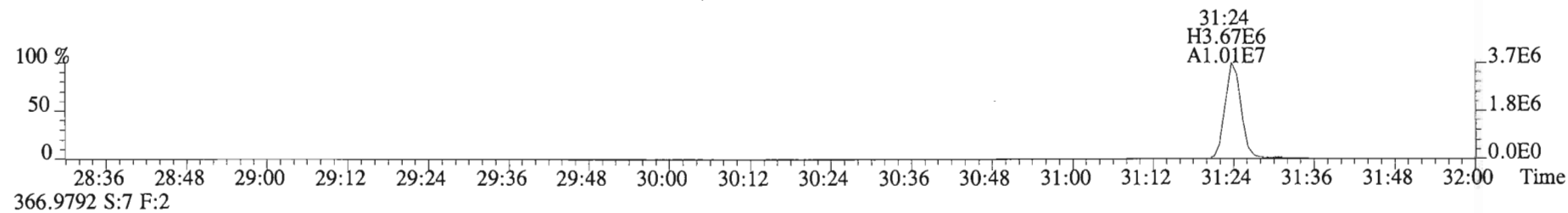
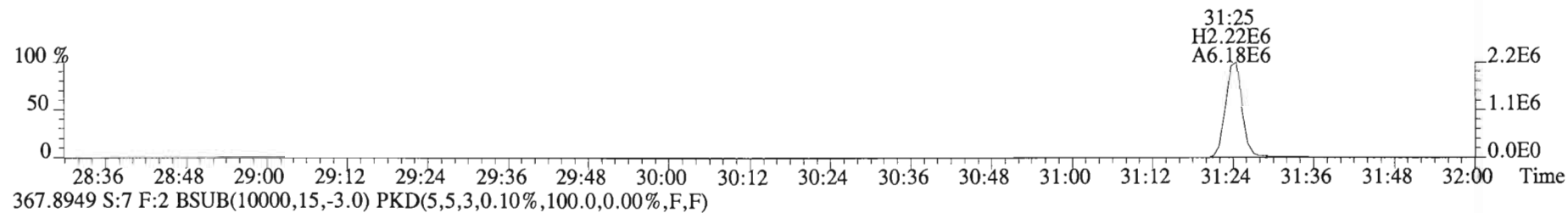
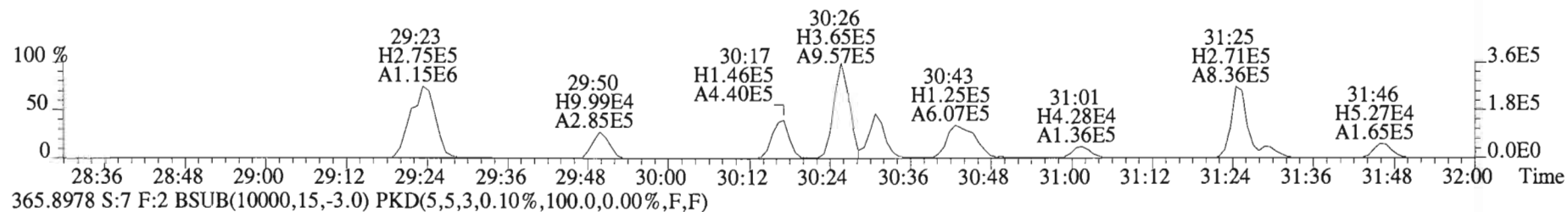
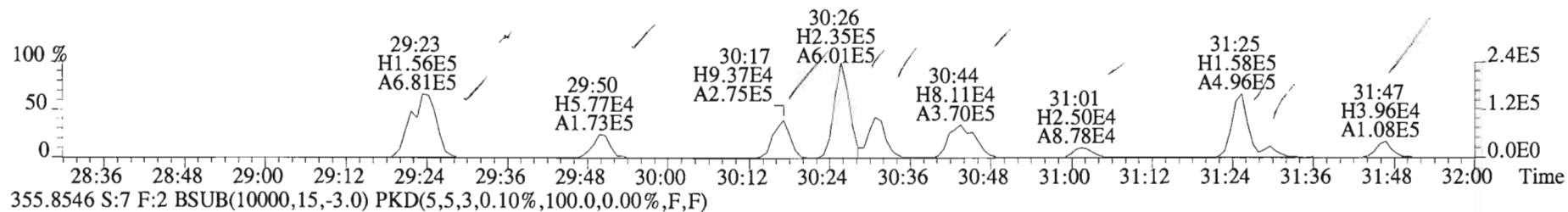
File:150204D1 #1-552 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
 319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



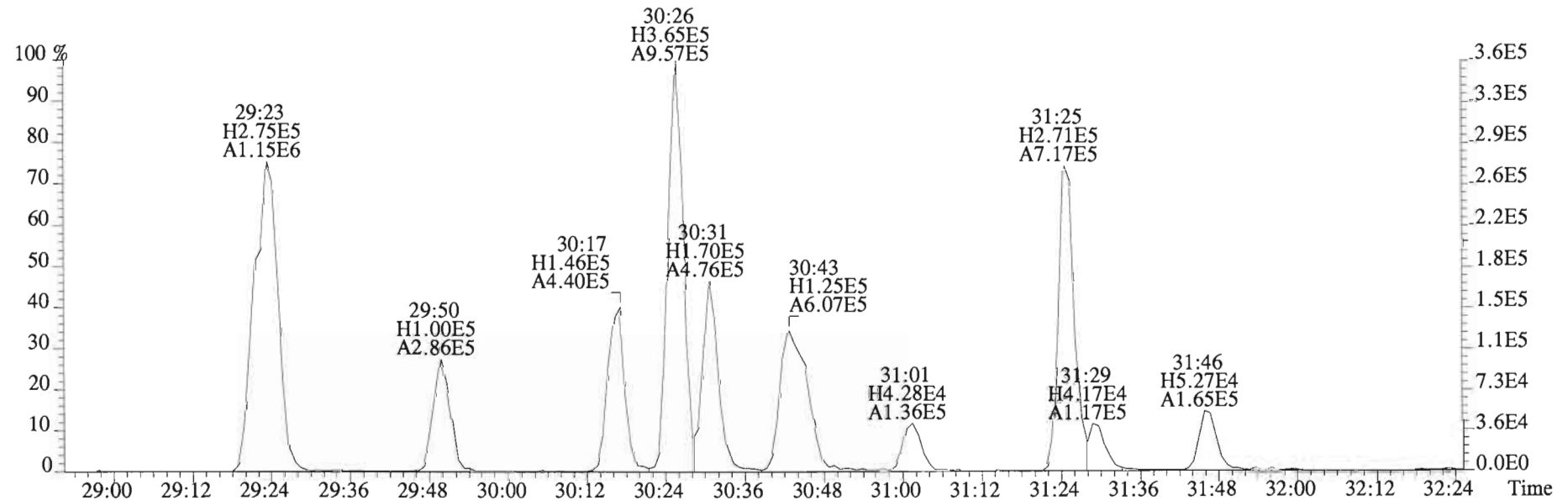
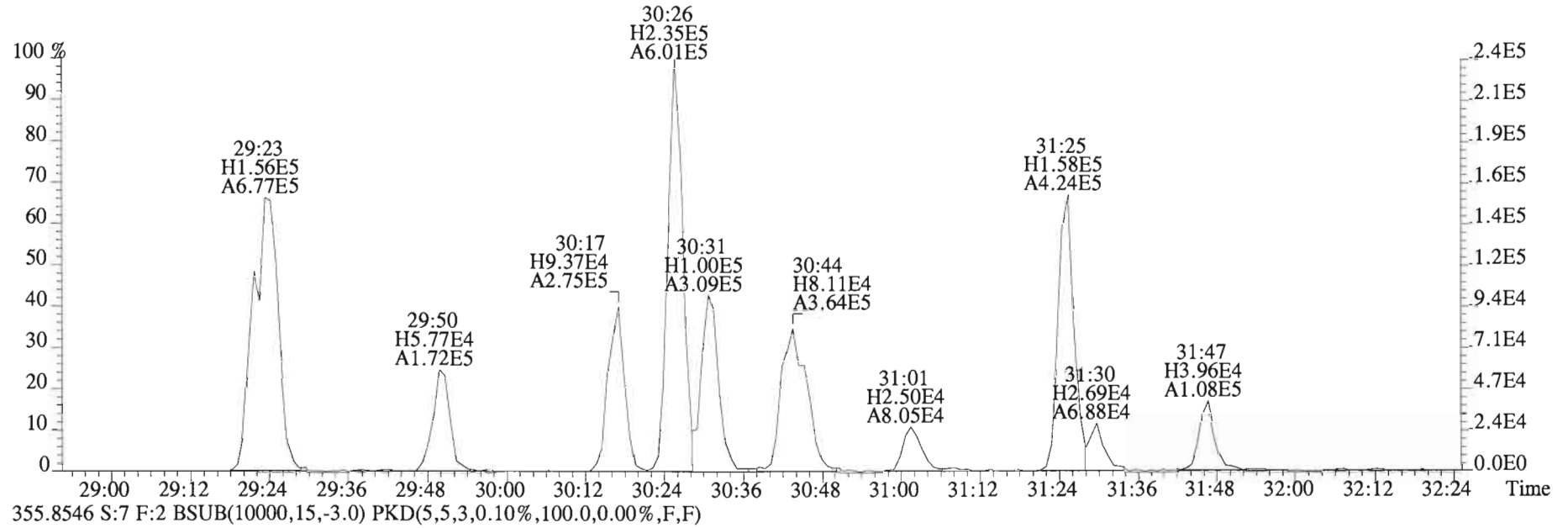
File:150204D1 #1-552 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
 319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



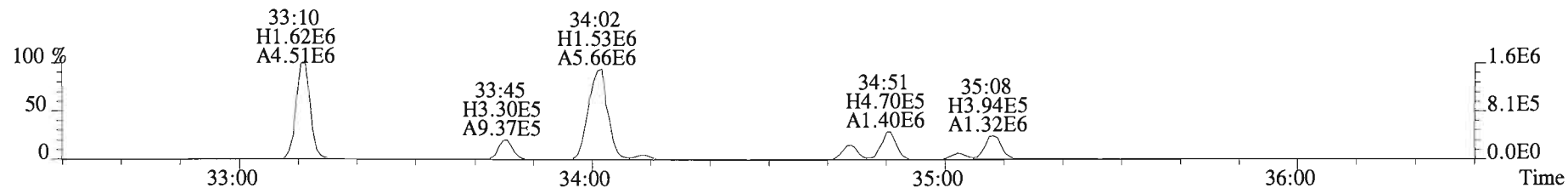
File:150204D1 #1-250 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



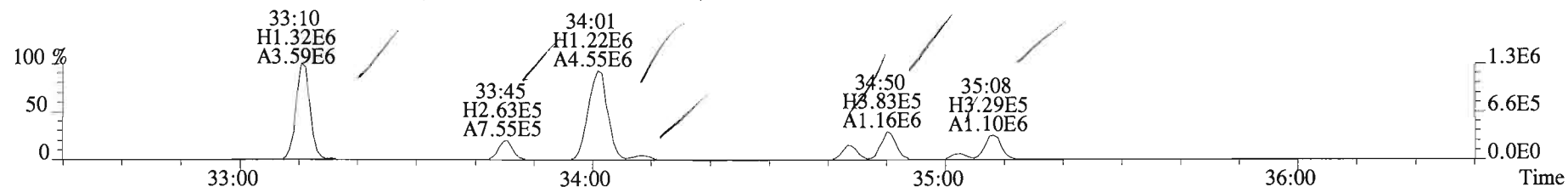
File:150204D1 #1-250 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
 353.8576 S:7 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



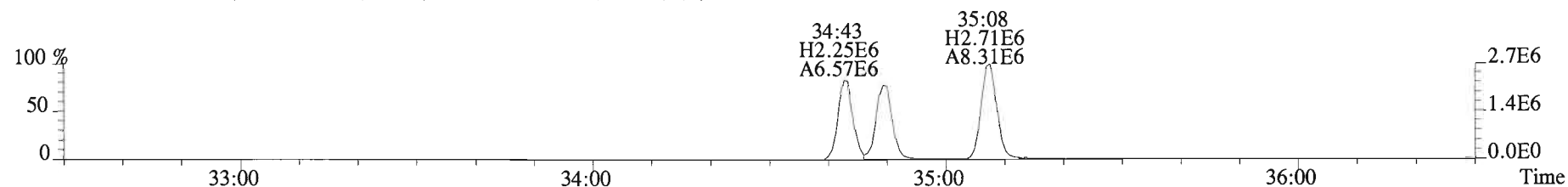
File:150204D1 #1-393 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



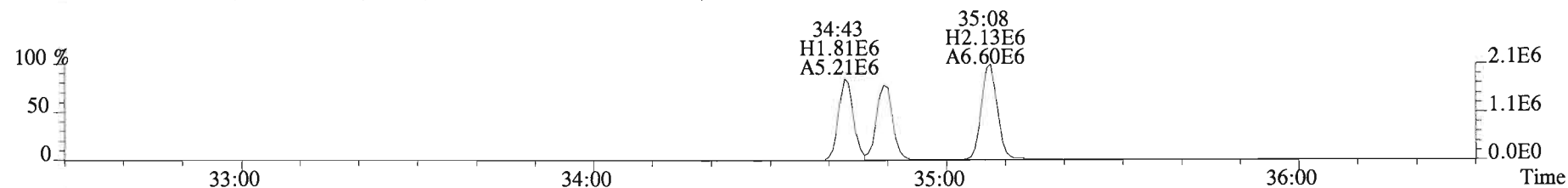
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



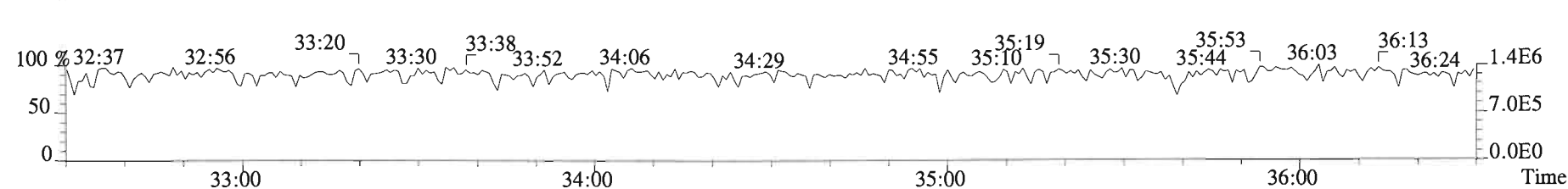
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



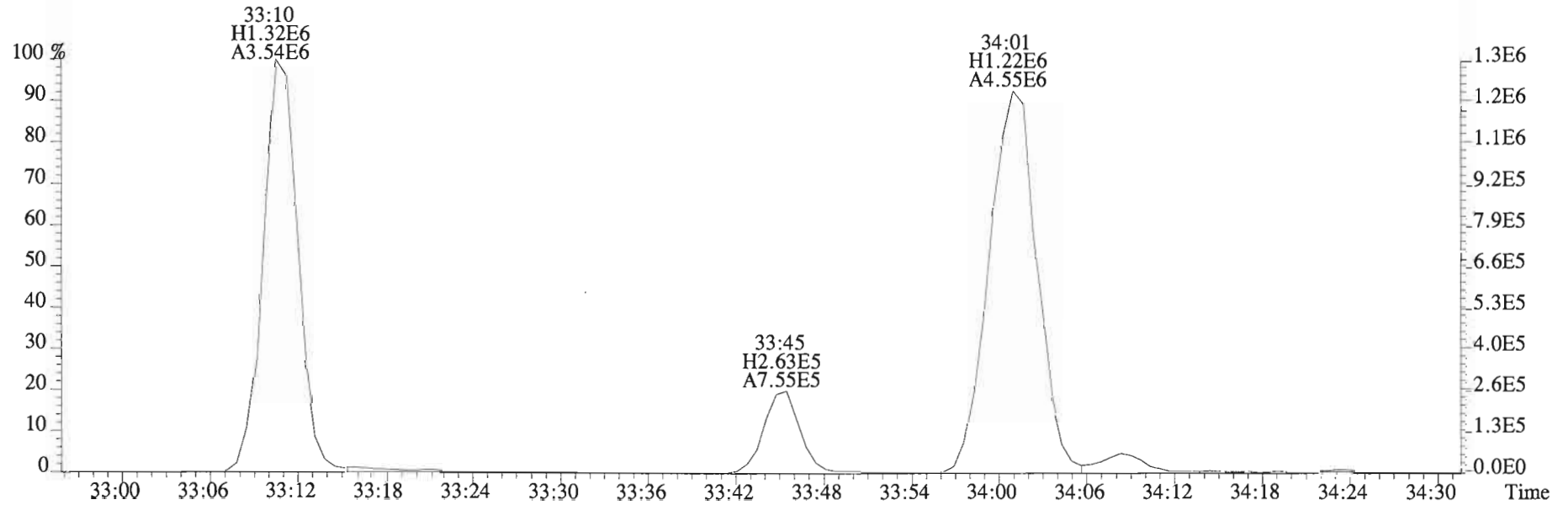
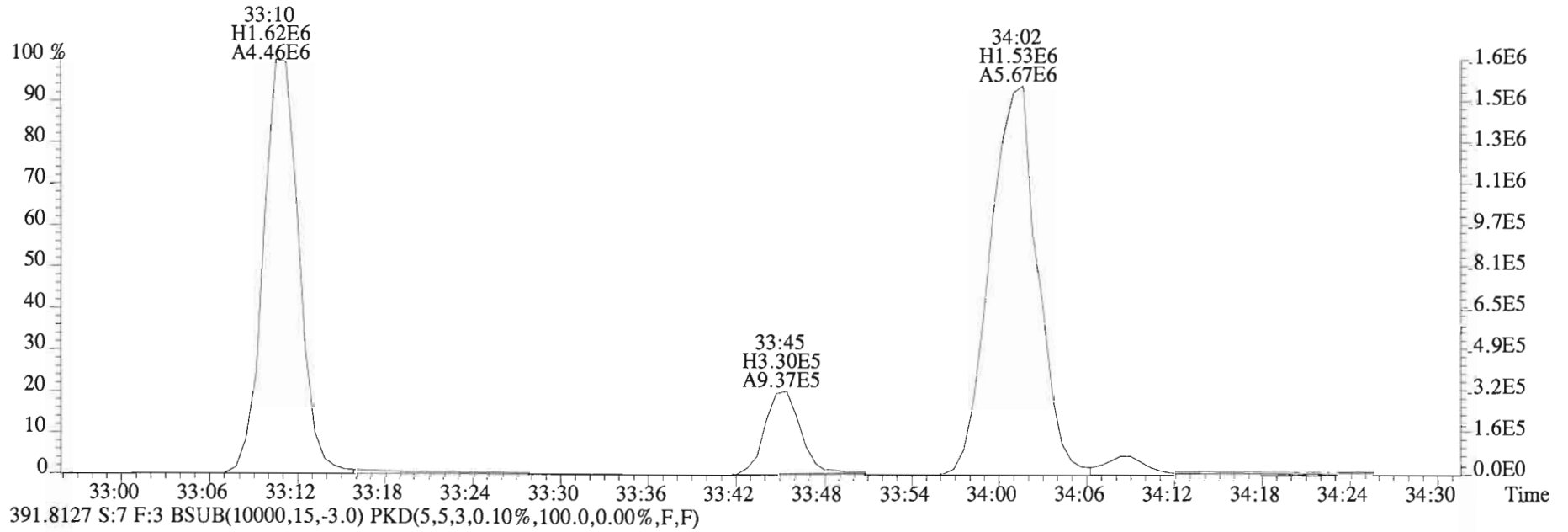
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



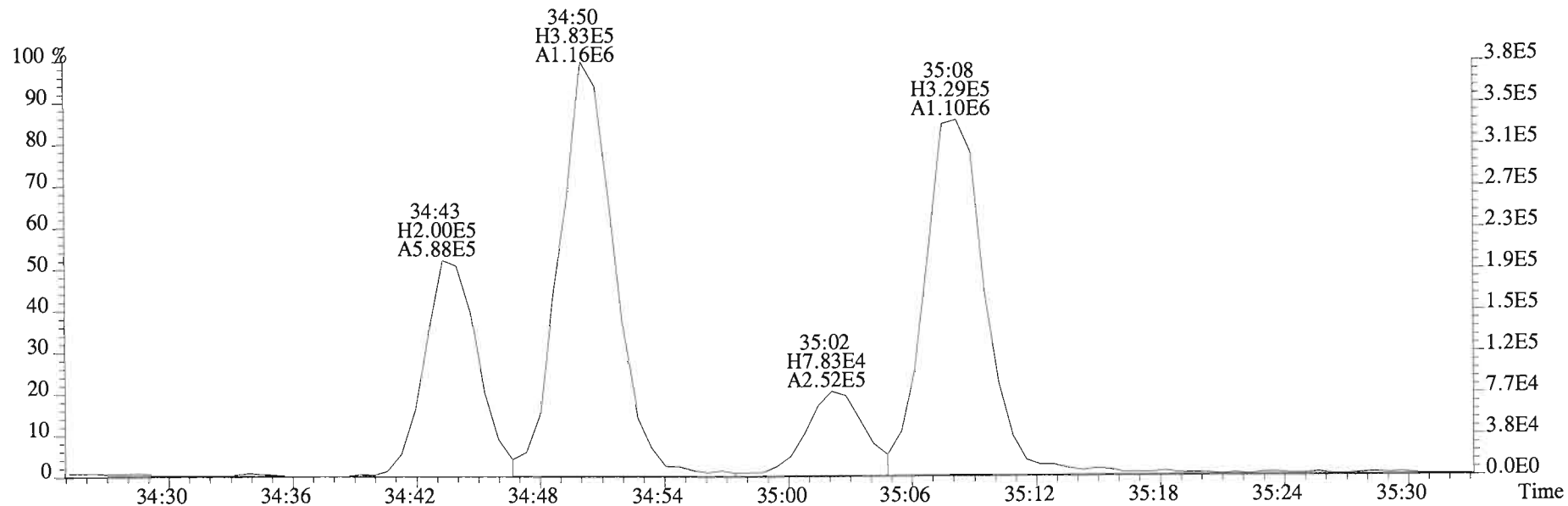
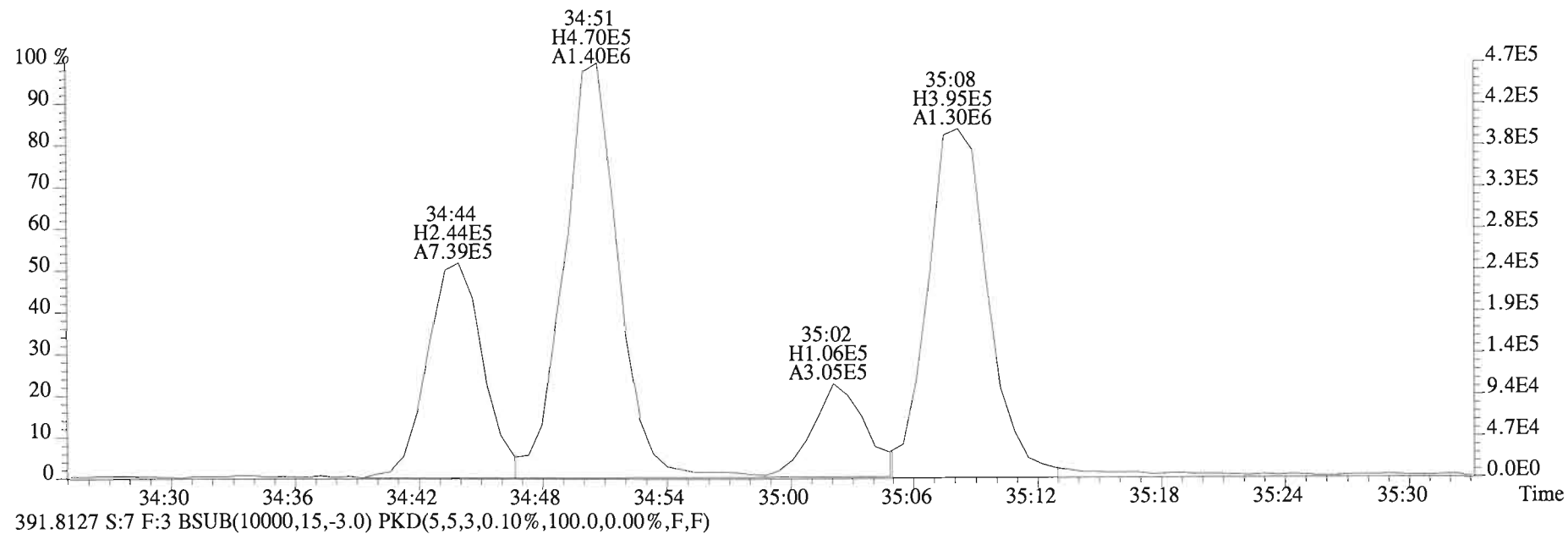
380.9760 S:7 F:3



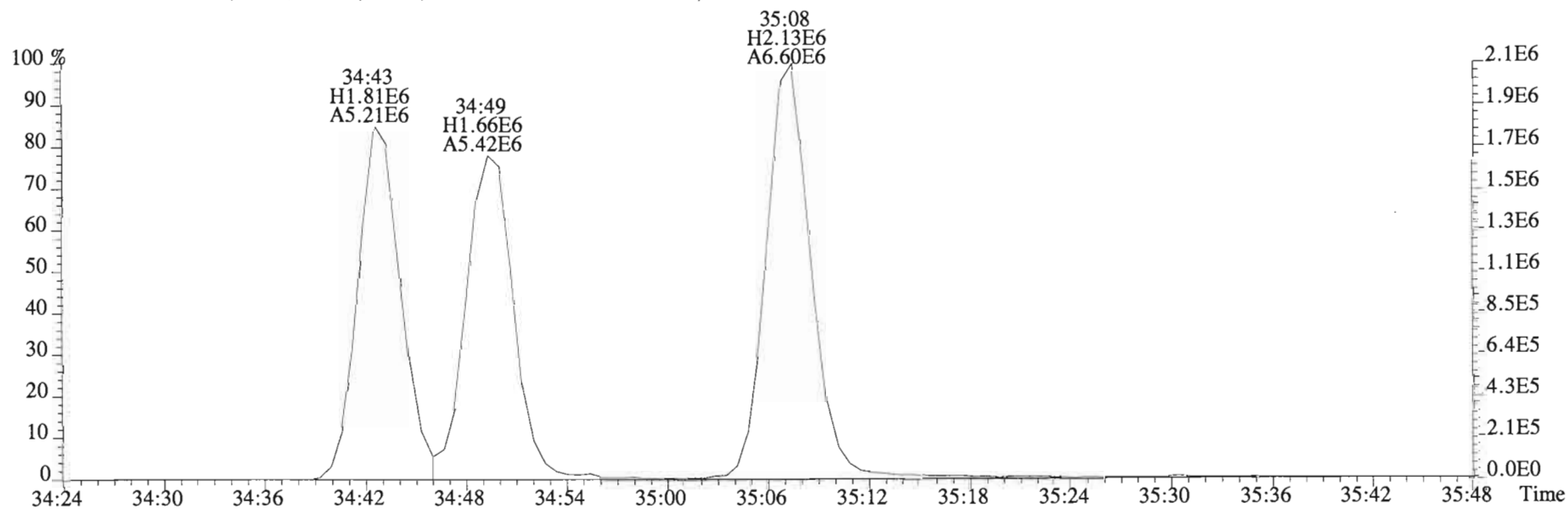
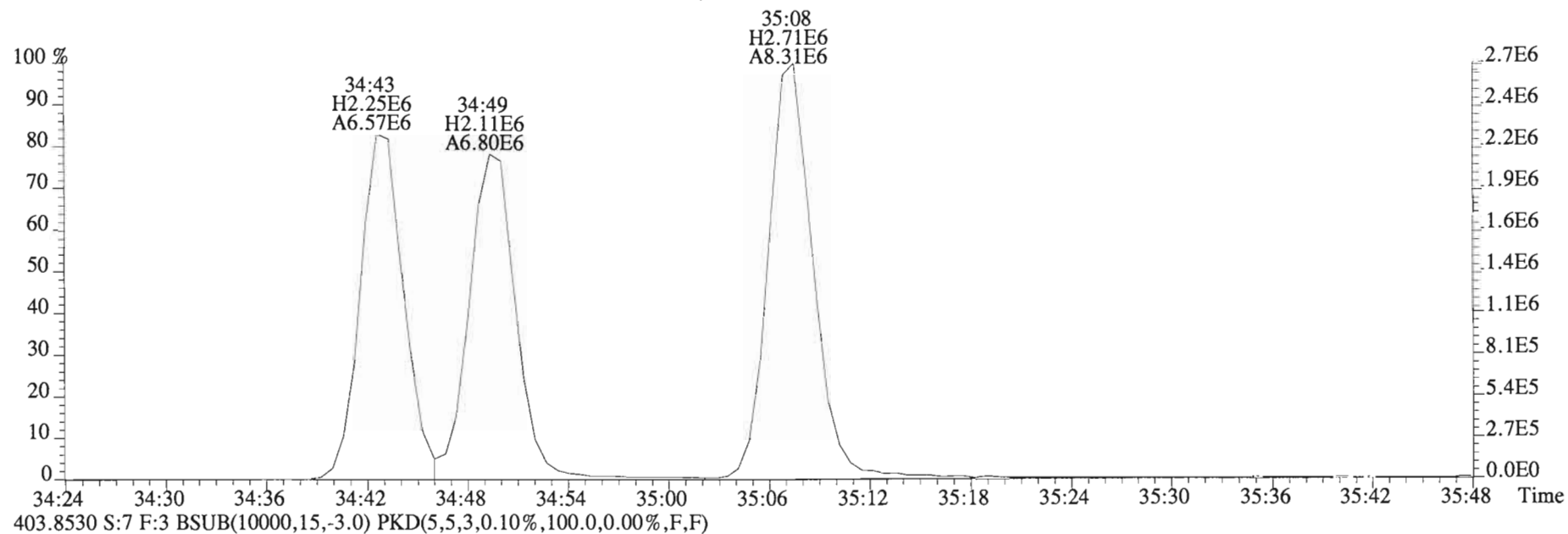
File:150204D1 #1-393 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



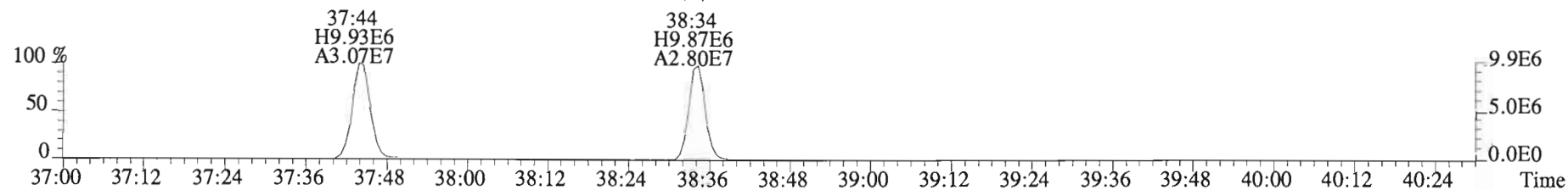
File:150204D1 #1-393 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



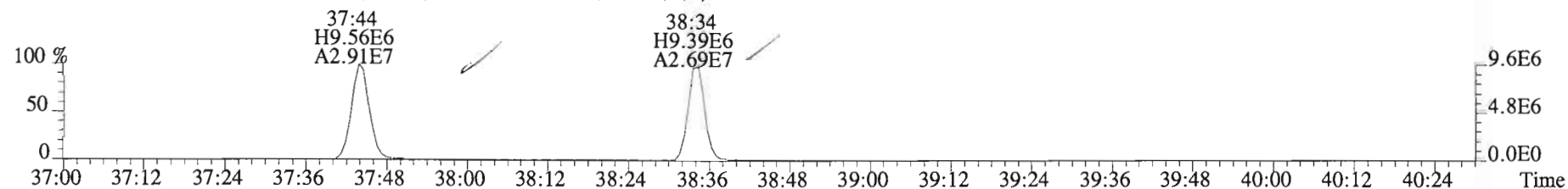
File:150204D1 #1-393 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



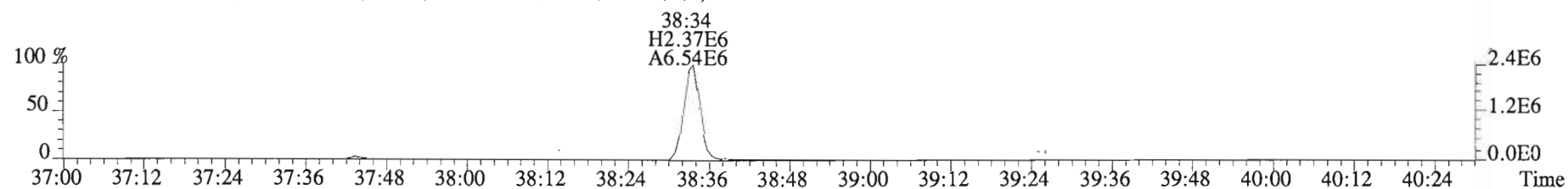
File:150204D1 #1-326 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



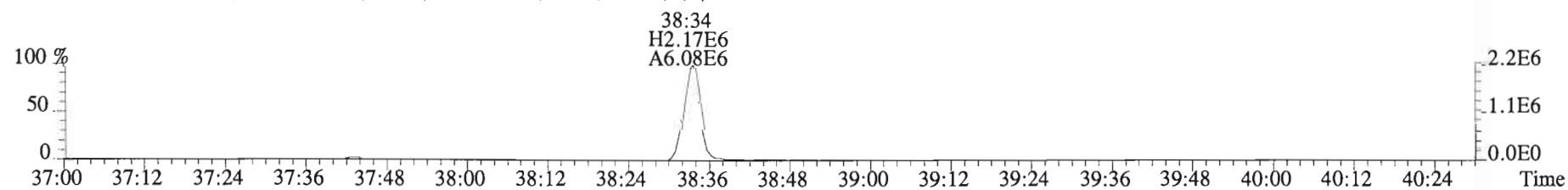
423.7737 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



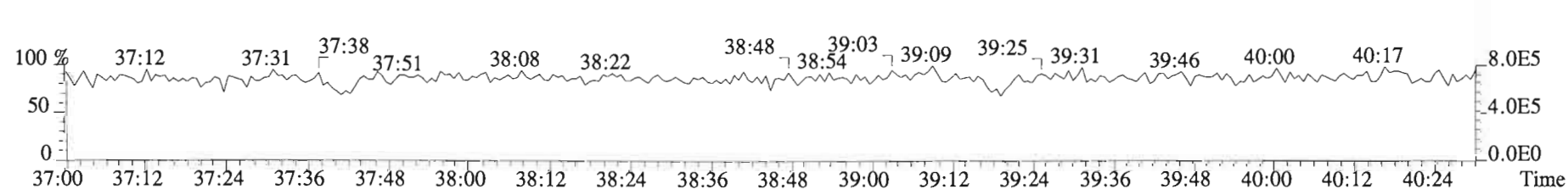
435.8169 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



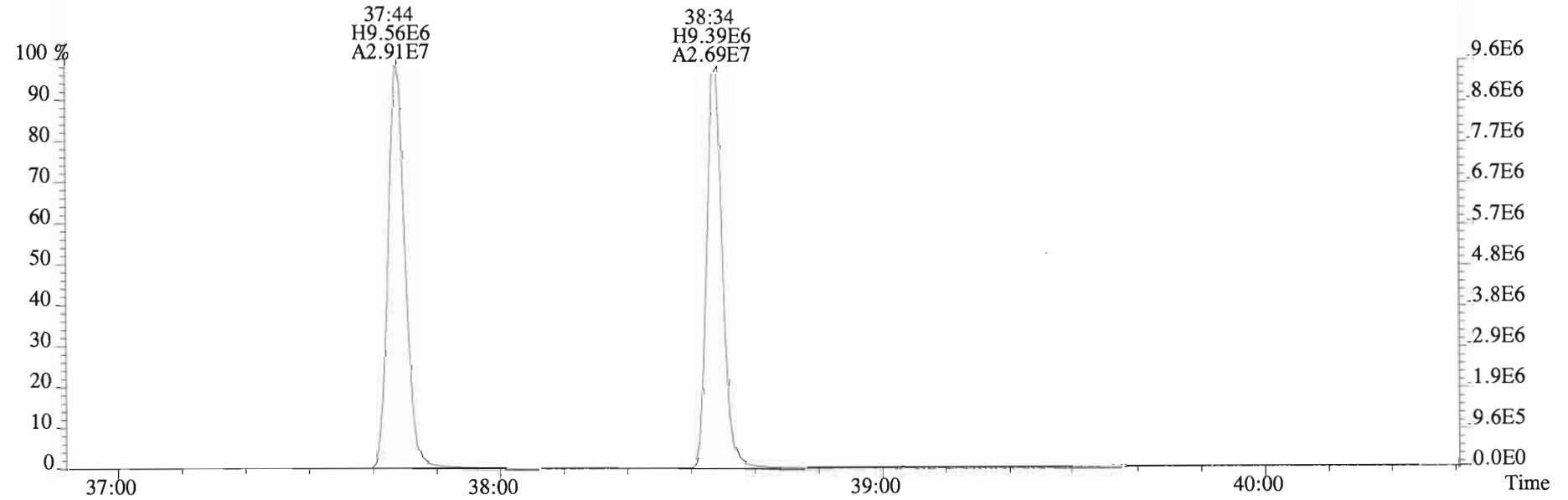
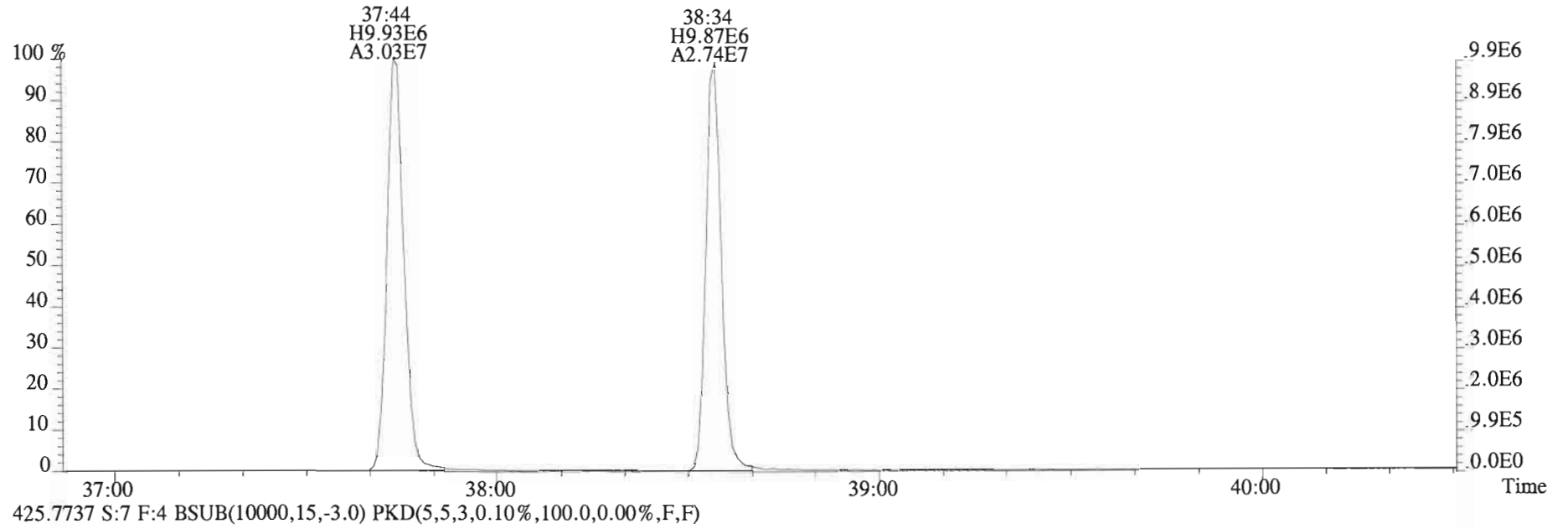
437.8140 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



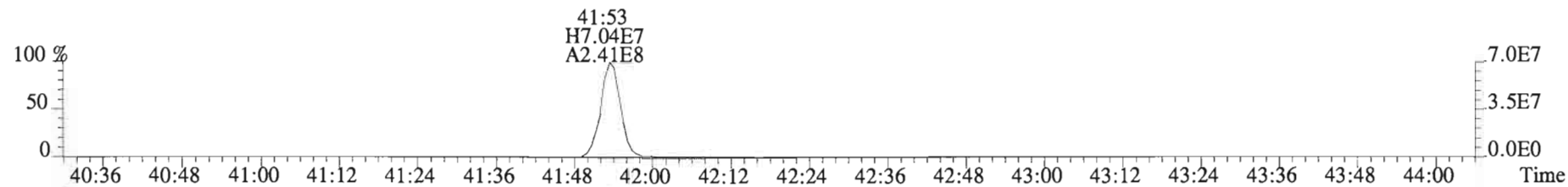
430.9728 S:7 F:4



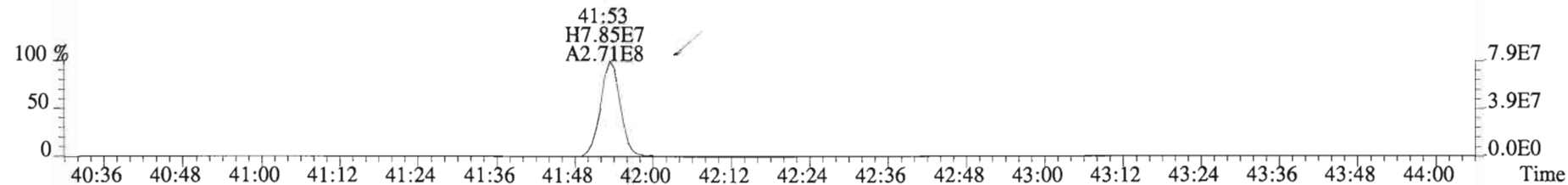
File:150204D1 #1-326 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



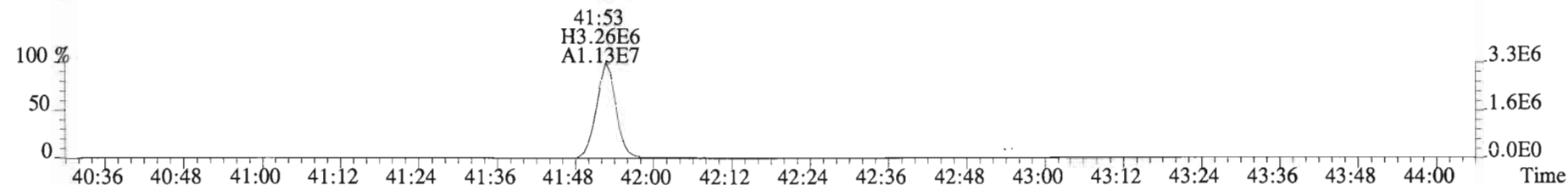
File:150204D1 #1-388 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
457.7377 S:7 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



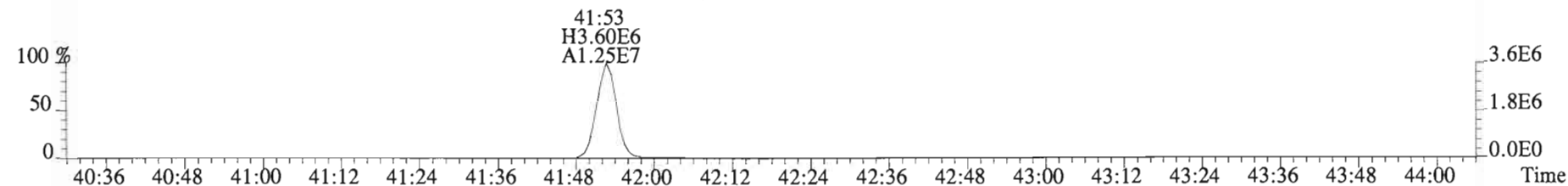
459.7348 S:7 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



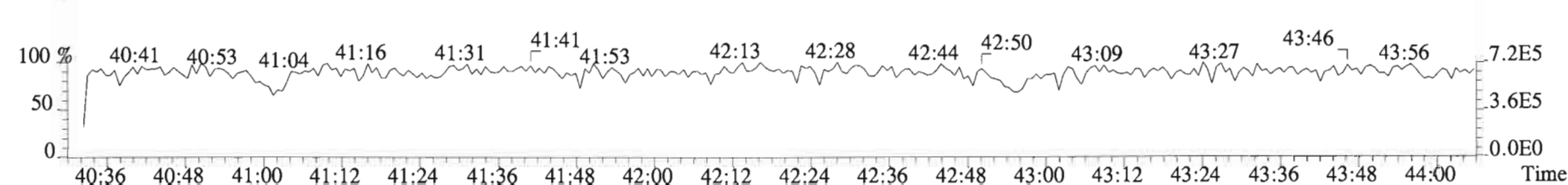
469.7780 S:7 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



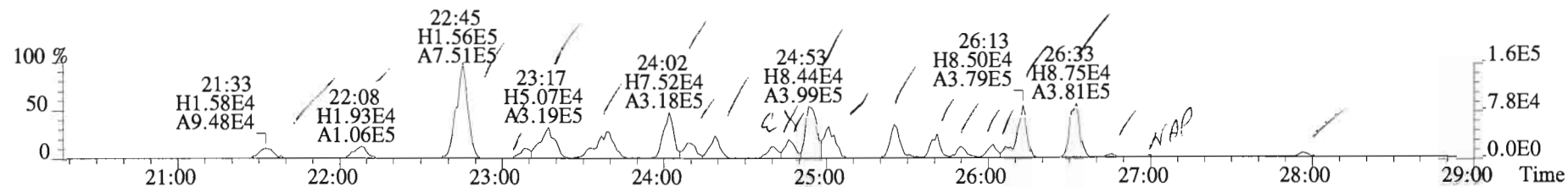
471.7750 S:7 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



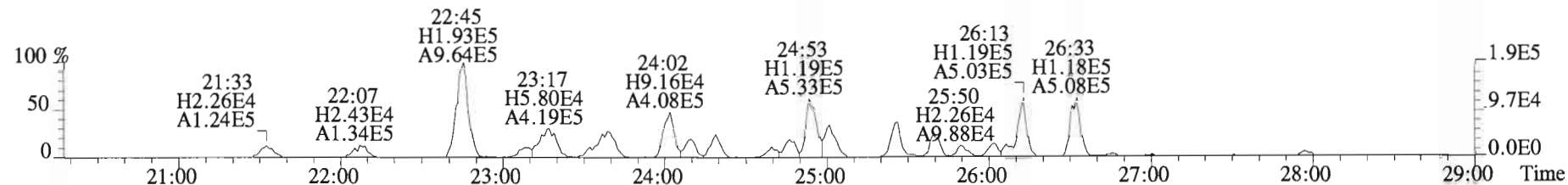
454.9728 S:7 F:5



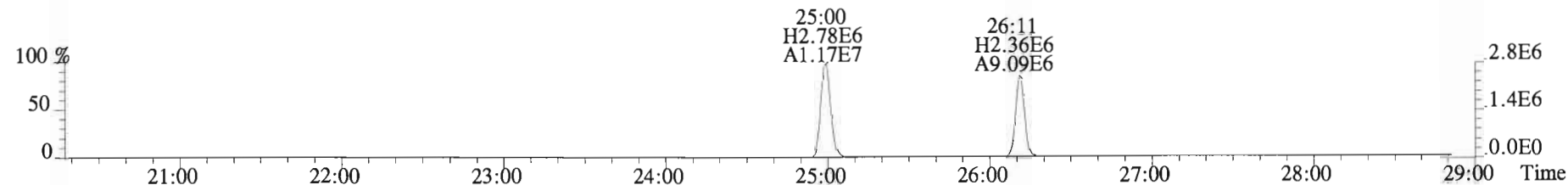
File:150204D1 #1-552 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



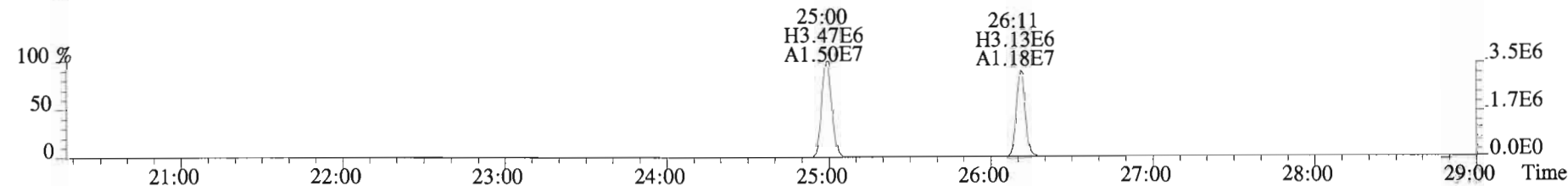
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



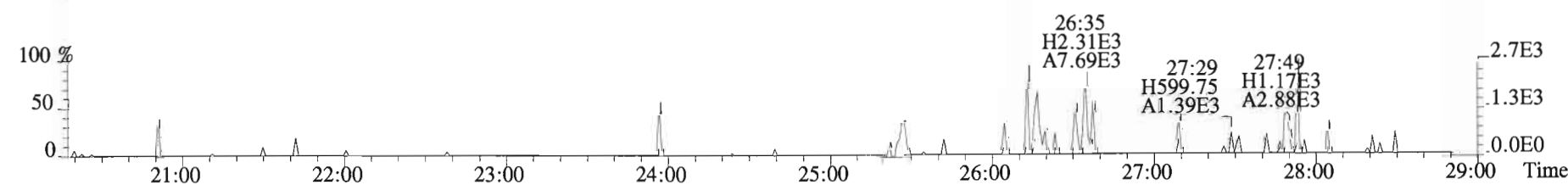
315.9419 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



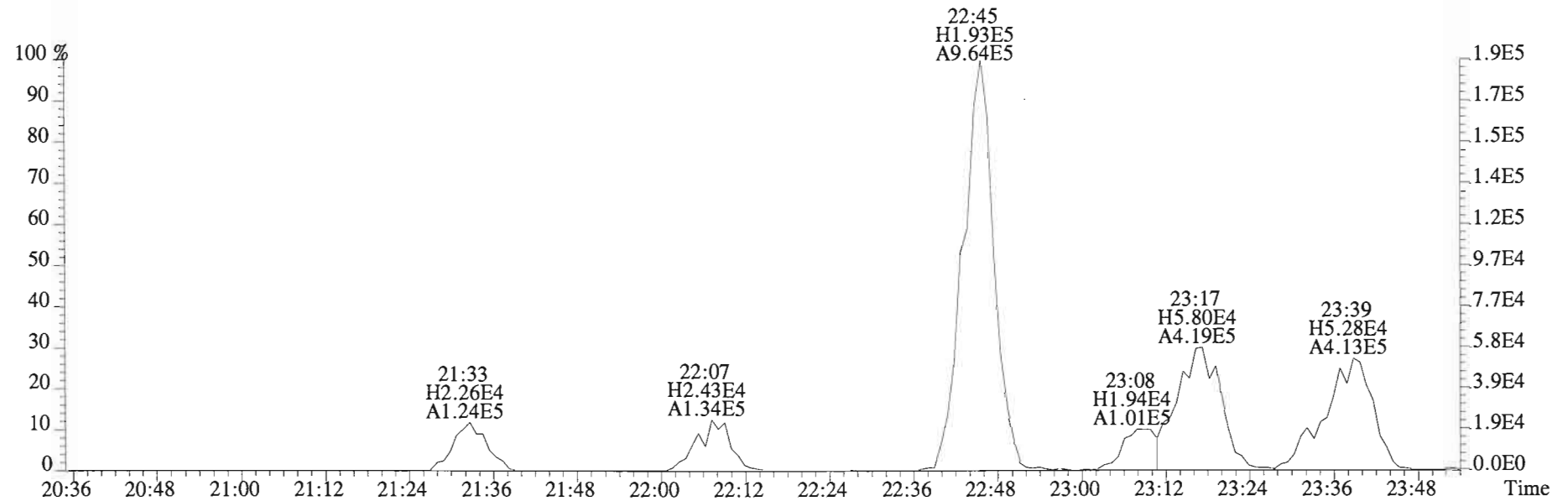
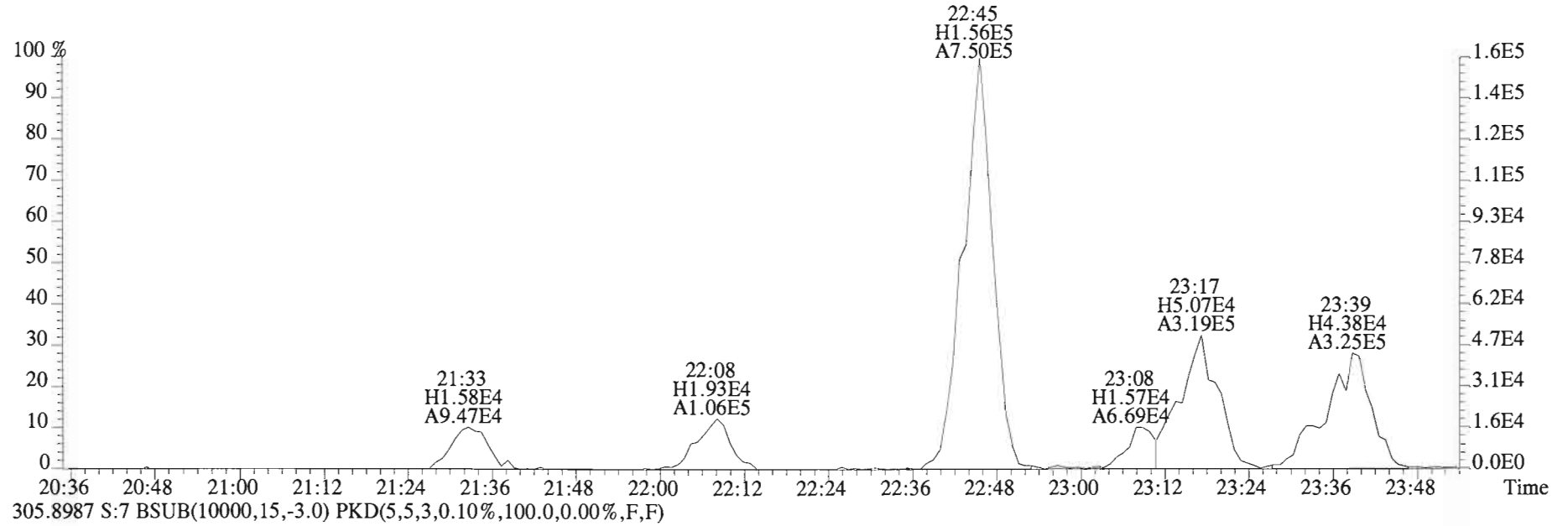
317.9389 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



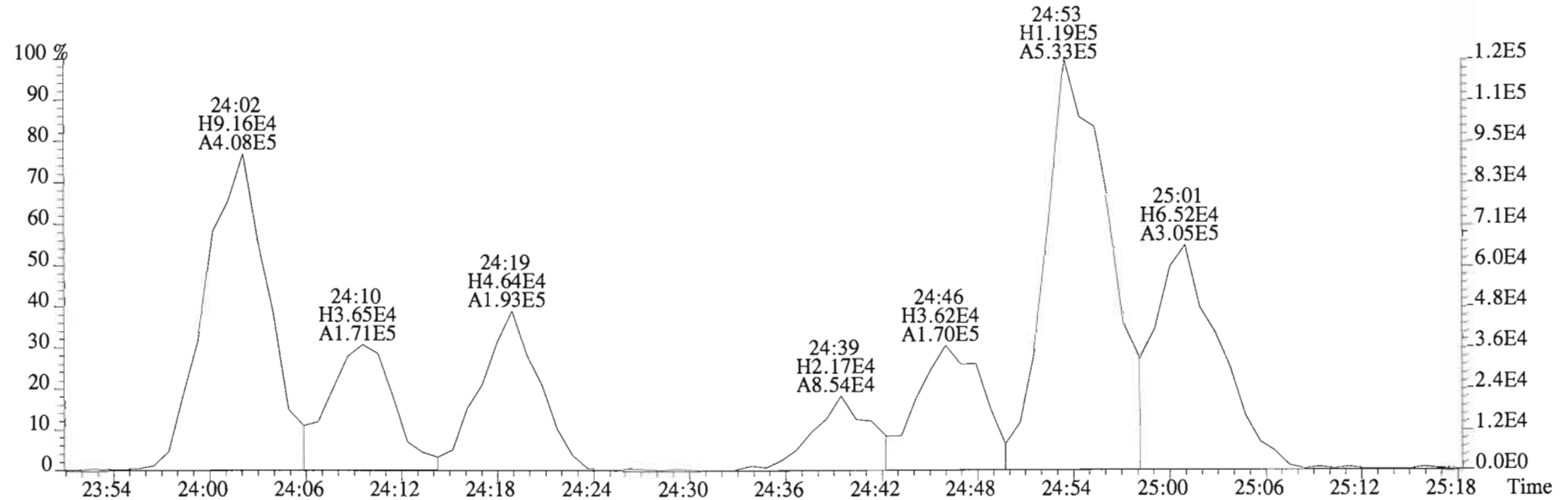
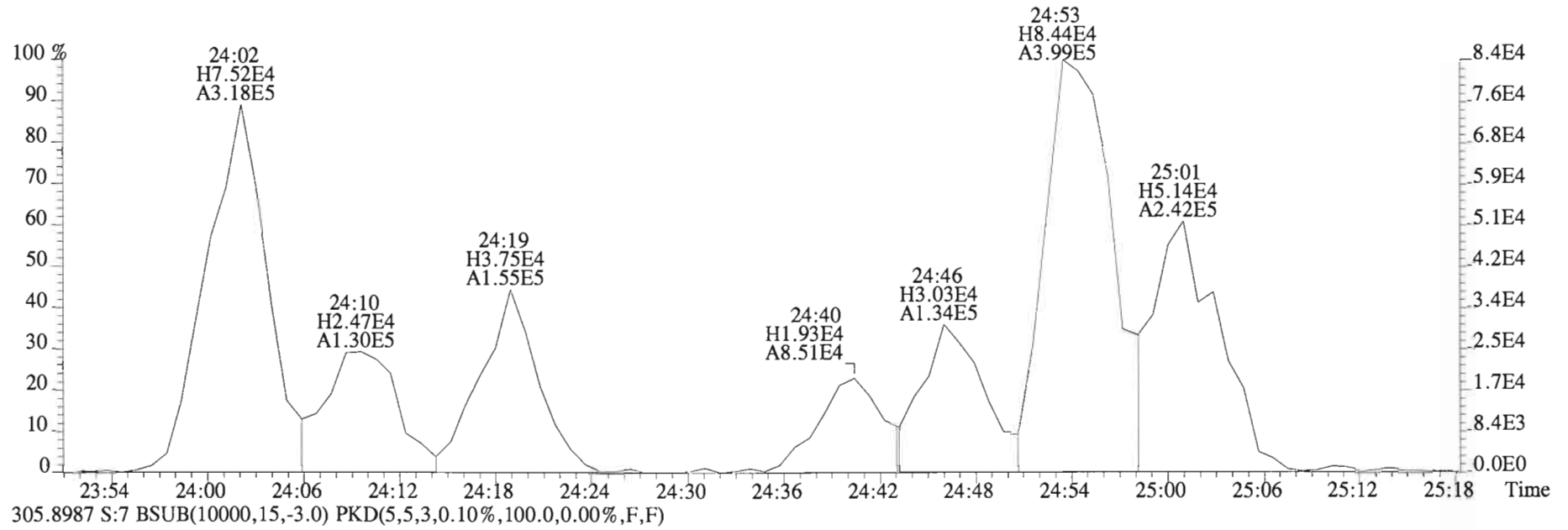
375.8364 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



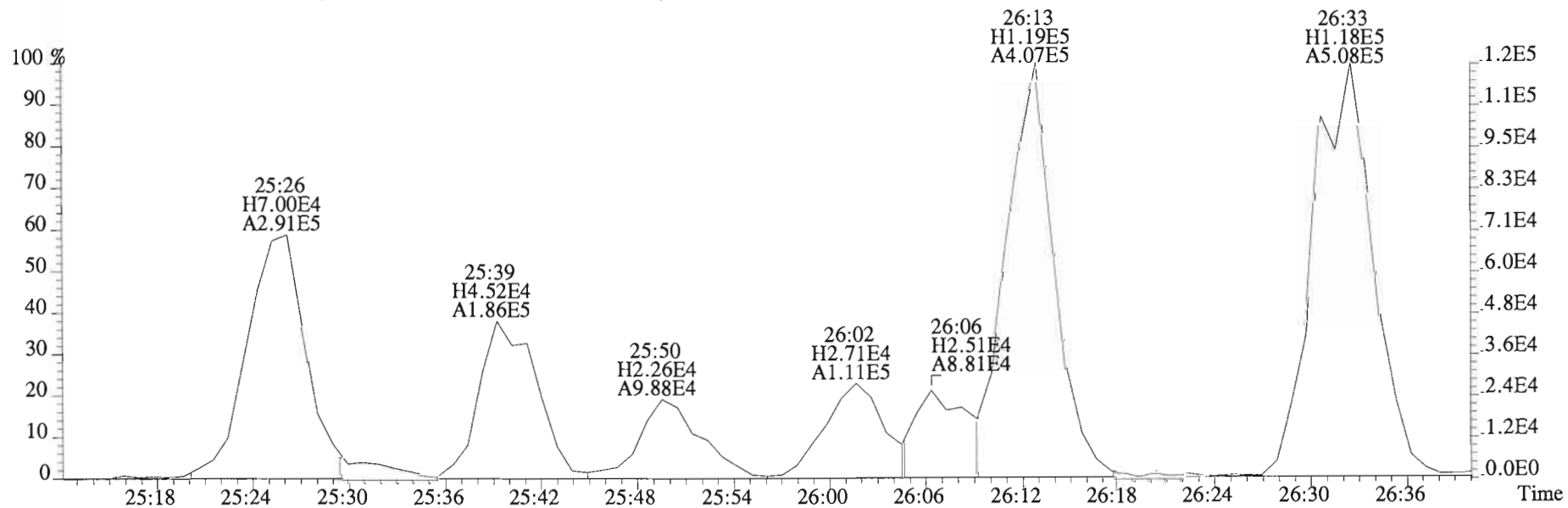
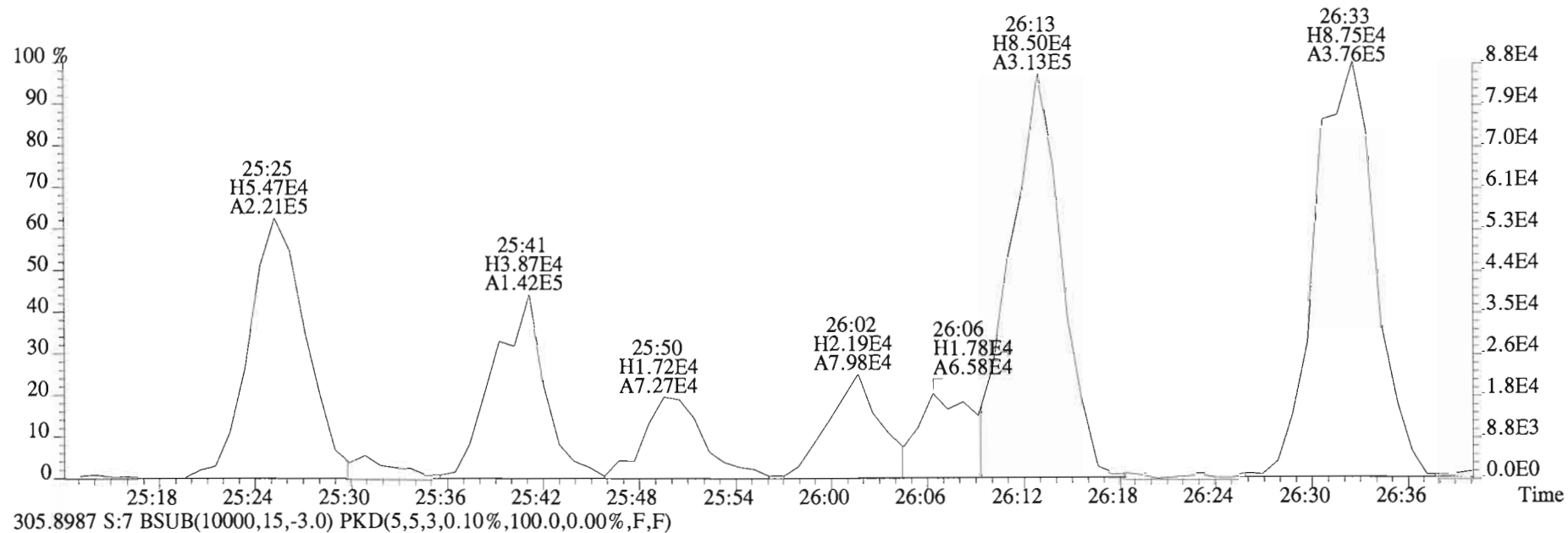
File:150204D1 #1-552 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



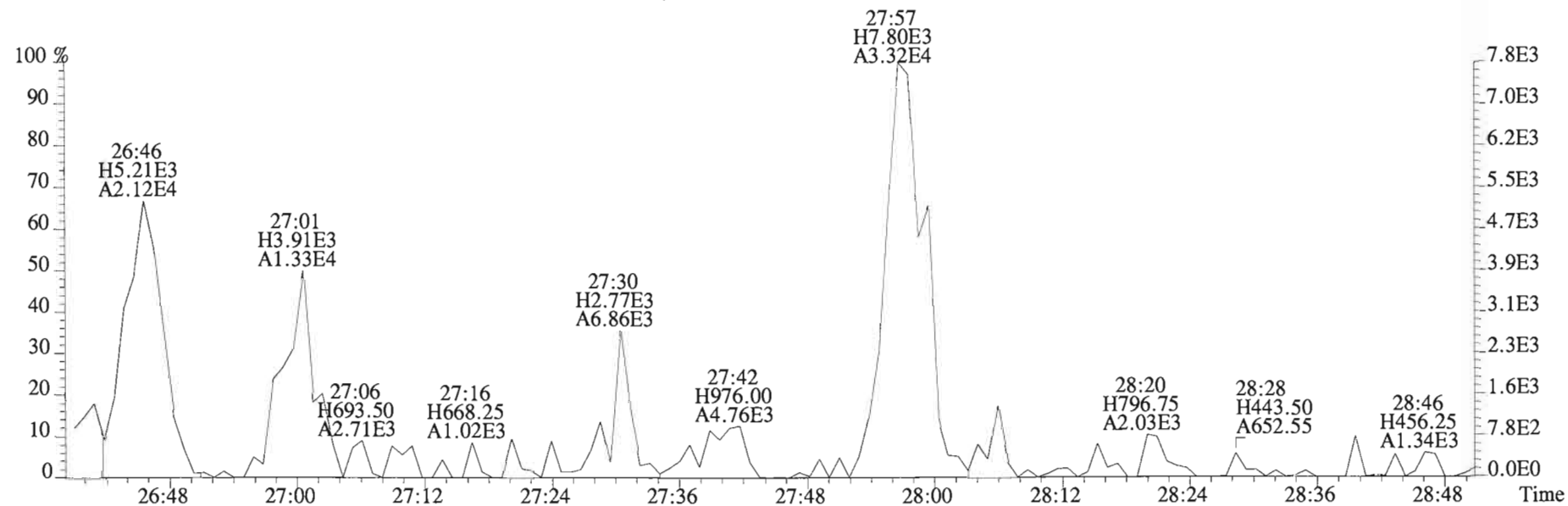
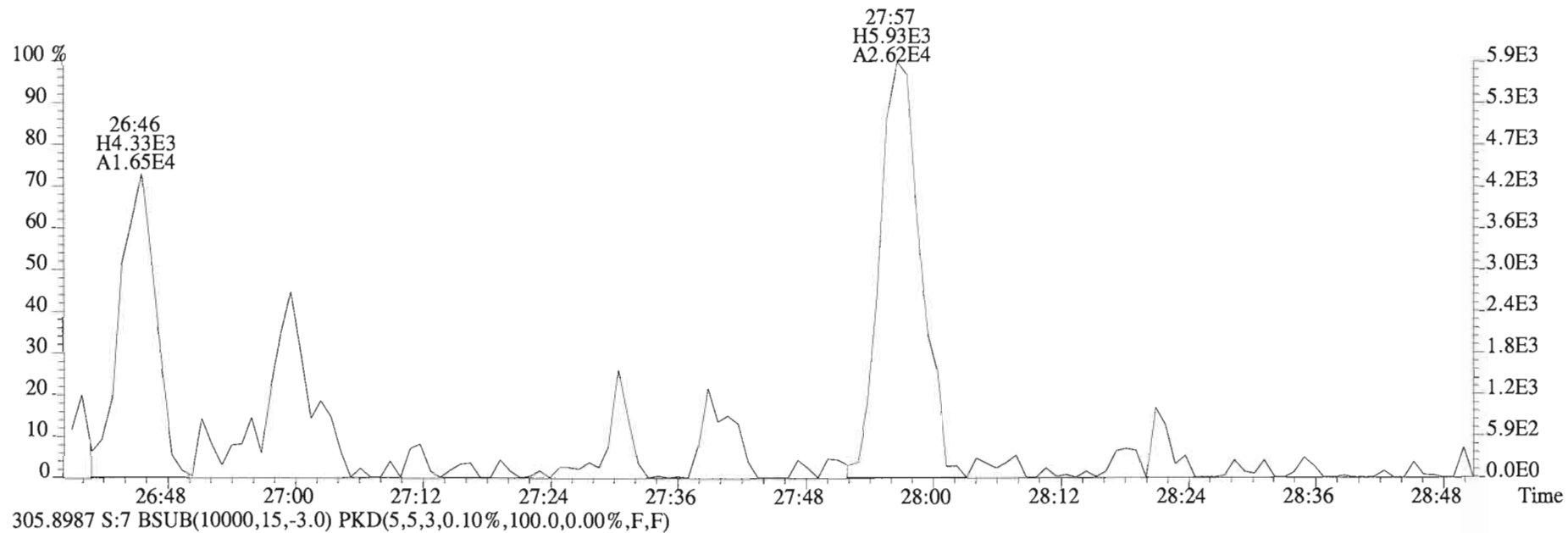
File:150204D1 #1-552 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



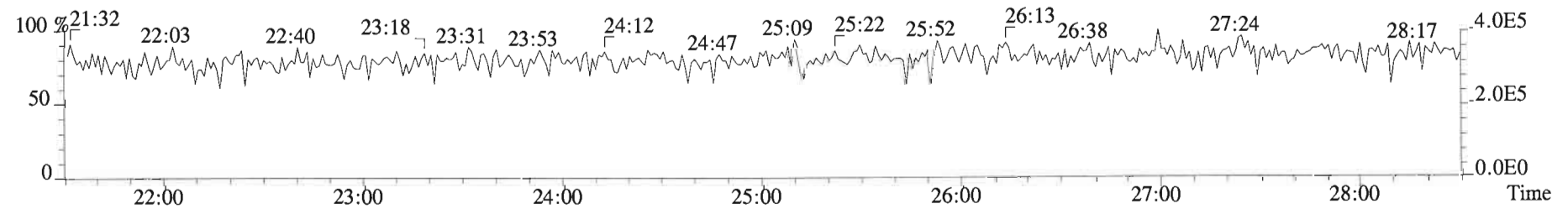
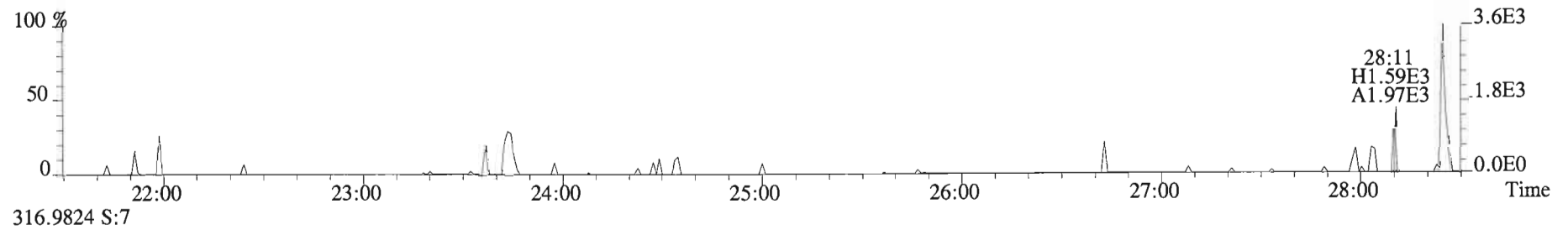
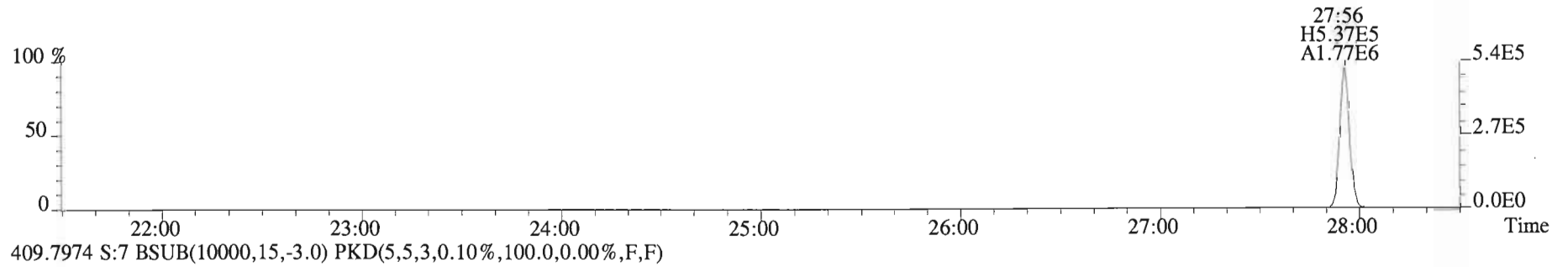
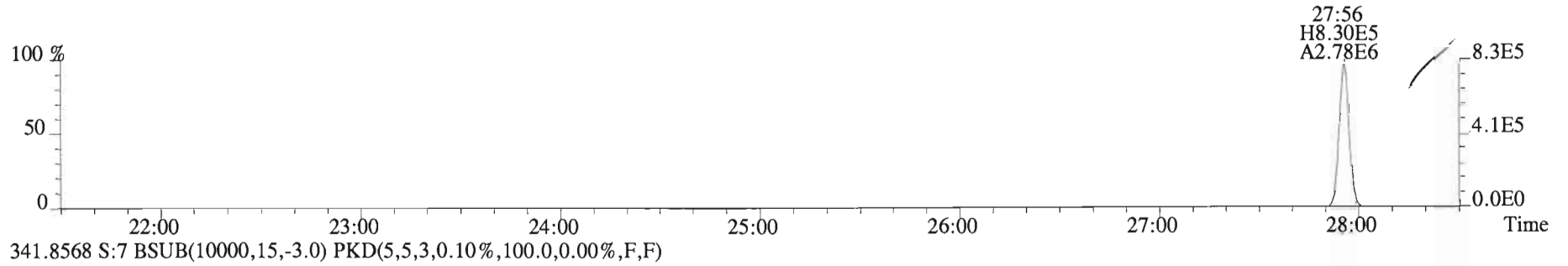
File:150204D1 #1-552 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
 303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



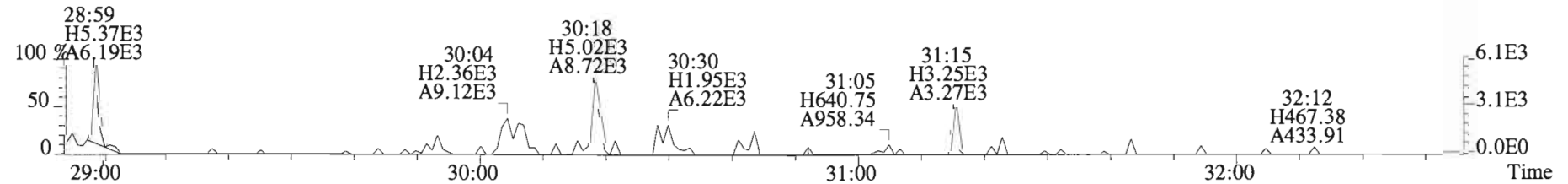
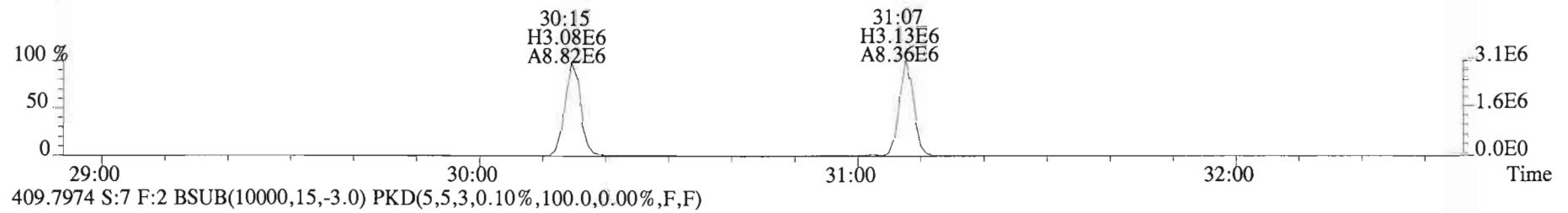
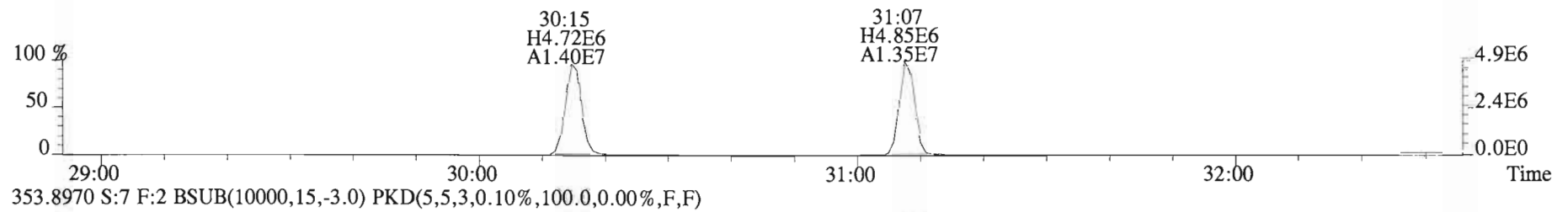
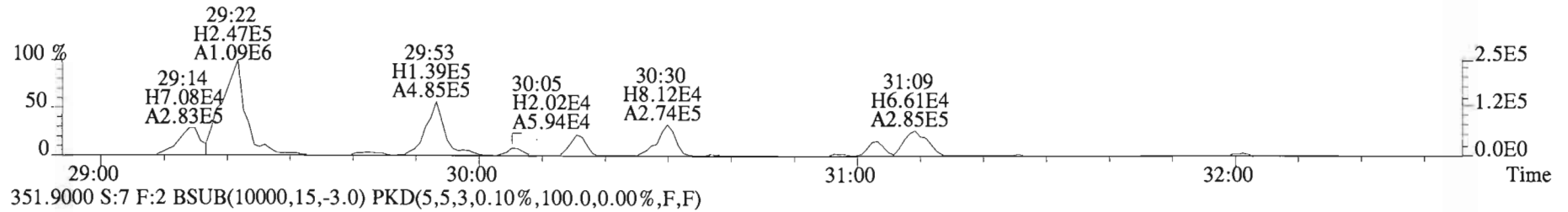
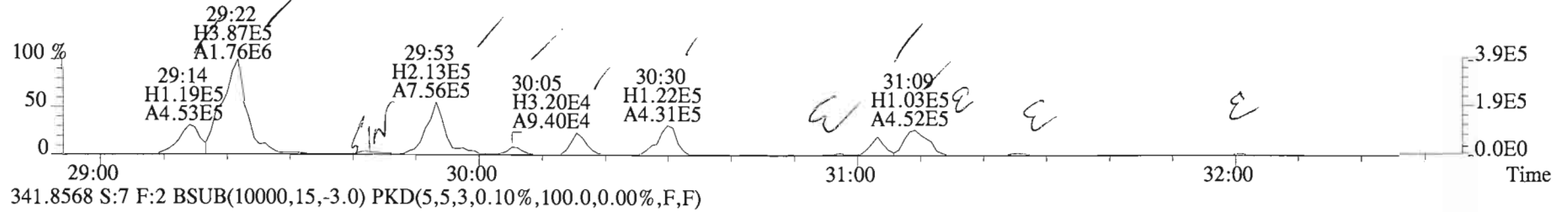
File:150204D1 #1-552 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
 303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



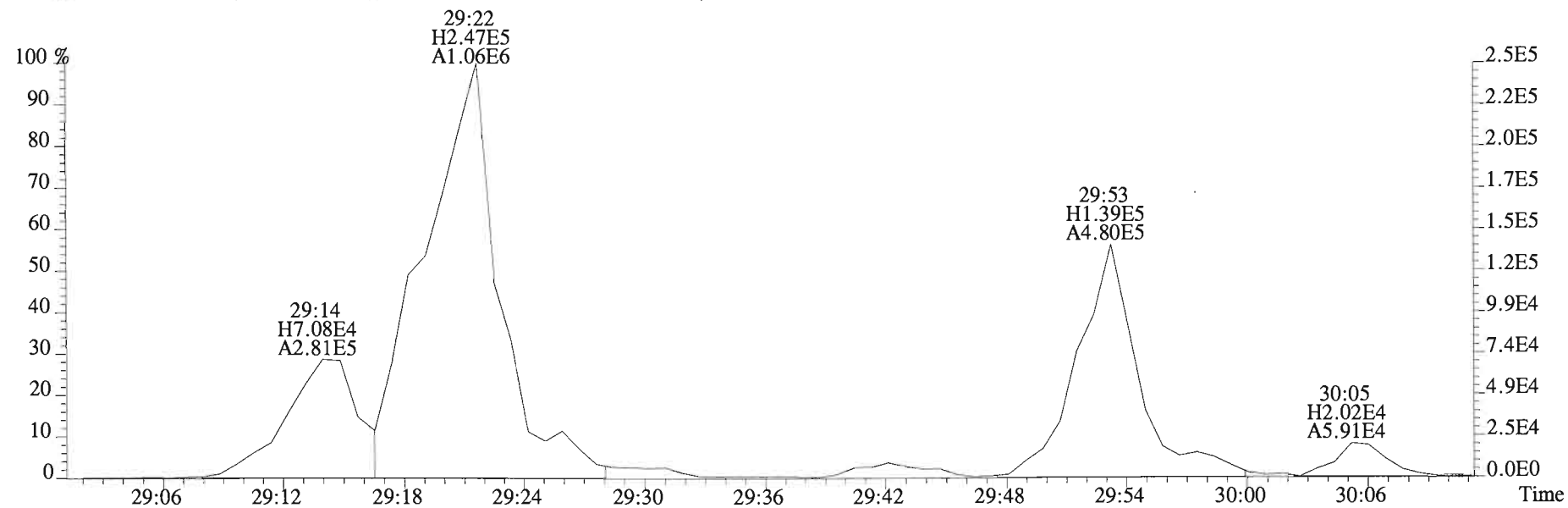
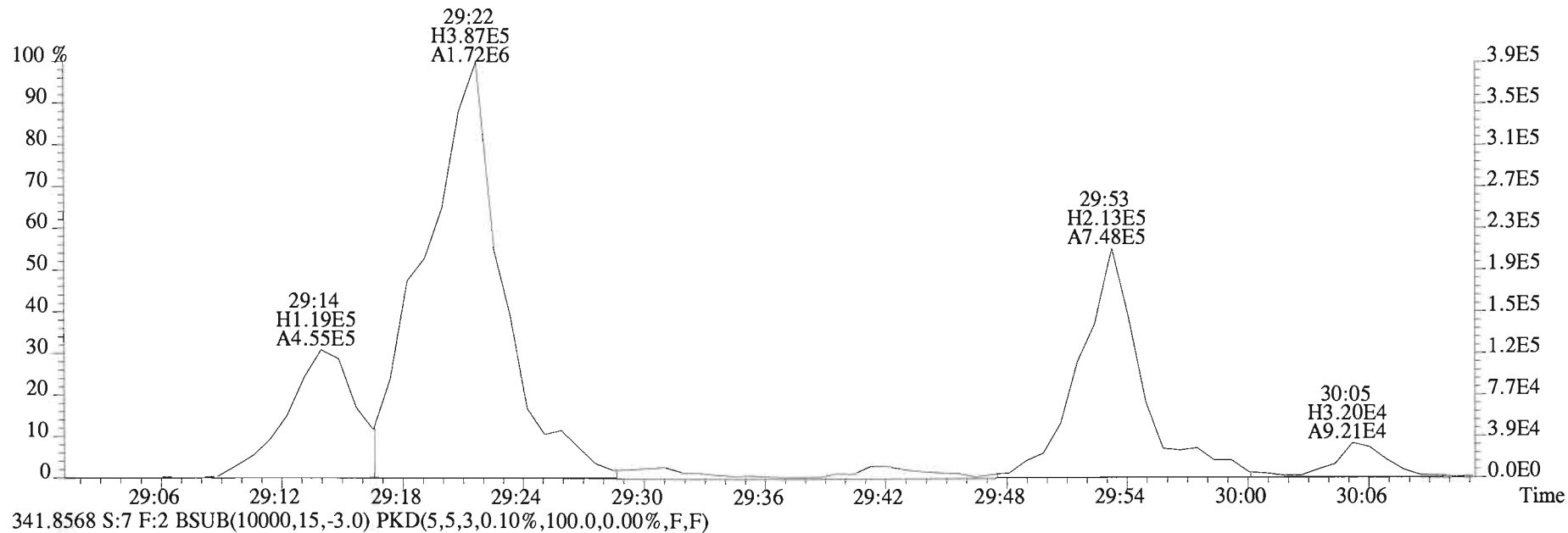
File:150204D1 #1-552 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



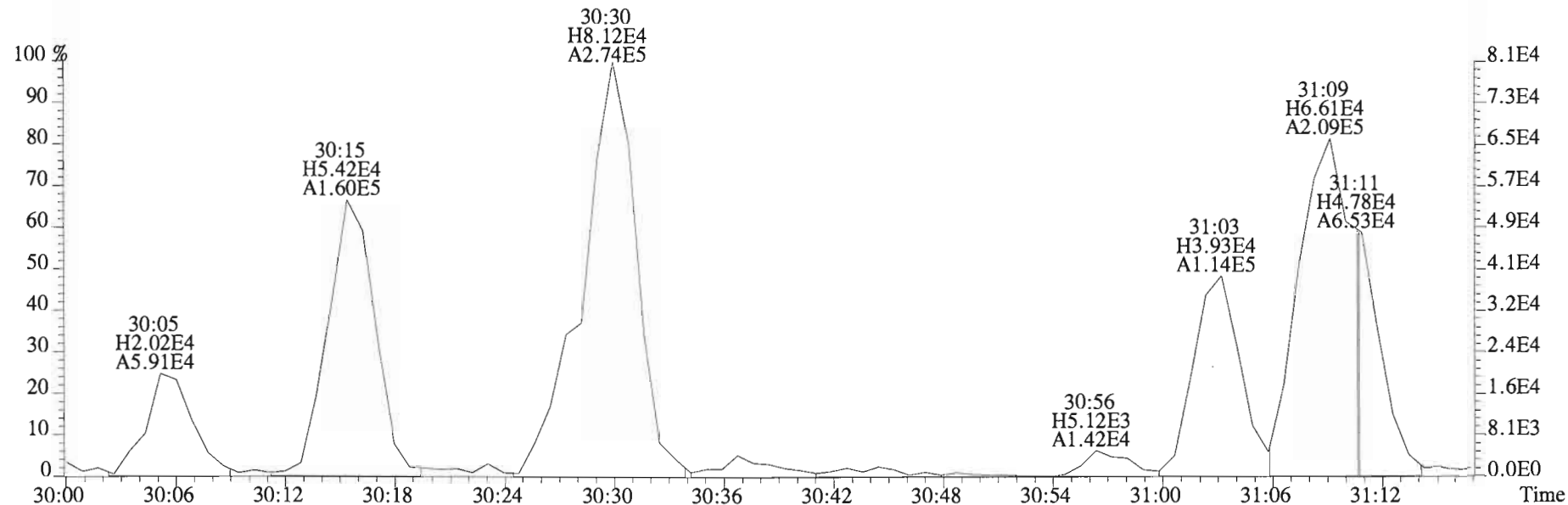
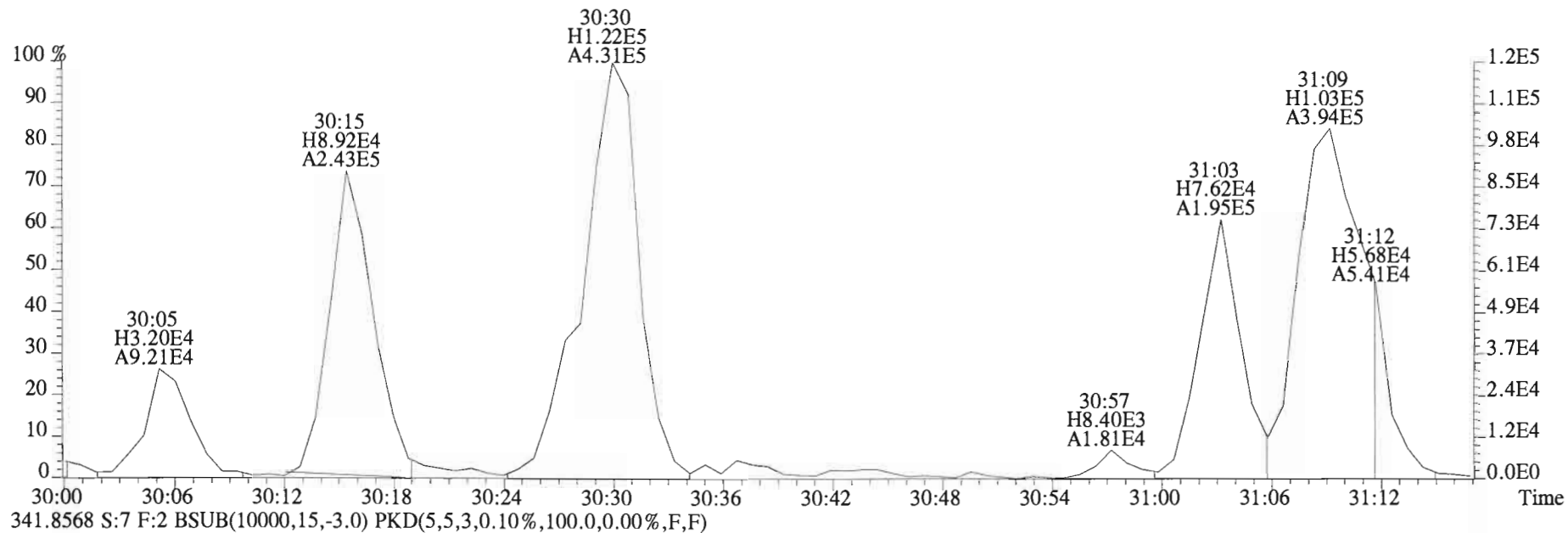
File:150204D1 #1-250 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



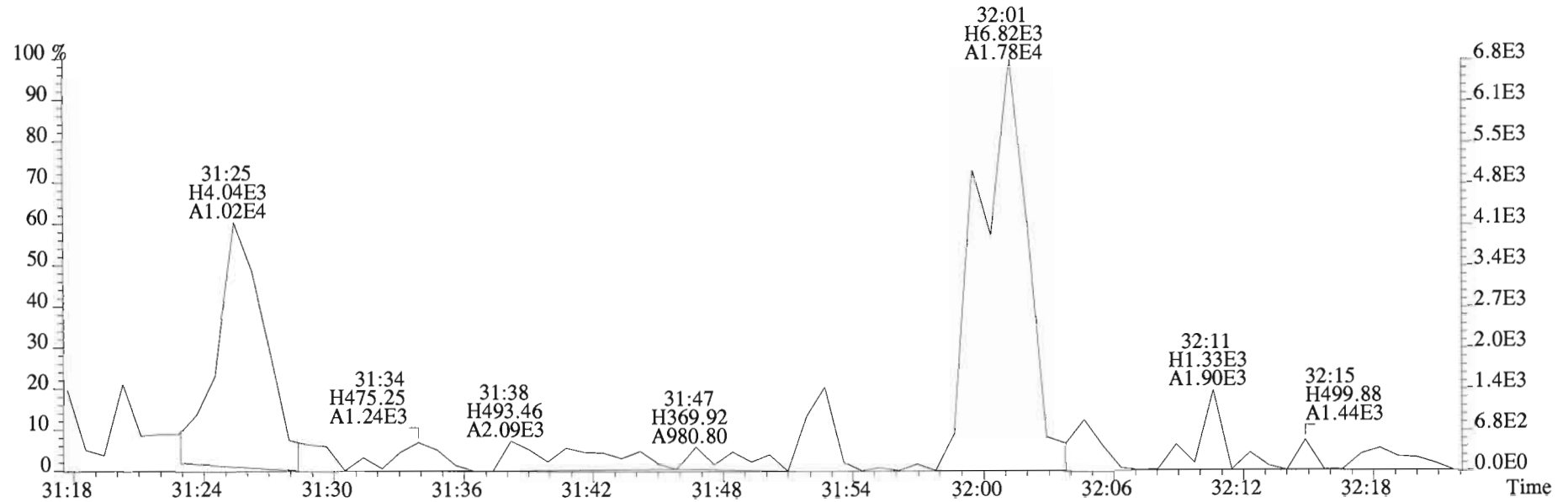
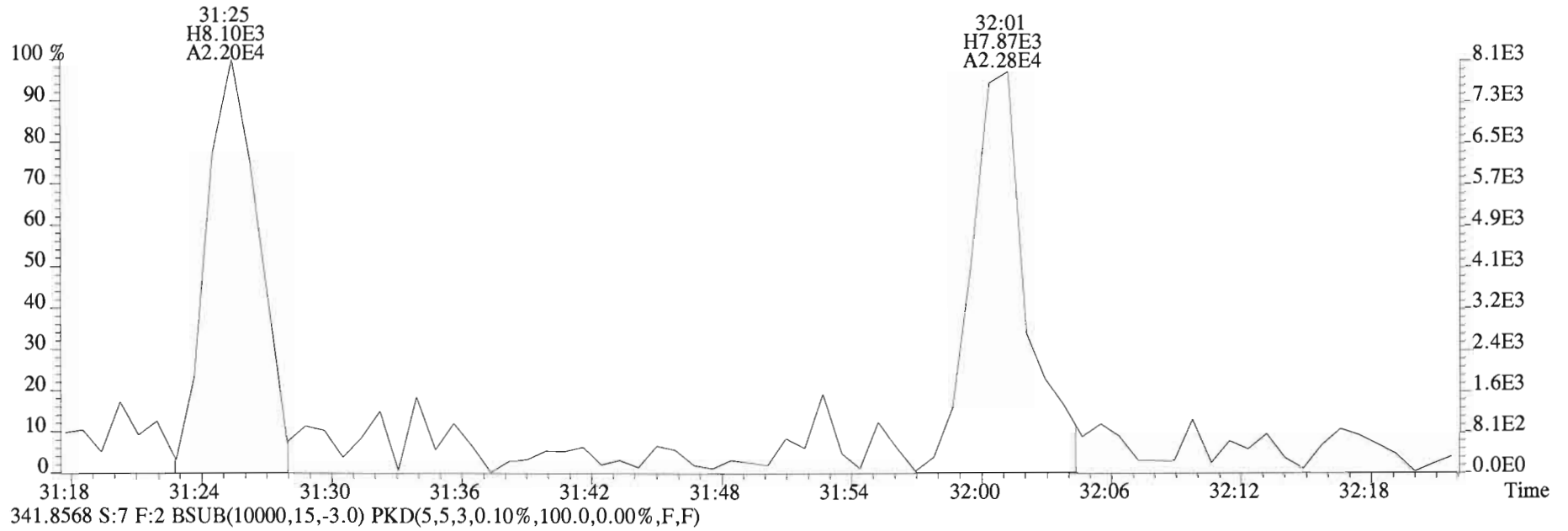
File:150204D1 #1-250 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



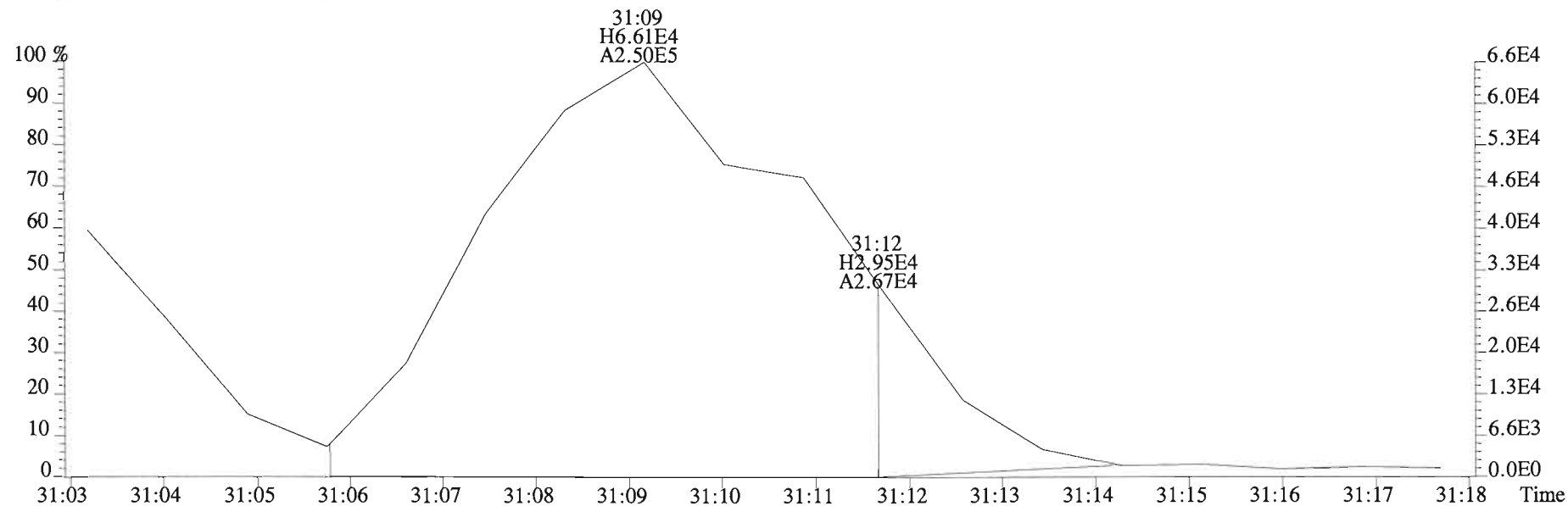
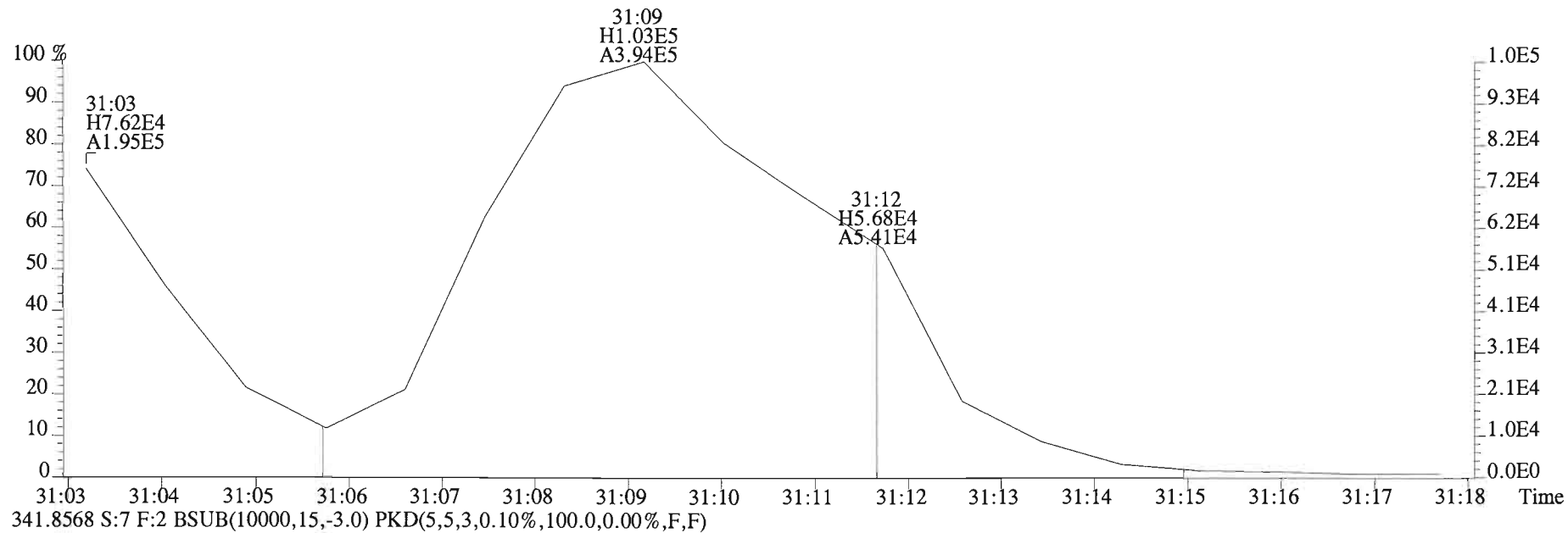
File:150204D1 #1-250 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
 339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



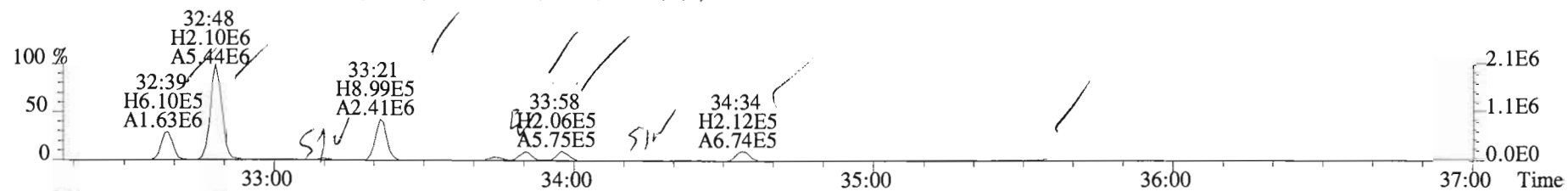
File:150204D1 #1-250 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
 339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



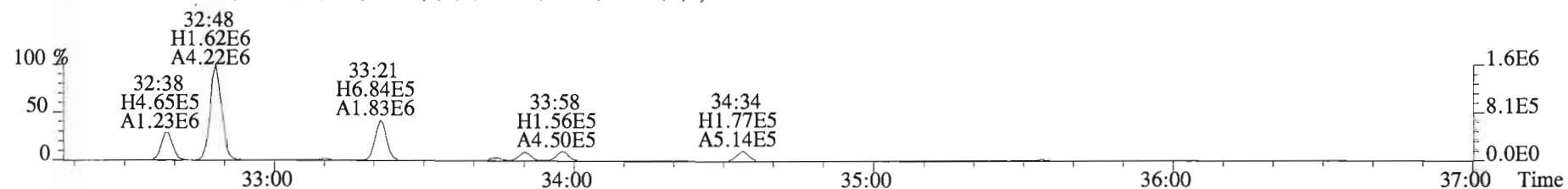
File:150204D1 #1-250 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



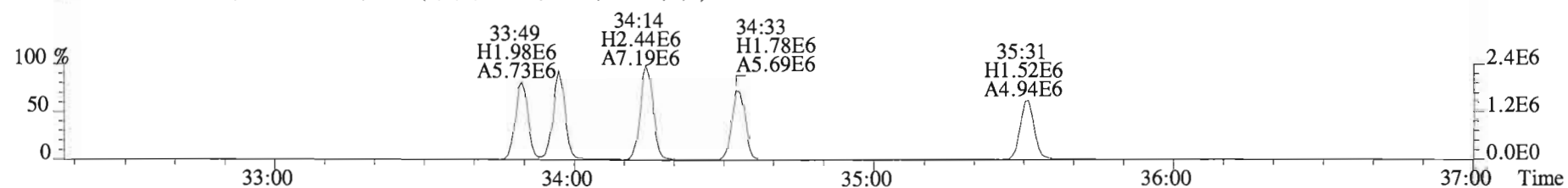
File:150204D1 #1-393 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



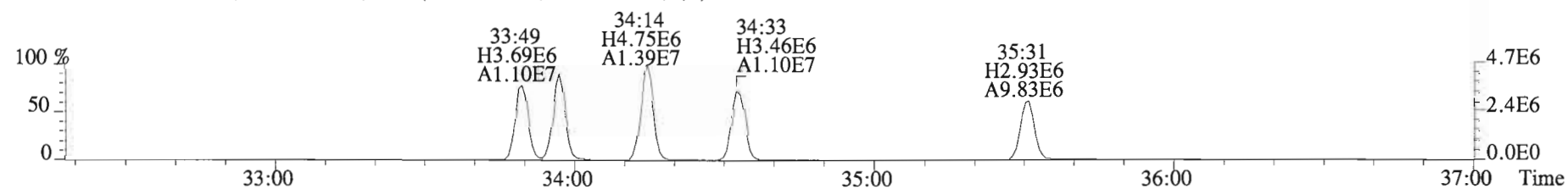
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



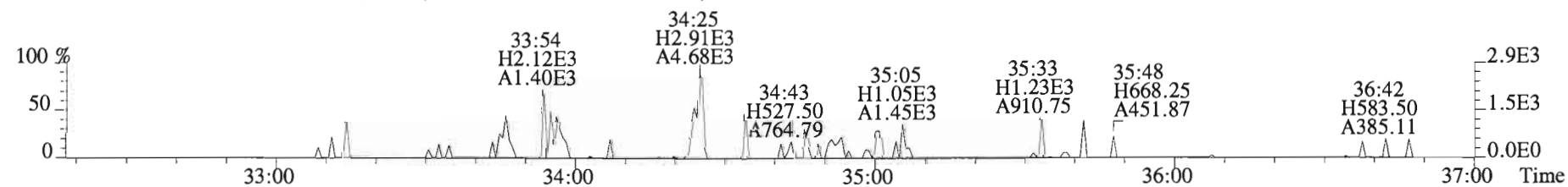
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



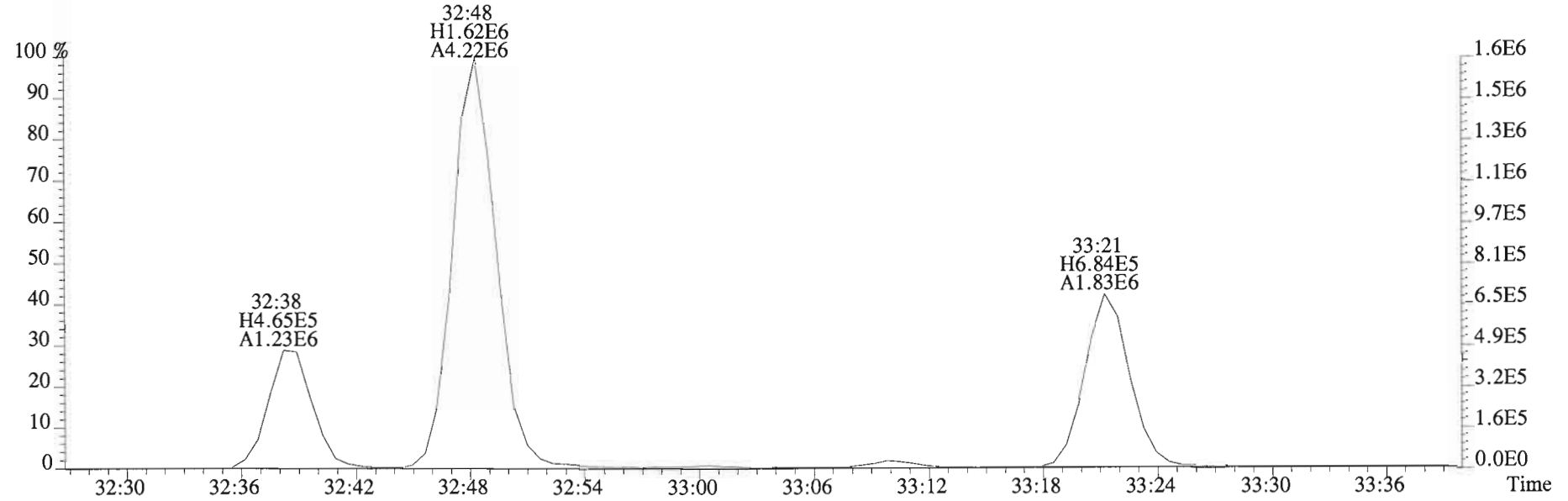
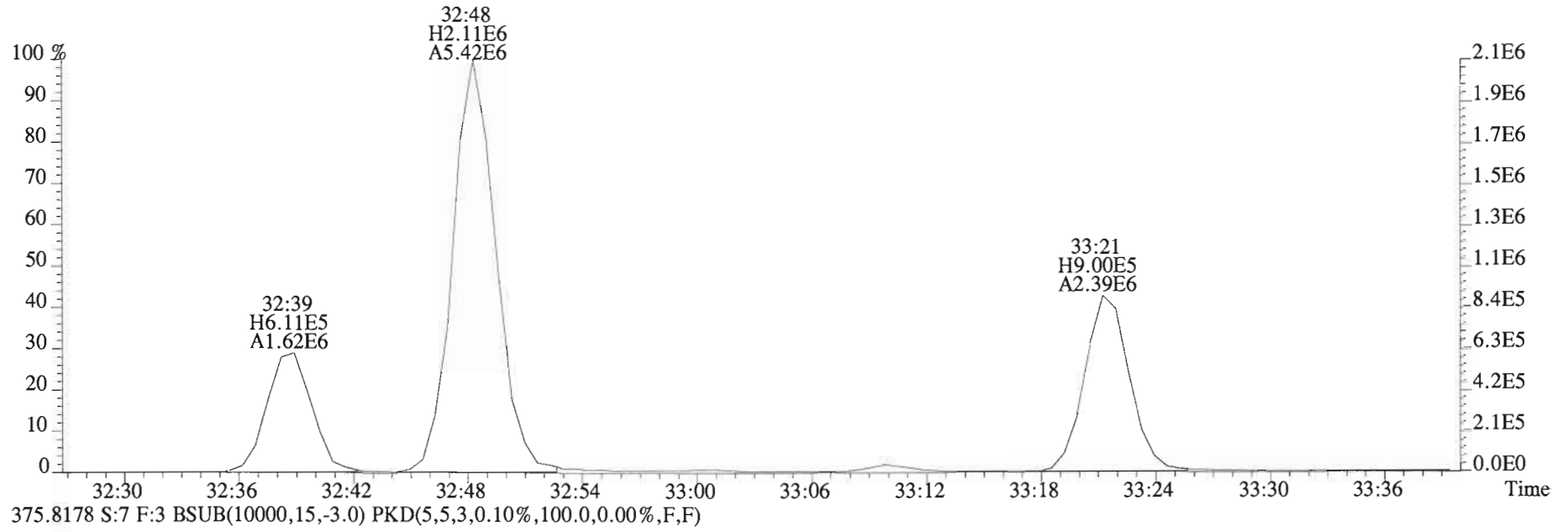
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



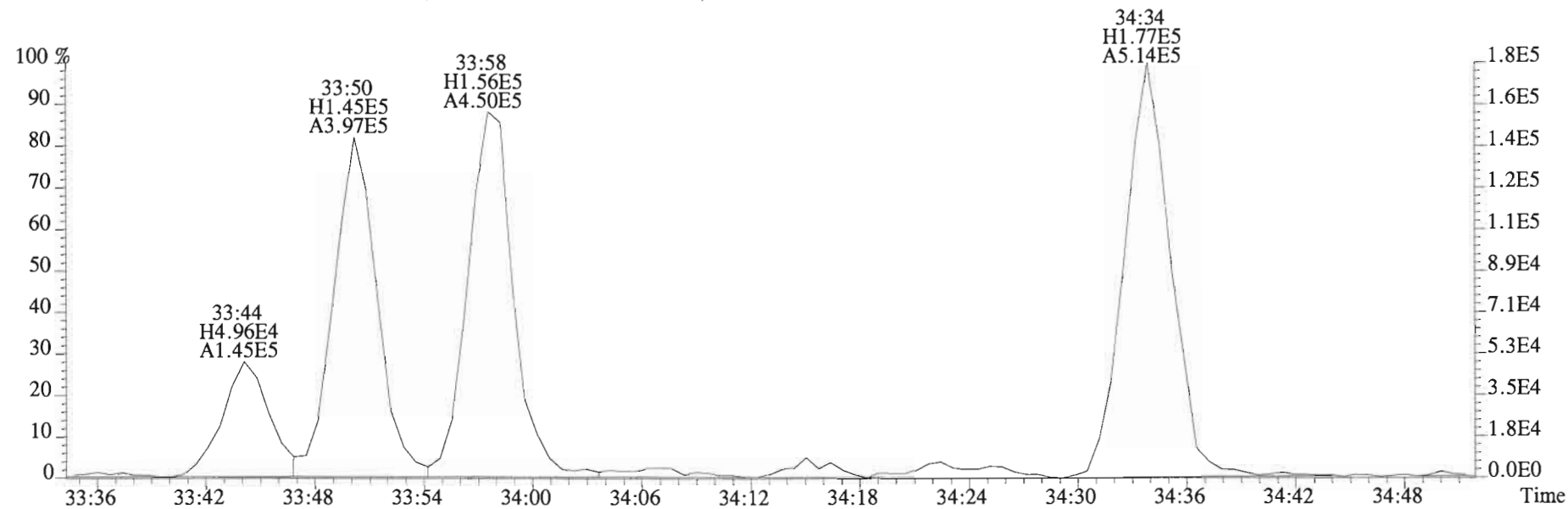
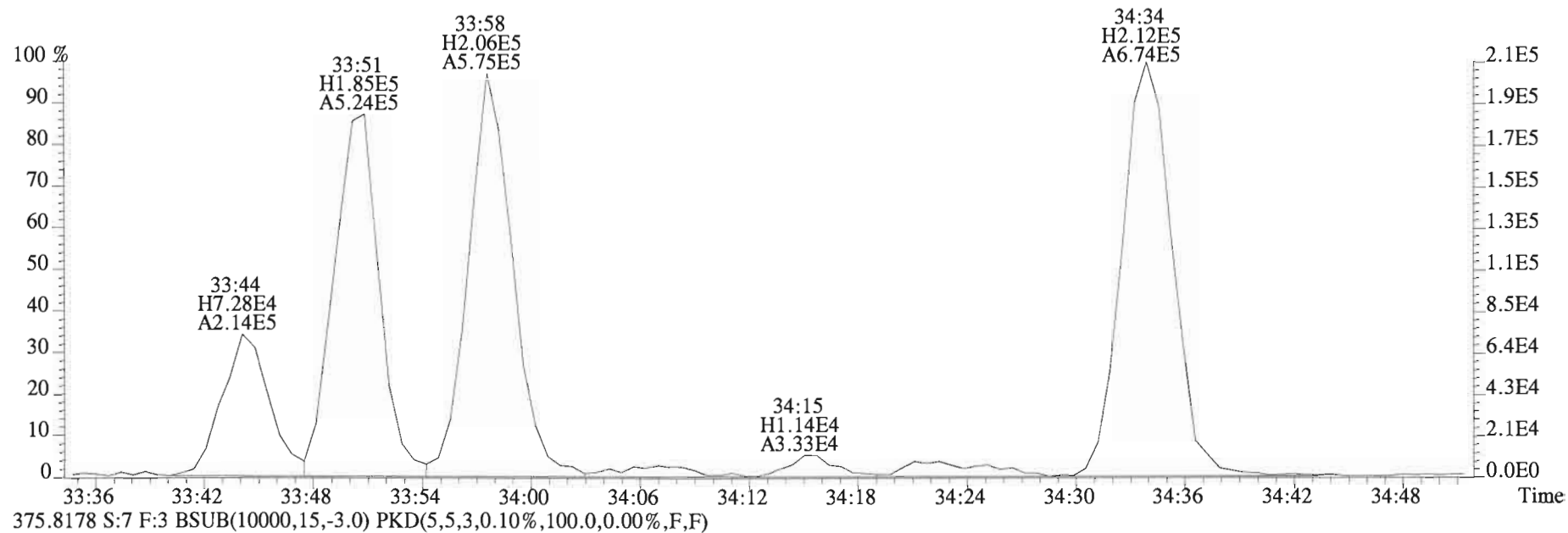
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



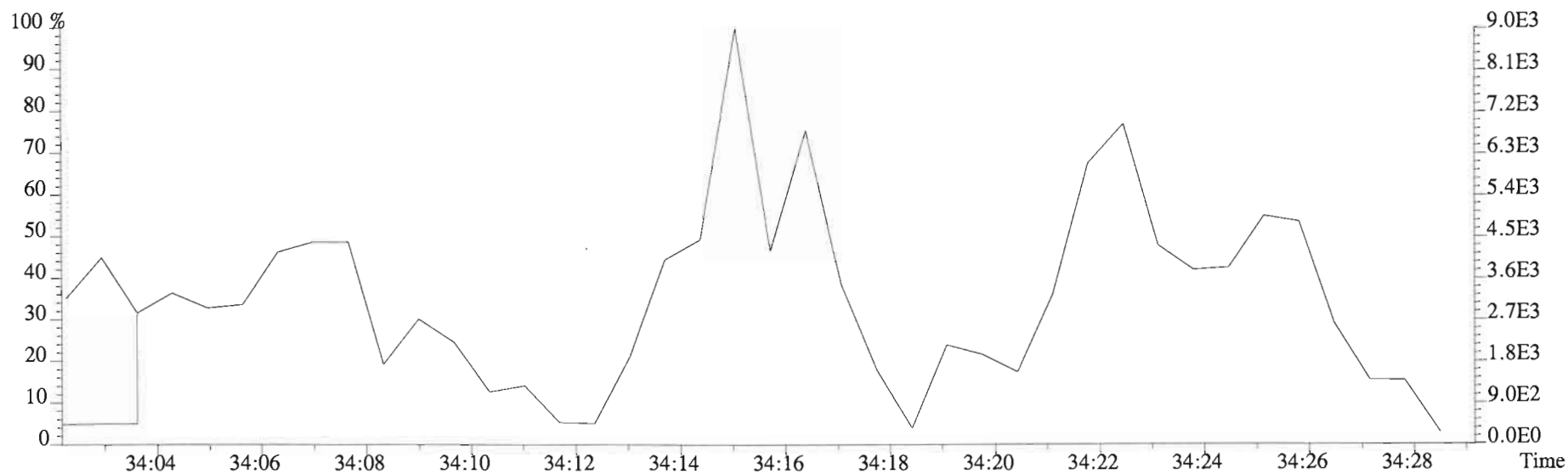
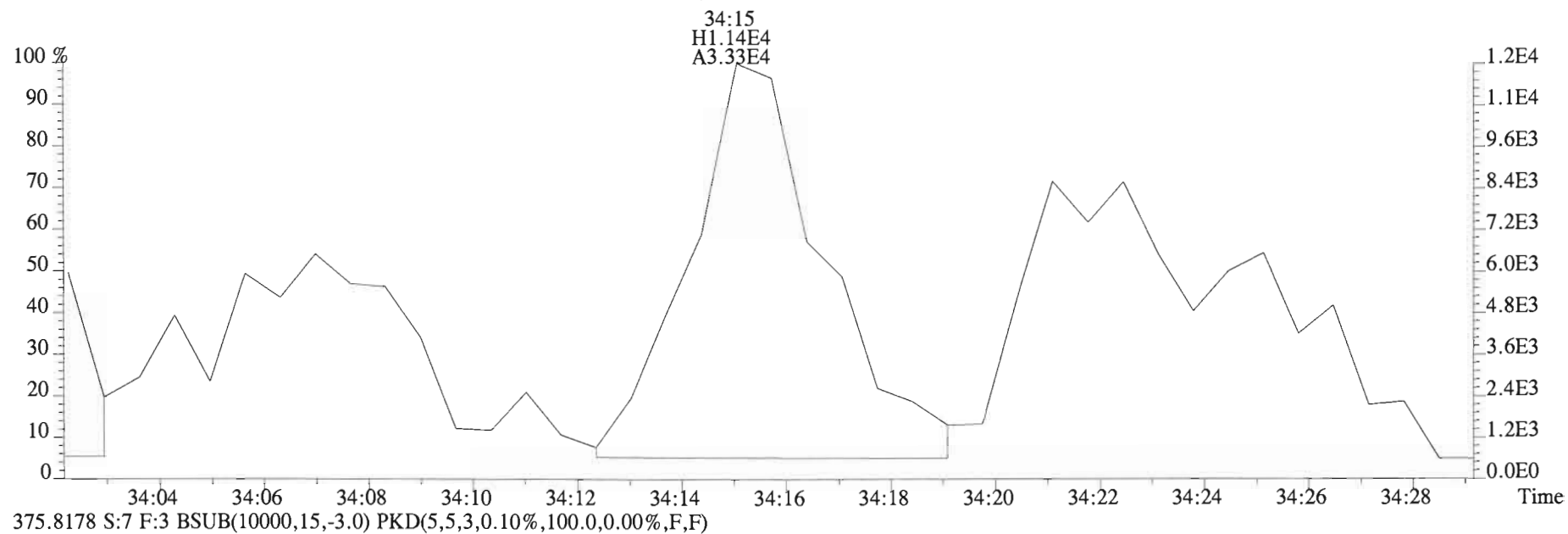
File:150204D1 #1-393 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



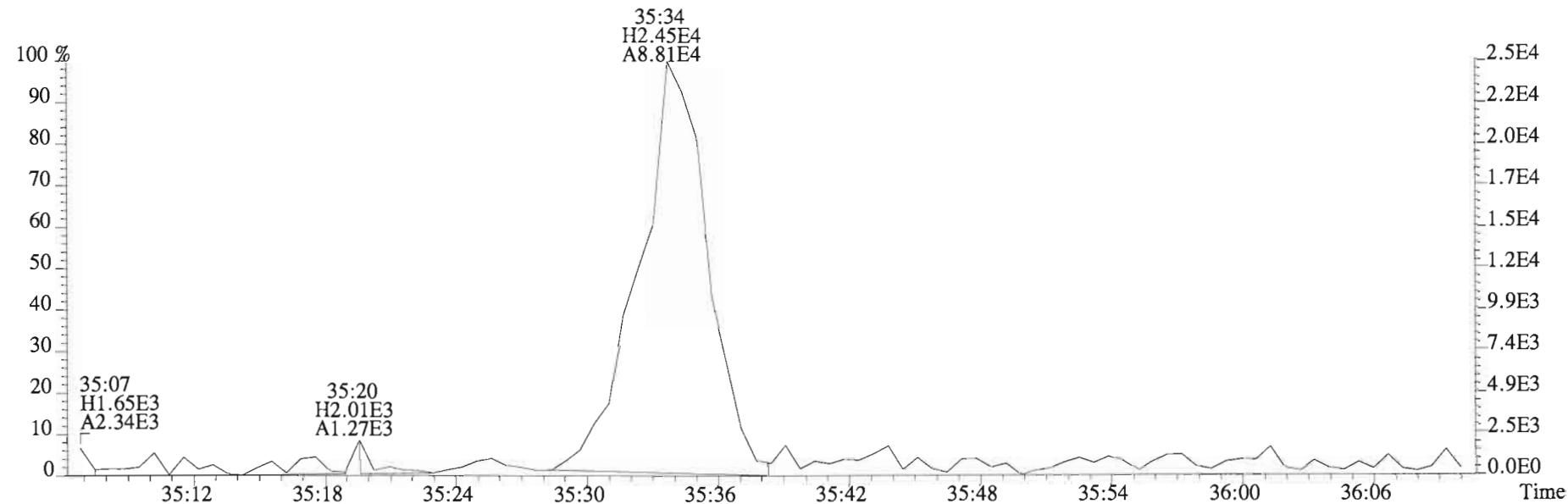
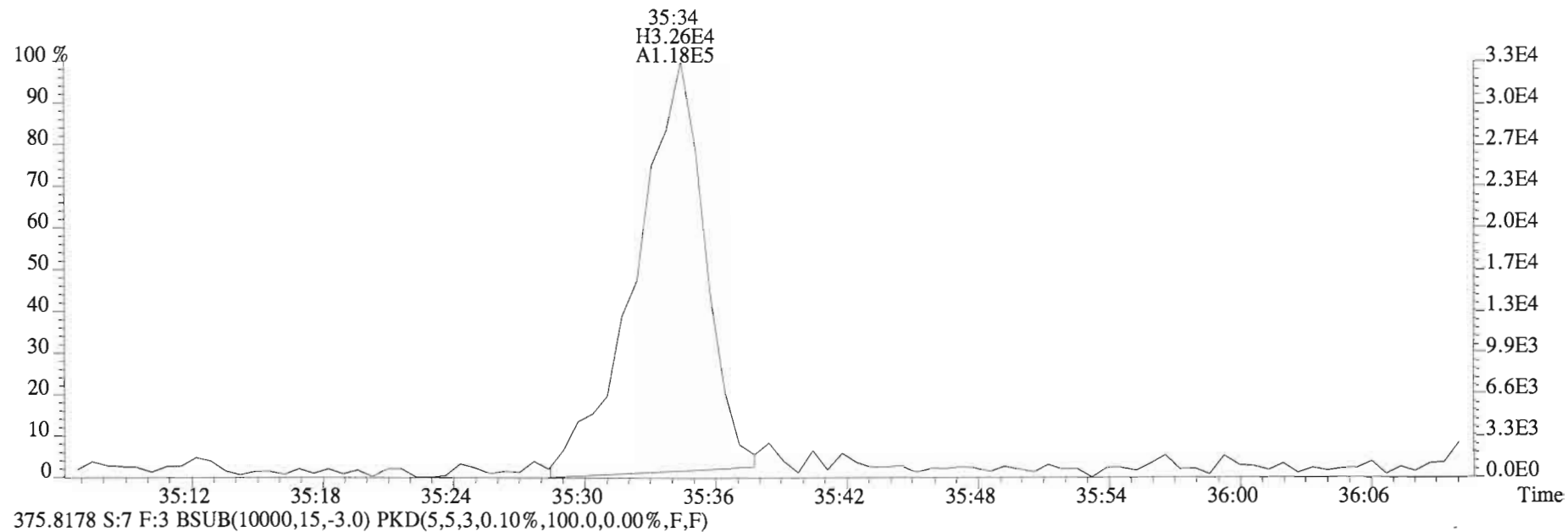
File:150204D1 #1-393 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



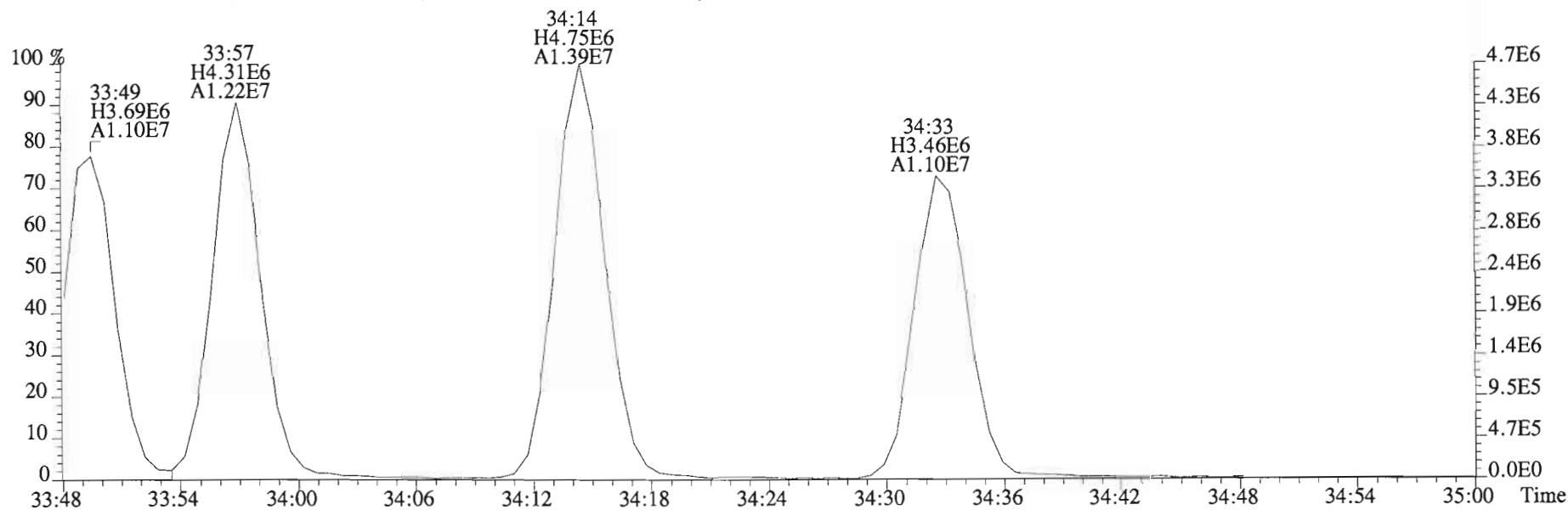
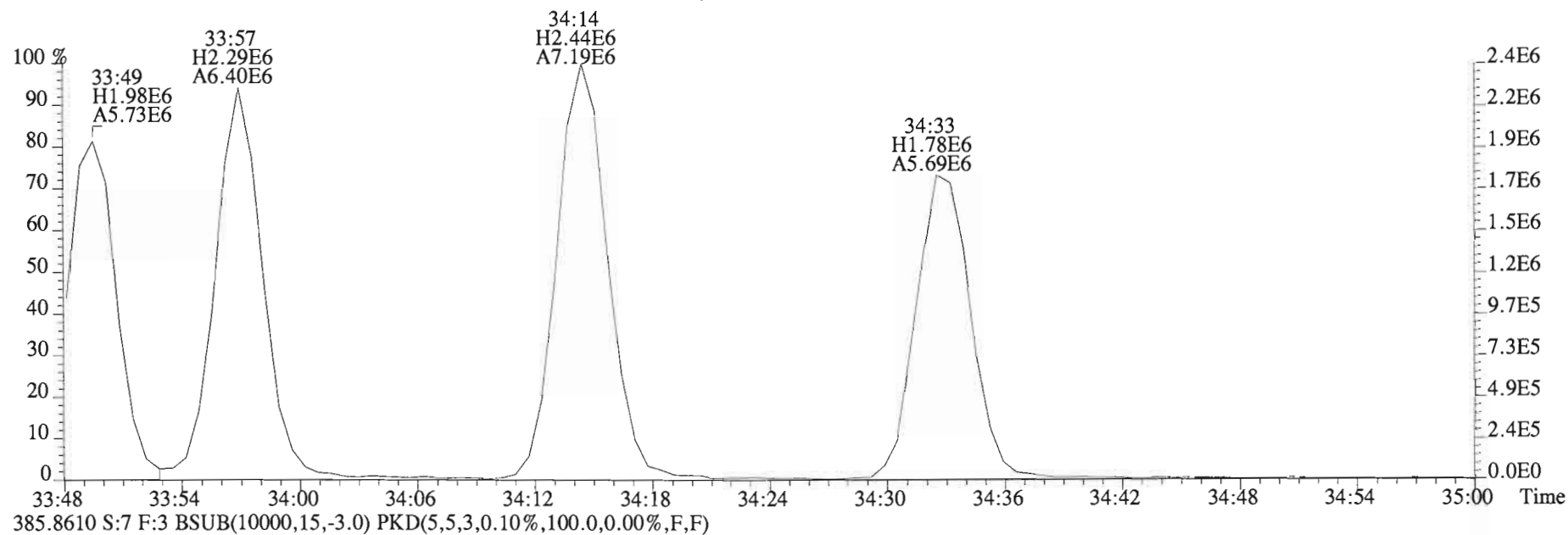
File:150204D1 #1-393 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



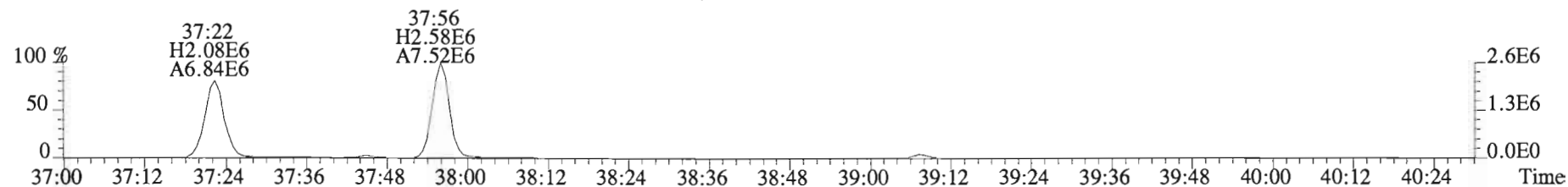
File:150204D1 #1-393 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



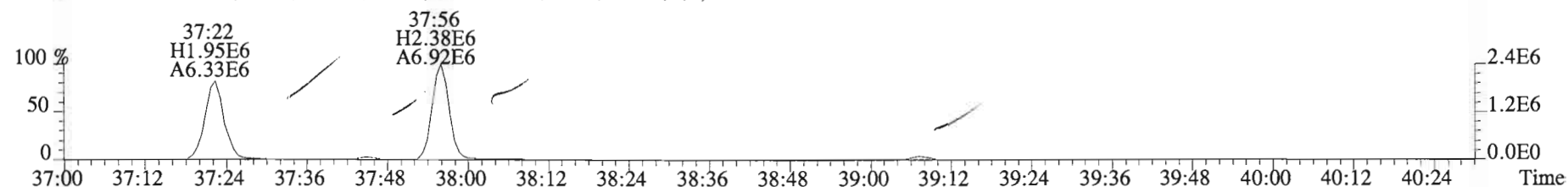
File:150204D1 #1-393 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



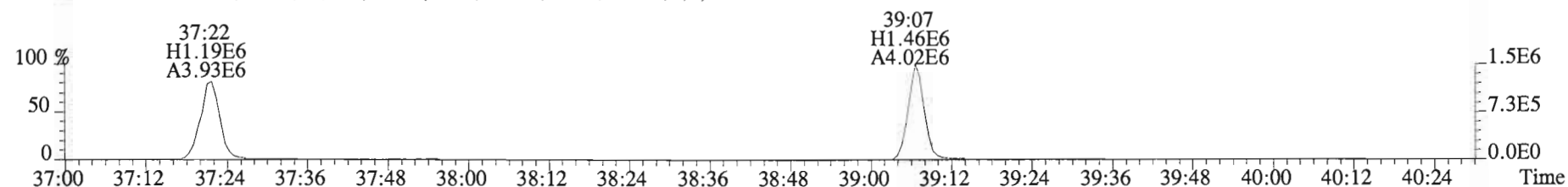
File:150204D1 #1-326 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
407.7818 S:7 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



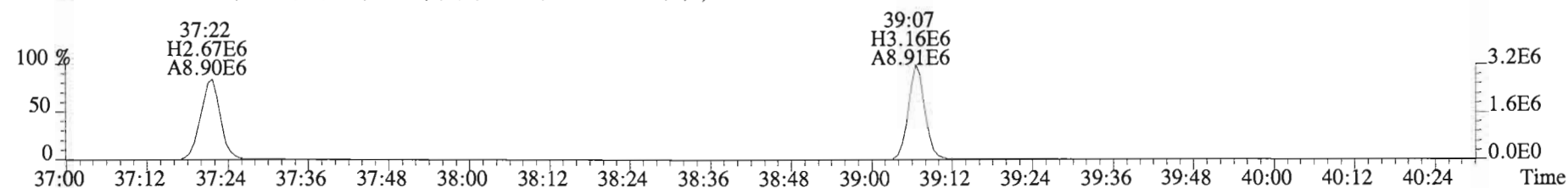
409.7788 S:7 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



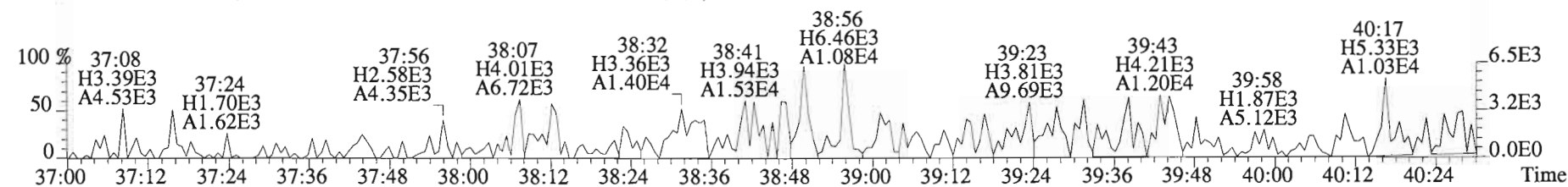
417.8253 S:7 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



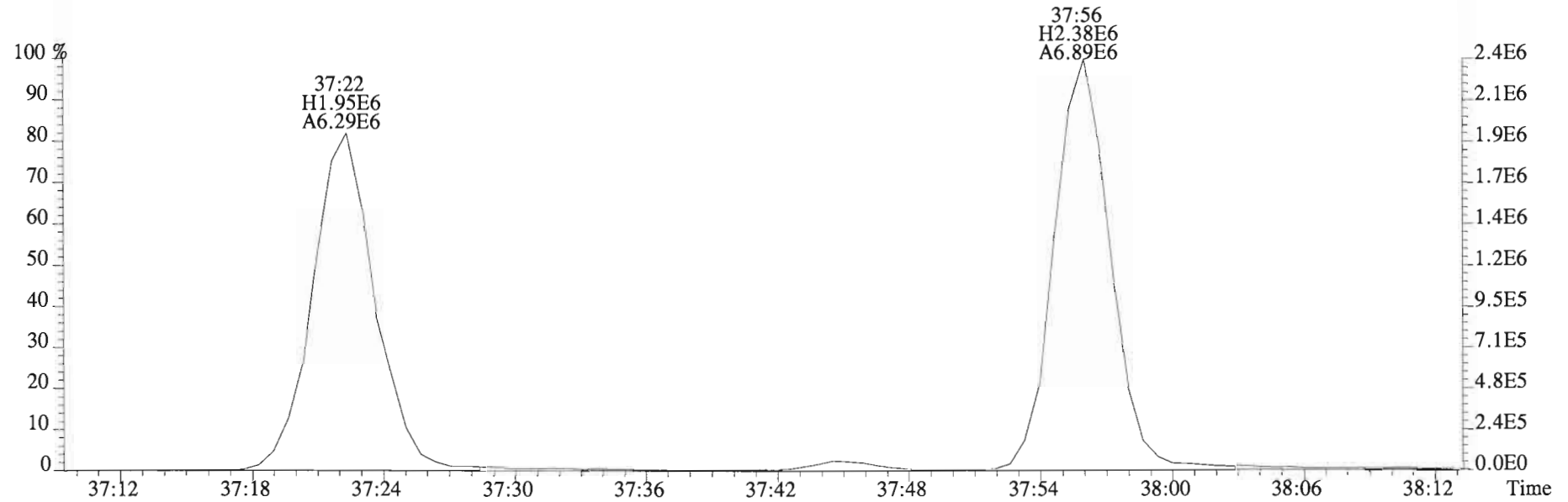
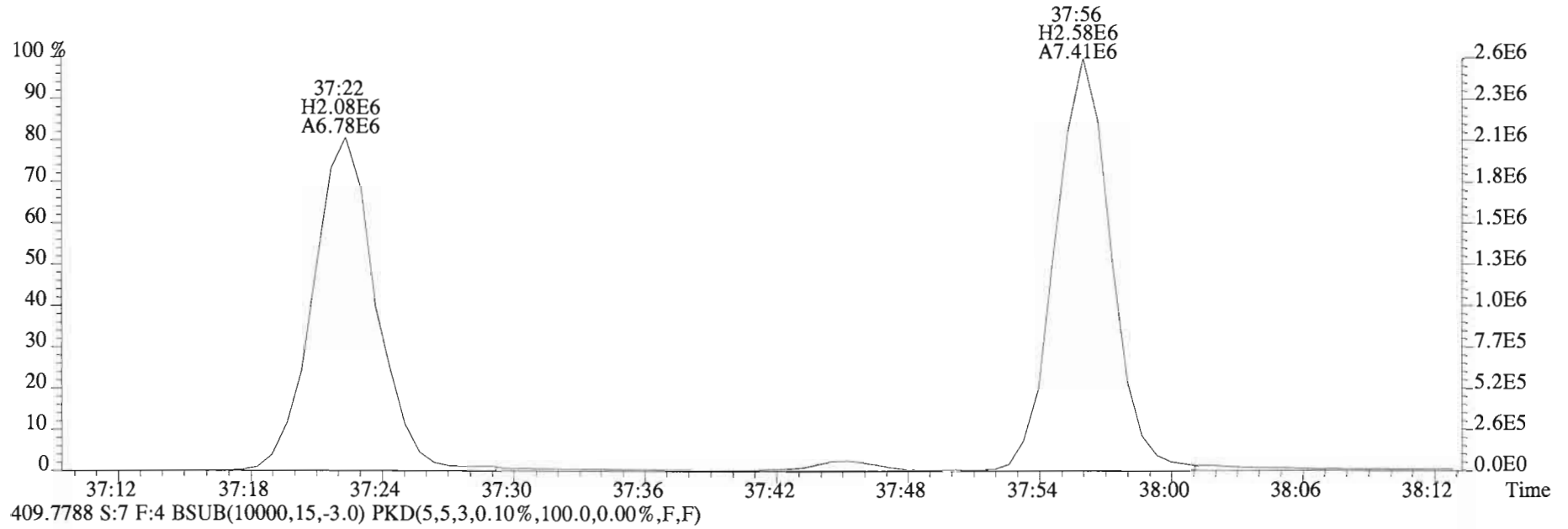
419.8220 S:7 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



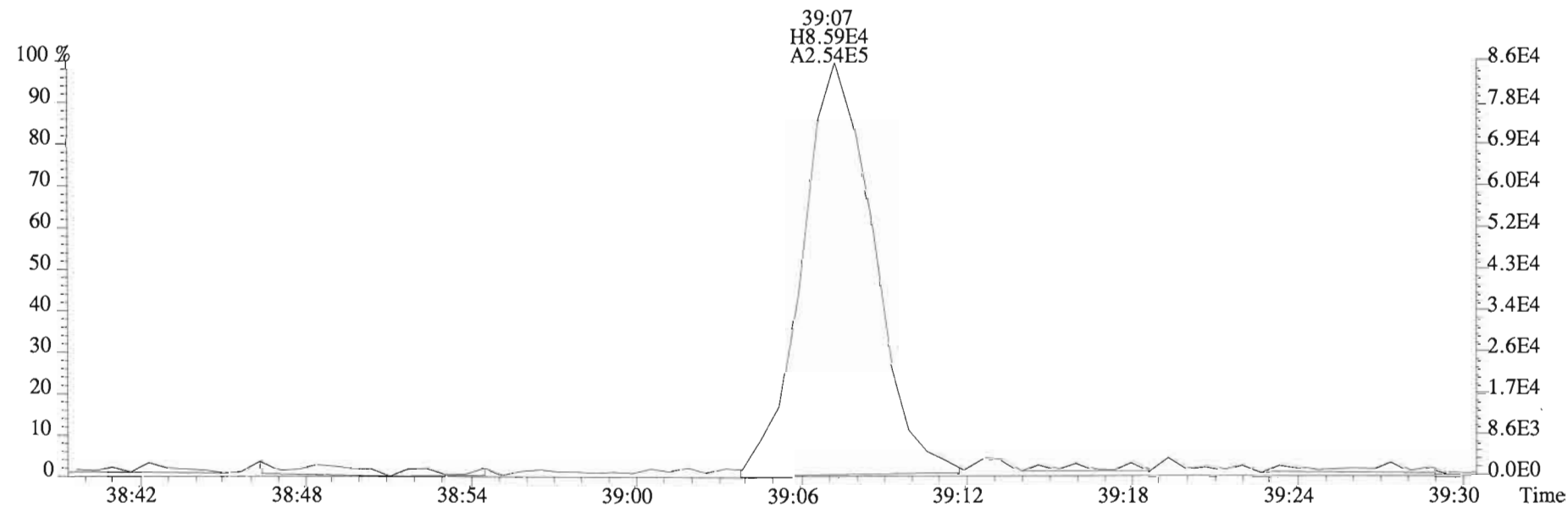
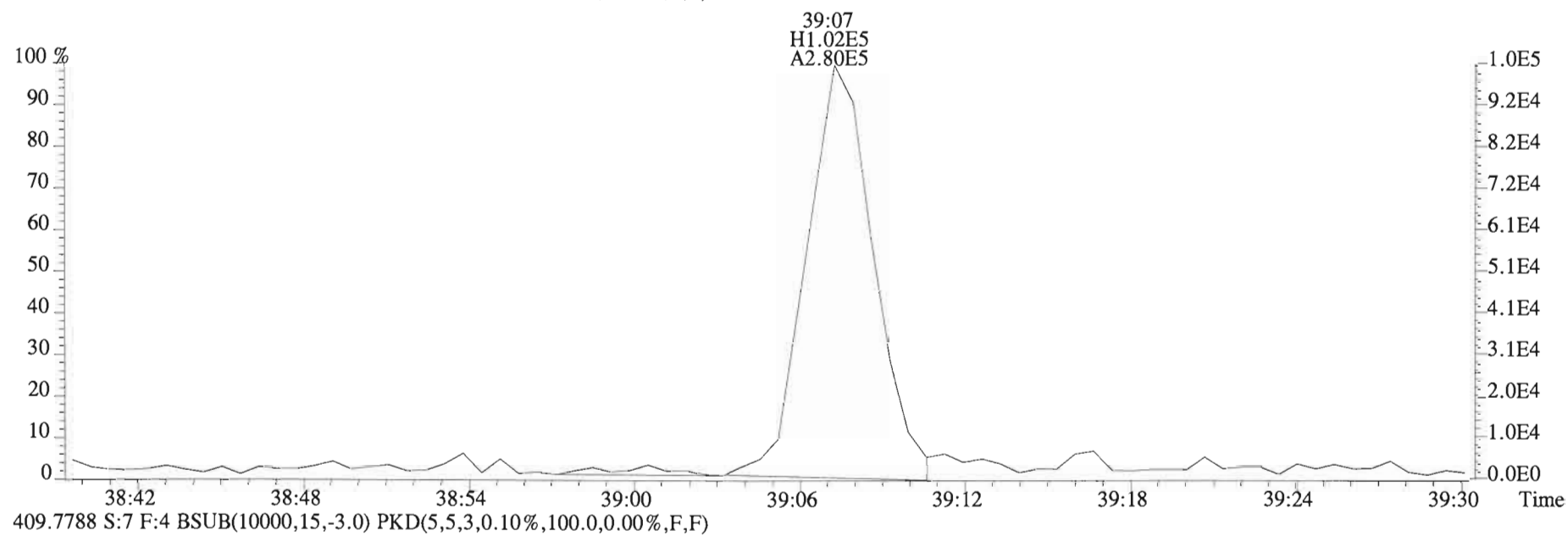
479.7165 S:7 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



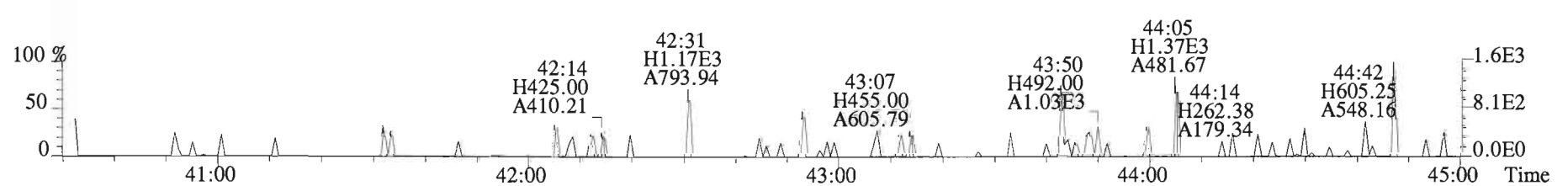
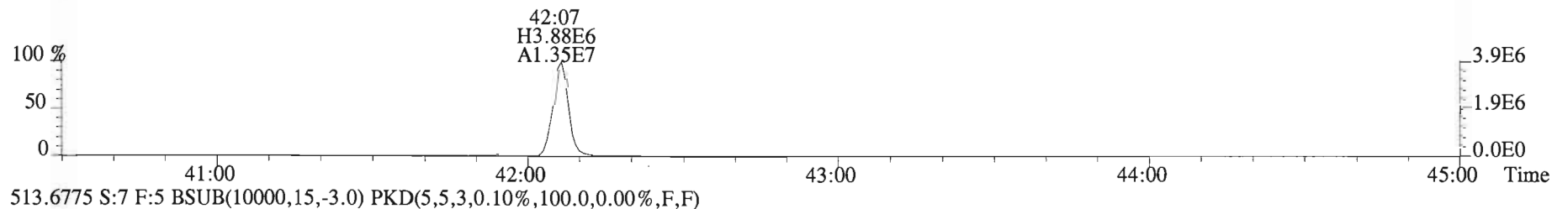
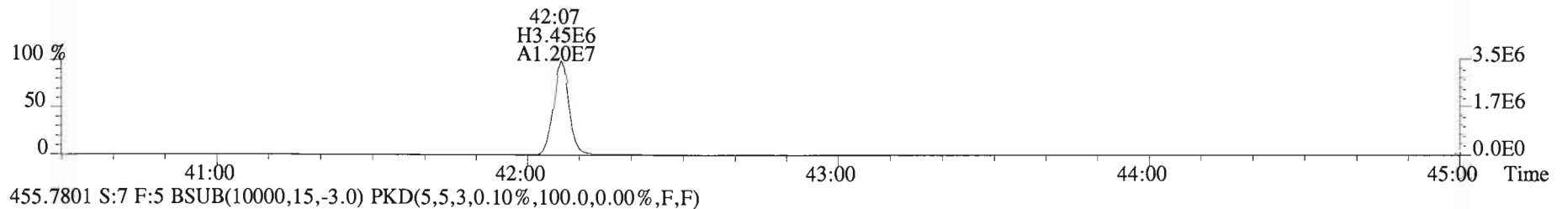
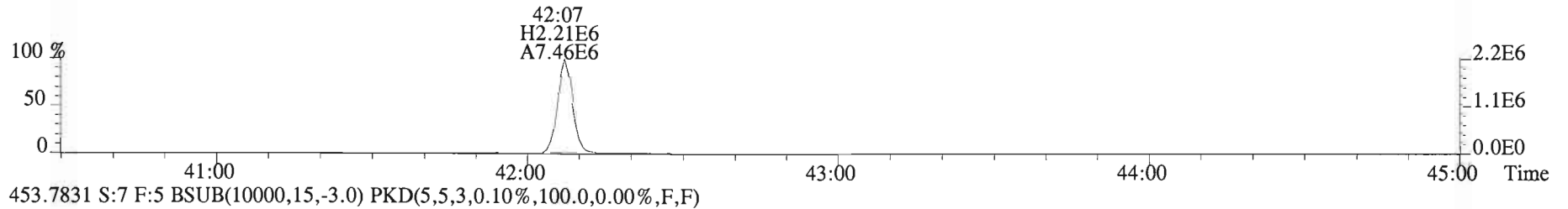
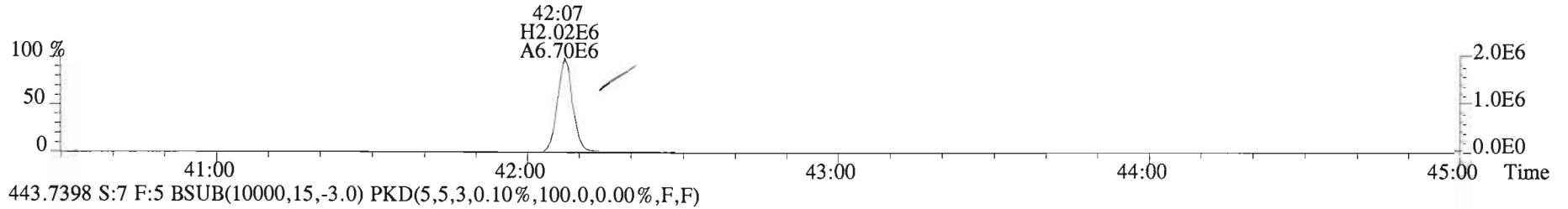
File:150204D1 #1-326 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text: Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 Exp:OCDD_DB5
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:150204D1 #1-326 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 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:150204D1 #1-388 Acq: 4-FEB-2015 13:54:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-7 Text:1400970-02@20X DS-TD-01-20141216-S 16.2 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)



Totals class: TCDD EMPC

Entry #: 19

Run: 10 File: 150204D1 S: 8 I: 1 F: 1
 Acquired: 4-FEB-15 14:42:47 Processed: 7-FEB-15 12:21:37

Total Concentration: 10.079

Unnamed Concentration: 9.083

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name	
23:38	9.614e+04	1.279e+05	0.75 y	2.241e+05	2.5760	
23:58	6.149e+04	8.369e+04	0.73 y	1.452e+05	1.6692	
24:23	1.501e+04	1.852e+04	0.81 y	3.352e+04	0.38543	
25:20	3.211e+04	4.855e+04	0.66 y	8.066e+04	0.92733	
25:30	3.599e+04	6.082e+04	0.59 n	8.273e+04	0.95115	
25:40	1.599e+04	2.520e+04	0.63 n	3.676e+04	0.42257	
25:53	5.490e+03	7.335e+03	0.75 y	1.282e+04	0.14744	
26:03	1.653e+04	1.594e+04	1.04 n	2.822e+04	0.32439	
26:23	1.446e+04	2.457e+04	0.59 n	3.325e+04	0.38225	
26:43	2.550e+04	3.537e+04	0.72 y	6.087e+04	0.69982	
26:57	3.564e+04	5.104e+04	0.70 y	8.668e+04	0.99651	2,3,7,8-TCDD
27:15	1.967e+04	2.407e+04	0.82 y	4.373e+04	0.50278	
27:47	3.564e+03	6.506e+03	0.55 n	8.193e+03	0.094188	

Totals class: PeCDD EMPC

Entry #: 21

Run: 10 File: 150204D1 S: 8 I: 1 F: 2
 Acquired: 4-FEB-15 14:42:47 Processed: 7-FEB-15 12:21:37

Total Concentration: 29.636

Unnamed Concentration: 25.917

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:22	1.905e+05	3.238e+05	0.59 y	5.143e+05	7.2532
29:49	3.715e+04	6.059e+04	0.61 y	9.774e+04	1.3784
30:16	9.340e+04	1.447e+05	0.65 y	2.381e+05	3.3573
30:25	1.037e+05	1.918e+05	0.54 y	2.955e+05	4.1668
30:31	8.851e+04	1.377e+05	0.64 y	2.262e+05	3.1904
30:44	9.242e+04	1.511e+05	0.61 y	2.435e+05	3.4339
31:01	3.551e+04	5.599e+04	0.63 y	9.150e+04	1.2904
31:24	9.582e+04	1.679e+05	0.57 y	2.637e+05	3.7188
31:29	2.080e+04	3.881e+04	0.54 y	5.960e+04	0.84058
31:46	2.504e+04	4.632e+04	0.54 y	7.135e+04	1.0063

1,2,3,7,8-PeCDD

Totals class: HxCDD EMPC

Entry #: 23

Run: 10 File: 150204D1 S: 8 I: 1 F: 3
 Acquired: 4-FEB-15 14:42:47 Processed: 7-FEB-15 12:21:37

Total Concentration: 103.12

Unnamed Concentration: 79.619

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
33:10	8.518e+05	6.646e+05	1.28 y	1.516e+06	25.052
33:45	3.525e+05	2.844e+05	1.24 y	6.369e+05	10.522
34:00	1.279e+06	1.004e+06	1.27 y	2.283e+06	37.723
34:08	1.080e+05	8.813e+04	1.23 y	1.961e+05	3.2403
34:43	1.777e+05	1.487e+05	1.19 y	3.264e+05	5.5447 1,2,3,4,7,8-HxCDD
34:50	3.082e+05	2.605e+05	1.18 y	5.686e+05	9.3633 1,2,3,6,7,8-HxCDD
35:01	1.071e+05	7.937e+04	1.35 y	1.865e+05	3.0816
35:07	3.031e+05	2.290e+05	1.32 y	5.321e+05	8.5967 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 10 File: 150204D1 S: 8 I: 1 F: 4
Acquired: 4-FEB-15 14:42:47 Processed: 7-FEB-15 12:21:37

Total Concentration: 336.47

Unnamed Concentration: 179.777

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:44	5.188e+06	5.156e+06	1.01 y	1.034e+07	179.78	
38:34	4.551e+06	4.465e+06	1.02 y	9.016e+06	156.69	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 10 File: 150204D1 S: 8 I: 1 F: 1
 Acquired: 4-FEB-15 14:42:47 Processed: 7-FEB-15 12:21:37

Total Concentration: 58.626 Unnamed Concentration: 54.858

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
21:32	3.487e+04	5.176e+04	0.67	y	8.663e+04	0.82044
22:06	6.911e+04	8.808e+04	0.78	y	1.572e+05	1.4887
22:44	4.522e+05	5.631e+05	0.80	y	1.015e+06	9.6151
23:14	1.858e+05	2.333e+05	0.80	y	4.191e+05	3.9696
23:37	2.506e+05	3.276e+05	0.76	y	5.781e+05	5.4754
24:00	2.729e+05	3.617e+05	0.75	y	6.346e+05	6.0100
24:08	8.973e+04	9.970e+04	0.90	n	1.765e+05	1.6713
24:18	9.160e+04	1.330e+05	0.69	y	2.246e+05	2.1268
24:38	2.847e+04	3.363e+04	0.85	y	6.211e+04	0.58820
24:45	6.333e+04	8.425e+04	0.75	y	1.476e+05	1.3977
24:53	2.786e+05	3.683e+05	0.76	y	6.469e+05	6.1261
25:01	1.034e+05	1.228e+05	0.84	y	2.262e+05	2.1421
25:24	1.192e+05	1.620e+05	0.74	y	2.812e+05	2.6632
25:39	6.607e+04	9.291e+04	0.71	y	1.590e+05	1.5056
25:49	2.850e+04	3.946e+04	0.72	y	6.796e+04	0.64359
26:01	3.375e+04	4.013e+04	0.84	y	7.389e+04	0.69978
26:06	3.820e+04	5.121e+04	0.75	y	8.942e+04	0.84684
26:12	1.648e+05	2.331e+05	0.71	y	3.979e+05	3.7682
26:31	2.817e+05	3.557e+05	0.79	y	6.374e+05	6.0366
26:44	1.025e+04	1.266e+04	0.81	y	2.292e+04	0.21705
27:29	8.366e+03	1.065e+04	0.79	y	1.901e+04	0.18006
27:39	7.030e+03	1.122e+04	0.63	n	1.616e+04	0.15303
27:57	2.206e+04	3.438e+04	0.64	n	5.071e+04	0.48030

2,3,7,8-TCDF

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 10 File: 150204D1 S: 8 I: 1 F: 1
Acquired: 4-FEB-15 14:42:47 Processed: 7-FEB-15 12:21:37

Total Concentration: 49.987 Unnamed Concentration: 49.987

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:56	3.340e+06	2.142e+06	1.56 y	5.482e+06	49.987

Totals class: PeCDF EMPC

Entry #: 31

Run: 10 File: 150204D1 S: 8 I: 1 F: 2
Acquired: 4-FEB-15 14:42:47 Processed: 7-FEB-15 12:21:37

Total Concentration: 55.233 Unnamed Concentration: 50.252

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:13	3.225e+05	1.921e+05	1.68 y	5.147e+05	4.6929
29:21	1.800e+06	1.096e+06	1.64 y	2.896e+06	26.403
29:41	3.592e+04	2.601e+04	1.38 y	6.193e+04	0.56468
29:52	5.090e+05	3.097e+05	1.64 y	8.188e+05	7.4655
30:05	4.347e+04	2.708e+04	1.61 y	7.055e+04	0.64328
30:14	1.096e+05	6.550e+04	1.67 y	1.751e+05	1.5323 1,2,3,7,8-PeCDF
30:29	2.897e+05	1.709e+05	1.70 y	4.607e+05	4.2006
30:57	1.224e+04	7.654e+03	1.60 y	1.989e+04	0.18140
31:02	9.421e+04	6.460e+04	1.46 y	1.588e+05	1.4480
31:08	2.205e+05	1.423e+05	1.55 y	3.628e+05	3.4482 2,3,4,7,8-PeCDF
31:11	2.958e+05	1.855e+05	1.59 y	4.813e+05	4.3889
32:00	1.743e+04	1.155e+04	1.51 y	2.898e+04	0.26422

Totals class: HxCDF EMPC

Entry #: 33

Run: 10 File: 150204D1 S: 8 I: 1 F: 3
 Acquired: 4-FEB-15 14:42:47 Processed: 7-FEB-15 12:21:37

Total Concentration: 98.527 Unnamed Concentration: 83.949

RT	m1 Resp	m2 Resp	RA		Resp Concentration		Name
32:38	5.656e+05	4.287e+05	1.32	y	9.943e+05	10.395	
32:48	2.315e+06	1.770e+06	1.31	y	4.084e+06	42.699	
33:09	6.117e+04	4.306e+04	1.42	y	1.042e+05	1.0897	
33:21	1.499e+06	1.117e+06	1.34	y	2.616e+06	27.349	
33:43	8.634e+04	6.526e+04	1.32	y	1.516e+05	1.5849	
33:49	2.041e+05	1.639e+05	1.25	y	3.680e+05	3.4382	1,2,3,4,7,8-HxCDF
33:58	2.375e+05	1.803e+05	1.32	y	4.178e+05	3.8985	1,2,3,6,7,8-HxCDF
34:06	1.584e+04	1.001e+04	1.58	n	2.243e+04	0.23450	
34:15	1.969e+04	1.236e+04	1.59	n	2.768e+04	0.28939	
34:21	1.614e+04	1.337e+04	1.21	y	2.951e+04	0.30852	
34:33	3.159e+05	2.453e+05	1.29	y	5.612e+05	6.1817	2,3,4,6,7,8-HxCDF
35:33	4.682e+04	3.557e+04	1.32	y	8.239e+04	1.0591	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

Entry #: 35

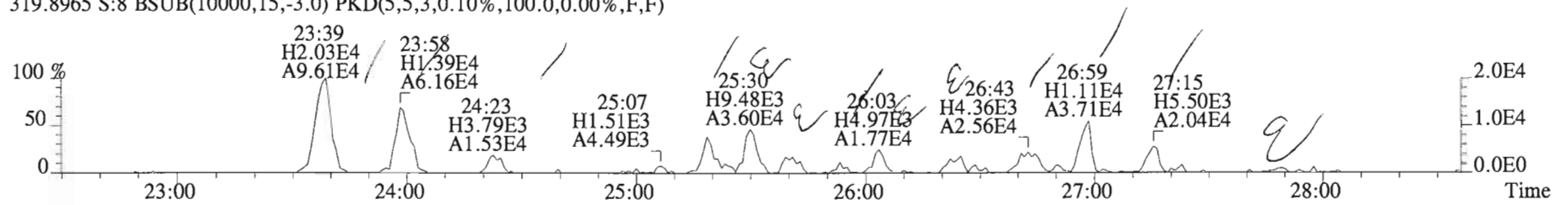
Run: 10 File: 150204D1 S: 8 I: 1 F: 4
Acquired: 4-FEB-15 14:42:47 Processed: 7-FEB-15 12:21:37

Total Concentration: 73.386

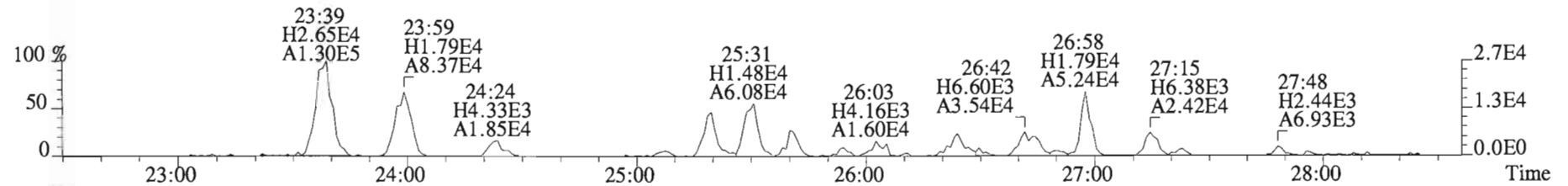
Unnamed Concentration: 38.692

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:22	1.594e+06	1.468e+06	1.09 y	3.063e+06	32.743	1,2,3,4,6,7,8-HpCDF
37:44	8.016e+04	7.999e+04	1.00 y	1.601e+05	1.8081	
37:55	1.702e+06	1.565e+06	1.09 y	3.267e+06	36.884	
39:07	8.087e+04	8.237e+04	0.98 y	1.632e+05	1.9501	1,2,3,4,7,8,9-HpCDF

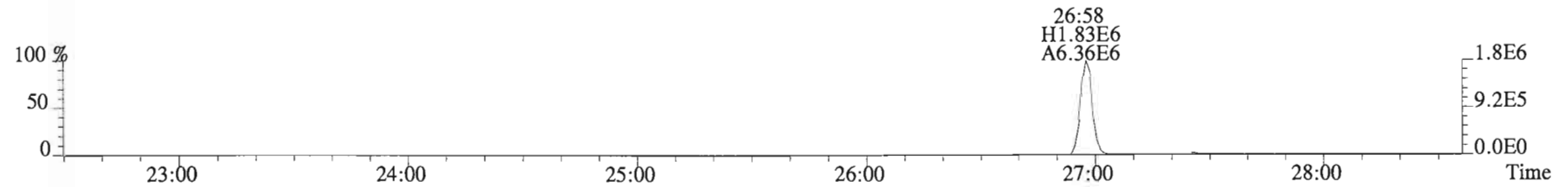
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



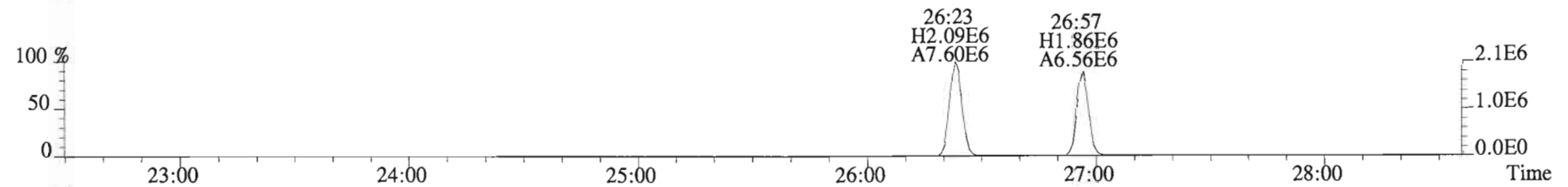
321.8936 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



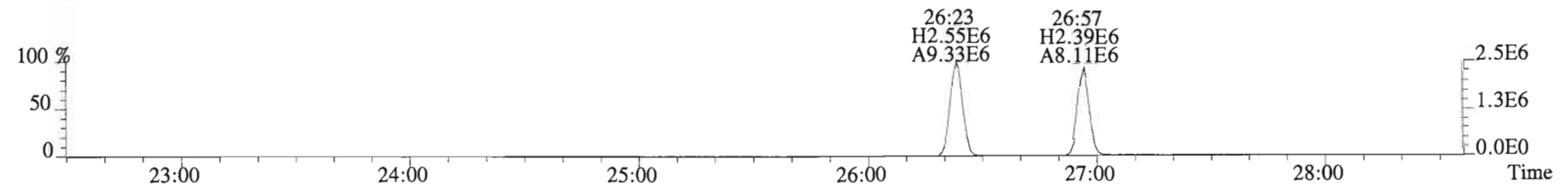
327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



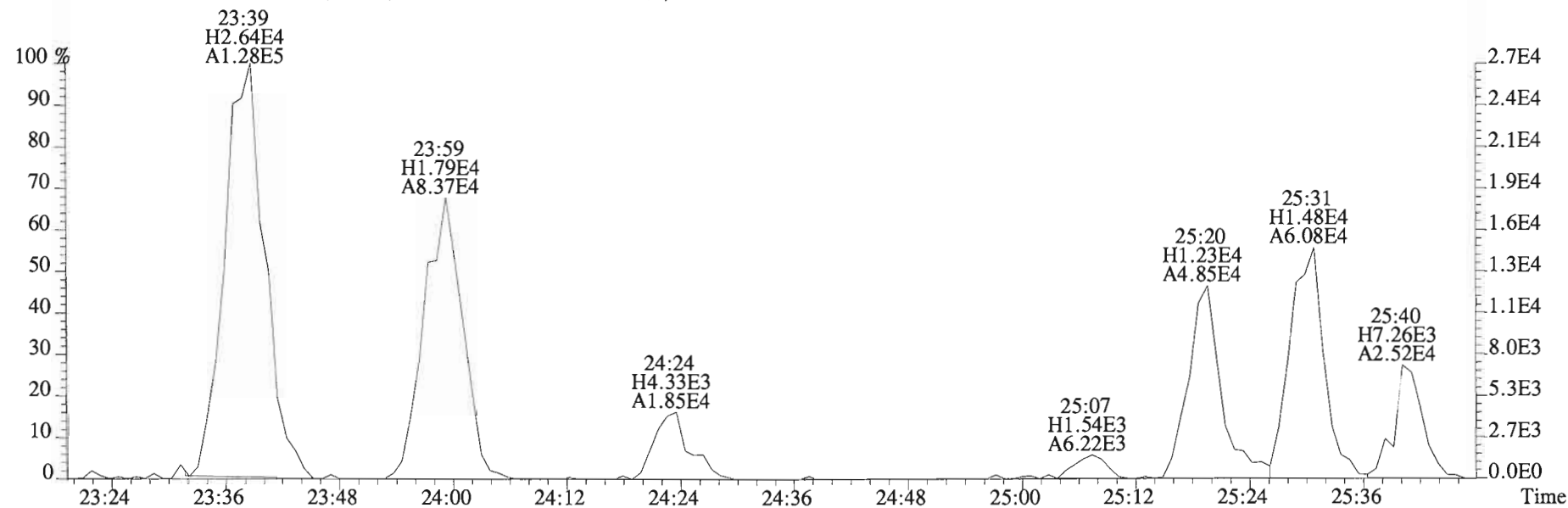
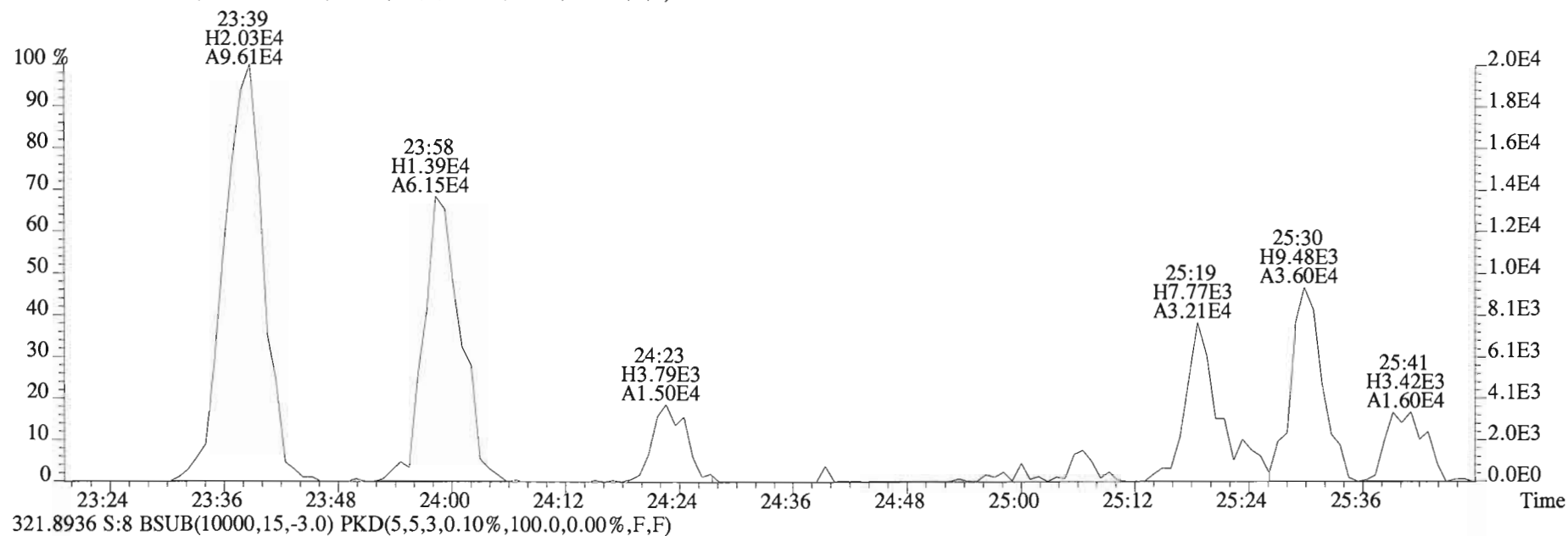
331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



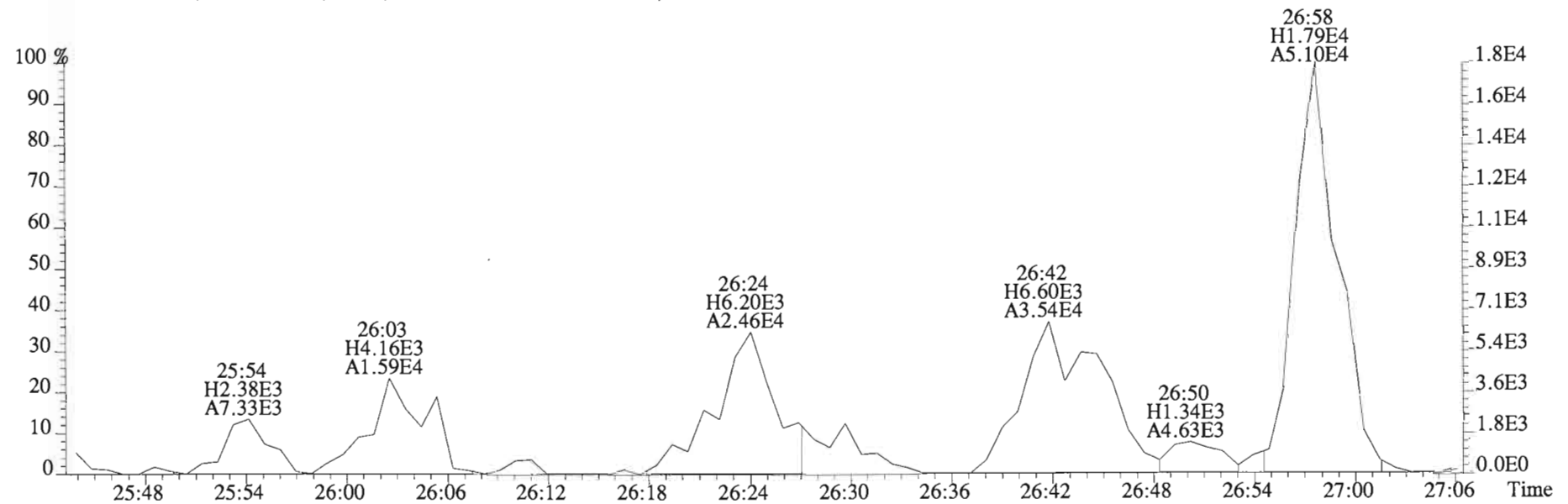
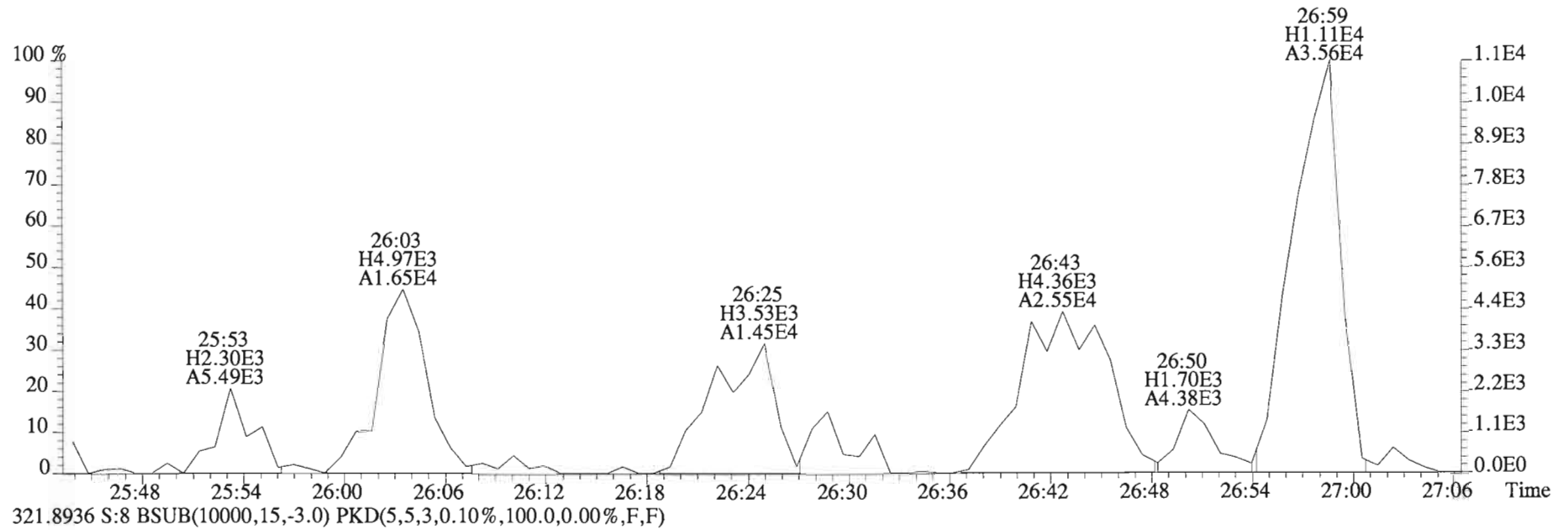
333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



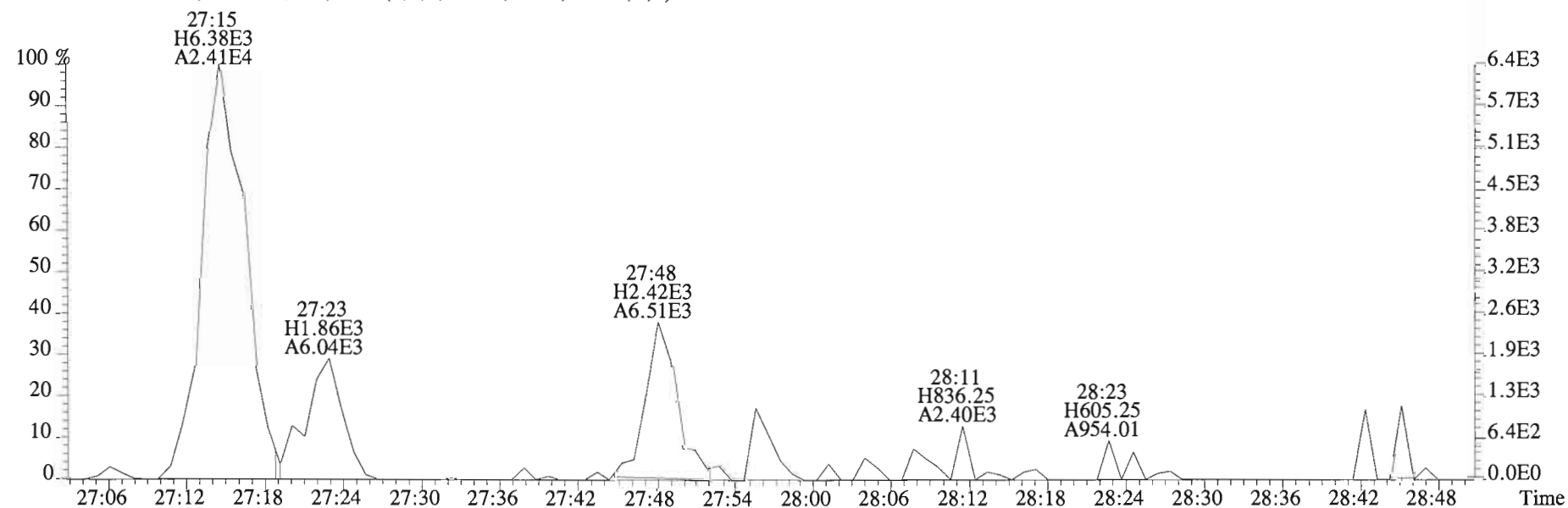
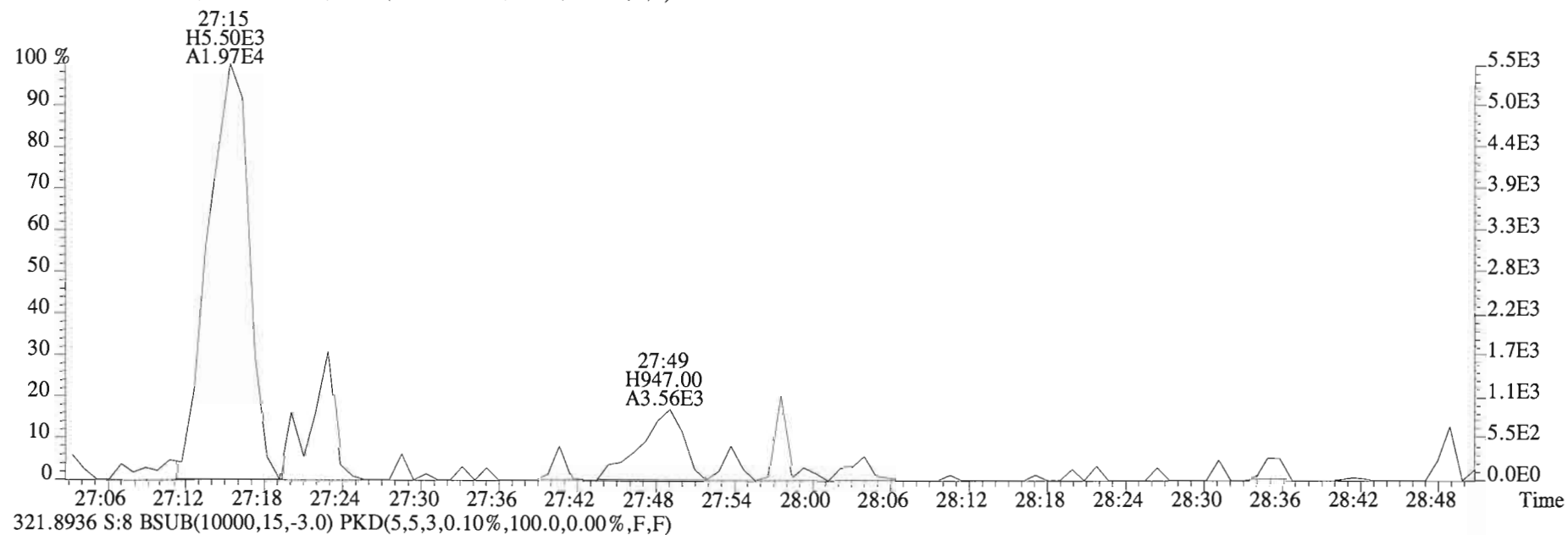
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
 319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



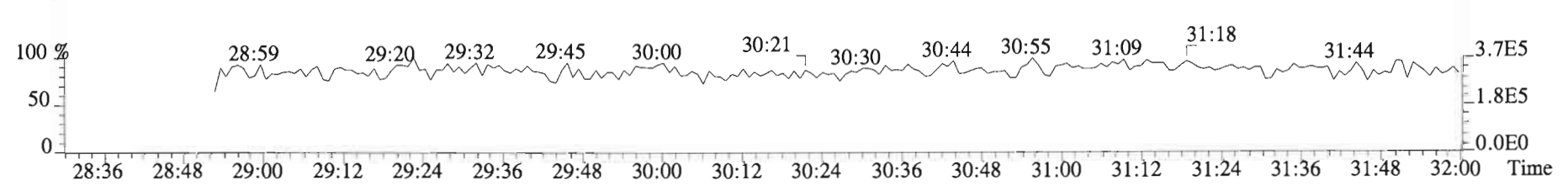
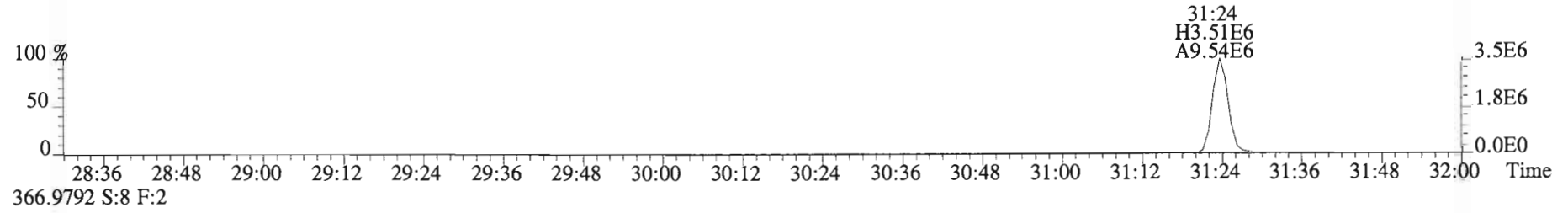
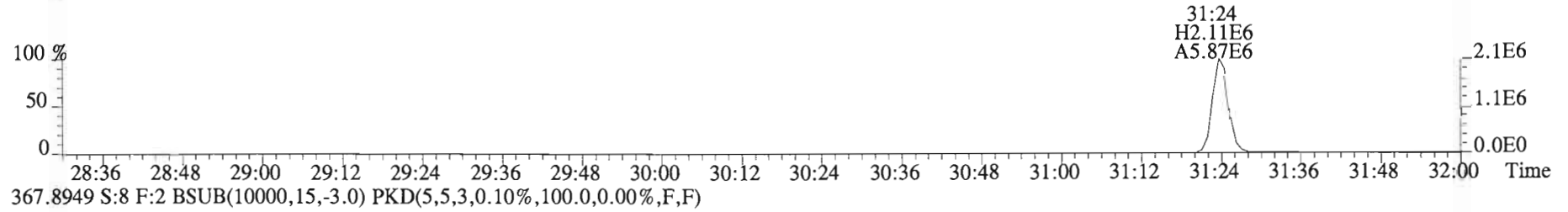
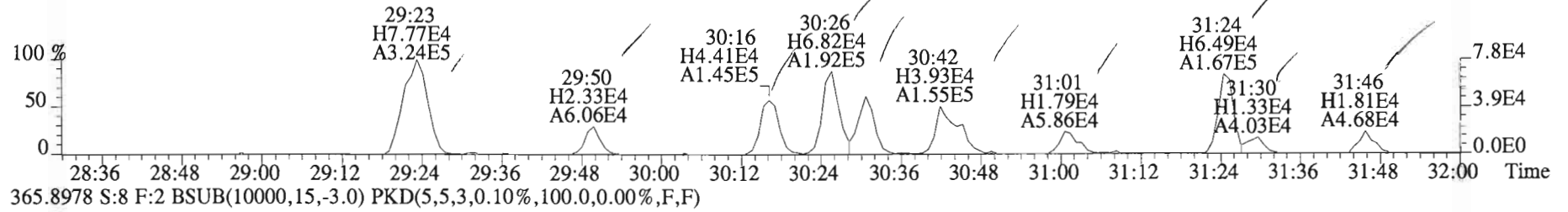
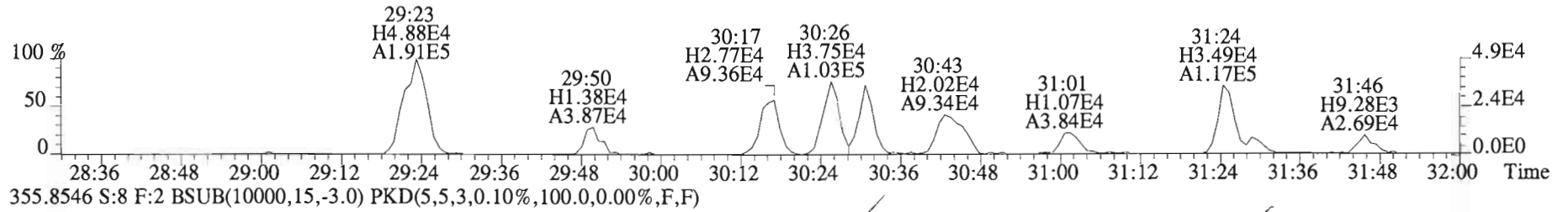
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



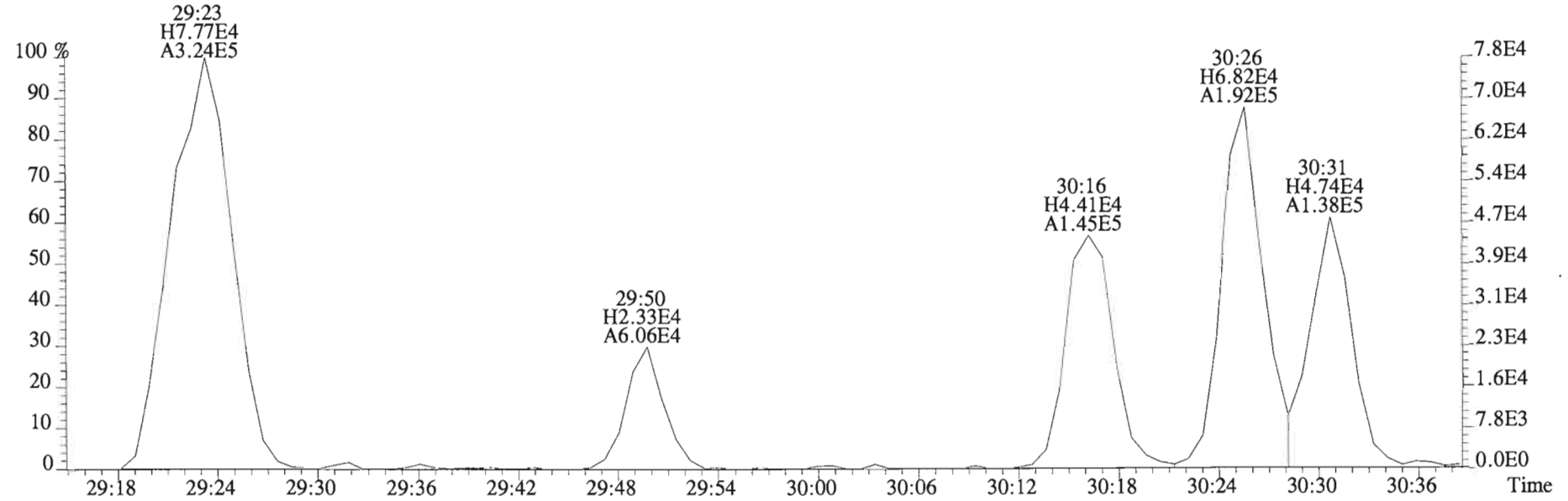
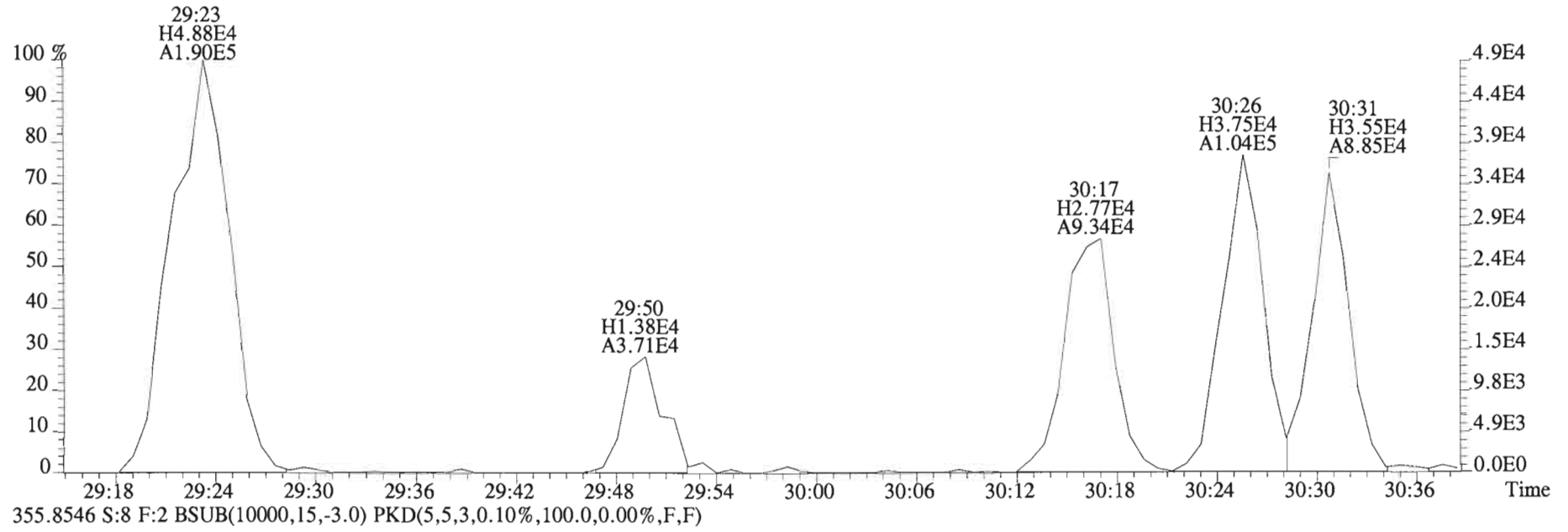
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



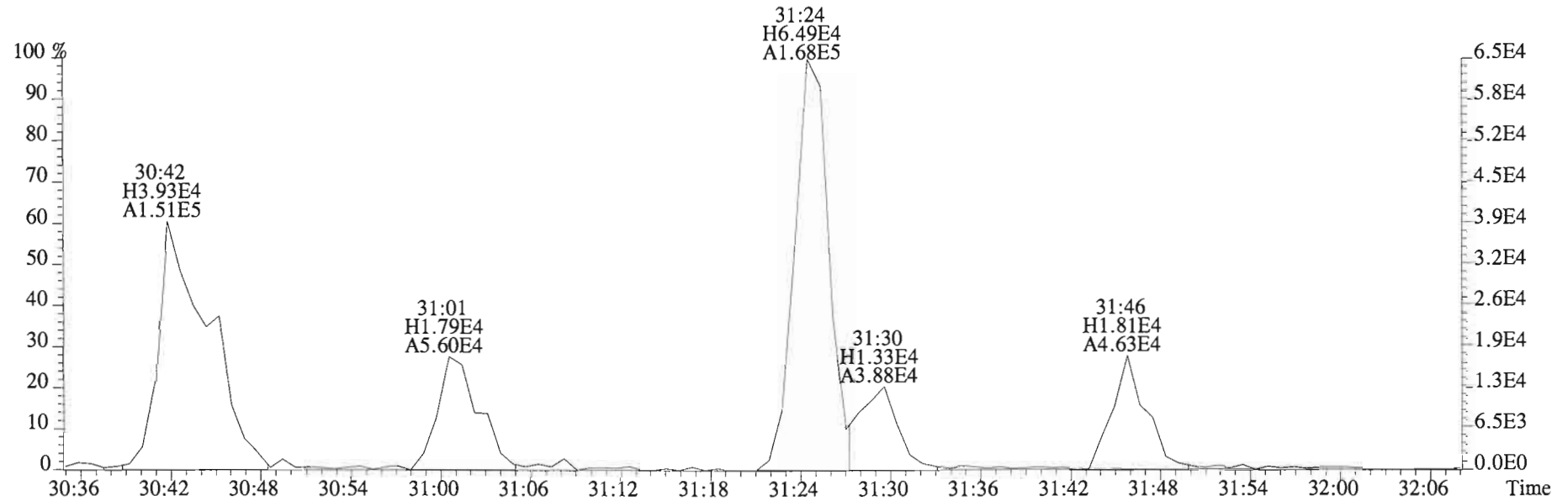
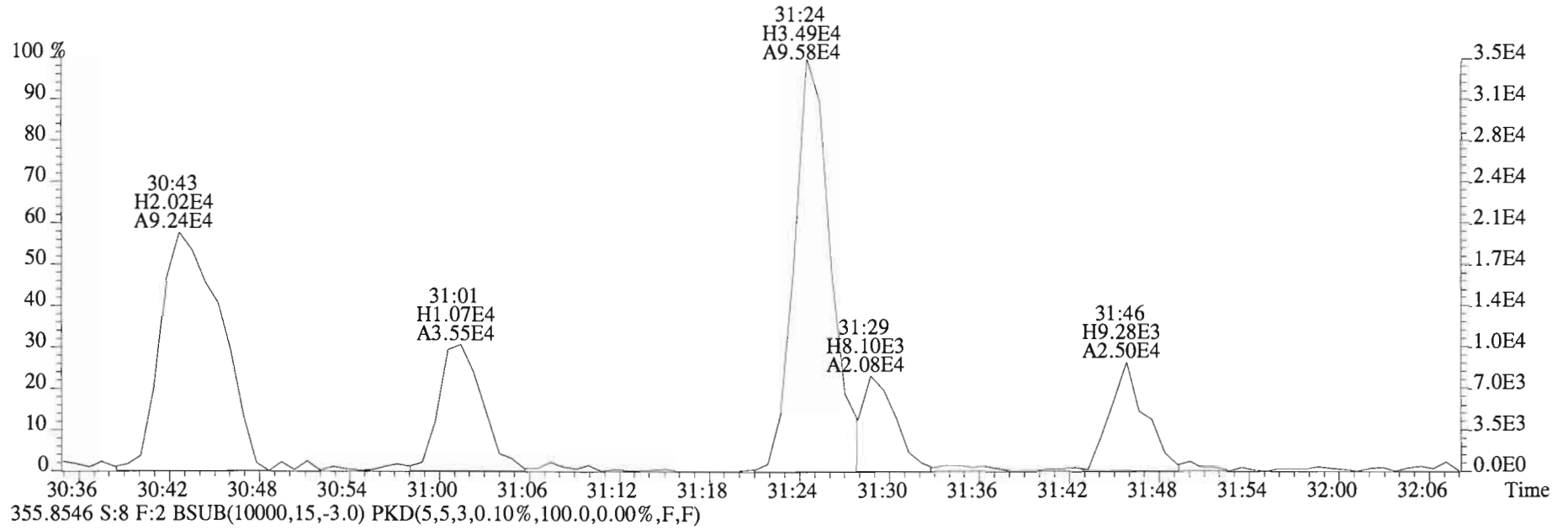
File:150204D1 #1-250 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



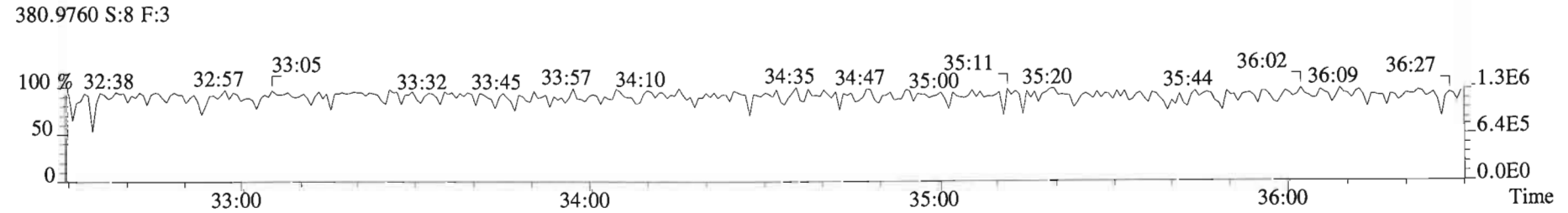
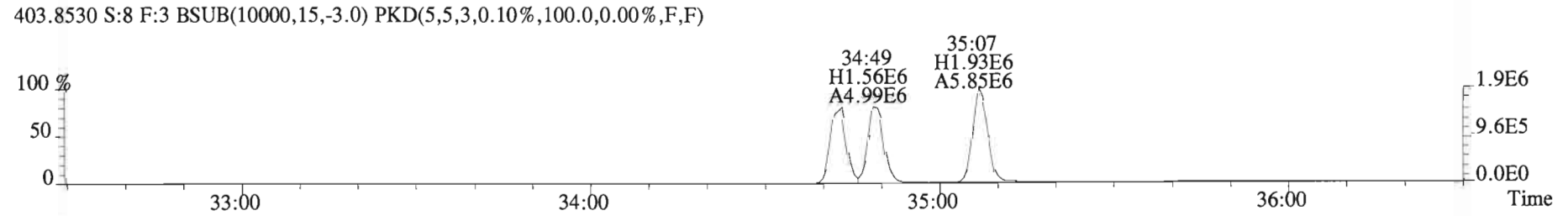
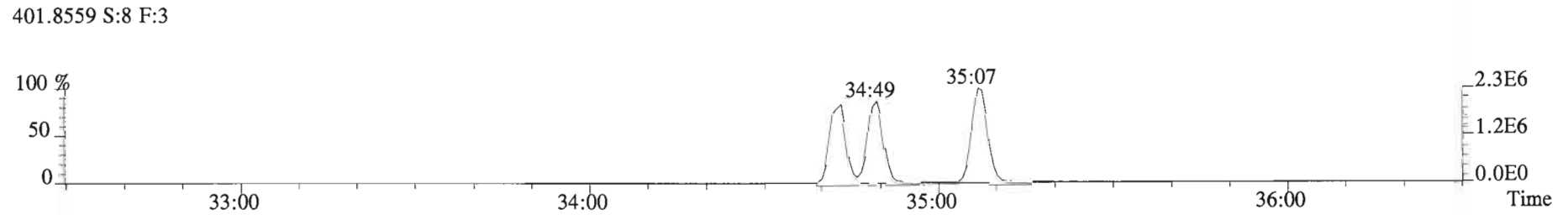
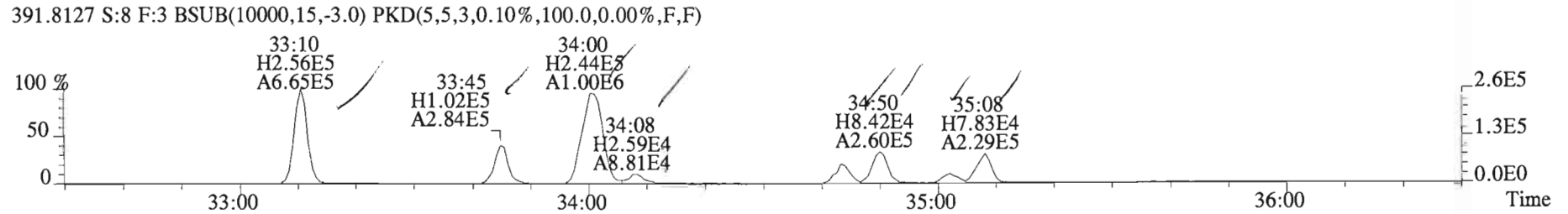
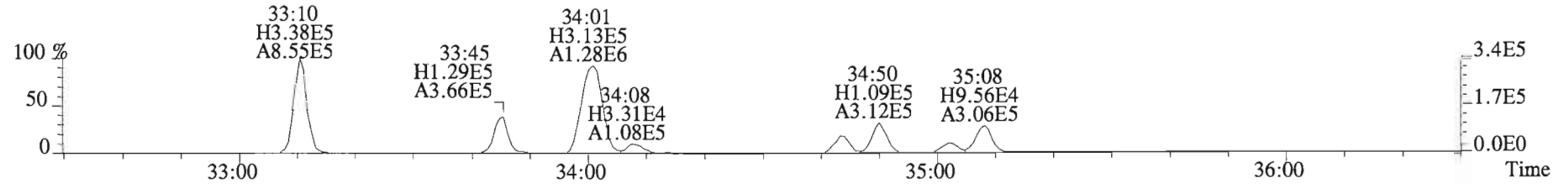
File:150204D1 #1-250 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



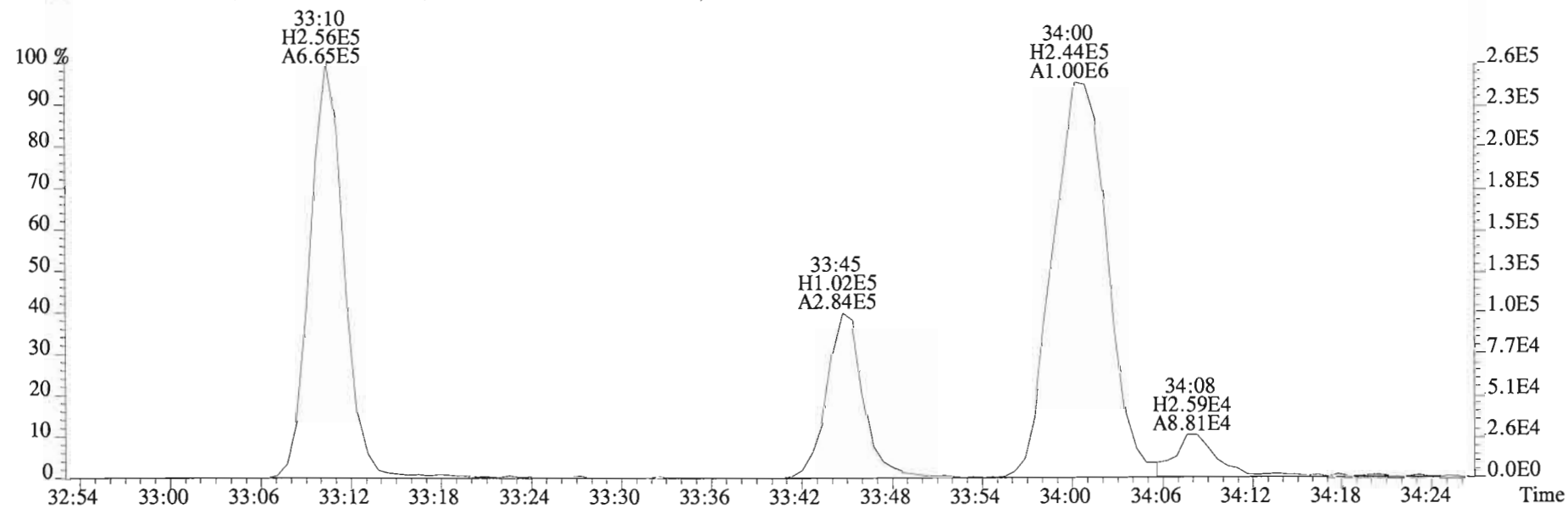
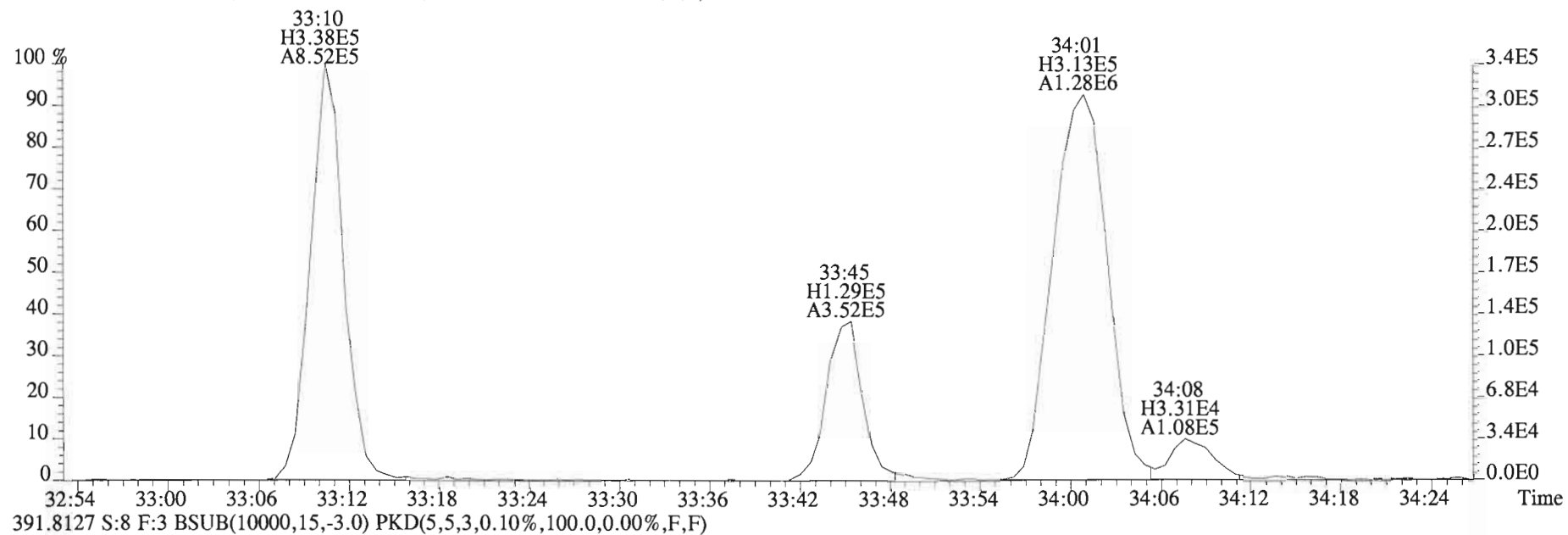
File:150204D1 #1-250 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



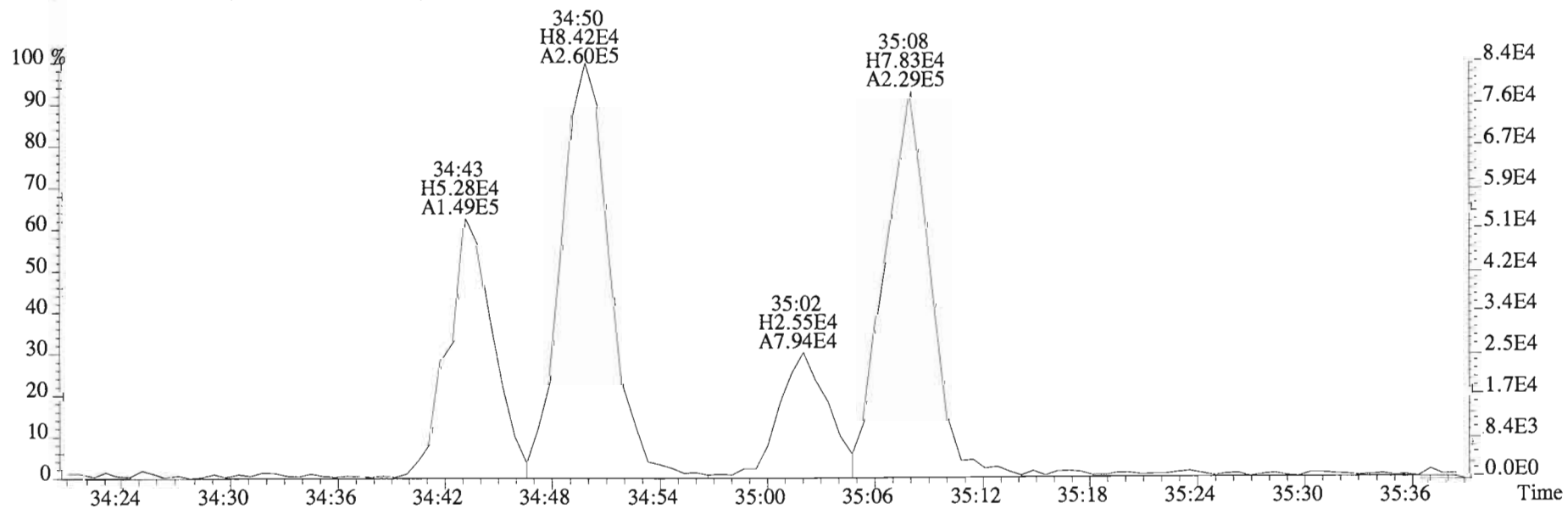
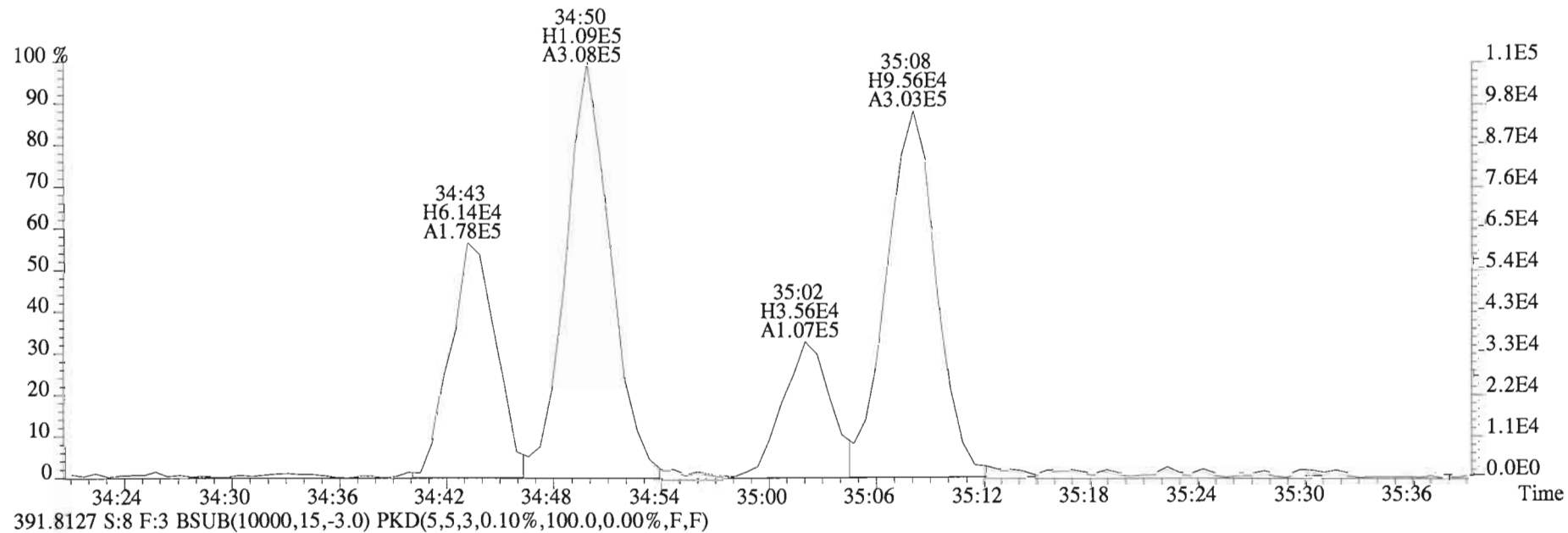
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
 389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



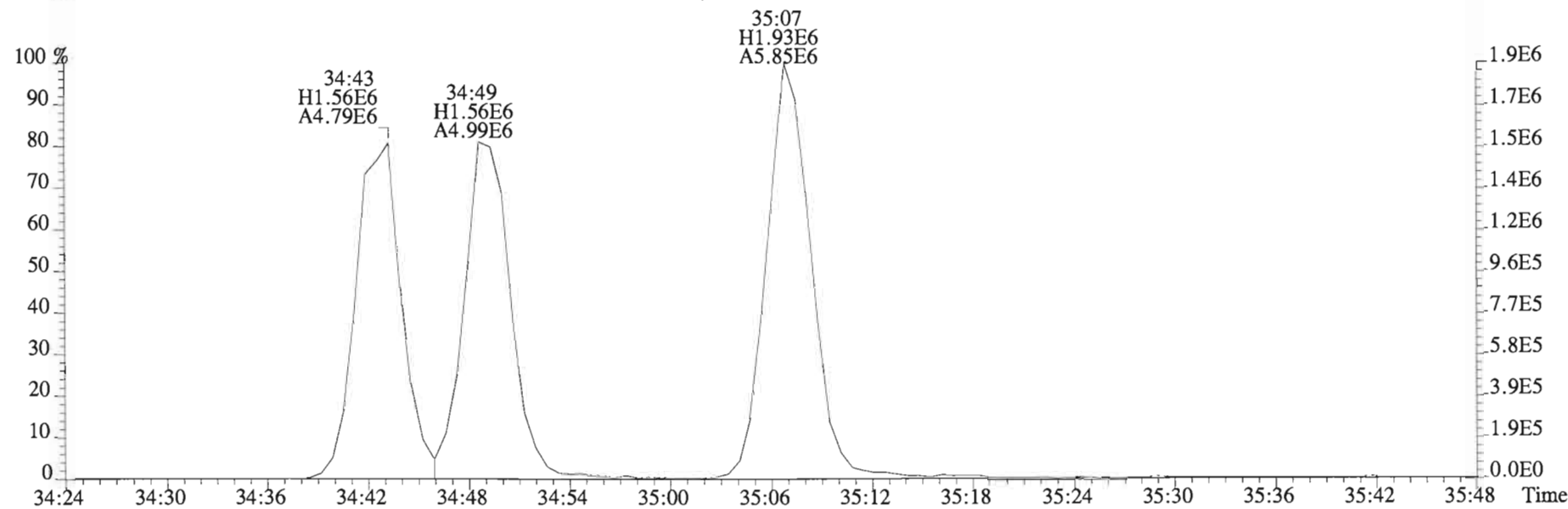
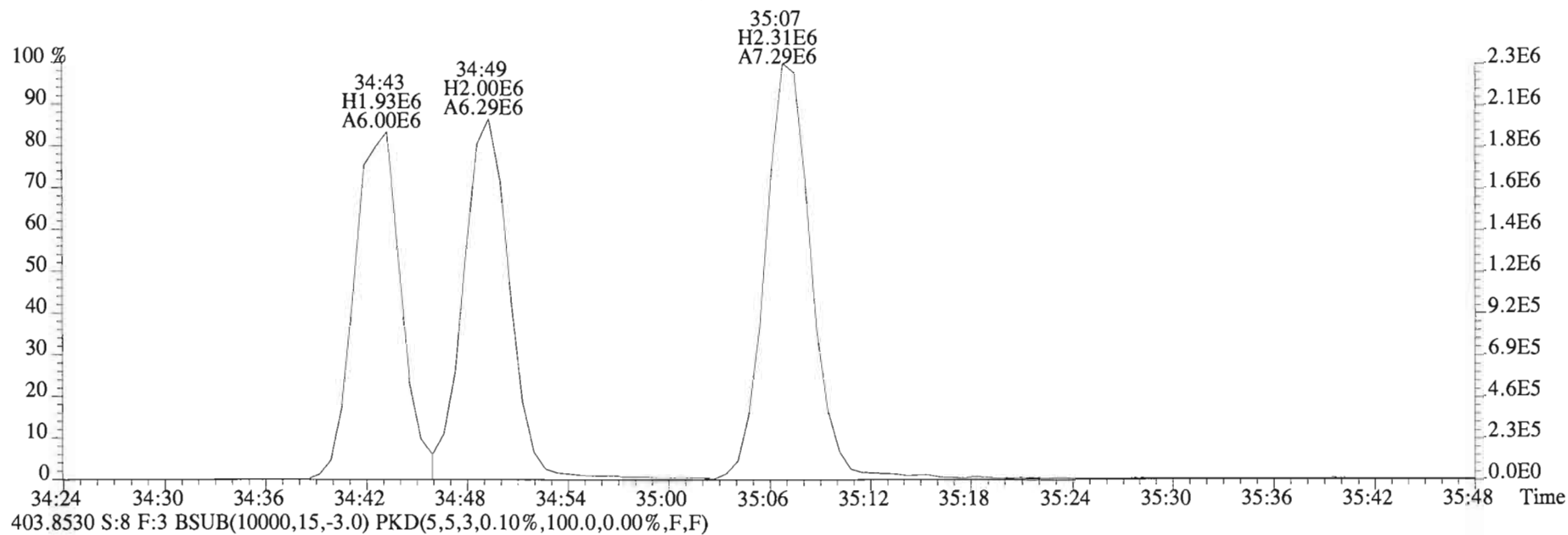
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



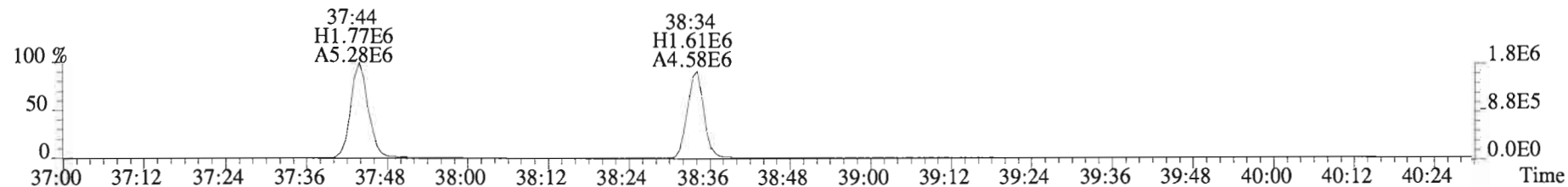
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Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
389.8156 S:8 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



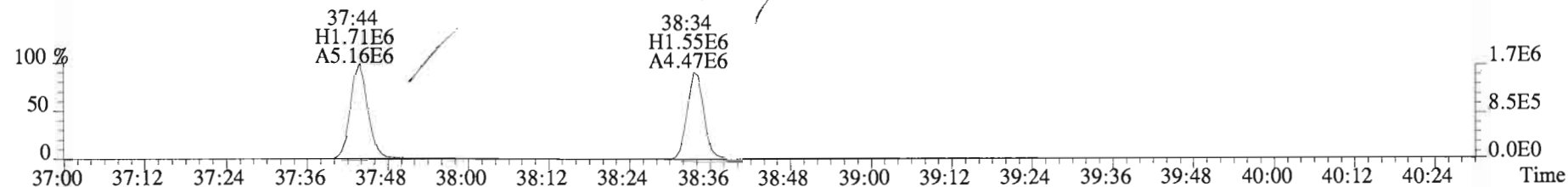
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
401.8559 S:8 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



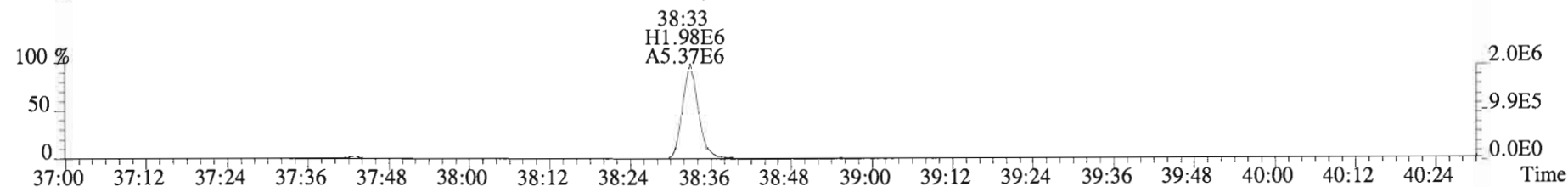
File:150204D1 #1-326 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



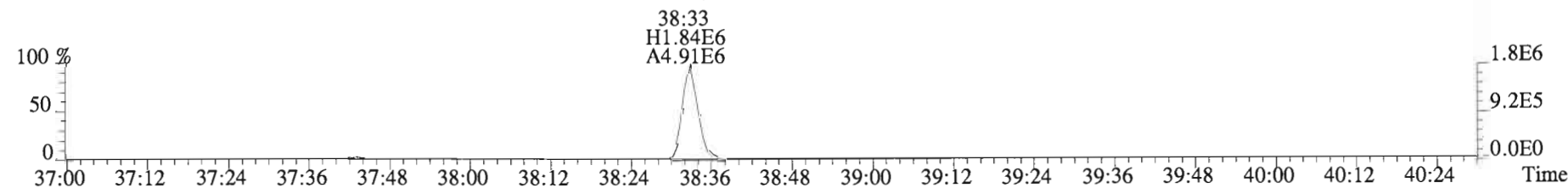
425.7737 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



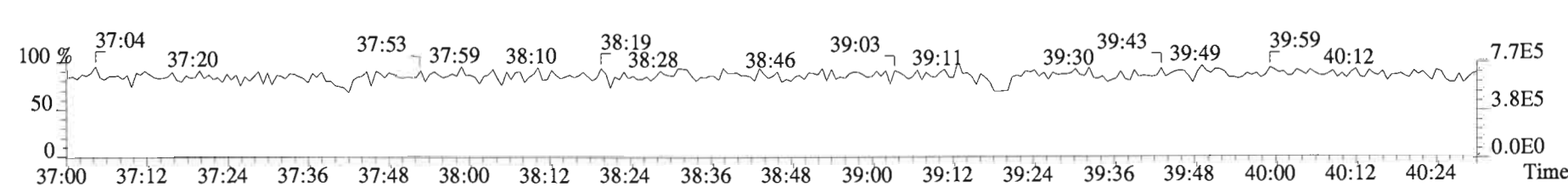
435.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



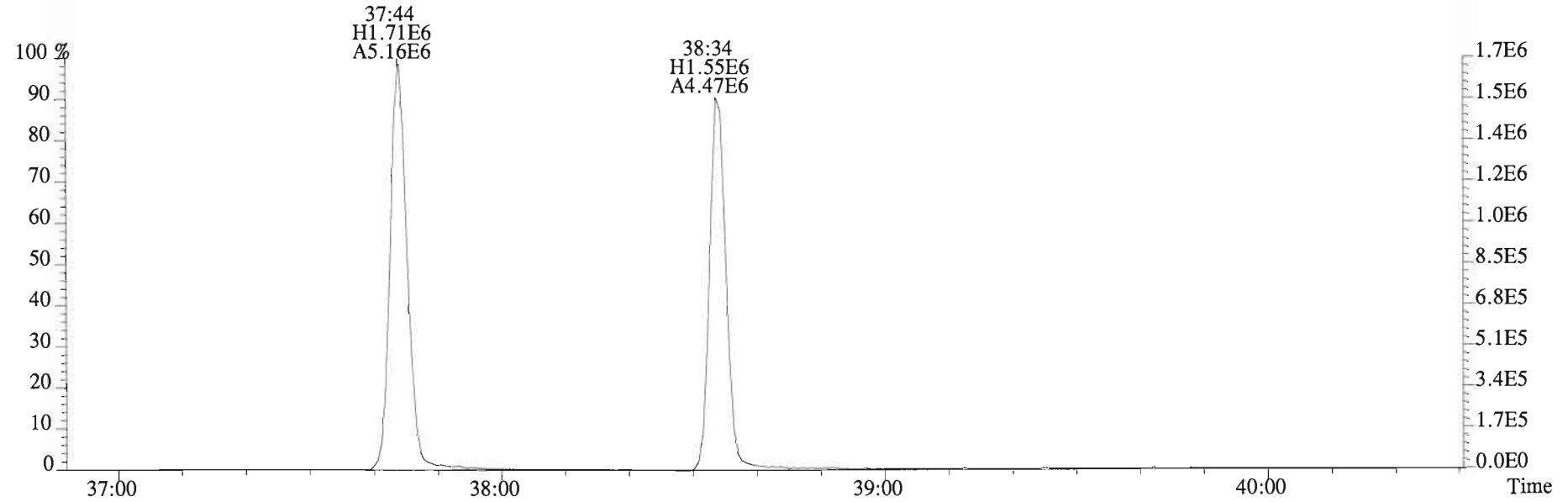
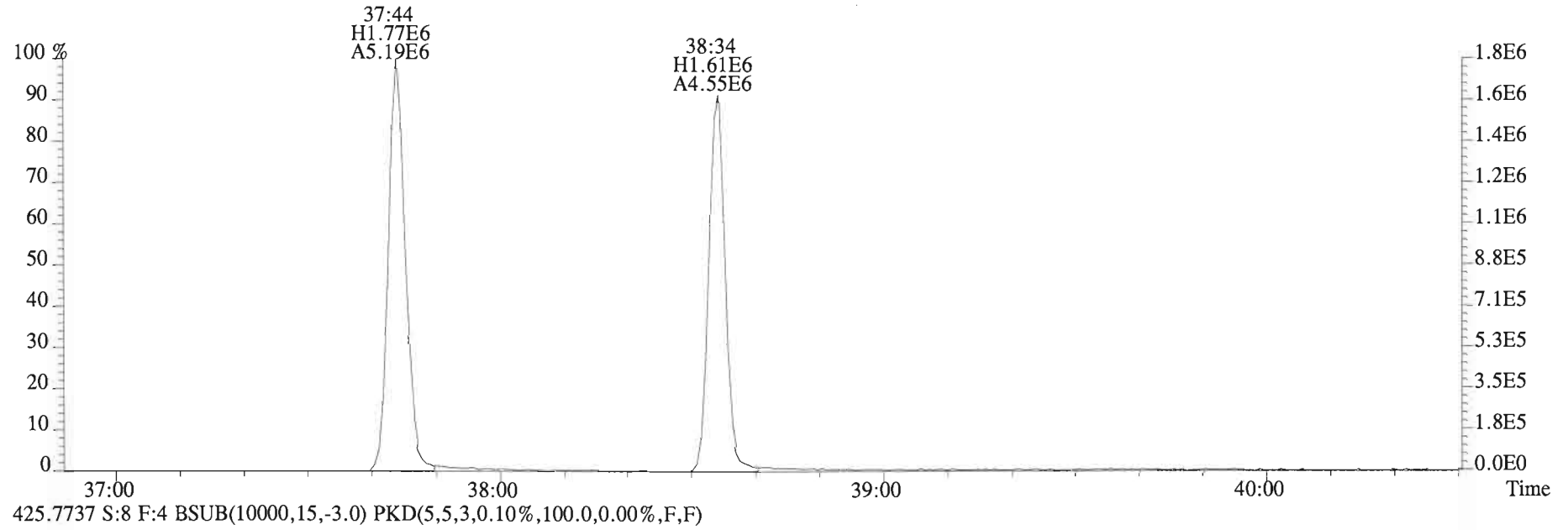
437.8140 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



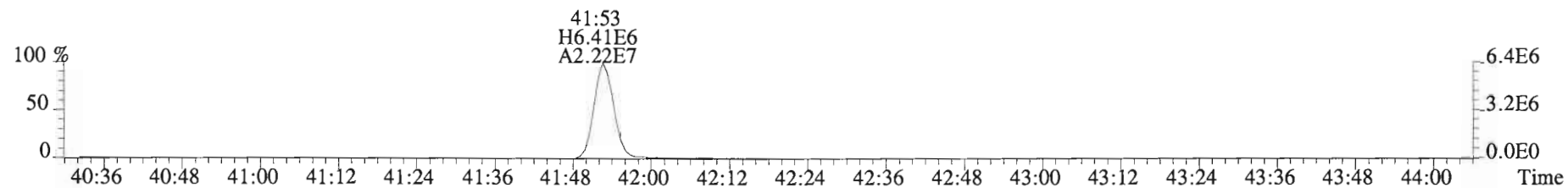
430.9728 S:8 F:4



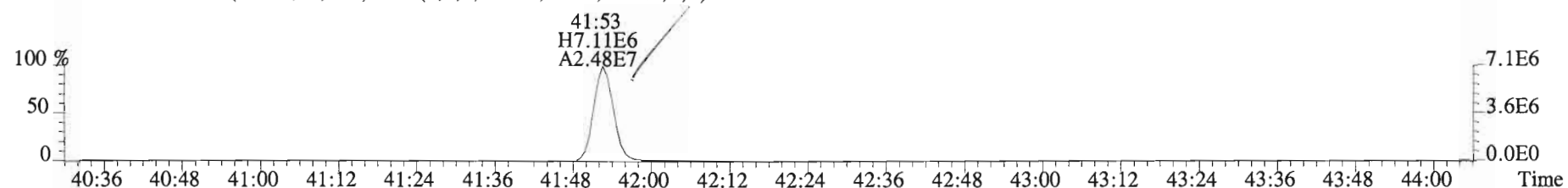
File:150204D1 #1-326 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



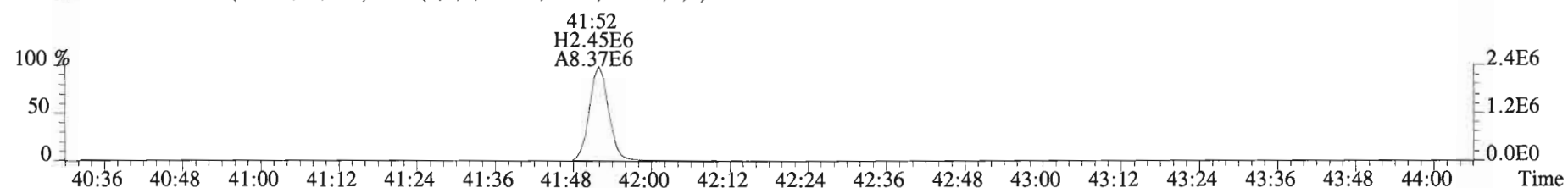
File:150204D1 #1-388 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



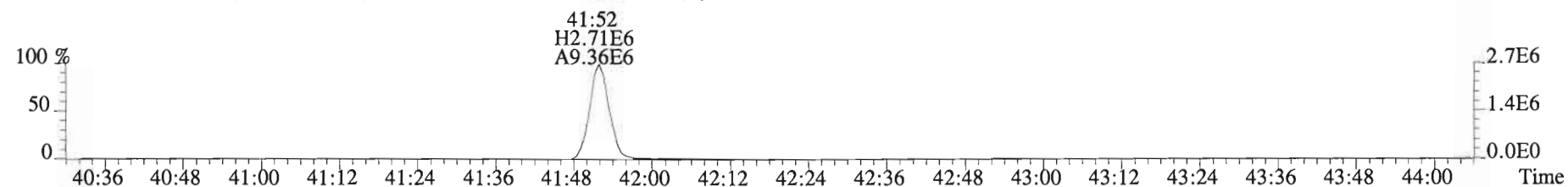
459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



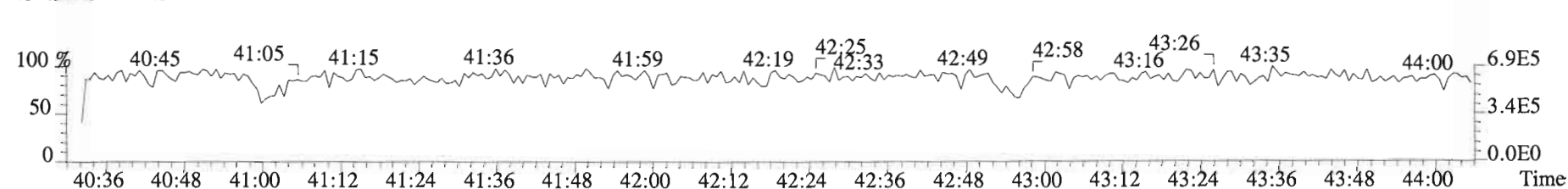
469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



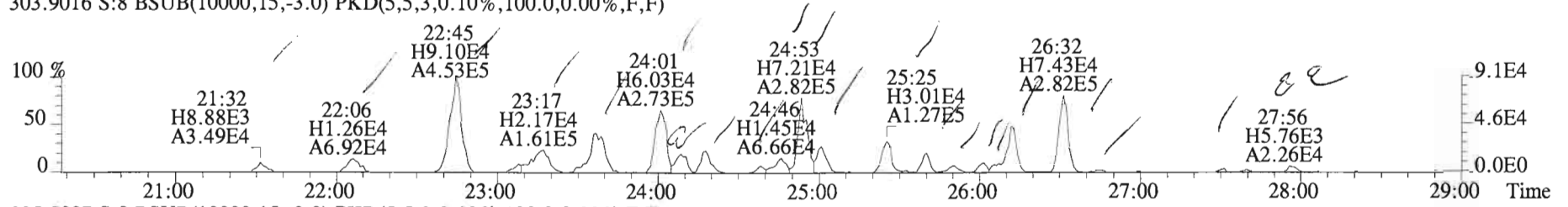
471.7750 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



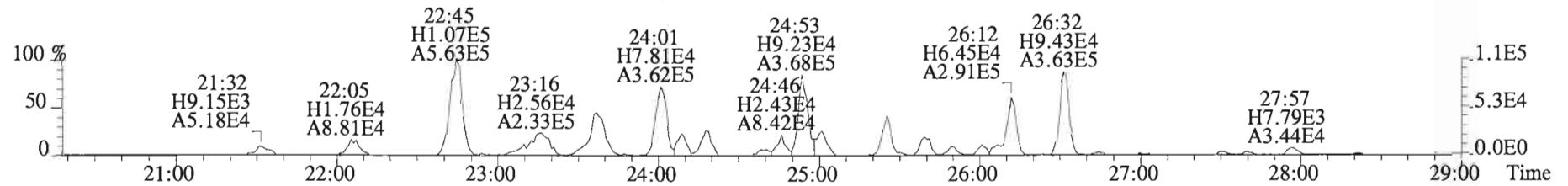
454.9728 S:8 F:5



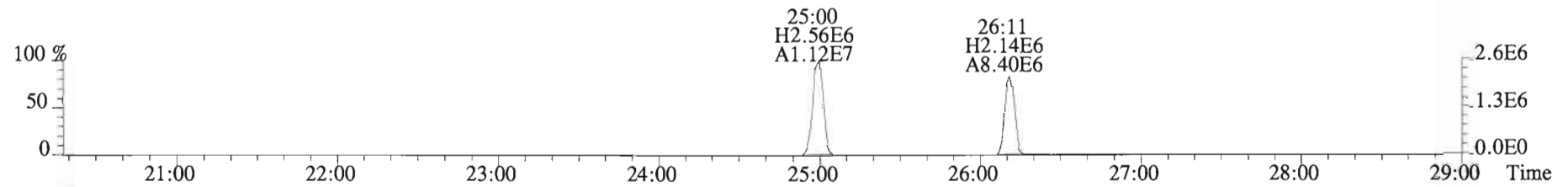
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



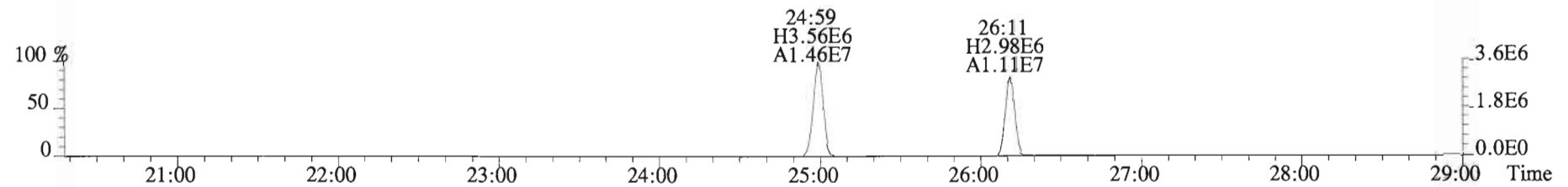
305.8987 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



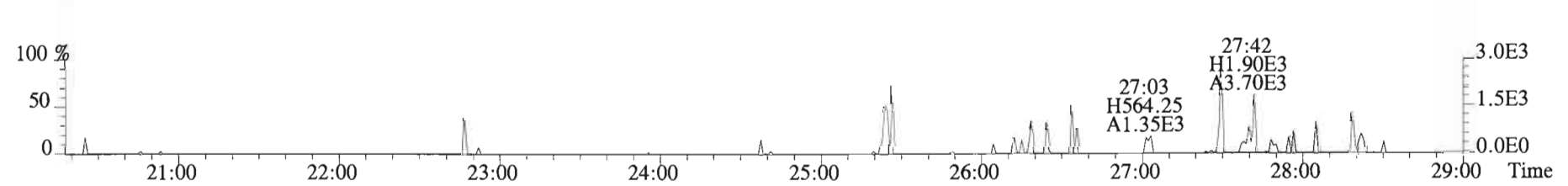
315.9419 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



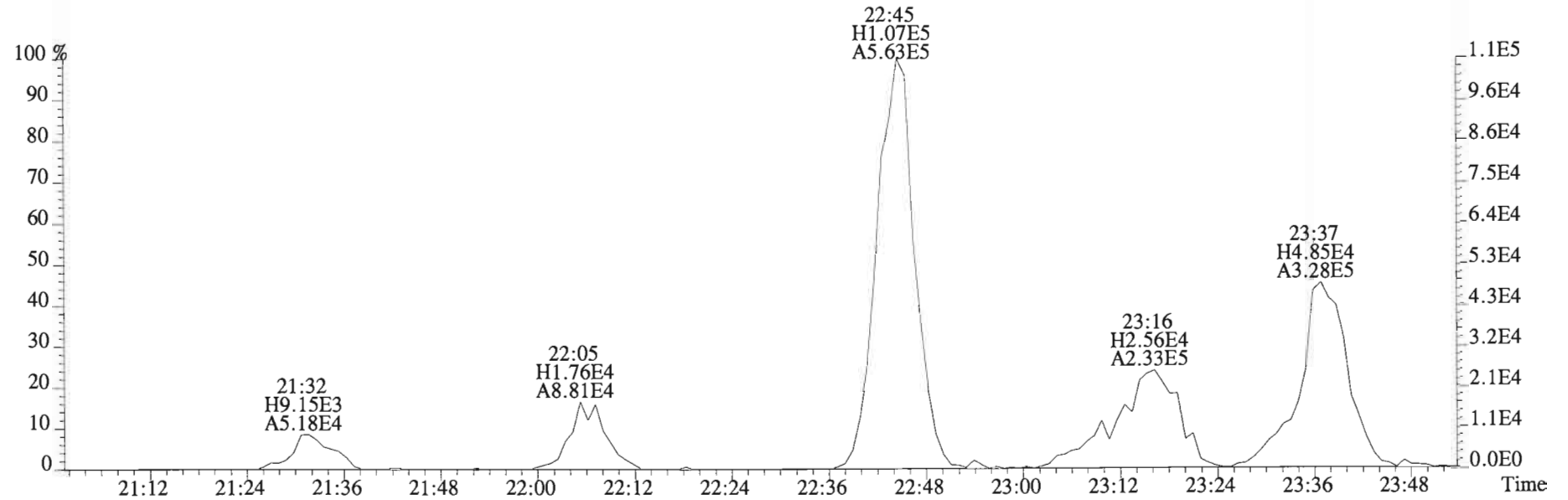
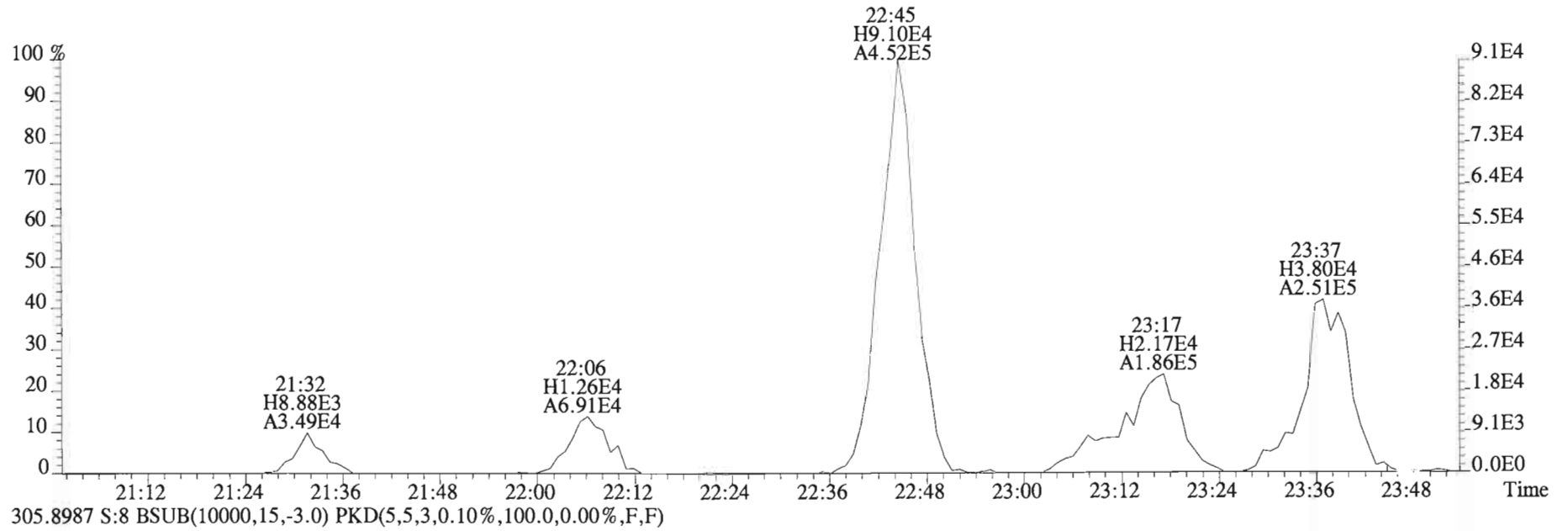
317.9389 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



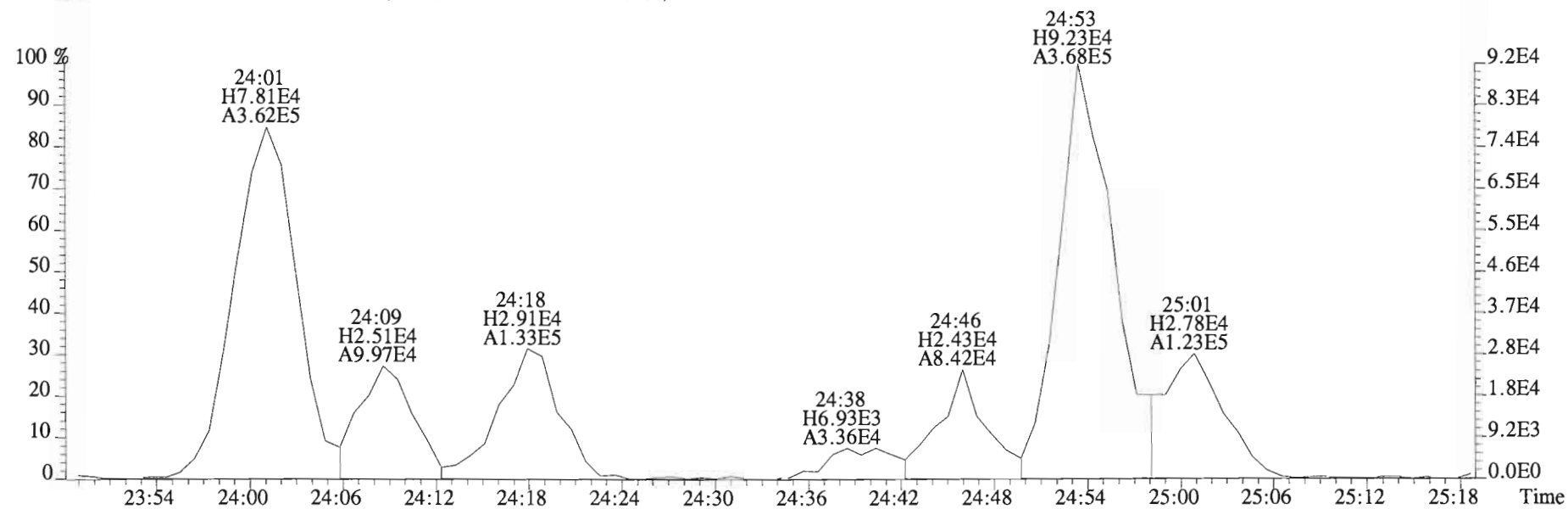
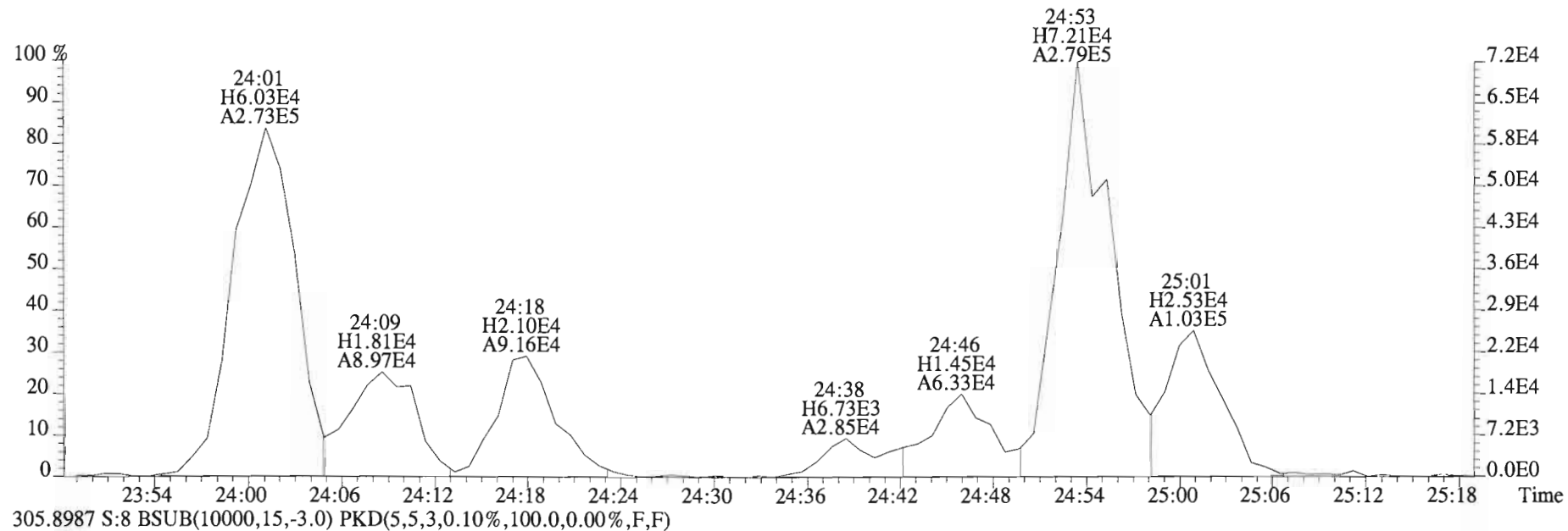
375.8364 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



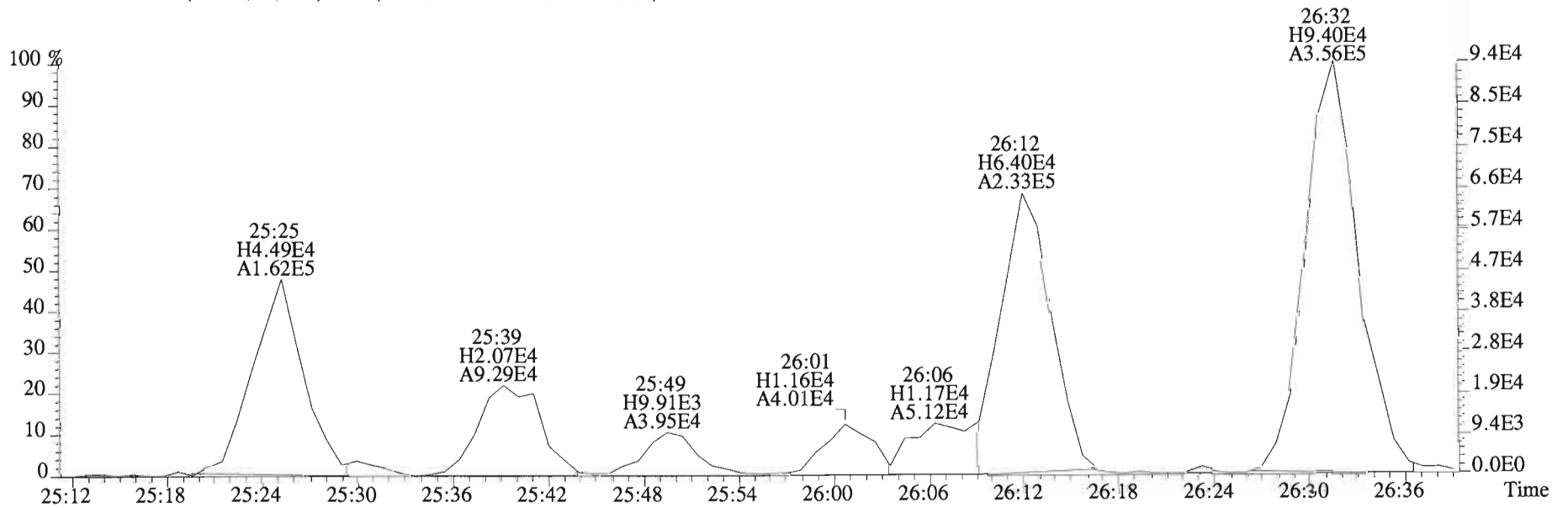
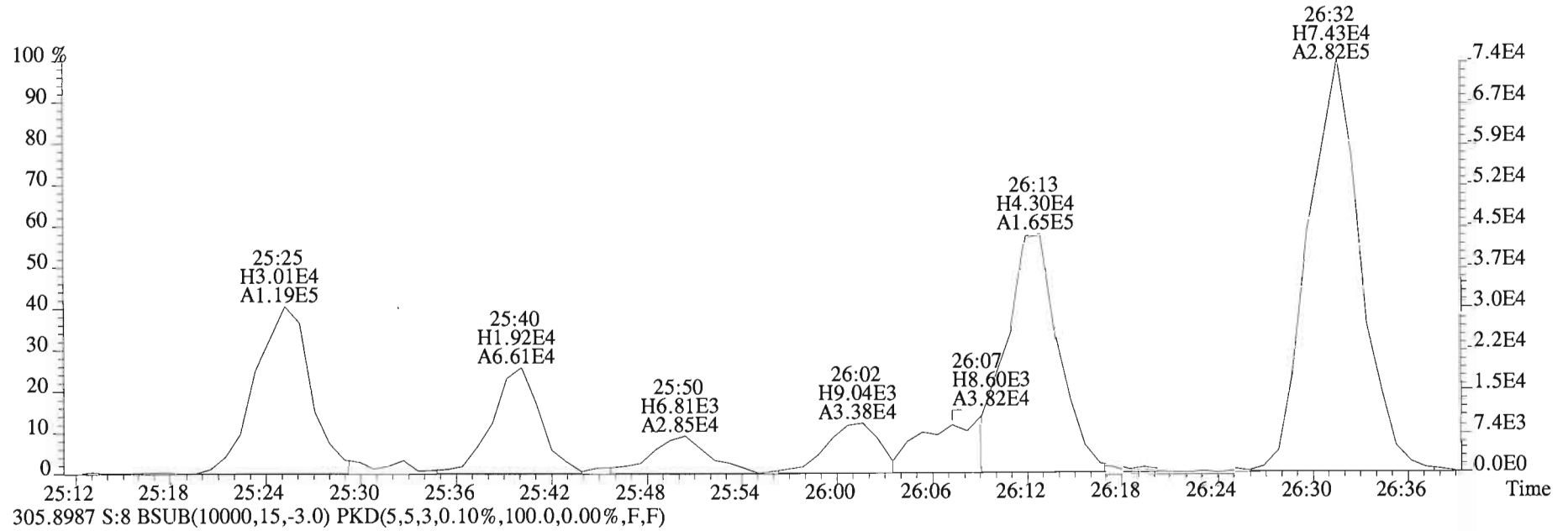
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



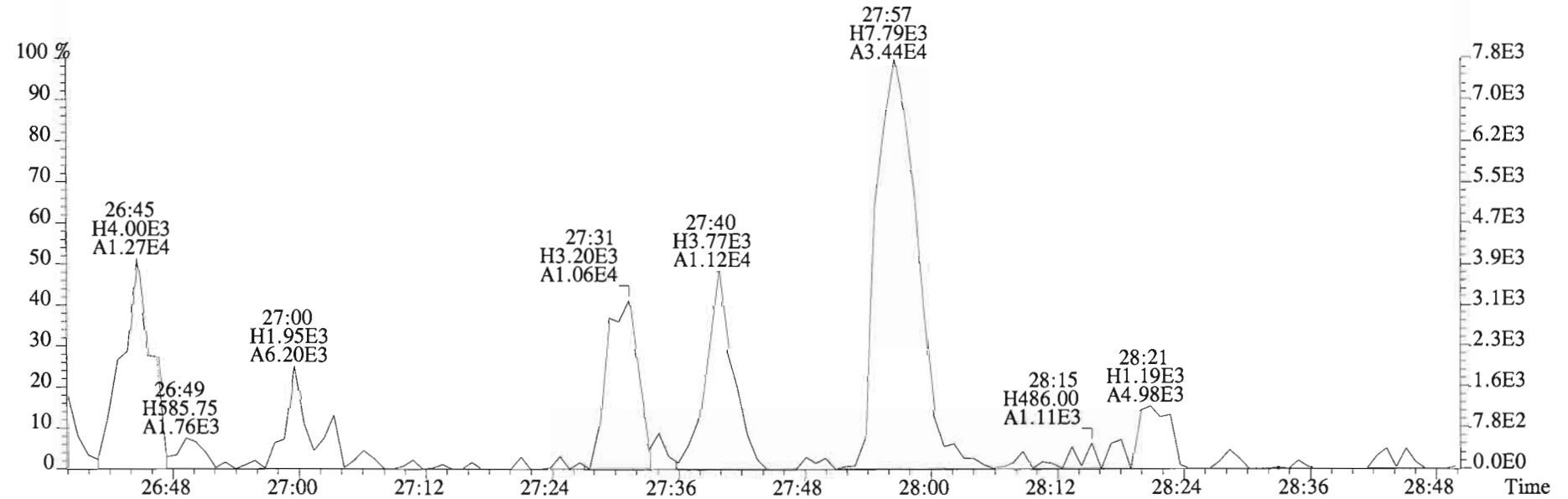
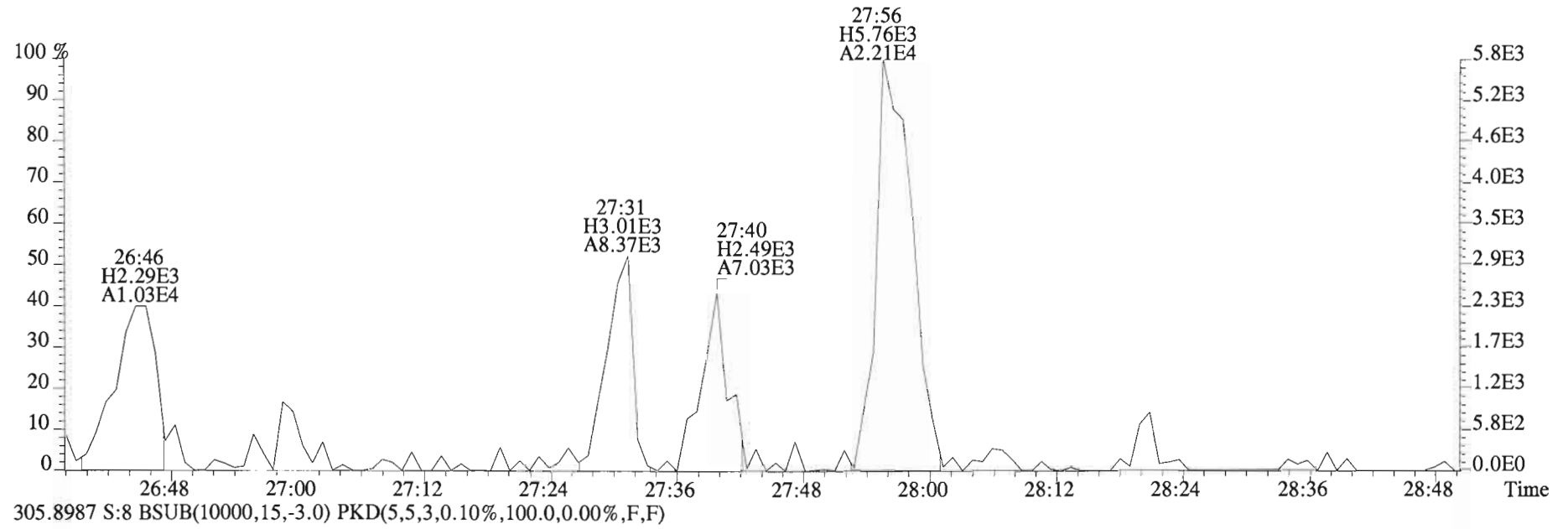
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
 303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



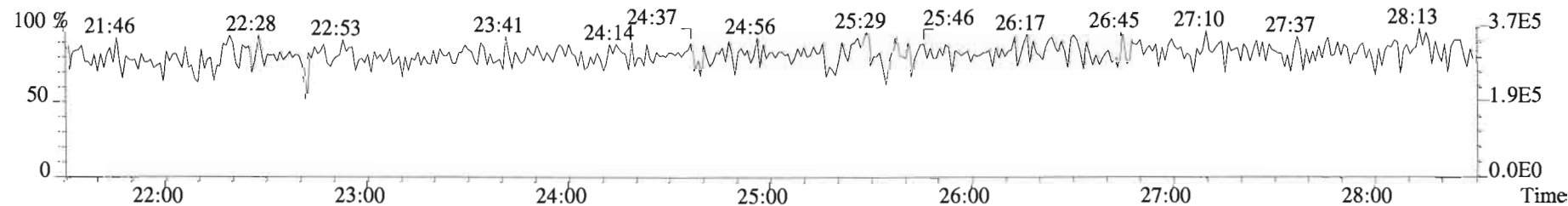
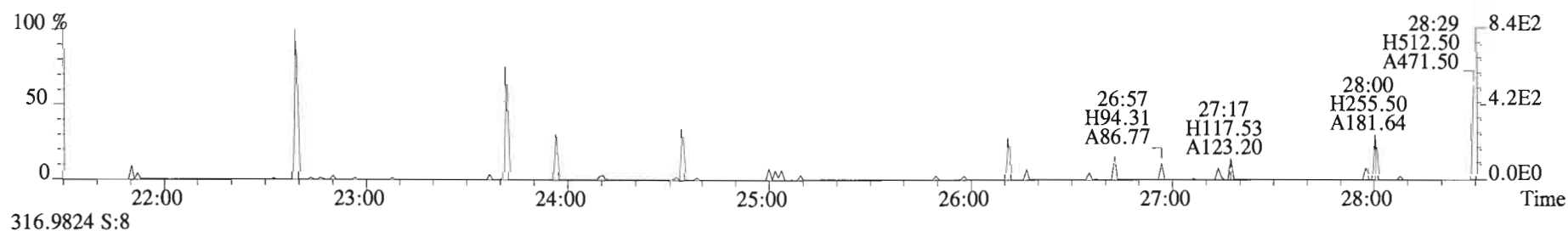
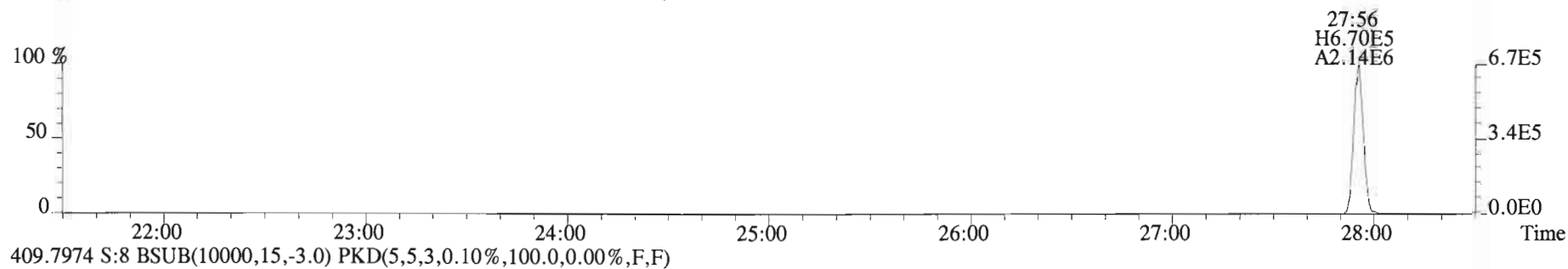
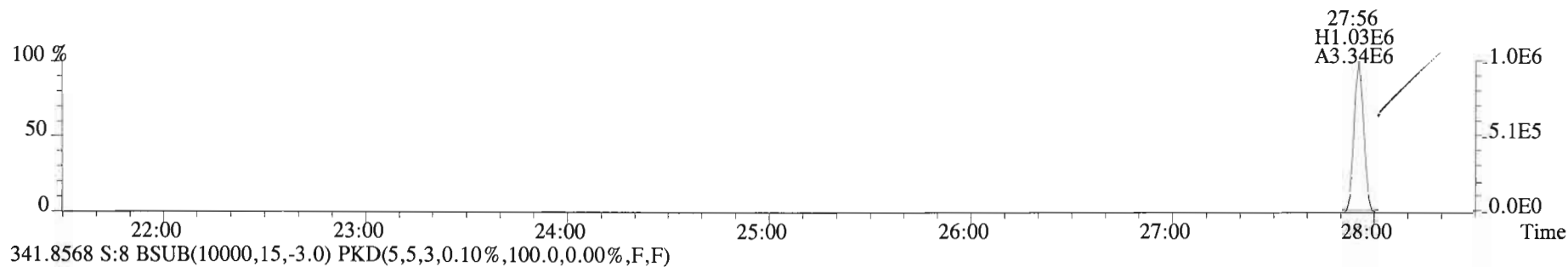
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
 303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



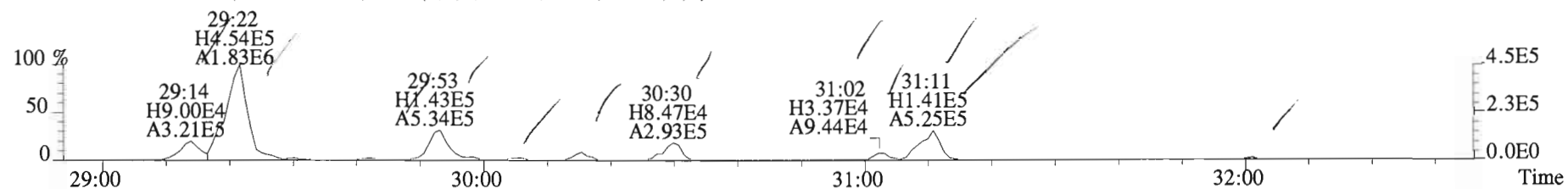
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
 303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



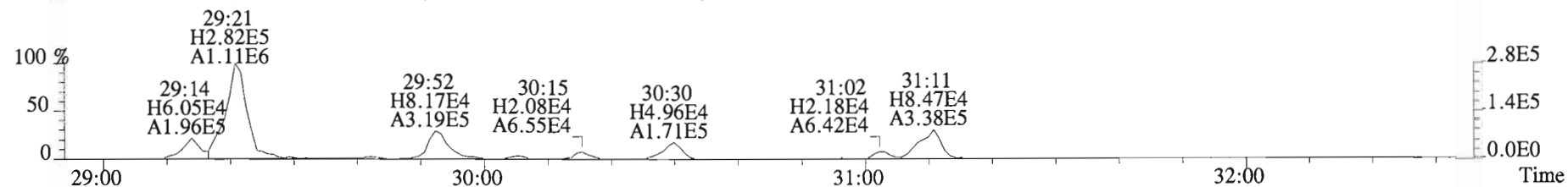
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



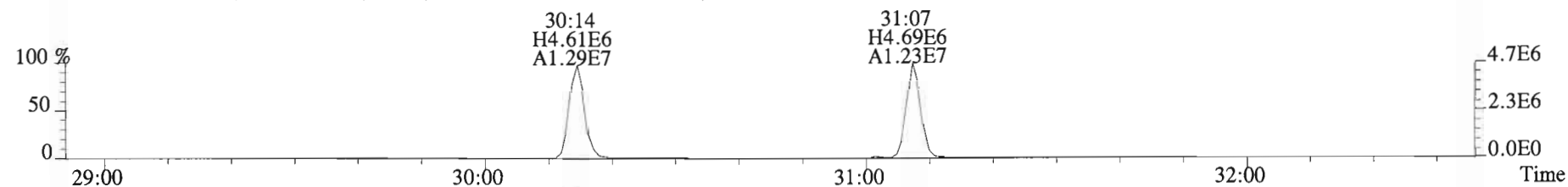
File:150204D1 #1-250 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
 339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



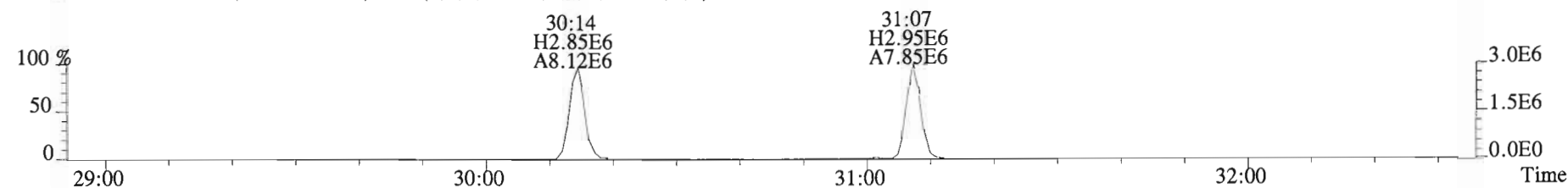
341.8568 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



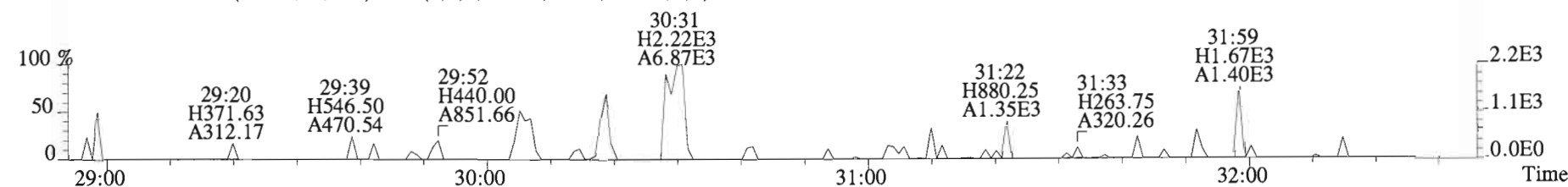
351.9000 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



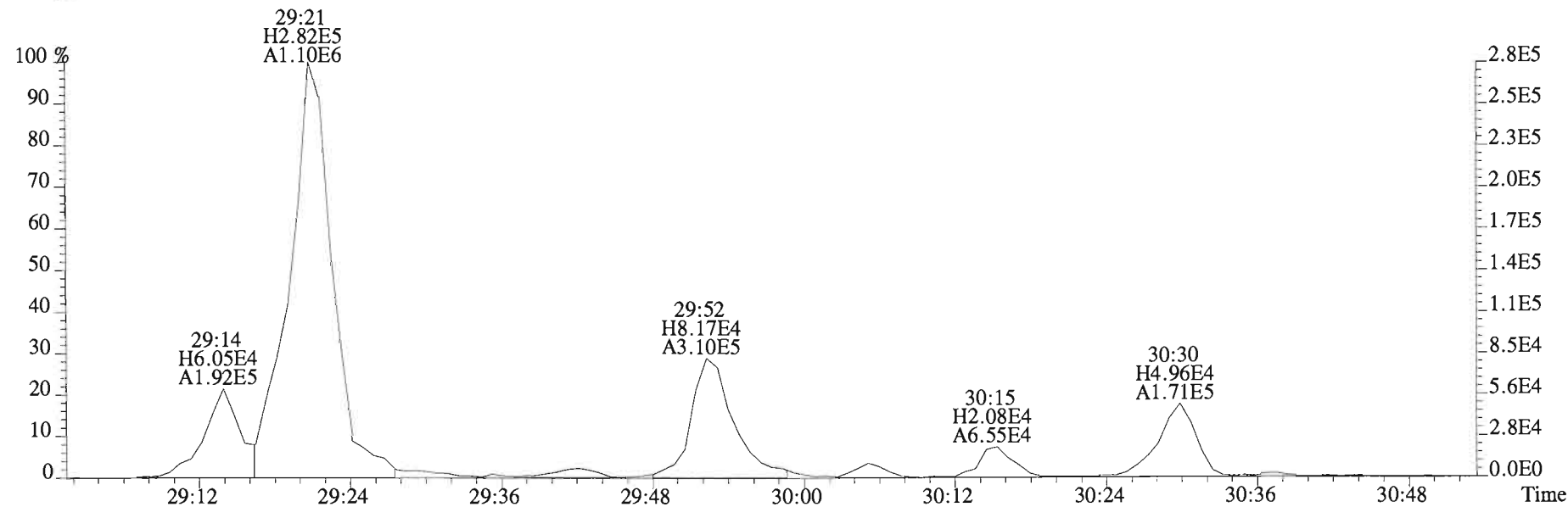
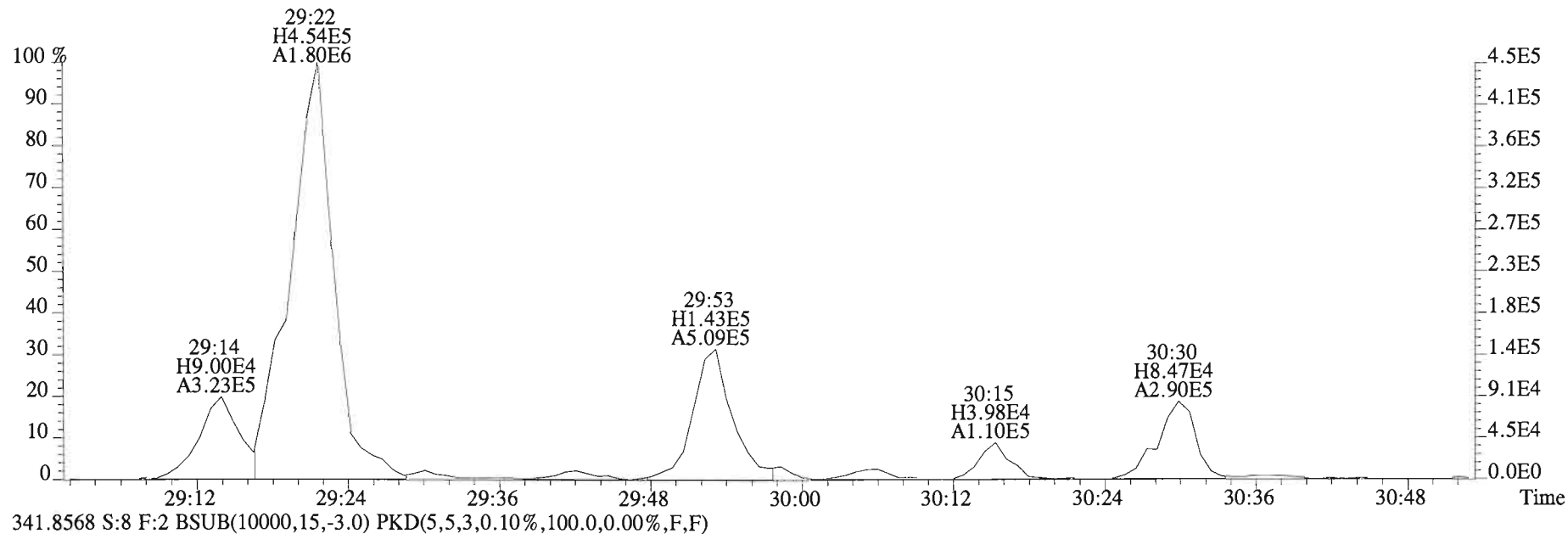
353.8970 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



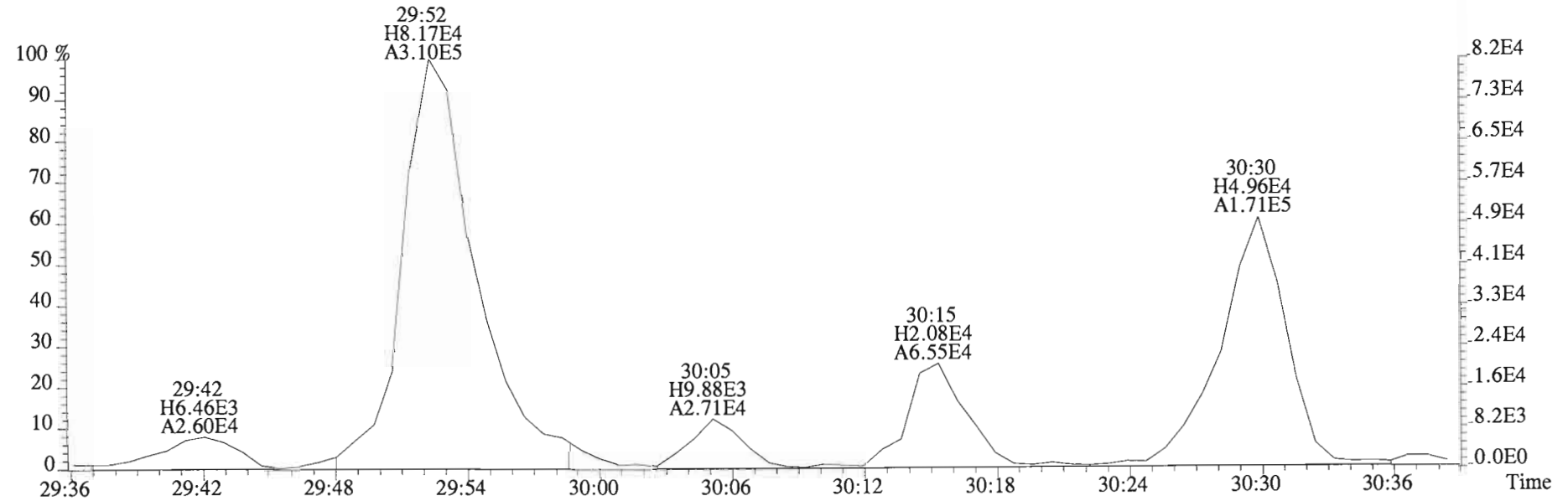
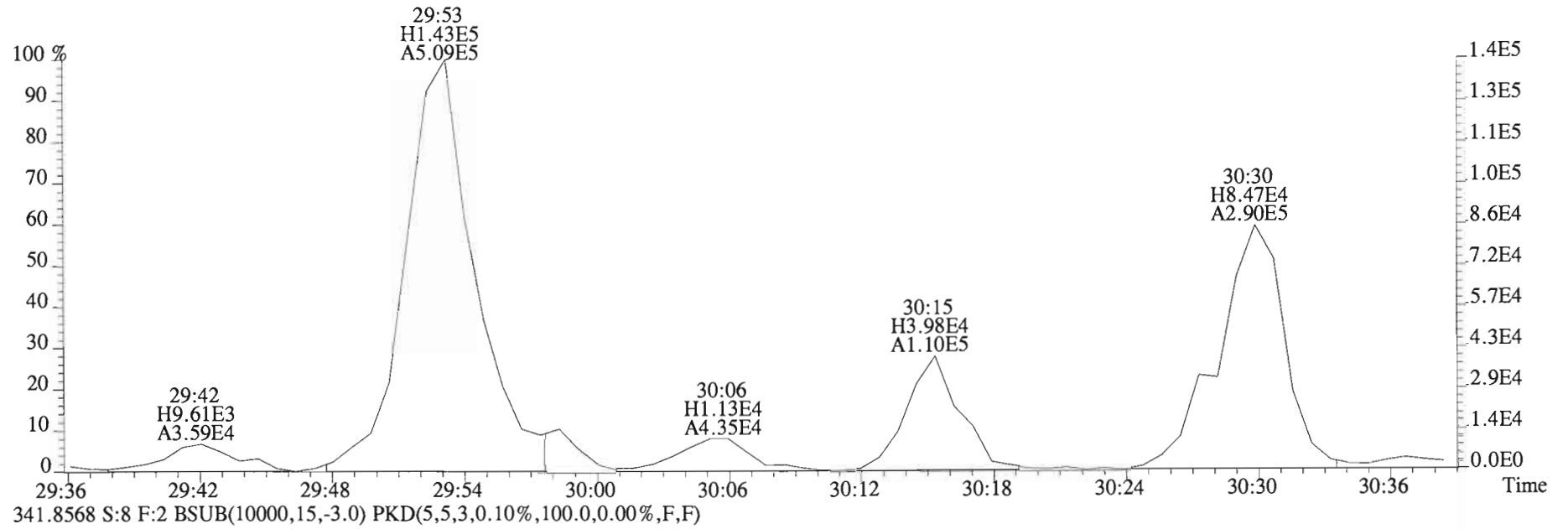
409.7974 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



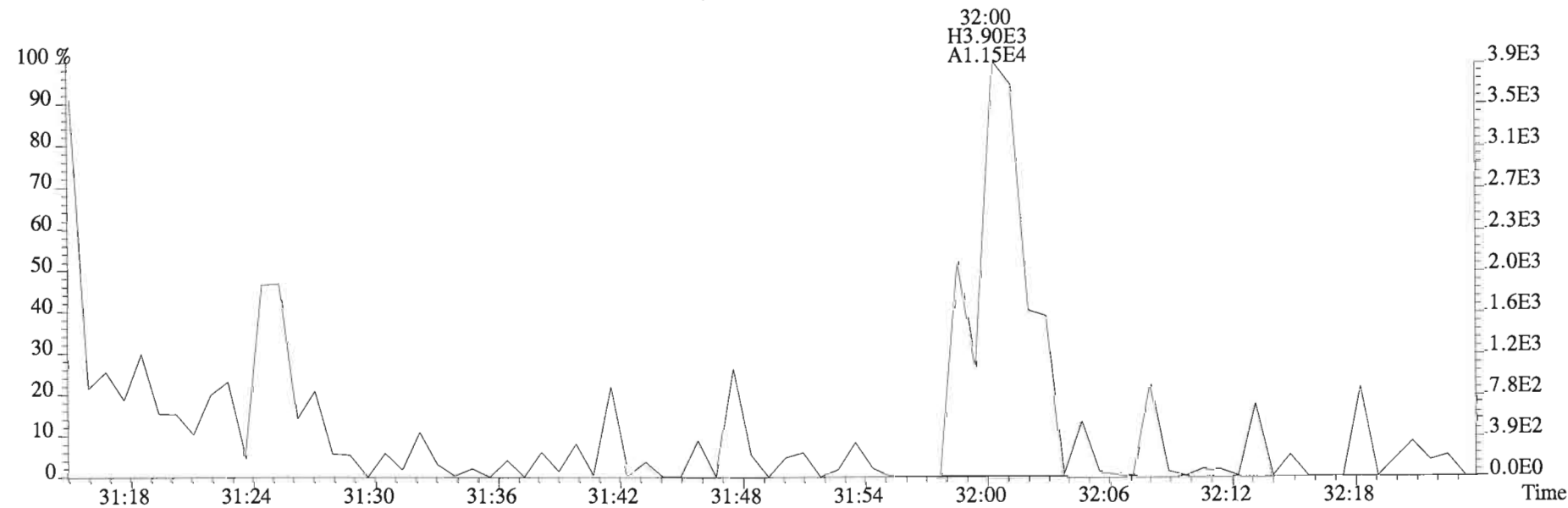
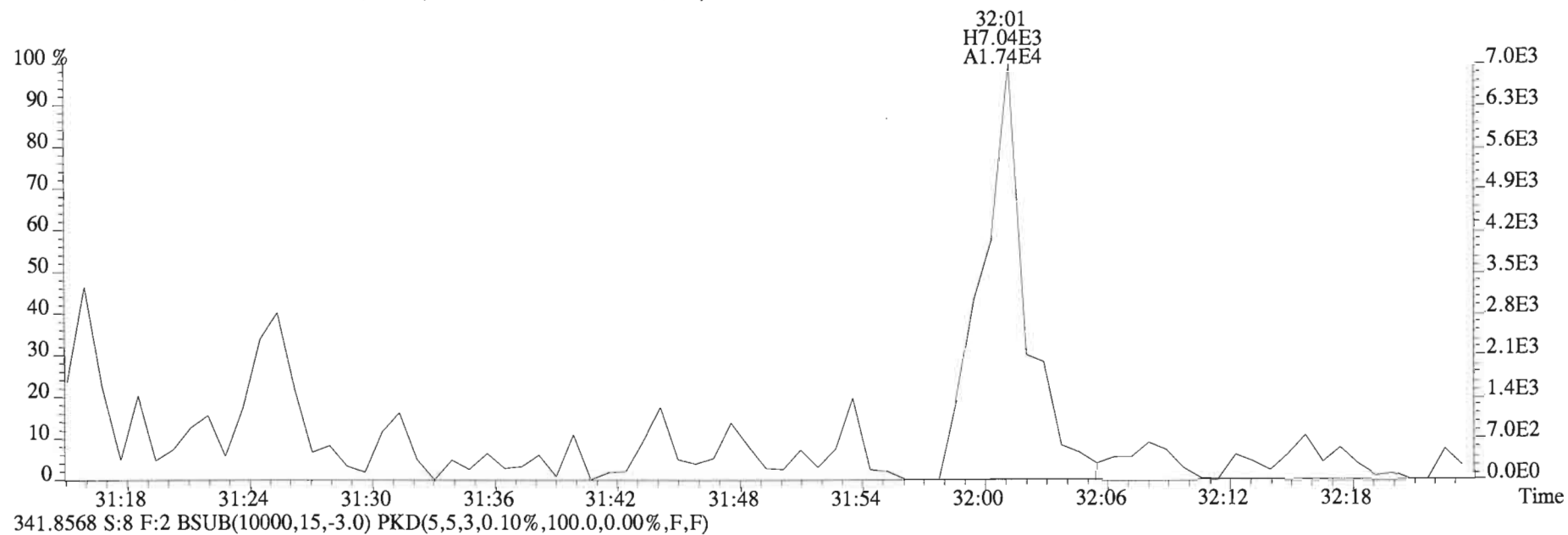
File:150204D1 #1-250 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



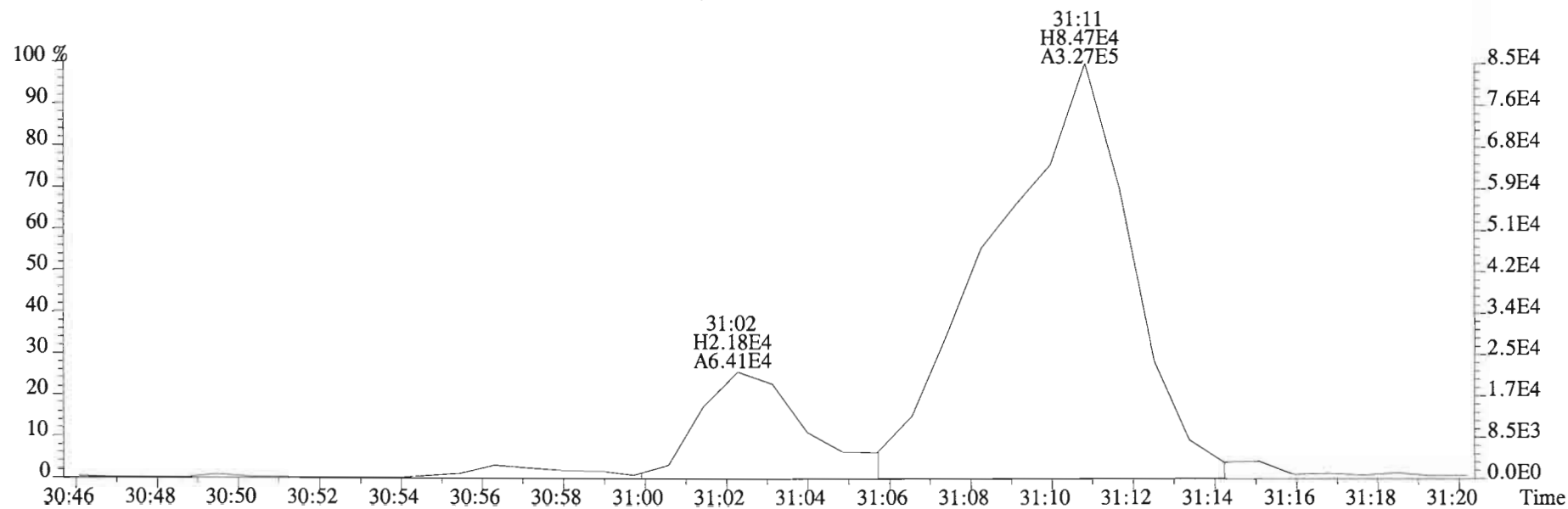
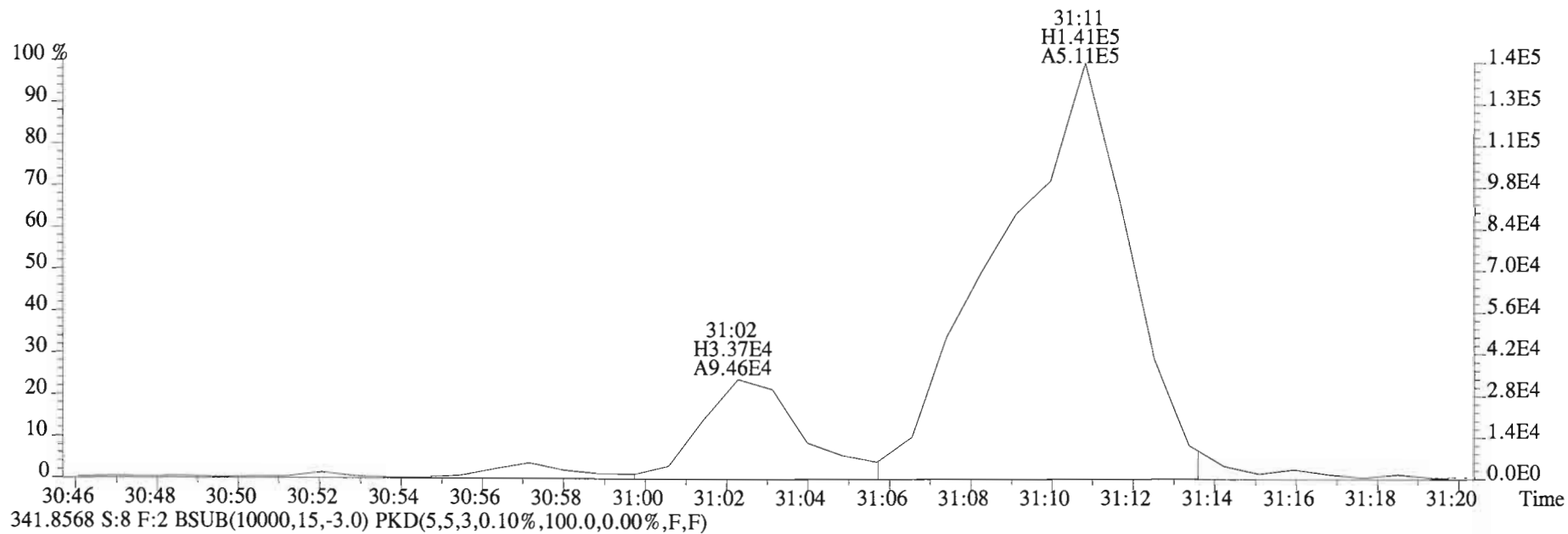
File:150204D1 #1-250 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



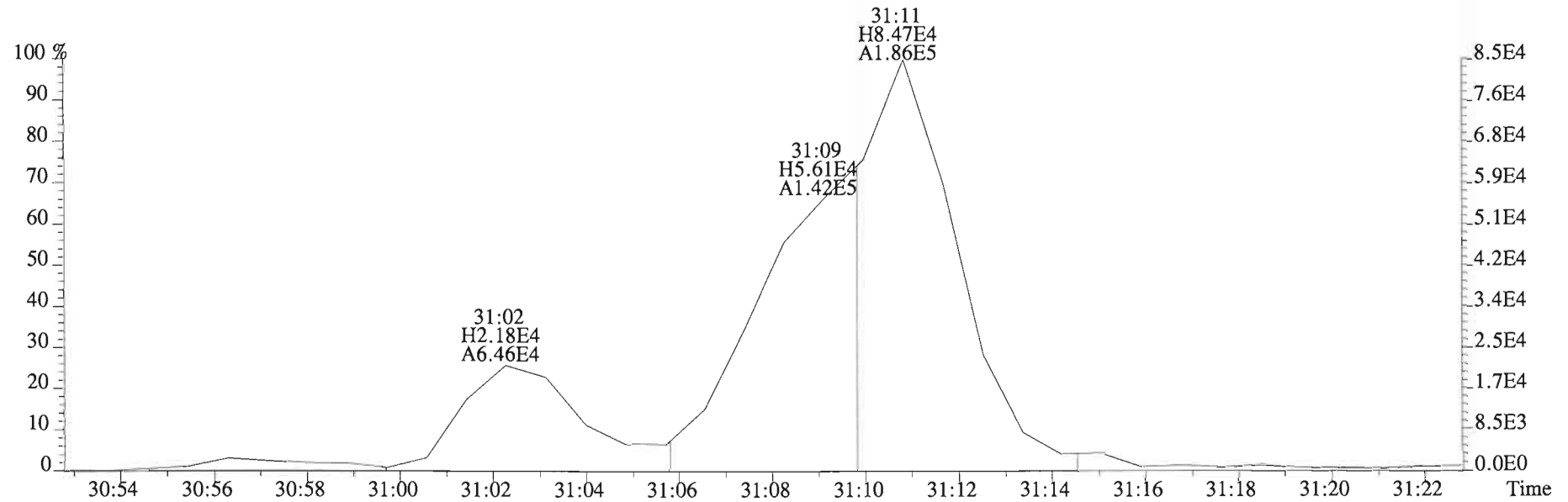
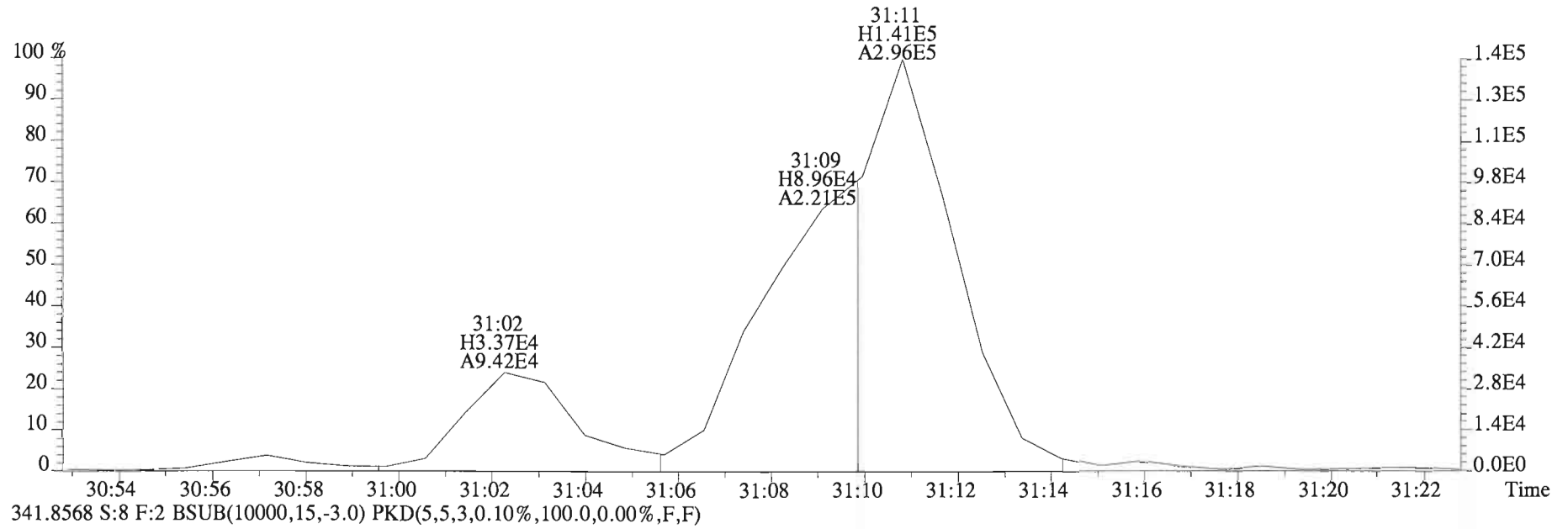
File:150204D1 #1-250 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



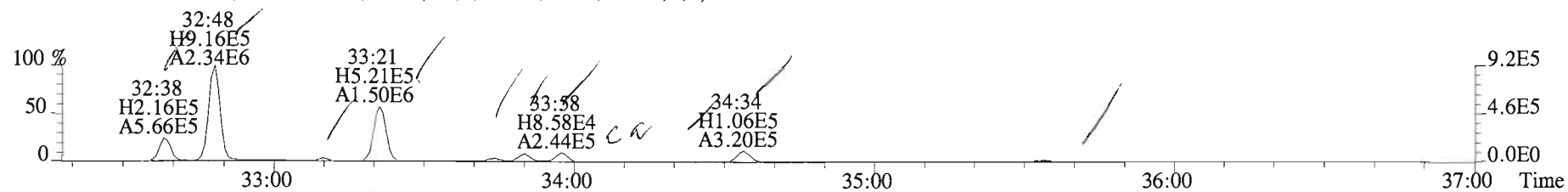
File:150204D1 #1-250 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
339.8597 S:8 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



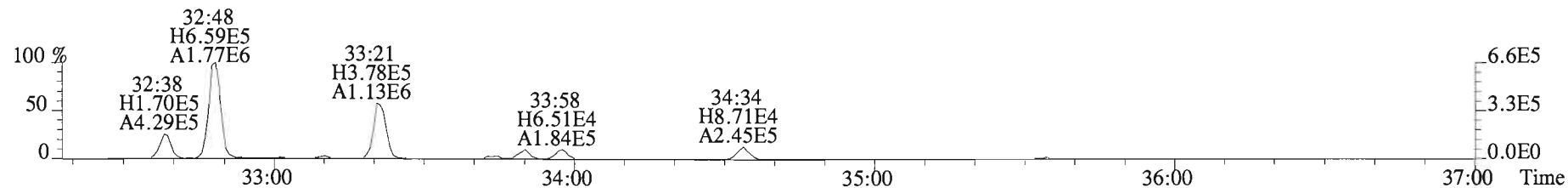
File:150204D1 #1-250 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



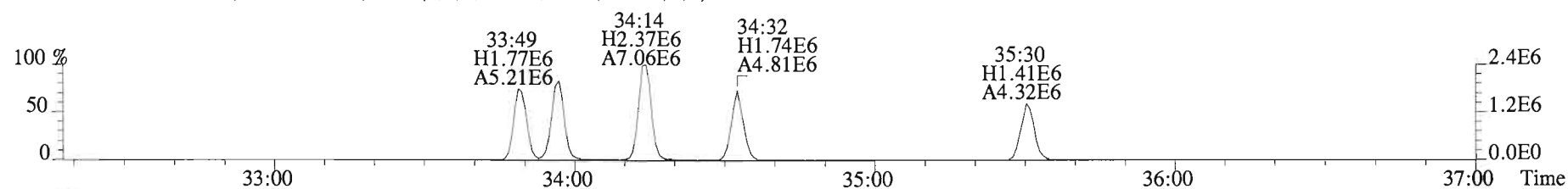
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



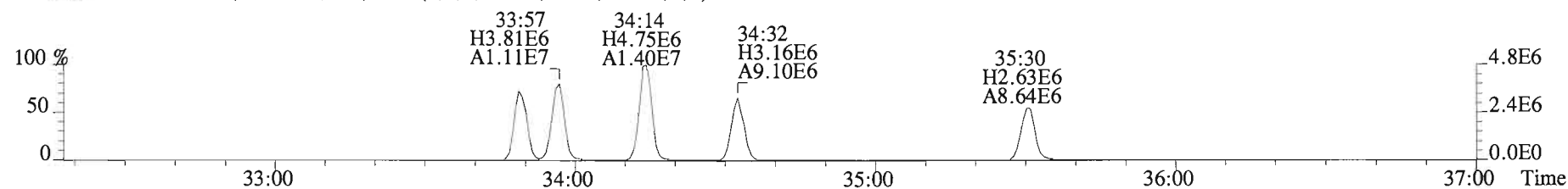
375.8178 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



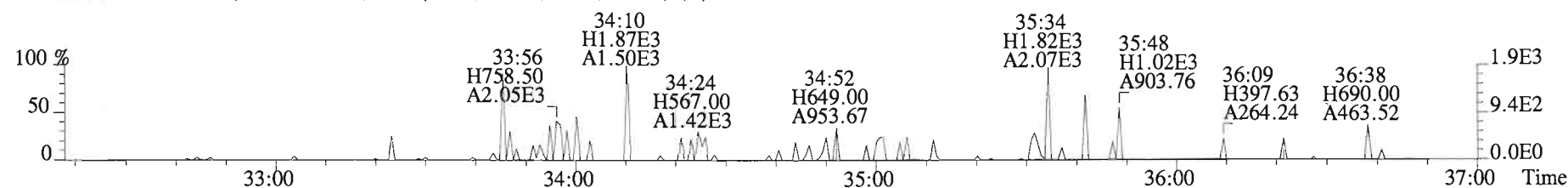
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



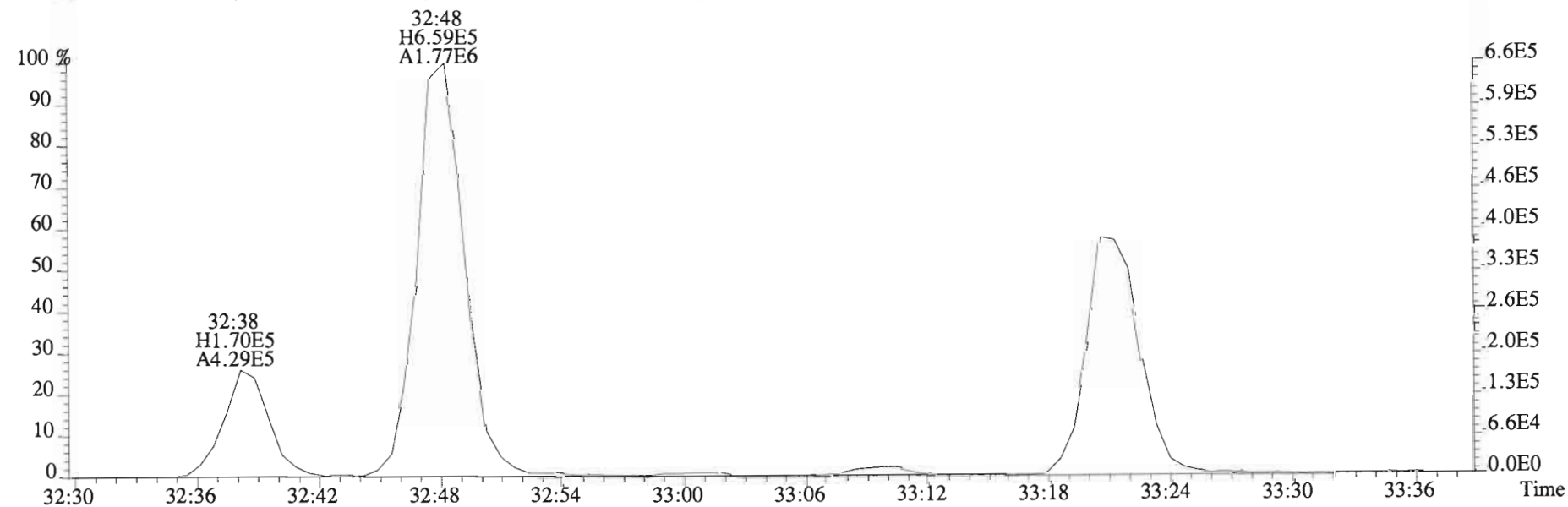
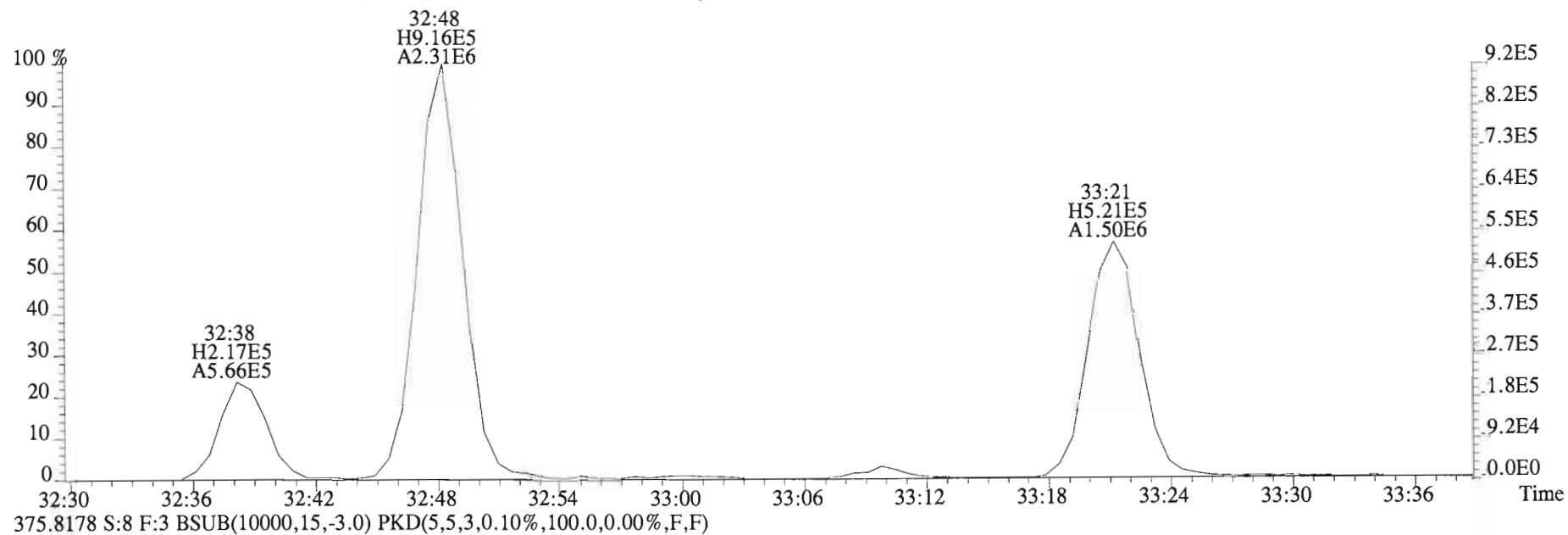
385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



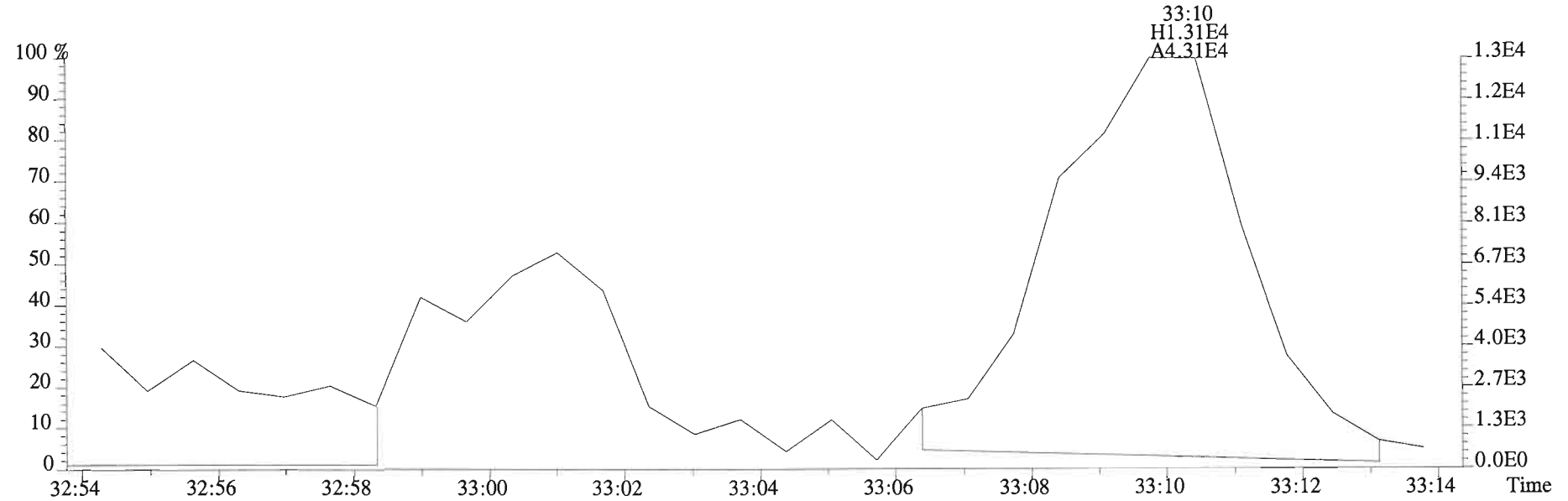
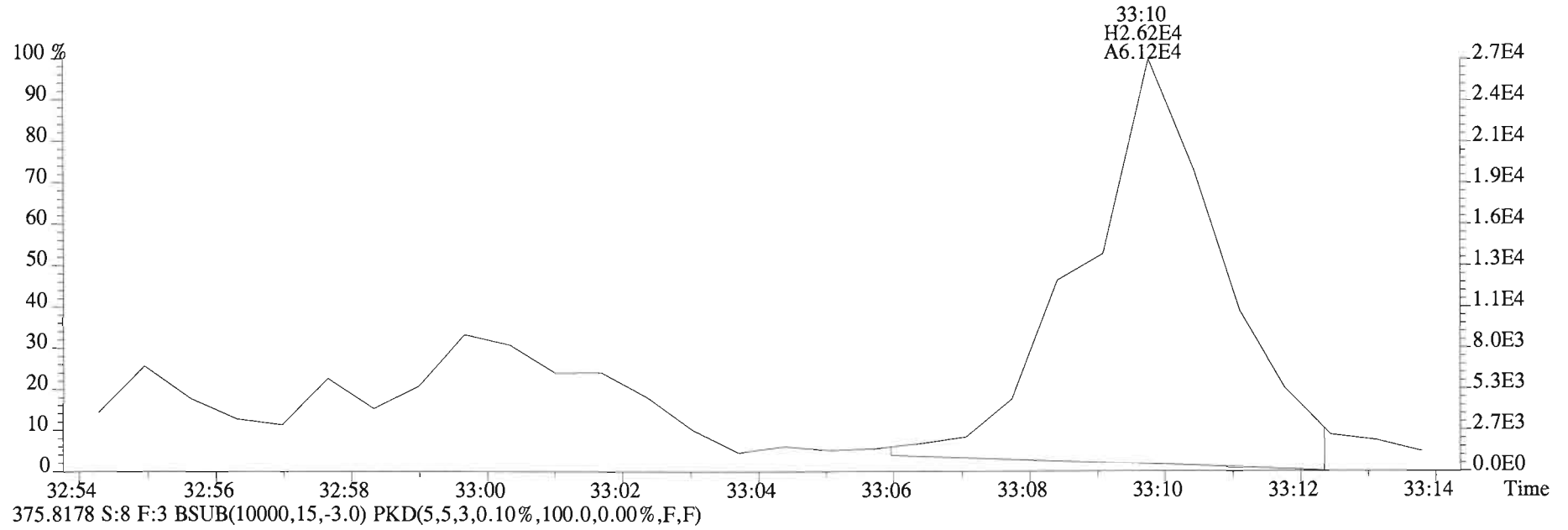
445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



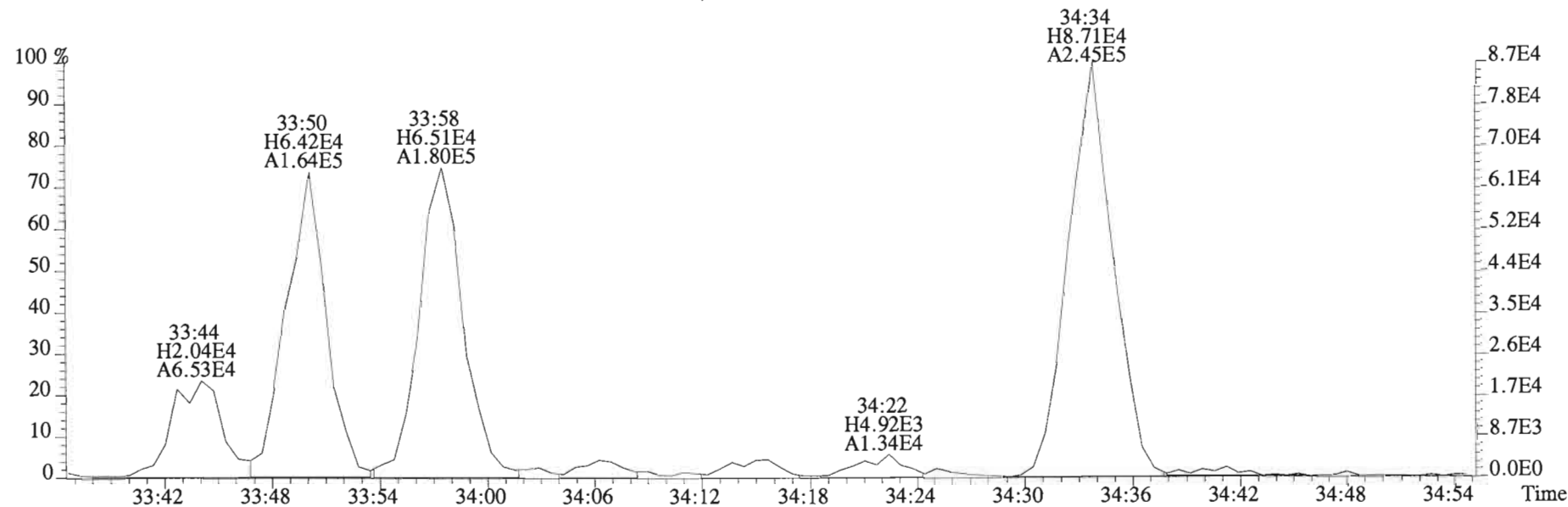
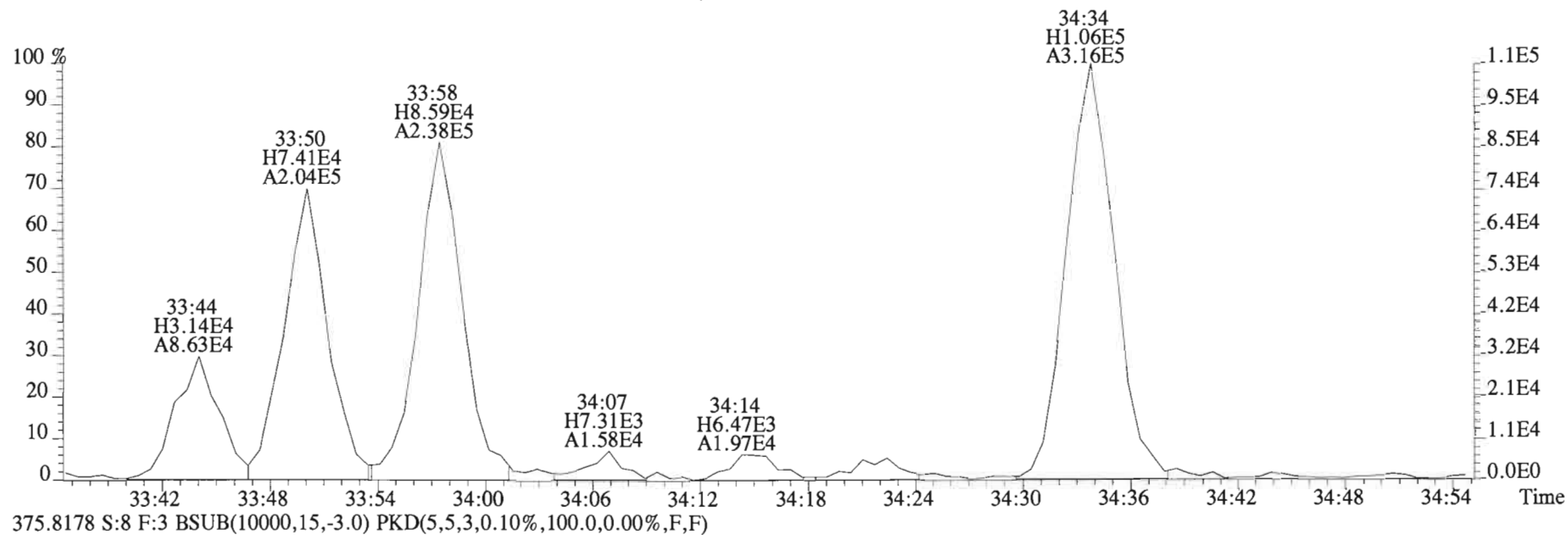
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



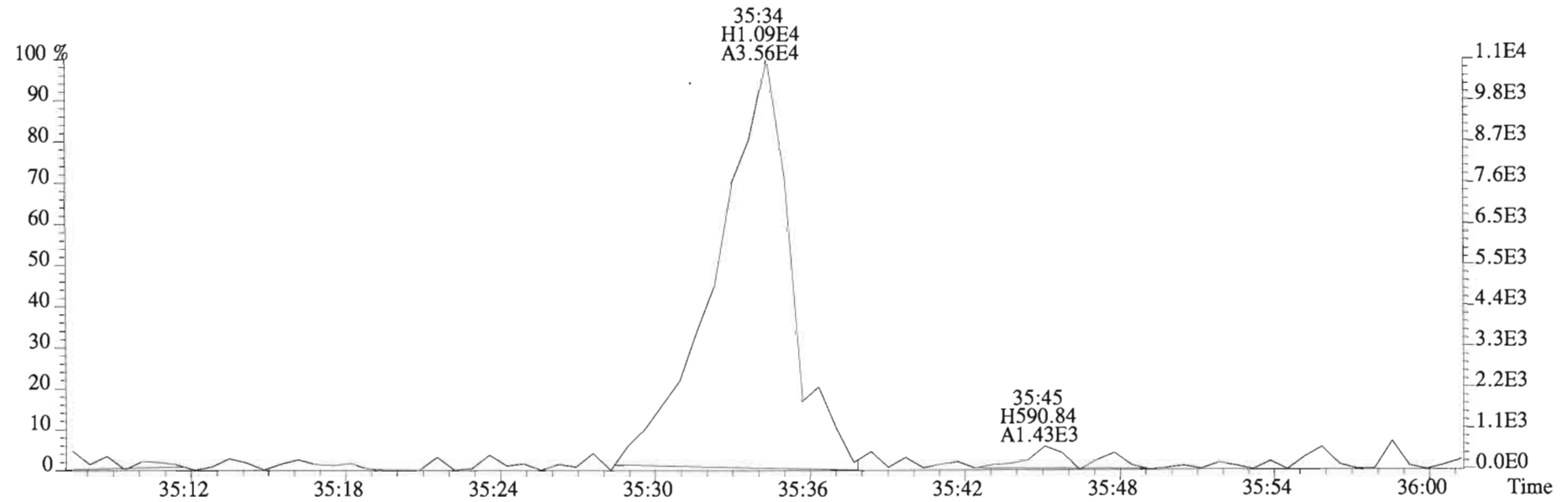
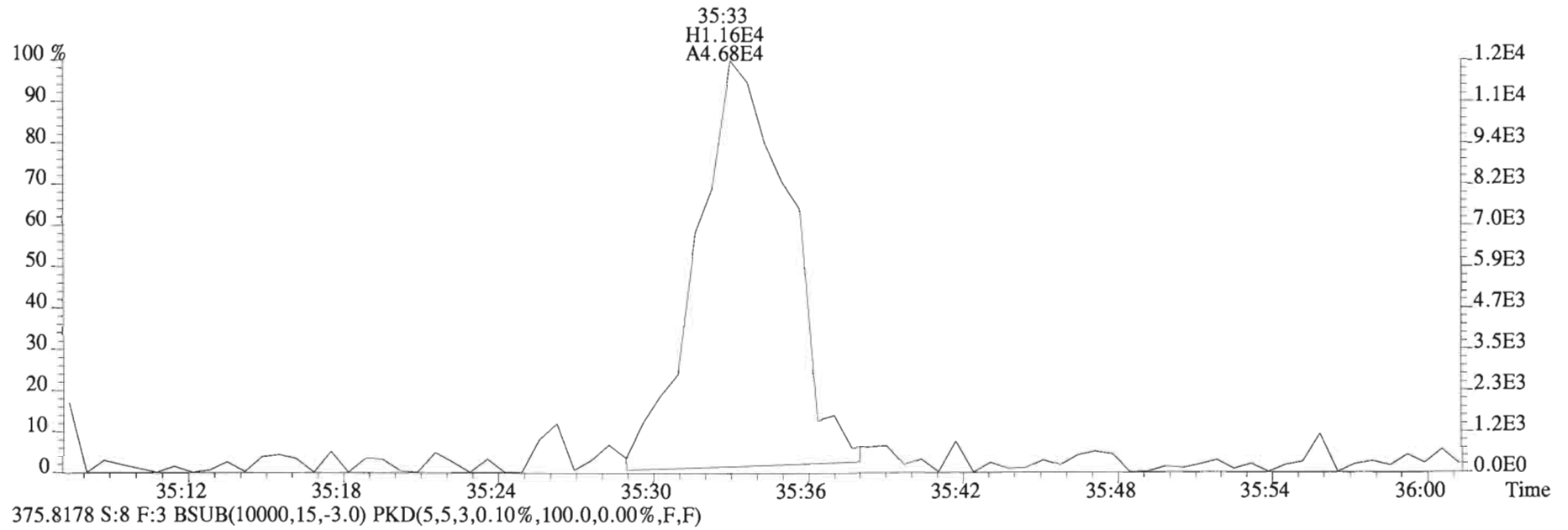
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



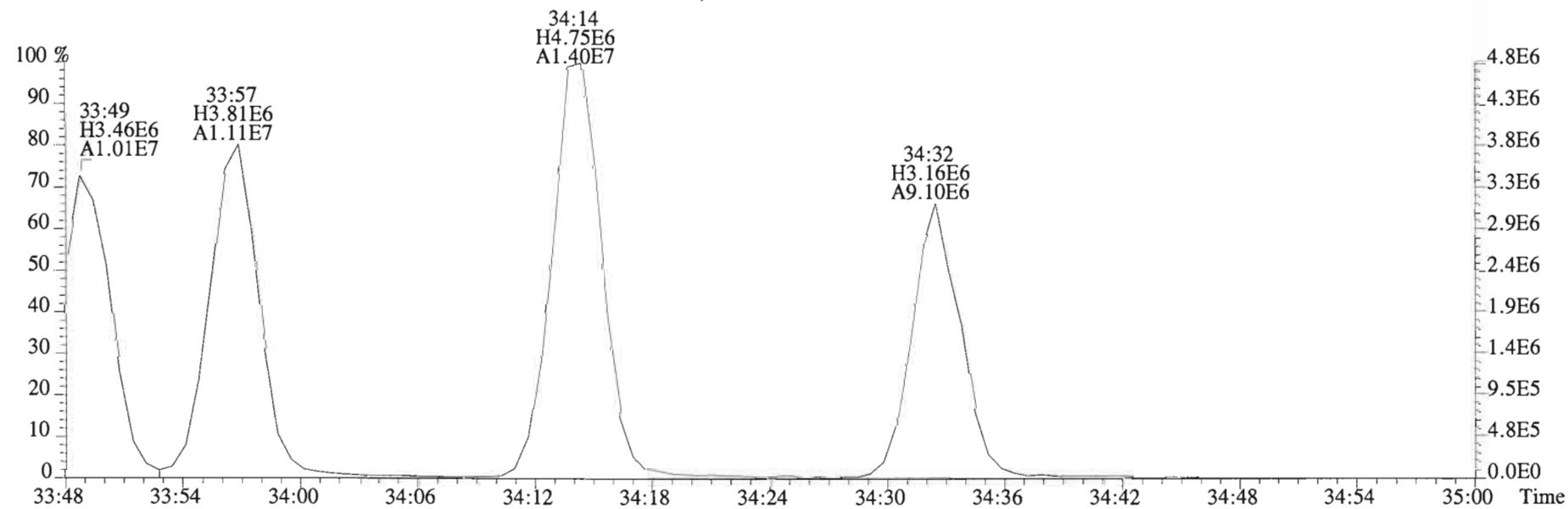
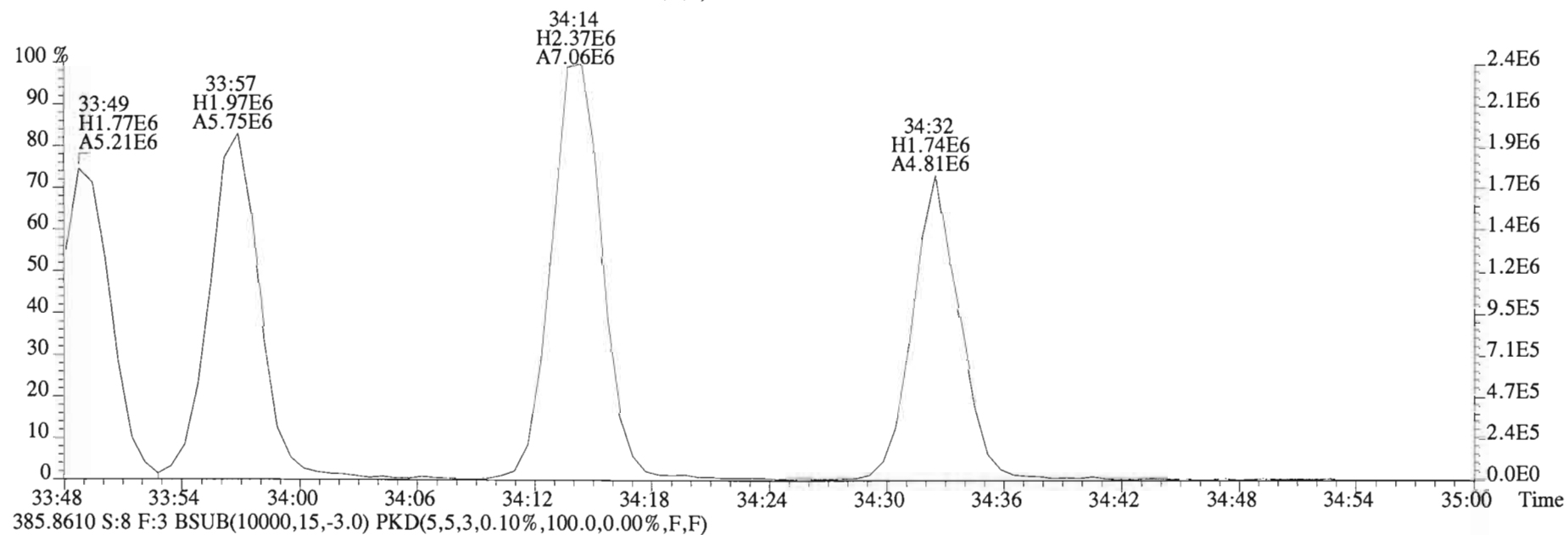
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
 373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



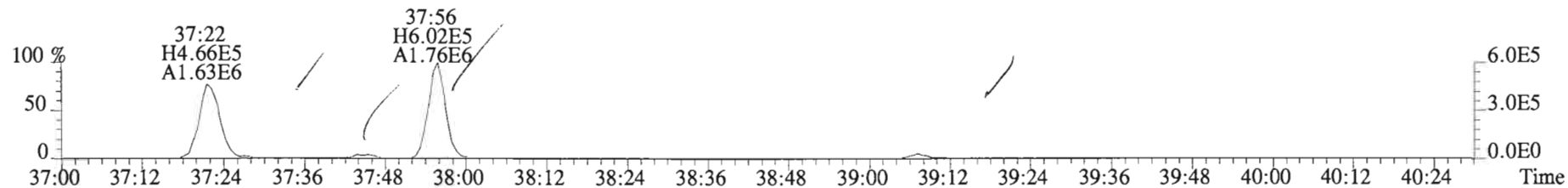
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



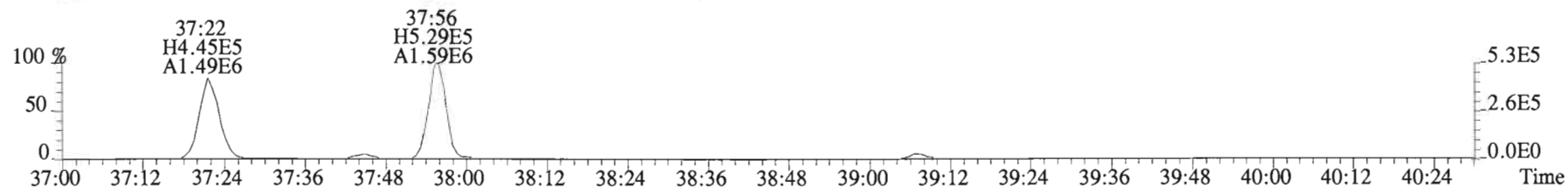
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



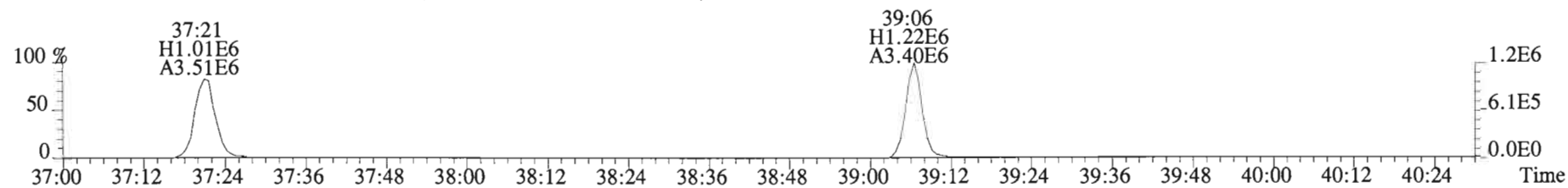
File:150204D1 #1-326 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
407.7818 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



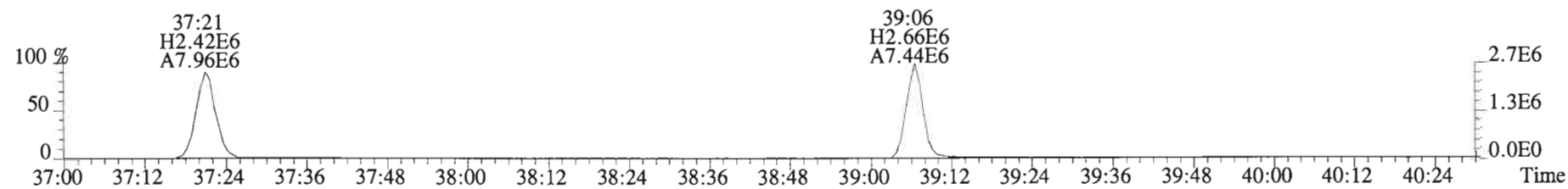
409.7788 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



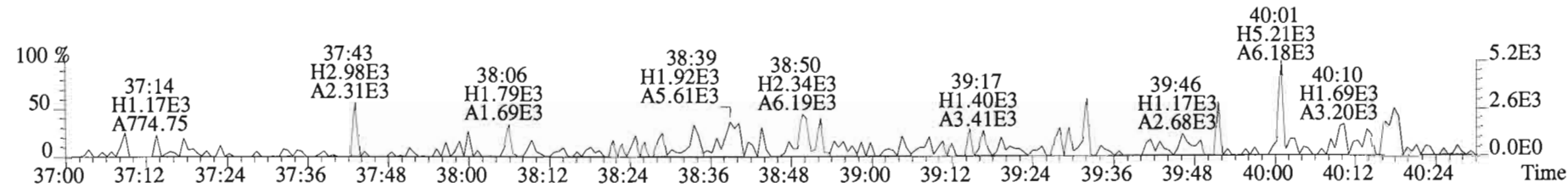
417.8253 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



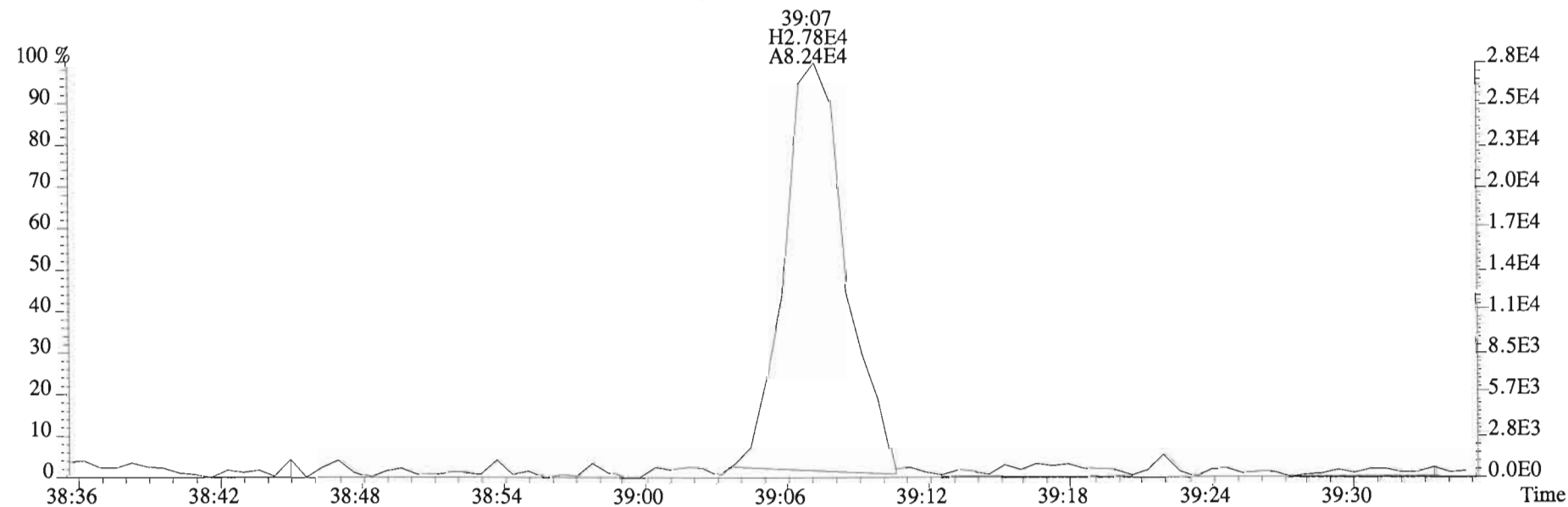
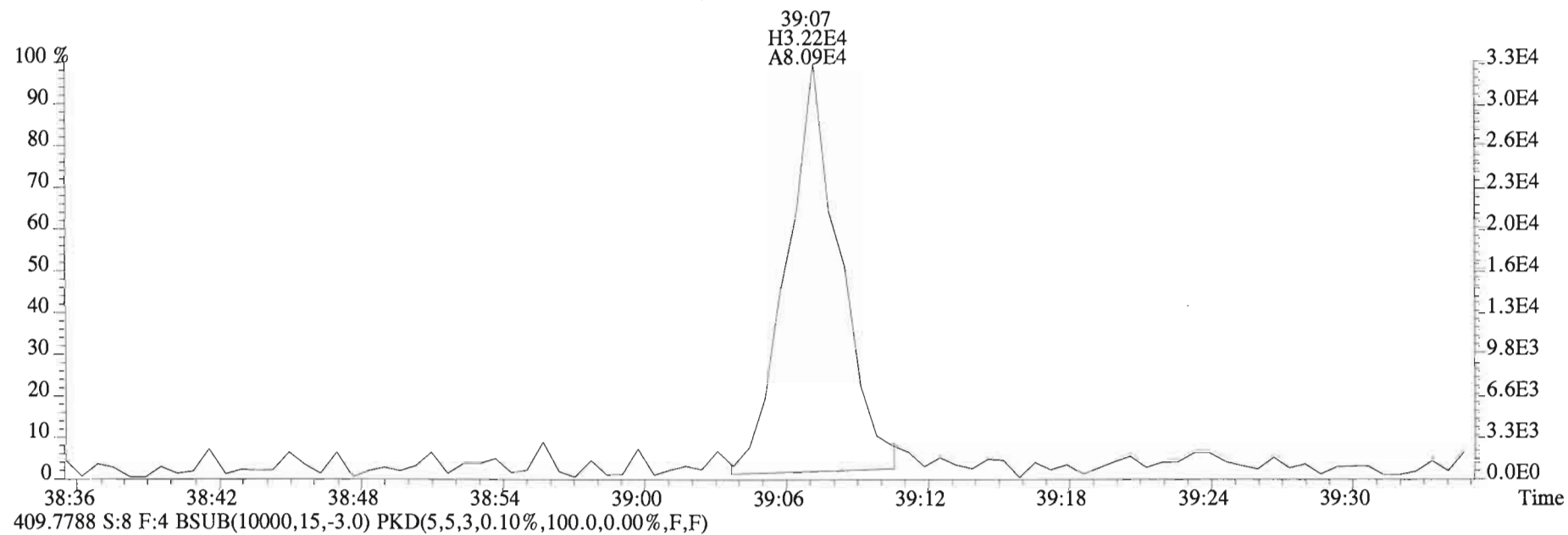
419.8220 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



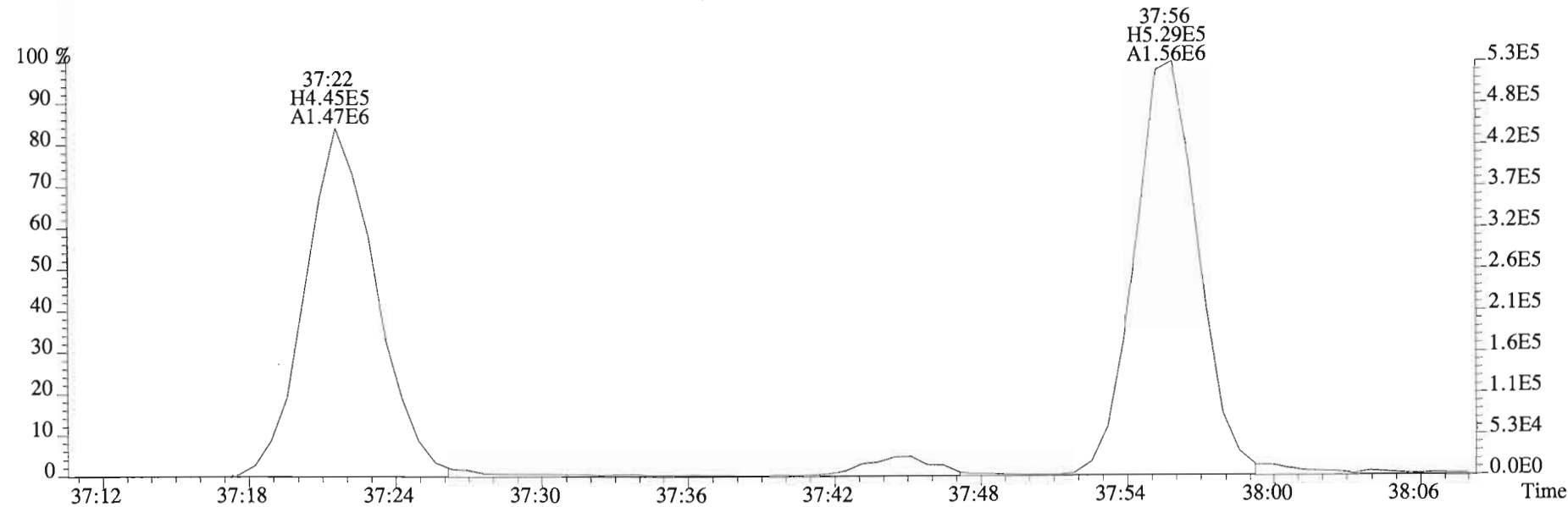
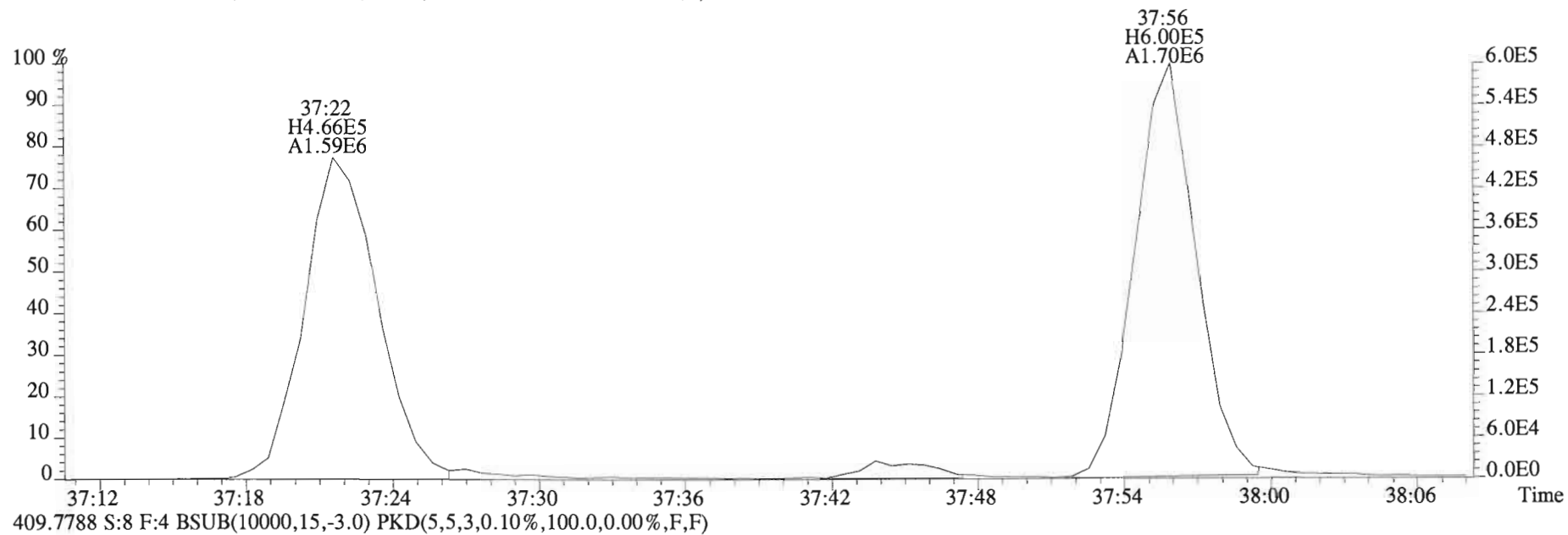
479.7165 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



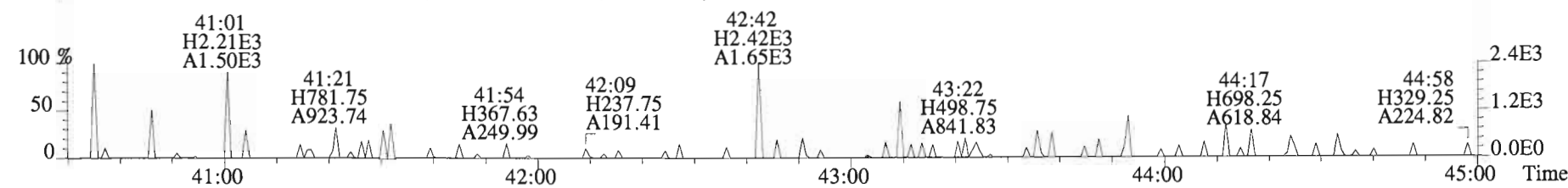
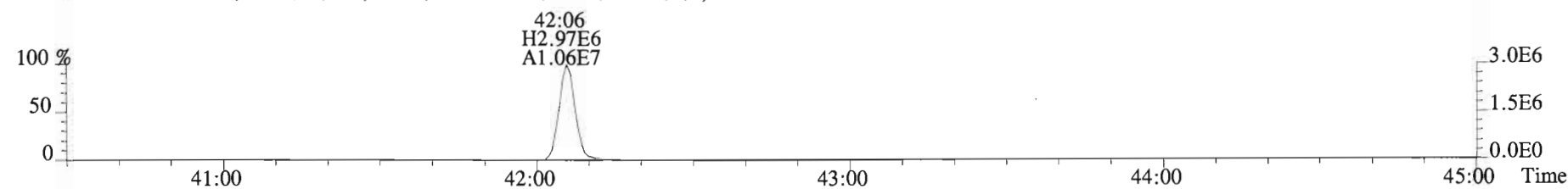
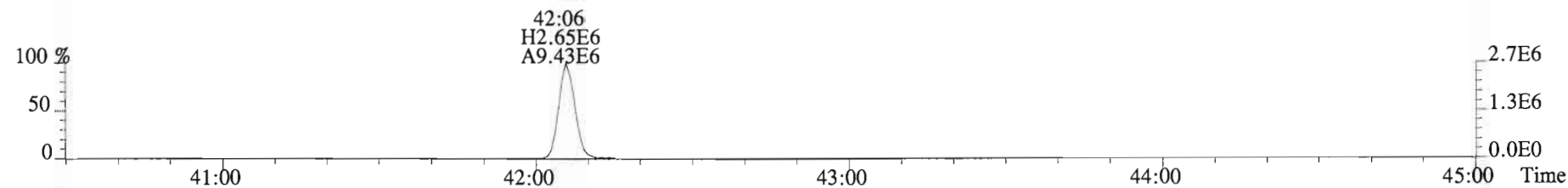
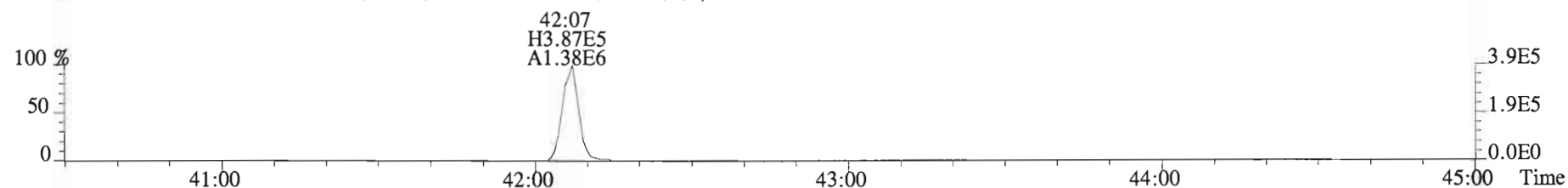
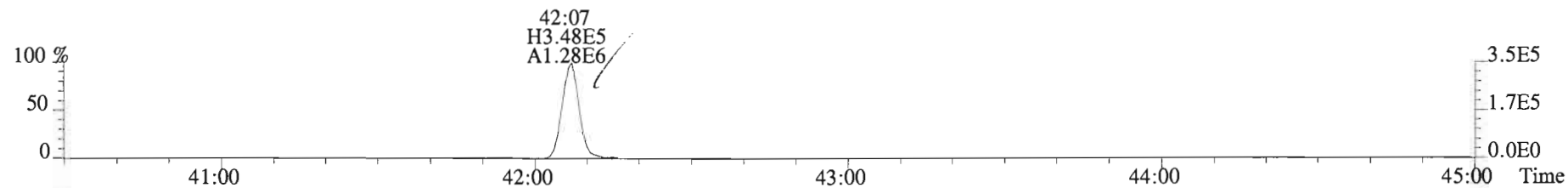
File:150204D1 #1-326 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:150204D1 #1-326 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-13-20141216-S 19.05 Exp:OCDD_DB5
407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:150204D1 #1-388 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: DS-CB-H1-20141216-S
Lab ID: 1400970-04

Filename: 150204D1 S:9 Acq: 4-FEB-15 15:30:59
GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol:10.011

ConCal: ST150204D2-1
EndCAL: NA *4D1 W*

Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	2.01e+05	0.66 y	1.17	26:57	1.001	3.7190		*	2.5	*	Total Tetra-Dioxins	38.9	39.3	*	*	
1,2,3,7,8-PeCDD	6.22e+05	0.60 y	0.91	31:24	1.000	15.345		*	2.5	*	Total Penta-Dioxins	108	108	*	*	
1,2,3,4,7,8-HxCDD	7.04e+05	1.22 y	1.08	34:43	1.000	23.120		*	2.5	*	Total Hexa-Dioxins	416	416	*	*	
1,2,3,6,7,8-HxCDD	1.37e+06	1.26 y	1.06	34:50	1.000	45.662		*	2.5	*	Total Hepta-Dioxins	1860	1860	*	*	
1,2,3,7,8,9-HxCDD	1.09e+06	1.23 y	0.93	35:07	1.000	37.037		*	2.5	*	Total Tetra-Furans	242	244	*	*	
1,2,3,4,6,7,8-HpCDD	2.34e+07	1.01 y	1.10	38:33	1.000	925.16		*	2.5	*	Total Penta-Furans	506.92	509.25	*	*	
OCDD	1.77e+08	0.88 y	0.95	41:53	1.000	10258		*	2.5	*	Total Hexa-Furans	434	438	*	*	
											Total Hepta-Furans	364	364	*	*	
2,3,7,8-TCDF	5.12e+05	0.78 y	1.07	26:11	1.001	7.8135	<i>6.91</i>	*	2.5	*						
1,2,3,7,8-PeCDF	3.14e+05	1.62 y	1.07	30:14	1.000	4.6557		*	2.5	*						
2,3,4,7,8-PeCDF	5.44e+05	1.55 y	1.03	31:07	1.000	9.8920		*	2.5	*						
1,2,3,4,7,8-HxCDF	7.79e+05	1.33 y	1.38	33:49	1.000	14.369		*	2.5	*						
1,2,3,6,7,8-HxCDF	8.47e+05	1.27 y	1.26	33:57	1.000	15.987		*	2.5	*						
2,3,4,6,7,8-HxCDF	1.10e+06	1.31 y	1.29	34:33	1.000	26.515		*	2.5	*						
1,2,3,7,8,9-HxCDF	1.84e+05	1.27 y	1.19	35:33	1.001	4.9445		*	2.5	*						
1,2,3,4,6,7,8-HpCDF	6.23e+06	1.08 y	1.61	37:22	1.001	150.54		*	2.5	*						
1,2,3,4,7,8,9-HpCDF	3.33e+05	1.04 y	1.53	39:07	1.000	9.2575		*	2.5	*						
OCDF	5.33e+06	0.92 y	1.10	42:07	1.000	246.15		*	2.5	*						
											Rec	Qual				
IS 13C-2,3,7,8-TCDD	9.24e+06	0.78 y	1.06	26:56	1.021	106.13					53.1					
IS 13C-1,2,3,7,8-PeCDD	8.91e+06	0.62 y	1.18	31:24	1.190	92.181					46.1					
IS 13C-1,2,3,4,7,8-HxCDD	5.64e+06	1.27 y	0.72	34:42	1.014	77.174					38.6					
IS 13C-1,2,3,6,7,8-HxCDD	5.62e+06	1.27 y	0.74	34:49	1.017	75.165					37.6					
IS 13C-1,2,3,7,8,9-HxCDD	6.34e+06	1.28 y	0.85	35:07	1.026	73.237					36.7					
IS 13C-1,2,3,4,6,7,8-HpCDD	4.57e+06	1.07 y	0.65	38:33	1.126	68.998					34.5					
IS 13C-OCDD	7.29e+06	0.89 y	0.76	41:52	1.223	94.006					23.5					
IS 13C-2,3,7,8-TCDF	1.22e+07	0.77 y	0.92	26:10	0.992	104.05					52.1					
IS 13C-1,2,3,7,8-PeCDF	1.25e+07	1.63 y	0.92	30:14	1.146	106.34					53.2					
IS 13C-2,3,4,7,8-PeCDF	1.06e+07	1.63 y	0.93	31:07	1.180	89.230					44.7					
IS 13C-1,2,3,4,7,8-HxCDF	7.83e+06	0.51 y	0.98	33:49	0.988	78.665					39.4					
IS 13C-1,2,3,6,7,8-HxCDF	8.42e+06	0.50 y	1.08	33:56	0.991	76.622					38.4					
IS 13C-2,3,4,6,7,8-HxCDF	6.42e+06	0.53 y	1.03	34:32	1.009	61.730					30.9					
IS 13C-1,2,3,7,8,9-HxCDF	6.26e+06	0.52 y	0.86	35:30	1.037	71.685					35.9					
IS 13C-1,2,3,4,6,7,8-HpCDF	5.13e+06	0.42 y	0.72	37:21	1.091	70.001					35.0					
IS 13C-1,2,3,4,7,8,9-HpCDF	4.71e+06	0.44 y	0.70	39:06	1.142	66.553					33.3					
IS 13C-OCDF	7.89e+06	0.87 y	0.85	42:06	1.230	91.536					22.9					
C/Up 37Cl-2,3,7,8-TCDD	4.35e+06		1.12	26:57	1.022	47.437					59.4					
RS/RT 13C-1,2,3,4-TCDD	1.64e+07	0.79 y	1.00	26:23	*	199.78						Integrations	Reviewed			
RS 13C-1,2,3,4-TCDF	2.56e+07	0.77 y	1.00	24:58	*	199.78						by	by			
RS/RT 13C-1,2,3,4,6,9-HxCDF	2.03e+07	0.52 y	1.00	34:14	*	199.78						Analyst: <i>[Signature]</i>	Analyst: <i>CI</i>			
												Date: <i>2/7/15</i>	Date: <i>2/9/15</i>			

Totals class: TCDD EMPC

Entry #: 19

Run: 11 File: 150204D1 S: 9 I: 1 F: 1
 Acquired: 4-FEB-15 15:30:59 Processed: 7-FEB-15 13:04:00

Total Concentration: 39.328

Unnamed Concentration: 35.609

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
23:37	2.073e+05	2.919e+05	0.71	y	4.992e+05	9.2146	
23:57	1.376e+05	1.785e+05	0.77	y	3.161e+05	5.8351	
24:23	3.901e+04	4.720e+04	0.83	y	8.622e+04	1.5914	
25:06	1.037e+04	1.646e+04	0.63	n	2.383e+04	0.43989	
25:19	7.670e+04	1.027e+05	0.75	y	1.794e+05	3.3113	
25:29	1.049e+05	1.366e+05	0.77	y	2.415e+05	4.4572	
25:40	3.174e+04	4.184e+04	0.76	y	7.358e+04	1.3581	
25:53	2.095e+04	2.532e+04	0.83	y	4.626e+04	0.85398	
26:03	3.863e+04	4.561e+04	0.85	y	8.424e+04	1.5549	
26:22	4.186e+04	6.328e+04	0.66	y	1.051e+05	1.9407	
26:42	5.593e+04	7.442e+04	0.75	y	1.303e+05	2.4061	
26:49	7.894e+03	1.151e+04	0.69	y	1.940e+04	0.35816	
26:57	7.986e+04	1.216e+05	0.66	y	2.015e+05	3.7190	2,3,7,8-TCDD
27:14	4.953e+04	5.817e+04	0.85	y	1.077e+05	1.9880	
27:21	6.642e+03	9.599e+03	0.69	y	1.624e+04	0.29978	

Totals class: PeCDD EMPC

Entry #: 21

Run: 11 File: 150204D1 S: 9 I: 1 F: 2
 Acquired: 4-FEB-15 15:30:59 Processed: 7-FEB-15 13:04:00

Total Concentration: 107.87

Unnamed Concentration: 92.528

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
29:22	3.684e+05	6.391e+05	0.58	y	1.008e+06	24.848
29:49	6.772e+04	1.232e+05	0.55	y	1.910e+05	4.7098
30:15	1.956e+05	3.044e+05	0.64	y	5.000e+05	12.331
30:25	2.998e+05	4.997e+05	0.60	y	7.995e+05	19.718
30:30	1.651e+05	2.629e+05	0.63	y	4.281e+05	10.557
30:43	1.722e+05	2.874e+05	0.60	y	4.596e+05	11.334
31:01	5.464e+04	8.701e+04	0.63	y	1.416e+05	3.4934
31:24	2.324e+05	3.898e+05	0.60	y	6.222e+05	15.345
31:29	3.369e+04	5.860e+04	0.58	y	9.229e+04	2.2761
31:46	4.783e+04	8.439e+04	0.57	y	1.322e+05	3.2608

1, 2, 3, 7, 8-PeCDD

Totals class: HxCDD EMPC

Entry #: 23

Run: 11 File: 150204D1 S: 9 I: 1 F: 3
 Acquired: 4-FEB-15 15:30:59 Processed: 7-FEB-15 13:04:00

Total Concentration: 415.75

Unnamed Concentration: 309.927

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
33:10	1.690e+06	1.350e+06	1.25	y	3.040e+06	101.60
33:44	5.367e+05	4.463e+05	1.20	y	9.829e+05	32.845
34:00	2.581e+06	2.114e+06	1.22	y	4.694e+06	156.86
34:08	1.450e+05	1.208e+05	1.20	y	2.658e+05	8.8823
34:43	3.873e+05	3.162e+05	1.22	y	7.035e+05	23.120
34:50	7.616e+05	6.045e+05	1.26	y	1.366e+06	45.662
35:01	1.623e+05	1.292e+05	1.26	y	2.915e+05	9.7415
35:07	6.046e+05	4.899e+05	1.23	y	1.094e+06	37.037
						1,2,3,4,7,8-HxCDD
						1,2,3,6,7,8-HxCDD
						1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 11 File: 150204D1 S: 9 I: 1 F: 4
Acquired: 4-FEB-15 15:30:59 Processed: 7-FEB-15 13:04:00

Total Concentration: 1864.1 Unnamed Concentration: 938.920

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:44	1.199e+07	1.176e+07	1.02 y	2.375e+07	938.92
38:33	1.174e+07	1.166e+07	1.01 y	2.340e+07	925.16

1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 11 File: 150204D1 S: 9 I: 1 F: 1
 Acquired: 4-FEB-15 15:30:59 Processed: 7-FEB-15 13:04:00

Total Concentration: 243.89 Unnamed Concentration: 236.074

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
21:31	7.731e+04	1.040e+05	0.74	y	1.813e+05	2.7659	
22:05	2.095e+05	2.651e+05	0.79	y	4.746e+05	7.2389	
22:43	1.731e+06	2.213e+06	0.78	y	3.944e+06	60.162	
23:13	3.423e+05	4.492e+05	0.76	y	7.915e+05	12.073	
23:36	7.290e+05	9.673e+05	0.75	y	1.696e+06	25.875	
24:00	1.017e+06	1.320e+06	0.77	y	2.337e+06	35.648	
24:08	1.159e+05	1.367e+05	0.85	y	2.526e+05	3.8525	
24:17	1.458e+05	2.168e+05	0.67	y	3.627e+05	5.5320	
24:38	6.384e+04	8.071e+04	0.79	y	1.446e+05	2.2049	
24:45	1.085e+05	1.325e+05	0.82	y	2.410e+05	3.6756	
24:52	1.039e+06	1.302e+06	0.80	y	2.341e+06	35.711	
25:00	2.138e+05	2.685e+05	0.80	y	4.823e+05	7.3564	
25:24	2.455e+05	3.371e+05	0.73	y	5.827e+05	8.8874	
25:38	1.068e+05	1.420e+05	0.75	y	2.488e+05	3.7950	
25:49	6.105e+04	7.570e+04	0.81	y	1.368e+05	2.0859	
26:00	6.945e+04	6.902e+04	1.01	n	1.222e+05	1.8635	
26:05	7.165e+04	8.664e+04	0.83	y	1.583e+05	2.4144	
26:11	2.248e+05	2.875e+05	0.78	y	5.123e+05	7.8135	2,3,7,8-TCDF
26:31	3.172e+05	4.160e+05	0.76	y	7.332e+05	11.183	
26:44	1.778e+04	1.870e+04	0.95	n	3.310e+04	0.50494	
27:29	1.645e+04	1.997e+04	0.82	y	3.642e+04	0.55551	
27:39	1.584e+04	2.088e+04	0.76	y	3.671e+04	0.55999	
27:56	5.914e+04	8.039e+04	0.74	y	1.395e+05	2.1283	

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 11 File: 150204D1 S: 9 I: 1 F: 1
Acquired: 4-FEB-15 15:30:59 Processed: 7-FEB-15 13:04:00

Total Concentration: 266.08 Unnamed Concentration: 266.079

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:55	9.827e+06	6.436e+06	1.53 y	1.626e+07	266.08

Totals class: PeCDF EMPC

Entry #: 31

Run: 11 File: 150204D1 S: 9 I: 1 F: 2
 Acquired: 4-FEB-15 15:30:59 Processed: 7-FEB-15 13:04:00

Total Concentration: 243.17

Unnamed Concentration: 228.621

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:13	4.705e+05	2.892e+05	1.63 y	7.597e+05	12.429
29:20	5.123e+06	3.188e+06	1.61 y	8.311e+06	135.97
29:52	1.351e+06	8.205e+05	1.65 y	2.171e+06	35.522
30:04	1.008e+05	5.588e+04	1.80 n	1.425e+05	2.3312
30:14	1.943e+05	1.199e+05	1.62 y	3.142e+05	4.6557
30:29	6.481e+05	3.983e+05	1.63 y	1.046e+06	17.120
31:02	1.292e+05	8.381e+04	1.54 y	2.131e+05	3.4857
31:07	3.309e+05	2.129e+05	1.55 y	5.438e+05	9.8920
31:10	8.219e+05	5.080e+05	1.62 y	1.330e+06	21.758

Totals class: HxCDF EMPC

Entry #: 33

Run: 11 File: 150204D1 S: 9 I: 1 F: 3
 Acquired: 4-FEB-15 15:30:59 Processed: 7-FEB-15 13:04:00

Total Concentration: 438.40 Unnamed Concentration: 376.587

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name	
32:38	1.252e+06	9.733e+05	1.29 y	2.225e+06	47.969	
32:48	5.213e+06	4.045e+06	1.29 y	9.258e+06	199.54	
33:09	1.030e+05	9.922e+04	1.04 n	1.860e+05	4.0092	
33:20	3.106e+06	2.408e+06	1.29 y	5.514e+06	118.85	
33:43	1.291e+05	1.043e+05	1.24 y	2.334e+05	5.0317	
33:49	4.442e+05	3.352e+05	1.33 y	7.794e+05	14.369	1,2,3,4,7,8-HxCDF
33:57	4.742e+05	3.728e+05	1.27 y	8.470e+05	15.987	1,2,3,6,7,8-HxCDF
34:14	2.877e+04	2.597e+04	1.11 y	5.474e+04	1.1799	
34:33	6.227e+05	4.769e+05	1.31 y	1.100e+06	26.515	2,3,4,6,7,8-HxCDF
35:33	1.026e+05	8.106e+04	1.27 y	1.837e+05	4.9445	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

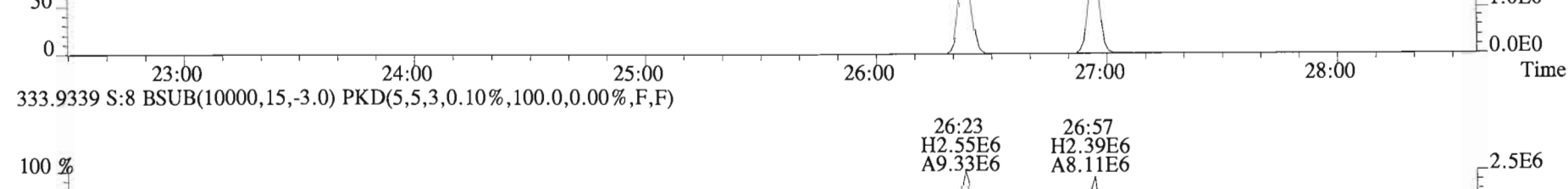
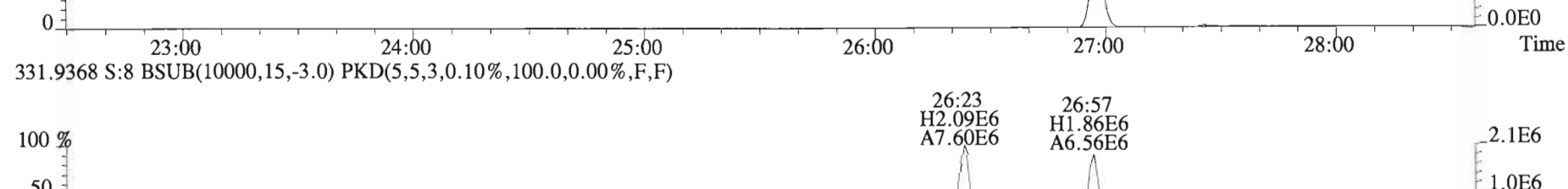
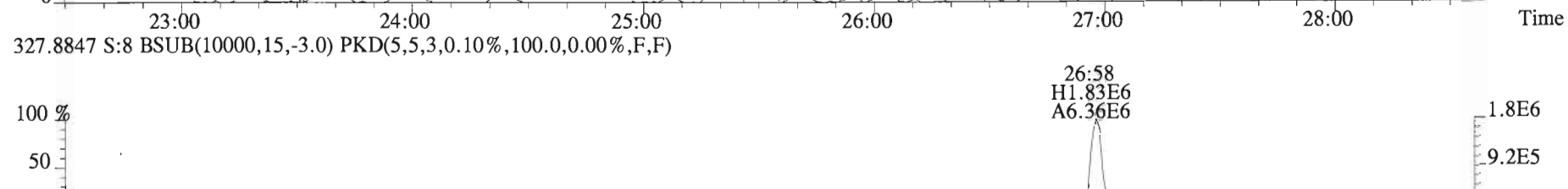
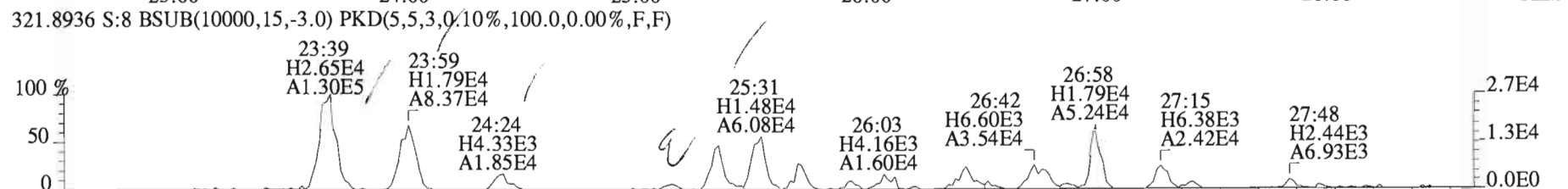
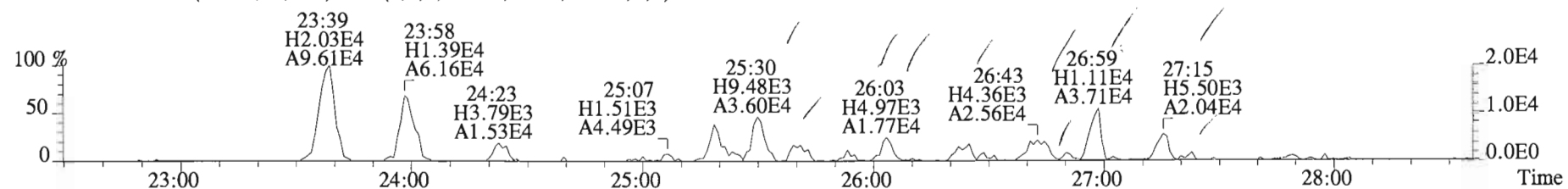
Entry #: 35

Run: 11 File: 150204D1 S: 9 I: 1 F: 4
Acquired: 4-FEB-15 15:30:59 Processed: 7-FEB-15 13:04:00

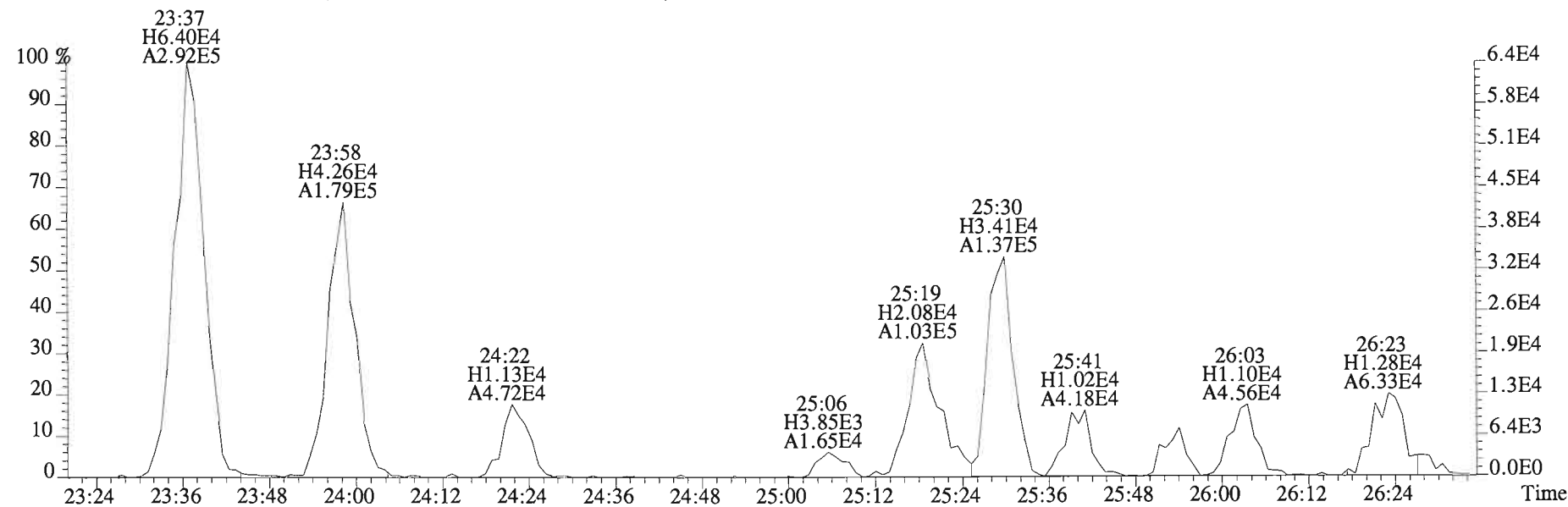
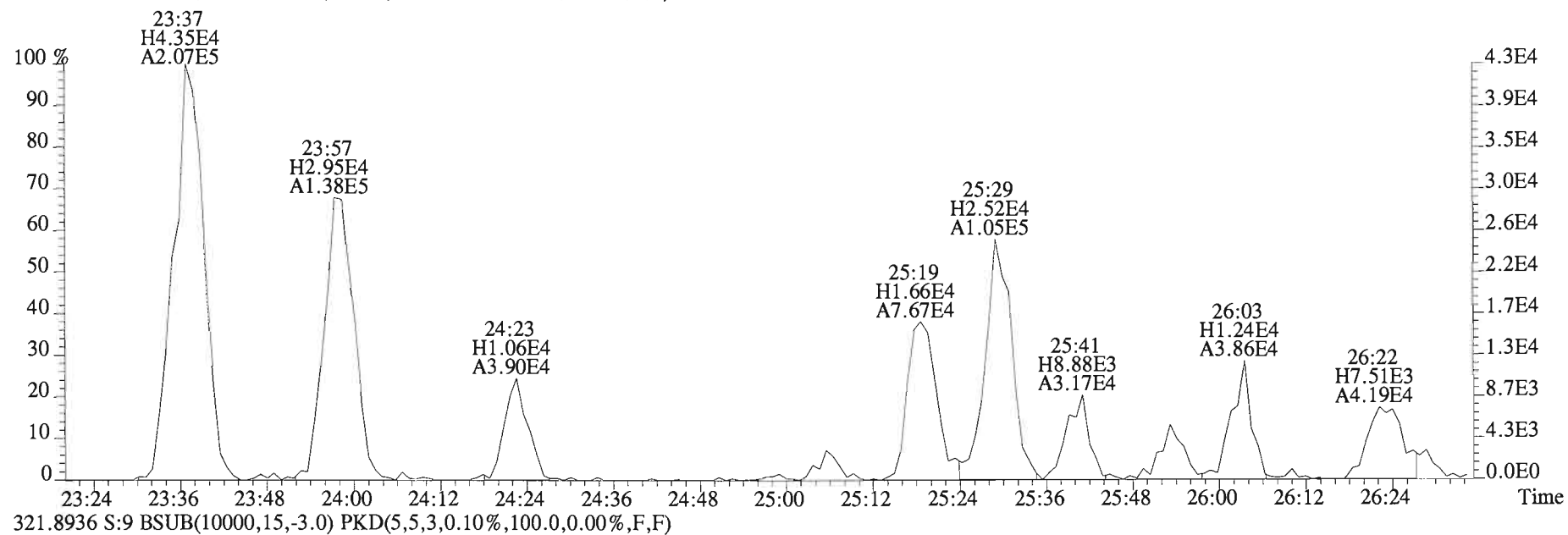
Total Concentration: 364.32 Unnamed Concentration: 204.520

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
37:22	3.237e+06	2.989e+06	1.08	y	6.226e+06	150.54	1,2,3,4,6,7,8-HpCDF
37:44	1.386e+05	1.170e+05	1.18	y	2.555e+05	6.6169	
37:55	3.979e+06	3.664e+06	1.09	y	7.642e+06	197.90	
39:07	1.700e+05	1.628e+05	1.04	y	3.328e+05	9.2575	1,2,3,4,7,8,9-HpCDF

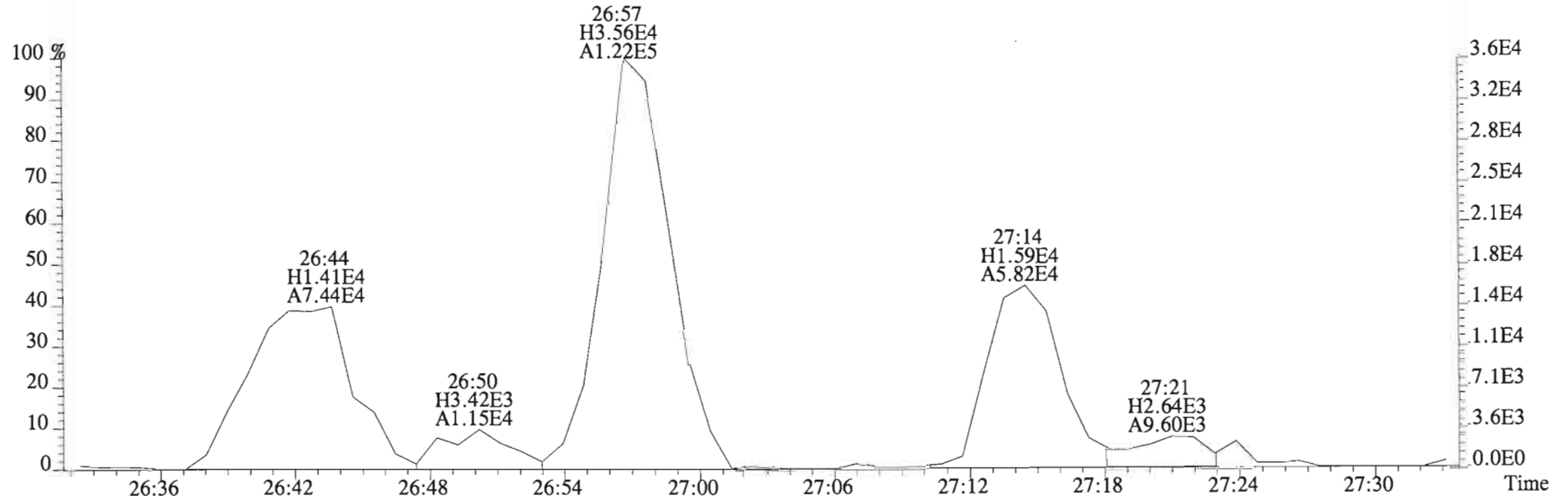
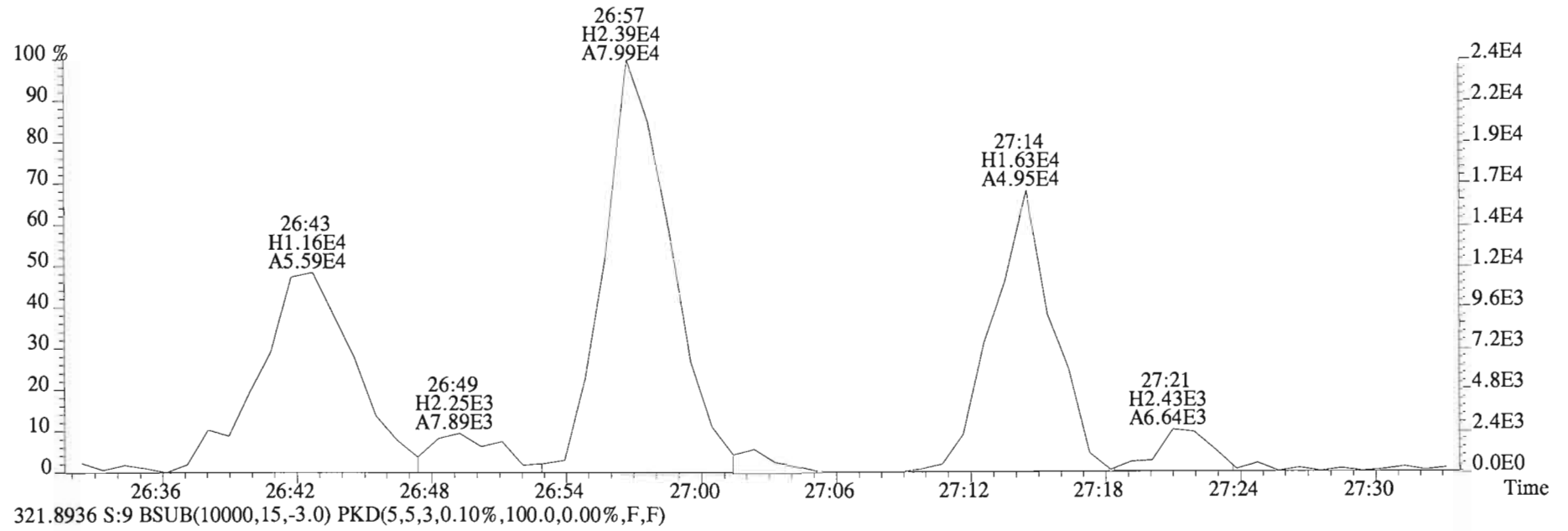
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



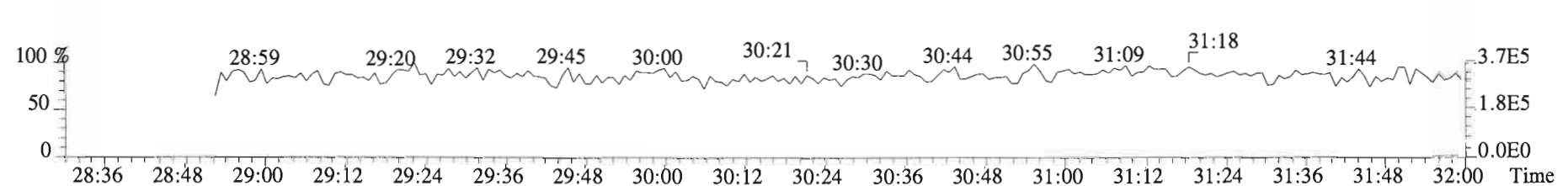
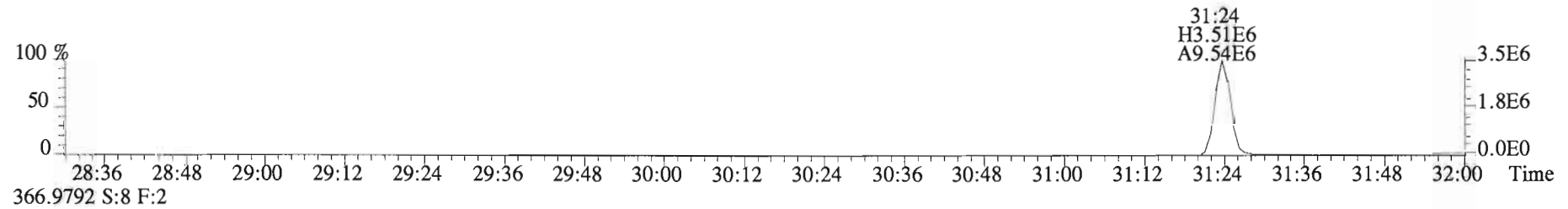
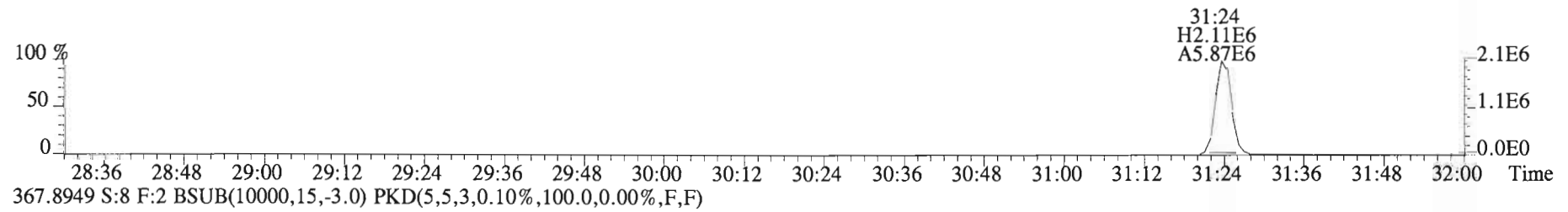
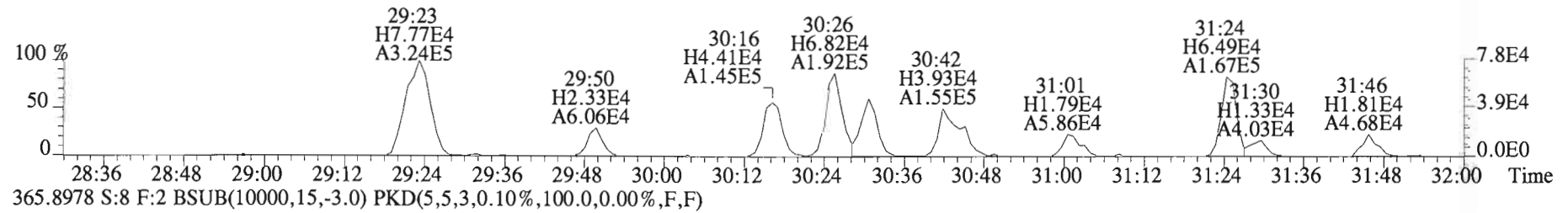
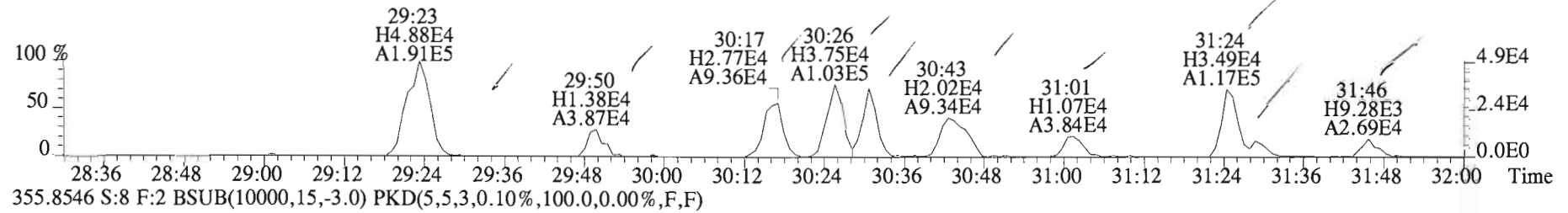
File:150204D1 #1-552 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
 319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



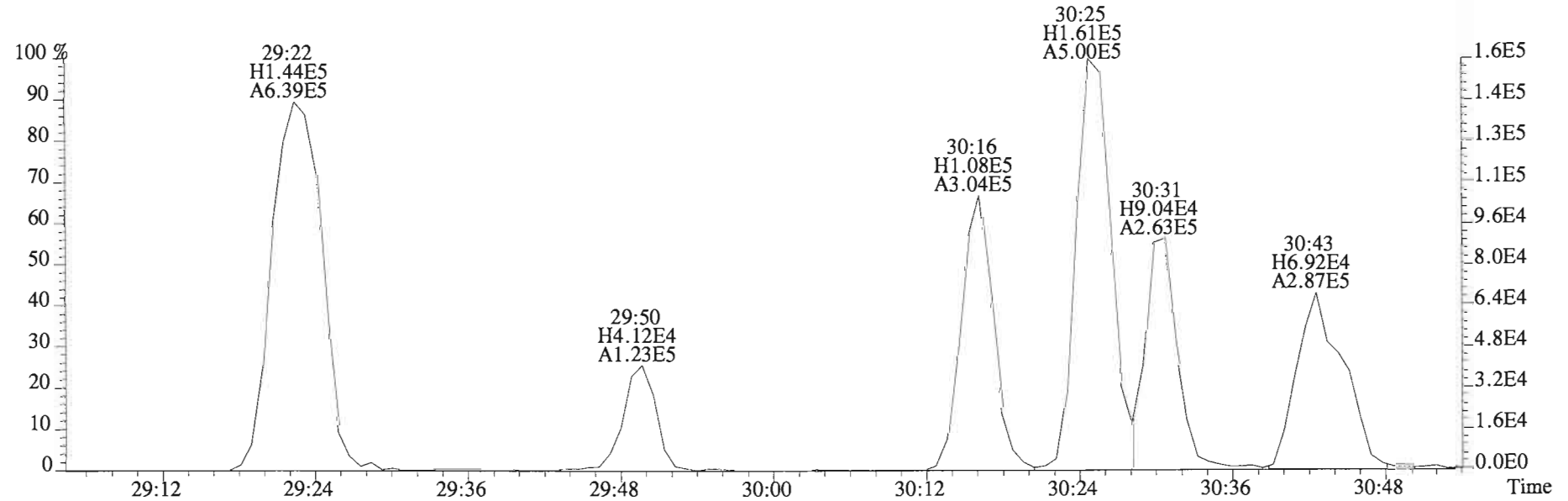
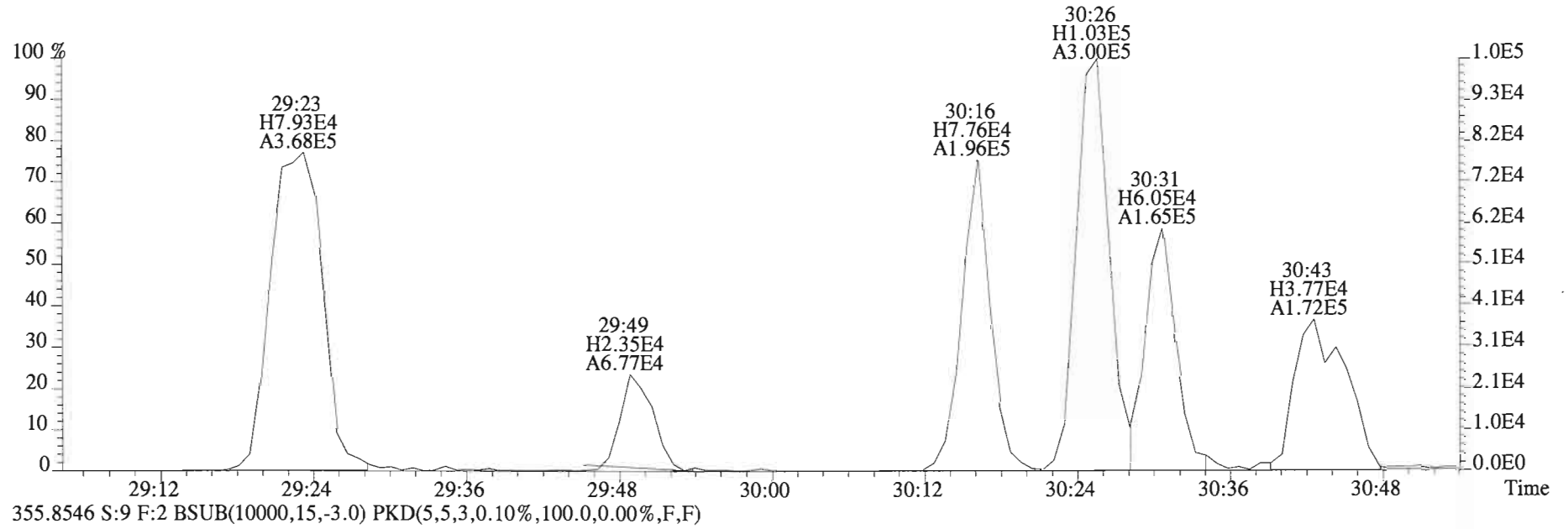
File:150204D1 #1-552 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text: Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



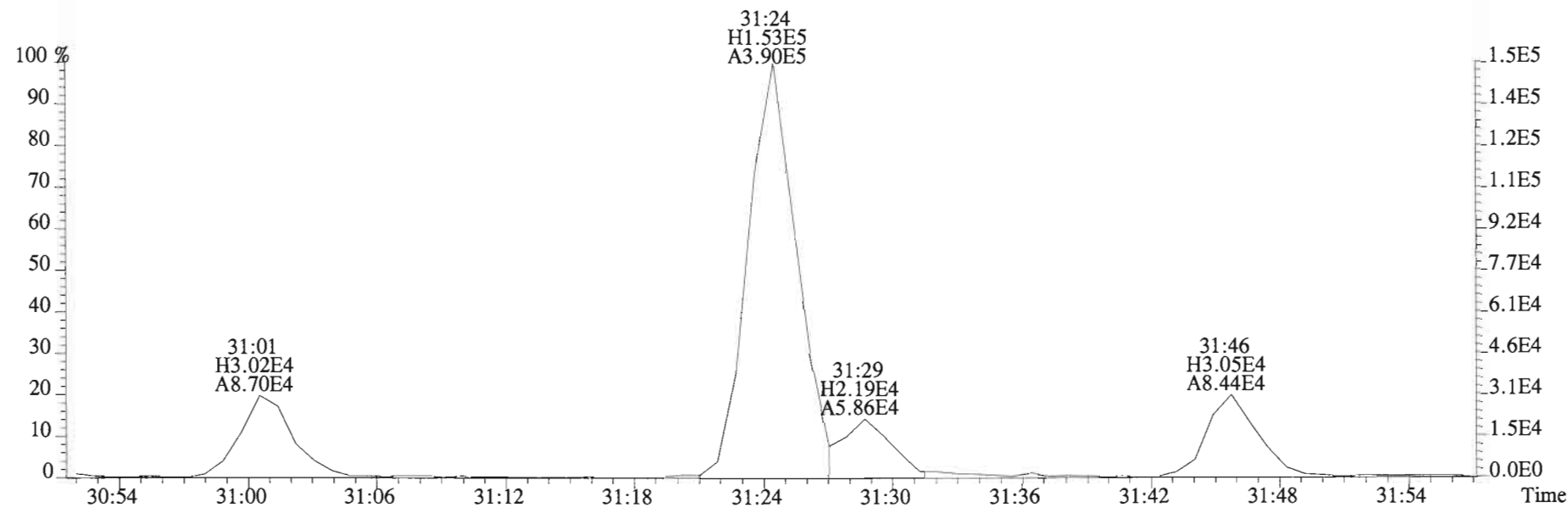
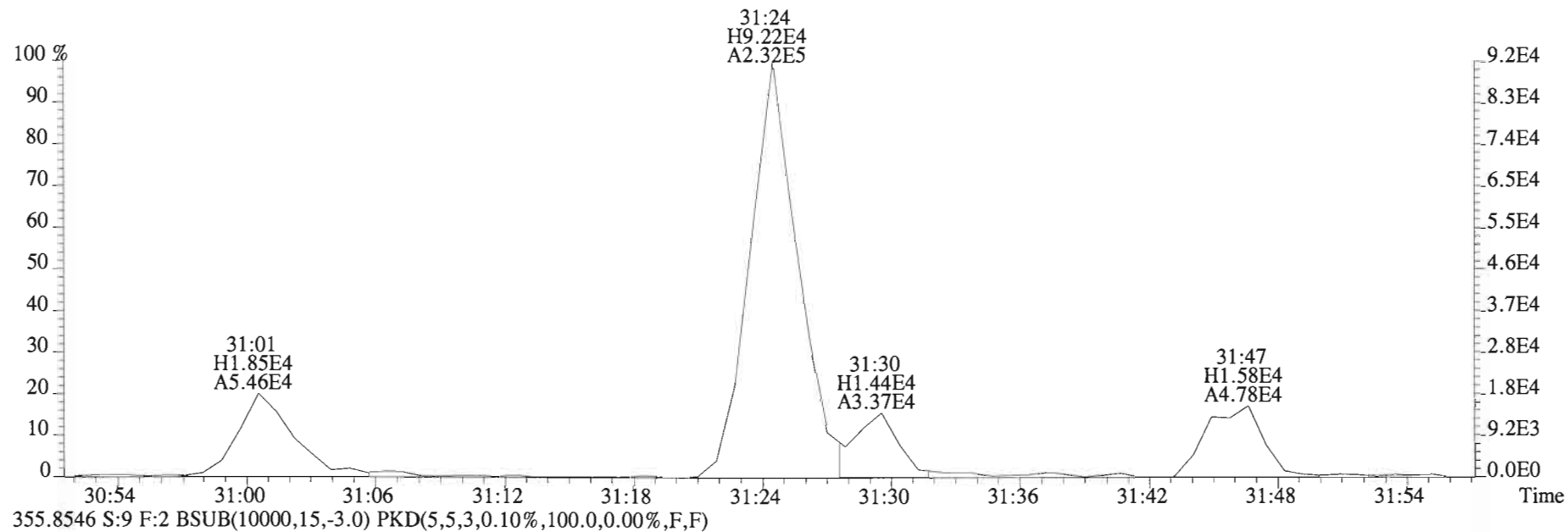
File:150204D1 #1-250 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



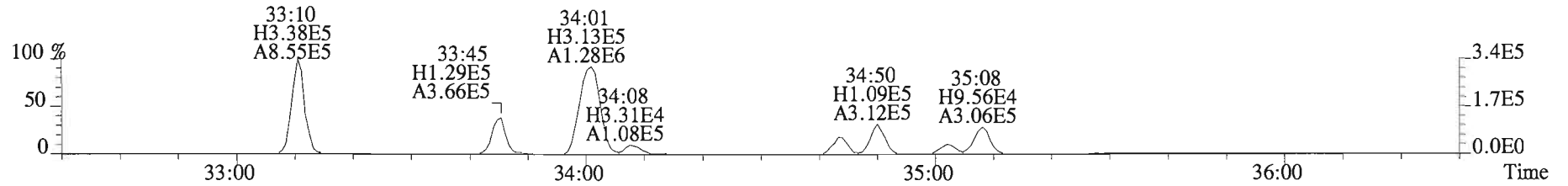
File:150204D1 #1-250 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
353.8576 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



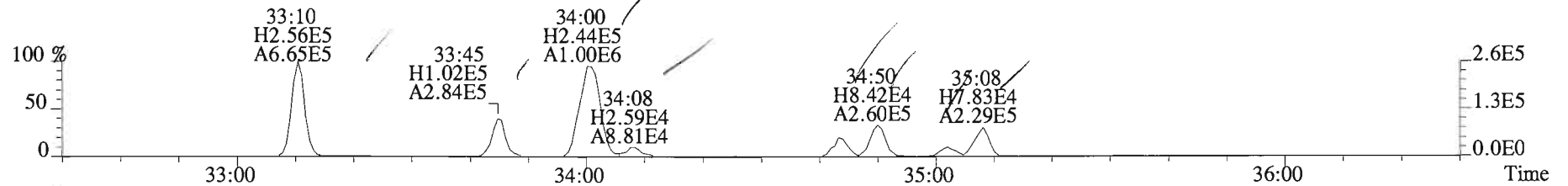
File:150204D1 #1-250 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
 353.8576 S:9 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



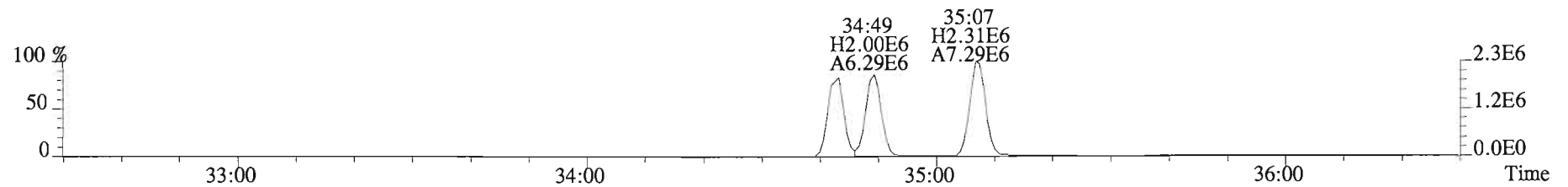
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
 389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



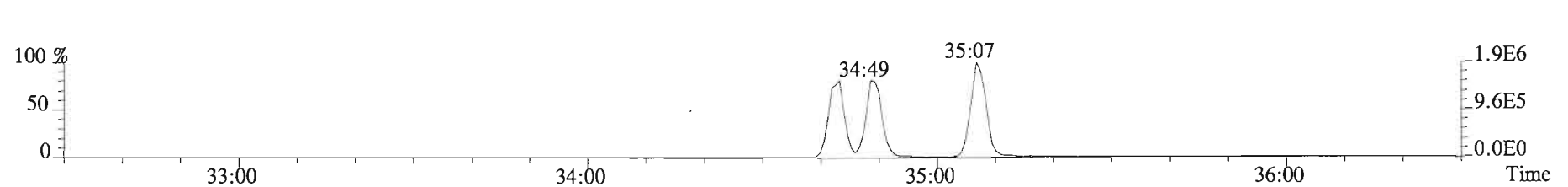
391.8127 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



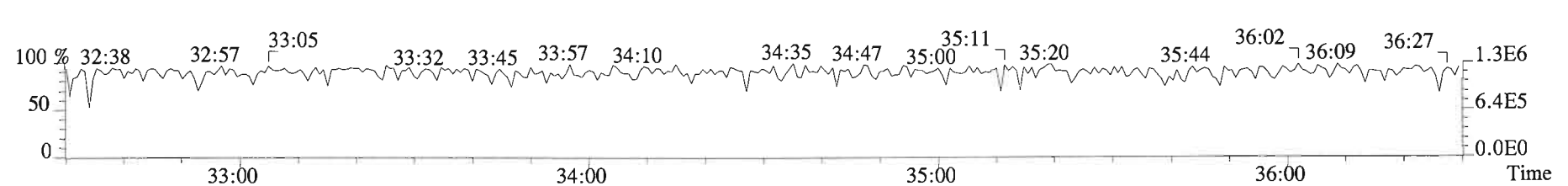
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



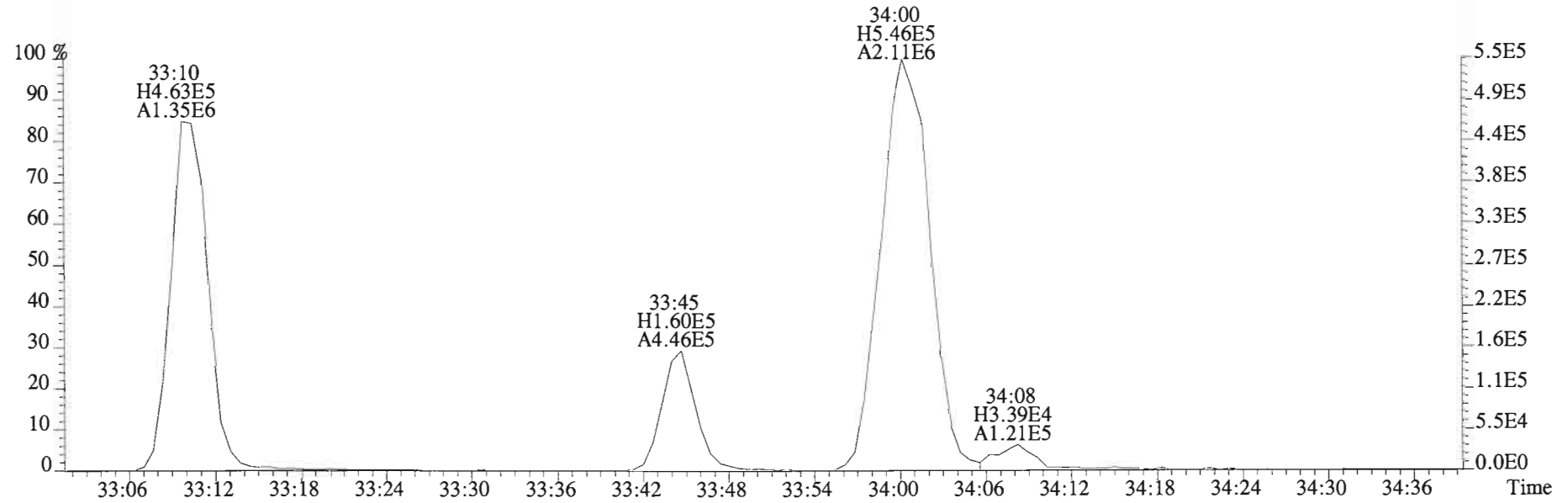
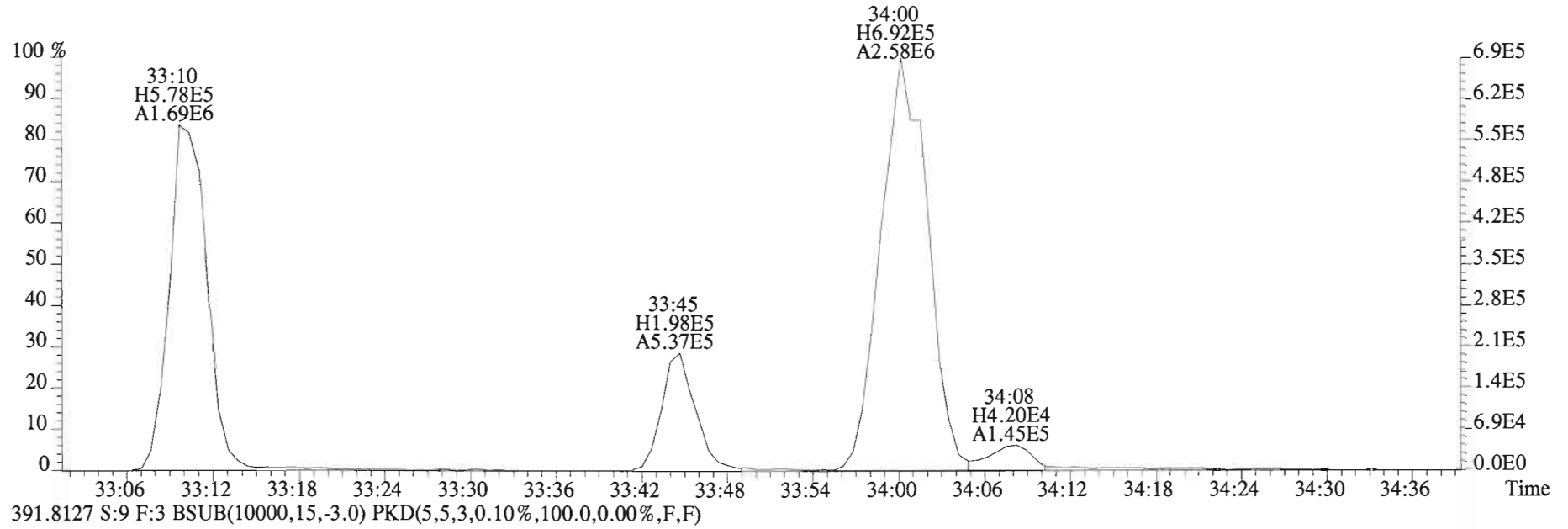
403.8530 S:8 F:3



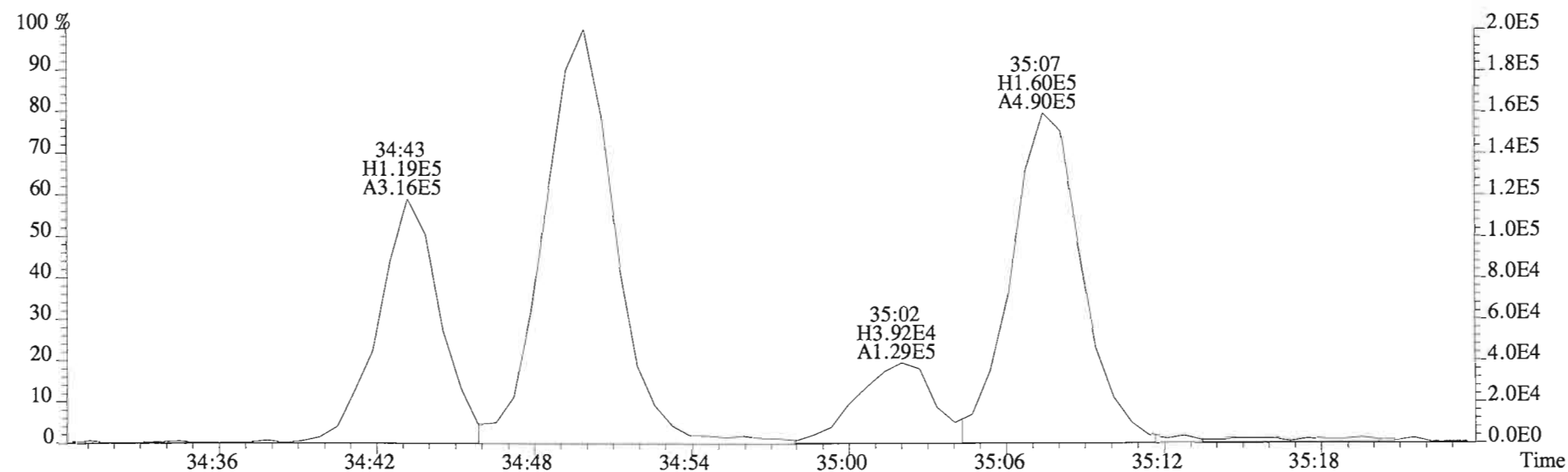
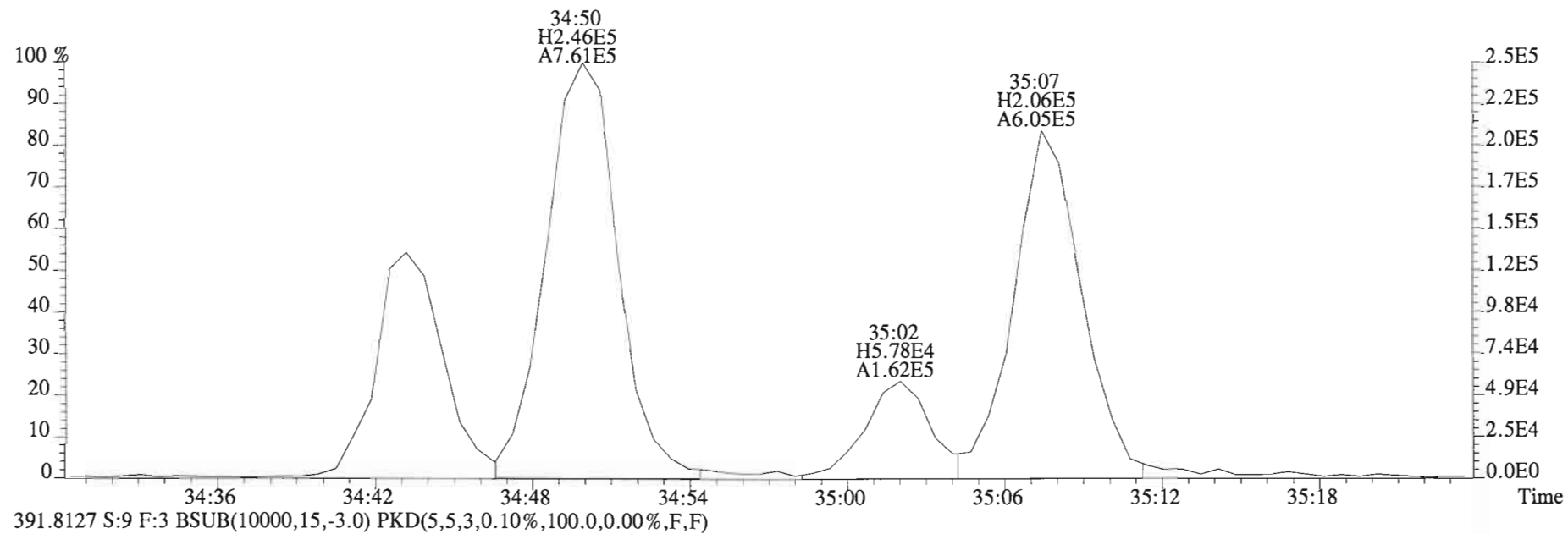
380.9760 S:8 F:3



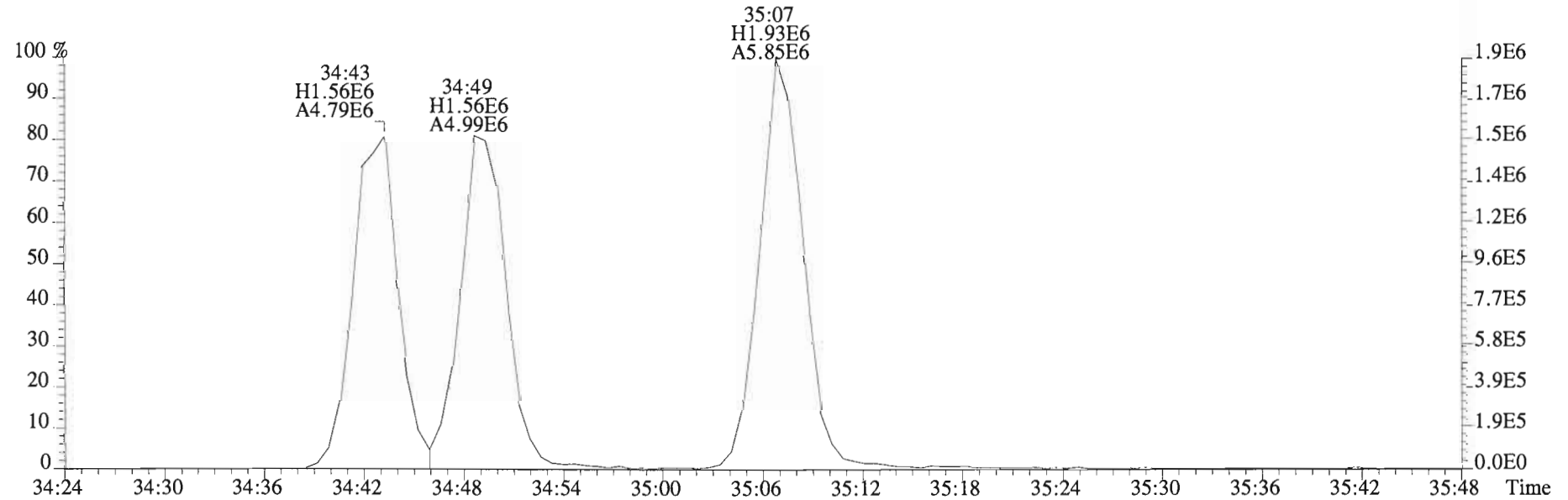
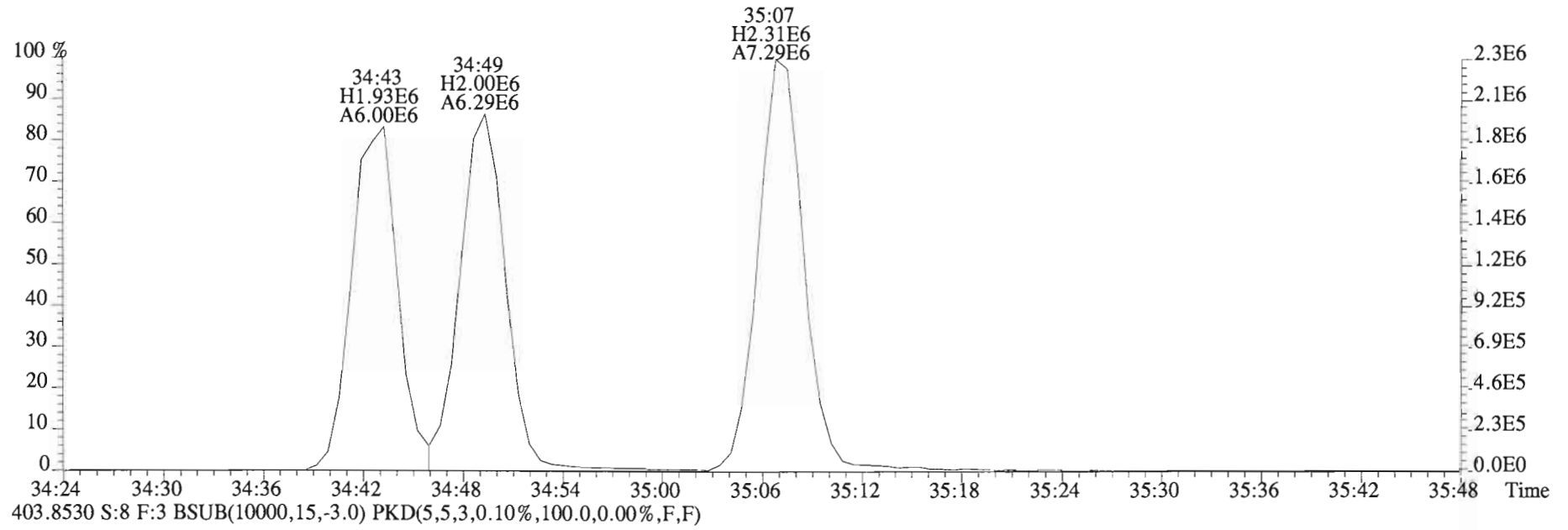
File:150204D1 #1-393 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



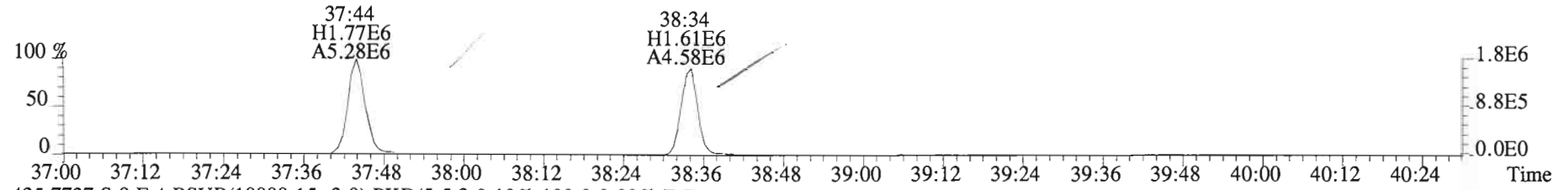
File:150204D1 #1-393 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



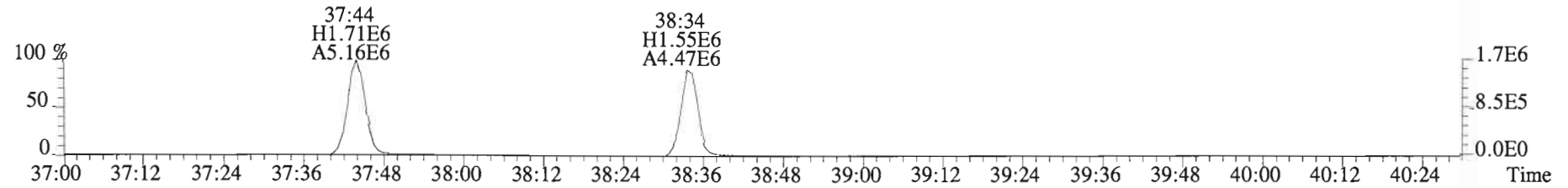
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



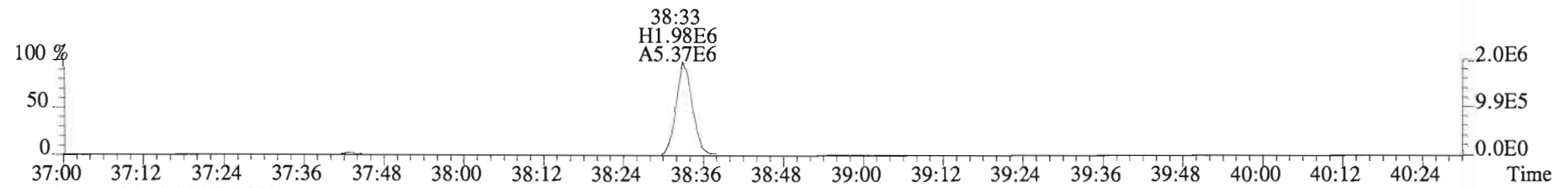
File:150204D1 #1-326 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



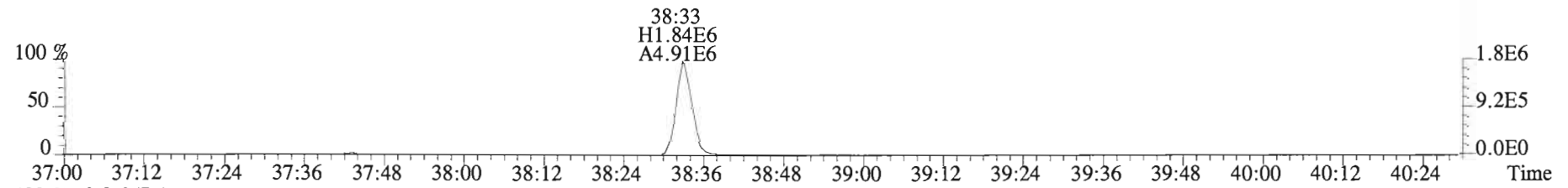
425.7737 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



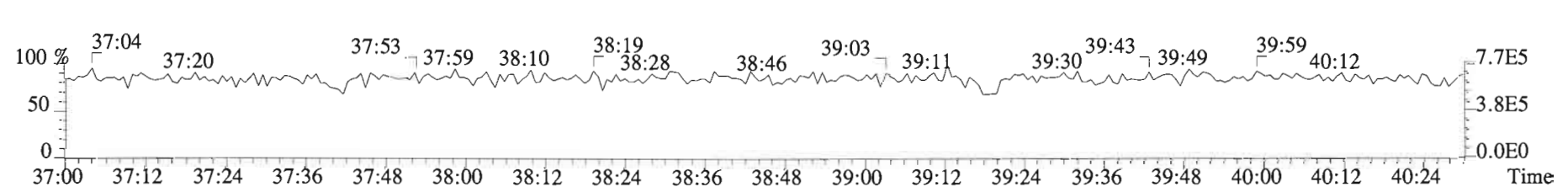
435.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



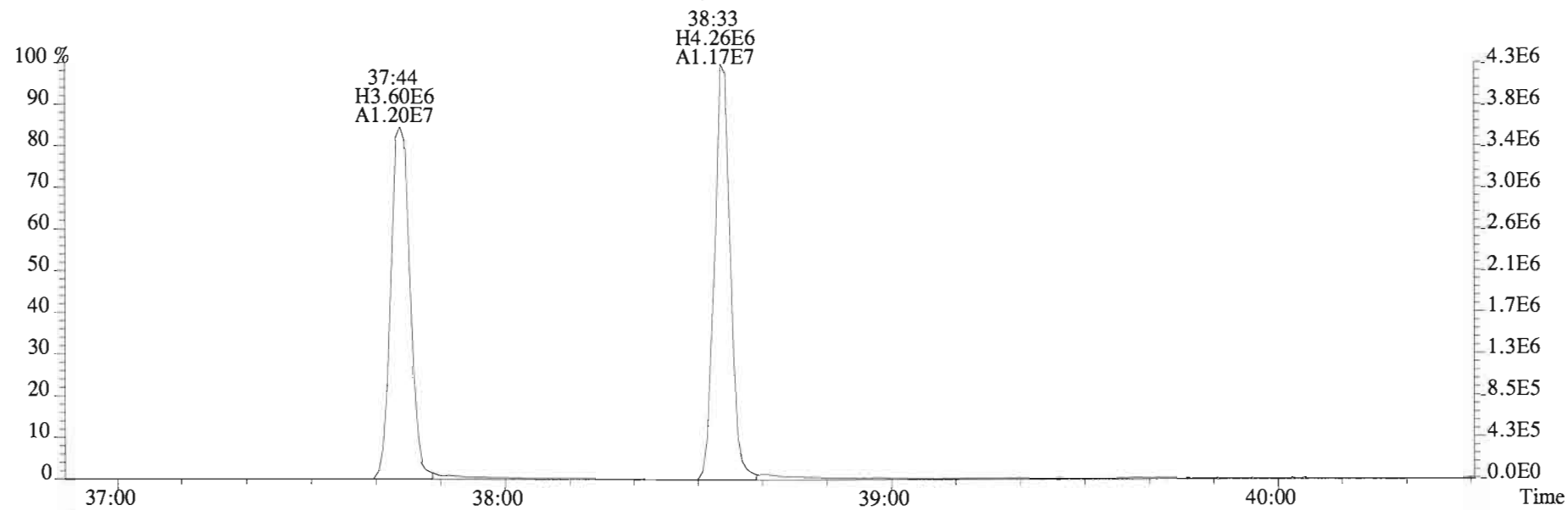
437.8140 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



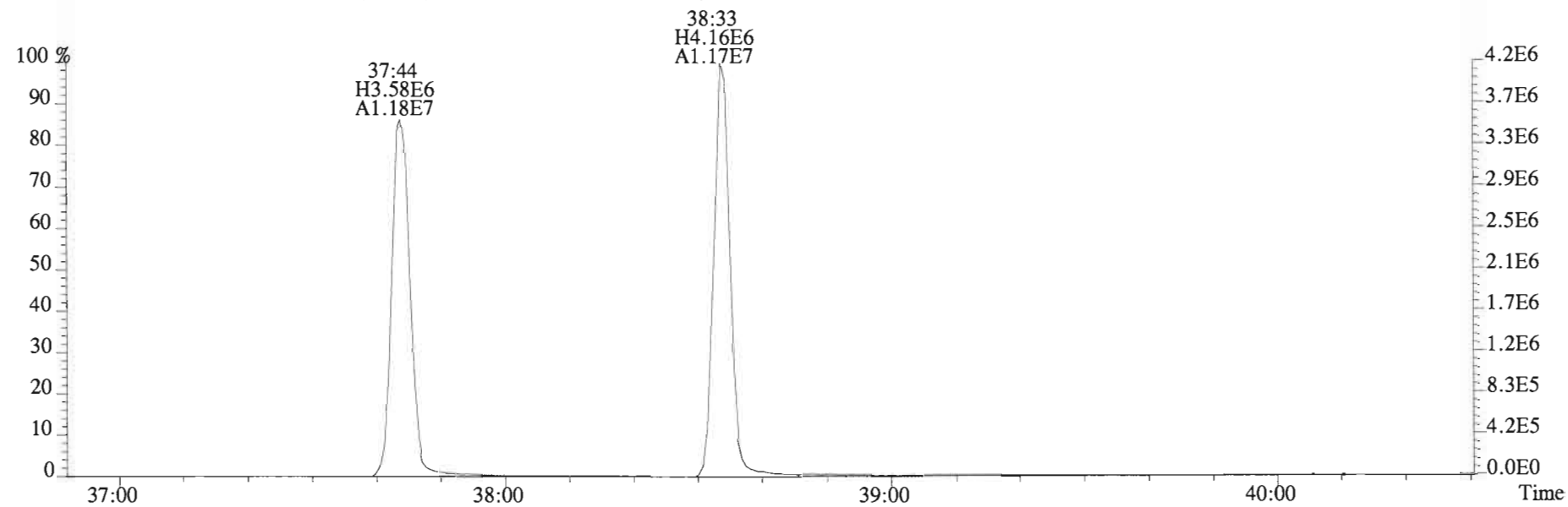
430.9728 S:8 F:4



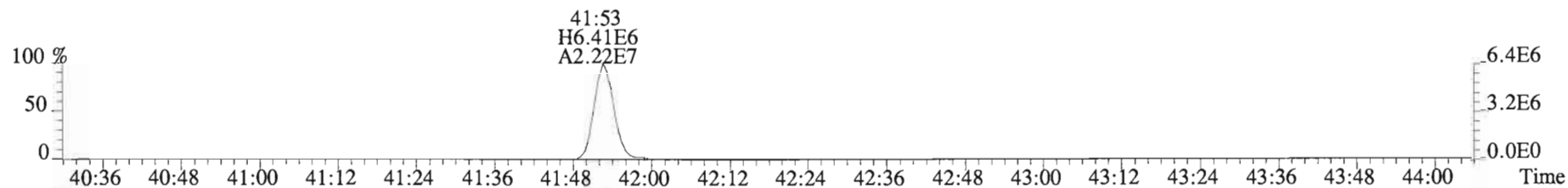
File:150204D1 #1-326 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
423.7767 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



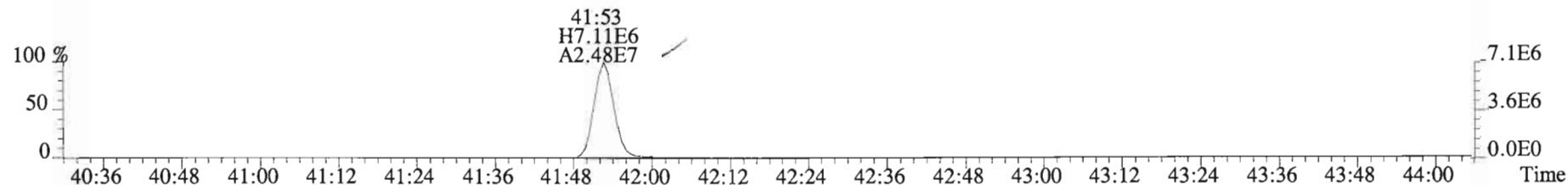
425.7737 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



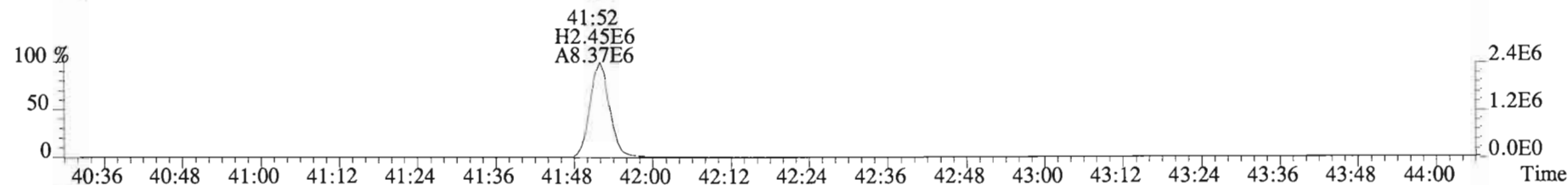
File:150204D1 #1-388 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



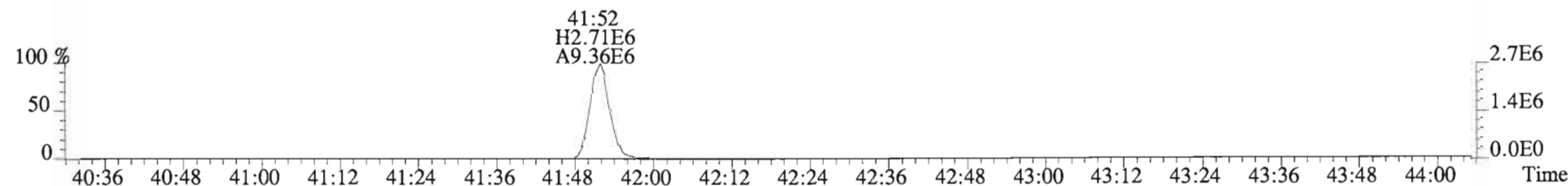
459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



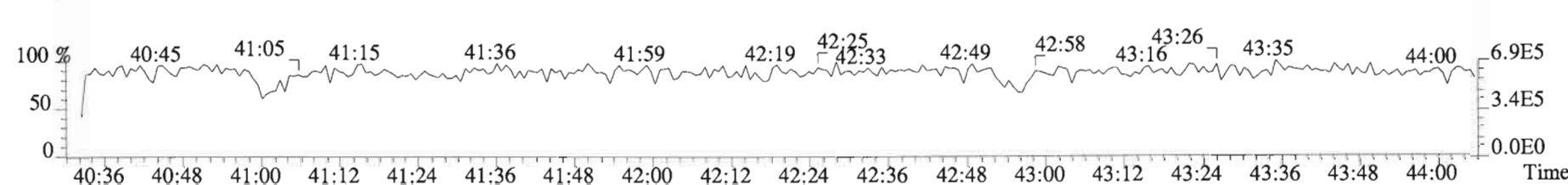
469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



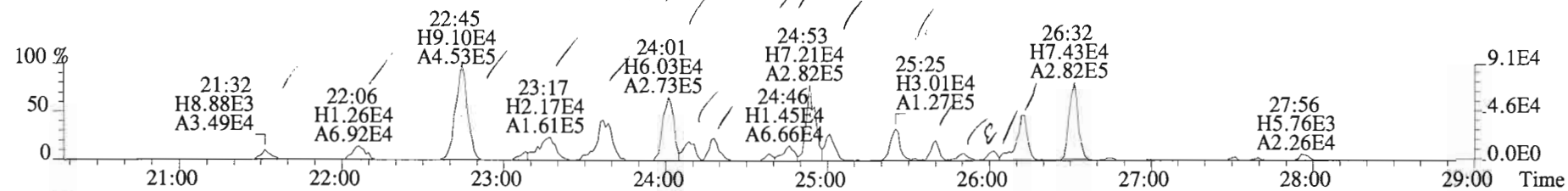
471.7750 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



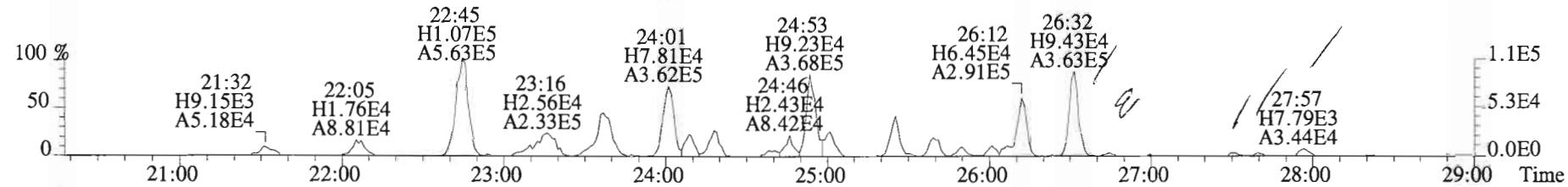
454.9728 S:8 F:5



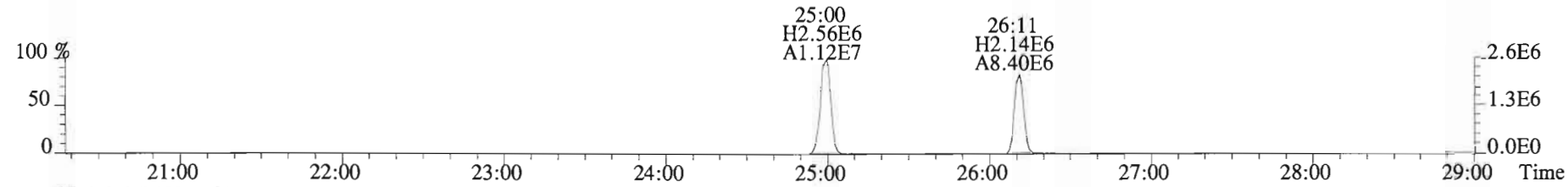
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



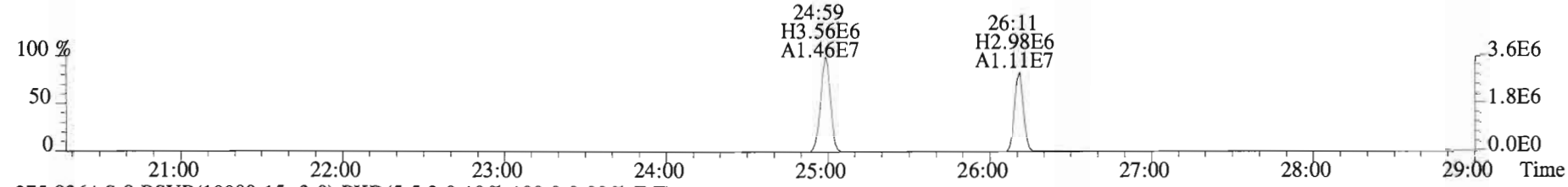
305.8987 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



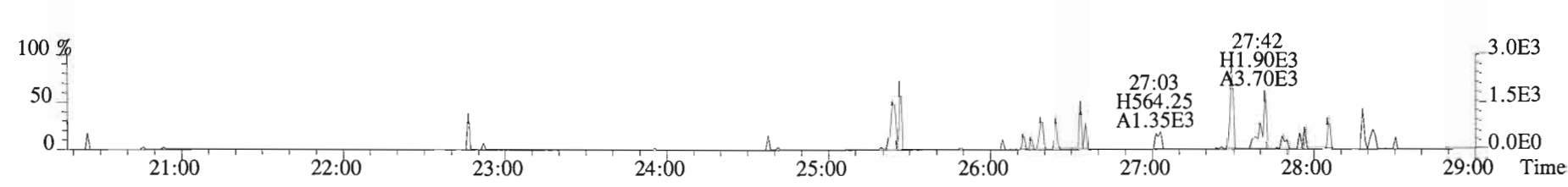
315.9419 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



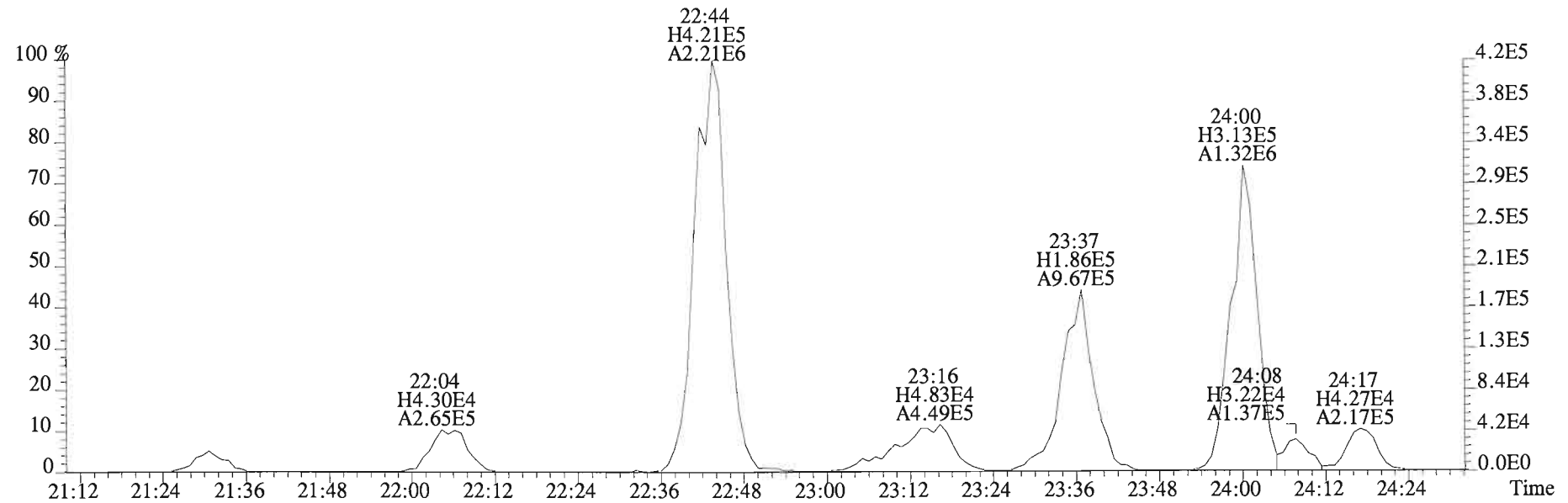
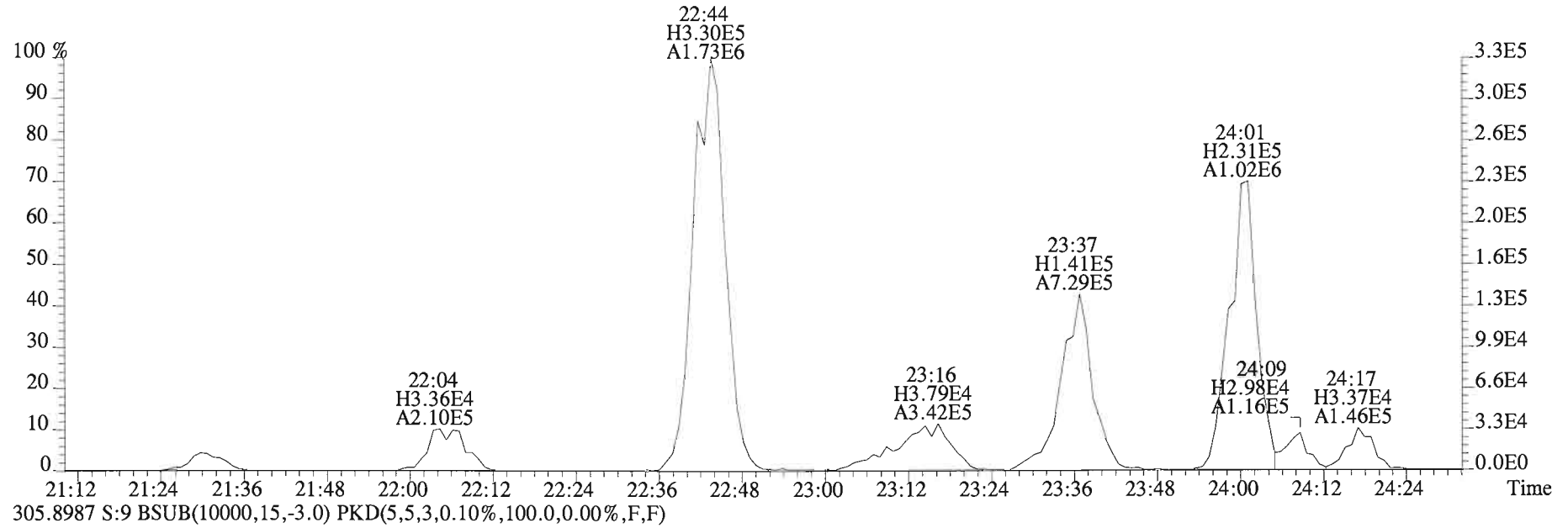
317.9389 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



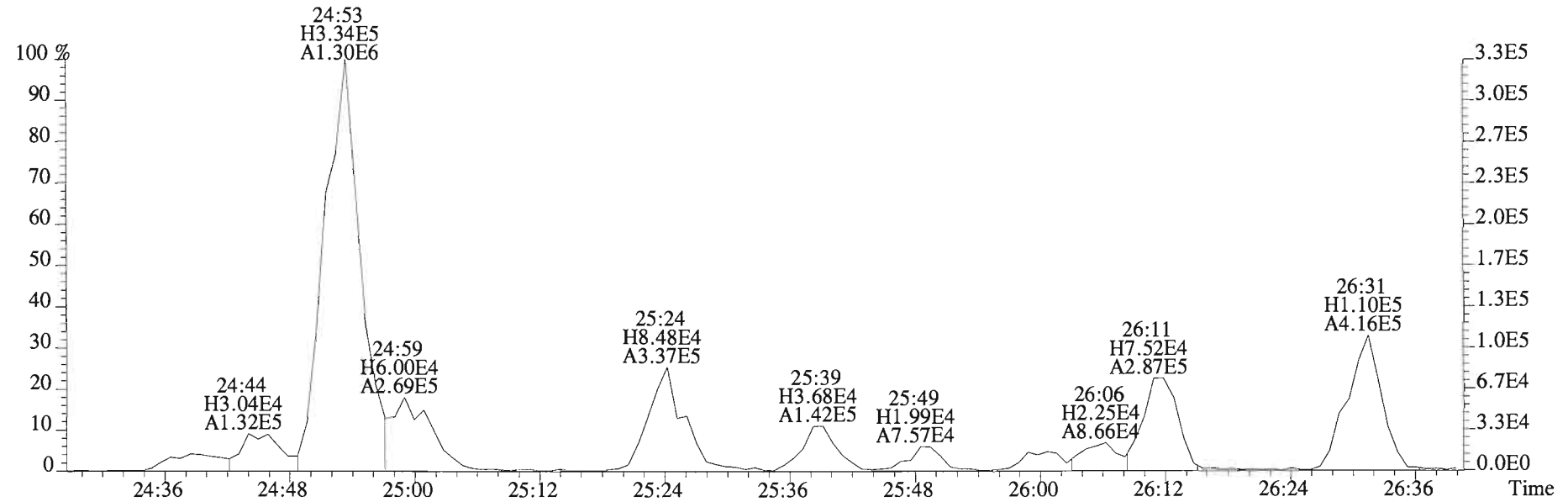
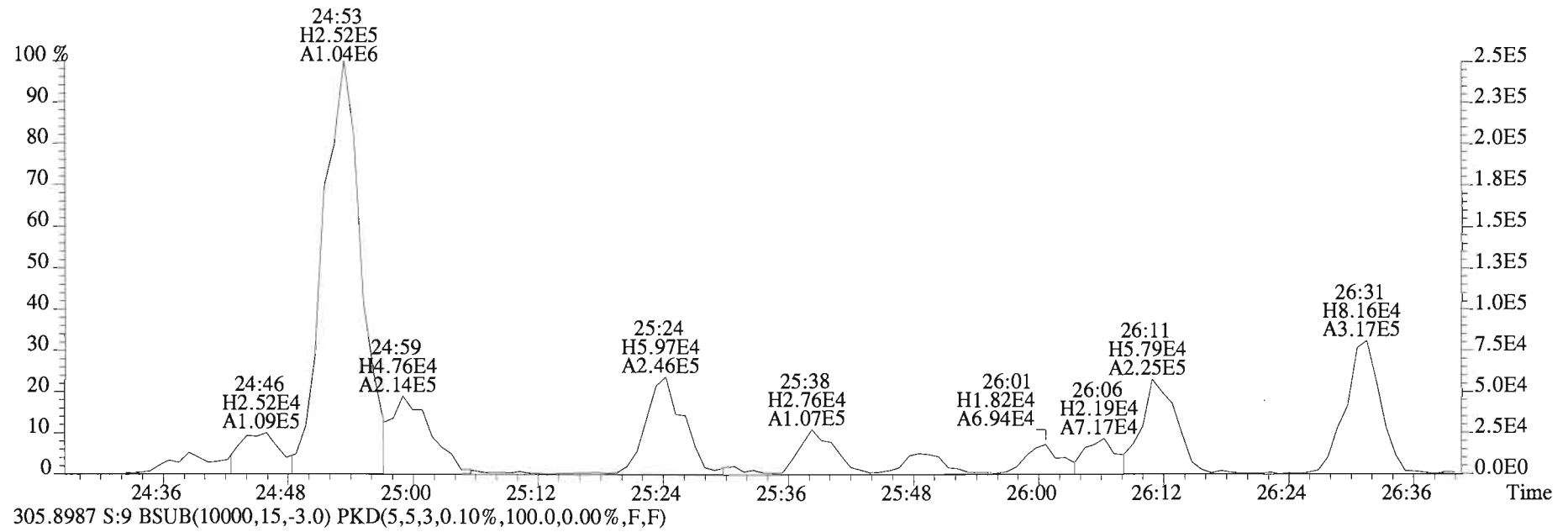
375.8364 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



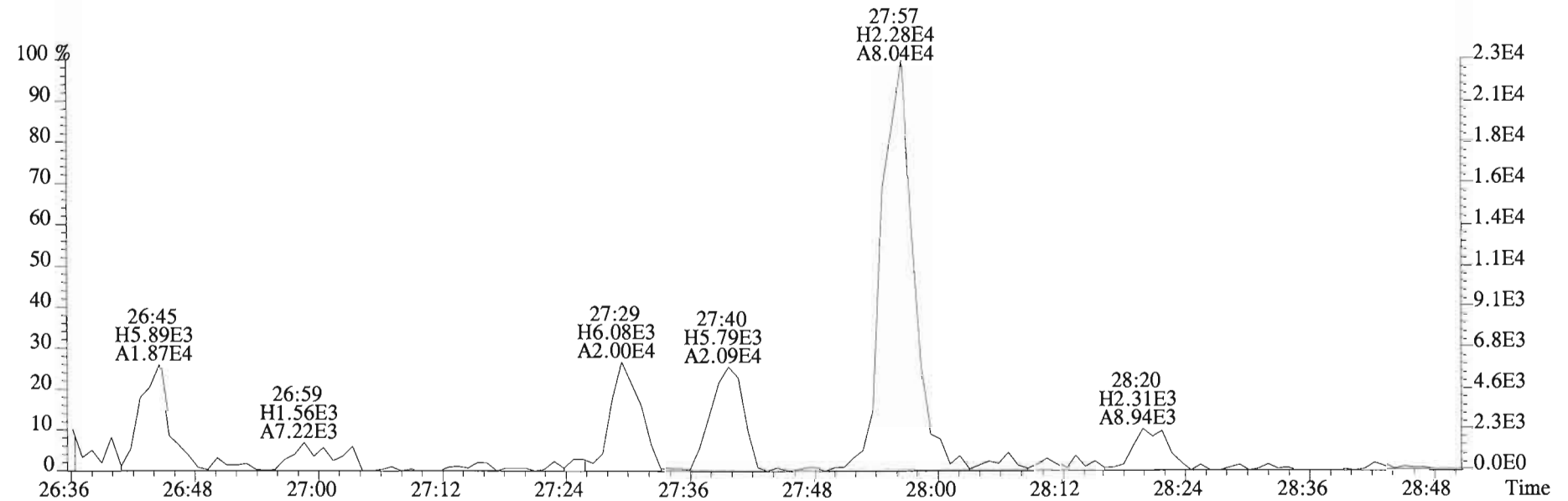
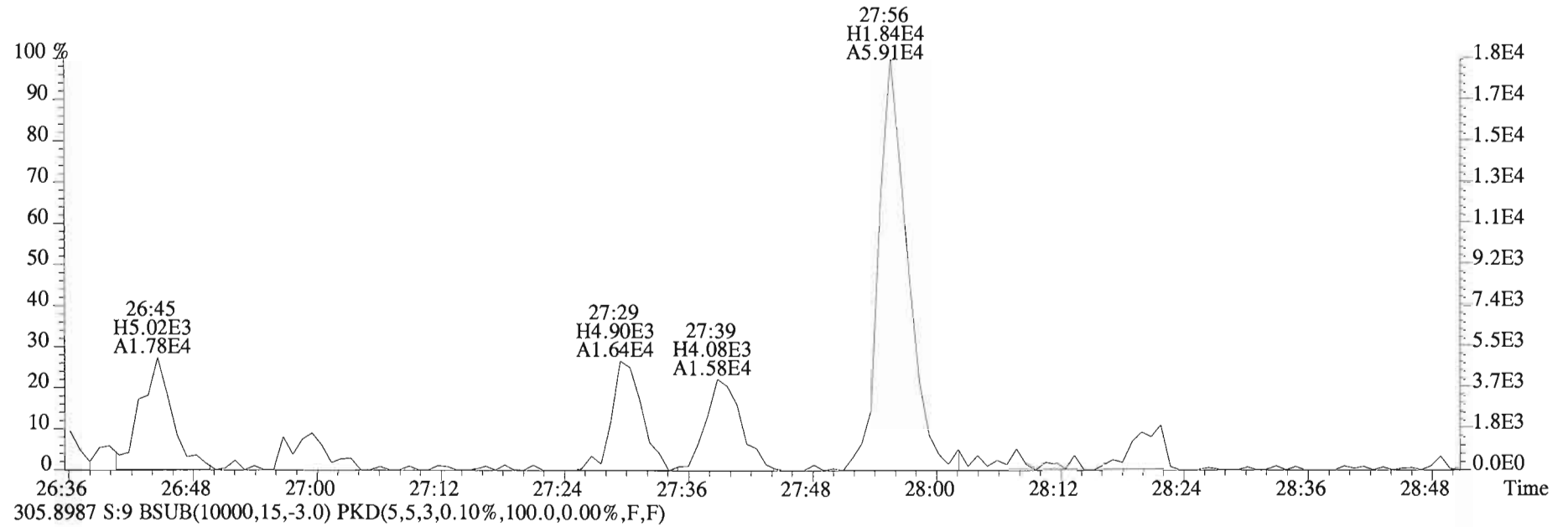
File:150204D1 #1-552 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



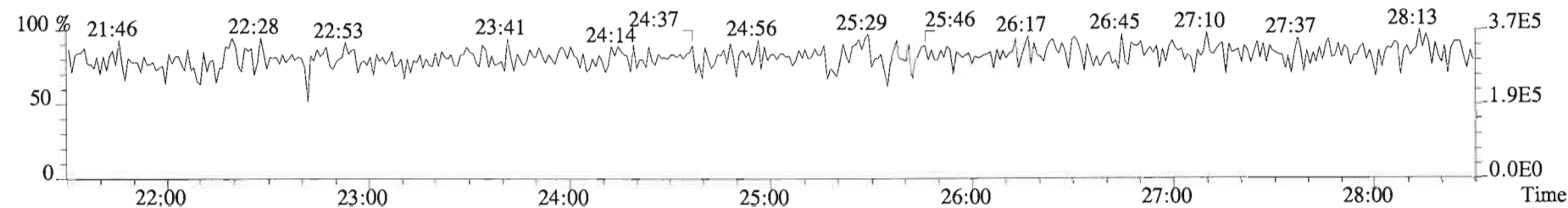
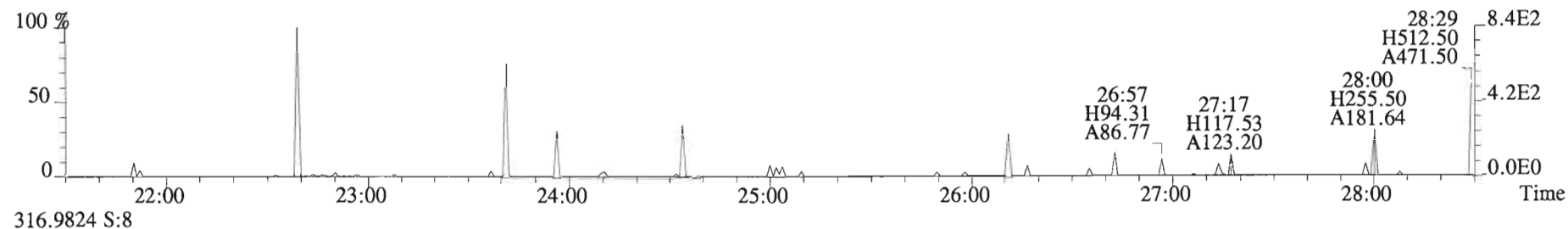
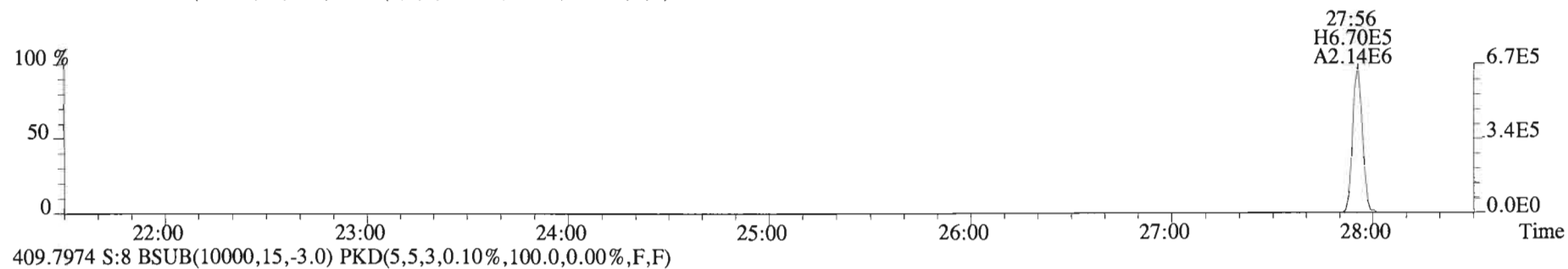
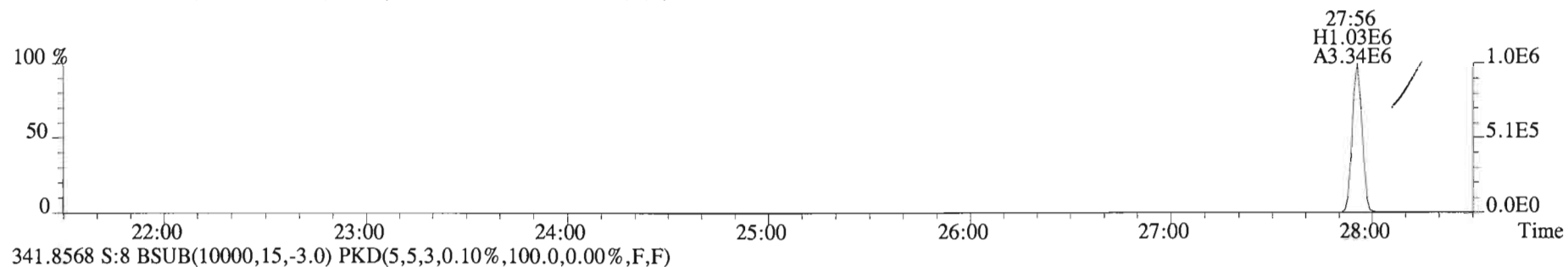
File:150204D1 #1-552 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
 303.9016 S:9 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



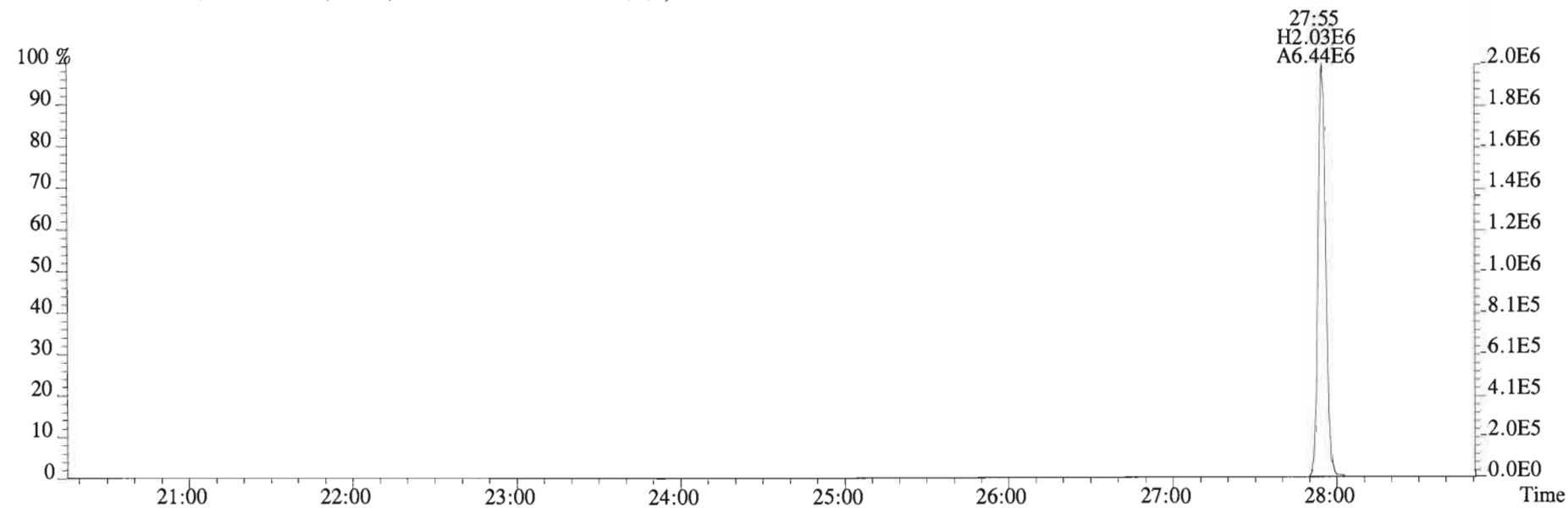
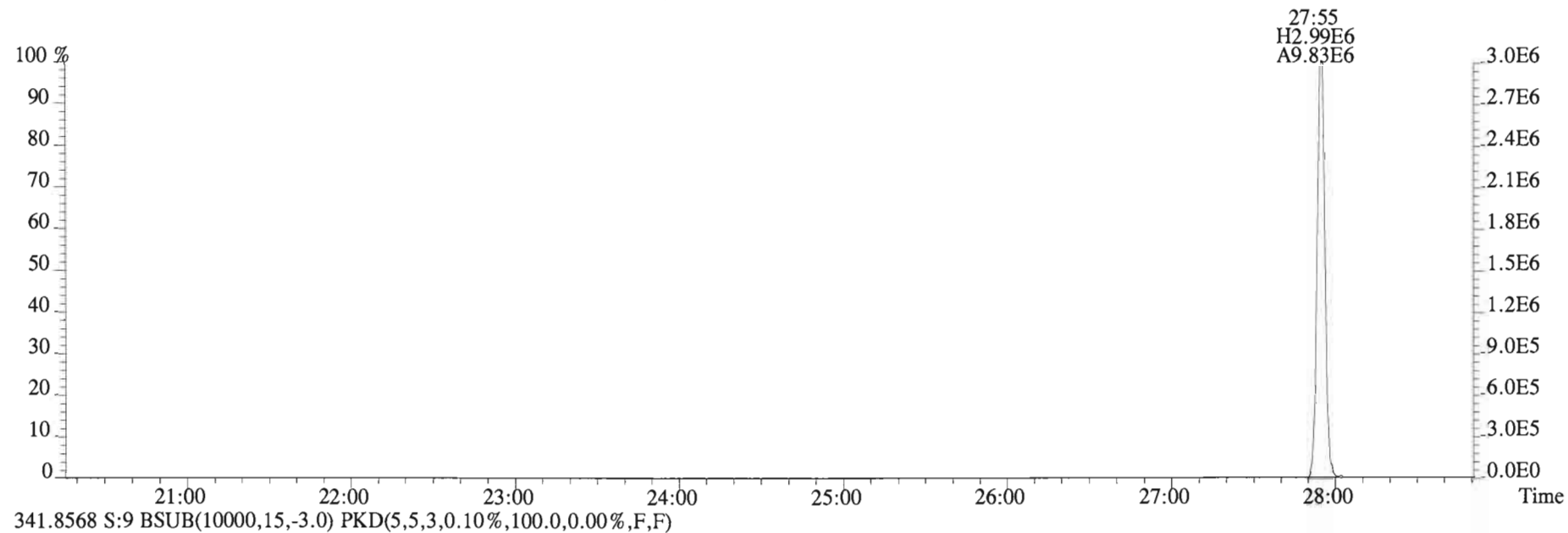
File:150204D1 #1-552 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text: Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



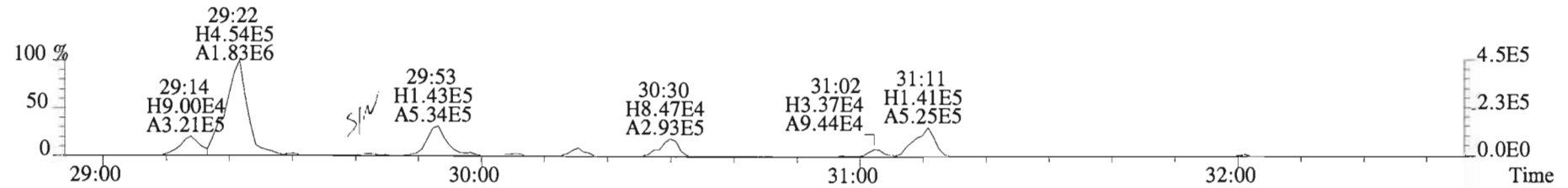
File:150204D1 #1-552 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-13-20141216-S 19.05 Exp:OCDD_DB5
339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



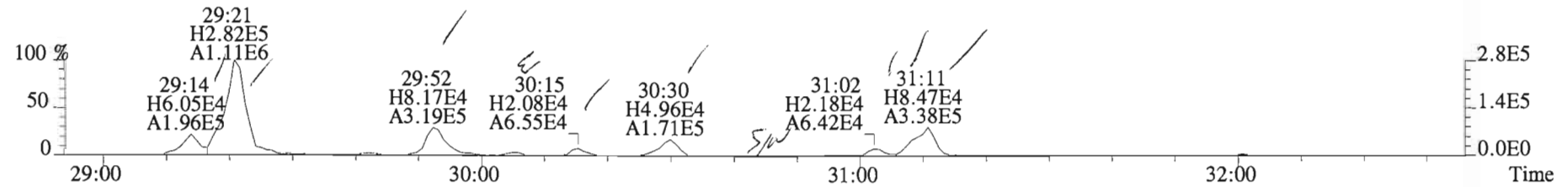
File:150204D1 #1-552 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text: Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
339.8597 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



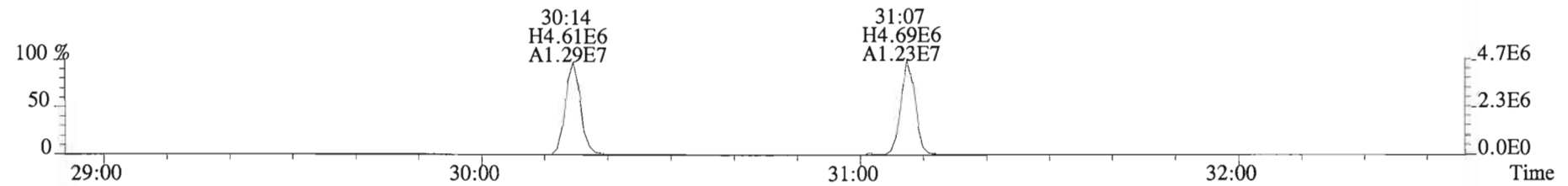
File:150204D1 #1-250 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
 339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



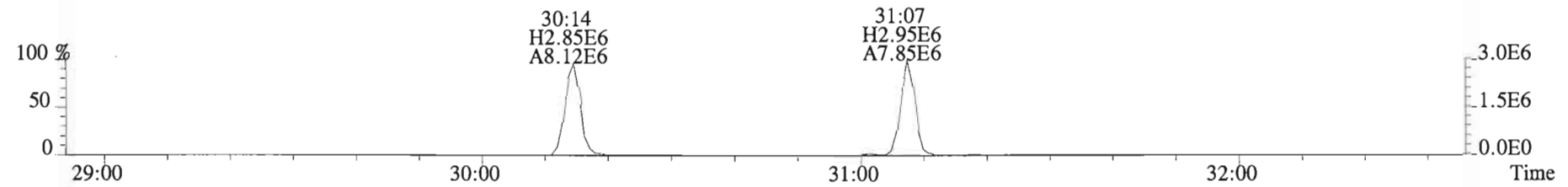
341.8568 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



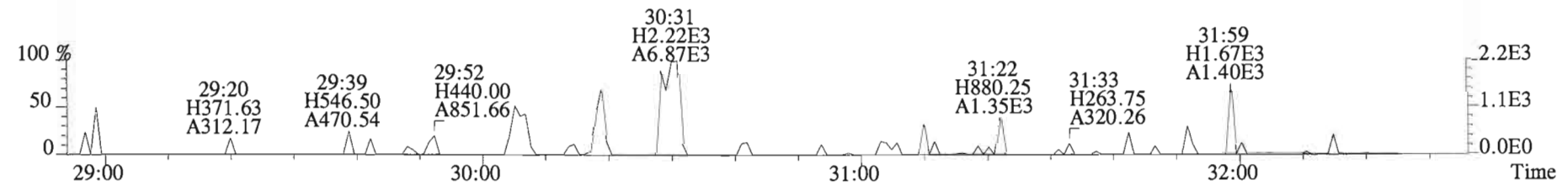
351.9000 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



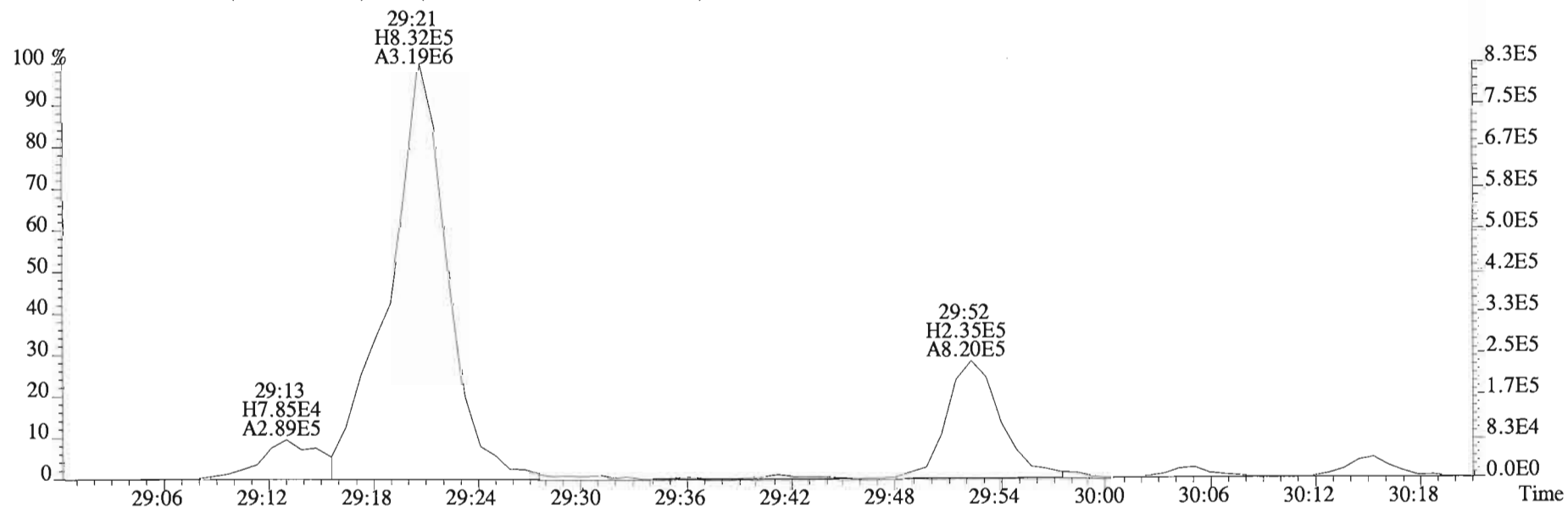
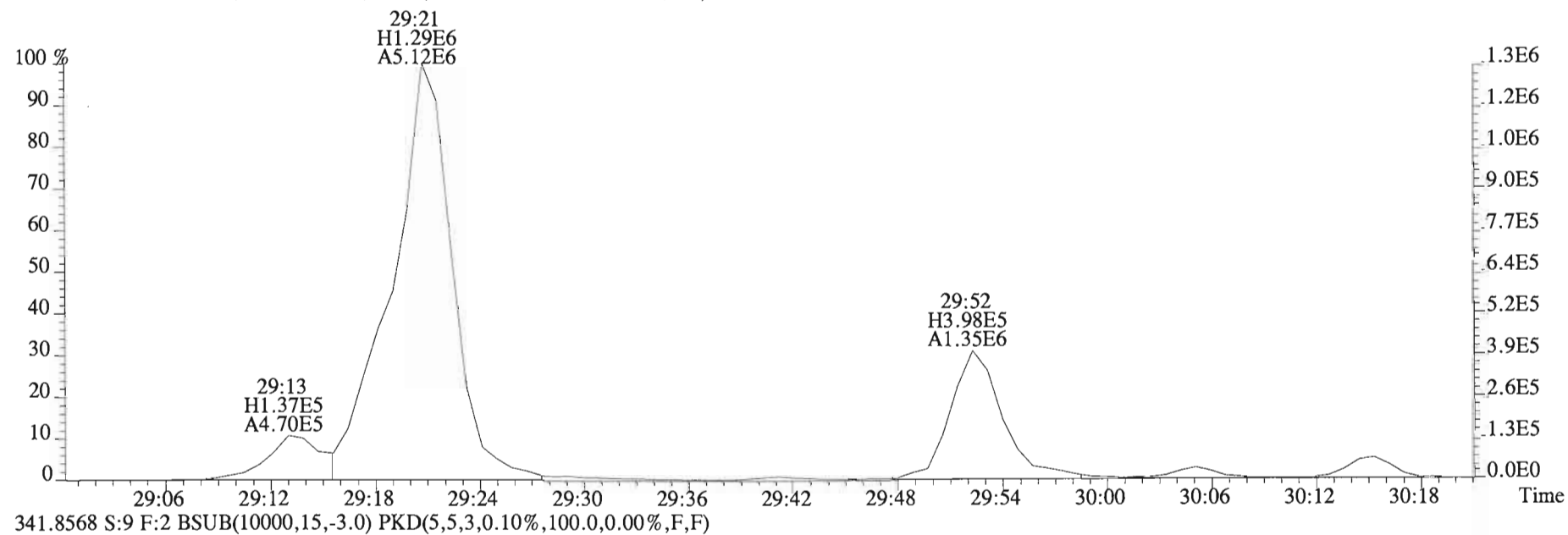
353.8970 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



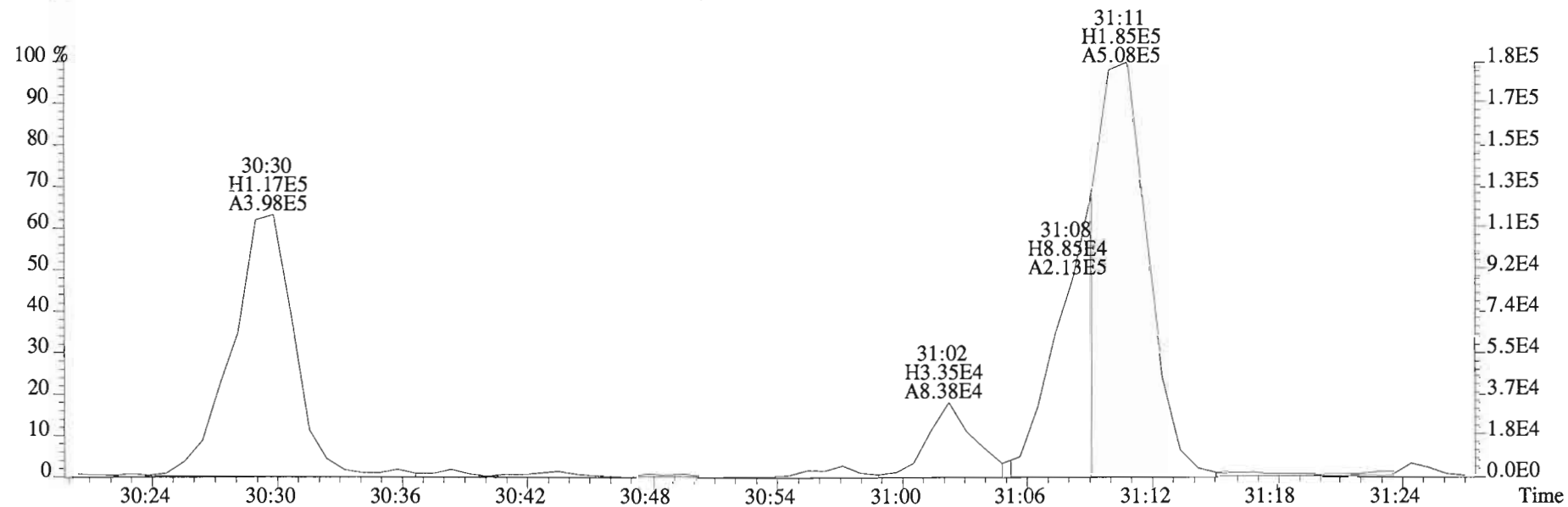
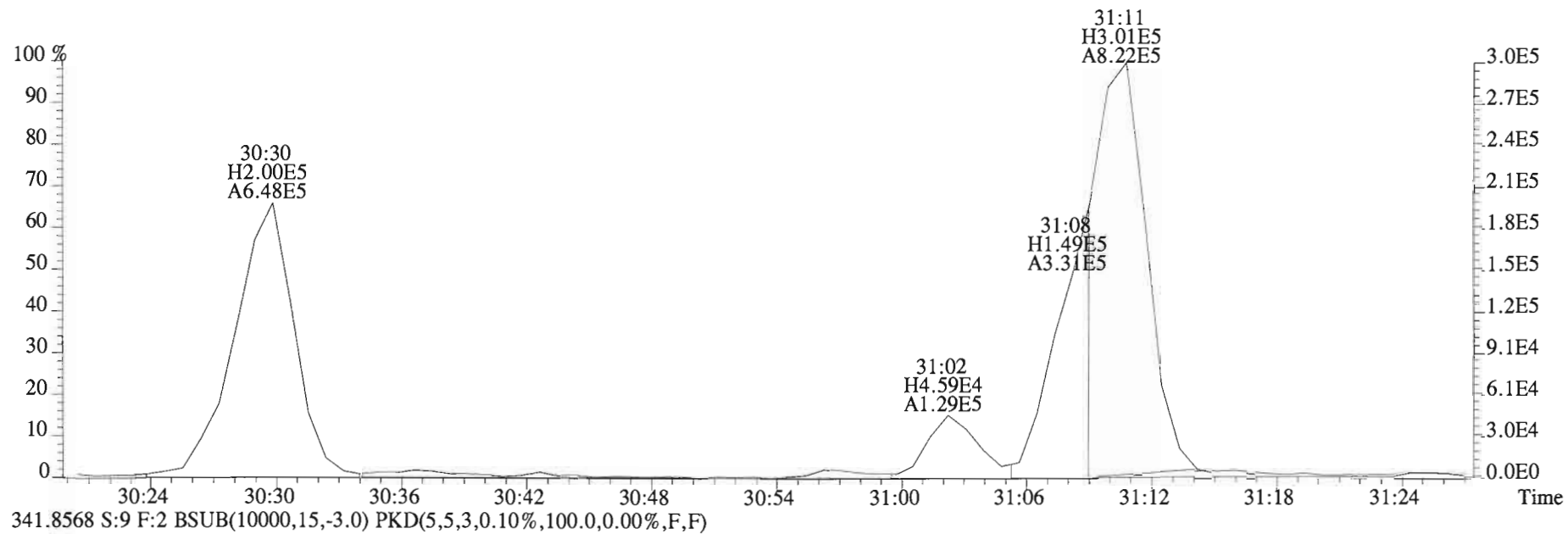
409.7974 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



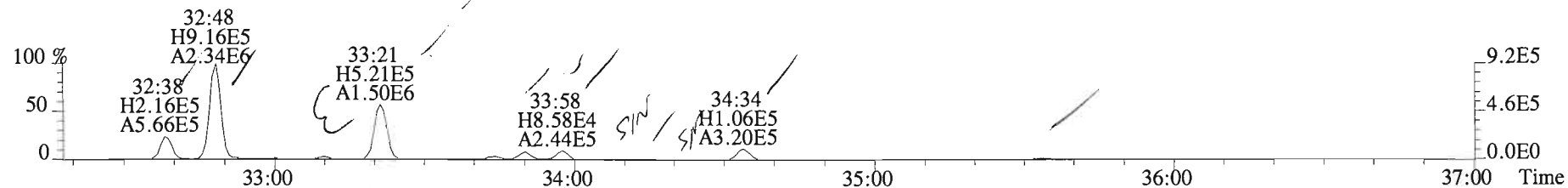
File:150204D1 #1-250 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



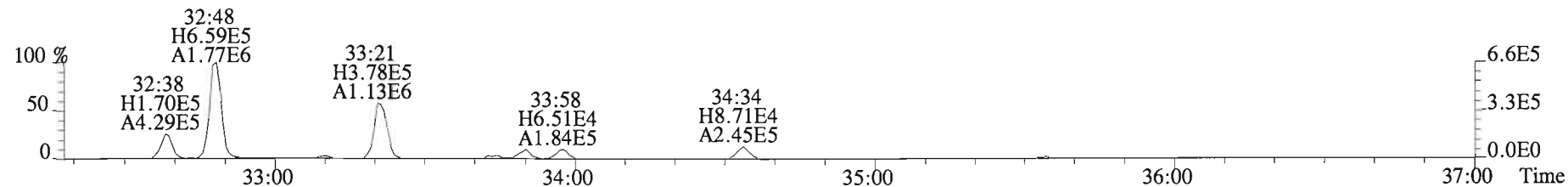
File:150204D1 #1-250 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



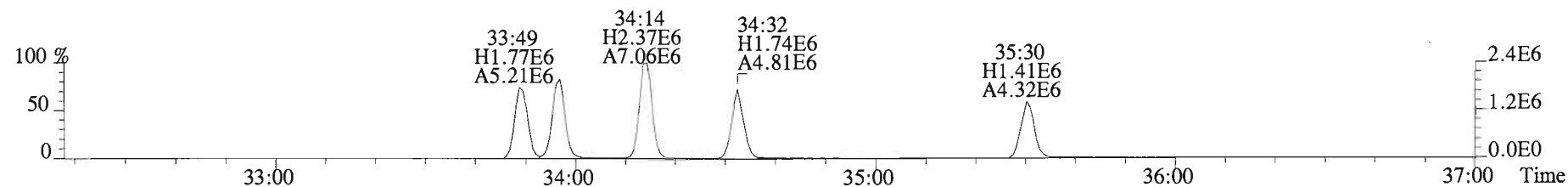
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-13-20141216-S 19.05 Exp:OCDD_DB5
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



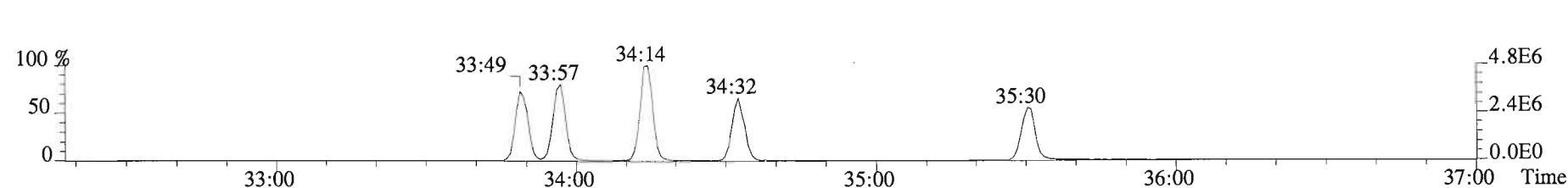
375.8178 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



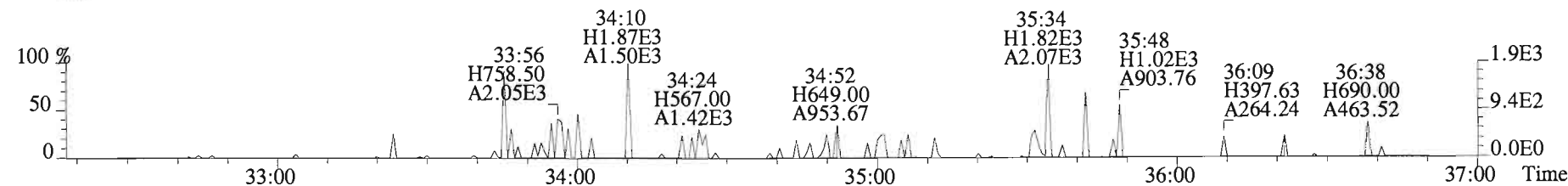
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



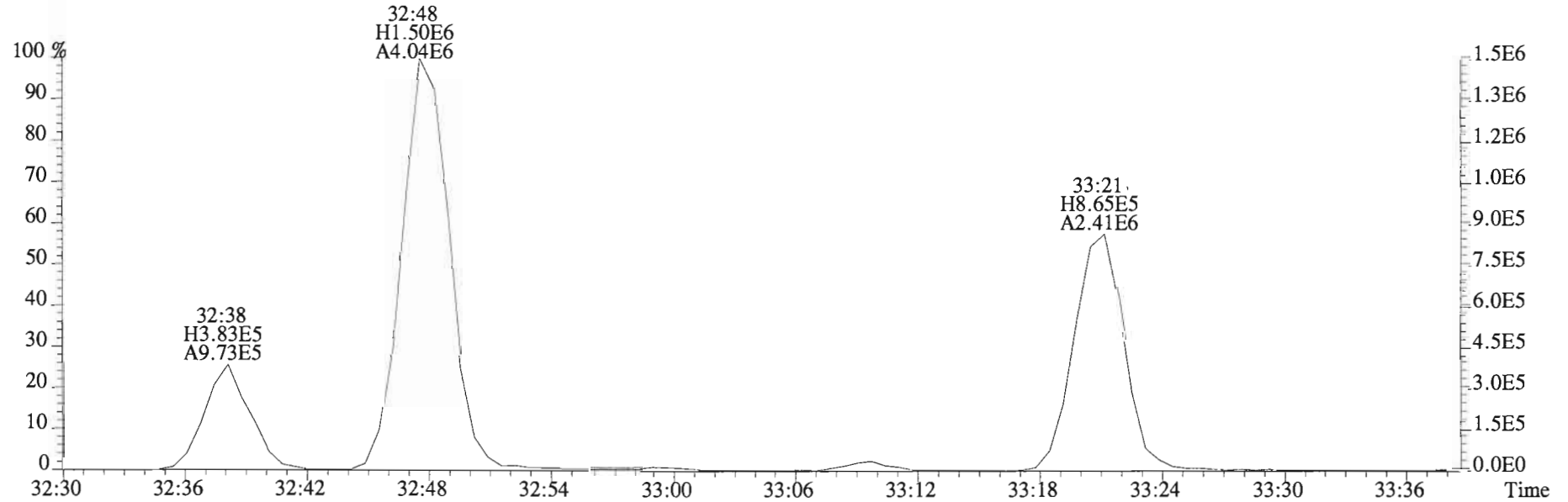
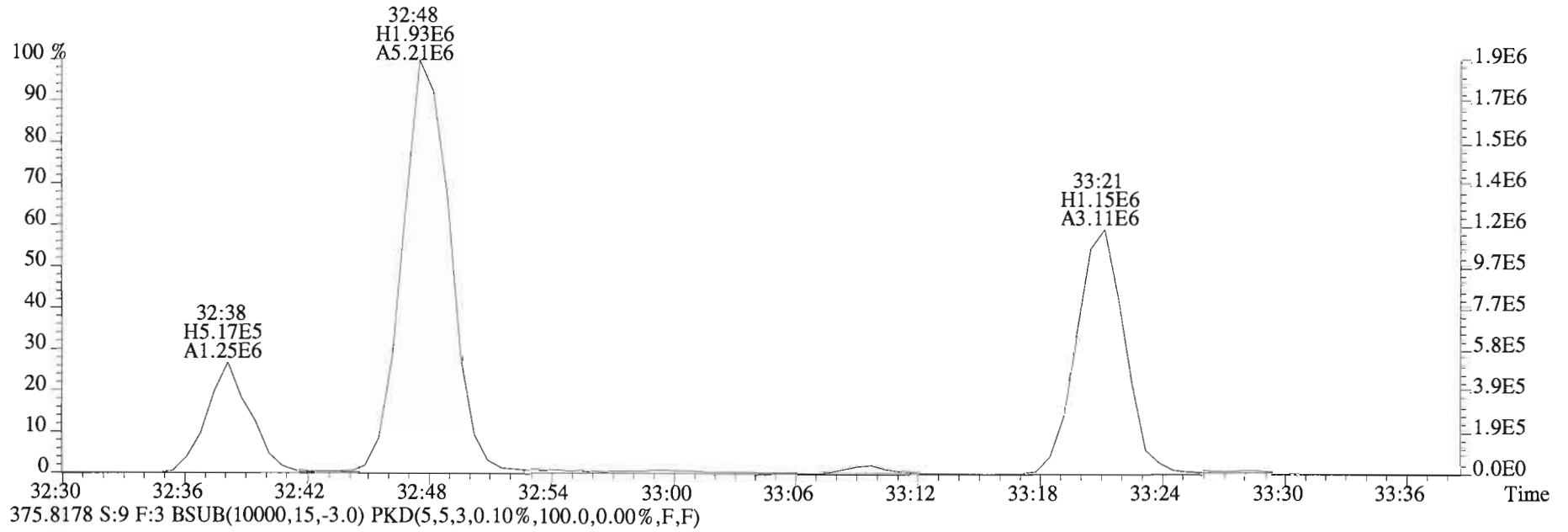
385.8610 S:8 F:3



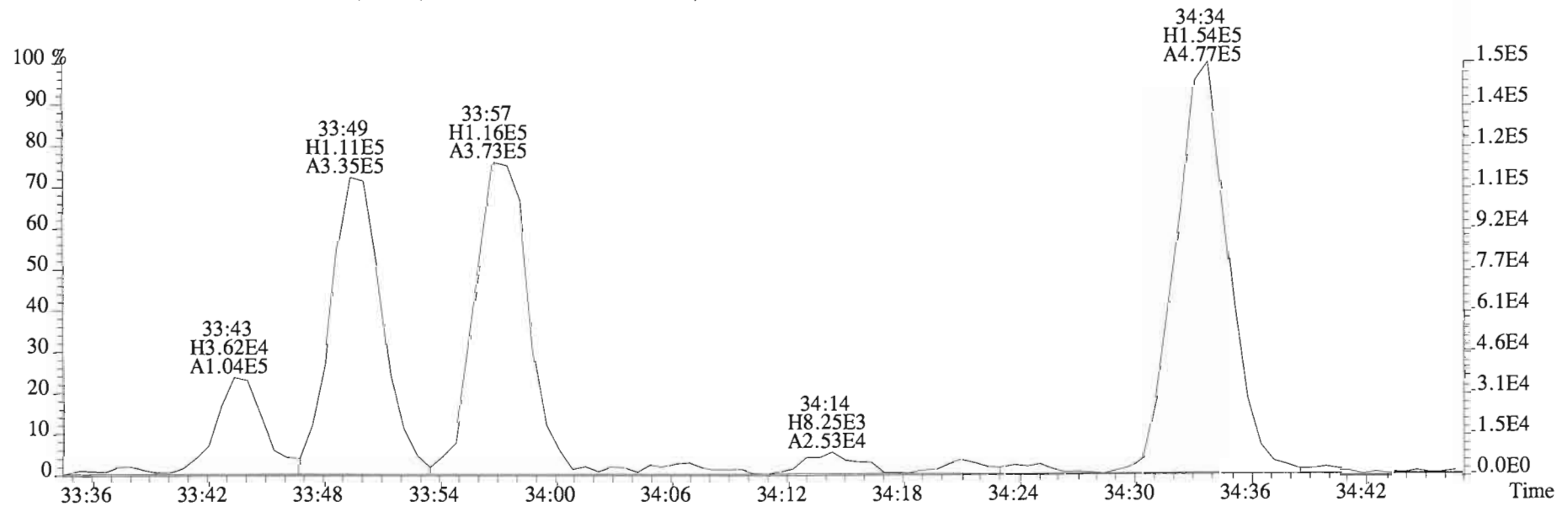
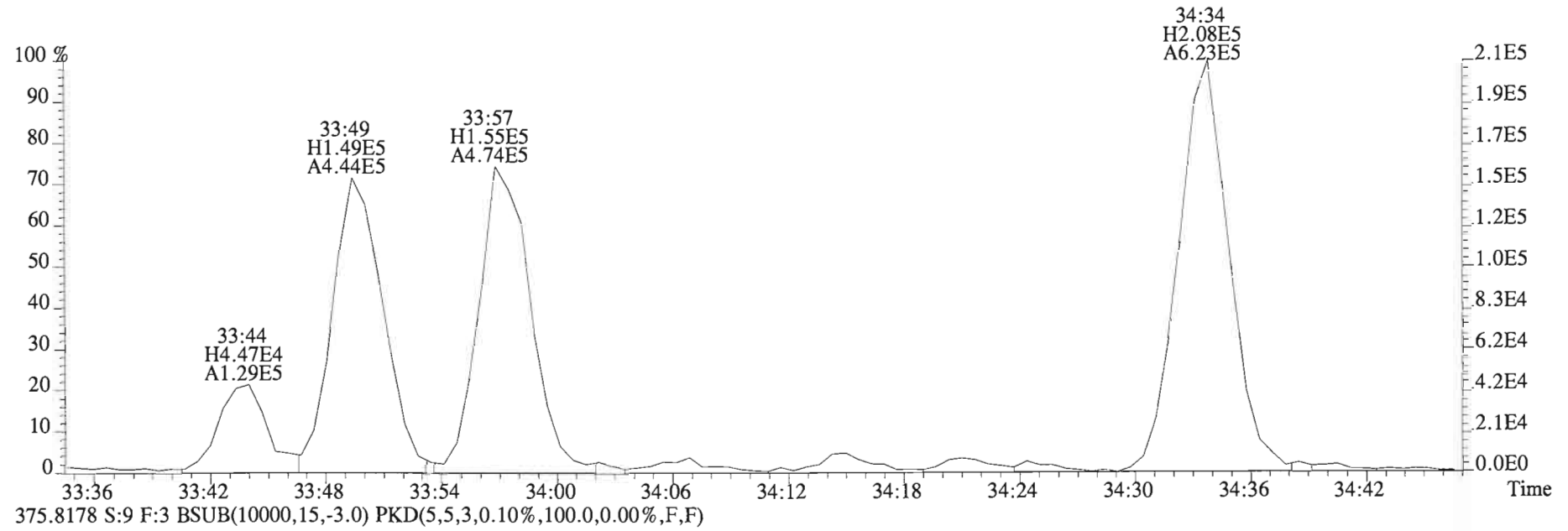
445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



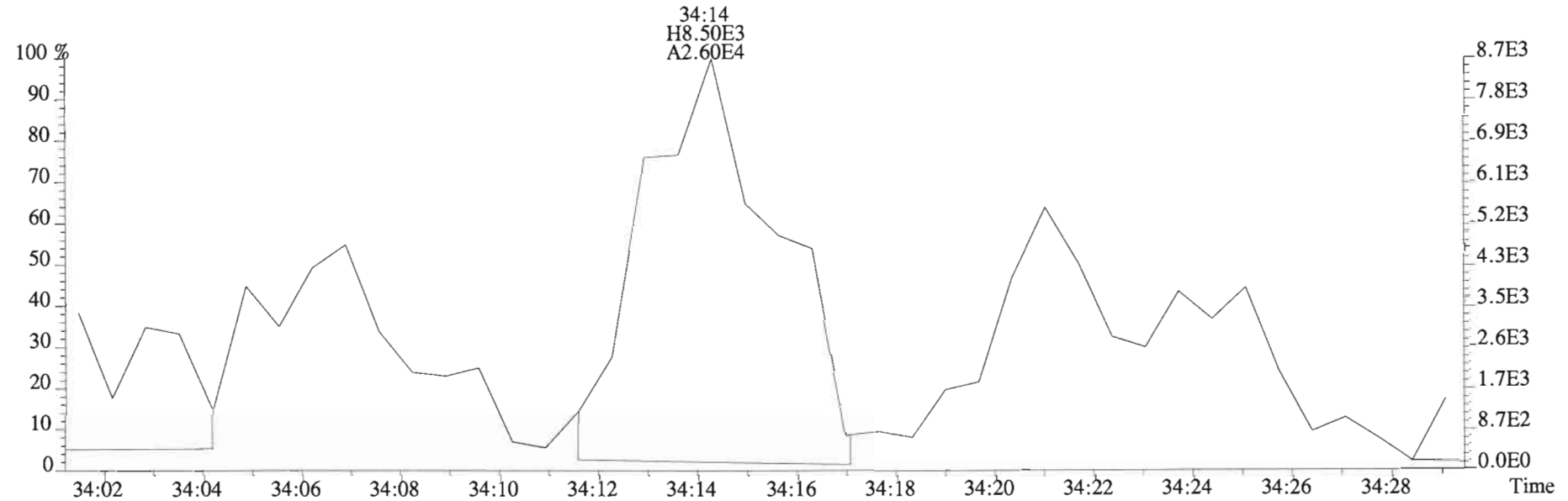
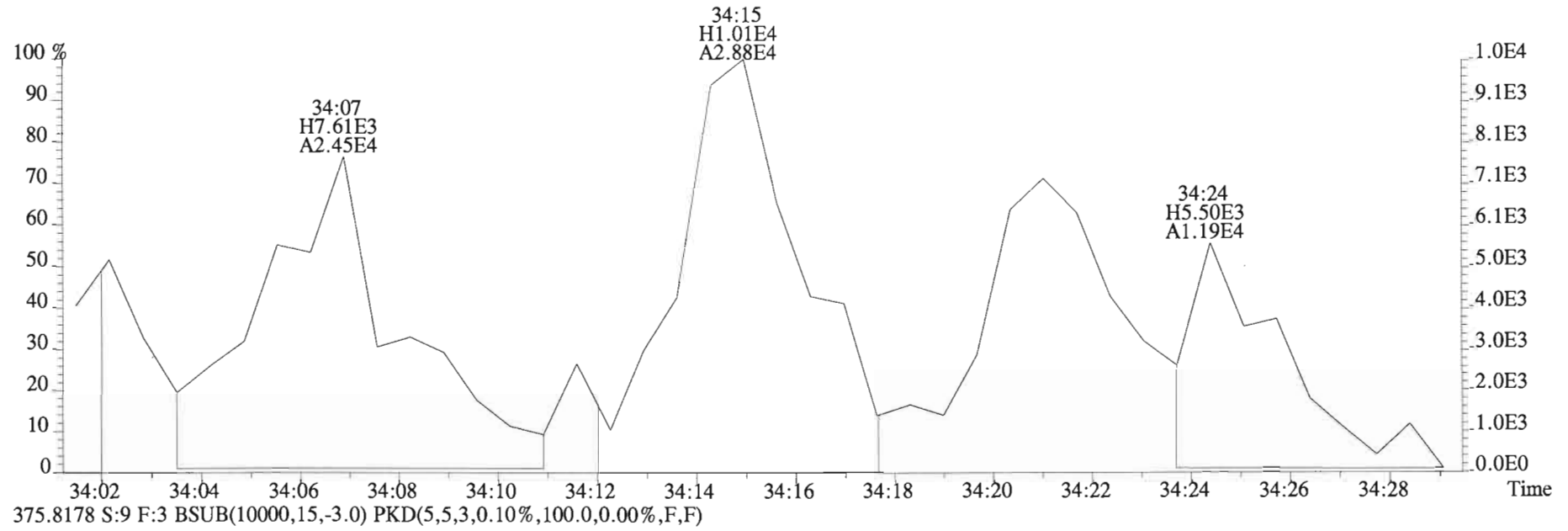
File:150204D1 #1-393 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



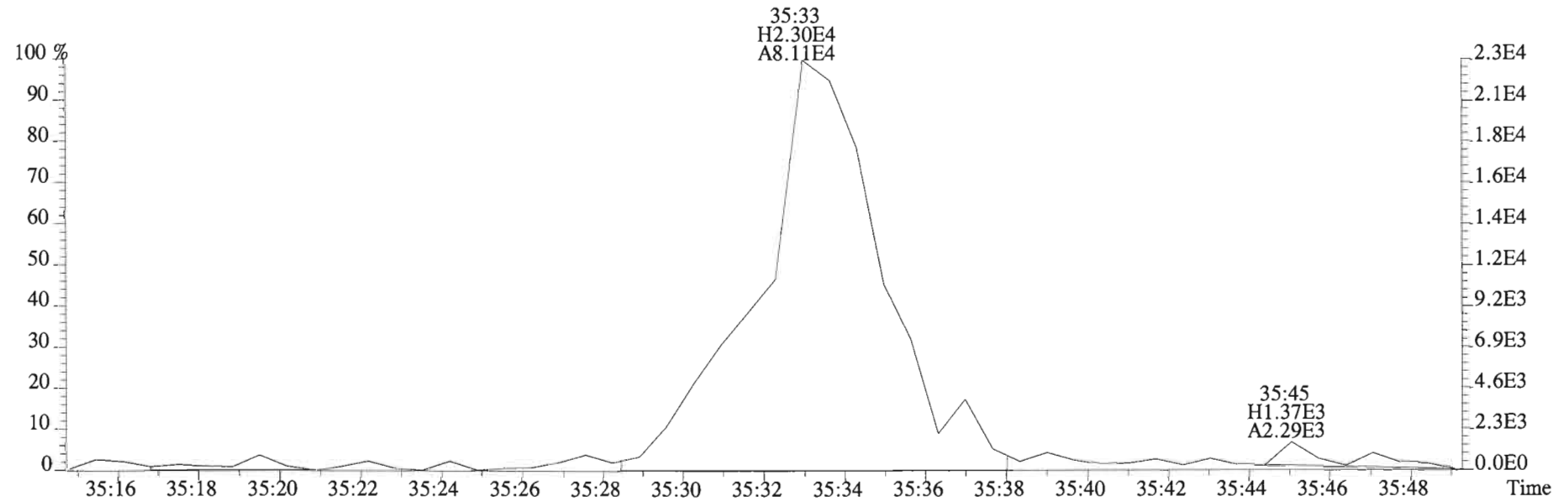
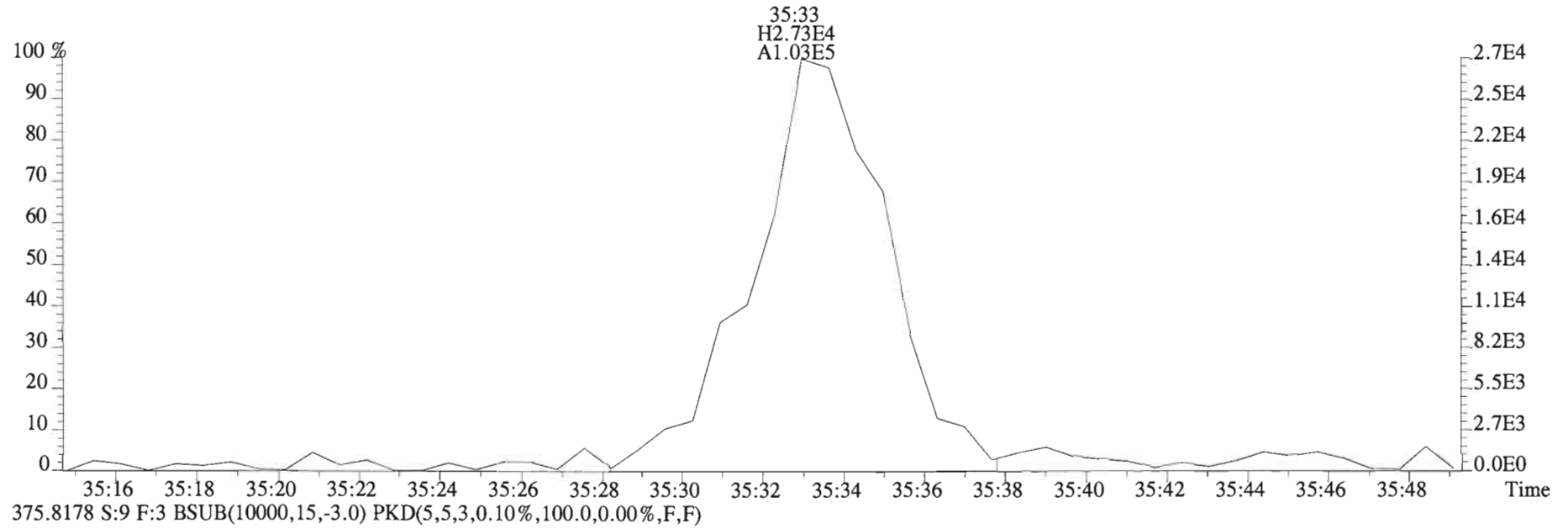
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Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



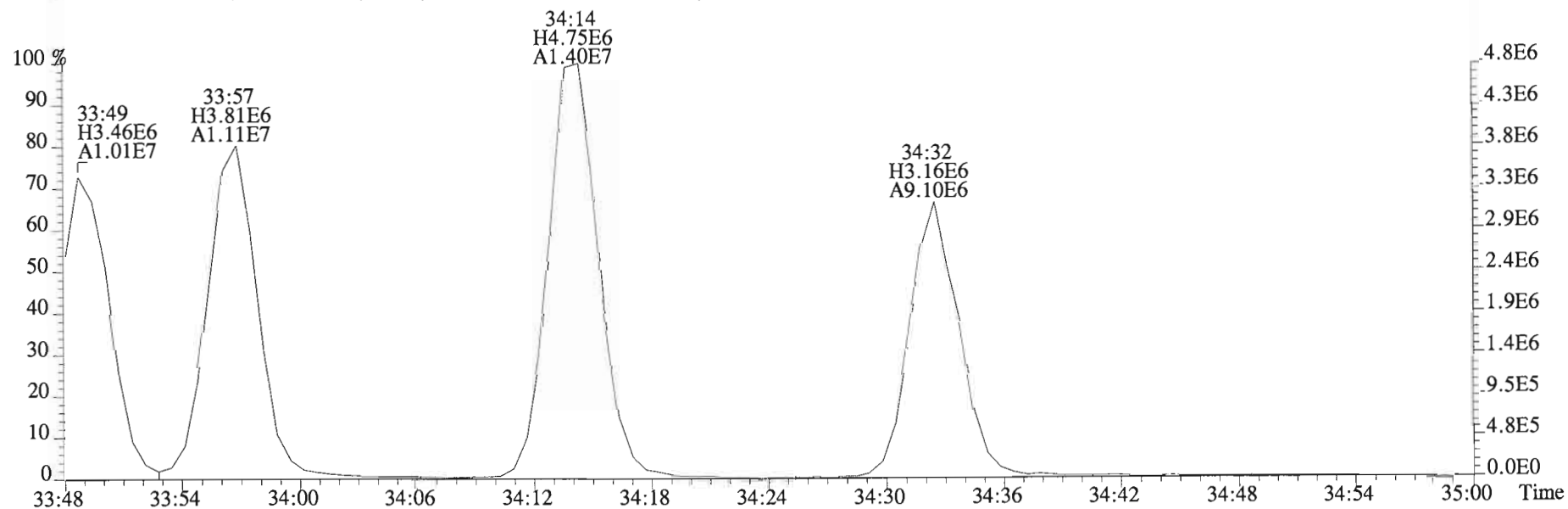
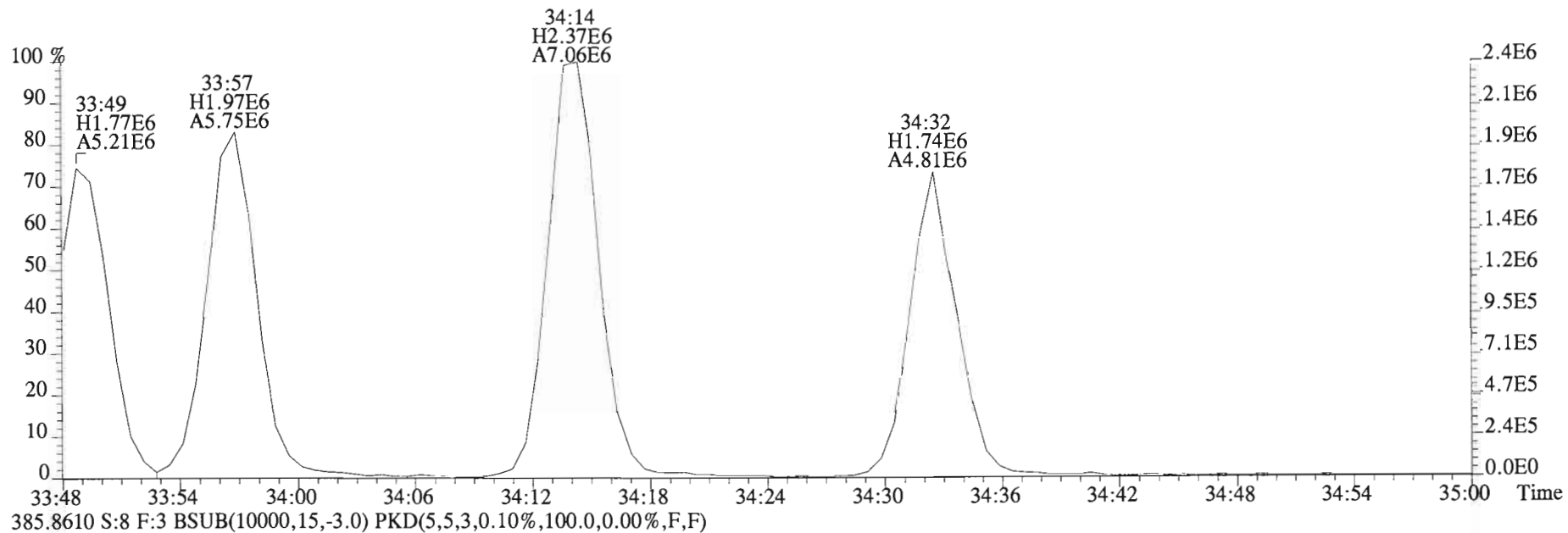
File:150204D1 #1-393 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
 373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



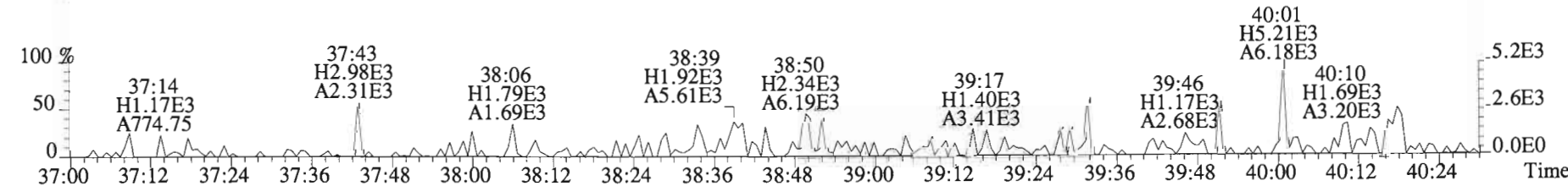
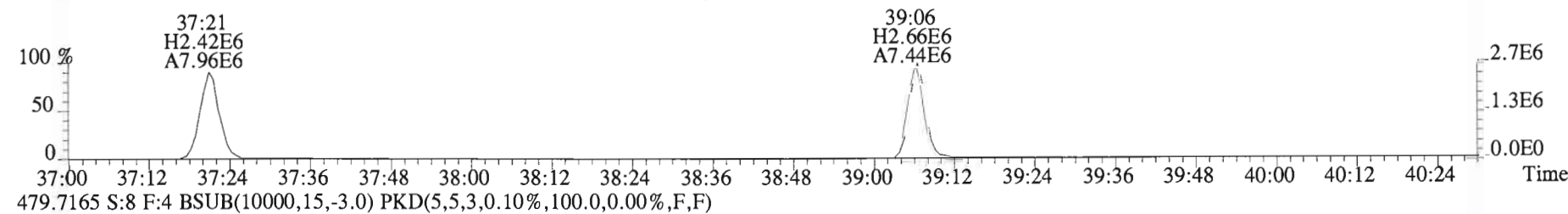
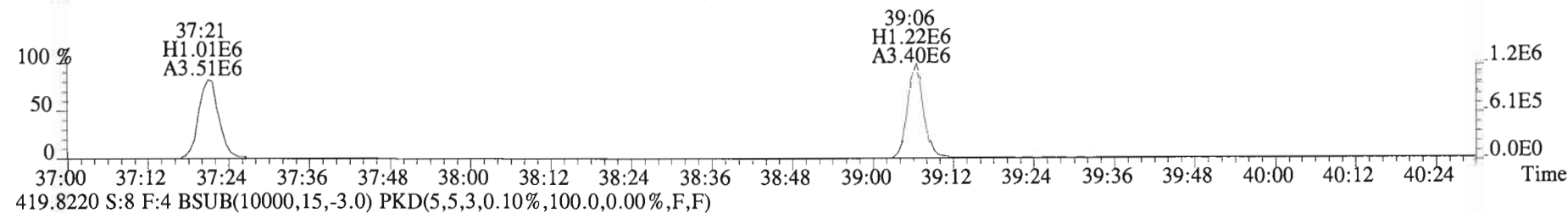
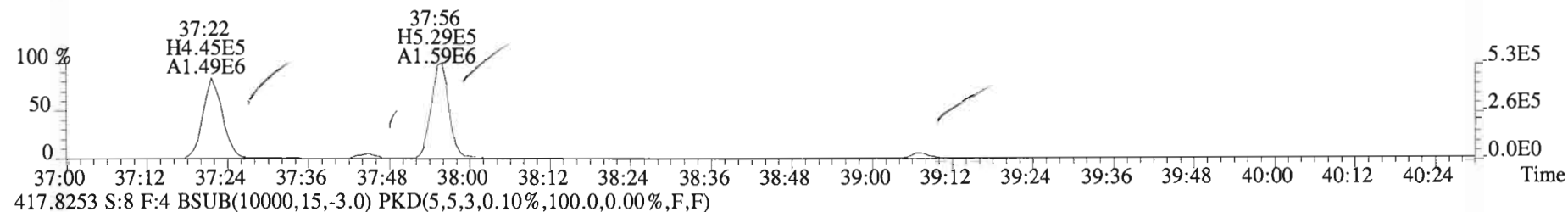
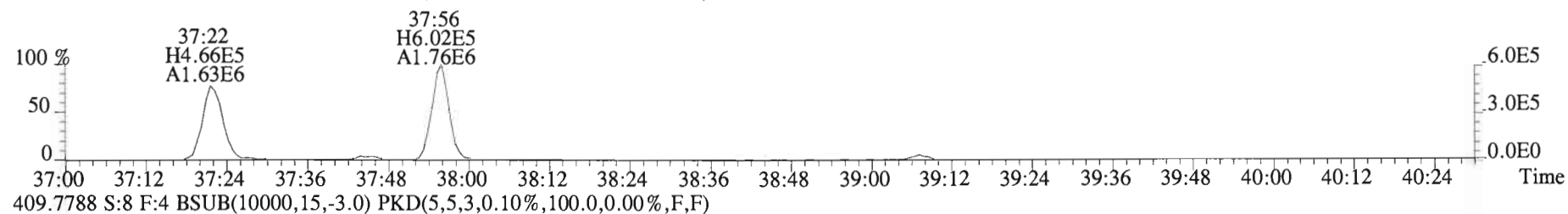
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Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
373.8207 S:9 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



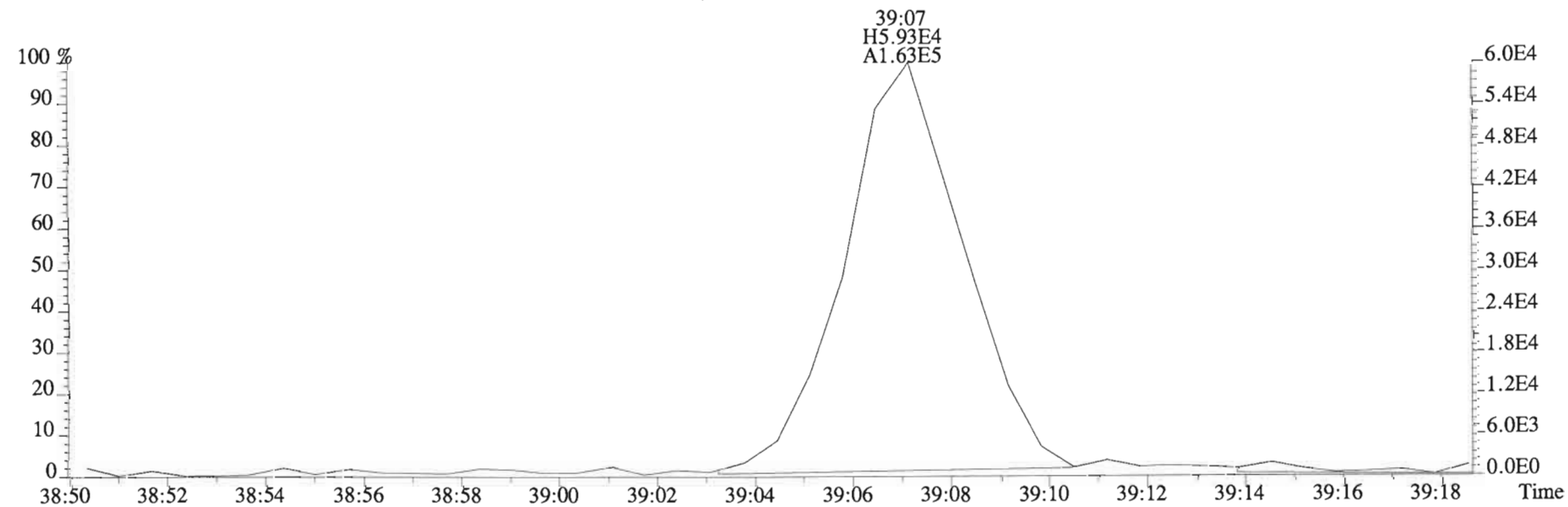
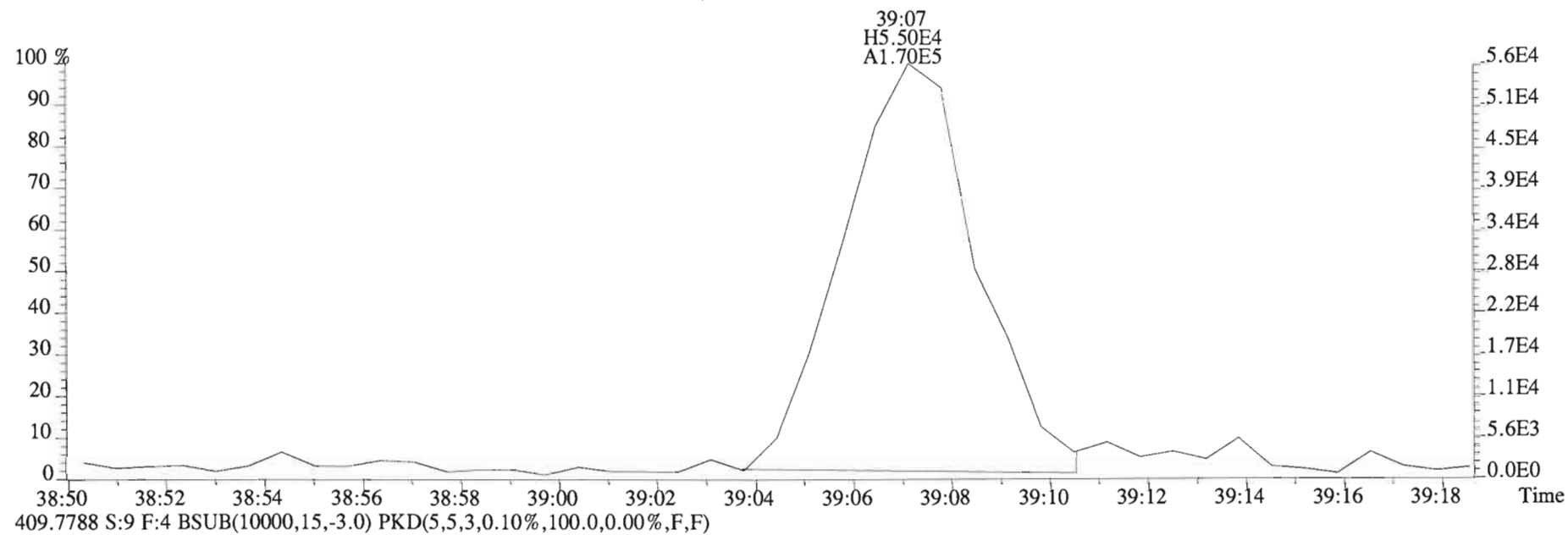
File:150204D1 #1-393 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



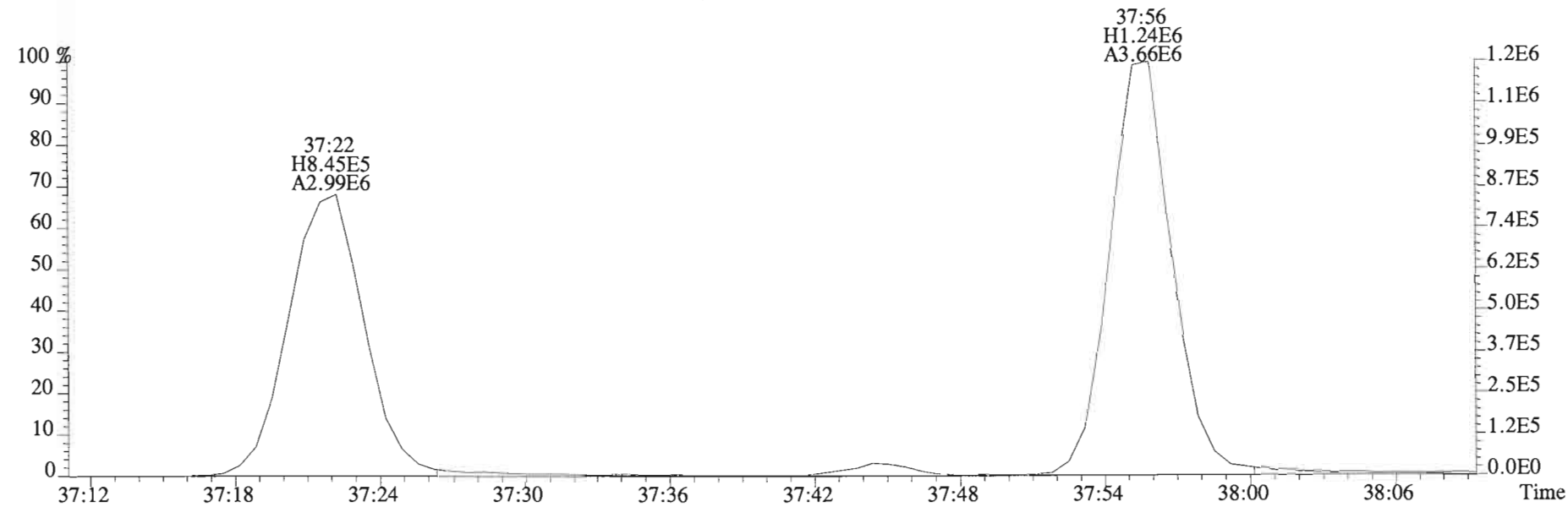
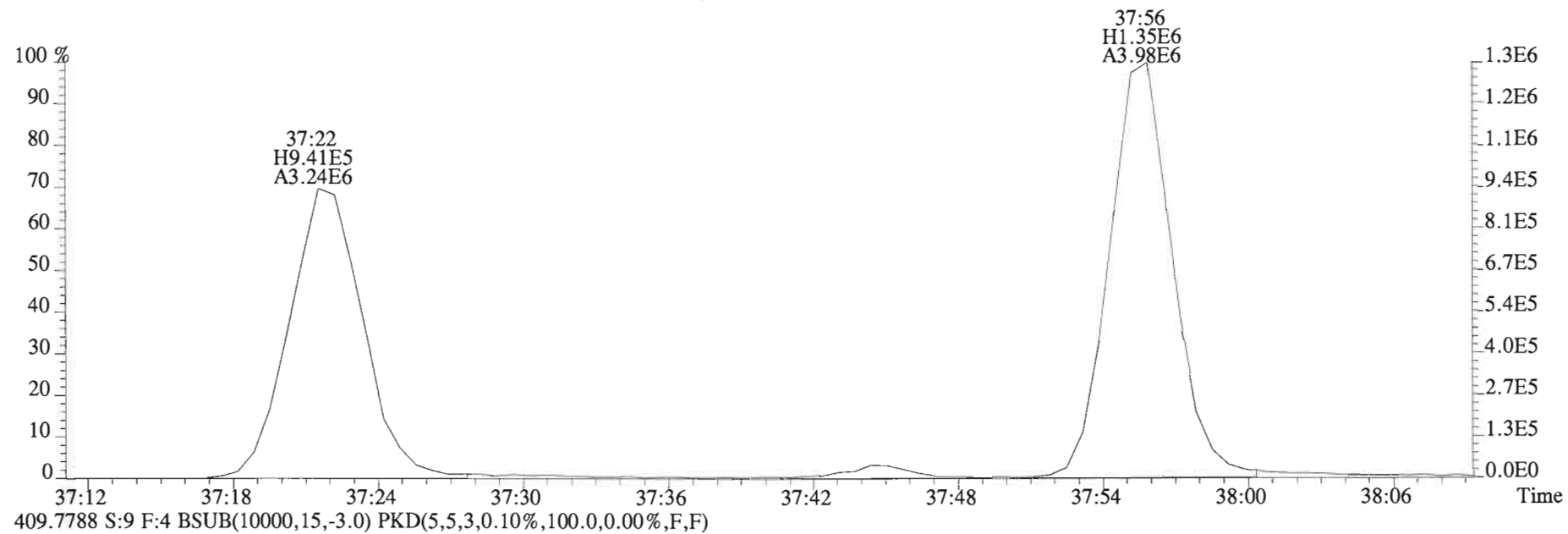
File:150204D1 #1-326 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



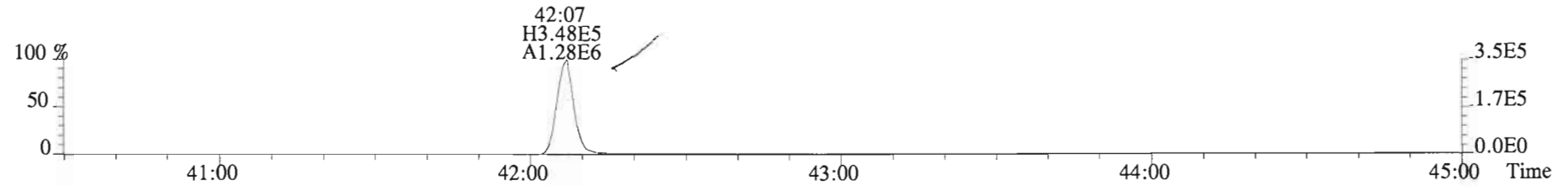
File:150204D1 #1-326 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text: Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



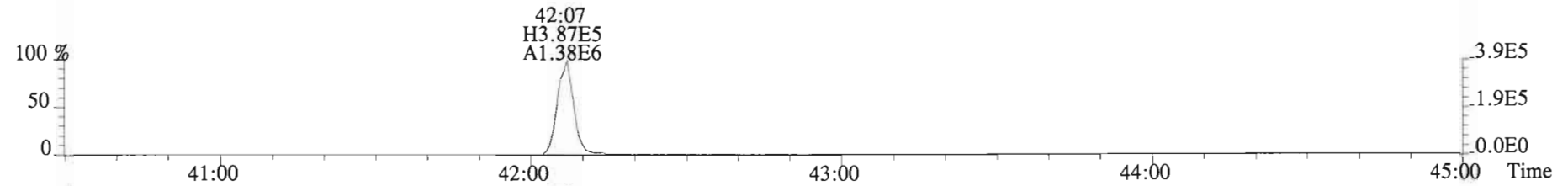
File:150204D1 #1-326 Acq: 4-FEB-2015 15:30:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG-7 Text:1400970-04 DS-CB-H1-20141216-S 33.39 Exp:OCDD_DB5
407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



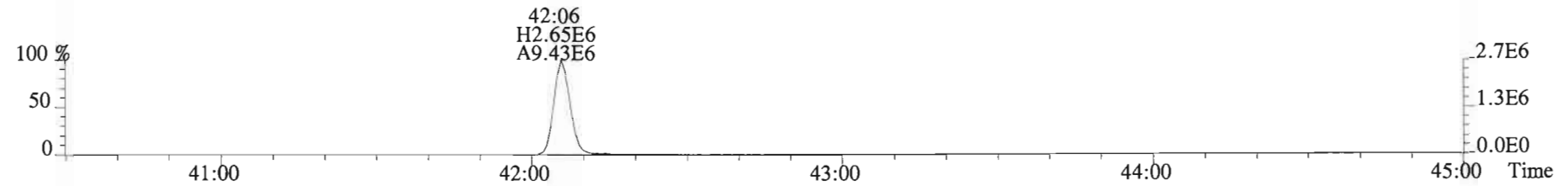
File:150204D1 #1-388 Acq: 4-FEB-2015 14:42:47 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG-7 Text:1400970-03 DS-CB-I3-20141216-S 19.05 Exp:OCDD_DB5
441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



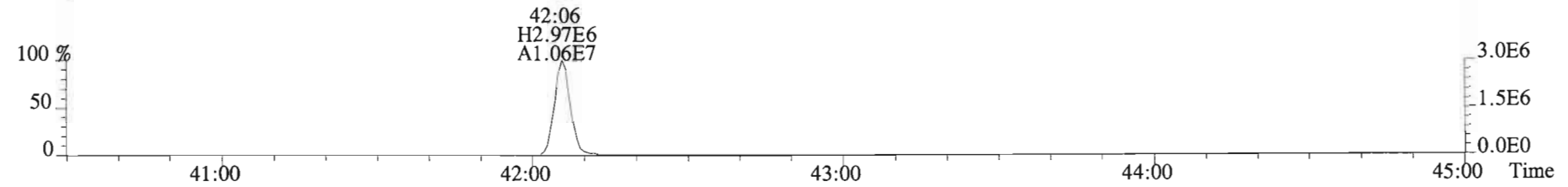
443.7398 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



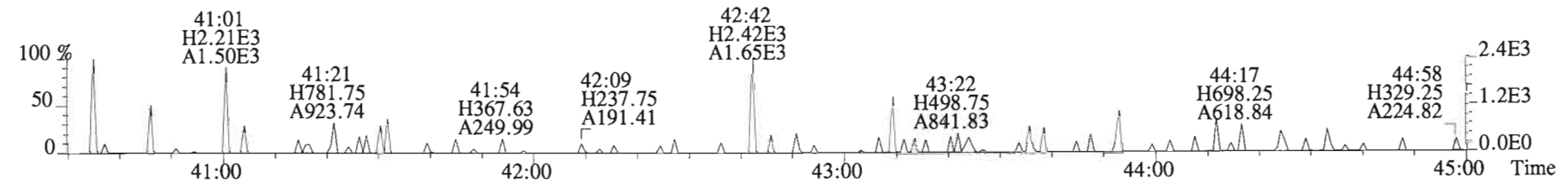
453.7831 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:8 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: 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 η	1.33	*		2050	2.5	3.07	*	0.997-1.007	
Mono	PCB-2	*	* n	NotF η	1.30	*		2050	2.5	2.92	*	0.983-0.993	
Mono	PCB-3	*	* n	NotF η	1.30	*		2050	2.5	2.91	*	0.996-1.006	
Di	PCB-4/10	*	* n	NotF η	1.67	*		4460	2.5	5.35	*	0.997-1.007	
Di	PCB-7/9	*	* n	NotF η	1.25	*		4460	2.5	4.58	*	0.864-0.872	
Di	PCB-6	*	* n	NotF η	1.24	*		4460	2.5	4.63	*	0.888-0.897	
Di	PCB-5/8	*	* n	NotF η	1.27	*		4460	2.5	4.52	*	0.905-0.915	
Di	PCB-14	*	* n	NotF η	1.47	*		4460	2.5	3.78	*	0.948-0.958	
Di	PCB-11	*	* n	NotF η	1.28	*		12400	2.5	12.0	*	0.995-1.005	
Di	PCB-12/13	*	* n	NotF η	1.27	*		4460	2.5	4.39	*	1.011-1.021	
Di	PCB-15	*	* n	NotF η	1.44	*		4460	2.5	3.86	*	1.023-1.031	
Tri	PCB-19	*	* n	NotF η	1.18	*		1810	2.5	2.35	*	0.996-1.006	
Tri	PCB-30	*	* n	NotF η	1.87	*		1810	2.5	1.48	*	1.033-1.043	
Tri	PCB-18	*	* n	NotF η	0.89	*		1810	2.5	2.16	*	0.949-0.959	
Tri	PCB-17	*	* n	NotF η	0.96	*		1810	2.5	2.00	*	0.956-0.966	
Tri	PCB-24/27	*	* n	NotF η	1.30	*		1810	2.5	1.47	*	0.977-0.987	
Tri	PCB-16/32	*	* n	NotF η	1.05	*		1810	2.5	1.83	*	0.996-1.006	
Tri	PCB-34	*	* n	NotF η	1.30	*		1960	2.5	2.40	*	0.955-0.965	
Tri	PCB-23	*	* n	NotF η	1.21	*		1960	2.5	2.58	*	0.958-0.968	
Tri	PCB-29	*	* n	NotF η	1.21	*		1960	2.5	2.58	*	0.967-0.977	
Tri	PCB-26	*	* n	NotF η	1.24	*		1960	2.5	2.52	*	0.974-0.984	
Tri	PCB-25	*	* n	NotF η	1.10	*		1960	2.5	2.85	*	0.980-0.990	
Tri	PCB-31	*	* n	NotF η	1.25	*		1960	2.5	2.50	*	0.992-1.002	
Tri	PCB-28	*	* n	NotF η	1.24	*		1960	2.5	2.52	*	0.996-1.006	
Tri	PCB-20/21/33	*	* n	NotF η	1.16	*		1960	2.5	2.70	*	1.016-1.026	
Tri	PCB-22	*	* n	NotF η	1.16	*		1960	2.5	2.68	*	1.032-1.042	
Tri	PCB-36	*	* n	NotF η	1.30	*		1960	2.5	2.57	*	0.929-0.939	
Tri	PCB-39	*	* n	NotF η	1.26	*		1960	2.5	2.65	*	0.943-0.953	
Tri	PCB-38	*	* n	NotF η	1.24	*		1960	2.5	2.69	*	0.967-0.977	
Tri	PCB-35	*	* n	NotF η	1.26	*		1960	2.5	2.66	*	0.982-0.992	
Tri	PCB-37	*	* n	NotF η	1.35	*		1960	2.5	2.48	*	0.996-1.006	
Tetra	PCB-54	*	* n	NotF η	1.02	*		2120	2.5	2.55	*	0.996-1.006	
Tetra	PCB-50	*	* n	NotF η	0.78	*		2120	2.5	3.35	*	1.037-1.047	
Tetra	PCB-53	*	* n	NotF η	1.14	*		2120	2.5	2.98	*	0.941-0.951	
Tetra	PCB-51	*	* n	NotF η	1.16	*		2120	2.5	2.92	*	0.952-0.962	
Tetra	PCB-45	*	* n	NotF η	1.04	*		2120	2.5	3.26	*	0.965-0.975	
Tetra	PCB-46	*	* n	NotF η	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 η	1.29	*		2120	2.5	2.63	*	0.996-1.006	
Tetra	PCB-73	*	* n	Not F η	1.41	*		2120	2.5	2.40	*	0.999-1.009	
Tetra	PCB-43/49	*	* n	Not F η	1.14	*		2120	2.5	2.98	*	1.005-1.015	
Tetra	PCB-47	*	* n	Not F η	1.20	*		2120	2.5	2.75	*	0.996-1.006	
Tetra	PCB-48/75	*	* n	Not F η	1.33	*		2120	2.5	2.48	*	0.999-1.009	
Tetra	PCB-65	*	* n	Not F η	1.32	*		2120	2.5	2.50	*	1.007-1.017	
Tetra	PCB-62	*	* n	Not F η	1.36	*		2120	2.5	2.42	*	1.011-1.021	
Tetra	PCB-44	*	* n	Not F η	0.87	*		2120	2.5	3.78	*	1.020-1.030	
Tetra	PCB-42/59	*	* n	Not F η	1.24	*		2120	2.5	2.66	*	1.027-1.037	
Tetra	PCB-41/64/71/72	*	* n	Not F η	1.34	*		2120	2.5	2.46	*	1.045-1.055	
Tetra	PCB-68	*	* n	Not F η	1.61	*		2120	2.5	2.05	*	1.053-1.063	
Tetra	PCB-40	*	* n	Not F η	0.86	*		2120	2.5	3.84	*	1.061-1.071	
Tetra	PCB-57	*	* n	Not F η	1.12	*		2120	2.5	2.21	*	0.965-0.975	
Tetra	PCB-67	*	* n	Not F η	1.09	*		2120	2.5	2.27	*	0.974-0.984	
Tetra	PCB-58	*	* n	Not F η	1.14	*		2120	2.5	2.18	*	0.977-0.987	
Tetra	PCB-63	*	* n	Not F η	1.16	*		2120	2.5	2.13	*	0.981-0.991	
Tetra	PCB-74	*	* n	Not F η	1.21	*		2120	2.5	2.04	*	0.989-0.999	
Tetra	PCB-61/70	*	* n	Not F η	1.13	*		2120	2.5	2.20	*	0.995-1.005	
Tetra	PCB-76/66	*	* n	Not F η	1.18	*		2120	2.5	2.10	*	1.000-1.010	
Tetra	PCB-80	*	* n	Not F η	1.32	*		2120	2.5	1.84	*	0.995-1.005	
Tetra	PCB-55	*	* n	Not F η	1.23	*		2120	2.5	1.98	*	1.004-1.014	
Tetra	PCB-56/60	*	* n	Not F η	1.11	*		2120	2.5	2.21	*	1.018-1.028	
Tetra	PCB-79	*	* n	Not F η	1.16	*		2120	2.5	2.10	*	1.048-1.058	
Tetra	PCB-78	*	* n	Not F η	1.18	*		2120	2.5	2.07	*	0.982-0.992	
Tetra	PCB-81	*	* n	Not F η	1.29	*		2120	2.5	1.89	*	0.995-1.005	
Tetra	PCB-77	*	* n	Not F η	1.29	*		2120	2.5	1.92	*	0.995-1.005	
Penta	PCB-104	*	* n	Not F η	1.26	*		1390	2.5	2.62	*	0.996-1.006	
Penta	PCB-96	*	* n	Not F η	1.09	*		1390	2.5	3.03	*	1.034-1.044	
Penta	PCB-103	*	* n	Not F η	0.97	*		1390	2.5	3.42	*	1.051-1.061	
Penta	PCB-100	*	* n	Not F η	0.96	*		1390	2.5	3.43	*	1.061-1.071	
Penta	PCB-94	*	* n	Not F η	1.13	*		1390	2.5	3.79	*	0.980-0.990	
Penta	PCB-95/98/102	*	* n	Not F η	1.29	*		1390	2.5	3.33	*	0.994-1.004	
Penta	PCB-93	*	* n	Not F η	1.06	*		1390	2.5	4.04	*	0.998-1.008	
Penta	PCB-88/91	*	* n	Not F η	1.12	*		1390	2.5	3.81	*	1.006-1.016	
Penta	PCB-121	*	* n	Not F η	1.76	*		1390	2.5	2.43	*	1.009-1.019	
Penta	PCB-84/92	*	* n	Not F η	1.07	*		1390	2.5	3.47	*	0.985-0.995	
Penta	PCB-89	*	* n	Not F η	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 η	1.21	*		1390	2.5	3.08	*	0.995-1.005	
Penta	PCB-113	*	* n	NotF η	1.34	*		1390	2.5	2.77	*	1.002-1.012	
Penta	PCB-99	*	* n	NotF η	1.25	*		1390	2.5	2.97	*	1.004-1.014	
Penta	PCB-119	*	* n	NotF η	1.88	*		1390	2.5	2.18	*	0.982-0.992	
Penta	PCB-108/112	*	* n	NotF η	1.41	*		1390	2.5	2.92	*	0.986-0.996	
Penta	PCB-83	*	* n	NotF η	1.66	*		1390	2.5	2.47	*	0.990-1.000	
Penta	PCB-97	*	* n	NotF η	1.30	*		1390	2.5	3.16	*	0.995-1.005	
Penta	PCB-86	*	* n	NotF η	1.03	*		1390	2.5	3.97	*	0.999-1.009	
Penta	PCB-87/117/125	*	* n	NotF η	1.59	*		1390	2.5	2.58	*	1.002-1.012	
Penta	PCB-111/115	*	* n	NotF η	1.86	*		1390	2.5	2.21	*	1.006-1.016	
Penta	PCB-85/116	*	* n	NotF η	1.39	*		1390	2.5	2.95	*	1.010-1.020	
Penta	PCB-120	*	* n	NotF η	1.99	*		1390	2.5	2.07	*	1.016-1.026	
Penta	PCB-110	*	* n	NotF η	1.70	*		1390	2.5	2.41	*	1.019-1.029	
Penta	PCB-82	*	* n	NotF η	0.74	*		1390	2.5	4.06	*	0.971-0.981	
Penta	PCB-124	*	* n	NotF η	1.30	*		1390	2.5	2.31	*	0.988-0.998	
Penta	PCB-107/109	*	* n	NotF η	1.34	*		1390	2.5	2.26	*	0.991-1.001	
Penta	PCB-123	*	* n	NotF η	1.25	*		1390	2.5	2.41	*	0.995-1.005	
Penta	PCB-106/118	*	* n	NotF η	1.29	*		1390	2.5	2.39	*	0.996-1.006	
Penta	PCB-114	*	* n	NotF η	1.45	*		905	2.5	1.35	*	0.995-1.005	
Penta	PCB-122	*	* n	NotF η	1.22	*		905	2.5	1.61	*	0.999-1.009	
Penta	PCB-105	*	* n	NotF η	1.56	*		905	2.5	1.27	*	0.995-1.005	
Penta	PCB-127	*	* n	NotF η	1.31	*		905	2.5	1.44	*	0.995-1.005	
Penta	PCB-126	*	* n	NotF η	1.41	*		905	2.5	1.43	*	0.995-1.005	
Hexa	PCB-155	*	* n	NotF η	1.20	*		683	2.5	1.35	*	0.966-1.006	
Hexa	PCB-150	*	* n	NotF η	1.13	*		683	2.5	1.44	*	1.030-1.040	
Hexa	PCB-152	*	* n	NotF η	1.17	*		683	2.5	1.39	*	1.043-1.053	
Hexa	PCB-145	*	* n	NotF η	1.09	*		683	2.5	1.48	*	1.055-1.065	
Hexa	PCB-136	*	* n	NotF η	1.14	*		683	2.5	1.42	*	1.063-1.073	
Hexa	PCB-148	*	* n	NotF η	0.82	*		683	2.5	1.98	*	1.066-1.076	
Hexa	PCB-154	*	* n	NotF η	0.89	*		683	2.5	1.82	*	1.079-1.089	
Hexa	PCB-151	*	* n	NotF η	0.82	*		683	2.5	1.98	*	1.097-1.107	
Hexa	PCB-135	*	* n	NotF η	0.80	*		683	2.5	2.04	*	1.101-1.113	
Hexa	PCB-144	*	* n	NotF η	0.86	*		683	2.5	1.90	*	1.105-1.116	
Hexa	PCB-147	*	* n	NotF η	0.78	*		683	2.5	2.08	*	1.108-1.120	
Hexa	PCB-139/149	*	* n	NotF η	0.87	*		683	2.5	1.86	*	1.115-1.127	
Hexa	PCB-140	*	* n	NotF η	0.78	*		683	2.5	2.09	*	1.120-1.132	
Hexa	PCB-134/143	*	* n	NotF η	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 η	0.91	*		1050	2.5	2.06	*	0.977-0.987	
Hexa	PCB-131	*	* n	Not F η	0.85	*		1050	2.5	2.22	*	0.981-0.991	
Hexa	PCB-146/165	*	* n	Not F η	1.08	*		1050	2.5	1.73	*	0.986-0.996	
Hexa	PCB-132/161	*	* n	Not F η	1.12	*		1050	2.5	1.67	*	0.992-1.002	
Hexa	PCB-153	*	* n	Not F η	1.20	*		1050	2.5	1.56	*	0.996-1.006	
Hexa	PCB-168	*	* n	Not F η	1.36	*		1050	2.5	1.38	*	1.000-1.010	
Hexa	PCB-141	*	* n	Not F η	1.16	*		1050	2.5	1.81	*	0.995-1.005	
Hexa	PCB-137	*	* n	Not F η	1.18	*		1050	2.5	1.78	*	1.004-1.014	
Hexa	PCB-130	*	* n	Not F η	0.92	*		1050	2.5	2.28	*	1.006-1.016	
Hexa	PCB-138/163/164	*	* n	Not F η	1.38	*		1050	2.5	1.44	*	0.996-1.006	
Hexa	PCB-158/160	*	* n	Not F η	1.48	*		1050	2.5	1.34	*	1.001-1.011	
Hexa	PCB-129	*	* n	Not F η	0.99	*		1050	2.5	2.00	*	1.007-1.017	
Hexa	PCB-166	*	* n	Not F η	1.14	*		1050	2.5	1.42	*	0.988-0.998	
Hexa	PCB-159	*	* n	Not F η	1.22	*		1050	2.5	1.33	*	0.995-1.005	
Hexa	PCB-128/162	*	* n	Not F η	1.03	*		1050	2.5	1.57	*	1.002-1.012	
Hexa	PCB-167	*	* n	Not F η	1.18	*		1050	2.5	1.36	*	0.995-1.005	
Hexa	PCB-156	*	* n	Not F η	1.27	*		1050	2.5	1.26	*	0.995-1.005	
Hexa	PCB-157	*	* n	Not F η	1.22	*		1050	2.5	1.29	*	0.995-1.005	
Hexa	PCB-169	*	* n	Not F η	1.07	*		1050	2.5	1.36	*	0.995-1.005	
Hepta	PCB-188	*	* n	Not F η	1.52	*		991	2.5	1.01	*	0.996-1.006	
Hepta	PCB-184	*	* n	Not F η	1.34	*		991	2.5	1.15	*	1.006-1.016	
Hepta	PCB-179	*	* n	Not F η	1.39	*		991	2.5	1.11	*	1.024-1.034	
Hepta	PCB-176	*	* n	Not F η	1.45	*		991	2.5	1.06	*	1.035-1.045	
Hepta	PCB-186	*	* n	Not F η	1.46	*		991	2.5	1.06	*	1.049-1.059	
Hepta	PCB-178	*	* n	Not F η	1.07	*		991	2.5	1.43	*	1.061-1.071	
Hepta	PCB-175	*	* n	Not F η	1.05	*		991	2.5	1.47	*	1.069-1.079	
Hepta	PCB-182/187	*	* n	Not F η	1.14	*		991	2.5	1.36	*	1.073-1.083	
Hepta	PCB-183	*	* n	Not F η	1.22	*		991	2.5	1.26	*	1.080-1.090	
Hepta	PCB-185	*	* n	Not F η	1.40	*		991	2.5	1.18	*	0.950-0.960	
Hepta	PCB-174	*	* n	Not F η	1.29	*		991	2.5	1.28	*	0.958-0.968	
Hepta	PCB-181	*	* n	Not F η	1.35	*		991	2.5	1.22	*	0.960-0.970	
Hepta	PCB-177	*	* n	Not F η	1.27	*		991	2.5	1.30	*	0.963-0.973	
Hepta	PCB-171	*	* n	Not F η	1.46	*		991	2.5	1.13	*	0.969-0.979	
Hepta	PCB-173	*	* n	Not F η	1.10	*		991	2.5	1.49	*	0.978-0.988	
Hepta	PCB-172	*	* n	Not F η	1.35	*		991	2.5	1.22	*	0.987-0.997	
Hepta	PCB-192	*	* n	Not F η	1.74	*		991	2.5	0.950	*	0.991-1.001	
Hepta	PCB-180	*	* n	Not F η	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 ₇	1.85	*	991	2.5	0.892	*	0.999-1.009	
Hepta	PCB-191	*	*	n	Not F ₇	1.86	*	991	2.5	0.887	*	1.005-1.015	
Hepta	PCB-170	*	*	n	Not F ₇	1.67	*	991	2.5	1.12	*	0.995-1.005	
Hepta	PCB-190	*	*	n	Not F ₇	2.25	*	991	2.5	0.835	*	0.999-1.009	
Hepta	PCB-189	*	*	n	Not F ₇	1.67	*	991	2.5	0.827	*	0.995-1.005	
Octa	PCB-202	*	*	n	Not F ₈	1.02	*	1100	2.5	2.07	*	0.995-1.005	
Octa	PCB-201	*	*	n	Not F ₈	1.10	*	1100	2.5	1.92	*	1.005-1.015	
Octa	PCB-204	*	*	n	Not F ₈	1.07	*	1100	2.5	1.96	*	1.009-1.019	
Octa	PCB-197	*	*	n	Not F ₈	1.17	*	1100	2.5	1.80	*	1.015-1.025	
Octa	PCB-200	*	*	n	Not F ₈	1.03	*	1100	2.5	2.03	*	1.034-1.044	
Octa	PCB-198	*	*	n	Not F ₈	0.75	*	1100	2.5	2.79	*	1.062-1.072	
Octa	PCB-199	*	*	n	Not F ₈	0.74	*	1100	2.5	2.84	*	1.064-1.074	
Octa	PCB-196/203	*	*	n	Not F ₈	0.83	*	1100	2.5	2.54	*	1.070-1.080	
Octa	PCB-195	*	*	n	Not F ₈	1.14	*	1050	2.5	1.73	*	0.979-0.989	
Octa	PCB-194	*	*	n	Not F ₈	1.29	*	1050	2.5	1.53	*	0.995-1.005	
Octa	PCB-205	*	*	n	Not F ₈	1.61	*	1050	2.5	1.23	*	1.001-1.010	
Nona	PCB-208	*	*	n	Not F ₉	1.01	*	900	2.5	0.992	*	0.995-1.005	
Nona	PCB-207	*	*	n	Not F ₉	1.03	*	900	2.5	0.979	*	1.001-1.011	
Nona	PCB-206	*	*	n	Not F ₉	0.88	*	900	2.5	1.90	*	0.995-1.005	
Deca	PCB-209	*	*	n	Not F ₁₀	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 EndCAL: NA

ConCal: ST150127E1-1

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*

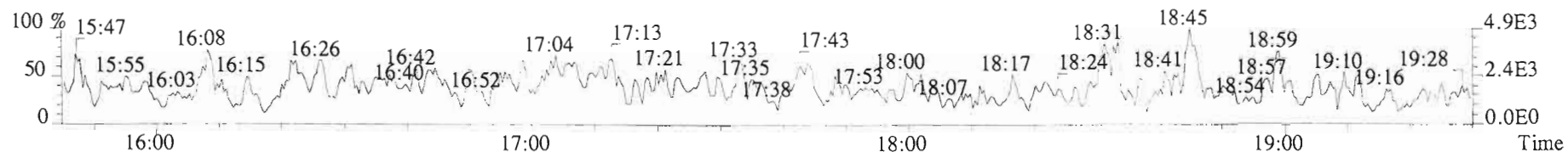
Date: *1/29/15*

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											
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	1.020-1.031		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											
13C-PCB-209	2.15e+07	1.16 y	0.71	56:54	1.050	1.045-1.055		2000	100											

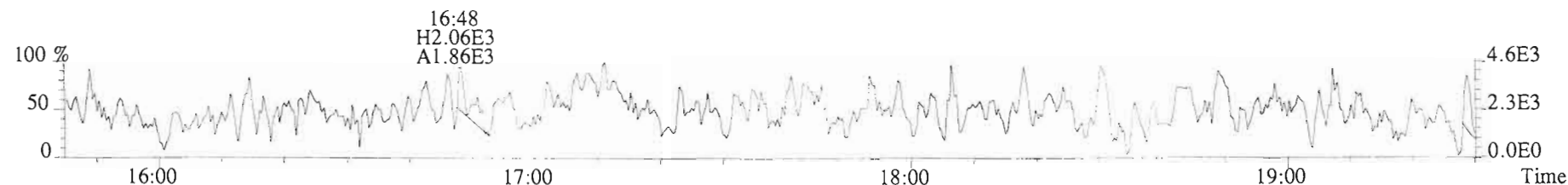
Analyst: DMS

Date: 1/29/15

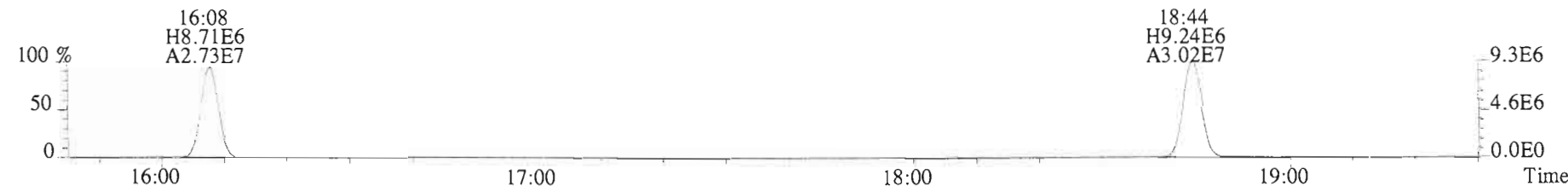
File:150127E1 #1-729 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
188.0393 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2264.0,0.00%,F,F)



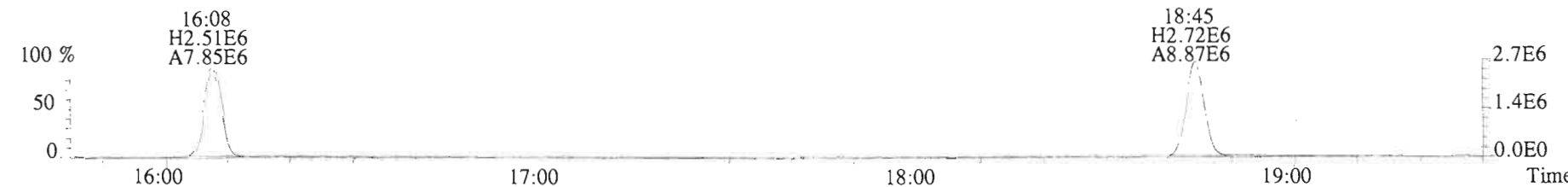
190.0363 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2900.0,0.00%,F,F)



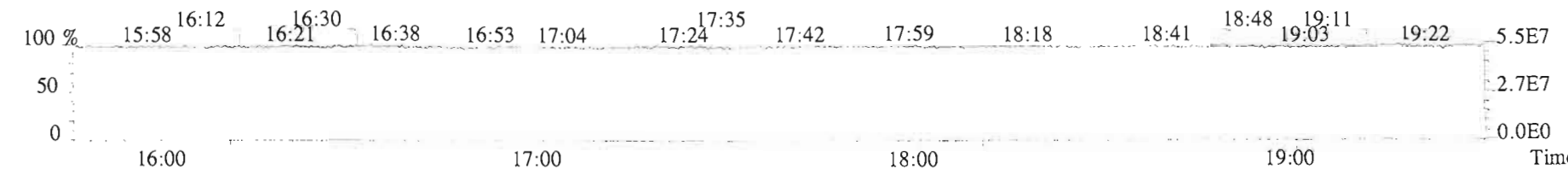
200.0795 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5436.0,0.00%,F,F)



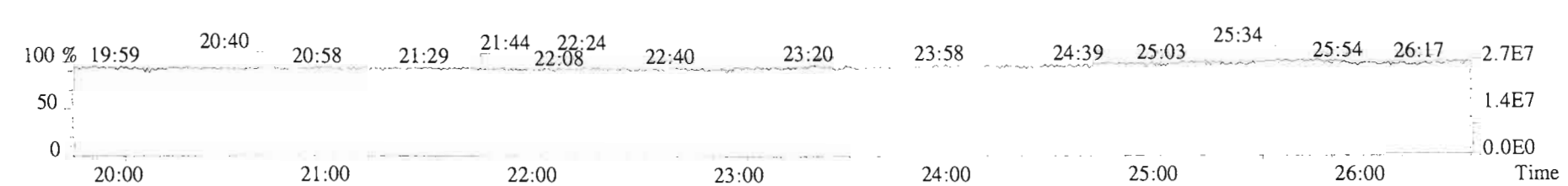
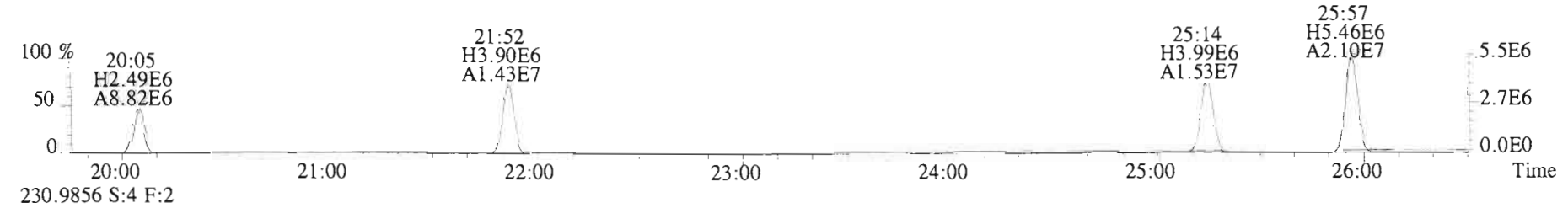
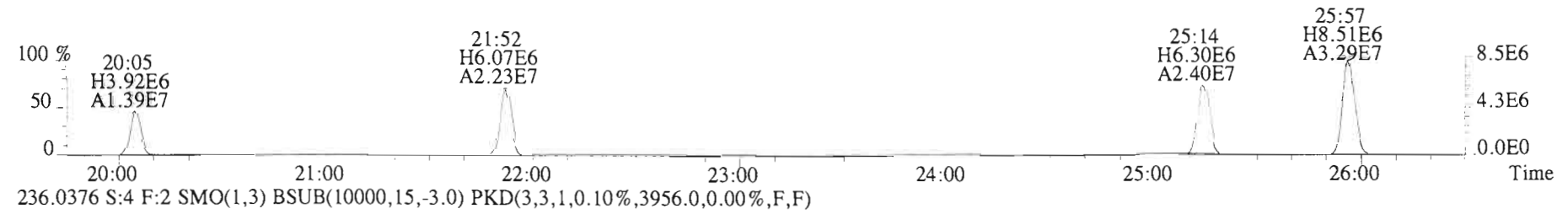
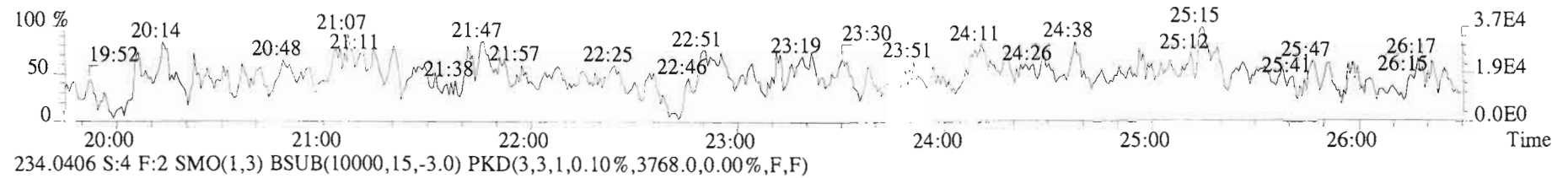
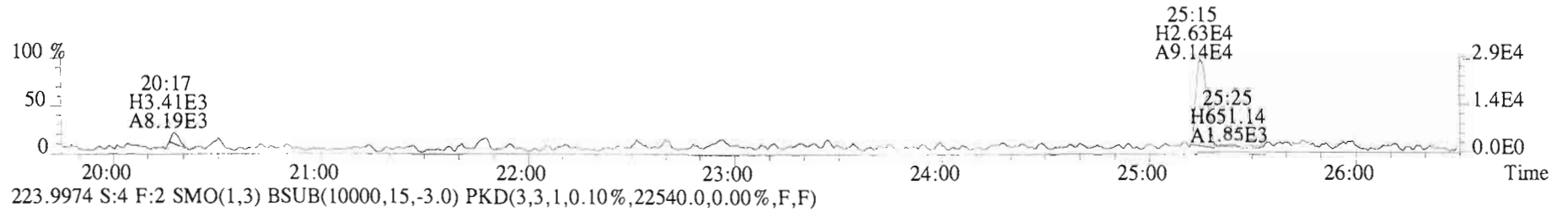
202.0766 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,25436.0,0.00%,F,F)



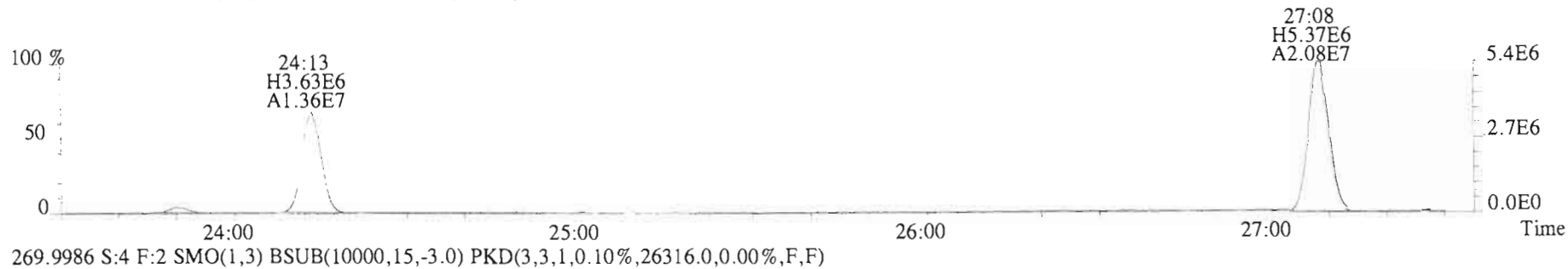
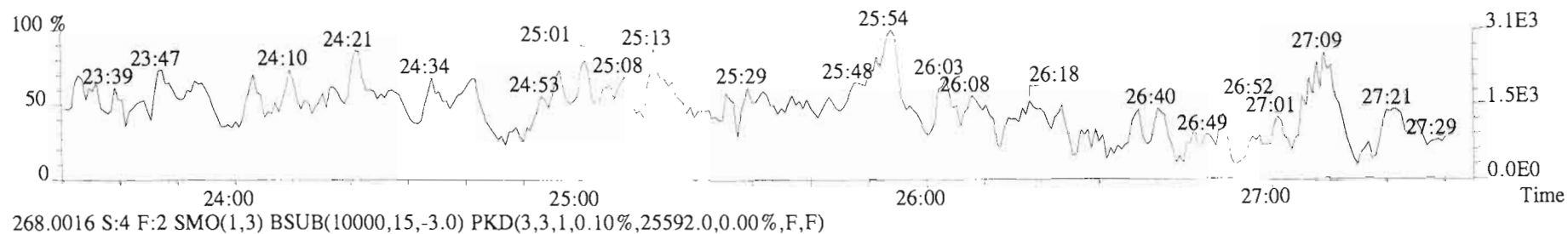
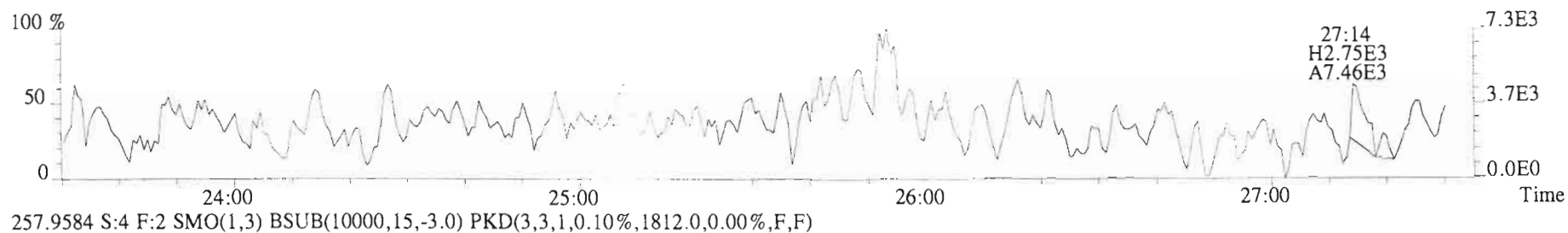
180.9880 S:4



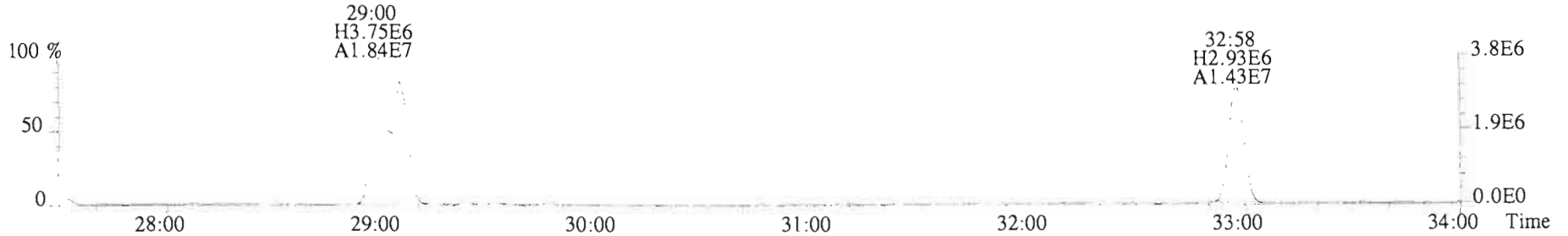
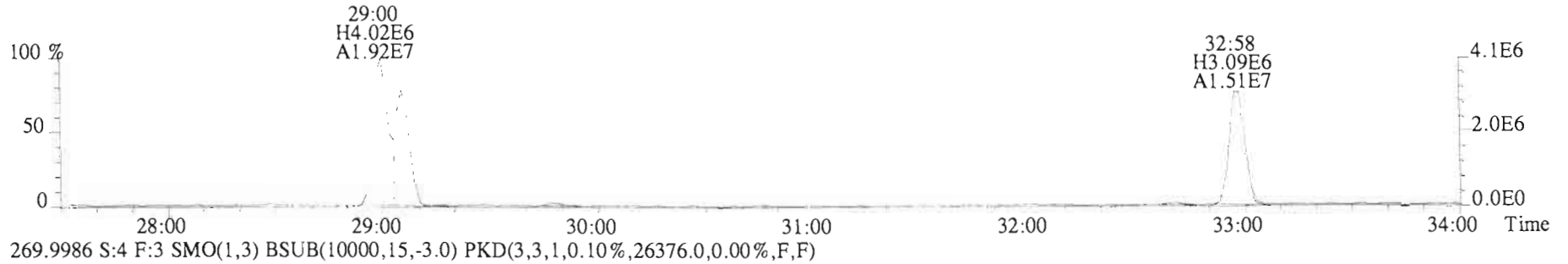
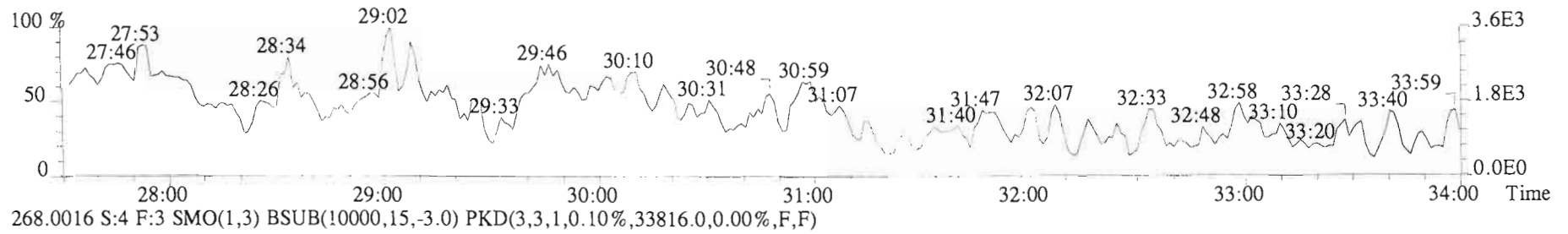
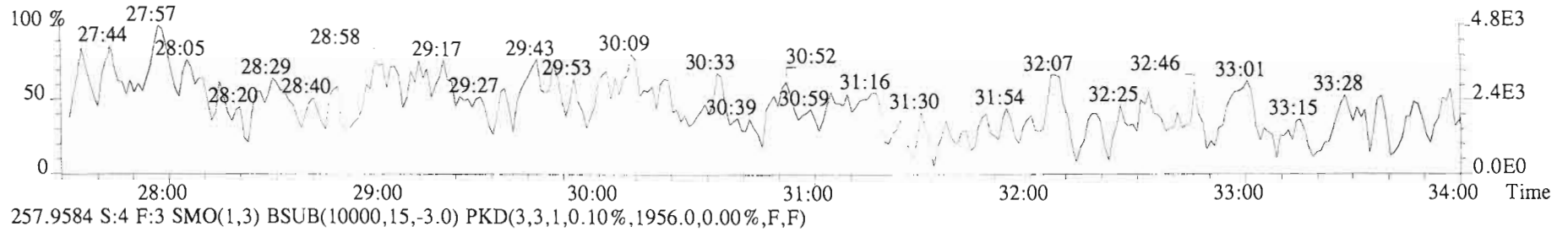
File:150127E1 #1-757 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2472.0,0.00%,F,F)



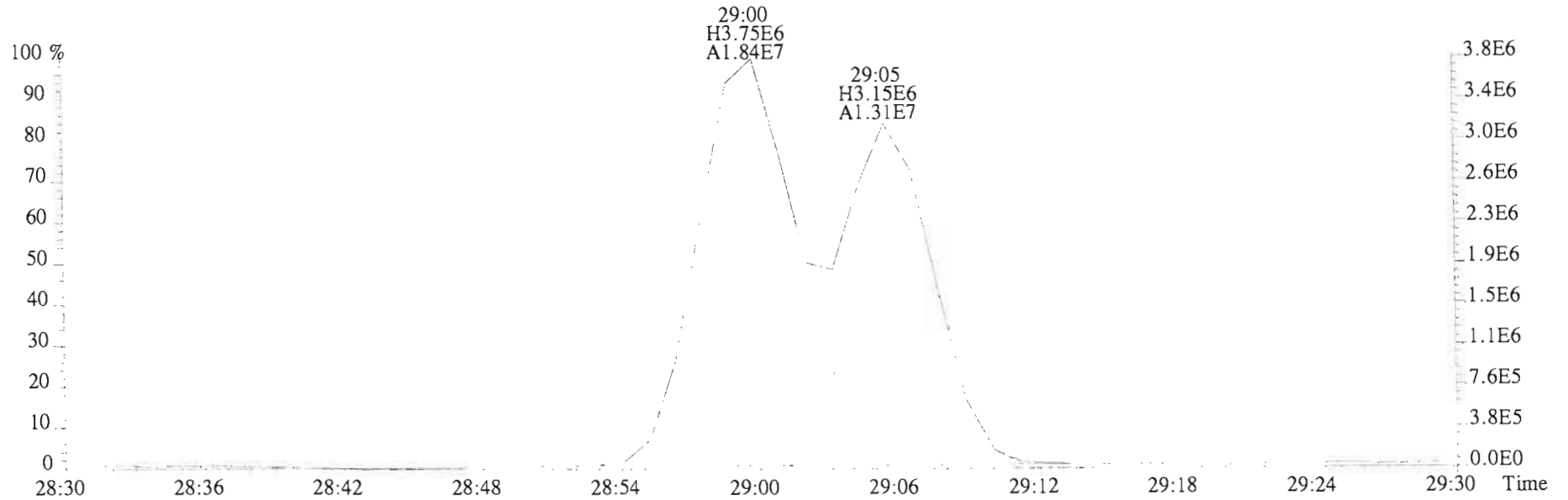
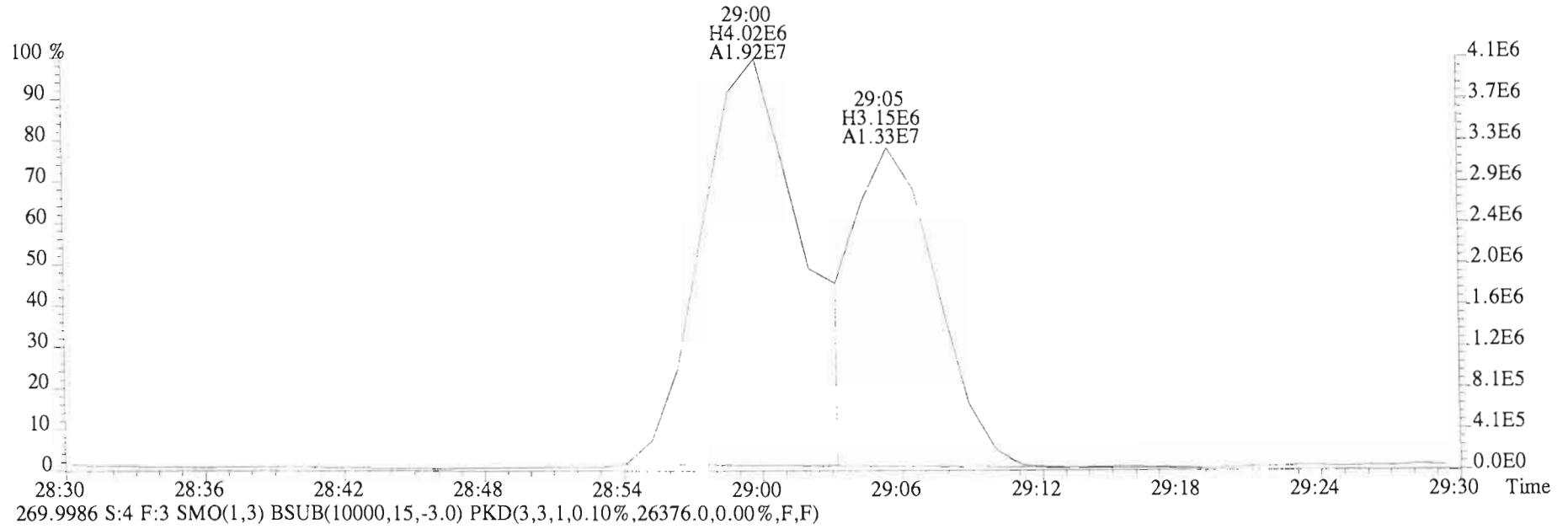
File:150127E1 #1-757 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
255.9613 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3268.0,0.00%,F,F)



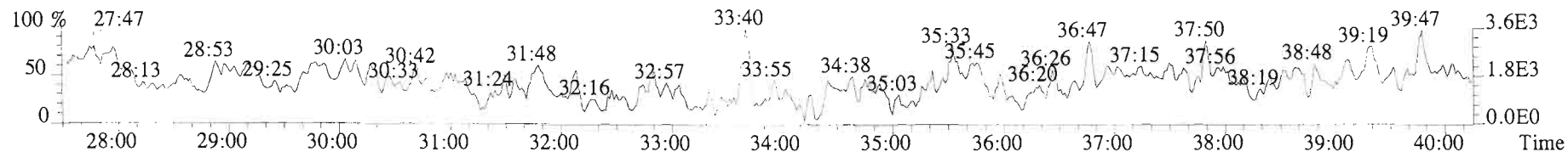
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZBI
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2864.0,0.00%,F,F)



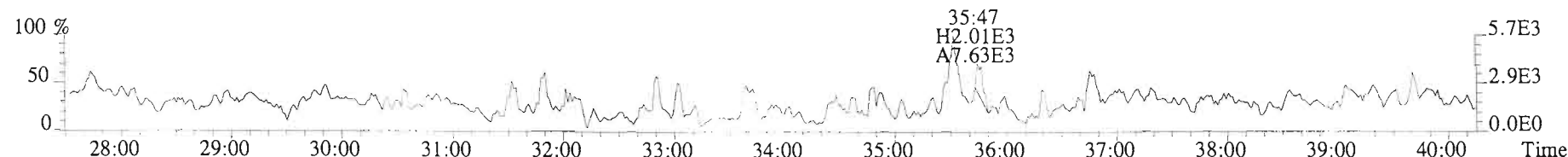
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,33816.0,0.00%,F,F)



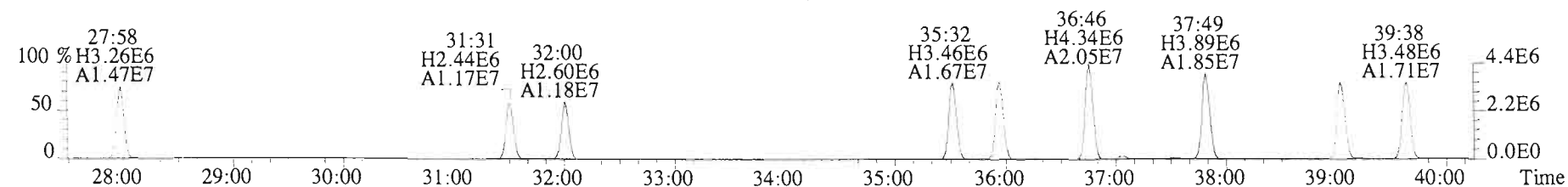
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2000.0,0.00%,F,F)



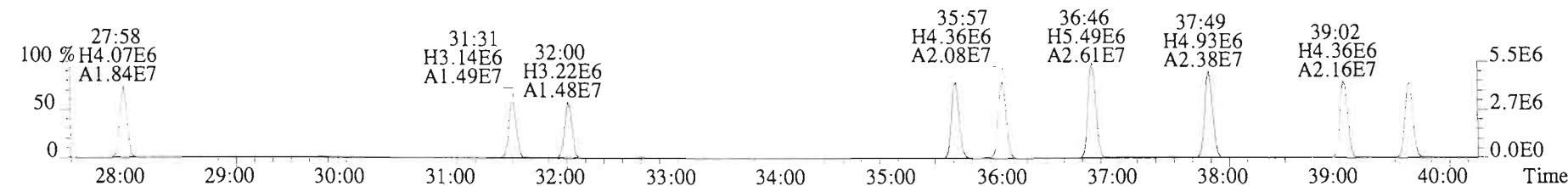
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



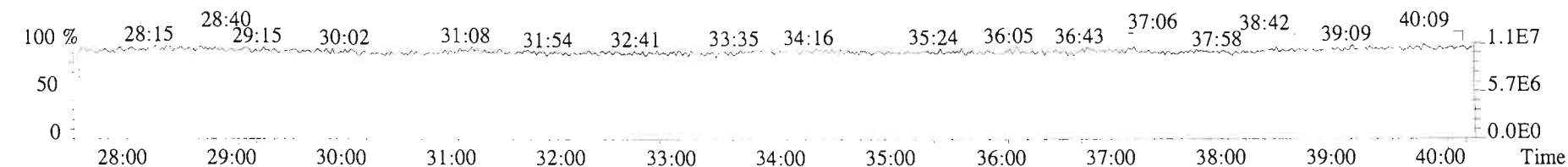
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6180.0,0.00%,F,F)



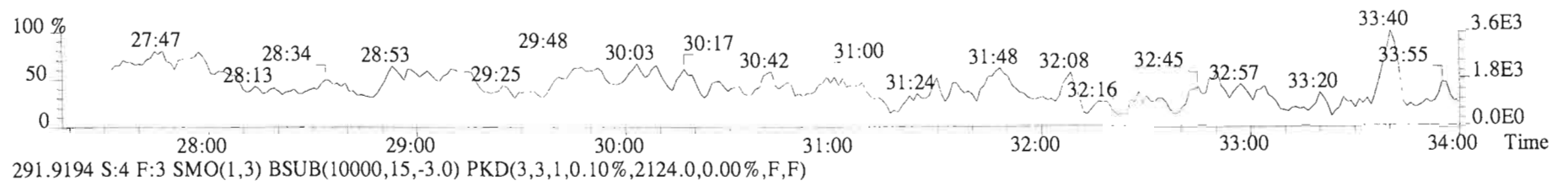
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4176.0,0.00%,F,F)



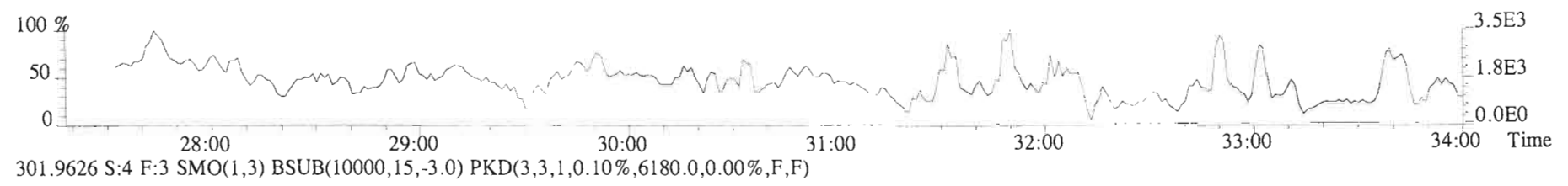
330.9792 S:4 F:3



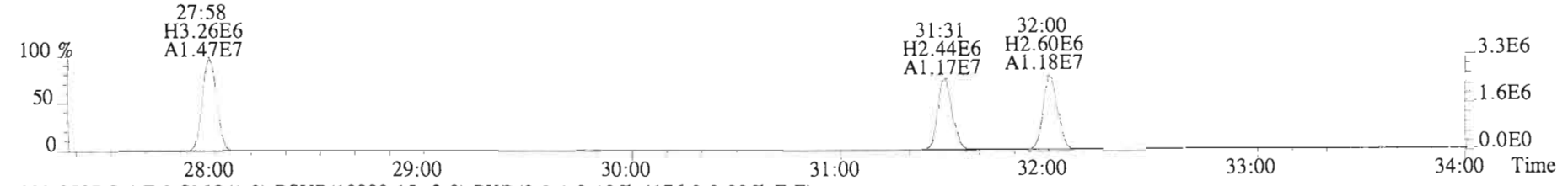
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text: Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2000.0,0.00%,F,F)



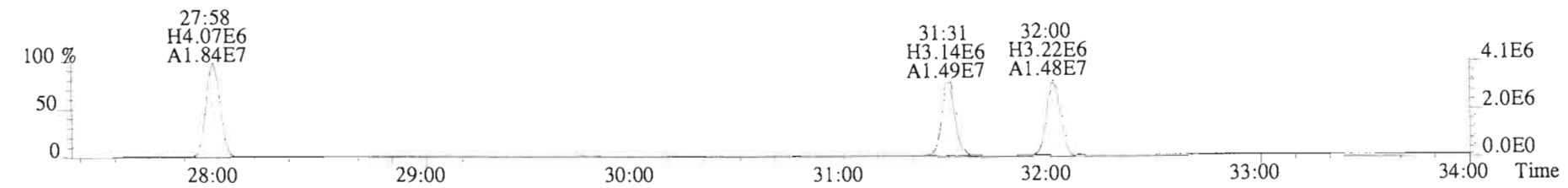
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



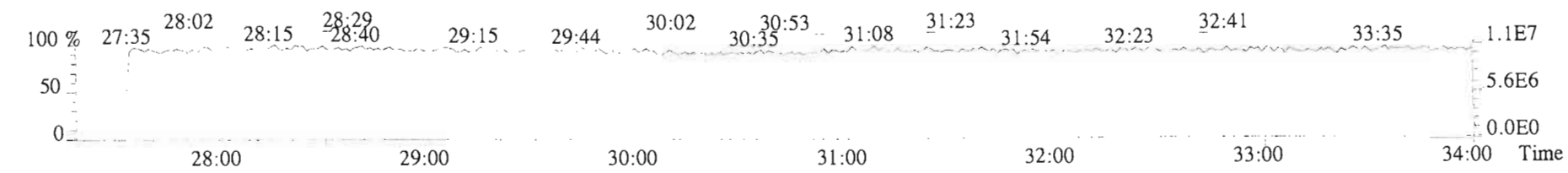
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6180.0,0.00%,F,F)



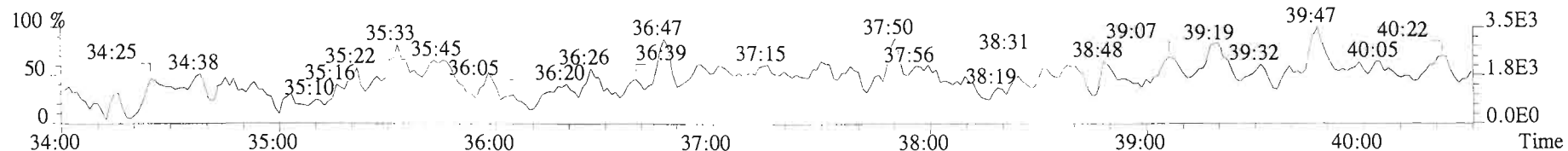
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4176.0,0.00%,F,F)



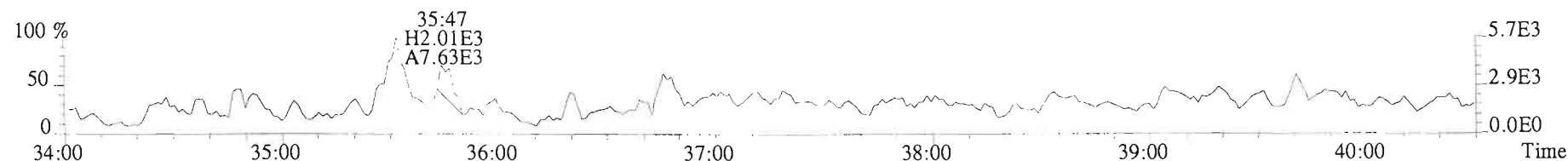
330.9792 S:4 F:3



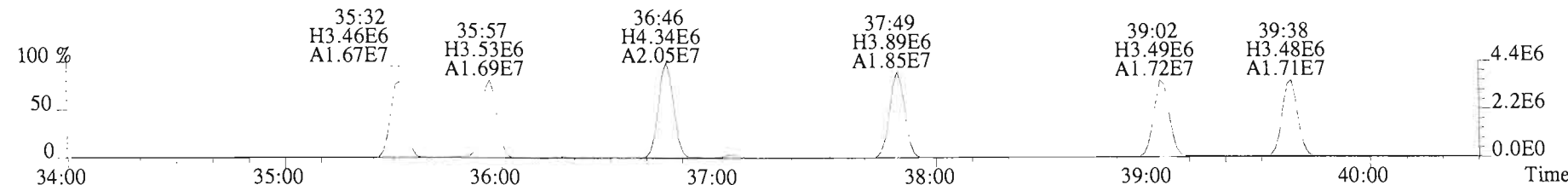
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2000.0,0.00%,F,F)



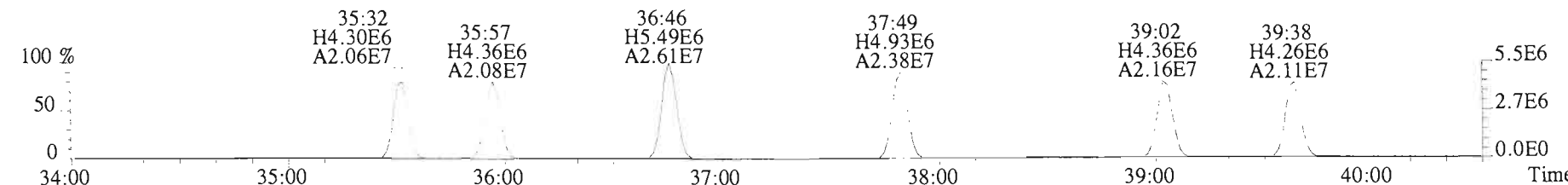
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2124.0,0.00%,F,F)



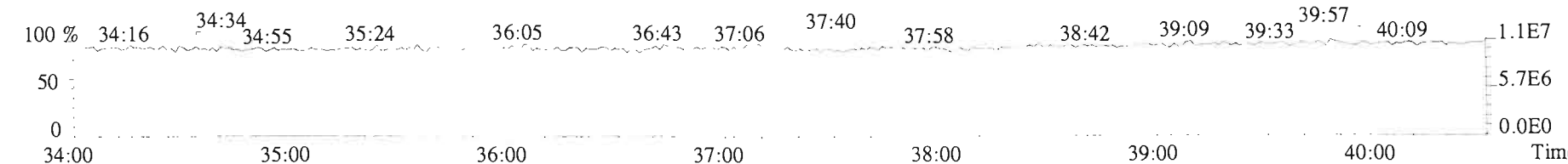
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6180.0,0.00%,F,F)



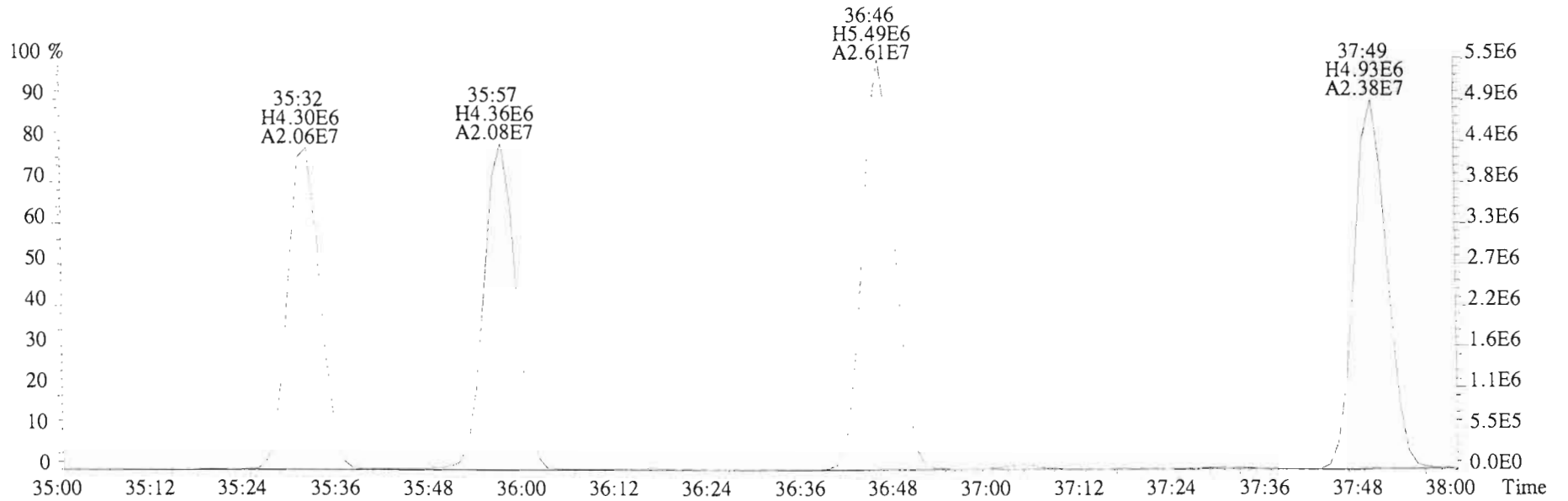
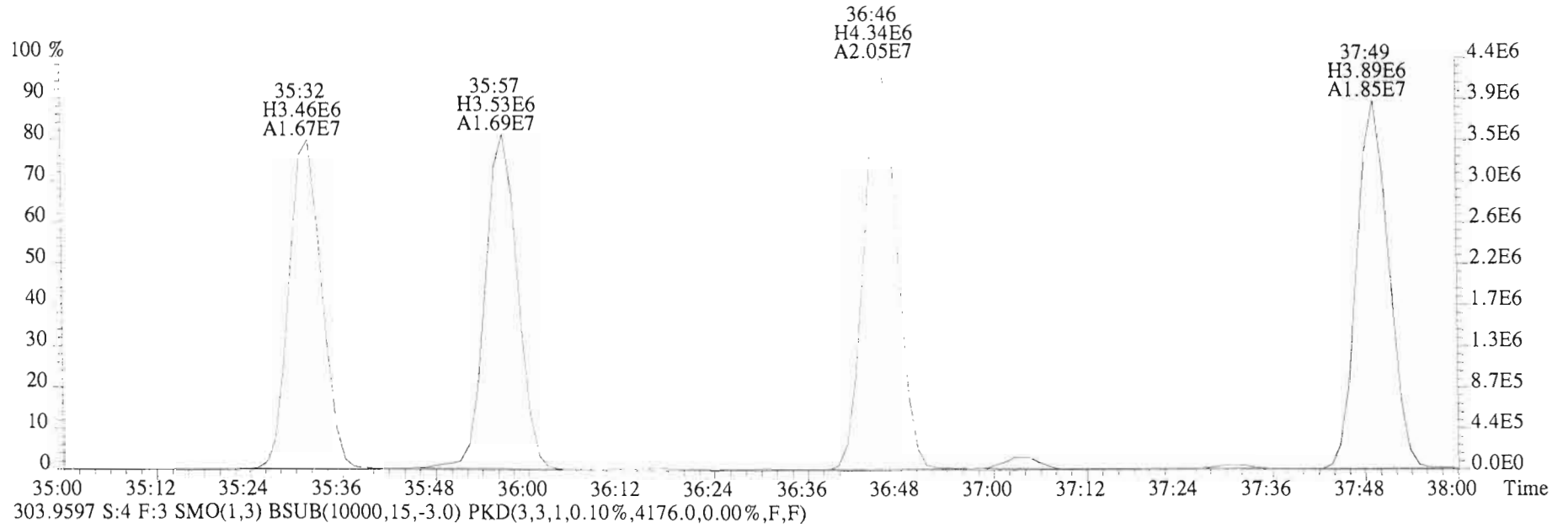
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4176.0,0.00%,F,F)



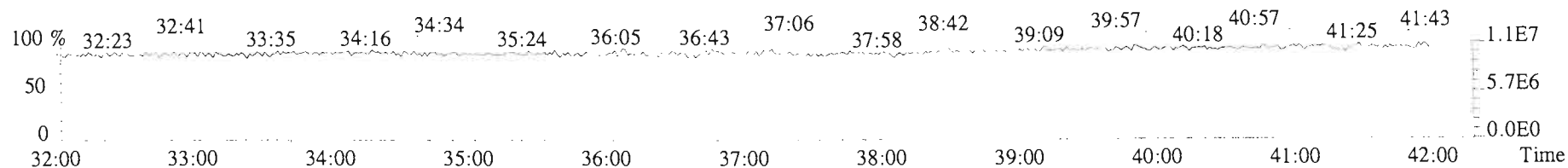
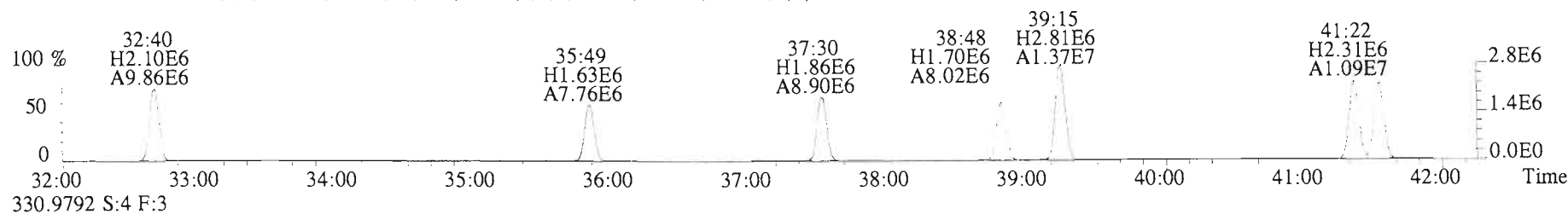
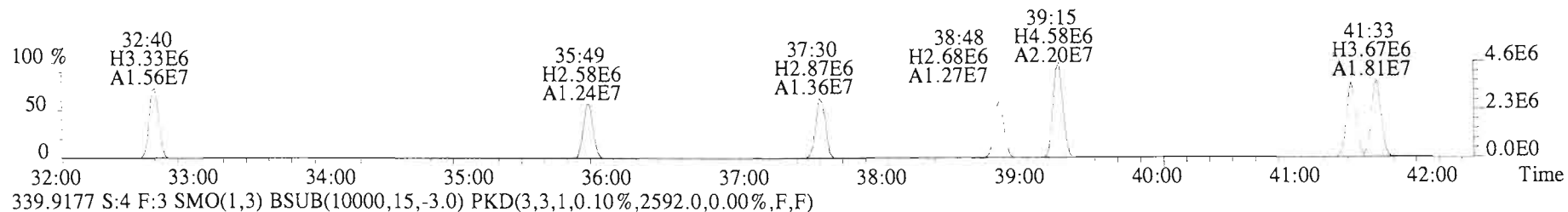
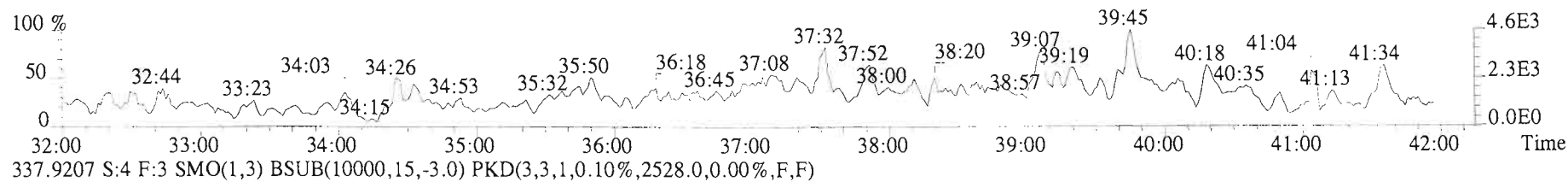
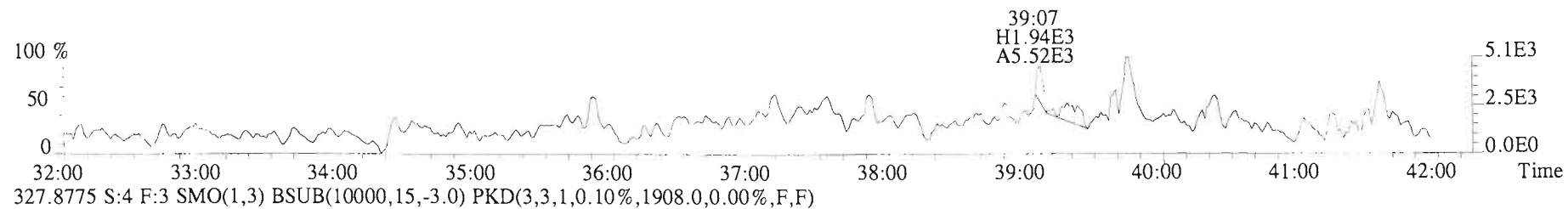
330.9792 S:4 F:3



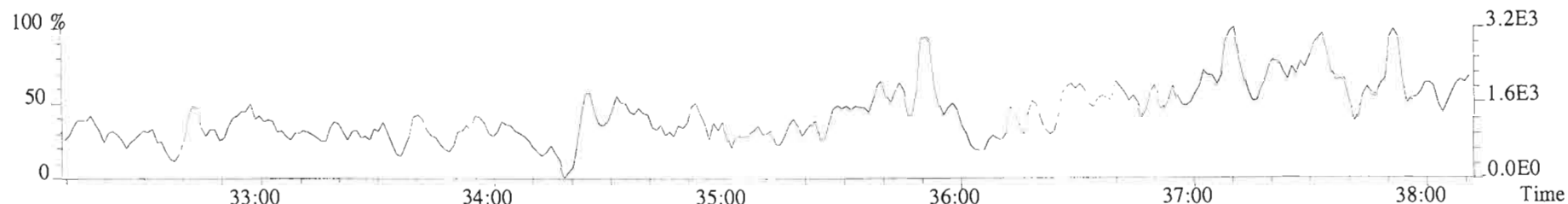
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6180.0,0.00%,F,F)



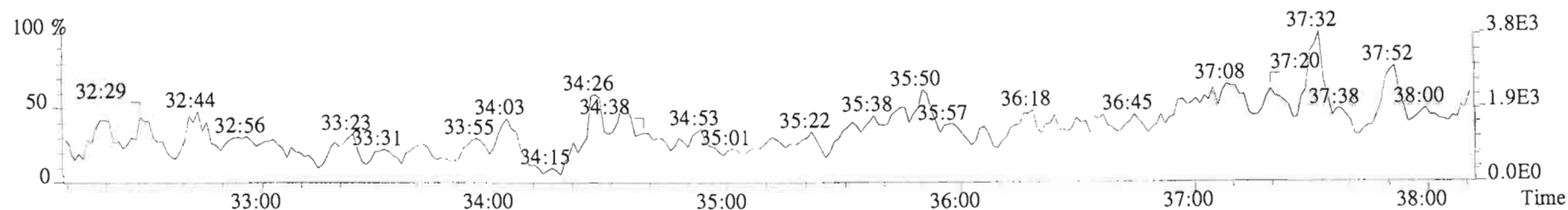
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2032.0,0.00%,F,F)



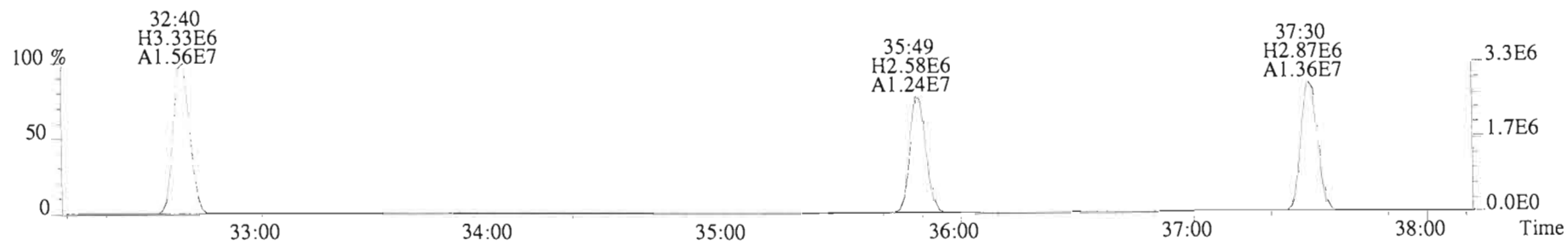
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2032.0,0.00%,F,F)



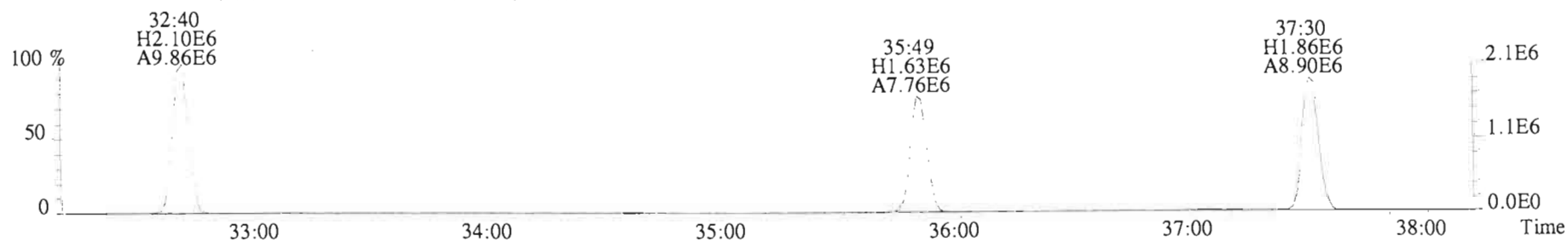
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)



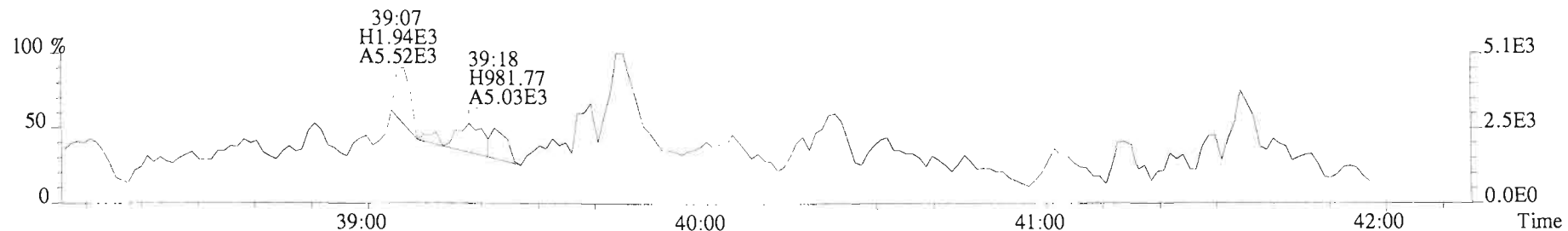
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2528.0,0.00%,F,F)



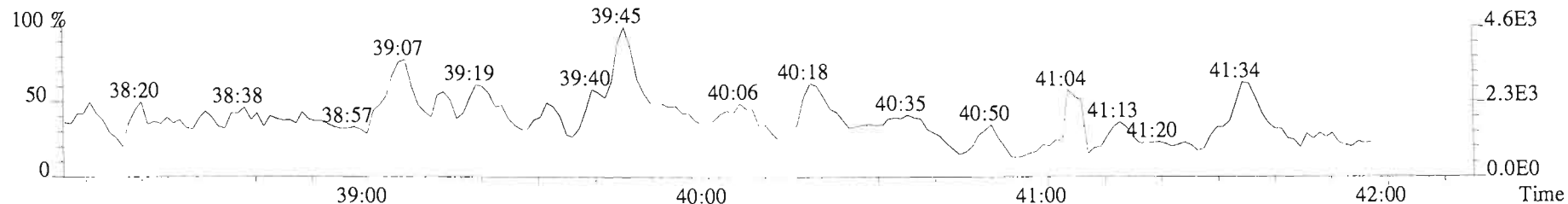
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2592.0,0.00%,F,F)



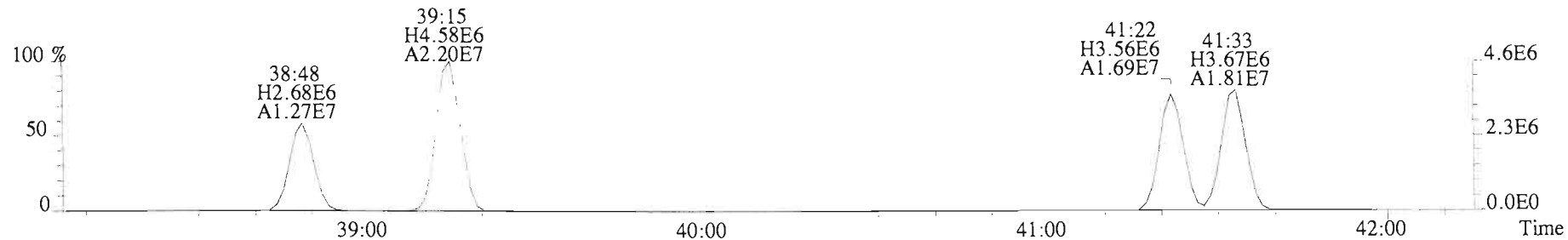
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
 325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2032.0,0.00%,F,F)



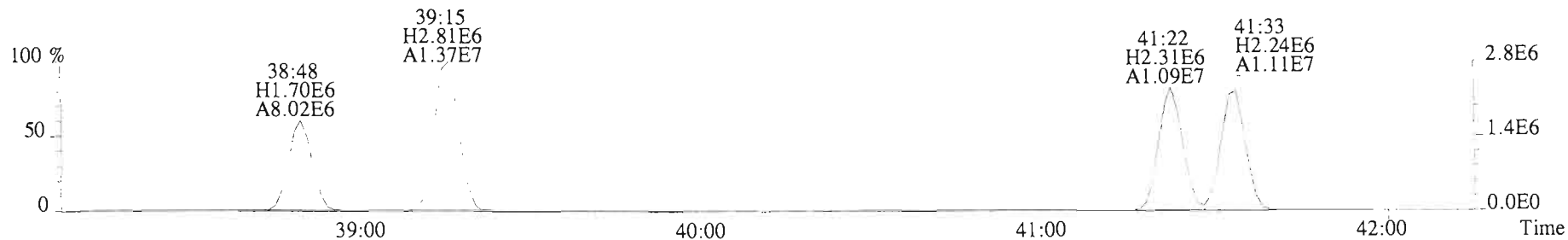
327.8775 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)



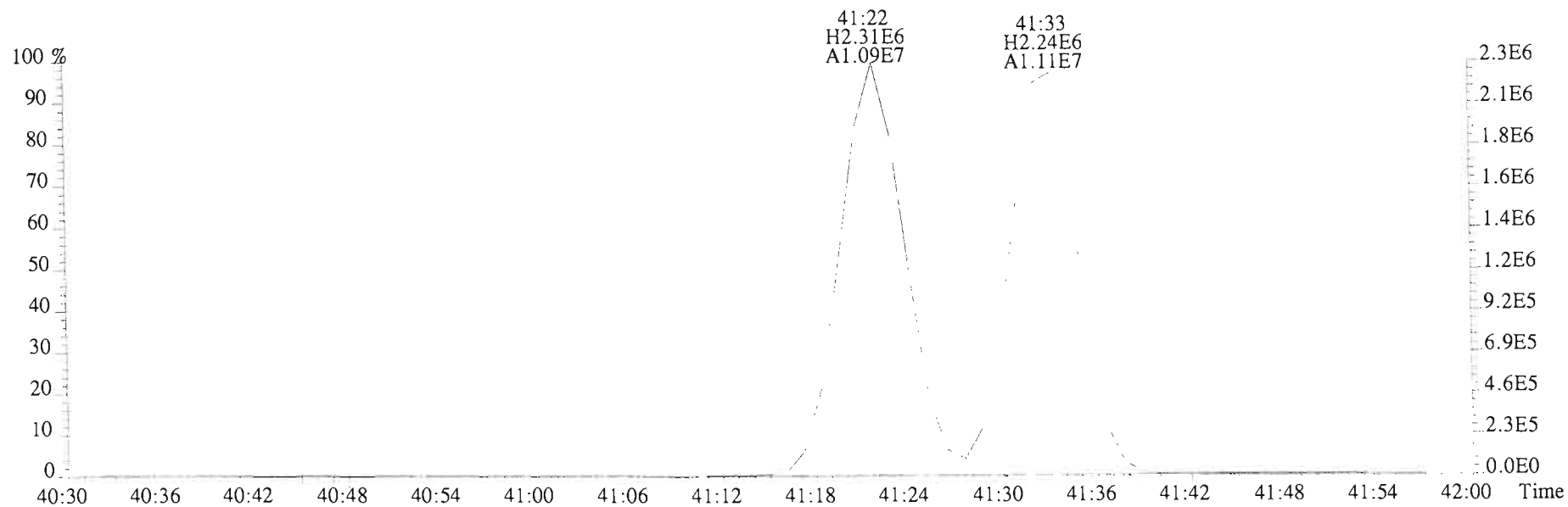
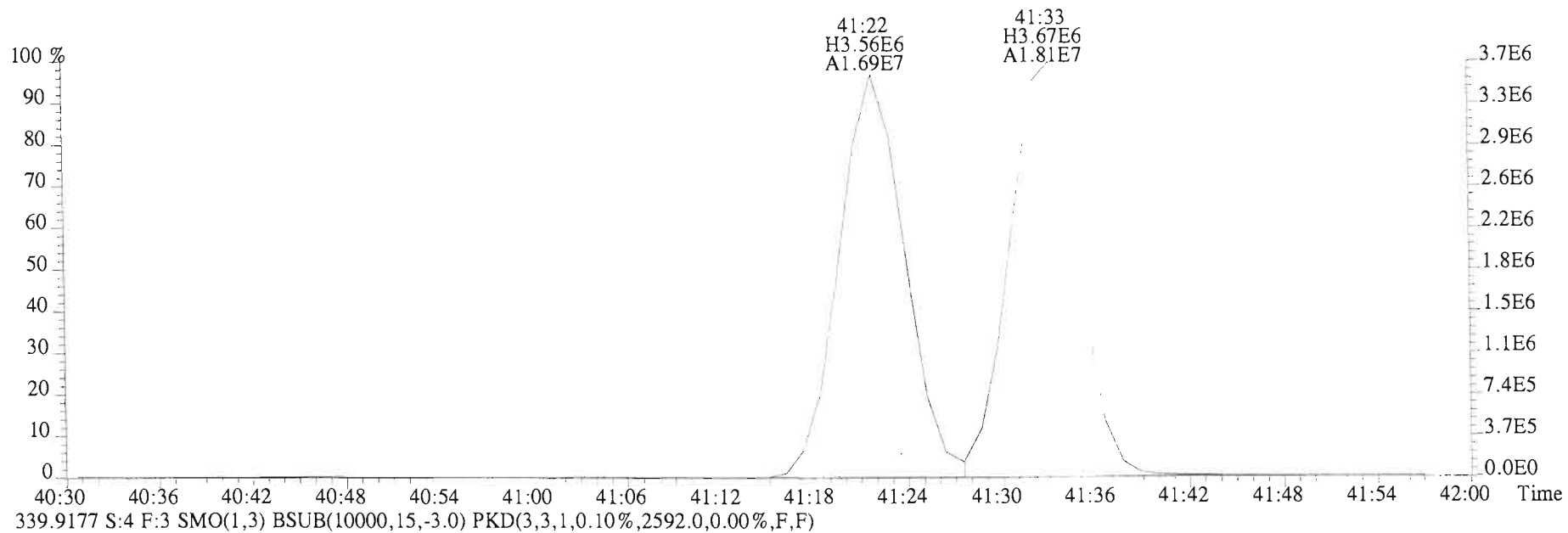
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2528.0,0.00%,F,F)



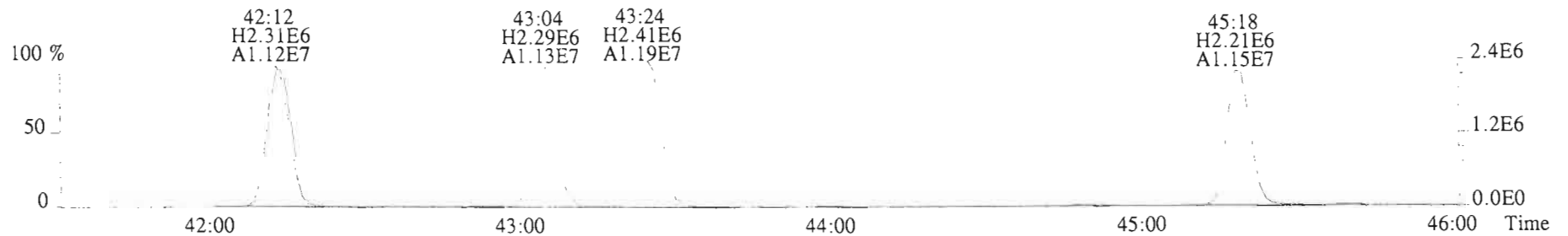
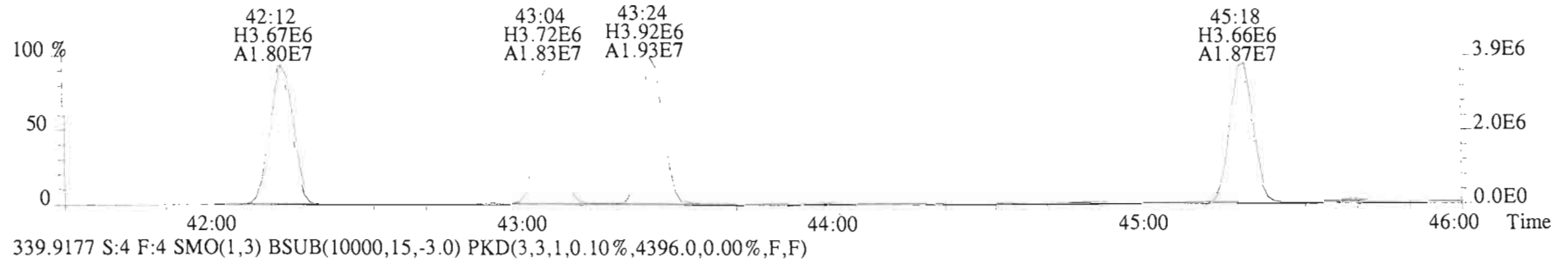
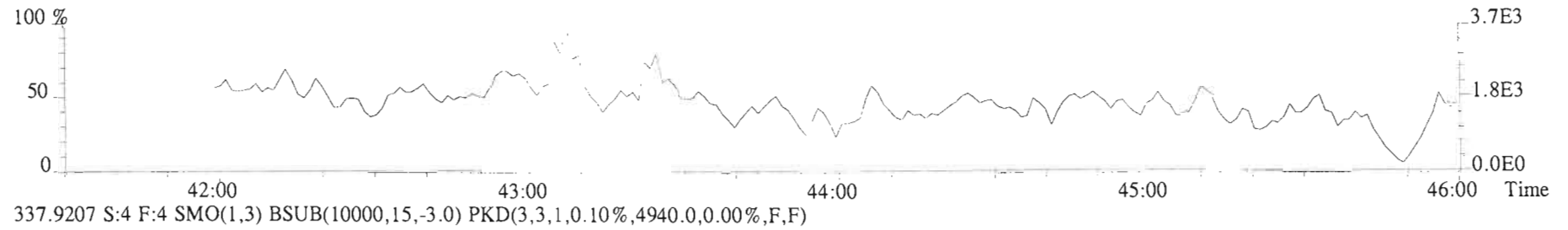
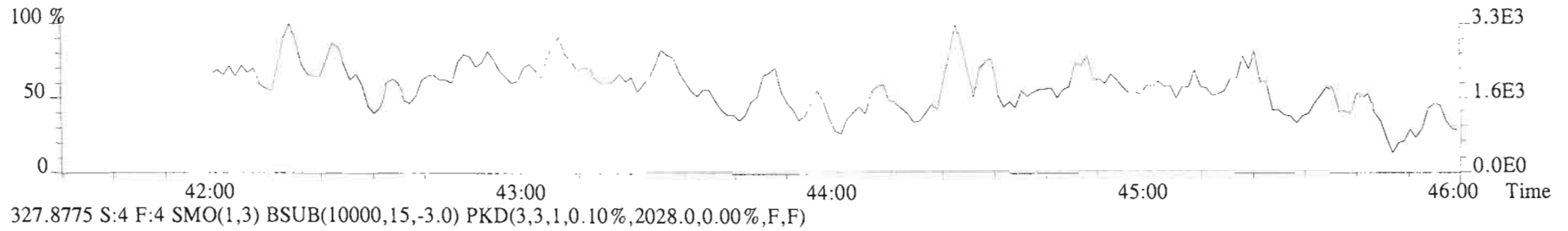
339.9177 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2592.0,0.00%,F,F)



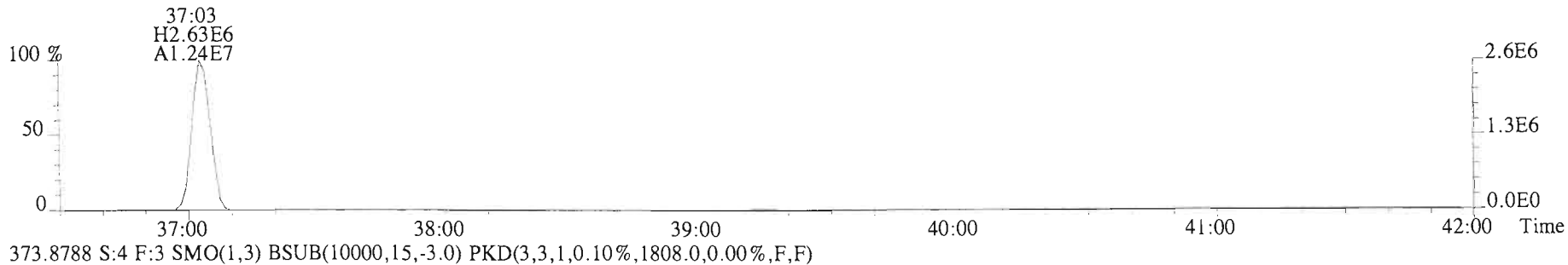
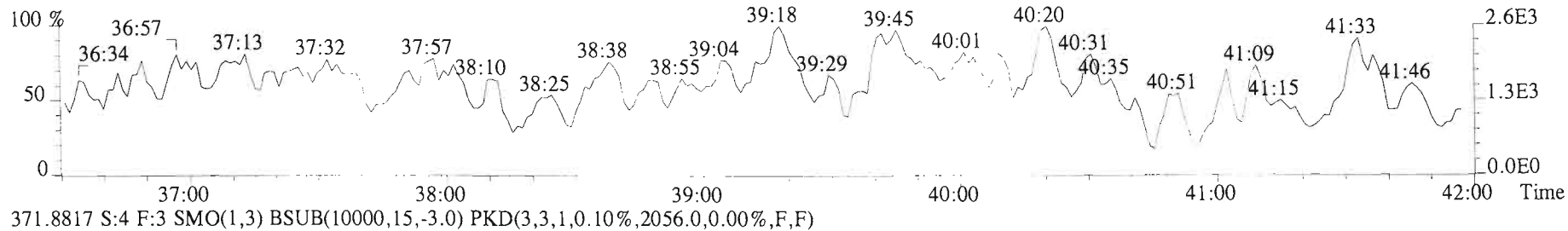
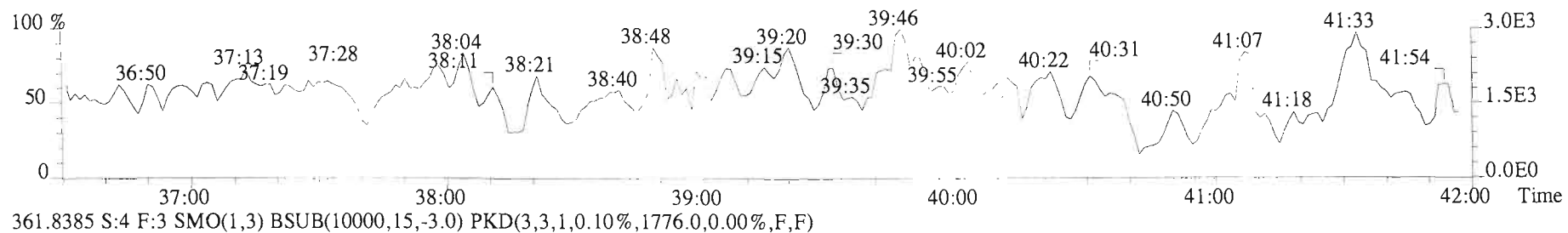
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text: Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2528.0,0.00%,F,F)



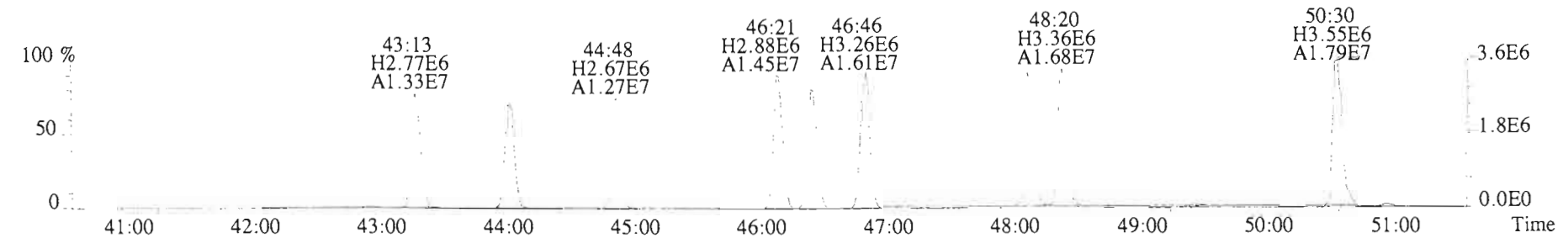
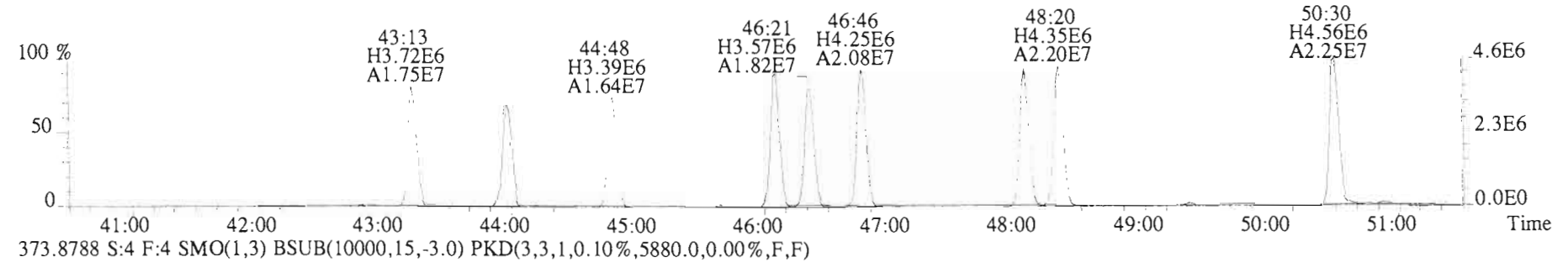
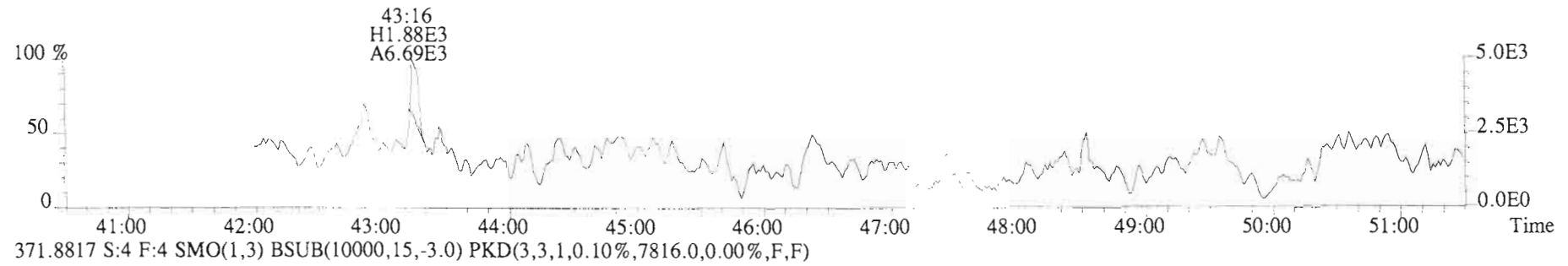
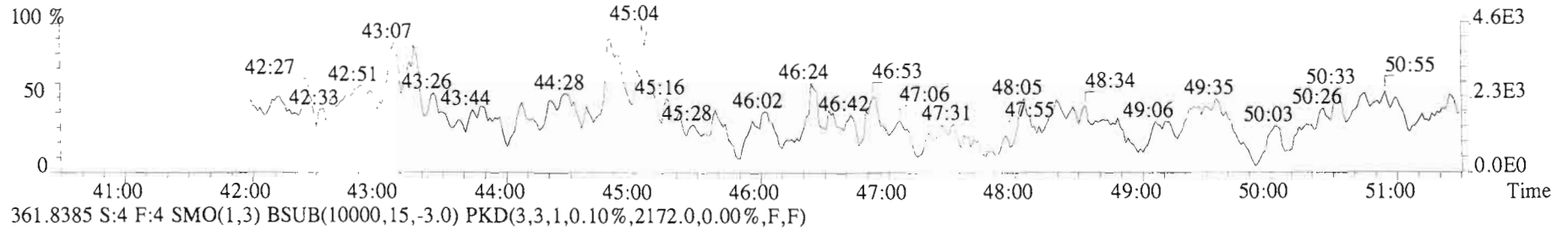
File:150127E1 #1-564 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
325.8804 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2288.0,0.00%,F,F)



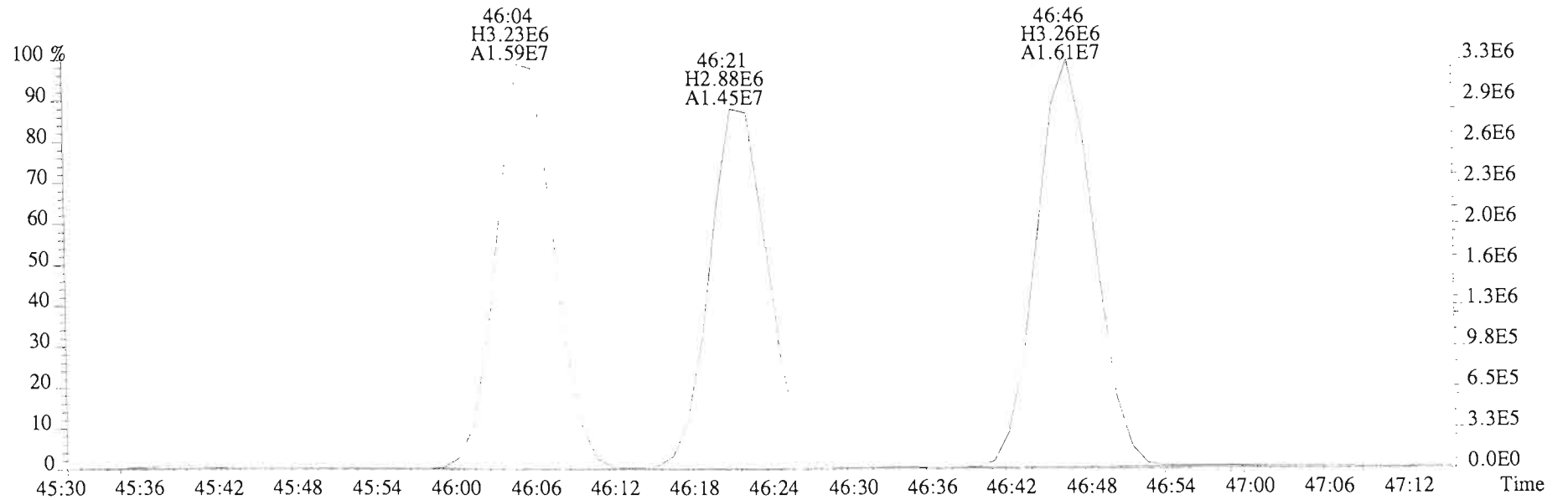
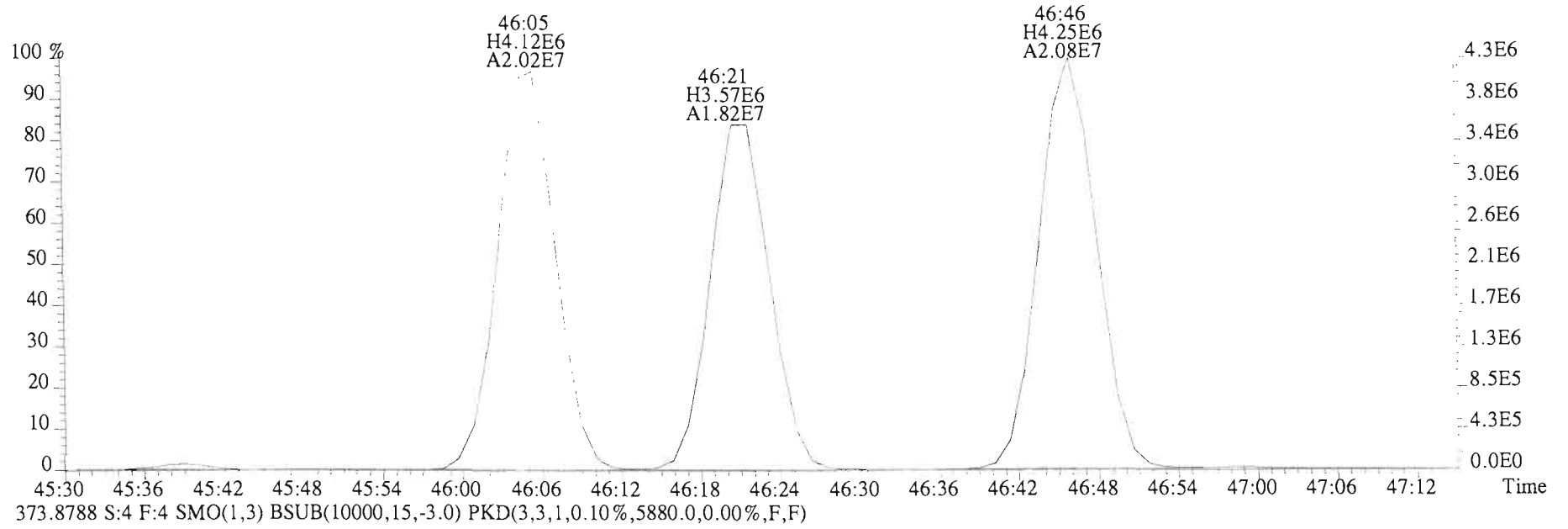
File:150127E1 #1-762 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
359.8415 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1920.0,0.00%,F,F)



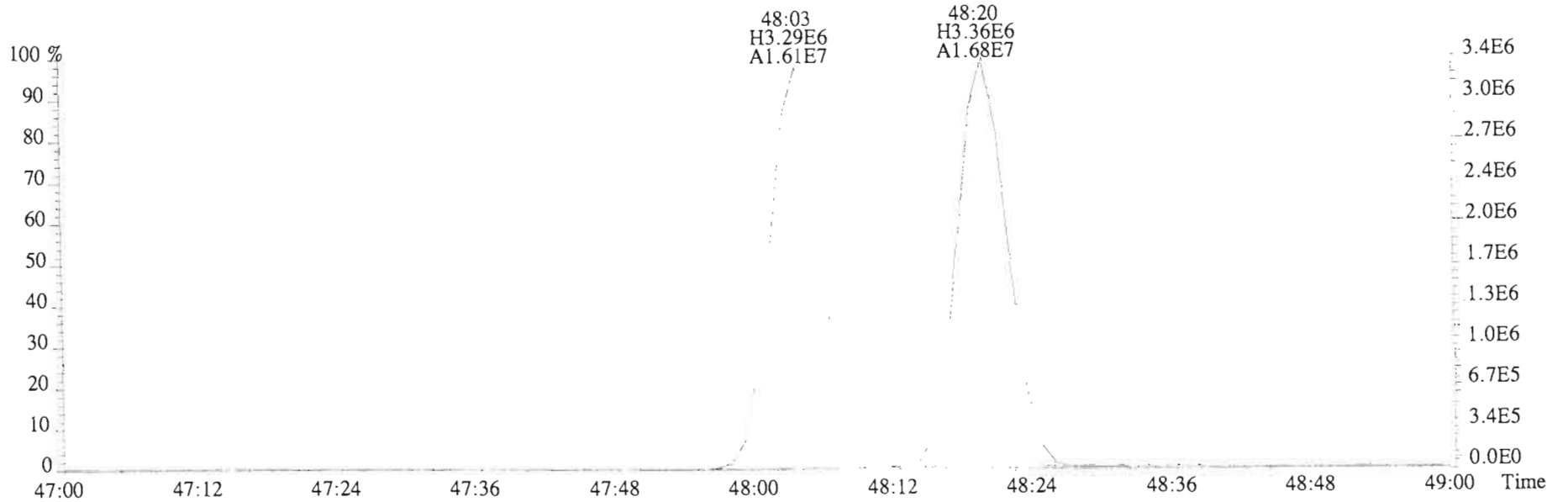
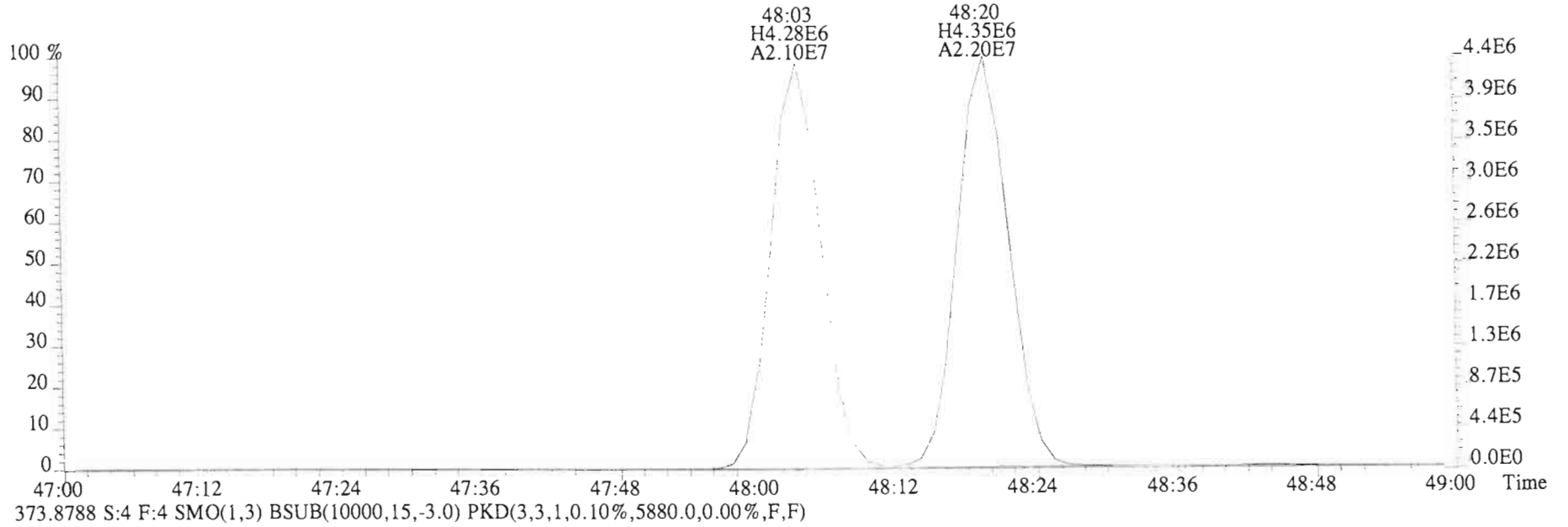
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Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2264.0,0.00%,F,F)



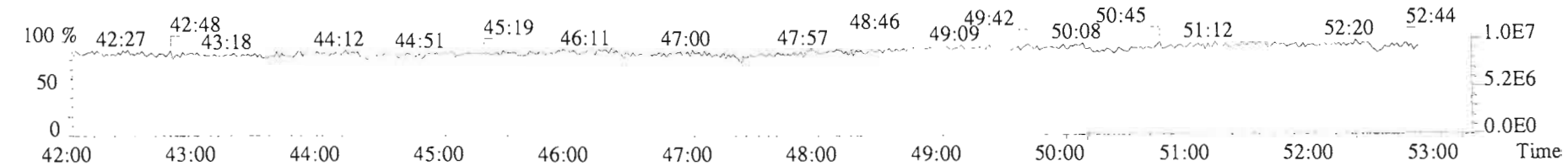
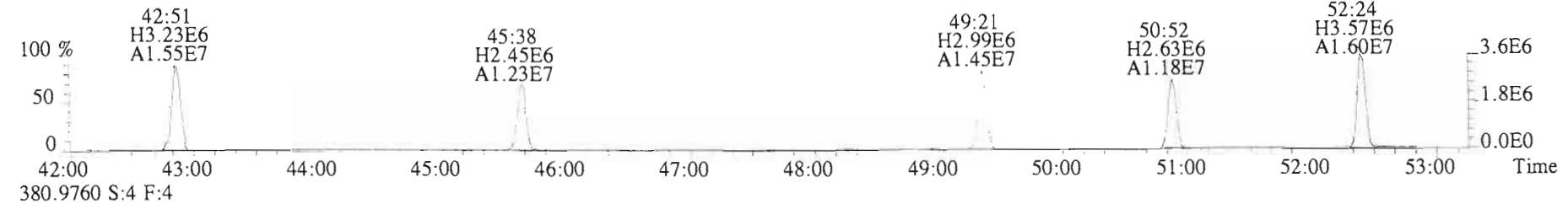
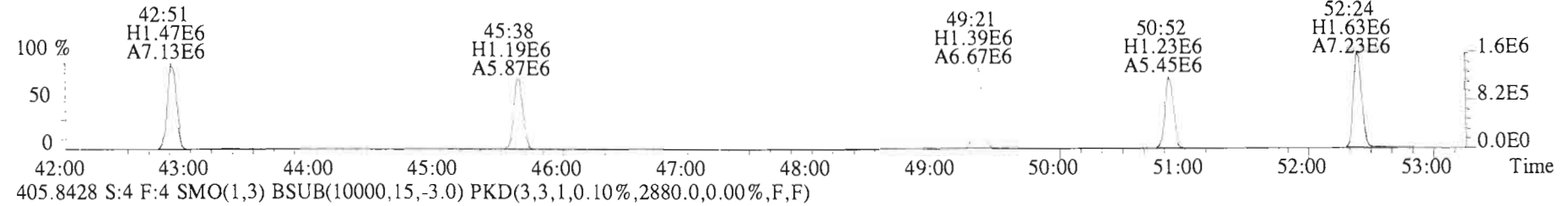
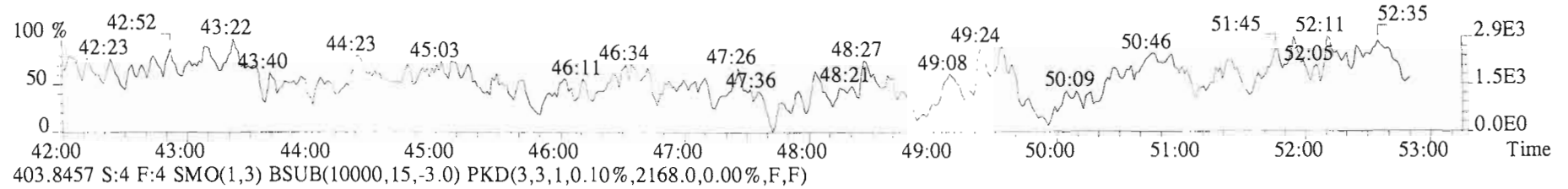
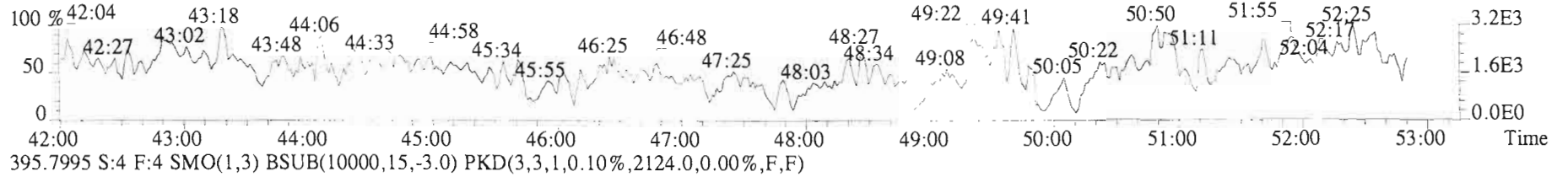
File:150127E1 #1-564 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7816.0,0.00%,F,F)



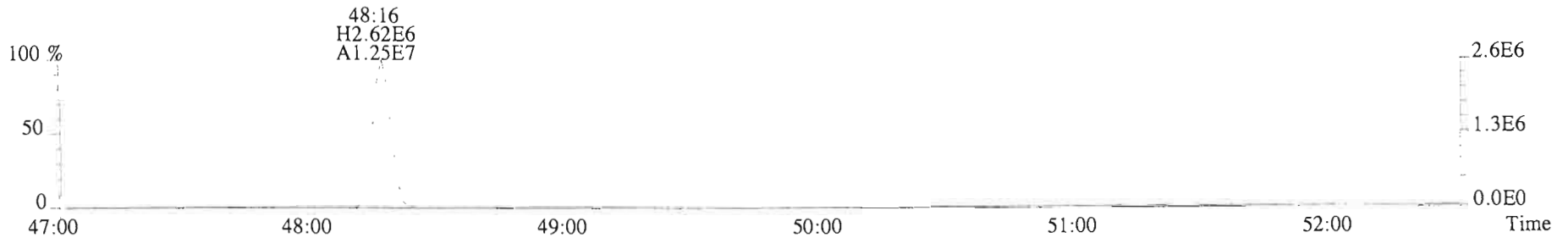
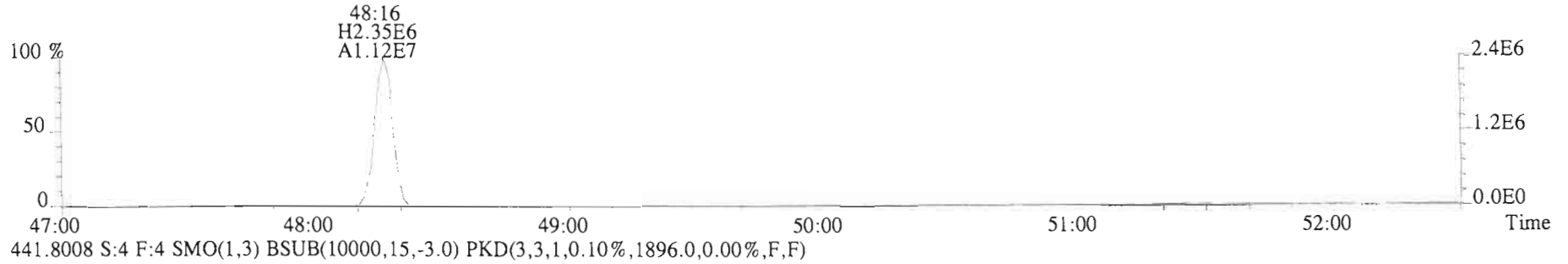
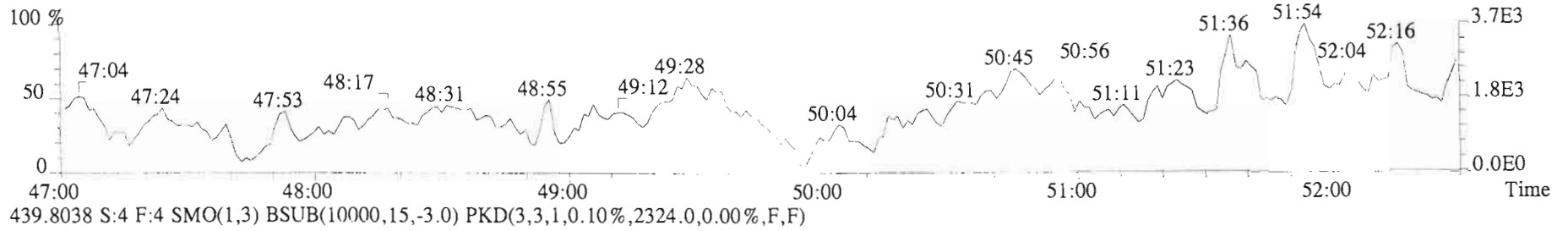
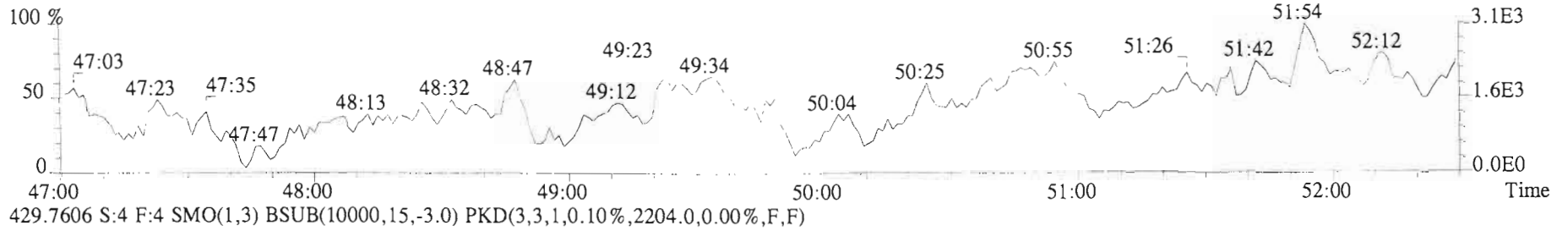
File:150127E1 #1-564 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,7816.0,0.00%,F,F)



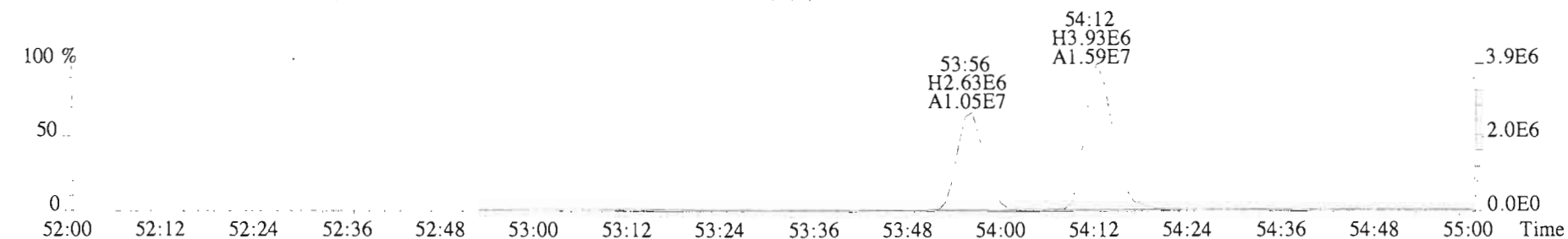
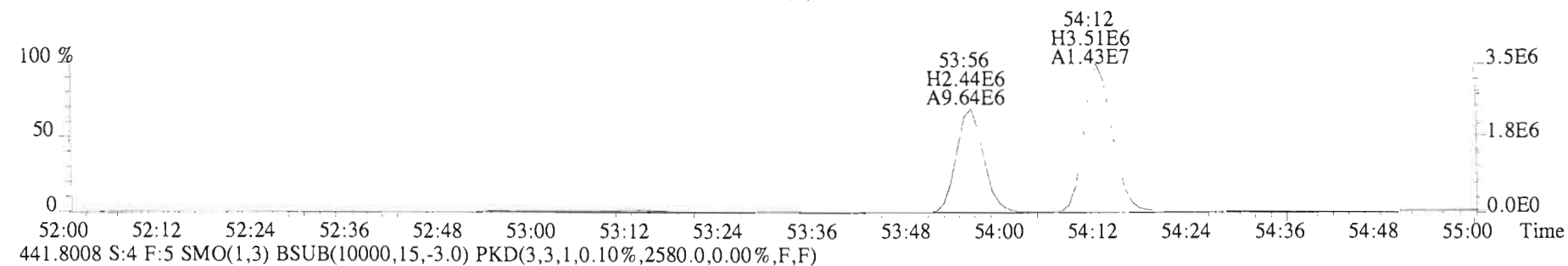
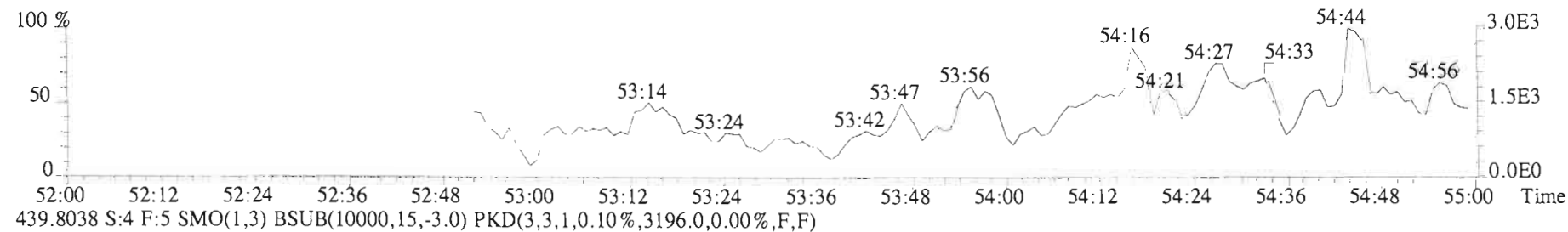
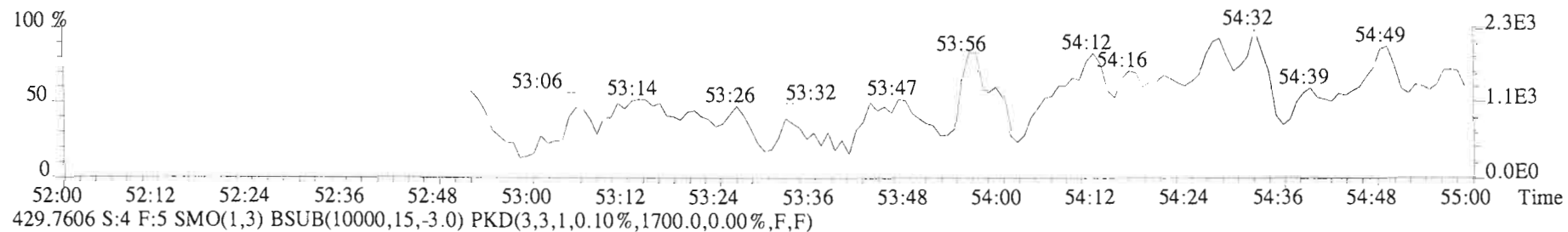
File:150127E1 #1-564 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
393.8025 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2284.0,0.00%,F,F)



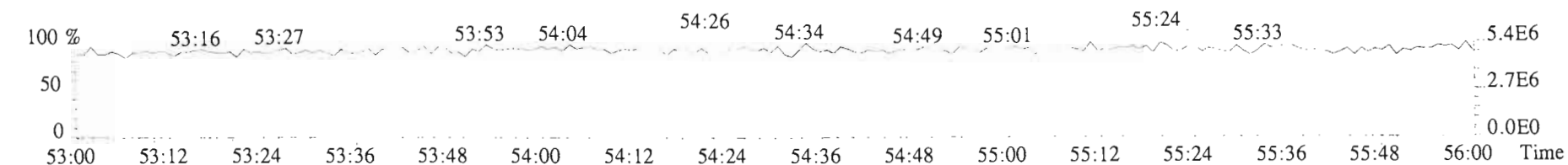
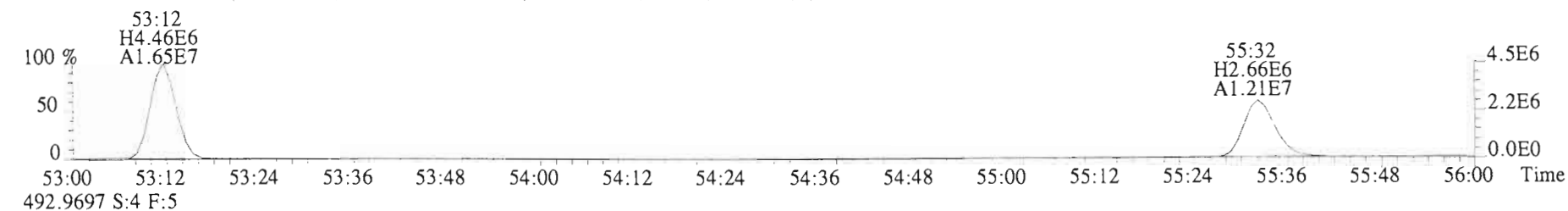
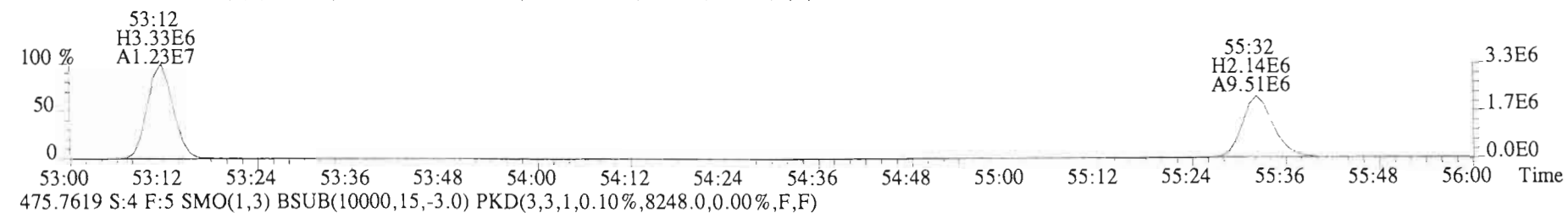
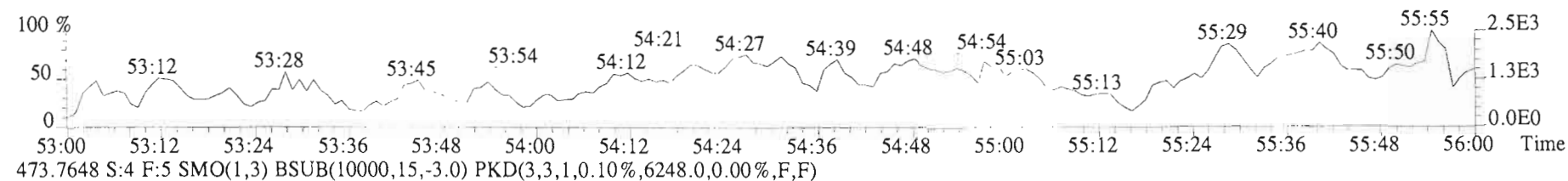
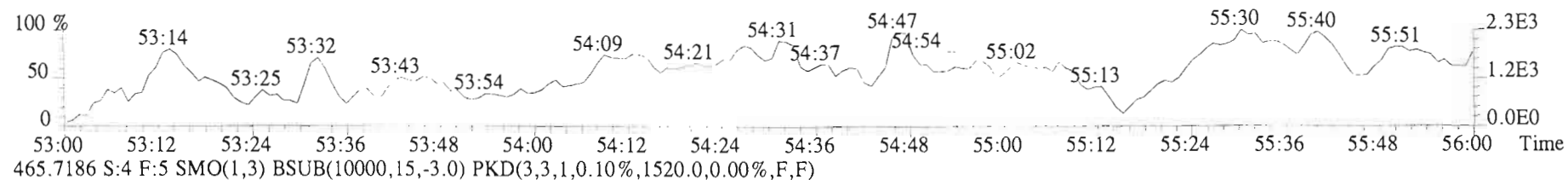
File:150127E1 #1-564 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BLK1 Method Blank 1 Exp:PCB_ZB1
427.7635 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2040.0,0.00%,F,F)



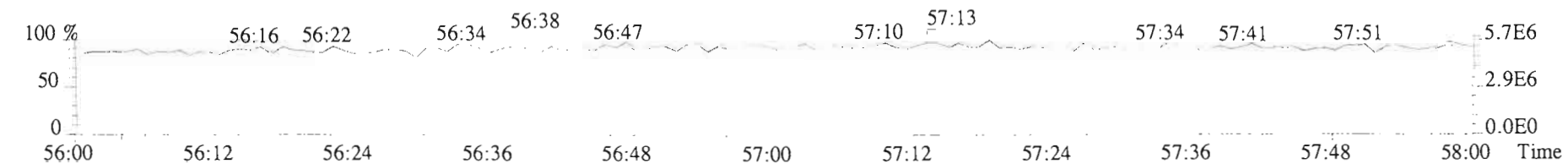
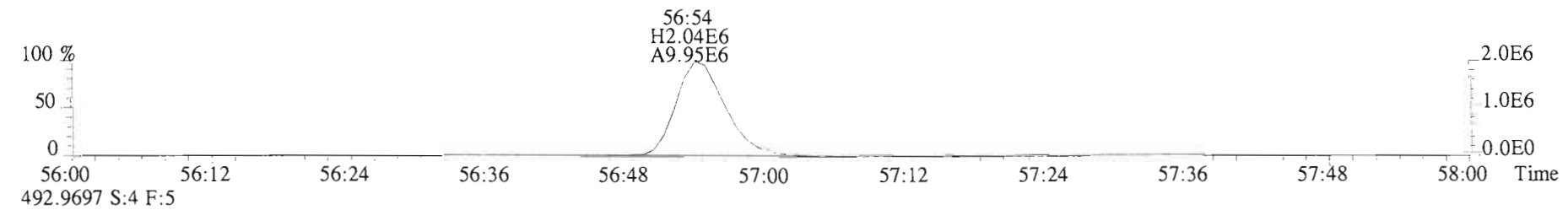
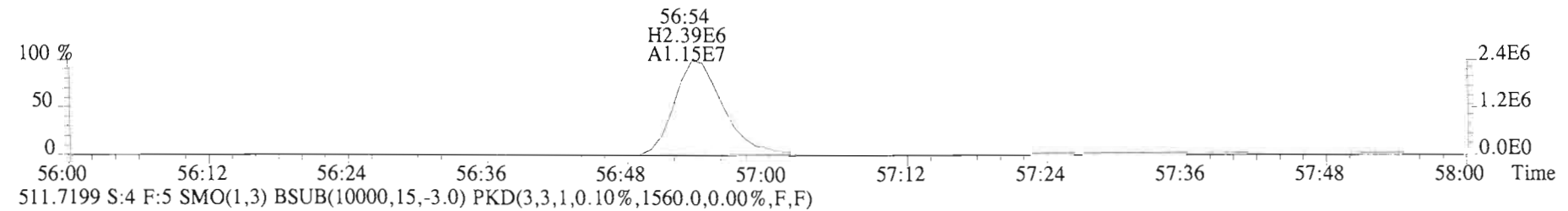
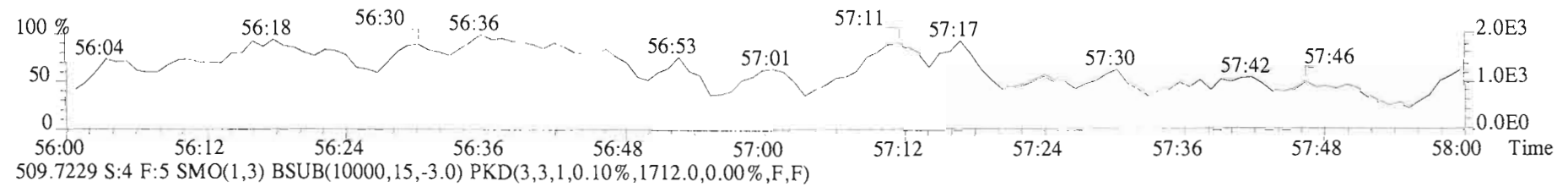
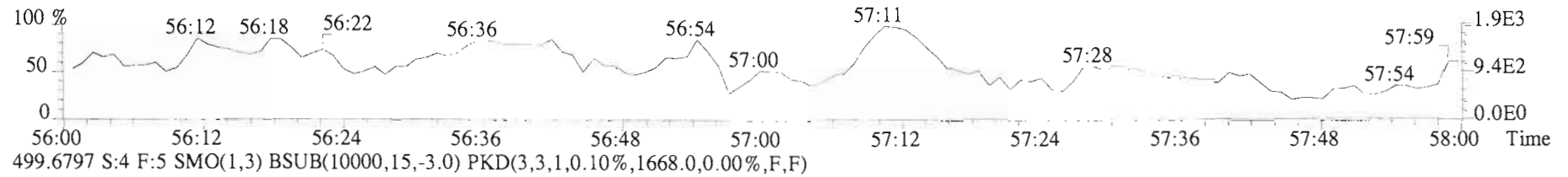
File:150127E1 #1-413 Acq:27-JAN-2015 13:52:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:BSA0099-BLK1 Method Blank 1 Exp:PCB_ZB1
429.7635 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1608.0,0.00%,F,F)



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: 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 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
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	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

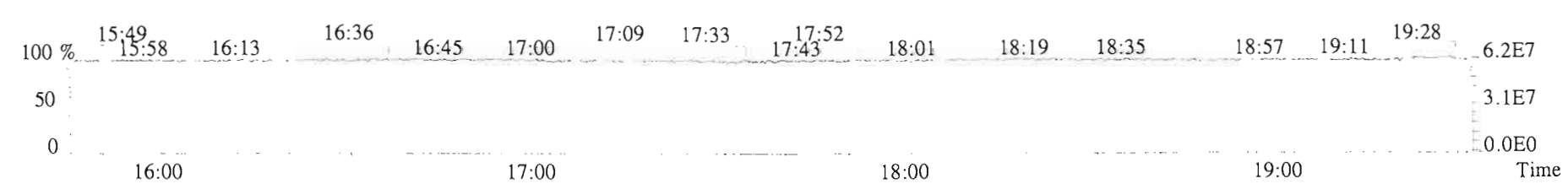
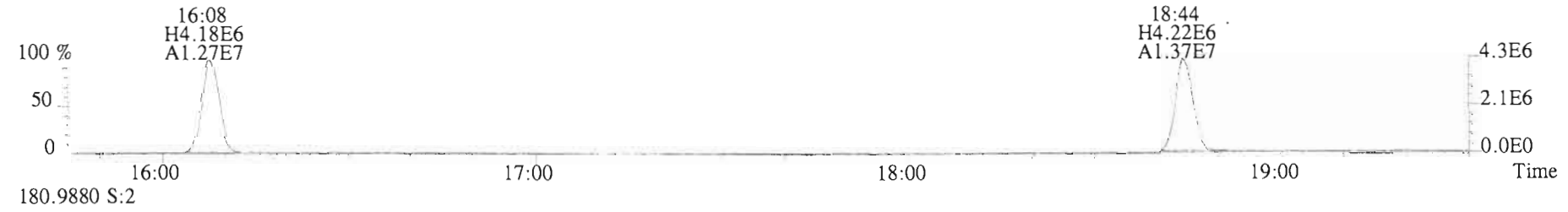
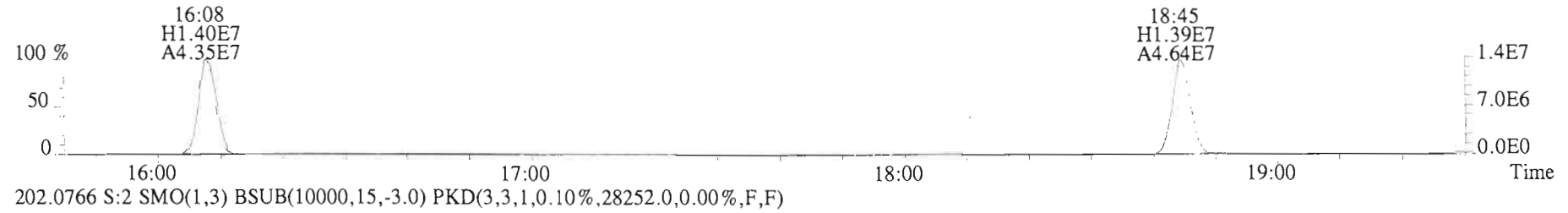
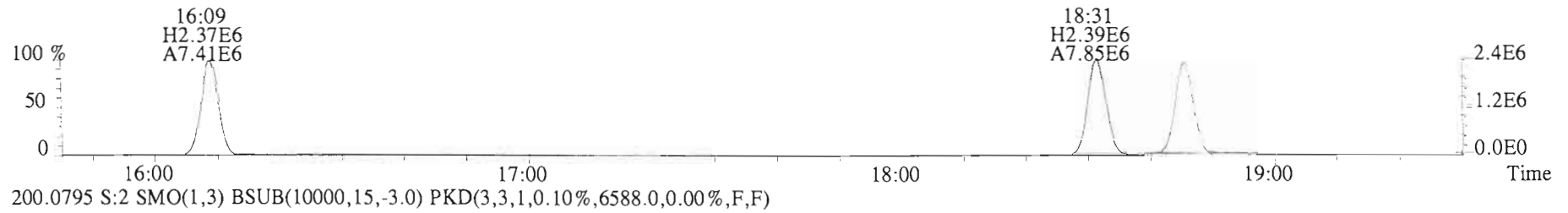
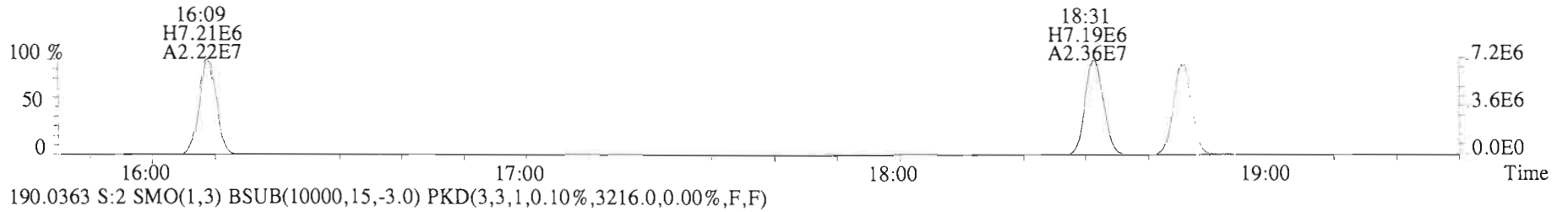
ConCal: ST150127E1-1
EndCAL: NA

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											

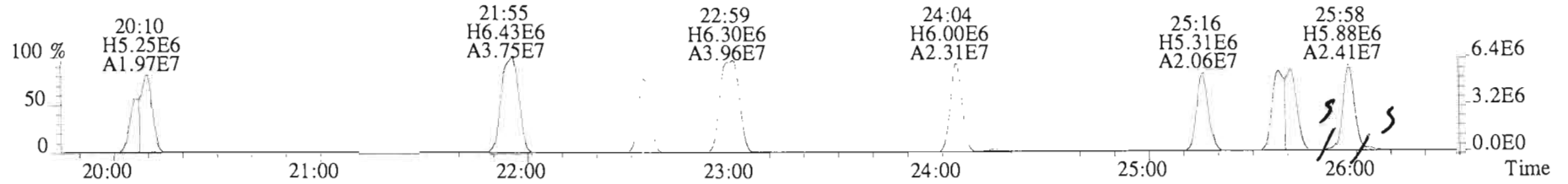
Analyst Dms

Date: 1/29/15

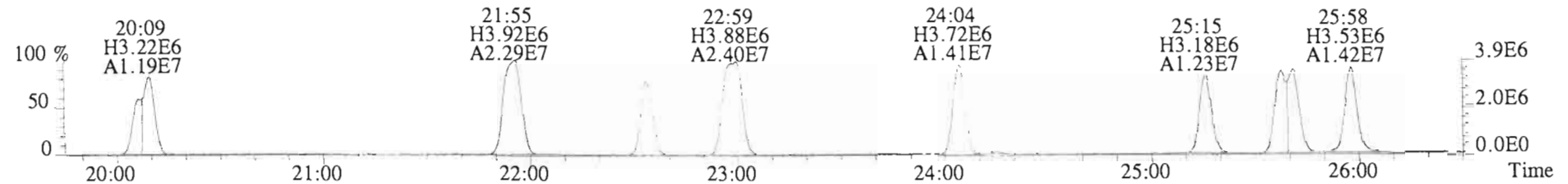
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
188.0393 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2608.0,0.00%,F,F)



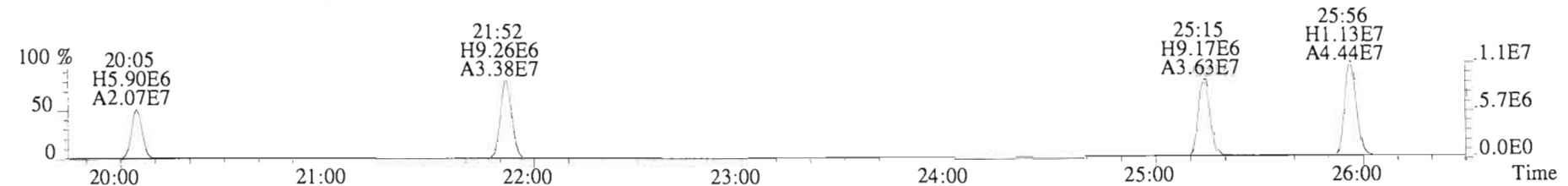
File:150127E1 #1-757 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
 222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3824.0,0.00%,F,F)



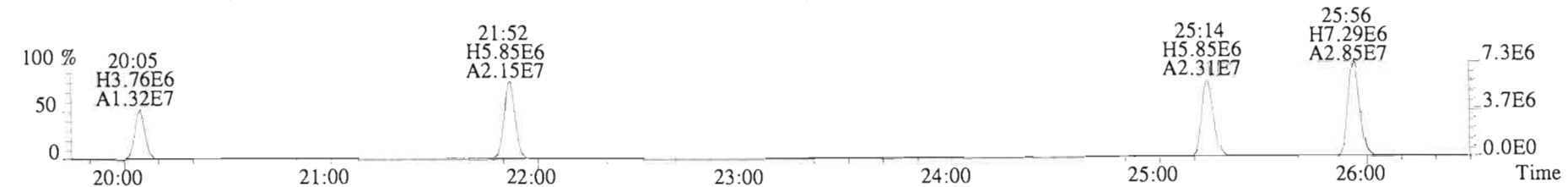
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,29916.0,0.00%,F,F)



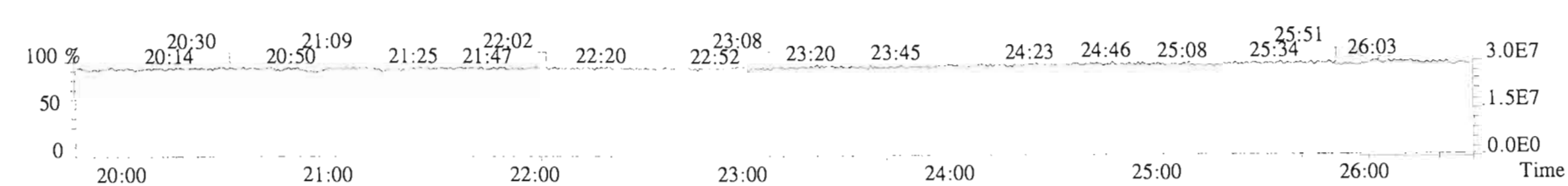
234.0406 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3120.0,0.00%,F,F)



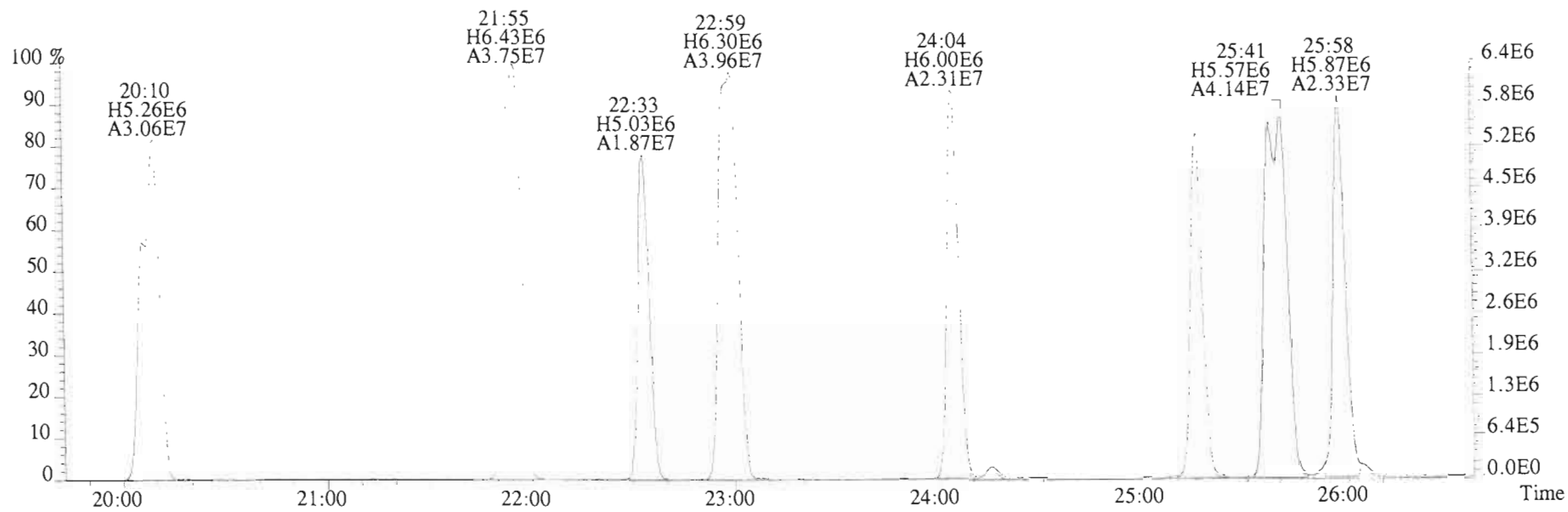
236.0376 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3820.0,0.00%,F,F)



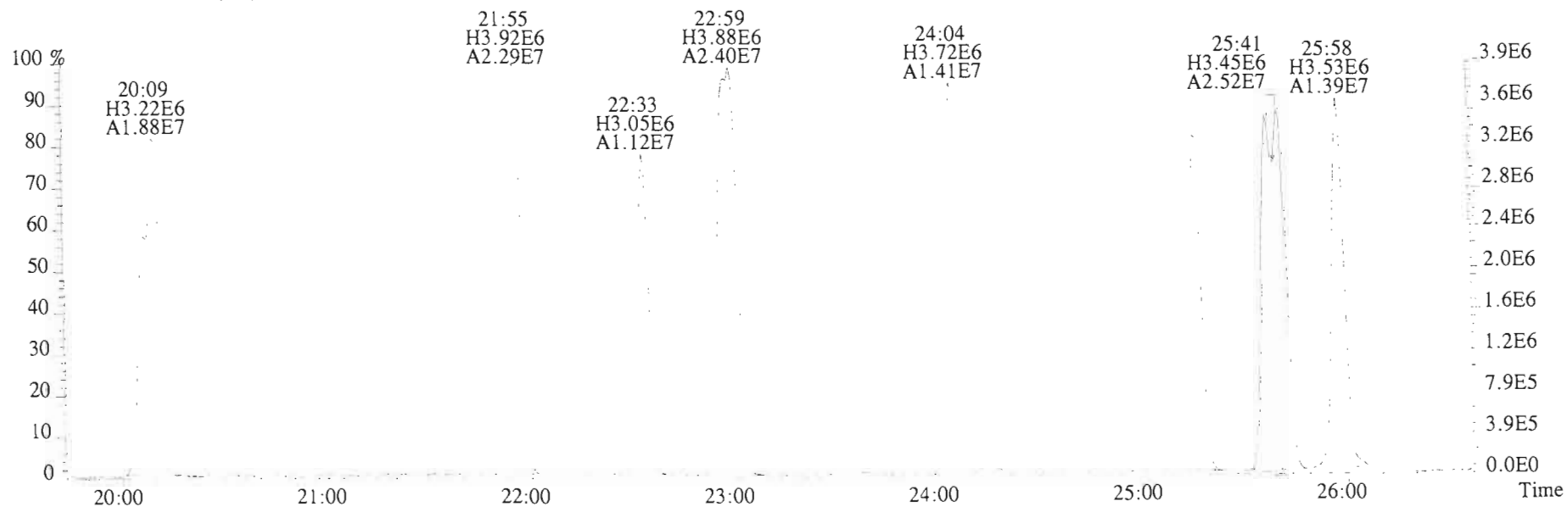
230.9856 S:2 F:2



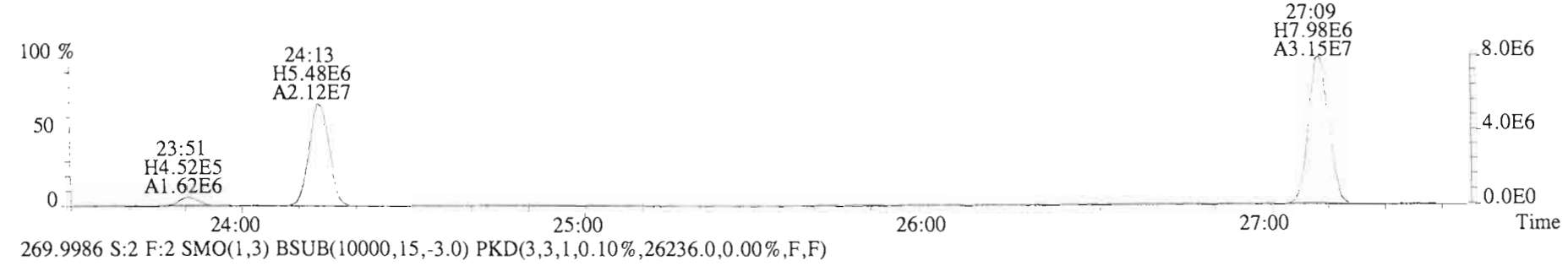
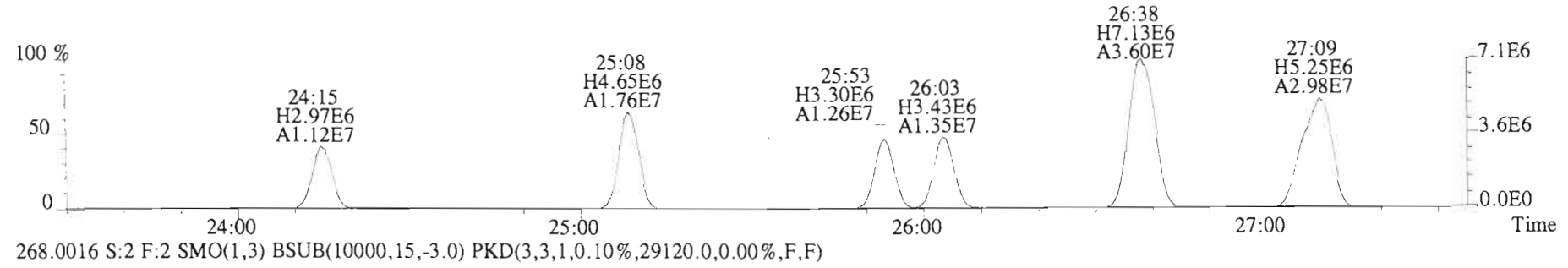
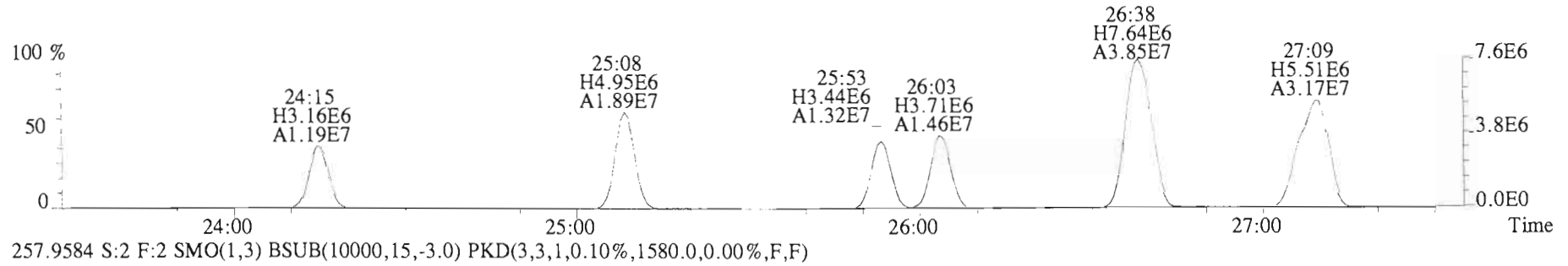
File:150127E1 #1-757 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3824.0,0.00%,F,F)



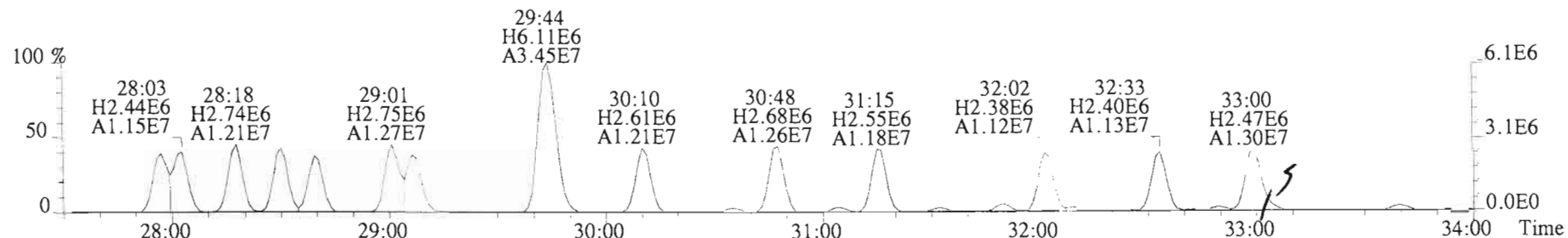
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,29916.0,0.00%,F,F)



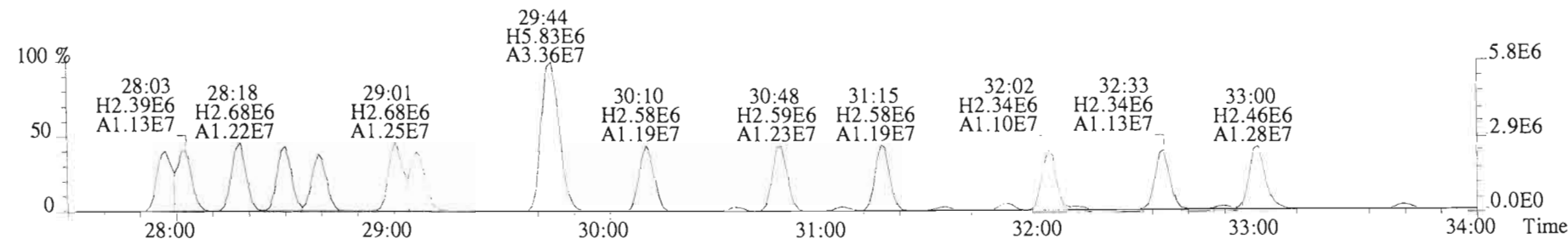
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3348.0,0.00%,F,F)



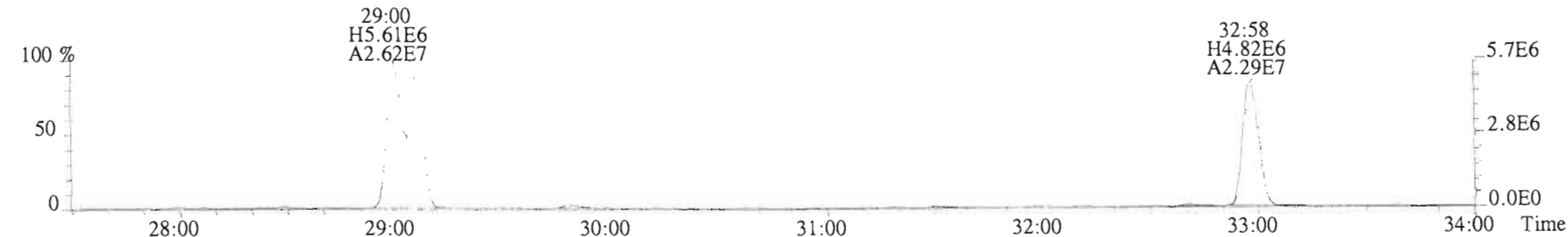
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4288.0,0.00%,F,F)



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)



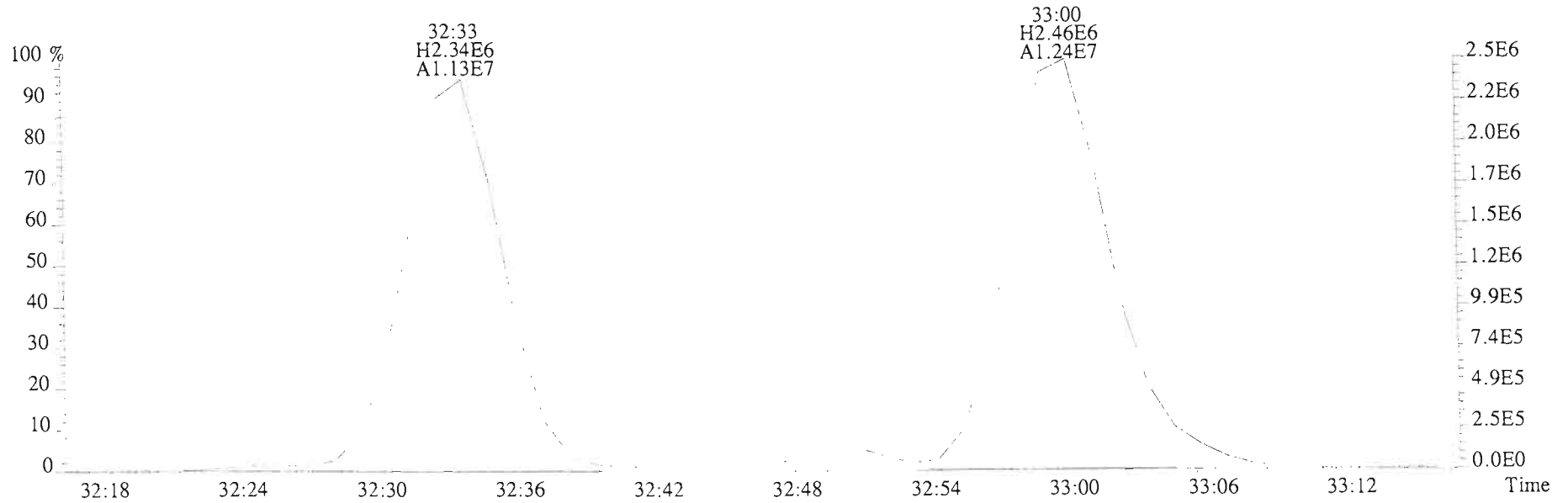
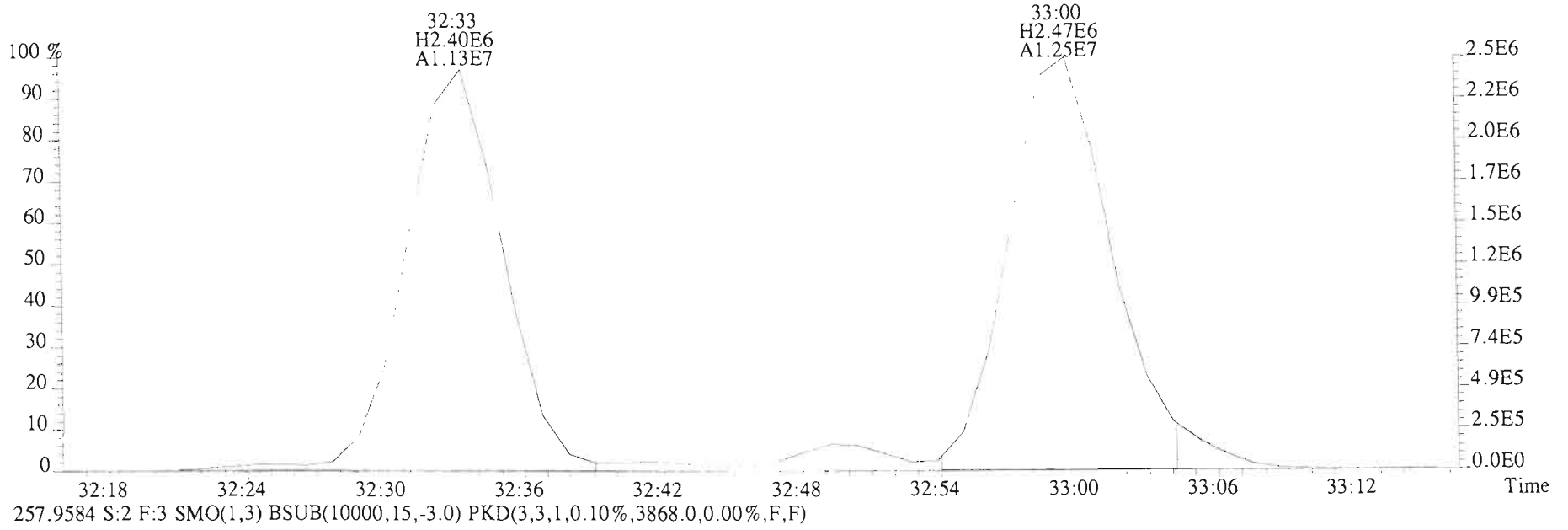
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,34820.0,0.00%,F,F)



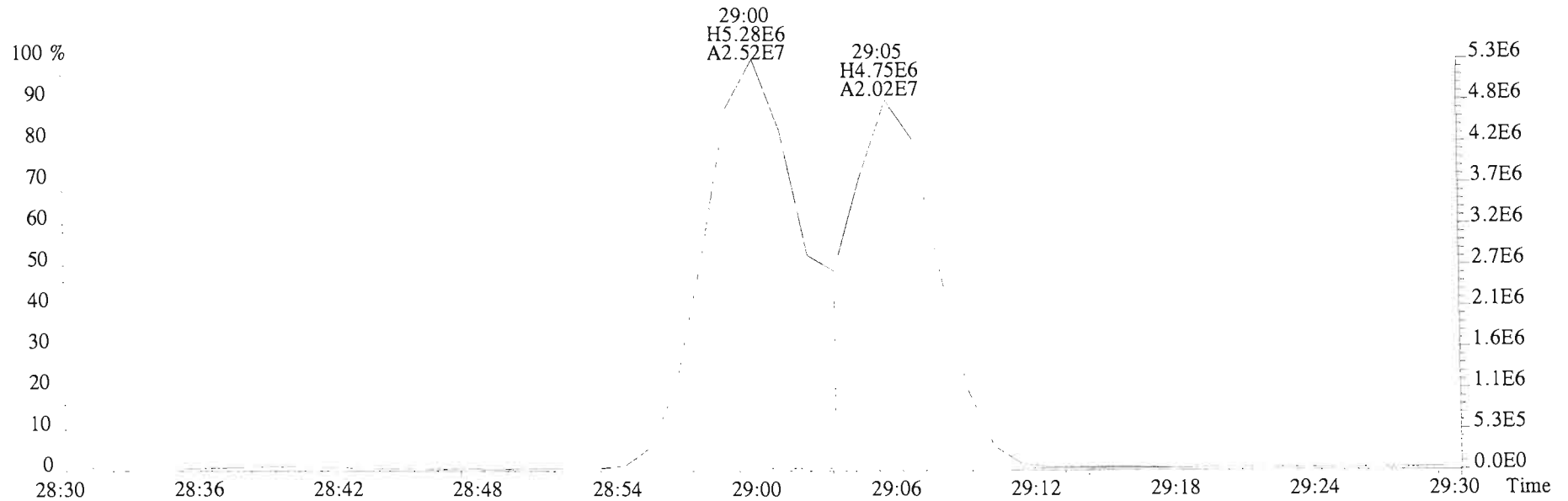
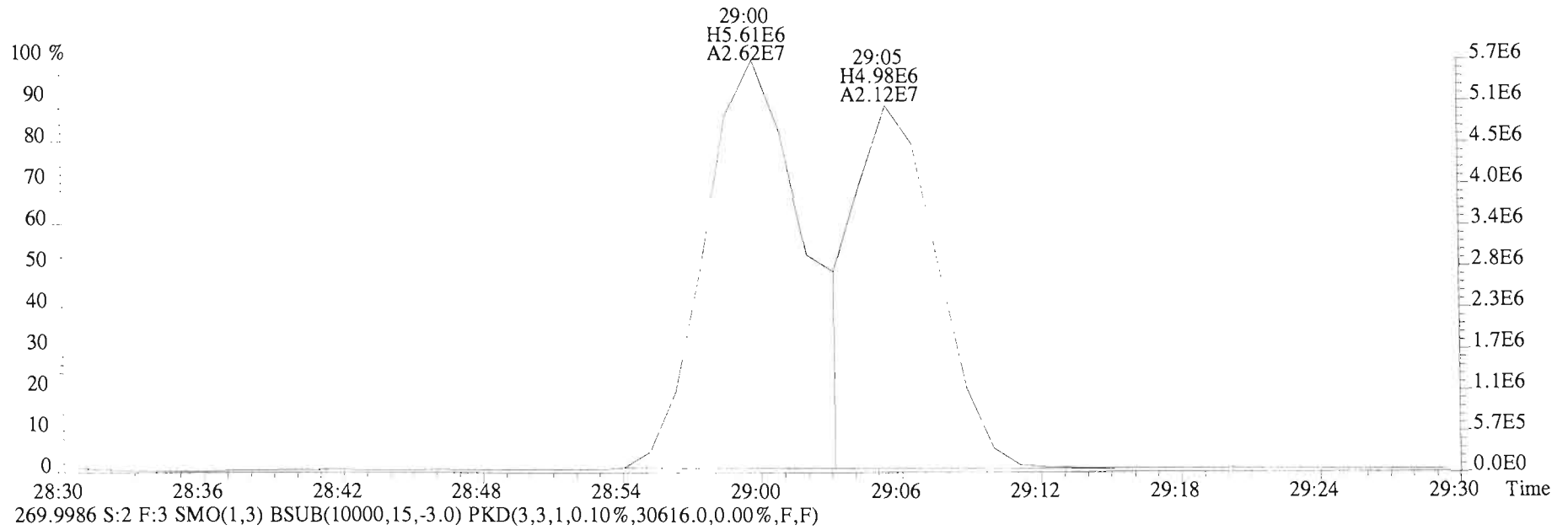
269.9986 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,30616.0,0.00%,F,F)



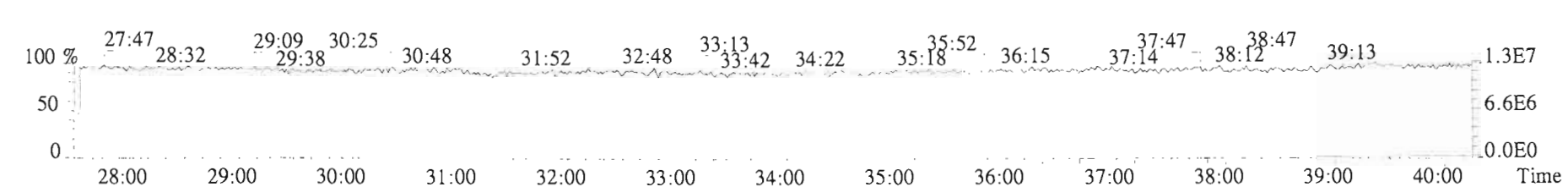
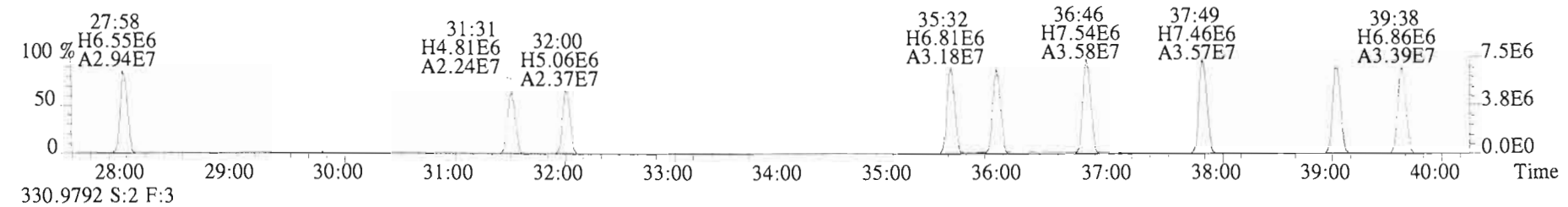
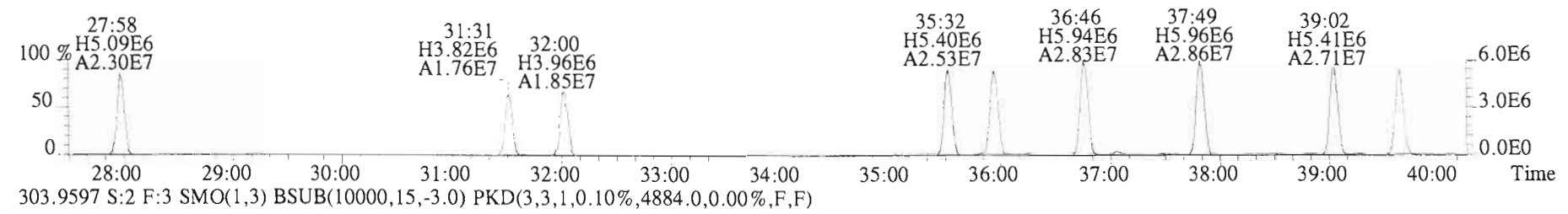
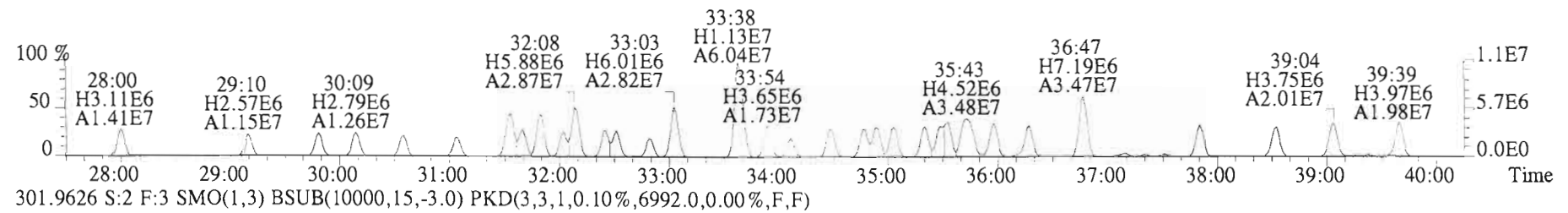
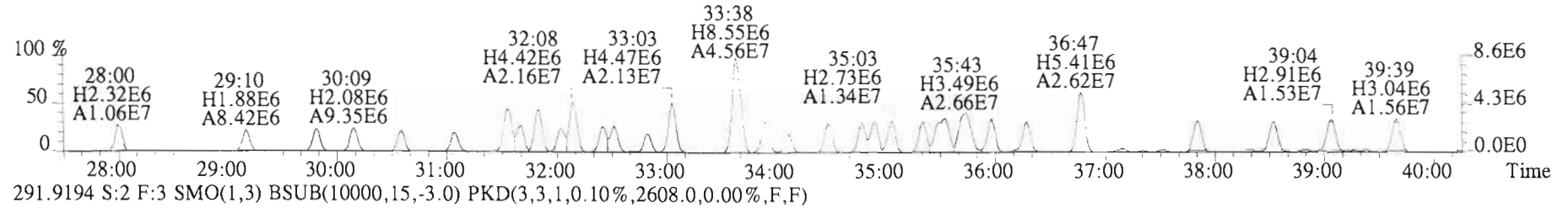
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
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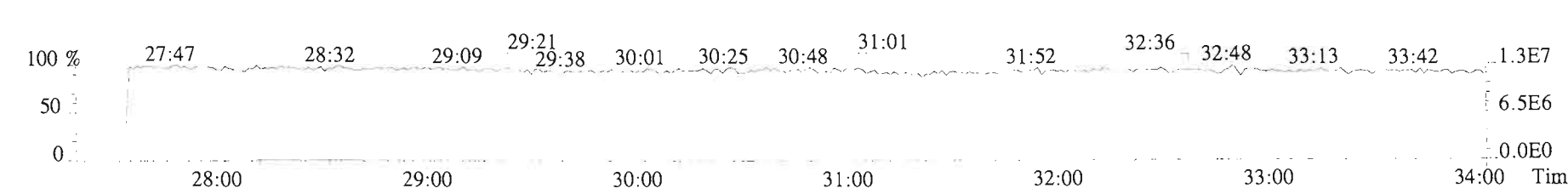
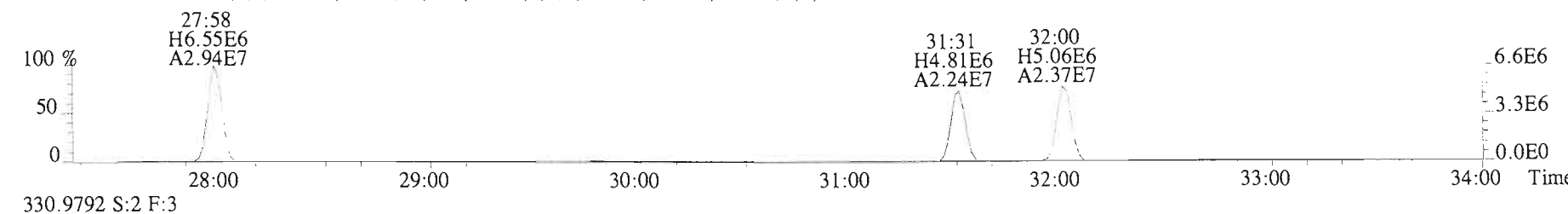
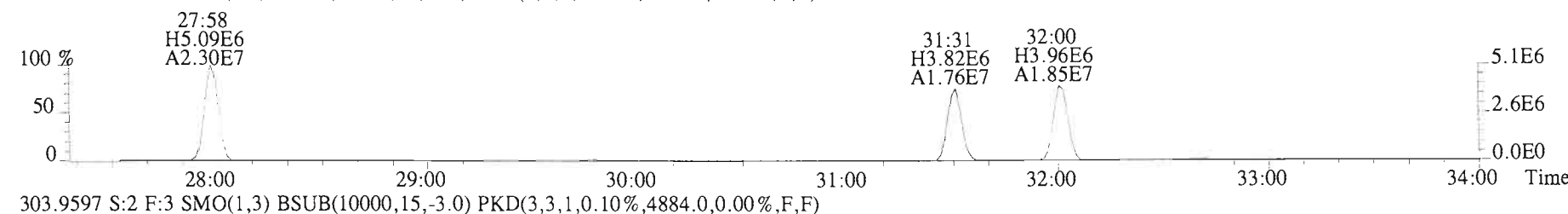
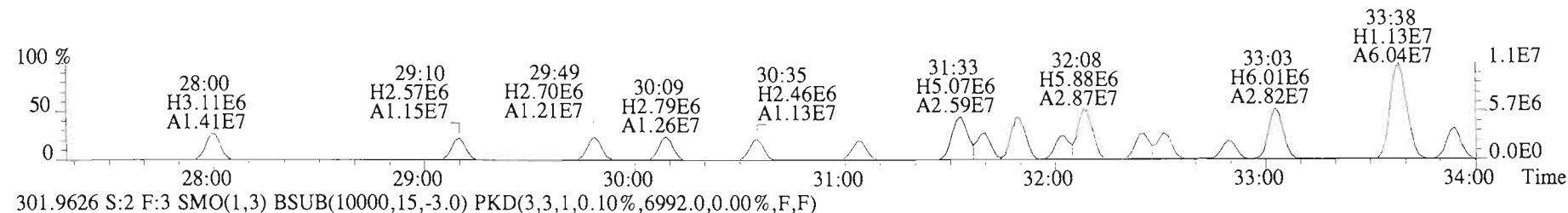
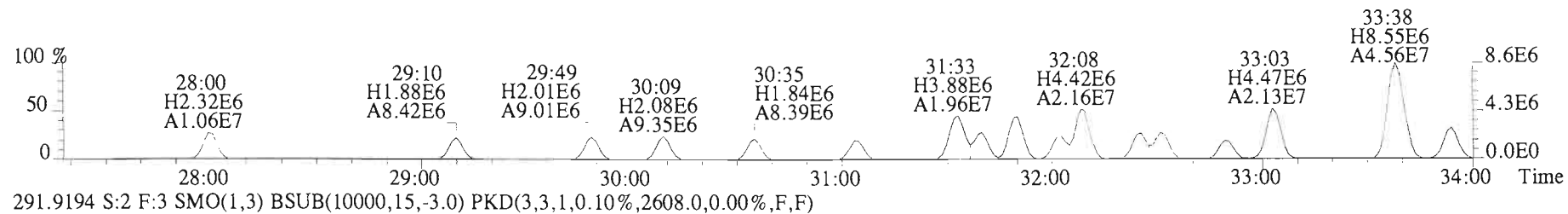
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,34820.0,0.00%,F,F)



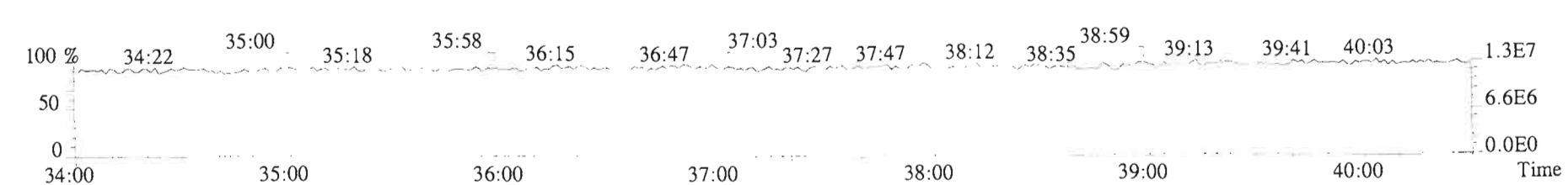
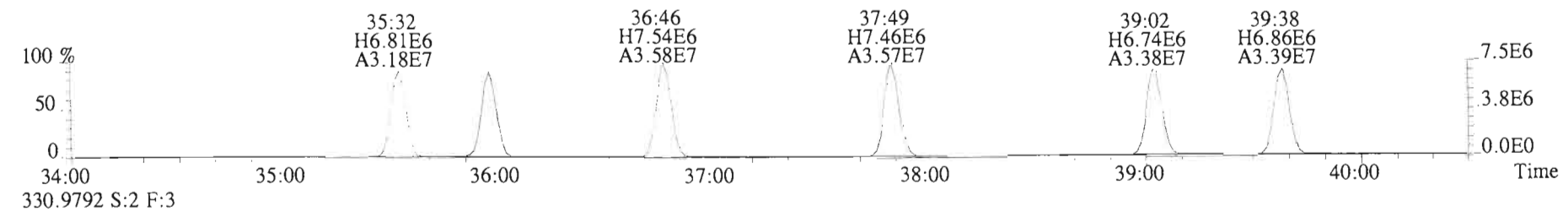
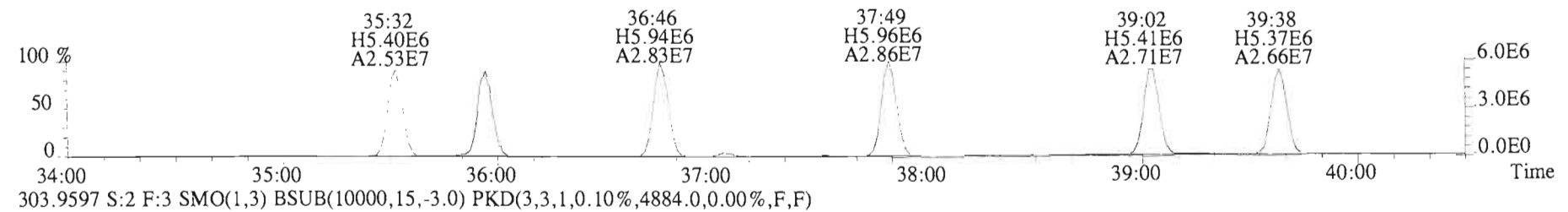
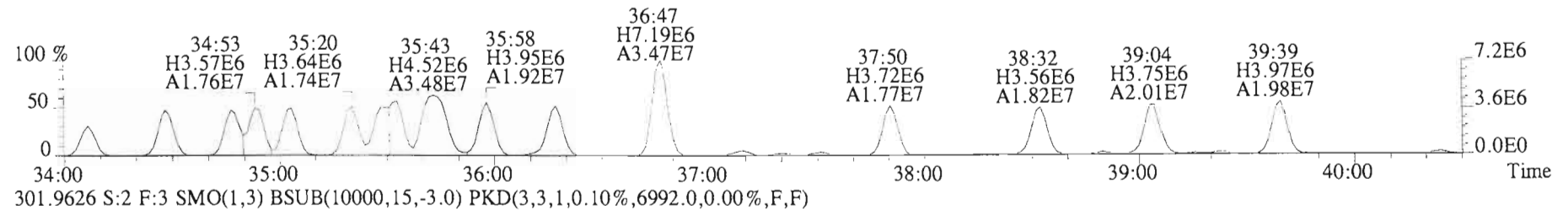
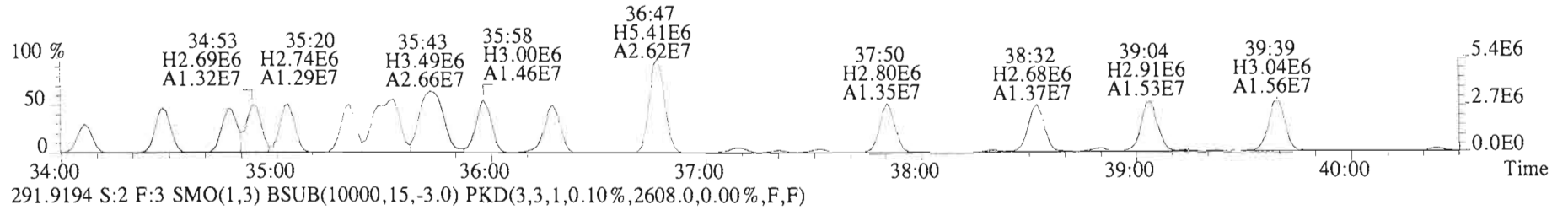
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
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289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2500.0,0.00%,F,F)



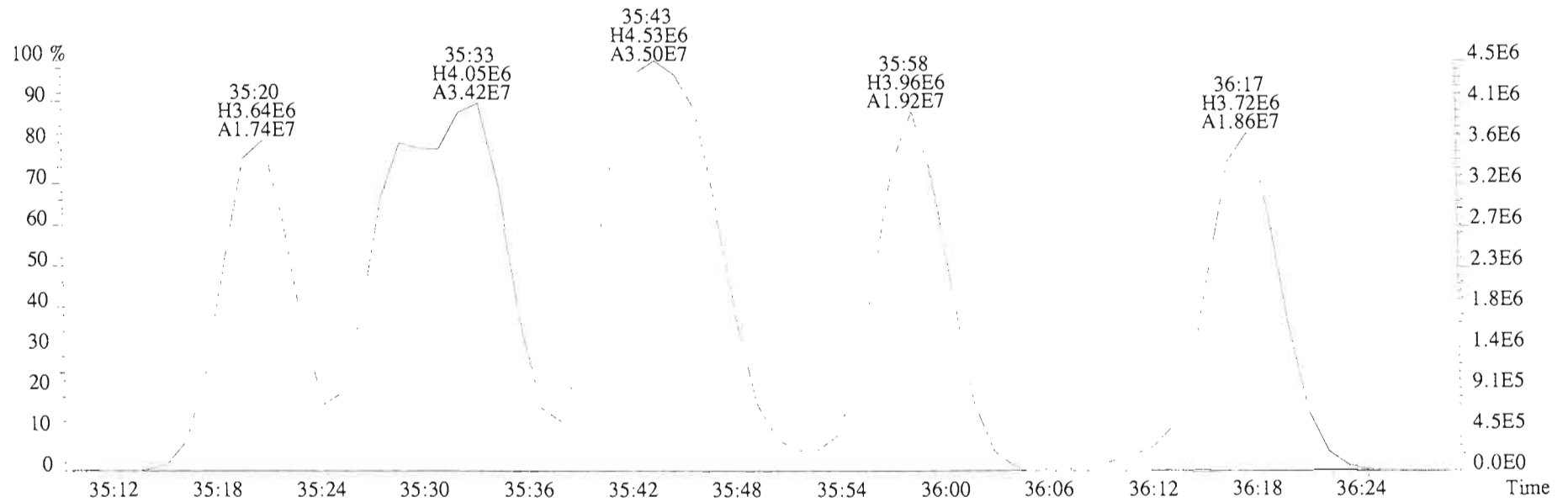
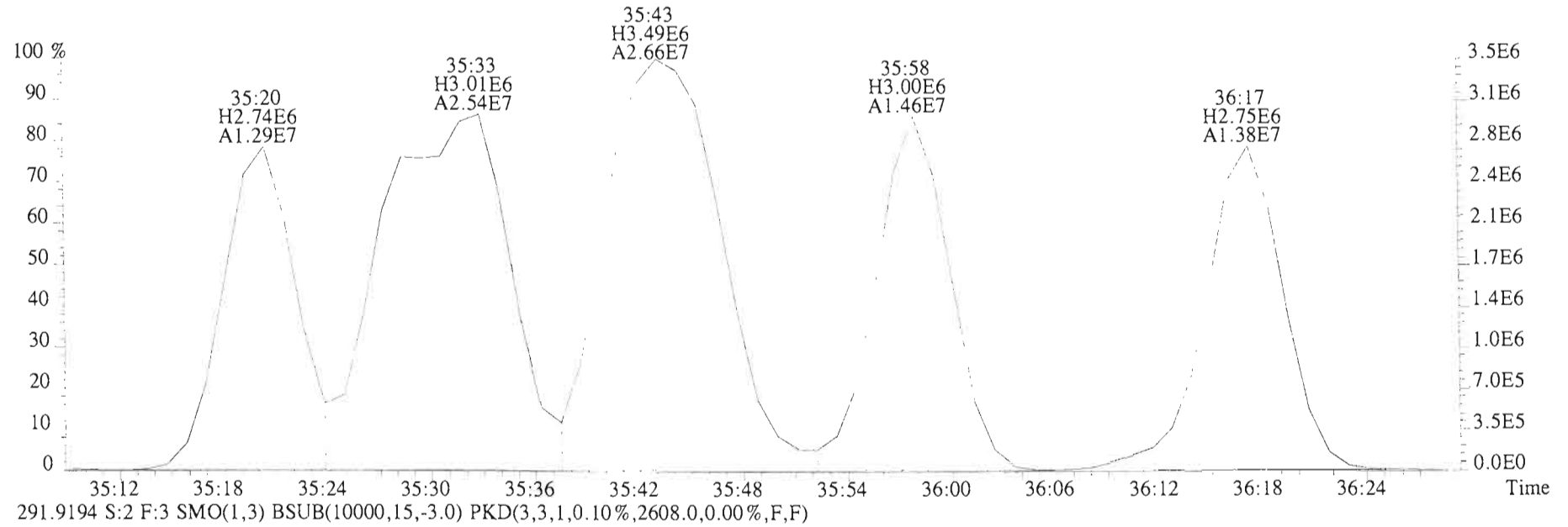
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2500.0,0.00%,F,F)



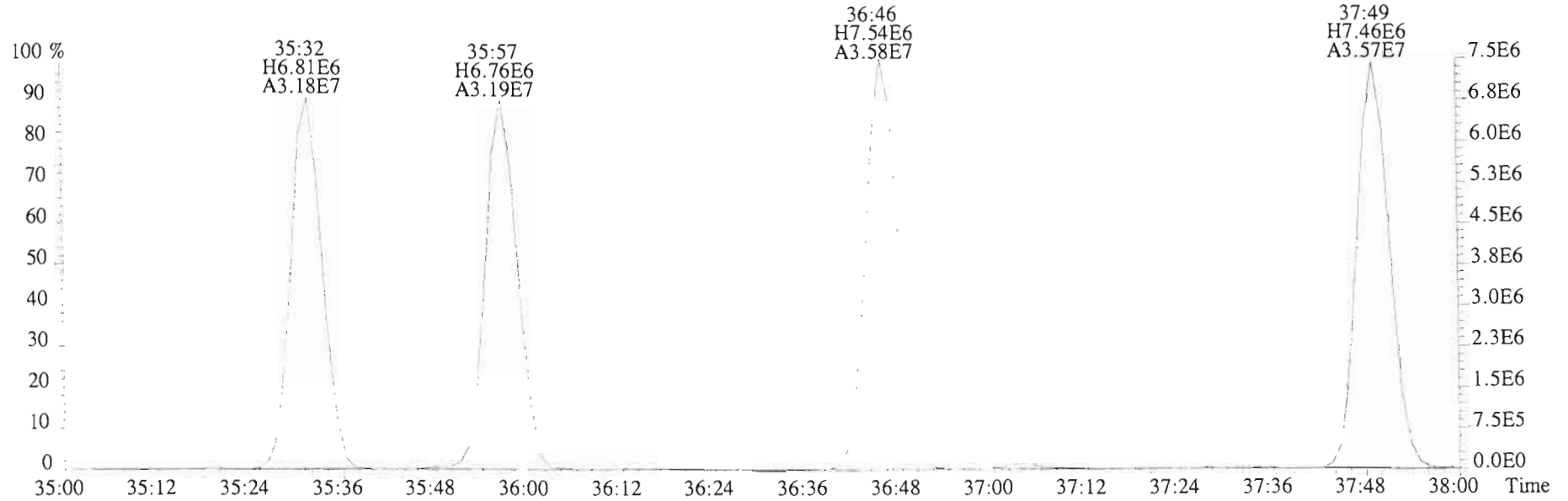
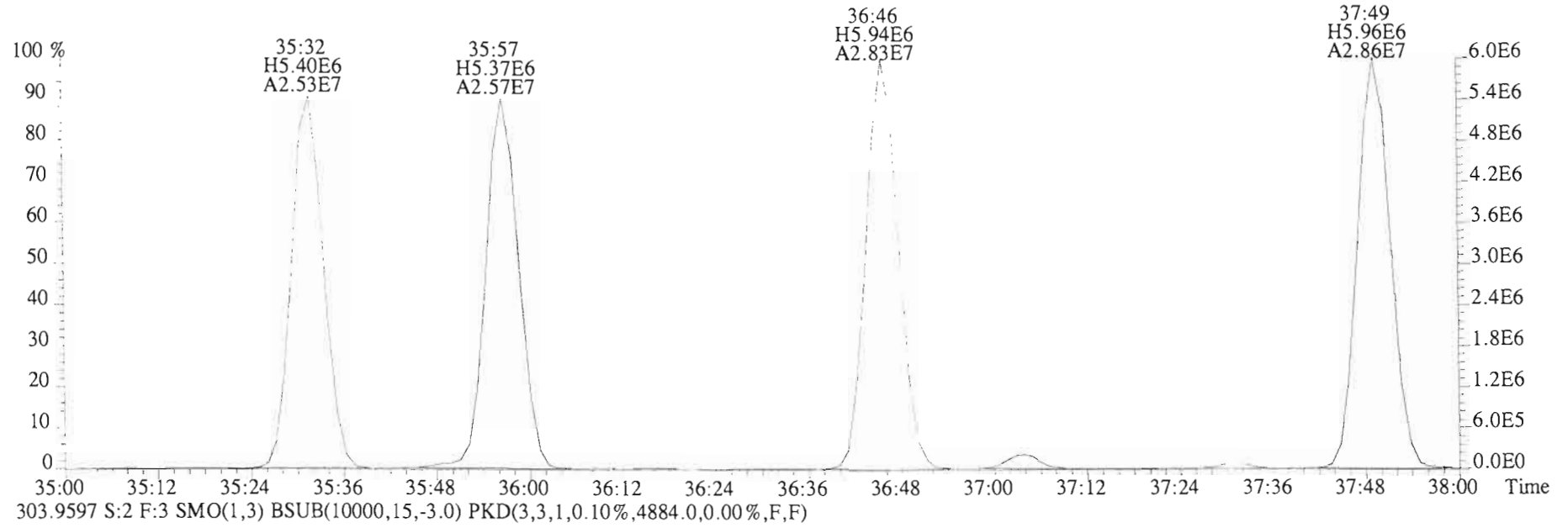
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2500.0,0.00%,F,F)



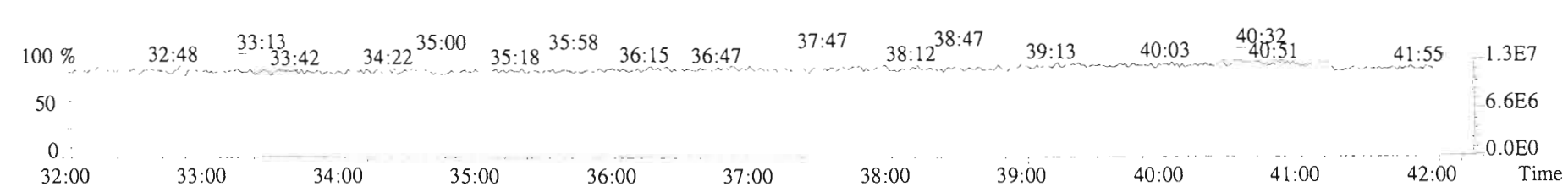
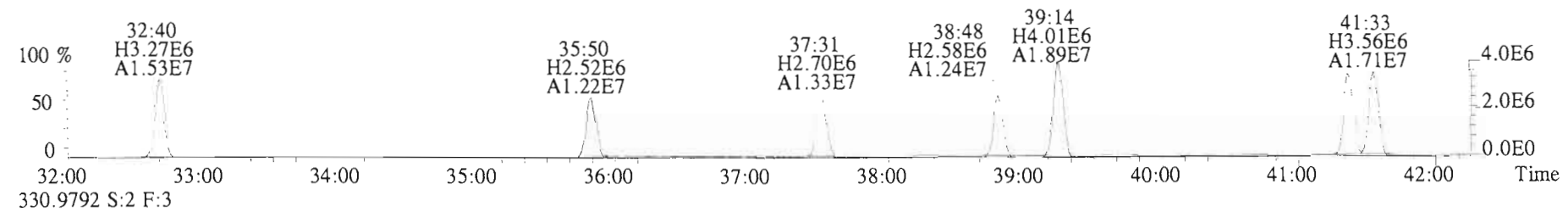
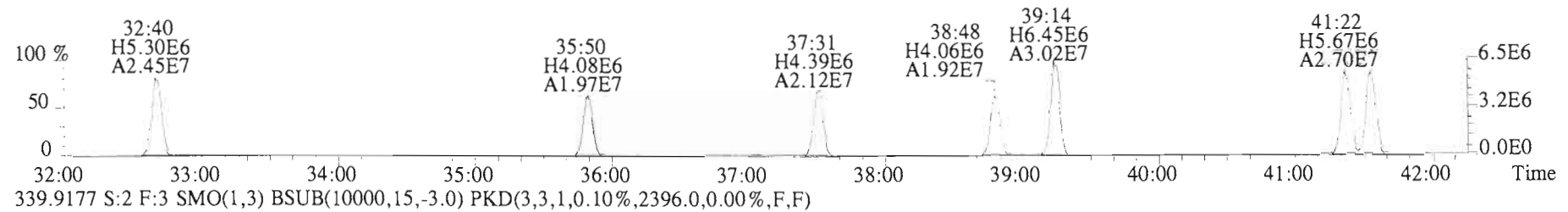
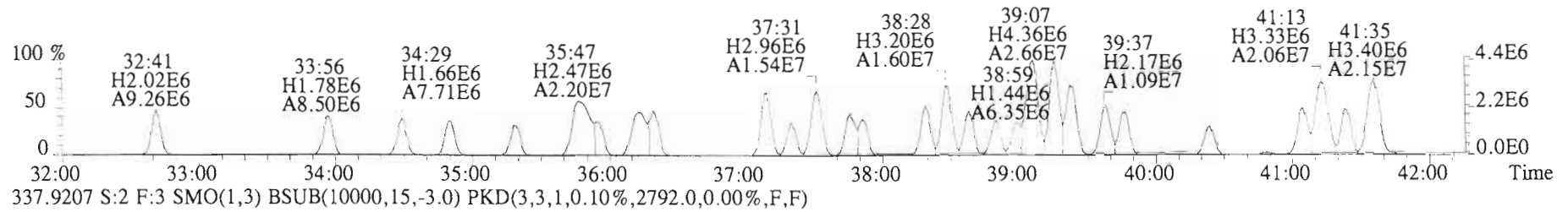
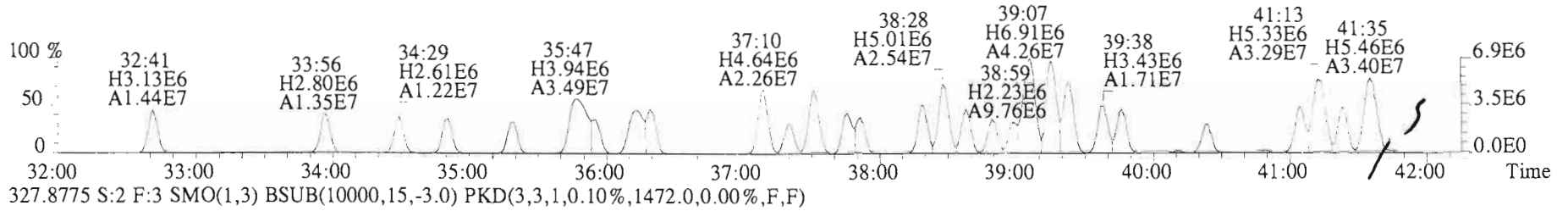
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
 289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2500.0,0.00%,F,F)



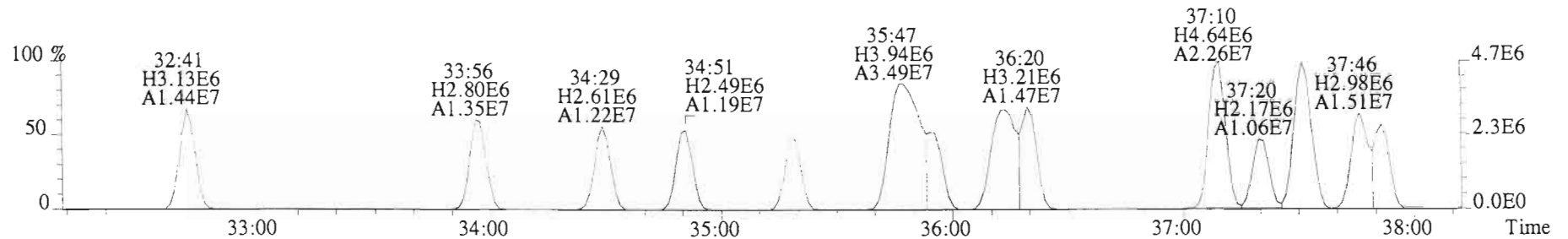
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6992.0,0.00%,F,F)



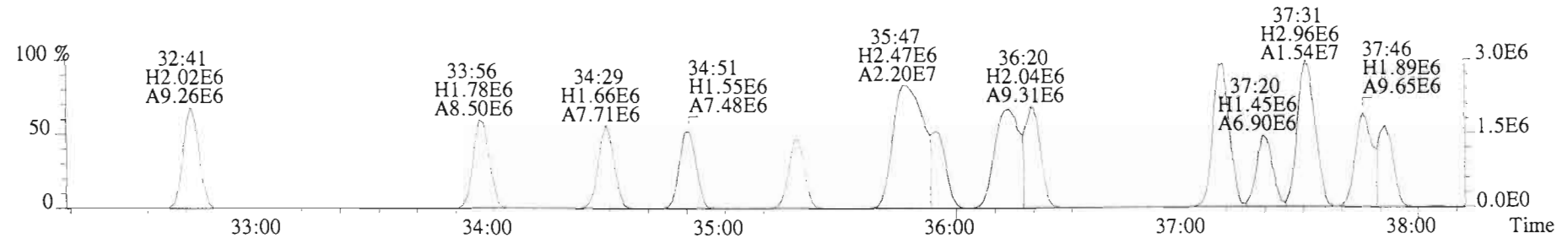
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1212.0,0.00%,F,F)



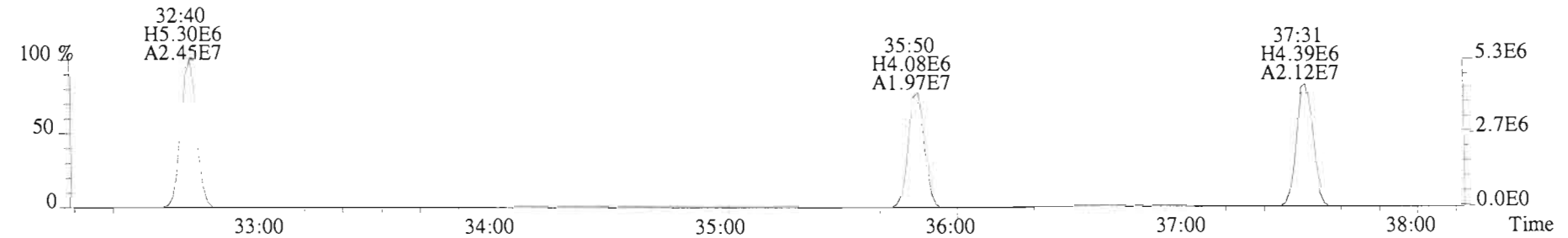
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1212.0,0.00%,F,F)



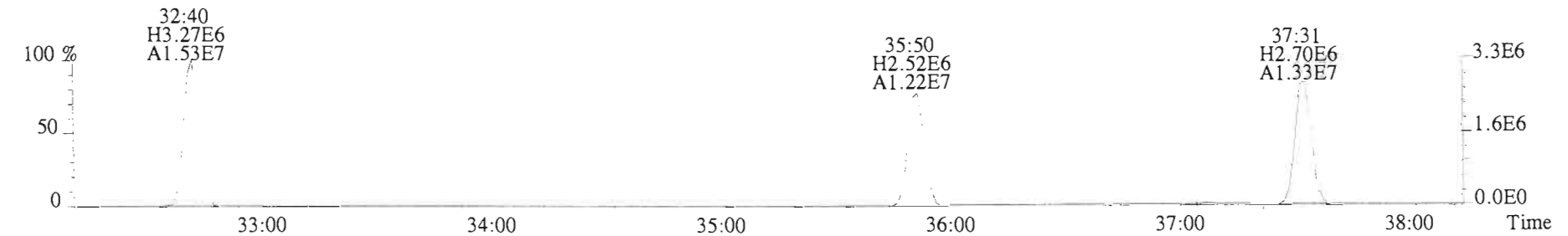
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1472.0,0.00%,F,F)



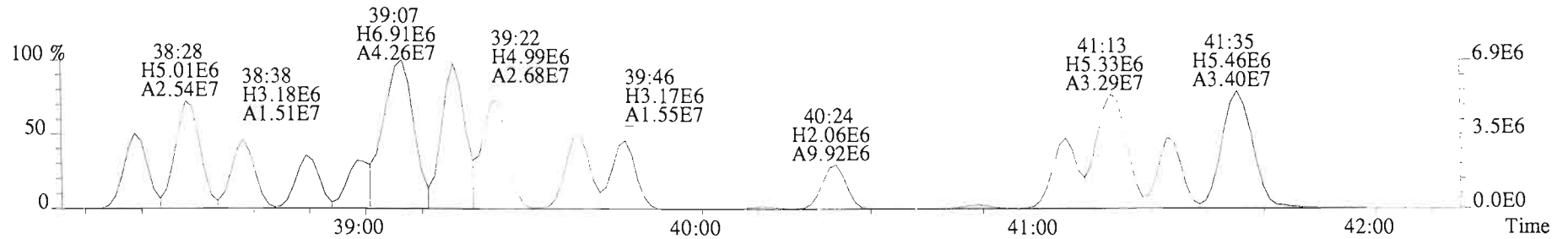
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2792.0,0.00%,F,F)



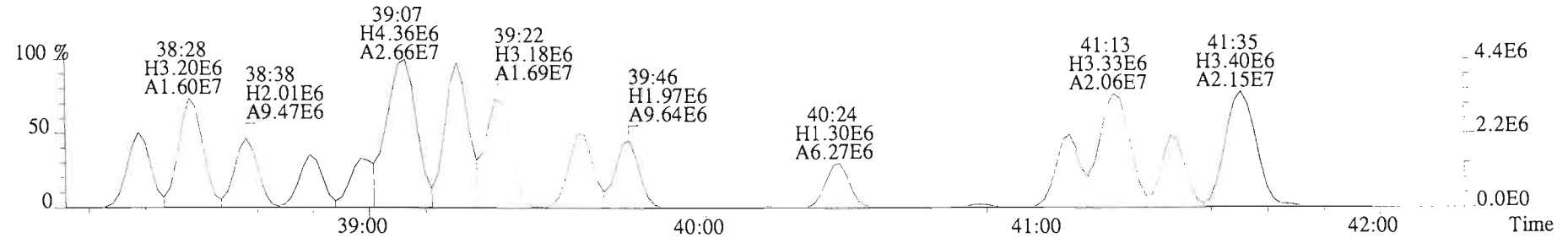
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2396.0,0.00%,F,F)



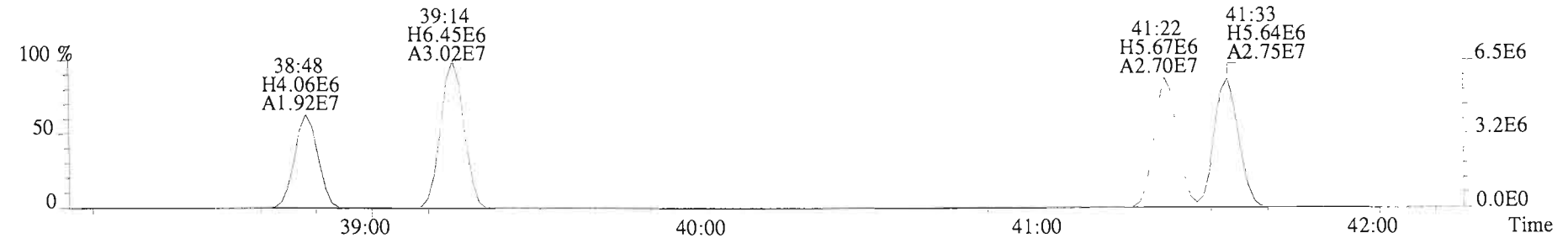
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1212.0,0.00%,F,F)



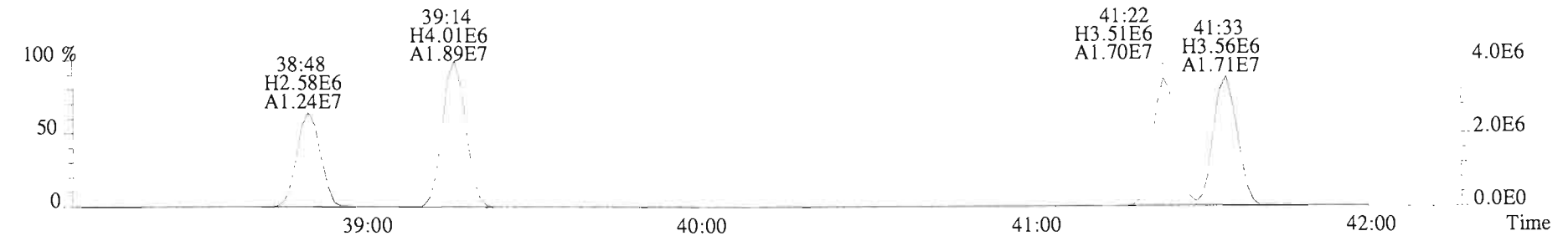
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1472.0,0.00%,F,F)



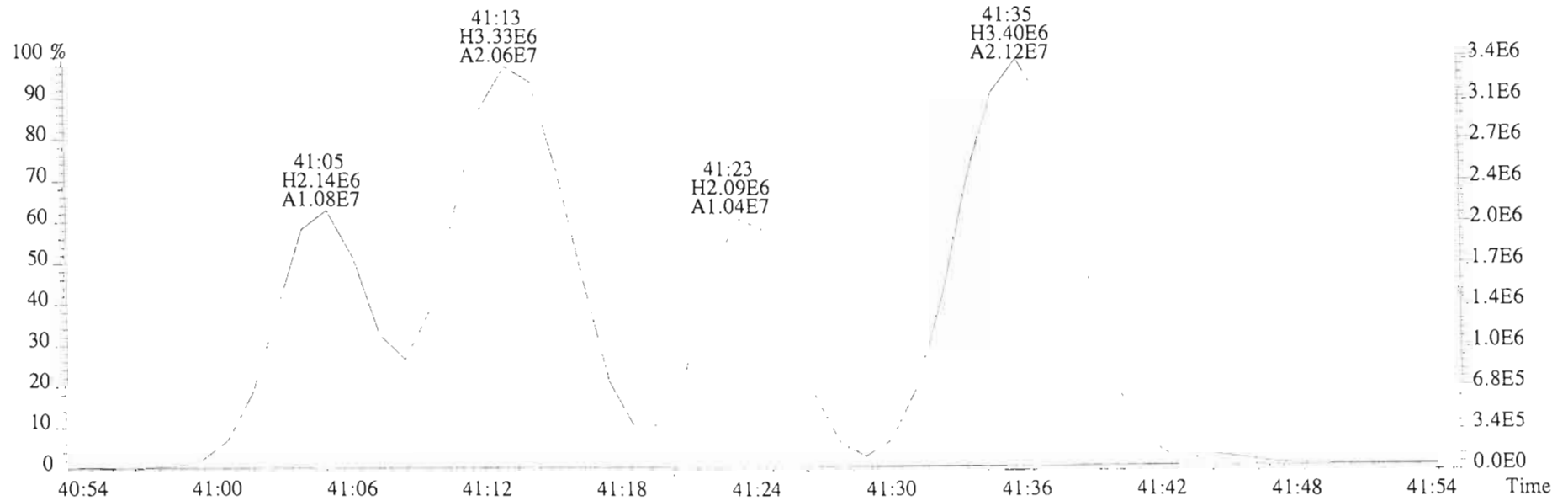
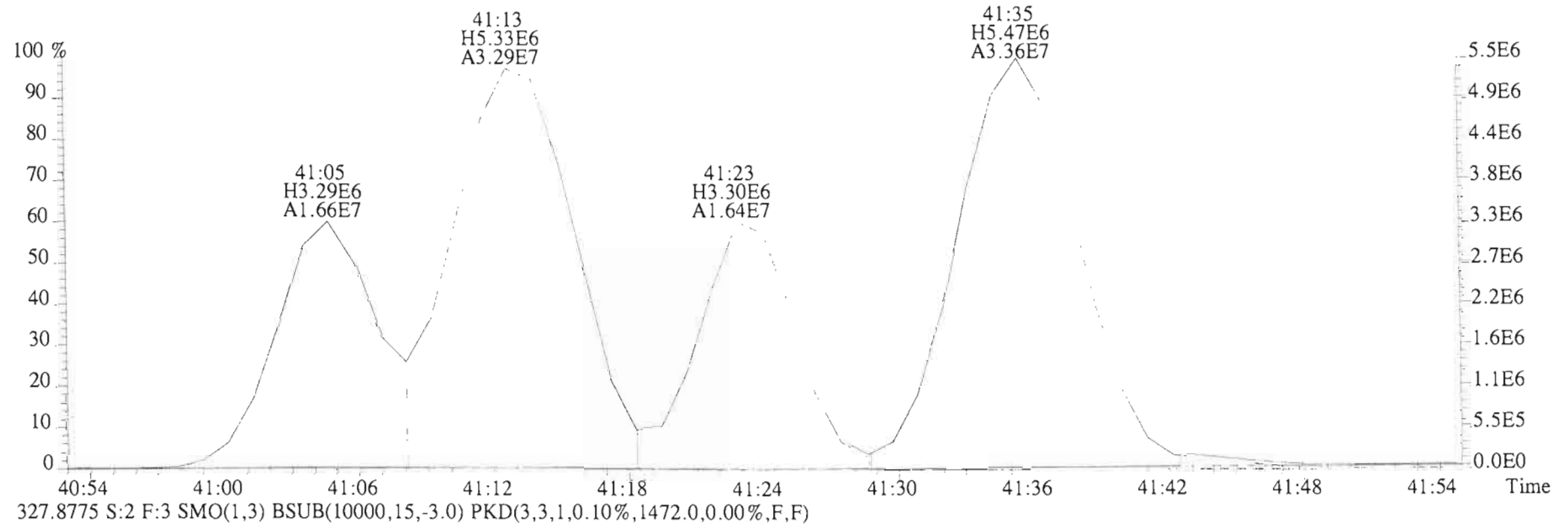
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2792.0,0.00%,F,F)



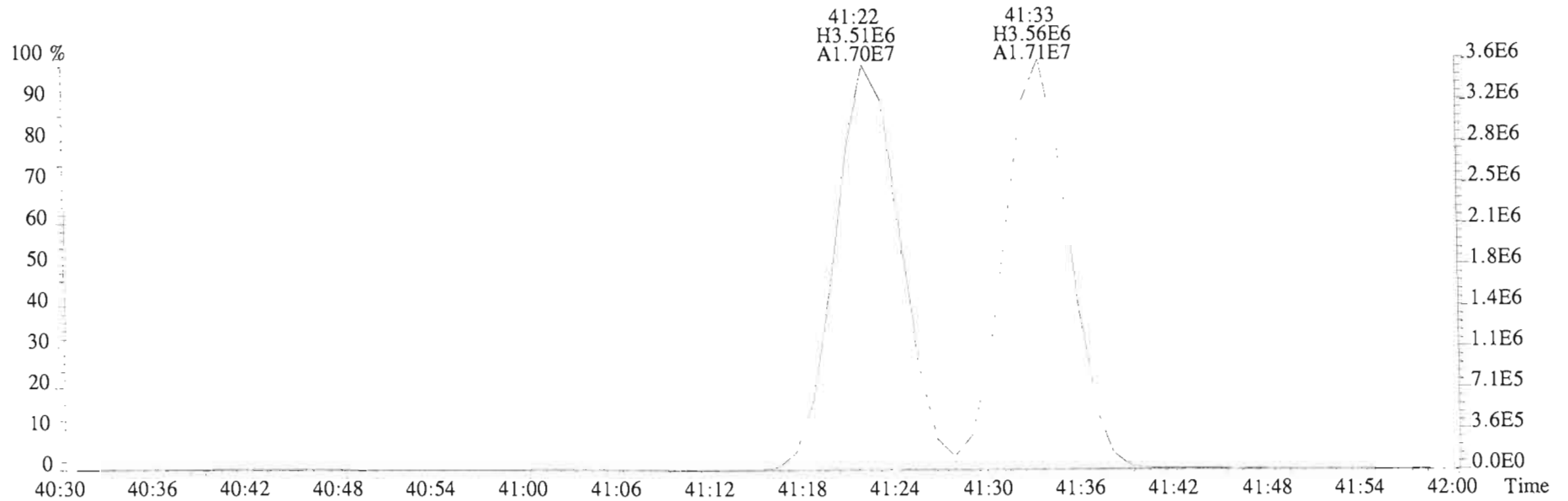
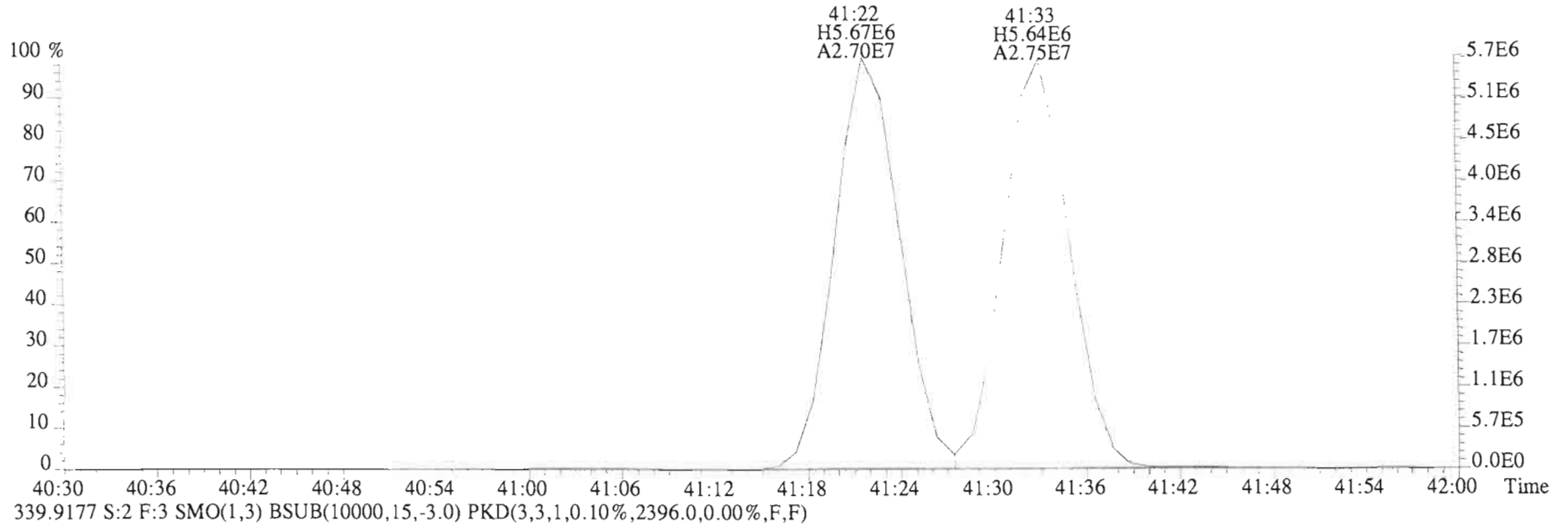
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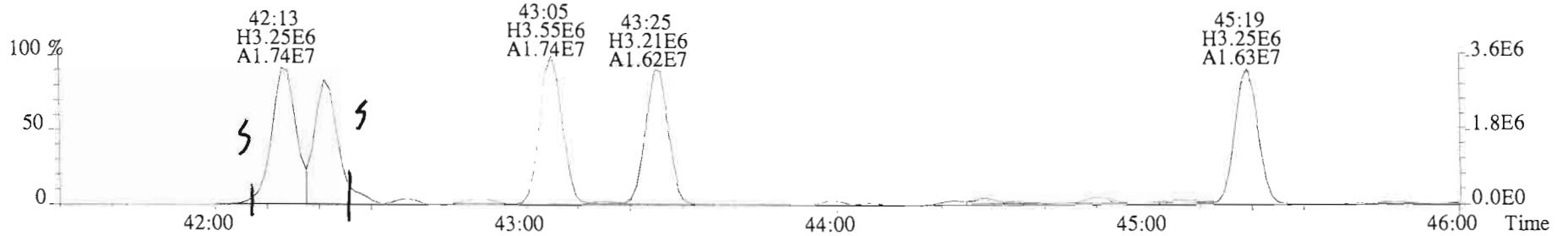
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
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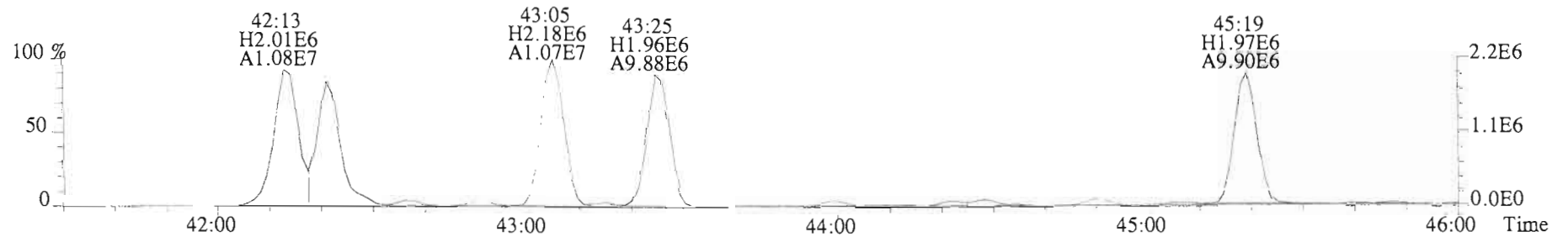
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2792.0,0.00%,F,F)



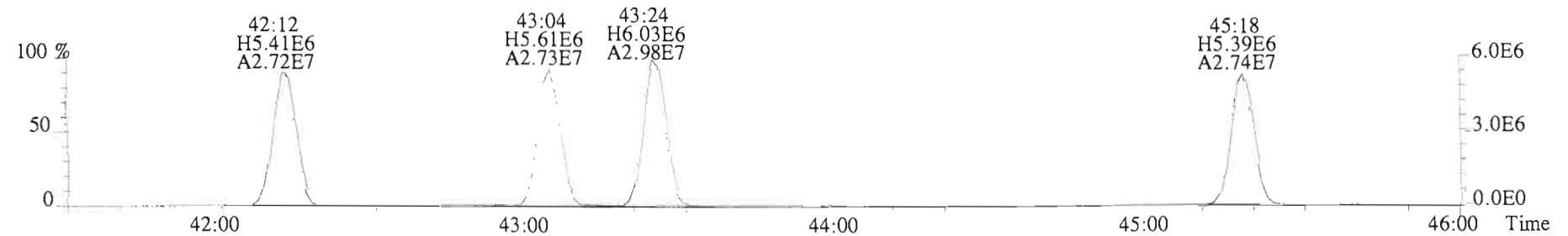
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC E1+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4264.0,0.00%,F,F)



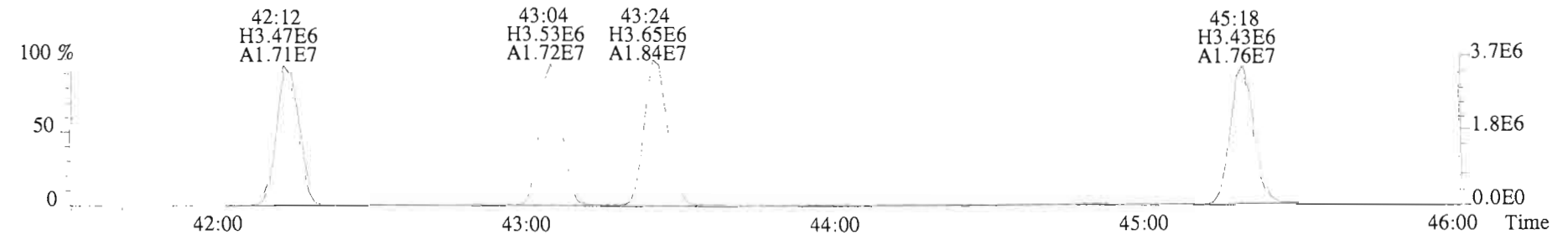
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3328.0,0.00%,F,F)



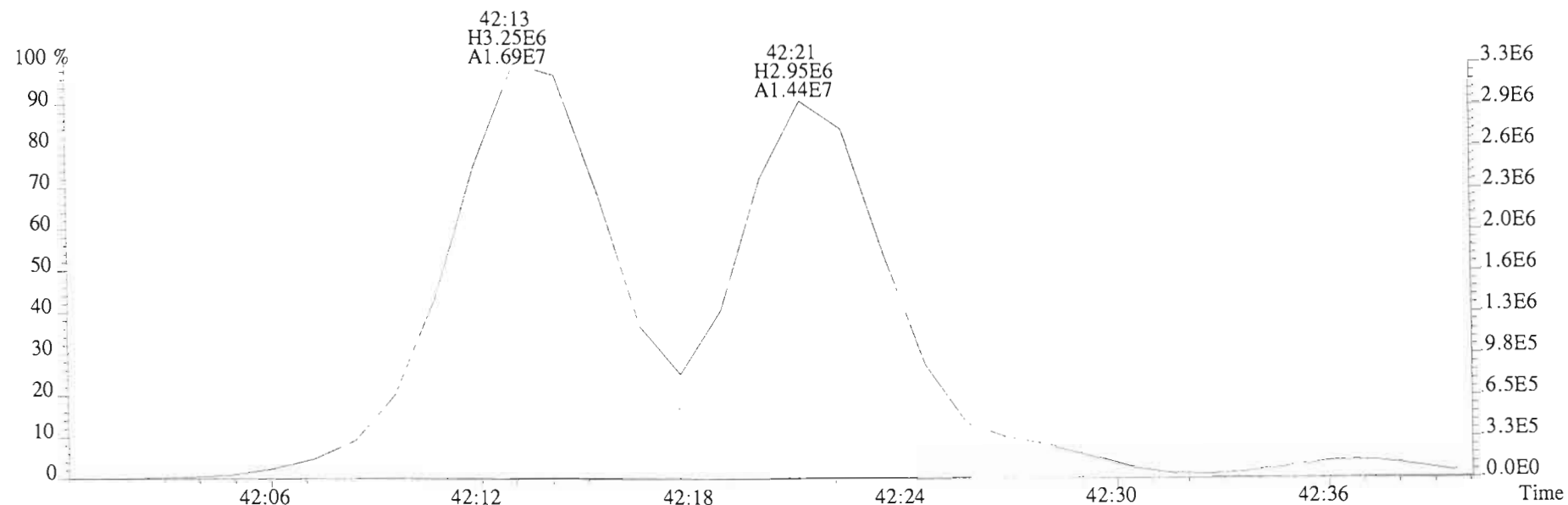
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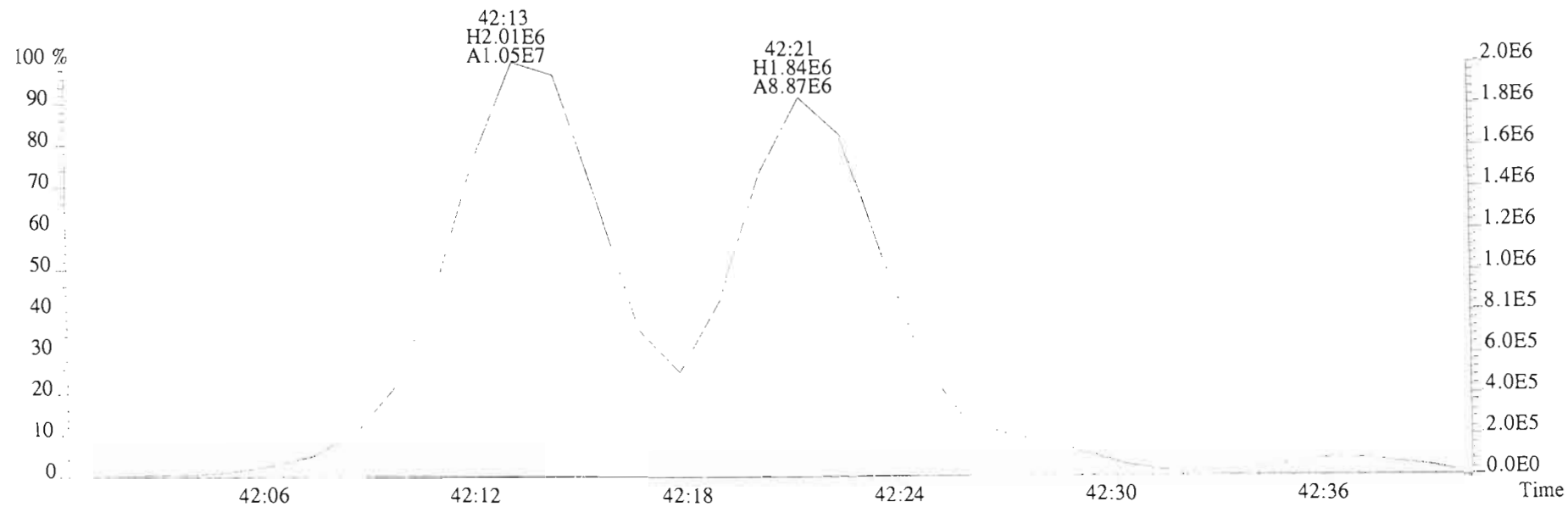
339.9177 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3612.0,0.00%,F,F)



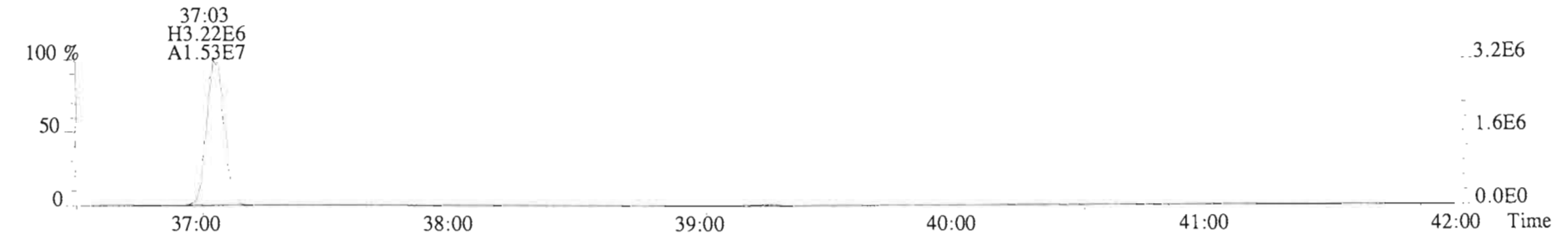
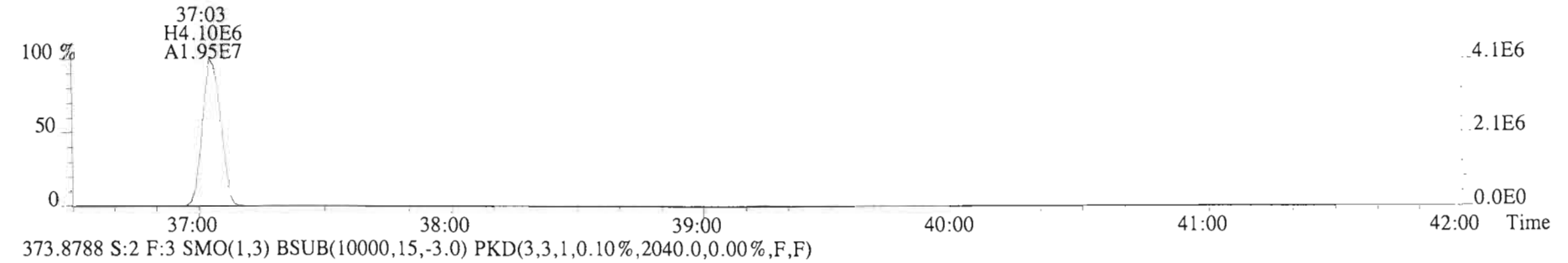
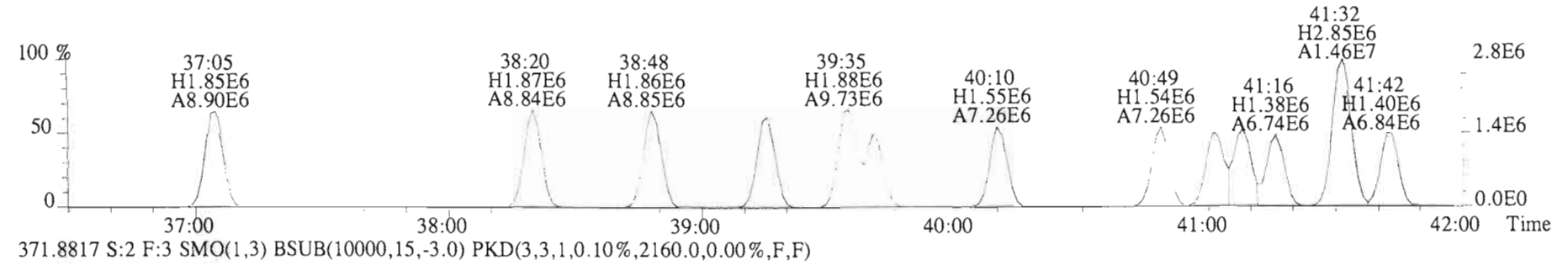
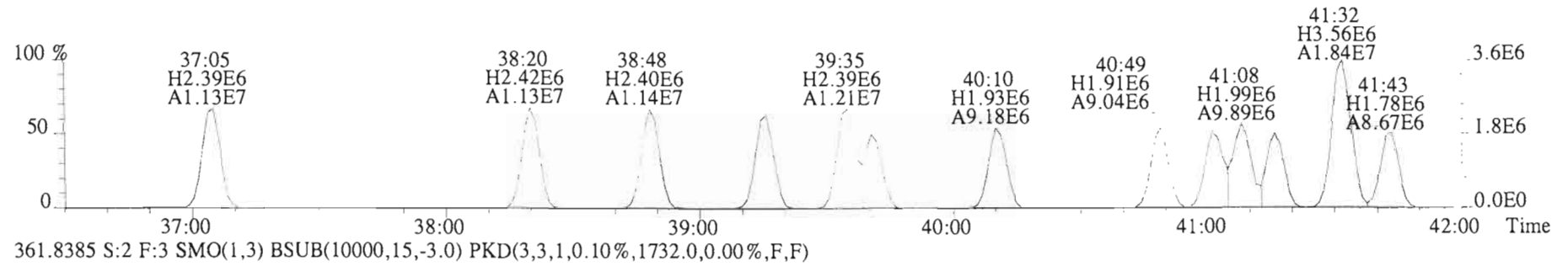
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
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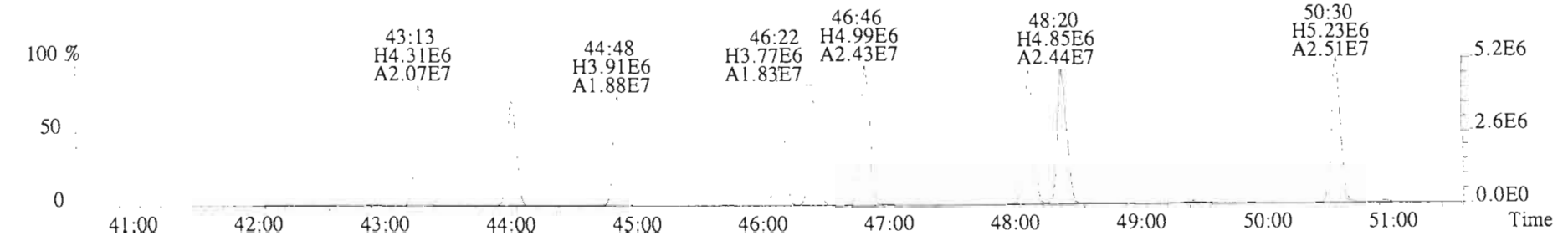
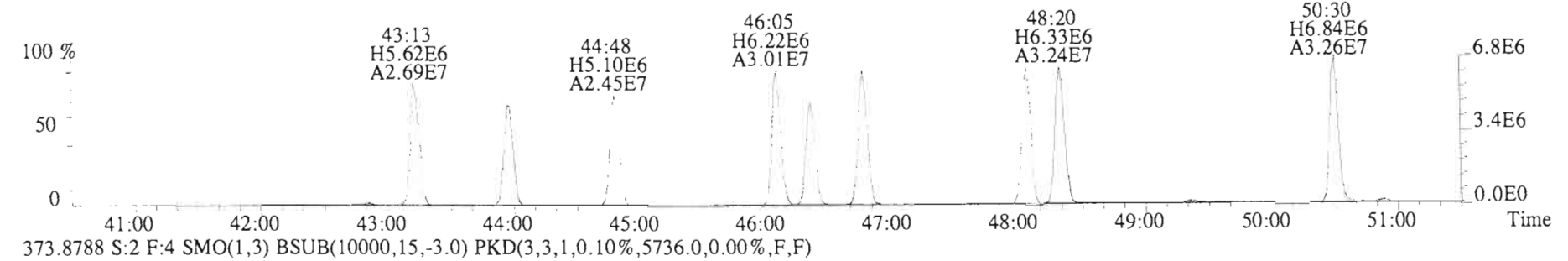
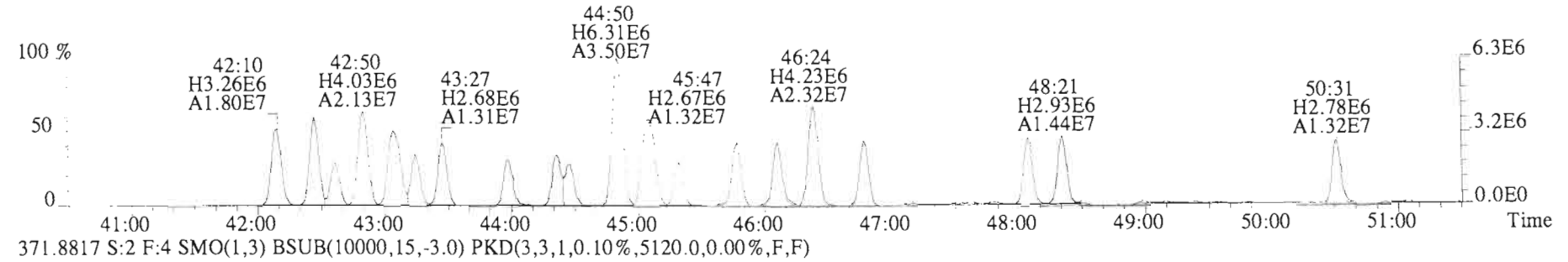
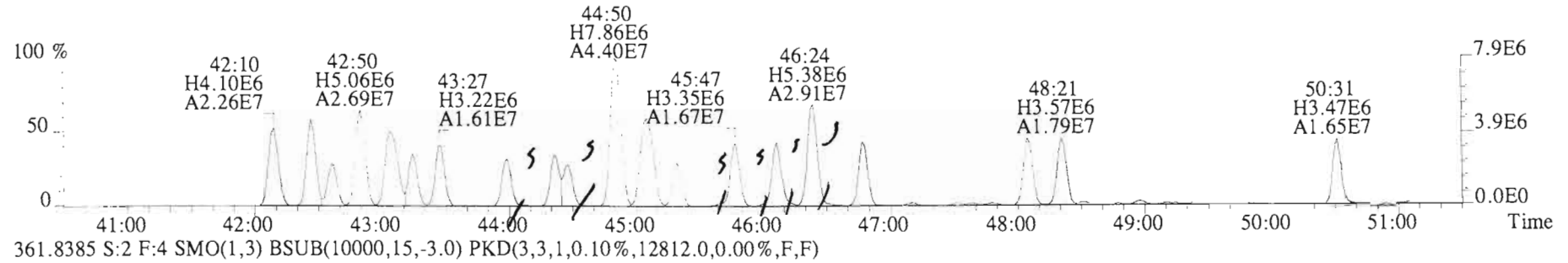
327.8775 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3328.0,0.00%,F,F)



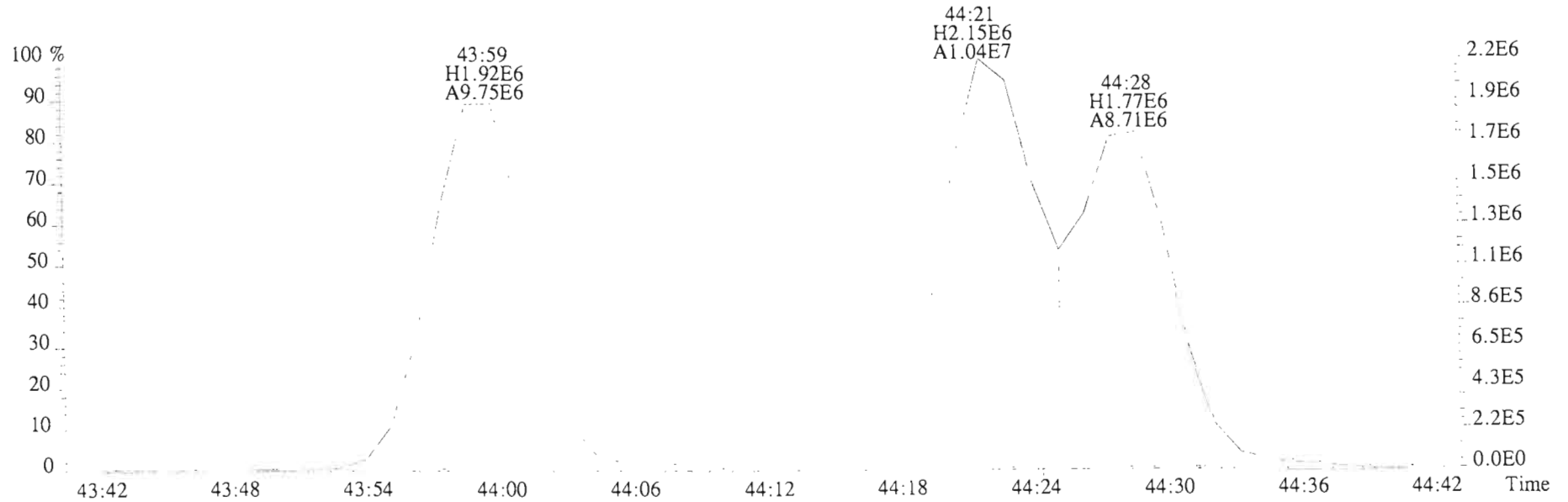
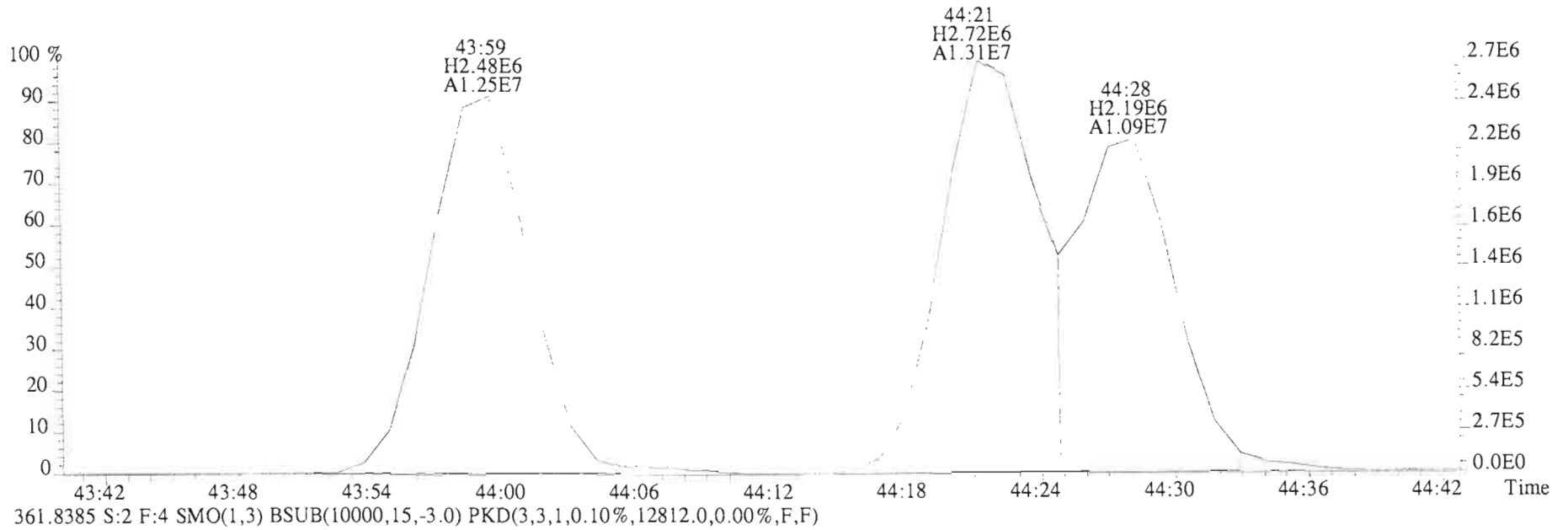
File:150127E1 #1-763 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2084.0,0.00%,F,F)



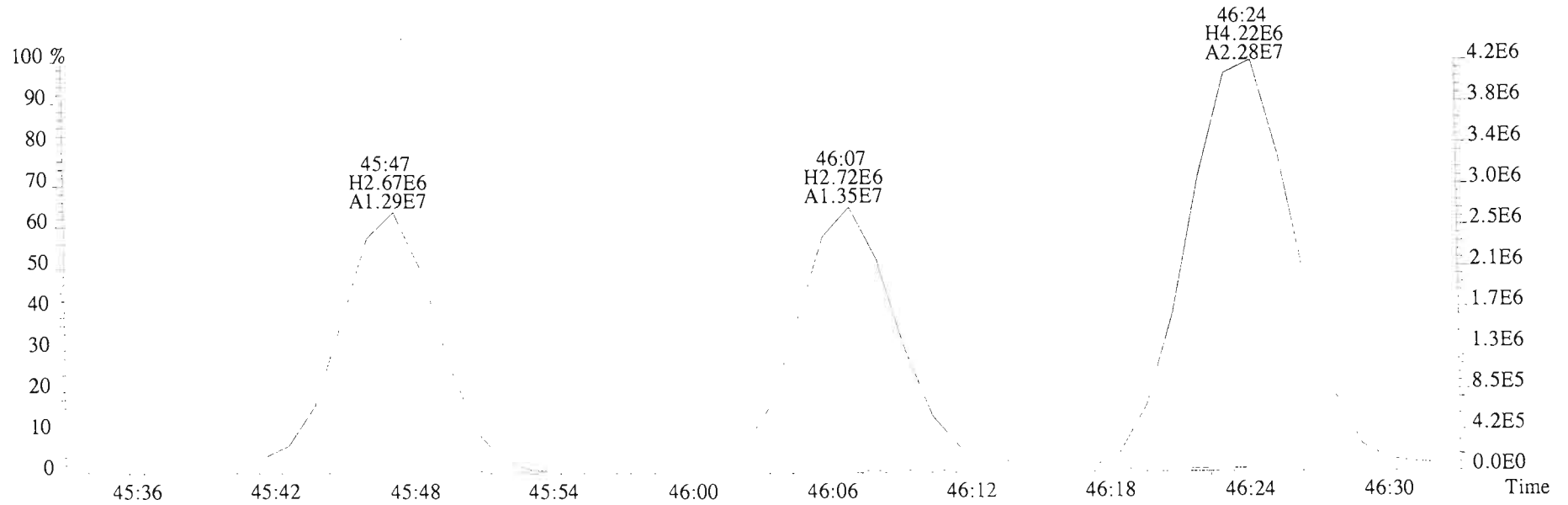
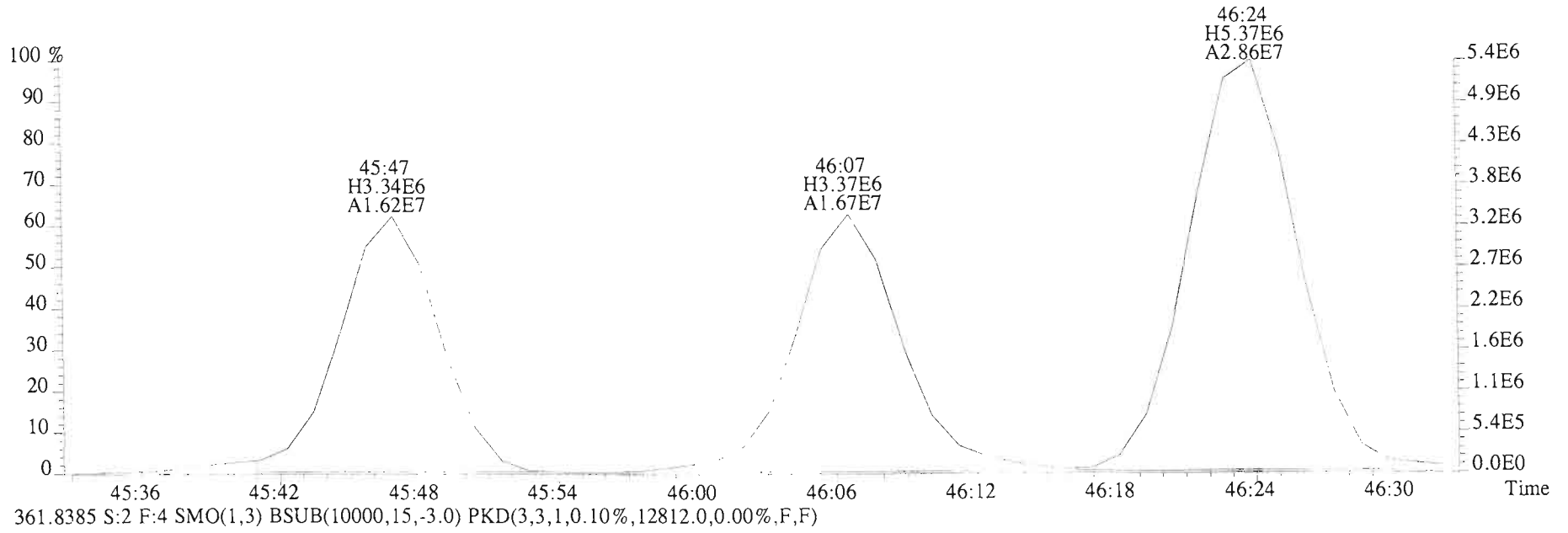
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6940.0,0.00%,F,F)



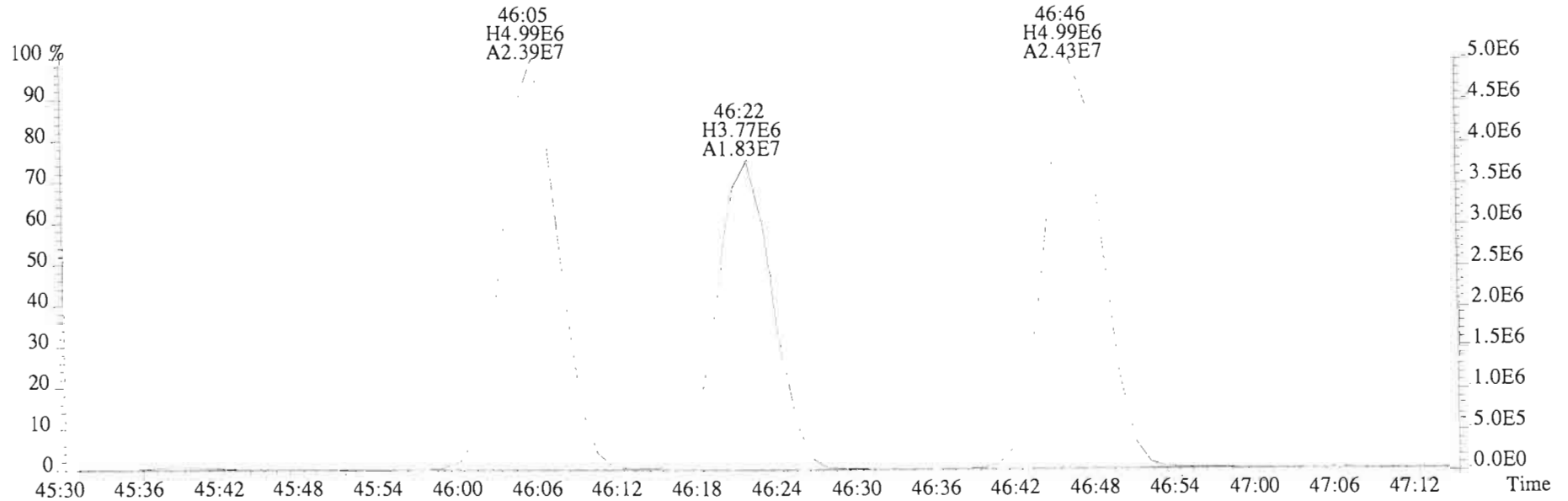
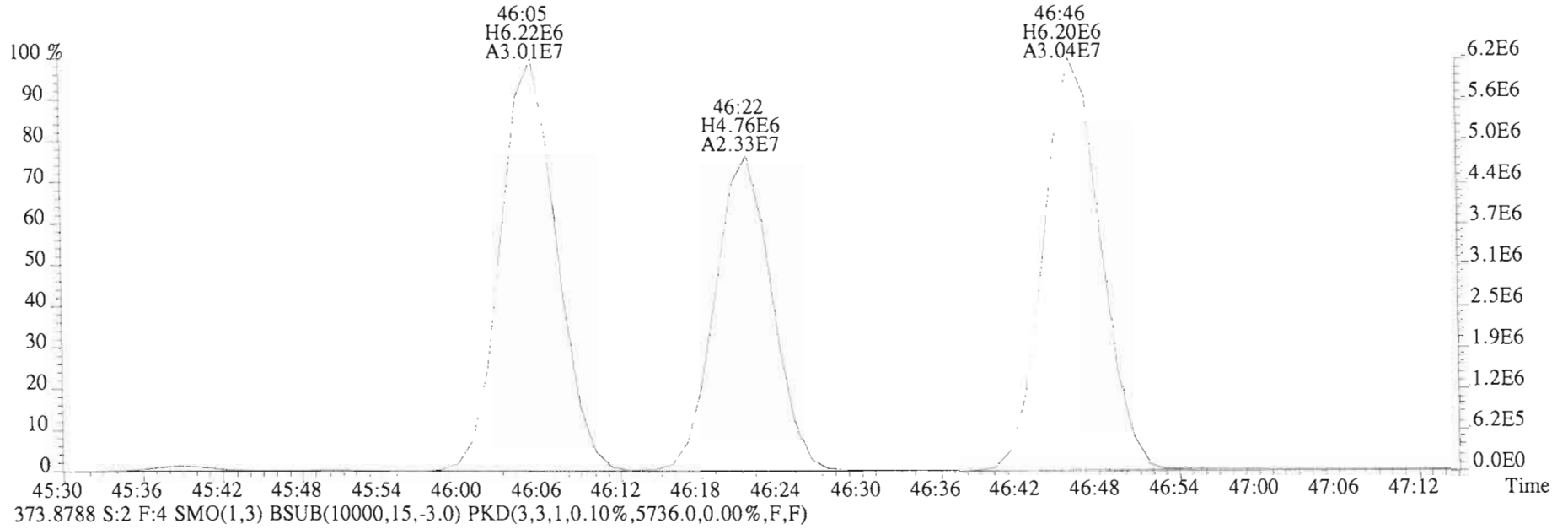
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6940.0,0.00%,F,F)



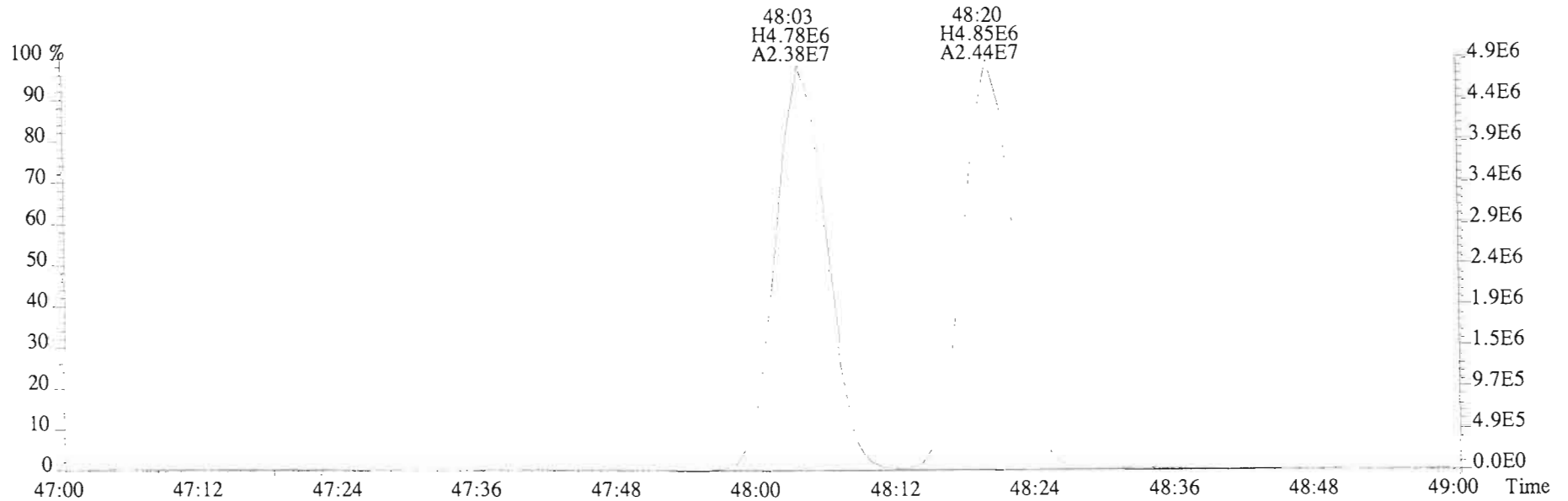
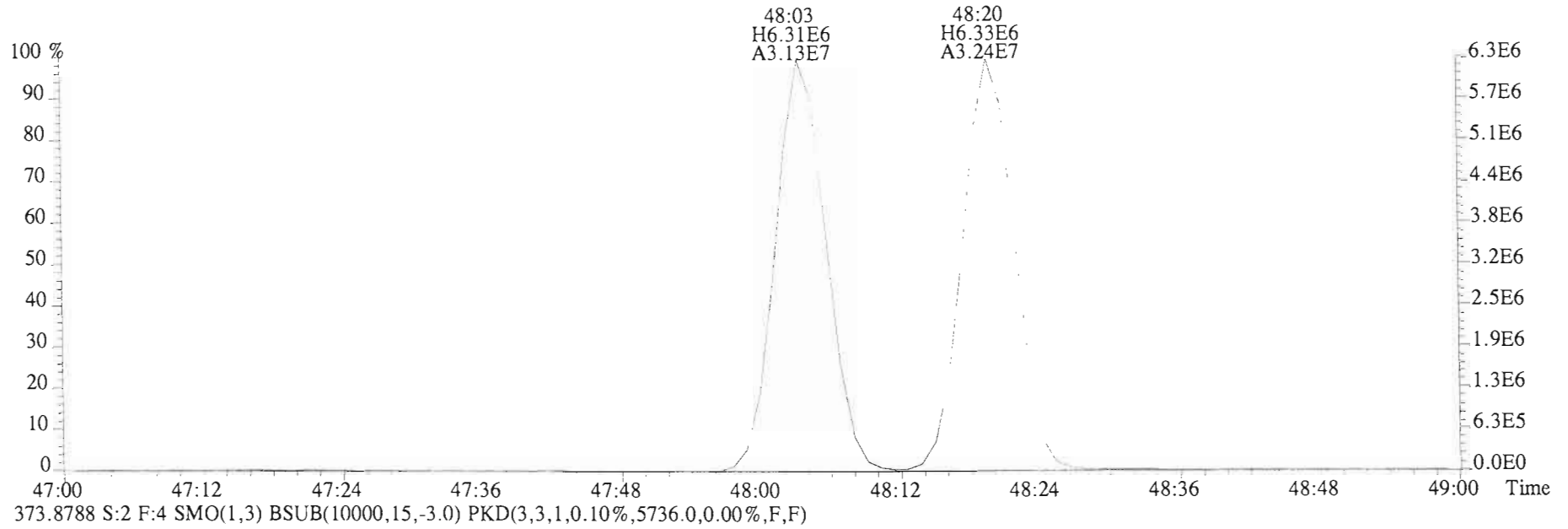
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
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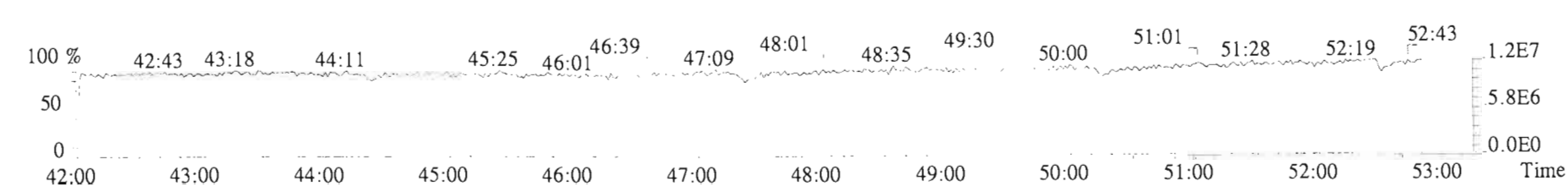
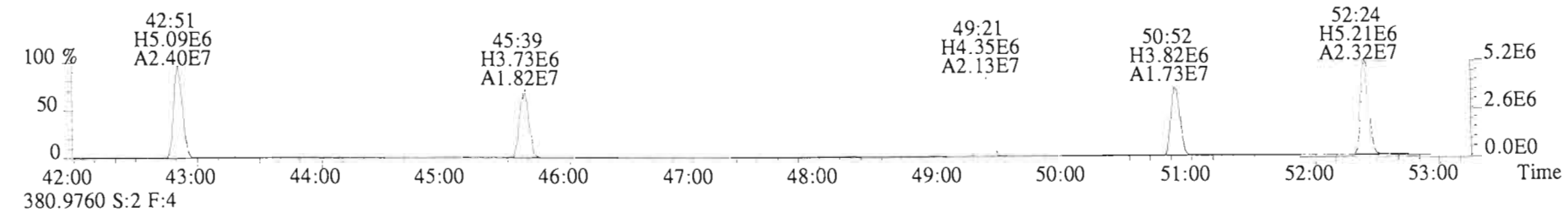
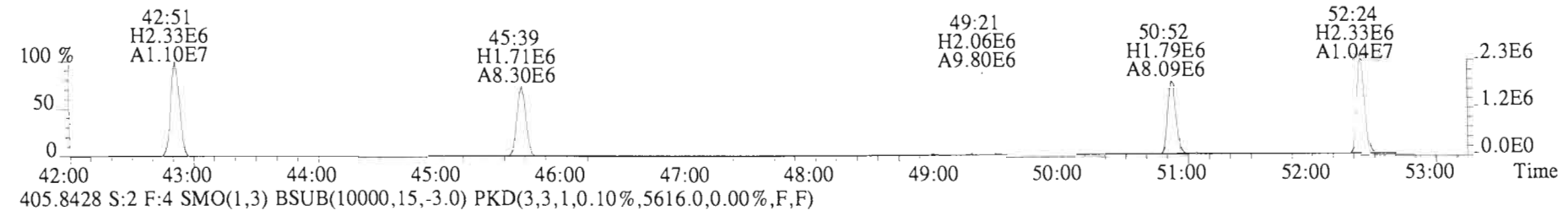
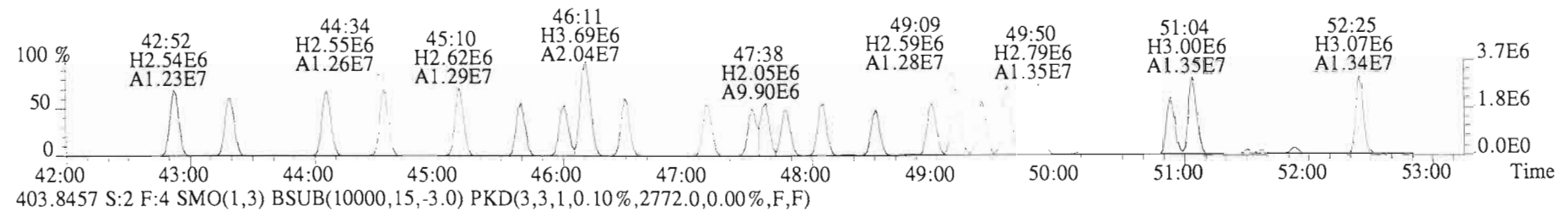
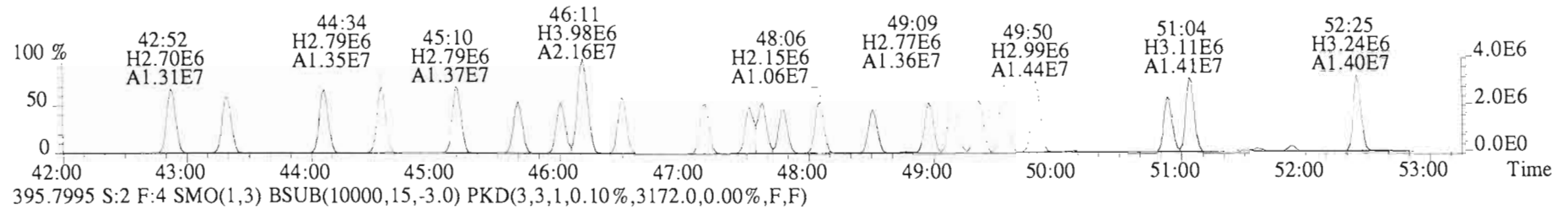
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5120.0,0.00%,F,F)



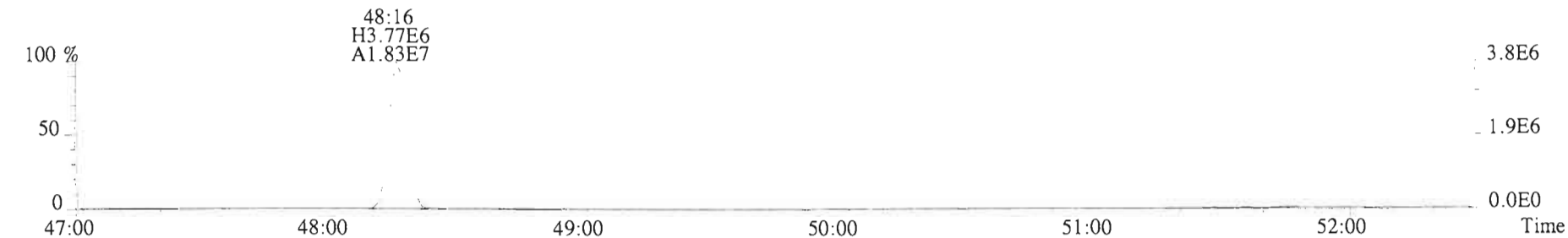
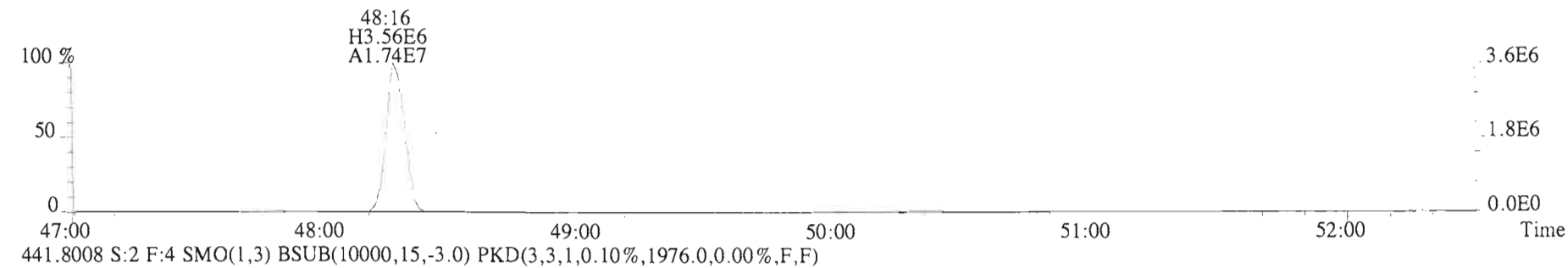
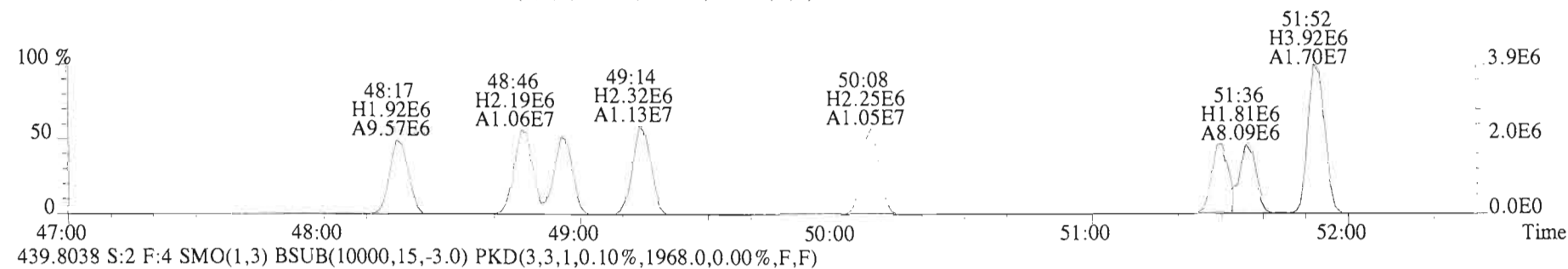
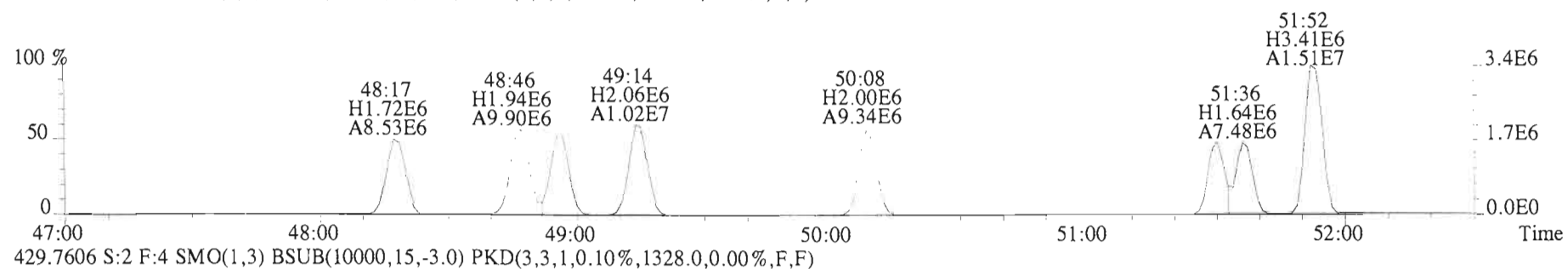
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
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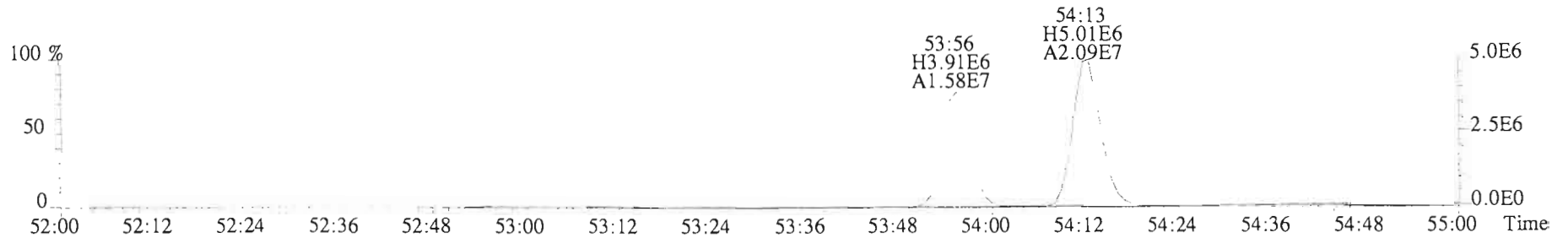
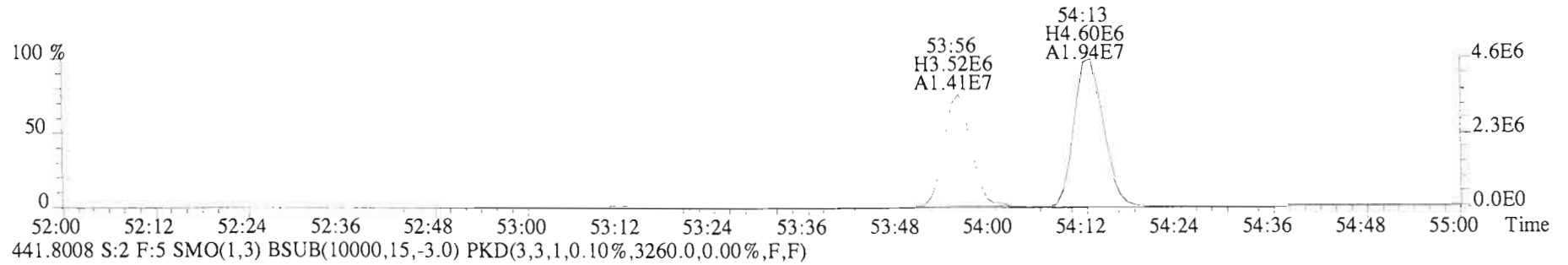
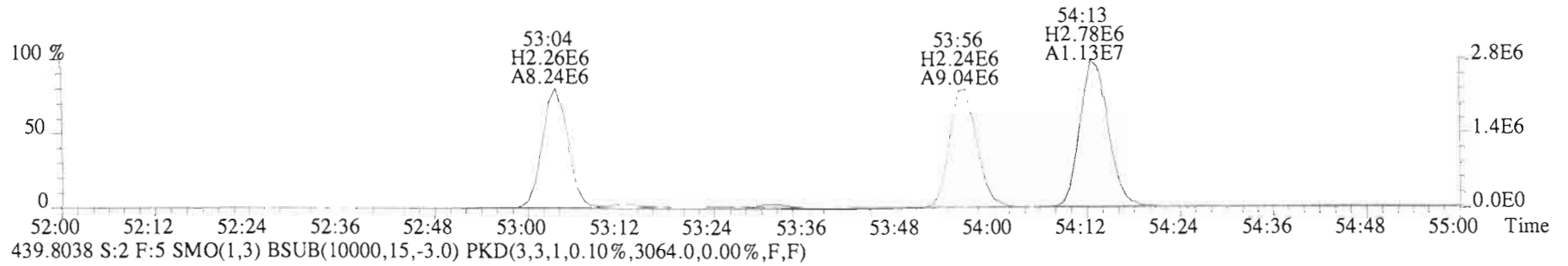
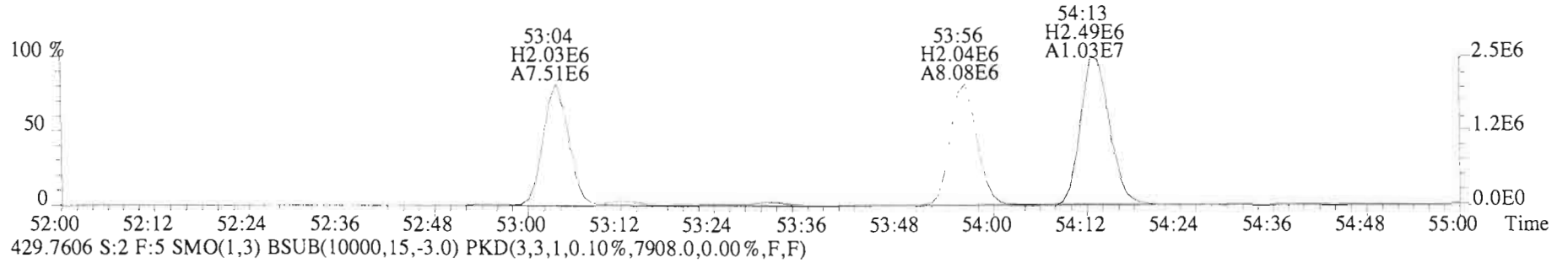
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
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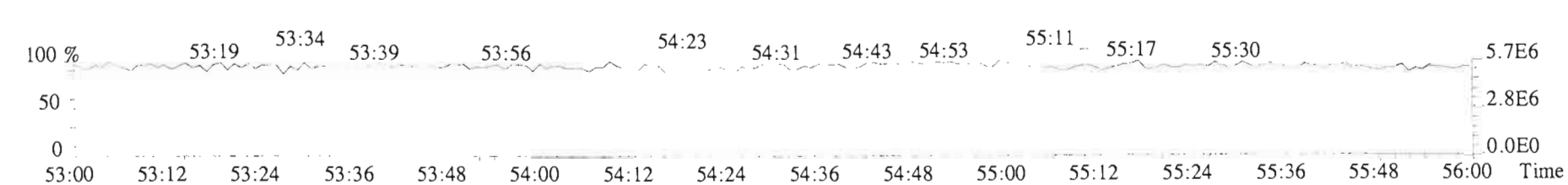
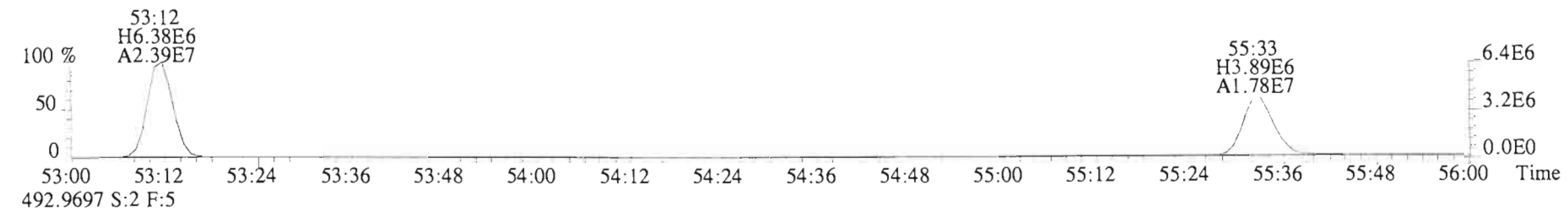
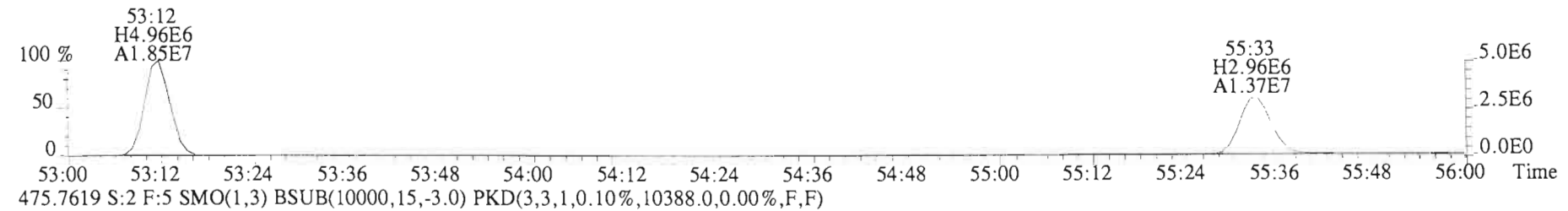
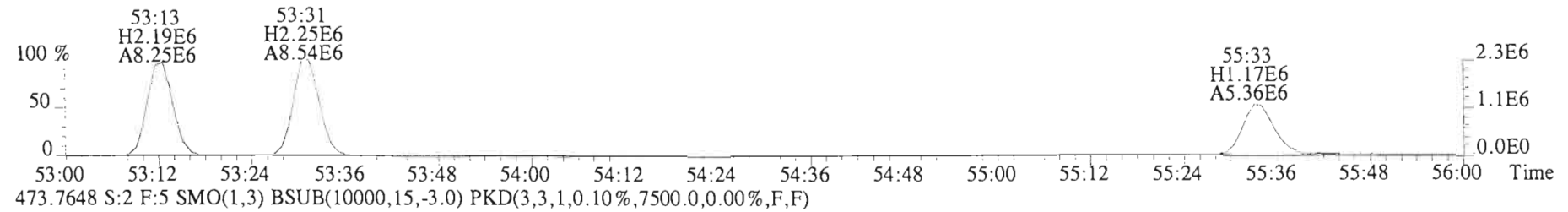
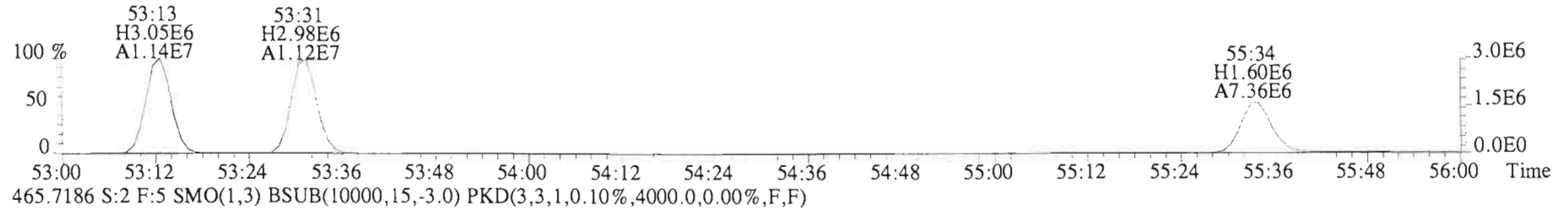
File:150127E1 #1-563 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
427.7635 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1232.0,0.00%,F,F)



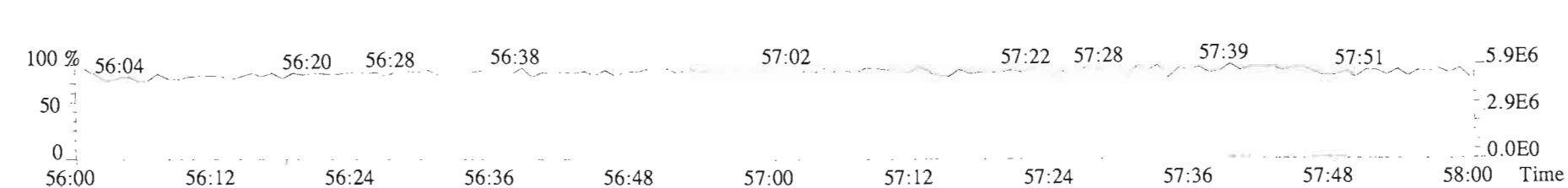
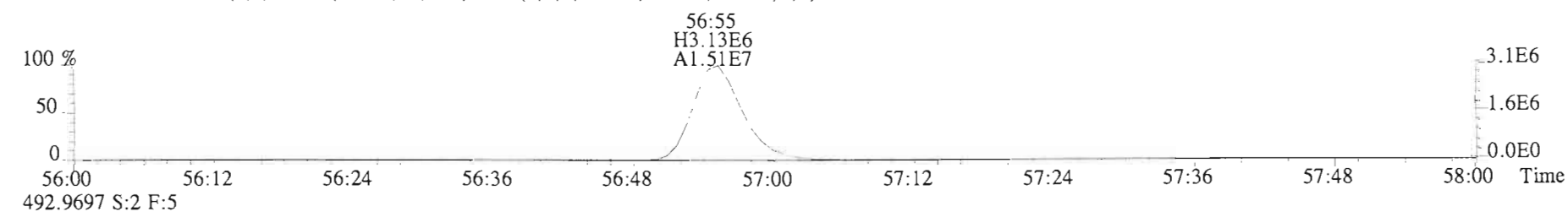
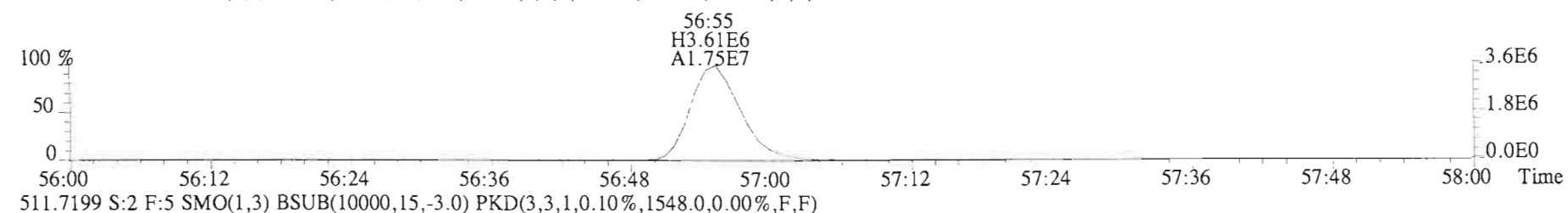
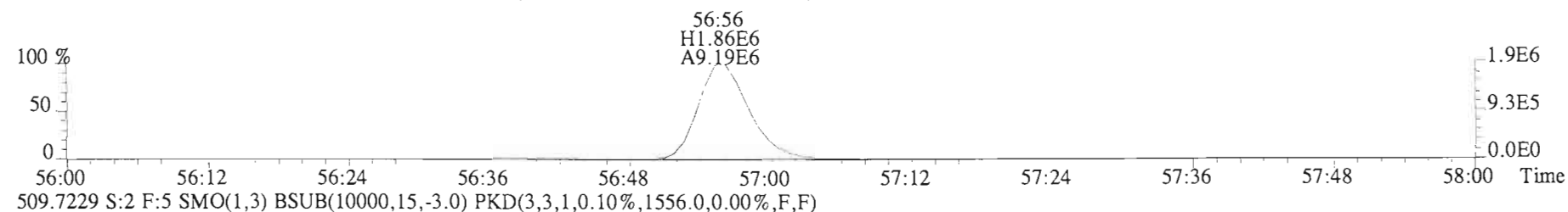
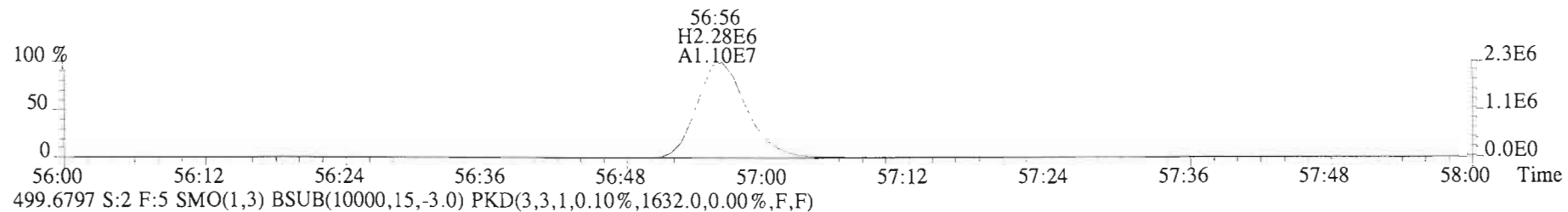
File:150127E1 #1-413 Acq:27-JAN-2015 11:43:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text:B5A0099-BS1 OPR 1 Exp:PCB_ZB1
427.7635 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2108.0,0.00%,F,F)



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)



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: DS-CB-F3-20141216-W
Lab ID: 1400970-01

Filename: 150127E1 S:5 Acq:27-JAN-15 14:57:06
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.031

ConCal: ST150127E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	* n	NotF η	1.33	*		1950	2.5	3.62	*	0.997-1.007	
Mono	PCB-2	*	* n	NotF η	1.30	*		1950	2.5	3.11	*	0.983-0.993	
Mono	PCB-3	*	* n	NotF η	1.30	*		1950	2.5	3.10	*	0.996-1.006	
Di	PCB-4/10	*	* n	NotF η	1.67	*		3210	2.5	4.21	*	0.997-1.007	
Di	PCB-7/9	*	* n	NotF η	1.25	*		3210	2.5	3.51	*	0.864-0.872	
Di	PCB-6	*	* n	NotF η	1.24	*		3210	2.5	3.56	*	0.888-0.897	
Di	PCB-5/8	*	* n	NotF η	1.27	*		3210	2.5	3.46	*	0.905-0.915	
Di	PCB-14	*	* n	NotF η	1.47	*		3210	2.5	2.79	*	0.948-0.958	
Di	PCB-11	*	* n	NotF η	1.28	*		3210	2.5	3.19	*	0.995-1.005	
Di	PCB-12/13	*	* n	NotF η	1.27	*		3210	2.5	3.23	*	1.011-1.021	
Di	PCB-15	*	* n	NotF η	1.44	*		3210	2.5	2.84	*	1.023-1.031	
Tri	PCB-19	*	* n	NotF η	1.18	*		2040	2.5	2.89	*	0.996-1.006	
Tri	PCB-30	*	* n	NotF η	1.87	*		2040	2.5	1.83	*	1.033-1.043	
Tri	PCB-18	*	* n	NotF η	0.89	*		2040	2.5	2.43	*	0.949-0.959	
Tri	PCB-17	*	* n	NotF η	0.96	*		2040	2.5	2.25	*	0.956-0.966	
Tri	PCB-24/27	*	* n	NotF η	1.30	*		2040	2.5	1.66	*	0.977-0.987	
Tri	PCB-16/32	*	* n	NotF η	1.05	*		2040	2.5	2.06	*	0.996-1.006	
Tri	PCB-34	*	* n	NotF η	1.30	*		1890	2.5	2.50	*	0.955-0.965	
Tri	PCB-23	*	* n	NotF η	1.21	*		1890	2.5	2.68	*	0.958-0.968	
Tri	PCB-29	*	* n	NotF η	1.21	*		1890	2.5	2.68	*	0.967-0.977	
Tri	PCB-26	*	* n	NotF η	1.24	*		1890	2.5	2.62	*	0.974-0.984	
Tri	PCB-25	*	* n	NotF η	1.10	*		1890	2.5	2.96	*	0.980-0.990	
Tri	PCB-31	*	* n	NotF η	1.25	*		1890	2.5	2.59	*	0.992-1.002	
Tri	PCB-28	*	* n	NotF η	1.24	*		1890	2.5	2.62	*	0.996-1.006	
Tri	PCB-20/21/33	*	* n	NotF η	1.16	*		1890	2.5	2.81	*	1.016-1.026	
Tri	PCB-22	*	* n	NotF η	1.16	*		1890	2.5	2.79	*	1.032-1.042	
Tri	PCB-36	*	* n	NotF η	1.30	*		1890	2.5	2.44	*	0.929-0.939	
Tri	PCB-39	*	* n	NotF η	1.26	*		1890	2.5	2.52	*	0.943-0.953	
Tri	PCB-38	*	* n	NotF η	1.24	*		1890	2.5	2.55	*	0.967-0.977	
Tri	PCB-35	*	* n	NotF η	1.26	*		1890	2.5	2.53	*	0.982-0.992	
Tri	PCB-37	*	* n	NotF η	1.35	*		1890	2.5	2.35	*	0.996-1.006	
Tetra	PCB-54	*	* n	NotF η	1.02	*		1900	2.5	2.43	*	0.996-1.006	
Tetra	PCB-50	*	* n	NotF η	0.78	*		1900	2.5	3.20	*	1.037-1.047	
Tetra	PCB-53	*	* n	NotF η	1.14	*		1900	2.5	2.88	*	0.941-0.951	
Tetra	PCB-51	*	* n	NotF η	1.16	*		1900	2.5	2.82	*	0.952-0.962	
Tetra	PCB-45	*	* n	NotF η	1.04	*		1900	2.5	3.15	*	0.965-0.975	
Tetra	PCB-46	*	* n	NotF η	0.95	*		1340	2.5	2.43	*	0.981-0.991	

Integrations by:

Analyst: Dms

Date: 2/5/15

Reviewed by: W/2

Date: 2/12/15

Client ID: DS-CB-F3-20141216-W
Lab ID: 1400970-01

Filename: 150127E1 S:5 Acq:27-JAN-15 14:57:06
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.031

ConCal: ST150127E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	1.63e+05	0.73	y 31:31	1.29	10.4		*	2.5	*	1.001	0.996-1.006	
Tetra	PCB-73	*	*	n NotF η	1.41	*		1900	2.5	2.32	*	0.999-1.009	
Tetra	PCB-43/49	4.04e+04	1.30	n 31:49	1.14	2.93	R	*	2.5	*	1.010	1.005-1.015	
Tetra	PCB-47	*	*	n NotF η	1.20	*		1900	2.5	2.57	*	0.996-1.006	
Tetra	PCB-48/75	*	*	n NotF η	1.33	*		1900	2.5	2.32	*	0.999-1.009	
Tetra	PCB-65	*	*	n NotF η	1.32	*		1900	2.5	2.34	*	1.007-1.017	
Tetra	PCB-62	*	*	n NotF η	1.36	*		1900	2.5	2.26	*	1.011-1.021	
Tetra	PCB-44	6.77e+04	0.88	y 32:49	0.87	6.05		*	2.5	*	1.025	1.020-1.030	
Tetra	PCB-42/59	*	*	n NotF η	1.24	*		1900	2.5	2.49	*	1.027-1.037	
Tetra	PCB-41/64/71/72	8.63e+04	0.85	y 33:37	1.34	5.02		*	2.5	*	1.050	1.045-1.055	
Tetra	PCB-68	*	*	n NotF η	1.61	*		1900	2.5	1.91	*	1.053-1.063	
Tetra	PCB-40	*	*	n NotF η	0.86	*		1900	2.5	3.59	*	1.061-1.071	
Tetra	PCB-57	*	*	n NotF η	1.12	*		1900	2.5	2.10	*	0.965-0.975	
Tetra	PCB-67	*	*	n NotF η	1.09	*		1900	2.5	2.16	*	0.974-0.984	
Tetra	PCB-58	*	*	n NotF η	1.14	*		1900	2.5	2.07	*	0.977-0.987	
Tetra	PCB-63	*	*	n NotF η	1.16	*		1900	2.5	2.02	*	0.981-0.991	
Tetra	PCB-74	4.71e+04	0.82	y 35:20	1.21	2.25		*	2.5	*	0.995	0.989-0.999	
Tetra	PCB-61/70	5.62e+04	0.70	y 35:32	1.13	2.89		*	2.5	*	1.000	0.995-1.005	
Tetra	PCB-76/66	8.68e+04	0.88	y 35:45	1.18	4.27		*	2.5	*	1.007	1.000-1.010	
Tetra	PCB-80	*	*	n NotF η	1.32	*		1900	2.5	1.77	*	0.995-1.005	
Tetra	PCB-55	*	*	n NotF η	1.23	*		1900	2.5	1.90	*	1.004-1.014	
Tetra	PCB-56/60	*	*	n NotF η	1.11	*		1900	2.5	2.12	*	1.018-1.028	
Tetra	PCB-79	*	*	n NotF η	1.16	*		1900	2.5	2.02	*	1.048-1.058	
Tetra	PCB-78	*	*	n NotF η	1.18	*		1900	2.5	1.94	*	0.982-0.992	
Tetra	PCB-81	*	*	n NotF η	1.29	*		1900	2.5	1.77	*	0.995-1.005	
Tetra	PCB-77	*	*	n NotF η	1.29	*		1900	2.5	1.92	*	0.995-1.005	
Penta	PCB-104	*	*	n NotF η	1.26	*		1330	2.5	2.37	*	0.996-1.006	
Penta	PCB-96	*	*	n NotF η	1.09	*		1330	2.5	2.74	*	1.034-1.044	
Penta	PCB-103	*	*	n NotF η	0.97	*		1330	2.5	3.09	*	1.051-1.061	
Penta	PCB-100	*	*	n NotF η	0.96	*		1330	2.5	3.11	*	1.061-1.071	
Penta	PCB-94	*	*	n NotF η	1.13	*		1330	2.5	3.59	*	0.980-0.990	
Penta	PCB-95/98/102	2.66e+05	1.32	y 35:50	1.29	21.1		*	2.5	*	1.000	0.994-1.004	
Penta	PCB-93	*	*	n NotF η	1.06	*		1330	2.5	3.82	*	0.998-1.008	
Penta	PCB-88/91	6.24e+04	1.24	n 36:13	1.12	5.69	R	*	2.5	*	1.011	1.006-1.016	
Penta	PCB-121	*	*	n NotF η	1.76	*		1330	2.5	2.30	*	1.009-1.019	
Penta	PCB-84/92	1.07e+05	1.51	y 37:09	1.07	9.18		*	2.5	*	0.991	0.985-0.995	
Penta	PCB-89	*	*	n NotF η	1.00	*		1330	2.5	3.75	*	0.990-1.000	

Analyst: Dms

Date: 2/5/15

Client ID: DS-CB-F3-20141216-W
Lab ID: 1400970-01

Filename: 150127E1 S:5 Acq:27-JAN-15 14:57:06
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.031

ConCal: ST150127E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	2.03e+05	1.72	y 37:31	1.21	15.5		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-113	*	*	n NotF η	1.34	*		1330	2.5	2.78	*	1.002-1.012	
Penta	PCB-99	6.33e+04	2.26	n 37:51	1.25	4.68	R	*	2.5	*	1.009	1.004-1.014	
Penta	PCB-119	*	*	n NotF η	1.88	*		1330	2.5	2.35	*	0.982-0.992	
Penta	PCB-108/112	*	*	n NotF η	1.41	*		1330	2.5	3.15	*	0.986-0.996	
Penta	PCB-83	*	*	n NotF η	1.66	*		1330	2.5	2.66	*	0.990-1.000	
Penta	PCB-97	*	*	n NotF η	1.30	*		1330	2.5	3.41	*	0.995-1.005	
Penta	PCB-86	*	*	n NotF η	1.03	*		1330	2.5	4.28	*	0.999-1.009	
Penta	PCB-87/117/125	6.38e+04	1.68	y 39:06	1.59	4.11		*	2.5	*	1.008	1.002-1.012	
Penta	PCB-111/115	*	*	n NotF η	1.86	*		1330	2.5	2.38	*	1.006-1.016	
Penta	PCB-85/116	4.71e+04	1.19	n 39:22	1.39	3.47	R	*	2.5	*	1.015	1.010-1.020	
Penta	PCB-120	*	*	n NotF η	1.99	*		1330	2.5	2.23	*	1.016-1.026	
Penta	PCB-110	3.29e+05	1.77	y 39:46	1.70	19.8		*	2.5	*	1.025	1.019-1.029	
Penta	PCB-82	*	*	n NotF η	0.74	*		1330	2.5	4.28	*	0.971-0.981	
Penta	PCB-124	*	*	n NotF η	1.30	*		1330	2.5	2.44	*	0.988-0.998	
Penta	PCB-107/109	*	*	n NotF η	1.34	*		1330	2.5	2.38	*	0.991-1.001	
Penta	PCB-123	*	*	n NotF η	1.25	*		1330	2.5	2.54	*	0.995-1.005	
Penta	PCB-106/118	1.76e+05	1.57	y 41:34	1.29	9.85		*	2.5	*	1.001	0.996-1.006	
Penta	PCB-114	*	*	n NotF η	1.45	*		1530	2.5	2.44	*	0.995-1.005	
Penta	PCB-122	*	*	n NotF η	1.22	*		1530	2.5	2.90	*	0.999-1.009	
Penta	PCB-105	9.74e+04	1.32	y 43:04	1.56	4.49		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-127	*	*	n NotF η	1.31	*		1530	2.5	2.49	*	0.995-1.005	
Penta	PCB-126	*	*	n NotF η	1.41	*		1530	2.5	2.59	*	0.995-1.005	
Hexa	PCB-155	*	*	n NotF η	1.20	*		1840	2.5	3.59	*	0.966-1.006	
Hexa	PCB-150	*	*	n NotF η	1.13	*		1840	2.5	3.71	*	1.030-1.040	
Hexa	PCB-152	*	*	n NotF η	1.17	*		1840	2.5	3.58	*	1.043-1.053	
Hexa	PCB-145	*	*	n NotF η	1.09	*		1840	2.5	3.82	*	1.055-1.065	
Hexa	PCB-136	*	*	n NotF η	1.14	*		1840	2.5	3.66	*	1.063-1.073	
Hexa	PCB-148	*	*	n NotF η	0.82	*		1840	2.5	5.12	*	1.066-1.076	
Hexa	PCB-154	*	*	n NotF η	0.89	*		1840	2.5	4.70	*	1.079-1.089	
Hexa	PCB-151	*	*	n NotF η	0.82	*		1840	2.5	5.11	*	1.097-1.107	
Hexa	PCB-135	*	*	n NotF η	0.80	*		1840	2.5	5.24	*	1.101-1.113	
Hexa	PCB-144	*	*	n NotF η	0.86	*		1840	2.5	4.89	*	1.105-1.116	
Hexa	PCB-147	*	*	n NotF η	0.78	*		1840	2.5	5.37	*	1.108-1.120	
Hexa	PCB-139/149	1.67e+05	1.11	y 41:30	0.87	16.3		*	2.5	*	1.120	1.115-1.127	
Hexa	PCB-140	*	*	n NotF η	0.78	*		1840	2.5	5.38	*	1.120-1.132	
Hexa	PCB-134/143	*	*	n NotF η	0.93	*		1550	2.5	3.25	*	0.970-0.980	

Analyst: Dms

Date: 2/5/15

Client ID: DS-CB-F3-20141216-W
Lab ID: 1400970-01

Filename: 150127E1 S:5 Acq:27-JAN-15 14:57:06
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.031

ConCal: ST150127E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	*	*	n NotF η	0.91	*		1550	2.5	3.33	*	0.977-0.987	
Hexa	PCB-131	*	*	n NotF η	0.85	*		1550	2.5	3.58	*	0.981-0.991	
Hexa	PCB-146/165	4.93e+04	0.76	n 42:50	1.08	3.13	R	*	2.5	*	0.991	0.986-0.996	
Hexa	PCB-132/161	1.03e+05	0.98	n 43:05	1.12	6.30	R	*	2.5	*	0.997	0.992-1.002	
Hexa	PCB-153	2.33e+05	1.27	y 43:14	1.20	13.4		*	2.5	*	1.000	0.996-1.006	
Hexa	PCB-168	*	*	n NotF η	1.36	*		1550	2.5	2.23	*	1.000-1.010	
Hexa	PCB-141	5.47e+04	1.21	y 43:59	1.16	3.73		*	2.5	*	1.001	0.995-1.005	
Hexa	PCB-137	*	*	n NotF η	1.18	*		1550	2.5	2.91	*	1.004-1.014	
Hexa	PCB-130	*	*	n NotF η	0.92	*		1550	2.5	3.73	*	1.006-1.016	
Hexa	PCB-138/163/164	3.94e+05	1.09	y 44:50	1.38	21.5		*	2.5	*	1.001	0.996-1.006	
Hexa	PCB-158/160	*	*	n NotF η	1.48	*		1550	2.5	2.23	*	1.001-1.011	
Hexa	PCB-129	*	*	n NotF η	0.99	*		1550	2.5	3.33	*	1.007-1.017	
Hexa	PCB-166	*	*	n NotF η	1.14	*		1550	2.5	2.33	*	0.988-0.998	
Hexa	PCB-159	*	*	n NotF η	1.22	*		1550	2.5	2.18	*	0.995-1.005	
Hexa	PCB-128/162	8.35e+04	1.27	y 46:21	1.03	5.01		*	2.5	*	1.006	1.002-1.012	
Hexa	PCB-167	*	*	n NotF η	1.18	*		1550	2.5	2.24	*	0.995-1.005	
Hexa	PCB-156	*	*	n NotF η	1.27	*		1550	2.5	2.15	*	0.995-1.005	
Hexa	PCB-157	*	*	n NotF η	1.22	*		1550	2.5	2.20	*	0.995-1.005	
Hexa	PCB-169	*	*	n NotF η	1.07	*		1550	2.5	2.45	*	0.995-1.005	
Hepta	PCB-188	*	*	n NotF η	1.52	*		1200	2.5	1.30	*	0.996-1.006	
Hepta	PCB-184	*	*	n NotF η	1.34	*		1200	2.5	1.48	*	1.006-1.016	
Hepta	PCB-179	*	*	n NotF η	1.39	*		1200	2.5	1.42	*	1.024-1.034	
Hepta	PCB-176	*	*	n NotF η	1.45	*		1200	2.5	1.36	*	1.035-1.045	
Hepta	PCB-186	*	*	n NotF η	1.46	*		1200	2.5	1.36	*	1.049-1.059	
Hepta	PCB-178	*	*	n NotF η	1.07	*		1200	2.5	1.84	*	1.061-1.071	
Hepta	PCB-175	*	*	n NotF η	1.05	*		1200	2.5	1.89	*	1.069-1.079	
Hepta	PCB-182/187	1.04e+05	0.91	y 46:09	1.14	8.47		*	2.5	*	1.077	1.073-1.083	
Hepta	PCB-183	4.85e+04	1.01	y 46:29	1.22	3.67		*	2.5	*	1.085	1.080-1.090	
Hepta	PCB-185	*	*	n NotF η	1.40	*		1200	2.5	1.70	*	0.950-0.960	
Hepta	PCB-174	7.16e+04	0.92	y 47:30	1.29	6.11		*	2.5	*	0.963	0.958-0.968	
Hepta	PCB-181	*	*	n NotF η	1.35	*		1200	2.5	1.77	*	0.960-0.970	
Hepta	PCB-177	5.86e+04	0.92	y 47:46	1.27	5.10		*	2.5	*	0.968	0.963-0.973	
Hepta	PCB-171	*	*	n NotF η	1.46	*		1200	2.5	1.64	*	0.969-0.979	
Hepta	PCB-173	*	*	n NotF η	1.10	*		1200	2.5	2.17	*	0.978-0.988	
Hepta	PCB-172	*	*	n NotF η	1.35	*		1200	2.5	1.77	*	0.987-0.997	
Hepta	PCB-192	*	*	n NotF η	1.74	*		1200	2.5	1.38	*	0.991-1.001	
Hepta	PCB-180	1.87e+05	1.08	y 49:21	1.45	14.2		*	2.5	*	1.000	0.995-1.005	

Analyst: *Dms*

Date: *2/5/15*

Client ID: DS-CB-F3-20141216-W
Lab ID: 1400970-01

Filename: 150127E1 S:5 Acq:27-JAN-15 14:57:06
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.031

ConCal: ST150127E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	*	* n	NotF η	1.85	*		1200	2.5	1.29	*	0.999-1.009	
Hepta	PCB-191	*	* n	NotF η	1.86	*		1200	2.5	1.29	*	1.005-1.015	
Hepta	PCB-170	6.36e+04	1.13 y	50:53	1.67	4.94		*	2.5	*	1.000	0.995-1.005	
Hepta	PCB-190	*	* n	NotF η	2.25	*		1200	2.5	1.14	*	0.999-1.009	
Hepta	PCB-189	*	* n	NotF η	1.67	*		1200	2.5	1.11	*	0.995-1.005	
Octa	PCB-202	*	* n	NotF η	1.02	*		1410	2.5	2.95	*	0.995-1.005	
Octa	PCB-201	*	* n	NotF η	1.10	*		1410	2.5	2.75	*	1.005-1.015	
Octa	PCB-204	*	* n	NotF η	1.07	*		1410	2.5	2.80	*	1.009-1.019	
Octa	PCB-197	*	* n	NotF η	1.17	*		1410	2.5	2.58	*	1.015-1.025	
Octa	PCB-200	*	* n	NotF η	1.03	*		1410	2.5	2.91	*	1.034-1.044	
Octa	PCB-198	*	* n	NotF η	0.75	*		1410	2.5	3.99	*	1.062-1.072	
Octa	PCB-199	3.70e+04	1.10 n	51:34	0.74	4.47	R	*	2.5	*	1.068	1.064-1.074	
Octa	PCB-196/203	*	* n	NotF η	0.83	*		1410	2.5	3.63	*	1.070-1.080	
Octa	PCB-195	*	* n	NotF η	1.14	*		1380	2.5	2.56	*	0.979-0.989	
Octa	PCB-194	3.10e+04	0.55 n	53:55	1.29	2.65	R	*	2.5	*	1.000	0.995-1.005	
Octa	PCB-205	*	* n	NotF η	1.61	*		1380	2.5	1.81	*	1.001-1.010	
Nona	PCB-208	*	* n	NotF η	1.01	*		1100	2.5	1.42	*	0.995-1.005	
Nona	PCB-207	*	* n	NotF η	1.03	*		1100	2.5	1.40	*	1.001-1.011	
Nona	PCB-206	*	* n	NotF η	0.88	*		1100	2.5	2.60	*	0.995-1.005	
Deca	PCB-209	*	* n	NotF η	1.35	*		1200	2.5	2.39	*	0.995-1.005	

Analyst: Dms

Date: 2/5/15

Client ID: DS-CB-F3-20141216-W
Lab ID: 1400970-01

Filename: 150127E1 S:5 Acq:27-JAN-15 14:57:06
GC Column ID: ZB-1 ICal: PCBVG8-1-14-15 wt/vol: 1.0313 EndCAL: NA

ConCal: ST150127E1-1

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	5.07e+05	0.73 y	31:31	1.17	30.8971	
Total Penta-PCB	1.14e+06	1.32 y	35:50	1.24	79.5886	
Total Penta-PCB	9.74e+04	1.32 y	43:04	1.39	4.49205	Sum:84.0806
Total Hexa-PCB	1.67e+05	1.11 y	41:30	0.94	16.2738	
Total Hexa-PCB	7.65e+05	1.27 y	43:14	1.13	43.6299	Sum:59.9037
Total Hepta-PCB	5.33e+05	0.91 y	46:09	1.37	42.4712	
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: ~~250~~.666386000

217

Integrations

by

Analyst: DMJ

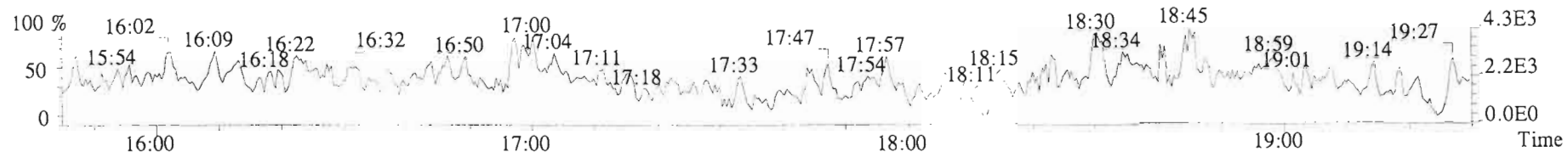
Date: 2/5/15

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	2.77e+07	3.49 y	0.91	16:07	0.621	0.619-0.625		1210	62.5											
13C-PCB-3	3.38e+07	3.36 y	0.94	18:44	0.722	0.718-0.726		1430	73.6		13C-PCB-79	3.70e+07	0.81 y	1.02	37:49	1.029	1.024-1.033		1790	92.4
13C-PCB-4	2.03e+07	1.58 y	0.60	20:04	0.774	0.770-0.778		1350	69.9		13C-PCB-178	1.53e+07	0.47 y	0.64	45:38	0.985	0.980-0.989		1770	91.2
13C-PCB-9	3.37e+07	1.54 y	0.96	21:51	0.843	0.839-0.847		1400	72.0											
13C-PCB-11	3.72e+07	1.54 y	0.95	25:14	0.973	0.968-0.978		1550	80.1	PS vs. IS										
13C-PCB-19	2.31e+07	1.11 y	0.56	24:13	0.934	0.929-0.939		1640	84.6											
13C-PCB-28	2.62e+07	1.02 y	1.07	29:06	1.004	0.999-1.009		1580	81.6		13C-PCB-79	3.70e+07	0.81 y	1.02	37:49	0.969	0.963-0.973		2030	104
13C-PCB-32	3.69e+07	1.06 y	0.83	27:08	1.046	1.041-1.051		1780	91.9		13C-PCB-178	1.53e+07	0.47 y	0.84	45:38	0.925	0.920-0.930		2000	103
13C-PCB-37	2.74e+07	1.03 y	0.96	32:58	1.137	1.131-1.143		1840	95.0											
13C-PCB-47	2.49e+07	0.82 y	0.77	32:01	0.871	0.867-0.875		1600	82.8											
13C-PCB-52	2.35e+07	0.79 y	0.71	31:30	0.857	0.853-0.861		1630	84.1											
13C-PCB-54	3.11e+07	0.81 y	1.06	27:58	0.761	0.757-0.765		1450	74.8											
13C-PCB-70	3.35e+07	0.82 y	0.99	35:31	0.966	0.961-0.971		1670	85.9											
13C-PCB-77	3.33e+07	0.83 y	0.96	39:38	1.078	1.073-1.083		1710	88.0											
13C-PCB-80	3.46e+07	0.81 y	1.02	35:56	0.977	0.973-0.983		1680	86.4											
13C-PCB-81	3.46e+07	0.79 y	1.00	39:02	1.062	1.057-1.067		1710	88.4											
13C-PCB-95	1.89e+07	1.55 y	0.70	35:49	0.913	0.908-0.918		1730	89.2	RS										
13C-PCB-97	1.89e+07	1.67 y	0.66	38:48	0.989	0.984-0.994		1840	94.7		Name	Resp	RA	RRF	RT	Conc				
13C-PCB-101	2.10e+07	1.59 y	0.77	37:30	0.956	0.951-0.961		1750	90.4		13C-PCB-15	4.87e+07	1.55 y	1.00	25:56	1940				
13C-PCB-104	2.51e+07	1.56 y	0.97	32:39	0.832	0.828-0.836		1660	85.5		13C-PCB-31	3.00e+07	1.04 y	1.00	28:59	1940				
13C-PCB-105	2.70e+07	1.63 y	1.20	43:03	0.929	0.924-0.934		1650	85.1		13C-PCB-60	3.92e+07	0.82 y	1.00	36:46	1940				
13C-PCB-114	2.71e+07	1.66 y	1.26	42:12	0.910	0.905-0.915		1590	81.8		13C-PCB-111	3.04e+07	1.62 y	1.00	39:14	1940				
13C-PCB-118	2.68e+07	1.60 y	0.94	41:32	1.059	1.054-1.064		1830	94.3		13C-PCB-128	2.64e+07	1.31 y	1.00	46:21	1940				
13C-PCB-123	2.57e+07	1.62 y	0.88	41:22	1.054	1.049-1.059		1870	96.3		13C-PCB-205	2.49e+07	0.89 y	1.00	54:12	1940				
13C-PCB-126	2.64e+07	1.59 y	1.13	45:17	0.977	0.972-0.982		1720	88.8											
13C-PCB-127	2.88e+07	1.61 y	1.26	43:24	0.936	0.931-0.941		1680	86.8											
13C-PCB-138	2.58e+07	1.31 y	1.12	44:47	0.966	0.961-0.971		1690	87.2											
13C-PCB-141	2.46e+07	1.33 y	1.09	43:57	0.948	0.943-0.953		1650	85.3											
13C-PCB-153	2.82e+07	1.31 y	1.27	43:13	0.932	0.927-0.937		1630	84.1											
13C-PCB-155	2.29e+07	1.28 y	0.87	37:03	0.944	0.939-0.949		1680	86.7											
13C-PCB-156	3.17e+07	1.27 y	1.35	48:03	1.037	1.032-1.042		1720	88.9											
13C-PCB-157	3.27e+07	1.28 y	1.42	48:20	1.043	1.037-1.047		1690	87.4											
13C-PCB-159	3.12e+07	1.29 y	1.37	46:05	0.994	0.989-0.999		1680	86.4											
13C-PCB-167	3.22e+07	1.28 y	1.38	46:46	1.009	1.004-1.014		1710	88.3											
13C-PCB-169	3.20e+07	1.30 y	1.38	50:29	1.089	1.084-1.094		1700	87.6											
13C-PCB-170	1.50e+07	0.47 y	0.60	50:52	1.097	1.091-1.103		1820	94.0											
13C-PCB-180	1.76e+07	0.46 y	0.76	49:20	1.064	1.059-1.069		1710	88.3											
13C-PCB-188	2.10e+07	0.46 y	1.01	42:51	0.924	0.919-0.929		1520	78.3											
13C-PCB-189	2.01e+07	0.45 y	0.80	52:24	1.131	1.124-1.136		1840	95.0											
13C-PCB-194	1.76e+07	0.92 y	0.75	53:56	0.995	0.990-1.000		1830	94.6											
13C-PCB-202	2.16e+07	0.93 y	0.99	48:16	1.041	1.036-1.046		1610	82.9											
13C-PCB-206	1.89e+07	0.78 y	0.73	55:33	1.025	1.020-1.301		2000	103											
13C-PCB-208	2.46e+07	0.76 y	1.08	53:11	0.981	0.977-0.987		1760	91.0											
13C-PCB-209	1.93e+07	1.18 y	0.71	56:54	1.050	1.045-1.055		2110	109											

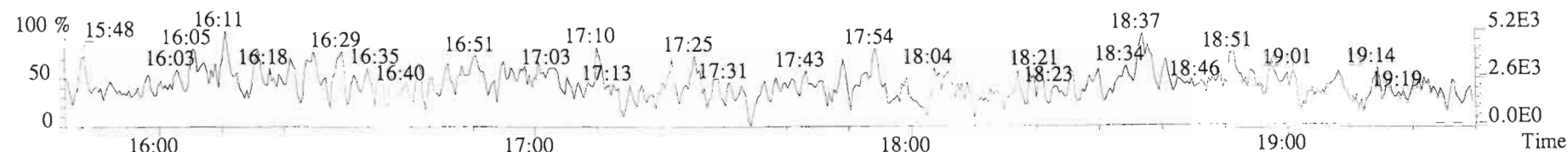
Analyst: Dms

Date: 2/5/15

File:150127E1 #1-728 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
188.0393 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2556.0,0.00%,F,F)



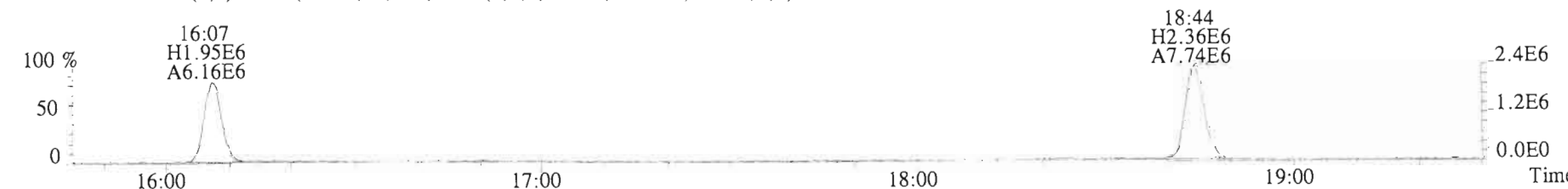
190.0363 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2828.0,0.00%,F,F)



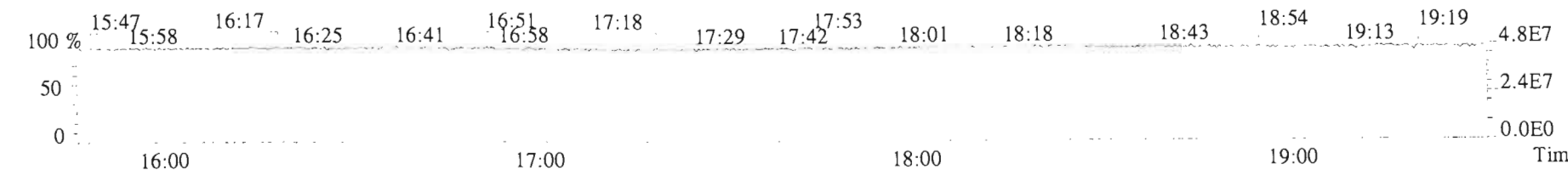
200.0795 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5336.0,0.00%,F,F)



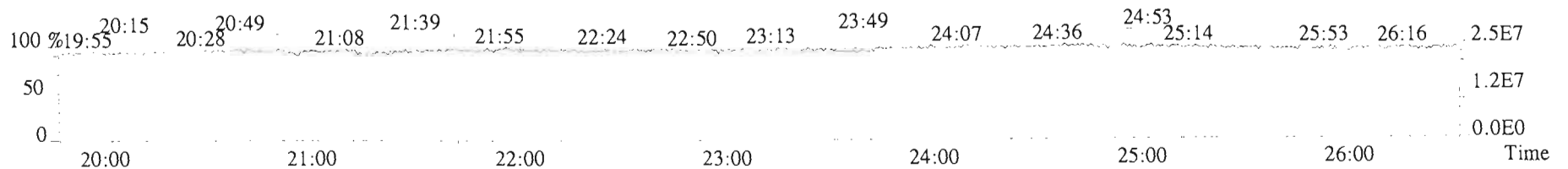
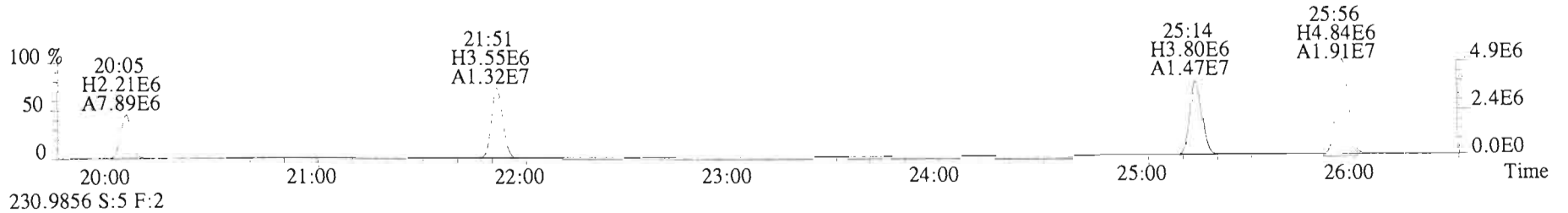
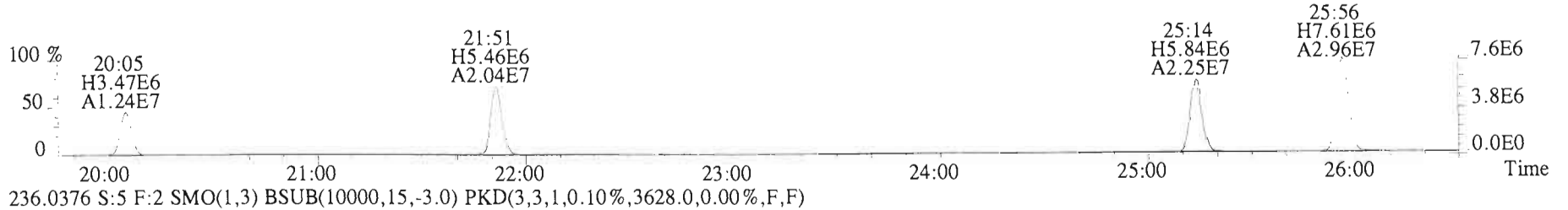
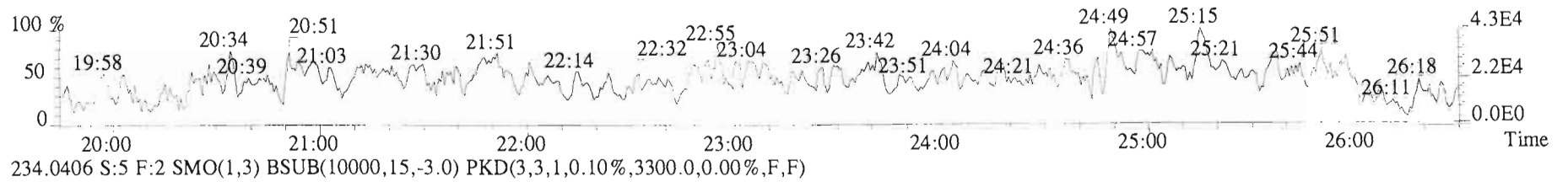
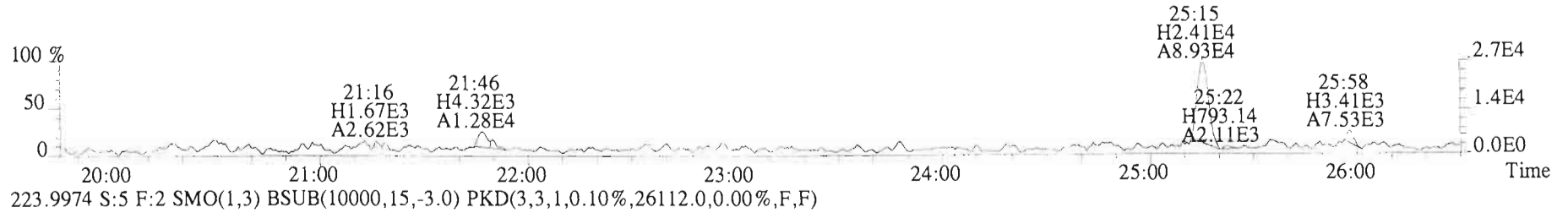
202.0766 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,24236.0,0.00%,F,F)



180.9880 S:5

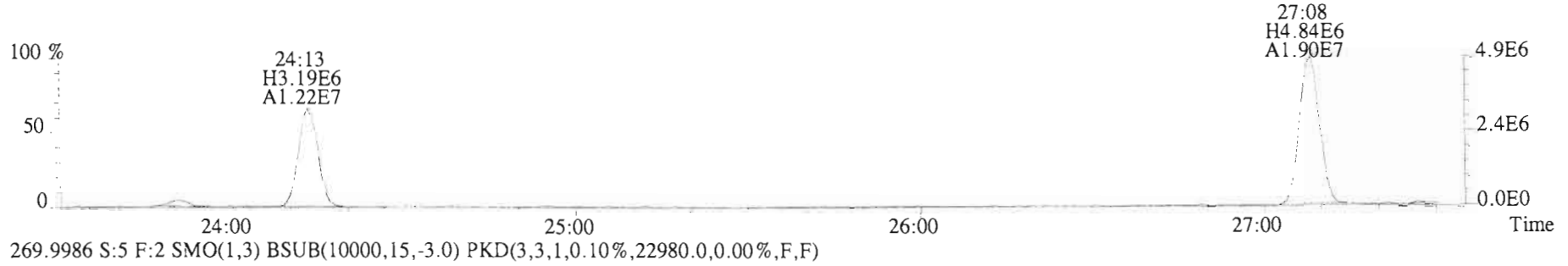
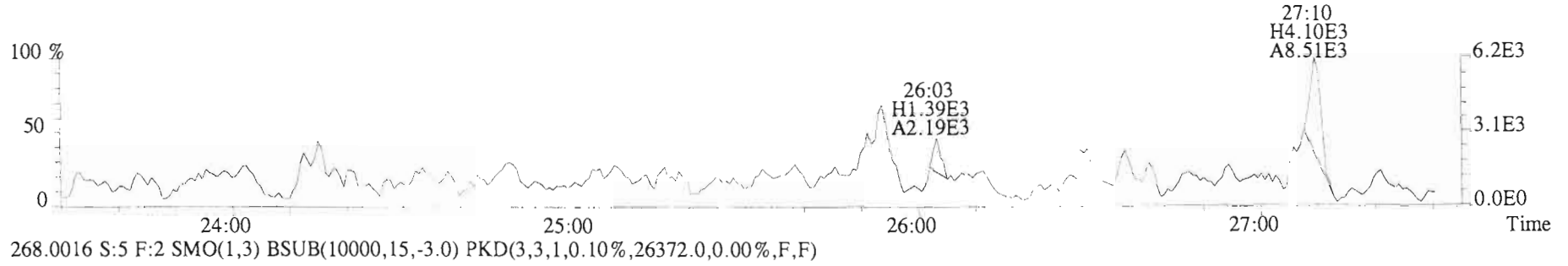
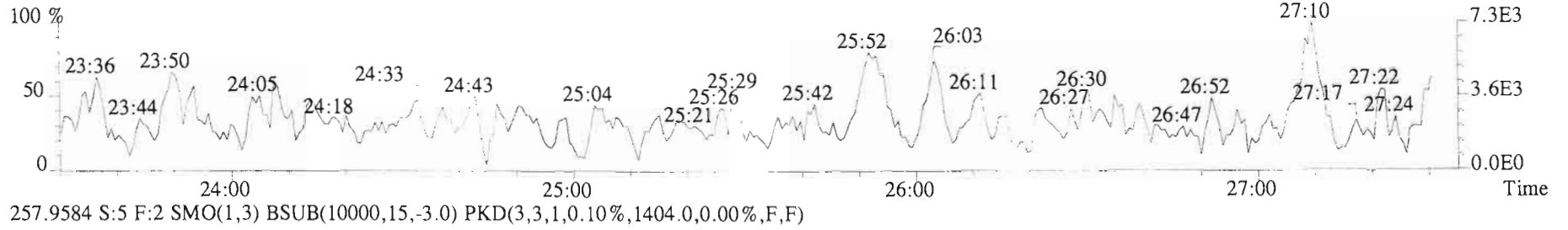


File:150127E1 #1-758 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
222.0003 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2232.0,0.00%,F,F)

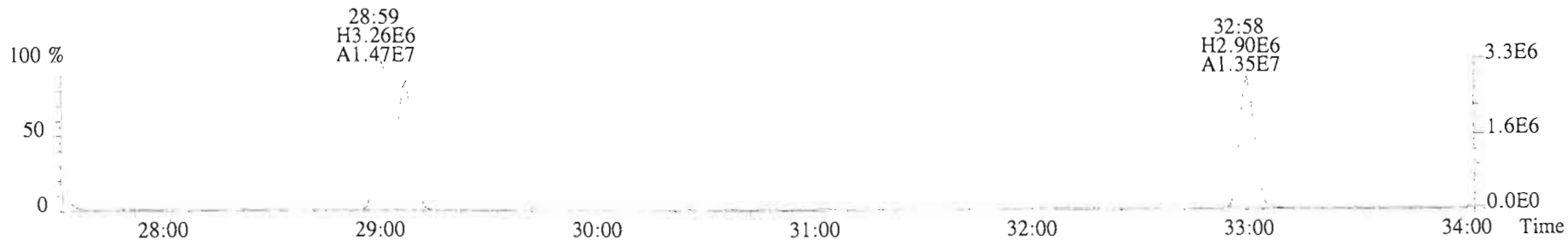
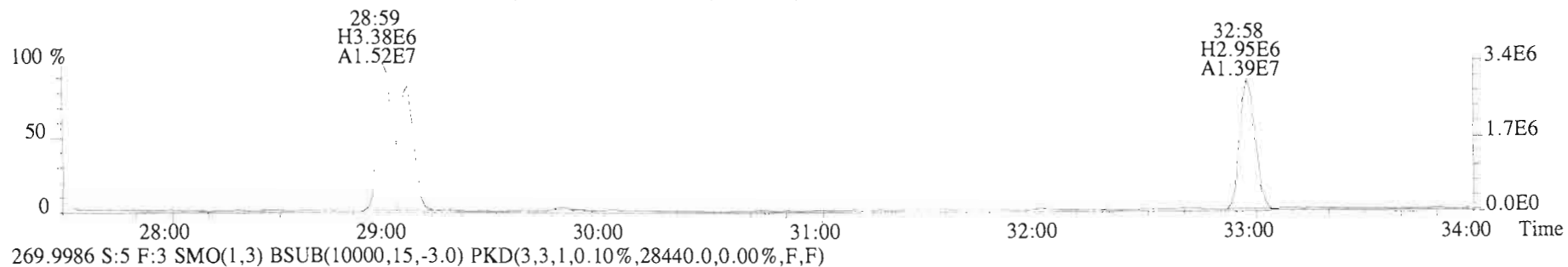
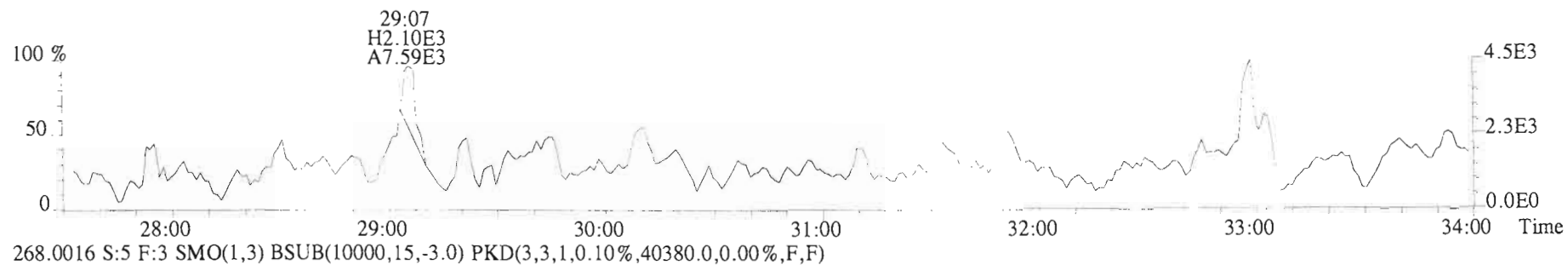
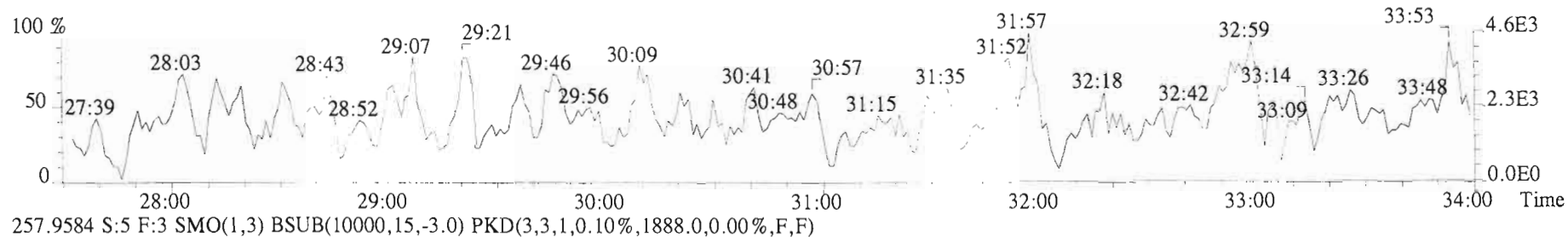


File:150127E1 #1-758 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
255.9613 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2900.0,0.00%,F,F)

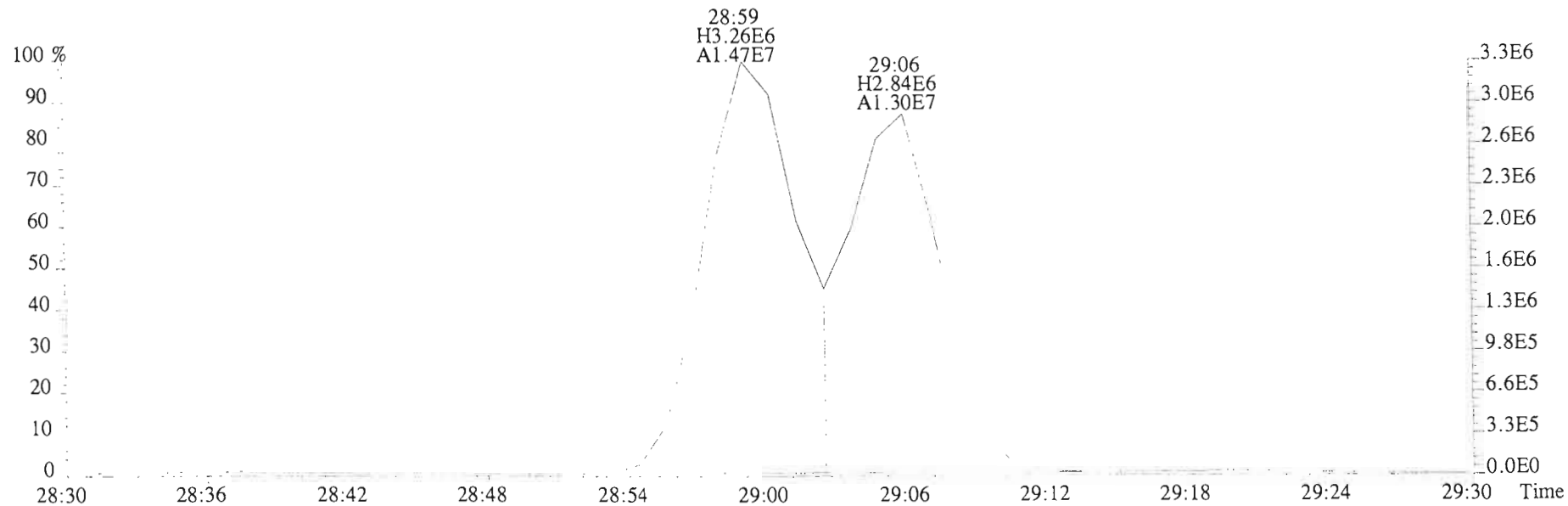
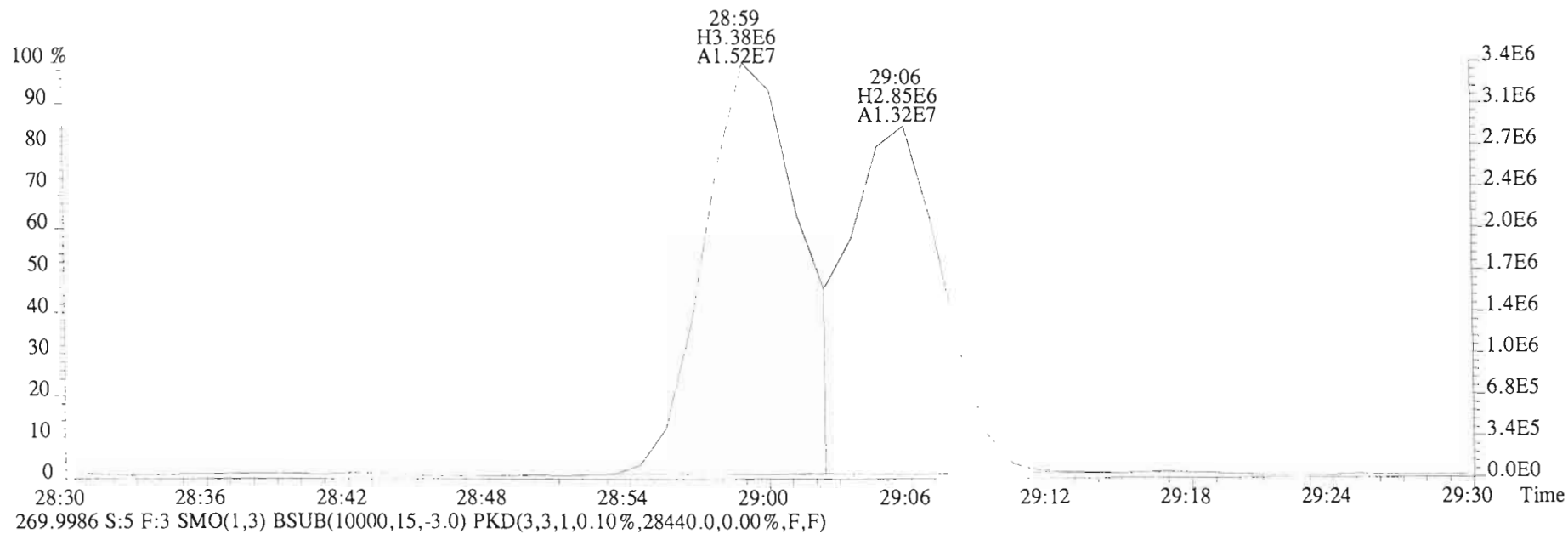
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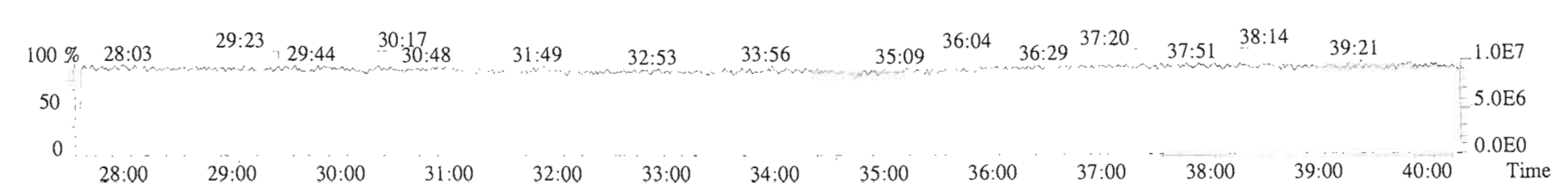
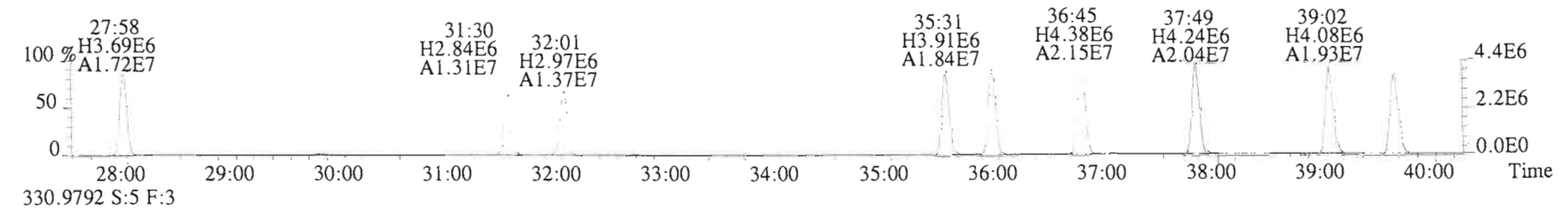
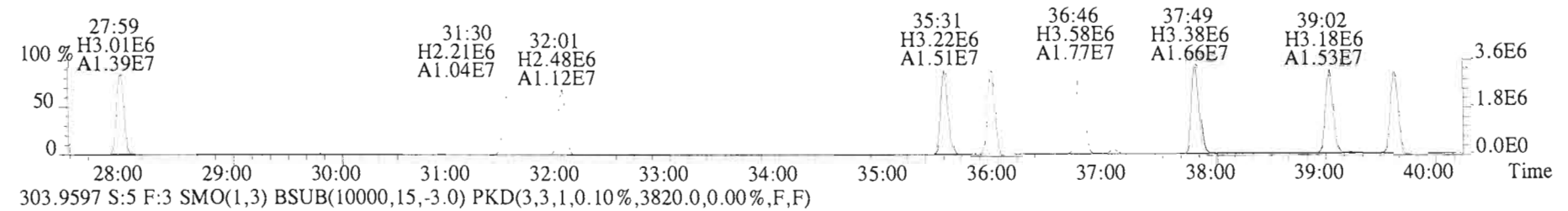
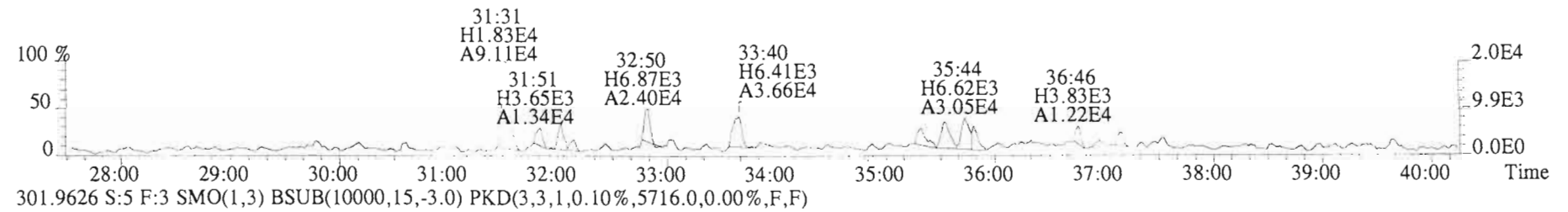
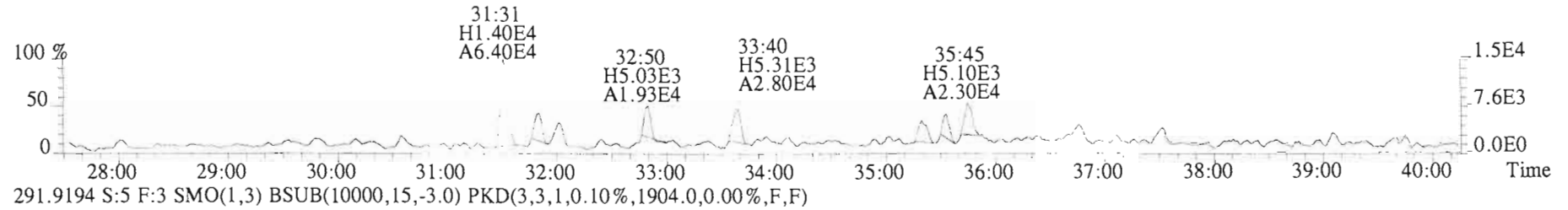
File:150127E1 #1-762 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
255.9613 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2688.0,0.00%,F,F)



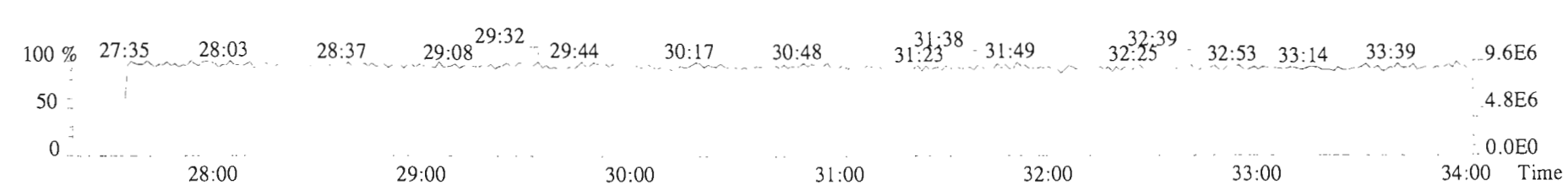
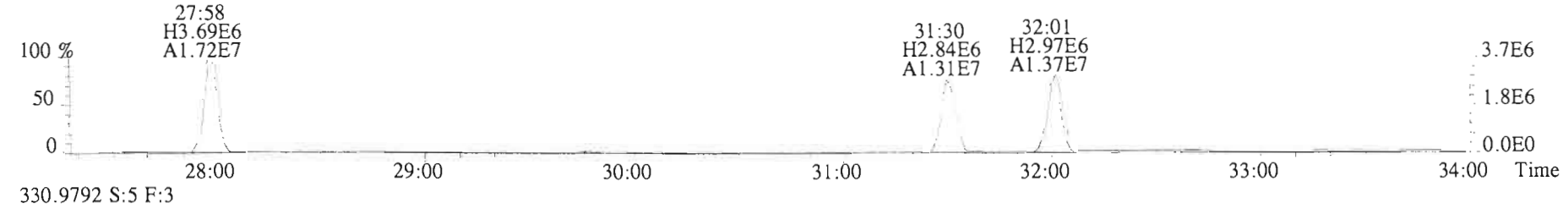
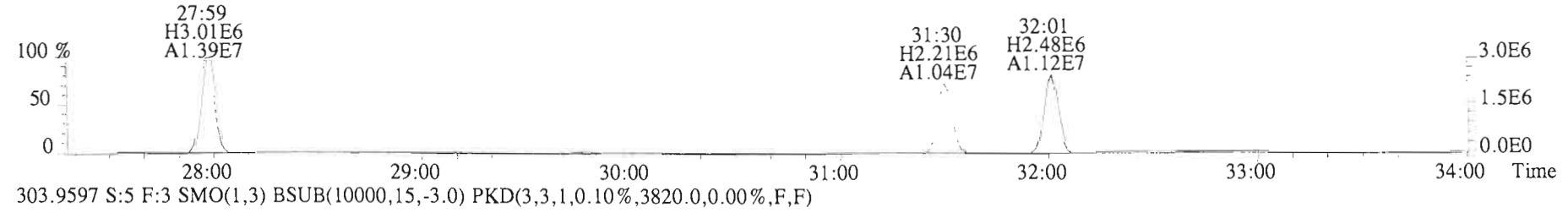
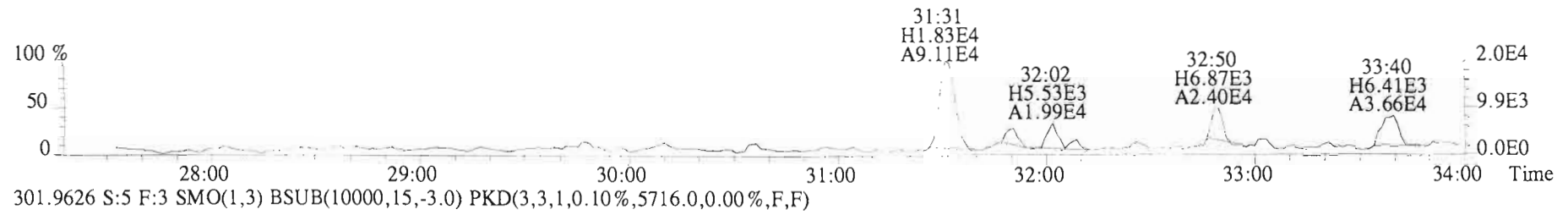
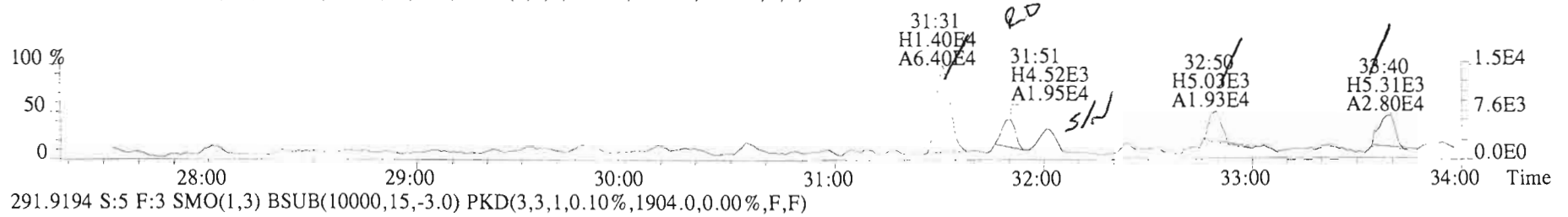
File:150127E1 #1-762 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
268.0016 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,40380.0,0.00%,F,F)



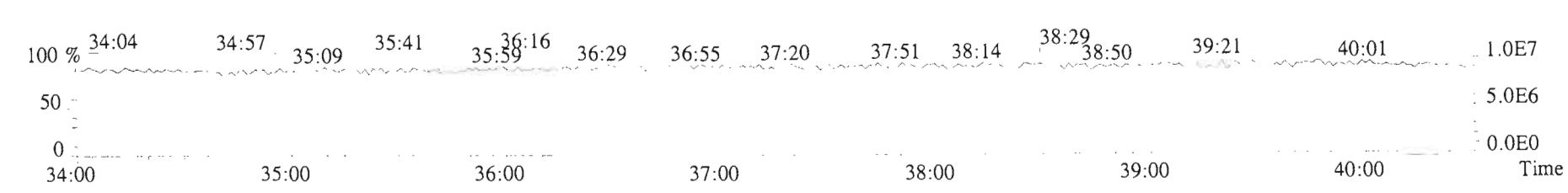
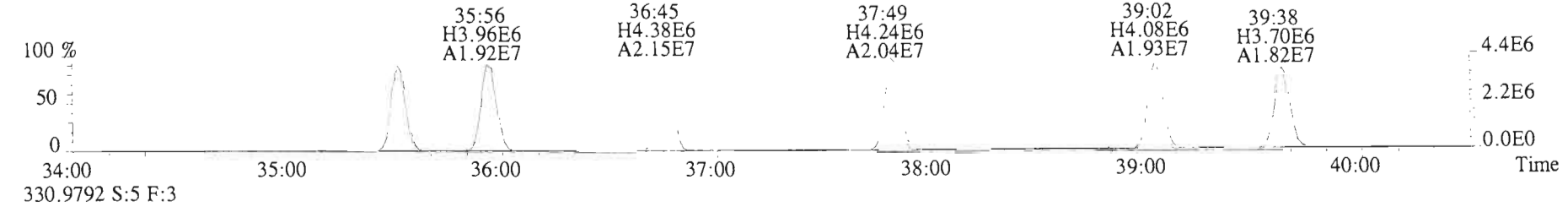
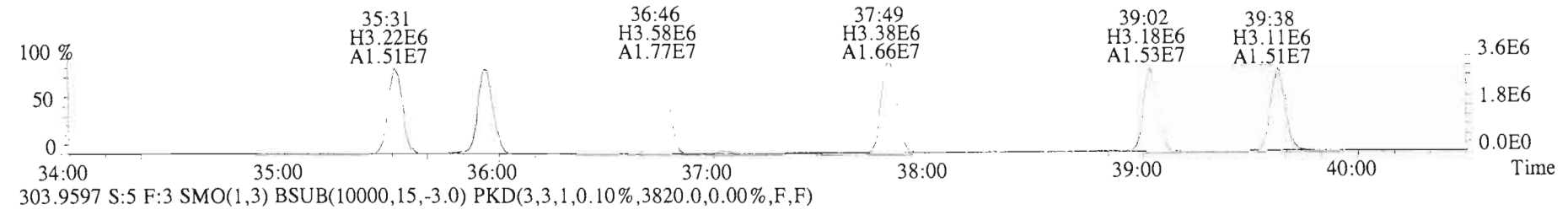
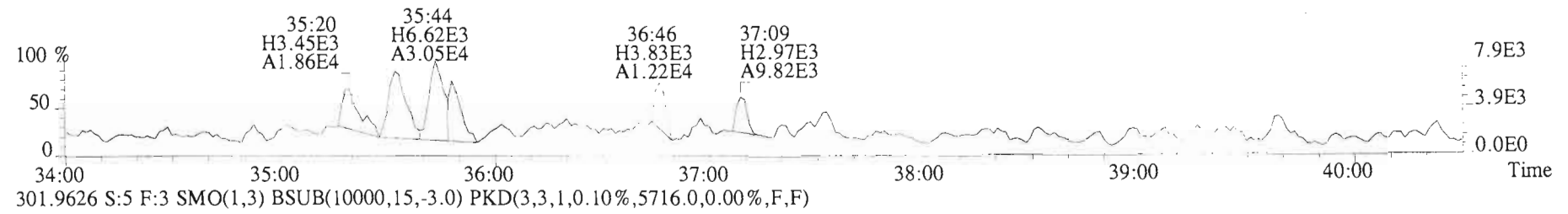
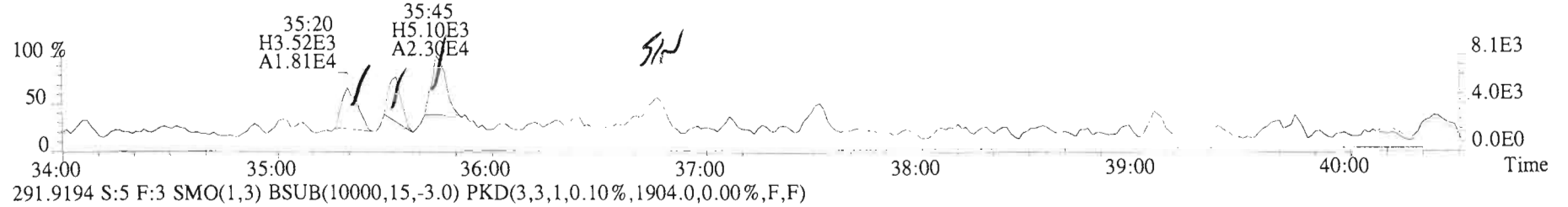
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Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1864.0,0.00%,F,F)



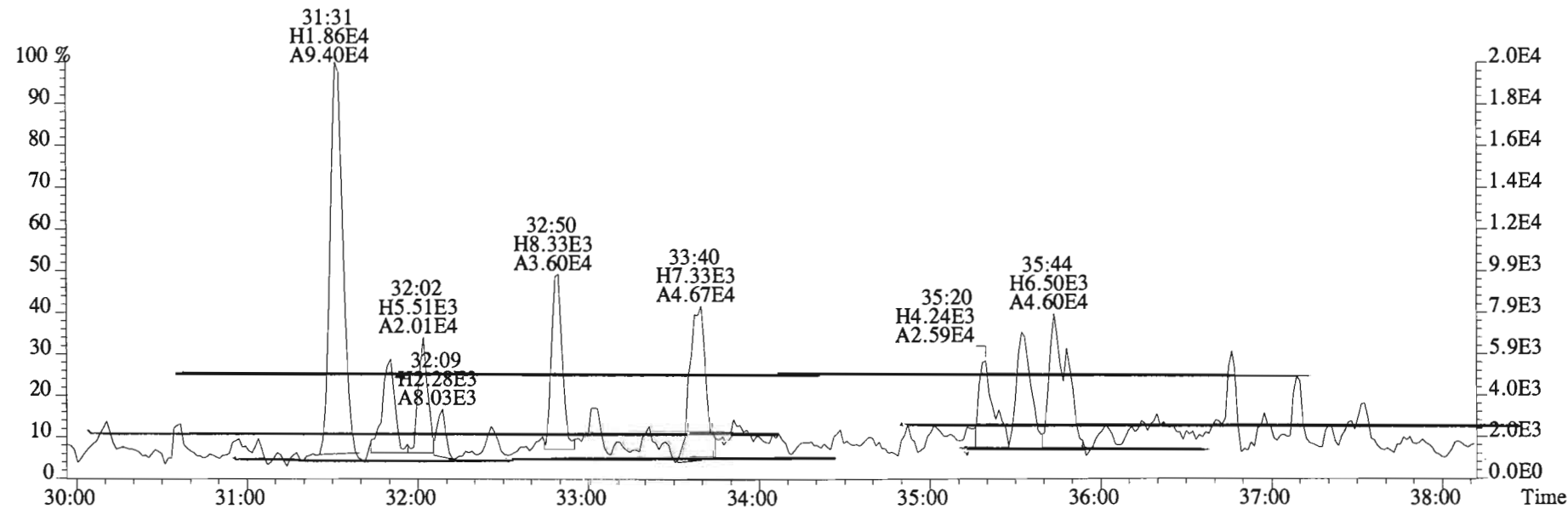
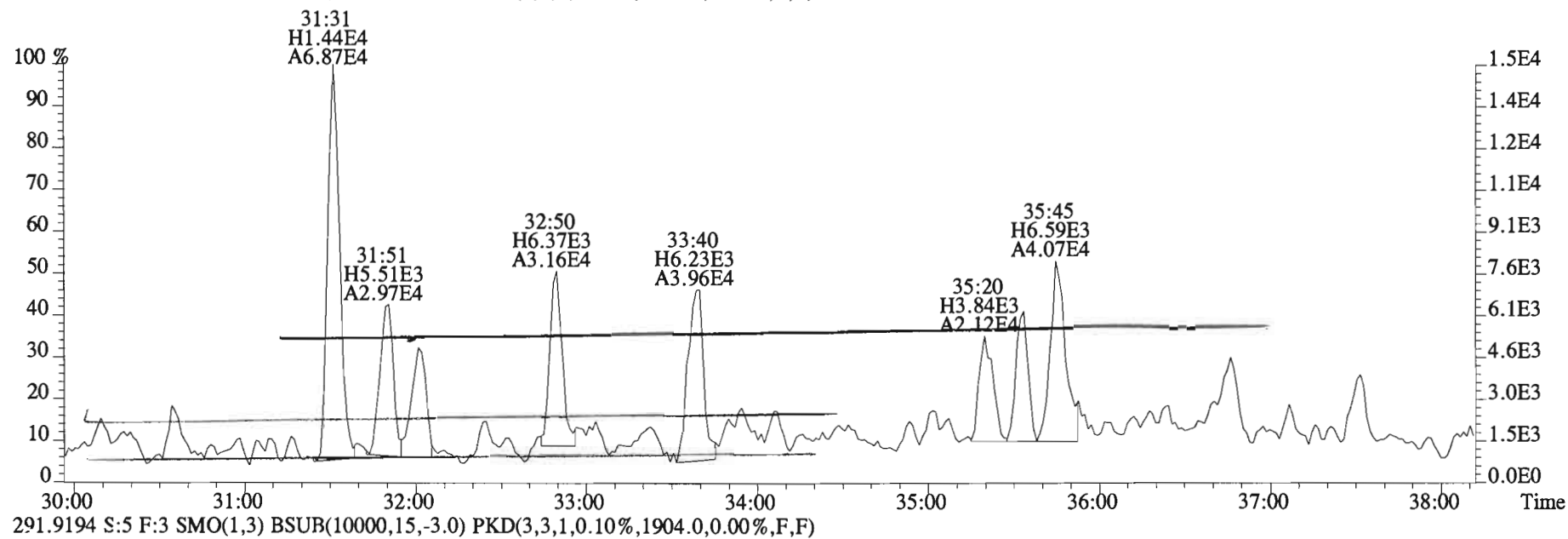
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
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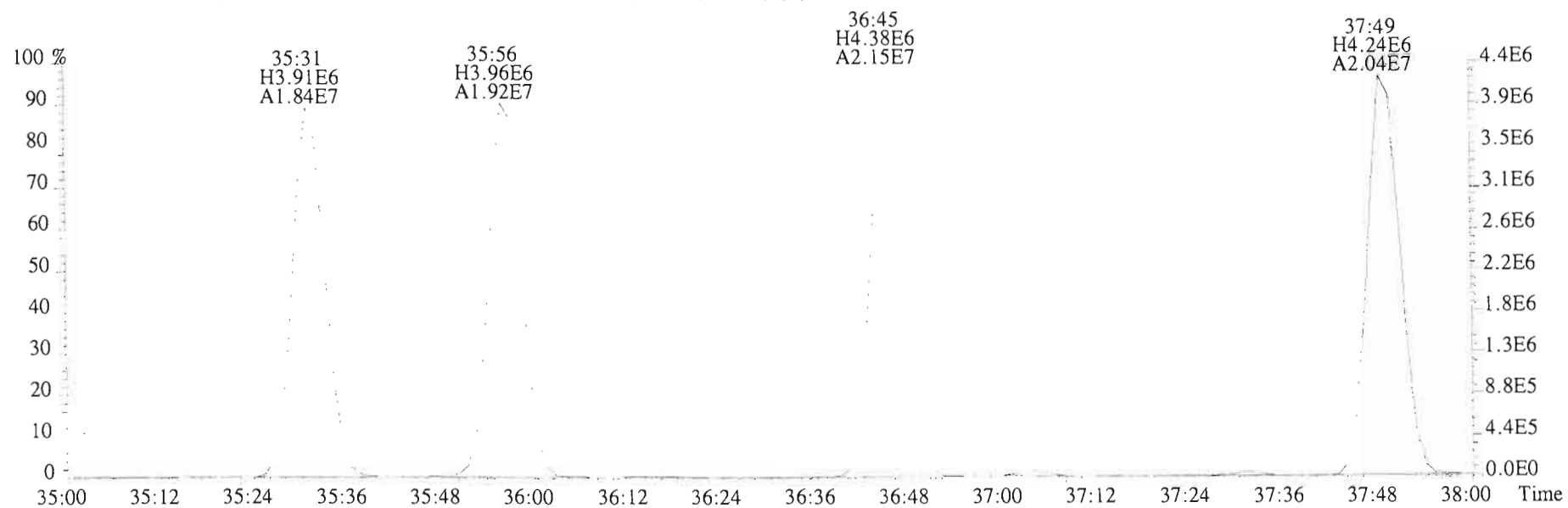
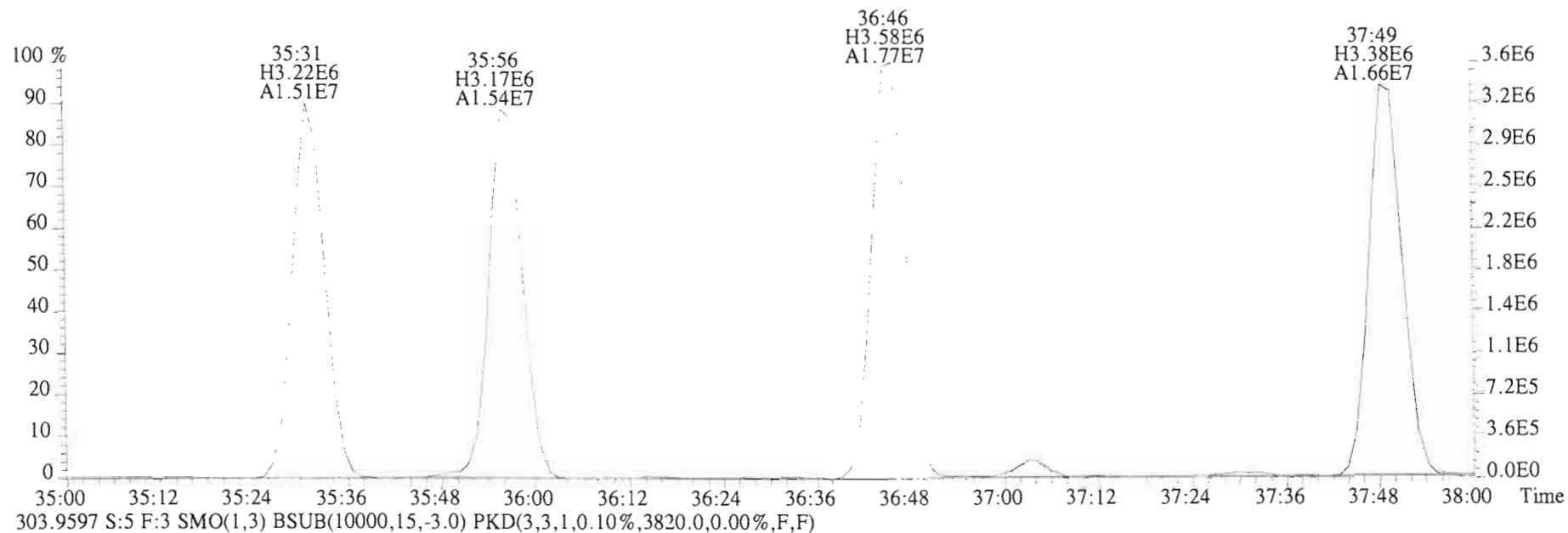
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
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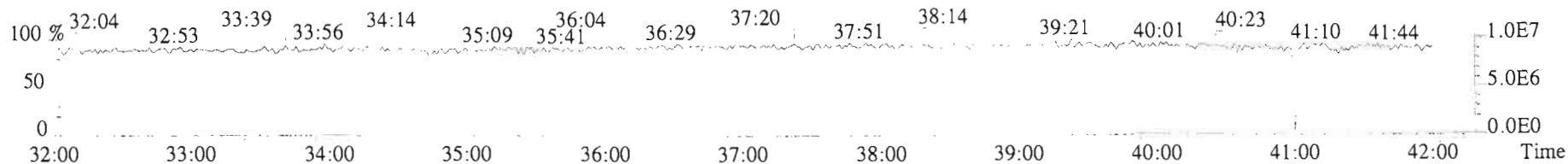
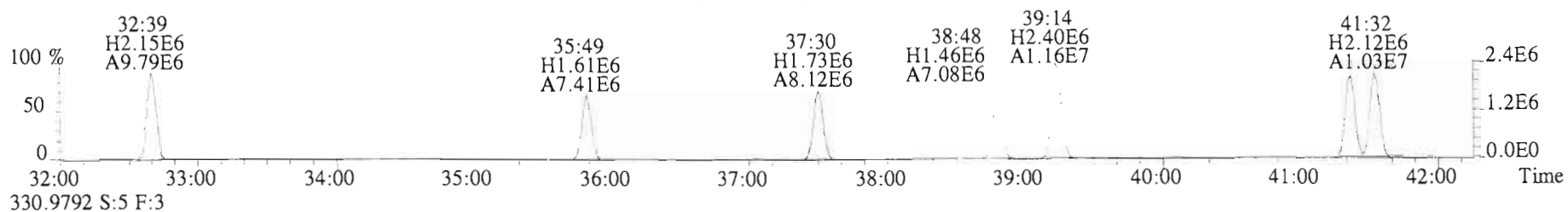
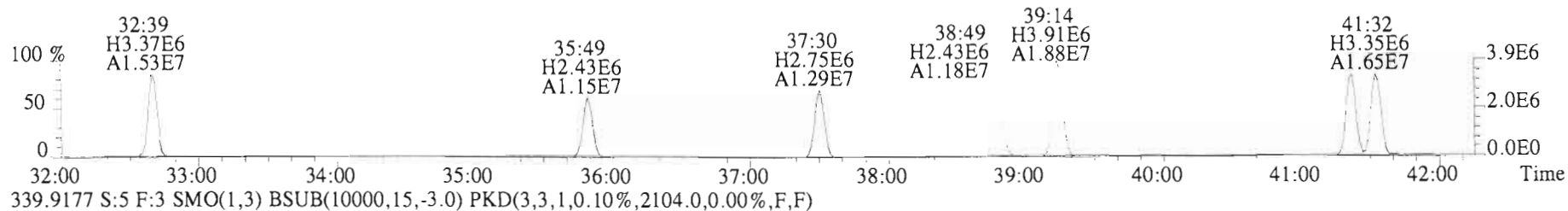
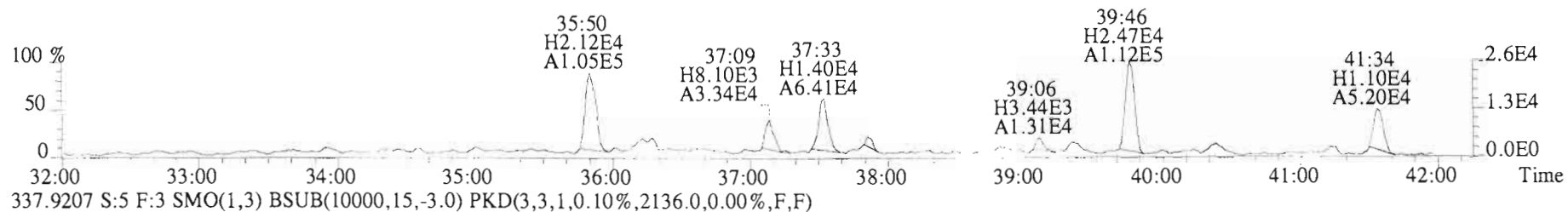
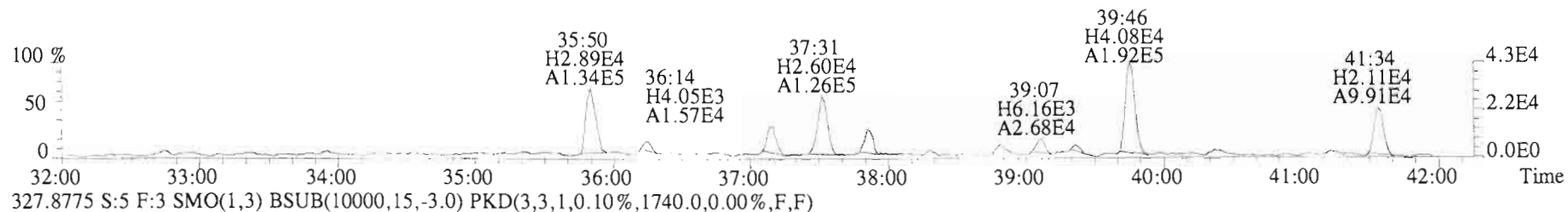
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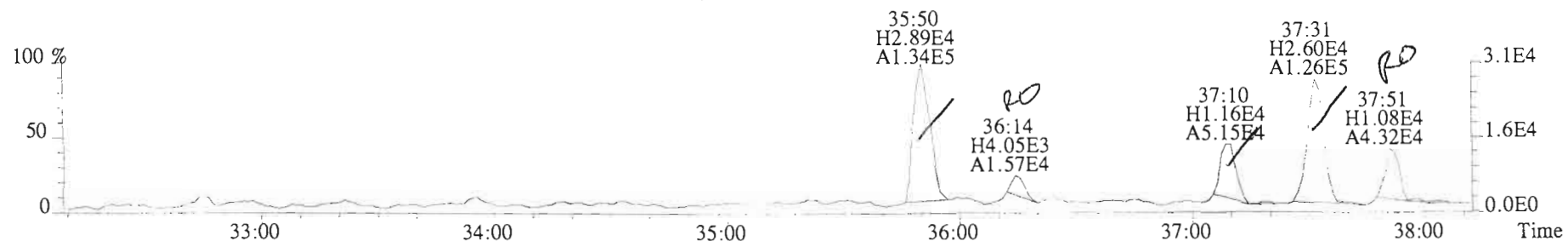
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
301.9626 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5716.0,0.00%,F,F)



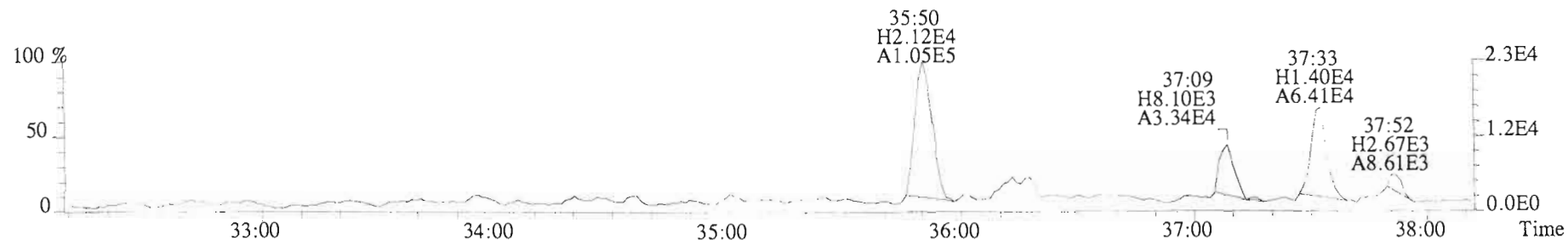
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Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2108.0,0.00%,F,F)



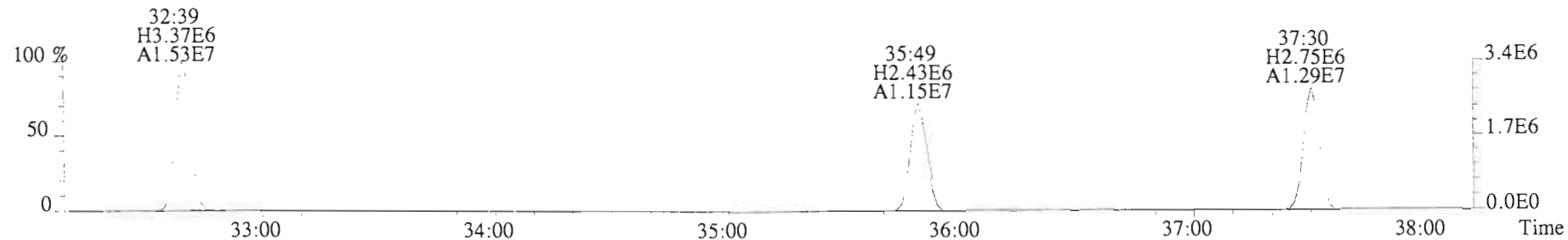
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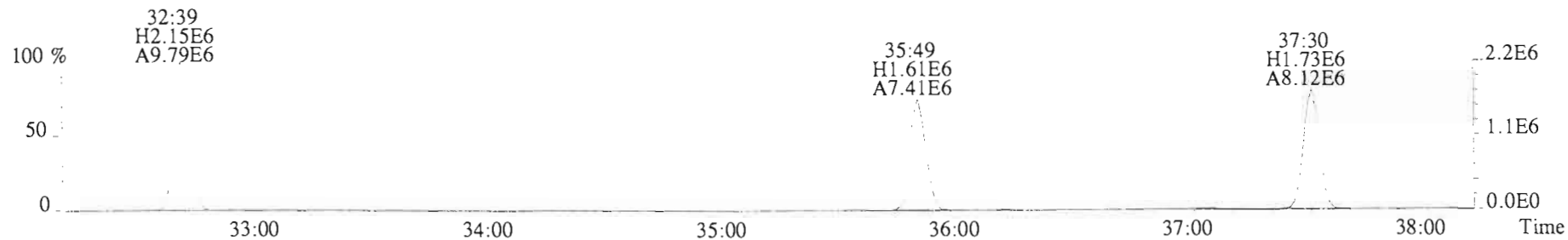
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1740.0,0.00%,F,F)



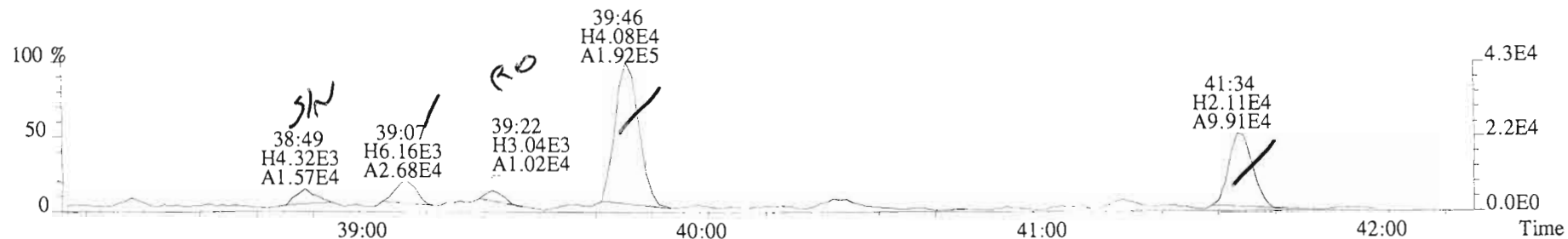
337.9207 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2136.0,0.00%,F,F)



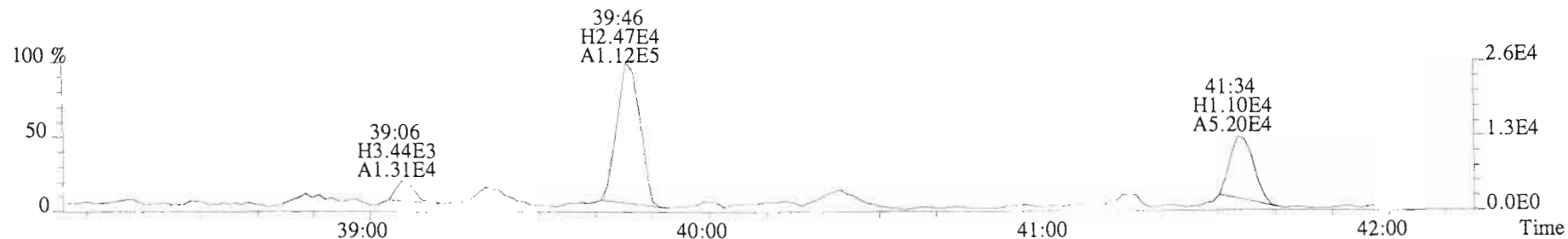
339.9177 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2104.0,0.00%,F,F)



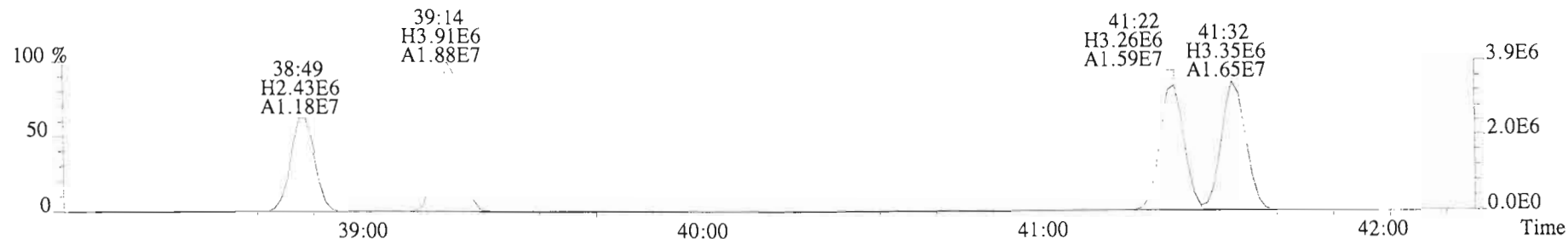
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2108.0,0.00%,F,F)



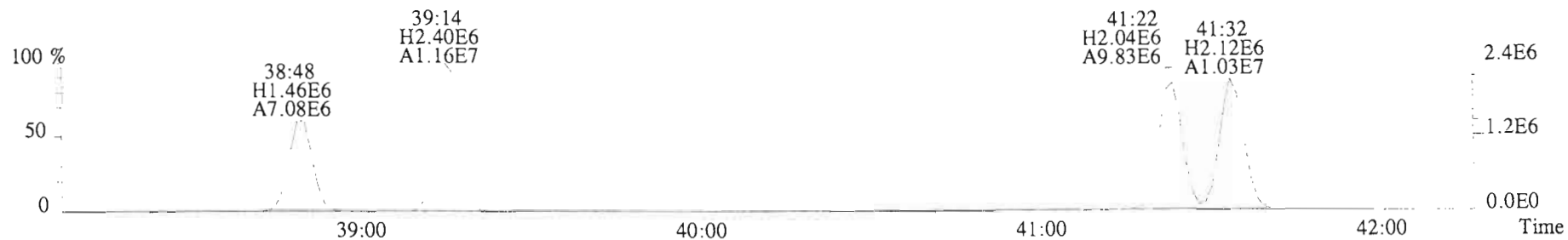
327.8775 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1740.0,0.00%,F,F)



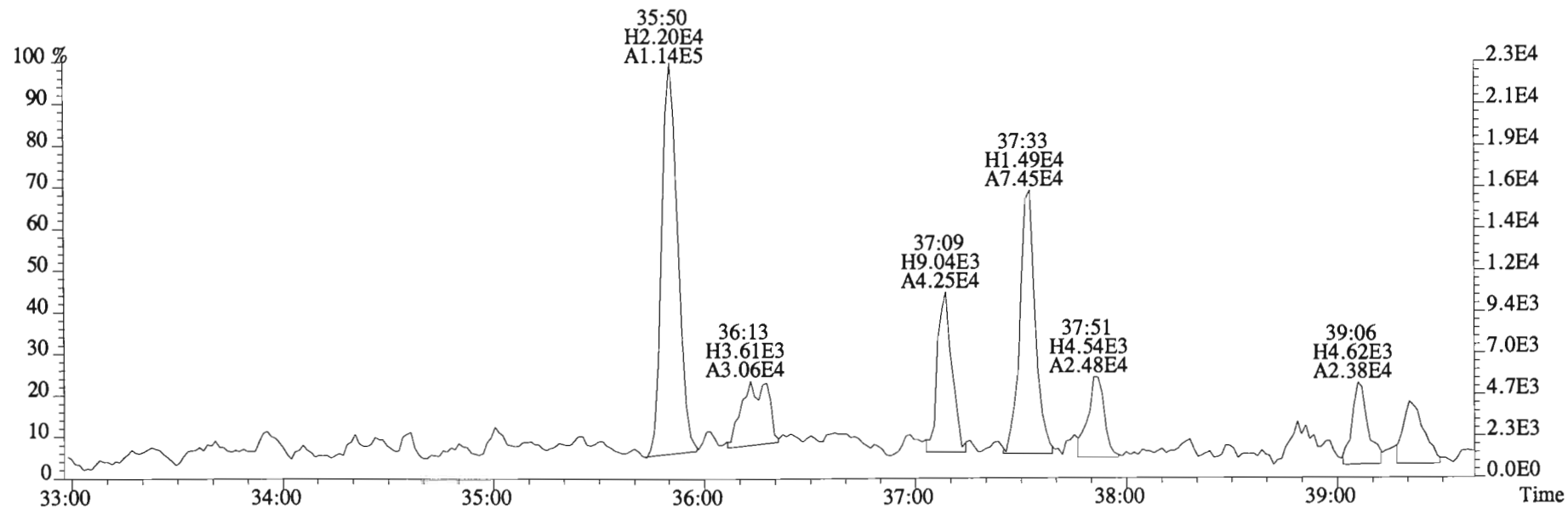
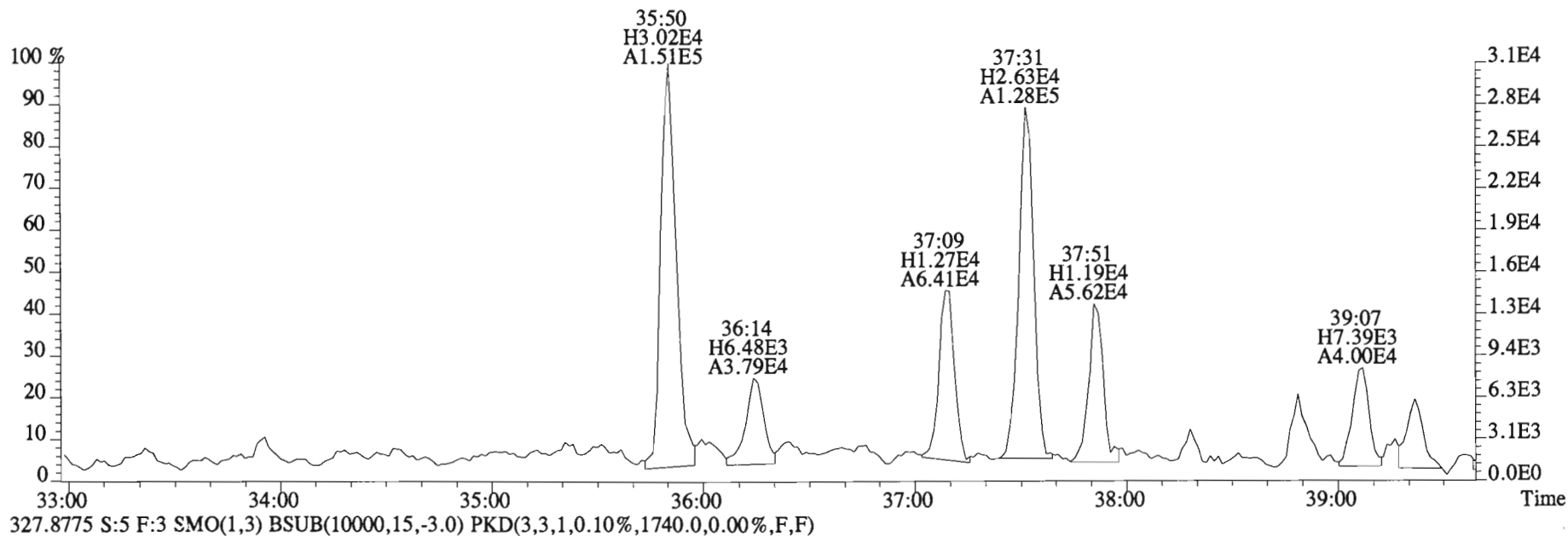
337.9207 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2136.0,0.00%,F,F)



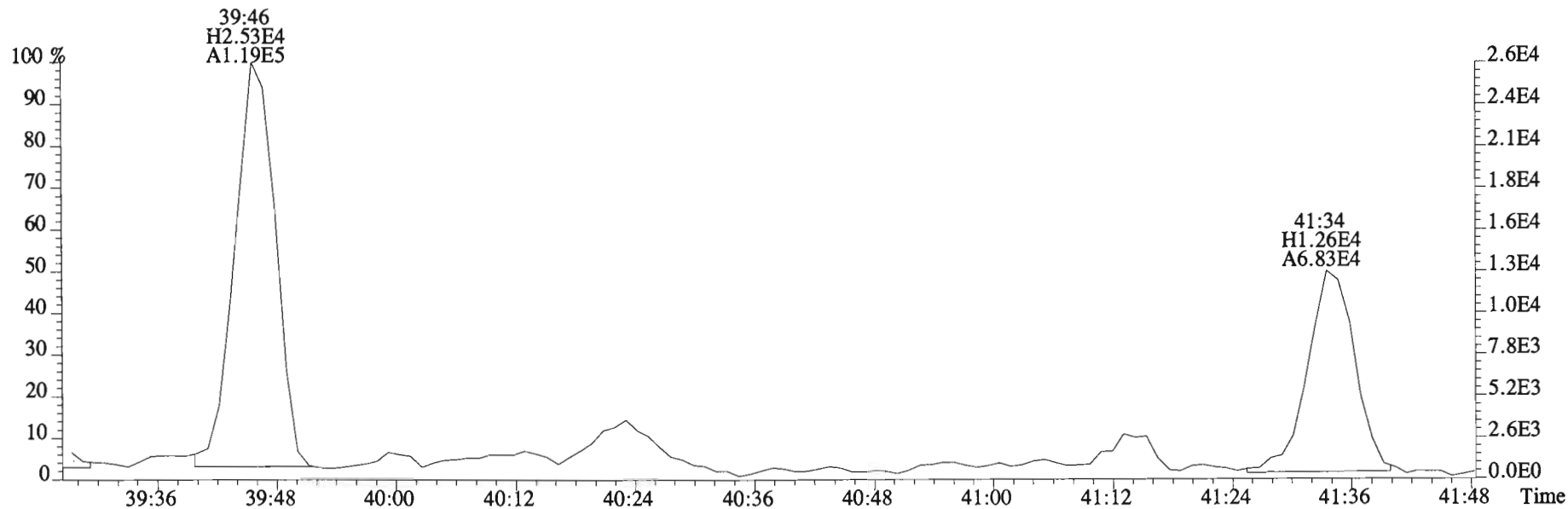
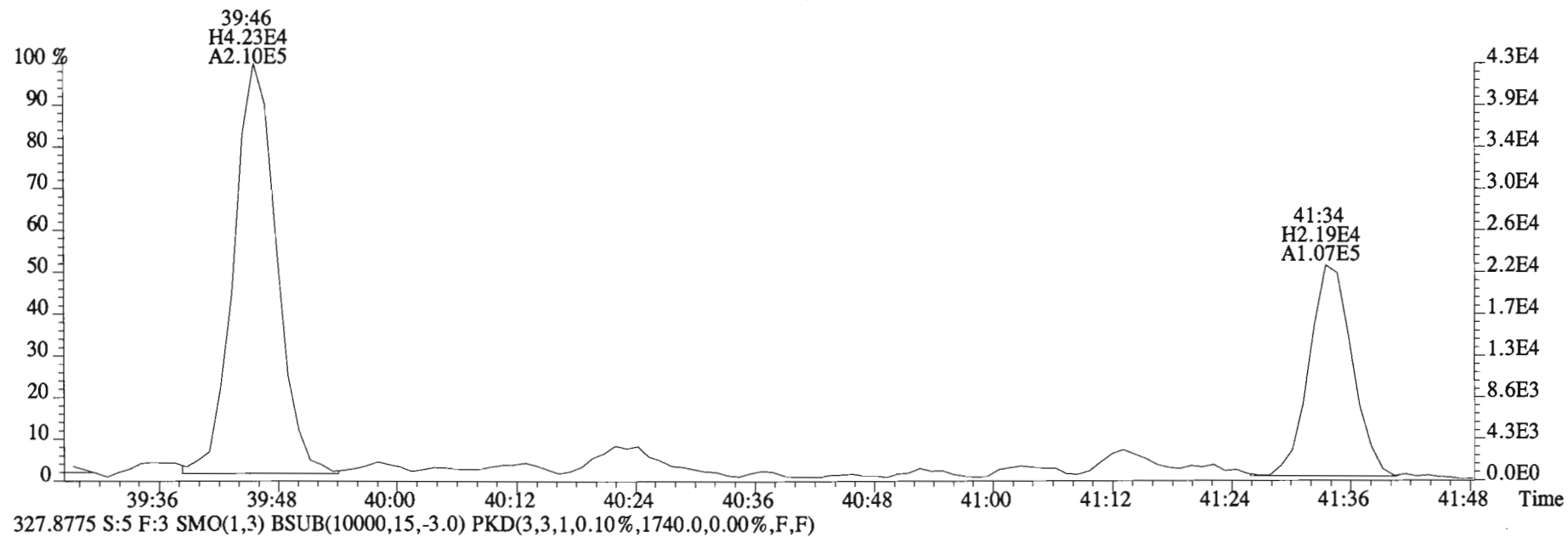
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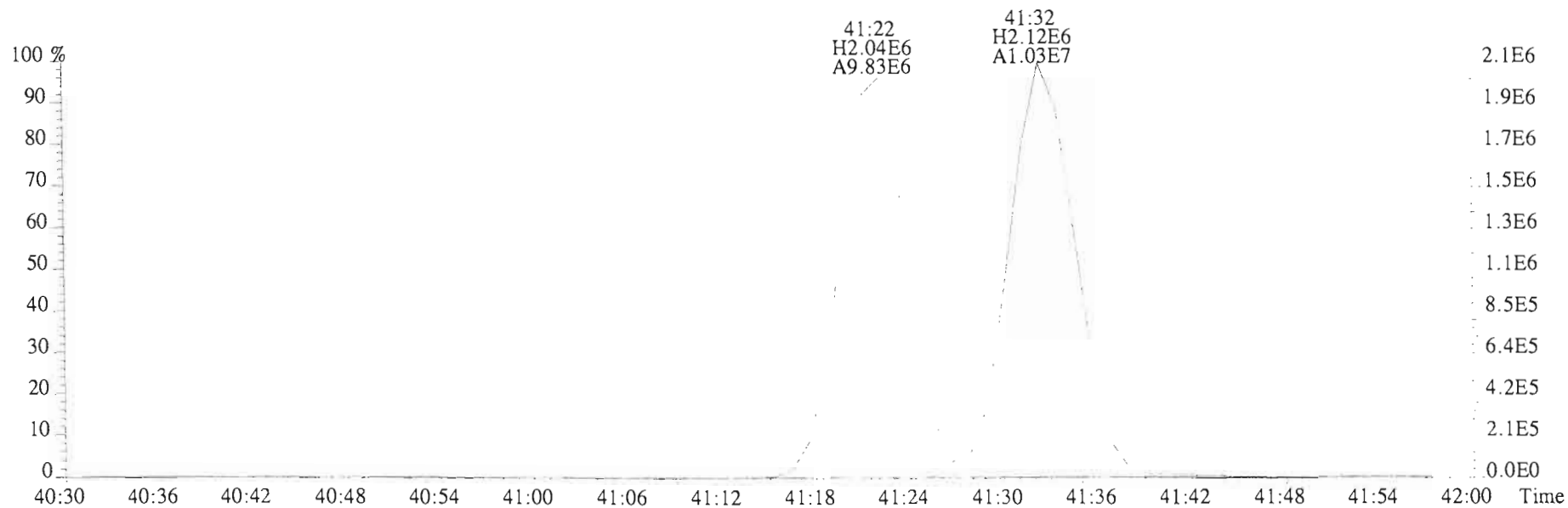
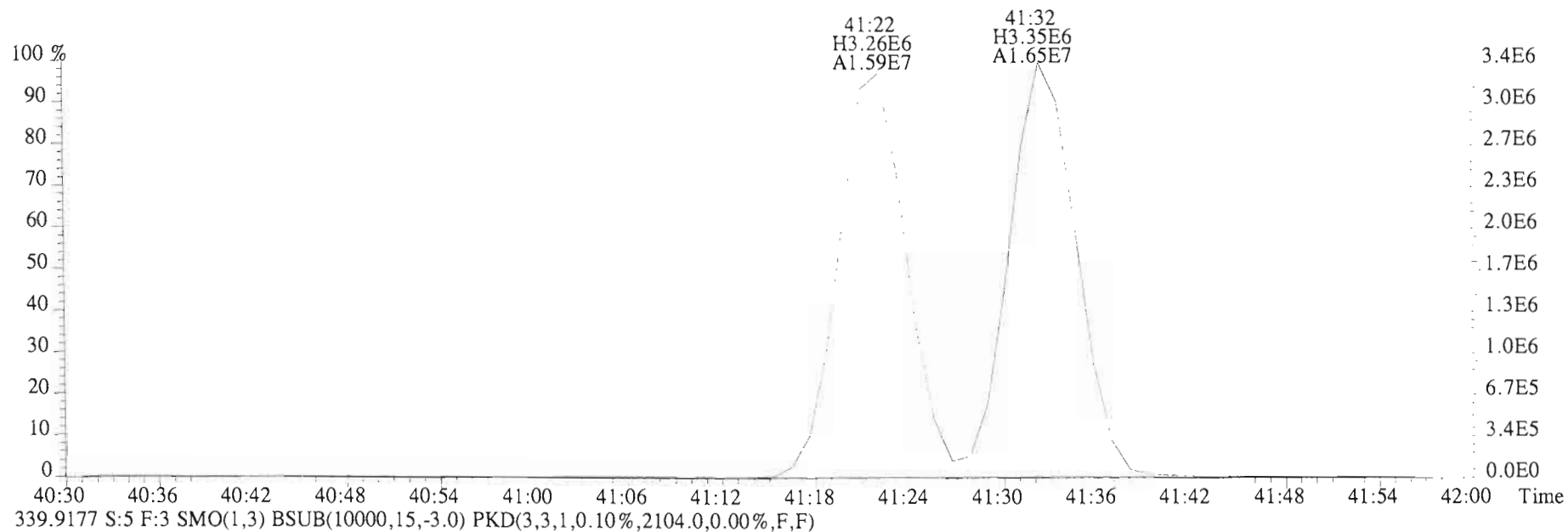
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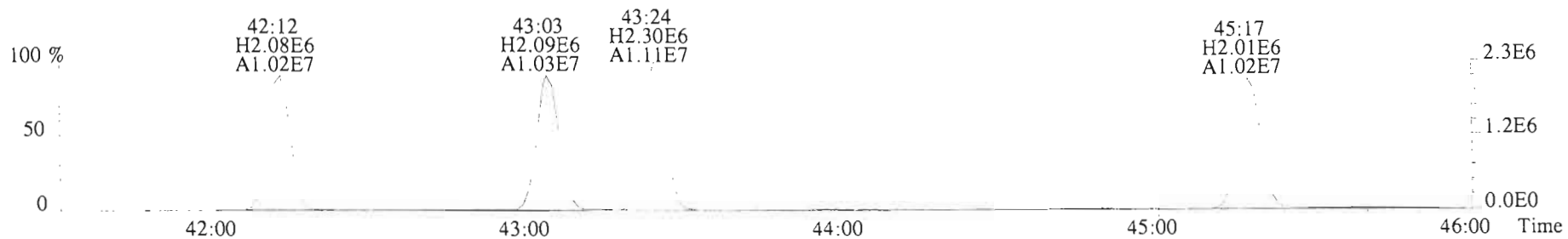
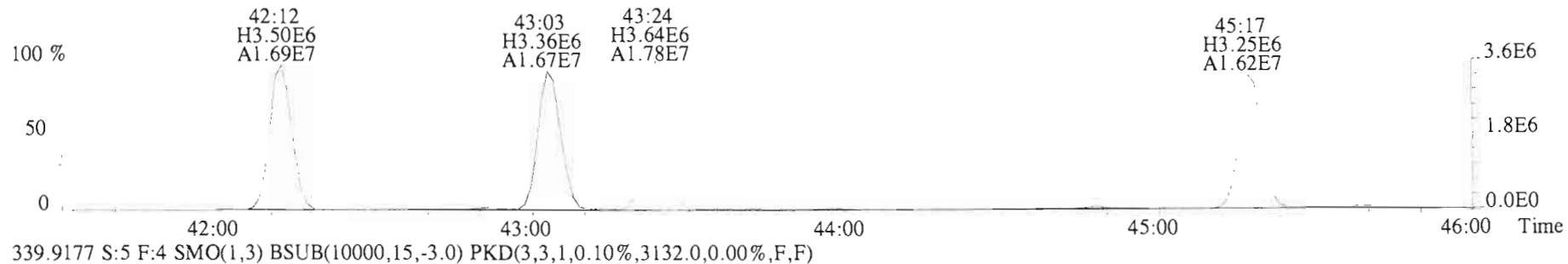
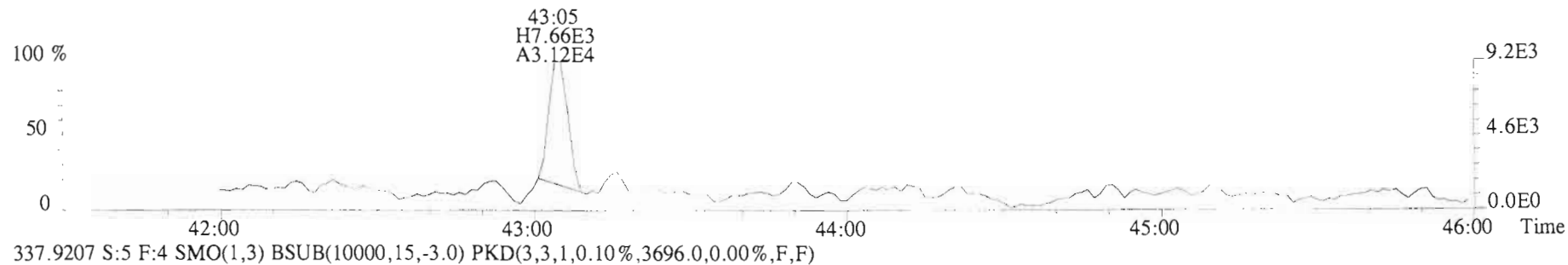
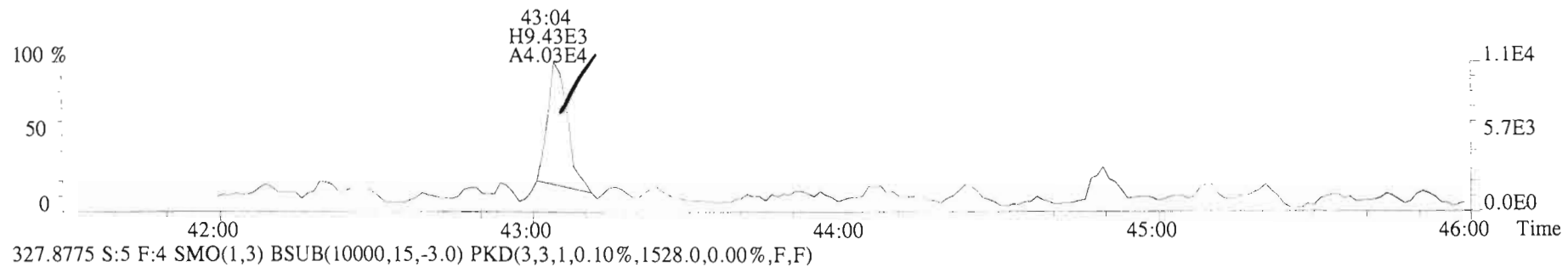
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
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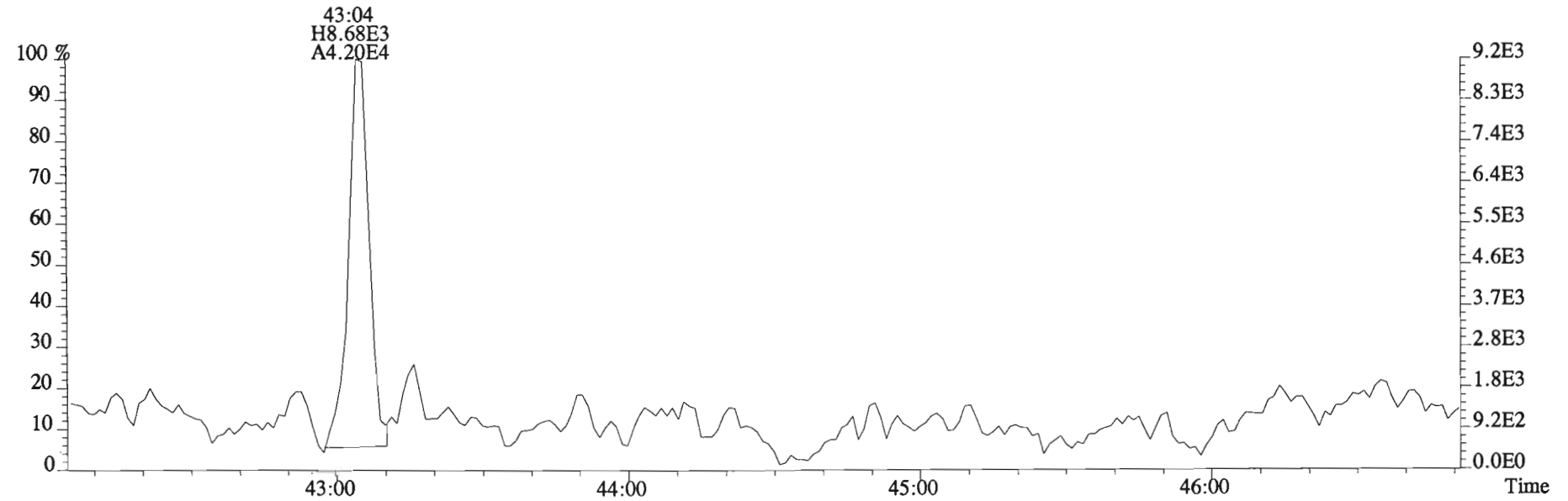
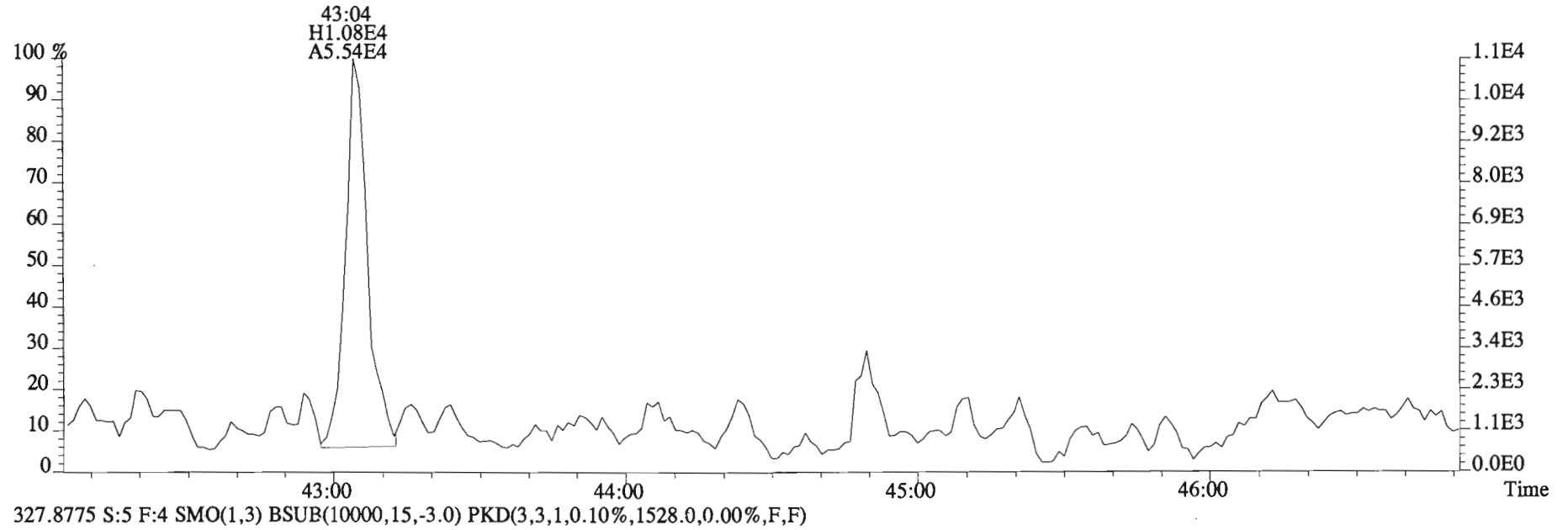
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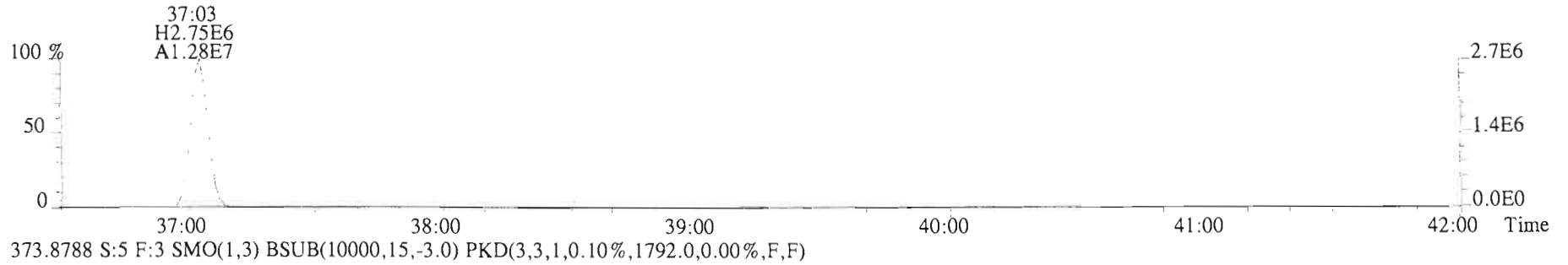
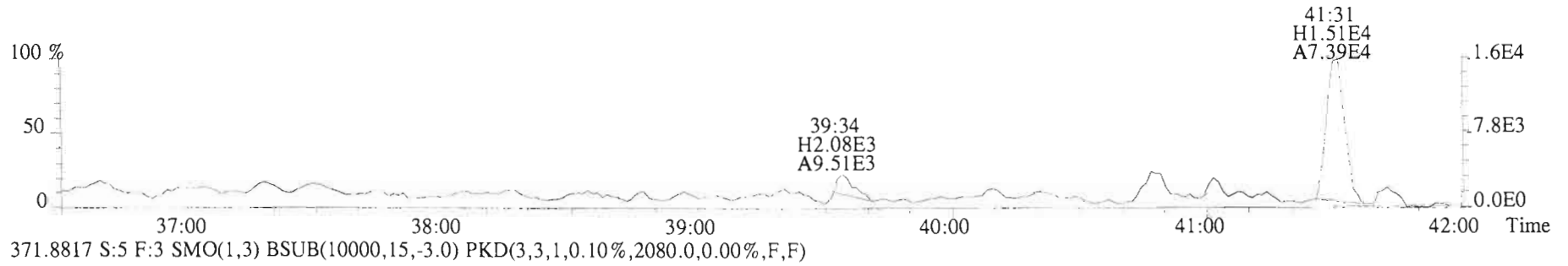
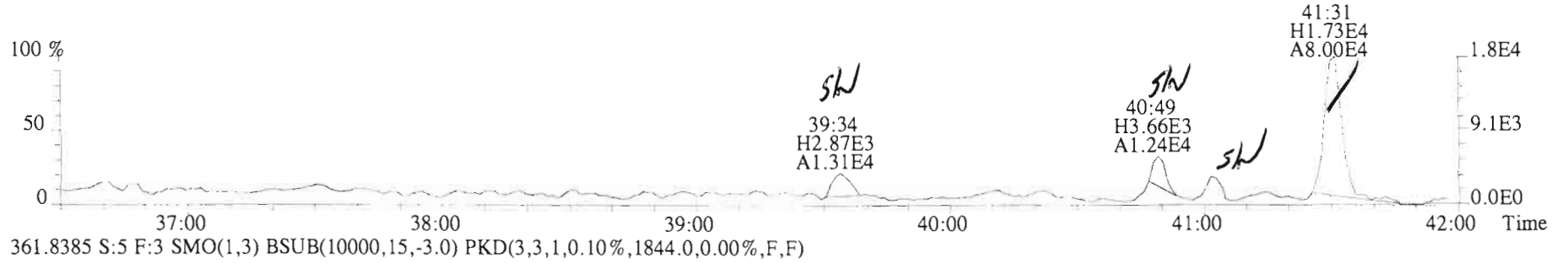
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
325.8804 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1712.0,0.00%,F,F)



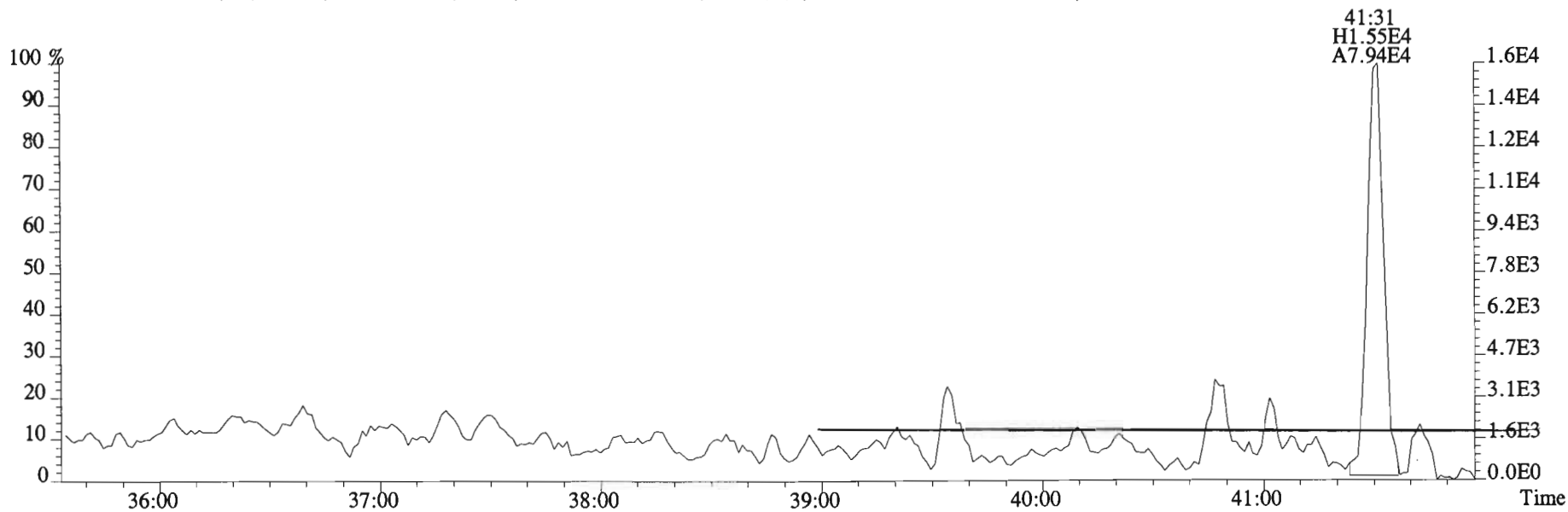
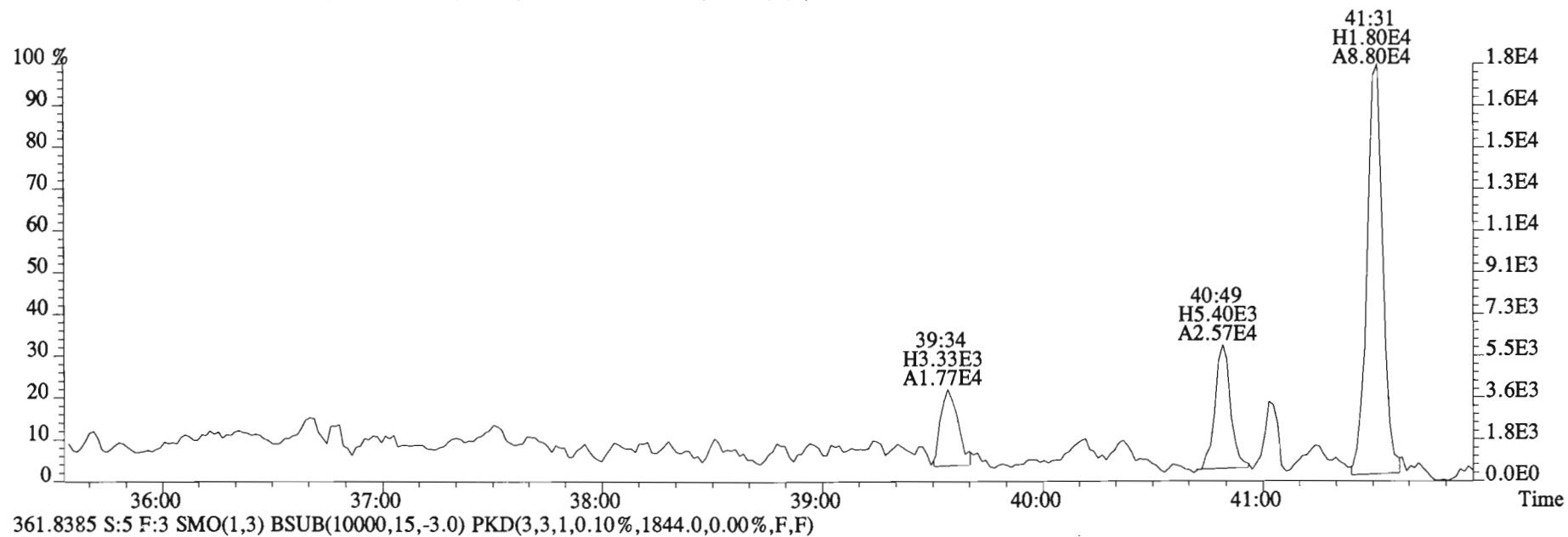
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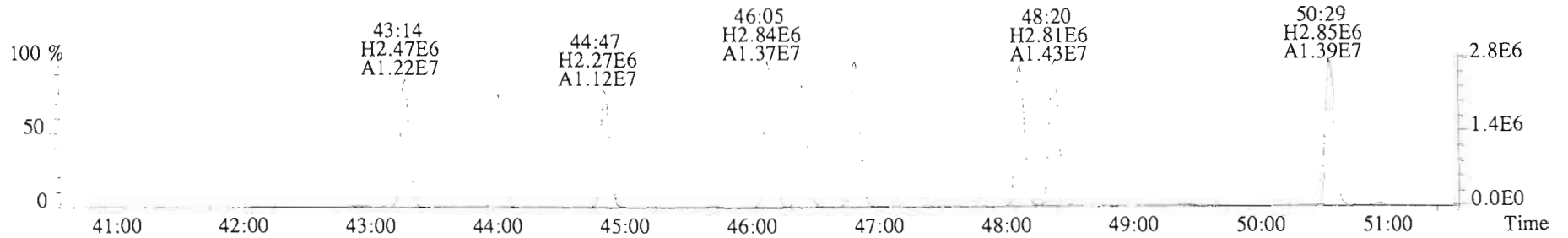
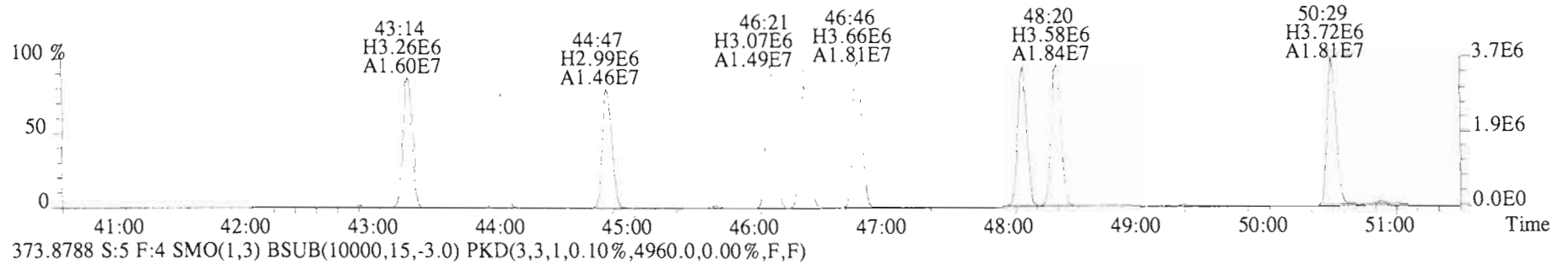
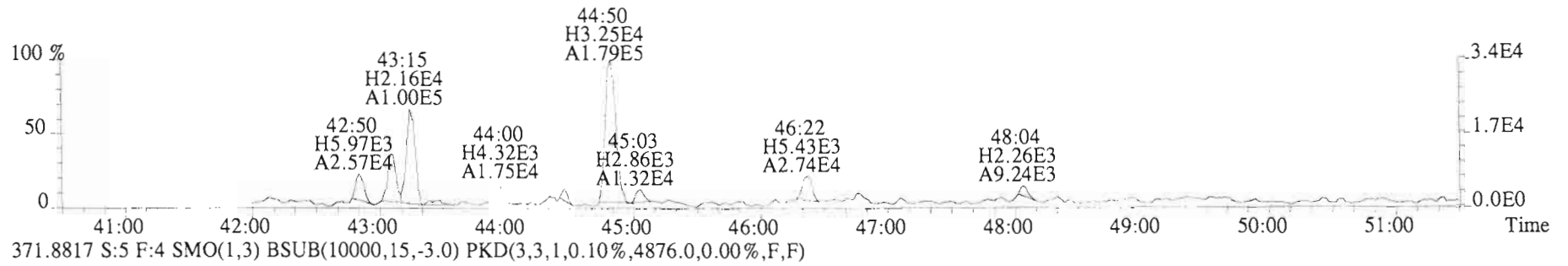
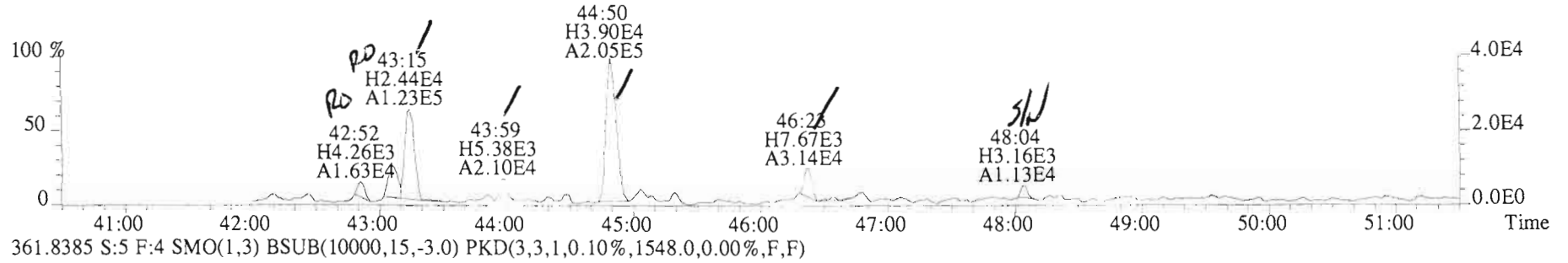
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1816.0,0.00%,F,F)



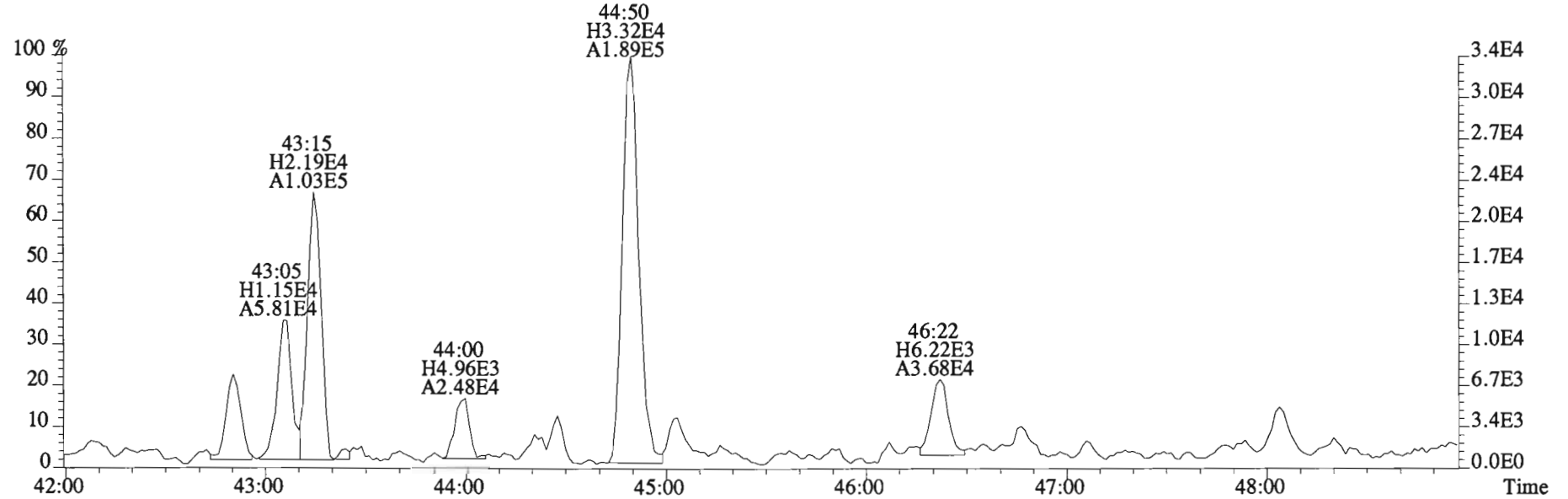
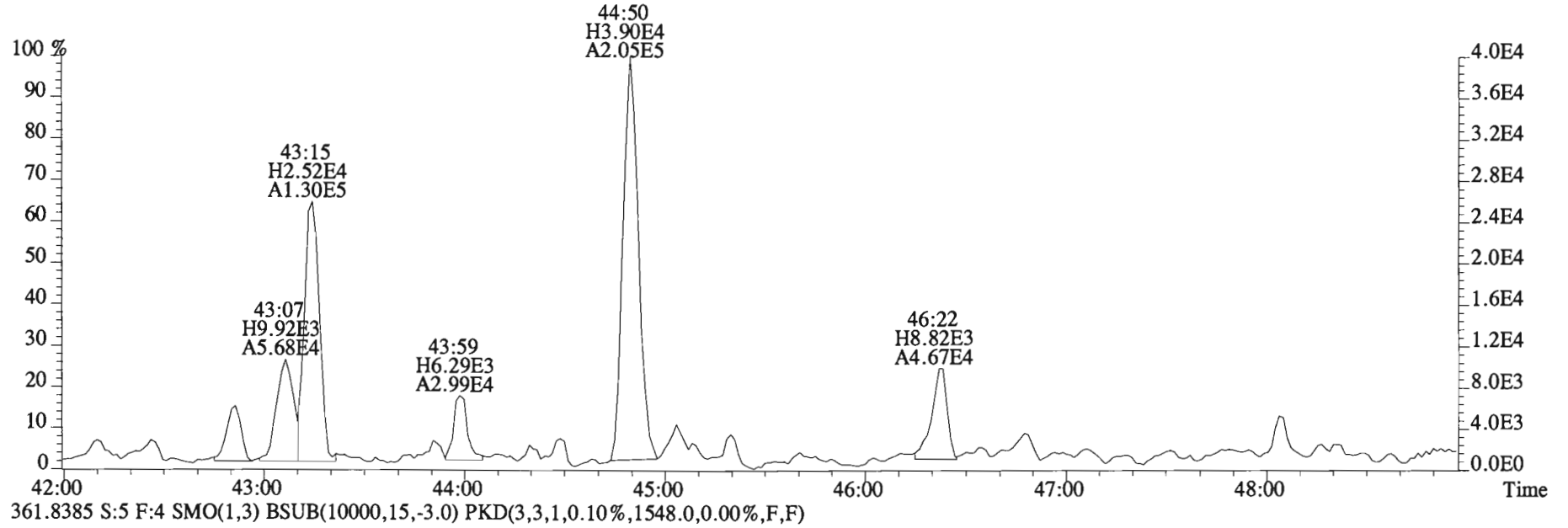
File:150127E1 #1-762 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1816.0,0.00%,F,F)



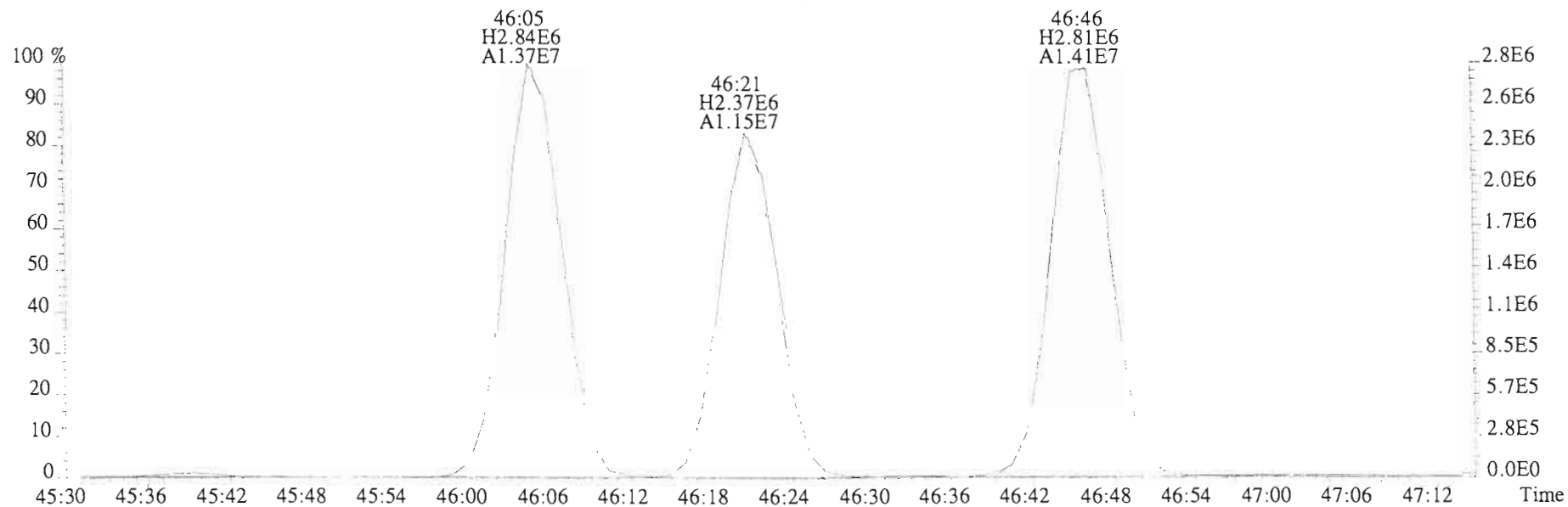
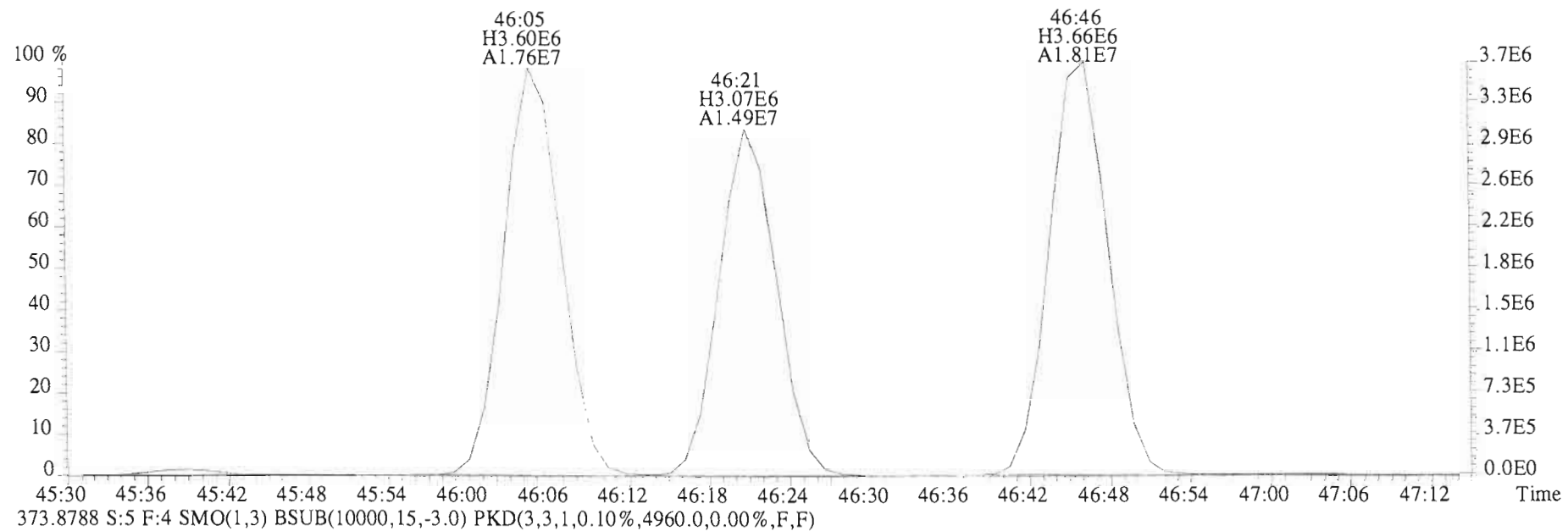
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Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
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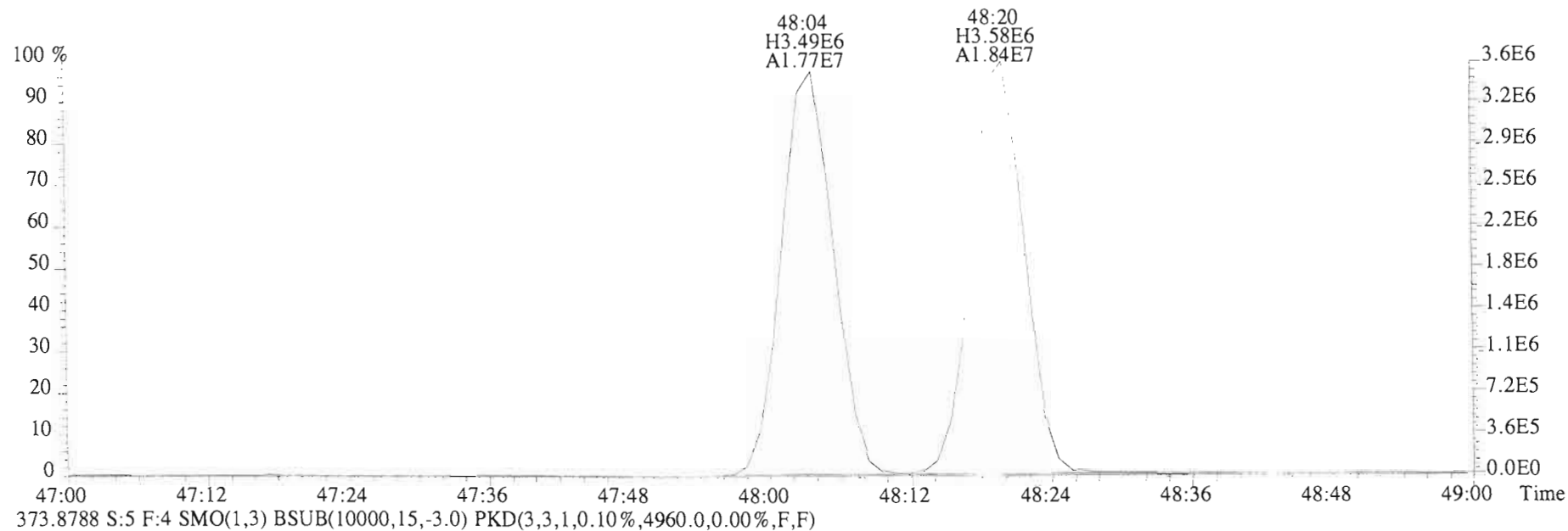
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Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
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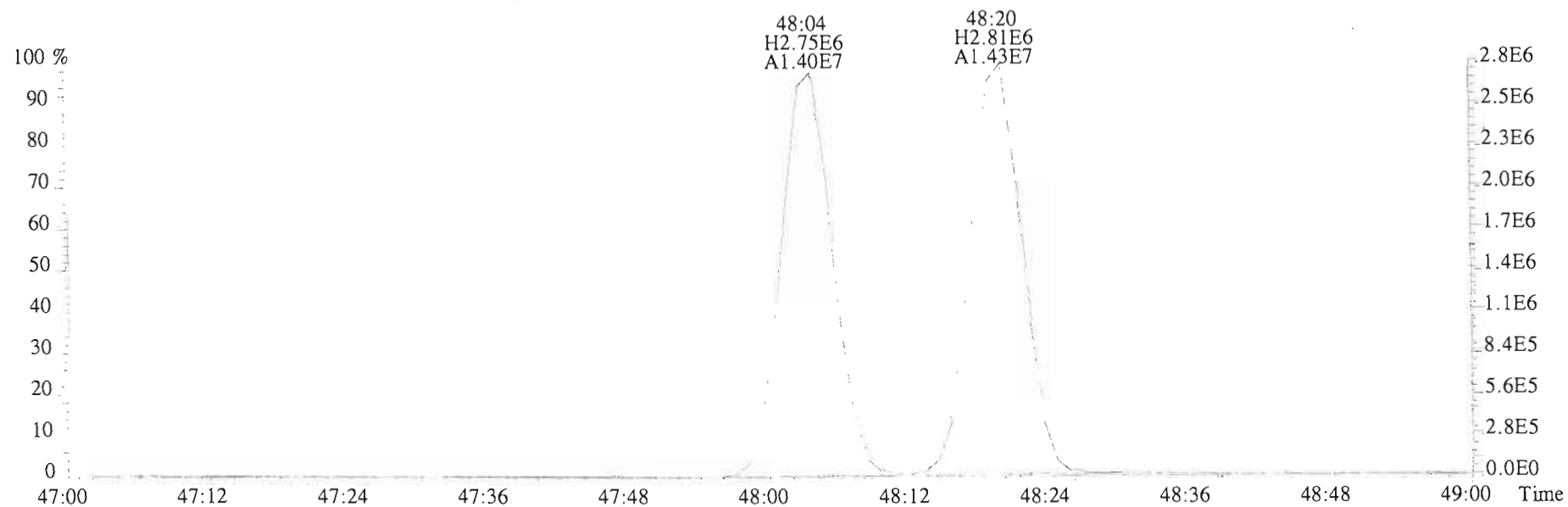
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Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
371.8817 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4876.0,0.00%,F,F)



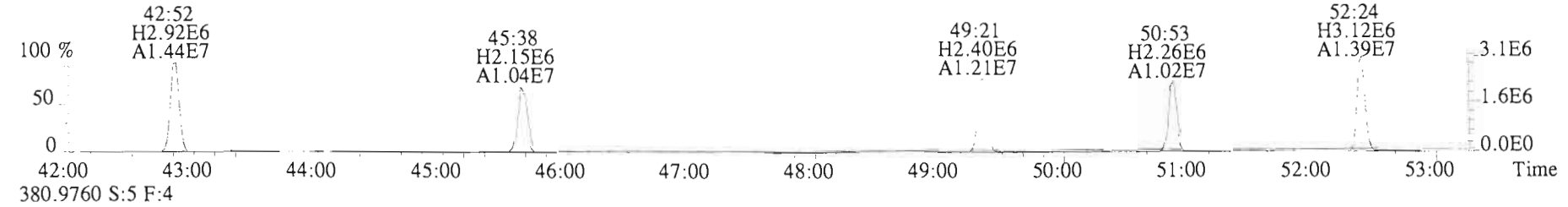
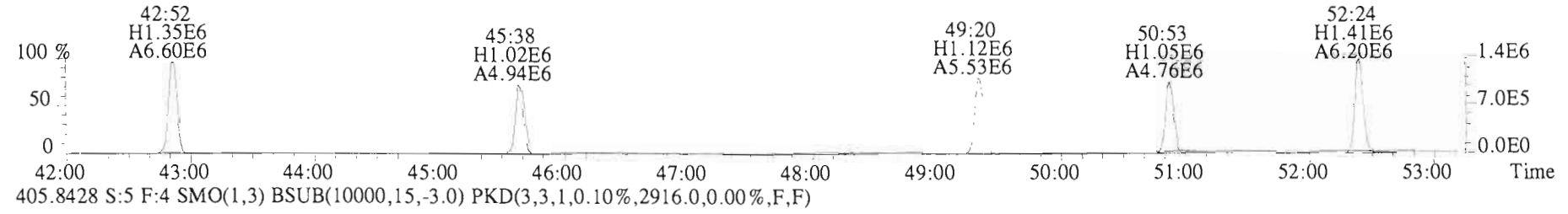
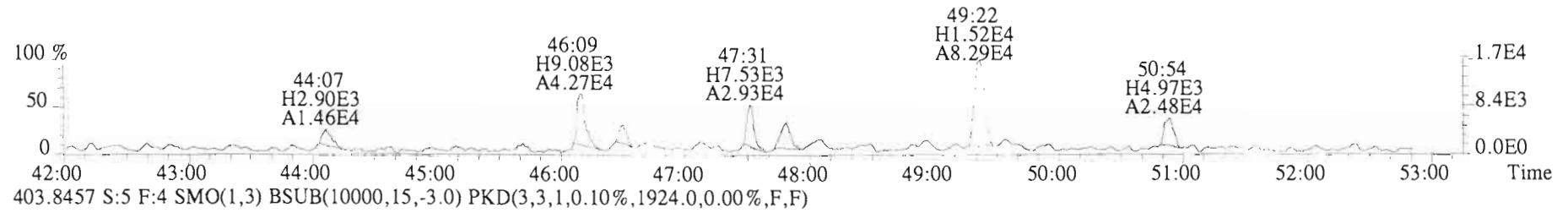
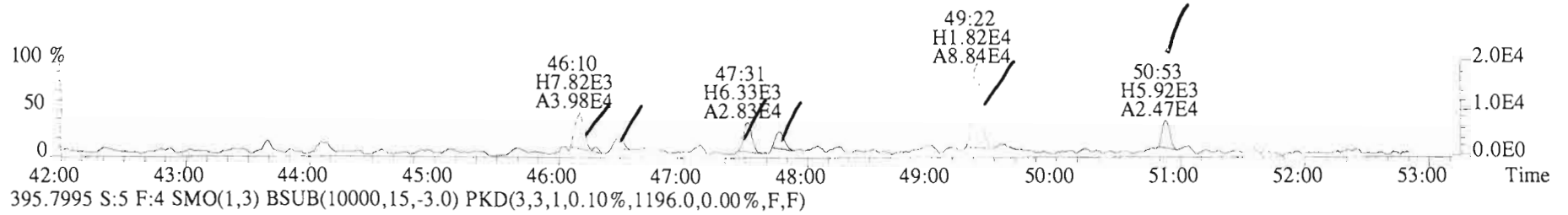
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
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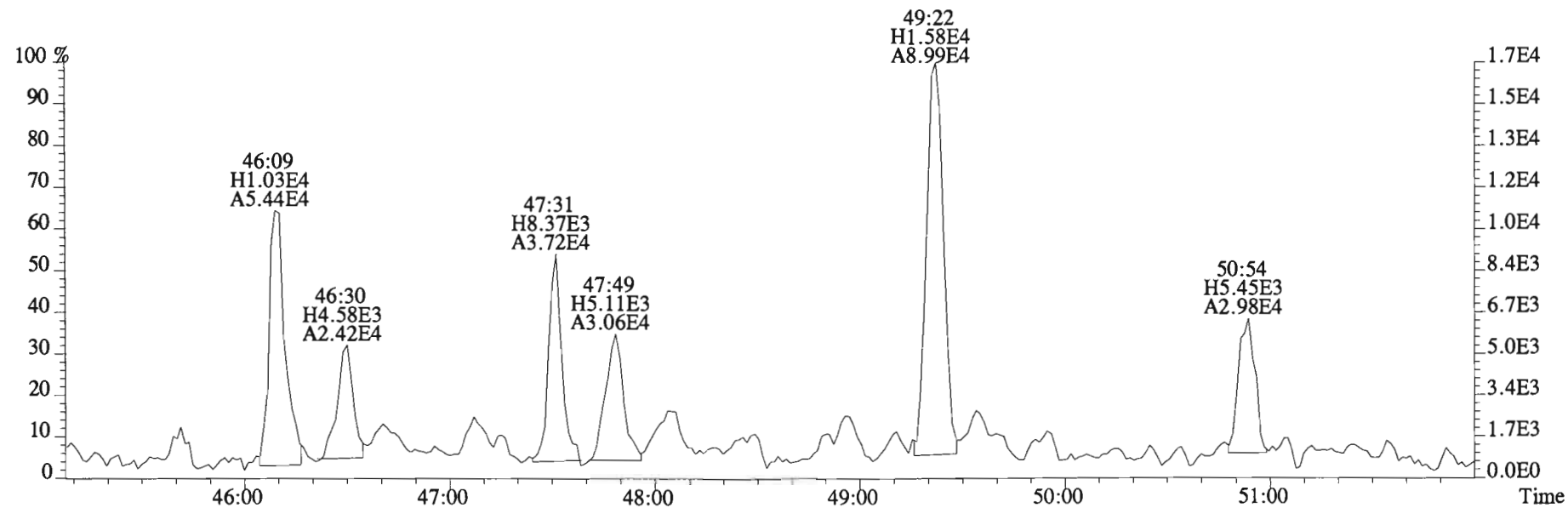
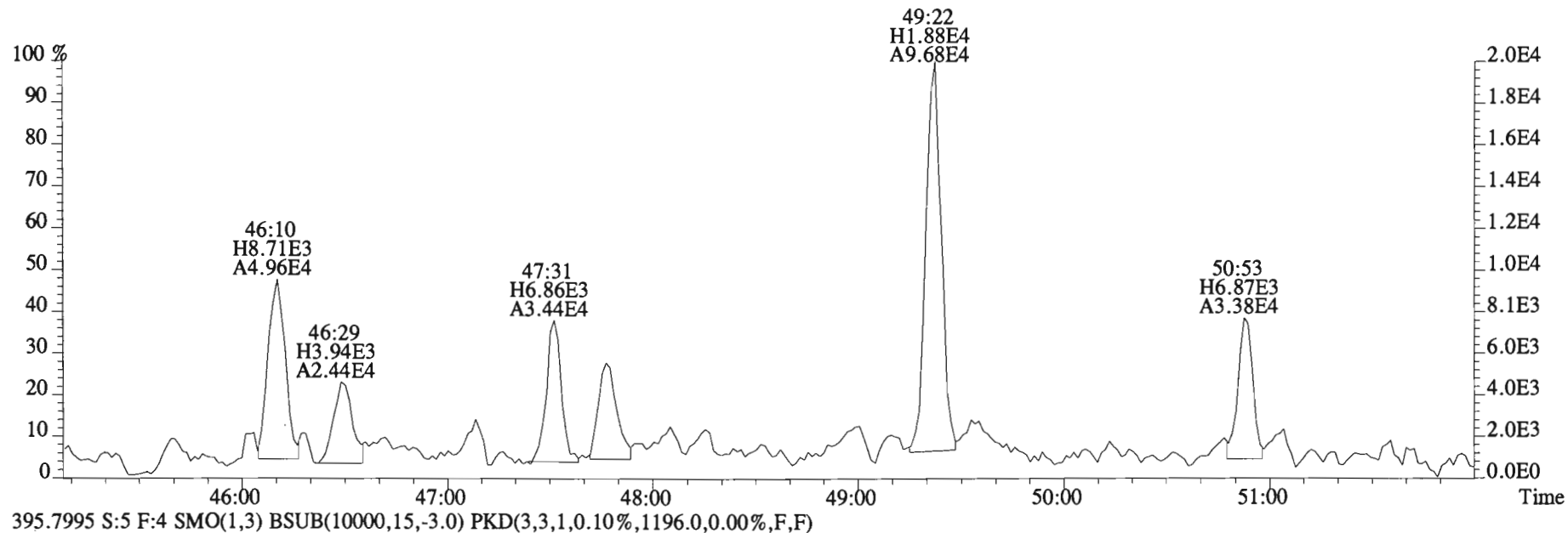
373.8788 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4960.0,0.00%,F,F)



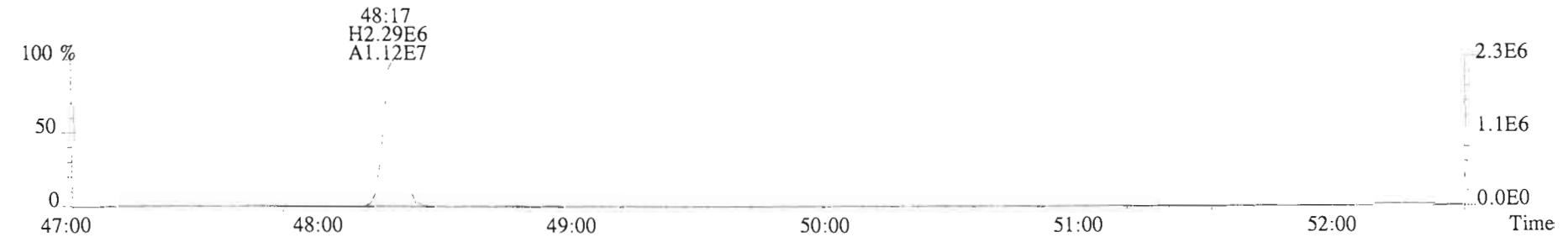
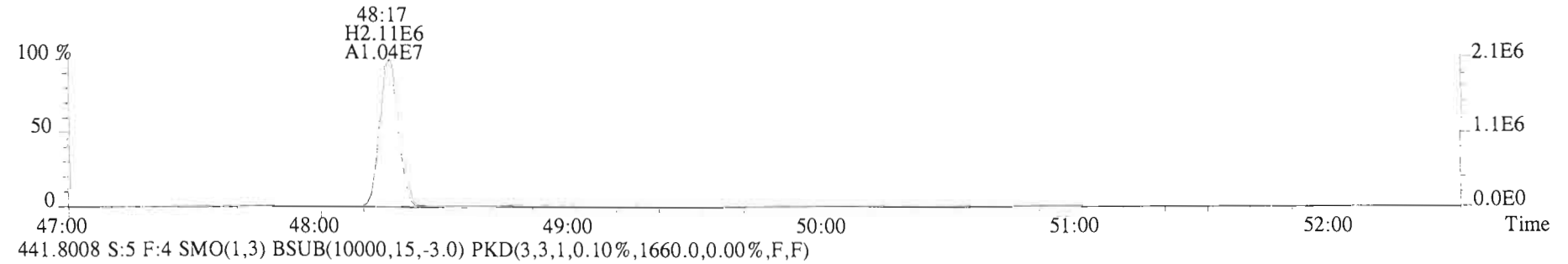
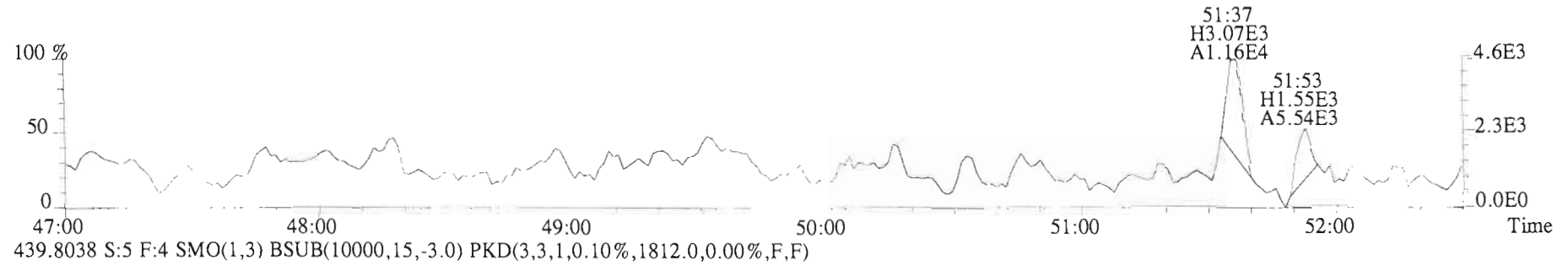
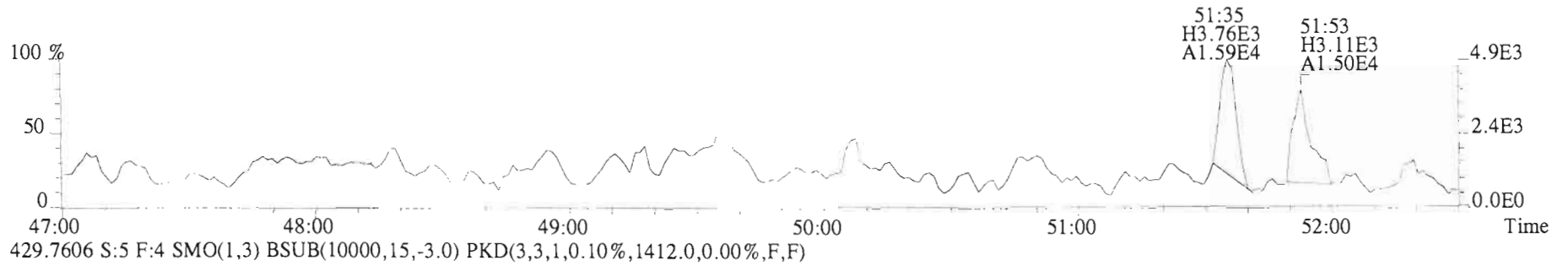
File:150127E1 #1-564 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1456.0,0.00%,F,F)



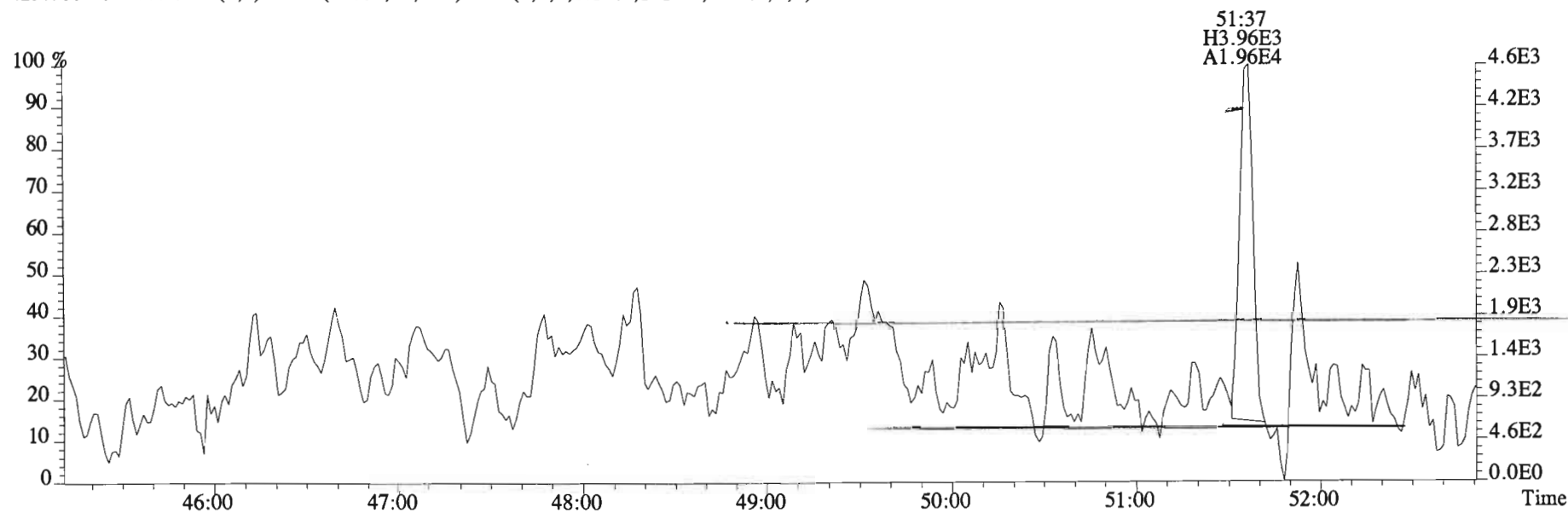
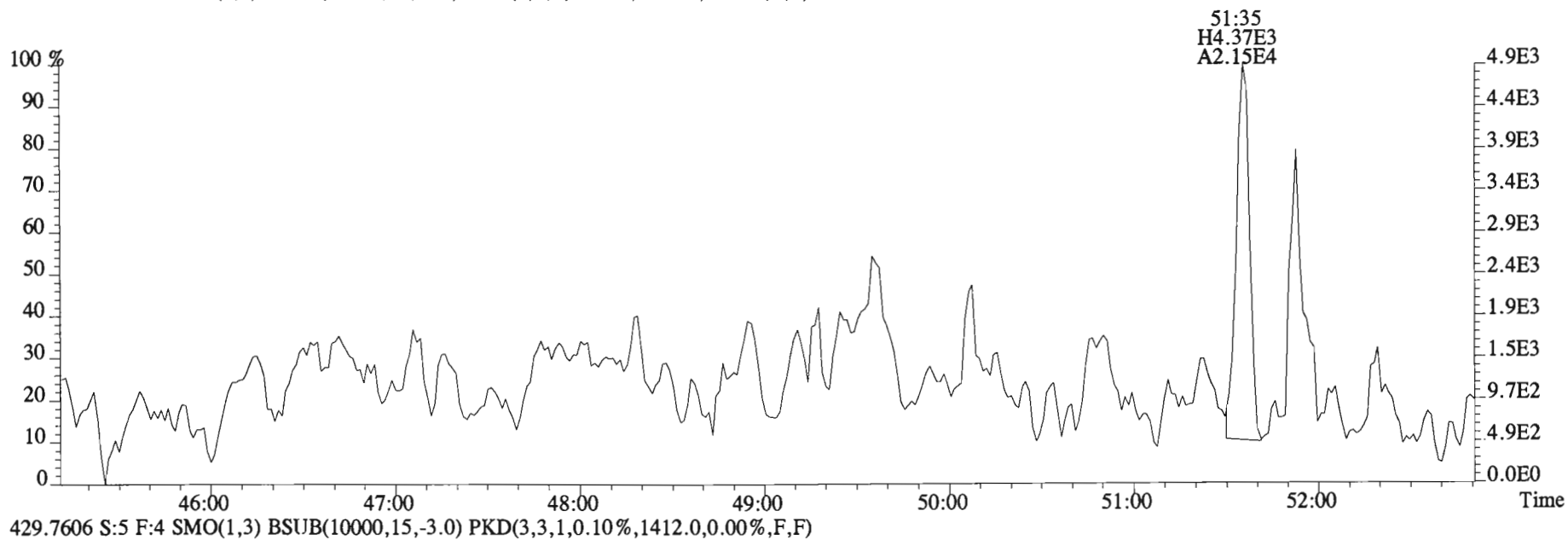
File:150127E1 #1-564 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
 393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1456.0,0.00%,F,F)



File:150127E1 #1-564 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
427.7635 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1384.0,0.00%,F,F)

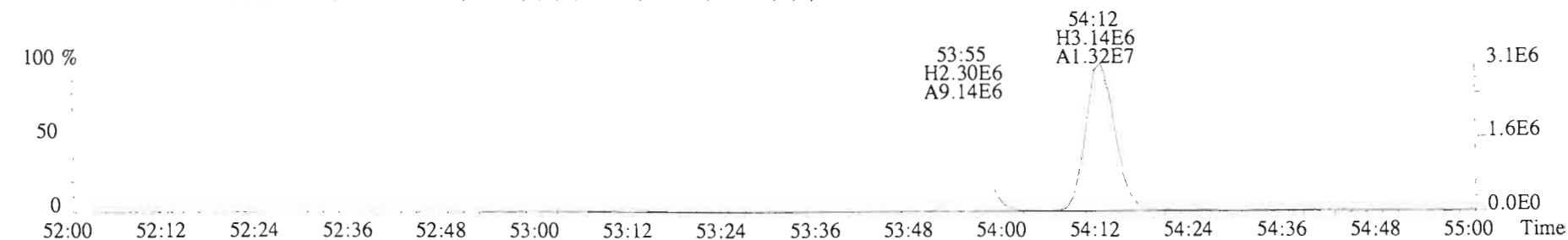
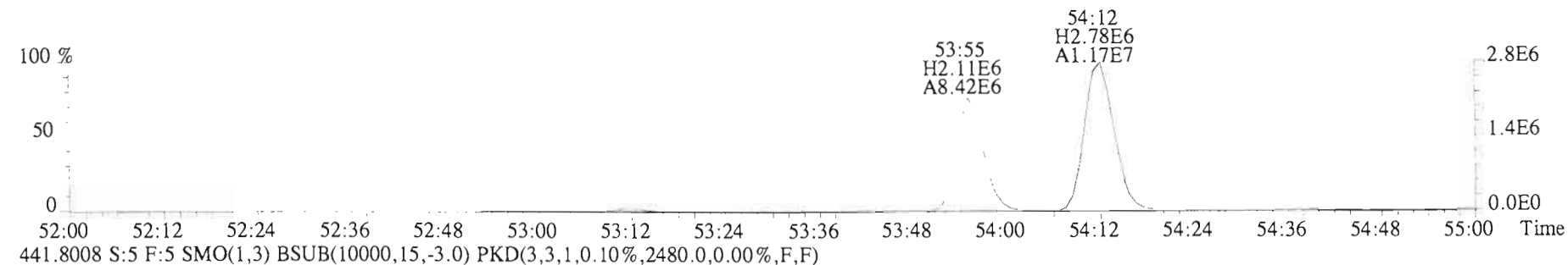
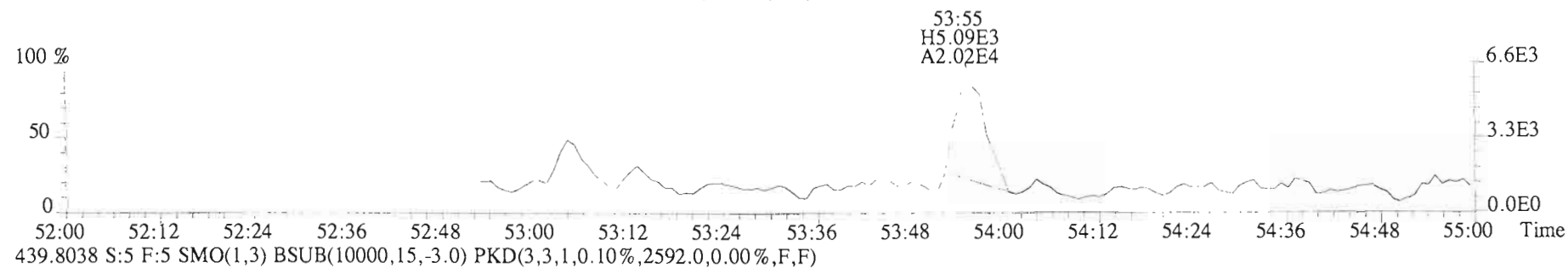
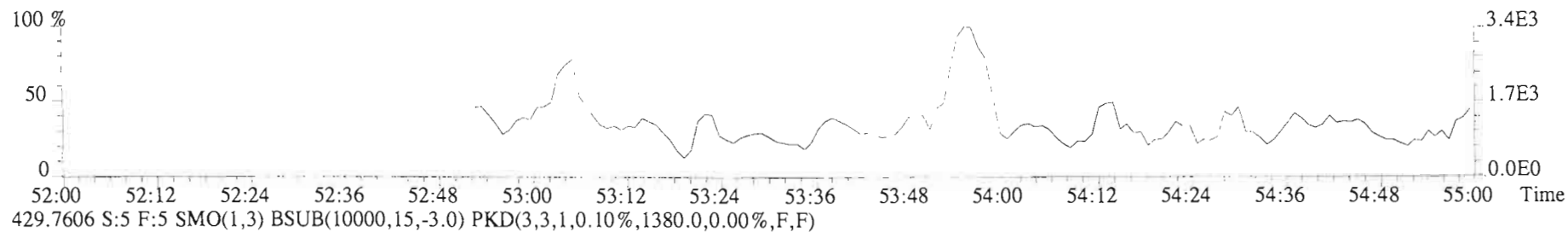


File:150127E1 #1-564 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
427.7635 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1384.0,0.00%,F,F)

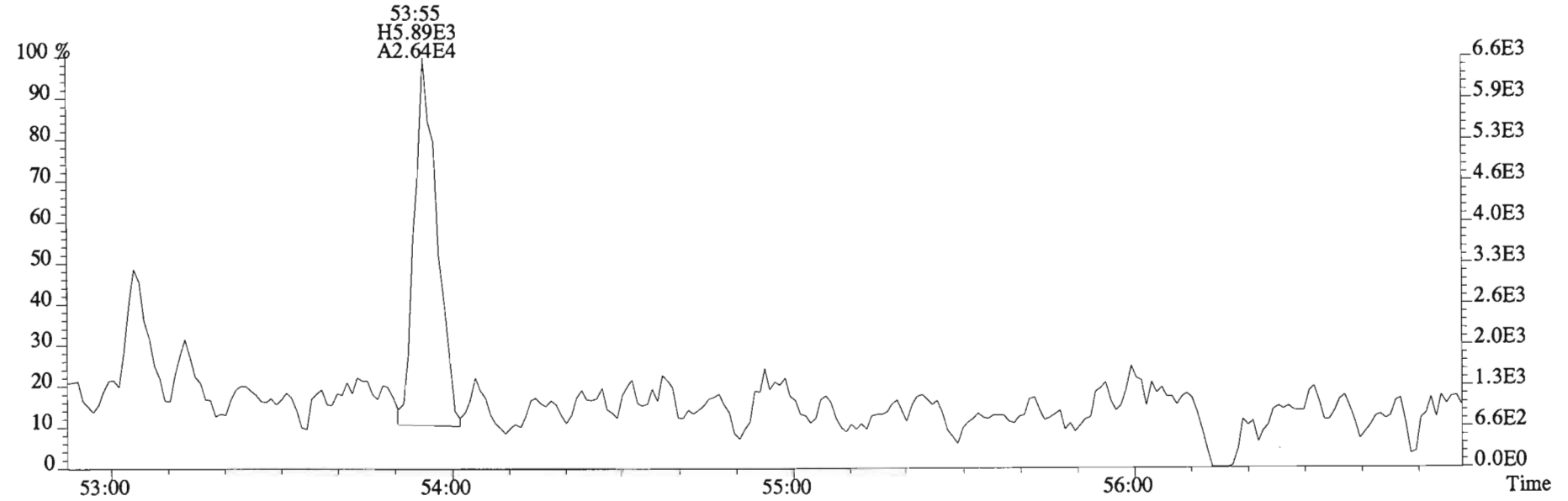
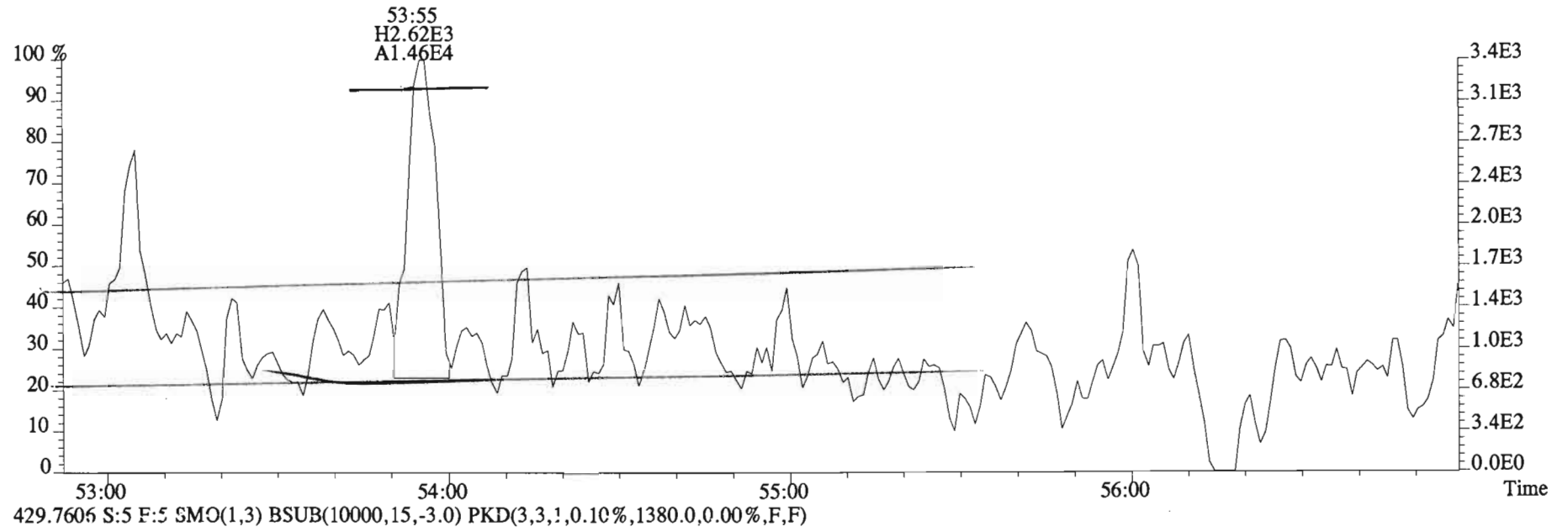


File:150127E1 #1-412 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
427.7635 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1328.0,0.00%,F,F)

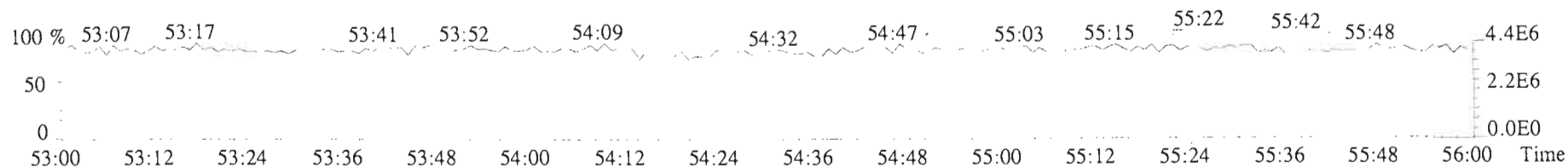
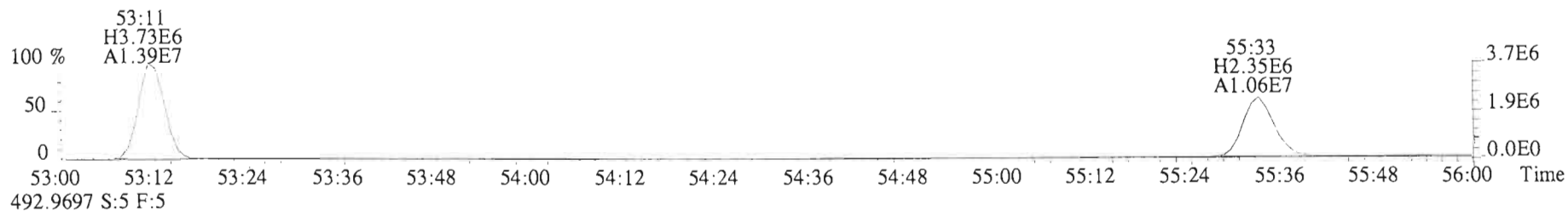
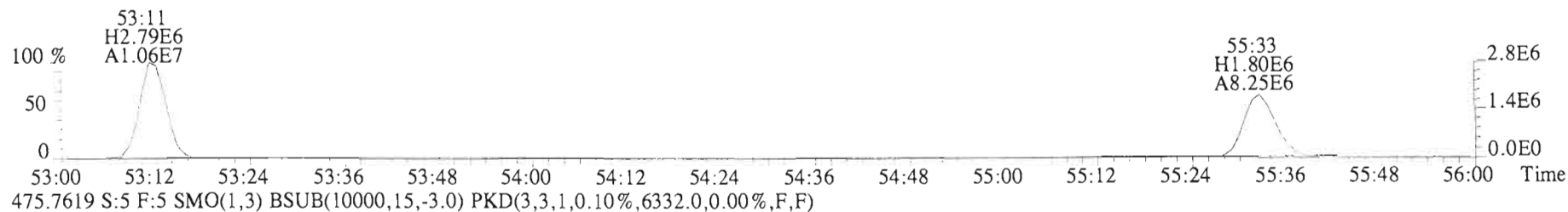
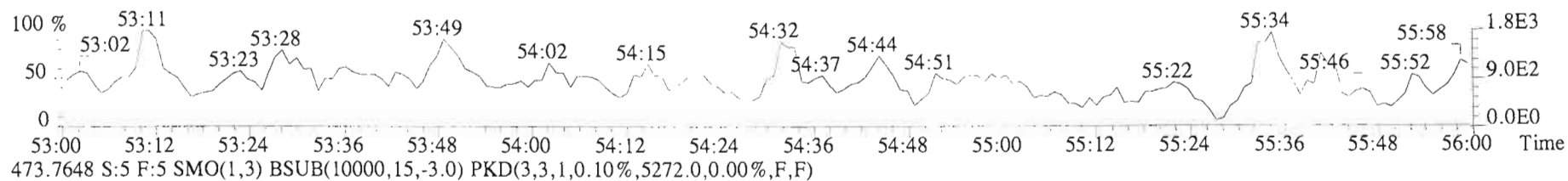
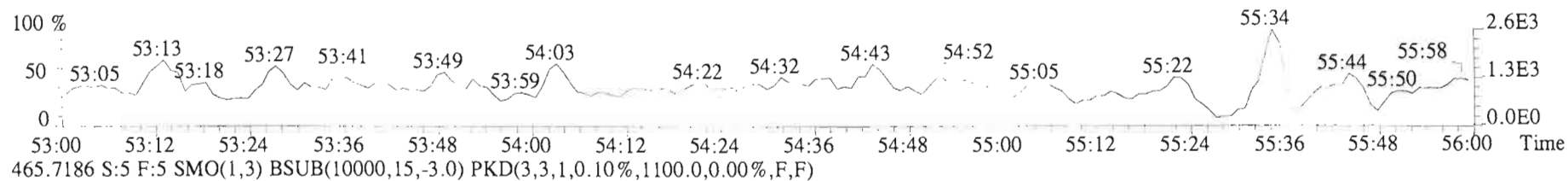
PD



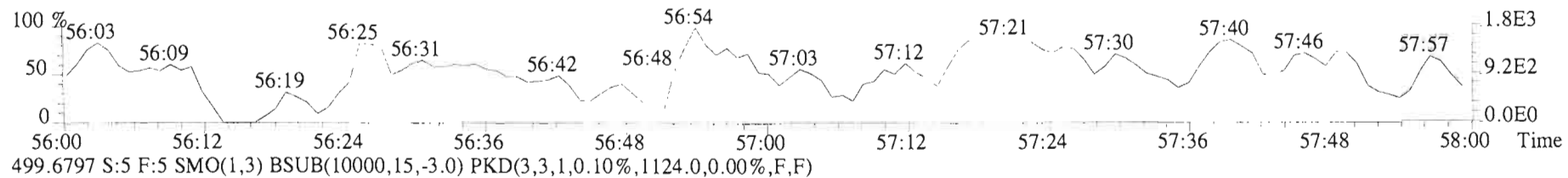
File:150127E1 #1-412 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
427.7635 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1328.0,0.00%,F,F)



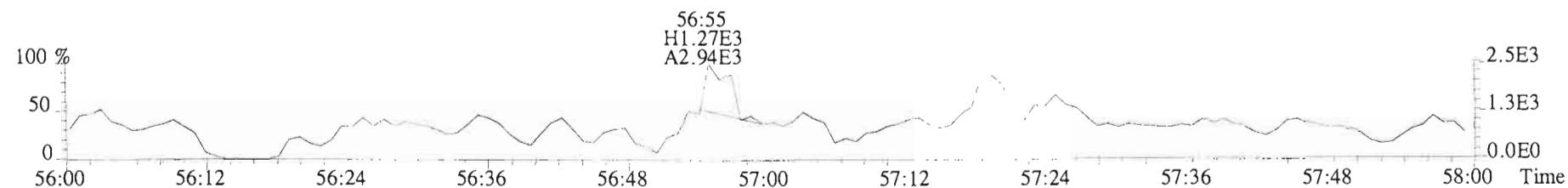
File:150127E1 #1-412 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
463.7216 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1388.0,0.00%,F,F)



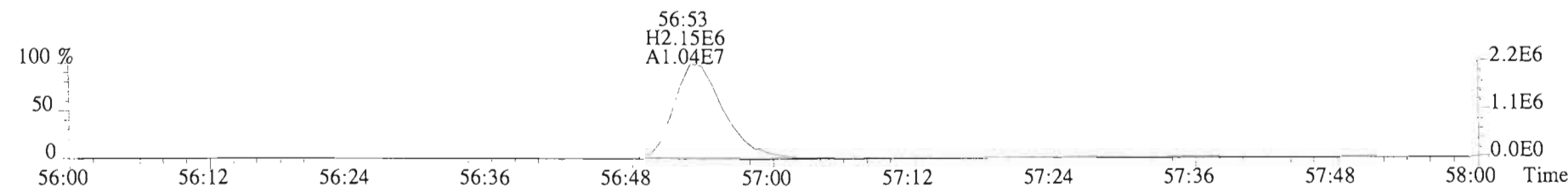
File:150127E1 #1-412 Acq:27-JAN-2015 14:57:06 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-01 DS-CB-F3-20141216-W 1 Exp:PCB_ZB1
497.6826 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1272.0,0.00%,F,F)



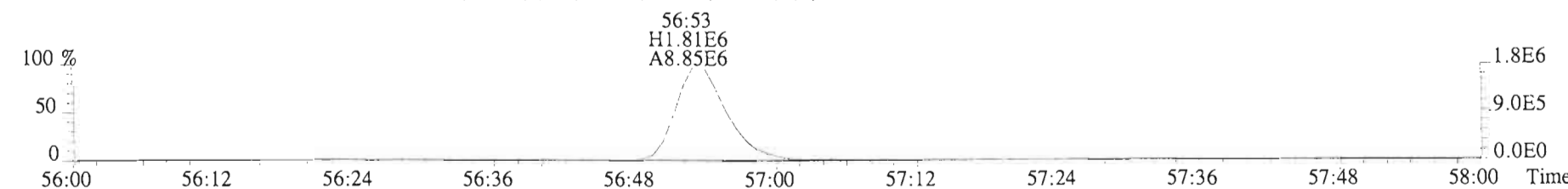
499.6797 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1124.0,0.00%,F,F)



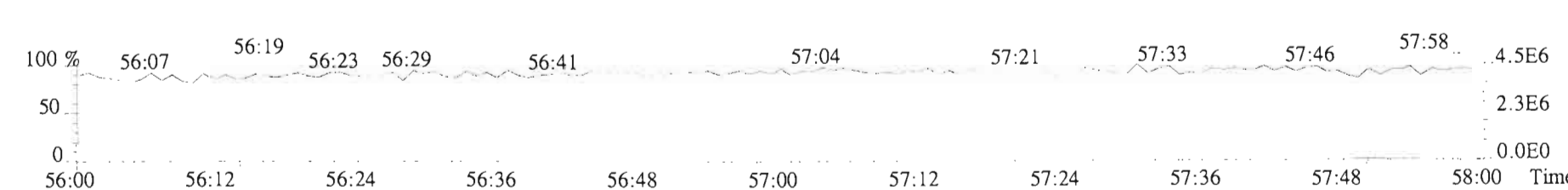
509.7229 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1460.0,0.00%,F,F)



511.7199 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1140.0,0.00%,F,F)



492.9697 S:5 F:5



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 η	1.19	*		3410	2.5	8.17	*	0.996-1.006	
Mono	PCB-2	*	* n	NotF η	1.18	*		3410	2.5	7.98	*	0.984-0.994	
Mono	PCB-3	*	* n	NotF η	1.43	*		3410	2.5	6.63	*	0.996-1.006	
Di	PCB-4/10	*	* n	NotF η	1.57	*		16100	2.5	31.3	*	0.997-1.007	
Di	PCB-7/9	*	* n	NotF η	1.21	*		16100	2.5	25.4	*	0.866-0.874	
Di	PCB-6	*	* n	NotF η	1.30	*		16100	2.5	23.6	*	0.890-0.899	
Di	PCB-5/8	*	* n	NotF η	1.15	*		16100	2.5	26.7	*	0.907-0.917	
Di	PCB-14	*	* n	NotF η	1.11	*		16100	2.5	26.0	*	0.949-0.959	
Di	PCB-11	*	* n	NotF η	1.09	*		16100	2.5	26.5	*	0.995-1.005	
Di	PCB-12/13	*	* n	NotF η	1.19	*		16100	2.5	24.2	*	1.011-1.021	
Di	PCB-15	*	* n	NotF η	1.28	*		16100	2.5	22.5	*	1.023-1.033	
Tri	PCB-19	*	* n	NotF η	1.04	*		1850	2.5	4.85	*	0.996-1.006	
Tri	PCB-30	*	* n	NotF η	1.71	*		1850	2.5	2.95	*	1.032-1.042	
Tri	PCB-18	*	* n	NotF η	0.78	*		1850	2.5	4.25	*	0.949-0.959	
Tri	PCB-17	*	* n	NotF η	0.92	*		1850	2.5	3.60	*	0.956-0.966	
Tri	PCB-24/27	*	* n	NotF η	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 η	1.14	*		1890	2.5	2.95	*	0.955-0.965	
Tri	PCB-23	*	* n	NotF η	1.28	*		1890	2.5	2.62	*	0.959-0.969	
Tri	PCB-29	*	* n	NotF η	1.08	*		1890	2.5	3.10	*	0.967-0.977	
Tri	PCB-20	*	* n	NotF η	1.21	*		1890	2.5	2.77	*	0.974-0.984	
Tri	PCB-25	*	* n	NotF η	1.26	*		1890	2.5	2.65	*	0.979-0.989	
Tri	PCB-31	*	* n	NotF η	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 η	1.21	*		1890	2.5	2.77	*	1.032-1.042	
Tri	PCB-36	*	* n	NotF η	1.14	*		1990	2.5	3.08	*	0.928-0.938	
Tri	PCB-39	*	* n	NotF η	1.12	*		1890	2.5	3.15	*	0.943-0.953	
Tri	PCB-38	*	* n	NotF η	1.20	*		1890	2.5	2.93	*	0.966-0.976	
Tri	PCB-35	*	* n	NotF η	1.23	*		1890	2.5	2.85	*	0.982-0.992	
Tri	PCB-37	*	* n	NotF η	1.23	*		1890	2.5	2.86	*	0.995-1.005	
Tetra	PCB-54	*	* n	NotF η	1.10	*		2190	2.5	4.08	*	0.996-1.006	
Tetra	PCB-50	*	* n	NotF η	0.88	*		2190	2.5	5.11	*	1.037-1.047	
Tetra	PCB-53	*	* n	NotF η	1.06	*		2190	2.5	4.98	*	0.942-0.952	
Tetra	PCB-51	*	* n	NotF η	0.99	*		2190	2.5	5.35	*	0.952-0.962	
Tetra	PCB-45	*	* n	NotF η	0.86	*		2190	2.5	6.13	*	0.966-0.976	
Tetra	PCB-46	*	* n	NotF η	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 η	1.28	*		2190	2.5	4.13	*	0.996-1.006	
Tetra	PCB-73	*	* n	NotF η	1.35	*		2190	2.5	3.92	*	1.000-1.010	
Tetra	PCB-43/49	*	* n	NotF η	0.99	*		2190	2.5	5.33	*	1.005-1.015	
Tetra	PCB-47	*	* n	NotF η	1.06	*		2190	2.5	4.62	*	0.996-1.006	
Tetra	PCB-48/75	*	* n	NotF η	1.23	*		2190	2.5	3.98	*	0.999-1.009	
Tetra	PCB-65	*	* n	NotF η	1.22	*		2190	2.5	3.99	*	1.008-1.018	
Tetra	PCB-62	*	* n	NotF η	1.22	*		2190	2.5	4.00	*	1.011-1.021	
Tetra	PCB-44	*	* n	NotF η	0.86	*		2190	2.5	5.68	*	1.021-1.031	
Tetra	PCB-42/59	*	* n	NotF η	1.14	*		2190	2.5	4.30	*	1.028-1.038	
Tetra	PCB-41/64/71/72	*	* n	NotF η	1.21	*		2190	2.5	4.05	*	1.046-1.056	
Tetra	PCB-68	*	* n	NotF η	1.35	*		2190	2.5	3.63	*	1.054-1.064	
Tetra	PCB-40	*	* n	NotF η	0.70	*		2190	2.5	6.97	*	1.061-1.071	
Tetra	PCB-57	*	* n	NotF η	0.98	*		2190	2.5	3.92	*	0.965-0.975	
Tetra	PCB-67	*	* n	NotF η	1.11	*		2190	2.5	3.47	*	0.974-0.984	
Tetra	PCB-58	*	* n	NotF η	0.93	*		2190	2.5	4.14	*	0.977-0.987	
Tetra	PCB-63	*	* n	NotF η	0.95	*		2190	2.5	4.03	*	0.982-0.992	
Tetra	PCB-74	*	* n	NotF η	1.24	*		2190	2.5	3.09	*	0.990-1.000	
Tetra	PCB-61/70	*	* n	NotF η	0.95	*		2190	2.5	4.03	*	0.995-1.005	
Tetra	PCB-76/66	*	* n	NotF η	1.04	*		2190	2.5	3.67	*	1.001-1.011	
Tetra	PCB-80	*	* n	NotF η	1.19	*		2190	2.5	3.11	*	0.996-1.006	
Tetra	PCB-55	*	* n	NotF η	1.04	*		2190	2.5	3.56	*	1.005-1.015	
Tetra	PCB-56/60	*	* n	NotF η	1.01	*		2190	2.5	3.67	*	1.019-1.029	
Tetra	PCB-79	*	* n	NotF η	1.08	*		2190	2.5	3.43	*	1.048-1.058	
Tetra	PCB-78	*	* n	NotF η	1.27	*		2190	2.5	3.37	*	0.982-0.992	
Tetra	PCB-81	*	* n	NotF η	1.33	*		2190	2.5	3.21	*	0.995-1.005	
Tetra	PCB-77	*	* n	NotF η	1.10	*		2190	2.5	3.76	*	0.995-1.005	
Penta	PCB-104	*	* n	NotF η	1.18	*		1060	2.5	3.95	*	0.996-1.006	
Penta	PCB-96	*	* n	NotF η	1.14	*		1060	2.5	4.10	*	1.034-1.044	
Penta	PCB-103	*	* n	NotF η	0.96	*		1060	2.5	4.87	*	1.050-1.060	
Penta	PCB-100	*	* n	NotF η	0.94	*		1060	2.5	4.97	*	1.061-1.071	
Penta	PCB-94	*	* n	NotF η	1.06	*		1060	2.5	5.78	*	0.980-0.990	
Penta	PCB-95/98/102	*	* n	NotF η	1.22	*		1060	2.5	4.99	*	0.995-1.005	
Penta	PCB-93	*	* n	NotF η	0.84	*		1060	2.5	7.24	*	0.997-1.007	
Penta	PCB-88/91	*	* n	NotF η	1.12	*		1060	2.5	5.47	*	1.005-1.015	
Penta	PCB-121	*	* n	NotF η	1.62	*		1060	2.5	3.78	*	1.009-1.019	
Penta	PCB-84/92	*	* n	NotF η	1.05	*		1060	2.5	5.49	*	0.985-0.995	
Penta	PCB-89	*	* n	NotF η	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 η	1.10	*		1060	2.5	5.22	*	0.995-1.005	
Penta	PCB-113	*	*	n NotF η	1.41	*		1060	2.5	4.07	*	1.002-1.012	
Penta	PCB-99	*	*	n NotF η	1.34	*		1060	2.5	4.30	*	1.004-1.014	
Penta	PCB-119	*	*	n NotF η	1.53	*		1060	2.5	4.22	*	0.982-0.992	
Penta	PCB-108/112	*	*	n NotF η	1.28	*		1060	2.5	5.05	*	0.986-0.996	
Penta	PCB-83	*	*	n NotF η	1.52	*		1060	2.5	4.26	*	0.990-1.000	
Penta	PCB-97	*	*	n NotF η	1.18	*		1060	2.5	5.47	*	0.995-1.005	
Penta	PCB-86	*	*	n NotF η	0.84	*		1060	2.5	7.67	*	0.999-1.009	
Penta	PCB-87/117/125	*	*	n NotF η	1.55	*		1060	2.5	4.17	*	1.002-1.012	
Penta	PCB-111/115	*	*	n NotF η	1.63	*		1060	2.5	3.96	*	1.006-1.016	
Penta	PCB-85/116	*	*	n NotF η	1.30	*		1060	2.5	4.96	*	1.010-1.020	
Penta	PCB-120	*	*	n NotF η	1.68	*		1060	2.5	3.85	*	1.016-1.026	
Penta	PCB-110	*	*	n NotF η	1.56	*		1060	2.5	4.15	*	1.020-1.030	
Penta	PCB-82	*	*	n NotF η	0.76	*		1060	2.5	6.52	*	0.971-0.981	
Penta	PCB-124	*	*	n NotF η	1.47	*		1060	2.5	3.37	*	0.988-0.998	
Penta	PCB-107/109	*	*	n NotF η	1.32	*		1060	2.5	3.74	*	0.991-1.001	
Penta	PCB-123	*	*	n NotF η	1.17	*		1060	2.5	4.24	*	0.996-1.006	
Penta	PCB-106/118	*	*	n NotF η	1.17	*		1060	2.5	3.97	*	0.996-1.006	
Penta	PCB-114	*	*	n NotF η	1.30	*		1840	2.5	4.78	*	0.995-1.005	
Penta	PCB-122	*	*	n NotF η	1.12	*		1840	2.5	5.53	*	0.999-1.009	
Penta	PCB-105	*	*	n NotF η	1.30	*		1840	2.5	4.78	*	0.995-1.005	
Penta	PCB-127	*	*	n NotF η	1.33	*		1840	2.5	4.21	*	0.996-1.006	
Penta	PCB-126	*	*	n NotF η	1.18	*		1840	2.5	5.45	*	0.995-1.005	
Hexa	PCB-155	*	*	n NotF η	1.11	*		1050	2.5	5.28	*	0.966-1.006	
Hexa	PCB-150	*	*	n NotF η	1.00	*		1050	2.5	5.91	*	1.030-1.040	
Hexa	PCB-152	*	*	n NotF η	1.12	*		1050	2.5	5.29	*	1.043-1.053	
Hexa	PCB-145	*	*	n NotF η	1.20	*		1050	2.5	4.91	*	1.055-1.065	
Hexa	PCB-136	*	*	n NotF η	1.18	*		1050	2.5	5.01	*	1.064-1.074	
Hexa	PCB-148	*	*	n NotF η	0.74	*		1050	2.5	7.92	*	1.066-1.076	
Hexa	PCB-154	*	*	n NotF η	0.86	*		1050	2.5	6.87	*	1.080-1.090	
Hexa	PCB-151	*	*	n NotF η	0.75	*		1050	2.5	7.90	*	1.097-1.107	
Hexa	PCB-135	*	*	n NotF η	0.79	*		1050	2.5	7.44	*	1.103-1.113	
Hexa	PCB-144	*	*	n NotF η	0.76	*		1050	2.5	7.74	*	1.105-1.117	
Hexa	PCB-147	*	*	n NotF η	0.82	*		1050	2.5	7.19	*	1.109-1.121	
Hexa	PCB-139/149	*	*	n NotF η	0.76	*		1050	2.5	7.74	*	1.116-1.128	
Hexa	PCB-140	*	*	n NotF η	0.72	*		1050	2.5	8.17	*	1.121-1.133	
Hexa	PCB-134/143	*	*	n NotF η	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 η	0.82	*		1800	2.5	7.47	*	0.977-0.987	
Hexa	PCB-131	*	* n	NotF η	0.91	*		1800	2.5	6.74	*	0.981-0.991	
Hexa	PCB-146/165	*	* n	NotF η	1.25	*		1800	2.5	4.91	*	0.986-0.996	
Hexa	PCB-132/161	*	* n	NotF η	1.10	*		1800	2.5	5.54	*	0.992-1.002	
Hexa	PCB-153	*	* n	NotF η	1.25	*		1800	2.5	4.90	*	0.995-1.005	
Hexa	PCB-168	*	* n	NotF η	1.45	*		1800	2.5	4.22	*	1.001-1.011	
Hexa	PCB-141	*	* n	NotF η	1.09	*		1800	2.5	6.12	*	0.995-1.005	
Hexa	PCB-137	*	* n	NotF η	1.06	*		1800	2.5	6.25	*	1.004-1.014	
Hexa	PCB-130	*	* n	NotF η	0.96	*		1800	2.5	6.88	*	1.006-1.016	
Hexa	PCB-138/163/164	*	* n	NotF η	1.29	*		1800	2.5	5.00	*	0.996-1.006	
Hexa	PCB-158/160	*	* n	NotF η	1.34	*		1800	2.5	4.82	*	1.001-1.011	
Hexa	PCB-129	*	* n	NotF η	0.85	*		1800	2.5	7.58	*	1.007-1.017	
Hexa	PCB-166	*	* n	NotF η	1.19	*		1800	2.5	4.87	*	0.988-0.998	
Hexa	PCB-159	*	* n	NotF η	1.11	*		1800	2.5	5.19	*	0.996-1.006	
Hexa	PCB-128/162	*	* n	NotF η	1.05	*		1800	2.5	5.51	*	1.002-1.012	
Hexa	PCB-167	*	* n	NotF η	1.20	*		1800	2.5	4.18	*	0.995-1.005	
Hexa	PCB-156	*	* n	NotF η	1.14	*		1800	2.5	4.76	*	0.996-1.006	
Hexa	PCB-157	*	* n	NotF η	1.16	*		1800	2.5	4.64	*	0.995-1.005	
Hexa	PCB-169	*	* n	NotF η	1.12	*		1800	2.5	4.71	*	0.995-1.005	
Hepta	PCB-188	*	* n	NotF η	1.58	*		1690	2.5	3.03	*	0.996-1.006	
Hepta	PCB-184	*	* n	NotF η	1.63	*		1690	2.5	2.94	*	1.006-1.016	
Hepta	PCB-179	*	* n	NotF η	1.30	*		1690	2.5	3.68	*	1.024-1.034	
Hepta	PCB-176	*	* n	NotF η	1.48	*		1690	2.5	3.25	*	1.035-1.045	
Hepta	PCB-186	*	* n	NotF η	1.45	*		1690	2.5	3.30	*	1.050-1.060	
Hepta	PCB-178	*	* n	NotF η	1.03	*		1690	2.5	4.63	*	1.061-1.071	
Hepta	PCB-175	*	* n	NotF η	1.01	*		1690	2.5	4.73	*	1.069-1.079	
Hepta	PCB-182/187	*	* n	NotF η	1.25	*		1690	2.5	3.83	*	1.073-1.083	
Hepta	PCB-183	*	* n	NotF η	1.21	*		1690	2.5	3.97	*	1.081-1.091	
Hepta	PCB-185	*	* n	NotF η	1.80	*		1690	2.5	3.68	*	0.951-0.961	
Hepta	PCB-174	*	* n	NotF η	1.38	*		1690	2.5	4.82	*	0.958-0.968	
Hepta	PCB-181	*	* n	NotF η	1.38	*		1690	2.5	4.81	*	0.960-0.970	
Hepta	PCB-177	*	* n	NotF η	1.26	*		1690	2.5	5.29	*	0.963-0.973	
Hepta	PCB-171	*	* n	NotF η	1.58	*		1690	2.5	4.19	*	0.970-0.980	
Hepta	PCB-173	*	* n	NotF η	1.11	*		1690	2.5	5.98	*	0.978-0.988	
Hepta	PCB-172	*	* n	NotF η	1.63	*		1690	2.5	4.06	*	0.987-0.997	
Hepta	PCB-192	*	* n	NotF η	1.74	*		1690	2.5	3.81	*	0.991-1.001	
Hepta	PCB-180	*	* n	NotF η	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 η	1.72	*		1690	2.5	3.87	*	0.999-1.009	
Hepta	PCB-191	*	* n	NotF η	1.69	*		1690	2.5	3.92	*	1.004-1.014	
Hepta	PCB-170	*	* n	NotF η	1.60	*		1690	2.5	4.69	*	0.995-1.005	
Hepta	PCB-190	*	* n	NotF η	2.21	*		1690	2.5	3.39	*	0.998-1.008	
Hepta	PCB-189	*	* n	NotF η	1.55	*		1690	2.5	3.82	*	0.995-1.005	
Octa	PCB-202	*	* n	NotF η	1.08	*		1570	2.5	6.80	*	0.995-1.005	
Octa	PCB-201	*	* n	NotF η	1.15	*		1570	2.5	6.40	*	1.005-1.015	
Octa	PCB-204	*	* n	NotF η	1.14	*		1570	2.5	6.47	*	1.008-1.018	
Octa	PCB-197	*	* n	NotF η	1.07	*		1570	2.5	6.86	*	1.015-1.025	
Octa	PCB-200	*	* n	NotF η	1.06	*		1570	2.5	6.93	*	1.032-1.044	
Octa	PCB-198	*	* n	NotF η	0.76	*		1570	2.5	9.75	*	1.059-1.069	
Octa	PCB-199	*	* n	NotF η	0.80	*		1570	2.5	9.23	*	1.061-1.071	
Octa	PCB-196/203	*	* n	NotF η	0.80	*		1570	2.5	9.19	*	1.066-1.076	
Octa	PCB-195	*	* n	NotF η	1.23	*		1520	2.5	4.20	*	0.979-0.989	
Octa	PCB-194	*	* n	NotF η	1.21	*		1520	2.5	4.25	*	0.995-1.005	
Octa	PCB-205	*	* n	NotF η	1.54	*		1520	2.5	3.34	*	1.001-1.011	
Nona	PCB-208	*	* n	NotF η	0.93	*		1200	2.5	2.93	*	0.995-1.005	
Nona	PCB-207	*	* n	NotF η	1.08	*		1200	2.5	2.51	*	1.001-1.011	
Nona	PCB-206	*	* n	NotF η	1.02	*		1200	2.5	5.23	*	0.995-1.005	
Deca	PCB-209	*	* n	NotF η	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

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	Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-1	1.14e+08	3.28	y	0.87	16:09	0.623	0.629-0.635	7000	70.0											
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											
13C-PCB-11	1.37e+08	1.58	y	0.94	25:13	0.973	0.968-0.978	7820	78.2											
13C-PCB-19	7.35e+07	1.09	y	0.53	24:12	0.933	0.930-0.940	7380	73.8											
13C-PCB-28	1.23e+08	1.06	y	0.93	29:04	1.003	0.999-1.009	7300	73.0		13C-PCB-79	1.37e+08	0.80	y	1.10	37:49	0.969	0.964-0.974	10300	103
13C-PCB-32	1.15e+08	1.08	y	0.80	27:07	1.046	1.040-1.050	7720	77.2		13C-PCB-178	4.46e+07	0.47	y	0.90	45:39	0.925	0.920-0.930	11000	110
13C-PCB-37	1.36e+08	1.08	y	0.84	32:57	1.137	1.131-1.143	8920	89.2											
13C-PCB-47	9.65e+07	0.79	y	0.81	31:59	0.870	0.866-0.874	8080	80.8											
13C-PCB-52	9.02e+07	0.80	y	0.77	31:29	0.856	0.853-0.861	7960	79.6											
13C-PCB-54	9.99e+07	0.80	y	0.97	27:57	0.761	0.758-0.766	7000	70.0											
13C-PCB-70	1.28e+08	0.80	y	1.00	35:31	0.966	0.961-0.971	8690	86.9											
13C-PCB-77	1.22e+08	0.80	y	0.94	39:38	1.078	1.073-1.083	8800	88.0											
13C-PCB-80	1.33e+08	0.81	y	1.03	35:56	0.978	0.972-0.982	8790	87.9											
13C-PCB-81	1.20e+08	0.80	y	0.92	39:02	1.062	1.057-1.067	8870	88.7											
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											

RS

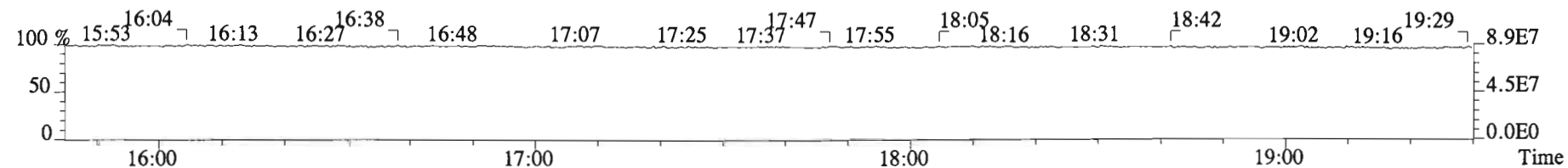
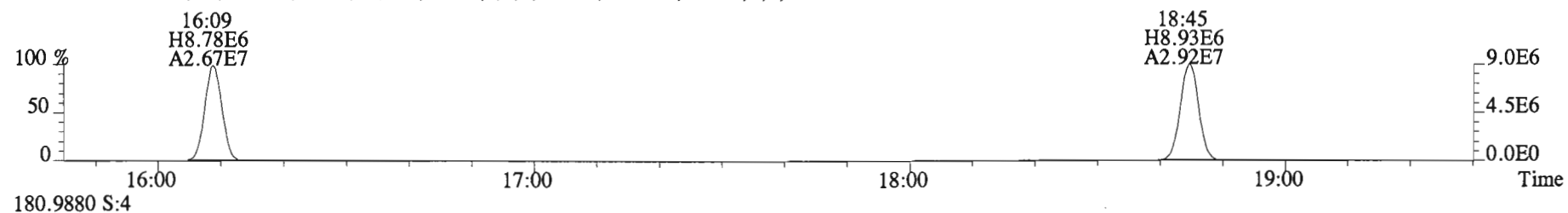
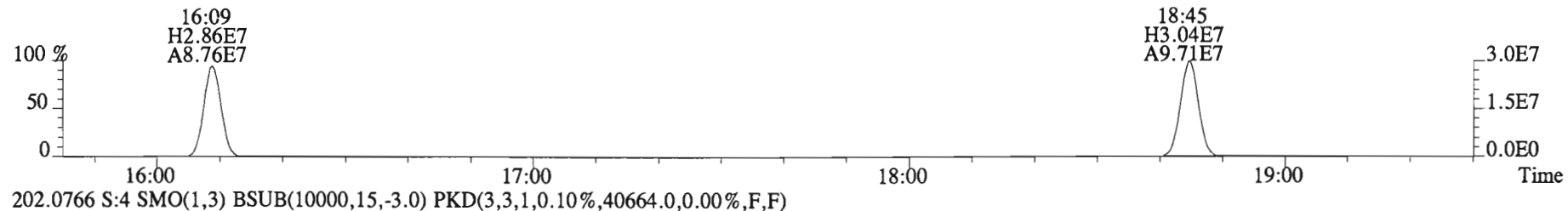
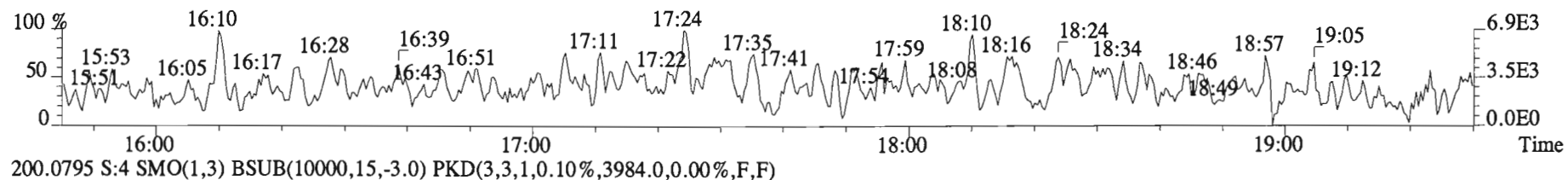
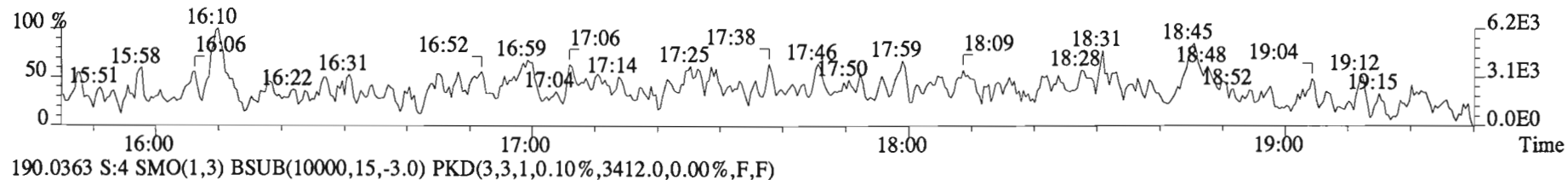
Name	Resp	RA	RRF	RT	Conc	
13C-PCB-15	1.87e+08	1.57	y	1.00	25:56	10000
13C-PCB-31	1.81e+08	1.05	y	1.00	28:58	10000
13C-PCB-60	1.47e+08	0.81	y	1.00	36:45	10000
13C-PCB-111	8.55e+07	1.59	y	1.00	39:13	10000
13C-PCB-128	8.41e+07	1.31	y	1.00	46:22	10000
13C-PCB-205	8.51e+07	0.92	y	1.00	54:03	10000

* = OK within 1668 method limits,

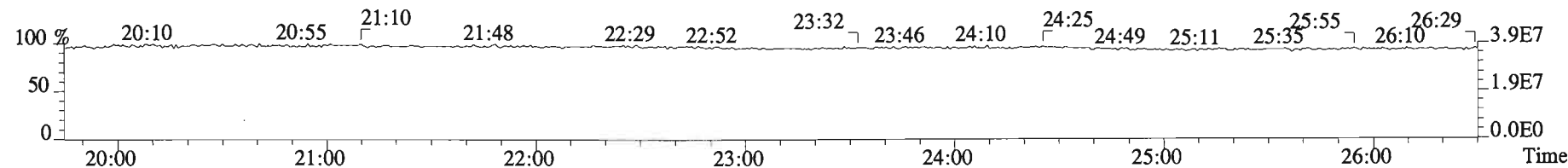
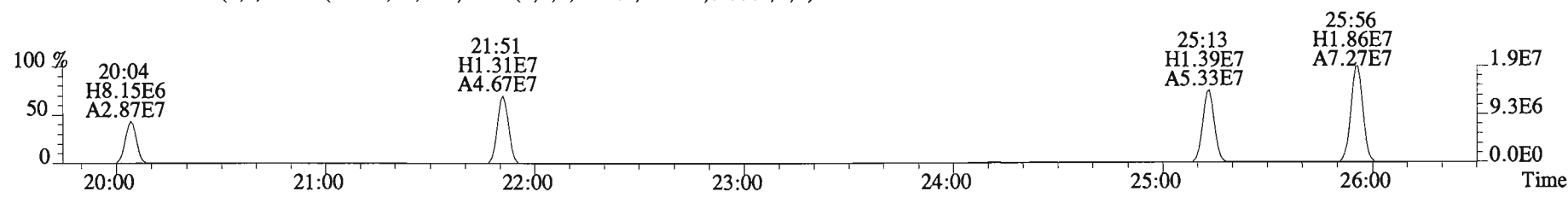
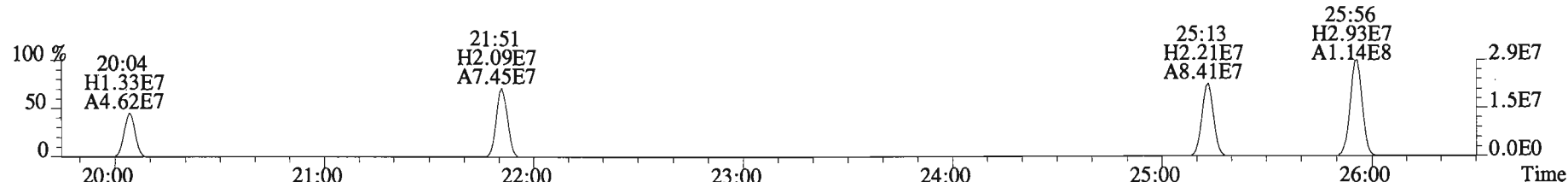
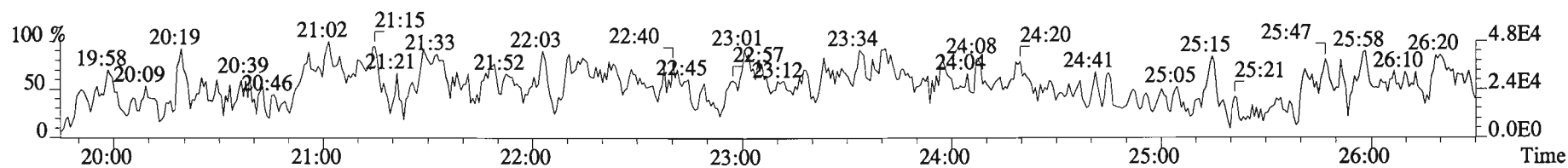
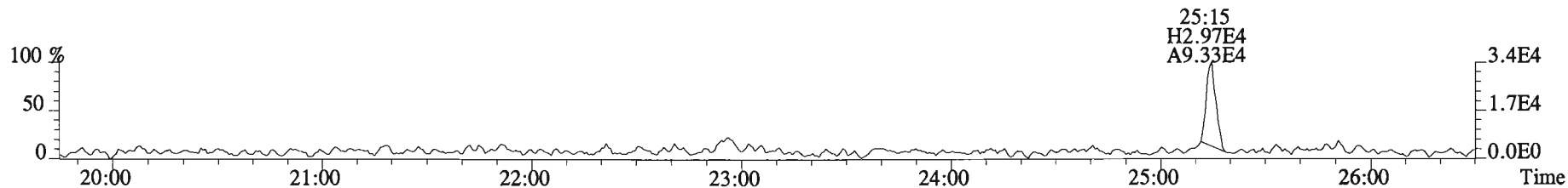
Analyst: DMS

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
188.0393 S:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2876.0,0.00%,F,F)

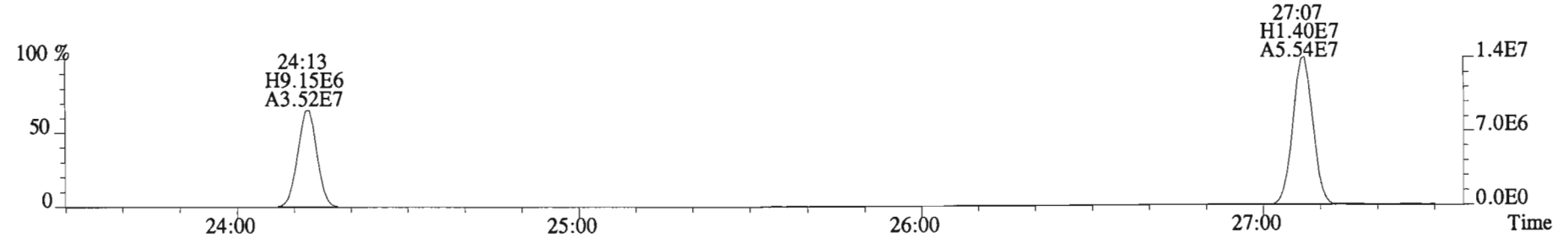
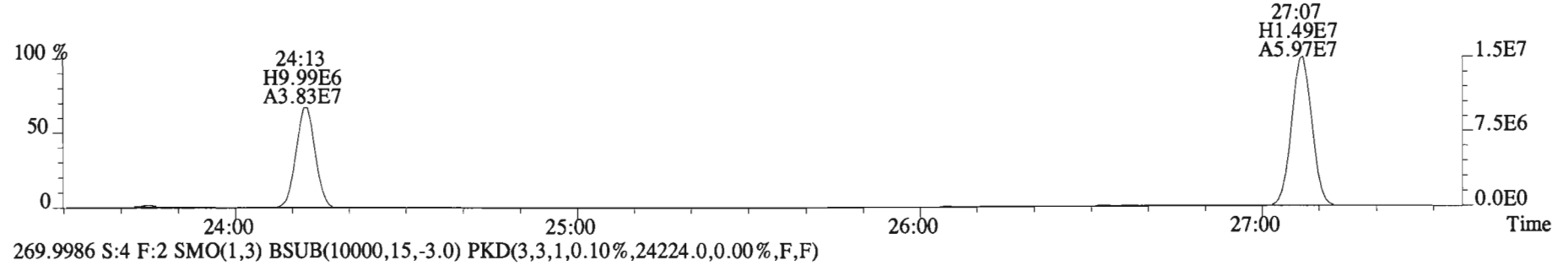
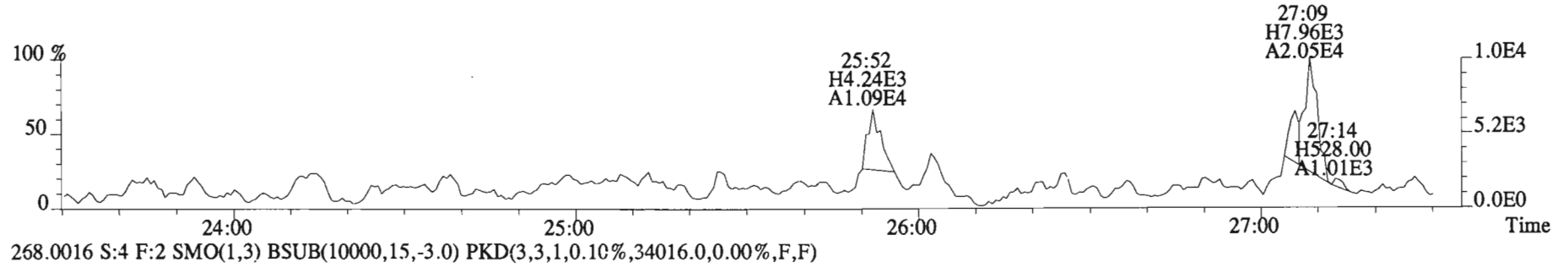
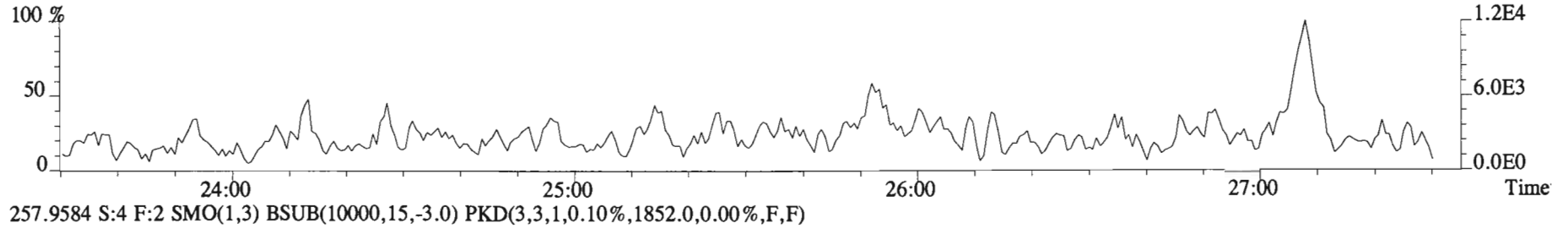


File:150205E1 #1-757 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
222.0003 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3412.0,0.00%,F,F)

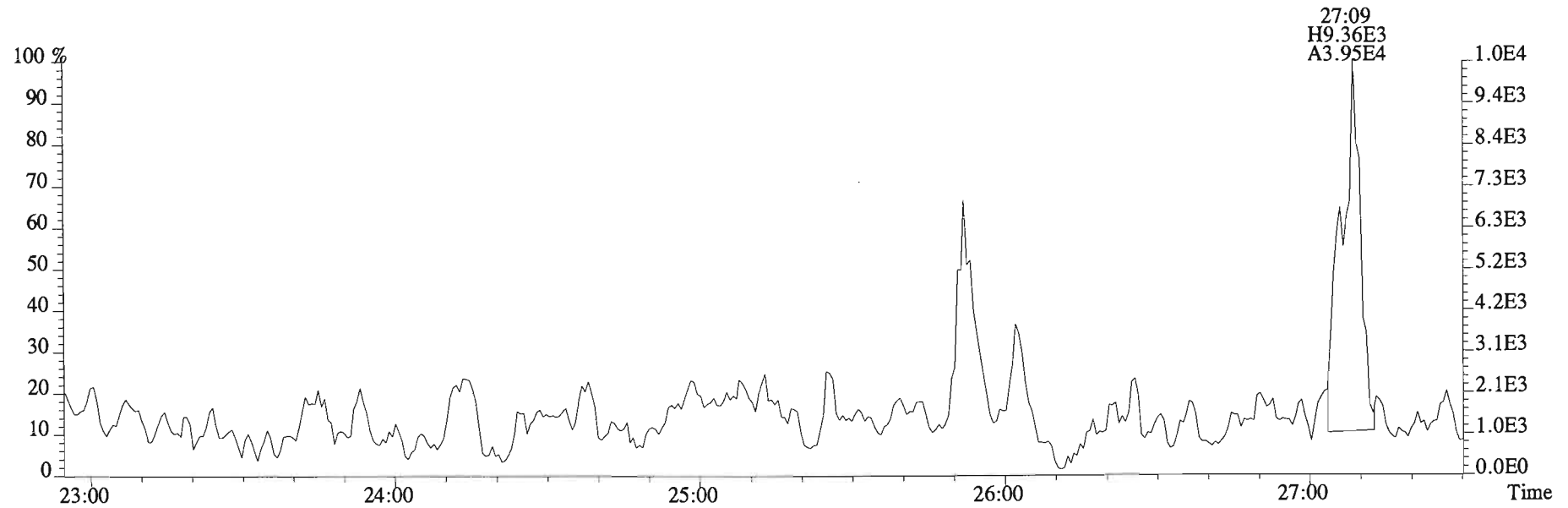
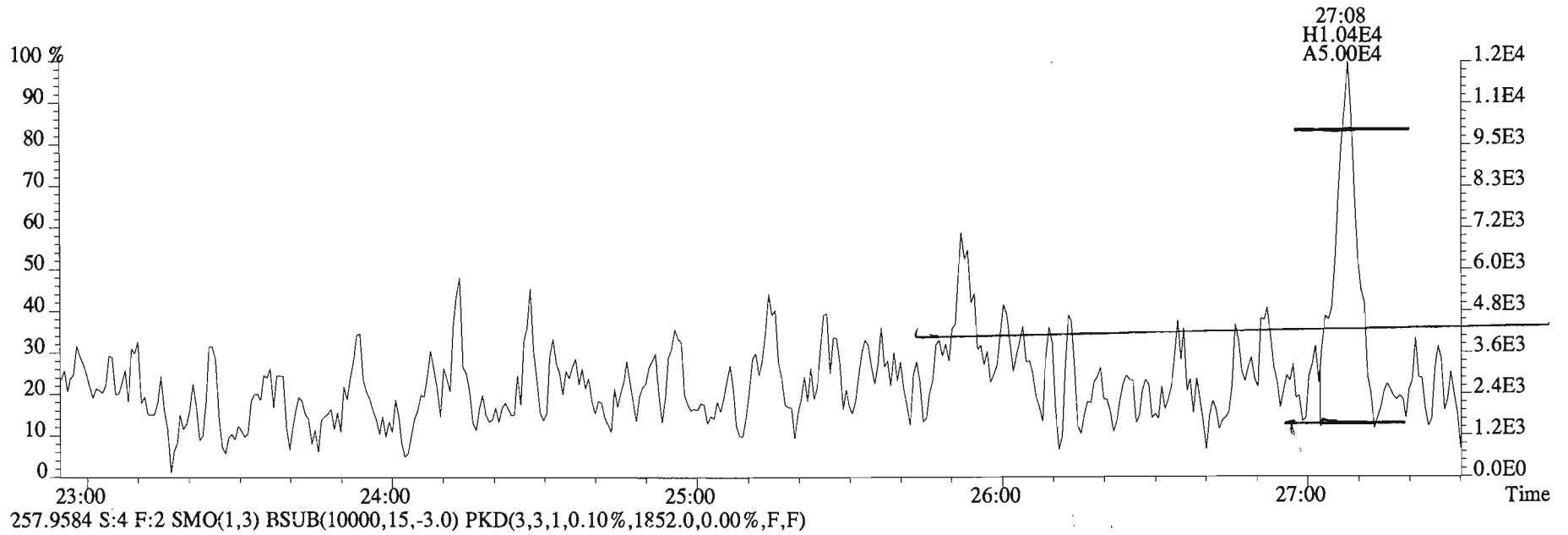


File:150205E1 #1-757 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
255.9613 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3320.0,0.00%,F,F)

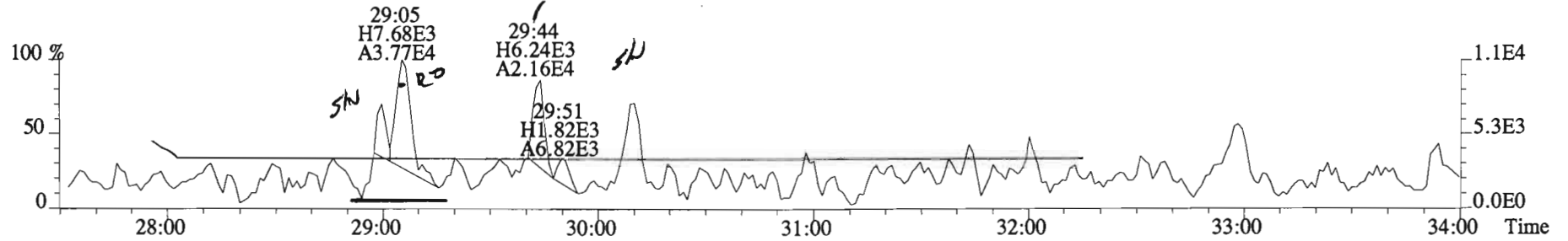
RD



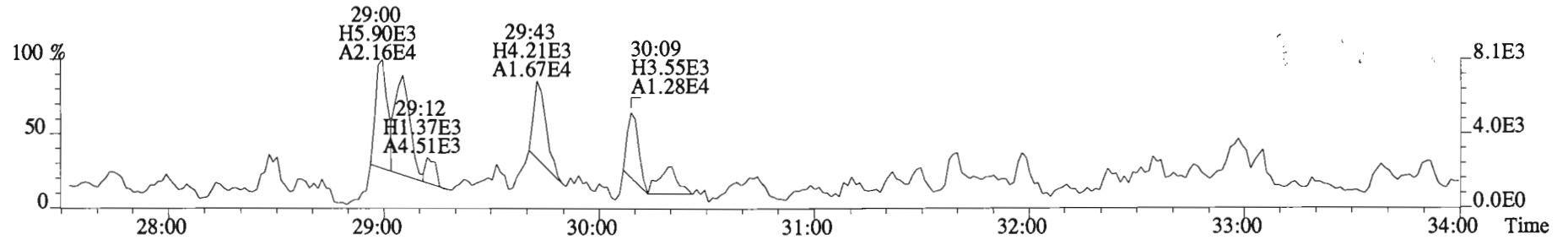
File:150205E1 #1-757 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
255.9613 S:4 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3320.0,0.00%,F,F)



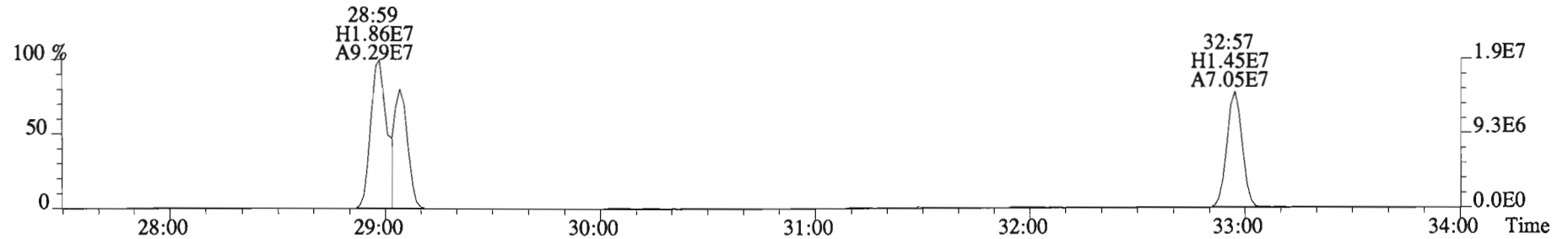
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2904.0,0.00%,F,F)



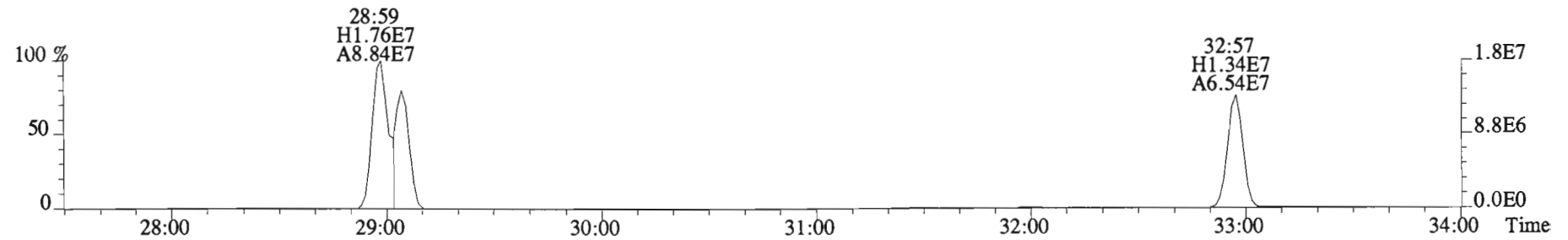
257.9584 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1892.0,0.00%,F,F)



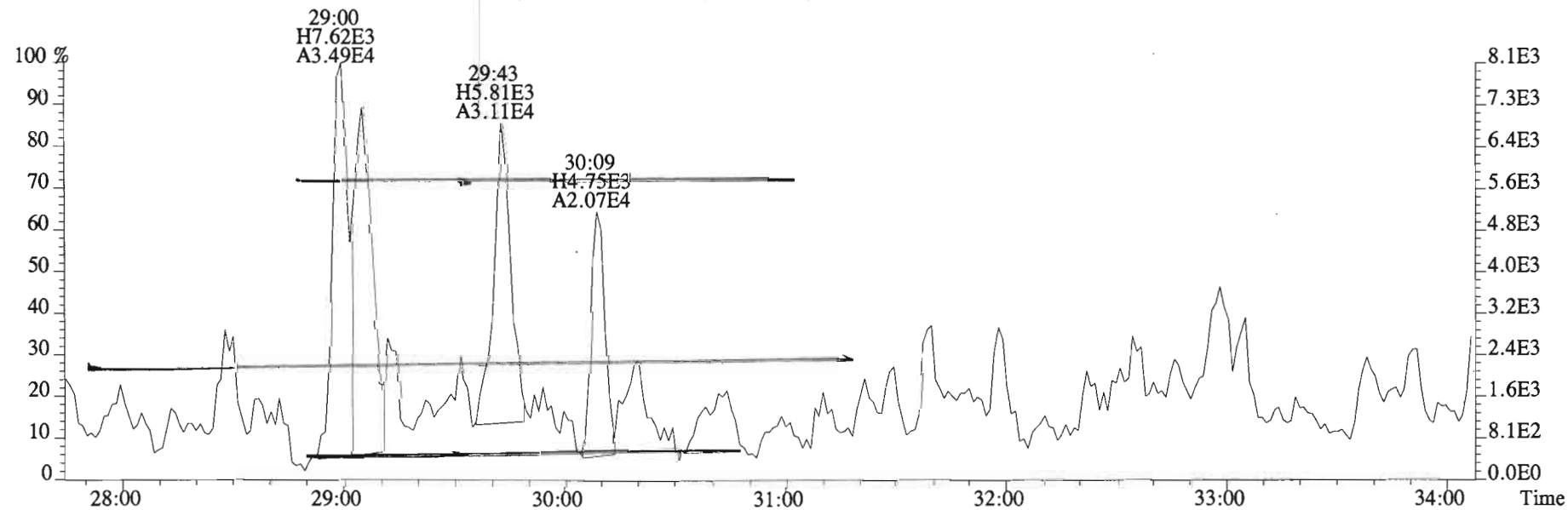
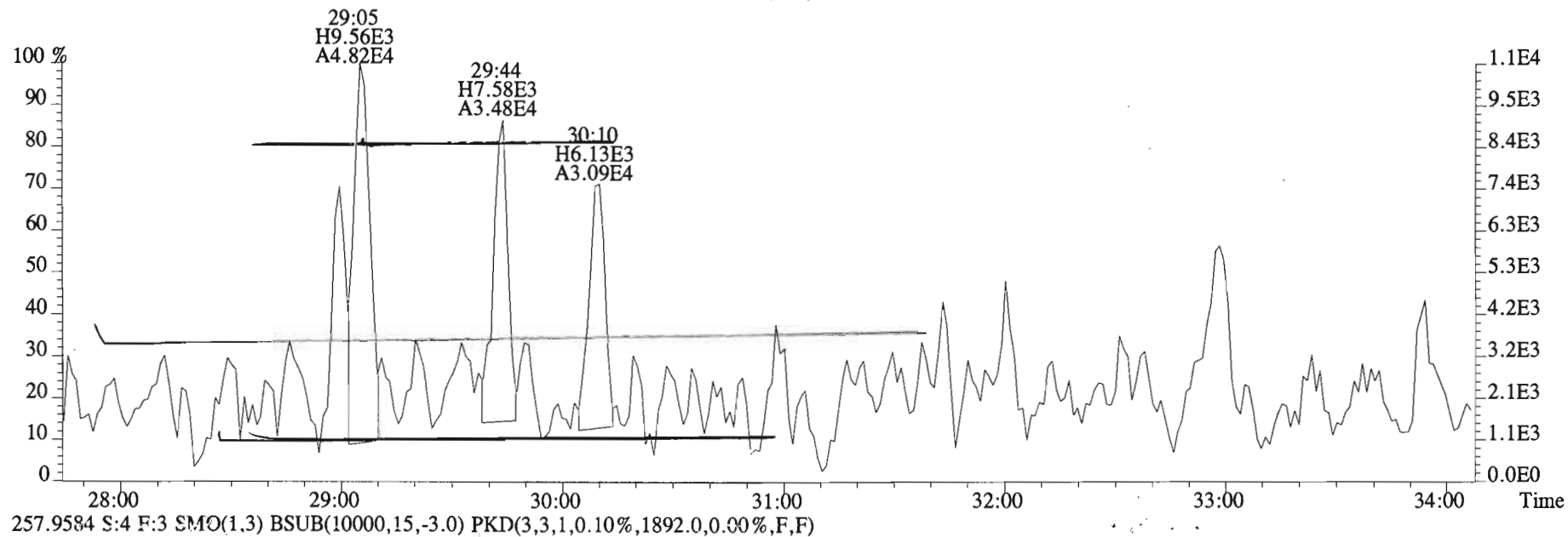
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,38296.0,0.00%,F,F)



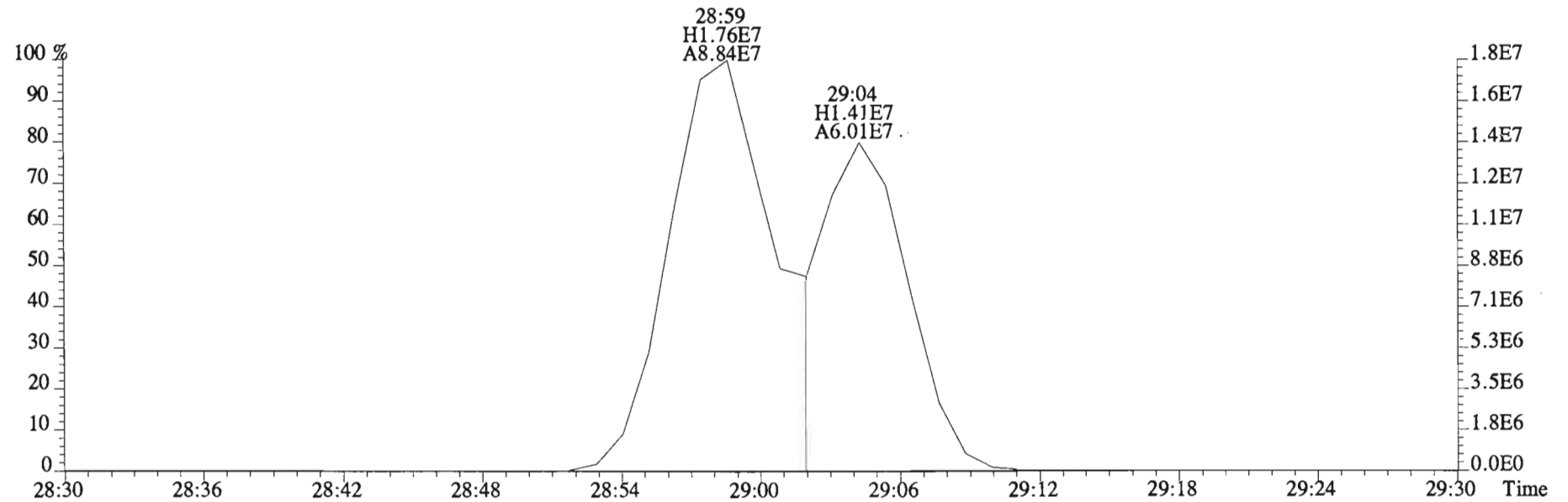
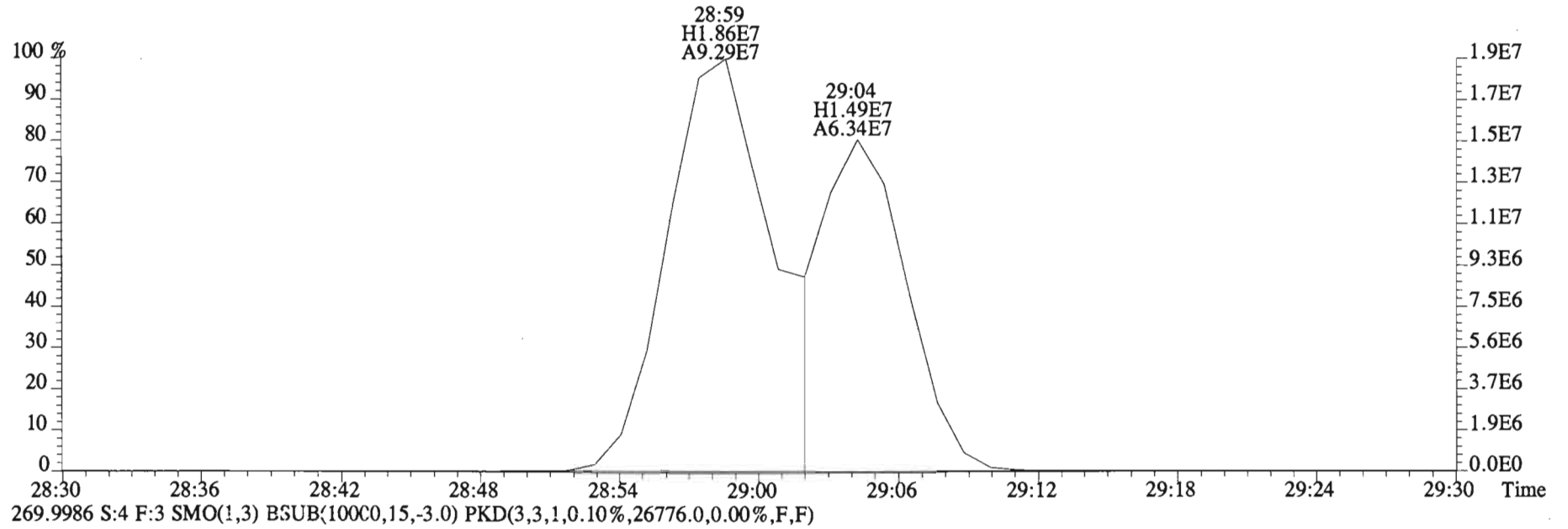
269.9986 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,26776.0,0.00%,F,F)



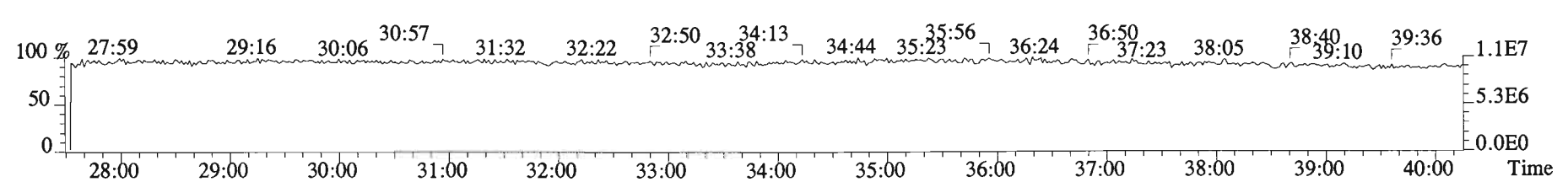
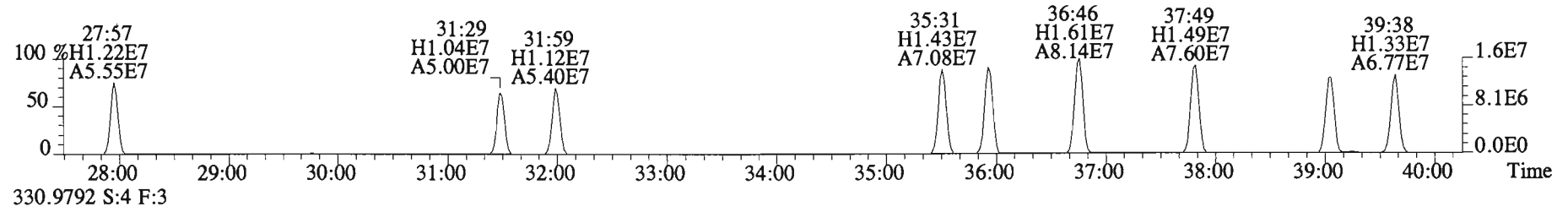
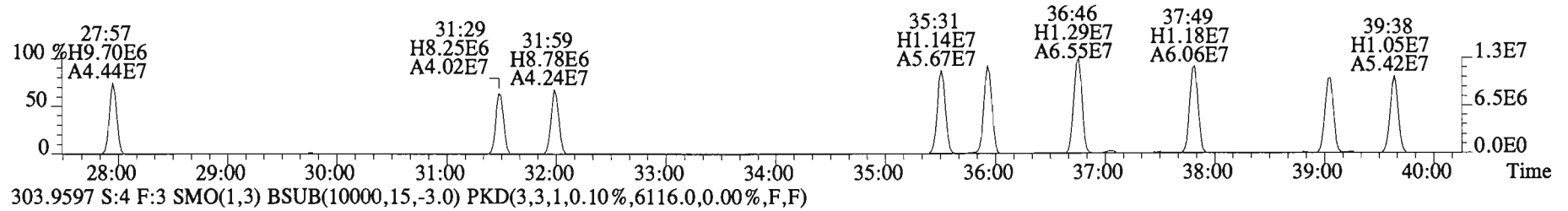
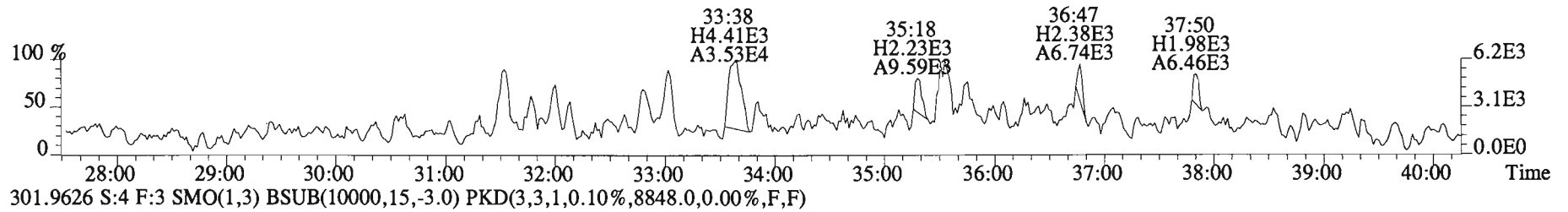
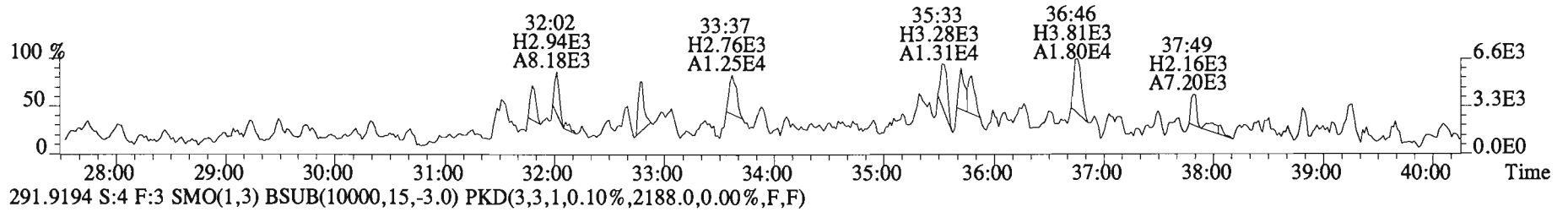
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BLK1 Method Blank 10 Exp: PCB_ZB1
 255.9613 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2904.0,0.00%,F,F)



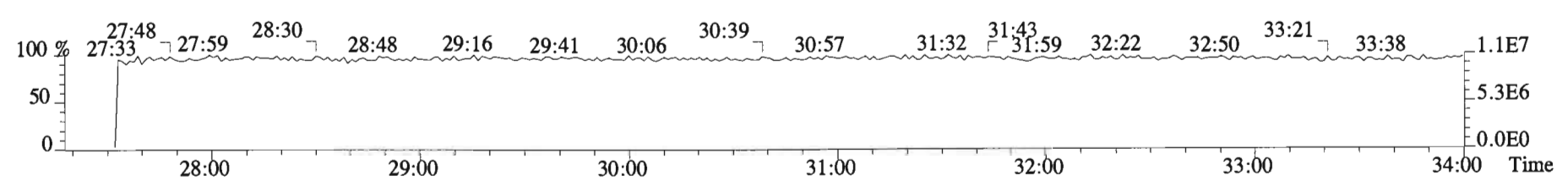
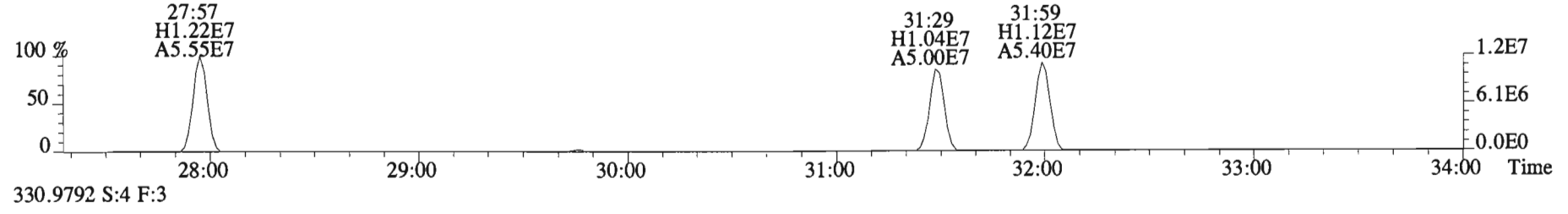
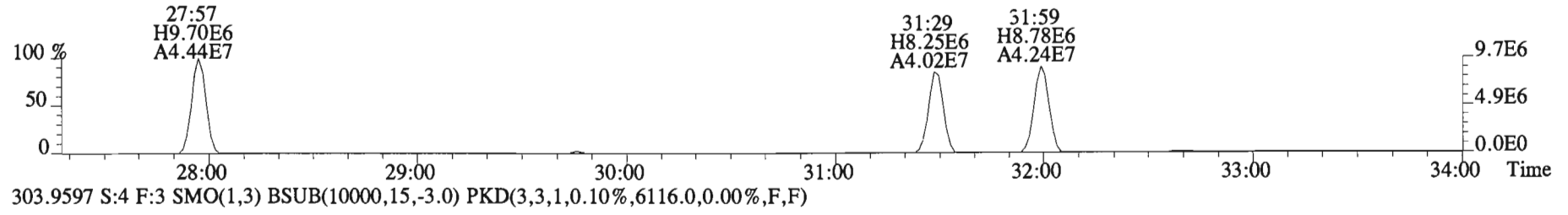
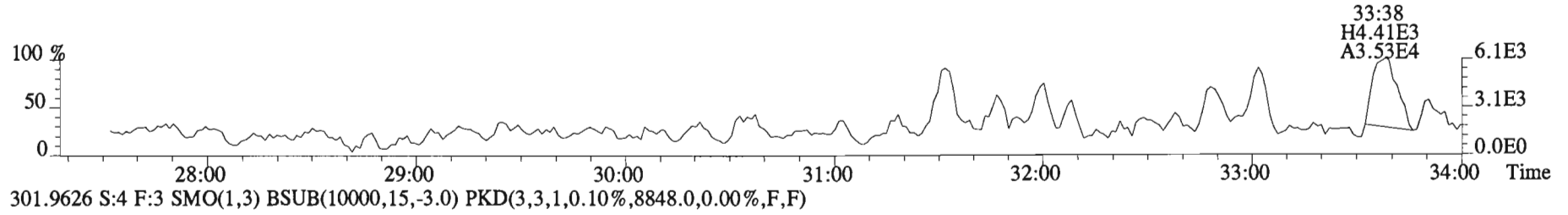
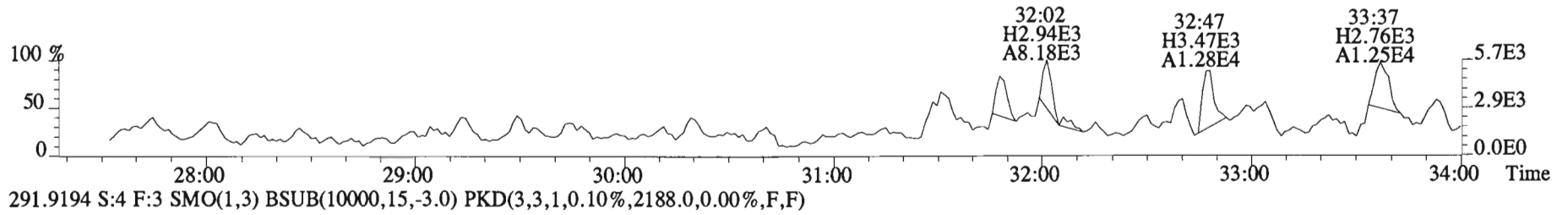
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
268.0016 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,38296.0,0.00%,F,F)



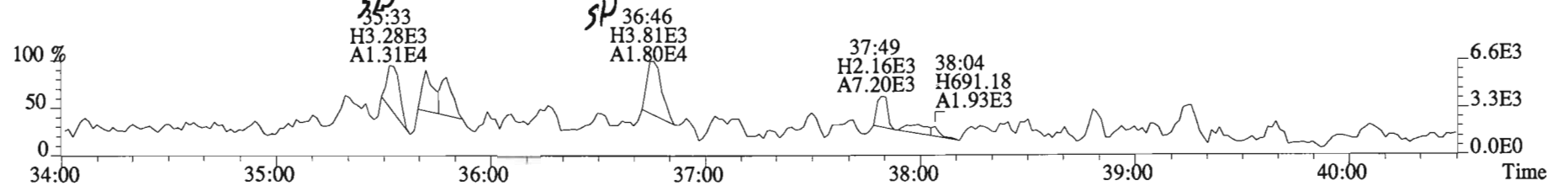
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
 289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2088.0,0.00%,F,F)



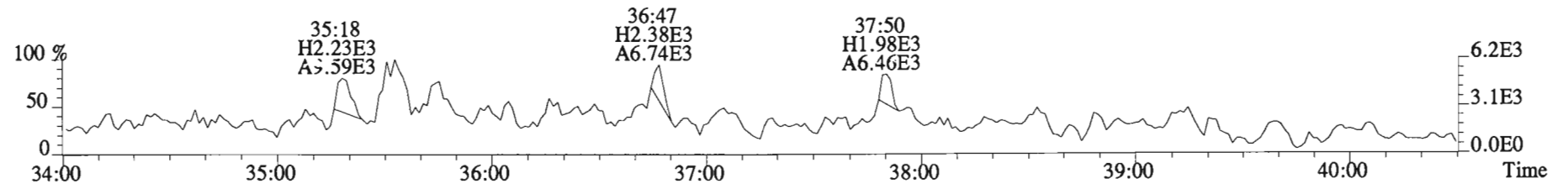
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2088.0,0.00%,F,F)



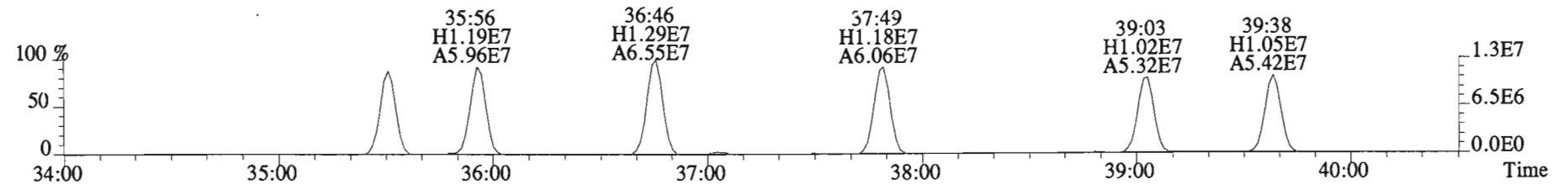
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
 289.9224 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2088.0,0.00%,F,F)



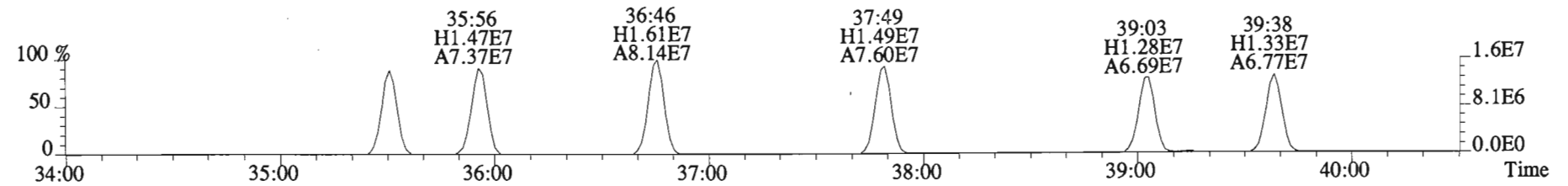
291.9194 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2188.0,0.00%,F,F)



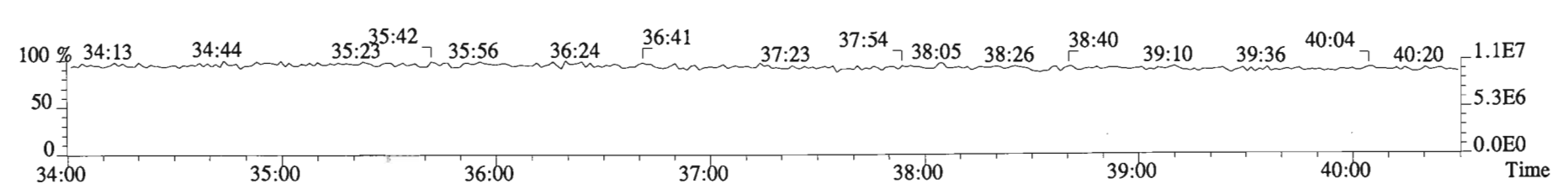
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8848.0,0.00%,F,F)



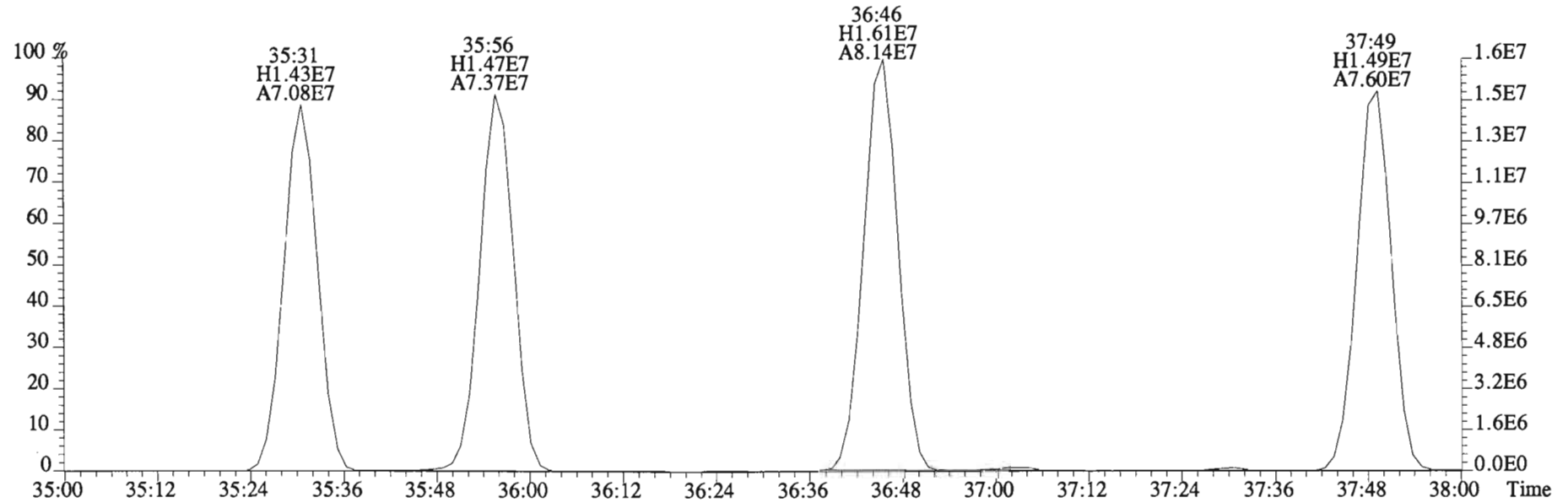
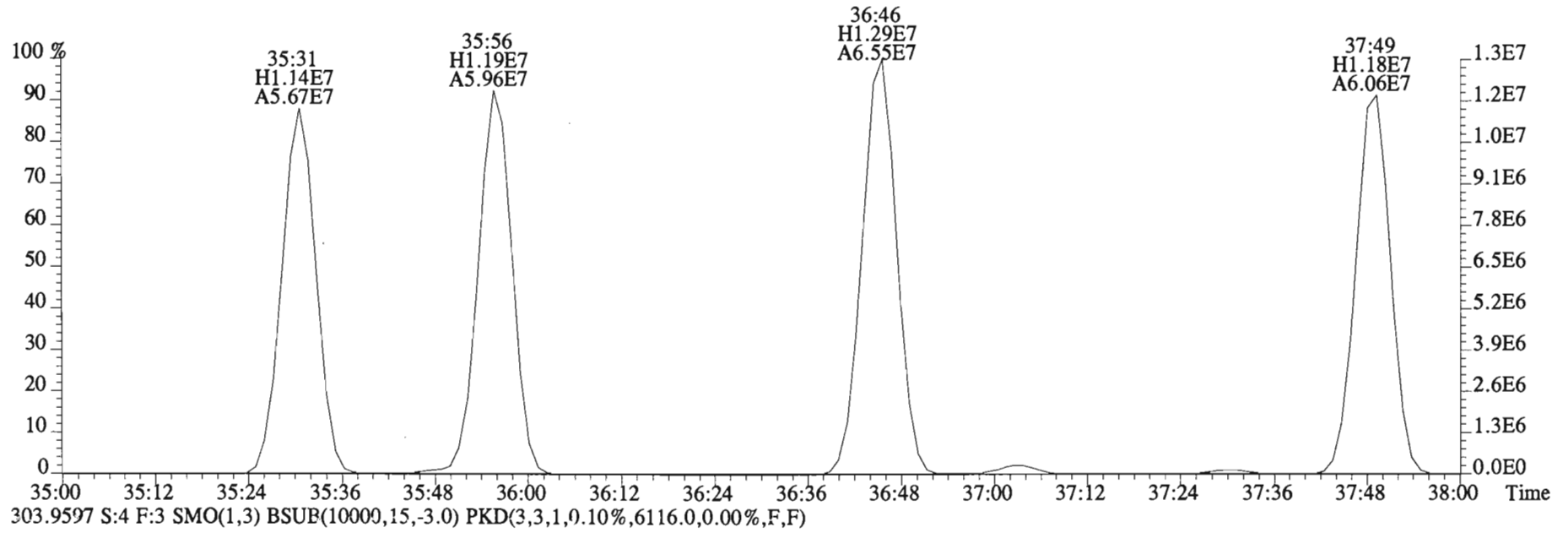
303.9597 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6116.0,0.00%,F,F)



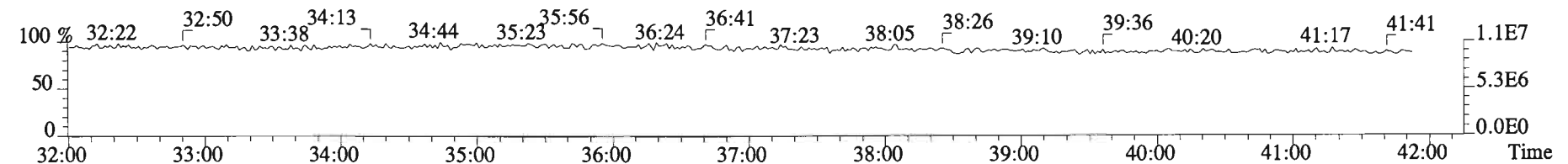
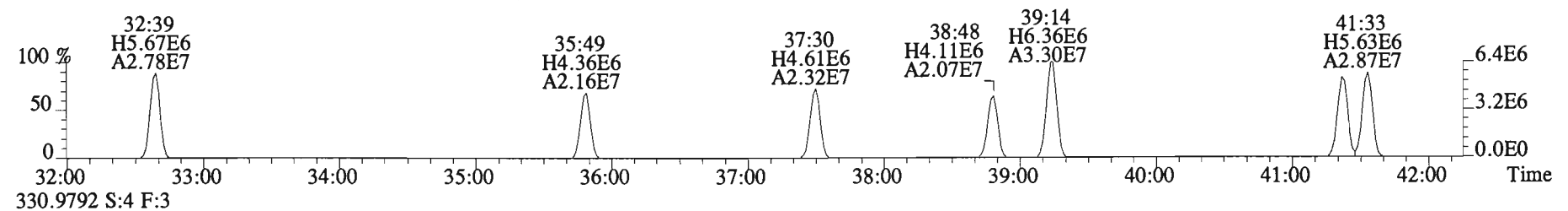
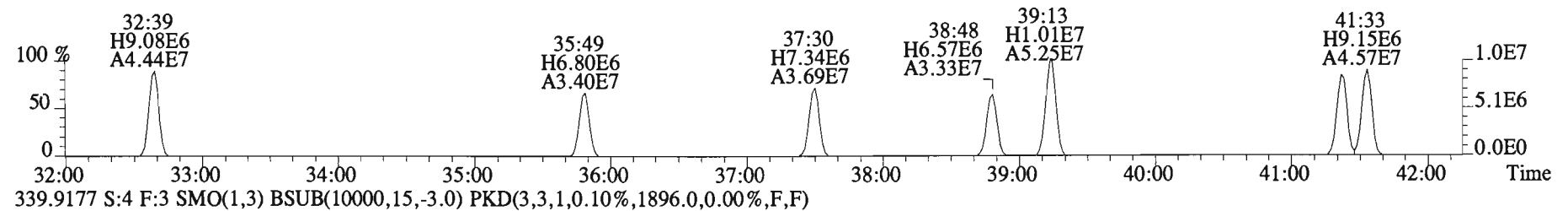
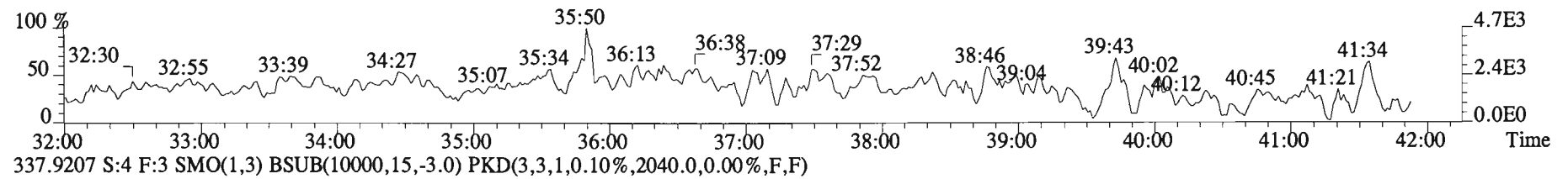
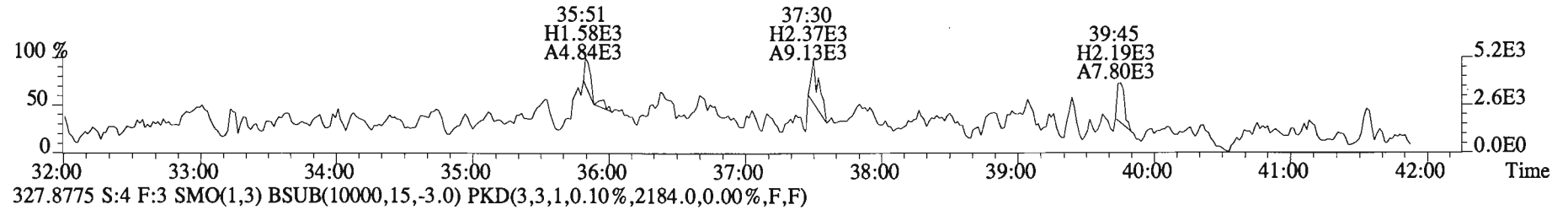
330.9792 S:4 F:3



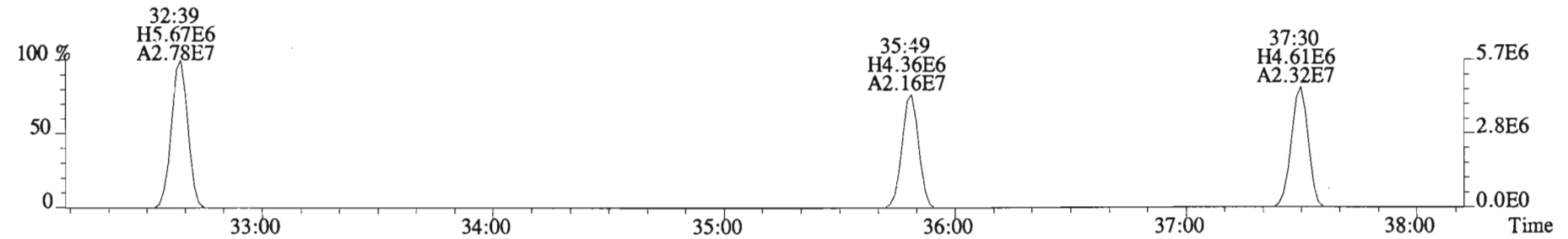
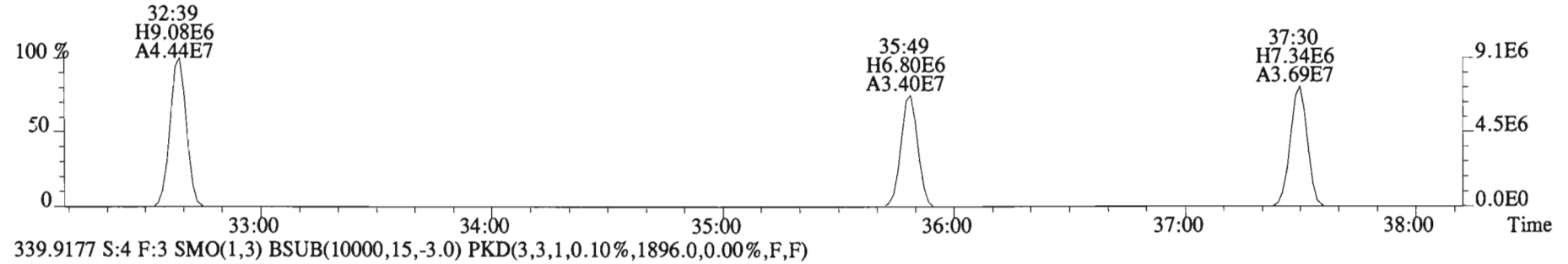
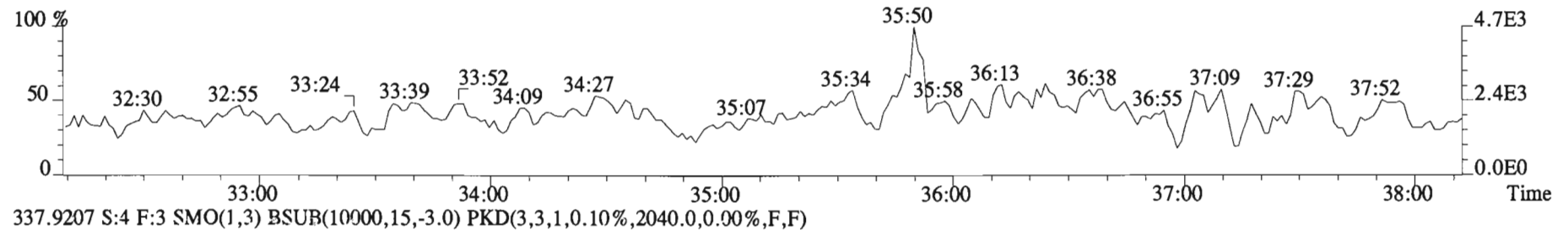
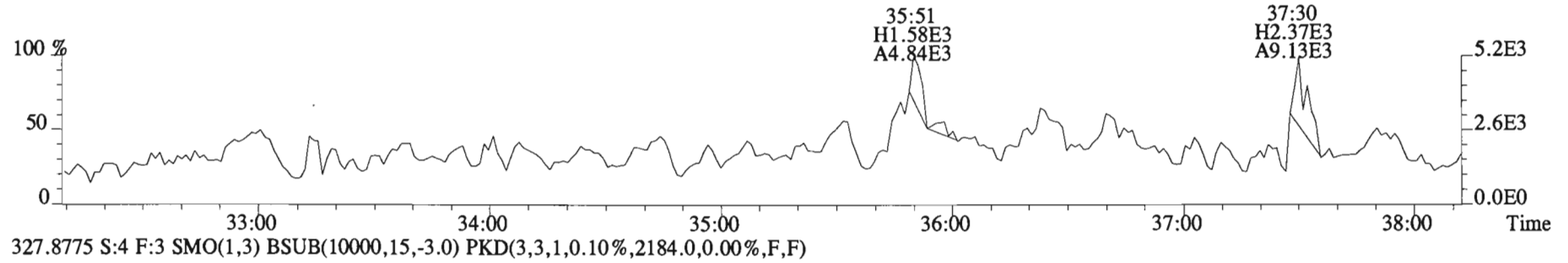
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
301.9626 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8848.0,0.00%,F,F)



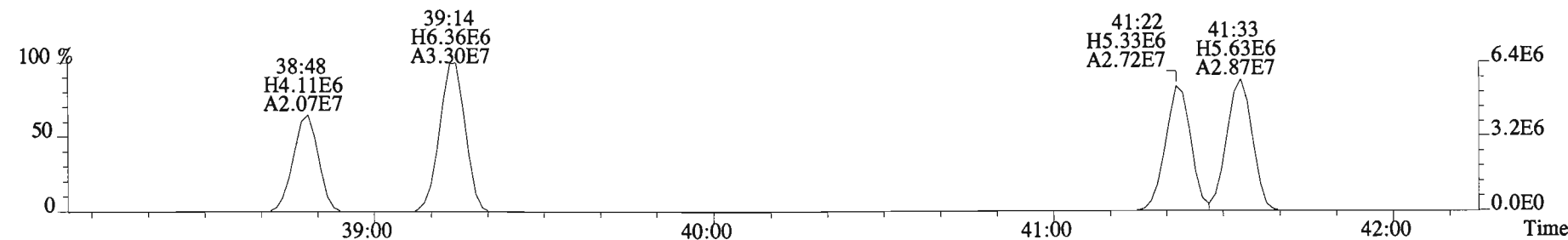
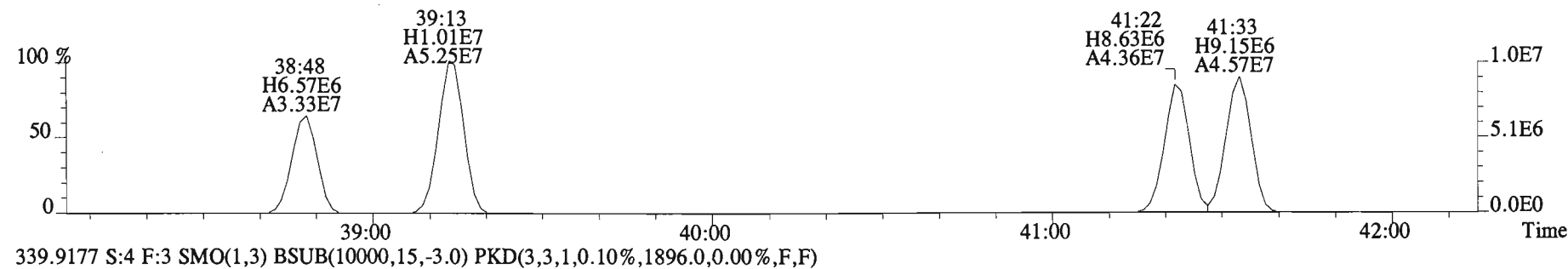
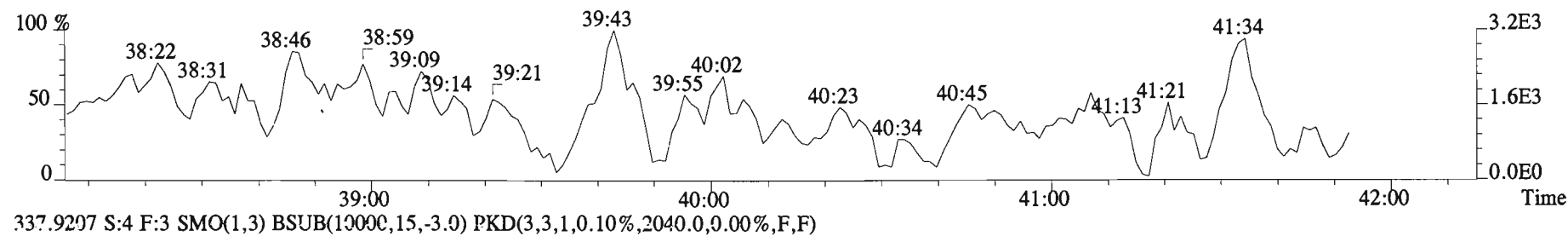
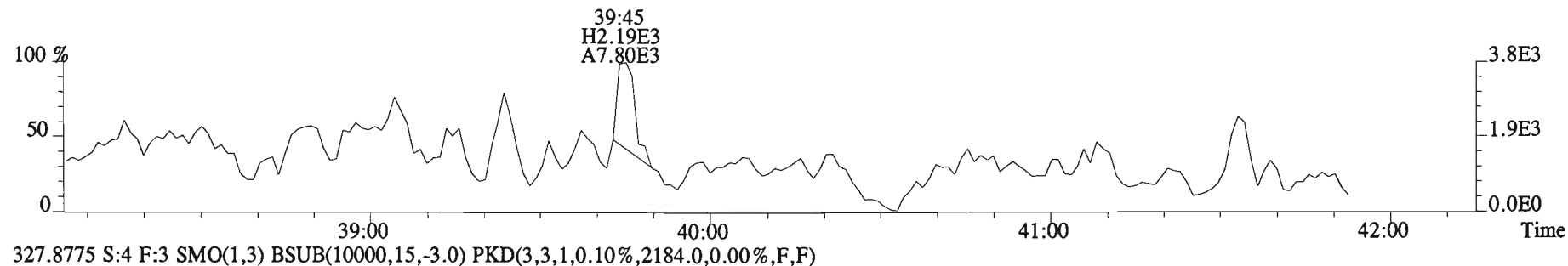
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
 325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976.0,0.00%,F,F)



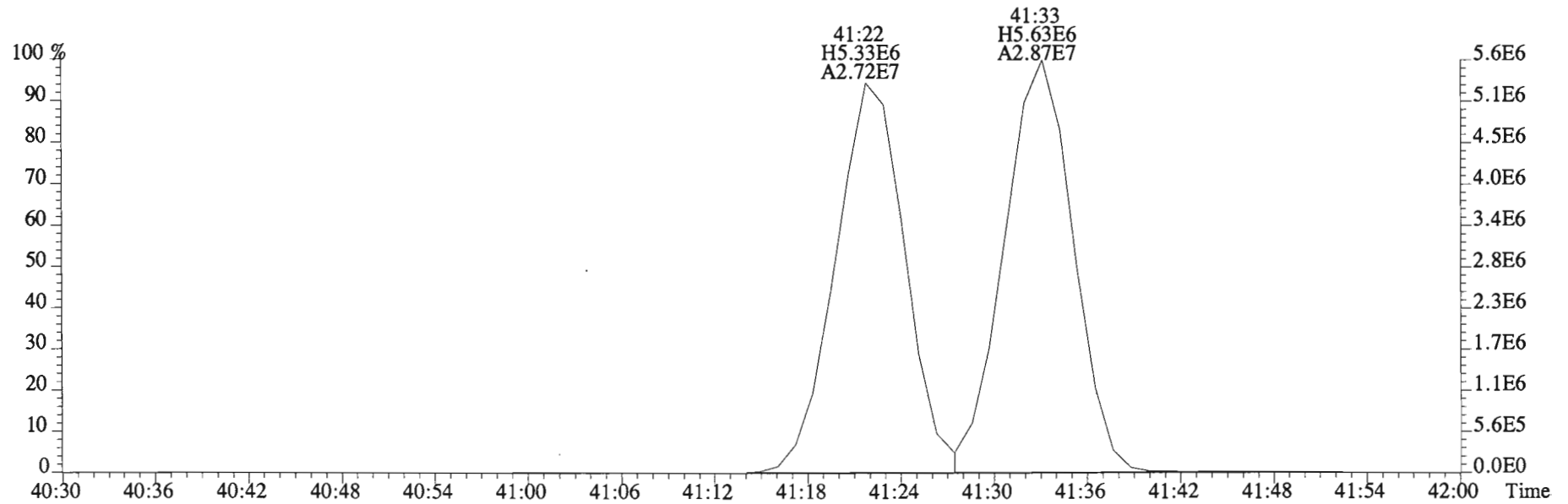
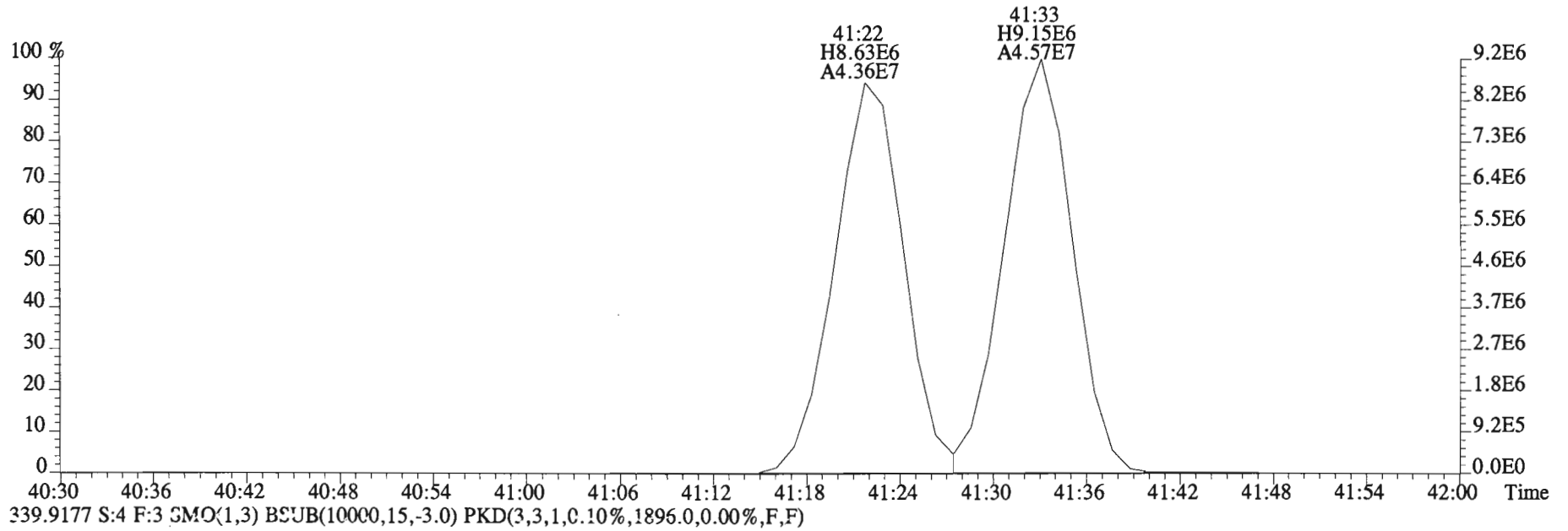
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976.0,0.00%,F,F)



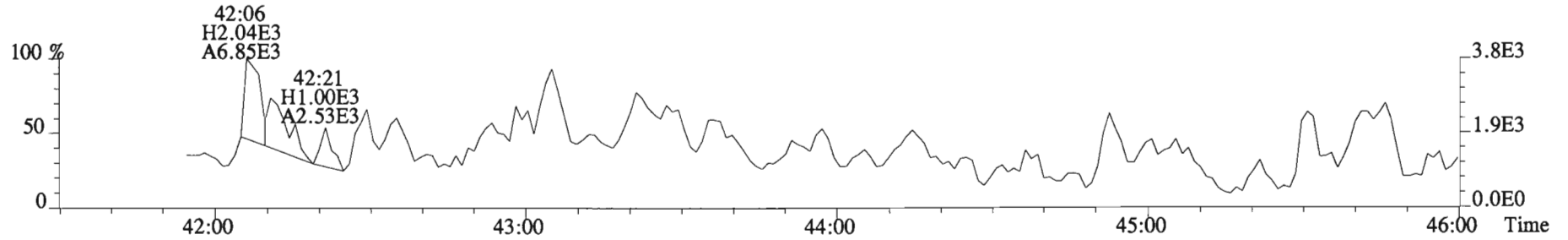
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
 325.8804 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1976.0,0.00%,F,F)



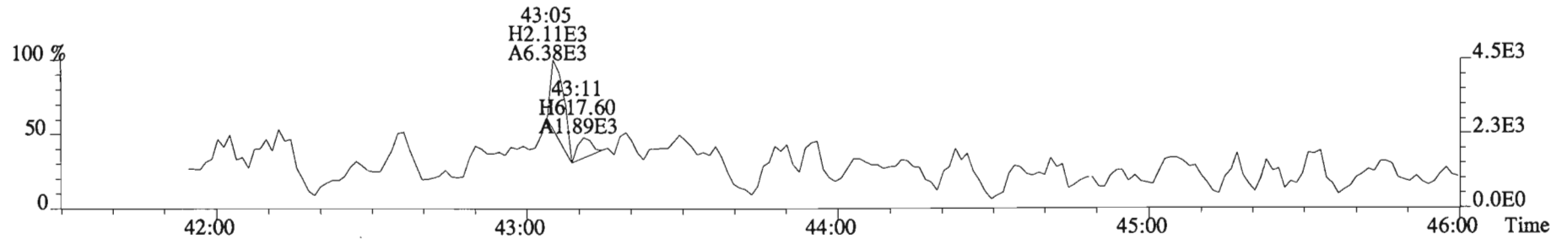
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
337.9207 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2040.0,0.00%,F,F)



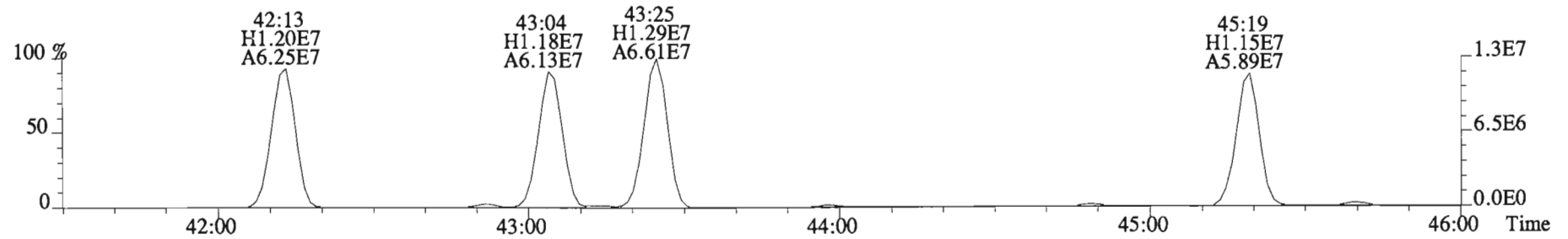
File:150205E1 #1-555 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
325.8804 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2076.0,0.00%,F,F)



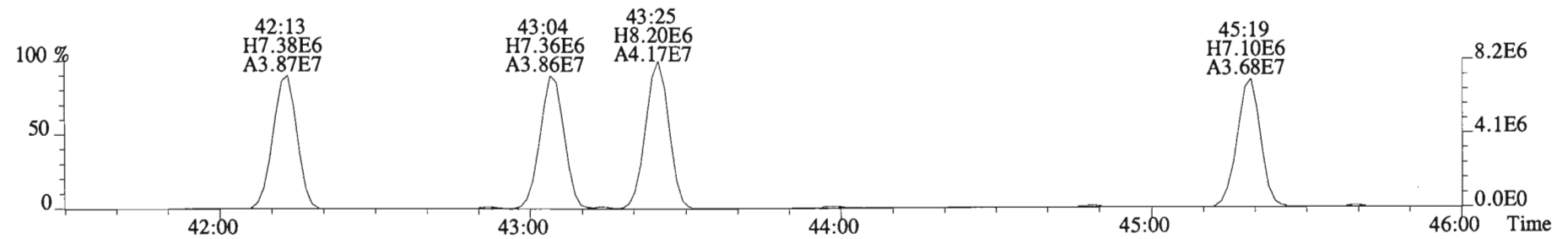
327.8775 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1836.0,0.00%,F,F)



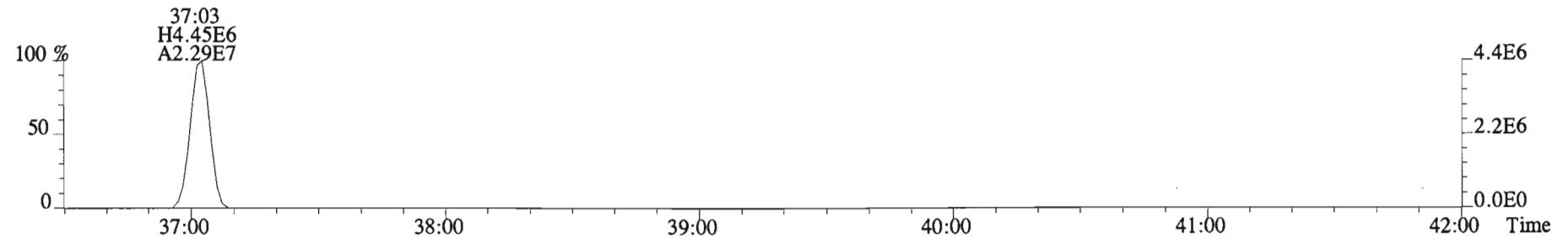
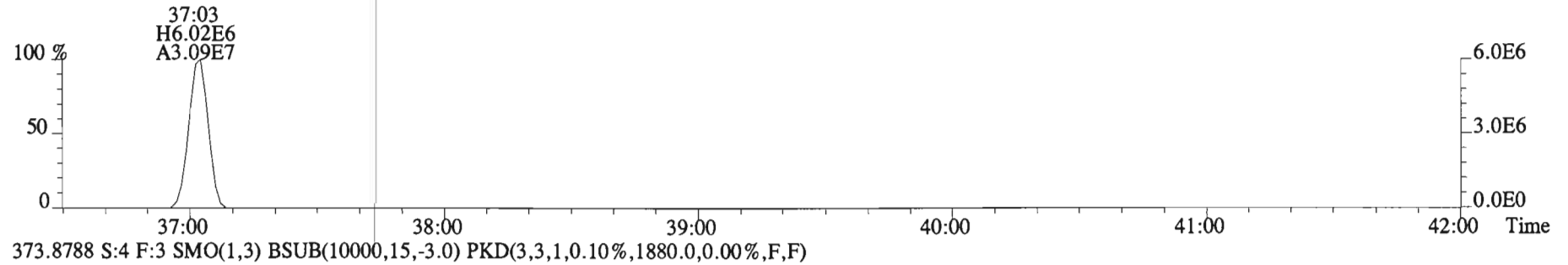
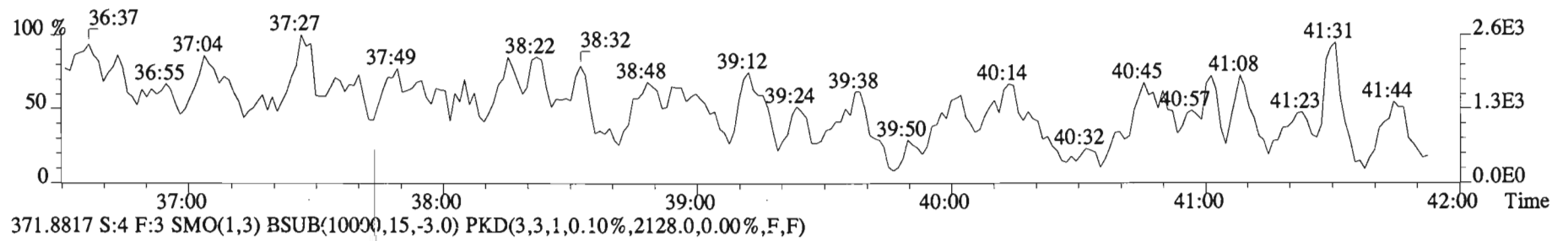
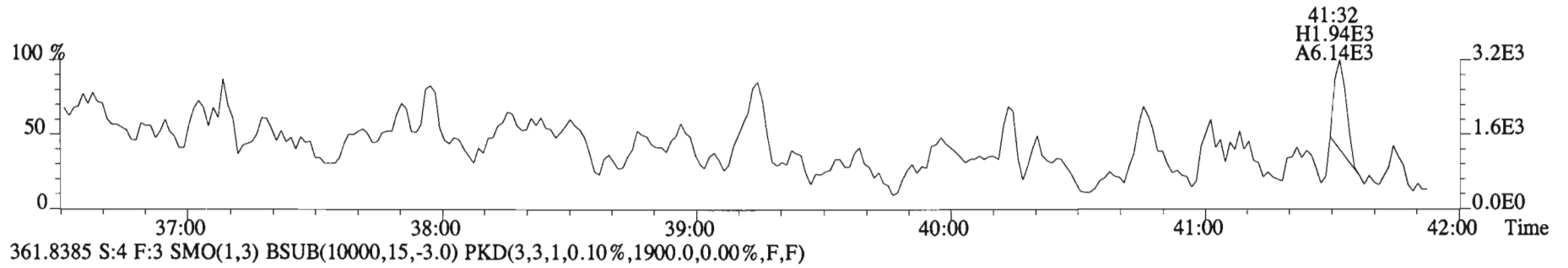
337.9207 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6172.0,0.00%,F,F)



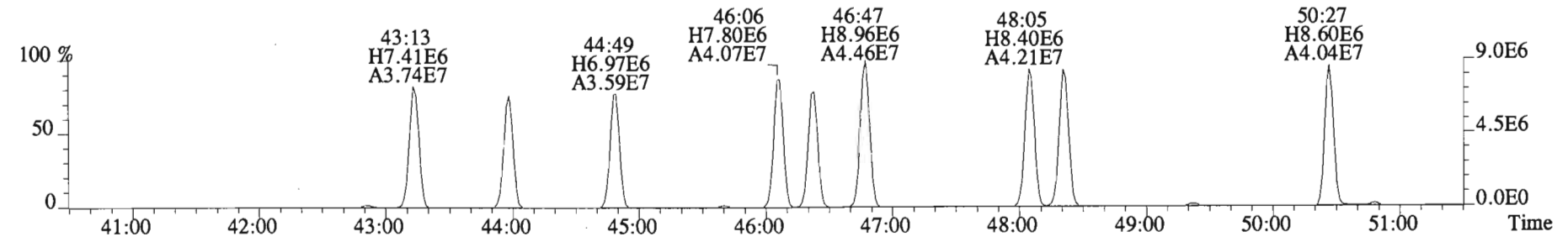
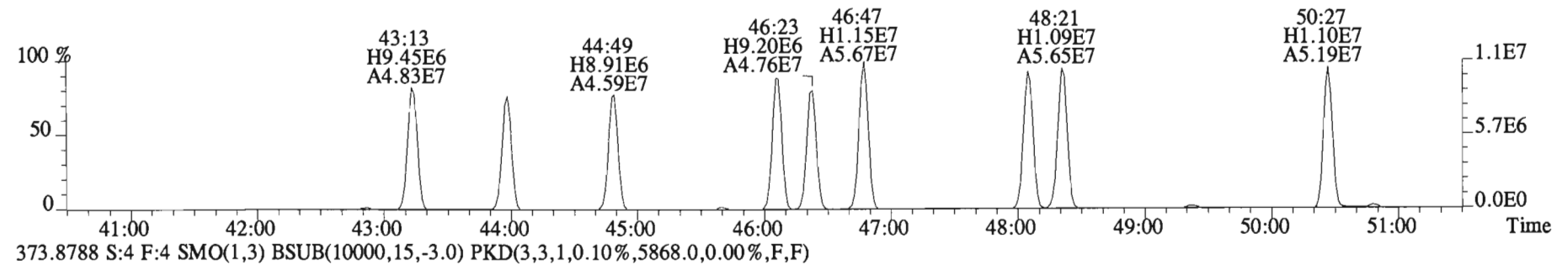
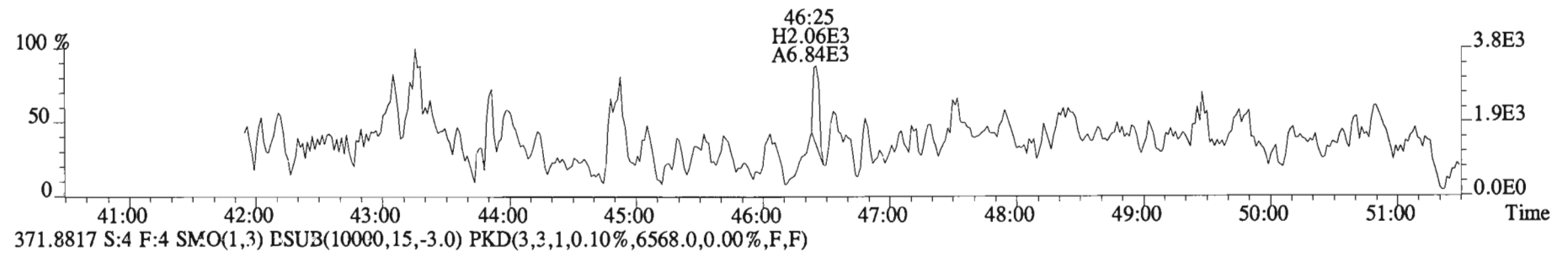
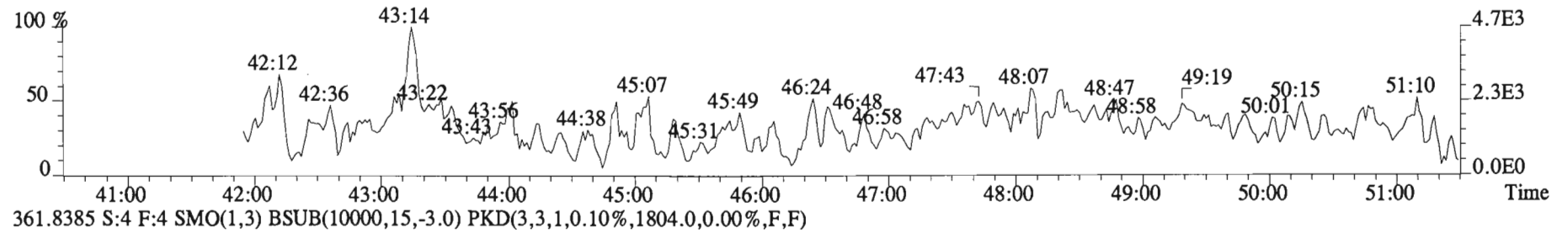
339.9177 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4572.0,0.00%,F,F)



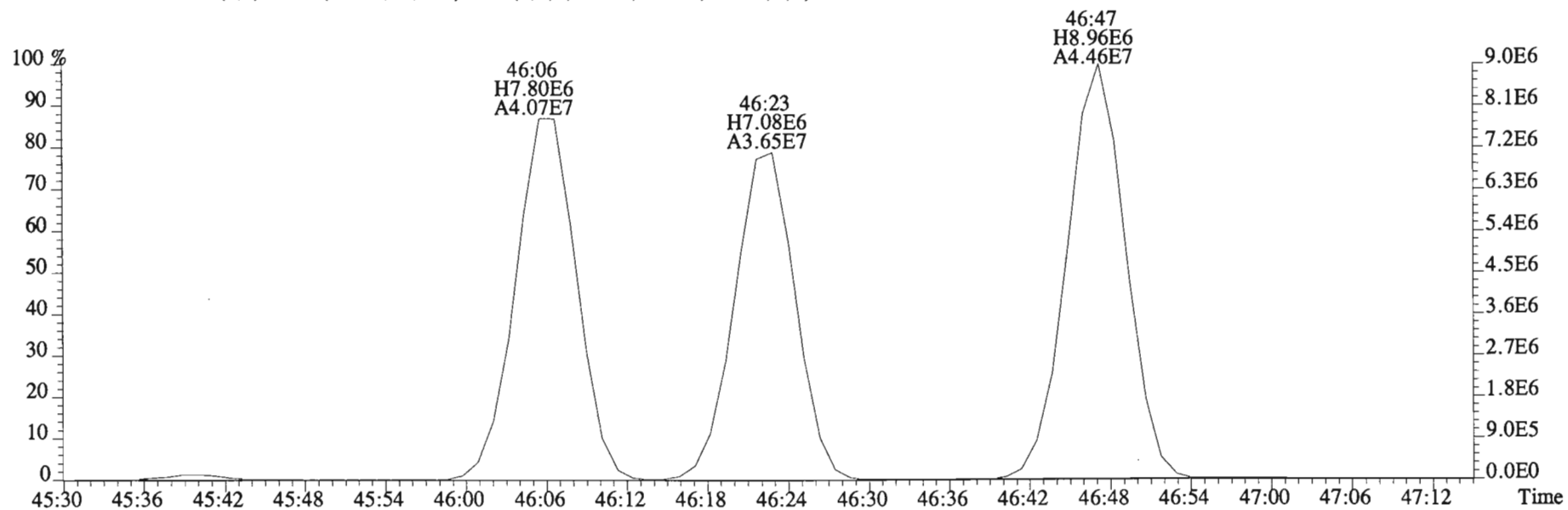
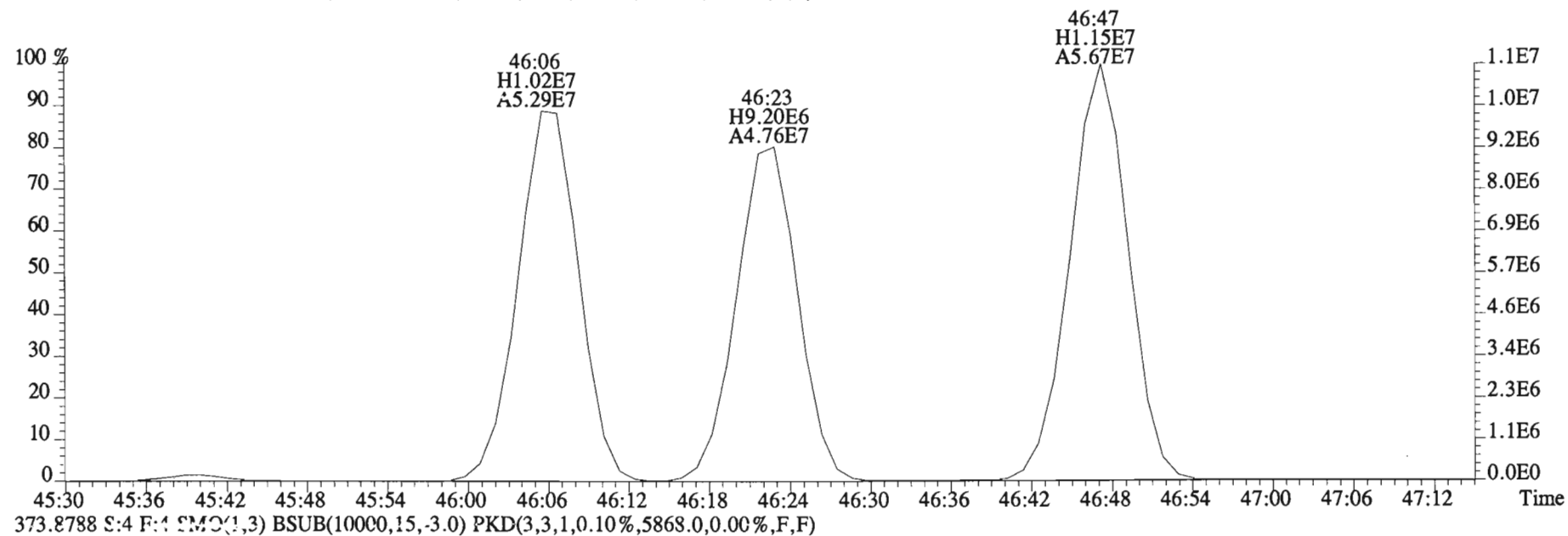
File:150205E1 #1-758 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
359.8415 S:4 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1876.0,0.00%,F,F)



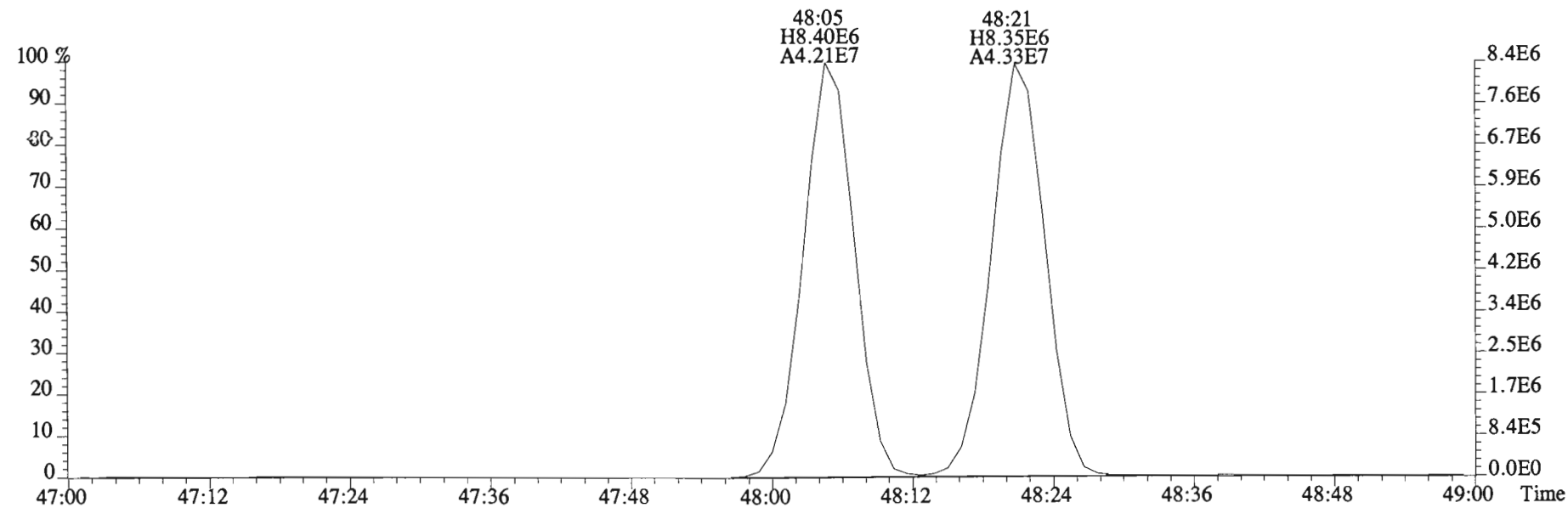
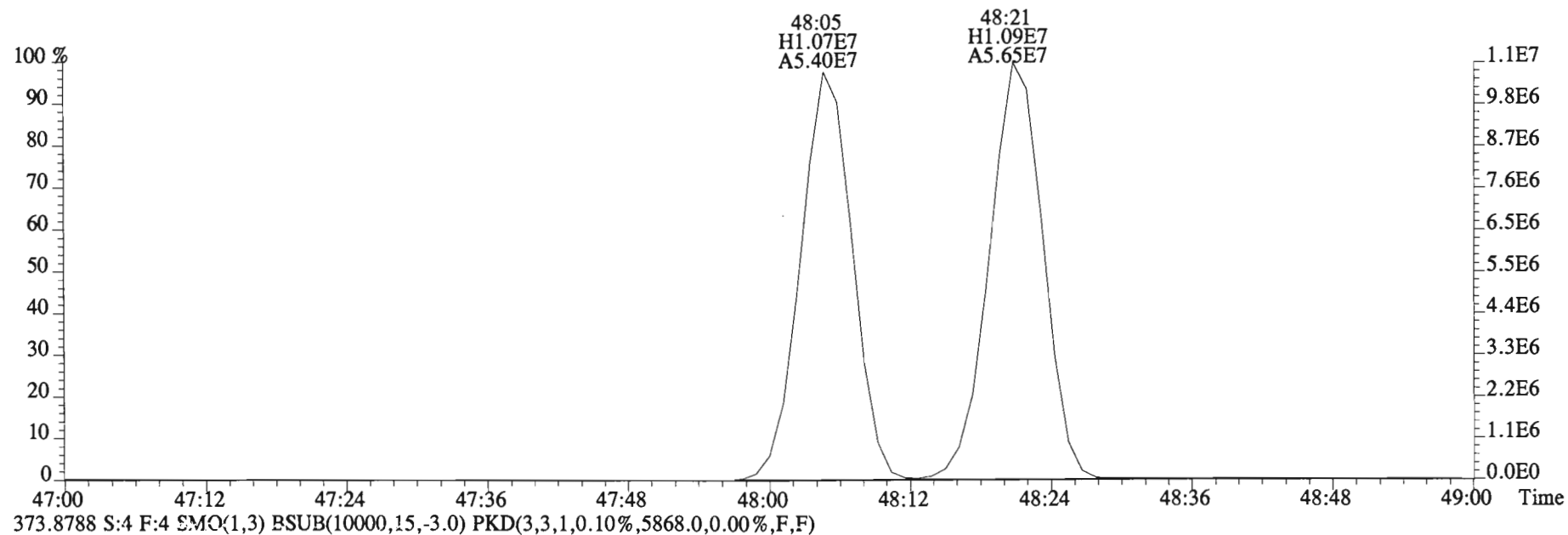
File:150205E1 #1-555 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
 359.8415 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1920.0,0.00%,F,F)



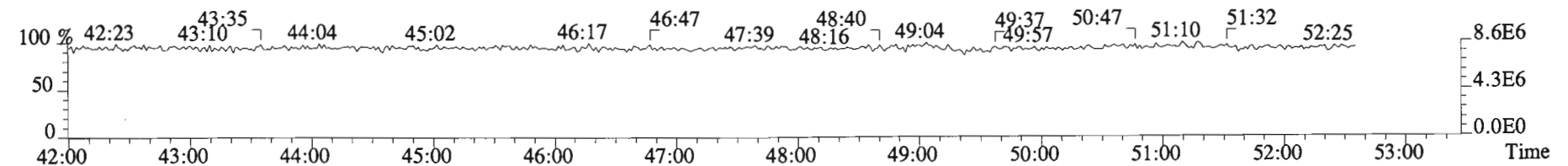
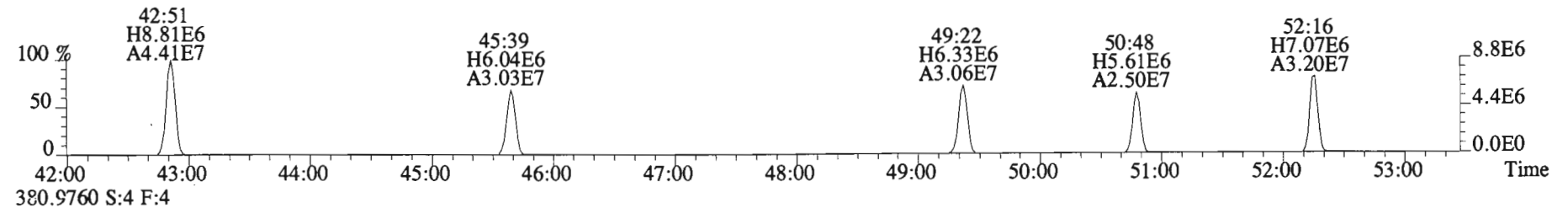
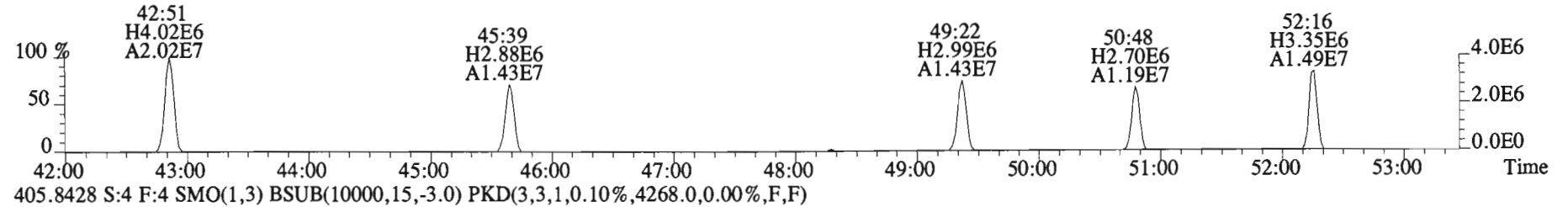
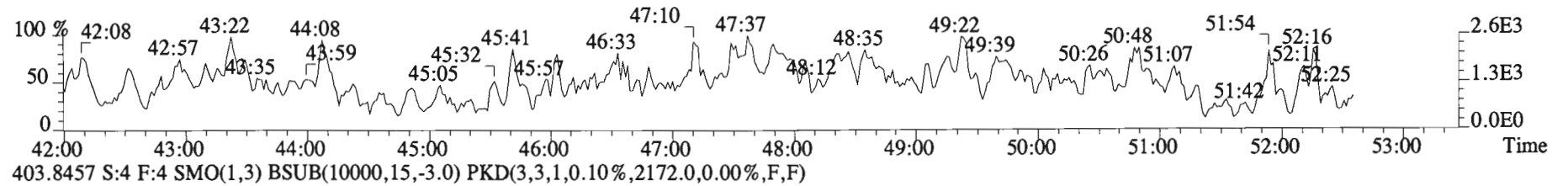
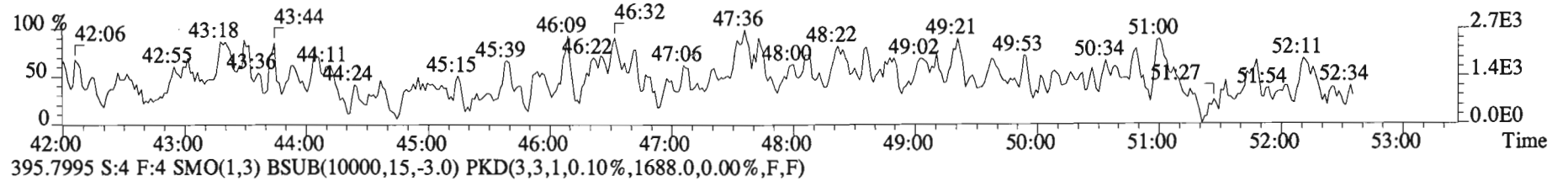
File:150205E1 #1-555 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6568.0,0.00%,F,F)



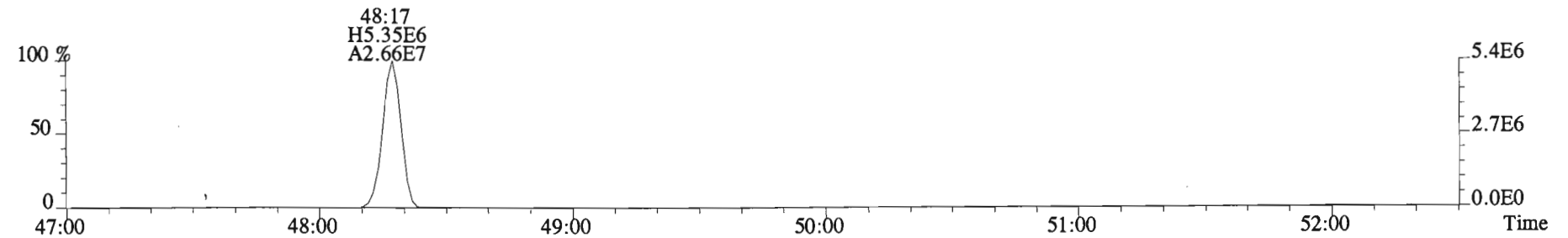
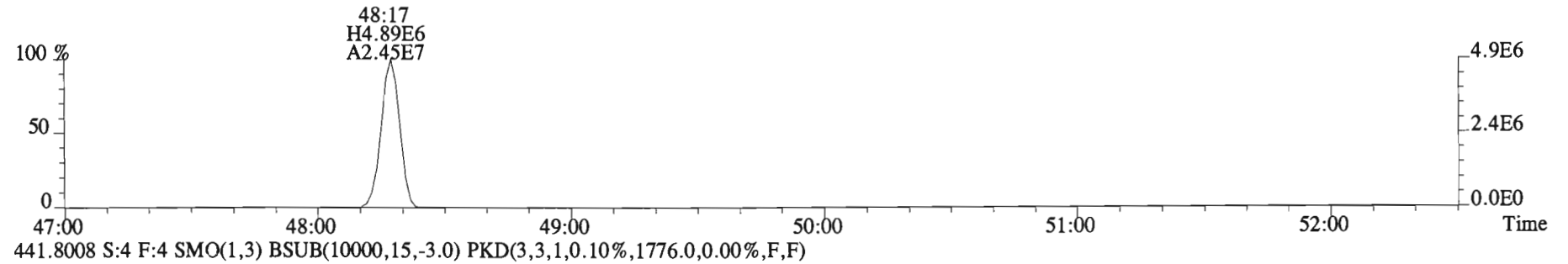
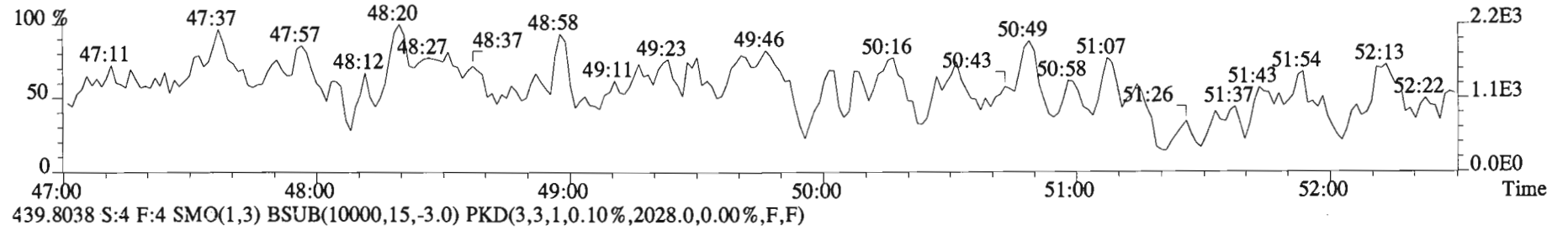
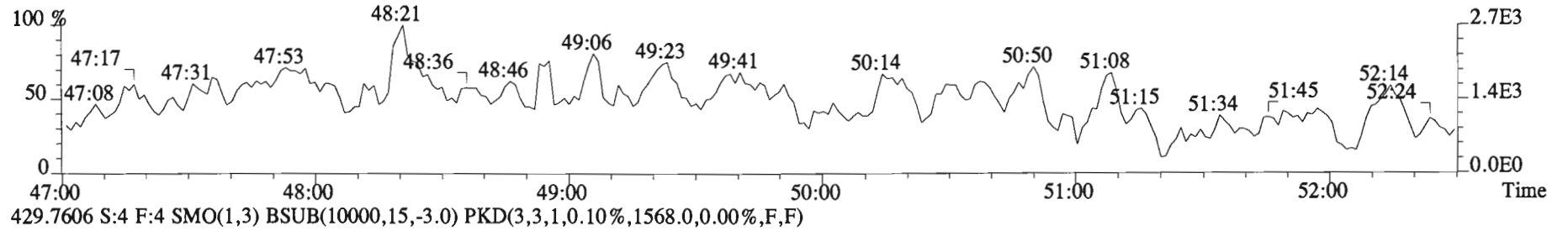
File:150205E1 #1-555 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
371.8817 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6568.0,0.00%,F,F)



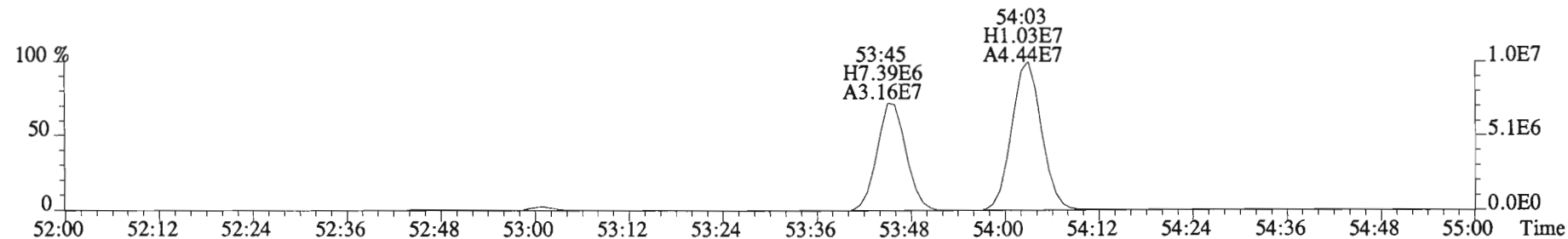
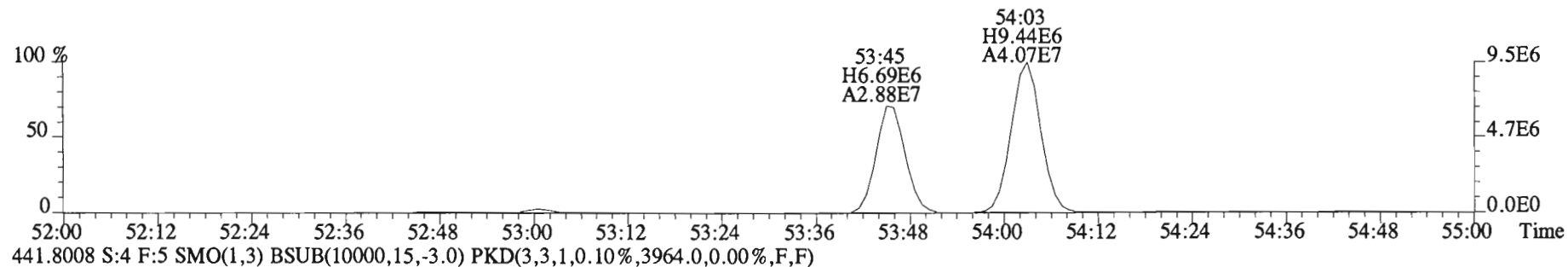
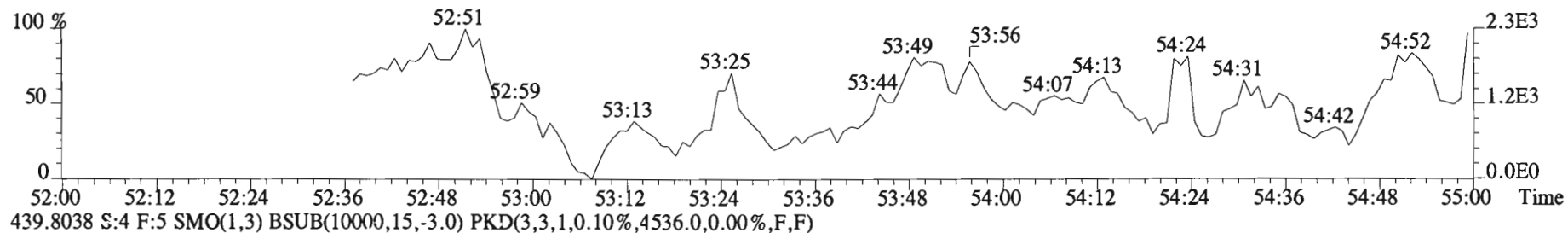
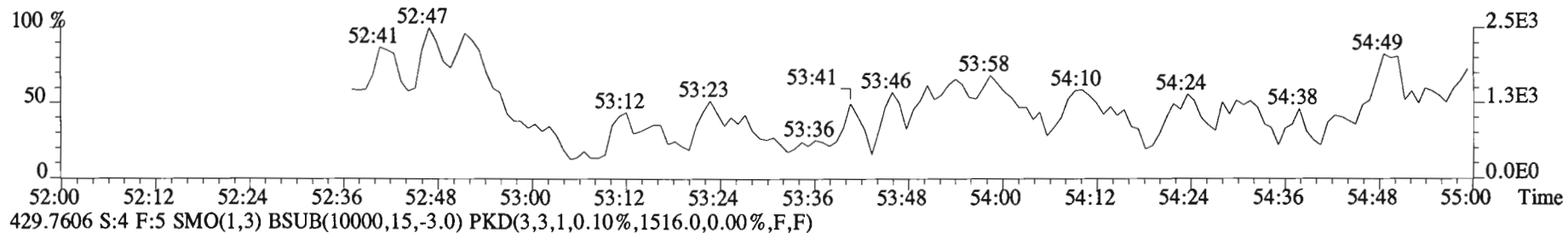
File:150205E1 #1-555 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
393.8025 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1604.0,0.00%,F,F)



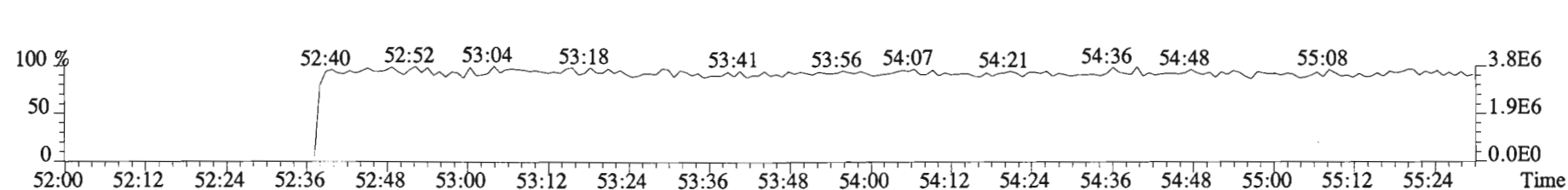
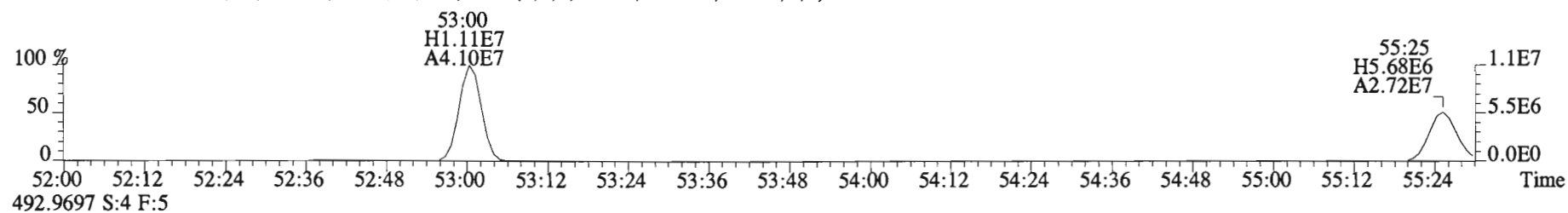
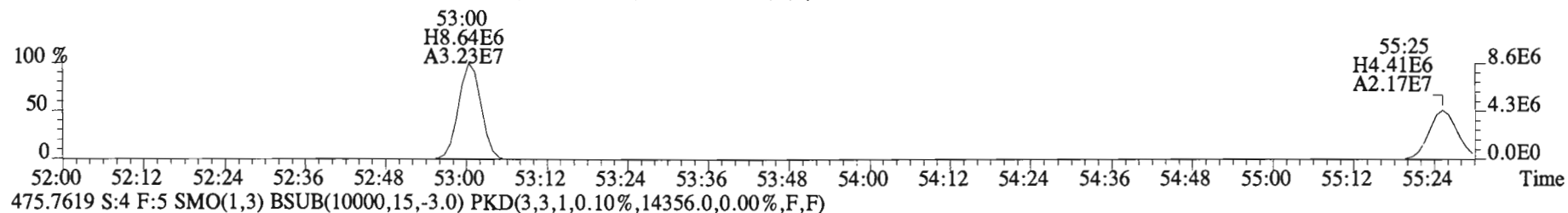
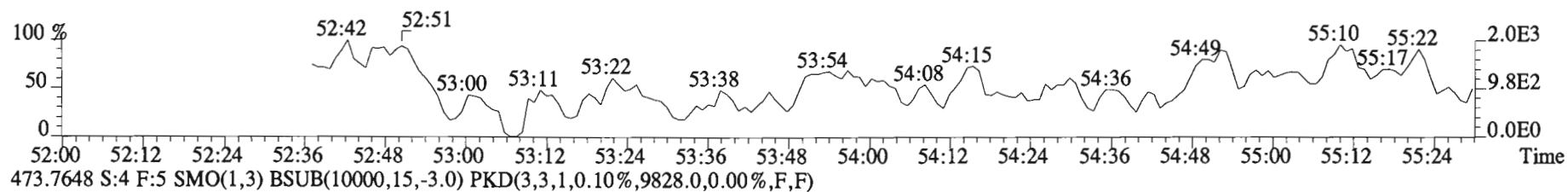
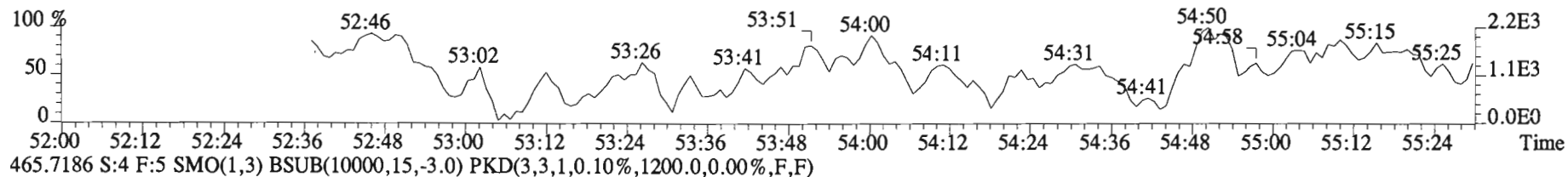
File:150205E1 #1-555 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
427.7635 S:4 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1632.0,0.00%,F,F)



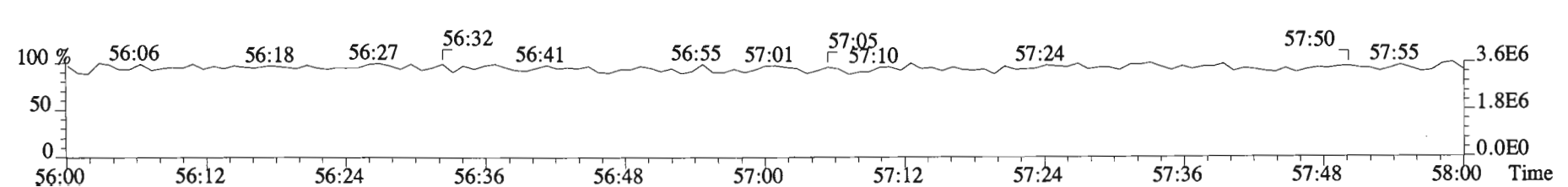
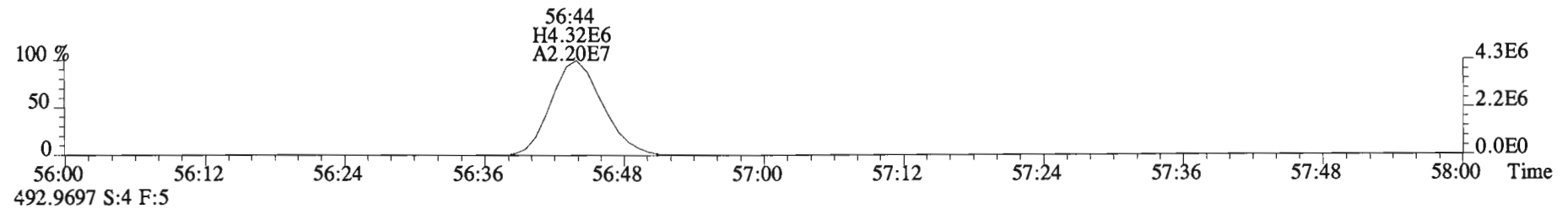
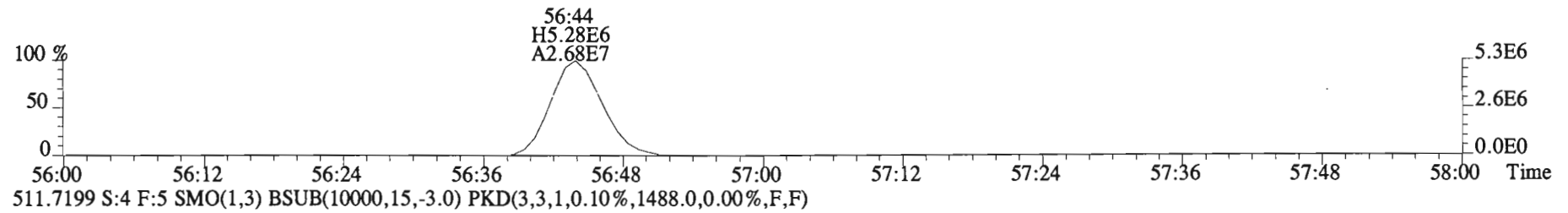
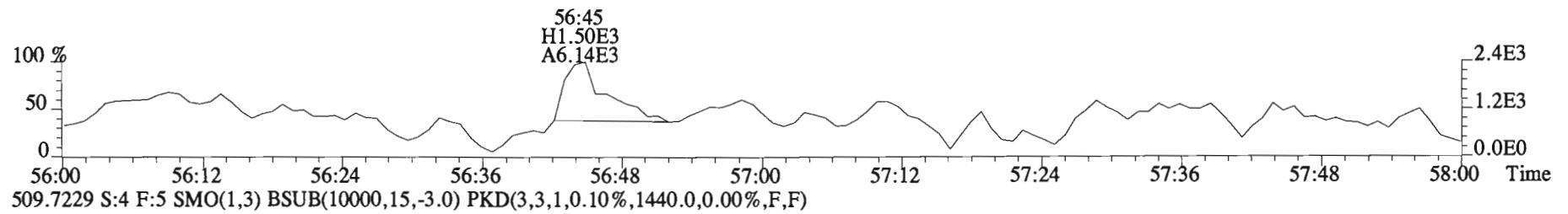
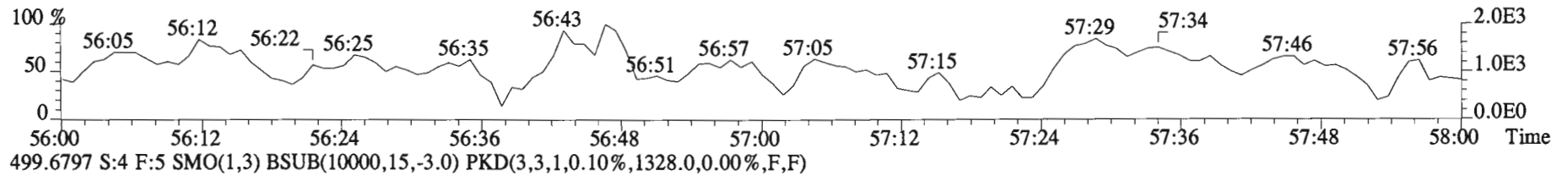
File:150205E1 #1-430 Acq: 5-FEB-2015 12:12:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BLK1 Method Blank 10 Exp:PCB_ZB1
 427.7635 S:4 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1444.0,0.00%,F,F)



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 ConCal: ST150205E1-1
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	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: pcbvsg8-6-23-14 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: 2/9/15

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
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											
13C-PCB-19	7.38e+07	1.10	y	0.53	24:13	0.934	0.930-0.940	68.8	68.8											
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-32	1.20e+08	1.08	y	0.80	27:07	1.046	1.040-1.050	74.7	74.7											
13C-PCB-37	1.36e+08	1.07	y	0.84	32:57	1.137	1.131-1.143	86.0	86.0											
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											
13C-PCB-54	1.03e+08	0.81	y	0.97	27:57	0.761	0.758-0.766	67.6	67.6											
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-77	1.25e+08	0.81	y	0.94	39:38	1.078	1.073-1.083	84.6	84.6											
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-81	1.22e+08	0.80	y	0.92	39:02	1.062	1.057-1.067	84.8	84.8											
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-97	5.63e+07	1.63	y	0.70	38:48	0.989	0.984-0.994	86.3	86.3											
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											
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											
13C-PCB-209	5.05e+07	1.21	y	0.61	56:45	1.050	1.045-1.055	94.0	94.0											

PS vs. IS

Name	Resp	RA	RRF	RT	RRT	LCL	UCL	Conc	Rec
13C-PCB-79	1.39e+08	0.80	y	1.10	37:49	0.969	0.964-0.974	103	103
13C-PCB-178	4.35e+07	0.45	y	0.90	45:39	0.925	0.920-0.930	103	103

x = OK within 1668 method limits.

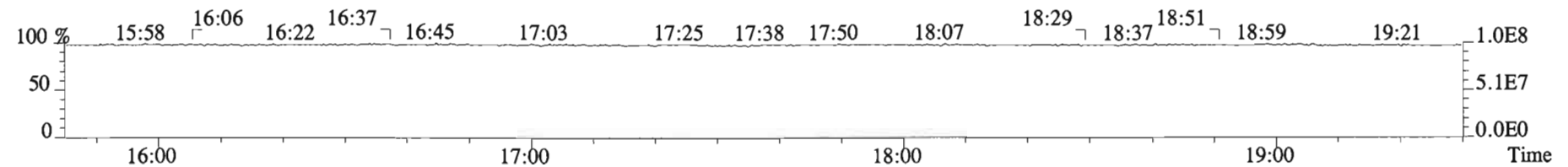
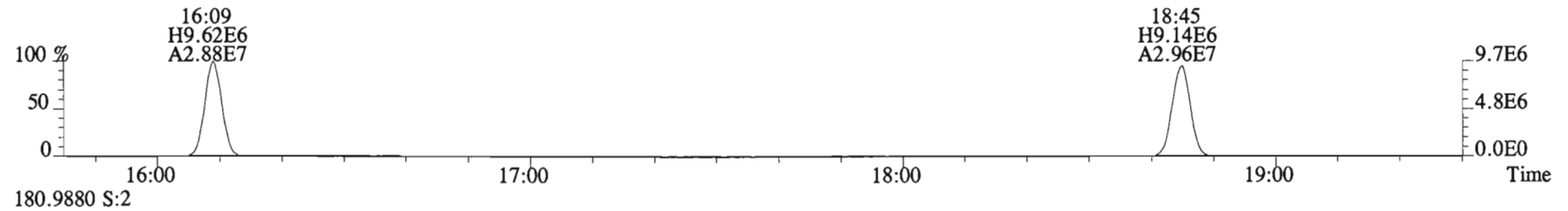
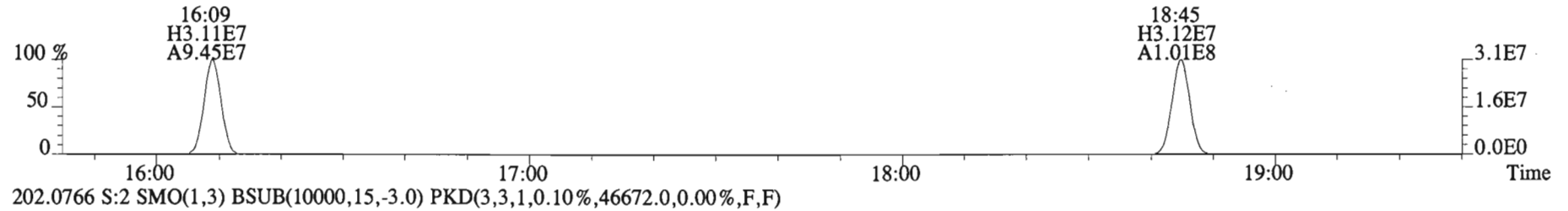
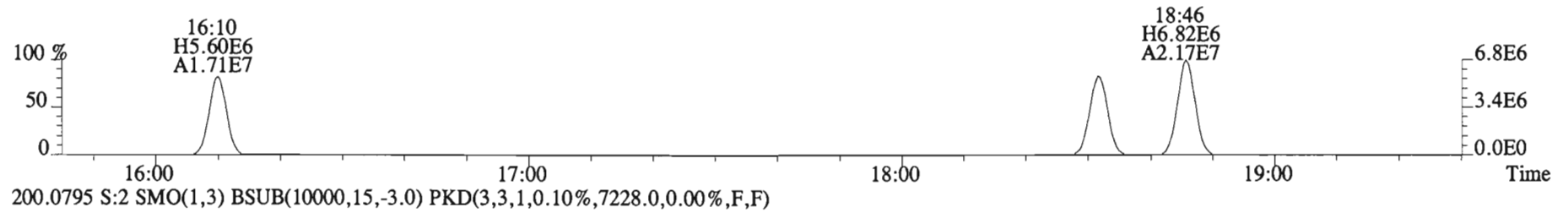
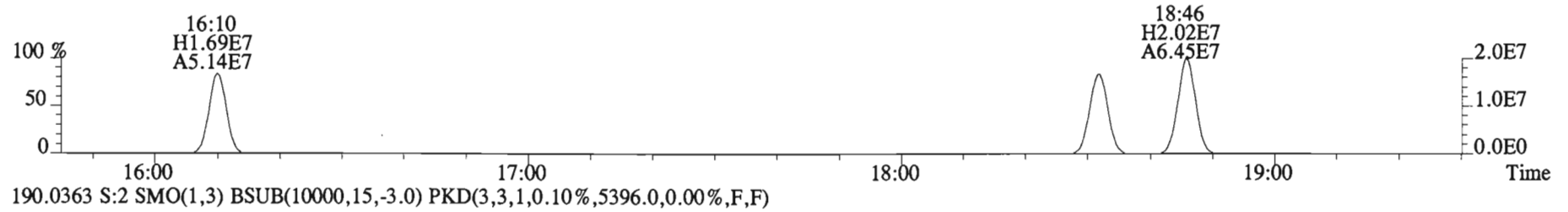
RS

Name	Resp	RA	RRF	RT	Conc	
13C-PCB-15	2.02e+08	1.59	y	1.00	25:56	100
13C-PCB-31	1.89e+08	1.06	y	1.00	28:58	100
13C-PCB-60	1.56e+08	0.81	y	1.00	36:45	100
13C-PCB-111	9.25e+07	1.62	y	1.00	39:13	100
13C-PCB-128	8.64e+07	1.30	y	1.00	46:22	100
13C-PCB-205	8.80e+07	0.92	y	1.00	54:02	100

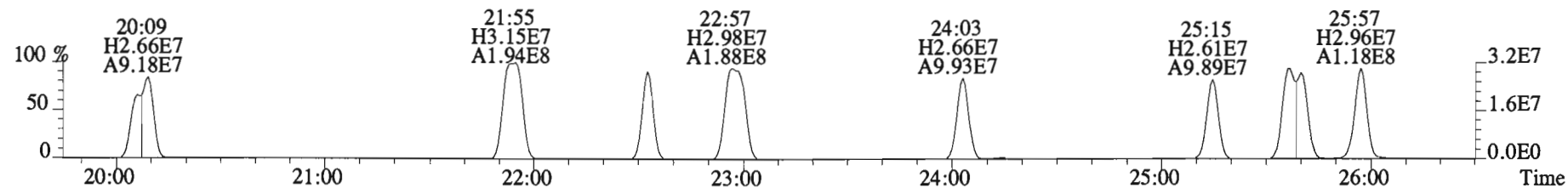
Analyst: DMS

Date: 2/9/15

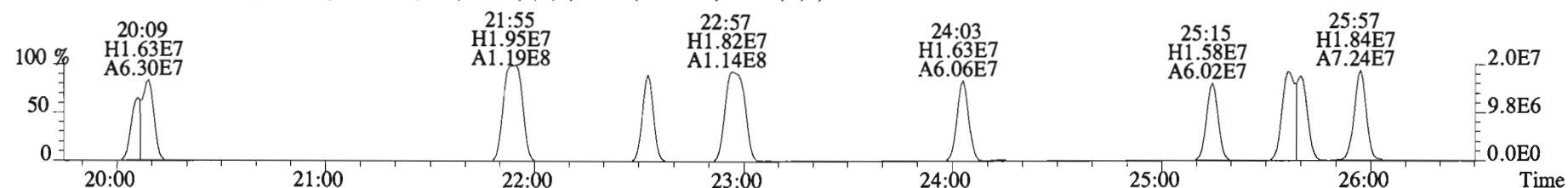
File:150205E1 #1-728 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
188.0393 S:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8604.0,0.00%,F,F)



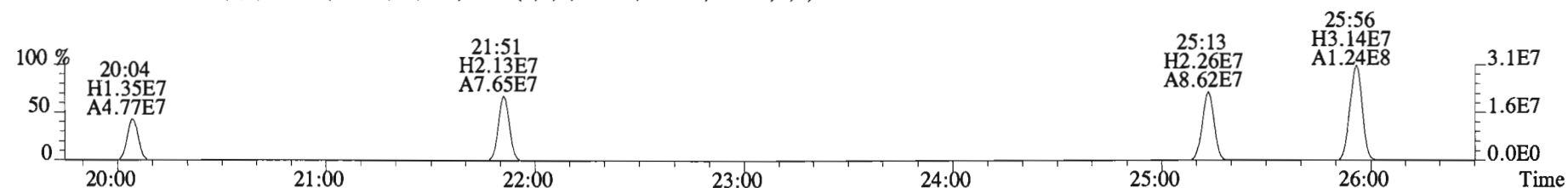
File:150205E1 #1-757 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
 222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8148.0,0.00%,F,F)



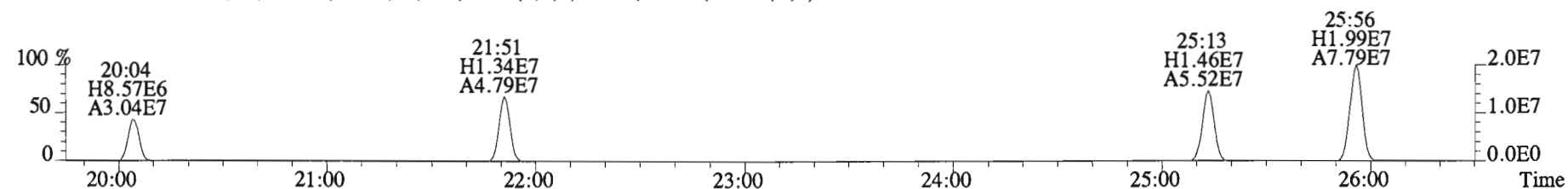
223.9974 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,31256.0,0.00%,F,F)



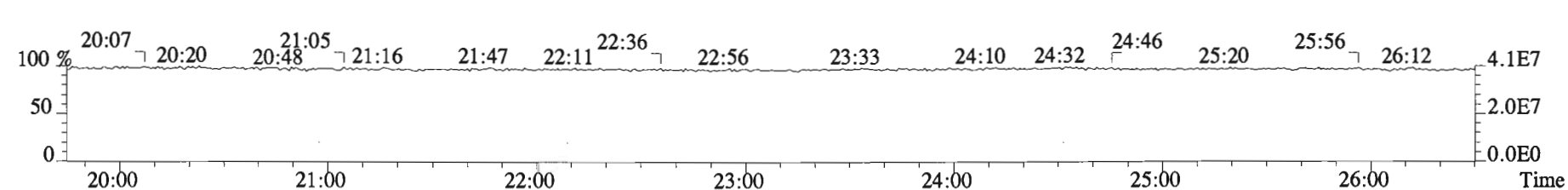
234.0406 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6008.0,0.00%,F,F)



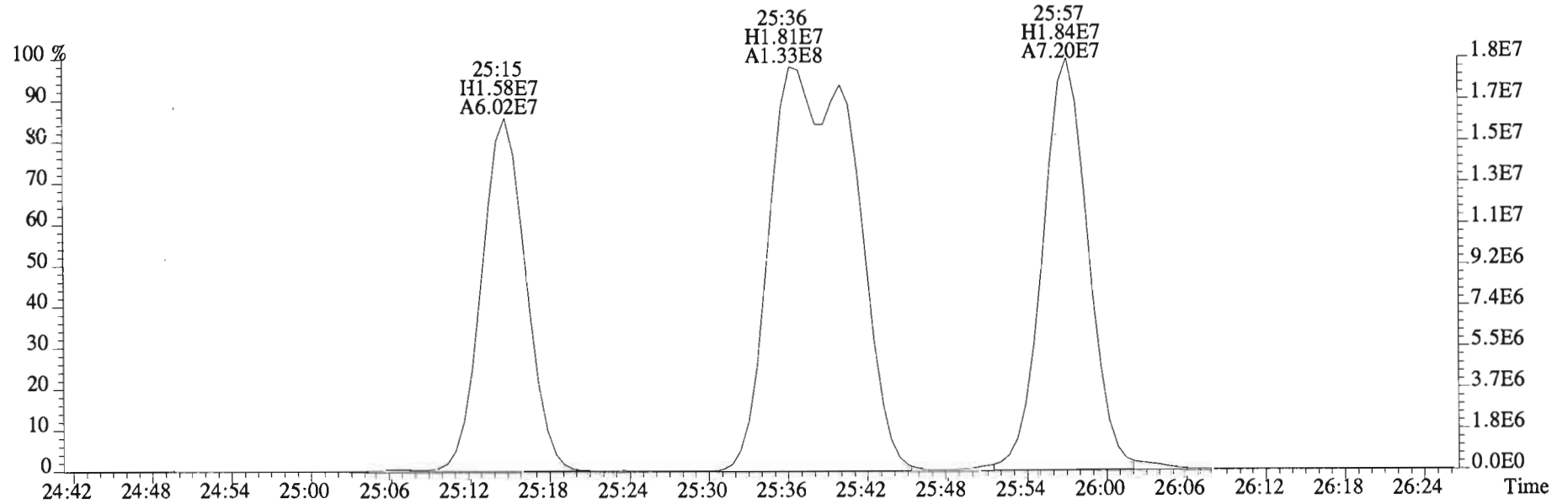
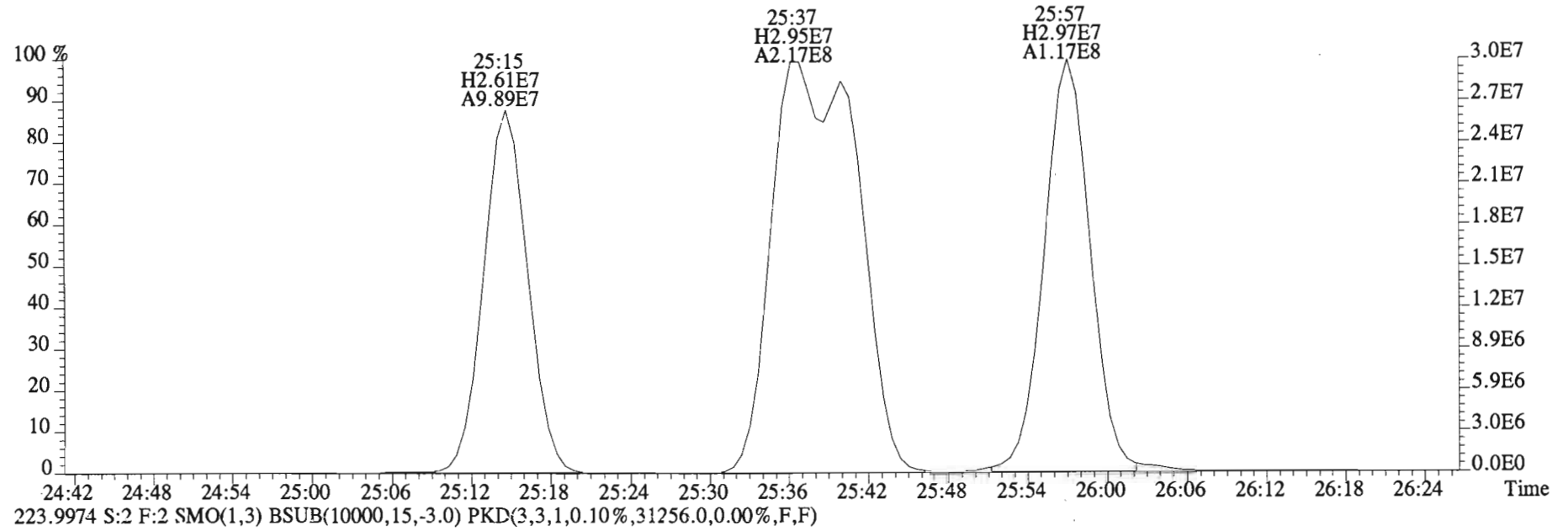
236.0376 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6104.0,0.00%,F,F)



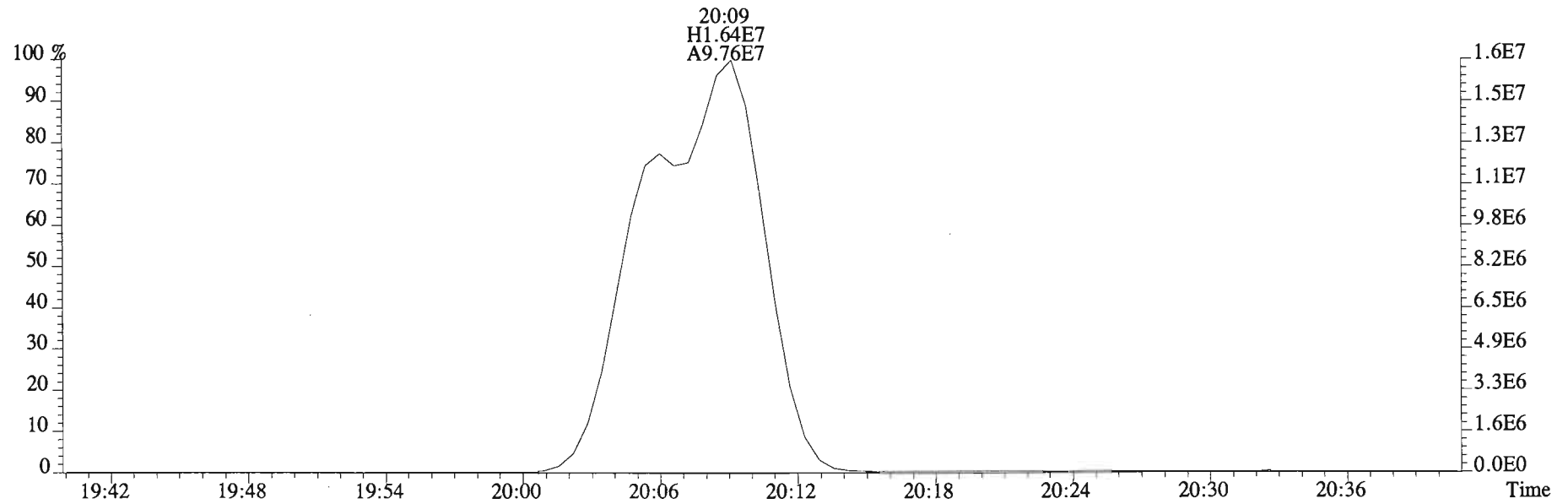
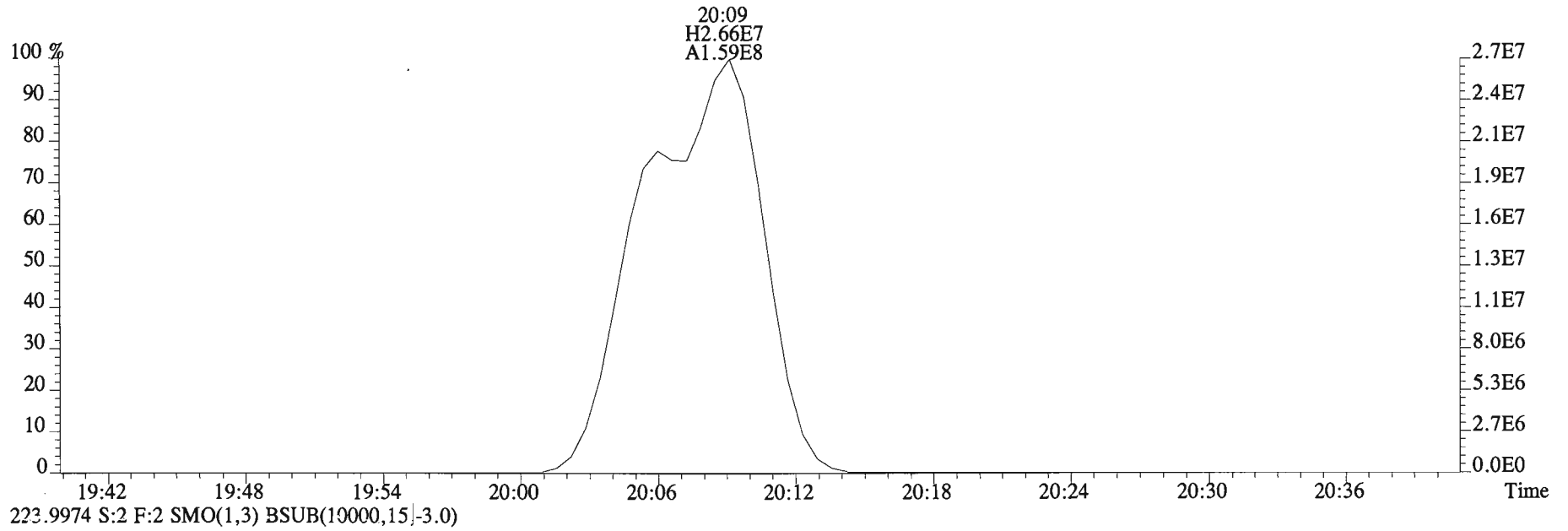
230.9856 S:2 F:2



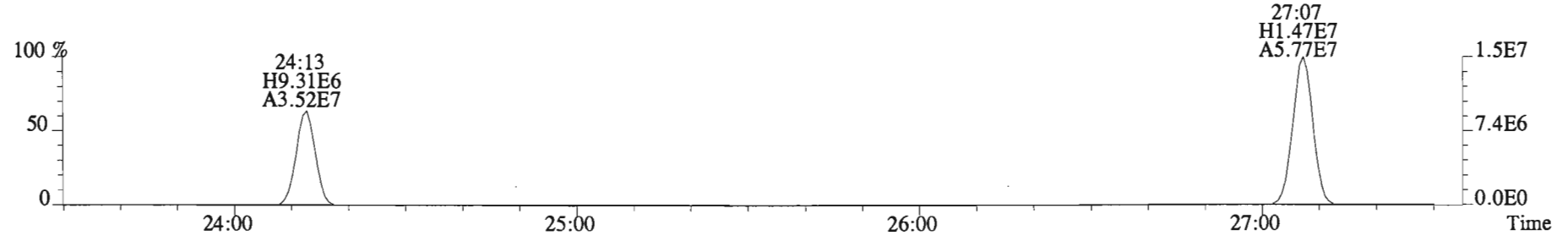
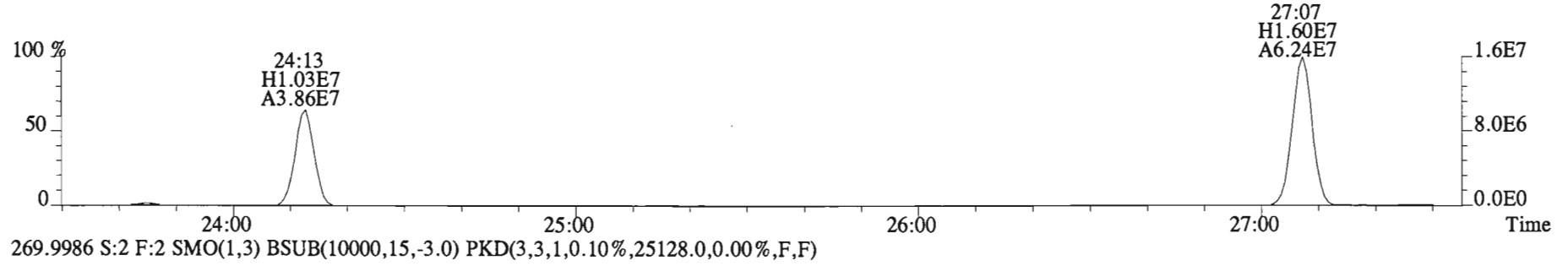
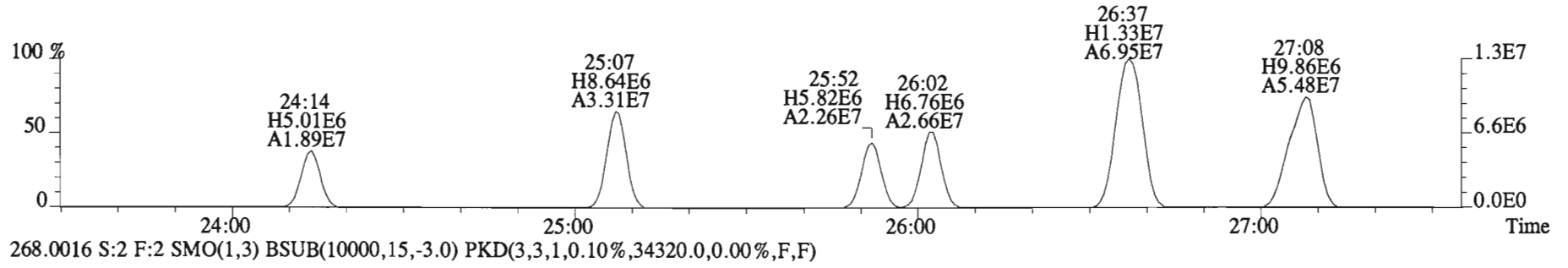
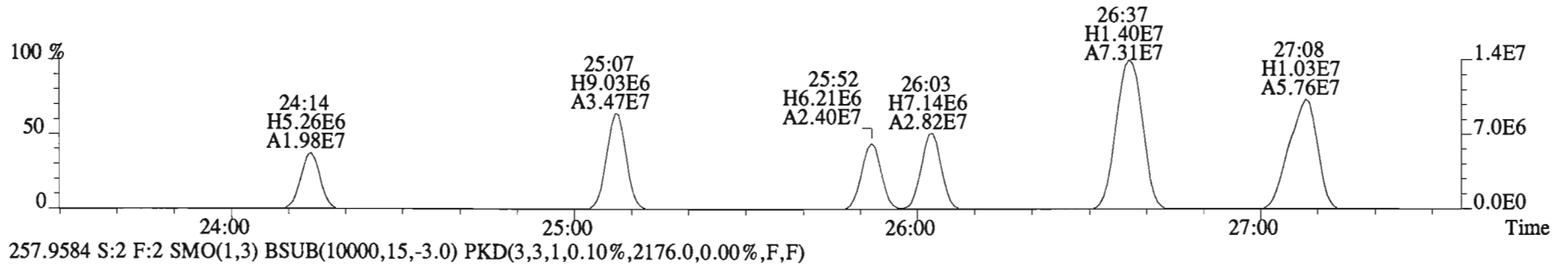
File:150205E1 #1-757 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8148.0,0.00%,F,F)



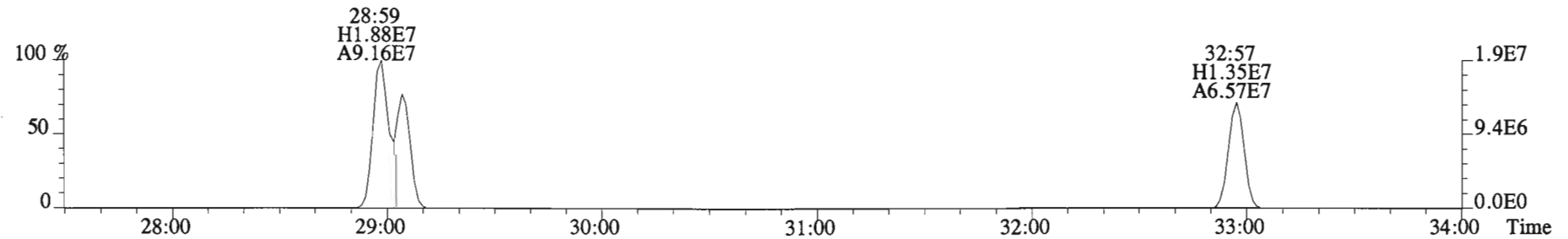
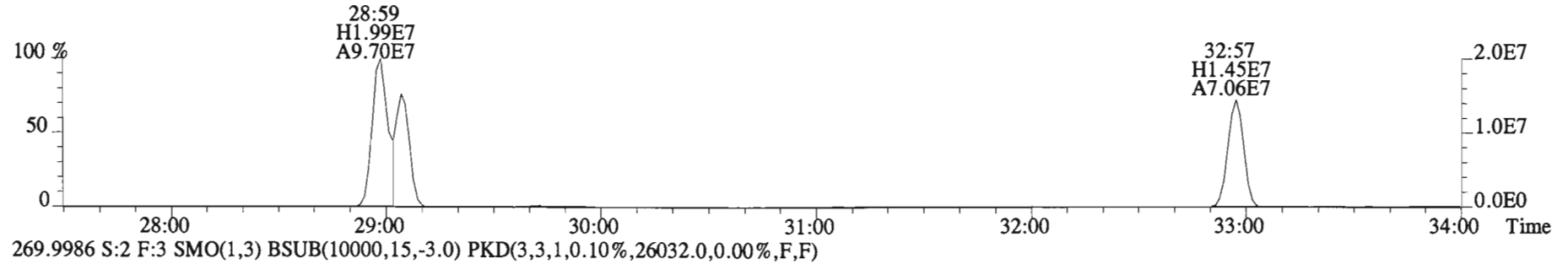
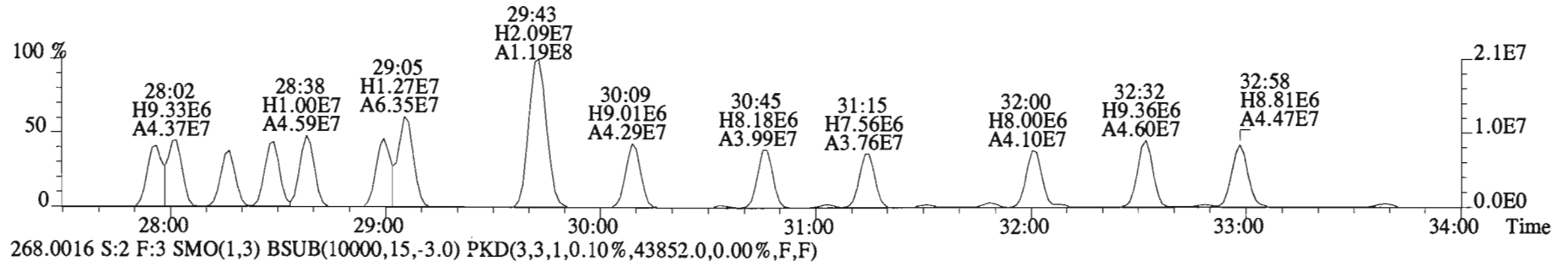
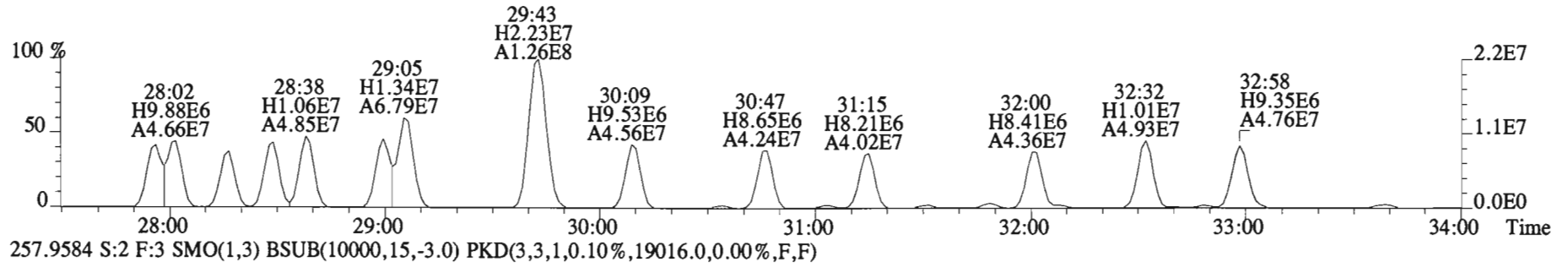
File:150205E1 #1-757 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
222.0003 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0)



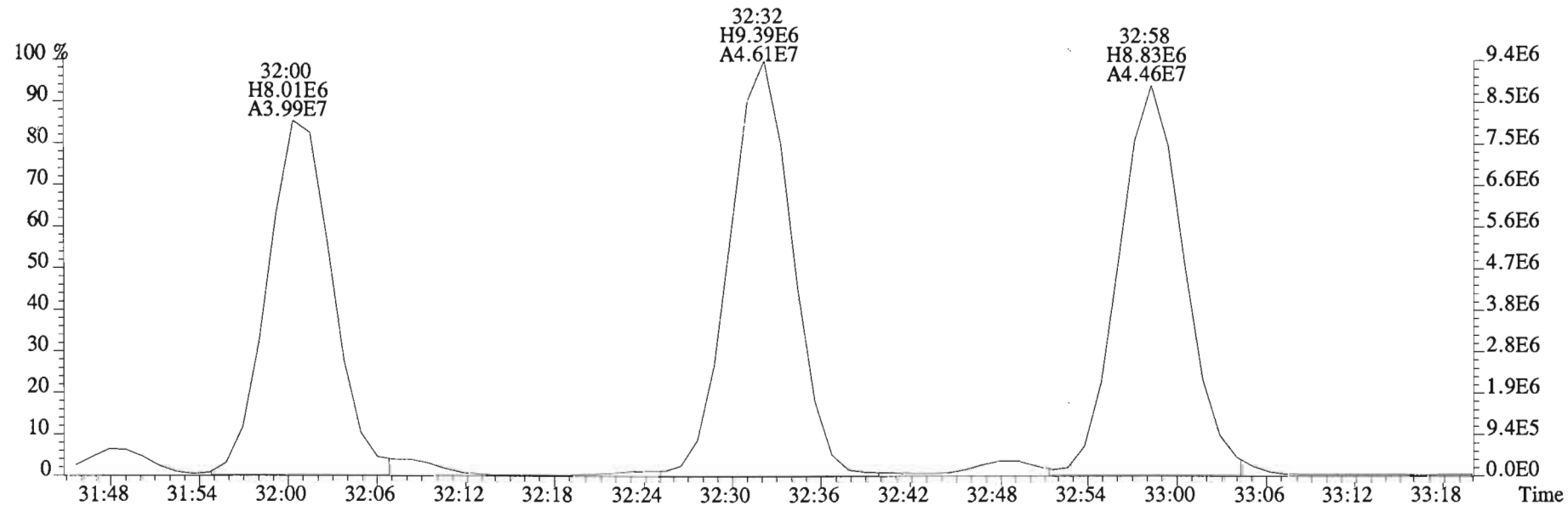
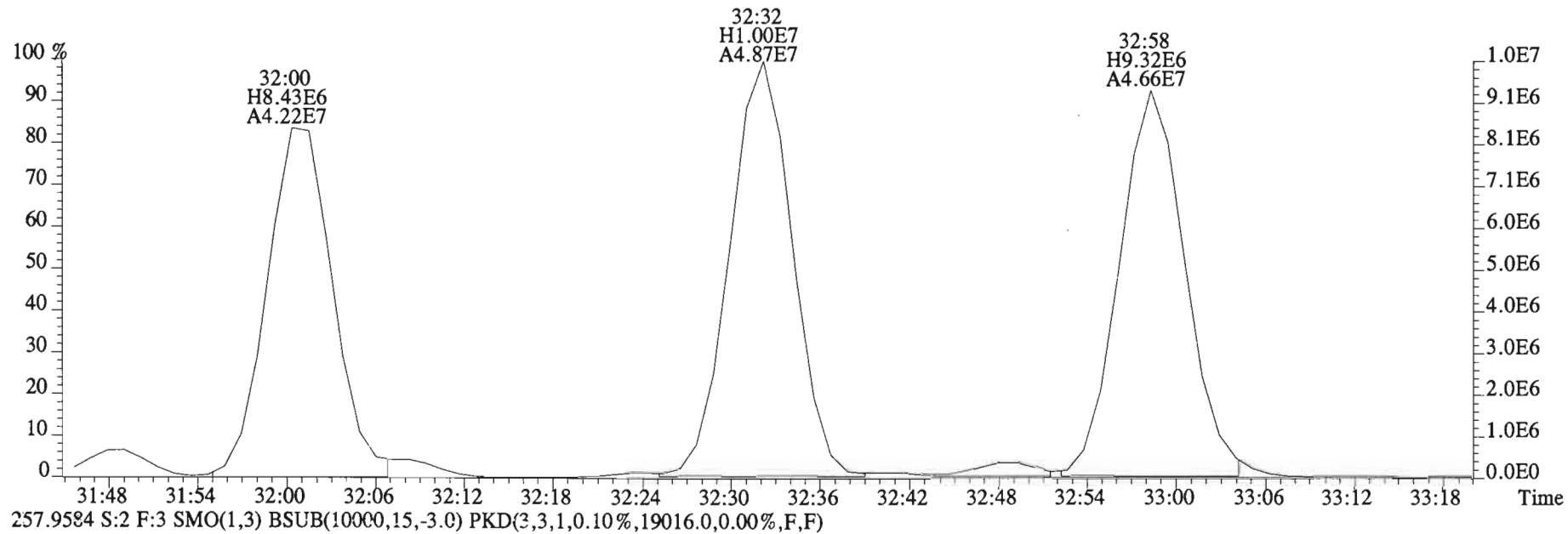
File:150205E1 #1-757 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
 255.9613 S:2 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3236.0,0.00%,F,F)



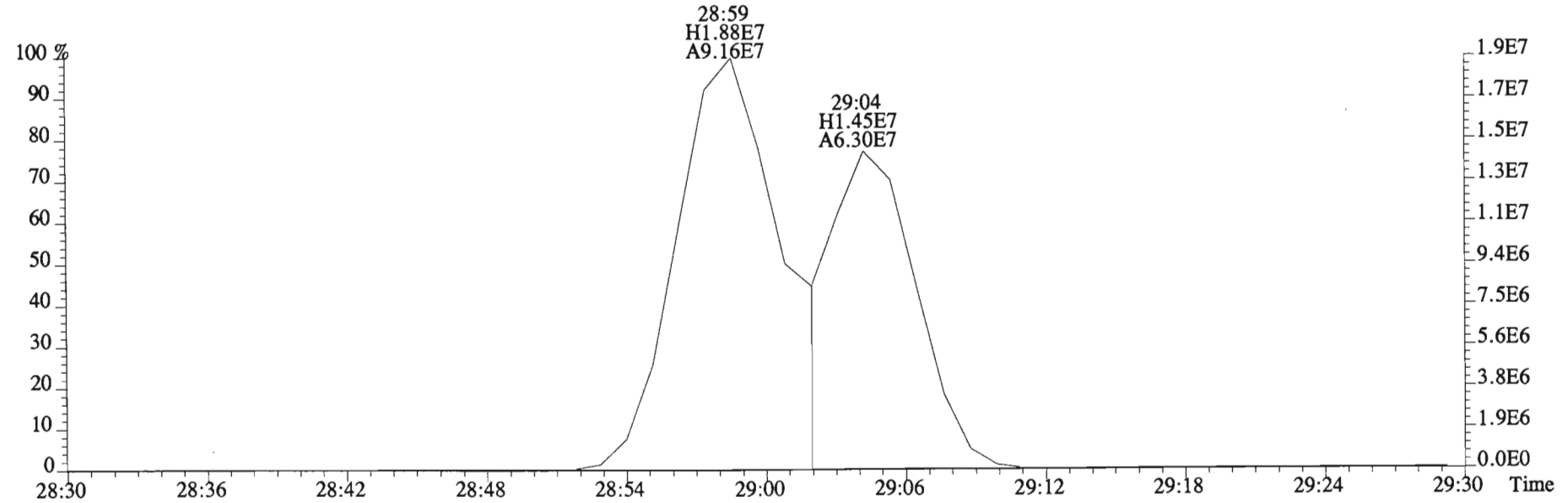
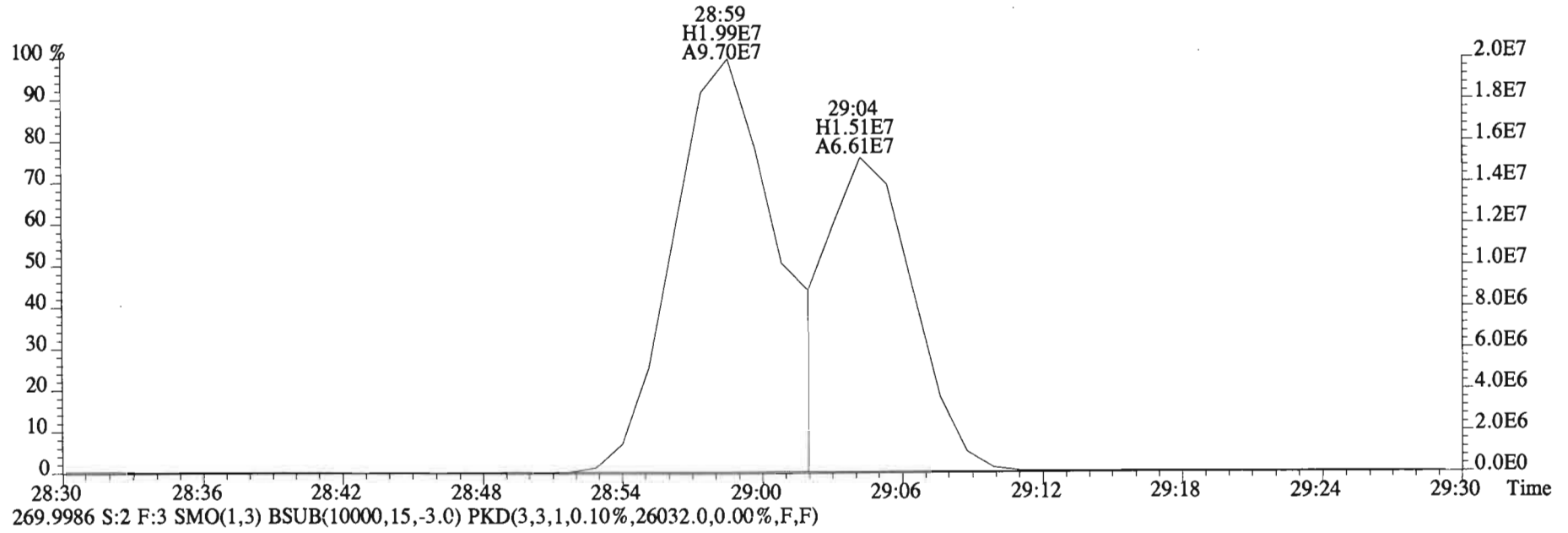
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,19996.0,0.00%,F,F)



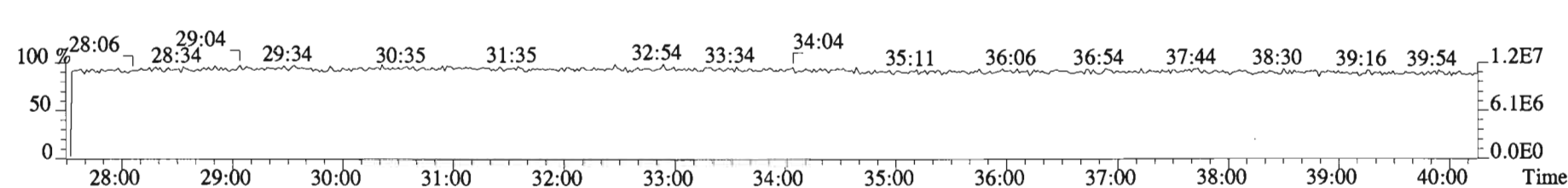
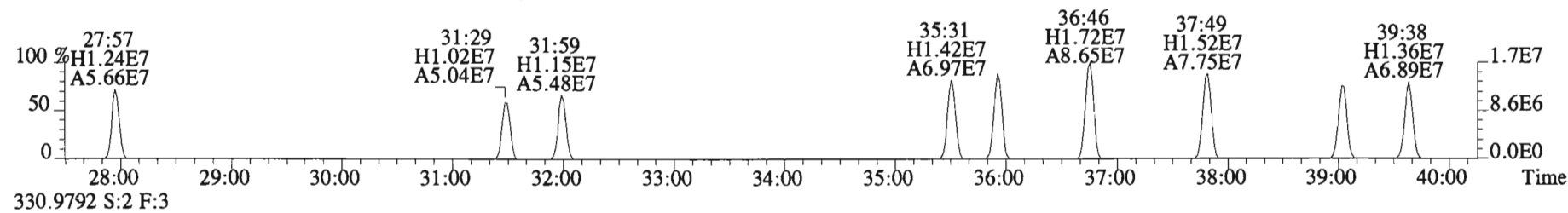
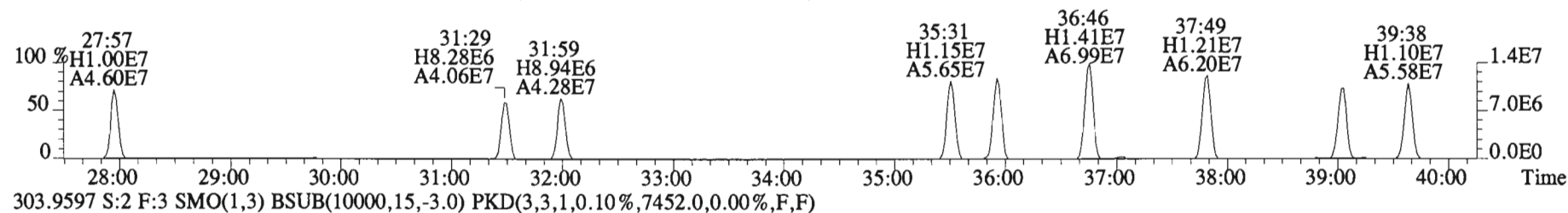
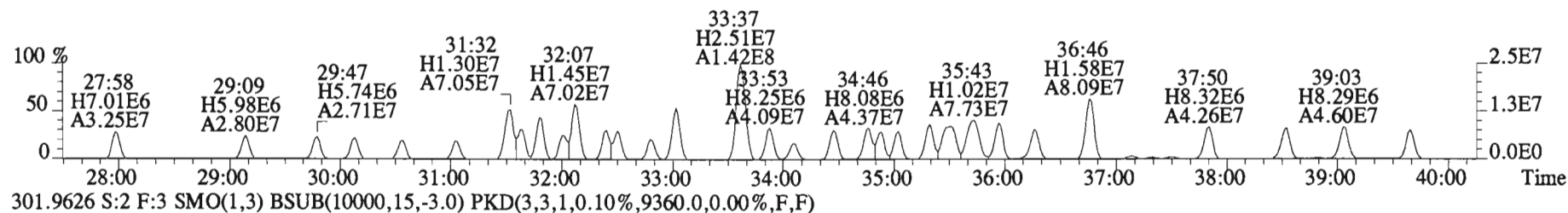
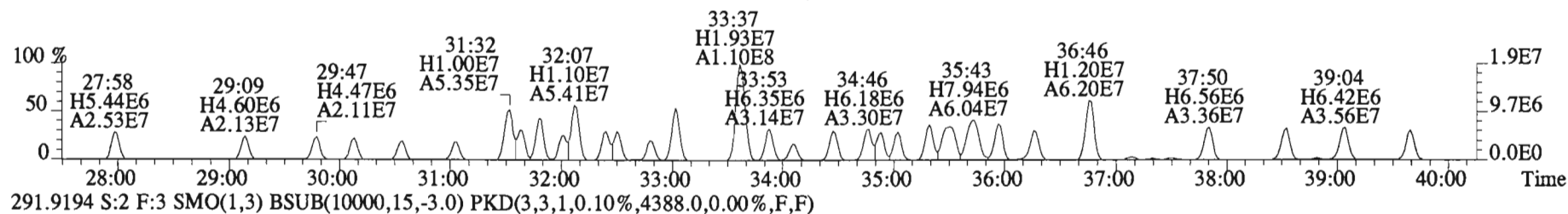
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
255.9613 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,19996.0,0.00%,F,F)



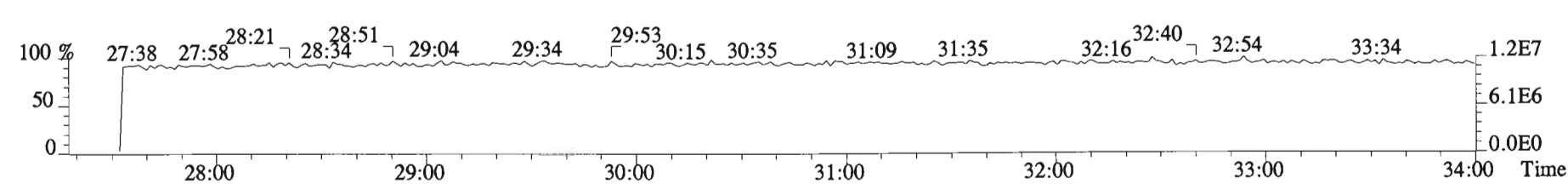
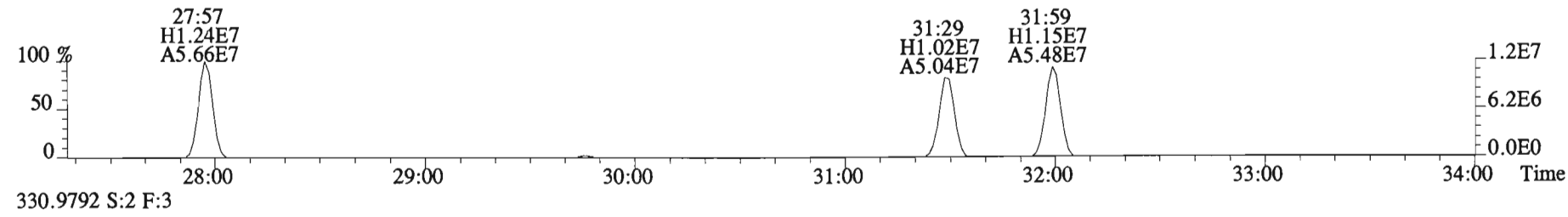
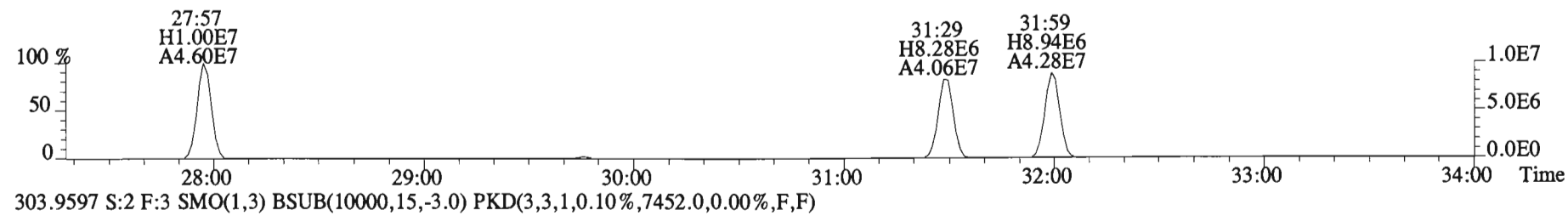
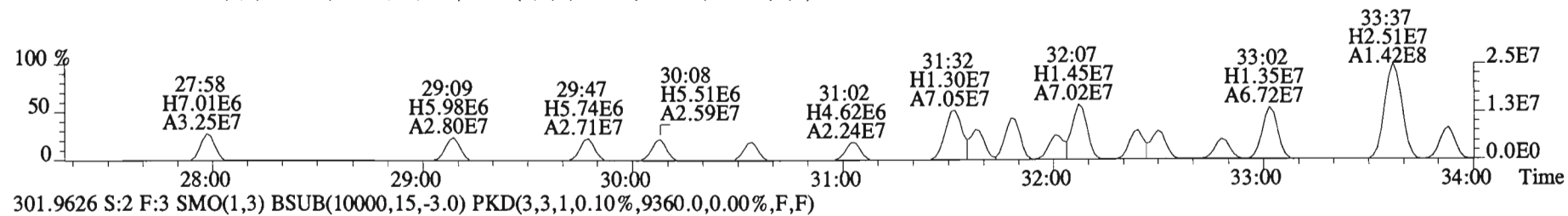
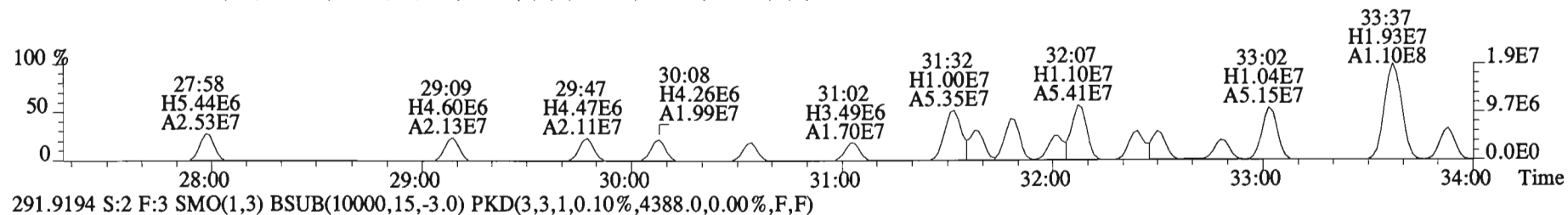
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
268.0016 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,43852.0,0.00%,F,F)



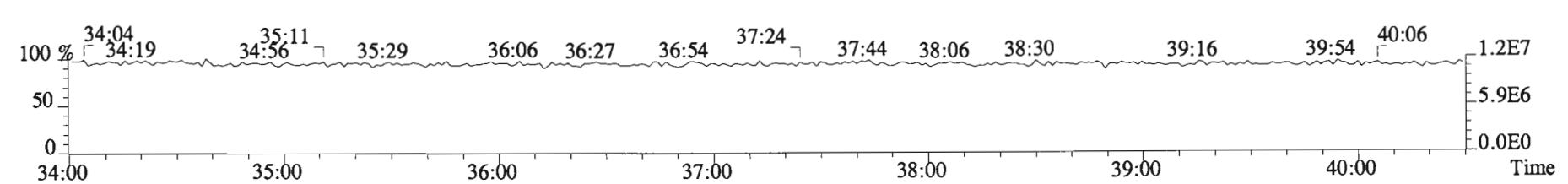
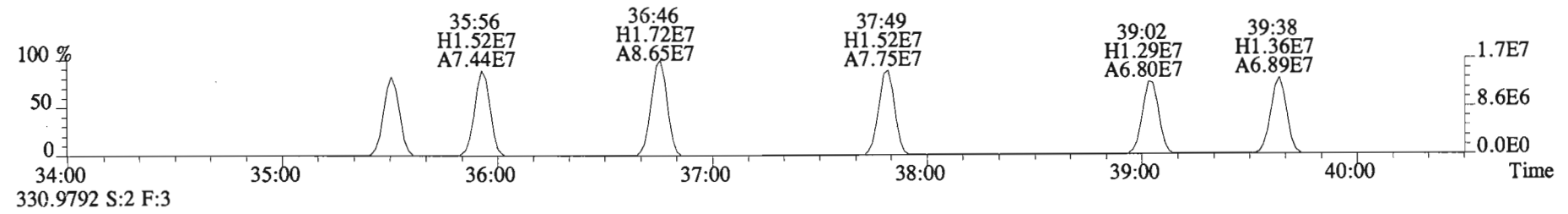
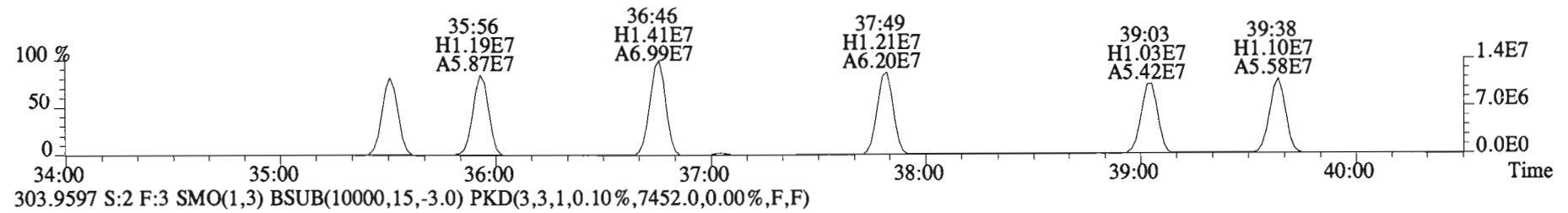
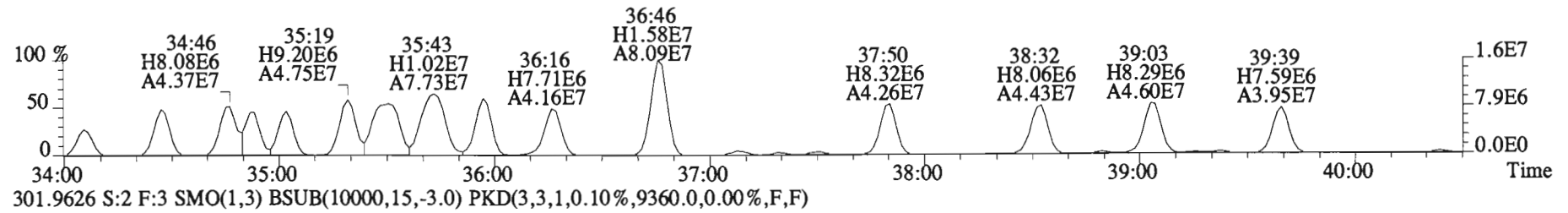
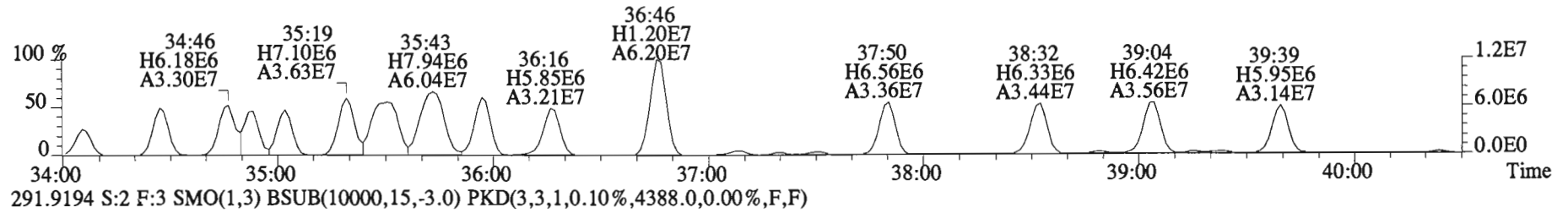
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6888.0,0.00%,F,F)



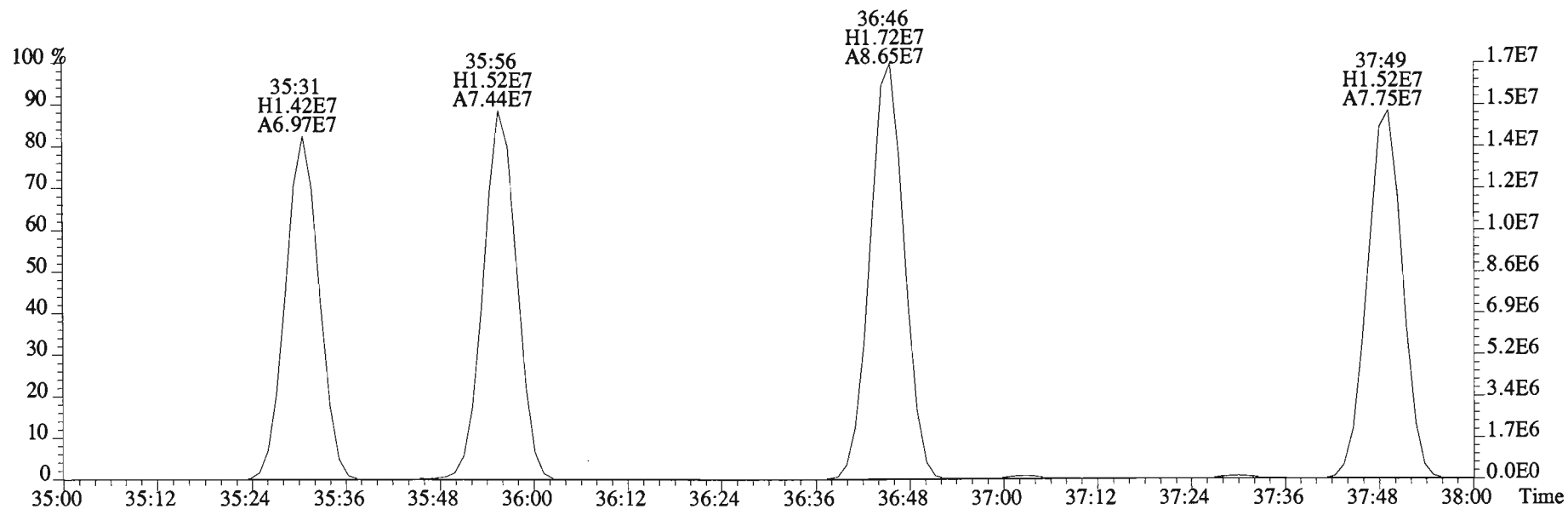
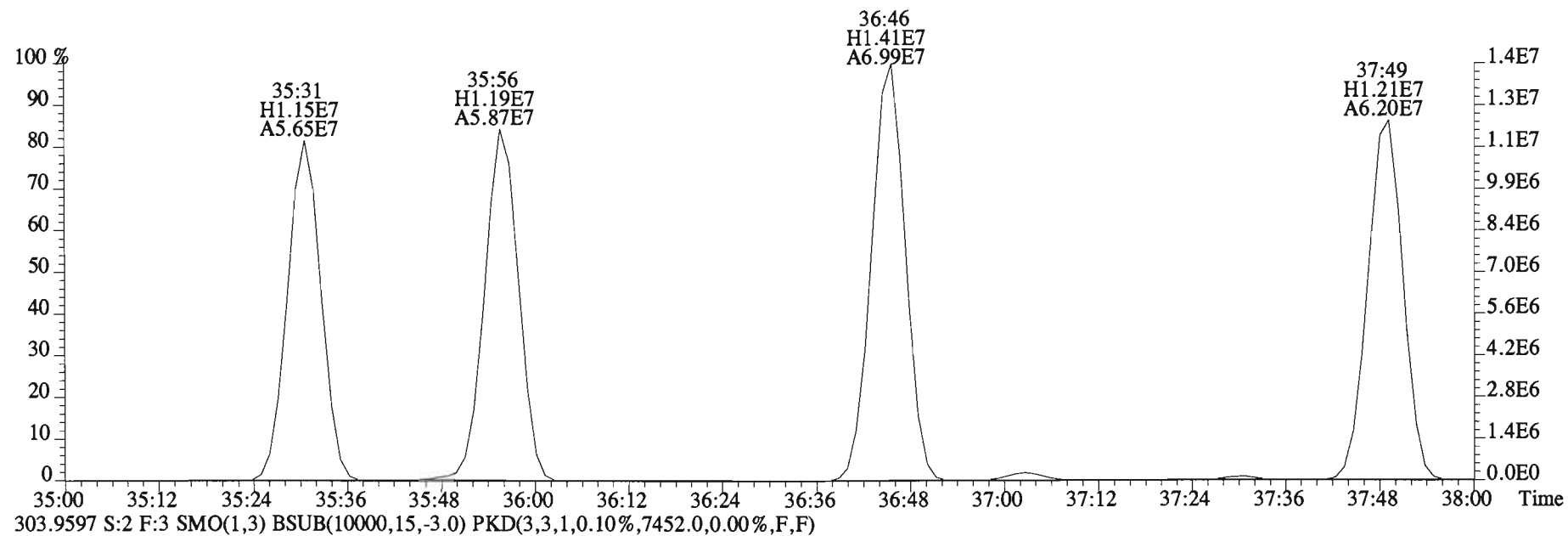
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6888.0,0.00%,F,F)



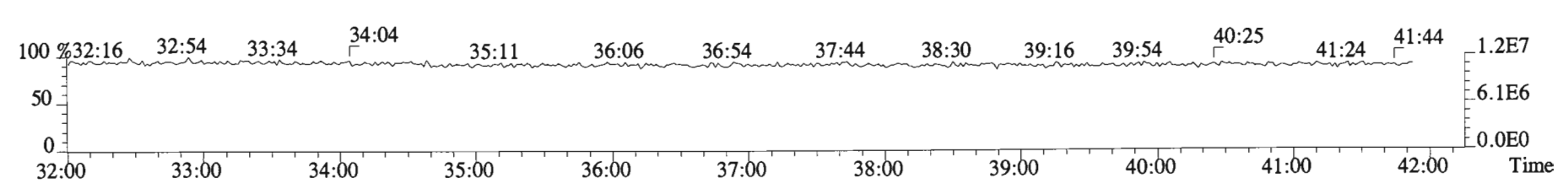
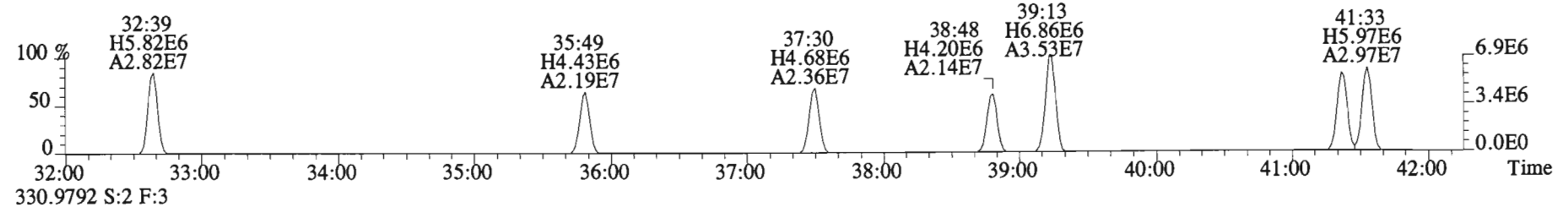
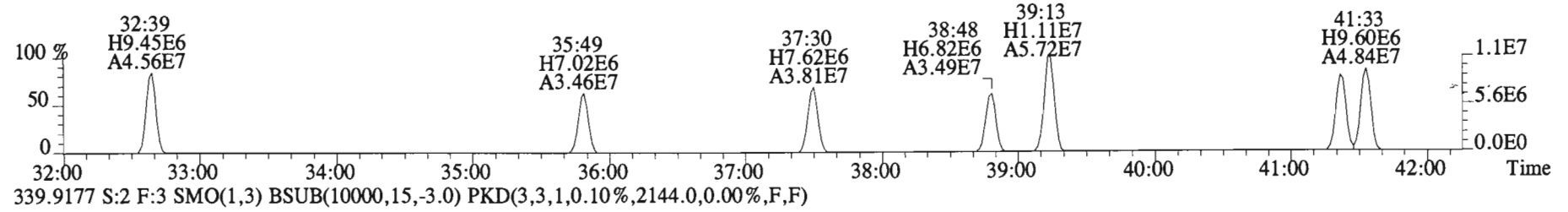
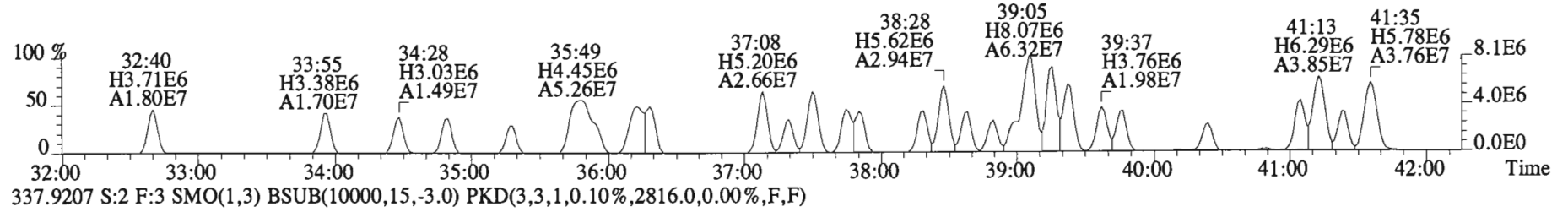
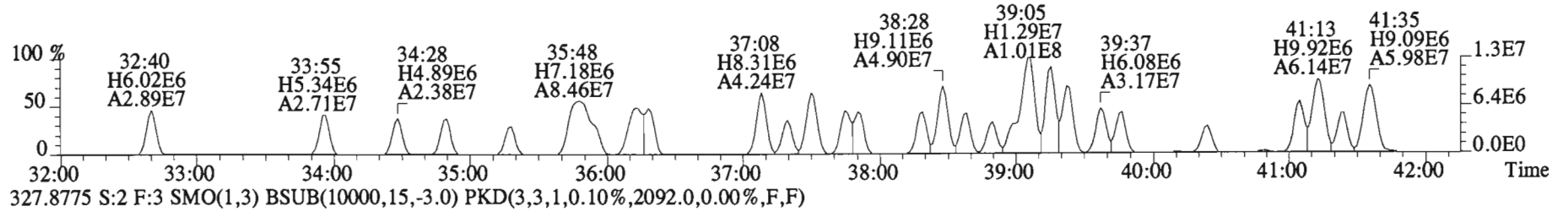
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Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
289.9224 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6888.0,0.00%,F,F)



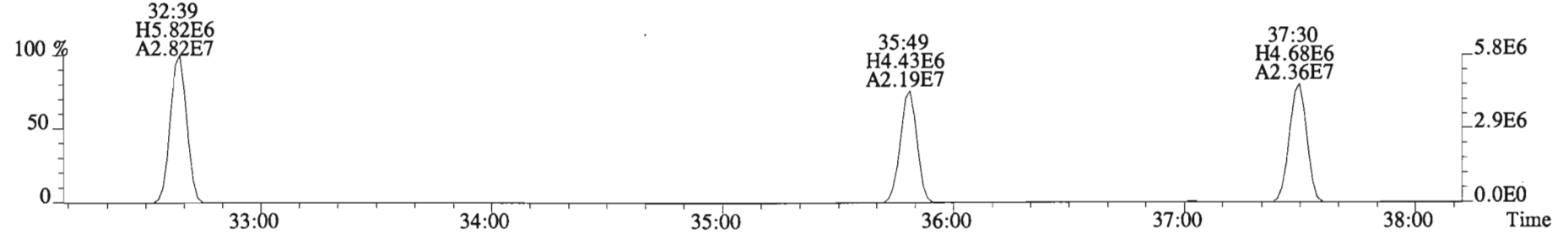
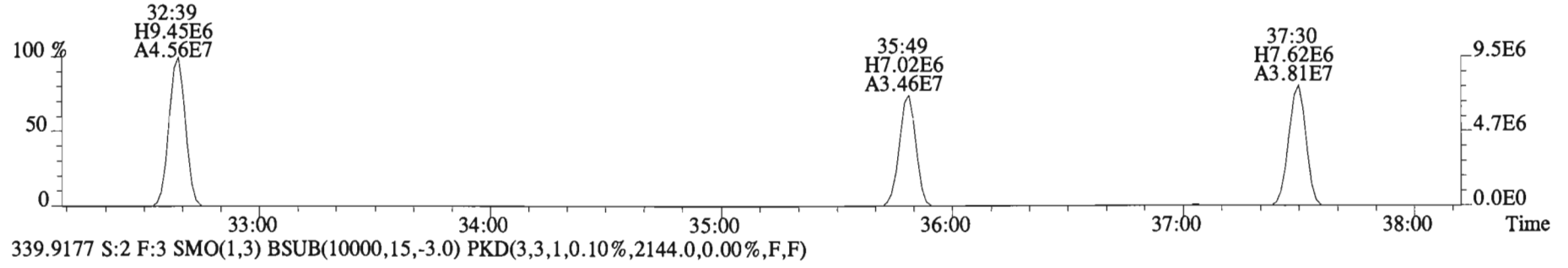
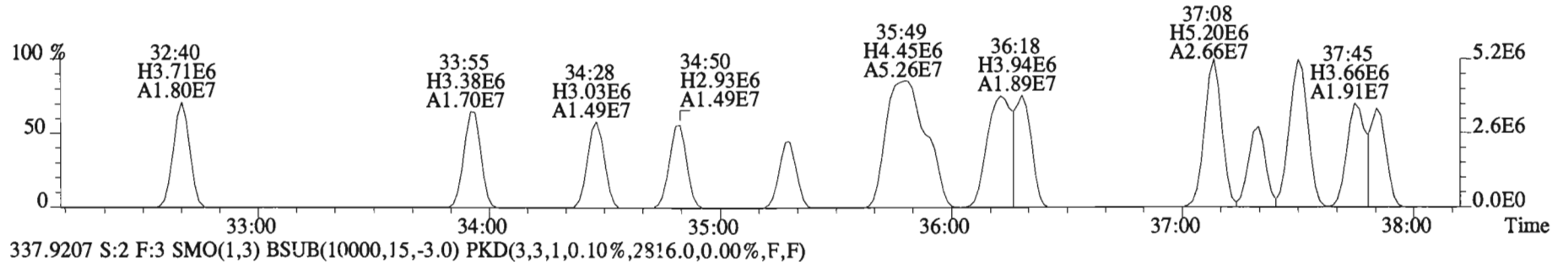
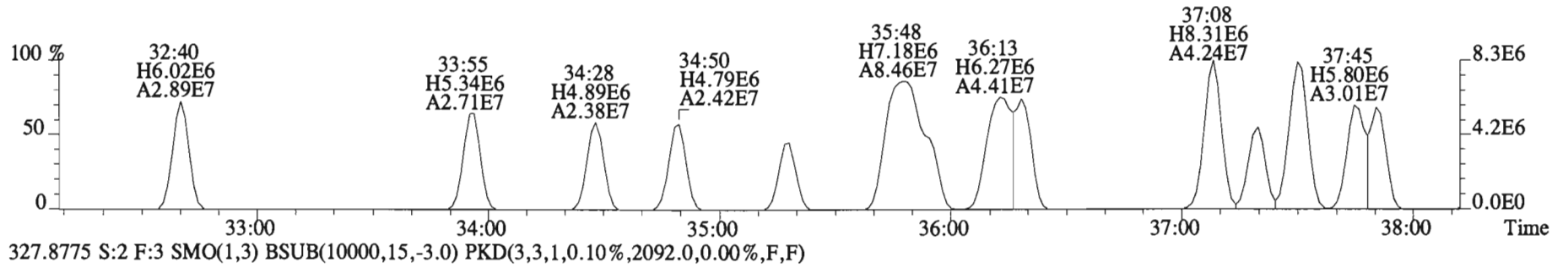
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
301.9626 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9360.0,0.00%,F,F)



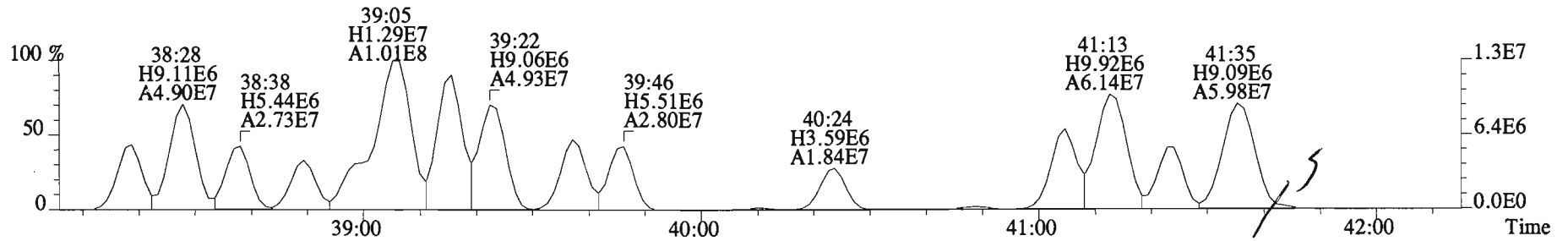
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
 325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)



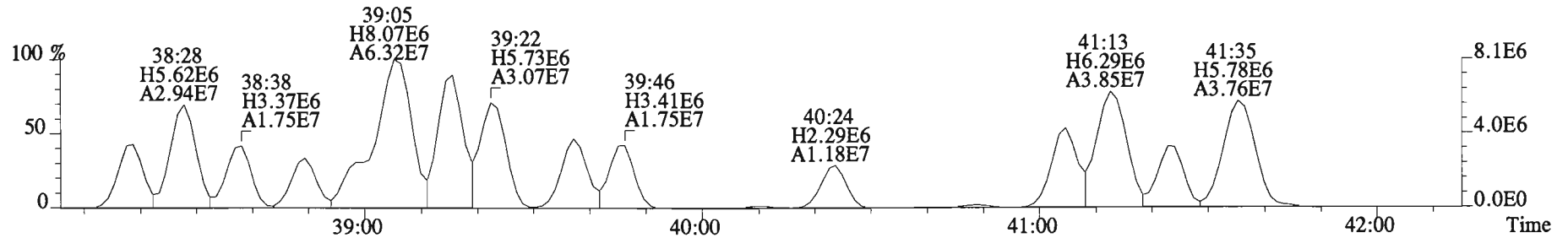
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)



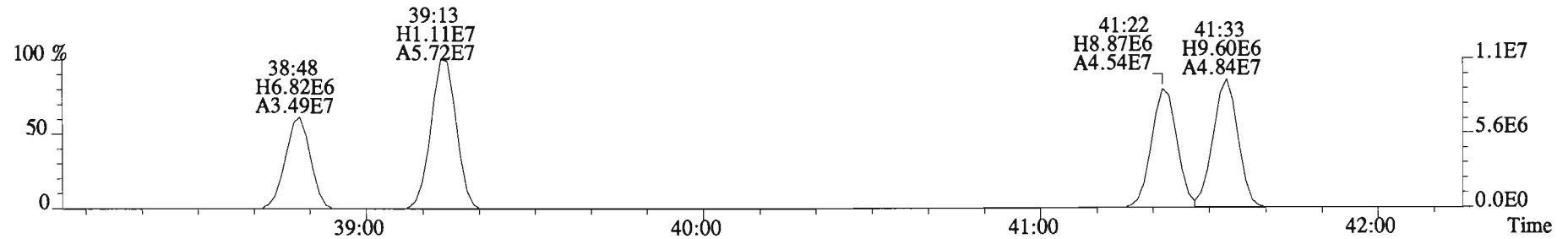
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
 325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)



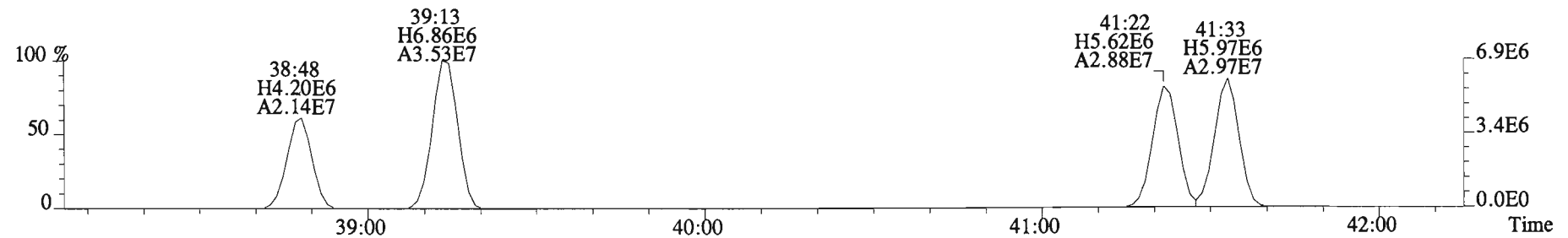
327.8775 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2092.0,0.00%,F,F)



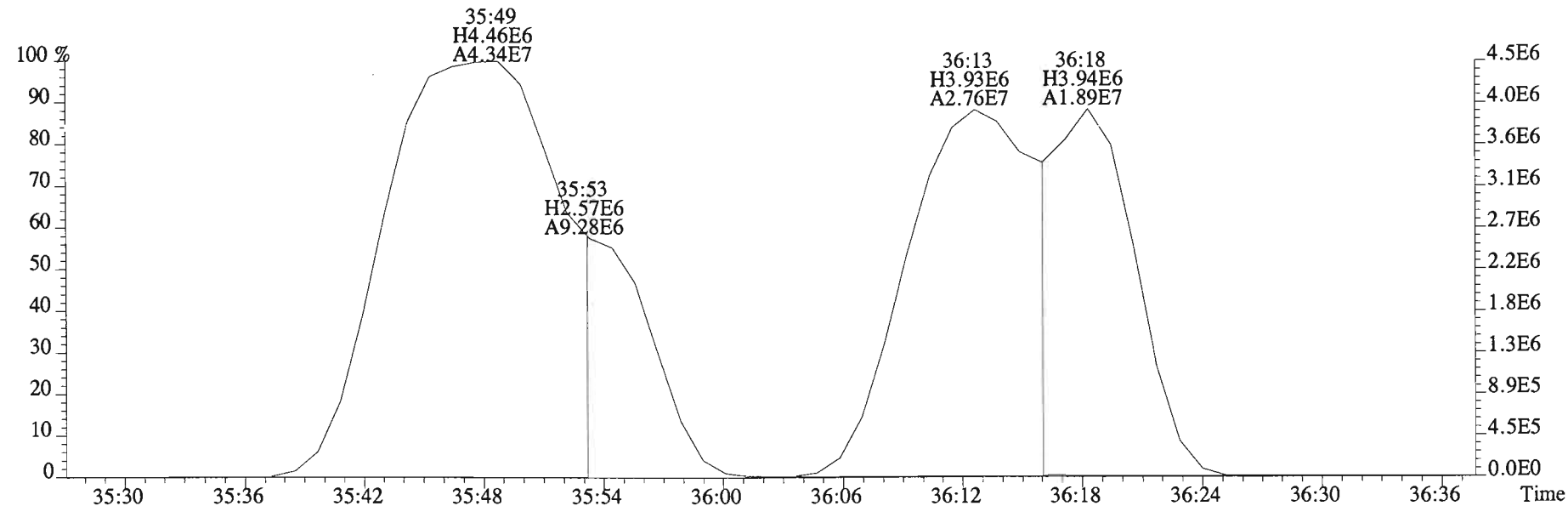
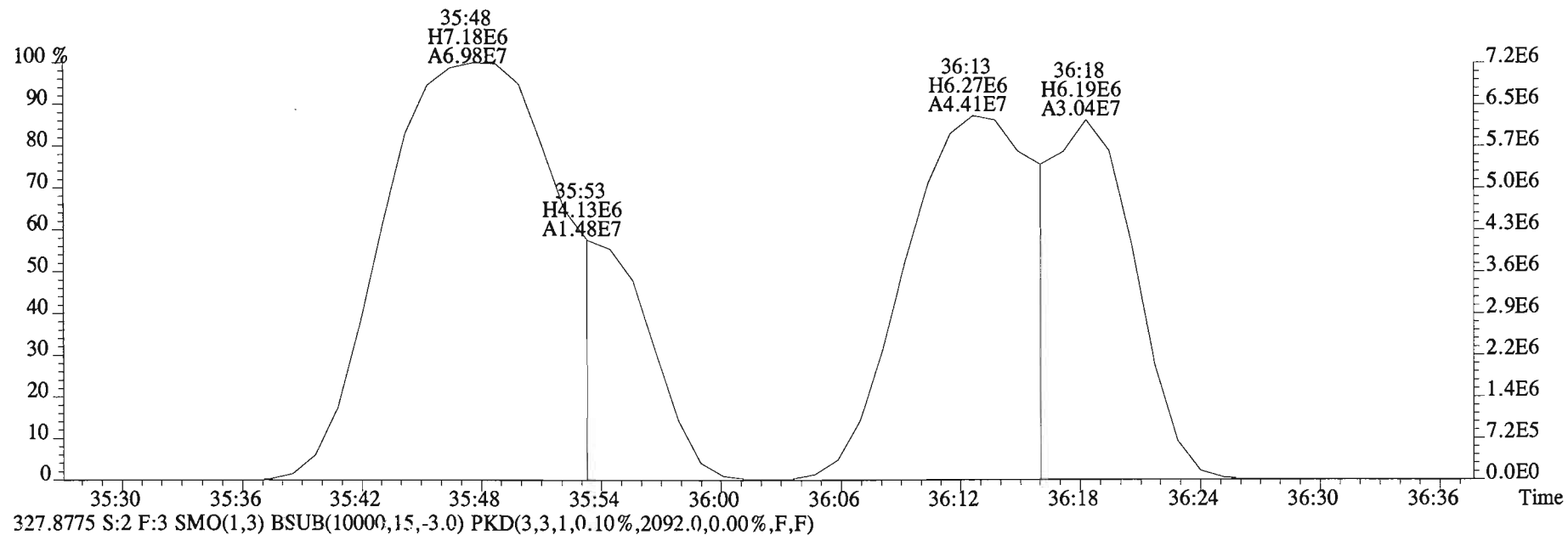
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2816.0,0.00%,F,F)



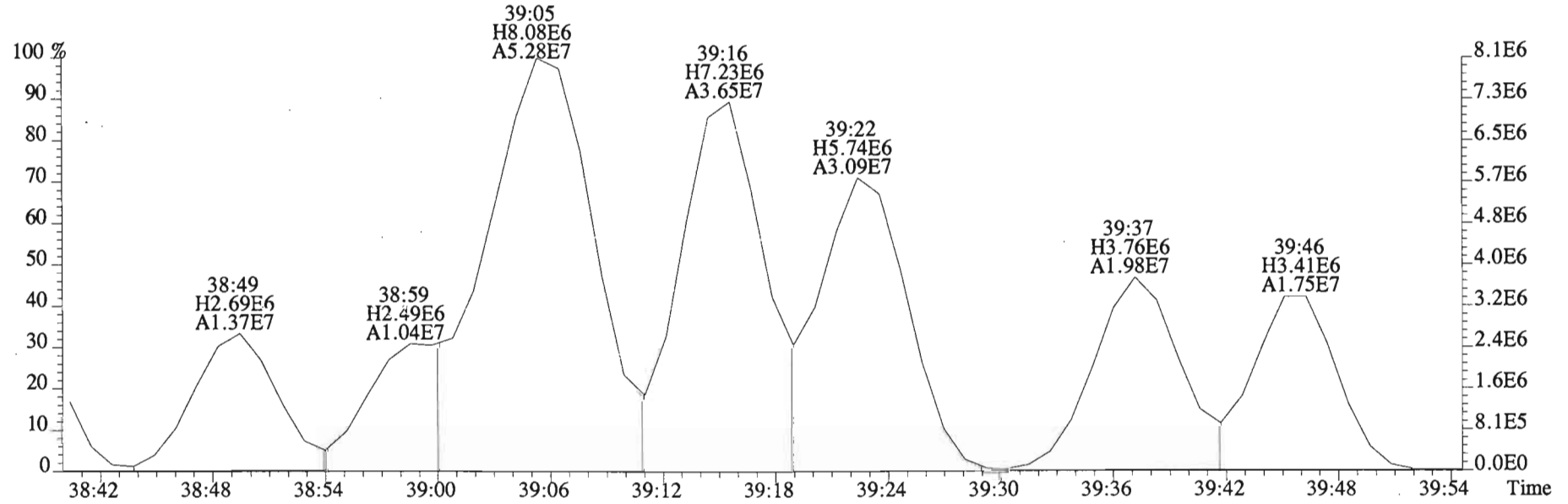
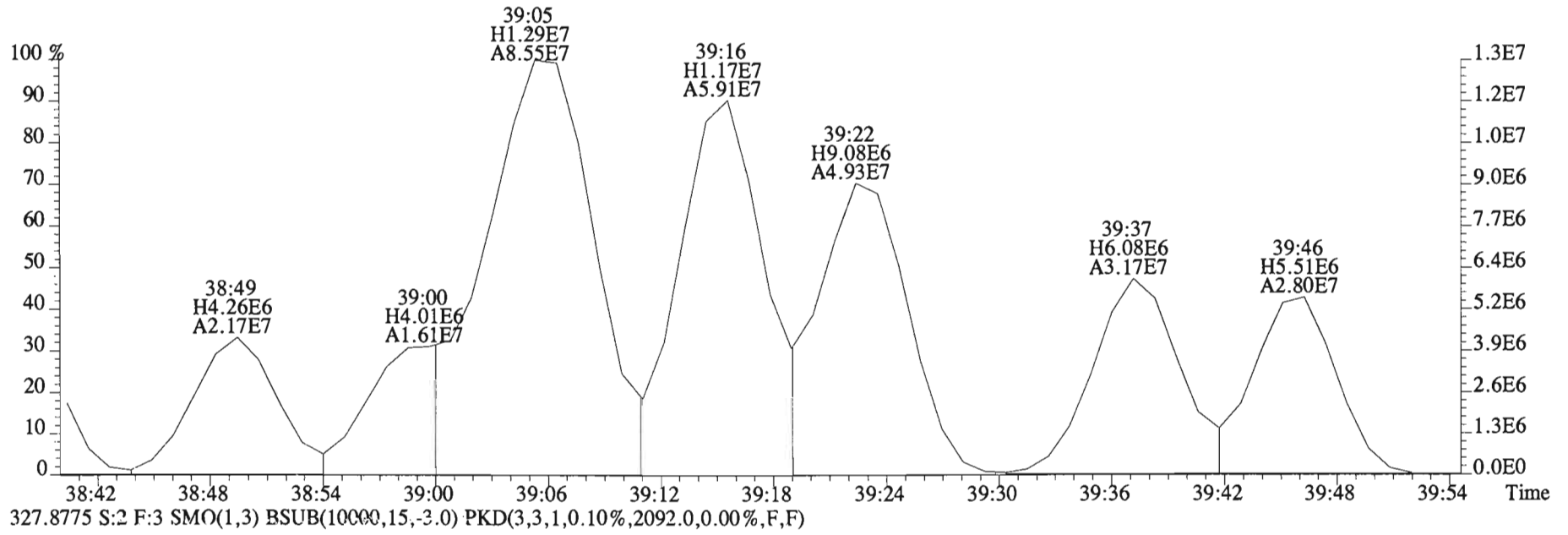
339.9177 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2144.0,0.00%,F,F)



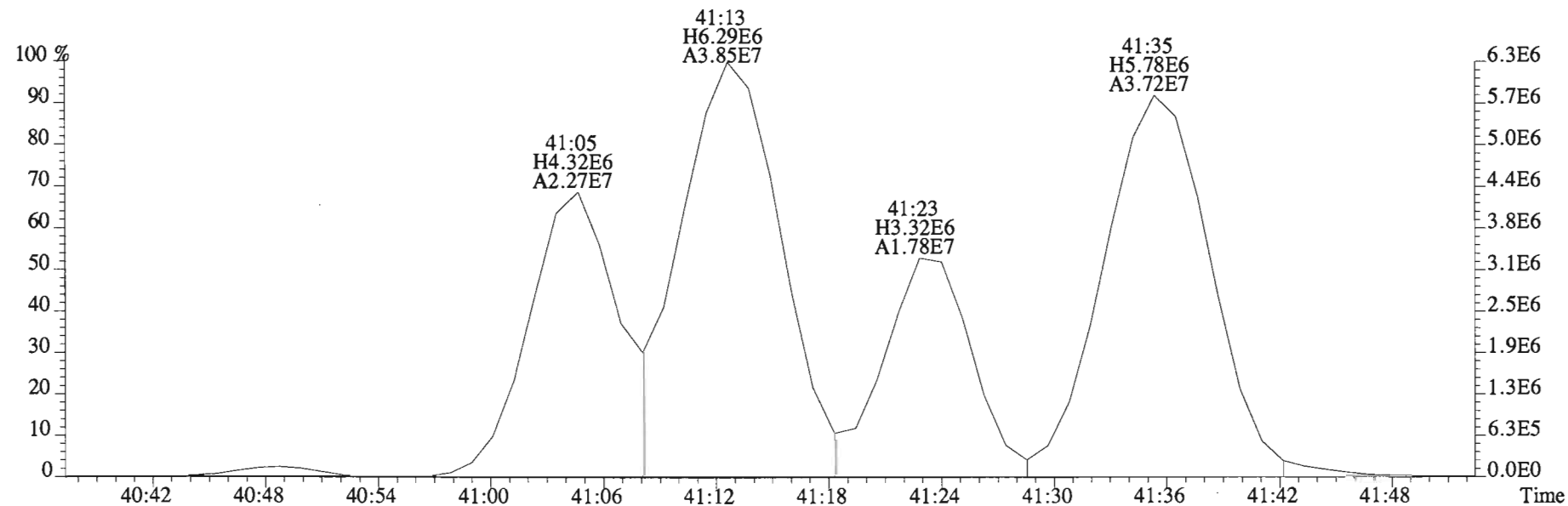
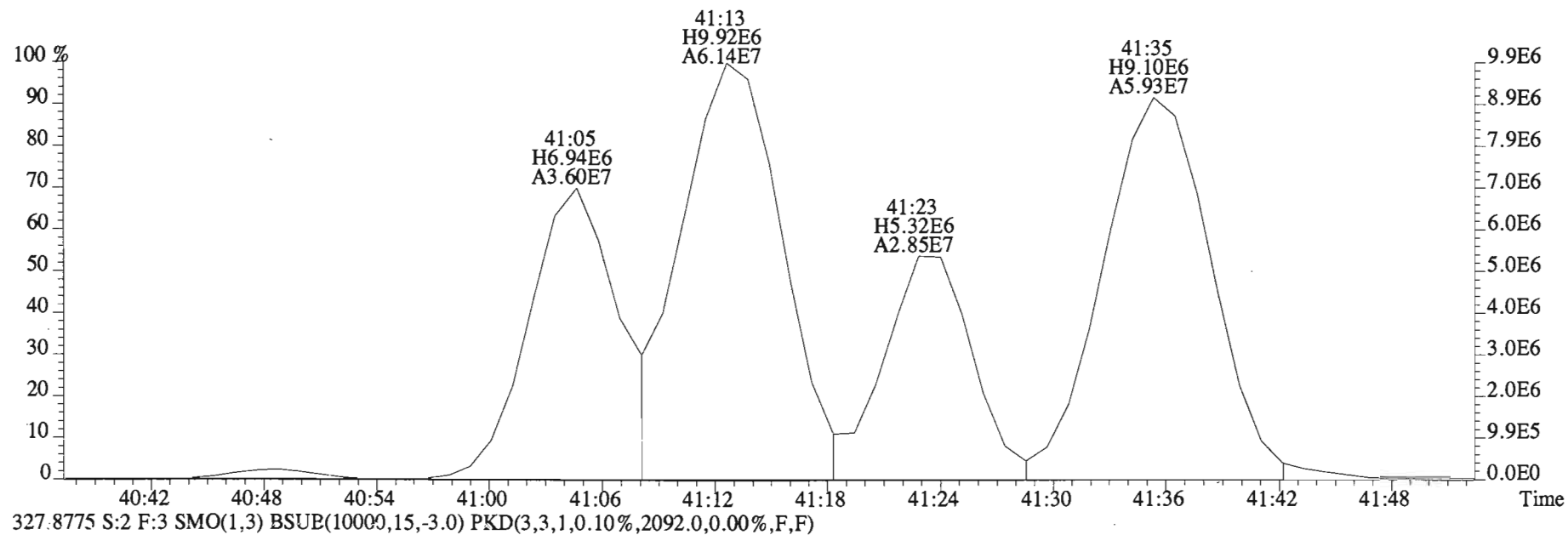
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB_ZB1
 325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)



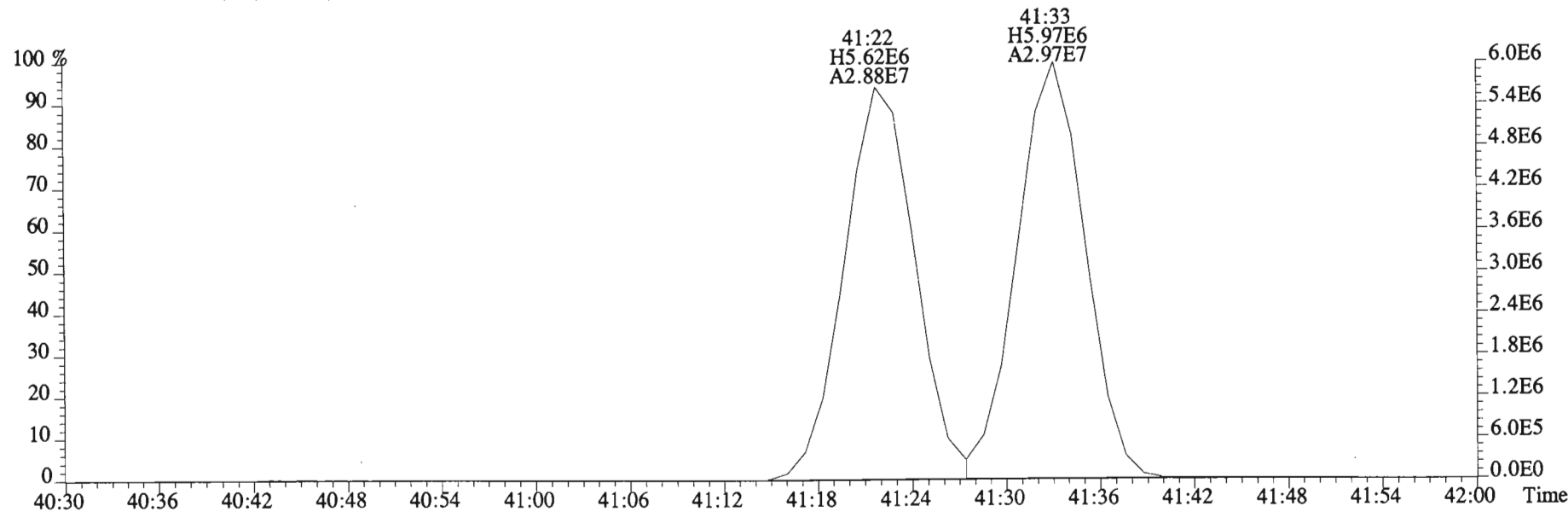
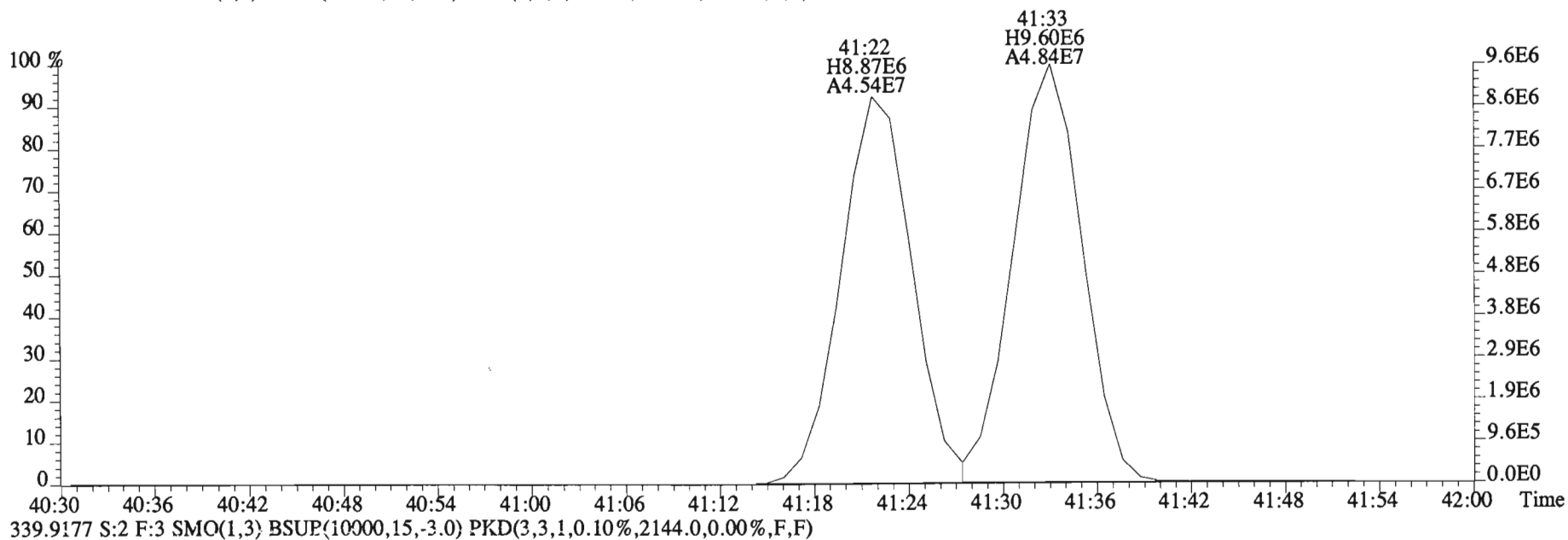
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
 325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)



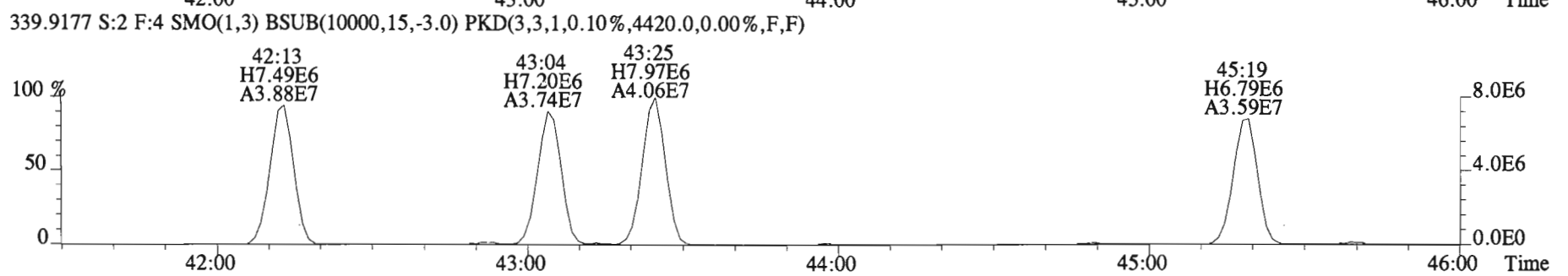
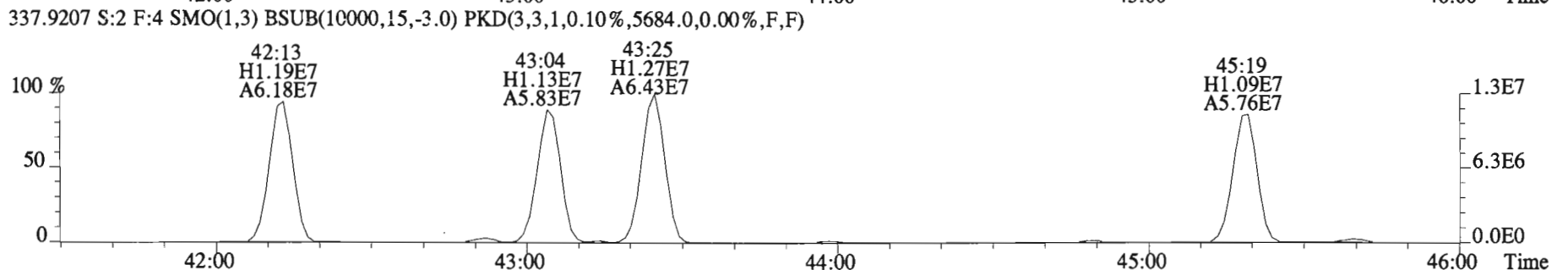
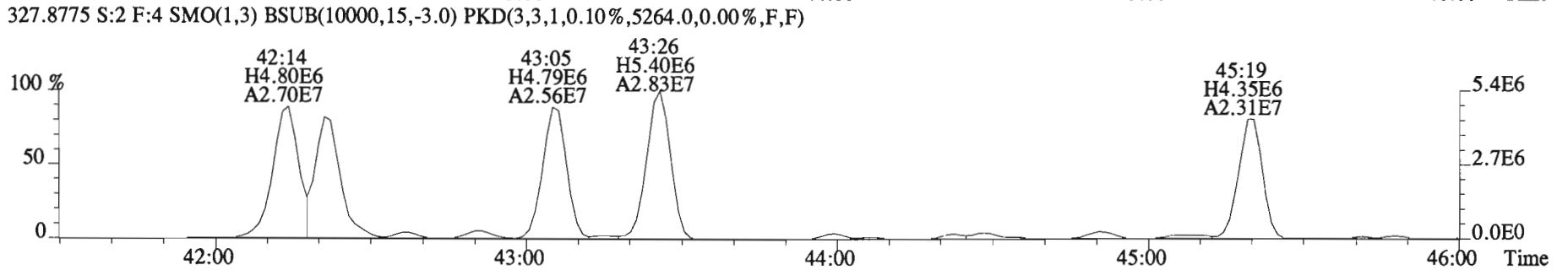
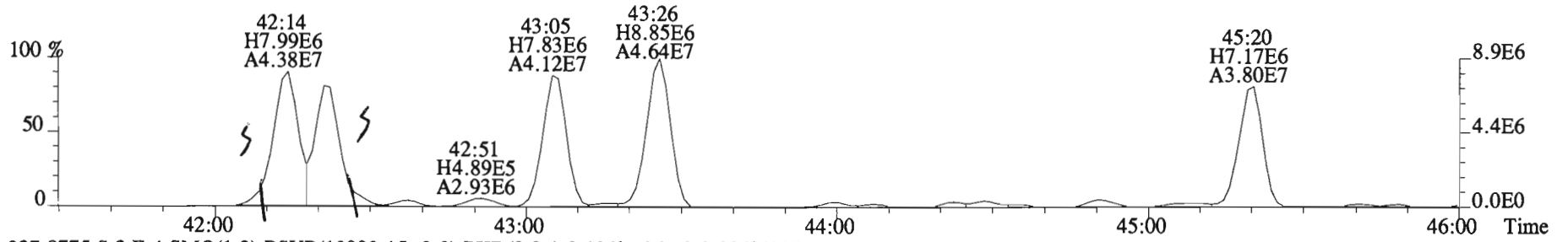
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB_ZB1
325.8804 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2408.0,0.00%,F,F)



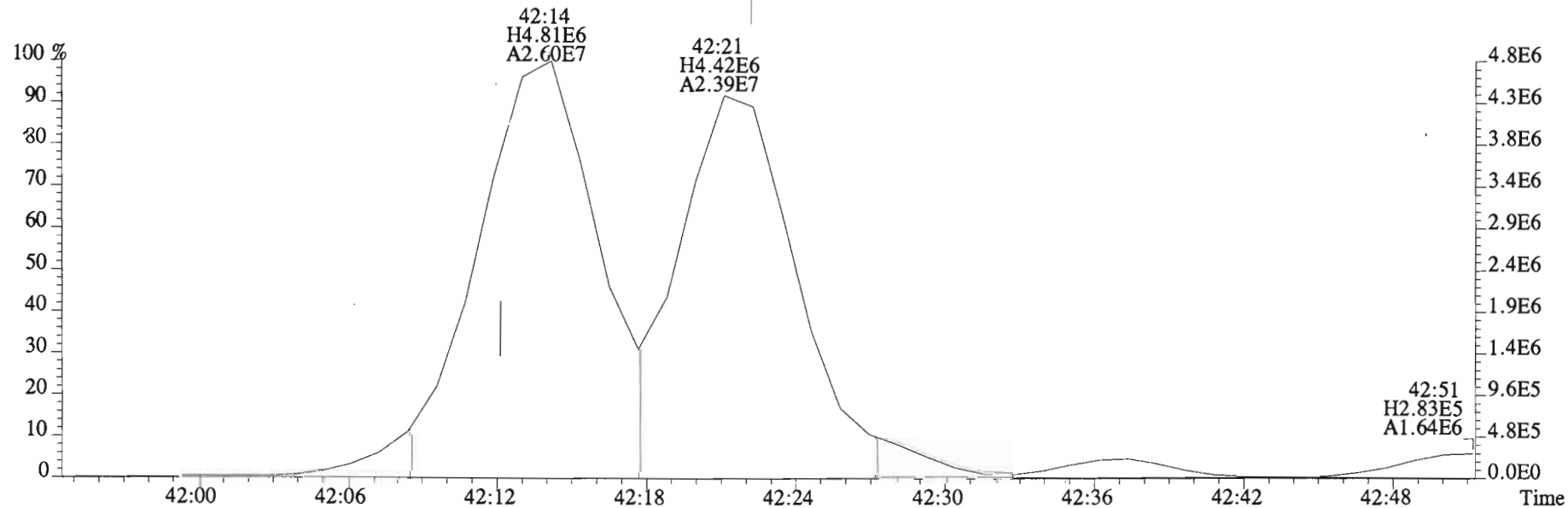
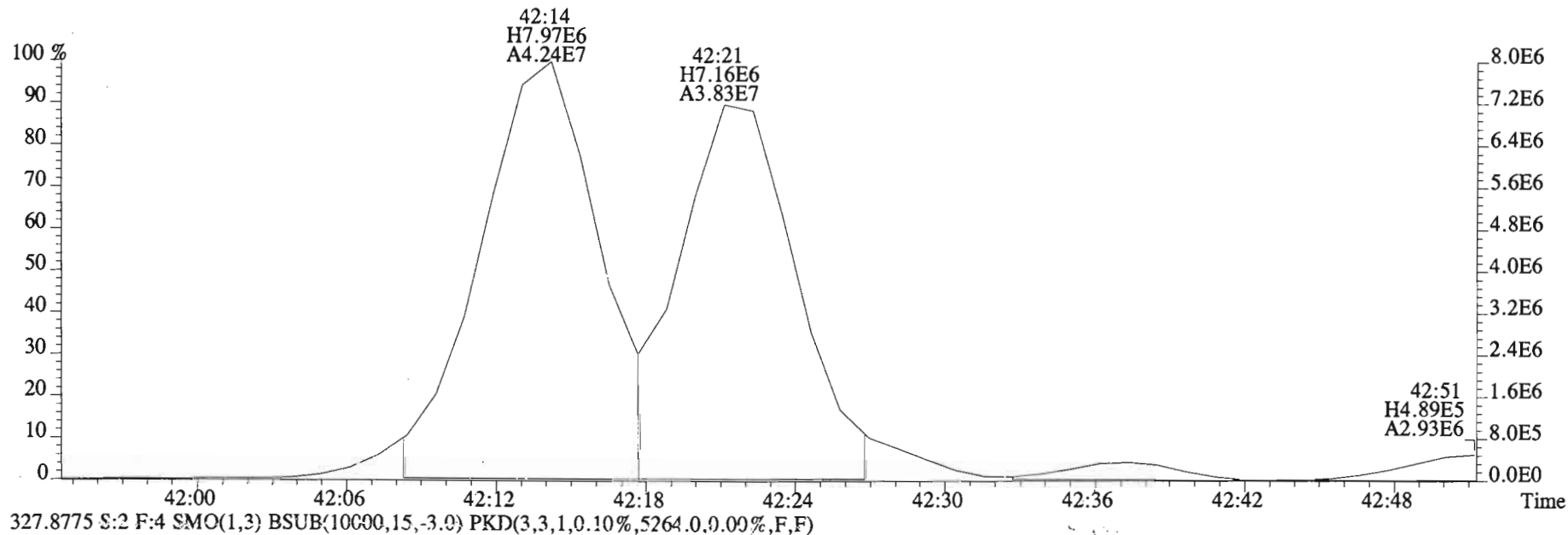
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
337.9207 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2816.0,0.00%,F,F)



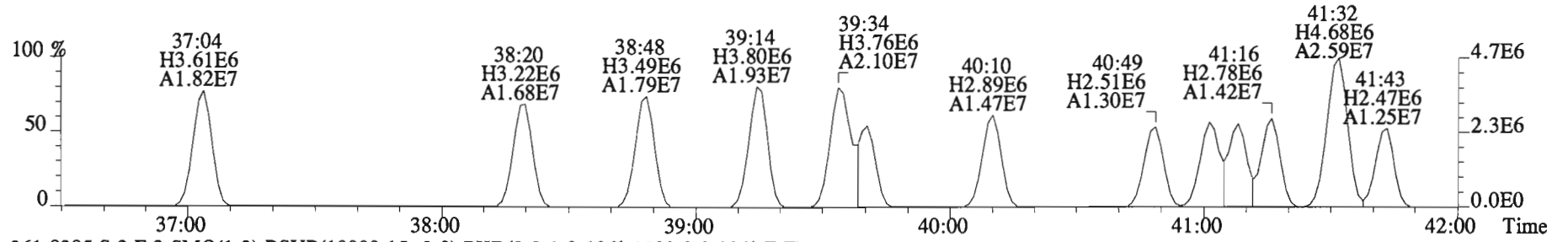
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6456.0,0.00%,F,F)



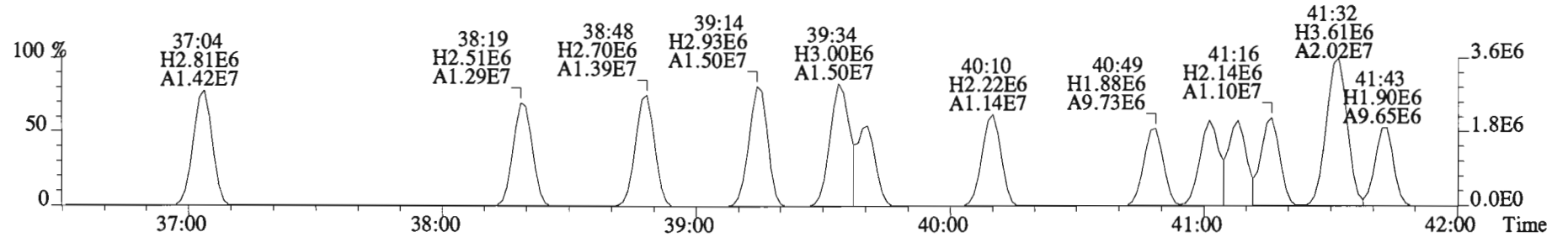
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB_ZB1
325.8804 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,6456.0,0.00%,F,F)



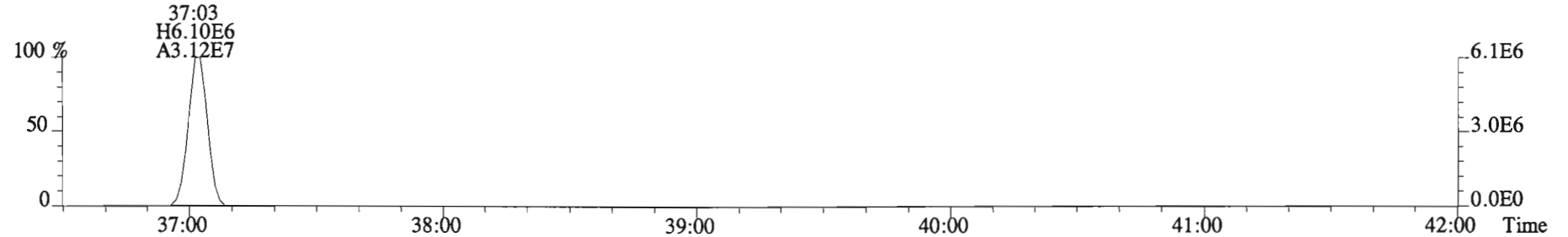
File:150205E1 #1-758 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
359.8415 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1480.0,0.00%,F,F)



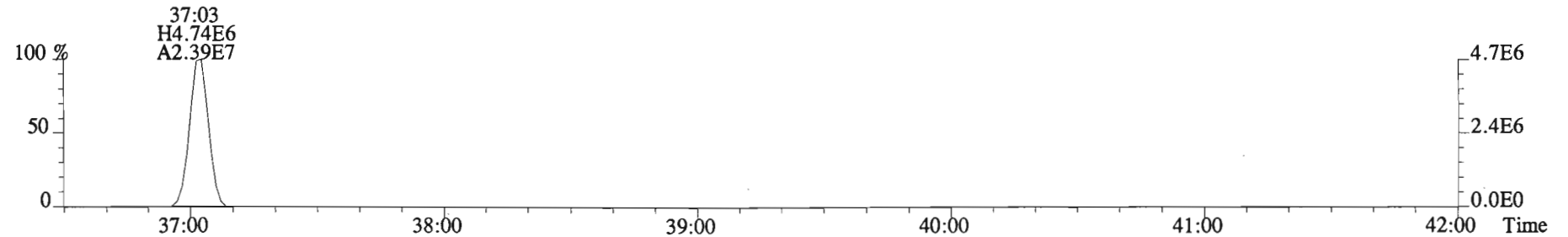
361.8385 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1520.0,0.00%,F,F)



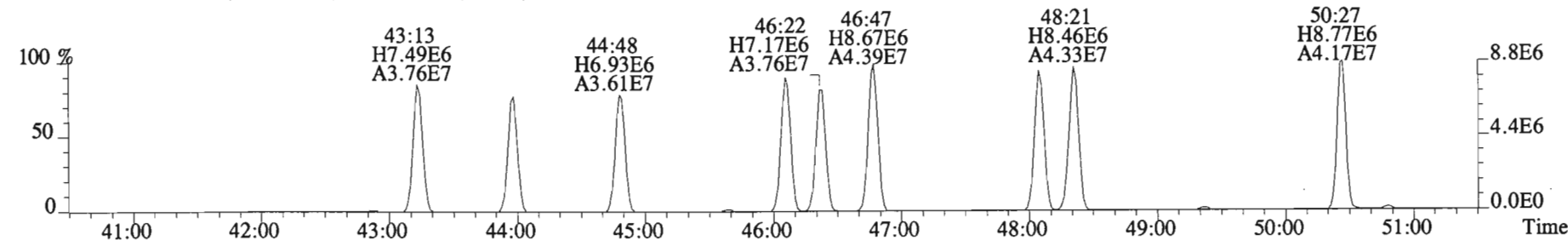
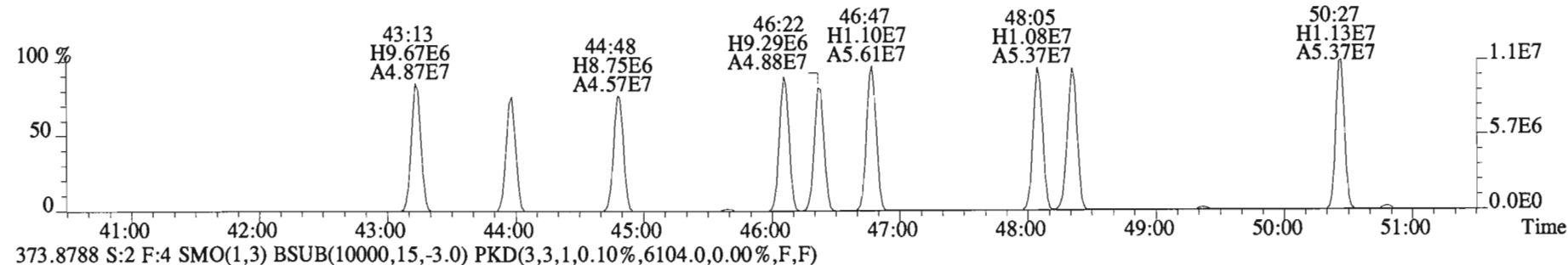
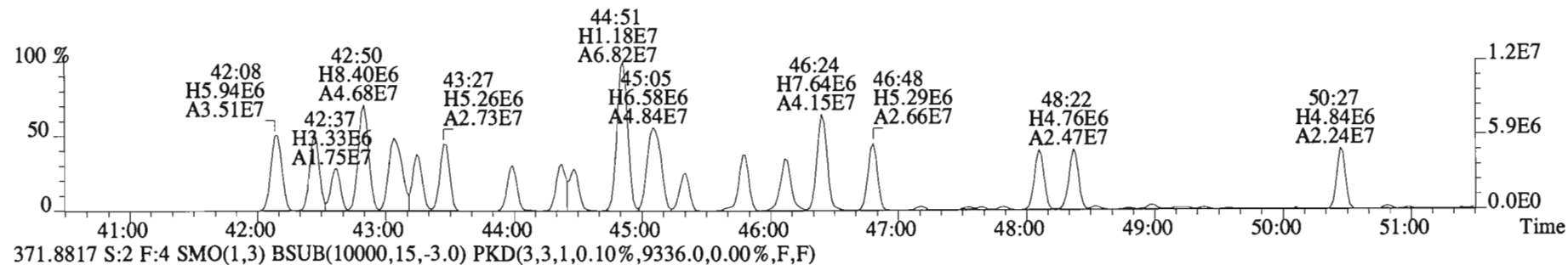
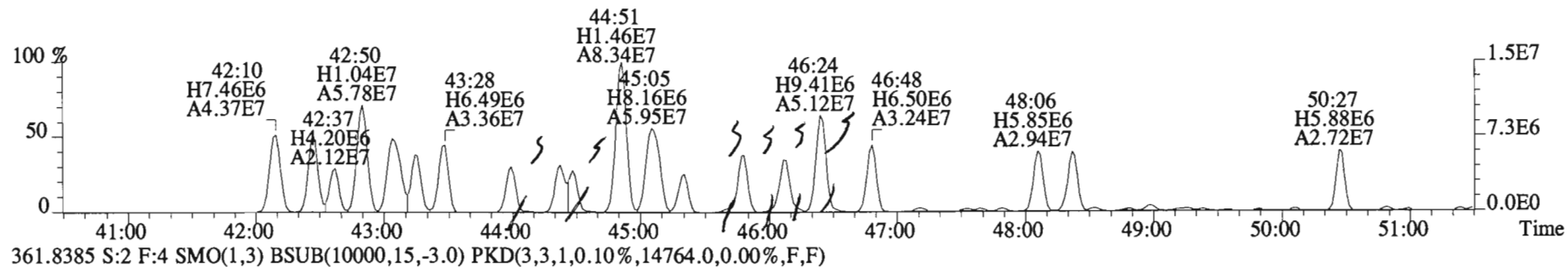
371.8817 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1448.0,0.00%,F,F)



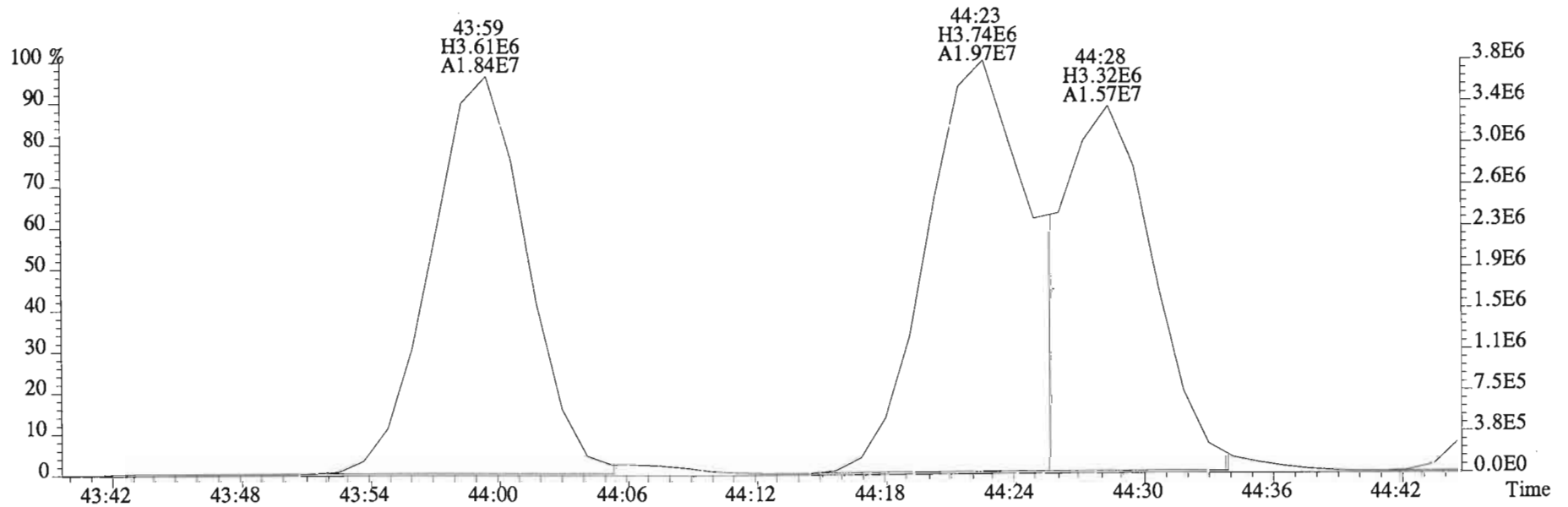
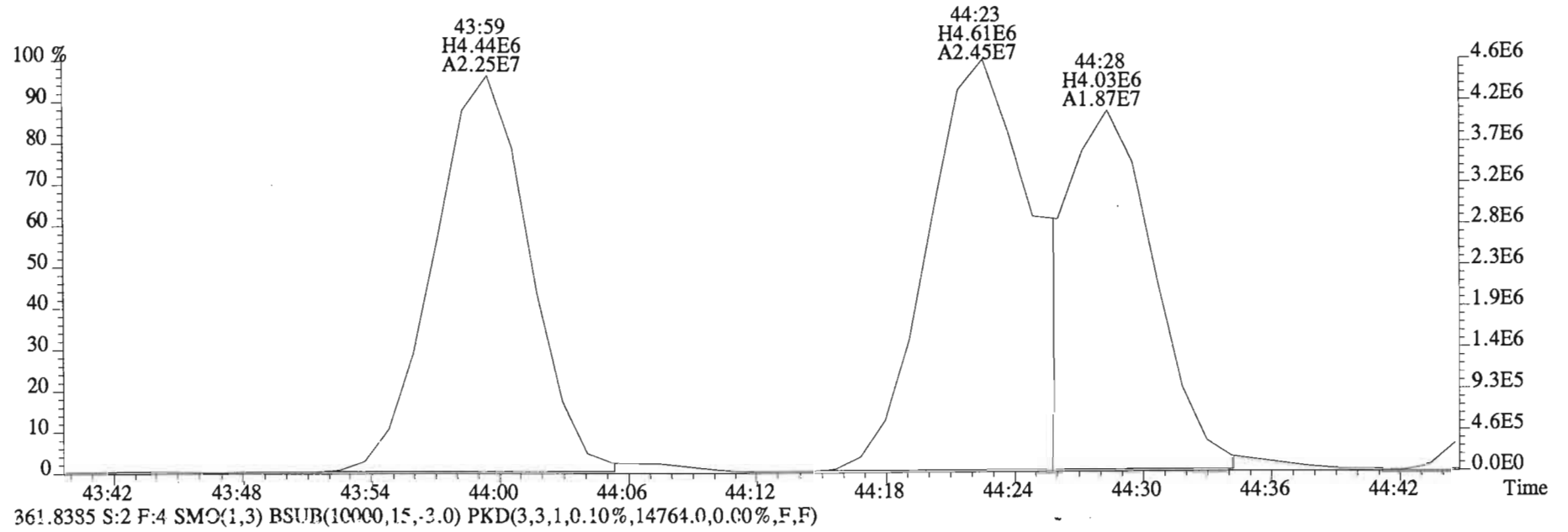
373.8788 S:2 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1584.0,0.00%,F,F)



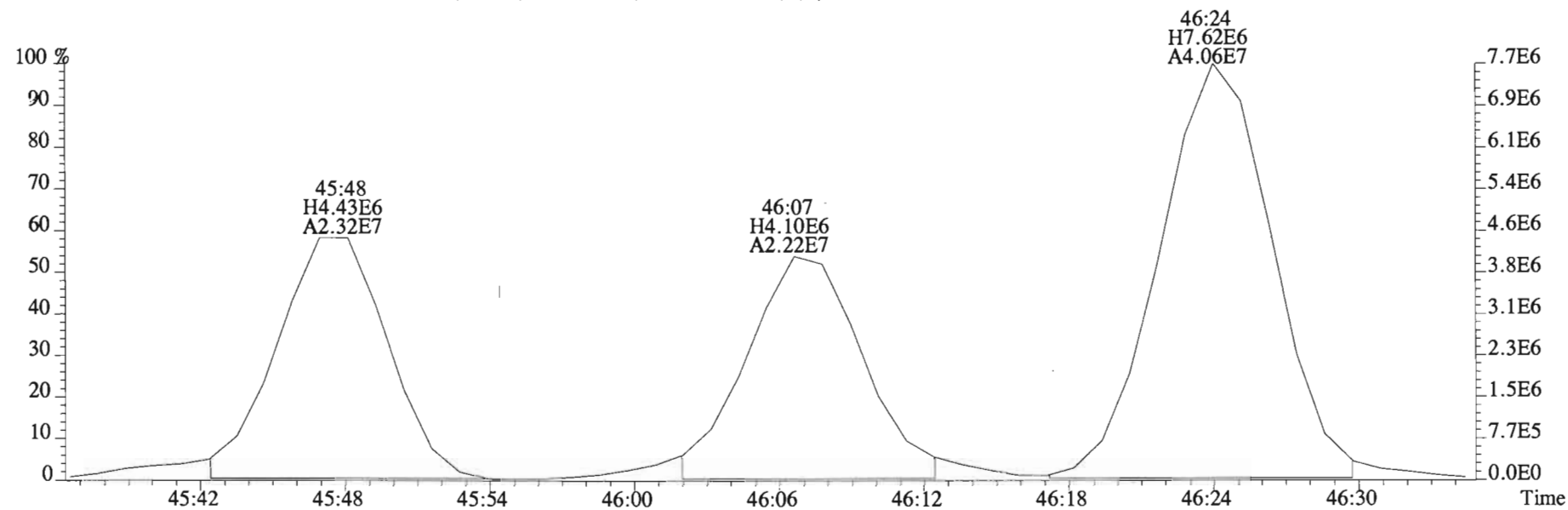
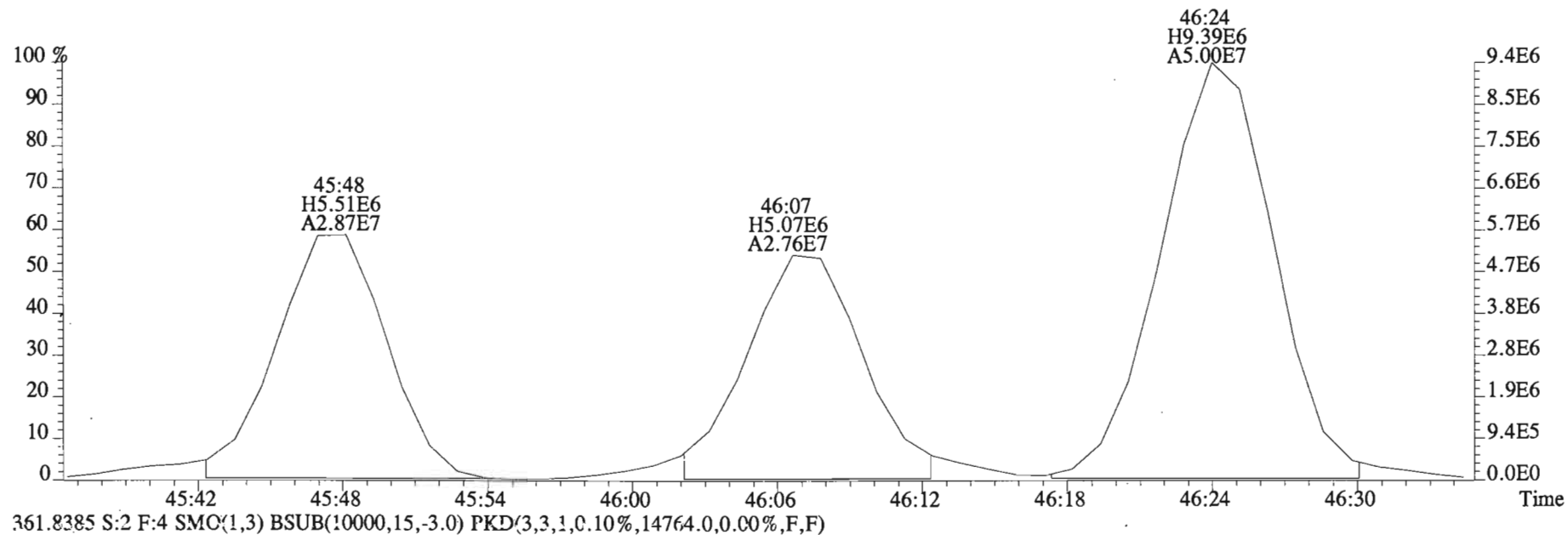
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,21804.0,0.00%,F,F)



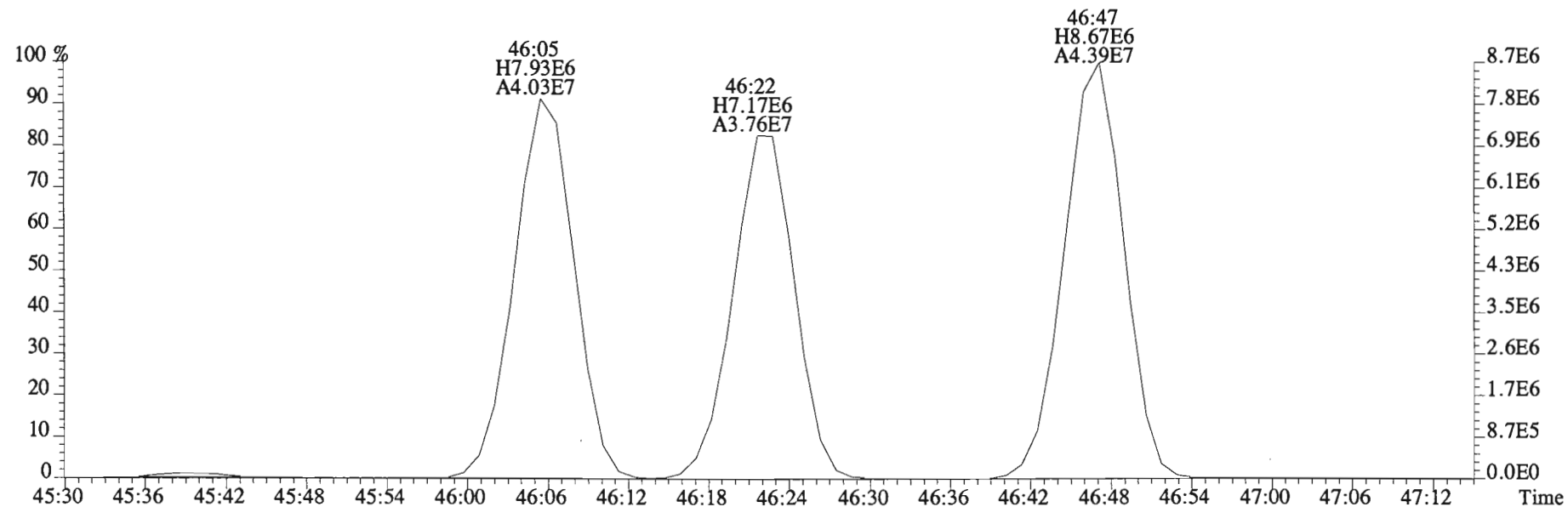
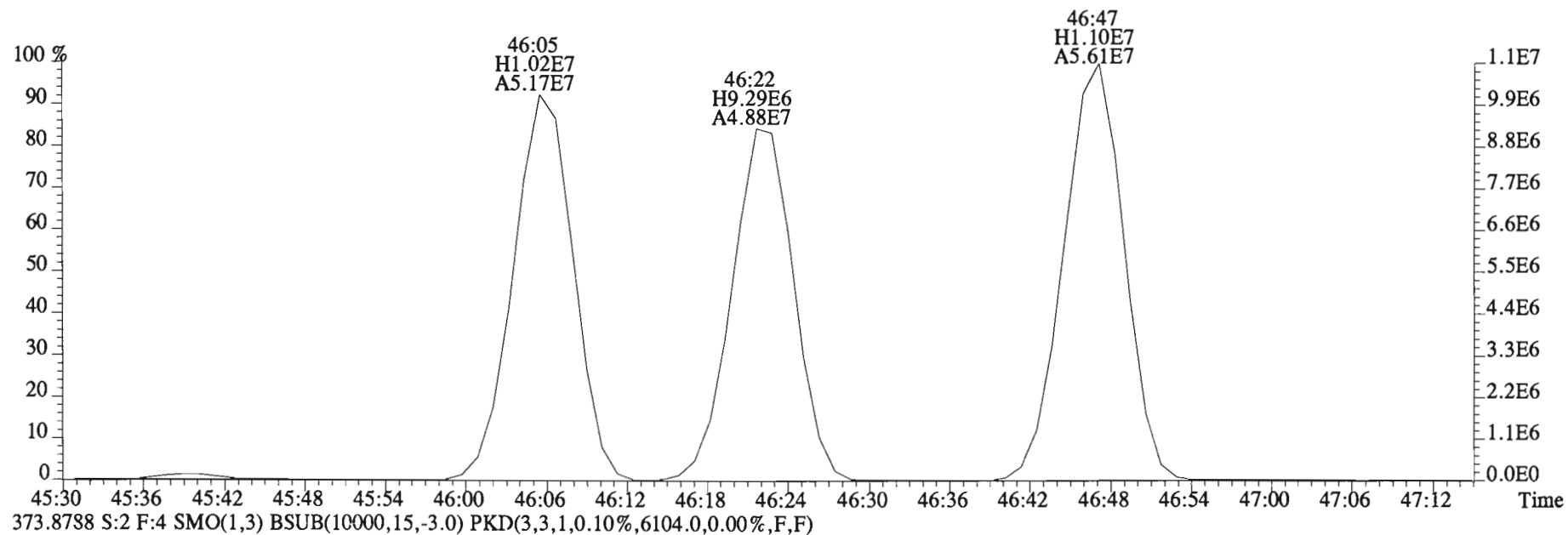
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,21804.0,0.00%,F,F)



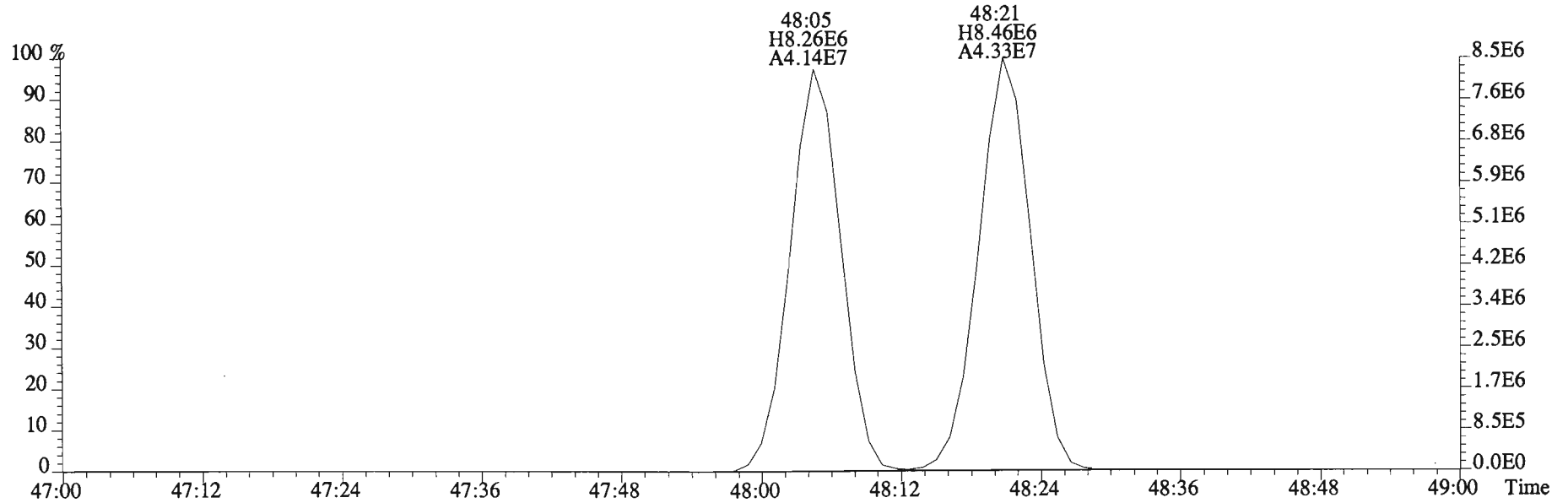
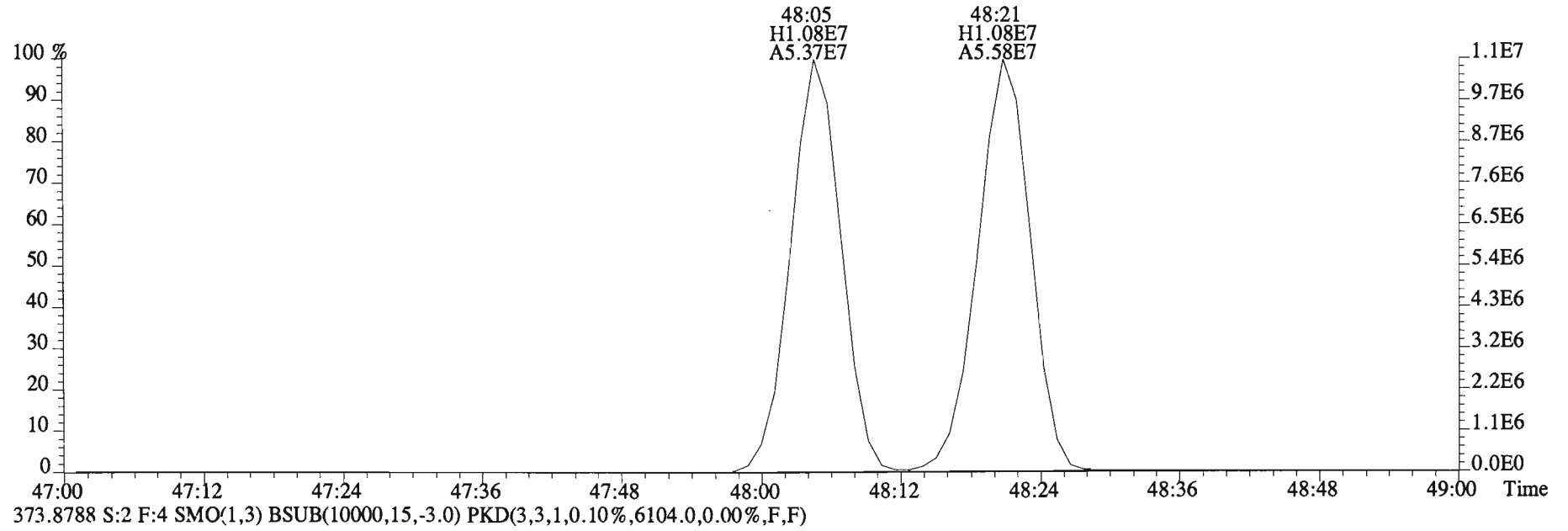
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
359.8415 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,21804.0,0.00%,F,F)



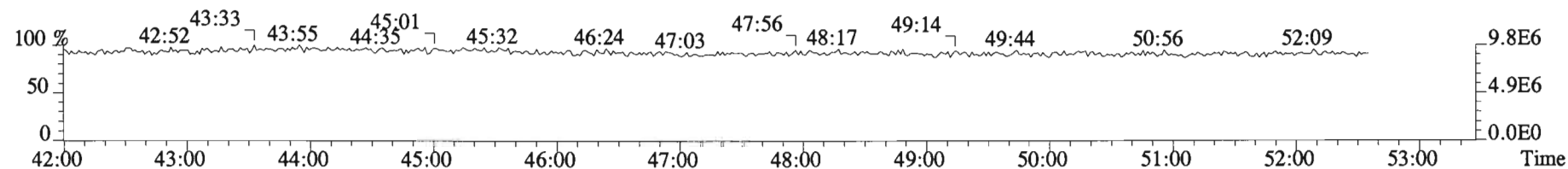
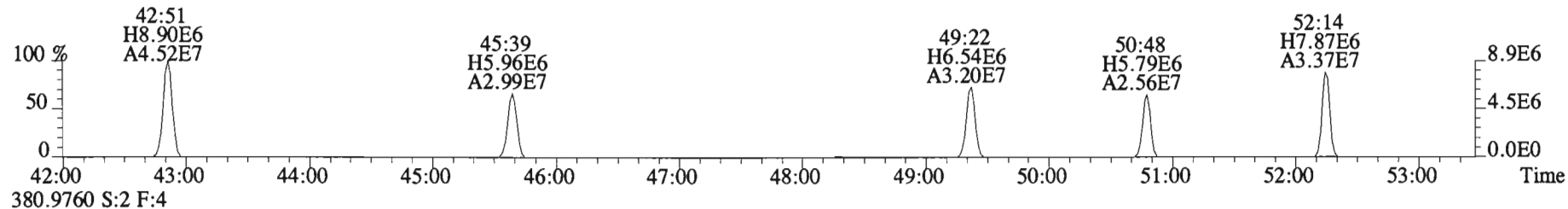
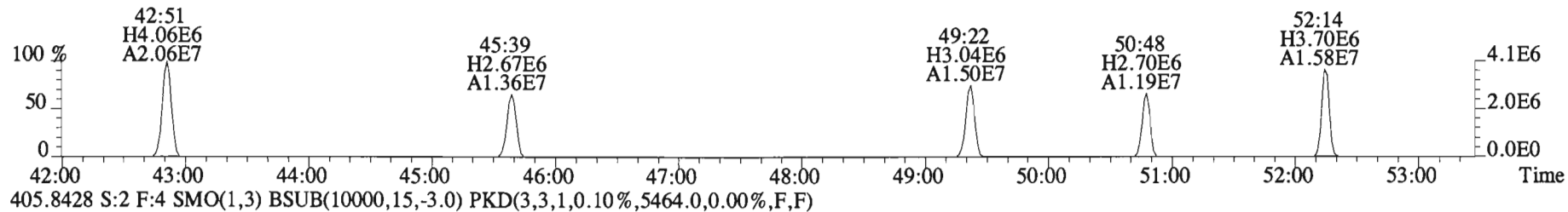
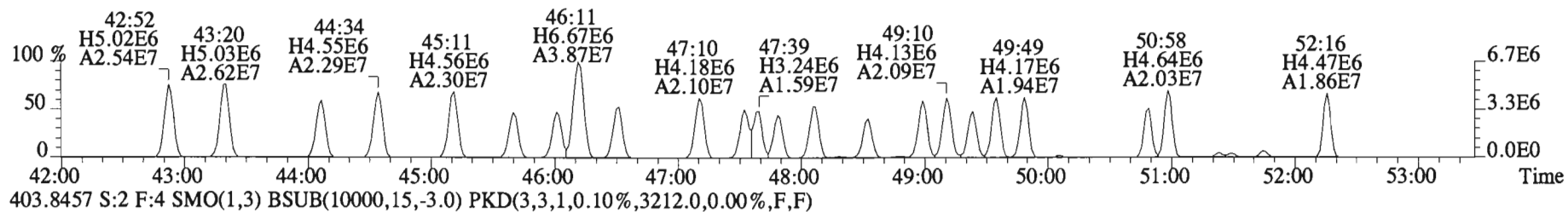
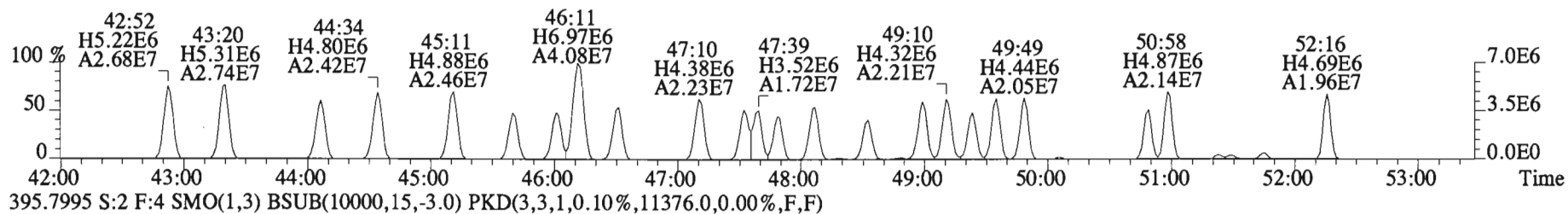
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB_ZB1
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9336.0,0.00%,F,F)



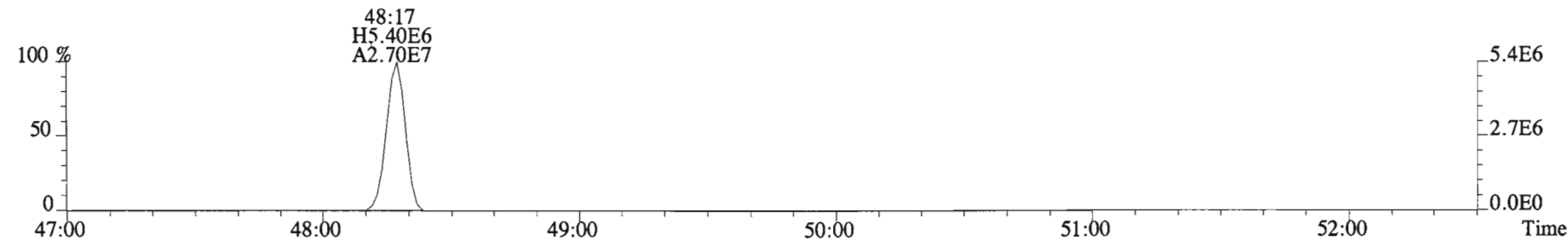
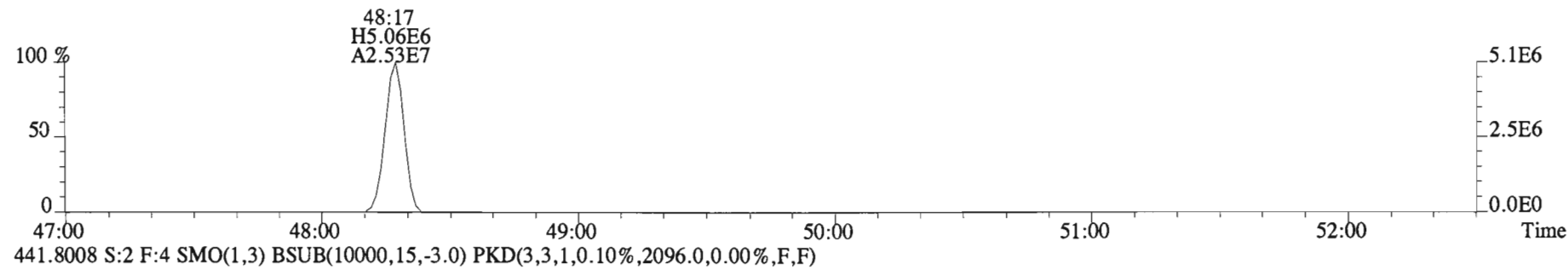
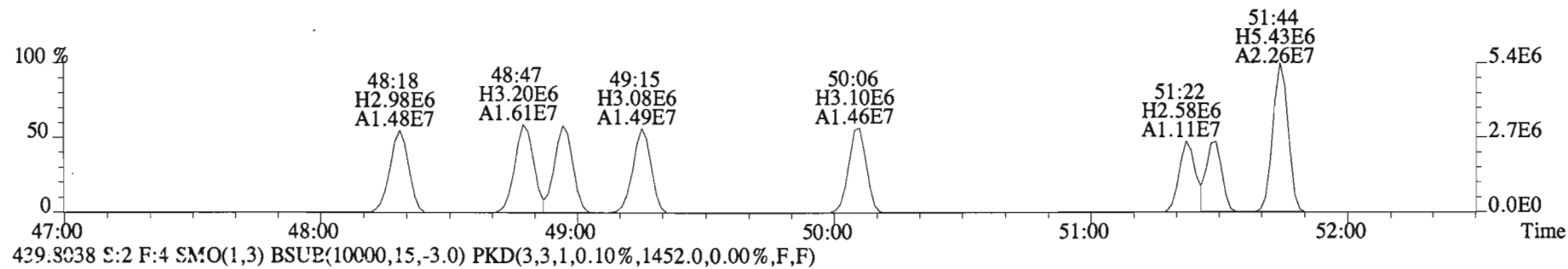
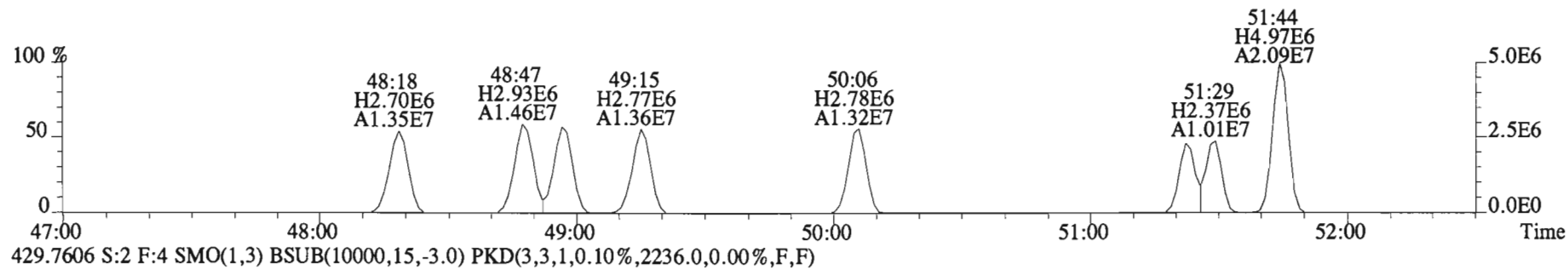
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
371.8817 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,9336.0,0.00%,F,F)



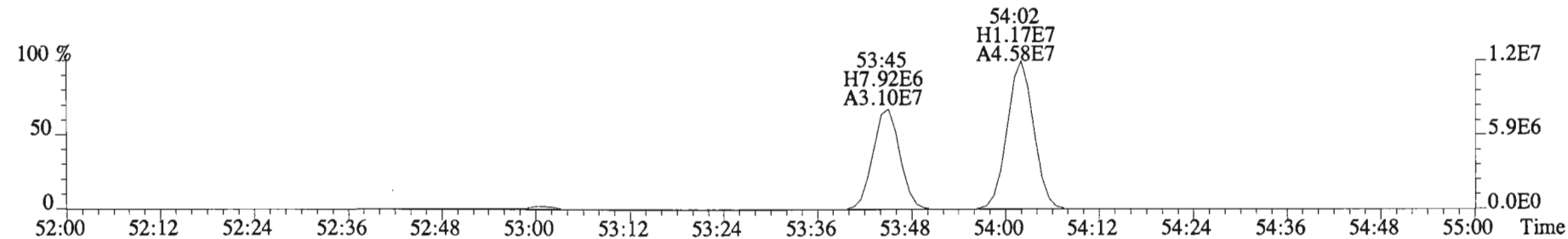
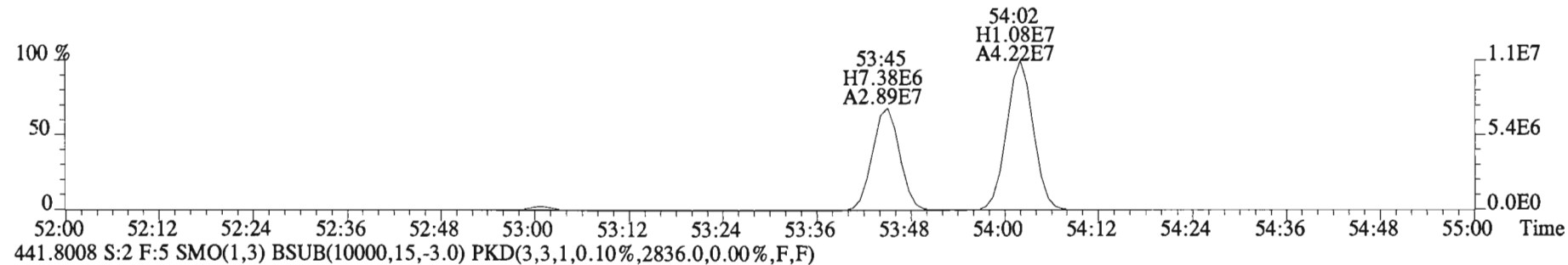
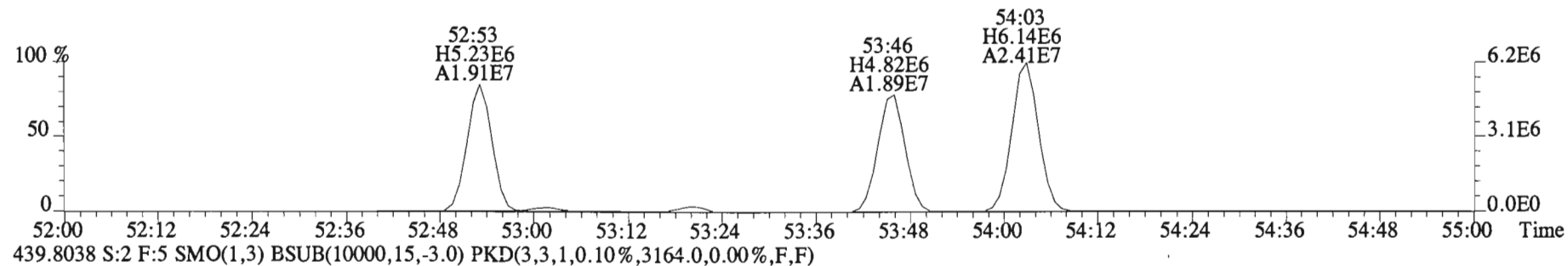
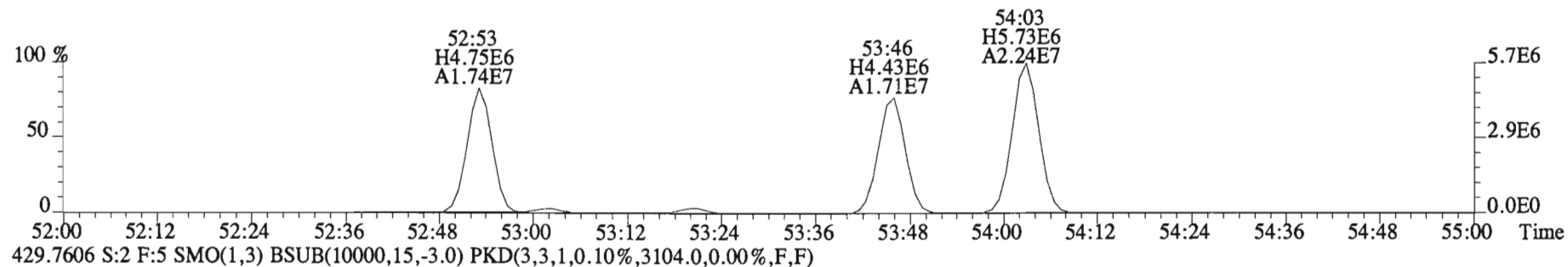
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
393.8025 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,8884.0,0.00%,F,F)



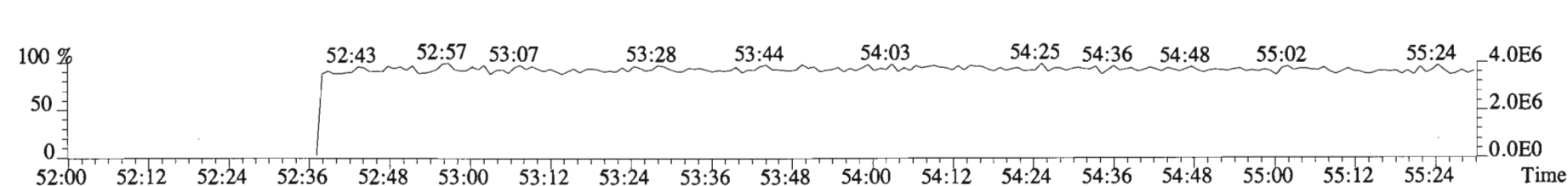
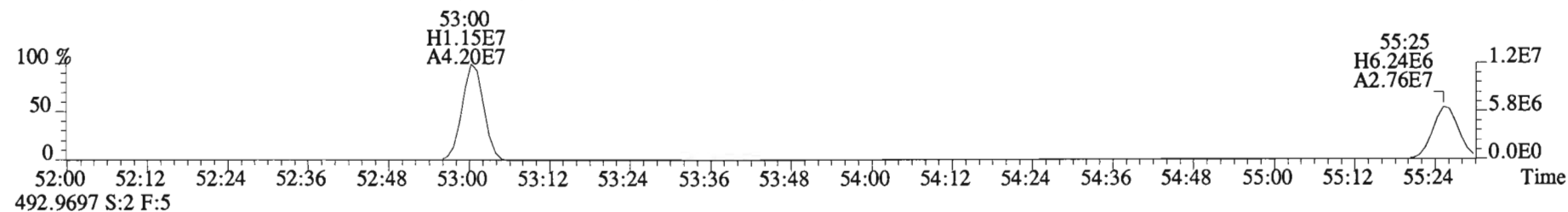
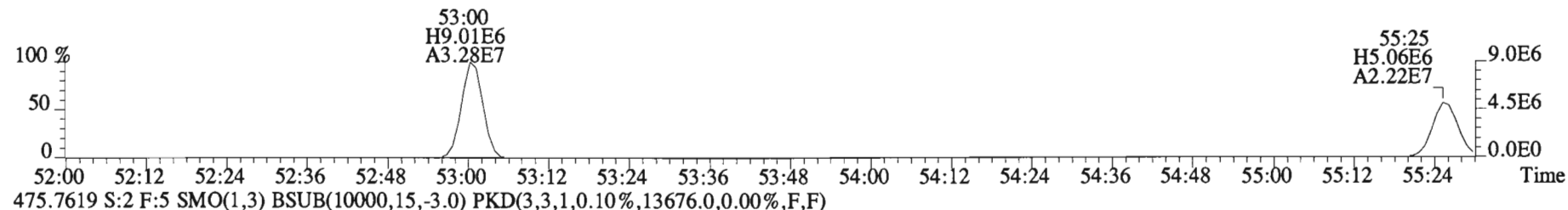
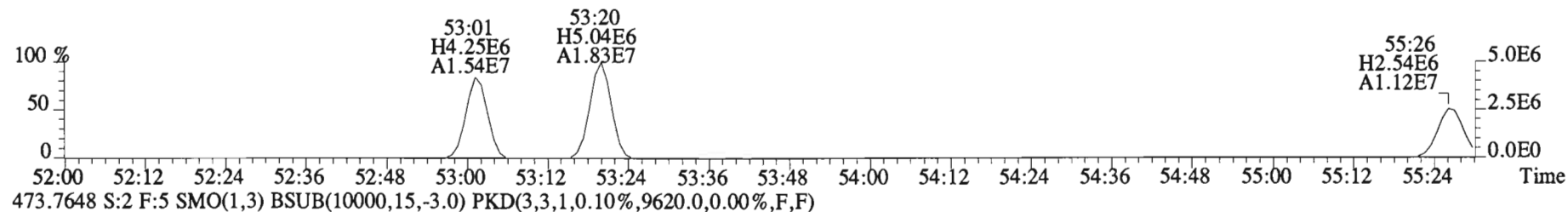
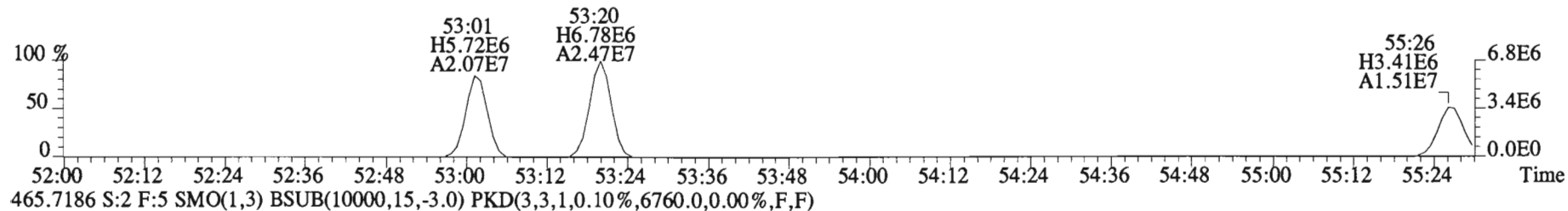
File:150205E1 #1-555 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG-8 Text:B5A0115-BS1 OPR 10 Exp:PCB_ZB1
427.7635 S:2 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1540.0,0.00%,F,F)



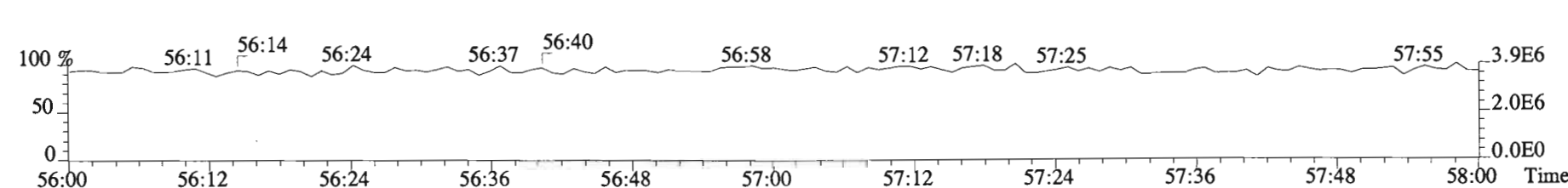
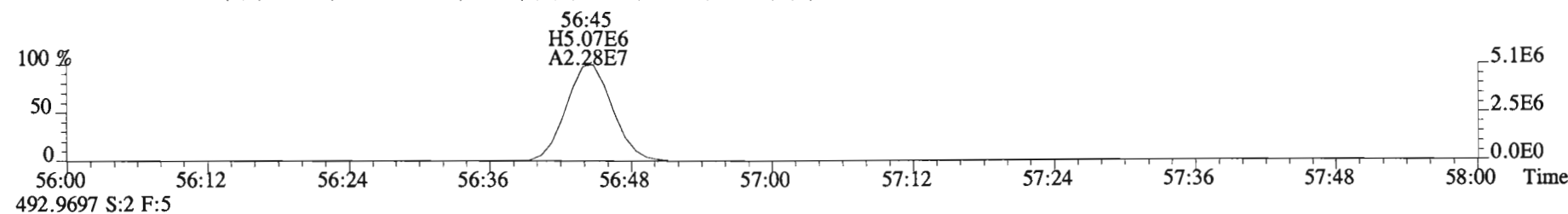
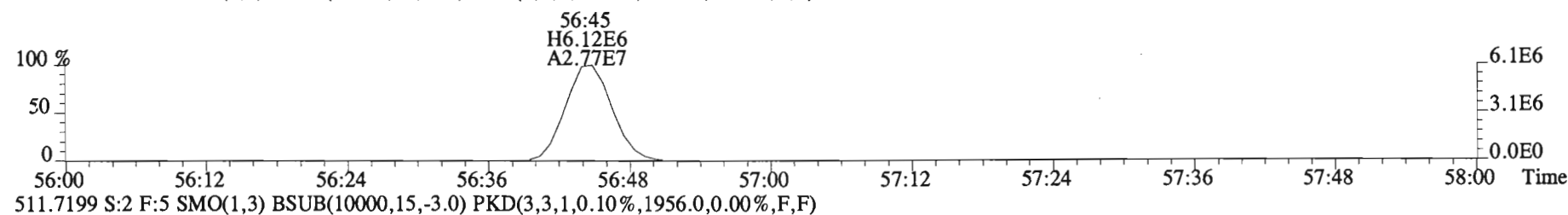
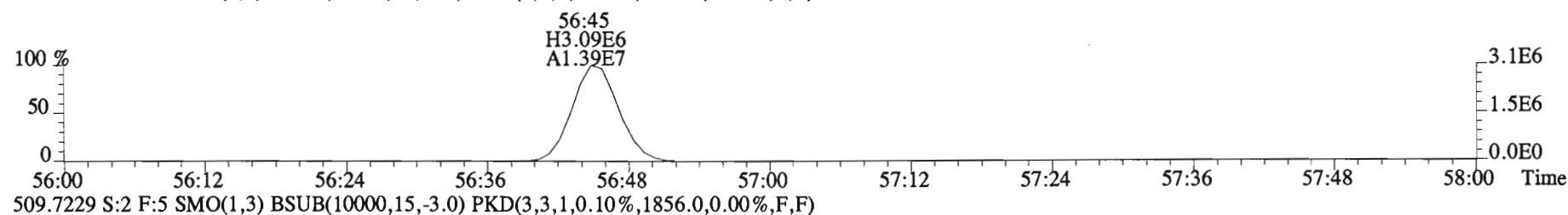
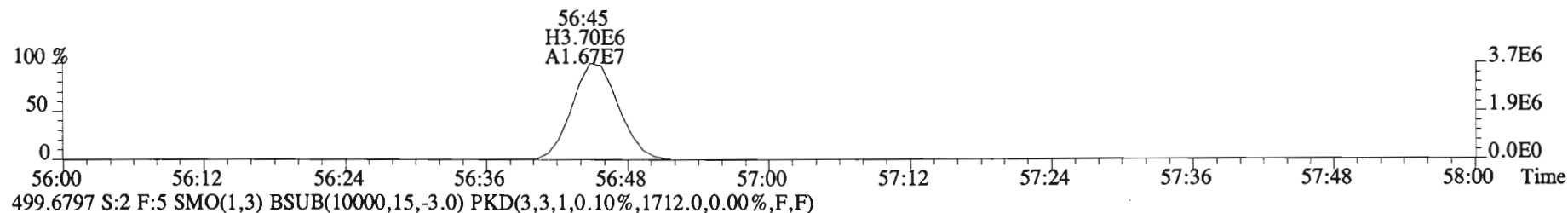
File:150205E1 #1-430 Acq: 5-FEB-2015 10:04:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG-8 Text: B5A0115-BS1 OPR 10 Exp: PCB_ZB1
427.7635 S:2 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2844.0,0.00%,F,F)



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: DS-TD-01-20141216-S
Lab ID: 1400970-02@10X

Filename: 150205E1 S:5 Acq: 5-FEB-15 13:16:16
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.027

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	*	n	NotF η	1.19	*	3300	2.5	63.1	*	0.996-1.006	
Mono	PCB-2	*	*	n	NotF η	1.18	*	3300	2.5	62.5	*	0.984-0.994	
Mono	PCB-3	*	*	n	NotF η	1.43	*	3300	2.5	51.9	*	0.996-1.006	
Di	PCB-4/10	*	*	n	NotF η	1.57	*	16700	2.5	263	*	0.997-1.007	
Di	PCB-7/9	*	*	n	NotF η	1.21	*	16700	2.5	217	*	0.866-0.874	
Di	PCB-6	*	*	n	NotF η	1.30	*	16700	2.5	201	*	0.890-0.899	
Di	PCB-5/8	4.42e+05	1.26	n	22:56	1.15	255	R	*	2.5	*	0.907-0.917	0.909
Di	PCB-14	*	*	n	NotF η	1.11	*	16700	2.5	251	*	0.949-0.959	
Di	PCB-11	1.13e+06	1.65	y	25:15	1.09	656	*	2.5	*	1.001	0.995-1.005	
Di	PCB-12/13	*	*	n	NotF η	1.19	*	16700	2.5	234	*	1.011-1.021	
Di	PCB-15	1.02e+06	1.72	y	25:57	1.28	502	*	2.5	*	1.029	1.023-1.033	
Tri	PCB-19	*	*	n	NotF η	1.04	*	1670	2.5	40.0	*	0.996-1.006	
Tri	PCB-30	*	*	n	NotF η	1.71	*	1670	2.5	24.4	*	1.032-1.042	
Tri	PCB-18	3.08e+05	0.99	y	25:51	0.78	303	*	2.5	*	0.953	0.949-0.959	
Tri	PCB-17	1.23e+05	1.11	y	26:03	0.92	103	*	2.5	*	0.961	0.956-0.966	
Tri	PCB-24/27	*	*	n	NotF η	1.19	*	1670	2.5	22.7	*	0.977-0.987	
Tri	PCB-16/32	2.39e+05	1.14	y	27:07	0.94	196	*	2.5	*	1.000	0.995-1.005	
Tri	PCB-34	*	*	n	NotF η	1.14	*	2720	2.5	38.2	*	0.955-0.965	
Tri	PCB-23	*	*	n	NotF η	1.28	*	2720	2.5	33.9	*	0.959-0.969	
Tri	PCB-29	*	*	n	NotF η	1.08	*	2720	2.5	40.2	*	0.967-0.977	
Tri	PCB-26	1.54e+05	0.94	y	28:28	1.21	92.1	*	2.5	*	0.979	0.974-0.984	
Tri	PCB-25	4.83e+04	1.03	y	28:37	1.26	27.6	*	2.5	*	0.984	0.979-0.989	
Tri	PCB-31	7.19e+05	0.95	y	28:59	1.28	404	*	2.5	*	0.997	0.992-1.002	
Tri	PCB-28	1.01e+06	1.17	y	29:06	1.71	427	*	2.5	*	1.001	0.995-1.005	
Tri	PCB-20/21/33	5.06e+05	1.13	y	29:43	1.08	338	*	2.5	*	1.022	1.017-1.027	
Tri	PCB-22	3.88e+05	1.18	y	30:09	1.21	232	*	2.5	*	1.037	1.032-1.042	
Tri	PCB-36	*	*	n	NotF η	1.14	*	2720	2.5	43.7	*	0.928-0.938	
Tri	PCB-39	*	*	n	NotF η	1.12	*	2720	2.5	44.7	*	0.943-0.953	
Tri	PCB-38	*	*	n	NotF η	1.20	*	2720	2.5	41.6	*	0.966-0.976	
Tri	PCB-35	1.09e+05	1.19	y	32:32	1.23	61.8	*	2.5	*	0.987	0.982-0.992	
Tri	PCB-37	1.36e+06	0.98	y	32:59	1.23	767	*	2.5	*	1.001	0.995-1.005	
Tetra	PCB-54	*	*	n	NotF η	1.10	*	2390	2.5	41.6	*	0.996-1.006	
Tetra	PCB-50	*	*	n	NotF η	0.88	*	2390	2.5	52.1	*	1.037-1.047	
Tetra	PCB-53	8.23e+04	1.05	n	29:47	1.06	80.7	R	*	2.5	*	0.942-0.952	
Tetra	PCB-51	*	*	n	NotF η	0.99	*	2390	2.5	58.6	*	0.952-0.962	
Tetra	PCB-45	9.88e+04	0.66	y	30:33	0.86	119	*	2.5	*	0.970	0.966-0.976	
Tetra	PCB-46	5.11e+04	0.84	y	31:03	0.85	63.1	*	2.5	*	0.986	0.981-0.991	

Integrations by:

Analyst: Dms

Date: 2/11/15

Reviewed by: [Signature]

Date: 2/12/15

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	1.34e+06	0.69	y 31:30	1.28	1090		*	2.5	*	1.001	0.996-1.006	
Tetra	PCB-73	*	*	n NotF η	1.35	*		2390	2.5	42.9	*	1.000-1.010	
Tetra	PCB-43/49	5.01e+05	0.82	y 31:48	0.99	525		*	2.5	*	1.010	1.005-1.015	
Tetra	PCB-47	1.79e+05	0.66	y 32:01	1.06	173		*	2.5	*	1.001	0.996-1.006	
Tetra	PCB-48/75	1.24e+05	0.81	y 32:09	1.23	104		*	2.5	*	1.005	0.999-1.009	
Tetra	PCB-65	*	*	n NotF η	1.22	*		2390	2.5	44.8	*	1.008-1.018	
Tetra	PCB-62	*	*	n NotF η	1.22	*		2390	2.5	44.9	*	1.011-1.021	
Tetra	PCB-44	6.88e+05	0.71	y 32:49	0.86	821		*	2.5	*	1.026	1.021-1.031	
Tetra	PCB-42/59	2.73e+05	0.79	y 33:02	1.14	247		*	2.5	*	1.032	1.028-1.038	
Tetra	PCB-41/64/71/72	8.09e+05	0.86	y 33:37	1.21	688		*	2.5	*	1.051	1.046-1.056	
Tetra	PCB-68	*	*	n NotF η	1.35	*		2390	2.5	40.7	*	1.054-1.064	
Tetra	PCB-40	1.02e+05	0.84	y 34:06	0.70	150		*	2.5	*	1.066	1.061-1.071	
Tetra	PCB-57	*	*	n NotF η	0.98	*		2390	2.5	46.1	*	0.965-0.975	
Tetra	PCB-67	*	*	n NotF η	1.11	*		2390	2.5	40.8	*	0.974-0.984	
Tetra	PCB-58	*	*	n NotF η	0.93	*		2390	2.5	48.7	*	0.977-0.987	
Tetra	PCB-63	*	*	n NotF η	0.95	*		2390	2.5	47.5	*	0.982-0.992	
Tetra	PCB-74	5.97e+05	0.82	y 35:20	1.24	385		*	2.5	*	0.994	0.990-1.000	
Tetra	PCB-61/70	1.67e+06	0.72	y 35:32	0.95	1410		*	2.5	*	1.000	0.995-1.005	
Tetra	PCB-76/66	1.20e+06	0.82	y 35:46	1.04	919		*	2.5	*	1.007	1.001-1.011	
Tetra	PCB-80	*	*	n NotF η	1.19	*		2390	2.5	37.4	*	0.996-1.006	
Tetra	PCB-55	*	*	n NotF η	1.04	*		2390	2.5	42.9	*	1.005-1.015	
Tetra	PCB-56/60	9.33e+05	0.77	y 36:46	1.01	707		*	2.5	*	1.023	1.019-1.029	
Tetra	PCB-79	1.16e+05	0.88	y 37:52	1.08	82.2		*	2.5	*	1.053	1.048-1.058	
Tetra	PCB-78	*	*	n NotF η	1.27	*		2390	2.5	39.9	*	0.982-0.992	
Tetra	PCB-81	5.22e+04	0.50	n 39:04	1.33	35.0	R	*	2.5	*	1.000	0.995-1.005	
Tetra	PCB-77	1.04e+06	0.84	y 39:41	1.10	810		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-104	*	*	n NotF η	1.18	*		1040	2.5	40.2	*	0.996-1.006	
Penta	PCB-96	*	*	n NotF η	1.14	*		1040	2.5	41.7	*	1.034-1.044	
Penta	PCB-103	*	*	n NotF η	0.96	*		1040	2.5	49.6	*	1.050-1.060	
Penta	PCB-100	*	*	n NotF η	0.94	*		1040	2.5	50.6	*	1.061-1.071	
Penta	PCB-94	*	*	n NotF η	1.06	*		1040	2.5	65.8	*	0.980-0.990	
Penta	PCB-95/98/102	1.55e+06	1.51	y 35:50	1.22	2400		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-93	*	*	n NotF η	0.84	*		1040	2.5	82.6	*	0.997-1.007	
Penta	PCB-88/91	2.96e+05	1.69	y 36:15	1.12	502		*	2.5	*	1.012	1.005-1.015	
Penta	PCB-121	*	*	n NotF η	1.62	*		1040	2.5	43.1	*	1.009-1.019	
Penta	PCB-84/92	9.61e+05	1.51	y 37:09	1.05	1680		*	2.5	*	0.990	0.985-0.995	
Penta	PCB-89	*	*	n NotF η	1.13	*		1040	2.5	56.6	*	0.991-1.001	

Analyst: Dms

Date: 2/11/15

Client ID: DS-TD-01-20141216-S
Lab ID: 1400970-02@10X

Filename: 150205E1 S:5 Acq: 5-FEB-15 13:16:16
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.027

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	2.92e+06	1.65	y 37:32	1.10	4850		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-113	*	*	n NotF η	1.41	*		1040	2.5	45.3	*	1.002-1.012	
Penta	PCB-99	1.09e+06	1.63	y 37:52	1.34	1500		*	2.5	*	1.009	1.004-1.014	
Penta	PCB-119	3.93e+04	1.86	n 38:19	1.53	52.9	R	*	2.5	*	0.987	0.982-0.992	
Penta	PCB-108/112	1.44e+05	1.60	y 38:29	1.28	233		*	2.5	*	0.991	0.986-0.996	
Penta	PCB-83	*	*	n NotF η	1.52	*		1040	2.5	46.9	*	0.990-1.000	
Penta	PCB-97	8.32e+05	1.51	y 38:50	1.18	1450		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-86	*	*	n NotF η	0.84	*		1040	2.5	84.6	*	0.999-1.009	
Penta	PCB-87/117/125	1.32e+06	1.56	y 39:07	1.55	1750		*	2.5	*	1.007	1.002-1.012	
Penta	PCB-111/115	7.85e+04	1.56	y 39:16	1.63	99.1		*	2.5	*	1.011	1.006-1.016	
Penta	PCB-85/116	4.35e+05	1.72	y 39:23	1.30	689		*	2.5	*	1.014	1.010-1.020	
Penta	PCB-120	*	*	n NotF η	1.68	*		1040	2.5	42.5	*	1.016-1.026	
Penta	PCB-110	4.46e+06	1.60	y 39:47	1.56	5920		*	2.5	*	1.025	1.020-1.030	
Penta	PCB-82	3.06e+05	1.59	y 40:24	0.76	647		*	2.5	*	0.976	0.971-0.981	
Penta	PCB-124	1.88e+05	1.74	y 41:05	1.47	204		*	2.5	*	0.992	0.988-0.998	
Penta	PCB-107/109	3.12e+05	1.66	y 41:15	1.32	379		*	2.5	*	0.996	0.991-1.001	
Penta	PCB-123	*	*	n NotF η	1.17	*		1040	2.5	51.5	*	0.996-1.006	
Penta	PCB-106/118	4.03e+06	1.62	y 41:36	1.17	5340		*	2.5	*	1.001	0.996-1.006	
Penta	PCB-114	1.36e+05	1.74	y 42:15	1.30	108		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-122	*	*	n NotF η	1.12	*		2700	2.5	85.1	*	0.999-1.009	
Penta	PCB-105	2.72e+06	1.61	y 43:07	1.30	2230		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-127	*	*	n NotF η	1.33	*		2700	2.5	70.0	*	0.996-1.006	
Penta	PCB-126	2.19e+05	1.65	y 45:21	1.18	214		*	2.5	*	1.000	0.995-1.005	
Hexa	PCB-155	*	*	n NotF η	1.11	*		903	2.5	57.1	*	0.966-1.006	
Hexa	PCB-150	*	*	n NotF η	1.00	*		903	2.5	63.7	*	1.030-1.040	
Hexa	PCB-152	*	*	n NotF η	1.12	*		903	2.5	57.0	*	1.043-1.053	
Hexa	PCB-145	*	*	n NotF η	1.20	*		903	2.5	52.9	*	1.055-1.065	
Hexa	PCB-136	2.56e+05	1.20	y 39:35	1.18	495		*	2.5	*	1.068	1.064-1.074	
Hexa	PCB-148	*	*	n NotF η	0.74	*		903	2.5	85.5	*	1.066-1.076	
Hexa	PCB-154	6.26e+04	1.33	y 40:11	0.86	166		*	2.5	*	1.085	1.080-1.090	
Hexa	PCB-151	3.15e+05	1.21	y 40:49	0.75	959		*	2.5	*	1.102	1.097-1.107	
Hexa	PCB-135	2.22e+05	1.48	n 41:03	0.79	636	R	*	2.5	*	1.108	1.103-1.113	
Hexa	PCB-144	7.28e+04	1.65	n 41:10	0.76	217	R	*	2.5	*	1.111	1.105-1.117	
Hexa	PCB-147	5.12e+04	0.96	n 41:18	0.82	142	R	*	2.5	*	1.115	1.109-1.121	
Hexa	PCB-139/149	1.52e+06	1.25	y 41:32	0.76	4540		*	2.5	*	1.121	1.116-1.128	
Hexa	PCB-140	4.79e+04	1.11	y 41:44	0.72	151		*	2.5	*	1.126	1.121-1.133	
Hexa	PCB-134/143	2.25e+05	1.28	y 42:11	0.92	312		*	2.5	*	0.975	0.970-0.980	

Analyst Dms

Date: 2/11/15

Client ID: DS-TD-01-20141216-S
Lab ID: 1400970-02@10X

Filename: 150205E1 S:5 Acq: 5-FEB-15 13:16:16
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.027

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	1.36e+05	1.41	y 42:29	0.82	212	*	2.5	*	*	0.982	0.977-0.987	
Hexa	PCB-131	*	*	n NotF η	0.91	*	591	2.5	24.9	*	*	0.981-0.991	
Hexa	PCB-146/165	8.17e+05	1.26	y 42:52	1.25	836	*	2.5	*	*	0.991	0.986-0.996	
Hexa	PCB-132/161	1.45e+06	1.27	y 43:08	1.10	1670	*	2.5	*	*	0.997	0.992-1.002	
Hexa	PCB-153	5.08e+06	1.21	y 43:16	1.25	5180	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-168	*	*	n NotF η	1.45	*	591	2.5	15.6	*	*	1.001-1.011	
Hexa	PCB-141	9.63e+05	1.18	y 44:01	1.09	1160	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-137	3.47e+05	1.18	y 44:24	1.06	428	*	2.5	*	*	1.009	1.004-1.014	
Hexa	PCB-130	3.28e+05	1.09	y 44:30	0.96	445	*	2.5	*	*	1.011	1.006-1.016	
Hexa	PCB-138/163/164	6.54e+06	1.20	y 44:52	1.29	6510	*	2.5	*	*	1.001	0.996-1.006	
Hexa	PCB-158/160	8.13e+05	1.12	y 45:06	1.34	781	*	2.5	*	*	1.006	1.001-1.011	
Hexa	PCB-129	2.68e+05	1.41	y 45:21	0.85	404	*	2.5	*	*	1.011	1.007-1.017	
Hexa	PCB-166	*	*	n NotF η	1.19	*	591	2.5	17.7	*	*	0.988-0.998	
Hexa	PCB-159	*	*	n NotF η	1.11	*	591	2.5	18.8	*	*	0.996-1.006	
Hexa	PCB-128/162	1.12e+06	1.21	y 46:24	1.05	1250	*	2.5	*	*	1.006	1.002-1.012	
Hexa	PCB-167	3.86e+05	1.17	y 46:50	1.20	339	*	2.5	*	*	1.000	0.995-1.005	
Hexa	PCB-156	7.59e+05	1.31	y 48:07	1.14	749	*	2.5	*	*	1.000	0.996-1.006	
Hexa	PCB-157	1.93e+05	1.16	y 48:24	1.16	171	*	2.5	*	*	1.001	0.995-1.005	
Hexa	PCB-169	*	*	n NotF η	1.12	*	591	2.5	16.9	*	*	0.995-1.005	
Hepta	PCB-188	*	*	n NotF η	1.58	*	1730	2.5	36.1	*	*	0.996-1.006	
Hepta	PCB-184	*	*	n NotF η	1.63	*	1730	2.5	35.0	*	*	1.006-1.016	
Hepta	PCB-179	3.50e+05	1.19	y 44:07	1.30	456	*	2.5	*	*	1.029	1.024-1.034	
Hepta	PCB-176	1.17e+05	1.12	y 44:36	1.48	135	*	2.5	*	*	1.040	1.035-1.045	
Hepta	PCB-186	*	*	n NotF η	1.45	*	1730	2.5	39.2	*	*	1.050-1.060	
Hepta	PCB-178	1.87e+05	1.18	y 45:42	1.03	307	*	2.5	*	*	1.066	1.061-1.071	
Hepta	PCB-175	*	*	n NotF η	1.01	*	1730	2.5	56.3	*	*	1.069-1.079	
Hepta	PCB-182/187	1.15e+06	1.04	y 46:12	1.25	1570	*	2.5	*	*	1.077	1.073-1.083	
Hepta	PCB-183	4.42e+05	0.93	y 46:33	1.21	621	*	2.5	*	*	1.086	1.081-1.091	
Hepta	PCB-185	7.98e+04	0.92	y 47:12	1.80	103	*	2.5	*	*	0.956	0.951-0.961	
Hepta	PCB-174	6.98e+05	1.04	y 47:33	1.38	1170	*	2.5	*	*	0.963	0.958-0.968	
Hepta	PCB-181	*	*	n NotF η	1.38	*	1730	2.5	53.5	*	*	0.960-0.970	
Hepta	PCB-177	4.29e+05	1.21	y 47:50	1.26	792	*	2.5	*	*	0.968	0.963-0.973	
Hepta	PCB-171	1.88e+05	1.17	y 48:07	1.58	275	*	2.5	*	*	0.974	0.970-0.980	
Hepta	PCB-173	*	*	n NotF η	1.11	*	1730	2.5	66.6	*	*	0.978-0.988	
Hepta	PCB-172	1.71e+05	1.20	y 49:01	1.63	243	*	2.5	*	*	0.992	0.987-0.997	
Hepta	PCB-192	*	*	n NotF η	1.74	*	1730	2.5	42.4	*	*	0.991-1.001	
Hepta	PCB-180	1.83e+06	1.06	y 49:24	1.34	3160	*	2.5	*	*	1.000	0.995-1.005	

Analyst: DMS

Date: 2/11/15

Client ID: DS-TD-01-20141216-S
Lab ID: 1400970-02@10X

Filename: 150205E1 S:5 Acq: 5-FEB-15 13:16:16
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.027

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	1.16e+05	1.17	y 49:35	1.72	156		*	2.5	*	1.004	0.999-1.009	
Hepta	PCB-191	6.35e+04	1.16	y 49:50	1.69	86.9		*	2.5	*	1.009	1.004-1.014	
Hepta	PCB-170	7.42e+05	1.09	y 50:49	1.60	1370		*	2.5	*	1.000	0.995-1.005	
Hepta	PCB-190	2.19e+05	1.18	y 51:00	2.21	292		*	2.5	*	1.004	0.998-1.008	
Hepta	PCB-189	4.86e+04	1.30	n 52:16	1.55	72.7	R	*	2.5	*	1.000	0.995-1.005	
Octa	PCB-202	1.03e+05	0.77	y 48:19	1.08	193		*	2.5	*	1.000	0.995-1.005	
Octa	PCB-201	6.85e+04	0.99	y 48:49	1.15	120		*	2.5	*	1.011	1.005-1.015	
Octa	PCB-204	*	*	n NotF η	1.14	*		1130	2.5	48.0	*	1.008-1.018	
Octa	PCB-197	*	*	n NotF η	1.07	*		1130	2.5	50.9	*	1.015-1.025	
Octa	PCB-200	5.19e+04	0.87	y 50:06	1.06	98.5		*	2.5	*	1.037	1.032-1.044	
Octa	PCB-198	*	*	n NotF η	0.76	*		1130	2.5	72.4	*	1.059-1.069	
Octa	PCB-199	2.97e+05	0.85	y 51:30	0.80	751		*	2.5	*	1.066	1.061-1.071	
Octa	PCB-196/203	3.40e+05	0.89	y 51:46	0.80	856		*	2.5	*	1.072	1.066-1.076	
Octa	PCB-195	1.77e+05	0.92	y 52:55	1.23	242		*	2.5	*	0.984	0.979-0.989	
Octa	PCB-194	5.52e+05	0.85	y 53:47	1.21	763		*	2.5	*	1.000	0.995-1.005	
Octa	PCB-205	3.40e+04	0.72	n 54:05	1.54	36.9	R	*	2.5	*	1.006	1.001-1.011	
Nona	PCB-208	1.29e+05	1.46	y 53:02	0.93	182		*	2.5	*	1.000	0.995-1.005	
Nona	PCB-207	5.27e+04	1.50	y 53:20	1.08	63.6		*	2.5	*	1.006	1.001-1.011	
Nona	PCB-206	2.78e+05	1.27	y 55:28	1.02	570		*	2.5	*	1.000	0.995-1.005	
Deca	PCB-209	2.36e+05	1.29	y 56:45	1.17	433		*	2.5	*	1.000	0.995-1.005	

Analyst: *DMS*

Date: *2/11/15*

Client ID: DS-TD-01-20141216-S
Lab ID: 1400970-02@10X

Filename: 150205E1 S:5 Acq: 5-FEB-15 13:16:16
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.0275 EndCAL: NA

ConCal: ST150205E1-1

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Name	Resp	RA	RT	RRF	Conc	
Total Mono-PCB	*	* n	NotFnd	1.27	*	
Total Di-PCB	2.15e+06	1.65 y	25:15	1.21	1157.52	
Total Tri-PCB	6.71e+05	0.99 y	25:51	1.10	601.325	
Total Tri-PCB	4.29e+06	0.94 y	28:28	1.21	2349.20	Sum:2950.52
Total Tetra-PCB	9.72e+06	0.66 y	30:33	1.09	8290.76	
Total Penta-PCB	1.89e+07	1.51 y	35:50	1.18	27629.1	
Total Penta-PCB	3.08e+06	1.74 y	42:15	1.25	2550.03	Sum:30179.1
Total Hexa-PCB	2.20e+06	1.20 y	39:35	0.90	6315.88	
Total Hexa-PCB	1.94e+07	1.28 y	42:11	1.11	20454.8	Sum:26770.7
Total Hepta-PCB	6.79e+06	1.19 y	44:07	1.42	10735.0	
Total Octa-PCB	8.60e+05	0.77 y	48:19	0.96	2018.87	
Total Octa-PCB	7.28e+05	0.92 y	52:55	1.33	1004.68	Sum:3023.55
Total Nona-PCB	4.60e+05	1.46 y	53:02	1.01	815.978	
Total Deca-PCB	2.36e+05	1.29 y	56:45	1.17	433.141	

Total PCB Conc: ~~85884.8806540~~

84400

Integrations

by

Analyst: Dms

Date: 2/11/15

Client ID: DS-TD-01-20141216-S
Lab ID: 1400970-02@10X

Filename: 150205E1 S:5 Acq: 5-FEB-15 13:16:16
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol:2.0275

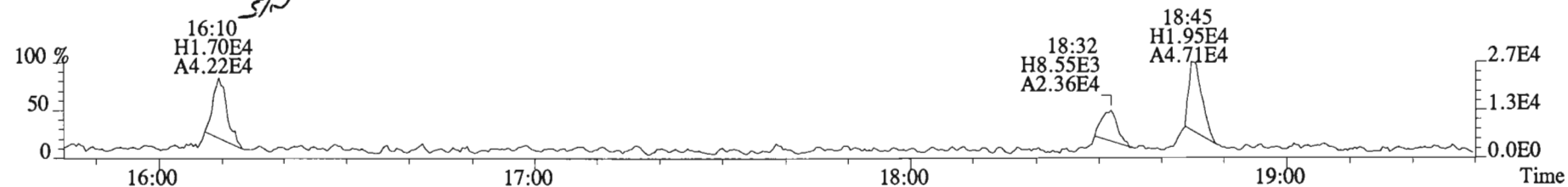
ConCal: ST150205E1-1
EndCAL: NA

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	1.42e+07	3.43	y	0.87	16:08	0.622	0.629-0.635	8180	82.9											
13C-PCB-3	1.51e+07	3.39	y	0.91	18:44	0.723	0.725-0.733	8350	84.7		13C-PCB-79	1.31e+07	0.80	y	1.02	37:51	1.029	1.023-1.034	9050	91.8
13C-PCB-4	9.20e+06	1.60	y	0.59	20:04	0.774	0.775-0.783	7890	80.0		13C-PCB-178	4.26e+06	0.43	y	0.61	45:41	0.984	0.979-0.990	8260	83.7
13C-PCB-9	1.49e+07	1.61	y	0.90	21:51	0.843	0.842-0.850	8360	84.8											
13C-PCB-11	1.56e+07	1.64	y	0.94	25:13	0.973	0.968-0.978	8390	85.0											
13C-PCB-19	7.82e+06	1.10	y	0.53	24:12	0.934	0.930-0.940	7410	75.1											
13C-PCB-28	1.37e+07	1.06	y	0.93	29:05	1.003	0.999-1.009	7220	73.1		13C-PCB-79	1.31e+07	0.80	y	1.10	37:51	0.968	0.964-0.974	10600	107
13C-PCB-32	1.28e+07	1.07	y	0.80	27:07	1.046	1.040-1.050	8120	82.3		13C-PCB-178	4.26e+06	0.43	y	0.90	45:41	0.925	0.920-0.930	11000	111
13C-PCB-37	1.42e+07	1.04	y	0.84	32:58	1.137	1.131-1.143	8310	84.3											
13C-PCB-47	9.61e+06	0.75	y	0.81	31:60	0.870	0.866-0.874	8310	84.3											
13C-PCB-52	9.46e+06	0.81	y	0.77	31:29	0.856	0.853-0.861	8610	87.3											
13C-PCB-54	1.11e+07	0.82	y	0.97	27:57	0.760	0.758-0.766	8000	81.1											
13C-PCB-70	1.23e+07	0.80	y	1.00	35:32	0.966	0.961-0.971	8660	87.8											
13C-PCB-77	1.15e+07	0.85	y	0.94	39:40	1.079	1.073-1.083	8550	86.6											
13C-PCB-80	1.29e+07	0.80	y	1.03	35:57	0.978	0.972-0.982	8770	88.9											
13C-PCB-81	1.10e+07	0.79	y	0.92	39:04	1.063	1.057-1.067	8420	85.3											
13C-PCB-95	5.20e+06	1.62	y	0.74	35:49	0.912	0.908-0.918	9000	91.2											
13C-PCB-97	4.79e+06	1.54	y	0.70	38:50	0.989	0.984-0.994	8700	88.2											
13C-PCB-101	5.41e+06	1.57	y	0.78	37:31	0.956	0.951-0.961	8840	89.6											
13C-PCB-104	7.09e+06	1.62	y	1.00	32:39	0.832	0.828-0.836	9070	92.0											
13C-PCB-105	9.29e+06	1.64	y	1.37	43:06	0.929	0.924-0.934	8090	82.0											
13C-PCB-114	9.61e+06	1.62	y	1.36	42:15	0.910	0.905-0.915	8390	85.0											
13C-PCB-118	6.34e+06	1.59	y	0.96	41:35	1.059	1.054-1.064	8470	85.9											
13C-PCB-123	6.16e+06	1.66	y	0.89	41:24	1.054	1.050-1.060	8820	89.5											
13C-PCB-126	8.53e+06	1.57	y	1.31	45:21	0.977	0.972-0.982	7760	78.7											
13C-PCB-127	9.99e+06	1.54	y	1.47	43:26	0.936	0.931-0.941	8070	81.8											
13C-PCB-138	7.66e+06	1.31	y	1.10	44:50	0.966	0.961-0.971	8290	84.0											
13C-PCB-141	7.53e+06	1.26	y	1.07	43:60	0.948	0.943-0.953	8340	84.5											
13C-PCB-153	7.75e+06	1.25	y	1.15	43:15	0.932	0.927-0.937	8040	81.5											
13C-PCB-155	4.34e+06	1.36	y	0.84	37:03	0.944	0.939-0.949	6620	67.1											
13C-PCB-156	8.81e+06	1.34	y	1.30	48:06	1.037	1.032-1.042	8080	81.9											
13C-PCB-157	9.58e+06	1.35	y	1.36	48:22	1.042	1.038-1.048	8390	85.1											
13C-PCB-159	8.41e+06	1.33	y	1.25	46:08	0.994	0.989-0.999	8020	81.3											
13C-PCB-167	9.37e+06	1.24	y	1.35	46:49	1.009	1.004-1.014	8250	83.6											
13C-PCB-169	8.80e+06	1.31	y	1.29	50:28	1.088	1.083-1.093	8140	82.6											
13C-PCB-170	3.35e+06	0.50	y	0.54	50:49	1.095	1.089-1.101	7340	74.4											
13C-PCB-180	4.26e+06	0.46	y	0.68	49:23	1.064	1.060-1.070	7410	75.1											
13C-PCB-188	5.81e+06	0.47	y	0.92	42:53	0.924	0.919-0.929	7530	76.4											
13C-PCB-189	4.26e+06	0.46	y	0.72	52:16	1.126	1.120-1.132	7070	71.7											
13C-PCB-194	5.89e+06	0.95	y	0.80	53:46	0.995	0.990-1.000	8450	85.6											
13C-PCB-202	4.88e+06	0.88	y	0.84	48:18	1.041	1.036-1.046	6940	70.3											
13C-PCB-206	4.70e+06	0.82	y	0.65	55:27	1.026	1.021-1.031	8270	83.9											
13C-PCB-208	7.54e+06	0.80	y	1.08	53:02	0.981	0.976-0.986	7990	81.0											
13C-PCB-209	4.60e+06	1.22	y	0.61	56:45	1.050	1.045-1.055	8620	87.4											

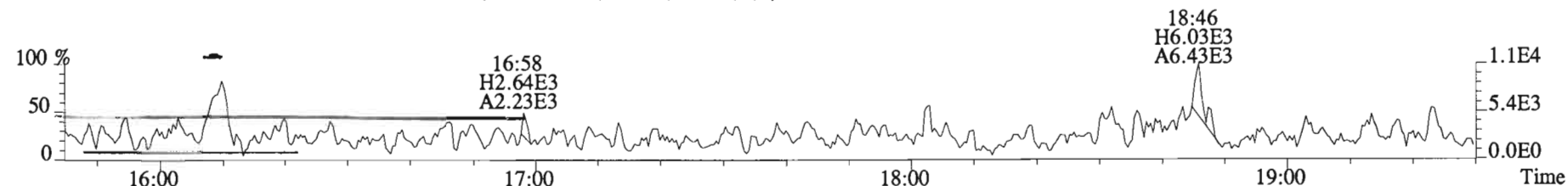
Analyst: DMS

Date: 2/11/15

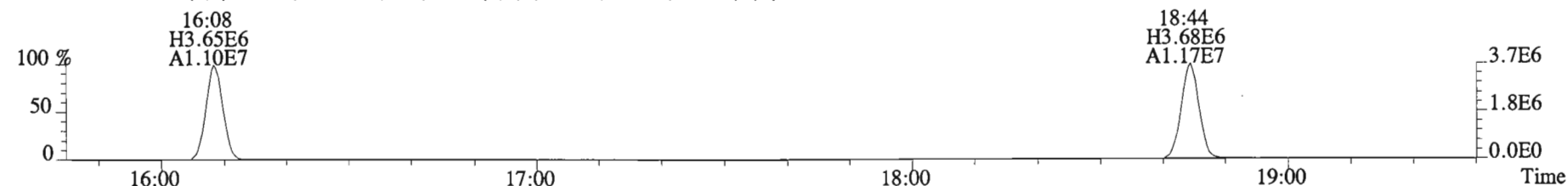
File:150205E1 #1-728 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 188.0393 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3420.0,0.00%,F,F)



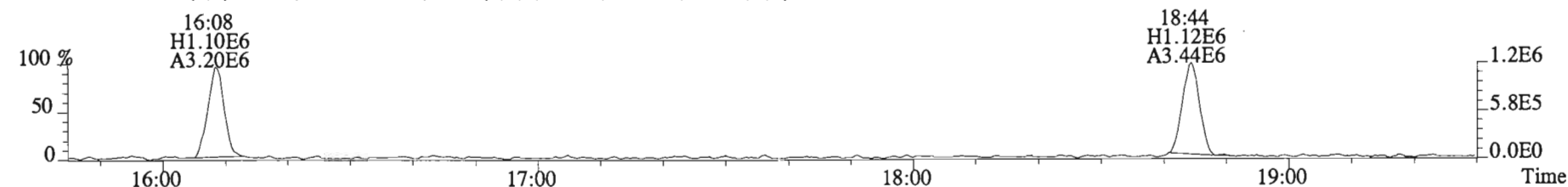
190.0363 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3300.0,0.00%,F,F)



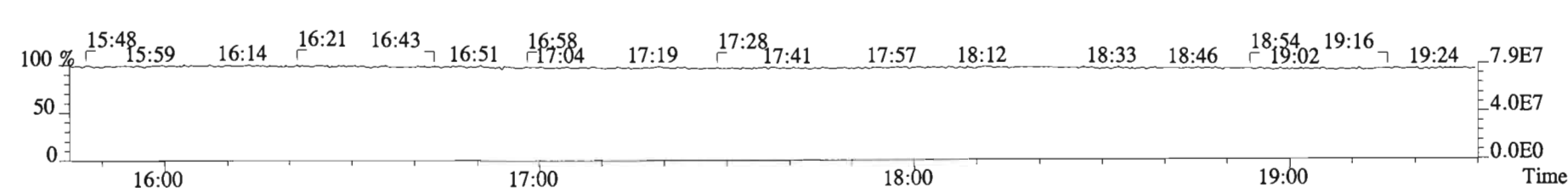
200.0795 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4076.0,0.00%,F,F)



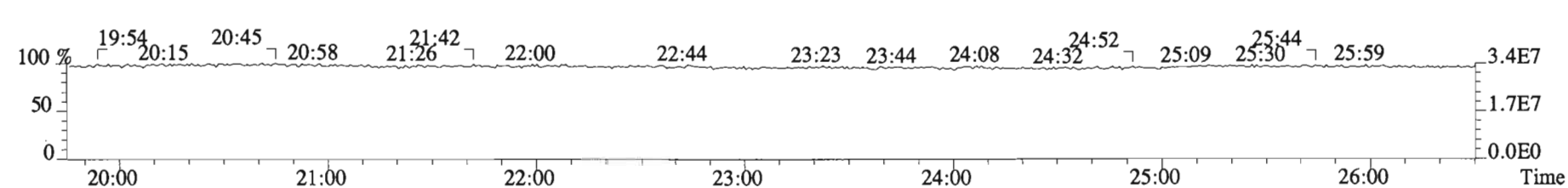
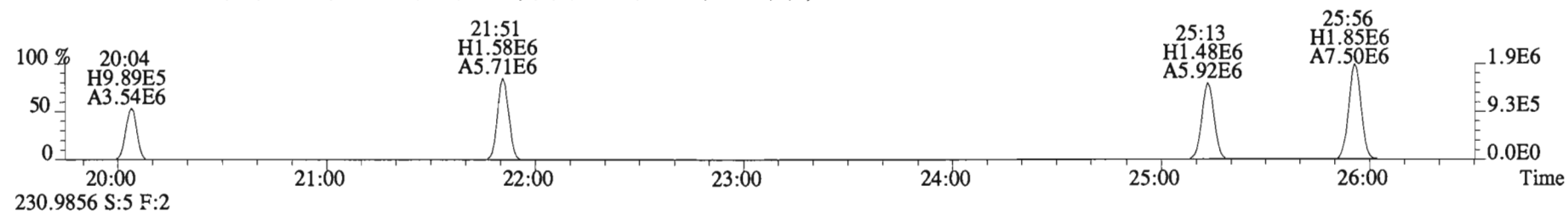
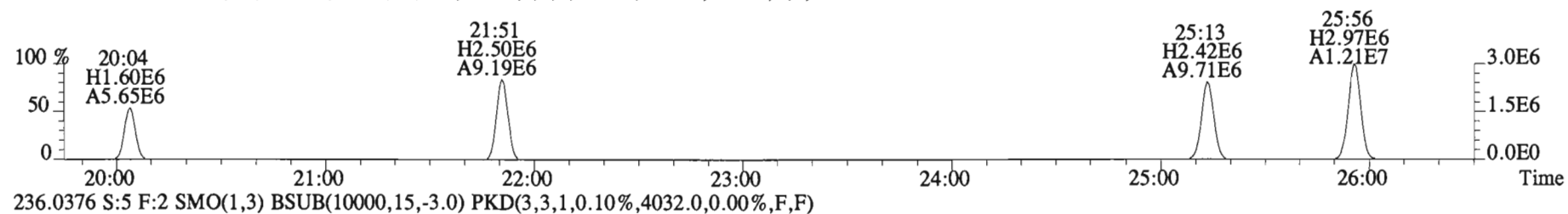
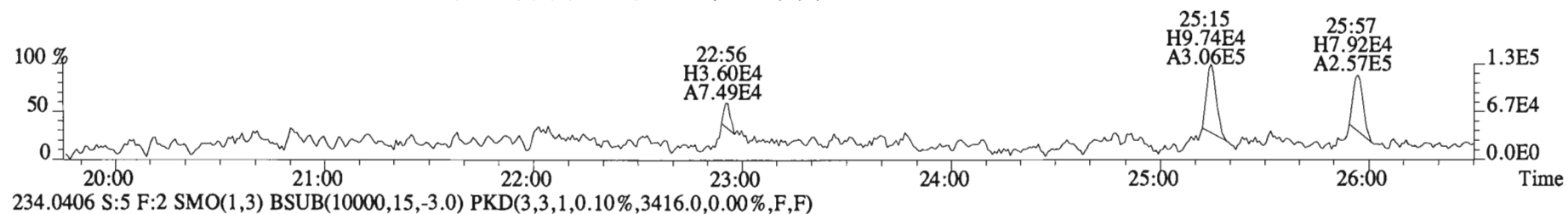
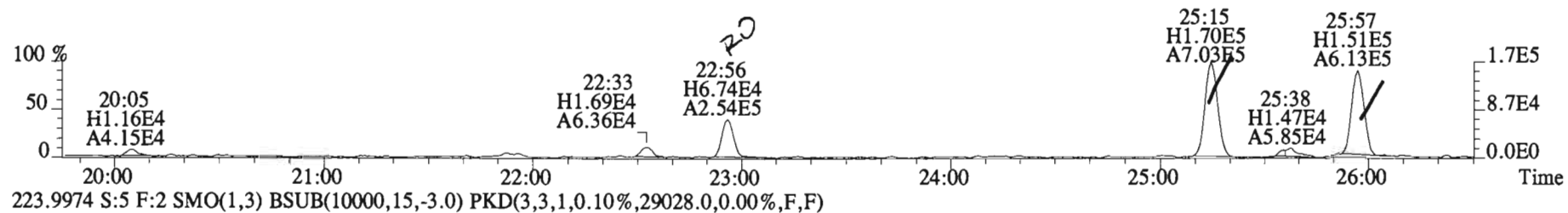
202.0766 S:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,35936.0,0.00%,F,F)



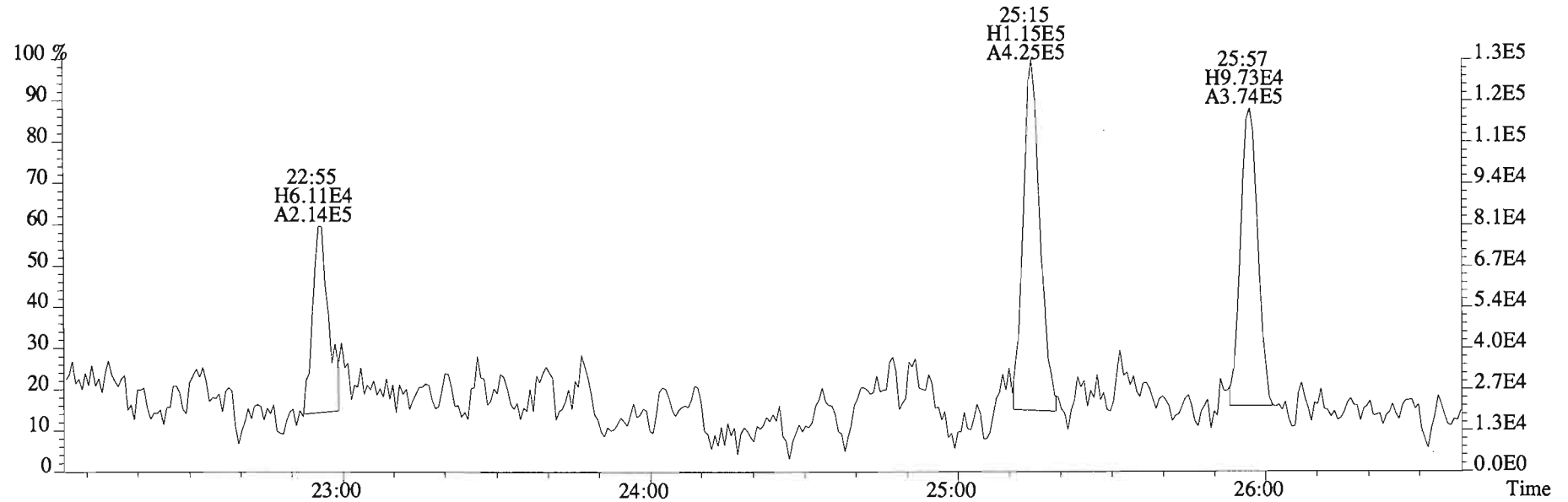
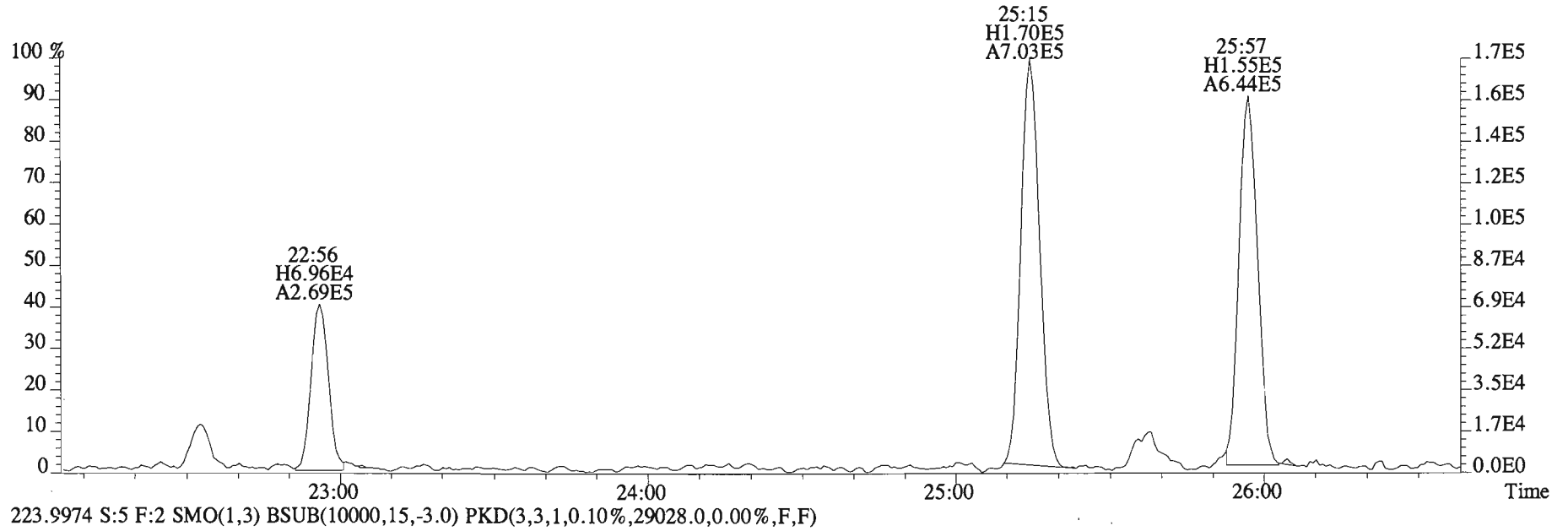
180.9880 S:5



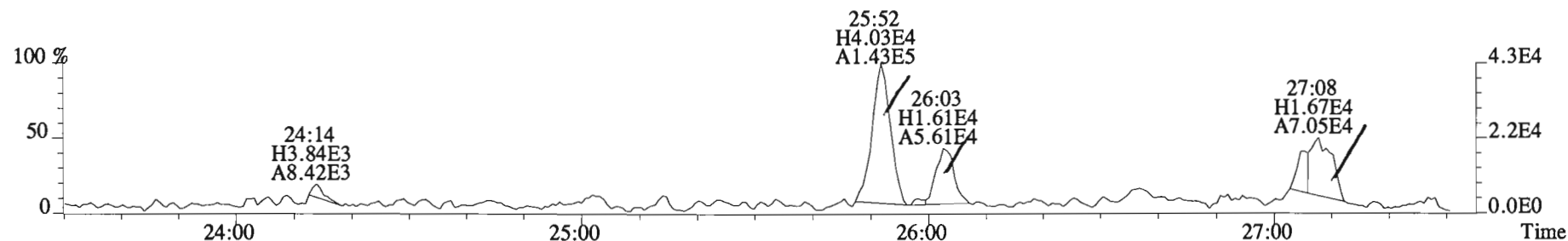
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 222.0003 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3124.0,0.00%,F,F)



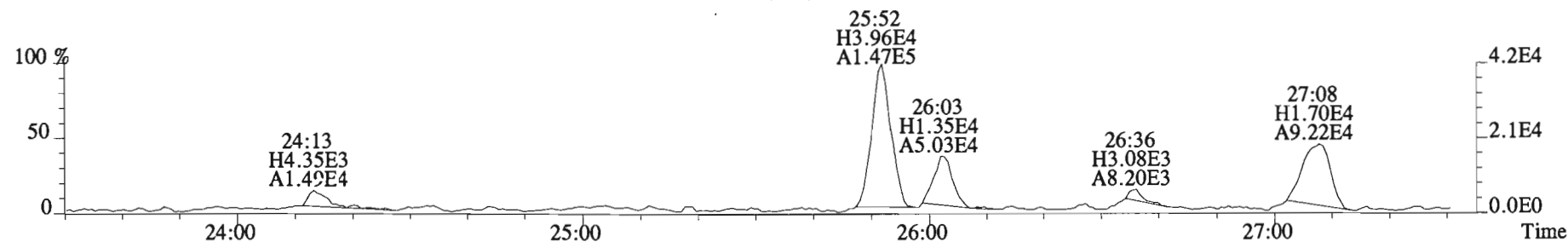
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
222.0003 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3124.0,0.00%,F,F)



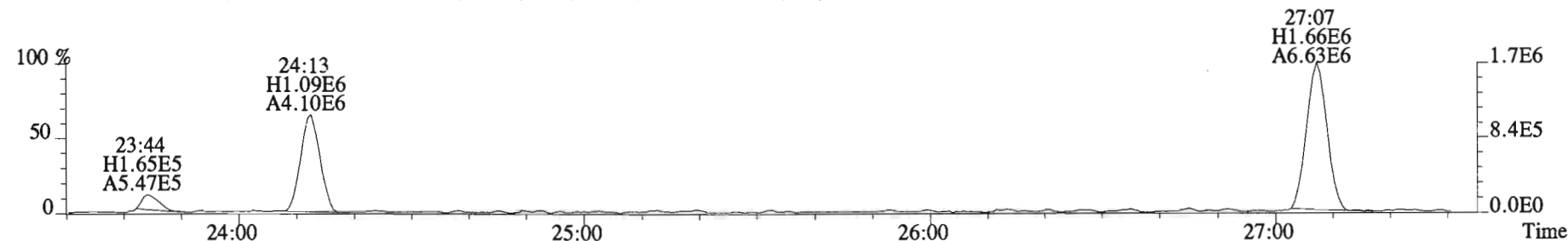
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
255.9613 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3548.0,0.00%,F,F)



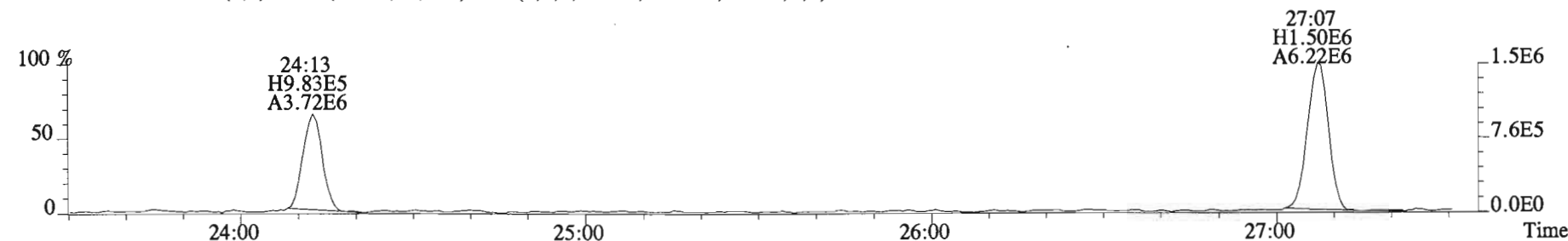
257.9584 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1668.0,0.00%,F,F)



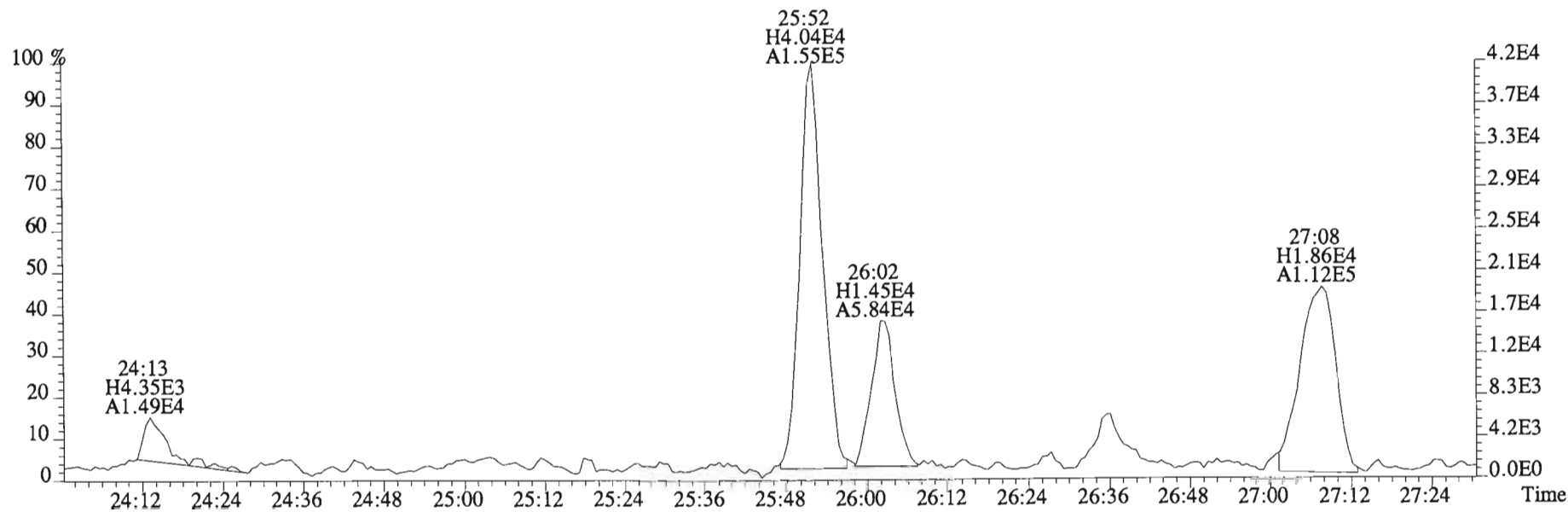
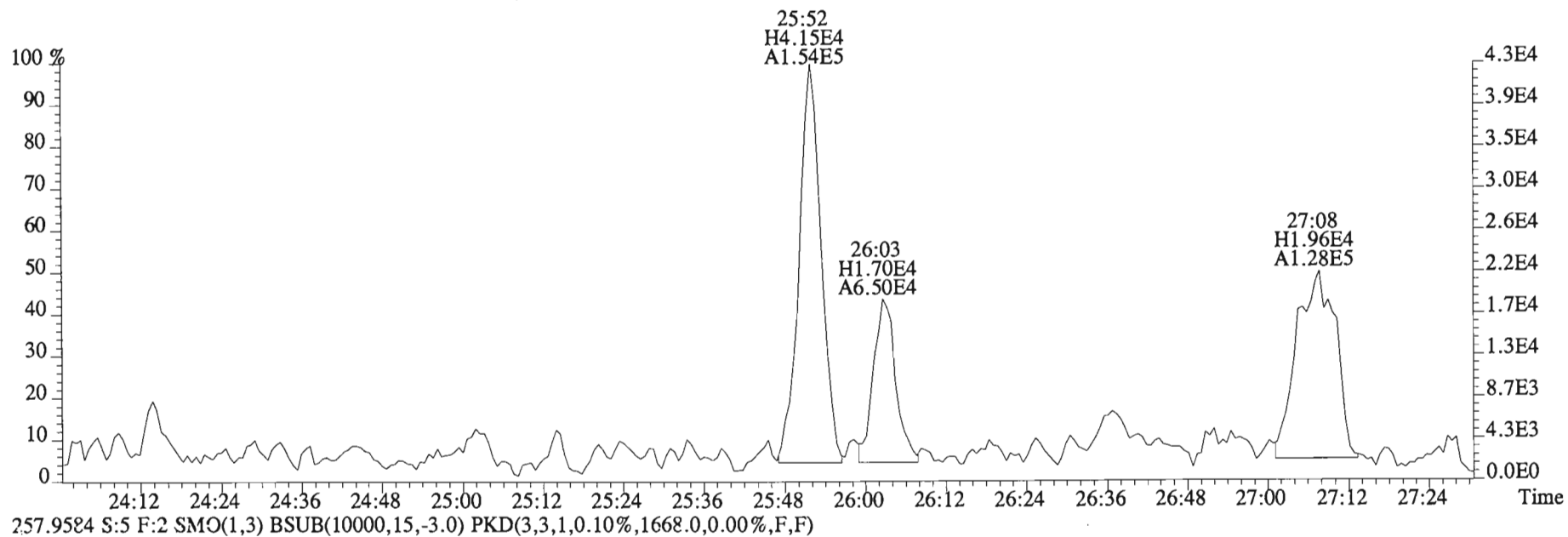
268.0016 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,29350.0,0.00%,F,F)



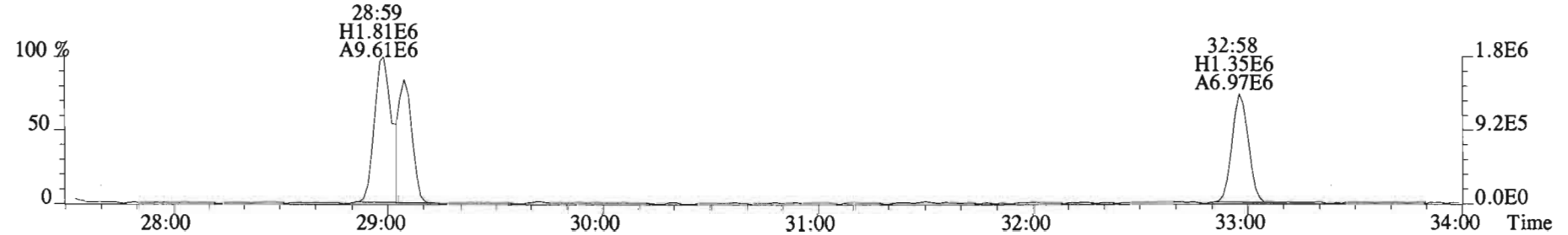
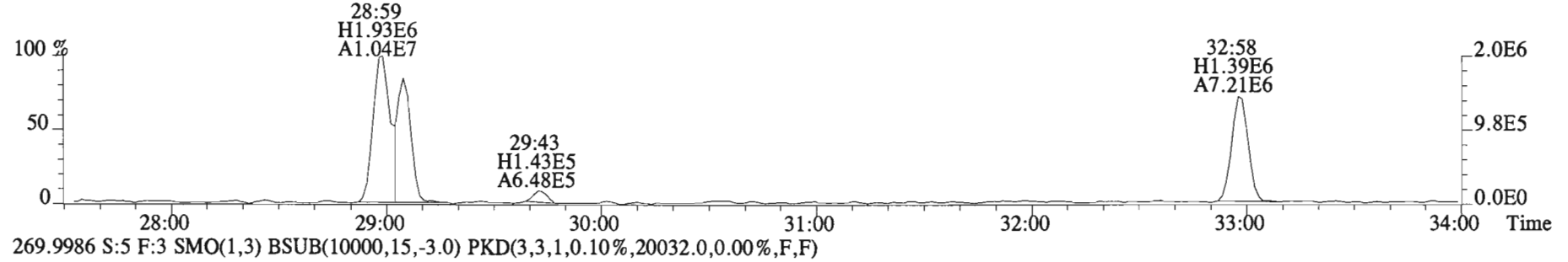
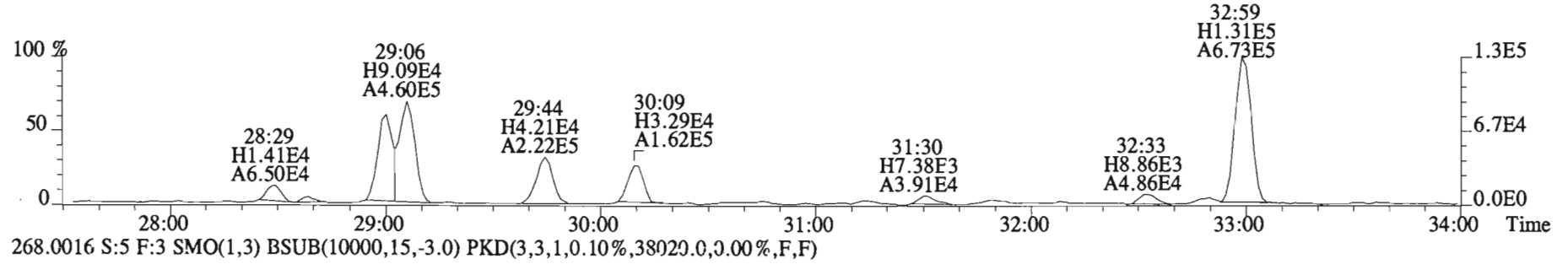
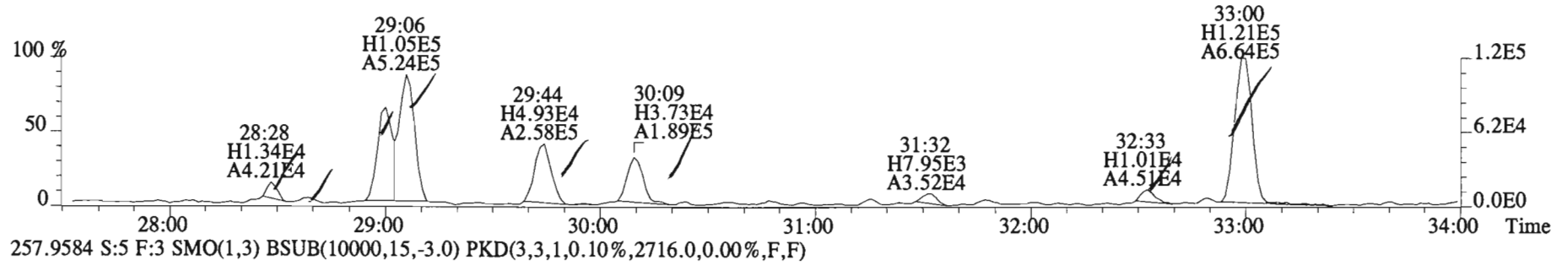
269.9986 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,25632.0,0.00%,F,F)



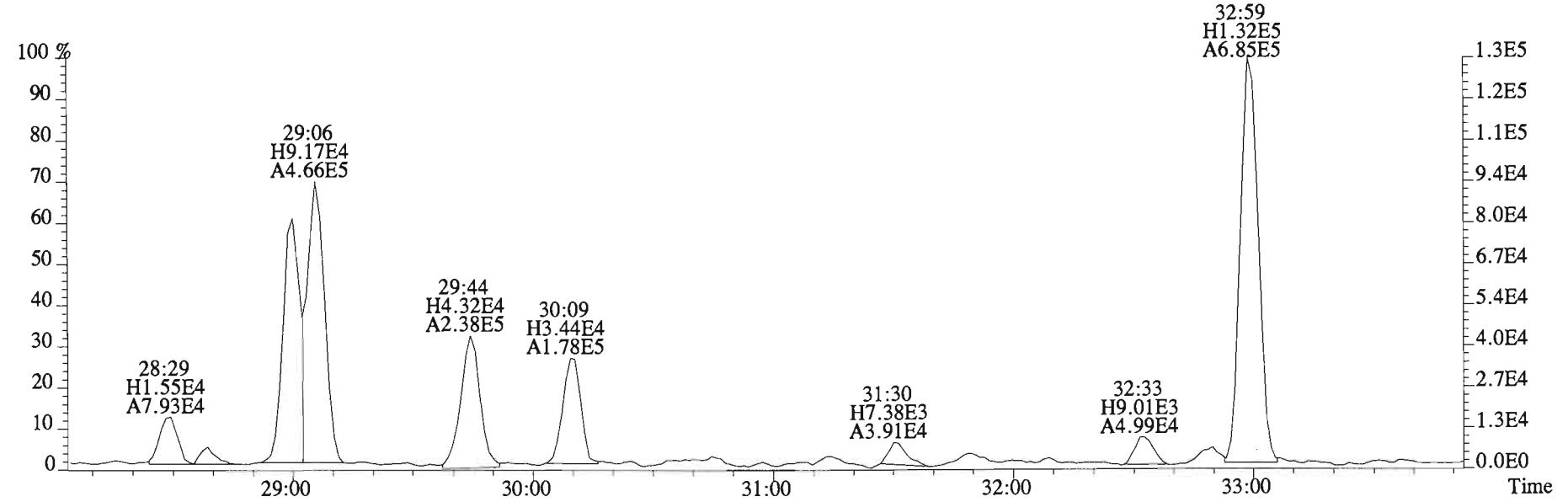
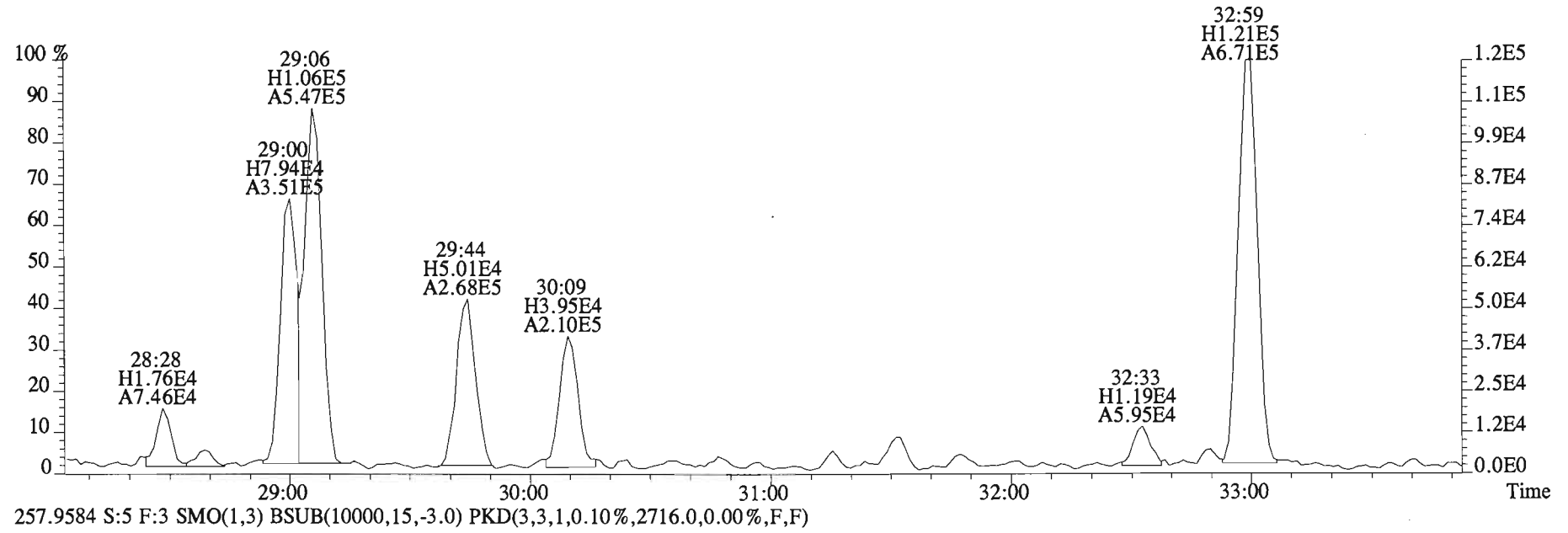
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
255.9613 S:5 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3548.0,0.00%,F,F)



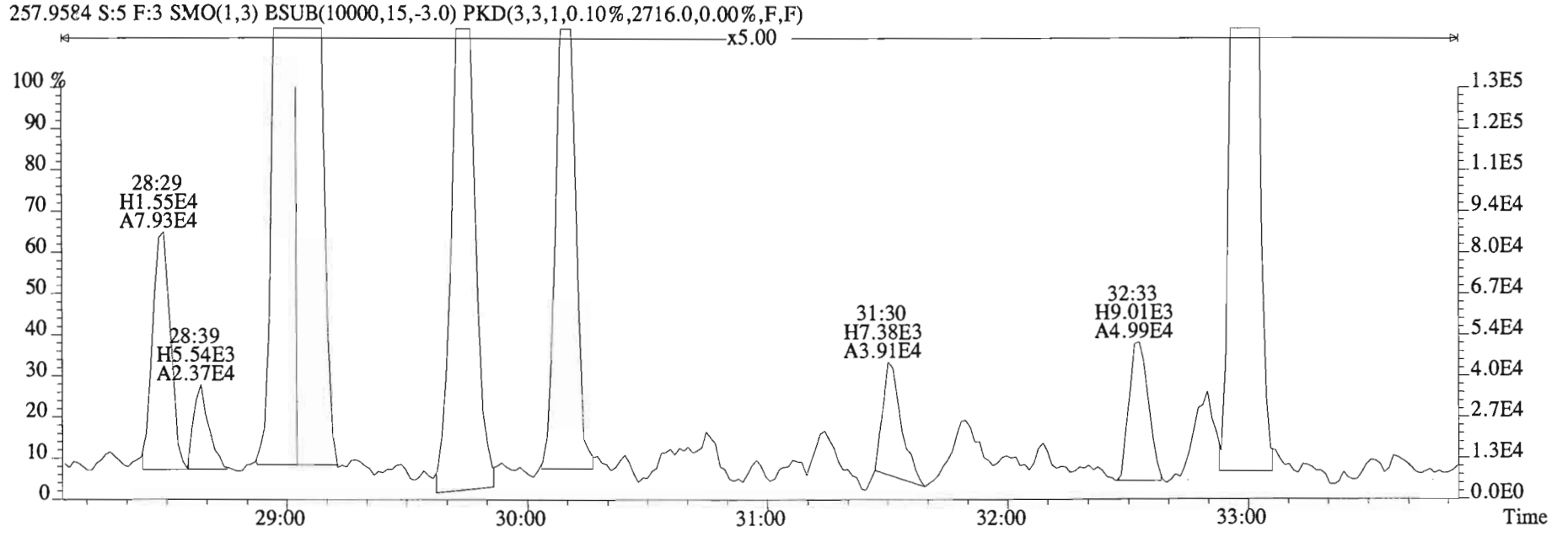
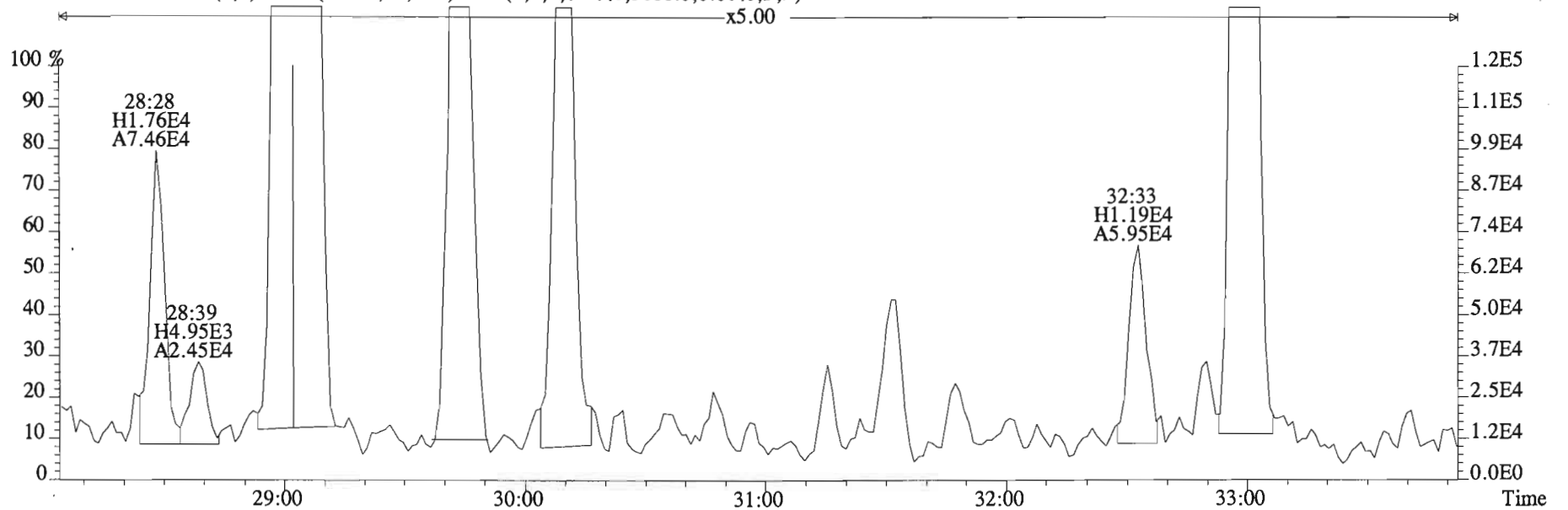
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 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 255.9613 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3688.0,0.00%,F,F)



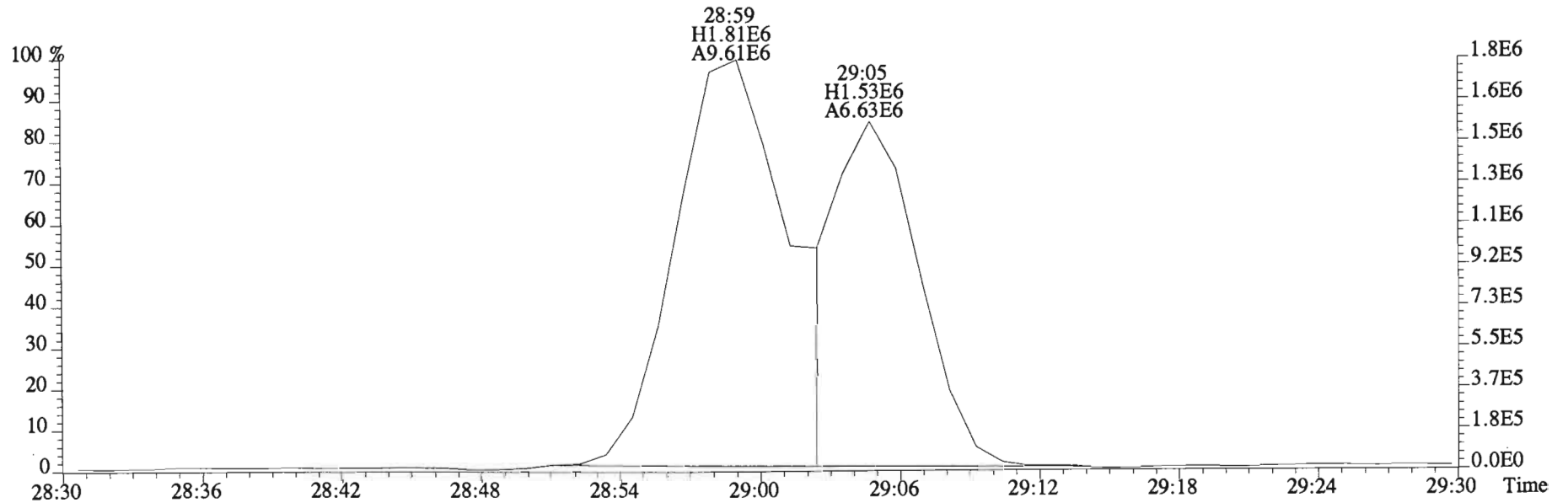
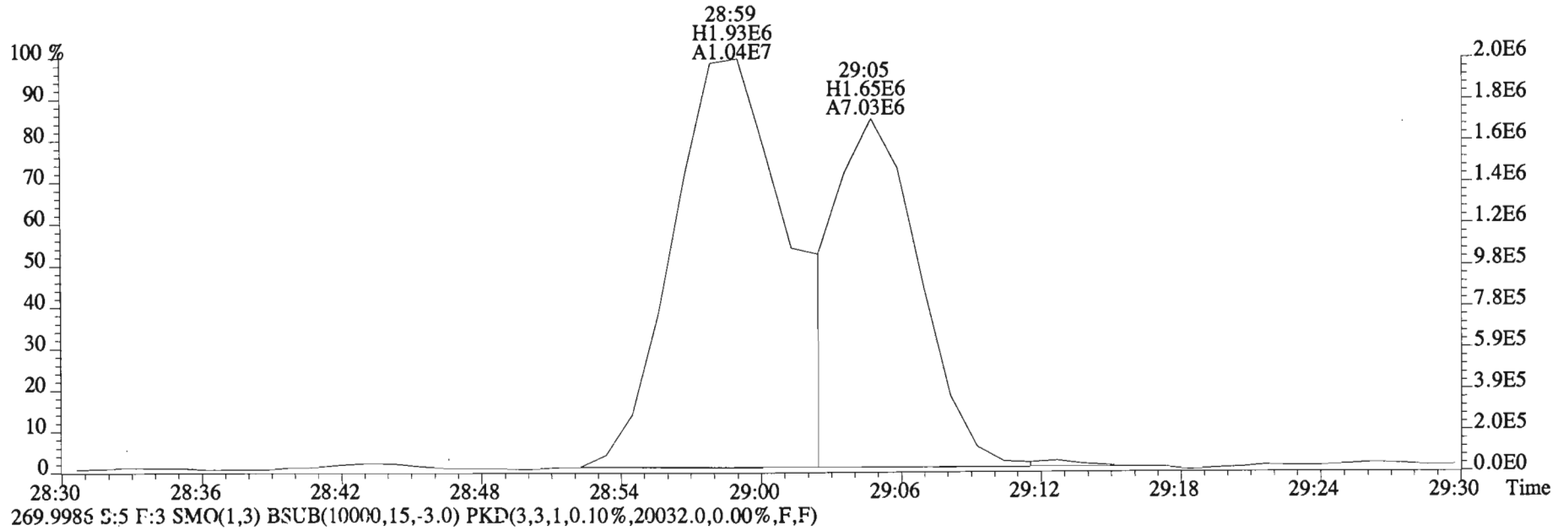
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 255.9613 S:5 F:3 SMO(1,3) BSub(10000,15,-3.0) PKD(3,3,1,0.10%,3688.0,0.00%,F,F)



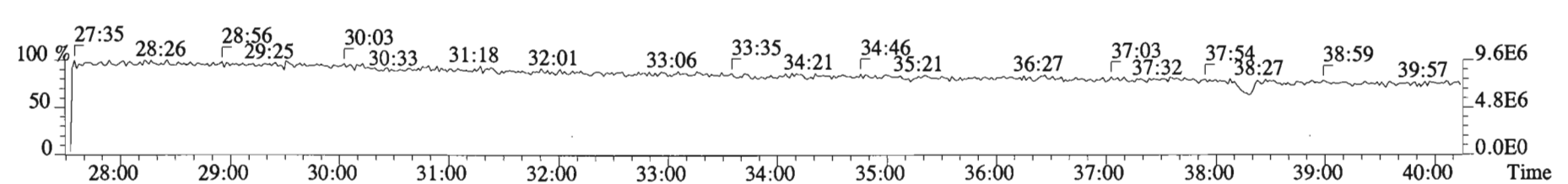
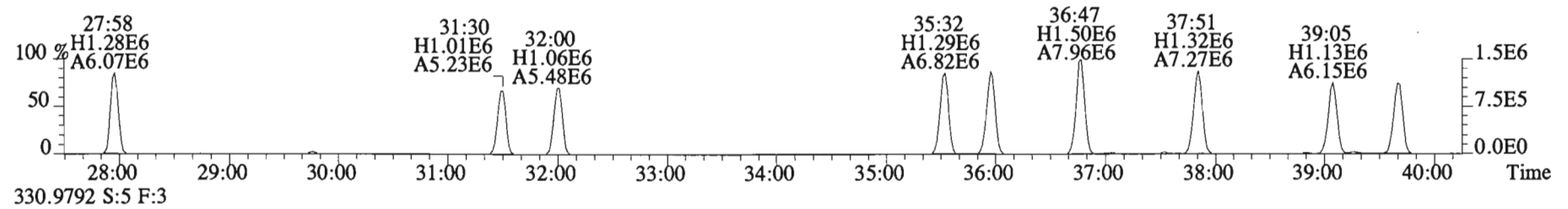
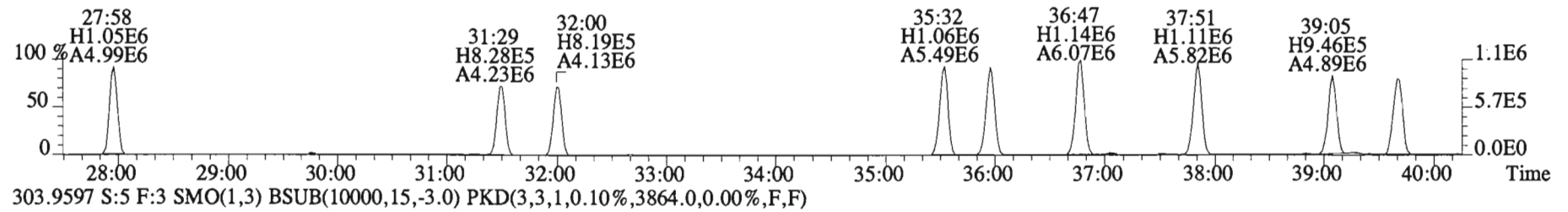
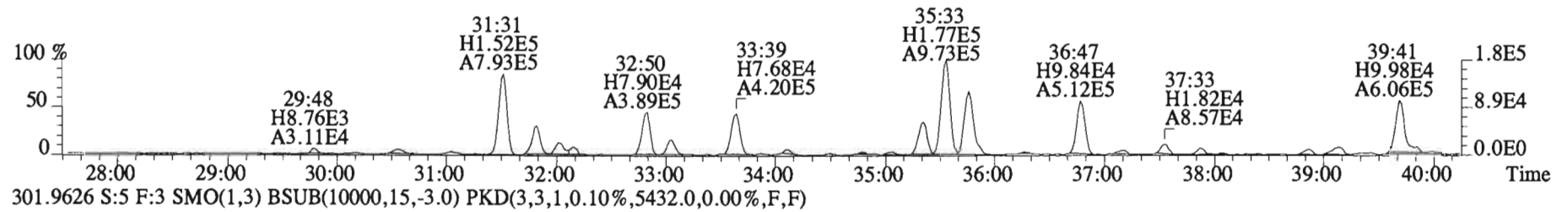
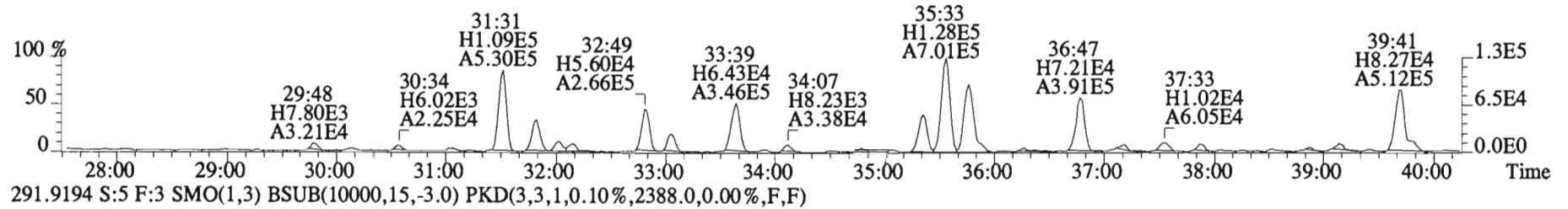
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
255.9613 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3688.0,0.00%,F,F)



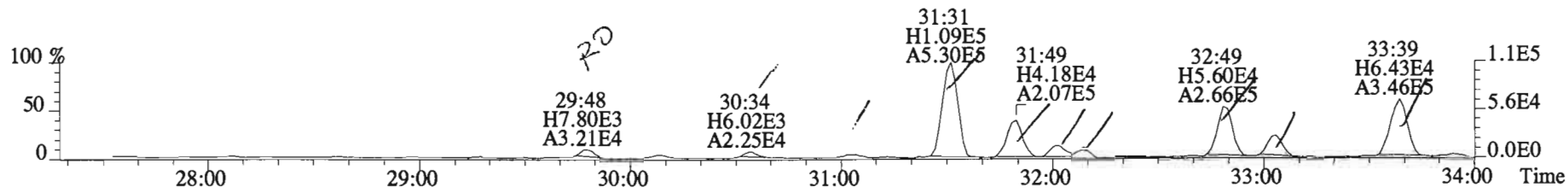
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
268.0016 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,38020.0,0.00%,F,F)



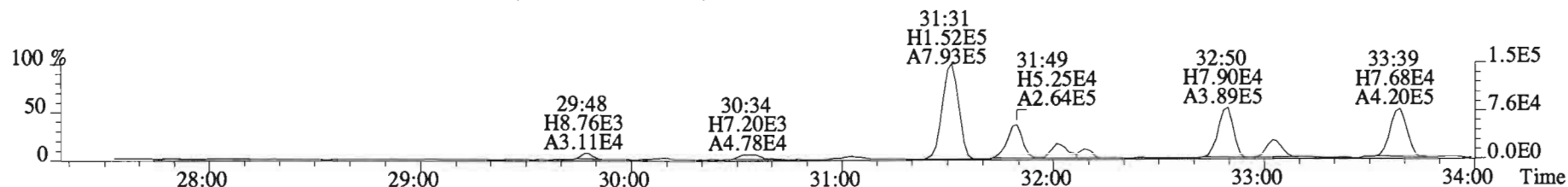
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2632.0,0.00%,F,F)



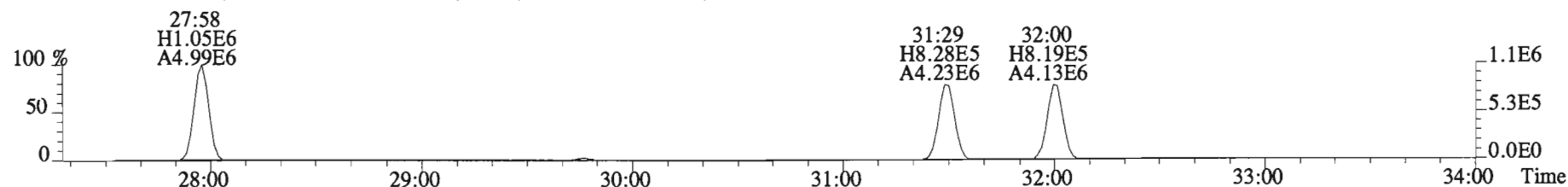
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2632.0,0.00%,F,F)



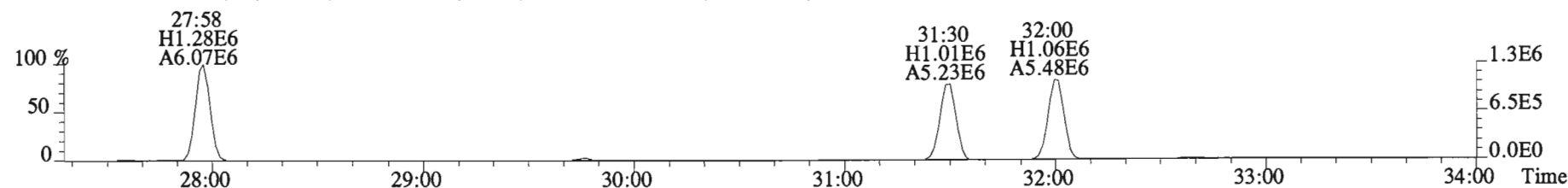
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2388.0,0.00%,F,F)



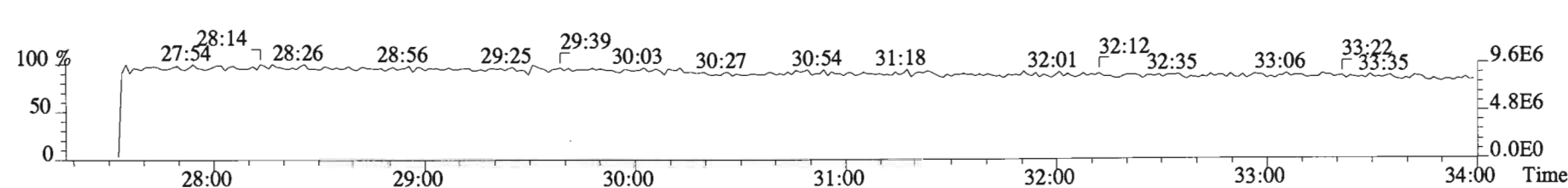
301.9626 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5432.0,0.00%,F,F)



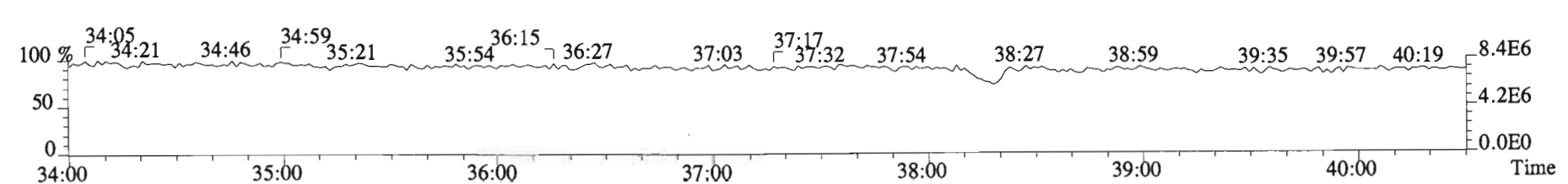
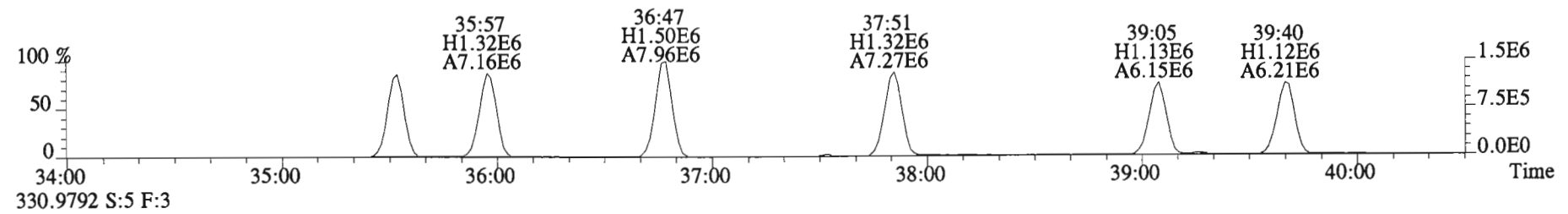
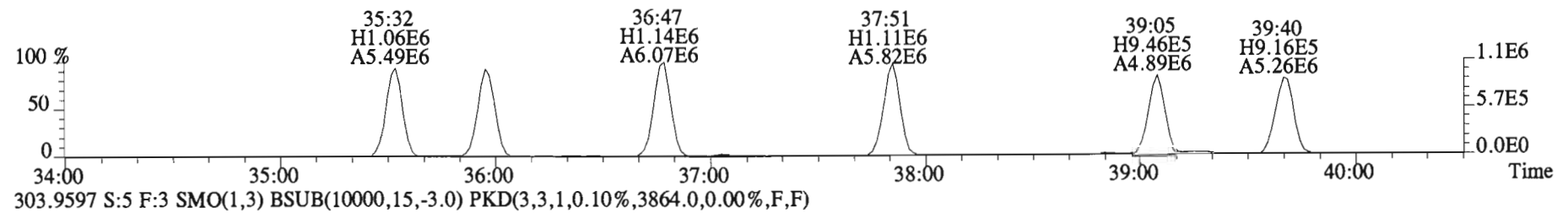
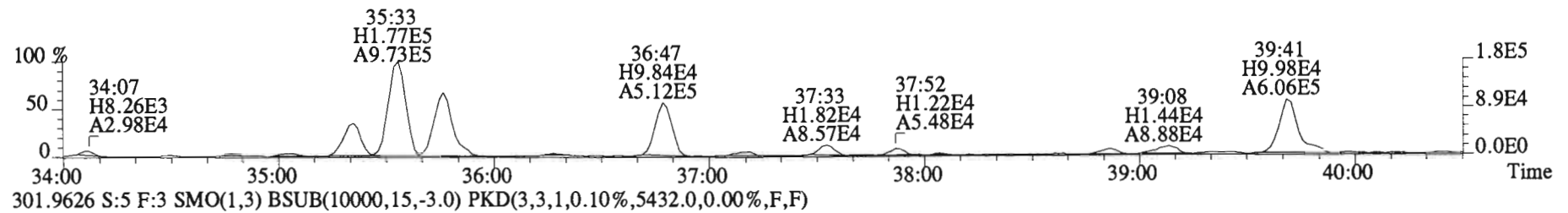
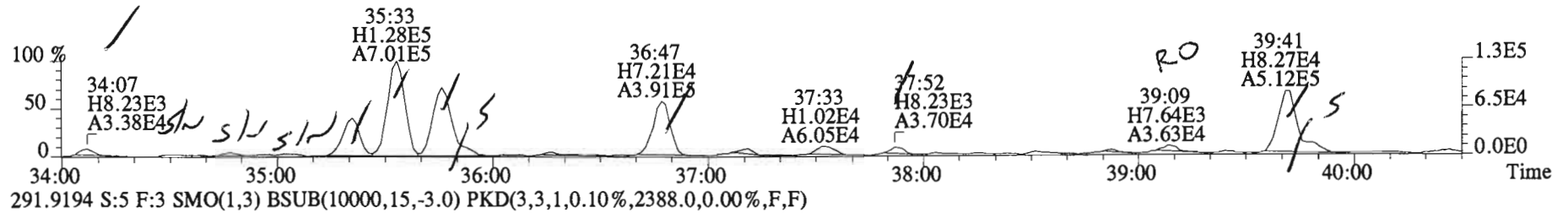
303.9597 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3864.0,0.00%,F,F)



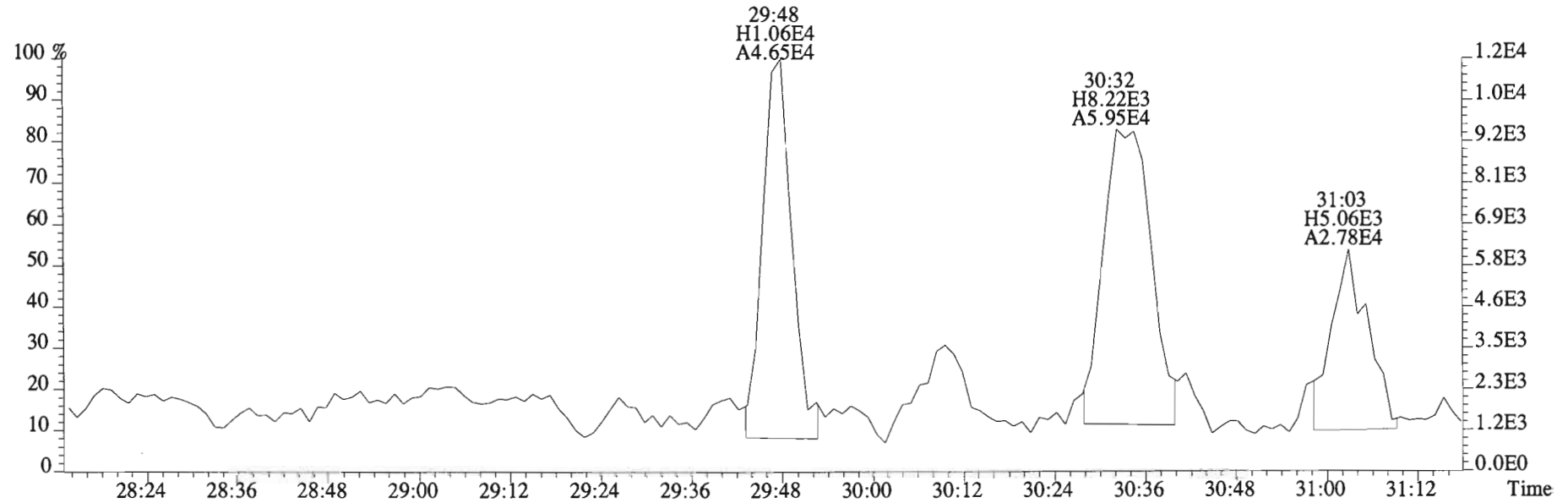
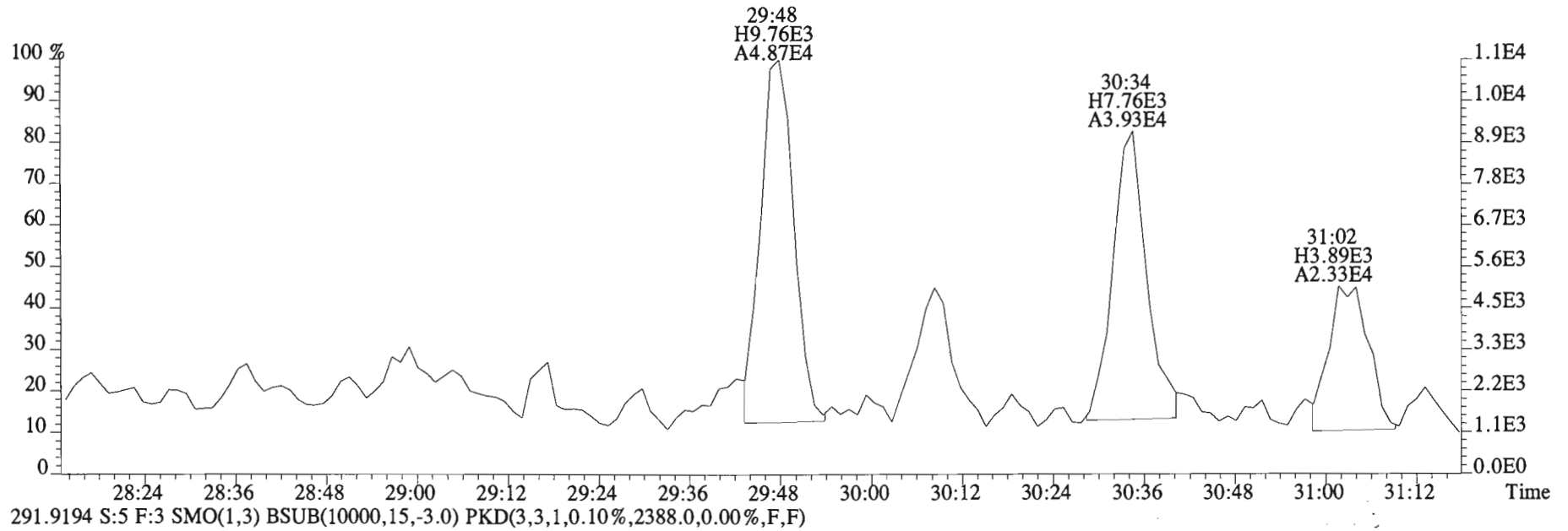
330.9792 S:5 F:3



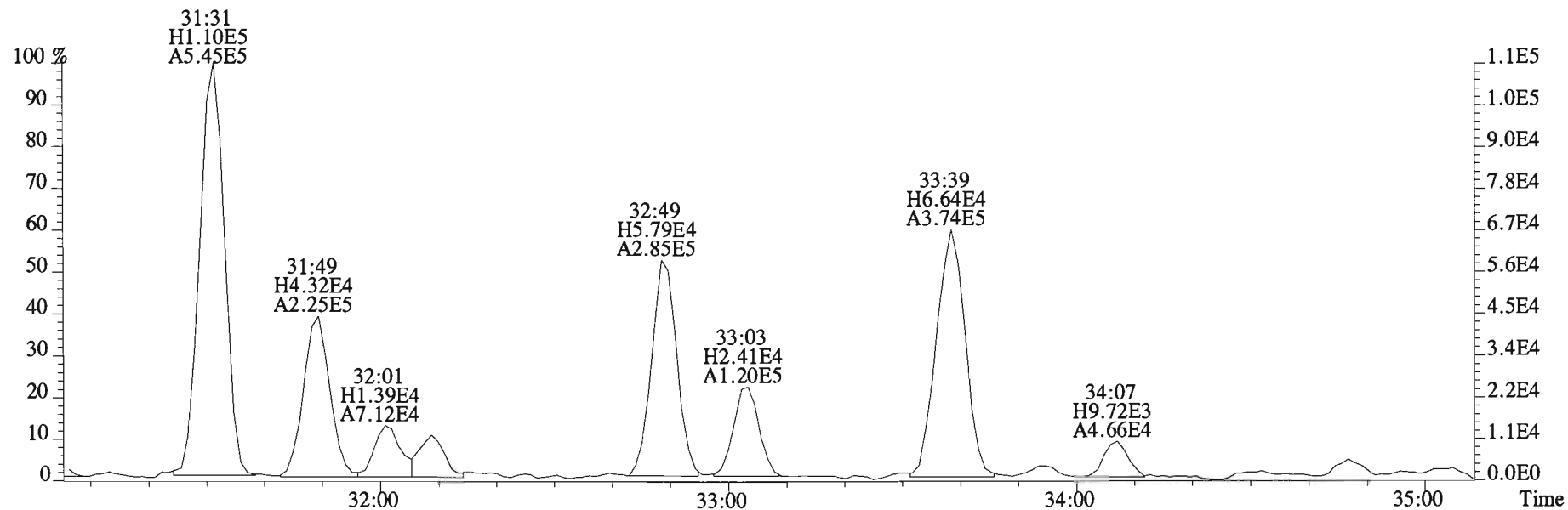
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2632.0,0.00%,F,F)



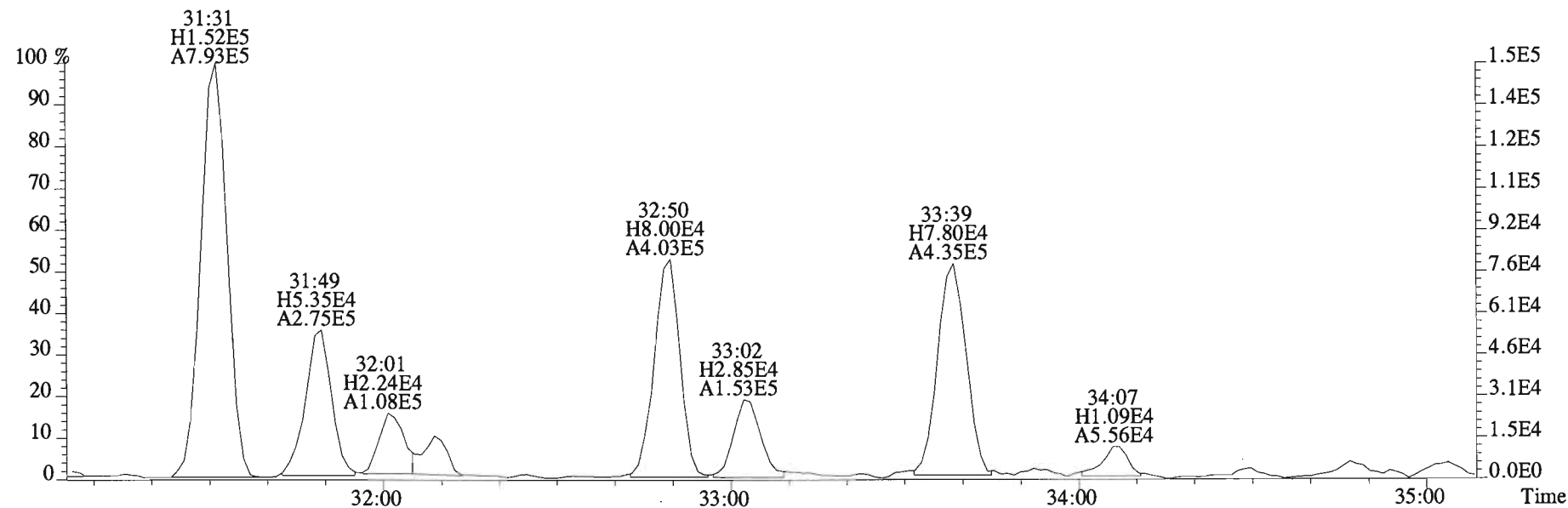
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2632.0,0.00%,F,F)



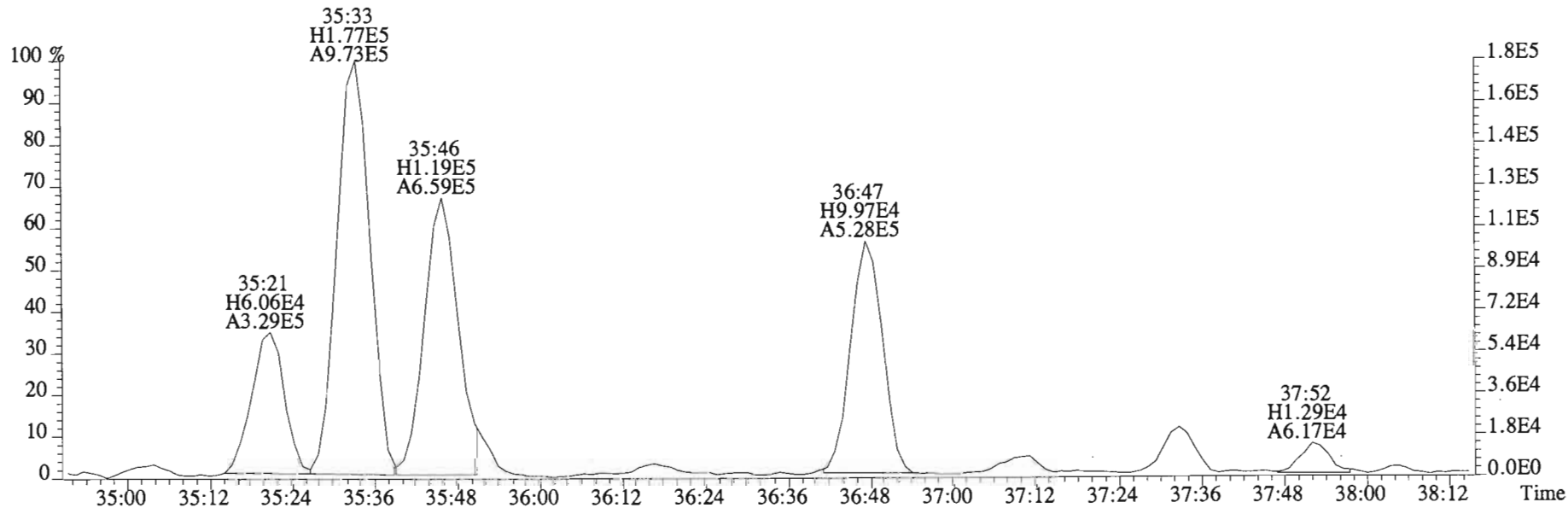
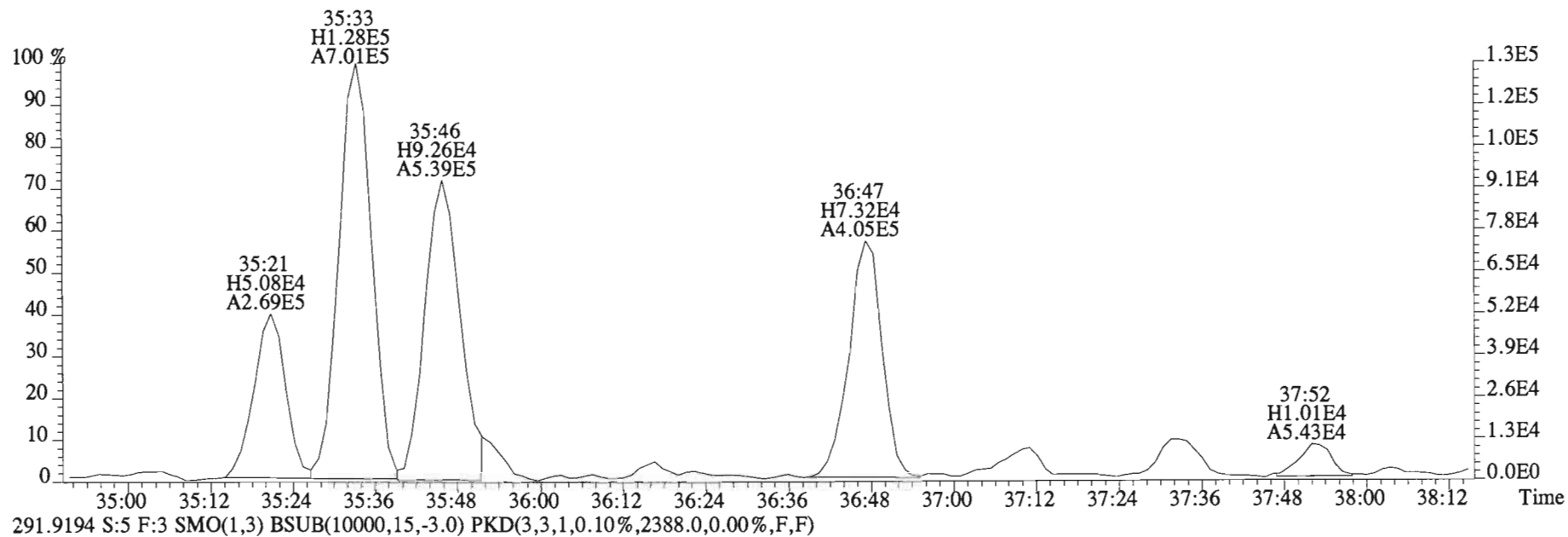
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2632.0,0.00%,F,F)



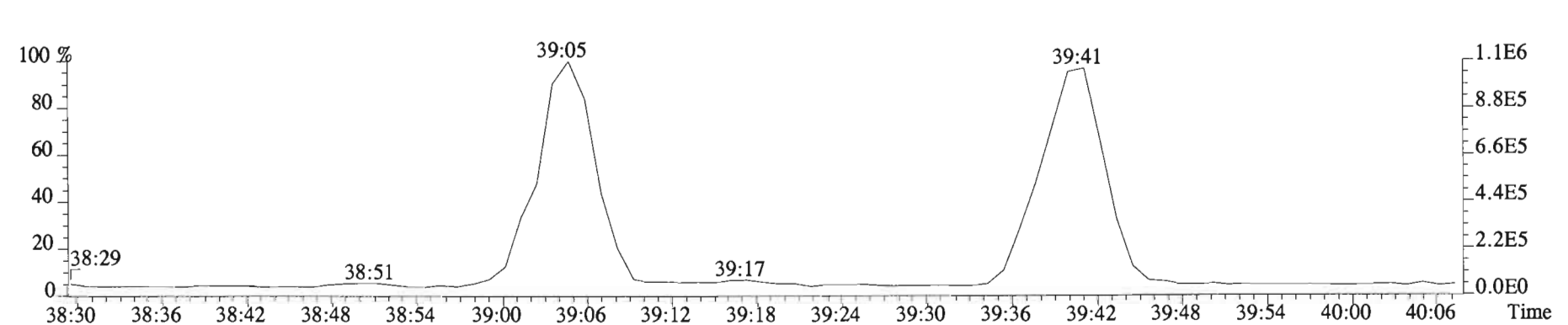
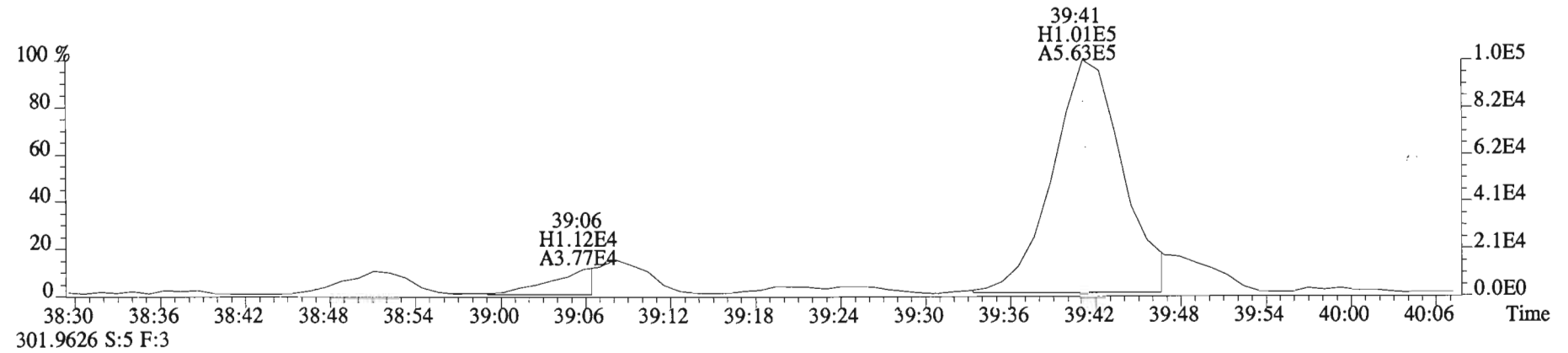
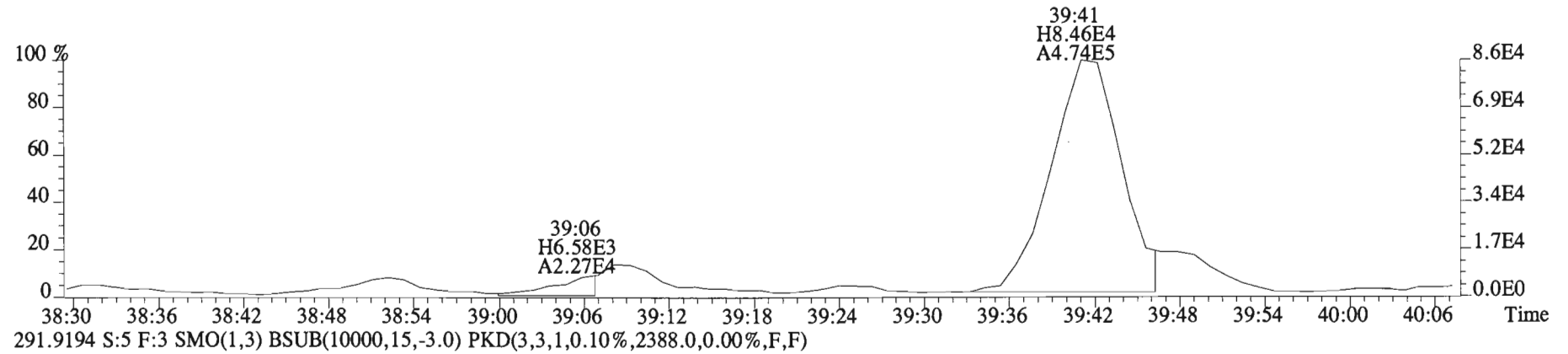
291.9194 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2388.0,0.00%,F,F)



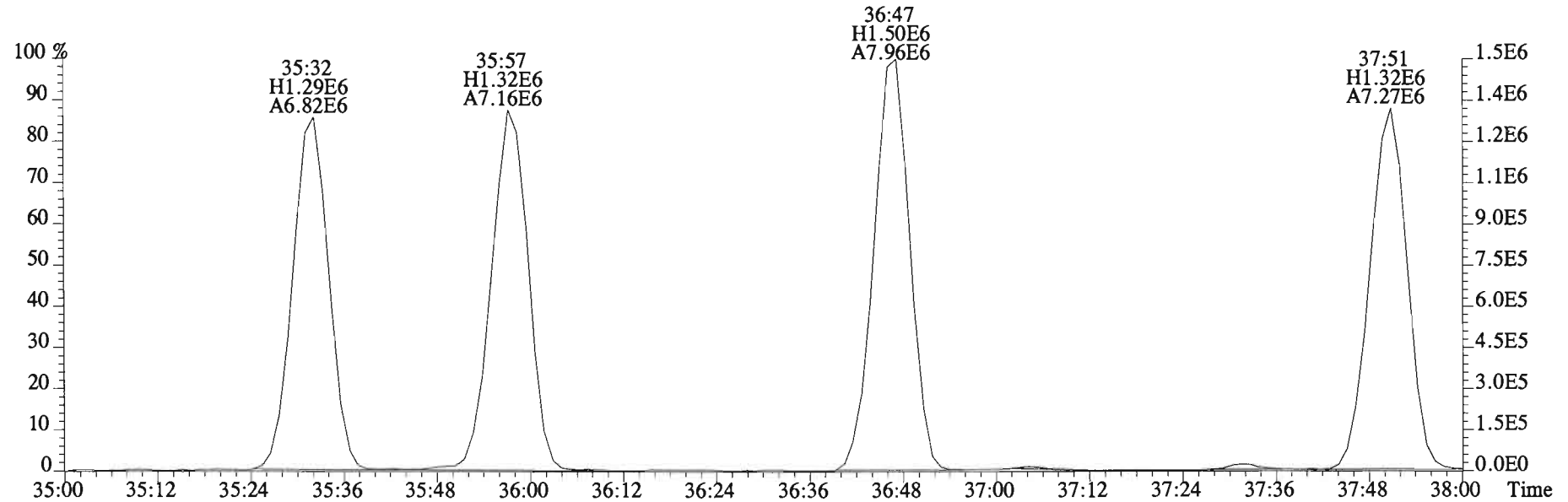
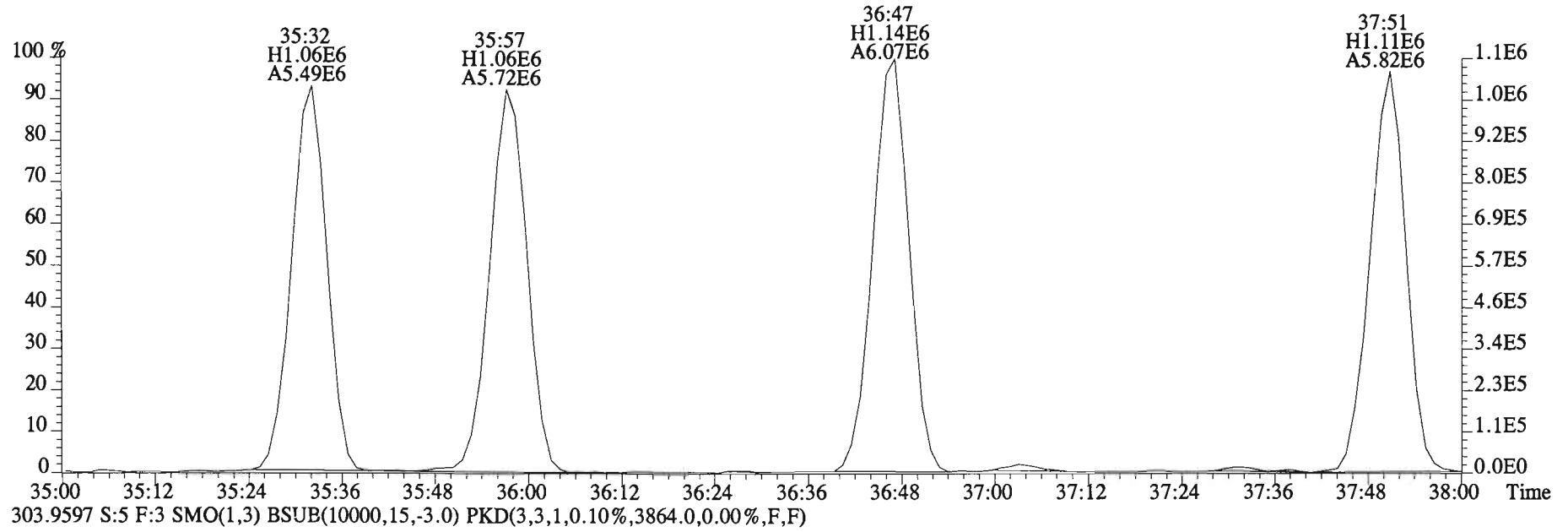
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2632.0,0.00%,F,F)



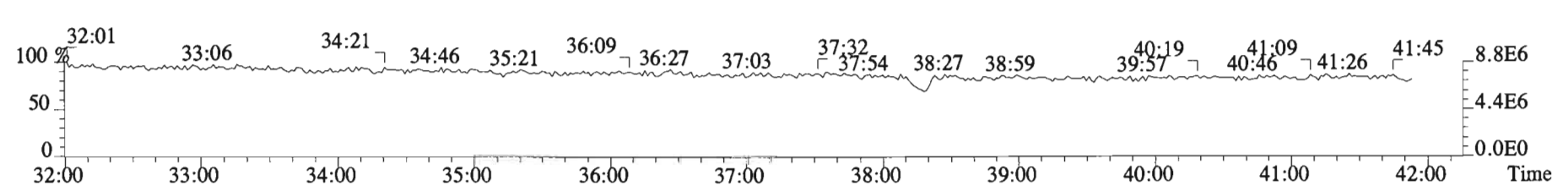
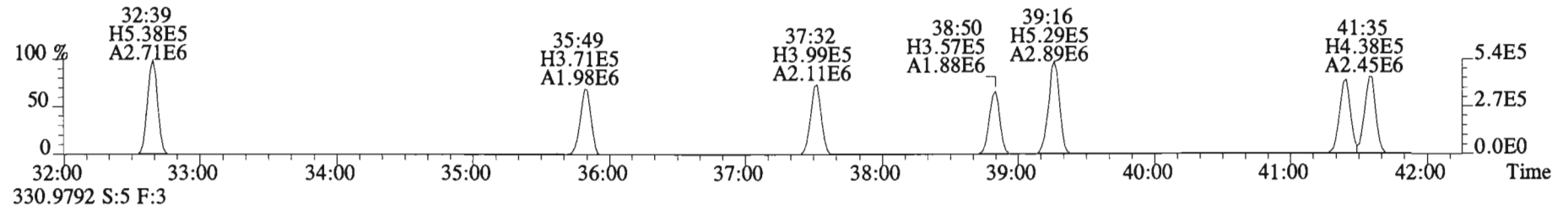
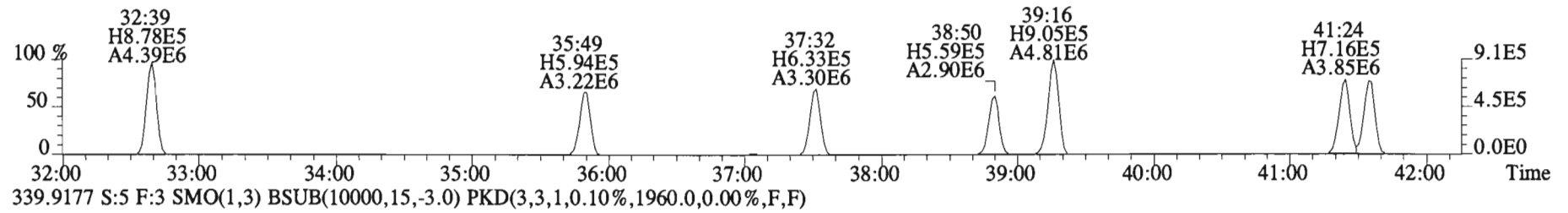
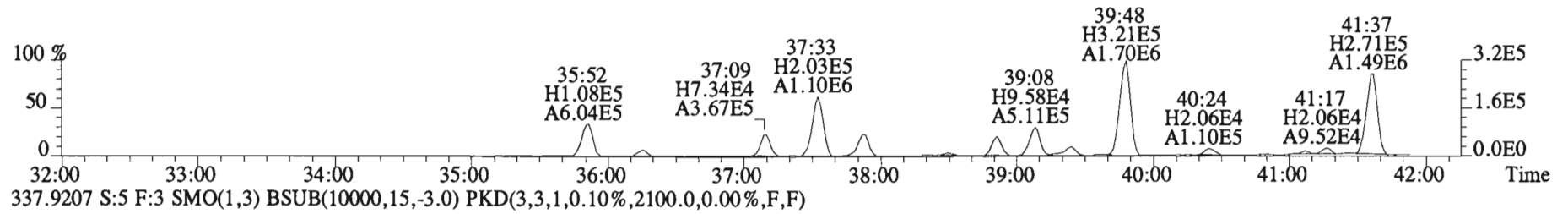
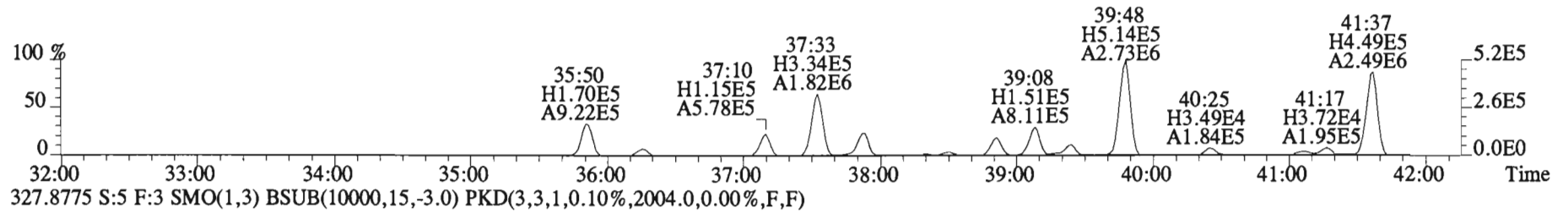
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
289.9224 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2632.0,0.00%,F,F)



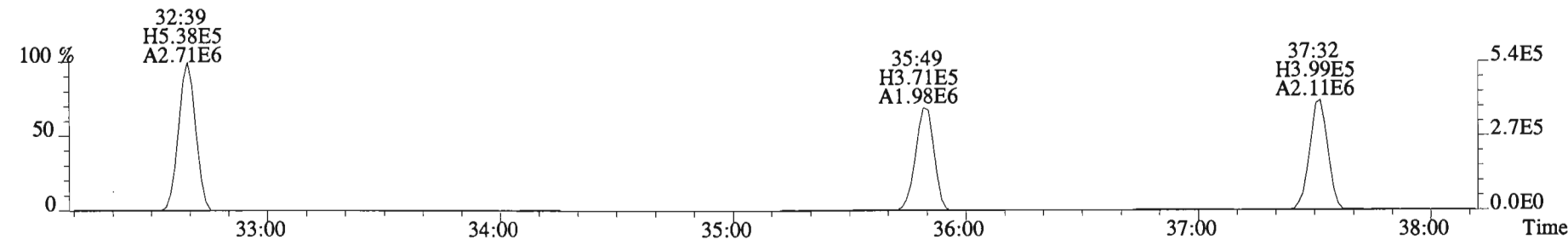
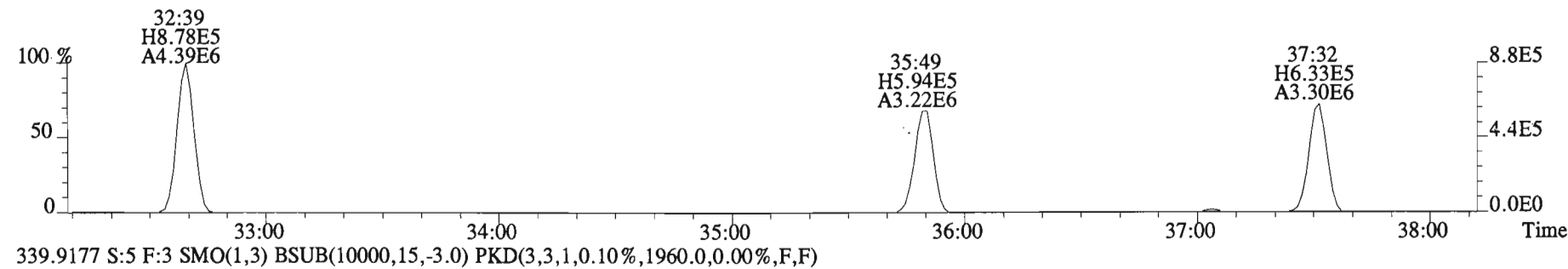
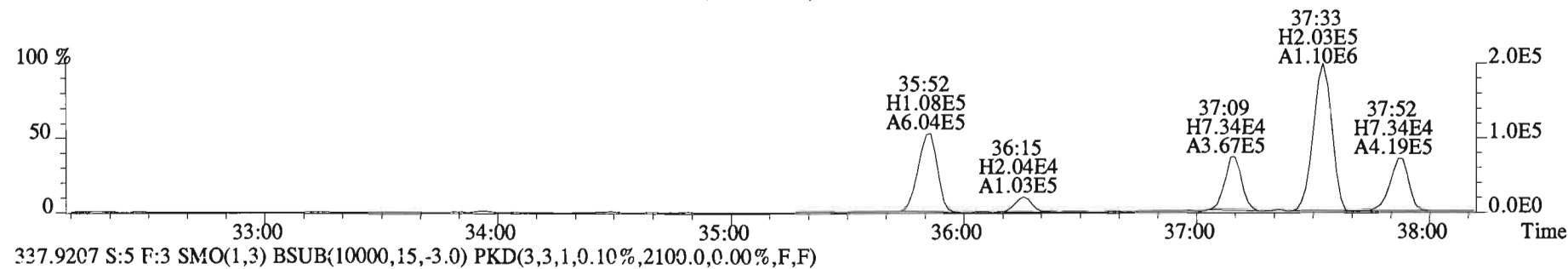
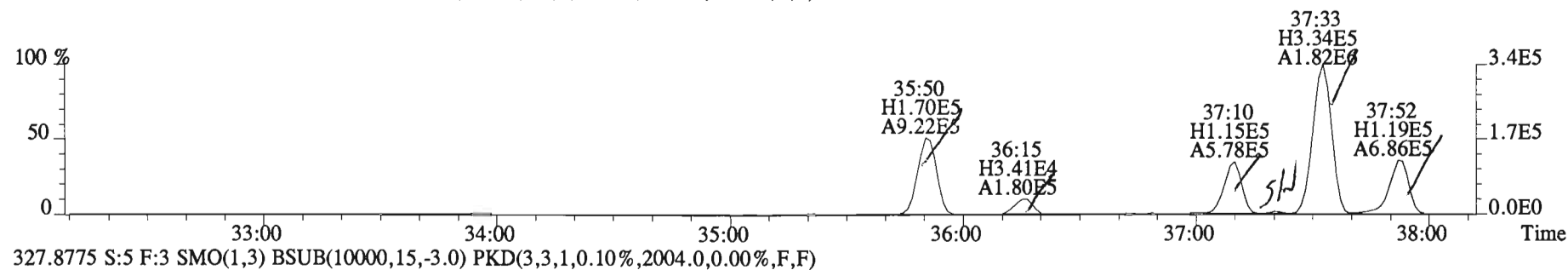
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
301.9626 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,5432.0,0.00%,F,F)



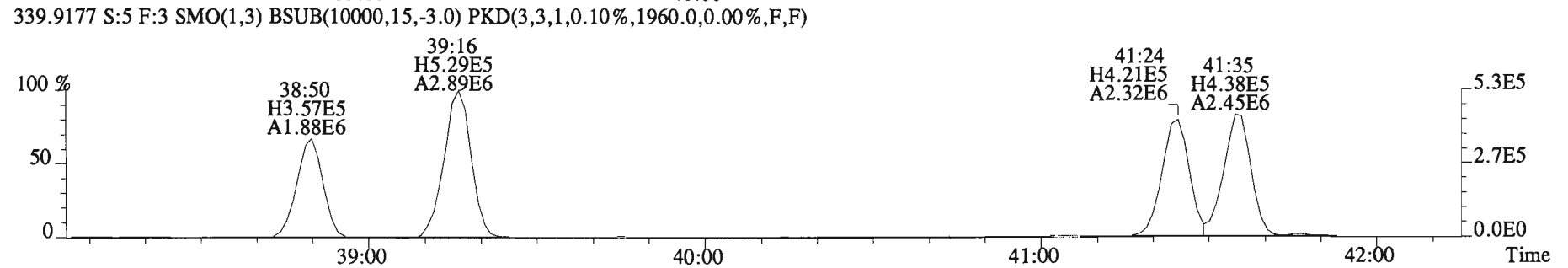
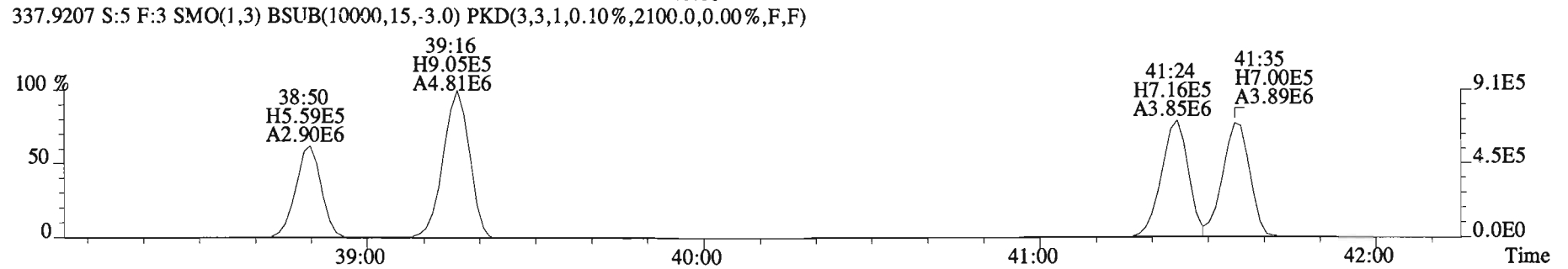
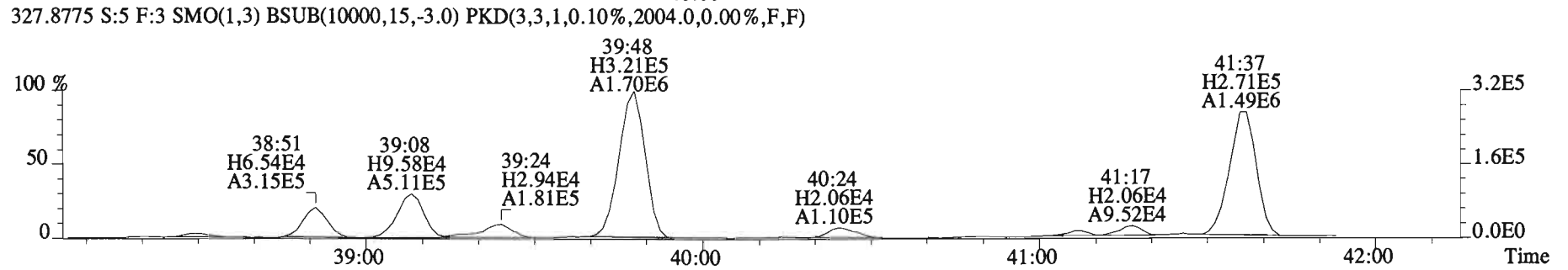
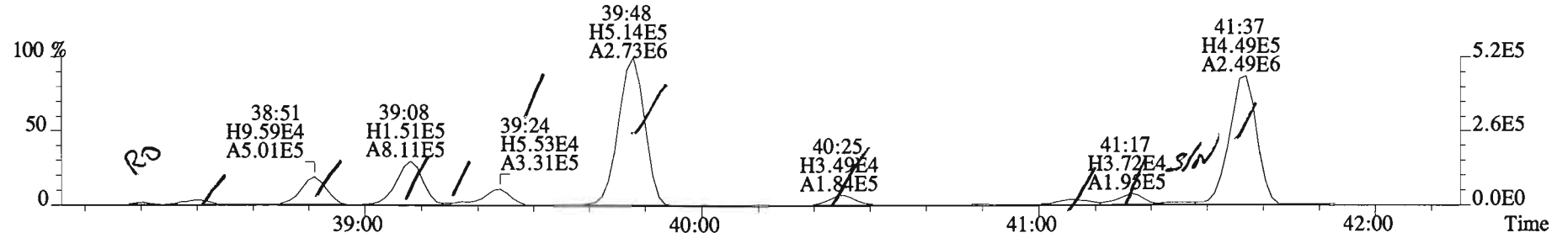
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)



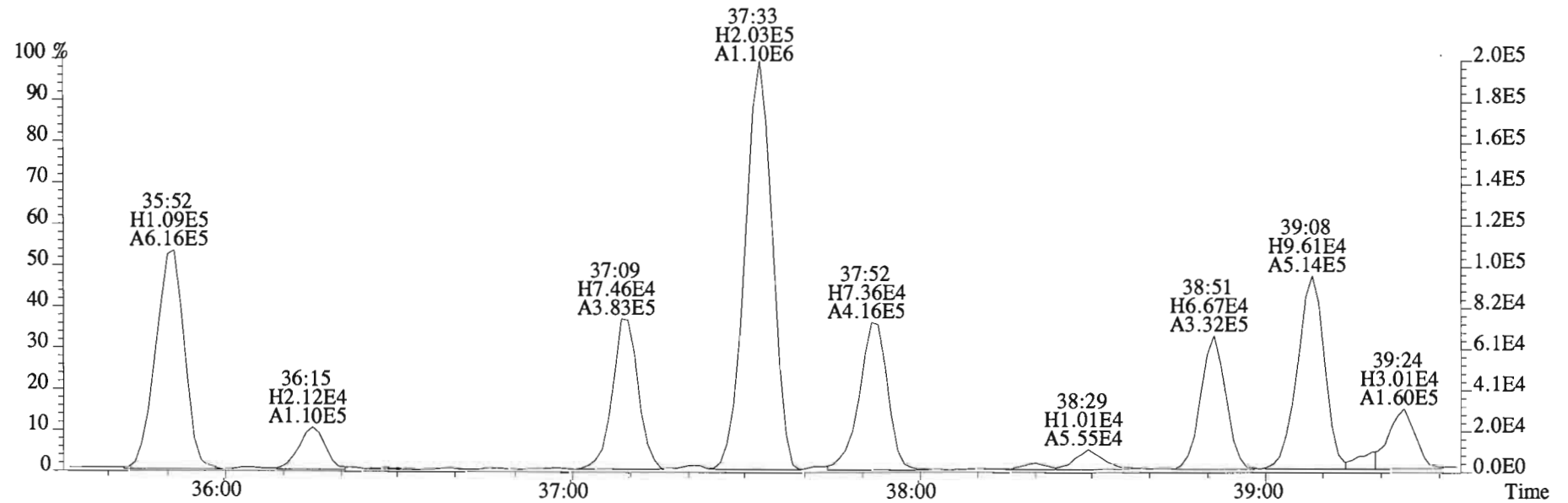
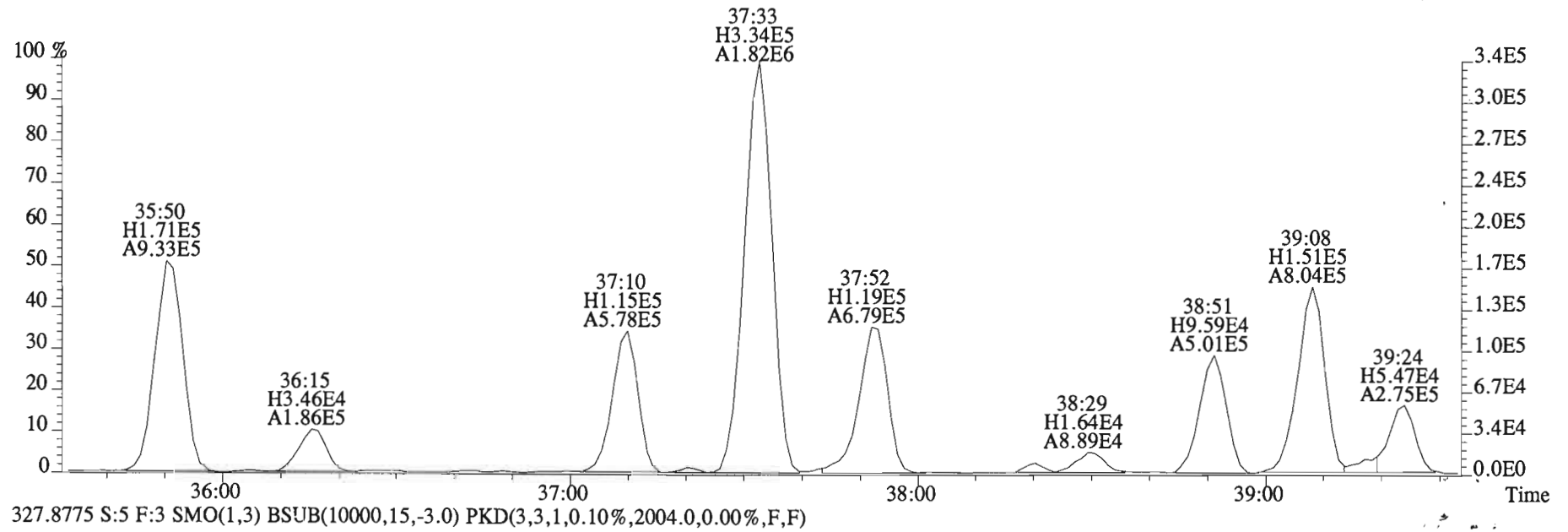
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)



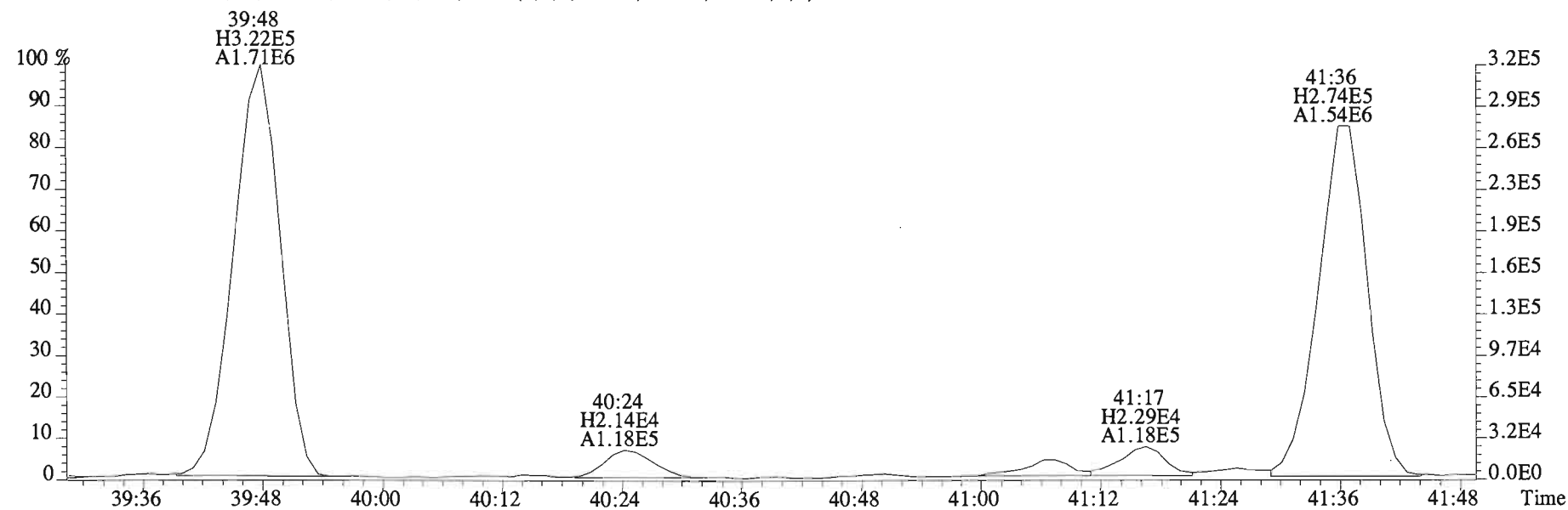
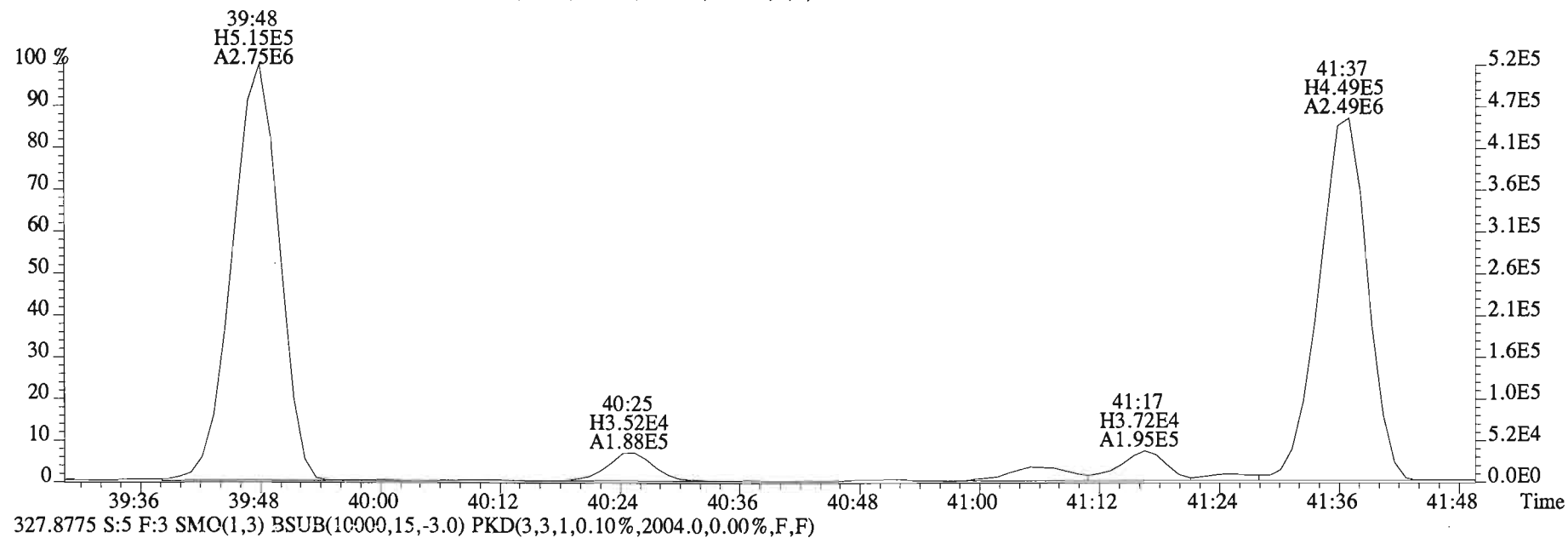
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 Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)



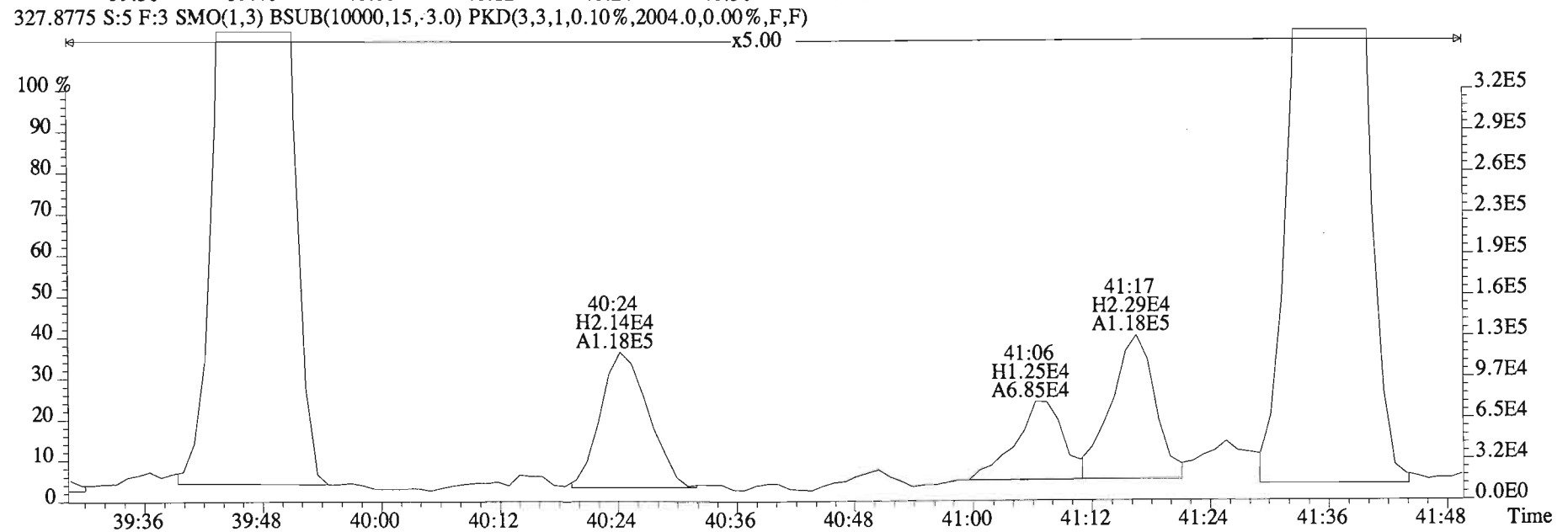
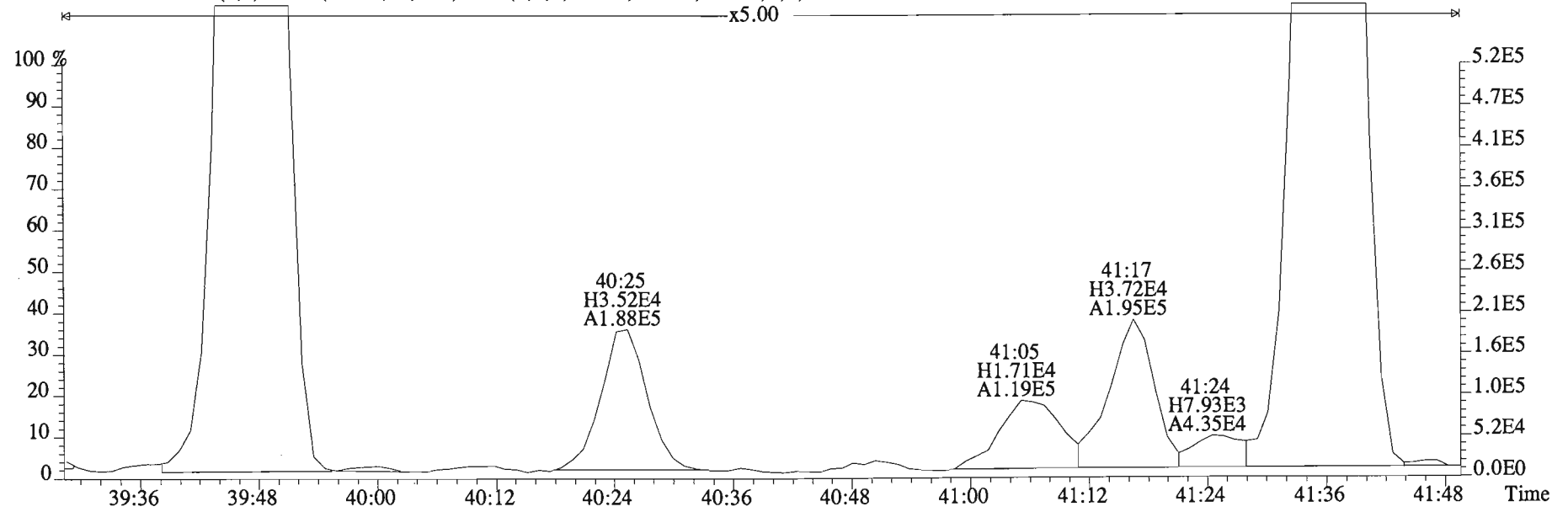
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)



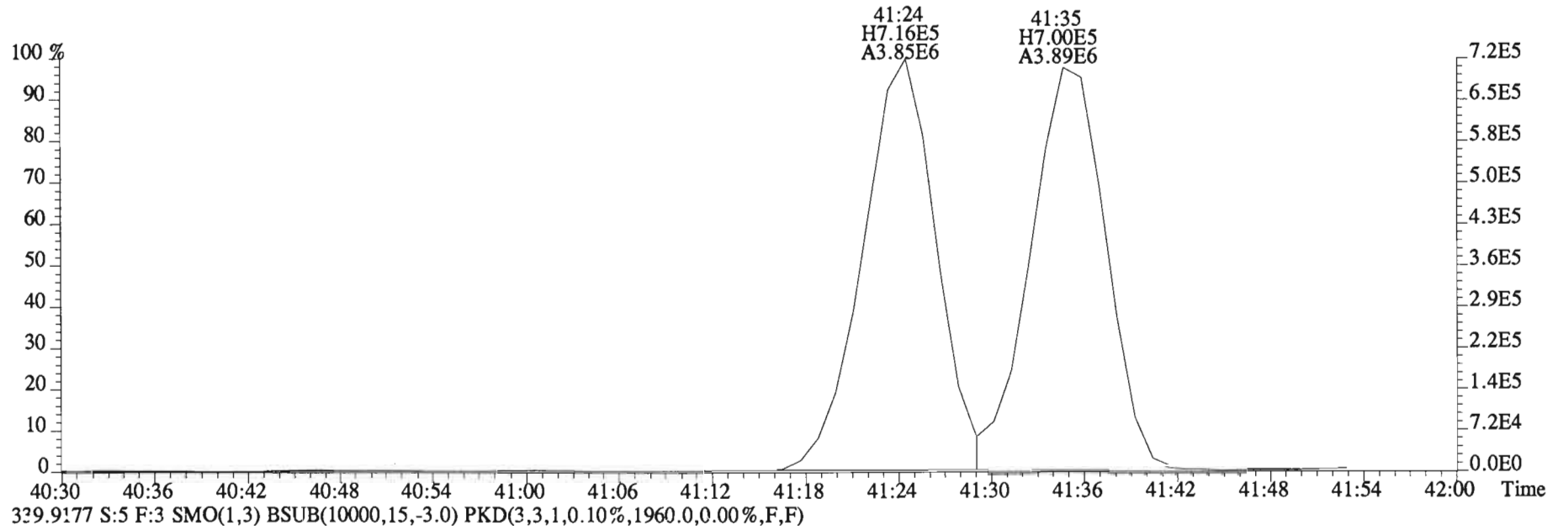
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)



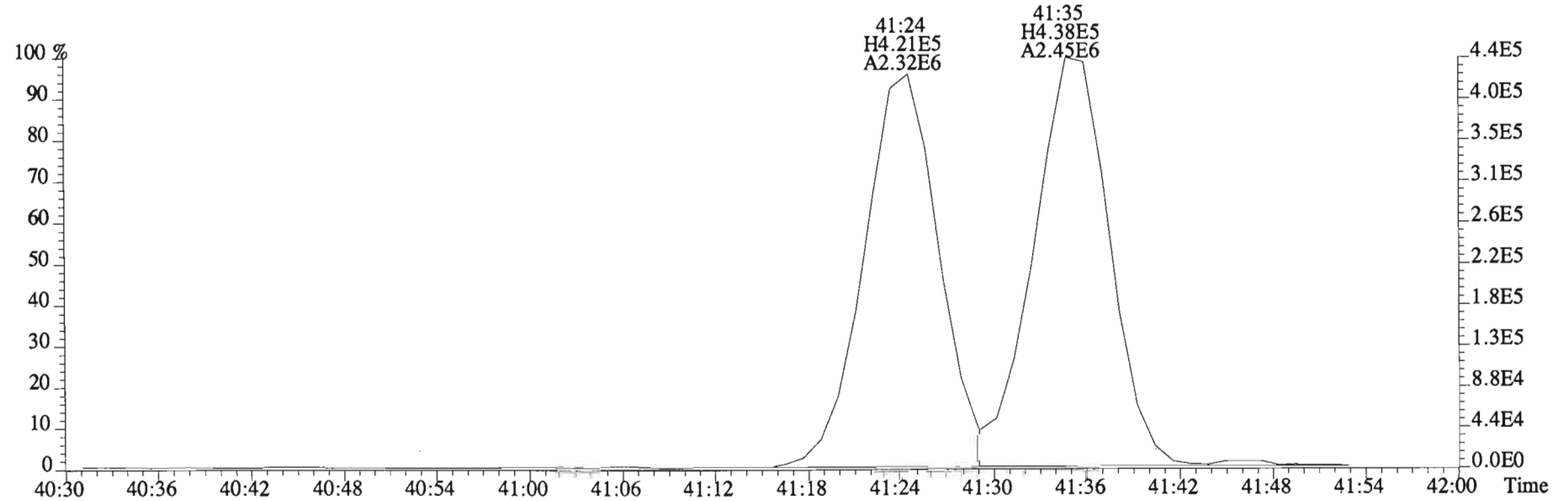
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 325.8804 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2024.0,0.00%,F,F)



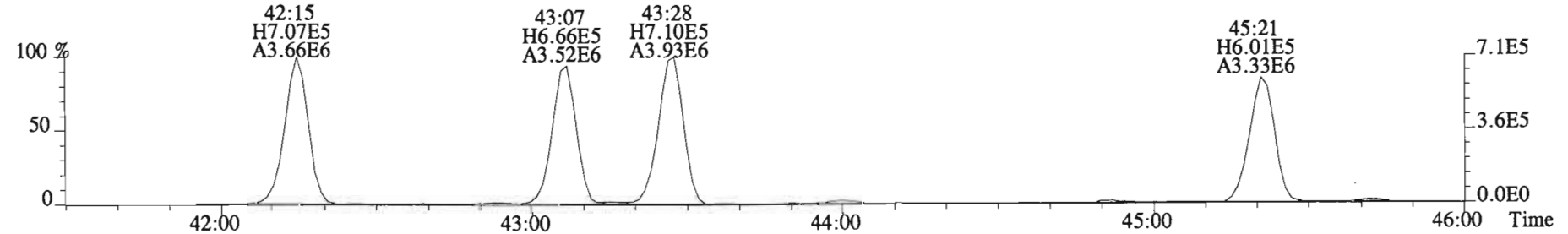
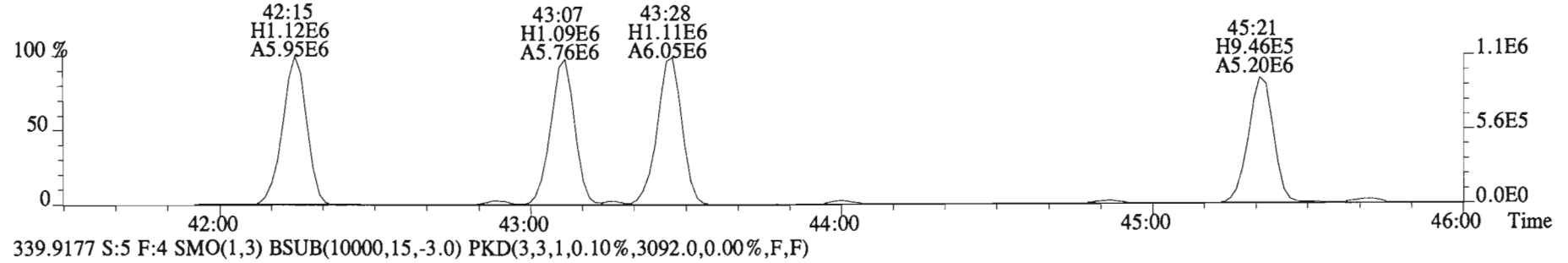
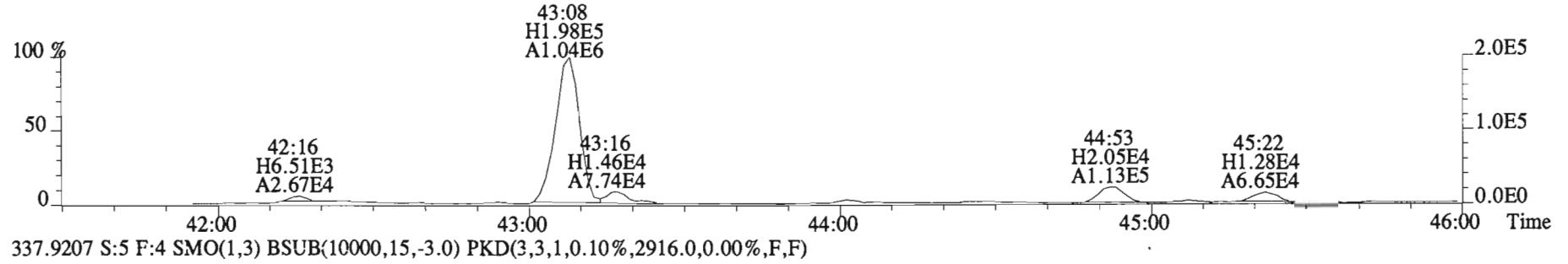
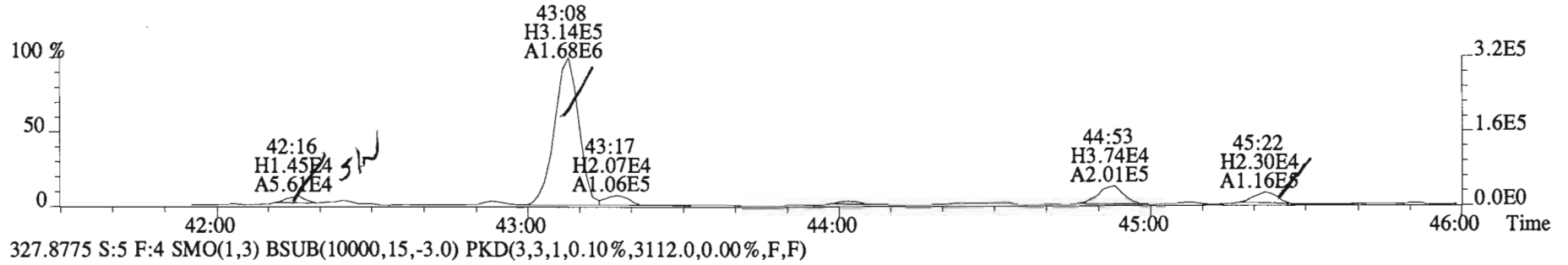
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
337.9207 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2100.0,0.00%,F,F)



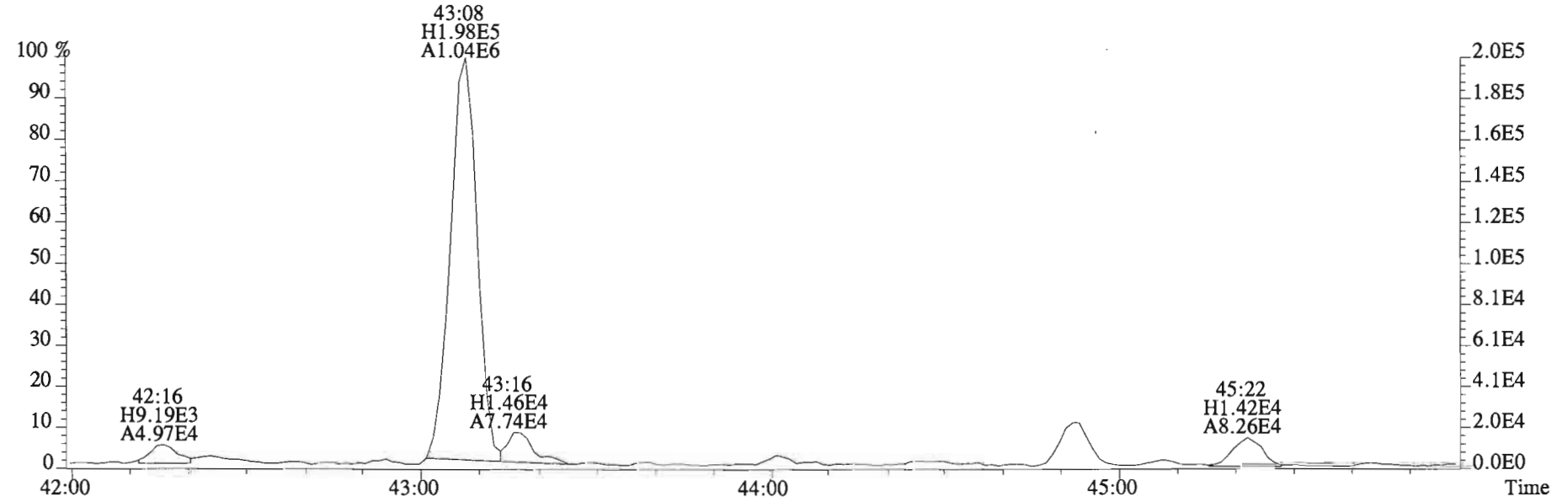
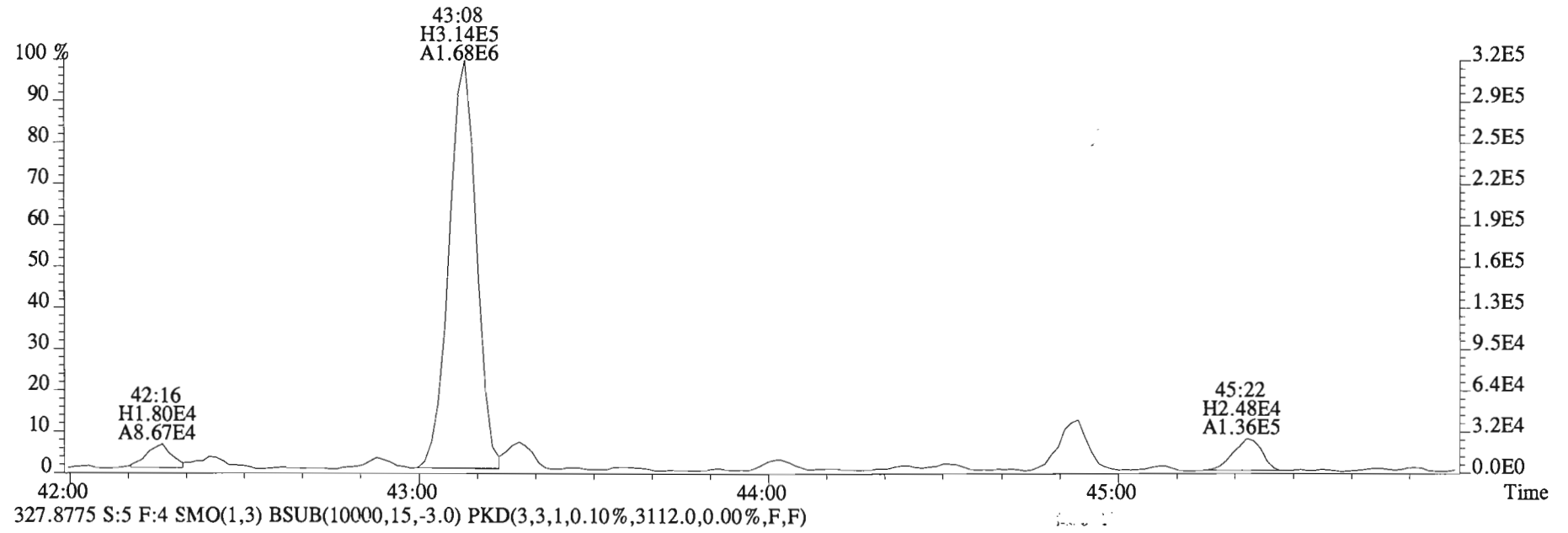
339.9177 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1960.0,0.00%,F,F)



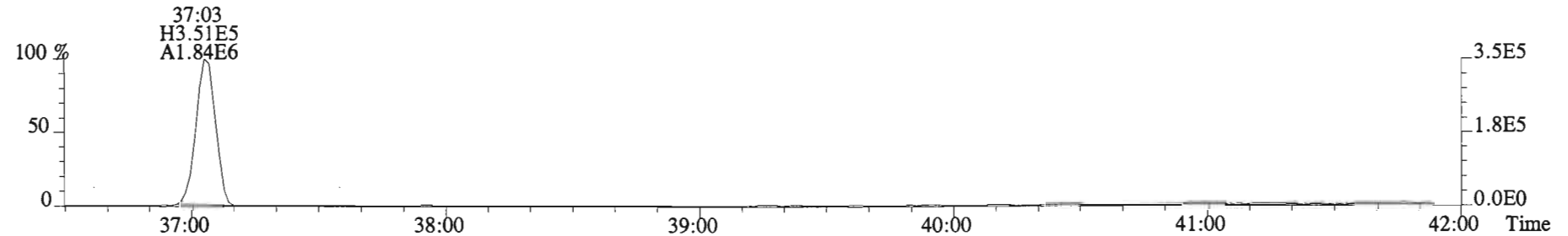
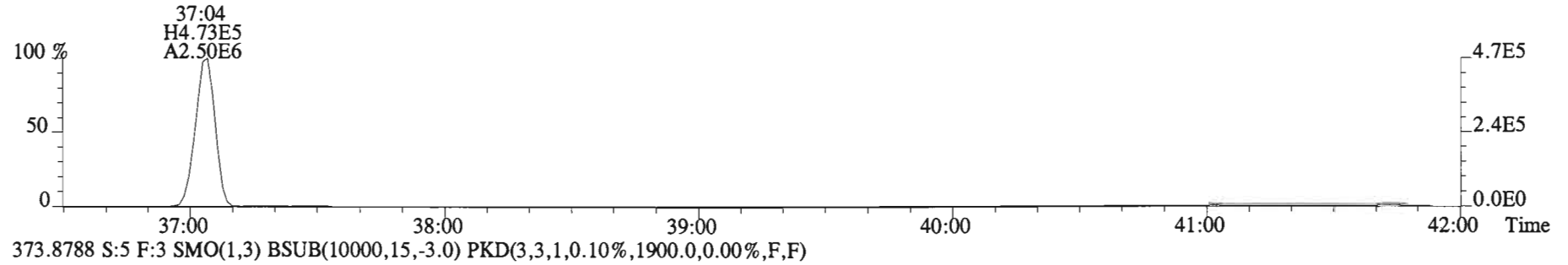
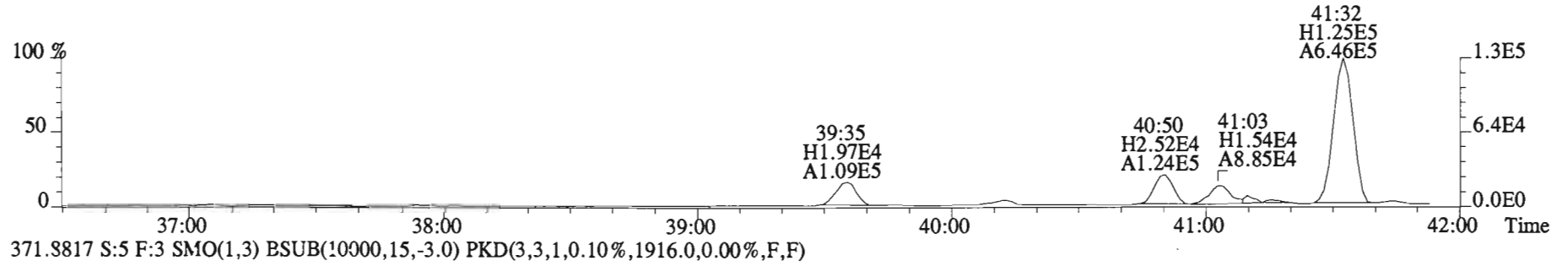
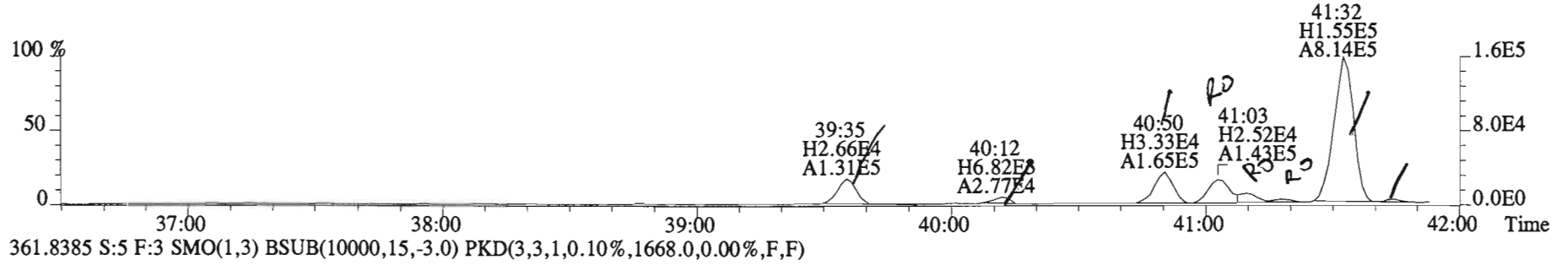
File:150205E1 #1-555 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
325.8804 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4472.0,0.00%,F,F)



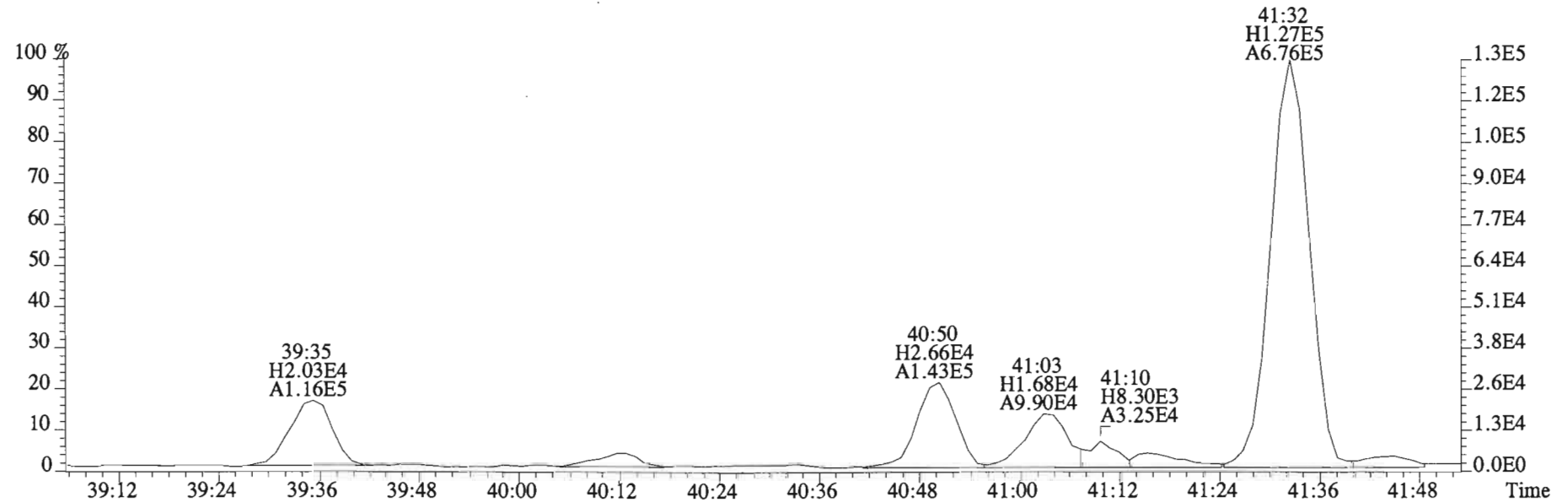
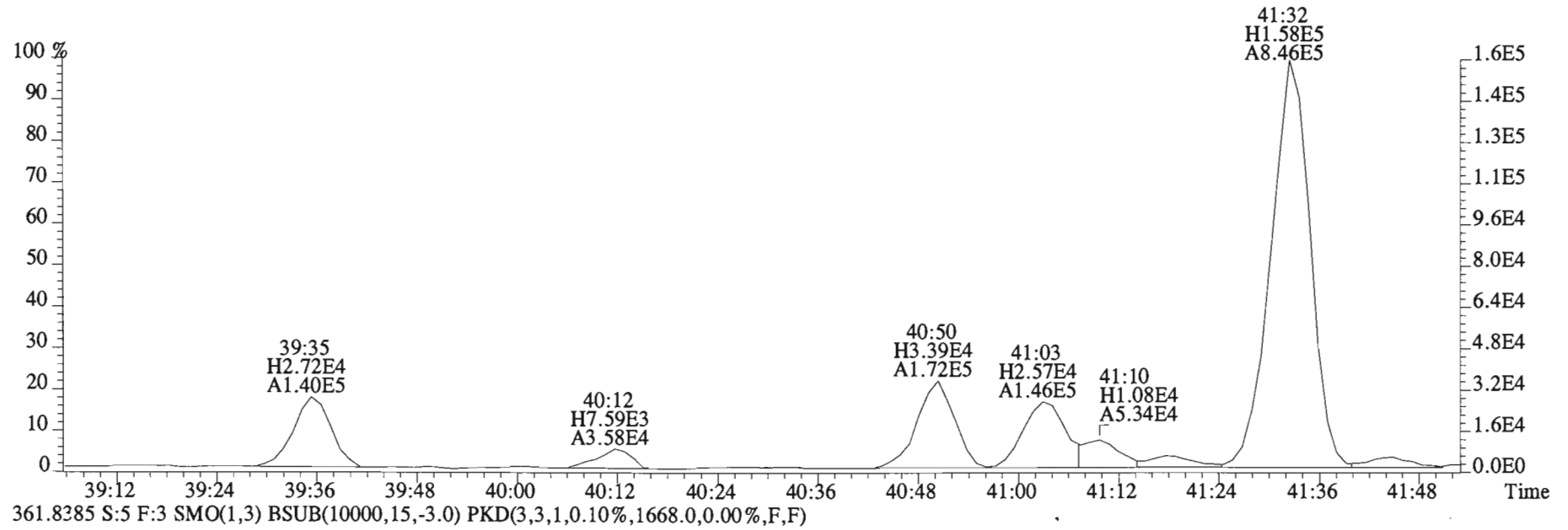
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
325.8804 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,4472.0,0.00%,F,F)



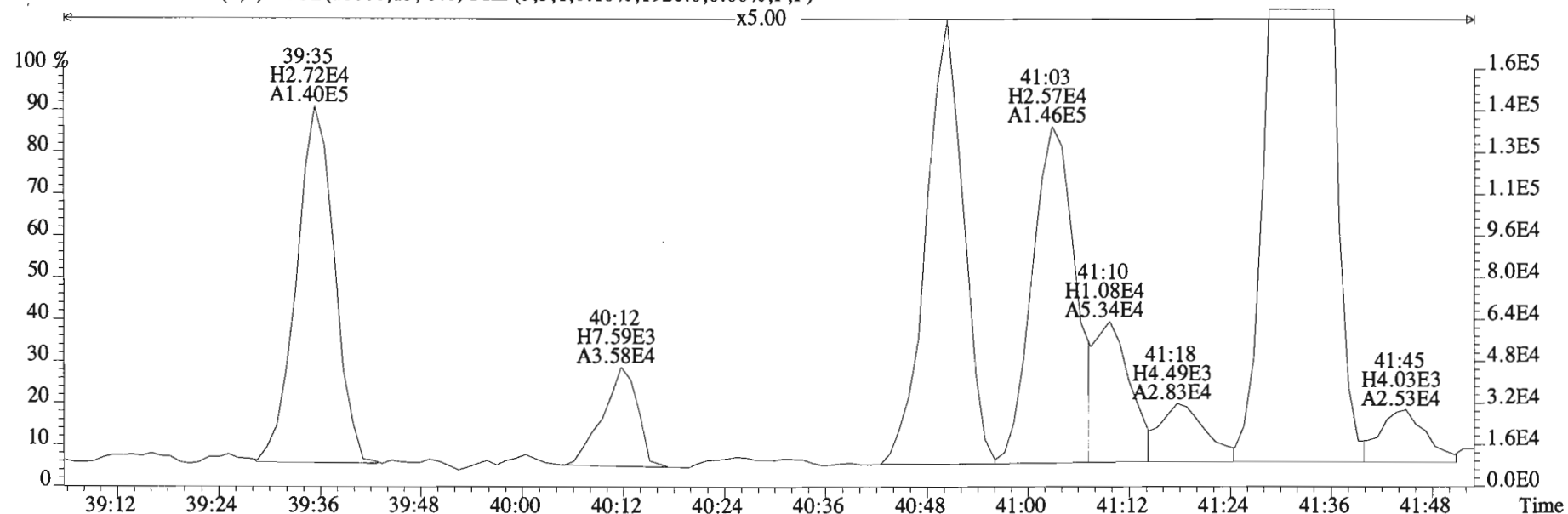
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1928.0,0.00%,F,F)



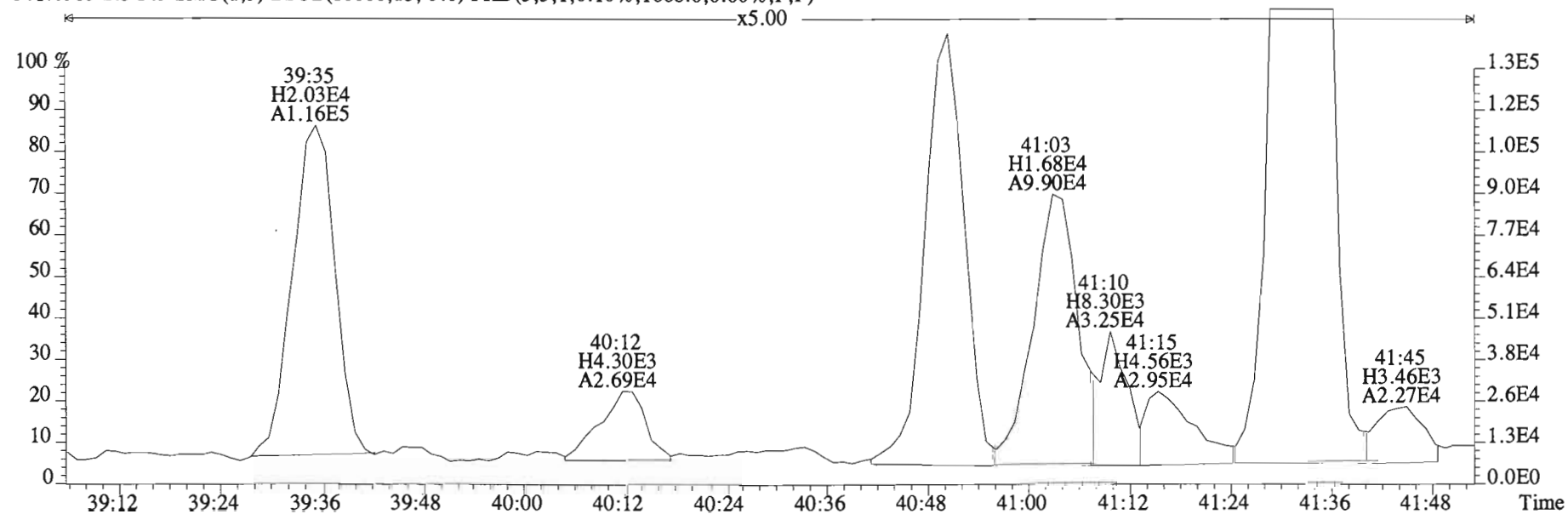
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1928.0,0.00%,F,F)



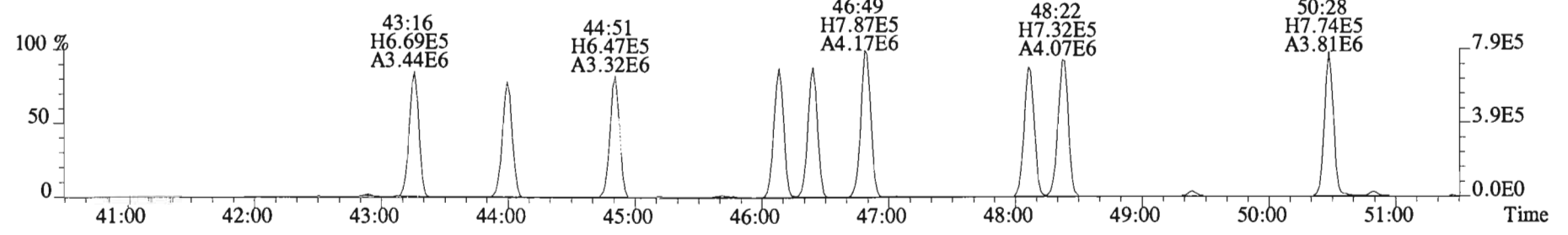
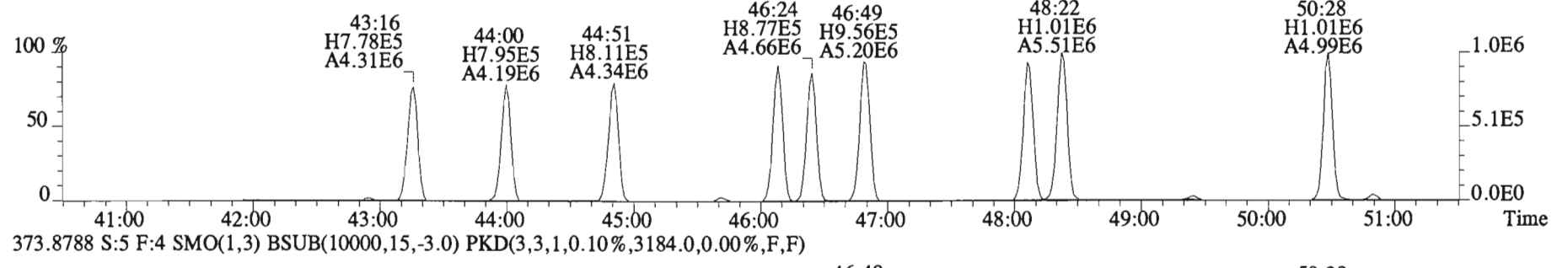
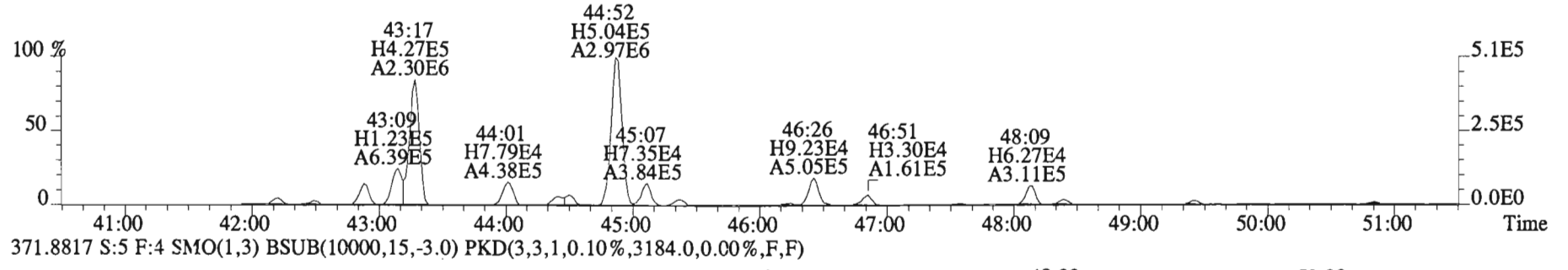
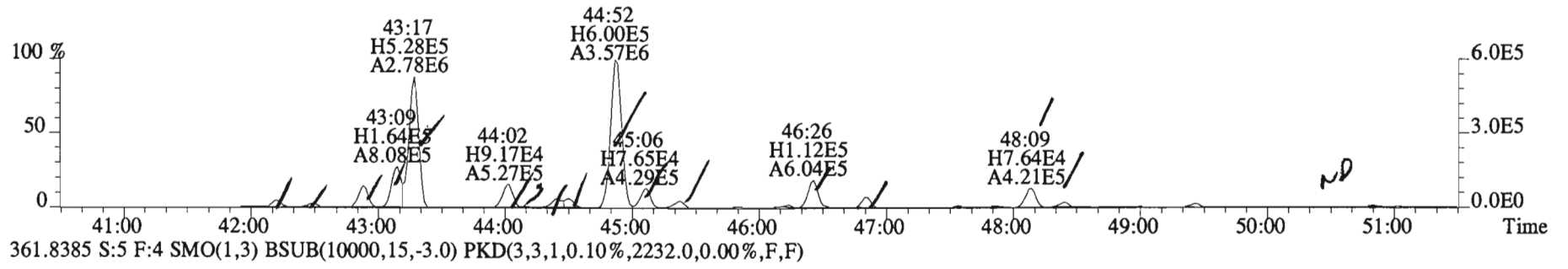
File:150205E1 #1-758 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 359.8415 S:5 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1928.0,0.00%,F,F)



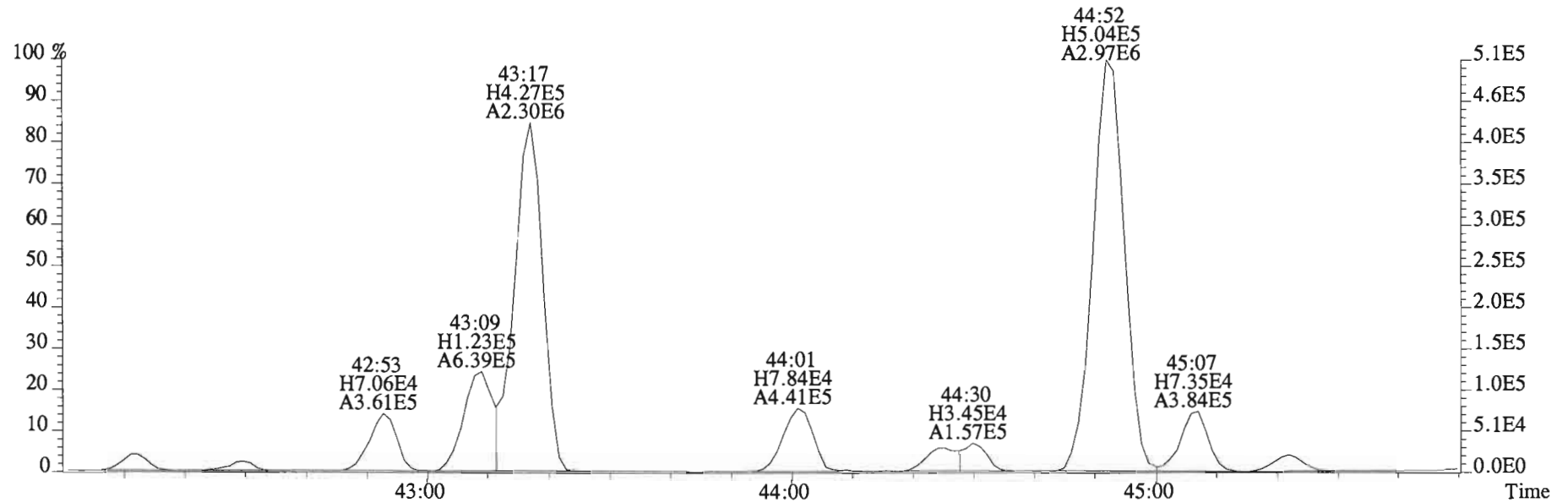
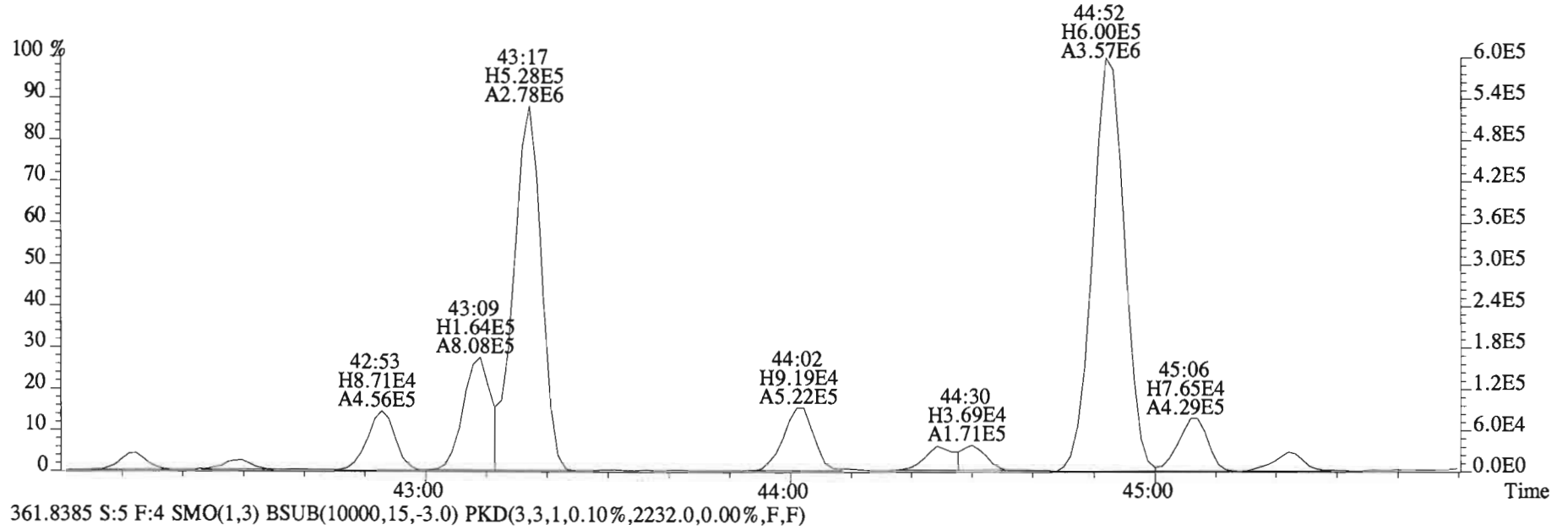
361.8385 S:5 F:3 SMO(1,3) ESUB(10000,15,-3.0) PKD(3,3,1,0.10%,1668.0,0.00%,F,F)



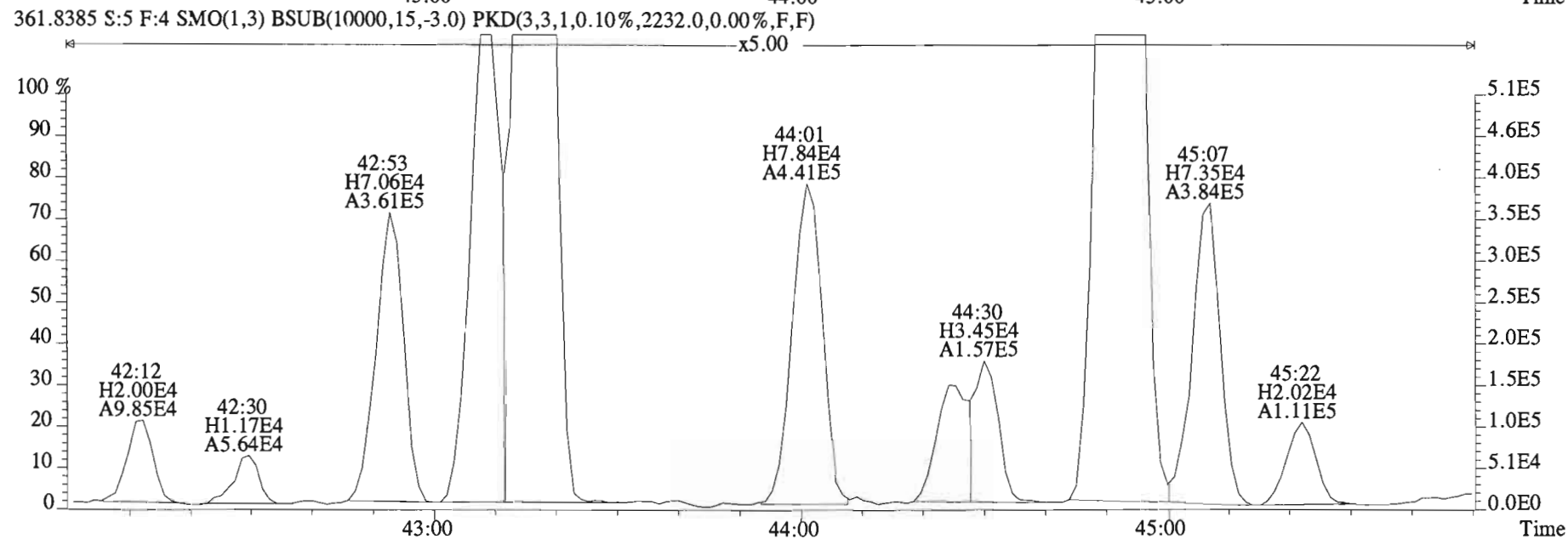
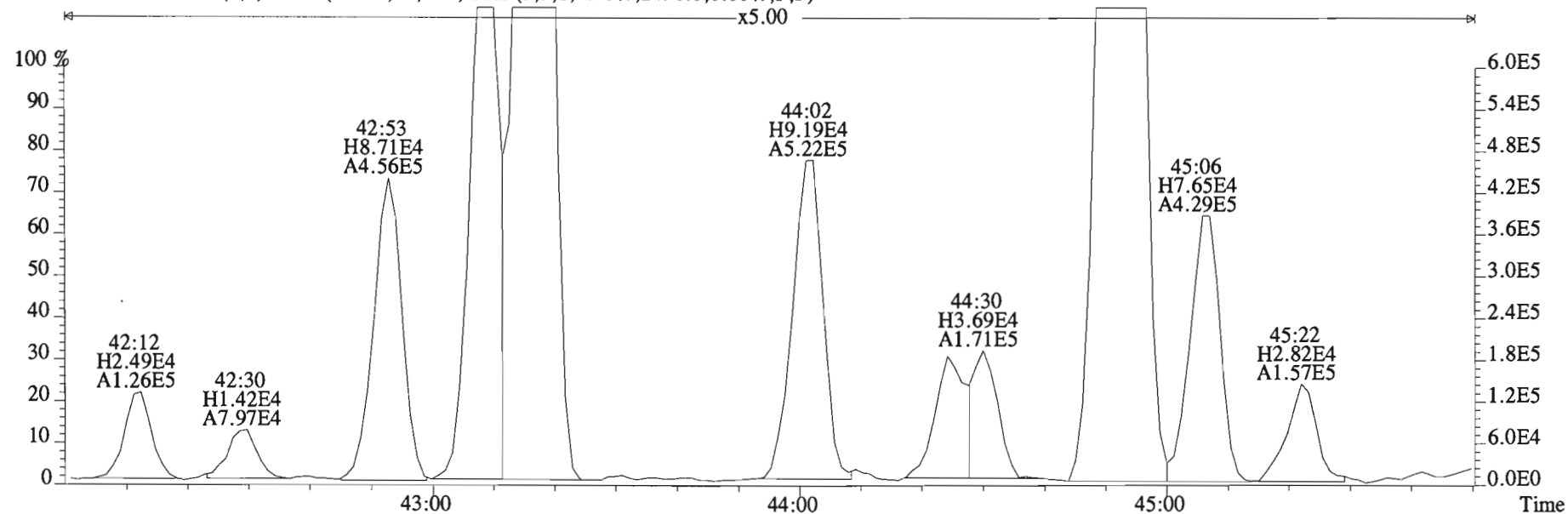
File:150205E1 #1-555 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2496.0,0.00%,F,F)



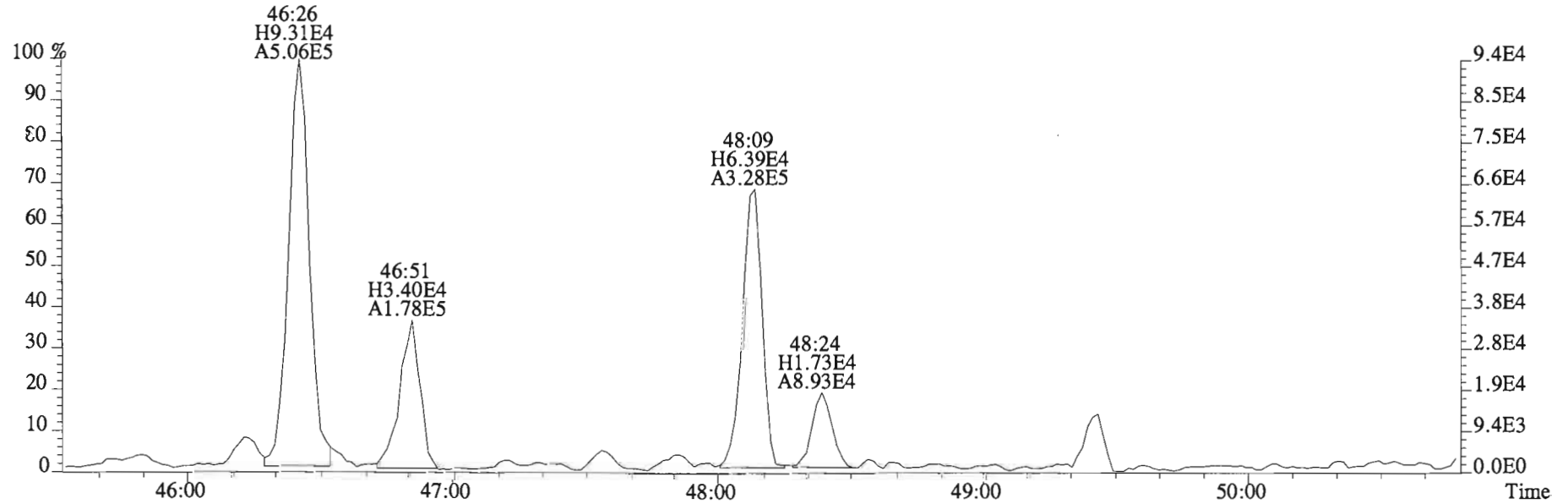
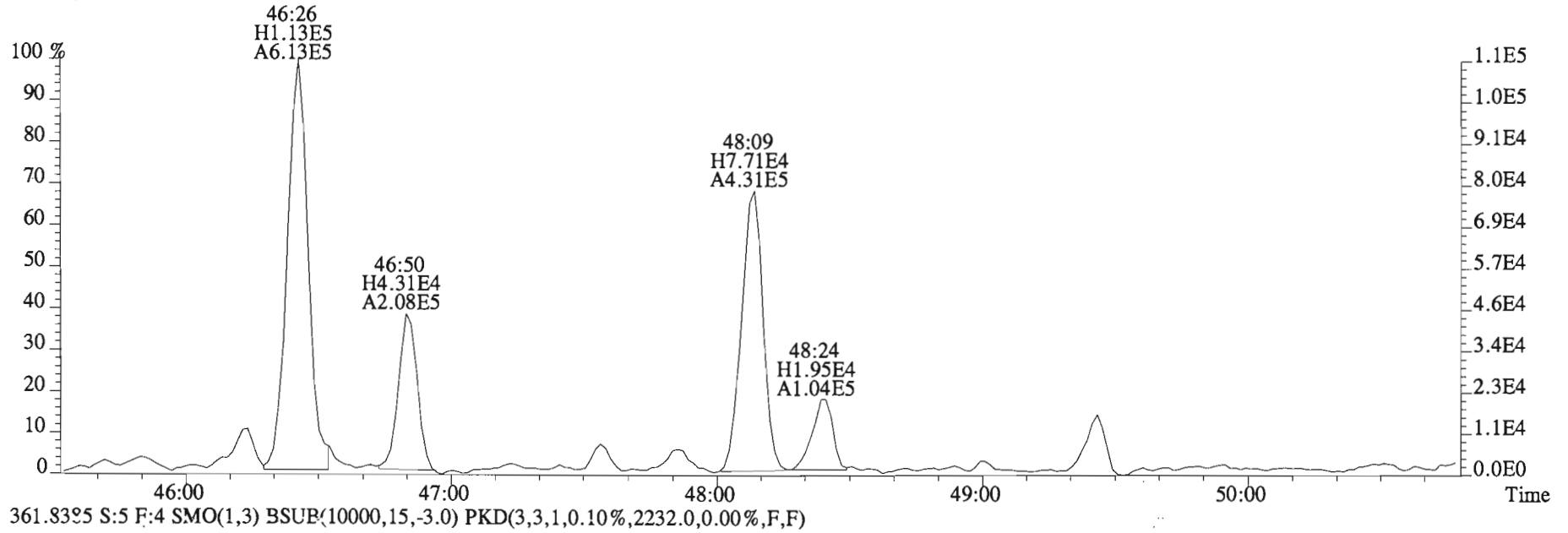
File:150205E1 #1-555 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2496.0,0.00%,F,F)



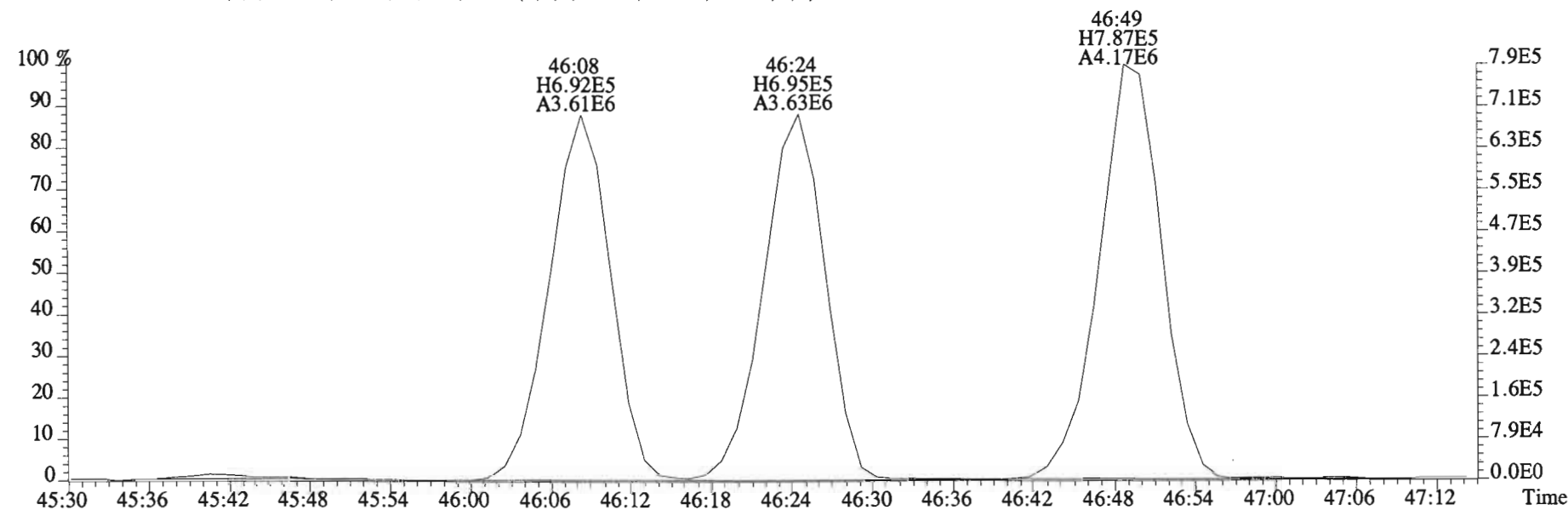
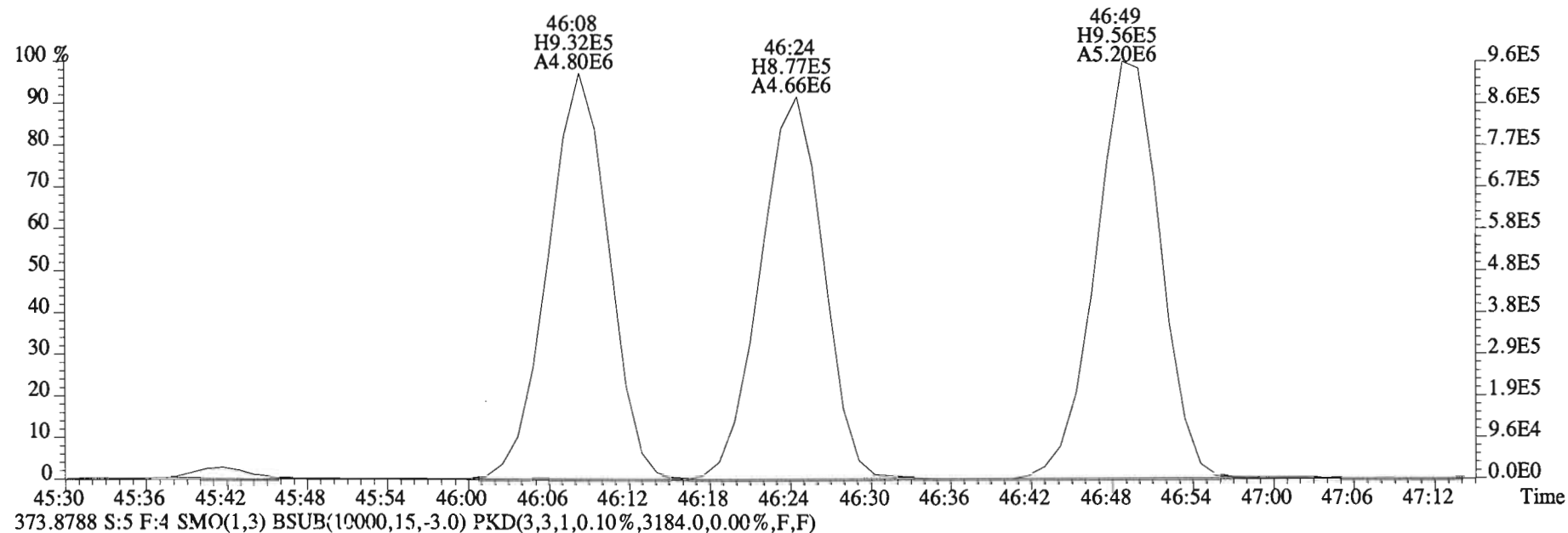
File:150205E1 #1-555 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2496.0,0.00%,F,F)



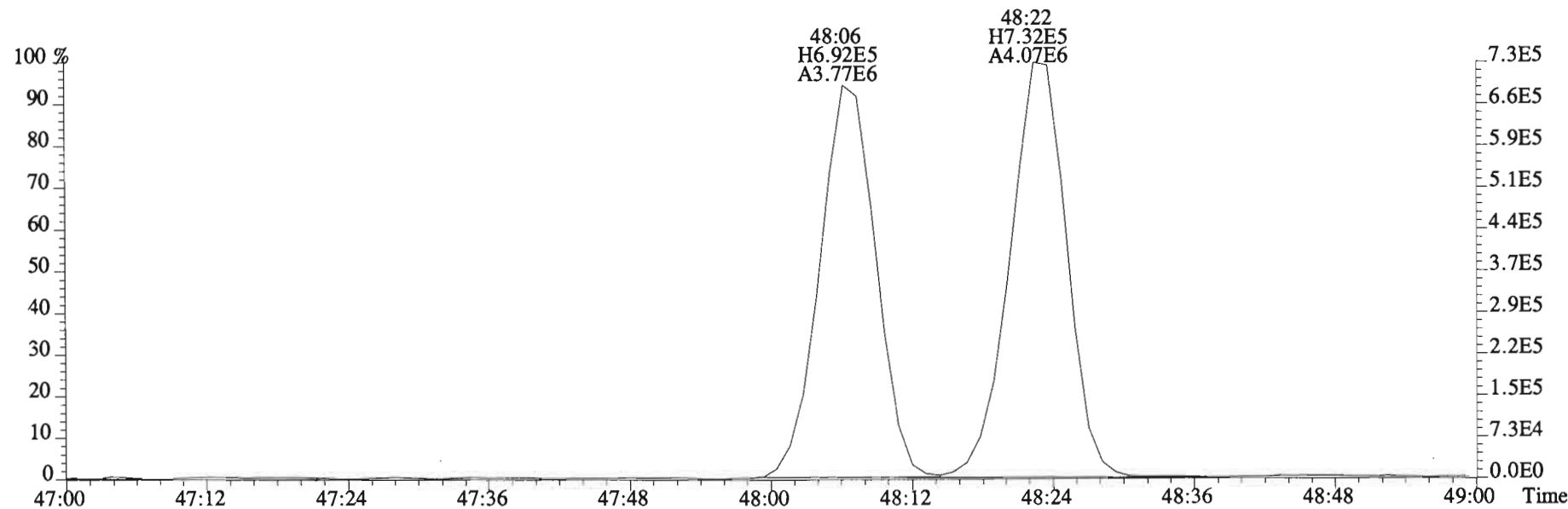
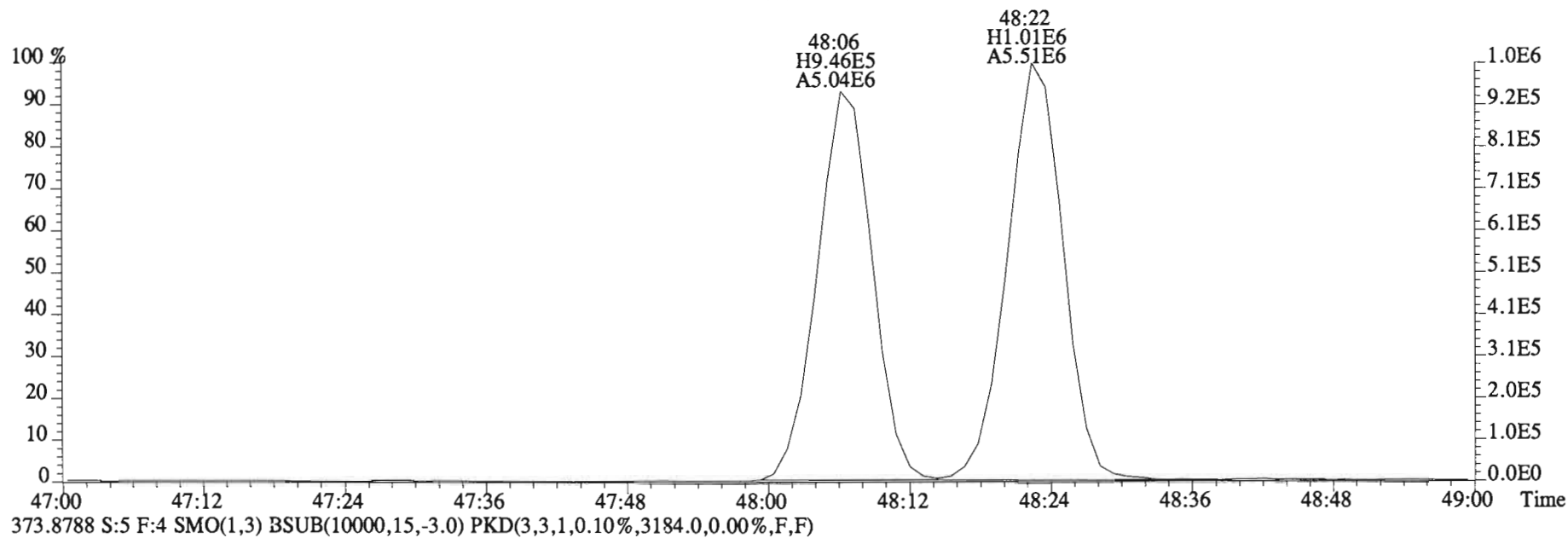
File:150205E1 #1-555 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
359.8415 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2496.0,0.00%,F,F)



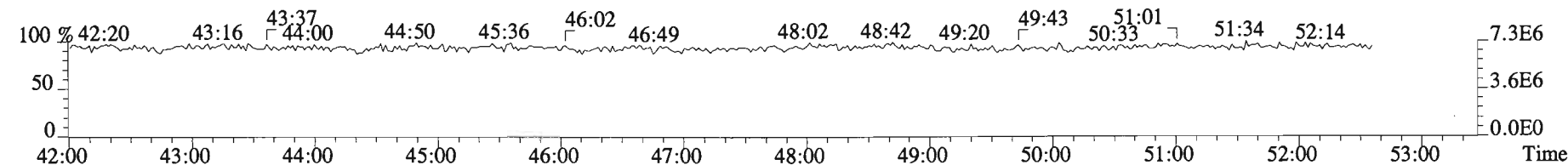
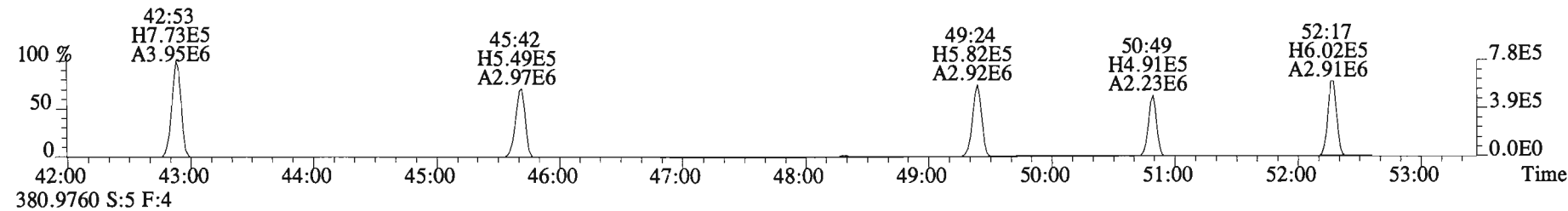
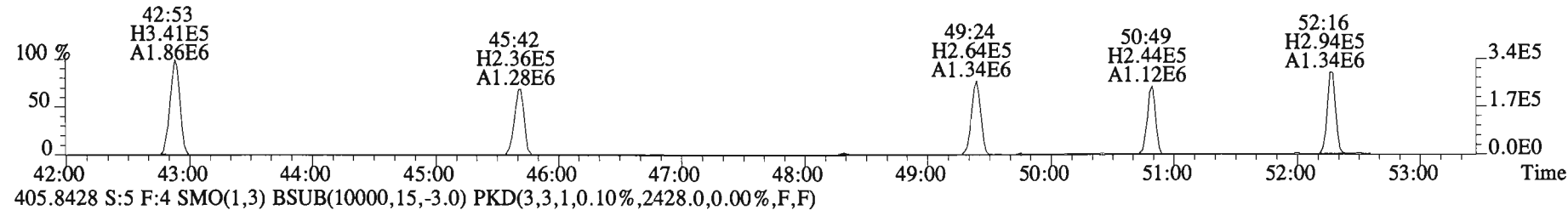
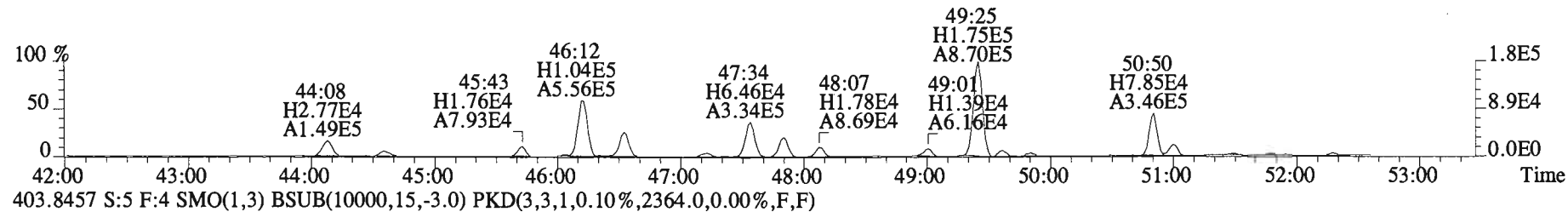
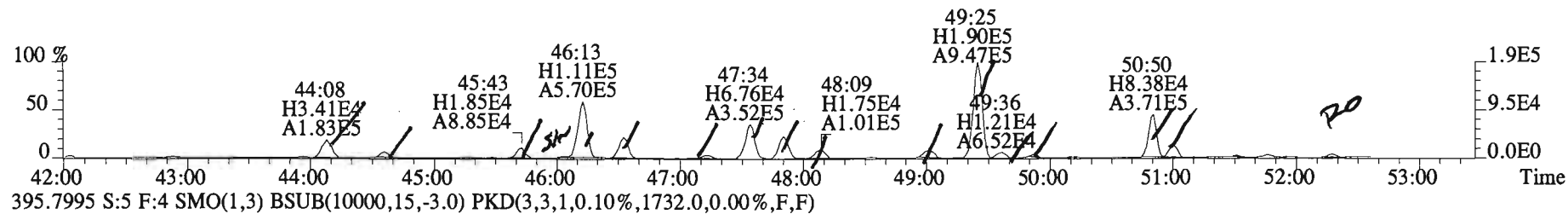
File:150205E1 #1-555 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
371.8817 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3184.0,0.00%,F,F)



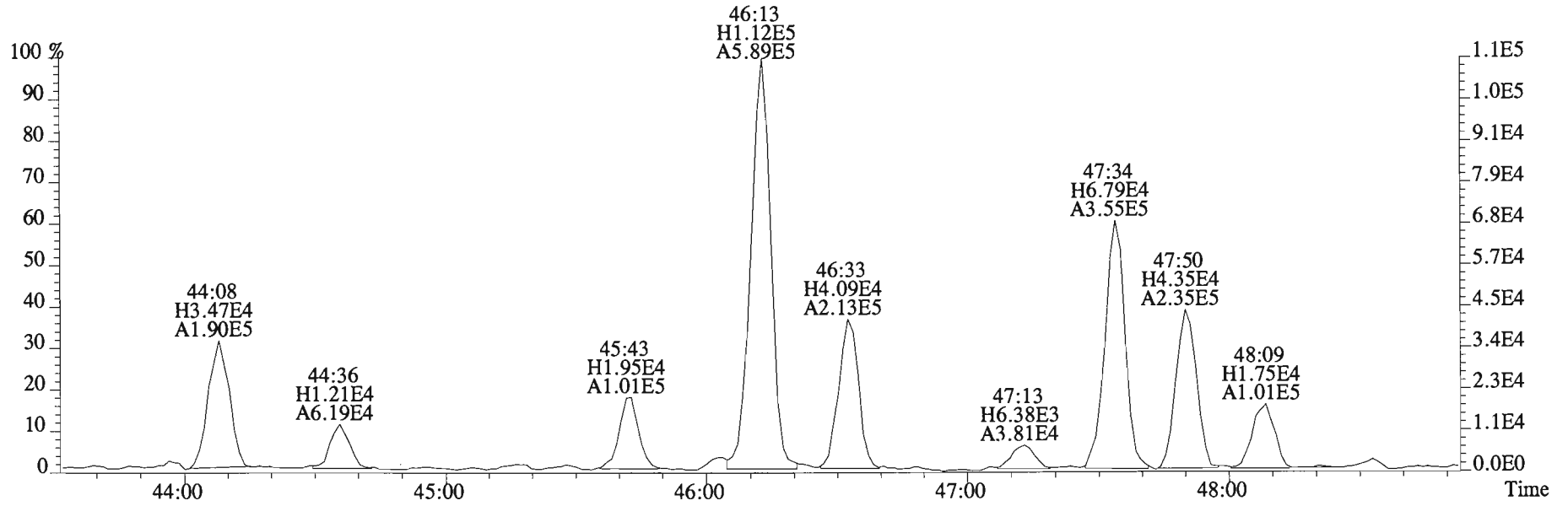
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
371.8817 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3184.0,0.00%,F,F)



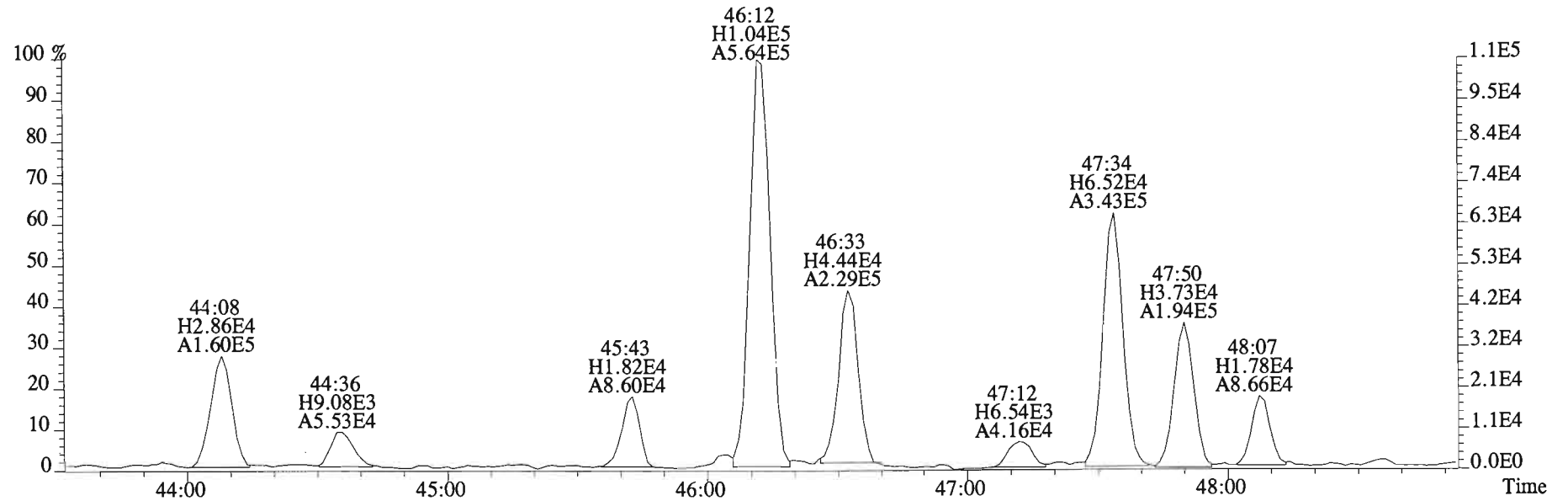
File:150205E1 #1-555 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1820.0,0.00%,F,F)



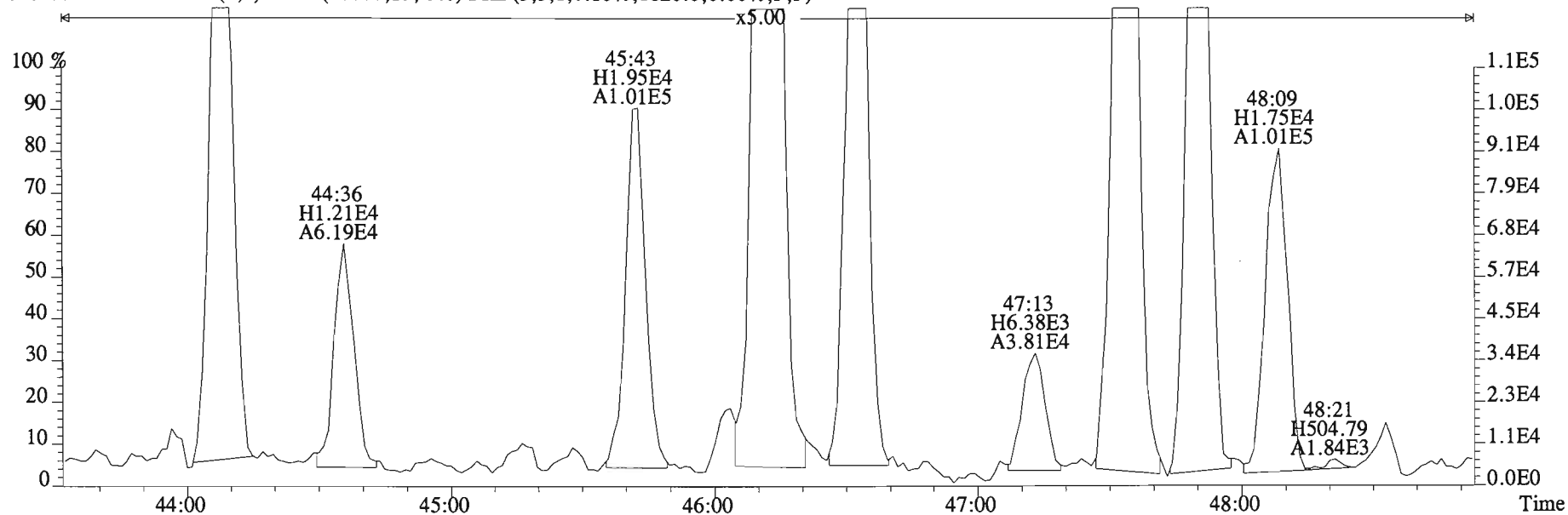
File:150205E1 #1-555 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1820.0,0.00%,F,F)



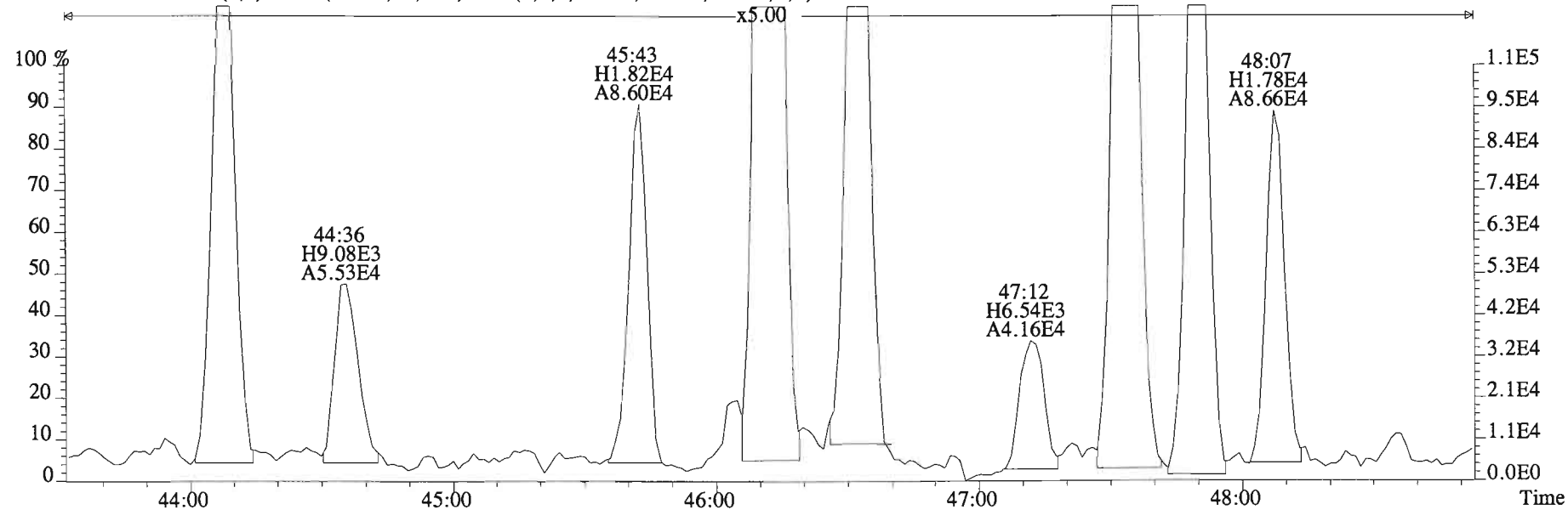
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1732.0,0.00%,F,F)



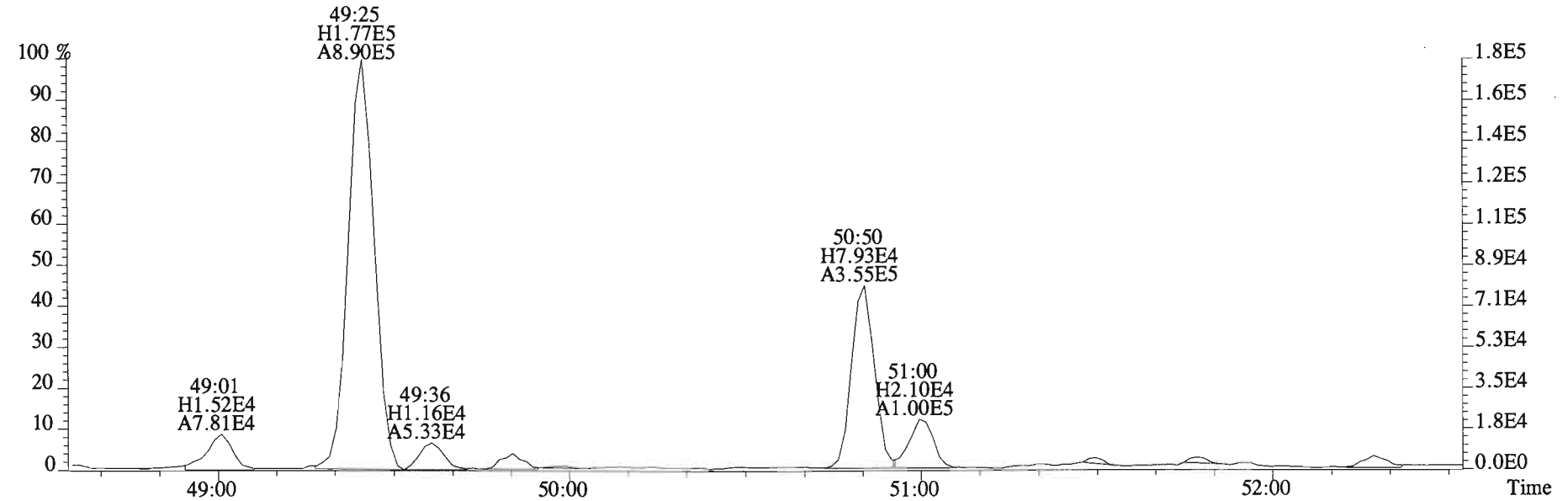
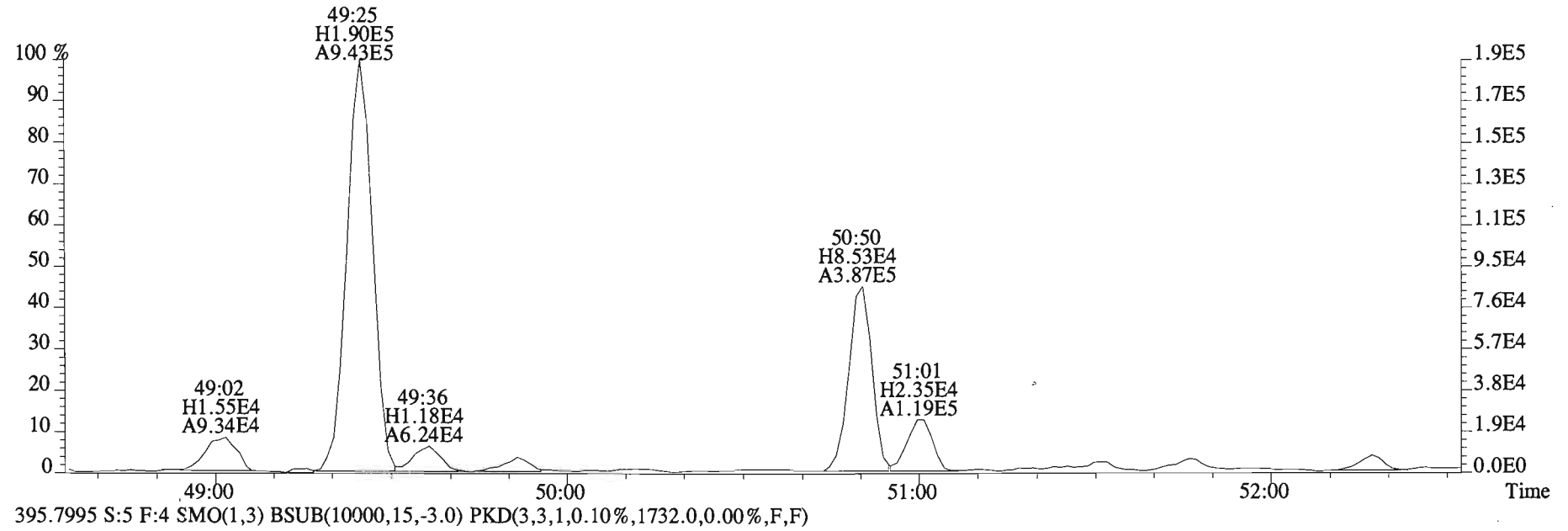
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1820.0,0.00%,F,F)



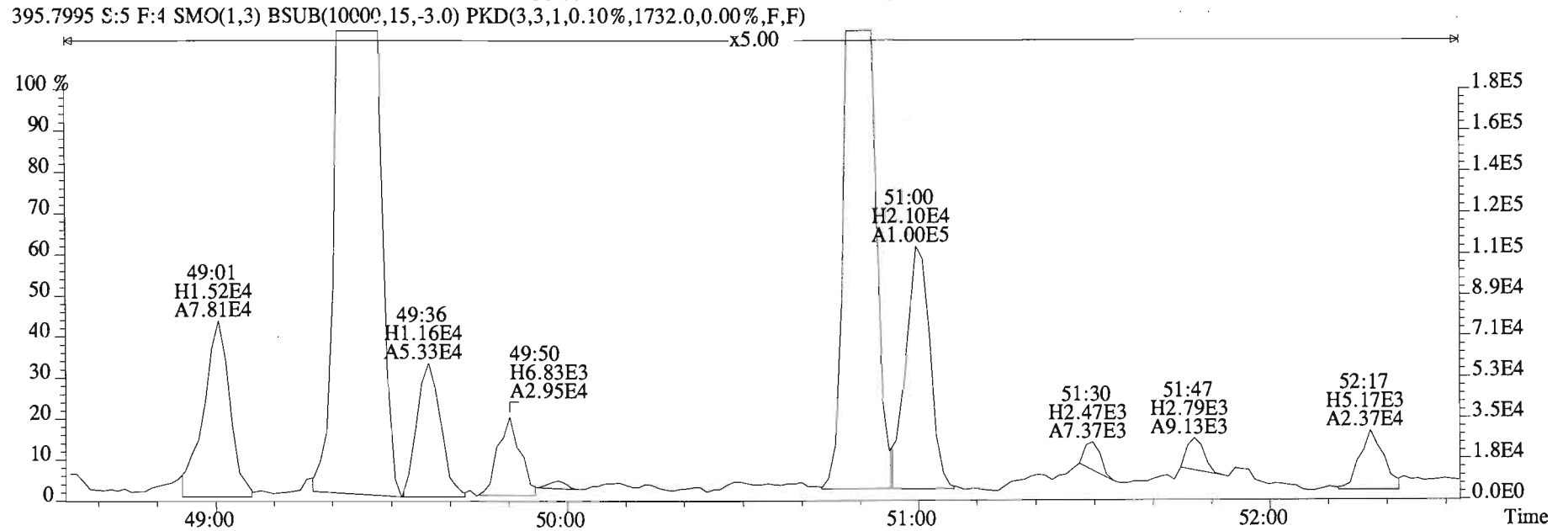
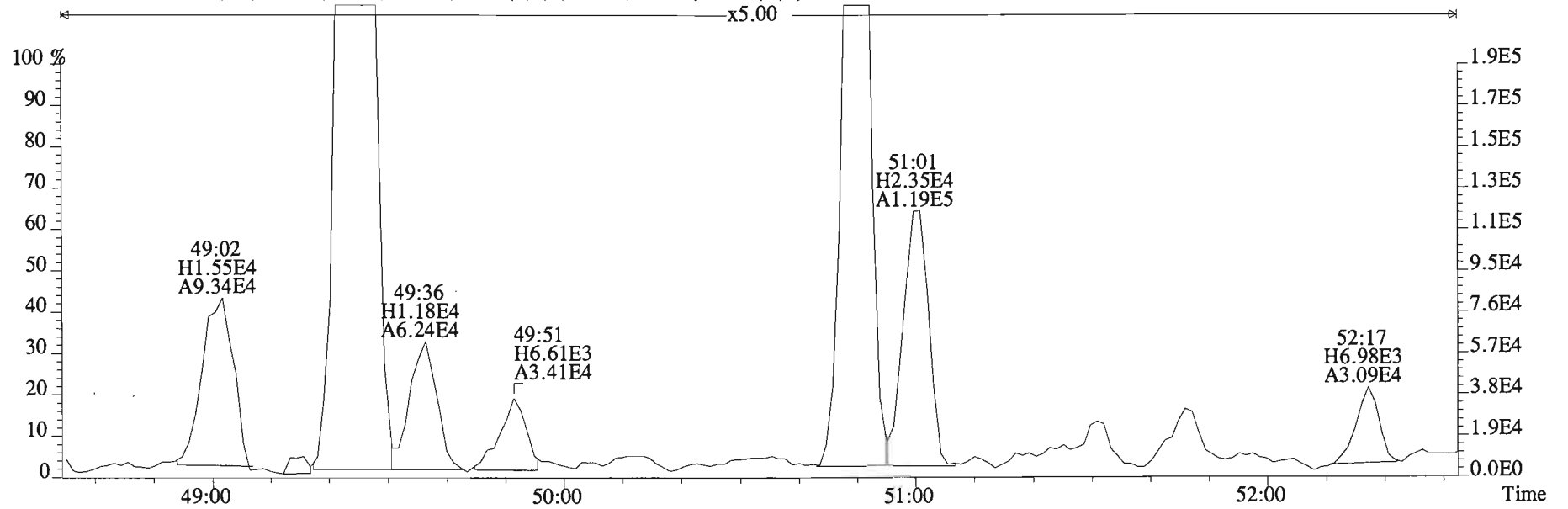
395.7995 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1732.0,0.00%,F,F)



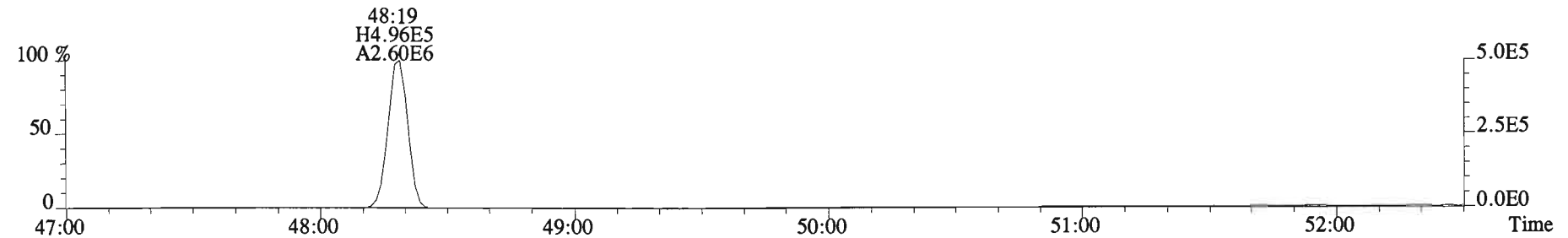
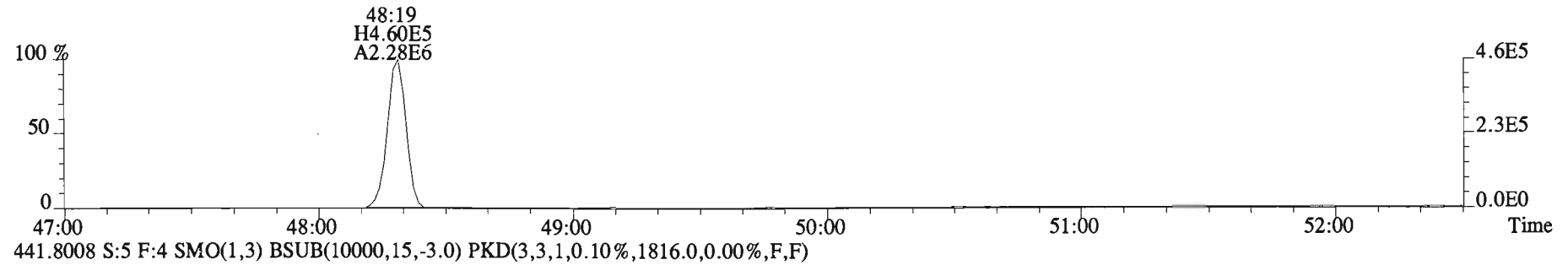
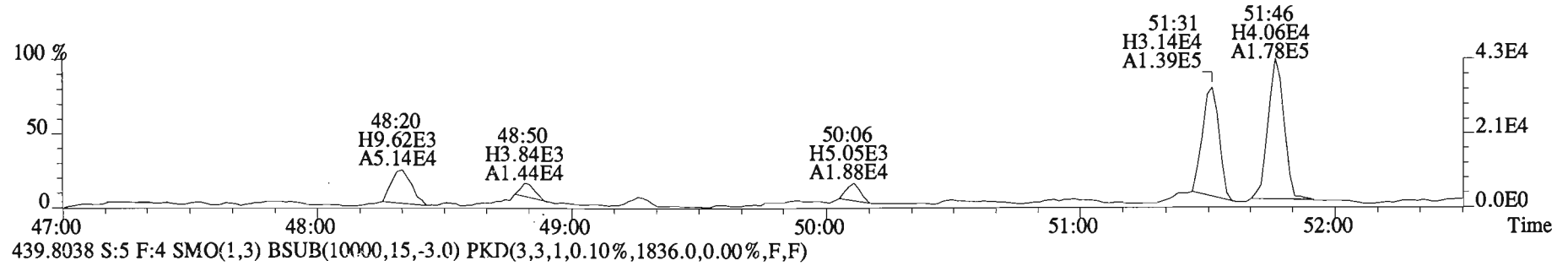
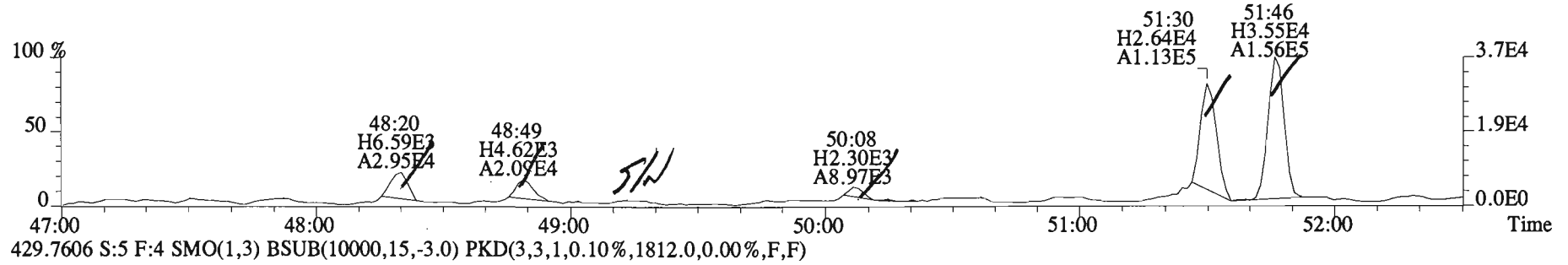
File:150205E1 #1-555 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1820.0,0.00%,F,F)



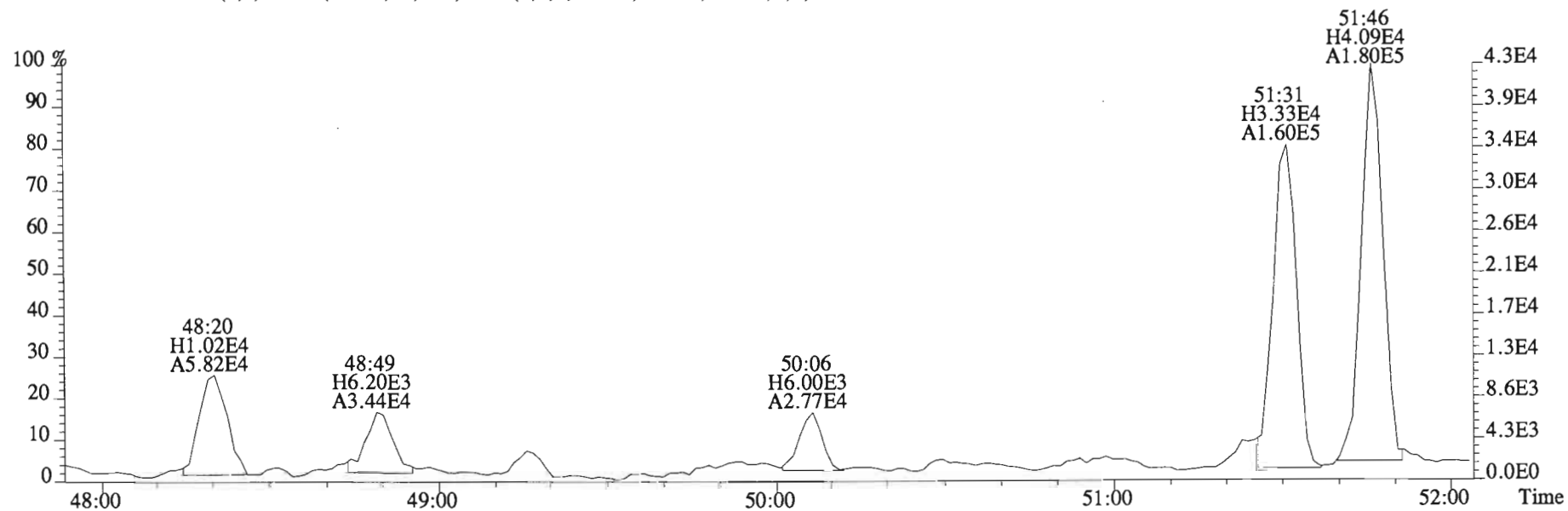
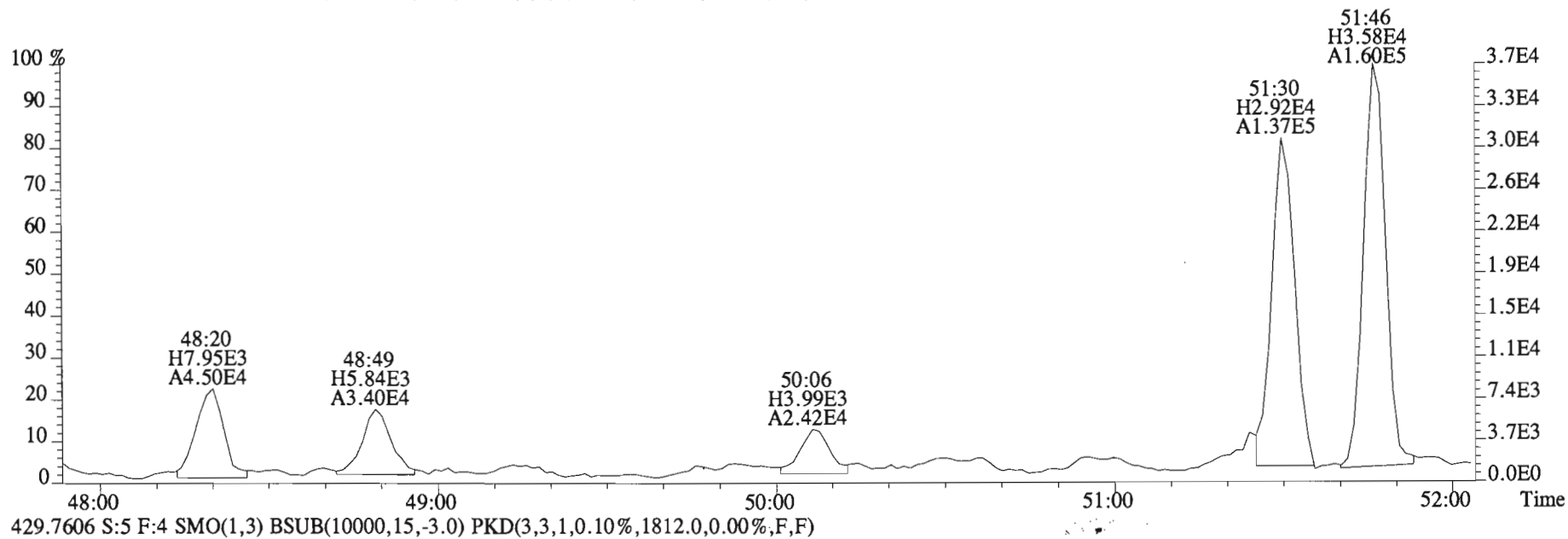
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 Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
 393.8025 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1820.0,0.00%,F,F)



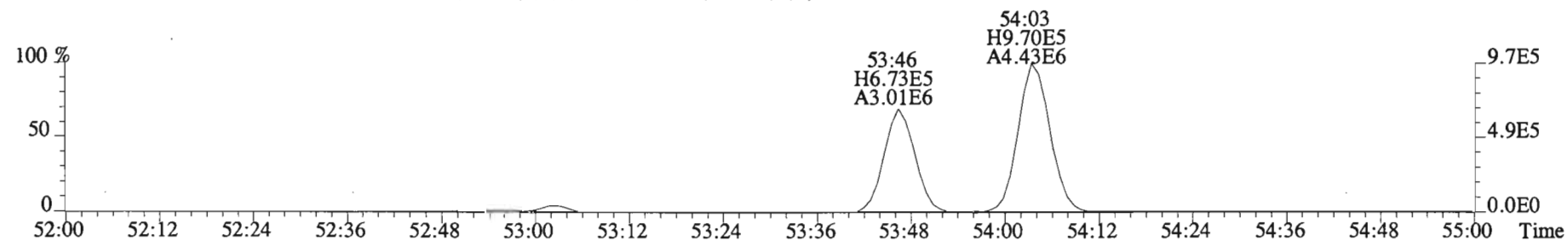
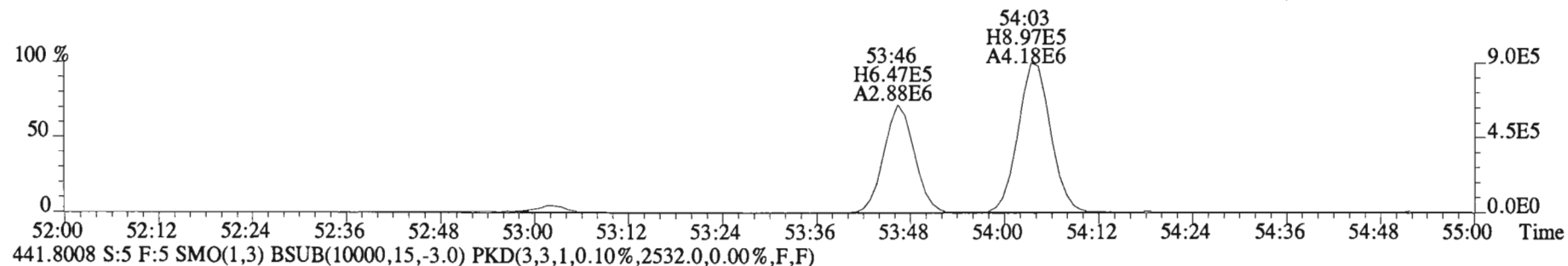
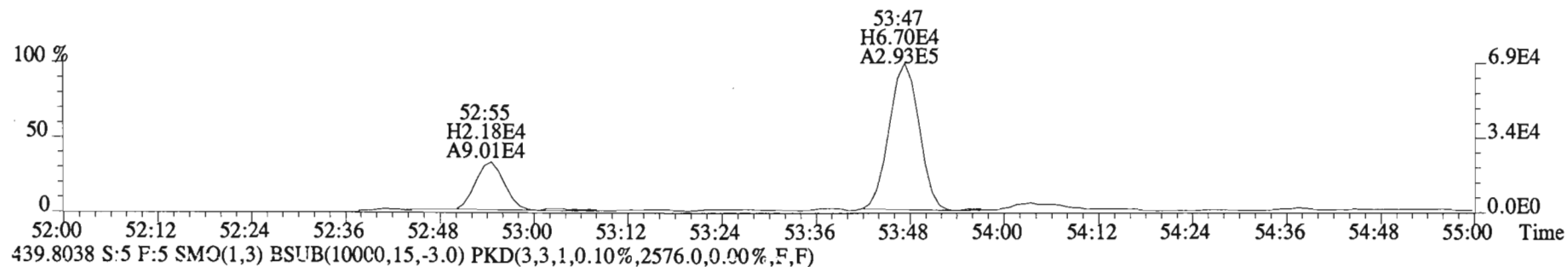
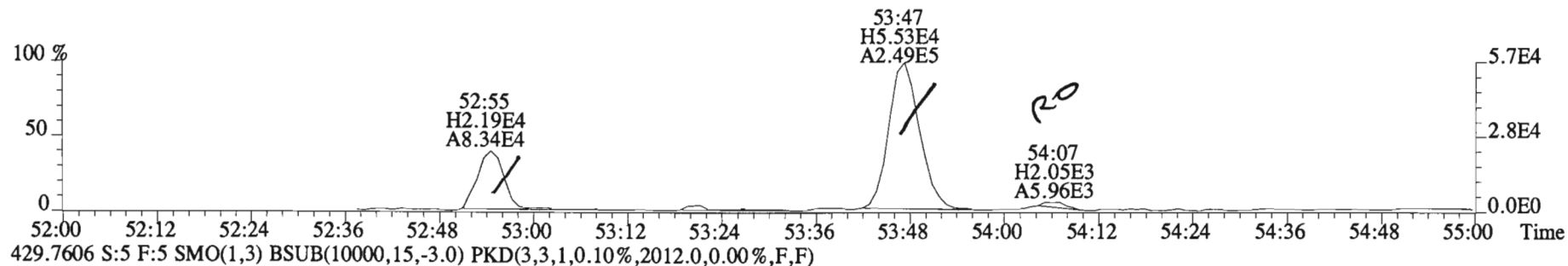
File:150205E1 #1-555 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
427.7635 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1804.0,0.00%,F,F)



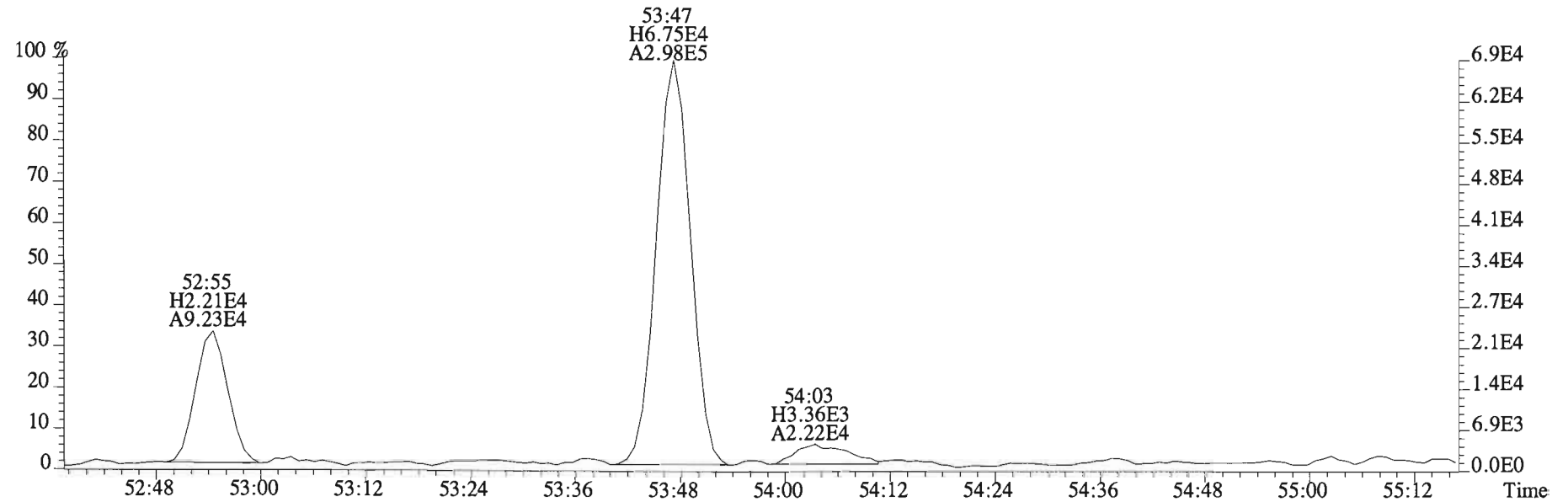
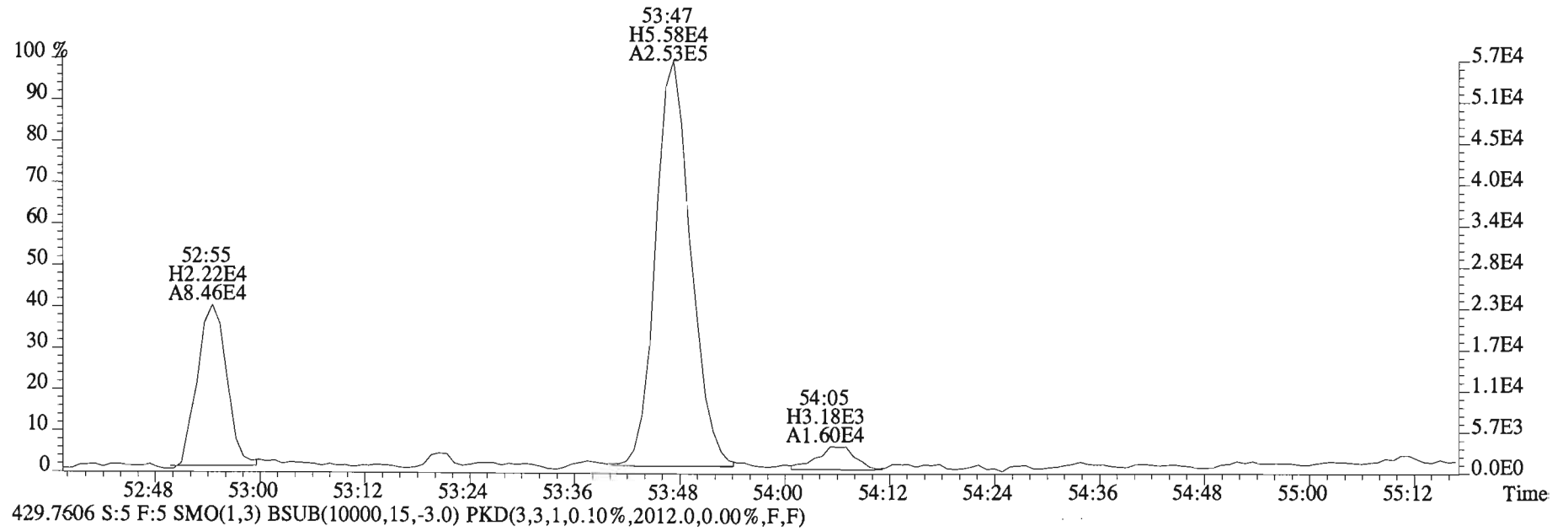
File:150205E1 #1-555 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
427.7635 S:5 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1804.0,0.00%,F,F)



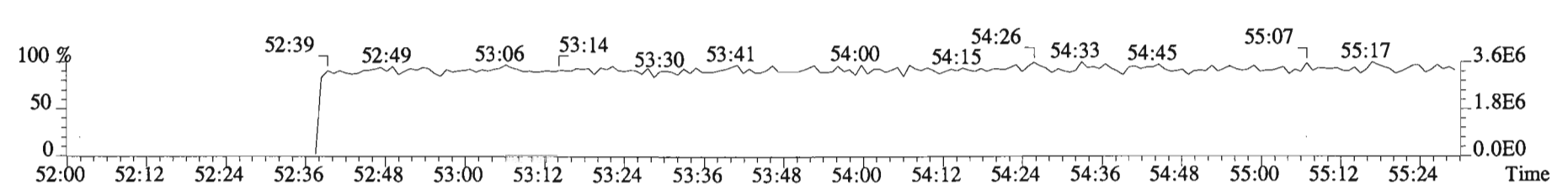
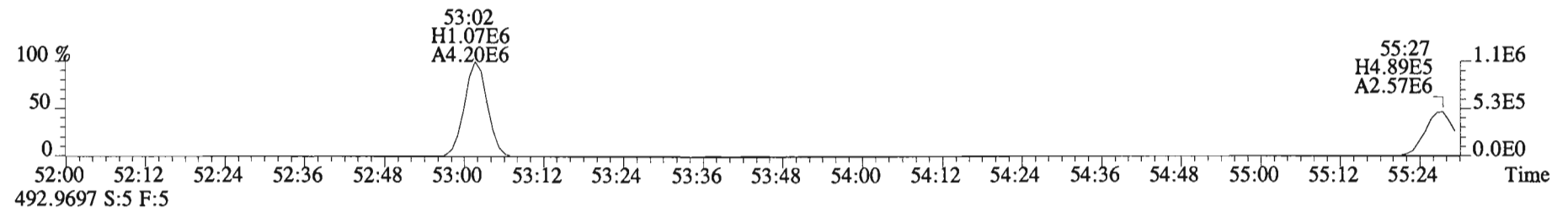
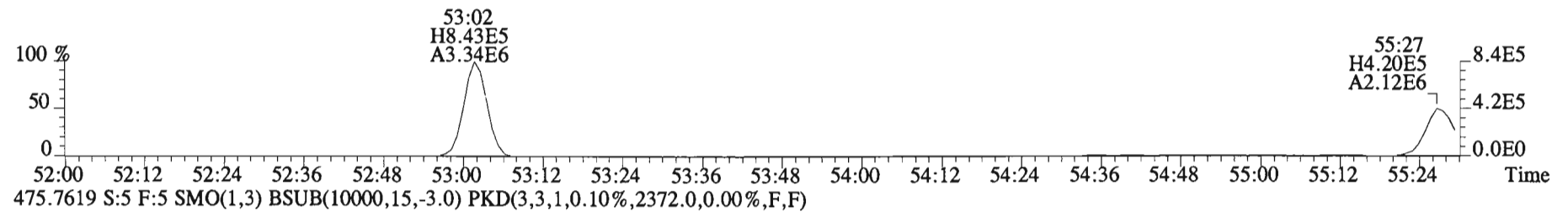
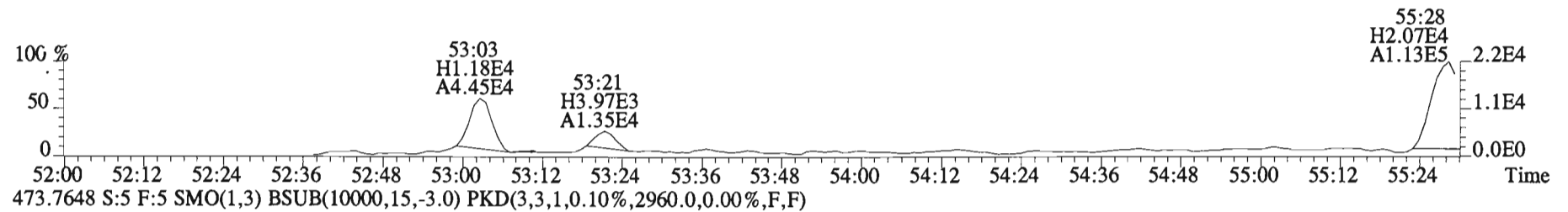
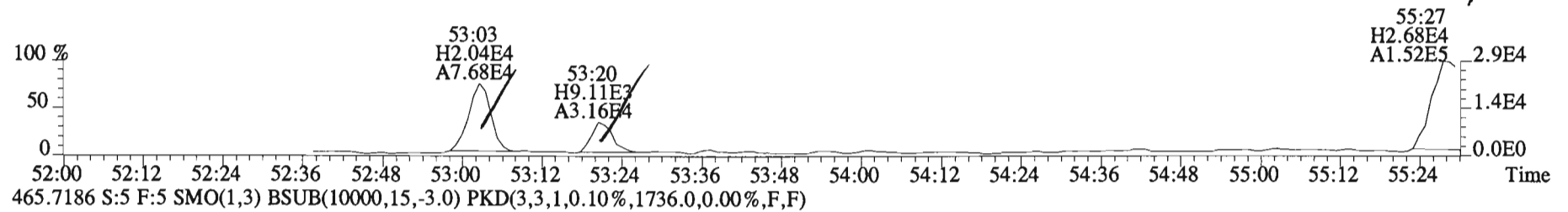
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
427.7635 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1536.0,0.00%,F,F)



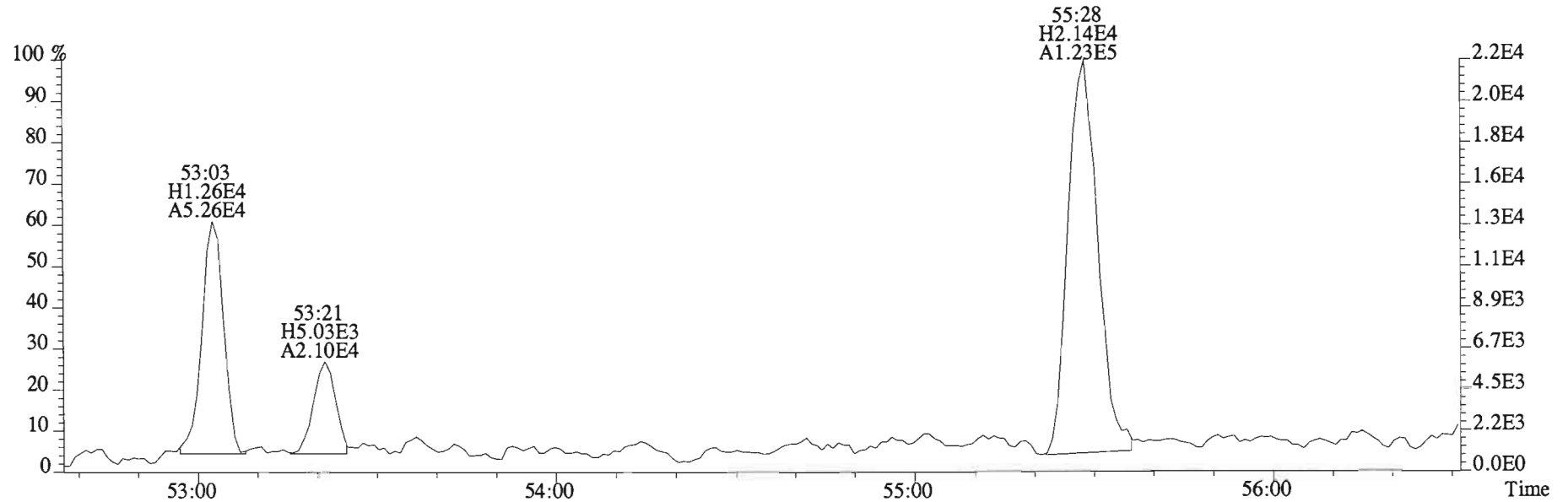
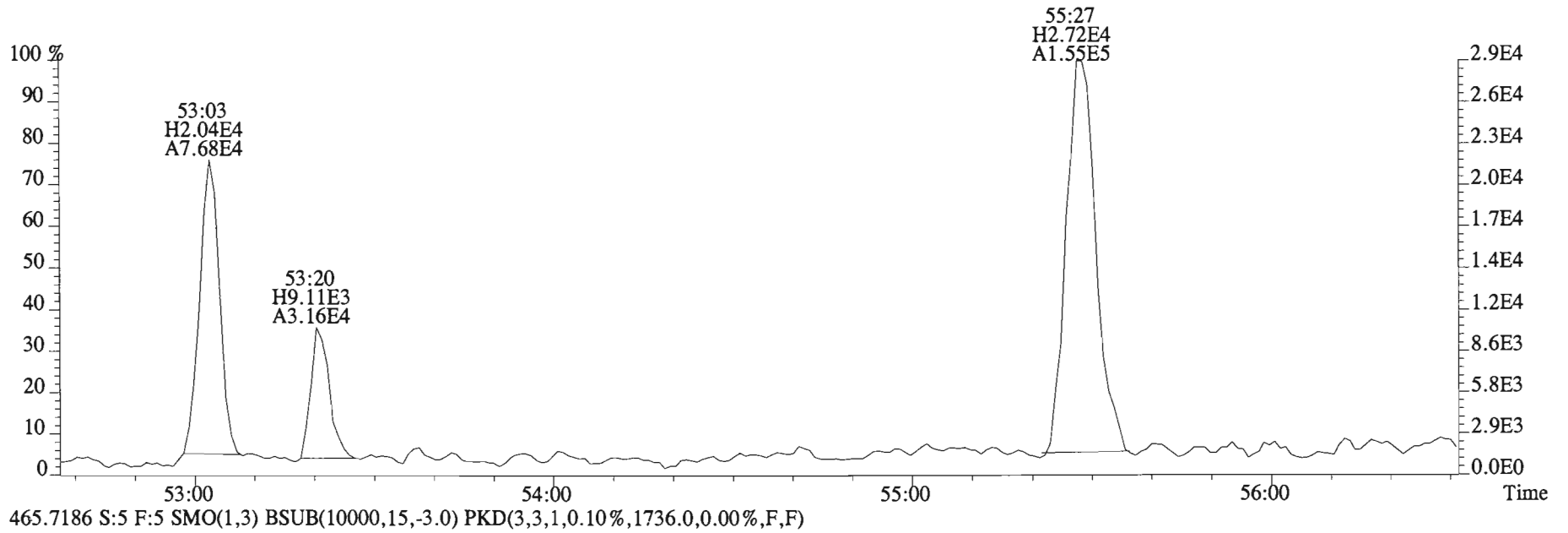
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Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
427.7635 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1536.0,0.00%,F,F)



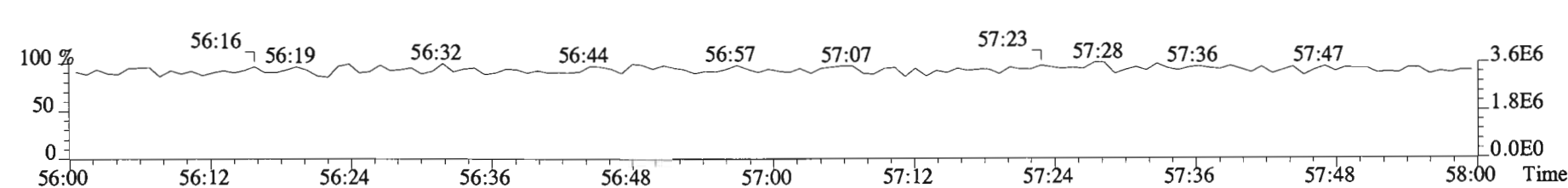
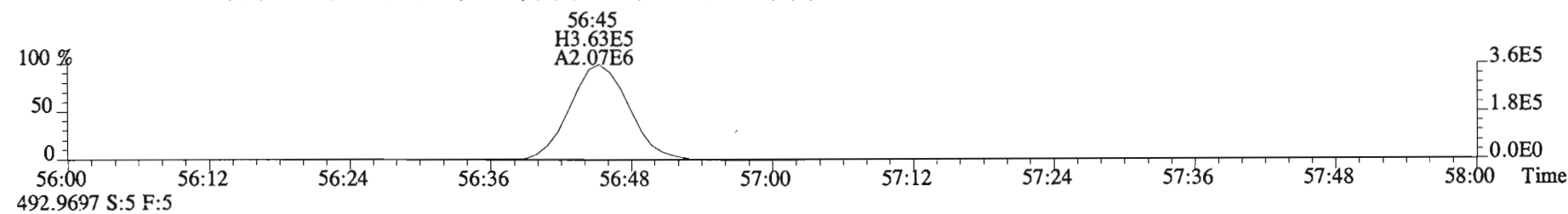
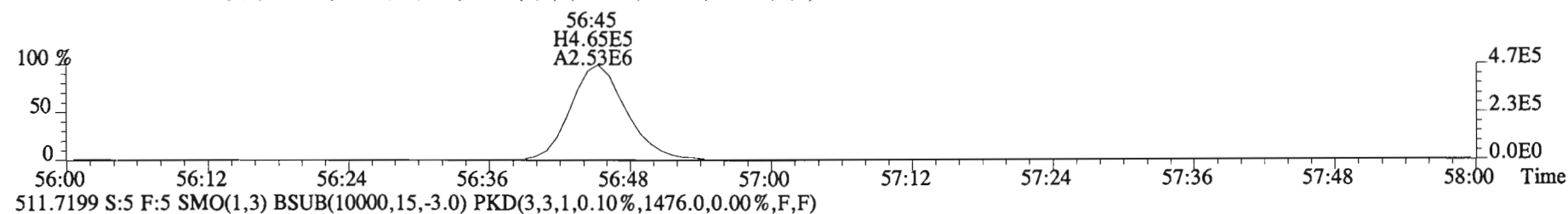
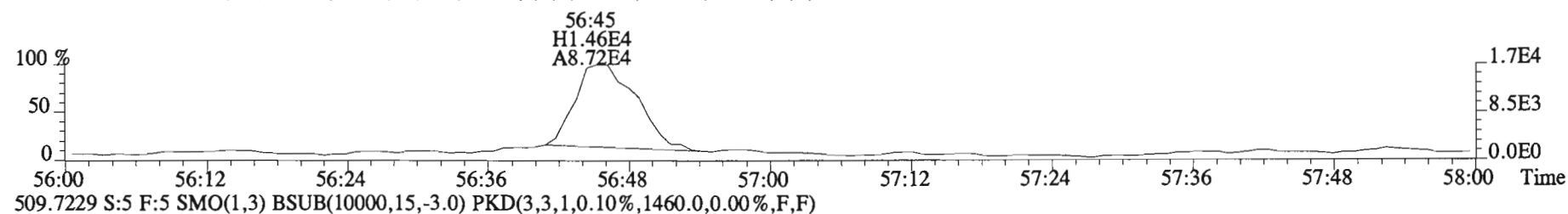
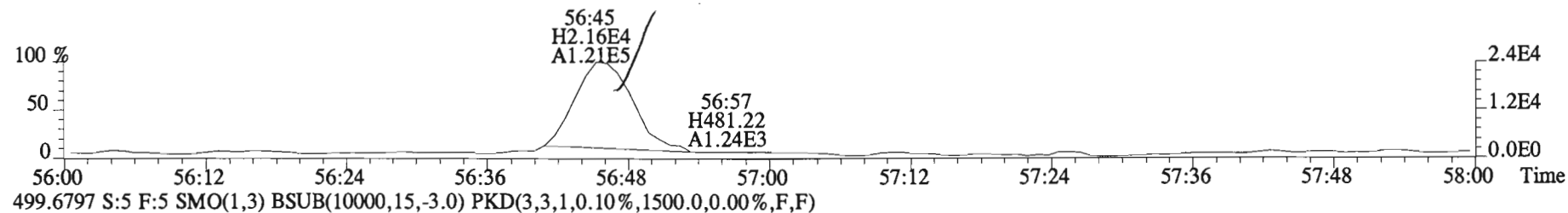
File:150205E1 #1-429 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
463.7216 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1760.0,0.00%,F,F)



File:150205E1 #1-429 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
463.7216 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1760.0,0.00%,F,F)



File:150205E1 #1-429 Acq: 5-FEB-2015 13:16:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory VG-8 Text:1400970-02@10X DS-TD-01-20141216-S Exp:PCB_ZB1
497.6826 S:5 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1400.0,0.00%,F,F)



Client ID: DS-CB-I3-20141216-S
Lab ID: 1400970-03@10X

Filename: 150205E1 S:6 Acq: 5-FEB-15 14:20:13
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.041

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	*	* n	NotF η	1.19	*		2400	2.5	61.7	*	0.996-1.006	
Mono	PCB-2	*	* n	NotF η	1.18	*		2400	2.5	61.4	*	0.984-0.994	
Mono	PCB-3	*	* n	NotF η	1.43	*		2400	2.5	51.0	*	0.996-1.006	
Di	PCB-4/10	*	* n	NotF η	1.57	*		2850	2.5	55.3	*	0.997-1.007	
Di	PCB-7/9	*	* n	NotF η	1.21	*		2850	2.5	45.1	*	0.866-0.874	
Di	PCB-6	*	* n	NotF η	1.30	*		2850	2.5	41.8	*	0.890-0.899	
Di	PCB-5/8	*	* n	NotF η	1.15	*		2850	2.5	47.5	*	0.907-0.917	
Di	PCB-14	*	* n	NotF η	1.11	*		2850	2.5	45.5	*	0.949-0.959	
Di	PCB-11	6.63e+05	1.43	y 25:14	1.09	435		*	2.5	*	1.001	0.995-1.005	
Di	PCB-12/13	*	* n	NotF η	1.19	*		2850	2.5	42.3	*	1.011-1.021	
Di	PCB-15	3.78e+05	1.23	n 25:56	1.28	211	R	*	2.5	*	1.029	1.023-1.033	
Tri	PCB-19	*	* n	NotF η	1.04	*		1660	2.5	44.3	*	0.996-1.006	
Tri	PCB-30	*	* n	NotF η	1.71	*		1660	2.5	27.0	*	1.032-1.042	
Tri	PCB-18	1.46e+05	1.19	y 25:51	0.78	165		*	2.5	*	0.954	0.949-0.959	
Tri	PCB-17	8.24e+04	1.16	y 26:01	0.92	78.9		*	2.5	*	0.960	0.956-0.966	
Tri	PCB-24/27	*	* n	NotF η	1.19	*		1660	2.5	26.4	*	0.977-0.987	
Tri	PCB-16/32	1.32e+05	1.18	y 27:05	0.94	124		*	2.5	*	0.999	0.995-1.005	
Tri	PCB-34	*	* n	NotF η	1.14	*		1420	2.5	24.8	*	0.955-0.965	
Tri	PCB-23	*	* n	NotF η	1.28	*		1420	2.5	22.0	*	0.959-0.969	
Tri	PCB-29	*	* n	NotF η	1.08	*		1420	2.5	26.1	*	0.967-0.977	
Tri	PCB-26	7.00e+04	1.32	n 28:28	1.21	46.8	R	*	2.5	*	0.979	0.974-0.984	
Tri	PCB-25	*	* n	NotF η	1.26	*		1420	2.5	22.3	*	0.979-0.989	
Tri	PCB-31	3.54e+05	0.95	y 28:59	1.28	222		*	2.5	*	0.997	0.992-1.002	
Tri	PCB-28	3.77e+05	0.94	y 29:04	1.71	178		*	2.5	*	1.000	0.995-1.005	
Tri	PCB-20/21/33	2.60e+05	1.15	y 29:43	1.08	194		*	2.5	*	1.022	1.017-1.027	
Tri	PCB-22	1.83e+05	1.14	y 30:08	1.21	122		*	2.5	*	1.037	1.032-1.042	
Tri	PCB-36	*	* n	NotF η	1.14	*		1420	2.5	26.8	*	0.928-0.938	
Tri	PCB-39	*	* n	NotF η	1.12	*		1420	2.5	27.4	*	0.943-0.953	
Tri	PCB-38	*	* n	NotF η	1.20	*		1420	2.5	25.5	*	0.966-0.976	
Tri	PCB-35	5.70e+04	0.96	y 32:32	1.23	39.7		*	2.5	*	0.987	0.982-0.992	
Tri	PCB-37	4.44e+05	1.12	y 32:57	1.23	310		*	2.5	*	1.000	0.995-1.005	
Tetra	PCB-54	*	* n	NotF η	1.10	*		986	2.5	19.2	*	0.996-1.006	
Tetra	PCB-50	*	* n	NotF η	0.88	*		986	2.5	24.0	*	1.037-1.047	
Tetra	PCB-53	3.35e+04	1.18	n 29:46	1.06	37.1	R	*	2.5	*	0.946	0.942-0.952	
Tetra	PCB-51	*	* n	NotF η	0.99	*		986	2.5	24.8	*	0.952-0.962	
Tetra	PCB-45	4.25e+04	0.73	y 30:33	0.86	57.9		*	2.5	*	0.971	0.966-0.976	
Tetra	PCB-46	*	* n	NotF η	0.85	*		986	2.5	29.0	*	0.981-0.991	

Integrations by:

Analyst: DMS

Date: 2/12/15

Reviewed by: [Signature]

Date: 2/12/15

Client ID: DS-CB-I3-20141216-S
Lab ID: 1400970-03@10X

Filename: 150205E1 S:6 Acq: 5-FEB-15 14:20:13
GC Column ID: ZB-1 ICal: pcbv8-6-23-14 wt/vol: 2.041

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	5.20e+05	0.76	y 31:30	1.28	478		*	2.5	*	1.001	0.996-1.006	
Tetra	PCB-73	*	*	n NotF η	1.35	*		986	2.5	18.1	*	1.000-1.010	
Tetra	PCB-43/49	2.00e+05	0.74	y 31:48	0.99	237		*	2.5	*	1.010	1.005-1.015	
Tetra	PCB-47	5.86e+04	0.51	n 31:59	1.06	60.1	R	*	2.5	*	1.000	0.996-1.006	
Tetra	PCB-48/75	5.38e+04	0.96	n 32:07	1.23	47.5	R	*	2.5	*	1.004	0.999-1.009	
Tetra	PCB-65	*	*	n NotF η	1.22	*		986	2.5	19.1	*	1.008-1.018	
Tetra	PCB-62	*	*	n NotF η	1.22	*		986	2.5	19.2	*	1.011-1.021	
Tetra	PCB-44	3.30e+05	0.67	y 32:47	0.86	416		*	2.5	*	1.025	1.021-1.031	
Tetra	PCB-42/59	9.02e+04	0.60	n 33:02	1.14	86.0	R	*	2.5	*	1.033	1.028-1.038	
Tetra	PCB-41/64/71/72	3.03e+05	0.73	y 33:36	1.21	272		*	2.5	*	1.050	1.046-1.056	
Tetra	PCB-68	*	*	n NotF η	1.35	*		986	2.5	17.4	*	1.054-1.064	
Tetra	PCB-40	*	*	n NotF η	0.70	*		986	2.5	33.4	*	1.061-1.071	
Tetra	PCB-57	*	*	n NotF η	0.98	*		986	2.5	20.6	*	0.965-0.975	
Tetra	PCB-67	*	*	n NotF η	1.11	*		986	2.5	18.2	*	0.974-0.984	
Tetra	PCB-58	*	*	n NotF η	0.93	*		986	2.5	21.8	*	0.977-0.987	
Tetra	PCB-63	*	*	n NotF η	0.95	*		986	2.5	21.2	*	0.982-0.992	
Tetra	PCB-74	2.99e+05	0.86	y 35:18	1.24	219		*	2.5	*	0.995	0.990-1.000	
Tetra	PCB-61/70	1.08e+06	0.82	y 35:31	0.95	1030		*	2.5	*	1.001	0.995-1.005	
Tetra	PCB-76/66	6.18e+05	0.85	y 35:43	1.04	537		*	2.5	*	1.006	1.001-1.011	
Tetra	PCB-80	*	*	n NotF η	1.19	*		986	2.5	17.4	*	0.996-1.006	
Tetra	PCB-55	*	*	n NotF η	1.04	*		986	2.5	19.9	*	1.005-1.015	
Tetra	PCB-56/60	4.66e+05	0.81	y 36:44	1.01	418		*	2.5	*	1.023	1.019-1.029	
Tetra	PCB-79	*	*	n NotF η	1.08	*		986	2.5	19.2	*	1.048-1.058	
Tetra	PCB-78	*	*	n NotF η	1.27	*		986	2.5	17.4	*	0.982-0.992	
Tetra	PCB-81	2.05e+04	0.74	y 39:01	1.33	15.7		*	2.5	*	1.000	0.995-1.005	
Tetra	PCB-77	4.78e+05	0.78	y 39:38	1.10	424		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-104	*	*	n NotF η	1.18	*		2400	2.5	96.1	*	0.996-1.006	
Penta	PCB-96	*	*	n NotF η	1.14	*		2400	2.5	100	*	1.034-1.044	
Penta	PCB-103	*	*	n NotF η	0.96	*		2400	2.5	119	*	1.050-1.060	
Penta	PCB-100	*	*	n NotF η	0.94	*		2400	2.5	121	*	1.061-1.071	
Penta	PCB-94	*	*	n NotF η	1.06	*		2400	2.5	160	*	0.980-0.990	
Penta	PCB-95/98/102	6.84e+05	1.52	y 35:49	1.22	1200		*	2.5	*	1.001	0.995-1.005	
Penta	PCB-93	*	*	n NotF η	0.84	*		2400	2.5	200	*	0.997-1.007	
Penta	PCB-88/91	1.21e+05	1.59	y 36:13	1.12	233		*	2.5	*	1.012	1.005-1.015	
Penta	PCB-121	*	*	n NotF η	1.62	*		2400	2.5	104	*	1.009-1.019	
Penta	PCB-84/92	4.35e+05	1.64	y 37:07	1.05	806		*	2.5	*	0.990	0.985-0.995	
Penta	PCB-89	*	*	n NotF η	1.13	*		2400	2.5	131	*	0.991-1.001	

Analyst: DMS

Date: 2/12/15

Client ID: DS-CB-I3-20141216-S
Lab ID: 1400970-03@10X

Filename: 150205E1 S:6 Acq: 5-FEB-15 14:20:13
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.041

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	1.29e+06	1.54	y 37:30	1.10	2260		*	2.5	*	1.001	0.995-1.005	
Penta	PCB-113	*	*	n NotF η	1.41	*		2400	2.5	105	*	1.002-1.012	
Penta	PCB-99	5.24e+05	1.66	y 37:49	1.34	761		*	2.5	*	1.009	1.004-1.014	
Penta	PCB-119	*	*	n NotF η	1.53	*		2400	2.5	108	*	0.982-0.992	
Penta	PCB-108/112	7.42e+04	1.59	y 38:27	1.28	128		*	2.5	*	0.991	0.986-0.996	
Penta	PCB-83	*	*	n NotF η	1.52	*		2400	2.5	109	*	0.990-1.000	
Penta	PCB-97	4.13e+05	1.66	y 38:48	1.18	769		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-86	*	*	n NotF η	0.84	*		2400	2.5	196	*	0.999-1.009	
Penta	PCB-87/117/125	7.20e+05	1.68	y 39:05	1.55	1020		*	2.5	*	1.008	1.002-1.012	
Penta	PCB-111/115	*	*	n NotF η	1.63	*		2400	2.5	101	*	1.006-1.016	
Penta	PCB-85/116	2.49e+05	1.78	y 39:20	1.30	421		*	2.5	*	1.014	1.010-1.020	
Penta	PCB-120	*	*	n NotF η	1.68	*		2400	2.5	98.6	*	1.016-1.026	
Penta	PCB-110	2.43e+06	1.68	y 39:44	1.56	3440		*	2.5	*	1.024	1.020-1.030	
Penta	PCB-82	1.47e+05	1.28	n 40:23	0.76	325	R	*	2.5	*	0.977	0.971-0.981	
Penta	PCB-124	1.04e+05	1.76	y 41:02	1.47	119		*	2.5	*	0.992	0.988-0.998	
Penta	PCB-107/109	2.07e+05	1.52	y 41:13	1.32	264		*	2.5	*	0.997	0.991-1.001	
Penta	PCB-123	*	*	n NotF η	1.17	*		2400	2.5	118	*	0.996-1.006	
Penta	PCB-106/118	2.90e+06	1.59	y 41:33	1.17	3930		*	2.5	*	1.000	0.996-1.006	
Penta	PCB-114	6.27e+04	1.91	n 42:13	1.30	58.5	R	*	2.5	*	1.001	0.995-1.005	
Penta	PCB-122	3.46e+04	1.59	y 42:21	1.12	37.4		*	2.5	*	1.004	0.999-1.009	
Penta	PCB-105	1.83e+06	1.66	y 43:04	1.30	1810		*	2.5	*	1.000	0.995-1.005	
Penta	PCB-127	*	*	n NotF η	1.33	*		1950	2.5	55.4	*	0.996-1.006	
Penta	PCB-126	8.69e+04	1.67	y 45:19	1.18	96.6		*	2.5	*	1.000	0.995-1.005	
Hexa	PCB-155	*	*	n NotF η	1.11	*		971	2.5	53.2	*	0.966-1.006	
Hexa	PCB-150	*	*	n NotF η	1.00	*		971	2.5	59.3	*	1.030-1.040	
Hexa	PCB-152	*	*	n NotF η	1.12	*		971	2.5	53.1	*	1.043-1.053	
Hexa	PCB-145	*	*	n NotF η	1.20	*		971	2.5	49.3	*	1.055-1.065	
Hexa	PCB-136	1.39e+05	1.20	y 39:33	1.18	259		*	2.5	*	1.068	1.064-1.074	
Hexa	PCB-148	*	*	n NotF η	0.74	*		971	2.5	79.6	*	1.066-1.076	
Hexa	PCB-154	*	*	n NotF η	0.86	*		971	2.5	69.0	*	1.080-1.090	
Hexa	PCB-151	1.69e+05	1.13	y 40:46	0.75	495		*	2.5	*	1.101	1.097-1.107	
Hexa	PCB-135	9.59e+04	0.89	n 41:00	0.79	265	R	*	2.5	*	1.107	1.103-1.113	
Hexa	PCB-144	4.52e+04	1.58	n 41:07	0.76	130	R	*	2.5	*	1.111	1.105-1.117	
Hexa	PCB-147	*	*	n NotF η	0.82	*		971	2.5	72.2	*	1.109-1.121	
Hexa	PCB-139/149	8.06e+05	1.34	y 41:30	0.76	2320		*	2.5	*	1.121	1.116-1.128	
Hexa	PCB-140	*	*	n NotF η	0.72	*		971	2.5	82.0	*	1.121-1.133	
Hexa	PCB-134/143	1.13e+05	1.17	y 42:08	0.92	171		*	2.5	*	0.975	0.970-0.980	

Analyst: Dms

Date: 2/12/15

Client ID: DS-CB-I3-20141216-S
Lab ID: 1400970-03@10X

Filename: 150205E1 S:6 Acq: 5-FEB-15 14:20:13
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.041

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	7.61e+04	1.35	y 42:25	0.82	129	*	*	2.5	*	0.982	0.977-0.987	
Hexa	PCB-131	*	*	n NotF η	0.91	*	*	1200	2.5	54.3	*	0.981-0.991	
Hexa	PCB-146/165	4.07e+05	1.42	y 42:49	1.25	454	*	*	2.5	*	0.991	0.986-0.996	
Hexa	PCB-132/161	9.28e+05	1.17	y 43:05	1.10	1170	*	*	2.5	*	0.997	0.992-1.002	
Hexa	PCB-153	2.69e+06	1.12	y 43:13	1.25	3000	*	*	2.5	*	1.000	0.995-1.005	
Hexa	PCB-168	*	*	n NotF η	1.45	*	*	1200	2.5	34.1	*	1.001-1.011	
Hexa	PCB-141	5.45e+05	1.27	y 43:58	1.09	727	*	*	2.5	*	1.000	0.995-1.005	
Hexa	PCB-137	2.05e+05	1.25	y 44:20	1.06	279	*	*	2.5	*	1.009	1.004-1.014	
Hexa	PCB-130	2.35e+05	1.23	y 44:27	0.96	352	*	*	2.5	*	1.011	1.006-1.016	
Hexa	PCB-138/163/164	4.42e+06	1.27	y 44:49	1.29	4930	*	*	2.5	*	1.001	0.996-1.006	
Hexa	PCB-158/160	5.81e+05	1.16	y 45:03	1.34	624	*	*	2.5	*	1.006	1.001-1.011	
Hexa	PCB-129	1.95e+05	1.25	y 45:19	0.85	329	*	*	2.5	*	1.012	1.007-1.017	
Hexa	PCB-166	*	*	n NotF η	1.19	*	*	1200	2.5	36.5	*	0.988-0.998	
Hexa	PCB-159	*	*	n NotF η	1.11	*	*	1200	2.5	38.9	*	0.996-1.006	
Hexa	PCB-128/162	7.86e+05	1.10	y 46:23	1.05	919	*	*	2.5	*	1.006	1.002-1.012	
Hexa	PCB-167	2.89e+05	1.37	y 46:47	1.20	285	*	*	2.5	*	1.000	0.995-1.005	
Hexa	PCB-156	7.09e+05	1.36	y 48:05	1.14	746	*	*	2.5	*	1.000	0.996-1.006	
Hexa	PCB-157	1.90e+05	1.35	y 48:21	1.16	187	*	*	2.5	*	1.000	0.995-1.005	
Hexa	PCB-169	*	*	n NotF η	1.12	*	*	1200	2.5	36.9	*	0.995-1.005	
Hepta	PCB-188	*	*	n NotF η	1.58	*	*	1220	2.5	28.1	*	0.996-1.006	
Hepta	PCB-184	*	*	n NotF η	1.63	*	*	1200	2.5	26.8	*	1.006-1.016	
Hepta	PCB-179	1.28e+05	1.05	y 44:05	1.30	184	*	*	2.5	*	1.029	1.024-1.034	
Hepta	PCB-176	5.16e+04	1.15	y 44:34	1.48	65.9	*	*	2.5	*	1.040	1.035-1.045	
Hepta	PCB-186	*	*	n NotF η	1.45	*	*	1200	2.5	30.1	*	1.050-1.060	
Hepta	PCB-178	8.13e+04	1.00	y 45:39	1.03	148	*	*	2.5	*	1.066	1.061-1.071	
Hepta	PCB-175	3.15e+04	0.90	y 46:00	1.01	58.6	*	*	2.5	*	1.074	1.069-1.079	
Hepta	PCB-182/187	4.44e+05	1.10	y 46:09	1.25	668	*	*	2.5	*	1.077	1.073-1.083	
Hepta	PCB-183	2.20e+05	0.94	y 46:30	1.21	344	*	*	2.5	*	1.086	1.081-1.091	
Hepta	PCB-185	4.11e+04	1.38	n 47:10	1.80	55.2	R	*	2.5	*	0.956	0.951-0.961	
Hepta	PCB-174	3.32e+05	1.08	y 47:31	1.38	583	*	*	2.5	*	0.963	0.958-0.968	
Hepta	PCB-181	*	*	n NotF η	1.38	*	*	1220	2.5	40.8	*	0.960-0.970	
Hepta	PCB-177	1.95e+05	1.01	y 47:48	1.26	377	*	*	2.5	*	0.968	0.963-0.973	
Hepta	PCB-171	1.45e+05	1.17	y 48:06	1.58	222	*	*	2.5	*	0.974	0.970-0.980	
Hepta	PCB-173	*	*	n NotF η	1.11	*	*	1220	2.5	50.8	*	0.978-0.988	
Hepta	PCB-172	7.27e+04	1.06	y 48:59	1.63	108	*	*	2.5	*	0.992	0.987-0.997	
Hepta	PCB-192	*	*	n NotF η	1.74	*	*	1220	2.5	32.4	*	0.991-1.001	
Hepta	PCB-180	9.37e+05	1.08	y 49:22	1.34	1690	*	*	2.5	*	1.000	0.995-1.005	

Analyst: DMS

Date: 2/12/15

Client ID: DS-CB-I3-20141216-S
Lab ID: 1400970-03@10X

Filename: 150205E1 S:6 Acq: 5-FEB-15 14:20:13
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.041

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	5.13e+04	1.19	y 49:34	1.72	72.4		*	2.5	*	1.004	0.999-1.009	
Hepta	PCB-191	2.97e+04	0.99	y 49:49	1.69	42.4		*	2.5	*	1.009	1.004-1.014	
Hepta	PCB-170	4.46e+05	1.19	y 50:48	1.60	873		*	2.5	*	1.000	0.995-1.005	
Hepta	PCB-190	1.19e+05	0.86	n 50:58	2.21	169	R	*	2.5	*	1.004	0.998-1.008	
Hepta	PCB-189	3.53e+04	0.99	y 52:16	1.55	54.1		*	2.5	*	1.000	0.995-1.005	
Octa	PCB-202	*	*	n NotF η	1.08	*		1810	2.5	87.8	*	0.995-1.005	
Octa	PCB-201	*	*	n NotF η	1.15	*		1810	2.5	82.7	*	1.005-1.015	
Octa	PCB-204	*	*	n NotF η	1.14	*		1810	2.5	83.6	*	1.008-1.018	
Octa	PCB-197	*	*	n NotF η	1.07	*		1810	2.5	88.6	*	1.015-1.025	
Octa	PCB-200	*	*	n NotF η	1.06	*		1810	2.5	89.5	*	1.032-1.044	
Octa	PCB-198	*	*	n NotF η	0.76	*		1810	2.5	126	*	1.059-1.069	
Octa	PCB-199	1.48e+05	0.91	y 51:28	0.80	407		*	2.5	*	1.066	1.061-1.071	
Octa	PCB-196/203	1.28e+05	1.05	n 51:44	0.80	350	R	*	2.5	*	1.072	1.066-1.076	
Octa	PCB-195	6.03e+04	1.24	n 52:53	1.23	91.3	R	*	2.5	*	0.984	0.979-0.989	
Octa	PCB-194	2.45e+05	0.93	y 53:46	1.21	375		*	2.5	*	1.000	0.995-1.005	
Octa	PCB-205	*	*	n NotF η	1.54	*		1830	2.5	50.2	*	1.001-1.011	
Nona	PCB-208	5.85e+04	1.29	y 53:01	0.93	94.0		*	2.5	*	1.000	0.995-1.005	
Nona	PCB-207	*	*	n NotF η	1.08	*		903	2.5	22.4	*	1.001-1.011	
Nona	PCB-206	9.82e+04	1.23	y 55:27	1.02	222		*	2.5	*	1.000	0.995-1.005	
Deca	PCB-209	*	*	n NotF η	1.17	*		876	2.5	57.6	*	0.995-1.005	

Analyst: DMS

Date: 2/12/15

Client ID: DS-CB-I3-20141216-S
Lab ID: 1400970-03@10X

Filename: 150205E1 S:6 Acq: 5-FEB-15 14:20:13
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.0405 EndCAL: NA

ConCal: ST150205E1-1

Name	Resp	RA	RT	RRF	Conc	
Total Mono-PCB	*	* n	NotFnd	1.27	*	
Total Di-PCB	6.63e+05	1.43 y	25:14	1.21	434.923	
Total Tri-PCB	3.61e+05	1.19 y	25:51	1.10	368.276	
Total Tri-PCB	1.68e+06	0.95 y	28:59	1.21	1065.52	Sum:1433.80
Total Tetra-PCB	4.35e+06	0.73 y	30:33	1.09	4100.57	
Total Penta-PCB	1.01e+07	1.52 y	35:49	1.18	15354.9	
Total Penta-PCB	1.95e+06	1.59 y	42:21	1.25	1940.98	Sum:17295.8
Total Hexa-PCB	1.11e+06	1.20 y	39:33	0.90	3070.69	
Total Hexa-PCB	1.24e+07	1.17 y	42:08	1.11	14301.0	Sum:17371.7
Total Hepta-PCB	3.20e+06	1.05 y	44:05	1.42	5486.84	
Total Octa-PCB	1.48e+05	0.91 y	51:28	0.96	406.753	
Total Octa-PCB	2.45e+05	0.93 y	53:46	1.33	375.189	Sum:781.942
Total Nona-PCB	1.57e+05	1.29 y	53:01	1.01	316.059	
Total Deca-PCB	*	* n	NotFnd	1.17	*	

Total PCB Conc: 47153.9905810

47200

Integrations

by

Analyst: DMS

Date: 2/12/15

Client ID: DS-CB-I3-20141216-S
Lab ID: 1400970-03@10X

Filename: 150205E1 S:6 Acq: 5-FEB-15 14:20:13
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol:2.0405

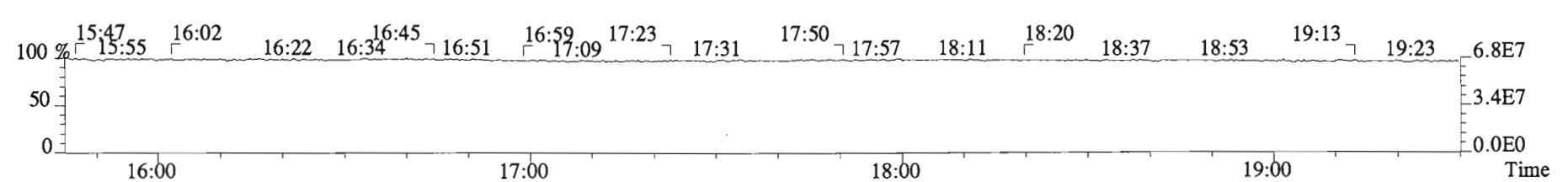
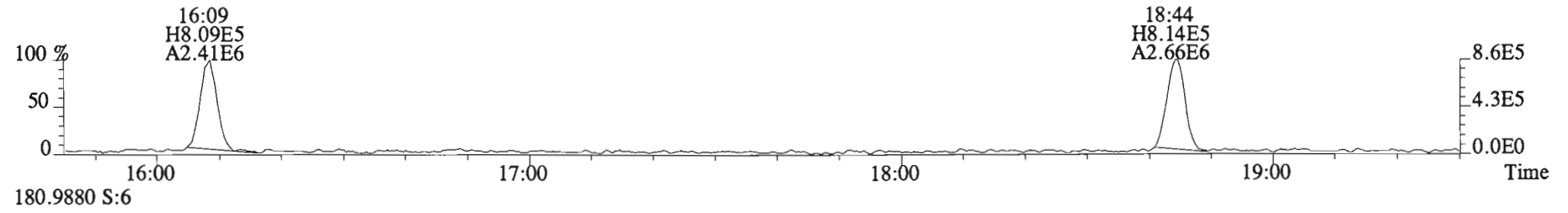
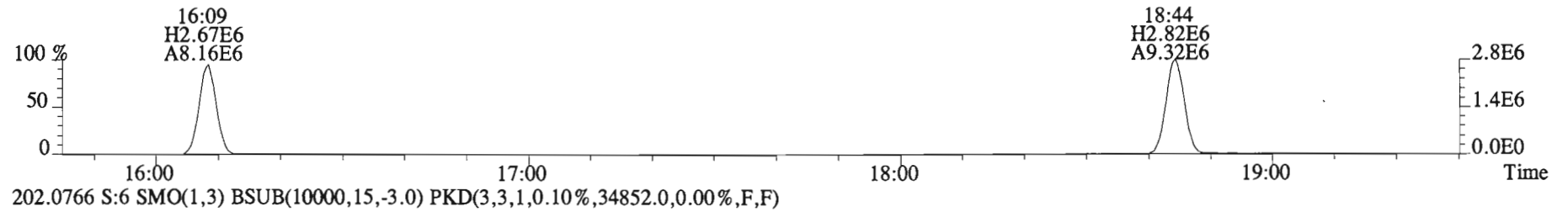
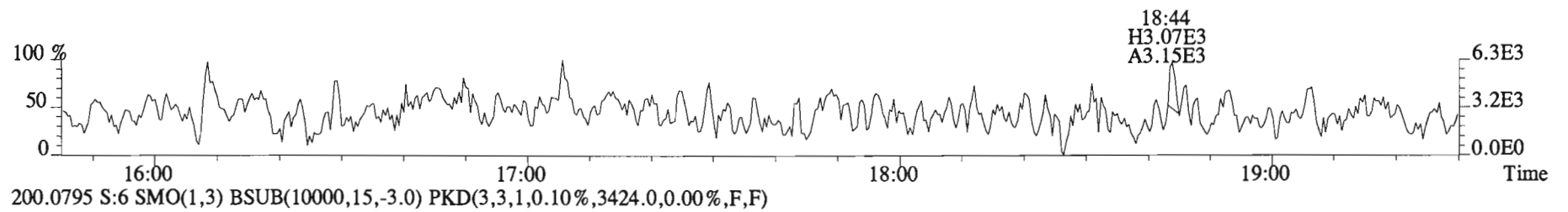
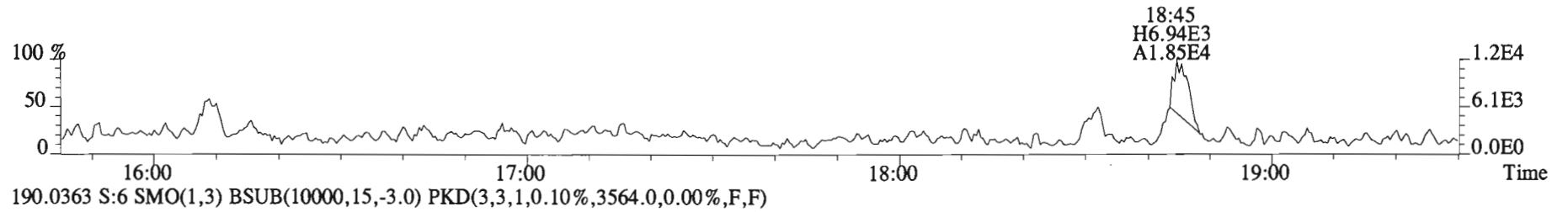
ConCal: ST150205E1-1
EndCAL: NA

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	1.06e+07	3.39 y	0.87	16:08	0.623	0.629-0.635	0.629-0.635	6760	68.9											
13C-PCB-3	1.20e+07	3.50 y	0.91	18:44	0.723	0.725-0.733	0.725-0.733	7320	74.7		13C-PCB-79	1.15e+07	0.80 y	1.02	37:48	1.029	1.023-1.034		8480	86.5
13C-PCB-4	7.59e+06	1.60 y	0.59	20:03	0.774	0.775-0.783	0.775-0.783	7210	73.6		13C-PCB-178	3.79e+06	0.43 y	0.61	45:38	0.984	0.979-0.990		8240	84.1
13C-PCB-9	1.21e+07	1.58 y	0.90	21:50	0.843	0.842-0.850	0.842-0.850	7510	76.6											
13C-PCB-11	1.38e+07	1.59 y	0.94	25:13	0.973	0.968-0.978	0.968-0.978	8180	83.4											
13C-PCB-19	7.47e+06	1.18 y	0.53	24:12	0.934	0.930-0.940	0.930-0.940	7840	80.0											
13C-PCB-28	1.22e+07	1.07 y	0.93	29:04	1.004	0.999-1.009	0.999-1.009	8480	86.5		13C-PCB-79	1.15e+07	0.80 y	1.10	37:48	0.969	0.964-0.974		10600	108
13C-PCB-32	1.11e+07	1.14 y	0.80	27:07	1.046	1.040-1.050	1.040-1.050	7780	79.4		13C-PCB-178	3.79e+06	0.43 y	0.90	45:38	0.924	0.920-0.930		10200	104
13C-PCB-37	1.14e+07	1.04 y	0.84	32:57	1.138	1.131-1.143	1.131-1.143	8840	90.2											
13C-PCB-47	9.04e+06	0.78 y	0.81	31:59	0.871	0.866-0.874	0.866-0.874	8350	85.1											
13C-PCB-52	8.32e+06	0.78 y	0.77	31:29	0.857	0.853-0.861	0.853-0.861	8090	82.5											
13C-PCB-54	9.66e+06	0.78 y	0.97	27:57	0.761	0.758-0.766	0.758-0.766	7460	76.1											
13C-PCB-70	1.08e+07	0.79 y	1.00	35:29	0.966	0.961-0.971	0.961-0.971	8110	82.7											
13C-PCB-77	1.00e+07	0.81 y	0.94	39:37	1.078	1.073-1.083	1.073-1.083	7970	81.4											
13C-PCB-80	1.08e+07	0.80 y	1.03	35:54	0.977	0.972-0.982	0.972-0.982	7860	80.2											
13C-PCB-81	9.61e+06	0.75 y	0.92	39:02	1.062	1.057-1.067	1.057-1.067	7820	79.8											
13C-PCB-95	4.56e+06	1.70 y	0.74	35:48	0.913	0.908-0.918	0.908-0.918	7860	80.2											
13C-PCB-97	4.45e+06	1.60 y	0.70	38:47	0.989	0.984-0.994	0.984-0.994	8060	82.2											
13C-PCB-101	5.06e+06	1.62 y	0.78	37:29	0.956	0.951-0.961	0.951-0.961	8240	84.1											
13C-PCB-104	6.48e+06	1.62 y	1.00	32:38	0.832	0.828-0.836	0.828-0.836	8260	84.3		13C-PCB-15	1.76e+07	1.60 y	1.00	25:55				9800	
13C-PCB-105	7.64e+06	1.55 y	1.37	43:03	0.929	0.924-0.934	0.924-0.934	7460	76.1		13C-PCB-31	1.51e+07	1.05 y	1.00	28:57				9800	
13C-PCB-114	8.12e+06	1.53 y	1.36	42:12	0.910	0.905-0.915	0.905-0.915	7940	81.1		13C-PCB-60	1.31e+07	0.78 y	1.00	36:44				9800	
13C-PCB-118	6.16e+06	1.60 y	0.96	41:32	1.059	1.054-1.064	1.054-1.064	8190	83.6		13C-PCB-111	7.68e+06	1.51 y	1.00	39:13				9800	
13C-PCB-123	5.82e+06	1.70 y	0.89	41:21	1.055	1.050-1.060	1.050-1.060	8300	84.7		13C-PCB-128	7.34e+06	1.27 y	1.00	46:22				9800	
13C-PCB-126	7.47e+06	1.56 y	1.31	45:18	0.977	0.972-0.982	0.972-0.982	7620	77.8		13C-PCB-205	7.63e+06	0.89 y	1.00	54:03				9800	
13C-PCB-127	8.56e+06	1.59 y	1.47	43:24	0.936	0.931-0.941	0.931-0.941	7750	79.1											
13C-PCB-138	6.80e+06	1.29 y	1.10	44:48	0.966	0.961-0.971	0.961-0.971	8260	84.2											
13C-PCB-141	6.77e+06	1.21 y	1.07	43:57	0.948	0.943-0.953	0.943-0.953	8410	85.8											
13C-PCB-153	7.04e+06	1.30 y	1.15	43:12	0.932	0.927-0.937	0.927-0.937	8200	83.6											
13C-PCB-155	4.48e+06	1.34 y	0.84	37:01	0.944	0.939-0.949	0.939-0.949	6800	69.4											
13C-PCB-156	8.20e+06	1.27 y	1.30	48:04	1.037	1.032-1.042	1.032-1.042	8430	86.0											
13C-PCB-157	8.57e+06	1.32 y	1.36	48:20	1.043	1.038-1.048	1.038-1.048	8420	85.9											
13C-PCB-159	8.01e+06	1.29 y	1.25	46:05	0.994	0.989-0.999	0.989-0.999	8570	87.5											
13C-PCB-167	8.27e+06	1.21 y	1.35	46:46	1.009	1.004-1.014	1.004-1.014	8170	83.3											
13C-PCB-169	7.91e+06	1.28 y	1.29	50:27	1.088	1.083-1.093	1.083-1.093	8210	83.7											
13C-PCB-170	3.13e+06	0.46 y	0.54	50:47	1.096	1.089-1.101	1.089-1.101	7700	78.6											
13C-PCB-180	4.05e+06	0.49 y	0.68	49:22	1.065	1.060-1.070	1.060-1.070	7910	80.7											
13C-PCB-188	5.20e+06	0.49 y	0.92	42:50	0.924	0.919-0.929	0.919-0.929	7560	77.1											
13C-PCB-189	4.13e+06	0.45 y	0.72	52:15	1.127	1.120-1.132	1.120-1.132	7690	78.4											
13C-PCB-194	5.28e+06	0.94 y	0.80	53:46	0.995	0.990-1.000	0.990-1.000	8500	86.7											
13C-PCB-202	4.47e+06	0.87 y	0.84	48:16	1.041	1.036-1.046	1.036-1.046	7110	72.6											
13C-PCB-206	4.23e+06	0.81 y	0.65	55:26	1.026	1.021-1.031	1.021-1.031	8360	85.3											
13C-PCB-208	6.56e+06	0.79 y	1.08	53:01	0.981	0.976-0.986	0.976-0.986	7790	79.5											
13C-PCB-209	4.26e+06	1.26 y	0.61	56:45	1.050	1.045-1.055	1.045-1.055	8960	91.4											

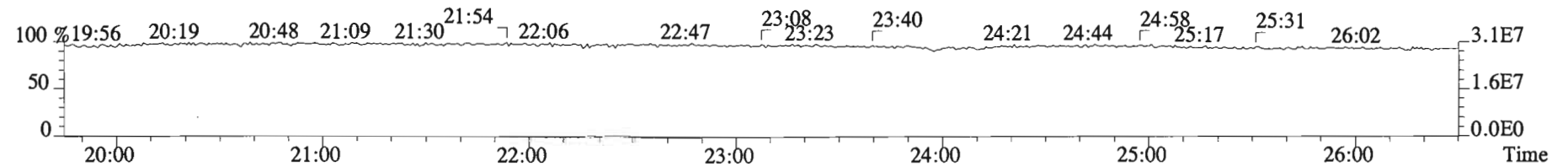
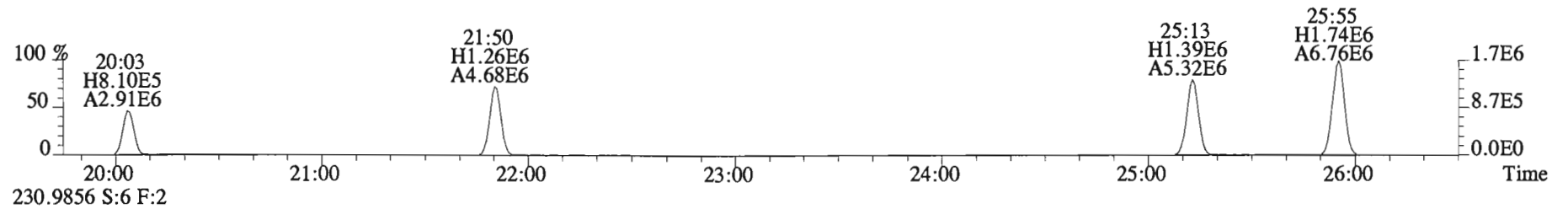
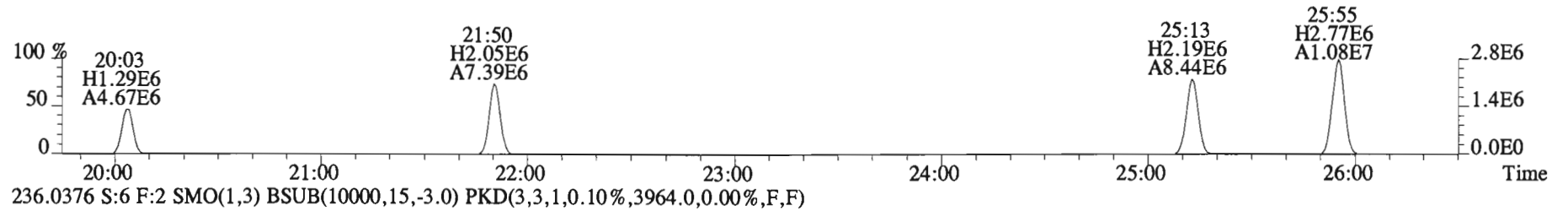
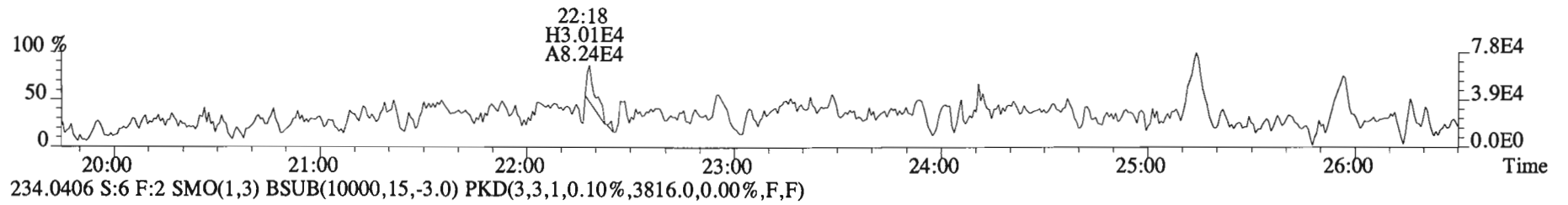
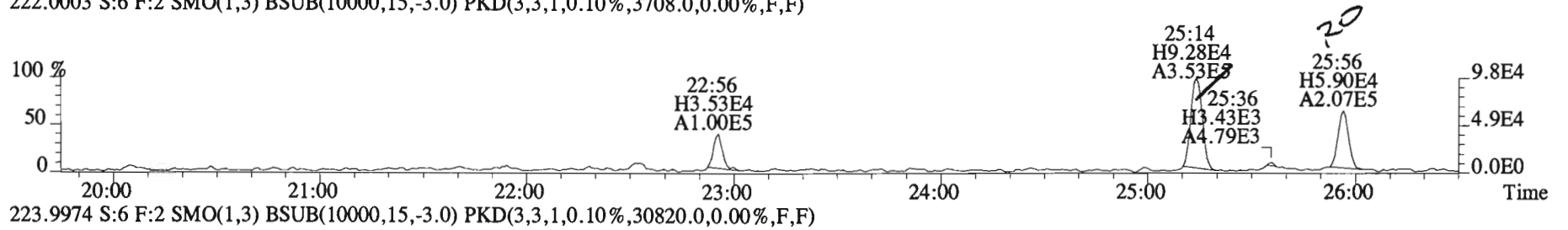
Analyst: DMS

Date: 2/11/15

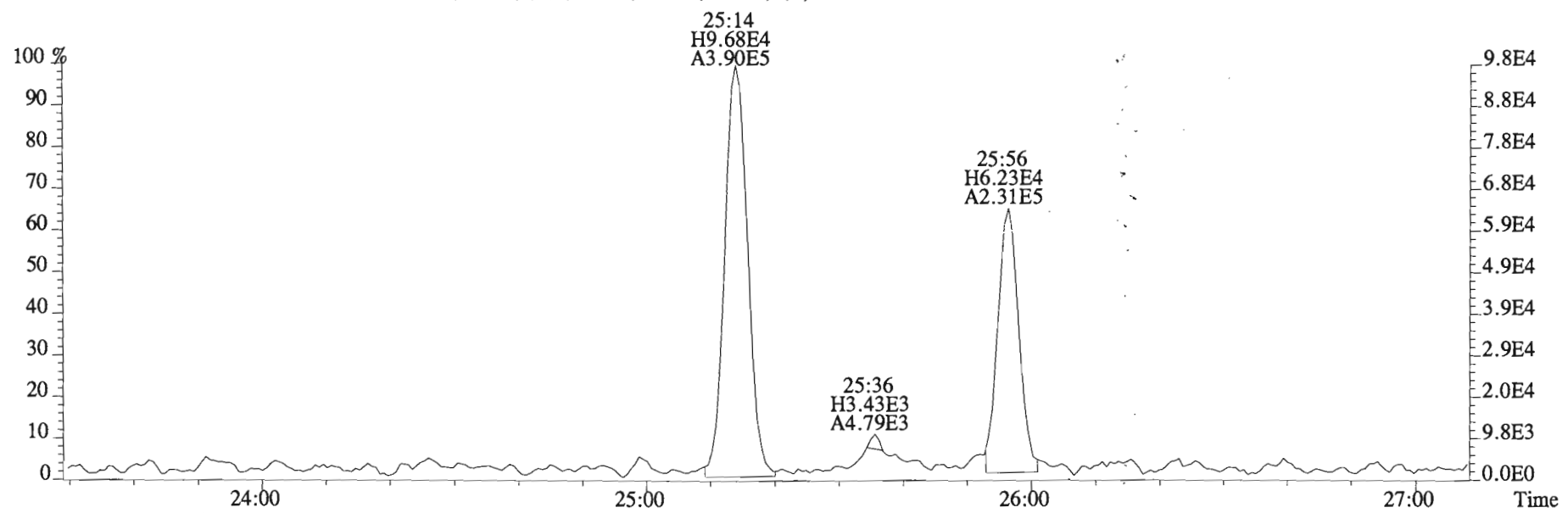
File:150205E1 #1-728 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
188.0393 S:6 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2752.0,0.00%,F,F)



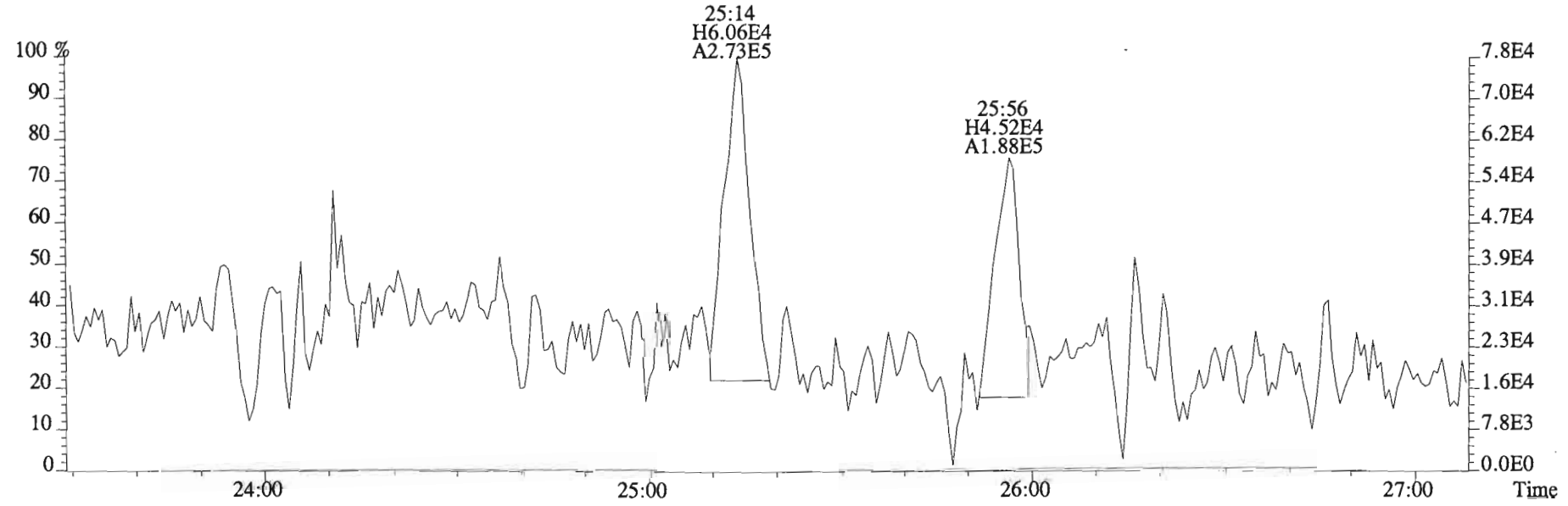
File:150205E1 #1-757 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
 222.0003 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3708.0,0.00%,F,F)



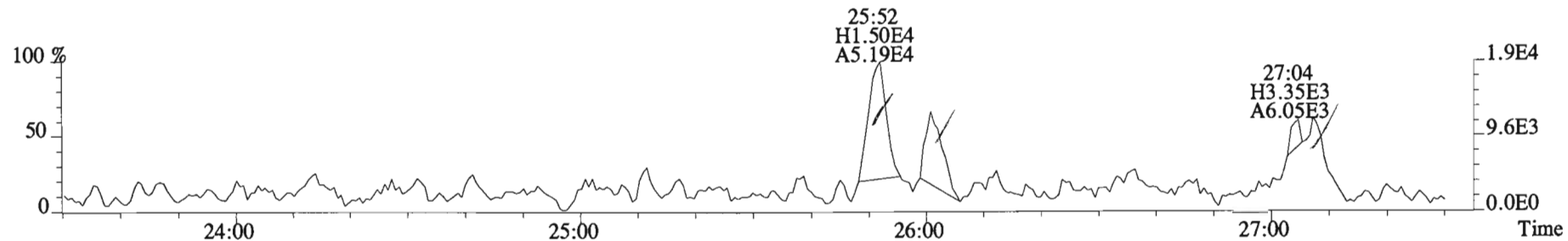
File:150205E1 #1-757 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
222.0003 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3708.0,0.00%,F,F)



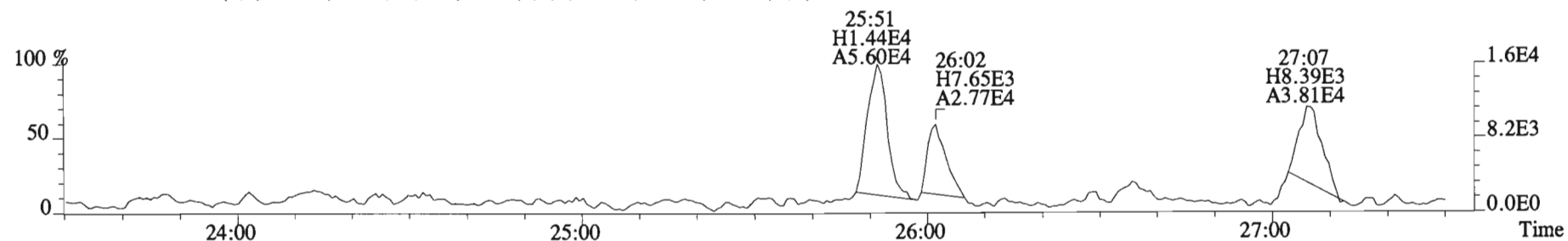
223.9974 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,30820.0,0.00%,F,F)



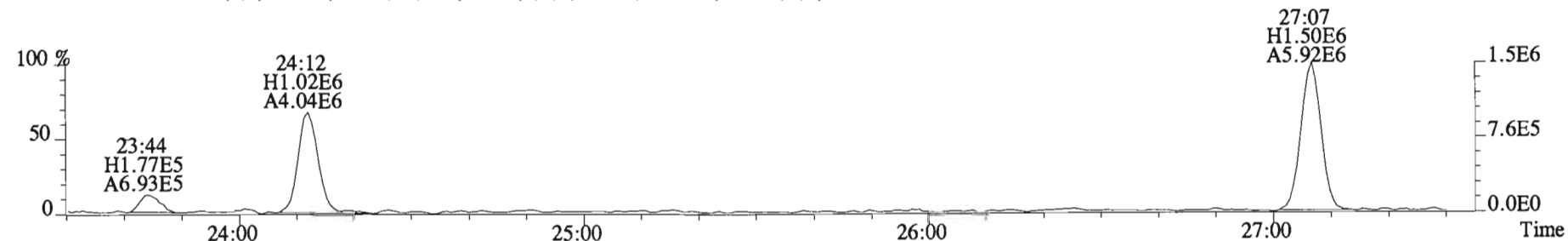
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Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
255.9613 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3460.0,0.00%,F,F)



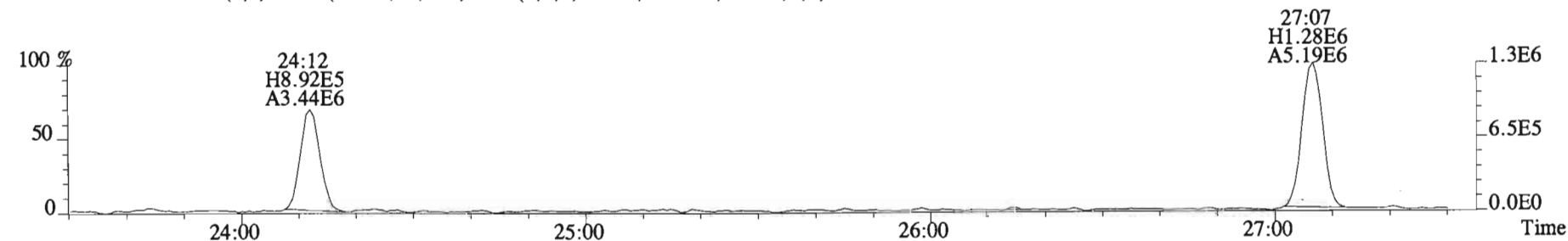
257.9584 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1620.0,0.00%,F,F)



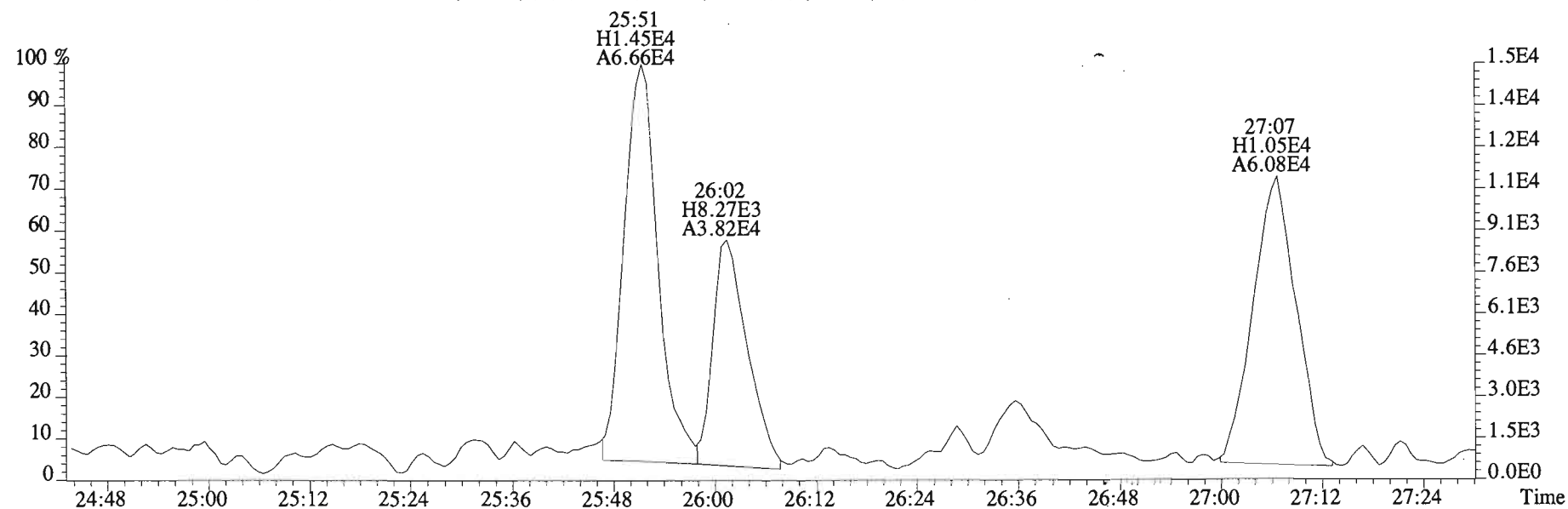
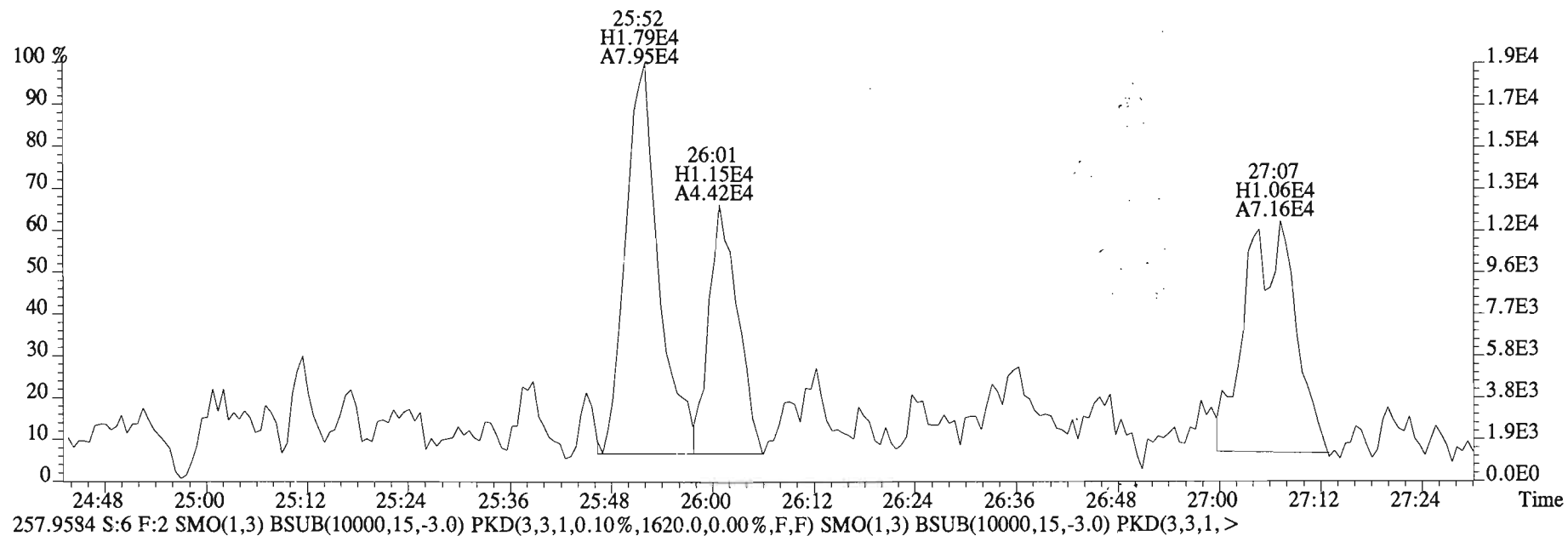
268.0016 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,29404.0,0.00%,F,F)



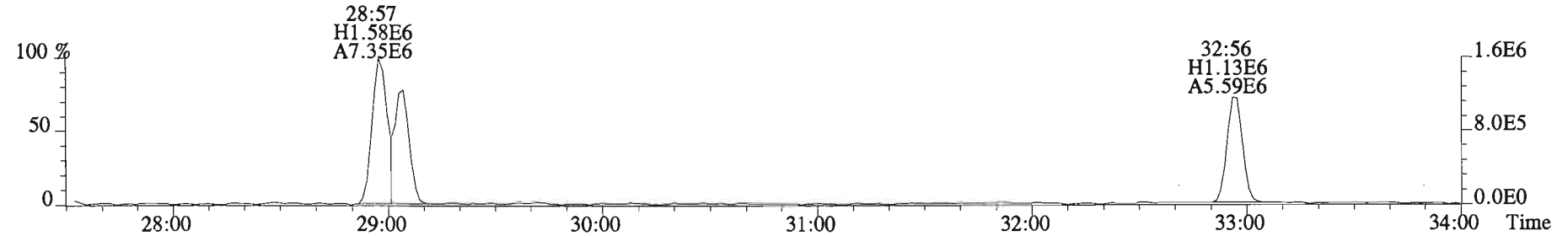
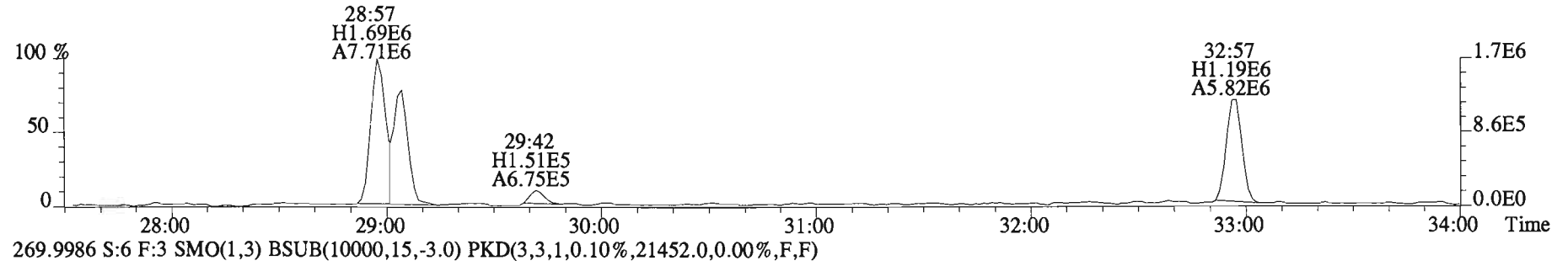
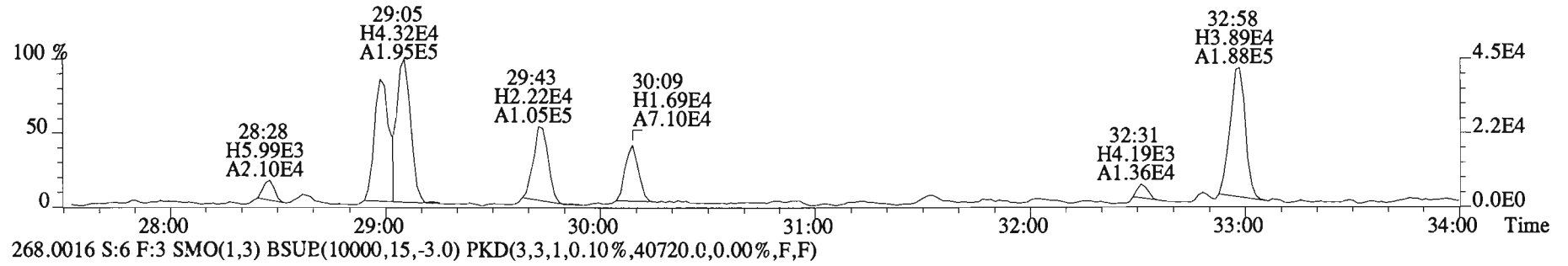
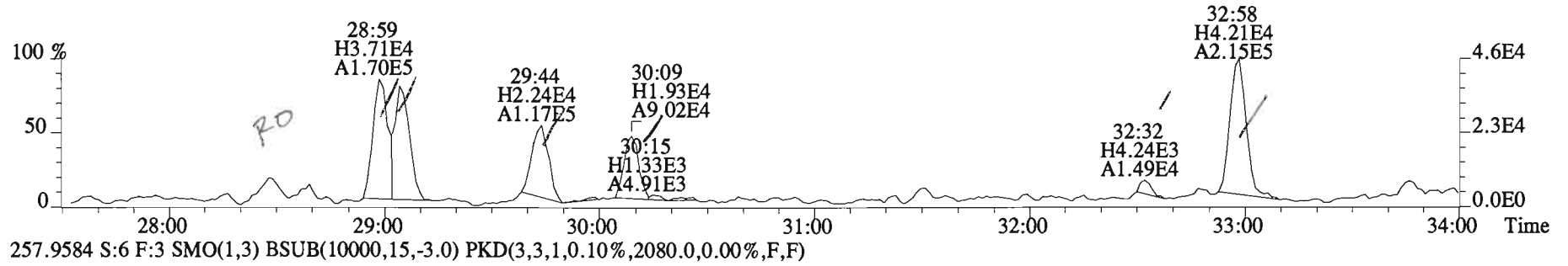
269.9986 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,22692.0,0.00%,F,F)



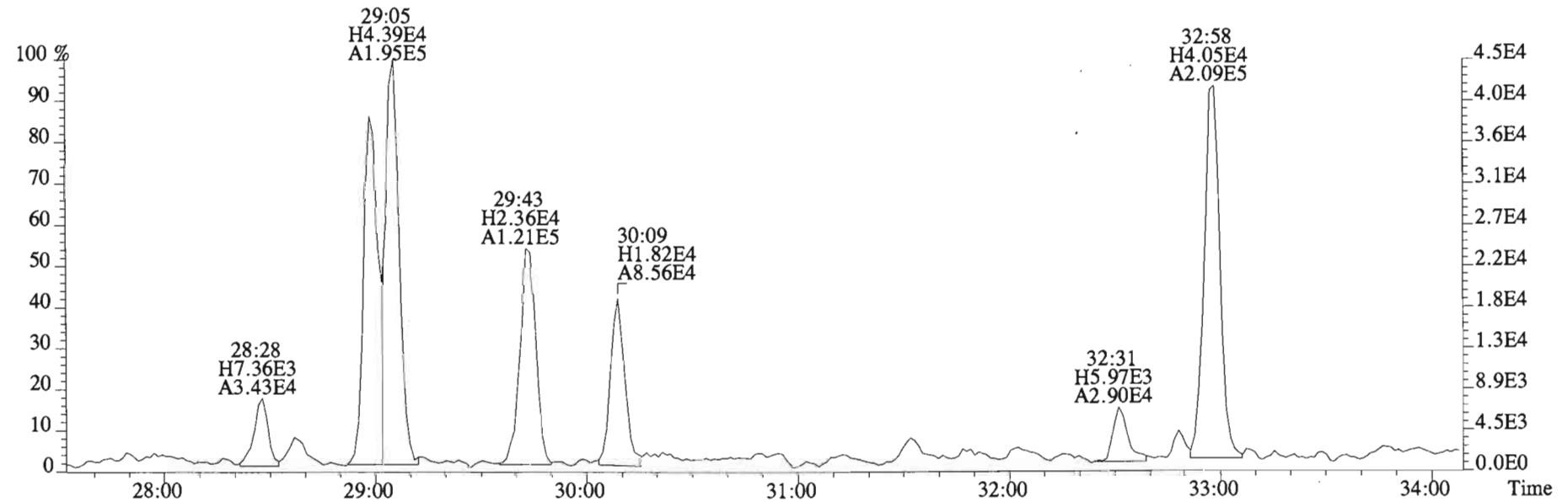
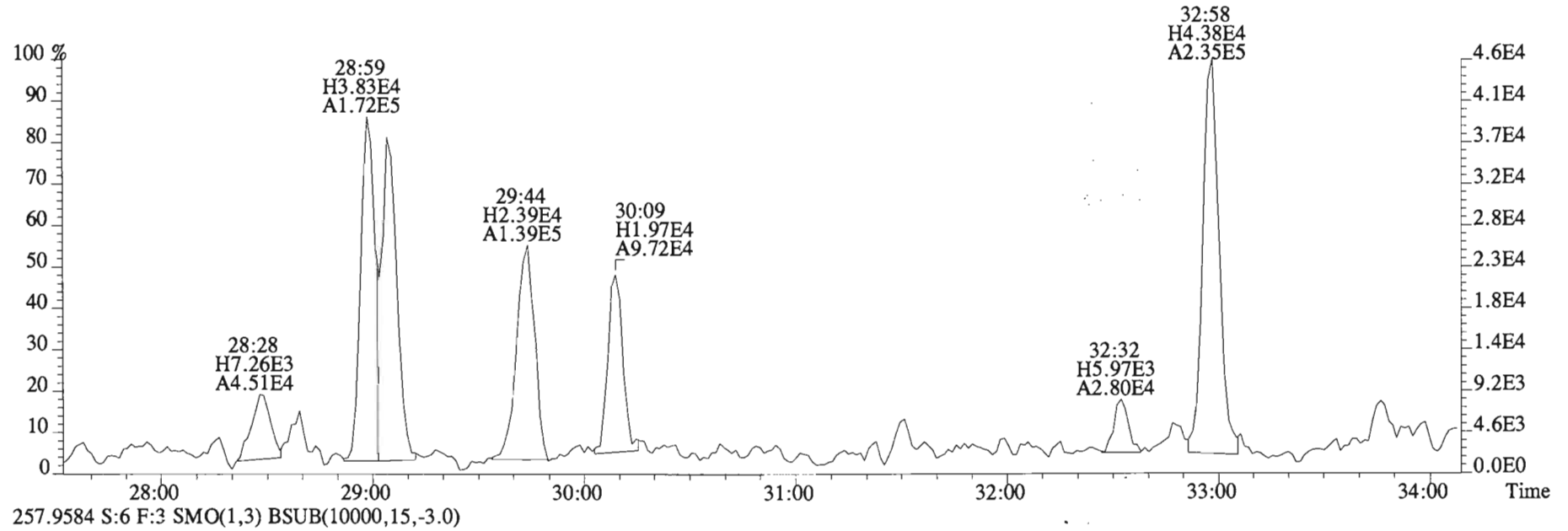
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255.9613 S:6 F:2 SMO(1,3) BSUB(10000,15,-3.0)



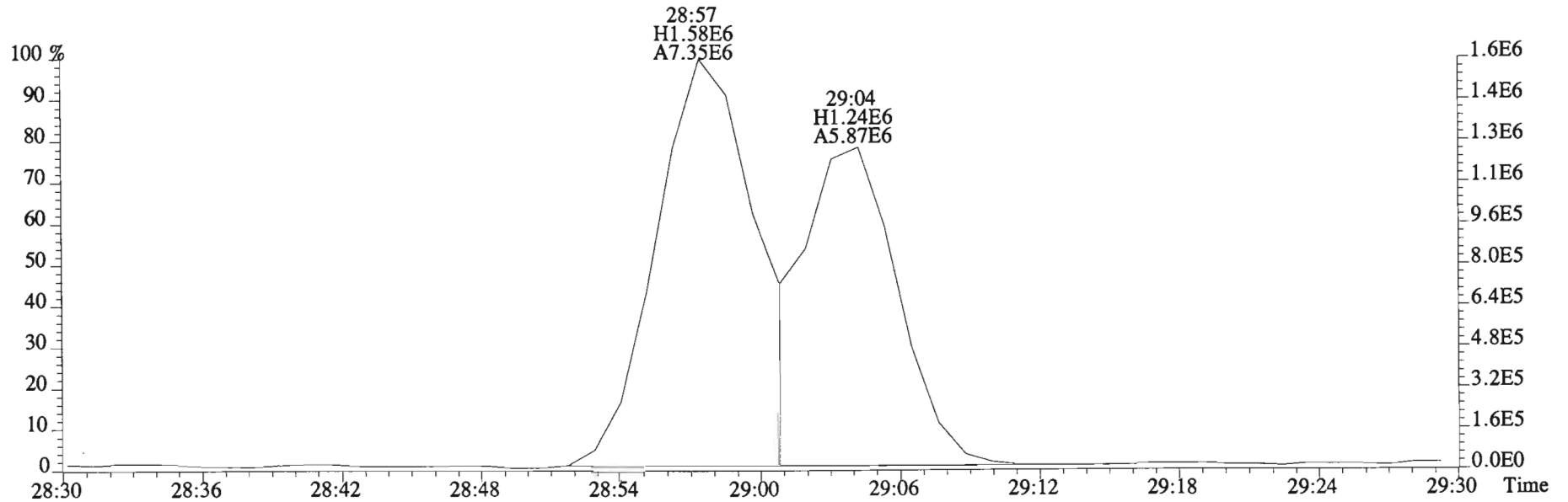
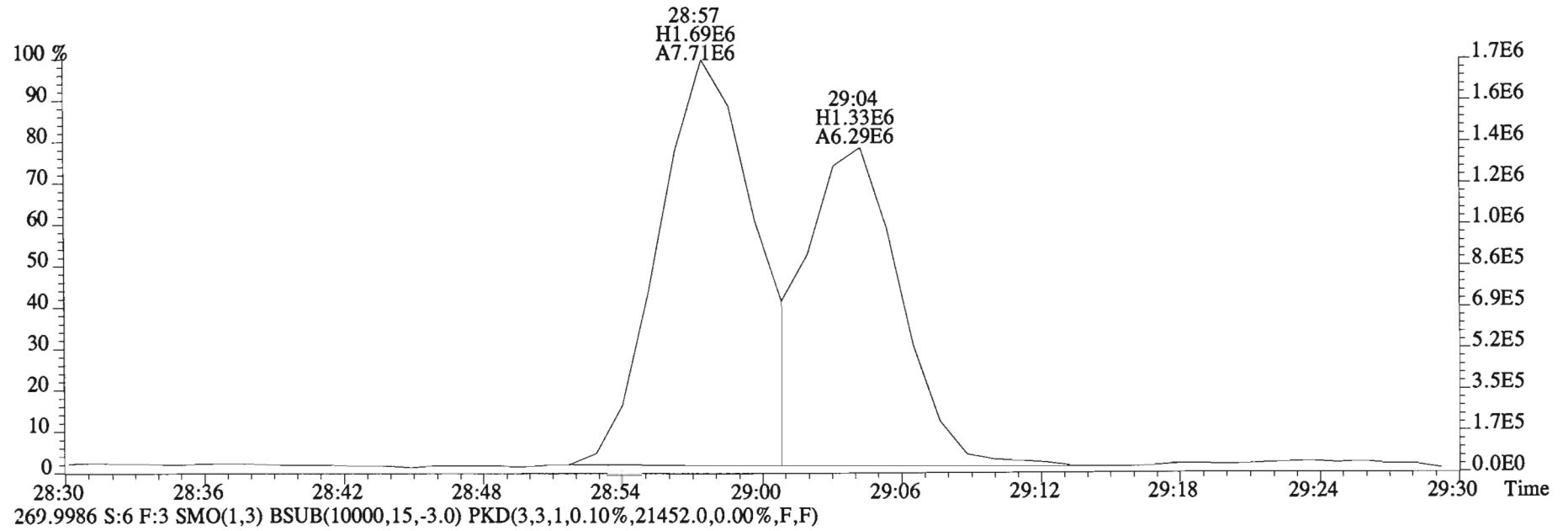
File:150205E1 #1-758 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
255.9613 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3604.0,0.00%,F,F)



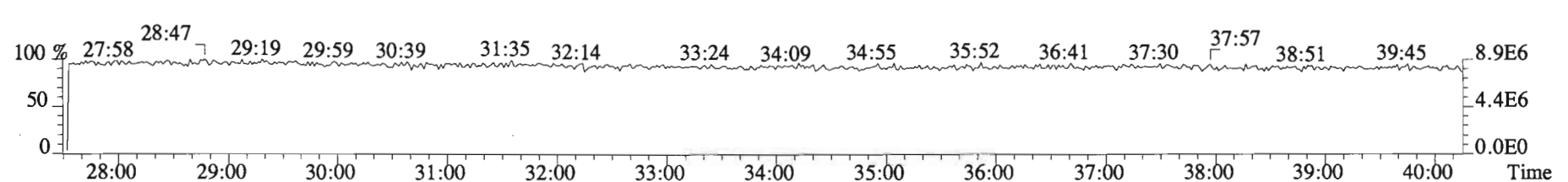
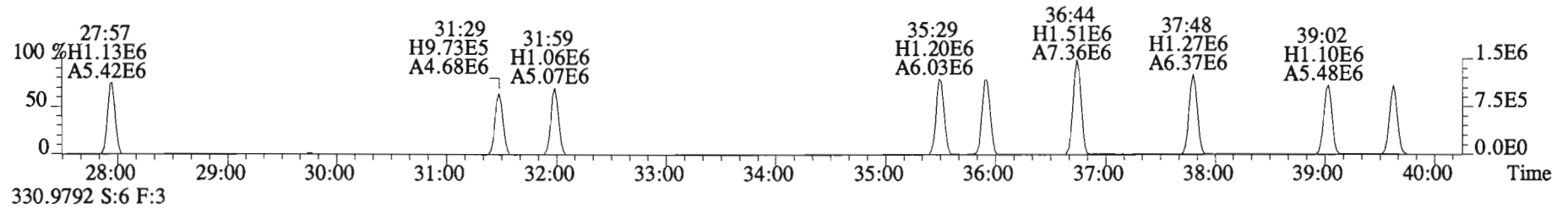
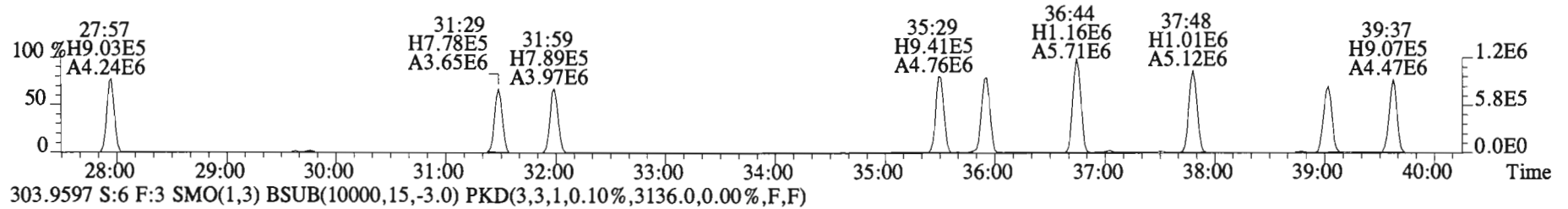
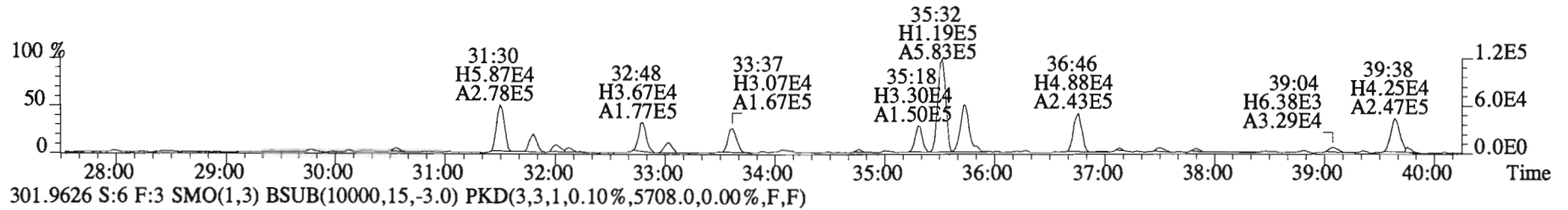
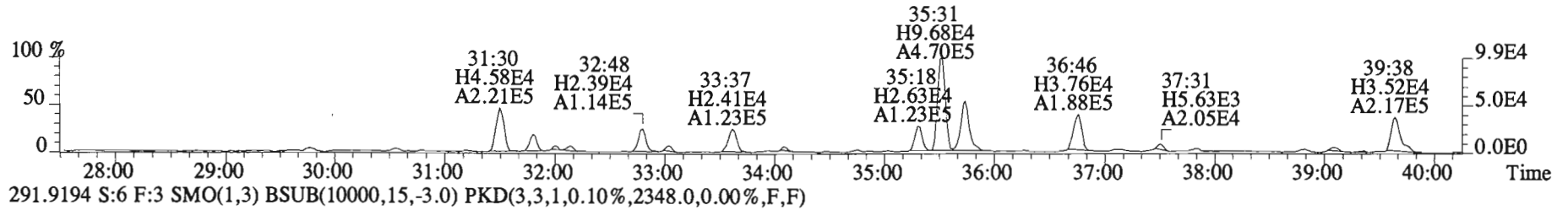
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255.9613 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



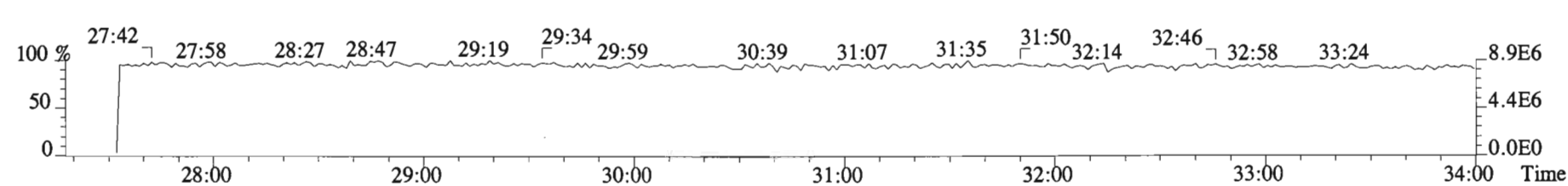
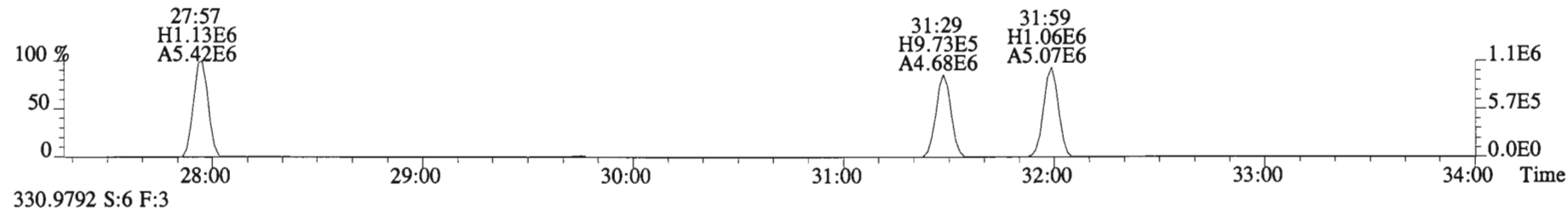
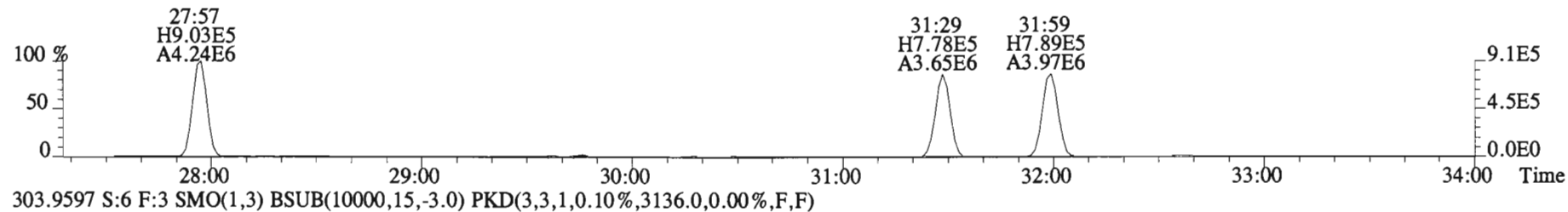
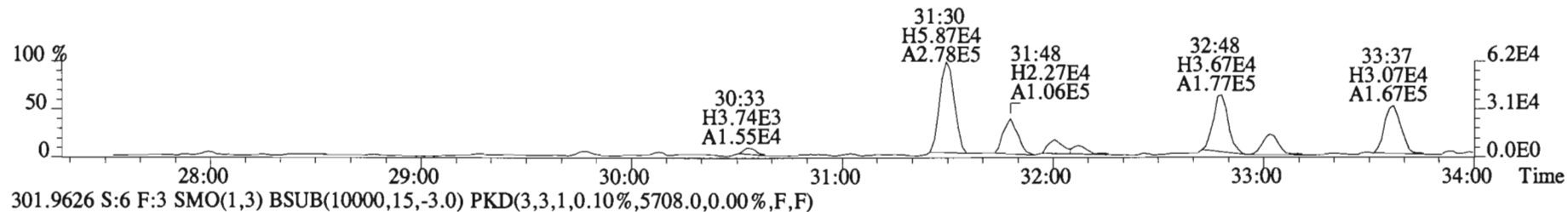
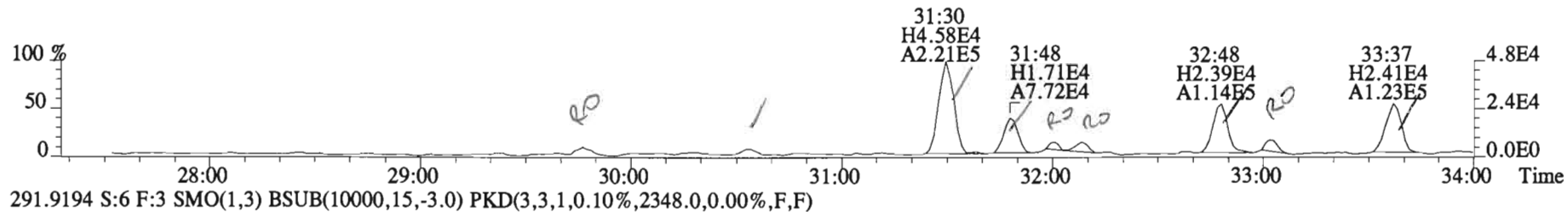
File:150205E1 #1-758 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
268.0016 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,40720.0,0.00%,F,F)



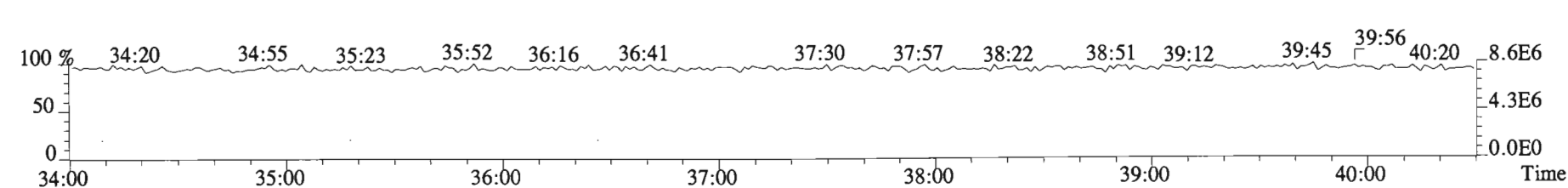
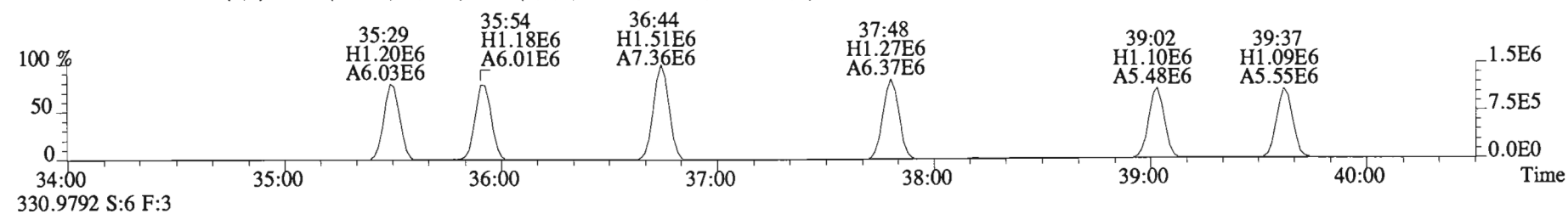
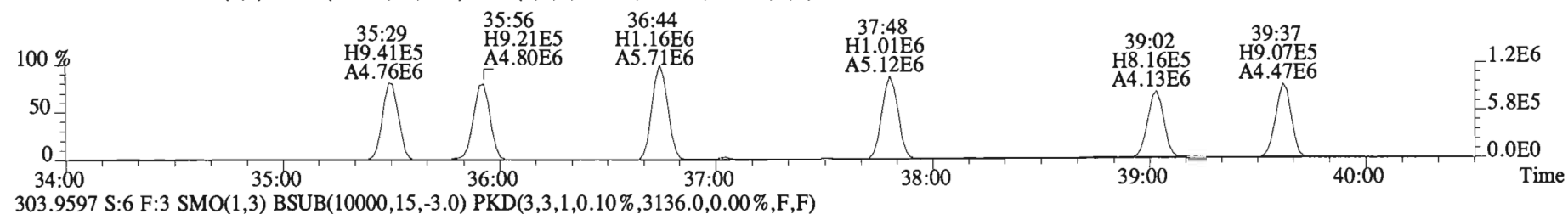
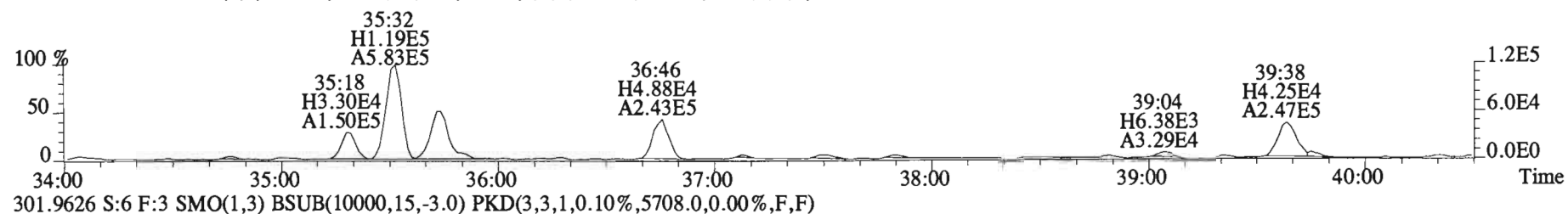
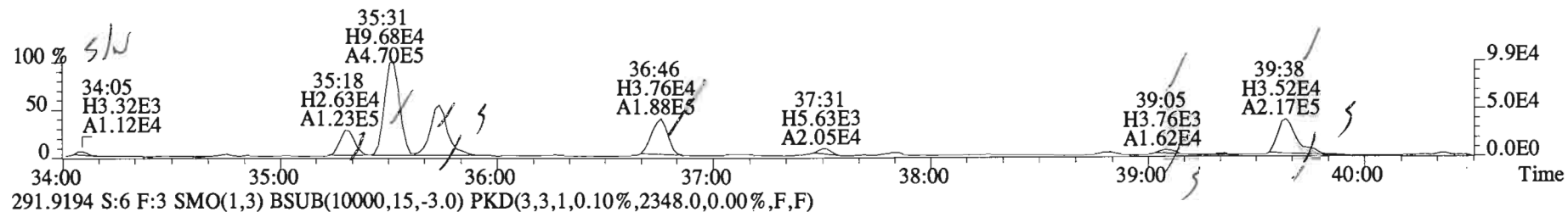
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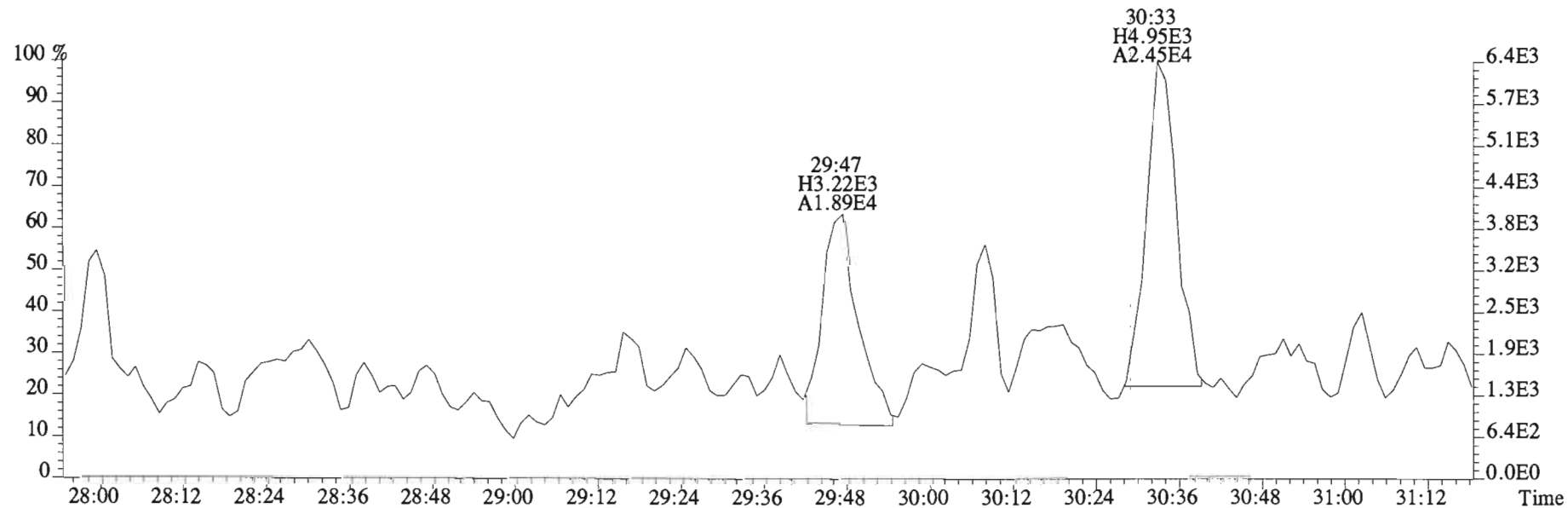
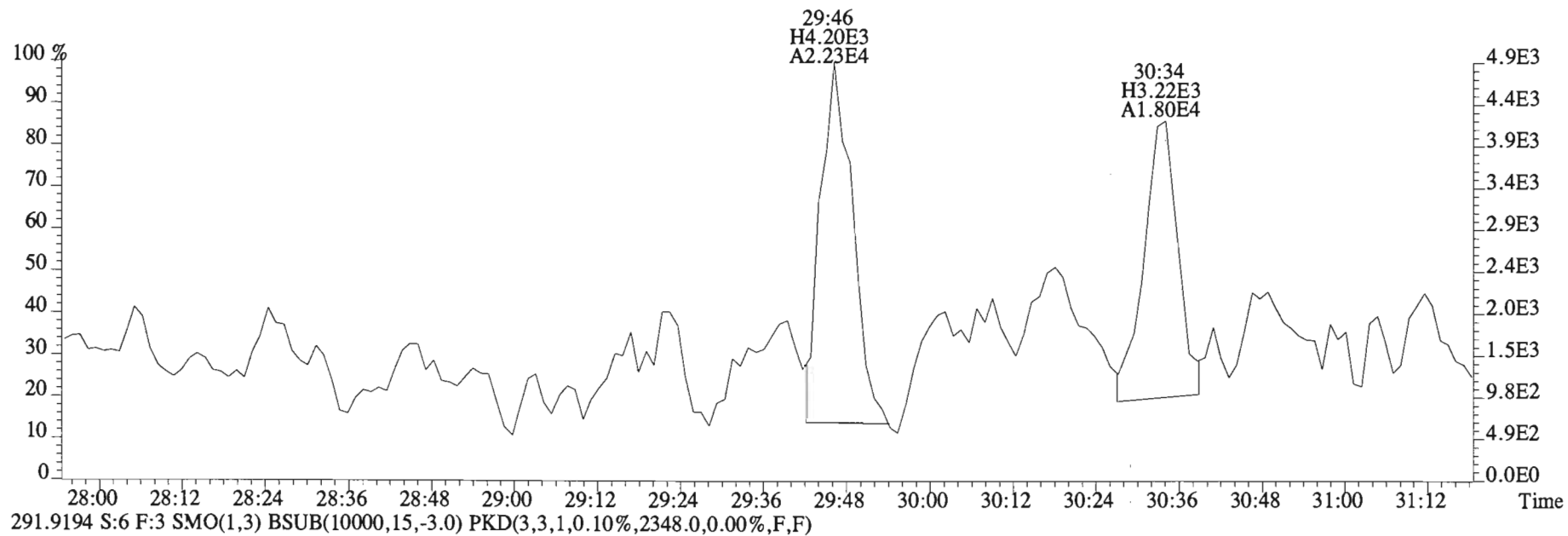
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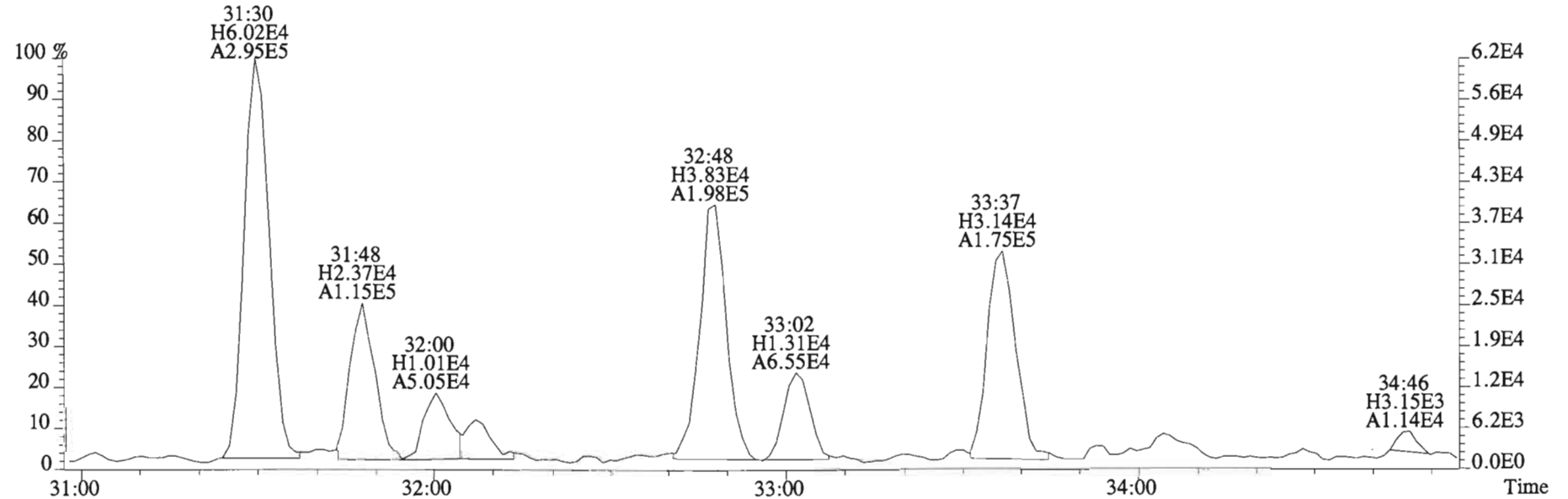
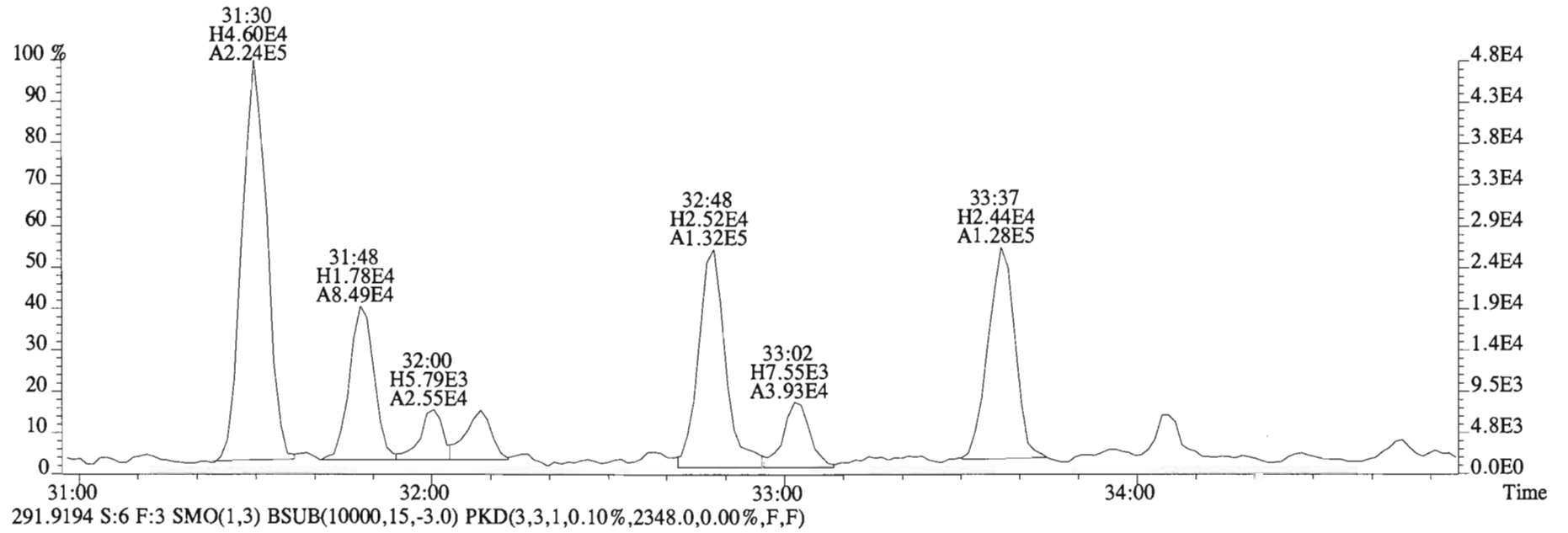
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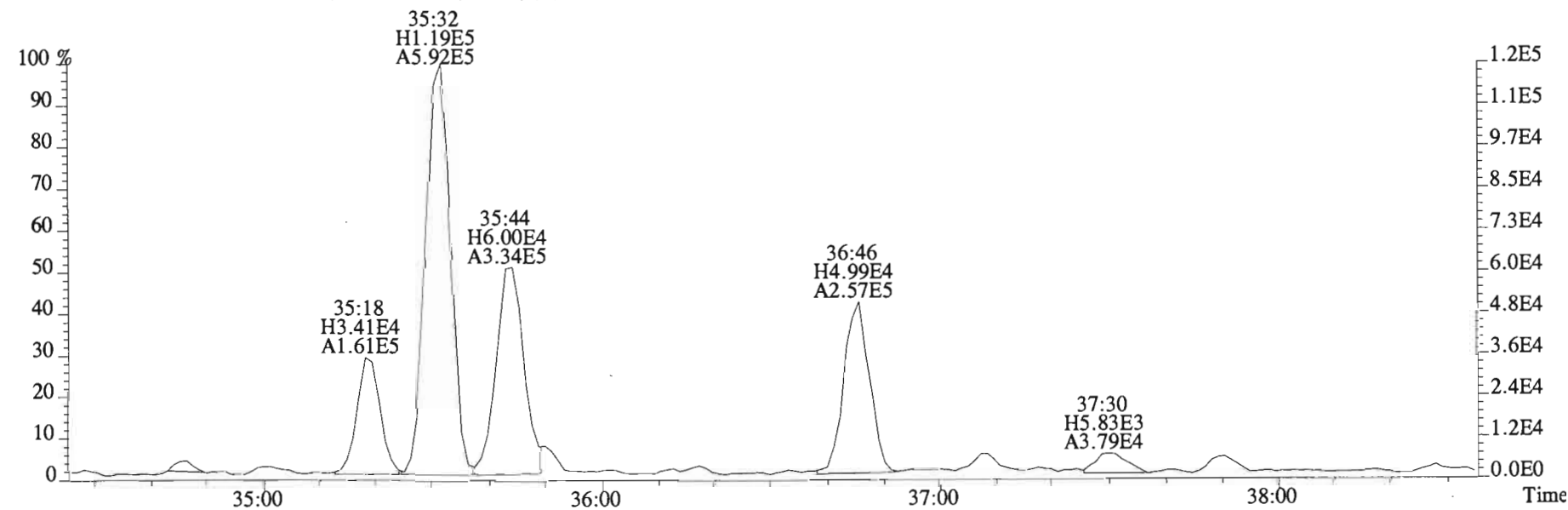
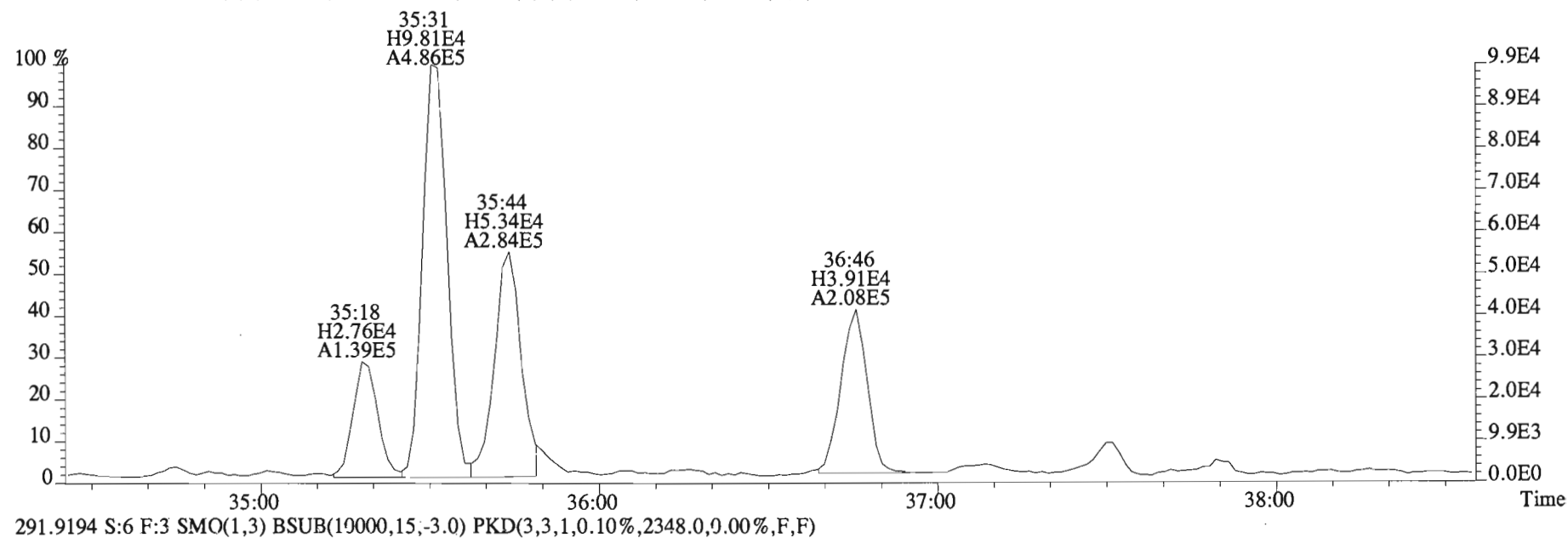
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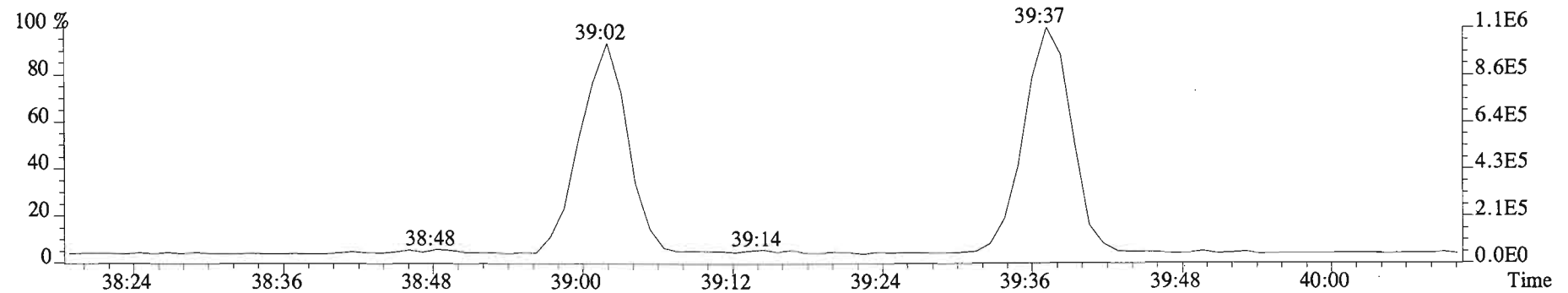
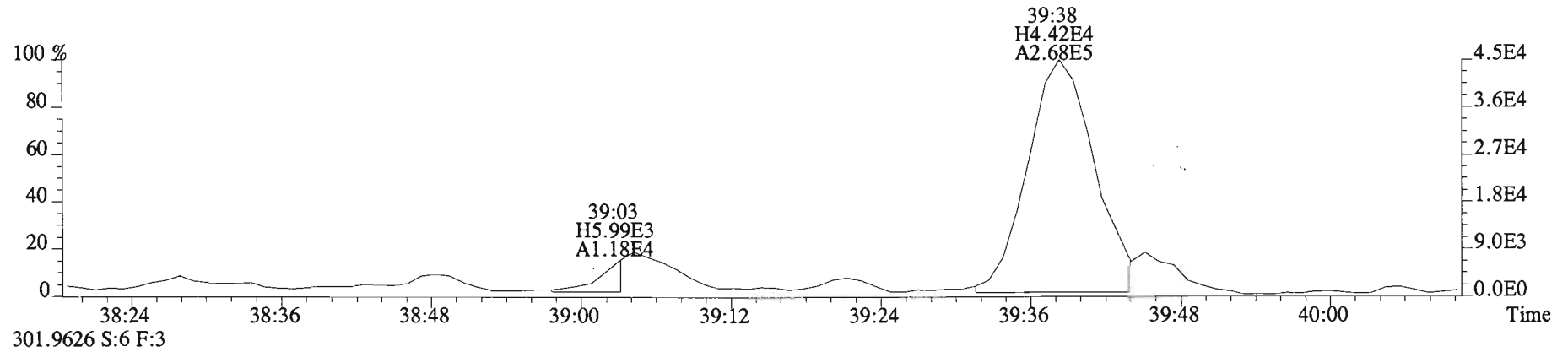
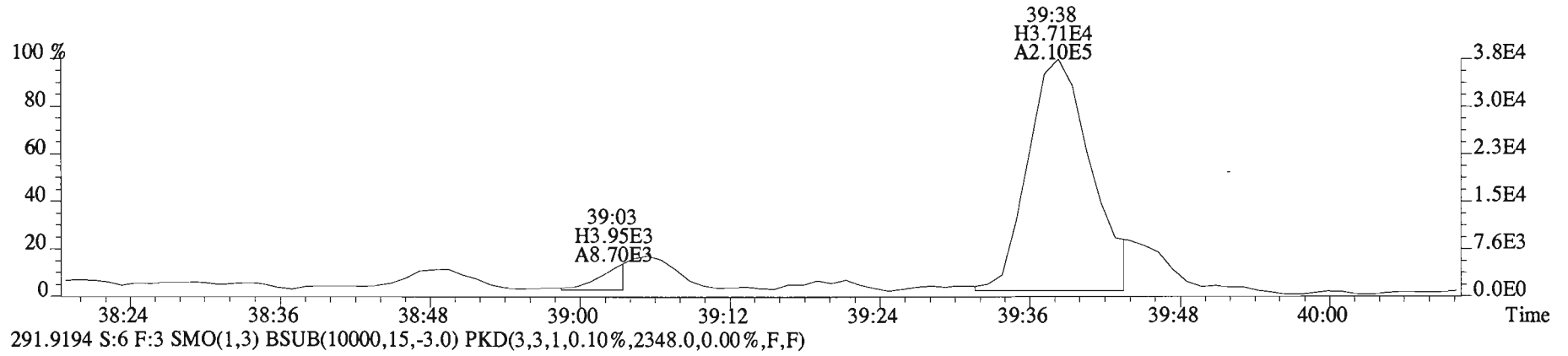
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 289.9224 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2264.0,0.00%,F,F)



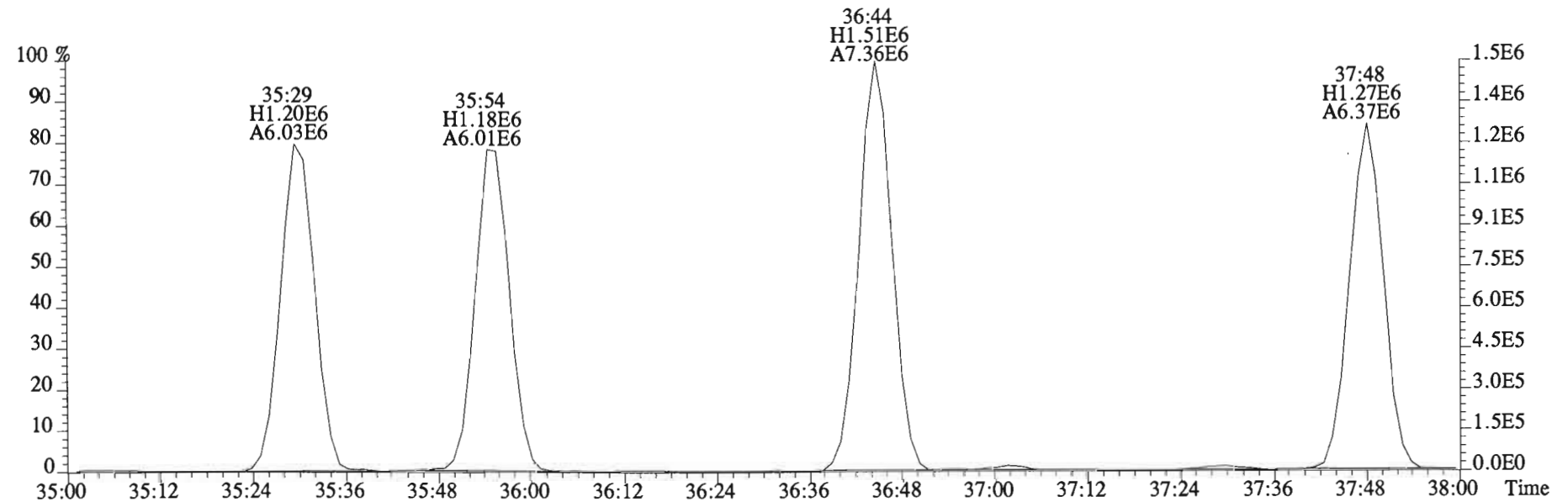
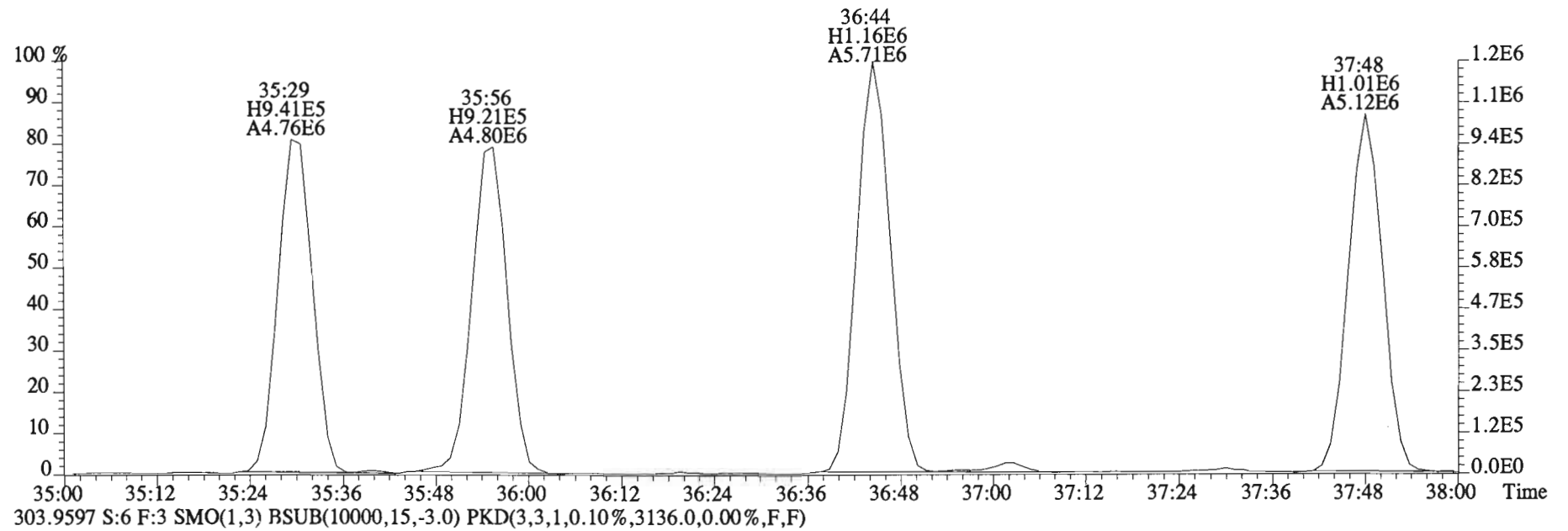
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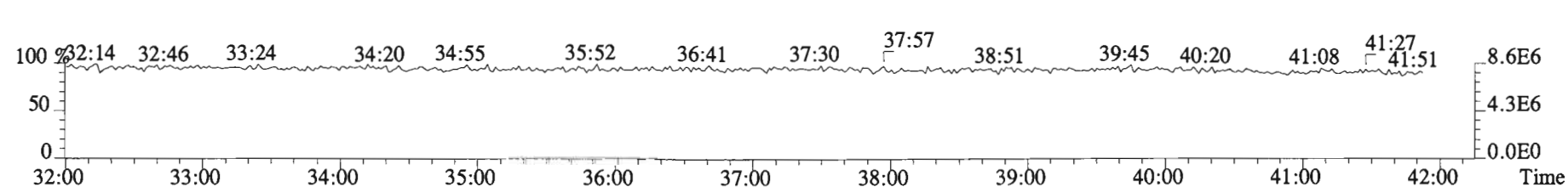
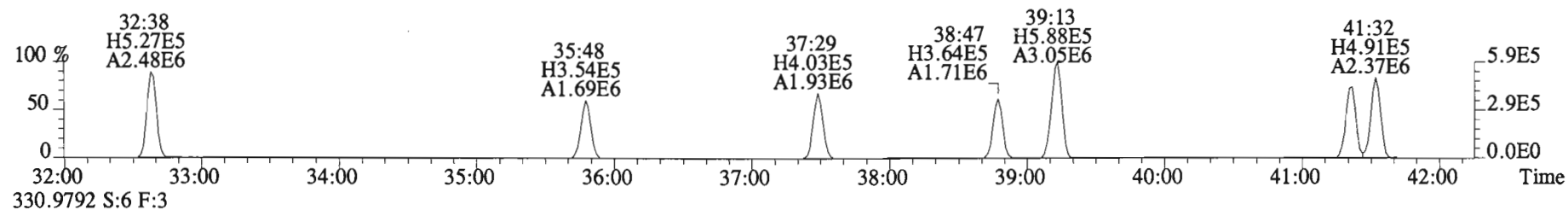
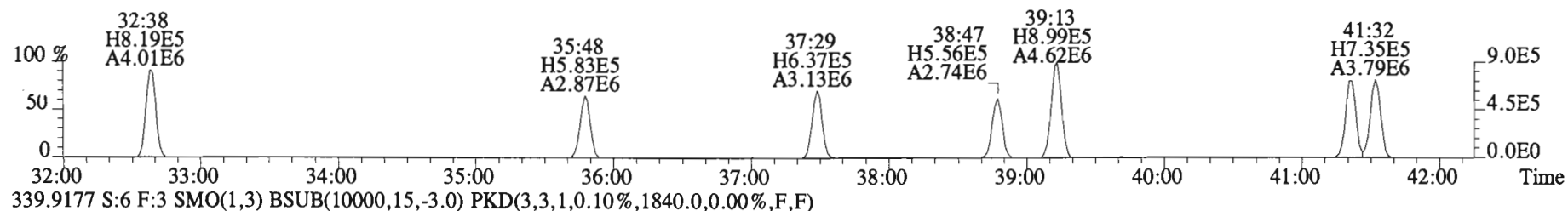
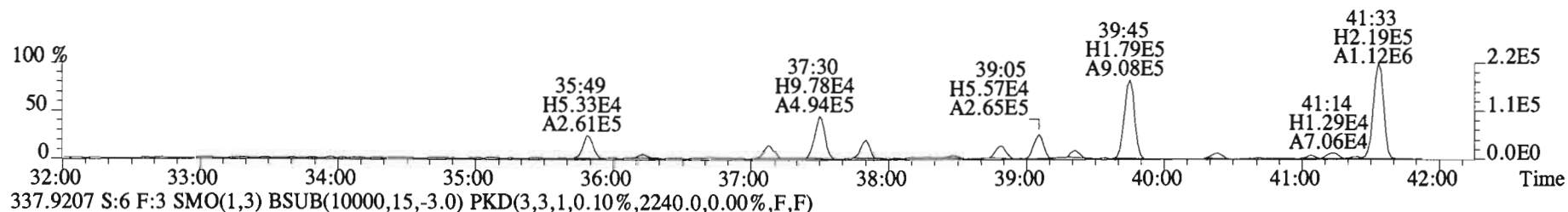
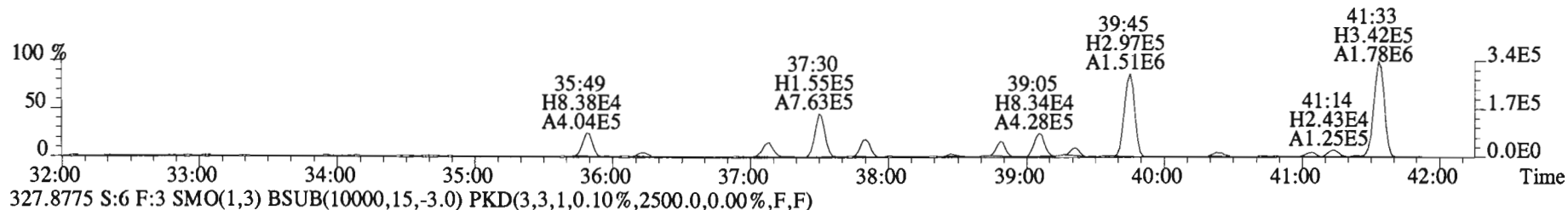
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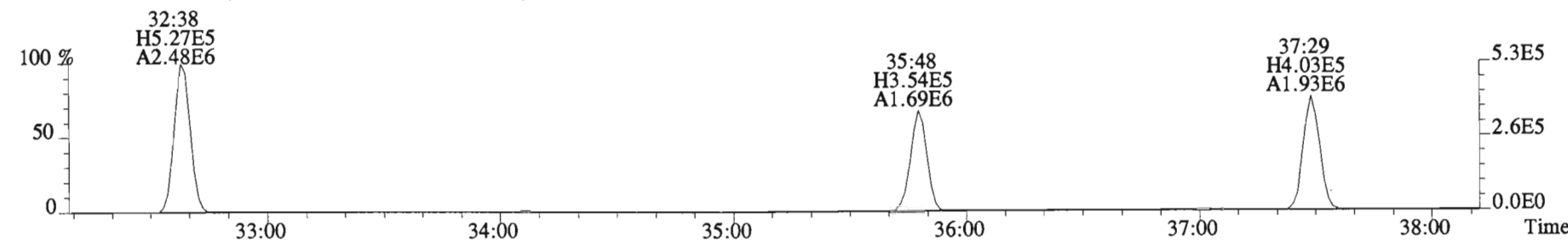
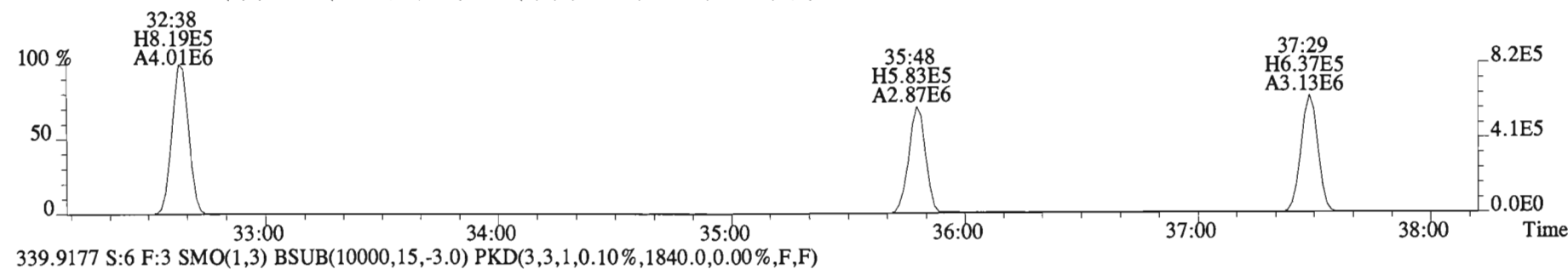
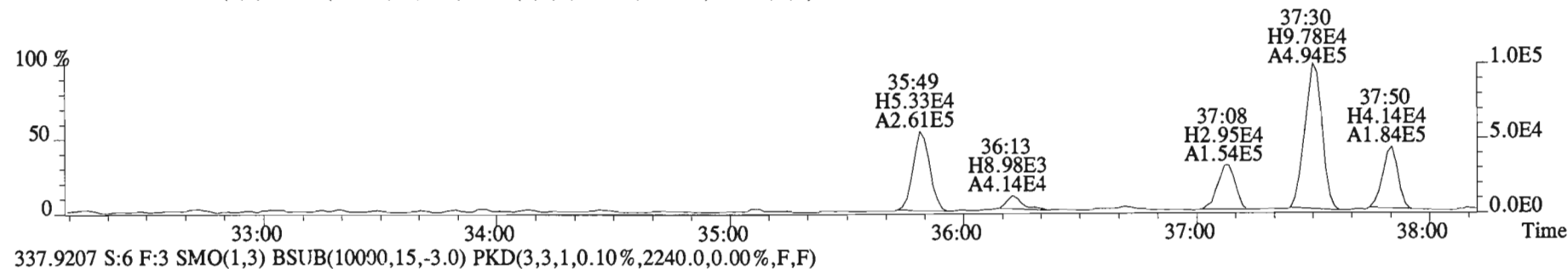
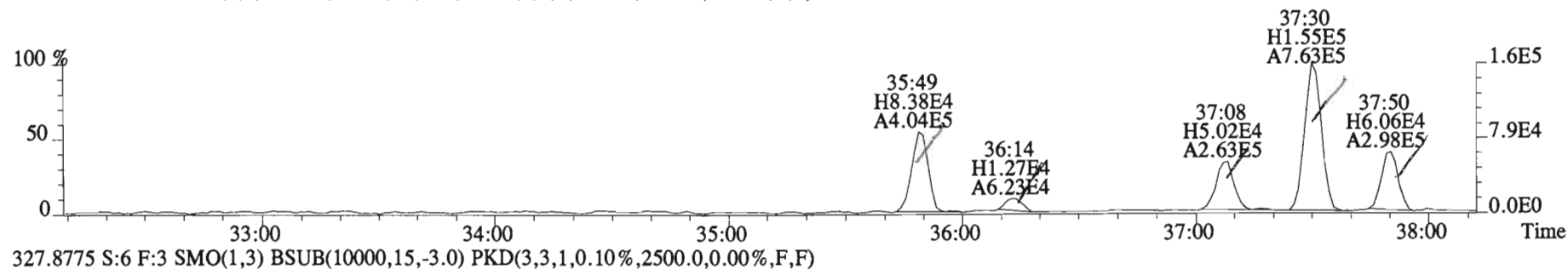
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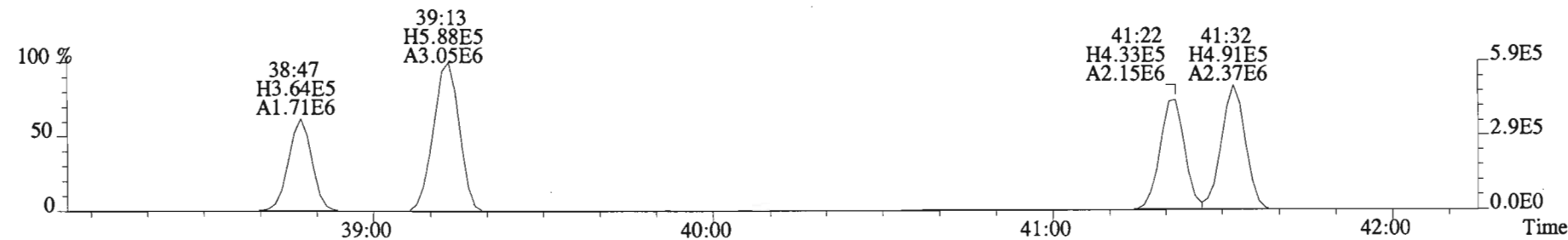
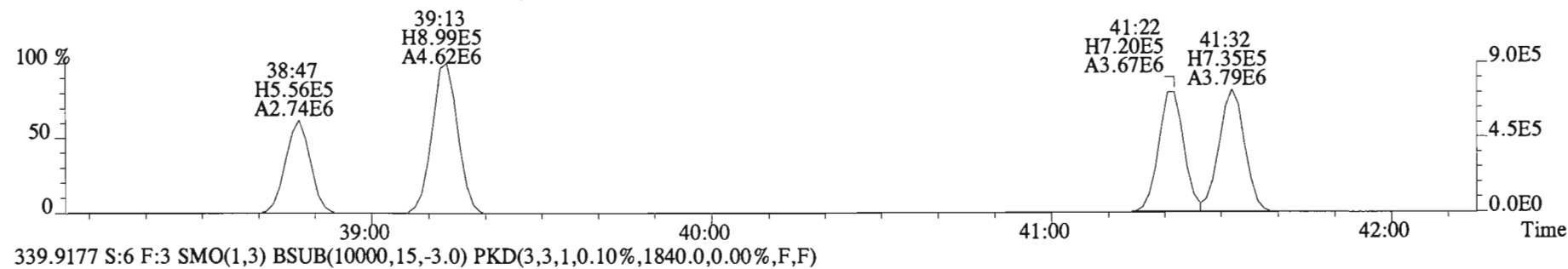
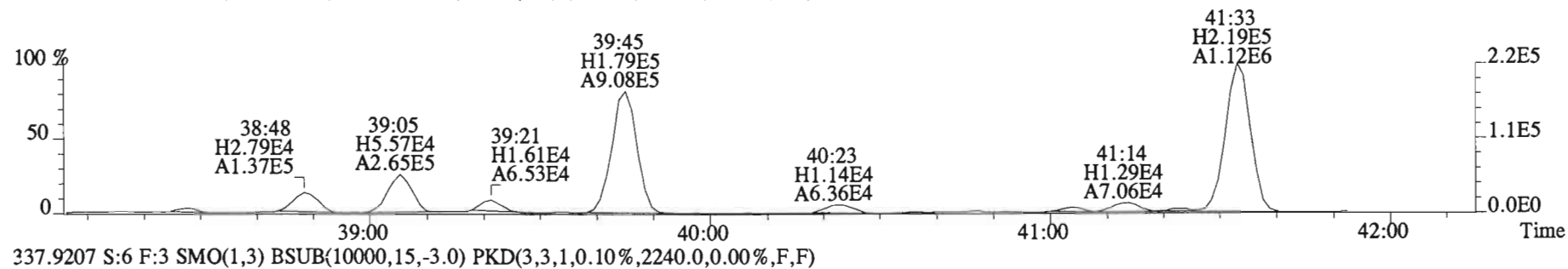
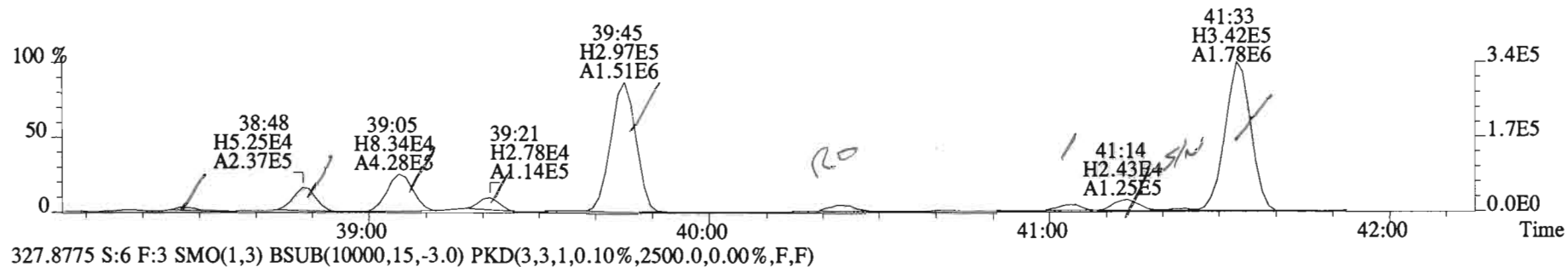
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325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,3140.0,0.00%,F,F)



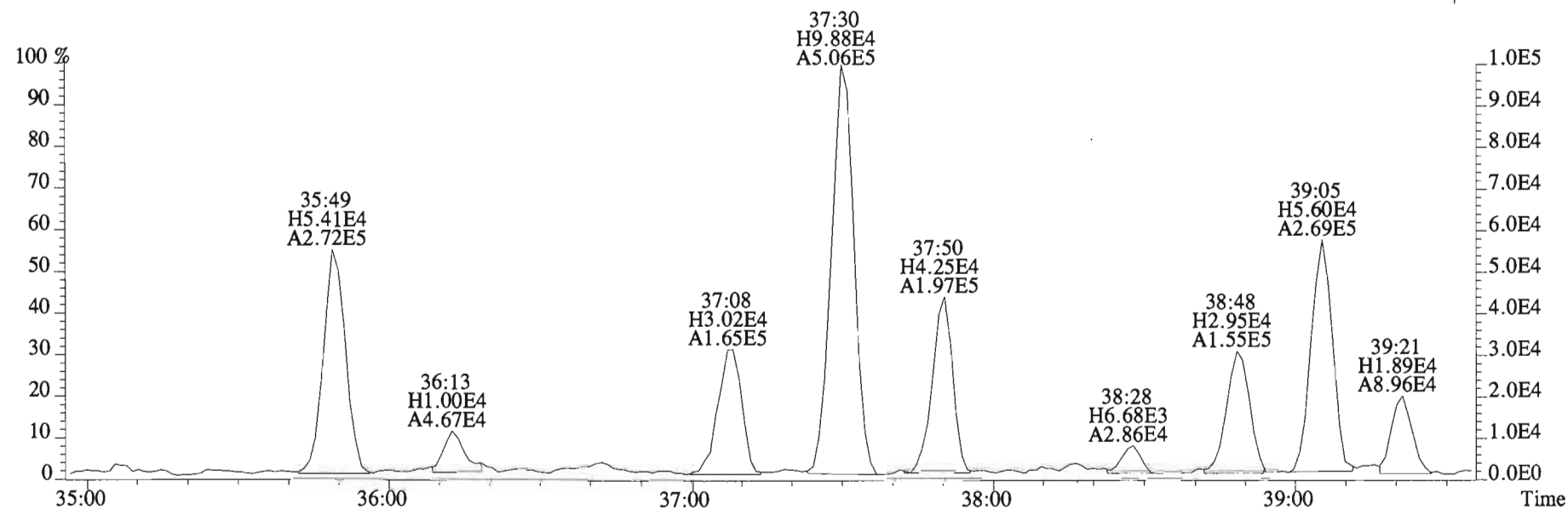
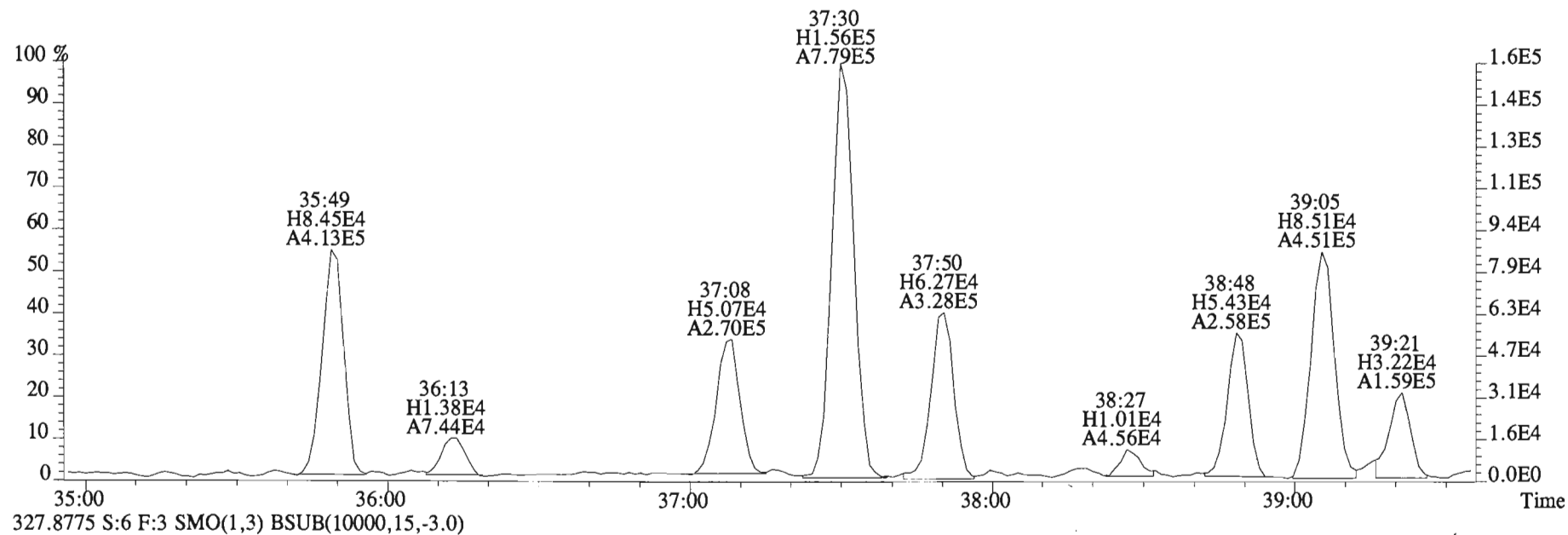
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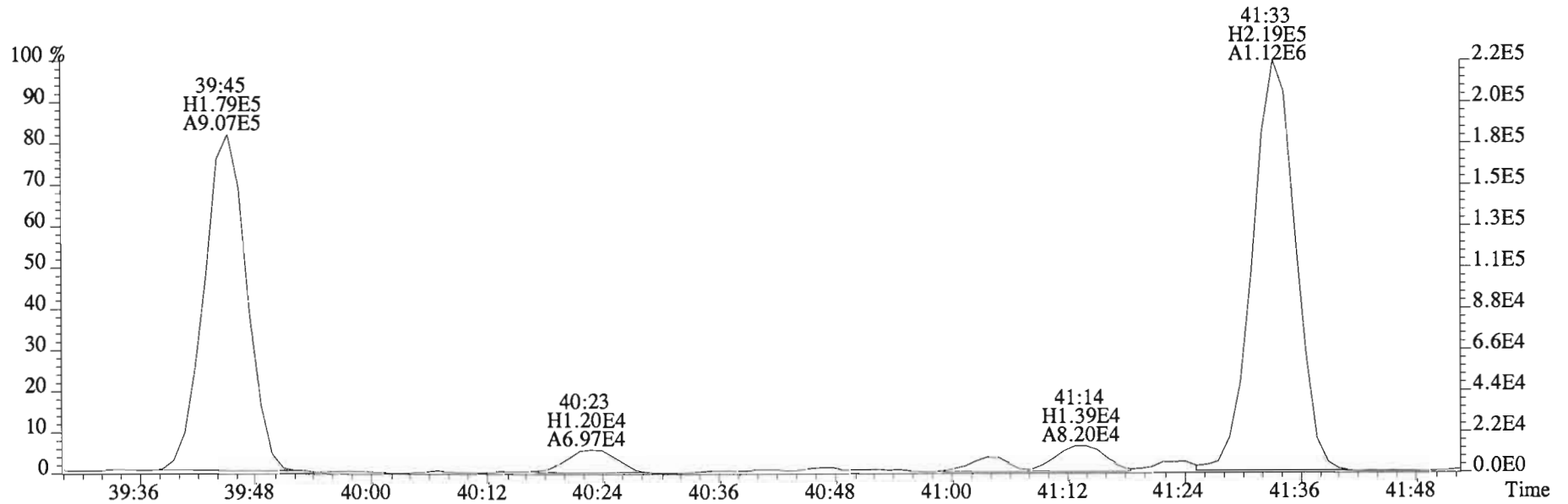
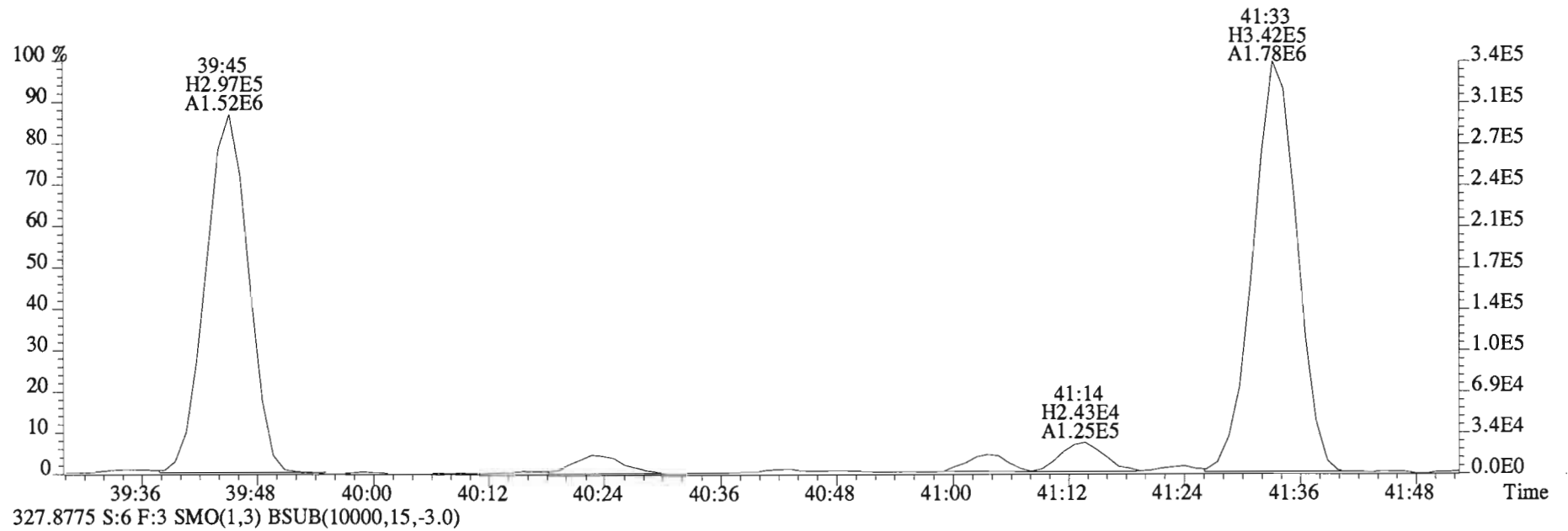
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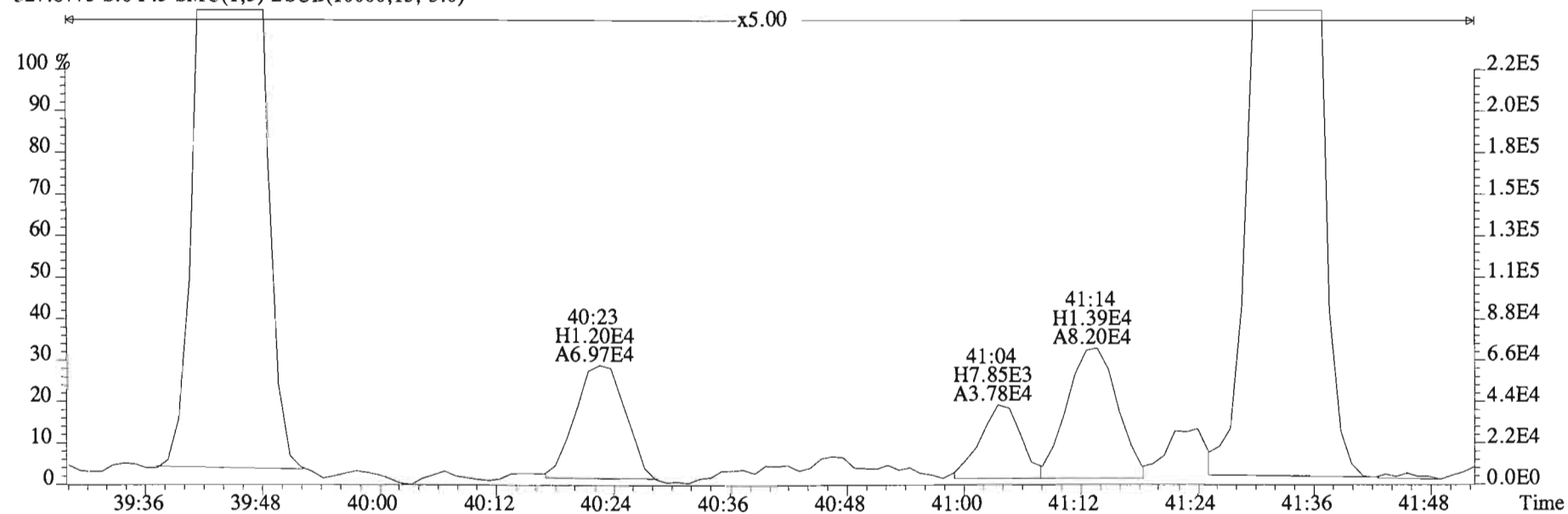
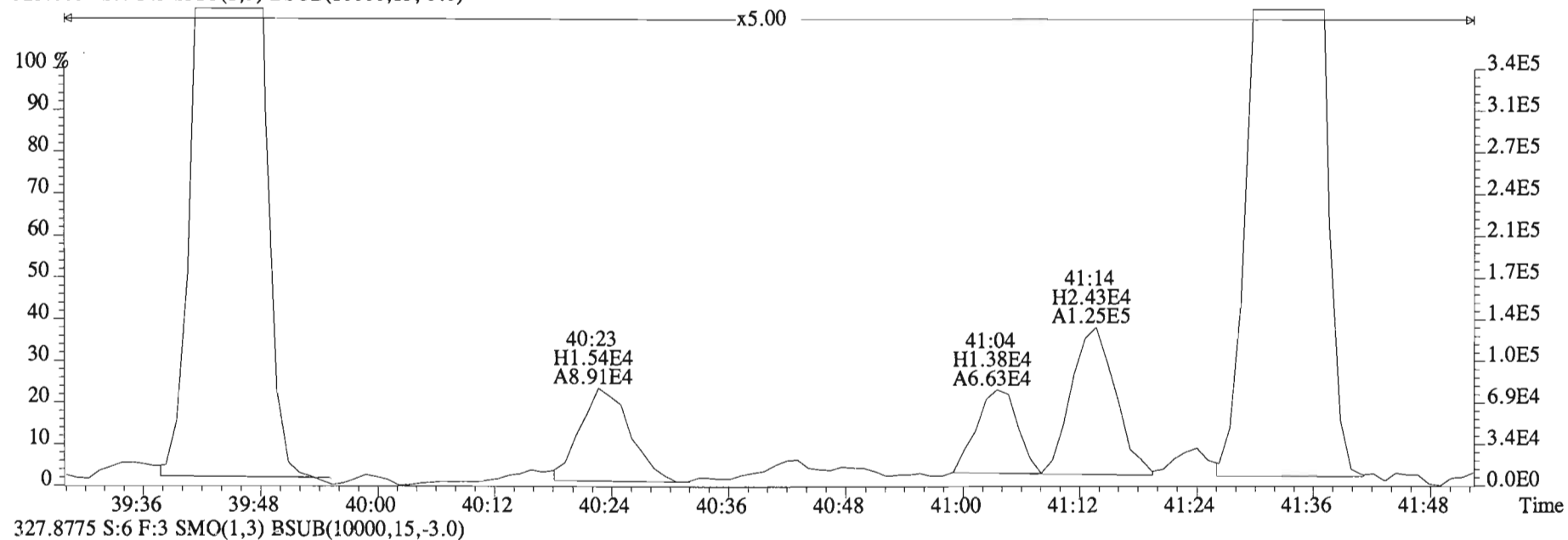
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 325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



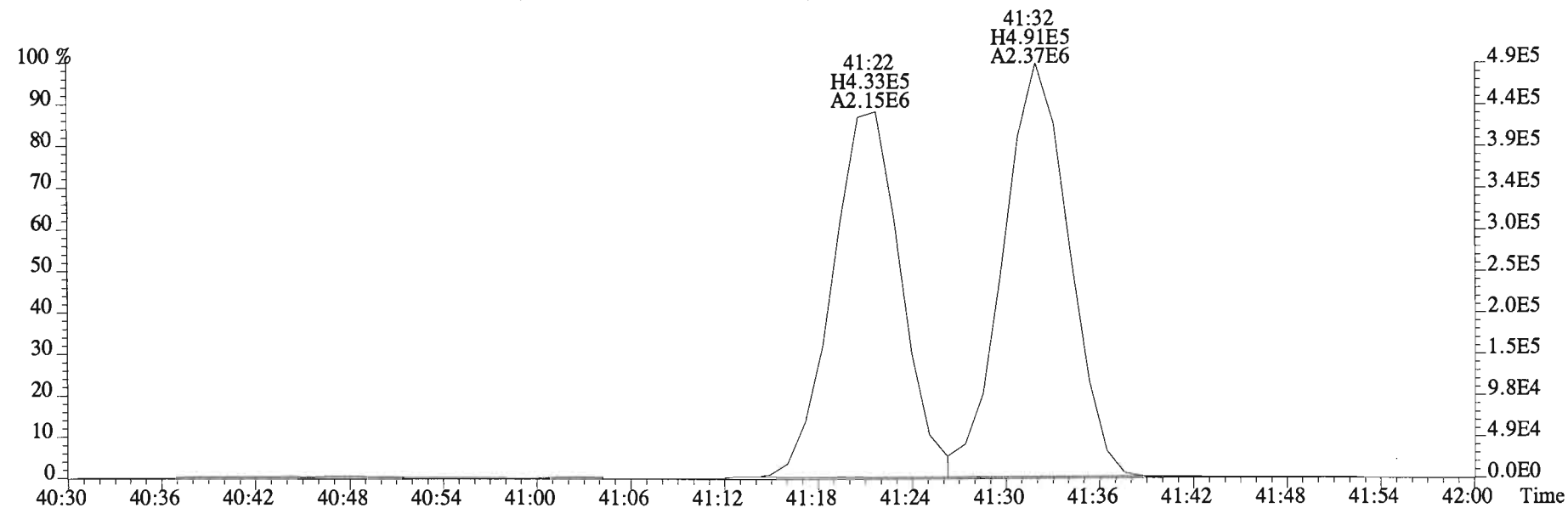
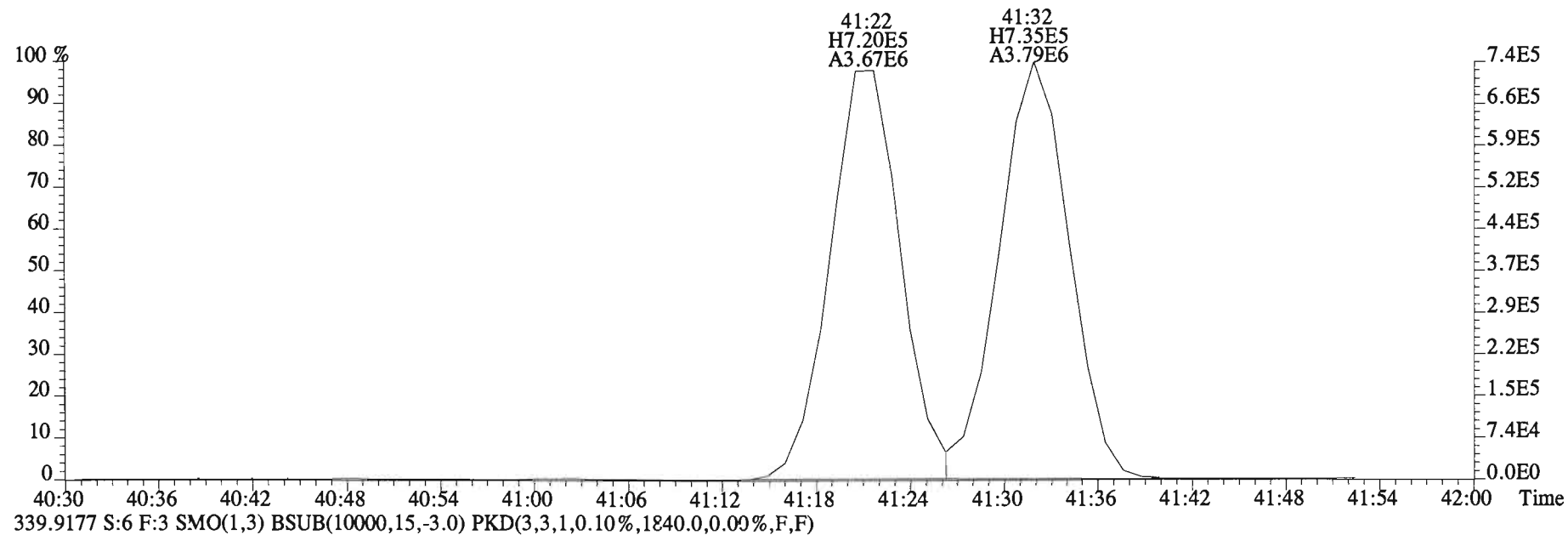
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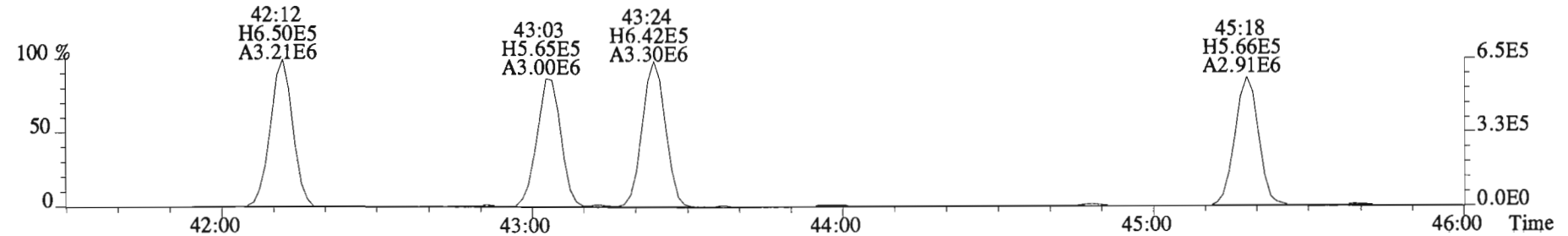
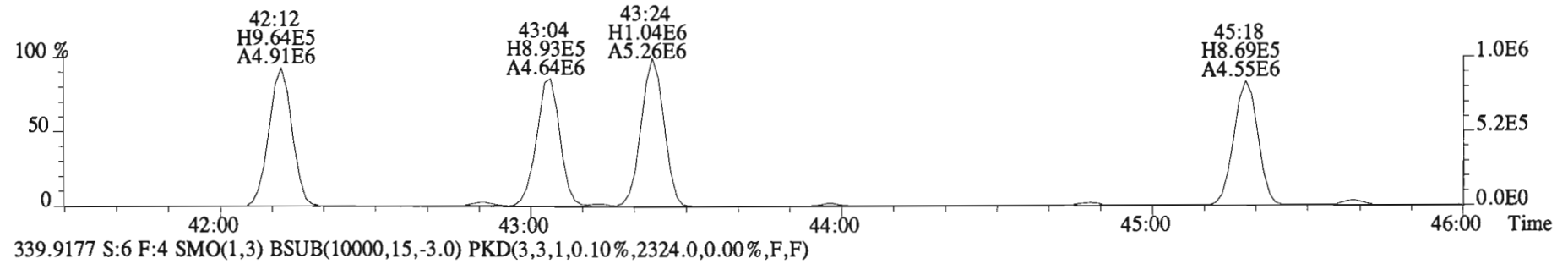
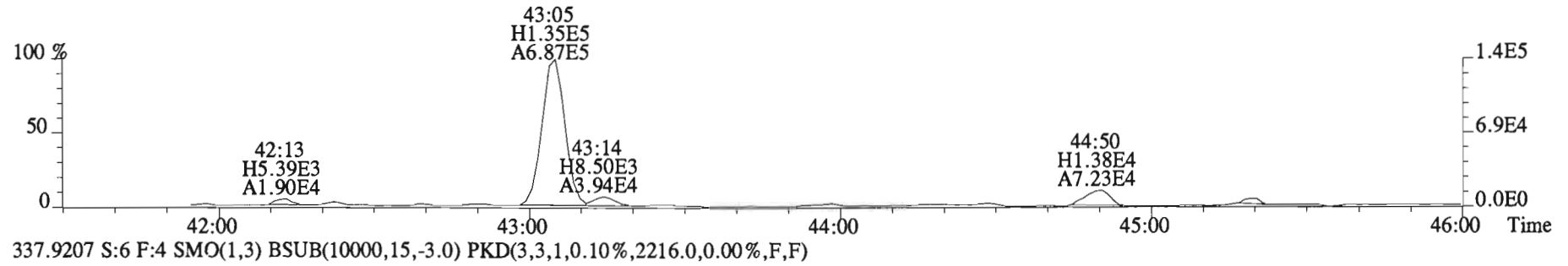
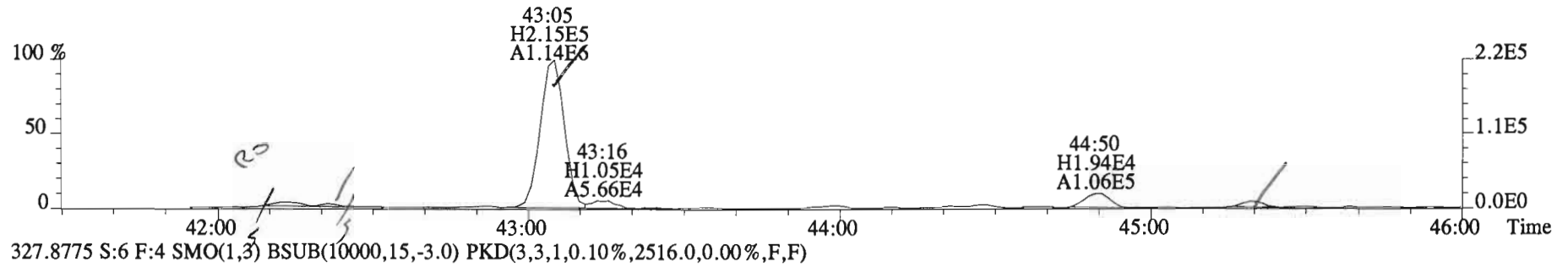
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325.8804 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0)



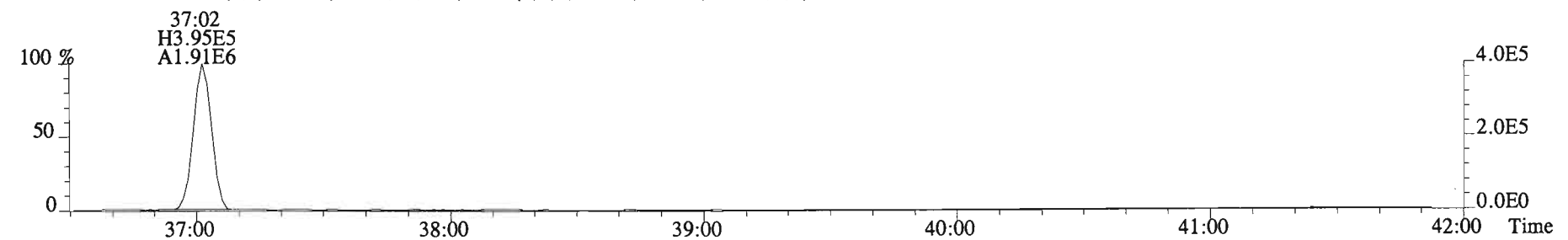
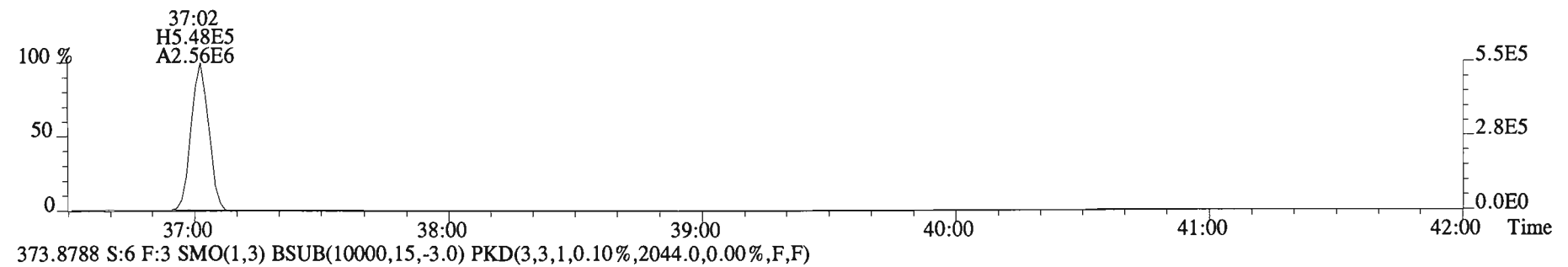
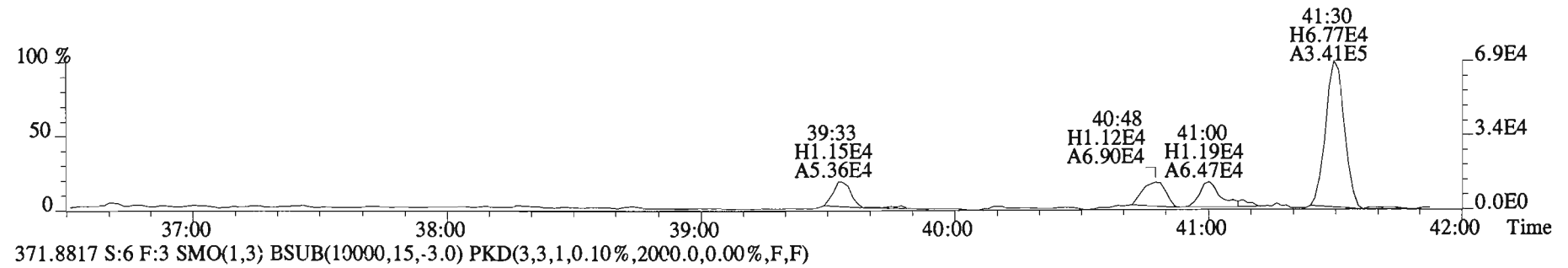
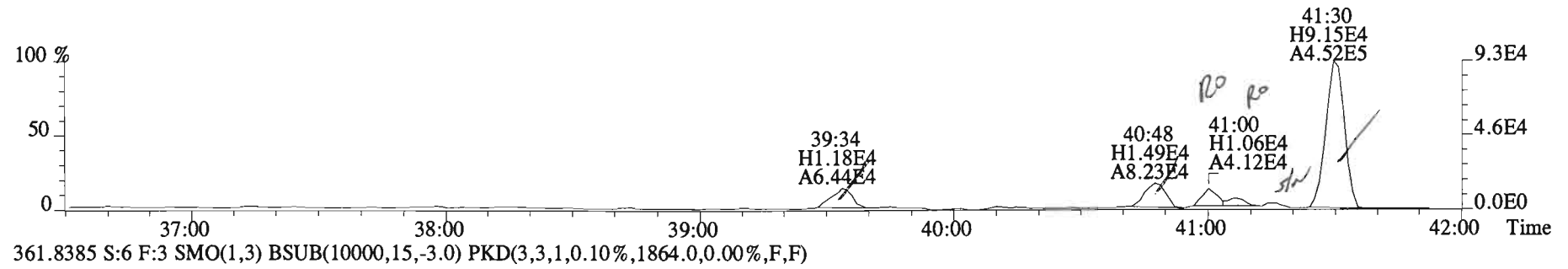
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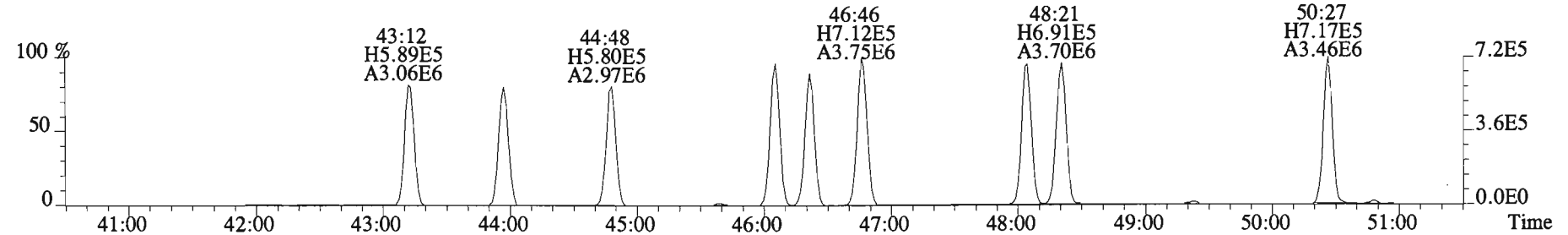
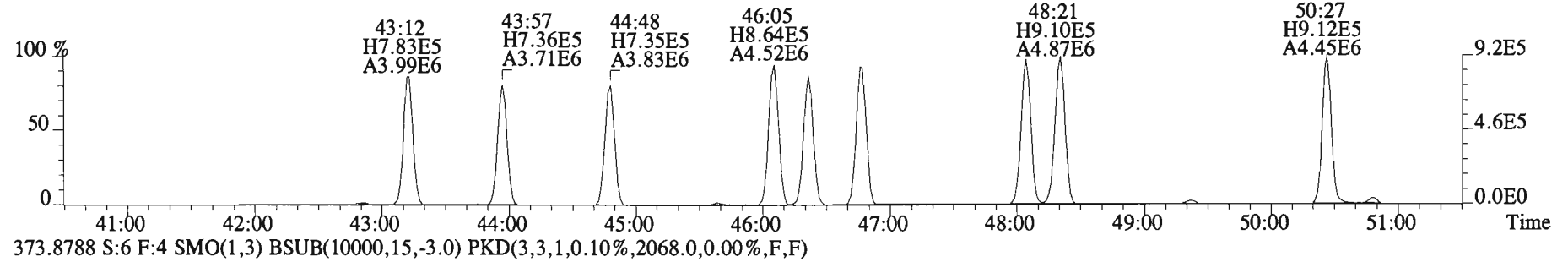
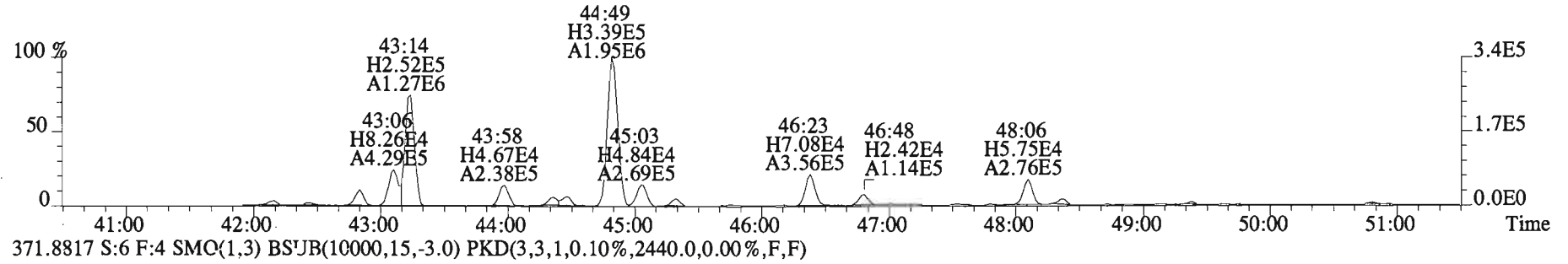
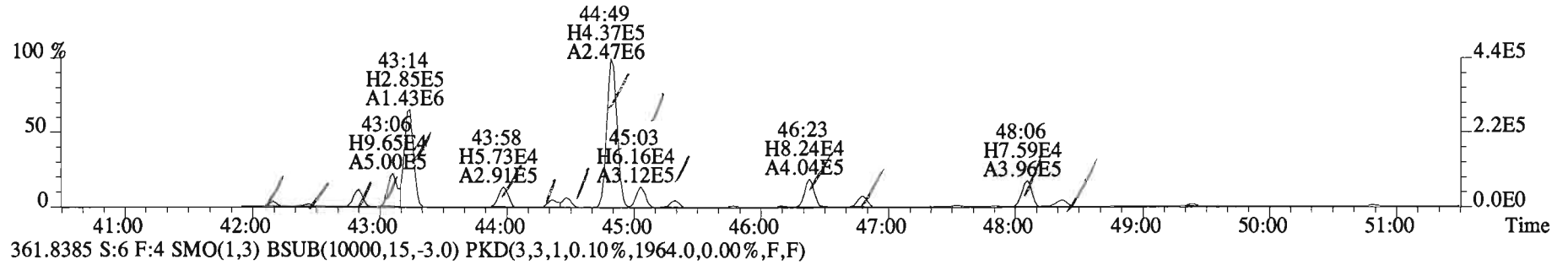
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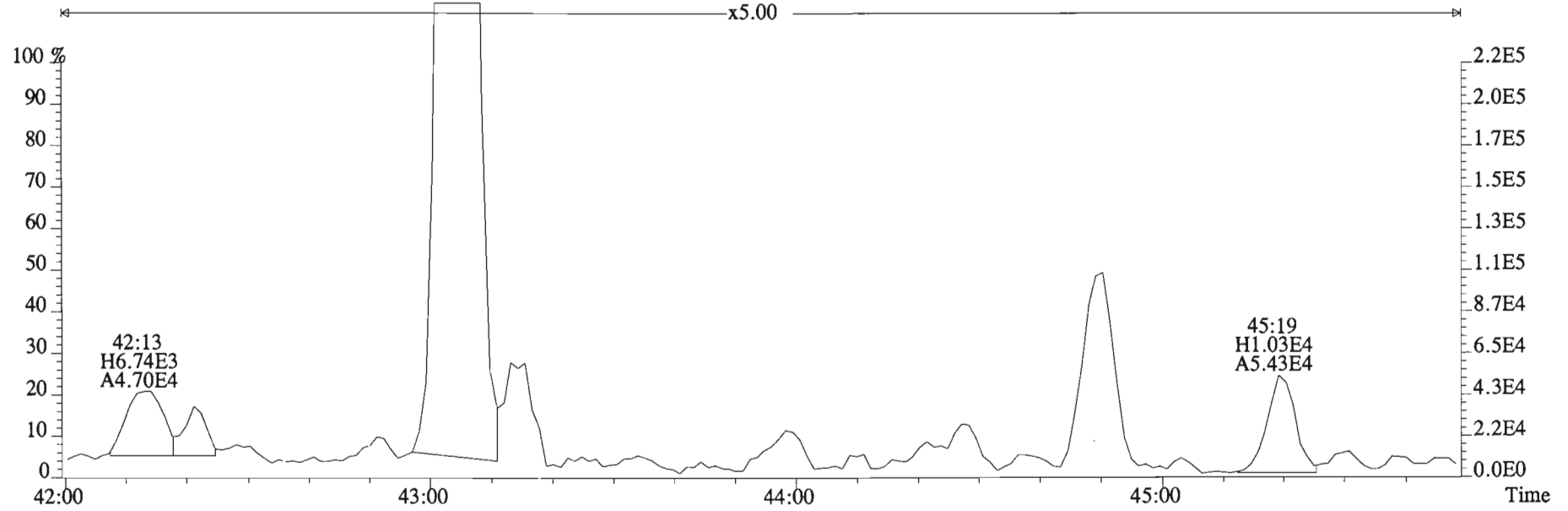
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Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
359.8415 S:6 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2016.0,0.00%,F,F)



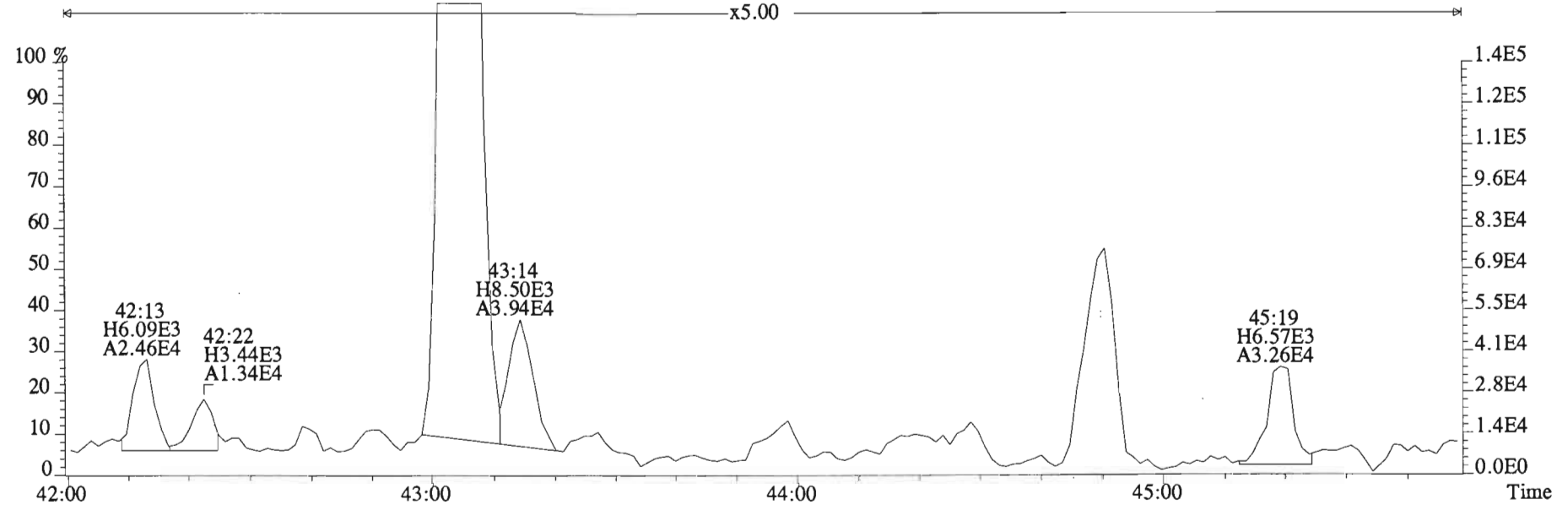
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Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
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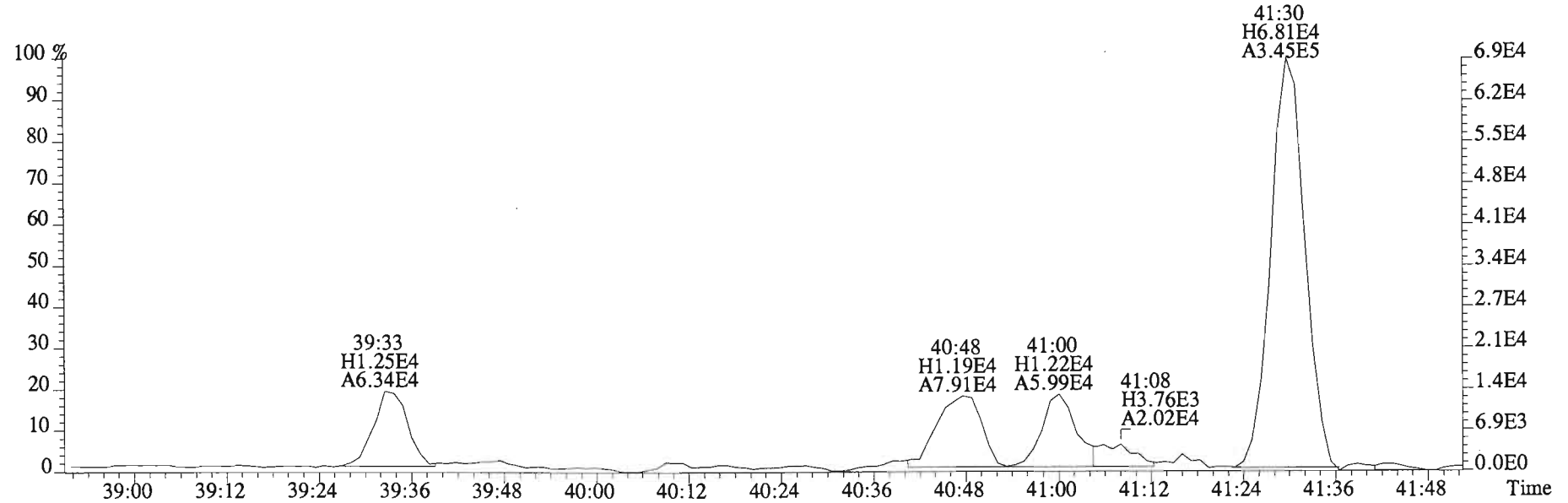
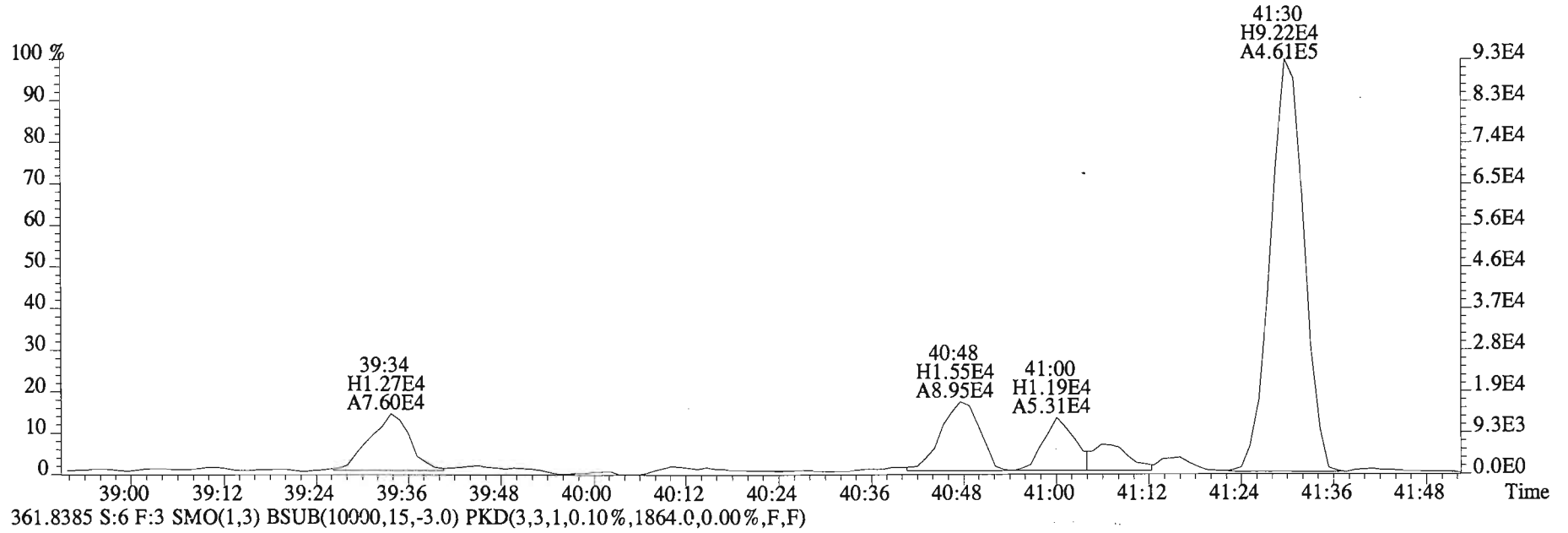
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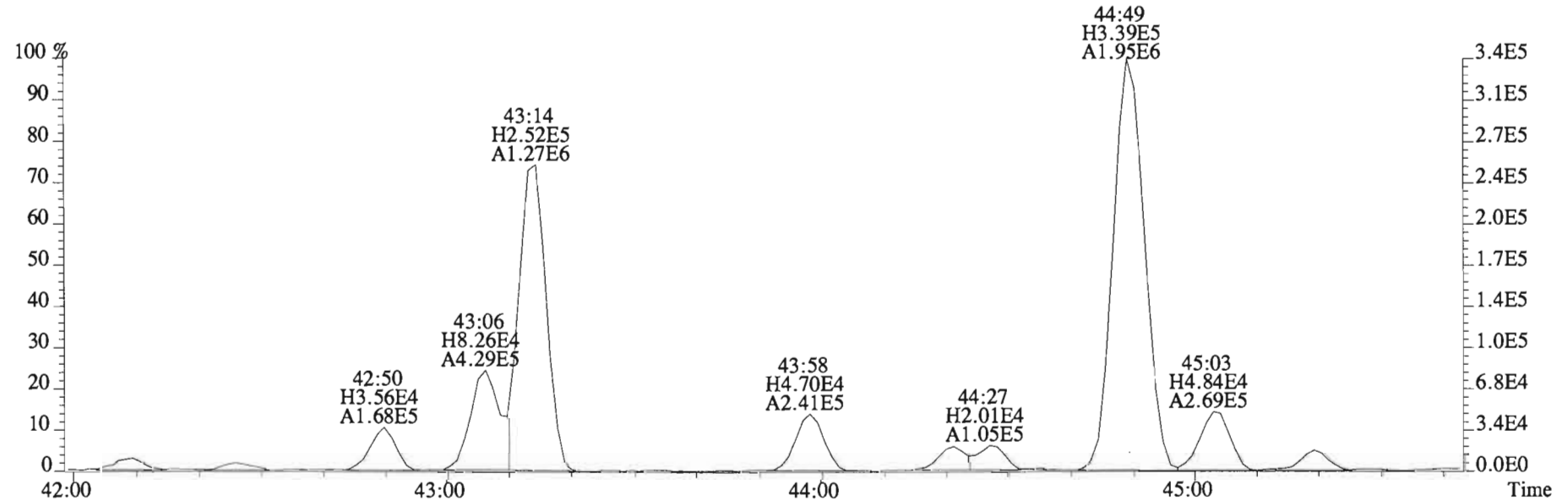
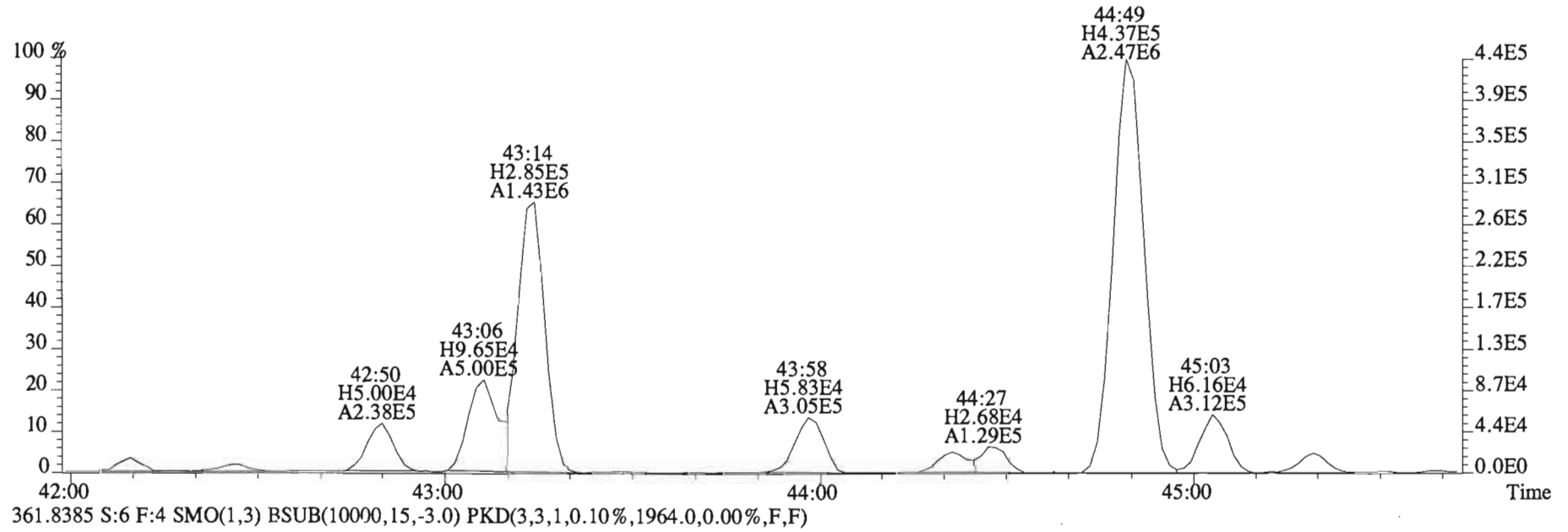
327.8775 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2516.0,0.00%,F,F)



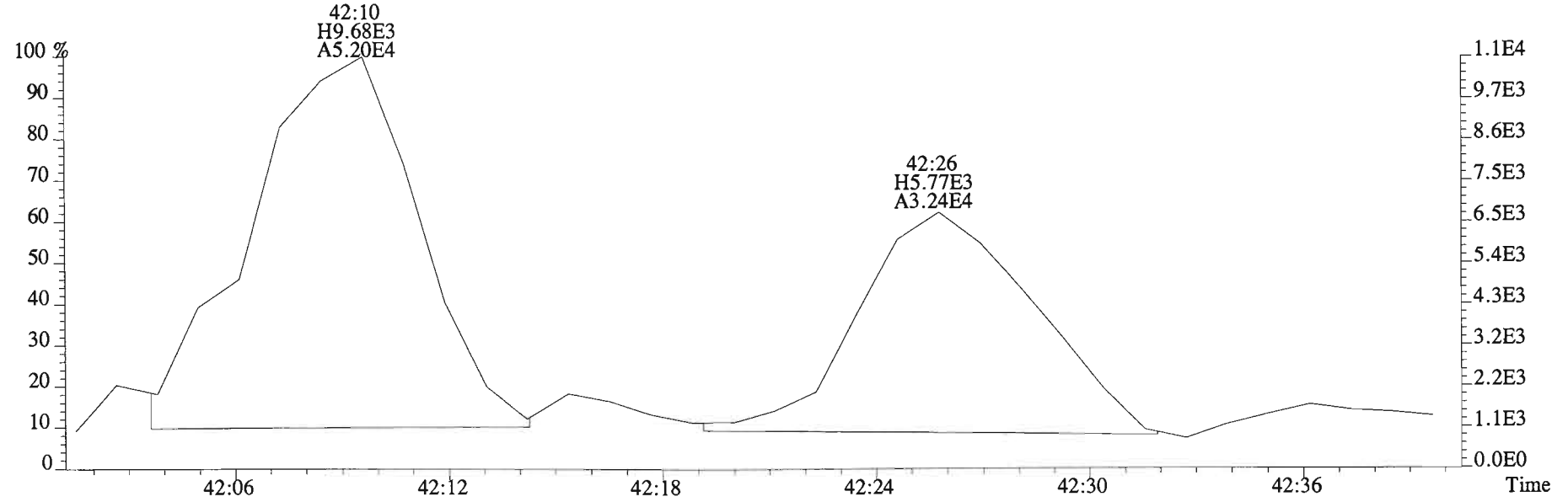
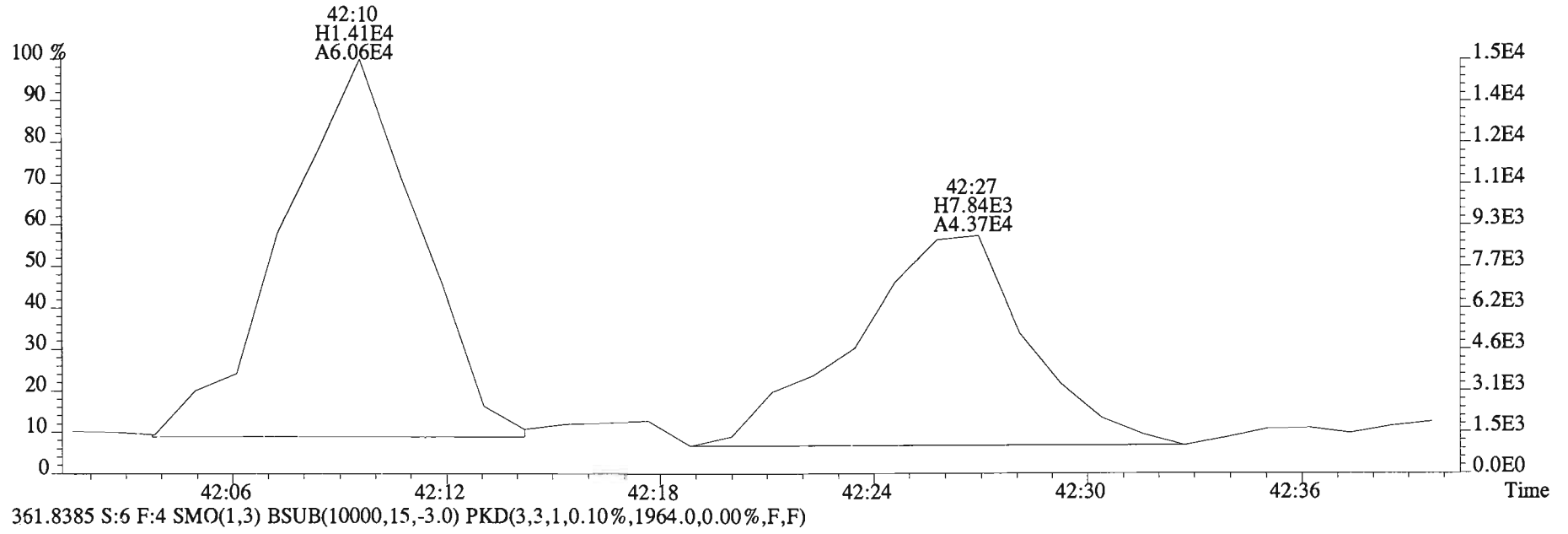
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Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
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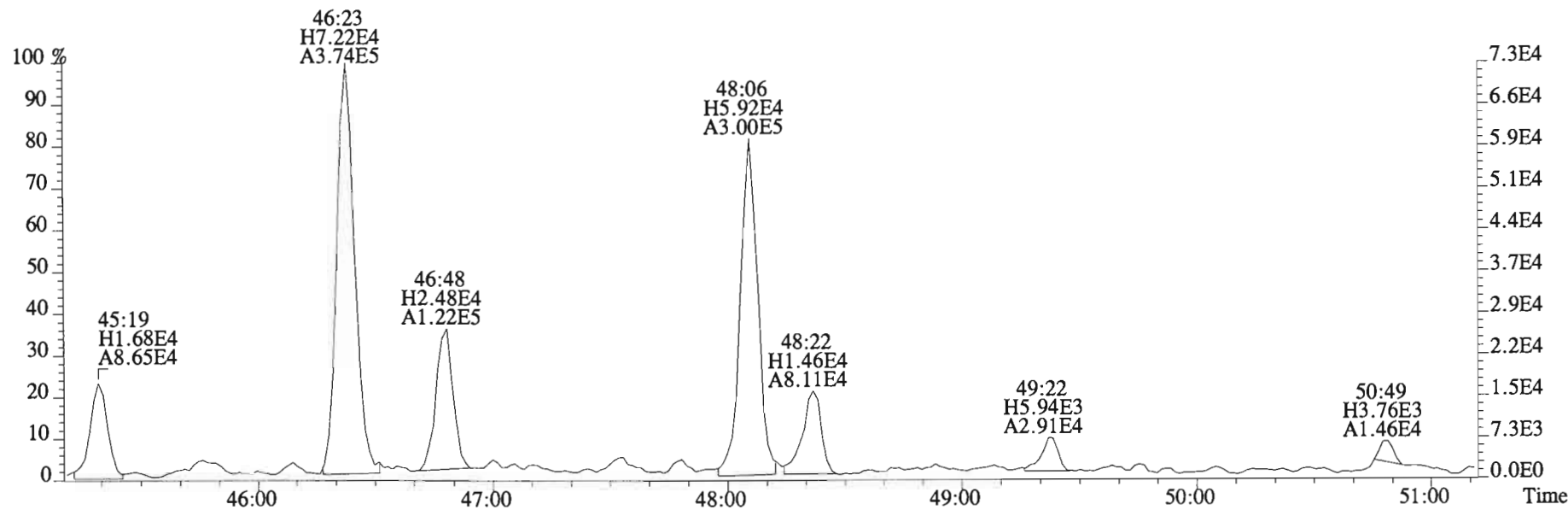
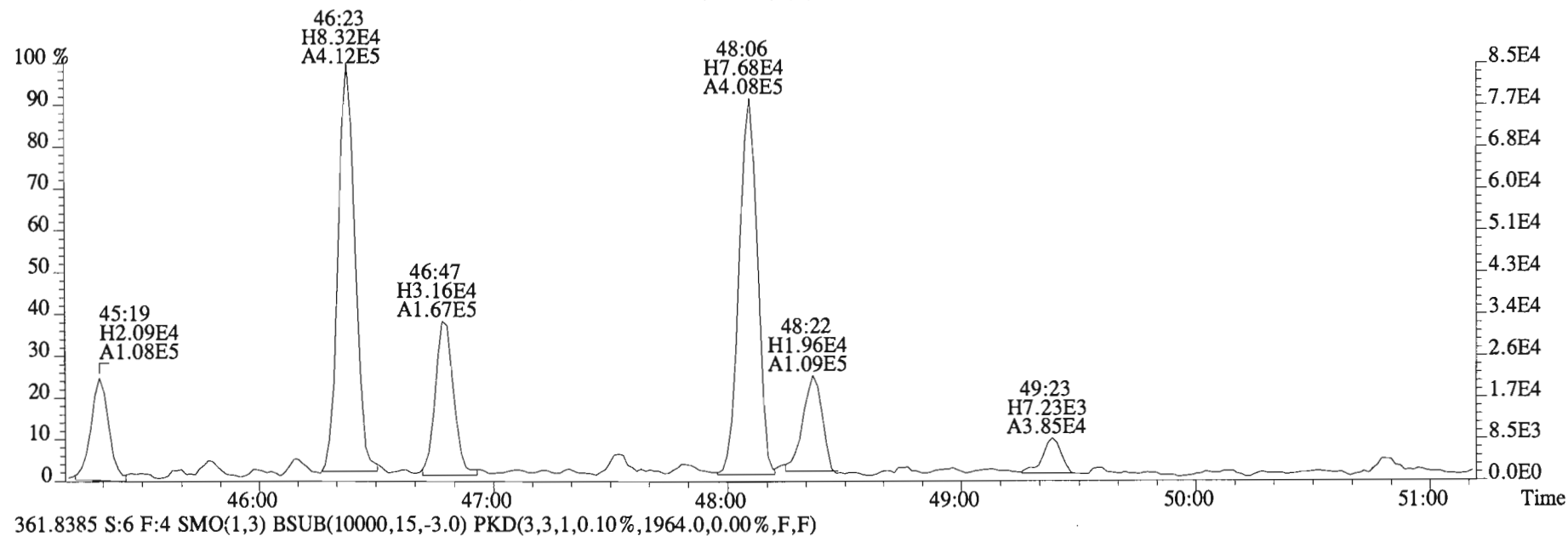
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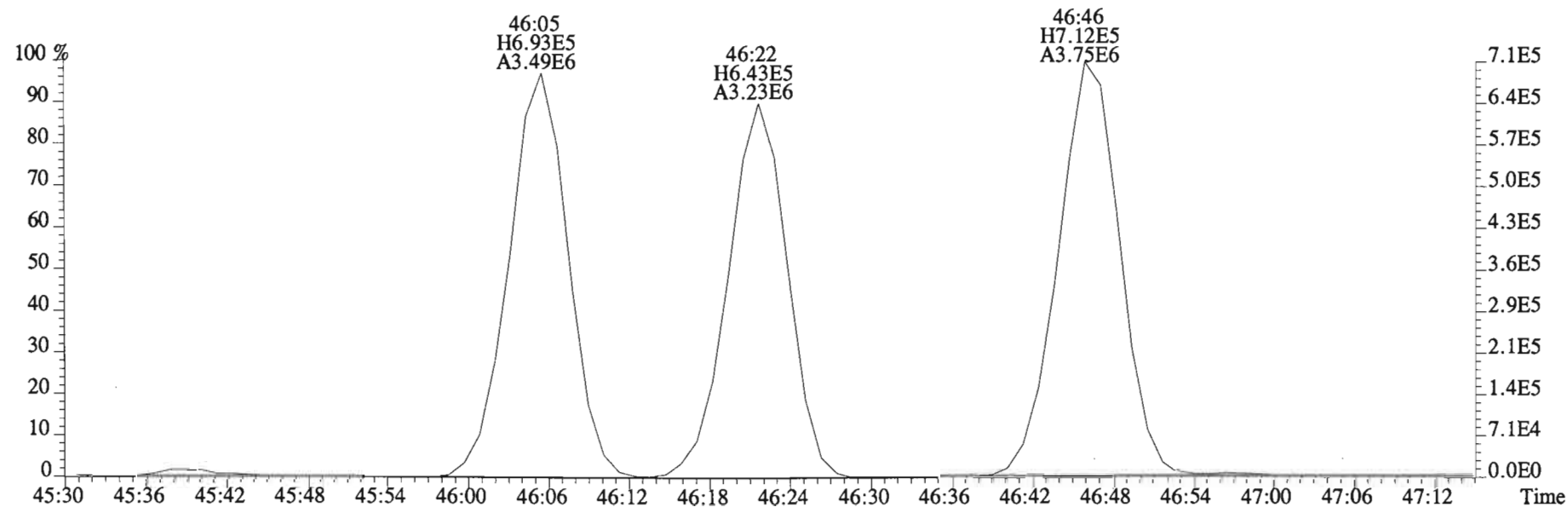
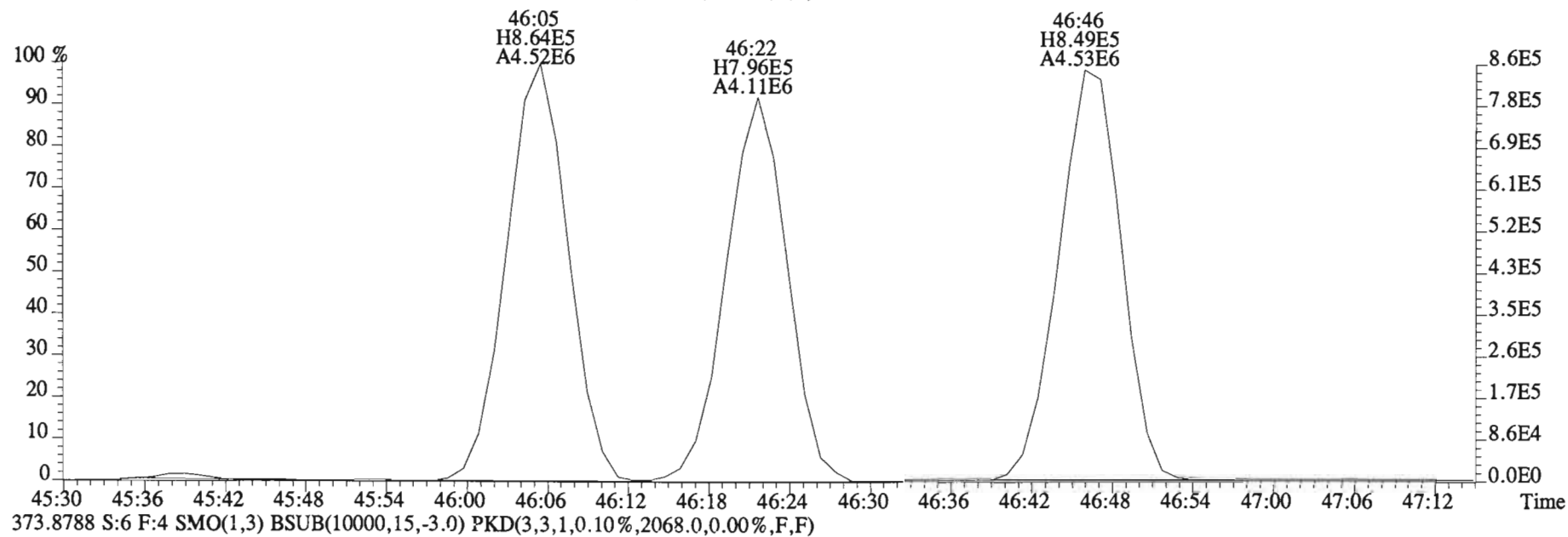
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Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
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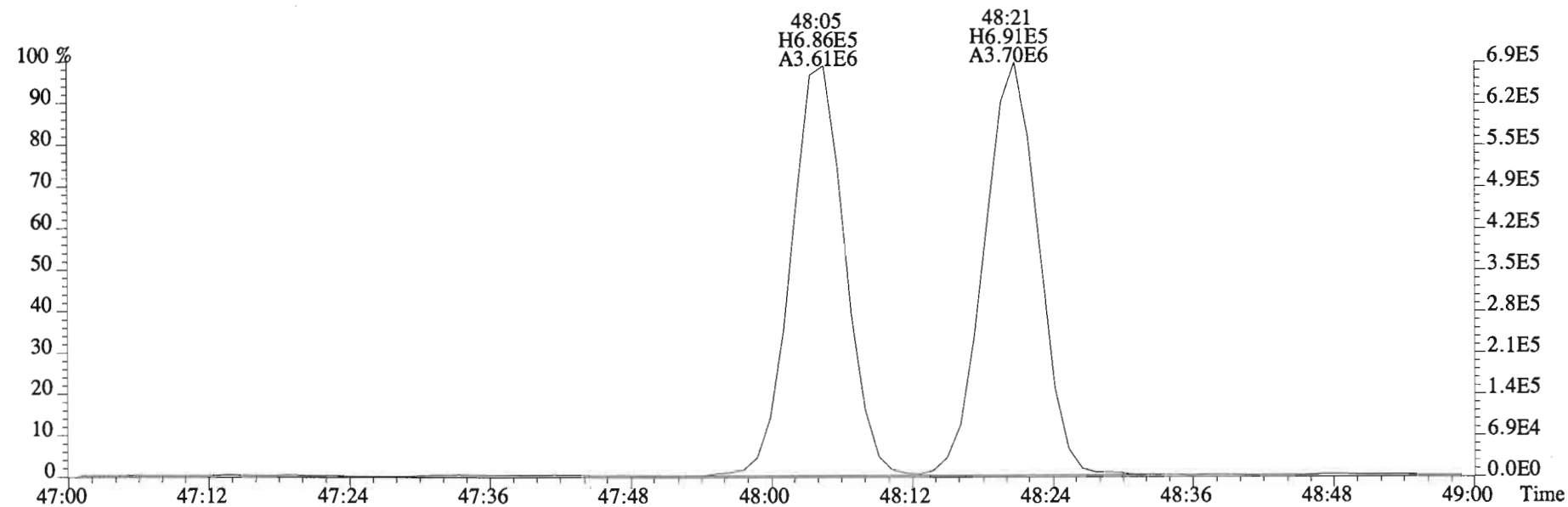
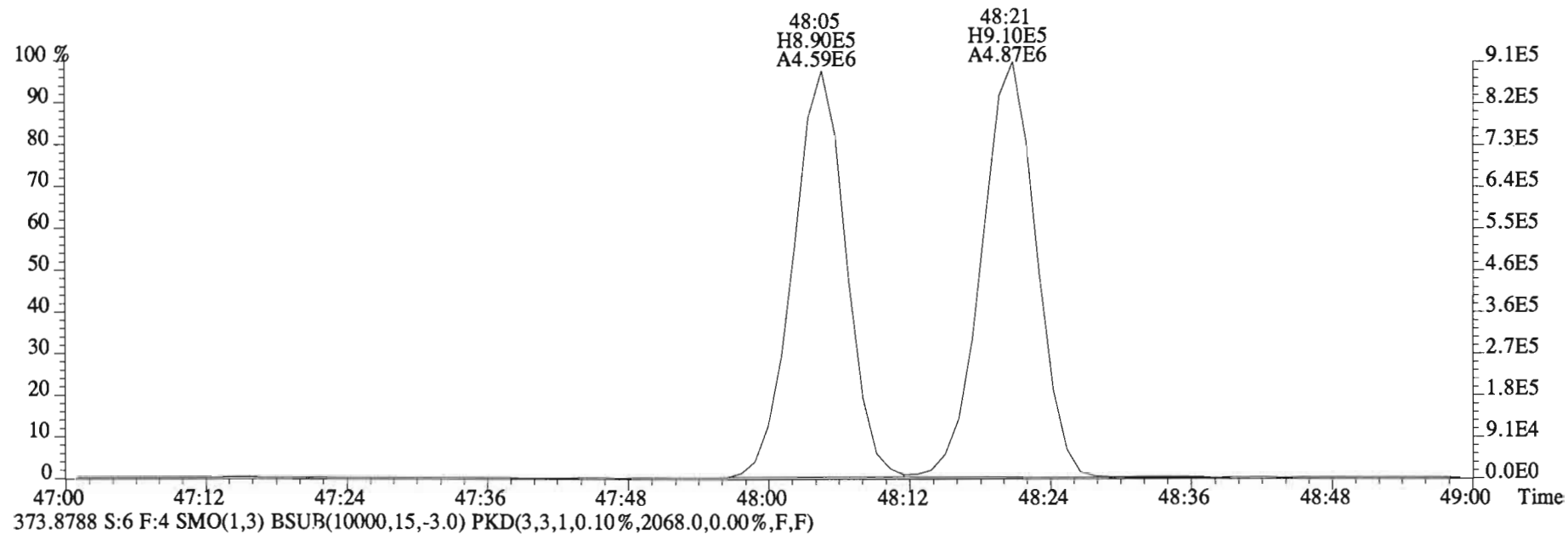
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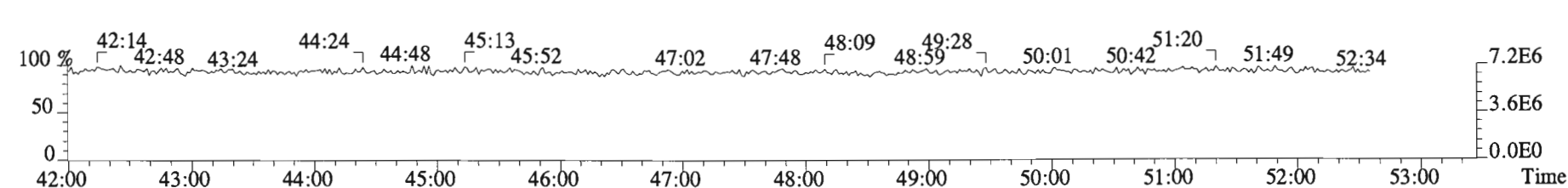
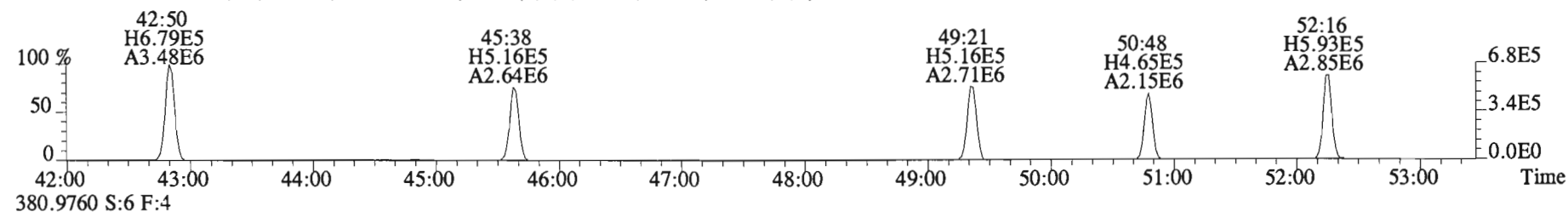
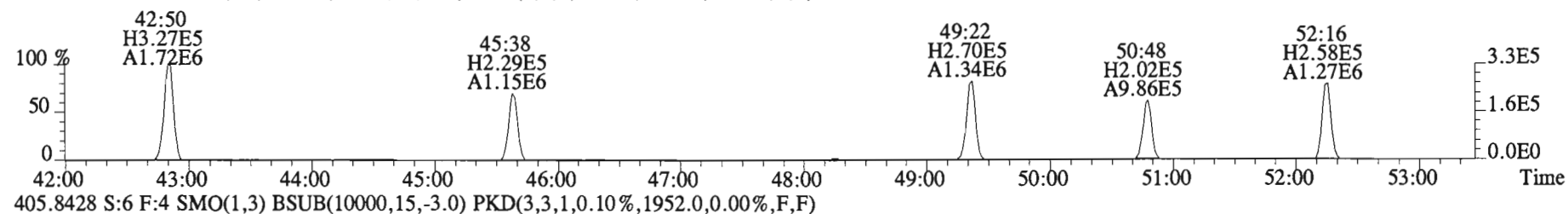
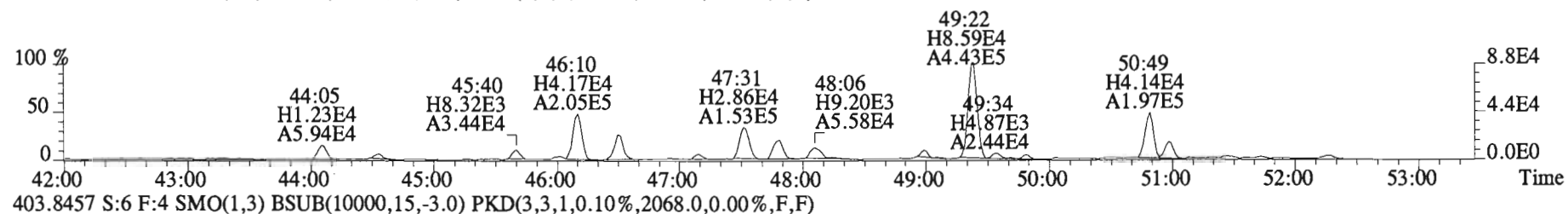
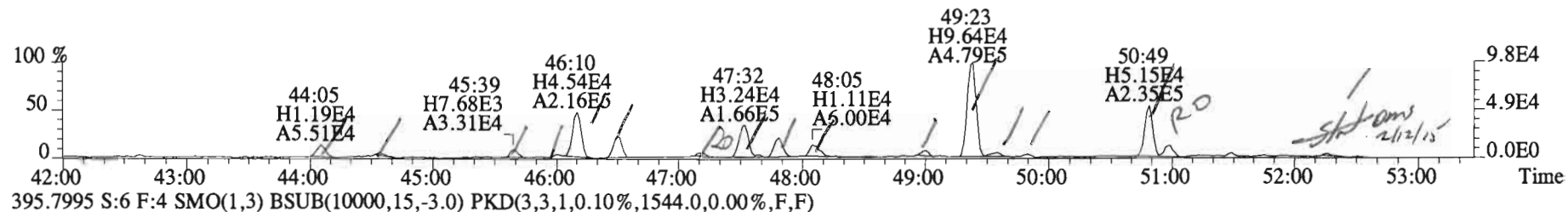
File:150205E1 #1-555 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2440.0,0.00%,F,F)



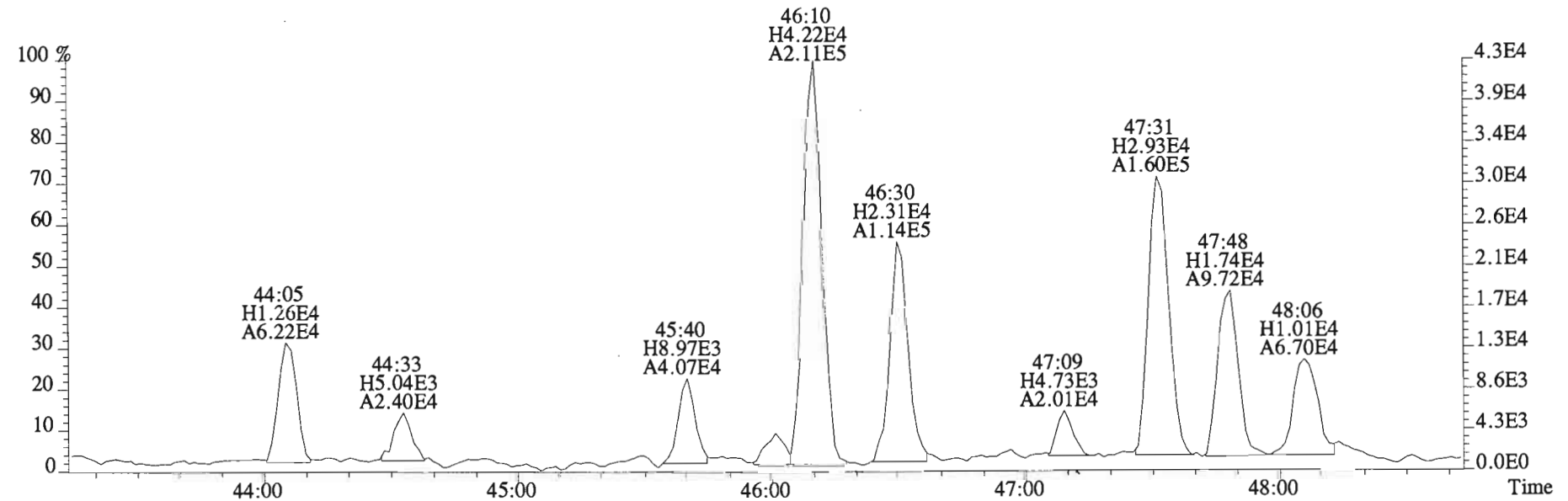
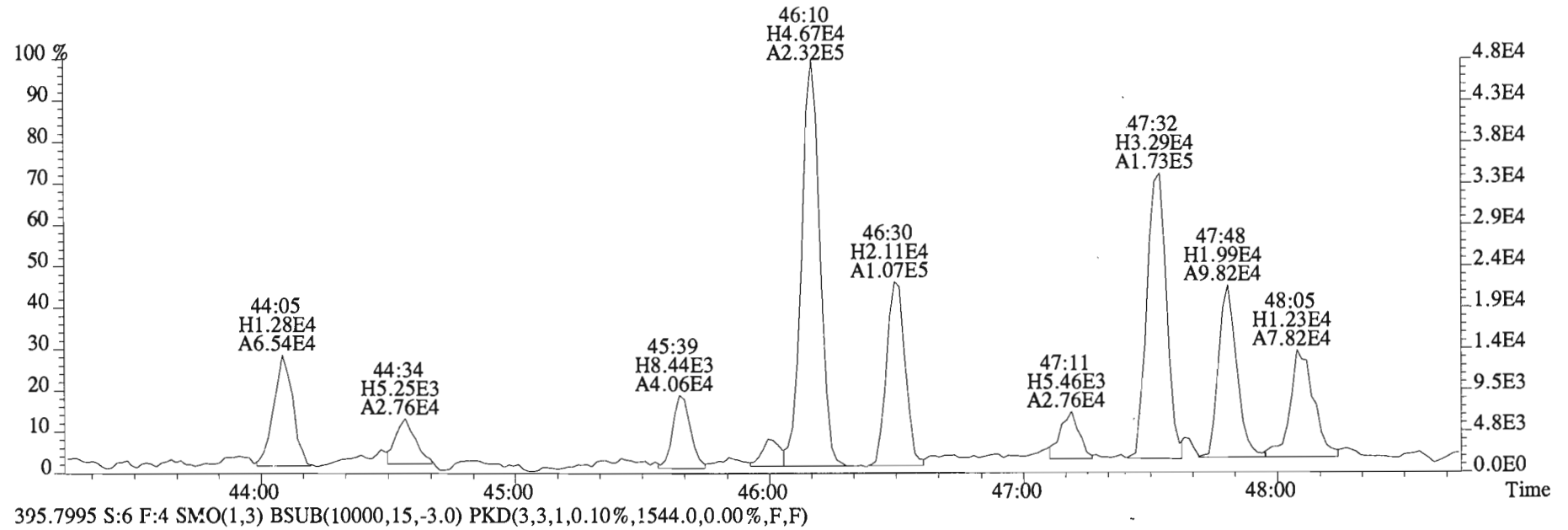
File:150205E1 #1-555 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
371.8817 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2440.0,0.00%,F,F)



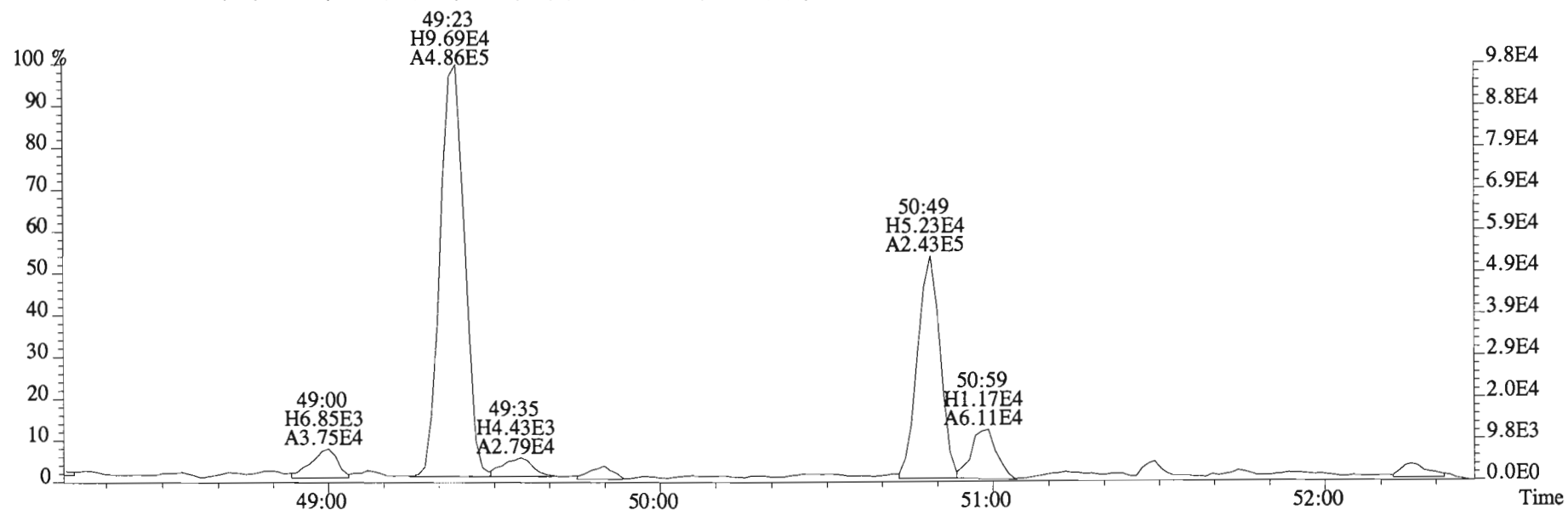
File:150205E1 #1-555 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)



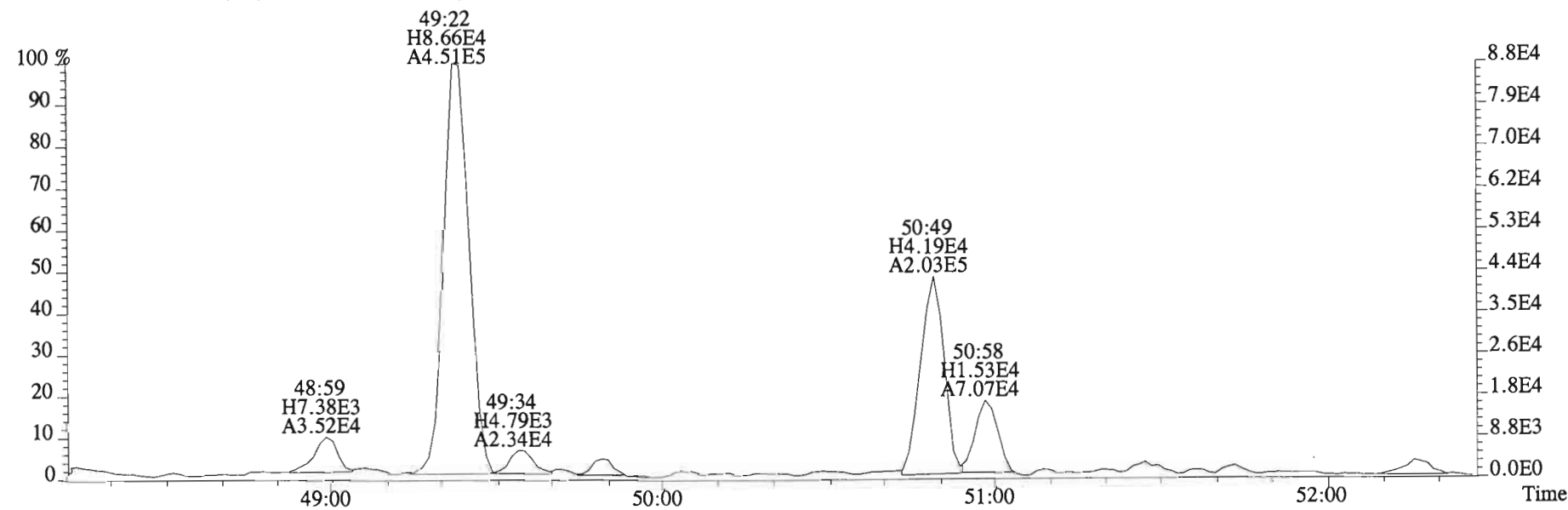
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 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
 393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)



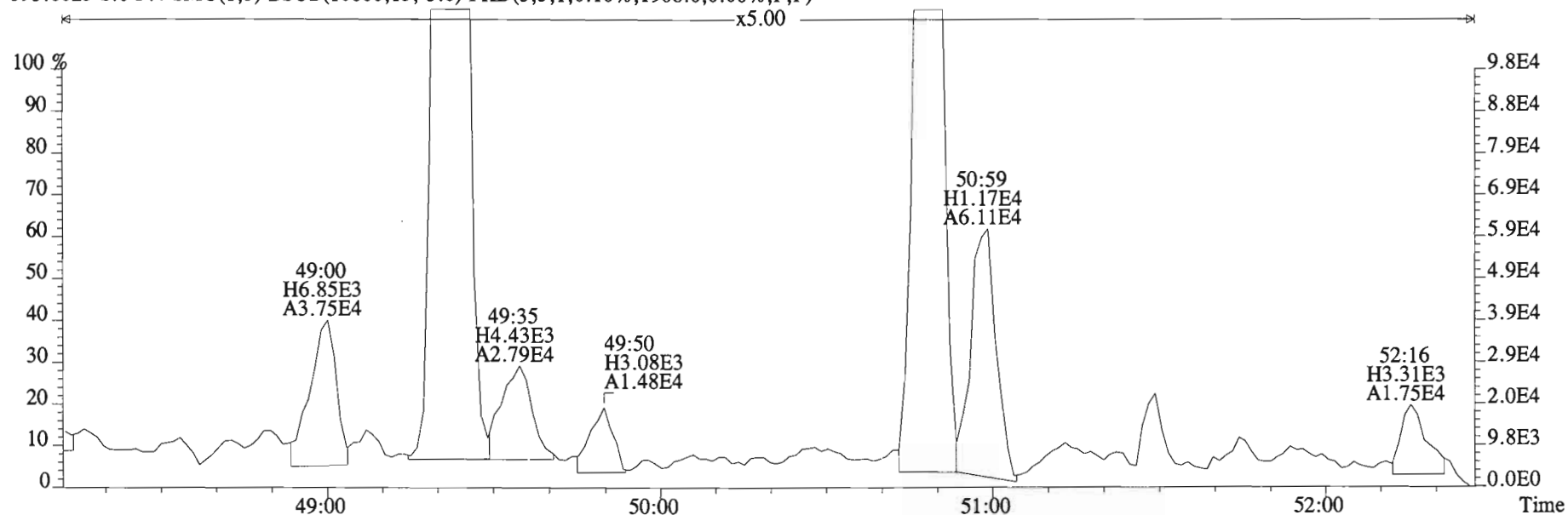
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 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
 393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)



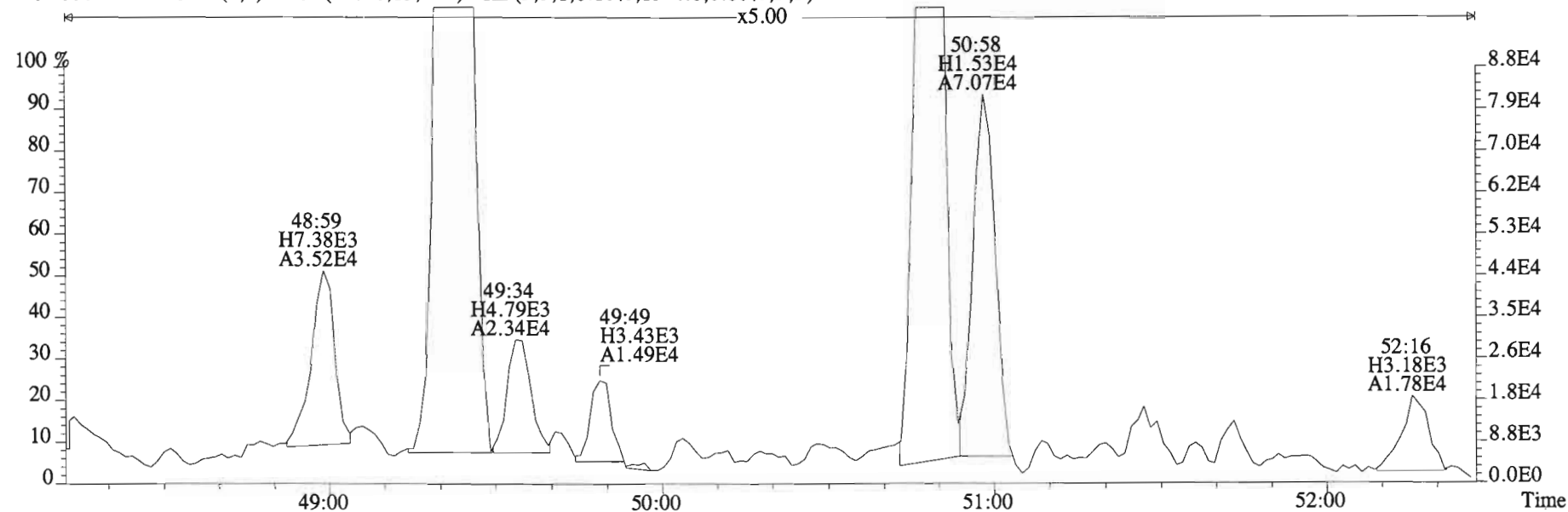
395.7995 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1544.0,0.00%,F,F)



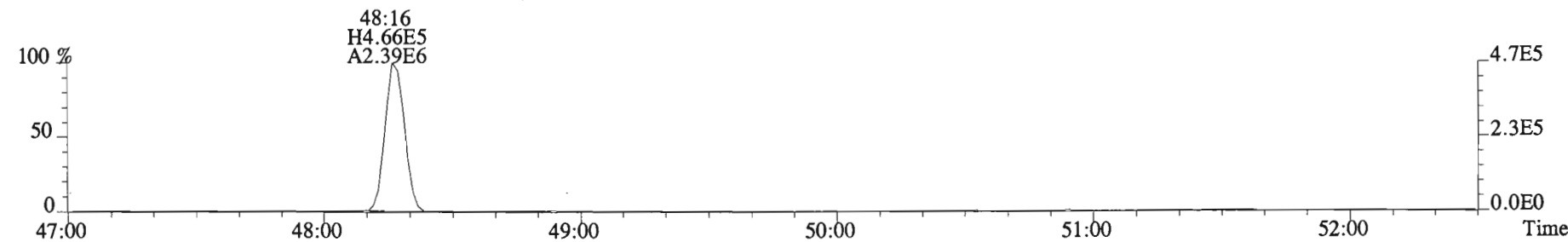
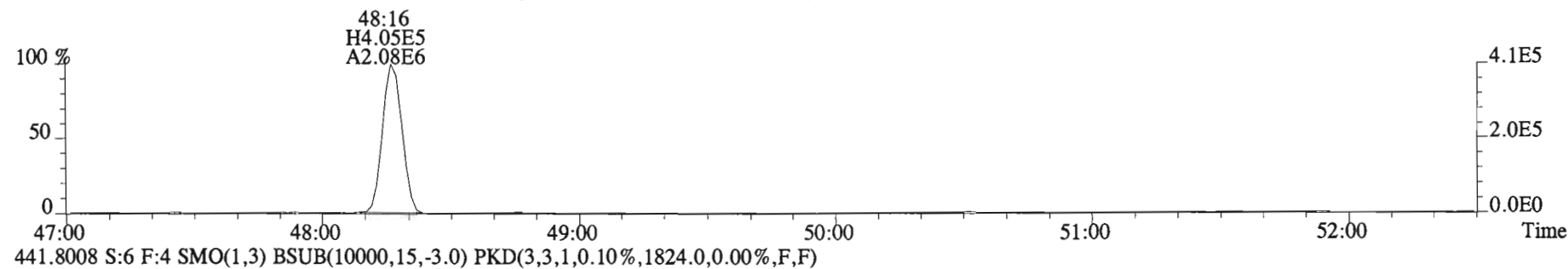
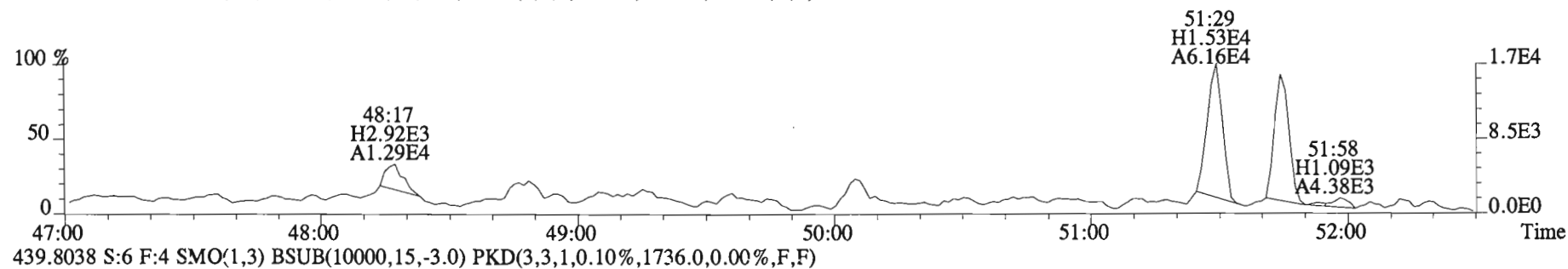
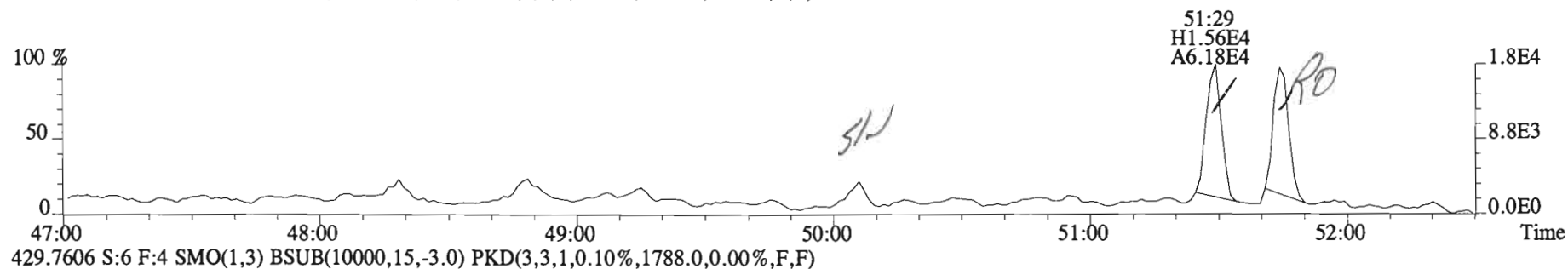
File:150205E1 #1-555 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
 393.8025 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1908.0,0.00%,F,F)



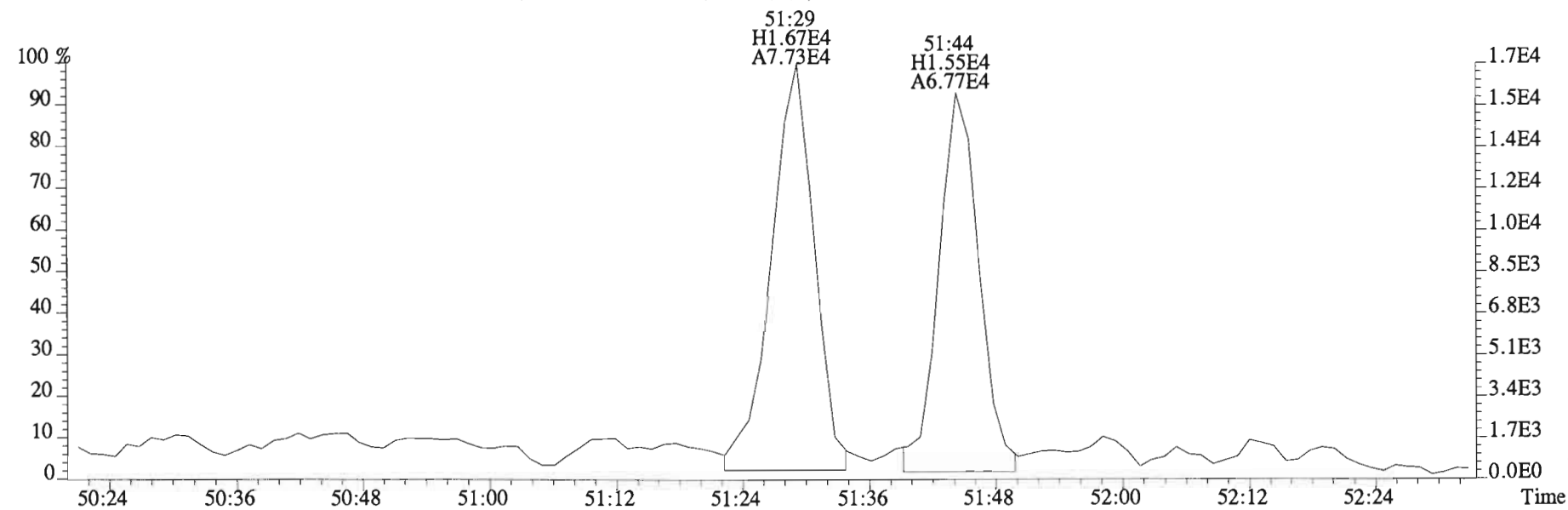
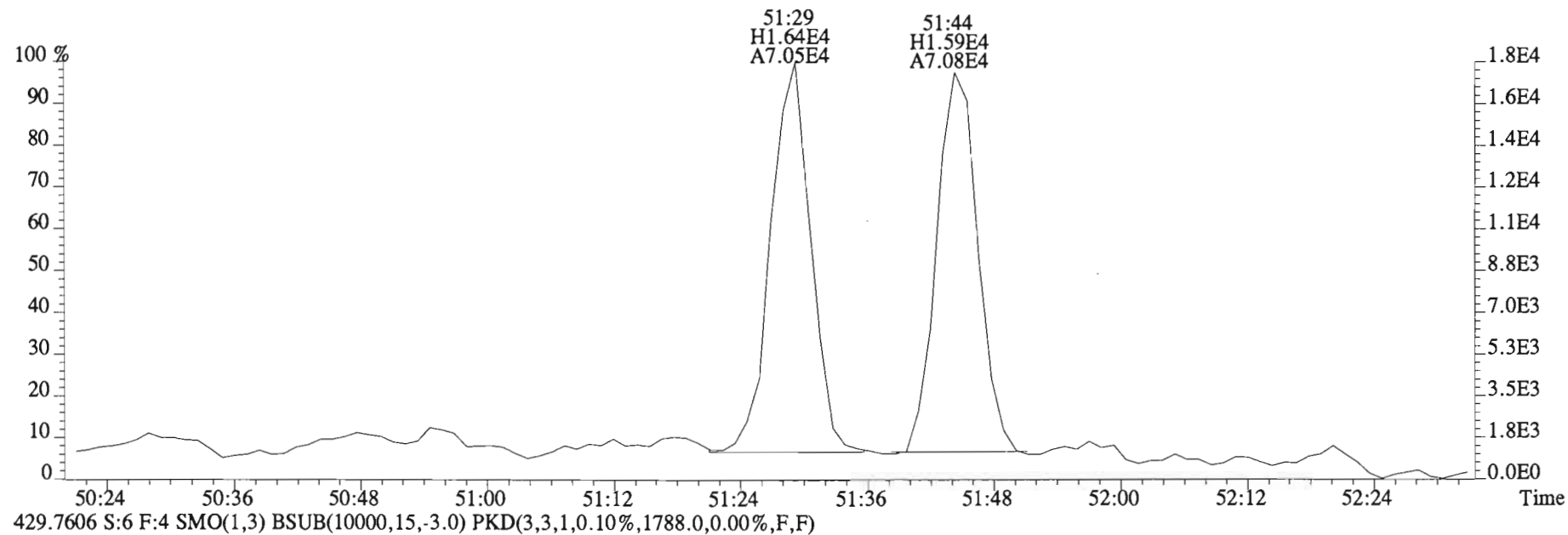
395.7995 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1544.0,0.00%,F,F)



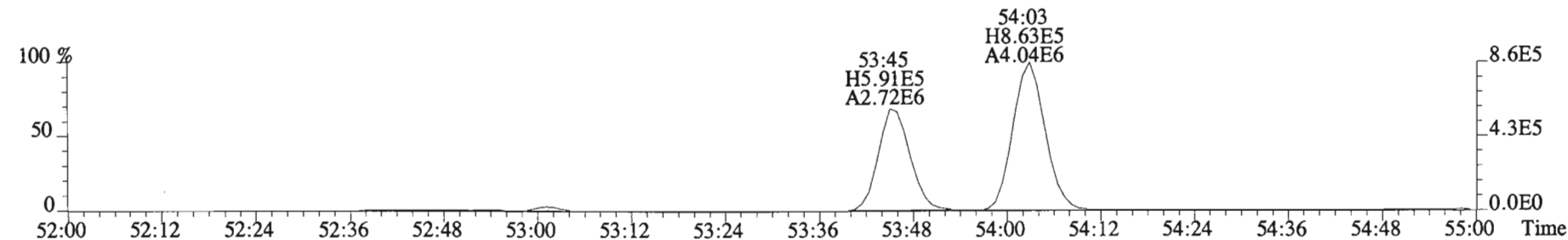
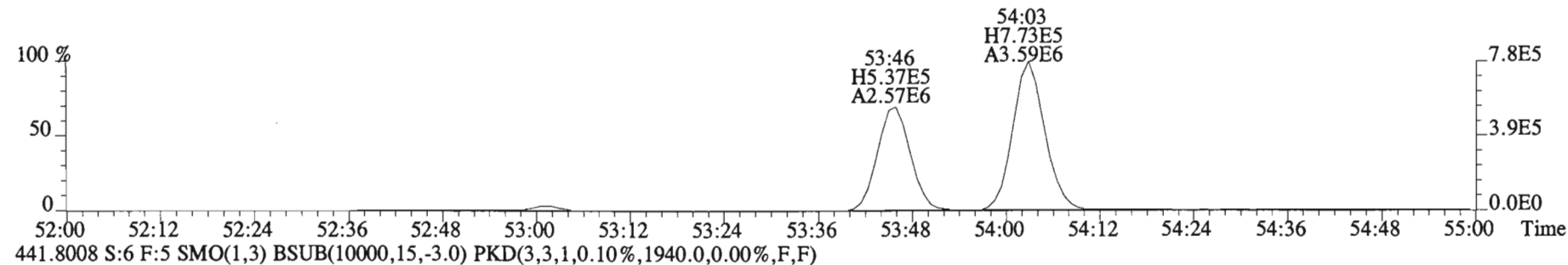
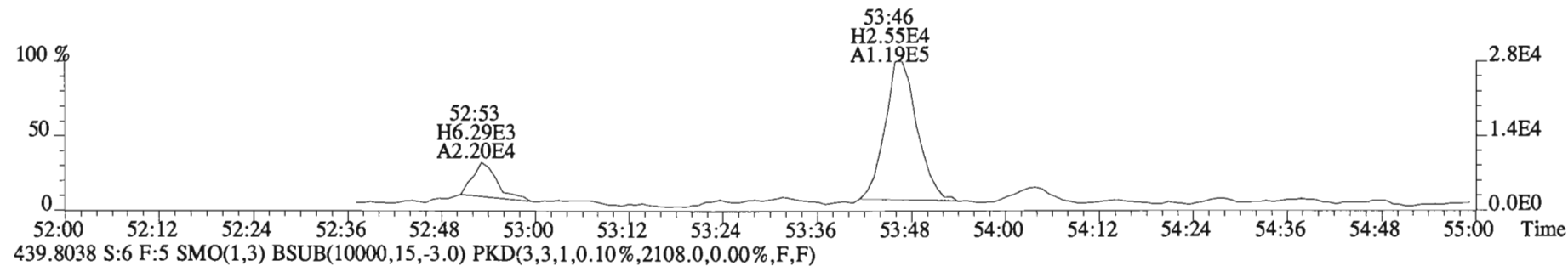
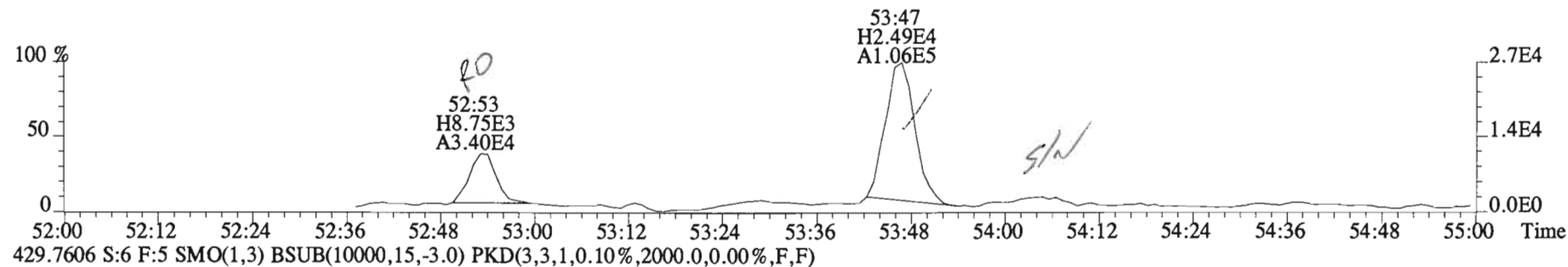
File:150205E1 #1-555 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
427.7635 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1832.0,0.00%,F,F)



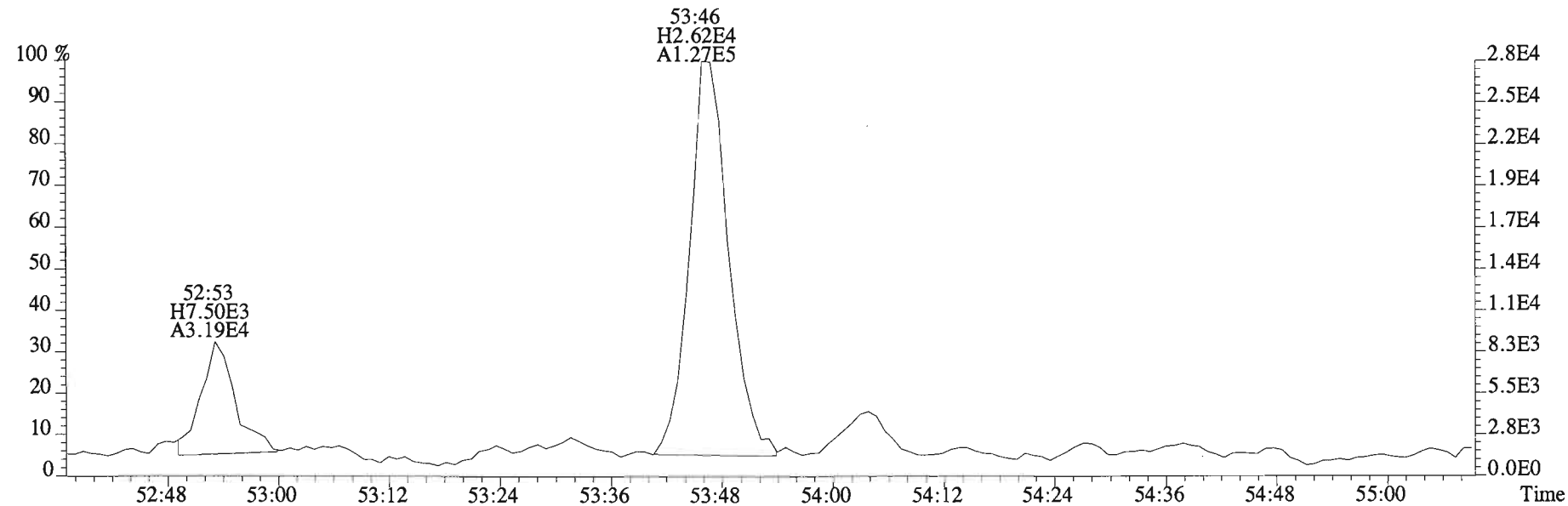
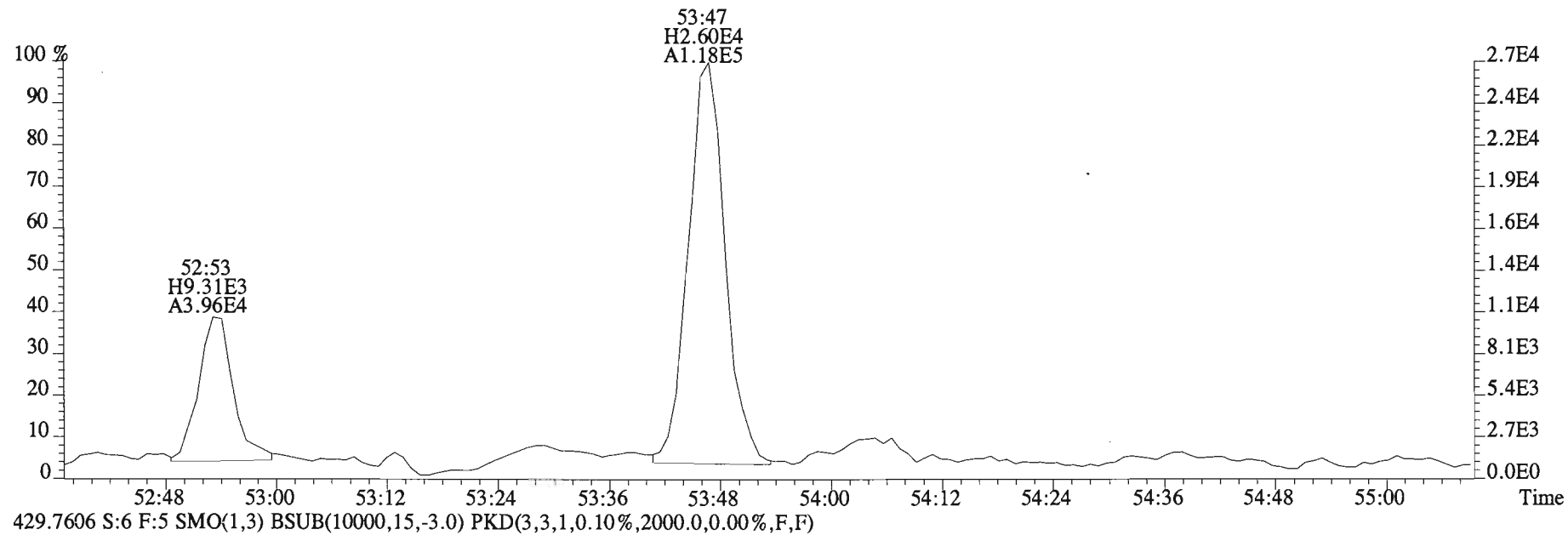
File:150205E1 #1-555 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
427.7635 S:6 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1832.0,0.00%,F,F)



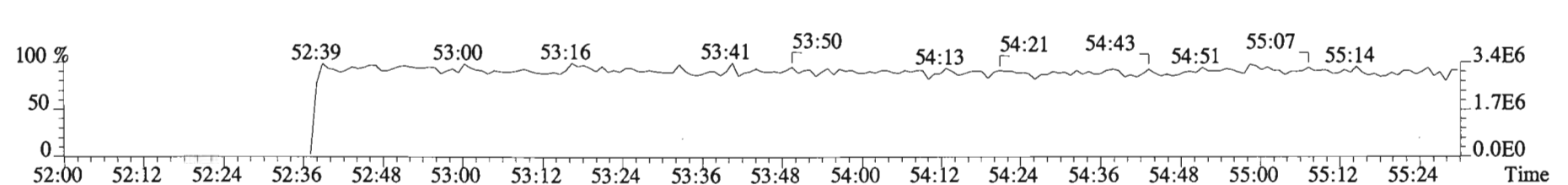
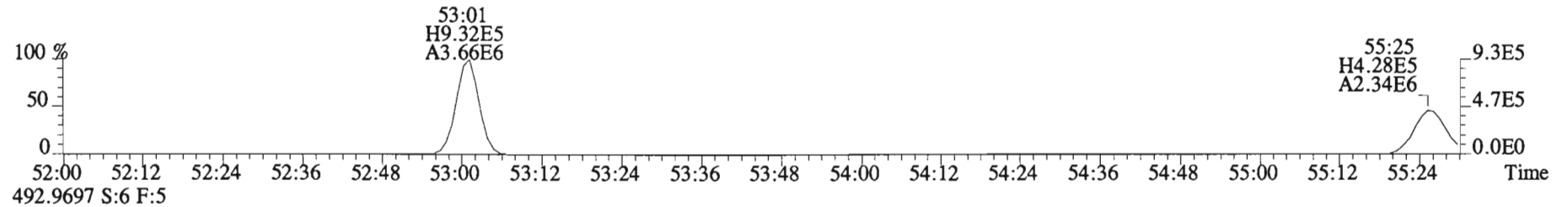
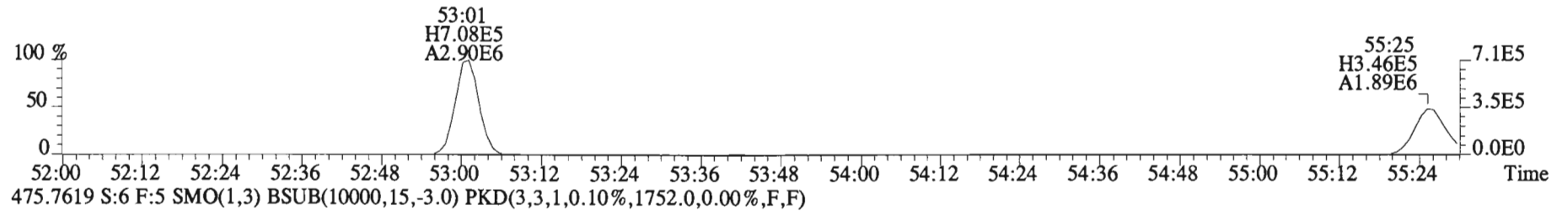
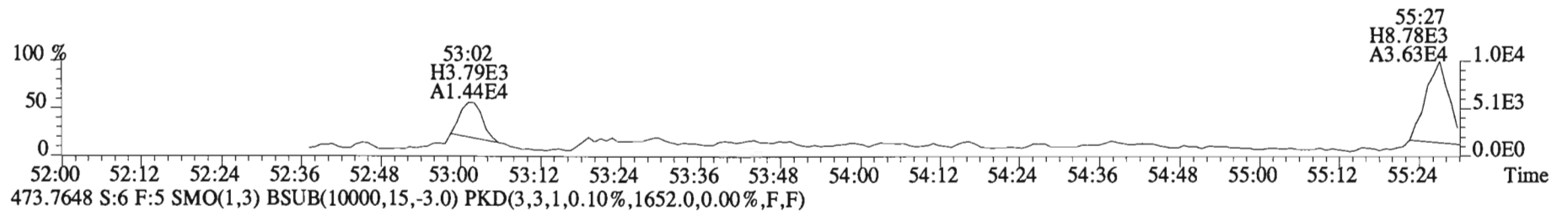
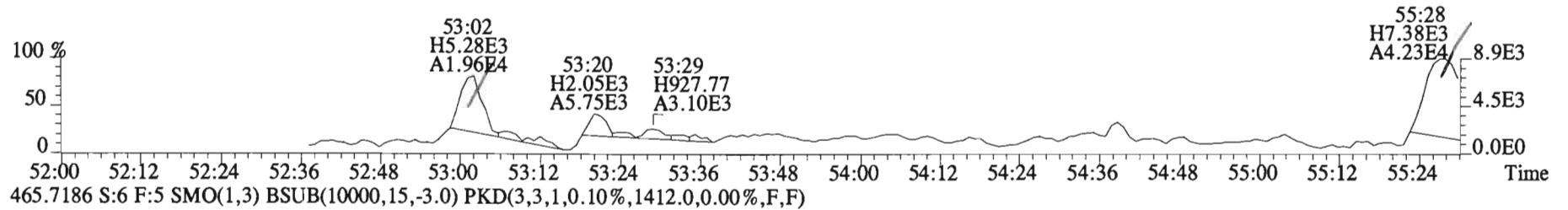
File:150205E1 #1-430 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text: Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
427.7635 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1516.0,0.00%,F,F)



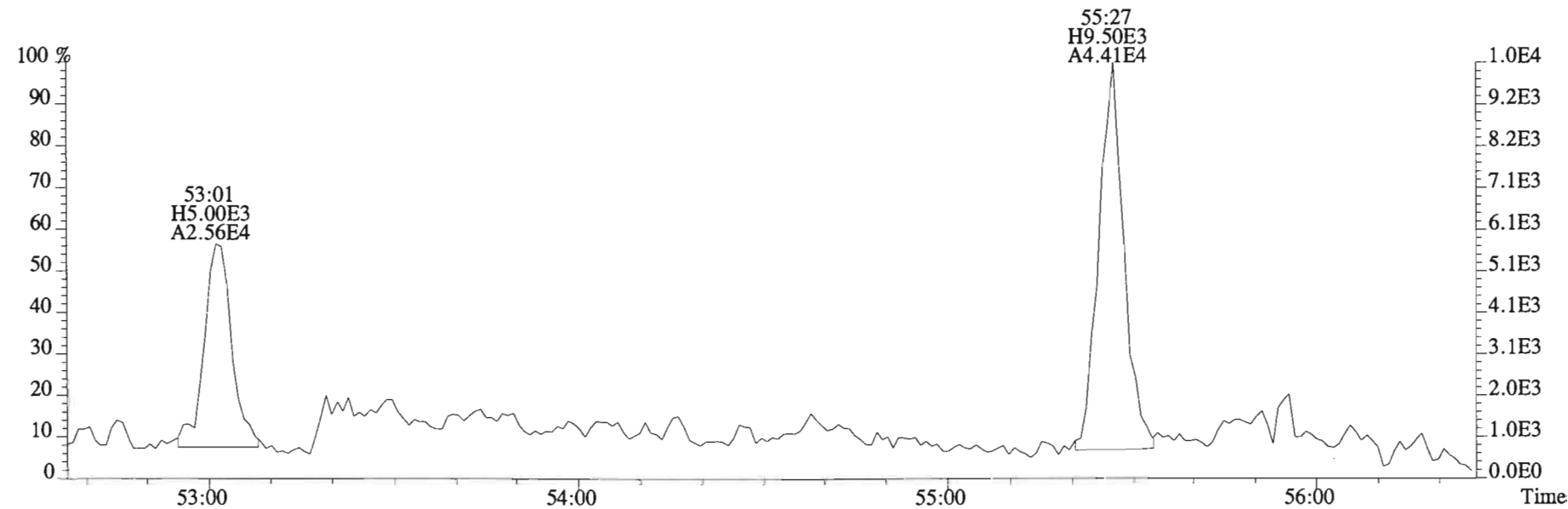
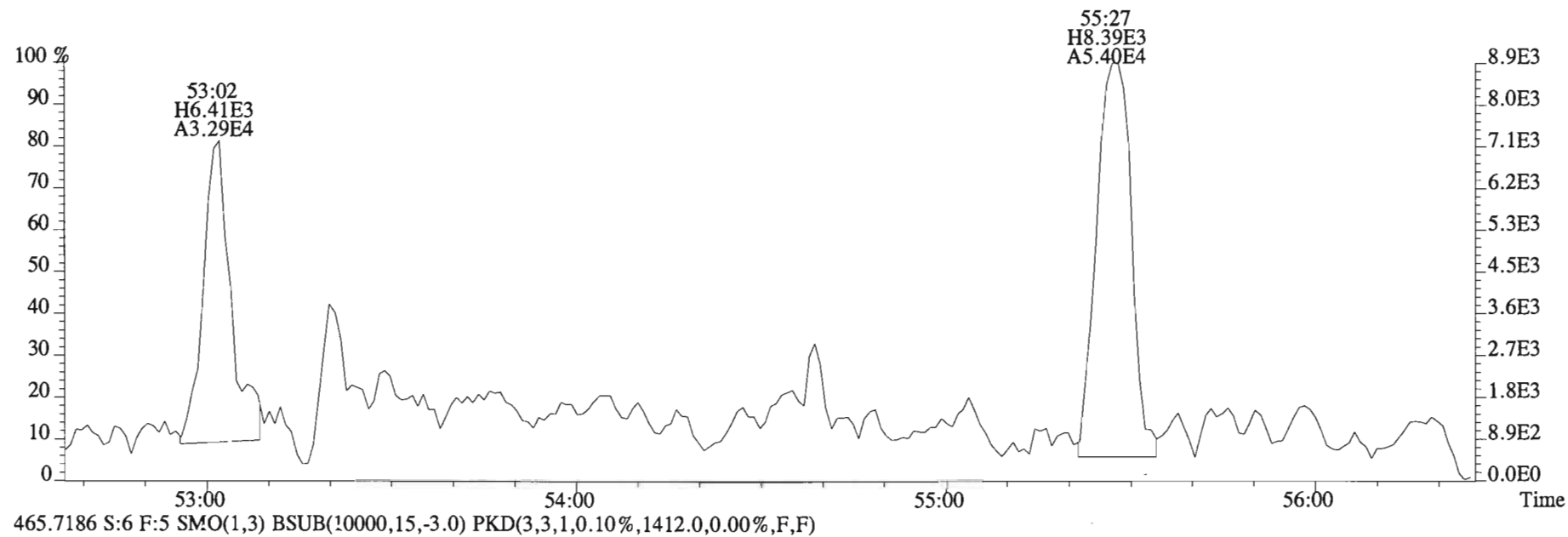
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Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
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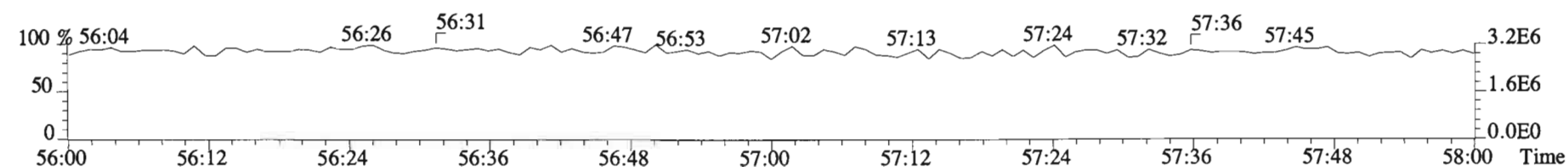
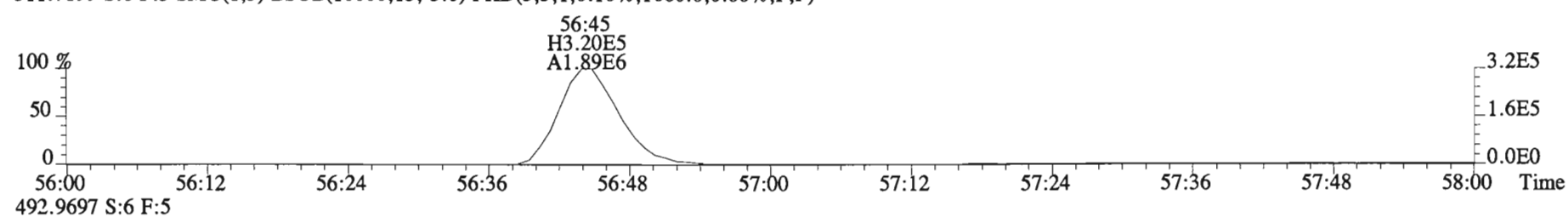
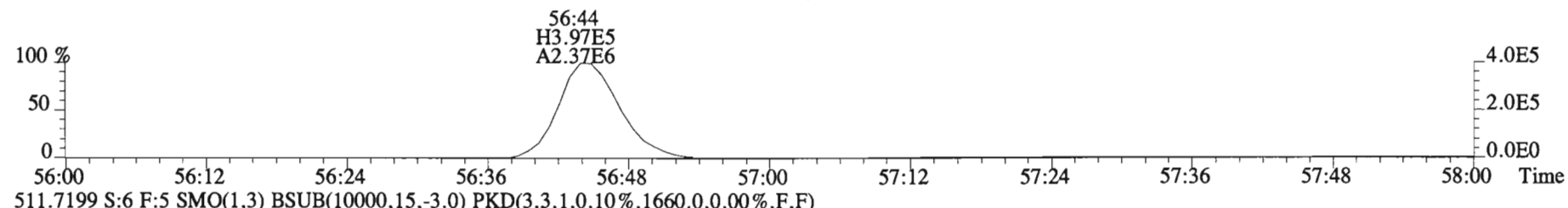
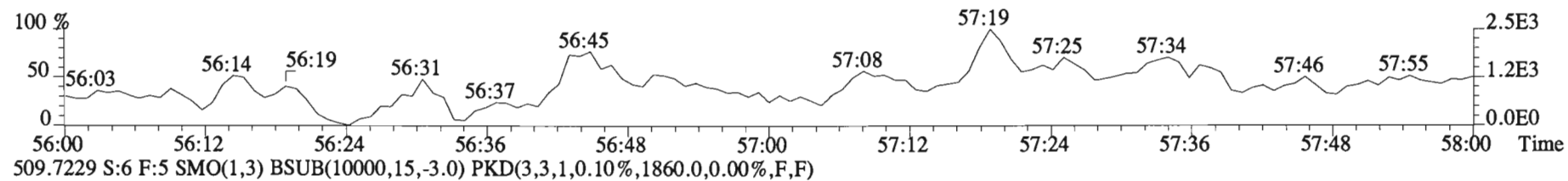
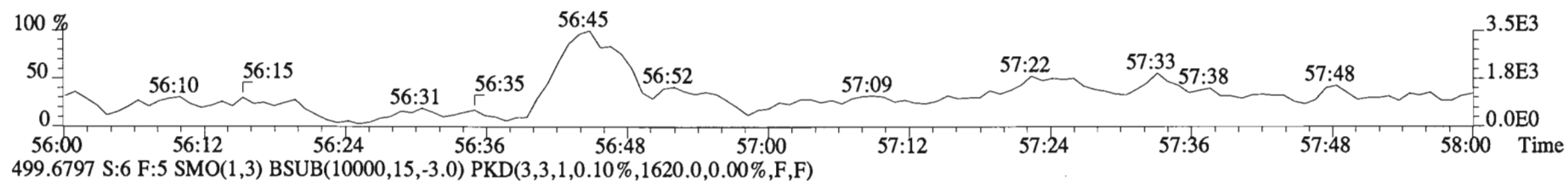
File:150205E1 #1-430 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
463.7216 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1656.0,0.00%,F,F)



File:150205E1 #1-430 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
463.7216 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1656.0,0.00%,F,F)



File:150205E1 #1-430 Acq: 5-FEB-2015 14:20:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG-8 Text:1400970-03@10X DS-CB-I3-20141216-S Exp:PCB_ZB1
497.6826 S:6 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1616.0,0.00%,F,F)



Client ID: DS-CB-H1-20141216-S
Lab ID: 1400970-04@10X

Filename: 150205E1 S:7 Acq: 5-FEB-15 15:24:13
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.006

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Mono	PCB-1	2.31e+05	2.78	y 16:09	1.19	129	*	2.5	*	*	1.001	0.996-1.006	
Mono	PCB-2	1.16e+05	2.89	y 18:31	1.18	63.3	*	2.5	*	*	0.988	0.984-0.994	
Mono	PCB-3	3.37e+05	3.21	y 18:45	1.43	153	*	2.5	*	*	1.001	0.996-1.006	
Di	PCB-4/10	2.74e+05	1.06	n 20:05	1.57	188	R	*	2.5	*	1.001	0.997-1.007	
Di	PCB-7/9	*	*	n NotF η	1.21	*		14300	2.5	201	*	0.866-0.874	
Di	PCB-6	2.79e+05	1.42	y 22:32	1.30	151	*	2.5	*	*	0.893	0.890-0.899	
Di	PCB-5/8	1.19e+06	1.46	y 22:55	1.15	731	*	2.5	*	*	0.909	0.907-0.917	
Di	PCB-14	*	*	n NotF η	1.11	*		14300	2.5	216	*	0.949-0.959	
Di	PCB-11	2.29e+06	1.58	y 25:14	1.09	1380	*	2.5	*	*	1.001	0.995-1.005	
Di	PCB-12/13	*	*	n NotF η	1.19	*		14300	2.5	200	*	1.011-1.021	
Di	PCB-15	2.06e+06	1.67	y 25:56	1.28	1050	*	2.5	*	*	1.028	1.023-1.033	
Tri	PCB-19	9.34e+04	1.32	n 24:13	1.04	115	R	*	2.5	*	1.000	0.996-1.006	
Tri	PCB-30	*	*	n NotF η	1.71	*		1820	2.5	27.0	*	1.032-1.042	
Tri	PCB-18	1.04e+06	1.10	y 25:51	0.78	1110	*	2.5	*	*	0.954	0.949-0.959	
Tri	PCB-17	3.99e+05	1.03	y 26:02	0.92	358	*	2.5	*	*	0.960	0.956-0.966	
Tri	PCB-24/27	1.11e+05	0.98	y 26:36	1.19	77.3	*	2.5	*	*	0.981	0.977-0.987	
Tri	PCB-16/32	8.85e+05	0.97	y 27:06	0.94	780	*	2.5	*	*	1.000	0.995-1.005	
Tri	PCB-34	*	*	n NotF η	1.14	*		1820	2.5	30.1	*	0.955-0.965	
Tri	PCB-23	*	*	n NotF η	1.28	*		1820	2.5	26.7	*	0.959-0.969	
Tri	PCB-29	*	*	n NotF η	1.08	*		1820	2.5	31.7	*	0.967-0.977	
Tri	PCB-26	4.59e+05	0.95	y 28:27	1.21	302	*	2.5	*	*	0.979	0.974-0.984	
Tri	PCB-25	2.08e+05	1.08	y 28:37	1.26	131	*	2.5	*	*	0.984	0.979-0.989	
Tri	PCB-31	2.59e+06	1.06	y 28:58	1.28	1600	*	2.5	*	*	0.996	0.992-1.002	
Tri	PCB-28	2.69e+06	1.12	y 29:05	1.71	1250	*	2.5	*	*	1.000	0.995-1.005	
Tri	PCB-20/21/33	1.94e+06	1.10	y 29:43	1.08	1420	*	2.5	*	*	1.022	1.017-1.027	
Tri	PCB-22	1.25e+06	0.99	y 30:08	1.21	822	*	2.5	*	*	1.037	1.032-1.042	
Tri	PCB-36	*	*	n NotF η	1.14	*		1820	2.5	33.6	*	0.928-0.938	
Tri	PCB-39	*	*	n NotF η	1.12	*		1820	2.5	34.4	*	0.943-0.953	
Tri	PCB-38	*	*	n NotF η	1.20	*		1820	2.5	32.0	*	0.966-0.976	
Tri	PCB-35	2.26e+05	1.10	y 32:32	1.23	151	*	2.5	*	*	0.988	0.982-0.992	
Tri	PCB-37	3.00e+06	0.99	y 32:58	1.23	2000	*	2.5	*	*	1.001	0.995-1.005	
Tetra	PCB-54	*	*	n NotF η	1.10	*		1890	2.5	34.3	*	0.996-1.006	
Tetra	PCB-50	*	*	n NotF η	0.88	*		1890	2.5	43.0	*	1.037-1.047	
Tetra	PCB-53	2.09e+05	0.75	y 29:46	1.06	220	*	2.5	*	*	0.946	0.942-0.952	
Tetra	PCB-51	7.63e+04	0.87	y 30:06	0.99	86.0	*	2.5	*	*	0.956	0.952-0.962	
Tetra	PCB-45	2.21e+05	0.83	y 30:32	0.86	286	*	2.5	*	*	0.970	0.966-0.976	
Tetra	PCB-46	9.20e+04	0.79	y 31:02	0.85	122	*	2.5	*	*	0.986	0.981-0.991	

Integrations by:

Analyst: *DMS*

Date: *2/11/15*

Reviewed by: *[Signature]* Date: *2/12/15*

Client ID: DS-CB-H1-20141216-S
Lab ID: 1400970-04@10X

Filename: 150205E1 S:7 Acq: 5-FEB-15 15:24:13
GC Column ID: ZB-1 ICAL: pcbvg8-6-23-14 wt/vol: 2.006

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Tetra	PCB-52/69	2.71e+06	0.74	y 31:29	1.28	2360		*	2.5	*	1.000	0.996-1.006	
Tetra	PCB-73	*	*	n NotF _η	1.35	*		1890	2.5	34.8	*	1.000-1.010	
Tetra	PCB-43/49	1.21e+06	0.78	y 31:47	0.99	1360		*	2.5	*	1.010	1.005-1.015	
Tetra	PCB-47	4.00e+05	0.77	y 32:00	1.06	386		*	2.5	*	1.000	0.996-1.006	
Tetra	PCB-48/75	3.63e+05	0.82	y 32:08	1.23	302		*	2.5	*	1.004	0.999-1.009	
Tetra	PCB-65	*	*	n NotF _η	1.22	*		1890	2.5	34.5	*	1.008-1.018	
Tetra	PCB-62	*	*	n NotF _η	1.22	*		1890	2.5	34.6	*	1.011-1.021	
Tetra	PCB-44	1.74e+06	0.73	y 32:47	0.86	2070		*	2.5	*	1.025	1.021-1.031	
Tetra	PCB-42/59	6.95e+05	0.88	y 33:01	1.14	624		*	2.5	*	1.032	1.028-1.038	
Tetra	PCB-41/64/71/72	2.13e+06	0.74	y 33:36	1.21	1800		*	2.5	*	1.050	1.046-1.056	
Tetra	PCB-68	*	*	n NotF _η	1.35	*		1890	2.5	31.4	*	1.054-1.064	
Tetra	PCB-40	2.97e+05	0.75	y 34:05	0.70	433		*	2.5	*	1.065	1.061-1.071	
Tetra	PCB-57	*	*	n NotF _η	0.98	*		1890	2.5	38.7	*	0.965-0.975	
Tetra	PCB-67	1.35e+05	0.93	n 34:44	1.11	109	R	*	2.5	*	0.978	0.974-0.984	
Tetra	PCB-58	1.93e+04	1.27	n 34:52	0.93	18.6	R	*	2.5	*	0.982	0.977-0.987	
Tetra	PCB-63	1.33e+05	0.73	y 35:02	0.95	124		*	2.5	*	0.987	0.982-0.992	
Tetra	PCB-74	1.84e+06	0.79	y 35:19	1.24	1320		*	2.5	*	0.995	0.990-1.000	
Tetra	PCB-61/70	5.14e+06	0.77	y 35:31	0.95	4800		*	2.5	*	1.001	0.995-1.005	
Tetra	PCB-76/66	3.75e+06	0.76	y 35:44	1.04	3190		*	2.5	*	1.007	1.001-1.011	
Tetra	PCB-80	*	*	n NotF _η	1.19	*		1890	2.5	31.3	*	0.996-1.006	
Tetra	PCB-55	1.15e+05	0.94	n 36:15	1.04	93.3	R	*	2.5	*	1.009	1.005-1.015	
Tetra	PCB-56/60	3.19e+06	0.79	y 36:45	1.01	2670		*	2.5	*	1.023	1.019-1.029	
Tetra	PCB-79	1.05e+05	0.94	n 37:50	1.08	82.3	R	*	2.5	*	1.053	1.048-1.058	
Tetra	PCB-78	*	*	n NotF _η	1.27	*		1890	2.5	33.3	*	0.982-0.992	
Tetra	PCB-81	5.58e+04	0.92	n 39:01	1.33	38.5	R	*	2.5	*	1.000	0.995-1.005	
Tetra	PCB-77	1.40e+06	0.83	y 39:39	1.10	1170		*	2.5	*	1.001	0.995-1.005	
Penta	PCB-104	*	*	n NotF _η	1.18	*		1590	2.5	61.9	*	0.996-1.006	
Penta	PCB-96	*	*	n NotF _η	1.14	*		1590	2.5	64.4	*	1.034-1.044	
Penta	PCB-103	*	*	n NotF _η	0.96	*		1590	2.5	76.6	*	1.050-1.060	
Penta	PCB-100	*	*	n NotF _η	0.94	*		1590	2.5	78.2	*	1.061-1.071	
Penta	PCB-94	*	*	n NotF _η	1.06	*		1590	2.5	97.2	*	0.980-0.990	
Penta	PCB-95/98/102	2.34e+06	1.62	y 35:49	1.22	3910		*	2.5	*	1.001	0.995-1.005	
Penta	PCB-93	*	*	n NotF _η	0.84	*		1590	2.5	122	*	0.997-1.007	
Penta	PCB-88/91	3.56e+05	1.62	y 36:13	1.12	652		*	2.5	*	1.012	1.005-1.015	
Penta	PCB-121	*	*	n NotF _η	1.62	*		1590	2.5	63.6	*	1.009-1.019	
Penta	PCB-84/92	1.34e+06	1.66	y 37:08	1.05	2390		*	2.5	*	0.991	0.985-0.995	
Penta	PCB-89	3.08e+04	1.42	y 37:18	1.13	50.9		*	2.5	*	0.995	0.991-1.001	

Analyst: DMS

Date: 2/11/15

Client ID: DS-CB-H1-20141216-S
Lab ID: 1400970-04@10X

Filename: 150205E1 S:7 Acq: 5-FEB-15 15:24:13
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.006

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Penta	PCB-90/101	3.95e+06	1.61	y 37:30	1.10	6690	*	2.5	*	*	1.000	0.995-1.005	
Penta	PCB-113	*	*	n NotF η	1.41	*		1590	2.5	72.1	*	1.002-1.012	
Penta	PCB-99	1.49e+06	1.54	y 37:50	1.34	2090	*	2.5	*	*	1.009	1.004-1.014	
Penta	PCB-119	7.33e+04	1.63	y 38:17	1.53	91.7	*	2.5	*	*	0.987	0.982-0.992	
Penta	PCB-108/112	2.12e+05	1.58	y 38:27	1.28	317	*	2.5	*	*	0.991	0.986-0.996	
Penta	PCB-83	*	*	n NotF η	1.52	*		1590	2.5	62.6	*	0.990-1.000	
Penta	PCB-97	1.18e+06	1.74	y 38:48	1.18	1910	*	2.5	*	*	1.000	0.995-1.005	
Penta	PCB-86	*	*	n NotF η	0.84	*		1590	2.5	113	*	0.999-1.009	
Penta	PCB-87/117/125	2.13e+06	1.53	y 39:05	1.55	2630	*	2.5	*	*	1.008	1.002-1.012	
Penta	PCB-111/115	1.08e+05	1.60	y 39:14	1.63	126	*	2.5	*	*	1.011	1.006-1.016	
Penta	PCB-85/116	7.39e+05	1.61	y 39:21	1.30	1090	*	2.5	*	*	1.014	1.010-1.020	
Penta	PCB-120	*	*	n NotF η	1.68	*		1590	2.5	56.7	*	1.016-1.026	
Penta	PCB-110	6.49e+06	1.63	y 39:44	1.56	7990	*	2.5	*	*	1.024	1.020-1.030	
Penta	PCB-82	4.93e+05	1.54	y 40:22	0.76	1060	*	2.5	*	*	0.976	0.971-0.981	
Penta	PCB-124	2.91e+05	1.32	y 41:03	1.47	323	*	2.5	*	*	0.993	0.988-0.998	
Penta	PCB-107/109	4.33e+05	1.69	y 41:13	1.32	535	*	2.5	*	*	0.997	0.991-1.001	
Penta	PCB-123	6.61e+04	2.62	n 41:22	1.17	92.2	R	*	2.5	*	1.000	0.996-1.006	
Penta	PCB-106/118	6.44e+06	1.57	y 41:34	1.17	7970	*	2.5	*	*	1.001	0.996-1.006	
Penta	PCB-114	2.26e+05	1.34	y 42:12	1.30	195	*	2.5	*	*	1.000	0.995-1.005	
Penta	PCB-122	9.14e+04	2.13	n 42:22	1.12	91.3	R	*	2.5	*	1.004	0.999-1.009	
Penta	PCB-105	4.12e+06	1.52	y 43:04	1.30	3580	*	2.5	*	*	1.000	0.995-1.005	
Penta	PCB-127	*	*	n NotF η	1.33	*		2930	2.5	83.5	*	0.996-1.006	
Penta	PCB-126	1.71e+05	1.61	y 45:20	1.18	176	*	2.5	*	*	1.001	0.995-1.005	
Hexa	PCB-155	*	*	n NotF η	1.11	*		1410	2.5	78.0	*	0.966-1.006	
Hexa	PCB-150	*	*	n NotF η	1.00	*		1410	2.5	87.0	*	1.030-1.040	
Hexa	PCB-152	*	*	n NotF η	1.12	*		1410	2.5	77.9	*	1.043-1.053	
Hexa	PCB-145	*	*	n NotF η	1.20	*		1410	2.5	72.3	*	1.055-1.065	
Hexa	PCB-136	4.16e+05	1.39	y 39:33	1.18	749	*	2.5	*	*	1.068	1.064-1.074	
Hexa	PCB-148	*	*	n NotF η	0.74	*		1410	2.5	117	*	1.066-1.076	
Hexa	PCB-154	3.72e+04	1.39	y 40:09	0.86	92.0	*	2.5	*	*	1.084	1.080-1.090	
Hexa	PCB-151	4.83e+05	1.41	y 40:47	0.75	1370	*	2.5	*	*	1.101	1.097-1.107	
Hexa	PCB-135	3.41e+05	1.07	y 41:01	0.79	913	*	2.5	*	*	1.108	1.103-1.113	
Hexa	PCB-144	1.15e+05	1.13	y 41:07	0.76	319	*	2.5	*	*	1.110	1.105-1.117	
Hexa	PCB-147	5.70e+04	1.28	y 41:15	0.82	148	*	2.5	*	*	1.114	1.109-1.121	
Hexa	PCB-139/149	2.29e+06	1.29	y 41:30	0.76	6390	*	2.5	*	*	1.121	1.116-1.128	
Hexa	PCB-140	*	*	n NotF η	0.72	*		1410	2.5	120	*	1.121-1.133	
Hexa	PCB-134/143	3.05e+05	1.31	y 42:09	0.92	433	*	2.5	*	*	0.976	0.970-0.980	

Analyst: *Dms*

Date: *2/11/15*

Client ID: DS-CB-H1-20141216-S
Lab ID: 1400970-04@10X

Filename: 150205E1 S:7 Acq: 5-FEB-15 15:24:13
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.006

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hexa	PCB-133/142	1.81e+05	1.12	y 42:26	0.82	288		*	2.5	*	0.982	0.977-0.987	
Hexa	PCB-131	*	*	n NotF η	0.91	*		2260	2.5	98.0	*	0.981-0.991	
Hexa	PCB-146/165	1.02e+06	1.31	y 42:49	1.25	1060		*	2.5	*	0.991	0.986-0.996	
Hexa	PCB-132/161	2.02e+06	1.20	y 43:06	1.10	2380		*	2.5	*	0.997	0.992-1.002	
Hexa	PCB-153	6.74e+06	1.21	y 43:14	1.25	7030		*	2.5	*	1.001	0.995-1.005	
Hexa	PCB-168	*	*	n NotF η	1.45	*		2260	2.5	61.4	*	1.001-1.011	
Hexa	PCB-141	1.42e+06	1.15	y 43:59	1.09	1850		*	2.5	*	1.001	0.995-1.005	
Hexa	PCB-137	4.86e+05	1.24	y 44:22	1.06	646		*	2.5	*	1.009	1.004-1.014	
Hexa	PCB-130	4.13e+05	1.17	y 44:28	0.96	604		*	2.5	*	1.012	1.006-1.016	
Hexa	PCB-138/163/164	9.44e+06	1.21	y 44:50	1.29	9730		*	2.5	*	1.001	0.996-1.006	
Hexa	PCB-158/160	1.22e+06	1.30	y 45:04	1.34	1210		*	2.5	*	1.006	1.001-1.011	
Hexa	PCB-129	3.63e+05	1.35	y 45:19	0.85	566		*	2.5	*	1.012	1.007-1.017	
Hexa	PCB-166	*	*	n NotF η	1.19	*		2260	2.5	66.8	*	0.988-0.998	
Hexa	PCB-159	*	*	n NotF η	1.11	*		2260	2.5	71.2	*	0.996-1.006	
Hexa	PCB-128/162	1.62e+06	1.23	y 46:23	1.05	1860		*	2.5	*	1.006	1.002-1.012	
Hexa	PCB-167	5.17e+05	1.22	y 46:48	1.20	495		*	2.5	*	1.001	0.995-1.005	
Hexa	PCB-156	1.27e+06	1.24	y 48:05	1.14	1320		*	2.5	*	1.000	0.996-1.006	
Hexa	PCB-157	2.80e+05	0.99	n 48:21	1.16	269	R	*	2.5	*	1.000	0.995-1.005	
Hexa	PCB-169	*	*	n NotF η	1.12	*		2260	2.5	73.1	*	0.995-1.005	
Hepta	PCB-188	*	*	n NotF η	1.58	*		1660	2.5	34.9	*	0.996-1.006	
Hepta	PCB-184	*	*	n NotF η	1.63	*		1660	2.5	33.8	*	1.006-1.016	
Hepta	PCB-179	5.29e+05	1.18	y 44:05	1.30	714		*	2.5	*	1.029	1.024-1.034	
Hepta	PCB-176	1.83e+05	1.02	y 44:32	1.48	218		*	2.5	*	1.039	1.035-1.045	
Hepta	PCB-186	*	*	n NotF η	1.45	*		1660	2.5	37.9	*	1.050-1.060	
Hepta	PCB-178	2.72e+05	1.07	y 45:39	1.03	463		*	2.5	*	1.066	1.061-1.071	
Hepta	PCB-175	5.19e+04	0.99	y 45:59	1.01	90.3		*	2.5	*	1.073	1.069-1.079	
Hepta	PCB-182/187	1.67e+06	1.13	y 46:09	1.25	2350		*	2.5	*	1.077	1.073-1.083	
Hepta	PCB-183	7.56e+05	1.01	y 46:30	1.21	1100		*	2.5	*	1.085	1.081-1.091	
Hepta	PCB-185	1.52e+05	1.15	y 47:10	1.80	208		*	2.5	*	0.956	0.951-0.961	
Hepta	PCB-174	1.24e+06	1.09	y 47:32	1.38	2220		*	2.5	*	0.963	0.958-0.968	
Hepta	PCB-181	*	*	n NotF η	1.38	*		1660	2.5	58.6	*	0.960-0.970	
Hepta	PCB-177	6.85e+05	1.11	y 47:48	1.26	1350		*	2.5	*	0.968	0.963-0.973	
Hepta	PCB-171	3.15e+05	1.12	y 48:05	1.58	492		*	2.5	*	0.974	0.970-0.980	
Hepta	PCB-173	3.31e+04	0.80	n 48:32	1.11	73.7	R	*	2.5	*	0.983	0.978-0.988	
Hepta	PCB-172	2.39e+05	0.97	y 48:58	1.63	362		*	2.5	*	0.992	0.987-0.997	
Hepta	PCB-192	*	*	n NotF η	1.74	*		1660	2.5	46.4	*	0.991-1.001	
Hepta	PCB-180	3.33e+06	1.07	y 49:23	1.34	6120		*	2.5	*	1.001	0.995-1.005	

Analyst: Dms

Date: 2/11/15

Client ID: DS-CB-H1-20141216-S
Lab ID: 1400970-04@10X

Filename: 150205E1 S:7 Acq: 5-FEB-15 15:24:13
GC Column ID: ZB-1 ICal: pcbv8-6-23-14 wt/vol: 2.006

ConCal: ST150205E1-1
EndCAL: NA

Type	Name	Resp	RA	RT	RRF	Conc	Qual	noise	Fac	DL	RRT	LCL	UCL
Hepta	PCB-193	2.14e+05	1.00	y 49:34	1.72	309	*	2.5	*	*	1.004	0.999-1.009	
Hepta	PCB-191	1.03e+05	1.17	y 49:49	1.69	150	*	2.5	*	*	1.009	1.004-1.014	
Hepta	PCB-170	1.34e+06	1.12	y 50:48	1.60	2640	*	2.5	*	*	1.000	0.995-1.005	
Hepta	PCB-190	3.45e+05	1.09	y 50:58	2.21	492	*	2.5	*	*	1.003	0.998-1.008	
Hepta	PCB-189	9.66e+04	1.09	y 52:16	1.55	149	*	2.5	*	*	1.000	0.995-1.005	
Octa	PCB-202	1.70e+05	0.83	y 48:18	1.08	357	*	2.5	*	*	1.000	0.995-1.005	
Octa	PCB-201	8.77e+04	0.73	n 48:47	1.15	174	*	2.5	*	*	1.010	1.005-1.015	
Octa	PCB-204	*	*	n NotF η	1.14	*	975	2.5	49.0	*	*	1.008-1.018	
Octa	PCB-197	*	*	n NotF η	1.07	*	975	2.5	51.9	*	*	1.015-1.025	
Octa	PCB-200	8.53e+04	0.96	y 50:04	1.06	183	*	2.5	*	*	1.037	1.032-1.044	
Octa	PCB-198	*	*	n NotF η	0.76	*	975	2.5	73.8	*	*	1.059-1.069	
Octa	PCB-199	5.43e+05	0.85	y 51:29	0.80	1550	*	2.5	*	*	1.066	1.061-1.071	
Octa	PCB-196/203	6.19e+05	0.82	y 51:45	0.80	1760	*	2.5	*	*	1.072	1.066-1.076	
Octa	PCB-195	2.79e+05	0.89	y 52:54	1.23	412	*	2.5	*	*	0.984	0.979-0.989	
Octa	PCB-194	9.08e+05	1.02	y 53:46	1.21	1360	*	2.5	*	*	1.000	0.995-1.005	
Octa	PCB-205	6.00e+04	0.83	y 54:02	1.54	70.5	*	2.5	*	*	1.005	1.001-1.011	
Nona	PCB-208	1.48e+05	1.28	y 53:02	0.93	231	*	2.5	*	*	1.000	0.995-1.005	
Nona	PCB-207	9.57e+04	1.34	y 53:20	1.08	128	*	2.5	*	*	1.006	1.001-1.011	
Nona	PCB-206	3.96e+05	1.28	y 55:27	1.02	877	*	2.5	*	*	1.000	0.995-1.005	
Deca	PCB-209	1.15e+05	1.06	y 56:46	1.17	223	*	2.5	*	*	1.000	0.995-1.005	

Analyst: Dms

Date: 2/11/15

Client ID: DS-CB-H1-20141216-S
Lab ID: 1400970-04@10X

Filename: 150205E1 S:7 Acq: 5-FEB-15 15:24:13
GC Column ID: ZB-1 ICal: pcbvg8-6-23-14 wt/vol: 2.0058 EndCAL: NA

ConCal: ST150205E1-1

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Name	Resp	RA	RT	RRF	Conc	
Total Mono-PCB	6.84e+05	2.78 y	16:09	1.27	345.764	
Total Di-PCB	5.82e+06	1.42 y	22:32	1.21	3311.67	
Total Tri-PCB	2.44e+06	1.10 y	25:51	1.10	2321.09	
Total Tri-PCB	1.24e+07	0.95 y	28:27	1.21	7676.44	Sum:9997.53
Total Tetra-PCB	2.56e+07	0.75 y	29:46	1.09	23321.3	
Total Penta-PCB	2.81e+07	1.62 y	35:49	1.18	39818.8	
Total Penta-PCB	4.51e+06	1.34 y	42:12	1.25	3952.61	Sum:43771.4
Total Hexa-PCB	3.74e+06	1.39 y	39:33	0.90	9982.83	
Total Hexa-PCB	2.70e+07	1.31 y	42:09	1.11	29463.6	Sum:39446.4
Total Hepta-PCB	1.15e+07	1.18 y	44:05	1.42	19419.6	
Total Octa-PCB	1.42e+06	0.83 y	48:18	0.96	3846.71	
Total Octa-PCB	1.25e+06	0.89 y	52:54	1.33	1840.52	Sum:5687.23
Total Nona-PCB	6.40e+05	1.28 y	53:02	1.01	1235.27	
Total Deca-PCB	1.15e+05	1.06 y	56:46	1.17	222.606	

Total PCB Conc: ~~148103.555250~~

147000

Integrations

by

Analyst: DMS

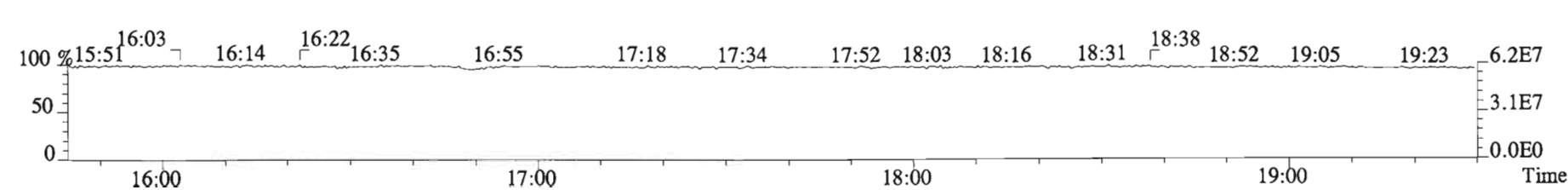
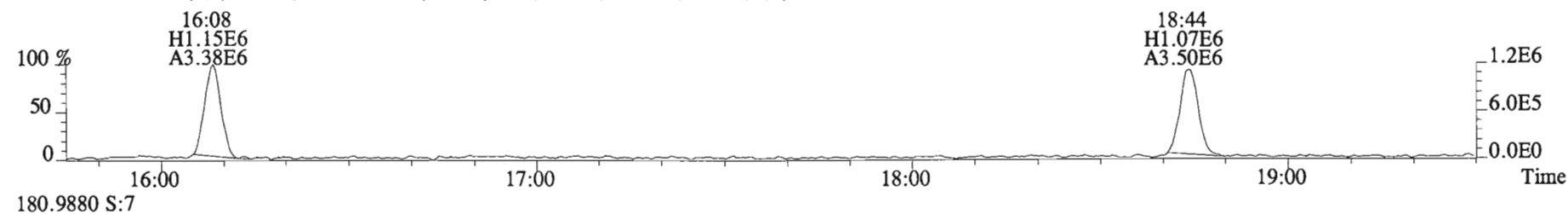
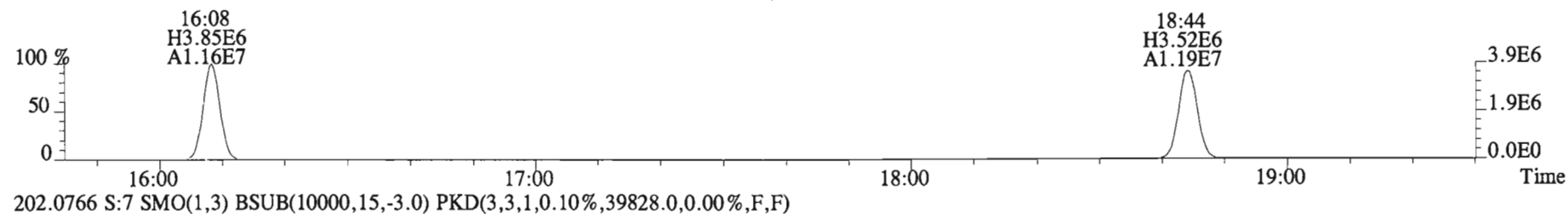
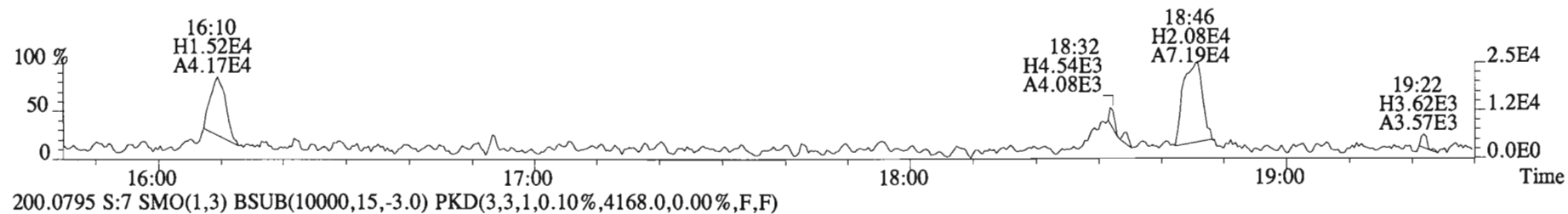
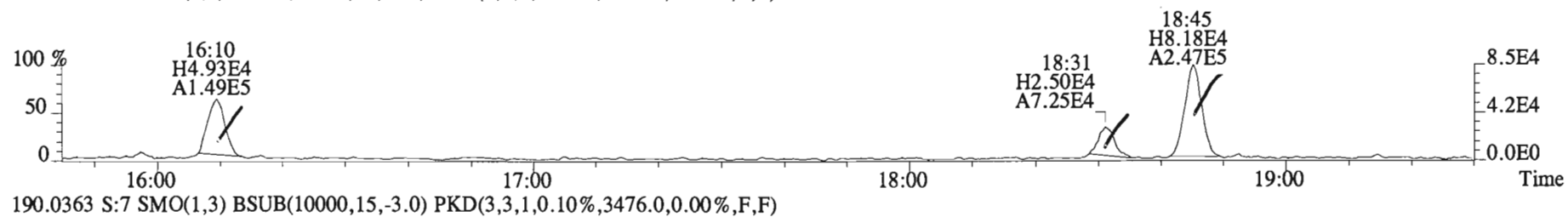
Date: 2/11/15

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	1.49e+07	3.41 y	0.87	16:08	0.623	0.629-0.635	OK	9530	95.6											
13C-PCB-3	1.54e+07	3.39 y	0.91	18:44	0.723	0.725-0.733		9380	94.1		13C-PCB-79	1.23e+07	0.78 y	1.02	37:48	1.029	1.023-1.034	9200	92.2	
13C-PCB-4	9.26e+06	1.56 y	0.59	20:04	0.774	0.775-0.783		8780	88.1		13C-PCB-178	3.98e+06	0.44 y	0.61	45:38	0.984	0.979-0.990	8910	89.4	
13C-PCB-9	1.41e+07	1.61 y	0.90	21:51	0.843	0.842-0.850		8760	87.9											
13C-PCB-11	1.52e+07	1.59 y	0.94	25:13	0.973	0.968-0.978		9050	90.7	PS vs. IS										
13C-PCB-19	7.74e+06	1.07 y	0.53	24:12	0.934	0.930-0.940		8100	81.2											
13C-PCB-28	1.26e+07	1.05 y	0.93	29:04	1.004	0.999-1.009		8370	84.0		13C-PCB-79	1.23e+07	0.78 y	1.10	37:48	0.969	0.964-0.974	10300	103	
13C-PCB-32	1.20e+07	1.11 y	0.80	27:06	1.046	1.040-1.050		8420	84.4		13C-PCB-178	3.98e+06	0.44 y	0.90	45:38	0.925	0.920-0.930	10900	110	
13C-PCB-37	1.22e+07	1.05 y	0.84	32:57	1.137	1.131-1.143		9000	90.3											
13C-PCB-47	9.76e+06	0.76 y	0.81	31:59	0.871	0.866-0.874		9110	91.3											
13C-PCB-52	8.93e+06	0.82 y	0.77	31:29	0.857	0.853-0.861		8770	88.0											
13C-PCB-54	1.06e+07	0.81 y	0.97	27:57	0.760	0.758-0.766		8260	82.8											
13C-PCB-70	1.12e+07	0.80 y	1.00	35:30	0.966	0.961-0.971		8510	85.3											
13C-PCB-77	1.09e+07	0.76 y	0.94	39:38	1.078	1.073-1.083		8750	87.7											
13C-PCB-80	1.18e+07	0.80 y	1.03	35:55	0.977	0.972-0.982		8650	86.8											
13C-PCB-81	1.08e+07	0.83 y	0.92	39:02	1.062	1.057-1.067		8920	89.4											
13C-PCB-95	4.88e+06	1.60 y	0.74	35:48	0.913	0.908-0.918		8870	88.9	RS										
13C-PCB-97	5.20e+06	1.48 y	0.70	38:47	0.989	0.984-0.994		9940	99.7		Name	Resp	RA	RRF	RT	Conc				
13C-PCB-101	5.35e+06	1.70 y	0.78	37:29	0.956	0.951-0.961		9180	92.1		13C-PCB-15	1.79e+07	1.62 y	1.00	25:55	9970				
13C-PCB-104	6.65e+06	1.63 y	1.00	32:38	0.832	0.828-0.836		8940	89.6		13C-PCB-31	1.60e+07	1.05 y	1.00	28:58	9970				
13C-PCB-105	8.83e+06	1.51 y	1.37	43:03	0.929	0.924-0.934		8890	89.2		13C-PCB-60	1.32e+07	0.80 y	1.00	36:45	9970				
13C-PCB-114	8.91e+06	1.66 y	1.36	42:12	0.910	0.905-0.915		8990	90.2		13C-PCB-111	7.40e+06	1.62 y	1.00	39:13	9970				
13C-PCB-118	6.87e+06	1.65 y	0.96	41:32	1.059	1.054-1.064		9640	96.6		13C-PCB-128	7.25e+06	1.29 y	1.00	46:22	9970				
13C-PCB-123	6.12e+06	1.54 y	0.89	41:21	1.054	1.050-1.060		9210	92.3		13C-PCB-205	7.60e+06	0.92 y	1.00	54:03	9970				
13C-PCB-126	8.21e+06	1.59 y	1.31	45:19	0.977	0.972-0.982		8640	86.6											
13C-PCB-127	9.16e+06	1.57 y	1.47	43:24	0.936	0.931-0.941		8550	85.7											
13C-PCB-138	7.49e+06	1.32 y	1.10	44:48	0.966	0.961-0.971		9370	94.0											
13C-PCB-141	7.07e+06	1.33 y	1.07	43:57	0.948	0.943-0.953		9050	90.7											
13C-PCB-153	7.66e+06	1.25 y	1.15	43:12	0.932	0.927-0.937		9190	92.2											
13C-PCB-155	4.70e+06	1.32 y	0.84	37:02	0.944	0.939-0.949		7530	75.6											
13C-PCB-156	8.47e+06	1.24 y	1.30	48:05	1.037	1.032-1.042		8980	90.1											
13C-PCB-157	8.94e+06	1.29 y	1.36	48:20	1.042	1.038-1.048		9060	90.8											
13C-PCB-159	8.31e+06	1.23 y	1.25	46:06	0.994	0.989-0.999		9160	91.9											
13C-PCB-167	8.68e+06	1.26 y	1.35	46:46	1.009	1.004-1.014		8840	88.6											
13C-PCB-169	8.43e+06	1.32 y	1.29	50:27	1.088	1.083-1.093		9020	90.5											
13C-PCB-170	3.16e+06	0.48 y	0.54	50:48	1.096	1.089-1.101		8020	80.4											
13C-PCB-180	4.04e+06	0.49 y	0.68	49:21	1.065	1.060-1.070		8120	81.4											
13C-PCB-188	5.66e+06	0.45 y	0.92	42:51	0.924	0.919-0.929		8490	85.1											
13C-PCB-189	4.18e+06	0.48 y	0.72	52:16	1.127	1.120-1.132		8030	80.5											
13C-PCB-194	5.50e+06	0.99 y	0.80	53:46	0.995	0.990-1.000		9050	90.7											
13C-PCB-202	4.38e+06	0.88 y	0.84	48:17	1.041	1.036-1.046		7190	72.1											
13C-PCB-206	4.40e+06	0.77 y	0.65	55:27	1.026	1.021-1.031		8880	89.0											
13C-PCB-208	6.89e+06	0.74 y	1.08	53:01	0.981	0.976-0.986		8360	83.8											
13C-PCB-209	4.40e+06	1.28 y	0.61	56:46	1.050	1.045-1.055		9450	94.8											

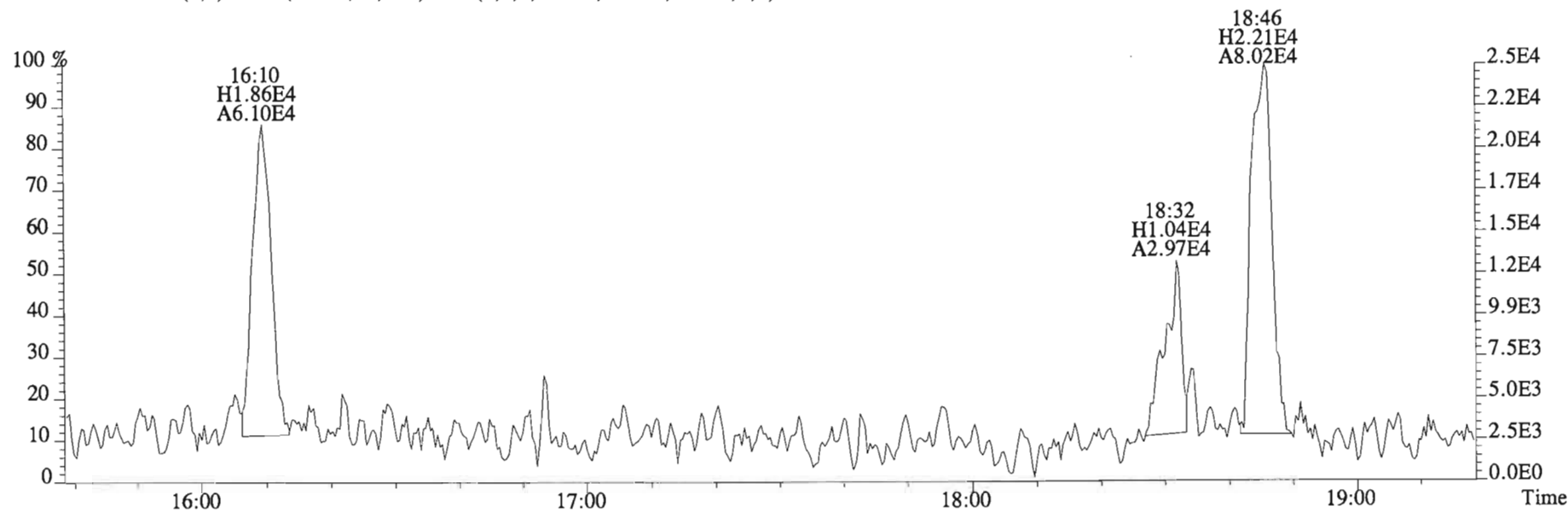
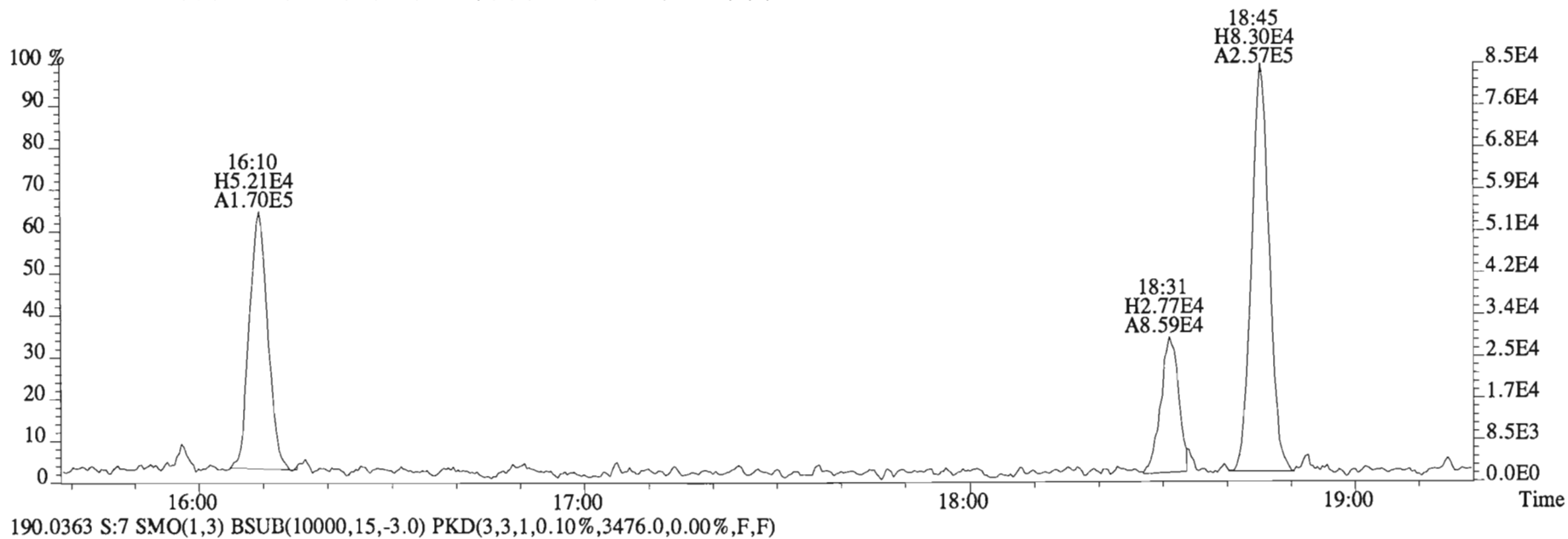
Analyst: DMS

Date: 2/11/15

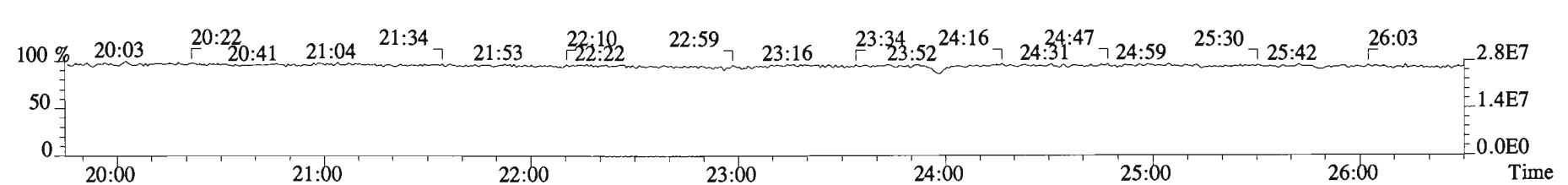
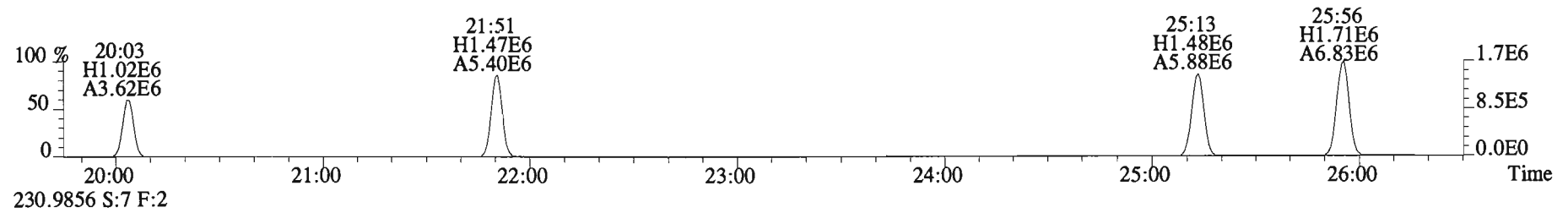
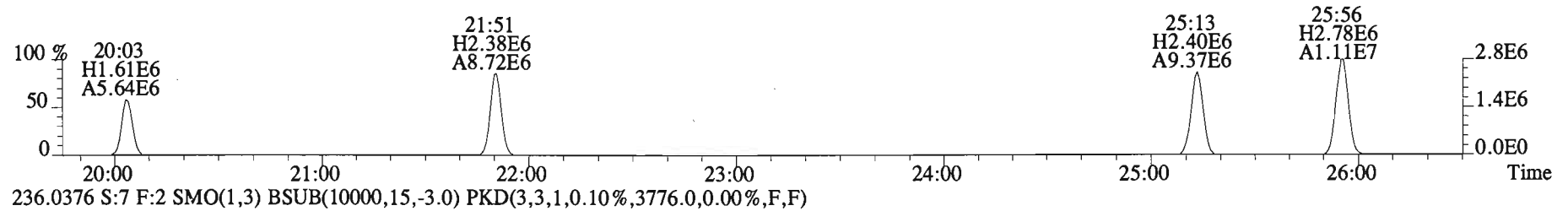
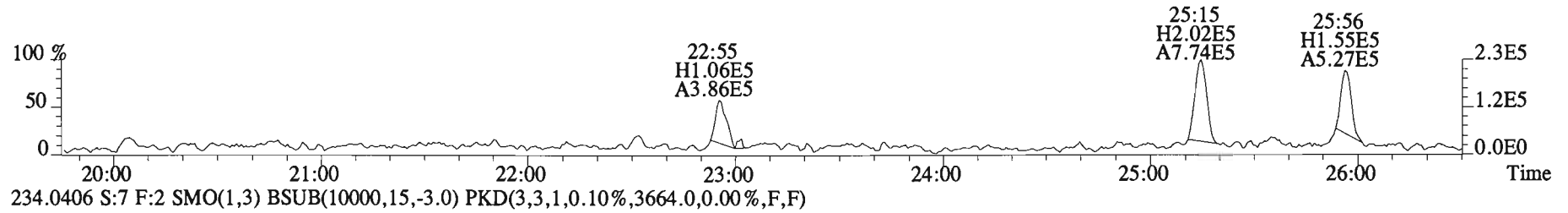
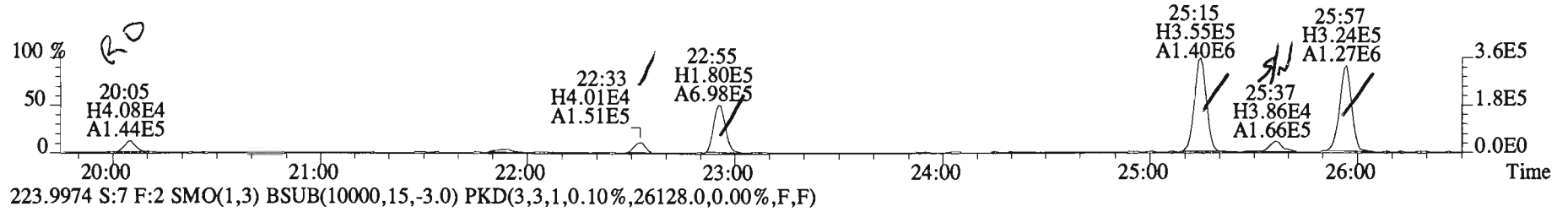
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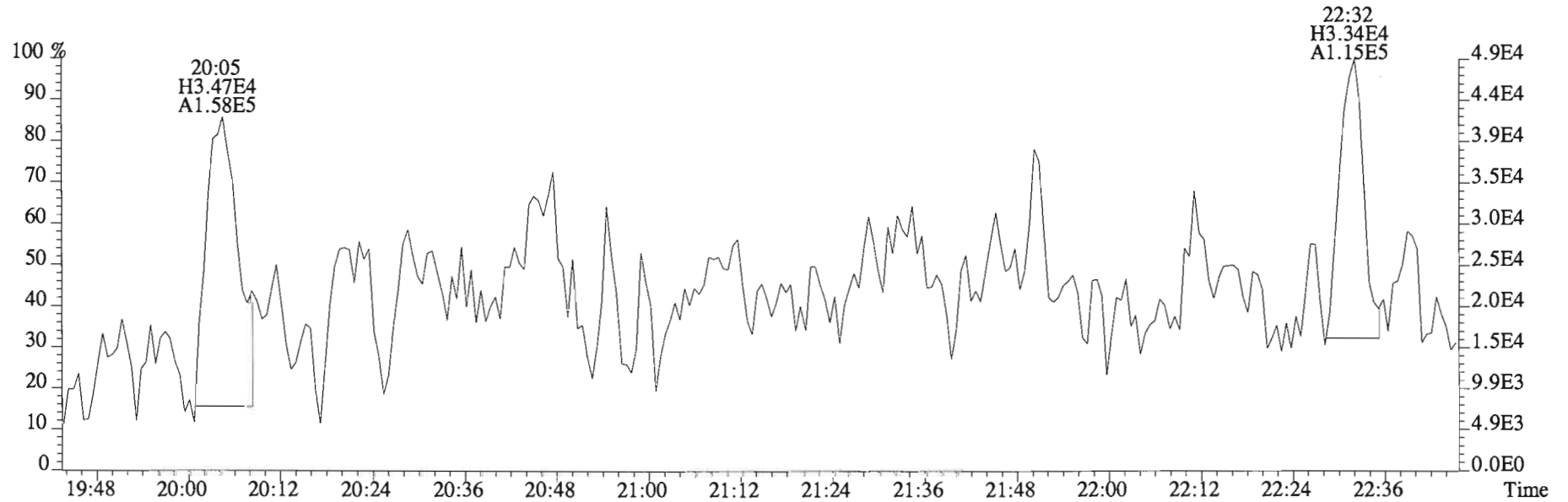
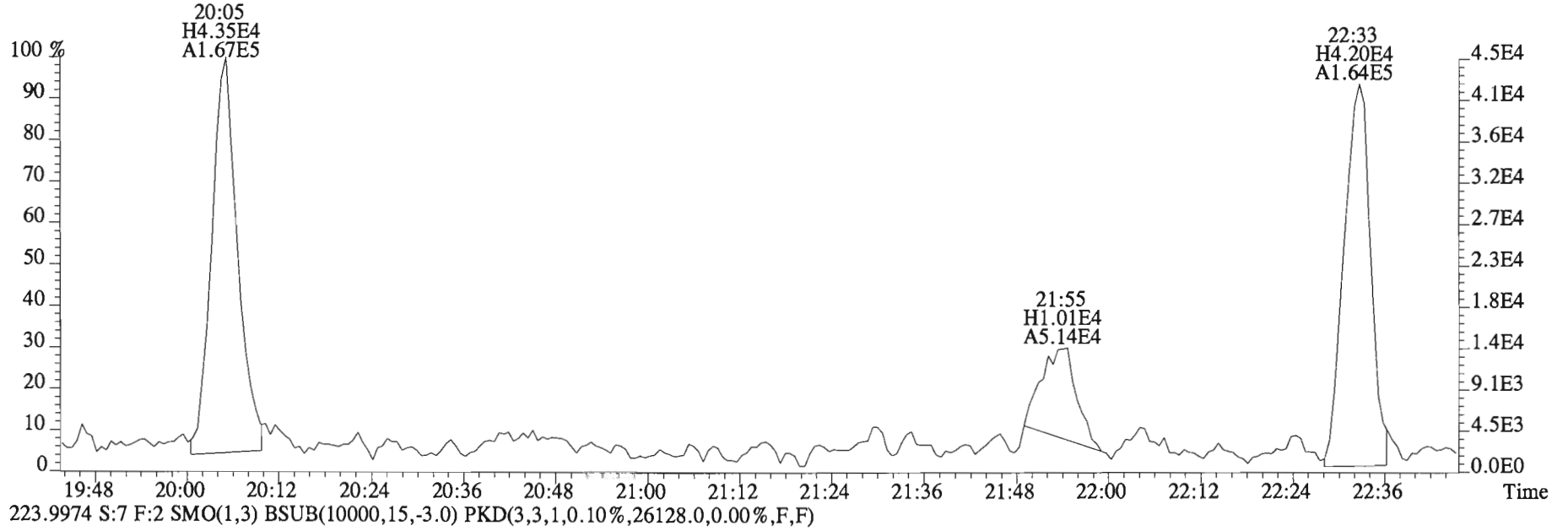
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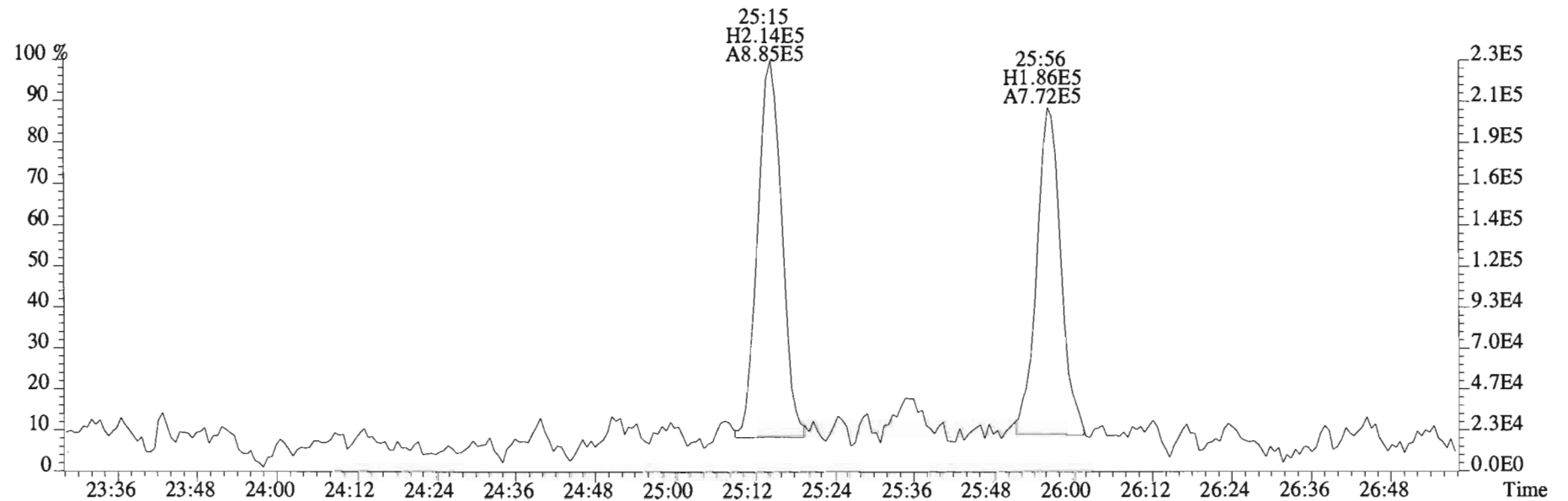
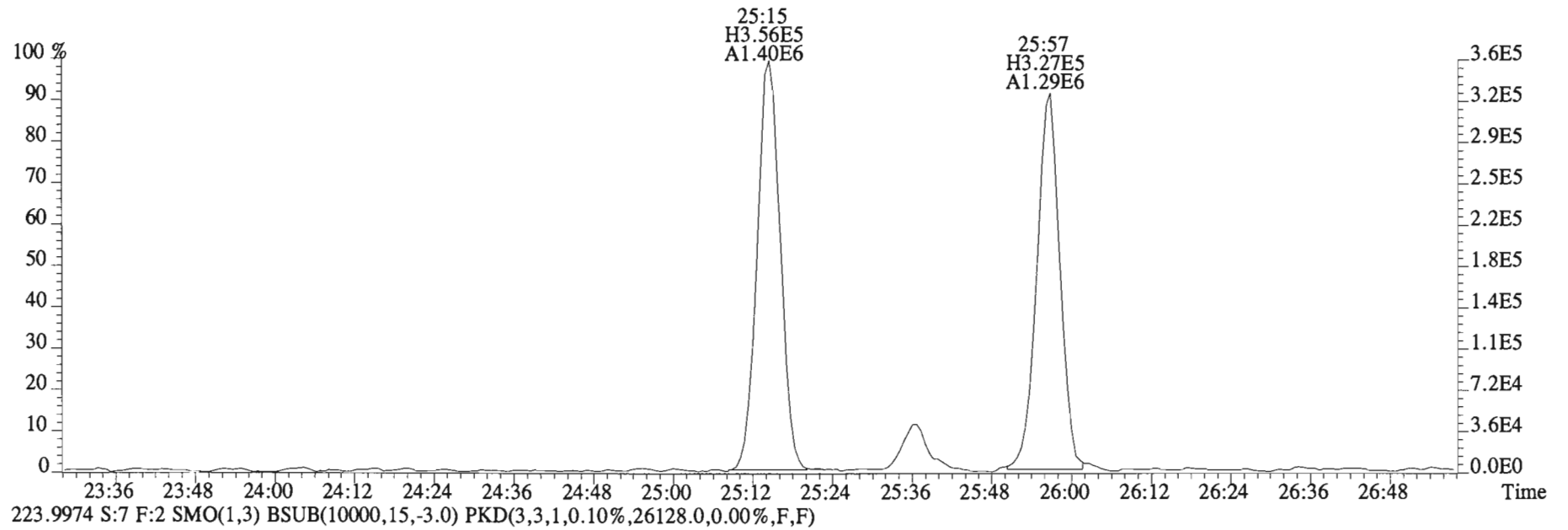
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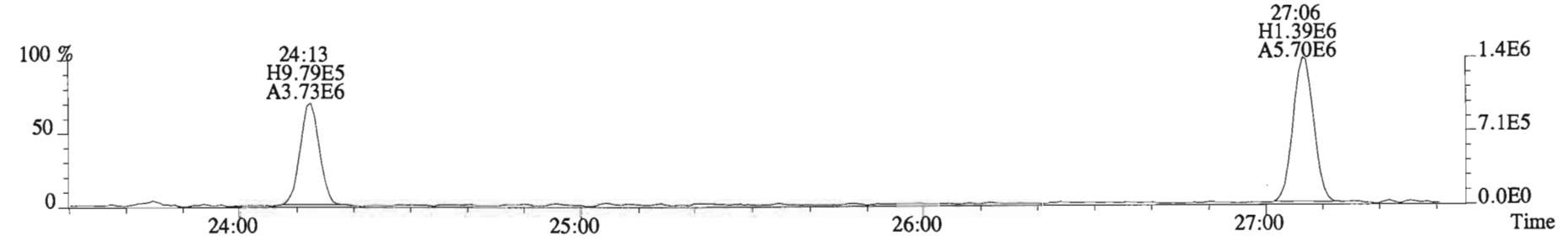
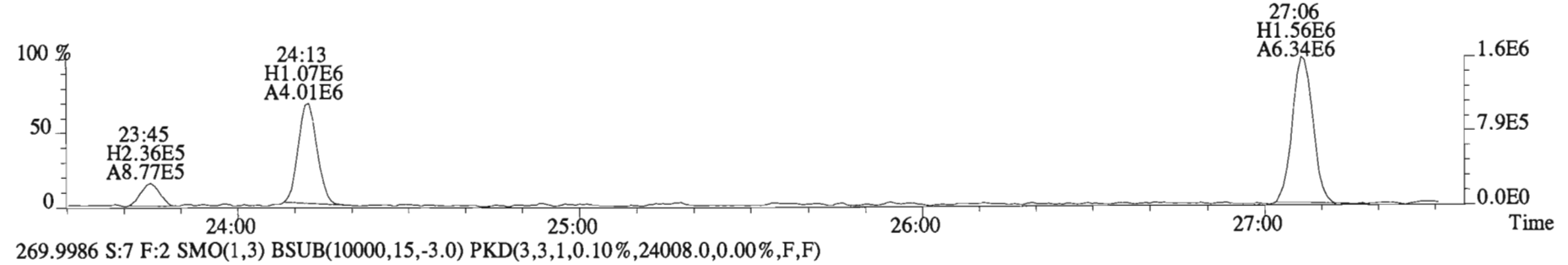
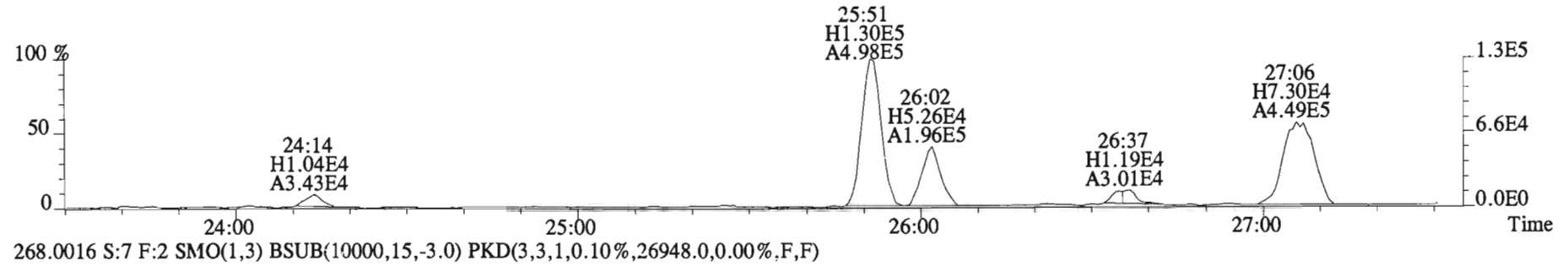
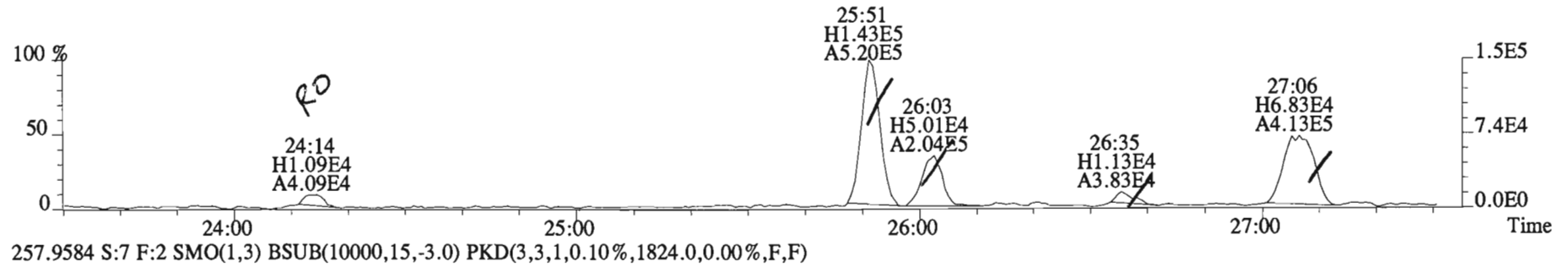
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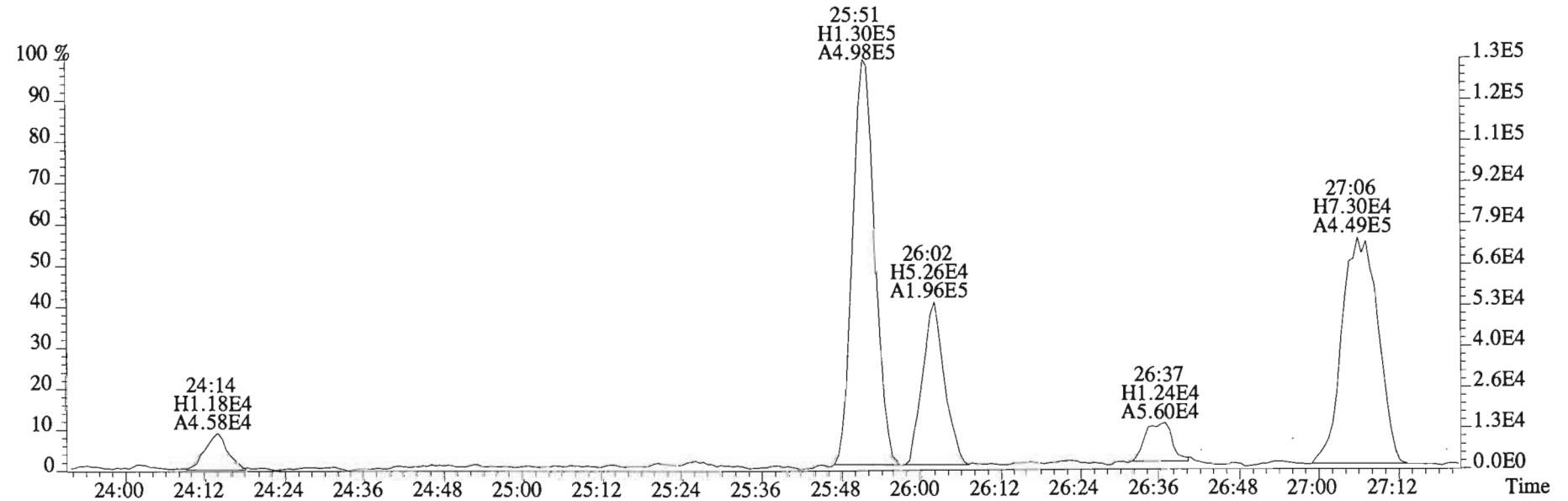
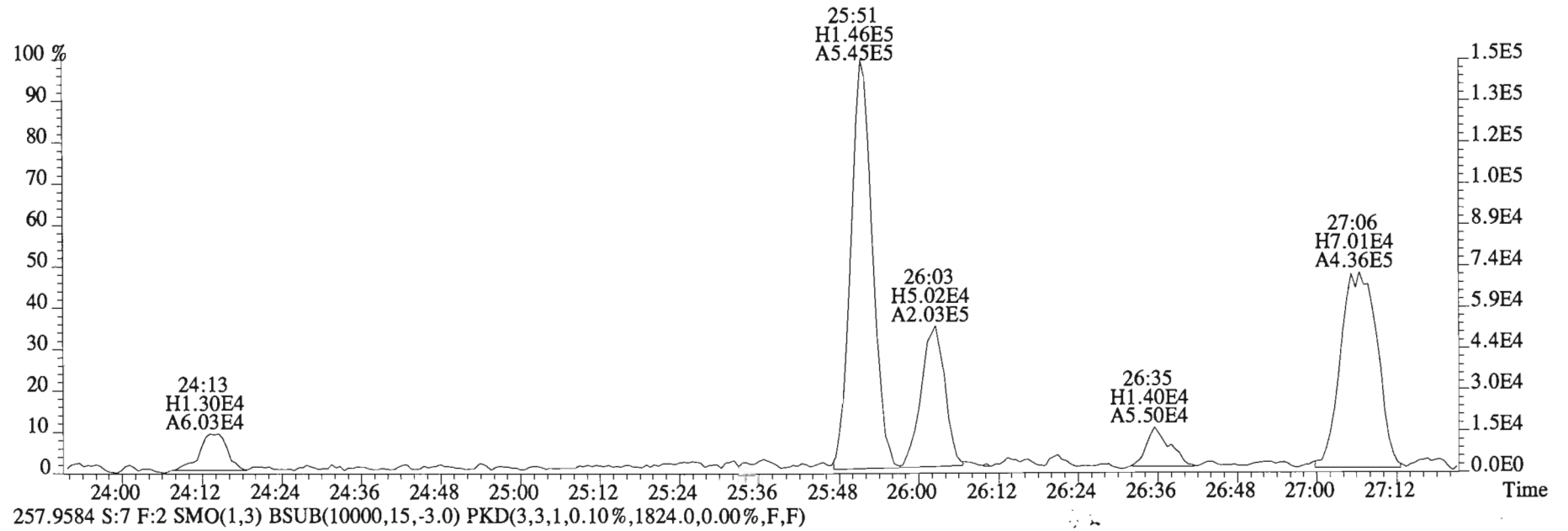
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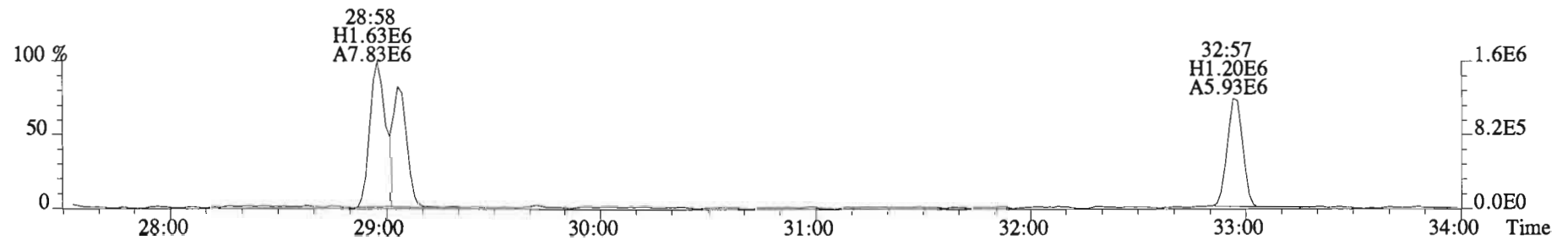
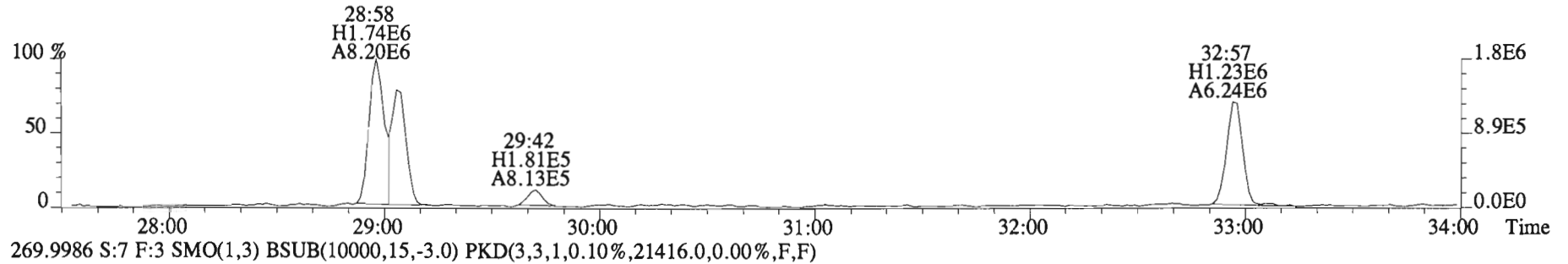
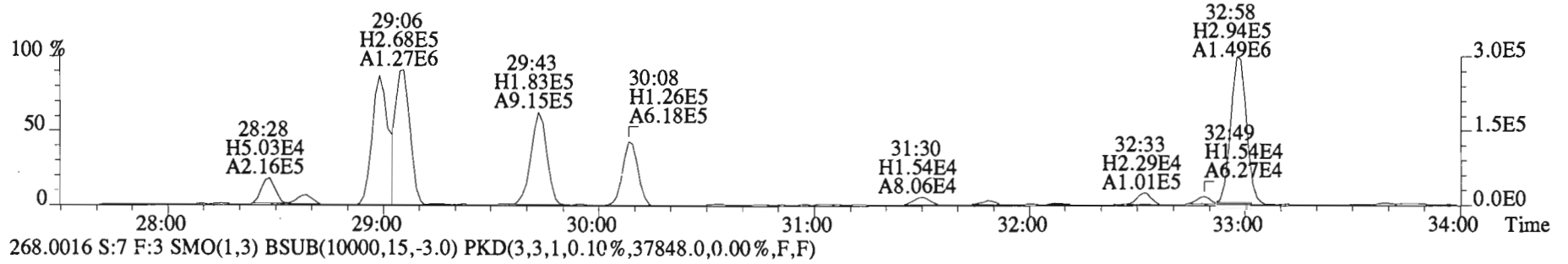
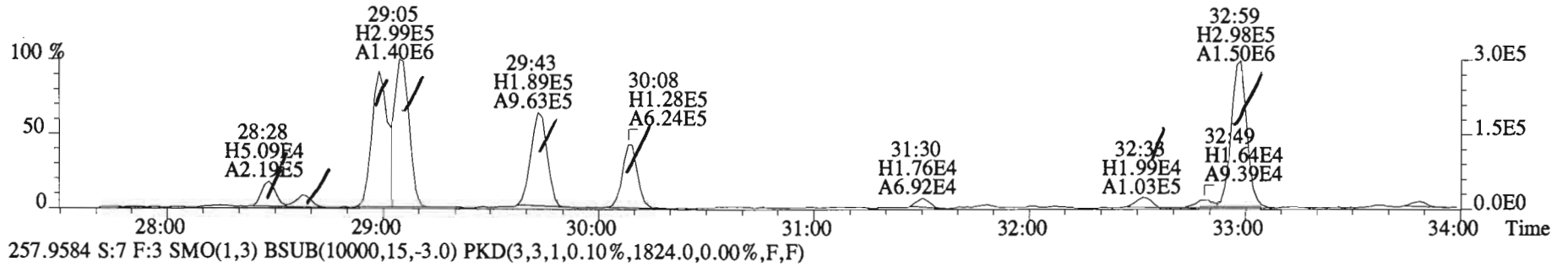
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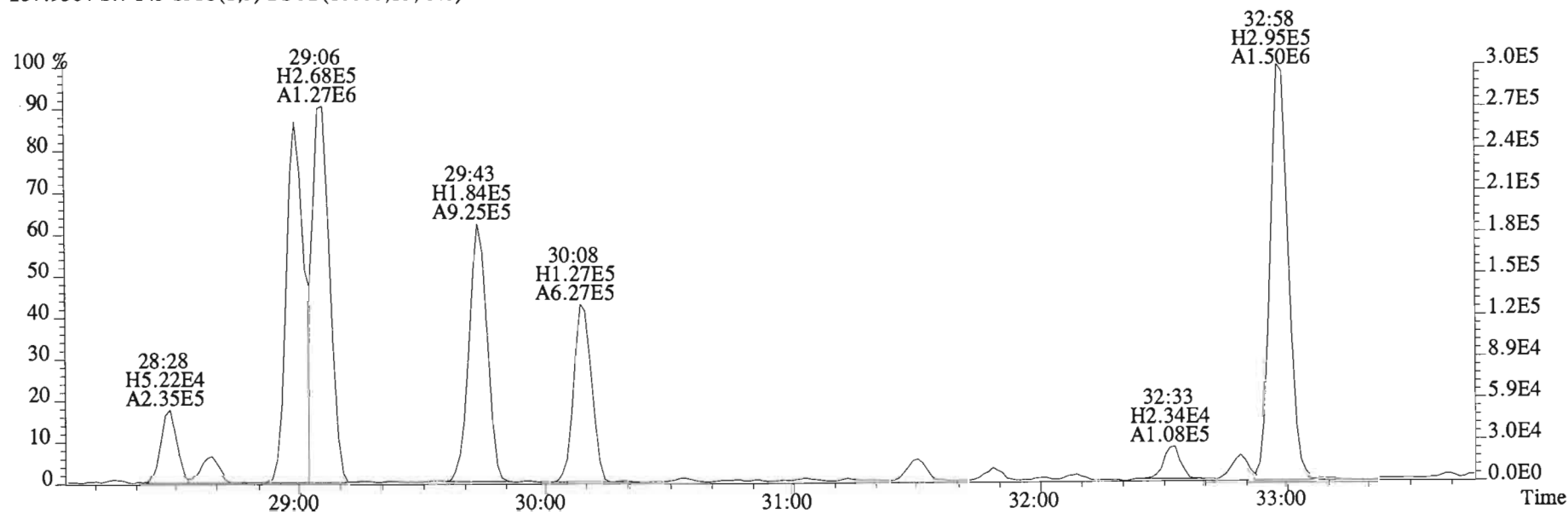
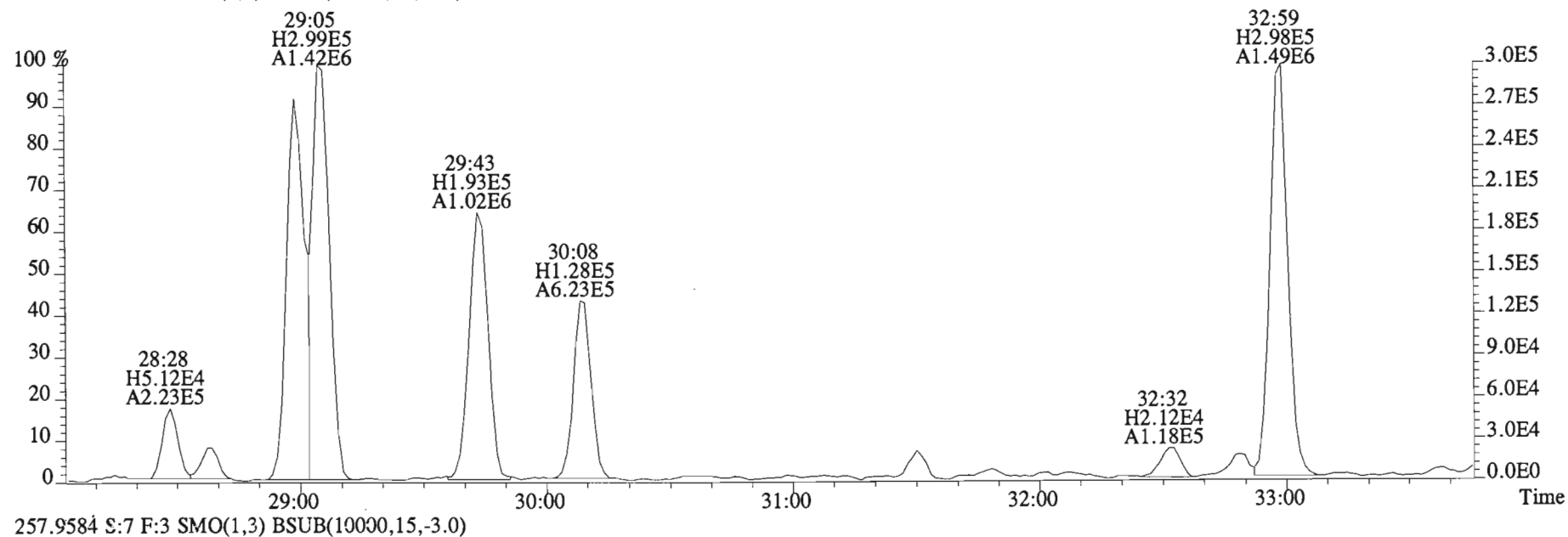
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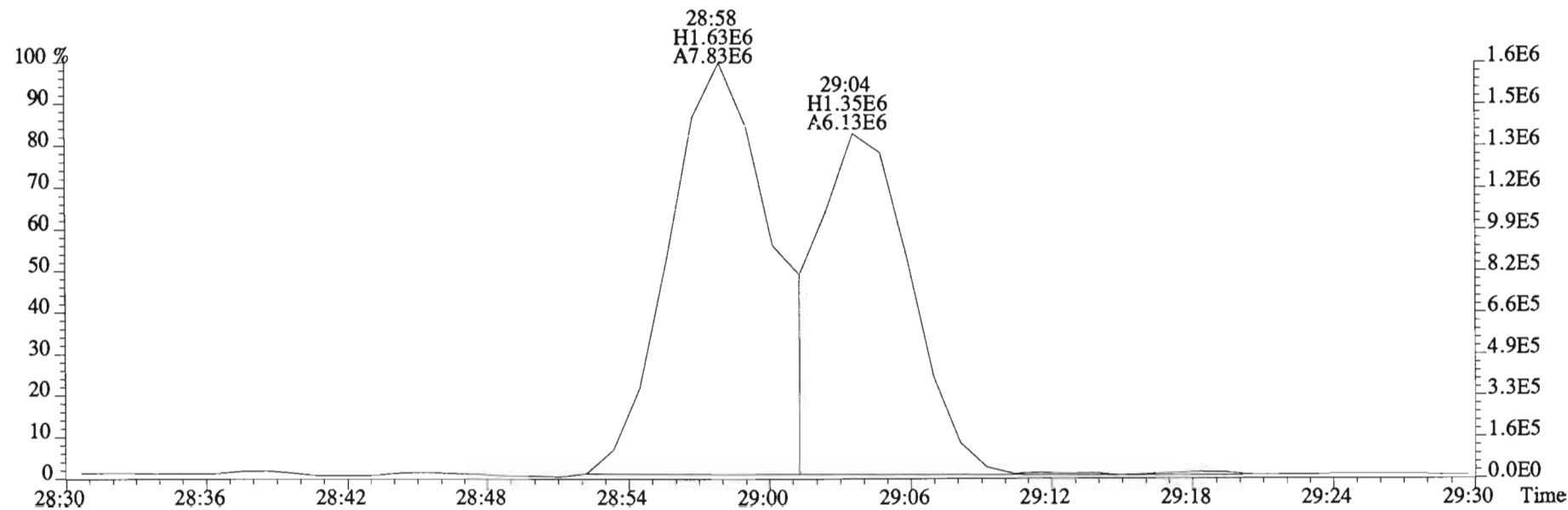
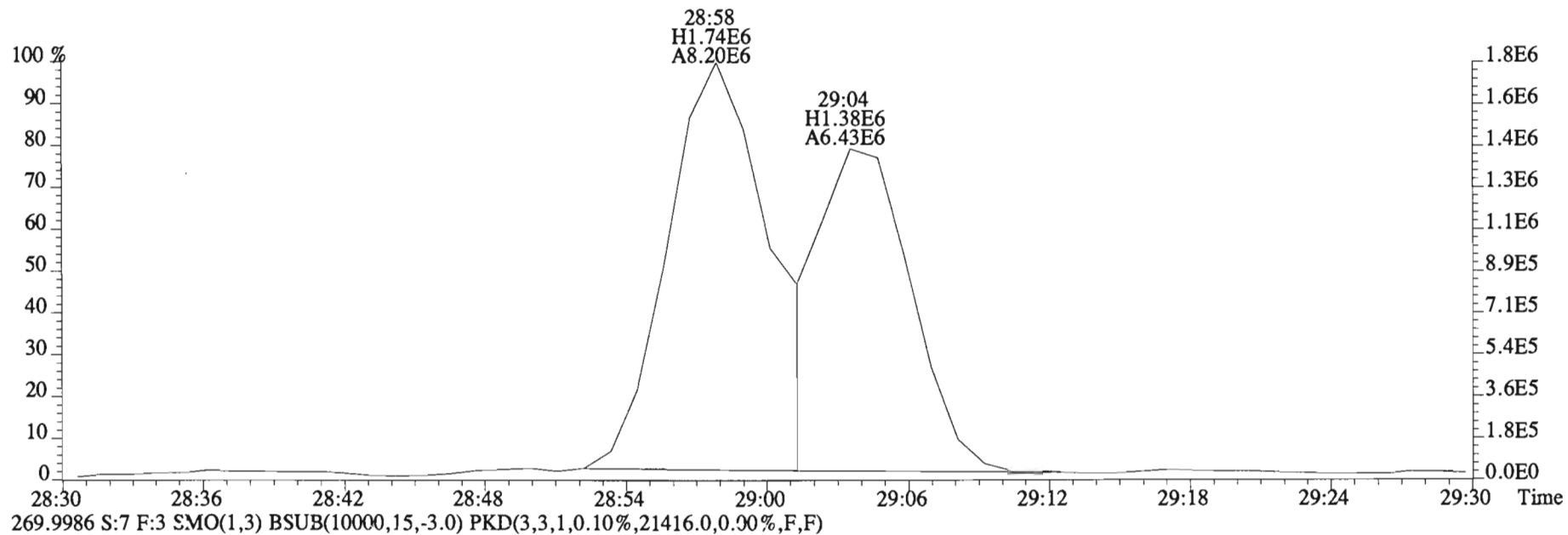
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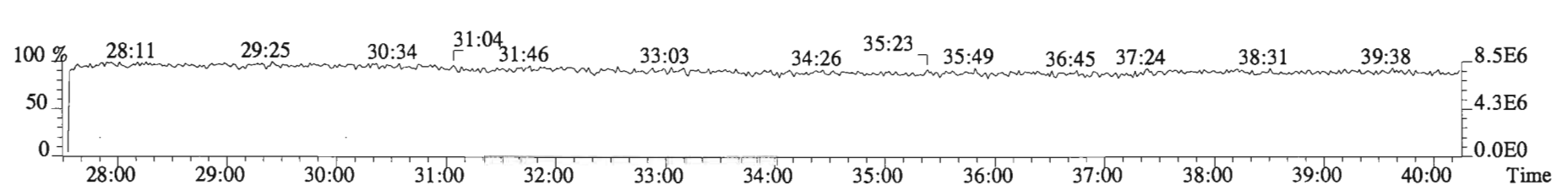
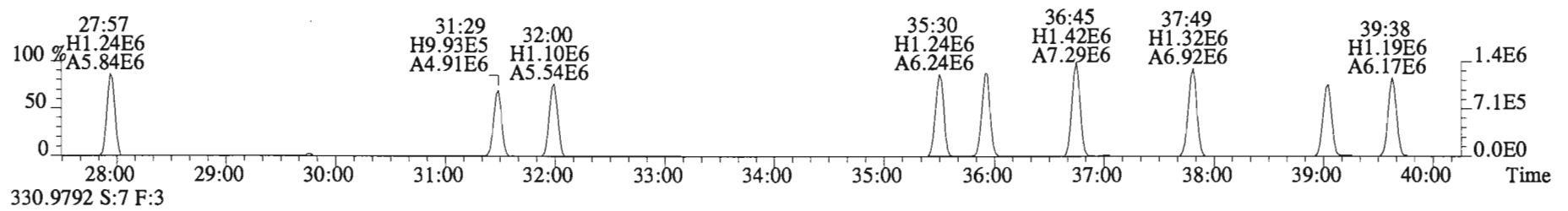
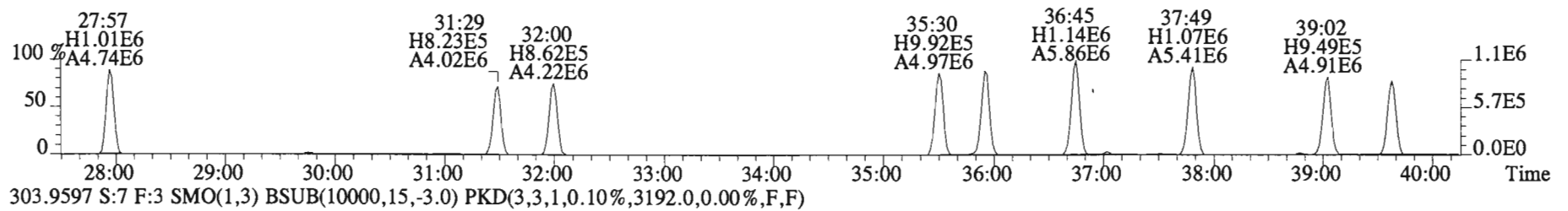
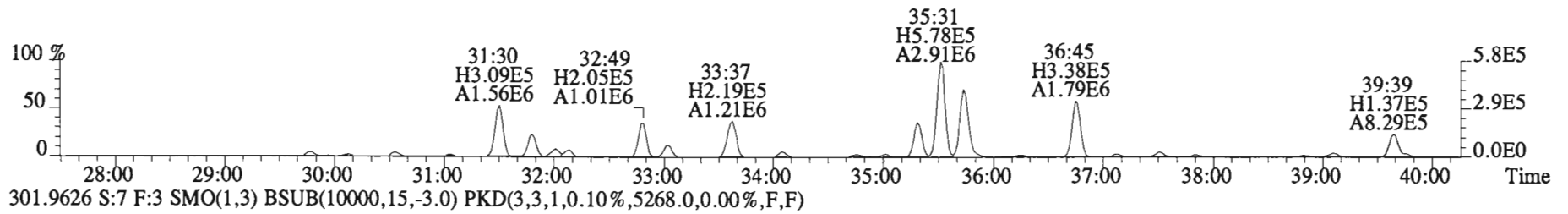
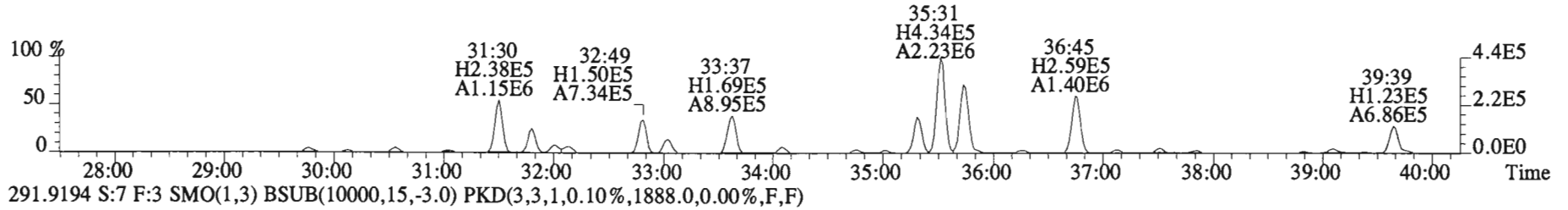
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255.9613 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



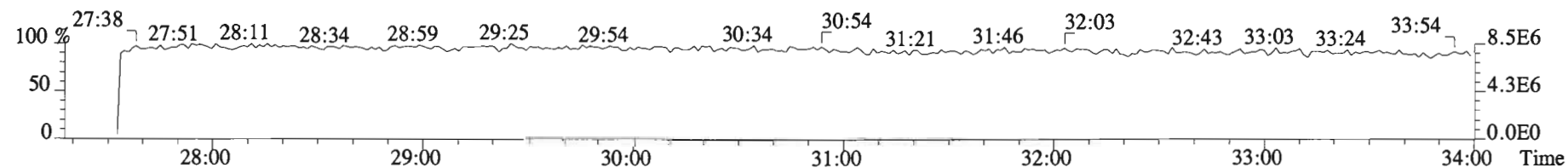
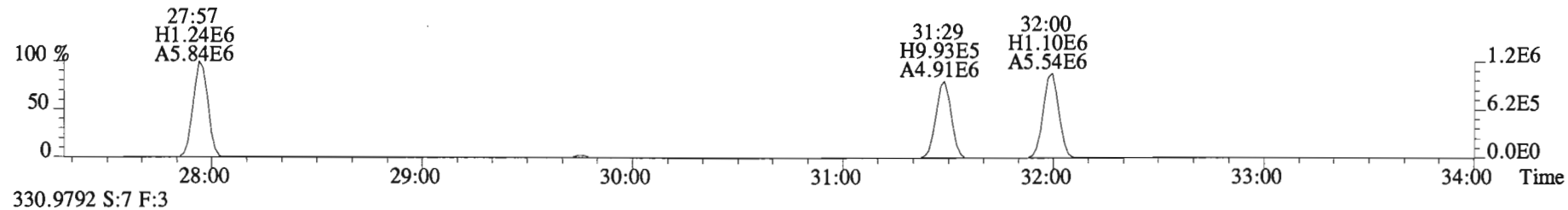
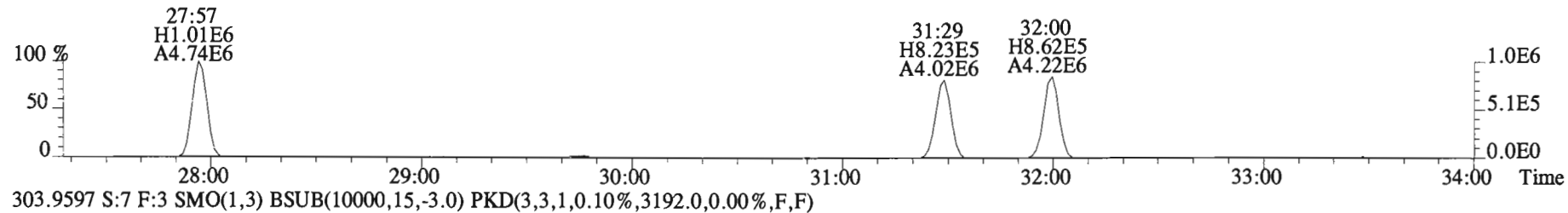
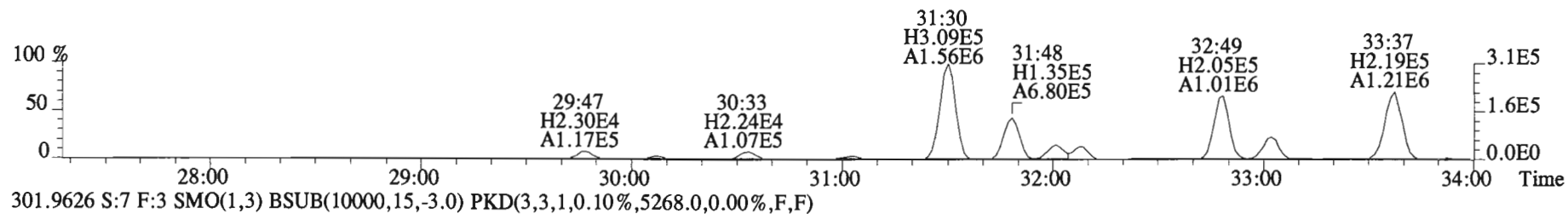
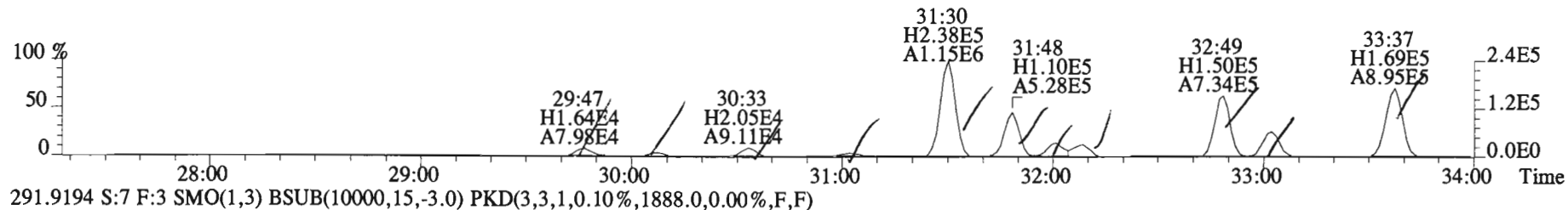
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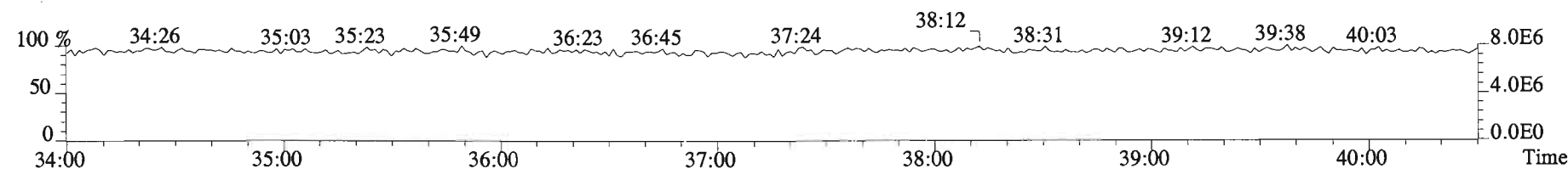
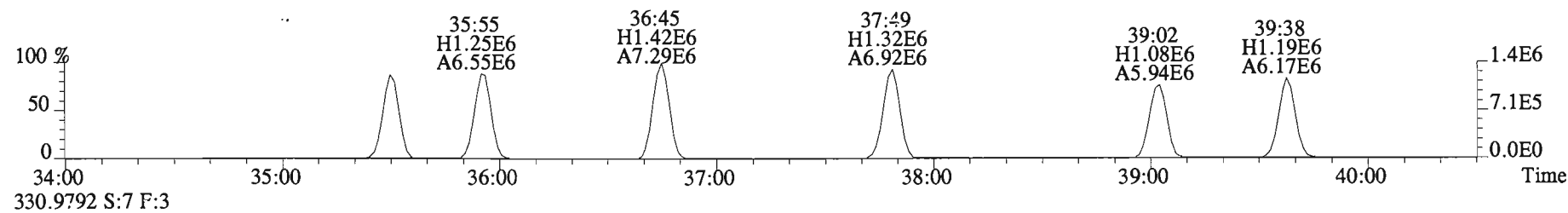
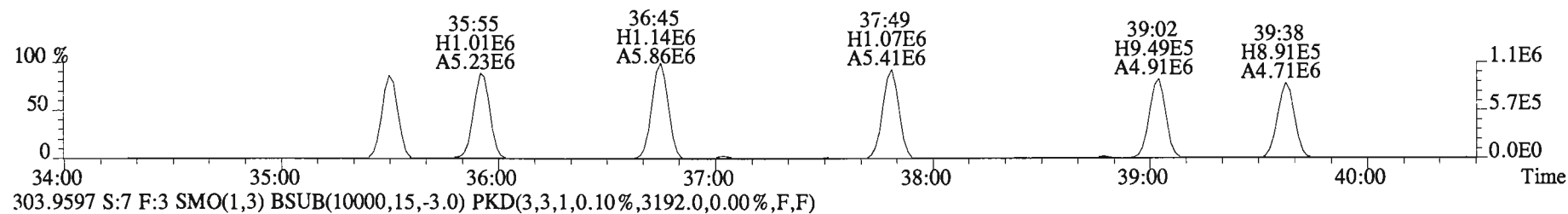
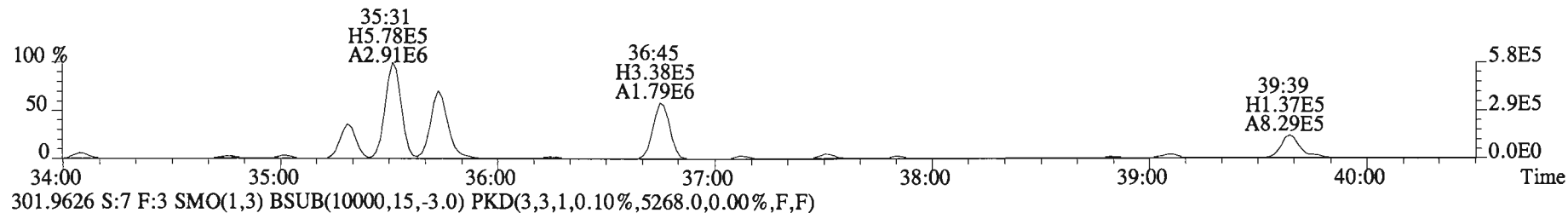
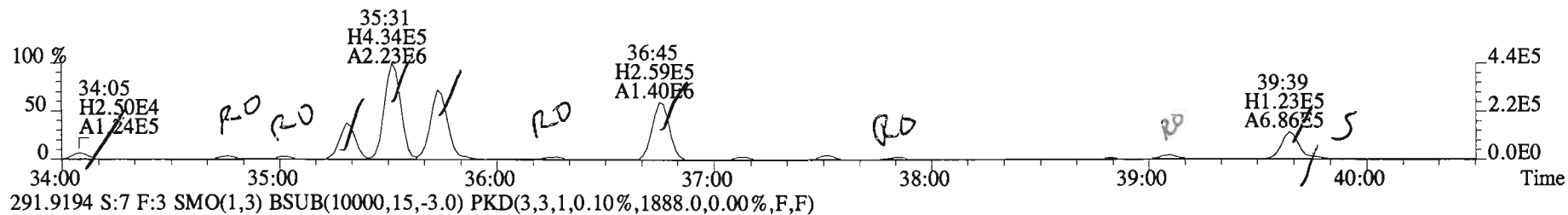
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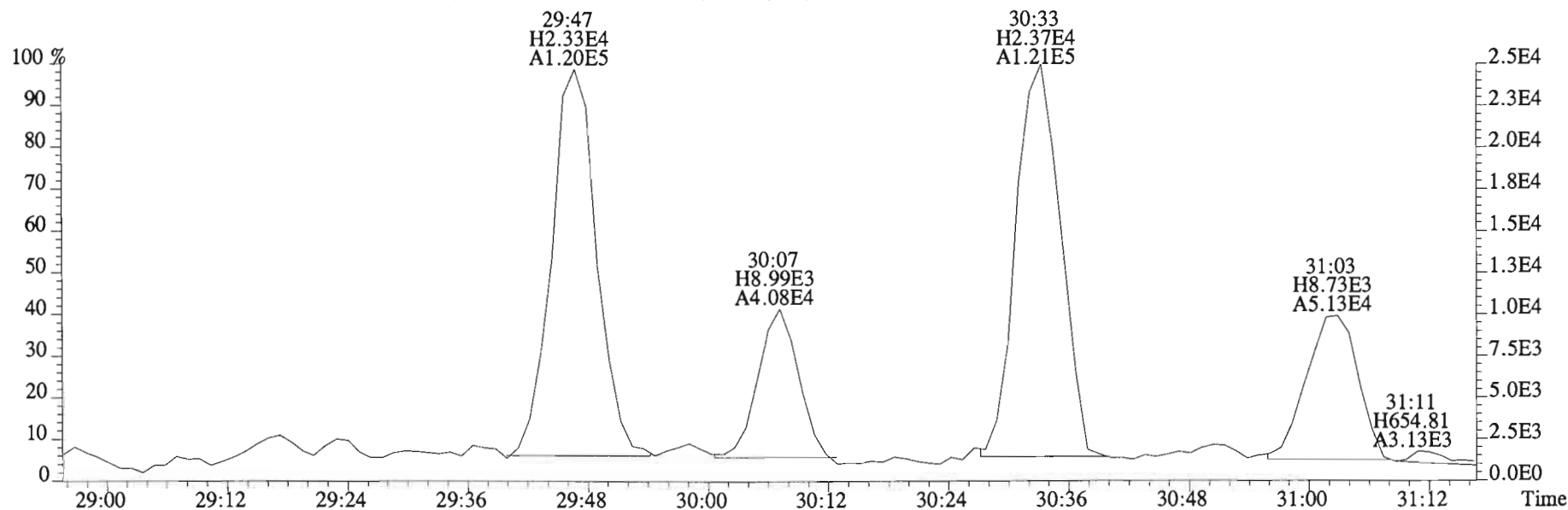
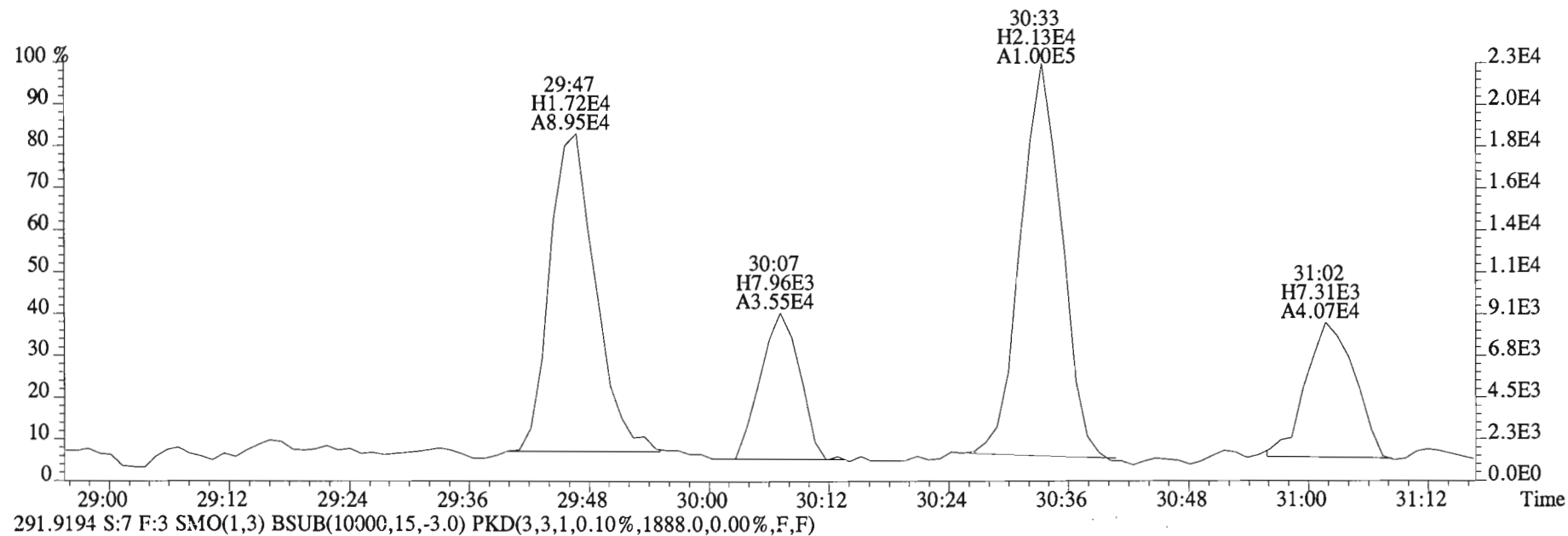
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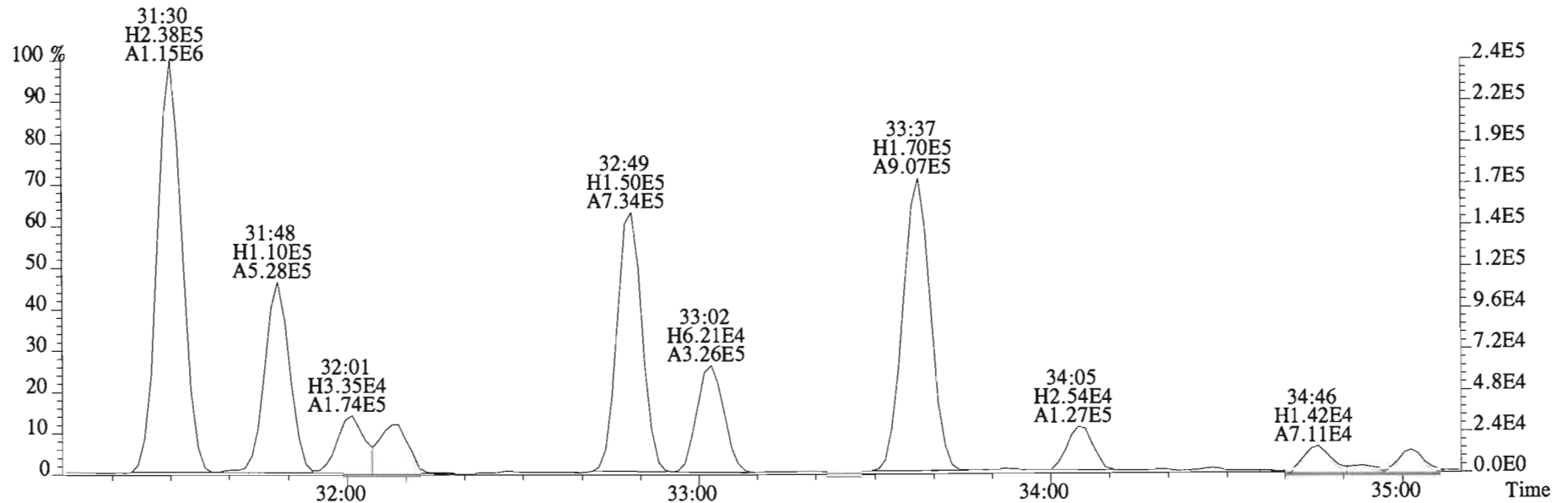
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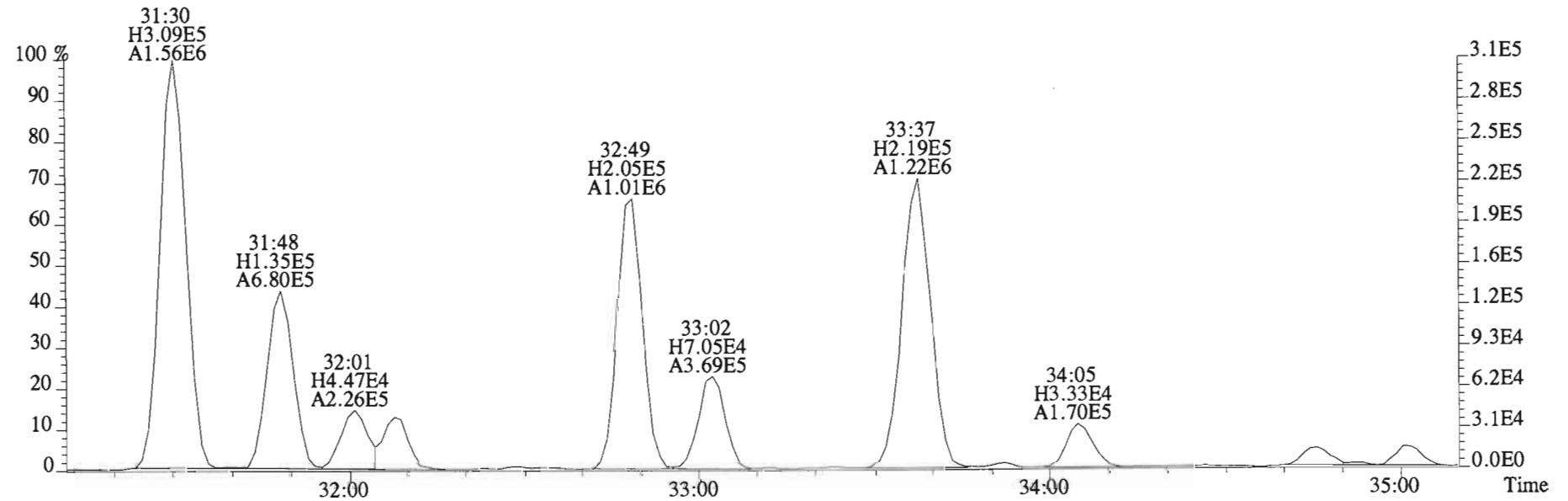
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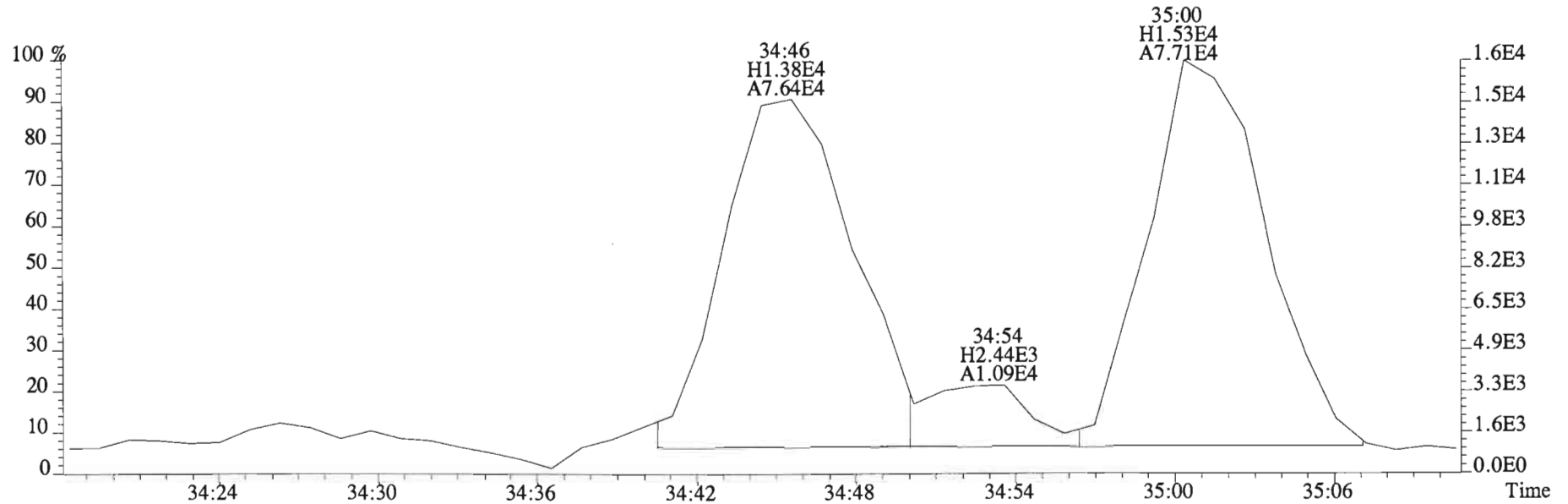
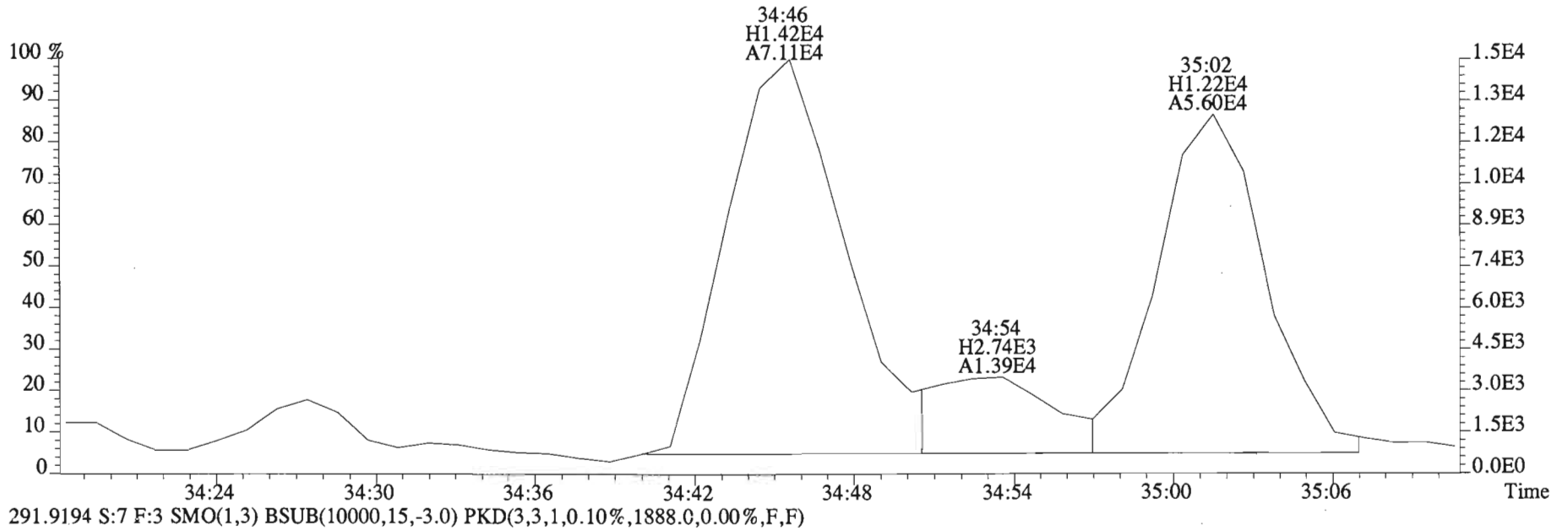
File:150205E1 #1-758 Acq: 5-FEB-2015 15:24:13 GC EI+ Voltage SIR Autospec-UltimaE
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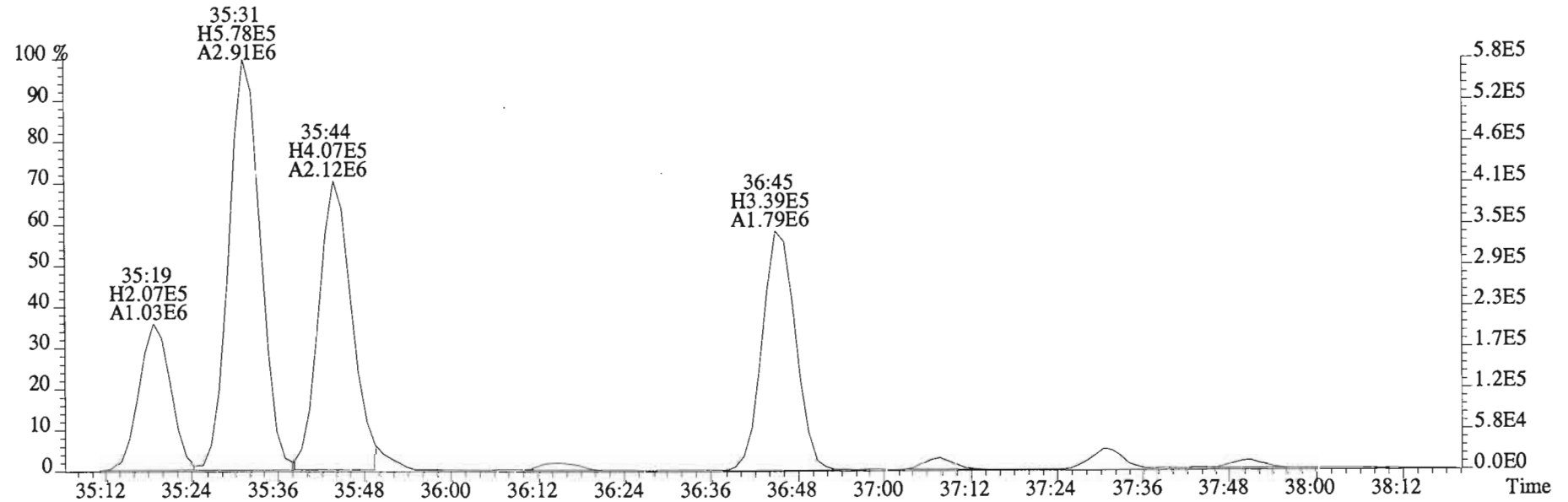
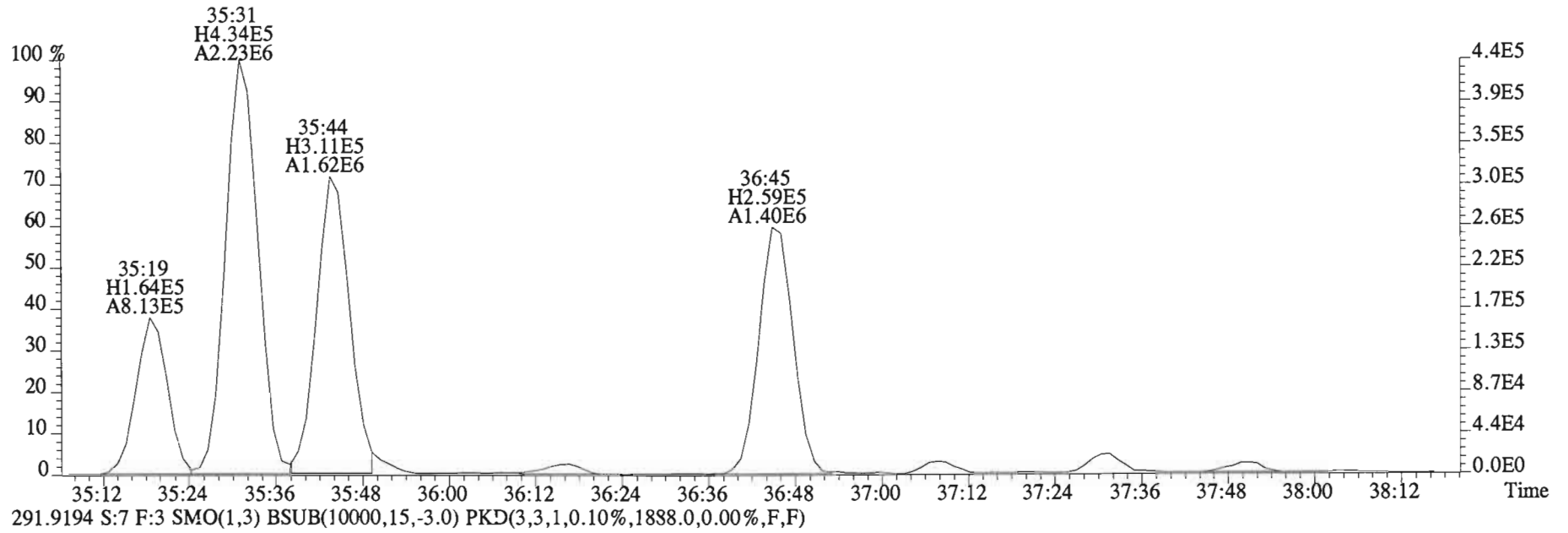
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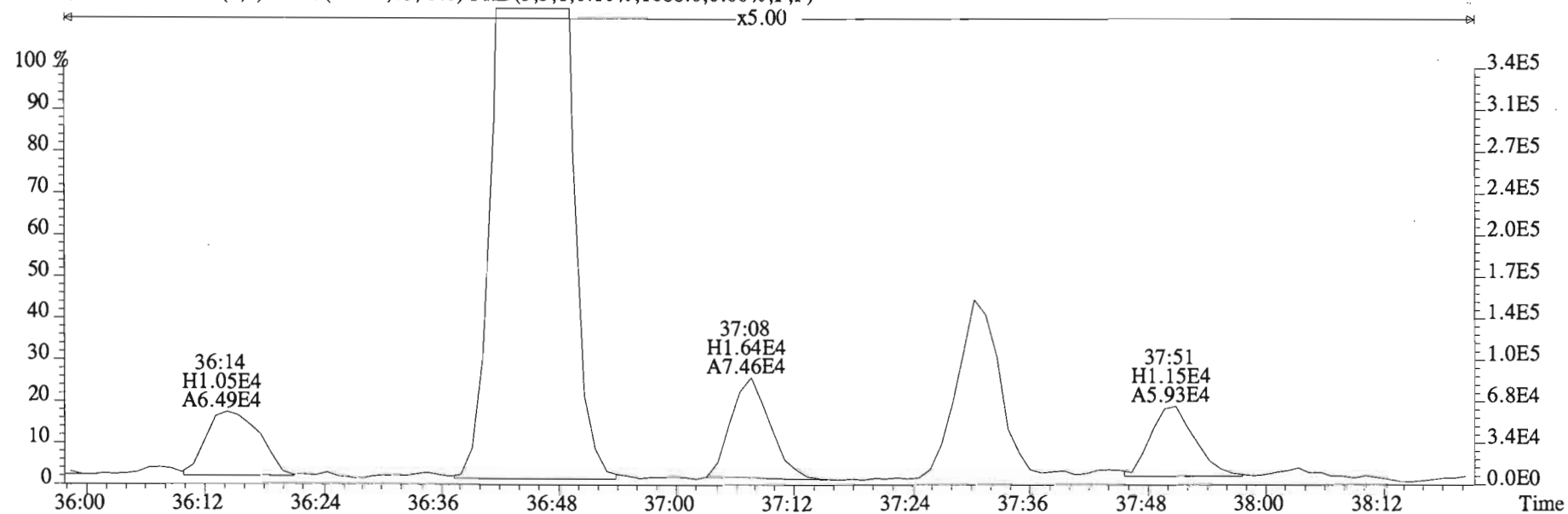
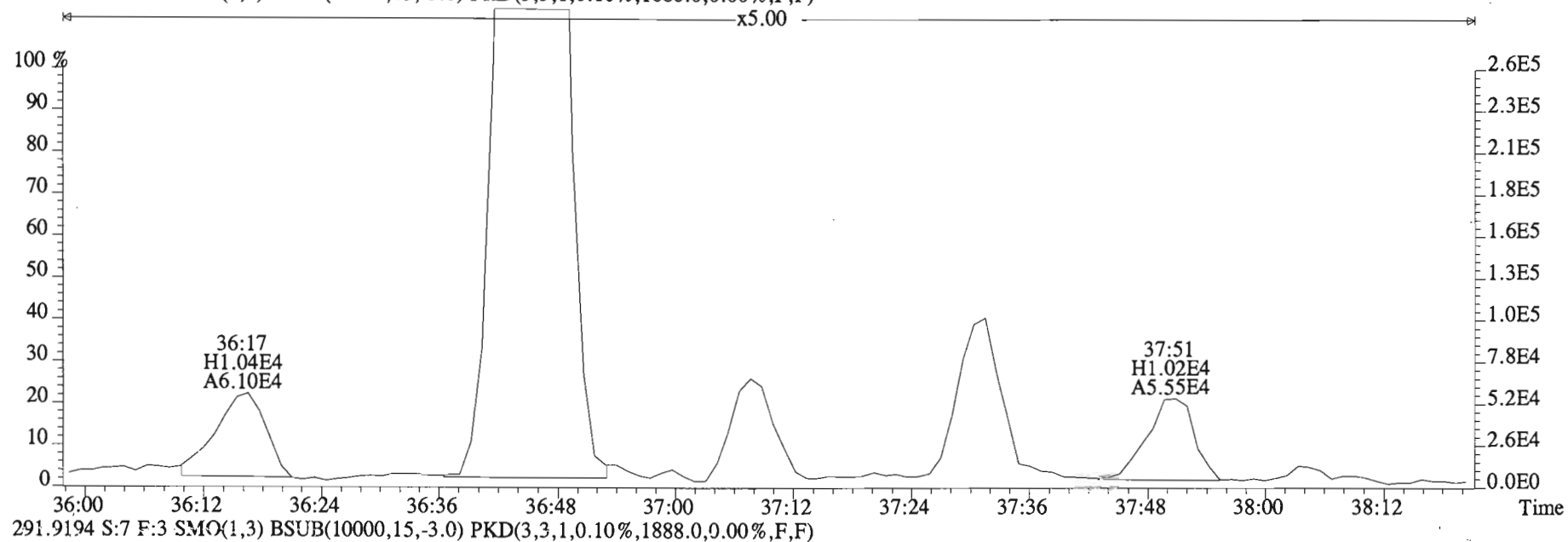
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Sample#7 File Text: Vista Analytical Laboratory VG-8 Text:1400970-04@10X DS-CB-H1-20141216-S Exp:PCB_ZB1
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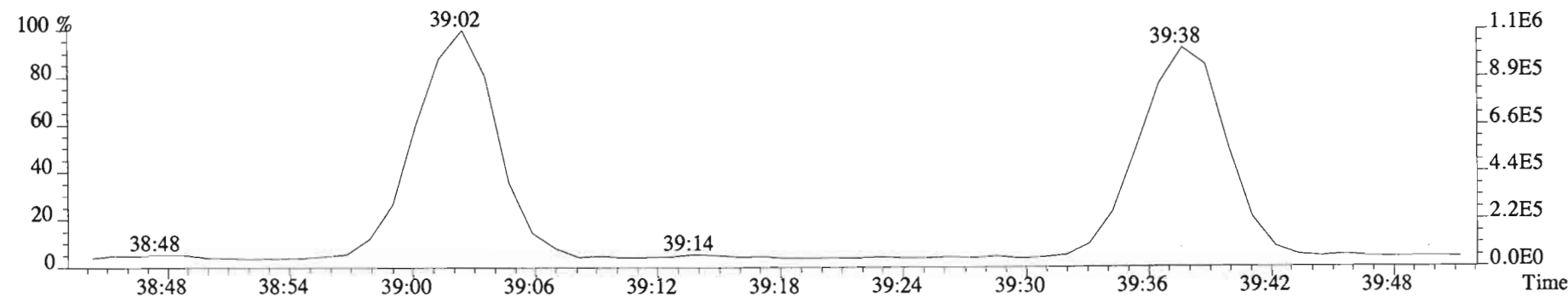
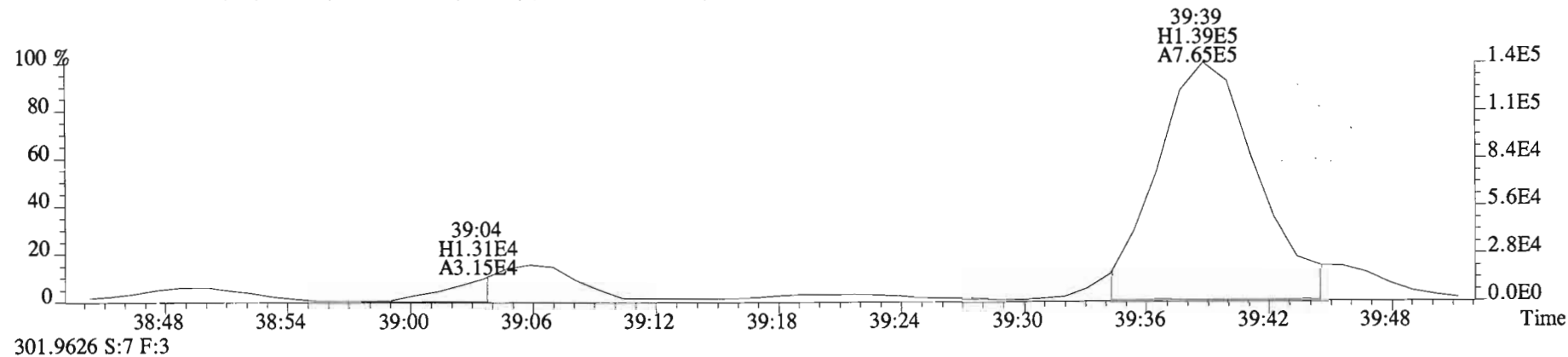
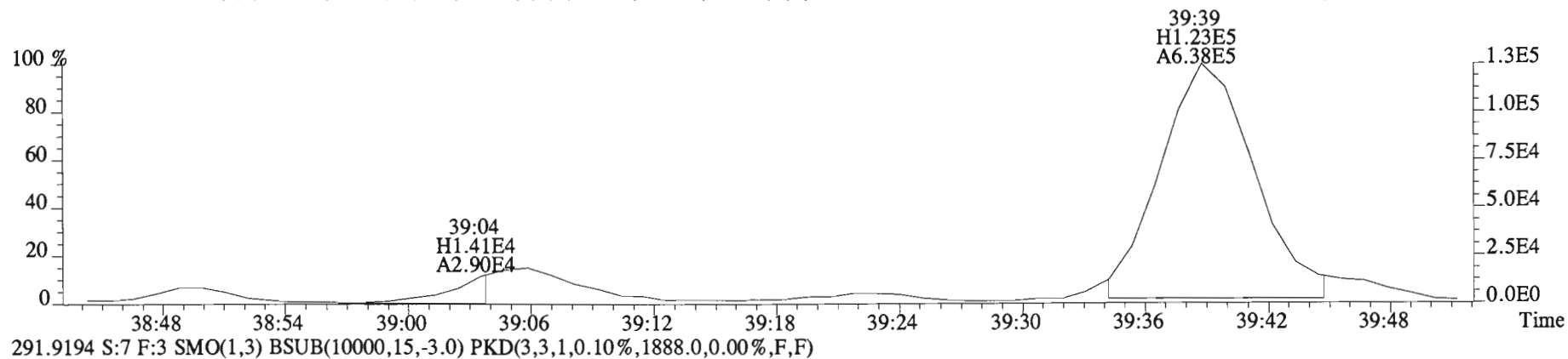
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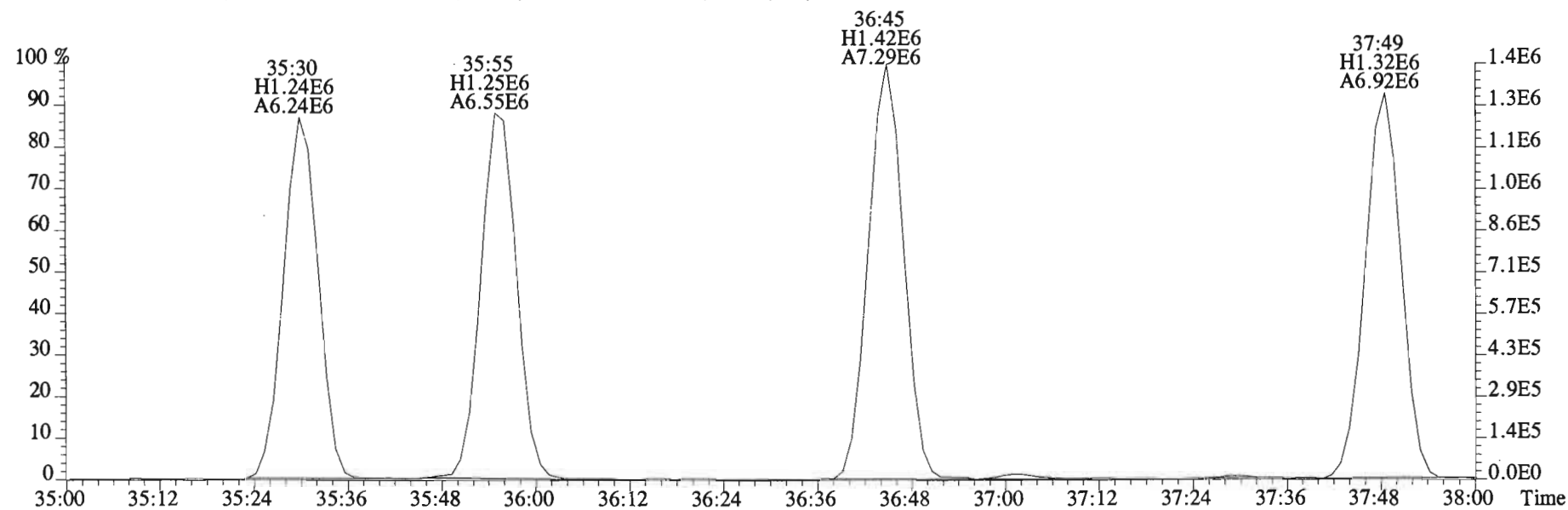
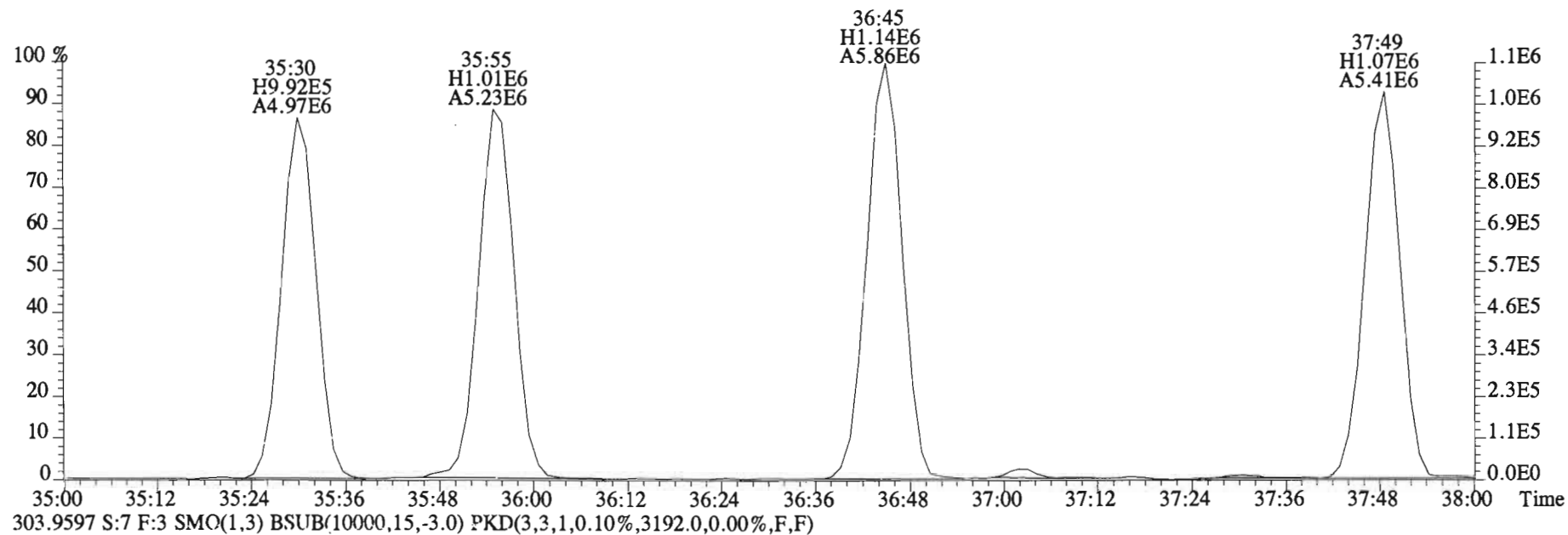
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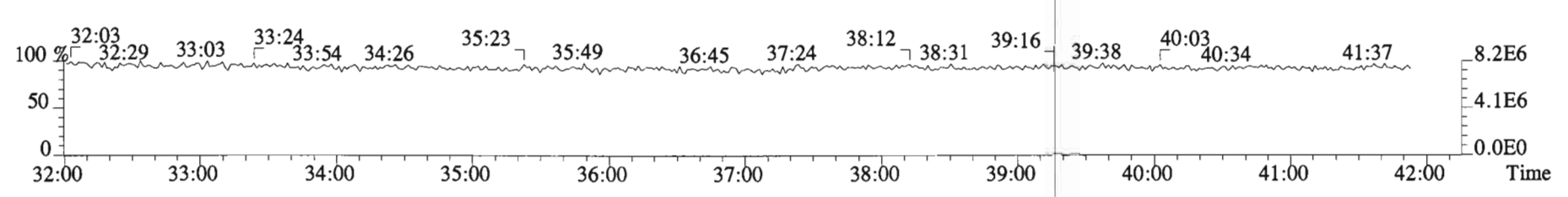
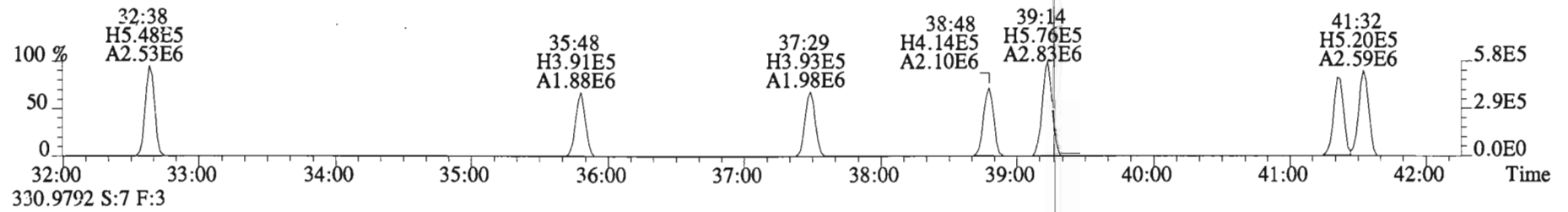
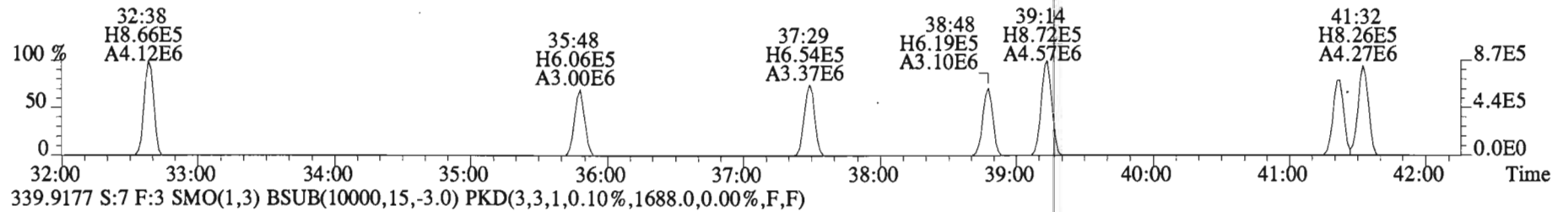
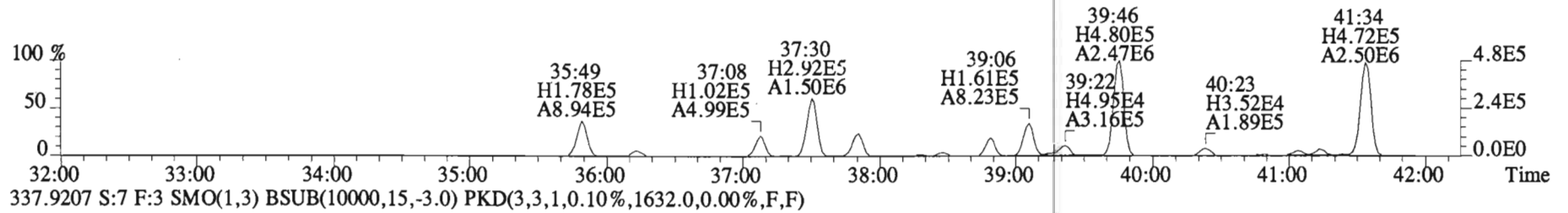
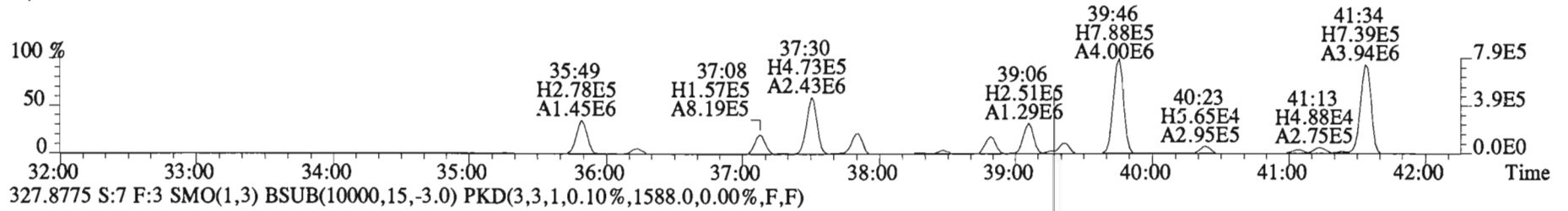
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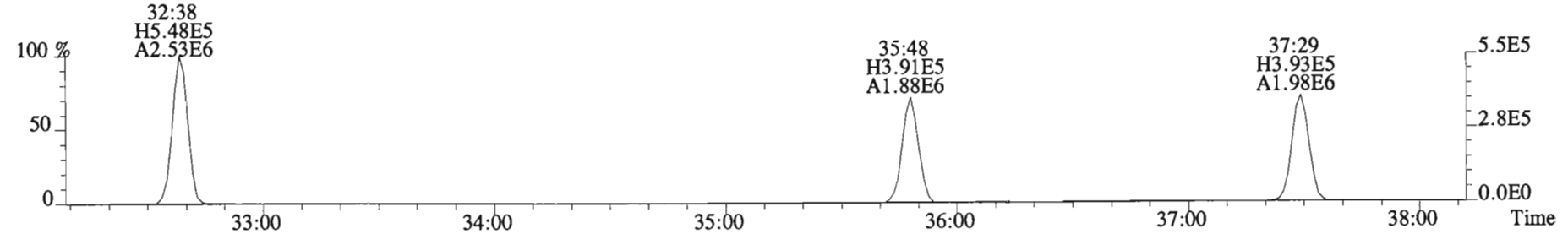
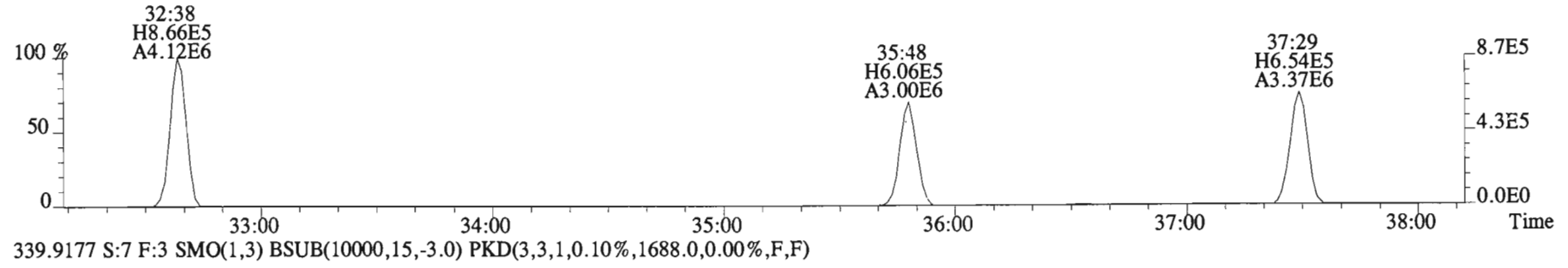
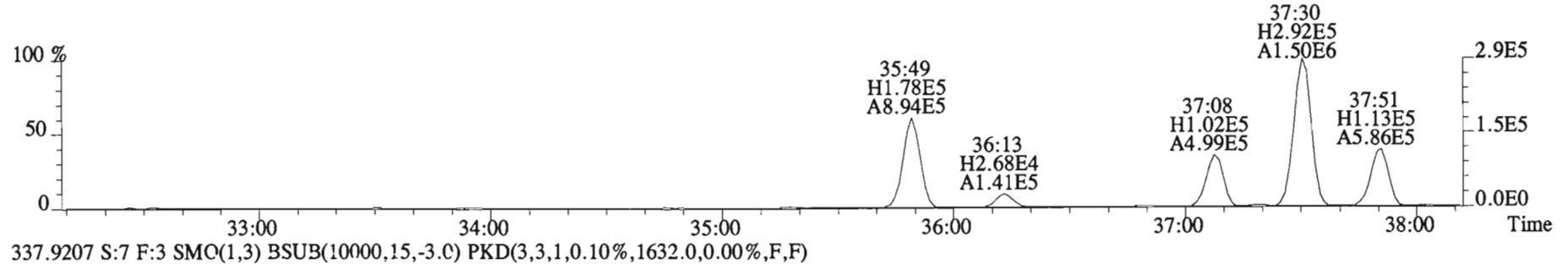
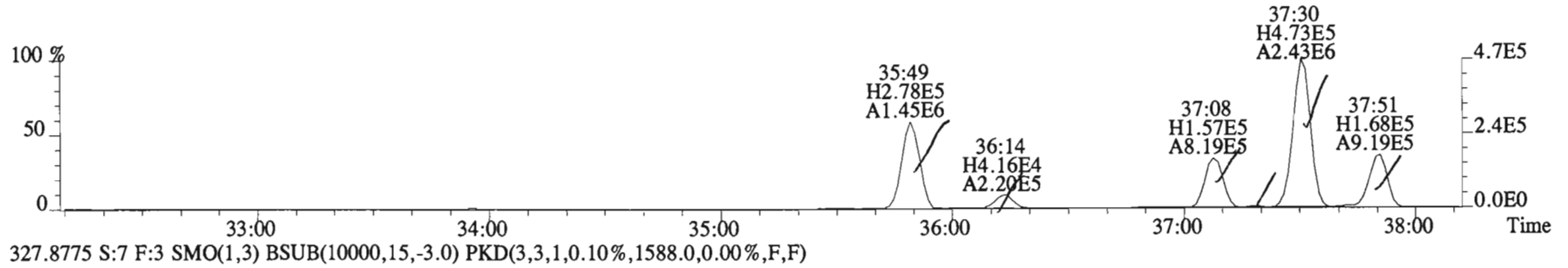
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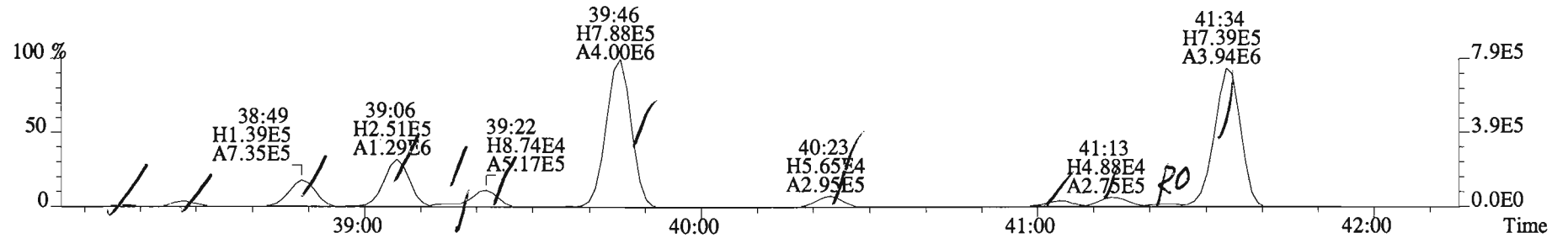
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Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400970-04@10X DS-CB-H1-20141216-S Exp:PCB_ZB1
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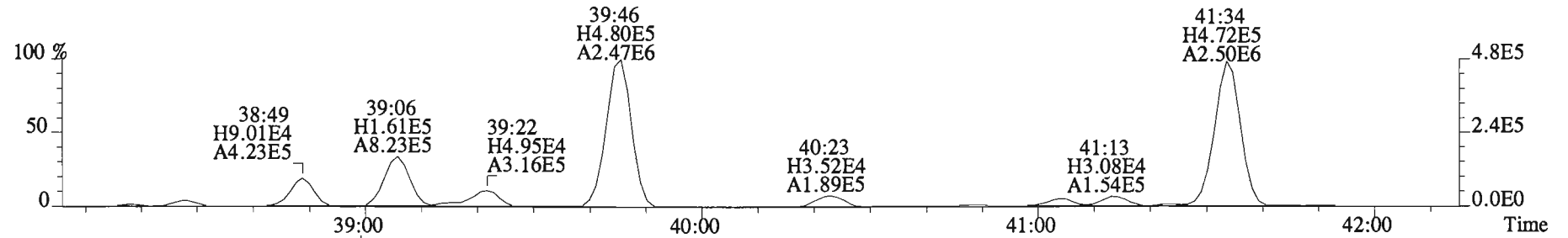
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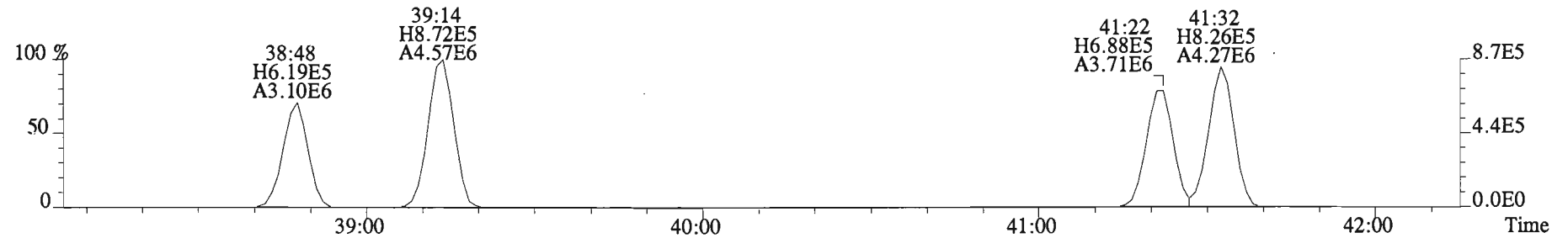
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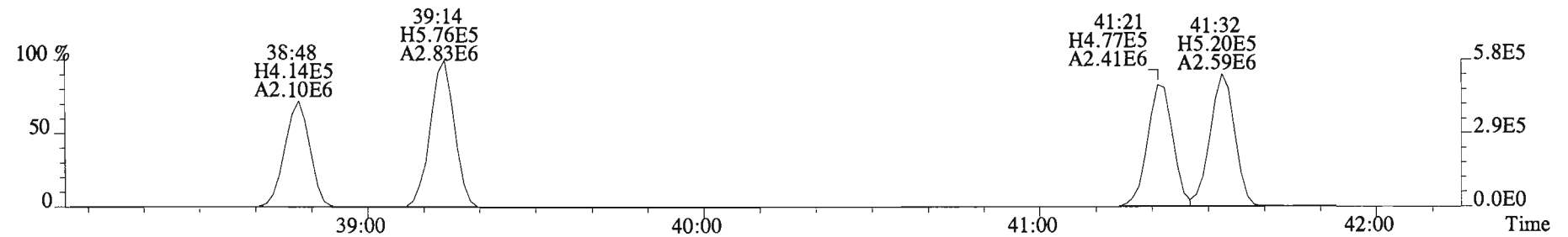
327.8775 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1588.0,0.00%,F,F)



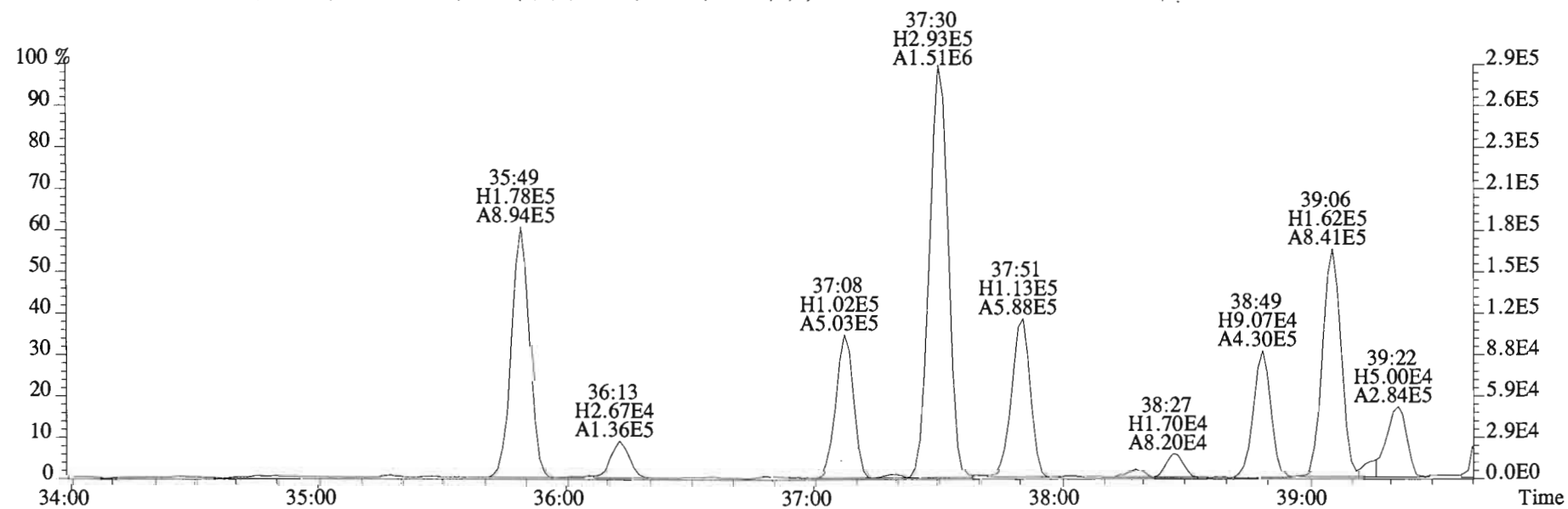
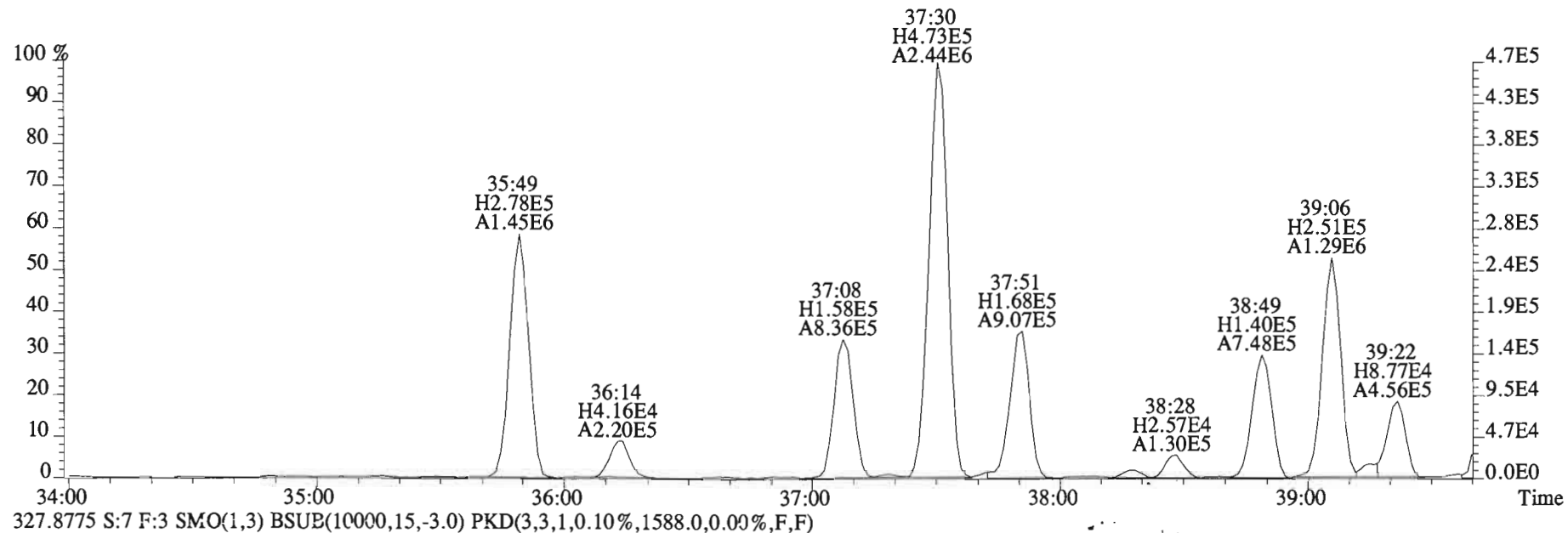
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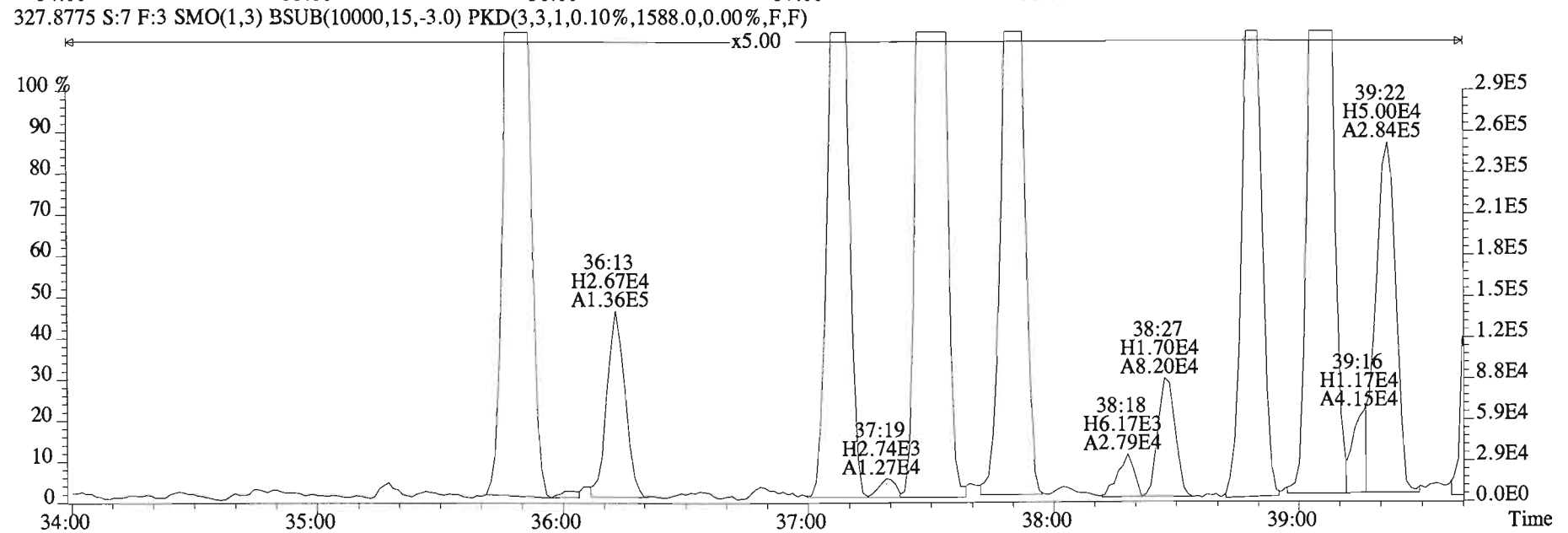
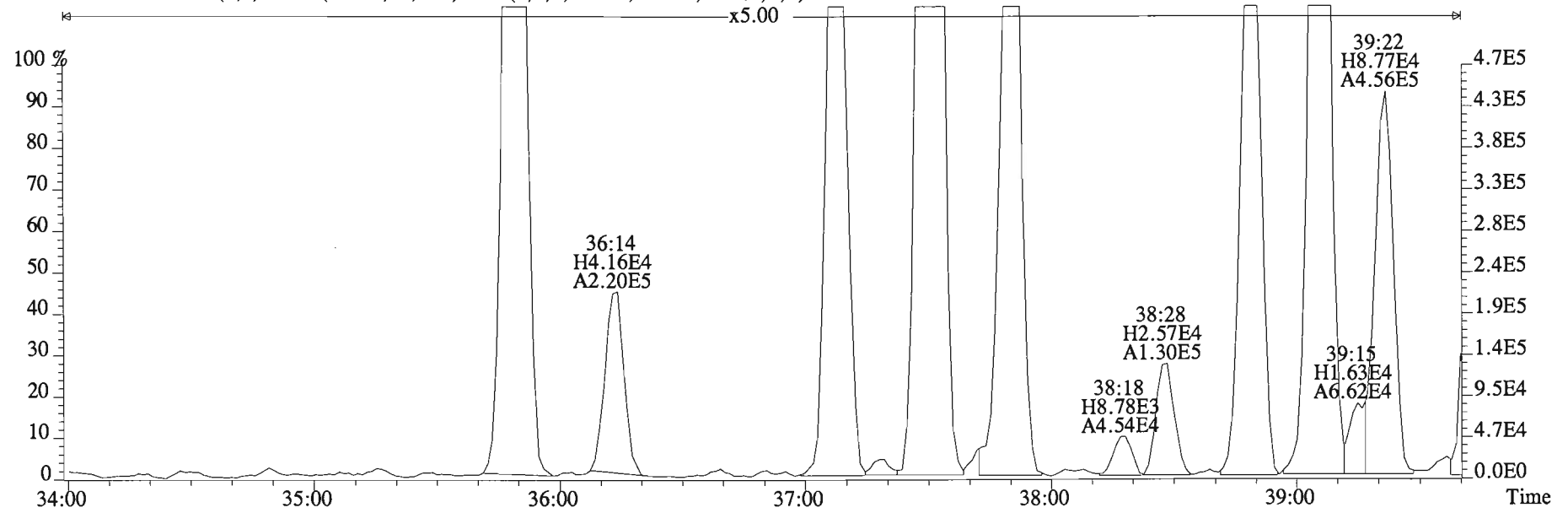
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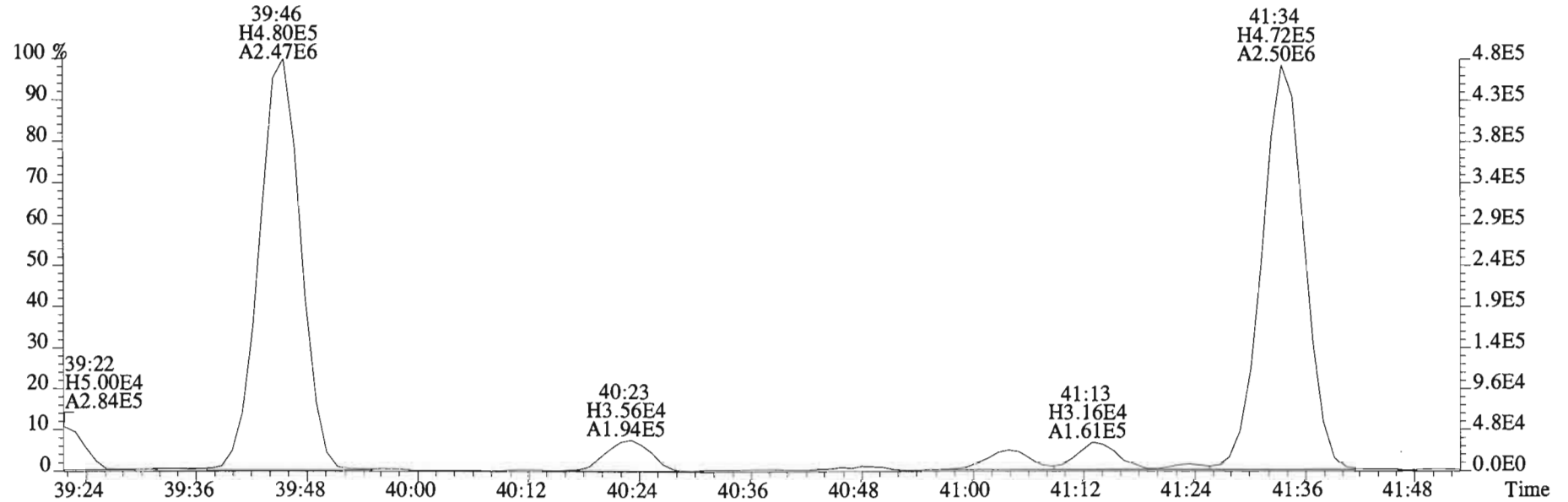
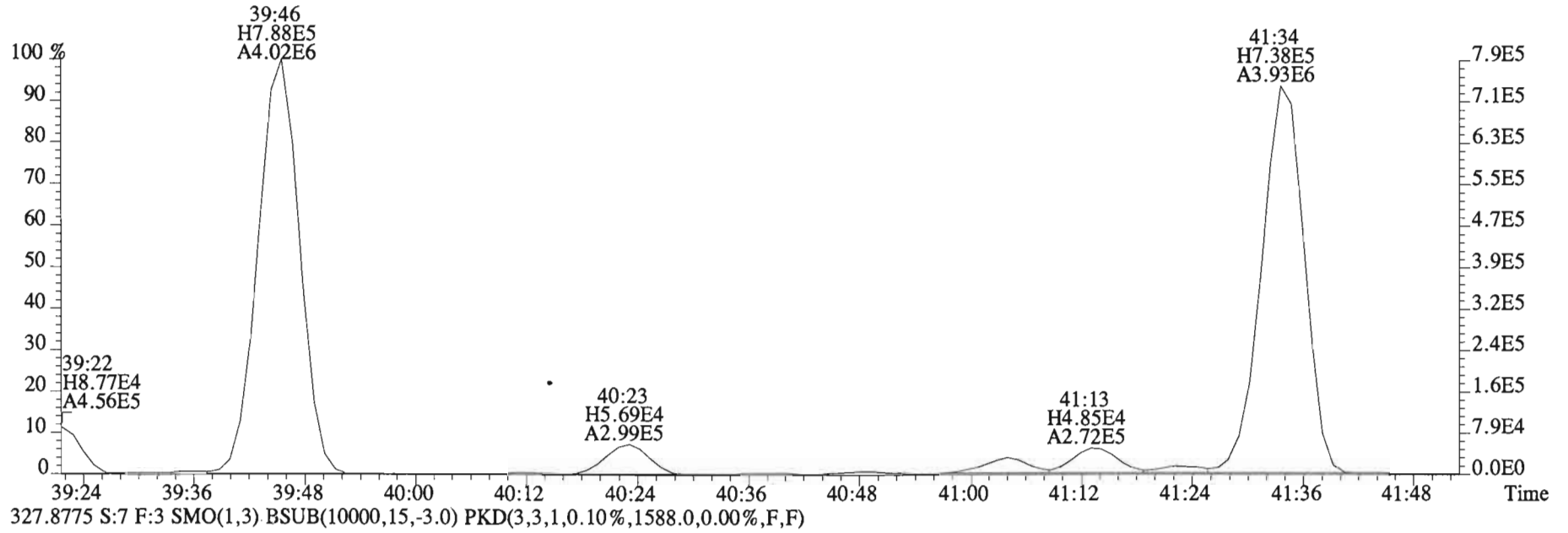
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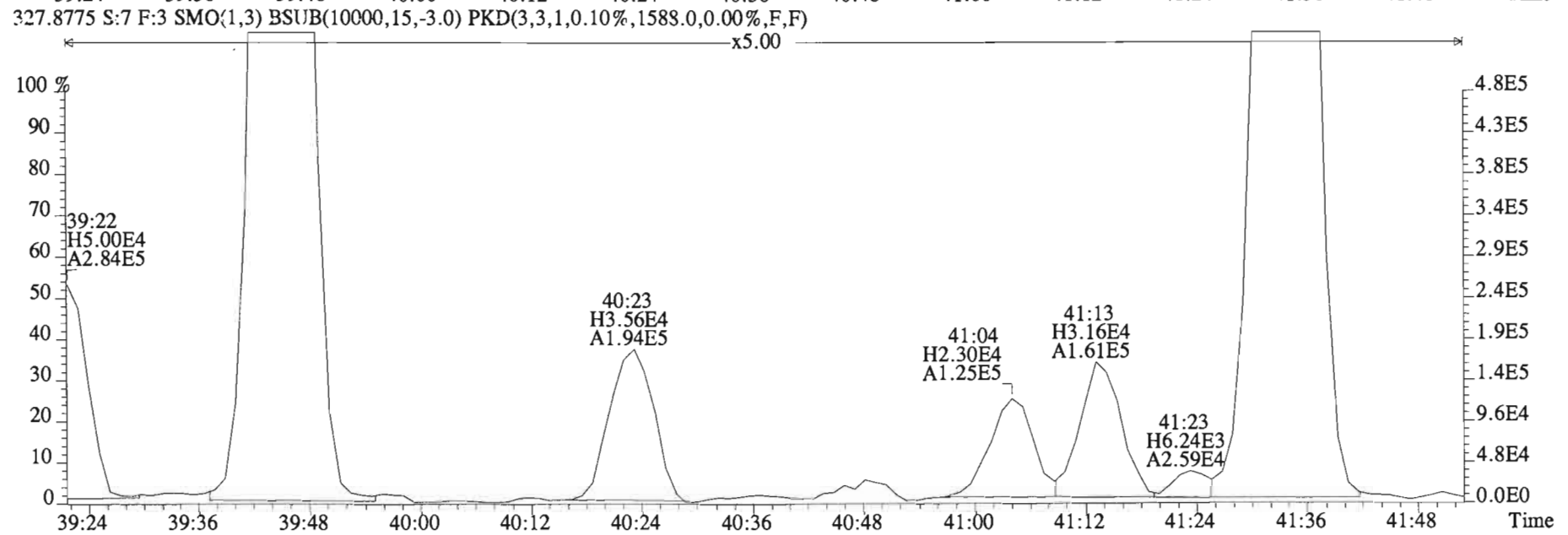
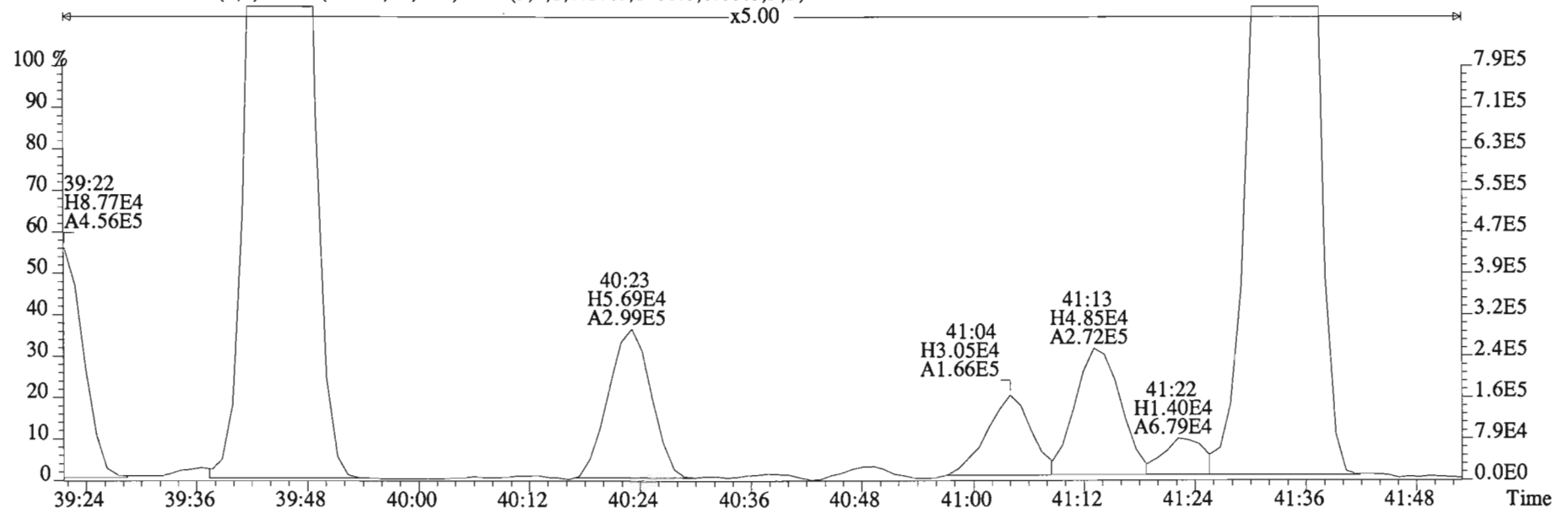
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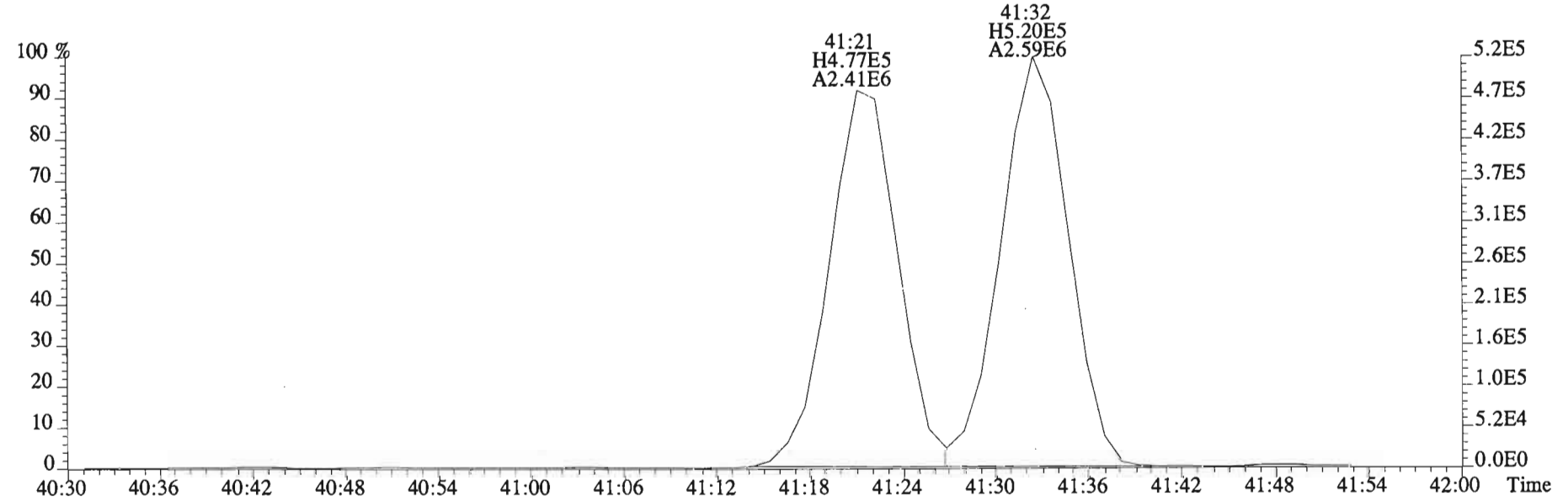
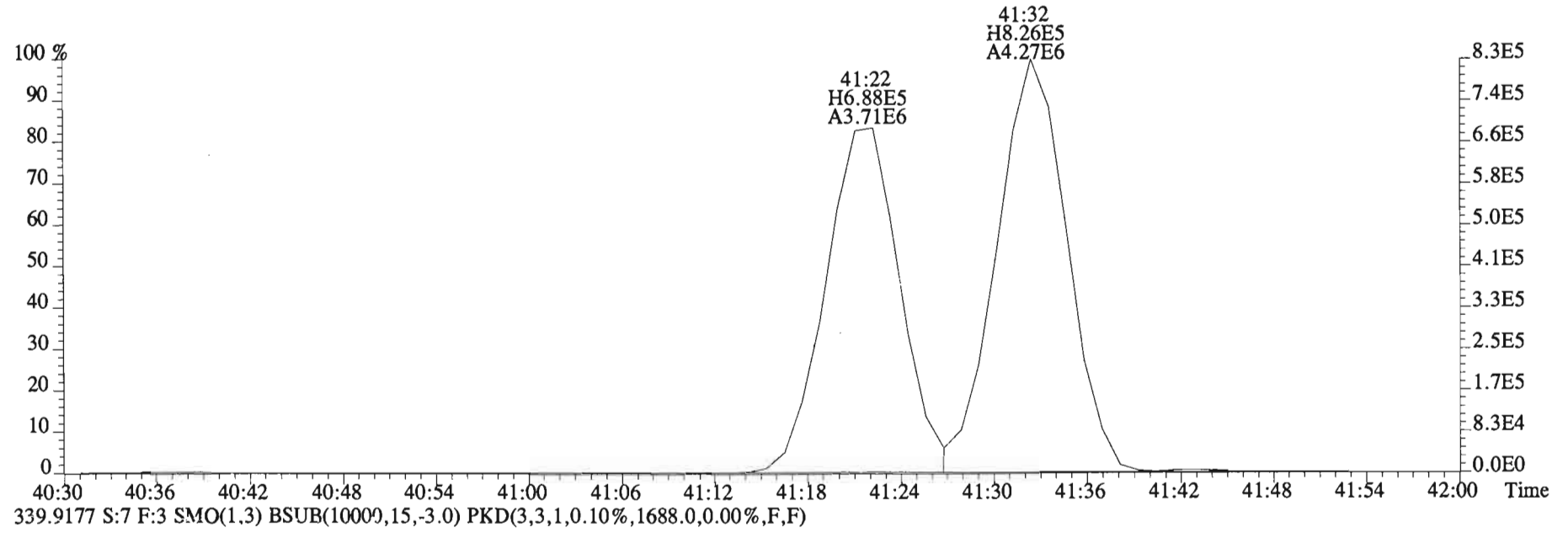
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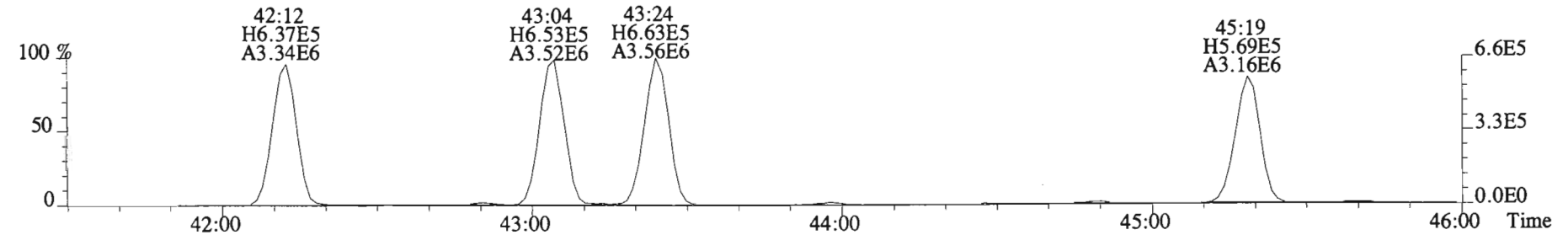
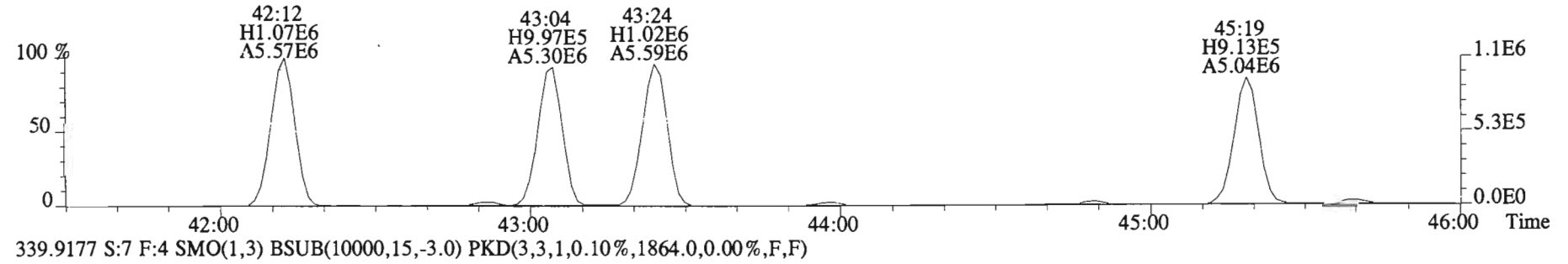
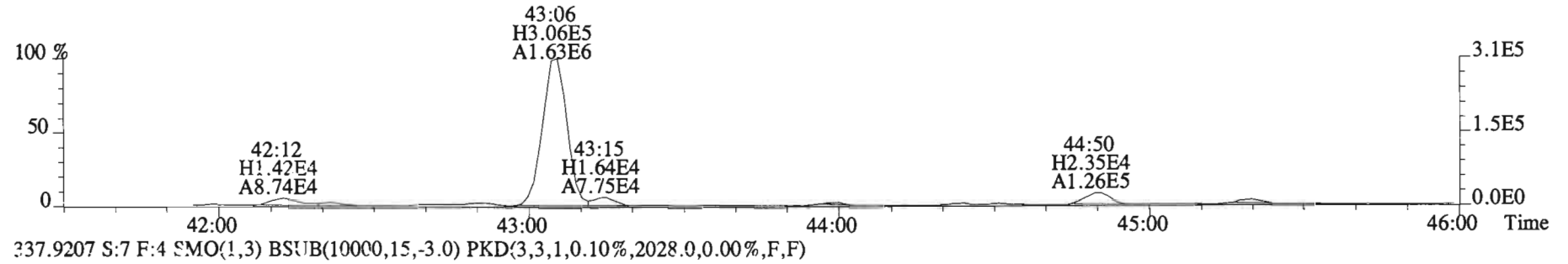
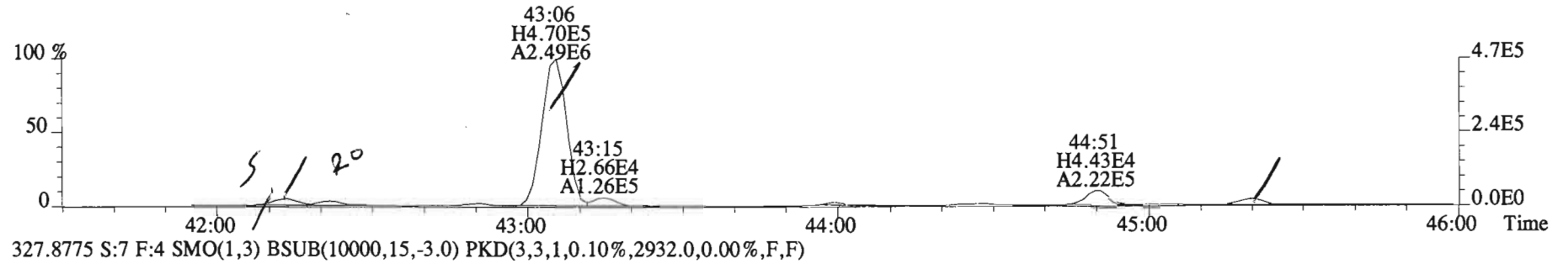
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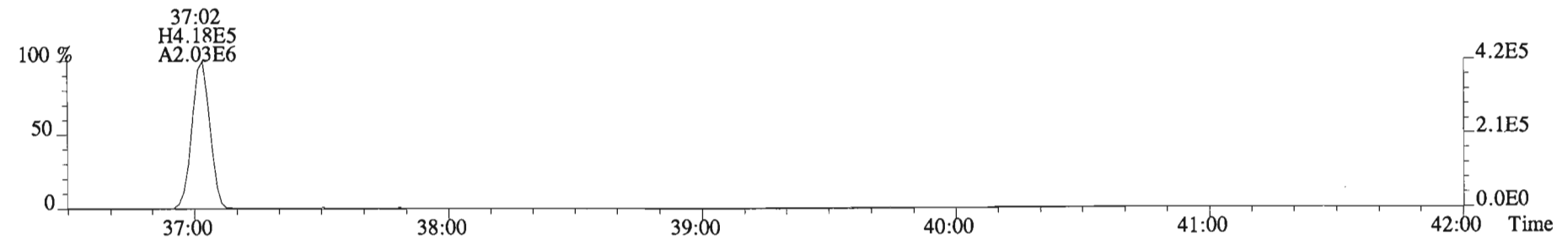
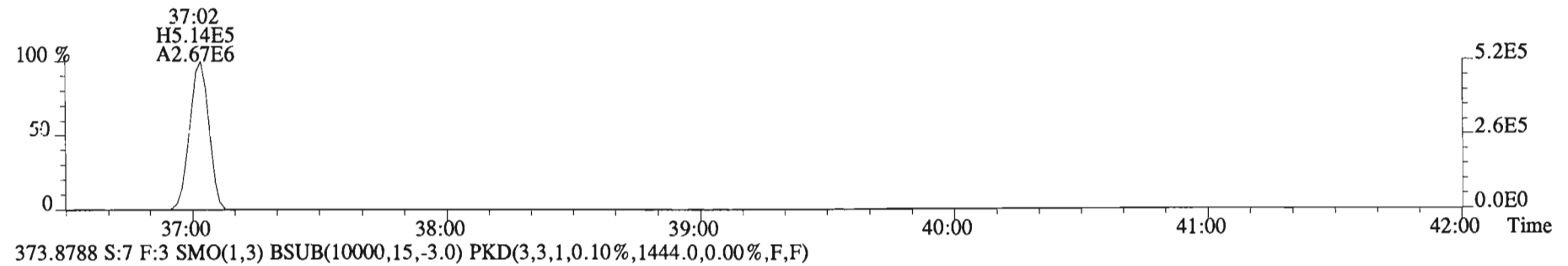
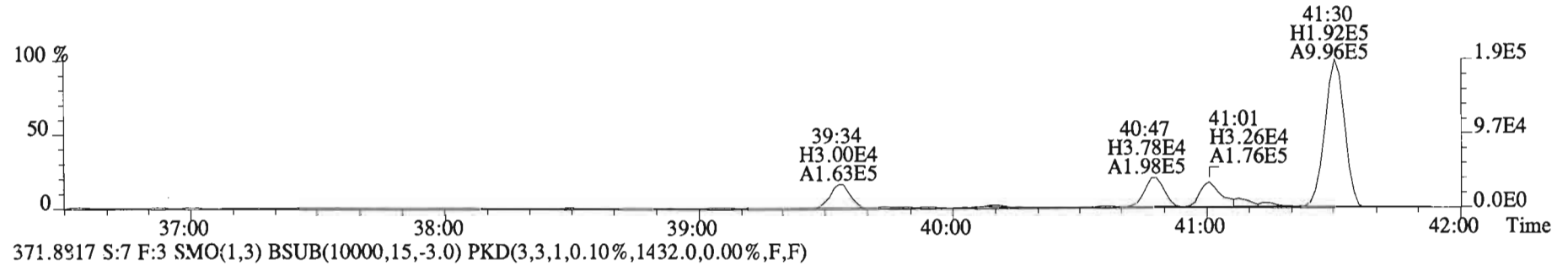
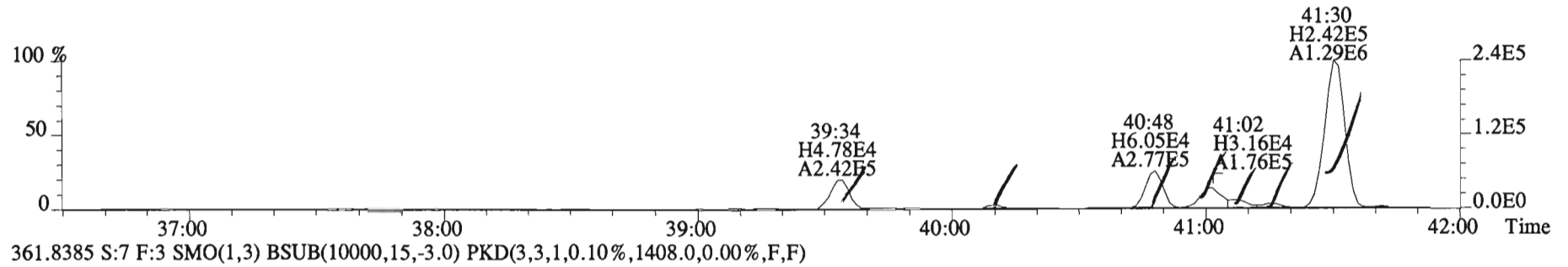
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337.9207 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1632.0,0.00%,F,F)



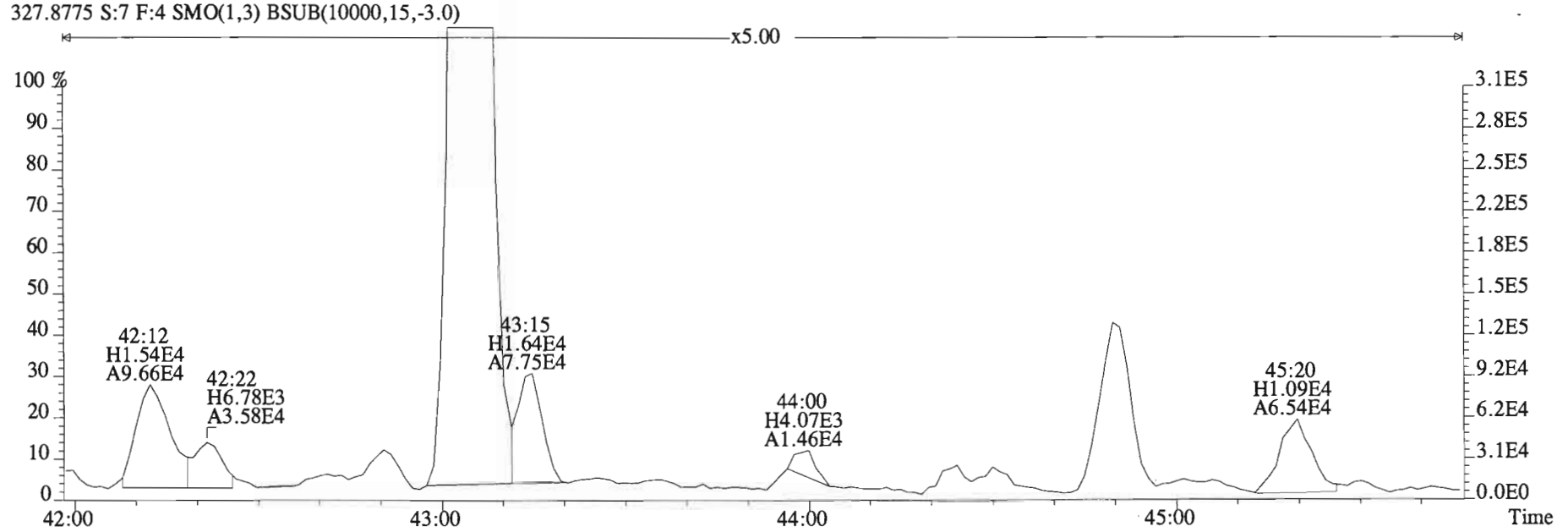
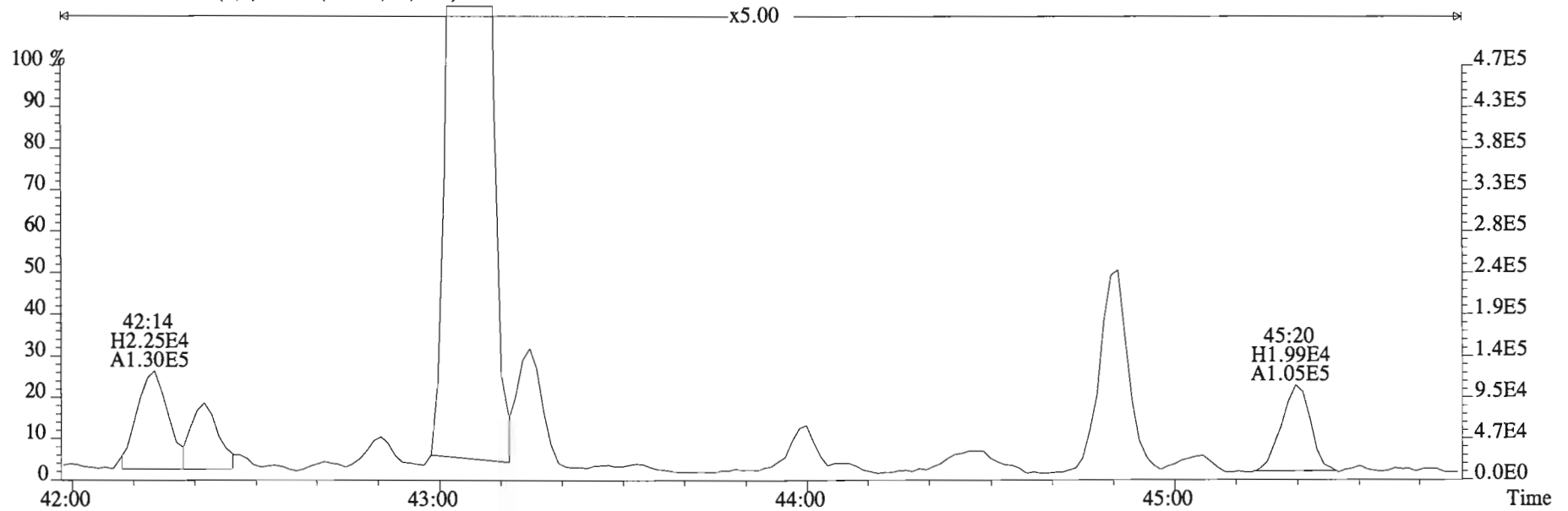
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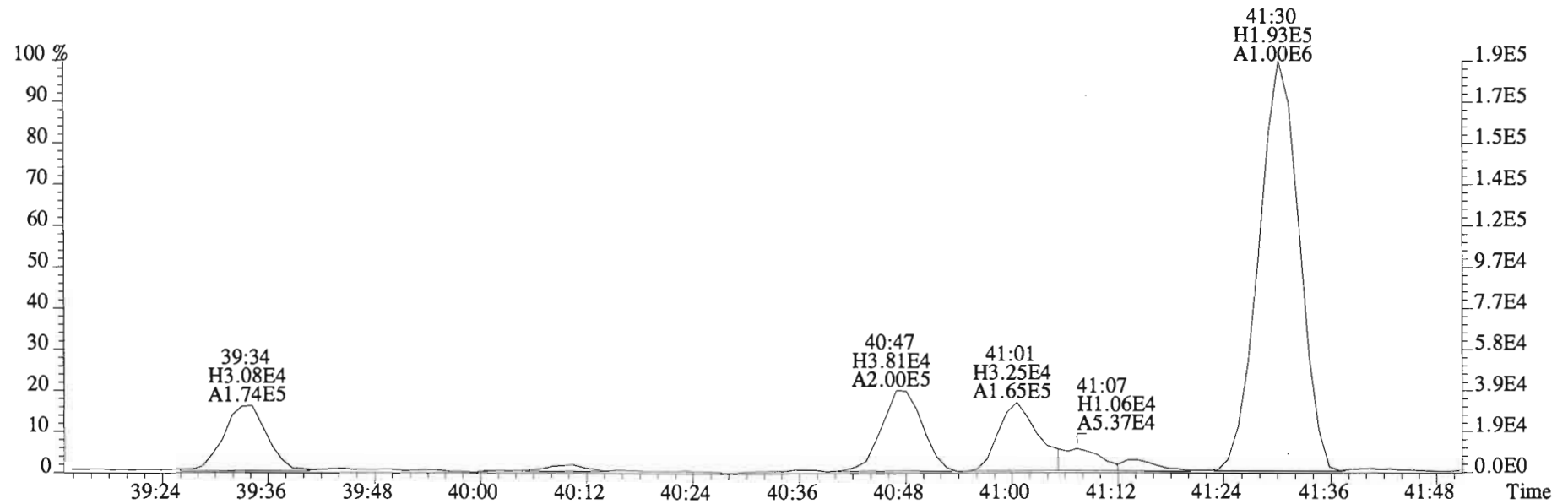
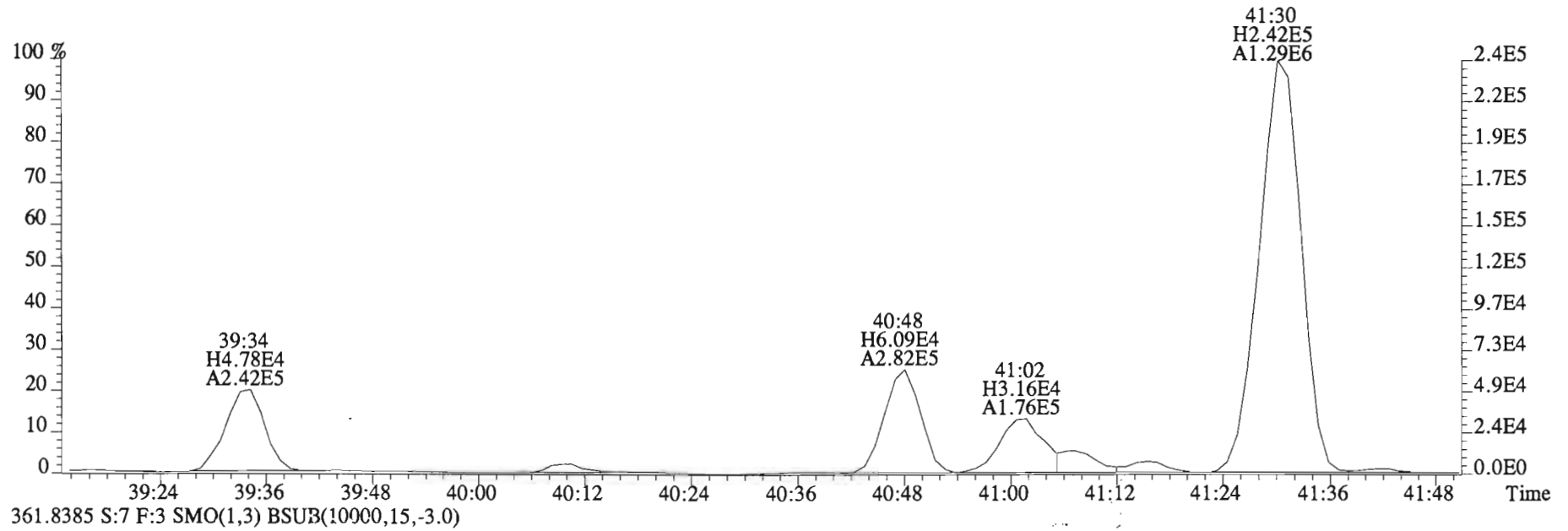
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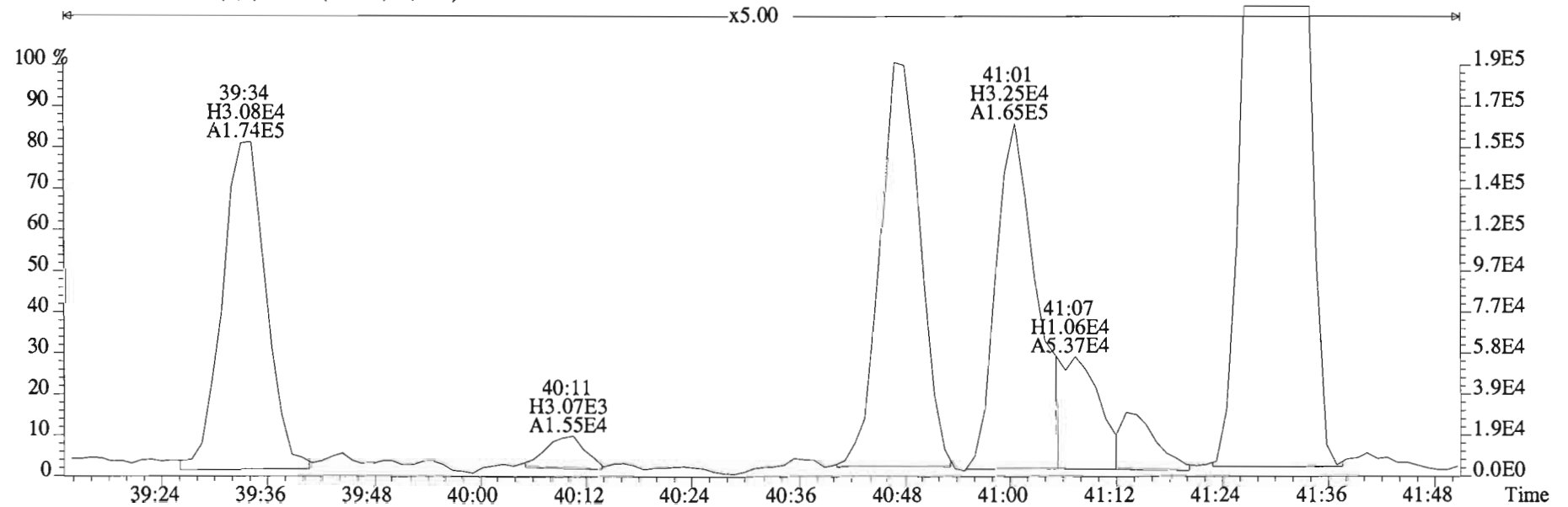
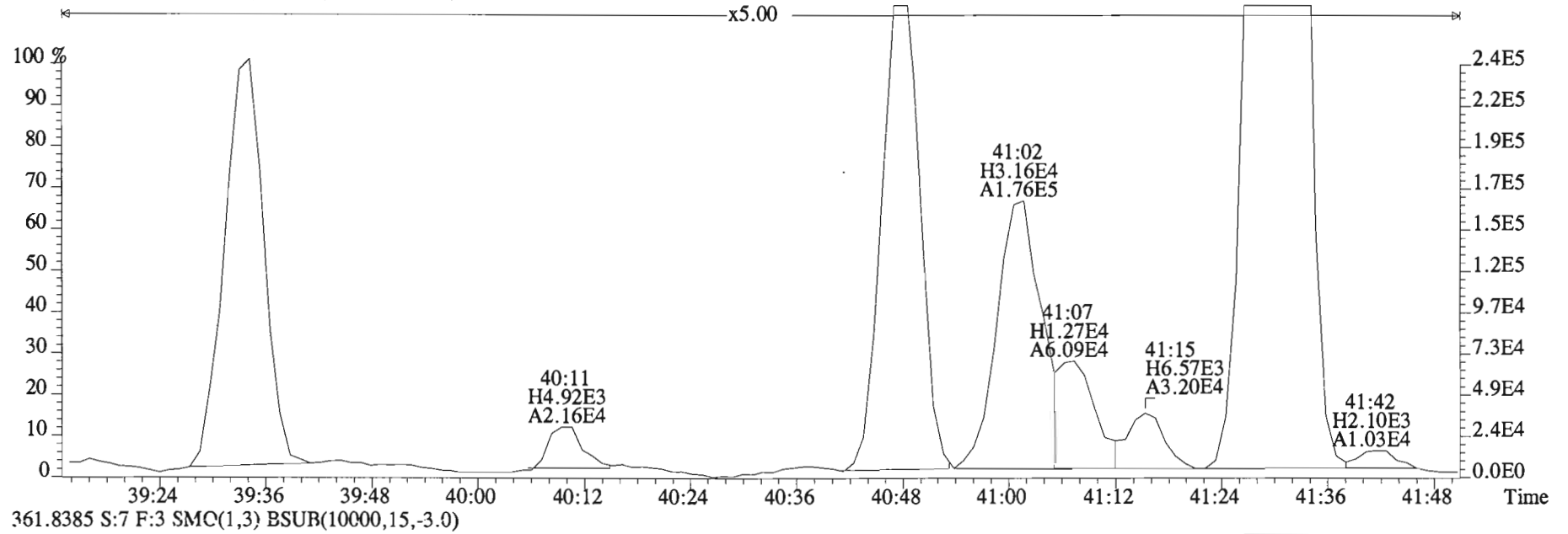
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325.8804 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0)



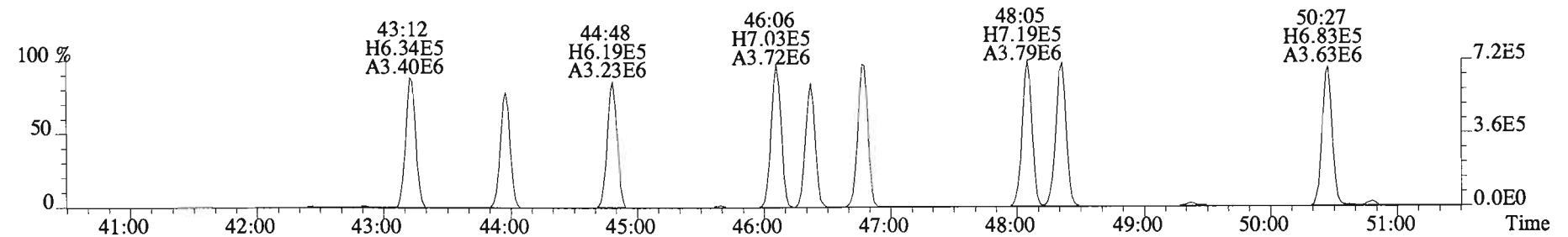
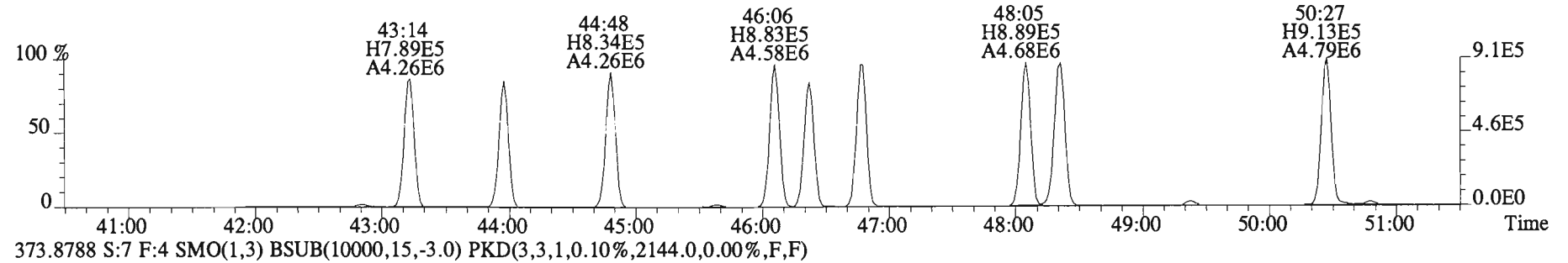
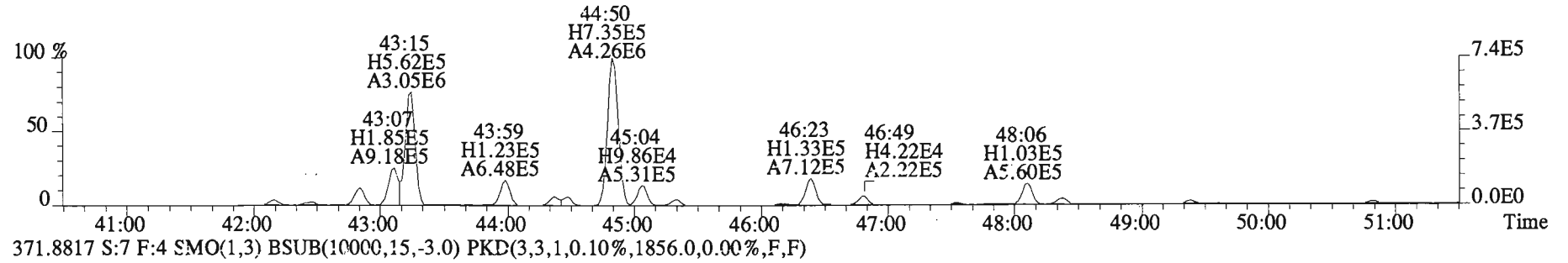
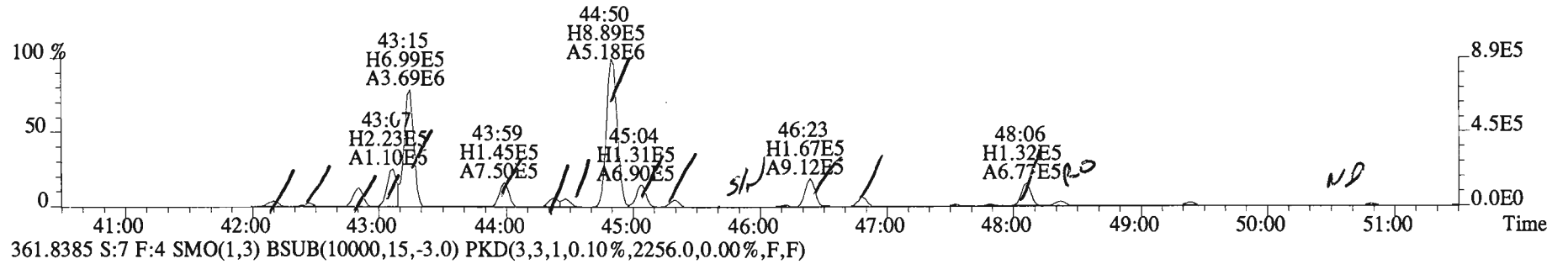
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Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400970-04@10X DS-CB-H1-20141216-S Exp:PCB_ZB1
359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



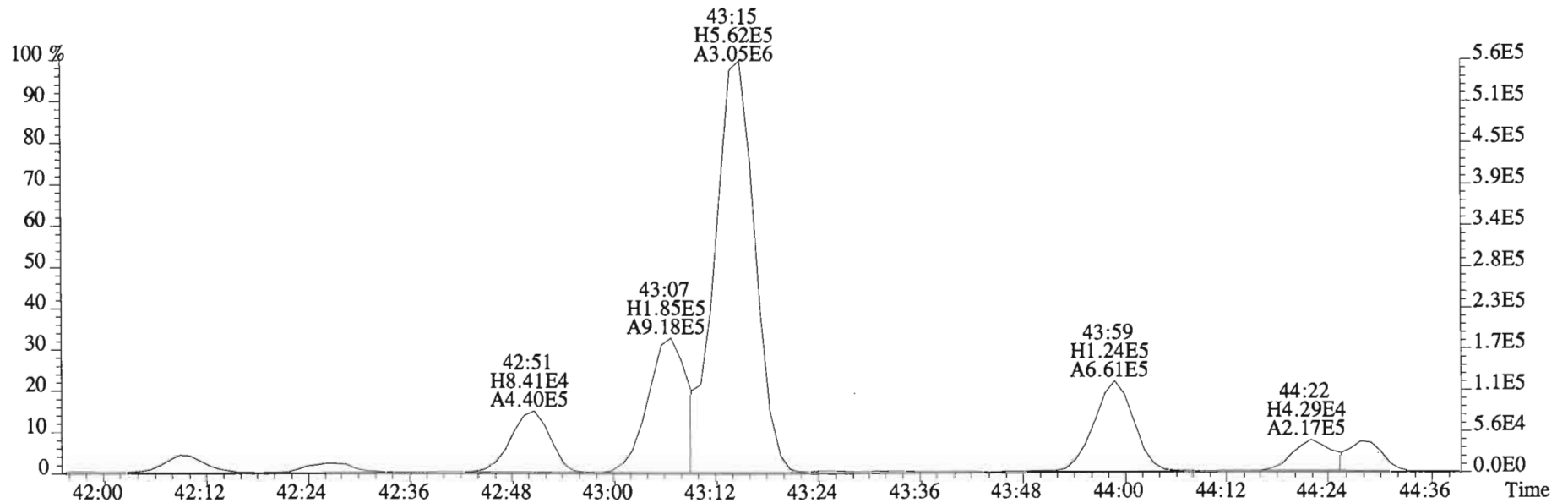
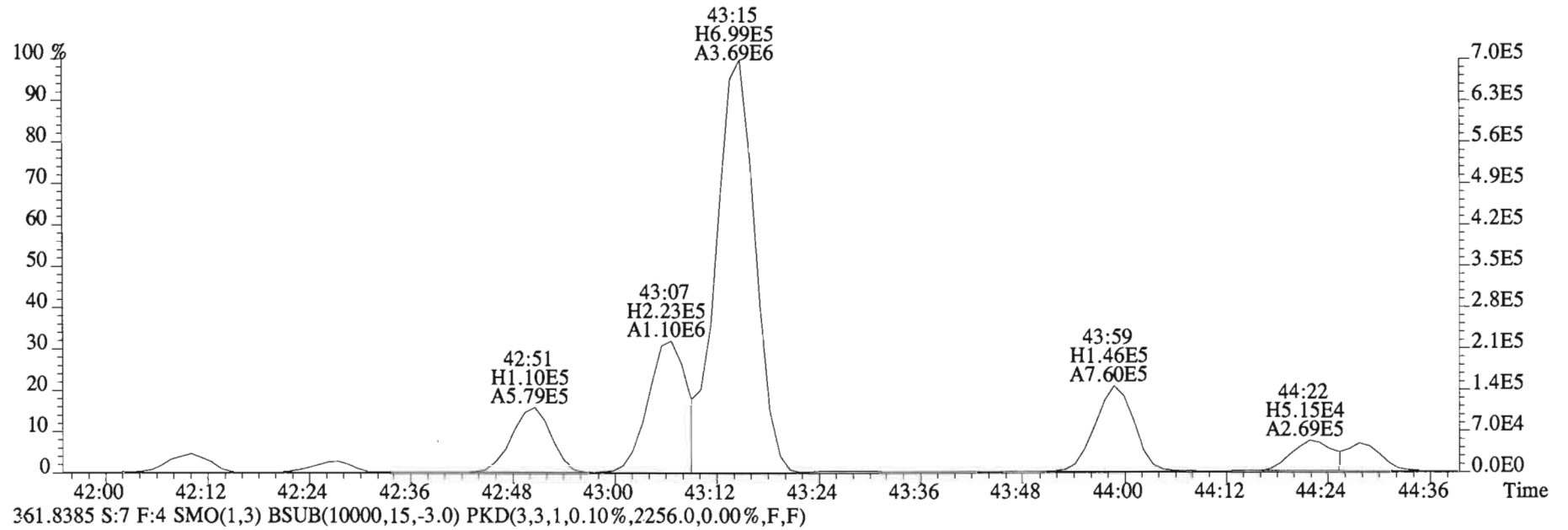
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359.8415 S:7 F:3 SMO(1,3) BSUB(10000,15,-3.0)



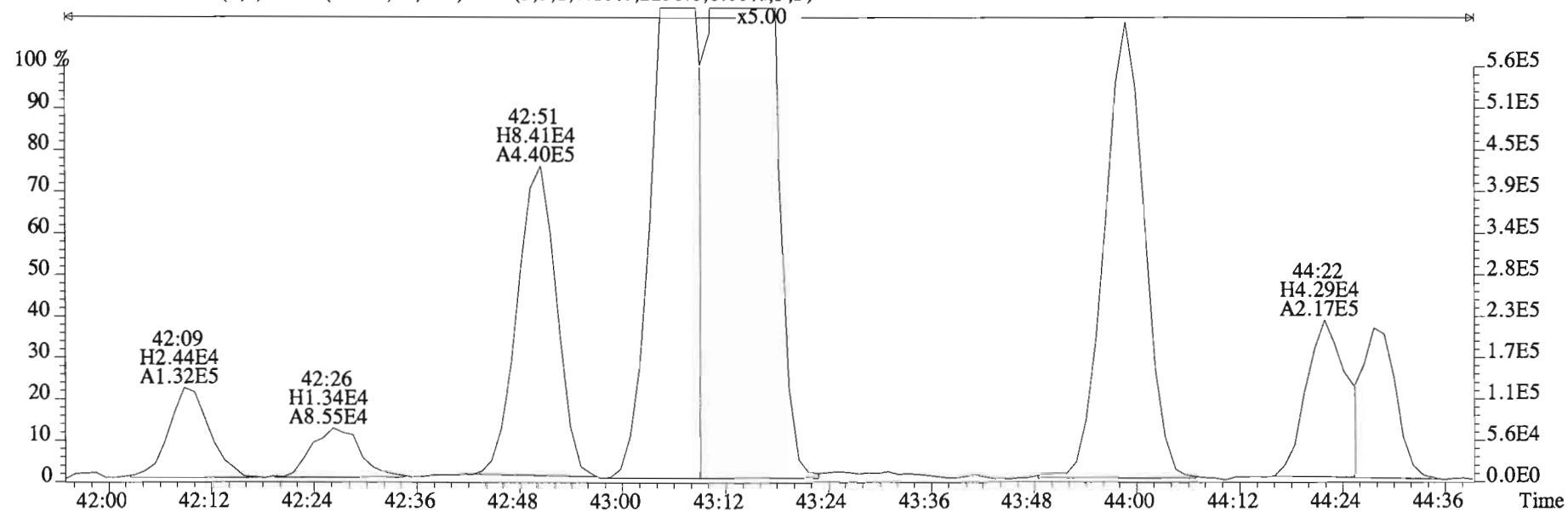
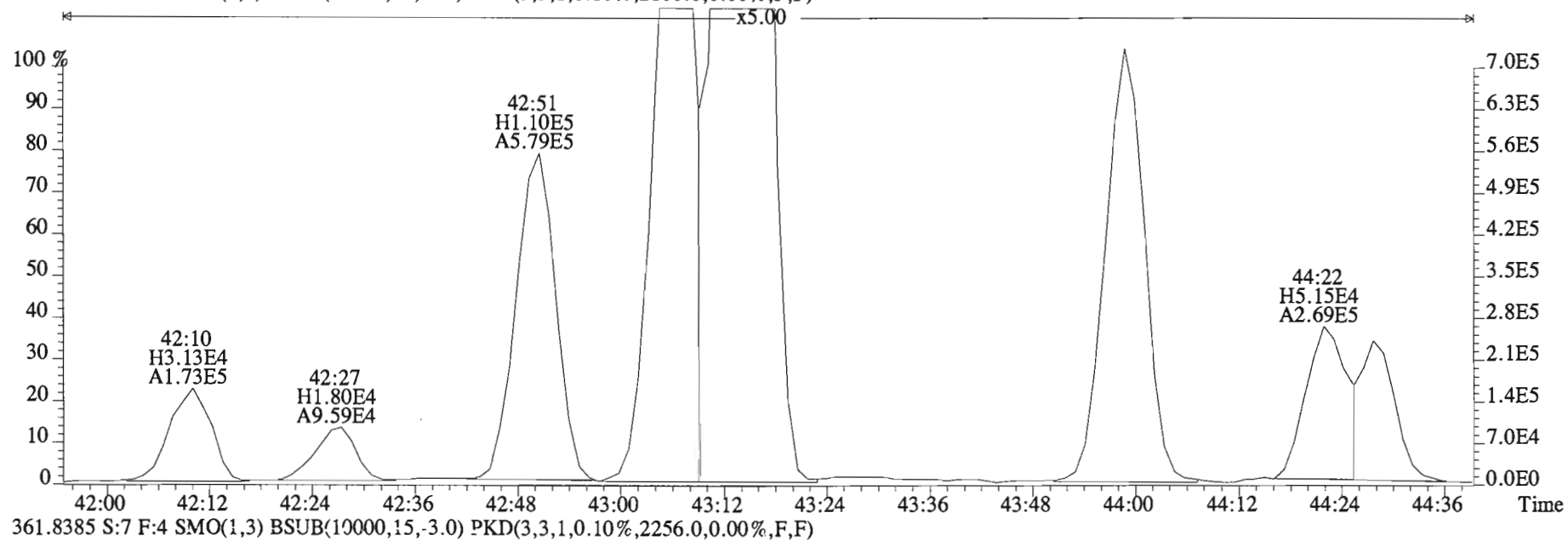
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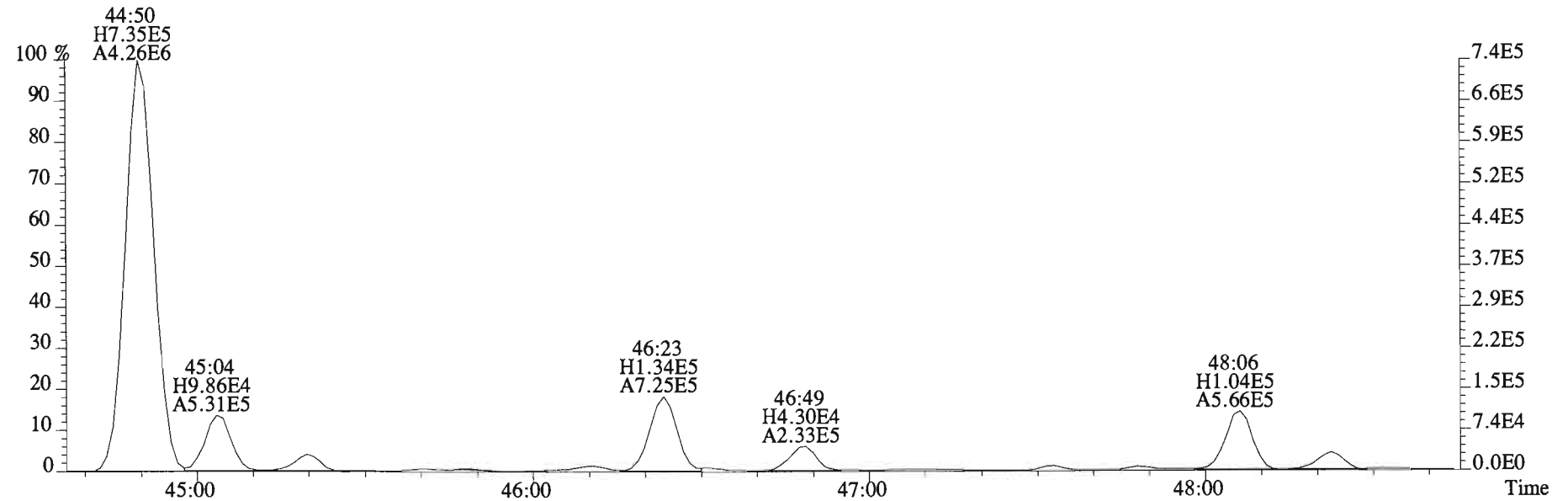
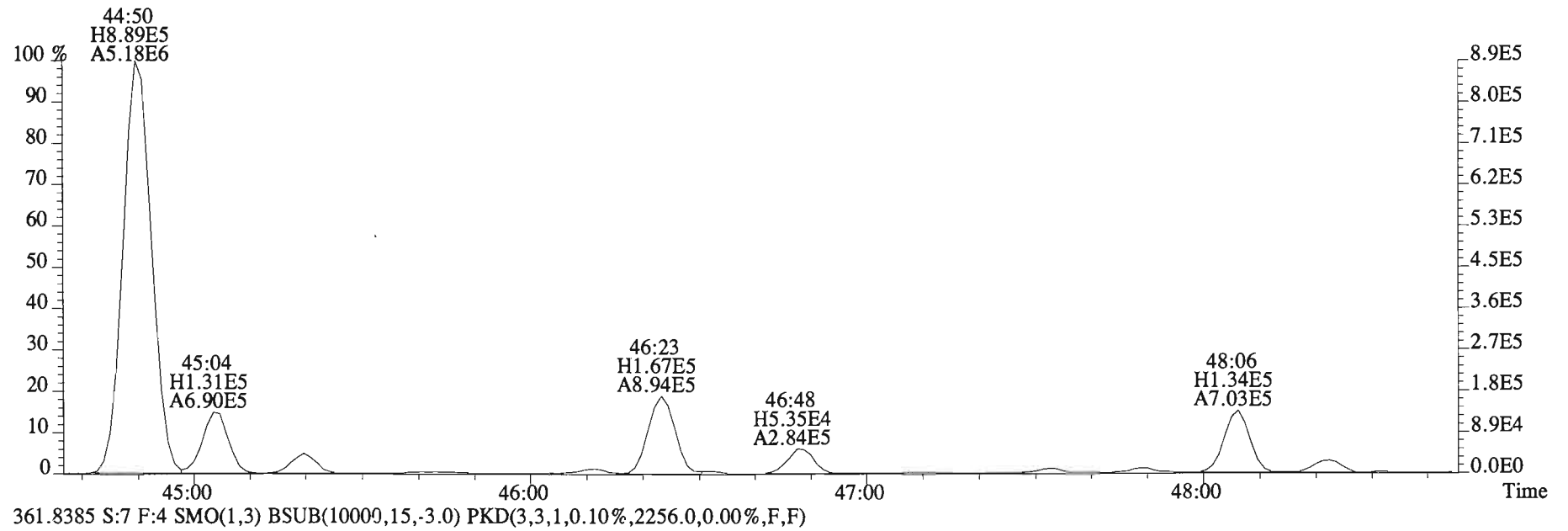
File:150205E1 #1-555 Acq: 5-FEB-2015 15:24:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400970-04@10X DS-CB-H1-20141216-S Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2100.0,0.00%,F,F)



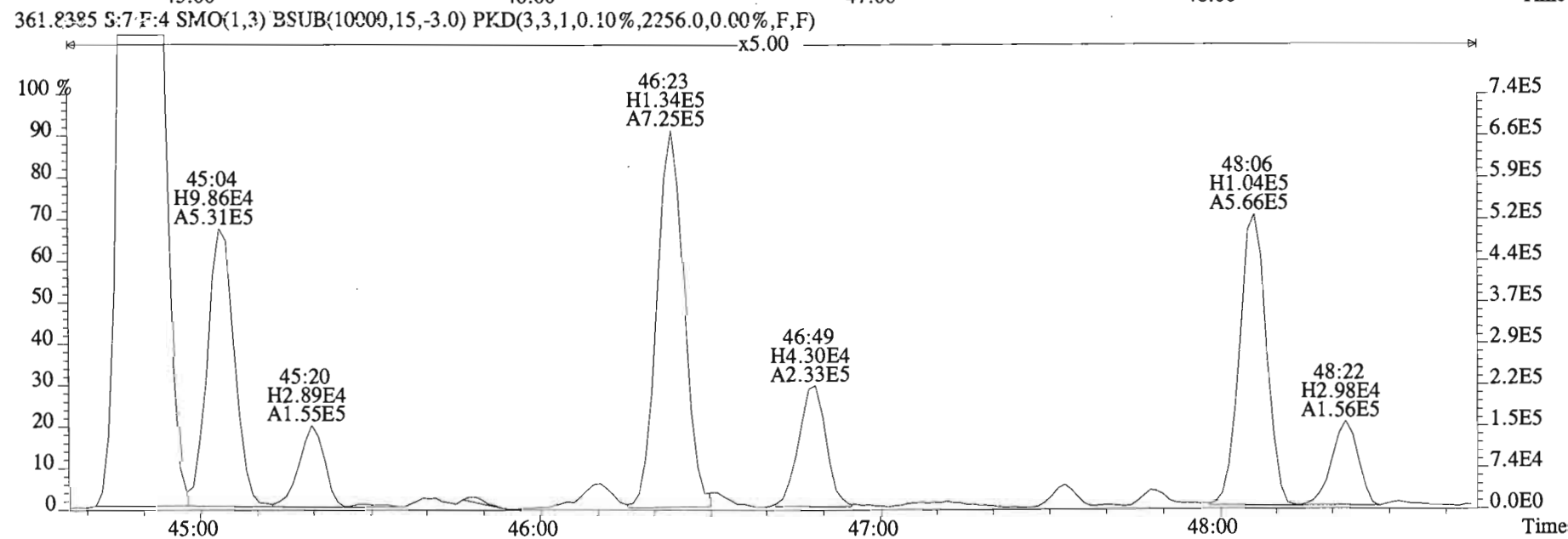
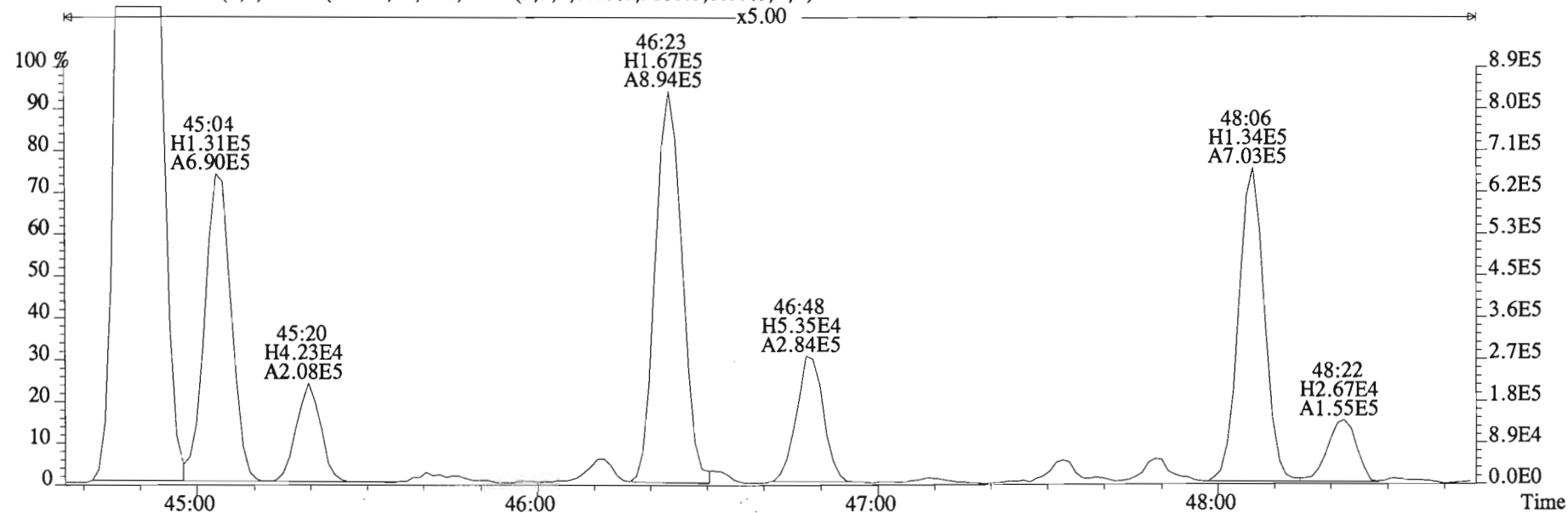
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Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400970-04@10X DS-CB-H1-20141216-S Exp:PCB_ZB1
359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2100.0,0.00%,F,F)



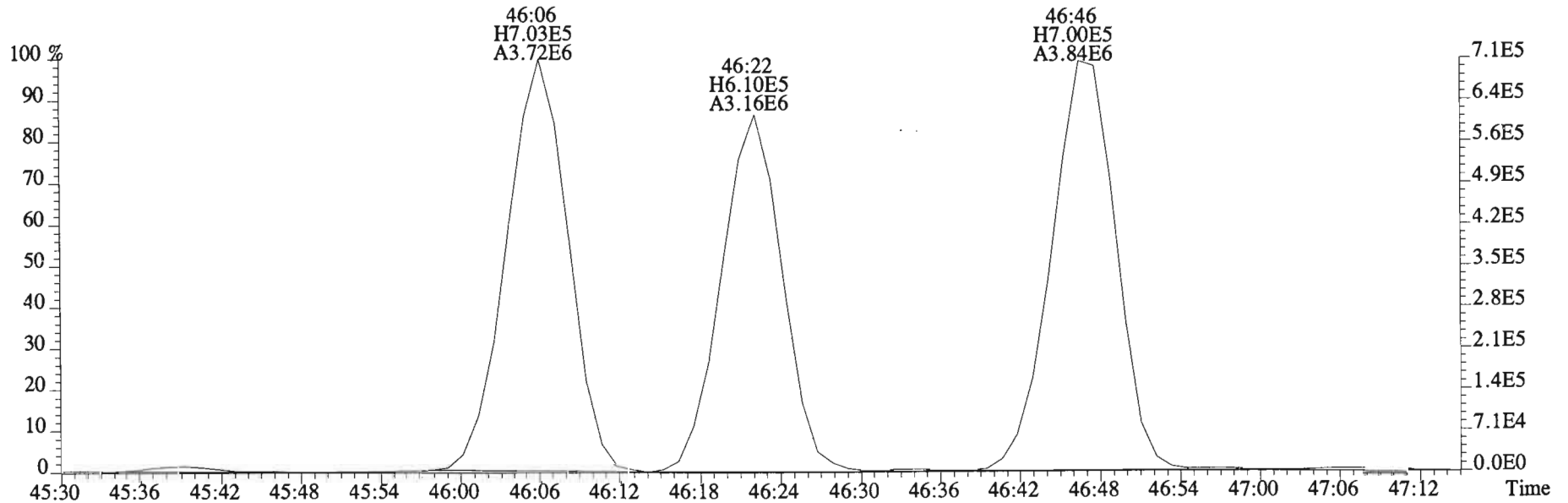
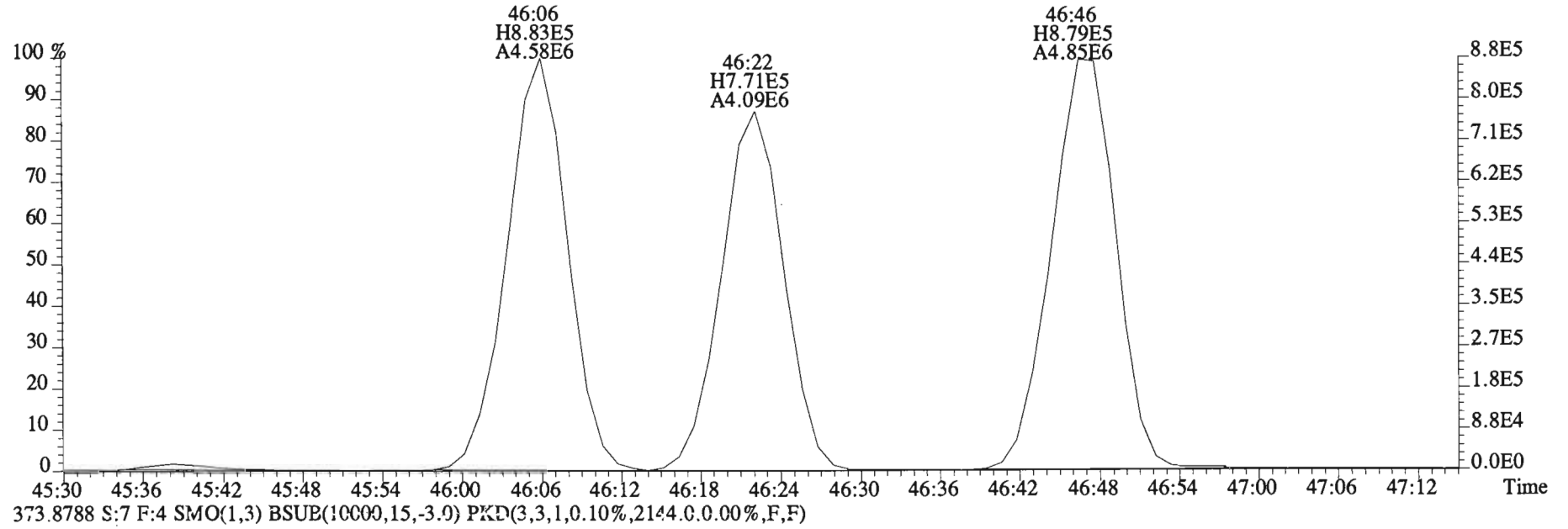
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 359.8415 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2100.0,0.00%,F,F)



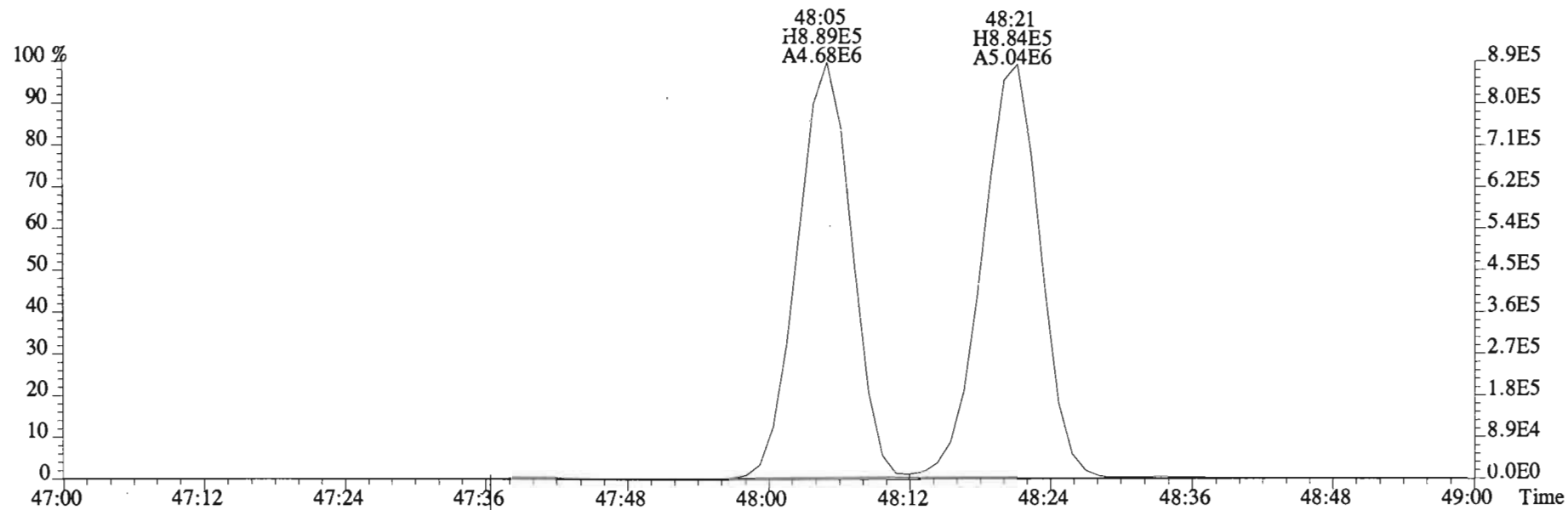
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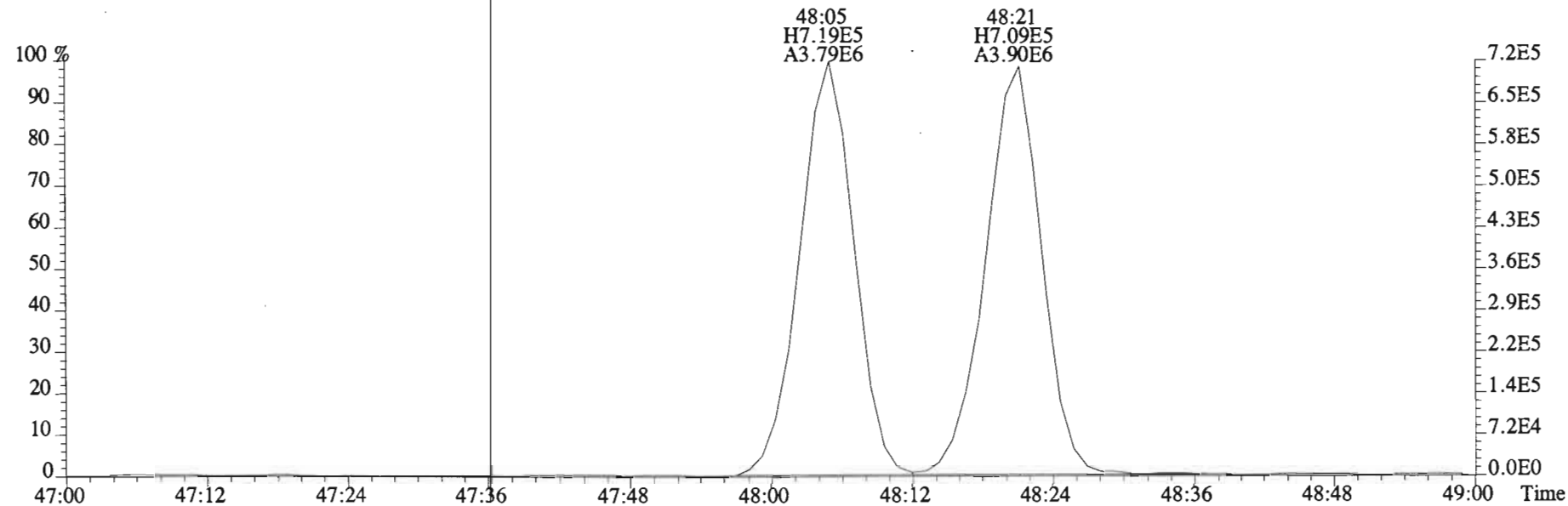
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Sample#7 File Text: Vista Analytical Laboratory VG-8 Text:1400970-04@10X DS-CB-H1-20141216-S Exp:PCB_ZB1
371.8817 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1856.0,0.00%,F,F)



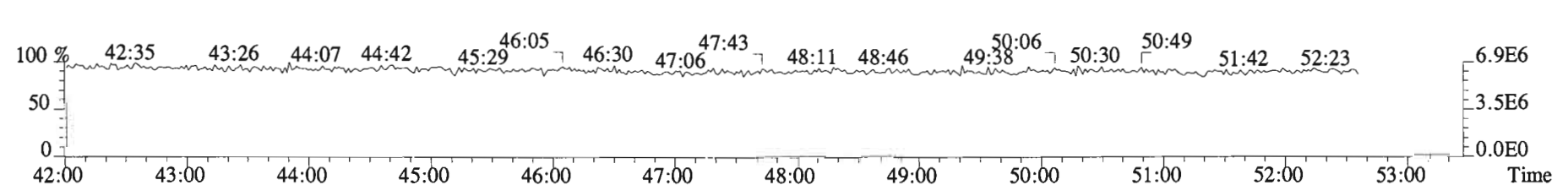
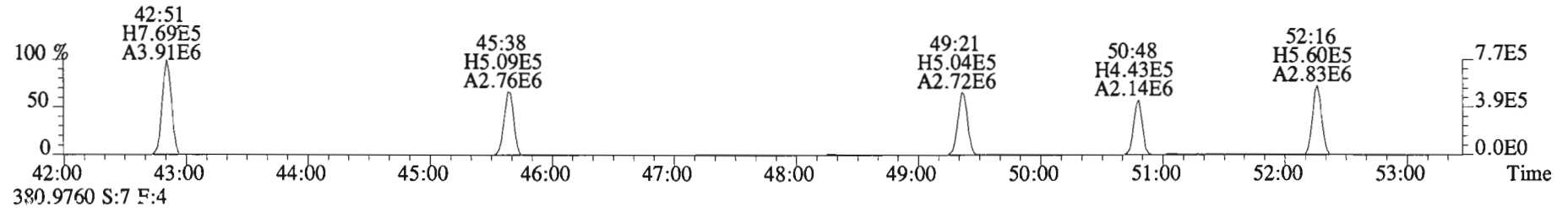
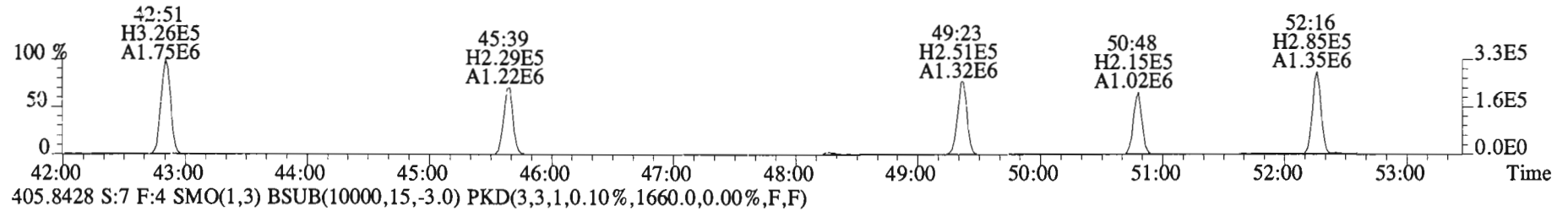
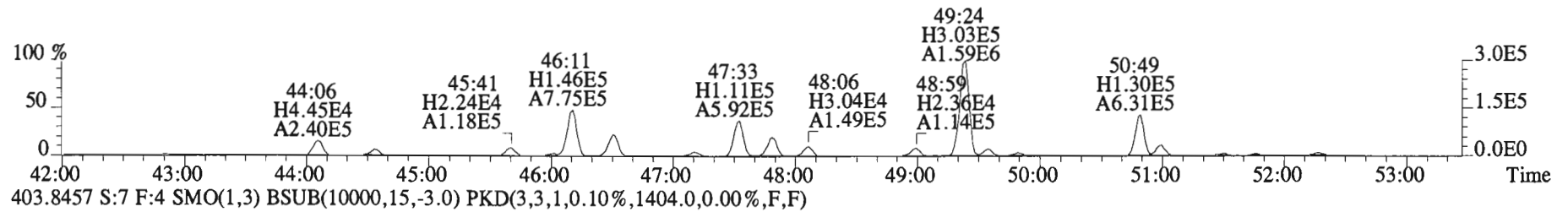
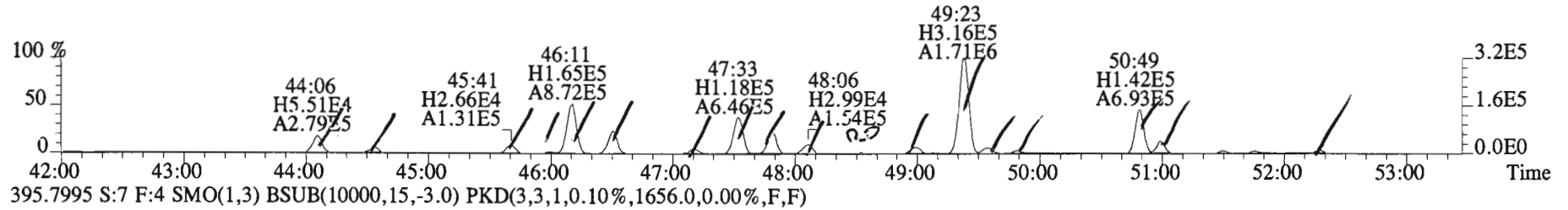
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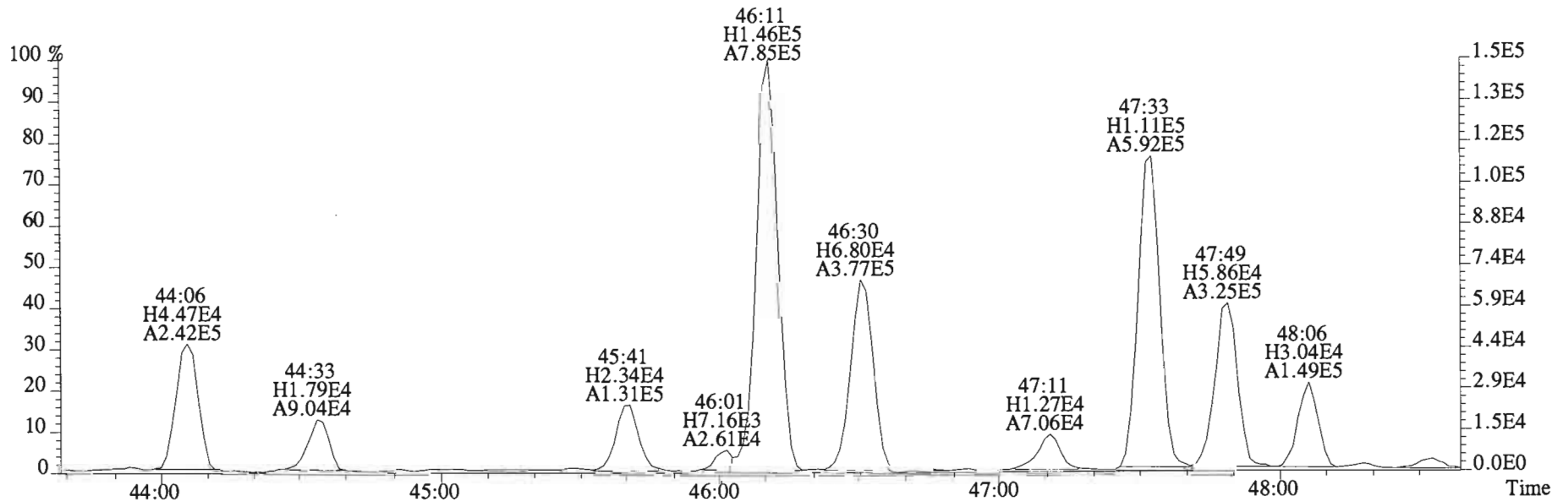
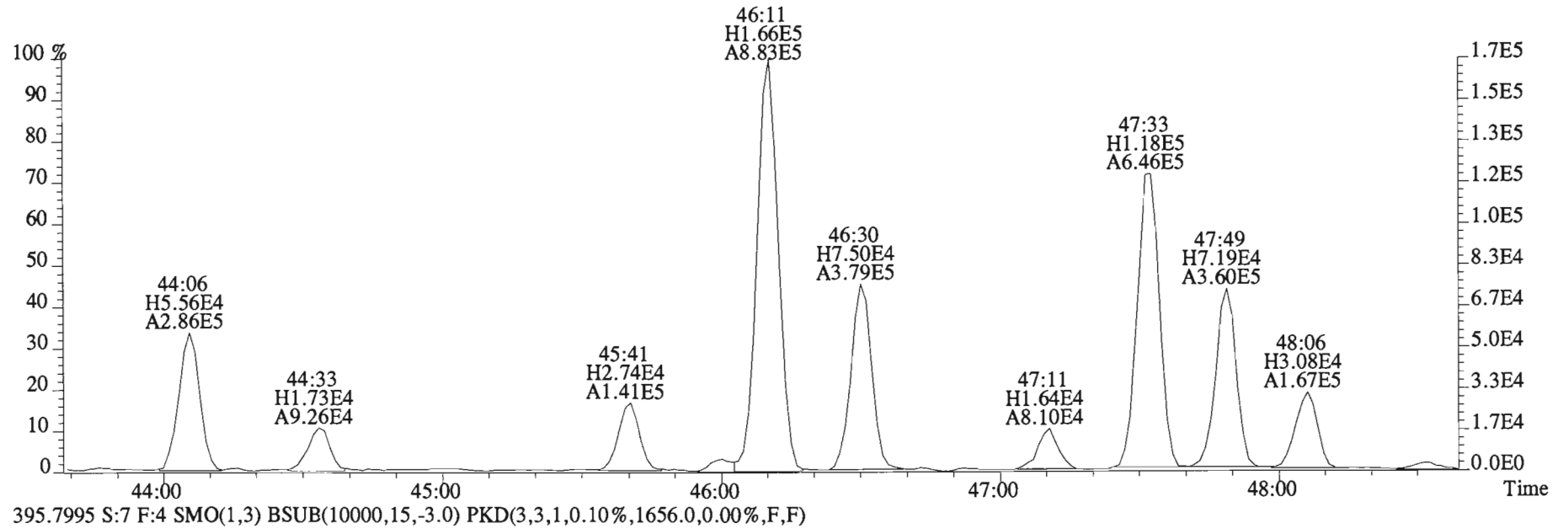
373.8788 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,2144.0,0.00%,F,F)



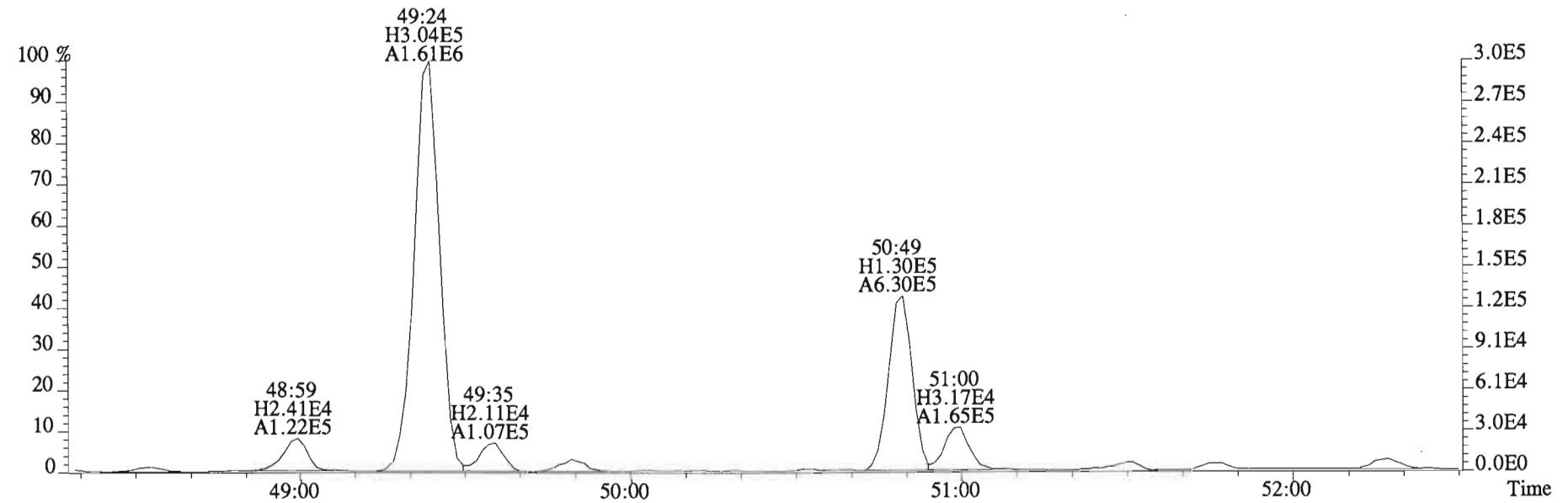
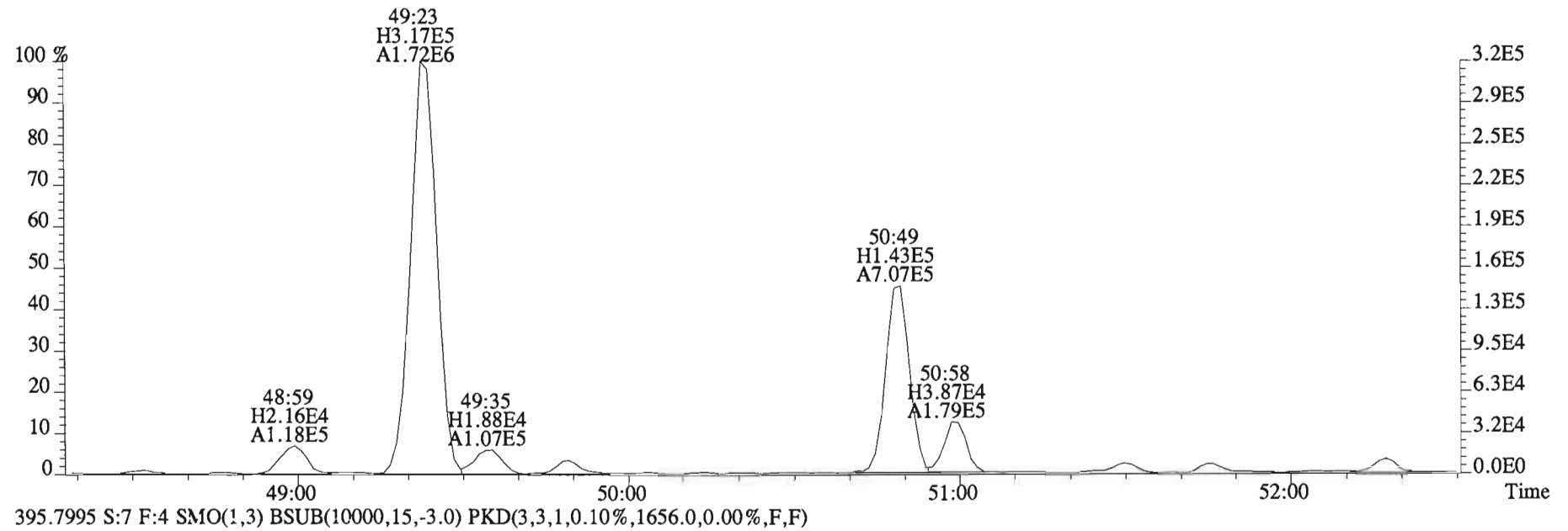
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393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1560.0,0.00%,F,F)



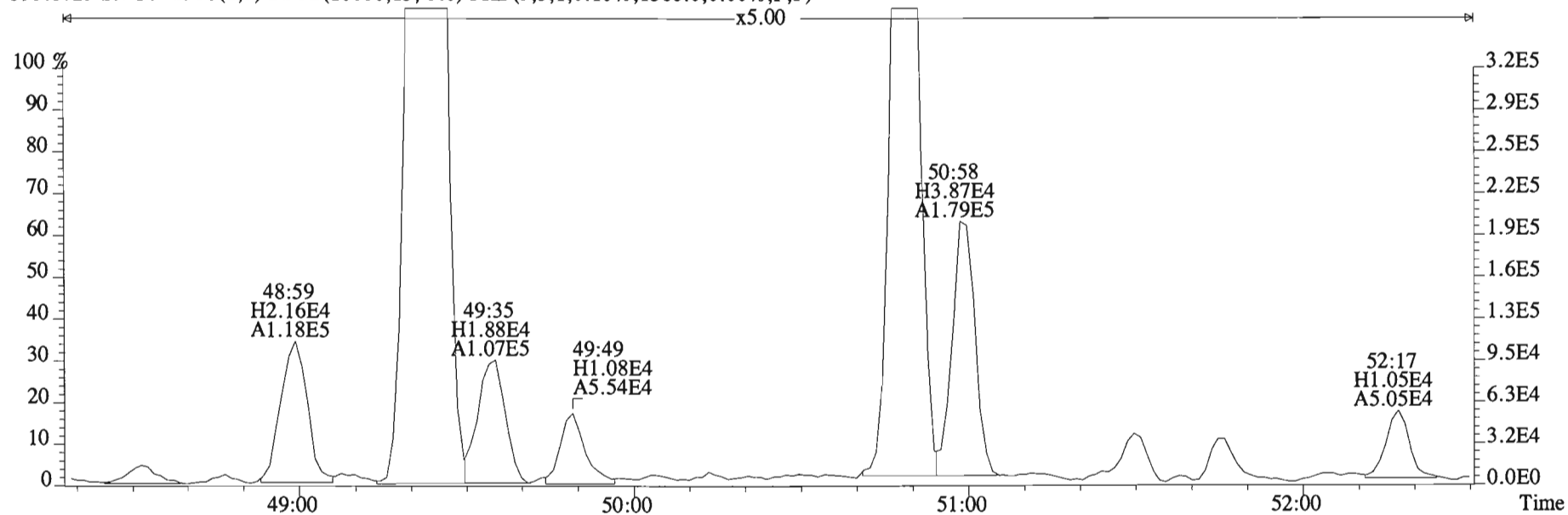
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 393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1560.0,0.00%,F,F)



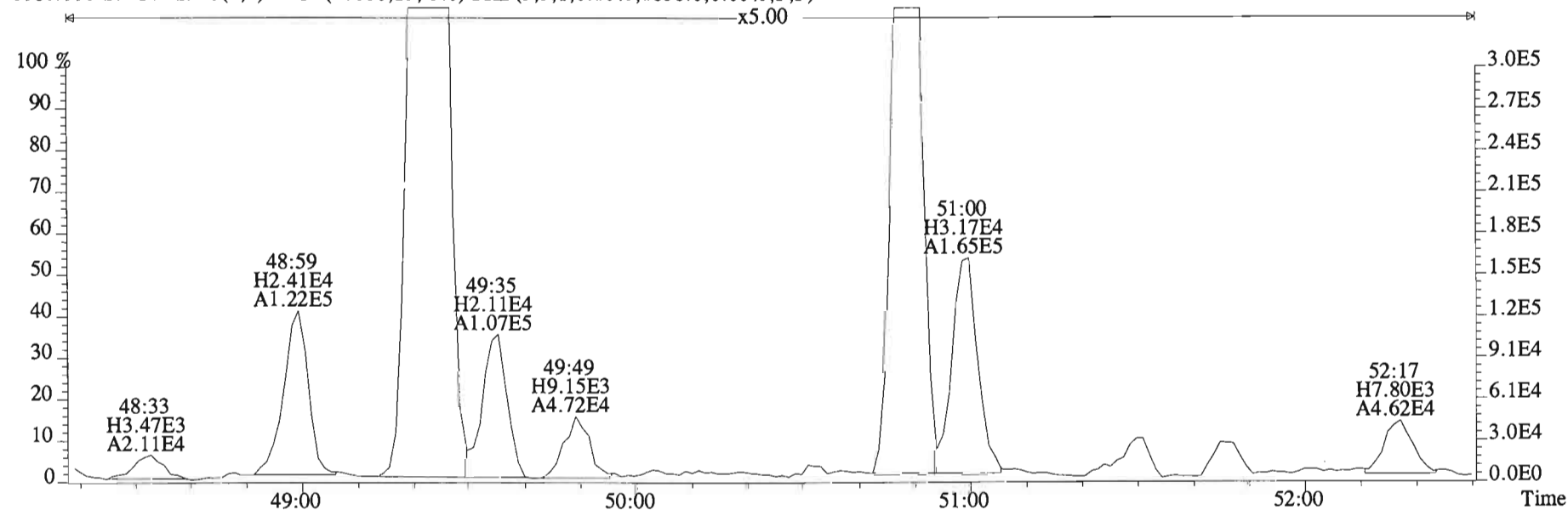
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393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1560.0,0.00%,F,F)



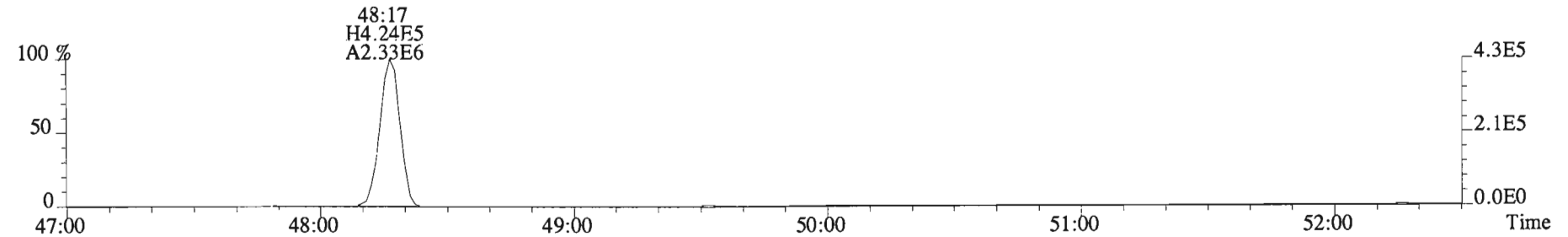
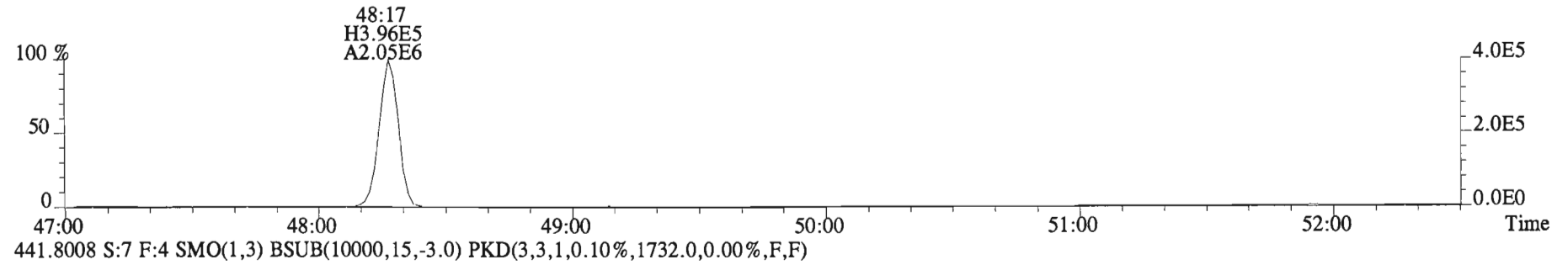
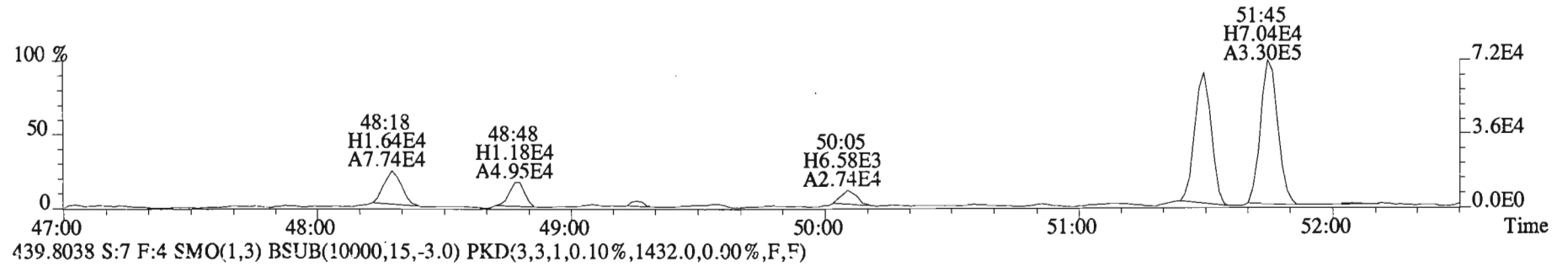
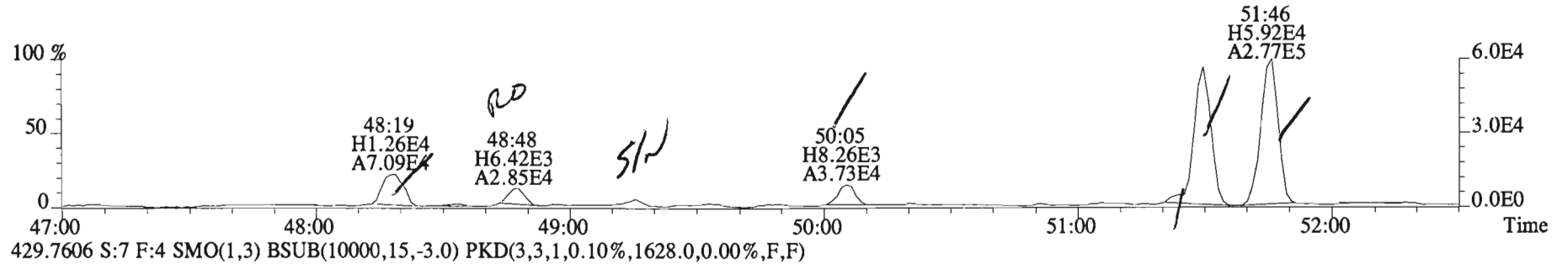
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 393.8025 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1560.0,0.00%,F,F)



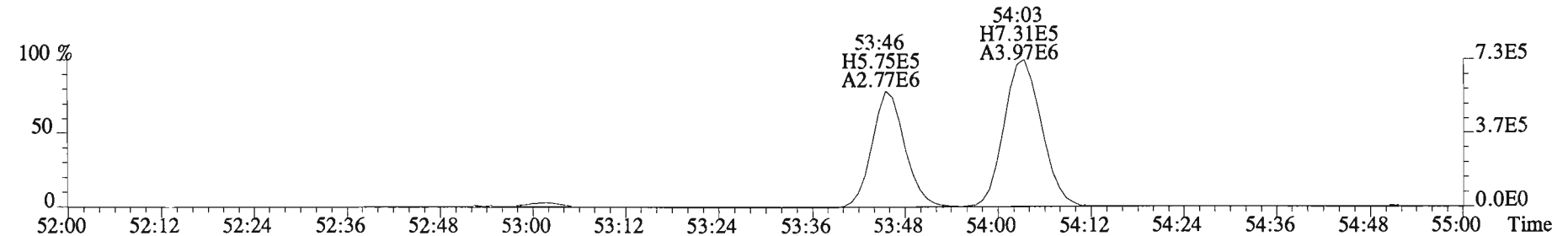
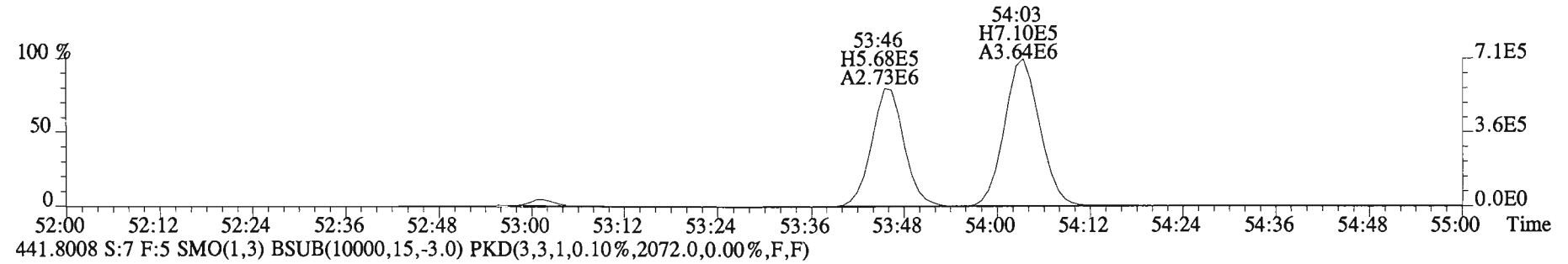
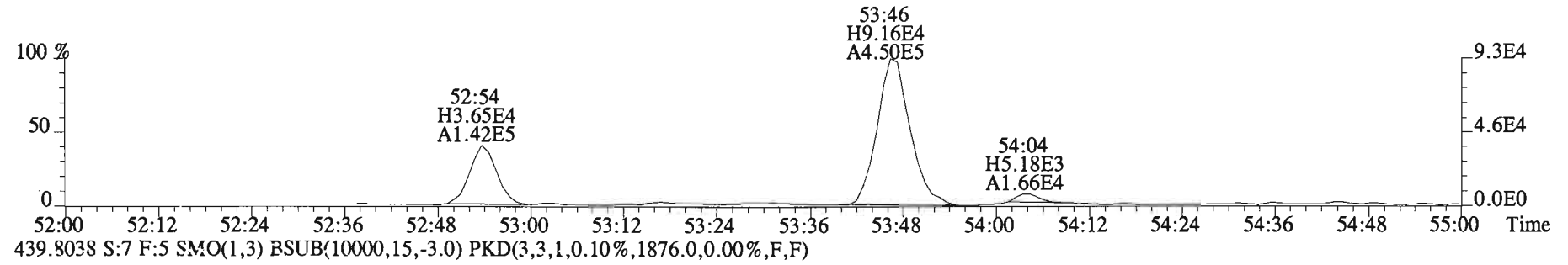
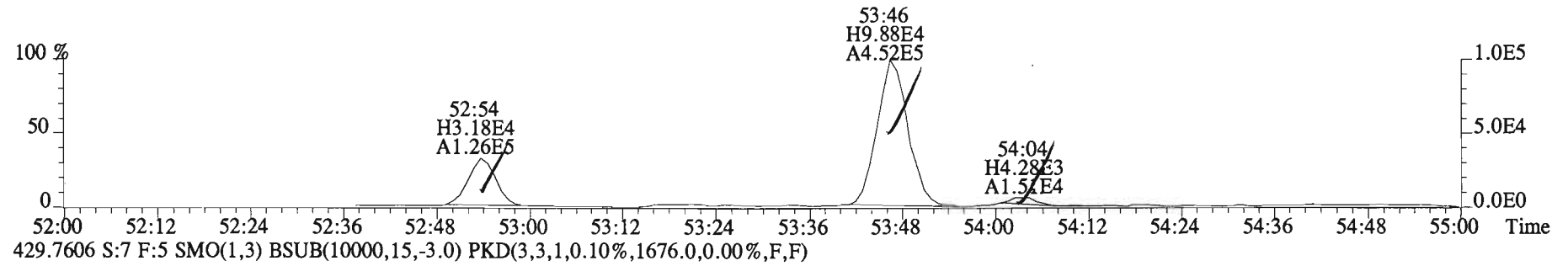
395.7995 S:7 F:4 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1656.0,0.00%,F,F)



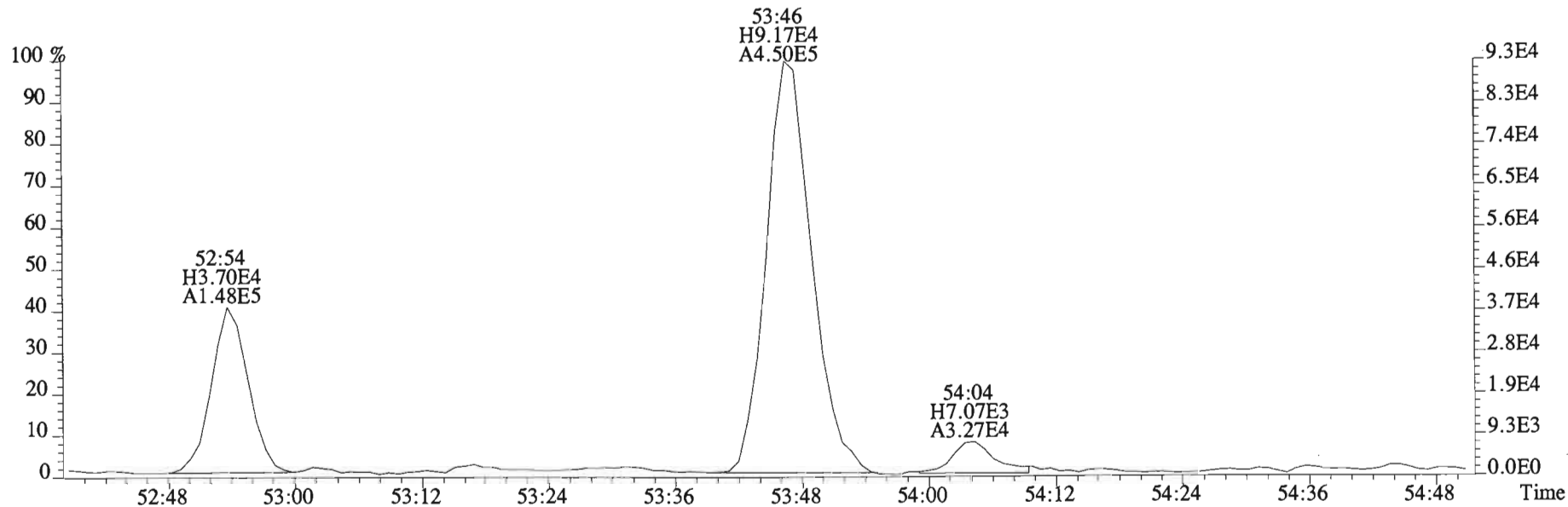
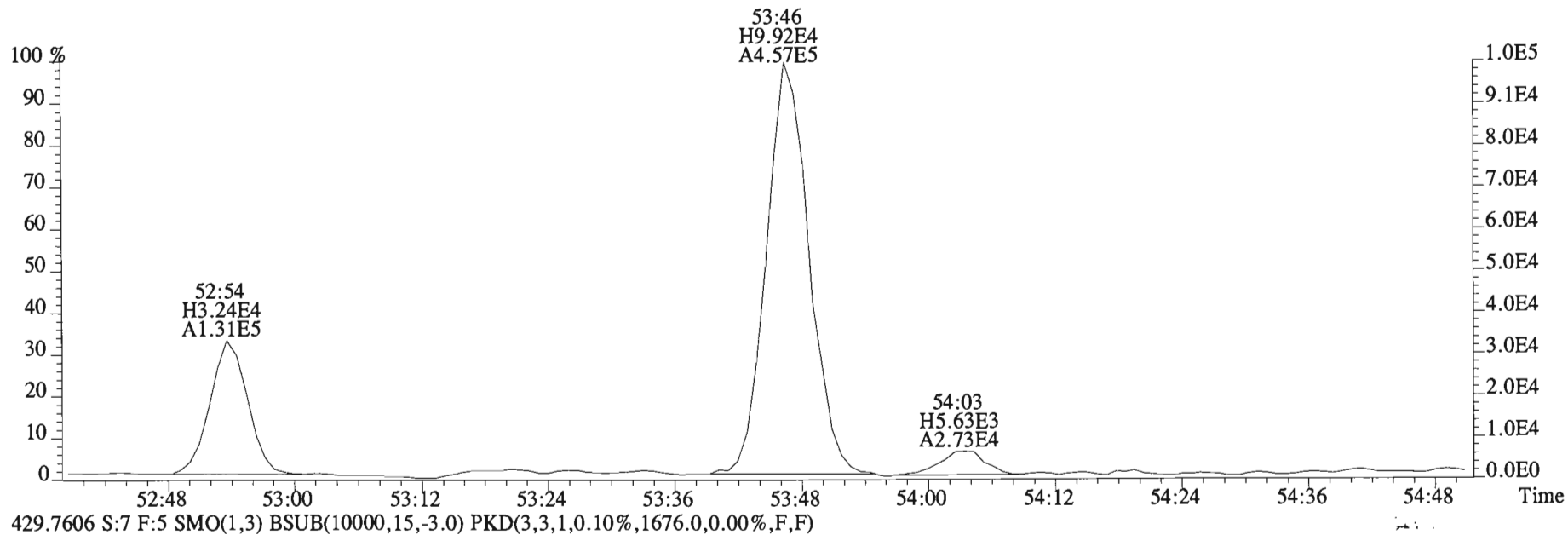
File:150205E1 #1-555 Acq: 5-FEB-2015 15:24:13 GC EI+ Voltage SIR Autospec-UltimaE
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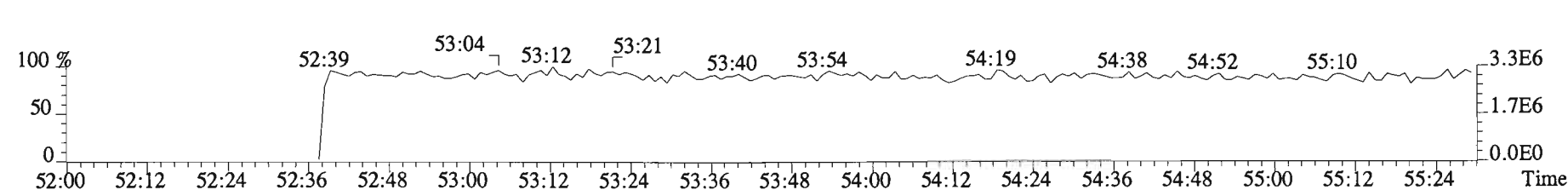
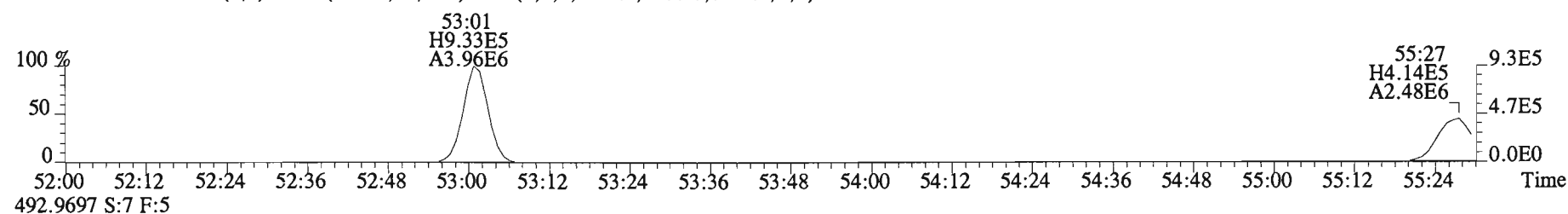
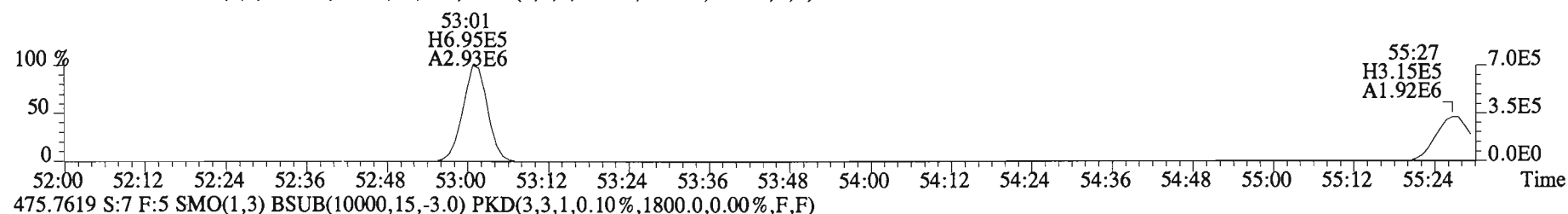
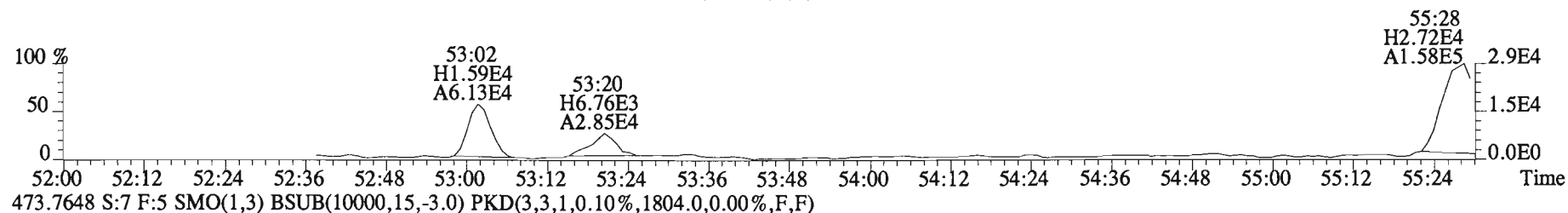
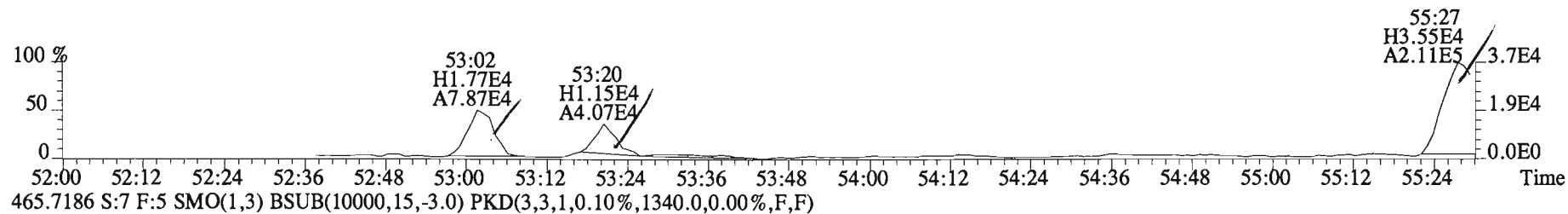
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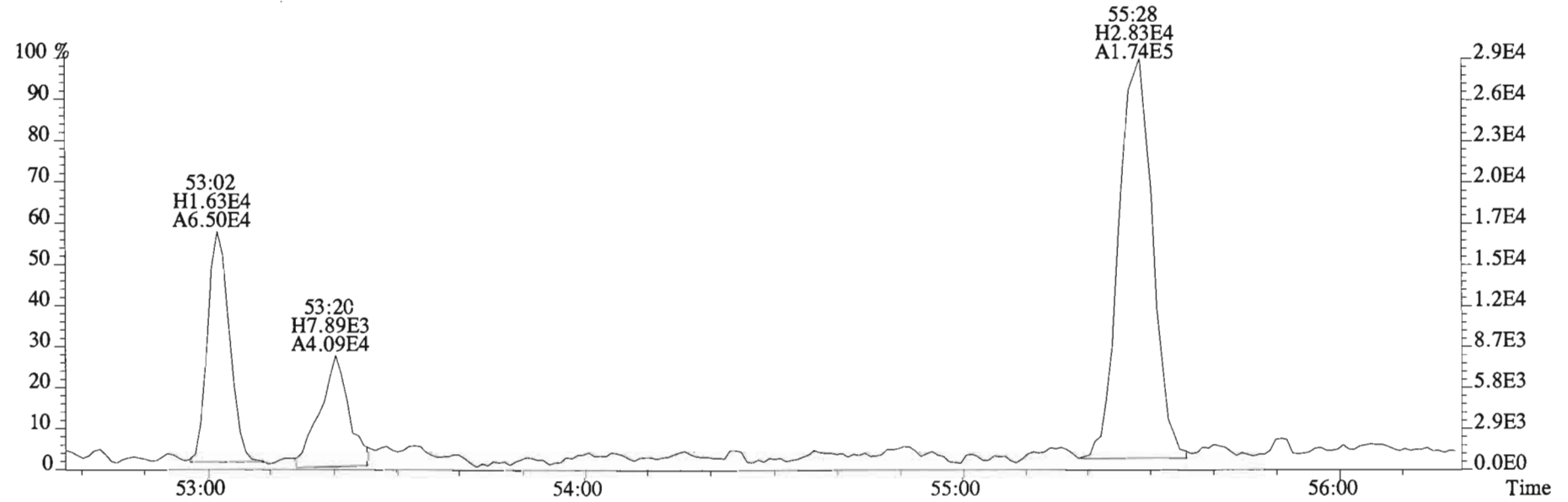
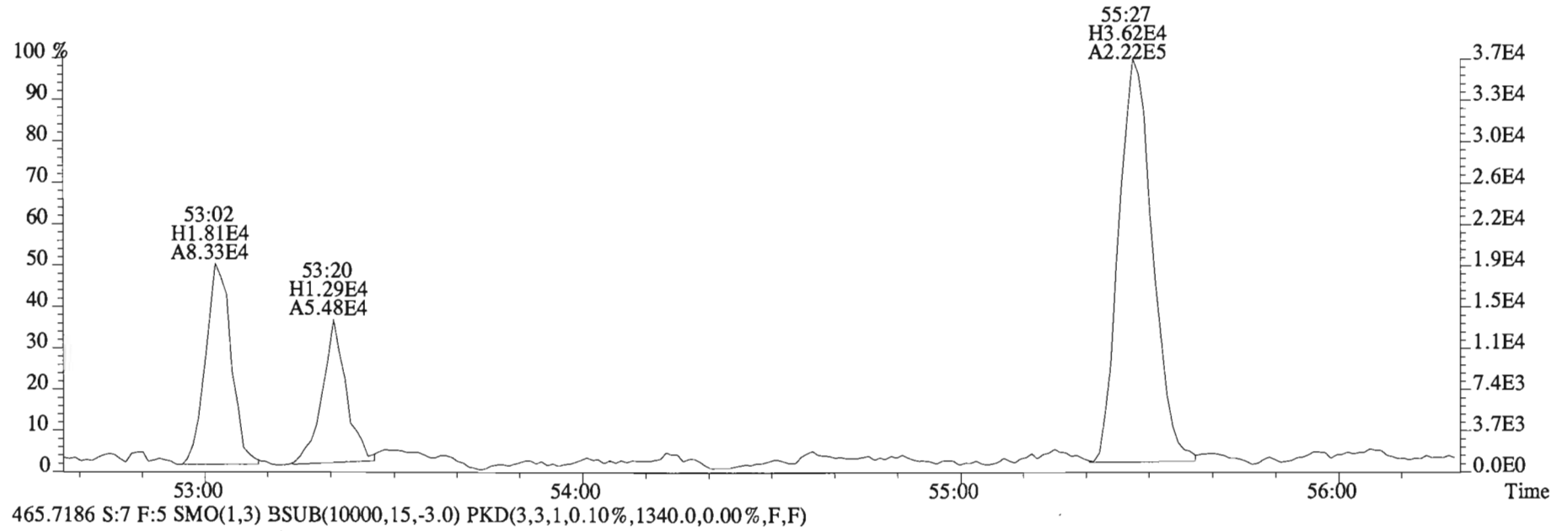
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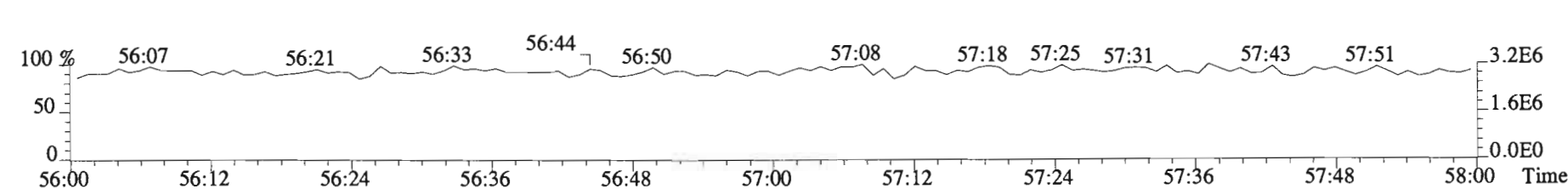
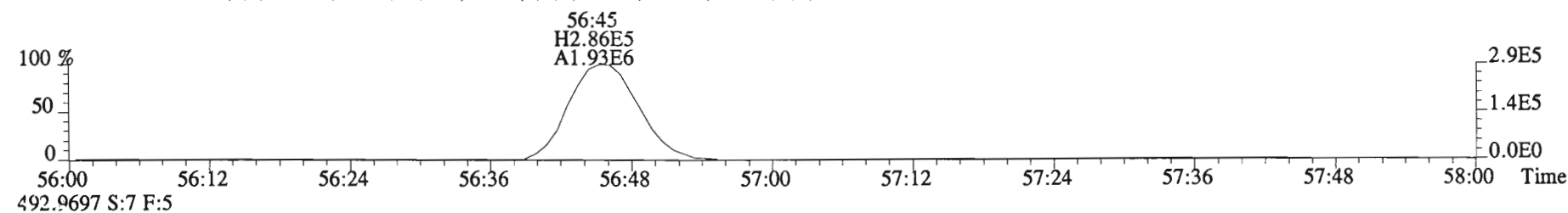
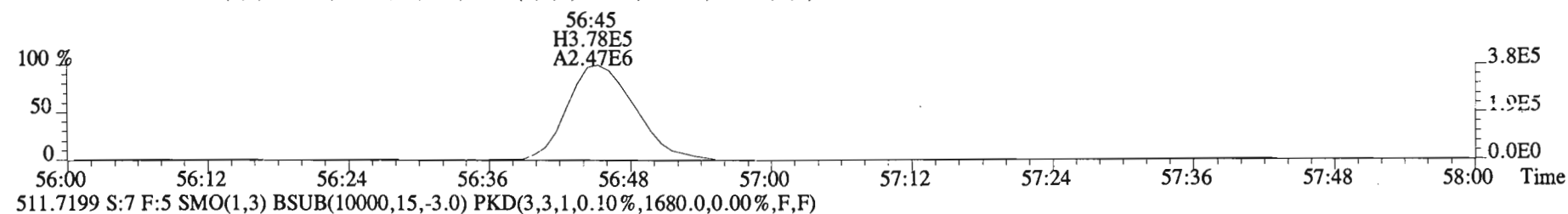
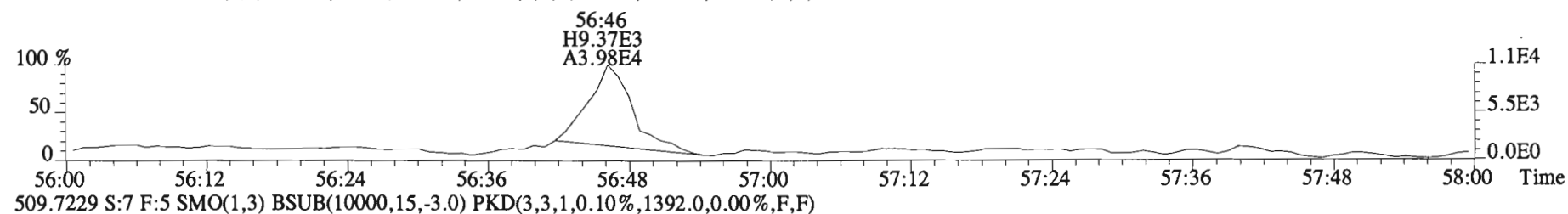
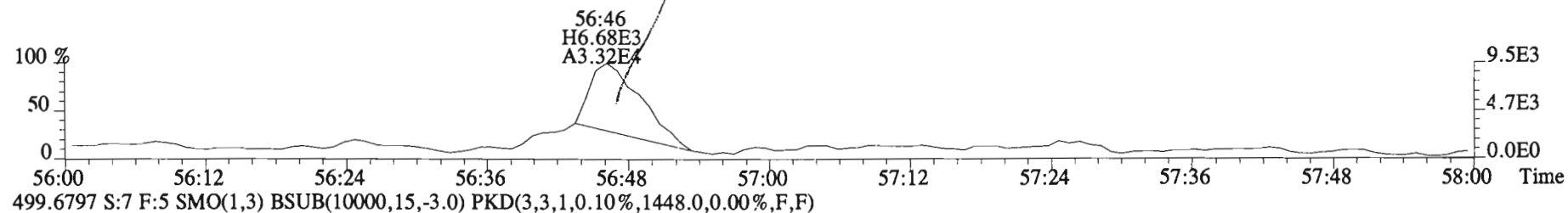
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463.7216 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1500.0,0.00%,F,F)



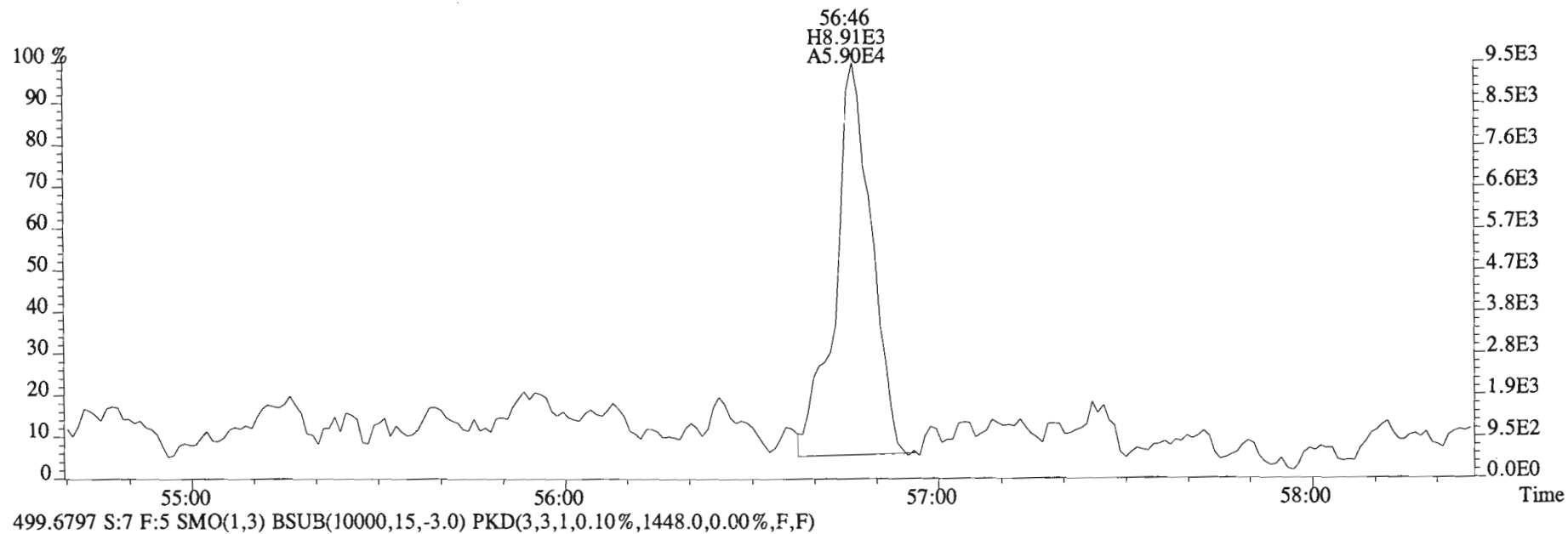
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463.7216 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0)



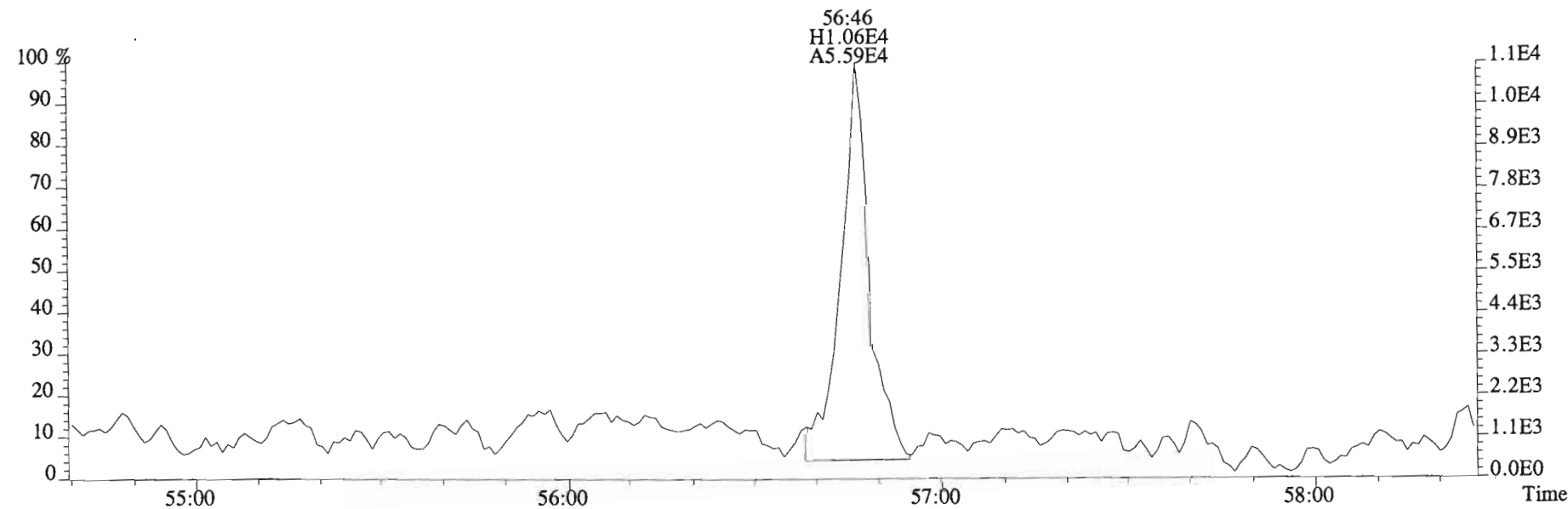
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Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400970-04@10X DS-CB-H1-20141216-S Exp:PCB_ZB1
497.6826 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1420.0,0.00%,F,F)



File:150205E1 #1-429 Acq: 5-FEB-2015 15:24:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG-8 Text:1400970-04@10X DS-CB-H1-20141216-S Exp:PCB_ZB1
497.6826 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1420.0,0.00%,F,F)



499.6797 S:7 F:5 SMO(1,3) BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,1448.0,0.00%,F,F)



CONFIRMATION

Dataset: C:\MassLynx\Default.pro\Results\150205F2\150205F2_10.qld

Last Altered: Friday, February 06, 2015 09:52:06 Pacific Standard Time

Printed: Friday, February 06, 2015 09:52:30 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

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1	1 2,3,7,8-TCDF	3.66e4	0.80	NO	1.10	10.169	17.57	5.1964		0.109
2	2 13C-2,3,7,8-TCDF	1.26e6	0.76	NO	0.844	10.169	17.55	173.49	88.2	0.433
3	3 13C-1,2,3,4-TCDF	1.69e6	0.79	NO	1.00	10.169	15.31	196.68	100	0.365

CS 2/6/15

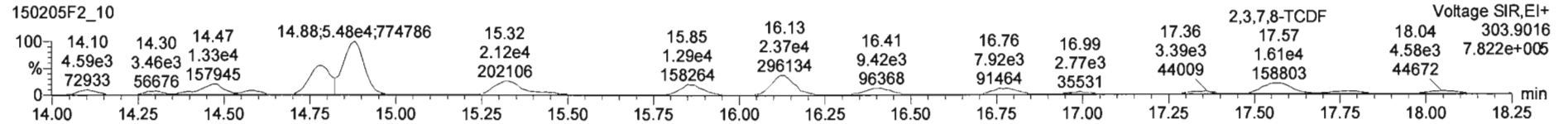
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2/7/15

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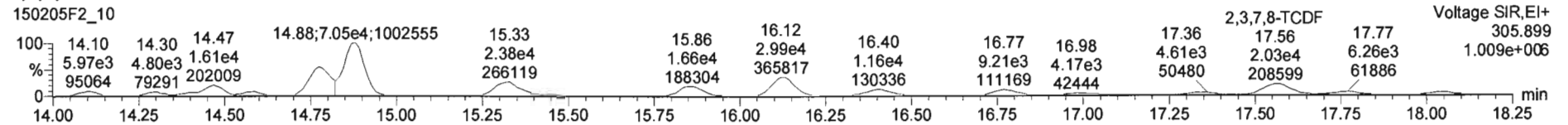
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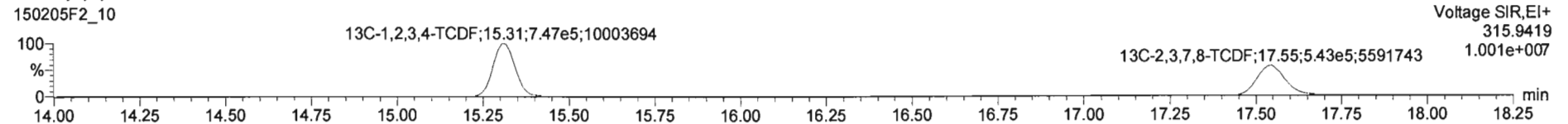
2,3,7,8-TCDF



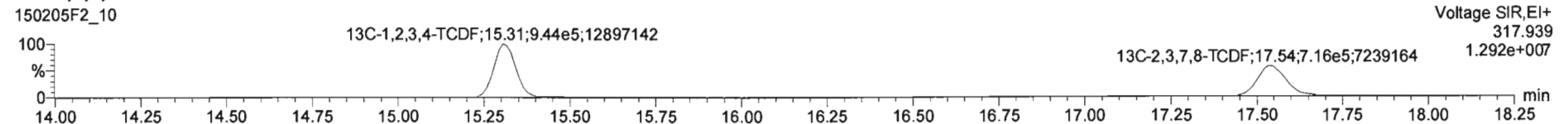
2,3,7,8-TCDF

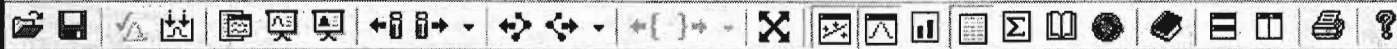


13C-2,3,7,8-TCDF



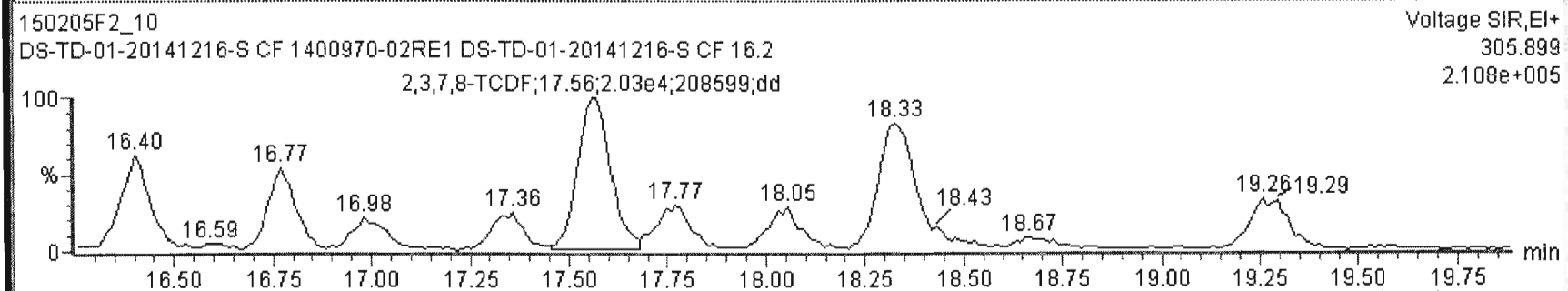
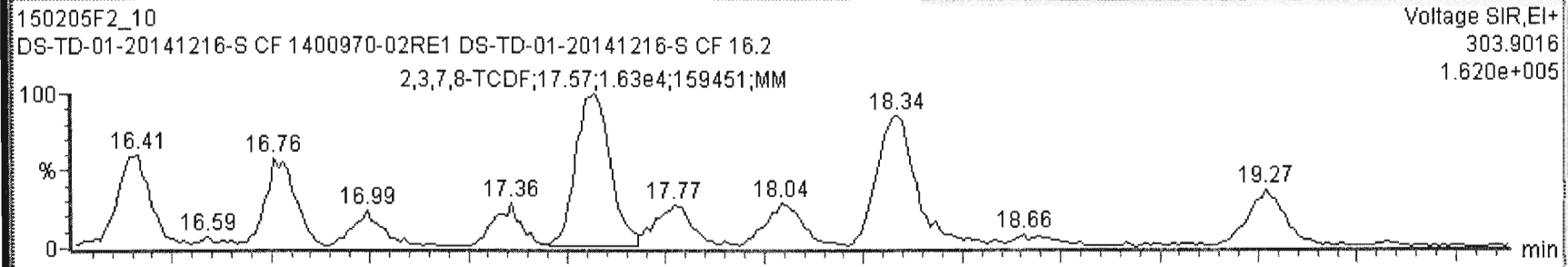
13C-2,3,7,8-TCDF





150205F2_10 - 1400970-02RE1 DS-TD-01-20141216-S CF 16.2 - DS-TD-01-20141216-S CF

#	Name	Resp	RA	n/y	RRF	wt/vol	RT	Conc.	%Rec	DL
1	2,3,7,8-TCDF	3.66e4	0.80	NO	1.10	10.169	17.57	5.20		0.109
2	13C-2,3,7,8-TCDF	1.26e6	0.76	NO	0.84	10.169	17.55	173	88.2	0.433
3	13C-1,2,3,4-TCDF	1.69e6	0.79	NO	1.00	10.169	15.31	197	100	0.365
4	13C-1,2,3,4-TCDD	1.25e6	0.79	NO		10.169	16.08			
5	PFK1					1.000				
6	DPE1					1.000				



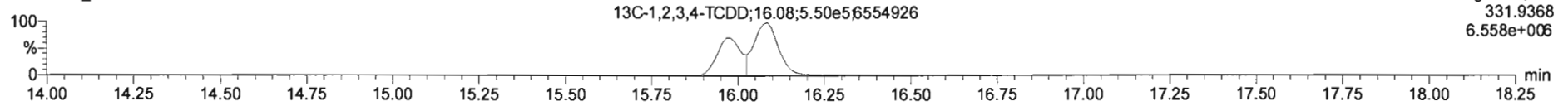
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Printed: Friday, February 06, 2015 09:14:47 Pacific Standard Time

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13C-1,2,3,4-TCDD

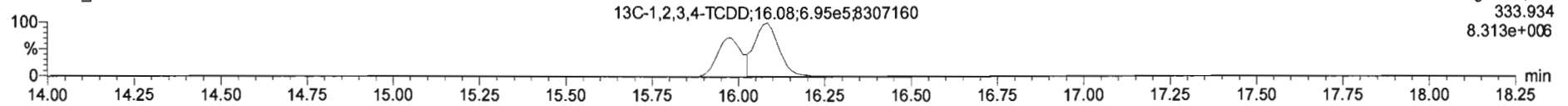
150205F2_10



Voltage SIR,EI+
331.9368
6.558e+006

13C-1,2,3,4-TCDD

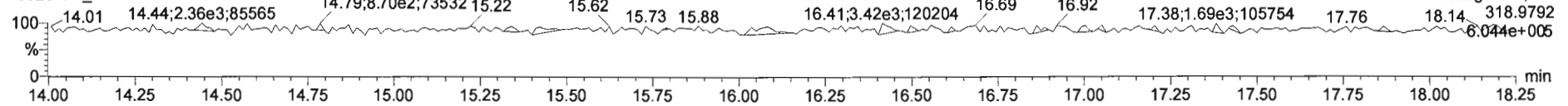
150205F2_10



Voltage SIR,EI+
333.934
8.313e+006

PFK1

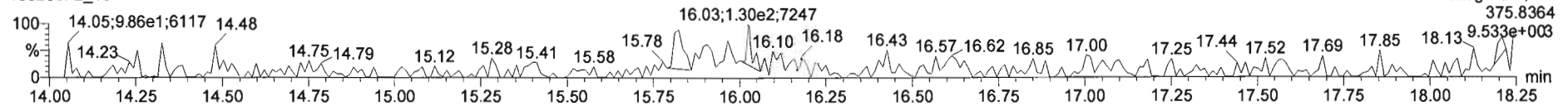
150205F2_10



Voltage SIR,EI+
318.9792
6.044e+005

DPE1

150205F2_10



Voltage SIR,EI+
375.8364
9.533e+003

Dataset: C:\MassLynx\Default.pro\Results\150205F2\150205F2_11.qld

Last Altered: Friday, February 06, 2015 09:53:14 Pacific Standard Time
 Printed: Friday, February 06, 2015 09:53:38 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 27 Jan 2015 16:23:49
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Name: 150205F2_11, Date: 05-Feb-2015, Time: 20:12:02, ID: 1400970-03RE1 DS-CB-I3-20141216-S CF 19.05, Description: DS-CB-I3-20141216-S CF

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	2.49e4	0.83	NO	1.10	10.123 ✓	17.56	3.4423		0.104
2	2 13C-2,3,7,8-TCDF	1.30e6	0.78	NO	0.844	10.123	17.54	168.76	85.4	0.363
3	3 13C-1,2,3,4-TCDF	1.80e6	0.78	NO	1.00	10.123	15.31	197.57	100	0.306

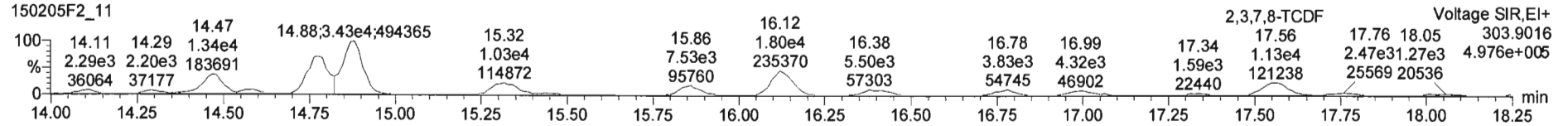
CS 2/6/15
2/7/15

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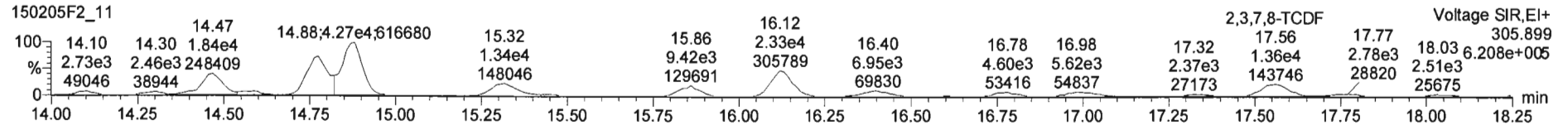
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Name: 150205F2_11, Date: 05-Feb-2015, Time: 20:12:02, ID: 1400970-03RE1 DS-CB-I3-20141216-S CF 19.05, Description: DS-CB-I3-20141216-S CF

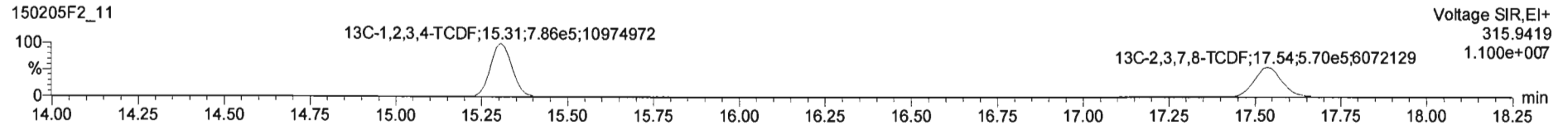
2,3,7,8-TCDF



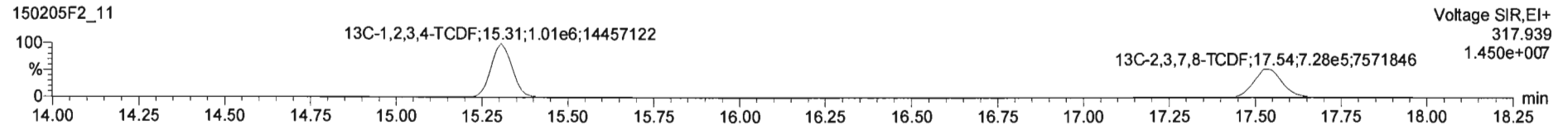
2,3,7,8-TCDF



13C-2,3,7,8-TCDF



13C-2,3,7,8-TCDF



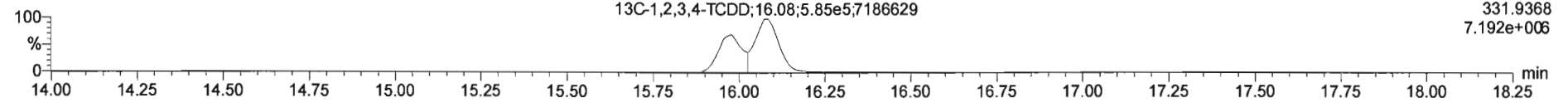
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Printed: Friday, February 06, 2015 09:14:47 Pacific Standard Time

Name: 150205F2_11, Date: 05-Feb-2015, Time: 20:12:02, ID: 1400970-03RE1 DS-CB-I3-20141216-S CF 19.05, Description: DS-CB-I3-20141216-S CF

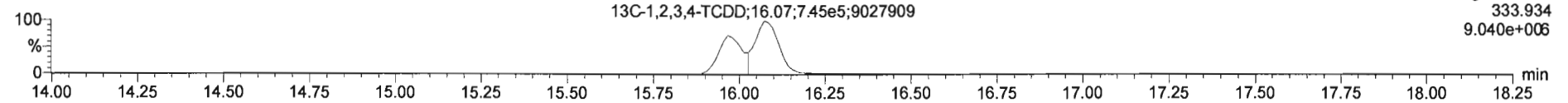
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150205F2_11



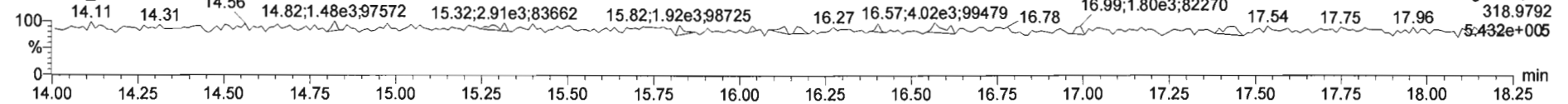
13C-1,2,3,4-TCDD

150205F2_11



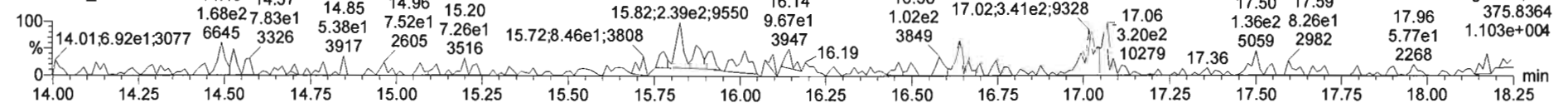
PFK1

150205F2_11



DPE1

150205F2_11



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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\ldb-225_1613TCDFvg9-11-13-14.cdb 14 Nov 2014 07:50:26

Name: 150205F2_12, Date: 05-Feb-2015, Time: 20:44:24, ID: 1400970-04RE1 DS-CB-H1-20141216-S CF 33.39, Description: DS-CB-H1-20141216-S CF

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	2.63e4	0.79	NO	1.10	10.011	17.57	6.9058		0.194
2	2 13C-2,3,7,8-TCDF	6.92e5	0.75	NO	0.844	10.011	17.56	102.90	51.5	0.370
3	3 13C-1,2,3,4-TCDF	1.59e6	0.77	NO	1.00	10.011	15.32	199.78	100	0.312

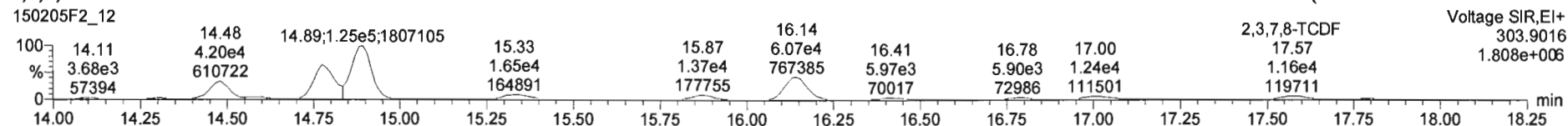
CS 2/6/15
M 2/7/15

Dataset: Untitled

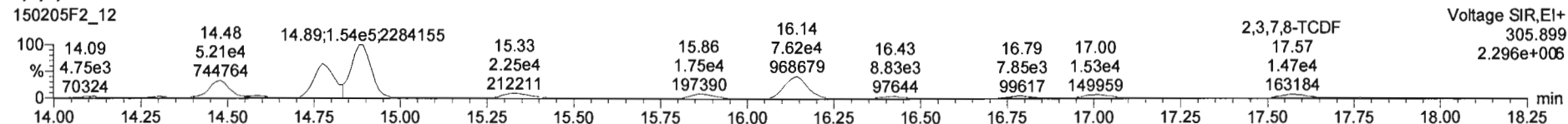
Last Altered: Friday, February 06, 2015 09:14:07 Pacific Standard Time
Printed: Friday, February 06, 2015 09:14:47 Pacific Standard Time

Name: 150205F2_12, Date: 05-Feb-2015, Time: 20:44:24, ID: 1400970-04RE1 DS-CB-H1-20141216-S CF 33.39, Description: DS-CB-H1-20141216-S CF

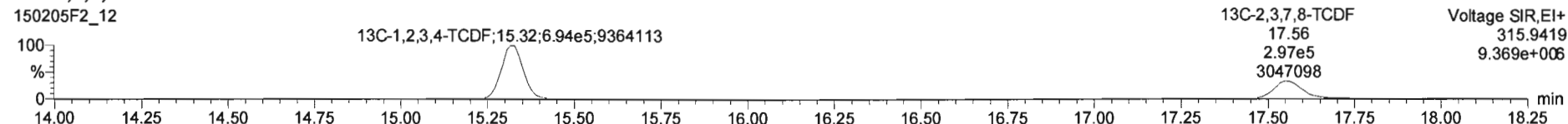
2,3,7,8-TCDF



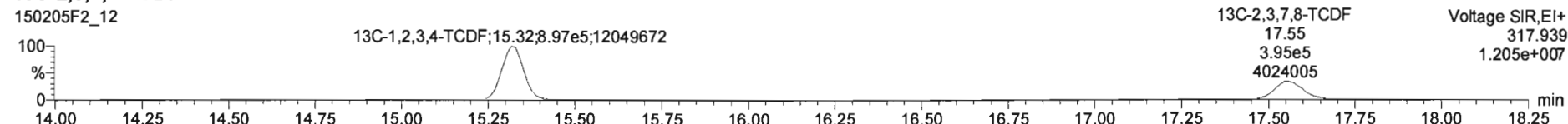
2,3,7,8-TCDF

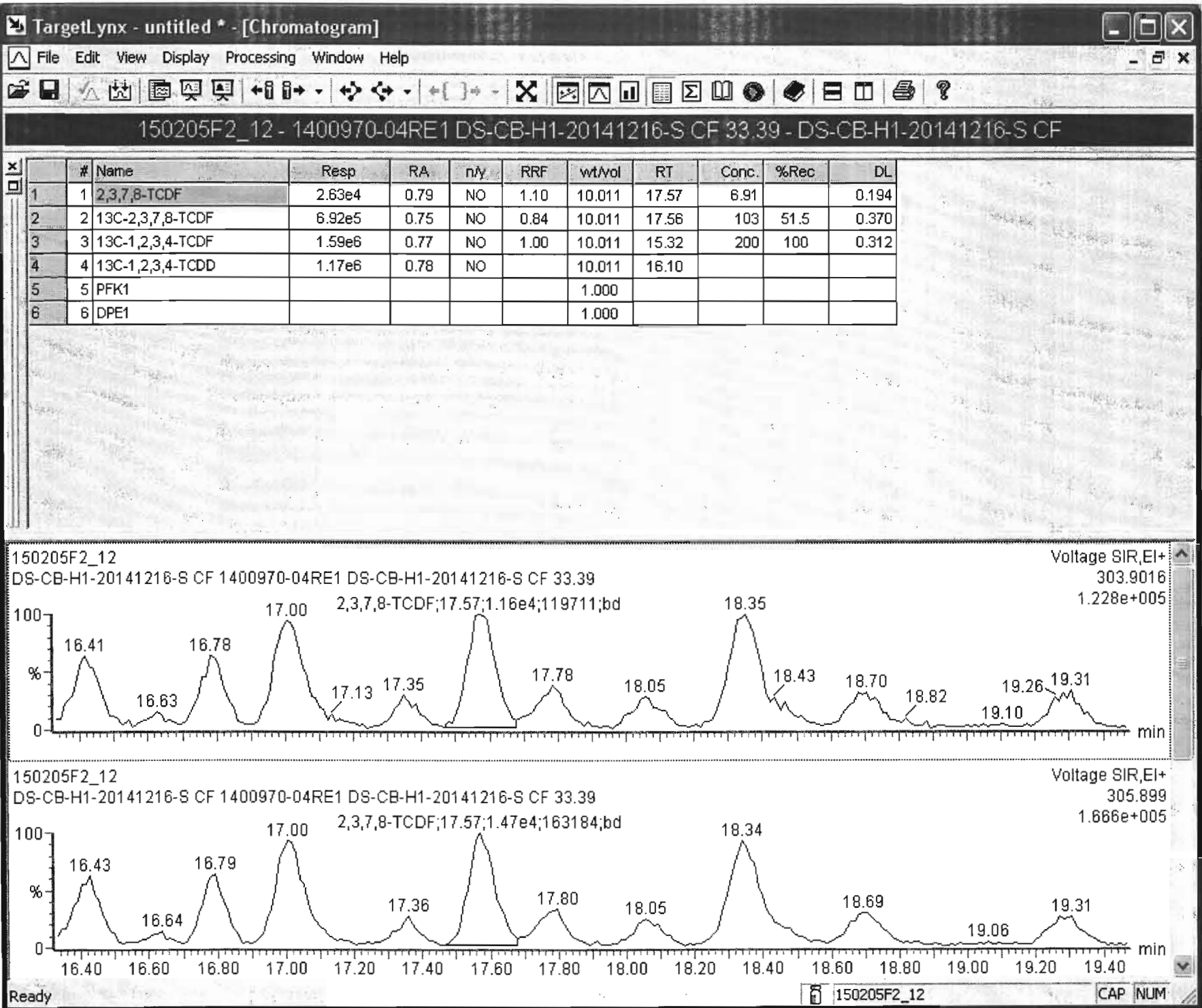


13C-2,3,7,8-TCDF



13C-2,3,7,8-TCDF





Dataset: Untitled

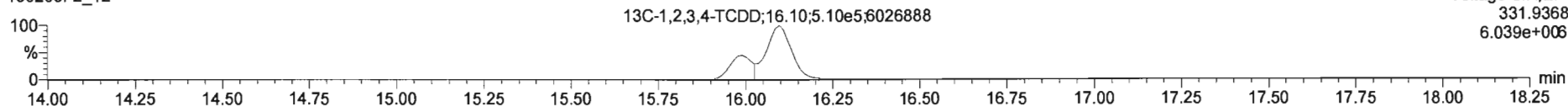
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Name: 150205F2_12, Date: 05-Feb-2015, Time: 20:44:24, ID: 1400970-04RE1 DS-CB-H1-20141216-S CF 33.39, Description: DS-CB-H1-20141216-S CF

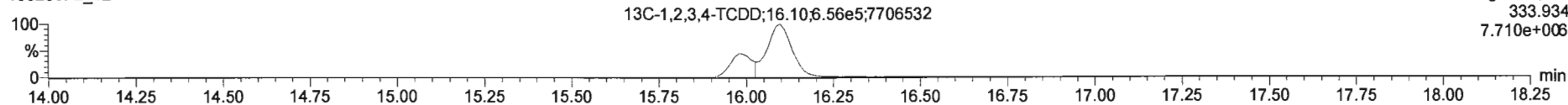
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150205F2_12



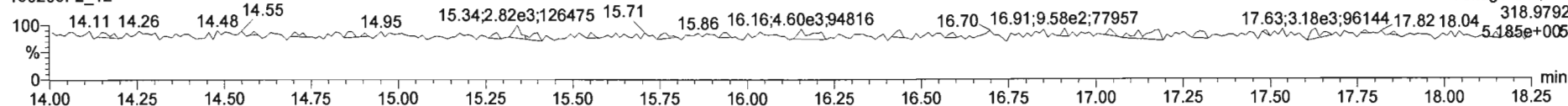
13C-1,2,3,4-TCDD

150205F2_12



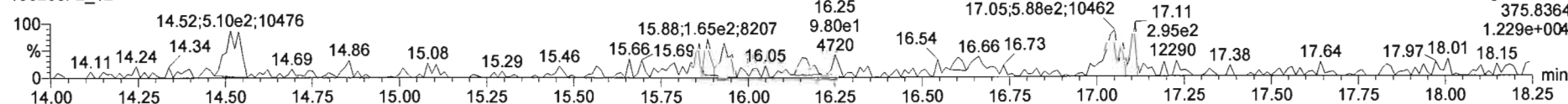
PFK1

150205F2_12



DPE1

150205F2_12



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: 11/31/15

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).

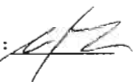
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ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% 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: 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: 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	RRT
	REFERENCE		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	1.000	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: 

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	*	*						
											Rec	Qual				
IS 13C-2,3,7,8-TCDD	2.45e+07	0.80 y	1.06	26:56	1.021	99.723					99.7					
IS 13C-1,2,3,7,8-PeCDD	2.48e+07	0.62 y	1.18	31:25	1.191	90.821					90.8					
IS 13C-1,2,3,4,7,8-HxCDD	1.89e+07	1.25 y	0.72	34:44	1.014	101.98					102					
IS 13C-1,2,3,6,7,8-HxCDD	1.94e+07	1.24 y	0.74	34:50	1.017	102.61					103					
IS 13C-1,2,3,7,8,9-HxCDD	2.28e+07	1.25 y	0.85	35:08	1.026	103.82					104					
IS 13C-1,2,3,4,6,7,8-HpCDD	1.88e+07	1.06 y	0.65	38:34	1.126	111.70					112					
IS 13C-OCDD	3.85e+07	0.86 y	0.76	41:53	1.223	195.87					97.9					
IS 13C-2,3,7,8-TCDF	3.30e+07	0.76 y	0.92	26:10	0.992	104.17					104					
IS 13C-1,2,3,7,8-PeCDF	3.26e+07	1.54 y	0.92	30:15	1.147	102.67					103					
IS 13C-2,3,4,7,8-PeCDF	3.17e+07	1.54 y	0.93	31:08	1.180	98.898					98.9					
IS 13C-1,2,3,4,7,8-HxCDF	2.35e+07	0.51 y	0.98	33:50	0.988	93.236					93.2					
IS 13C-1,2,3,6,7,8-HxCDF	2.72e+07	0.51 y	1.08	33:58	0.992	97.776					97.8					
IS 13C-2,3,4,6,7,8-HxCDF	2.53e+07	0.52 y	1.03	34:34	1.009	95.854					95.9					
IS 13C-1,2,3,7,8,9-HxCDF	2.25e+07	0.51 y	0.86	35:31	1.037	101.48					101					
IS 13C-1,2,3,4,6,7,8-HpCDF	1.96e+07	0.44 y	0.72	37:23	1.091	105.43					105					
IS 13C-1,2,3,4,7,8,9-HpCDF	1.86e+07	0.44 y	0.70	39:08	1.142	103.97					104					
IS 13C-OCDF	4.08e+07	0.88 y	0.85	42:07	1.230	186.63					93.3					
C/Up 37Cl-2,3,7,8-TCDD	2.76e+06		1.12	26:57	1.022	10.675					107					
											Integrations					
											by					
RS/RT 13C-1,2,3,4-TCDD	2.32e+07	0.81 y	1.00	26:23	*	100.00					Analyst: 					
RS 13C-1,2,3,4-TCDF	3.45e+07	0.76 y	1.00	24:58	*	100.00					Analyst: _____					
RS/RT 13C-1,2,3,4,6,9-HxCDF	2.57e+07	0.52 y	1.00	34:15	*	100.00										
											Date: <u>1/31/15</u>					
											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 Tetra-Furans	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 Penta-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 Hexa-Furans	196.45	196.73	*	*	
OCDD	1.54e+07	0.88 y	0.95	41:53	1.000	101.54	*	2.5	*	*	Total Hepta-Furans	250	251	*	*	
												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 checked="" 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: ST150204D1-1

Contract No.: SAS No.:

Initial Calibration Date: 1-7-15

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 150204D1 S#1 Analysis Date: 4-FEB-15 Time: 09:05:22

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	0.75	0.65-0.89	y	8.99	7.8 - 12.9
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	49.3	8.2 - 12.3 (4) 39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	49.8	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	51.2	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	48.6	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	50.3	43.0 - 58.0
OCDD	M+2/M+4	0.87	0.76-1.02	y	101	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.33	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	49.9	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	48.7	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.32	1.05-1.43	y	50.6	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.32	1.05-1.43	y	51.0	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.32	1.05-1.43	y	51.8	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.33	1.05-1.43	y	51.4	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.09	0.88-1.20	y	51.3	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	52.6	43.0 - 58.0
OCDF	M+2/M+4	0.95	0.76-1.02	y	104	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: Dms

Date: 2/4/15

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: 150204D1 S#1 Analysis Date: 4-FEB-15 Time: 09:05:22

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	0.77	0.65-0.89	y	99.4	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	1.26	1.05-1.43	y	95.2	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	97.7	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	97.2	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	101	72.0 - 138.0
13C-OCDD	M/M+2	0.88	0.76-1.02	y	177	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.79	0.65-0.89	y	93.6	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	102	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	95.3	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	109	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	103	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	94.7	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.50	0.43-0.59	y	99.3	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	101	77.0 - 129.0
13C-OCDF	M+2/M+4	0.89	0.76-1.02	y	186	96.0 - 415.0
CLEANUP STANDARD (3) 37Cl-2,3,7,8-TCDD					10.8	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: Dms

Date: 2/4/15

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: 150204D1 S#1 Analysis Date: 4-FEB-15 Time: 09:05:22

ZB-5MS IS Data Filename: 150204D1 S#1 Analysis Date: 4-FEB-15 Time: 09:05:22

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)	23:34	1,3,6,8-TCDF (F)	21:27
1,2,8,9-TCDD (L)	27:46	1,2,8,9-TCDF (L)	27:56
1,2,4,7,9-PeCDD (F)	29:22	1,3,4,6,8-PeCDF (F)	27:52
1,2,3,8,9-PeCDD (L)	31:45	1,2,3,8,9-PeCDF (L)	31:60
1,2,4,6,7,9-HxCDD (F)	33:09	1,2,3,4,6,8-HxCDF (F)	32:37
1,2,3,7,8,9-HxCDD (L)	35:07	1,2,3,7,8,9-HxCDF (L)	35:31
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)	39:06

(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: DMS

Date: 2/4/15

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: 150204D1 S#1 Analysis Date: 4-FEB-15 Time: 09:05:22

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	1.191	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	1.181	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: DMS

Date: 2/4/15

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: 150204D1 S#1 Analysis Date: 4-FEB-15 Time: 09:05:22

NATIVE ANALYTES	RETENTION TIME		RRT
	REFERENCE	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	1.000	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	1.001	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	1.001	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	1.143	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: DMS

Date: 2/4/15

Client ID: 1613 CS3 15A0501
Lab ID: ST150204D1-1

Filename: 150204D1 S:1 Acq: 4-FEB-15 09:05:22
GC Column ID: ZB-5MS ICal: 1613VG7-1-7-15 wt/vol: 1.000

ConCal: ST150204D1-1
EndCAL: NA

Page 2 of 2

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	1.26e+06	0.75 y	1.17	26:56	8.9888			* 2.5	*	Total Tetra-Dioxins	50.4	50.7		*	*
1,2,3,7,8-PeCDD	5.48e+06	0.62 y	0.91	31:24	49.295			* 2.5	*	Total Penta-Dioxins	158	159		*	*
1,2,3,4,7,8-HxCDD	5.03e+06	1.26 y	1.08	34:42	49.779			* 2.5	*	Total Hexa-Dioxins	195	195		*	*
1,2,3,6,7,8-HxCDD	5.36e+06	1.26 y	1.06	34:49	51.238			* 2.5	*	Total Hepta-Dioxins	134	134		*	*
1,2,3,7,8,9-HxCDD	5.13e+06	1.24 y	0.93	35:07	48.647			* 2.5	*	Total Tetra-Furans	30.7	31.2		*	*
1,2,3,4,6,7,8-HpCDD	4.99e+06	1.05 y	1.10	38:33	50.288			* 2.5	*	Total Penta-Furans	203.06	203.37		*	*
OCDD	8.85e+06	0.87 y	0.95	41:52	101.25			* 2.5	*	Total Hexa-Furans	254	255		*	*
										Total Hepta-Furans	105	106		*	*
2,3,7,8-TCDF	1.71e+06	0.80 y	1.07	26:09	9.3331			* 2.5	*						
1,2,3,7,8-PeCDF	1.00e+07	1.61 y	1.07	30:14	49.935			* 2.5	*						
2,3,4,7,8-PeCDF	8.88e+06	1.62 y	1.03	31:07	48.690			* 2.5	*						
1,2,3,4,7,8-HxCDF	1.03e+07	1.32 y	1.38	33:49	50.581			* 2.5	*						
1,2,3,6,7,8-HxCDF	9.78e+06	1.32 y	1.26	33:56	50.951			* 2.5	*						
2,3,4,6,7,8-HxCDF	8.85e+06	1.32 y	1.29	34:33	51.771			* 2.5	*						
1,2,3,7,8,9-HxCDF	7.11e+06	1.33 y	1.19	35:31	51.421			* 2.5	*						
1,2,3,4,6,7,8-HpCDF	8.55e+06	1.09 y	1.61	37:21	51.313			* 2.5	*						
1,2,3,4,7,8,9-HpCDF	7.69e+06	1.07 y	1.53	39:06	52.613			* 2.5	*						
OCDF	1.23e+07	0.95 y	1.10	42:06	104.24			* 2.5	*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	1.19e+07	0.77 y	1.06	26:54	99.415					99.4					
IS 13C-1,2,3,7,8-PeCDD	1.22e+07	0.62 y	1.18	31:23	91.658					91.7					
IS 13C-1,2,3,4,7,8-HxCDD	9.37e+06	1.26 y	0.72	34:41	95.239					95.2					
IS 13C-1,2,3,6,7,8-HxCDD	9.83e+06	1.23 y	0.74	34:48	97.749					97.7					
IS 13C-1,2,3,7,8,9-HxCDD	1.13e+07	1.26 y	0.85	35:06	97.193					97.2					
IS 13C-1,2,3,4,6,7,8-HpCDD	8.98e+06	1.04 y	0.65	38:32	100.68					101					
IS 13C-OCDD	1.84e+07	0.88 y	0.76	41:51	176.67					88.3					
IS 13C-2,3,7,8-TCDF	1.71e+07	0.79 y	0.92	26:08	93.632					93.6					
IS 13C-1,2,3,7,8-PeCDF	1.87e+07	1.58 y	0.92	30:13	101.76					102					
IS 13C-2,3,4,7,8-PeCDF	1.77e+07	1.60 y	0.93	31:06	95.344					95.3					
IS 13C-1,2,3,4,7,8-HxCDF	1.46e+07	0.51 y	0.98	33:48	109.30					109					
IS 13C-1,2,3,6,7,8-HxCDF	1.53e+07	0.52 y	1.08	33:56	103.25					103					
IS 13C-2,3,4,6,7,8-HxCDF	1.33e+07	0.51 y	1.03	34:31	94.671					94.7					
IS 13C-1,2,3,7,8,9-HxCDF	1.17e+07	0.50 y	0.86	35:29	99.281					99.3					
IS 13C-1,2,3,4,6,7,8-HpCDF	1.03e+07	0.44 y	0.72	37:20	104.94					105					
IS 13C-1,2,3,4,7,8,9-HpCDF	9.58e+06	0.44 y	0.70	39:06	100.57					101					
IS 13C-OCDF	2.16e+07	0.89 y	0.85	42:05	186.12					93.1					
C/Up 37C1-2,3,7,8-TCDD	1.36e+06		1.12	26:55	10.778					26.9					
										Integrations					
										by					
RS/RT 13C-1,2,3,4-TCDD	1.13e+07	0.79 y	1.00	26:20	100.00					Analyst: <i>DMS</i>					
RS 13C-1,2,3,4-TCDF	1.99e+07	0.78 y	1.00	24:56	100.00					Analyst: <i>[Signature]</i>					
RS/RT 13C-1,2,3,4,6,9-HxCDF	1.37e+07	0.51 y	1.00	34:13	100.00					Date: <i>2/4/15</i>					
										Date: <i>2/5/15</i>					

Vista Analytical Laboratory - Injection Log Run file: 150204D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
150204D1	1	ST150204D1-1	WJL	4-FEB-15	09:05:22	ST150204D1-1	NA
150204D1	2	ST150204D2-2	WJL	4-FEB-15	09:53:33	ST150204D2-2	ST150204D2-3
150204D1	3	B5B0003-BS1	WJL	4-FEB-15	10:41:46	ST150204D2-2	ST150204D2-3
150204D1	4	SOLVENT BLANK	WJL	4-FEB-15	11:29:58	NA	NA
150204D1	5	B550003-BLK1	WJL	4-FEB-15	12:18:10	ST150204D2-2	ST150204D2-3
150204D1	6	1500122-01	WJL	4-FEB-15	13:06:23	ST150204D2-2	ST150204D2-3
150204D1	7	1400970-02	WJL	4-FEB-15	13:54:34	ST150203D2-1	NA
150204D1	8	1400970-03	WJL	4-FEB-15	14:42:47	ST150203D2-1	NA
150204D1	9	1400970-04	WJL	4-FEB-15	15:30:59	ST150203D2-1	NA
150204D1	10	SOLVENT BLANK	WJL	4-FEB-15	16:19:10	NA	NA
150204D1	11	SOLVENT BLANK	WJL	4-FEB-15	17:07:23	NA	NA
150204D1	12	ST150204D2-3	WJL	4-FEB-15	17:55:33	ST150204D2-2	ST150204D2-3

CALIBRATION STANDARDS REVIEW CHECKLIST



Beg. Calibration ID: ST15020401-1

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 checked="" type="checkbox"/> NA	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"/> NA
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		<input checked="" type="checkbox"/>
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"/>	Comments: 		
-Correct instrument listed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
-Samples within 12-hour clock?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> n			

Reviewed by: *APJ* 2/5/11^{ns}
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 ABOUNDRATIO	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			

CJ 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 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	QC	PASS	CONC.	CONC.
	ABUND.	LIMITS		FOUND	RANGE
	RATIO				(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-188	3.54e+07	1.06	y	1.52	42:52	1.000	0.996-1.006	47.4220
PCB-105	3.76e+07	1.61	y	1.56	43:04	1.000	0.995-1.005	41.6800	PCB-184	3.22e+07	1.06	y	1.34	43:19	1.011	1.006-1.016	49.0503
PCB-127	3.41e+07	1.63	y	1.31	43:24	1.000	0.995-1.005	42.7931	PCB-179	3.33e+07	1.06	y	1.39	44:06	1.029	1.024-1.034	48.9203
PCB-126	3.51e+07	1.61	y	1.41	45:19	1.001	0.995-1.005	43.3476	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

Page 2 of

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											
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											
13C-PCB-97	4.32e+07	1.60	y	0.66	38:48	0.989	0.984-0.994	106	106											
13C-PCB-101	4.82e+07	1.64	y	0.77	37:30	0.956	0.951-0.961	101	101											
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-15	9.66e+07	1.59	y	1.00	25:56			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-31	7.28e+07	1.02	y	1.00	28:59			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-60	8.33e+07	0.79	y	1.00	36:45			100	
13C-PCB-118	6.04e+07	1.63	y	0.94	41:32	1.059	1.054-1.064	104	104		13C-PCB-111	6.20e+07	1.63	y	1.00	39:14			100	
13C-PCB-123	5.96e+07	1.60	y	0.88	41:21	1.054	1.049-1.059	109	109		13C-PCB-128	5.23e+07	1.28	y	1.00	46:21			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-205	4.72e+07	0.94	y	1.00	54:11			100	
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"/> 5/27/15	<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 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 1/28/15
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 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	2.98	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-4/10	1.73e+08	1.65	y	1.57	20:07	1.003	0.997-1.007	197.966	PCB-47	2.73e+07	0.75	y	1.06	31:60	1.001	0.996-1.006	47.9433
PCB-7/9	2.01e+08	1.64	y	1.21	21:53	0.868	0.866-0.874	198.623	PCB-48/75	7.06e+07	0.76	y	1.23	32:07	1.004	0.999-1.009	106.755
PCB-6	1.06e+08	1.62	y	1.30	22:31	0.893	0.890-0.899	97.0445	PCB-65	3.48e+07	0.76	y	1.22	32:23	1.013	1.008-1.018	52.7763
PCB-5/8	1.90e+08	1.63	y	1.15	22:57	0.910	0.907-0.917	198.052	PCB-62	3.40e+07	0.77	y	1.22	32:30	1.016	1.011-1.021	51.6427
PCB-14	9.57e+07	1.64	y	1.11	24:02	0.953	0.949-0.959	100.771	PCB-44	2.45e+07	0.80	y	0.86	32:48	1.025	1.021-1.031	52.7941
PCB-11	9.30e+07	1.66	y	1.09	25:13	1.000	0.995-1.005	100.024	PCB-42/59	6.41e+07	0.77	y	1.14	33:01	1.033	1.028-1.038	104.617
PCB-12/13	2.01e+08	1.65	y	1.19	25:37	1.016	1.011-1.021	196.924	PCB-41/64/71/72	1.34e+08	0.78	y	1.21	33:37	1.051	1.046-1.056	205.623
PCB-15	1.09e+08	1.65	y	1.28	25:56	1.029	1.023-1.033	99.0549	PCB-68	3.73e+07	0.78	y	1.35	33:52	1.059	1.054-1.064	51.4396
PCB-19	2.50e+07	1.05	y	1.04	24:13	1.001	0.996-1.006	48.3657	PCB-40	2.05e+07	0.76	y	0.70	34:05	1.066	1.061-1.071	54.2717
PCB-30	4.02e+07	1.05	y	1.71	25:06	1.038	1.032-1.042	47.4557	PCB-57	3.39e+07	0.78	y	0.98	34:27	0.970	0.965-0.975	51.2063
PCB-18	2.79e+07	1.04	y	0.78	25:51	0.954	0.949-0.959	50.1458	PCB-67	3.68e+07	0.76	y	1.11	34:45	0.979	0.974-0.984	49.1597
PCB-17	3.23e+07	1.05	y	0.92	26:01	0.960	0.956-0.966	49.1995	PCB-58	3.31e+07	0.79	y	0.93	34:52	0.982	0.977-0.987	52.6748
PCB-24/27	8.28e+07	1.05	y	1.19	26:36	0.981	0.977-0.987	97.8671	PCB-63	3.23e+07	0.77	y	0.95	35:01	0.986	0.982-0.992	50.1790
PCB-16/32	6.55e+07	1.05	y	0.94	27:07	1.000	0.995-1.005	97.9906	PCB-74	4.14e+07	0.79	y	1.24	35:19	0.995	0.990-1.000	49.2341
PCB-34	4.37e+07	1.06	y	1.14	27:54	0.960	0.955-0.965	49.8873	PCB-61/70	6.73e+07	0.79	y	0.95	35:29	1.000	0.995-1.005	104.334
PCB-23	5.44e+07	1.07	y	1.28	27:59	0.963	0.959-0.969	55.1711	PCB-76/66	7.13e+07	0.76	y	1.04	35:42	1.006	1.001-1.011	100.794
PCB-29	4.47e+07	1.08	y	1.08	28:15	0.972	0.967-0.977	53.7440	PCB-80	4.27e+07	0.78	y	1.19	35:56	1.001	0.996-1.006	51.6676
PCB-26	4.99e+07	1.09	y	1.21	28:28	0.979	0.974-0.984	53.6246	PCB-55	3.78e+07	0.77	y	1.04	36:16	1.009	1.005-1.015	52.3161
PCB-25	5.46e+07	1.09	y	1.26	28:37	0.985	0.979-0.989	56.1301	PCB-56/60	7.26e+07	0.77	y	1.01	36:45	1.023	1.019-1.029	103.724
PCB-31	5.35e+07	1.06	y	1.28	28:59	0.997	0.992-1.002	54.0330	PCB-79	3.84e+07	0.80	y	1.08	37:49	1.053	1.048-1.058	51.3632
PCB-28	7.16e+07	1.09	y	1.71	29:04	1.000	0.995-1.005	54.2756	PCB-78	3.95e+07	0.77	y	1.27	38:31	0.987	0.982-0.992	49.4519
PCB-20/21/33	1.41e+08	1.07	y	1.08	29:42	1.022	1.017-1.027	168.751	PCB-81	4.18e+07	0.76	y	1.33	39:03	1.000	0.995-1.005	49.9321
PCB-22	5.07e+07	1.06	y	1.21	30:08	1.037	1.032-1.042	54.3984	PCB-77	3.59e+07	0.80	y	1.10	39:38	1.000	0.995-1.005	51.4536
PCB-36	4.37e+07	1.07	y	1.14	30:45	0.933	0.928-0.938	52.3510	PCB-104	2.56e+07	1.62	y	1.18	32:39	1.001	0.996-1.006	53.0238
PCB-39	4.34e+07	1.07	y	1.12	31:14	0.948	0.943-0.953	53.3094	PCB-96	2.41e+07	1.61	y	1.14	33:55	1.039	1.034-1.044	51.8946
PCB-38	4.33e+07	1.07	y	1.20	32:00	0.971	0.966-0.976	49.4301	PCB-103	2.06e+07	1.60	y	0.96	34:27	1.056	1.050-1.060	52.7405
PCB-35	5.01e+07	1.07	y	1.23	32:31	0.987	0.982-0.992	55.7127	PCB-100	2.04e+07	1.62	y	0.94	34:48	1.066	1.061-1.071	53.4401
PCB-37	4.78e+07	1.08	y	1.23	32:57	1.000	0.995-1.005	53.2390	PCB-94	1.65e+07	1.62	y	1.06	35:17	0.986	0.980-0.990	51.5714
PCB-54	3.46e+07	0.78	y	1.10	27:58	1.001	0.996-1.006	50.0266	PCB-95/98/102	5.79e+07	1.58	y	1.22	35:46	0.999	0.995-1.005	156.535
PCB-50	2.81e+07	0.77	y	0.88	29:08	1.042	1.037-1.047	50.8730	PCB-93	1.46e+07	1.67	y	0.84	35:54	1.003	0.997-1.007	57.3905
PCB-53	2.83e+07	0.76	y	1.06	29:46	0.946	0.942-0.952	50.9438	PCB-88/91	3.93e+07	1.61	y	1.12	36:11	1.011	1.005-1.015	116.593
PCB-51	2.57e+07	0.76	y	0.99	30:07	0.957	0.952-0.962	49.7183	PCB-121	2.35e+07	1.63	y	1.62	36:18	1.014	1.009-1.019	48.2118
PCB-45	2.30e+07	0.78	y	0.86	30:33	0.971	0.966-0.976	50.9773	PCB-84/92	3.52e+07	1.62	y	1.05	37:07	0.990	0.985-0.995	105.086
PCB-46	2.25e+07	0.77	y	0.85	31:02	0.986	0.981-0.991	51.1100	PCB-89	1.90e+07	1.62	y	1.13	37:18	0.995	0.991-1.001	52.4369

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

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: 5 Acquired: 16-OCT-14 14:19:34

Run: 141016D1 Analyte:

Cal:

Results:

Sample text: ST141016D1-4 1613 CS2 14I1821

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	2.00	3.13e+05	0.82 y	27:03	-	1.06
2	Unk	1,2,3,7,8-PeCDD	10.00	1.47e+06	0.59 y	31:32	-	0.84
3	Unk	1,2,3,4,7,8-HxCDD	10.00	1.26e+06	1.28 y	34:52	-	1.00
4	Unk	1,2,3,6,7,8-HxCDD	10.00	1.24e+06	1.26 y	34:59	-	0.96
5	Unk	1,2,3,7,8,9-HxCDD	10.00	1.30e+06	1.28 y	35:17	-	0.86
6	Unk	1,2,3,4,6,7,8-HpCDD	10.00	1.21e+06	1.04 y	38:44	-	1.07
7	Unk	OCDD	20.00	2.38e+06	0.87 y	42:03	-	0.85
8	Unk	2,3,7,8-TCDF	2.00	4.47e+05	0.78 y	26:17	-	0.99
9	Unk	1,2,3,7,8-PeCDF	10.00	2.35e+06	1.55 y	30:22	-	1.00
10	Unk	2,3,4,7,8-PeCDF	10.00	2.32e+06	1.57 y	31:15	-	0.96
11	Unk	1,2,3,4,7,8-HxCDF	10.00	2.31e+06	1.29 y	33:58	-	1.31
12	Unk	1,2,3,6,7,8-HxCDF	10.00	2.24e+06	1.28 y	34:06	-	1.14
13	Unk	2,3,4,6,7,8-HxCDF	10.00	2.19e+06	1.30 y	34:42	-	1.20
14	Unk	1,2,3,7,8,9-HxCDF	10.00	1.69e+06	1.33 y	35:41	-	1.13
15	Unk	1,2,3,4,6,7,8-HpCDF	10.00	1.86e+06	1.10 y	37:32	-	1.49
16	Unk	1,2,3,4,7,8,9-HpCDF	10.00	1.69e+06	1.09 y	39:17	-	1.39
17	Unk	OCDF	20.00	3.11e+06	0.93 y	42:17	-	1.01
36	IS	13C-2,3,7,8-TCDD	100.00	1.47e+07	0.79 y	27:02	-	1.04
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.74e+07	0.63 y	31:31	-	1.23
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.26e+07	1.28 y	34:51	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.29e+07	1.24 y	34:58	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.51e+07	1.23 y	35:16	-	0.83
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.13e+07	1.05 y	38:43	-	0.62
42	IS	13C-OCDD	200.00	2.79e+07	0.88 y	42:03	-	0.77
43	IS	13C-2,3,7,8-TCDF	100.00	2.26e+07	0.77 y	26:16	-	0.91
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.36e+07	1.54 y	30:21	-	0.95
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.40e+07	1.57 y	31:14	-	0.96
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.77e+07	0.50 y	33:57	-	0.98
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.97e+07	0.51 y	34:05	-	1.09
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.83e+07	0.52 y	34:41	-	1.01
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.50e+07	0.52 y	35:40	-	0.83
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.24e+07	0.43 y	37:31	-	0.69
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.22e+07	0.43 y	39:16	-	0.67
52	IS	13C-OCDF	200.00	3.07e+07	0.90 y	42:17	-	0.85
53	C/Up	37Cl-2,3,7,8-TCDD	2.00	3.51e+05		27:03	-	1.24
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.41e+07	0.80 y	26:28	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.49e+07	0.77 y	25:03	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.80e+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: mDate: 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					
RS/RT 13C-1,2,3,4-TCDD	1.79e+07	0.80 y	1.00	26:24	*	100.00										
RS 13C-1,2,3,4-TCDF	2.97e+07	0.78 y	1.00	24:58	*	100.00										
RS/RT 13C-1,2,3,4,6,9-HxCDF	2.08e+07	0.51 y	1.00	34:21	*	100.00										

Integrations
 by
 Analyst: ms
 Date: 1/9/15
 Reviewed
 by
 Analyst: CT
 Date: 1/12/15

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 1411819	13-Nov-14	14:37:32
3	141113F1_3	ST141113F1-2 1613 CS1 1411820	13-Nov-14	15:09:19
4	141113F1_4	ST141113F1-3 1613 CS2 1411821	13-Nov-14	15:41:06
5	141113F1_5	ST141113F1-4 1613 CS4 1411822	13-Nov-14	16:12:54
6	141113F1_6	ST141113F1-5 1613 CS5 1411823	13-Nov-14	16:44:42
7	141113F1_7	ST141113F1-6 1613 CS3 1411102	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

Run: 150114E1 Analyte:

Cal: pcbvg8-1-14-15

Inst. ID. VG-8

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 *
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	0.95	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	Total Mono-PCB	0.00	-	- n	-	-	1.32
170	Tot	Total Di-PCB	0.00	-	- n	-	-	1.31
171	Tot	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: pcbvgs-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 ¶	Total Mono-PCB	0.00	-	- n	-	-	1.25
170	Tot ¶	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 η	Total Mono-PCB	0.00	-	- n	-	-	1.33
170	Tot η	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 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-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-157	1.21	1.05-1.43	y	46.2	37.5-62.5
PCB-122	1.63	1.32-1.78	y	45.9	37.5-62.5	PCB-169	1.20	1.05-1.43	y	47.2	37.5-62.5
PCB-105	1.65	1.32-1.78	y	47.1	37.5-62.5	PCB-188	1.06	0.89-1.21	y	47.0	37.5-62.5
PCB-127	1.69	1.32-1.78	y	47.5	37.5-62.5	PCB-184	1.05	0.89-1.21	y	47.6	37.5-62.5
PCB-126	1.64	1.32-1.78	y	49.3	37.5-62.5	PCB-179	1.03	0.89-1.21	y	47.9	37.5-62.5
PCB-155	1.23	1.05-1.43	y	46.8	37.5-62.5	PCB-176	1.04	0.89-1.21	y	48.0	37.5-62.5
PCB-150	1.24	1.05-1.43	y	45.2	37.5-62.5	PCB-186	1.05	0.89-1.21	y	46.9	37.5-62.5
PCB-152	1.25	1.05-1.43	y	44.2	37.5-62.5	PCB-178	1.06	0.89-1.21	y	46.4	37.5-62.5
PCB-145	1.24	1.05-1.43	y	45.5	37.5-62.5	PCB-175	1.06	0.89-1.21	y	48.1	37.5-62.5
PCB-136	1.23	1.05-1.43	y	47.5	37.5-62.5	PCB-182/187	1.05	0.89-1.21	y	93.3	75.0-125
PCB-148	1.24	1.05-1.43	y	43.6	37.5-62.5	PCB-183	1.04	0.89-1.21	y	47.4	37.5-62.5
PCB-154	1.23	1.05-1.43	y	45.1	37.5-62.5	PCB-185	1.05	0.89-1.21	y	47.6	37.5-62.5
PCB-151	1.25	1.05-1.43	y	46.1	37.5-62.5	PCB-174	1.05	0.89-1.21	y	48.5	37.5-62.5
PCB-135	1.23	1.05-1.43	y	45.1	37.5-62.5	PCB-181	1.08	0.89-1.21	y	48.3	37.5-62.5
PCB-144	1.33	1.05-1.43	y	45.7	37.5-62.5	PCB-177	1.04	0.89-1.21	y	45.9	37.5-62.5
PCB-147	1.15	1.05-1.43	y	43.6	37.5-62.5	PCB-171	1.05	0.89-1.21	y	46.1	37.5-62.5
PCB-139/149	1.23	1.05-1.43	y	88.3	75.0-125	PCB-173	1.04	0.89-1.21	y	49.0	37.5-62.5
						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
GC Column ID: ZB-1 ICal: pcbvg8-1-14-15 wt/vol: 1.0000 EndCAL: NA

Page 1 of 8

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											
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											
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		13C-PCB-15	1.34e+08	1.56 y	1.00	25:59				100	
13C-PCB-104	6.91e+07	1.61 y	0.97	32:42	0.832	0.828-0.836		109	109		13C-PCB-31	7.47e+07	1.02 y	1.00	29:01				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-60	8.72e+07	0.74 y	1.00	36:48				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-111	6.56e+07	1.64 y	1.00	39:17				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-128	4.99e+07	1.27 y	1.00	46:24				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-205	4.76e+07	0.89 y	1.00	54:12				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-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	ST150116E1-2	dms	16-JAN-15	08:51:27	NA	NA

Run: 140623E2

Analyte: PCBNEW

Cal: PCBVG8-6-23-14

Inst. ID: VG R

Data filename: 140623E2

			Samp# 1	Samp# 2	Samp# 3	Samp# 4	Samp# 5	Samp# 6
			0.25	1.0	2.5	50	400	750
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
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 η	Total Mono-PCB	0.00	-	- n	-	-	1.15
170	Tot η	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	Octaη	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	Tetr	η	13C-PCB-54	100.00	1.30e+08	0.80	y	27:56	-	0.98
193	Tetr	η	13C-PCB-52	100.00	9.99e+07	0.80	y	31:25	-	0.75
194	Tetr	η	13C-PCB-47	100.00	1.04e+08	0.77	y	31:55	-	0.78
195	Tetr	η	13C-PCB-70	100.00	1.35e+08	0.78	y	35:24	-	1.02
196	Tetr	η	13C-PCB-80	100.00	1.39e+08	0.80	y	35:49	-	1.05
197	Tetr	η	13C-PCB-81	100.00	1.30e+08	0.79	y	38:56	-	0.98
198	Tetr	η	13C-PCB-77	100.00	1.29e+08	0.80	y	39:32	-	0.97
199	Pent	η	13C-PCB-104	100.00	8.83e+07	1.59	y	32:34	-	0.96
200	Pent	η	13C-PCB-95	100.00	6.79e+07	1.55	y	35:43	-	0.74
201	Pent	η	13C-PCB-101	100.00	7.25e+07	1.55	y	37:23	-	0.79
202	Pent	η	13C-PCB-97	100.00	6.44e+07	1.57	y	38:42	-	0.70
203	Pent	η	13C-PCB-123	100.00	8.18e+07	1.58	y	41:16	-	0.89
204	Pent	η	13C-PCB-118	100.00	9.11e+07	1.59	y	41:27	-	0.99
205	Pent	η	13C-PCB-114	100.00	1.10e+08	1.61	y	42:06	-	1.45
206	Pent	η	13C-PCB-105	100.00	1.10e+08	1.59	y	42:58	-	1.45
207	Pent	η	13C-PCB-127	100.00	1.18e+08	1.61	y	43:18	-	1.54
208	Pent	η	13C-PCB-126	100.00	1.02e+08	1.57	y	45:13	-	1.34
209	Hexa	η	13C-PCB-155	100.00	7.27e+07	1.27	y	36:56	-	0.79
210	Hexa	η	13C-PCB-153	100.00	8.79e+07	1.29	y	43:07	-	1.15
211	Hexa	η	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	Hexa	η	13C-PCB-159	100.00	9.51e+07	1.28	y	45:59	-	1.25
214	Hexa	η	13C-PCB-167	100.00	1.01e+08	1.26	y	46:41	-	1.33
215	Hexa	η	13C-PCB-156	100.00	1.01e+08	1.27	y	47:59	-	1.32
216	Hexa	η	13C-PCB-157	100.00	1.05e+08	1.31	y	48:15	-	1.38
217	Hexa	η	13C-PCB-169	100.00	9.82e+07	1.28	y	50:20	-	1.29
218	Hept	η	13C-PCB-188	100.00	6.91e+07	0.47	y	42:45	-	0.91
219	Hept	η	13C-PCB-180	100.00	4.94e+07	0.48	y	49:16	-	0.65
220	Hept	η	13C-PCB-170	100.00	3.94e+07	0.46	y	50:41	-	0.52
221	Hept	η	13C-PCB-189	100.00	5.34e+07	0.46	y	52:08	-	0.70
222	Octa	η	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: DMS

Date: 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-47	5.35e+07	0.76	y	1.06	31:55	1.001	0.996-1.006	49.2976
PCB-4/10	3.27e+08	1.65	y	1.57	20:14	1.002	0.997-1.007	200.078	PCB-48/75	1.20e+08	0.77	y	1.23	32:02	1.004	0.999-1.009	95.5705
PCB-7/9	3.82e+08	1.65	y	1.21	21:57	0.870	0.866-0.874	199.310	PCB-65	6.30e+07	0.76	y	1.22	32:19	1.013	1.008-1.018	50.1860
PCB-6	2.07e+08	1.66	y	1.30	22:35	0.895	0.890-0.899	100.033	PCB-62	5.58e+07	0.76	y	1.22	32:26	1.016	1.011-1.021	44.5973
PCB-5/8	3.65e+08	1.64	y	1.15	23:00	0.912	0.907-0.917	200.175	PCB-44	4.12e+07	0.77	y	0.86	32:43	1.026	1.021-1.031	46.6811
PCB-14	1.87e+08	1.66	y	1.11	24:04	0.954	0.949-0.959	102.750	PCB-42/59	1.11e+08	0.76	y	1.14	32:57	1.033	1.028-1.038	95.2591
PCB-11	1.81e+08	1.65	y	1.09	25:14	1.000	0.995-1.005	101.723	PCB-41/64/71/72	2.33e+08	0.77	y	1.21	33:32	1.051	1.046-1.056	187.913
PCB-12/13	3.92e+08	1.65	y	1.19	25:38	1.016	1.011-1.021	200.431	PCB-68	6.63e+07	0.76	y	1.35	33:47	1.059	1.054-1.064	47.9757
PCB-15	2.11e+08	1.66	y	1.28	25:56	1.028	1.023-1.033	100.196	PCB-40	3.48e+07	0.77	y	0.70	34:00	1.066	1.061-1.071	48.4517
									PCB-57	6.06e+07	0.76	y	0.98	34:22	0.970	0.965-0.975	50.6920
PCB-19	4.92e+07	1.05	y	1.04	24:15	1.001	0.996-1.006	49.8495	PCB-67	6.65e+07	0.76	y	1.11	34:40	0.979	0.974-0.984	49.1755
PCB-30	7.99e+07	1.06	y	1.71	25:07	1.037	1.032-1.042	49.3635	PCB-58	5.67e+07	0.79	y	0.93	34:47	0.982	0.977-0.987	50.1141
PCB-18	5.58e+07	1.05	y	0.78	25:51	0.954	0.949-0.959	51.2756	PCB-63	5.70e+07	0.76	y	0.95	34:56	0.987	0.982-0.992	48.9977
PCB-17	6.48e+07	1.05	y	0.92	26:02	0.961	0.956-0.966	50.4844	PCB-74	7.34e+07	0.77	y	1.24	35:13	0.995	0.990-1.000	48.3011
PCB-24/27	1.68e+08	1.05	y	1.19	26:36	0.982	0.977-0.987	101.312	PCB-61/70	1.16e+08	0.77	y	0.95	35:24	1.000	0.995-1.005	99.8888
PCB-16/32	1.31e+08	1.06	y	0.94	27:06	1.000	0.995-1.005	100.158	PCB-76/66	1.26e+08	0.77	y	1.04	35:37	1.006	1.001-1.011	99.0361
PCB-34	7.59e+07	1.03	y	1.14	27:52	0.960	0.955-0.965	47.8540	PCB-80	7.72e+07	0.77	y	1.19	35:50	1.001	0.996-1.006	51.1089
PCB-23	8.55e+07	1.06	y	1.28	27:58	0.964	0.959-0.969	47.9079	PCB-55	6.84e+07	0.77	y	1.04	36:10	1.010	1.005-1.015	51.7926
PCB-29	7.42e+07	1.04	y	1.08	28:13	0.972	0.967-0.977	49.2142	PCB-56/60	1.27e+08	0.77	y	1.01	36:40	1.024	1.019-1.029	98.8614
PCB-26	8.24e+07	1.04	y	1.21	28:25	0.975	0.974-0.984	48.9217	PCB-79	6.79e+07	0.78	y	1.08	37:43	1.053	1.048-1.058	49.6313
PCB-25	8.85e+07	1.06	y	1.26	28:34	0.984	0.979-0.989	50.2567	PCB-78	6.97e+07	0.77	y	1.27	38:25	0.987	0.982-0.992	49.0861
PCB-31	8.64e+07	1.02	y	1.28	28:56	0.997	0.992-1.002	48.1924	PCB-81	7.20e+07	0.78	y	1.33	38:57	1.000	0.995-1.005	48.4278
PCB-28	1.19e+08	1.04	y	1.71	29:02	1.000	0.995-1.005	49.7990	PCB-77	6.19e+07	0.79	y	1.10	39:33	1.000	0.995-1.005	49.2464
PCB-20/21/33	2.26e+08	1.03	y	1.08	29:39	1.022	1.017-1.027	149.601									
PCB-22	8.60e+07	1.04	y	1.21	30:05	1.037	1.032-1.042	50.9455	PCB-104	5.11e+07	1.57	y	1.18	32:35	1.001	0.996-1.006	50.6145
PCB-36	7.12e+07	1.03	y	1.14	30:40	0.933	0.928-0.938	51.8469	PCB-96	4.80e+07	1.56	y	1.14	33:50	1.039	1.034-1.044	49.4868
PCB-39	7.20e+07	1.02	y	1.12	31:09	0.948	0.943-0.953	53.6838	PCB-103	3.98e+07	1.56	y	0.96	34:22	1.055	1.050-1.060	48.8016
PCB-38	7.37e+07	1.03	y	1.20	31:55	0.971	0.966-0.976	51.1156	PCB-100	3.93e+07	1.58	y	0.94	34:42	1.066	1.061-1.071	49.1824
PCB-35	7.10e+07	1.03	y	1.23	32:26	0.987	0.982-0.992	47.9376	PCB-94	3.18e+07	1.55	y	1.06	35:11	0.985	0.980-0.990	48.0705
PCB-37	7.16e+07	1.02	y	1.23	32:53	1.000	0.995-1.005	48.3854	PCB-95/98/102	1.14e+08	1.55	y	1.22	35:42	1.000	0.995-1.005	149.073
									PCB-93	2.65e+07	1.58	y	0.84	35:48	1.002	0.997-1.007	50.1439
PCB-54	6.73e+07	0.78	y	1.10	27:57	1.001	0.996-1.006	49.6981	PCB-88/91	7.03e+07	1.58	y	1.12	36:05	1.010	1.005-1.015	100.529
PCB-50	5.38e+07	0.77	y	0.88	29:05	1.042	1.037-1.047	49.7280	PCB-121	5.08e+07	1.60	y	1.62	36:12	1.014	1.009-1.019	50.2163
PCB-53	5.23e+07	0.75	y	1.06	29:44	0.947	0.942-0.952	50.5493	PCB-84/92	6.82e+07	1.56	y	1.05	37:01	0.990	0.985-0.995	99.2072
PCB-51	4.77e+07	0.77	y	0.99	30:04	0.957	0.952-0.962	49.5846	PCB-89	3.73e+07	1.58	y	1.13	37:14	0.996	0.991-1.001	50.2710
PCB-45	4.32e+07	0.77	y	0.86	30:30	0.971	0.966-0.976	51.4204									
PCB-46	4.05e+07	0.76	y	0.85	30:59	0.986	0.981-0.991	49.2764									

Integrations by _____ Reviewed by _____
by Analyst: *DMS* Analyst: _____
RL: MONO, TRI - DECA: _____ Date: *6/24/14* Date: _____
RL: DI : _____

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

Attachment T-5
Ecology Inspection Report



MUNICIPAL STORMWATER INSPECTION REPORT

State of Washington Department of Ecology
3190 – 160th Avenue SE, Bellevue, WA 98008-5452

Municipal Stormwater
Inspection Form

Phone: (425) 649-7000
FAX: (425) 649-7098

Section A: General Data

Inspection Date 12/16/14	NPDES Permit # WAR044503	County King	Receiving Waters Duwamish River	Inspector(s) Rachel McCrea	Facility Type Municipal
Discharges to: Surface Water <input checked="" type="checkbox"/> Ground Water (passive infiltration) <input checked="" type="checkbox"/>				Announced Inspection	

Section B: Facility Data

Name and Location of Site Inspected		Entry Time	Permit Effective Date									
Seattle City Light Duwamish Substation		8:30 a.m.	8/1/2013									
10000 W Marginal PI S		Exit Time	Permit Expiration Date									
Seattle, WA 98168		4:00 p.m.	7/31/2018									
Permittee Contact(s)		Additional Participants:										
Gary Lockwood, Seattle City Light, NPDES Coordinator		Mahbub Alam – Ecology										
Echo Tremoglio, Seattle City Light, Sr. Environmental Analyst		Christine Nancarrow – Leidos										
Kate Rhoads, Seattle Public Utilities, Municipal Stormwater Specialist		Melissa Ivancevich – Leidos										
Beth Schmoyer, Seattle Public Utilities, Duwamish Source Control		Corey Wilson – Leidos										
Pam Hamlin, Seattle City Light, Sr. Civil Engineer												
Ed Richards, Seattle City Light, Duwamish Substation, Crew Coordinator												
Rodney Dunlap, Seattle City Light, Duwamish Substation, Crew Chief (on-site contact)												
Felipe Batayola, Seattle City Light, Duwamish Substation, Crew Chief, Trainer												
Ben and Ben, Seattle City Light, Duwamish Substation, journeymen & safety watch												
Responsible Official(s):												
Nancy Ahern, Director												
Utility System Management Branch												
Seattle Public Utilities												
PO Box 34018												
Seattle, WA 98124-4018												
		<table border="0"> <tr> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Samples Taken?</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Photos Taken?</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>			Yes	No	Samples Taken?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Photos Taken?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Yes	No										
Samples Taken?	<input checked="" type="checkbox"/>	<input type="checkbox"/>										
Photos Taken?	<input checked="" type="checkbox"/>	<input type="checkbox"/>										

Section C: Summary of Findings/Comments

BACKGROUND

This inspection with sampling occurred as part of Ecology's efforts to control sources of pollutants to the Lower Duwamish Waterway Superfund cleanup site. Refer to Ecology Publication Number 14-09-263 for additional background. The purpose of the sampling is to evaluate pollutants present in the stormwater system on the site. Stormwater from the site enters the Duwamish River and an adjacent municipal stormwater conveyance system which discharges to the Duwamish River. Results from the sampling will be available several months following the date of inspection and sampling. A report documenting the specific locations and site conditions related to sample collection will be available at that time. City of Seattle representatives observed sample collection procedures and obtained split samples for their use.

The purposes of the inspection was to document on-site conditions and activities, and evaluate compliance with the Phase I Municipal Stormwater Permit issued to the City of Seattle, as applicable to the Seattle City Light (SCL) Duwamish Substation.

This facility required Electrical Hazard Recognition safety training and accompaniment by trained SCL journeymen. The inspection was therefore announced to accommodate planning. On the day of the inspection (12/16/14), City of Seattle representatives provided Ecology a map, entitled *Oil Containment System Drawing No D-35108 (Rev No. 6)*, showing the stormwater drainage system configuration. The map was later provided electronically.

This facility is regulated under 40 CFR 112 and has a Spill Prevention, Control and Countermeasure (SPCC) plan. SPCC plan contents were not reviewed and evaluated.

INSPECTION/OBSERVATIONS

Vegetation Management – SCL vegetation management crews (not on-site) conduct vegetation management practices at the periphery of the facility. Additional weed control in the substation gravel area is conducted as needed. SCL representatives indicated such activities were performed with torching and herbicides where necessary.

PCB-containing Oil Handling – Transformers receive routine maintenance, including oil checks and oil changes. Oil changes involve use of off-site specialty trucks and onsite best management practices.

Fencing – Perimeter fencing will soon be replaced. Consider non-pollution generating fencing materials to minimize potential stormwater pollution to the adjacent Duwamish River.

Materials Storage Area (south side of site) – This area is used for indoor and outdoor storage of materials, including historic lamp posts, solid (and/or potentially hazardous) waste and scrap metal. Facility does not have a SWPPP.

Power Washing – Periodic power washing of the substation equipment occurs at this facility. It has been undergoing a steady repainting project over the last couple years; only one block of transformers (BUS D) remains unpainted.

Pavement Staining – The presence of pavement staining beneath substation equipment suggests potential pollution generating materials and/or processes that occur over time (e.g., copper parts may leave green staining on the BUS pads).

Primary Gravel Surface – For electrical safety, the gravel base of a substation is made of thick uncompacted special gravel with no fine particles; this may result in lower particulate generation than would be expected of a gravel surface.

Septic – This facility is on a septic system (last pumped in 2014). Drain field is located north of drain line H.

Stormwater System Operations and Maintenance

- This facility has automatic shut off valves (float switch operated) and manual shutoff valves in each of the 6 stormwater discharge locations. These valves are designed to plug the discharge location/outfall in case of an oil spill. The automatic shutoff valve located in storm drain line G was observed to be closed and SCL staff indicated that system was malfunctioning during their routine inspection of stormwater facilities. An SCL representative manually opened the valve during the inspection.
- Two or more catch basins have concrete pipe “plugs” that may interfere with routine catch basin maintenance.
- The map showing stormwater drainage did not identify all stormwater structures and was not up to date (drainage from one of the former oil circuit breakers is now capped).

Drainage System Configuration (*outfall numbers per 2014 LDW Source Control Outfall Inventory):

- **Storm drain line I** discharges to the Duwamish River at Outfall DuwSD#3* – This drains a small impervious surface area at the north end of the facility that receives vehicular traffic, including access route to the loading bay as well as runoff from BUS B and BUS C capacitors that does not otherwise infiltrate.
- **Storm drain line H (including below ground tunnel drainage)** discharges to the Duwamish River at Outfall 2099* – This drains an impervious surface area used for vehicle parking and pedestrian access to the Control Building, roof runoff from the Control Building, and pumped water from an automatic sump pump located in the basement of the control building which conveys groundwater seepage from inside the tunnels to storm drain line H. Stormwater may also enter a grate into a transformer vault and then be collected in the tunnel drainage system. Note that a smaller sump pump located in the BUS C tunnel pumps accumulated water to the ground surface.
- **Storm drain line G** discharges to the Duwamish River at Outfall 2098* – This drains impervious surface area associated with the perimeter access roadway only.
- Storm drain lines A and B discharge to the Duwamish River through a municipal stormwater system not owned or operated by City of Seattle. According to SCL representatives, the City of Tukwila owns this outfall (unconfirmed).
 - **Storm drain line A** drains impervious surfaces at the site's northern access location.
 - **Storm drain line B** drains impervious surfaces associated with the access roadway in the west-central portion of the site.
- **Storm drain line F represents the site's largest drainage basin.** Storm drain lines C, D and E connect to line F to discharge to the Duwamish River through a municipal stormwater system not owned or operated by City of Seattle. Storm drain line F has an oil/water separator (approx. volume 3180 gallons) prior to discharge off-site. Drainage from a limited area of access roadway enters this line, as well as substation area drainage as follows:
 - Three trench drains are located in three containment pads, each associated with a large transformer bank. Each trench drain feeds to an isolated conveyance line with independent automatic shutoff valves prior to conveyance to the oil/water separator (lines C, D and E).
 - Three impermeable liner systems are located beneath two oil circuit breakers and one spare parts storage area. Drainage from the impermeable liners is conveyed on an isolated line to the oil/water separator.

Sampling Locations and Observations – Ecology representatives, with the help of SCL staff, evaluated potential sampling locations (i.e., catch basins, inlets, manholes, oil water separator, and transformer bank trench drains) for sufficient storm drain solid material to allow collection and analysis. None of the deep catch basins/manholes nor the oil water separator had enough accumulated solids for sampling. Ecology noted solids visible on some structures inside manholes (see Photos 16 and 17). SCL representatives offered no explanation of source of the material or relationship to a recent cleaning activity. In absence of solids material, Ecology collected a water sample from the oil water separator. We collected a composite solids

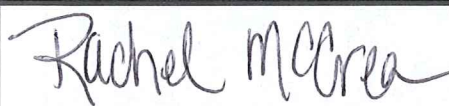

sample from the trench drains of the containment pads for the three large transformer banks. Enough solids material was found in these trench drains, which are connected to the downgradient oil/water separator in storm drain line F. Additionally, some of the catch basin inlets had enough volume for solids sampling, and Ecology collected two solids samples from I3 and H1 locations.

Section D: Compliance/Recommendations

1. This site handles PCB-containing products (e.g., PCB-containing oils). This site is located adjacent to the Duwamish River. This site's stormwater drainage system and oil containment system are one and the same system; a spill of oil will enter the stormwater system. Oil containment relies on automatic shutoff valves and additional manually-operated shutoff valves in the event of a large spill. These conditions suggest the Duwamish Substation may need special attention for source control to the up-river reach of the Lower Duwamish Waterway superfund site.
2. Ensure policies and procedures are implemented, including site-specific BMPs where appropriate, to prevent and/or minimize stormwater pollution. Relevant activities include, but are not limited to, power washing, vegetation management, outdoor storage of potentially pollution generating materials, stormwater system/oil containment system maintenance, and operations and maintenance activities conducted in the underground tunnels which could impact the quality of water being pumped into the storm drain system. Consider using tools (such as checklists and forms) to assist with documentation of stormwater BMP-related activities and/or inspections. Consider pollution prevention in facility-related purchases.
3. Evaluate whether this facility meets the definition of a "heavy equipment maintenance or storage yard" and/or "material storage facility" (permit definitions excerpted below).
 - "Heavy equipment maintenance or storage yard" means an uncovered area where any heavy equipment, such as mowing equipment, excavators, dump trucks, backhoes, or bulldozers are washed or maintained, or where at least five pieces of heavy equipment are stored on a long term basis.
 - "Material Storage Facilities" means an uncovered area where bulk materials (liquid, solid, granular, etc.) are stored in piles, barrels, tanks, bins, crates, or other means.
4. Ensure comprehensive mapping and identification of all drainage-related structures, active and historical. Coordinate with inter-connected municipal stormwater system owners/operators to ensure an accurate understanding of drainage from the Duwamish Substation. Ecology was not able to identify the off-site outfall (for storm drain lines A, B and F) as belonging to the City of Tukwila; Tukwila did not confirm ownership.
5. At least two catch basins included structures (capped pipes) that might interfere with routine catch basin cleaning, and one automatic shut-off valve (Line G) was malfunctioning. Consider whether capital projects are needed to improve drainage system conditions and maintenance.
6. The Phase I Municipal Stormwater Permit requires notification of any stormwater monitoring or stormwater-related studies that occurred over the previous calendar year (Appendix 12 Annual Report question 72, Special Condition S8.A). In upcoming annual report(s), describe any analysis of the City's split samples from the 12/16/14 inspection.

For questions related to this report or any technical assistance please contact Rachel McCrea at: (425) 649-7223 or rmcc461@ecy.wa.gov.

The Department of Ecology has the authority to issue formal enforcement actions including issuance of orders and civil penalties of up to \$10,000 per day per violation for violations of your NPDES permit and/or state laws and regulations.

	Reviewed and approved by:
Rachel McCrea Lead Water Quality Planner for the Lower Duwamish & Municipal Stormwater Specialist Water Quality Program	 Raman Iyer Compliance & Technical Assistance Unit Supervisor Water Quality Program

1/26/15

1/29/15

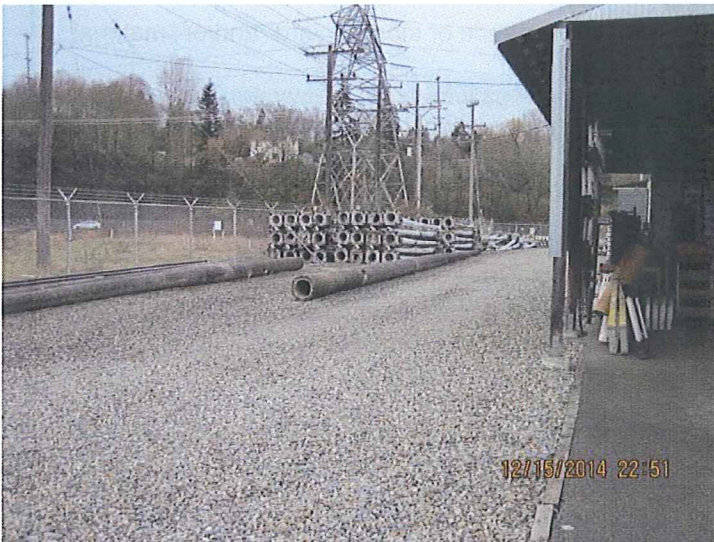
PHOTO LOG – DUWAMISH SUBSTATION



01 DESCRIPTION: MATERIALS STORAGE



02 DESCRIPTION: OPEN METAL BIN FOR MATERIALS STORAGE



03 DESCRIPTION: MATERIALS STORAGE



04 DESCRIPTION: PAVEMENT STAINING BENEATH TRANSFORMERS



05 DESCRIPTION: ARROWS SHOW EDGES OF IMPERMEABLE LINER TO PREVENT INFILTRATION OF SPILLS FROM ADJACENT OIL CIRCUIT BREAKER



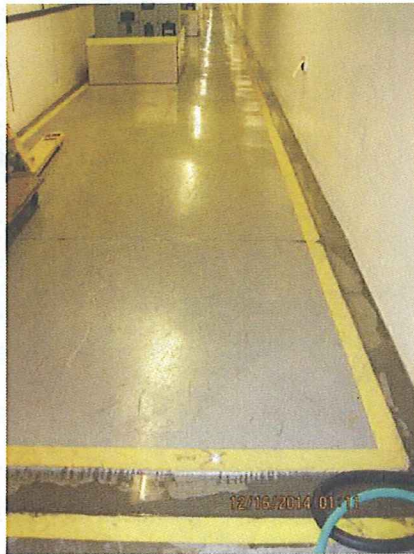
06 DESCRIPTION: LARGE TRANSFORMER CONTAINMENT PAD (CONCRETE CURBED), WEATHERED ABSORBENT PAD UNDER VALVE, PAVEMENT STAINING



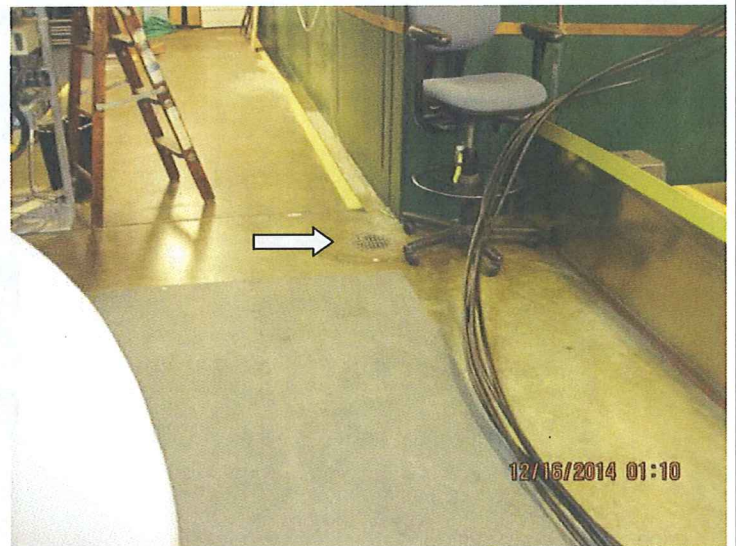
07 DESCRIPTION: WEATHERED ABSORBENT PAD UNDER VALVE IN PROXIMITY TO TRENCH DRAIN



08 DESCRIPTION: TRENCH DRAIN INSIDE LARGE TRANSFORMER CONTAINMENT PAD



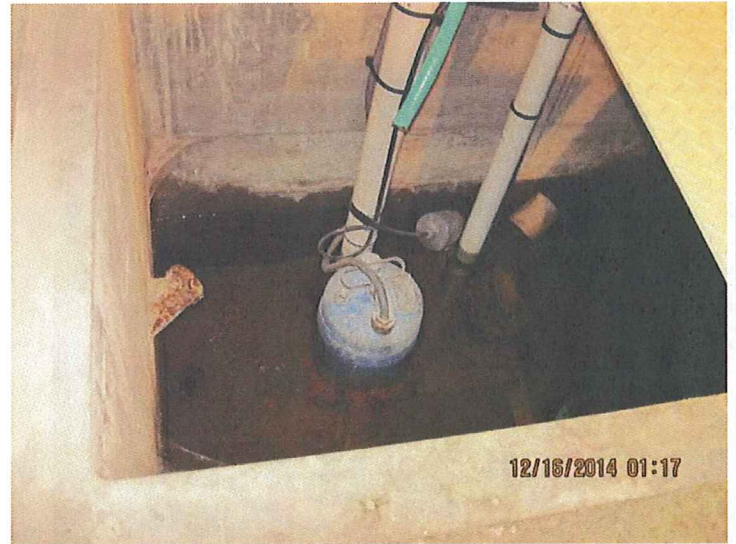
09 DESCRIPTION: CONTROL HOUSE BASEMENT SEEP DRAIN CHANNELS



10 DESCRIPTION: CONTROL HOUSE BASEMENT SEEP DRAIN CHANNEL TO FLOOR DRAIN



11 DESCRIPTION: : CONTROL HOUSE BASEMENT SUMP PUMP TO STORMWATER SYSTEM (CLOSED)



12 DESCRIPTION: CONTROL HOUSE BASEMENT SUMP PUMP TO STORMWATER SYSTEM (OPEN).



13 DESCRIPTION: CONTROL HOUSE BASEMENT SECONDARY SUMP PUMP



14 DESCRIPTION: DRIED ALGAE IN SEEP DRAIN CHANNEL



15 DESCRIPTION: CATCH BASIN EQUIPPED WITH AN AUTOMATIC SHUTOFF VALVE (FLOAT SWITCH OPERATED)



16 DESCRIPTION: SOLIDS MATERIAL ON TOP OF STANDPIPE INSIDE OIL WATER SEPARATOR MANHOLE (DRAINAGE AREA F)



17 DESCRIPTION: SOLIDS MATERIAL ON TOP OF SHUTOFF VALVE INSIDE A MANHOLE IN DRAINAGE AREA F

Attachment T-6
Split Sample Results



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 30, 2014

Gary Lockwood
Seattle City Light
3613 4th Avenue S.
Seattle, WA 98134

Re: Analytical Data for Project Stormwater Inspection - Duwamish Sub
Laboratory Reference No. 1412-197

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on December 17, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

Case Narrative

Samples were collected on December 16, 2014 and received by the laboratory on December 17, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx and Volatiles EPA 8260C Analysis

Per EPA Method 5035A, some of the samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis. The remaining samples were received by the laboratory in pre-weighed 40 mL VOA vials and were preserved with either Methanol or Sodium Bisulfate.

Semivolatiles EPA 8270D/SIM (Sediment) Analysis

Sample DS-TD-01-20141216-S had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**PCBs
 EPA 8082A**

Matrix: Sediment
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-TD-01-20141216-S					
Laboratory ID:	12-197-02					
Aroclor 1016	ND	0.080	EPA 8082A	12-22-14	12-22-14	
Aroclor 1221	ND	0.080	EPA 8082A	12-22-14	12-22-14	
Aroclor 1232	ND	0.080	EPA 8082A	12-22-14	12-22-14	
Aroclor 1242	ND	0.080	EPA 8082A	12-22-14	12-22-14	
Aroclor 1248	ND	0.080	EPA 8082A	12-22-14	12-22-14	
Aroclor 1254	ND	0.080	EPA 8082A	12-22-14	12-22-14	
Aroclor 1260	ND	0.080	EPA 8082A	12-22-14	12-22-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	65	55-140				
Client ID:	DS-CB-I3-20141216-S					
Laboratory ID:	12-197-03					
Aroclor 1016	ND	0.10	EPA 8082A	12-22-14	12-22-14	
Aroclor 1221	ND	0.10	EPA 8082A	12-22-14	12-22-14	
Aroclor 1232	ND	0.10	EPA 8082A	12-22-14	12-22-14	
Aroclor 1242	ND	0.10	EPA 8082A	12-22-14	12-22-14	
Aroclor 1248	ND	0.10	EPA 8082A	12-22-14	12-22-14	
Aroclor 1254	ND	0.10	EPA 8082A	12-22-14	12-22-14	
Aroclor 1260	ND	0.10	EPA 8082A	12-22-14	12-22-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	59	55-140				
Client ID:	DS-CB-H1-20141216-S					
Laboratory ID:	12-197-04					
Aroclor 1016	ND	0.18	EPA 8082A	12-22-14	12-22-14	
Aroclor 1221	ND	0.18	EPA 8082A	12-22-14	12-22-14	
Aroclor 1232	ND	0.18	EPA 8082A	12-22-14	12-22-14	
Aroclor 1242	ND	0.18	EPA 8082A	12-22-14	12-22-14	
Aroclor 1248	ND	0.18	EPA 8082A	12-22-14	12-22-14	
Aroclor 1254	ND	0.18	EPA 8082A	12-22-14	12-22-14	
Aroclor 1260	ND	0.18	EPA 8082A	12-22-14	12-22-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	76	55-140				

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Sediment
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1222S1					
Aroclor 1016	ND	0.050	EPA 8082A	12-22-14	12-22-14	
Aroclor 1221	ND	0.050	EPA 8082A	12-22-14	12-22-14	
Aroclor 1232	ND	0.050	EPA 8082A	12-22-14	12-22-14	
Aroclor 1242	ND	0.050	EPA 8082A	12-22-14	12-22-14	
Aroclor 1248	ND	0.050	EPA 8082A	12-22-14	12-22-14	
Aroclor 1254	ND	0.050	EPA 8082A	12-22-14	12-22-14	
Aroclor 1260	ND	0.050	EPA 8082A	12-22-14	12-22-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
DCB	78		55-140			

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	12-225-02										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	0.497	0.498	0.500	0.500	ND	99	100	46-136	0	17	
<i>Surrogate:</i>											
DCB						80	82	55-140			

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

SEMIVOLATILES EPA 8270D/SIM

page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-F3-20141216-W					
Laboratory ID:	12-197-01					
n-Nitrosodimethylamine	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Pyridine	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Phenol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Aniline	ND	4.7	EPA 8270D	12-22-14	12-22-14	
bis(2-Chloroethyl)ether	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2-Chlorophenol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
1,3-Dichlorobenzene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
1,4-Dichlorobenzene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Benzyl alcohol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
1,2-Dichlorobenzene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2-Methylphenol (o-Cresol)	ND	0.95	EPA 8270D	12-22-14	12-22-14	
bis(2-Chloroisopropyl)ether	ND	0.95	EPA 8270D	12-22-14	12-22-14	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.95	EPA 8270D	12-22-14	12-22-14	
n-Nitroso-di-n-propylamine	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Hexachloroethane	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Nitrobenzene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Isophorone	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2-Nitrophenol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2,4-Dimethylphenol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
bis(2-Chloroethoxy)methane	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2,4-Dichlorophenol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
1,2,4-Trichlorobenzene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Naphthalene	ND	0.095	EPA 8270D/SIM	12-22-14	12-22-14	
4-Chloroaniline	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Hexachlorobutadiene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
4-Chloro-3-methylphenol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2-Methylnaphthalene	ND	0.095	EPA 8270D/SIM	12-22-14	12-22-14	
1-Methylnaphthalene	ND	0.095	EPA 8270D/SIM	12-22-14	12-22-14	
Hexachlorocyclopentadiene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2,4,6-Trichlorophenol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2,3-Dichloroaniline	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2,4,5-Trichlorophenol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2-Chloronaphthalene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2-Nitroaniline	ND	0.95	EPA 8270D	12-22-14	12-22-14	
1,4-Dinitrobenzene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Dimethylphthalate	ND	0.95	EPA 8270D	12-22-14	12-22-14	
1,3-Dinitrobenzene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2,6-Dinitrotoluene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
1,2-Dinitrobenzene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Acenaphthylene	ND	0.095	EPA 8270D/SIM	12-22-14	12-22-14	
3-Nitroaniline	ND	0.95	EPA 8270D	12-22-14	12-22-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-F3-20141216-W					
Laboratory ID:	12-197-01					
2,4-Dinitrophenol	ND	4.7	EPA 8270D	12-22-14	12-22-14	
Acenaphthene	ND	0.095	EPA 8270D/SIM	12-22-14	12-22-14	
4-Nitrophenol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2,4-Dinitrotoluene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Dibenzofuran	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2,3,5,6-Tetrachlorophenol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
2,3,4,6-Tetrachlorophenol	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Diethylphthalate	ND	0.95	EPA 8270D	12-22-14	12-22-14	
4-Chlorophenyl-phenylether	ND	0.95	EPA 8270D	12-22-14	12-22-14	
4-Nitroaniline	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Fluorene	ND	0.095	EPA 8270D/SIM	12-22-14	12-22-14	
4,6-Dinitro-2-methylphenol	ND	4.7	EPA 8270D	12-22-14	12-22-14	
n-Nitrosodiphenylamine	ND	0.95	EPA 8270D	12-22-14	12-22-14	
1,2-Diphenylhydrazine	ND	0.95	EPA 8270D	12-22-14	12-22-14	
4-Bromophenyl-phenylether	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Hexachlorobenzene	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Pentachlorophenol	ND	4.7	EPA 8270D	12-22-14	12-22-14	
Phenanthrene	ND	0.095	EPA 8270D/SIM	12-22-14	12-22-14	
Anthracene	ND	0.095	EPA 8270D/SIM	12-22-14	12-22-14	
Carbazole	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Di-n-butylphthalate	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Fluoranthene	ND	0.095	EPA 8270D/SIM	12-22-14	12-22-14	
Benzidine	ND	4.7	EPA 8270D	12-22-14	12-22-14	
Pyrene	ND	0.095	EPA 8270D/SIM	12-22-14	12-22-14	
Butylbenzylphthalate	ND	0.95	EPA 8270D	12-22-14	12-22-14	
bis-2-Ethylhexyladipate	ND	0.95	EPA 8270D	12-22-14	12-22-14	
3,3'-Dichlorobenzidine	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Benzo[a]anthracene	ND	0.0095	EPA 8270D/SIM	12-22-14	12-22-14	
Chrysene	ND	0.0095	EPA 8270D/SIM	12-22-14	12-22-14	
bis(2-Ethylhexyl)phthalate	ND	4.7	EPA 8270D	12-22-14	12-22-14	
Di-n-octylphthalate	ND	0.95	EPA 8270D	12-22-14	12-22-14	
Benzo[b]fluoranthene	ND	0.0095	EPA 8270D/SIM	12-22-14	12-22-14	
Benzo(j,k)fluoranthene	ND	0.0095	EPA 8270D/SIM	12-22-14	12-22-14	
Benzo[a]pyrene	ND	0.0095	EPA 8270D/SIM	12-22-14	12-22-14	
Indeno[1,2,3-cd]pyrene	ND	0.0095	EPA 8270D/SIM	12-22-14	12-22-14	
Dibenz[a,h]anthracene	ND	0.0095	EPA 8270D/SIM	12-22-14	12-22-14	
Benzo[g,h,i]perylene	ND	0.0095	EPA 8270D/SIM	12-22-14	12-22-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>58</i>	<i>19 - 86</i>				
<i>Phenol-d6</i>	<i>41</i>	<i>10 - 94</i>				
<i>Nitrobenzene-d5</i>	<i>87</i>	<i>37 - 108</i>				
<i>2-Fluorobiphenyl</i>	<i>74</i>	<i>46 - 107</i>				
<i>2,4,6-Tribromophenol</i>	<i>72</i>	<i>49 - 116</i>				
<i>Terphenyl-d14</i>	<i>79</i>	<i>69 - 112</i>				

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**SEMIVOLATILES EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1222W2					
n-Nitrosodimethylamine	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Pyridine	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Phenol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Aniline	ND	5.0	EPA 8270D	12-22-14	12-22-14	
bis(2-Chloroethyl)ether	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2-Chlorophenol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
1,3-Dichlorobenzene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
1,4-Dichlorobenzene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Benzyl alcohol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
1,2-Dichlorobenzene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2-Methylphenol (o-Cresol)	ND	1.0	EPA 8270D	12-22-14	12-22-14	
bis(2-Chloroisopropyl)ether	ND	1.0	EPA 8270D	12-22-14	12-22-14	
(3+4)-Methylphenol (m,p-Cresol)	ND	1.0	EPA 8270D	12-22-14	12-22-14	
n-Nitroso-di-n-propylamine	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Hexachloroethane	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Nitrobenzene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Isophorone	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2-Nitrophenol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2,4-Dimethylphenol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
bis(2-Chloroethoxy)methane	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2,4-Dichlorophenol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Naphthalene	ND	0.10	EPA 8270D/SIM	12-22-14	12-22-14	
4-Chloroaniline	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Hexachlorobutadiene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
4-Chloro-3-methylphenol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	12-22-14	12-22-14	
1-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	12-22-14	12-22-14	
Hexachlorocyclopentadiene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2,4,6-Trichlorophenol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2,3-Dichloroaniline	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2,4,5-Trichlorophenol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2-Chloronaphthalene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2-Nitroaniline	ND	1.0	EPA 8270D	12-22-14	12-22-14	
1,4-Dinitrobenzene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Dimethylphthalate	ND	1.0	EPA 8270D	12-22-14	12-22-14	
1,3-Dinitrobenzene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2,6-Dinitrotoluene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
1,2-Dinitrobenzene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Acenaphthylene	ND	0.10	EPA 8270D/SIM	12-22-14	12-22-14	
3-Nitroaniline	ND	1.0	EPA 8270D	12-22-14	12-22-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1222W2					
2,4-Dinitrophenol	ND	5.0	EPA 8270D	12-22-14	12-22-14	
Acenaphthene	ND	0.10	EPA 8270D/SIM	12-22-14	12-22-14	
4-Nitrophenol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2,4-Dinitrotoluene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Dibenzofuran	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2,3,5,6-Tetrachlorophenol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
2,3,4,6-Tetrachlorophenol	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Diethylphthalate	ND	1.0	EPA 8270D	12-22-14	12-22-14	
4-Chlorophenyl-phenylether	ND	1.0	EPA 8270D	12-22-14	12-22-14	
4-Nitroaniline	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Fluorene	ND	0.10	EPA 8270D/SIM	12-22-14	12-22-14	
4,6-Dinitro-2-methylphenol	ND	5.0	EPA 8270D	12-22-14	12-22-14	
n-Nitrosodiphenylamine	ND	1.0	EPA 8270D	12-22-14	12-22-14	
1,2-Diphenylhydrazine	ND	1.0	EPA 8270D	12-22-14	12-22-14	
4-Bromophenyl-phenylether	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Hexachlorobenzene	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Pentachlorophenol	ND	5.0	EPA 8270D	12-22-14	12-22-14	
Phenanthrene	ND	0.10	EPA 8270D/SIM	12-22-14	12-22-14	
Anthracene	ND	0.10	EPA 8270D/SIM	12-22-14	12-22-14	
Carbazole	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Di-n-butylphthalate	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Fluoranthene	ND	0.10	EPA 8270D/SIM	12-22-14	12-22-14	
Benzidine	ND	5.0	EPA 8270D	12-22-14	12-22-14	
Pyrene	ND	0.10	EPA 8270D/SIM	12-22-14	12-22-14	
Butylbenzylphthalate	ND	1.0	EPA 8270D	12-22-14	12-22-14	
bis-2-Ethylhexyladipate	ND	1.0	EPA 8270D	12-22-14	12-22-14	
3,3'-Dichlorobenzidine	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Benzo[a]anthracene	ND	0.010	EPA 8270D/SIM	12-22-14	12-22-14	
Chrysene	ND	0.010	EPA 8270D/SIM	12-22-14	12-22-14	
bis(2-Ethylhexyl)phthalate	ND	5.0	EPA 8270D	12-22-14	12-22-14	
Di-n-octylphthalate	ND	1.0	EPA 8270D	12-22-14	12-22-14	
Benzo[b]fluoranthene	ND	0.010	EPA 8270D/SIM	12-22-14	12-22-14	
Benzo(j,k)fluoranthene	ND	0.010	EPA 8270D/SIM	12-22-14	12-22-14	
Benzo[a]pyrene	ND	0.010	EPA 8270D/SIM	12-22-14	12-22-14	
Indeno[1,2,3-cd]pyrene	ND	0.010	EPA 8270D/SIM	12-22-14	12-22-14	
Dibenz[a,h]anthracene	ND	0.010	EPA 8270D/SIM	12-22-14	12-22-14	
Benzo[g,h,i]perylene	ND	0.010	EPA 8270D/SIM	12-22-14	12-22-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>67</i>	<i>19 - 86</i>				
<i>Phenol-d6</i>	<i>50</i>	<i>10 - 94</i>				
<i>Nitrobenzene-d5</i>	<i>99</i>	<i>37 - 108</i>				
<i>2-Fluorobiphenyl</i>	<i>87</i>	<i>46 - 107</i>				
<i>2,4,6-Tribromophenol</i>	<i>94</i>	<i>49 - 116</i>				
<i>Terphenyl-d14</i>	<i>100</i>	<i>69 - 112</i>				

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**SEMIVOLATILES EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limits	Limit		
SPIKE BLANKS										
Laboratory ID:	SB1222W2									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	21.7	19.5	40.0	40.0	54	49	31 - 70	11	32	
2-Chlorophenol	35.7	30.9	40.0	40.0	89	77	51 - 103	14	37	
1,4-Dichlorobenzene	16.1	13.1	20.0	20.0	81	66	45 - 94	21	42	
n-Nitroso-di-n-propylamine	19.1	17.9	20.0	20.0	96	90	45 - 102	6	36	
1,2,4-Trichlorobenzene	15.8	13.6	20.0	20.0	79	68	51 - 98	15	37	
4-Chloro-3-methylphenol	36.6	37.9	40.0	40.0	92	95	67 - 116	3	32	
Acenaphthene	15.7	15.8	20.0	20.0	79	79	63 - 103	1	27	
4-Nitrophenol	20.7	23.5	40.0	40.0	52	59	36 - 75	13	37	
2,4-Dinitrotoluene	16.7	19.5	20.0	20.0	84	98	68 - 123	15	30	
Pentachlorophenol	30.6	33.8	40.0	40.0	77	85	40 - 120	10	38	
Pyrene	20.0	22.7	20.0	20.0	100	114	60 - 120	13	29	
<i>Surrogate:</i>										
2-Fluorophenol					69	60	19 - 86			
Phenol-d6					51	46	10 - 94			
Nitrobenzene-d5					101	88	37 - 108			
2-Fluorobiphenyl					81	80	46 - 107			
2,4,6-Tribromophenol					91	98	49 - 116			
Terphenyl-d14					93	107	69 - 112			

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

SEMIVOLATILES EPA 8270D/SIM

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Matrix: Sediment
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-TD-01-20141216-S					
Laboratory ID:	12-197-02					
n-Nitrosodimethylamine	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Pyridine	ND	2.7	EPA 8270D	12-24-14	12-24-14	
Phenol	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Aniline	ND	1.3	EPA 8270D	12-24-14	12-24-14	
bis(2-Chloroethyl)ether	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2-Chlorophenol	ND	0.27	EPA 8270D	12-24-14	12-24-14	
1,3-Dichlorobenzene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
1,4-Dichlorobenzene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Benzyl alcohol	ND	1.3	EPA 8270D	12-24-14	12-24-14	
1,2-Dichlorobenzene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2-Methylphenol (o-Cresol)	ND	0.27	EPA 8270D	12-24-14	12-24-14	
bis(2-Chloroisopropyl)ether	ND	0.27	EPA 8270D	12-24-14	12-24-14	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.27	EPA 8270D	12-24-14	12-24-14	
n-Nitroso-di-n-propylamine	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Hexachloroethane	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Nitrobenzene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Isophorone	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2-Nitrophenol	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2,4-Dimethylphenol	ND	0.27	EPA 8270D	12-24-14	12-24-14	
bis(2-Chloroethoxy)methane	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2,4-Dichlorophenol	ND	0.27	EPA 8270D	12-24-14	12-24-14	
1,2,4-Trichlorobenzene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Naphthalene	0.055	0.053	EPA 8270D/SIM	12-24-14	12-29-14	
4-Chloroaniline	ND	1.3	EPA 8270D	12-24-14	12-24-14	
Hexachlorobutadiene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
4-Chloro-3-methylphenol	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2-Methylnaphthalene	0.061	0.053	EPA 8270D/SIM	12-24-14	12-29-14	
1-Methylnaphthalene	ND	0.053	EPA 8270D/SIM	12-24-14	12-29-14	
Hexachlorocyclopentadiene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2,4,6-Trichlorophenol	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2,3-Dichloroaniline	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2,4,5-Trichlorophenol	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2-Chloronaphthalene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2-Nitroaniline	ND	0.27	EPA 8270D	12-24-14	12-24-14	
1,4-Dinitrobenzene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Dimethylphthalate	ND	0.27	EPA 8270D	12-24-14	12-24-14	
1,3-Dinitrobenzene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2,6-Dinitrotoluene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
1,2-Dinitrobenzene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Acenaphthylene	ND	0.053	EPA 8270D/SIM	12-24-14	12-29-14	
3-Nitroaniline	ND	0.27	EPA 8270D	12-24-14	12-24-14	

Date of Report: December 30, 2014
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SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-TD-01-20141216-S					
Laboratory ID:	12-197-02					
2,4-Dinitrophenol	ND	1.3	EPA 8270D	12-24-14	12-24-14	
Acenaphthene	ND	0.053	EPA 8270D/SIM	12-24-14	12-29-14	
4-Nitrophenol	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2,4-Dinitrotoluene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Dibenzofuran	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2,3,5,6-Tetrachlorophenol	ND	0.27	EPA 8270D	12-24-14	12-24-14	
2,3,4,6-Tetrachlorophenol	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Diethylphthalate	ND	1.3	EPA 8270D	12-24-14	12-24-14	
4-Chlorophenyl-phenylether	ND	0.27	EPA 8270D	12-24-14	12-24-14	
4-Nitroaniline	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Fluorene	ND	0.053	EPA 8270D/SIM	12-24-14	12-29-14	
4,6-Dinitro-2-methylphenol	ND	1.3	EPA 8270D	12-24-14	12-24-14	
n-Nitrosodiphenylamine	ND	0.27	EPA 8270D	12-24-14	12-24-14	
1,2-Diphenylhydrazine	ND	0.27	EPA 8270D	12-24-14	12-24-14	
4-Bromophenyl-phenylether	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Hexachlorobenzene	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Pentachlorophenol	ND	1.3	EPA 8270D	12-24-14	12-24-14	
Phenanthrene	0.62	0.27	EPA 8270D	12-24-14	12-24-14	
Anthracene	0.21	0.053	EPA 8270D/SIM	12-24-14	12-29-14	
Carbazole	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Di-n-butylphthalate	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Fluoranthene	0.88	0.27	EPA 8270D	12-24-14	12-24-14	
Benzidine	ND	2.7	EPA 8270D	12-24-14	12-24-14	
Pyrene	0.81	0.27	EPA 8270D	12-24-14	12-24-14	
Butylbenzylphthalate	ND	0.27	EPA 8270D	12-24-14	12-24-14	
bis-2-Ethylhexyladipate	ND	0.27	EPA 8270D	12-24-14	12-24-14	
3,3'-Dichlorobenzidine	ND	1.3	EPA 8270D	12-24-14	12-24-14	
Benzo[a]anthracene	0.32	0.27	EPA 8270D	12-24-14	12-24-14	
Chrysene	0.57	0.27	EPA 8270D	12-24-14	12-24-14	
bis(2-Ethylhexyl)phthalate	1.7	0.27	EPA 8270D	12-24-14	12-24-14	
Di-n-octylphthalate	ND	0.27	EPA 8270D	12-24-14	12-24-14	
Benzo[b]fluoranthene	0.47	0.27	EPA 8270D	12-24-14	12-24-14	
Benzo(j,k)fluoranthene	0.48	0.27	EPA 8270D	12-24-14	12-24-14	
Benzo[a]pyrene	0.41	0.27	EPA 8270D	12-24-14	12-24-14	
Indeno[1,2,3-cd]pyrene	0.30	0.27	EPA 8270D	12-24-14	12-24-14	
Dibenz[a,h]anthracene	0.14	0.053	EPA 8270D/SIM	12-24-14	12-29-14	
Benzo[g,h,i]perylene	0.37	0.27	EPA 8270D	12-24-14	12-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>41</i>	<i>31 - 110</i>				
<i>Phenol-d6</i>	<i>44</i>	<i>34 - 109</i>				
<i>Nitrobenzene-d5</i>	<i>13</i>	<i>30 - 109</i>				
<i>2-Fluorobiphenyl</i>	<i>45</i>	<i>39 - 103</i>				
<i>2,4,6-Tribromophenol</i>	<i>29</i>	<i>25 - 120</i>				
<i>Terphenyl-d14</i>	<i>48</i>	<i>40 - 117</i>				

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Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
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SEMIVOLATILES EPA 8270D/SIM

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Matrix: Sediment
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-I3-20141216-S					
Laboratory ID:	12-197-03					
n-Nitrosodimethylamine	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Pyridine	ND	3.3	EPA 8270D	12-24-14	12-29-14	
Phenol	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Aniline	ND	1.7	EPA 8270D	12-24-14	12-29-14	
bis(2-Chloroethyl)ether	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2-Chlorophenol	ND	0.33	EPA 8270D	12-24-14	12-29-14	
1,3-Dichlorobenzene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
1,4-Dichlorobenzene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Benzyl alcohol	ND	1.7	EPA 8270D	12-24-14	12-29-14	
1,2-Dichlorobenzene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2-Methylphenol (o-Cresol)	ND	0.33	EPA 8270D	12-24-14	12-29-14	
bis(2-Chloroisopropyl)ether	ND	0.33	EPA 8270D	12-24-14	12-29-14	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.33	EPA 8270D	12-24-14	12-29-14	
n-Nitroso-di-n-propylamine	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Hexachloroethane	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Nitrobenzene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Isophorone	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2-Nitrophenol	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2,4-Dimethylphenol	ND	0.33	EPA 8270D	12-24-14	12-29-14	
bis(2-Chloroethoxy)methane	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2,4-Dichlorophenol	ND	0.33	EPA 8270D	12-24-14	12-29-14	
1,2,4-Trichlorobenzene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Naphthalene	ND	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
4-Chloroaniline	ND	1.7	EPA 8270D	12-24-14	12-29-14	
Hexachlorobutadiene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
4-Chloro-3-methylphenol	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2-Methylnaphthalene	ND	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
1-Methylnaphthalene	ND	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
Hexachlorocyclopentadiene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2,4,6-Trichlorophenol	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2,3-Dichloroaniline	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2,4,5-Trichlorophenol	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2-Chloronaphthalene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2-Nitroaniline	ND	0.33	EPA 8270D	12-24-14	12-29-14	
1,4-Dinitrobenzene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Dimethylphthalate	ND	0.33	EPA 8270D	12-24-14	12-29-14	
1,3-Dinitrobenzene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2,6-Dinitrotoluene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
1,2-Dinitrobenzene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Acenaphthylene	ND	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
3-Nitroaniline	ND	0.33	EPA 8270D	12-24-14	12-29-14	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-I3-20141216-S					
Laboratory ID:	12-197-03					
2,4-Dinitrophenol	ND	1.7	EPA 8270D	12-24-14	12-29-14	
Acenaphthene	ND	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
4-Nitrophenol	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2,4-Dinitrotoluene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Dibenzofuran	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2,3,5,6-Tetrachlorophenol	ND	0.33	EPA 8270D	12-24-14	12-29-14	
2,3,4,6-Tetrachlorophenol	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Diethylphthalate	ND	1.7	EPA 8270D	12-24-14	12-29-14	
4-Chlorophenyl-phenylether	ND	0.33	EPA 8270D	12-24-14	12-29-14	
4-Nitroaniline	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Fluorene	ND	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
4,6-Dinitro-2-methylphenol	ND	1.7	EPA 8270D	12-24-14	12-29-14	
n-Nitrosodiphenylamine	ND	0.33	EPA 8270D	12-24-14	12-29-14	
1,2-Diphenylhydrazine	ND	0.33	EPA 8270D	12-24-14	12-29-14	
4-Bromophenyl-phenylether	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Hexachlorobenzene	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Pentachlorophenol	ND	1.7	EPA 8270D	12-24-14	12-29-14	
Phenanthrene	0.45	0.33	EPA 8270D	12-24-14	12-29-14	
Anthracene	0.12	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
Carbazole	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Di-n-butylphthalate	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Fluoranthene	0.63	0.33	EPA 8270D	12-24-14	12-29-14	
Benzidine	ND	3.3	EPA 8270D	12-24-14	12-29-14	
Pyrene	0.53	0.33	EPA 8270D	12-24-14	12-29-14	
Butylbenzylphthalate	ND	0.33	EPA 8270D	12-24-14	12-29-14	
bis(2-Ethylhexyl)adipate	ND	0.33	EPA 8270D	12-24-14	12-29-14	
3,3'-Dichlorobenzidine	ND	1.7	EPA 8270D	12-24-14	12-29-14	
Benzo[a]anthracene	0.26	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
Chrysene	0.37	0.33	EPA 8270D	12-24-14	12-29-14	
bis(2-Ethylhexyl)phthalate	0.76	0.33	EPA 8270D	12-24-14	12-29-14	
Di-n-octylphthalate	ND	0.33	EPA 8270D	12-24-14	12-29-14	
Benzo[b]fluoranthene	0.37	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
Benzo(j,k)fluoranthene	0.25	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
Benzo[a]pyrene	0.24	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
Indeno[1,2,3-cd]pyrene	0.18	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
Dibenz[a,h]anthracene	0.074	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
Benzo[g,h,i]perylene	0.23	0.067	EPA 8270D/SIM	12-24-14	12-29-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>75</i>	<i>31 - 110</i>				
<i>Phenol-d6</i>	<i>84</i>	<i>34 - 109</i>				
<i>Nitrobenzene-d5</i>	<i>79</i>	<i>30 - 109</i>				
<i>2-Fluorobiphenyl</i>	<i>90</i>	<i>39 - 103</i>				
<i>2,4,6-Tribromophenol</i>	<i>82</i>	<i>25 - 120</i>				
<i>Terphenyl-d14</i>	<i>84</i>	<i>40 - 117</i>				

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
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Matrix: Sediment
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-H1-20141216-S					
Laboratory ID:	12-197-04					
n-Nitrosodimethylamine	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Pyridine	ND	61	EPA 8270D	12-24-14	12-24-14	
Phenol	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Aniline	ND	31	EPA 8270D	12-24-14	12-24-14	
bis(2-Chloroethyl)ether	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2-Chlorophenol	ND	6.1	EPA 8270D	12-24-14	12-24-14	
1,3-Dichlorobenzene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
1,4-Dichlorobenzene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Benzyl alcohol	ND	31	EPA 8270D	12-24-14	12-24-14	
1,2-Dichlorobenzene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2-Methylphenol (o-Cresol)	ND	6.1	EPA 8270D	12-24-14	12-24-14	
bis(2-Chloroisopropyl)ether	ND	6.1	EPA 8270D	12-24-14	12-24-14	
(3+4)-Methylphenol (m,p-Cresol)	ND	6.1	EPA 8270D	12-24-14	12-24-14	
n-Nitroso-di-n-propylamine	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Hexachloroethane	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Nitrobenzene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Isophorone	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2-Nitrophenol	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2,4-Dimethylphenol	ND	6.1	EPA 8270D	12-24-14	12-24-14	
bis(2-Chloroethoxy)methane	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2,4-Dichlorophenol	ND	6.1	EPA 8270D	12-24-14	12-24-14	
1,2,4-Trichlorobenzene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Naphthalene	1.1	0.12	EPA 8270D/SIM	12-24-14	12-29-14	
4-Chloroaniline	ND	31	EPA 8270D	12-24-14	12-24-14	
Hexachlorobutadiene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
4-Chloro-3-methylphenol	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2-Methylnaphthalene	0.59	0.12	EPA 8270D/SIM	12-24-14	12-29-14	
1-Methylnaphthalene	0.57	0.12	EPA 8270D/SIM	12-24-14	12-29-14	
Hexachlorocyclopentadiene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2,4,6-Trichlorophenol	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2,3-Dichloroaniline	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2,4,5-Trichlorophenol	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2-Chloronaphthalene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2-Nitroaniline	ND	6.1	EPA 8270D	12-24-14	12-24-14	
1,4-Dinitrobenzene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Dimethylphthalate	ND	6.1	EPA 8270D	12-24-14	12-24-14	
1,3-Dinitrobenzene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2,6-Dinitrotoluene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
1,2-Dinitrobenzene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Acenaphthylene	0.13	0.12	EPA 8270D/SIM	12-24-14	12-29-14	
3-Nitroaniline	ND	6.1	EPA 8270D	12-24-14	12-24-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-H1-20141216-S					
Laboratory ID:	12-197-04					
2,4-Dinitrophenol	ND	31	EPA 8270D	12-24-14	12-24-14	
Acenaphthene	7.1	6.1	EPA 8270D	12-24-14	12-24-14	
4-Nitrophenol	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2,4-Dinitrotoluene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Dibenzofuran	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2,3,5,6-Tetrachlorophenol	ND	6.1	EPA 8270D	12-24-14	12-24-14	
2,3,4,6-Tetrachlorophenol	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Diethylphthalate	ND	31	EPA 8270D	12-24-14	12-24-14	
4-Chlorophenyl-phenylether	ND	6.1	EPA 8270D	12-24-14	12-24-14	
4-Nitroaniline	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Fluorene	4.6	0.12	EPA 8270D/SIM	12-24-14	12-29-14	
4,6-Dinitro-2-methylphenol	ND	31	EPA 8270D	12-24-14	12-24-14	
n-Nitrosodiphenylamine	ND	6.1	EPA 8270D	12-24-14	12-24-14	
1,2-Diphenylhydrazine	ND	6.1	EPA 8270D	12-24-14	12-24-14	
4-Bromophenyl-phenylether	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Hexachlorobenzene	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Pentachlorophenol	ND	31	EPA 8270D	12-24-14	12-24-14	
Phenanthrene	48	6.1	EPA 8270D	12-24-14	12-24-14	
Anthracene	8.8	6.1	EPA 8270D	12-24-14	12-24-14	
Carbazole	6.7	6.1	EPA 8270D	12-24-14	12-24-14	
Di-n-butylphthalate	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Fluoranthene	47	6.1	EPA 8270D	12-24-14	12-24-14	
Benzidine	ND	61	EPA 8270D	12-24-14	12-24-14	
Pyrene	45	6.1	EPA 8270D	12-24-14	12-24-14	
Butylbenzylphthalate	ND	6.1	EPA 8270D	12-24-14	12-24-14	
bis-2-Ethylhexyladipate	ND	6.1	EPA 8270D	12-24-14	12-24-14	
3,3'-Dichlorobenzidine	ND	31	EPA 8270D	12-24-14	12-24-14	
Benzo[a]anthracene	17	6.1	EPA 8270D	12-24-14	12-24-14	
Chrysene	19	6.1	EPA 8270D	12-24-14	12-24-14	
bis(2-Ethylhexyl)phthalate	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Di-n-octylphthalate	ND	6.1	EPA 8270D	12-24-14	12-24-14	
Benzo[b]fluoranthene	17	6.1	EPA 8270D	12-24-14	12-24-14	
Benzo(j,k)fluoranthene	14	6.1	EPA 8270D	12-24-14	12-24-14	
Benzo[a]pyrene	16	6.1	EPA 8270D	12-24-14	12-24-14	
Indeno[1,2,3-cd]pyrene	9.7	6.1	EPA 8270D	12-24-14	12-24-14	
Dibenz[a,h]anthracene	4.0	0.12	EPA 8270D/SIM	12-24-14	12-29-14	
Benzo[g,h,i]perylene	11	6.1	EPA 8270D	12-24-14	12-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>65</i>	<i>31 - 110</i>				
<i>Phenol-d6</i>	<i>69</i>	<i>34 - 109</i>				
<i>Nitrobenzene-d5</i>	<i>64</i>	<i>30 - 109</i>				
<i>2-Fluorobiphenyl</i>	<i>69</i>	<i>39 - 103</i>				
<i>2,4,6-Tribromophenol</i>	<i>48</i>	<i>25 - 120</i>				
<i>Terphenyl-d14</i>	<i>69</i>	<i>40 - 117</i>				

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**SEMIVOLATILES EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

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Matrix: Sediment
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1224S1					
n-Nitrosodimethylamine	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Pyridine	ND	0.33	EPA 8270D	12-24-14	12-24-14	
Phenol	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Aniline	ND	0.17	EPA 8270D	12-24-14	12-24-14	
bis(2-Chloroethyl)ether	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2-Chlorophenol	ND	0.033	EPA 8270D	12-24-14	12-24-14	
1,3-Dichlorobenzene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
1,4-Dichlorobenzene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Benzyl alcohol	ND	0.17	EPA 8270D	12-24-14	12-24-14	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	12-24-14	12-24-14	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	12-24-14	12-24-14	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	12-24-14	12-24-14	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Hexachloroethane	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Nitrobenzene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Isophorone	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2-Nitrophenol	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	12-24-14	12-24-14	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	12-24-14	12-24-14	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Naphthalene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
4-Chloroaniline	ND	0.17	EPA 8270D	12-24-14	12-24-14	
Hexachlorobutadiene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2-Chloronaphthalene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2-Nitroaniline	ND	0.033	EPA 8270D	12-24-14	12-24-14	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Dimethylphthalate	ND	0.033	EPA 8270D	12-24-14	12-24-14	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
3-Nitroaniline	ND	0.033	EPA 8270D	12-24-14	12-24-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1224S1					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	12-24-14	12-24-14	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
4-Nitrophenol	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Dibenzofuran	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	12-24-14	12-24-14	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Diethylphthalate	ND	0.17	EPA 8270D	12-24-14	12-24-14	
4-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	12-24-14	12-24-14	
4-Nitroaniline	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Fluorene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	12-24-14	12-24-14	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	12-24-14	12-24-14	
1,2-Diphenylhydrazine	ND	0.033	EPA 8270D	12-24-14	12-24-14	
4-Bromophenyl-phenylether	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Hexachlorobenzene	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Pentachlorophenol	ND	0.17	EPA 8270D	12-24-14	12-24-14	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
Anthracene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
Carbazole	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Di-n-butylphthalate	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
Benzidine	ND	0.33	EPA 8270D	12-24-14	12-24-14	
Pyrene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
Butylbenzylphthalate	ND	0.033	EPA 8270D	12-24-14	12-24-14	
bis-2-Ethylhexyladipate	ND	0.033	EPA 8270D	12-24-14	12-24-14	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	12-24-14	12-24-14	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
Chrysene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
bis(2-Ethylhexyl)phthalate	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Di-n-octylphthalate	ND	0.033	EPA 8270D	12-24-14	12-24-14	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
Indeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	12-24-14	12-29-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorophenol</i>	<i>66</i>	<i>31 - 110</i>				
<i>Phenol-d6</i>	<i>73</i>	<i>34 - 109</i>				
<i>Nitrobenzene-d5</i>	<i>72</i>	<i>30 - 109</i>				
<i>2-Fluorobiphenyl</i>	<i>65</i>	<i>39 - 103</i>				
<i>2,4,6-Tribromophenol</i>	<i>64</i>	<i>25 - 120</i>				
<i>Terphenyl-d14</i>	<i>79</i>	<i>40 - 117</i>				

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**SEMIVOLATILES EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Sediment
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1224S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	0.907	0.918	1.33	1.33	68	69	55 - 105	1	25	
2-Chlorophenol	0.947	0.962	1.33	1.33	71	72	56 - 102	2	30	
1,4-Dichlorobenzene	0.475	0.466	0.667	0.667	71	70	49 - 99	2	35	
n-Nitroso-di-n-propylamine	0.455	0.488	0.667	0.667	68	73	52 - 102	7	26	
1,2,4-Trichlorobenzene	0.477	0.483	0.667	0.667	72	72	49 - 110	1	30	
4-Chloro-3-methylphenol	1.03	1.06	1.33	1.33	77	80	59 - 113	3	22	
Acenaphthene	0.445	0.475	0.667	0.667	67	71	52 - 103	7	22	
4-Nitrophenol	1.05	1.12	1.33	1.33	79	84	51 - 125	6	23	
2,4-Dinitrotoluene	0.494	0.527	0.667	0.667	74	79	53 - 118	6	23	
Pentachlorophenol	0.951	0.993	1.33	1.33	72	75	25 - 141	4	39	
Pyrene	0.521	0.548	0.667	0.667	78	82	57 - 120	5	20	
<i>Surrogate:</i>										
<i>2-Fluorophenol</i>					<i>69</i>	<i>69</i>	<i>31 - 110</i>			
<i>Phenol-d6</i>					<i>73</i>	<i>75</i>	<i>34 - 109</i>			
<i>Nitrobenzene-d5</i>					<i>72</i>	<i>72</i>	<i>30 - 109</i>			
<i>2-Fluorobiphenyl</i>					<i>75</i>	<i>79</i>	<i>39 - 103</i>			
<i>2,4,6-Tribromophenol</i>					<i>79</i>	<i>85</i>	<i>25 - 120</i>			
<i>Terphenyl-d14</i>					<i>79</i>	<i>83</i>	<i>40 - 117</i>			

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

NWTPH-Dx

Matrix: Sediment
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-TD-01-20141216-S					
Laboratory ID:	12-197-02					
Diesel Range Organics	ND	790	NWTPH-Dx	12-23-14	12-24-14	U1
Lube Oil Range Organics	1500	80	NWTPH-Dx	12-23-14	12-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	82	50-150				
Client ID:	DS-CB-I3-20141216-S					
Laboratory ID:	12-197-03					
Diesel Range Organics	280	100	NWTPH-Dx	12-23-14	12-24-14	
Lube Oil	2000	200	NWTPH-Dx	12-23-14	12-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				
Client ID:	DS-CB-H1-20141216-S					
Laboratory ID:	12-197-04					
Diesel Range Organics	980	460	NWTPH-Dx	12-23-14	12-24-14	
Lube Oil	7700	920	NWTPH-Dx	12-23-14	12-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	109	50-150				

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**NWTPH-Dx
 QUALITY CONTROL**

Matrix: Sediment
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1223S1					
Diesel Range Organics	ND	25	NWTPH-Dx	12-23-14	12-23-14	
Lube Oil Range Organics	ND	50	NWTPH-Dx	12-23-14	12-23-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>118</i>	<i>50-150</i>				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	12-214-01							
	ORIG	DUP						
Diesel Fuel #2	5820	5010	NA	NA	NA	NA	15	NA X1
Lube Oil	2280	1880	NA	NA	NA	NA	19	NA X1,N1
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				<i>88</i>	<i>95</i>	<i>50-150</i>		

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Sediment
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-197-02					
Client ID:	DS-TD-01-20141216-S					
Arsenic	15	8.0	6010C	12-22-14	12-22-14	
Barium	340	4.0	6010C	12-22-14	12-22-14	
Cadmium	11	0.80	6010C	12-22-14	12-22-14	
Chromium	130	0.80	6010C	12-22-14	12-22-14	
Copper	400	1.6	6010C	12-22-14	12-22-14	
Lead	220	8.0	6010C	12-22-14	12-22-14	
Mercury	ND	0.40	7471B	12-23-14	12-23-14	
Selenium	ND	16	6010C	12-22-14	12-22-14	
Silver	8.1	1.6	6010C	12-22-14	12-22-14	
Zinc	5400	40	6010C	12-22-14	12-23-14	

Lab ID:	12-197-03					
Client ID:	DS-CB-I3-20141216-S					
Arsenic	ND	10	6010C	12-22-14	12-22-14	
Barium	99	5.0	6010C	12-22-14	12-22-14	
Cadmium	1.1	1.0	6010C	12-22-14	12-22-14	
Chromium	46	1.0	6010C	12-22-14	12-22-14	
Copper	130	2.0	6010C	12-22-14	12-22-14	
Lead	86	10	6010C	12-22-14	12-22-14	
Mercury	ND	0.50	7471B	12-23-14	12-23-14	
Selenium	ND	20	6010C	12-22-14	12-22-14	
Silver	ND	2.0	6010C	12-22-14	12-22-14	
Zinc	350	5.0	6010C	12-22-14	12-22-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
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 Project: Stormwater Inspection - Duwamish Sub

**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Sediment
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-197-04					
Client ID:	DS-CB-H1-20141216-S					
Arsenic	ND	18	6010C	12-22-14	12-22-14	
Barium	160	9.2	6010C	12-22-14	12-22-14	
Cadmium	ND	1.8	6010C	12-22-14	12-22-14	
Chromium	80	1.8	6010C	12-22-14	12-22-14	
Copper	150	3.7	6010C	12-22-14	12-22-14	
Lead	220	18	6010C	12-22-14	12-22-14	
Mercury	ND	0.92	7471B	12-23-14	12-23-14	
Selenium	ND	37	6010C	12-22-14	12-22-14	
Silver	ND	3.7	6010C	12-22-14	12-22-14	
Zinc	740	9.2	6010C	12-22-14	12-22-14	

Date of Report: December 30, 2014
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**TOTAL METALS
 EPA 6010C
 METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-22&23-14
 Date Analyzed: 12-22&23-14

Matrix: Sediment
 Units: mg/kg (ppm)

Lab ID: MB1222SM1

Analyte	Method	Result	PQL
Arsenic	6010C	ND	5.0
Barium	6010C	ND	2.5
Cadmium	6010C	ND	0.50
Chromium	6010C	ND	0.50
Copper	6010C	ND	1.0
Lead	6010C	ND	5.0
Selenium	6010C	ND	10
Silver	6010C	ND	1.0
Zinc	6010C	ND	2.5

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

**TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-23-14
Date Analyzed: 12-23-14

Matrix: Sediment
Units: mg/kg (ppm)

Lab ID: MB1223S1

Analyte	Method	Result	PQL
Mercury	7471B	ND	0.25

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**TOTAL METALS
 EPA 6010C
 DUPLICATE QUALITY CONTROL**

Date Extracted: 12-22&23-14
 Date Analyzed: 12-22&23-14

Matrix: Sediment
 Units: mg/kg (ppm)

Lab ID: 12-255-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	5.0	
Barium	16.1	17.8	10	2.5	
Cadmium	ND	ND	NA	0.50	
Chromium	14.2	15.0	6	0.50	
Copper	6.90	7.35	6	1.0	
Lead	ND	ND	NA	5.0	
Selenium	ND	ND	NA	10	
Silver	ND	ND	NA	1.0	
Zinc	18.0	18.6	3	2.5	

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

**TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL**

Date Extracted: 12-23-14
Date Analyzed: 12-23-14

Matrix: Sediment
Units: mg/kg (ppm)

Lab ID: 12-209-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	ND	ND	NA	0.25	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**TOTAL METALS
 EPA 6010C
 MS/MSD QUALITY CONTROL**

Date Extracted: 12-22&23-14
 Date Analyzed: 12-22&23-14

Matrix: Sediment
 Units: mg/kg (ppm)

Lab ID: 12-255-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	102	102	107	107	5	
Barium	100	112	96	118	102	5	
Cadmium	50.0	49.4	99	51.6	103	4	
Chromium	100	110	96	117	103	7	
Copper	50.0	57.8	102	60.7	108	5	
Lead	250	240	96	253	101	5	
Selenium	100	96.8	97	102	102	5	
Silver	25.0	22.6	90	23.7	95	5	
Zinc	100	120	102	125	107	4	

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

**TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL**

Date Extracted: 12-23-14

Date Analyzed: 12-23-14

Matrix: Sediment

Units: mg/kg (ppm)

Lab ID: 12-209-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	0.460	92	0.460	92	0	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

NWTPH-Gx

Matrix: Sediment
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-TD-01-20141216-S					
Laboratory ID:	12-197-02					
Gasoline	ND	19	NWTPH-Gx	12-22-14	12-22-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>103</i>	<i>68-123</i>				

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**NWTPH-Gx
 QUALITY CONTROL**

Matrix: Sediment
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1222S2					
Gasoline	ND	5.0	NWTPH-Gx	12-22-14	12-22-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	96	68-123				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	12-238-16							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				100	103	68-123		

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

VOLATILES EPA 8260C
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Matrix: Sediment
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-TD-01-20141216-S					
Laboratory ID:	12-197-02					
Dichlorodifluoromethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Chloromethane	ND	0.014	EPA 8260C	12-18-14	12-18-14	
Vinyl Chloride	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Bromomethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Chloroethane	ND	0.014	EPA 8260C	12-18-14	12-18-14	
Trichlorofluoromethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
1,1-Dichloroethene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Acetone	ND	0.027	EPA 8260C	12-18-14	12-18-14	
Iodomethane	ND	0.014	EPA 8260C	12-18-14	12-18-14	
Carbon Disulfide	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Methylene Chloride	ND	0.014	EPA 8260C	12-18-14	12-18-14	
(trans) 1,2-Dichloroethene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Methyl t-Butyl Ether	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
1,1-Dichloroethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Vinyl Acetate	ND	0.014	EPA 8260C	12-18-14	12-18-14	
2,2-Dichloropropane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
(cis) 1,2-Dichloroethene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
2-Butanone	ND	0.014	EPA 8260C	12-18-14	12-18-14	
Bromochloromethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Chloroform	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
1,1,1-Trichloroethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Carbon Tetrachloride	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
1,1-Dichloropropene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Benzene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
1,2-Dichloroethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Trichloroethene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
1,2-Dichloropropane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Dibromomethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Bromodichloromethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
2-Chloroethyl Vinyl Ether	ND	0.014	EPA 8260C	12-18-14	12-18-14	
(cis) 1,3-Dichloropropene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Methyl Isobutyl Ketone	ND	0.014	EPA 8260C	12-18-14	12-18-14	
Toluene	ND	0.014	EPA 8260C	12-18-14	12-18-14	
(trans) 1,3-Dichloropropene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-TD-01-20141216-S					
Laboratory ID:	12-197-02					
1,1,2-Trichloroethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Tetrachloroethene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
1,3-Dichloropropane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
2-Hexanone	ND	0.014	EPA 8260C	12-18-14	12-18-14	
Dibromochloromethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
1,2-Dibromoethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Chlorobenzene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
1,1,1,2-Tetrachloroethane	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Ethylbenzene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
m,p-Xylene	ND	0.0054	EPA 8260C	12-18-14	12-18-14	
o-Xylene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Styrene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Bromoform	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Isopropylbenzene	ND	0.0027	EPA 8260C	12-18-14	12-18-14	
Bromobenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
1,1,1,2-Tetrachloroethane	ND	0.19	EPA 8260C	12-18-14	12-18-14	
1,2,3-Trichloropropane	ND	0.19	EPA 8260C	12-18-14	12-18-14	
n-Propylbenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
2-Chlorotoluene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
4-Chlorotoluene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
1,3,5-Trimethylbenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
tert-Butylbenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
1,2,4-Trimethylbenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
sec-Butylbenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
1,3-Dichlorobenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
p-Isopropyltoluene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
1,4-Dichlorobenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
1,2-Dichlorobenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
n-Butylbenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
1,2-Dibromo-3-chloropropane	ND	0.96	EPA 8260C	12-18-14	12-18-14	
1,2,4-Trichlorobenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
Hexachlorobutadiene	ND	0.96	EPA 8260C	12-18-14	12-18-14	
Naphthalene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
1,2,3-Trichlorobenzene	ND	0.19	EPA 8260C	12-18-14	12-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>76-131</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>82-129</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>79-126</i>				

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VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Sediment
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1218S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Chloromethane	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
Vinyl Chloride	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Bromomethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Chloroethane	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Acetone	ND	0.0099	EPA 8260C	12-18-14	12-18-14	
Iodomethane	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
Carbon Disulfide	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Methylene Chloride	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Vinyl Acetate	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
2-Butanone	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
Bromochloromethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Chloroform	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Benzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Trichloroethene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Dibromomethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Bromodichloromethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
Toluene	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	

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VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1218S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Tetrachloroethene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
2-Hexanone	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
Dibromochloromethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Chlorobenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Ethylbenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
m,p-Xylene	ND	0.0020	EPA 8260C	12-18-14	12-18-14	
o-Xylene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Styrene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Bromoform	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Isopropylbenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Bromobenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
n-Propylbenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
2-Chlorotoluene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
4-Chlorotoluene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
tert-Butylbenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
sec-Butylbenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
n-Butylbenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	12-18-14	12-18-14	
Naphthalene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	12-18-14	12-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>95</i>	<i>76-131</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>82-129</i>				
<i>4-Bromofluorobenzene</i>	<i>121</i>	<i>79-126</i>				

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
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 Project: Stormwater Inspection - Duwamish Sub

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Sediment
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB1218S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0605	0.0592	0.0500	0.0500	121	118	66-129	2	15	
Benzene	0.0586	0.0581	0.0500	0.0500	117	116	71-123	1	15	
Trichloroethene	0.0518	0.0526	0.0500	0.0500	104	105	75-115	2	15	
Toluene	0.0522	0.0516	0.0500	0.0500	104	103	75-120	1	15	
Chlorobenzene	0.0482	0.0475	0.0500	0.0500	96	95	75-121	1	15	
<i>Surrogate:</i>										
Dibromofluoromethane					92	94	76-131			
Toluene-d8					94	96	82-129			
4-Bromofluorobenzene					113	116	79-126			

Date of Report: December 30, 2014
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 Project: Stormwater Inspection - Duwamish Sub

**TOTAL ORGANIC CARBON
 EPA 9060A**

Matrix: Sediment
 Units: % Carbon

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-TD-01-20141216-S					
Laboratory ID:	12-197-02					
Total Organic Carbon	6.4	0.65	EPA 9060	12-23-14	12-23-14	
Client ID:	DS-CB-I3-20141216-S					
Laboratory ID:	12-197-03					
Total Organic Carbon	4.0	0.59	EPA 9060	12-23-14	12-23-14	
Client ID:	DS-CB-H1-20141216-S					
Laboratory ID:	12-197-04					
Total Organic Carbon	14	0.63	EPA 9060	12-23-14	12-23-14	

Date of Report: December 30, 2014
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 Project: Stormwater Inspection - Duwamish Sub

**TOTAL ORGANIC CARBON
 EPA 9060A
 QUALITY CONTROL**

Matrix: Sediment
 Units: % Carbon

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1223S1					
Total Organic Carbon	ND	0.042	EPA 9060	12-23-14	12-23-14	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	12-197-02							
	ORIG	DUP						
Total Organic Carbon	6.37	7.215	NA	NA	NA	NA	12	20

SPIKE BLANK								
Laboratory ID:	SB1223S1							
	SB	SB		SB				
Total Organic Carbon	45.3	42.1	NA	108	87-132	NA	NA	

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 Project: Stormwater Inspection - Duwamish Sub

TOTAL METALS
EPA 200.8/245.1

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	12-197-01					
Client ID:	DS-CB-F3-20141216-W					
Arsenic	1.9	0.50	200.8	12-18-14	12-18-14	
Barium	2.6	2.5	200.8	12-18-14	12-18-14	
Cadmium	ND	0.20	200.8	12-18-14	12-18-14	
Chromium	ND	5.0	200.8	12-18-14	12-18-14	
Copper	4.5	2.0	200.8	12-18-14	12-18-14	
Lead	ND	0.50	200.8	12-18-14	12-18-14	
Mercury	ND	0.025	245.1	12-18-14	12-18-14	
Nickel	ND	4.0	200.8	12-18-14	12-18-14	
Selenium	ND	2.5	200.8	12-18-14	12-18-14	
Silver	ND	0.20	200.8	12-18-14	12-18-14	
Zinc	24	2.5	200.8	12-18-14	12-18-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
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 Project: Stormwater Inspection - Duwamish Sub

**TOTAL METALS
 EPA 200.8
 METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-18-14
 Date Analyzed: 12-18-14
 Matrix: Water
 Units: ug/L (ppb)
 Lab ID: MB1218WH1

Analyte	Method	Result	PQL
Arsenic	200.8	ND	0.50
Barium	200.8	ND	2.5
Cadmium	200.8	ND	0.20
Chromium	200.8	ND	5.0
Copper	200.8	ND	2.0
Lead	200.8	ND	0.50
Nickel	200.8	ND	4.0
Selenium	200.8	ND	2.5
Silver	200.8	ND	0.20
Zinc	200.8	ND	2.5

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

TOTAL MERCURY
EPA 245.1
METHOD BLANK QUALITY CONTROL

Date Extracted: 12-18-14

Date Analyzed: 12-18-14

Matrix: Water

Units: ug/L (ppb)

Lab ID: MB1218W1

Analyte	Method	Result	PQL
Mercury	245.1	ND	0.025

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**TOTAL METALS
 EPA 200.8
 DUPLICATE QUALITY CONTROL**

Date Extracted: 12-18-14
 Date Analyzed: 12-18-14

 Matrix: Water
 Units: ug/L (ppb)

 Lab ID: 12-041-08

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	8.14	8.08	1	0.50	
Barium	37.7	38.8	3	2.5	
Cadmium	ND	ND	NA	0.20	
Chromium	ND	ND	NA	5.0	
Copper	ND	ND	NA	2.0	
Lead	ND	ND	NA	0.50	
Nickel	ND	ND	NA	4.0	
Selenium	ND	ND	NA	2.5	
Silver	ND	ND	NA	0.20	
Zinc	8.17	7.39	10	2.5	

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

TOTAL MERCURY
EPA 245.1
DUPLICATE QUALITY CONTROL

Date Extracted: 12-18-14
Date Analyzed: 12-18-14

Matrix: Water
Units: ug/L (ppb)

Lab ID: 12-041-06

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	ND	ND	NA	0.025	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**TOTAL METALS
 EPA 200.8
 MS/MSD QUALITY CONTROL**

Date Extracted: 12-18-14
 Date Analyzed: 12-18-14

 Matrix: Water
 Units: ug/L (ppb)

 Lab ID: 12-041-08

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	114	106	114	106	0	
Barium	100	141	103	141	103	0	
Cadmium	100	104	104	103	103	0	
Chromium	100	112	112	112	112	0	
Copper	100	102	102	104	104	2	
Lead	100	100	100	101	101	1	
Nickel	100	107	107	108	108	1	
Selenium	100	97.7	98	100	100	3	
Silver	100	104	104	106	106	2	
Zinc	100	109	101	110	102	1	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
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TOTAL MERCURY
EPA 245.1
MS/MSD QUALITY CONTROL

Date Extracted: 12-18-14
 Date Analyzed: 12-18-14

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 12-041-06

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	6.25	5.51	88	5.72	91	4	

Date of Report: December 30, 2014
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 Project: Stormwater Inspection - Duwamish Sub

ALKALINITY
SM 2320B

Matrix: Water
 Units: mg CaCO₃/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-F3-20141216-W					
Laboratory ID:	12-197-01					
Carbonate Alkalinity	ND	2.0	SM 2320B	12-22-14	12-22-14	
Bicarbonate Concentration	11	2.0	SM 2320B	12-22-14	12-22-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**ALKALINITY
 SM 2320B
 QUALITY CONTROL**

Matrix: Water
 Units: mg CaCO₃/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1222W1					
Carbonate Alkalinity	ND	2.0	SM 2320B	12-22-14	12-22-14	
Bicarbonate Concentration	ND	2.0	SM 2320B	12-22-14	12-22-14	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	12-197-01							
	ORIG	DUP						
Total Alkalinity	11.0	11.0	NA	NA	NA	0	10	

SPIKE BLANK								
Laboratory ID:	SB1222W1							
	SB	SB		SB				
Total Alkalinity	104	100	NA	104	88-114	NA	NA	

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-F3-20141216-W					
Laboratory ID:	12-197-01					
Nitrate	0.33	0.050	EPA 353.2	12-18-14	12-18-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1218W1					
Nitrate	ND	0.050	EPA 353.2	12-18-14	12-18-14	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	12-197-01							
	ORIG	DUP						
Nitrate	0.333	0.313	NA	NA	NA	NA	6	13

MATRIX SPIKE

Laboratory ID:	12-197-01							
	MS	MS		MS				
Nitrate	2.40	2.00	0.333	103	90-123	NA	NA	

SPIKE BLANK

Laboratory ID:	SB1218W1							
	SB	SB		SB				
Nitrate	2.18	2.00	NA	109	88-121	NA	NA	

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

SULFATE
ASTM D516-07

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-F3-20141216-W					
Laboratory ID:	12-197-01					
Sulfate	ND	5.0	ASTM D516-07	12-22-14	12-22-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**SULFATE
 ASTM D516-07
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1222W1					
Sulfate	ND	5.0	ASTM D516-07	12-22-14	12-22-14	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	12-197-01							
	ORIG	DUP						
Sulfate	ND	ND	NA	NA	NA	NA	10	

MATRIX SPIKE

Laboratory ID:	12-197-01							
	MS	MS		MS				
Sulfate	10.7	10.0	ND	107	82-121	NA	NA	

SPIKE BLANK

Laboratory ID:	SB1222W1							
	SB	SB		SB				
Sulfate	10.2	10.0	NA	102	90-114	NA	NA	

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

**TOTAL ORGANIC CARBON
SM 5310B**

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-F3-20141216-W					
Laboratory ID:	12-197-01					
Total Organic Carbon	ND	1.0	SM 5310B	12-17-14	12-17-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**TOTAL ORGANIC CARBON
 SM 5310B
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1217W1					
Total Organic Carbon	ND	1.0	SM 5310B	12-17-14	12-17-14	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	12-140-04							
	ORIG	DUP						
Total Organic Carbon	2.55	2.566	NA	NA	NA	NA	1	15

MATRIX SPIKE

Laboratory ID:	12-140-04							
	MS	MS		MS				
Total Organic Carbon	12.1	10.0	2.55	96	80-122	NA	NA	

SPIKE BLANK

Laboratory ID:	SB1217W1							
	SB	SB		SB				
Total Organic Carbon	9.65	10.0	NA	97	84-115	NA	NA	

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

**DISSOLVED ORGANIC CARBON
SM 5310B**

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-F3-20141216-W					
Laboratory ID:	12-197-01					
Dissolved Organic Carbon	ND	1.0	SM 5310B	12-17-14	12-22-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**DISSOLVED ORGANIC CARBON
 SM 5310B
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1217D1					
Dissolved Organic Carbon	ND	1.0	SM 5310B	12-17-14	12-22-14	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	12-197-01							
	ORIG	DUP						
Dissolved Organic Carbon	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKE

Laboratory ID:	12-197-01							
	MS	MS		MS				
Dissolved Organic Carbon	11.5	10.0	ND	115	75-125	NA	NA	

SPIKE BLANK

Laboratory ID:	SB1217D1							
	SB	SB		SB				
Dissolved Organic Carbon	11.3	10.0	NA	113	75-125	NA	NA	

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

**TOTAL SUSPENDED SOLIDS
SM 2540D**

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DS-CB-F3-20141216-W					
Laboratory ID:	12-197-01					
Total Suspended Solids	ND	4.0	SM 2540D	12-22-14	12-23-14	

Date of Report: December 30, 2014
 Samples Submitted: December 17, 2014
 Laboratory Reference: 1412-197
 Project: Stormwater Inspection - Duwamish Sub

**TOTAL SUSPENDED SOLIDS
 SM 2540D
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1222W1					
Total Suspended Solids	ND	4.0	SM 2540D	12-22-14	12-23-14	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	12-197-01							
	ORIG	DUP						
Total Suspended Solids	ND	ND	NA	NA	NA	NA	20	

SPIKE BLANK								
Laboratory ID:	SB1222W1							
	SB	SB		SB				
Total Suspended Solids	99.0	100	NA	99	76-111	NA	NA	

Date of Report: December 30, 2014
Samples Submitted: December 17, 2014
Laboratory Reference: 1412-197
Project: Stormwater Inspection - Duwamish Sub

% MOISTURE

Date Analyzed: 12-18-14

Client ID	Lab ID	% Moisture
DS-TD-01-20141216-S	12-197-02	38
DS-CB-I3-20141216-S	12-197-03	50
DS-CB-H1-20141216-S	12-197-04	73



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference

12-197

Regulatory Program: DW NPDES RCRA Other:

Client Contact

Gary Lockwood - SCL

Project Manager:

Tel/Fax:

Analysis Turnaround Time

CALENDAR DAYS WORKING DAYS

Phone 206 684-3293

FAX

Project Name: Stormwater Inspection

Site: Duwamish Substation

P O #

TAT if different from Below 3 Weeks
2 weeks
1 week
2 days
1 day
Standard

Sample Identification

DS-CB-F3-20141216-W

Sample Date

12/16/14

Sample Time

1110

Sample Type (C=Comp, G=Grab)

G

Matrix

W

of Cont.

13

Filtered Sample (Y/N)

N

Perform MS / MSD (Y / N)

2

SVOCs (Method 8270D)

1

Metals (Method 200.8/7470A)

2

pH (Method SM4500H)

2

Spee Cond (Method 120.1)

2

Alk/Bicarb/Carb (Method SM2320)

2

Anions (Method 300.0/353.2)

2

TOC (Method SM5310B)

1

DOC (Method SM5310B)

2

TSS (Method 2540D)

1

Date: 12/16/14

Carrier: Courier

COC No:

1 of 2 COCs

Sampler: M1, CW

For Lab Use Only:
Walk-in Client:
Lab Sampling:

Job / SDG No.:

Sample Specific Notes:

*Nitrates, sulfate

Sample Date	Sample Time	Sample Type (C=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)	Spee Cond (Method 120.1)	Alk/Bicarb/Carb (Method SM2320)	Anions (Method 300.0/353.2)	TOC (Method SM5310B)	DOC (Method SM5310B)	TSS (Method 2540D)
12/16/14	1110	G	W	13	N	2	1	2	2	2	2	1	2	1	1

Preservation Used: 1=Ice, 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other MeOH as marked on

Possible Hazard Identification: skin PPE container

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.

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 71 Months

Custody Seals Intact: Yes No

Custody Seal No.:

Cooler Temp. (°C): Obsd:

Corrd:

Therm ID No.:

Relinquished by: Melissa VanCenich

Company: Leidos

Date/Time: 12/16/14 1537

Received by: Gary Lockwood

Company: SCL

Date/Time: 12/16/14 1350

Relinquished by: Gary Lockwood

Company: SCL

Date/Time: 12/17/14 1144

Received by: Mvoun

Company: SCL

Date/Time: 12/17/14 1147

Relinquished by:

Company:

Date/Time:

Received in Laboratory by:

Company:

Date/Time:

