

November 11, 2019

Vista Work Order No. 1903546

Ms. Delaney Peterson
Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle, WA 98101

Dear Ms. Peterson,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on October 08, 2019 under your Project Name 'Gasco PDI'.

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 NELAP 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. 1903546

Case Narrative

Sample Condition on Receipt:

Fourteen sediment and two QC water 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. Sample "PDI-081SC-B-08-10-191002" was assigned to Vista Work Order No. 1903565.

Analytical Notes:

EPA Method 1613B

These samples were extracted and analyzed for tetra-through-octa chlorinated dioxins and furans by EPA Method 1613B using a ZB-5MS GC column. The confirmation of 2,3,7,8-TCDF was analyzed by EPA Method 1613B using a DB-225 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.

As requested, a Duplicate was performed on sample "PDI-028SC-A-12-13-191003". The RPDs were out of the acceptance criteria for 1,2,3,4,6,7,8-HpCDD and OCDD.

The labeled standard recovery outside the method acceptance criteria is listed in the table below:

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
1903546-04	PDI-RB-1910031323	EPA Method 1613B	13C-1,2,3,4,6,7,8-HpCDF	H	22.3

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1903546-01	PDI-014SC-A-12-13-191003	03-Oct-19 10:08	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-02	PDI-014SC-A-13-13.5-191003	03-Oct-19 10:08	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-03	PDI-FB-1910031324	03-Oct-19 13:24	08-Oct-19 10:03	Amber Glass NM Bottle, 1L Amber Glass NM Bottle, 1L
1903546-04	PDI-RB-1910031323	03-Oct-19 13:23	08-Oct-19 10:03	Amber Glass NM Bottle, 1L Amber Glass NM Bottle, 1L
1903546-05	PDI-017SC-A-09-10-191003	03-Oct-19 12:08	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-06	PDI-017SC-A-10-11.4-191003	03-Oct-19 12:09	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-07	PDI-028SC-A-12-13-191003	DUP03-Oct-19 07:54	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-08	PDI-028SC-A-13-14.2-191003	03-Oct-19 08:36	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-09	PDI-1028SC-A-13-14.2-191003	03-Oct-19 00:00	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-10	PDI-081SC-A-12-13-191002	02-Oct-19 08:49	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-11	PDI-081SC-A-13-13.5-191002	02-Oct-19 08:50	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-12	PDI-081SC-B-00-02-191002	02-Oct-19 08:57	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-13	PDI-081SC-B-02-04-191002	02-Oct-19 08:58	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-14	PDI-081SC-B-04-06-191002	02-Oct-19 08:59	08-Oct-19 10:03	Amber Glass, 120 mL
1903546-15	PDI-081SC-B-06-08-191002	02-Oct-19 09:01	08-Oct-19 10:03	Amber Glass, 120 mL

ANALYTICAL RESULTS

Sample ID: Method Blank					EPA Method 1613B				
Matrix: Solid Sample Size: 10.0 g		QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26		Lab Sample: B9J0132-BLK1 Date Analyzed: 24-Oct-19 19:36 Column: ZB-5MS					
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
2,3,7,8-TCDD	ND	0.133			IS 13C-2,3,7,8-TCDD	64.3	25 - 164		
1,2,3,7,8-PeCDD	ND	0.113			13C-1,2,3,7,8-PeCDD	75.7	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.151			13C-1,2,3,4,7,8-HxCDD	71.6	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.169			13C-1,2,3,6,7,8-HxCDD	60.4	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.162			13C-1,2,3,7,8,9-HxCDD	68.2	32 - 141		
1,2,3,4,6,7,8-HpCDD	ND	0.113			13C-1,2,3,4,6,7,8-HpCDD	79.4	23 - 140		
OCDD	ND	0.244			13C-OCDD	68.6	17 - 157		
2,3,7,8-TCDF	ND	0.126			13C-2,3,7,8-TCDF	56.6	24 - 169		
1,2,3,7,8-PeCDF	ND	0.103			13C-1,2,3,7,8-PeCDF	68.8	24 - 185		
2,3,4,7,8-PeCDF	ND	0.102			13C-2,3,4,7,8-PeCDF	68.2	21 - 178		
1,2,3,4,7,8-HxCDF	ND	0.0531			13C-1,2,3,4,7,8-HxCDF	82.4	26 - 152		
1,2,3,6,7,8-HxCDF	ND	0.0547			13C-1,2,3,6,7,8-HxCDF	73.8	26 - 123		
2,3,4,6,7,8-HxCDF	ND	0.0601			13C-2,3,4,6,7,8-HxCDF	74.2	28 - 136		
1,2,3,7,8,9-HxCDF	ND	0.0756			13C-1,2,3,7,8,9-HxCDF	77.1	29 - 147		
1,2,3,4,6,7,8-HpCDF	ND	0.0571			13C-1,2,3,4,6,7,8-HpCDF	98.8	28 - 143		
1,2,3,4,7,8,9-HpCDF	ND	0.0665			13C-1,2,3,4,7,8,9-HpCDF	81.6	26 - 138		
OCDF	ND	0.261			13C-OCDF	61.9	17 - 157		
					CRS 37Cl-2,3,7,8-TCDD	80.9	35 - 197		
					Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)				
					TEQMinWHO2005Dioxin		0.00		
TOTALS									
Total TCDD	ND	0.133							
Total PeCDD	ND	0.113							
Total HxCDD	ND	0.161							
Total HpCDD	ND	0.113							
Total TCDF	ND	0.126							
Total PeCDF	ND	0.103							
Total HxCDF	ND	0.0604							
Total HpCDF	ND	0.0606							

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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 Sample Size: 10.0 g		QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26		Lab Sample: B9J0132-BS1 Date Analyzed: 29-Oct-19 11:03 Column: ZB-5MS			
Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	25.6	20.0	128	67 - 158	IS 13C-2,3,7,8-TCDD	50.4	20 - 175
1,2,3,7,8-PeCDD	133	100	133	70 - 142	13C-1,2,3,7,8-PeCDD	56.2	21 - 227
1,2,3,4,7,8-HxCDD	125	100	125	70 - 164	13C-1,2,3,4,7,8-HxCDD	59.3	21 - 193
1,2,3,6,7,8-HxCDD	134	100	134	76 - 134	13C-1,2,3,6,7,8-HxCDD	51.2	25 - 163
1,2,3,7,8,9-HxCDD	130	100	130	64 - 162	13C-1,2,3,7,8,9-HxCDD	56.1	21 - 193
1,2,3,4,6,7,8-HpCDD	123	100	123	70 - 140	13C-1,2,3,4,6,7,8-HpCDD	61.1	26 - 166
OCDD	259	200	130	78 - 144	13C-OCDD	49.2	13 - 199
2,3,7,8-TCDF	21.6	20.0	108	75 - 158	13C-2,3,7,8-TCDF	43.5	22 - 152
1,2,3,7,8-PeCDF	126	100	126	80 - 134	13C-1,2,3,7,8-PeCDF	57.3	21 - 192
2,3,4,7,8-PeCDF	117	100	117	68 - 160	13C-2,3,4,7,8-PeCDF	53.0	13 - 328
1,2,3,4,7,8-HxCDF	118	100	118	72 - 134	13C-1,2,3,4,7,8-HxCDF	64.7	19 - 202
1,2,3,6,7,8-HxCDF	119	100	119	84 - 130	13C-1,2,3,6,7,8-HxCDF	61.8	21 - 159
2,3,4,6,7,8-HxCDF	122	100	122	70 - 156	13C-2,3,4,6,7,8-HxCDF	54.6	22 - 176
1,2,3,7,8,9-HxCDF	119	100	119	78 - 130	13C-1,2,3,7,8,9-HxCDF	56.8	17 - 205
1,2,3,4,6,7,8-HpCDF	122	100	122	82 - 122	13C-1,2,3,4,6,7,8-HpCDF	89.1	21 - 158
1,2,3,4,7,8,9-HpCDF	117	100	117	78 - 138	13C-1,2,3,4,7,8,9-HpCDF	39.5	20 - 186
OCDF	236	200	118	63 - 170	13C-OCDF	17.9	13 - 199
					CRS 37Cl-2,3,7,8-TCDD	76.0	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: Method Blank					EPA Method 1613B				
Matrix: Solid Sample Size: 10.0 g		QC Batch: B9J0312 Date Extracted: 29-Oct-2019 7:26		Lab Sample: B9J0312-BLK1 Date Analyzed: 01-Nov-19 17:10 Column: ZB-5MS					
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
2,3,7,8-TCDD	ND	0.0535			IS 13C-2,3,7,8-TCDD	95.3	25 - 164		
1,2,3,7,8-PeCDD	ND	0.101			13C-1,2,3,7,8-PeCDD	98.9	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.105			13C-1,2,3,4,7,8-HxCDD	102	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.110			13C-1,2,3,6,7,8-HxCDD	88.4	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.115			13C-1,2,3,7,8,9-HxCDD	91.9	32 - 141		
1,2,3,4,6,7,8-HpCDD	ND	0.148			13C-1,2,3,4,6,7,8-HpCDD	93.3	23 - 140		
OCDD	ND	0.179			13C-OCDD	85.6	17 - 157		
2,3,7,8-TCDF	ND	0.0610			13C-2,3,7,8-TCDF	92.3	24 - 169		
1,2,3,7,8-PeCDF	ND	0.0826			13C-1,2,3,7,8-PeCDF	106	24 - 185		
2,3,4,7,8-PeCDF	ND	0.0815			13C-2,3,4,7,8-PeCDF	101	21 - 178		
1,2,3,4,7,8-HxCDF	ND	0.0521			13C-1,2,3,4,7,8-HxCDF	113	26 - 152		
1,2,3,6,7,8-HxCDF	ND	0.0576			13C-1,2,3,6,7,8-HxCDF	97.9	26 - 123		
2,3,4,6,7,8-HxCDF	ND	0.0631			13C-2,3,4,6,7,8-HxCDF	94.6	28 - 136		
1,2,3,7,8,9-HxCDF	ND	0.0850			13C-1,2,3,7,8,9-HxCDF	102	29 - 147		
1,2,3,4,6,7,8-HpCDF	ND	0.0945			13C-1,2,3,4,6,7,8-HpCDF	83.9	28 - 143		
1,2,3,4,7,8,9-HpCDF	ND	0.0813			13C-1,2,3,4,7,8,9-HpCDF	97.4	26 - 138		
OCDF	ND		0.302		13C-OCDF	92.5	17 - 157		
					CRS 37Cl-2,3,7,8-TCDD	95.1	35 - 197		
					Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)				
					TEQMinWHO2005Dioxin		0.00		
TOTALS									
Total TCDD	ND	0.0535							
Total PeCDD	ND	0.101							
Total HxCDD	ND	0.111							
Total HpCDD	ND	0.148							
Total TCDF	ND	0.0610							
Total PeCDF	ND	0.0820							
Total HxCDF	ND	0.0636							
Total HpCDF	ND	0.0883							

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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 Sample Size: 10.0 g		QC Batch: B9J0312 Date Extracted: 29-Oct-2019 7:26			Lab Sample: B9J0312-BS1 Date Analyzed: 01-Nov-19 15:34 Column: ZB-5MS		
Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	23.2	20.0	116	67 - 158	IS 13C-2,3,7,8-TCDD	92.6	20 - 175
1,2,3,7,8-PeCDD	112	100	112	70 - 142	13C-1,2,3,7,8-PeCDD	91.1	21 - 227
1,2,3,4,7,8-HxCDD	111	100	111	70 - 164	13C-1,2,3,4,7,8-HxCDD	93.8	21 - 193
1,2,3,6,7,8-HxCDD	108	100	108	76 - 134	13C-1,2,3,6,7,8-HxCDD	80.8	25 - 163
1,2,3,7,8,9-HxCDD	110	100	110	64 - 162	13C-1,2,3,7,8,9-HxCDD	84.2	21 - 193
1,2,3,4,6,7,8-HpCDD	104	100	104	70 - 140	13C-1,2,3,4,6,7,8-HpCDD	87.0	26 - 166
OCDD	215	200	107	78 - 144	13C-OCDD	83.1	13 - 199
2,3,7,8-TCDF	20.9	20.0	105	75 - 158	13C-2,3,7,8-TCDF	86.8	22 - 152
1,2,3,7,8-PeCDF	110	100	110	80 - 134	13C-1,2,3,7,8-PeCDF	93.8	21 - 192
2,3,4,7,8-PeCDF	110	100	110	68 - 160	13C-2,3,4,7,8-PeCDF	89.4	13 - 328
1,2,3,4,7,8-HxCDF	103	100	103	72 - 134	13C-1,2,3,4,7,8-HxCDF	99.7	19 - 202
1,2,3,6,7,8-HxCDF	102	100	102	84 - 130	13C-1,2,3,6,7,8-HxCDF	88.8	21 - 159
2,3,4,6,7,8-HxCDF	105	100	105	70 - 156	13C-2,3,4,6,7,8-HxCDF	86.9	22 - 176
1,2,3,7,8,9-HxCDF	103	100	103	78 - 130	13C-1,2,3,7,8,9-HxCDF	92.9	17 - 205
1,2,3,4,6,7,8-HpCDF	100	100	100	82 - 122	13C-1,2,3,4,6,7,8-HpCDF	81.5	21 - 158
1,2,3,4,7,8,9-HpCDF	100	100	100	78 - 138	13C-1,2,3,4,7,8,9-HpCDF	90.6	20 - 186
OCDF	204	200	102	63 - 170	13C-OCDF	86.2	13 - 199
					CRS 37Cl-2,3,7,8-TCDD	99.0	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: PDI-014SC-A-12-13-191003 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-01 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 14.8 g	QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Collected: 03-Oct-2019 10:08	% Solids: 68.4	Date Analyzed : 25-Oct-19 05:24 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0541			IS 13C-2,3,7,8-TCDD	97.4	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0779			13C-1,2,3,7,8-PeCDD	102	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.127			13C-1,2,3,4,7,8-HxCDD	98.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.136			13C-1,2,3,6,7,8-HxCDD	81.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.139			13C-1,2,3,7,8,9-HxCDD	90.4	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND		0.384		13C-1,2,3,4,6,7,8-HpCDD	110	23 - 140	
OCDD	2.38			J	13C-OCDD	105	17 - 157	
2,3,7,8-TCDF	ND	0.0488			13C-2,3,7,8-TCDF	97.5	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0540			13C-1,2,3,7,8-PeCDF	99.6	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0511			13C-2,3,4,7,8-PeCDF	98.8	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0402			13C-1,2,3,4,7,8-HxCDF	105	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0405			13C-1,2,3,6,7,8-HxCDF	94.7	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0447			13C-2,3,4,6,7,8-HxCDF	94.0	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0585			13C-1,2,3,7,8,9-HxCDF	104	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0701			13C-1,2,3,4,6,7,8-HpCDF	106	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0633			13C-1,2,3,4,7,8,9-HpCDF	115	26 - 138	
OCDF	ND		0.189		13C-OCDF	112	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	103	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)

TEQMinWHO2005Dioxin 0.000714

TOTALS			
Total TCDD	ND		0.226
Total PeCDD	ND	0.0779	
Total HxCDD	0.314		
Total HpCDD	0.630		1.01
Total TCDF	ND	0.0488	
Total PeCDF	ND	0.0525	
Total HxCDF	ND	0.0457	
Total HpCDF	ND	0.0669	

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: PDI-014SC-A-13-13.5-191003 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-02 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 13.2 g	QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Collected: 03-Oct-2019 10:08	% Solids: 77.0	Date Analyzed : 25-Oct-19 06:12 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.104			IS 13C-2,3,7,8-TCDD	72.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0995			13C-1,2,3,7,8-PeCDD	85.6	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.122			13C-1,2,3,4,7,8-HxCDD	96.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.141			13C-1,2,3,6,7,8-HxCDD	80.5	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.126			13C-1,2,3,7,8,9-HxCDD	92.8	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.540			J	13C-1,2,3,4,6,7,8-HpCDD	104	23 - 140	
OCDD	4.60			J	13C-OCDD	101	17 - 157	
2,3,7,8-TCDF	ND	0.0592			13C-2,3,7,8-TCDF	66.7	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0875			13C-1,2,3,7,8-PeCDF	79.8	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0850			13C-2,3,4,7,8-PeCDF	76.4	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0539			13C-1,2,3,4,7,8-HxCDF	98.8	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0527			13C-1,2,3,6,7,8-HxCDF	92.3	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0538			13C-2,3,4,6,7,8-HxCDF	95.5	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0680			13C-1,2,3,7,8,9-HxCDF	106	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0692			13C-1,2,3,4,6,7,8-HpCDF	107	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0665			13C-1,2,3,4,7,8,9-HpCDF	112	26 - 138	
OCDF	0.106			J	13C-OCDF	113	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	77.8	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)

TEQMinWHO2005Dioxin 0.00681

TOTALS								
Total TCDD	ND	0.104						
Total PeCDD	ND	0.0995						
Total HxCDD	0.187							
Total HpCDD	1.44							
Total TCDF	ND	0.0592						
Total PeCDF	ND	0.0862						
Total HxCDF	ND	0.0569						
Total HpCDF	ND	0.0680						

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: PDI-017SC-A-09-10-191003 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-05 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 11.3 g	QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Collected: 03-Oct-2019 12:08	% Solids: 90.9	Date Analyzed : 25-Oct-19 07:00 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0976			IS 13C-2,3,7,8-TCDD	81.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.101			13C-1,2,3,7,8-PeCDD	88.3	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.163			13C-1,2,3,4,7,8-HxCDD	88.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.173			13C-1,2,3,6,7,8-HxCDD	75.6	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.162			13C-1,2,3,7,8,9-HxCDD	85.8	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.386			J	13C-1,2,3,4,6,7,8-HpCDD	100	23 - 140	
OCDD	1.94			J	13C-OCDD	98.5	17 - 157	
2,3,7,8-TCDF	ND	0.0924			13C-2,3,7,8-TCDF	71.8	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0970			13C-1,2,3,7,8-PeCDF	82.8	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0935			13C-2,3,4,7,8-PeCDF	79.4	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0670			13C-1,2,3,4,7,8-HxCDF	94.7	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0657			13C-1,2,3,6,7,8-HxCDF	87.5	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0719			13C-2,3,4,6,7,8-HxCDF	88.4	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0918			13C-1,2,3,7,8,9-HxCDF	94.2	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.110			13C-1,2,3,4,6,7,8-HpCDF	99.4	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0967			13C-1,2,3,4,7,8,9-HpCDF	105	26 - 138	
OCDF	ND	0.171			13C-OCDF	103	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	90.7	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)
 TEQMinWHO2005Dioxin 0.00444

TOTALS		
Total TCDD	ND	0.0976
Total PeCDD	ND	0.101
Total HxCDD	ND	0.166
Total HpCDD	0.906	
Total TCDF	ND	0.0924
Total PeCDF	ND	0.0951
Total HxCDF	ND	0.0735
Total HpCDF	ND	0.104

DL - Sample specific estimated detection limit
 EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: PDI-017SC-A-10-11.4-191003 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-06 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 12.8 g	QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Collected: 03-Oct-2019 12:09	% Solids: 78.9	Date Analyzed: 25-Oct-19 07:48 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0938			IS 13C-2,3,7,8-TCDD	83.9	25 - 164	
1,2,3,7,8-PeCDD	ND	0.101			13C-1,2,3,7,8-PeCDD	89.6	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0868			13C-1,2,3,4,7,8-HxCDD	98.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0863			13C-1,2,3,6,7,8-HxCDD	80.6	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0850			13C-1,2,3,7,8,9-HxCDD	93.1	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.118			13C-1,2,3,4,6,7,8-HpCDD	113	23 - 140	
OCDD	ND		0.280		13C-OCDD	104	17 - 157	
2,3,7,8-TCDF	ND	0.0726			13C-2,3,7,8-TCDF	73.2	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0774			13C-1,2,3,7,8-PeCDF	89.8	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0777			13C-2,3,4,7,8-PeCDF	86.2	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0443			13C-1,2,3,4,7,8-HxCDF	106	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0456			13C-1,2,3,6,7,8-HxCDF	95.2	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0482			13C-2,3,4,6,7,8-HxCDF	97.6	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0597			13C-1,2,3,7,8,9-HxCDF	102	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0503			13C-1,2,3,4,6,7,8-HpCDF	106	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0463			13C-1,2,3,4,7,8,9-HpCDF	112	26 - 138	
OCDF	0.115			J	13C-OCDF	115	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	86.2	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)

TEQMinWHO2005Dioxin 0.000035

TOTALS				
Total TCDD	ND	0.0938		
Total PeCDD	ND	0.101		
Total HxCDD	ND	0.0864		
Total HpCDD	ND	0.118		
Total TCDF	ND	0.0726		
Total PeCDF	ND	0.0774		
Total HxCDF	ND	0.0492		
Total HpCDF	ND	0.0485		

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: PDI-028SC-A-12-13-191003 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-07 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 12.4 g	QC Batch: B9J0312 Date Extracted: 29-Oct-2019 7:26
Date Collected: 03-Oct-2019 7:54	% Solids: 81.9	Date Analyzed: 01-Nov-19 17:58 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0813			IS 13C-2,3,7,8-TCDD	101	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0897			13C-1,2,3,7,8-PeCDD	101	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.142			13C-1,2,3,4,7,8-HxCDD	103	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.149			13C-1,2,3,6,7,8-HxCDD	86.0	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.141			13C-1,2,3,7,8,9-HxCDD	96.6	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.562			J	13C-1,2,3,4,6,7,8-HpCDD	94.5	23 - 140	
OCDD	3.63			J	13C-OCDD	98.6	17 - 157	
2,3,7,8-TCDF	ND	0.0388			13C-2,3,7,8-TCDF	99.8	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0786			13C-1,2,3,7,8-PeCDF	108	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0721			13C-2,3,4,7,8-PeCDF	105	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0474			13C-1,2,3,4,7,8-HxCDF	112	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0507			13C-1,2,3,6,7,8-HxCDF	96.8	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0537			13C-2,3,4,6,7,8-HxCDF	95.2	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0703			13C-1,2,3,7,8,9-HxCDF	103	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0815			13C-1,2,3,4,6,7,8-HpCDF	92.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0708			13C-1,2,3,4,7,8,9-HpCDF	101	26 - 138	
OCDF	ND		0.264		13C-OCDF	103	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	100	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)

TEQMinWHO2005Dioxin 0.00671

TOTALS								
Total TCDD	ND	0.0813						
Total PeCDD	ND	0.0897						
Total HxCDD	0.300							
Total HpCDD	0.562		1.32					
Total TCDF	ND	0.0388						
Total PeCDF	ND	0.0753						
Total HxCDF	ND	0.0550						
Total HpCDF	ND	0.0765						

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: Duplicate					EPA Method 1613B			
Source Client ID: PDI-028SC-A-12-13-191003		QC Batch: B9J0312		Lab Sample: B9J0312-DUP1				
Source LabNumber: 1903546-07		Date Extracted: 29-Oct-2019 7:26		Date Analyzed: 01-Nov-19 18:46 Column: ZB-5MS				
Matrix: Solid								
Sample Size: 12.1 g								
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0571			IS 13C-2,3,7,8-TCDD	101	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0816			13C-1,2,3,7,8-PeCDD	97.2	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.102			13C-1,2,3,4,7,8-HxCDD	102	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.112			13C-1,2,3,6,7,8-HxCDD	88.1	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.107			13C-1,2,3,7,8,9-HxCDD	95.8	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.842			J	13C-1,2,3,4,6,7,8-HpCDD	96.7	23 - 140	
OCDD	5.85				13C-OCDD	97.8	17 - 157	
2,3,7,8-TCDF	ND	0.0424			13C-2,3,7,8-TCDF	99.8	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0753			13C-1,2,3,7,8-PeCDF	106	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0750			13C-2,3,4,7,8-PeCDF	102	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0279			13C-1,2,3,4,7,8-HxCDF	113	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0314			13C-1,2,3,6,7,8-HxCDF	98.7	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0344			13C-2,3,4,6,7,8-HxCDF	95.7	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0430			13C-1,2,3,7,8,9-HxCDF	104	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0692			13C-1,2,3,4,6,7,8-HpCDF	88.9	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0545			13C-1,2,3,4,7,8,9-HpCDF	104	26 - 138	
OCDF	0.289			J	13C-OCDF	103	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	106	35 - 197	
					Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)			
					TEQMinWHO2005Dioxin 0.0103			
TOTALS								
Total TCDD	ND	0.0571						
Total PeCDD	ND	0.0816						
Total HxCDD	0.810							
Total HpCDD	2.18							
Total TCDF	ND	0.0424						
Total PeCDF	ND	0.0751						
Total HxCDF	ND	0.0338						
Total HpCDF	ND	0.0621						

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

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: Duplicate					EPA Method 1613B				
Source Client ID: PDI-028SC-A-12-13-191003					Duplicate Lab Sample: B9J0312-DUP1				
Source LabNumber: 1903546-07									
Matrix: Solid									
Analyte	Dup Conc. (pg/g)	Source Conc.	RPD	RPD Limits	Labeled Standard	Dup %R	Source %R	LCL-UCL	
2,3,7,8-TCDD	ND	ND	NA	25	IS 13C-2,3,7,8-TCDD	101	101	25 - 164	
1,2,3,7,8-PeCDD	ND	ND	NA	25	13C-1,2,3,7,8-PeCDD	97.2	101	25 - 181	
1,2,3,4,7,8-HxCDD	ND	ND	NA	25	13C-1,2,3,4,7,8-HxCDD	102	103	32 - 141	
1,2,3,6,7,8-HxCDD	ND	ND	NA	25	13C-1,2,3,6,7,8-HxCDD	88.1	86.0	28 - 130	
1,2,3,7,8,9-HxCDD	ND	ND	NA	25	13C-1,2,3,7,8,9-HxCDD	95.8	96.6	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.842	0.562	39.8	25	13C-1,2,3,4,6,7,8-HpCDD	96.7	94.5	23 - 140	
OCDD	5.85	3.63	46.8	25	13C-OCDD	97.8	98.6	17 - 157	
2,3,7,8-TCDF	ND	ND	NA	25	13C-2,3,7,8-TCDF	99.8	99.8	24 - 169	
1,2,3,7,8-PeCDF	ND	ND	NA	25	13C-1,2,3,7,8-PeCDF	106	108	24 - 185	
2,3,4,7,8-PeCDF	ND	ND	NA	25	13C-2,3,4,7,8-PeCDF	102	105	21 - 178	
1,2,3,4,7,8-HxCDF	ND	ND	NA	25	13C-1,2,3,4,7,8-HxCDF	113	112	26 - 152	
1,2,3,6,7,8-HxCDF	ND	ND	NA	25	13C-1,2,3,6,7,8-HxCDF	98.7	96.8	26 - 123	
2,3,4,6,7,8-HxCDF	ND	ND	NA	25	13C-2,3,4,6,7,8-HxCDF	95.7	95.2	28 - 136	
1,2,3,7,8,9-HxCDF	ND	ND	NA	25	13C-1,2,3,7,8,9-HxCDF	104	103	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	ND	NA	25	13C-1,2,3,4,6,7,8-HpCDF	88.9	92.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	ND	NA	25	13C-1,2,3,4,7,8,9-HpCDF	104	101	26 - 138	
OCDF	0.289	ND	#	25	13C-OCDF	103	103	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	106	100	35 - 197	

LCL-UCL - Lower control limit - upper control limit
The results are reported in dry weight.
The sample size is reported in wet weight. Results reported to the MDL

Sample ID: PDI-028SC-A-13-14.2-191003 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-08 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 13.7 g	QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Collected: 03-Oct-2019 8:36	% Solids: 73.6	Date Analyzed: 25-Oct-19 09:24 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0974			IS 13C-2,3,7,8-TCDD	97.4	25 - 164	
1,2,3,7,8-PeCDD	ND	0.104			13C-1,2,3,7,8-PeCDD	97.2	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.108			13C-1,2,3,4,7,8-HxCDD	101	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.116			13C-1,2,3,6,7,8-HxCDD	84.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.113			13C-1,2,3,7,8,9-HxCDD	93.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.104			13C-1,2,3,4,6,7,8-HpCDD	107	23 - 140	
OCDD	0.790			J	13C-OCDD	101	17 - 157	
2,3,7,8-TCDF	ND	0.0817			13C-2,3,7,8-TCDF	91.2	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0930			13C-1,2,3,7,8-PeCDF	92.2	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0975			13C-2,3,4,7,8-PeCDF	93.4	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0353			13C-1,2,3,4,7,8-HxCDF	106	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0373			13C-1,2,3,6,7,8-HxCDF	96.9	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0390			13C-2,3,4,6,7,8-HxCDF	96.4	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0503			13C-1,2,3,7,8,9-HxCDF	103	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0544			13C-1,2,3,4,6,7,8-HpCDF	104	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0496			13C-1,2,3,4,7,8,9-HpCDF	112	26 - 138	
OCDF	ND	0.0970			13C-OCDF	112	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	106	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)

TEQMinWHO2005Dioxin 0.000237

TOTALS		
Total TCDD	ND	0.0974
Total PeCDD	ND	0.104
Total HxCDD	ND	0.113
Total HpCDD	ND	0.104
Total TCDF	ND	0.0817
Total PeCDF	ND	0.0953
Total HxCDF	ND	0.0402
Total HpCDF	ND	0.0522

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: PDI-1028SC-A-13-14.2-191003 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-09 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 13.5 g	QC Batch: B9J0312 Date Extracted: 29-Oct-2019 7:26
Date Collected: 03-Oct-2019 0:00	% Solids: 74.5	Date Analyzed : 01-Nov-19 19:34 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0719			IS 13C-2,3,7,8-TCDD	91.9	25 - 164	
1,2,3,7,8-PeCDD	ND	0.132			13C-1,2,3,7,8-PeCDD	89.1	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.119			13C-1,2,3,4,7,8-HxCDD	87.4	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.123			13C-1,2,3,6,7,8-HxCDD	74.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.119			13C-1,2,3,7,8,9-HxCDD	81.7	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.633			J	13C-1,2,3,4,6,7,8-HpCDD	80.7	23 - 140	
OCDD	4.58			J	13C-OCDD	86.4	17 - 157	
2,3,7,8-TCDF	ND	0.0583			13C-2,3,7,8-TCDF	90.6	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0970			13C-1,2,3,7,8-PeCDF	95.3	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0950			13C-2,3,4,7,8-PeCDF	95.9	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0453			13C-1,2,3,4,7,8-HxCDF	97.1	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0514			13C-1,2,3,6,7,8-HxCDF	83.5	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0553			13C-2,3,4,6,7,8-HxCDF	83.6	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0679			13C-1,2,3,7,8,9-HxCDF	87.8	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0610			13C-1,2,3,4,6,7,8-HpCDF	77.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0498			13C-1,2,3,4,7,8,9-HpCDF	87.2	26 - 138	
OCDF	0.201			J	13C-OCDF	90.8	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	100	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)

TEQMinWHO2005Dioxin 0.00776

TOTALS			
Total TCDD	ND	0.0719	
Total PeCDD	ND	0.132	
Total HxCDD	0.718		
Total HpCDD	1.70		
Total TCDF	ND	0.0583	
Total PeCDF	ND	0.0960	
Total HxCDF	ND	0.0545	
Total HpCDF	ND	0.0557	

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: PDI-081SC-A-12-13-191002 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-10 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 13.0 g	QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Collected: 02-Oct-2019 8:49	% Solids: 77.2	Date Analyzed : 25-Oct-19 11:00 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.140			IS 13C-2,3,7,8-TCDD	76.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.139			13C-1,2,3,7,8-PeCDD	76.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.189			13C-1,2,3,4,7,8-HxCDD	83.7	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.194			13C-1,2,3,6,7,8-HxCDD	70.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.201			13C-1,2,3,7,8,9-HxCDD	76.8	32 - 141	
1,2,3,4,6,7,8-HpCDD	1.55			J	13C-1,2,3,4,6,7,8-HpCDD	92.8	23 - 140	
OCDD	8.59				13C-OCDD	90.4	17 - 157	
2,3,7,8-TCDF	ND	0.0915			13C-2,3,7,8-TCDF	68.6	24 - 169	
1,2,3,7,8-PeCDF	ND	0.122			13C-1,2,3,7,8-PeCDF	75.9	24 - 185	
2,3,4,7,8-PeCDF	ND	0.121			13C-2,3,4,7,8-PeCDF	76.2	21 - 178	
1,2,3,4,7,8-HxCDF	0.244			J	13C-1,2,3,4,7,8-HxCDF	87.6	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0577			13C-1,2,3,6,7,8-HxCDF	80.0	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0650			13C-2,3,4,6,7,8-HxCDF	77.7	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0804			13C-1,2,3,7,8,9-HxCDF	85.9	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.112			13C-1,2,3,4,6,7,8-HpCDF	88.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0998			13C-1,2,3,4,7,8,9-HpCDF	92.4	26 - 138	
OCDF	ND		0.380		13C-OCDF	95.7	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	104	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)

TEQMinWHO2005Dioxin 0.0425

TOTALS			
Total TCDD	ND	0.140	
Total PeCDD	ND	0.139	
Total HxCDD	0.541		
Total HpCDD	3.19		
Total TCDF	ND	0.0915	
Total PeCDF	ND	0.122	
Total HxCDF	0.244		
Total HpCDF	ND		0.128

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: PDI-081SC-A-13-13.5-191002 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-11 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 13.4 g	QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Collected: 02-Oct-2019 8:50	% Solids: 74.8	Date Analyzed: 25-Oct-19 11:48 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0834			IS 13C-2,3,7,8-TCDD	82.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.109			13C-1,2,3,7,8-PeCDD	92.0	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.144			13C-1,2,3,4,7,8-HxCDD	99.8	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.159			13C-1,2,3,6,7,8-HxCDD	86.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.162			13C-1,2,3,7,8,9-HxCDD	92.3	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND		2.04		13C-1,2,3,4,6,7,8-HpCDD	105	23 - 140	
OCDD	15.0				13C-OCDD	101	17 - 157	
2,3,7,8-TCDF	ND		0.251		13C-2,3,7,8-TCDF	81.5	24 - 169	
1,2,3,7,8-PeCDF	ND		0.127		13C-1,2,3,7,8-PeCDF	96.3	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0844			13C-2,3,4,7,8-PeCDF	90.8	21 - 178	
1,2,3,4,7,8-HxCDF	0.298			J	13C-1,2,3,4,7,8-HxCDF	100	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0792			13C-1,2,3,6,7,8-HxCDF	91.7	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0796			13C-2,3,4,6,7,8-HxCDF	94.1	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.102			13C-1,2,3,7,8,9-HxCDF	103	29 - 147	
1,2,3,4,6,7,8-HpCDF	0.453			J	13C-1,2,3,4,6,7,8-HpCDF	103	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.126			13C-1,2,3,4,7,8,9-HpCDF	107	26 - 138	
OCDF	0.729			J	13C-OCDF	107	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	85.6	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)

TEQMinWHO2005Dioxin 0.0390

TOTALS				
Total TCDD	0.186			
Total PeCDD	ND	0.109		
Total HxCDD	0.776			
Total HpCDD	2.20		4.24	
Total TCDF	0.305		0.556	
Total PeCDF	ND		0.127	
Total HxCDF	0.298			
Total HpCDF	0.795			

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: PDI-081SC-B-00-02-191002 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-12 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 21.7 g	QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Collected: 02-Oct-2019 8:57	% Solids: 46.7	Date Analyzed : 25-Oct-19 12:36 Column: ZB-5MS 30-Oct-19 19:48 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		1.52		IS 13C-2,3,7,8-TCDD	46.8	25 - 164	
1,2,3,7,8-PeCDD	2.73				13C-1,2,3,7,8-PeCDD	58.0	25 - 181	
1,2,3,4,7,8-HxCDD	5.44				13C-1,2,3,4,7,8-HxCDD	68.0	32 - 141	
1,2,3,6,7,8-HxCDD	20.6				13C-1,2,3,6,7,8-HxCDD	57.4	28 - 130	
1,2,3,7,8,9-HxCDD	9.96				13C-1,2,3,7,8,9-HxCDD	61.5	32 - 141	
1,2,3,4,6,7,8-HpCDD	313				13C-1,2,3,4,6,7,8-HpCDD	76.6	23 - 140	
OCDD	2270				13C-OCDD	73.2	17 - 157	
2,3,7,8-TCDF	73.9				13C-2,3,7,8-TCDF	45.1	24 - 169	
1,2,3,7,8-PeCDF	85.7				13C-1,2,3,7,8-PeCDF	54.3	24 - 185	
2,3,4,7,8-PeCDF	29.9				13C-2,3,4,7,8-PeCDF	55.0	21 - 178	
1,2,3,4,7,8-HxCDF	76.2				13C-1,2,3,4,7,8-HxCDF	68.0	26 - 152	
1,2,3,6,7,8-HxCDF	17.2				13C-1,2,3,6,7,8-HxCDF	61.7	26 - 123	
2,3,4,6,7,8-HxCDF	6.42				13C-2,3,4,6,7,8-HxCDF	62.2	28 - 136	
1,2,3,7,8,9-HxCDF	4.44				13C-1,2,3,7,8,9-HxCDF	67.7	29 - 147	
1,2,3,4,6,7,8-HpCDF	33.5				13C-1,2,3,4,6,7,8-HpCDF	64.3	28 - 143	
1,2,3,4,7,8,9-HpCDF	10.7				13C-1,2,3,4,7,8,9-HpCDF	76.9	26 - 138	
OCDF	80.4				13C-OCDF	74.5	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	67.9	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)

TEQMinWHO2005Dioxin 40.0

TOTALS								
Total TCDD	71.1		73.6					
Total PeCDD	40.3		49.1					
Total HxCDD	218							
Total HpCDD	732							
Total TCDF	232							
Total PeCDF	236							P
Total HxCDF	162		163					
Total HpCDF	98.6							

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: PDI-081SC-B-02-04-191002 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-13 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 19.7 g	QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Collected: 02-Oct-2019 8:58	% Solids: 50.6	Date Analyzed : 25-Oct-19 13:23 Column: ZB-5MS 30-Oct-19 20:20 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.997		IS 13C-2,3,7,8-TCDD	59.0	25 - 164	
1,2,3,7,8-PeCDD	ND		1.40		13C-1,2,3,7,8-PeCDD	59.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND		1.43		13C-1,2,3,4,7,8-HxCDD	69.4	32 - 141	
1,2,3,6,7,8-HxCDD	9.14				13C-1,2,3,6,7,8-HxCDD	58.6	28 - 130	
1,2,3,7,8,9-HxCDD	3.37				13C-1,2,3,7,8,9-HxCDD	65.0	32 - 141	
1,2,3,4,6,7,8-HpCDD	352				13C-1,2,3,4,6,7,8-HpCDD	75.1	23 - 140	
OCDD	4310				13C-OCDD	70.2	17 - 157	
2,3,7,8-TCDF	81.3				13C-2,3,7,8-TCDF	53.7	24 - 169	
1,2,3,7,8-PeCDF	117				13C-1,2,3,7,8-PeCDF	63.3	24 - 185	
2,3,4,7,8-PeCDF	45.2				13C-2,3,4,7,8-PeCDF	62.2	21 - 178	
1,2,3,4,7,8-HxCDF	173				13C-1,2,3,4,7,8-HxCDF	72.1	26 - 152	
1,2,3,6,7,8-HxCDF	43.7				13C-1,2,3,6,7,8-HxCDF	65.6	26 - 123	
2,3,4,6,7,8-HxCDF	12.2				13C-2,3,4,6,7,8-HxCDF	64.6	28 - 136	
1,2,3,7,8,9-HxCDF	8.03				13C-1,2,3,7,8,9-HxCDF	69.5	29 - 147	
1,2,3,4,6,7,8-HpCDF	108				13C-1,2,3,4,6,7,8-HpCDF	71.1	28 - 143	
1,2,3,4,7,8,9-HpCDF	35.3				13C-1,2,3,4,7,8,9-HpCDF	74.7	26 - 138	
OCDF	243				13C-OCDF	76.2	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	76.6	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)

TEQMinWHO2005Dioxin 56.5

TOTALS			
Total TCDD	6.49	8.26	
Total PeCDD	4.56	16.4	
Total HxCDD	89.0	90.4	
Total HpCDD	836		
Total TCDF	252	262	
Total PeCDF	315		P
Total HxCDF	316	318	
Total HpCDF	261		

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: PDI-081SC-B-04-06-191002 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-14 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 16.0 g	QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Collected: 02-Oct-2019 8:59	% Solids: 63.3	Date Analyzed : 25-Oct-19 14:12 Column: ZB-5MS 30-Oct-19 18:13 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.124			IS 13C-2,3,7,8-TCDD	52.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.262			13C-1,2,3,7,8-PeCDD	56.1	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.397			13C-1,2,3,4,7,8-HxCDD	61.7	32 - 141	
1,2,3,6,7,8-HxCDD	4.68				13C-1,2,3,6,7,8-HxCDD	51.9	28 - 130	
1,2,3,7,8,9-HxCDD	2.23			J	13C-1,2,3,7,8,9-HxCDD	58.7	32 - 141	
1,2,3,4,6,7,8-HpCDD	165				13C-1,2,3,4,6,7,8-HpCDD	69.1	23 - 140	
OCDD	859				13C-OCDD	65.3	17 - 157	
2,3,7,8-TCDF	13.4				13C-2,3,7,8-TCDF	51.8	24 - 169	
1,2,3,7,8-PeCDF	16.7				13C-1,2,3,7,8-PeCDF	56.4	24 - 185	
2,3,4,7,8-PeCDF	6.30				13C-2,3,4,7,8-PeCDF	57.7	21 - 178	
1,2,3,4,7,8-HxCDF	18.3				13C-1,2,3,4,7,8-HxCDF	64.2	26 - 152	
1,2,3,6,7,8-HxCDF	5.10				13C-1,2,3,6,7,8-HxCDF	57.0	26 - 123	
2,3,4,6,7,8-HxCDF	1.69			J	13C-2,3,4,6,7,8-HxCDF	57.7	28 - 136	
1,2,3,7,8,9-HxCDF	1.14			J	13C-1,2,3,7,8,9-HxCDF	58.9	29 - 147	
1,2,3,4,6,7,8-HpCDF	13.0				13C-1,2,3,4,6,7,8-HpCDF	60.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	3.33				13C-1,2,3,4,7,8,9-HpCDF	56.5	26 - 138	
OCDF	33.8				13C-OCDF	50.2	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	82.5	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)

TEQMinWHO2005Dioxin 9.13

TOTALS		
Total TCDD	2.64	3.36
Total PeCDD	7.46	
Total HxCDD	70.4	
Total HpCDD	313	
Total TCDF	40.9	42.7
Total PeCDF	50.8	51.6
Total HxCDF	39.7	
Total HpCDF	34.1	

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control 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: PDI-081SC-B-06-08-191002 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903546-15 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 16.6 g	QC Batch: B9J0312 Date Extracted: 29-Oct-2019 7:26
Date Collected: 02-Oct-2019 9:01	% Solids: 61.3	Date Analyzed : 01-Nov-19 20:21 Column: ZB-5MS 07-Nov-19 12:58 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.180		IS 13C-2,3,7,8-TCDD	107	25 - 164	
1,2,3,7,8-PeCDD	0.238			J	13C-1,2,3,7,8-PeCDD	110	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.222			13C-1,2,3,4,7,8-HxCDD	107	32 - 141	
1,2,3,6,7,8-HxCDD	1.84			J	13C-1,2,3,6,7,8-HxCDD	85.9	28 - 130	
1,2,3,7,8,9-HxCDD	0.553			J	13C-1,2,3,7,8,9-HxCDD	95.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	101				13C-1,2,3,4,6,7,8-HpCDD	95.5	23 - 140	
OCDD	636				13C-OCDD	98.6	17 - 157	
2,3,7,8-TCDF	7.98				13C-2,3,7,8-TCDF	107	24 - 169	
1,2,3,7,8-PeCDF	15.1				13C-1,2,3,7,8-PeCDF	114	24 - 185	
2,3,4,7,8-PeCDF	5.83				13C-2,3,4,7,8-PeCDF	115	21 - 178	
1,2,3,4,7,8-HxCDF	16.6				13C-1,2,3,4,7,8-HxCDF	121	26 - 152	
1,2,3,6,7,8-HxCDF	4.99				13C-1,2,3,6,7,8-HxCDF	102	26 - 123	
2,3,4,6,7,8-HxCDF	2.22			J	13C-2,3,4,6,7,8-HxCDF	99.1	28 - 136	
1,2,3,7,8,9-HxCDF	1.18			J	13C-1,2,3,7,8,9-HxCDF	105	29 - 147	
1,2,3,4,6,7,8-HpCDF	11.7				13C-1,2,3,4,6,7,8-HpCDF	92.2	28 - 143	
1,2,3,4,7,8,9-HpCDF	3.12				13C-1,2,3,4,7,8,9-HpCDF	106	26 - 138	
OCDF	31.1				13C-OCDF	107	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	93.6	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)
TEQMinWHO2005Dioxin 7.33

TOTALS			
Total TCDD	ND		1.64
Total PeCDD	1.36		
Total HxCDD	9.95		17.6
Total HpCDD	224		
Total TCDF	19.5		22.7
Total PeCDF	45.9		
Total HxCDF	39.2		39.7
Total HpCDF	35.1		

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit
The results are reported in dry weight. The sample size is reported in wet weight.
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: Method Blank					EPA Method 1613B			
Matrix: Aqueous Sample Size: 1.00 L		QC Batch: B9J0185 Date Extracted: 18-Oct-2019 10:09		Lab Sample: B9J0185-BLK1 Date Analyzed: 23-Oct-19 16:31 Column: ZB-5MS				
Analyte	Conc. (pg/L)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.831			IS 13C-2,3,7,8-TCDD	89.7	25 - 164	
1,2,3,7,8-PeCDD	ND	0.771			13C-1,2,3,7,8-PeCDD	93.0	25 - 181	
1,2,3,4,7,8-HxCDD	ND	1.51			13C-1,2,3,4,7,8-HxCDD	89.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	1.60			13C-1,2,3,6,7,8-HxCDD	76.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	1.41			13C-1,2,3,7,8,9-HxCDD	86.6	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	1.65			13C-1,2,3,4,6,7,8-HpCDD	76.6	23 - 140	
OCDD	ND	2.14			13C-OCDD	72.8	17 - 157	
2,3,7,8-TCDF	ND	0.743			13C-2,3,7,8-TCDF	74.5	24 - 169	
1,2,3,7,8-PeCDF	ND	1.18			13C-1,2,3,7,8-PeCDF	69.6	24 - 185	
2,3,4,7,8-PeCDF	ND	0.818			13C-2,3,4,7,8-PeCDF	87.3	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.982			13C-1,2,3,4,7,8-HxCDF	73.7	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.916			13C-1,2,3,6,7,8-HxCDF	72.4	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.829			13C-2,3,4,6,7,8-HxCDF	90.1	28 - 136	
1,2,3,7,8,9-HxCDF	ND	1.04			13C-1,2,3,7,8,9-HxCDF	92.8	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	1.58			13C-1,2,3,4,6,7,8-HpCDF	39.9	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.771			13C-1,2,3,4,7,8,9-HpCDF	84.1	26 - 138	
OCDF	ND	1.76			13C-OCDF	72.0	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	81.3	35 - 197	
					Toxic Equivalent Quotient (TEQ) Data (pg/L)			
					TEQMinWHO2005Dioxin 0.00			
TOTALS								
Total TCDD	ND	0.831						
Total PeCDD	ND	0.771						
Total HxCDD	ND	1.51						
Total HpCDD	ND	1.65						
Total TCDF	ND	0.743						
Total PeCDF	ND	0.977						
Total HxCDF	ND	0.935						
Total HpCDF	ND	1.09						

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

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

Sample ID: OPR					EPA Method 1613B		
Matrix: Aqueous	QC Batch: B9J0185	Lab Sample: B9J0185-BS1					
Sample Size: 1.00 L	Date Extracted: 18-Oct-2019 10:09	Date Analyzed: 23-Oct-19 14:07	Column: ZB-5MS				
Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	204	200	102	67 - 158	IS 13C-2,3,7,8-TCDD	87.0	20 - 175
1,2,3,7,8-PeCDD	960	1000	96.0	70 - 142	13C-1,2,3,7,8-PeCDD	97.7	21 - 227
1,2,3,4,7,8-HxCDD	1010	1000	101	70 - 164	13C-1,2,3,4,7,8-HxCDD	97.2	21 - 193
1,2,3,6,7,8-HxCDD	1060	1000	106	76 - 134	13C-1,2,3,6,7,8-HxCDD	81.3	25 - 163
1,2,3,7,8,9-HxCDD	1030	1000	103	64 - 162	13C-1,2,3,7,8,9-HxCDD	92.5	21 - 193
1,2,3,4,6,7,8-HpCDD	995	1000	99.5	70 - 140	13C-1,2,3,4,6,7,8-HpCDD	90.7	26 - 166
OCDD	2010	2000	100	78 - 144	13C-OCDD	81.3	13 - 199
2,3,7,8-TCDF	185	200	92.4	75 - 158	13C-2,3,7,8-TCDF	62.9	22 - 152
1,2,3,7,8-PeCDF	985	1000	98.5	80 - 134	13C-1,2,3,7,8-PeCDF	84.4	21 - 192
2,3,4,7,8-PeCDF	1020	1000	102	68 - 160	13C-2,3,4,7,8-PeCDF	82.5	13 - 328
1,2,3,4,7,8-HxCDF	945	1000	94.5	72 - 134	13C-1,2,3,4,7,8-HxCDF	62.7	19 - 202
1,2,3,6,7,8-HxCDF	946	1000	94.6	84 - 130	13C-1,2,3,6,7,8-HxCDF	60.0	21 - 159
2,3,4,6,7,8-HxCDF	1000	1000	100	70 - 156	13C-2,3,4,6,7,8-HxCDF	95.2	22 - 176
1,2,3,7,8,9-HxCDF	1000	1000	100	78 - 130	13C-1,2,3,7,8,9-HxCDF	102	17 - 205
1,2,3,4,6,7,8-HpCDF	980	1000	98.0	82 - 122	13C-1,2,3,4,6,7,8-HpCDF	46.7	21 - 158
1,2,3,4,7,8,9-HpCDF	996	1000	99.6	78 - 138	13C-1,2,3,4,7,8,9-HpCDF	94.6	20 - 186
OCDF	1980	2000	99.0	63 - 170	13C-OCDF	74.2	13 - 199
					CRS 37Cl-2,3,7,8-TCDD	81.1	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: PDI-FB-1910031324 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: QC Water	Lab Sample: 1903546-03 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 0.957 L	QC Batch: B9J0185 Date Extracted: 18-Oct-2019 10:09
Date Collected: 03-Oct-2019 13:24		Date Analyzed: 23-Oct-19 18:07 Column: ZB-5MS

Analyte	Conc. (pg/L)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.865			IS 13C-2,3,7,8-TCDD	86.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.961			13C-1,2,3,7,8-PeCDD	92.3	25 - 181	
1,2,3,4,7,8-HxCDD	ND	1.27			13C-1,2,3,4,7,8-HxCDD	91.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	1.45			13C-1,2,3,6,7,8-HxCDD	78.1	28 - 130	
1,2,3,7,8,9-HxCDD	ND	1.32			13C-1,2,3,7,8,9-HxCDD	84.5	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	1.55			13C-1,2,3,4,6,7,8-HpCDD	84.2	23 - 140	
OCDD	ND	2.35			13C-OCDD	76.2	17 - 157	
2,3,7,8-TCDF	ND	0.746			13C-2,3,7,8-TCDF	74.0	24 - 169	
1,2,3,7,8-PeCDF	ND	1.04			13C-1,2,3,7,8-PeCDF	88.4	24 - 185	
2,3,4,7,8-PeCDF	ND	0.859			13C-2,3,4,7,8-PeCDF	89.6	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.778			13C-1,2,3,4,7,8-HxCDF	76.6	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.716			13C-1,2,3,6,7,8-HxCDF	74.9	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.610			13C-2,3,4,6,7,8-HxCDF	91.0	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.758			13C-1,2,3,7,8,9-HxCDF	98.2	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.973			13C-1,2,3,4,6,7,8-HpCDF	69.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.746			13C-1,2,3,4,7,8,9-HpCDF	90.6	26 - 138	
OCDF	ND	1.77			13C-OCDF	83.2	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	87.7	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/L)

TEQMinWHO2005Dioxin 0.00

TOTALS		
Total TCDD	ND	0.865
Total PeCDD	ND	0.961
Total HxCDD	ND	1.35
Total HpCDD	ND	1.55
Total TCDF	ND	0.746
Total PeCDF	ND	0.946
Total HxCDF	ND	0.709
Total HpCDF	ND	0.859

DL - Sample specific estimated detection limit
EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit
Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: PDI-RB-1910031323 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: QC Water	Lab Sample: 1903546-04 Date Received: 08-Oct-2019 10:03
Project: Gasco PDI	Sample Size: 0.986 L	QC Batch: B9J0185 Date Extracted: 18-Oct-2019 10:09
Date Collected: 03-Oct-2019 13:23		Date Analyzed: 23-Oct-19 18:55 Column: ZB-5MS

Analyte	Conc. (pg/L)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.765			IS 13C-2,3,7,8-TCDD	95.4	25 - 164	
1,2,3,7,8-PeCDD	ND	0.756			13C-1,2,3,7,8-PeCDD	95.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	1.42			13C-1,2,3,4,7,8-HxCDD	56.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	1.59			13C-1,2,3,6,7,8-HxCDD	46.7	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.922			13C-1,2,3,7,8,9-HxCDD	86.8	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	1.53			13C-1,2,3,4,6,7,8-HpCDD	60.2	23 - 140	
OCDD	ND	1.71			13C-OCDD	56.8	17 - 157	
2,3,7,8-TCDF	ND	0.560			13C-2,3,7,8-TCDF	80.0	24 - 169	
1,2,3,7,8-PeCDF	ND	0.687			13C-1,2,3,7,8-PeCDF	96.9	24 - 185	
2,3,4,7,8-PeCDF	ND	0.668			13C-2,3,4,7,8-PeCDF	95.9	21 - 178	
1,2,3,4,7,8-HxCDF	ND	1.60			13C-1,2,3,4,7,8-HxCDF	30.2	26 - 152	
1,2,3,6,7,8-HxCDF	ND	1.59			13C-1,2,3,6,7,8-HxCDF	29.4	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.533			13C-2,3,4,6,7,8-HxCDF	94.4	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.699			13C-1,2,3,7,8,9-HxCDF	99.6	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	1.82			13C-1,2,3,4,6,7,8-HpCDF	22.3	28 - 143	H
1,2,3,4,7,8,9-HpCDF	ND	0.581			13C-1,2,3,4,7,8,9-HpCDF	65.0	26 - 138	
OCDF	ND	3.02			13C-OCDF	34.3	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	86.3	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/L)

TEQMinWHO2005Dioxin	0.00
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TOTALS		
Total TCDD	ND	0.765
Total PeCDD	ND	0.756
Total HxCDD	ND	1.23
Total HpCDD	ND	1.53
Total TCDF	ND	0.560
Total PeCDF	ND	0.677
Total HxCDF	ND	0.850
Total HpCDF	ND	0.962

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

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

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)
*	See Cover Letter

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

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	19-013-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-23
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2018017
Massachusetts Department of Environmental Protection	N/A
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1521520
New Hampshire Environmental Accreditation Program	207718-B
New Jersey Department of Environmental Protection	190001
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-010
Pennsylvania Department of Environmental Protection	016
Texas Commission on Environmental Quality	T104704189-19-10
Vermont Department of Health	VT-4042
Virginia Department of General Services	10272
Washington Department of Ecology	C584-19
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613/1613B
1,4-Dioxane (1,4-Diethyleneoxide) analysis by GC/HRMS	EPA 522
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

1903546 2.3°C

POC: # Delaney Peterson (360-715-2707)
1605 Cornwall Avenue, Bellingham, WA 98225

Project: Gasco PDI
Client: NW Natural

COC ID: VISTA-20191002-173916
Sample Custodian: dep
Lab: VISTA

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected		Containers #	Lab QC*	Test Request	Method	TAT**	Preservative
				Date	Time						
001	PDI-014SC-A-12-13-191003	N	SE	10/03/2019	10:08	1	<input type="checkbox"/>	Dioxin/Furans Total solids (VISTA)	E1613B SM2540G	30 30	4°C 4°C
002	PDI-014SC-A-13-13.5-191003	N	SE	10/03/2019	10:08	1	<input type="checkbox"/>	Dioxin/Furans Total solids (VISTA)	E1613B SM2540G	30 30	4°C 4°C
003	PDI-FB-1910031324	FB	WQ	10/03/2019	13:24	2	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
004	PDI-RB-1910031323	RB	WQ	10/03/2019	13:23	2	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
005	PDI-017SC-A-09-10-191003	N	SE	10/03/2019	12:08	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
006	PDI-017SC-A-10-11.4-191003	N	SE	10/03/2019	12:09	1	<input type="checkbox"/>	Dioxin/Furans Total solids (VISTA)	E1613B SM2540G	30 30	4°C 4°C
007	PDI-028SC-A-12-13-191003	N	SE	10/03/2019	7:54	1	<input checked="" type="checkbox"/>	Dioxin/Furans Total solids (VISTA)	E1613B SM2540G	30 30	4°C 4°C
008	PDI-028SC-A-13-14.2-191003	N	SE	10/03/2019	8:36	1	<input type="checkbox"/>	Dioxin/Furans Total solids (VISTA)	E1613B SM2540G	30 30	4°C 4°C

Comment:

Relinquished By: Signature: <i>[Signature]</i>	Received By: Signature: <i>[Signature]</i>	Relinquished By: Signature:	Received By: Signature:	Relinquished By: Signature:	Received By: Signature:
Print Name: D. Peterson	Print Name: Hayden Ganas	Print Name:	Print Name:	Print Name:	Print Name:
Company: AQ	Company: VA	Company:	Company:	Company:	Company:
Date/Time: 10.4.19 1000	Date/Time: 10/8/19 10:03	Date/Time:	Date/Time:	Date/Time:	Date/Time:

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

1903546

2.3^{oc}

POC: # Delaney Peterson (360-715-2707)

Project: Gasco PDI

COC ID:

VISTA-20191002-173916

1605 Cornwall Avenue, Bellingham, WA 98225

Client: NW Natural

Sample Custodian:

dep

Lab:

VISTA

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Time	Containers #	Lab QC*	Test Request	Method	TAT**	Preservative
009	PDI-1028SC-A-13-14.2-191003	FD	SE	10/03/2019		1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
010	PDI-081SC-A-12-13-191002	N	SE	10/02/2019	8:49	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
011	PDI-081SC-A-13-13.5-191002	N	SE	10/02/2019	8:50	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
012	PDI-081SC-B-00-02-191002	N	SE	10/02/2019	8:57	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
013	PDI-081SC-B-02-04-191002	N	SE	10/02/2019	8:58	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
014	PDI-081SC-B-04-06-191002	N	SE	10/02/2019	8:59	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
015	PDI-081SC-B-06-08-191002	N	SE	10/02/2019	9:01	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
*016	PDI-081SC-B-08-10-191002	N	SE	10/02/2019	9:03	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C

Comment:

*WO# 1903565 gin 10/09/19

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature	Signature	Signature	Signature
Print Name D. Peterson	Print Name Hayden Ganas	Print Name	Print Name	Print Name	Print Name
Company AQ	Company VA	Company	Company	Company	Company
Date/Time 10.4.19 1000	Date/Time 10/8/19 10:03	Date/Time	Date/Time	Date/Time	Date/Time

Sample Log-In Checklist

 Page # 1 of 1

 Vista Work Order #: 1903546 TAT 28 days

Samples Arrival:	Date/Time		Initials:		Location: <u>WR-2</u>		
	<u>10/8/19</u>	<u>10:03</u>	<u>HDC</u>		Shelf/Rack: <u>NA</u>		
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac	<input type="checkbox"/> GSO	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input type="checkbox"/> Ice		<input checked="" type="checkbox"/> Blue Ice		<input type="checkbox"/> Dry Ice		<input type="checkbox"/> None
Temp °C: <u>2.3</u>	<input type="checkbox"/> (uncorrected)		Probe used: <u>Y</u> / <input checked="" type="checkbox"/> <u>N</u>			Thermometer ID: <u>IR-3</u>	
Temp °C: <u>2.3</u>	<input type="checkbox"/> (corrected)						

	YES	NO	NA
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill	<u>Trk # 7765 7000 6403</u>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
	<input type="checkbox"/>	<input checked="" type="checkbox"/> Return	<input type="checkbox"/> Dispose
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody / Sample Documentation Complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Logged In:	Date/Time		Initials:		Location: <u>WR-2</u>		
	<u>10/09/19</u>	<u>0851</u>	<u>ajr</u>		Shelf/Rack: <u>A-1/C-3</u>		
COC Anomaly/Sample Acceptance Form completed?						<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

CoC/Label Reconciliation Report WO# 1903546

LabNumber	CoC Sample ID	Label ID matches COCID	Label ID doesn't match COCID	SampleAlias	Sampled	Label Sampled matches	Sampled doesn't match	Container	Container Correct	BaseMatrix	ReportMatrix
1903546-01	A PDI-014SC-A-12-13-191003	<input checked="" type="checkbox"/>		001	03-Oct-19 10:08	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-02	A PDI-014SC-A-13-13.5-191003	<input checked="" type="checkbox"/>		002	03-Oct-19 10:08	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-03	A PDI-FB-1910031324	<input checked="" type="checkbox"/>		003	03-Oct-19 13:24	<input checked="" type="checkbox"/>		Amber Glass NM Bottle, 1L	<input checked="" type="checkbox"/>	Aqueous	QC Water
1903546-03	B PDI-FB-1910031324	<input checked="" type="checkbox"/>		003	03-Oct-19 13:24	<input checked="" type="checkbox"/>		Amber Glass NM Bottle, 1L	<input checked="" type="checkbox"/>	Aqueous	QC Water
1903546-04	A PDI-RB-1910031323	<input checked="" type="checkbox"/>		004	03-Oct-19 13:23	<input checked="" type="checkbox"/>		Amber Glass NM Bottle, 1L	<input checked="" type="checkbox"/>	Aqueous	QC Water
1903546-04	B PDI-RB-1910031323	<input checked="" type="checkbox"/>		004	03-Oct-19 13:23	<input checked="" type="checkbox"/>		Amber Glass NM Bottle, 1L	<input checked="" type="checkbox"/>	Aqueous	QC Water
1903546-05	A PDI-017SC-A-09-10-191003	<input checked="" type="checkbox"/>		005	03-Oct-19 12:08	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-06	A PDI-017SC-A-10-11.4-191003	<input checked="" type="checkbox"/>		006	03-Oct-19 12:09	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-07	A PDI-028SC-A-12-13-191003	<input checked="" type="checkbox"/>		007	03-Oct-19 07:54	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-08	A PDI-028SC-A-13-14.2-191003	<input checked="" type="checkbox"/>		008	03-Oct-19 08:36	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-09	A PDI-1028SC-A-13-14.2-191003	<input checked="" type="checkbox"/>		009	03-Oct-19 00:00	<input type="checkbox"/>	08:36	Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-10	A PDI-081SC-A-12-13-191002	<input checked="" type="checkbox"/>		010	02-Oct-19 08:49	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-11	A PDI-081SC-A-13-13.5-191002	<input checked="" type="checkbox"/>		011	02-Oct-19 08:50	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-12	A PDI-081SC-B-00-02-191002	<input checked="" type="checkbox"/>		012	02-Oct-19 08:57	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-13	A PDI-081SC-B-02-04-191002	<input checked="" type="checkbox"/>		013	02-Oct-19 08:58	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-14	A PDI-081SC-B-04-06-191002	<input checked="" type="checkbox"/>		014	02-Oct-19 08:59	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment
1903546-15	A PDI-081SC-B-06-08-191002	<input checked="" type="checkbox"/>		015	02-Oct-19 09:01	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	Sediment

	Yes	No	NA
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Adequate Sample Volume?	<input checked="" type="checkbox"/>		
Preservation Documented: Na2S2O3 Trizma <u>None</u> Other			<input checked="" type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>

Comments:

Verified by/Date: M.E. 10/09/19

EXTRACTION INFORMATION

Process Sheet

Workorder: 1903546

29-Oct-19

Prep Expiration: 2020-10-01
Client: Anchor QEA, LLC

Workorder Due: 05-Nov-19 00:00

TAT: 28 21 (2) 10/10/19

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

Prep Batch: 89J0132

Prep Data Entered: TL 10/16/19
Date and Initials

Initial Sequence: 5950064

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1903546-01	A <input checked="" type="checkbox"/>	PDI-014SC-A-12-13-191003 ✓	08-Oct-19 10:03	WR-2 A-1	
1903546-02	A <input checked="" type="checkbox"/>	PDI-014SC-A-13-13.5-191003 ✓	08-Oct-19 10:03	WR-2 A-1	
1903546-05	A <input checked="" type="checkbox"/>	PDI-017SC-A-09-10-191003 ✓	08-Oct-19 10:03	WR-2 A-1	
1903546-06	A <input checked="" type="checkbox"/>	PDI-017SC-A-10-11.4-191003 ✓	08-Oct-19 10:03	WR-2 A-1	
1903546-07	A <input checked="" type="checkbox"/>	PDI-028SC-A-12-13-191003 ✓	08-Oct-19 10:03	WR-2 A-1	DUP
1903546-08	A <input checked="" type="checkbox"/>	PDI-028SC-A-13-14.2-191003 ✓	08-Oct-19 10:03	WR-2 A-1	
1903546-09	A <input checked="" type="checkbox"/>	PDI-1028SC-A-13-14.2-191003 ✓	08-Oct-19 10:03	WR-2 A-1	
1903546-10	A <input checked="" type="checkbox"/>	PDI-081SC-A-12-13-191002 ✓	08-Oct-19 10:03	WR-2 A-1	
1903546-11	A <input checked="" type="checkbox"/>	PDI-081SC-A-13-13.5-191002 ✓	08-Oct-19 10:03	WR-2 A-1	
1903546-12	A <input checked="" type="checkbox"/>	PDI-081SC-B-00-02-191002 ✓	08-Oct-19 10:03	WR-2 A-1	
1903546-13	A <input checked="" type="checkbox"/>	PDI-081SC-B-02-04-191002 ✓	08-Oct-19 10:03	WR-2 A-1	
1903546-14	A <input checked="" type="checkbox"/>	PDI-081SC-B-04-06-191002 ✓	08-Oct-19 10:03	WR-2 A-1	
1903546-15	A <input checked="" type="checkbox"/>	PDI-081SC-B-06-08-191002 ✓	08-Oct-19 10:03	WR-2 A-1	

WO Comments: ~~ROB - Extraction (dry weight)~~
Dioxin - 10g (dry weight)

~~ROB - Extraction (dry weight)~~

Pre-Prep Check Out: TL 10/11/19

Prep Check Out: TL 10/14/19

Prep Reconciled Initials/Date: TL 10/11/19

Pre-Prep Check In: TL 10/11/19

Prep Check In: TL 10/14/19

Spike Reconciled Initials/Date: TL 10/14/19

VialBoxID: Candy Mountain

PREPARATION BENCH SHEET

Matrix: Solid

B9J0132

Chemist: TL

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 14-Oct-19 07:26

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
<input type="checkbox"/>	B9J0132-BLK1	NA	(10.00)	2TL 10/14/19	AZ 10/15/19	10/15/19	00 10/15/19	11/5*	10/15/19	AZ 10/16/19
<input type="checkbox"/>	B9J0132-BS1	NA	(10.00)	T	T	↓	T	T	T	T
<input type="checkbox"/>	1903430-01	11.02	11.29	T	T	N/A	T	T	T	T
<input type="checkbox"/>	1903430-02	12.02	12.25	T	T	T	T	T	T	T
<input type="checkbox"/>	1903546-01	14.61	14.83	T	T	T	T	T	T	T
<input type="checkbox"/>	1903546-02	12.98	13.16	T	T	T	T	T	T	T
<input type="checkbox"/>	1903546-05	11.00	11.27	T	T	T	T	T	T	T
<input type="checkbox"/>	1903546-06	12.68	12.84	T	T	T	T	T	T	T
<input type="checkbox"/>	1903546-07	12.21	12.36	T	T	T	T	T	T	T
<input type="checkbox"/>	1903546-08	13.60	13.69	T	T	T	T	T	T	T
<input type="checkbox"/>	1903546-09	13.42	13.47	T	T	T	T	T	T	T
<input type="checkbox"/>	1903546-10	12.96	12.97	T	T	T	T	T	T	T
<input type="checkbox"/>	1903546-11	13.37	13.40	T	T	↓	T	T	T	T
<input type="checkbox"/>	1903546-12 (A)	21.40	21.71	T	T	10/15/19	T	T	T	T
<input type="checkbox"/>	1903546-13 (B)	17.78	17.74	T	T	↓	T	T	T	T

IS Name <u>V3</u>	NS Name <u>V2</u>	CRS Name <u>V1</u>	RS Name <u>V7</u>	Cycle Time	APP: SEFUN SOX (SDS)	Check Out: Chemist/Date: <u>TL 10/14/19</u>
PCDD/F <u>19C 190Z 10uL</u>	PCDD/F <u>18F 1913 10uL</u>	PCDD/F <u>15J 1001, 10uL</u>	PCDD/F <u>19C 1003</u>	Start Date/Time <u>10/14/19 14:24</u>	SOLV: <u>Toluene</u>	Check In: Chemist/Date: <u>TL 10/14/19</u>
PCB	PCB	PCB	PCB	Stop Date/Time <u>10/15/19 06:25</u>	Other <u>NA</u>	Balance ID: <u>HRMS-8</u>
PAH	PAH	PAH	PAH	Final Volume(s) <u>CM</u>	<u>20uL</u>	

Comments:

- 1 = Sample approached dryness on rotovap
- 2 = Sample bumped on rotovap; lost < 5%
- 3 = Sample poured through Na2SO4 to remove water
- 4 = Precipitate present at Final Volume
- 5 = Sample homogenized in secondary container
- 6 = Sample clogged during extraction; pipetted and used Nitrogen to assist

(A) Sample went dry during extraction DF 10/15/19
* 10/15/19

PREPARATION BENCH SHEET

Matrix: Solid

B9J0132

Chemist: TL

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 14-Oct-19 07:26

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
<input type="checkbox"/>	1903546-14 (3)	15.79	16.01	TL 10/14/19	AZ 10/15/19	10/15/19	00 10/15/19	10/16/19	10/16/19	AZ 10/16/19
<input type="checkbox"/>	1903546-15	16.32	16.46	↓	↓	N/A	↓	↓	↓	↓

(3) 10/15/19

IS Name <u>V₃</u>	NS Name <u>V₆</u>	CRS Name <u>V₁</u>	RS Name <u>V₂</u>	Cycle Time	APP: SEFUN SOX <u>SDS</u>	Check Out: Chemist/Date: <u>TL 10/14/19</u>
PCDD/F <u>19C1902, 10uL</u>	PCDD/F <u>18F1913, 10uL</u>	PCDD/F <u>18J1001, 10uL</u>	PCDD/F <u>19I1603</u>	Start Date/Time <u>10/14/19 1424</u>	SOLV: <u>Toluene</u>	Check In: Chemist/Date: <u>TL 10/14/19</u>
PCB _____	PCB _____	PCB _____	PCB _____	Stop Date/Time <u>10/15/19 0625</u>	Other <u>NA</u>	Balance ID: <u>HRMS-8</u>
PAH _____	PAH _____	PAH _____	PAH _____		Final Volume(s) <u>C14</u> <u>20uL</u>	

Comments:

- 1 = Sample approached dryness on rotovap
- 2 = Sample bumped on rotovap; lost < 5%
- 3 = Sample poured through Na2SO4 to remove water
- 4 = Precipitate present at Final Volume
- 5 = Sample homogenized in secondary container
- 6 = Sample clogged during extraction; pipetted and used Nitrogen to assist

Analyst: TL	Test Code: %Moist/%Solids	Data Entry Verified by: (Initial and Date) <u>TL 10/14/19</u>
Analyte: Dried at 110°C+/-5°C	Units: %	
Oven ID: 01 02		

Inst: HRMS-9

Date/Time IN: 10/11/19 1015
Date/Time OUT: 10/14/19 0700

Particle Size	SampID	SampType	Initial and Date:		TL 10/11/19		TL 10/14/19		%Solids RawVal	Visual Inspection	TL 10/11/19				TL 10/11/19
			Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	CI-	pH Before			pH After	Acid Added	Sample Homogenized*		
	1903546-01	A	Sample	1.2400 ✓	7.9900 ✓	5.8600 ✓	4.6200	68.44	Sand	NA	NA	NA	NA	Y	
	1903546-02	A	Sample	1.2400 ✓	8.2100 ✓	6.6100 ✓	5.3700	77.04	Sand	NA	NA	NA	NA	Y	
	1903546-05	A	Sample	1.2600 ✓	8.9300 ✓	8.2300 ✓	6.9700	90.87	Sand	NA	NA	NA	NA	Y	
	1903546-06	A	Sample	1.2600 ✓	9.4500 ✓	7.7200 ✓	6.4600	78.88	Sand	NA	NA	NA	NA	Y	
	1903546-07	A	Sample	1.2400 ✓	9.1900 ✓	7.7500 ✓	6.5100	81.89	Sand	NA	NA	NA	NA	Y	
	1903546-08	A	Sample	1.2300 ✓	11.9300 ✓	9.1000 ✓	7.8700	73.55	Sand	NA	NA	NA	NA	Y	
	1903546-09	A	Sample	1.2400 ✓	9.9100 ✓	7.7000 ✓	6.4600	74.51	Sand	NA	NA	NA	NA	Y	
	1903546-10	A	Sample	1.2400 ✓	8.6800 ✓	6.9800 ✓	5.7400	77.15	Sand	NA	NA	NA	NA	Y	
	1903546-11	A	Sample	1.2300 ✓	9.5600 ✓	7.4600 ✓	6.2300	74.79	Sand	NA	NA	NA	NA	Y	
	1903546-12	A	Sample	1.2400 ✓	11.4900 ✓	6.0300 ✓	4.7900	46.73	Mud	NA	NA	NA	NA	Y	
	1903546-13	A	Sample	1.2600 ✓	11.0900 ✓	6.2300 ✓	4.9700	50.56	Mud	NA	NA	NA	NA	Y	
	1903546-14	A	Sample	1.2500 ✓	9.0200 ✓	6.1700 ✓	4.9200	63.32	Mud	NA	NA	NA	NA	Y	
	1903546-15	A	Sample	1.2400 ✓	12.4700 ✓	8.1200 ✓	6.8800	61.26	Mud	NA	NA	NA	NA	Y	

*Sample homogenized in sample container unless otherwise noted.

Analyst: <u>TL</u>	Test Code: %Moist/%Solids	Data Entry Verified by: (Initial and Date) <u>NA</u>
Analyte:	Units: %	
Oven ID: 01 <u>02</u>	Dried at 110°C+/-5°C	

Inst HRMS-9

Date/Time IN: 10/11/19 10:45 Date/Time OUT: 10/14/19 07:00

Particle Size	SampID	SampType	Initial and Date:		Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	TL 10/11/19					Sample Homogenized*
			Pan Tare Wt. (gms)	TL 10/11/19					TL 10/14/19	Visual Inspection	Cl-	pH Before	pH After	
	1903546-01	A Sample	1.24	TL 10/11/19	7.99	5.86	[Large handwritten triangle]	Sand	NA	NA	NA	NA	X	
	1903546-02	A Sample	1.24		8.21	6.61		T	T	T	T	T	X	
	1903546-05	A Sample	1.26		8.93	8.23		T	T	T	T	T	X	
	1903546-06	A Sample	1.26		9.45	7.72		T	T	T	T	T	X	
	1903546-07	A Sample	1.24		9.19	7.75		T	T	T	T	T	X	
	1903546-08	A Sample	1.23		11.93	9.10		T	T	T	T	T	X	
	1903546-09	A Sample	1.24		9.91	7.70		T	T	T	T	T	X	
	1903546-10	A Sample	1.24		8.68	6.98		T	T	T	T	T	X	
	1903546-11	A Sample	1.23		9.56	7.46		✓	T	T	T	T	X	
	1903546-12	A Sample	1.24		11.49	6.03		Mud	T	T	T	T	X	
	1903546-13	A Sample	1.26		11.09	6.23		T	T	T	T	T	X	
	1903546-14	A Sample	1.25		9.62	6.17		T	T	T	T	T	X	
	1903546-15	A Sample	1.24		12.47	8.12		T	T	T	T	T	X	

*Sample homogenized in sample container unless otherwise noted.

Batch: B9J0132

Matrix: Solid

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1903430-01	11.29 ✓	90.74074	10.2446	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903430-02	12.25 ✓	83.21918	10.1943	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-01	14.83 ✓	68.44445	10.1503	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-02	13.16 ✓	77.04448	10.1391	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-05	11.27 ✓	90.87352	10.2414	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-06	12.84 ✓	78.87668	10.1278	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-07	12.36 ✓	81.8868	10.1212	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-08	13.69 ✓	73.55141	10.0692	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-09	13.47 ✓	74.5098	10.0365	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-10	12.97 ✓	77.15054	10.0064	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-11	13.4 ✓	74.78991	10.0218	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-12	21.71 ✓	46.73171	10.1455	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-13	19.74 ✓	50.55951	9.9804	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-14	16.01 ✓	63.32046	10.1376	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
1903546-15	16.46 ✓	61.26447	10.0841	20	14-Oct-19 07:26	TL			Sediment	1613 Full List
B9J0132-BLK1	10			20	14-Oct-19 07:26	TL				QC
B9J0132-BS1	10			20	14-Oct-19 07:26	TL	18F1913 ✓	10 ✓		QC

 10/16/19

All bolded data on report verified against written benchsheet by (initial/date)

RX @ 10/28/19

Prep Expiration: 2020-10-01
 Client: Anchor QEA, LLC

Workorder Due: **05-Nov-19 00:00**

TAT: 28

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

Prep Batch: B950312
 Prep Data Entered: 10/31/19
Date and Initials
 Initial Sequence: SSK0001

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1903546-01	<input type="checkbox"/>	PDI-011SC-A-12-13-191002	08-Oct-19 10:03	WR-2 A-1	
1903546-02	<input type="checkbox"/>	PDI-011SC-A-13-14.2-191003	08-Oct-19 10:03	WR-2 A-1	
1903546-03	<input type="checkbox"/>	PDI-011SC-A-06-13-191002	08-Oct-19 10:03	WR-2 A-1	
1903546-04	<input type="checkbox"/>	PDI-011SC-A-10-11.7-191003	08-Oct-19 10:03	WR-2 A-1	
1903546-07 A	<input checked="" type="checkbox"/>	PDI-028SC-A-12-13-191003	08-Oct-19 10:03	WR-2 A-1	DUP
1903546-08	<input type="checkbox"/>	PDI-028SC-A-13-14.2-191003	08-Oct-19 10:03	WR-2 A-1	
1903546-09 A	<input checked="" type="checkbox"/>	PDI-1028SC-A-13-14.2-191003	08-Oct-19 10:03	WR-2 A-1	
1903546-10	<input type="checkbox"/>	PDI-081SC-A-12-13-191002	08-Oct-19 10:03	WR-2 A-1	
1903546-11	<input type="checkbox"/>	PDI-081SC-A-10-10.5-191002	08-Oct-19 10:03	WR-2 A-1	
1903546-12	<input type="checkbox"/>	PDI-081SC-B-03-02-191000	08-Oct-19 10:03	WR-2 A-1	
1903546-13	<input type="checkbox"/>	PDI-081SC-B-02-04-191002	08-Oct-19 10:03	WR-2 A-1	
1903546-14	<input type="checkbox"/>	PDI-081SC-B-07-08-191002	08-Oct-19 10:03	WR-2 A-1	
1903546-15 A	<input checked="" type="checkbox"/>	PDI-081SC-B-06-08-191002	08-Oct-19 10:03	WR-2 A-1	

WO Comments: ~~Test - 1g extraction (dry weight)~~
Dioxin - 10g (dry weight)
~~PDB - 5g extraction (dry weight)~~

Pre-Prep Check Out: N/A Prep Check Out: AZ 10/29/19 Prep Reconciled Initials/Date: AZ 10/29/19
 Pre-Prep Check In: N/A Prep Check In: AZ 10/29/19 Spike Reconciled Initials/Date: 90 10/29/19
 VialBoxID: Dragon Ball Z

PREPARATION BENCH SHEET

Matrix: Solid

B9J0312

Chemist: AZ

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 29-Oct-19 06:14

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisol CHEM/ DATE	RS CHEM/WIT DATE
<input type="checkbox"/>	B9J0312-BLK1	NA	(10.00)	AD AZ 10/29/19	TZ 10/30/19	N/A	TL 10/30/19	TL 10/30/19	10/30/19	TZ 10/31/19
<input type="checkbox"/>	B9J0312-BS1	NA	(10.00)							
<input type="checkbox"/>	B9J0312-DUP1 1903546-07RE2	12.21	12.12							
<input type="checkbox"/>	B9J0312-DUP2 1903653-01	12.19	12.18							
<input type="checkbox"/>	1903546-07RE2	12.21	12.36							
<input type="checkbox"/>	1903546-09RE1	13.42	13.47							
<input type="checkbox"/>	1903546-15RE1	16.32	16.63							
<input type="checkbox"/>	1903642-01	26.95	27.03							
<input type="checkbox"/>	1903651-01	17.23	17.85							
<input type="checkbox"/>	1903651-02	14.92	14.93							
<input type="checkbox"/>	1903651-03	13.31	13.51							
<input type="checkbox"/>	1903651-04	13.93	13.84							
<input type="checkbox"/>	1903651-05	12.76	12.72							
<input type="checkbox"/>	1903651-06	14.11	14.17							
<input type="checkbox"/>	1903651-07	12.73	12.74							

IS Name <u>VZ</u>	NS Name <u>V5</u>	CRS Name <u>V7</u>	RS Name <u>V7</u>	Cycle Time	APP: SEFUN SOX <u>SDS</u>	Check Out:
PCDD/F <u>19C1902, 10ul</u>	PCDD/F <u>18F1913, 10ul</u>	PCDD/F <u>19I1602, 10ul</u>	PCDD/F <u>19JK03, 10ul</u>	Start Date/Time <u>10/29/19</u> <u>13:57</u>	SOLV: <u>TOL</u>	Chemist/Date: <u>AZ 10/29/19</u>
PCB _____	PCB _____	PCB _____	PCB _____	Stop Date/Time <u>10/30/19</u> <u>0613</u>	Other <u>NA</u>	Check In: Chemist/Date: <u>AZ 10/29/19</u>
PAH _____	PAH _____	PAH _____	PAH _____	Final Volume(s) <u>20uL</u>	<u>C14</u>	Balance ID: <u>HRMS-8</u>

Comments:

- 1 = Sample approached dryness on rotovap
- 2 = Sample bumped on rotovap; lost < 5%
- 3 = Sample poured through Na2SO4 to remove water
- 4 = Precipitate present at Final Volume
- 5 = Sample homogenized in secondary container
- 6 = Sample clogged during extraction; pipetted and used Nitrogen to assist

PREPARATION BENCH SHEET

Matrix: Solid

B9J0312

Chemist: AZ

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 14-Oct-19 07:26

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
<input type="checkbox"/>	1903653-01	12.19	12.20	AD AZ 10/29/19	TL 10/30/19	N/A	TL 10/30/19	TL 10/30/19	TL 10/30/19	TL 10/31/19
<input type="checkbox"/>	1903653-02	13.47	13.44	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1903653-03	15.66	15.50	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1903653-04	15.66	15.76	↓	↓	↓	↓	↓	↓	↓

10/30/19


IS Name <u>V₂</u>	NS Name <u>V₅</u>	CRS Name <u>V₇</u>	RS Name <u>V₉</u>	Cycle Time	APP: SEFUN SOX <u>SDS</u>	Check Out: Chemist/Date: <u>AZ 10/29/19</u>
PCDD/F <u>19J1902, 10µL</u>	PCDD/F <u>18F1913, 10µL</u>	PCDD/F <u>19J1602, 10µL</u>	PCDD/F <u>19J1603, 10µL</u>	Start Date/Time <u>10/29/19 13:57</u>	SOLV: <u>TOL</u>	Check In: Chemist/Date: <u>AZ 10/29/19</u>
PCB _____	PCB _____	PCB _____	PCB _____	Stop Date/Time <u>10/30/19 06:13</u>	Other <u>NA</u>	Balance ID: <u>HRMS 8</u>
PAH _____	PAH _____	PAH _____	PAH _____	Final Volume(s) <u>20µL</u>	<u>Cin</u>	

Comments:

- 1 = Sample approached dryness on rotovap
- 2 = Sample bumped on rotovap; lost < 5%
- 3 = Sample poured through Na2SO4 to remove water
- 4 = Precipitate present at Final Volume
- 5 = Sample homogenized in secondary container
- 6 = Sample clogged during extraction; pipetted and used Nitrogen to assist

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1903546-07RE2	12.36 ✓	81.8868	10.1212	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903546-09RE1	13.47 ✓	74.5098	10.0365	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903546-15RE1	16.63 ✓	61.26447	10.1883	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903642-01	27.03 ✓	37.10407	10.0292	20	29-Oct-19 07:26	AZK			Soil	1613 Full List
1903642-01RE1	27.03 ✓	37.10407	10.0292	20	29-Oct-19 07:26	AZK			Soil	1613 Full List
1903651-01	17.85 ✓	58.04481	10.3610	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903651-02	14.93 ✓	67.03786	10.0088	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903651-03	13.51 ✓	75.12038	10.1488	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903651-04	13.84 ✓	71.77122	9.9331	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903651-05	12.72 ✓	78.34179	9.9651	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903651-06	14.17 ✓	70.86182	10.0411	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903651-07	12.74 ✓	78.53535	10.0054	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903653-01	12.2 ✓	82.01582	10.0059	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903653-02	13.44 ✓	74.26471	9.9812	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903653-03	15.5 ✓	63.85041	9.8968	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
1903653-04	15.76 ✓	63.84298	10.0617	20	29-Oct-19 07:26	AZK			Sediment	1613 Full List
B9J0312-BLK1	10 ✓			20	29-Oct-19 07:26	AZK				QC
B9J0312-BS1	10 ✓			20	29-Oct-19 07:26	AZK	18F1913 ✓	10 ✓		QC
B9J0312-DUP1	12.12 ✓	81.8868	9.9247	20	29-Oct-19 07:26	AZK				QC
B9J0312-DUP2	12.18 ✓	82.01582	9.9875	20	29-Oct-19 07:26	AZK				QC

All bolded data on report verified against written benchsheet by (initial/date)

11/06/19 

Process Sheet

Workorder: 1903546

29-Oct-19

Prep Expiration: 2020-10-02
Client: Anchor QEA, LLC

Workorder Due: ~~05-Nov-19 00:00~~

TAT: 28 21 (D) 10/10/19

Method: 1613 Full List
Matrix: Aqueous
Client Matrix: QC Water
Also run: Percent Solids

Prep Batch: B9J0185

Prep Data Entered: 00 10/22/19
Date and Initials

Initial Sequence: S9J0059

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1903546-03	A <input checked="" type="checkbox"/>	PDI-FB-1910031324	08-Oct-19 10:03	WR-2 C-3	
1903546-04	J <input checked="" type="checkbox"/>	PDI-RB-1910031323	08-Oct-19 10:03	WR-2 C-3	

WO Comments: ~~Rest 1g extraction (dry weight)~~
~~Dioxin 10g (dry weight)~~
~~PCB 5g extraction (dry weight)~~

Pre-Prep Check Out: NA

Prep Check Out: 00 10/18/19

Prep Reconciled Initials/Date: 00 10/18/19

Pre-Prep Check In: NA

Prep Check In: NA

Spike Reconciled Initials/Date: 00 10/18/19

VialBoxID: Test

PREPARATION BENCH SHEET

Matrix: Aqueous

B9J0185

Chemist: AO

Method: 1613 Full List

Prep Date/Time: 18-Oct-19

Method: 1613 2.3.7.8s Only

Method: 1613 2.3.7.8-TCDD Only

Prepared using: HRMS - Separatory Funnel

VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
B9J0185-BLK1	NA	NA	(1.00)	AO AZ 10/18/19	AO AZ 10/21/19	NA	AZ 10/21/19	AZ 10/21/19	AO AZ 10/21/19	AO AZ 10/21/19
B9J0185-BS1	↓	↓	(1.00)	↓	↓	↓	↓	↓	↓	↓
1903424-01	1482.17	502.95	0.97922	↓	↓	↓	↓	↓	↓	↓
1903454-01	1489.09	565.84	0.98325	↓	↓	↓	↓	↓	↓	↓
1903525-01	1483.19	515.58	0.96701	↓	↓	↓	↓	↓	↓	↓
1903543-01	1321.29	394.92	0.92637	↓	↓	↓	↓	↓	NA	↓
1903546-03	1465.64	508.40	0.95724	↓	↓	↓	↓	↓	AO AZ 10/21/19	↓
1903546-04	1491.05	509.04	0.98601	↓	↓	↓	↓	↓	↓	↓
1903566-01	1529.57	513.50	1.01607	↓	↓	↓	↓	↓	↓	↓
1903644-01	1491.52	504.75	0.98677	↓	↓	↓	↓	↓	↓	↓

Ⓐ Sample composited from A, B, C bottles (3424-01A: 10mls, 3424-01B: 480mls, 3424-01C: 510mls) using graduated cylinder into bottle 3424-01G. BL 10/18/19

Ⓣ AO 10/18/19

Ⓑ Severe emulsion, multiple Na₂SO₄ funnels used AO 10/18/19

Ⓢ PPT formed during rotovaping AO 10/21/19

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP: SEFUN SOX SDS	Check Out: Chemist/Date: AO 10/18/19
PCDD/F 19C1902, 10μL	PCDD/F 18F1913, 10μL	PCDD/F 19E1602, 10μL	PCDD/F 19E1603, 10μL	Start Date/Time: NA	SOLV: DCM	Check In: Chemist/Date: NA
PCB	PCB	PCB	PCB	Stop Date/Time: NA	Other: NA	Balance ID: HRMS-10
PAH	PAH	PAH	PAH		Final Volume(s): C14 20mL	

Comments: Assume 1 g = 1 mL
 1 = Sample approached dryness on rotovap
 2 = Sample bumped on rotovap; lost < 5%
 3 = Sample poured through Na₂SO₄ to remove water
 4 = Precipitate present at Final Volume
 Work Order 1903546

5 = Sample Centrifuged to remove particulate
 6 = Added boiling chips to separatory funnel
 7 = Sample emulsed during shakeout

Analyst: AO	Test Code: %Moist/%Solids	Data Entry Verified by: (Initial and Date) <i>AO 10/22/19</i>
Analyte:	Units: %	
Dried at 110°C+/-5°C		
Oven ID: 01 02		

Inst HRMS-10 Date/Time IN: 10/18/19 1115 Date/Time OUT: 10/21/19 1100

Particle Size	SampleID	SampType	Initial and Date:		Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	AO 10/18/19			NA		Sample Homogenized*	
			Pan Tare Wt. (gms)	AO 10/18/19					AO 10/21/19	Visual Inspection	Cl-	pH Before	pH After		Acid Added
	1903424-01	Sample	1.2900	AO 10/18/19	9.6600	1.3300	0.0400	0.48	GOLD	0	8	NA	NA	X	
	1903454-01	Sample	1.2900	AO 10/18/19	13.4900	1.3000	0.0100	0.08	CLEAR	0	6	NA	NA	X	
	1903525-01	Sample	1.2800	AO 10/18/19	15.0100	1.3100	0.0300	0.22	YELLOW	0	7	NA	NA	X	
	1903543-01	Sample	1.2900	AO 10/18/19	13.2100	1.3000	0.0100	0.08	CLEAR	0	7	NA	NA	X	
	1903546-03	Sample	1.2900	AO 10/18/19	18.5700	1.2900	0.0000	0.00	CLEAR	0	5	NA	NA	X	
	1903546-04	Sample	1.3000	AO 10/18/19	17.1800	1.3000	0.0000	0.00	CLEAR	0	5	NA	NA	X	
	1903566-01	Sample	1.2900	AO 10/18/19	18.2100	1.3000	0.0100	0.06	CLEAR	0	6	NA	NA	X	
	1903644-01	Sample	1.2900	AO 10/18/19	15.4500	1.3000	0.0100	0.07	CLEAR	0	6	NA	NA	X	

*Sample homogenized in sample container unless otherwise noted.

Percent Moisture/ Percent Solids

D2216-90

BATCH ID B9J0186

Analyst: AO	Test Code: %Moist/%Solids	Data Entry Verified by: (Initial and Date) NA
Analyte: Dried at 110°C+/-5°C	Units: %	
Oven ID: 01 02		

Inst **HRMS-10**

Date/Time IN: **10/18/19 11:12** Date/Time OUT: **10/21/19 11:00**

Particle Size	SampleID	SampType	Initial and Date: AO 10/18/19		Initial and Date: AO 10/21/19		Dry Sample Weight (g)	%Solids RawVal	Initial and Date: AO 10/18/19			Initial and Date: AO 10/18/19	
			Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Visual Inspection			Cl-	pH Before	pH After	Acid Added	Sample Homogenized*
	1903424-01	Sample	1.29	9.66	1.33			gold	0	8			X
	1903454-01	Sample	1.29	13.49	1.30			Clear	0	6			X
	1903525-01	Sample	1.28	15.01	1.31			Yellow	0	7			X
	1903543-01	Sample	1.29	13.21	1.30			Clear	0	7			X
	1903546-03	Sample	1.29	18.57	1.28 1.29			T	0	5			X
	1903546-04	Sample	1.30	17.18	1.28 1.30			T	0	5			X
	1903566-01	Sample	1.29	18.21	1.30			T	0	6			X
	1903644-01	Sample	1.29	15.45	1.30			T	0	6			X

*Sample homogenized in sample container unless otherwise noted.

Batch: B9J0185

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1903424-01	0.97922			20	18-Oct-19 10:09	JJC			Liquid	1613 Full List
1903454-01	0.98325			20	18-Oct-19 10:09	JJC			Effluent	1613 Full List
1903525-01	0.96761			20	18-Oct-19 10:09	JJC			Water	1613 Full List
1903543-01	0.92637			20	18-Oct-19 10:09	JJC			Wastewater	1613 2,3,7,8-TCDD Only
1903546-03	0.95724			20	18-Oct-19 10:09	JJC			QC Water	1613 Full List
1903546-04	0.98601			20	18-Oct-19 10:09	JJC			QC Water	1613 Full List
1903566-01	1.01607			20	18-Oct-19 10:09	JJC			Water	1613 Full List
1903644-01	0.98677			20	18-Oct-19 10:09	JJC			Water	1613 2,3,7,8s Only
B9J0185-BLK1	1			20	18-Oct-19 10:09	JJC				QC
B9J0185-BS1	1			20	18-Oct-19 10:09	JJC	18F1913	10		QC

All bolded data on report verified against written benchsheet by (initial/date) GD 10/22/19

SAMPLE DATA – EPA METHOD 1613

Client ID: Method Blank
Lab ID: B9J0185-BLK1

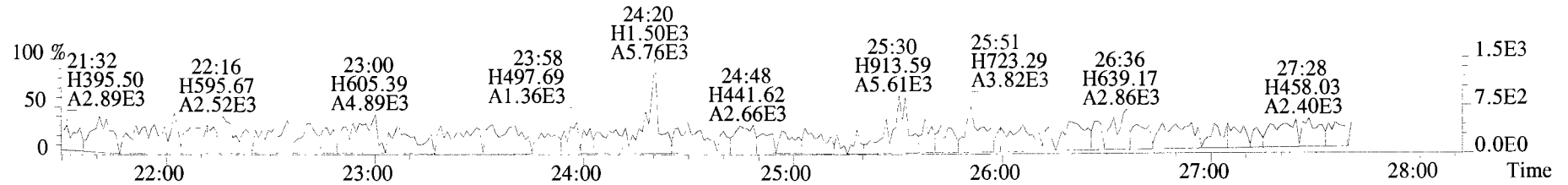
Filename: 191023D1 S:5 Acq:23 OCT 19 16:31:52
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000

ConCal: ST191023D1 1
EndCAL: NA

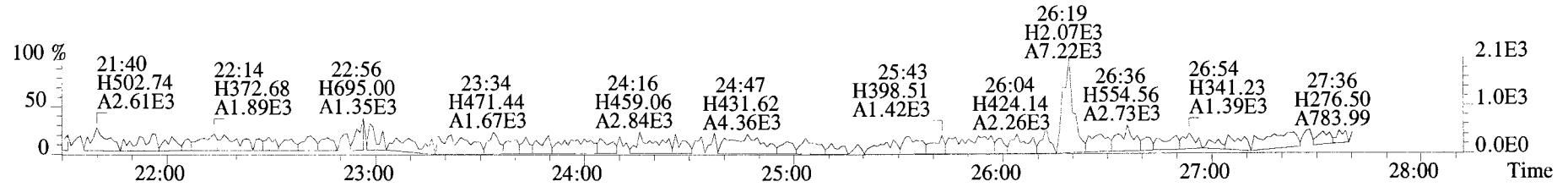
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	NotF η	*		160	2.5	0.831	Total Tetra-Dioxins	*	*		160	0.831
1,2,3,7,8-PeCDD	*	* n	0.90	NotF η	*		174	2.5	0.771	Total Penta-Dioxins	*	*		174	0.771
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF η	*		190	2.5	1.51	Total Hexa-Dioxins	*	*		190	1.51
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotF η	*		190	2.5	1.60	Total Hepta-Dioxins	*	*		171	1.65
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotF η	*		190	2.5	1.41	Total Tetra-Furans	*	*		180	0.743
1,2,3,4,6,7,8-HpCDD	*	* n	0.98	NotF η	*		171	2.5	1.65	Total Penta-Furans	0.0000	0.0000		188	0.977
OCDD	*	* n	0.96	NotF η	*		169	2.5	2.14	Total Hexa-Furans	*	*		238	0.935
										Total Hepta-Furans	*	*		141	1.09
2,3,7,8-TCDF	*	* n	0.95	NotF η	*		180	2.5	0.743						
1,2,3,7,8-PeCDF	*	* n	0.96	NotF η	*		188	2.5	1.18						
2,3,4,7,8-PeCDF	*	* n	1.01	NotF η	*		188	2.5	0.818						
1,2,3,4,7,8-HxCDF	*	* n	1.18	NotF η	*		238	2.5	0.982						
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotF η	*		238	2.5	0.916						
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotF η	*		238	2.5	0.829						
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotF η	*		238	2.5	1.04						
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	NotF η	*		141	2.5	1.58						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotF η	*		141	2.5	0.771						
OCDF	*	* n	0.95	NotF η	*		155	2.5	1.76						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	7.20e+06	0.81 y	1.10	26:18	1793.5					89.7					
IS 13C-1,2,3,7,8-PeCDD	6.01e+06	0.61 y	0.88	30:46	1860.7					93.0					
IS 13C-1,2,3,4,7,8-HxCDD	4.65e+06	1.26 y	0.64	34:06	1782.3					89.1					
IS 13C-1,2,3,6,7,8-HxCDD	5.30e+06	1.27 y	0.86	34:12	1526.8					76.3					
IS 13C-1,2,3,7,8,9-HxCDD	5.67e+06	1.22 y	0.81	34:30	1732.0					86.6					
IS 13C-1,2,3,4,6,7,8-HpCDD	4.07e+06	1.05 y	0.65	37:58	1532.8					76.6					
IS 13C-OCDD	6.85e+06	0.91 y	0.58	41:18	2912.0					72.8					
IS 13C-2,3,7,8-TCDF	8.99e+06	0.79 y	1.03	25:31	1489.9					74.5					
IS 13C-1,2,3,7,8-PeCDF	6.94e+06	1.58 y	0.85	29:36	1392.8					69.6					
IS 13C-2,3,4,7,8-PeCDF	8.62e+06	1.58 y	0.85	30:29	1745.2					87.3					
IS 13C-1,2,3,4,7,8-HxCDF	4.98e+06	0.51 y	0.83	33:12	1473.4					73.7					
IS 13C-1,2,3,6,7,8-HxCDF	6.08e+06	0.51 y	1.03	33:20	1448.0					72.4					
IS 13C-2,3,4,6,7,8-HxCDF	6.97e+06	0.52 y	0.95	33:55	1802.0					90.1					
IS 13C-1,2,3,7,8,9-HxCDF	6.24e+06	0.52 y	0.83	34:53	1856.5					92.8					
IS 13C-1,2,3,4,6,7,8-HpCDF	2.46e+06	0.40 y	0.76	36:45	798.79					39.9					
IS 13C-1,2,3,4,7,8,9-HpCDF	3.97e+06	0.45 y	0.58	38:31	1682.5					84.1					
IS 13C-OCDF	8.05e+06	0.92 y	0.69	41:32	2878.4					72.0					
C/Up 37C1-2,3,7,8-TCDD	2.85e+06		1.20	26:19	650.24					81.3					
RS/RT 13C-1,2,3,4-TCDD	7.33e+06	0.80 y	1.00	25:44	2000.0										
RS 13C-1,2,3,4-TCDF	1.17e+07	0.82 y	1.00	24:20	2000.0										
RS/RT 13C-1,2,3,4,6,9-HxCDF	8.12e+06	0.52 y	1.00	33:37	2000.0										

Integrations
by DB
Analyst: DB
Reviewed
by CT
Analyst: CT
Date: 10/24/19
Date: 10/24/19

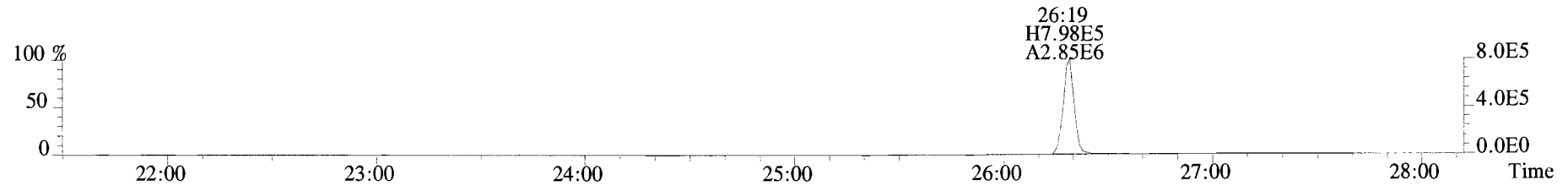
File:191023D1 #1-493 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory VG7 Text:B9J0185-BLK1 Method Blank 1 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



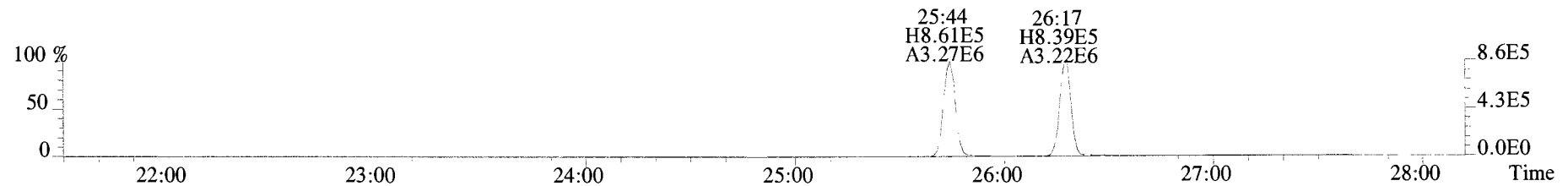
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



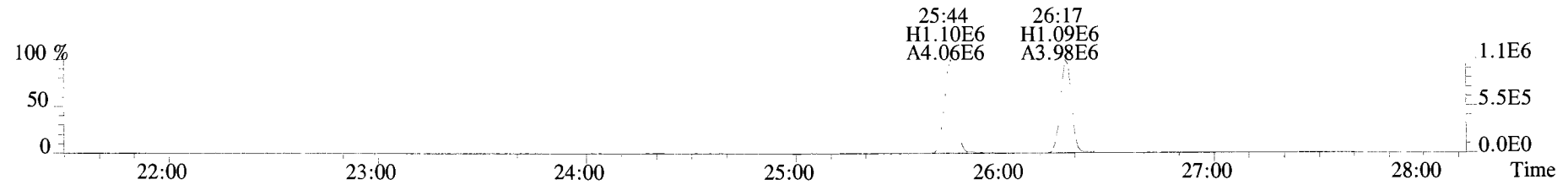
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



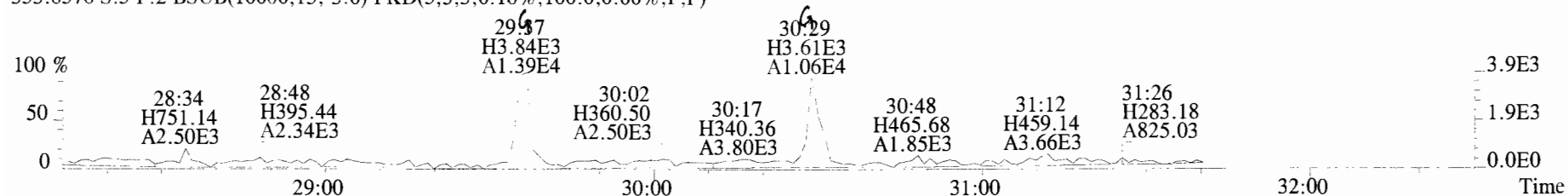
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



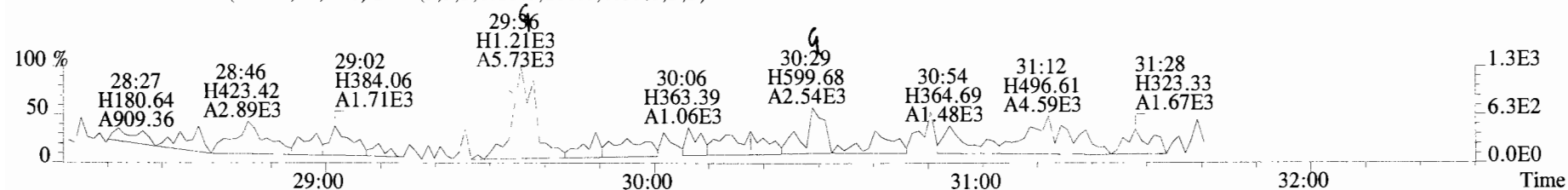
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



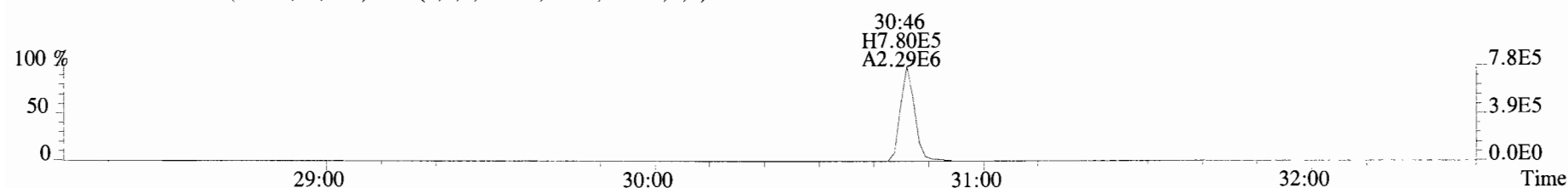
File:191023D1 #1-211 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0185-BLK1 Method Blank 1 Exp:OCDD_DB5
 353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



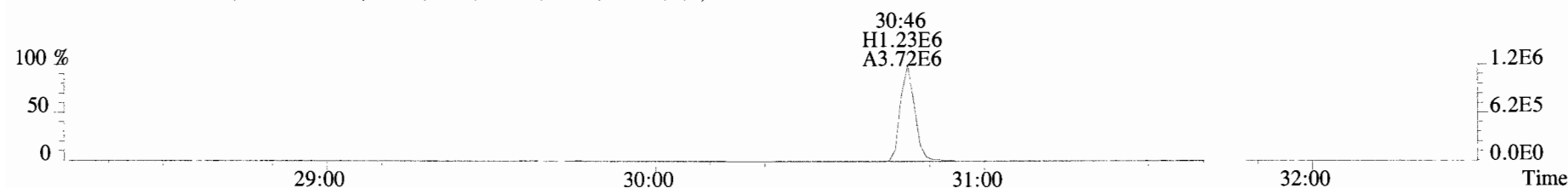
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



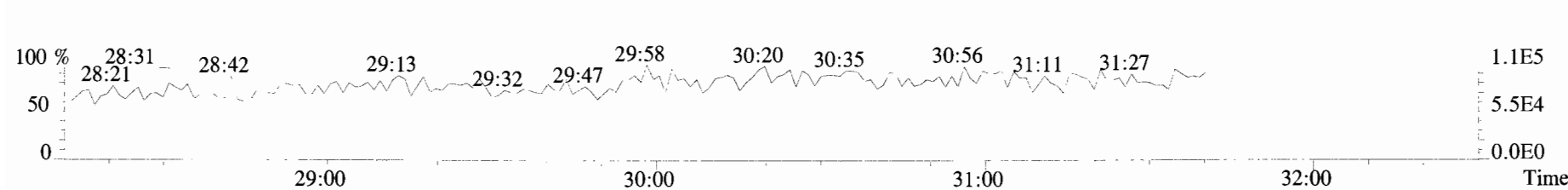
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



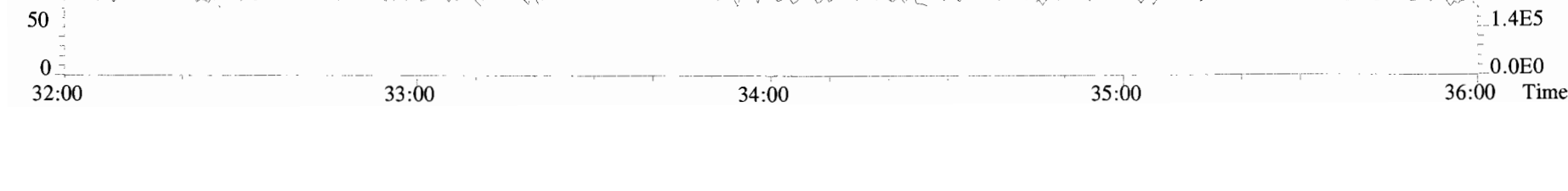
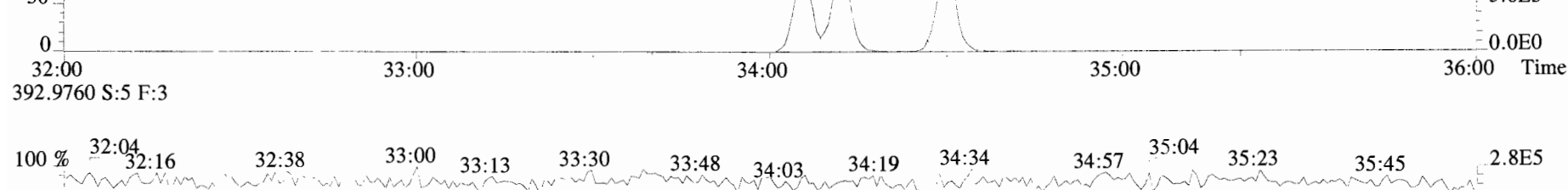
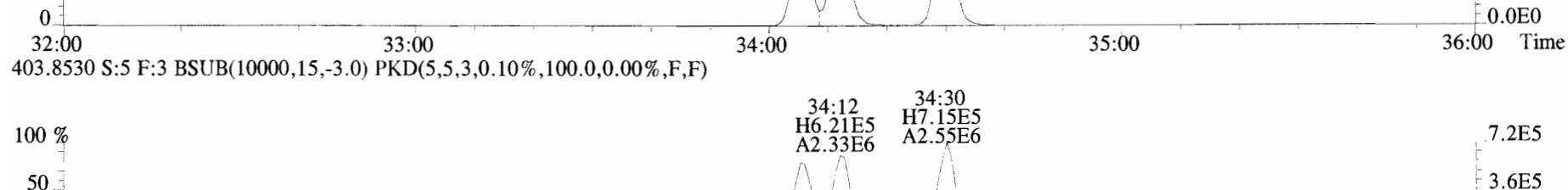
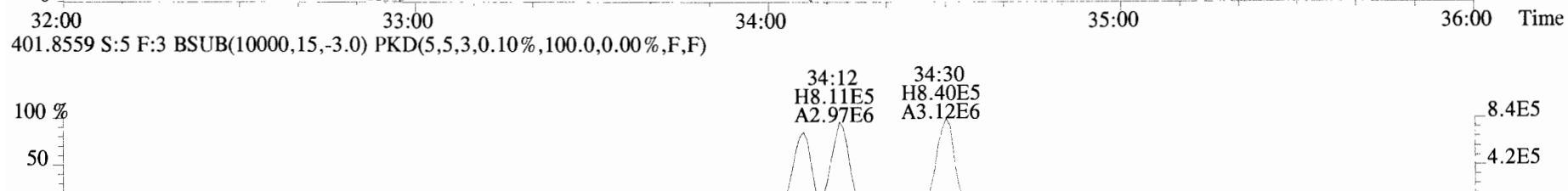
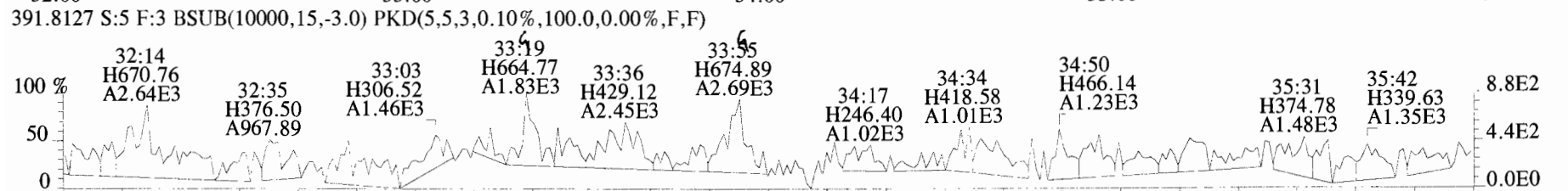
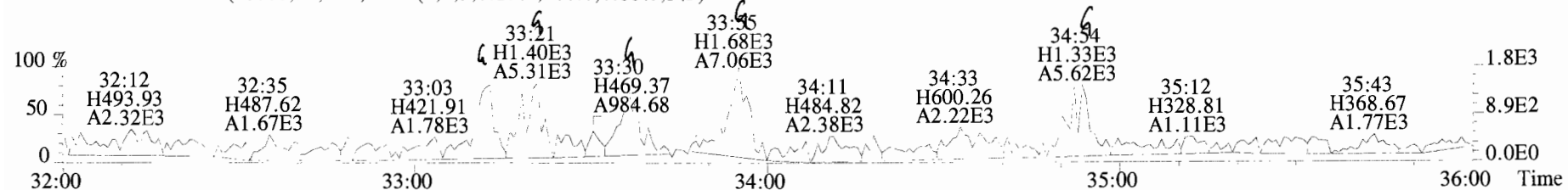
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



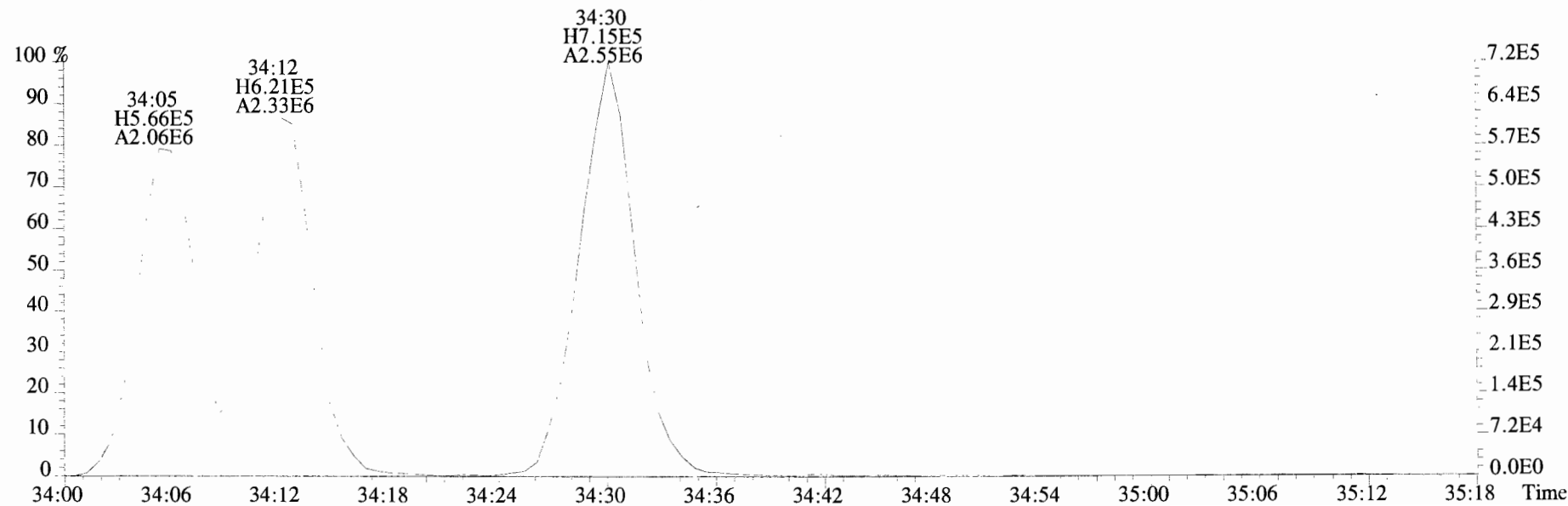
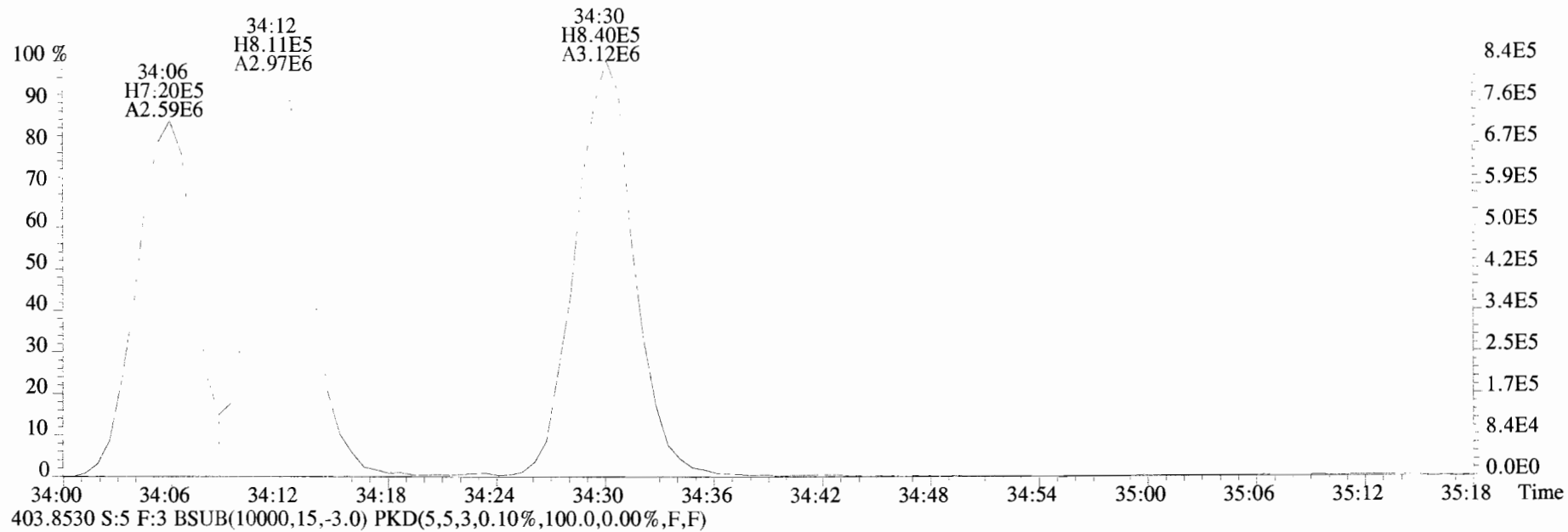
366.9792 S:5 F:2



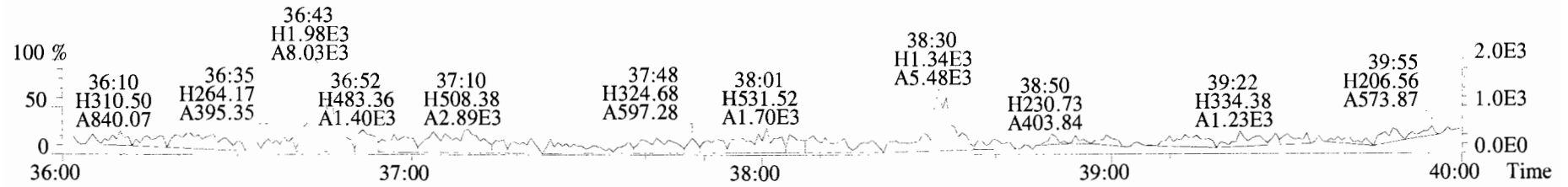
File:191023D1 #1-385 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B9J0185-BLK1 Method Blank 1 Exp:OCDD_DB5
 389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



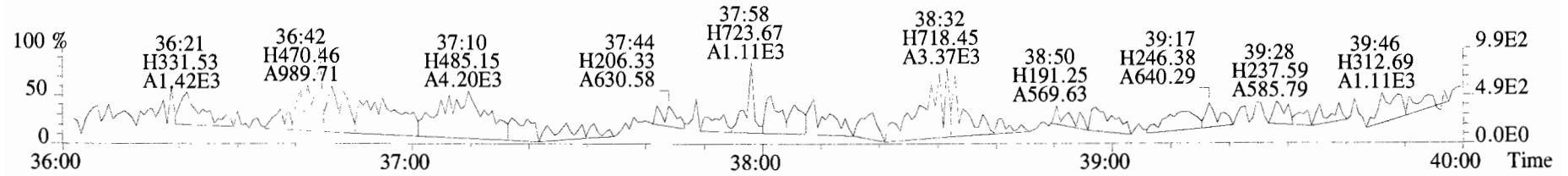
File:191023D1 #1-385 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0185-BLK1 Method Blank 1 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



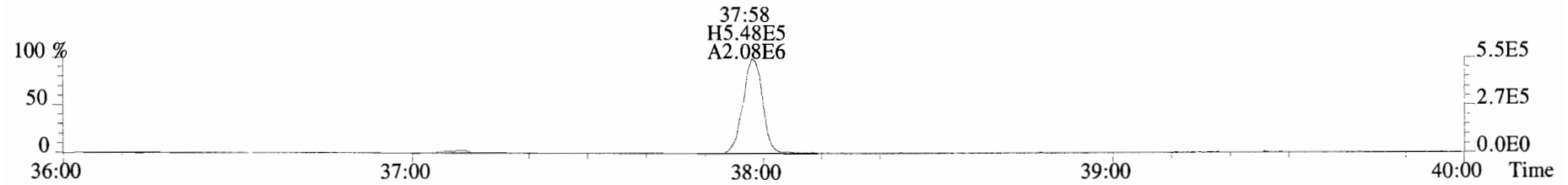
File:191023D1 #1-356 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B9I0185-BLK1 Method Blank 1 Exp:OCDD_DB5
 423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



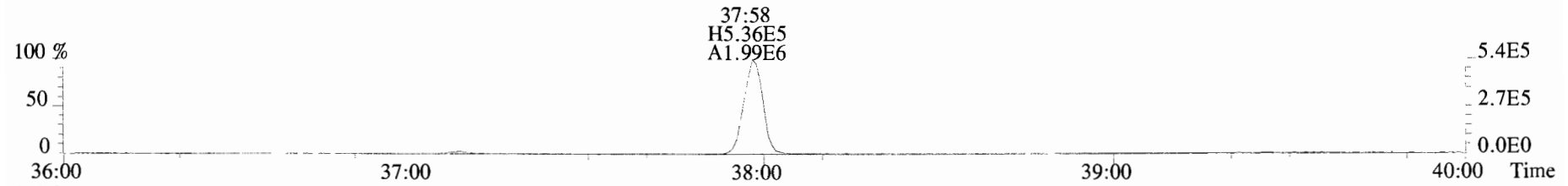
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



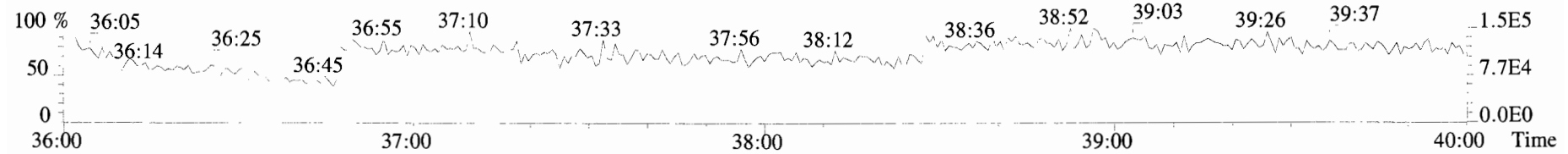
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



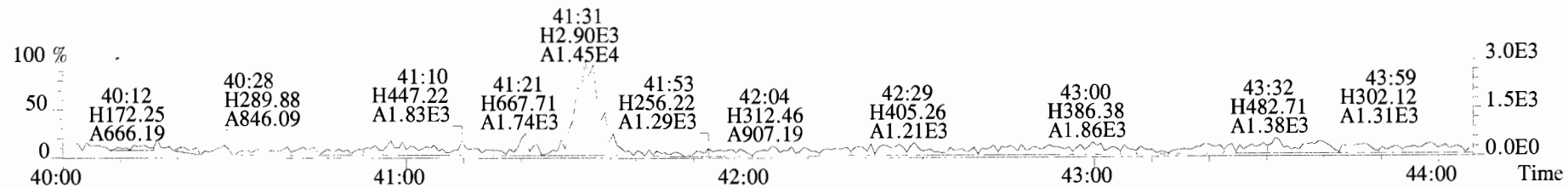
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



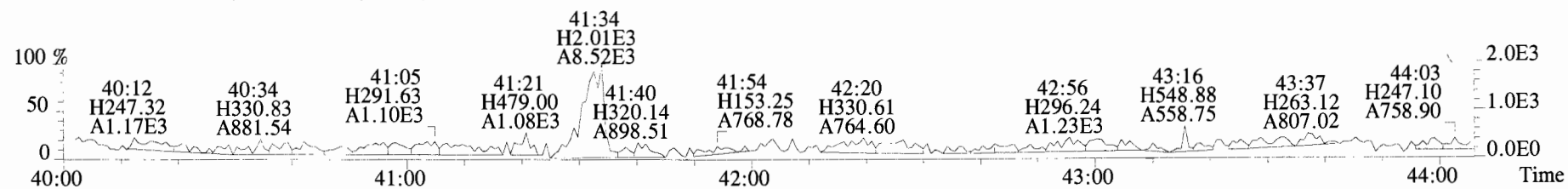
454.9728 S:5 F:4



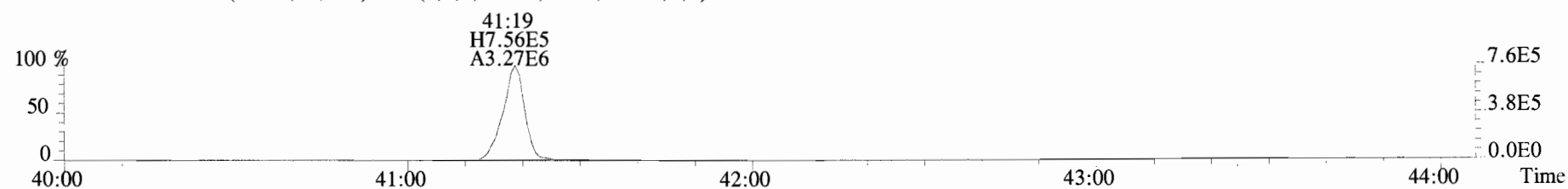
File:191023D1 #1-432 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0185-BLK1 Method Blank 1 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



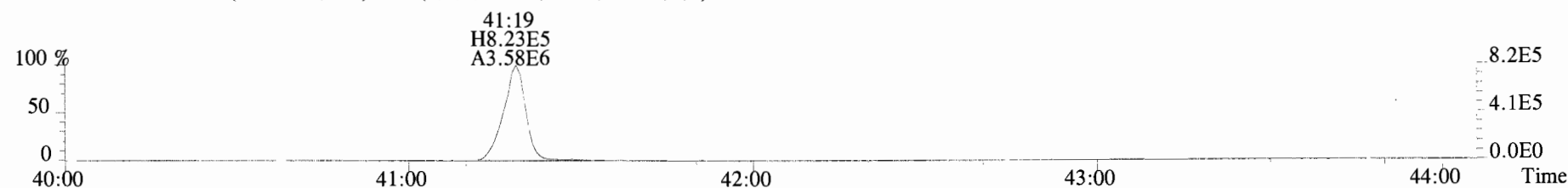
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



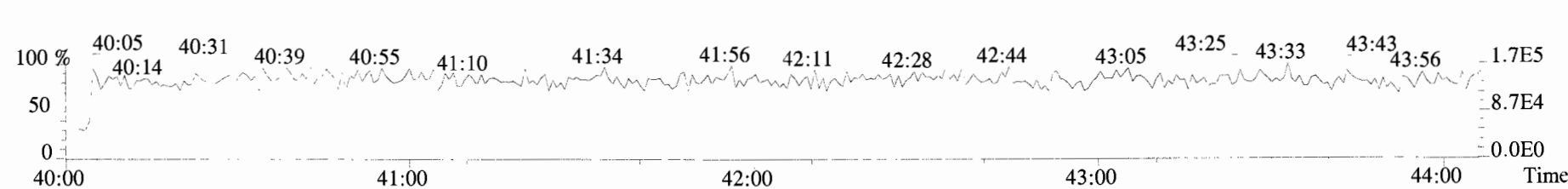
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



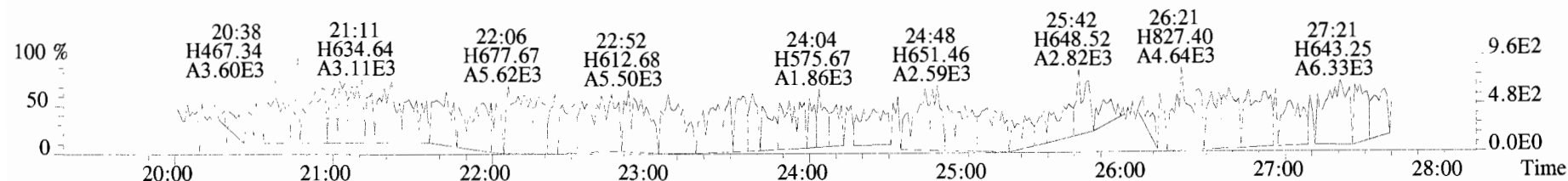
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



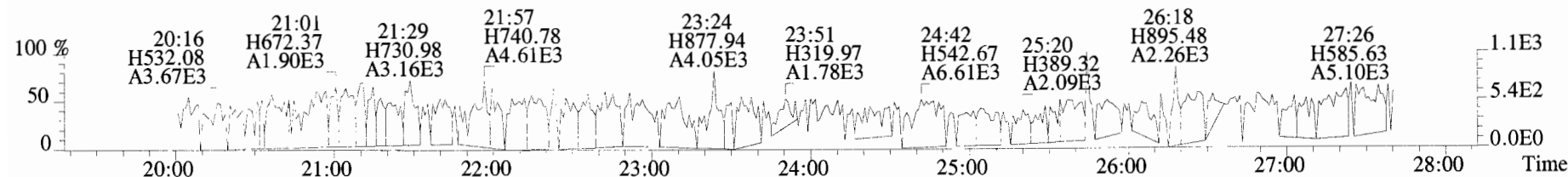
454.9728 S:5 F:5



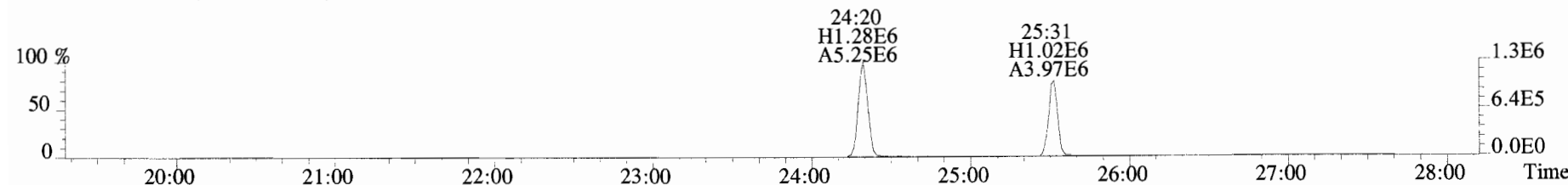
File:191023D1 #1-493 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9I0185-BLK1 Method Blank 1 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



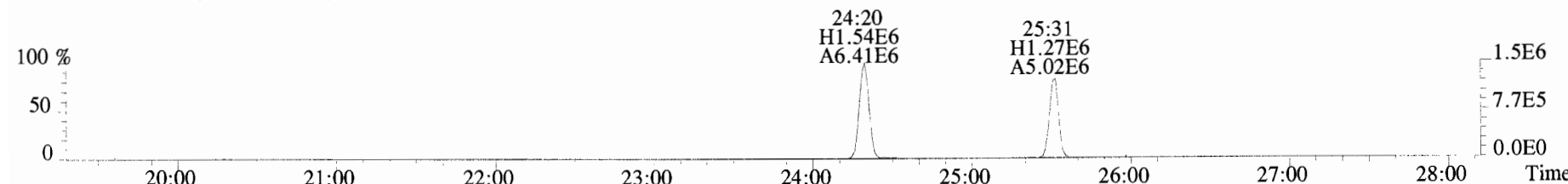
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



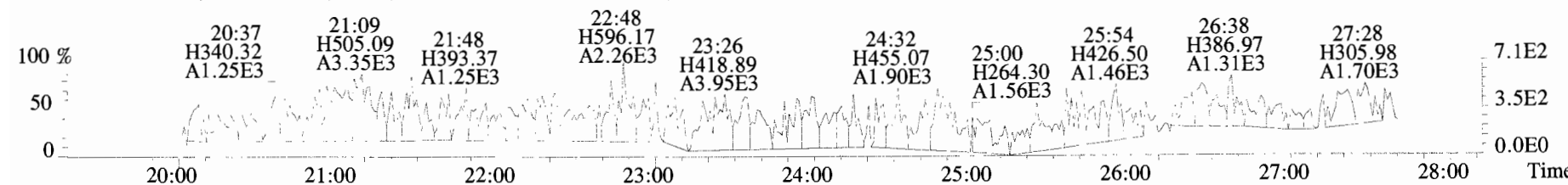
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



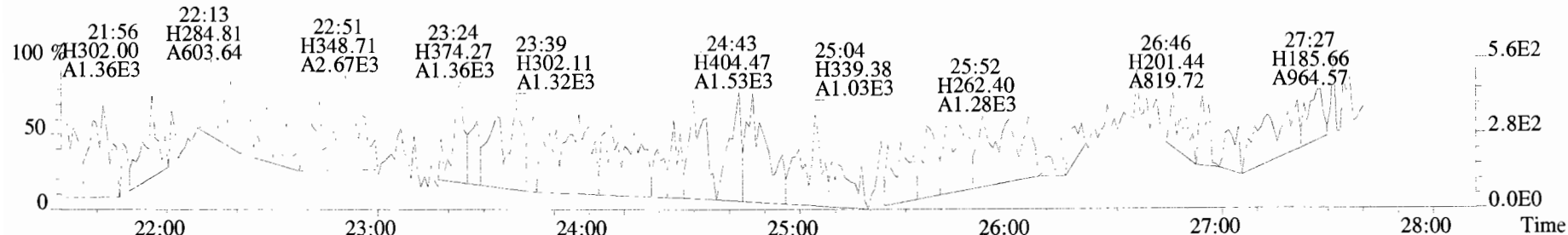
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



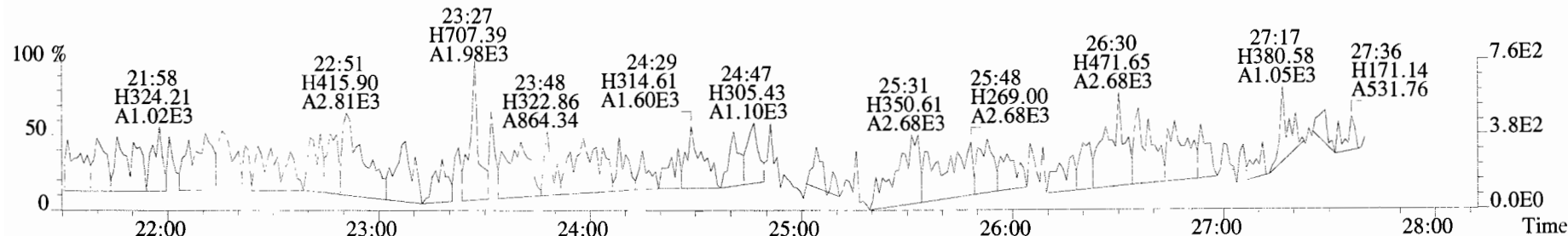
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



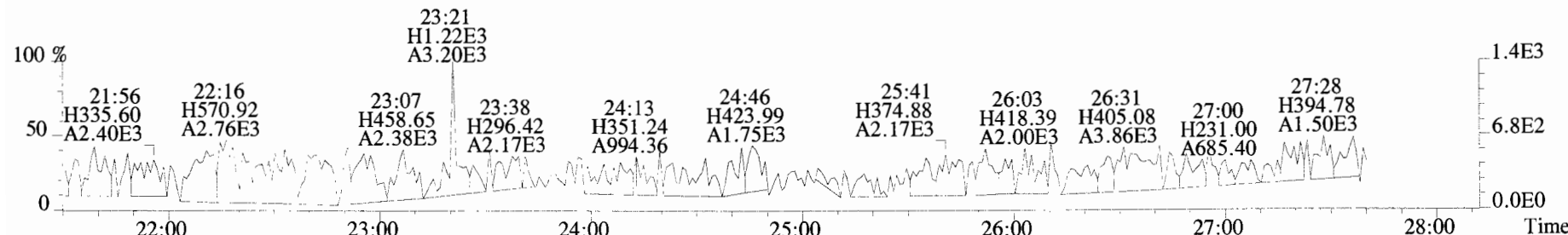
File:191023D1 #1-493 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B9J0185-BLK1 Method Blank 1 Exp:OCDD_DB5
 339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



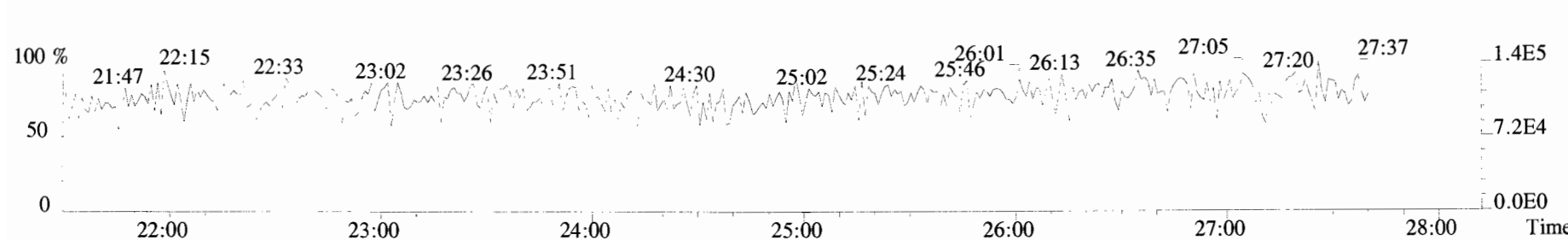
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



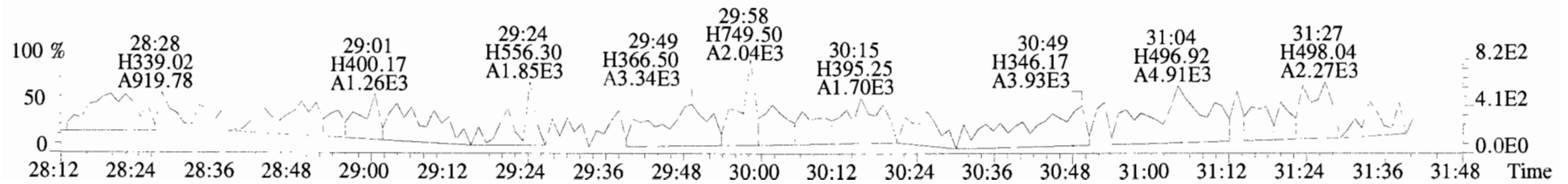
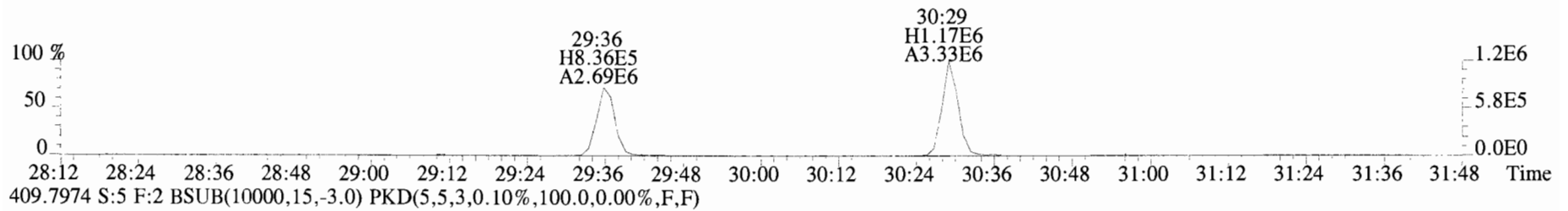
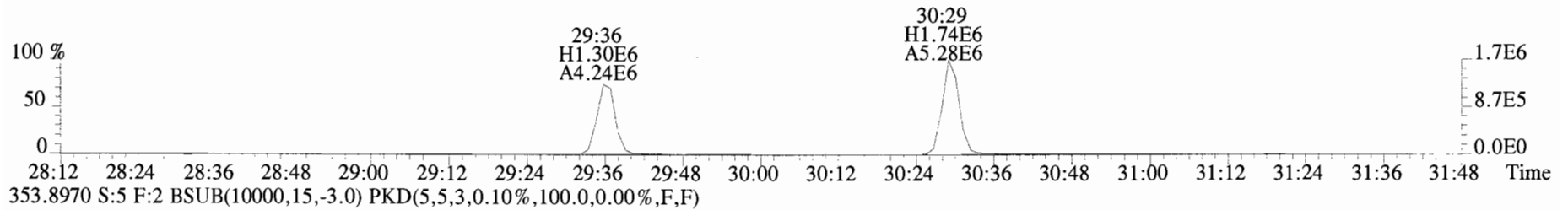
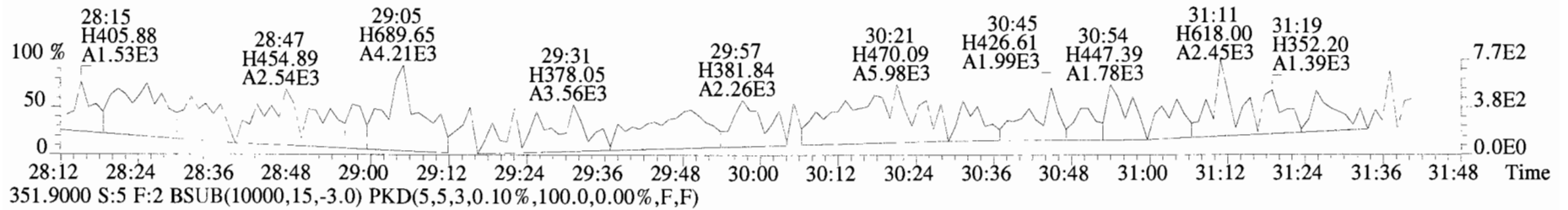
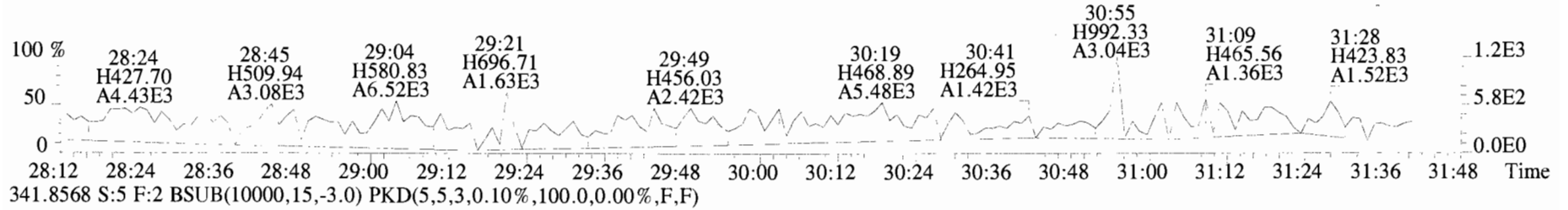
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



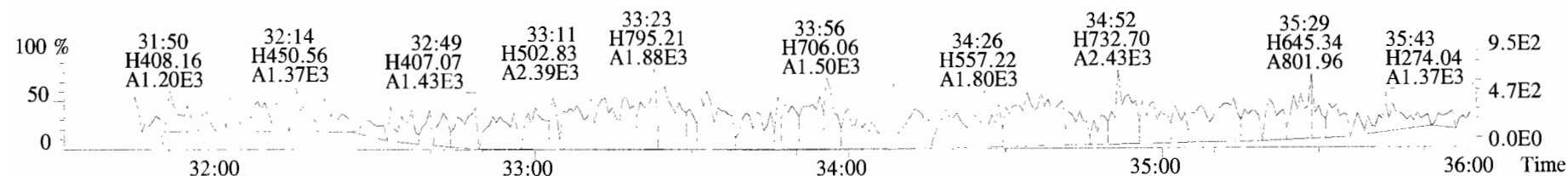
316.9824 S:5



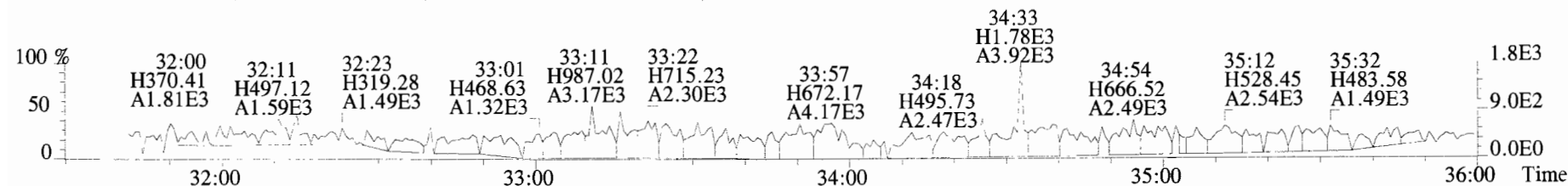
File:191023D1 #1-211 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0185-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



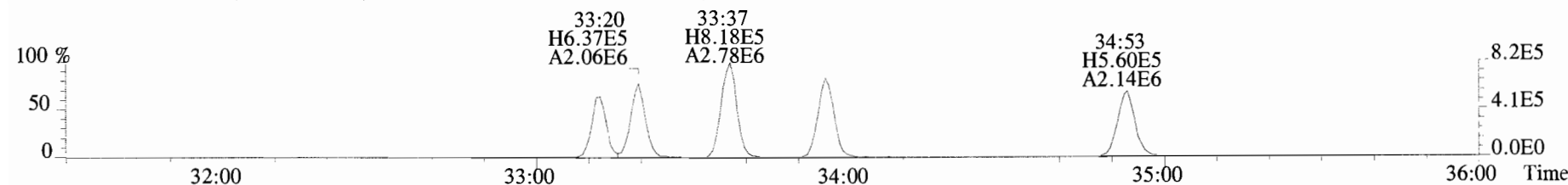
File:191023D1 #1-385 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0185-BLK1 Method Blank 1 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



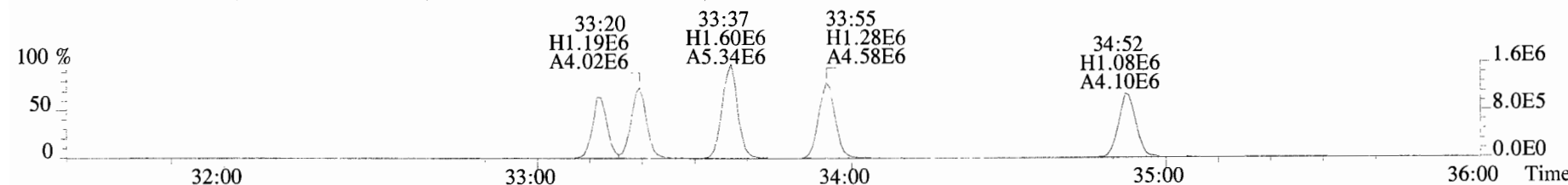
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



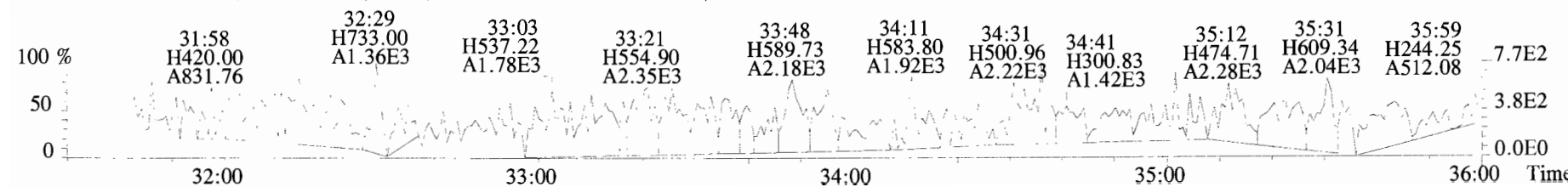
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



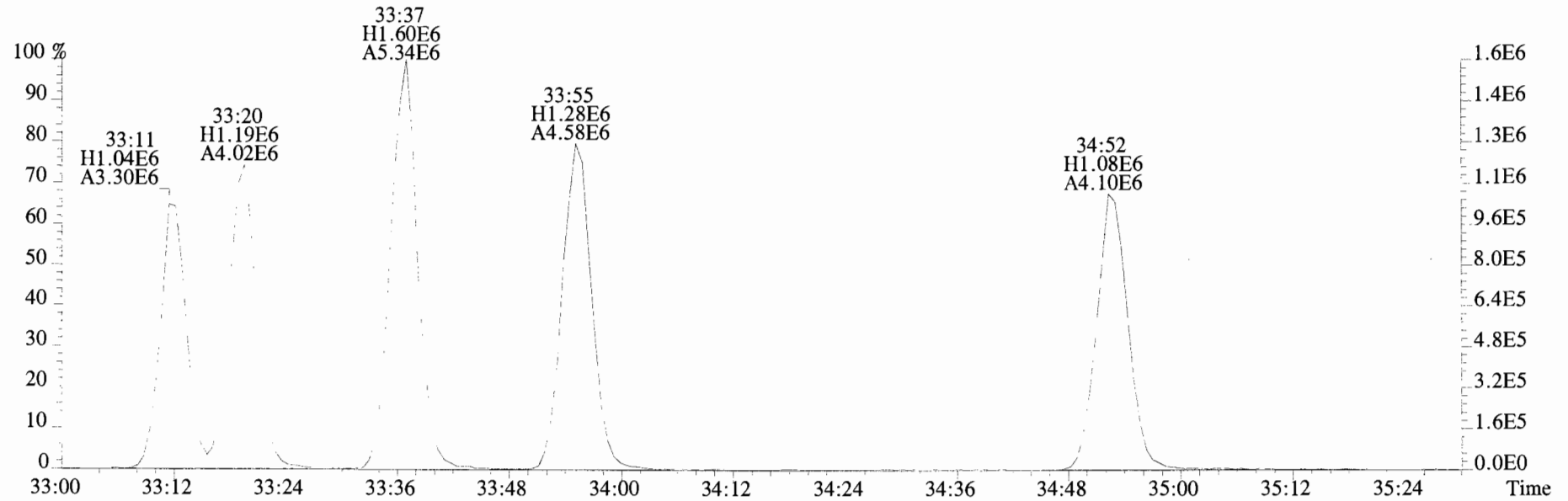
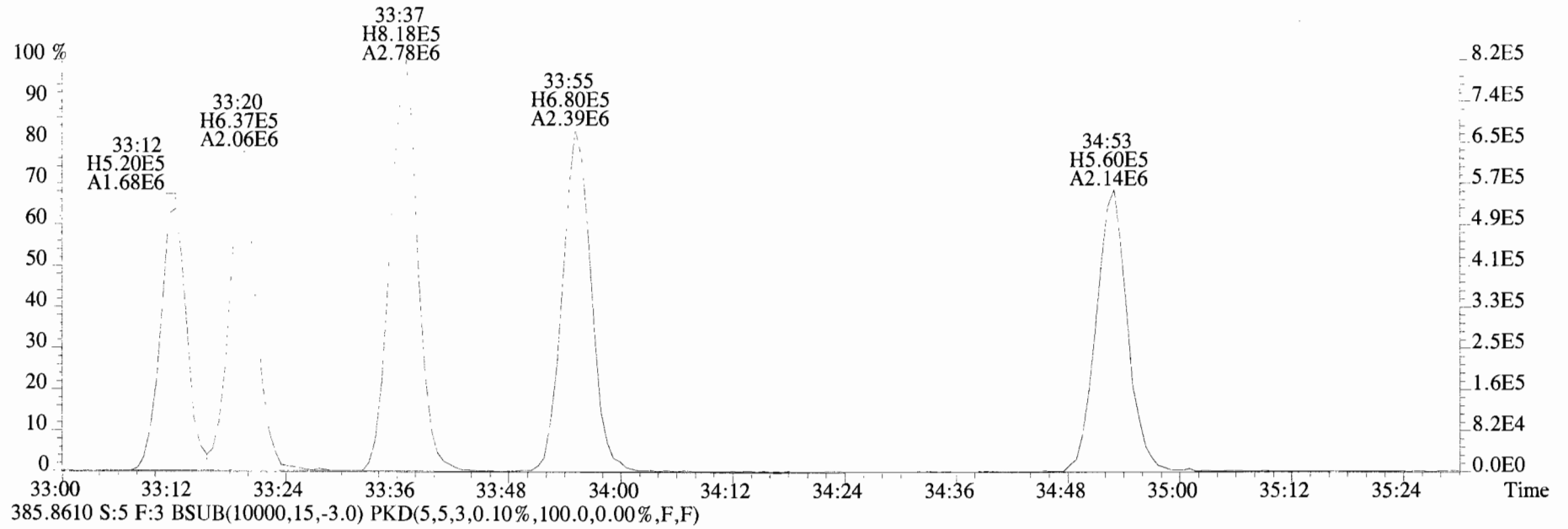
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



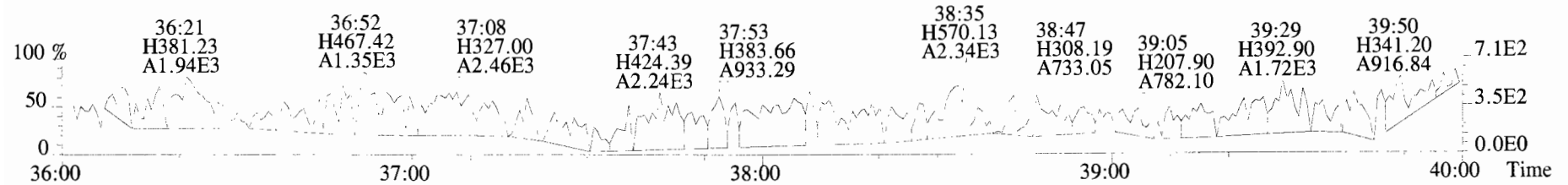
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



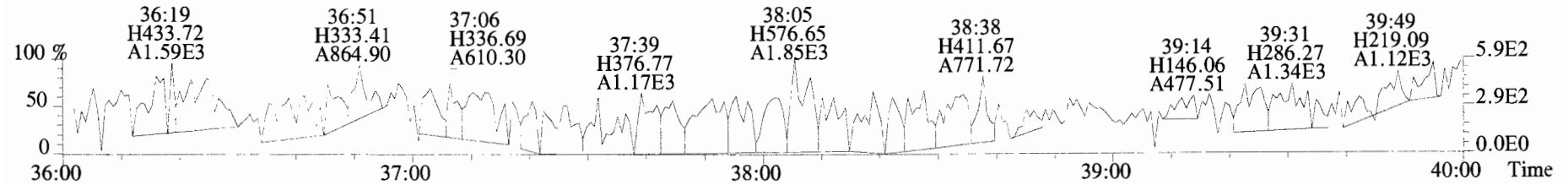
File: 191023D1 #1-385 Acq: 23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory VG7 Text: B9J0185-BLK1 Method Blank 1 Exp: OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



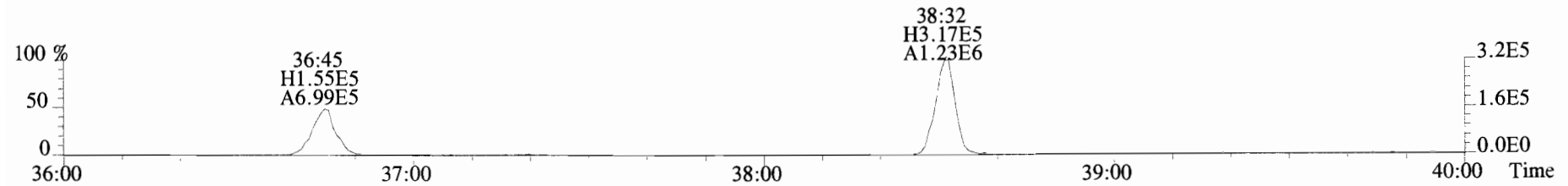
File:191023D1 #1-356 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text: Vista_Analytical_Laboratory_VG7 Text:B9J0185-BLK1 Method Blank 1 Exp:OCDD_DB5
 407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



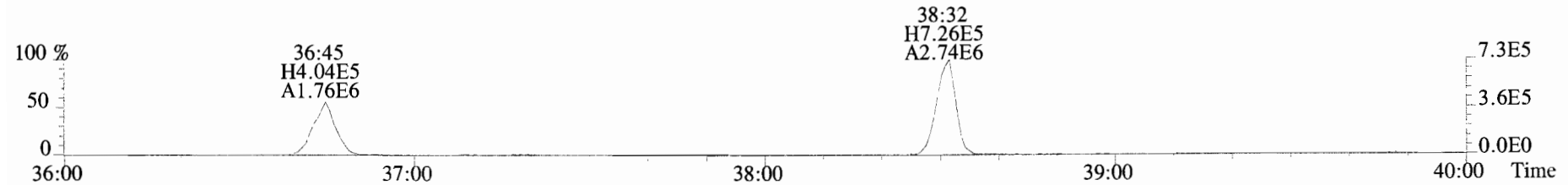
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



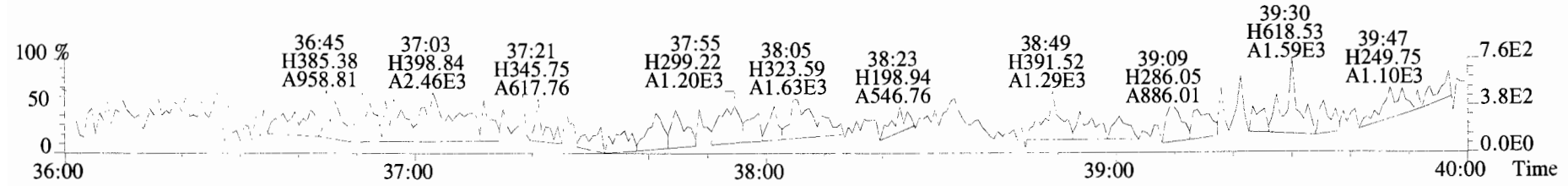
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



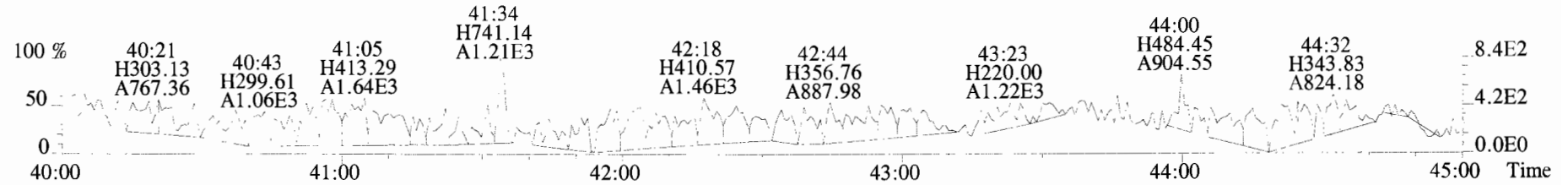
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



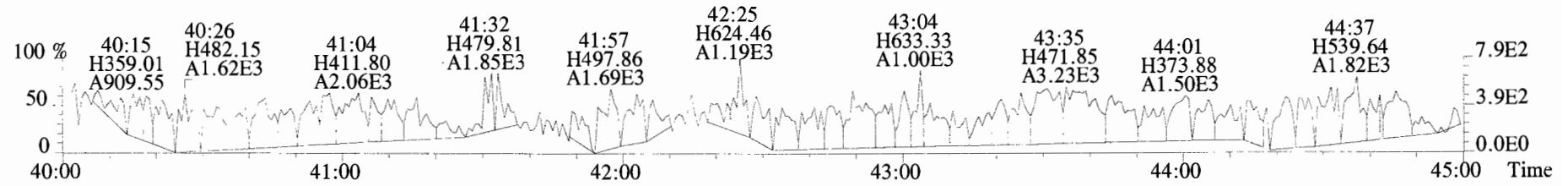
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



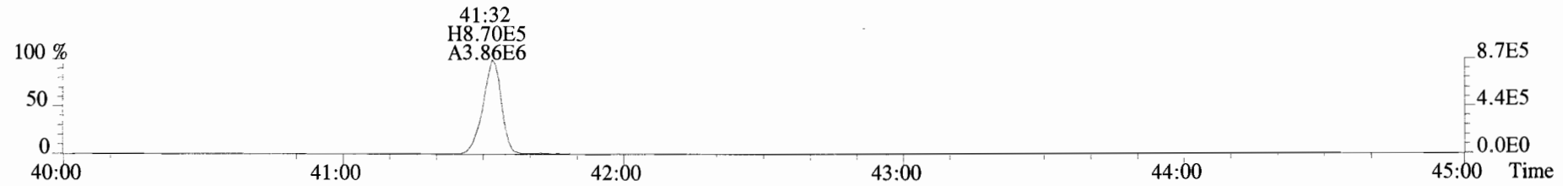
File:191023D1 #1-432 Acq:23-OCT-2019 16:31:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory_VG7 Text:B9J0185-BLK1 Method Blank 1 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



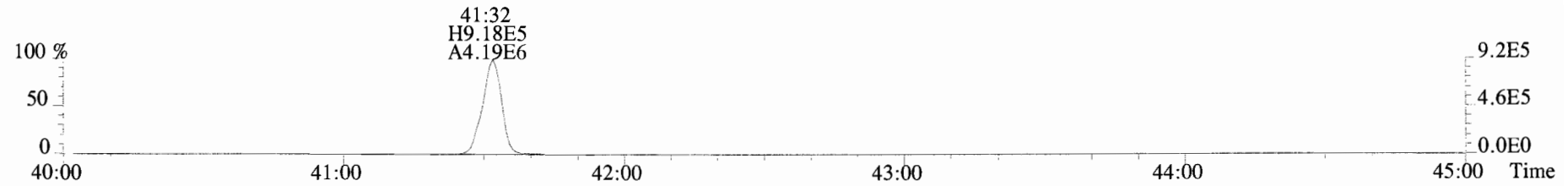
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



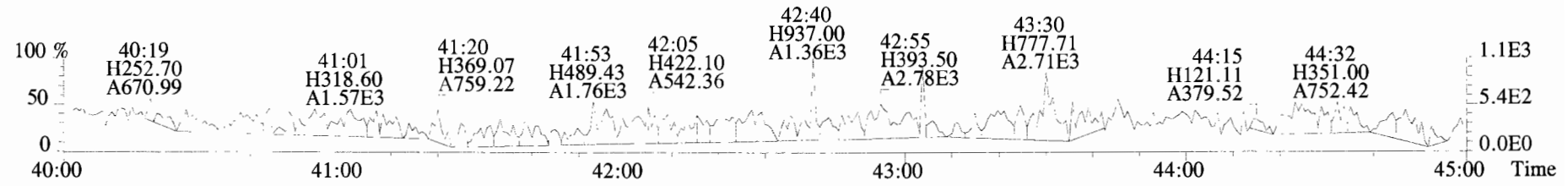
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B9J0185-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 191023D1-2

Ext. Date: Shift: Day Analysis Date: 23-OCT-19 Time: 14:07:54

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	10.2	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	48.0	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	50.5	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	52.9	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	51.3	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	49.8	35.0 - 70.0
OCDD	100	100	78.0 - 144.0
2,3,7,8-TCDF	10	9.24	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	49.2	40.0 - 67.0
2,3,4,7,8-PeCDF	50	50.9	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	47.3	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	47.3	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	50.1	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	50.1	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	49.0	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	49.8	39.0 - 69.0
OCDF	100	99.0	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: DB

Date: 10/24/19

FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B9J0185 BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 191023D1-2

Ext. Date: Shift: Day Analysis Date: 23-OCT-19 Time: 14:07:54

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	87.0	20.0 - 175.0 25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	97.7	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	97.2	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	81.3	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	92.5	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	90.7	26.0 - 166.0
13C-OCDD	200	163	26.0 - 397.0
13C-2,3,7,8-TCDF	100	62.9	22.0 - 152.0 26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	84.4	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	82.5	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	62.7	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	60.0	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	95.2	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	102	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	46.7	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	94.6	20.0 - 186.0
13C-OCDF	200	148	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	32.4	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: DB

Date: 10/24/19

Client ID: OPR
Lab ID: B9J0185-BS1

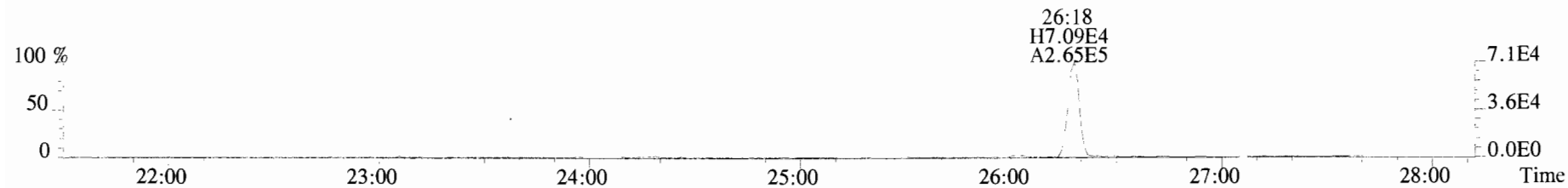
Filename: 191023D1 S:2 Acq:23 OCT 19 14:07:54
GC Column ID: ZB-5MS ICal: 1613VG7-10-9 19 wt/vol: 1.000

ConCal: ST191023D1 1
EndCAL: NA

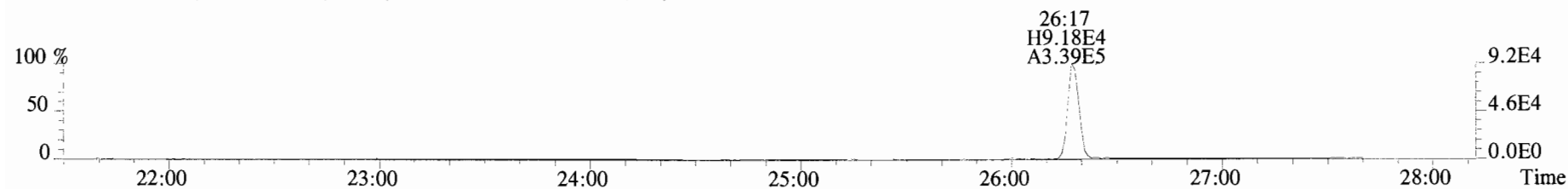
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	6.04e+05	0.78	y	0.91	26:18	10.205	*	2.5	*	Total Tetra-Dioxins	10.6	12.9	*	*	
1,2,3,7,8-PeCDD	2.56e+06	0.63	y	0.90	30:47	47.980	*	2.5	*	Total Penta-Dioxins	48.0	48.4	*	*	
1,2,3,4,7,8-HxCDD	2.79e+06	1.23	y	1.10	34:07	50.487	*	2.5	*	Total Hexa-Dioxins	155	155	*	*	
1,2,3,6,7,8-HxCDD	2.78e+06	1.24	y	0.94	34:13	52.871	*	2.5	*	Total Hepta-Dioxins	49.9	51.2	*	*	
1,2,3,7,8,9-HxCDD	2.97e+06	1.21	y	0.96	34:31	51.334	*	2.5	*	Total Tetra-Furans	10.0	12.7	*	*	
1,2,3,4,6,7,8-HpCDD	2.33e+06	1.03	y	0.98	37:59	49.764	*	2.5	*	Total Penta-Furans	101.16	102.54	*	*	
OCDD	3.65e+06	0.91	y	0.96	41:19	100.29	*	2.5	*	Total Hexa-Furans	195	195	*	*	
										Total Hepta-Furans	99.2	99.6	*	*	
2,3,7,8-TCDF	6.50e+05	0.77	y	0.95	25:31	9.2411	*	2.5	*						
1,2,3,7,8-PeCDF	3.88e+06	1.66	y	0.96	29:37	49.228	*	2.5	*						
2,3,4,7,8-PeCDF	4.11e+06	1.62	y	1.01	30:30	50.863	*	2.5	*						
1,2,3,4,7,8-HxCDF	2.33e+06	1.21	y	1.18	33:13	47.271	*	2.5	*						
1,2,3,6,7,8-HxCDF	2.53e+06	1.25	y	1.07	33:20	47.294	*	2.5	*						
2,3,4,6,7,8-HxCDF	4.08e+06	1.13	y	1.11	33:56	50.091	*	2.5	*						
1,2,3,7,8,9-HxCDF	3.62e+06	1.21	y	1.06	34:54	50.124	*	2.5	*						
1,2,3,4,6,7,8-HpCDF	1.57e+06	1.01	y	1.13	36:46	48.979	*	2.5	*						
1,2,3,4,7,8,9-HpCDF	2.82e+06	1.03	y	1.28	38:32	49.793	*	2.5	*						
OCDF	3.86e+06	0.91	y	0.95	41:33	98.997	*	2.5	*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	6.54e+06	0.74	y	1.10	26:16	87.016				87.0					
IS 13C-1,2,3,7,8-PeCDD	5.91e+06	0.62	y	0.88	30:46	97.675				97.7					
IS 13C-1,2,3,4,7,8-HxCDD	5.02e+06	1.22	y	0.64	34:06	97.221				97.2					
IS 13C-1,2,3,6,7,8-HxCDD	5.60e+06	1.27	y	0.86	34:12	81.265				81.3					
IS 13C-1,2,3,7,8,9-HxCDD	6.01e+06	1.26	y	0.81	34:30	92.546				92.5					
IS 13C-1,2,3,4,6,7,8-HpCDD	4.77e+06	1.06	y	0.65	37:58	90.663				90.7					
IS 13C-OCDD	7.59e+06	0.93	y	0.58	41:18	162.63				81.3					
IS 13C-2,3,7,8-TCDF	7.41e+06	0.76	y	1.03	25:30	62.858				62.9					
IS 13C-1,2,3,7,8-PeCDF	8.21e+06	1.54	y	0.85	29:36	84.386				84.4					
IS 13C-2,3,4,7,8-PeCDF	7.96e+06	1.57	y	0.85	30:29	82.511				82.5					
IS 13C-1,2,3,4,7,8-HxCDF	4.20e+06	0.49	y	0.83	33:12	62.673				62.7					
IS 13C-1,2,3,6,7,8-HxCDF	5.00e+06	0.49	y	1.03	33:20	59.999				60.0					
IS 13C-2,3,4,6,7,8-HxCDF	7.31e+06	0.50	y	0.95	33:55	95.226				95.2					
IS 13C-1,2,3,7,8,9-HxCDF	6.80e+06	0.51	y	0.83	34:53	102.00				102					
IS 13C-1,2,3,4,6,7,8-HpCDF	2.85e+06	0.44	y	0.76	36:45	46.749				46.7					
IS 13C-1,2,3,4,7,8,9-HpCDF	4.43e+06	0.43	y	0.58	38:31	94.597				94.6					
IS 13C-OCDF	8.23e+06	0.91	y	0.69	41:32	148.35				74.2					
C/Up 37Cl-2,3,7,8-TCDD	2.67e+06			1.20	26:18	32.449				81.1					
RS/RT 13C-1,2,3,4-TCDD	6.86e+06	0.76	y	1.00	25:43	100.00									
RS 13C-1,2,3,4-TCDF	1.14e+07	0.75	y	1.00	24:18	100.00									
RS/RT 13C-1,2,3,4,6,9-HxCDF	8.05e+06	0.48	y	1.00	33:37	100.00									

Integrations Reviewed
by DB by CT
Analyst: DB Analyst: CT
Date: 10/24/19 Date: 10/24/19

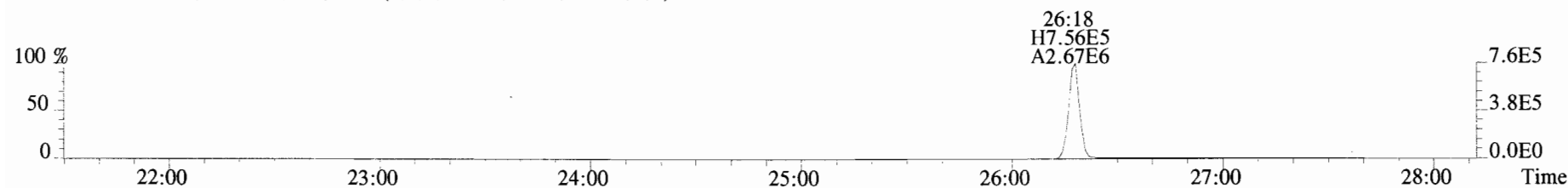
File:191023D1 #1-493 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0185-BS1 OPR 1 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



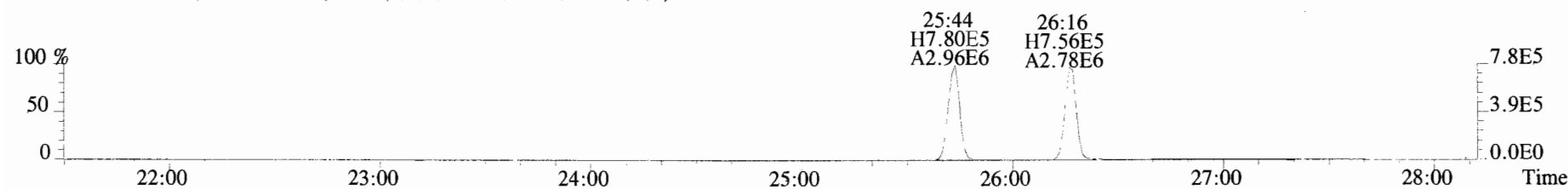
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



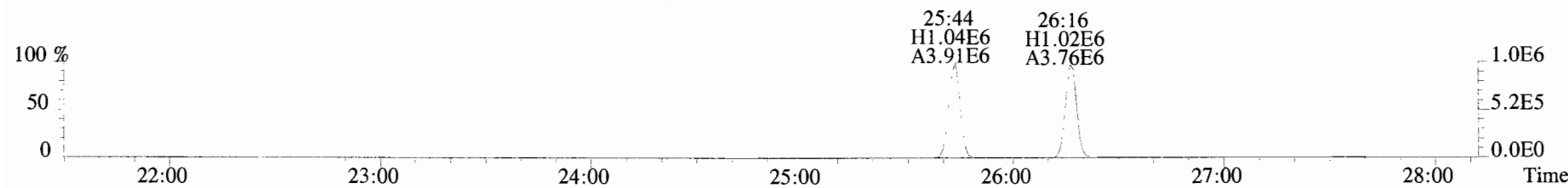
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



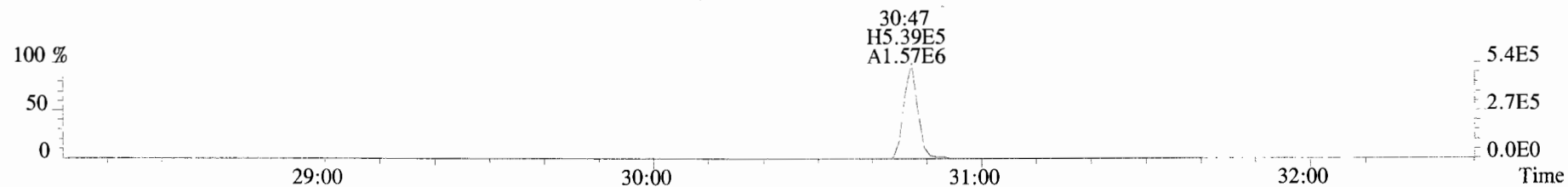
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



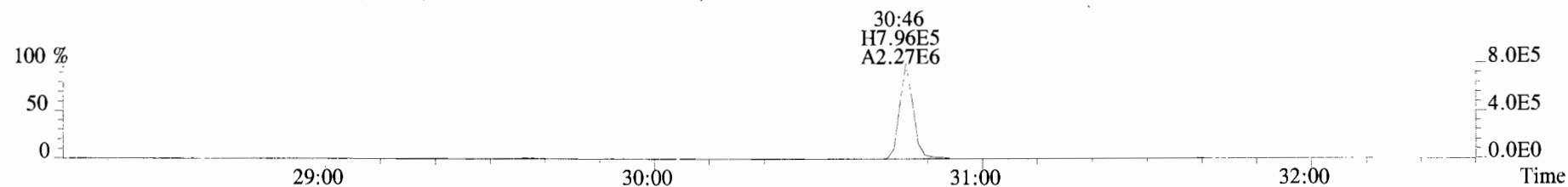
File:191023D1 #1-211 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0185-BS1 OPR 1 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



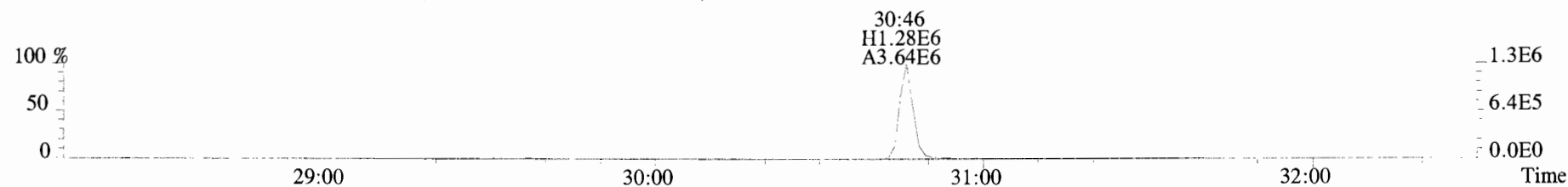
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



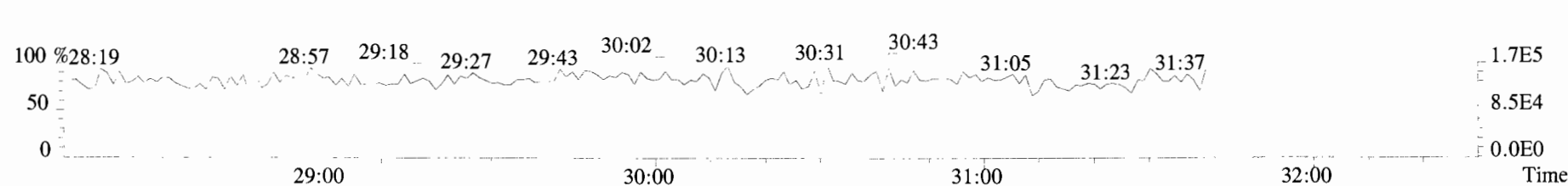
365.8978 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



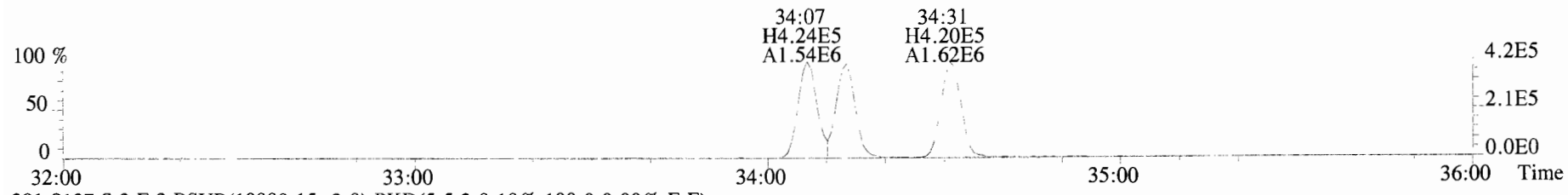
367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



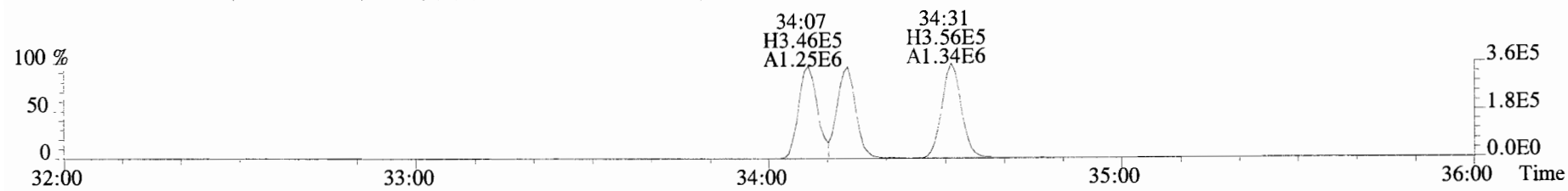
366.9792 S:2 F:2



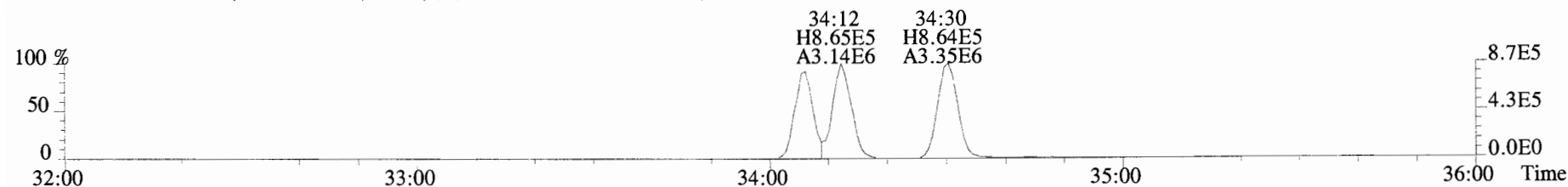
File:191023D1 #1-385 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0185-BS1 OPR 1 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



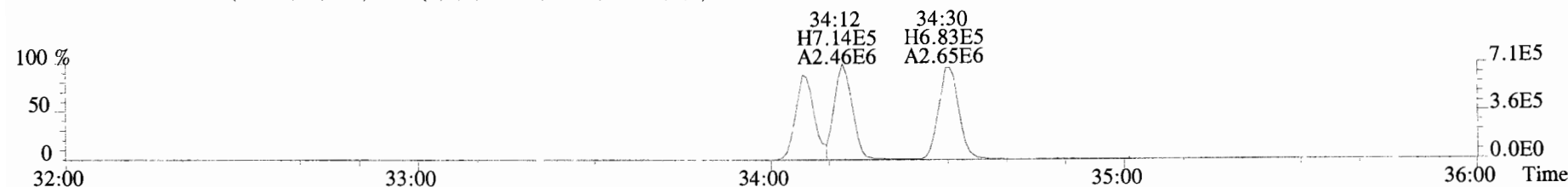
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



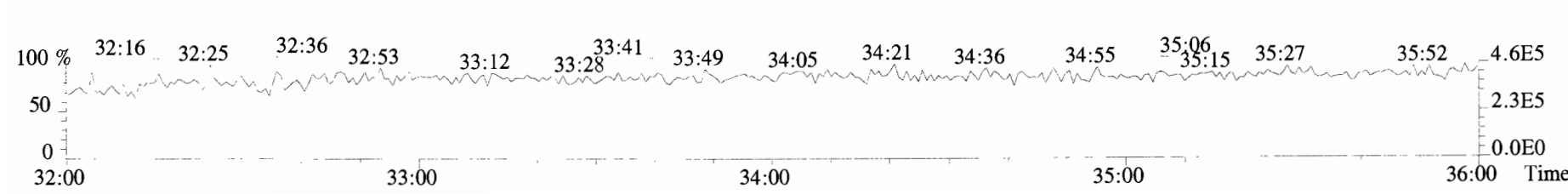
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



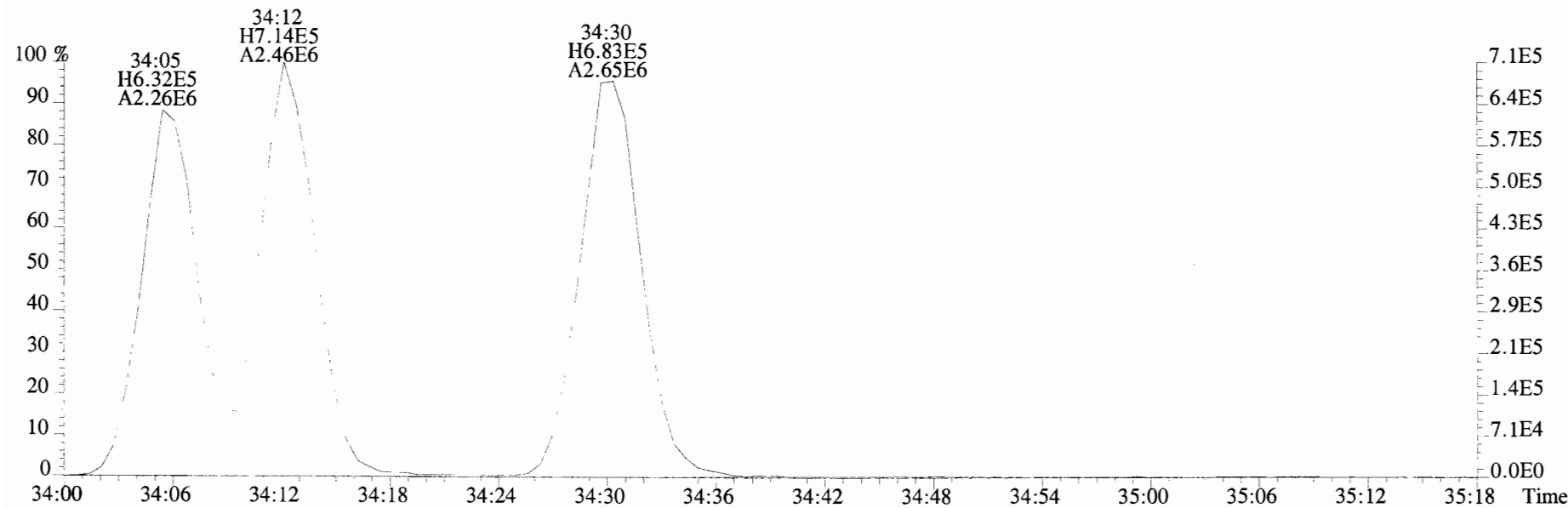
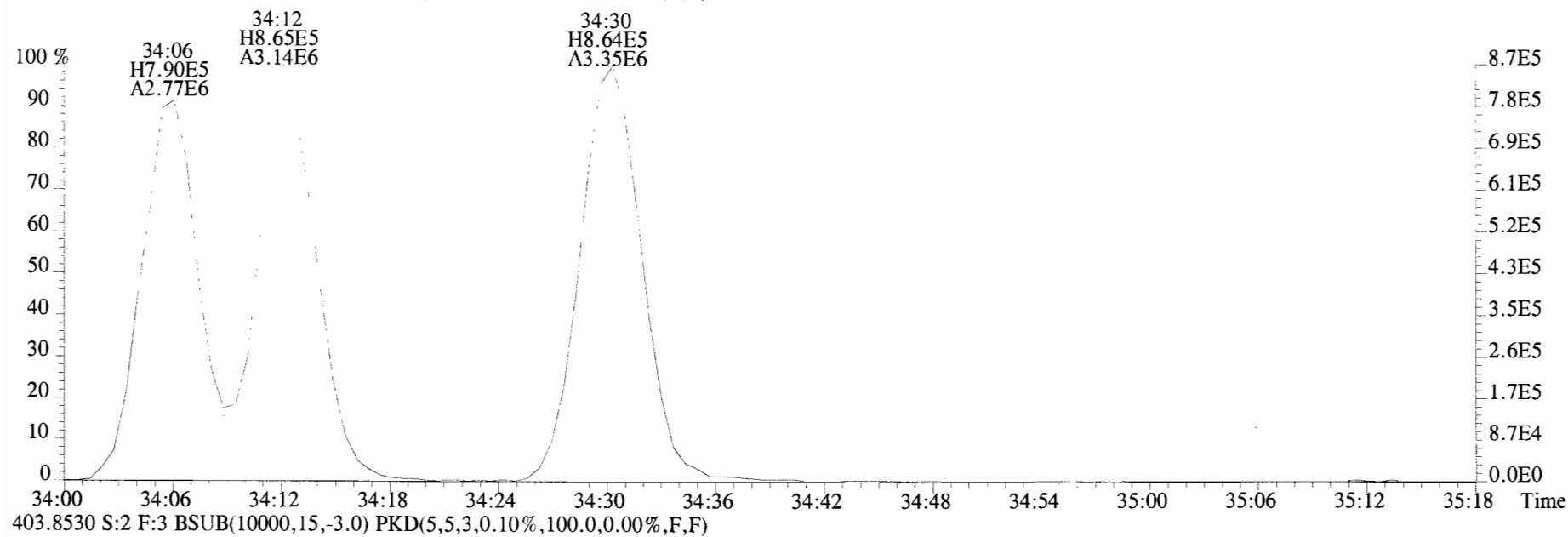
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



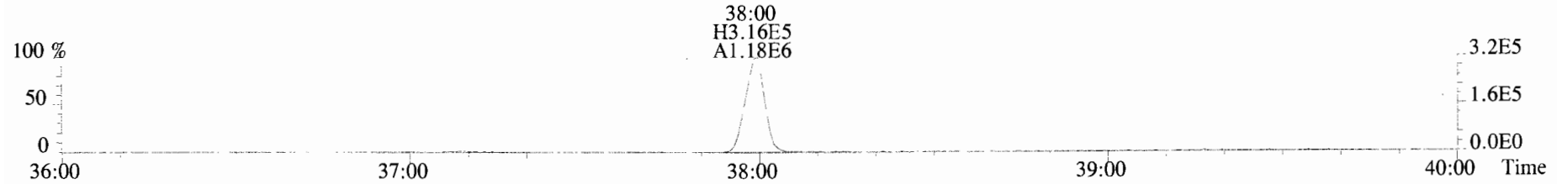
392.9760 S:2 F:3



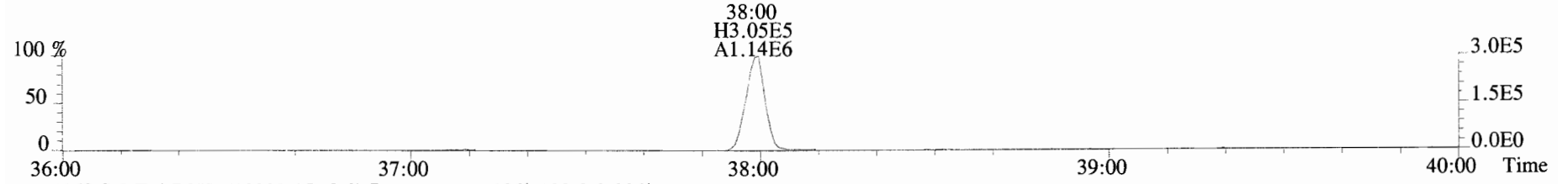
File:191023D1 #1-385 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B9J0185-BS1 OPR 1 Exp:OCDD_DB5
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



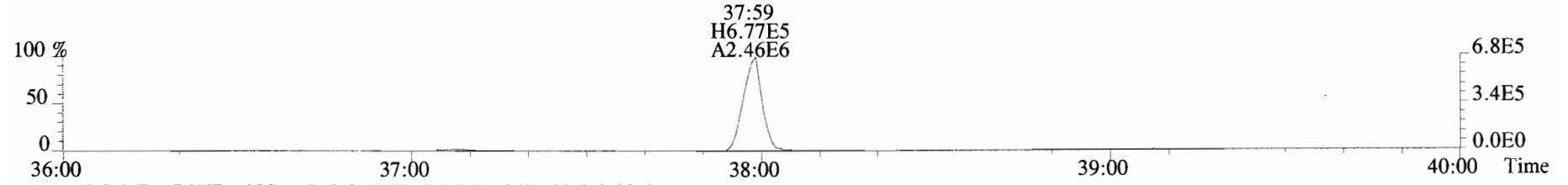
File:191023D1 #1-356 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory_VG7 Text:B9J0185-BS1 OPR 1 Exp:OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



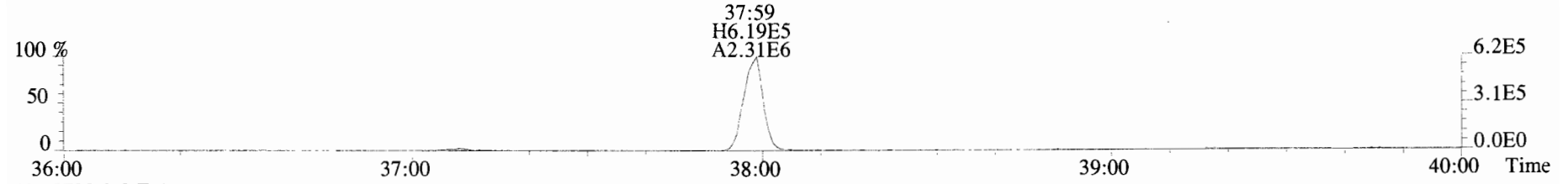
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



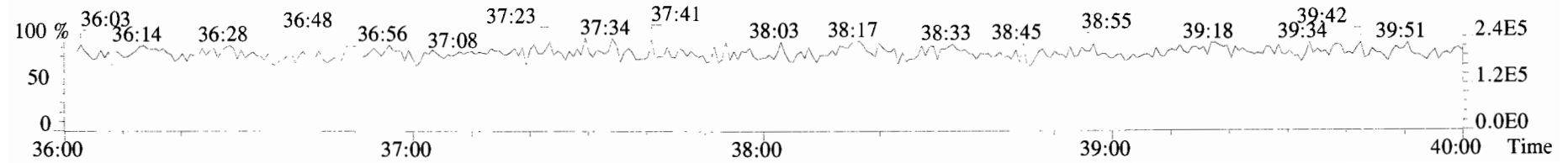
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



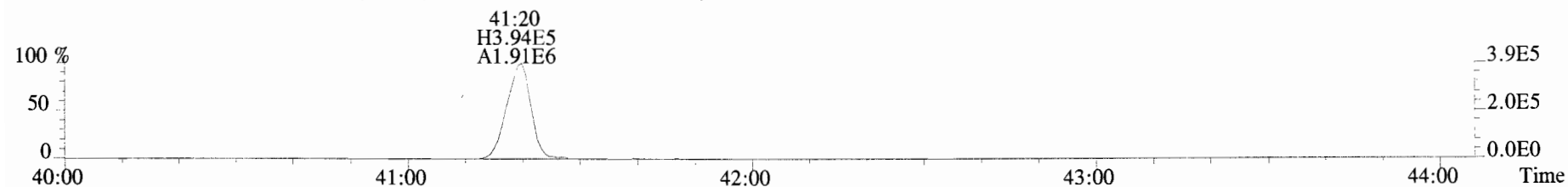
454.9728 S:2 F:4



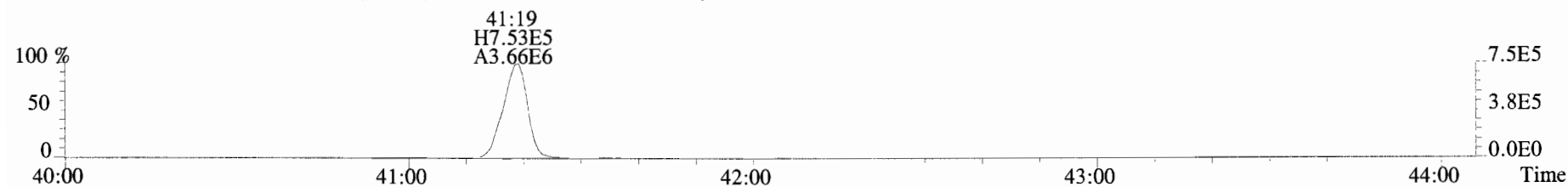
File:191023D1 #1-432 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0185-BS1 OPR 1 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



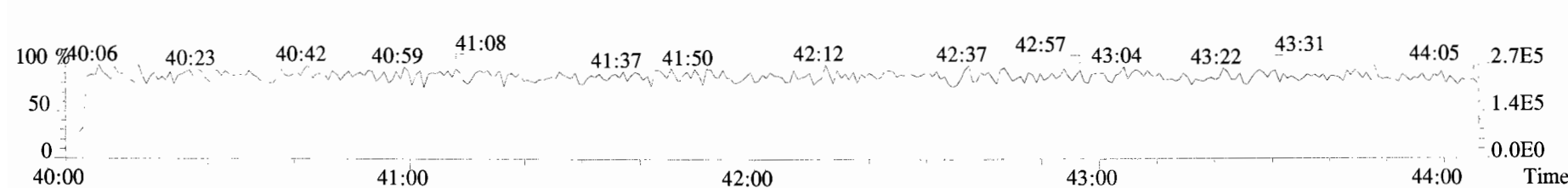
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



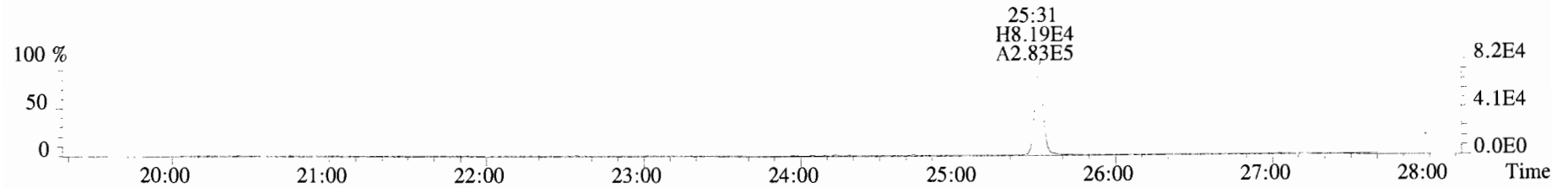
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



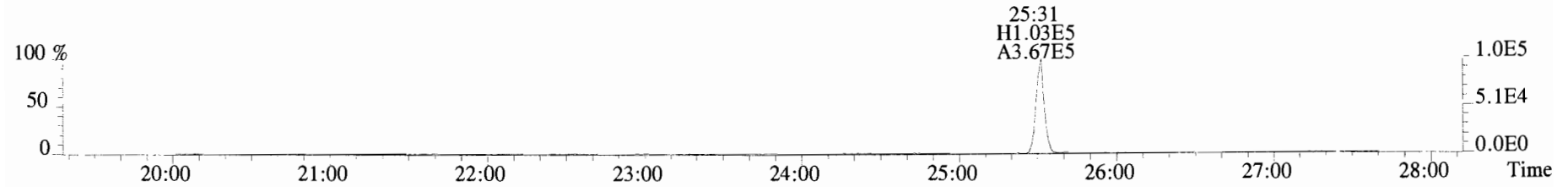
454.9728 S:2 F:5



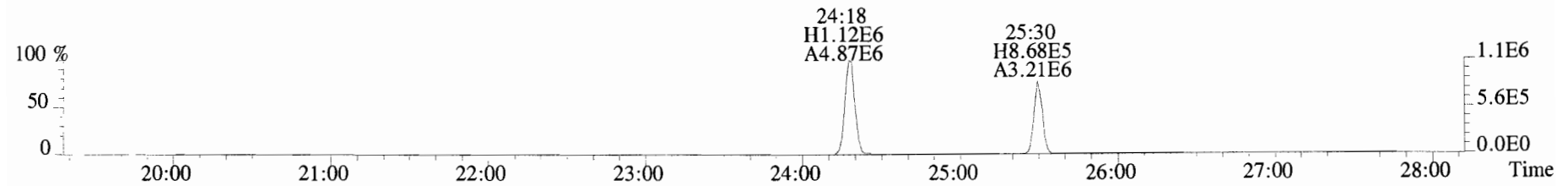
File:191023D1 #1-493 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:B9J0185-BS1 OPR 1 Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



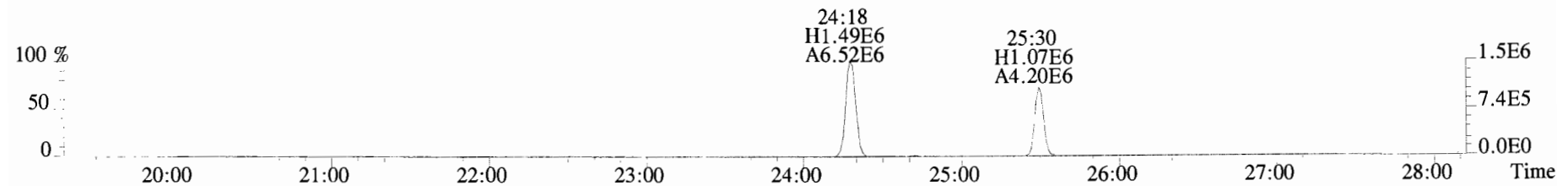
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



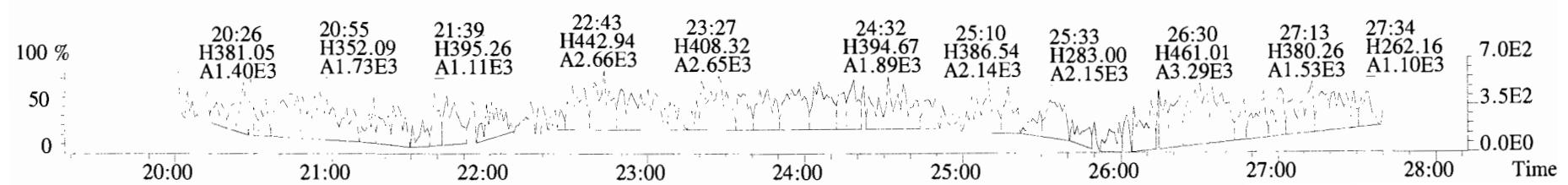
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



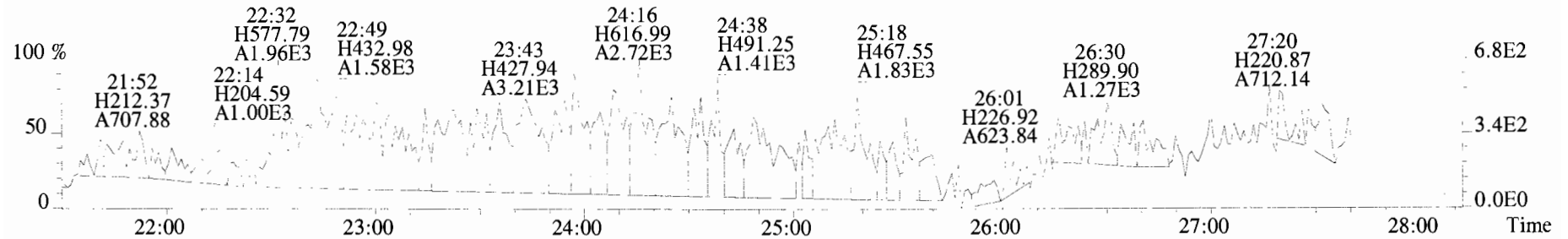
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



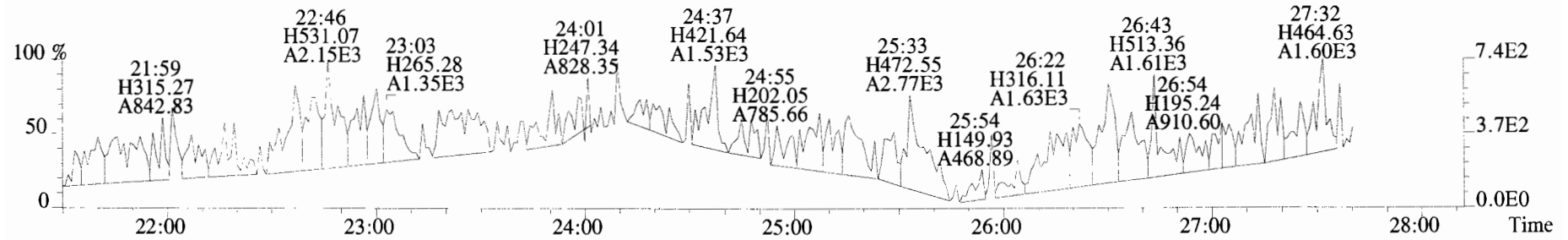
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



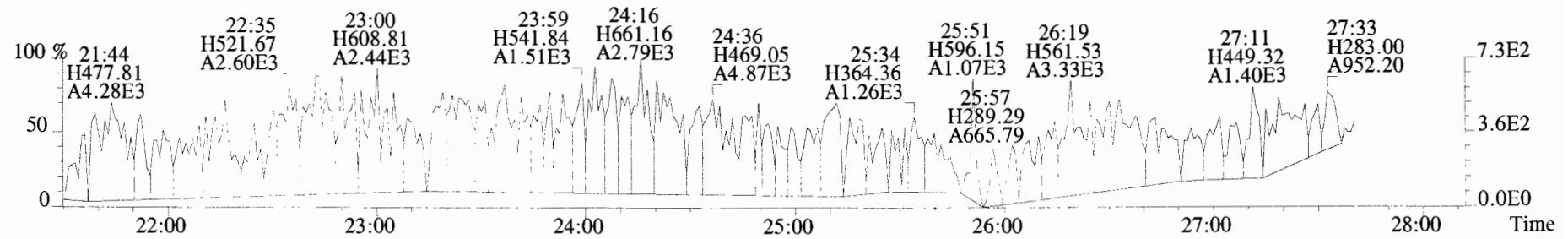
File:191023D1 #1-493 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B9J0185-BS1 OPR 1 Exp:OCDD_DB5
 339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



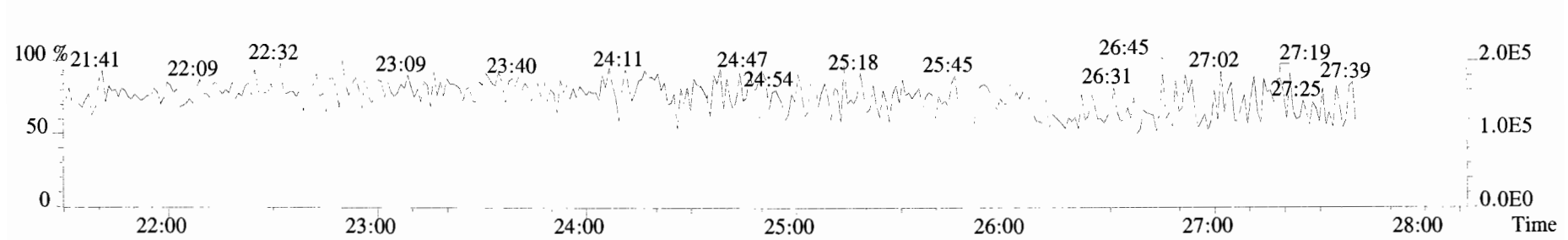
341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



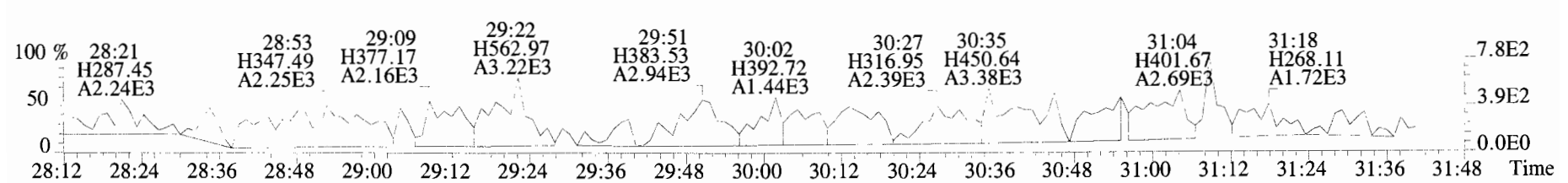
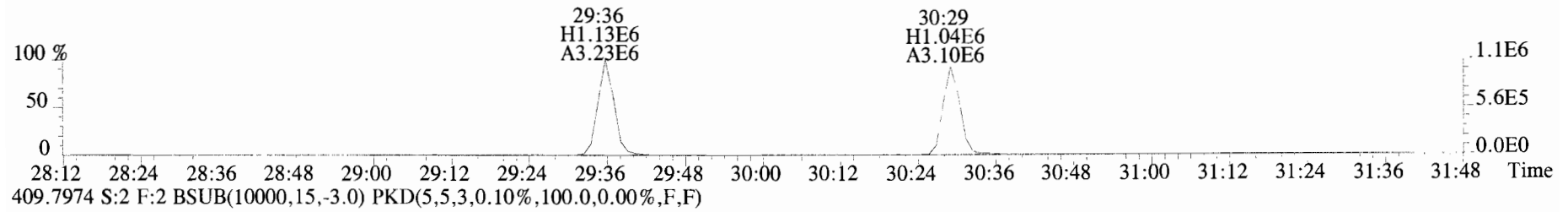
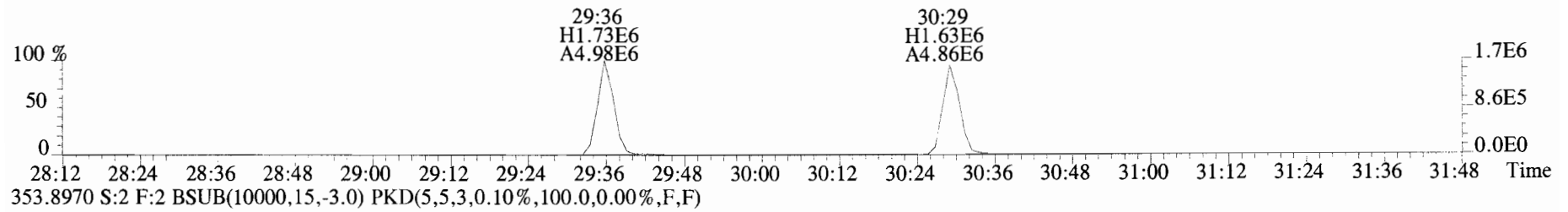
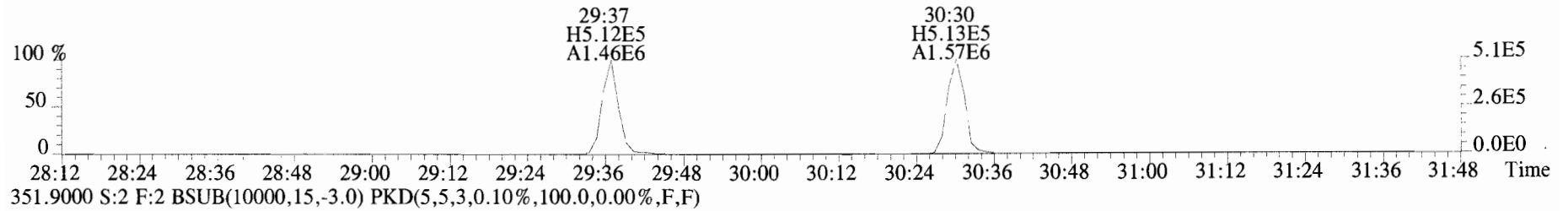
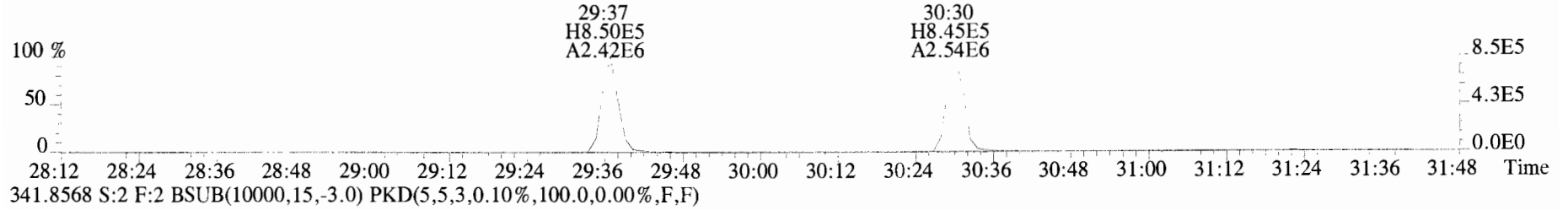
409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



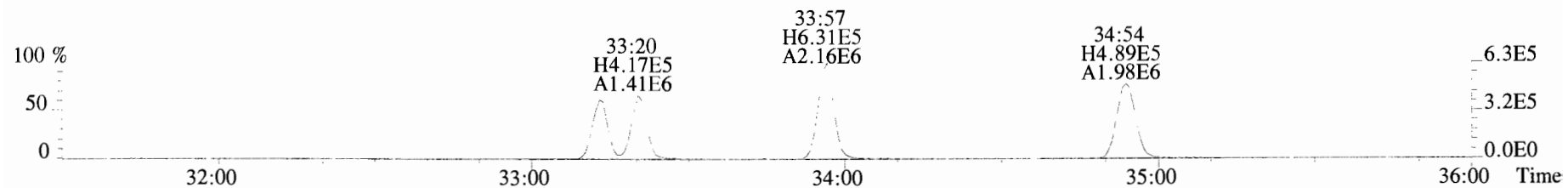
316.9824 S:2



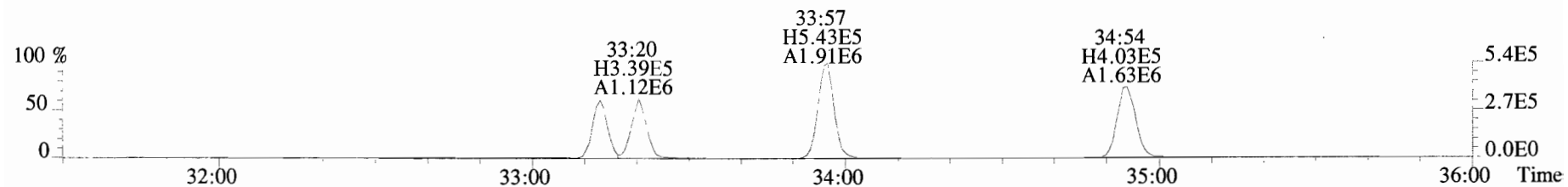
File:191023D1 #1-211 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0185-BS1 OPR 1 Exp:OCDD_DB5
 339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



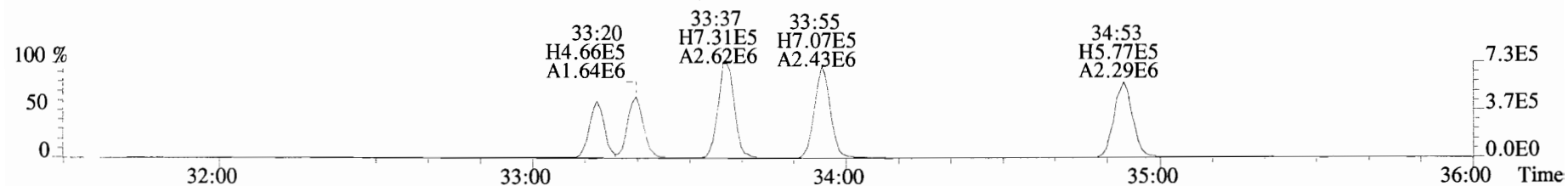
File:191023D1 #1-385 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical_Laboratory_VG7 Text:B9J0185-BS1 OPR 1 Exp:OCDD_DB5
 373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



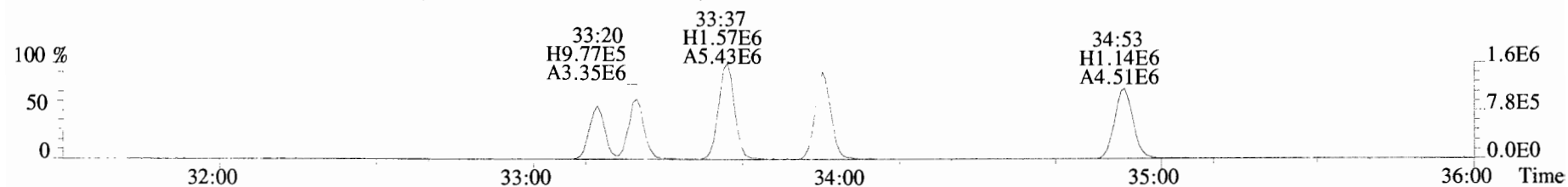
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



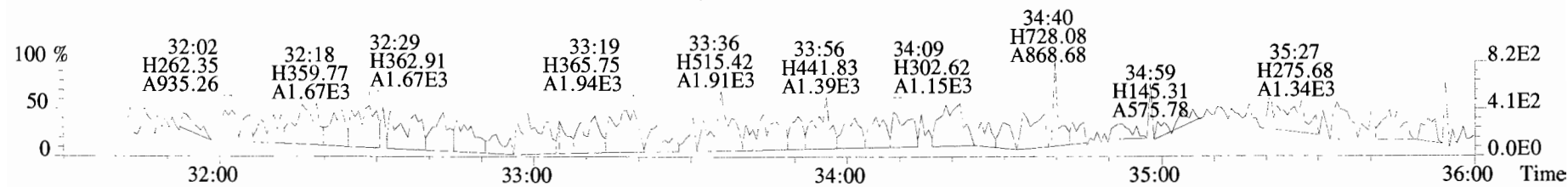
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



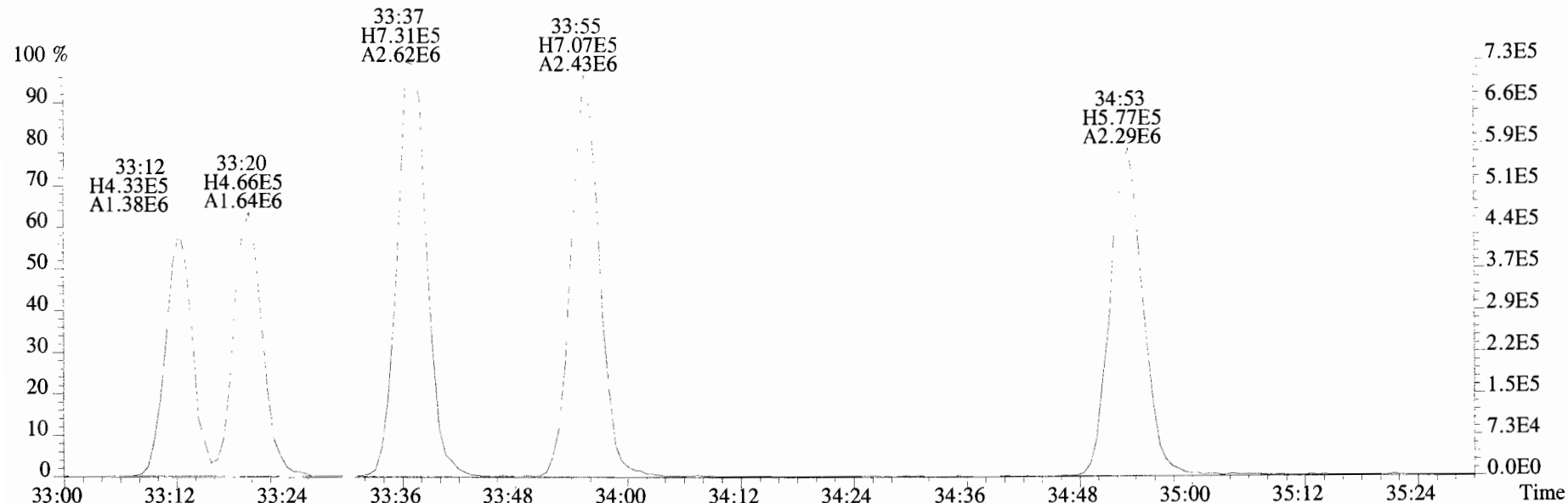
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



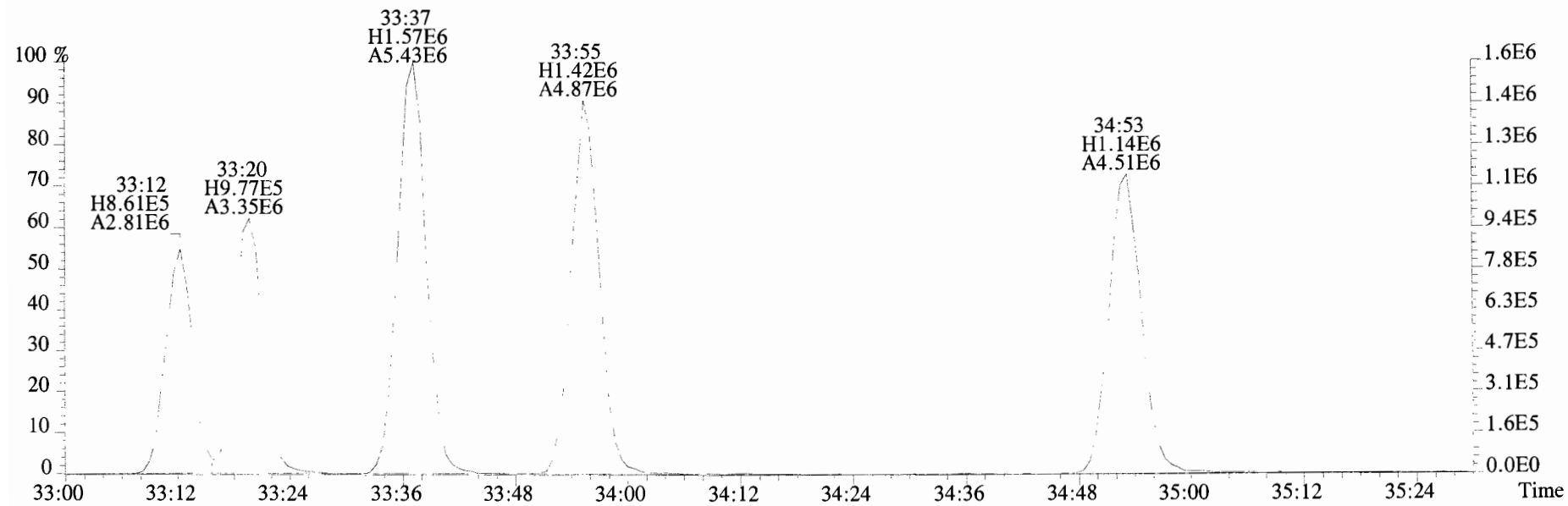
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



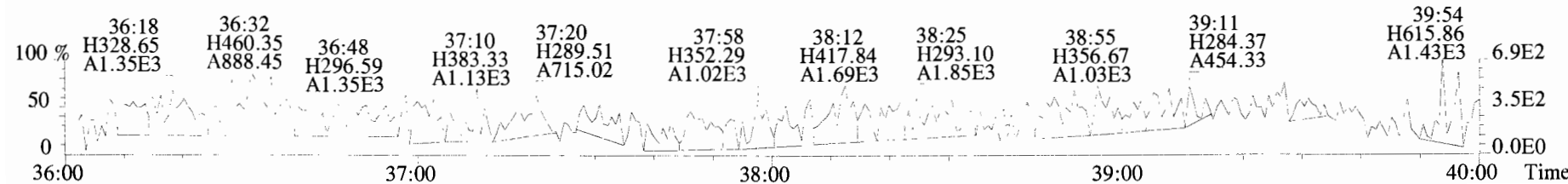
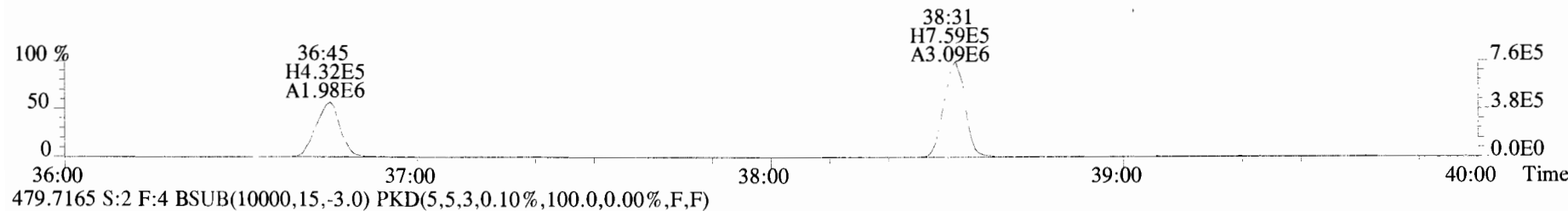
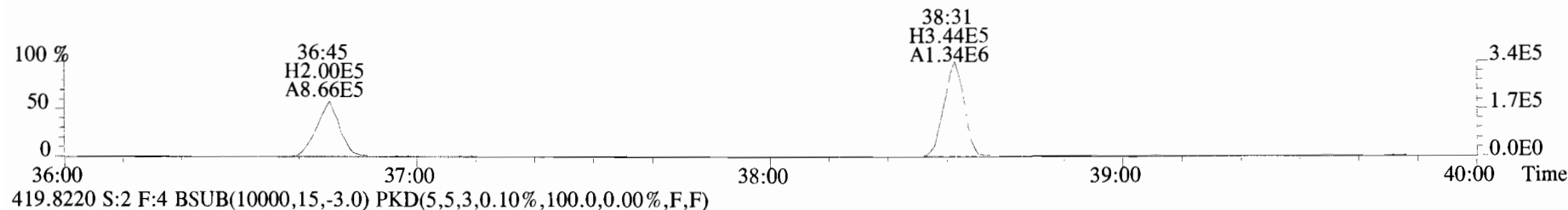
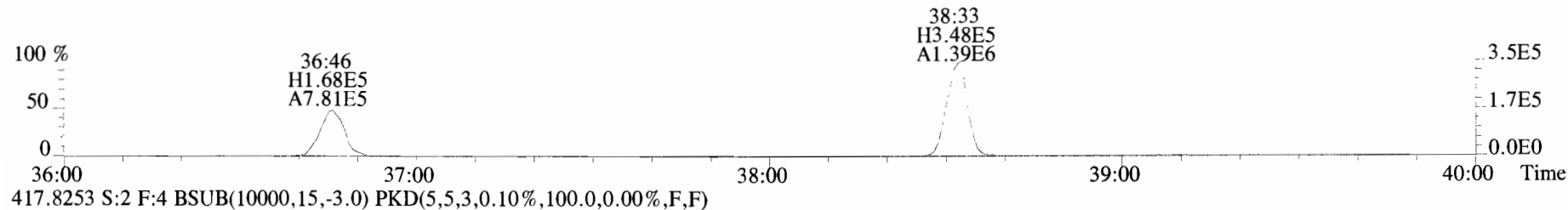
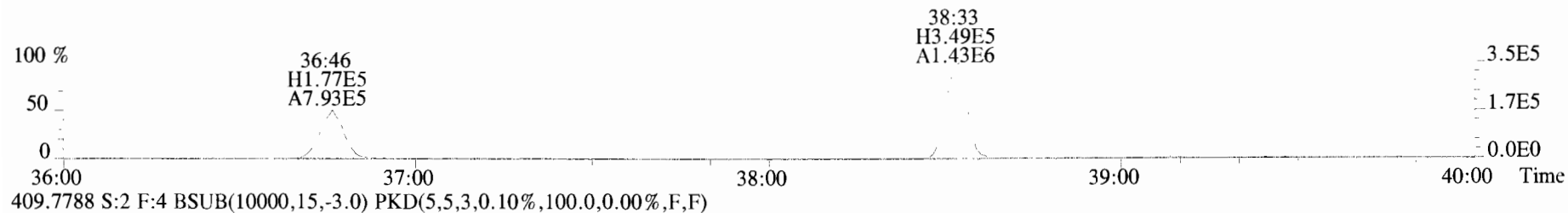
File:191023D1 #1-385 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B9J0185-BS1 OPR 1 Exp:OCDD_DB5
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



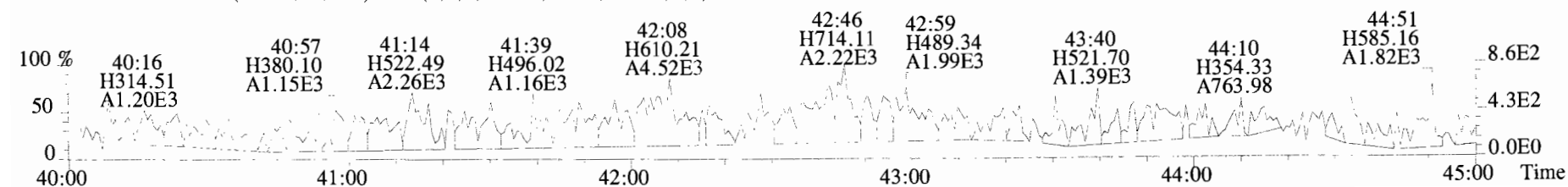
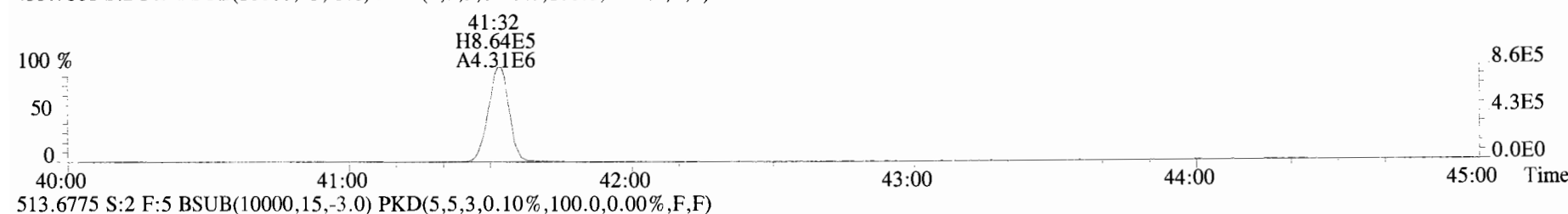
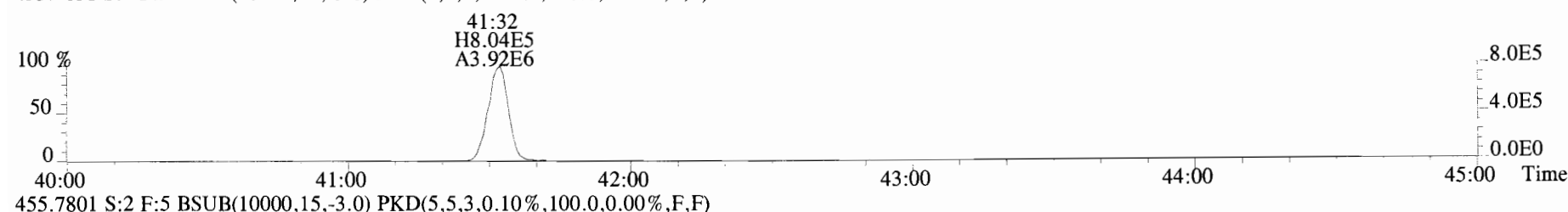
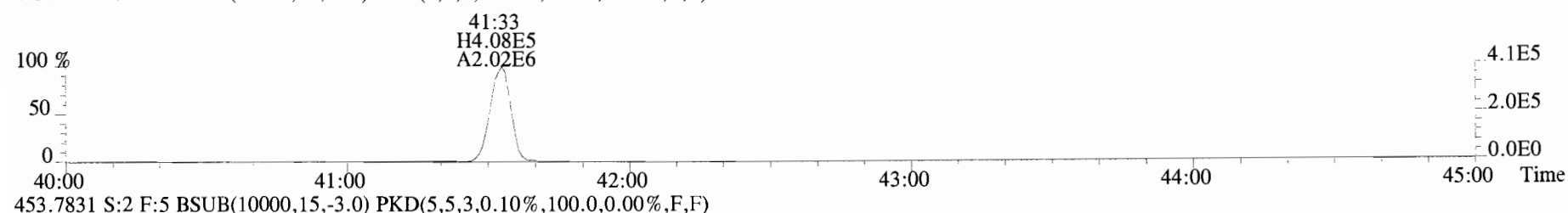
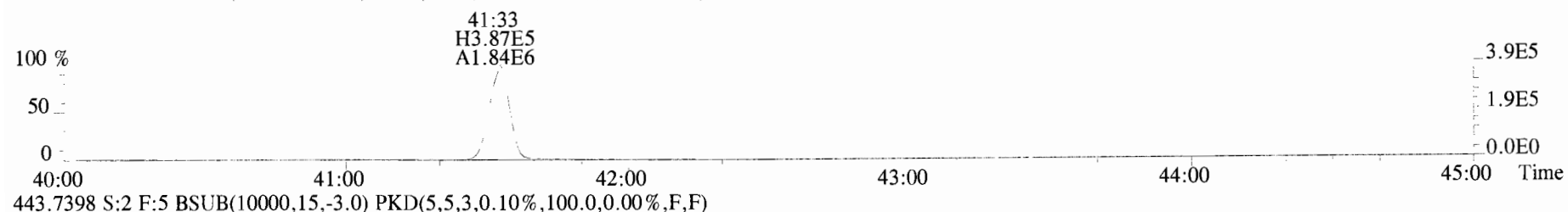
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File: 191023D1 #1-356 Acq: 23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text: Vista Analytical Laboratory VG7 Text: B9J0185-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)



File:191023D1 #1-432 Acq:23-OCT-2019 14:07:54 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B9J0185-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)



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
2,3,7,8-TCDD	*	* n	0.91	NotF η	*		159	2.5	0.865
1,2,3,7,8-PeCDD	*	* n	0.90	NotF η	*		191	2.5	0.961
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF η	*		151	2.5	1.27
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotF η	*		151	2.5	1.45
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotF η	*		151	2.5	1.32
1,2,3,4,6,7,8-HpCDD	*	* n	0.98	NotF η	*		166	2.5	1.55
OCDD	*	* n	0.96	NotF η	*		173	2.5	2.35
2,3,7,8-TCDF	*	* n	0.95	NotF η	*		160	2.5	0.746
1,2,3,7,8-PeCDF	*	* n	0.96	NotF η	*		198	2.5	1.04
2,3,4,7,8-PeCDF	*	* n	1.01	NotF η	*		198	2.5	0.859
1,2,3,4,7,8-HxCDF	*	* n	1.18	NotF η	*		166	2.5	0.778
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotF η	*		166	2.5	0.716
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotF η	*		166	2.5	0.610
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotF η	*		166	2.5	0.758
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	NotF η	*		133	2.5	0.973
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotF η	*		133	2.5	0.746
OCDF	*	* n	0.95	NotF η	*		165	2.5	1.77

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		159	0.865
Total Penta-Dioxins	*	*		191	0.961
Total Hexa-Dioxins	*	*		151	1.35
Total Hepta-Dioxins	*	*		166	1.55
Total Tetra-Furans	*	*		160	0.746
Total Penta-Furans	0.0000	0.0000		198	0.946
Total Hexa-Furans	*	*		166	0.709
Total Hepta-Furans	*	*		133	0.859

IS	Conc	RA	RRF	RT	Conc	Qual	Rec
13C-2,3,7,8-TCDD	6.67e+06	0.77 y	1.10	26:17	1801.7		86.2
13C-1,2,3,7,8-PeCDD	5.74e+06	0.63 y	0.88	30:46	1928.1		92.3
13C-1,2,3,4,7,8-HxCDD	4.60e+06	1.25 y	0.64	34:06	1908.3		91.3
13C-1,2,3,6,7,8-HxCDD	5.24e+06	1.26 y	0.86	34:12	1632.6		78.1
13C-1,2,3,7,8,9-HxCDD	5.34e+06	1.24 y	0.81	34:30	1764.8		84.5
13C-1,2,3,4,6,7,8-HpCDD	4.31e+06	1.01 y	0.65	37:58	1758.6		84.2
13C-OCDD	6.93e+06	0.91 y	0.58	41:18	3186.1		76.2
13C-2,3,7,8-TCDF	8.26e+06	0.79 y	1.03	25:30	1546.7		74.0
13C-1,2,3,7,8-PeCDF	8.14e+06	1.58 y	0.85	29:36	1846.4		88.4
13C-2,3,4,7,8-PeCDF	8.18e+06	1.60 y	0.85	30:29	1872.4		89.6
13C-1,2,3,4,7,8-HxCDF	5.00e+06	0.53 y	0.83	33:12	1601.4		76.6
13C-1,2,3,6,7,8-HxCDF	6.07e+06	0.51 y	1.03	33:19	1565.1		74.9
13C-2,3,4,6,7,8-HxCDF	6.80e+06	0.51 y	0.95	33:55	1900.8		91.0
13C-1,2,3,7,8,9-HxCDF	6.37e+06	0.52 y	0.83	34:53	2050.9		98.2
13C-1,2,3,4,6,7,8-HpCDF	4.10e+06	0.42 y	0.76	36:44	1441.7		69.0
13C-1,2,3,4,7,8,9-HpCDF	4.12e+06	0.44 y	0.58	38:31	1892.2		90.6
13C-OCDF	8.98e+06	0.90 y	0.69	41:31	3476.7		83.2

Rec Qual

C/Up	37C1-2,3,7,8-TCDD	2.97e+06		1.20	26:19	733.34	
RS/RT	13C-1,2,3,4-TCDD	7.06e+06	0.77 y	1.00	25:44	2089.3	
RS	13C-1,2,3,4-TCDF	1.08e+07	0.83 y	1.00	24:19	2089.3	
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.84e+06	0.51 y	1.00	33:37	2089.3	

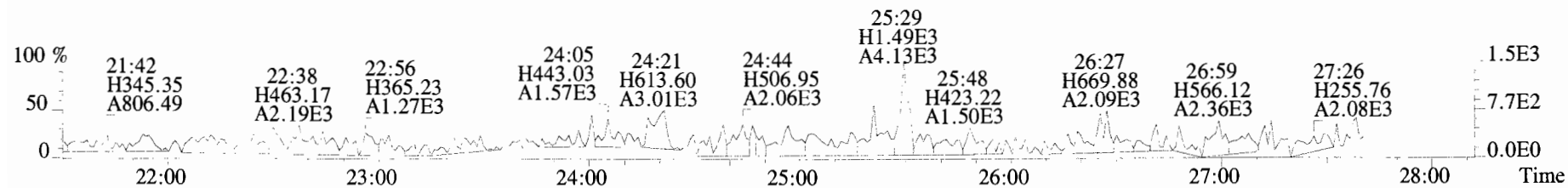
Integrations
 by
 Analyst: DB

Reviewed
 by
 Analyst: CM

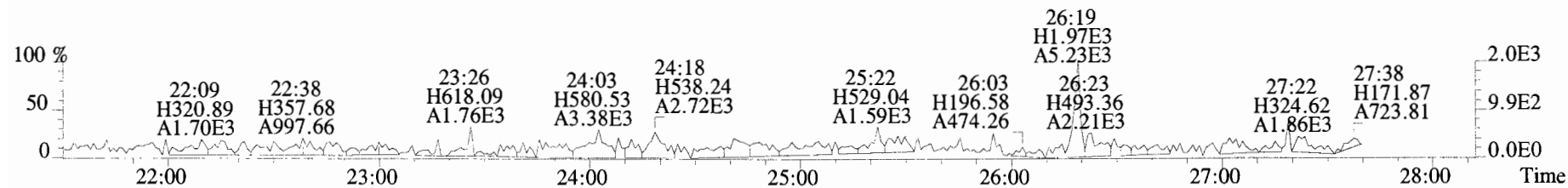
Date: 10/24/19

Date: 11/04/19

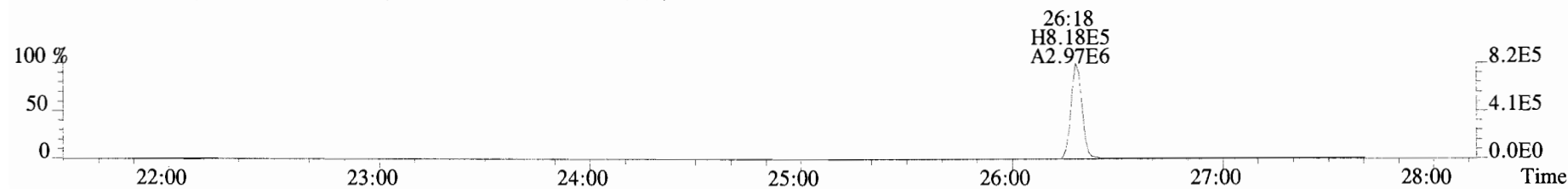
File:191023D1 #1-492 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory_VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



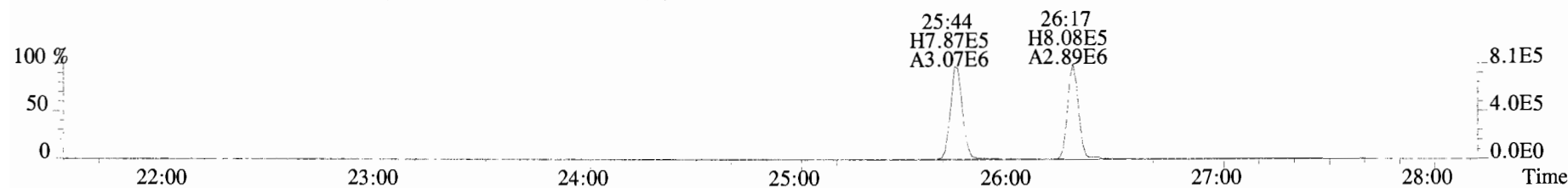
321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



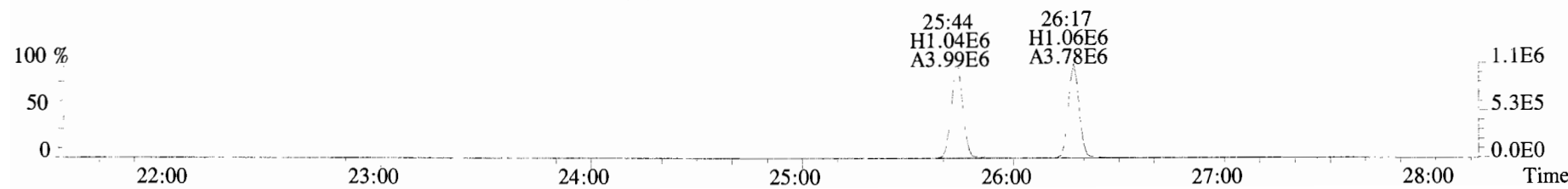
327.8847 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



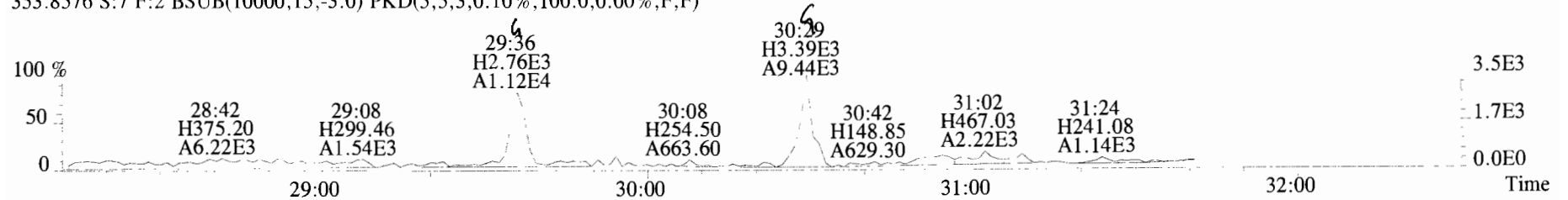
331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



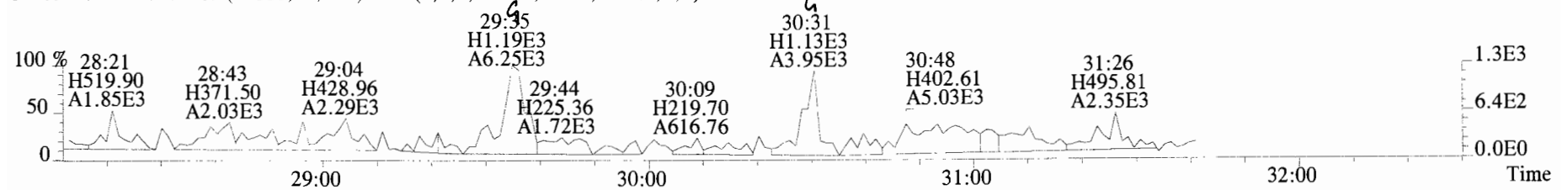
333.9339 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



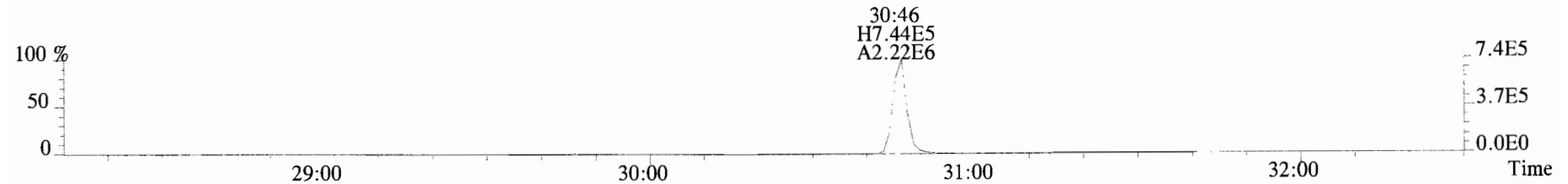
File:191023D1 #1-211 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



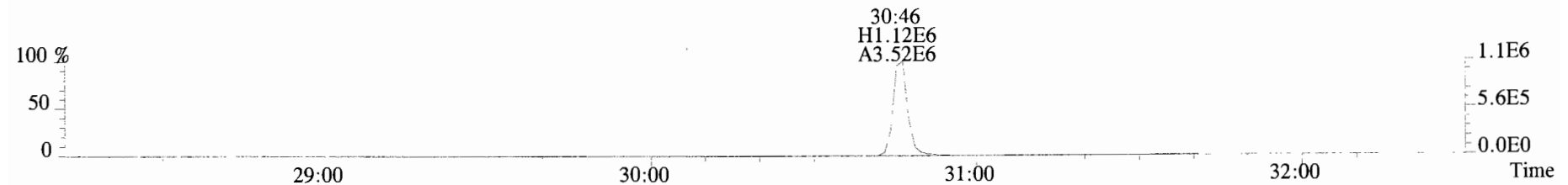
355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



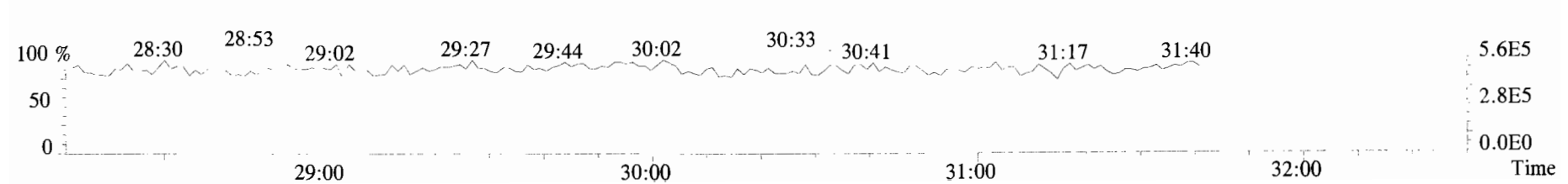
365.8978 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



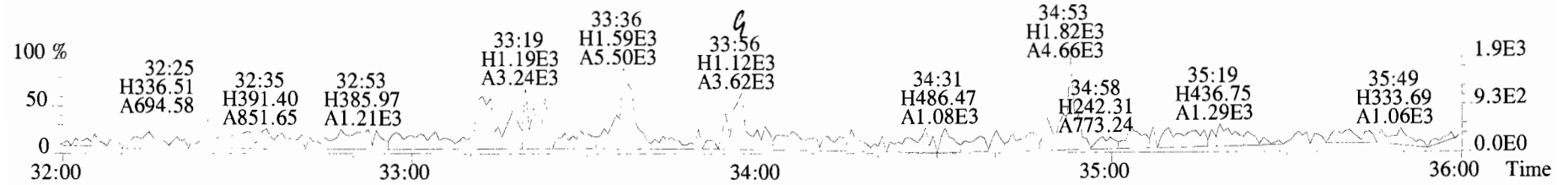
367.8949 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



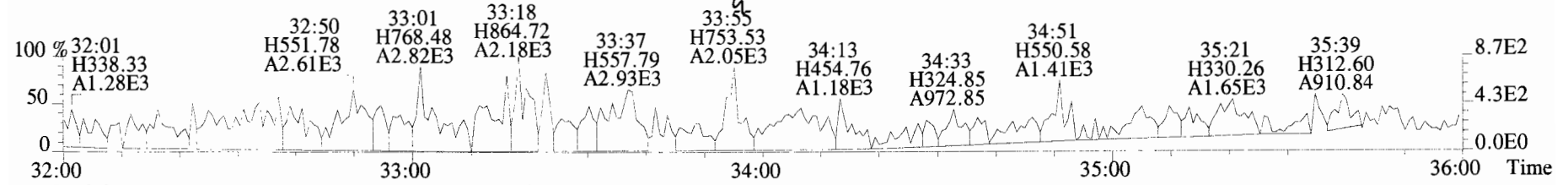
366.9792 S:7 F:2



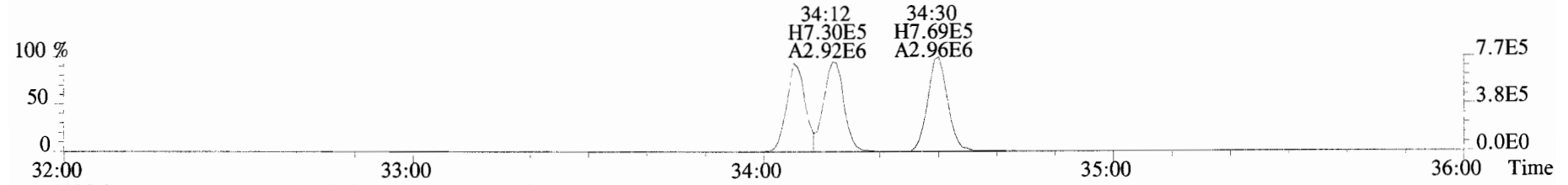
File:191023D1 #1-384 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
 389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



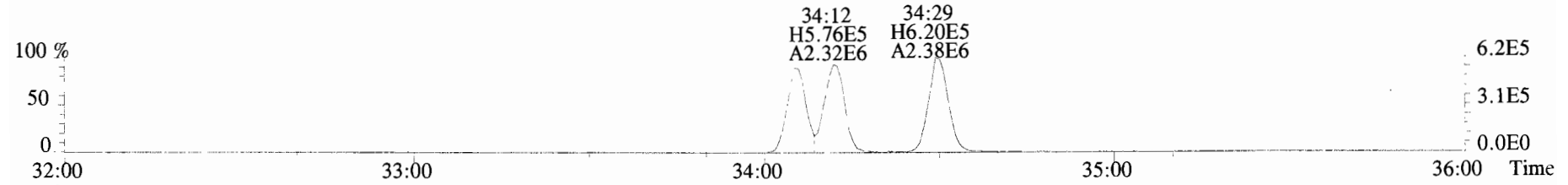
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



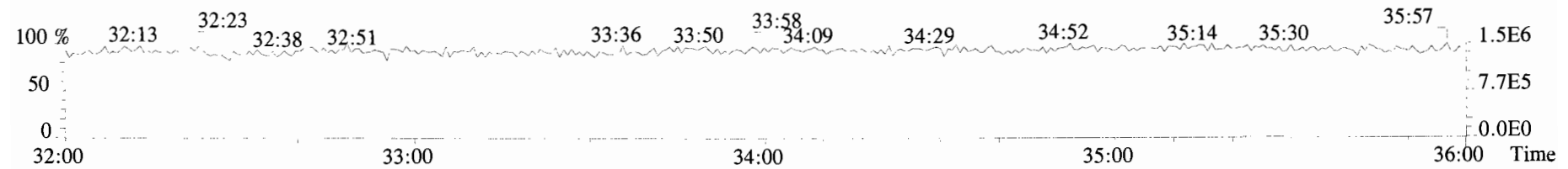
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



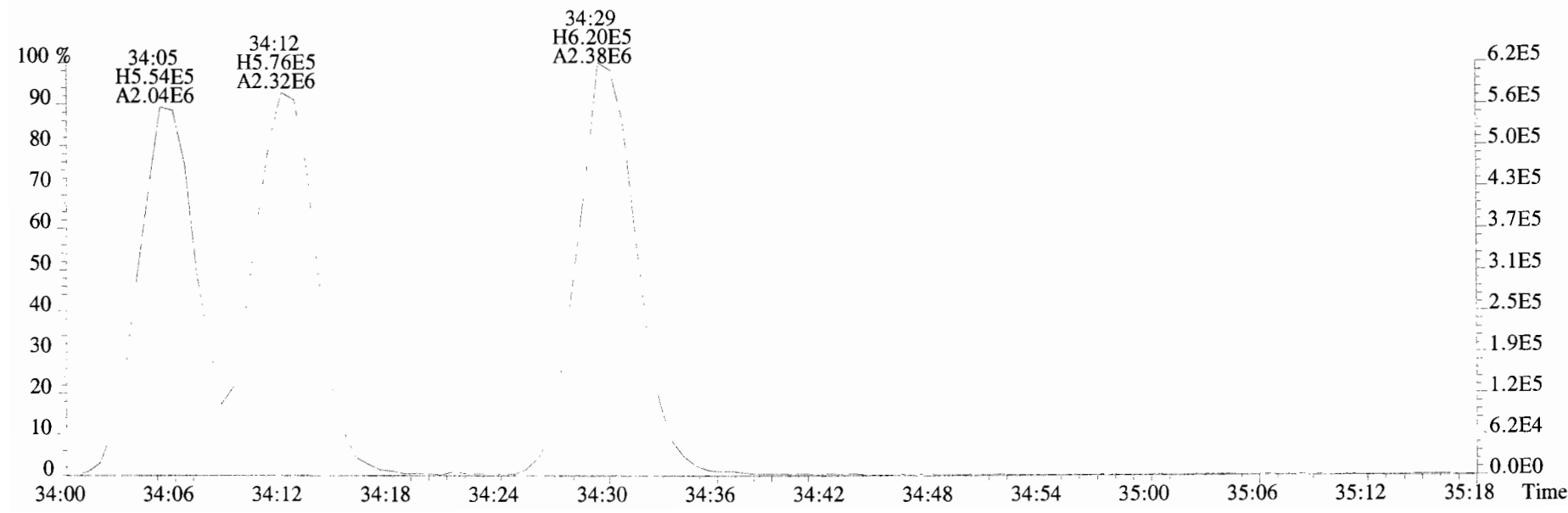
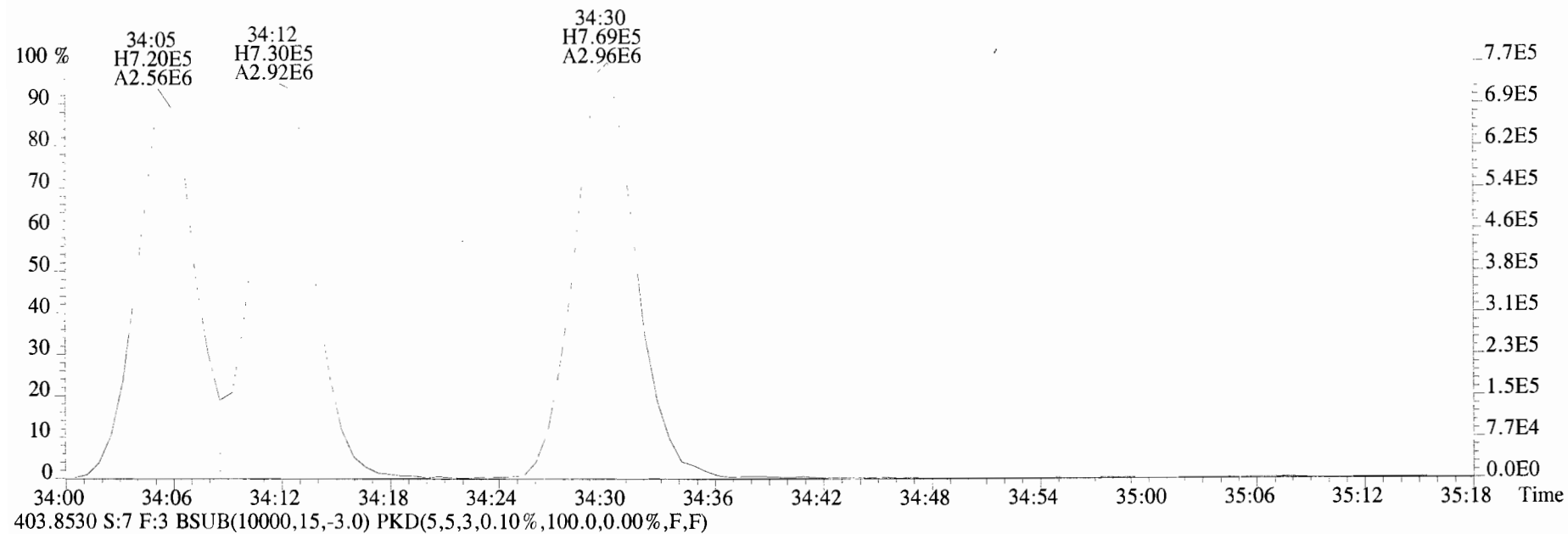
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



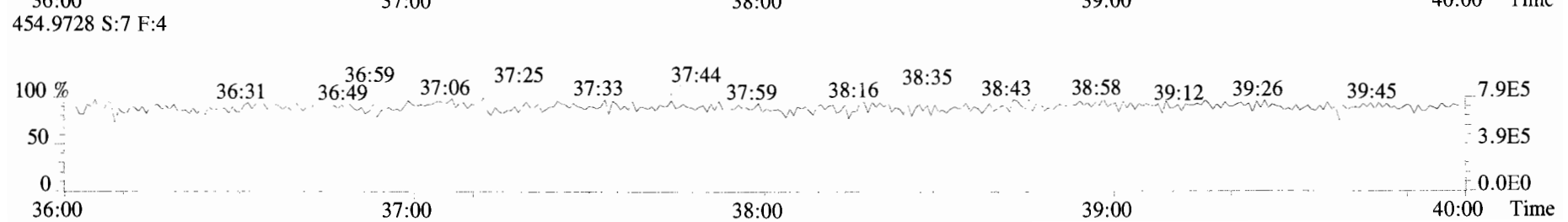
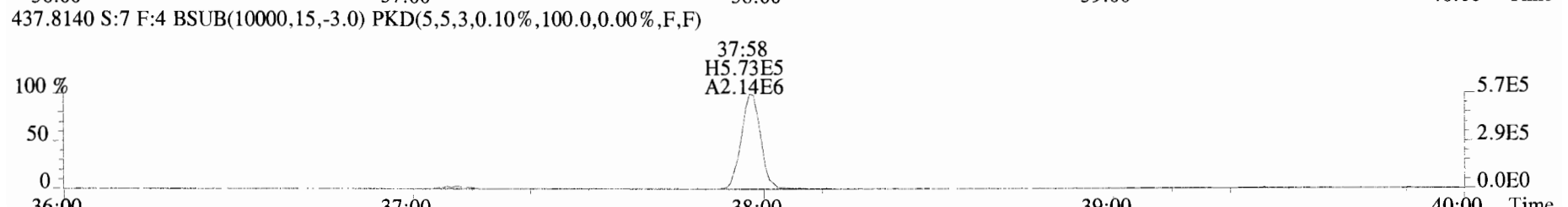
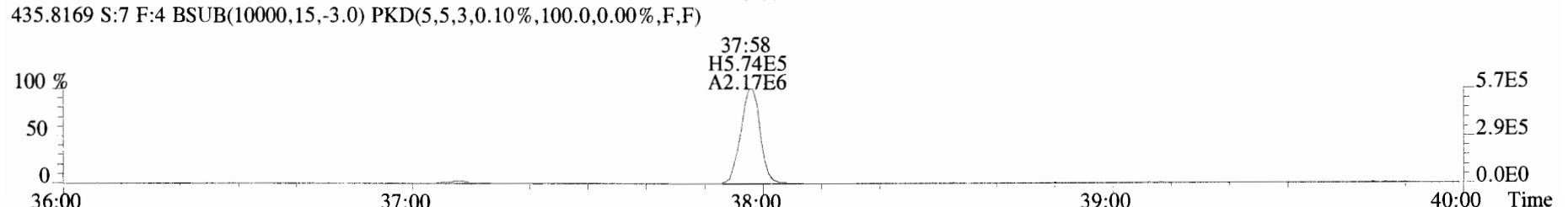
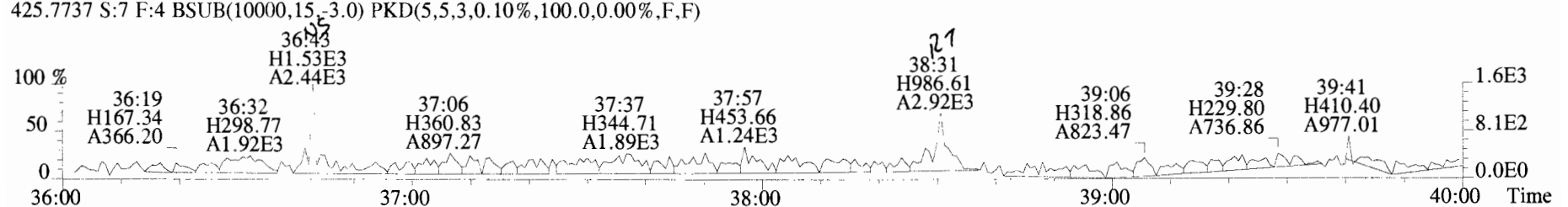
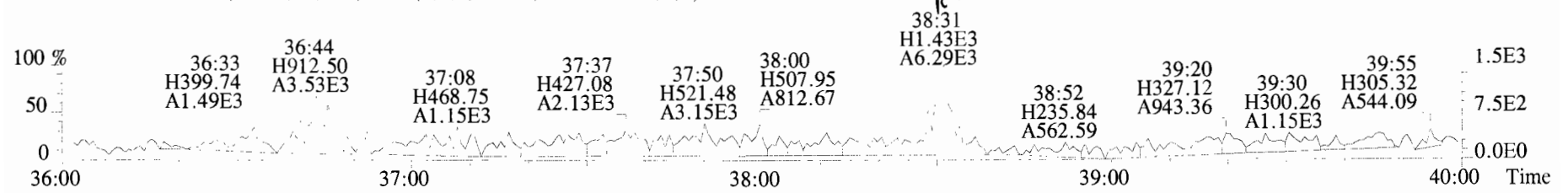
392.9760 S:7 F:3



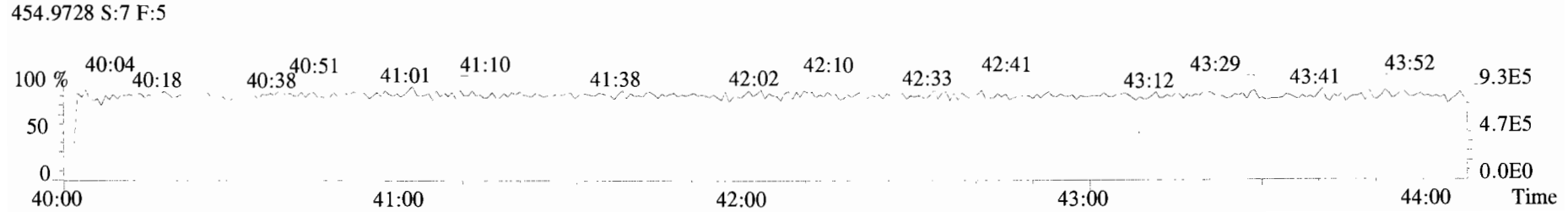
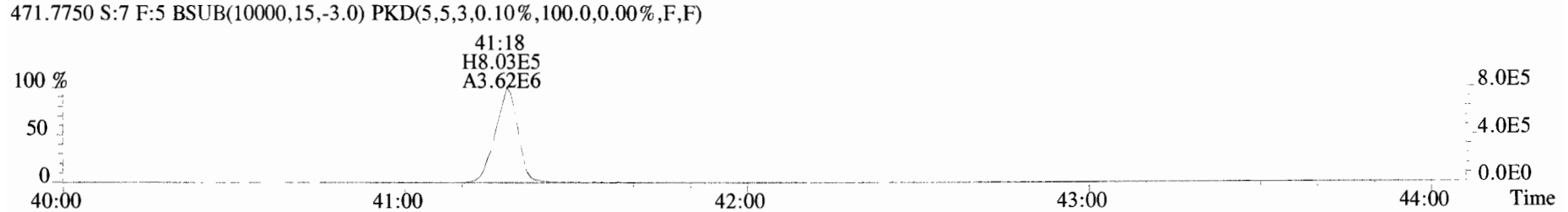
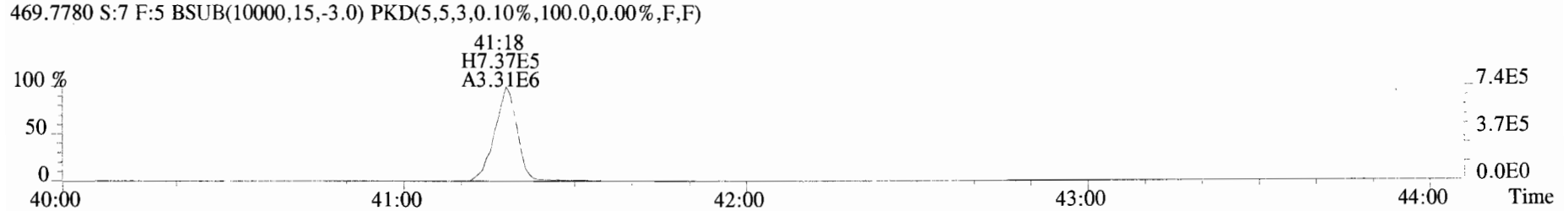
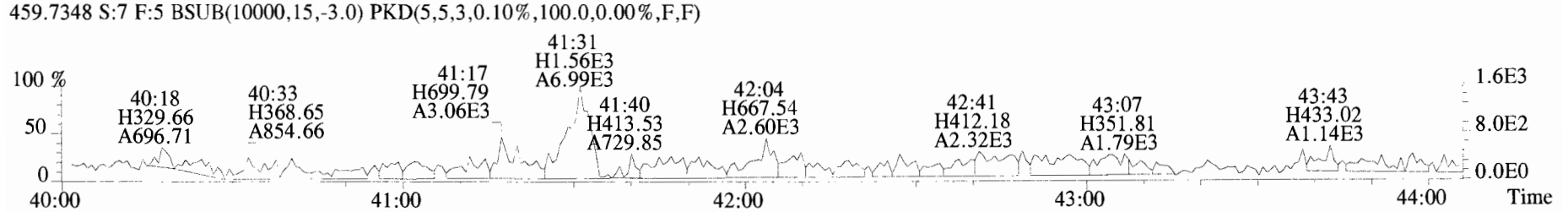
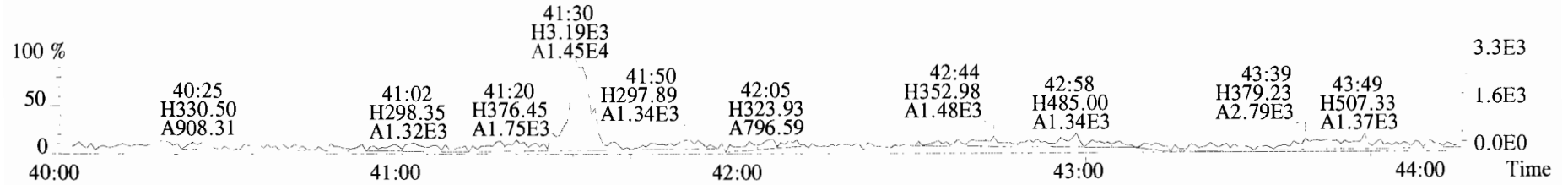
File:191023D1 #1-384 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



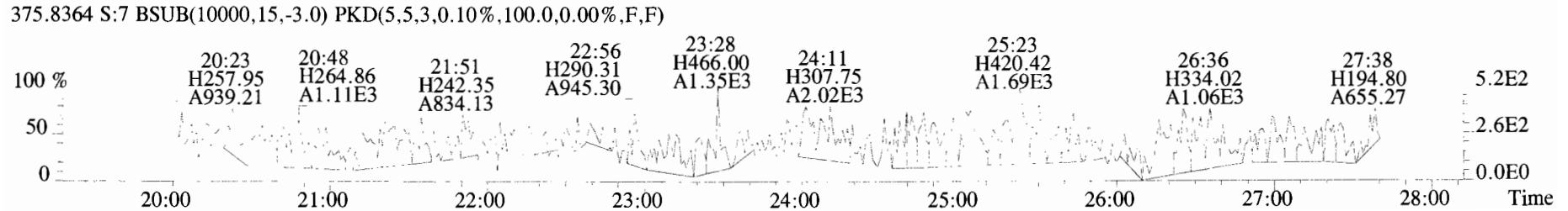
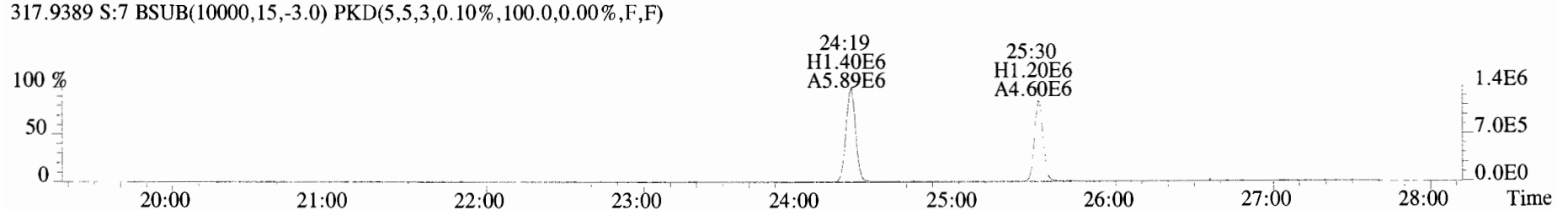
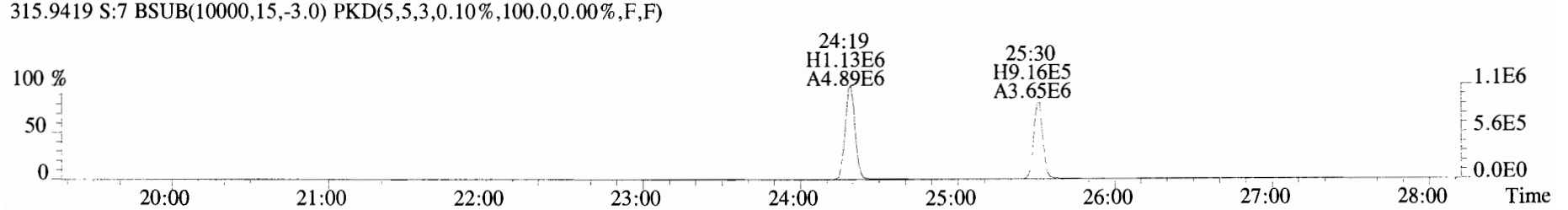
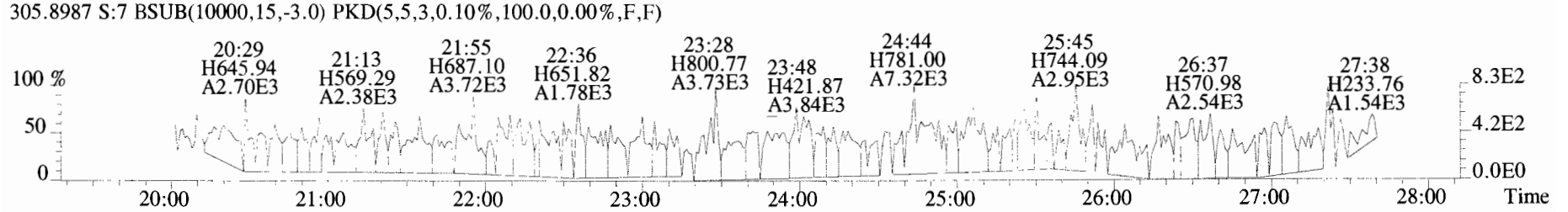
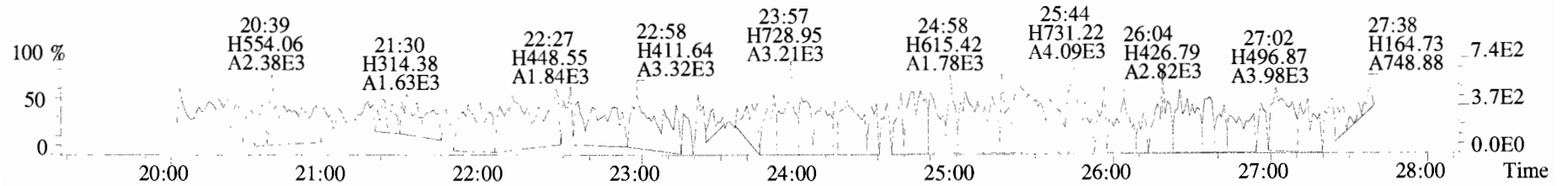
File:191023D1 #1-355 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text: Vista Analytical Laboratory VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
 423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



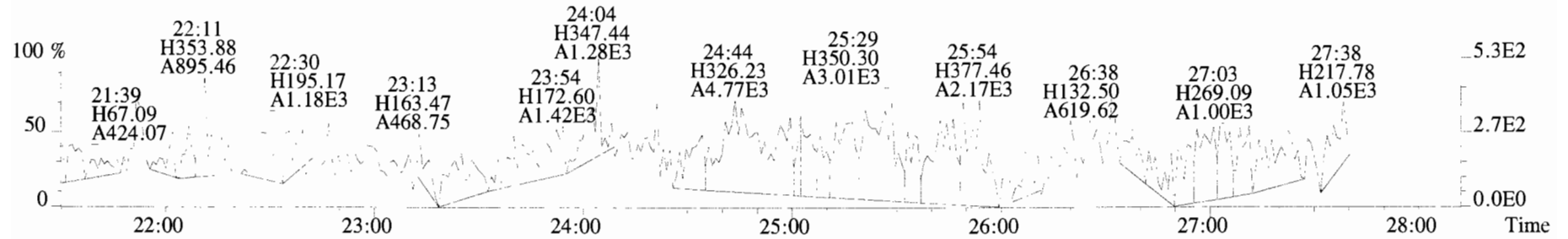
File:191023D1 #1-432 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



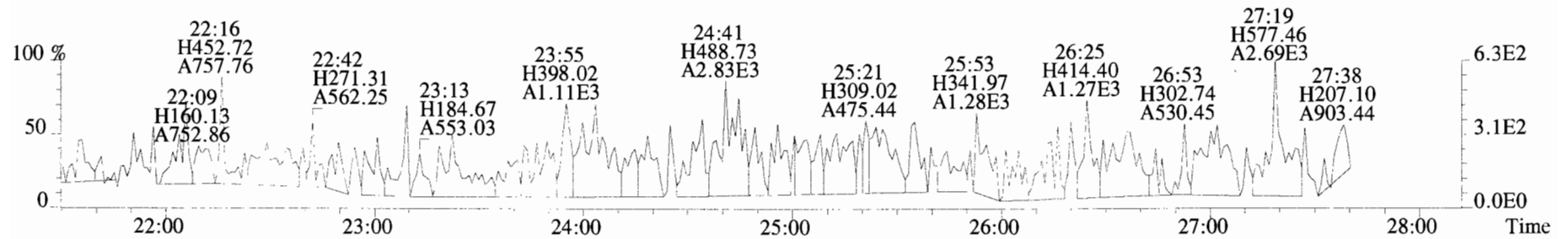
File:191023D1 #1-492 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory_VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



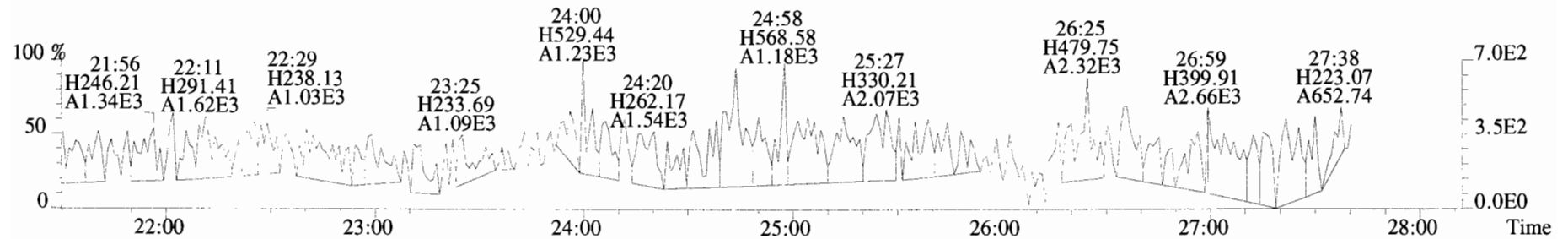
File:191023D1 #1-492 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
 339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



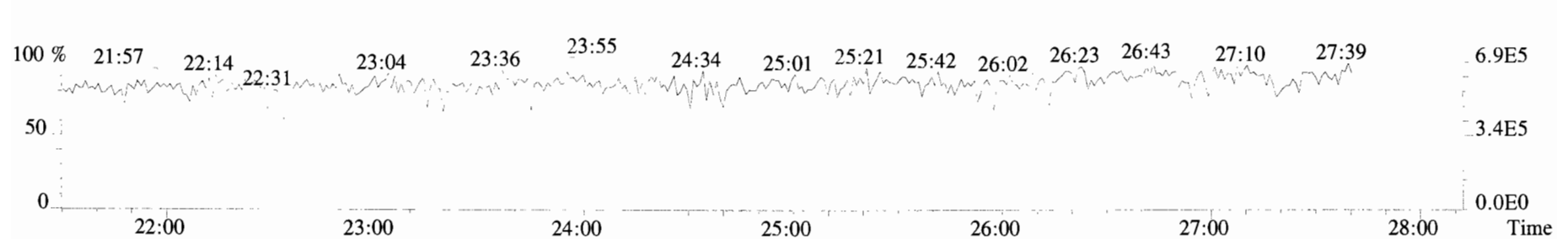
341.8568 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



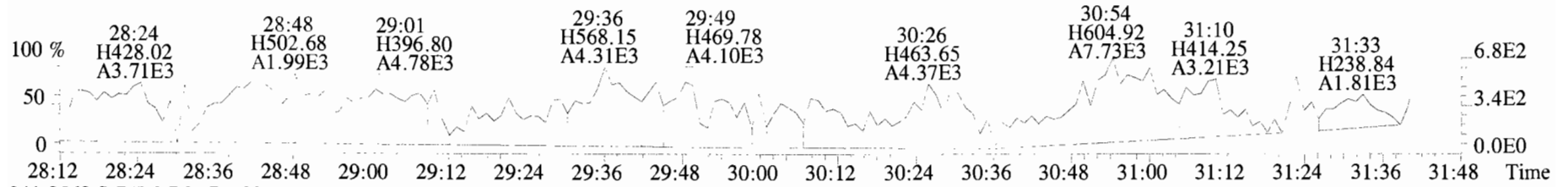
409.7974 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



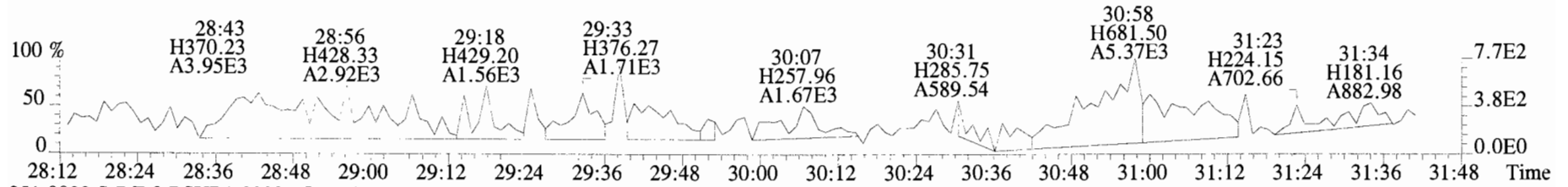
316.9824 S:7



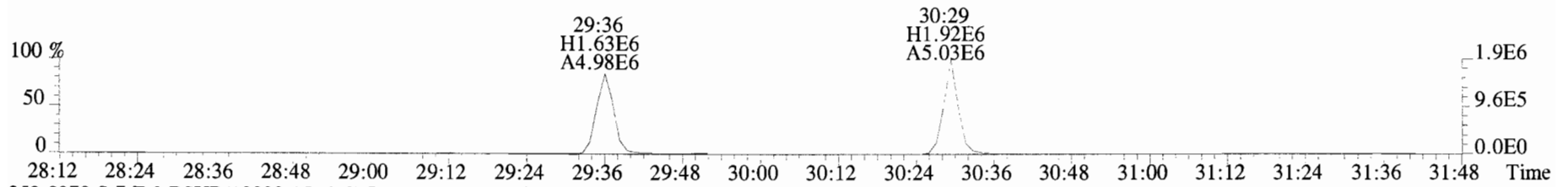
File:191023D1 #1-211 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



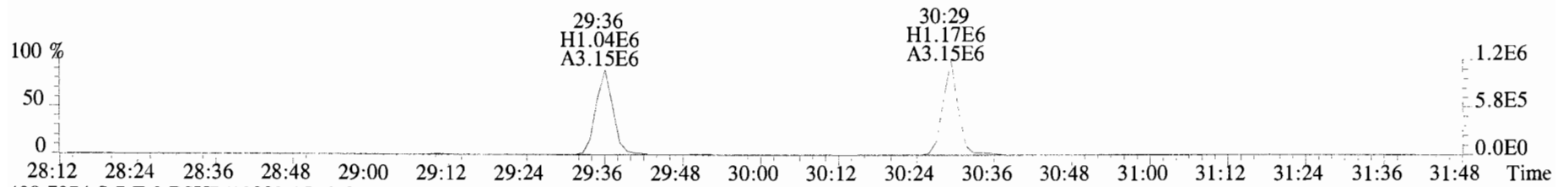
341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



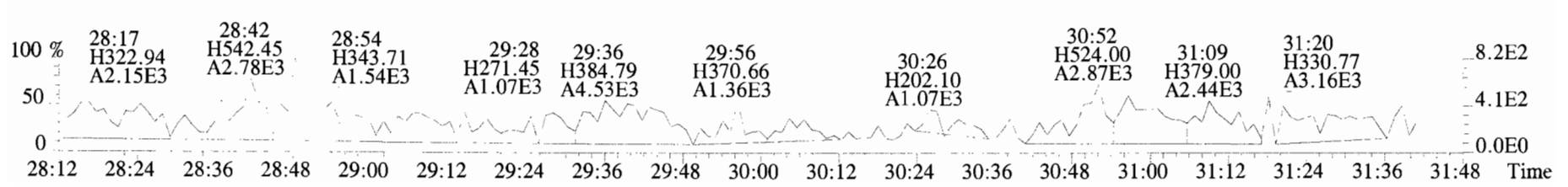
351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



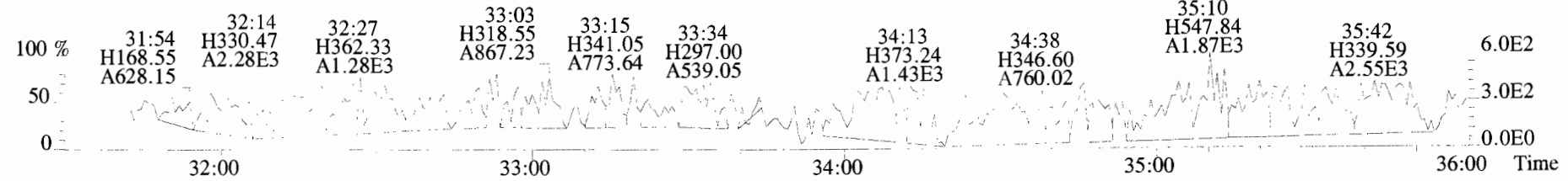
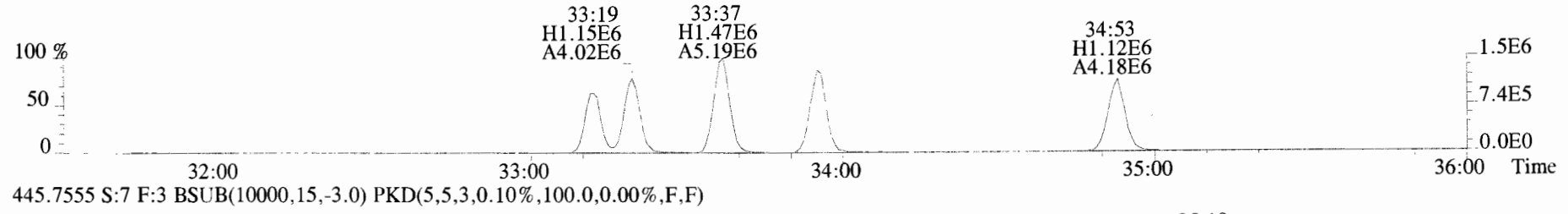
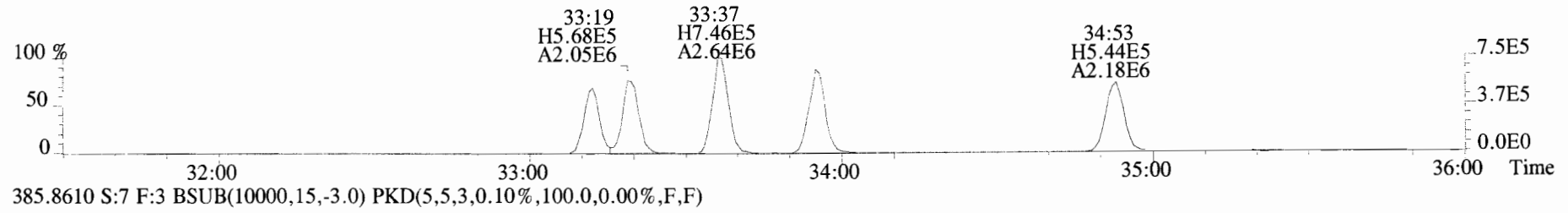
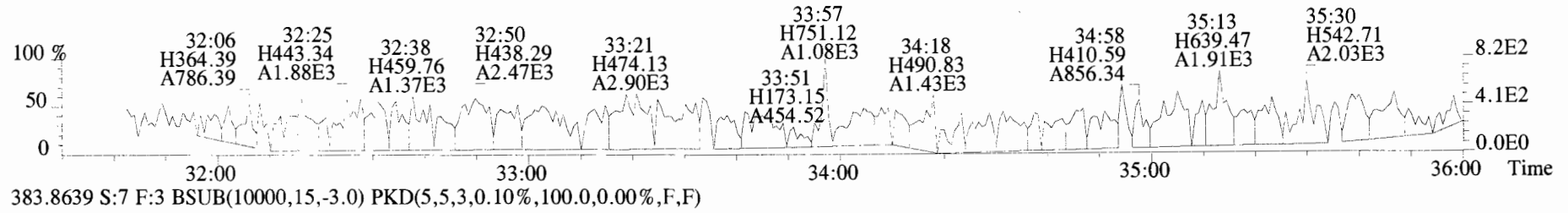
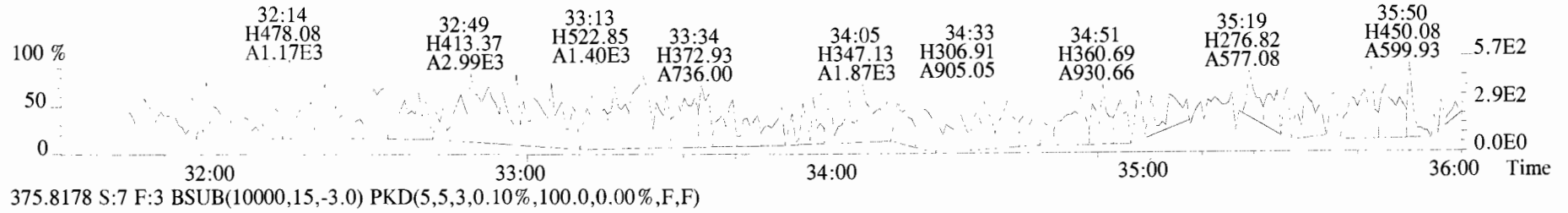
353.8970 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



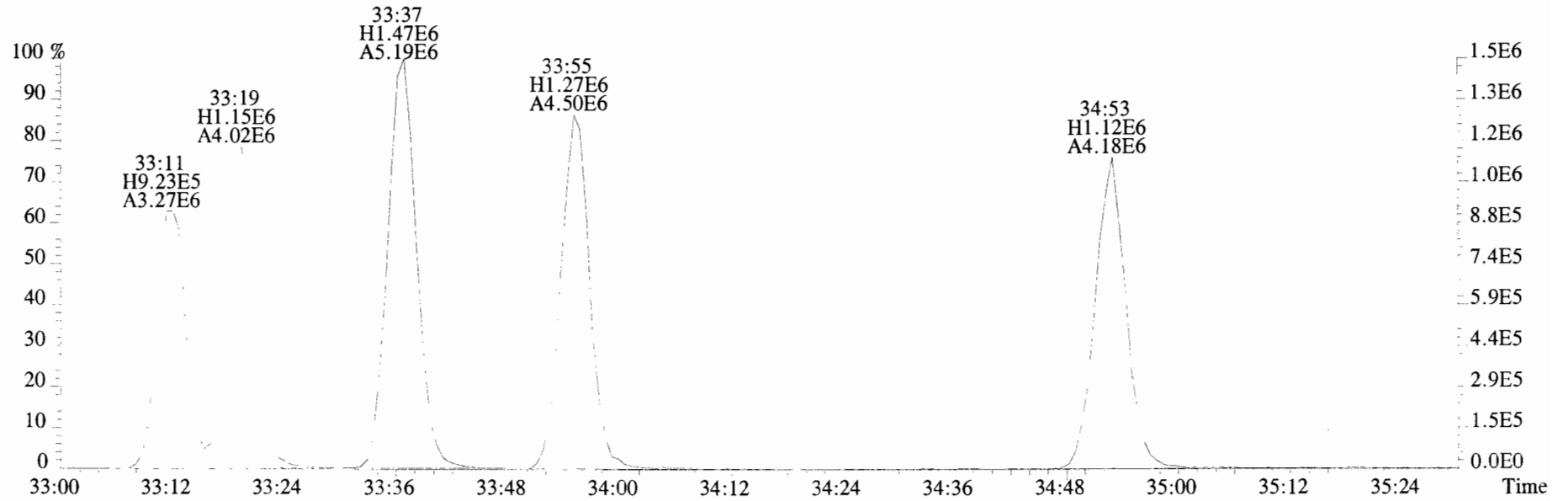
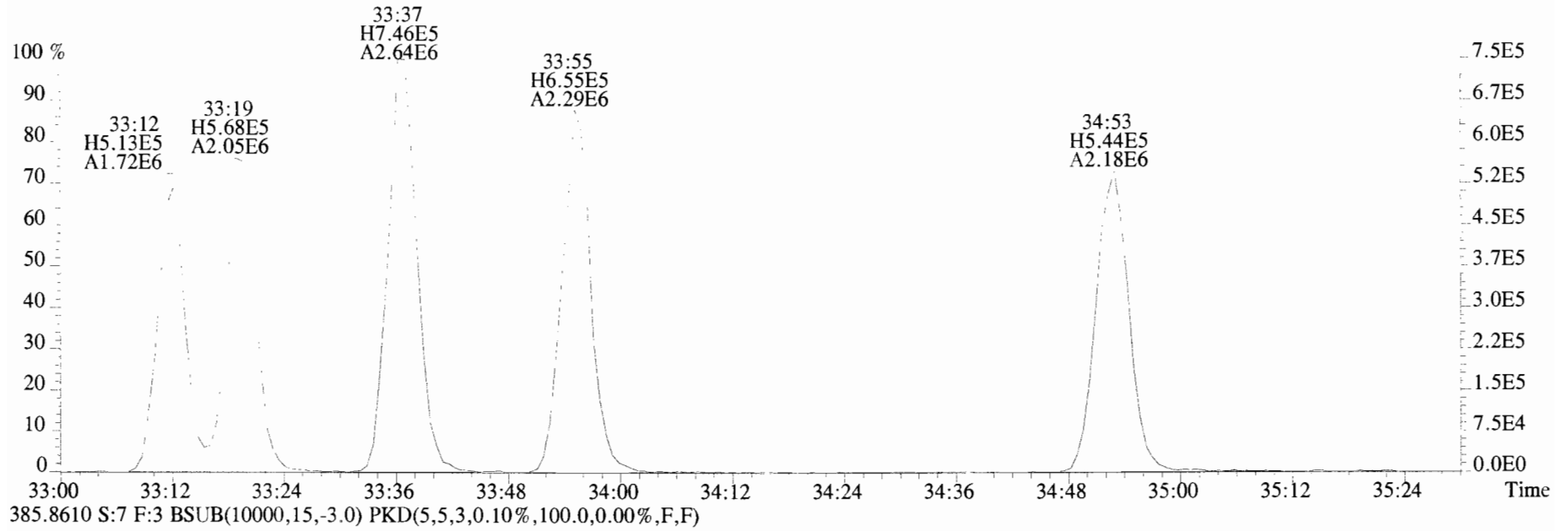
409.7974 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



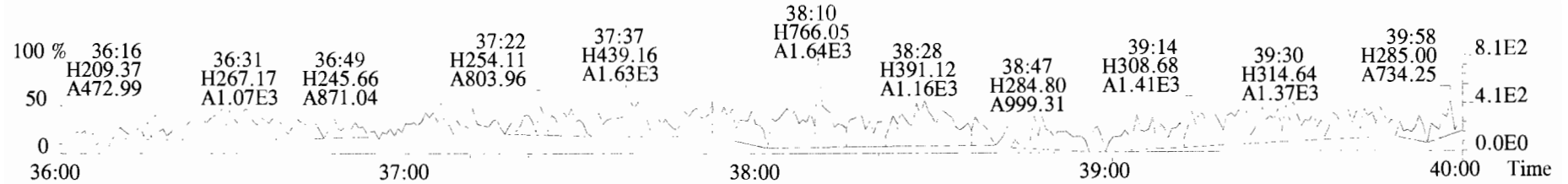
File:191023D1 #1-384 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
 373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



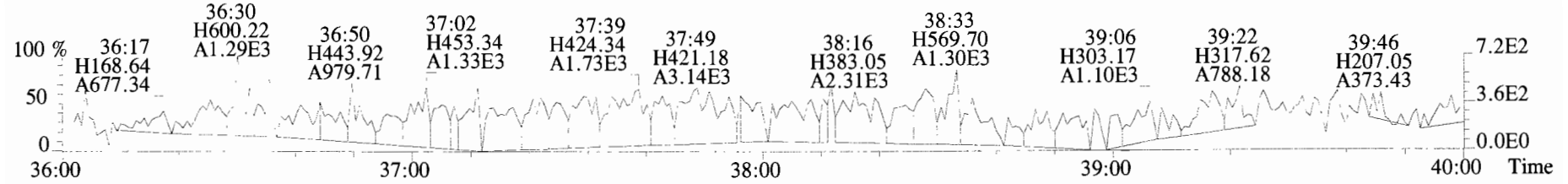
File:191023D1 #1-384 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



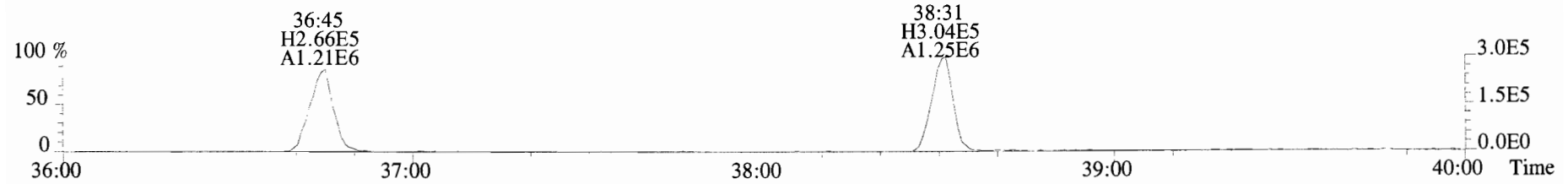
File:191023D1 #1-355 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
 407.7818 S:7 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



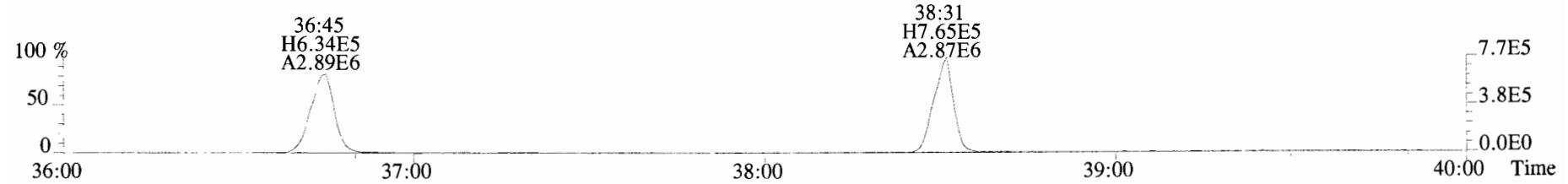
409.7788 S:7 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



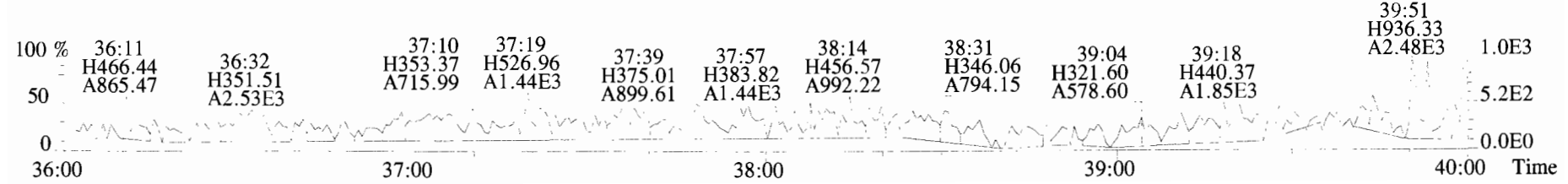
417.8253 S:7 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



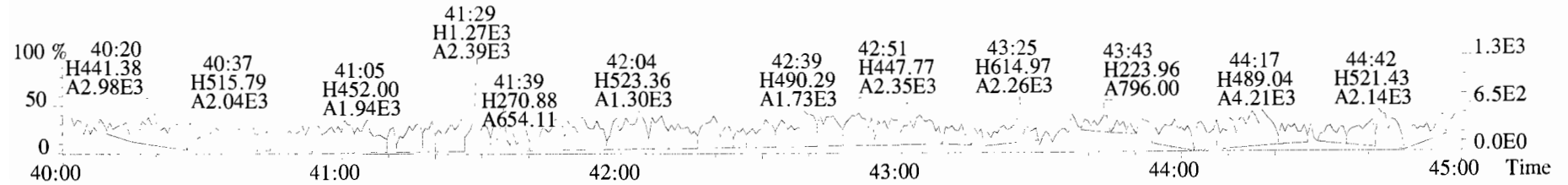
419.8220 S:7 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



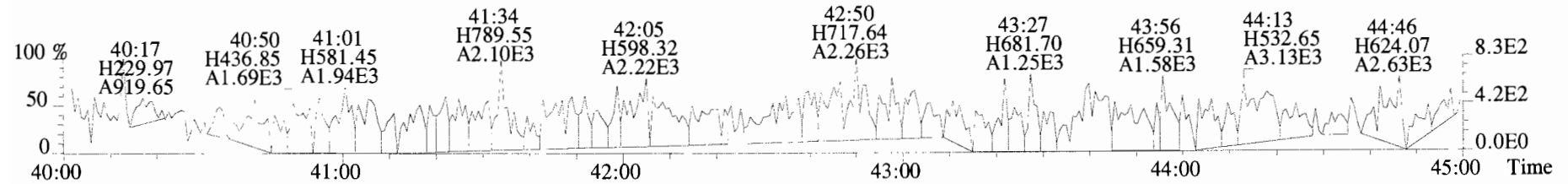
479.7165 S:7 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



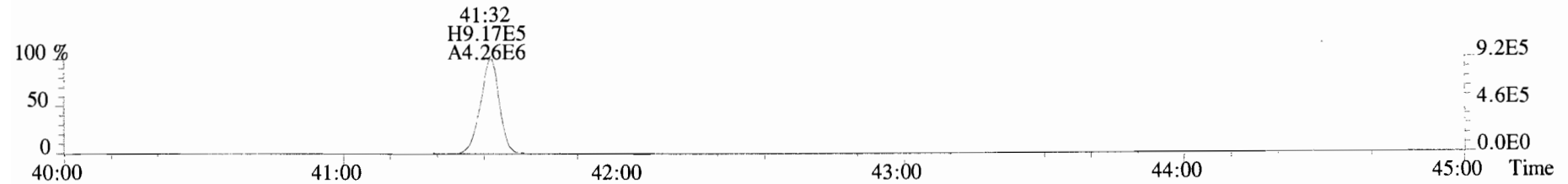
File:191023D1 #1-432 Acq:23-OCT-2019 18:07:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-03 PDI-FB-1910031324 0.95724 Exp:OCDD_DB5
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



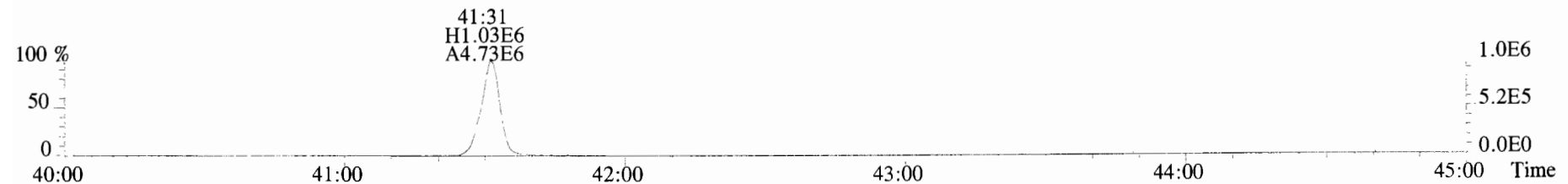
443.7398 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



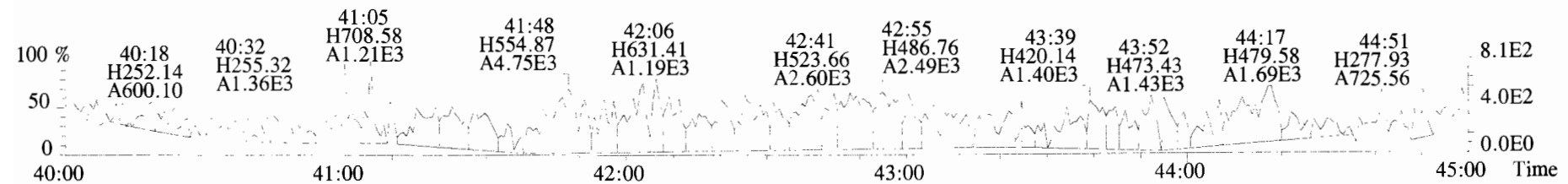
453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: PDI-RB-1910021323
Lab ID: 1903546-04

Filename: 191023D1 S:8 Acq:23-OCT-19 18:55:33
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 0.986

ConCal: ST191023D1-1
EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
2,3,7,8-TCDD	*	* n	0.91	Not F η	*		160	2.5	0.765
1,2,3,7,8-PeCDD	*	* n	0.90	Not F η	*		180	2.5	0.756
1,2,3,4,7,8-HxCDD	*	* n	1.10	Not F η	*		118	2.5	1.42
1,2,3,6,7,8-HxCDD	*	* n	0.94	Not F η	*		118	2.5	1.59
1,2,3,7,8,9-HxCDD	*	* n	0.96	Not F η	*		118	2.5	0.922
1,2,3,4,6,7,8-HpCDD	*	* n	0.98	Not F η	*		132	2.5	1.53
OCDD	*	* n	0.96	Not F η	*		104	2.5	1.71
2,3,7,8-TCDF	*	* n	0.95	Not F η	*		144	2.5	0.560
1,2,3,7,8-PeCDF	*	* n	0.96	Not F η	*		146	2.5	0.687
2,3,4,7,8-PeCDF	*	* n	1.01	Not F η	*		146	2.5	0.668
1,2,3,4,7,8-HxCDF	*	* n	1.18	Not F η	*		164	2.5	1.60
1,2,3,6,7,8-HxCDF	*	* n	1.07	Not F η	*		164	2.5	1.59
2,3,4,6,7,8-HxCDF	*	* n	1.11	Not F η	*		164	2.5	0.533
1,2,3,7,8,9-HxCDF	*	* n	1.06	Not F η	*		164	2.5	0.699
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	Not F η	*		84.2	2.5	1.82
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	Not F η	*		84.2	2.5	0.581
OCDF	*	* n	0.95	Not F η	*		126	2.5	3.02

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		160	0.765
Total Penta-Dioxins	*	*		180	0.756
Total Hexa-Dioxins	*	*		118	1.23
Total Hepta-Dioxins	*	*		132	1.53
Total Tetra-Furans	*	*		144	0.560
Total Penta-Furans	0.0000	0.0000		146	0.677
Total Hexa-Furans	*	*		164	0.850
Total Hepta-Furans	*	*		84.2	0.962

IS	Conc	RA	RRF	RT	Conc	Qual	noise	Fac	DL
13C-2,3,7,8-TCDD	7.52e+06	0.75 y	1.10	26:17	1935.9				
13C-1,2,3,7,8-PeCDD	6.05e+06	0.63 y	0.88	30:46	1936.0				
13C-1,2,3,4,7,8-HxCDD	3.02e+06	1.23 y	0.64	34:05	1154.9				
13C-1,2,3,6,7,8-HxCDD	3.30e+06	1.26 y	0.86	34:12	947.48				
13C-1,2,3,7,8,9-HxCDD	5.78e+06	1.26 y	0.81	34:30	1761.0				
13C-1,2,3,4,6,7,8-HpCDD	3.25e+06	1.06 y	0.65	37:58	1221.6				
13C-OCDD	5.44e+06	0.92 y	0.58	41:19	2302.7				
13C-2,3,7,8-TCDF	9.04e+06	0.78 y	1.03	25:31	1622.1				
13C-1,2,3,7,8-PeCDF	9.04e+06	1.55 y	0.85	29:36	1966.3				
13C-2,3,4,7,8-PeCDF	8.87e+06	1.61 y	0.85	30:29	1945.7				
13C-1,2,3,4,7,8-HxCDF	2.07e+06	0.50 y	0.83	33:12	612.08				
13C-1,2,3,6,7,8-HxCDF	2.51e+06	0.51 y	1.03	33:19	595.96				
13C-2,3,4,6,7,8-HxCDF	7.43e+06	0.52 y	0.95	33:55	1914.2				
13C-1,2,3,7,8,9-HxCDF	6.81e+06	0.52 y	0.83	34:53	2019.4				
13C-1,2,3,4,6,7,8-HpCDF	1.40e+06	0.43 y	0.76	36:44	452.82				
13C-1,2,3,4,7,8,9-HpCDF	3.12e+06	0.42 y	0.58	38:31	1318.8				
13C-OCDF	3.91e+06	0.93 y	0.69	41:32	1393.4				

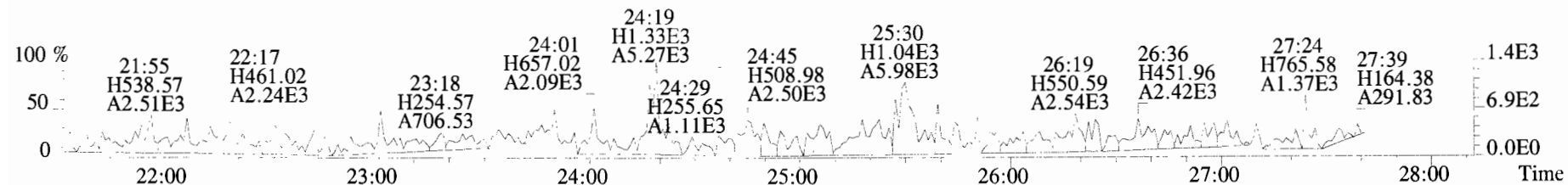
Rec Qual

95.4
95.4
56.9
46.7
86.8
60.2
56.8
80.0
96.9
95.9
30.2
29.4
94.4
99.6
22.3
65.0
34.3

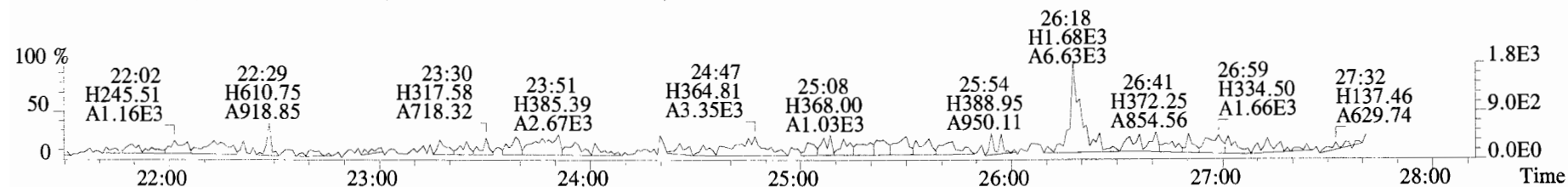
C/Up	37Cl-2,3,7,8-TCDD	2.97e+06		1.20	26:19	700.25			
RS/RT	13C-1,2,3,4-TCDD	7.19e+06	0.78 y	1.00	25:44	2028.4			
RS	13C-1,2,3,4-TCDF	1.09e+07	0.81 y	1.00	24:19	2028.4			
RS/RT	13C-1,2,3,4,6,9-HxCDF	8.26e+06	0.52 y	1.00	33:37	2028.4			

Integrations
by DB
Analyst: DB
Reviewed
by CT
Analyst: CT
Date: 10/24/19
Date: 11/04/19

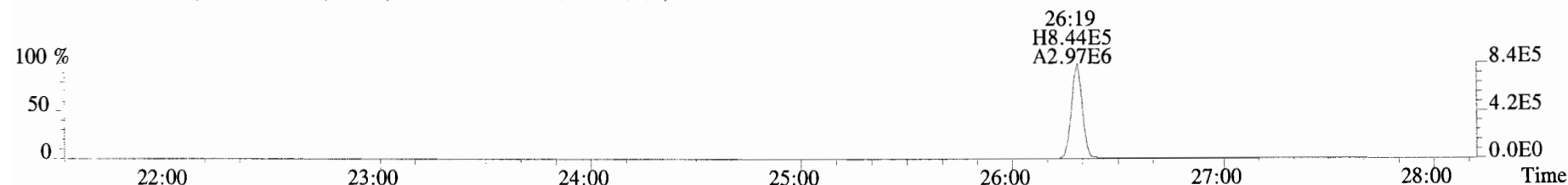
File:191023D1 #1-493 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



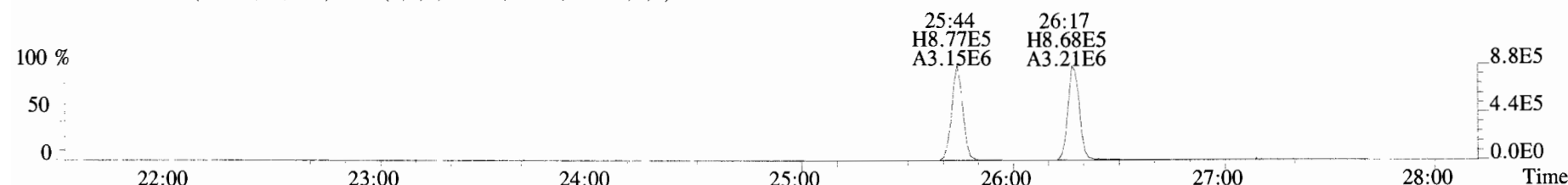
321.8936 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



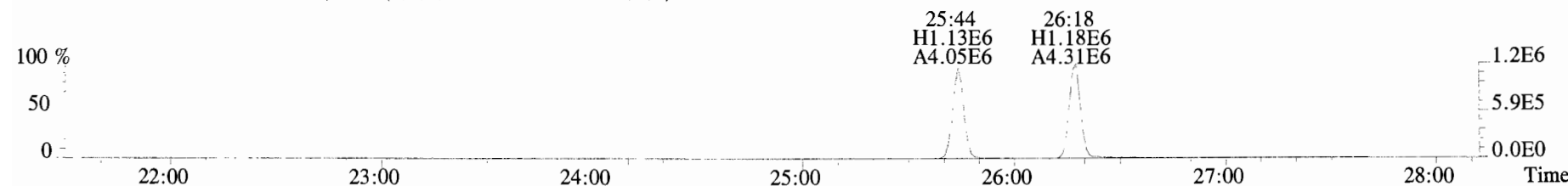
327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



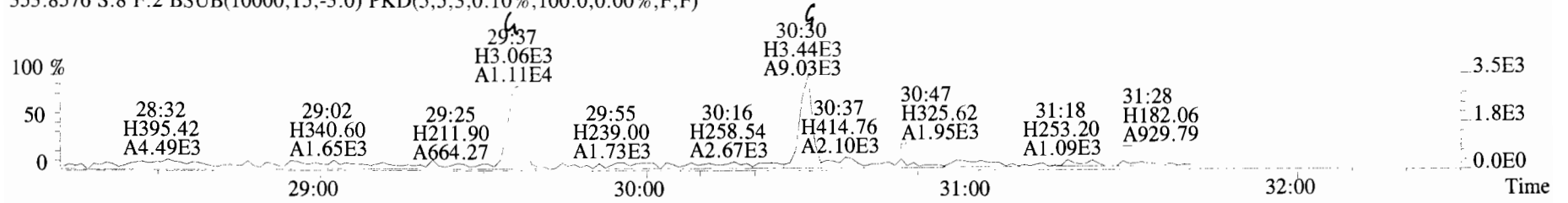
331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



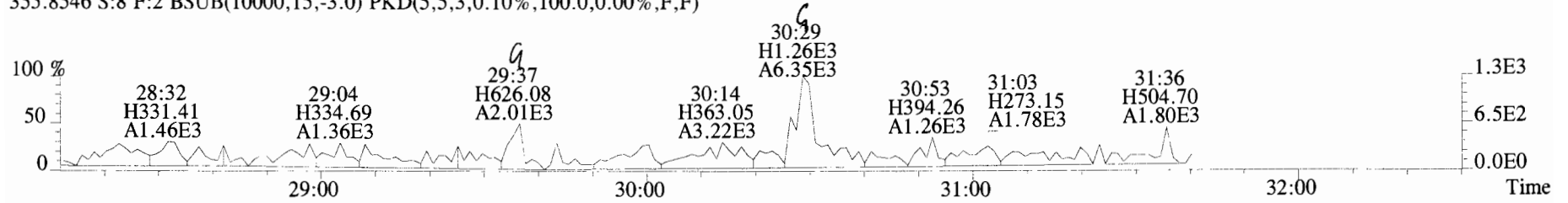
333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



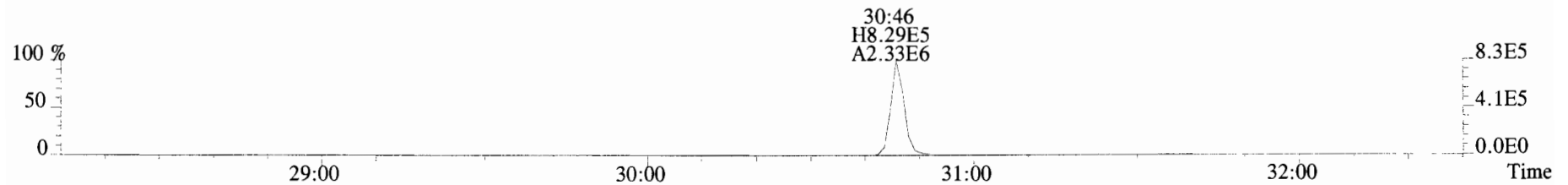
File:191023D1 #1-210 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



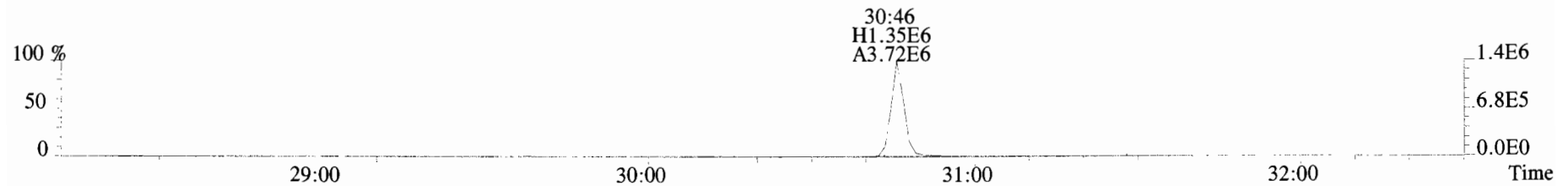
355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



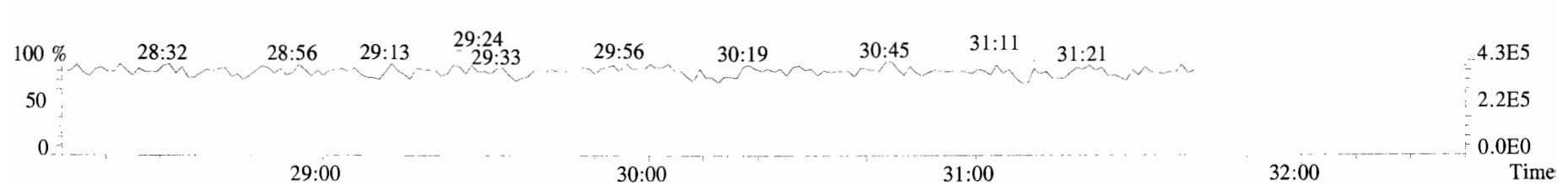
365.8978 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



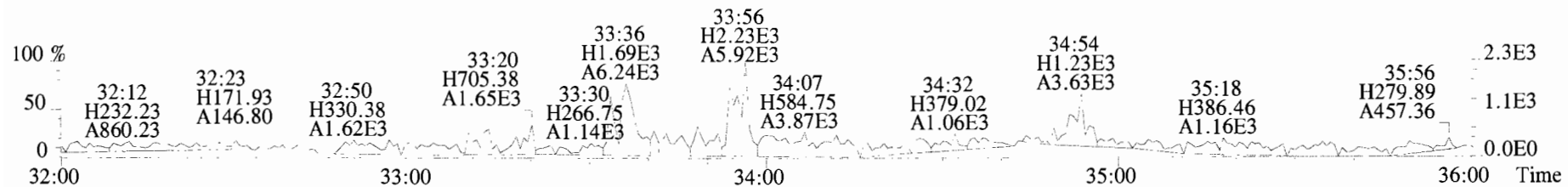
367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



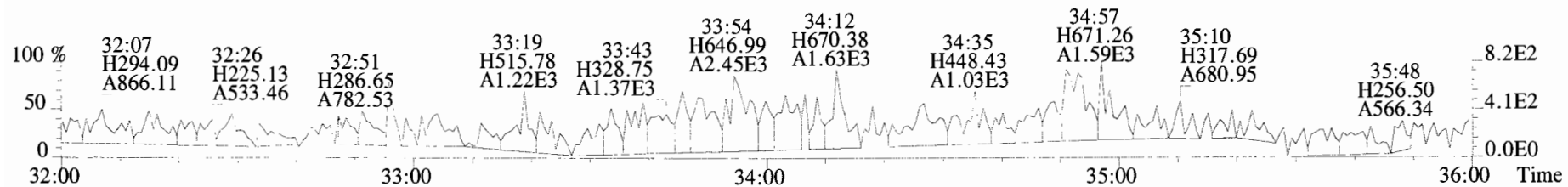
366.9792 S:8 F:2



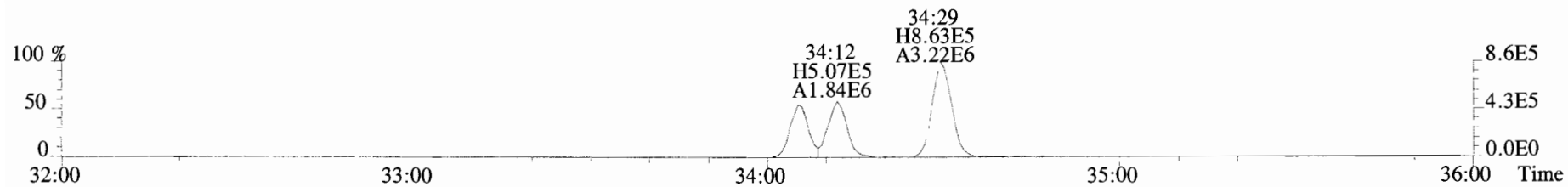
File:191023D1 #1-385 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text: Vista Analytical Laboratory_VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
 389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



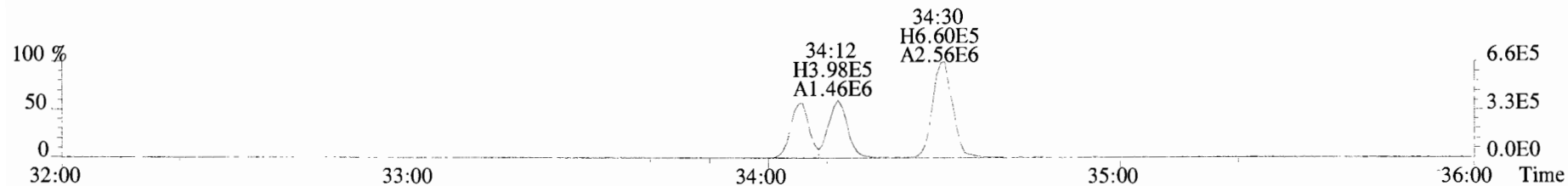
391.8127 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



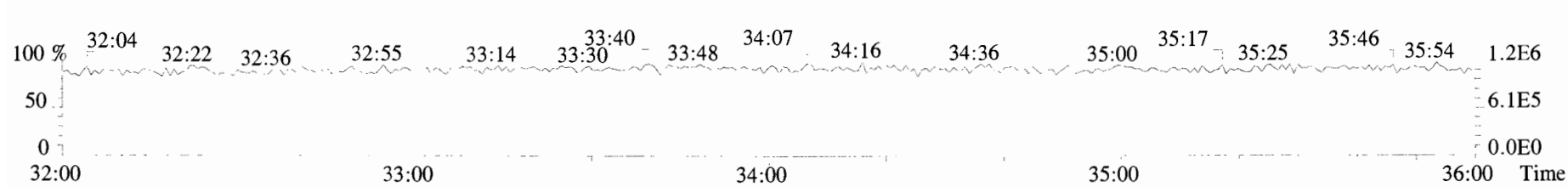
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



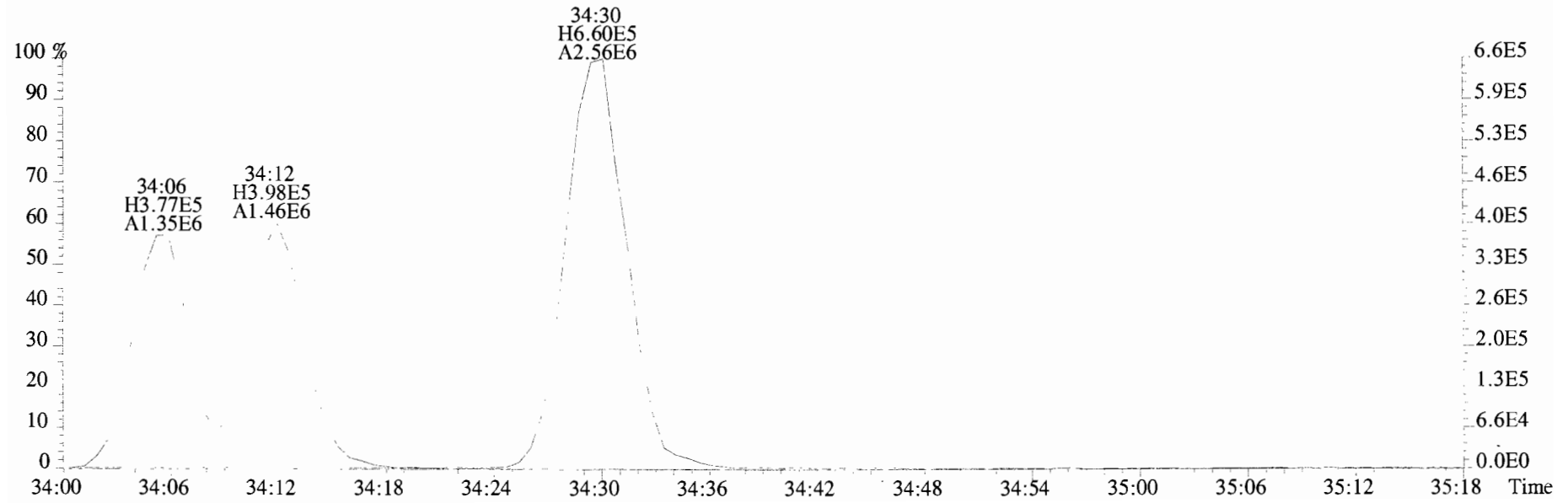
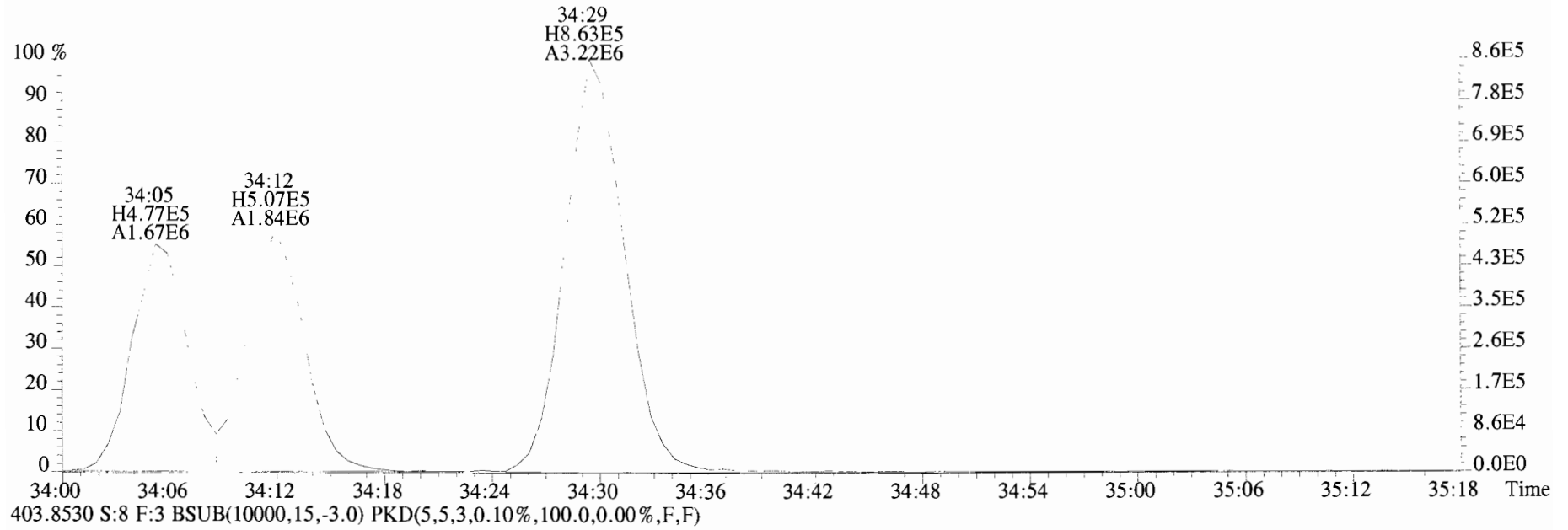
403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



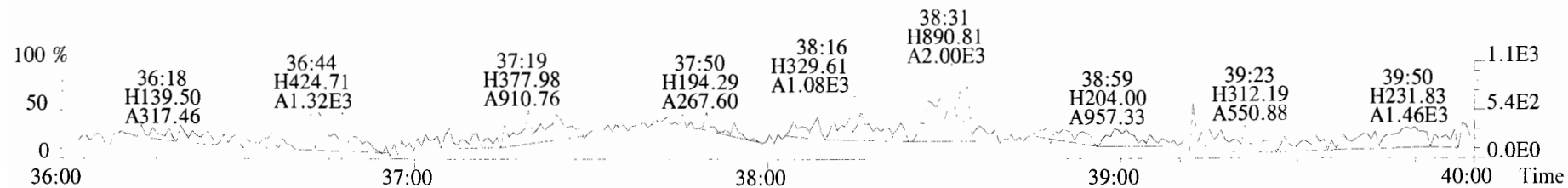
392.9760 S:8 F:3



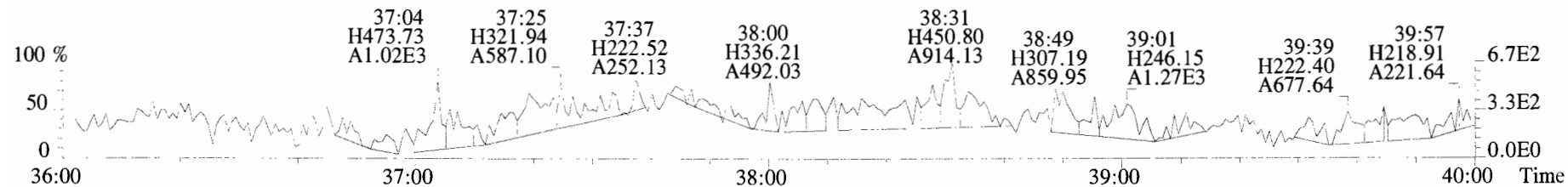
File:191023D1 #1-385 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
401.8559 S:8 F:3 BSUB(T0000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



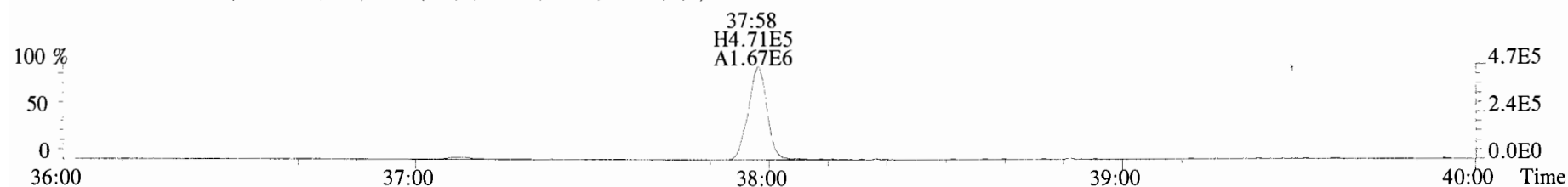
File:191023D1 #1-355 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
423.7767 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



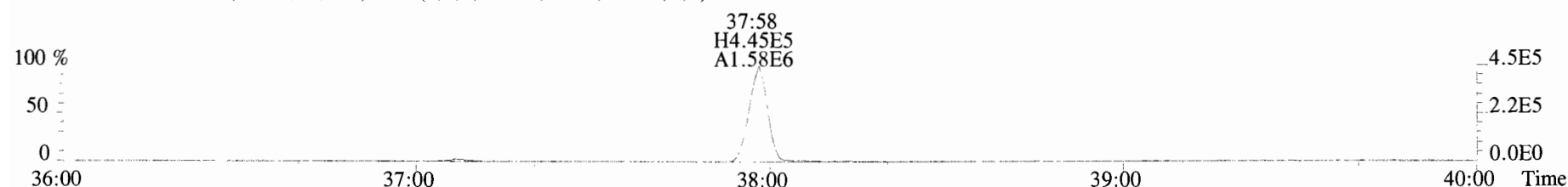
425.7737 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



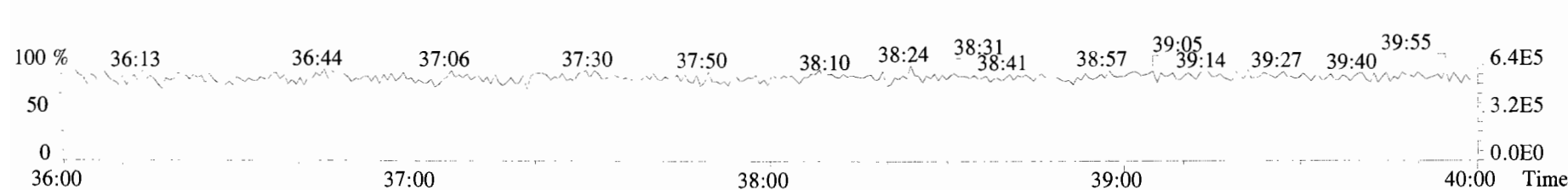
435.8169 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



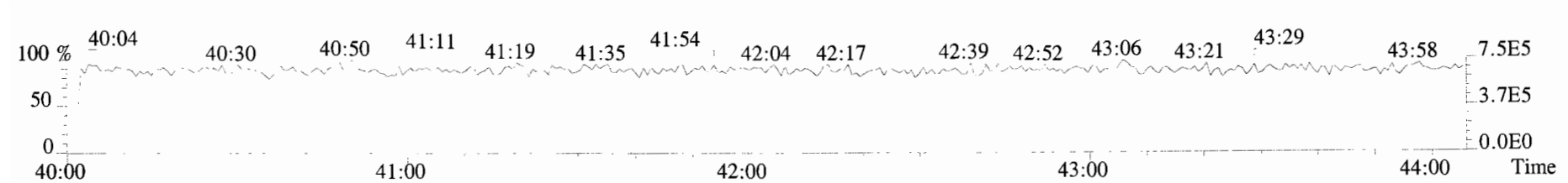
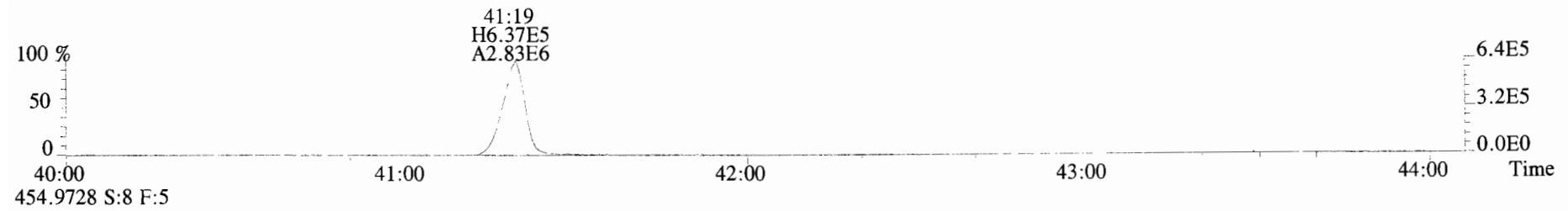
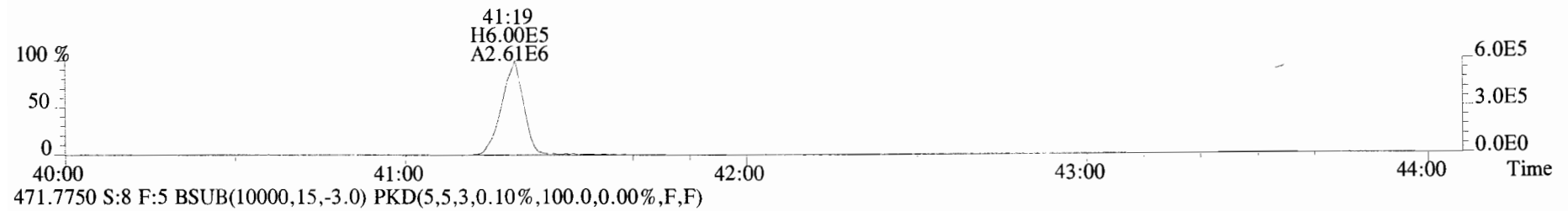
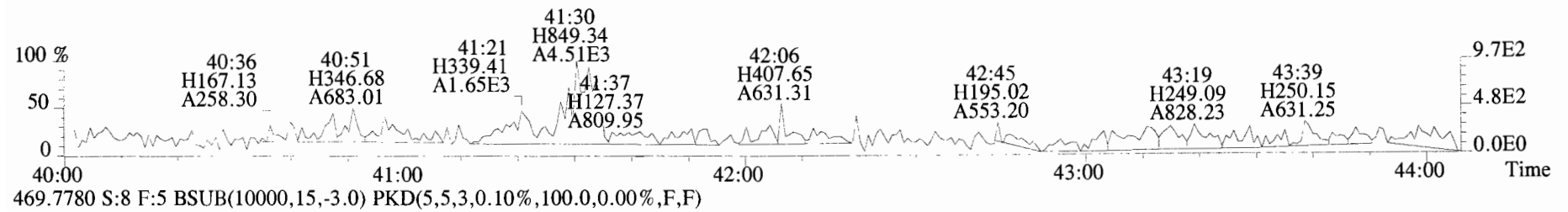
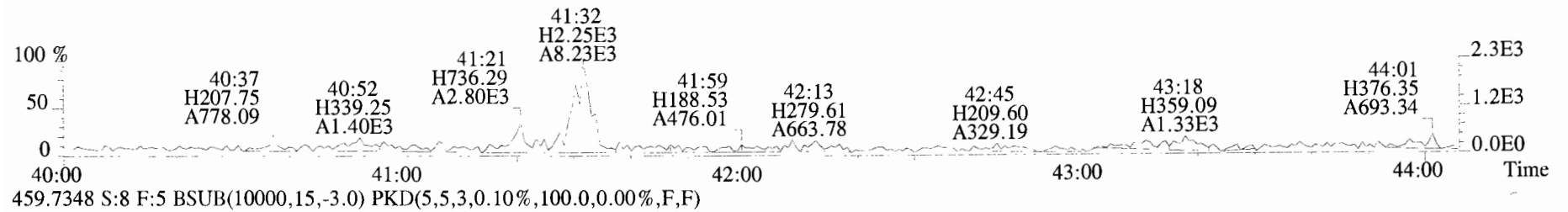
437.8140 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



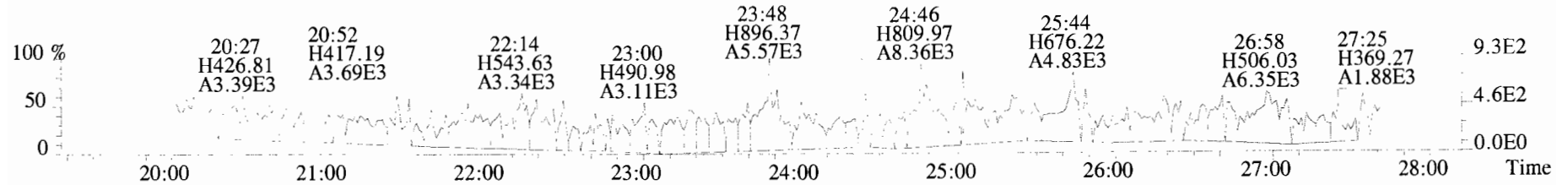
454.9728 S:8 F:4



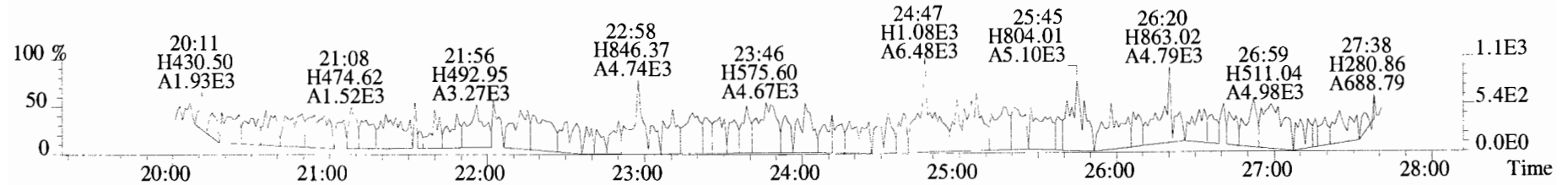
File:191023D1 #1-432 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



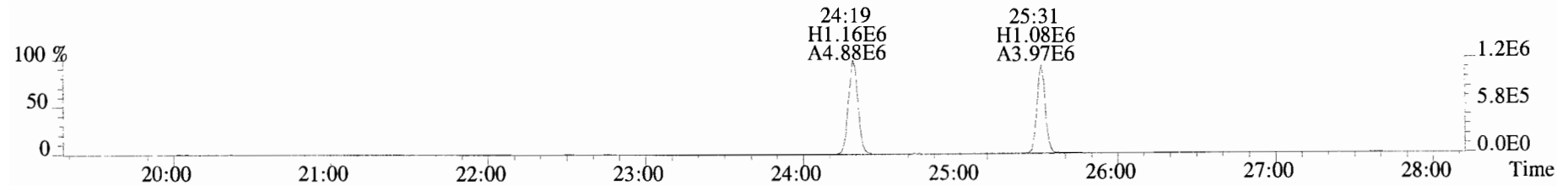
File:191023D1 #1-493 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



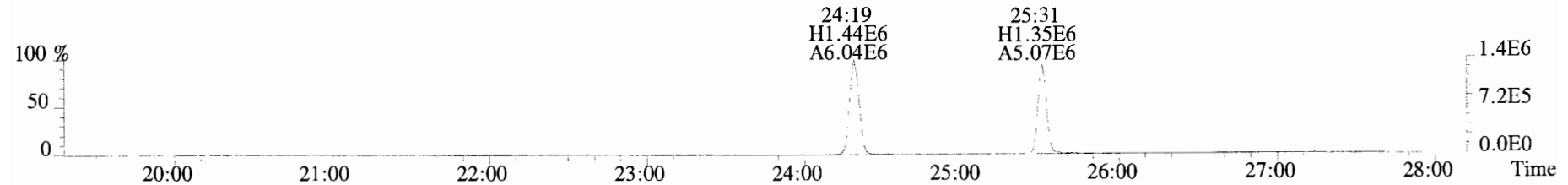
305.8987 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



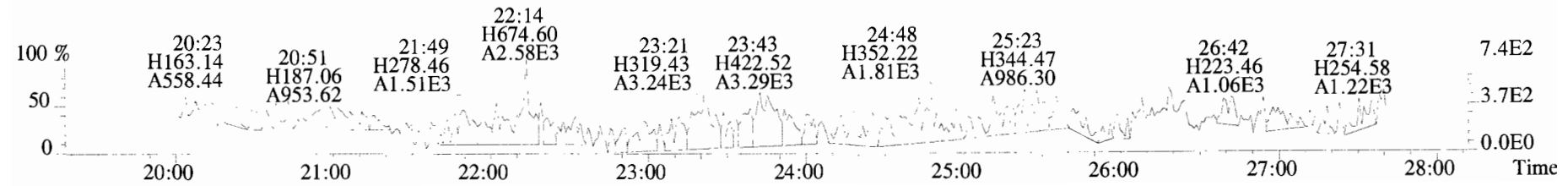
315.9419 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



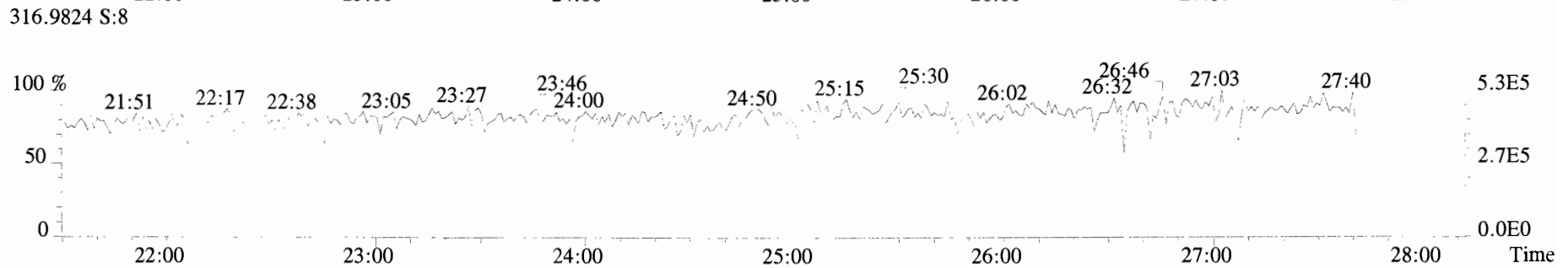
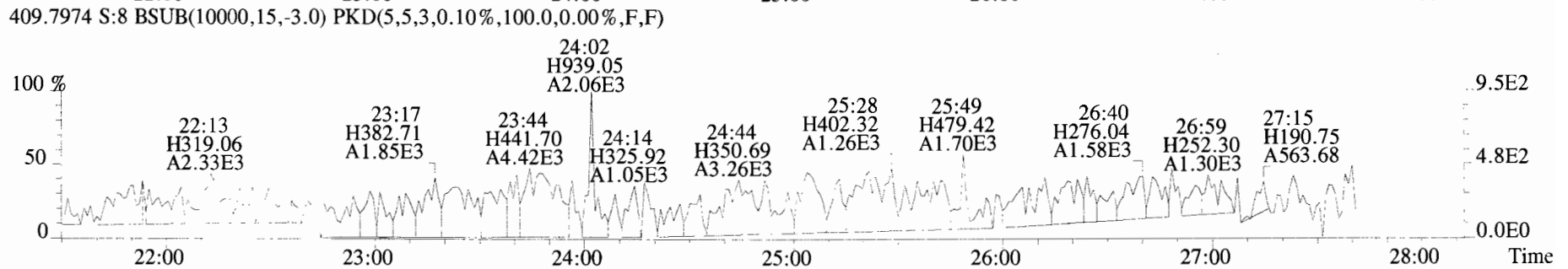
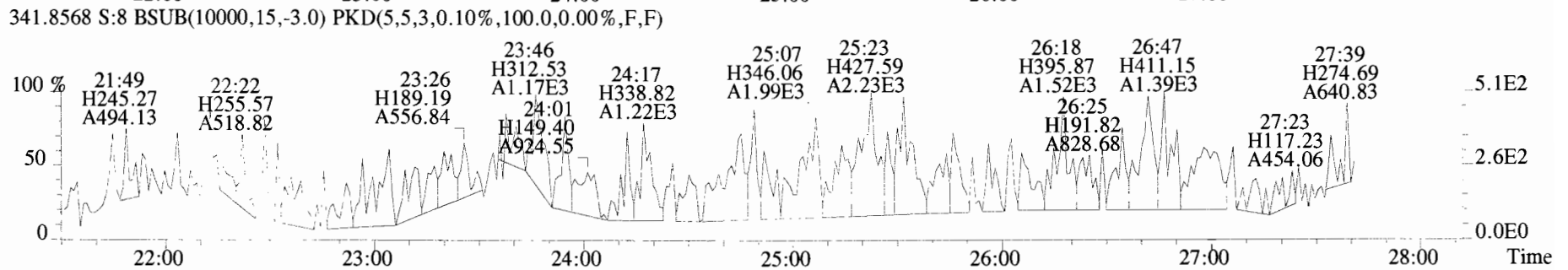
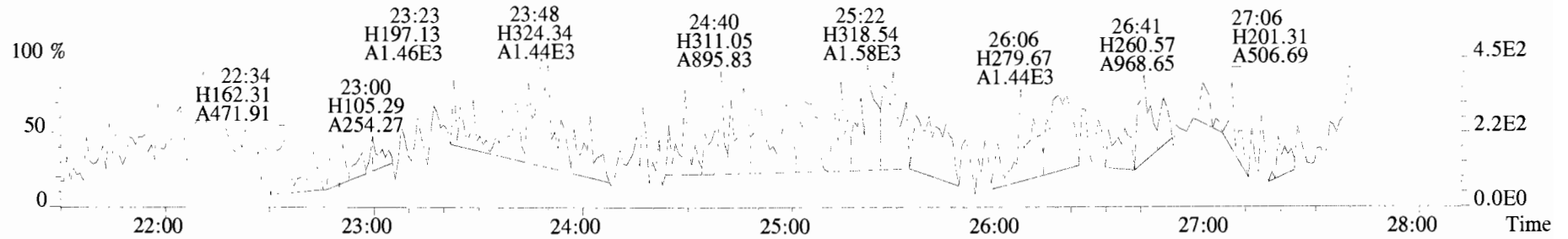
317.9389 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



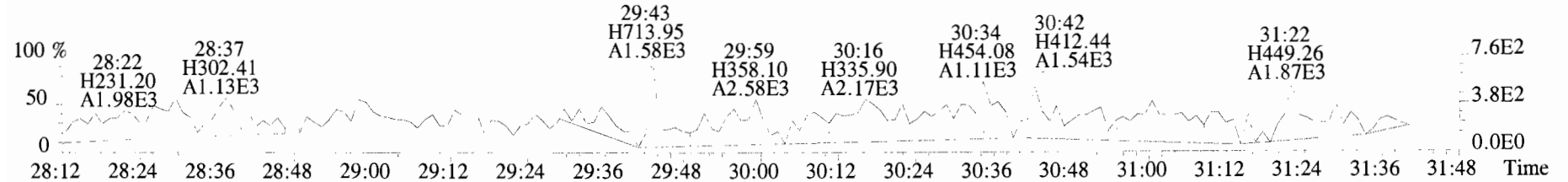
375.8364 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



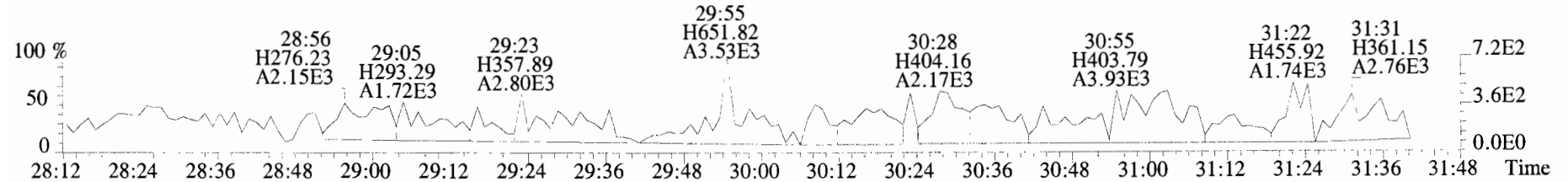
File:191023D1 #1-493 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



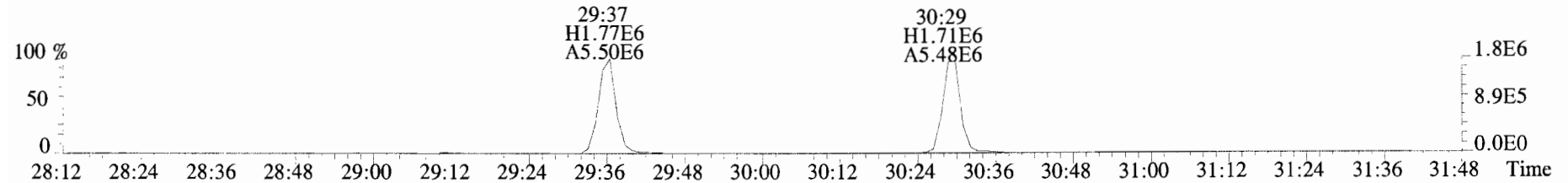
File: 191023D1 #1-210 Acq: 23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista_Analytical_Laboratory_VG7 Text: 1903546-04 PDI-RB-1910031323 0.98601 Exp: OCDD_DB5
339.8597 S:8 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



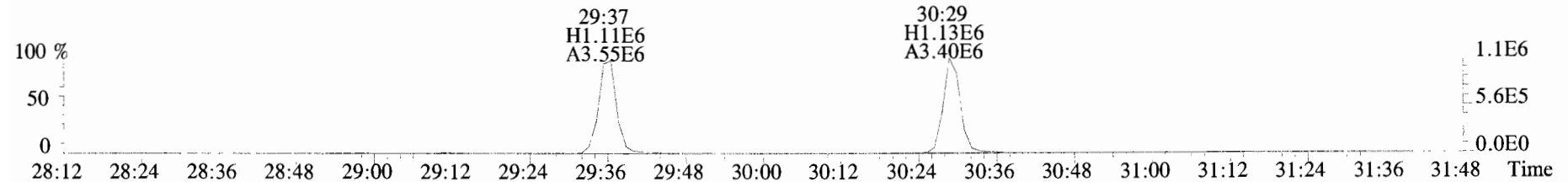
341.8568 S:8 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



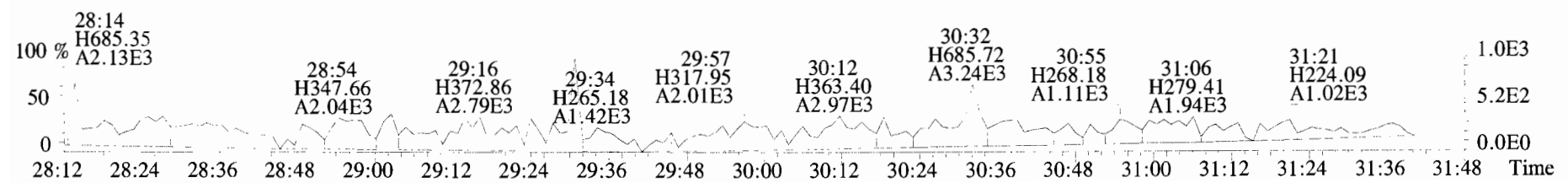
351.9000 S:8 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



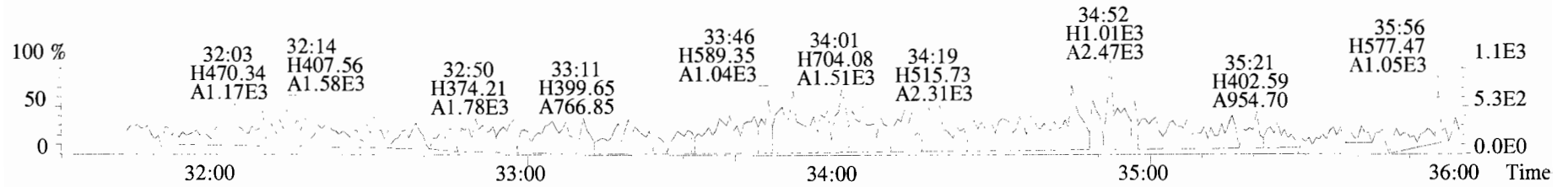
353.8970 S:8 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



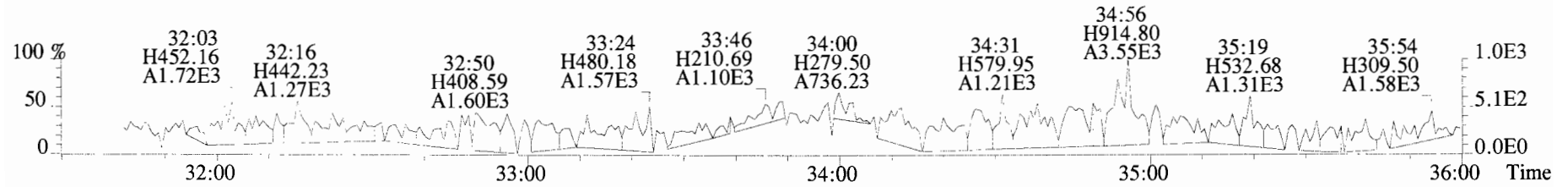
409.7974 S:8 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



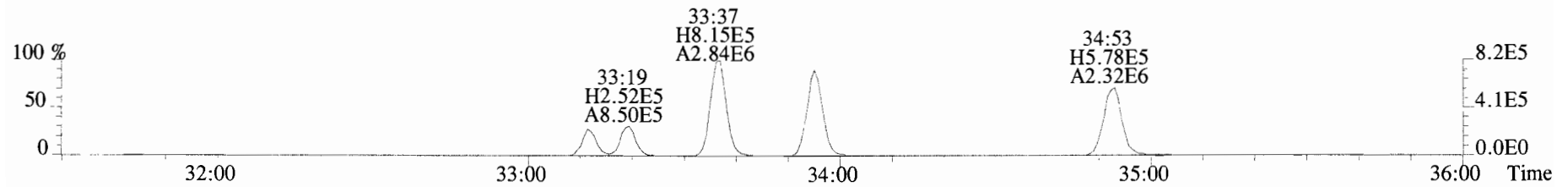
File:191023D1 #1-385 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
 373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



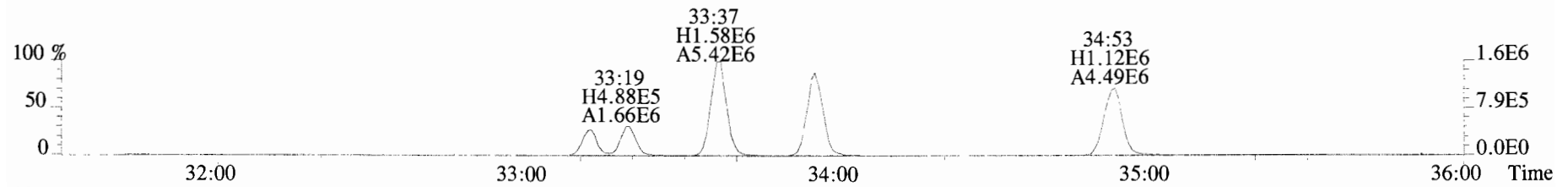
375.8178 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



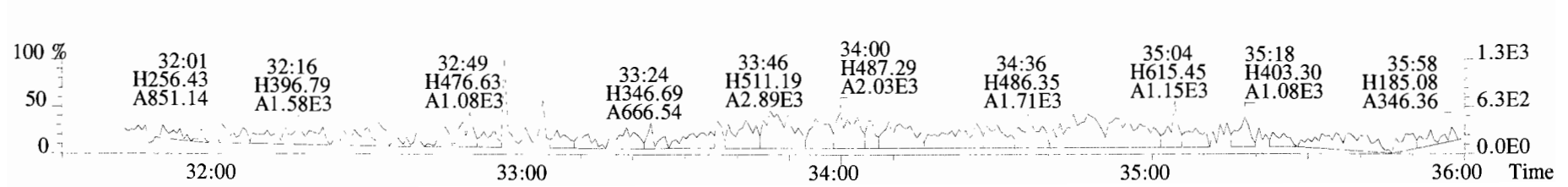
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



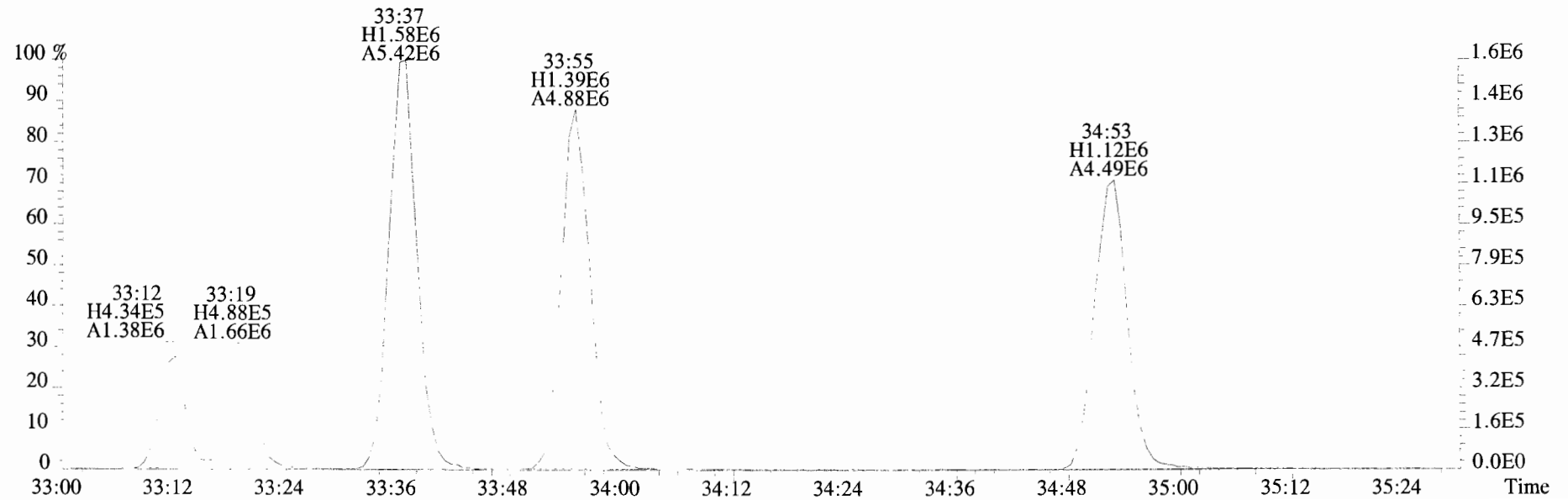
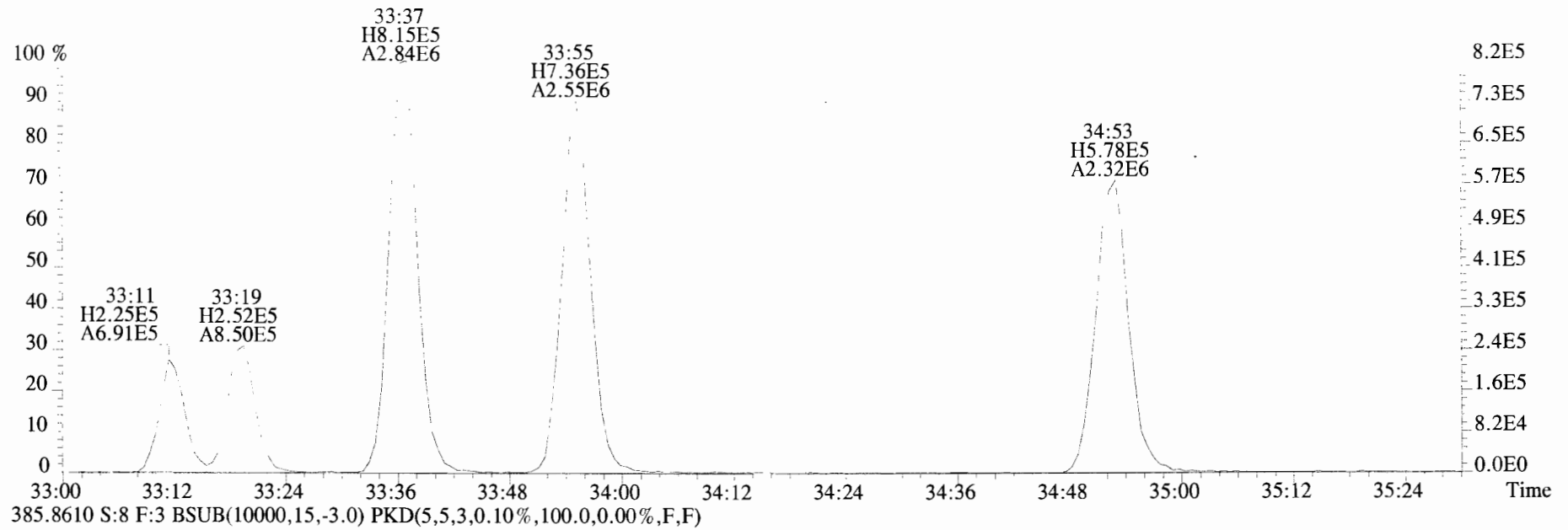
385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



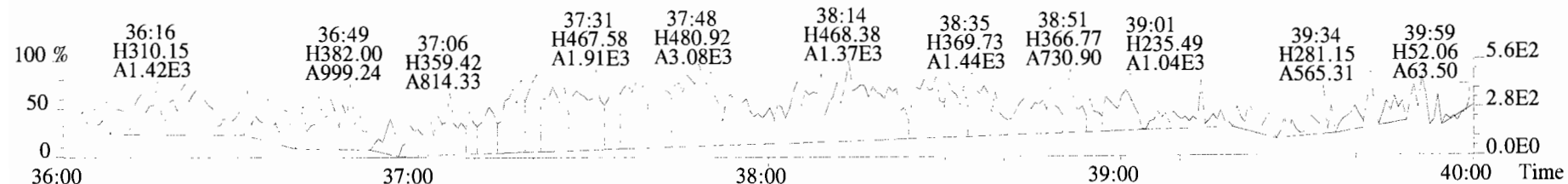
445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



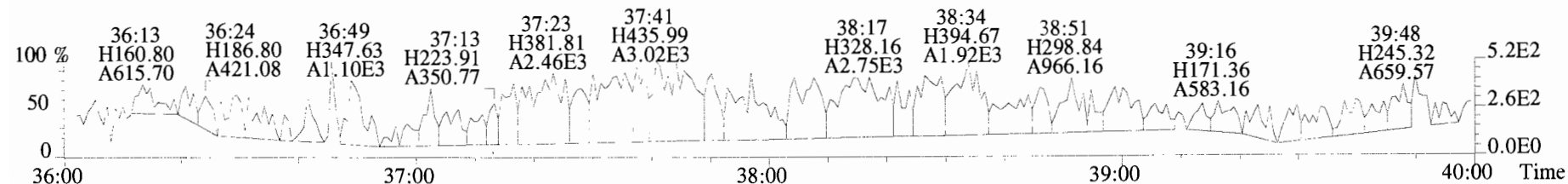
File:191023D1 #1-385 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
383.8639 S:8 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



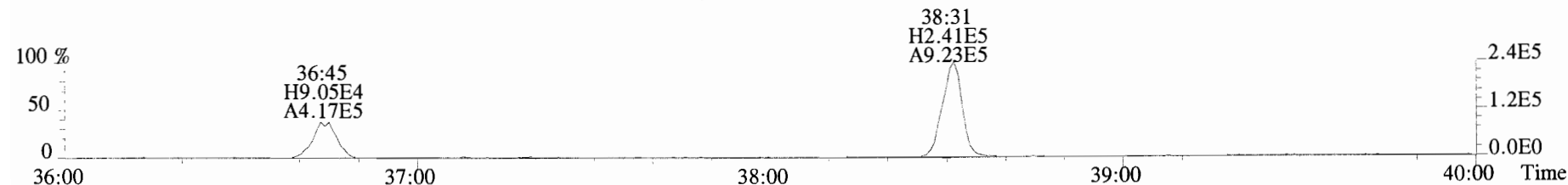
File:191023D1 #1-355 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text: Vista_Analytical_Laboratory_VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
 407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



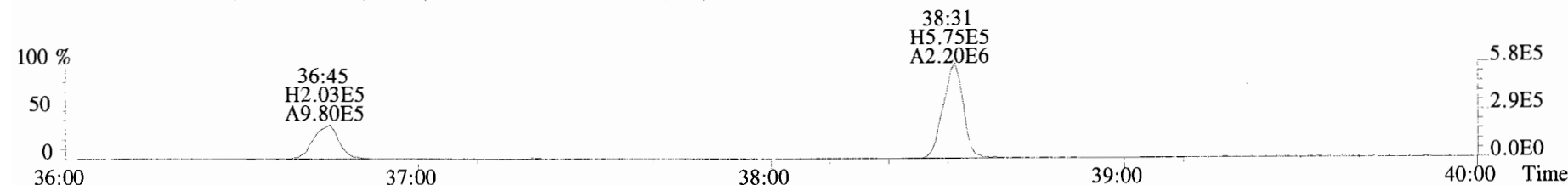
409.7788 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



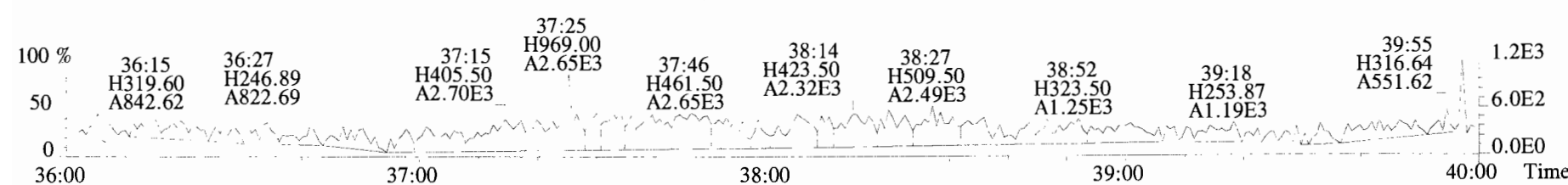
417.8253 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



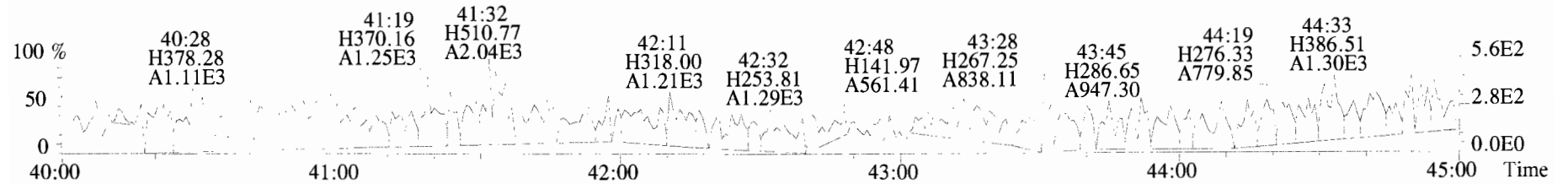
419.8220 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



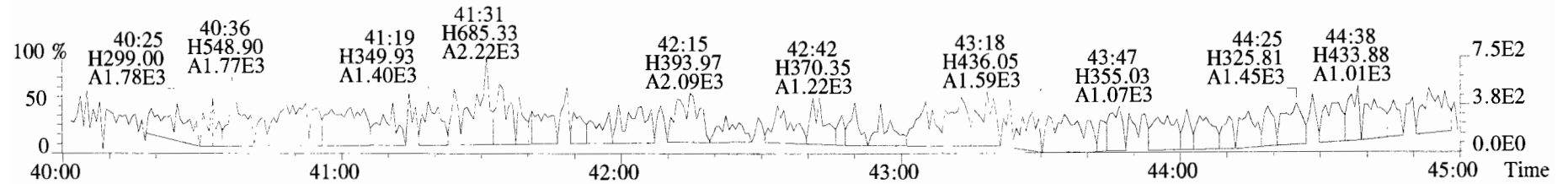
479.7165 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



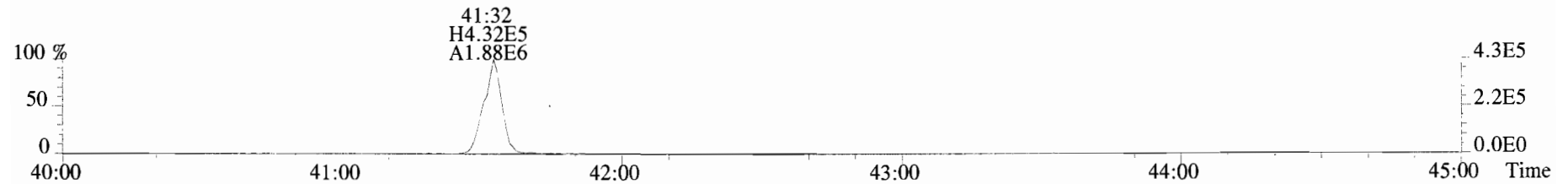
File:191023D1 #1-432 Acq:23-OCT-2019 18:55:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory_VG7 Text:1903546-04 PDI-RB-1910031323 0.98601 Exp:OCDD_DB5
441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



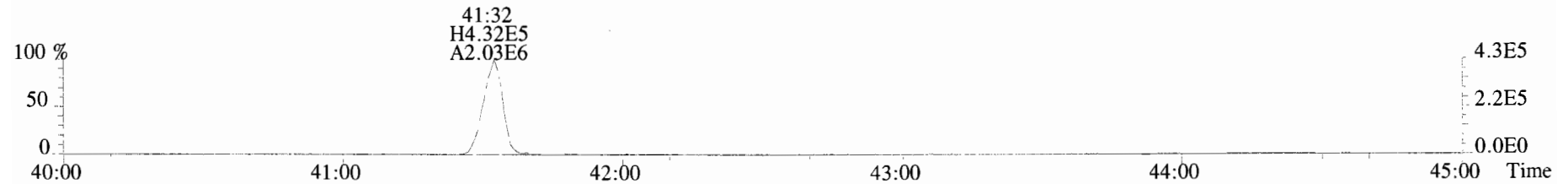
443.7398 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



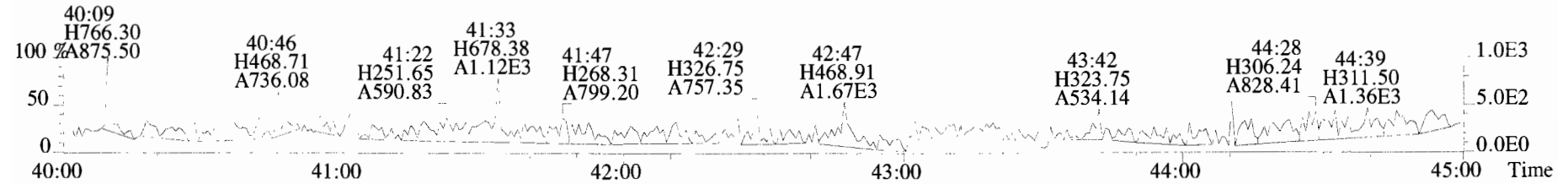
453.7831 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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)



Client ID: Method Blank
Lab ID: B9J0132-BLK1

Filename: 191024D1 S:6 Acq:24-OCT-19 19:36:16
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.000

ConCal: ST191024D1-1
EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
2,3,7,8-TCDD	*	* n	0.91	NotF η	*		142 2.5		0.133
1,2,3,7,8-PeCDD	*	* n	0.90	NotF η	*		156 2.5		0.113
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF η	*		137 2.5		0.151
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotF η	*		137 2.5		0.169
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotF η	*		137 2.5		0.162
1,2,3,4,6,7,8-HpCDD	*	* n	0.98	NotF η	*		105 2.5		0.113
OCDD	*	* n	0.96	NotF η	*		159 2.5		0.244
2,3,7,8-TCDF	*	* n	0.95	NotF η	*		189 2.5		0.126
1,2,3,7,8-PeCDF	*	* n	0.96	NotF η	*		137 2.5		0.103
2,3,4,7,8-PeCDF	*	* n	1.01	NotF η	*		137 2.5		0.102
1,2,3,4,7,8-HxCDF	*	* n	1.18	NotF η	*		124 2.5		0.0531
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotF η	*		124 2.5		0.0547
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotF η	*		124 2.5		0.0601
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotF η	*		124 2.5		0.0756
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	NotF η	*		98.6 2.5		0.0571
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotF η	*		98.6 2.5		0.0665
OCDF	*	* n	0.95	NotF η	*		170 2.5		0.261

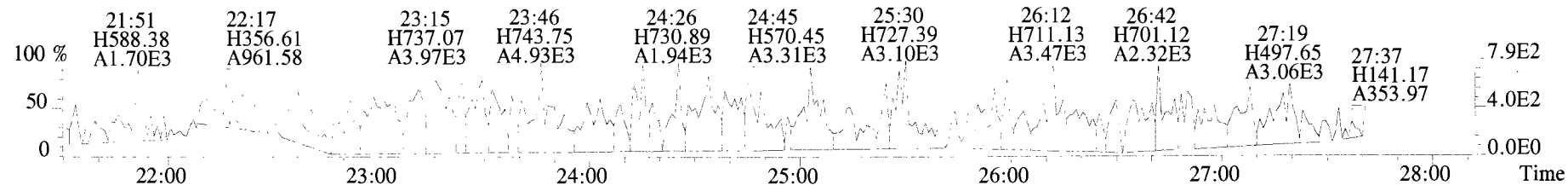
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		142	0.133
Total Penta-Dioxins	*	*		156	0.113
Total Hexa-Dioxins	*	*		137	0.161
Total Hepta-Dioxins	*	*		105	0.113
Total Tetra-Furans	*	*		189	0.126
Total Penta-Furans	0.0000	0.0000		137	0.103
Total Hexa-Furans	*	*		124	0.0604
Total Hepta-Furans	*	*		98.6	0.0606

IS	Conc	Qual
13C-2,3,7,8-TCDD	3.92e+06	64.3
13C-1,2,3,7,8-PeCDD	3.71e+06	75.7
13C-1,2,3,4,7,8-HxCDD	3.23e+06	71.6
13C-1,2,3,6,7,8-HxCDD	3.63e+06	60.4
13C-1,2,3,7,8,9-HxCDD	3.87e+06	68.2
13C-1,2,3,4,6,7,8-HpCDD	3.65e+06	79.4
13C-OCDD	5.59e+06	68.6
13C-2,3,7,8-TCDF	5.44e+06	56.6
13C-1,2,3,7,8-PeCDF	5.46e+06	68.8
13C-2,3,4,7,8-PeCDF	5.36e+06	68.2
13C-1,2,3,4,7,8-HxCDF	4.81e+06	82.4
13C-1,2,3,6,7,8-HxCDF	5.36e+06	73.8
13C-2,3,4,6,7,8-HxCDF	4.97e+06	74.2
13C-1,2,3,7,8,9-HxCDF	4.48e+06	77.1
13C-1,2,3,4,6,7,8-HpCDF	5.26e+06	98.8
13C-1,2,3,4,7,8,9-HpCDF	3.33e+06	81.6
13C-OCDF	6.00e+06	61.9

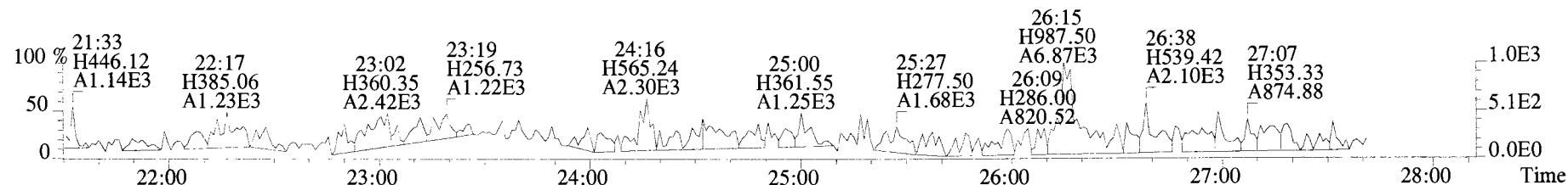
C/Up	Conc	Qual
37C1-2,3,7,8-TCDD	2.15e+06	80.9
RS/RT 13C-1,2,3,4-TCDD	5.56e+06	200.00
RS 13C-1,2,3,4-TCDF	9.28e+06	200.00
RS/RT 13C-1,2,3,4,6,9-HxCDF	7.03e+06	200.00

Rec Qual
Integrations Reviewed
by Analyst: DB by Analyst: CT
Date: 11/4/19 Date: 11/05/19

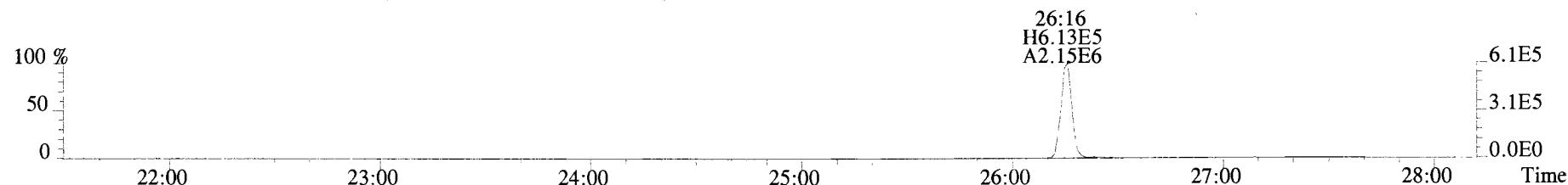
File:191024D1 #1-493 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
 319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



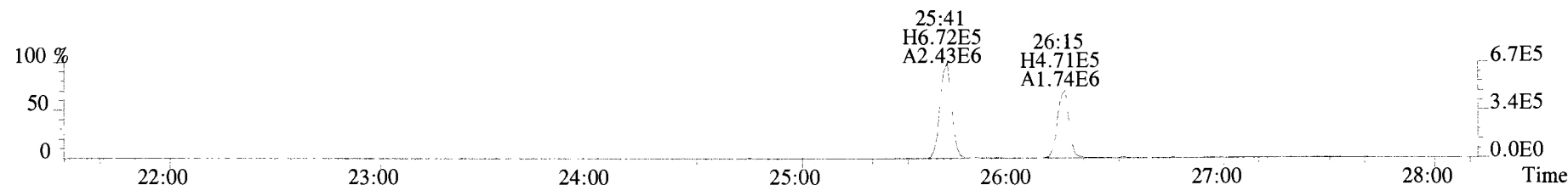
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



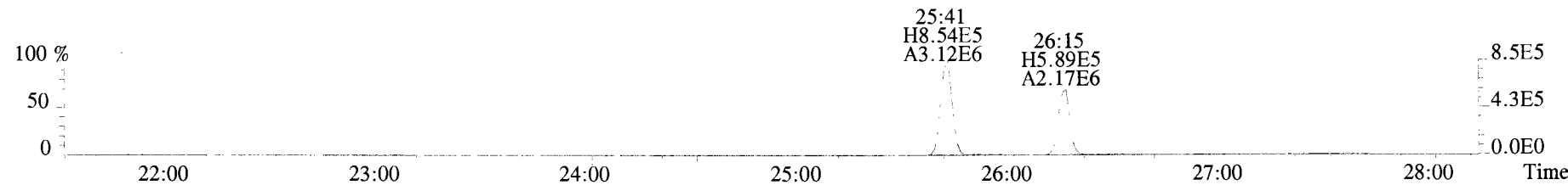
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



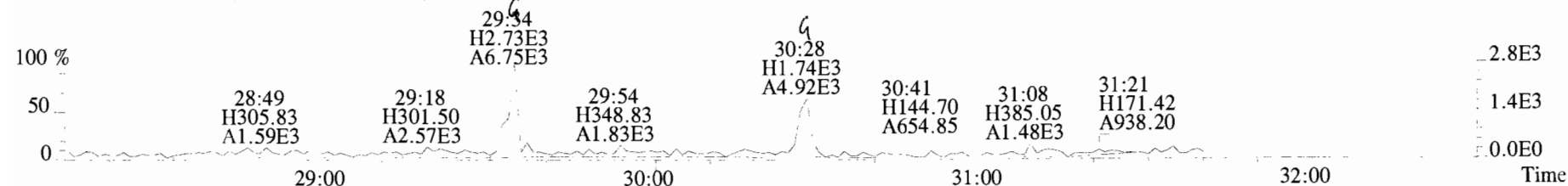
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



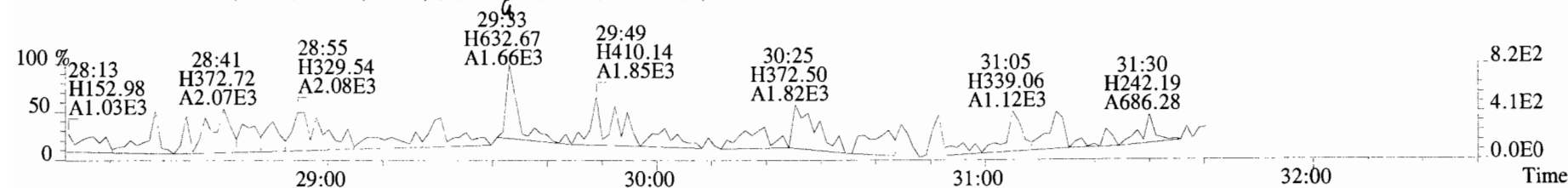
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



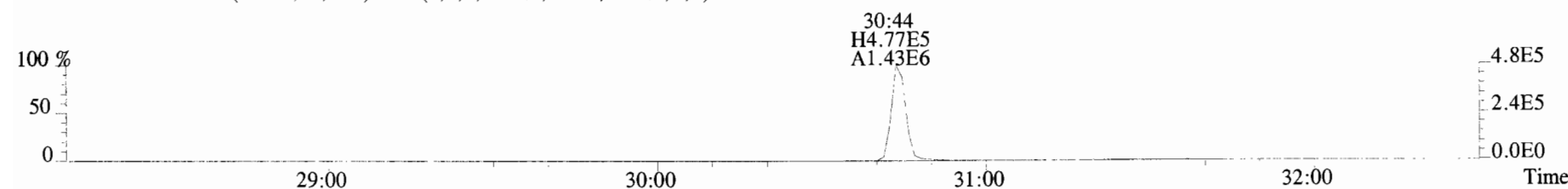
File:191024D1 #1-210 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



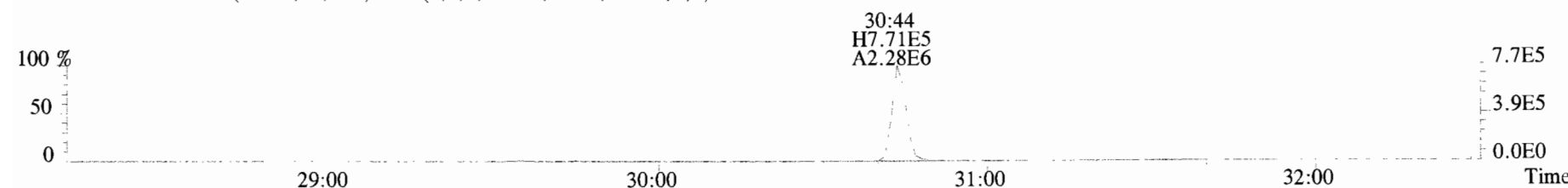
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



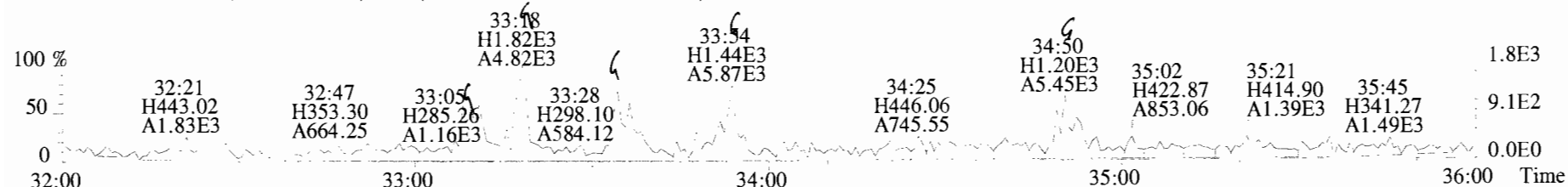
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



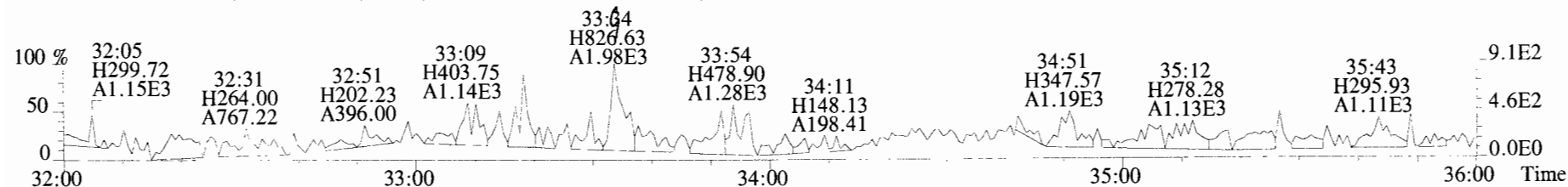
366.9792 S:6 F:2



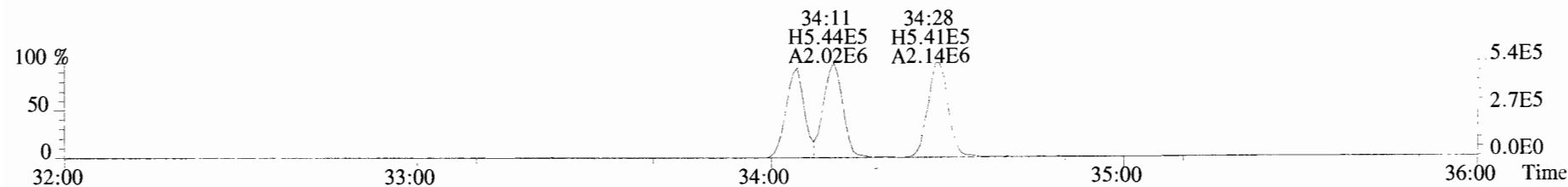
File:191024D1 #1-385 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
 389.8156 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



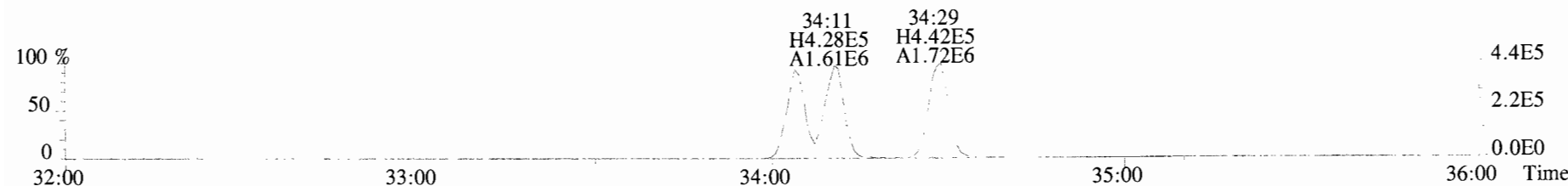
391.8127 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



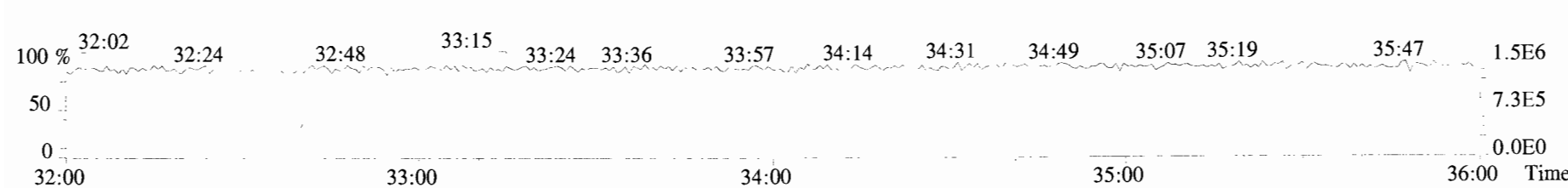
401.8559 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



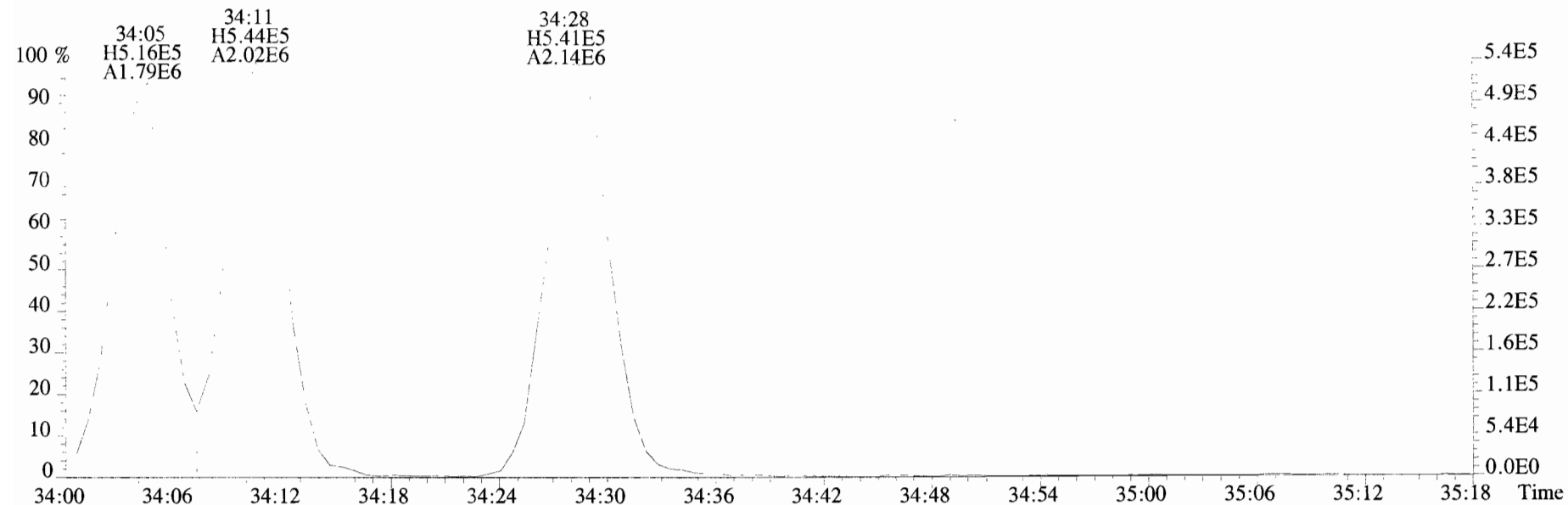
403.8530 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



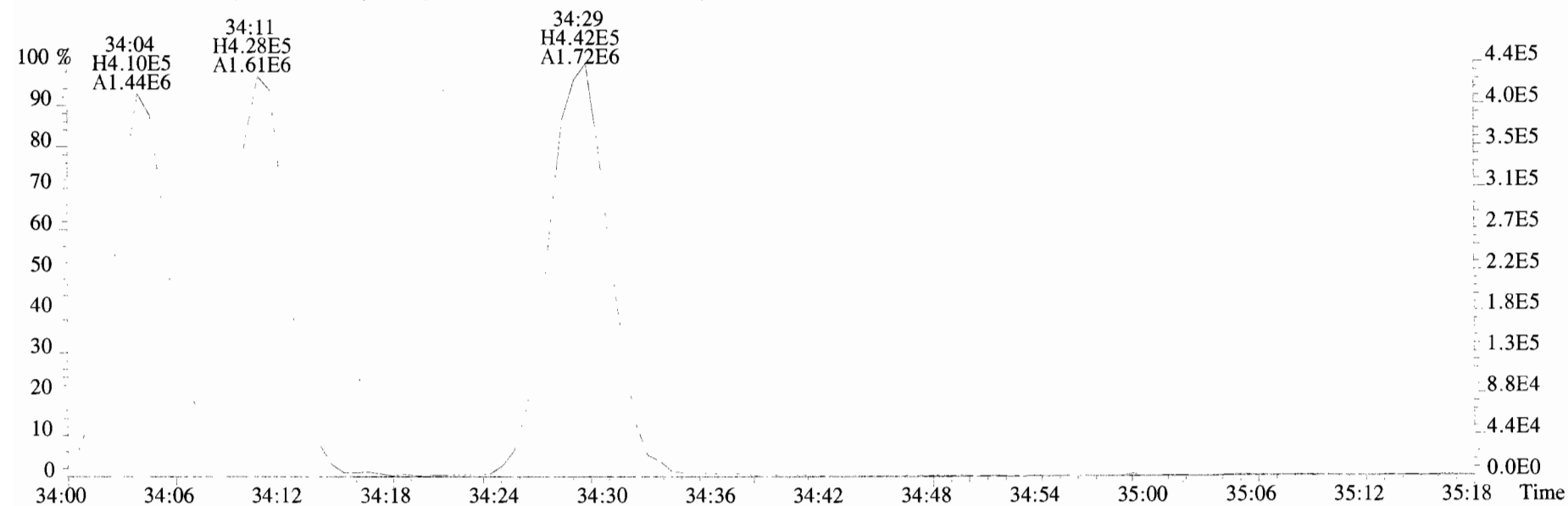
392.9760 S:6 F:3



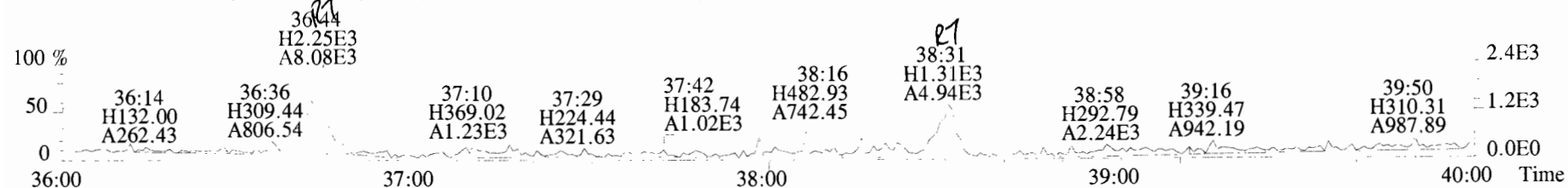
File:191024D1 #1-385 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



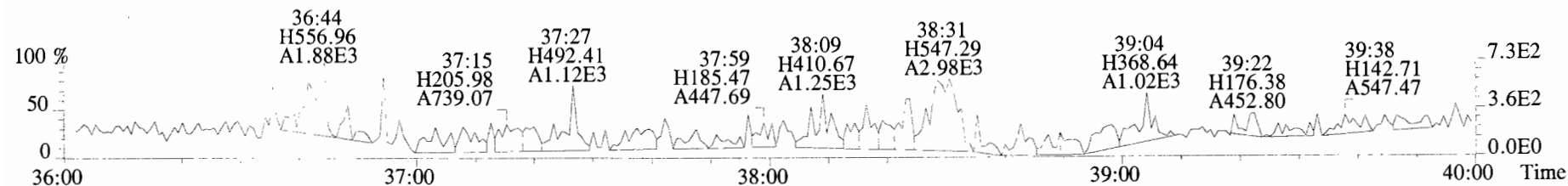
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



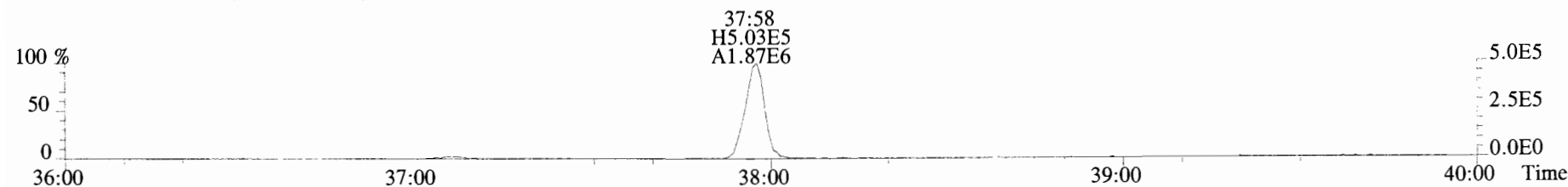
File:191024D1 #1-355 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



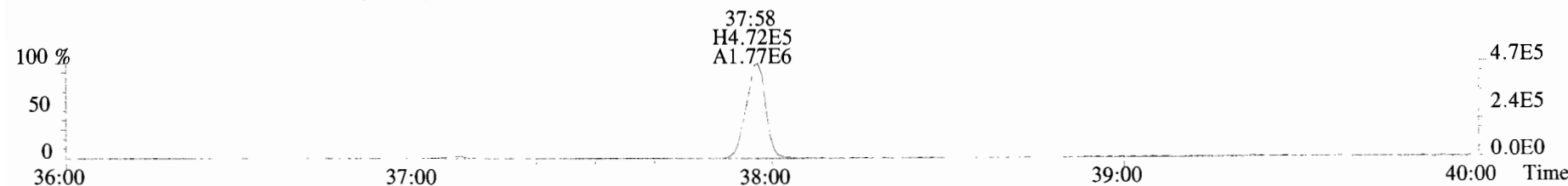
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



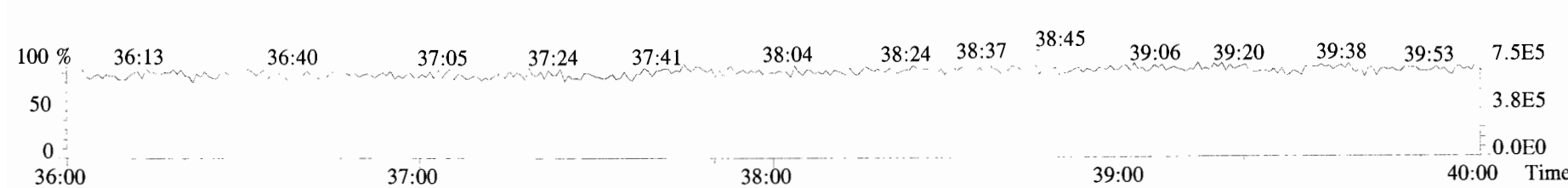
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



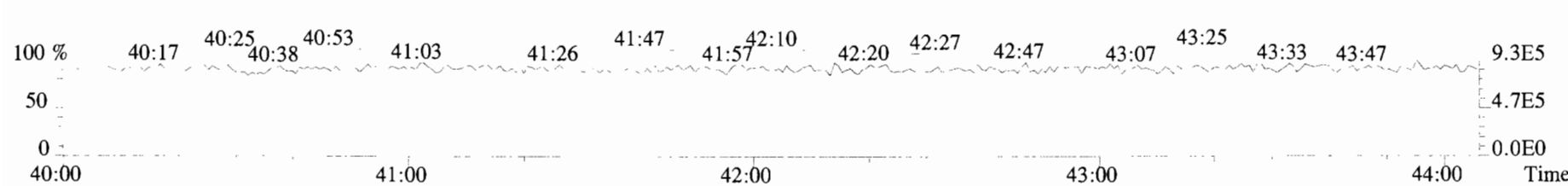
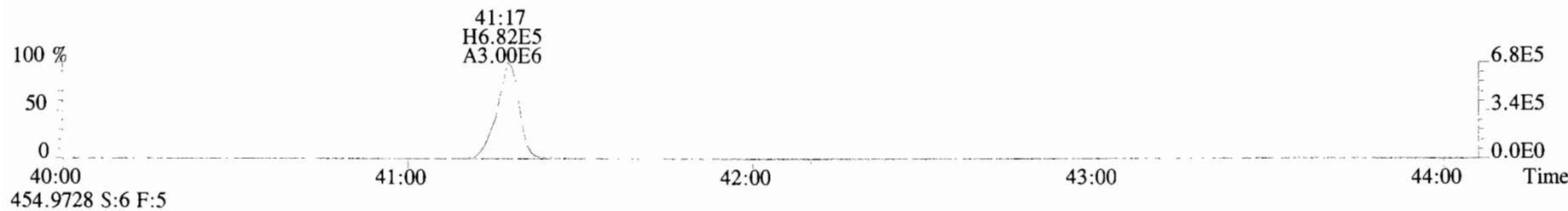
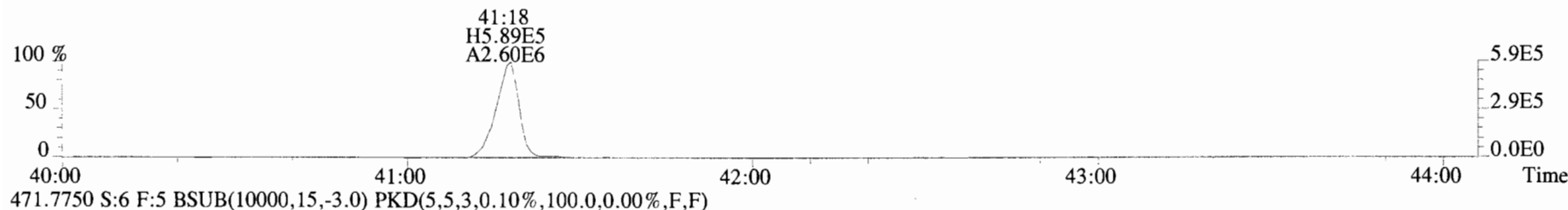
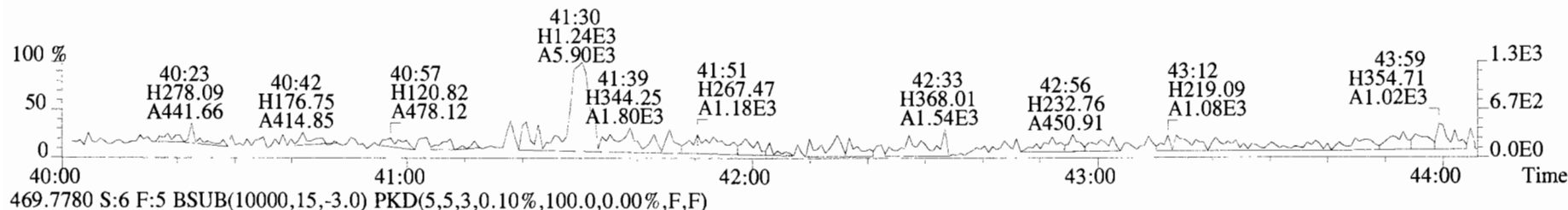
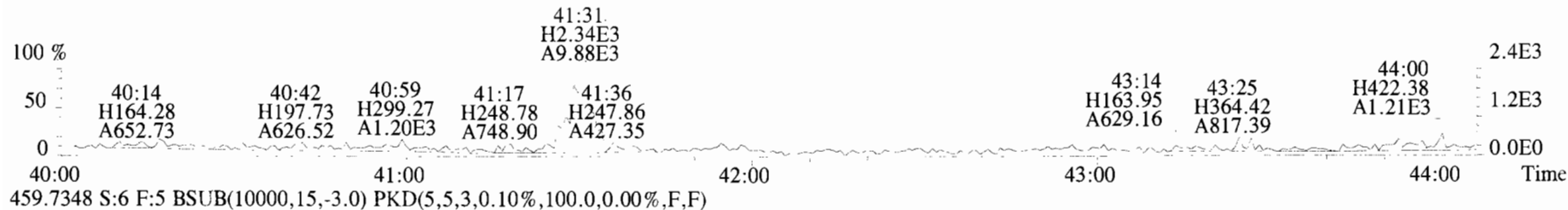
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



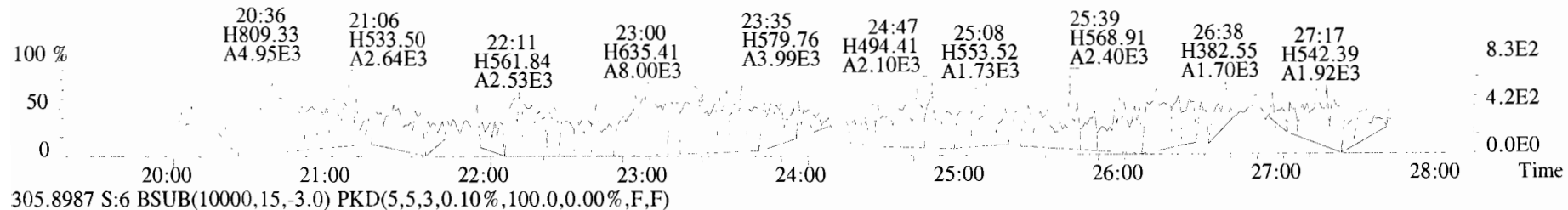
454.9728 S:6 F:4



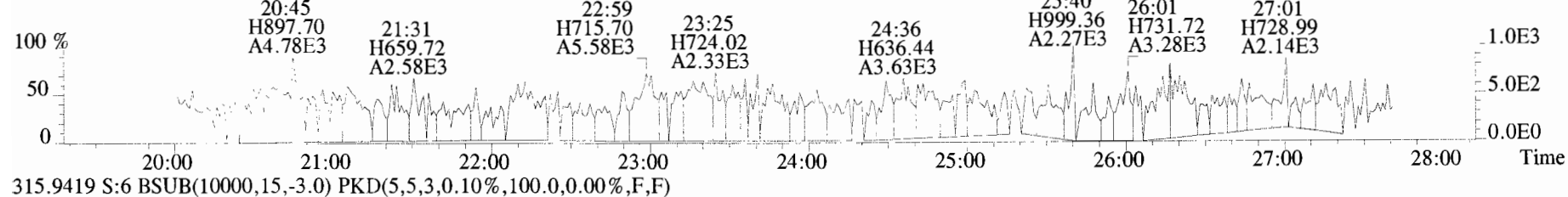
File:191024D1 #1-432 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



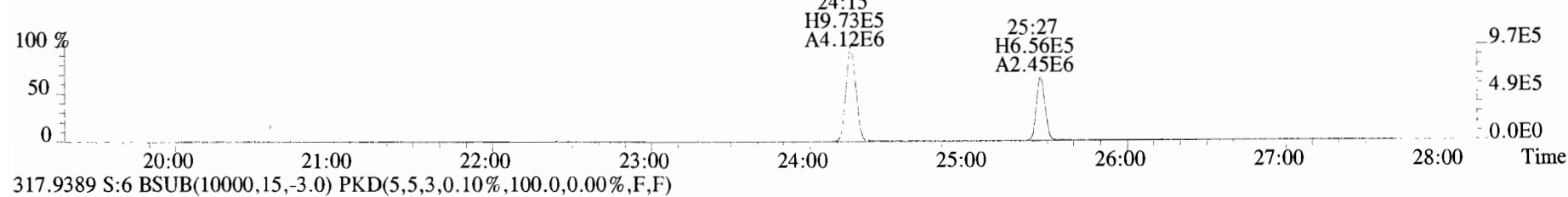
File:191024D1 #1-493 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



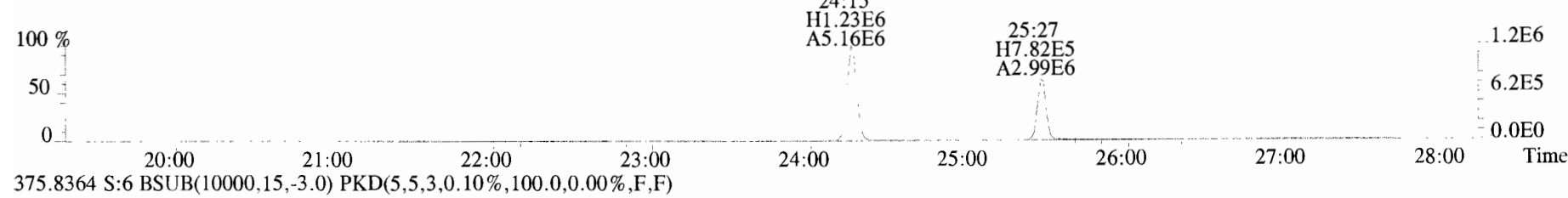
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



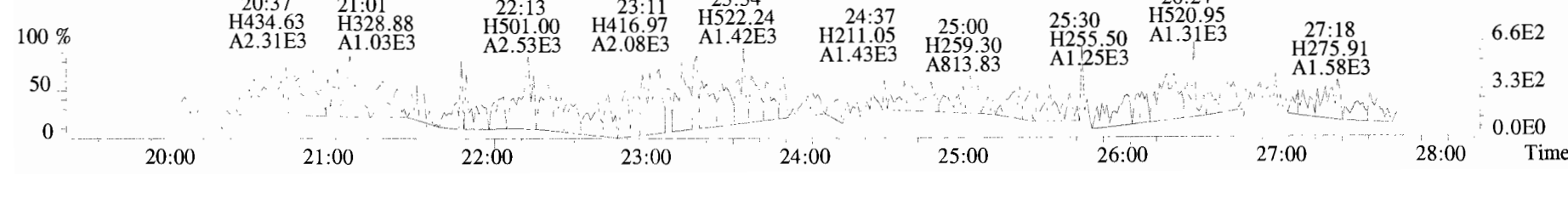
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



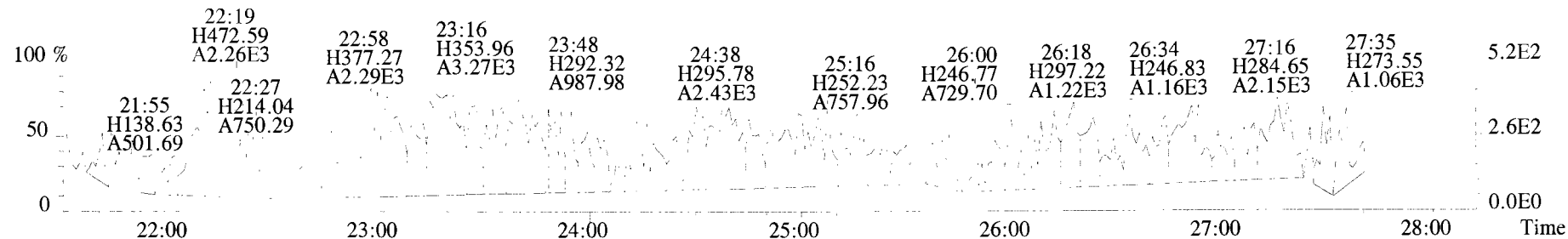
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



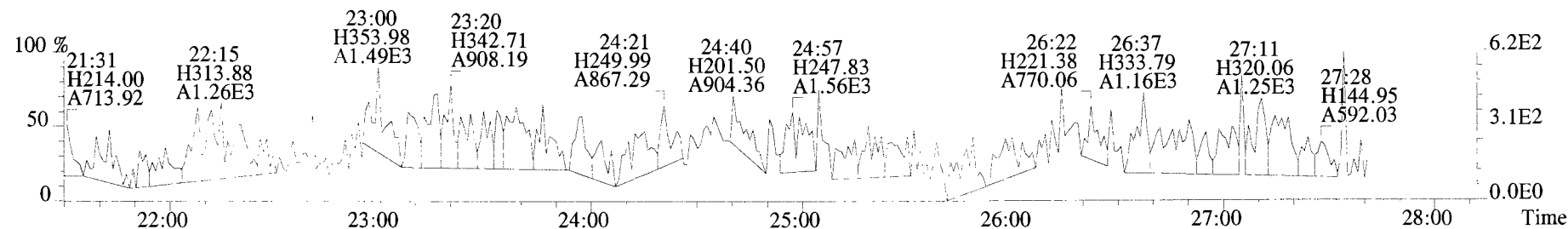
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



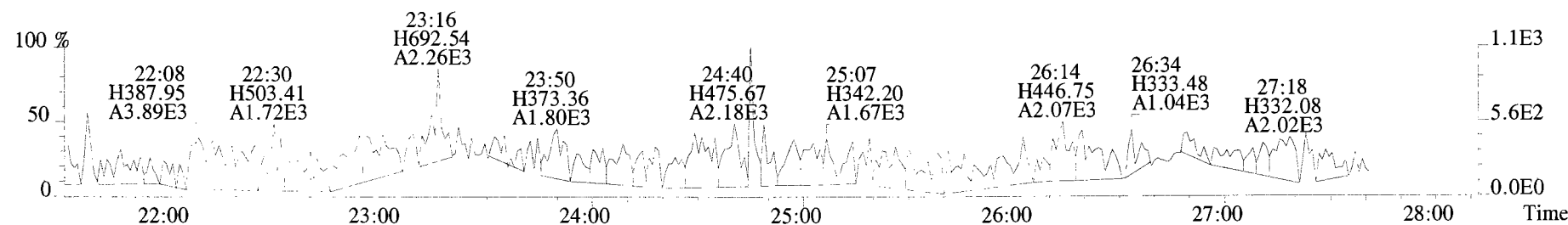
File: 191024D1 #1-493 Acq: 24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text: Vista_Analytical_Laboratory_VG7 Text: B9J0132-BLK1 Method Blank 10 Exp: OCDD_DB5
 339.8597 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



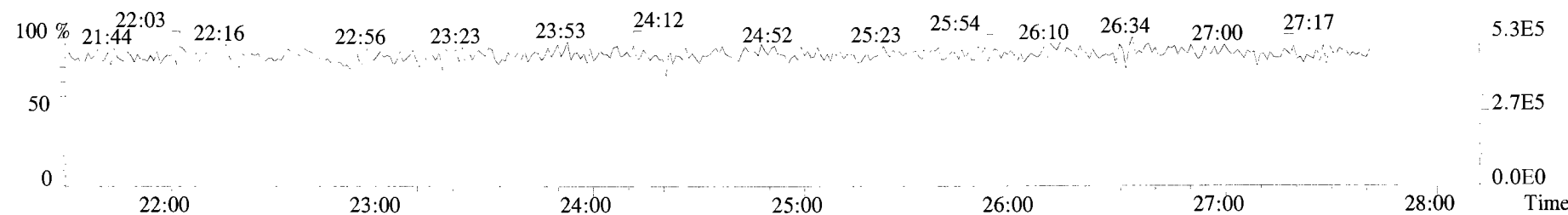
341.8568 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



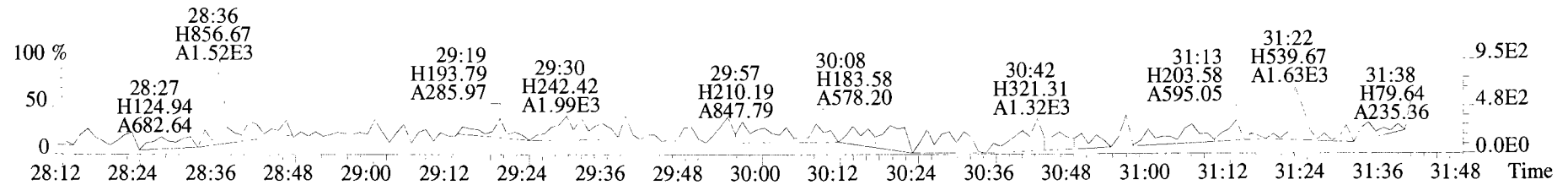
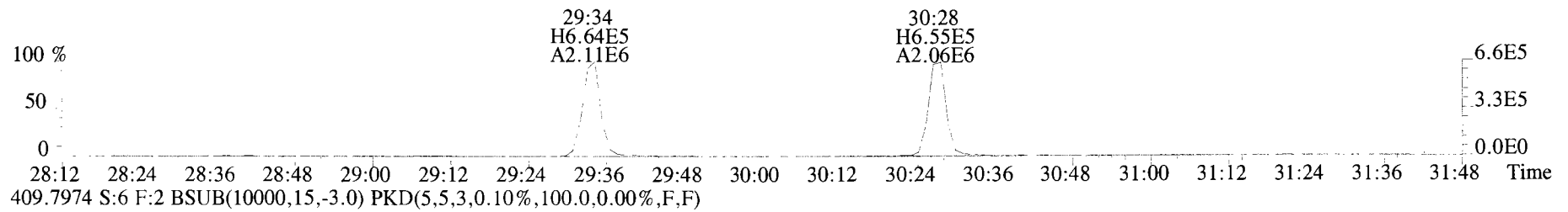
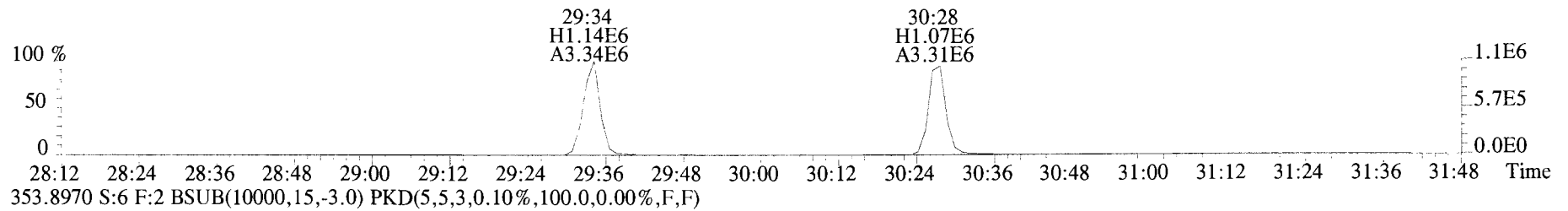
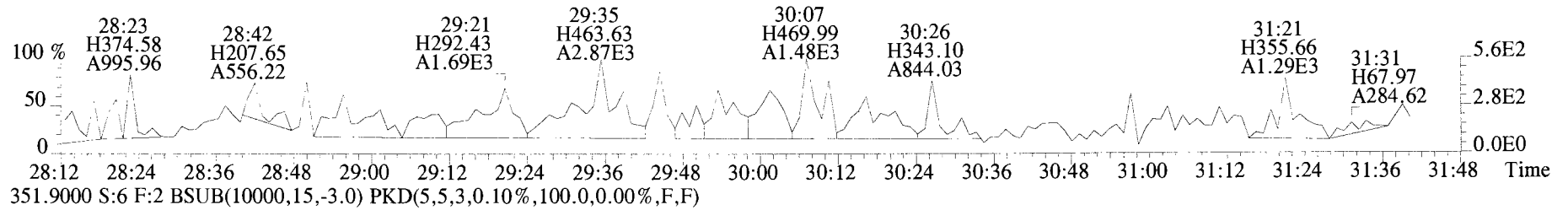
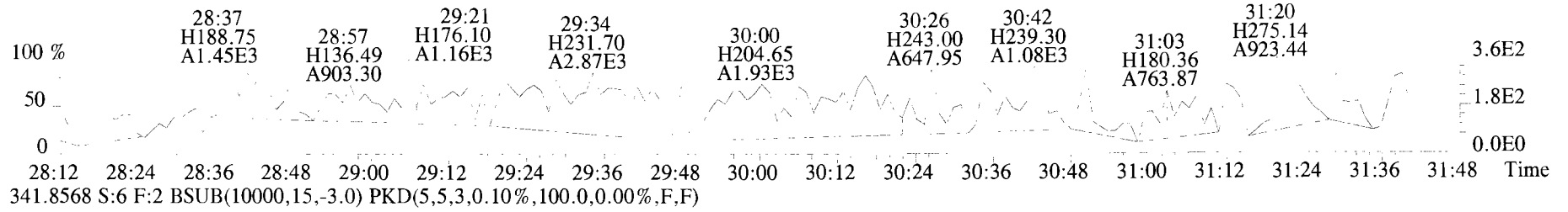
409.7974 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



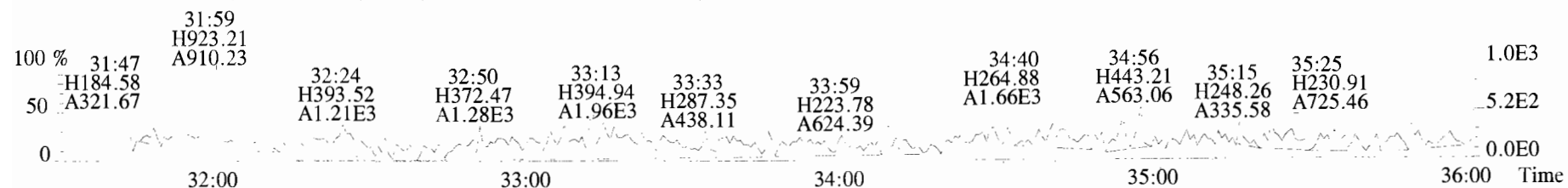
316.9824 S:6



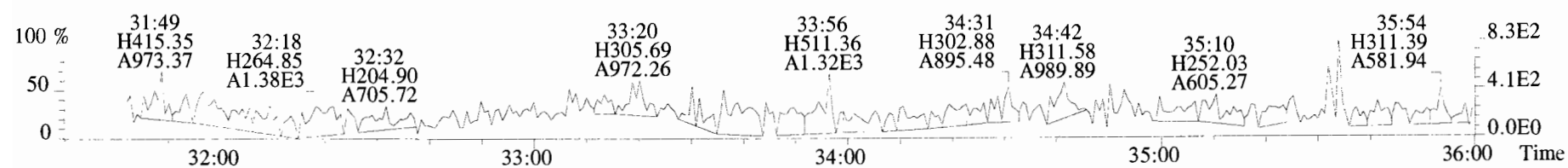
File:191024D1 #1-210 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



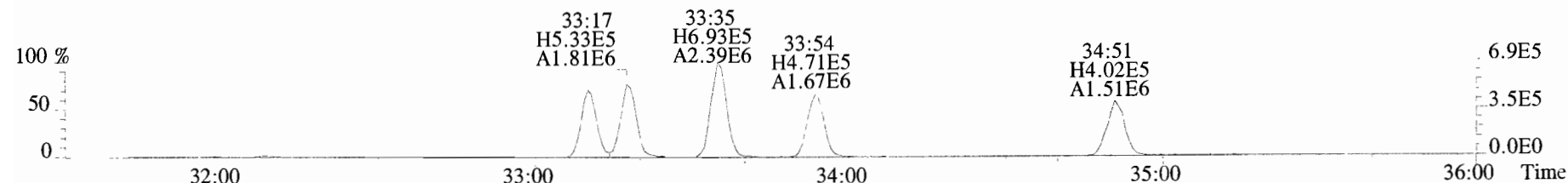
File:191024D1 #1-385 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



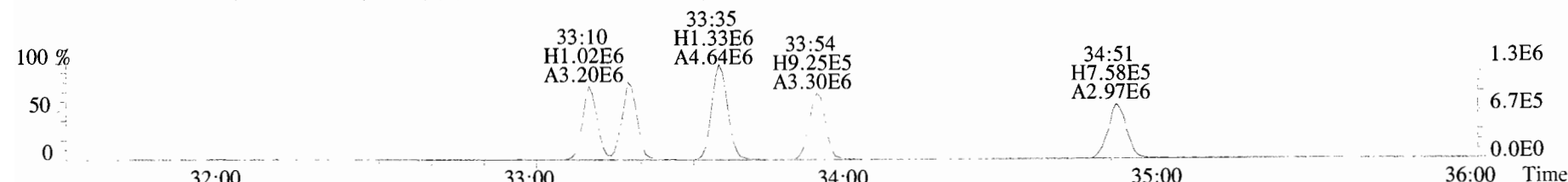
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



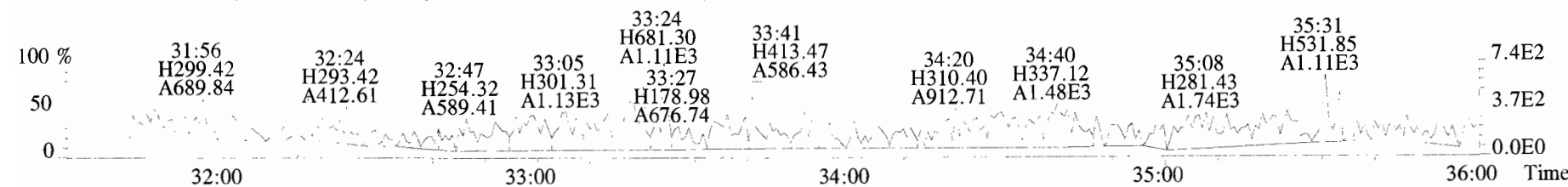
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



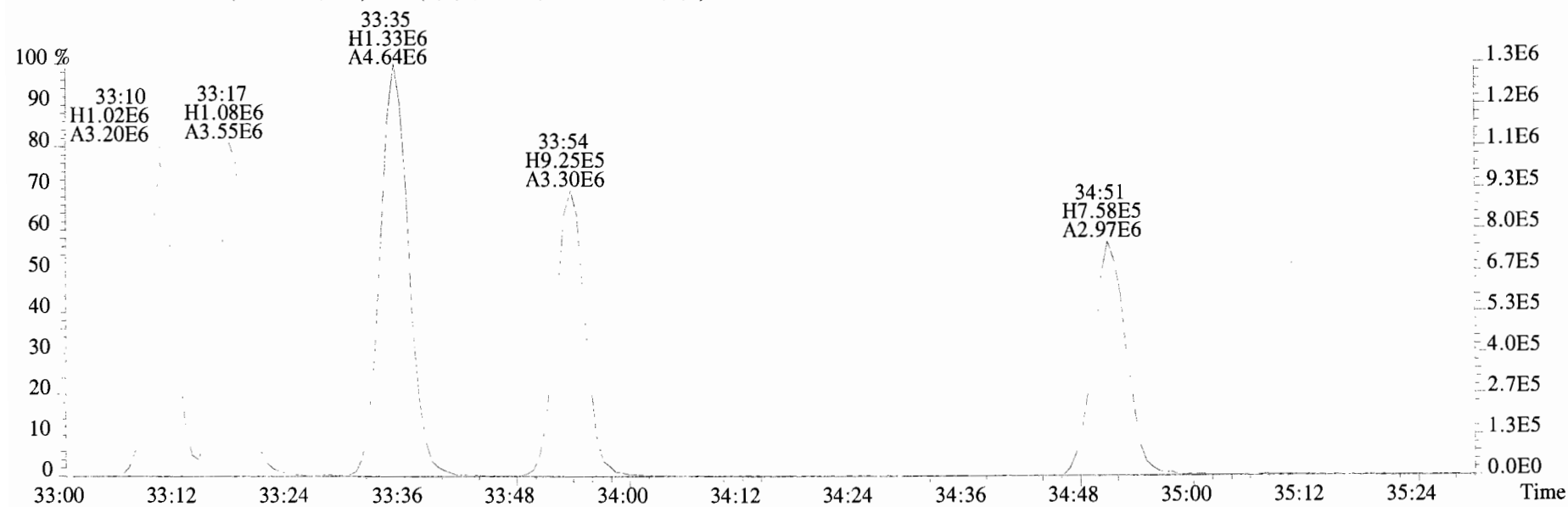
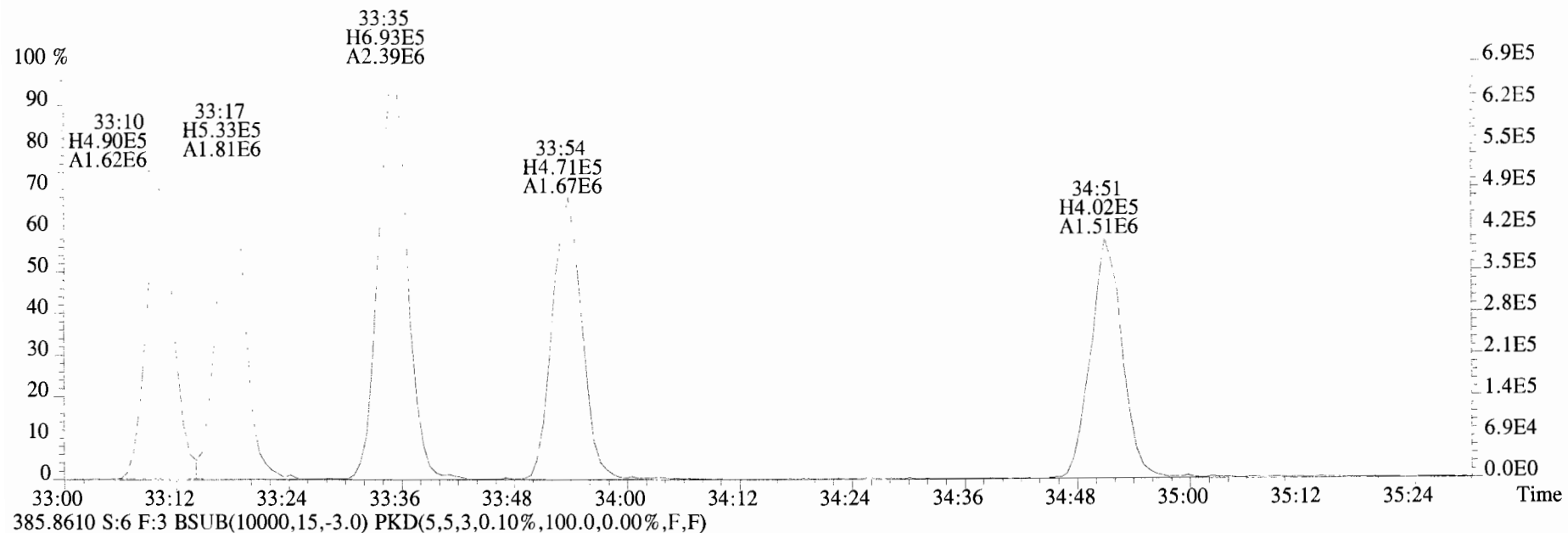
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



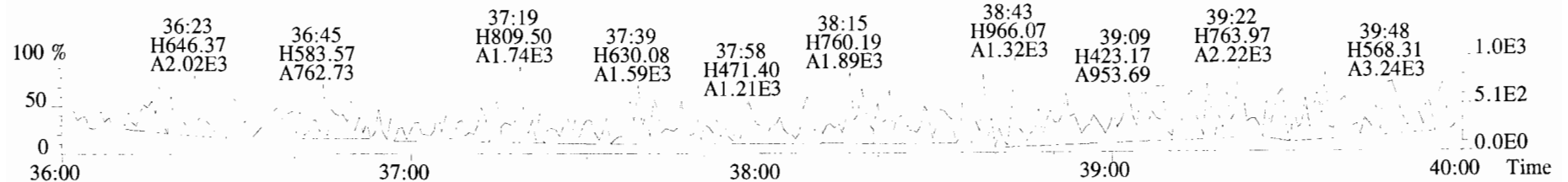
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



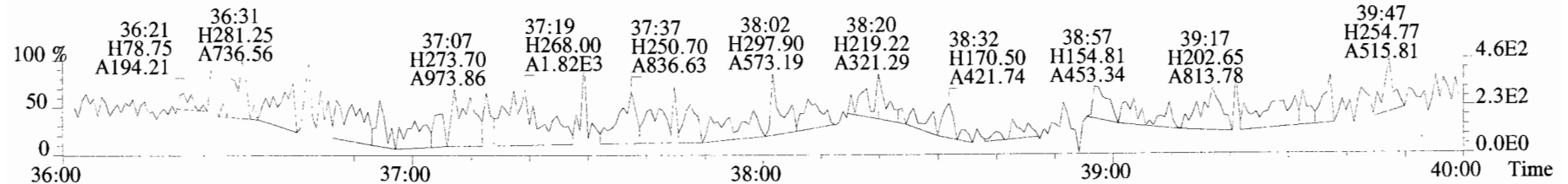
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383.8639 S:6 F:3 BSUB(I0000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



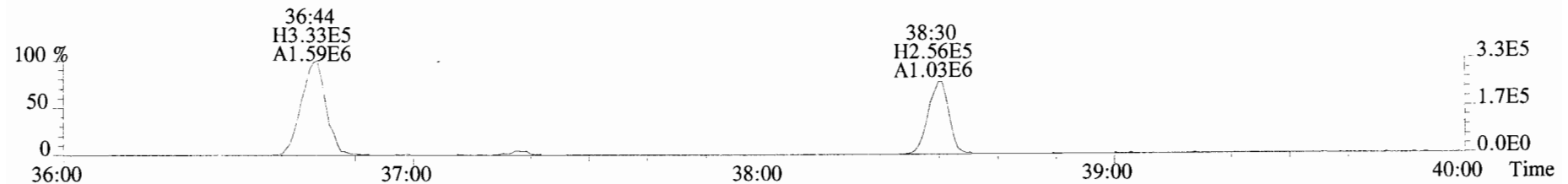
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Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



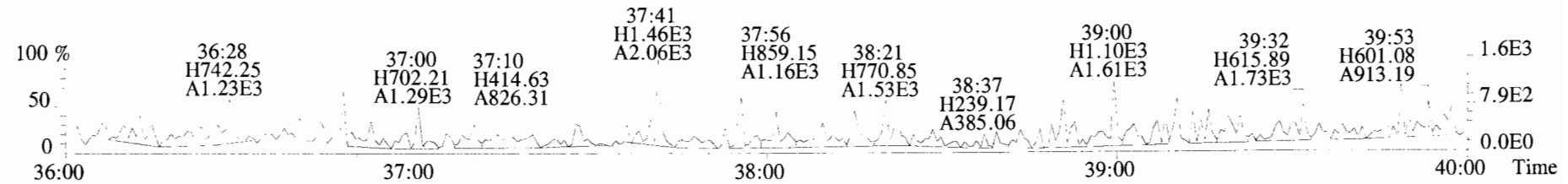
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



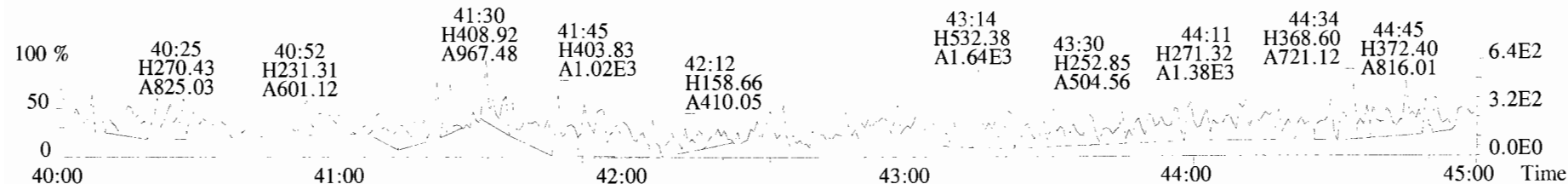
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



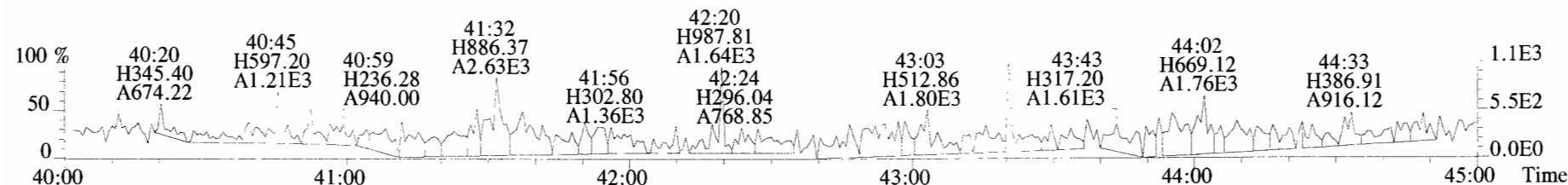
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



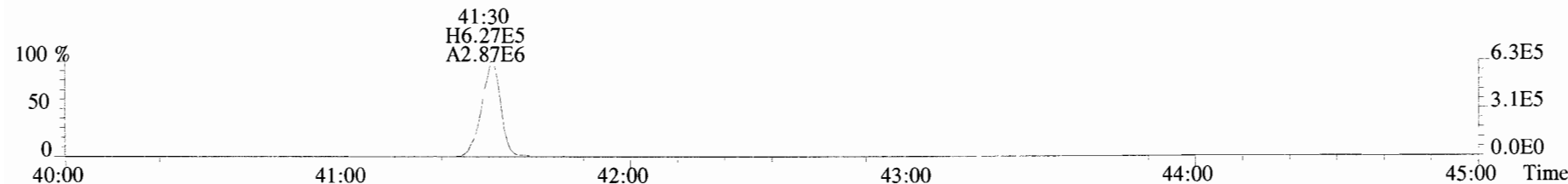
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441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



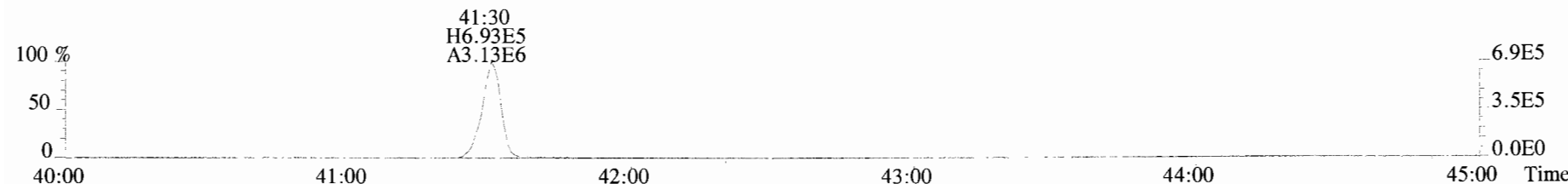
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



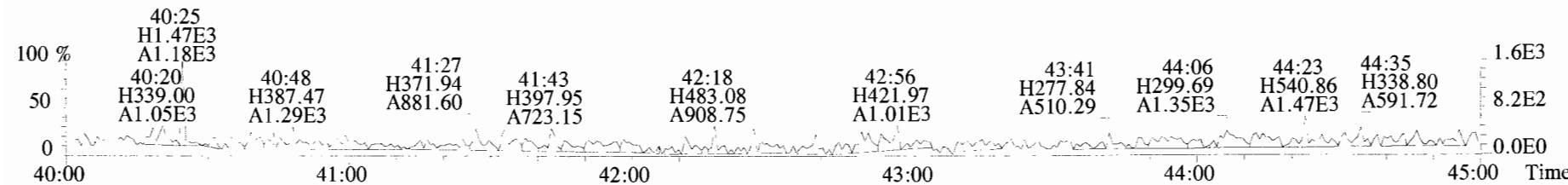
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B9J0132-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 191029D1-2

Ext. Date: Shift: Day Analysis Date: 29-OCT-19 Time: 11:03:33

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	12.8	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	66.6	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	62.5	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	67.0	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	65.2	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	61.3	35.0 - 70.0
OCDD	100	130	78.0 - 144.0
2,3,7,8-TCDF	10	10.8	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	63.0	40.0 - 67.0
2,3,4,7,8-PeCDF	50	58.4	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	59.1	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	59.6	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	60.9	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	59.7	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	61.0	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	58.6	39.0 - 69.0
OCDF	100	118	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: DB

Date: 10/29/19

FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B9J0132-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 191029D1-2

Ext. Date: Shift: Day Analysis Date: 29-OCT-19 Time: 11:03:33

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	50.4	20.0 - 175.0 25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	56.2	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	59.3	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	51.2	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	56.1	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	61.1	26.0 - 166.0
13C-OCDD	200	98.4	26.0 - 397.0
13C-2,3,7,8-TCDF	100	43.5	22.0 - 152.0 26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	57.3	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	53.0	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	64.7	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	61.8	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	54.6	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	56.8	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	89.1	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	39.5	20.0 - 186.0
13C-OCDF	200	35.9	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	30.4	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: DB

Date: 10/29/19

Client ID: OPR
Lab ID: B9J0132-BS1

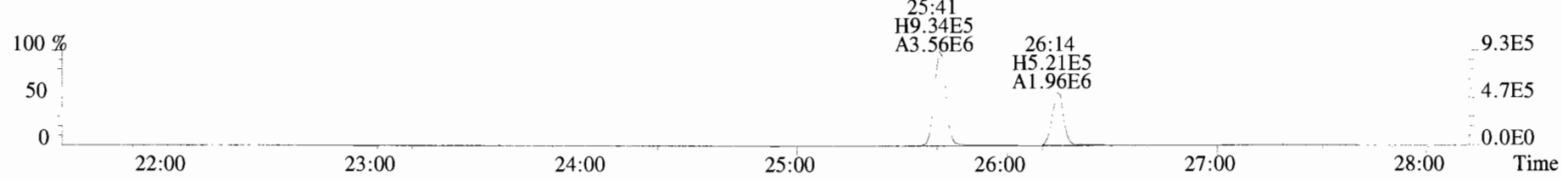
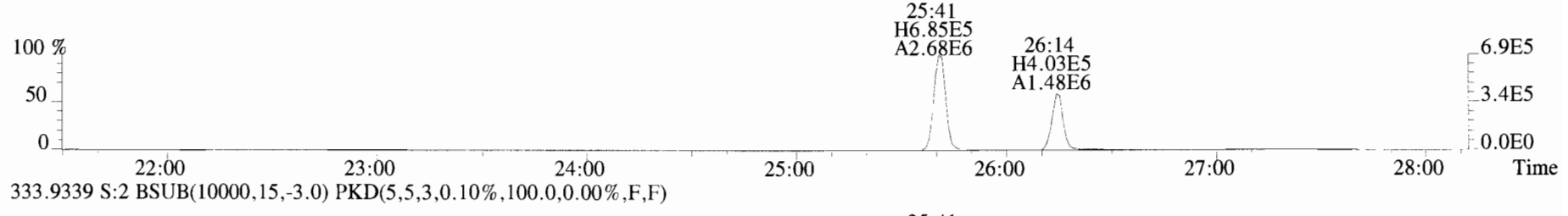
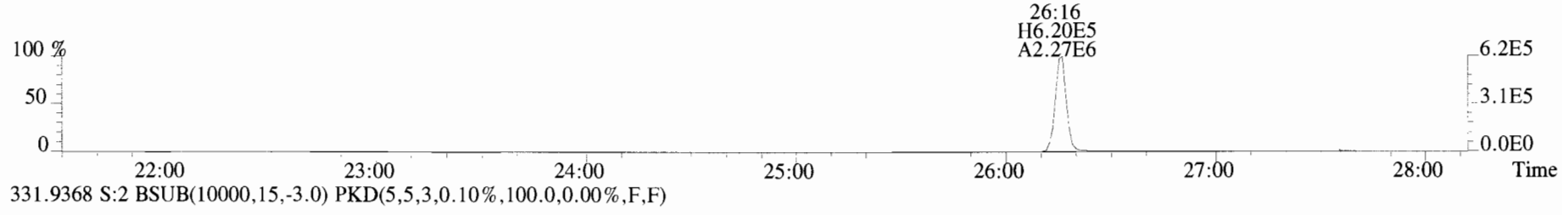
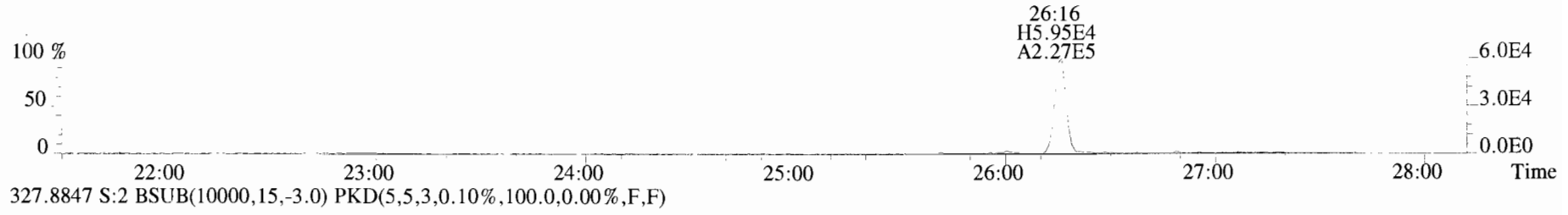
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GC Column ID: ZB SMS ICal: 1613VG7 10-9-19 wt/vol: 1.000

ConCal: ST191029D1 1
EndCAL: NA

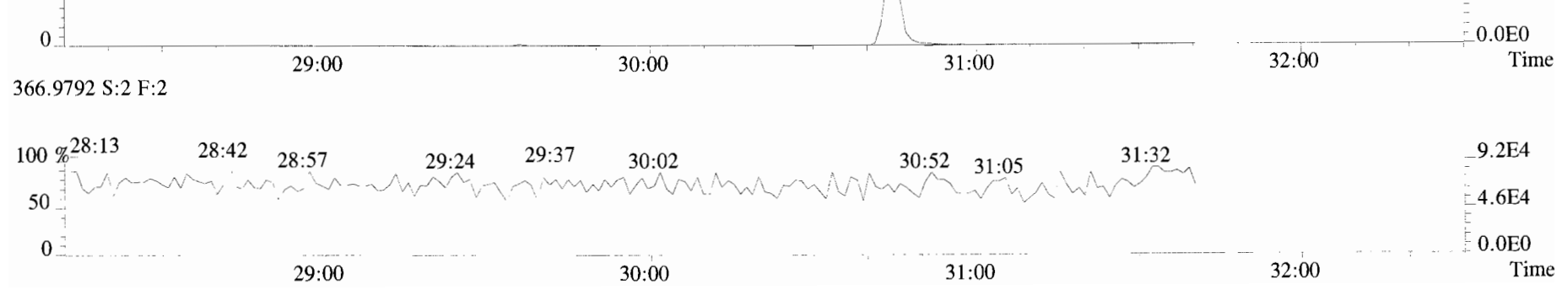
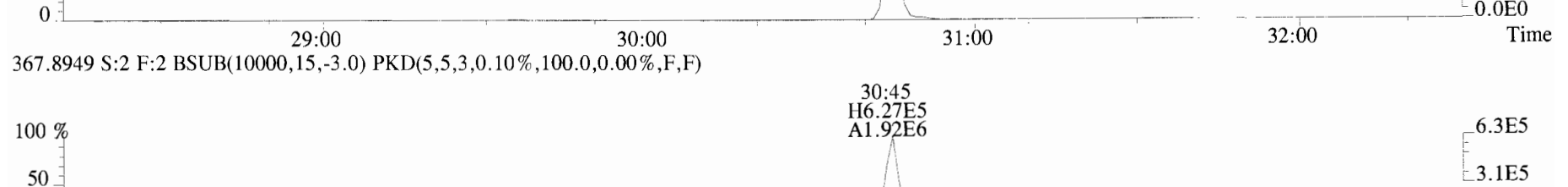
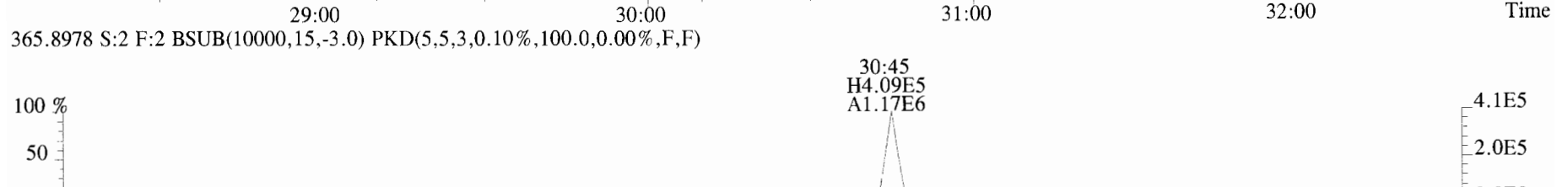
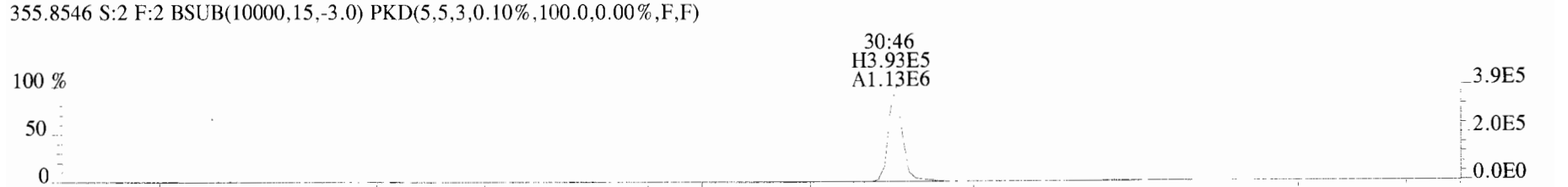
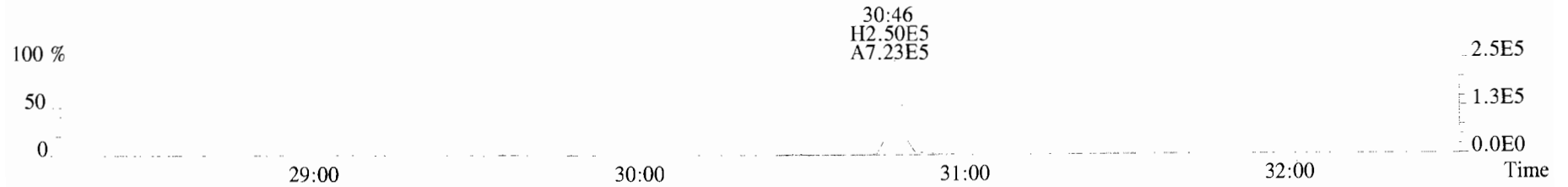
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Pac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	4.00e+05	0.76 y	0.91	26:16	12.821		* 2.5		*	Total Tetra-Dioxins	13.3	16.4		*	*
1,2,3,7,8-PeCDD	1.86e+06	0.64 y	0.90	30:46	66.637		* 2.5		*	Total Penta-Dioxins	66.7	67.8		*	*
1,2,3,4,7,8-HxCDD	1.85e+06	1.30 y	1.10	34:05	62.473		* 2.5		*	Total Hexa-Dioxins	195	195		*	*
1,2,3,6,7,8-HxCDD	1.95e+06	1.20 y	0.94	34:12	66.997		* 2.5		*	Total Hepta-Dioxins	64.4	65.4		*	*
1,2,3,7,8,9-HxCDD	2.01e+06	1.18 y	0.96	34:30	65.181		* 2.5		*	Total Tetra-Furans	12.0	15.0		*	*
1,2,3,4,6,7,8-HpCDD	1.70e+06	1.03 y	0.98	37:58	61.290		* 2.5		*	Total Penta-Furans	124.53	127.20		*	*
OCDD	2.51e+06	0.90 y	0.96	41:18	129.68		* 2.5		*	Total Hexa-Furans	249	249		*	*
										Total Hepta-Furans	120	120		*	*
2,3,7,8-TCDF	4.87e+05	0.80 y	0.95	25:29	10.811		* 2.5		*						
1,2,3,7,8-PeCDF	3.12e+06	1.64 y	0.96	29:36	63.010		* 2.5		*						
2,3,4,7,8-PeCDF	2.80e+06	1.67 y	1.01	30:29	58.424		* 2.5		*						
1,2,3,4,7,8-HxCDF	2.65e+06	1.22 y	1.18	33:12	59.106		* 2.5		*						
1,2,3,6,7,8-HxCDF	2.88e+06	1.22 y	1.07	33:19	59.637		* 2.5		*						
2,3,4,6,7,8-HxCDF	2.50e+06	1.23 y	1.11	33:55	60.947		* 2.5		*						
1,2,3,7,8,9-HxCDF	2.11e+06	1.25 y	1.06	34:53	59.721		* 2.5		*						
1,2,3,4,6,7,8-HpCDF	3.28e+06	1.01 y	1.13	36:44	60.960		* 2.5		*						
1,2,3,4,7,8,9-HpCDF	1.22e+06	1.01 y	1.28	38:31	58.562		* 2.5		*						
OCDF	9.78e+05	0.90 y	0.95	41:31	118.23		* 2.5		*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	3.44e+06	0.75 y	1.10	26:14	50.400					50.4					
IS 13C-1,2,3,7,8-PeCDD	3.09e+06	0.61 y	0.88	30:45	56.168					56.2					
IS 13C-1,2,3,4,7,8-HxCDD	2.69e+06	1.35 y	0.64	34:05	59.338					59.3					
IS 13C-1,2,3,6,7,8-HxCDD	3.09e+06	1.29 y	0.86	34:11	51.164					51.2					
IS 13C-1,2,3,7,8,9-HxCDD	3.20e+06	1.31 y	0.81	34:29	56.120					56.1					
IS 13C-1,2,3,4,6,7,8-HpCDD	2.83e+06	1.01 y	0.65	37:57	61.117					61.1					
IS 13C-OCDD	4.03e+06	0.93 y	0.58	41:17	98.396					49.2					
IS 13C-2,3,7,8-TCDF	4.74e+06	0.79 y	1.03	25:28	43.525					43.5					
IS 13C-1,2,3,7,8-PeCDF	5.15e+06	1.64 y	0.85	29:35	57.330					57.3					
IS 13C-2,3,4,7,8-PeCDF	4.72e+06	1.57 y	0.85	30:28	52.951					53.0					
IS 13C-1,2,3,4,7,8-HxCDF	3.81e+06	0.49 y	0.83	33:11	64.747					64.7					
IS 13C-1,2,3,6,7,8-HxCDF	4.52e+06	0.51 y	1.03	33:19	61.772					61.8					
IS 13C-2,3,4,6,7,8-HxCDF	3.68e+06	0.51 y	0.95	33:54	54.641					54.6					
IS 13C-1,2,3,7,8,9-HxCDF	3.32e+06	0.51 y	0.83	34:52	56.807					56.8					
IS 13C-1,2,3,4,6,7,8-HpCDF	4.77e+06	0.43 y	0.76	36:43	89.094					89.1					
IS 13C-1,2,3,4,7,8,9-HpCDF	1.62e+06	0.45 y	0.58	38:30	39.535					39.5					
IS 13C-OCDF	1.75e+06	0.92 y	0.69	41:30	35.877					17.9					
C/Up 37Cl-2,3,7,8-TCDD	2.27e+06		1.20	26:16	30.392					76.0					
RS/RT 13C-1,2,3,4-TCDD	6.24e+06	0.75 y	1.00	25:41	100.00										
RS 13C-1,2,3,4-TCDF	1.05e+07	0.76 y	1.00	24:15	100.00										
RS/RT 13C-1,2,3,4,6,9-HxCDF	7.07e+06	0.52 y	1.00	33:36	100.00										

Integrations Reviewed
by DB by CT
Analyst: DB Analyst: CT
Date: 10/29/19 Date: 11/05/19

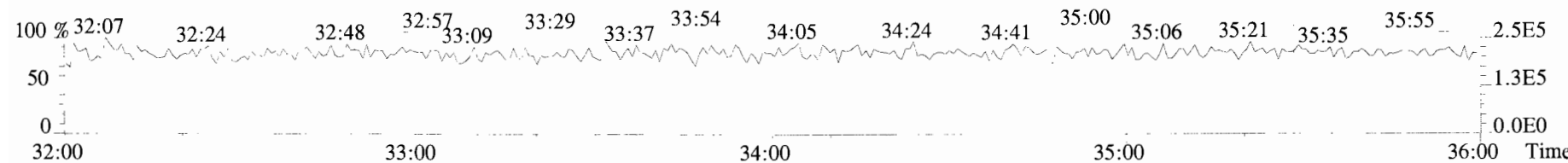
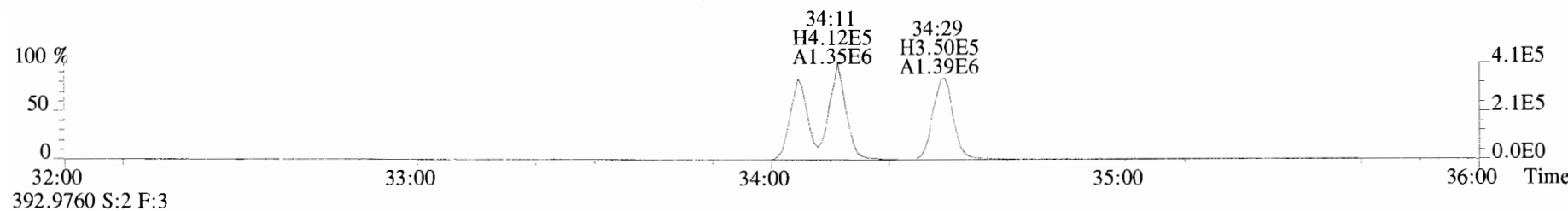
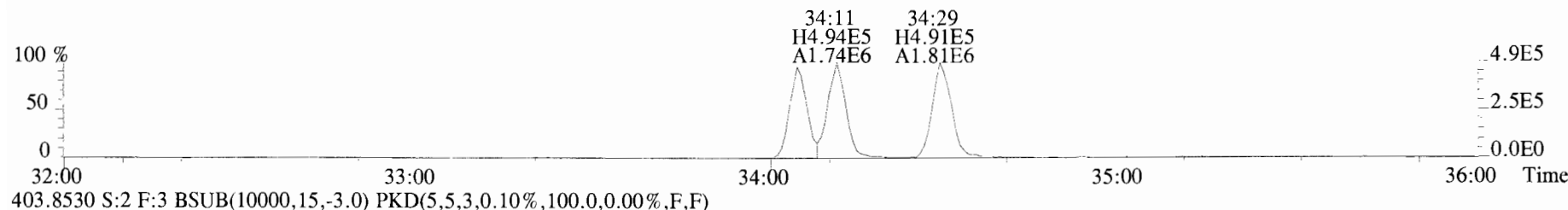
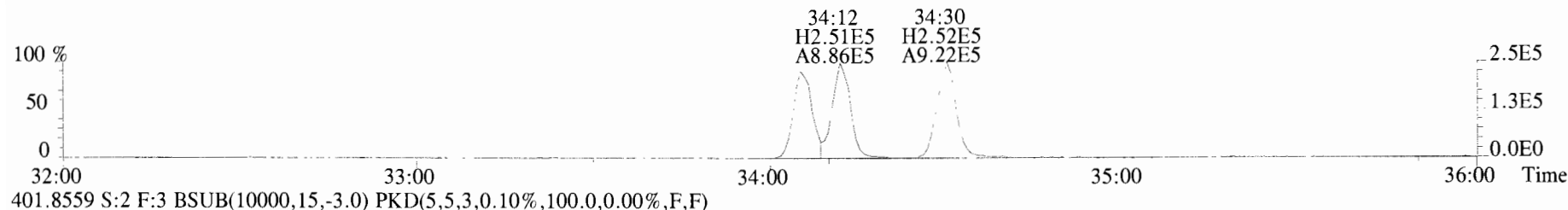
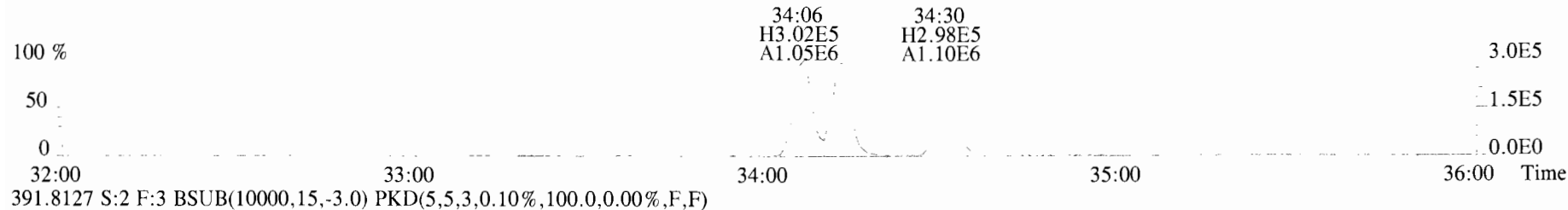
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319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



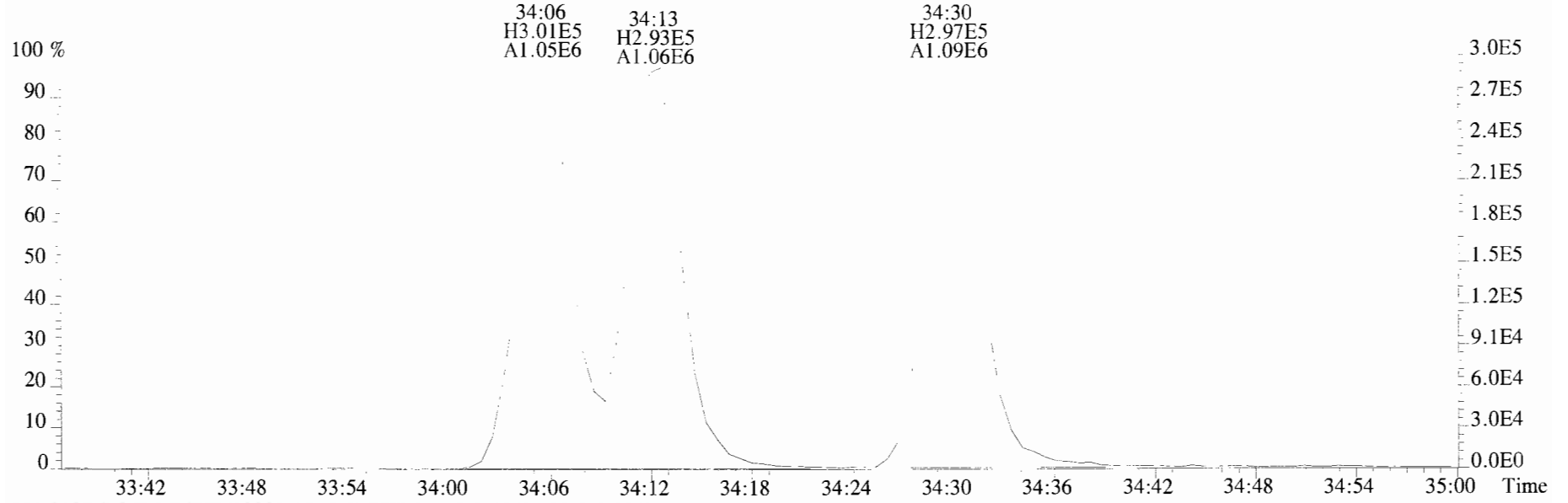
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353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



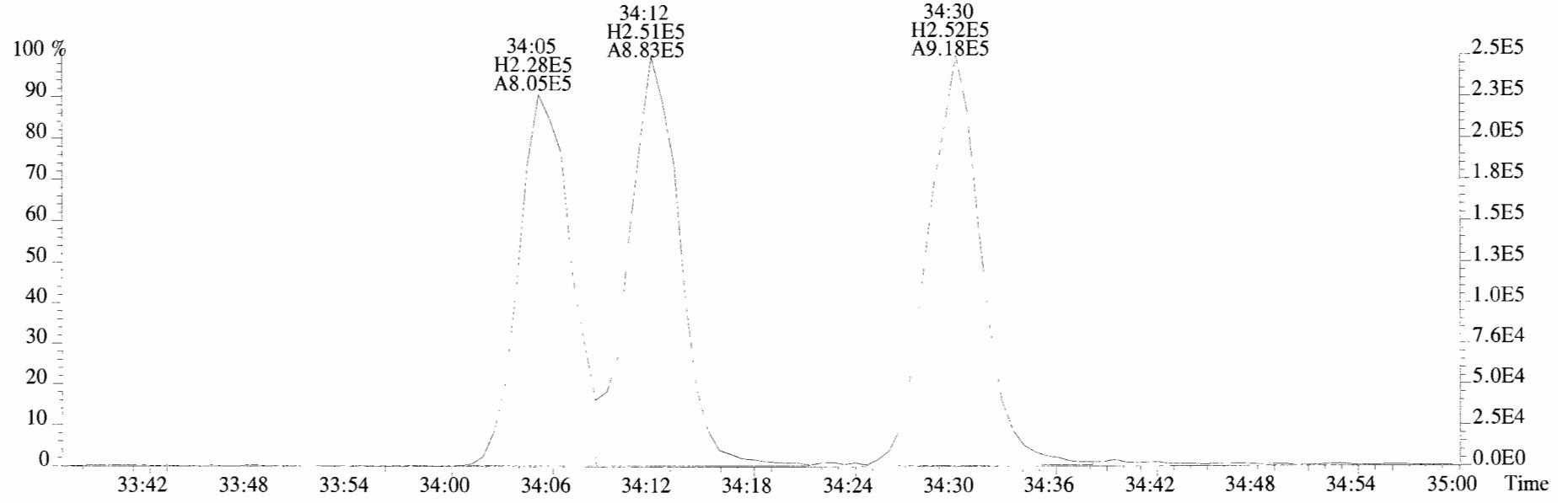
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Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



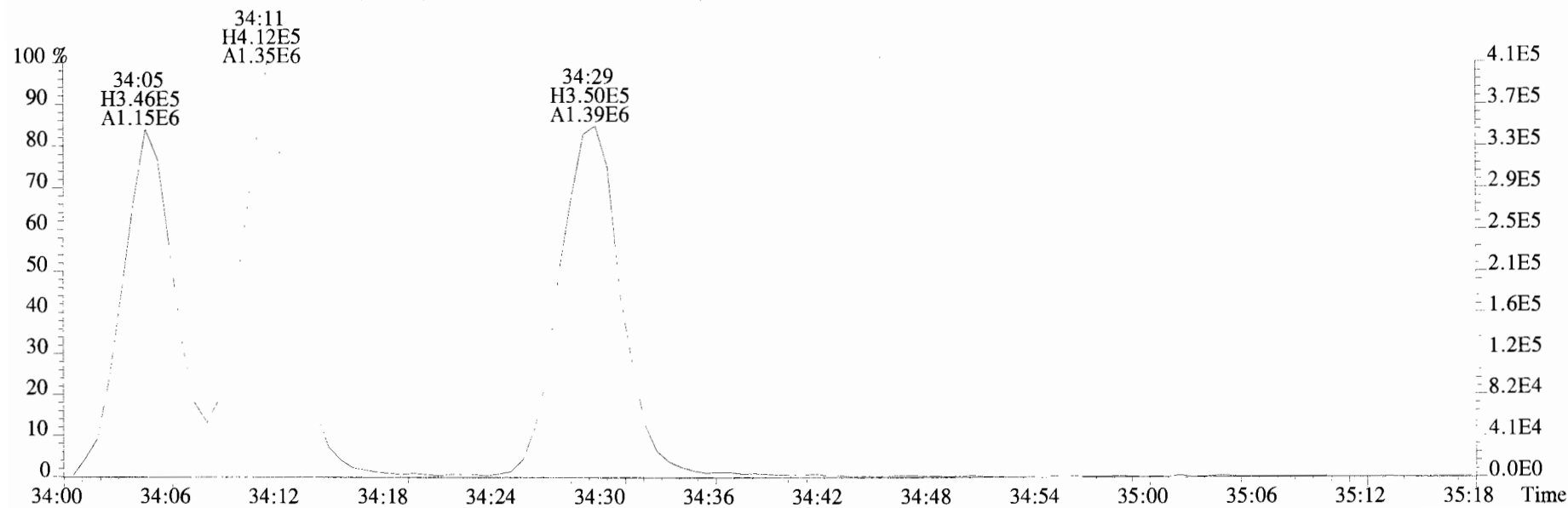
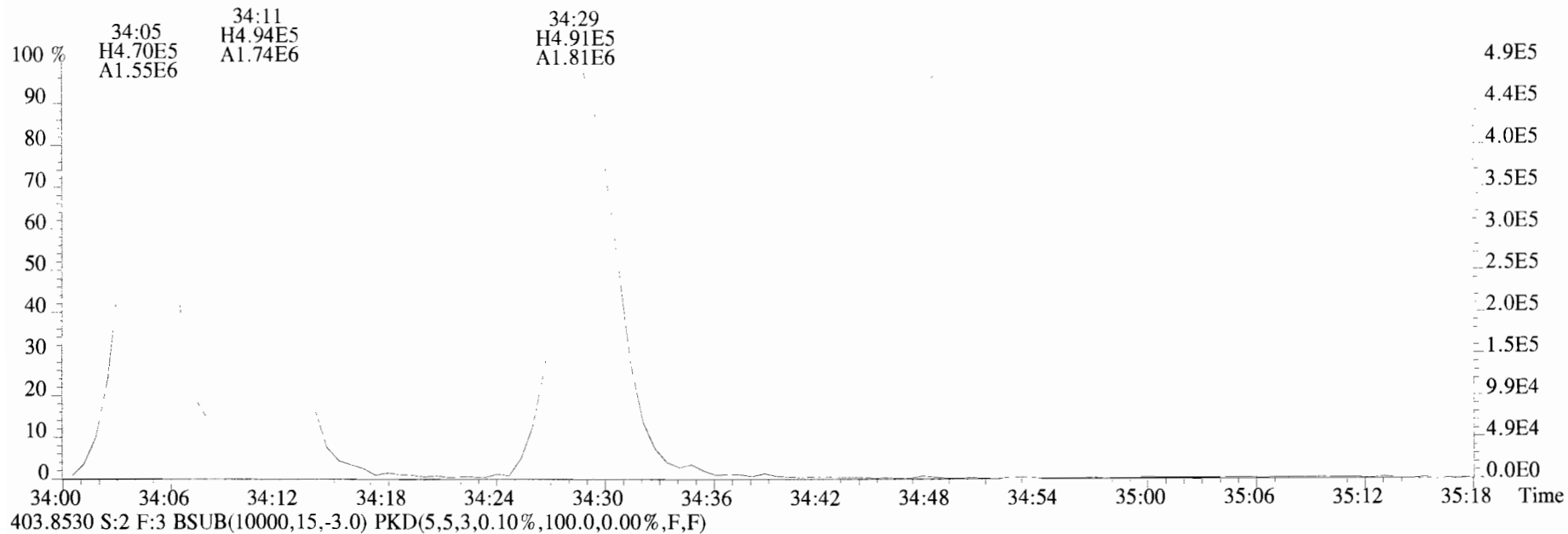
File:191029D1 #1-385 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata Analytical Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000.15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



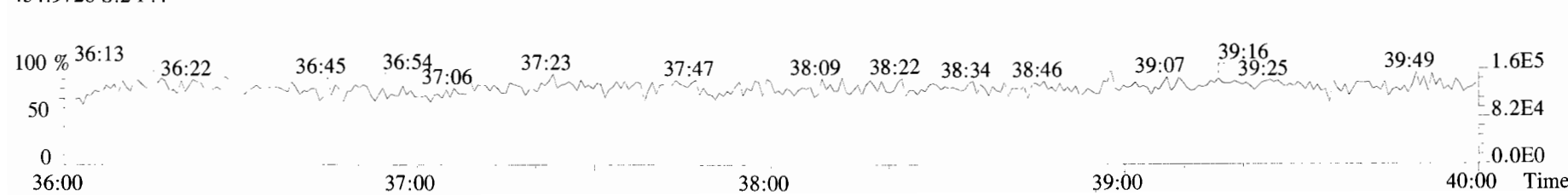
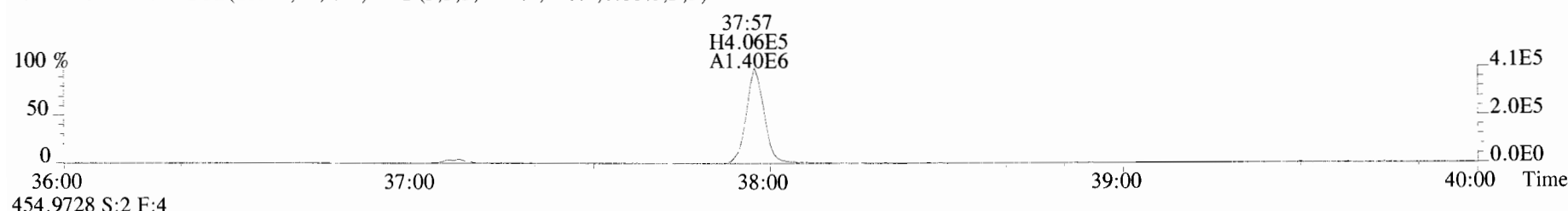
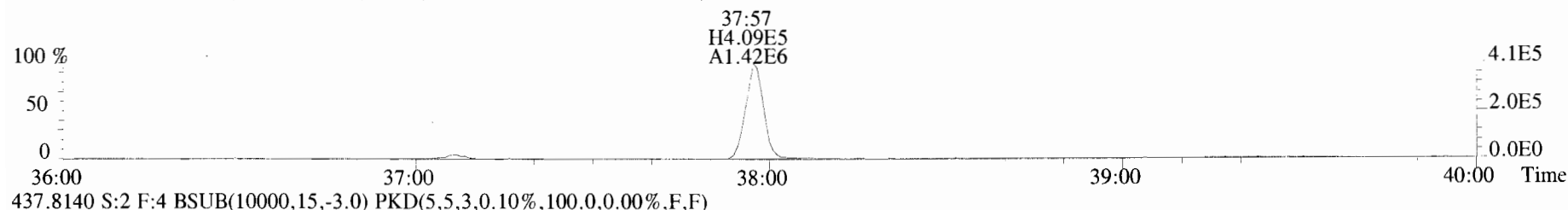
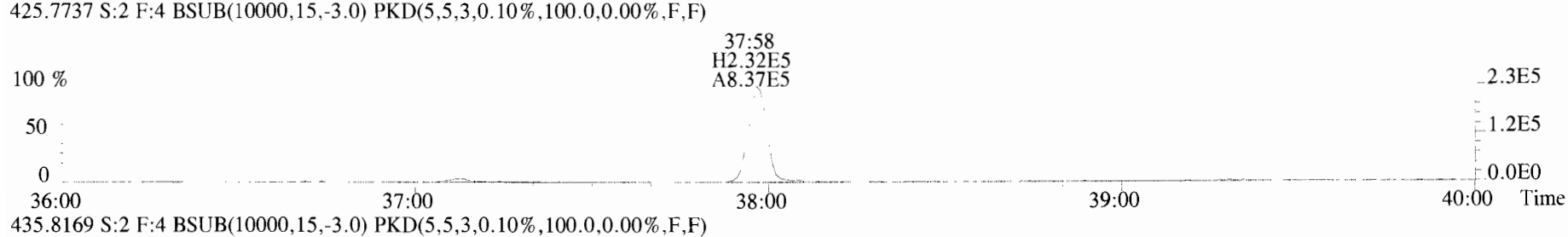
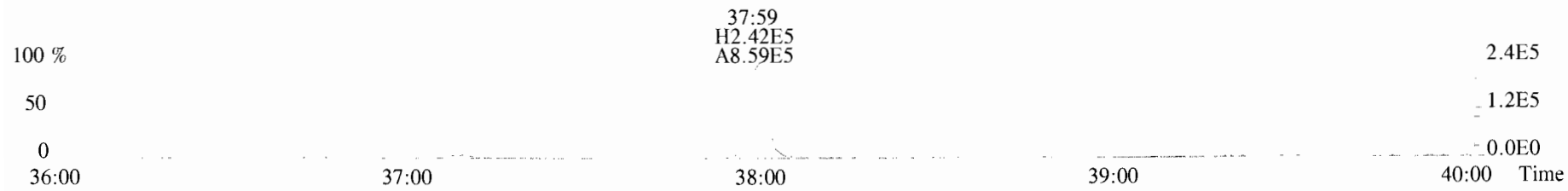
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191029D1 #1-385 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata Analytical Laboratory_VG7 Text:B9J0132-BS1 OPR 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)



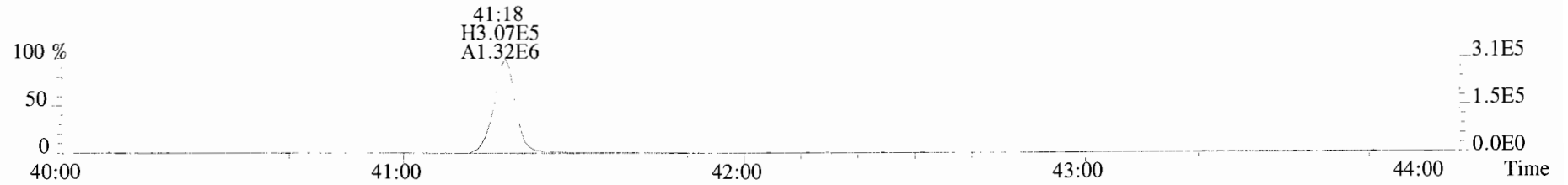
File:191029D1 #1-356 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



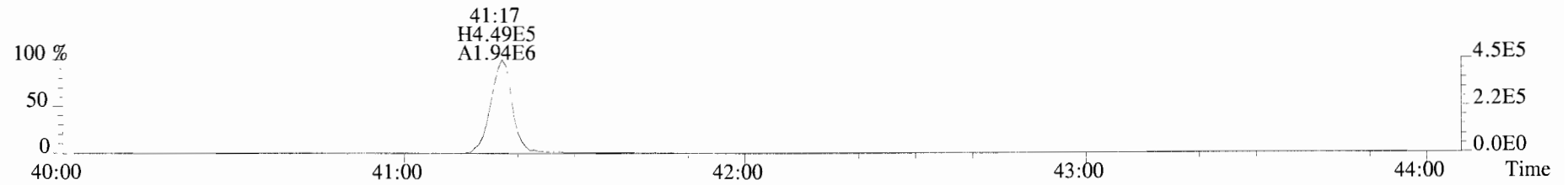
File:191029D1 #1-432 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



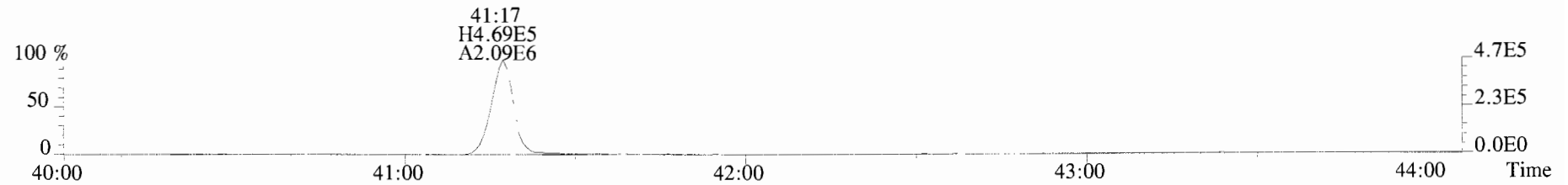
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



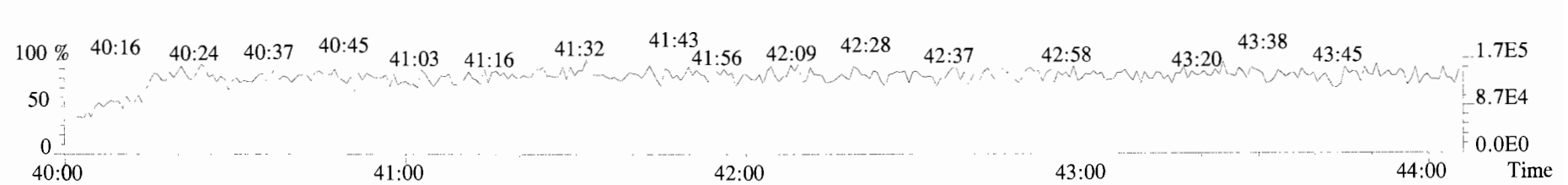
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



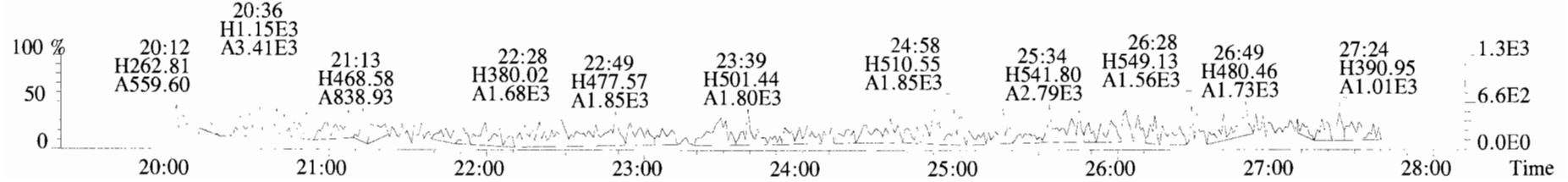
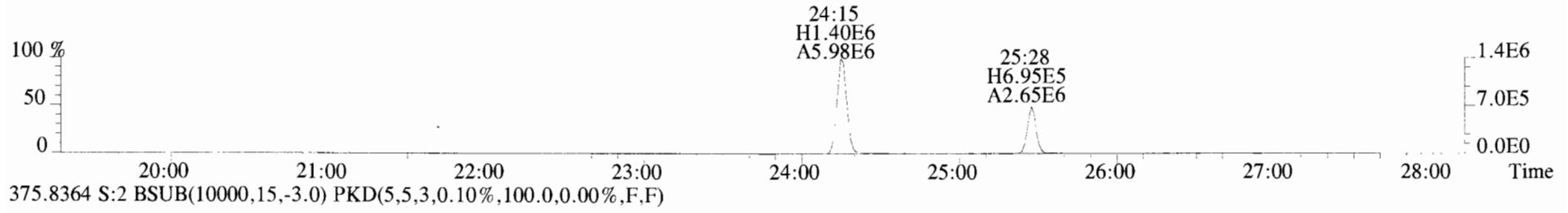
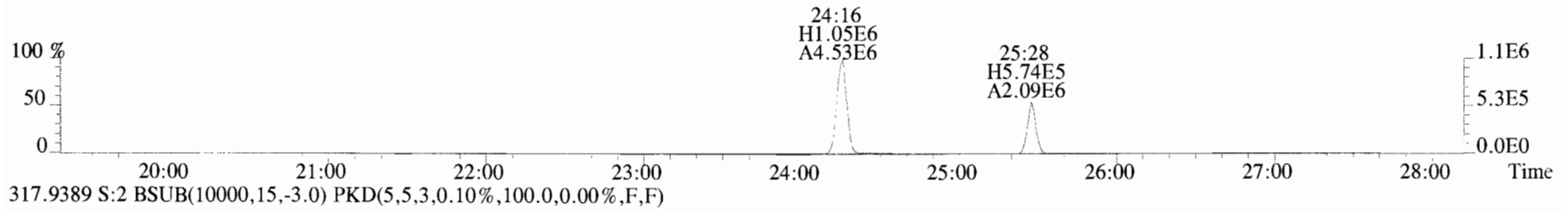
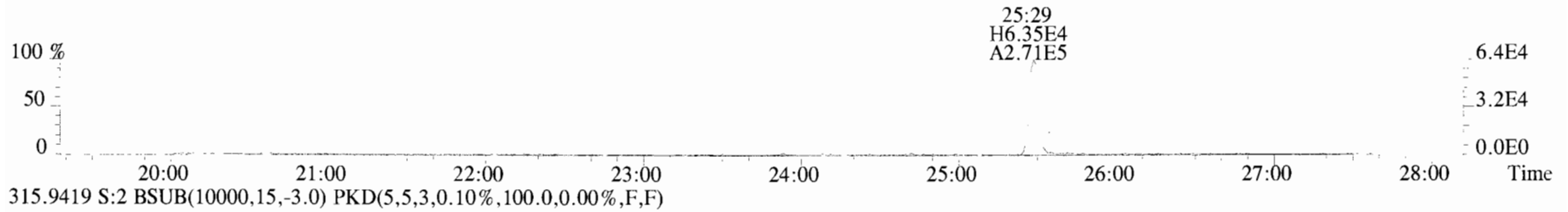
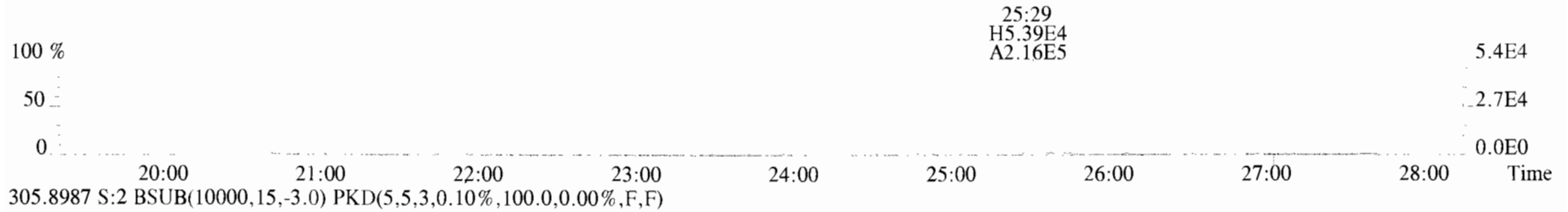
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



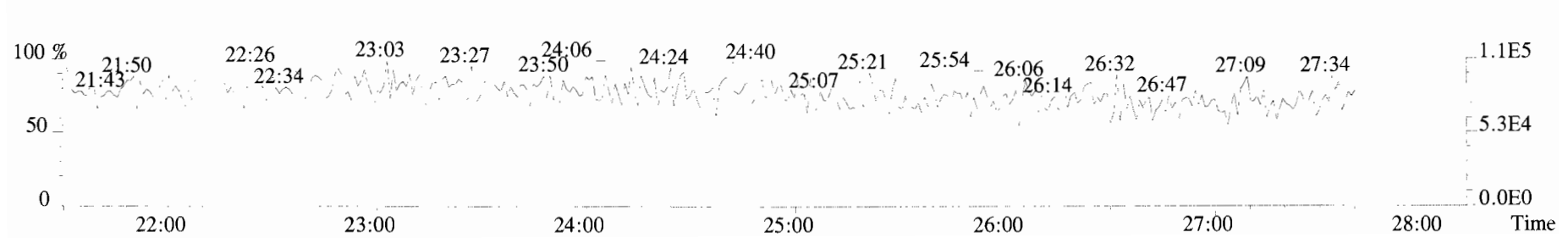
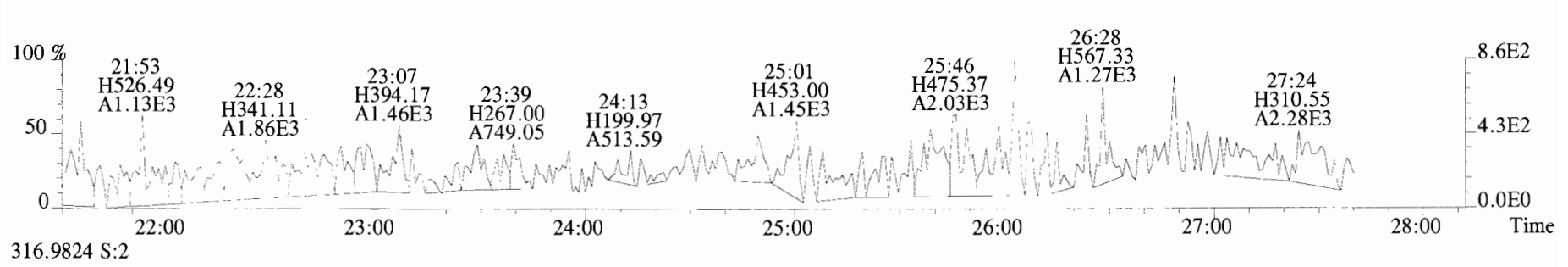
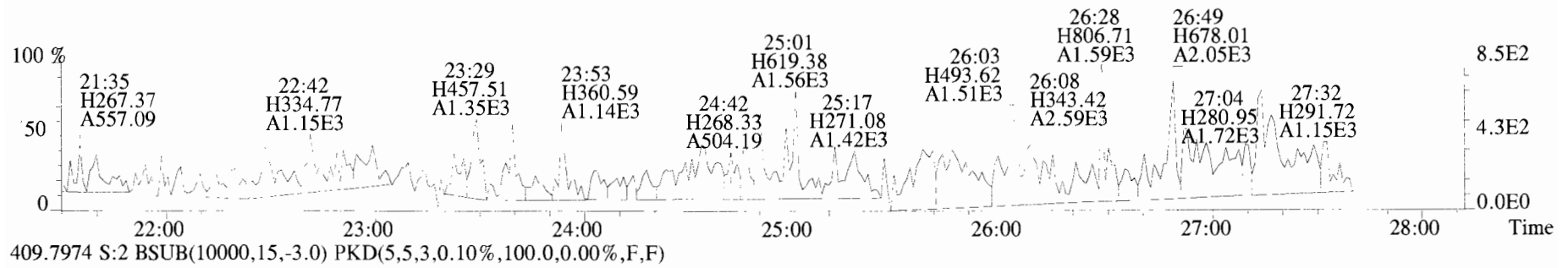
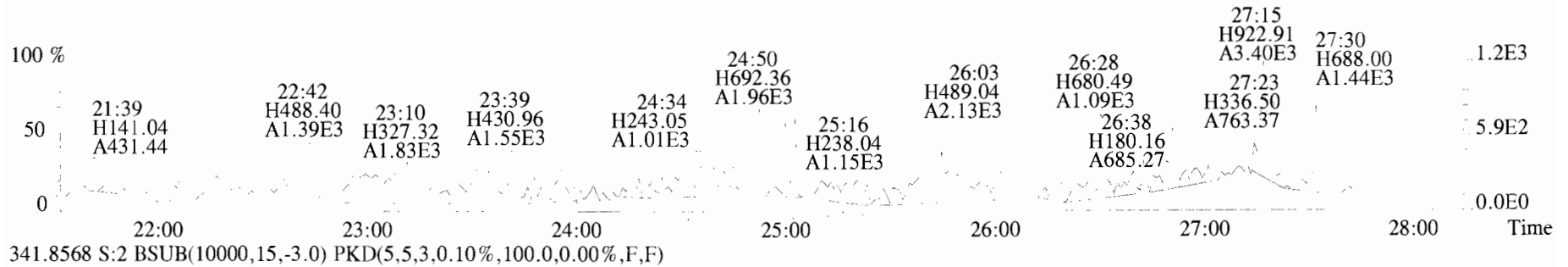
454.9728 S:2 F:5



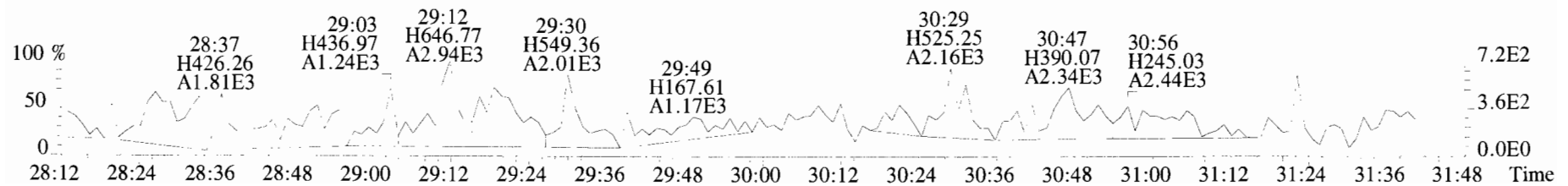
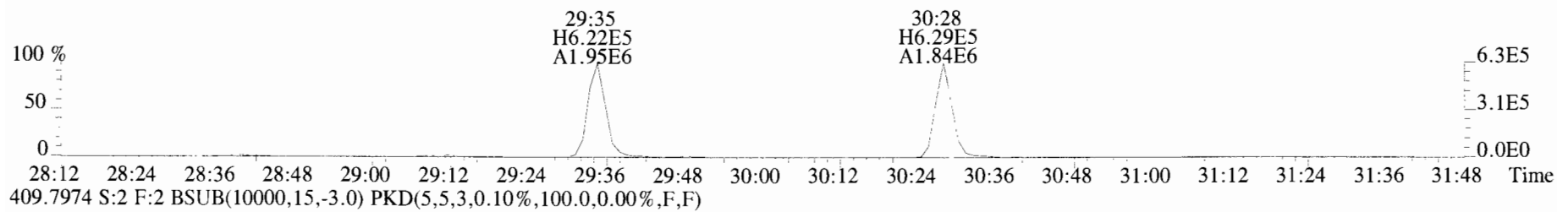
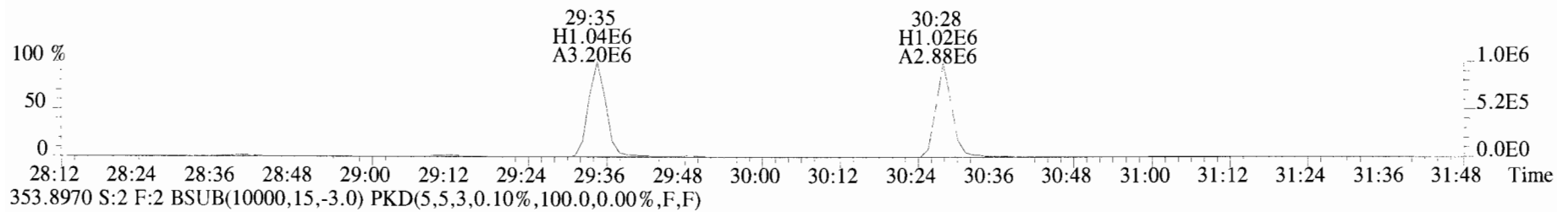
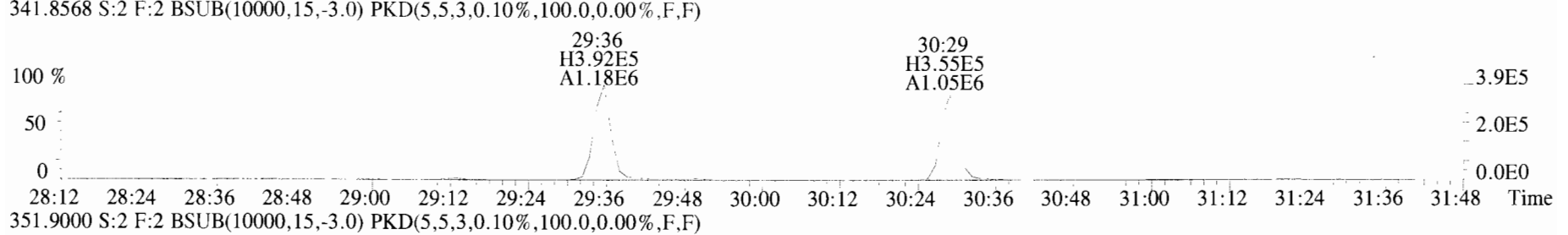
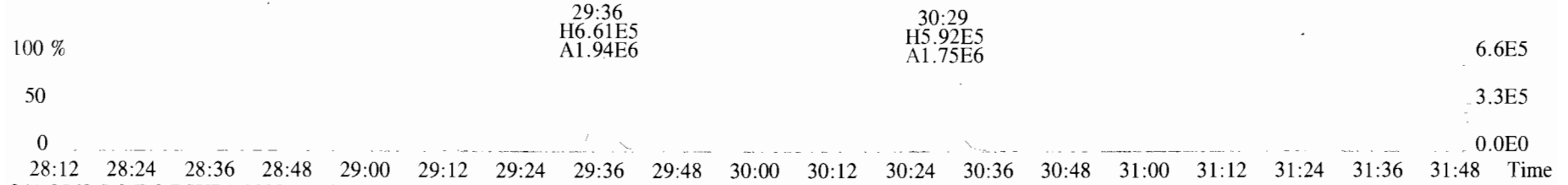
File:191029D1 #1-493 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata Analytical Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



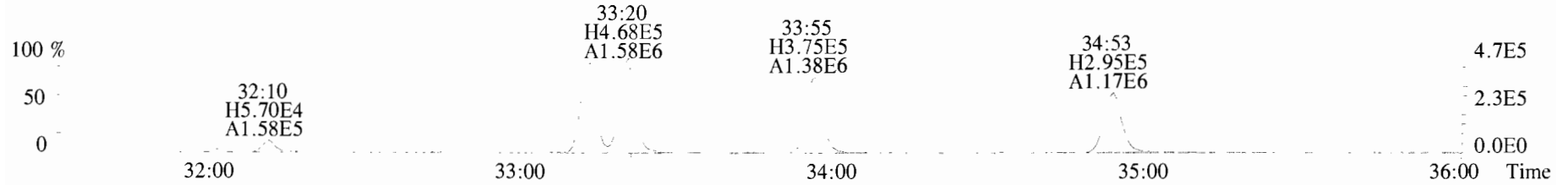
File:191029D1 #1-493 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Viata Analytical Laboratory VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
 339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



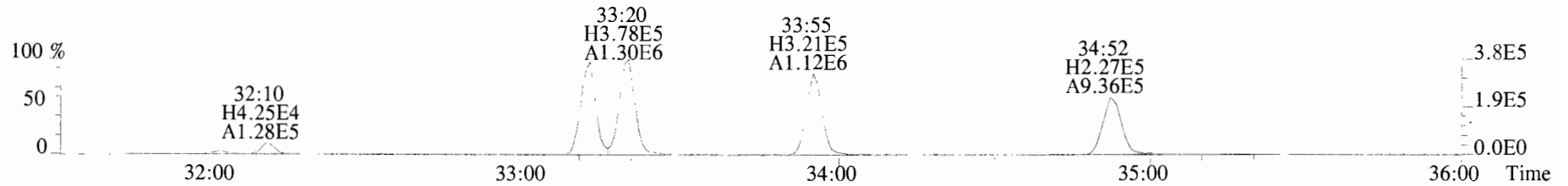
File:191029D1 #1-211 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Viata Analytical Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
 339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



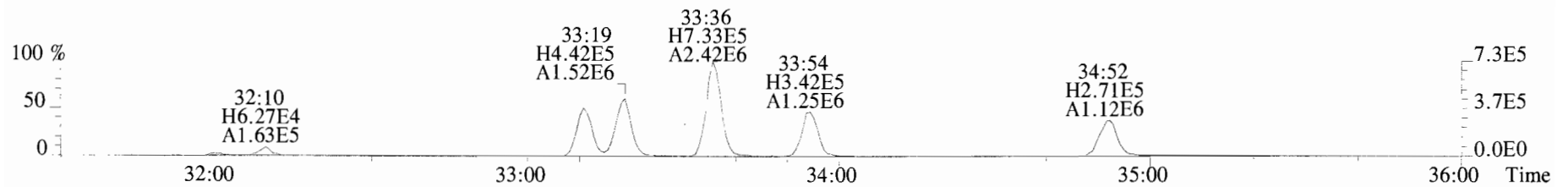
File:191029D1 #1-385 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



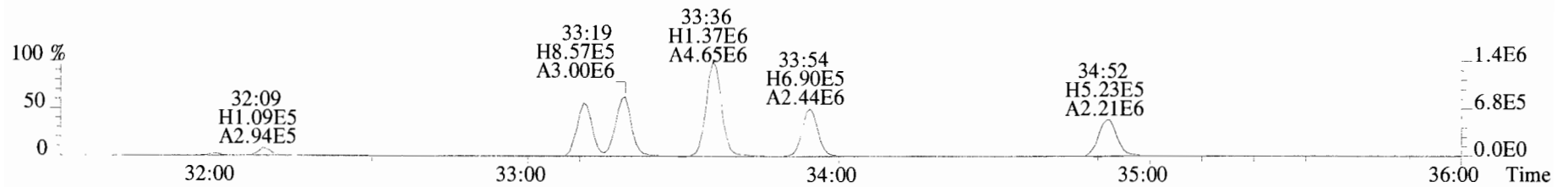
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



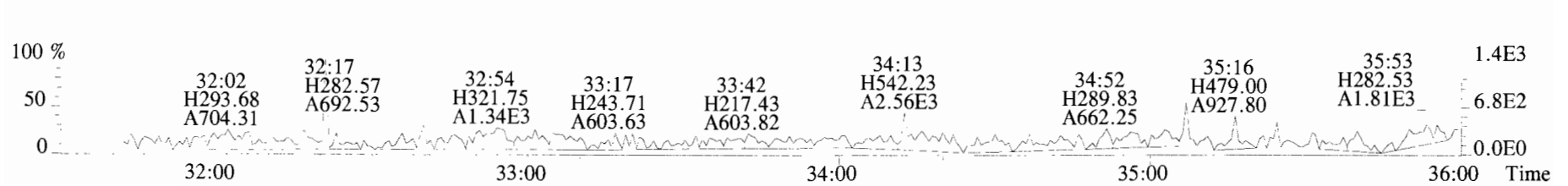
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



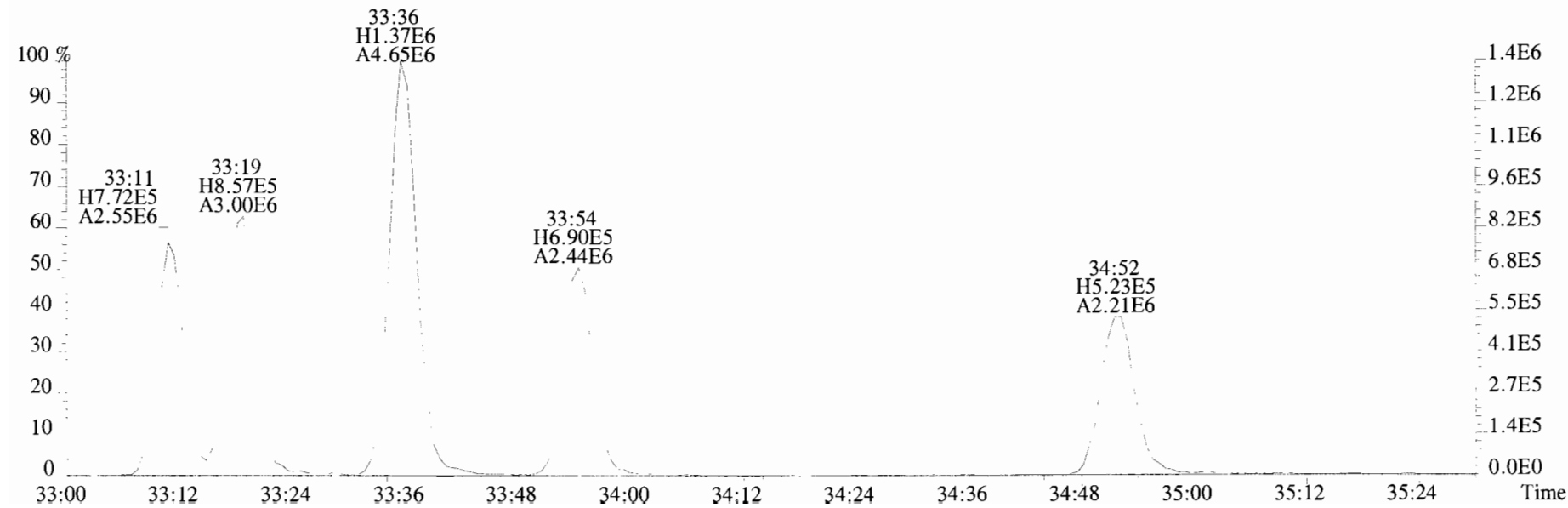
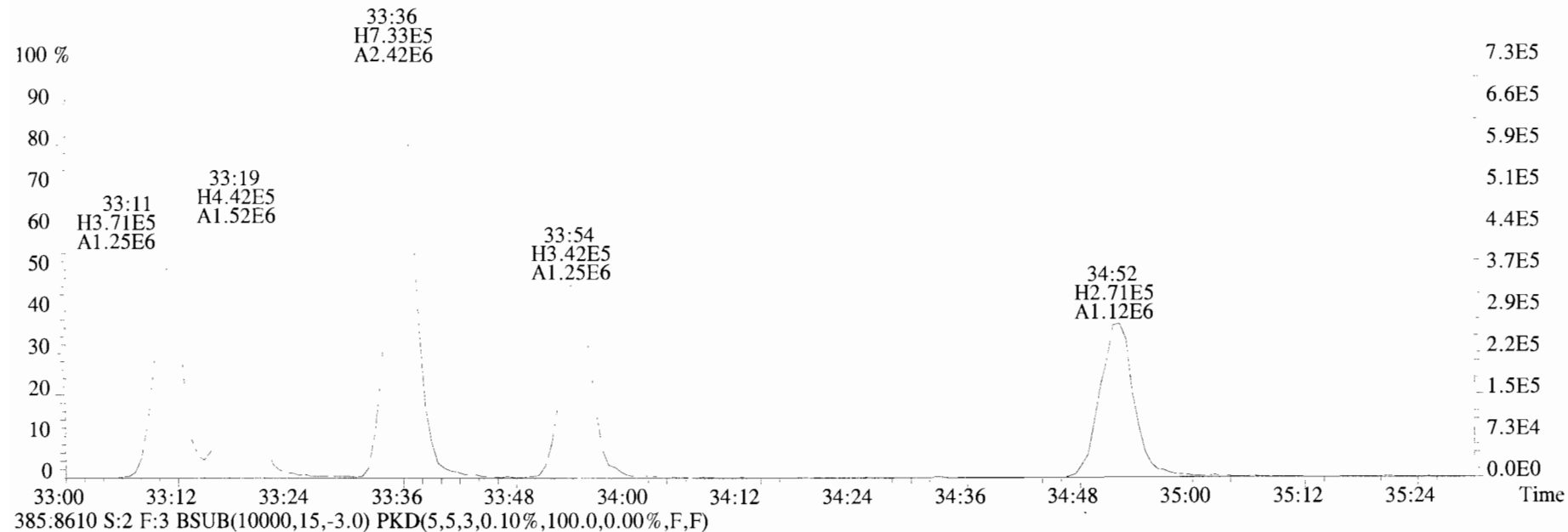
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



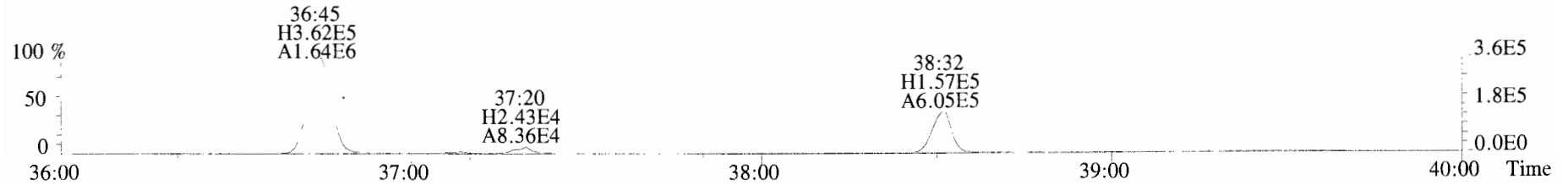
File:191029D1 #1-385 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Viata Analytical Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
 383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



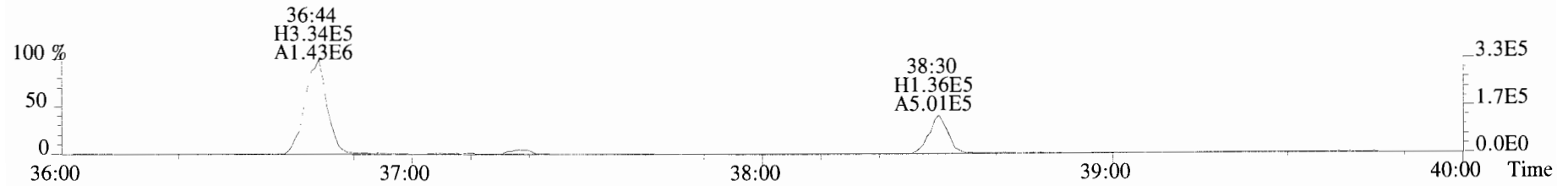
File:191029D1 #1-356 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B910132-BS1 OPR Exp:OCDD_DB5
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



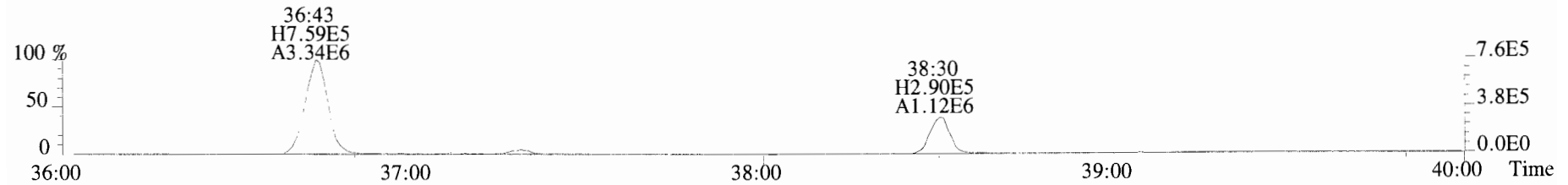
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



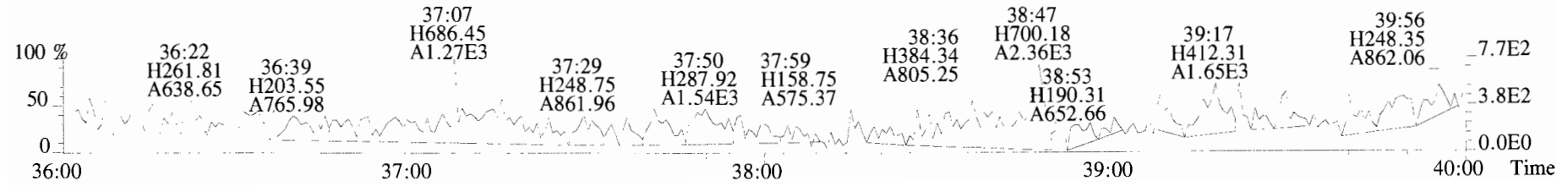
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



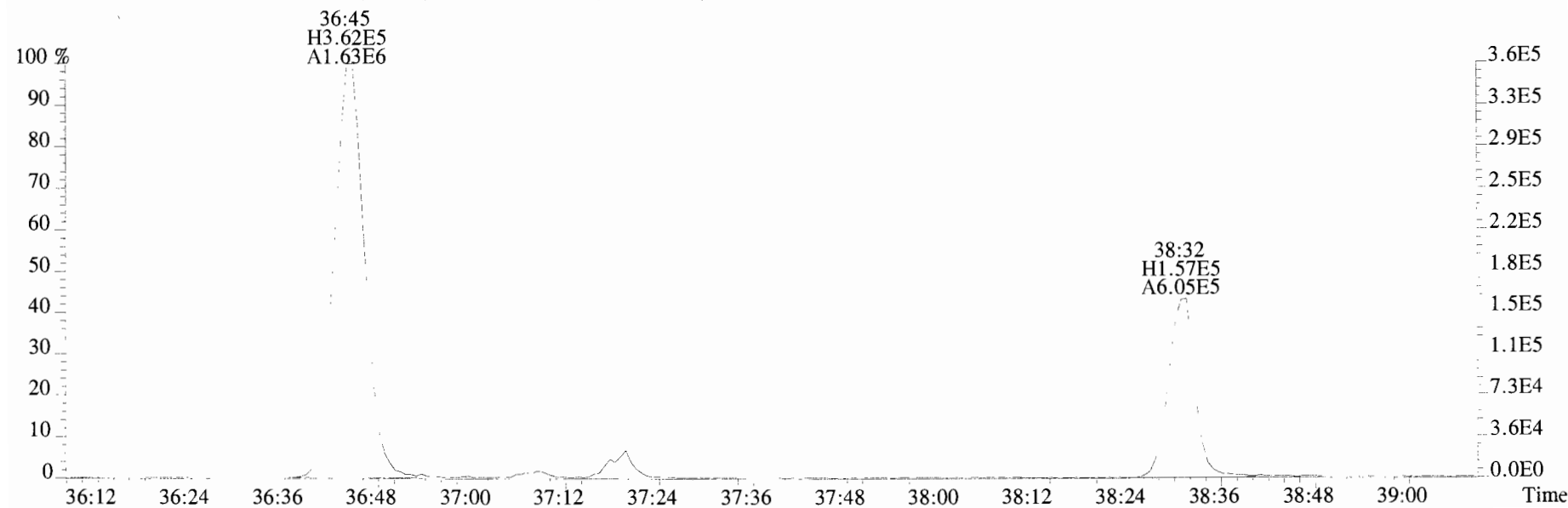
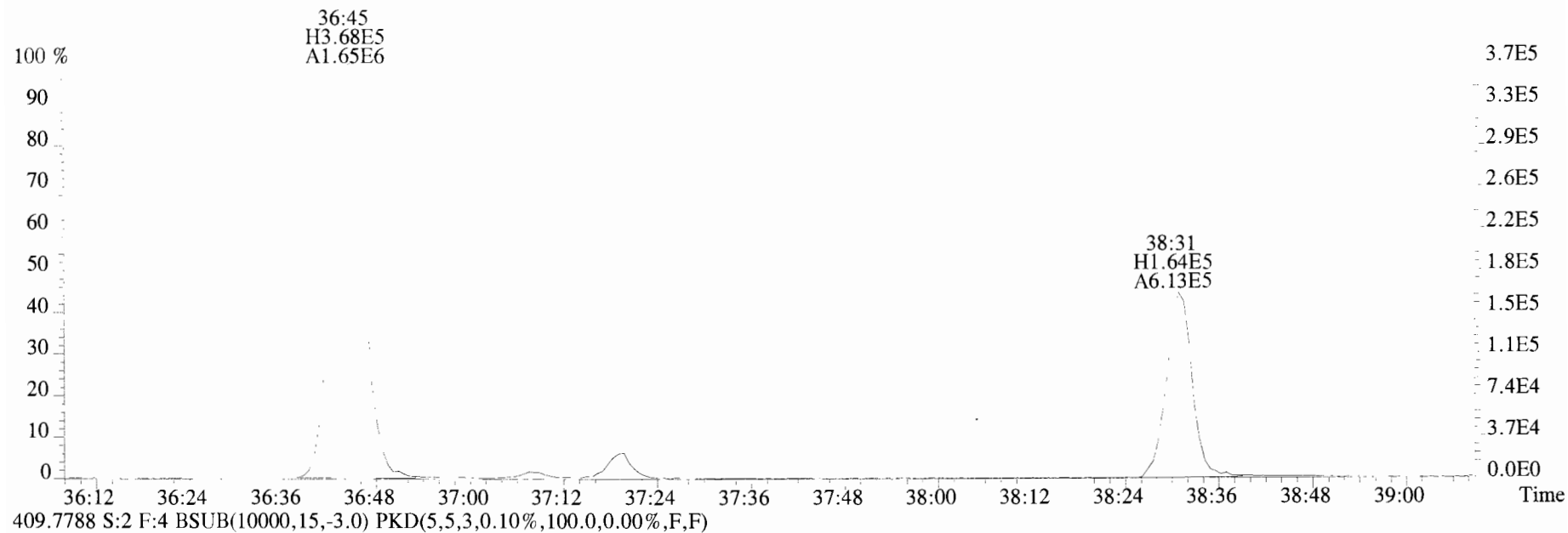
419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



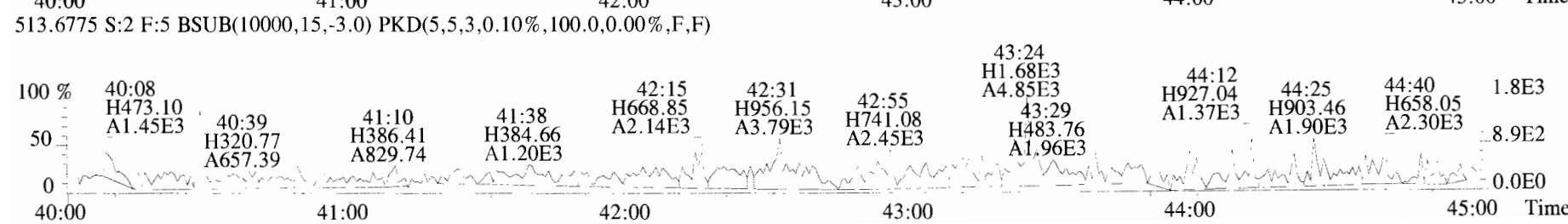
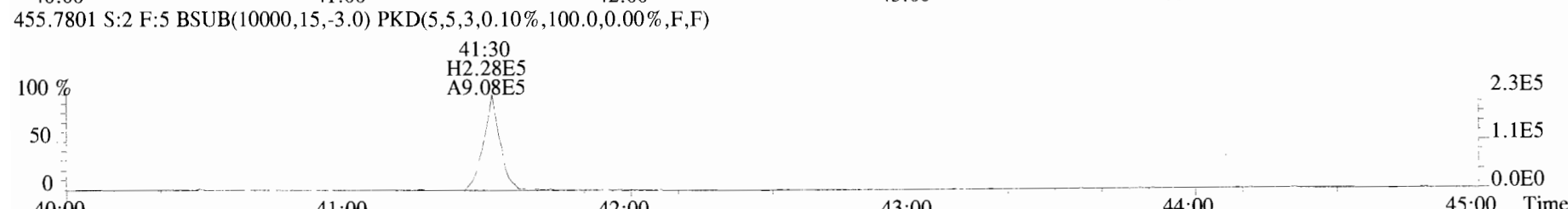
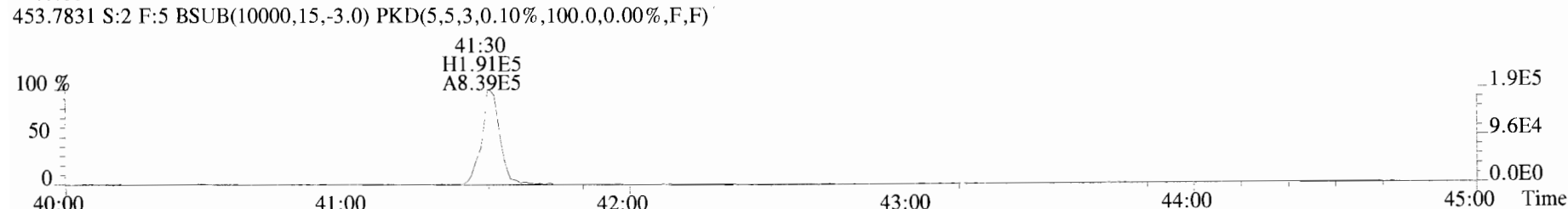
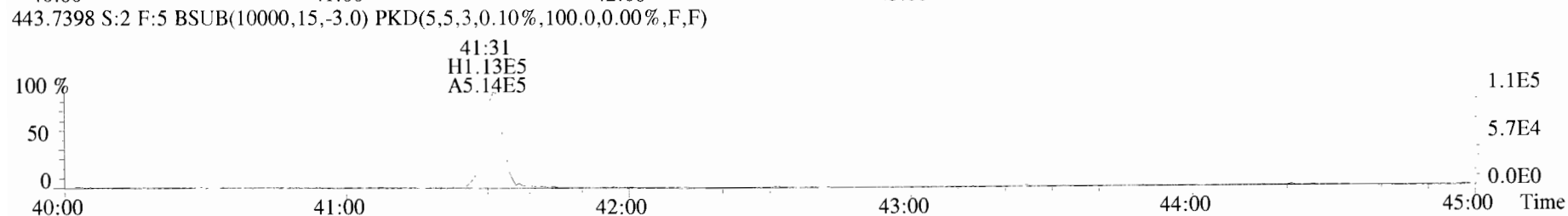
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191029D1 #1-356 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata Analytical Laboratory_VG7 Text:B9I0132-BS1 OPR 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:191029D1 #1-432 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR 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)



Client ID: Me... Blank
Lab ID: B9J0312 BLK1

Filename: 191101D1 S:5 Acq:1-NOV-19 10:44
GC Column ID: ZB-5MS ICal: 1613VG7-10-9... wt/vol:10.000

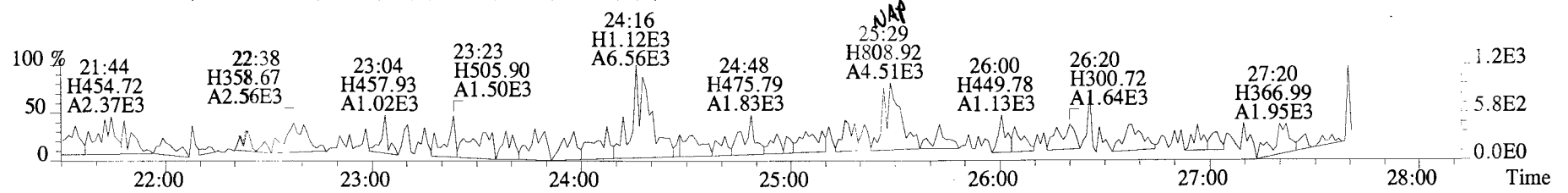
ConCal: ST191101D1-1
EndCAL: NA

Page 3 of 3

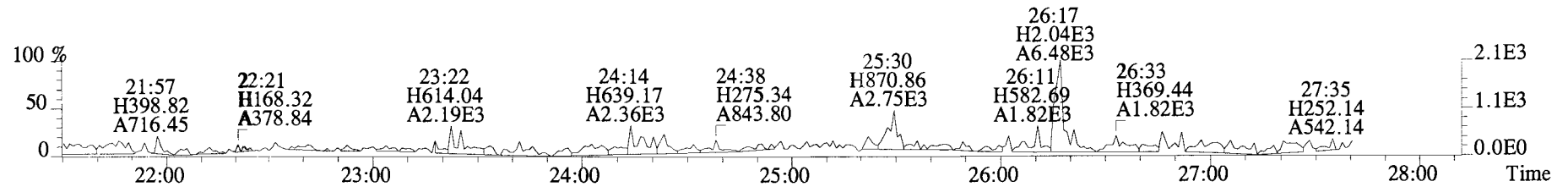
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	Not F η	*		107	2.5	0.0535	Total Tetra-Dioxins	*	*		107	0.0535
1,2,3,7,8-PeCDD	*	* n	0.90	Not F η	*		231	2.5	0.101	Total Penta-Dioxins	*	*		231	0.101
1,2,3,4,7,8-HxCDD	*	* n	1.10	Not F η	*		130	2.5	0.105	Total Hexa-Dioxins	*	*		130	0.111
1,2,3,6,7,8-HxCDD	*	* n	0.94	Not F η	*		130	2.5	0.110	Total Hepta-Dioxins	*	*		158	0.148
1,2,3,7,8,9-HxCDD	*	* n	0.96	Not F η	*		130	2.5	0.115	Total Tetra-Furans	*	*		180	0.0610
1,2,3,4,6,7,8-HpCDD	*	* n	0.98	Not F η	*		158	2.5	0.148	Total Penta-Furans	0.0000	0.0000		200	0.0820
OCDD	*	* n	0.96	Not F η	*		142	2.5	0.179	Total Hexa-Furans	*	*		172	0.0636
										Total Hepta-Furans	*	*		147	0.0883
2,3,7,8-TCDF	*	* n	0.95	Not F η	*		180	2.5	0.0610						
1,2,3,7,8-PeCDF	*	* n	0.96	Not F η	*		200	2.5	0.0826						
2,3,4,7,8-PeCDF	*	* n	1.01	Not F η	*		200	2.5	0.0815						
1,2,3,4,7,8-HxCDF	*	* n	1.18	Not F η	*		172	2.5	0.0521						
1,2,3,6,7,8-HxCDF	*	* n	1.07	Not F η	*		172	2.5	0.0576						
2,3,4,6,7,8-HxCDF	*	* n	1.11	Not F η	*		172	2.5	0.0631						
1,2,3,7,8,9-HxCDF	*	* n	1.06	Not F η	*		172	2.5	0.0850						
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	Not F η	*		147	2.5	0.0945						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	Not F η	*		147	2.5	0.0813						
OCDF	6.35e+03	1.05 n	0.95	41:26	0.30172		*	2.5	*						
IS	13C-2,3,7,8-TCDD	6.94e+06	0.78 y	1.10	26:15	190.67				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	5.80e+06	0.62 y	0.88	30:44	197.81				95.3					
IS	13C-1,2,3,4,7,8-HxCDD	4.55e+06	1.31 y	0.64	34:03	203.31				98.9					
IS	13C-1,2,3,6,7,8-HxCDD	5.27e+06	1.31 y	0.86	34:09	176.76				102					
IS	13C-1,2,3,7,8,9-HxCDD	5.16e+06	1.27 y	0.81	34:27	183.77				88.4					
IS	13C-1,2,3,4,6,7,8-HpCDD	4.25e+06	1.08 y	0.65	37:54	186.51				91.9					
IS	13C-OCDD	6.91e+06	0.91 y	0.58	41:12	342.23				93.3					
IS	13C-2,3,7,8-TCDF	1.03e+07	0.78 y	1.03	25:29	184.51				85.6					
IS	13C-1,2,3,7,8-PeCDF	9.82e+06	1.58 y	0.85	29:35	212.40				92.3					
IS	13C-2,3,4,7,8-PeCDF	9.22e+06	1.58 y	0.85	30:27	201.10				106					
IS	13C-1,2,3,4,7,8-HxCDF	6.58e+06	0.50 y	0.83	33:09	226.97				101					
IS	13C-1,2,3,6,7,8-HxCDF	7.05e+06	0.53 y	1.03	33:17	195.73				113					
IS	13C-2,3,4,6,7,8-HxCDF	6.28e+06	0.51 y	0.95	33:53	189.26				97.9					
IS	13C-1,2,3,7,8,9-HxCDF	5.89e+06	0.51 y	0.83	34:50	204.19				94.6					
IS	13C-1,2,3,4,6,7,8-HpCDF	4.43e+06	0.44 y	0.76	36:41	167.73				102					
IS	13C-1,2,3,4,7,8,9-HpCDF	3.94e+06	0.43 y	0.58	38:27	194.75				83.9					
IS	13C-OCDF	8.88e+06	0.89 y	0.69	41:25	370.13				97.4					
C/Up	37C1-2,3,7,8-TCDD	3.03e+06		1.20	26:17	76.047				92.5					
RS/RT	13C-1,2,3,4-TCDD	6.65e+06	0.78 y	1.00	25:43	200.00									
RS	13C-1,2,3,4-TCDF	1.08e+07	0.78 y	1.00	24:17	200.00									
RS/RT	13C-1,2,3,4,6,9-HxCDF	6.97e+06	0.51 y	1.00	33:34	200.00									

Integrations Reviewed
by Analyst: DB by Analyst: CT
Date: 11/4/19 Date: 11/06/19

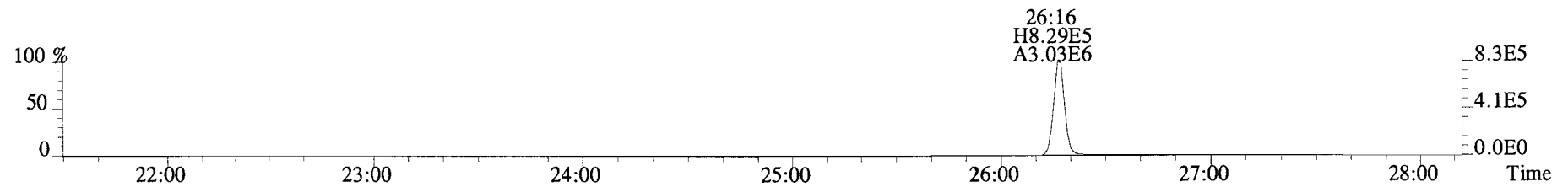
File:191101D1 #1-492 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-BLK1 Method Blank 10 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



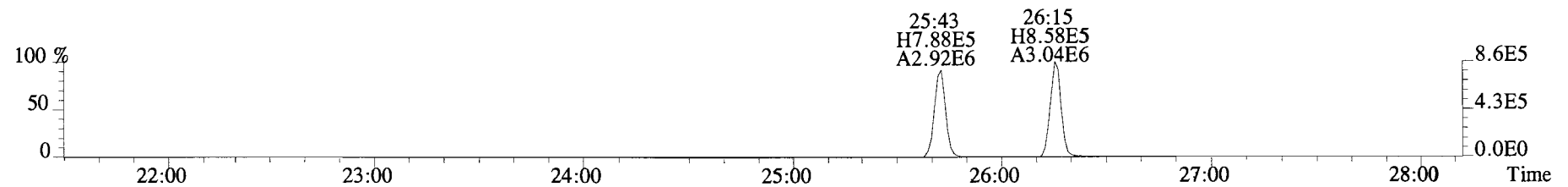
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



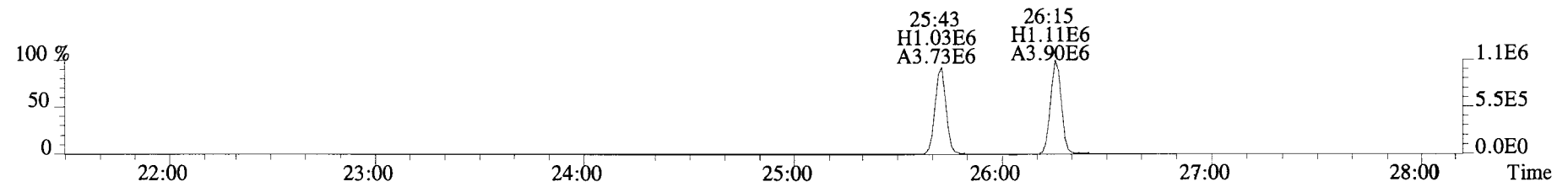
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



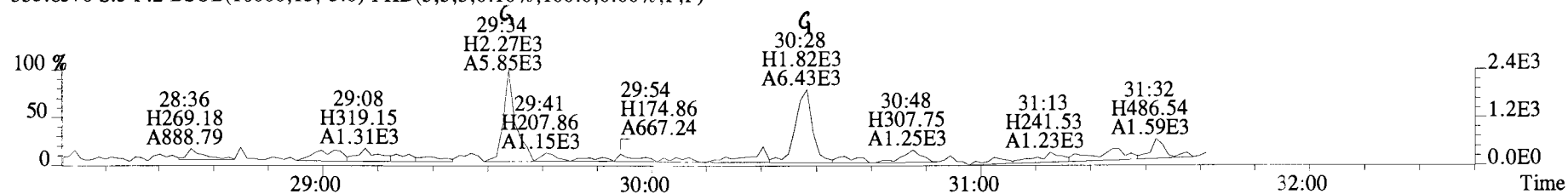
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



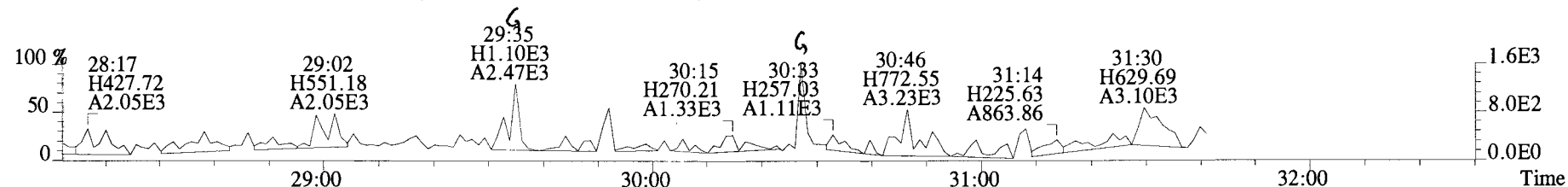
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



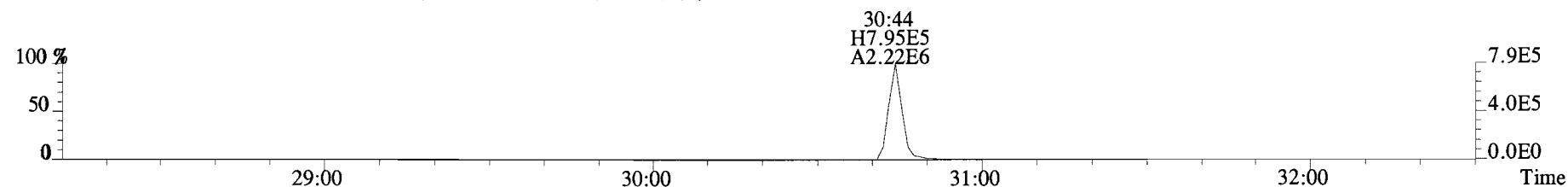
File:191101D1 #1-211 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:B9I0312-BLK1 Method Blank 10 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



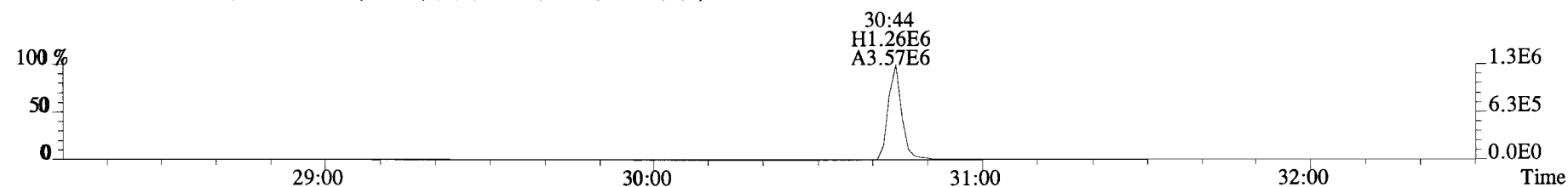
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



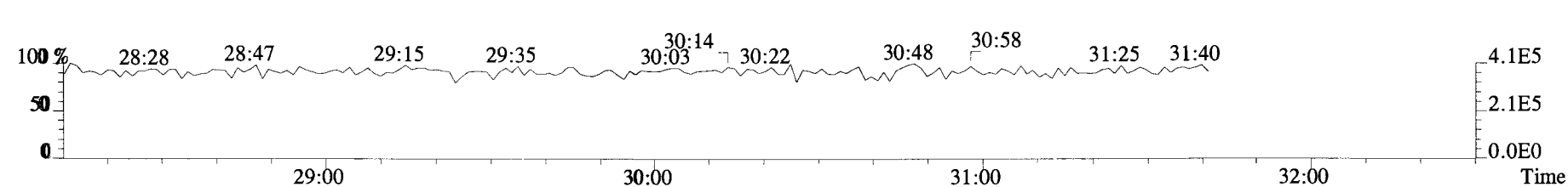
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



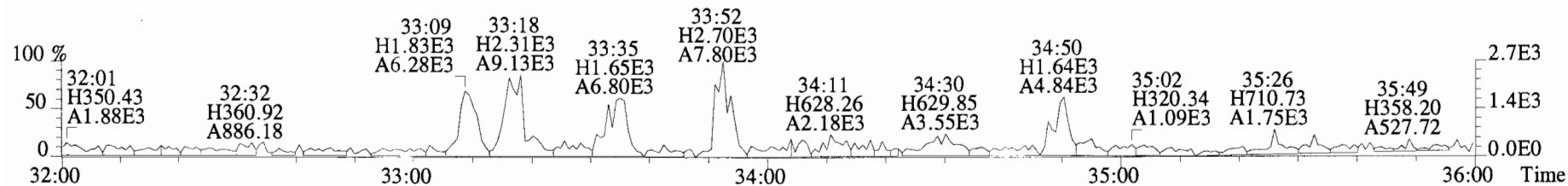
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



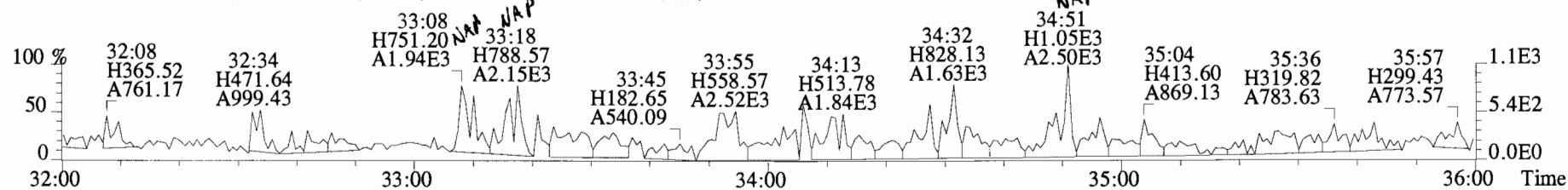
366.9792 S:5 F:2



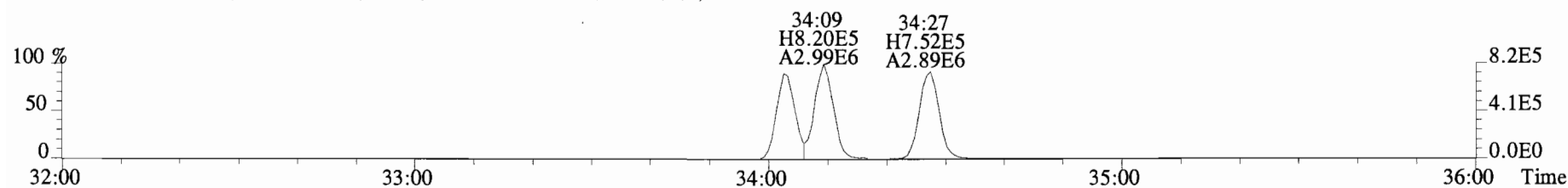
File:191101D1 #1-384 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-BLK1 Method Blank 10 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



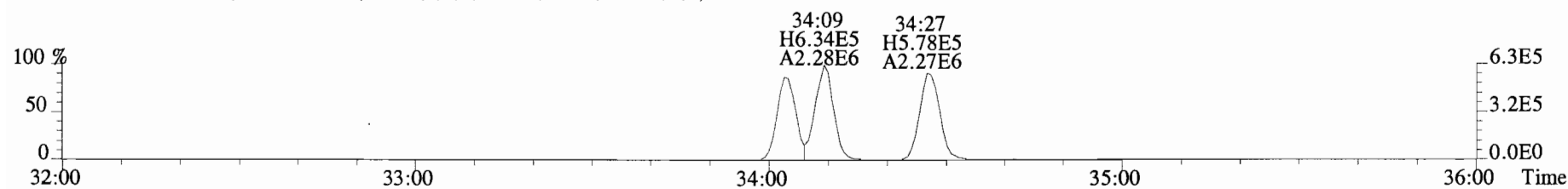
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



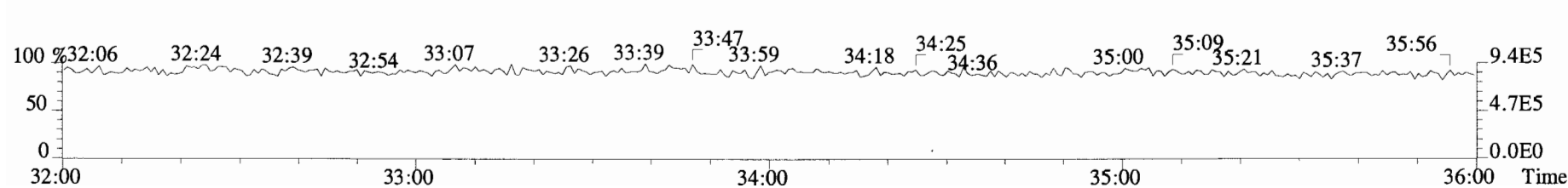
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



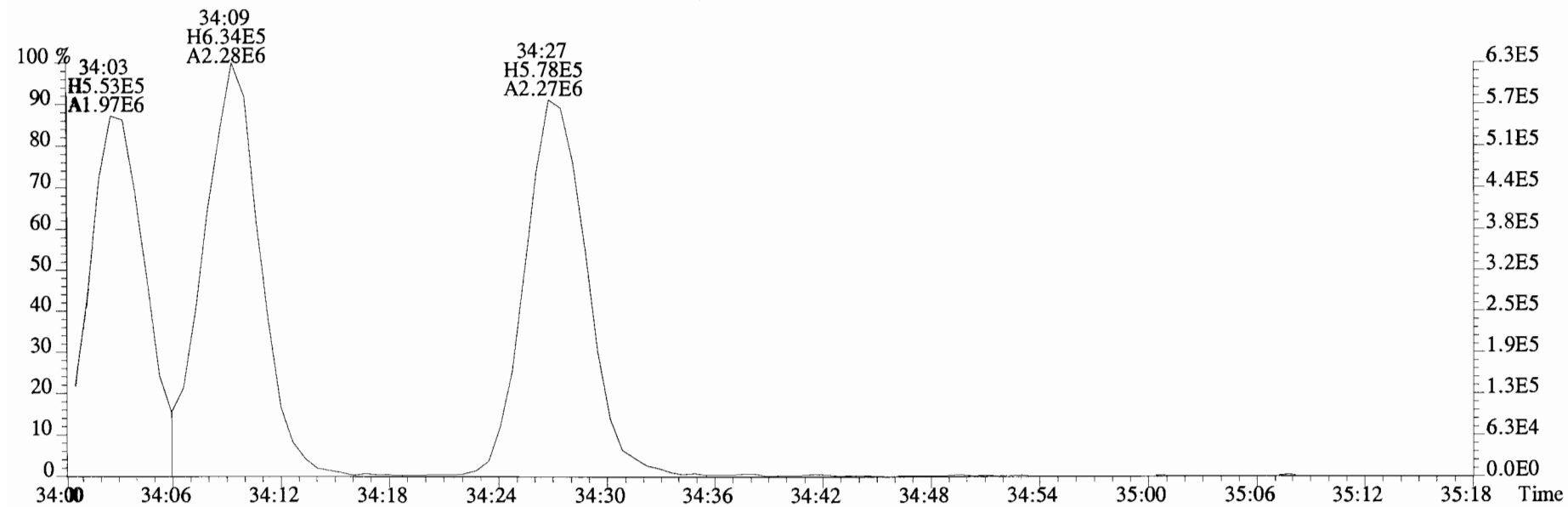
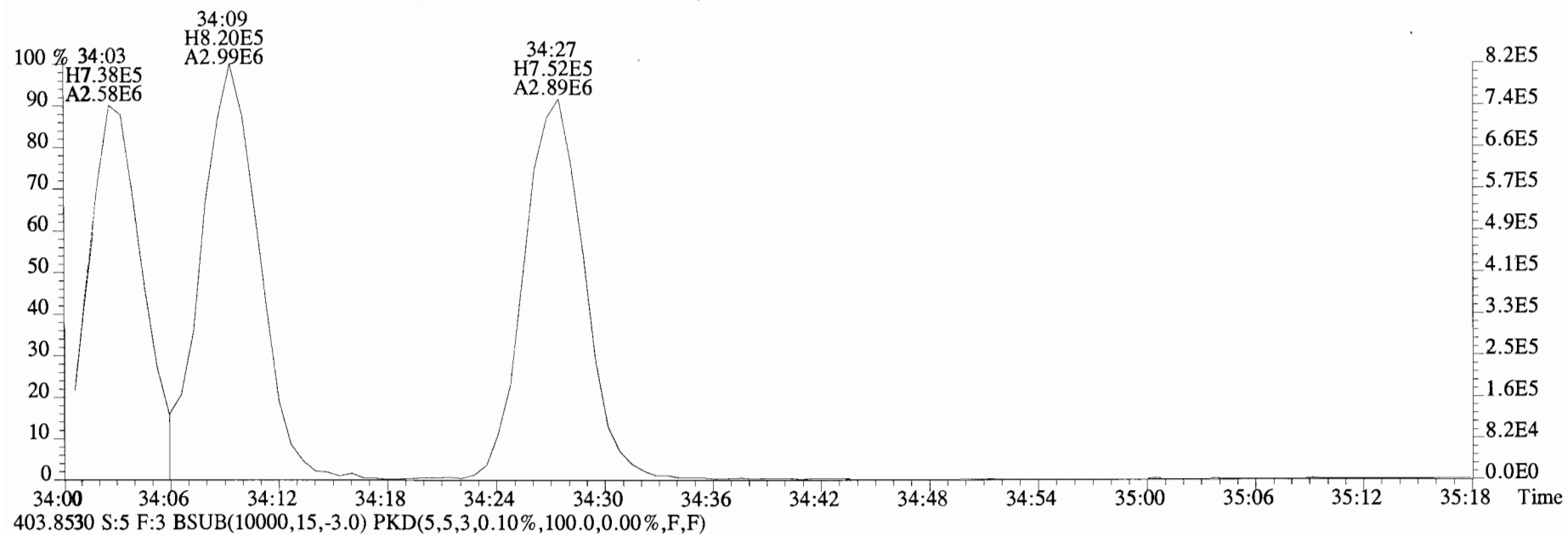
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



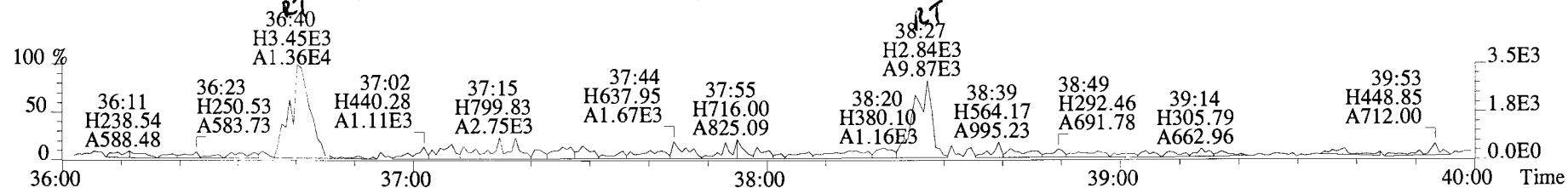
392.9760 S:5 F:3



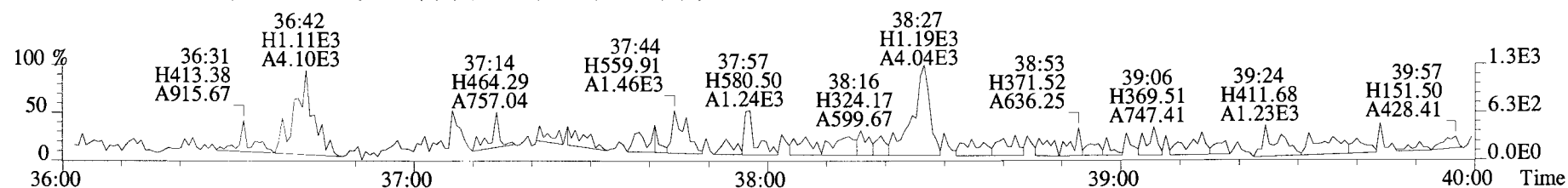
File:191101D1 #1-384 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-BLK1 Method Blank 10 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



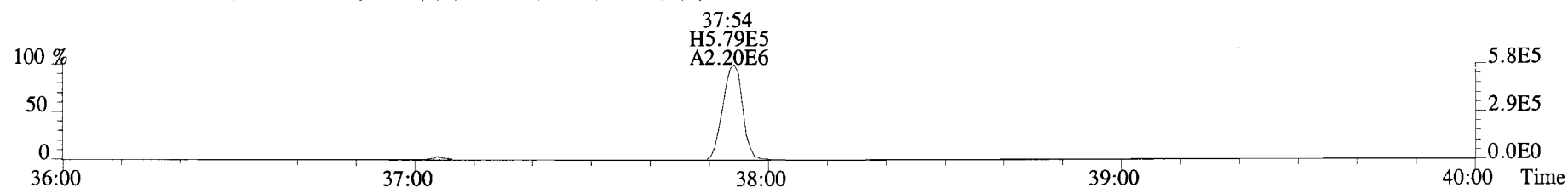
File:191101D1 #1-355 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-BLK1 Method Blank 10 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



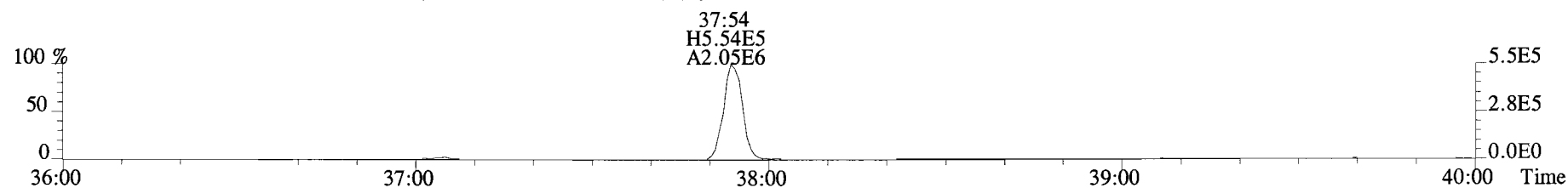
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



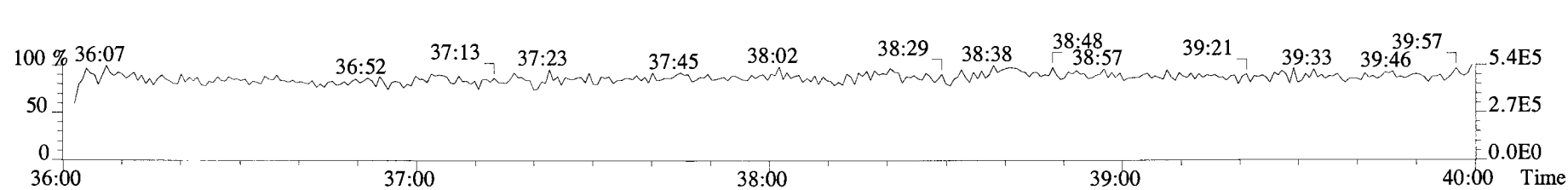
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



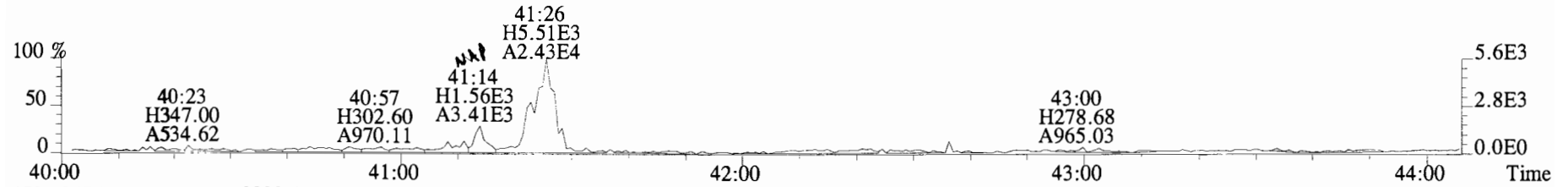
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



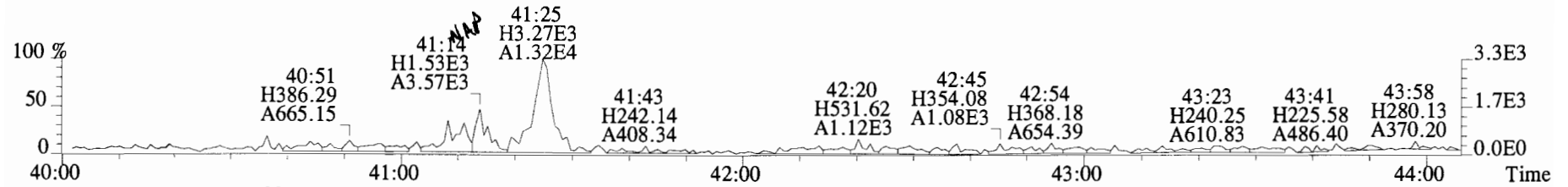
454.9728 S:5 F:4



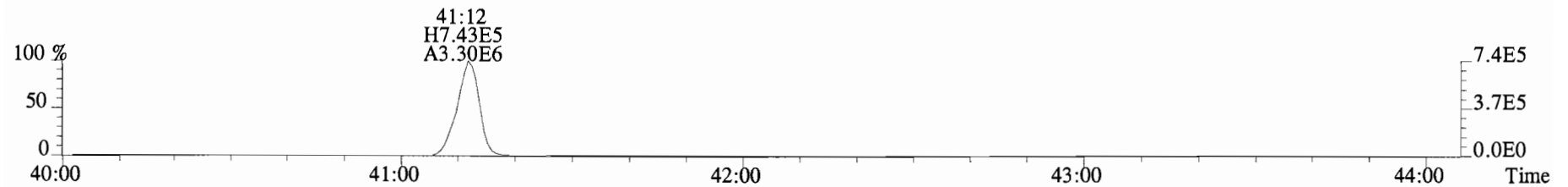
File:191101D1 #1-432 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-BLK1 Method Blank 10 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



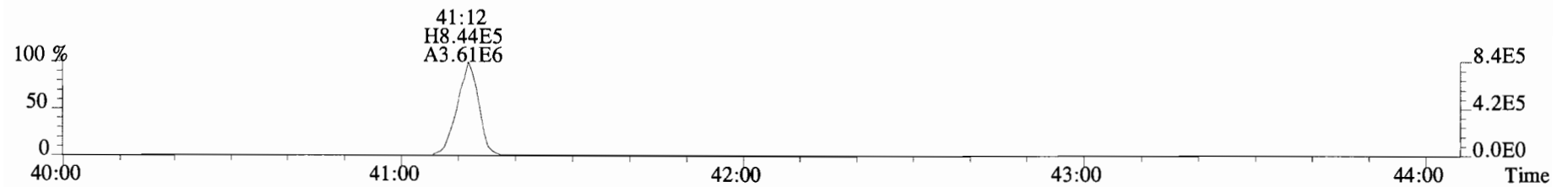
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



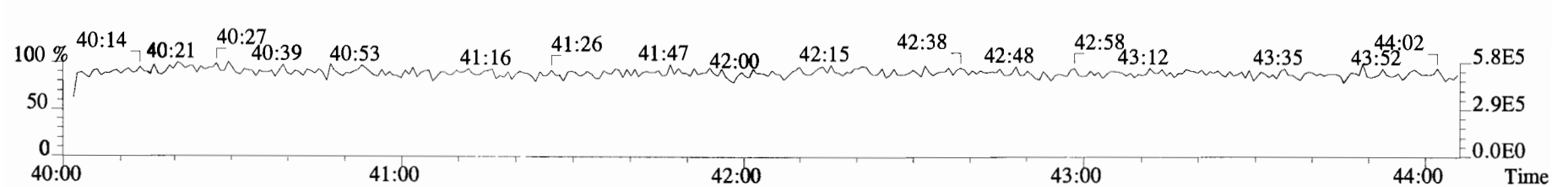
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



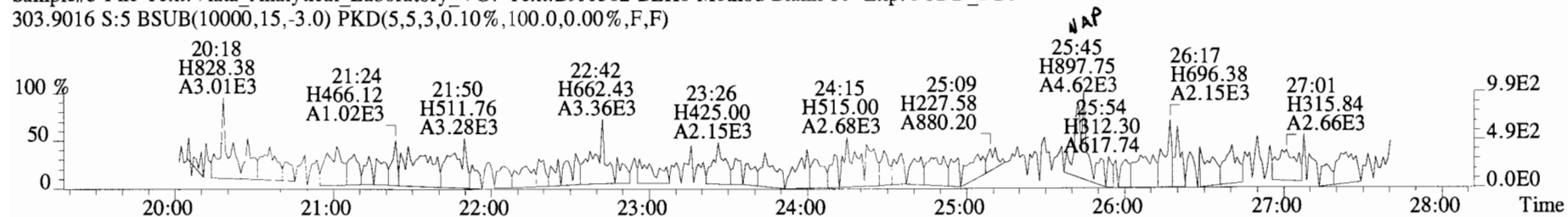
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



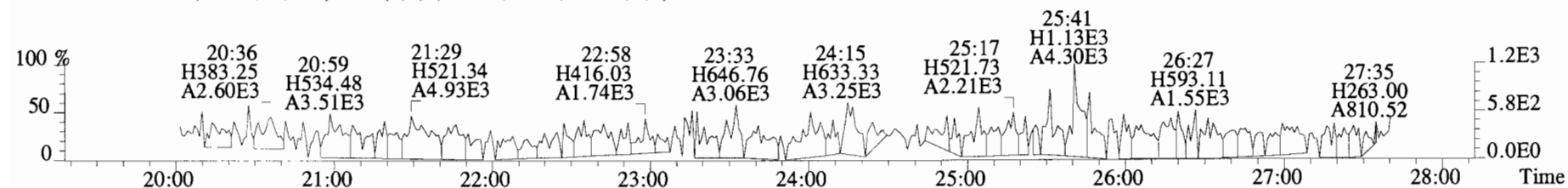
454.9728 S:5 F:5



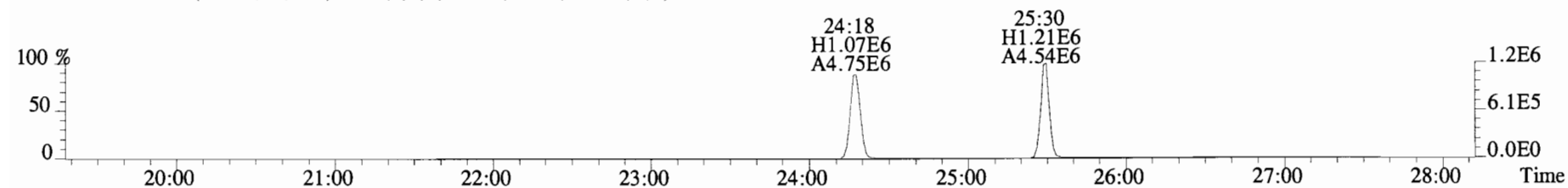
File:191101D1 #1-492 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-BLK1 Method Blank 10 Exp:OCDD_DB5
 303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



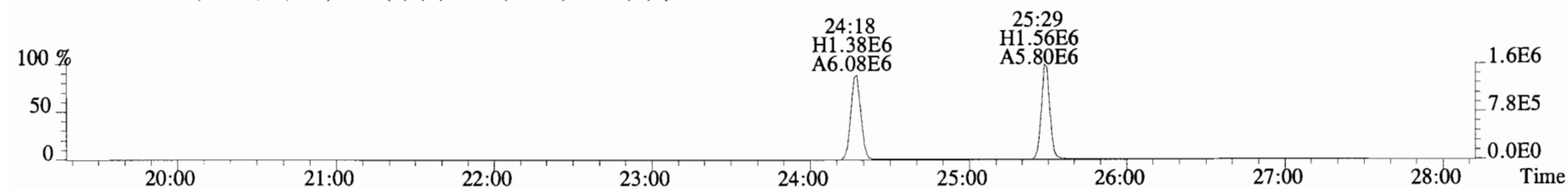
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



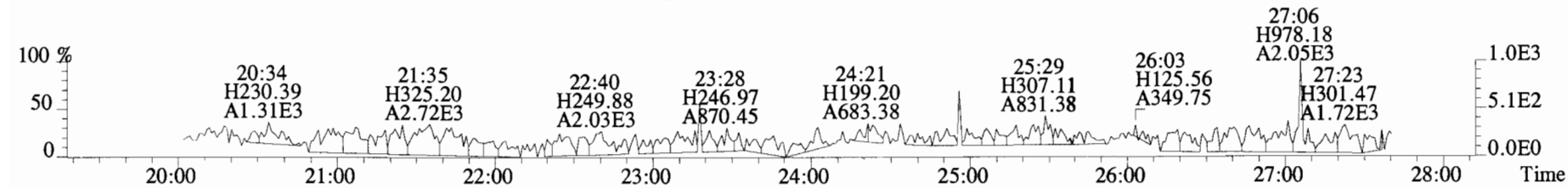
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



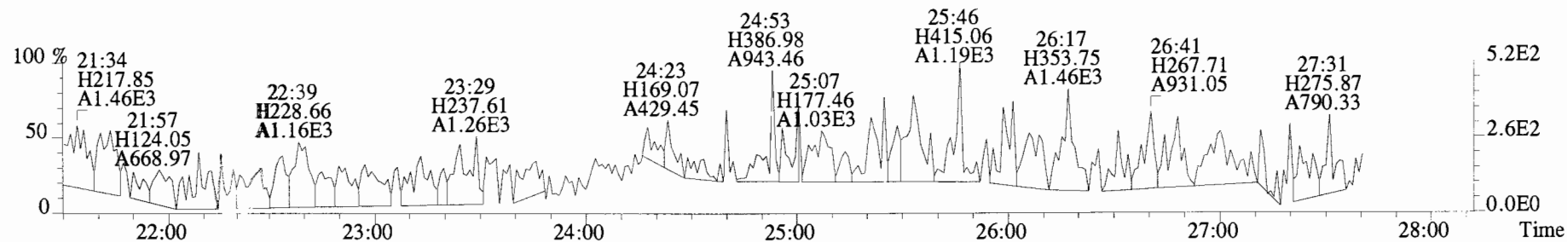
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



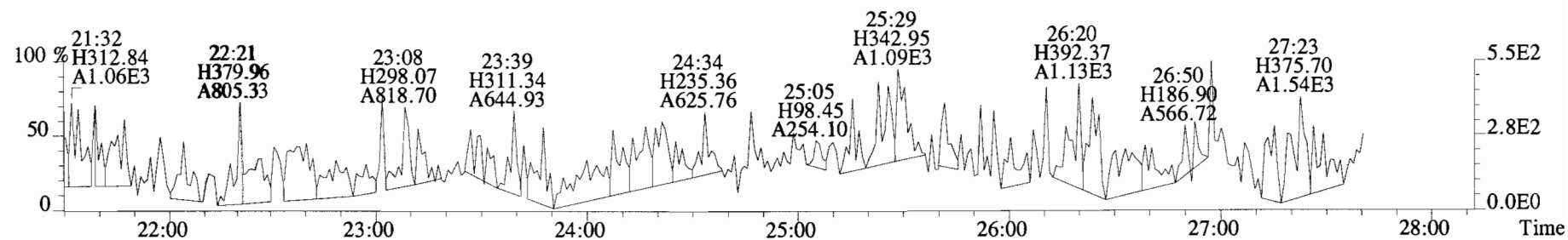
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



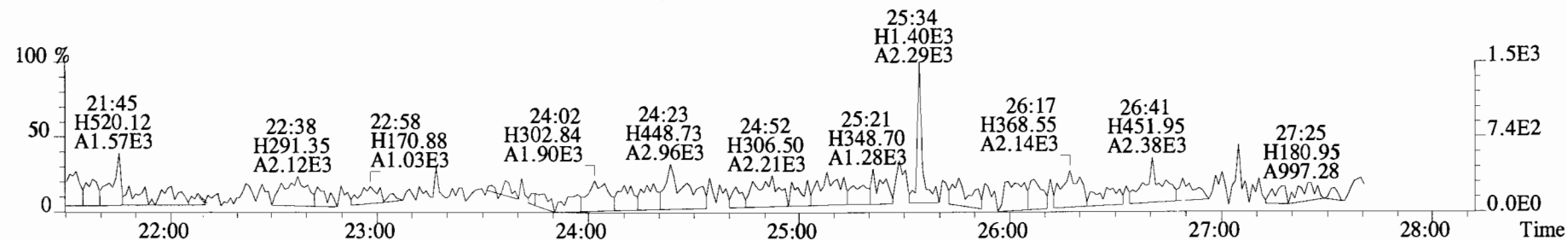
File:191101D1 #1-492 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-BLK1 Method Blank 10 Exp:OCDD_DB5
 339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



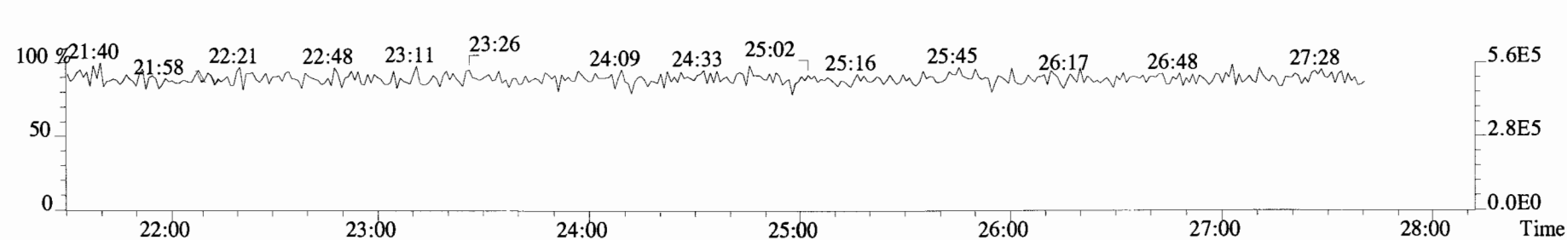
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



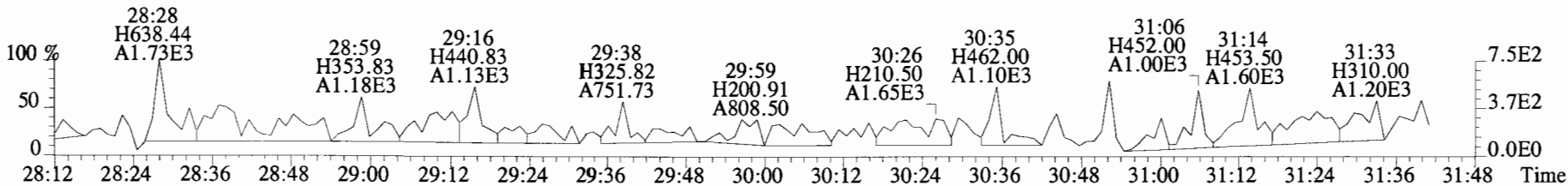
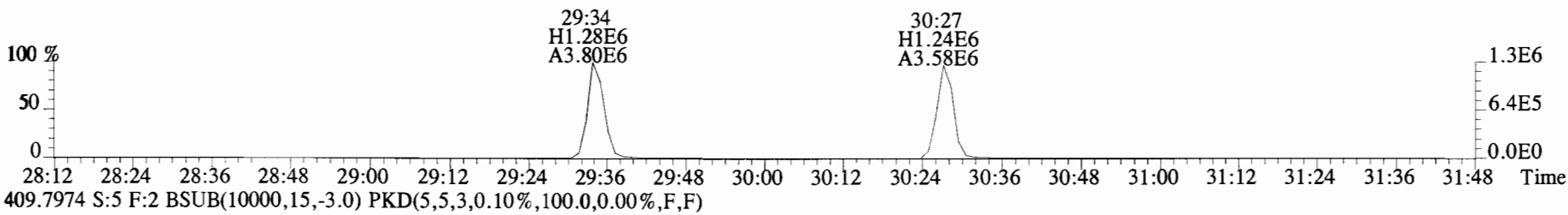
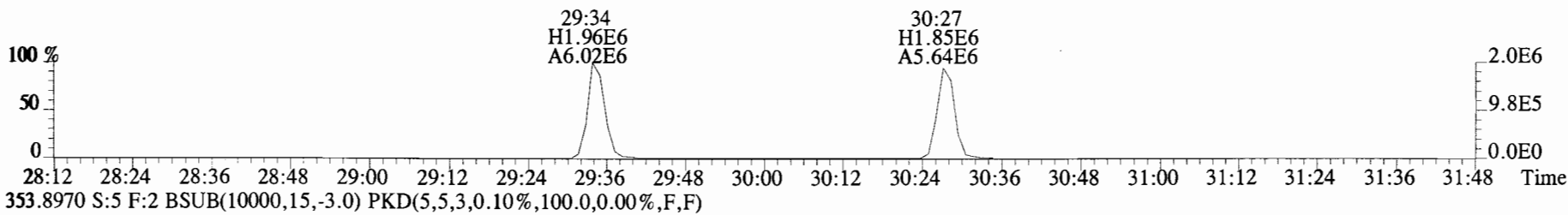
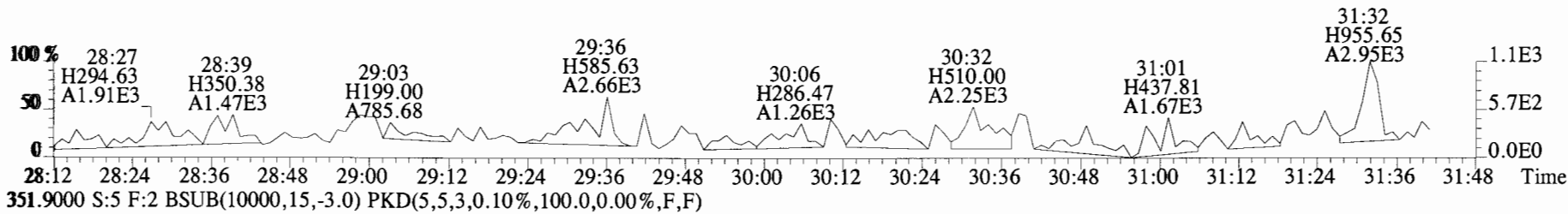
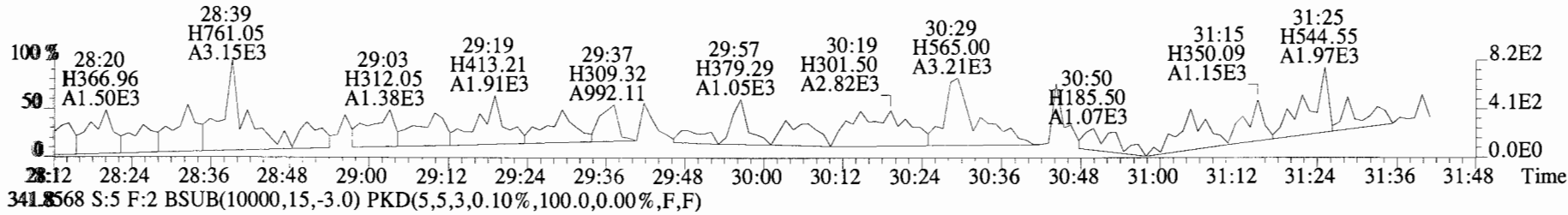
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



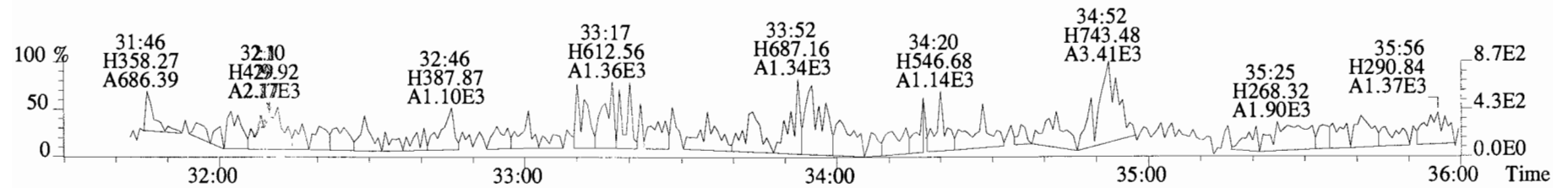
316.9824 S:5



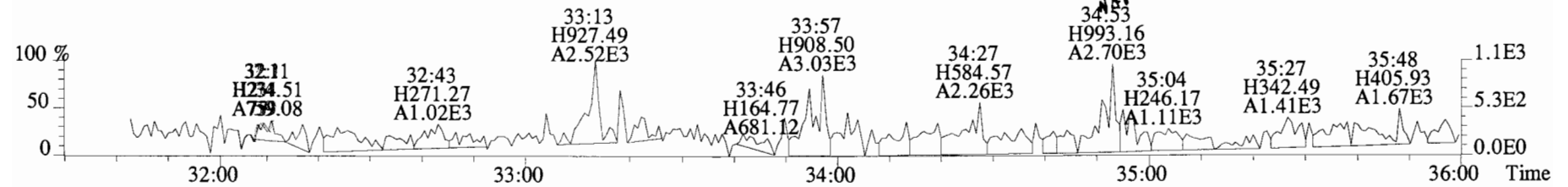
File: 191101D1 #1-211 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Viata Analytical_Laboratory_VG7 Text: B9J0312-BLK1 Method Blank 10 Exp: OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



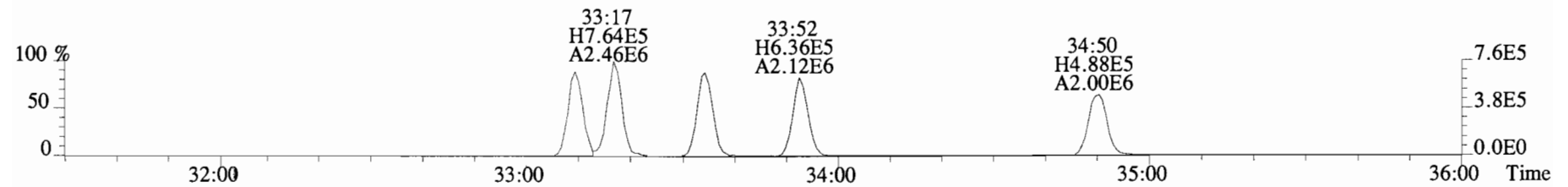
File:191101D1 #1-384 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata Analytical_Laboratory_VG7 Text:B9J0312-BLK1 Method Blank 10 Exp:OCDD_DB5
 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



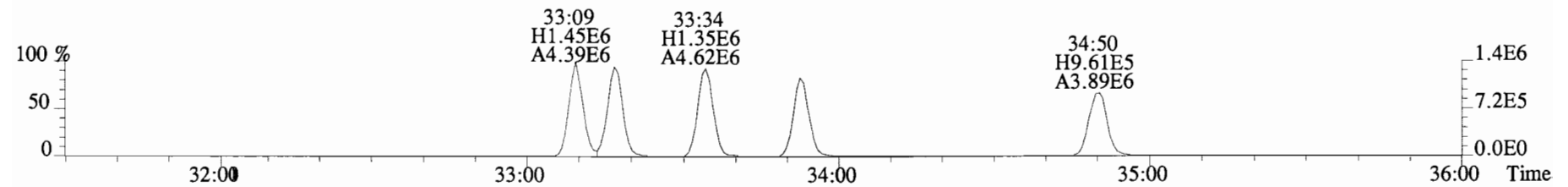
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



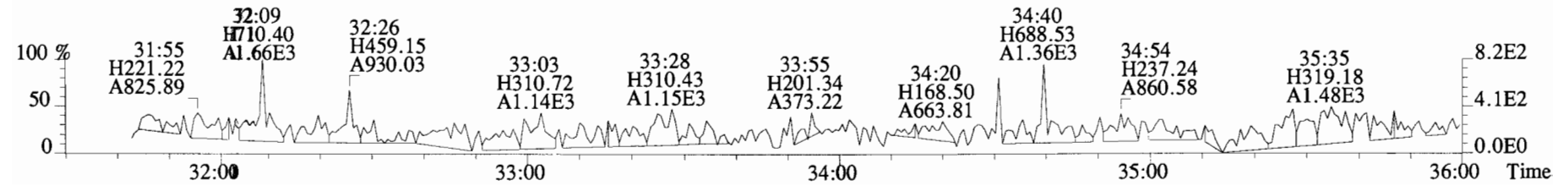
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



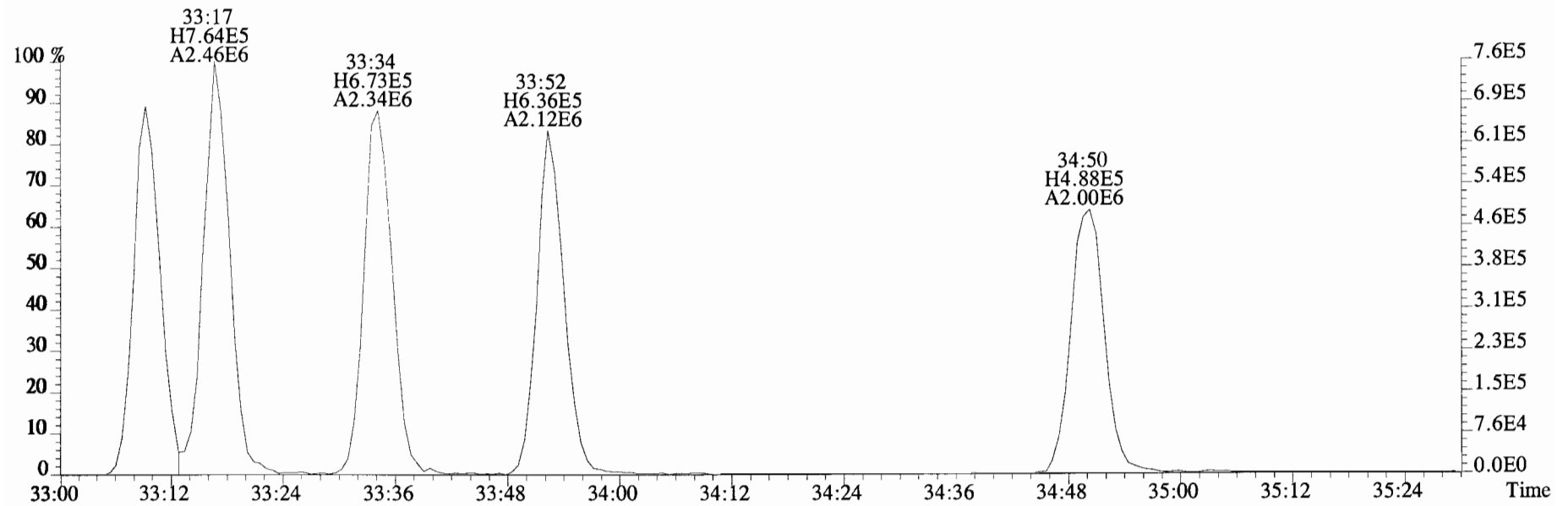
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



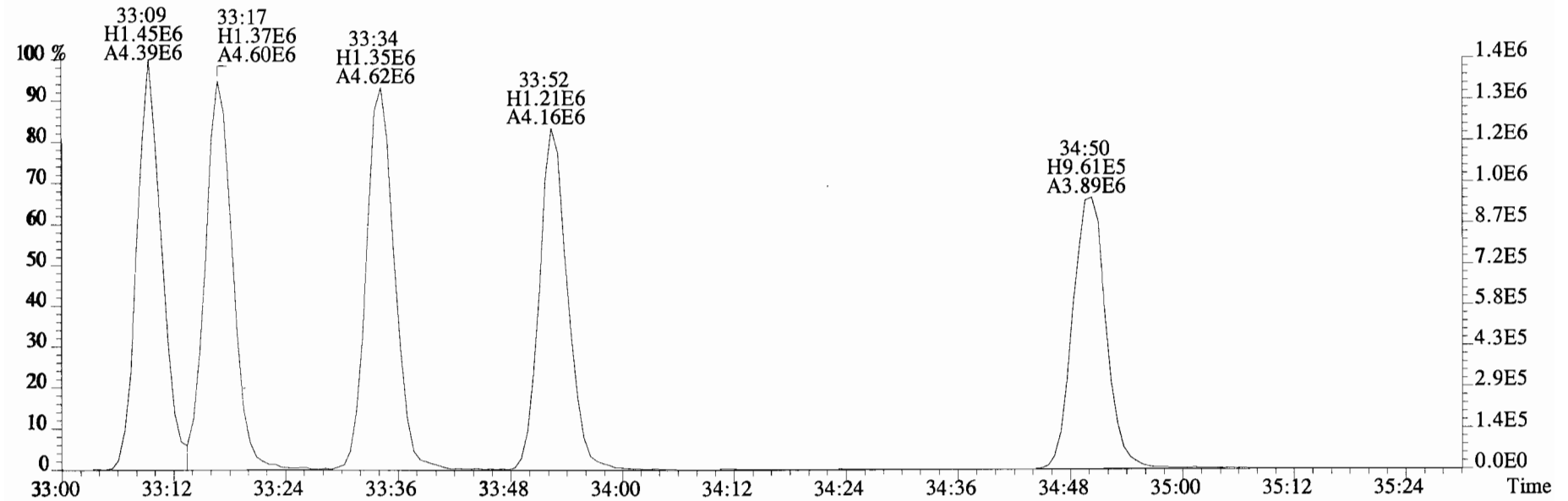
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



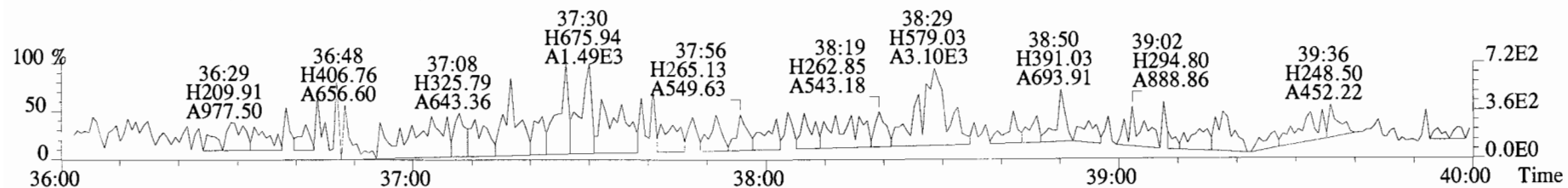
File:191101D1 #1-384 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory VG7 Text:B9J0312-BLK1 Method Blank 10 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



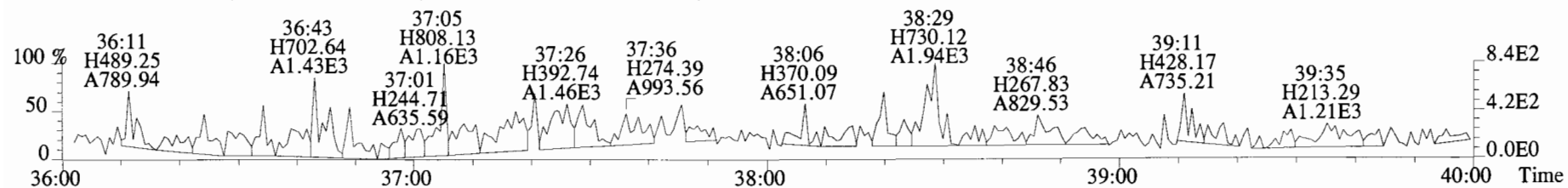
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



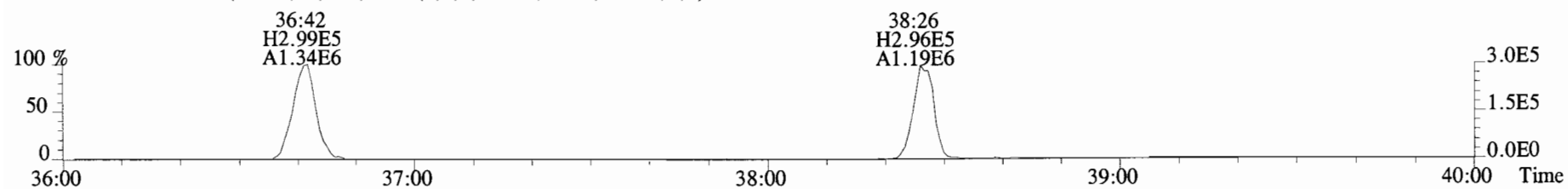
File:191101D1 #1-355 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-BLK1 Method Blank 10 Exp:OCDD_DB5
407.7818 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



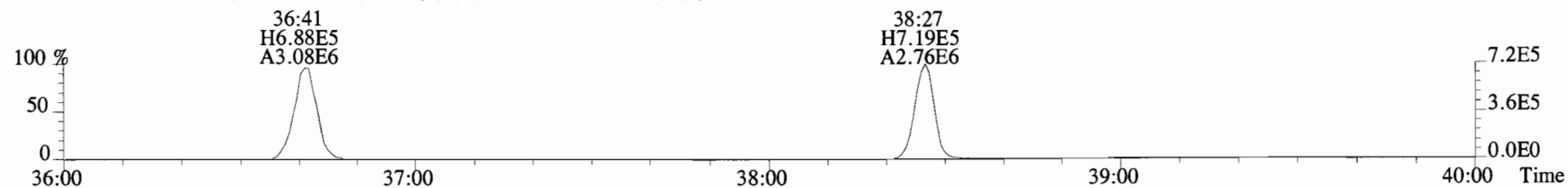
409.7788 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



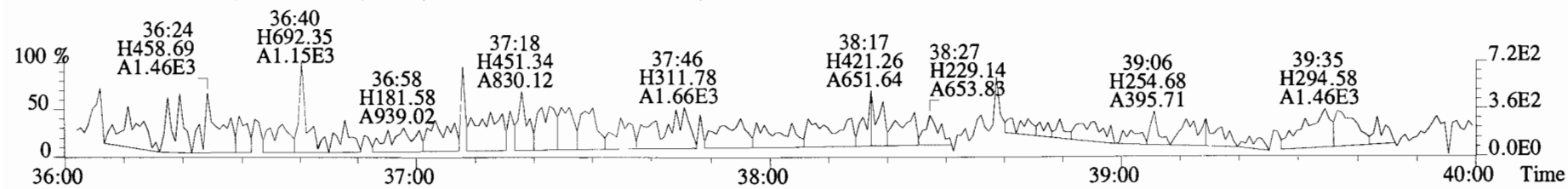
417.8253 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



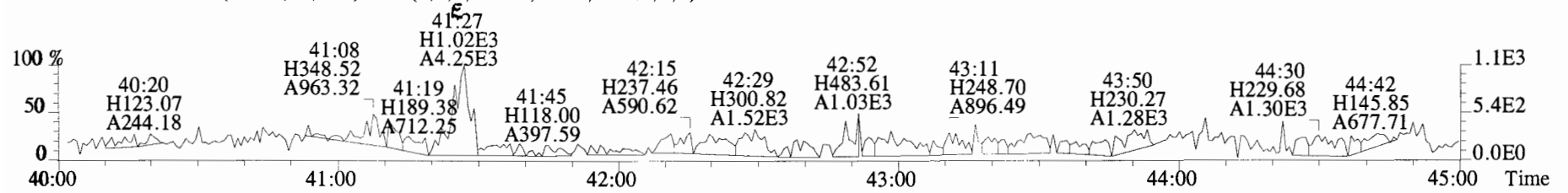
419.8220 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



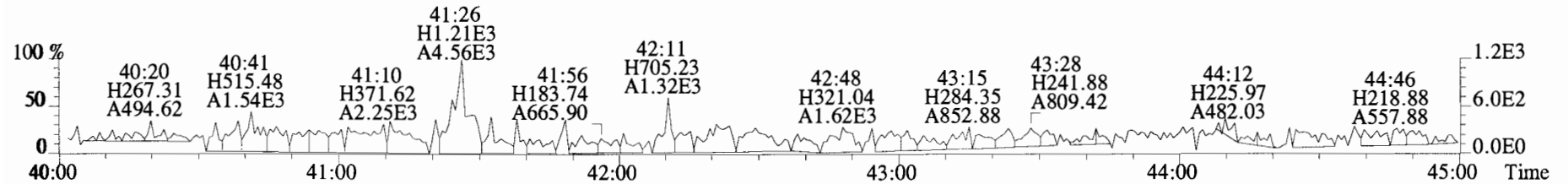
479.7165 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



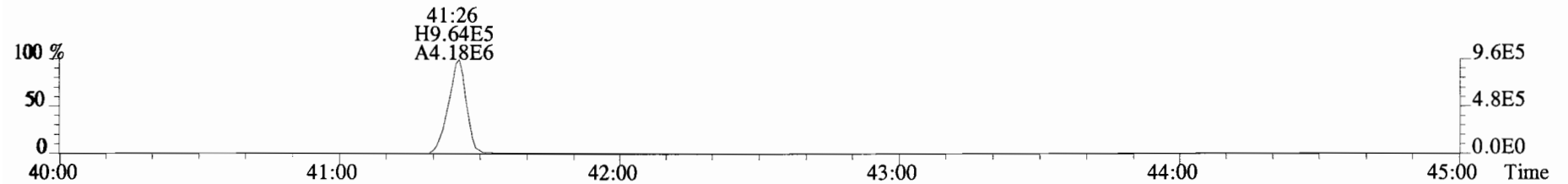
File:191101D1 #1-432 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-BLK1 Method Blank 10 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



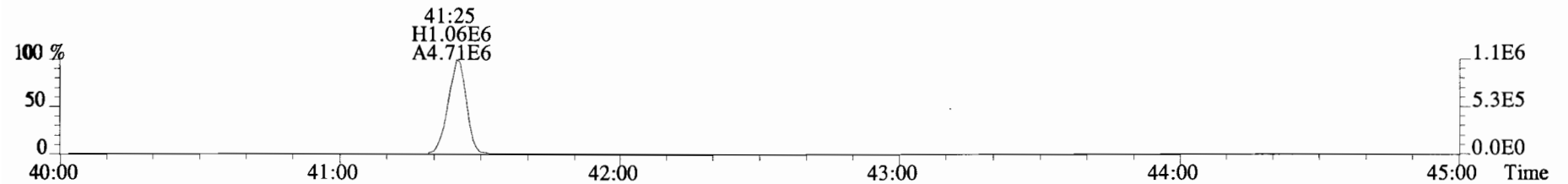
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



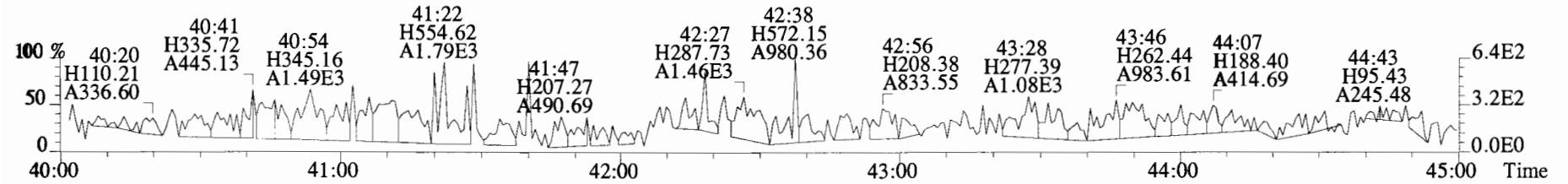
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



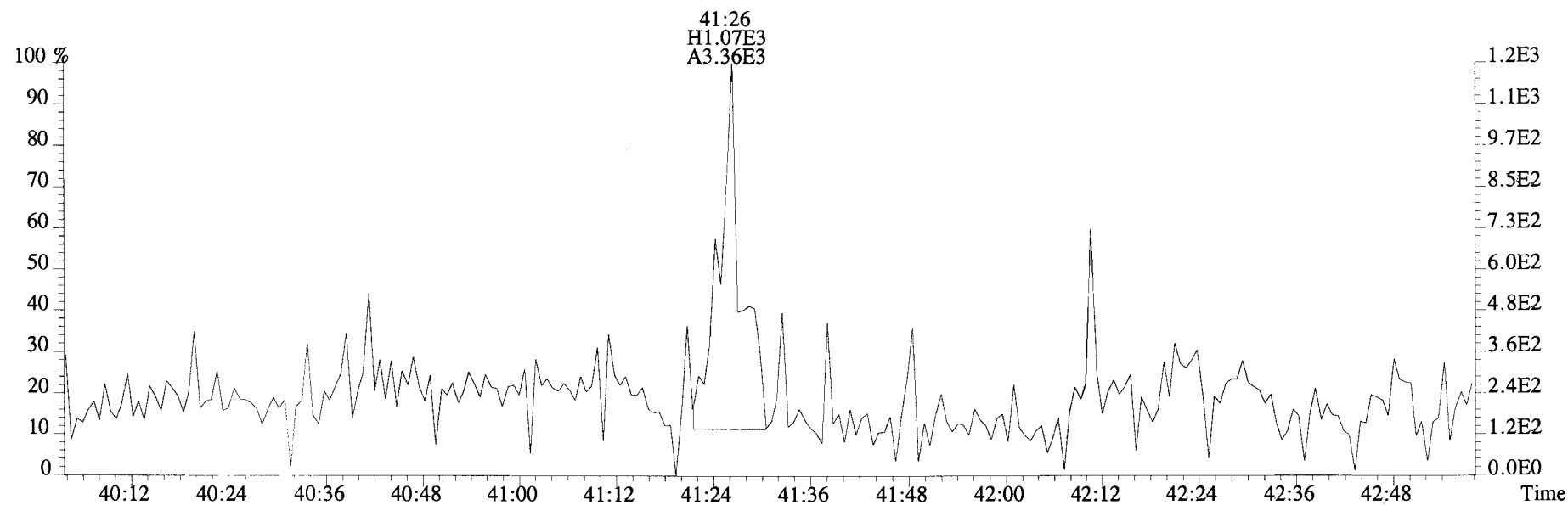
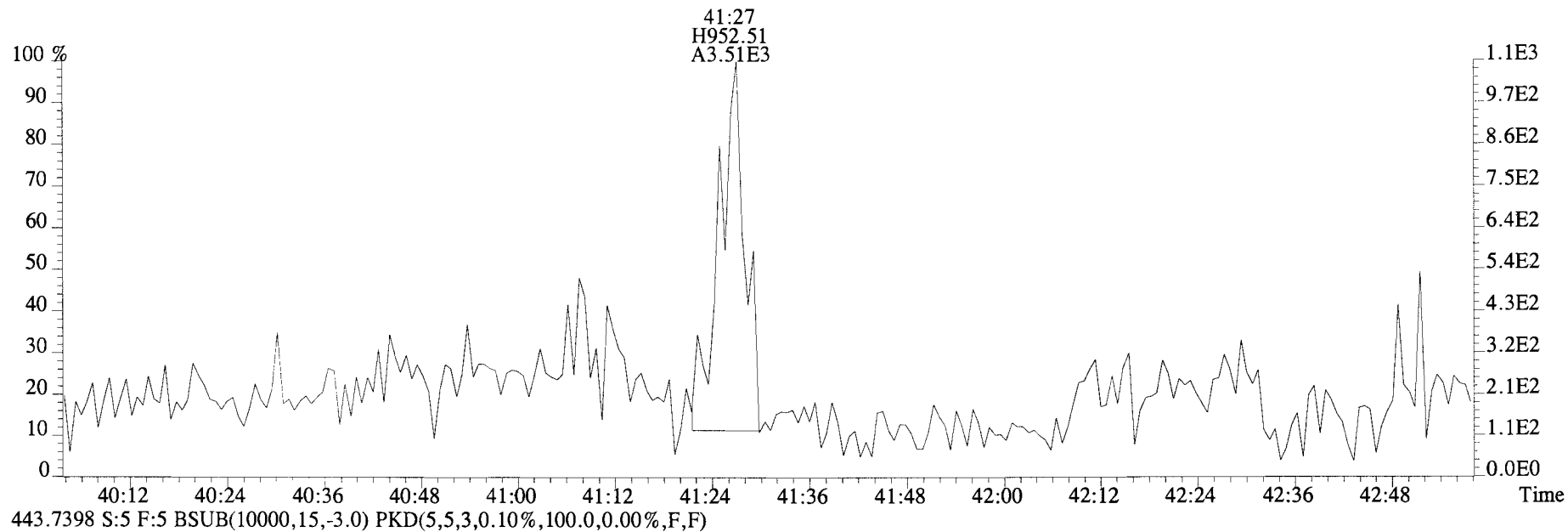
455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191101D1 #1-432 Acq: 1-NOV-2019 17:10:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-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)



FORM 8A

PCDD/PCDF ONGOING PRECISION AND RECOVERY (AF)

Lab Name: Vista Analytical Laboratory Extraction Batch: B9J0312-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 191101D1-3

Ext. Date: Shift: Day Analysis Date: 1-NOV-19 Time: 15:34:58

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	11.6	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	55.8	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	55.4	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	54.0	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	55.2	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	52.2	35.0 - 70.0
OCDD	100	107	78.0 - 144.0
2,3,7,8-TCDF	10	10.5	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	55.2	40.0 - 67.0
2,3,4,7,8-PeCDF	50	55.1	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	51.5	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	51.0	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	52.6	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	51.3	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	50.1	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	50.1	39.0 - 69.0
OCDF	100	102	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: DBDate: 11/4/19

FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B9J0219-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 191101D1-3

Ext. Date: Shift: Day Analysis Date: 1-NOV-19 Time: 15:34:58

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	92.6	20.0 - 175.0 25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	91.1	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	93.8	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	80.8	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	84.2	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	87.0	26.0 - 166.0
13C-OCDD	200	166	26.0 - 397.0
13C-2,3,7,8-TCDF	100	86.8	22.0 - 152.0 26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	93.8	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	89.4	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	99.7	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	88.8	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	86.9	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	92.9	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	81.5	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	90.6	20.0 - 186.0
13C-OCDF	200	172	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	39.6	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: DB

Date: 11/6/19

Client: J OPR
Lab ID: 1903512-BS1

Filename: 191101D1 S:3 Acq:1-NOV-19 15:34:58
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.00

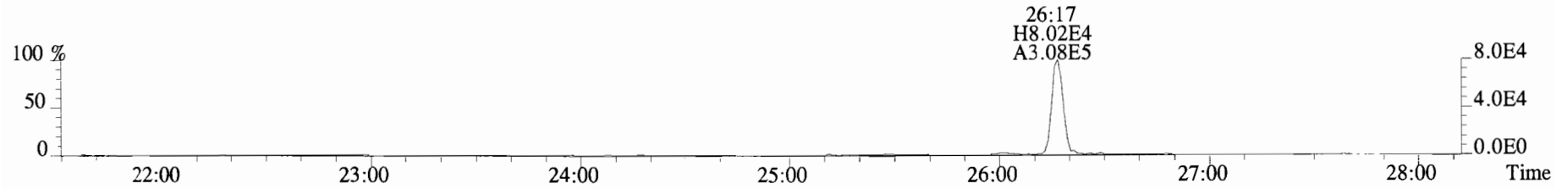
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EndCAL: NA

Page 1 of 2

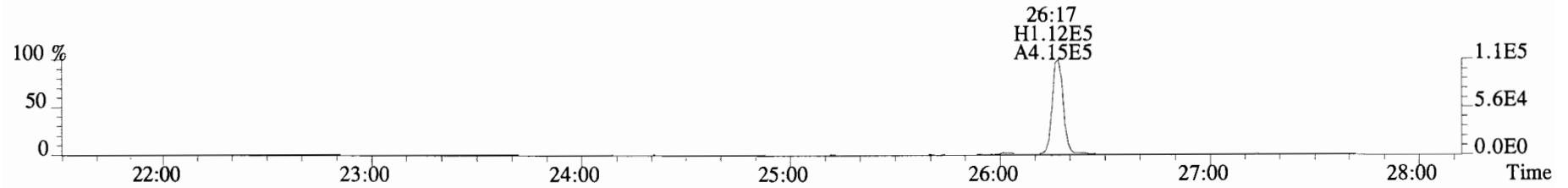
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	Int	Name	Conc	EMPC	Qual	noise	TD
2,3,7,8-TCDD	7.24e+05	0.74 y	0.91	26:17	11.596		* 2.5	*	*	Total Tetra-Dioxins	11.6	13.1	*	*	*
1,2,3,7,8-PeCDD	2.75e+06	0.62 y	0.90	30:46	55.848		* 2.5	*	*	Total Penta-Dioxins	56.0	56.1	*	*	*
1,2,3,4,7,8-HxCDD	2.60e+06	1.27 y	1.10	34:04	55.378		* 2.5	*	*	Total Hexa-Dioxins	165	166	*	*	*
1,2,3,6,7,8-HxCDD	2.48e+06	1.26 y	0.94	34:11	54.013		* 2.5	*	*	Total Hepta-Dioxins	52.9	54.5	*	*	*
1,2,3,7,8,9-HxCDD	2.55e+06	1.24 y	0.96	34:29	55.220		* 2.5	*	*	Total Tetra-Furans	11.0	12.6	*	*	*
1,2,3,4,6,7,8-HpCDD	2.05e+06	1.01 y	0.98	37:55	52.159		* 2.5	*	*	Total Penta-Furans	110.41	112.47	*	*	*
OCDD	3.51e+06	0.90 y	0.96	41:13	107.45		* 2.5	*	*	Total Hexa-Furans	207	207	*	*	*
										Total Hepta-Furans	101	102	*	*	*
2,3,7,8-TCDF	9.91e+05	0.79 y	0.95	25:30	10.453		* 2.5	*	*						
1,2,3,7,8-PeCDF	4.72e+06	1.57 y	0.96	29:35	55.234		* 2.5	*	*						
2,3,4,7,8-PeCDF	4.71e+06	1.59 y	1.01	30:29	55.143		* 2.5	*	*						
1,2,3,4,7,8-HxCDF	3.55e+06	1.23 y	1.18	33:11	51.522		* 2.5	*	*						
1,2,3,6,7,8-HxCDF	3.54e+06	1.22 y	1.07	33:18	50.998		* 2.5	*	*						
2,3,4,6,7,8-HxCDF	3.43e+06	1.22 y	1.11	33:54	52.564		* 2.5	*	*						
1,2,3,7,8,9-HxCDF	2.96e+06	1.27 y	1.06	34:52	51.290		* 2.5	*	*						
1,2,3,4,6,7,8-HpCDF	2.47e+06	1.03 y	1.13	36:43	50.147		* 2.5	*	*						
1,2,3,4,7,8,9-HpCDF	2.39e+06	1.04 y	1.28	38:28	50.095		* 2.5	*	*						
OCDF	4.05e+06	0.89 y	0.95	41:26	101.77		* 2.5	*	*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	6.89e+06	0.78 y	1.10	26:16	92.638					92.6					
IS 13C-1,2,3,7,8-PeCDD	5.46e+06	0.63 y	0.88	30:45	91.139					91.1					
IS 13C-1,2,3,4,7,8-HxCDD	4.26e+06	1.30 y	0.64	34:03	93.769					93.8					
IS 13C-1,2,3,6,7,8-HxCDD	4.89e+06	1.26 y	0.86	34:10	80.797					80.8					
IS 13C-1,2,3,7,8,9-HxCDD	4.80e+06	1.26 y	0.81	34:28	84.208					84.2					
IS 13C-1,2,3,4,6,7,8-HpCDD	4.02e+06	1.06 y	0.65	37:54	86.981					87.0					
IS 13C-OCDD	6.81e+06	0.91 y	0.58	41:12	166.17					83.1					
IS 13C-2,3,7,8-TCDF	9.98e+06	0.81 y	1.03	25:29	86.813					86.8					
IS 13C-1,2,3,7,8-PeCDF	8.90e+06	1.59 y	0.85	29:34	93.820					93.8					
IS 13C-2,3,4,7,8-PeCDF	8.41e+06	1.59 y	0.85	30:28	89.408					89.4					
IS 13C-1,2,3,4,7,8-HxCDF	5.86e+06	0.51 y	0.83	33:10	99.682					99.7					
IS 13C-1,2,3,6,7,8-HxCDF	6.50e+06	0.51 y	1.03	33:18	88.831					88.8					
IS 13C-2,3,4,6,7,8-HxCDF	5.86e+06	0.51 y	0.95	33:53	86.931					86.9					
IS 13C-1,2,3,7,8,9-HxCDF	5.44e+06	0.52 y	0.83	34:51	92.945					92.9					
IS 13C-1,2,3,4,6,7,8-HpCDF	4.37e+06	0.44 y	0.76	36:42	81.489					81.5					
IS 13C-1,2,3,4,7,8,9-HpCDF	3.72e+06	0.44 y	0.58	38:27	90.592					90.6					
IS 13C-OCDF	8.40e+06	0.90 y	0.69	41:26	172.40					86.2					
C/Up 37Cl-2,3,7,8-TCDD	3.22e+06		1.20	26:17	39.606					99.0					
RS/RT 13C-1,2,3,4-TCDD	6.79e+06	0.80 y	1.00	25:42	100.00										
RS 13C-1,2,3,4-TCDF	1.11e+07	0.80 y	1.00	24:17	100.00										
RS/RT 13C-1,2,3,4,6,9-HxCDF	7.07e+06	0.51 y	1.00	33:35	100.00										

Integrations
by DB
Analyst: DB
Date: 11/6/19
Reviewed
by CT
Analyst: CT
Date: 11/06/19

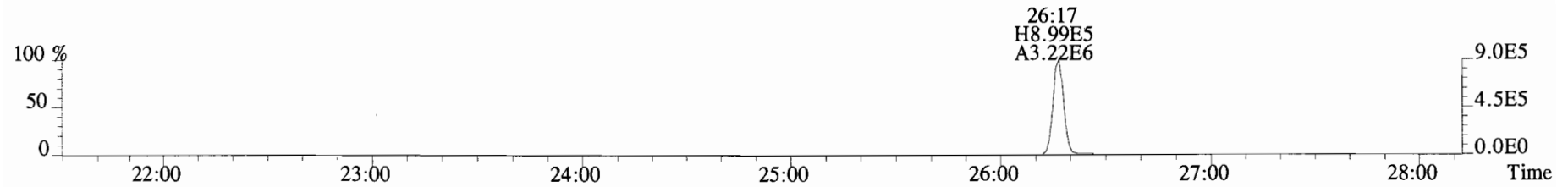
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Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



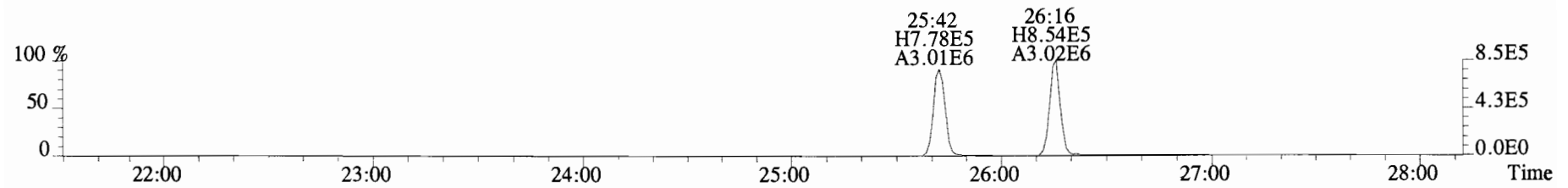
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



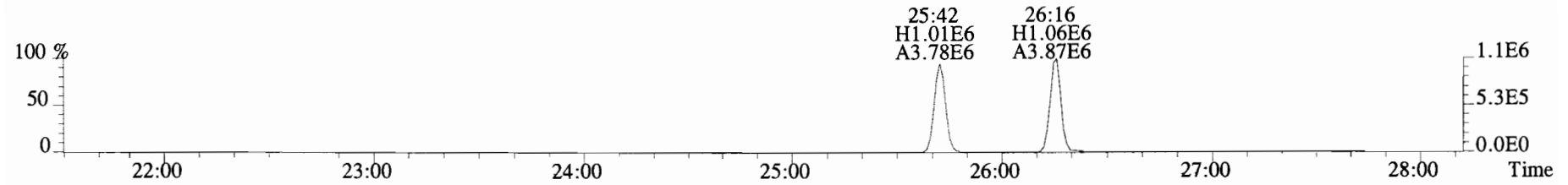
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



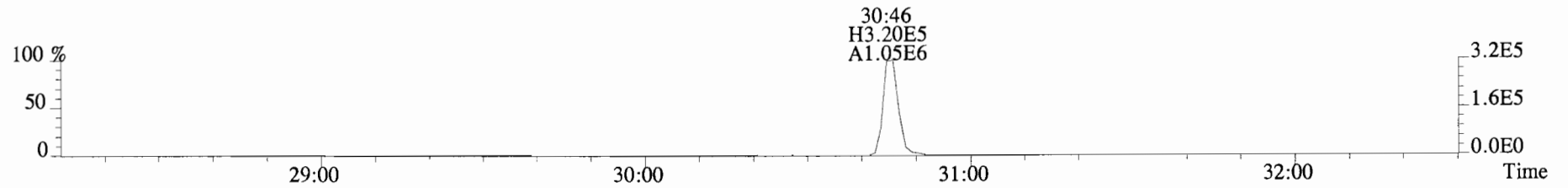
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



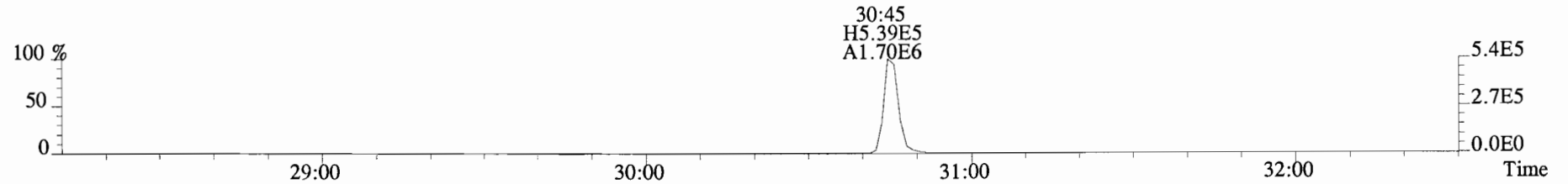
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



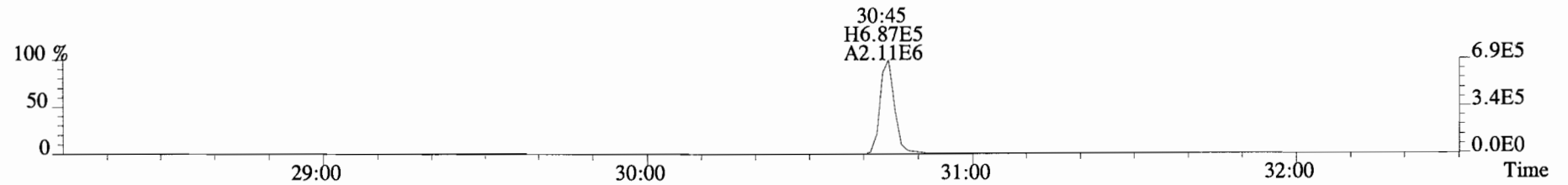
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Sample#3 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



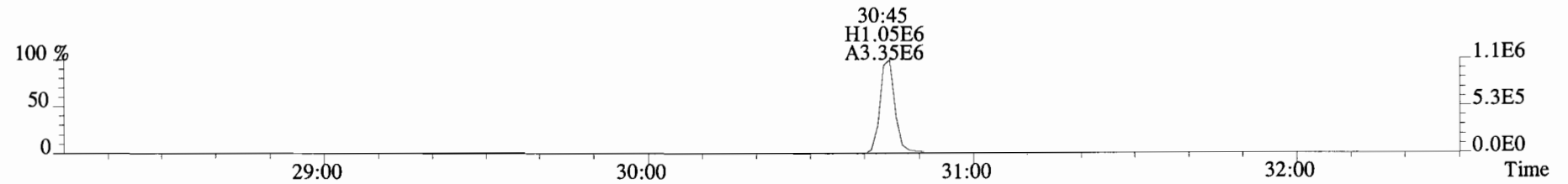
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



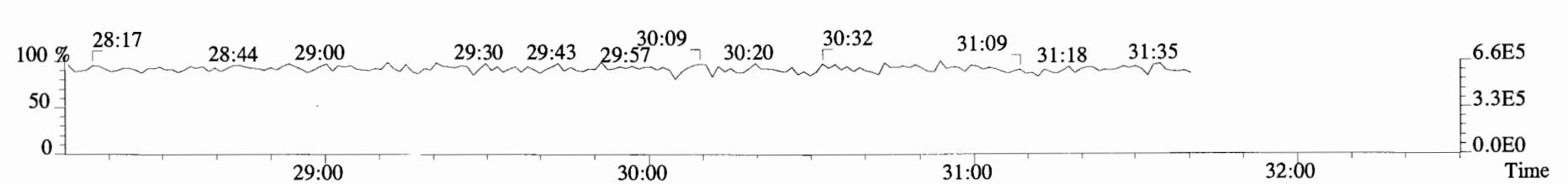
365.8978 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



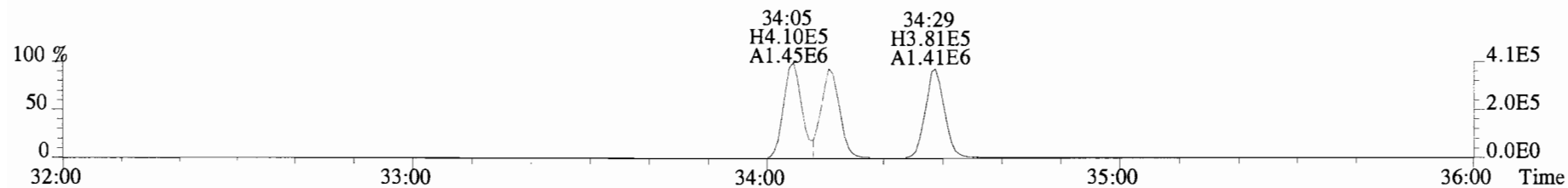
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



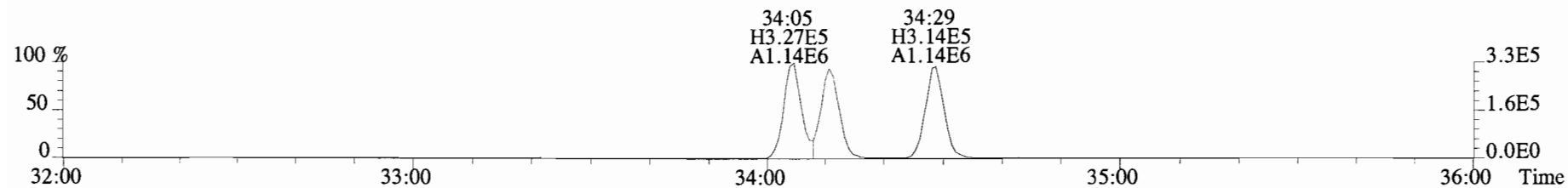
366.9792 S:3 F:2



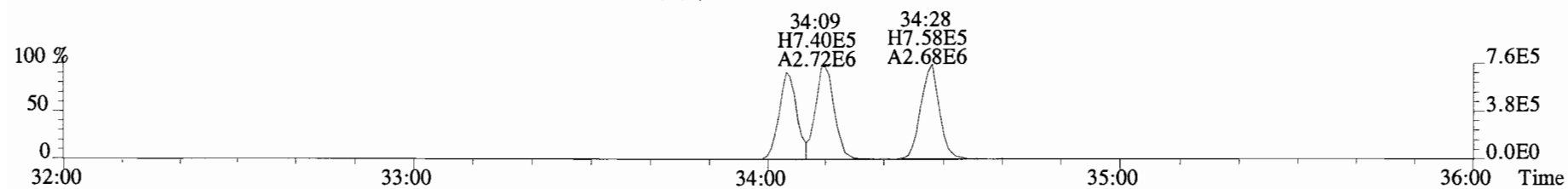
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Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



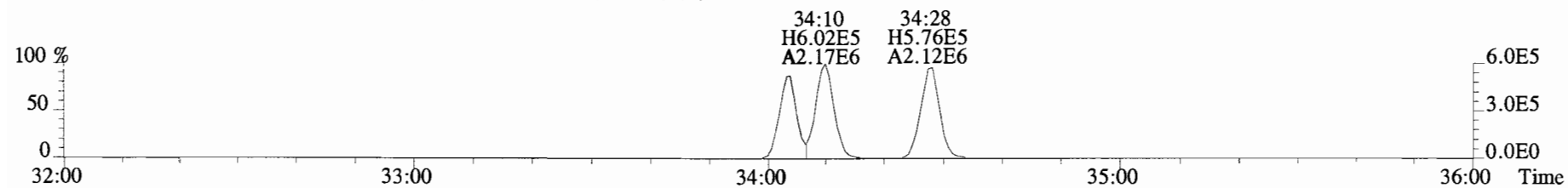
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



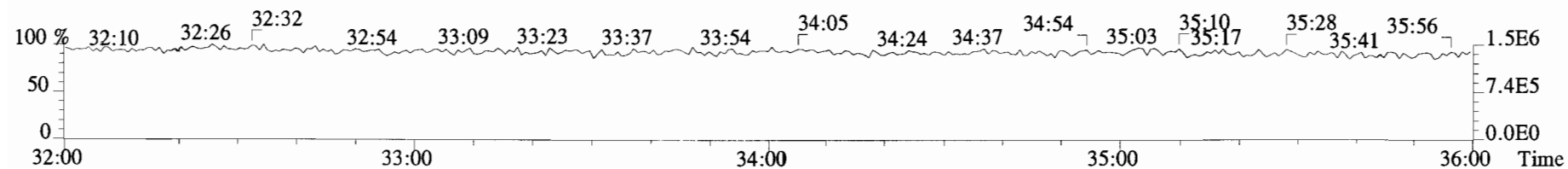
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



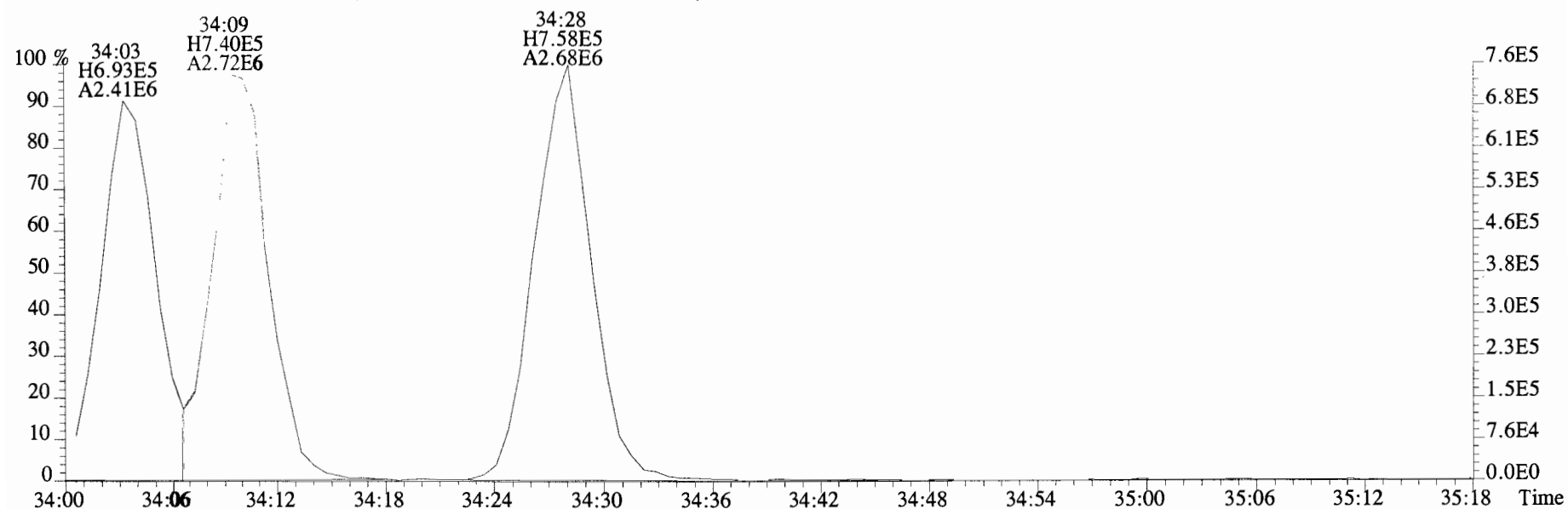
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



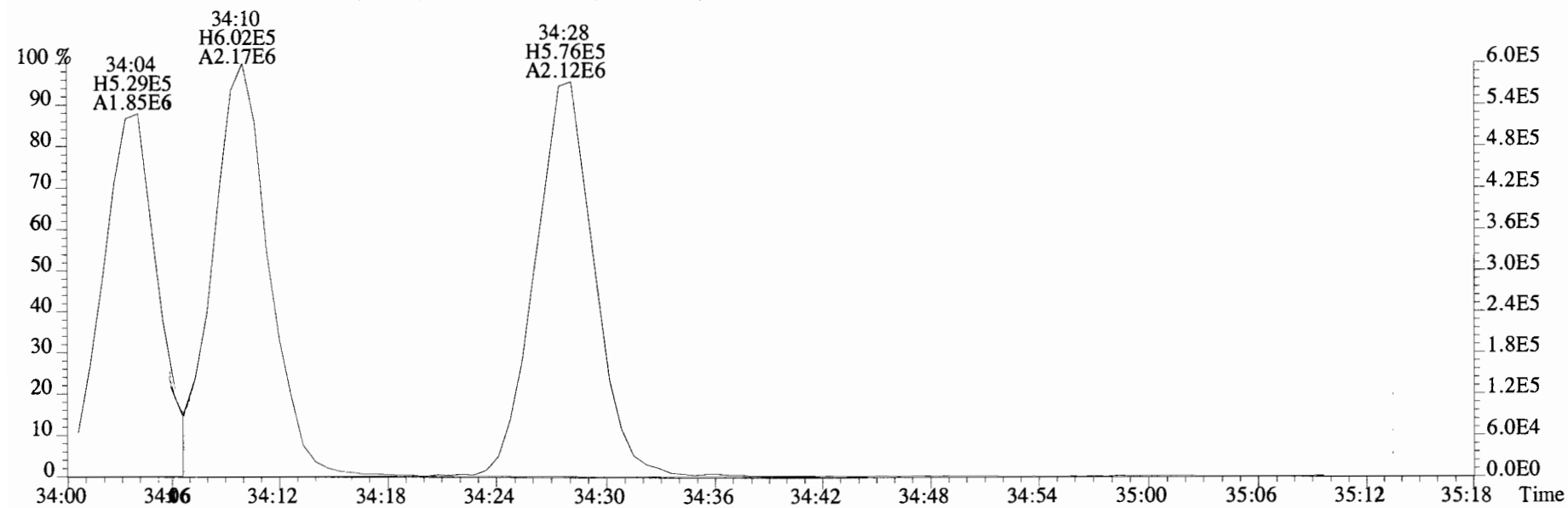
392.9760 S:3 F:3



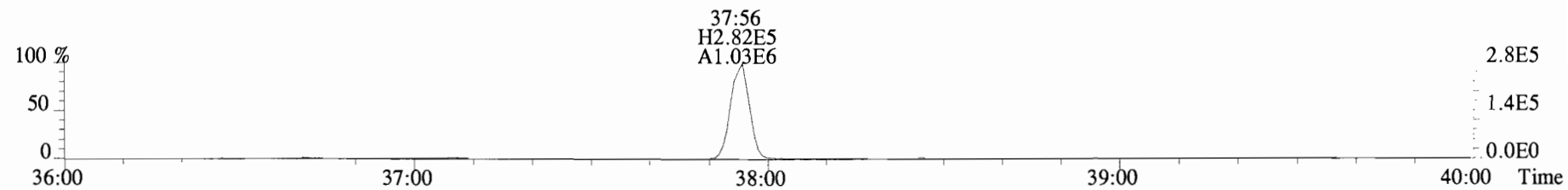
File:191101D1 #1-385 Acq: 1-NOV-2019 15:34:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



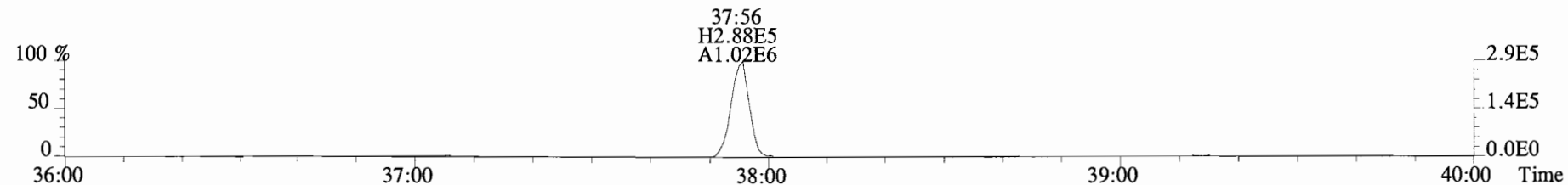
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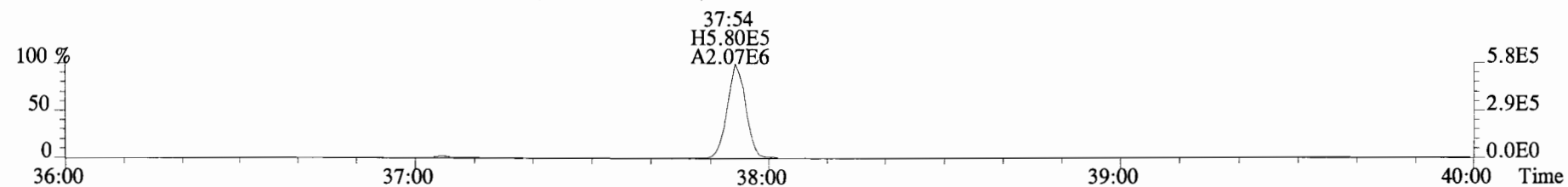
File:191101D1 #1-355 Acq: 1-NOV-2019 15:34:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



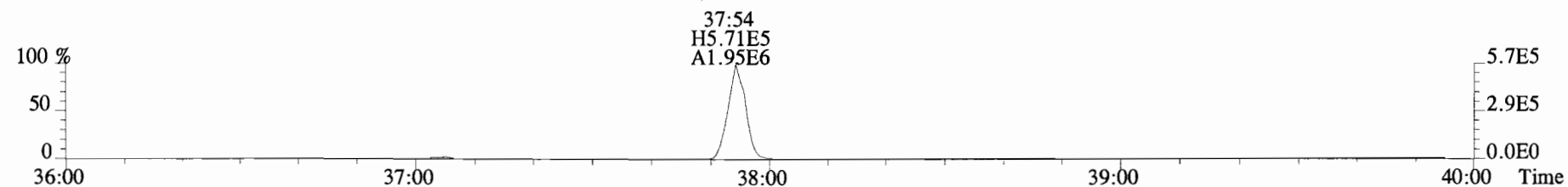
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



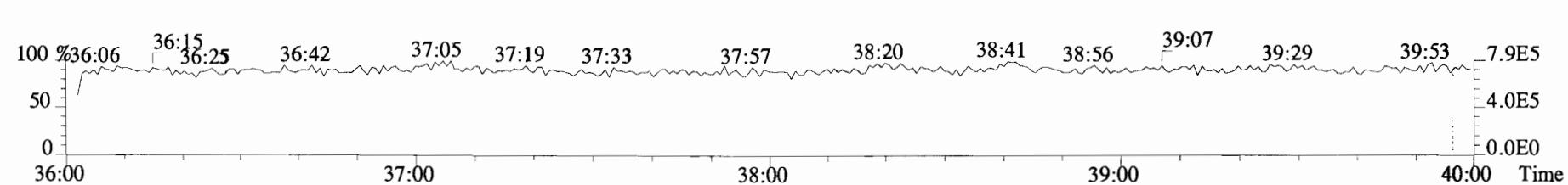
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



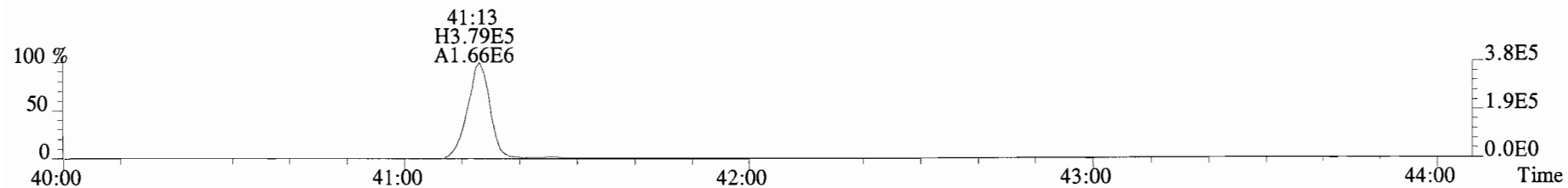
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



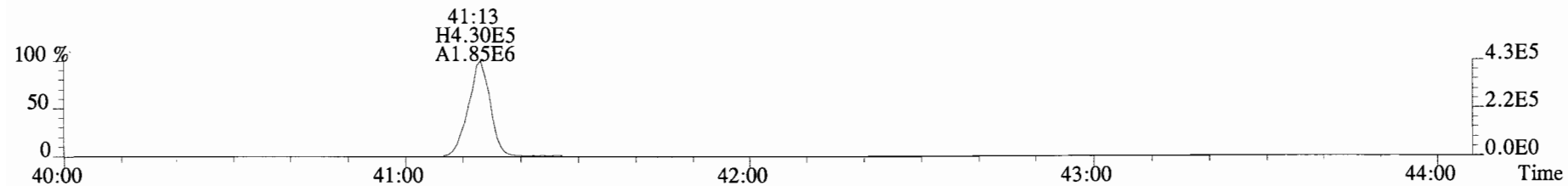
454.9728 S:3 F:4



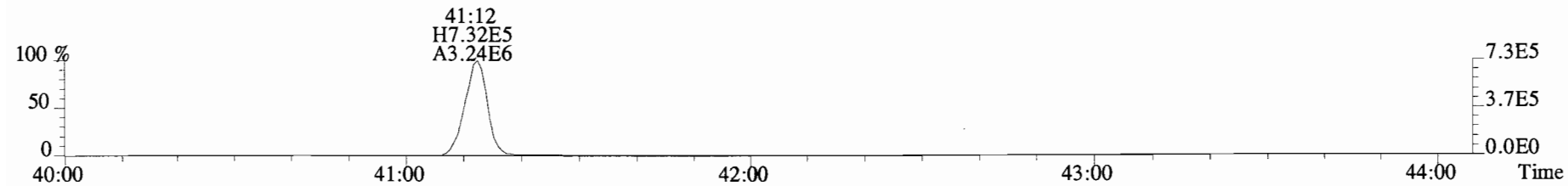
File:191101D1 #1-432 Acq: 1-NOV-2019 15:34:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



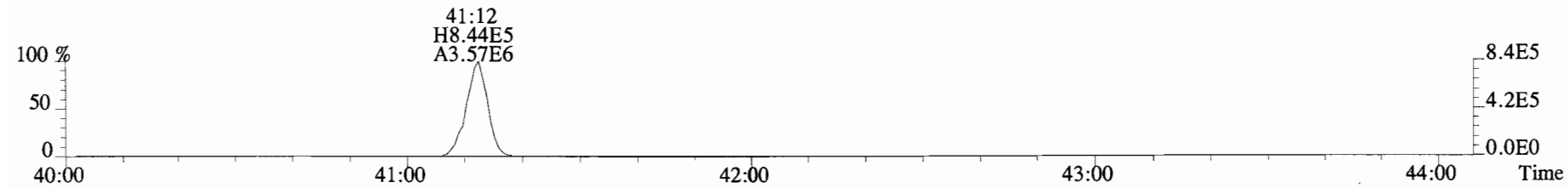
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



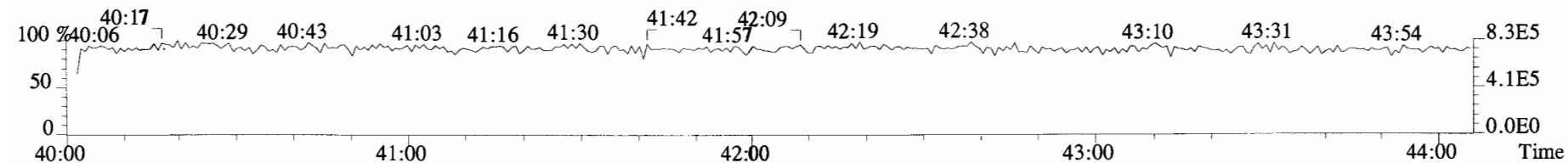
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



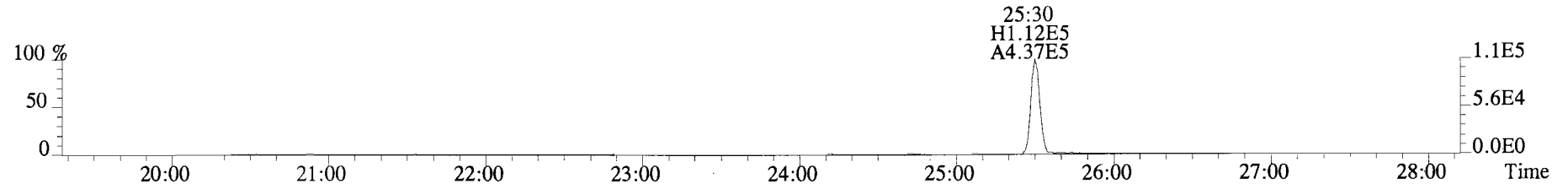
471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



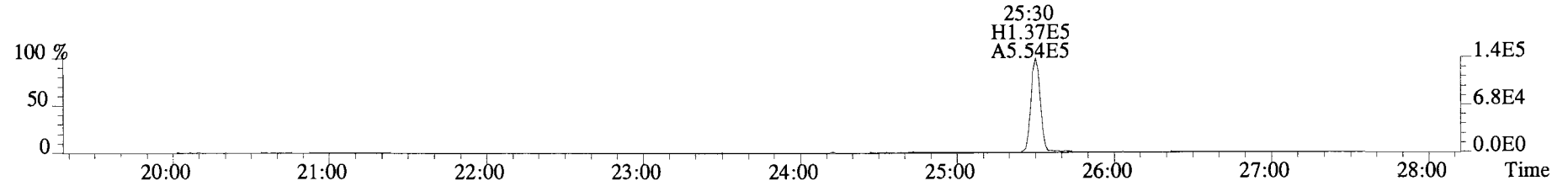
454.9728 S:3 F:5



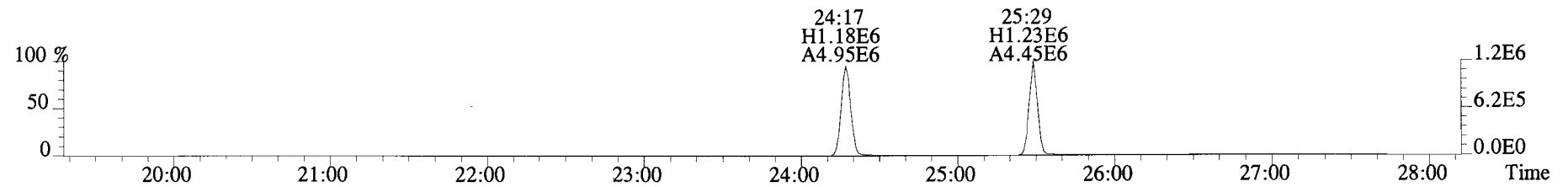
File:191101D1 #1-493 Acq: 1-NOV-2019 15:34:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



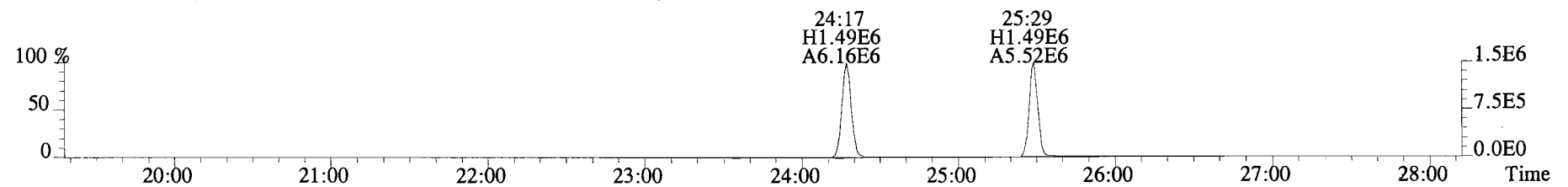
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



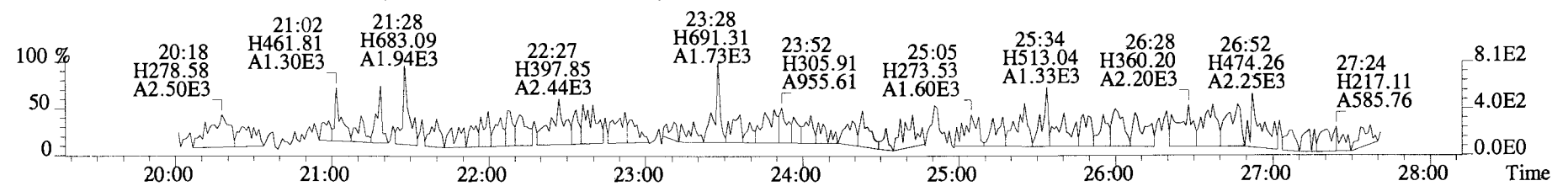
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



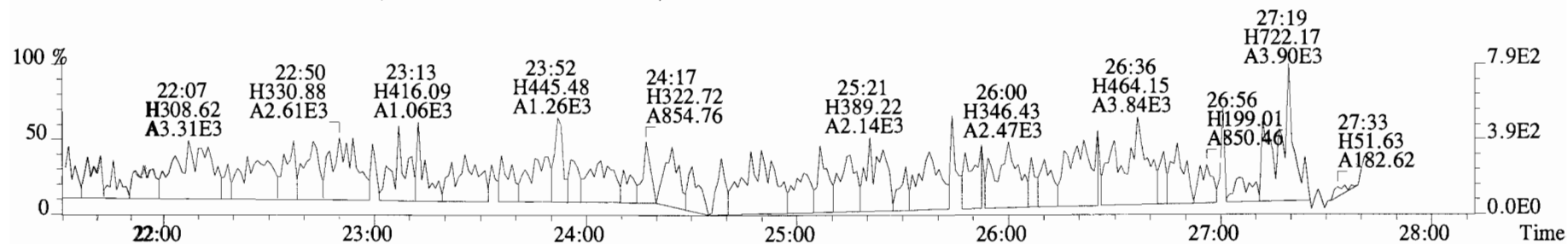
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



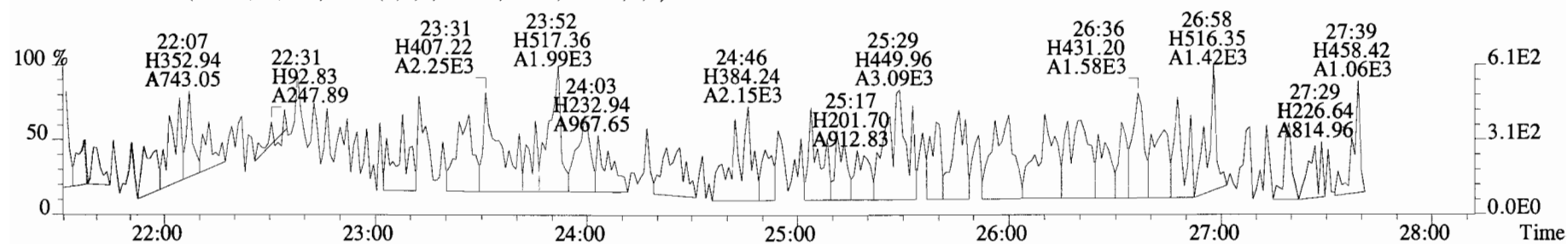
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



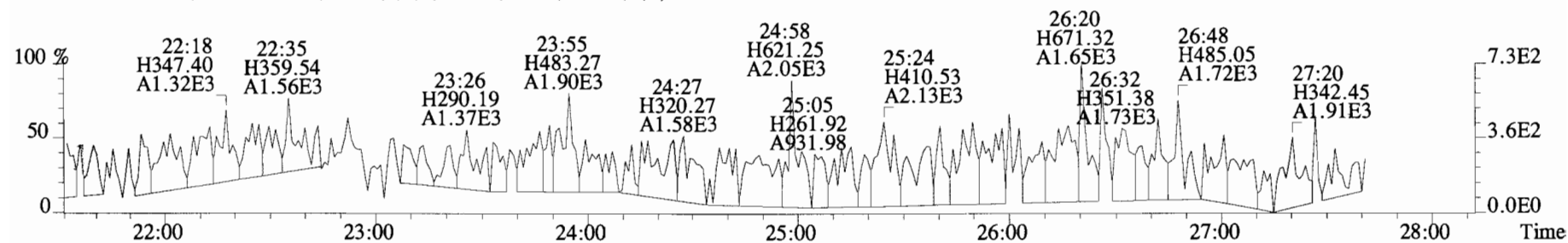
File:191101D1 #1-493 Acq: 1-NOV-2019 15:34:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
 339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



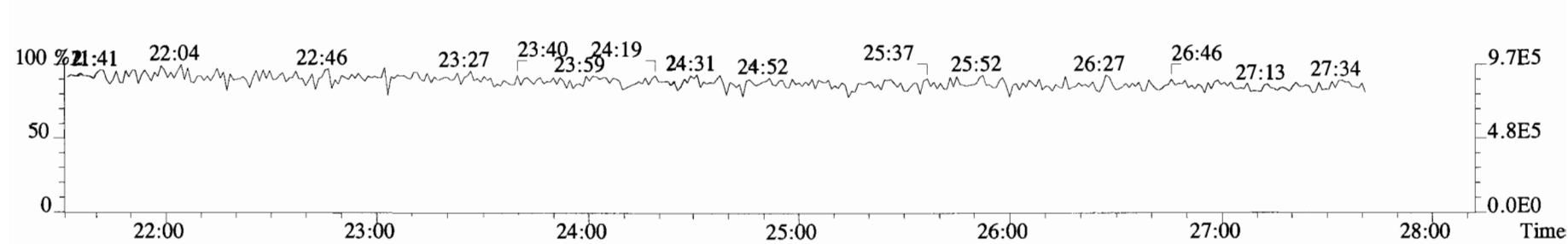
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



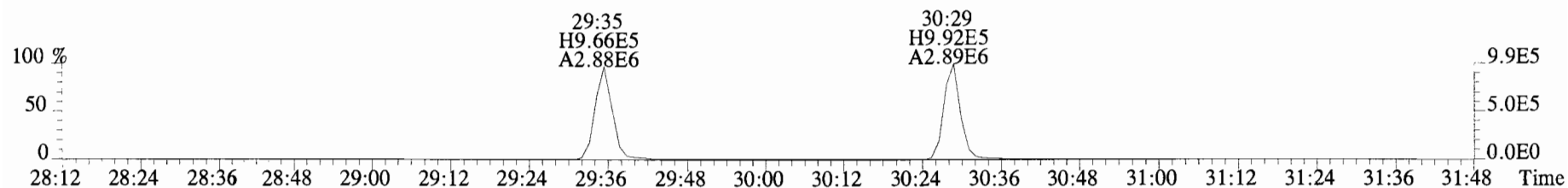
409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



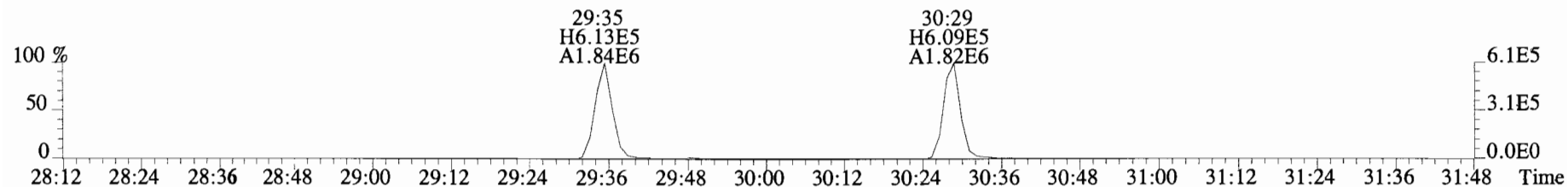
316.9824 S:3



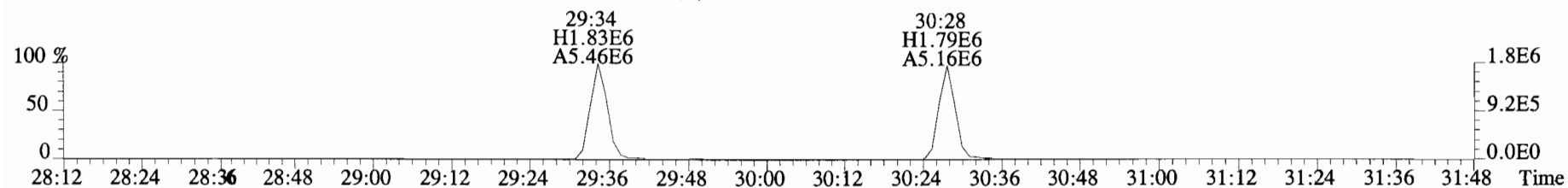
File:191101D1 #1-210 Acq: 1-NOV-2019 15:34:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Viata Analytical_Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
 339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



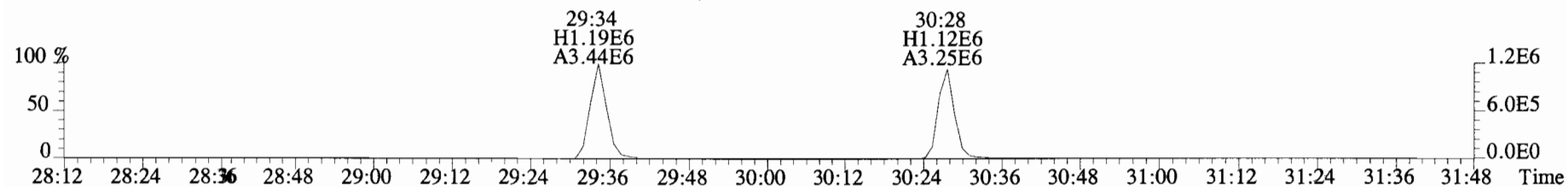
341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



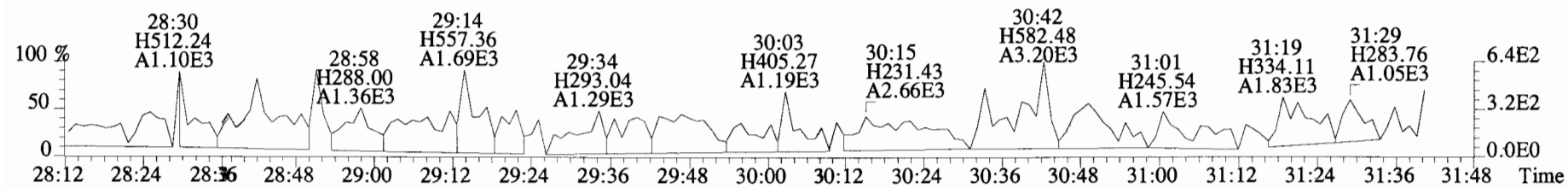
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



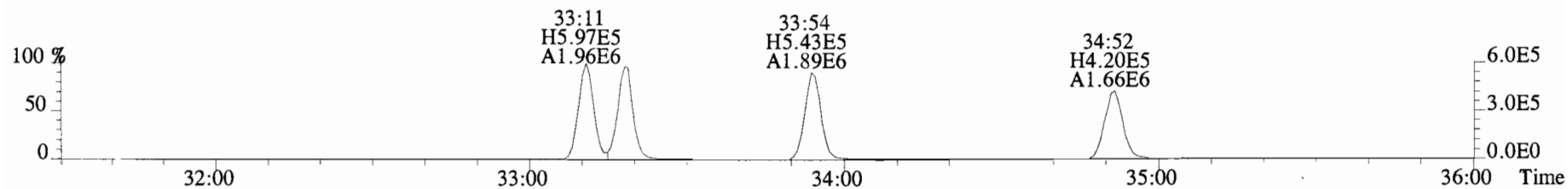
353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



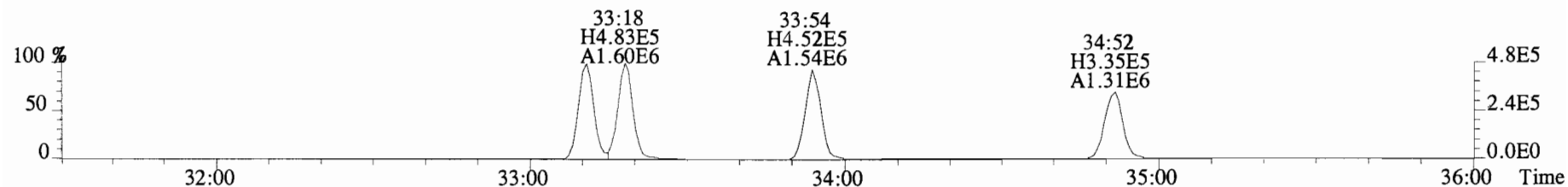
409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



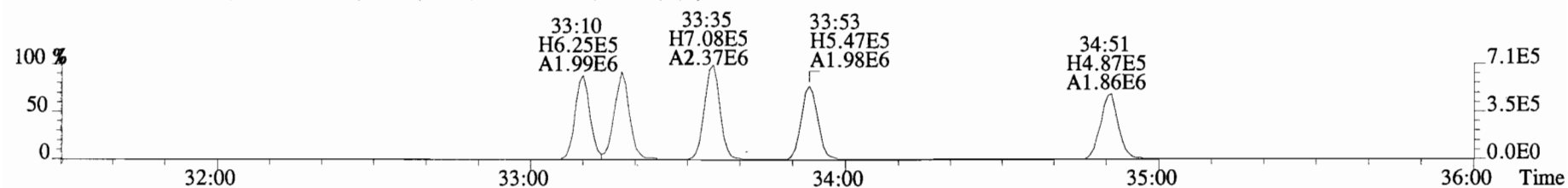
File:191101D1 #1-385 Acq: 1-NOV-2019 15:34:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



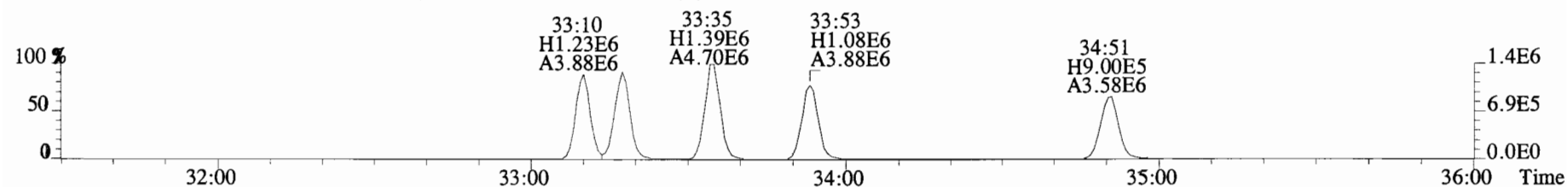
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



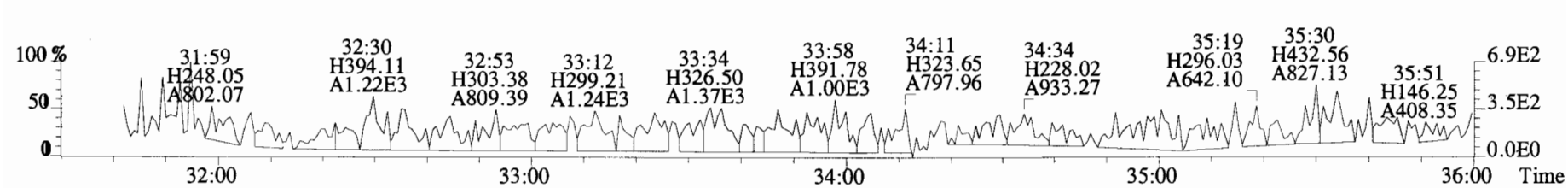
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



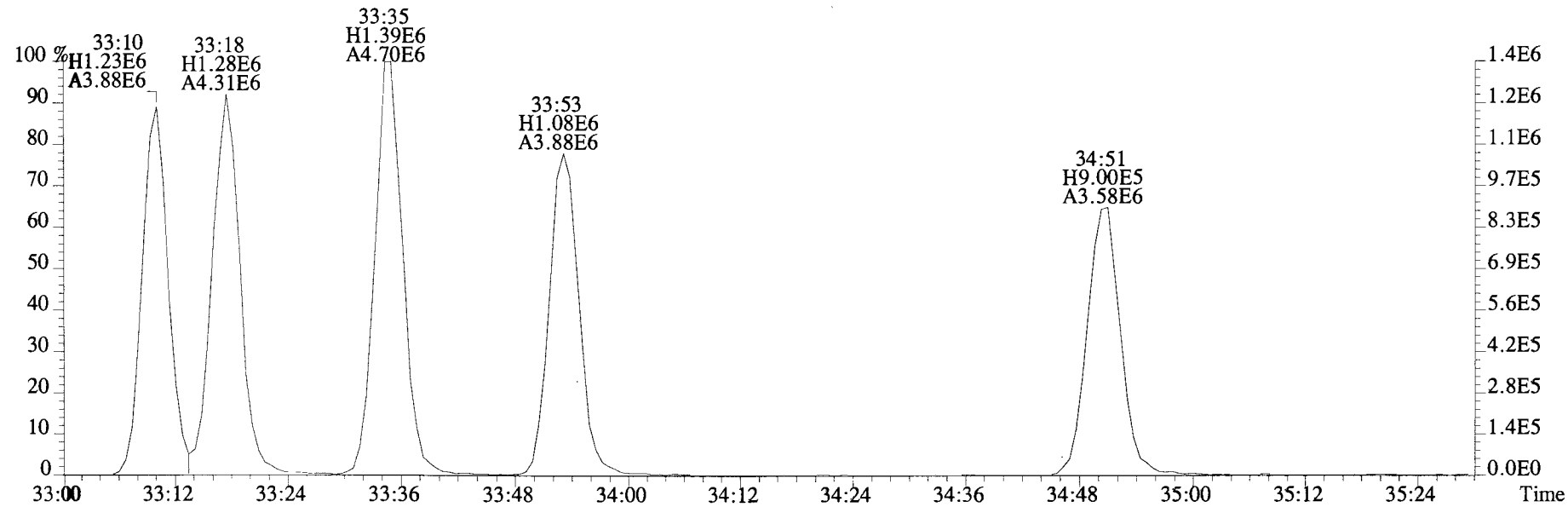
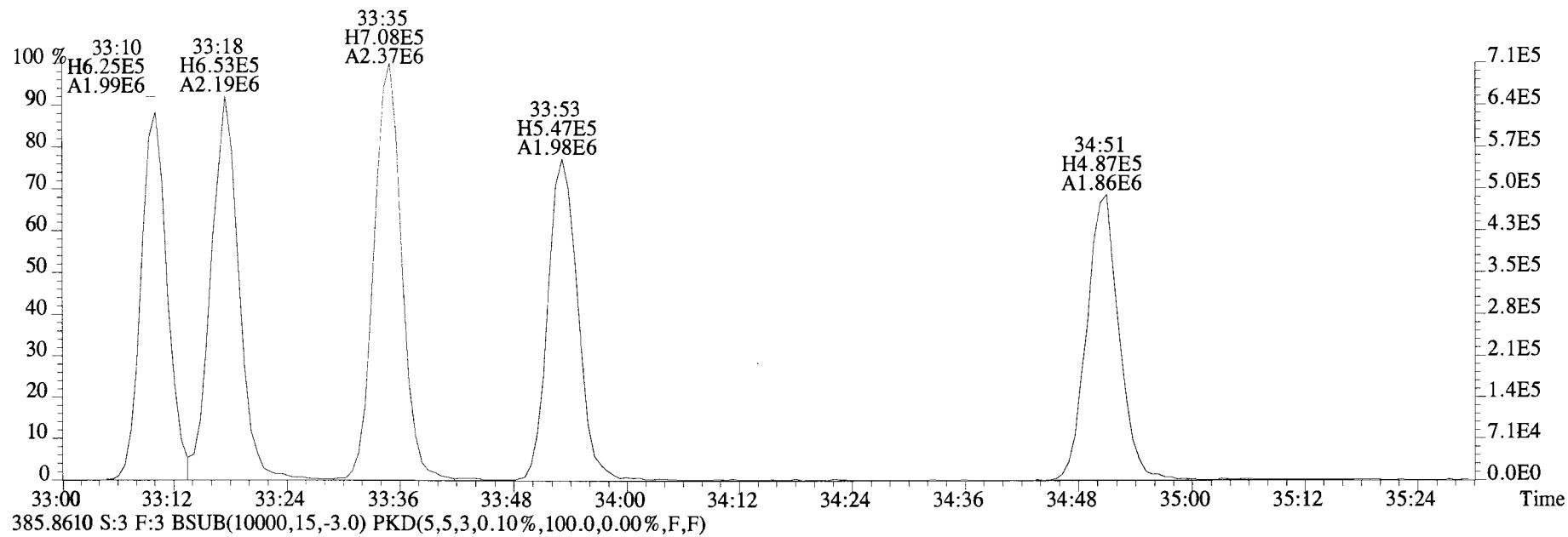
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



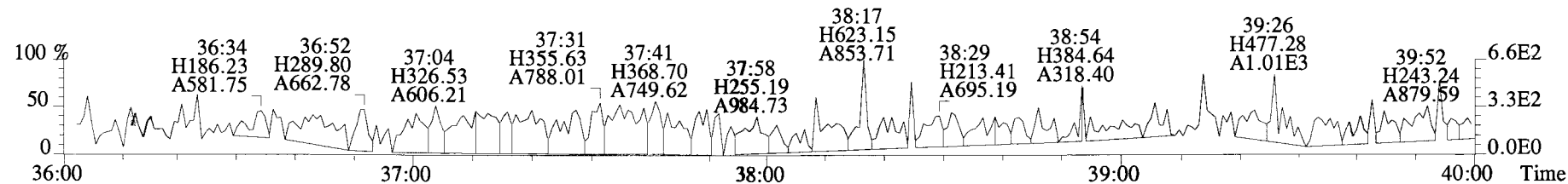
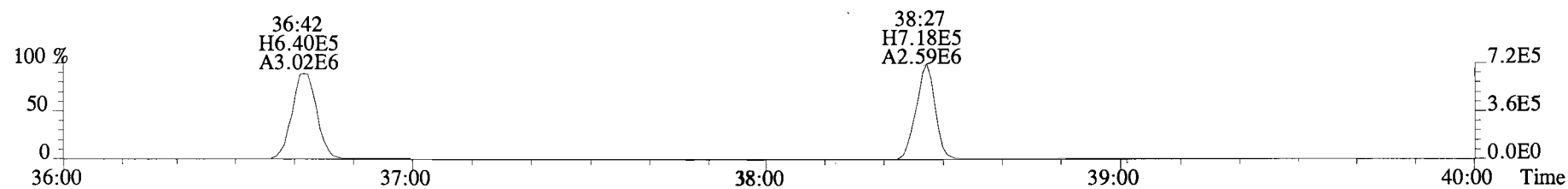
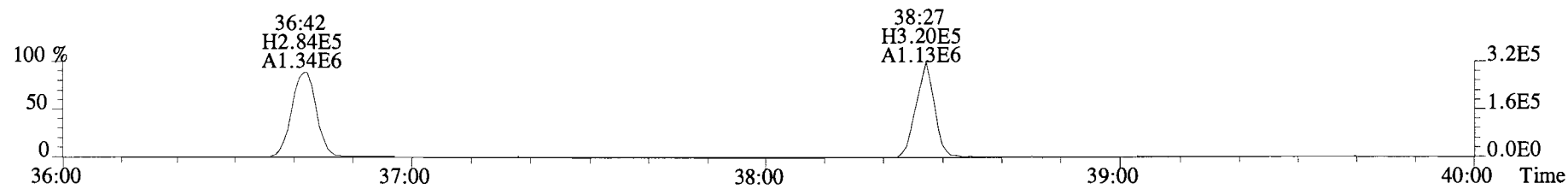
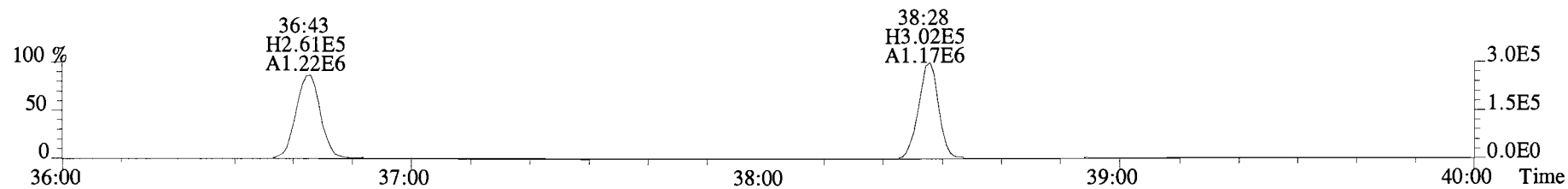
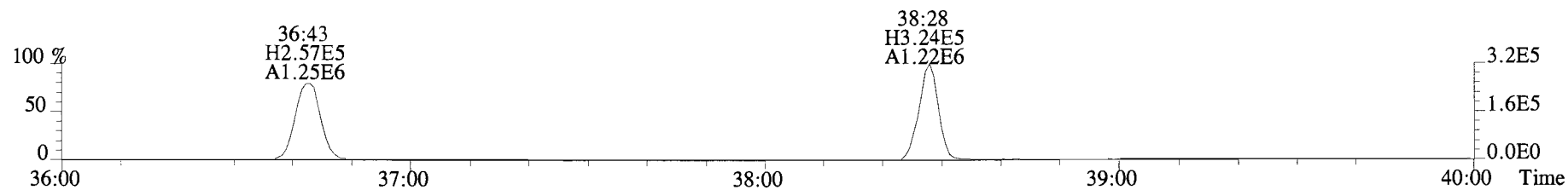
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



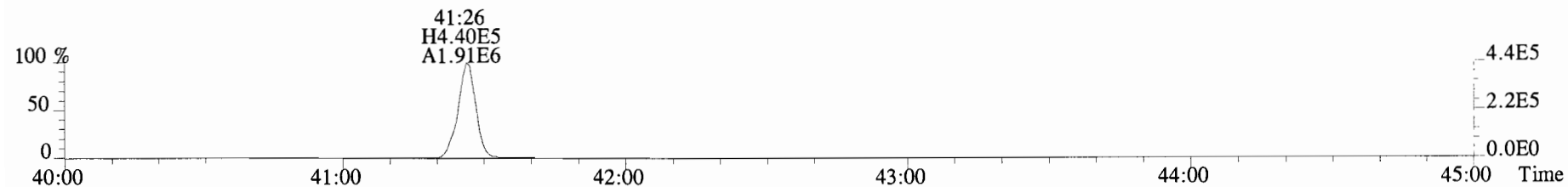
File:191101D1 #1-385 Acq: 1-NOV-2019 15:34:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



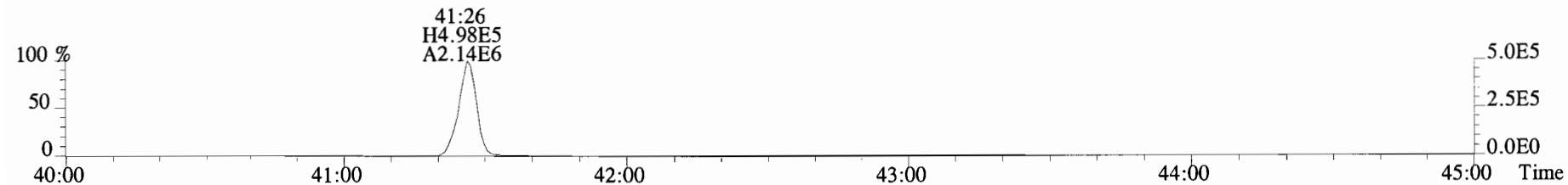
File:191101D1 #1-355 Acq: 1-NOV-2019 15:34:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



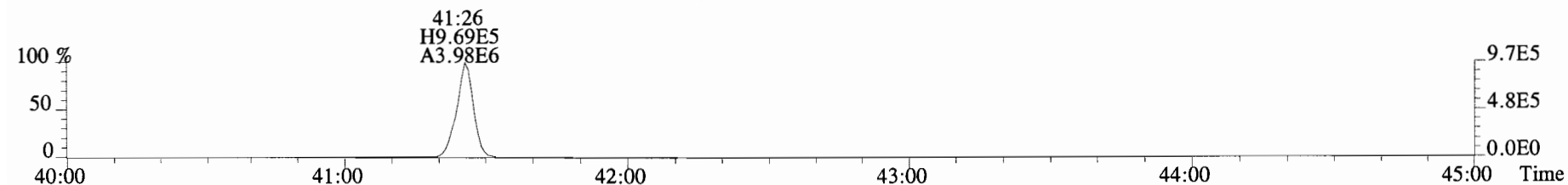
File:191101D1 #1-432 Acq: 1-NOV-2019 15:34:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-BS1 OPR 10 Exp:OCDD_DB5
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



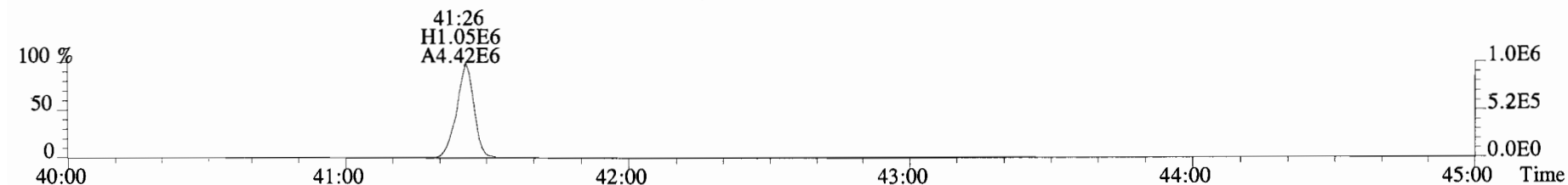
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



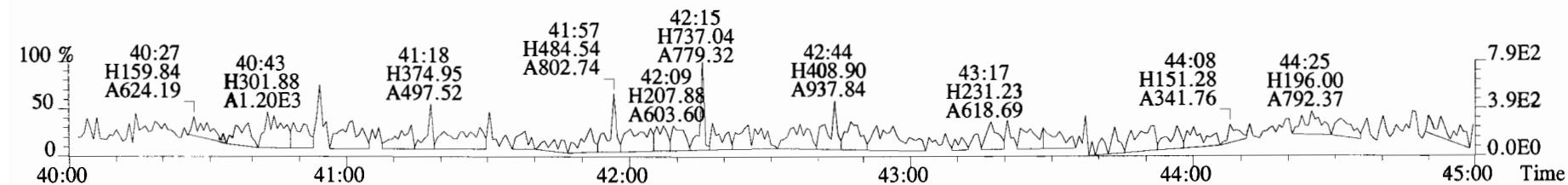
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	NotF η	*		97.4	2.5	0.0541	Total Tetra-Dioxins	*	0.226	*	*	
1,2,3,7,8-PeCDD	*	* n	0.90	NotF η	*		165	2.5	0.0779	Total Penta-Dioxins	*	*		165	0.0779
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF η	*		168	2.5	0.127	Total Hexa-Dioxins	0.314	0.314	*	*	
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotF η	*		168	2.5	0.136	Total Hepta-Dioxins	0.630	1.01	*	*	
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotF η	*		168	2.5	0.139	Total Tetra-Furans	*	*		127	0.0488
1,2,3,4,6,7,8-HpCDD	1.00e+04	1.30 n	0.98	37:58	0.38400		*	2.5	*	Total Penta-Furans	0.0000	0.0000		106	0.0525
OCDD	5.13e+04	0.86 y	0.96	41:19	2.3774		*	2.5	*	Total Hexa-Furans	*	*		126	0.0457
										Total Hepta-Furans	*	*		152	0.0669
2,3,7,8-TCDF	*	* n	0.95	NotF η	*		127	2.5	0.0488						
1,2,3,7,8-PeCDF	*	* n	0.96	NotF η	*		106	2.5	0.0540						
2,3,4,7,8-PeCDF	*	* n	1.01	NotF η	*		106	2.5	0.0511						
1,2,3,4,7,8-HxCDF	*	* n	1.18	NotF η	*		126	2.5	0.0402						
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotF η	*		126	2.5	0.0405						
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotF η	*		126	2.5	0.0447						
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotF η	*		126	2.5	0.0585						
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	NotF η	*		152	2.5	0.0701						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotF η	*		152	2.5	0.0633						
OCDF	5.10e+03	1.11 n	0.95	41:33	0.18866		*	2.5	*						
										Rec	Qual				
IS	13C-2,3,7,8-TCDD	6.04e+06	0.78 y	1.10	26:17	191.99				97.4					
IS	13C-1,2,3,7,8-PeCDD	5.08e+06	0.62 y	0.88	30:46	200.91				102					
IS	13C-1,2,3,4,7,8-HxCDD	4.63e+06	1.26 y	0.64	34:05	194.34				98.6					
IS	13C-1,2,3,6,7,8-HxCDD	5.12e+06	1.26 y	0.86	34:12	161.09				81.8					
IS	13C-1,2,3,7,8,9-HxCDD	5.34e+06	1.29 y	0.81	34:30	178.12				90.4					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.26e+06	1.06 y	0.65	37:58	216.46				110					
IS	13C-OCDD	8.87e+06	0.91 y	0.58	41:19	412.13				105					
IS	13C-2,3,7,8-TCDF	9.01e+06	0.78 y	1.03	25:30	192.19				97.5					
IS	13C-1,2,3,7,8-PeCDF	7.59e+06	1.61 y	0.85	29:36	196.20				99.6					
IS	13C-2,3,4,7,8-PeCDF	7.47e+06	1.58 y	0.85	30:29	194.65				98.8					
IS	13C-1,2,3,4,7,8-HxCDF	6.40e+06	0.52 y	0.83	33:12	207.28				105					
IS	13C-1,2,3,6,7,8-HxCDF	7.17e+06	0.52 y	1.03	33:20	186.59				94.7					
IS	13C-2,3,4,6,7,8-HxCDF	6.56e+06	0.51 y	0.95	33:55	185.15				94.0					
IS	13C-1,2,3,7,8,9-HxCDF	6.29e+06	0.51 y	0.83	34:53	204.53				104					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.88e+06	0.41 y	0.76	36:44	208.91				106					
IS	13C-1,2,3,4,7,8,9-HpCDF	4.88e+06	0.42 y	0.58	38:31	226.20				115					
IS	13C-OCDF	1.13e+07	0.91 y	0.69	41:32	439.73				112					
C/Up	37C1-2,3,7,8-TCDD	2.79e+06		1.20	26:18	81.288				103					
RS/RT	13C-1,2,3,4-TCDD	5.66e+06	0.80 y	1.00	25:43	197.04									
RS	13C-1,2,3,4-TCDF	8.92e+06	0.82 y	1.00	24:18	197.04									
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.32e+06	0.52 y	1.00	33:37	197.04									

Integrations Reviewed
 by DB by CT
 Analyst: DB Analyst: CT
 Date: 11/5/19 Date: 11/11/19

Totals class: TCDD EMPC

Entry #: 19

Run: 8

File: 191024D2

S: 3 I: 1 F: 1

Acquired: 25-OCT-19 05:24:41

Processed: 28-OCT-19 09:58:46

Total Concentration: 0.22585

Unnamed Concentration: 0.226

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
24:27	3.493e+03	3.539e+03	0.99 n	6.264e+03	0.22585

Totals class: HxCDD EMPC

Entry #: 23

Run: 8 File: 191024D2 S: 3 I: 1 F: 3
Acquired: 25-OCT-19 05:24:41 Processed: 28-OCT-19 09:58:46

Total Concentration: 0.31399

Unnamed Concentration: 0.314

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:33	4.519e+03	3.430e+03	1.32 y	7.949e+03	0.31399

Totals class: HpCDD EMPC

Entry #: 25

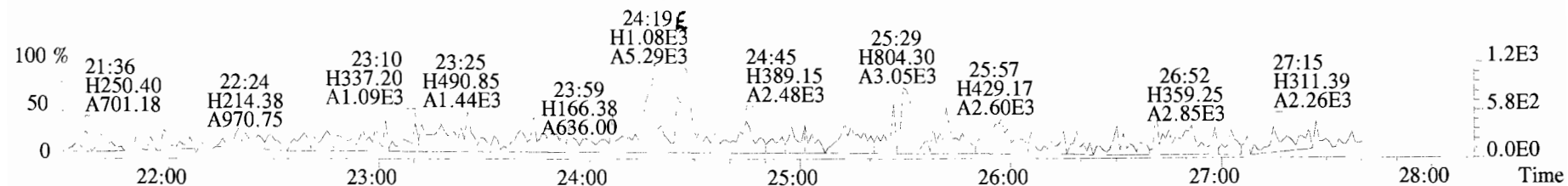
Run: 8 File: 191024D2 S: 3 I: 1 F: 4
Acquired: 25-OCT-19 05:24:41 Processed: 28-OCT-19 09:58:46

Total Concentration: 1.0145

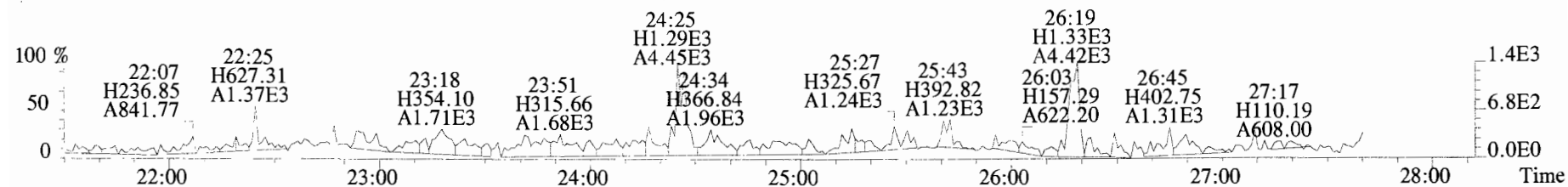
Unnamed Concentration: 0.630

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:08	8.617e+03	7.857e+03	1.10	y	1.647e+04	0.63048
37:58	6.401e+03	4.919e+03	1.30	n	1.003e+04	0.38400 1,2,3,4,6,7,8-HpCDD

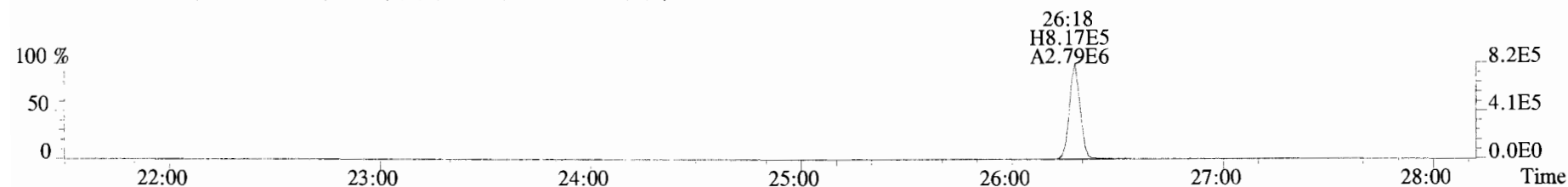
File:191024D2 #1-492 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



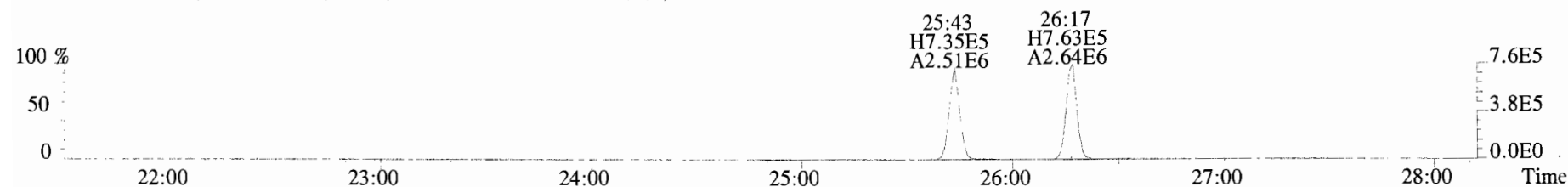
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



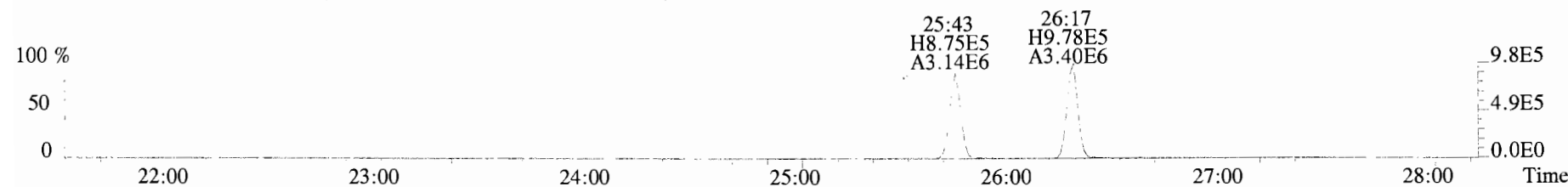
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



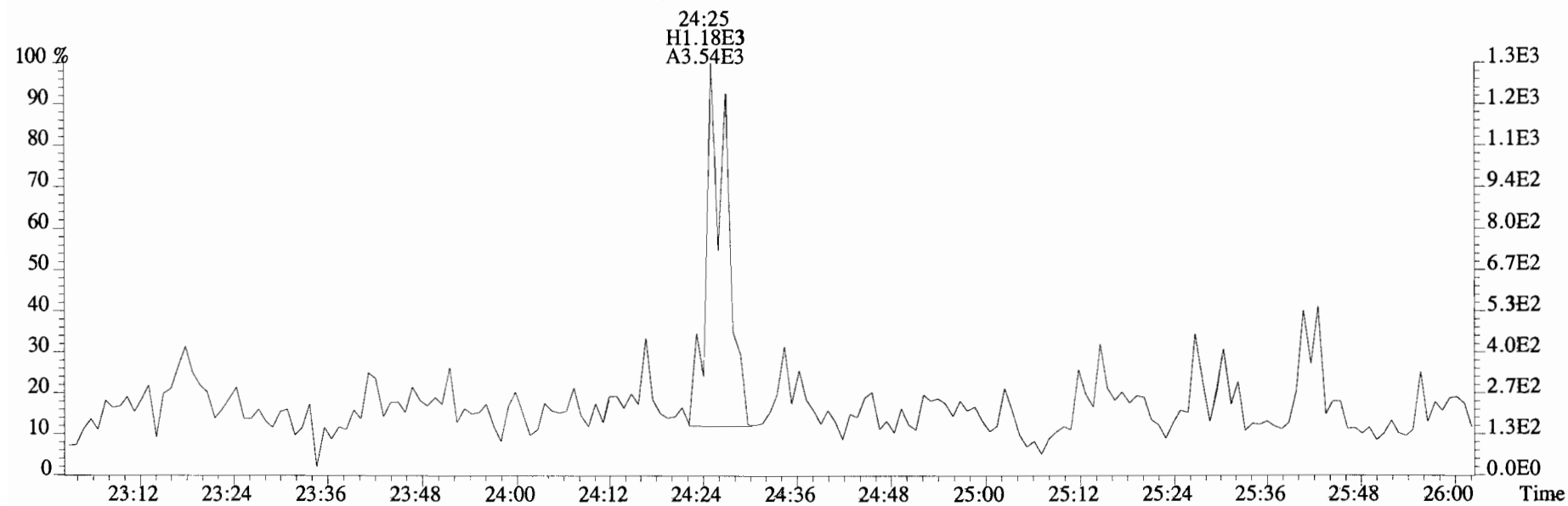
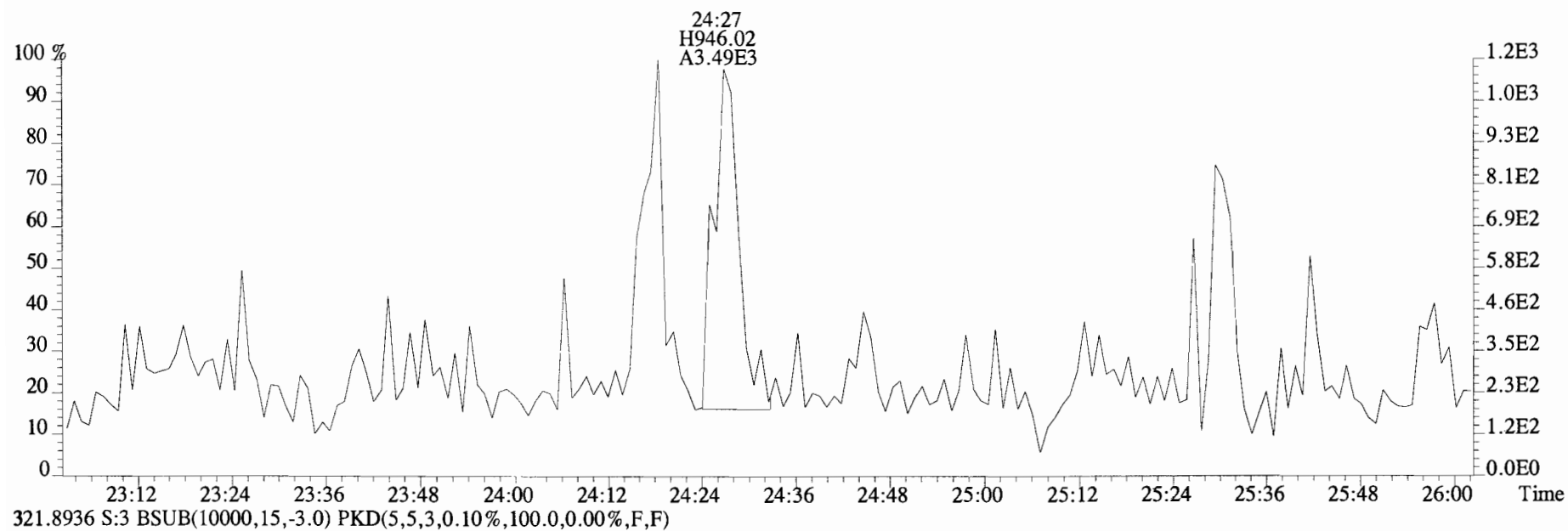
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



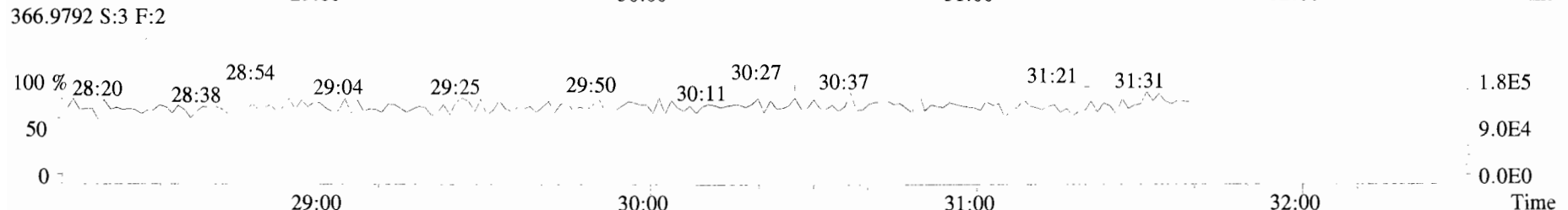
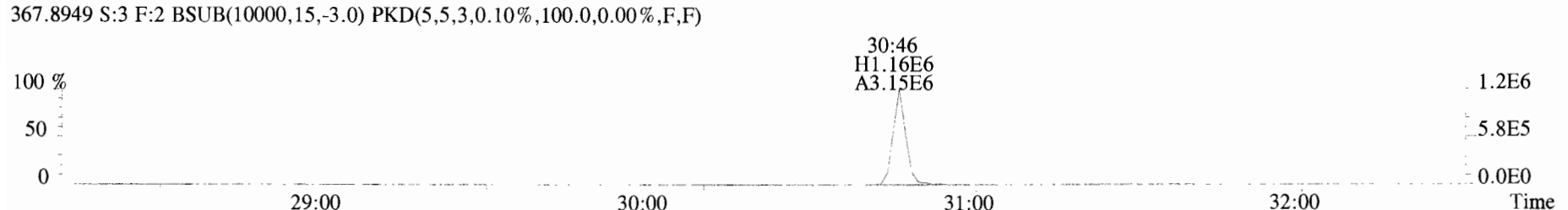
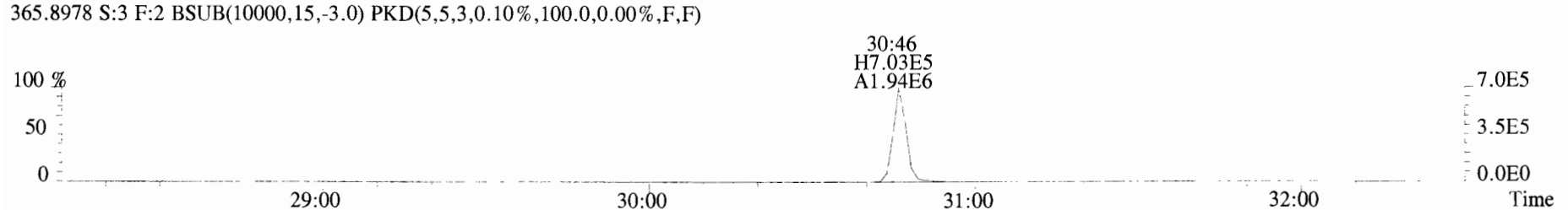
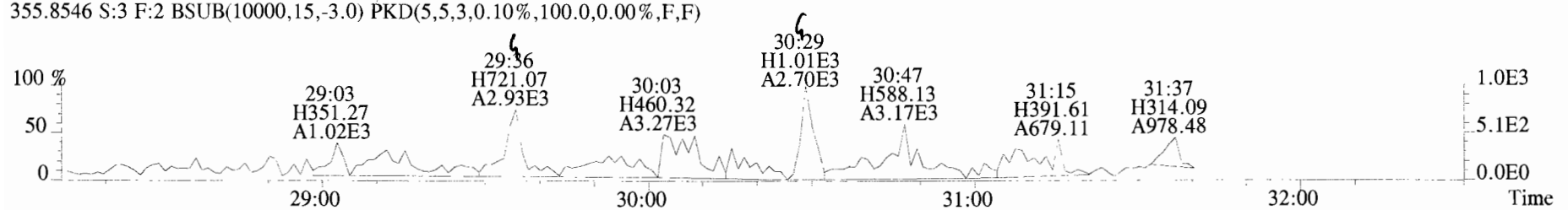
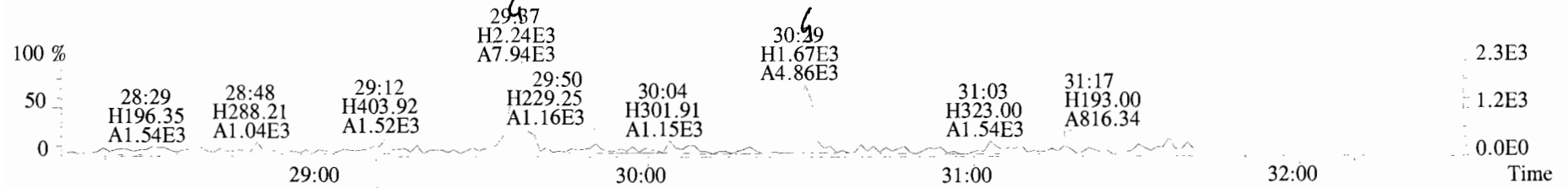
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



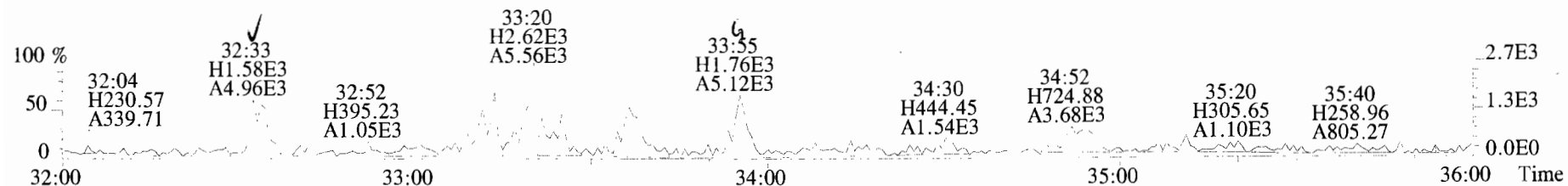
File:191024D2 #1-492 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



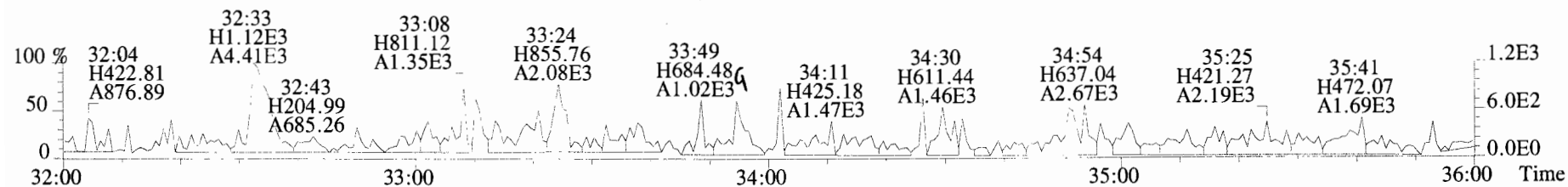
File:191024D2 #1-211 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
 353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



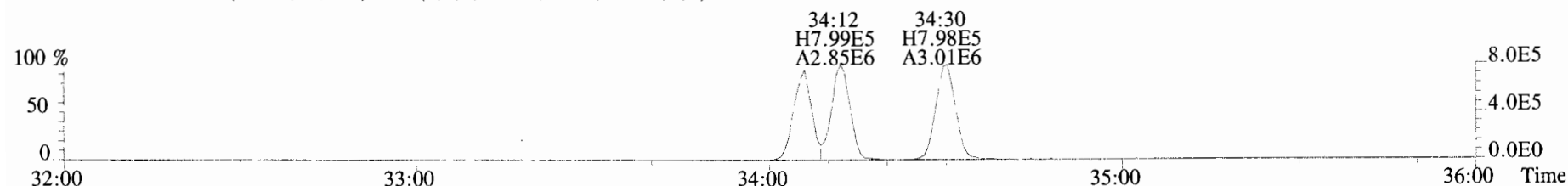
File:191024D2 #1-385 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
 389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



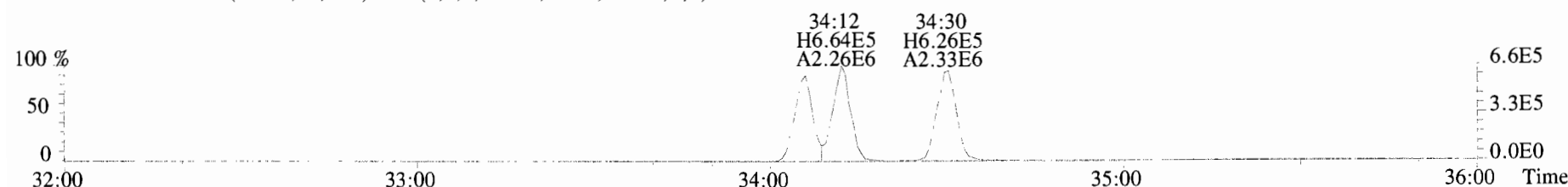
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



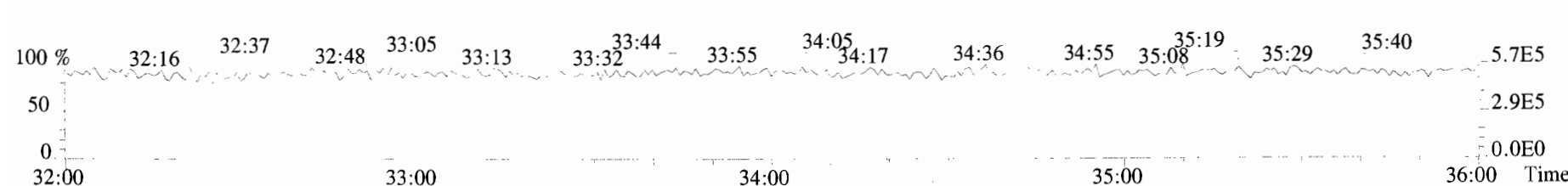
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



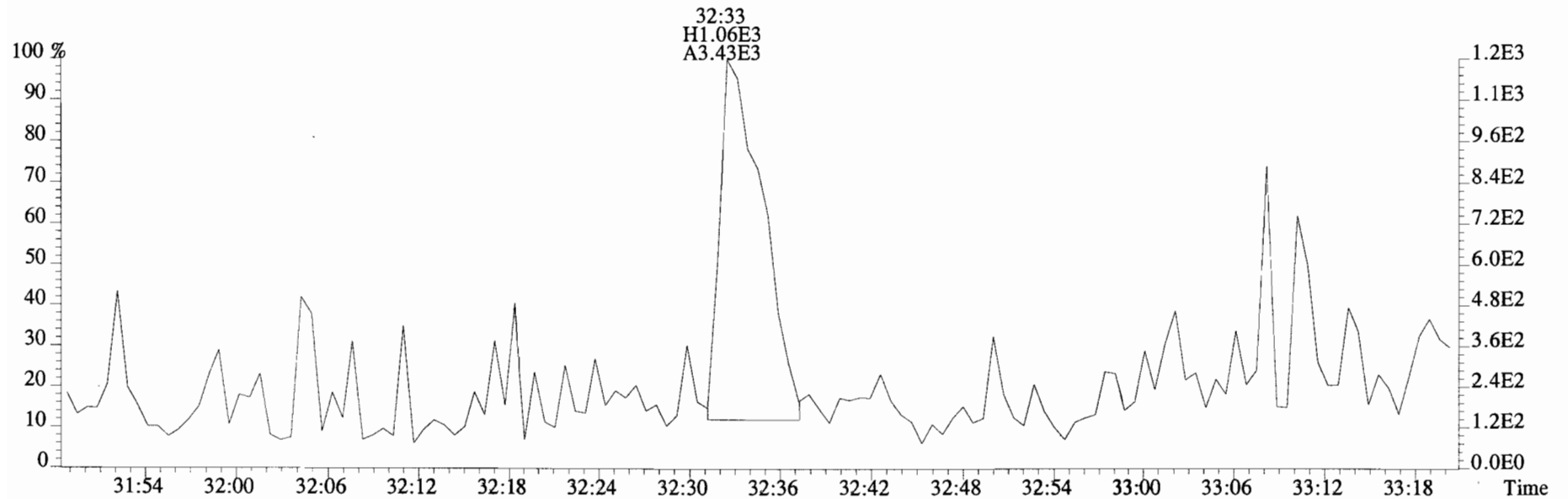
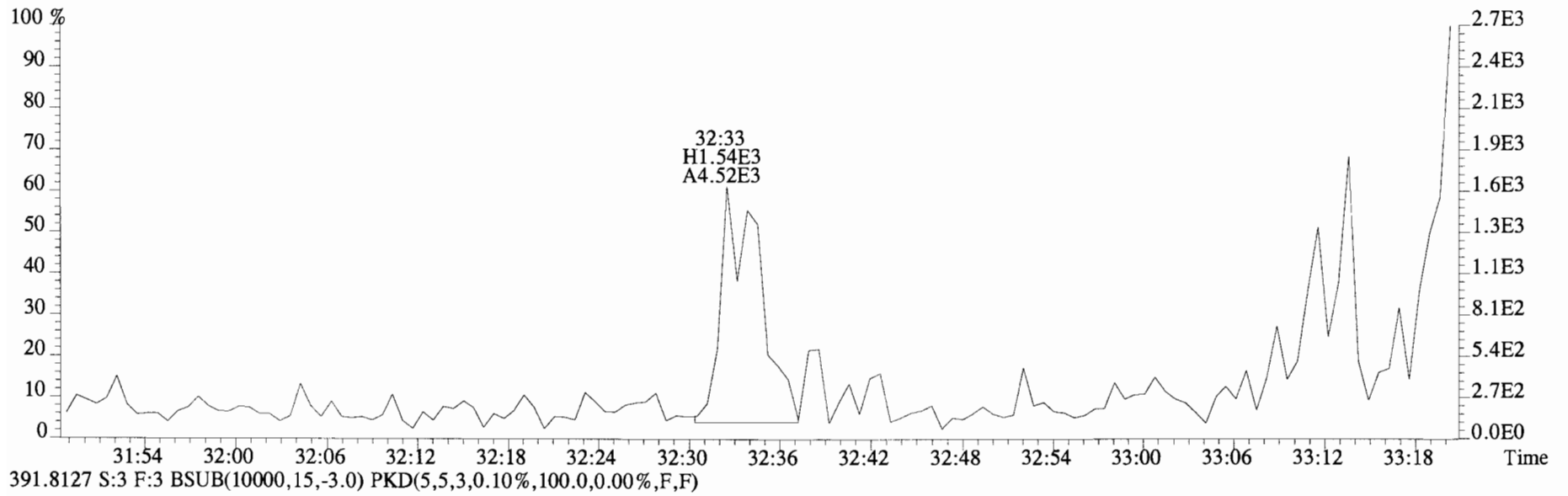
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



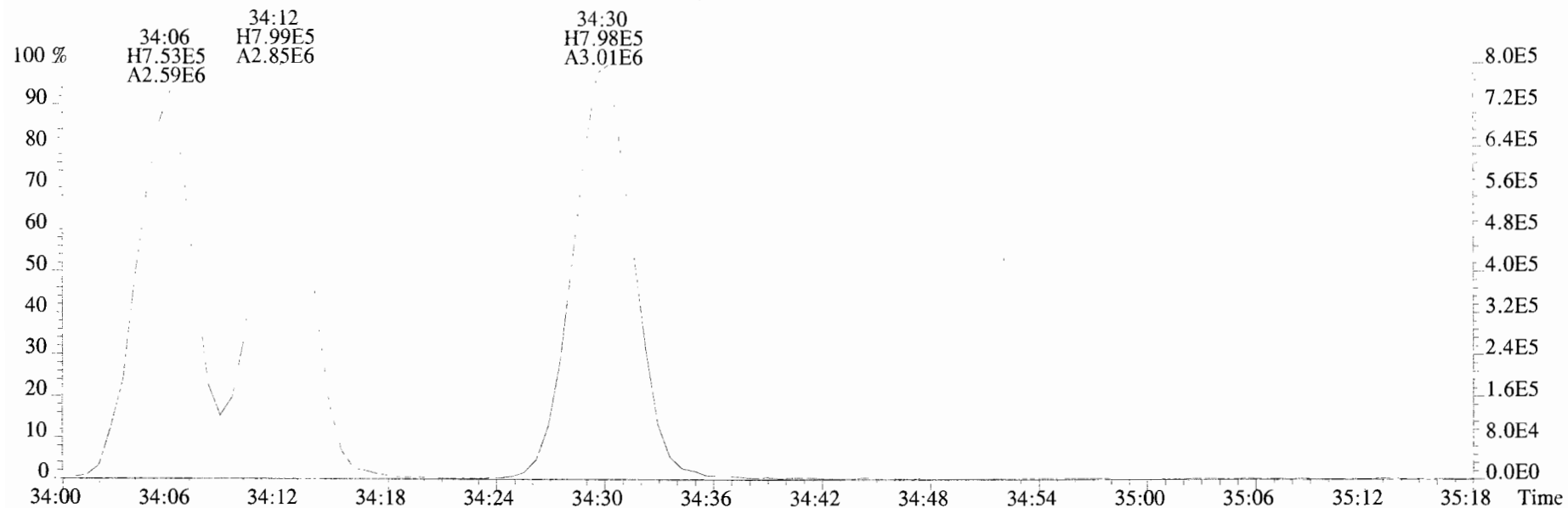
392.9760 S:3 F:3



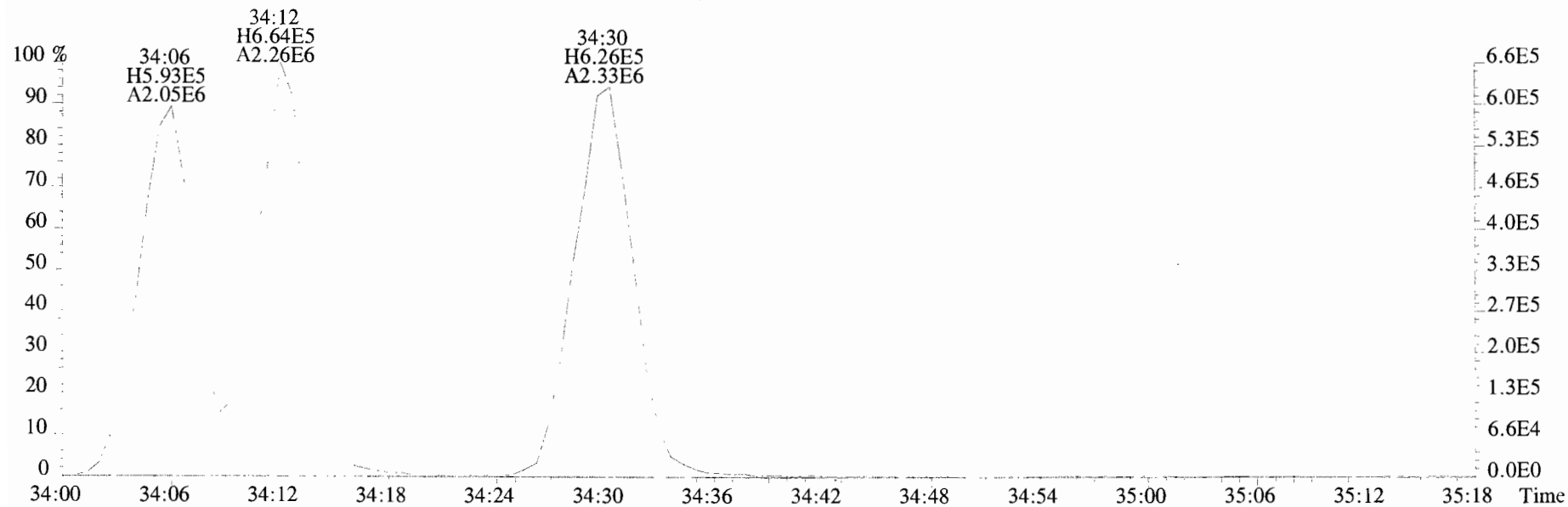
File:191024D2 #1-385 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text: Vista Analytical Laboratory VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



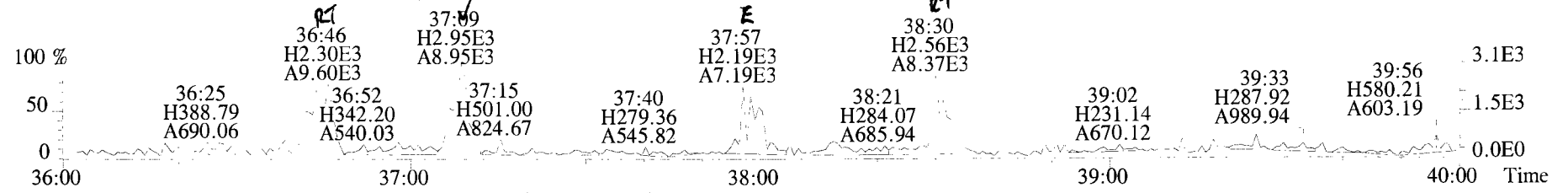
File:191024D2 #1-385 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
401.8559 S:3 F:3 BSUB(10000.15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



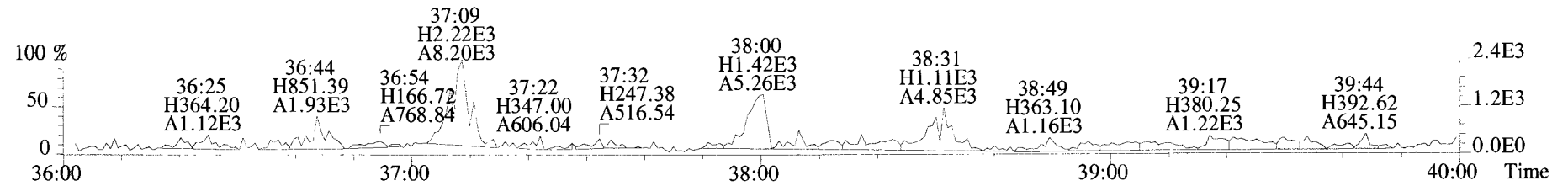
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



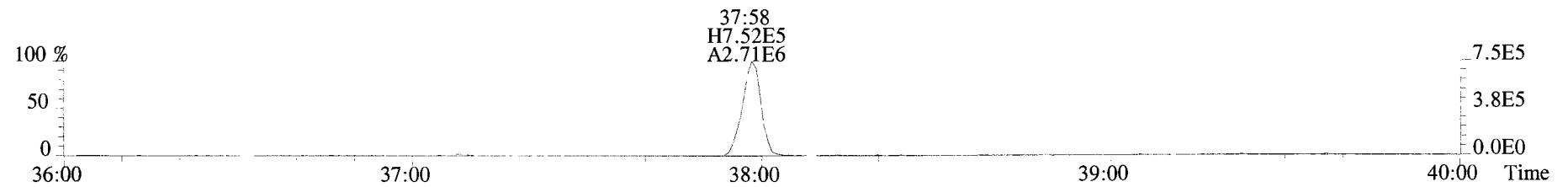
File:191024D2 #1-355 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text: Vista Analytical Laboratory VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
423.7767 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



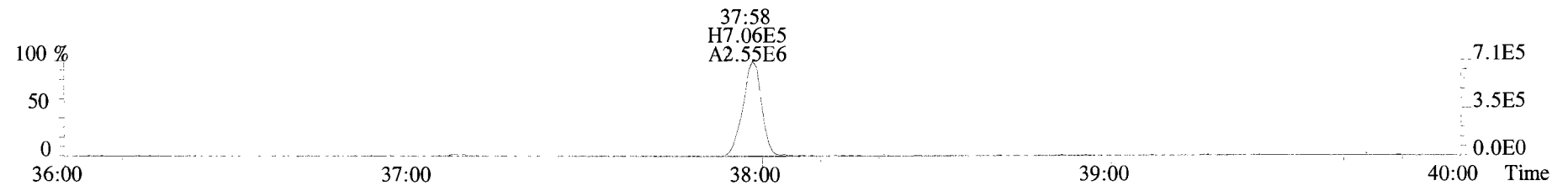
425.7737 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



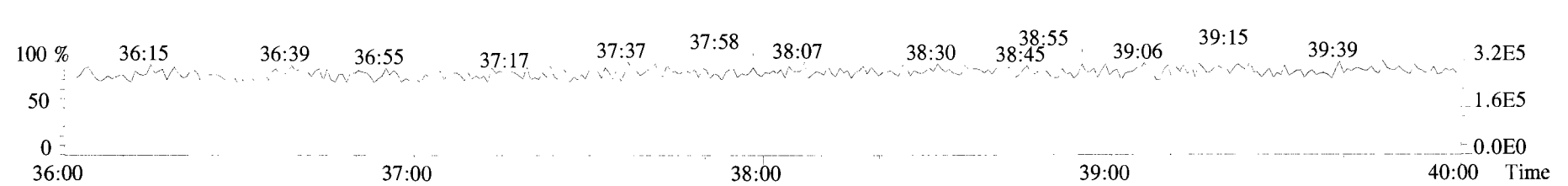
435.8169 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



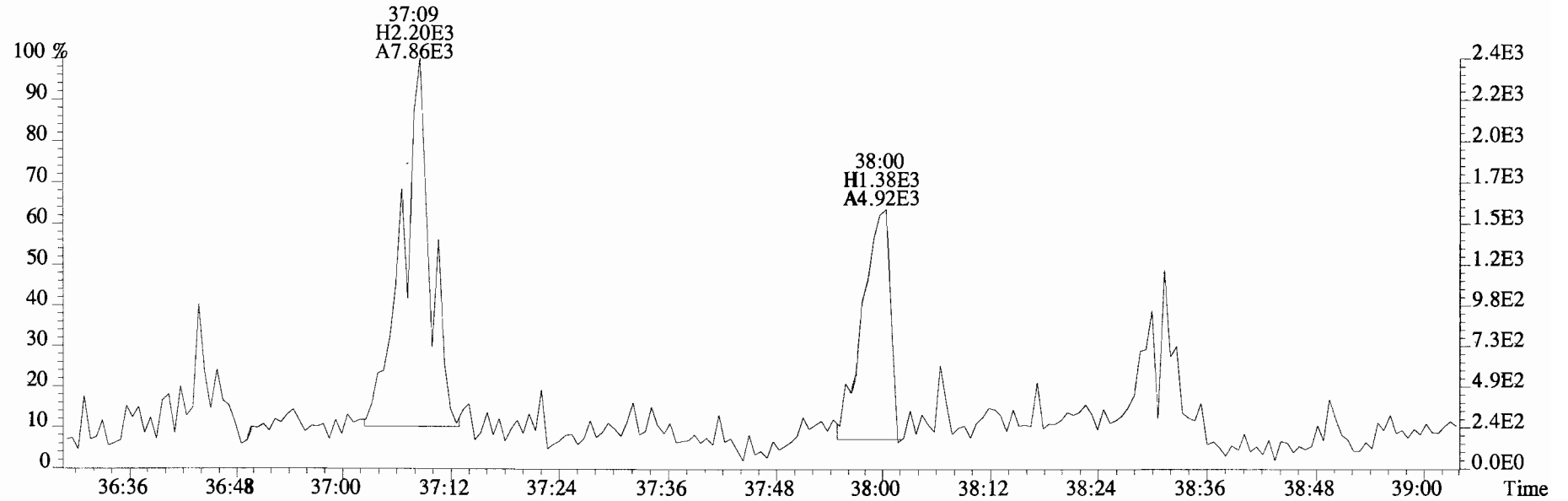
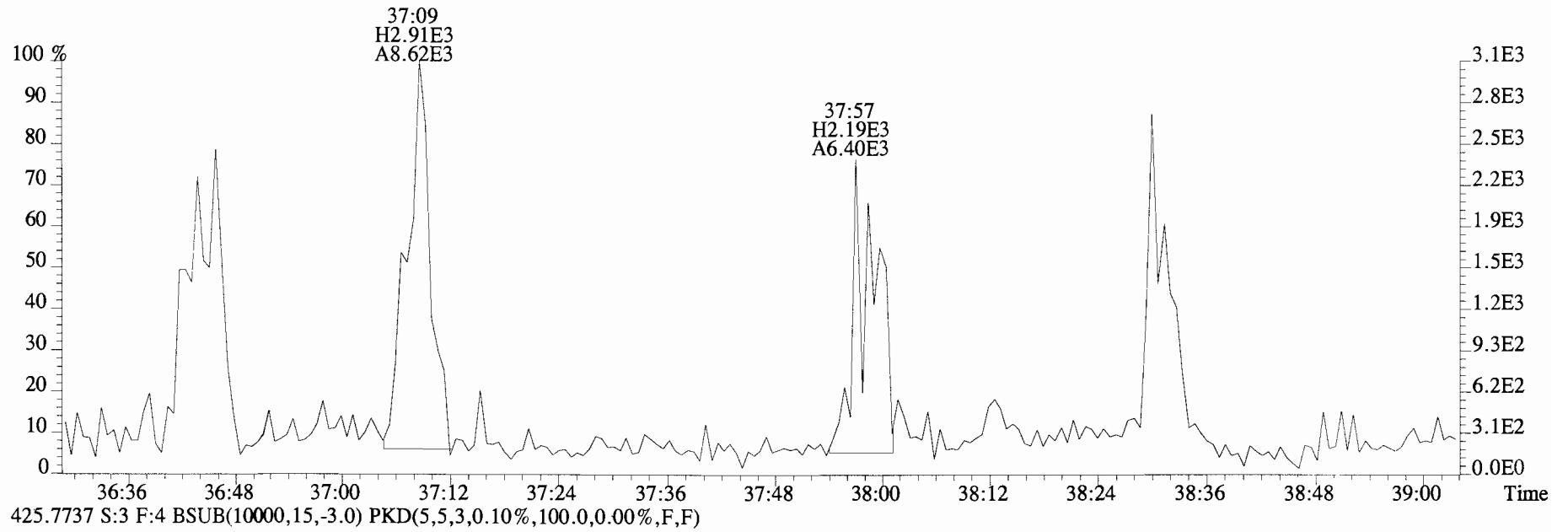
437.8140 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



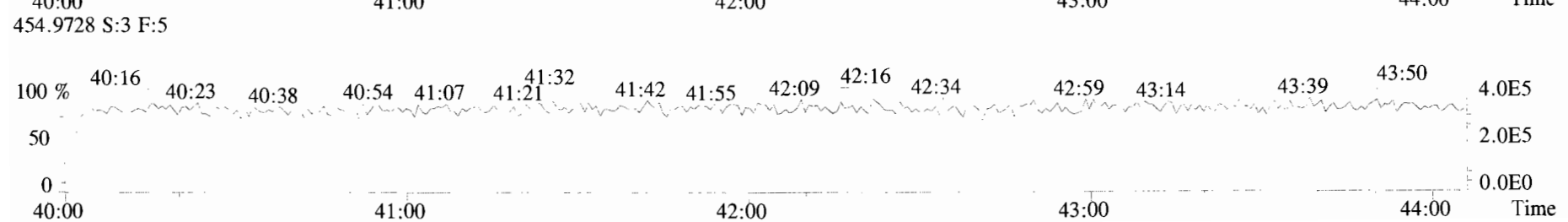
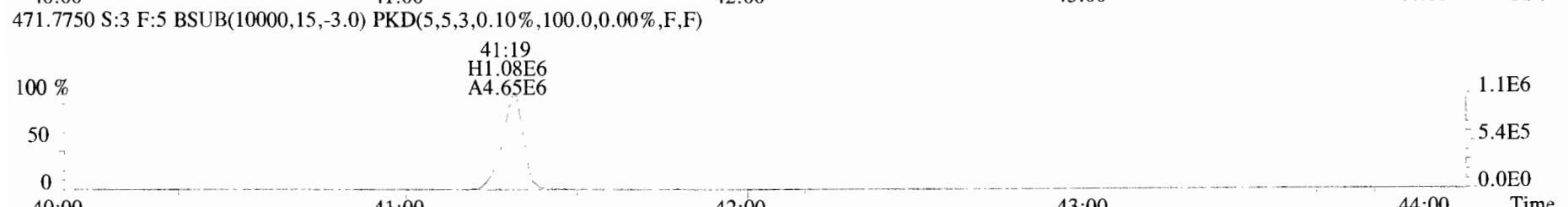
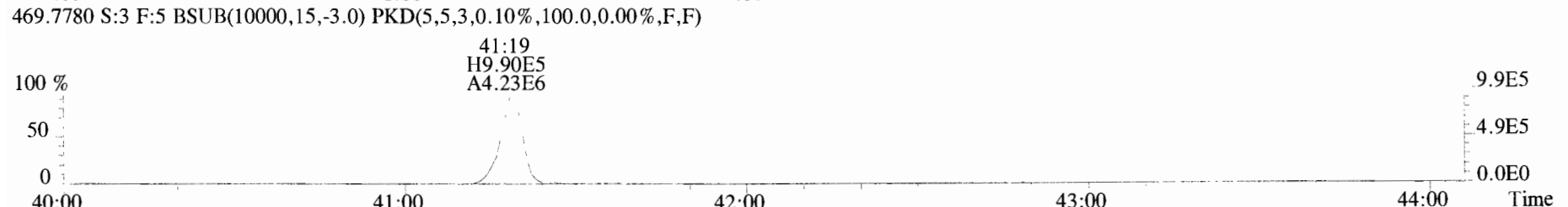
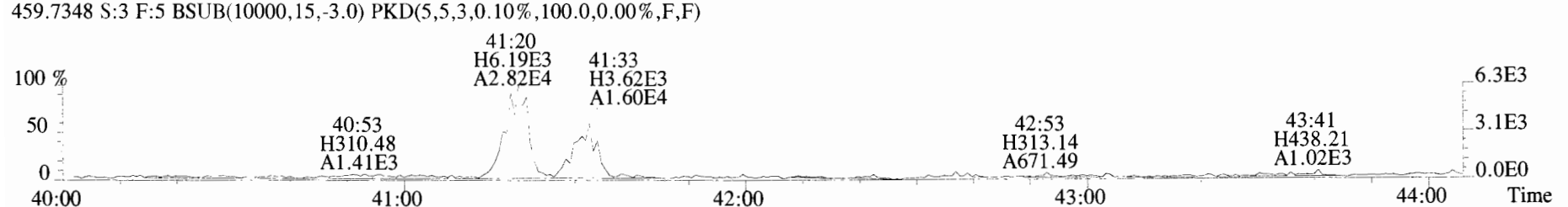
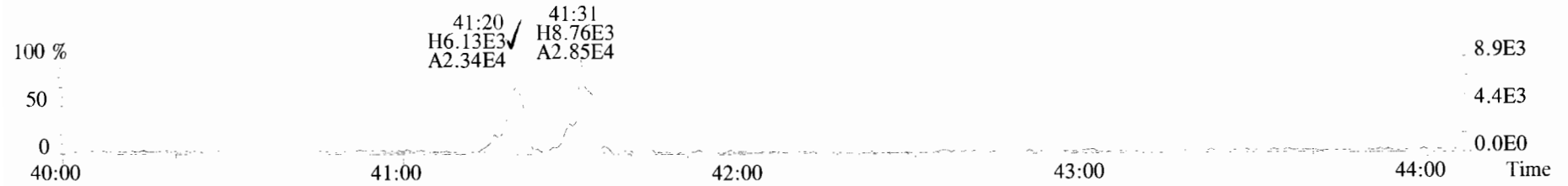
454.9728 S:3 F:4



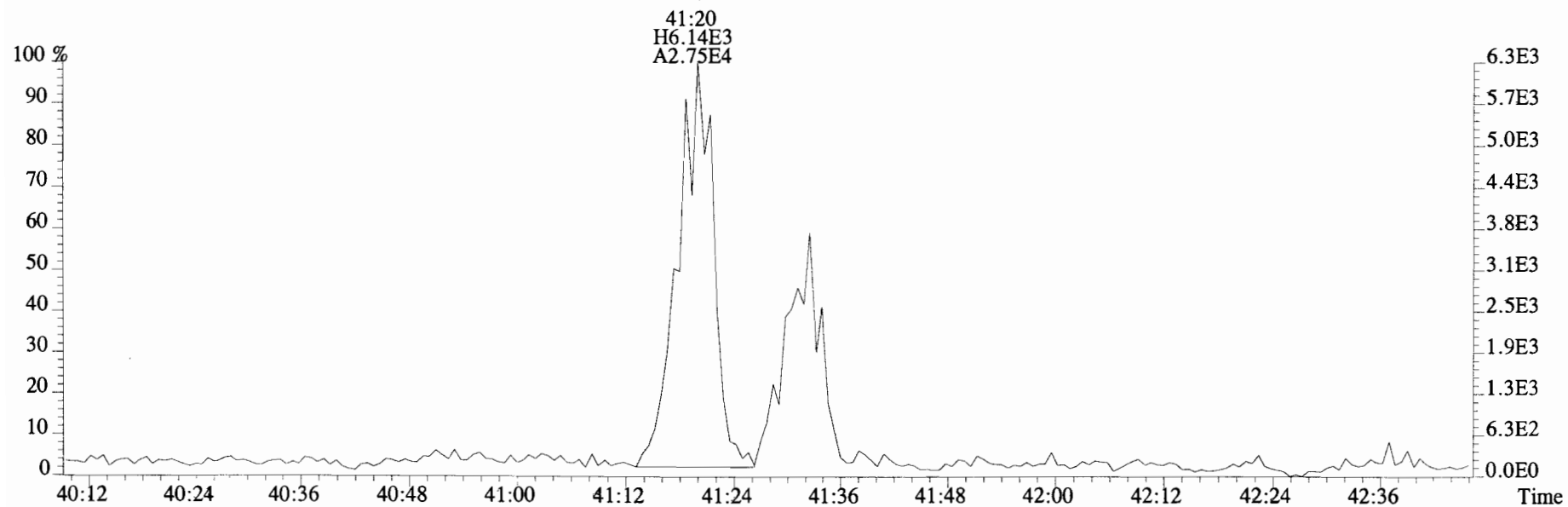
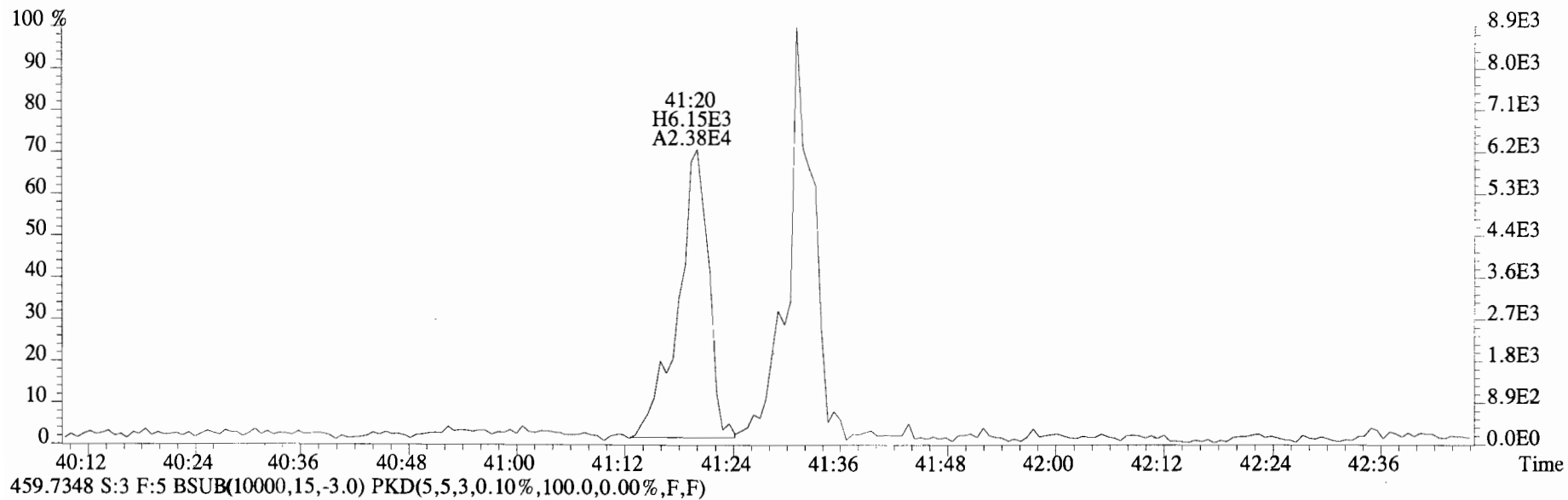
File:191024D2 #1-355 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
423.7767 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



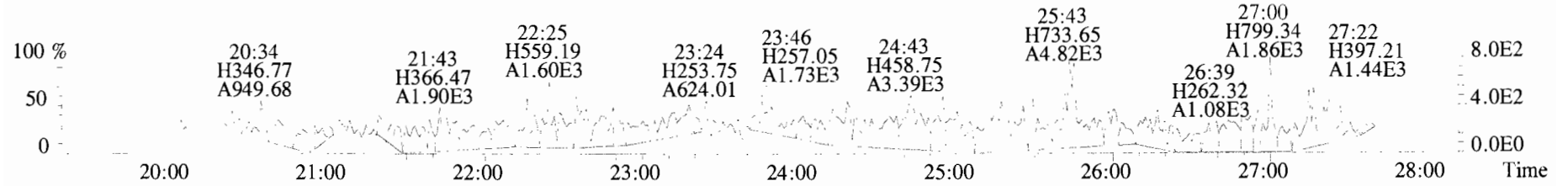
File:191024D2 #1-432 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



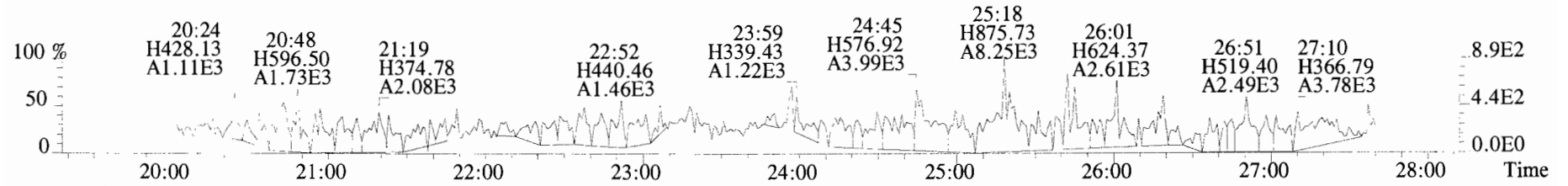
File:191024D2 #1-432 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



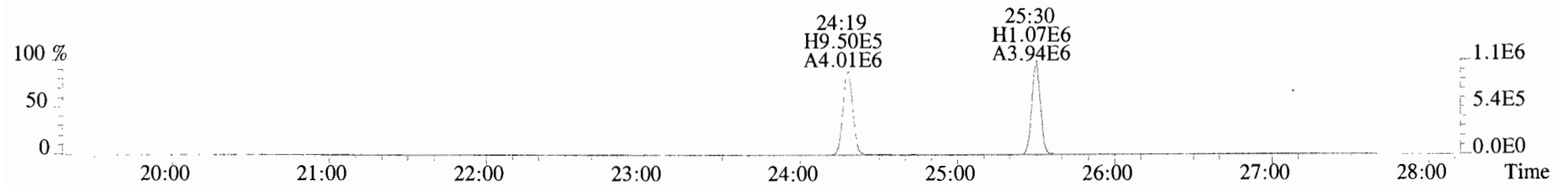
File:191024D2 #1-492 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



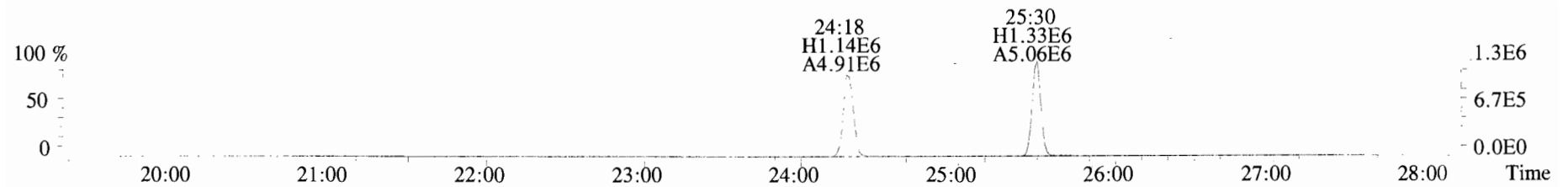
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



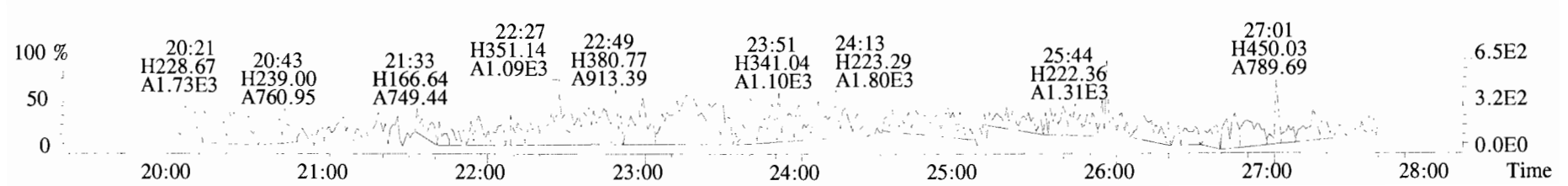
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



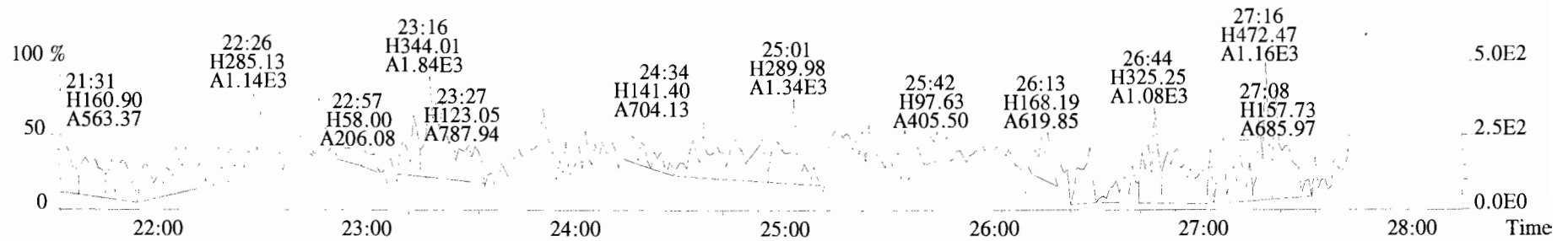
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



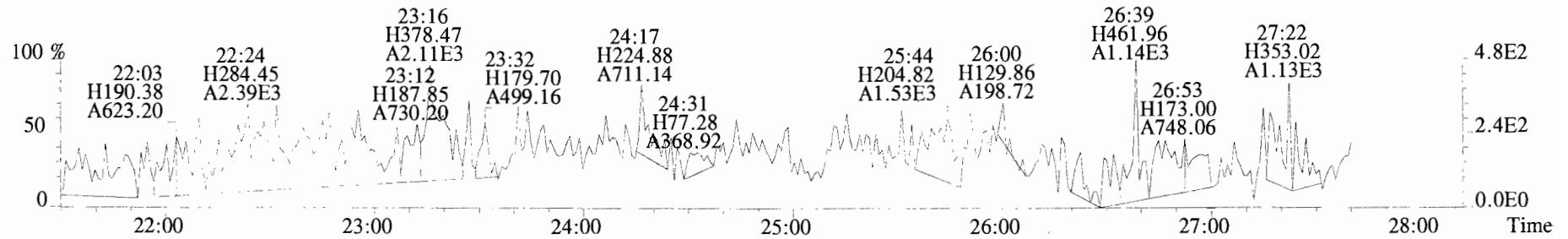
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



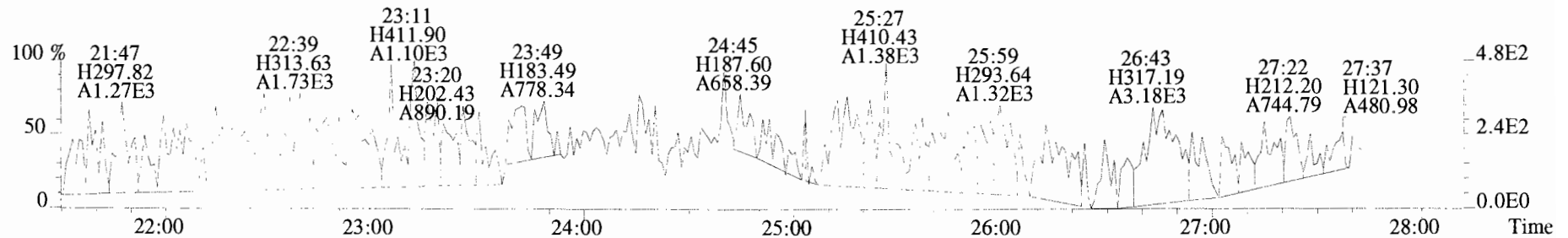
File:191024D2 #1-492 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
 339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



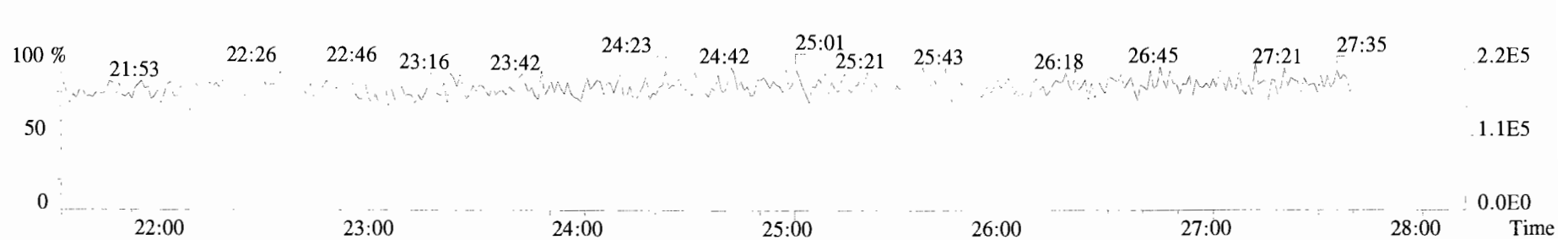
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



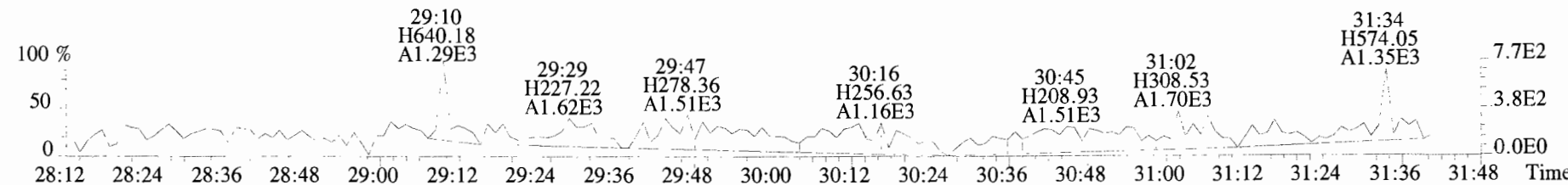
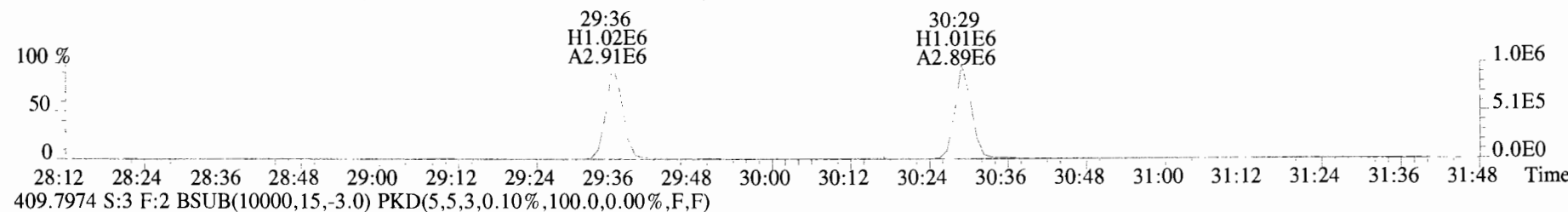
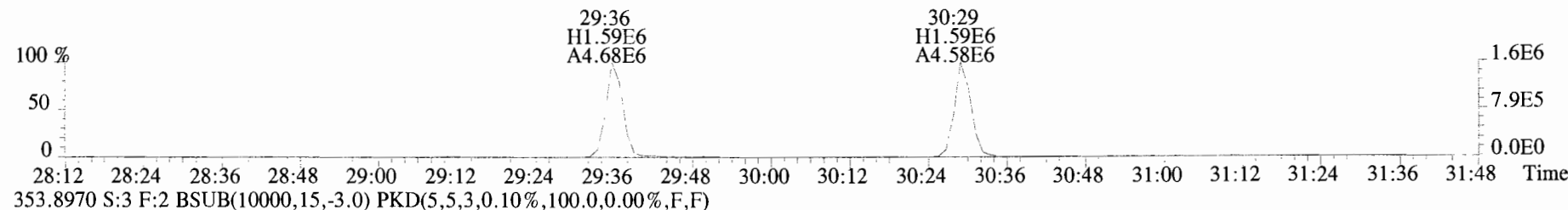
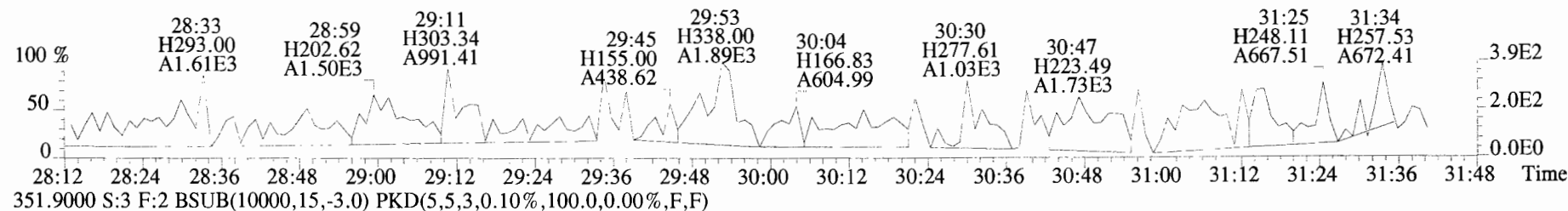
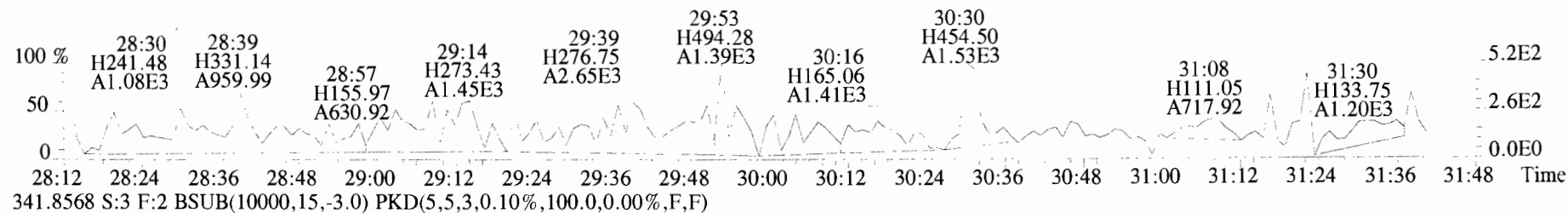
409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



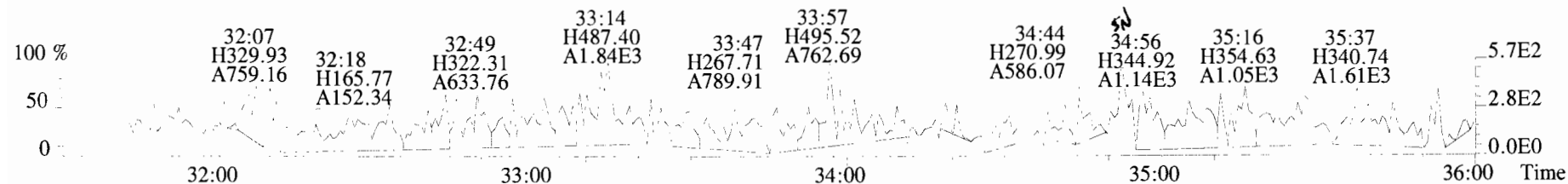
316.9824 S:3



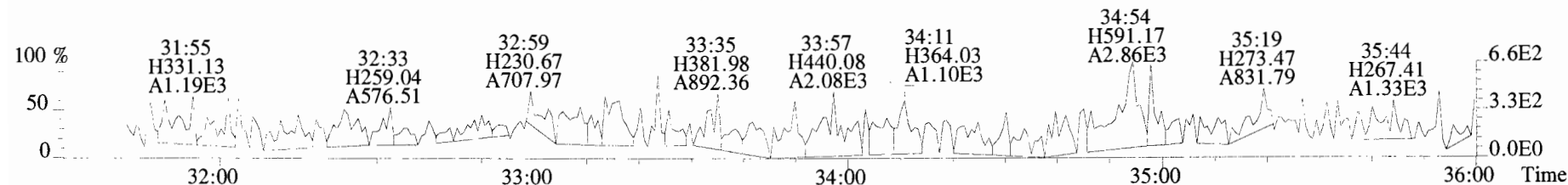
File:191024D2 #1-211 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



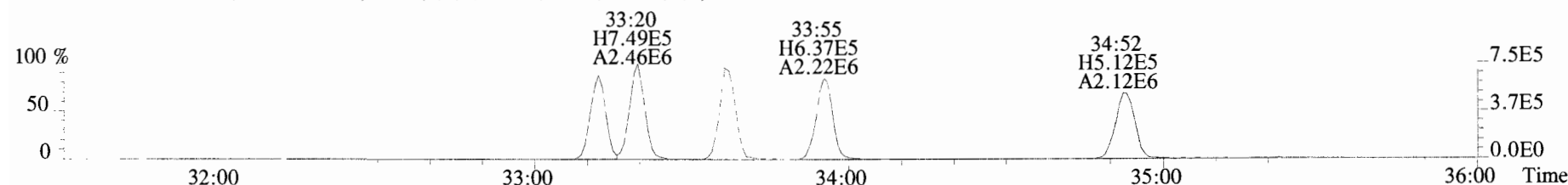
File:191024D2 #1-385 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



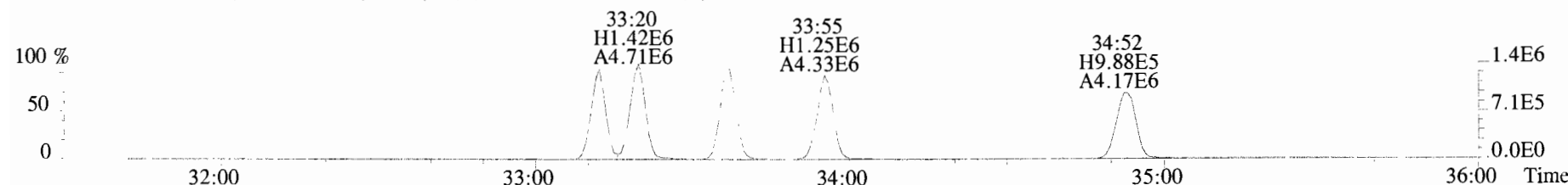
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



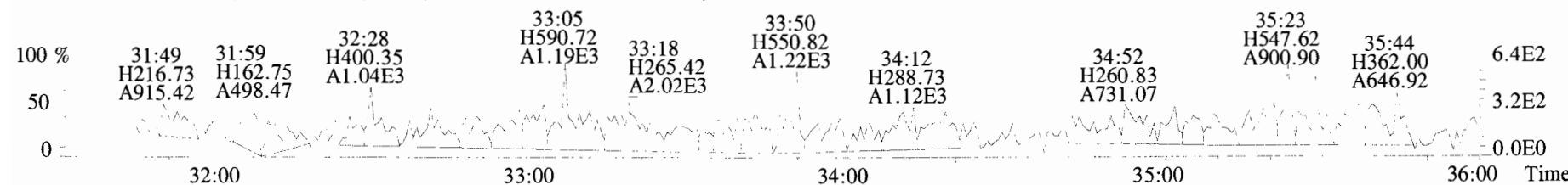
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



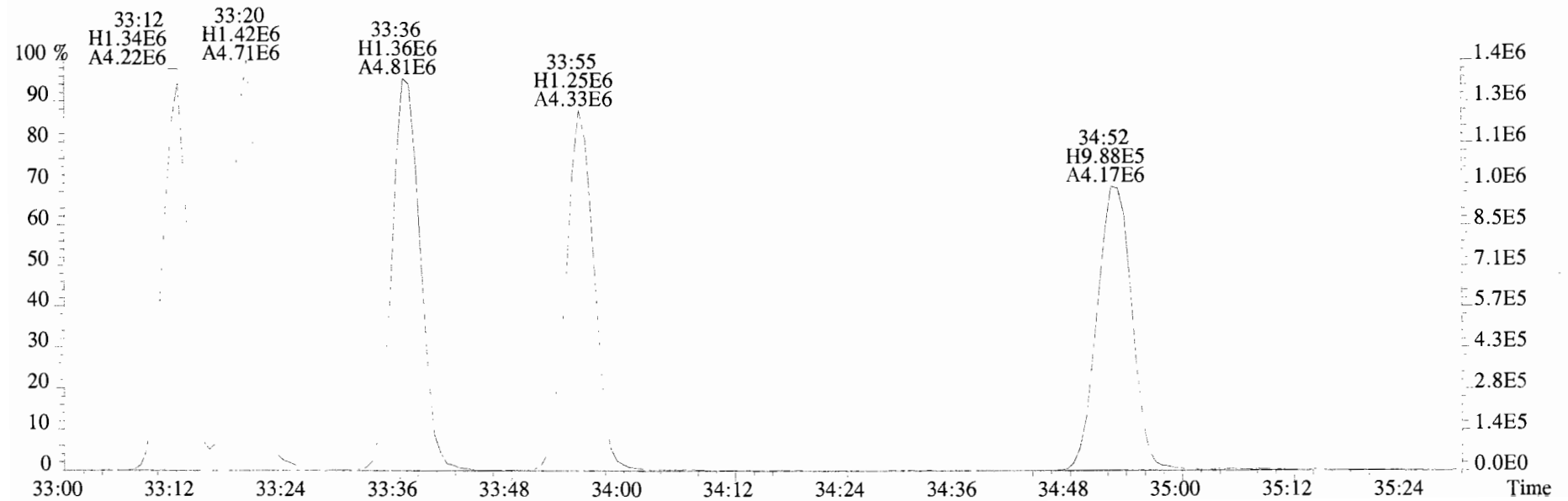
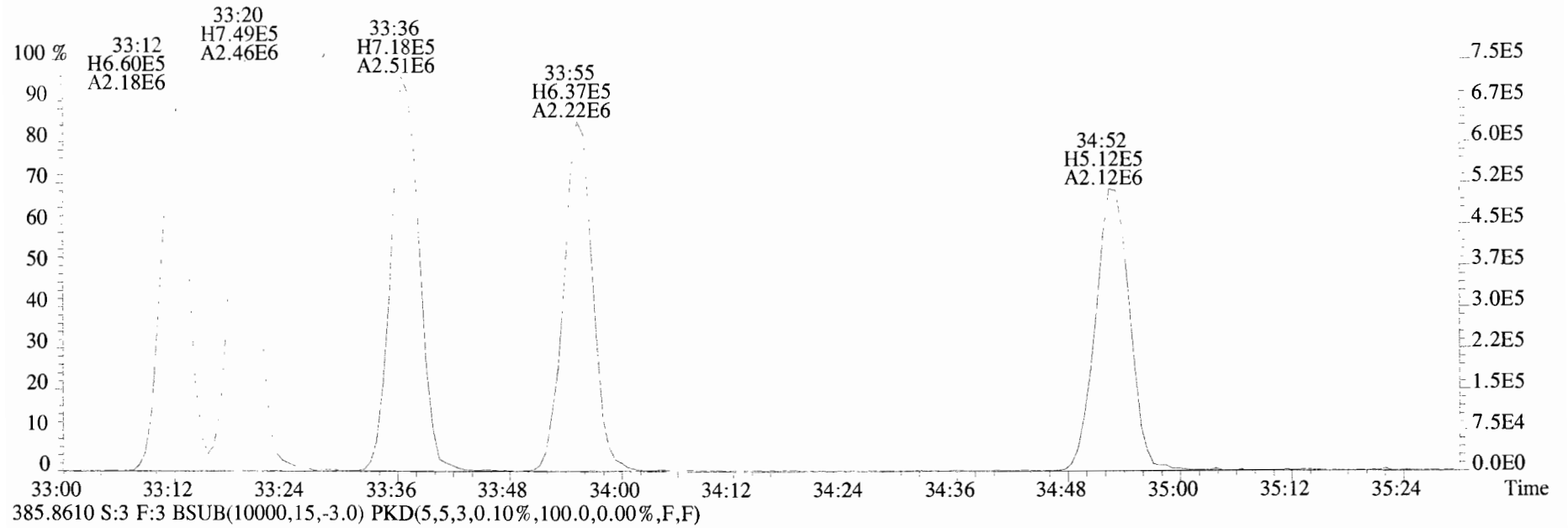
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



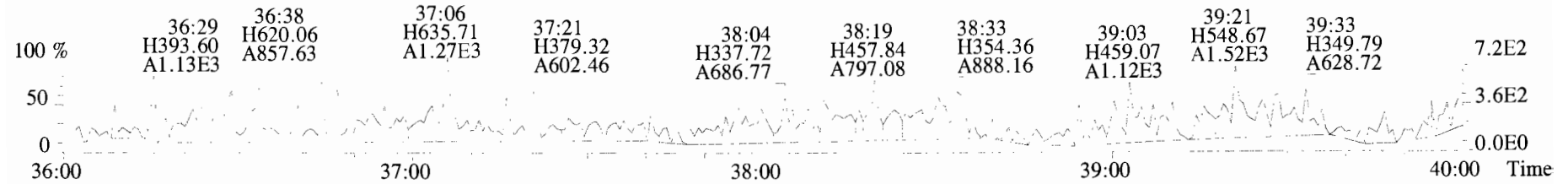
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



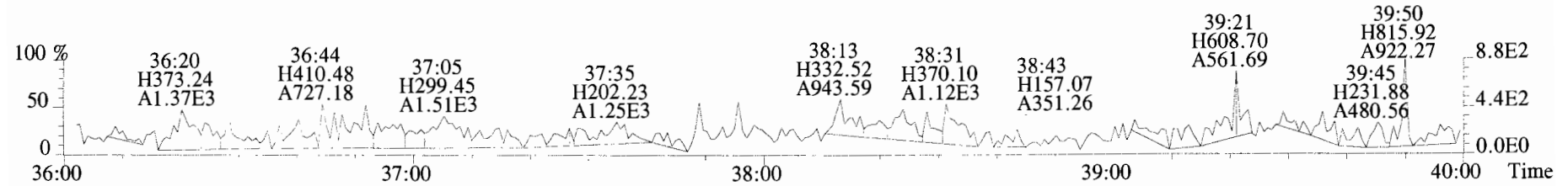
File:191024D2 #1-385 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



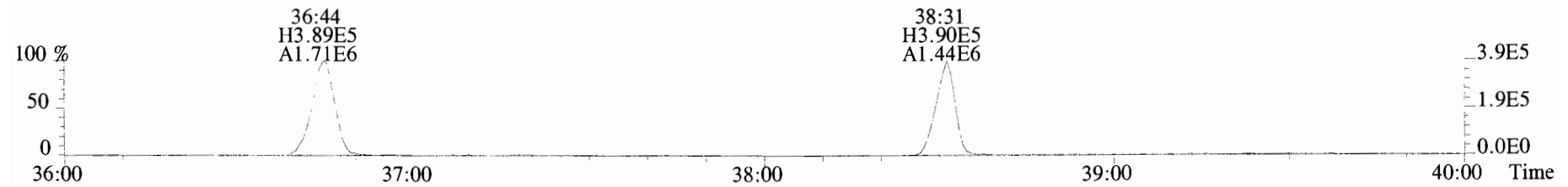
File:191024D2 #1-355 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
 407.7818 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



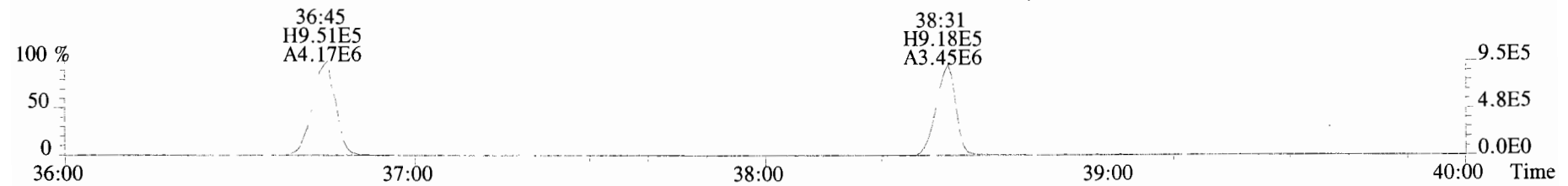
409.7788 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



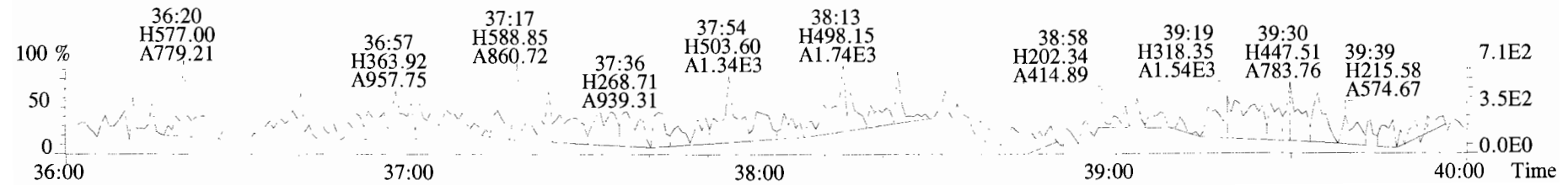
417.8253 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



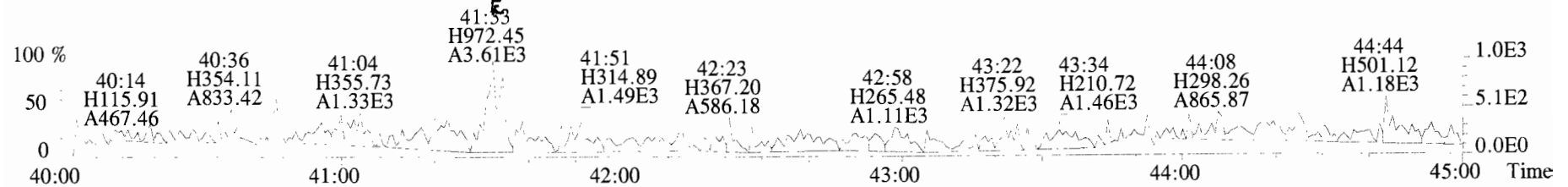
419.8220 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



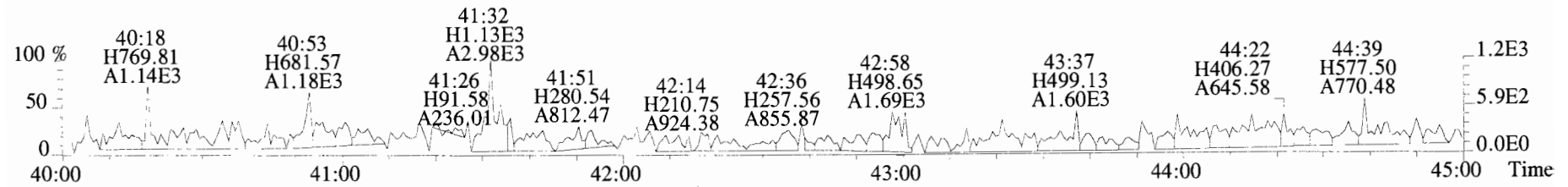
479.7165 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



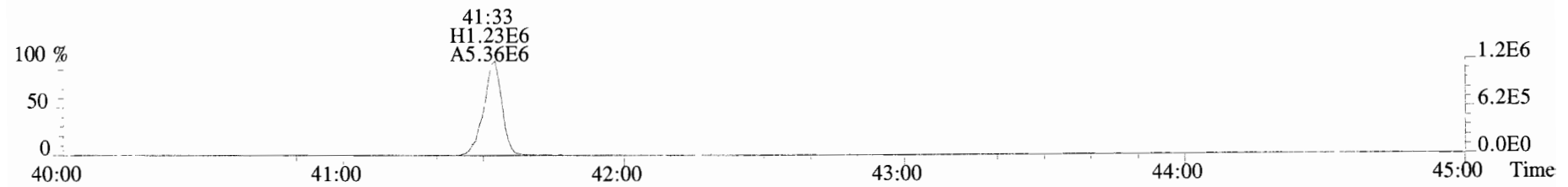
File:191024D2 #1-432 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



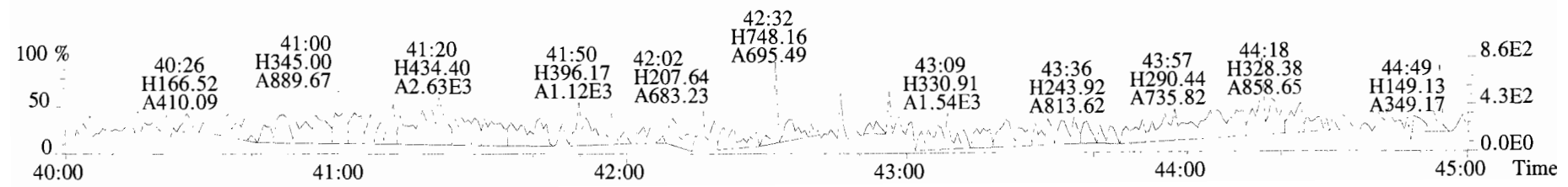
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



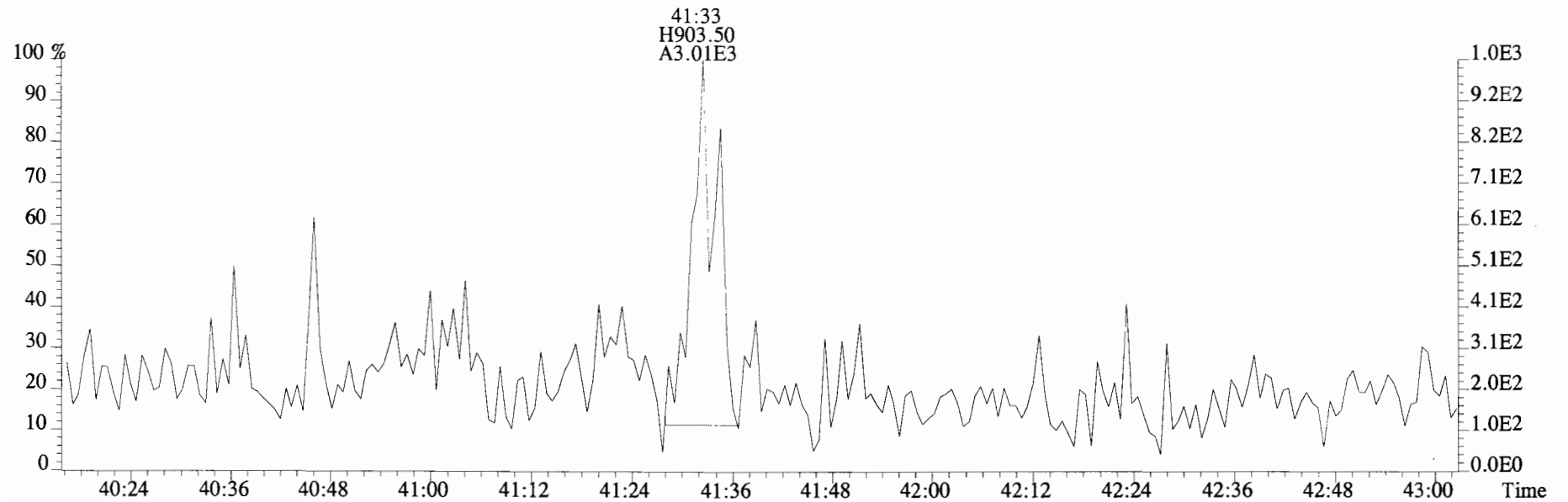
455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



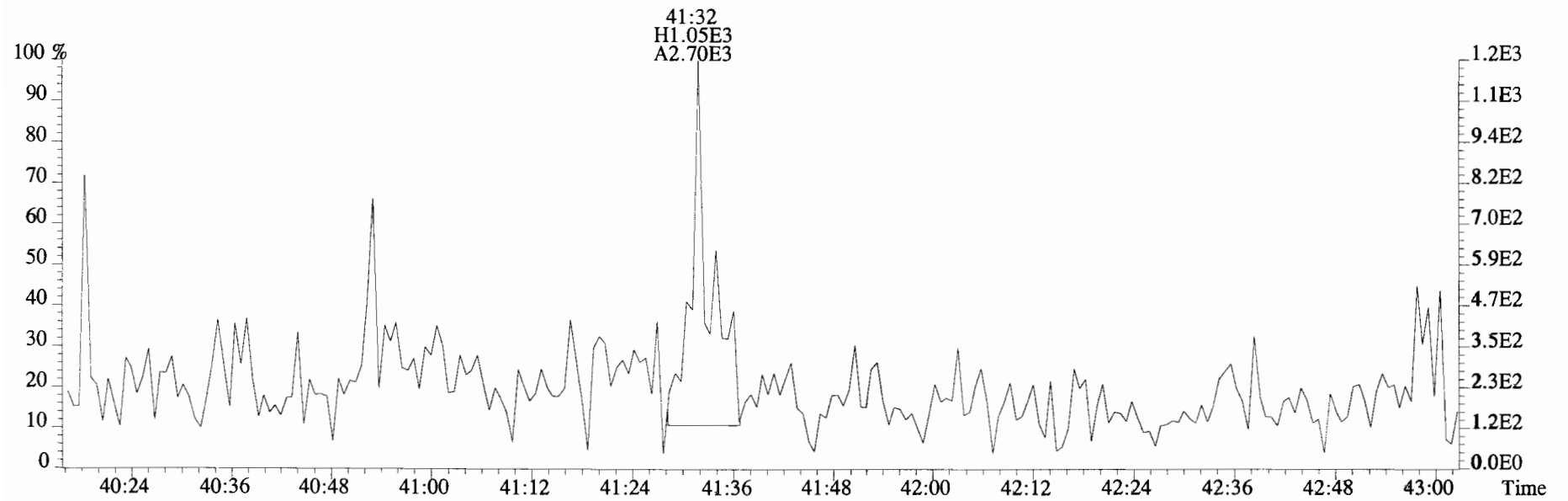
513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191024D2 #1-432 Acq:25-OCT-2019 05:24:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:1903546-01 PDI-014SC-A-12-13-191003 14.83 Exp:OCDD_DB5
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	Not Fη	*		122	2.5	0.104	Total Tetra-Dioxins	*	*		122	0.104
1,2,3,7,8-PeCDD	*	* n	0.90	Not Fη	*		149	2.5	0.0995	Total Penta-Dioxins	*	*		149	0.0995
1,2,3,4,7,8-HxCDD	*	* n	1.10	Not Fη	*		138	2.5	0.122	Total Hexa-Dioxins	0.187	0.187	*	*	
1,2,3,6,7,8-HxCDD	*	* n	0.94	Not Fη	*		138	2.5	0.141	Total Hepta-Dioxins	1.44	1.44	*	*	
1,2,3,7,8,9-HxCDD	*	* n	0.96	Not Fη	*		138	2.5	0.126	Total Tetra-Furans	*	*		102	0.0592
1,2,3,4,6,7,8-HpCDD	1.19e+04	0.94 y	0.98	37:58	0.53989		*	2.5	*	Total Penta-Furans	0.0000	0.0000		131	0.0862
OCDD	8.52e+04	0.80 y	0.96	41:18	4.6018		*	2.5	*	Total Hexa-Furans	*	*		136	0.0569
										Total Hepta-Furans	*	*		132	0.0680
2,3,7,8-TCDF	*	* n	0.95	Not Fη	*		102	2.5	0.0592						
1,2,3,7,8-PeCDF	*	* n	0.96	Not Fη	*		131	2.5	0.0875						
2,3,4,7,8-PeCDF	*	* n	1.01	Not Fη	*		131	2.5	0.0850						
1,2,3,4,7,8-HxCDF	*	* n	1.18	Not Fη	*		136	2.5	0.0539						
1,2,3,6,7,8-HxCDF	*	* n	1.07	Not Fη	*		136	2.5	0.0527						
2,3,4,6,7,8-HxCDF	*	* n	1.11	Not Fη	*		136	2.5	0.0538						
1,2,3,7,8,9-HxCDF	*	* n	1.06	Not Fη	*		136	2.5	0.0680						
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	Not Fη	*		132	2.5	0.0692						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	Not Fη	*		132	2.5	0.0665						
OCDF	2.56e+03	0.83 y	0.95	41:34	0.10591		*	2.5	*						
IS	13C-2,3,7,8-TCDD	4.13e+06	0.79 y	1.10	26:16	142.33				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	3.94e+06	0.65 y	0.88	30:46	168.81				72.2					
IS	13C-1,2,3,4,7,8-HxCDD	4.02e+06	1.23 y	0.64	34:05	190.65				85.6					
IS	13C-1,2,3,6,7,8-HxCDD	4.47e+06	1.29 y	0.86	34:12	158.88				96.6					
IS	13C-1,2,3,7,8,9-HxCDD	4.86e+06	1.26 y	0.81	34:29	203.12				80.5					
IS	13C-1,2,3,4,6,7,8-HpCDD	4.42e+06	1.07 y	0.65	37:58	185.72				92.8					
IS	13C-OCDD	7.62e+06	0.90 y	0.58	41:18	400.01				104					
IS	13C-2,3,7,8-TCDF	5.92e+06	0.77 y	1.03	25:29	131.51				101					
IS	13C-1,2,3,7,8-PeCDF	5.85e+06	1.57 y	0.85	29:36	157.39				66.7					
IS	13C-2,3,4,7,8-PeCDF	5.55e+06	1.61 y	0.85	30:29	150.63				79.8					
IS	13C-1,2,3,4,7,8-HxCDF	5.33e+06	0.51 y	0.83	33:11	194.81				76.4					
IS	13C-1,2,3,6,7,8-HxCDF	6.19e+06	0.52 y	1.03	33:19	181.99				98.8					
IS	13C-2,3,4,6,7,8-HxCDF	5.91e+06	0.51 y	0.95	33:55	188.43				92.3					
IS	13C-1,2,3,7,8,9-HxCDF	5.70e+06	0.52 y	0.83	34:52	209.48				95.5					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.26e+06	0.42 y	0.76	36:44	211.28				106					
IS	13C-1,2,3,4,7,8,9-HpCDF	4.24e+06	0.43 y	0.58	38:31	221.89				107					
IS	13C-OCDF	1.01e+07	0.87 y	0.69	41:32	444.69				112					
C/Up	37C1-2,3,7,8-TCDD	1.95e+06		1.20	26:17	61.393				113					
RS/RT	13C-1,2,3,4-TCDD	5.22e+06	0.78 y	1.00	25:42	197.26									
RS	13C-1,2,3,4-TCDF	8.59e+06	0.82 y	1.00	24:17	197.26									
RS/RT	13C-1,2,3,4,6,9-HxCDF	6.49e+06	0.52 y	1.00	33:36	197.26									

Integrations Reviewed
 by Analyst: DB by Analyst: CT
 Date: 11/5/19 Date: 11/11/19

Totals class: HxCDD EMPC

Entry #: 23

Run: 9 . File: 191024D2 S: 4 I: 1 F: 3
Acquired: 25-OCT-19 06:12:37 Processed: 28-OCT-19 09:58:47

Total Concentration: 0.18718

Unnamed Concentration: 0.187

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
33:23	2.254e+03	1.934e+03	1.17 y	4.188e+03	0.18718

Totals class: HpCDD EMPC

Entry #: 25

Run: 9

File: 191024D2

S: 4 I: 1 F: 4

Acquired: 25-OCT-19 06:12:37

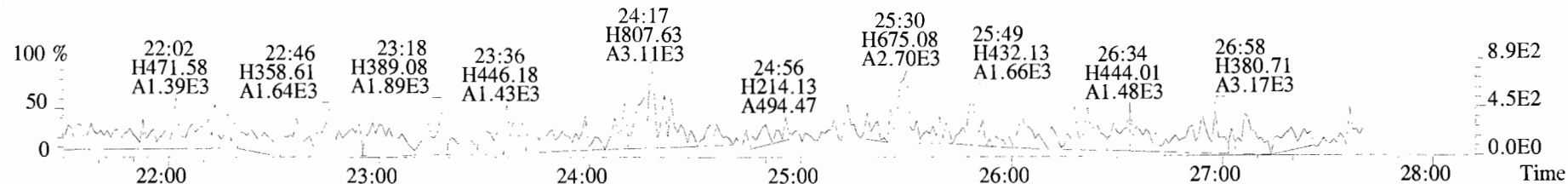
Processed: 28-OCT-19 09:58:47

Total Concentration: 1.4409

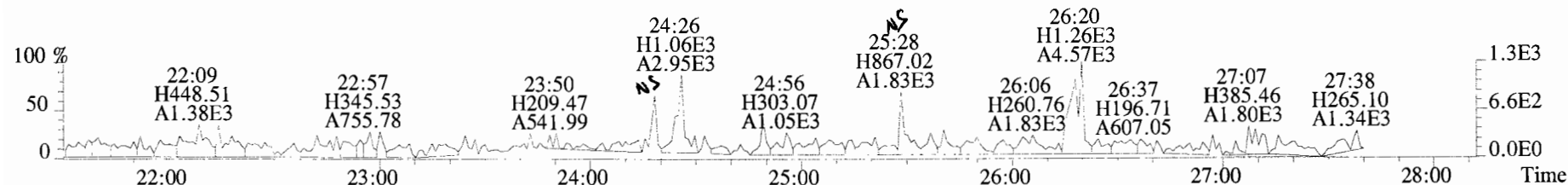
Unnamed Concentration: 0.901

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:08	9.549e+03	1.024e+04	0.93	y	1.979e+04	0.90103
37:58	5.742e+03	6.114e+03	0.94	y	1.186e+04	0.53989 1,2,3,4,6,7,8-HpCDD

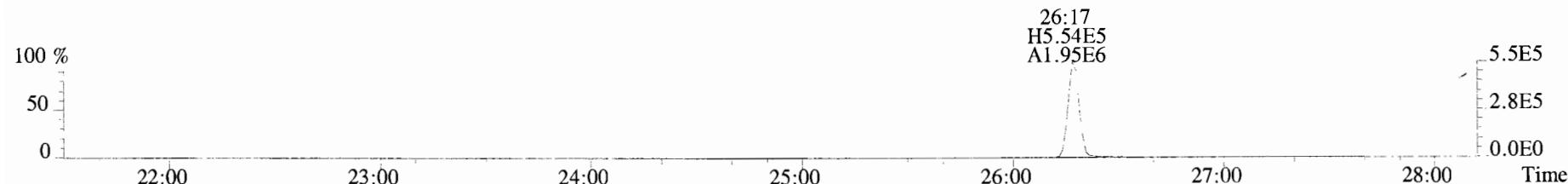
File:191024D2 #1-492 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



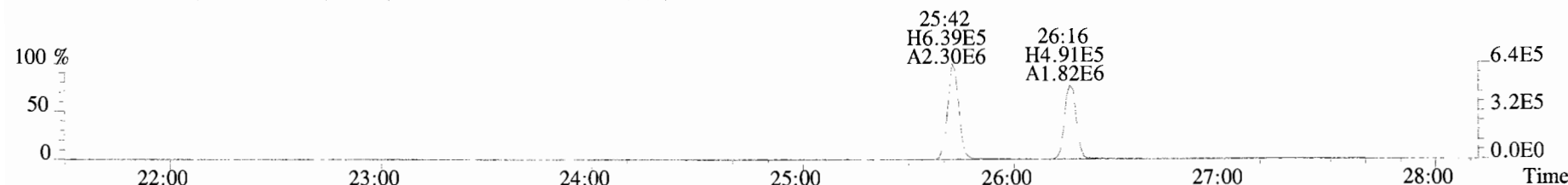
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



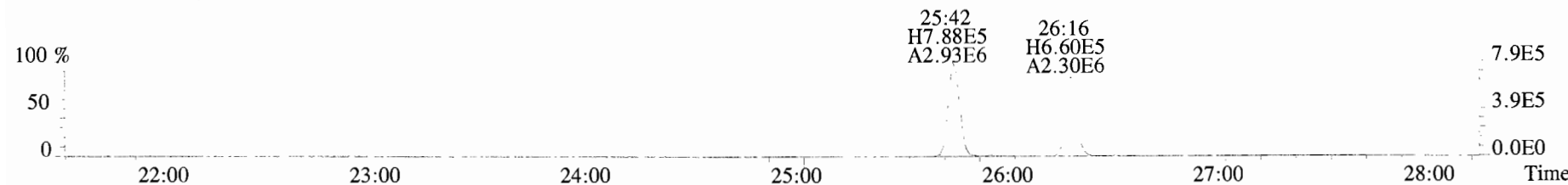
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



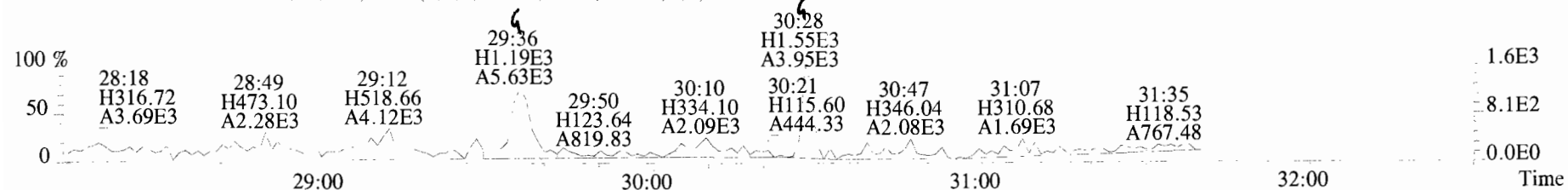
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



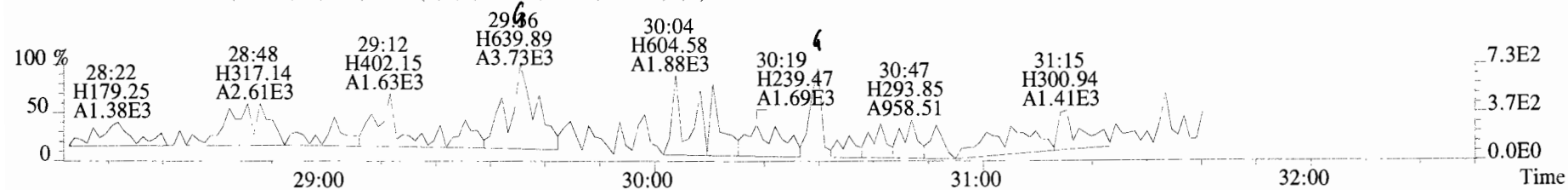
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



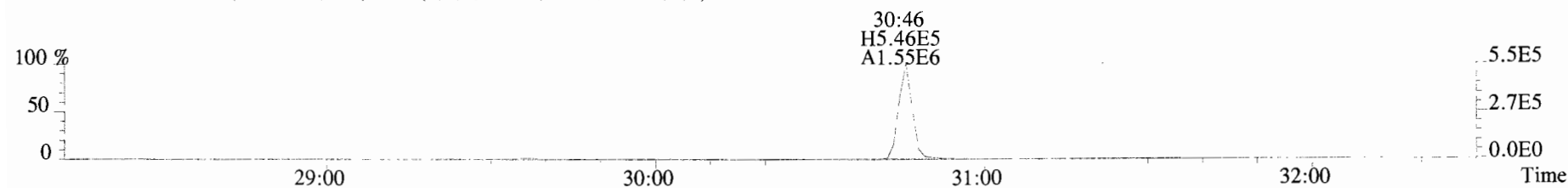
File:191024D2 #1-211 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
 353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



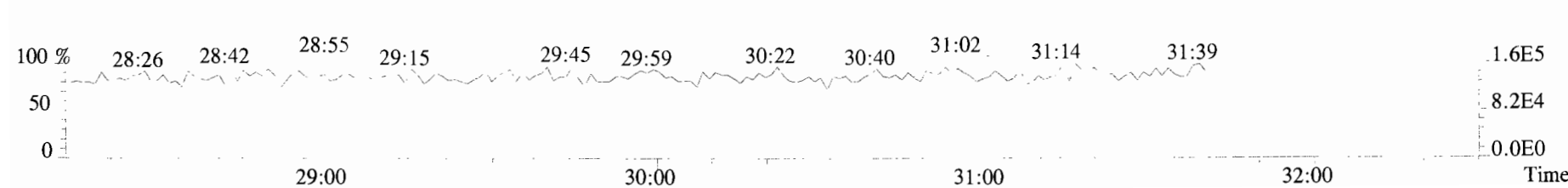
365.8978 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



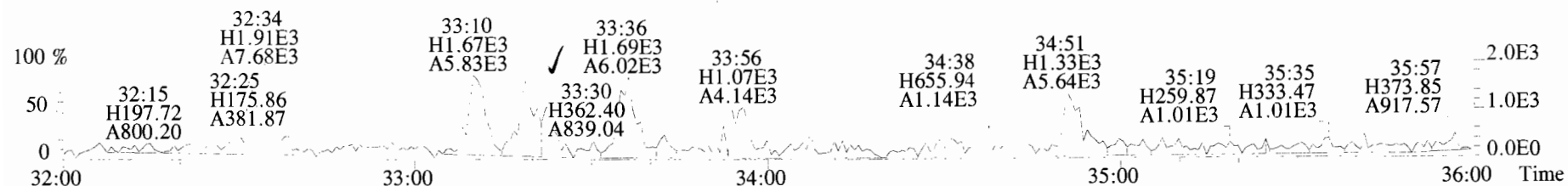
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



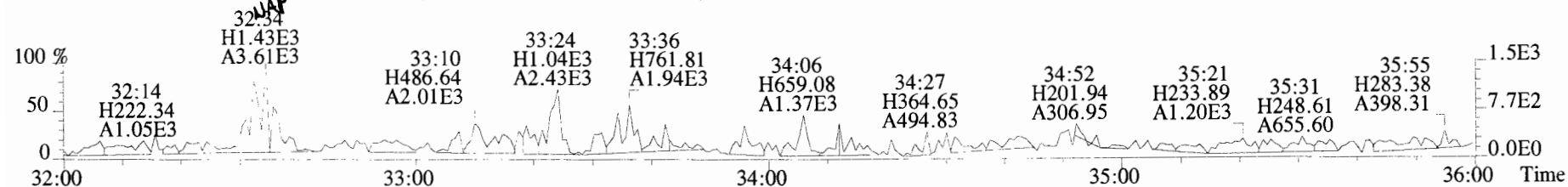
366.9792 S:4 F:2



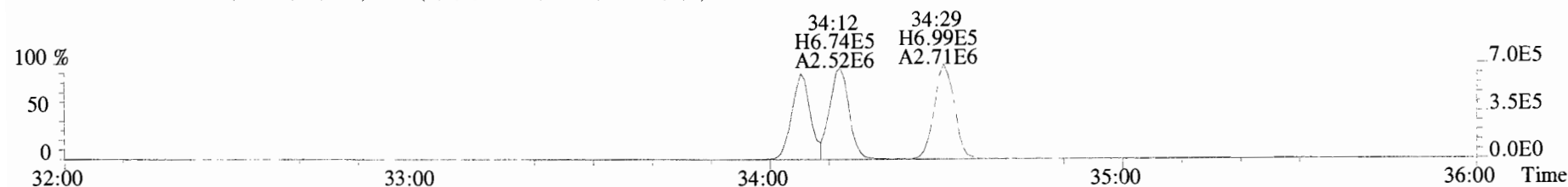
File:191024D2 #1-385 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
 389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



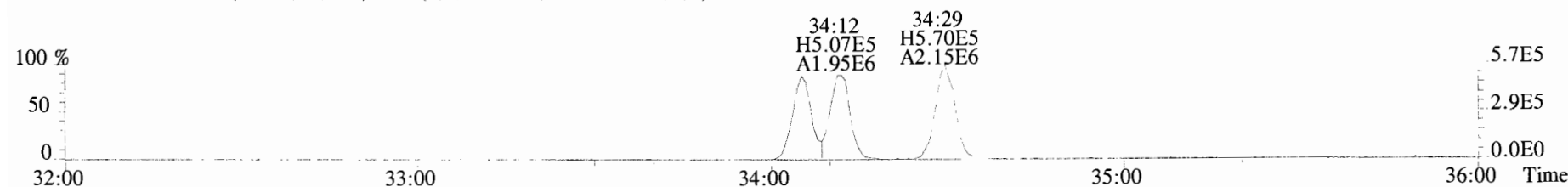
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



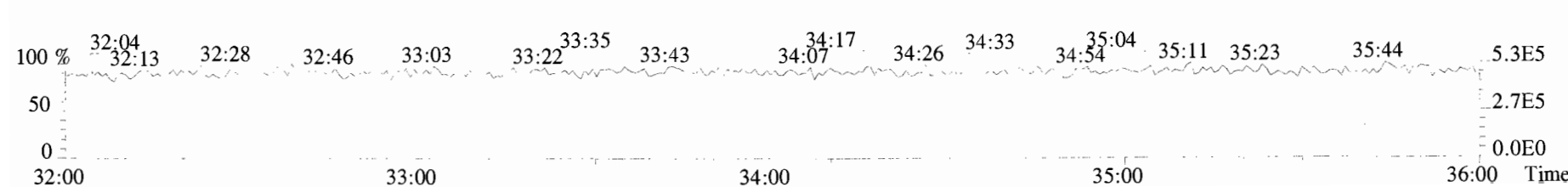
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



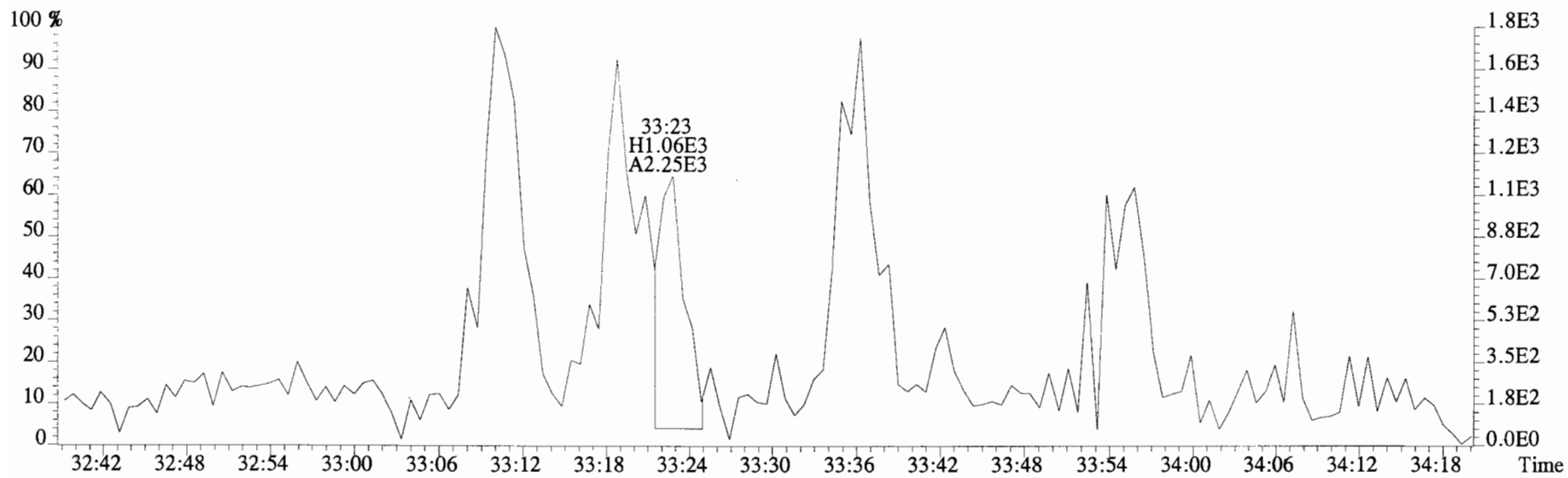
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



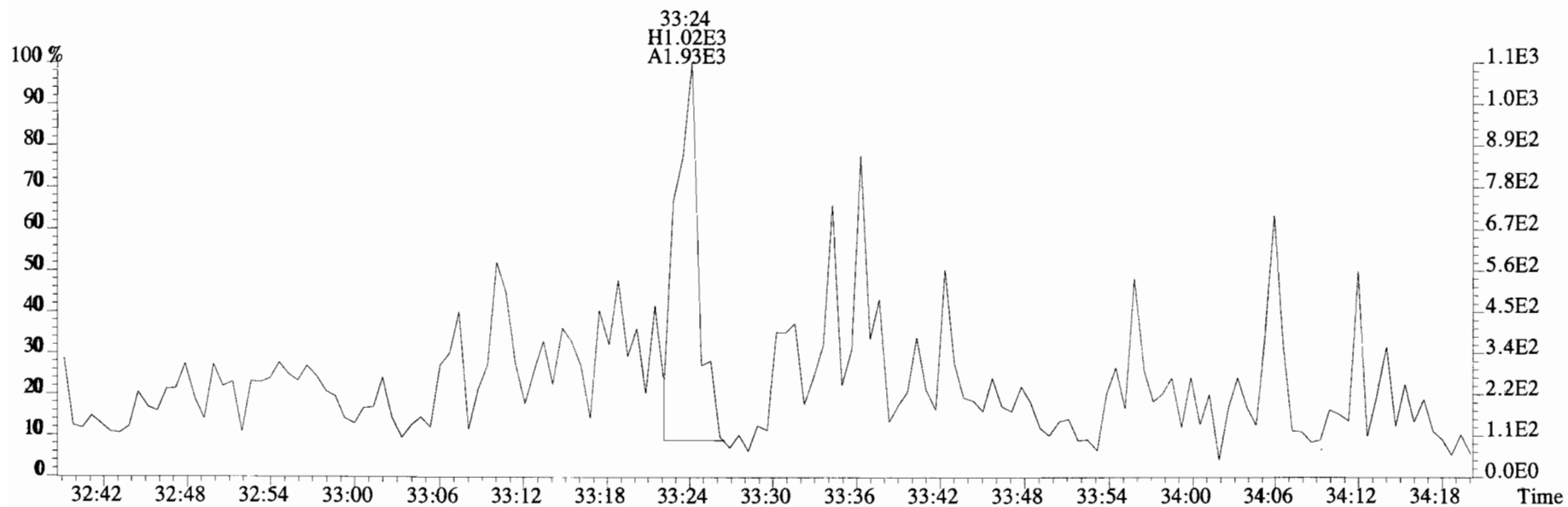
392.9760 S:4 F:3



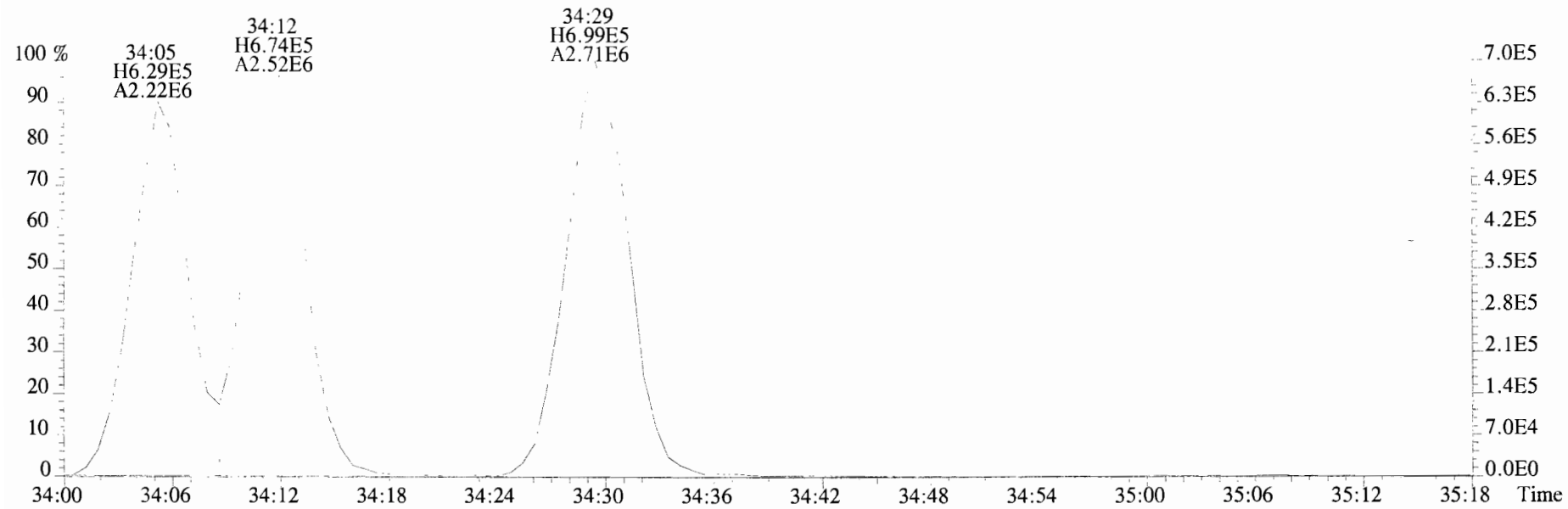
File:191024D2 #1-385 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text: Vista Analytical Laboratory VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



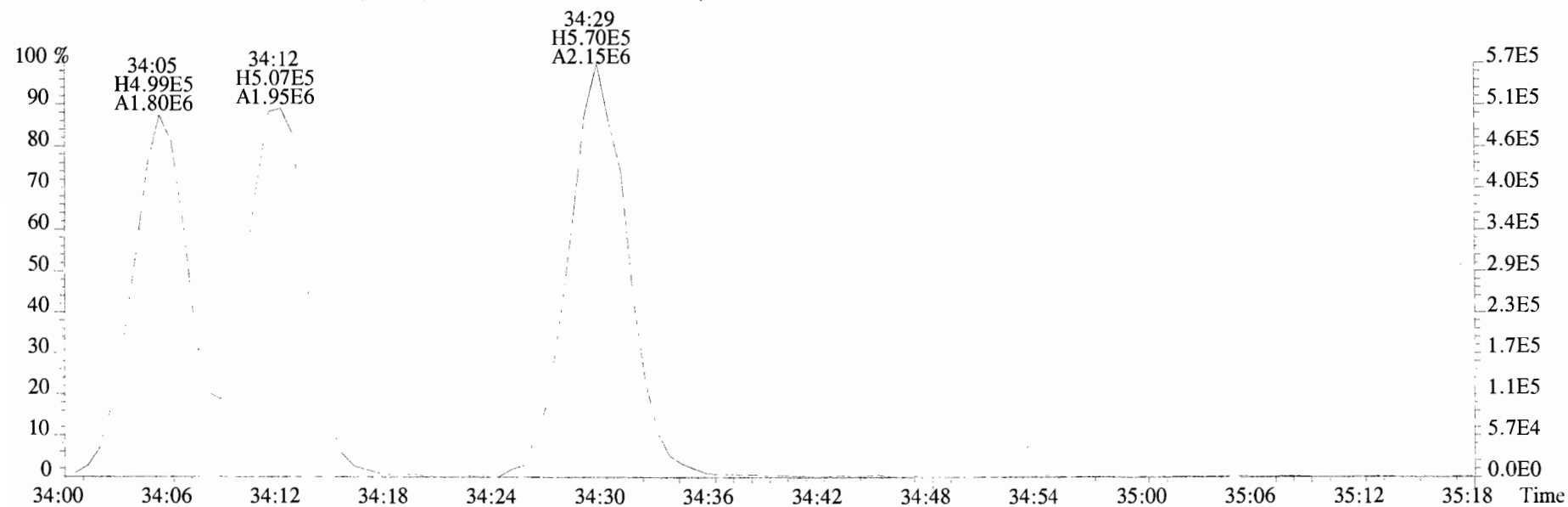
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



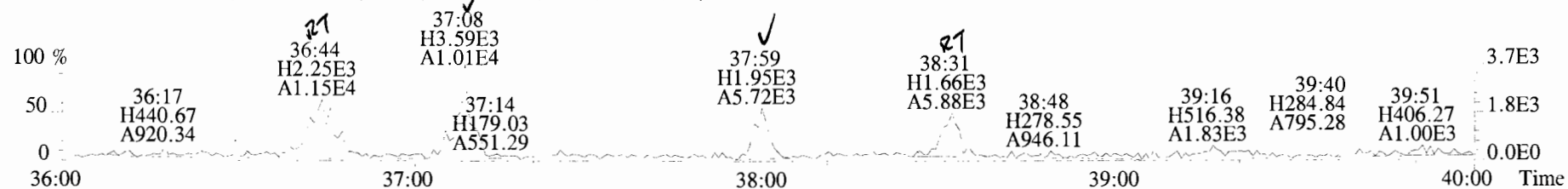
File:191024D2 #1-385 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



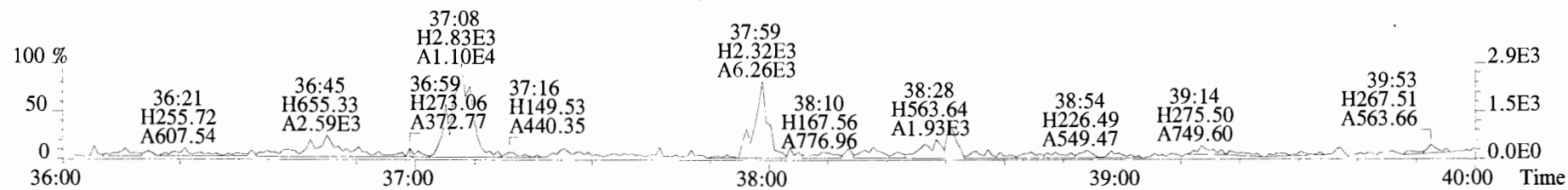
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



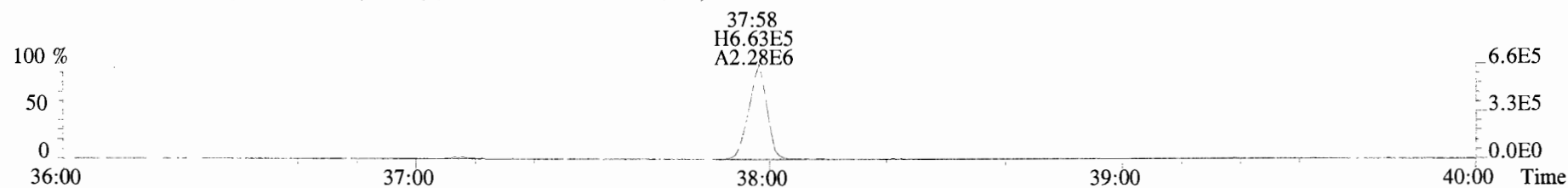
File:191024D2 #1-356 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text: Vista Analytical Laboratory VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
 423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



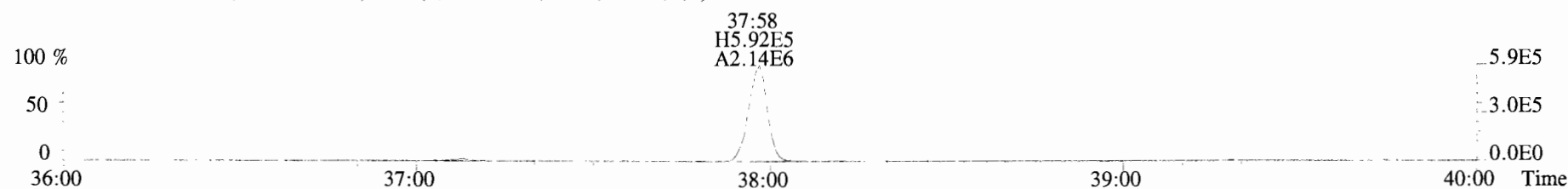
425.7737 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



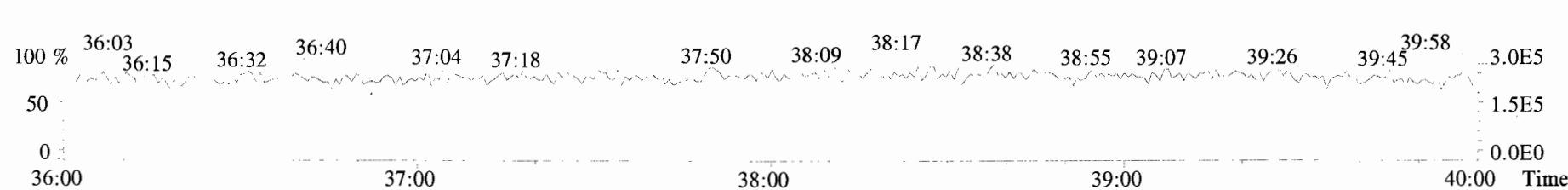
435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



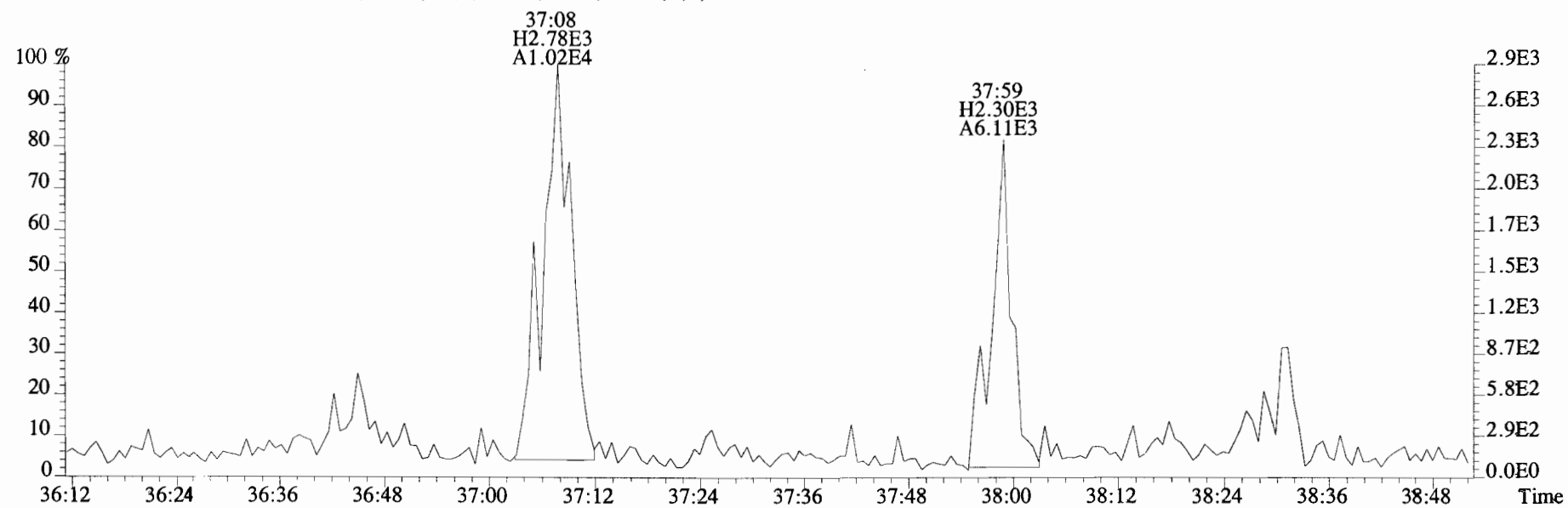
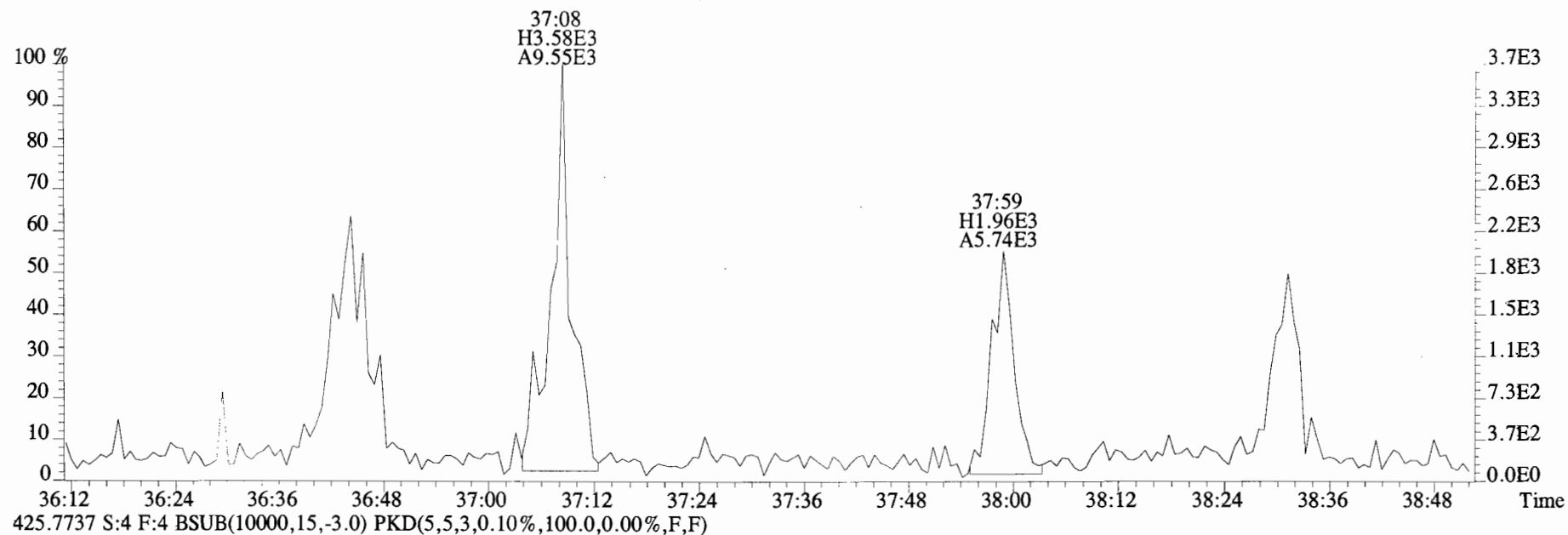
437.8140 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



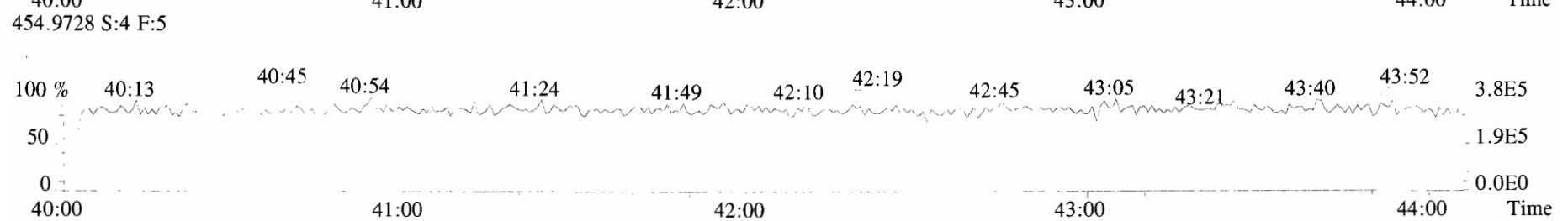
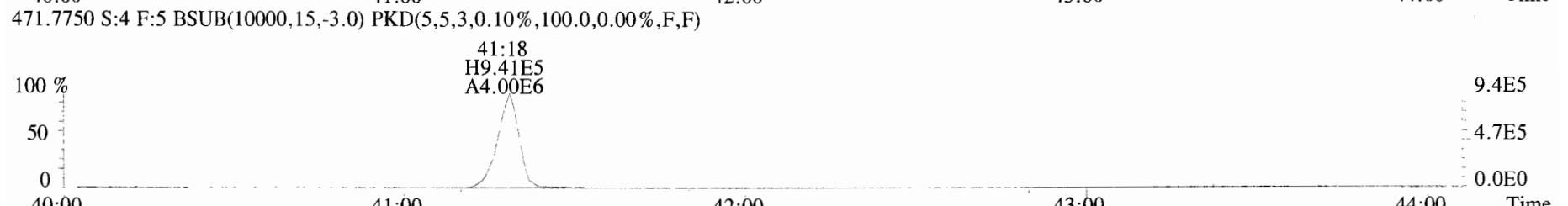
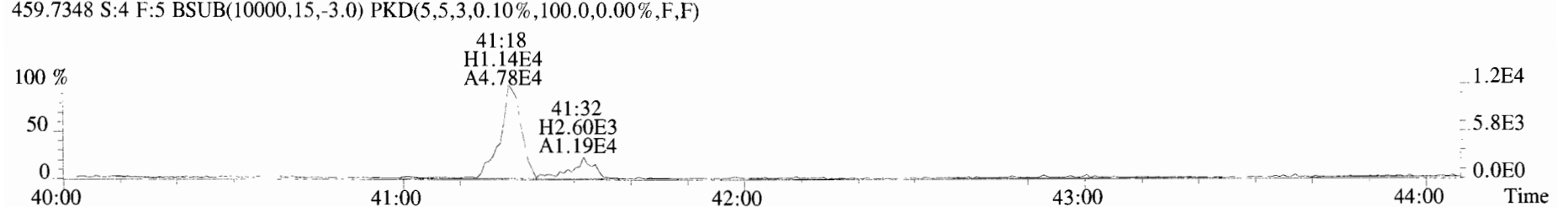
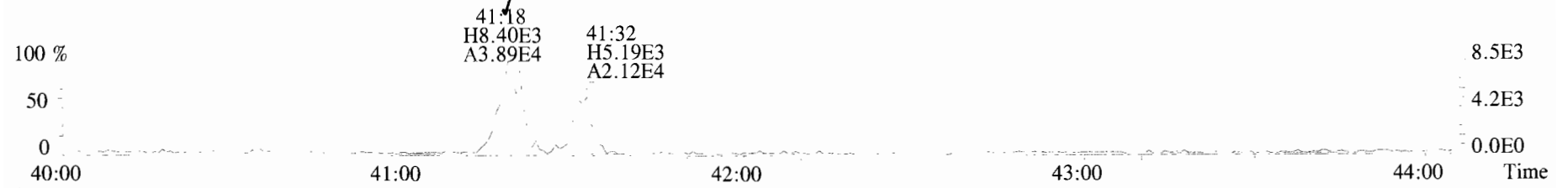
454.9728 S:4 F:4



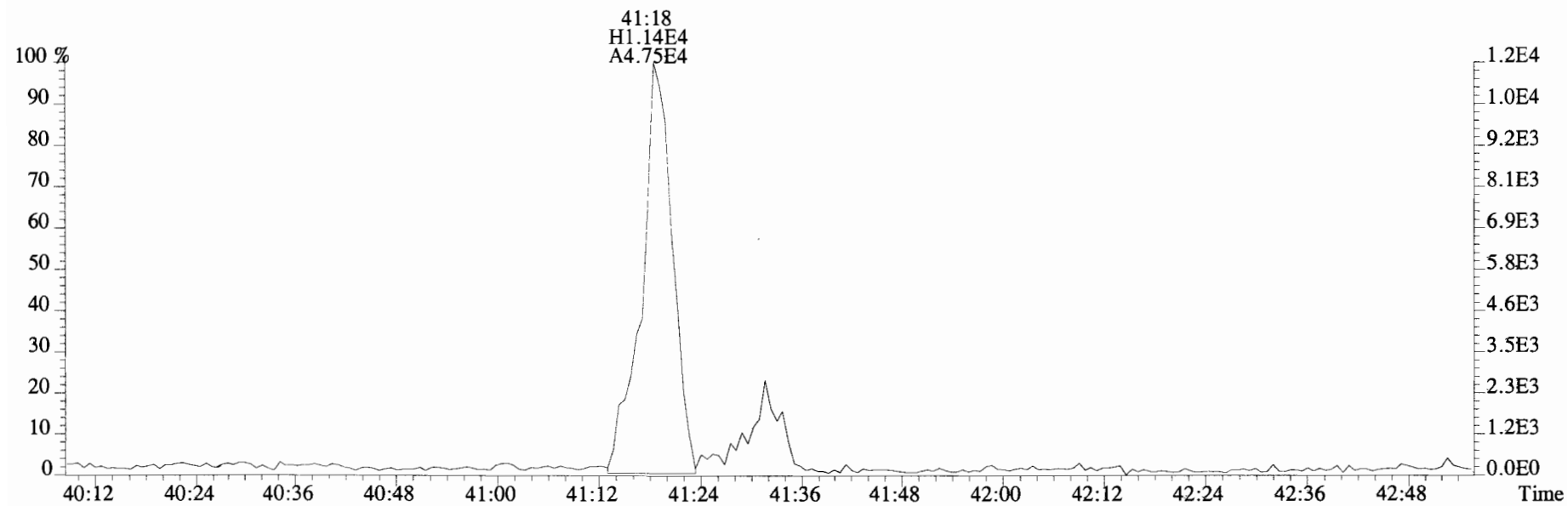
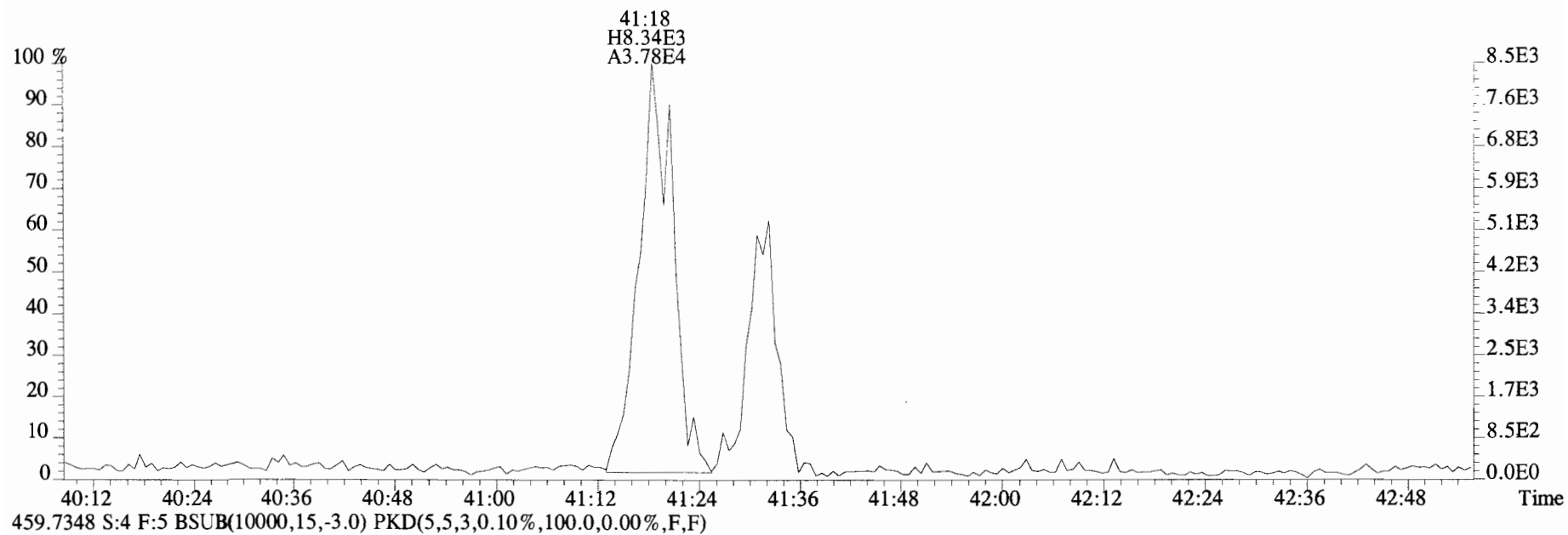
File:191024D2 #1-356 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



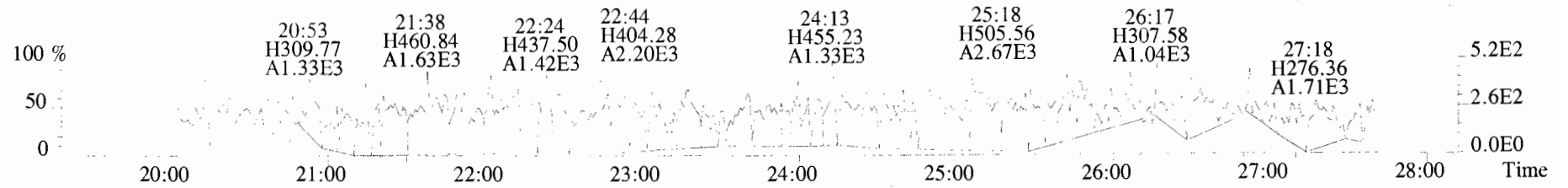
File:191024D2 #1-431 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



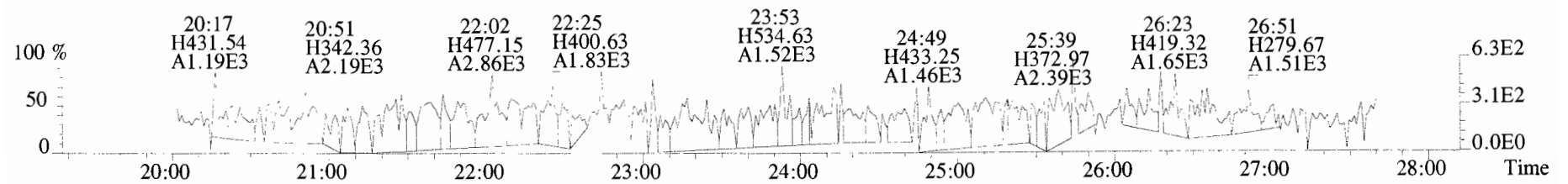
File:191024D2 #1-431 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text: Vista Analytical Laboratory VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



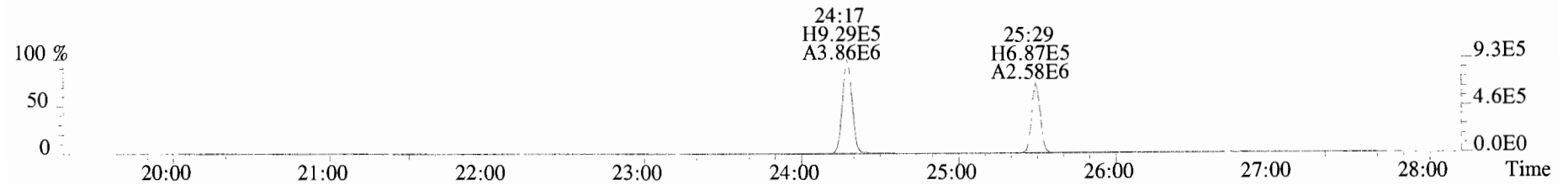
File:191024D2 #1-492 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
 303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



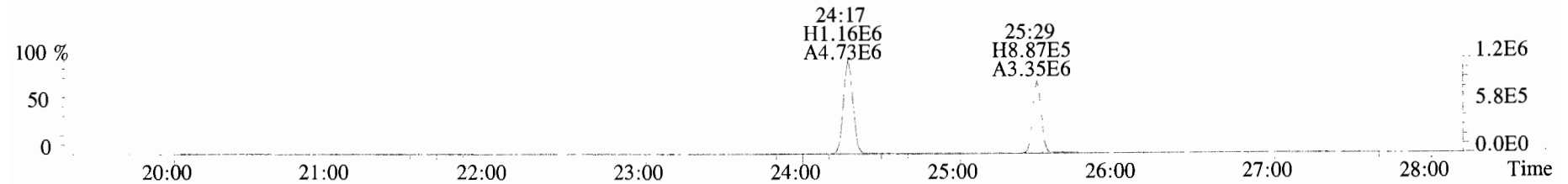
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



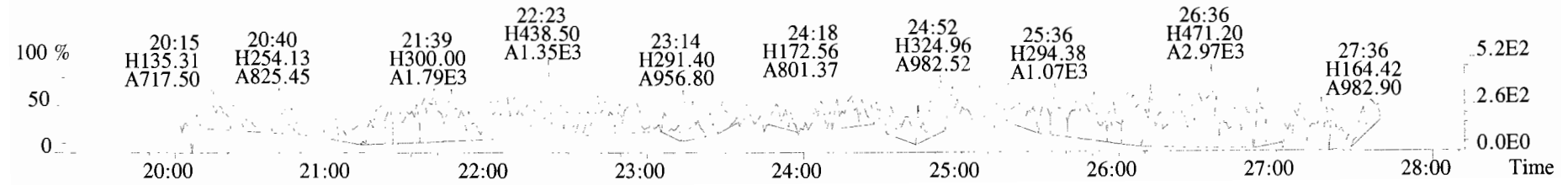
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



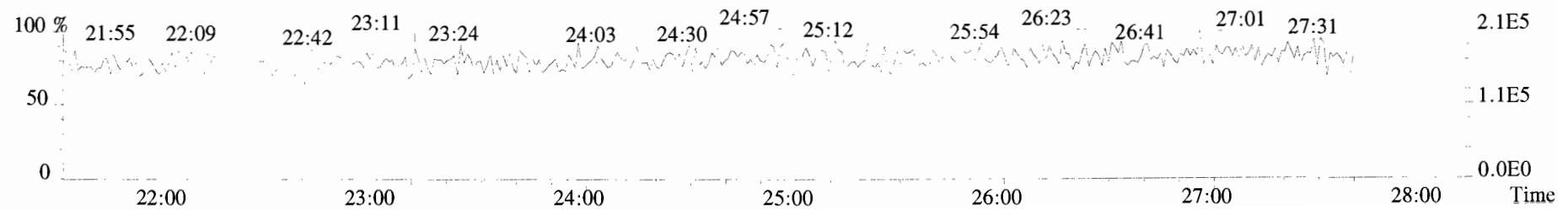
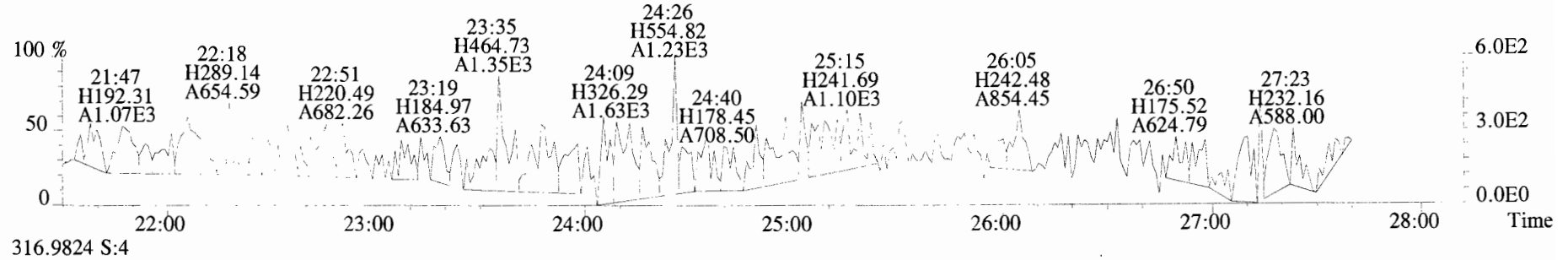
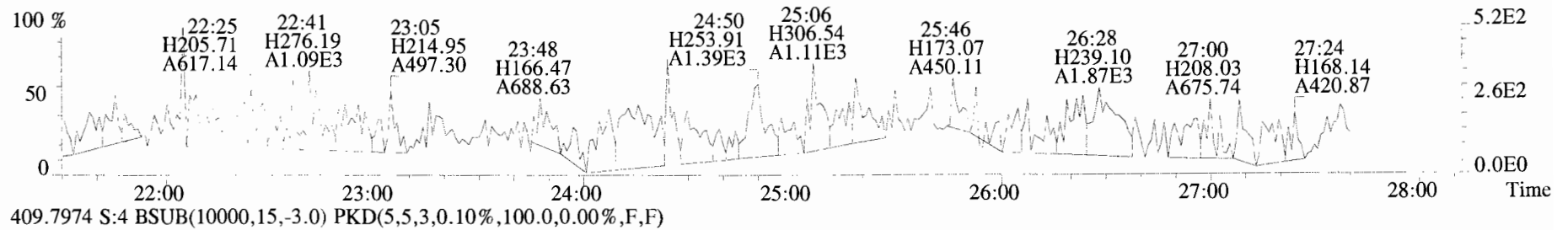
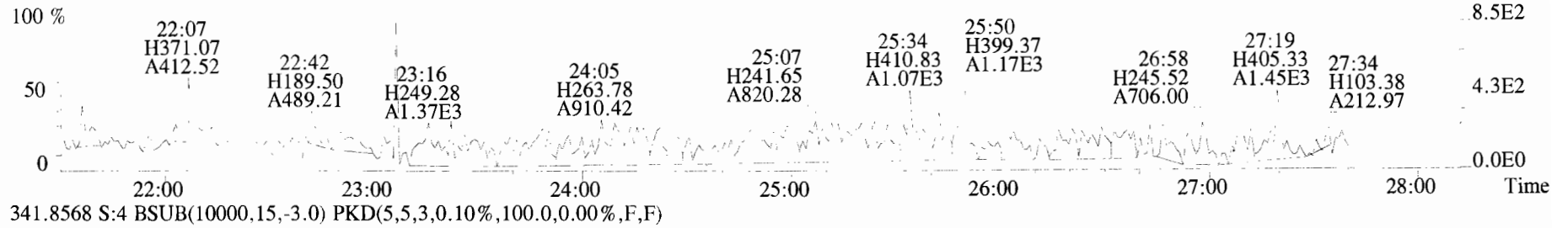
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



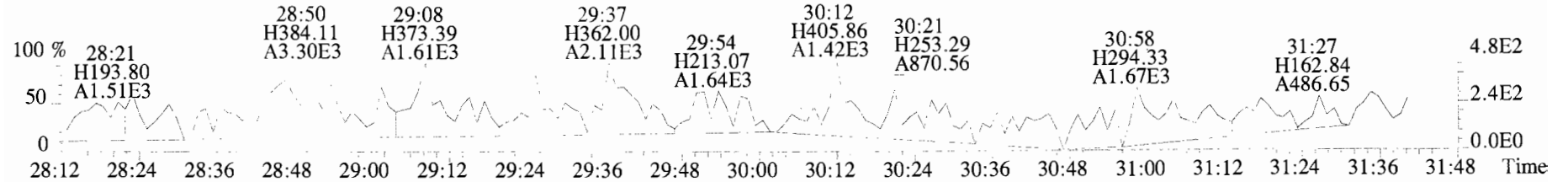
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



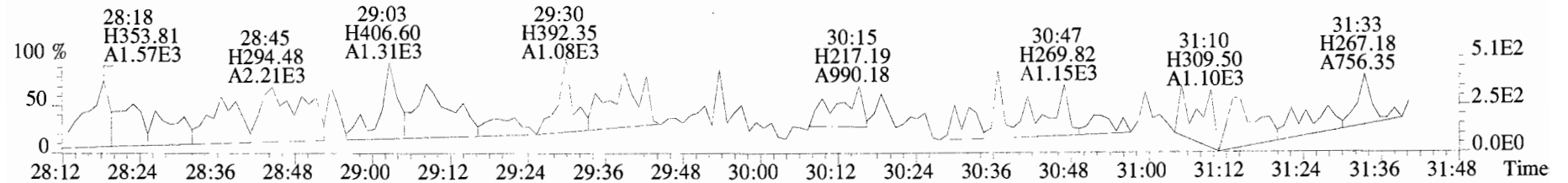
File:191024D2 #1-492 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
 339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



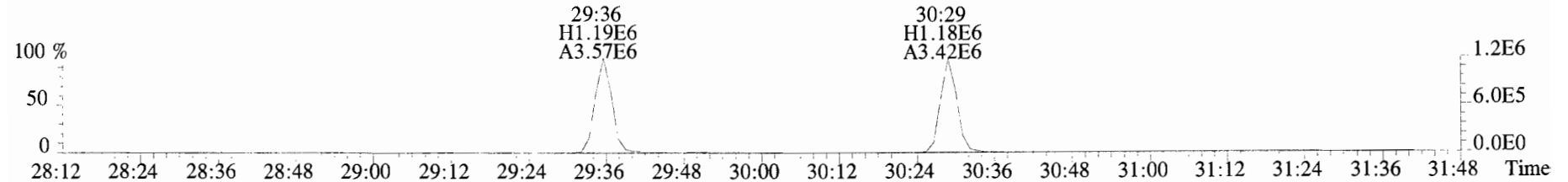
File:191024D2 #1-211 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
 339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



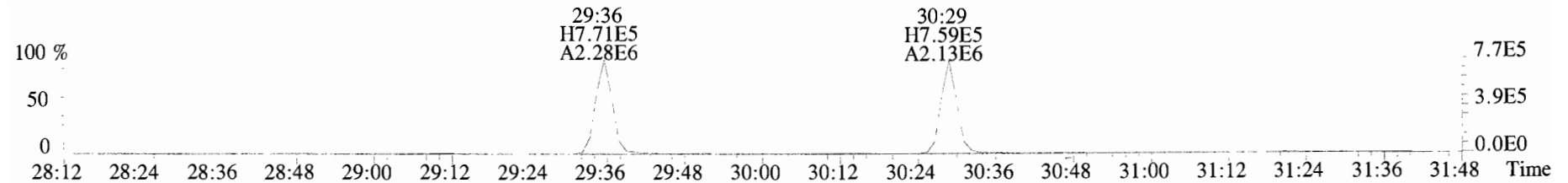
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



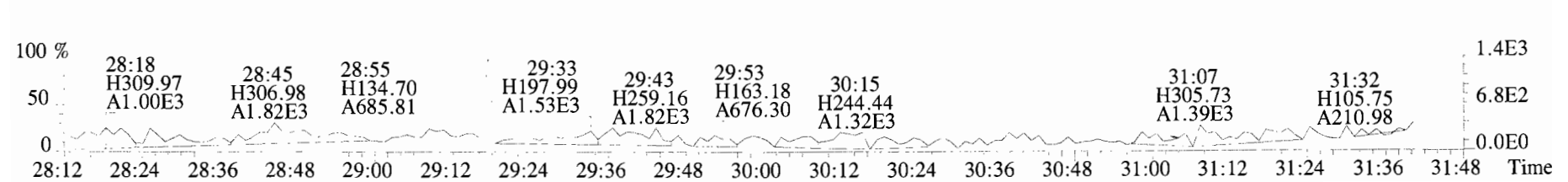
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



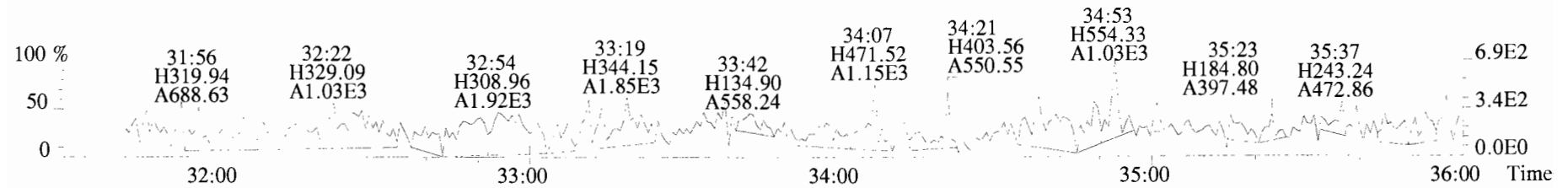
353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



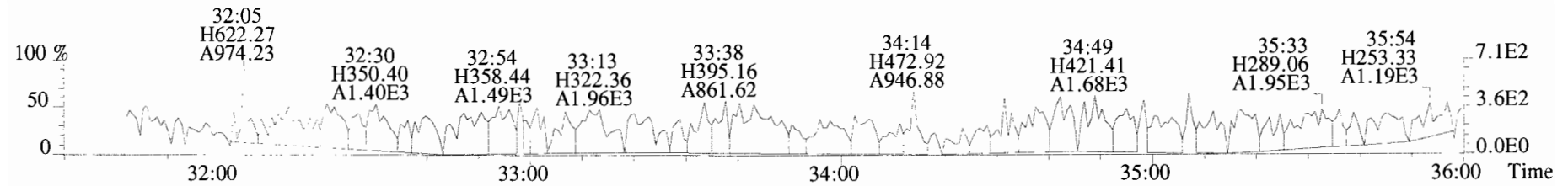
409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



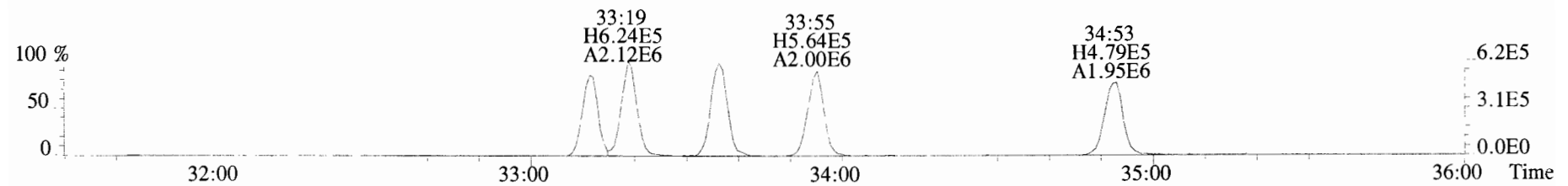
File:191024D2 #1-385 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



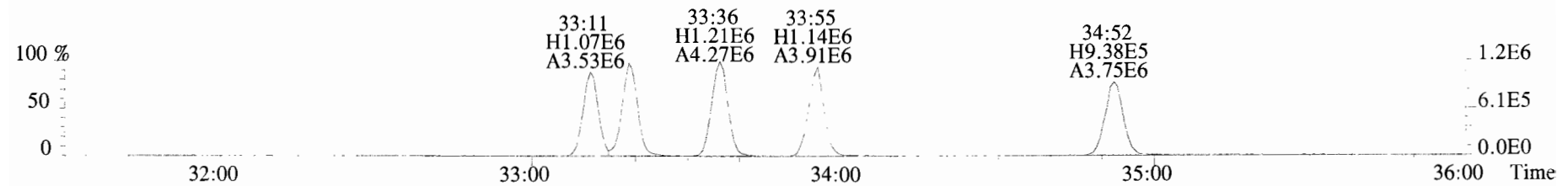
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



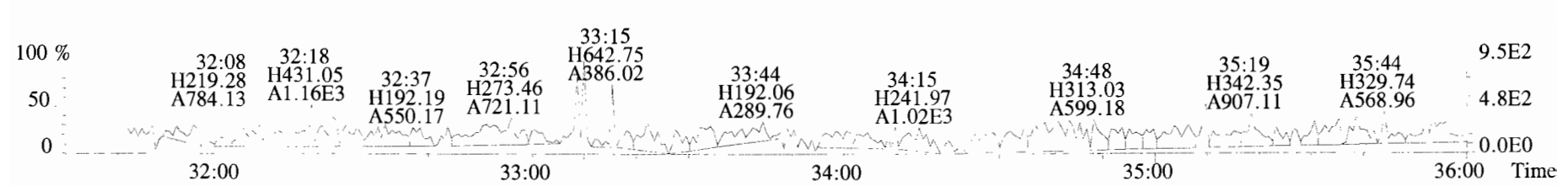
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



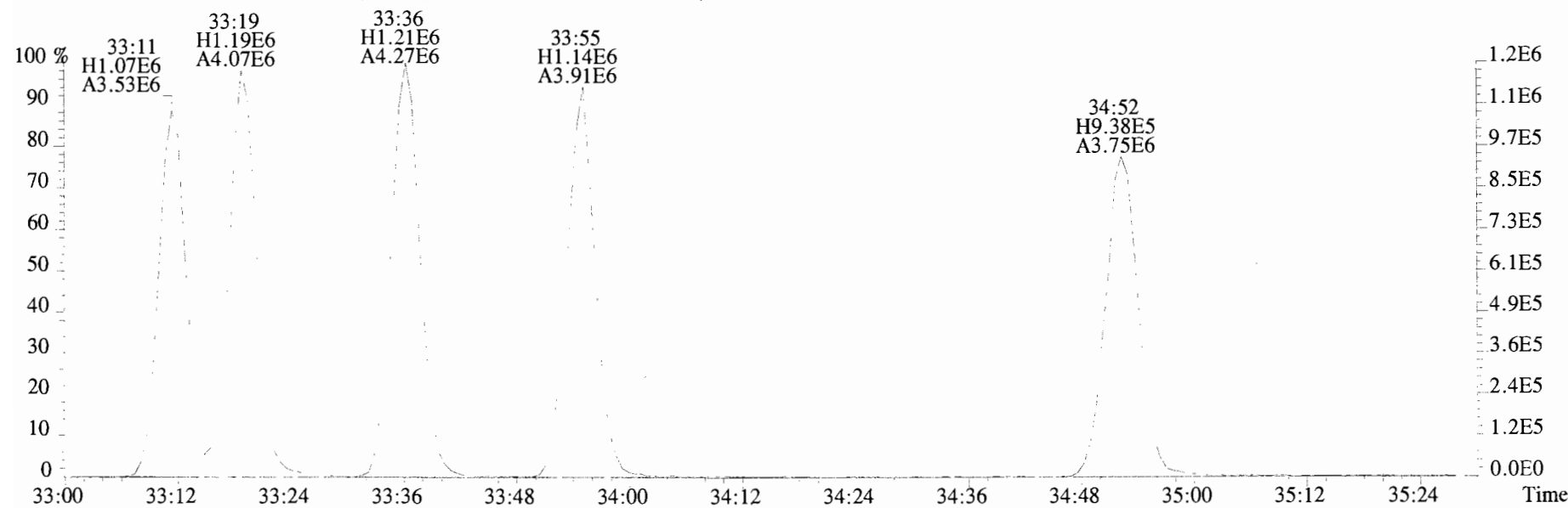
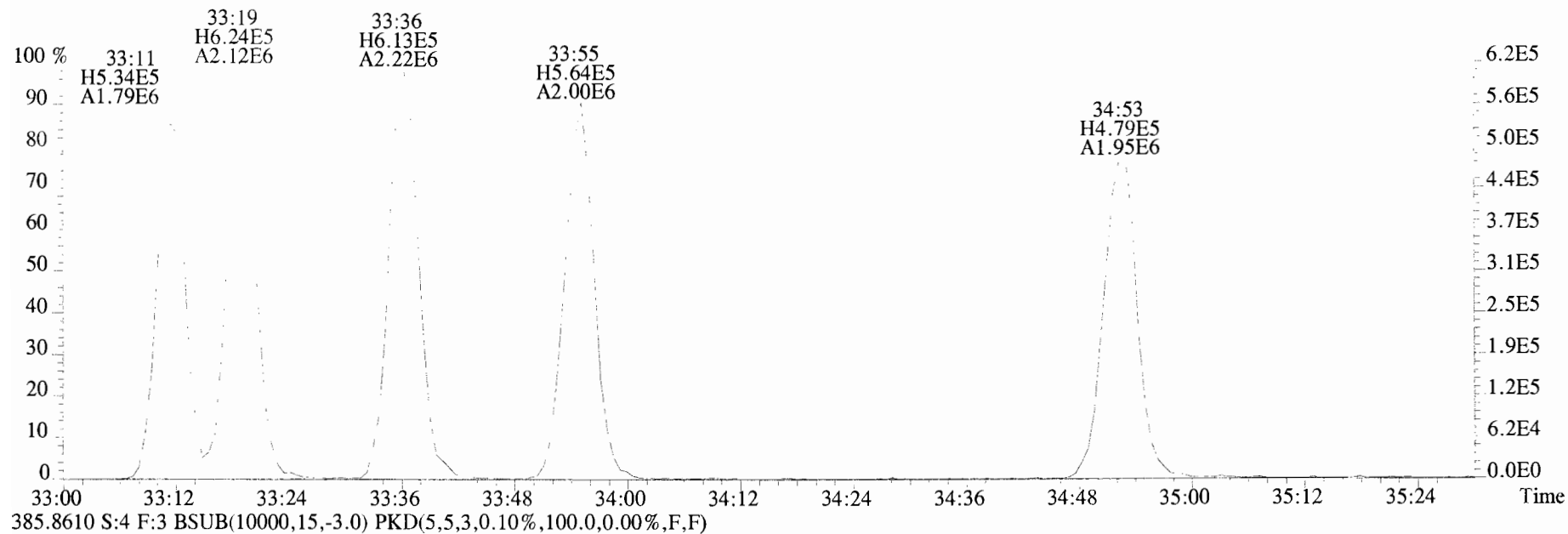
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



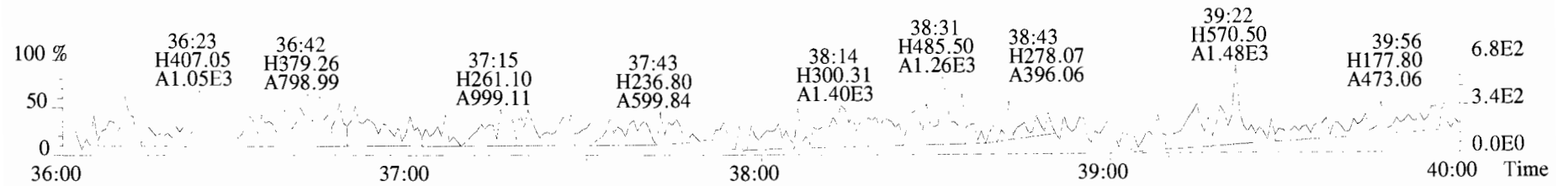
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



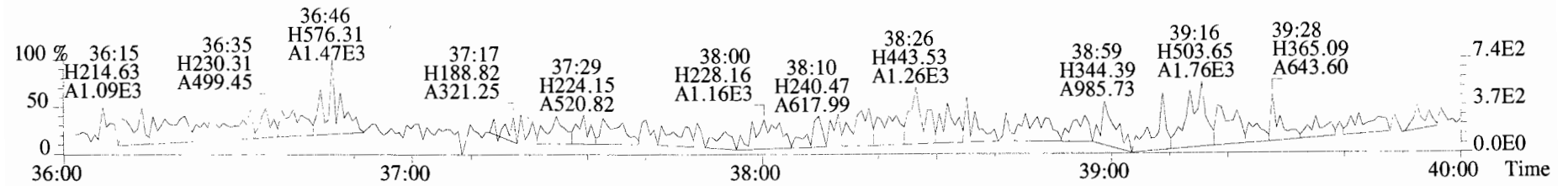
File:191024D2 #1-385 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



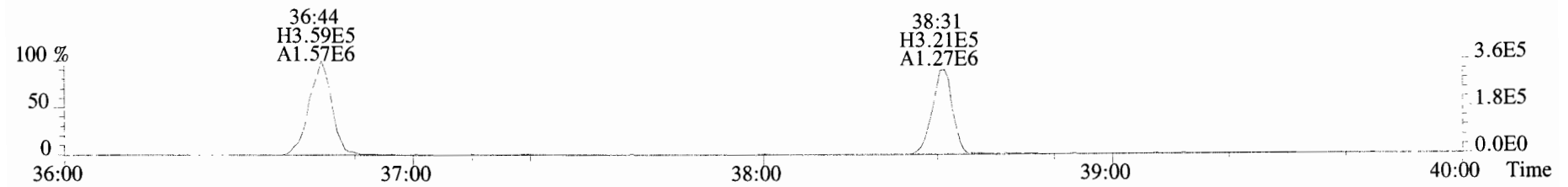
File:191024D2 #1-356 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
 407.7818 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



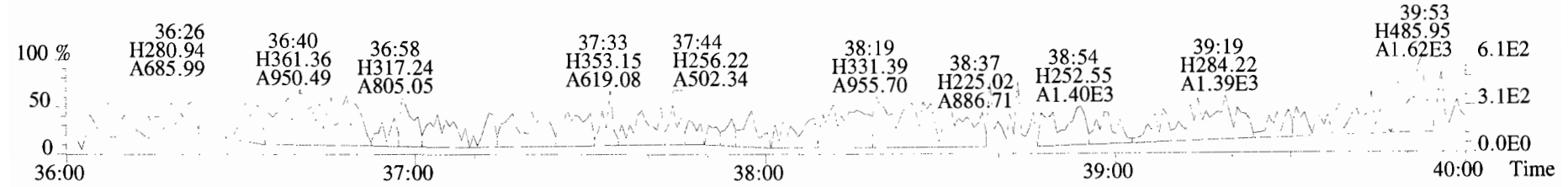
417.8253 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



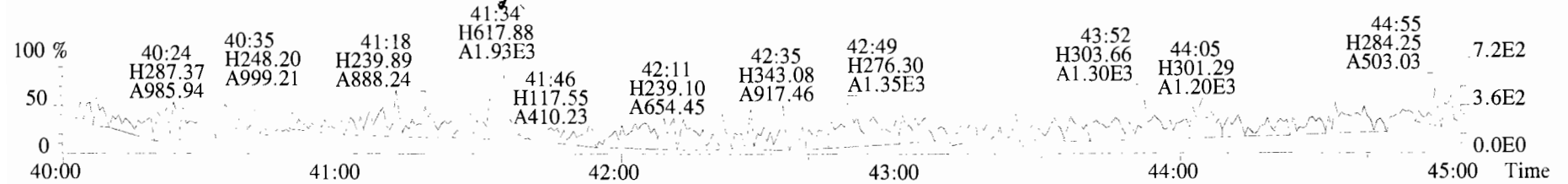
419.8220 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



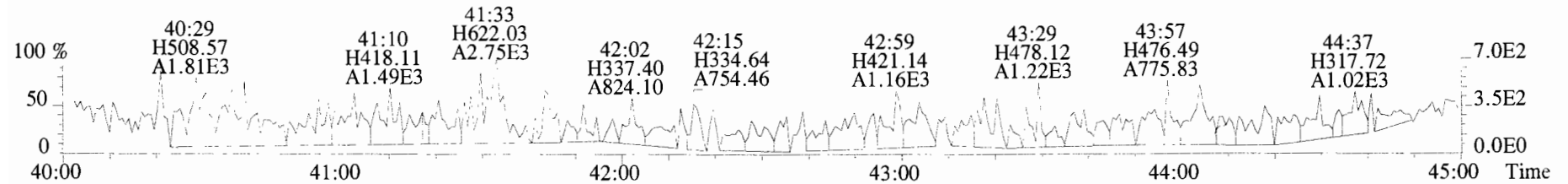
479.7165 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



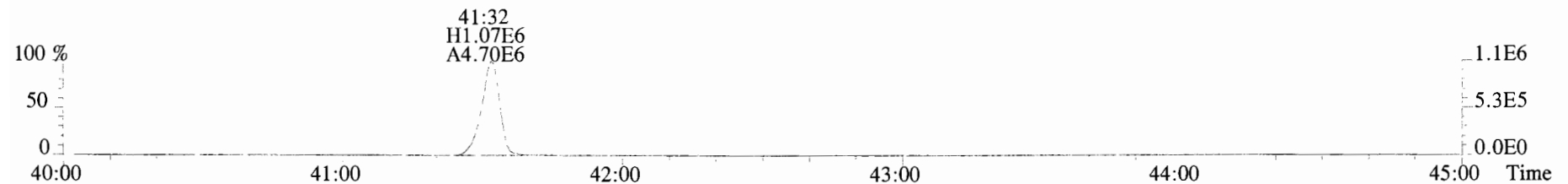
File:191024D2 #1-431 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 Exp:OCDD_DB5
 441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



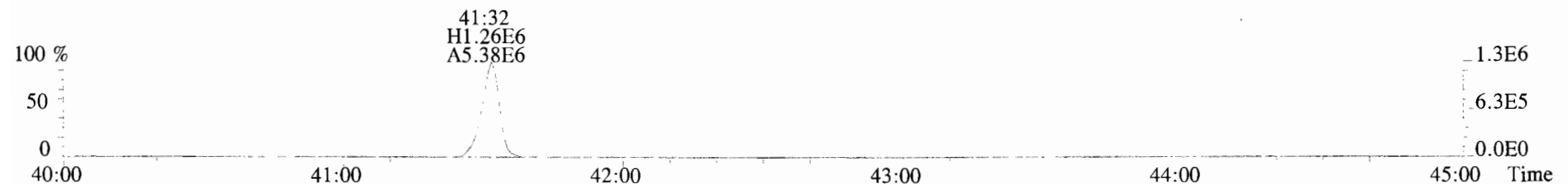
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



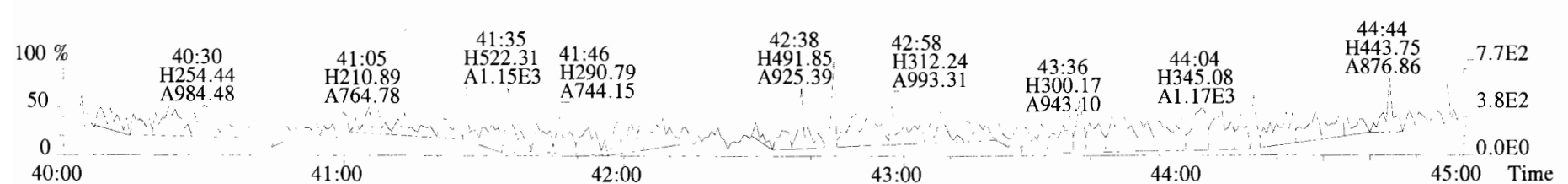
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



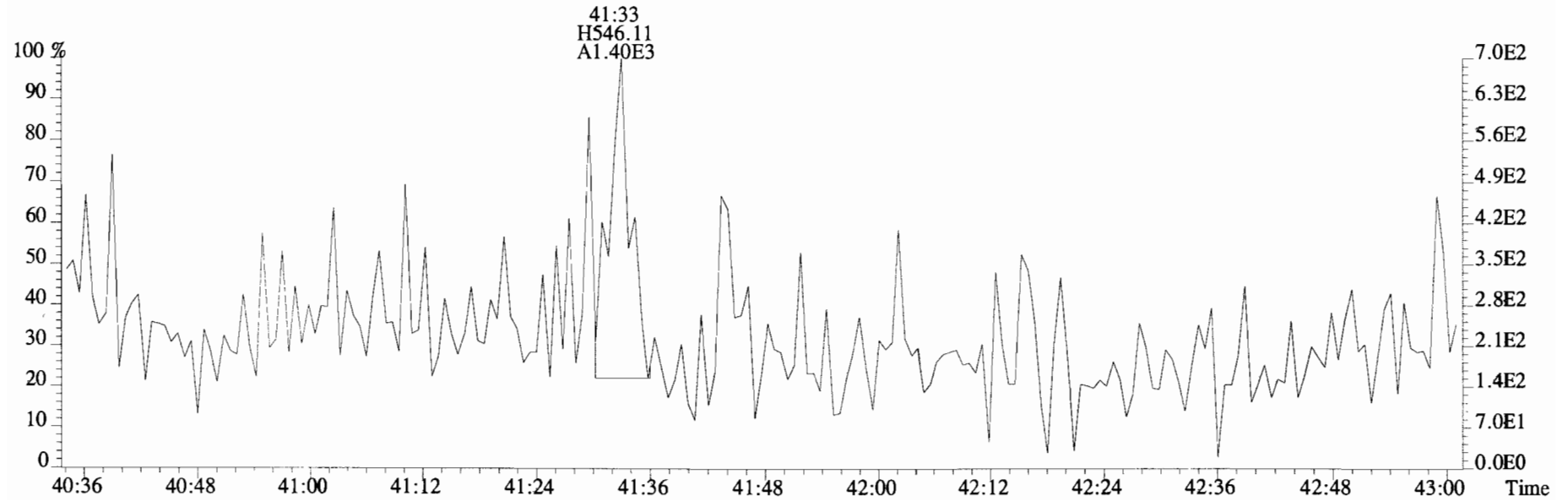
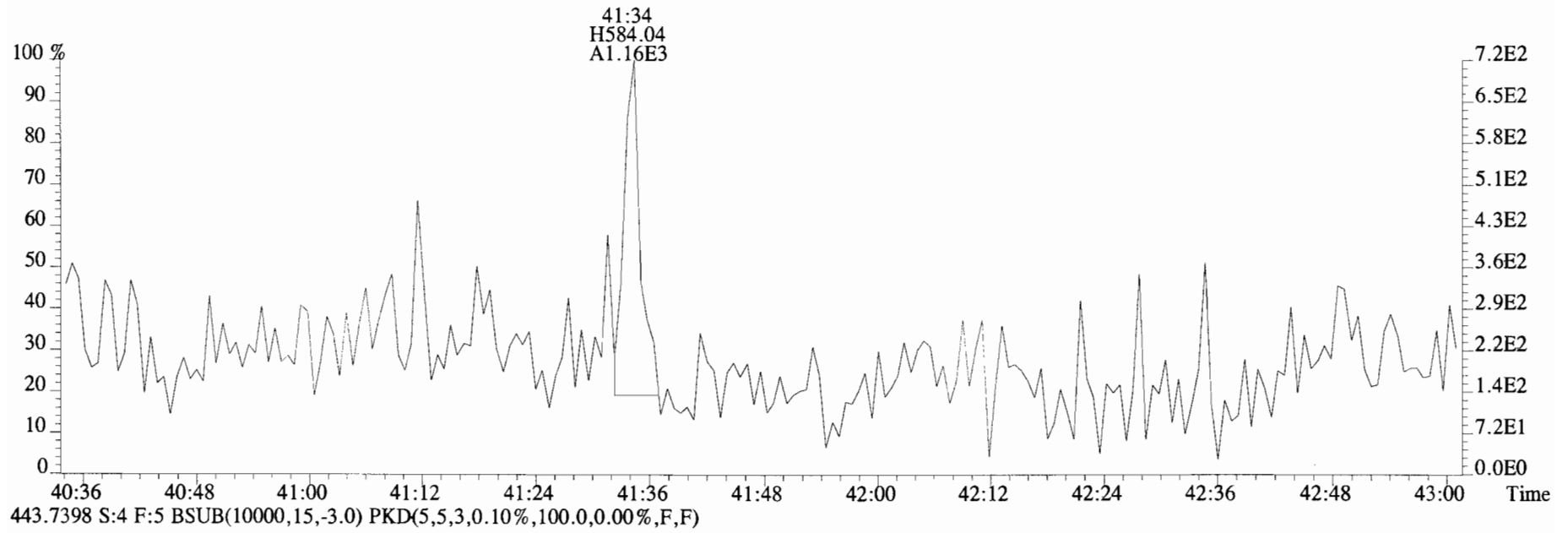
455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191024D2 #1-431 Acq:25-OCT-2019 06:12:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text: Vista Analytical Laboratory VG7 Text:1903546-02 PDI-014SC-A-13-13.5-191003 13.16 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)



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	NotF ₇₁	*		133	2.5	0.0976	Total Tetra-Dioxins	*	*		133	0.0976
1,2,3,7,8-PeCDD	*	* n	0.90	NotF ₇₁	*		167	2.5	0.101	Total Penta-Dioxins	*	*		167	0.101
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF ₇₁	*		179	2.5	0.163	Total Hexa-Dioxins	*	*		179	0.166
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotF ₇₁	*		179	2.5	0.173	Total Hepta-Dioxins	0.906	0.906		*	*
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotF ₇₁	*		179	2.5	0.162	Total Tetra-Furans	*	*		169	0.0924
1,2,3,4,6,7,8-HpCDD	8.75e+03	0.95 y	0.98	37:56	0.38640			* 2.5	*	Total Penta-Furans	0.0000	0.0000		160	0.0951
OCDD	3.73e+04	0.86 y	0.96	41:15	1.9382			* 2.5	*	Total Hexa-Furans	*	*		177	0.0735
										Total Hepta-Furans	*	*		201	0.104
2,3,7,8-TCDF	*	* n	0.95	NotF ₇₁	*		169	2.5	0.0924						
1,2,3,7,8-PeCDF	*	* n	0.96	NotF ₇₁	*		160	2.5	0.0970						
2,3,4,7,8-PeCDF	*	* n	1.01	NotF ₇₁	*		160	2.5	0.0935						
1,2,3,4,7,8-HxCDF	*	* n	1.18	NotF ₇₁	*		177	2.5	0.0670						
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotF ₇₁	*		177	2.5	0.0657						
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotF ₇₁	*		177	2.5	0.0719						
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotF ₇₁	*		177	2.5	0.0918						
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	NotF ₇₁	*		201	2.5	0.110						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotF ₇₁	*		201	2.5	0.0967						
OCDF	*	* n	0.95	NotF ₇₁	*		192	2.5	0.171						
										Rec	Qual				
IS	13C-2,3,7,8-TCDD	4.73e+06	0.79 y	1.10	26:14	158.20				81.0					
IS	13C-1,2,3,7,8-PeCDD	4.15e+06	0.62 y	0.88	30:43	172.44				88.3					
IS	13C-1,2,3,4,7,8-HxCDD	3.92e+06	1.25 y	0.64	34:02	173.56				88.9					
IS	13C-1,2,3,6,7,8-HxCDD	4.45e+06	1.26 y	0.86	34:09	147.60				75.6					
IS	13C-1,2,3,7,8,9-HxCDD	4.76e+06	1.25 y	0.81	34:27	167.53				85.8					
IS	13C-1,2,3,4,6,7,8-HpCDD	4.52e+06	1.08 y	0.65	37:55	196.12				100					
IS	13C-OCDD	7.85e+06	0.94 y	0.58	41:15	384.62				98.5					
IS	13C-2,3,7,8-TCDF	6.70e+06	0.83 y	1.03	25:27	140.18				71.8					
IS	13C-1,2,3,7,8-PeCDF	6.38e+06	1.56 y	0.85	29:33	161.64				82.8					
IS	13C-2,3,4,7,8-PeCDF	6.07e+06	1.66 y	0.85	30:26	155.14				79.4					
IS	13C-1,2,3,4,7,8-HxCDF	5.41e+06	0.51 y	0.83	33:09	184.85				94.7					
IS	13C-1,2,3,6,7,8-HxCDF	6.23e+06	0.52 y	1.03	33:17	170.94				87.5					
IS	13C-2,3,4,6,7,8-HxCDF	5.80e+06	0.52 y	0.95	33:52	172.70				88.4					
IS	13C-1,2,3,7,8,9-HxCDF	5.36e+06	0.54 y	0.83	34:49	183.95				94.2					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.18e+06	0.44 y	0.76	36:41	194.15				99.4					
IS	13C-1,2,3,4,7,8,9-HpCDF	4.19e+06	0.43 y	0.58	38:28	204.51				105					
IS	13C-OCDF	9.80e+06	0.92 y	0.69	41:28	403.83				103					
C/Up	37C1-2,3,7,8-TCDD	2.31e+06		1.20	26:15	70.823				90.7					
RS/RT	13C-1,2,3,4-TCDD	5.33e+06	0.79 y	1.00	25:40	195.28									
RS	13C-1,2,3,4-TCDF	9.02e+06	0.81 y	1.00	24:15	195.28									
RS/RT	13C-1,2,3,4,6,9-HxCDF	6.88e+06	0.53 y	1.00	33:34	195.28									

Integrations
 by DB
 Analyst: DB
 Date: 11/5/19
 Reviewed
 by OT
 Analyst: OT
 Date: 11/11/19

Totals class: HpCDD EMPC

Entry #: 25

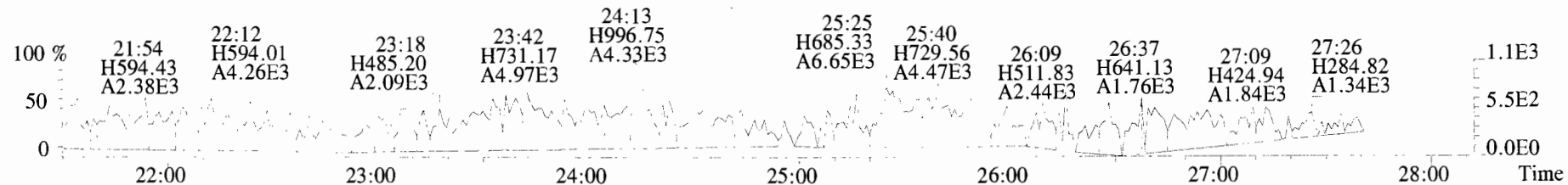
Run: 10 File: 191024D2 S: 5 I: 1 F: 4
Acquired: 25-OCT-19 07:00:34 Processed: 28-OCT-19 09:58:47

Total Concentration: 0.90647

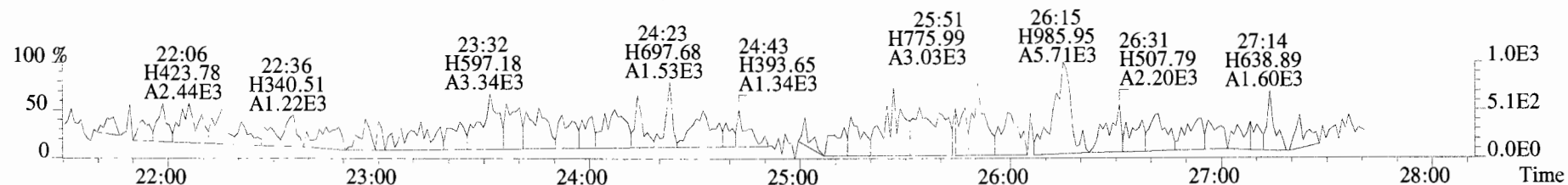
Unnamed Concentration: 0.520

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:04	5.653e+03	6.125e+03	0.92 y	1.178e+04	0.52007
37:56	4.271e+03	4.480e+03	0.95 y	8.751e+03	0.38640 1,2,3,4,6,7,8-HpCDD

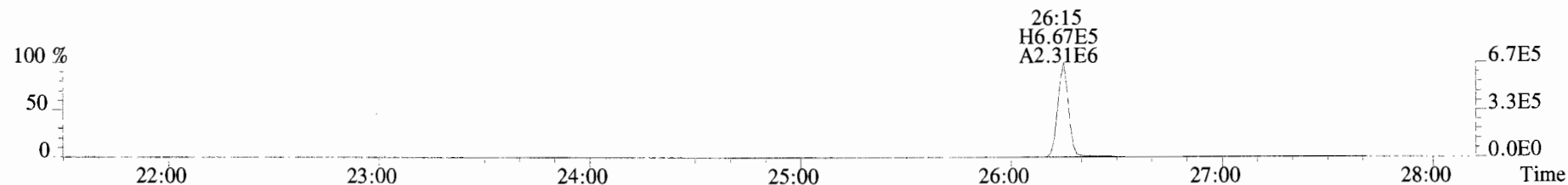
File:191024D2 #1-493 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



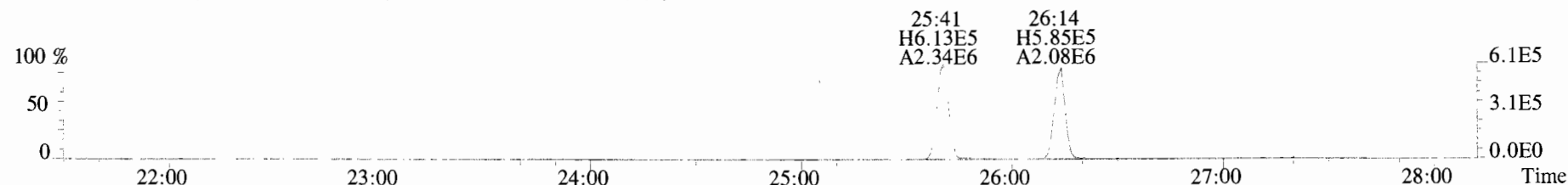
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



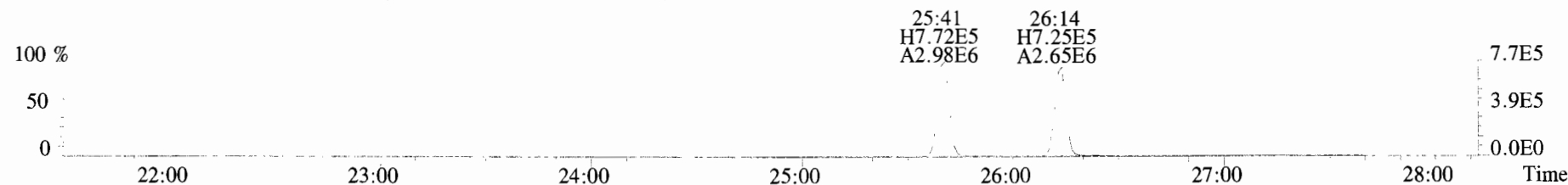
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



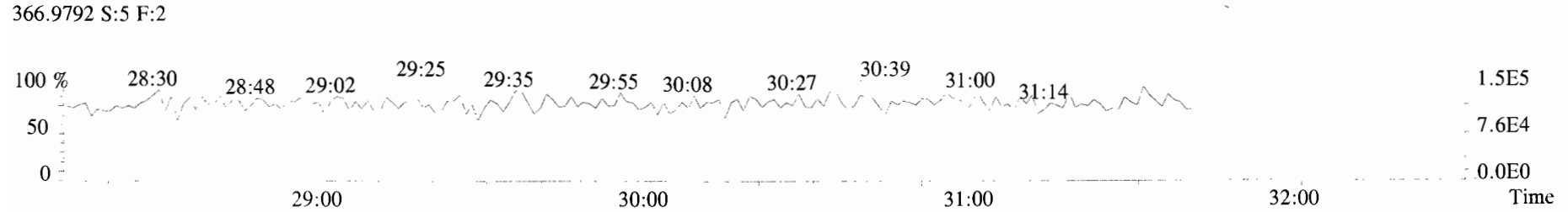
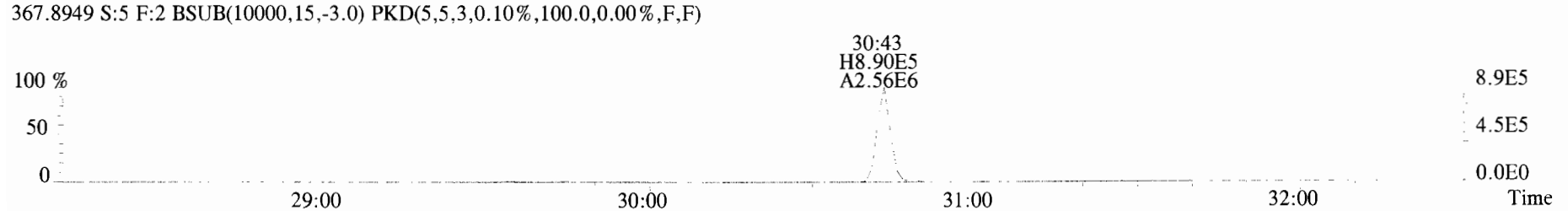
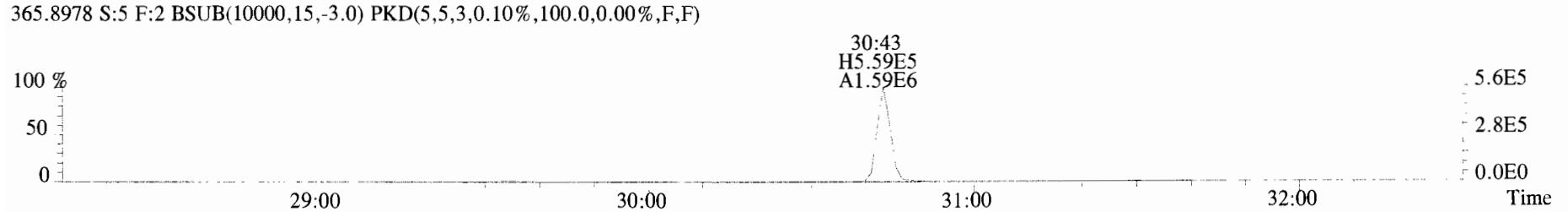
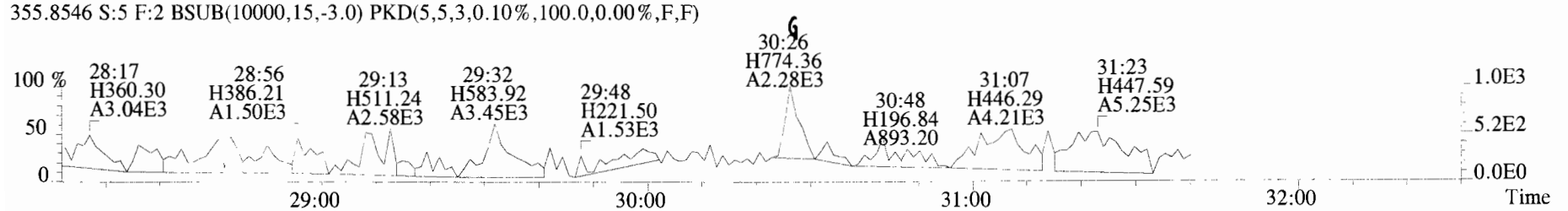
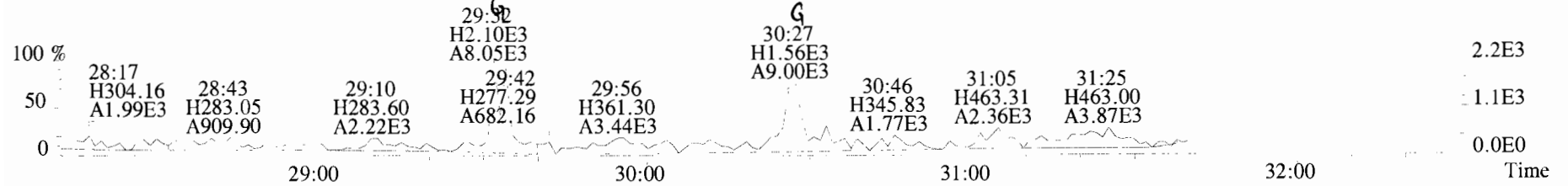
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



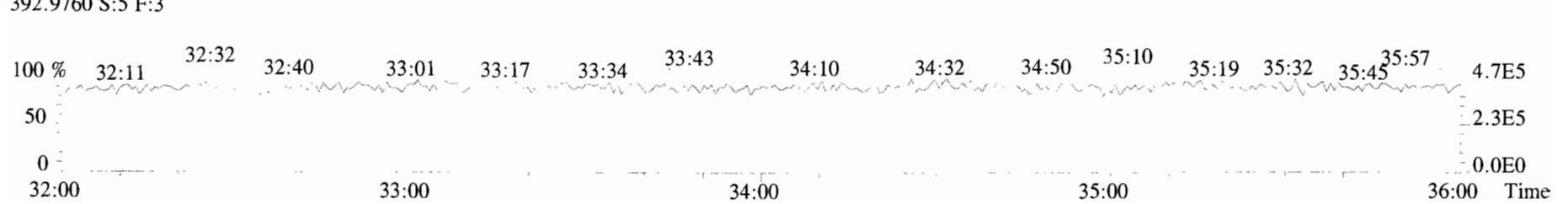
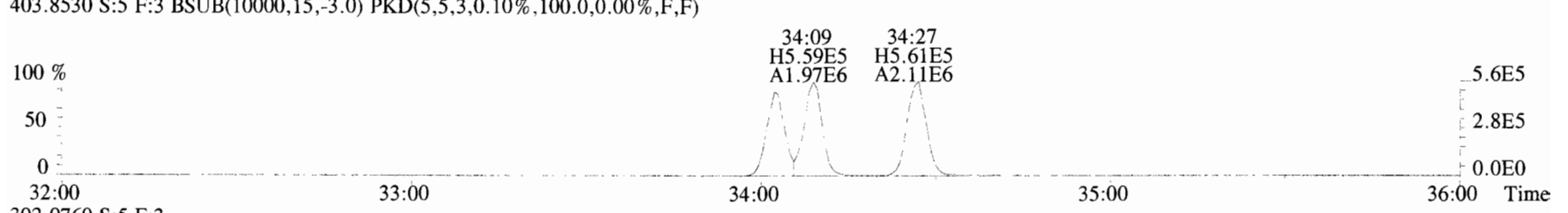
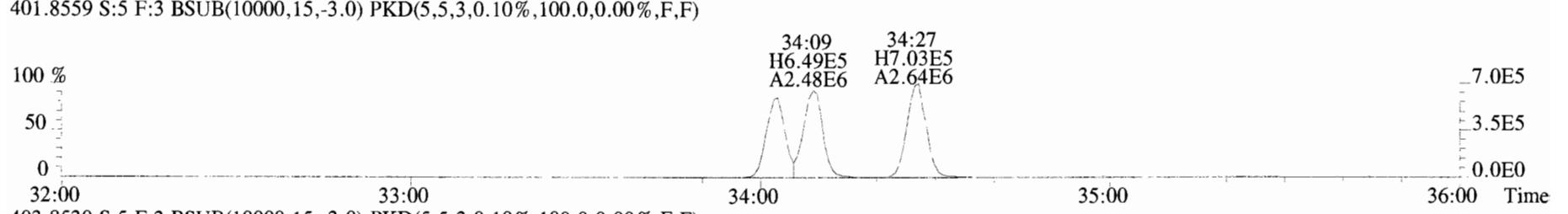
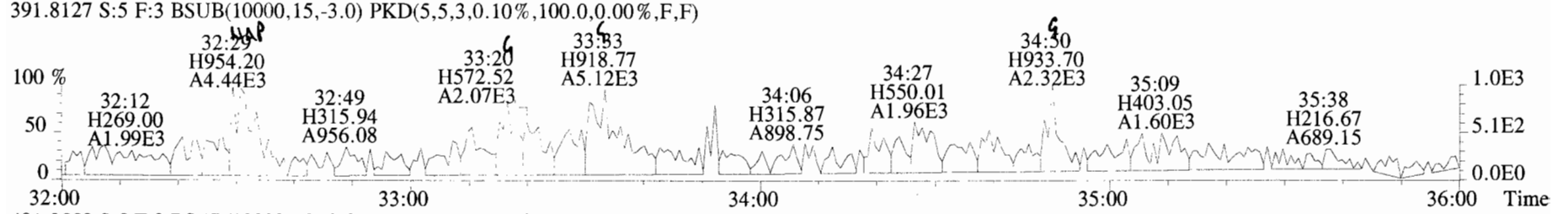
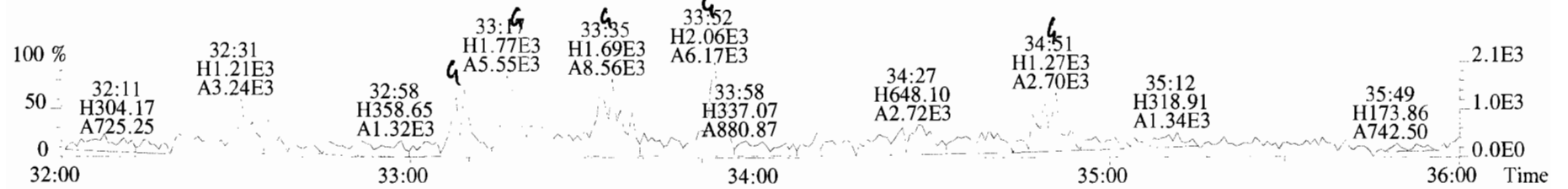
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



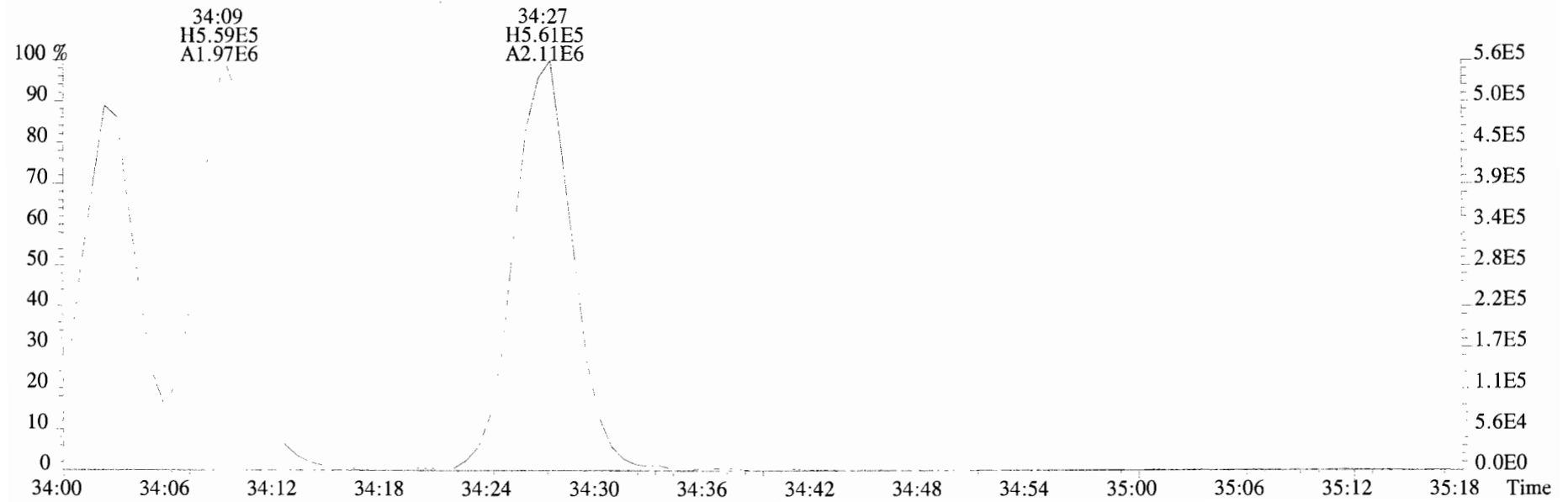
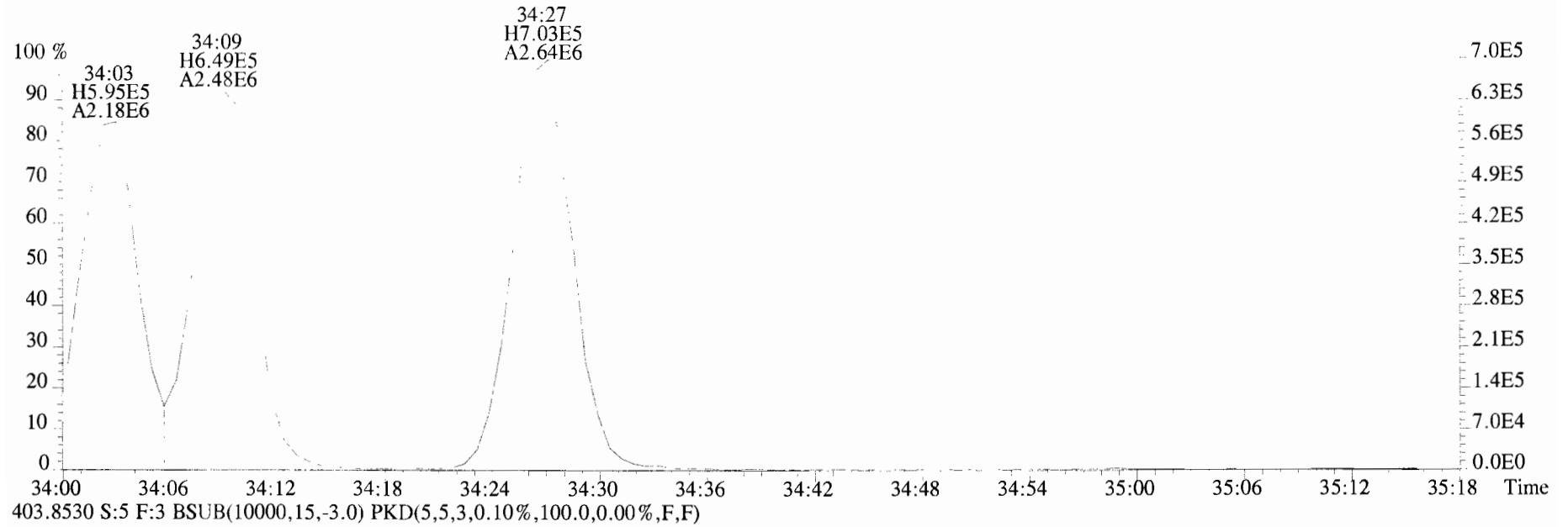
File:191024D2 #1-210 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
 353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



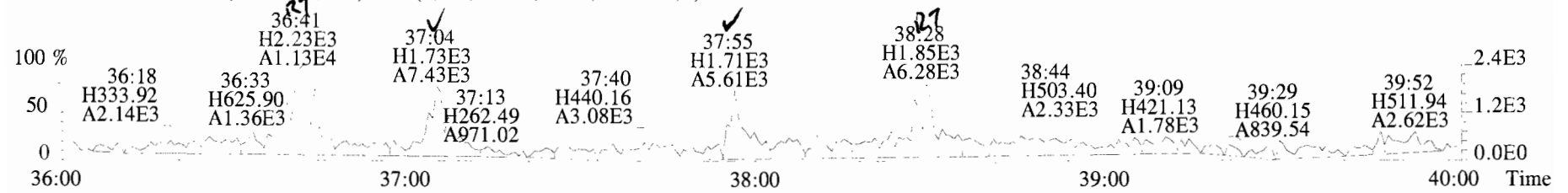
File:191024D2 #1-385 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
 389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



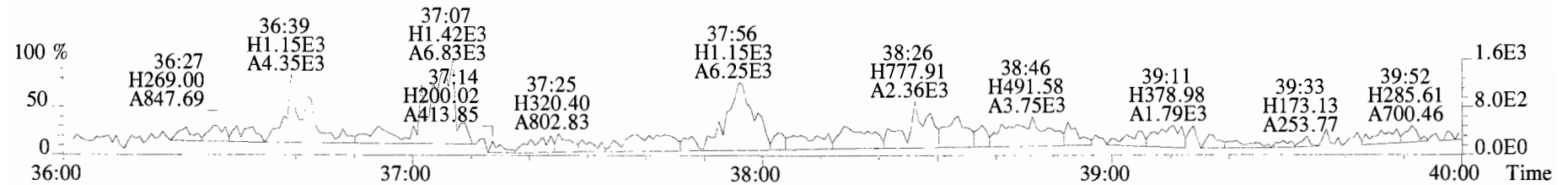
File:191024D2 #1-385 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



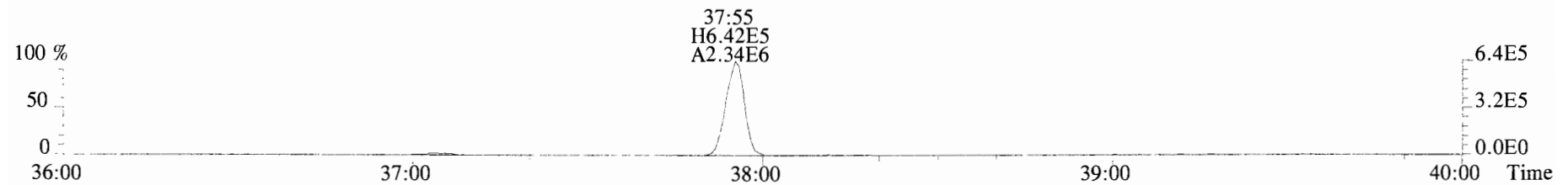
File:191024D2 #1-356 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
423.7767 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



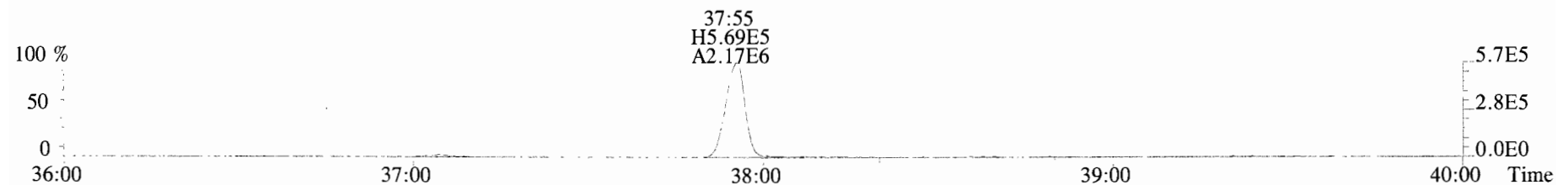
425.7737 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



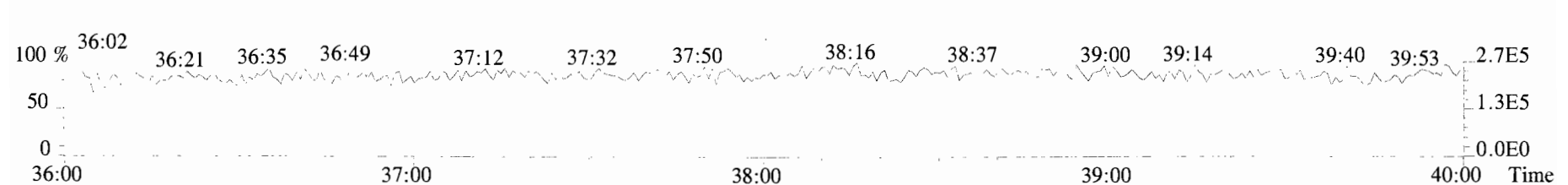
435.8169 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



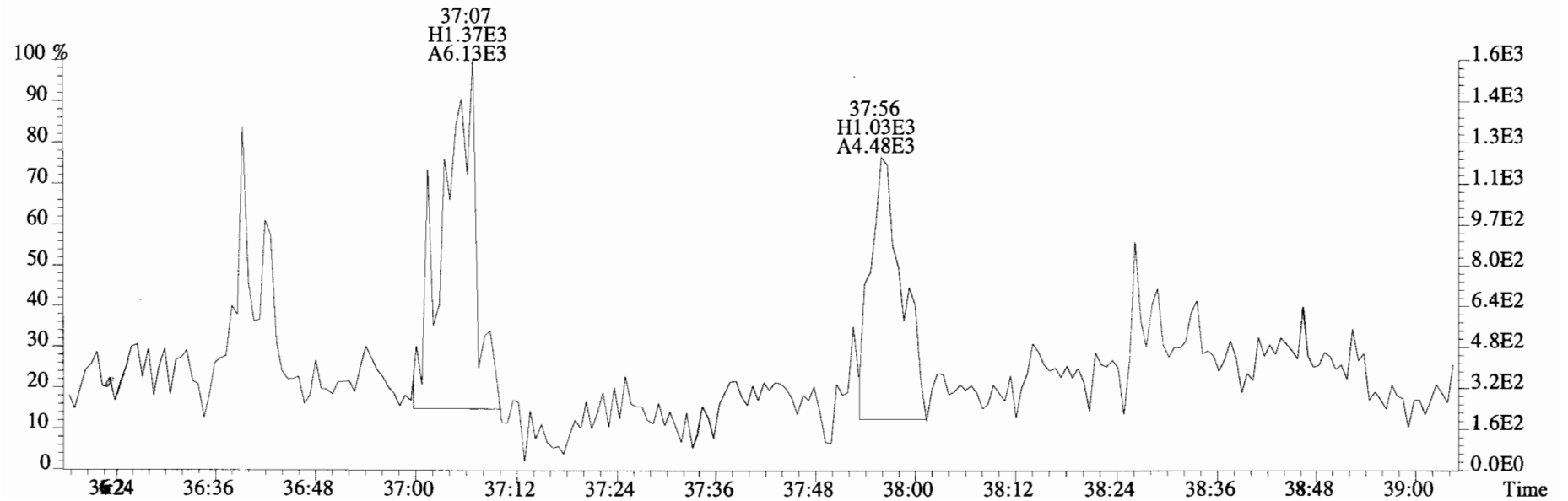
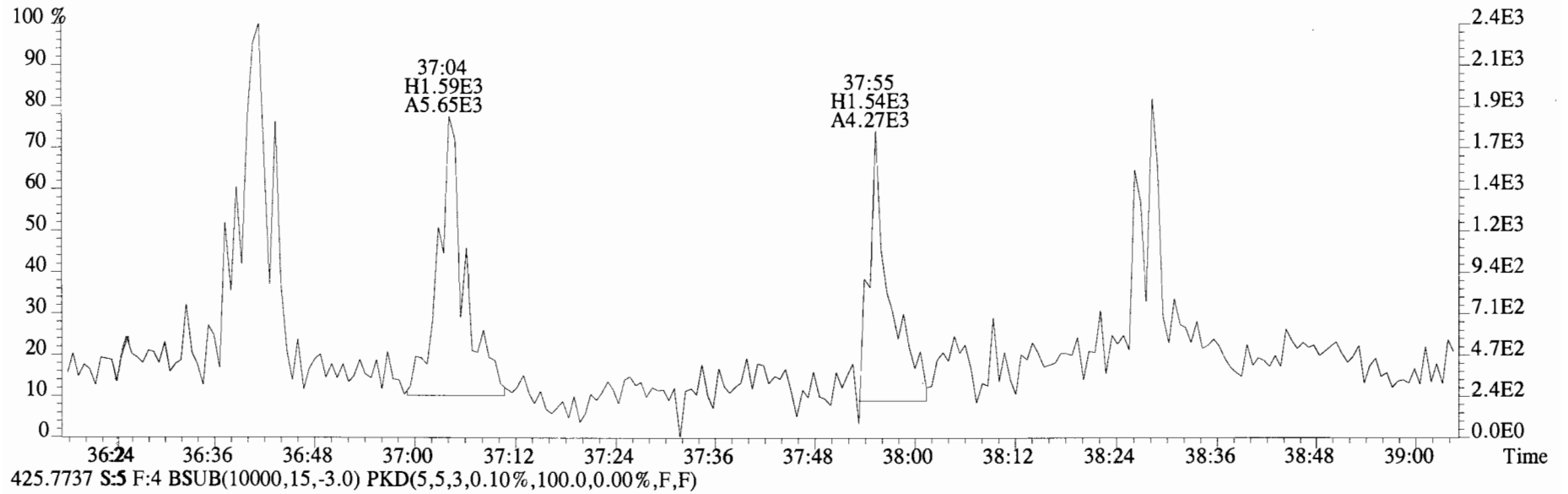
437.8140 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



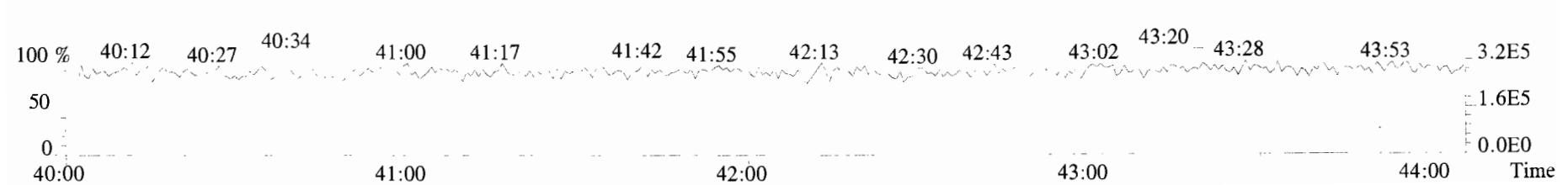
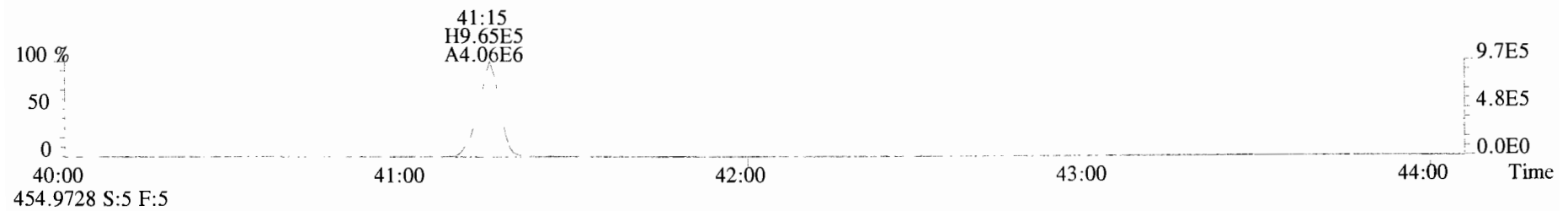
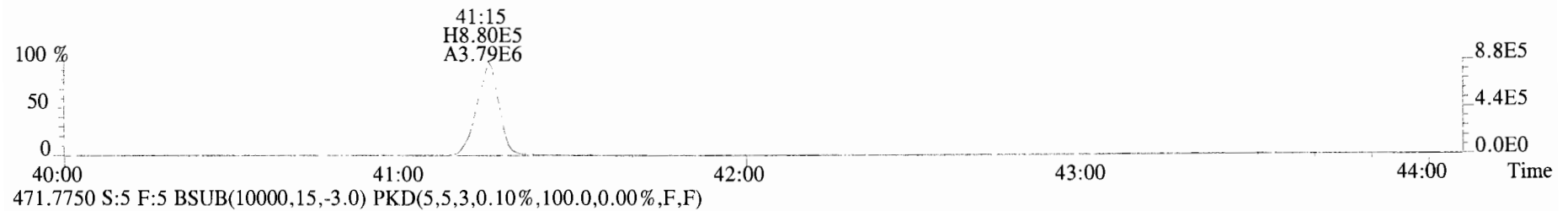
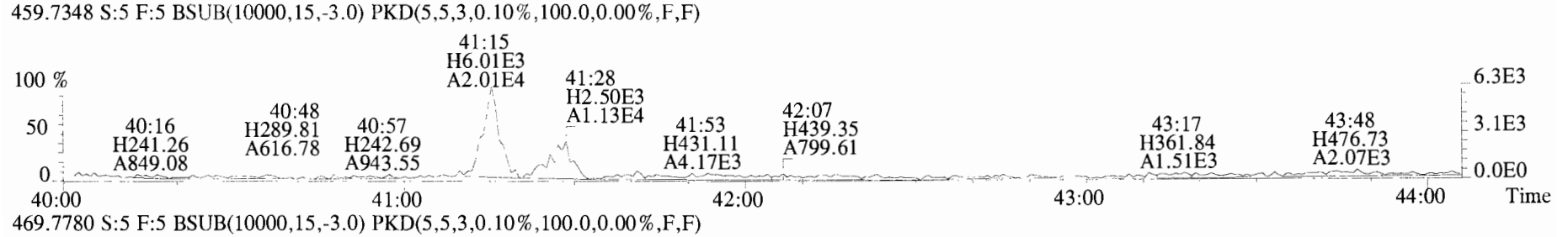
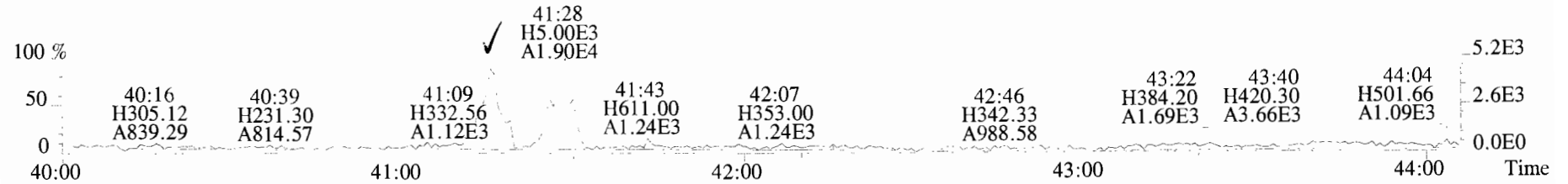
454.9728 S:5 F:4



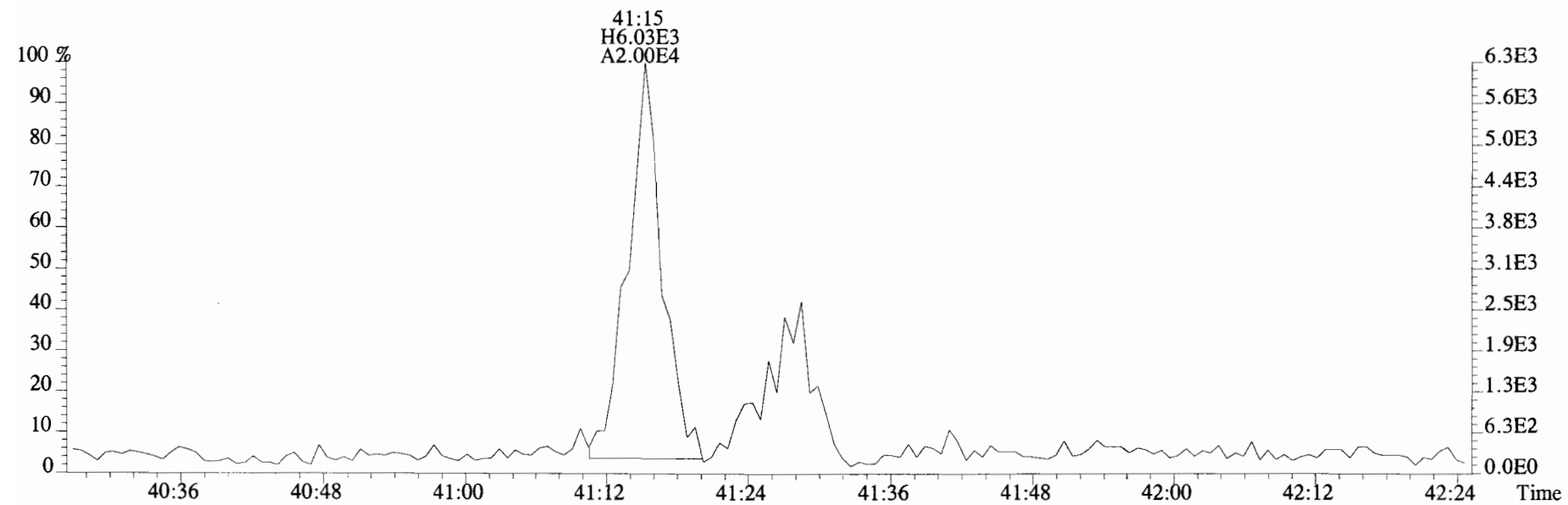
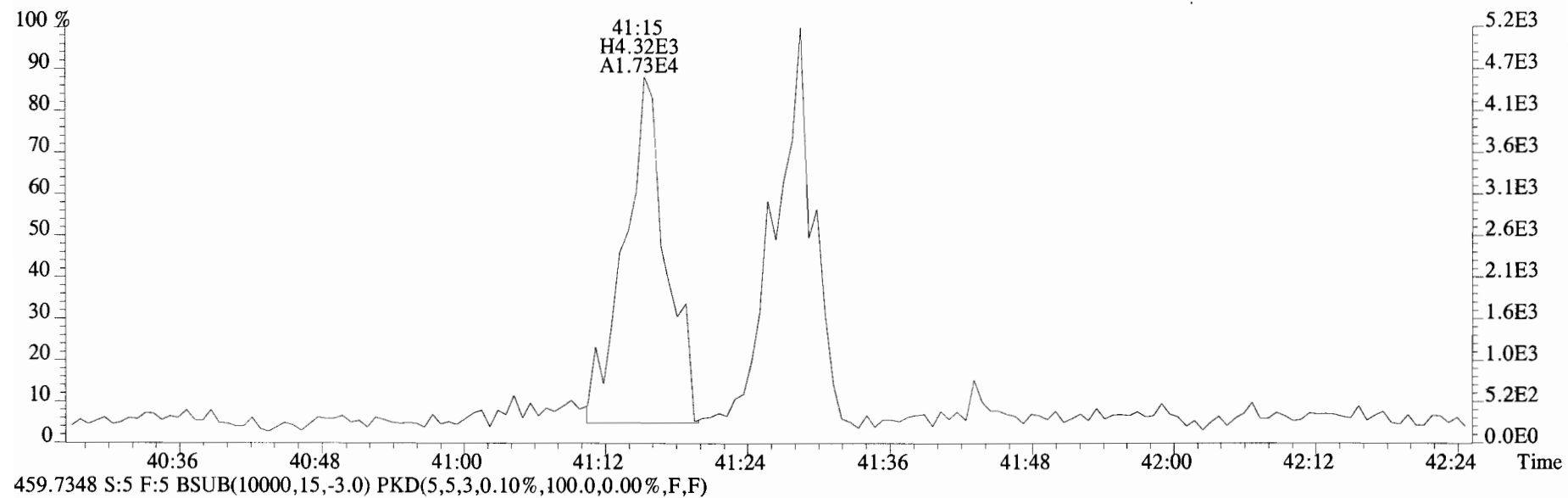
File:191024D2 #1-356 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



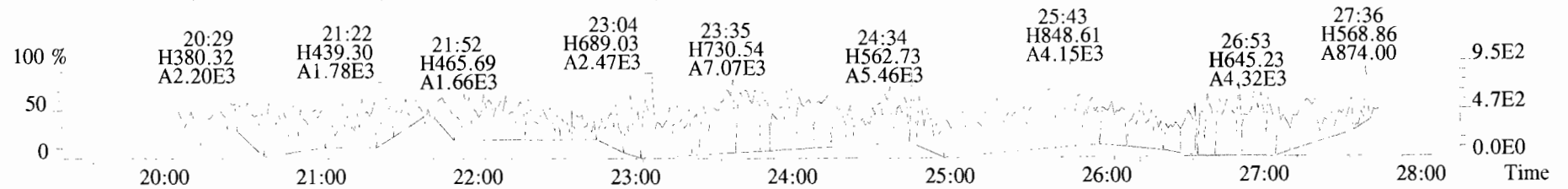
File:191024D2 #1-432 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
457.7377 S:5 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



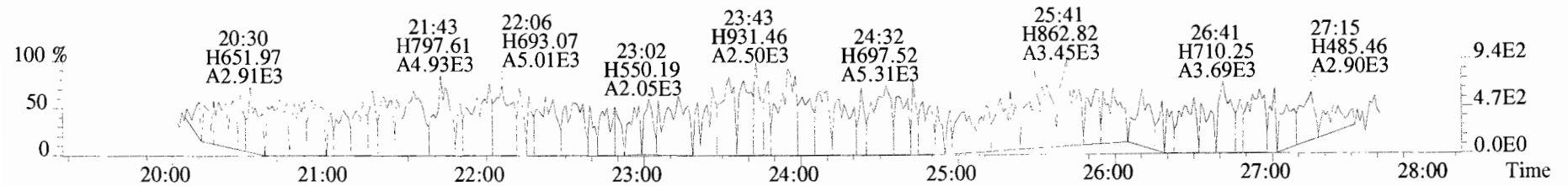
File:191024D2 #1-432 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



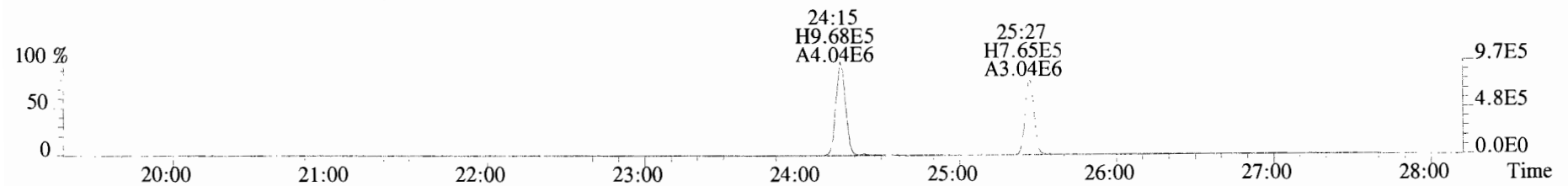
File:191024D2 #1-493 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory_VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



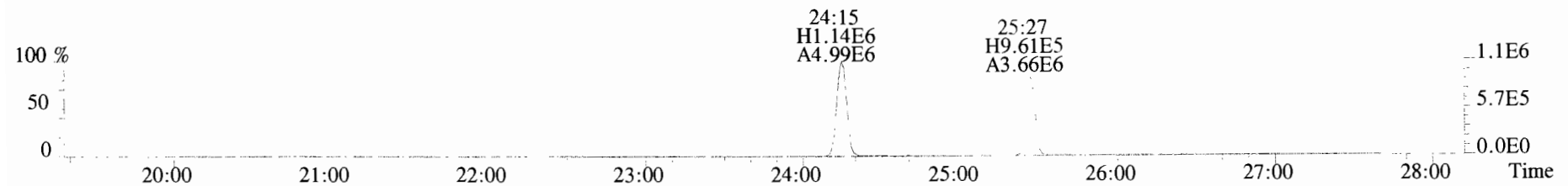
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



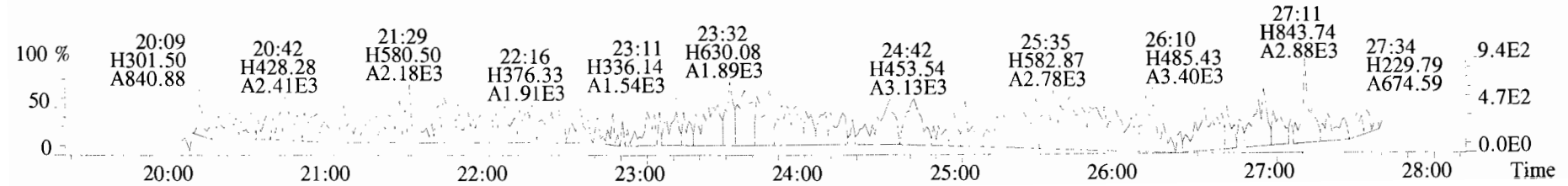
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



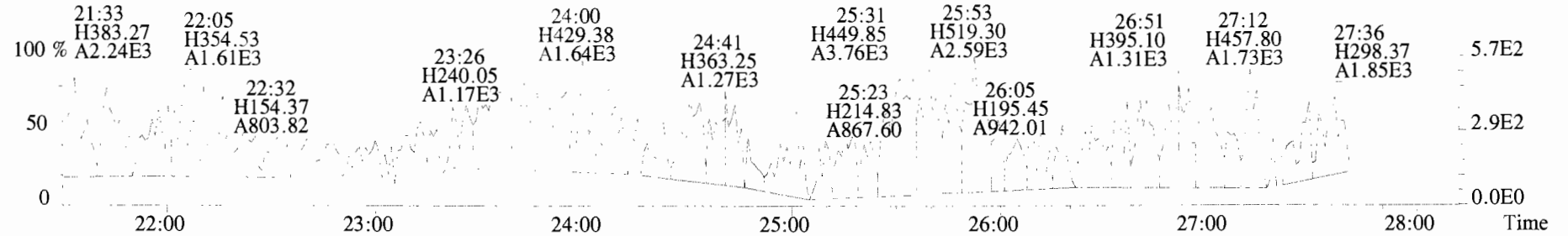
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



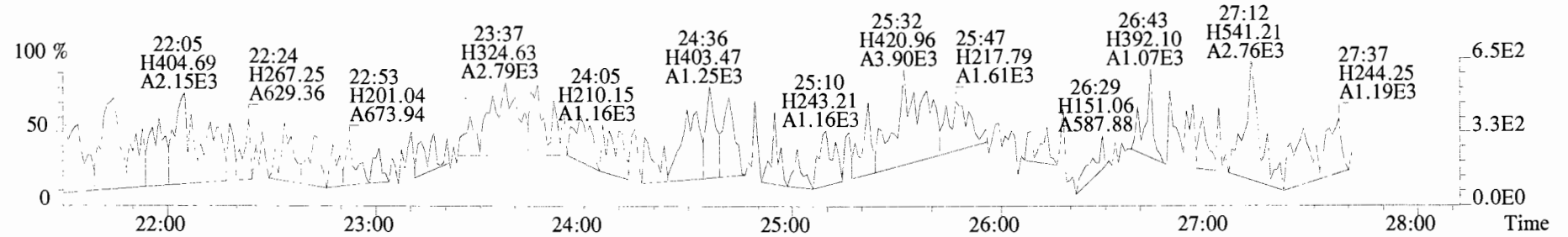
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



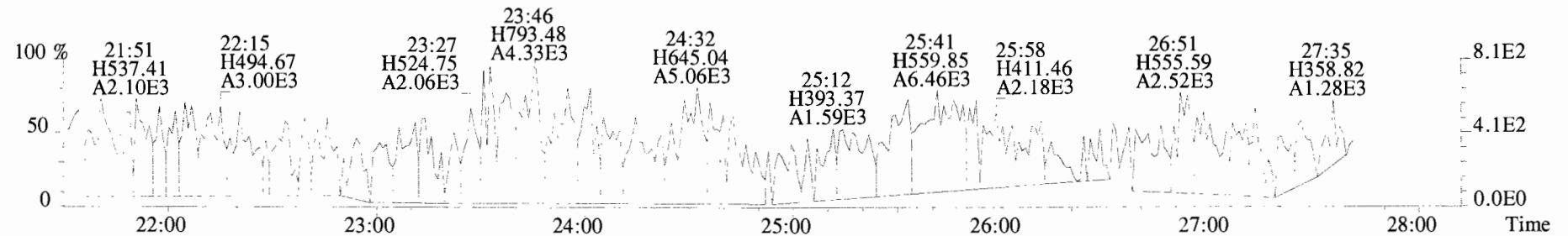
File:191024D2 #1-493 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
 339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



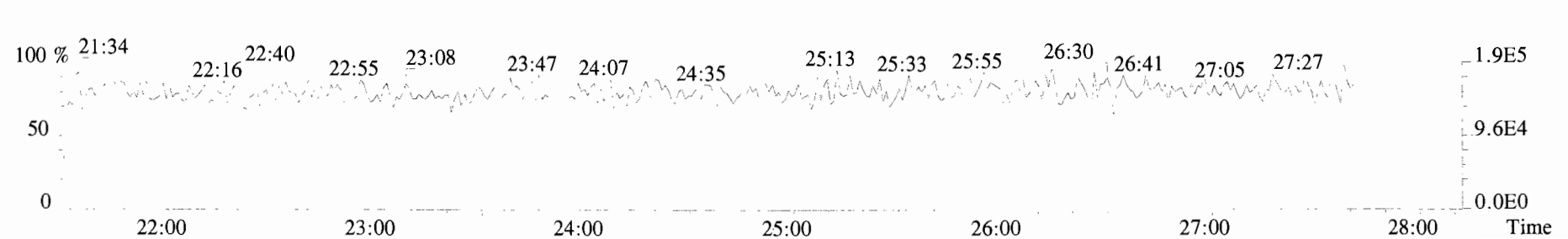
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



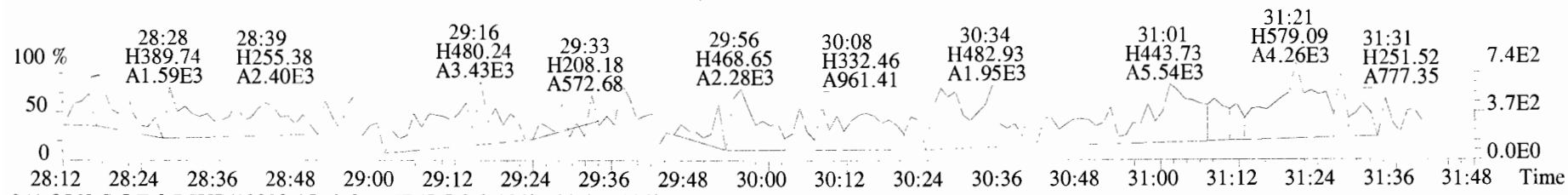
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



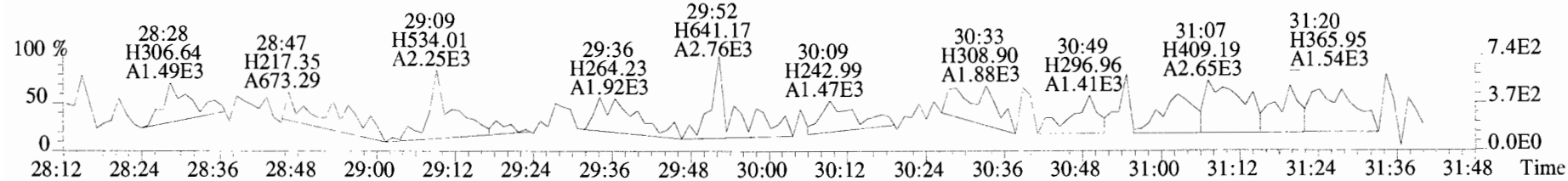
316.9824 S:5



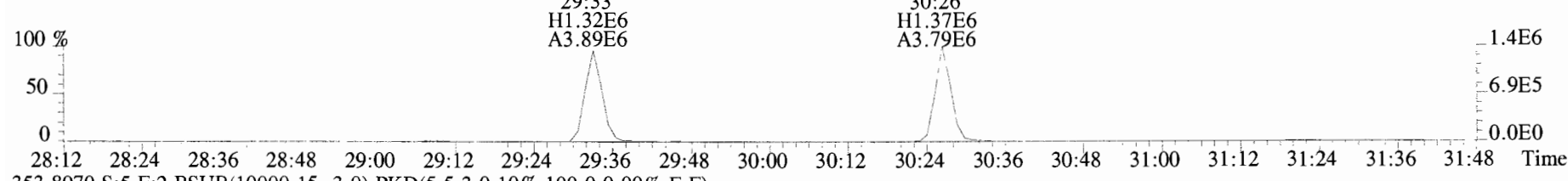
File:191024D2 #1-210 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
 339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



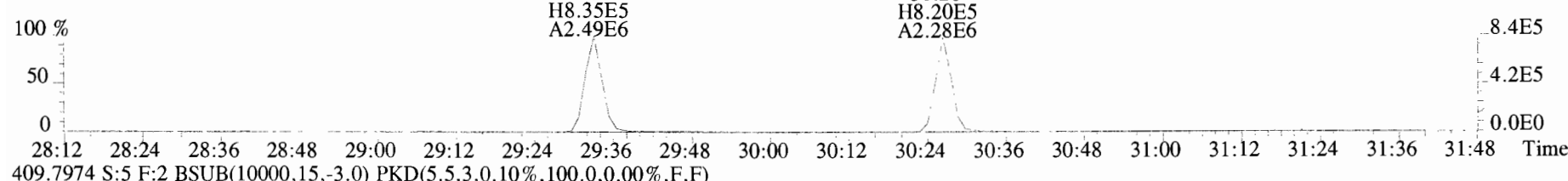
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



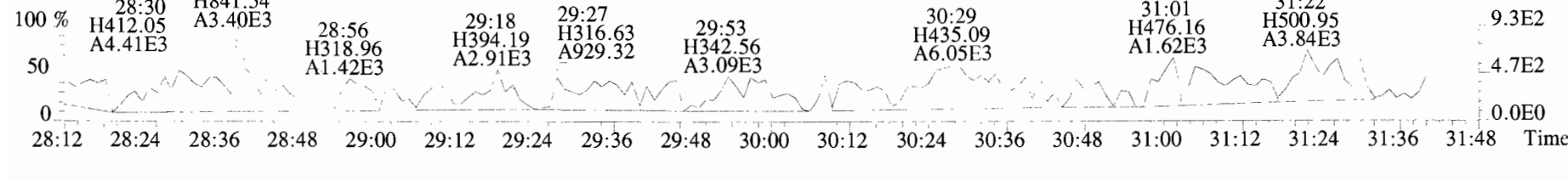
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



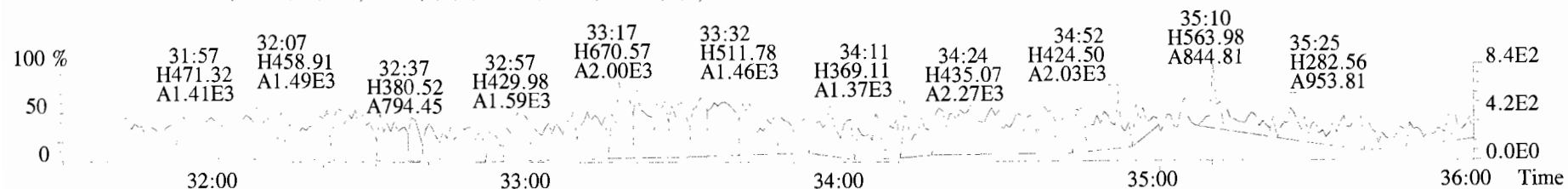
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



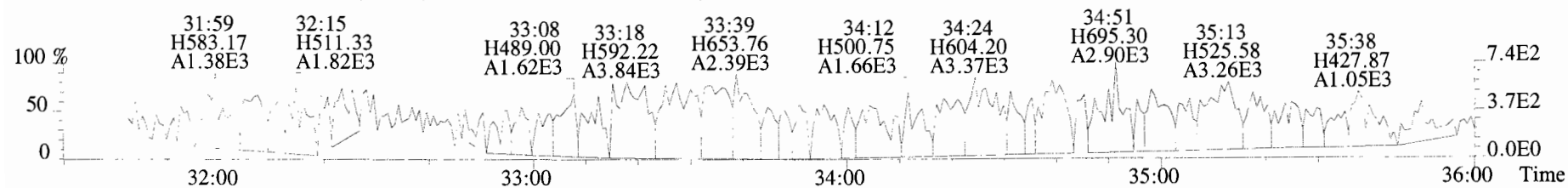
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



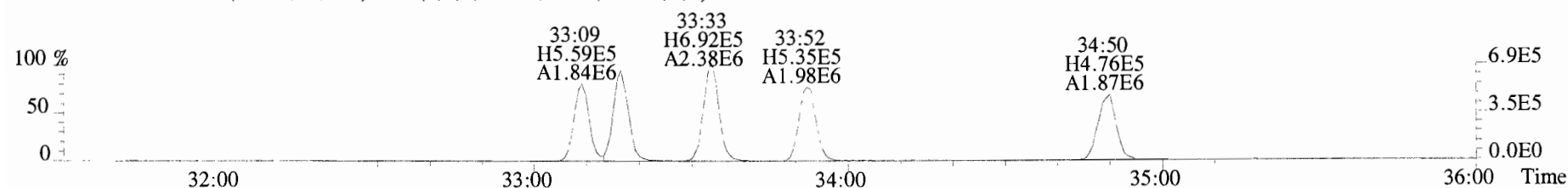
File:191024D2 #1-385 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



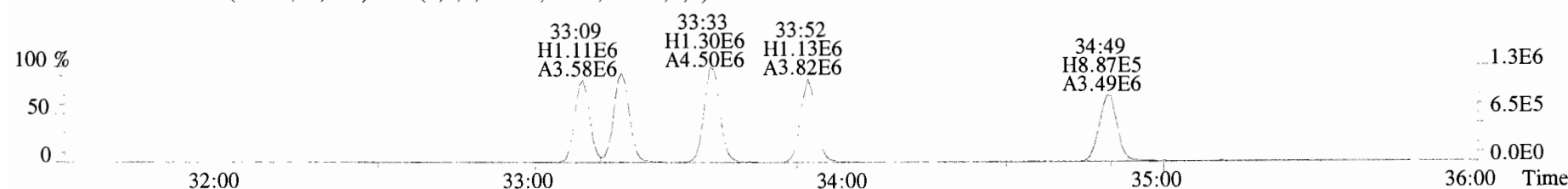
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



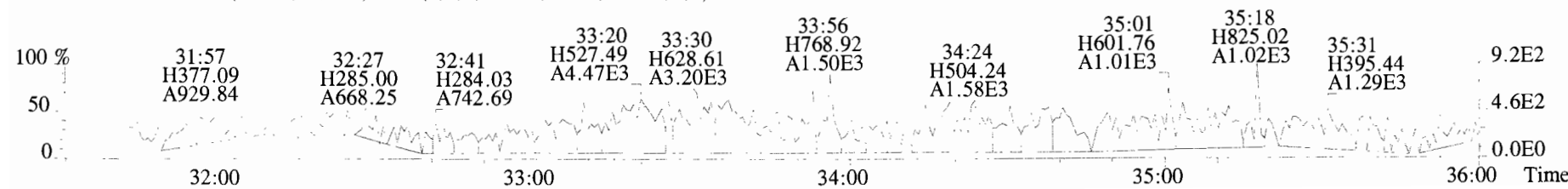
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



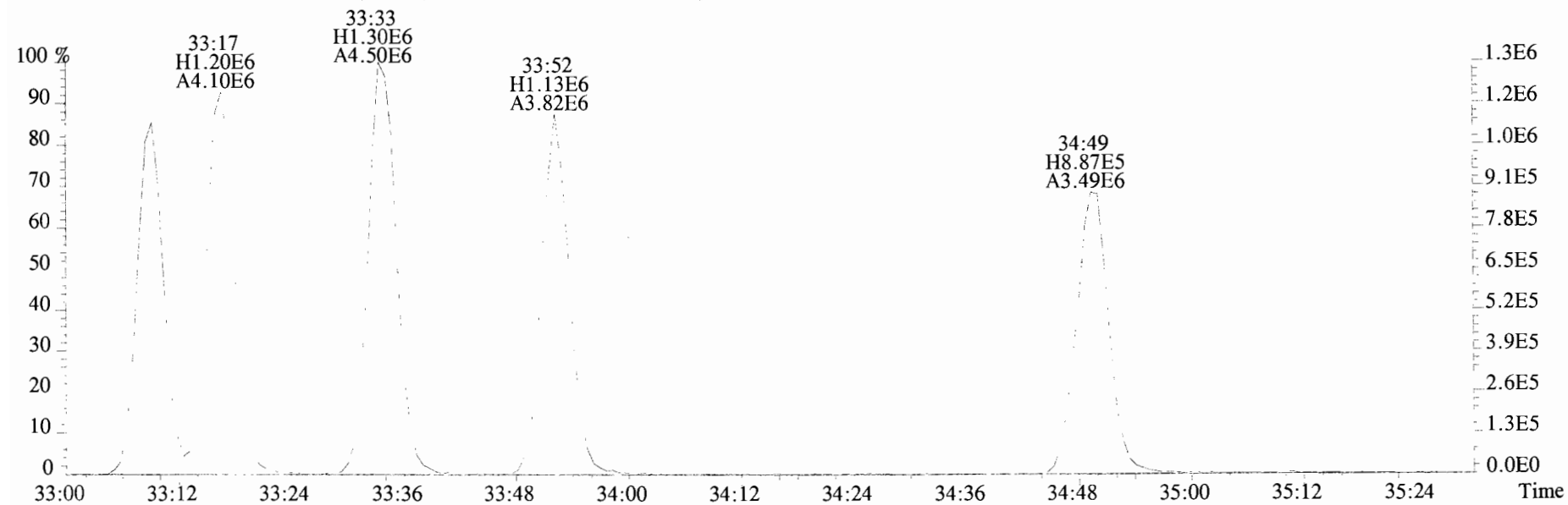
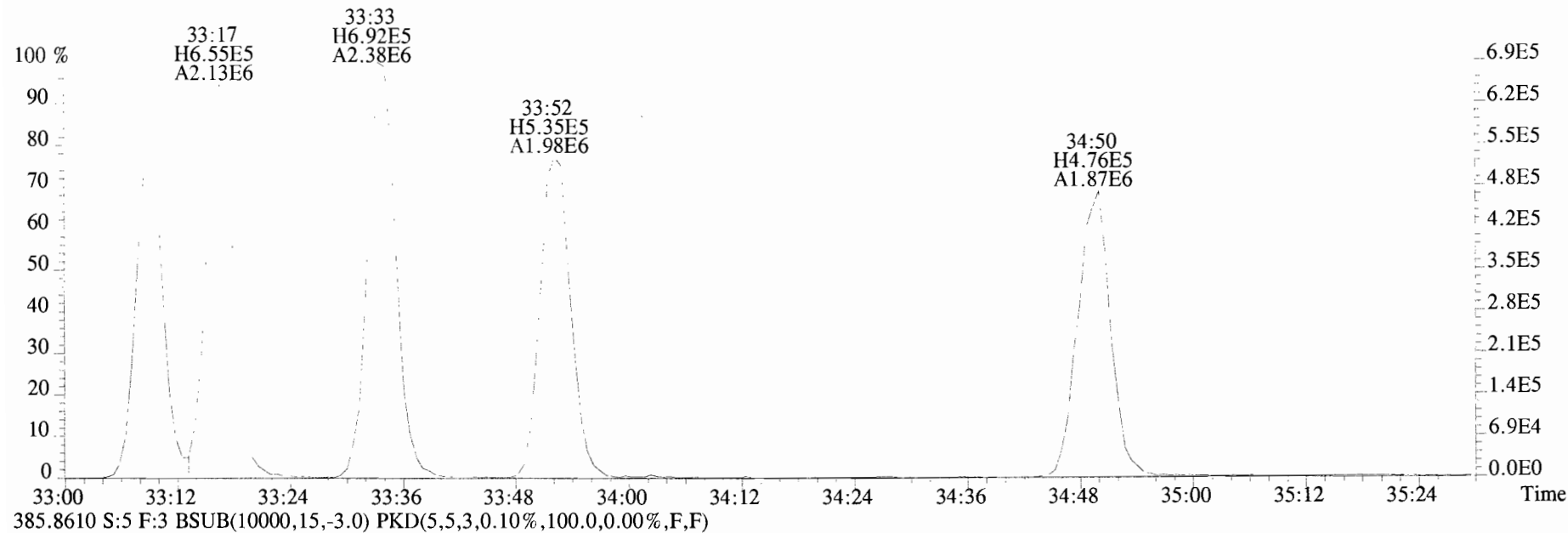
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



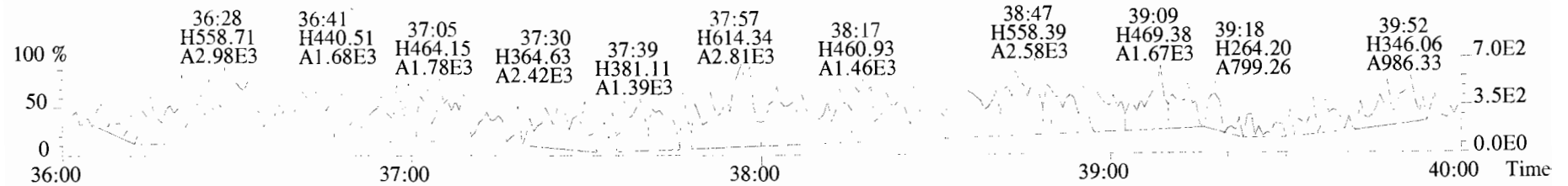
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



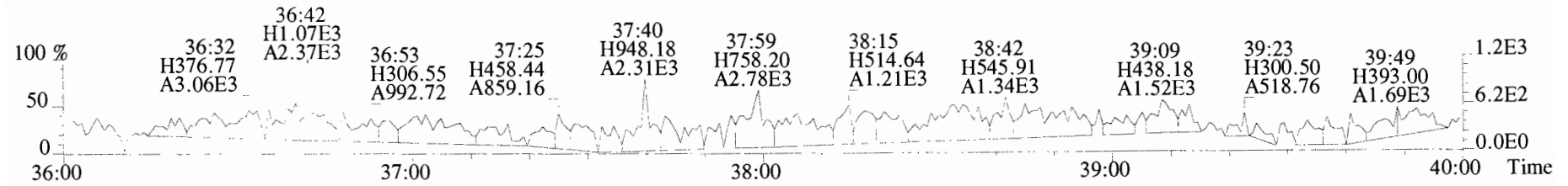
File:191024D2 #1-385 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



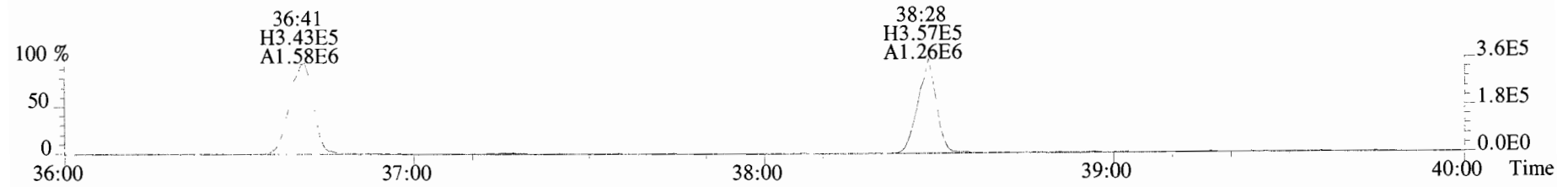
File:191024D2 #1-356 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
407.7818 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



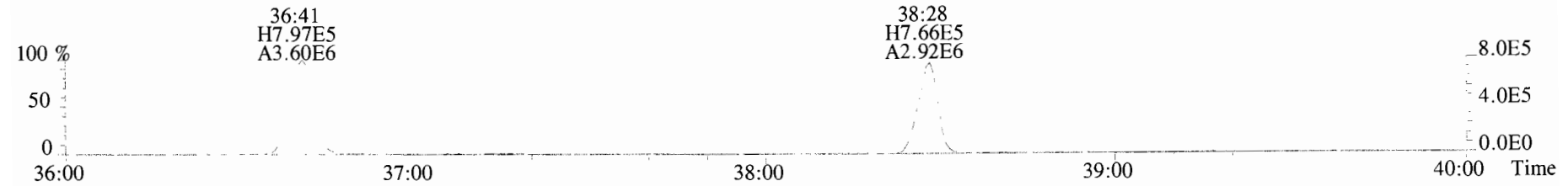
409.7788 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



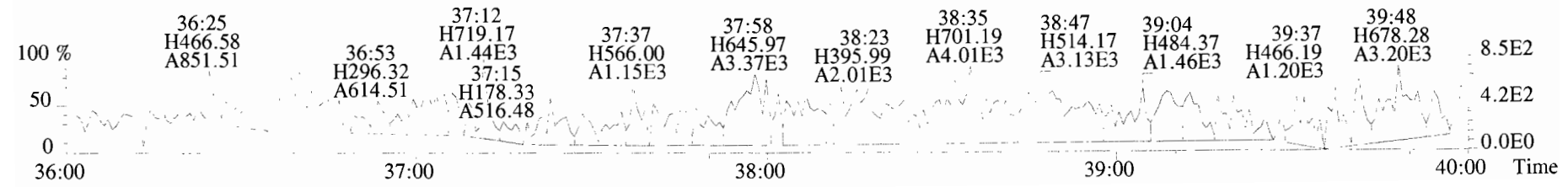
417.8253 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



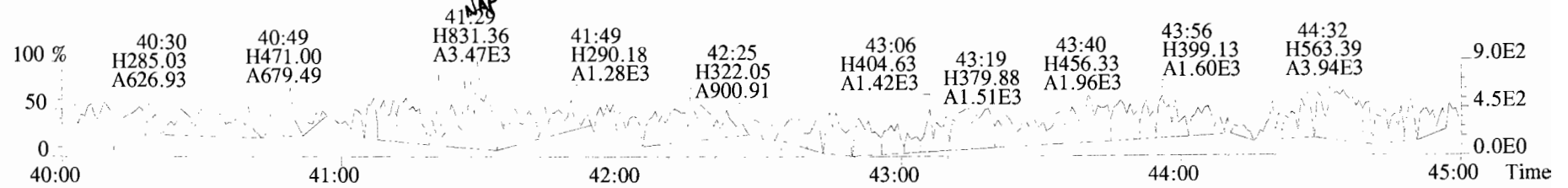
419.8220 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



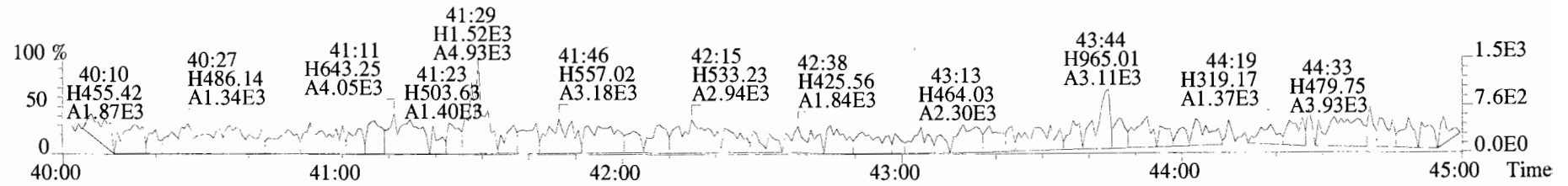
479.7165 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



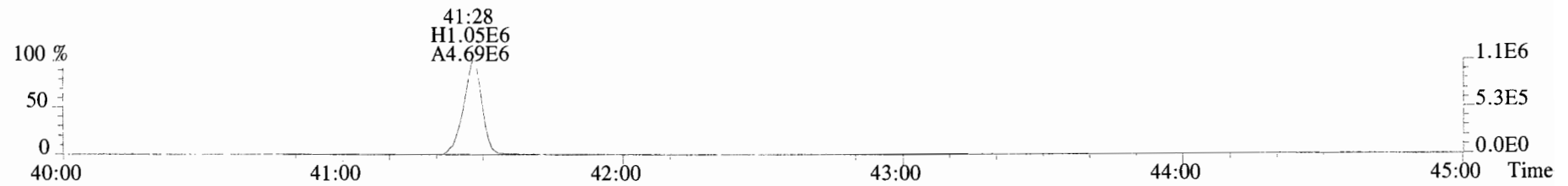
File:191024D2 #1-432 Acq:25-OCT-2019 07:00:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1903546-05 PDI-017SC-A-09-10-191003 11.27 Exp:OCDD_DB5
 441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



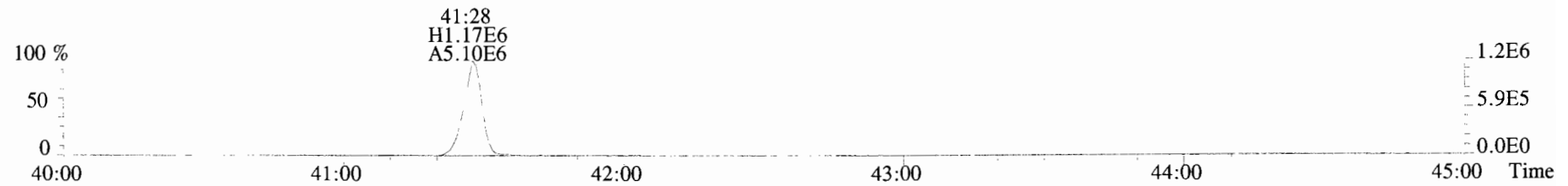
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



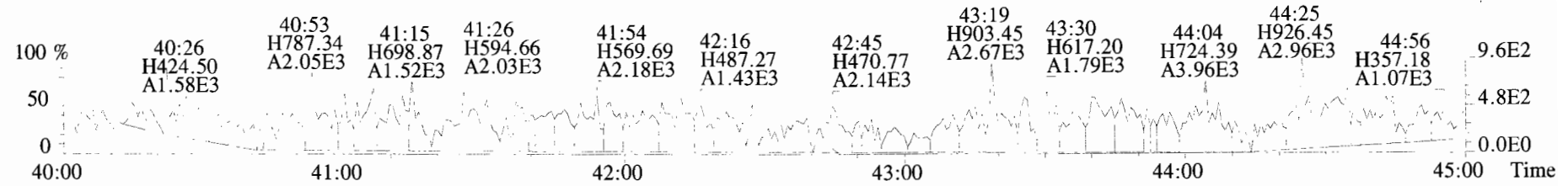
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



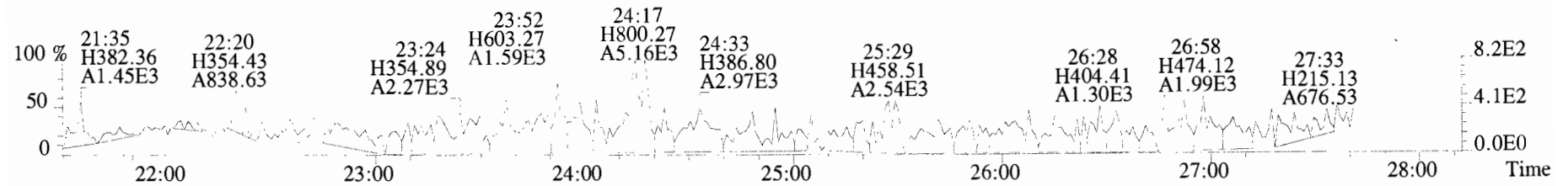
513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



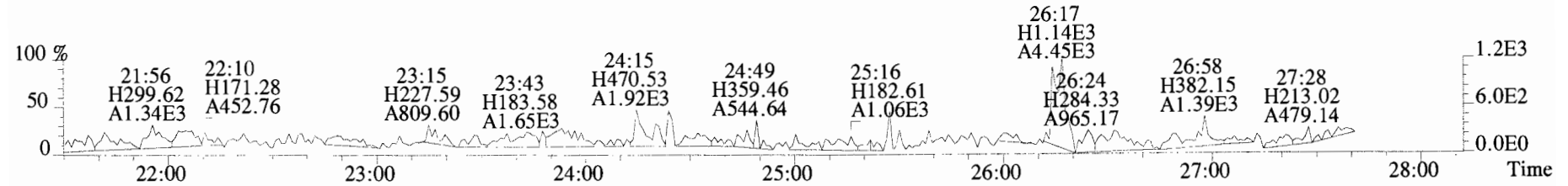
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	Not F _η	*		131 2.5	0.0938		Total Tetra-Dioxins	*	*		131 0.0938	
1,2,3,7,8-PeCDD	*	* n	0.90	Not F _η	*		174 2.5	0.101		Total Penta-Dioxins	*	*		174 0.101	
1,2,3,4,7,8-HxCDD	*	* n	1.10	Not F _η	*		97.0 2.5	0.0868		Total Hexa-Dioxins	*	*		97.0 0.0864	
1,2,3,6,7,8-HxCDD	*	* n	0.94	Not F _η	*		97.0 2.5	0.0863		Total Hepta-Dioxins	*	*		152 0.118	
1,2,3,7,8,9-HxCDD	*	* n	0.96	Not F _η	*		97.0 2.5	0.0850		Total Tetra-Furans	*	*		132 0.0726	
1,2,3,4,6,7,8-HpCDD	*	* n	0.98	Not F _η	*		152 2.5	0.118		Total Penta-Furans	0.0000	0.0000		133 0.0774	
OCDD	5.55e+03	0.68 n	0.96	41:18	0.28033		* 2.5	*		Total Hexa-Furans	*	*		126 0.0492	
2,3,7,8-TCDF	*	* n	0.95	Not F _η	*		132 2.5	0.0726		Total Hepta-Furans	*	*		95.8 0.0485	
1,2,3,7,8-PeCDF	*	* n	0.96	Not F _η	*		133 2.5	0.0774							
2,3,4,7,8-PeCDF	*	* n	1.01	Not F _η	*		133 2.5	0.0777							
1,2,3,4,7,8-HxCDF	*	* n	1.18	Not F _η	*		126 2.5	0.0443							
1,2,3,6,7,8-HxCDF	*	* n	1.07	Not F _η	*		126 2.5	0.0456							
2,3,4,6,7,8-HxCDF	*	* n	1.11	Not F _η	*		126 2.5	0.0482							
1,2,3,7,8,9-HxCDF	*	* n	1.06	Not F _η	*		126 2.5	0.0597							
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	Not F _η	*		95.8 2.5	0.0503							
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	Not F _η	*		95.8 2.5	0.0463							
OCDF	2.96e+03	1.01 y	0.95	41:31	0.11505		* 2.5	*							
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	4.81e+06	0.76 y	1.10	26:15	165.63					83.9					
IS 13C-1,2,3,7,8-PeCDD	4.14e+06	0.60 y	0.88	30:44	176.97					89.6					
IS 13C-1,2,3,4,7,8-HxCDD	4.28e+06	1.30 y	0.64	34:05	194.71					98.6					
IS 13C-1,2,3,6,7,8-HxCDD	4.67e+06	1.26 y	0.86	34:11	159.23					80.6					
IS 13C-1,2,3,7,8,9-HxCDD	5.08e+06	1.25 y	0.81	34:29	183.84					93.1					
IS 13C-1,2,3,4,6,7,8-HpCDD	5.00e+06	1.07 y	0.65	37:58	222.96					113					
IS 13C-OCDD	8.15e+06	0.90 y	0.58	41:17	410.41					104					
IS 13C-2,3,7,8-TCDF	6.51e+06	0.80 y	1.03	25:28	144.62					73.2					
IS 13C-1,2,3,7,8-PeCDF	6.60e+06	1.54 y	0.85	29:34	177.38					89.8					
IS 13C-2,3,4,7,8-PeCDF	6.27e+06	1.63 y	0.85	30:27	170.13					86.2					
IS 13C-1,2,3,4,7,8-HxCDF	5.97e+06	0.51 y	0.83	33:11	209.55					106					
IS 13C-1,2,3,6,7,8-HxCDF	6.66e+06	0.53 y	1.03	33:18	188.04					95.2					
IS 13C-2,3,4,6,7,8-HxCDF	6.30e+06	0.51 y	0.95	33:54	192.73					97.6					
IS 13C-1,2,3,7,8,9-HxCDF	5.69e+06	0.51 y	0.83	34:52	200.72					102					
IS 13C-1,2,3,4,6,7,8-HpCDF	5.41e+06	0.43 y	0.76	36:43	208.43					106					
IS 13C-1,2,3,4,7,8,9-HpCDF	4.39e+06	0.43 y	0.58	38:30	220.42					112					
IS 13C-OCDF	1.07e+07	0.91 y	0.69	41:31	453.96					115					
C/Up 37C1-2,3,7,8-TCDD	2.16e+06		1.20	26:16	68.114					86.2					
RS/RT 13C-1,2,3,4-TCDD	5.24e+06	0.80 y	1.00	25:41	197.48										
RS 13C-1,2,3,4-TCDF	8.60e+06	0.80 y	1.00	24:16	197.48										
RS/RT 13C-1,2,3,4,6,9-HxCDF	6.77e+06	0.51 y	1.00	33:36	197.48										

Integrations
 by DB
 Analyst: DB
 Date: 11/5/19
 Reviewed
 by C1
 Analyst: C1
 Date: 11/11/19

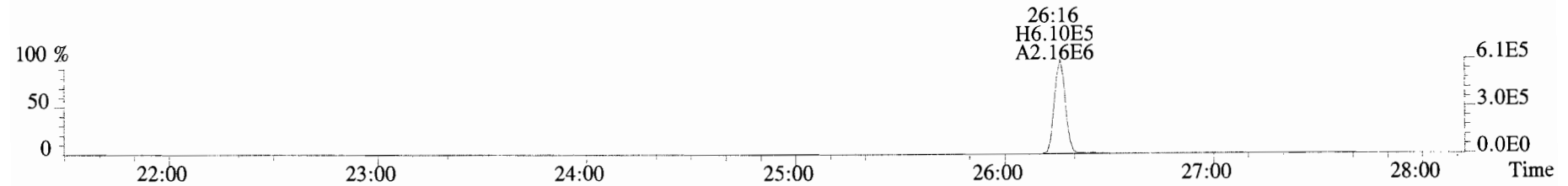
File:191024D2 #1-493 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



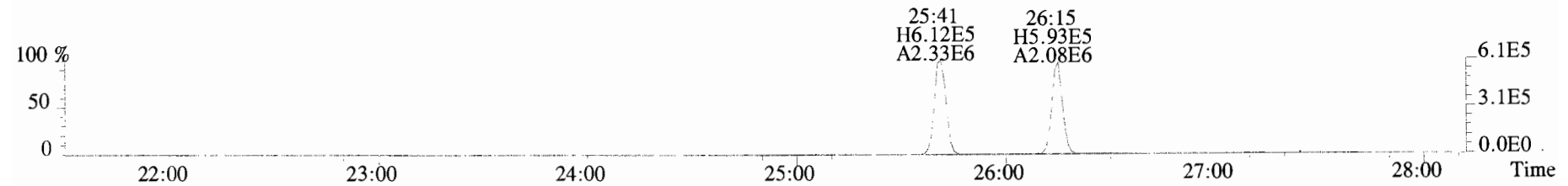
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



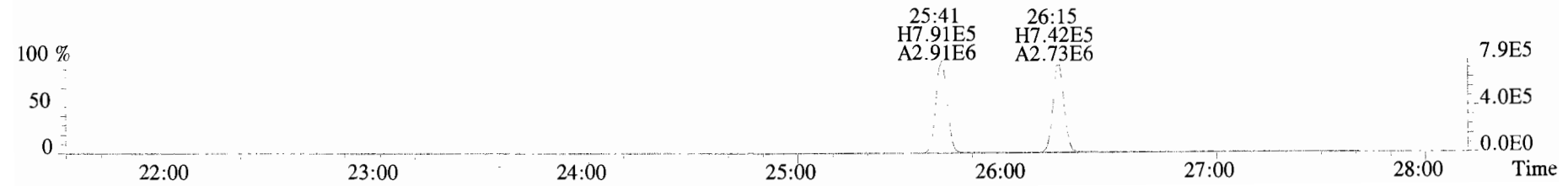
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



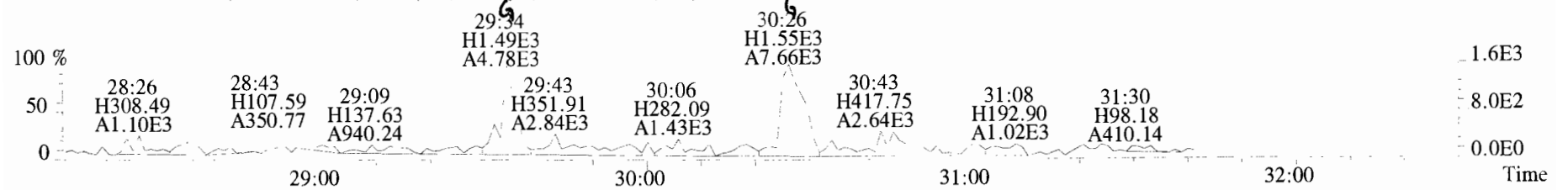
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



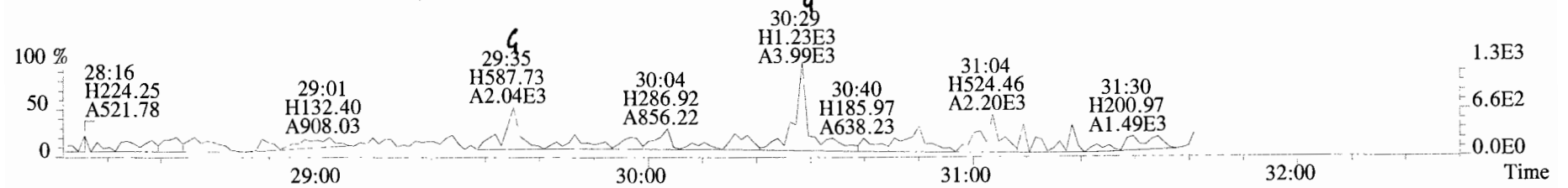
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



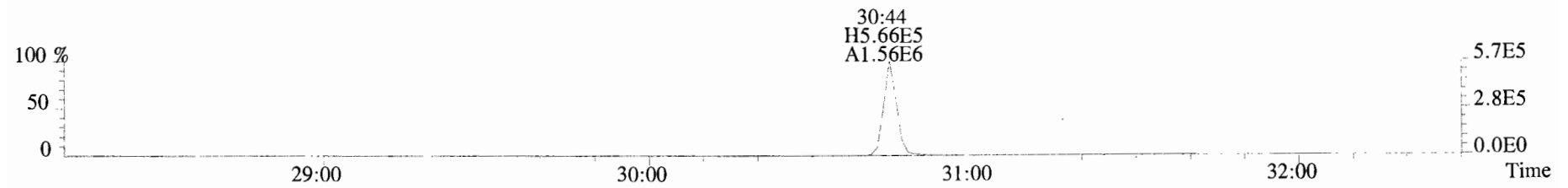
File:191024D2 #1-211 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
 353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



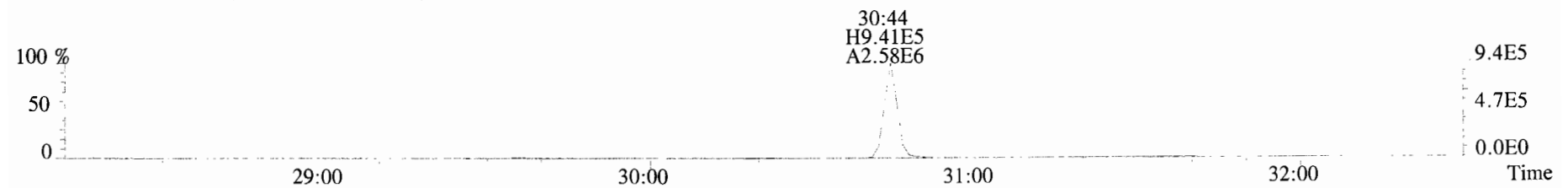
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



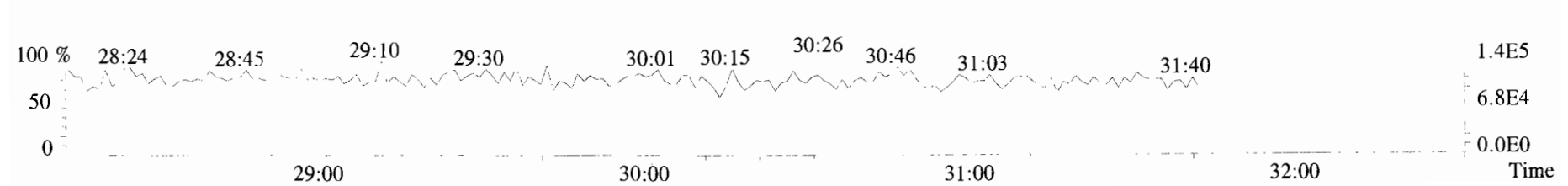
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



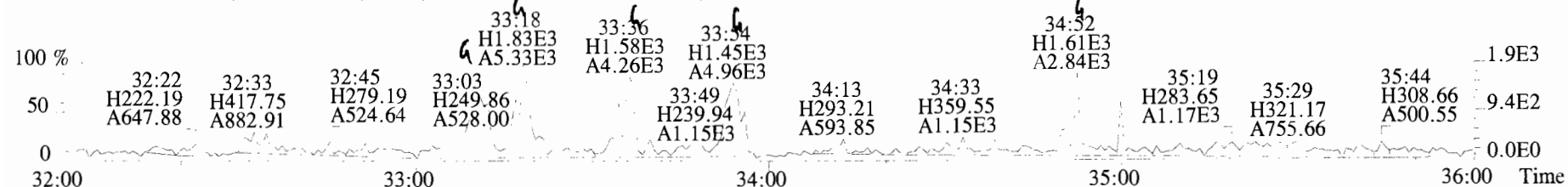
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



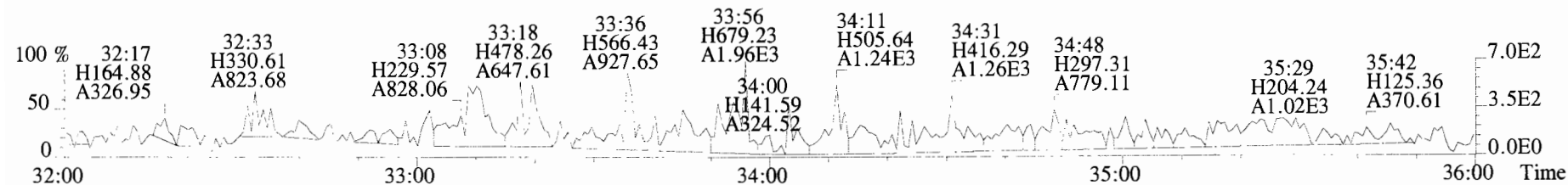
366.9792 S:6 F:2



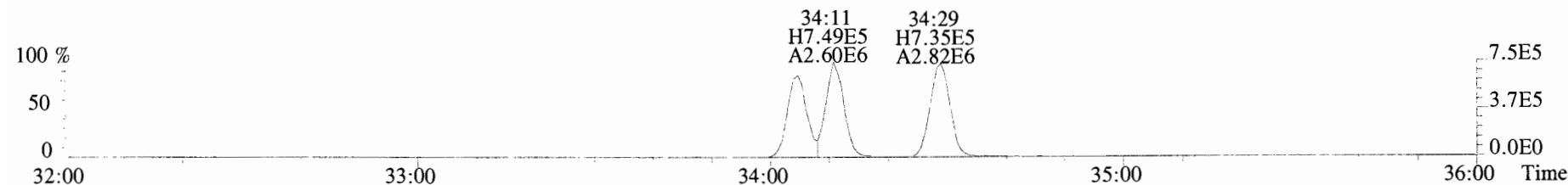
File:191024D2 #1-384 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
 389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



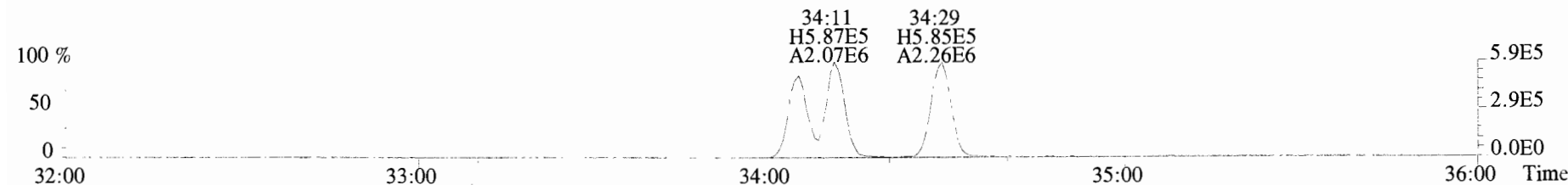
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



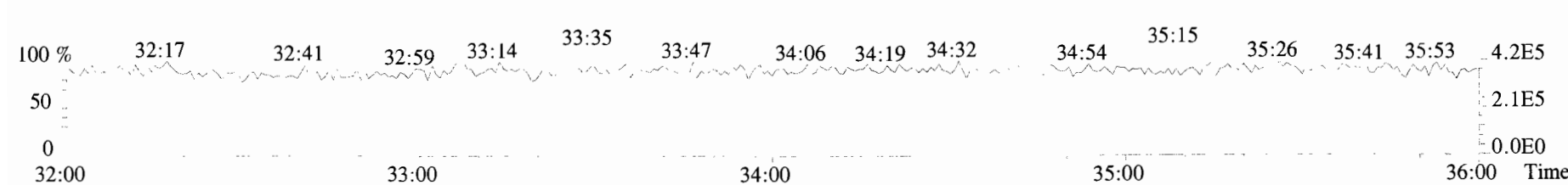
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



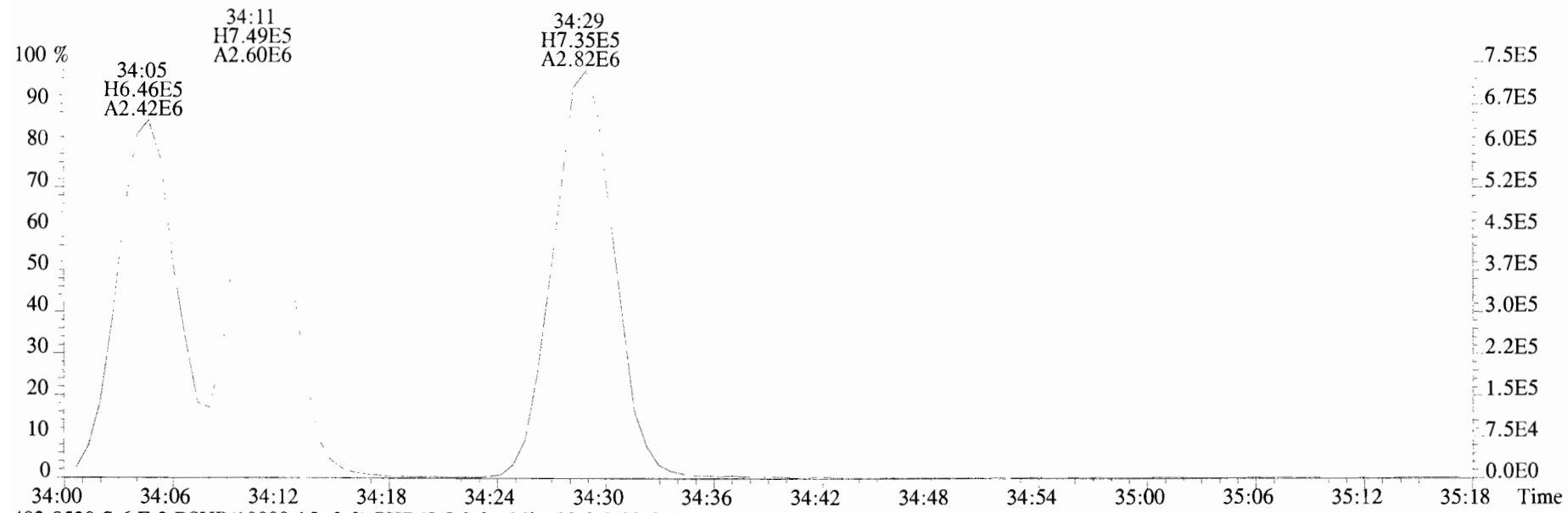
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



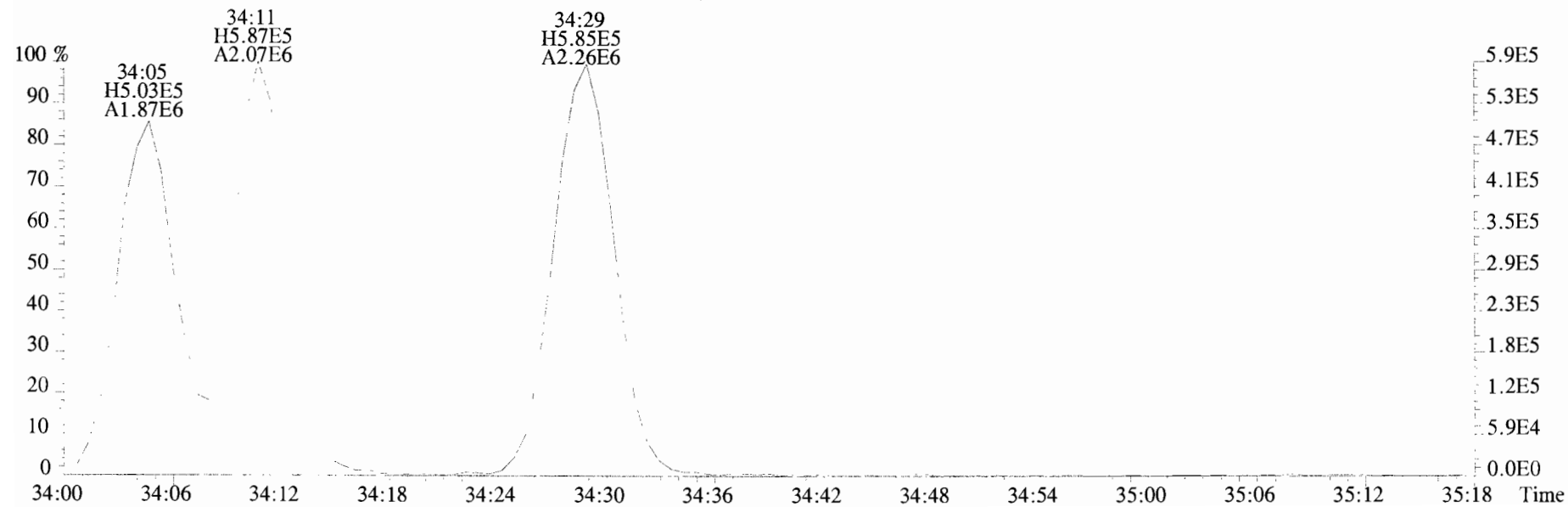
392.9760 S:6 F:3



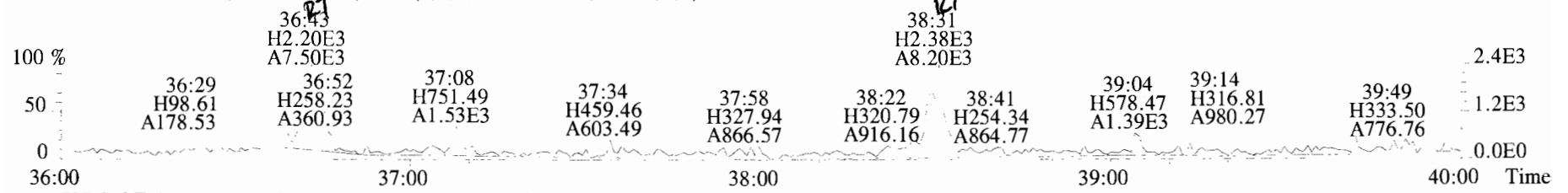
File: 191024D2 #1-384 Acq: 25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text: Vista Analytical Laboratory VG7 Text: 1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp: OCDD_DB5
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



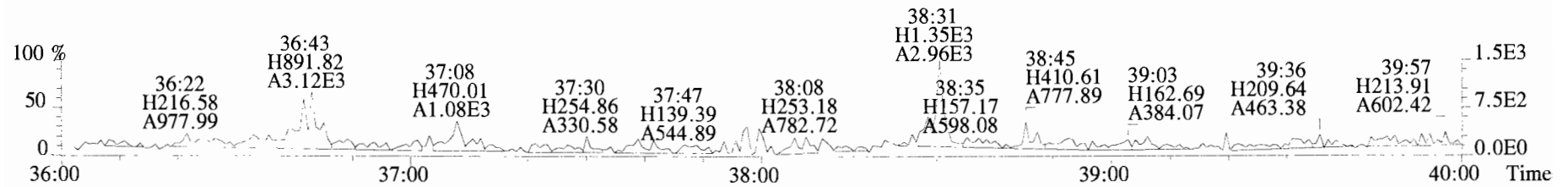
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



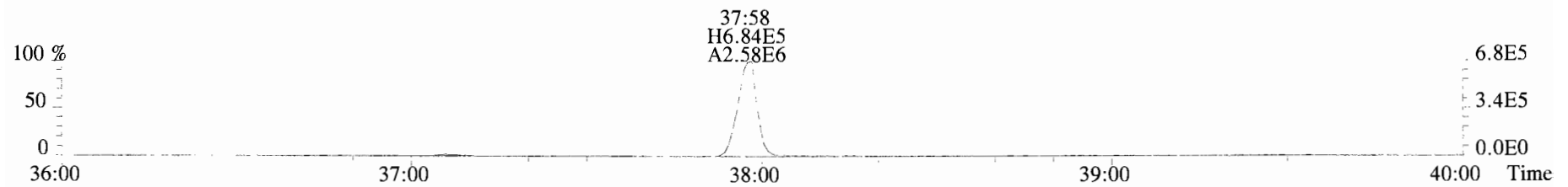
File:191024D2 #1-356 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text: Vista Analytical Laboratory VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



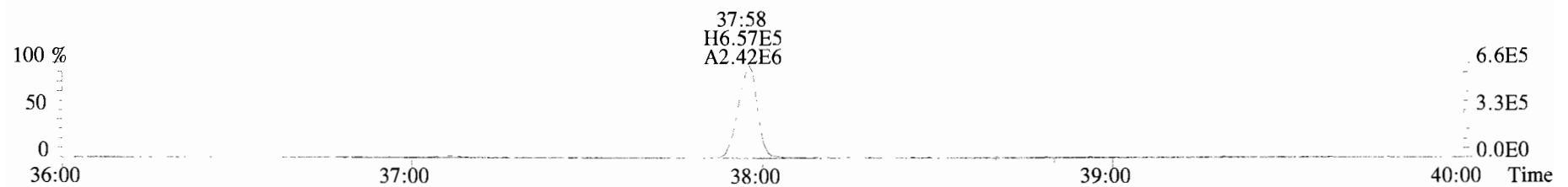
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



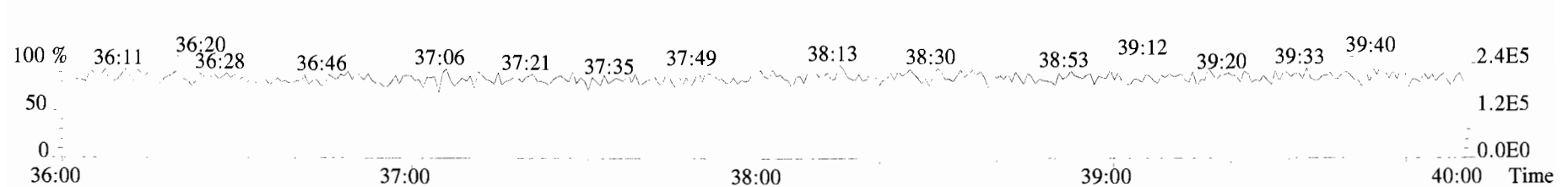
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



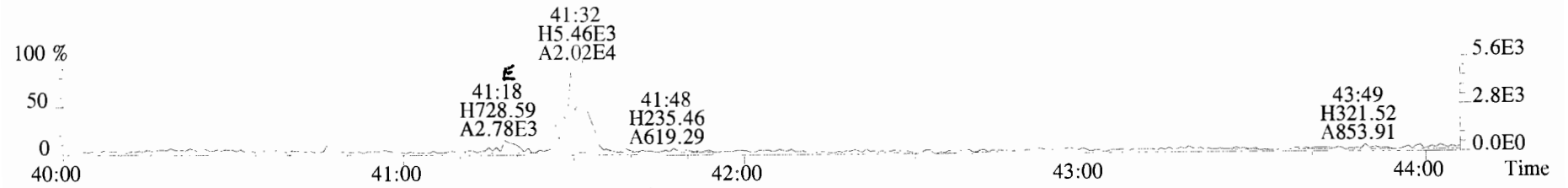
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



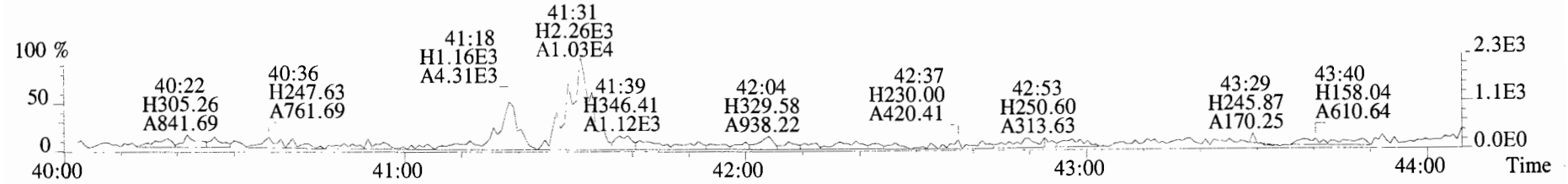
454.9728 S:6 F:4



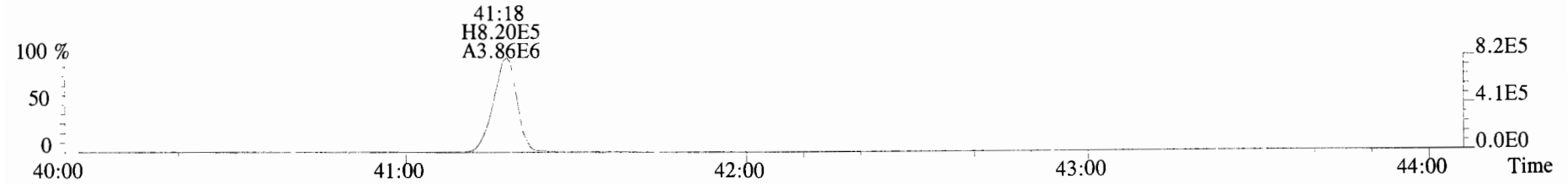
File:191024D2 #1-432 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
 457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



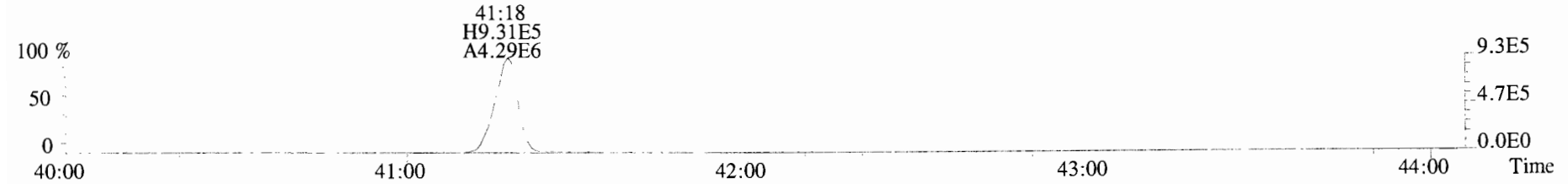
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



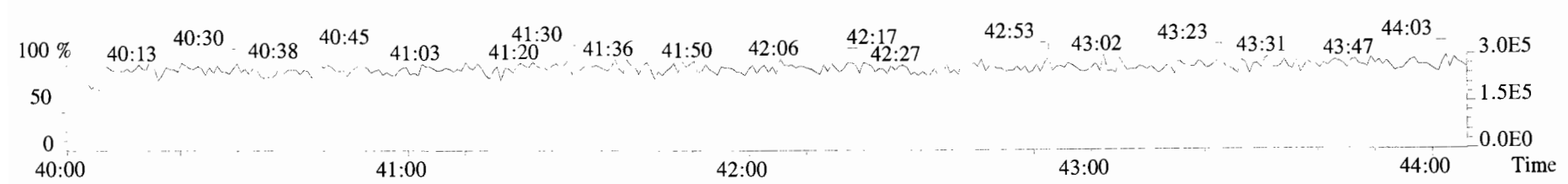
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



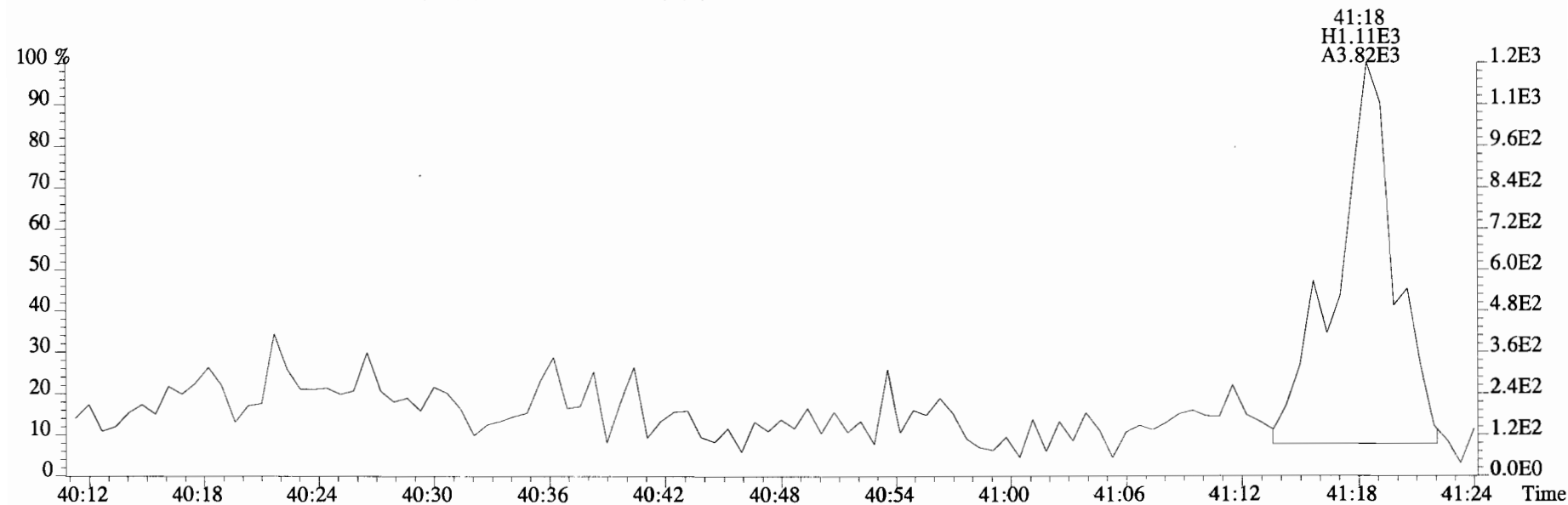
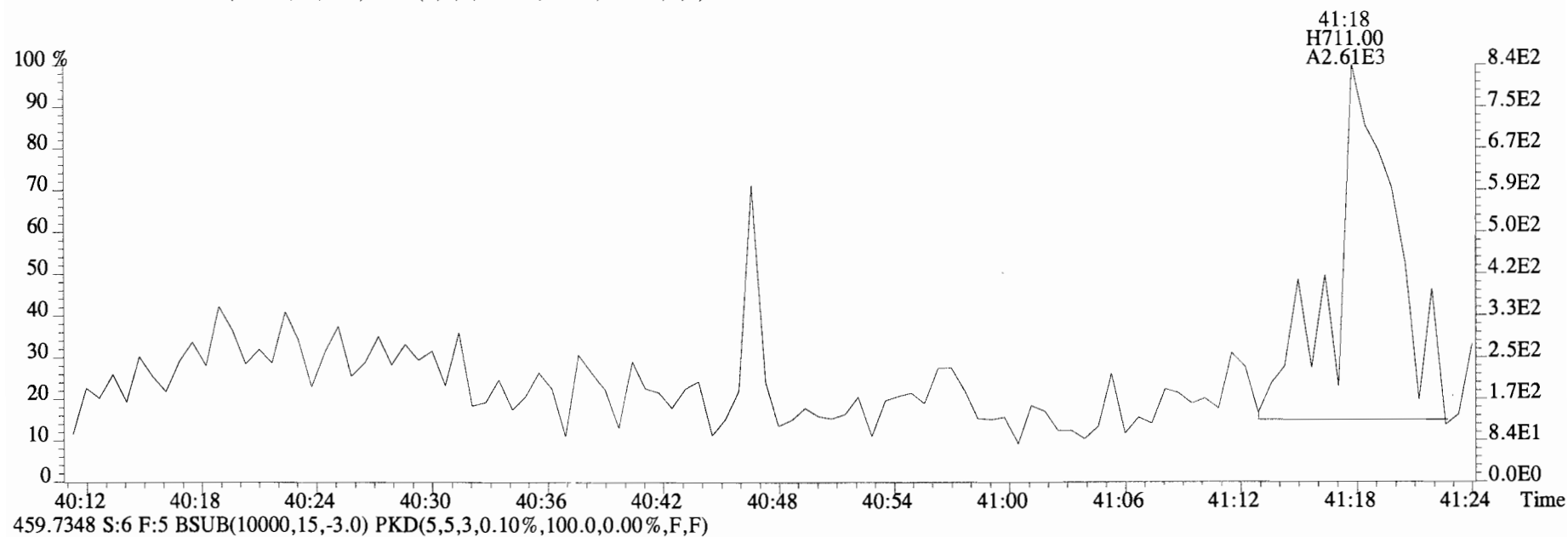
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



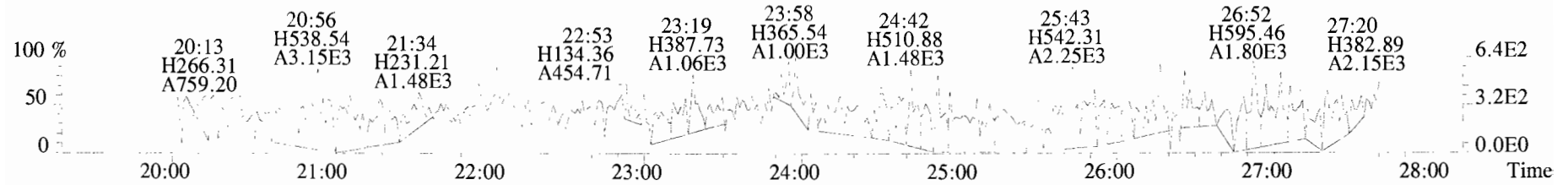
454.9728 S:6 F:5



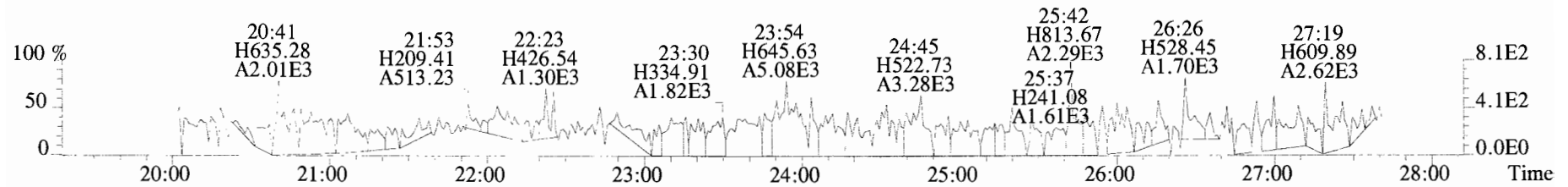
File:191024D2 #1-432 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



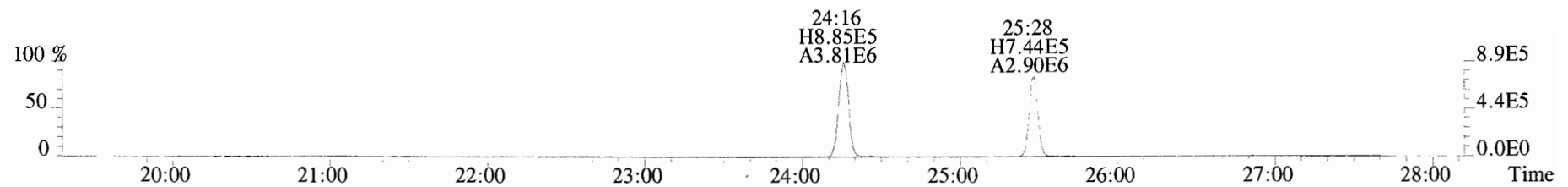
File:191024D2 #1-493 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory_VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



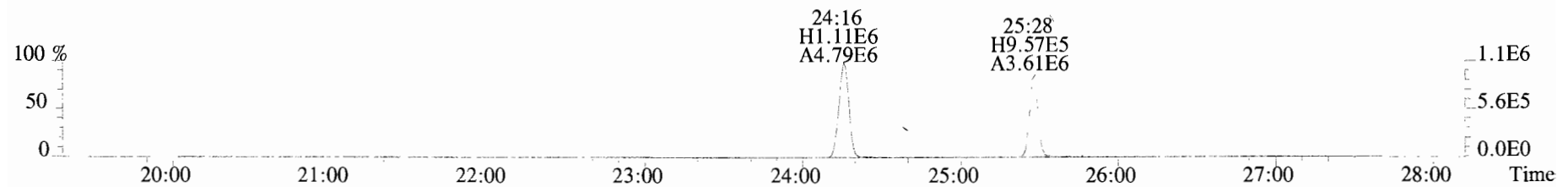
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



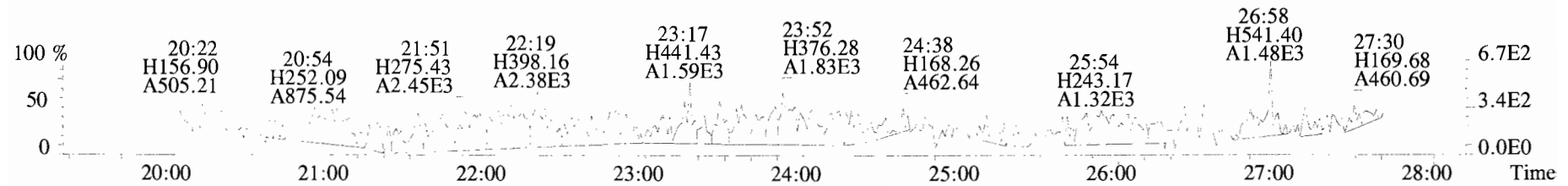
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



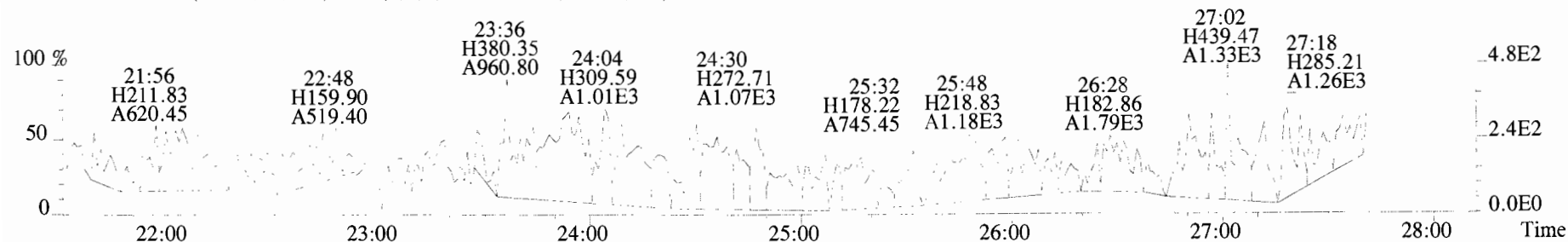
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



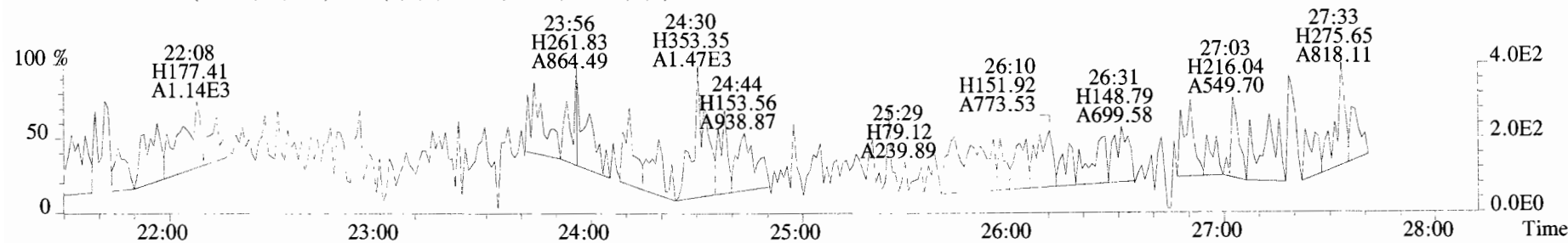
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



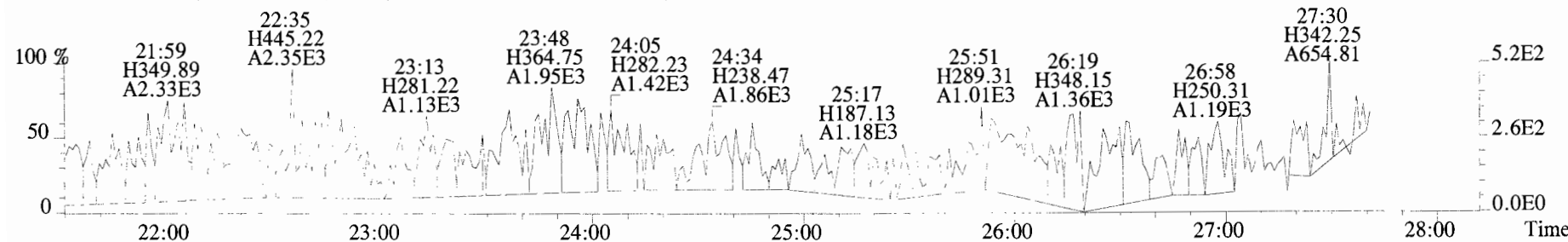
File:191024D2 #1-493 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
 339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



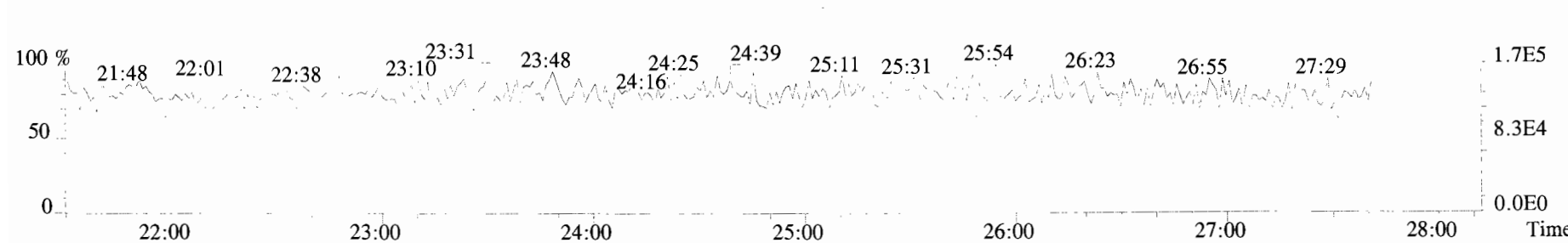
341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



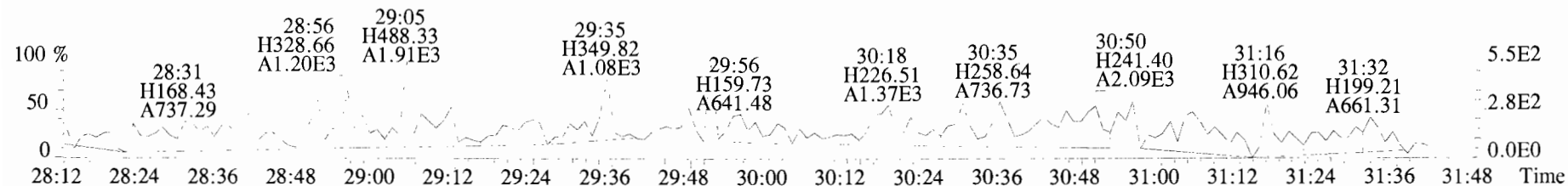
409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



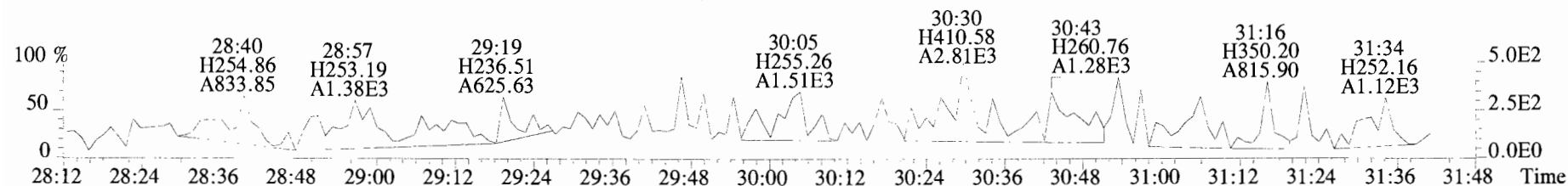
316.9824 S:6



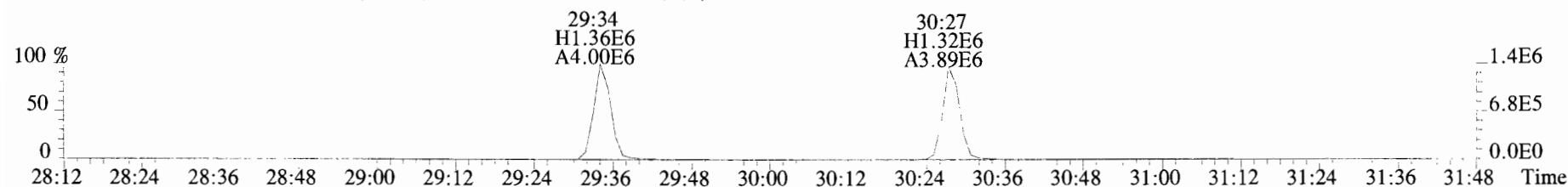
File:191024D2 #1-211 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
 339.8597 S:6 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



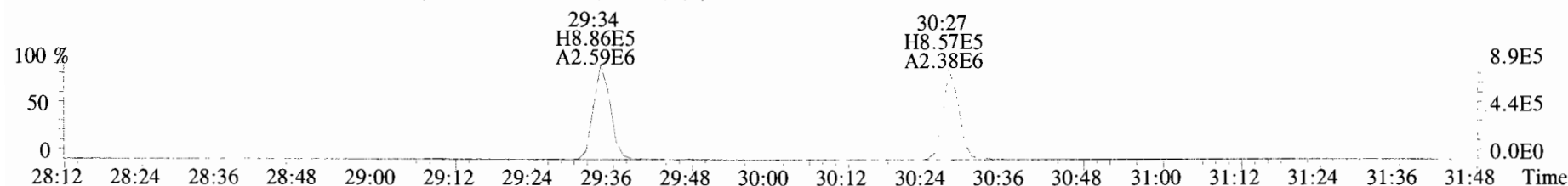
341.8568 S:6 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



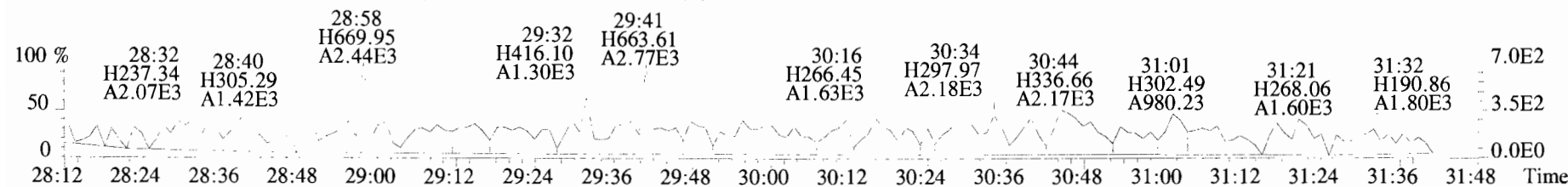
351.9000 S:6 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



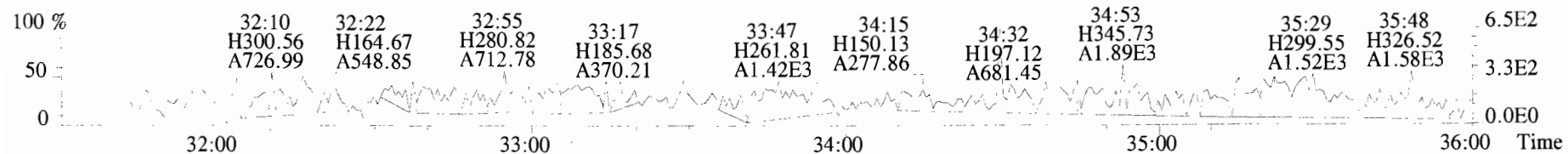
353.8970 S:6 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



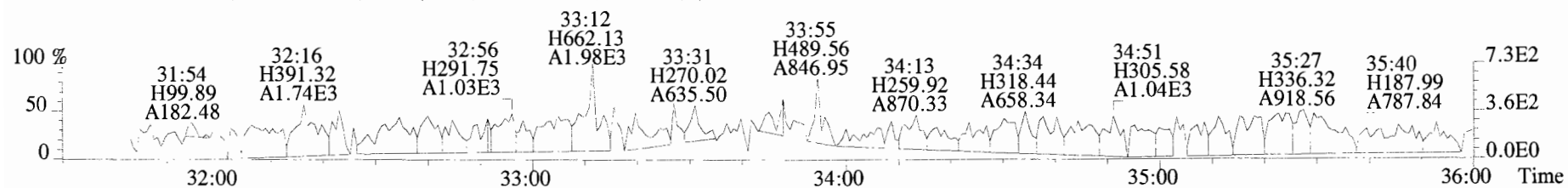
409.7974 S:6 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



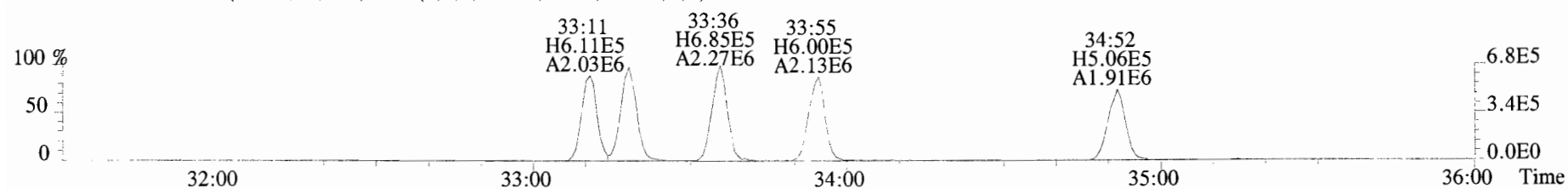
File:191024D2 #1-384 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



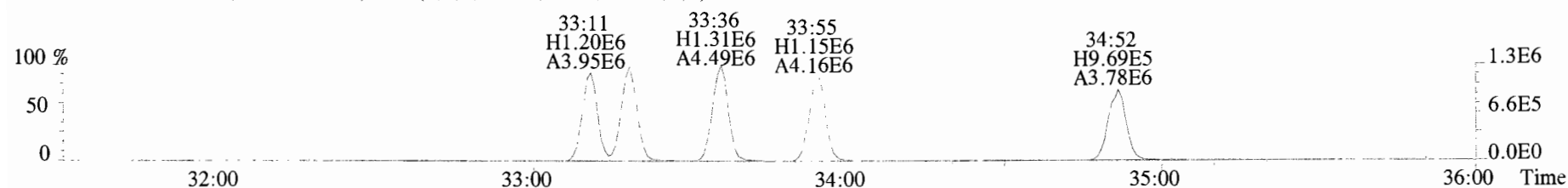
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



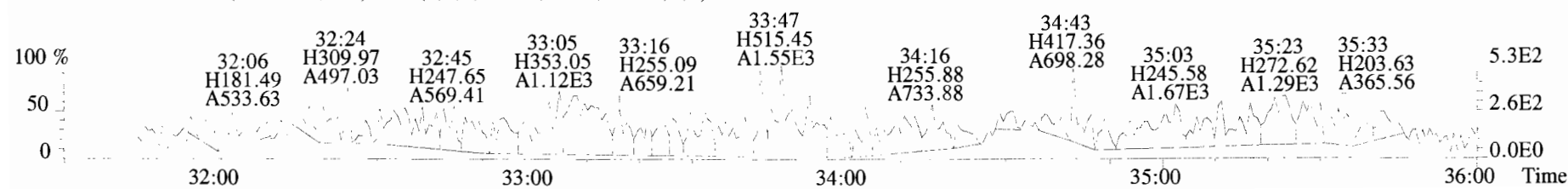
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



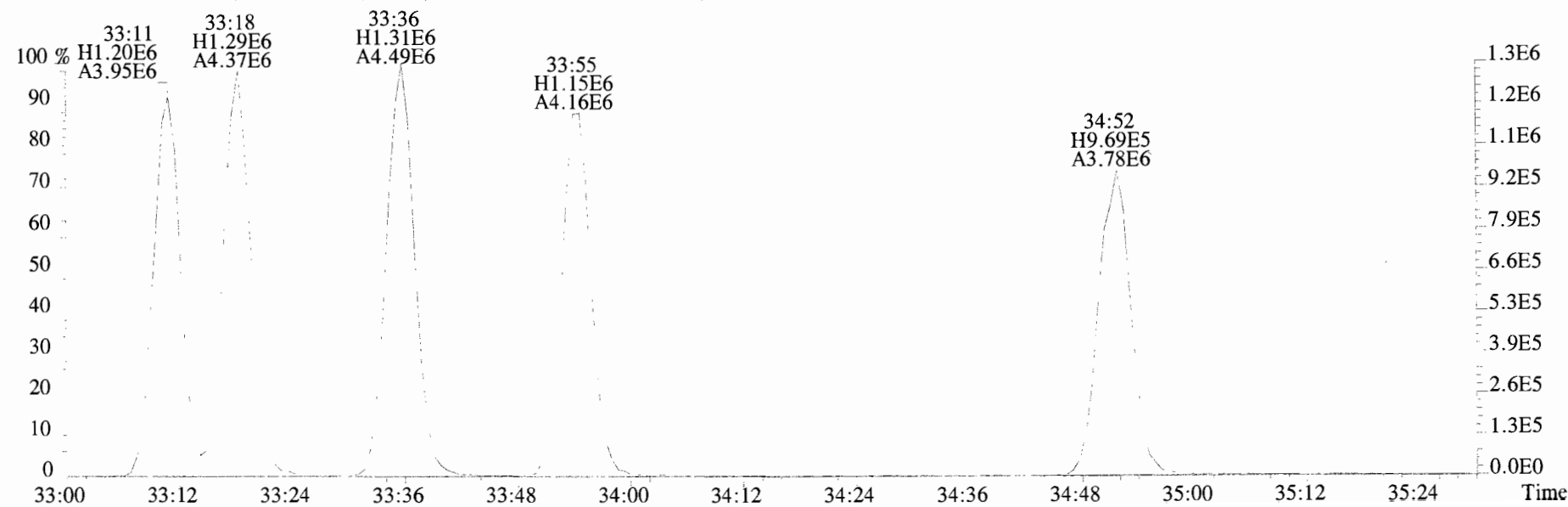
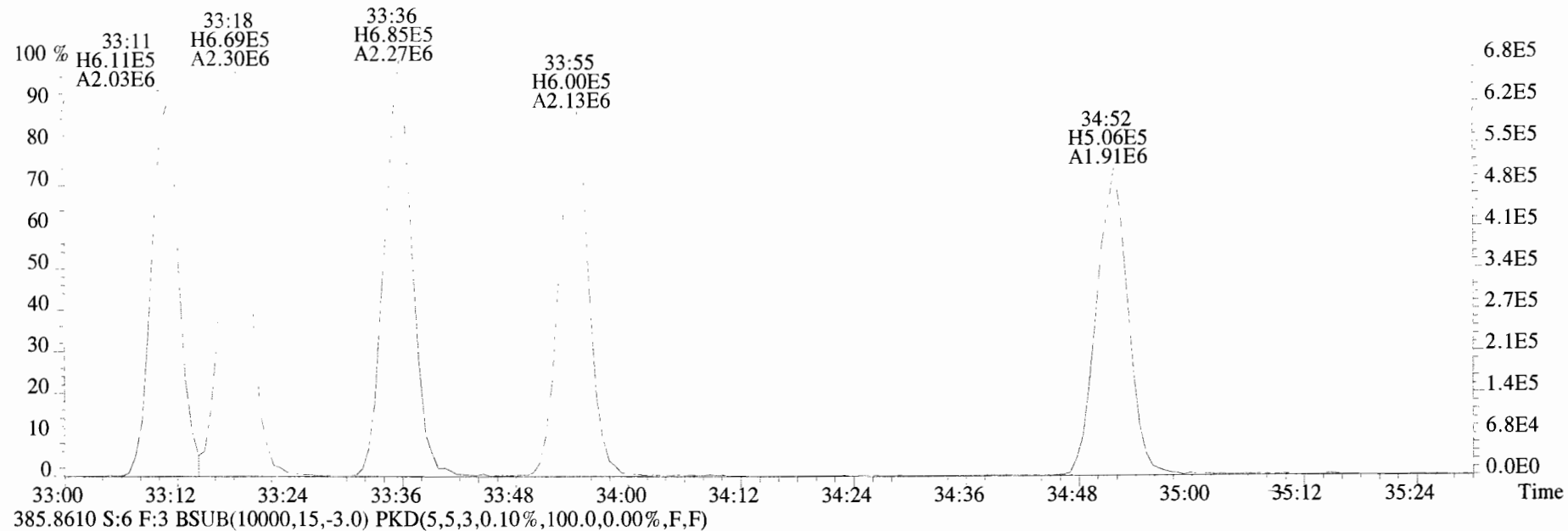
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



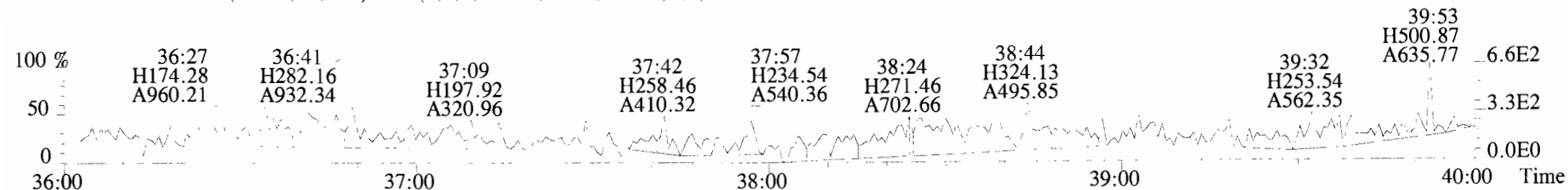
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



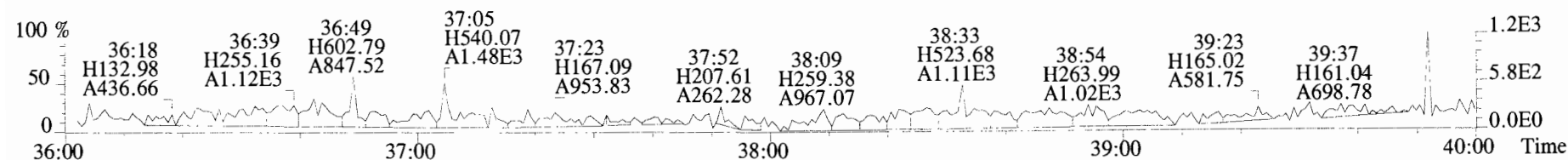
File: 191024D2 #1-384 Acq: 25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text: Vista Analytical Laboratory VG7 Text: 1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp: OCDD_DB5
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



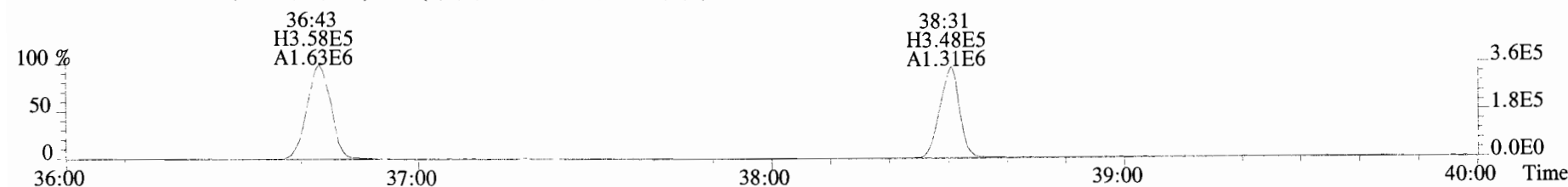
File:191024D2 #1-356 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text: Vista Analytical Laboratory VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



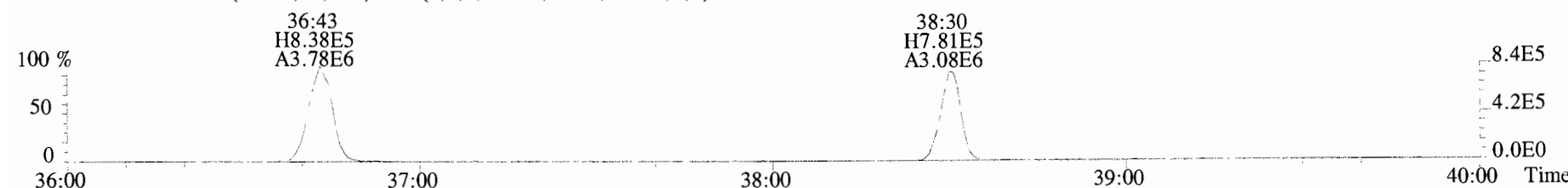
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



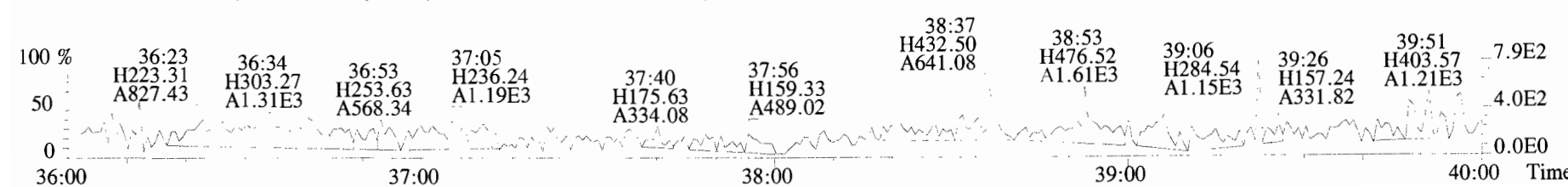
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



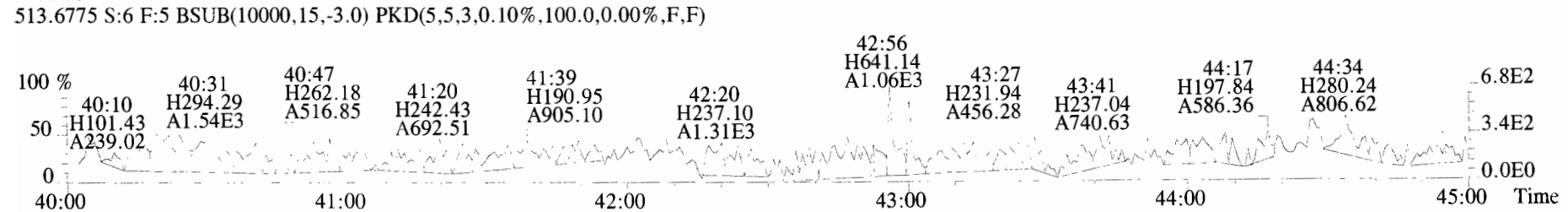
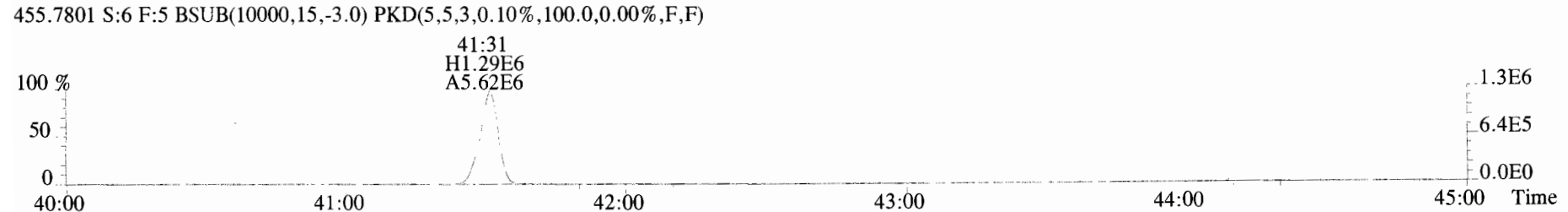
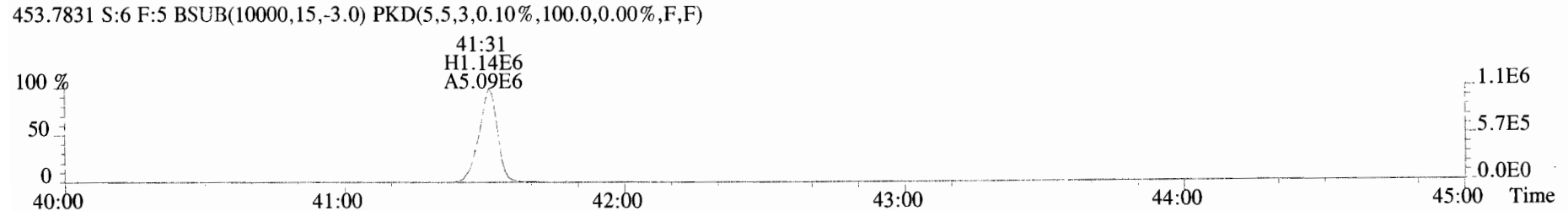
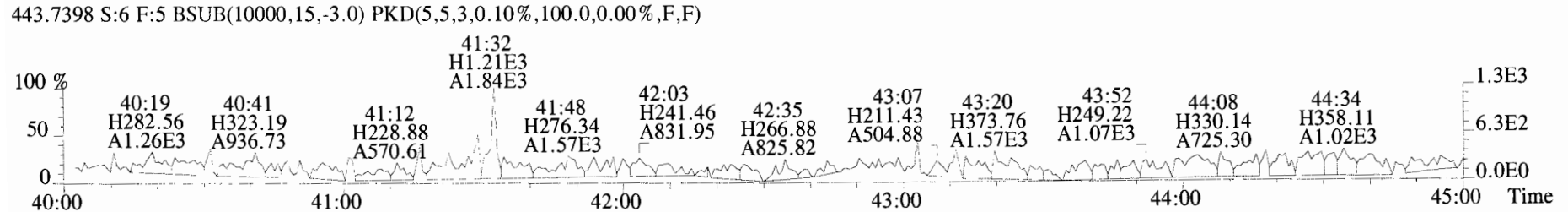
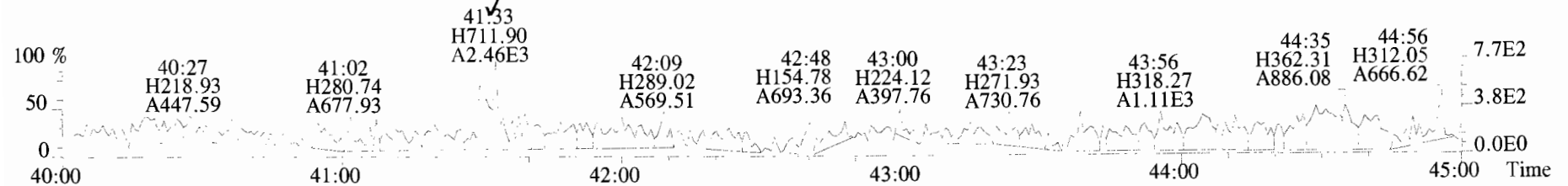
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



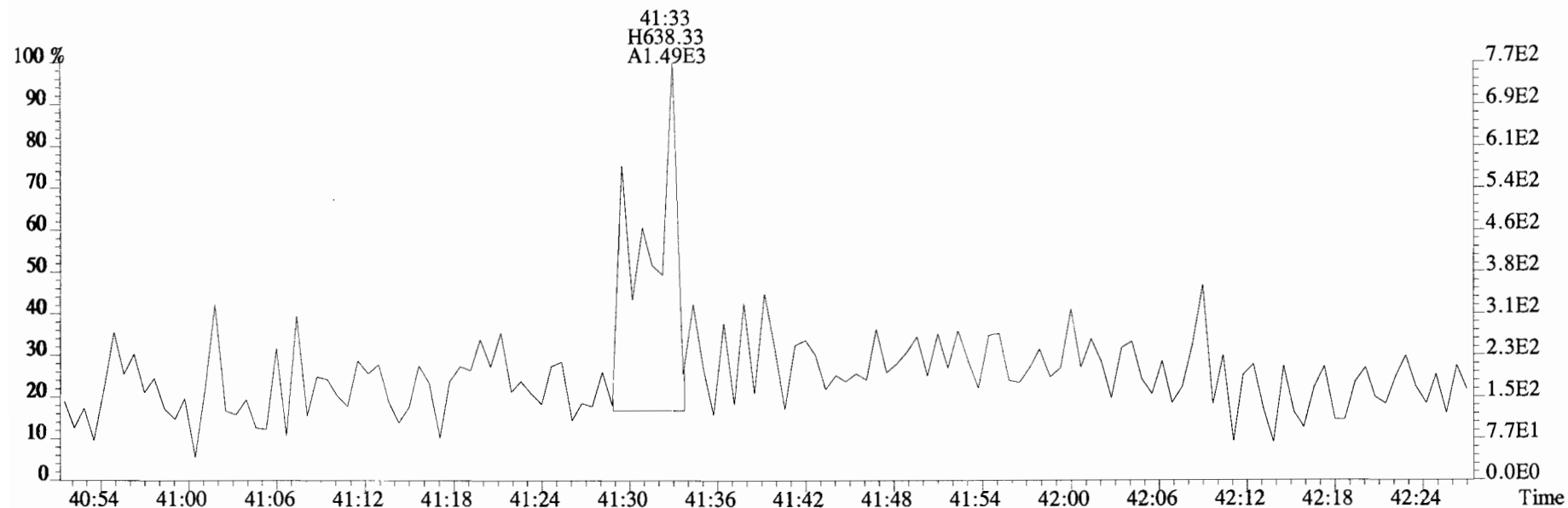
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



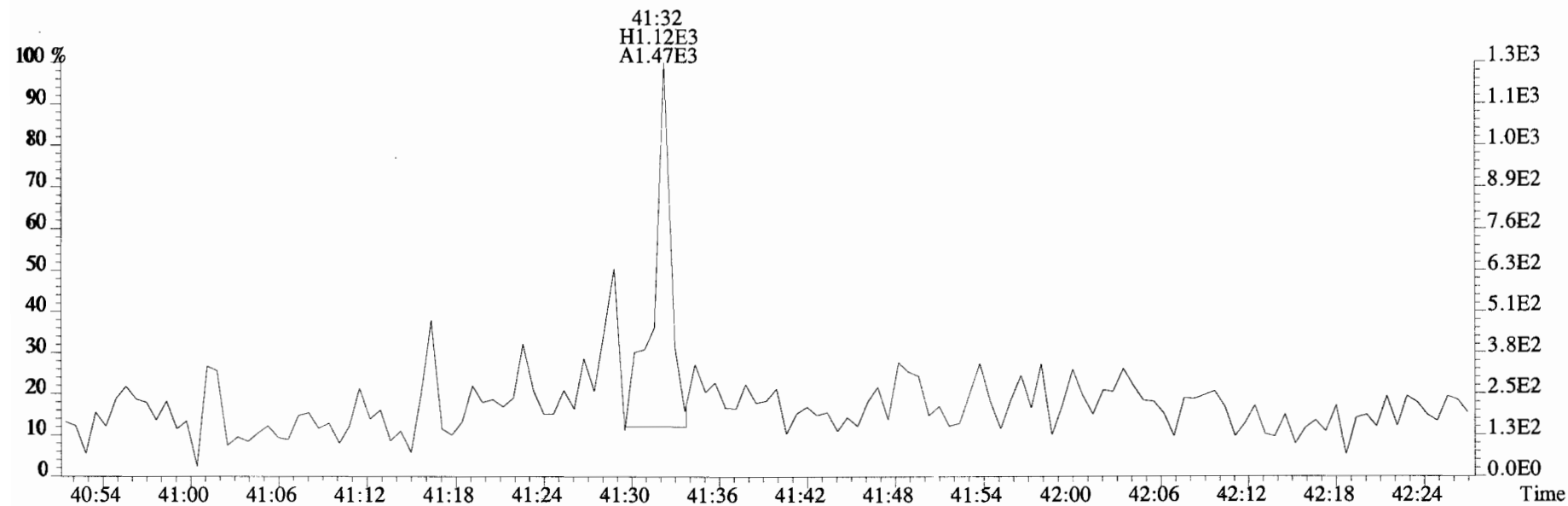
File:191024D2 #1-432 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
 441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191024D2 #1-432 Acq:25-OCT-2019 07:48:31 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1903546-06 PDI-017SC-A-10-11.4-191003 12.84 Exp:OCDD_DB5
441.7428 S:6 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



443.7398 S:6 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
2,3,7,8-TCDD	*	* n	0.91	NotF η	*		168	2.5	0.0813
1,2,3,7,8-PeCDD	*	* n	0.90	NotF η	*		222	2.5	0.0897
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF η	*		179	2.5	0.142
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotF η	*		179	2.5	0.149
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotF η	*		179	2.5	0.141
1,2,3,4,6,7,8-HpCDD	1.22e+04	1.00 y	0.98	37:55	0.56221		*	2.5	*
OCDD	7.15e+04	0.85 y	0.96	41:12	3.6340		*	2.5	*
2,3,7,8-TCDF	*	* n	0.95	NotF η	*		125	2.5	0.0388
1,2,3,7,8-PeCDF	*	* n	0.96	NotF η	*		185	2.5	0.0786
2,3,4,7,8-PeCDF	*	* n	1.01	NotF η	*		185	2.5	0.0721
1,2,3,4,7,8-HxCDF	*	* n	1.18	NotF η	*		154	2.5	0.0474
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotF η	*		154	2.5	0.0507
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotF η	*		154	2.5	0.0537
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotF η	*		154	2.5	0.0703
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	NotF η	*		136	2.5	0.0815
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotF η	*		136	2.5	0.0708
OCDF	6.39e+03	0.69 n	0.95	41:27	0.26449		*	2.5	*

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		168	0.0813
Total Penta-Dioxins	*	*		222	0.0897
Total Hexa-Dioxins	0.300	0.300		*	*
Total Hepta-Dioxins	0.562	1.32		*	*
Total Tetra-Furans	*	*		125	0.0388
Total Penta-Furans	0.0000	0.0000		185	0.0753
Total Hexa-Furans	*	*		154	0.0550
Total Hepta-Furans	*	*		136	0.0765

IS	13C-2,3,7,8-TCDD	7.37e+06	0.78 y	1.10	26:15	200.14
IS	13C-1,2,3,7,8-PeCDD	5.89e+06	0.63 y	0.88	30:44	198.90
IS	13C-1,2,3,4,7,8-HxCDD	4.69e+06	1.29 y	0.64	34:03	203.56
IS	13C-1,2,3,6,7,8-HxCDD	5.22e+06	1.29 y	0.86	34:10	169.90
IS	13C-1,2,3,7,8,9-HxCDD	5.53e+06	1.24 y	0.81	34:28	190.87
IS	13C-1,2,3,4,6,7,8-HpCDD	4.38e+06	1.05 y	0.65	37:55	186.76
IS	13C-OCDD	8.11e+06	0.89 y	0.58	41:12	389.84
IS	13C-2,3,7,8-TCDF	1.11e+07	0.79 y	1.03	25:29	197.29
IS	13C-1,2,3,7,8-PeCDF	9.92e+06	1.63 y	0.85	29:34	213.07
IS	13C-2,3,4,7,8-PeCDF	9.58e+06	1.58 y	0.85	30:27	207.39
IS	13C-1,2,3,4,7,8-HxCDF	6.60e+06	0.50 y	0.83	33:10	221.16
IS	13C-1,2,3,6,7,8-HxCDF	7.10e+06	0.54 y	1.03	33:18	191.27
IS	13C-2,3,4,6,7,8-HxCDF	6.44e+06	0.52 y	0.95	33:53	188.07
IS	13C-1,2,3,7,8,9-HxCDF	6.04e+06	0.52 y	0.83	34:51	203.15
IS	13C-1,2,3,4,6,7,8-HpCDF	4.94e+06	0.44 y	0.76	36:42	181.80
IS	13C-1,2,3,4,7,8,9-HpCDF	4.17e+06	0.44 y	0.58	38:27	199.81
IS	13C-OCDF	1.01e+07	0.90 y	0.69	41:26	407.42

Rec Qual

101
101
103
86.0
96.6
94.5
98.6
99.8
108
105
112
96.8
95.2
103
92.0
101
103

C/Up	37C1-2,3,7,8-TCDD	3.19e+06		1.20	26:16	79.236
RS/RT	13C-1,2,3,4-TCDD	6.64e+06	0.78 y	1.00	25:42	197.60
RS	13C-1,2,3,4-TCDF	1.08e+07	0.80 y	1.00	24:17	197.60
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.09e+06	0.52 y	1.00	33:35	197.60

Integrations
 by DB
 Analyst: DB
 Date: 11/6/19
 Reviewed
 by CT
 Analyst: CT
 Date: 11/11/19

Totals class: HxCDD EMPC

Entry #: 23

Run: 10 File: 191101D1 S: 6 I: 1 F: 3
Acquired: 1-NOV-19 17:58:35 Processed: 4-NOV-19 10:36:44

Total Concentration: 0.30003 Unnamed Concentration: 0.300

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:31	4.449e+03	3.299e+03	1.35 y	7.748e+03	0.30003

Totals class: HpCDD EMPC

Entry #: 25

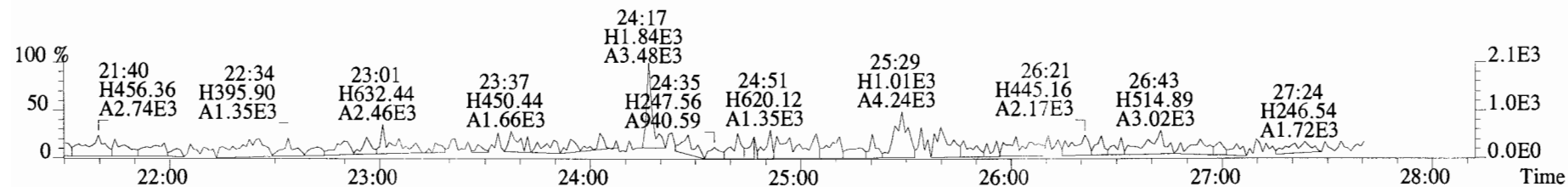
Run: 10 File: 191101D1 S: 6 I: 1 F: 4
Acquired: 1-NOV-19 17:58:35 Processed: 4-NOV-19 10:36:44

Total Concentration: 1.3223

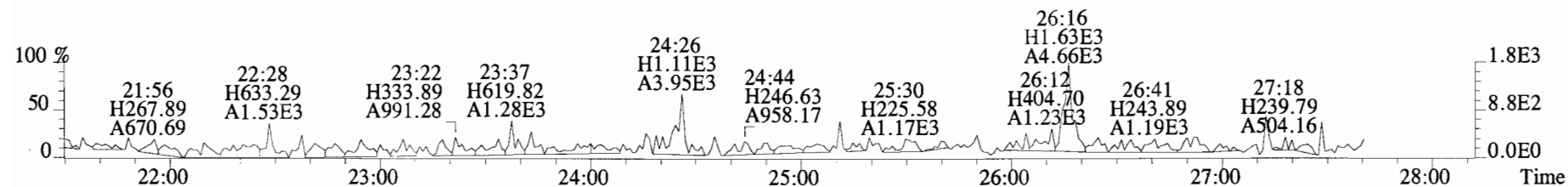
Unnamed Concentration: 0.760

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:05	9.938e+03	8.096e+03	1.23	n	1.652e+04	0.76011
37:55	6.095e+03	6.120e+03	1.00	y	1.222e+04	0.56221 1,2,3,4,6,7,8-HpCDD

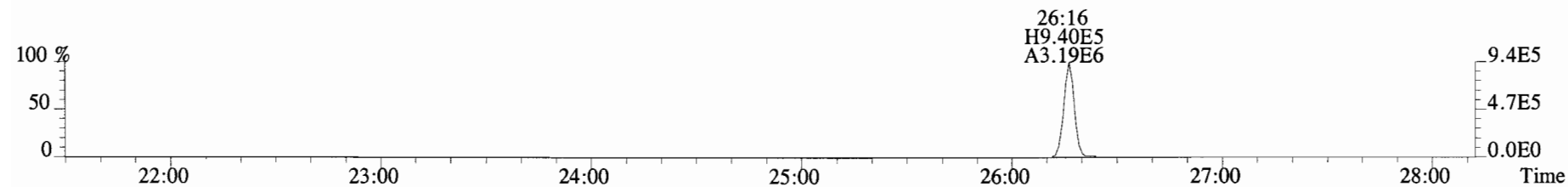
File:191101D1 #1-492 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Viata Analytical Laboratory_VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
 319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



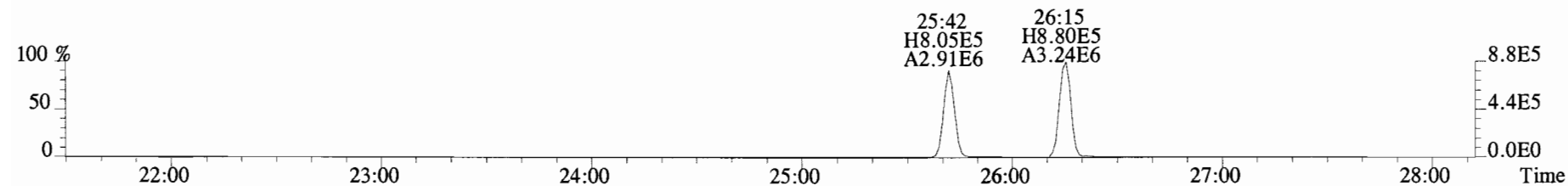
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



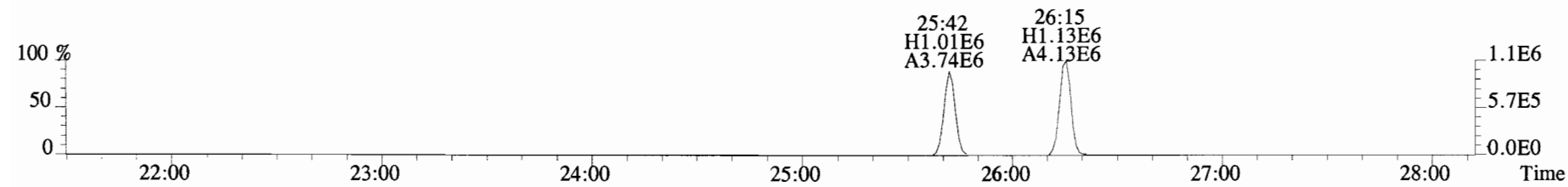
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



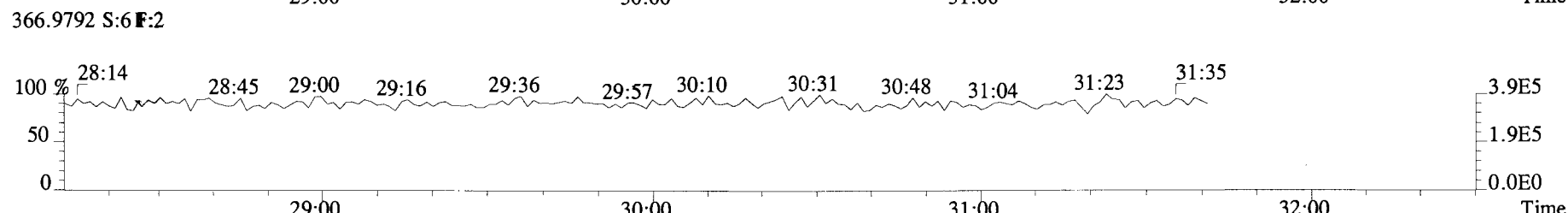
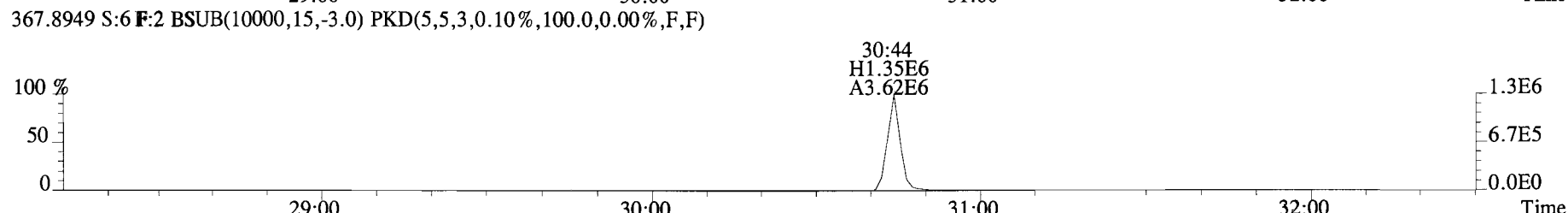
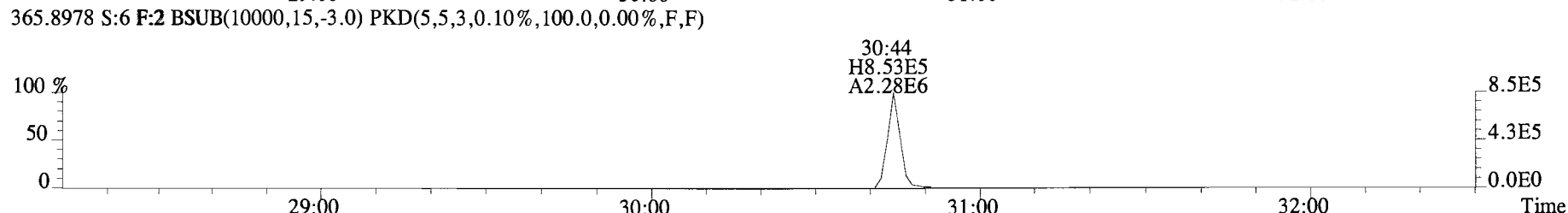
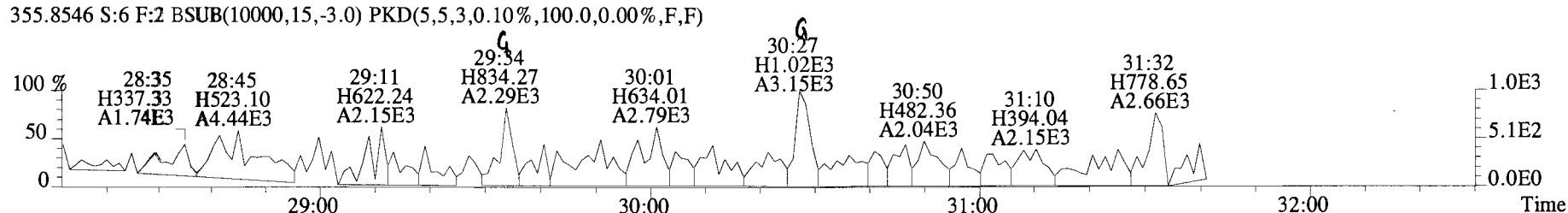
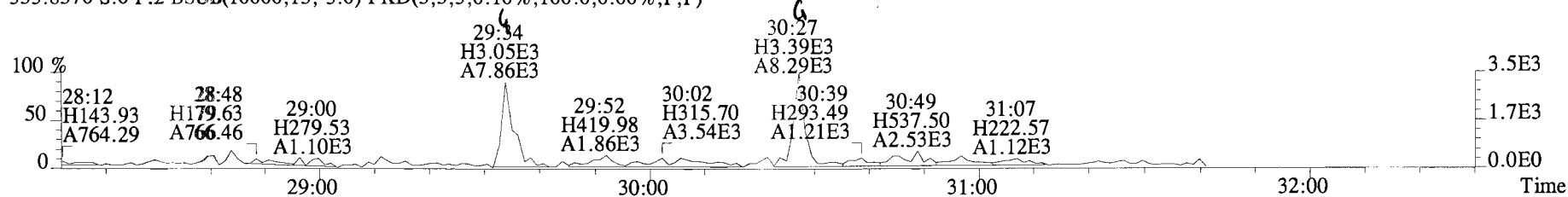
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



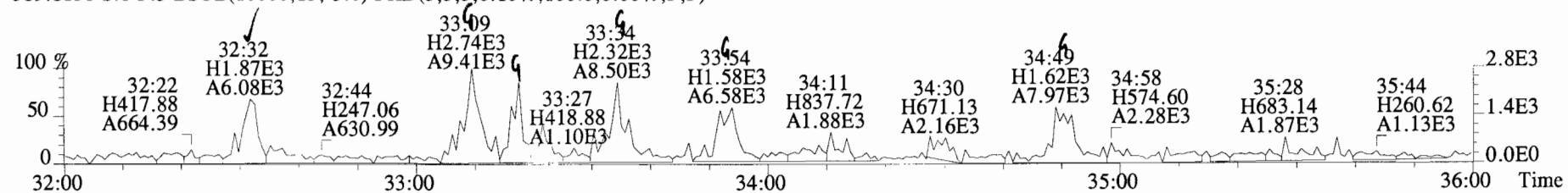
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191101D1 #1-211 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



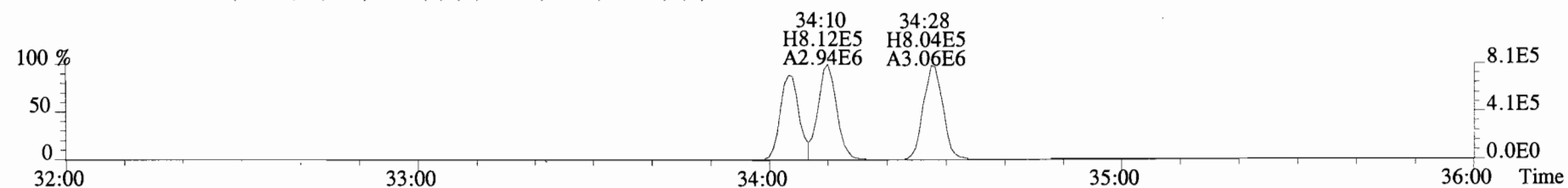
File:191101D1 #1-384 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
 389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



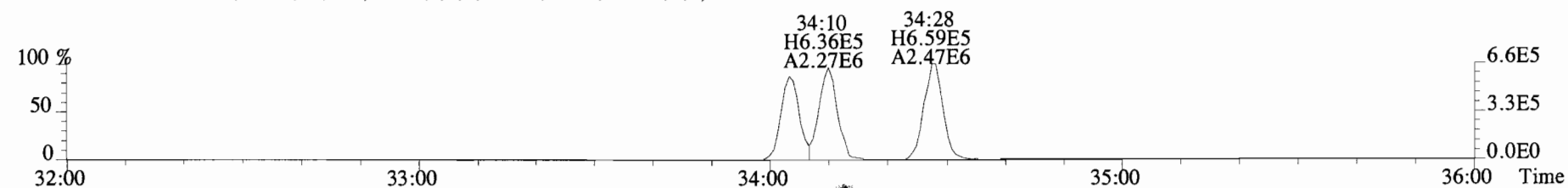
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



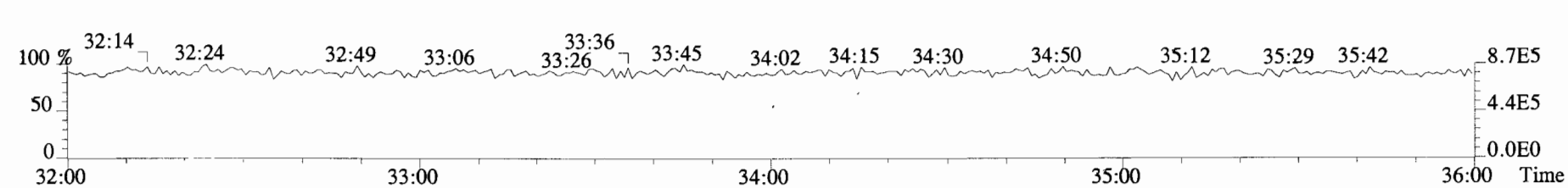
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



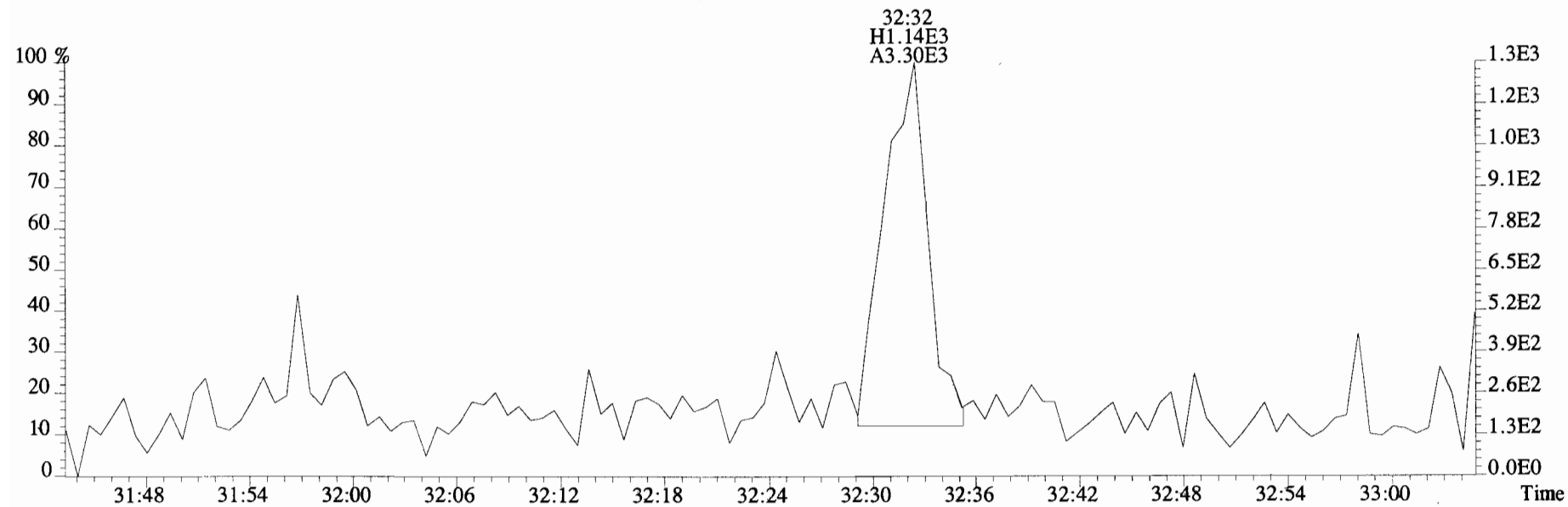
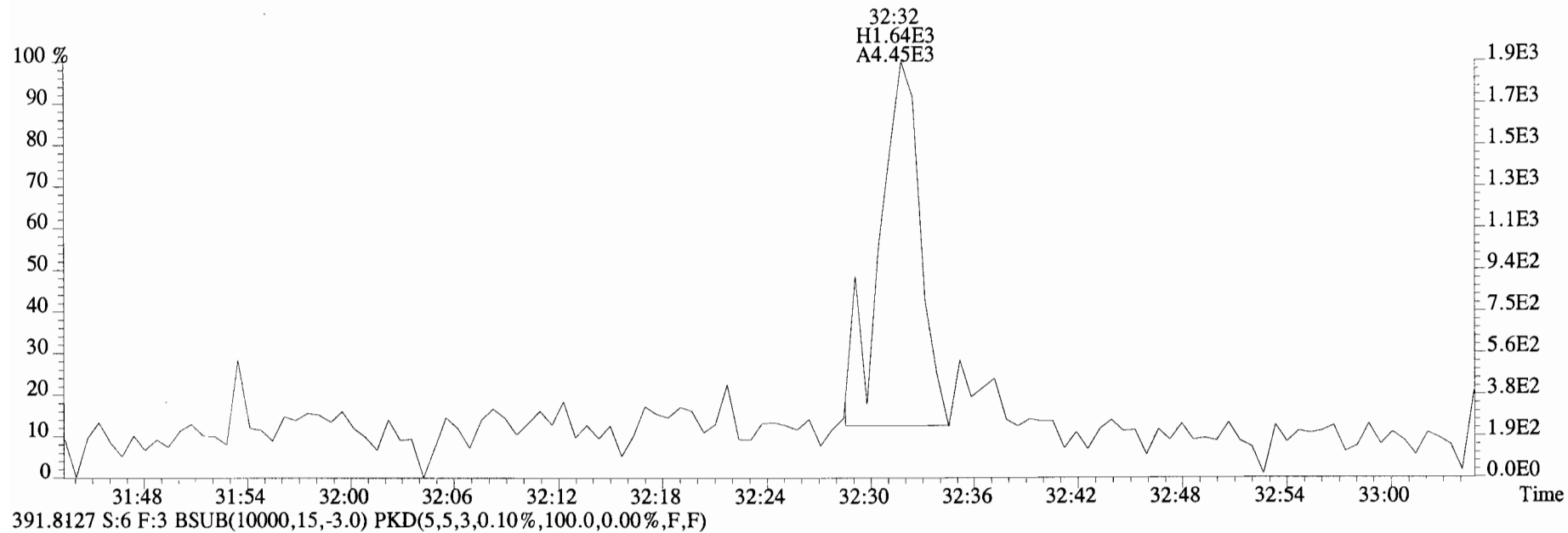
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



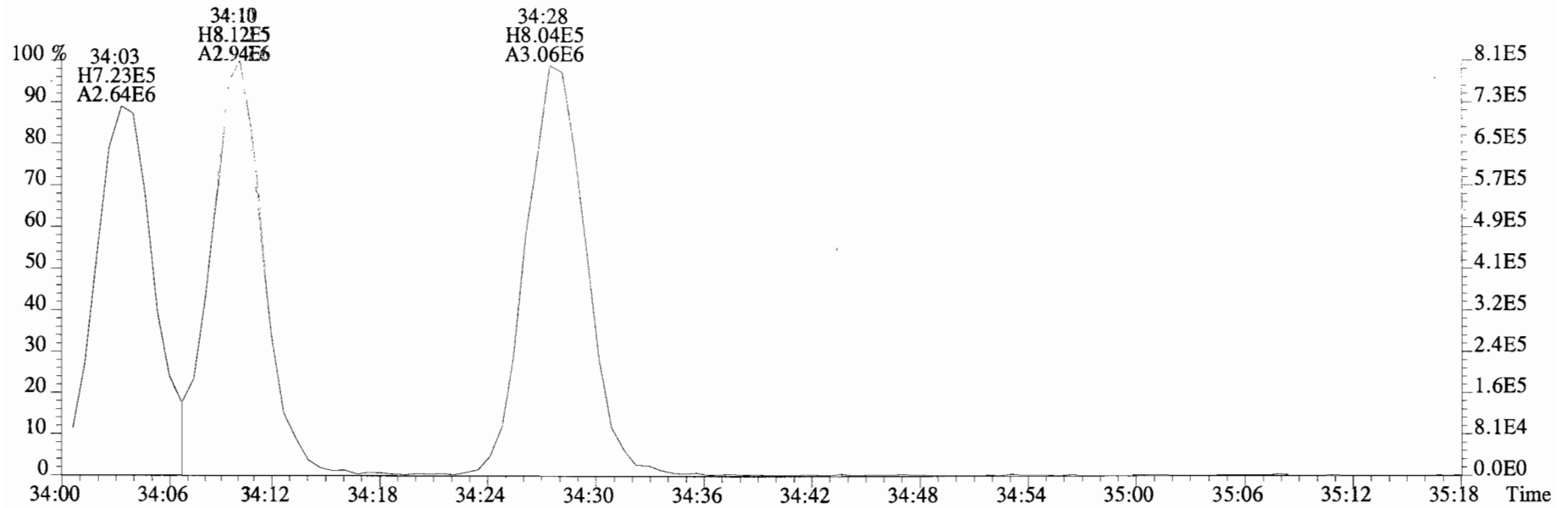
392.9760 S:6 F:3



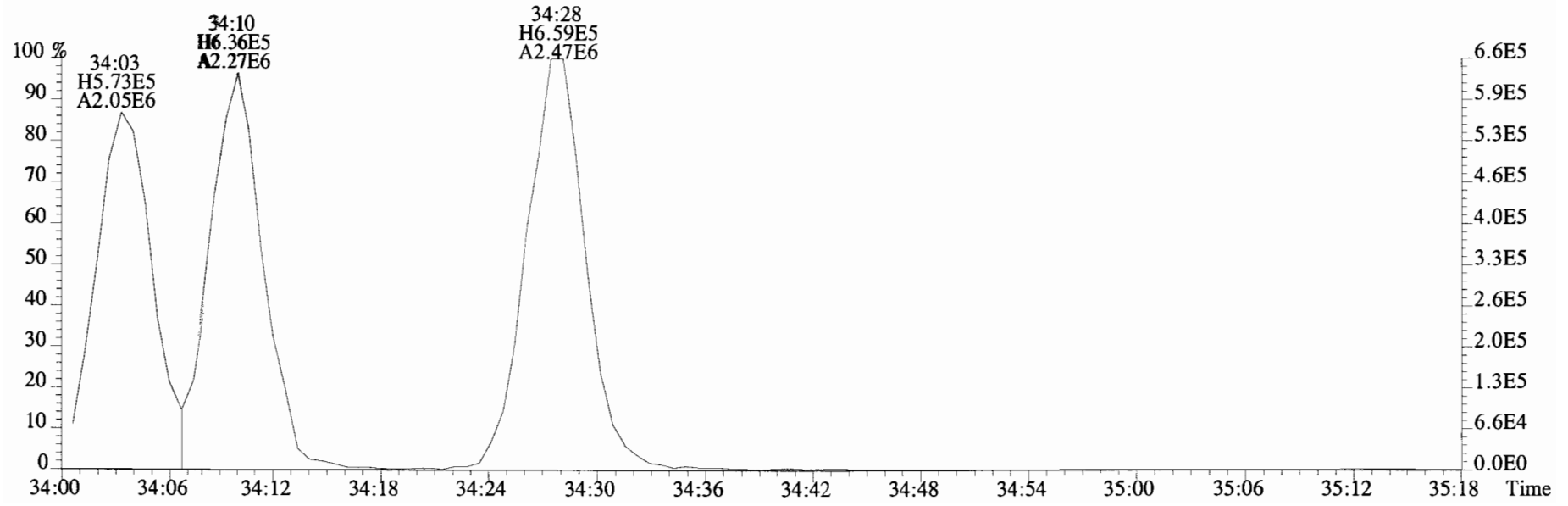
File:191101D1 #1-384 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



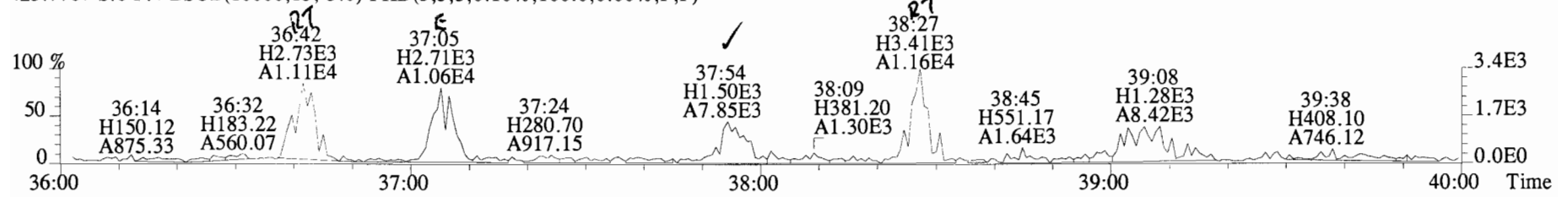
File:191101D1 #1-384 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text: Viata Analytical Laboratory VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



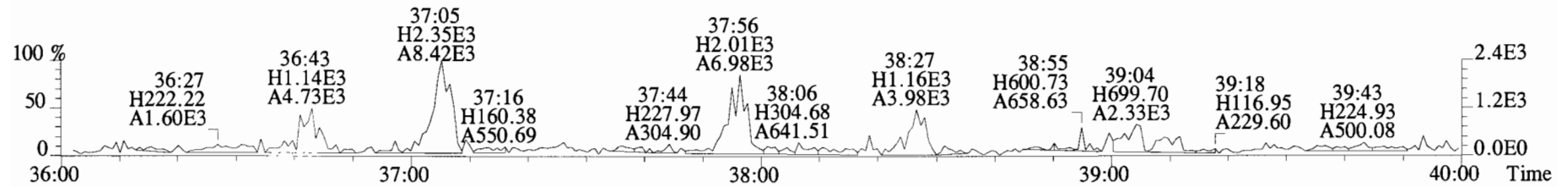
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



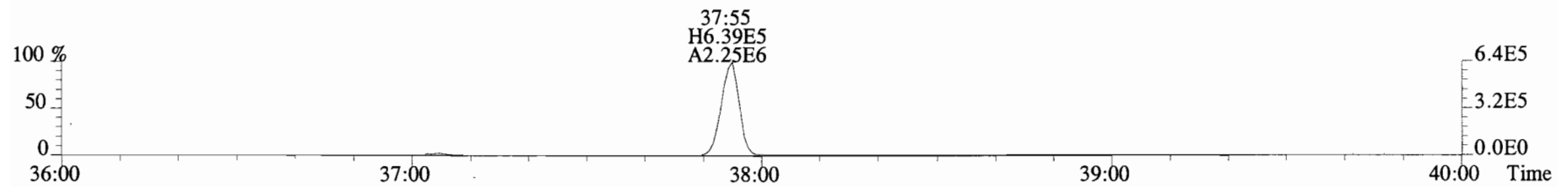
File:191101D1 #1-355 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical Laboratory_VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



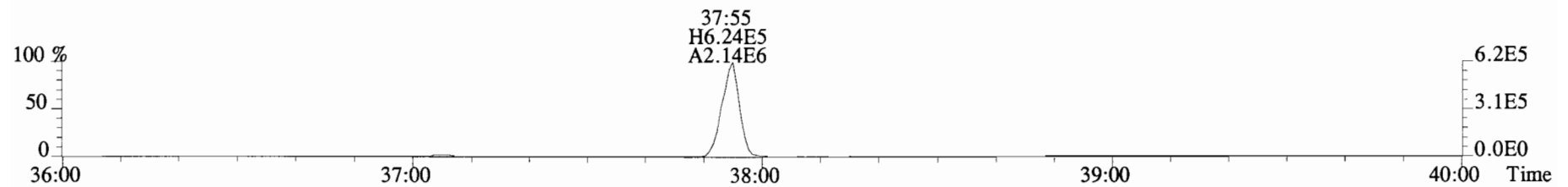
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



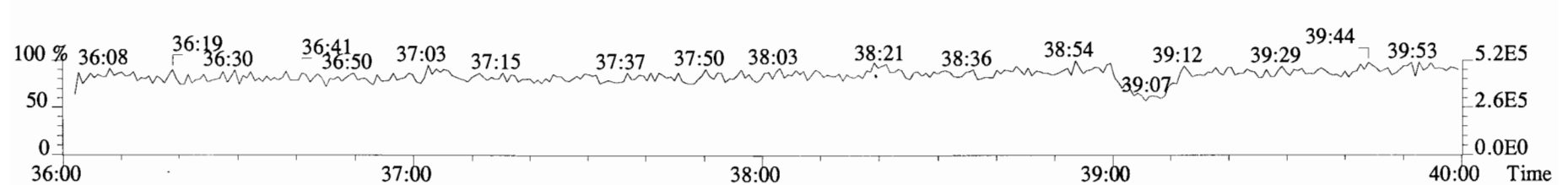
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



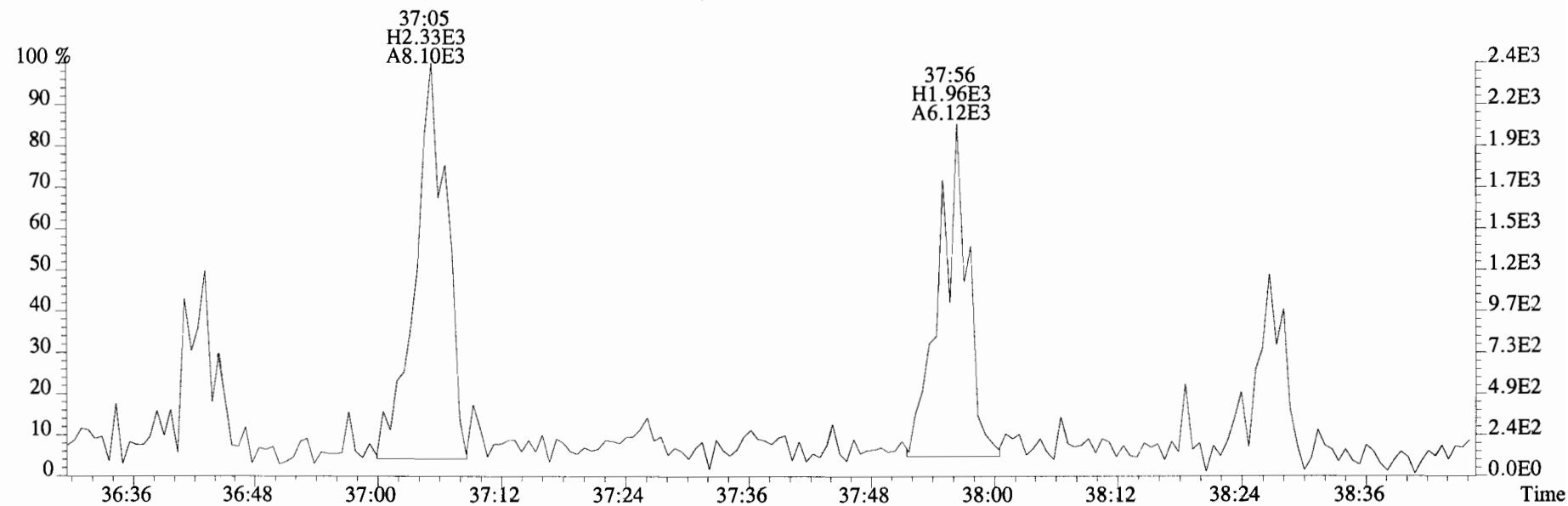
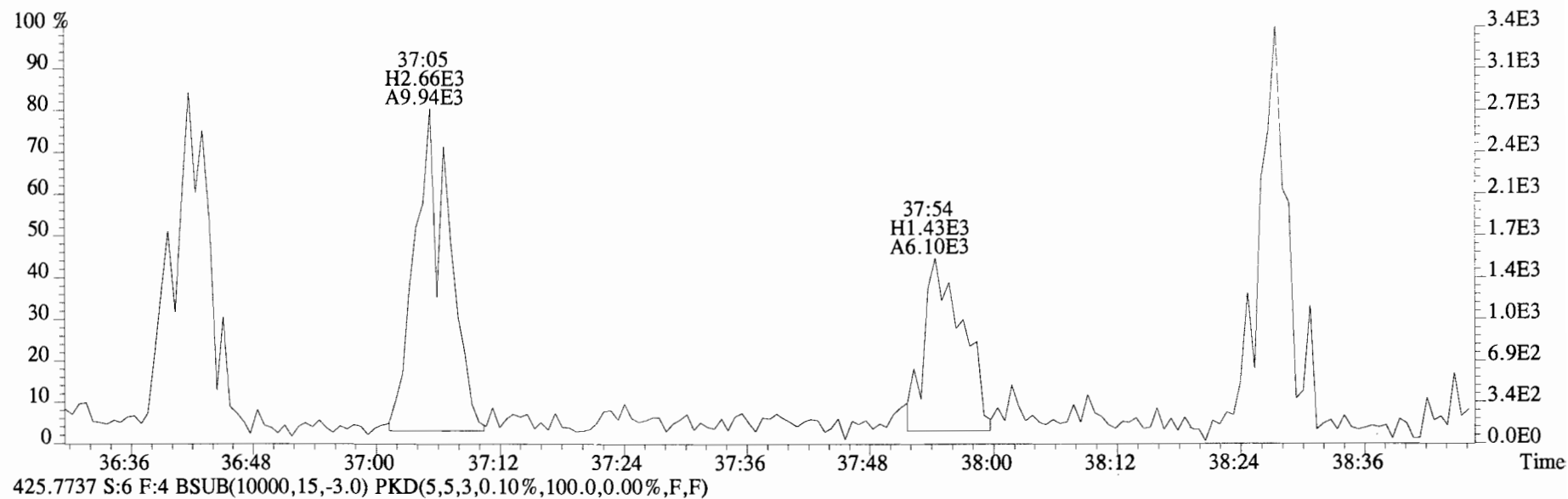
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



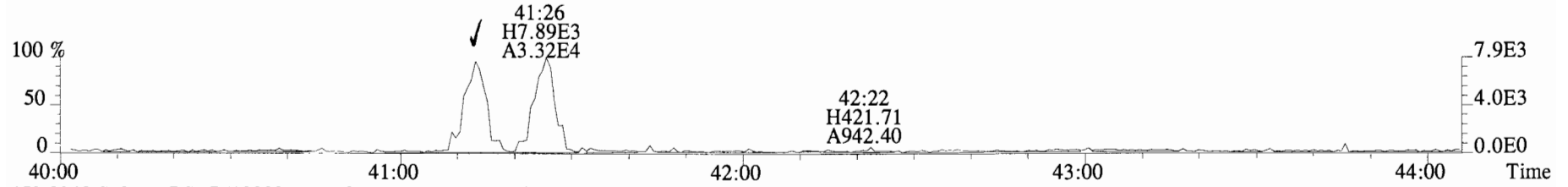
454.9728 S:6 F:4



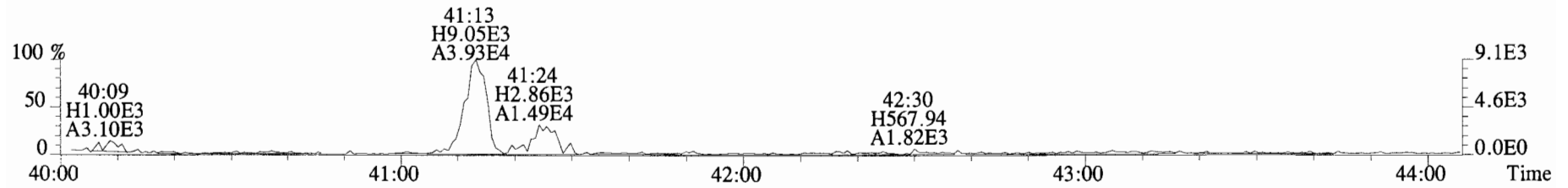
File:191101D1 #1-355 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



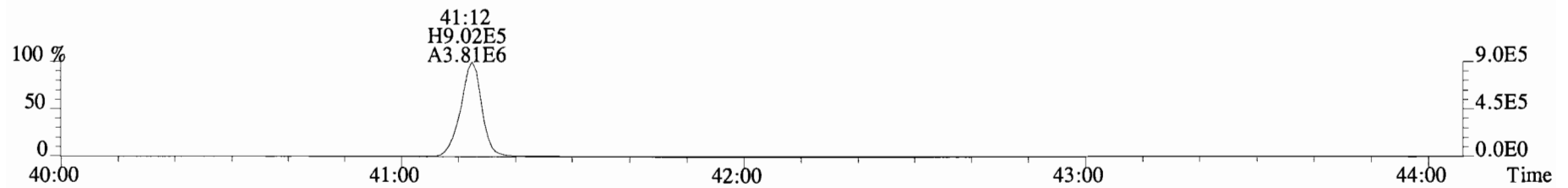
File:191101D1 #1-432 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



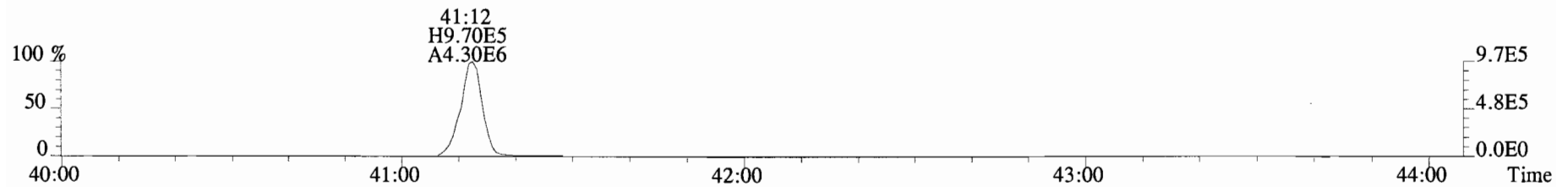
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



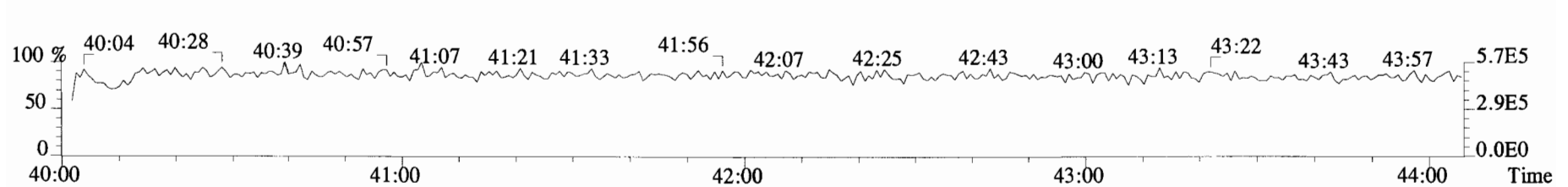
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



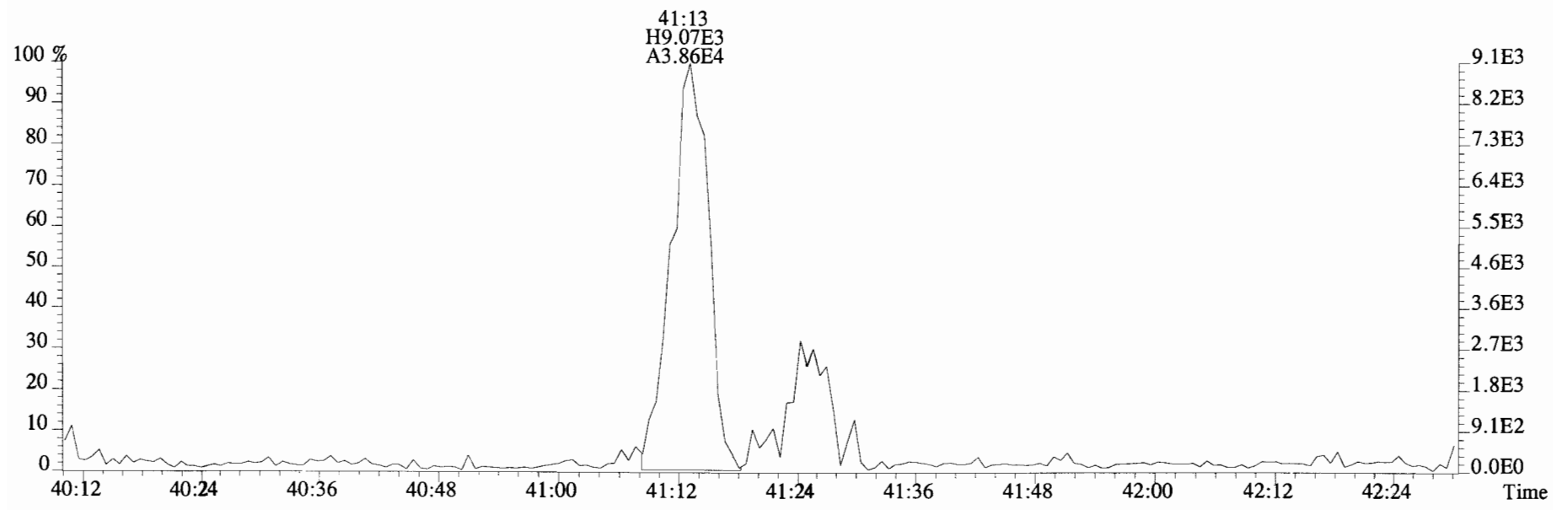
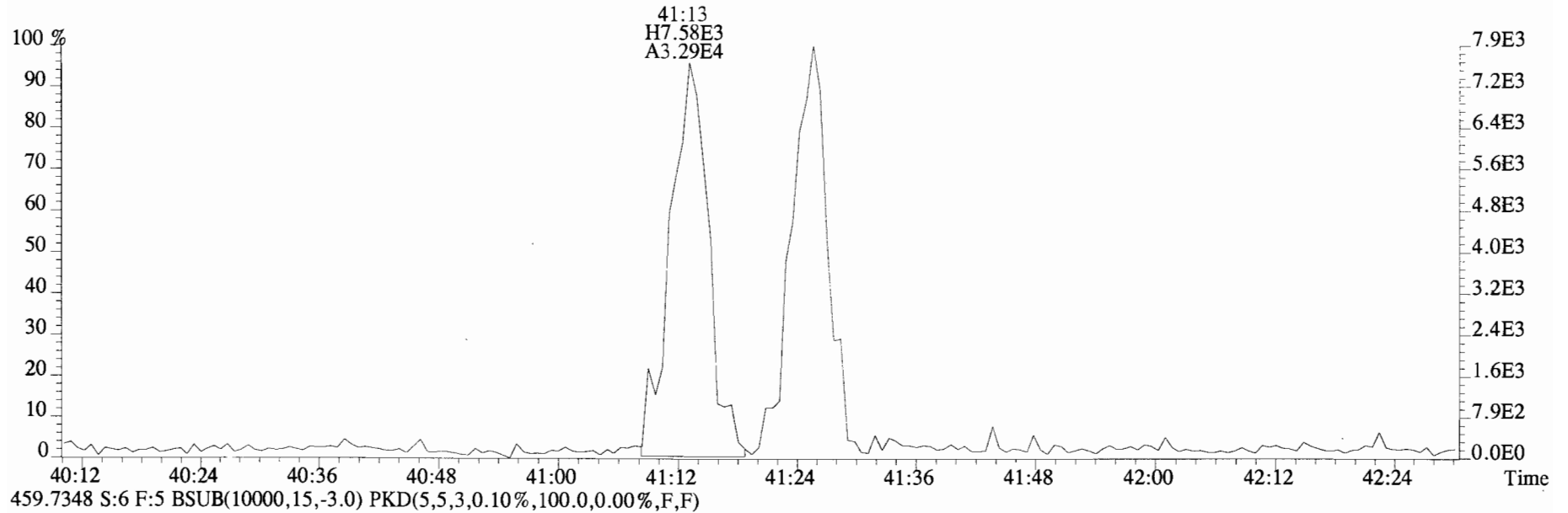
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



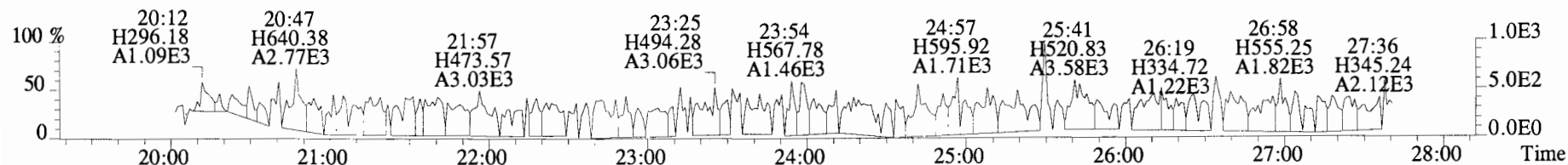
454.9728 S:6 F:5



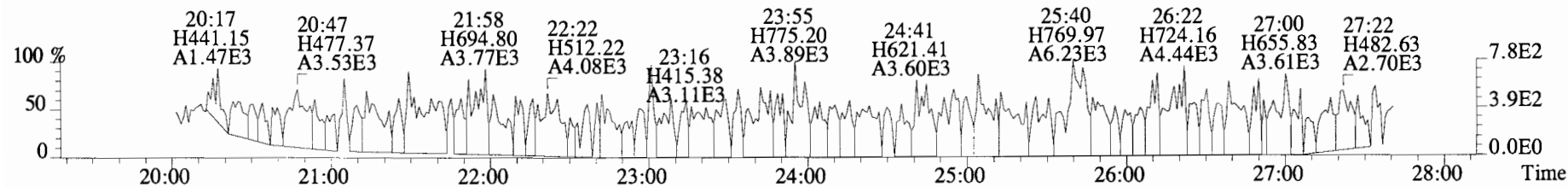
File:191101D1 #1-432 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical Laboratory_VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



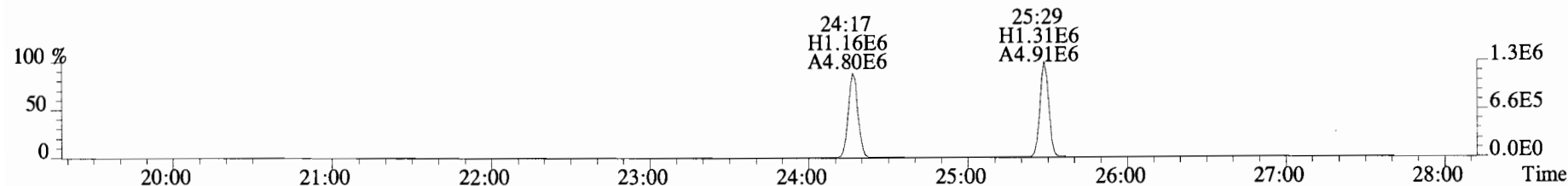
File:191101D1 #1-492 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical Laboratory_VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



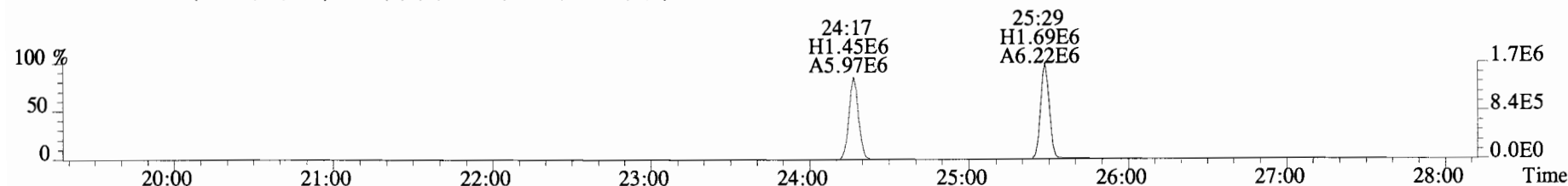
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



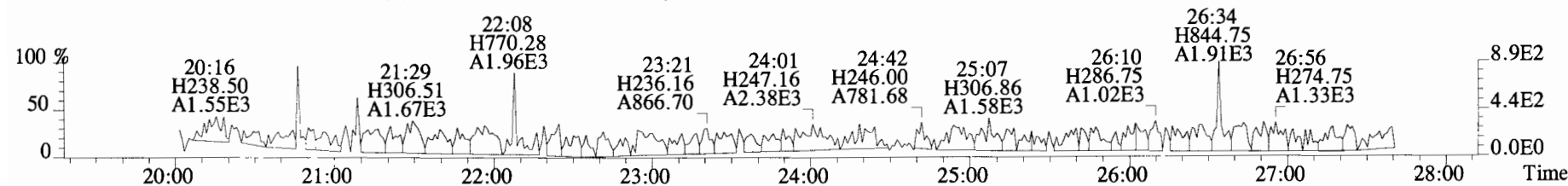
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



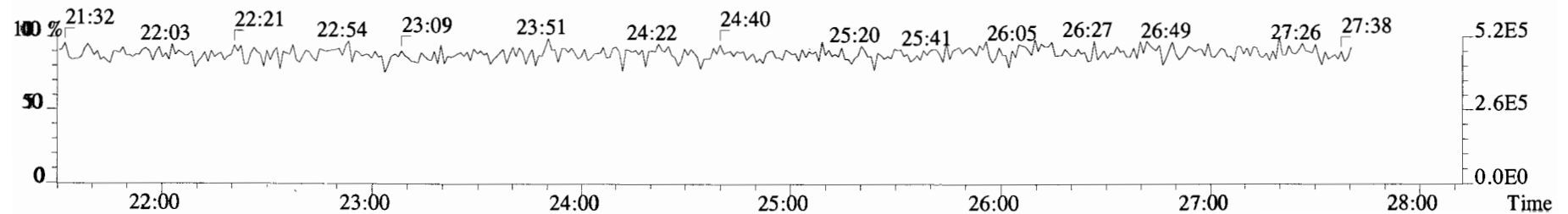
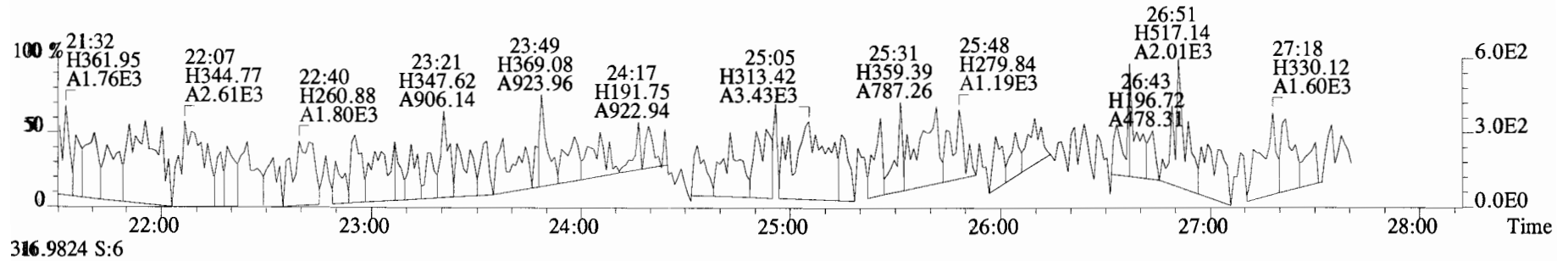
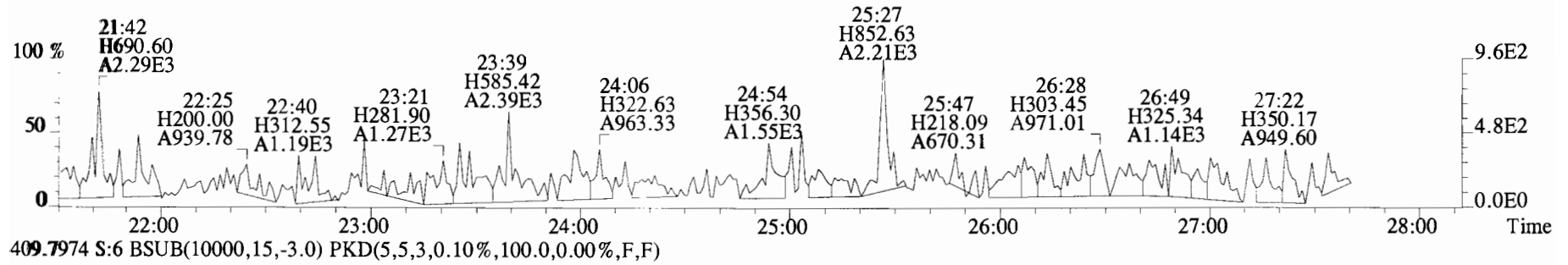
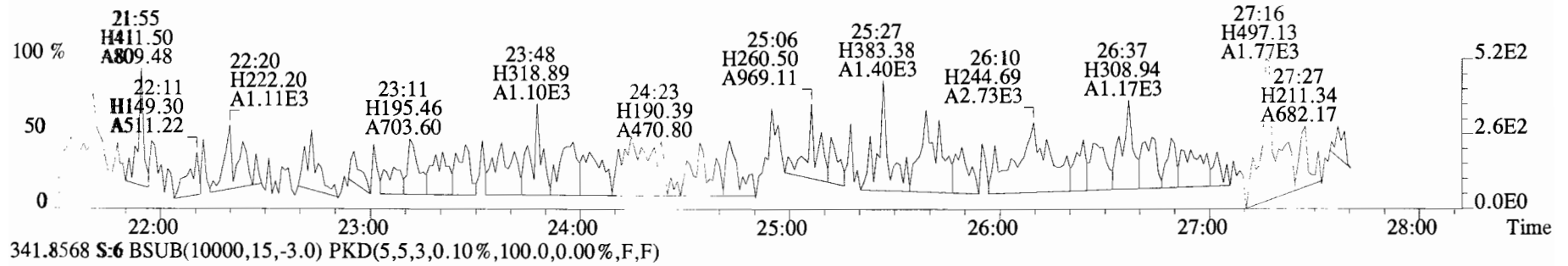
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



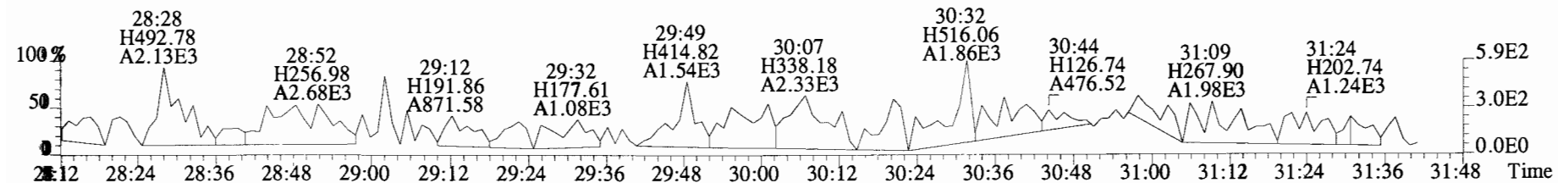
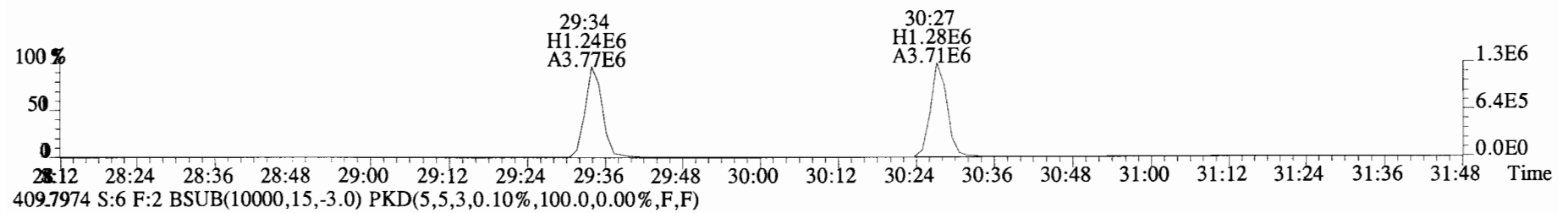
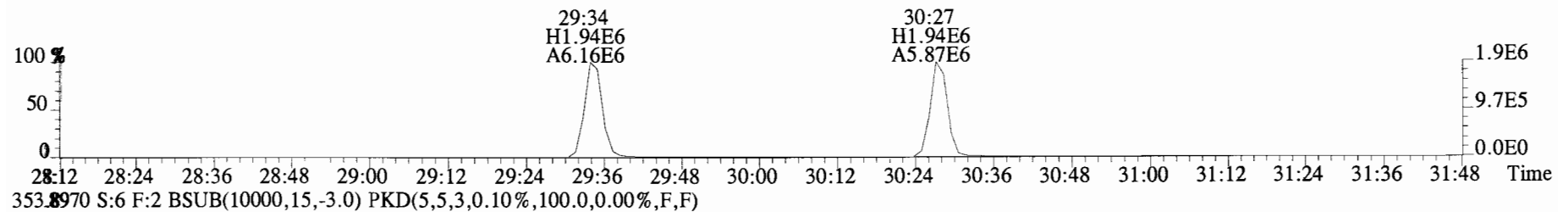
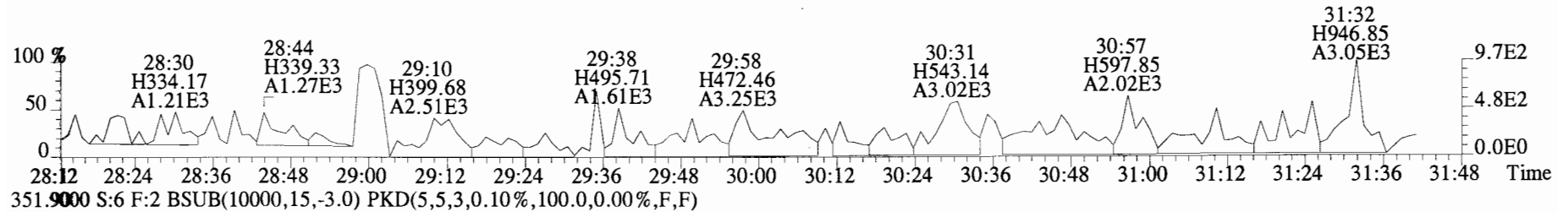
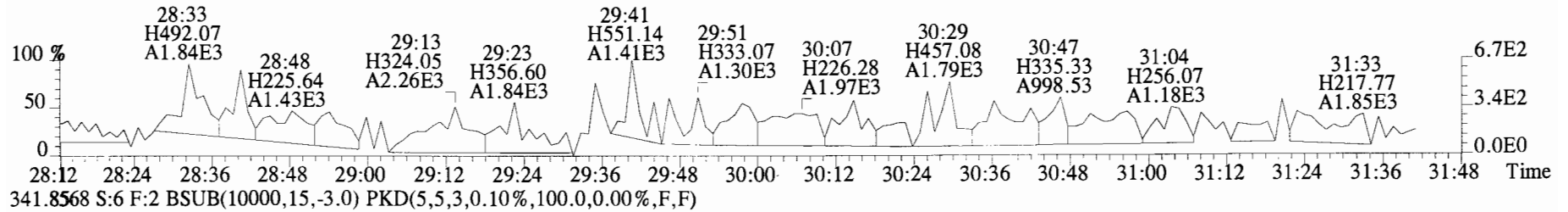
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



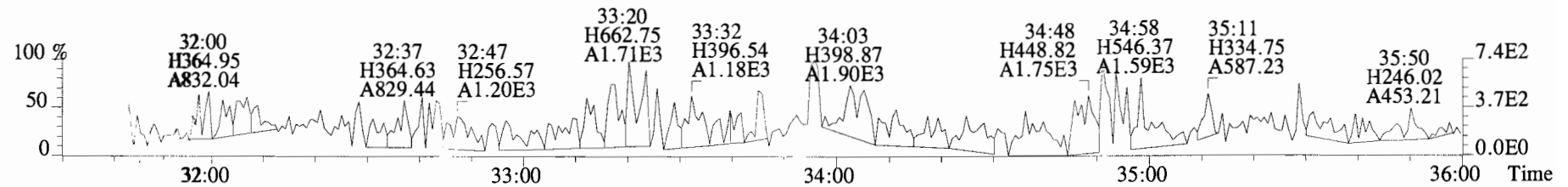
File:191101D1 #1-492 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Viata Analytical Laboratory_VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
 339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



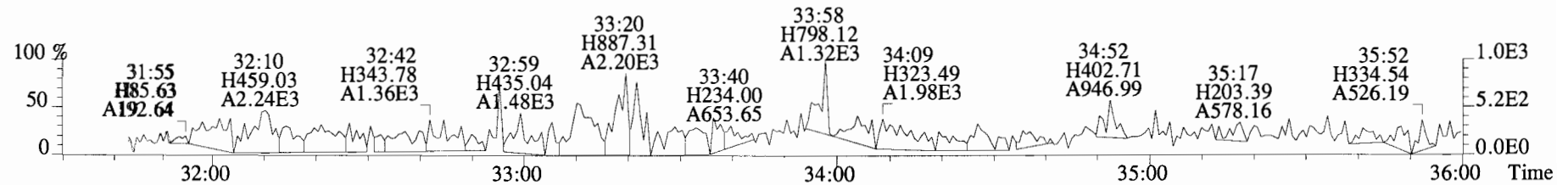
File:191101D1 #1-211 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



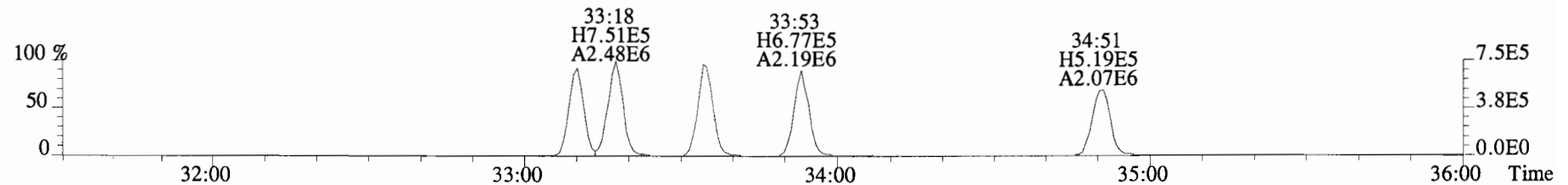
File:191101D1 #1-384 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



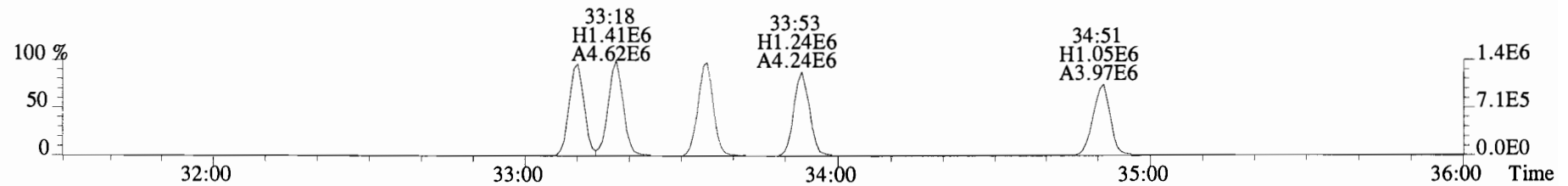
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



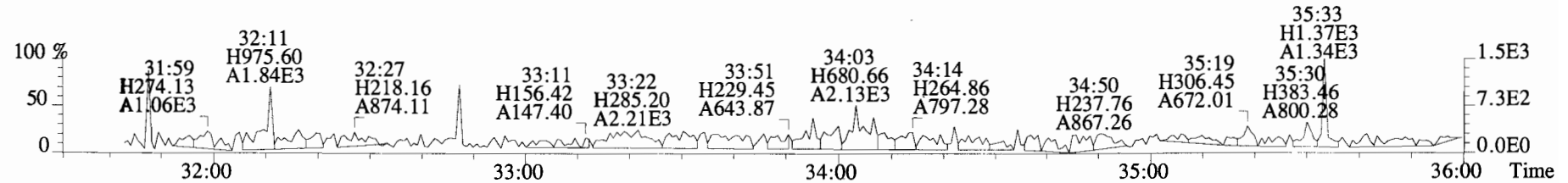
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



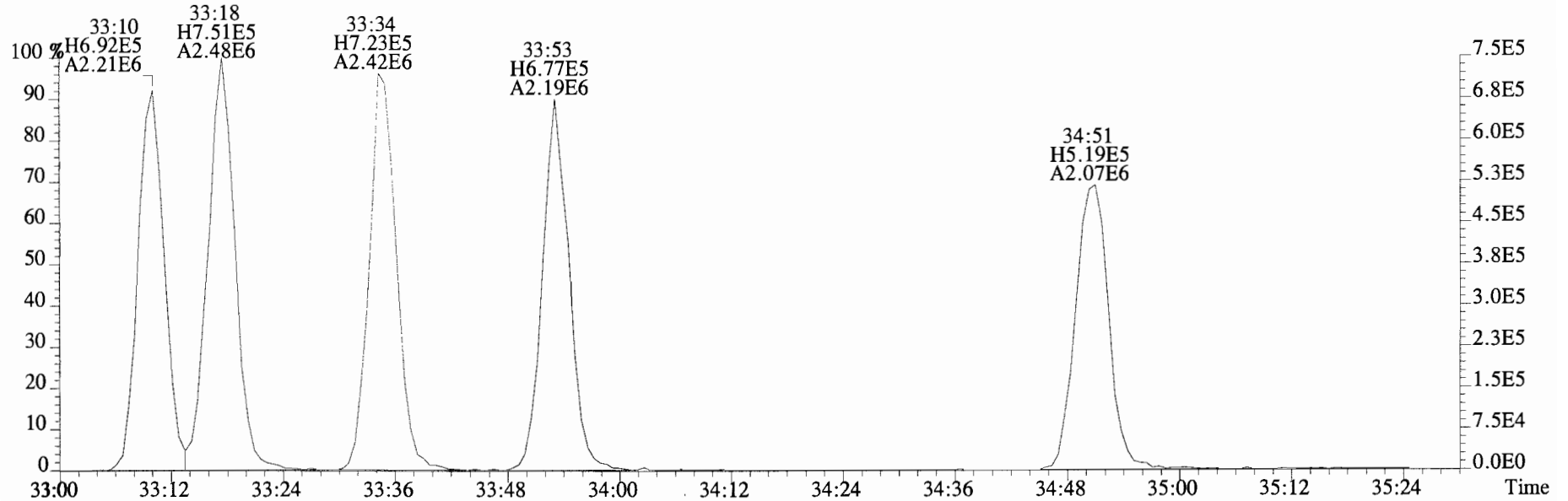
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



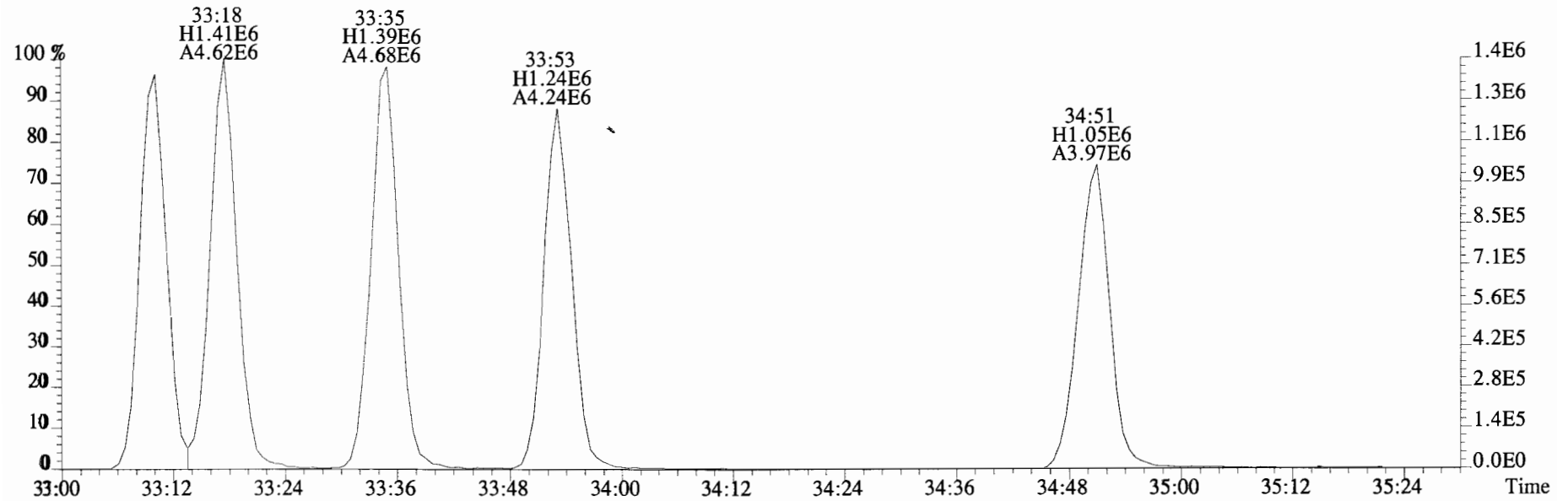
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



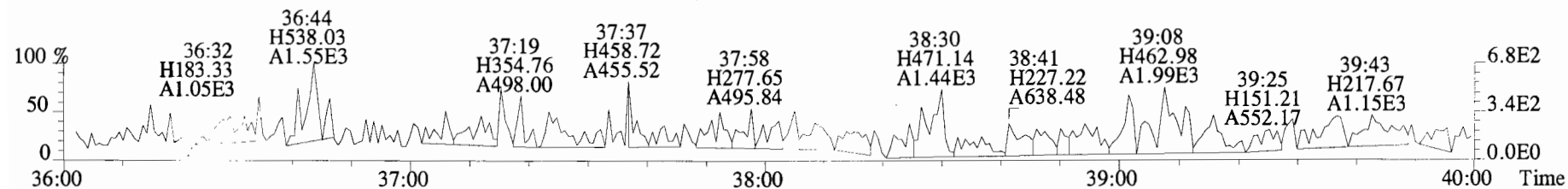
File:191101D1 #1-384 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



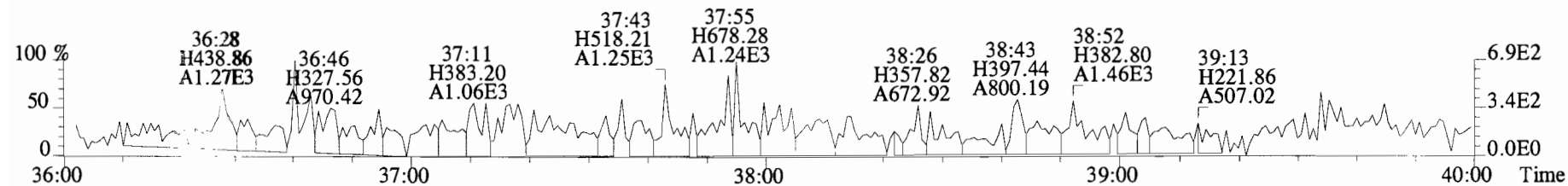
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



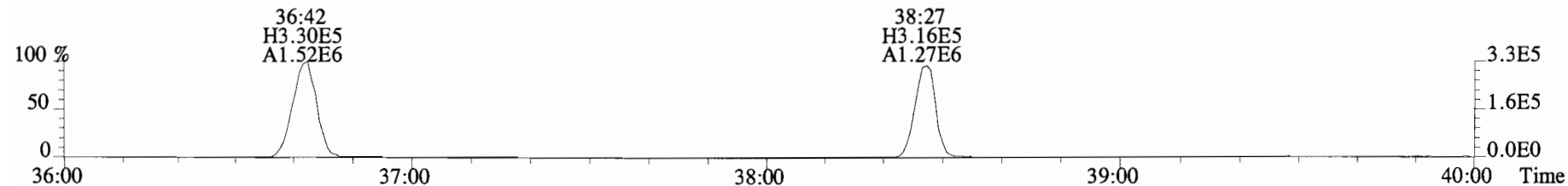
File:191101D1 #1-355 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical_Laboratory_VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



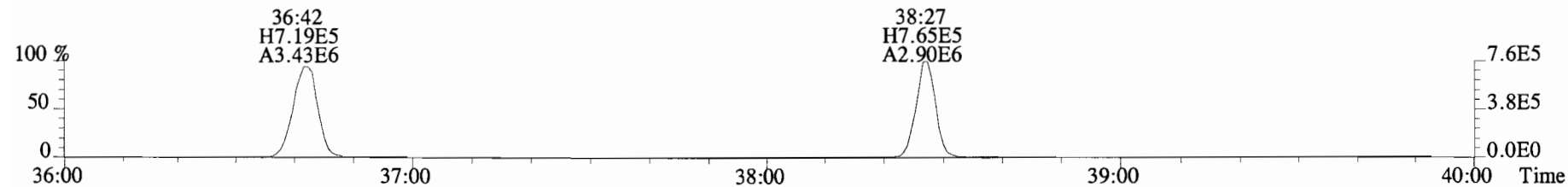
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



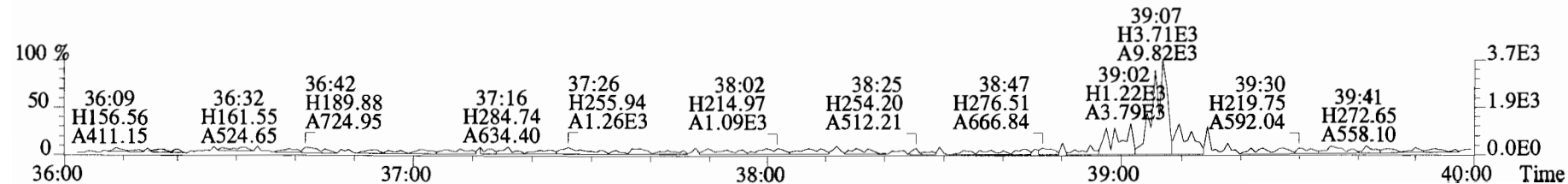
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



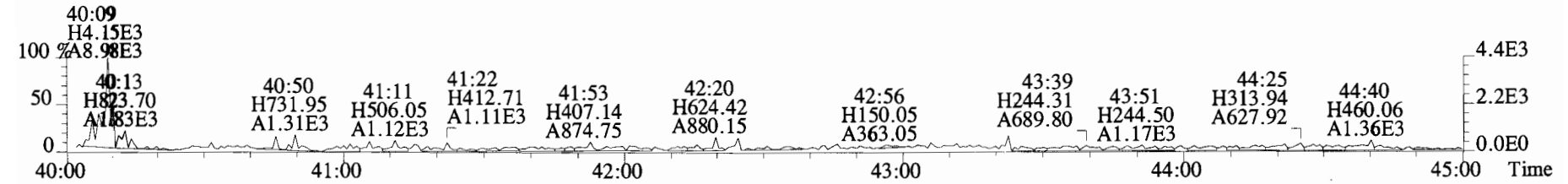
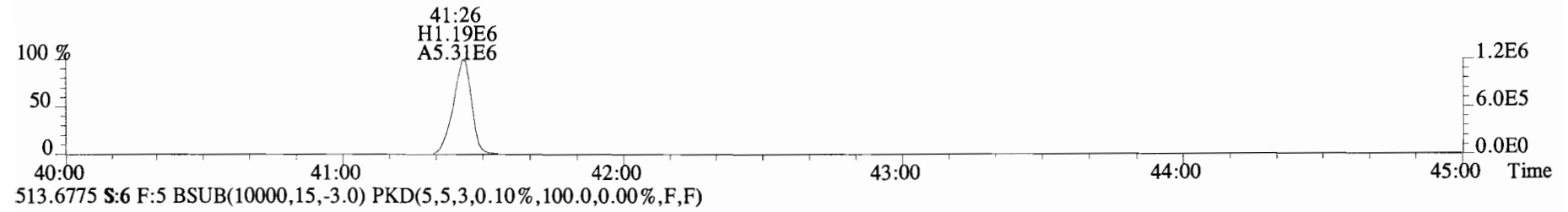
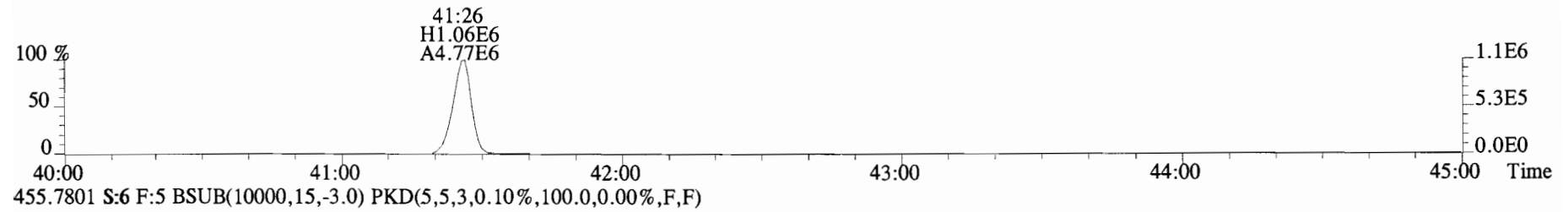
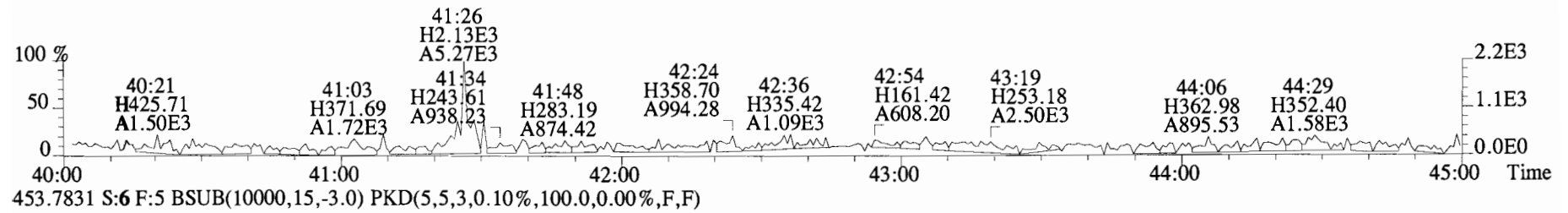
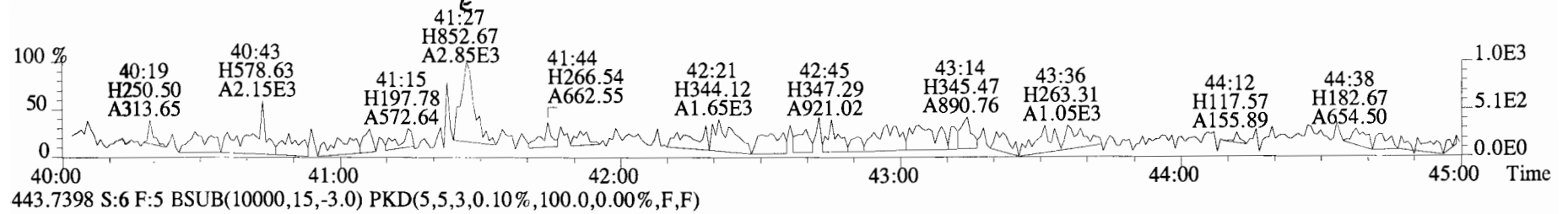
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



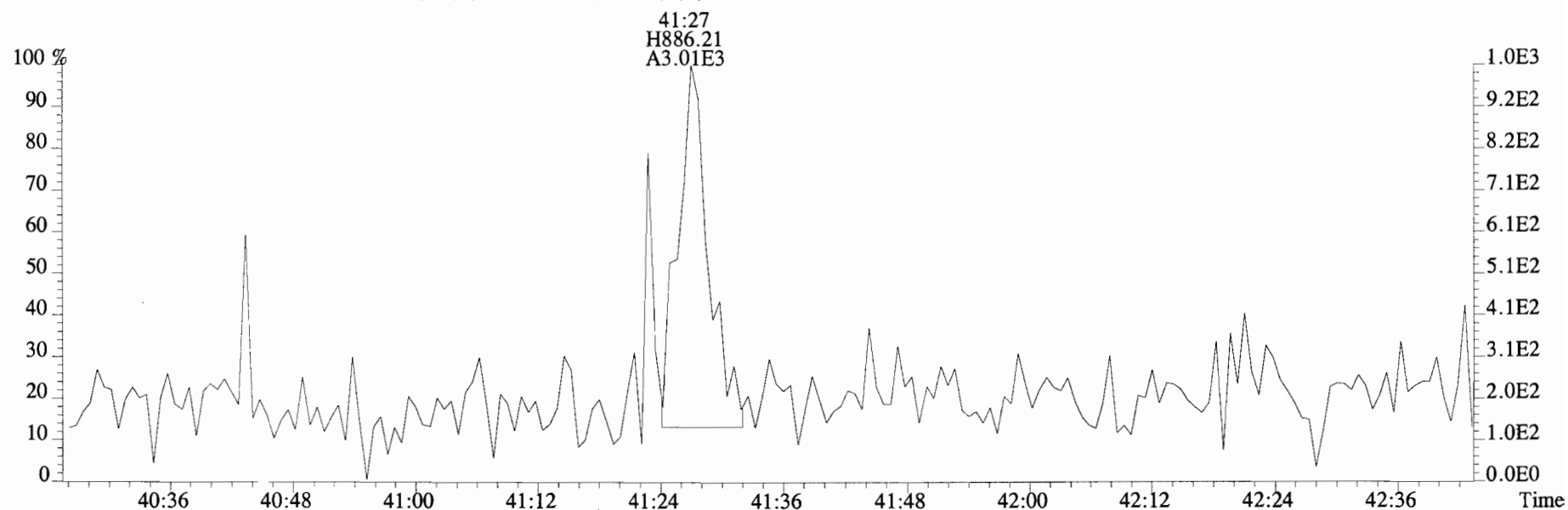
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



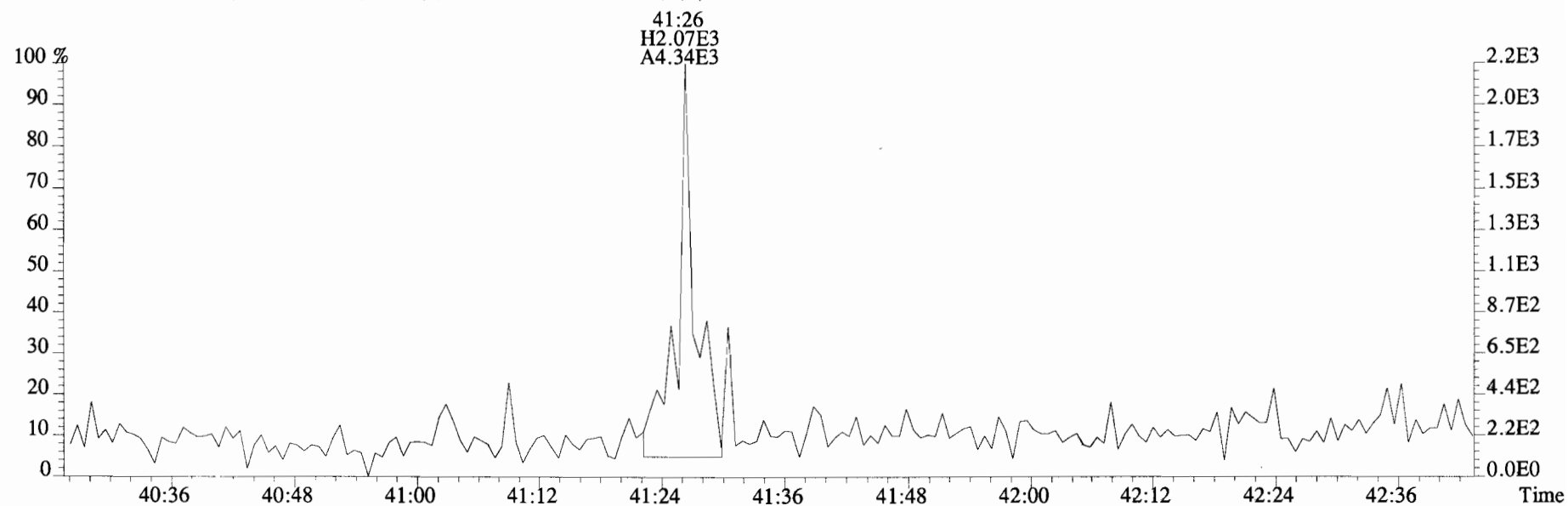
File:191101D1 #1-432 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
 441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191101D1 #1-432 Acq: 1-NOV-2019 17:58:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903546-07RE2 PDI-028SC-A-12-13-191003 12.36 Exp:OCDD_DB5
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: Duplicate
Lab ID: B9J0312-DUP1

Filename: 191101D1 S:7 Acq:1-NOV-19 18:46:30
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 9.925

ConCal: ST191101D1-1
EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
2,3,7,8-TCDD	*	* n	0.91	NotF η	*		125	2.5	0.0571
1,2,3,7,8-PeCDD	*	* n	0.90	NotF η	*		189	2.5	0.0816
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF η	*		135	2.5	0.102
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotF η	*		135	2.5	0.112
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotF η	*		135	2.5	0.107
1,2,3,4,6,7,8-HpCDD	1.90e+04	0.96 y	0.98	37:55	0.84183		*	2.5	*
OCDD	1.16e+05	0.86 y	0.96	41:12	5.8536		*	2.5	*
2,3,7,8-TCDF	*	* n	0.95	NotF η	*		139	2.5	0.0424
1,2,3,7,8-PeCDF	*	* n	0.96	NotF η	*		193	2.5	0.0753
2,3,4,7,8-PeCDF	*	* n	1.01	NotF η	*		193	2.5	0.0750
1,2,3,4,7,8-HxCDF	*	* n	1.18	NotF η	*		97.0	2.5	0.0279
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotF η	*		97.0	2.5	0.0314
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotF η	*		97.0	2.5	0.0344
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotF η	*		97.0	2.5	0.0430
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	NotF η	*		119	2.5	0.0692
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotF η	*		119	2.5	0.0545
OCDF	7.11e+03	0.78 y	0.95	41:25	0.28929		*	2.5	*

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		125	0.0571
Total Penta-Dioxins	*	*		189	0.0816
Total Hexa-Dioxins	0.810	0.810		*	*
Total Hepta-Dioxins	2.18	2.18		*	*
Total Tetra-Furans	*	*		139	0.0424
Total Penta-Furans	0.0000	0.0000		193	0.0751
Total Hexa-Furans	*	*		97.0	0.0338
Total Hepta-Furans	*	*		119	0.0621

IS	13C-2,3,7,8-TCDD	7.77e+06	0.80 y	1.10	26:16	202.87
IS	13C-1,2,3,7,8-PeCDD	6.04e+06	0.64 y	0.88	30:45	195.88
IS	13C-1,2,3,4,7,8-HxCDD	4.81e+06	1.32 y	0.64	34:04	205.77
IS	13C-1,2,3,6,7,8-HxCDD	5.53e+06	1.28 y	0.86	34:10	177.61
IS	13C-1,2,3,7,8,9-HxCDD	5.67e+06	1.26 y	0.81	34:28	193.06
IS	13C-1,2,3,4,6,7,8-HpCDD	4.64e+06	1.07 y	0.65	37:54	194.90
IS	13C-OCDD	8.33e+06	0.89 y	0.58	41:12	394.37
IS	13C-2,3,7,8-TCDF	1.15e+07	0.80 y	1.03	25:29	201.03
IS	13C-1,2,3,7,8-PeCDF	1.01e+07	1.59 y	0.85	29:35	212.91
IS	13C-2,3,4,7,8-PeCDF	9.69e+06	1.58 y	0.85	30:28	206.26
IS	13C-1,2,3,4,7,8-HxCDF	6.90e+06	0.50 y	0.83	33:10	227.65
IS	13C-1,2,3,6,7,8-HxCDF	7.49e+06	0.53 y	1.03	33:18	198.86
IS	13C-2,3,4,6,7,8-HxCDF	6.69e+06	0.51 y	0.95	33:54	192.77
IS	13C-1,2,3,7,8,9-HxCDF	6.30e+06	0.52 y	0.83	34:51	209.09
IS	13C-1,2,3,4,6,7,8-HpCDF	4.94e+06	0.43 y	0.76	36:42	179.17
IS	13C-1,2,3,4,7,8,9-HpCDF	4.43e+06	0.43 y	0.58	38:27	209.50
IS	13C-OCDF	1.05e+07	0.88 y	0.69	41:26	417.04

C/Up	37Cl-2,3,7,8-TCDD	3.58e+06		1.20	26:17	85.465
RS/RT	13C-1,2,3,4-TCDD	7.04e+06	0.77 y	1.00	25:42	201.52
RS	13C-1,2,3,4-TCDF	1.12e+07	0.81 y	1.00	24:18	201.52
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.34e+06	0.51 y	1.00	33:35	201.52

Rec Qual

101	
97.2	
102	
88.1	
95.8	
96.7	
97.8	
99.8	
106	
102	
113	
98.7	
95.7	
104	
88.9	
104	
103	

Integrations
by DB
Analyst: DB

Reviewed
by CT
Analyst: CT

Date: 11/6/19

Date: 11/11/19

Totals class: HxCDD EMPC

Entry #: 23

Run: 11 File: 191101D1 S: 7 I: 1 F: 3
Acquired: 1-NOV-19 18:46:30 Processed: 4-NOV-19 10:36:45

Total Concentration: 0.81048

Unnamed Concentration: 0.810

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:32	7.816e+03	6.099e+03	1.28 y	1.391e+04	0.52953
33:22	4.146e+03	3.237e+03	1.28 y	7.383e+03	0.28096

Totals class: HpCDD EMPC

Entry #: 25

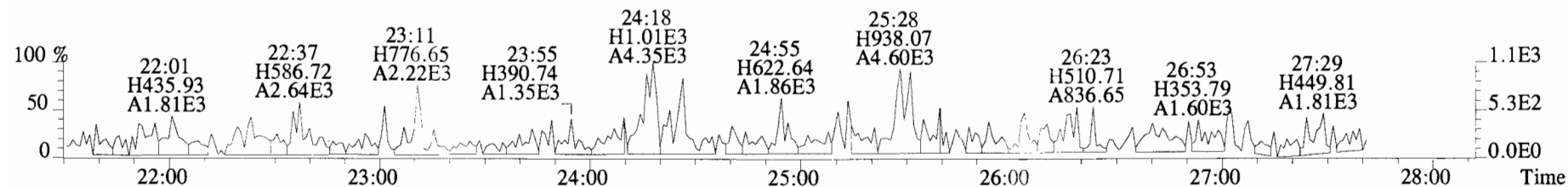
Run: 11 File: 191101D1 S: 7 I: 1 F: 4
Acquired: 1-NOV-19 18:46:30 Processed: 4-NOV-19 10:36:45

Total Concentration: 2.1779

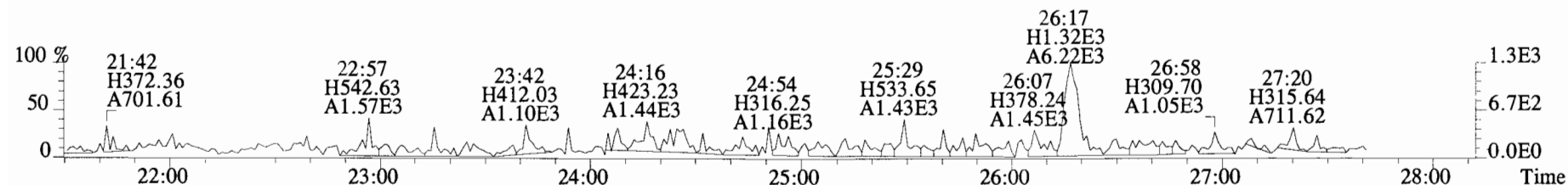
Unnamed Concentration: 1.336

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:05	1.520e+04	1.495e+04	1.02 y	3.014e+04	1.3360
37:55	9.314e+03	9.678e+03	0.96 y	1.899e+04	0.84183 1,2,3,4,6,7,8-HpCDD

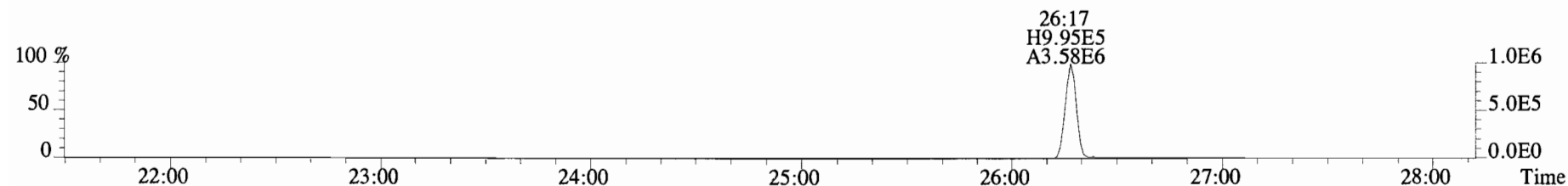
File:191101D1 #1-493 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



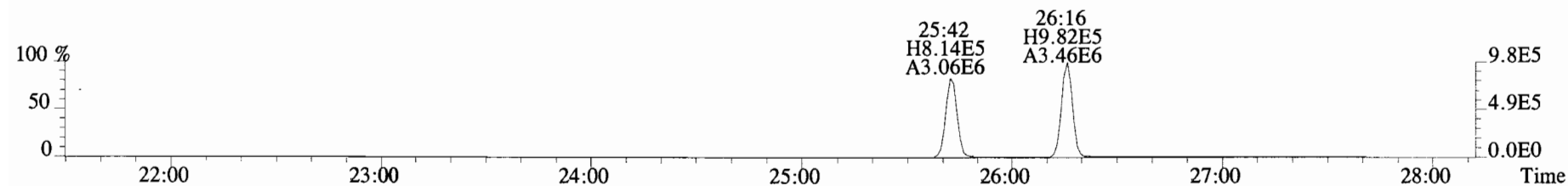
321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



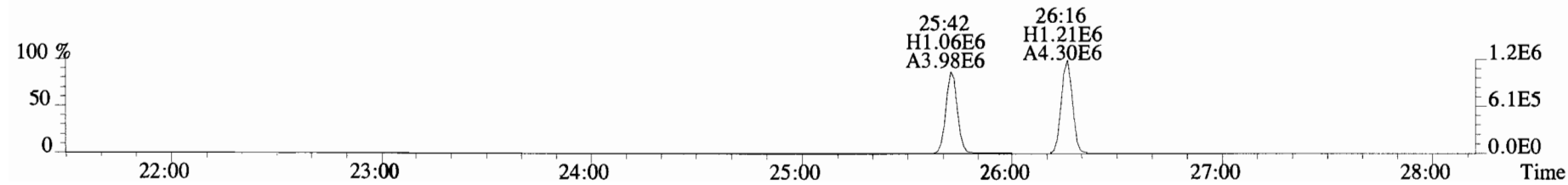
327.8847 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



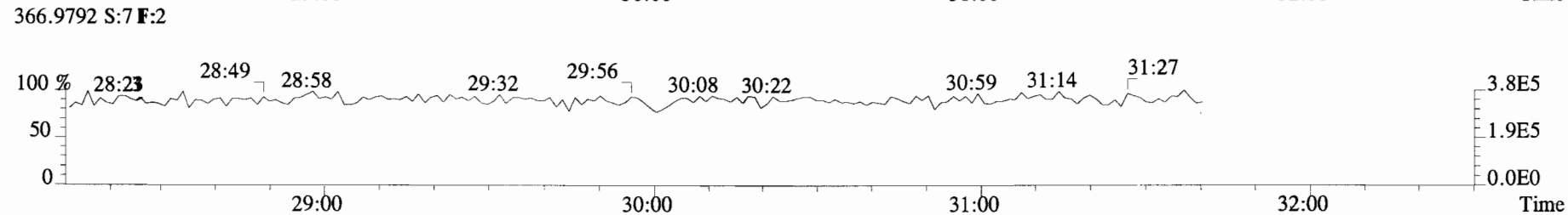
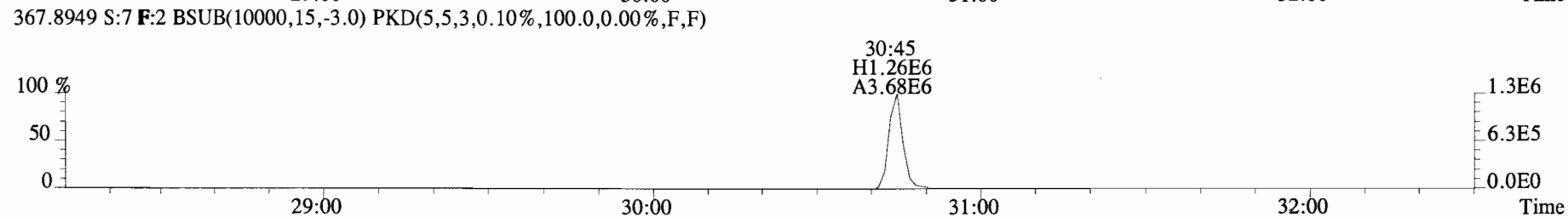
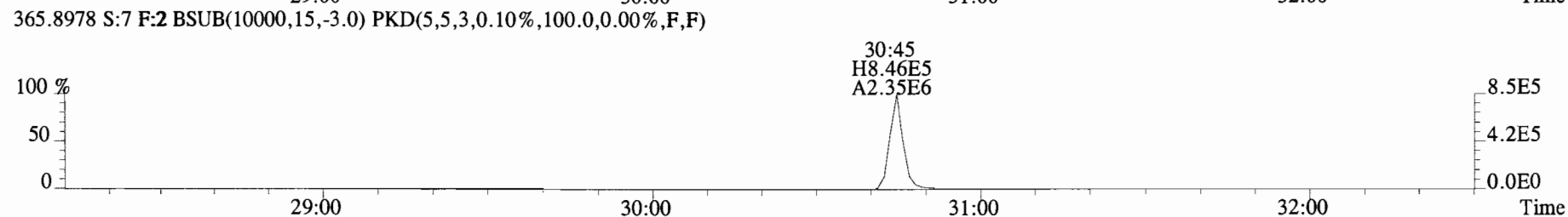
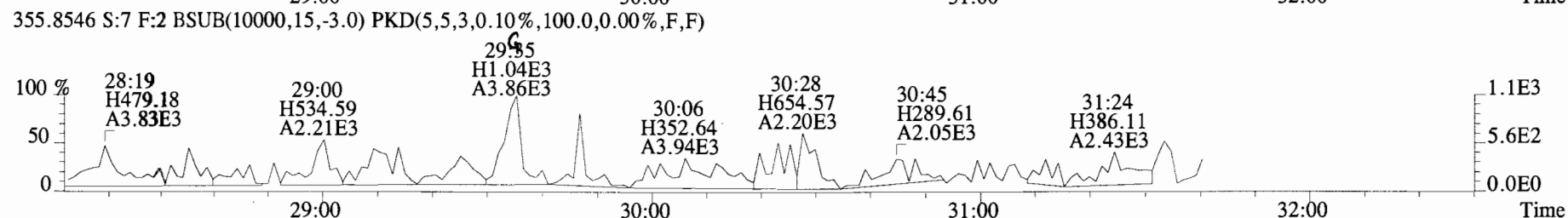
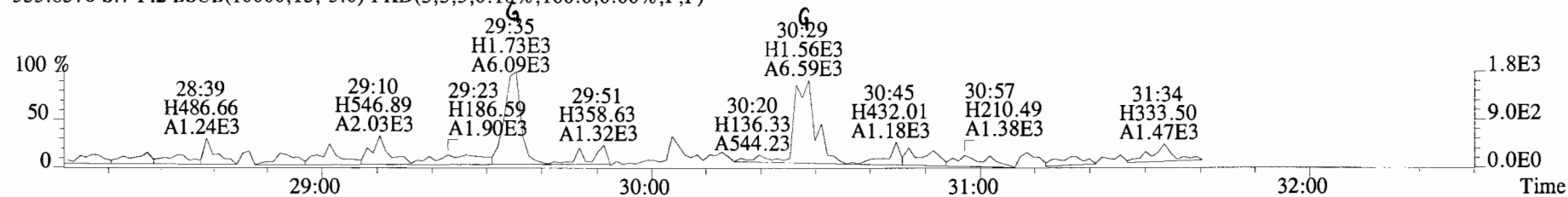
331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



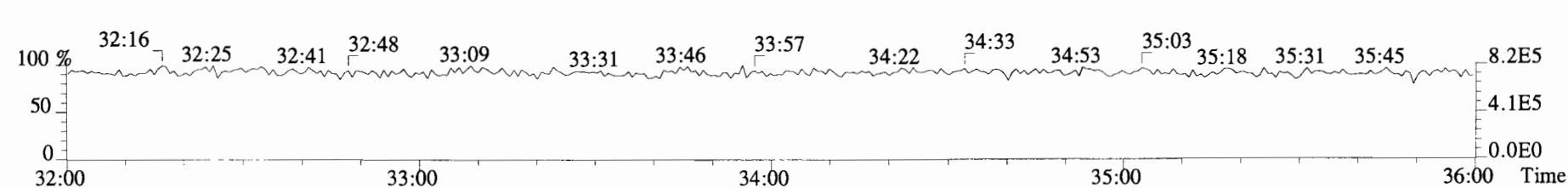
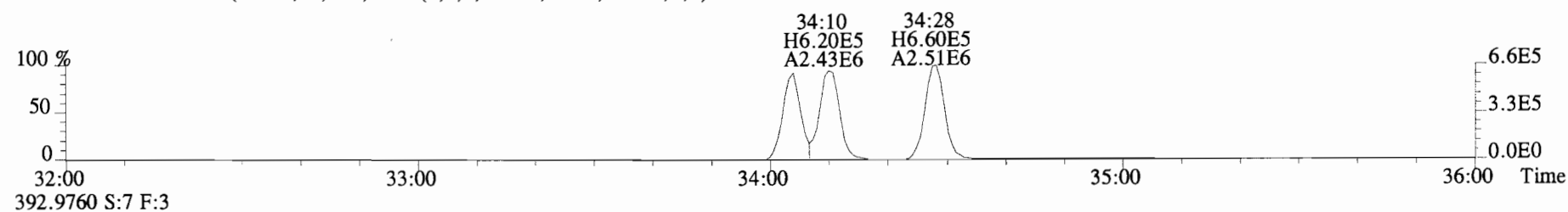
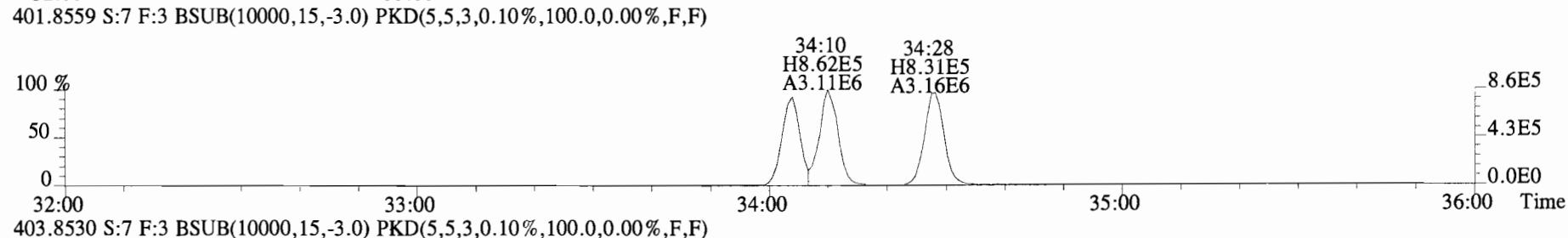
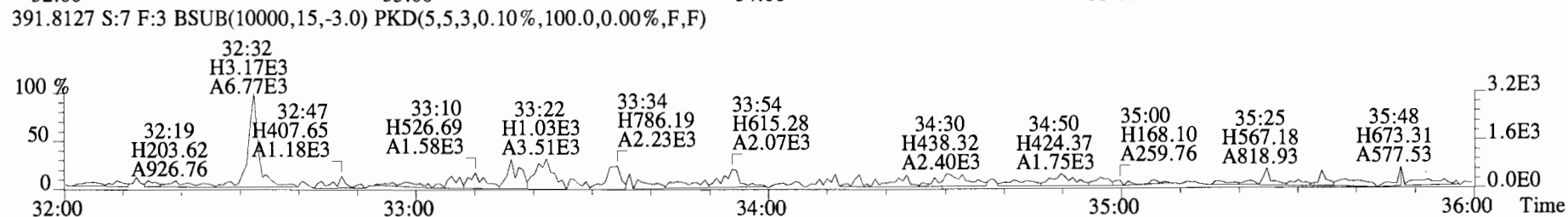
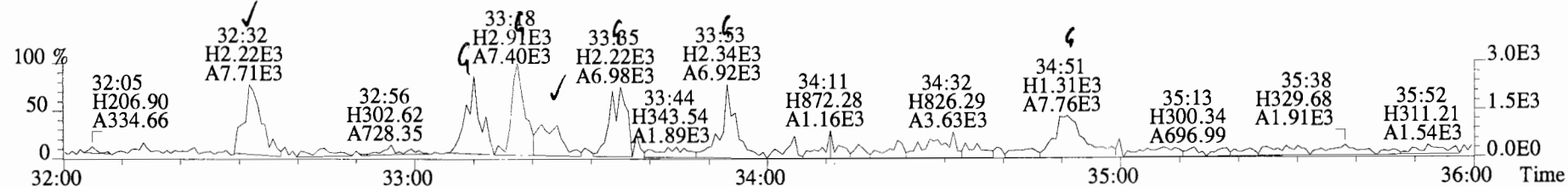
333.9339 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



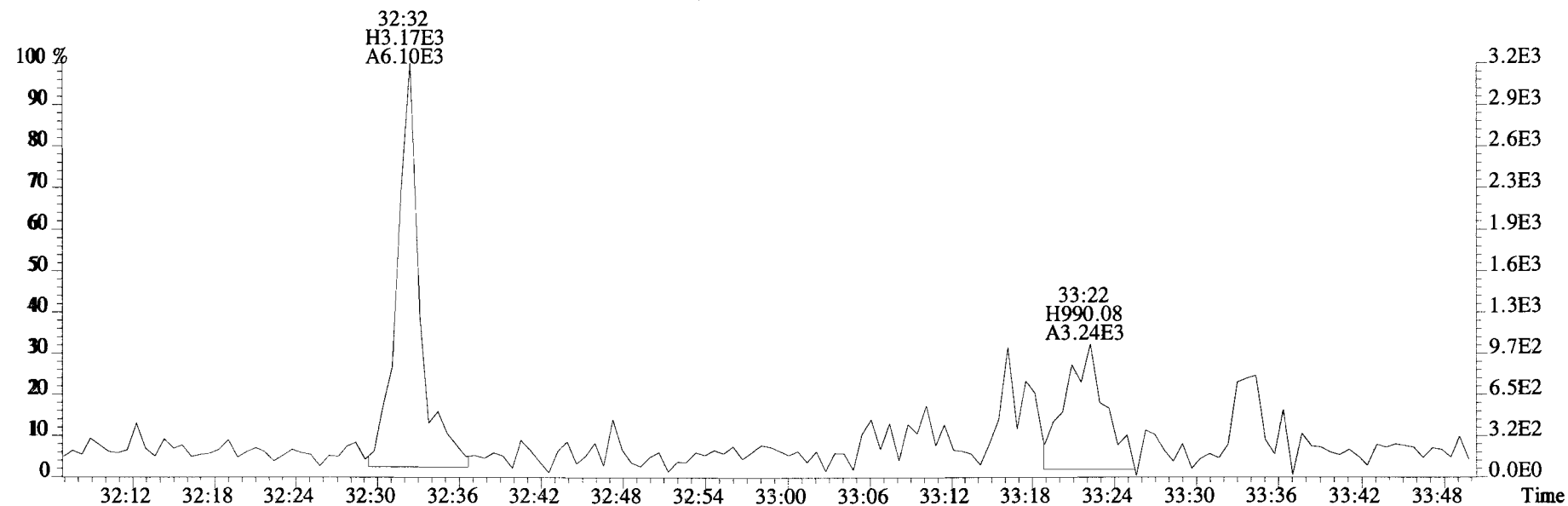
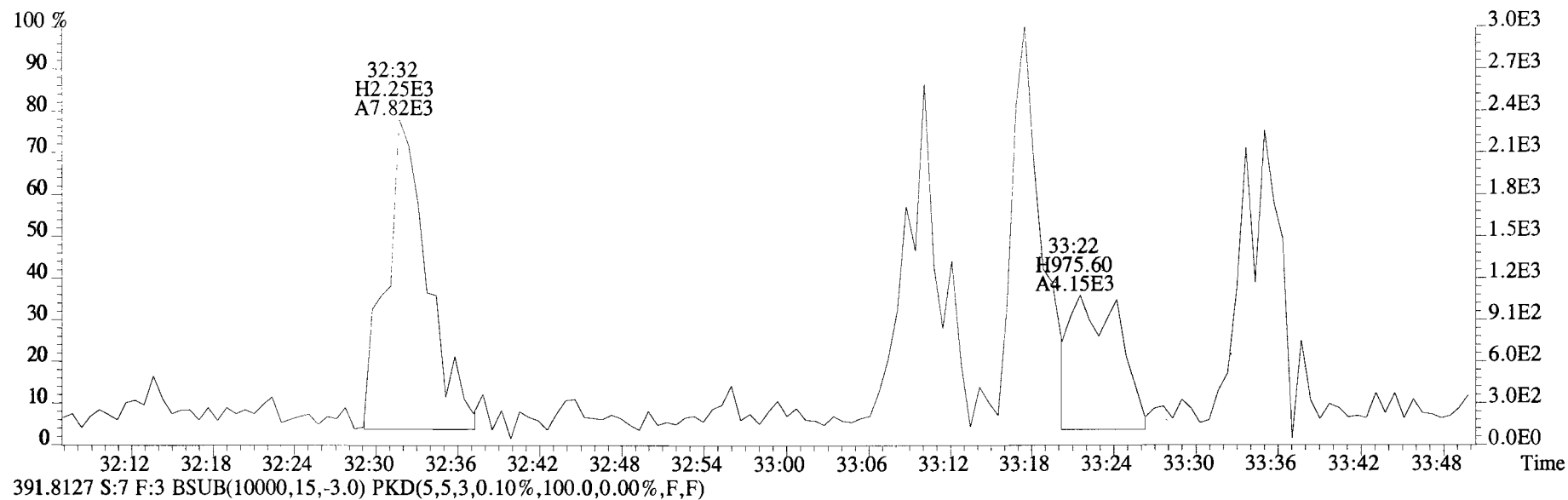
File:191101D1 #1-210 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
 353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



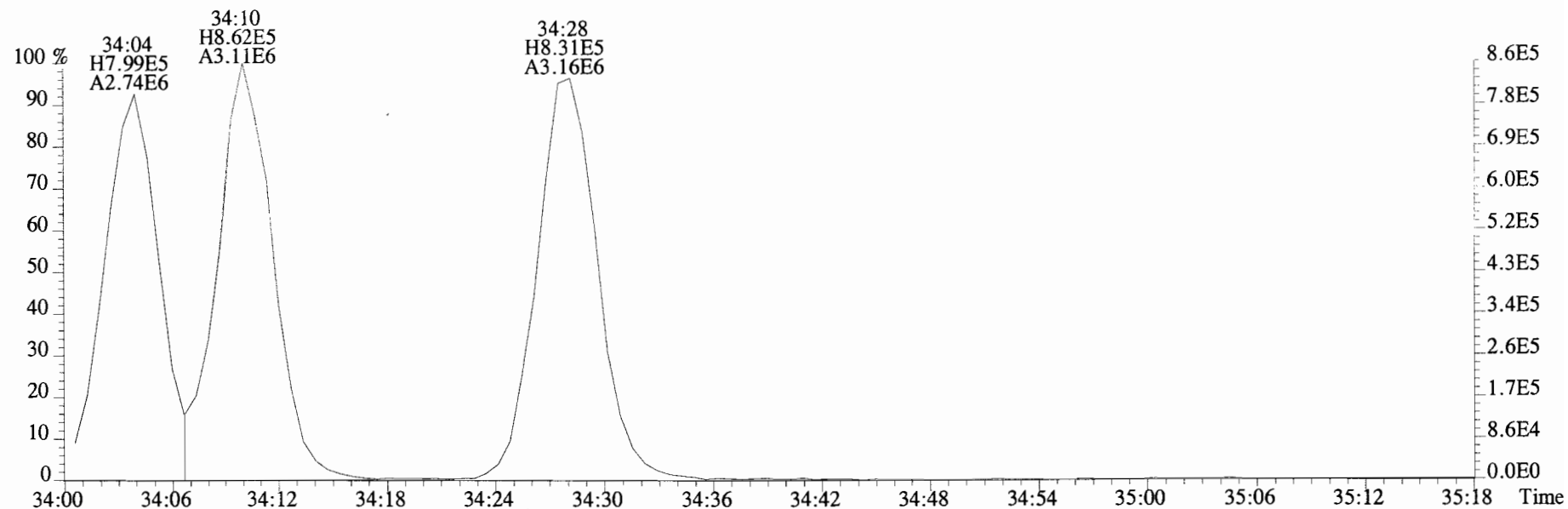
File:191101D1 #1-385 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Viata Analytical Laboratory VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
 389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



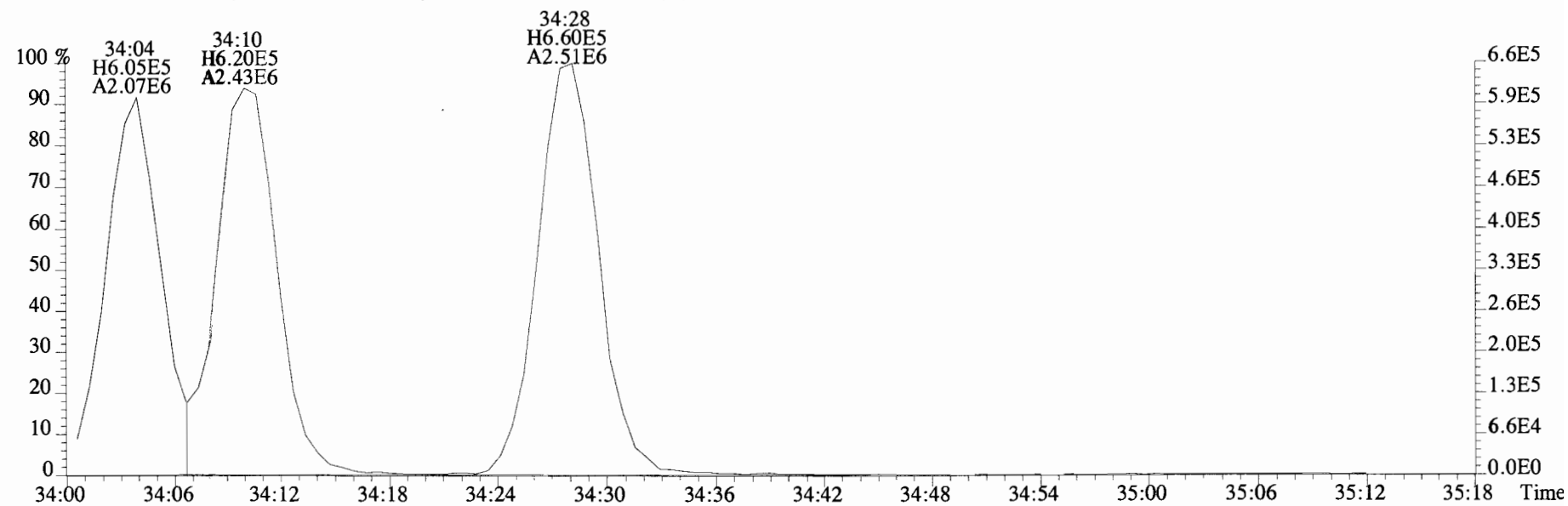
File:191101D1 #1-385 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata Analytical Laboratory VG7 Text:B9J0312-DUPI Duplicate 12.12 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



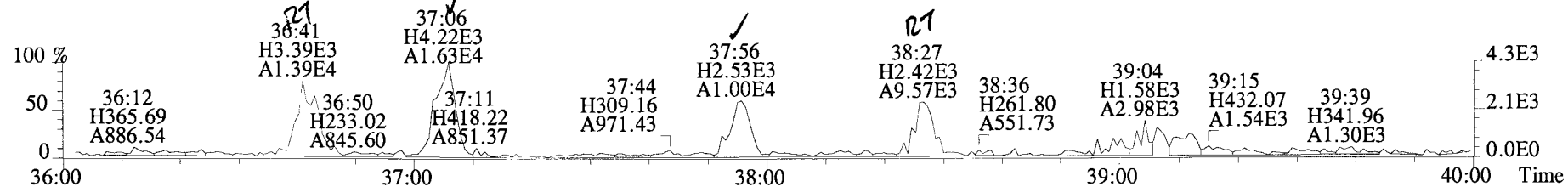
File:191101D1 #1-385 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata Analytical Laboratory VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



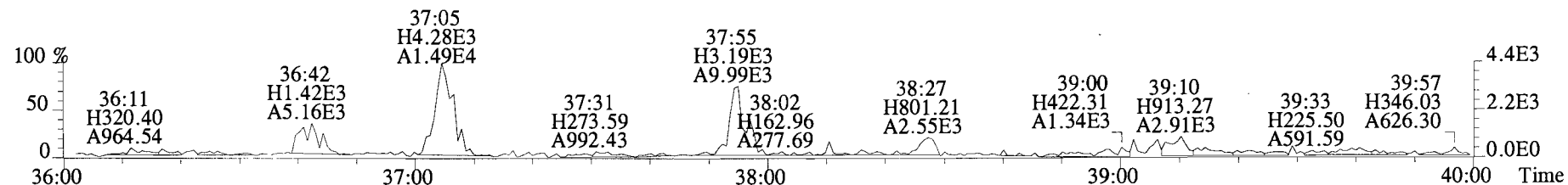
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



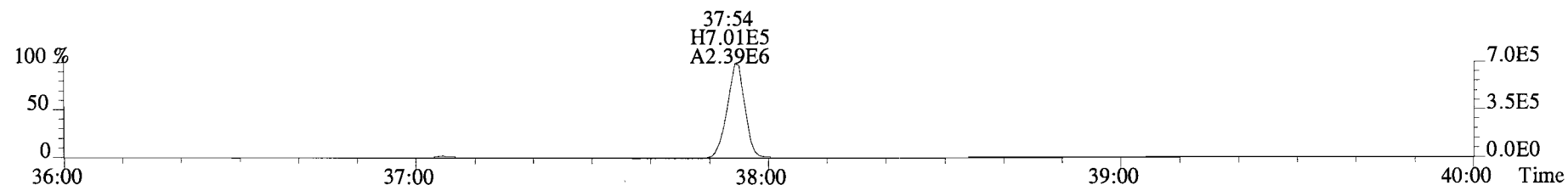
File:191101D1 #1-355 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Viata Analytical_Laboratory_VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
 423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



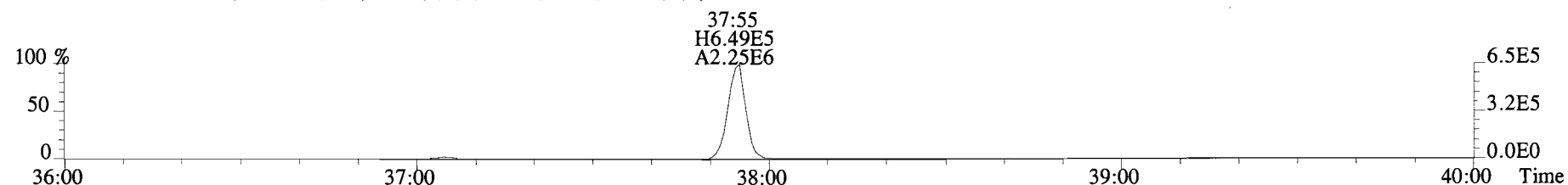
425.7737 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



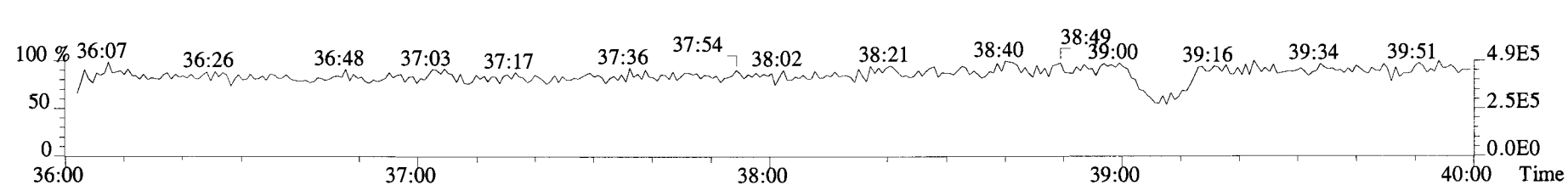
435.8169 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



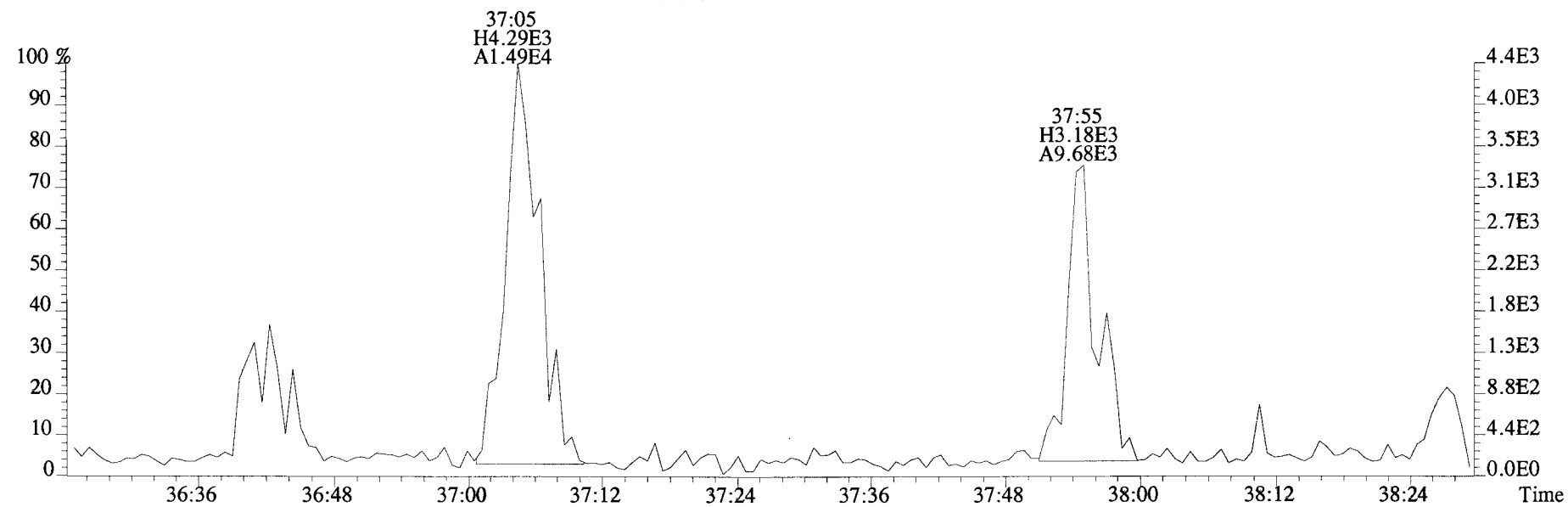
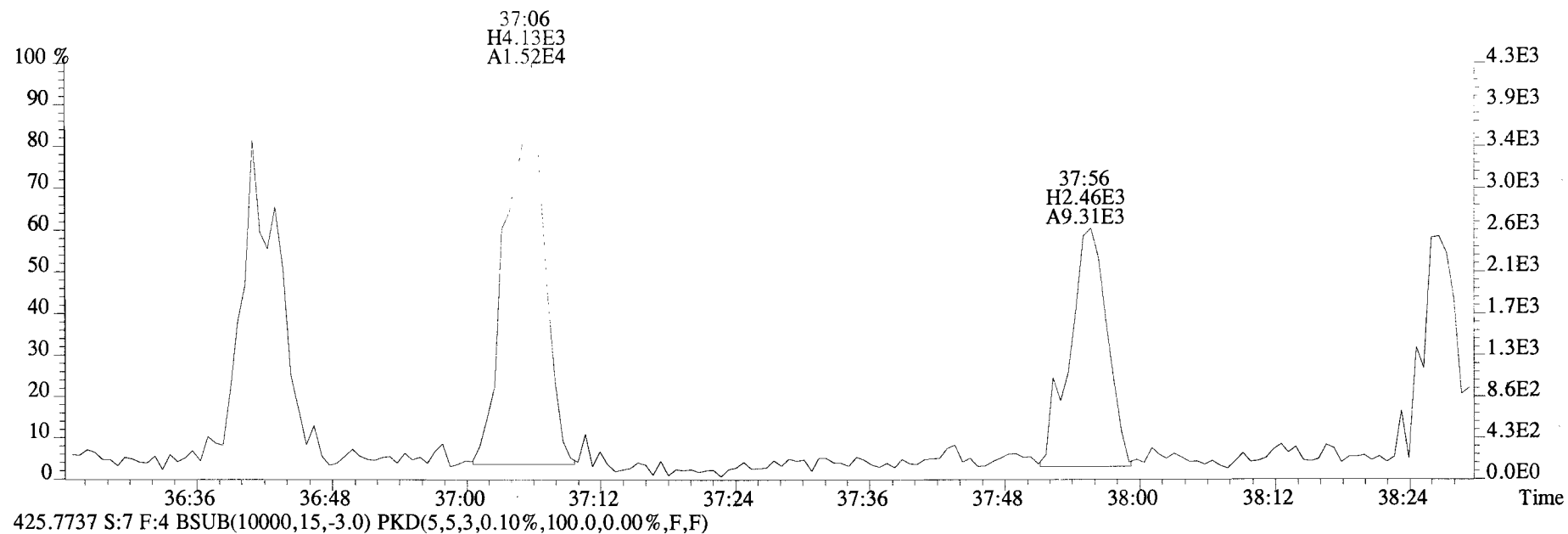
437.8140 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



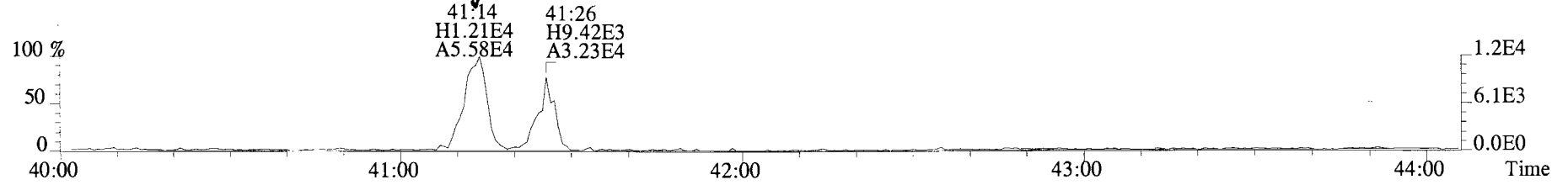
454.9728 S:7 F:4



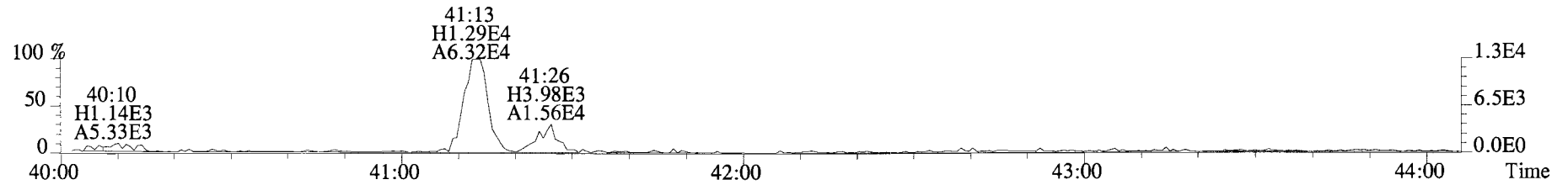
File:191101D1 #1-355 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



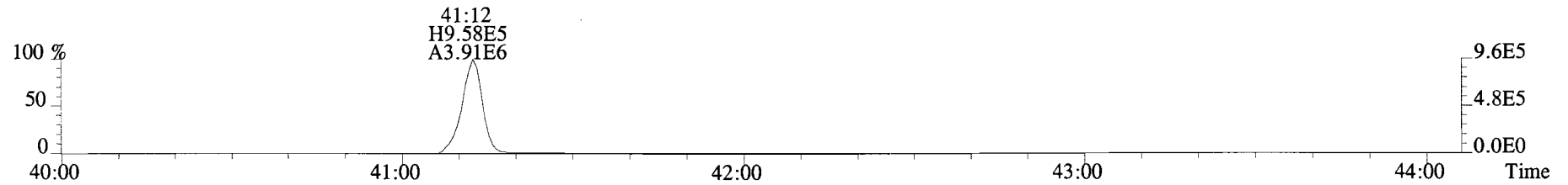
File:191101D1 #1-432 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



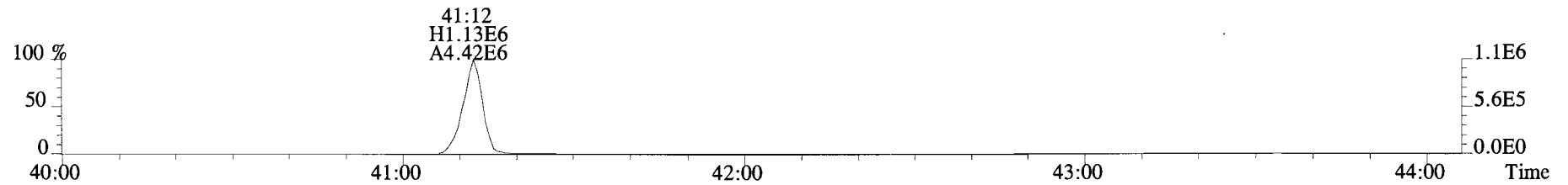
459.7348 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



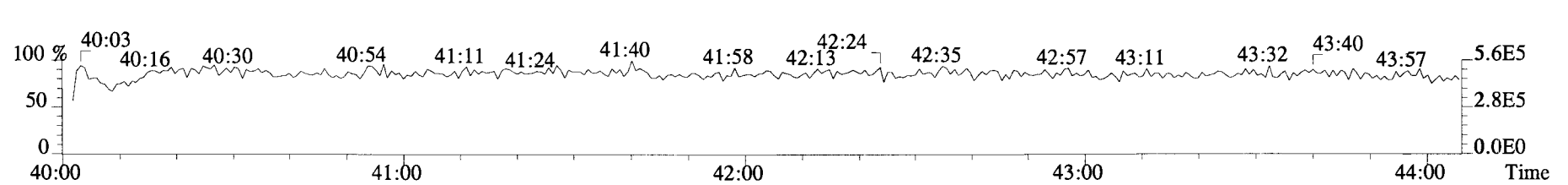
469.7780 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



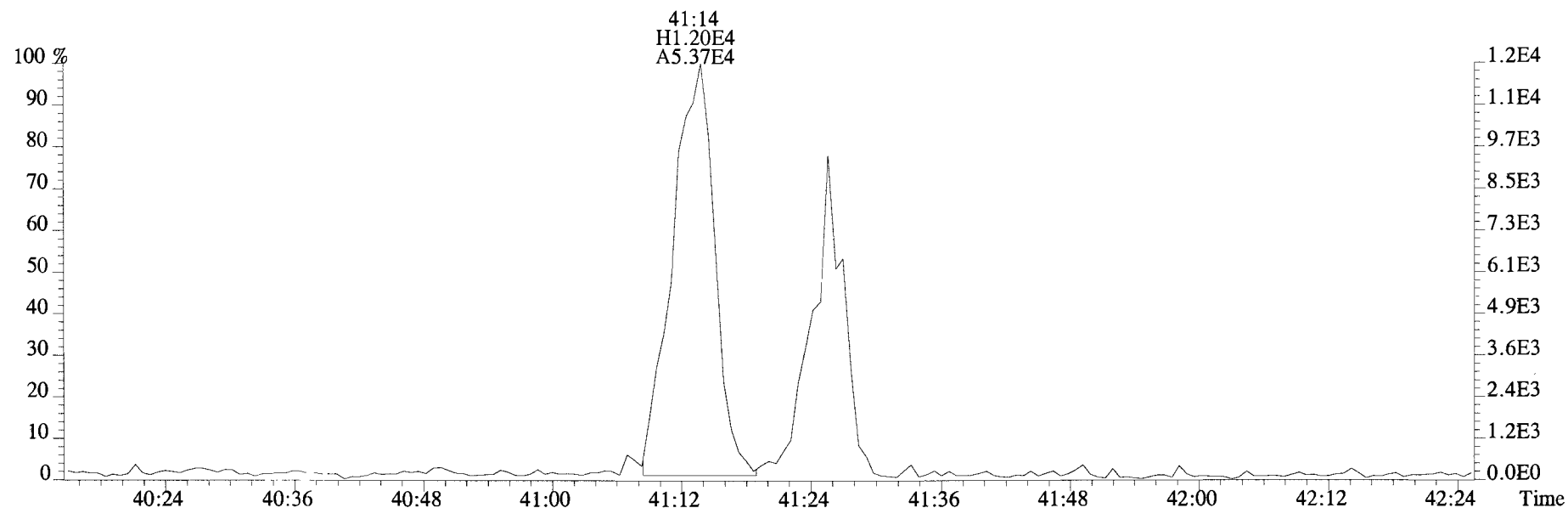
471.7750 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



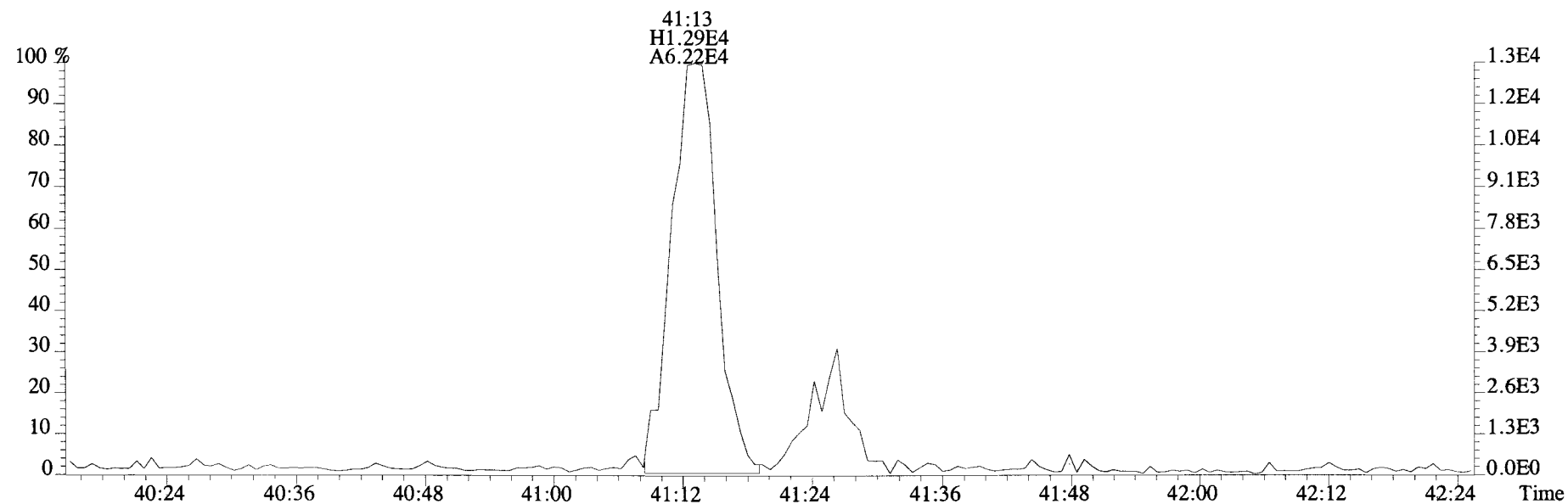
454.9728 S:7 F:5



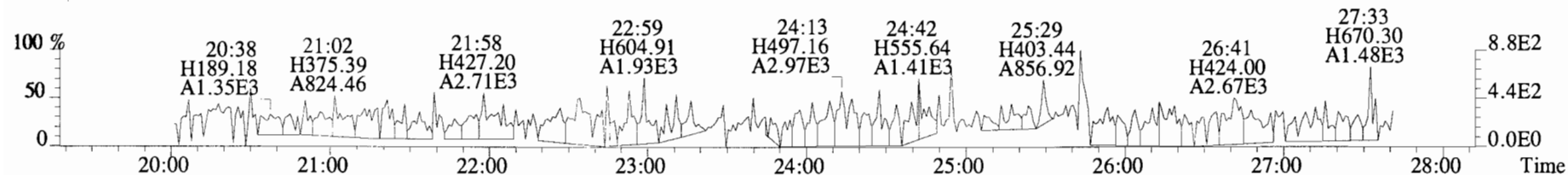
File:191101D1 #1-432 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata Analytical Laboratory VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



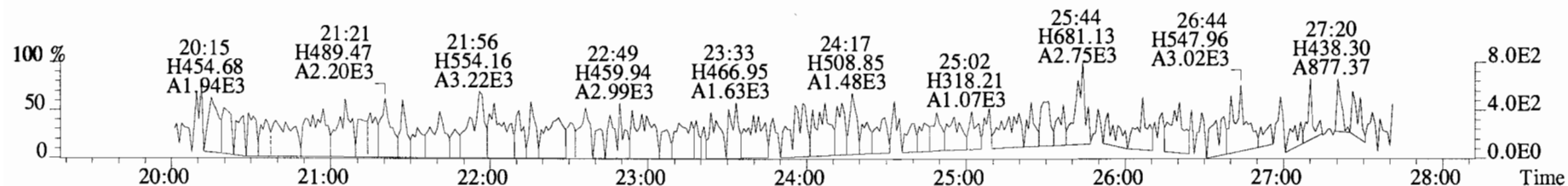
459.7348 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



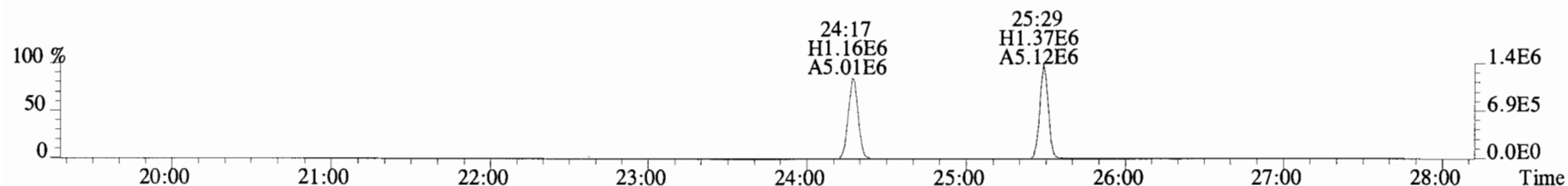
File:191101D1 #1-493 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
 303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



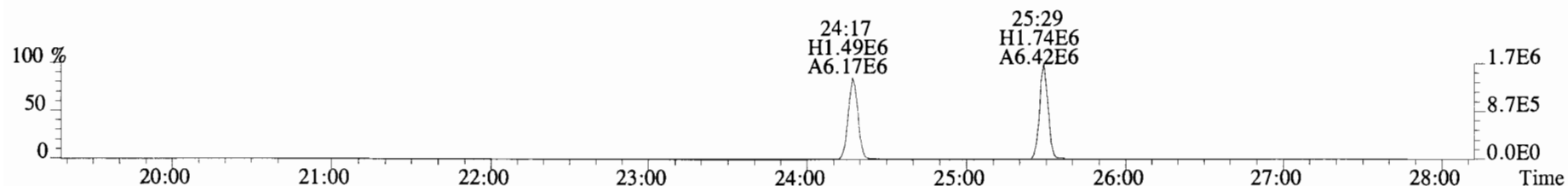
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



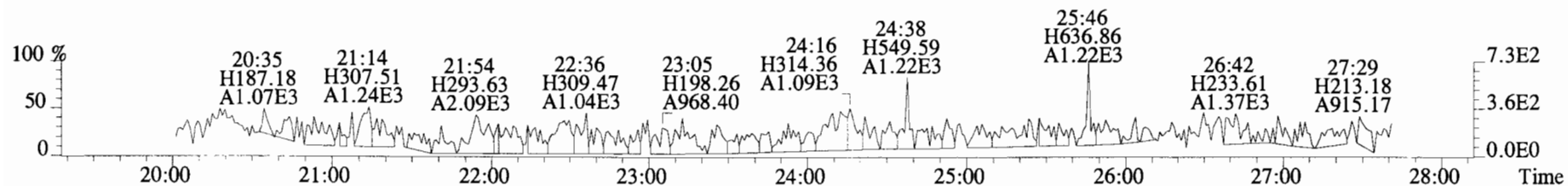
315.9419 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



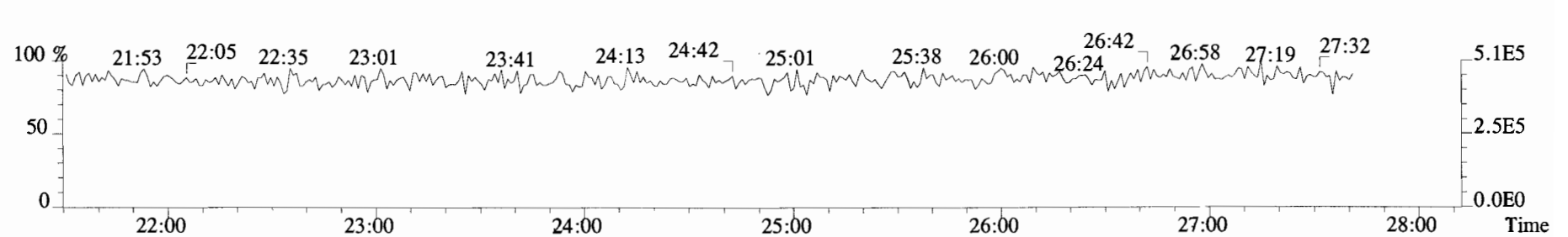
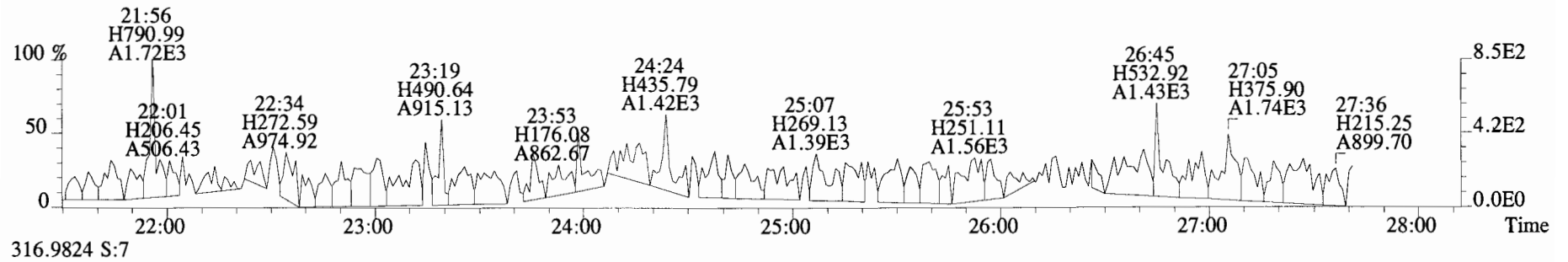
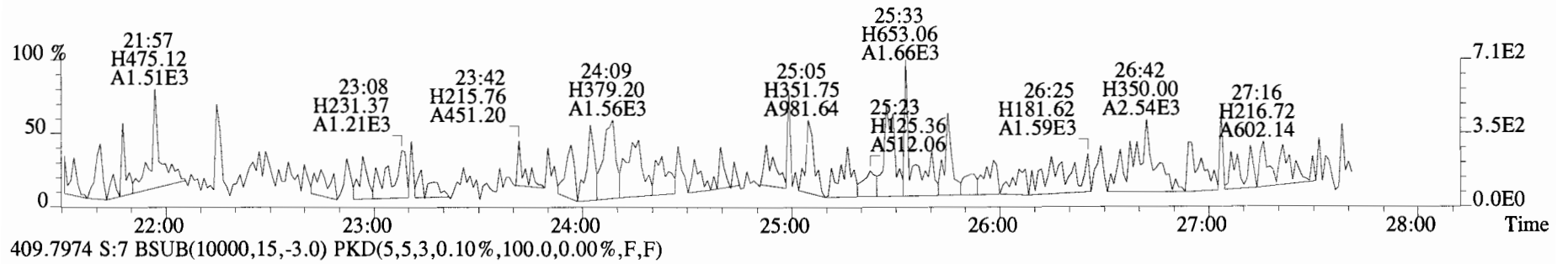
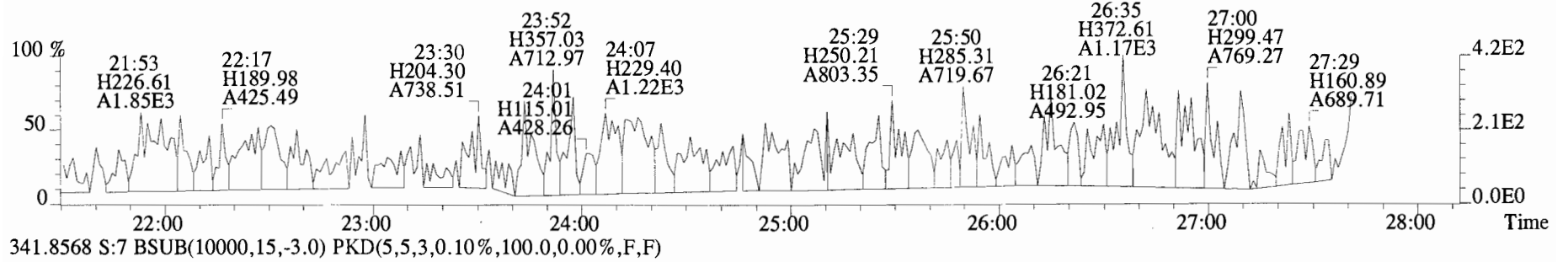
317.9389 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



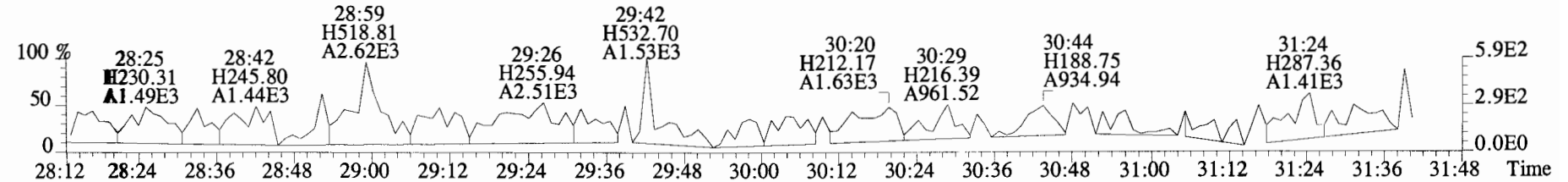
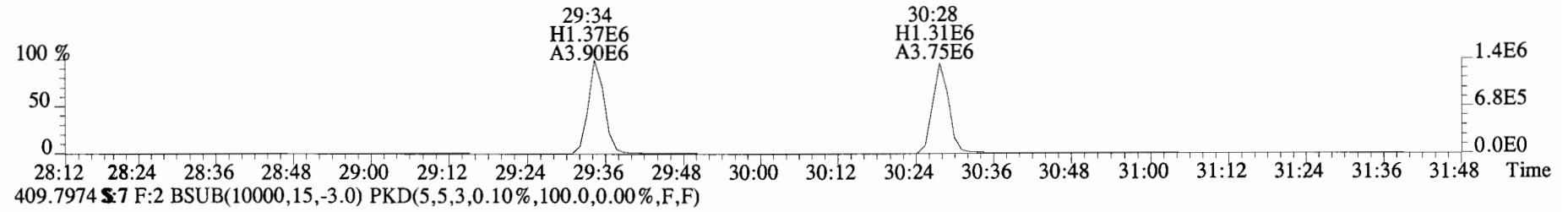
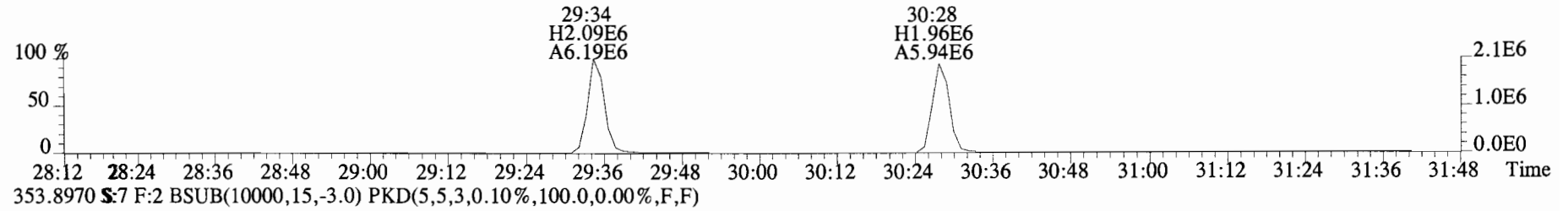
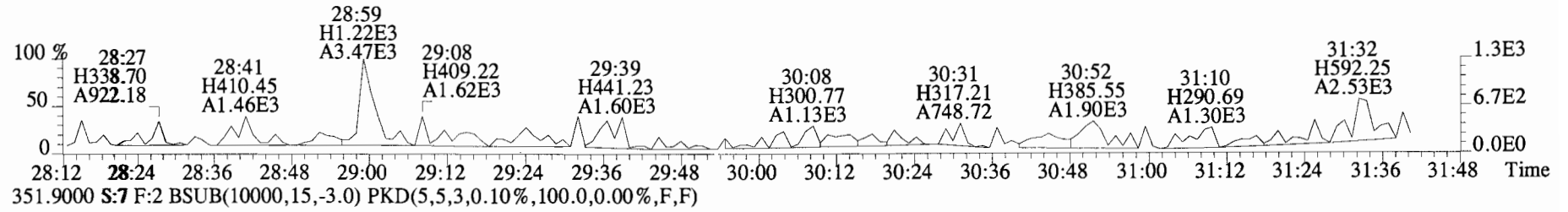
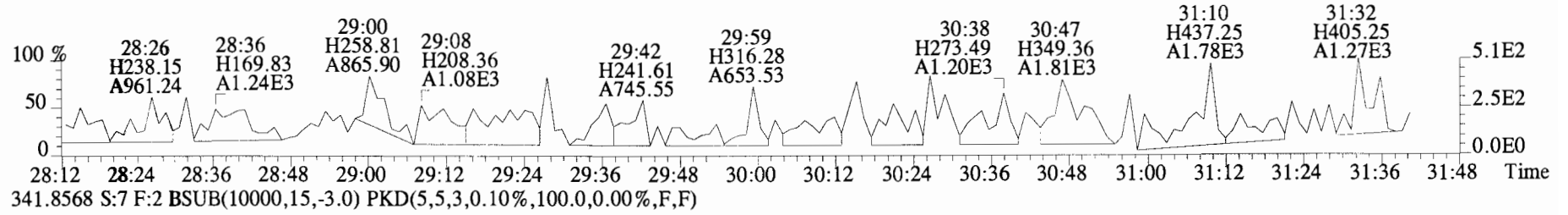
375.8364 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



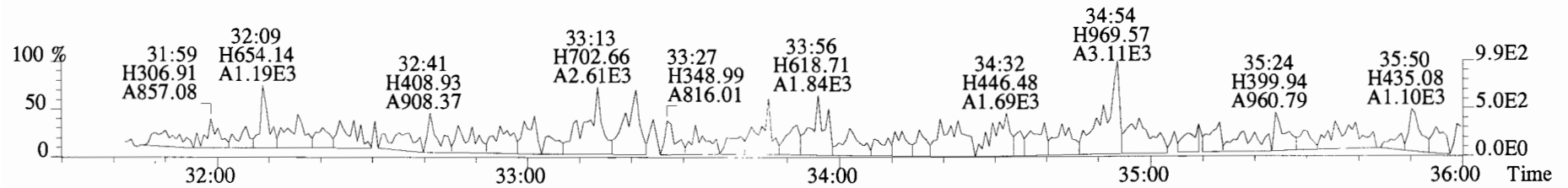
File:191101D1 #1-493 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



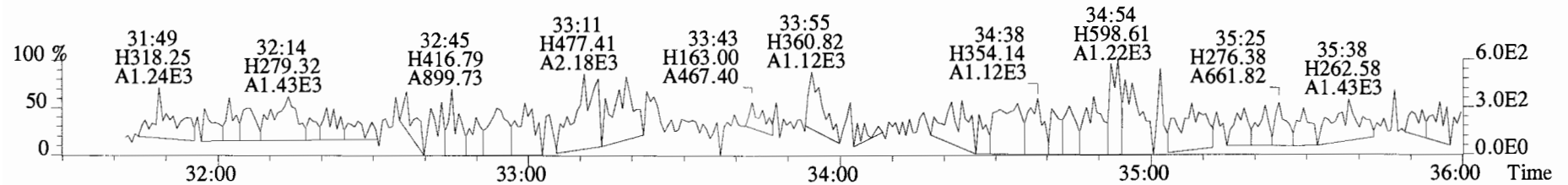
File:191101D1 #1-210 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



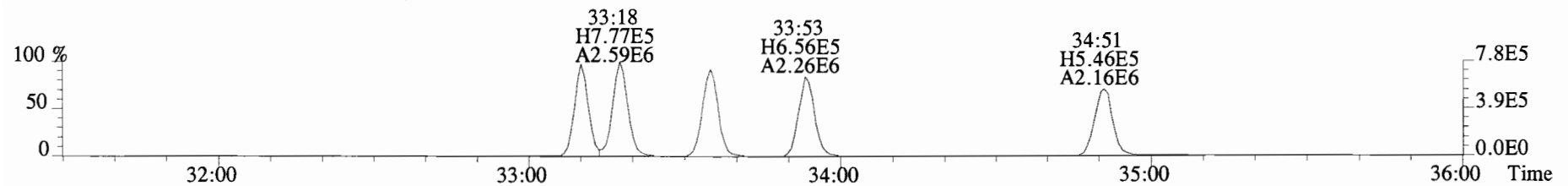
File:191101D1 #1-385 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
 373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



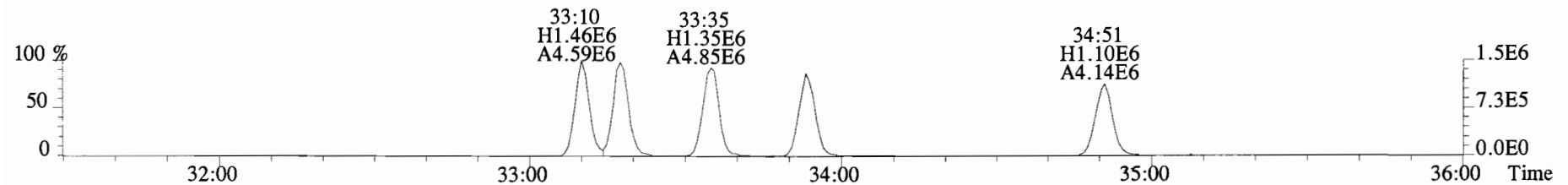
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



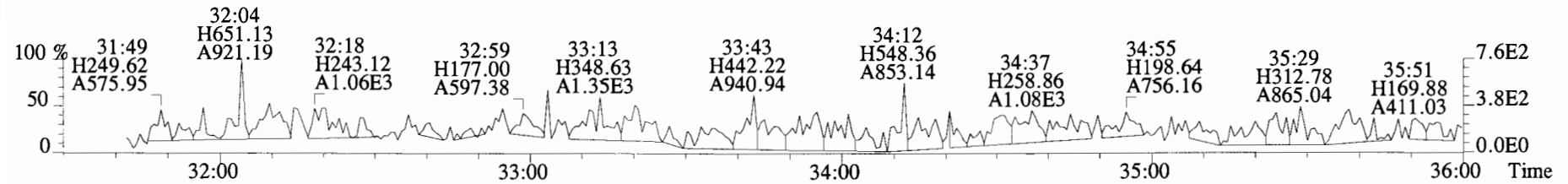
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



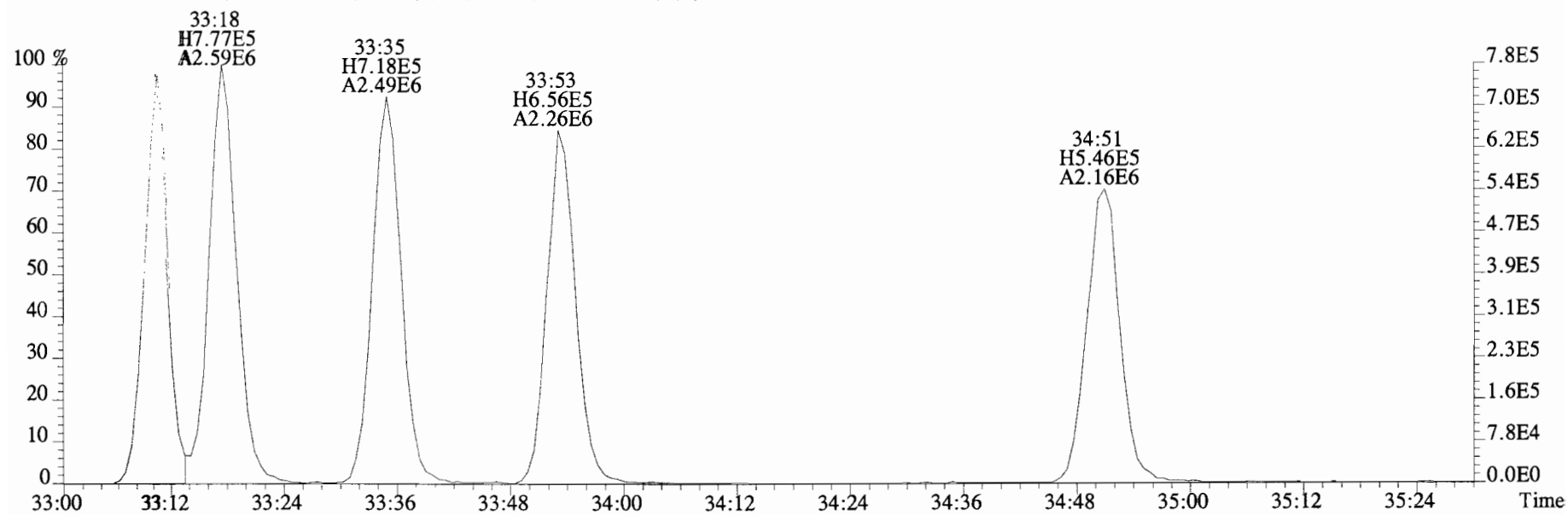
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



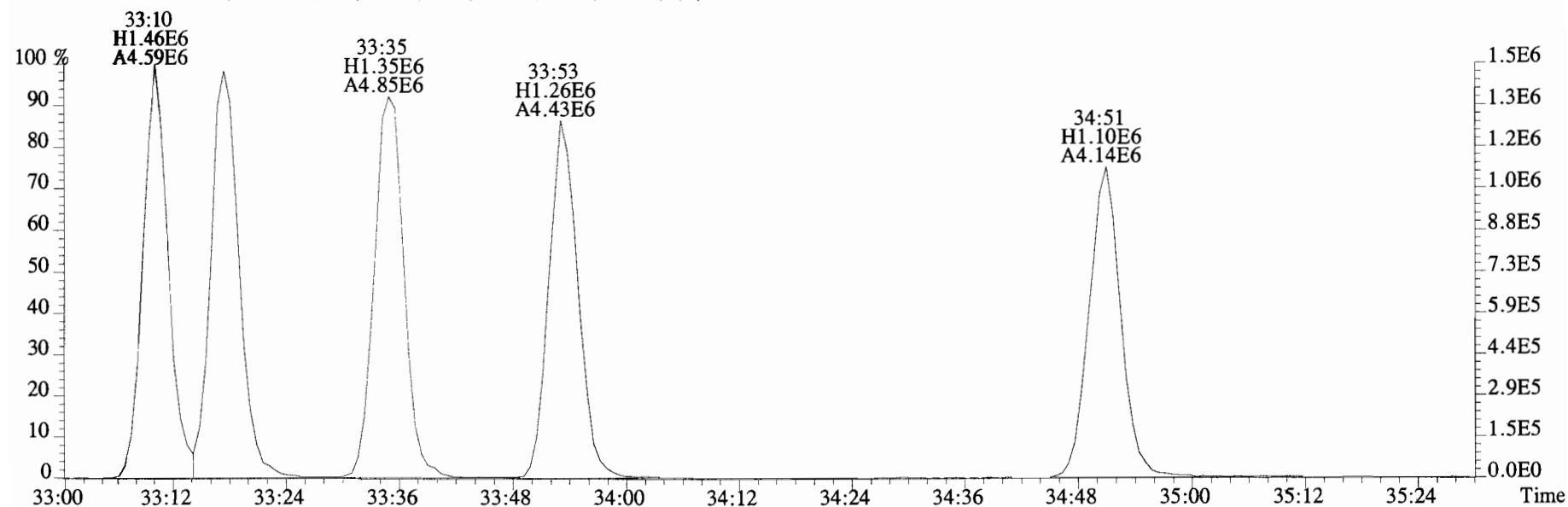
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



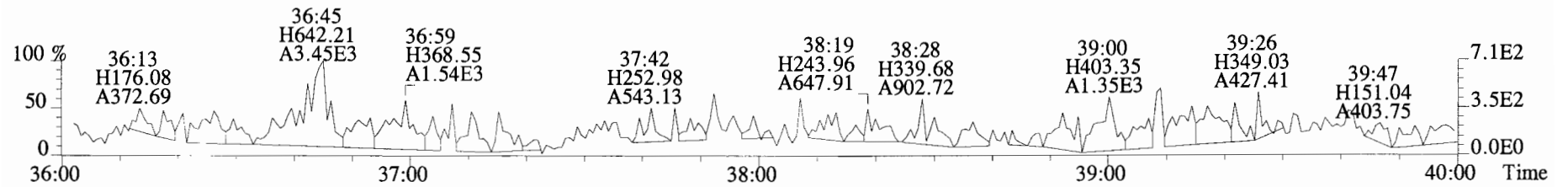
File:191101D1 #1-385 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata Analytical Laboratory VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



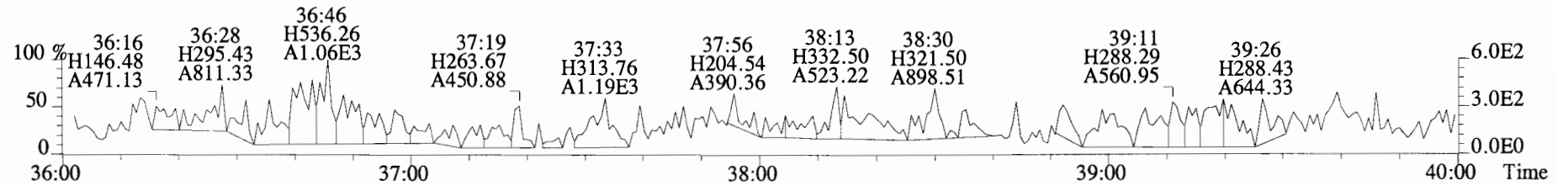
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



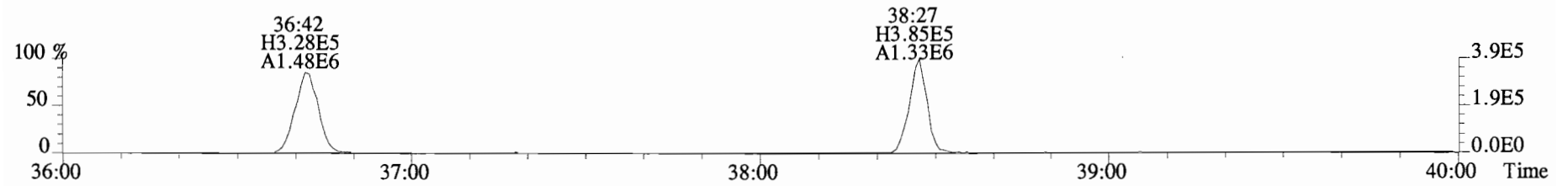
File:191101D1 #1-355 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata Analytical Laboratory_VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



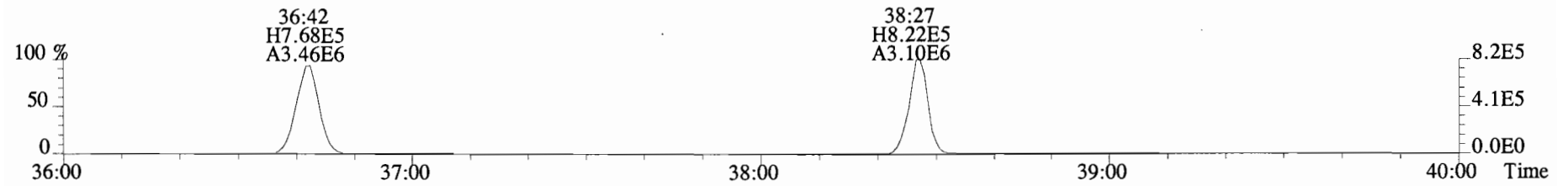
409.7788 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



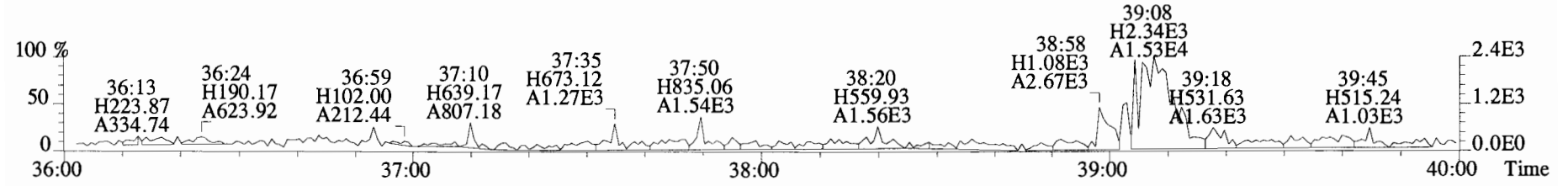
417.8253 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



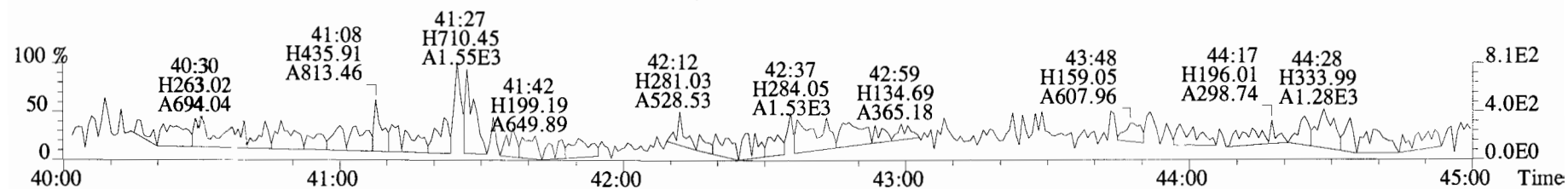
419.8220 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



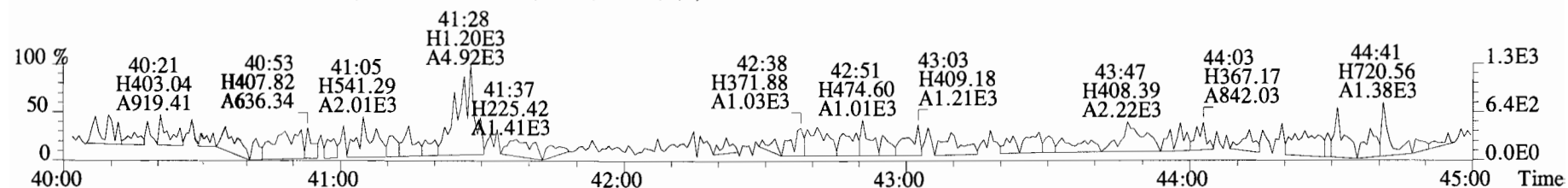
479.7165 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



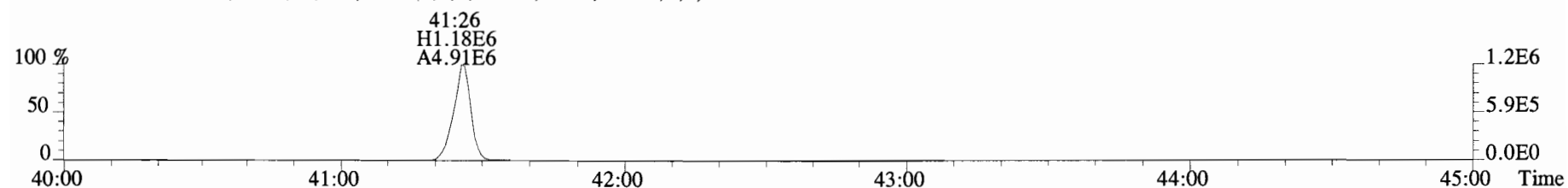
File:191101D1 #1-432 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



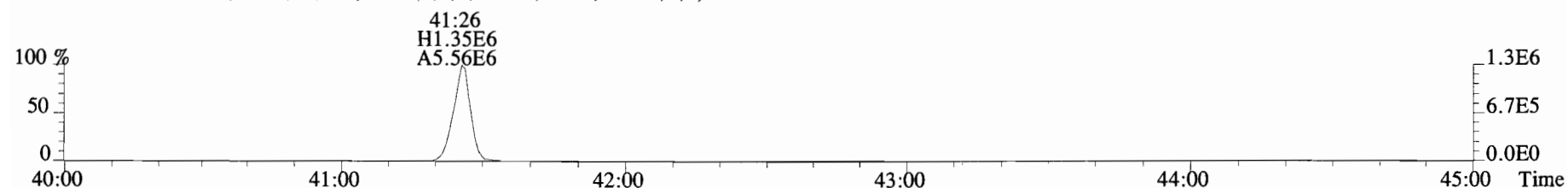
443.7398 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



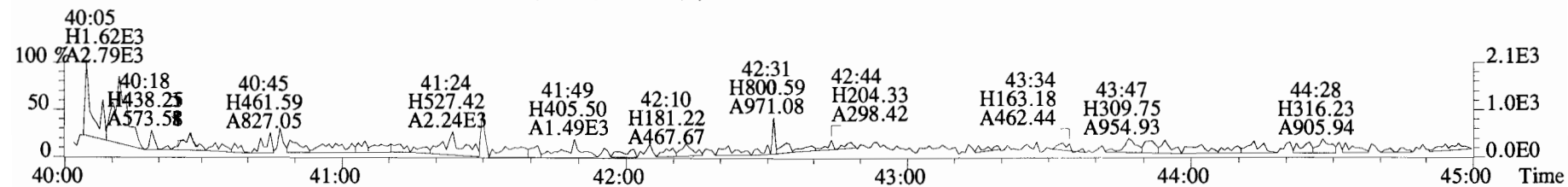
453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



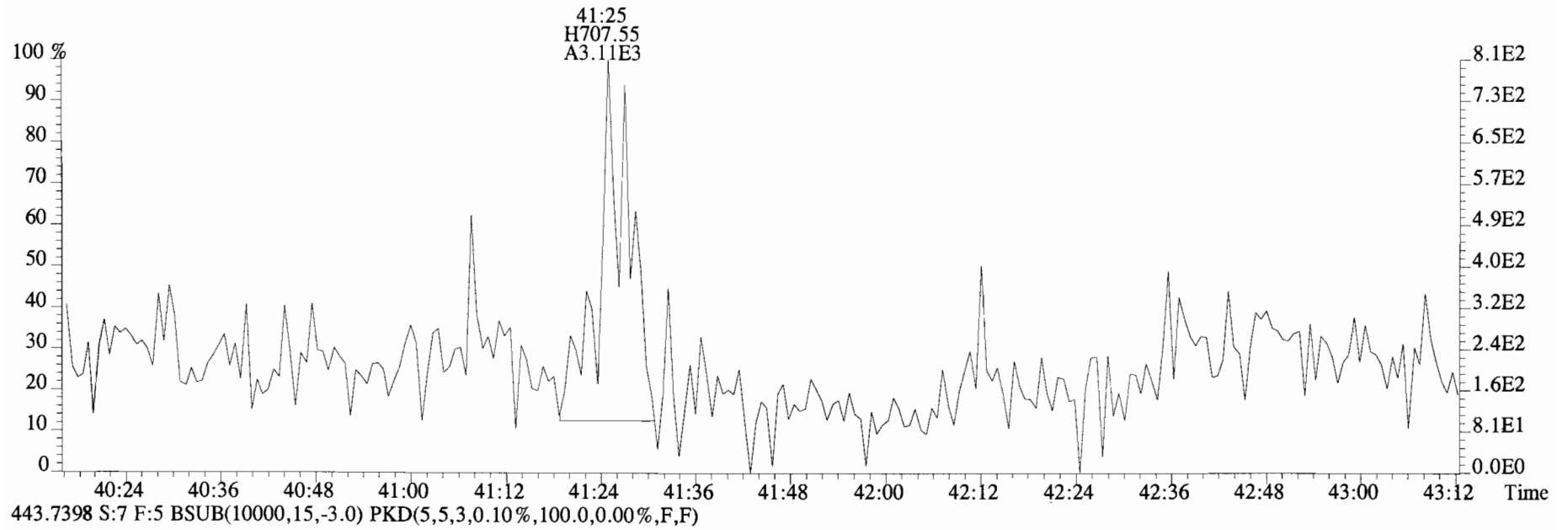
455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



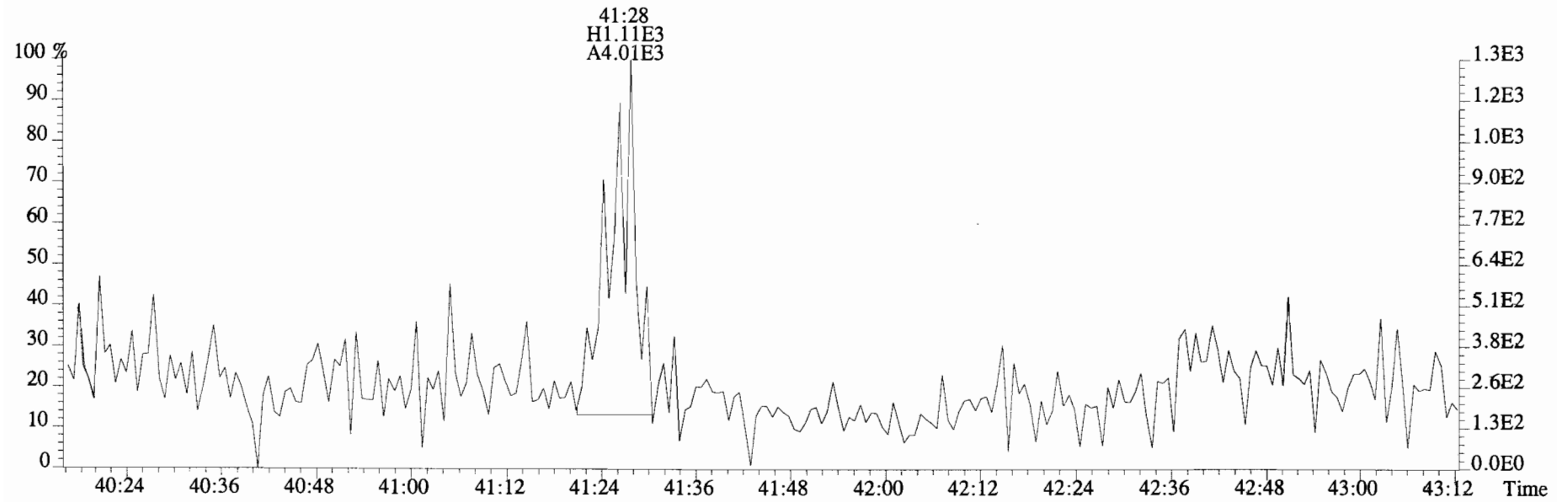
513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191101D1 #1-432 Acq: 1-NOV-2019 18:46:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Viata Analytical Laboratory VG7 Text:B9J0312-DUP1 Duplicate 12.12 Exp:OCDD_DB5
441.7428 S:7 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



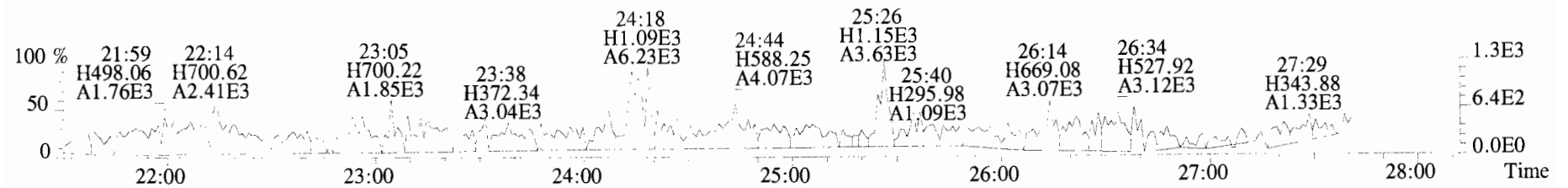
443.7398 S:7 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



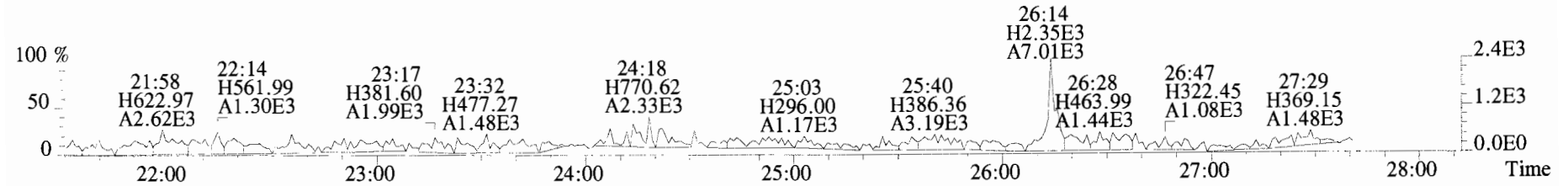
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	Not F _η	*		160	2.5	0.0974	Total Tetra-Dioxins	*	*		160	0.0974
1,2,3,7,8-PeCDD	*	* n	0.90	Not F _η	*		189	2.5	0.104	Total Penta-Dioxins	*	*		189	0.104
1,2,3,4,7,8-HxCDD	*	* n	1.10	Not F _η	*		125	2.5	0.108	Total Hexa-Dioxins	*	*		125	0.113
1,2,3,6,7,8-HxCDD	*	* n	0.94	Not F _η	*		125	2.5	0.116	Total Hepta-Dioxins	*	*		127	0.104
1,2,3,7,8,9-HxCDD	*	* n	0.96	Not F _η	*		125	2.5	0.113	Total Tetra-Furans	*	*		190	0.0817
1,2,3,4,6,7,8-HpCDD	*	* n	0.98	Not F _η	*		127	2.5	0.104	Total Penta-Furans	0.0000	0.0000		177	0.0953
OCDD	1.47e+04	1.02 y	0.96	41:18	0.78997		*	2.5	*	Total Hexa-Furans	*	*		104	0.0402
										Total Hepta-Furans	*	*		99.4	0.0522
2,3,7,8-TCDF	*	* n	0.95	Not F _η	*		190	2.5	0.0817						
1,2,3,7,8-PeCDF	*	* n	0.96	Not F _η	*		177	2.5	0.0930						
2,3,4,7,8-PeCDF	*	* n	1.01	Not F _η	*		177	2.5	0.0975						
1,2,3,4,7,8-HxCDF	*	* n	1.18	Not F _η	*		104	2.5	0.0353						
1,2,3,6,7,8-HxCDF	*	* n	1.07	Not F _η	*		104	2.5	0.0373						
2,3,4,6,7,8-HxCDF	*	* n	1.11	Not F _η	*		104	2.5	0.0390						
1,2,3,7,8,9-HxCDF	*	* n	1.06	Not F _η	*		104	2.5	0.0503						
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	Not F _η	*		99.4	2.5	0.0544						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	Not F _η	*		99.4	2.5	0.0496						
OCDF	*	* n	0.95	Not F _η	*		109	2.5	0.0970						
										Rec	Qual				
IS	13C-2,3,7,8-TCDD	5.88e+06	0.79 y	1.10	26:13	193.45				97.4					
IS	13C-1,2,3,7,8-PeCDD	4.72e+06	0.65 y	0.88	30:43	193.04				97.2					
IS	13C-1,2,3,4,7,8-HxCDD	4.24e+06	1.28 y	0.64	34:03	199.70				101					
IS	13C-1,2,3,6,7,8-HxCDD	4.77e+06	1.27 y	0.86	34:10	168.64				84.9					
IS	13C-1,2,3,7,8,9-HxCDD	4.98e+06	1.24 y	0.81	34:28	186.48				93.9					
IS	13C-1,2,3,4,6,7,8-HpCDD	4.58e+06	1.07 y	0.65	37:56	211.89				107					
IS	13C-OCDD	7.73e+06	0.89 y	0.58	41:17	403.00				101					
IS	13C-2,3,7,8-TCDF	8.36e+06	0.80 y	1.03	25:26	181.05				91.2					
IS	13C-1,2,3,7,8-PeCDF	6.98e+06	1.56 y	0.85	29:33	183.17				92.2					
IS	13C-2,3,4,7,8-PeCDF	7.01e+06	1.60 y	0.85	30:27	185.58				93.4					
IS	13C-1,2,3,4,7,8-HxCDF	5.80e+06	0.51 y	0.83	33:10	210.99				106					
IS	13C-1,2,3,6,7,8-HxCDF	6.59e+06	0.52 y	1.03	33:17	192.56				96.9					
IS	13C-2,3,4,6,7,8-HxCDF	6.04e+06	0.53 y	0.95	33:53	191.54				96.4					
IS	13C-1,2,3,7,8,9-HxCDF	5.60e+06	0.51 y	0.83	34:50	204.71				103					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.20e+06	0.42 y	0.76	36:42	207.42				104					
IS	13C-1,2,3,4,7,8,9-HpCDF	4.30e+06	0.45 y	0.58	38:29	223.44				112					
IS	13C-OCDF	1.01e+07	0.89 y	0.69	41:30	443.13				112					
C/Up	37C1-2,3,7,8-TCDD	2.80e+06		1.20	26:15	84.285				106					
RS/RT	13C-1,2,3,4-TCDD	5.51e+06	0.80 y	1.00	25:40	198.63									
RS	13C-1,2,3,4-TCDF	8.86e+06	0.78 y	1.00	24:15	198.63									
RS/RT	13C-1,2,3,4,6,9-HxCDF	6.57e+06	0.51 y	1.00	33:34	198.63									

Integrations
 by DB
 Analyst: DB
 Date: 11/5/19
 Reviewed
 by CT
 Analyst: CT
 Date: 11/11/19

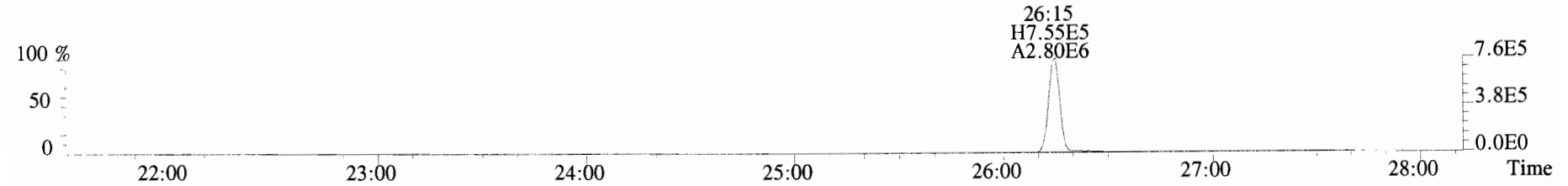
File:191024D2 #1-493 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
 319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



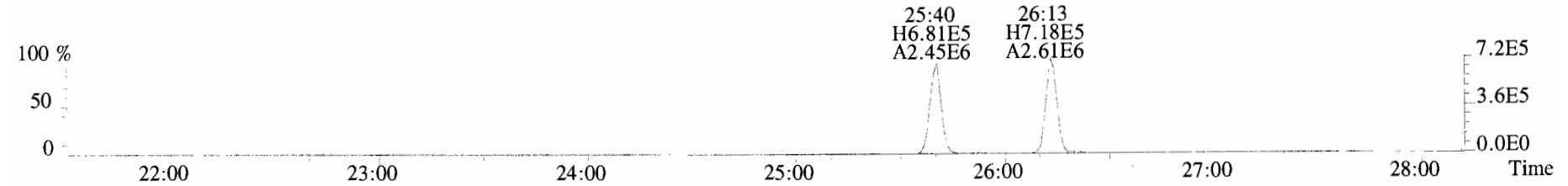
321.8936 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



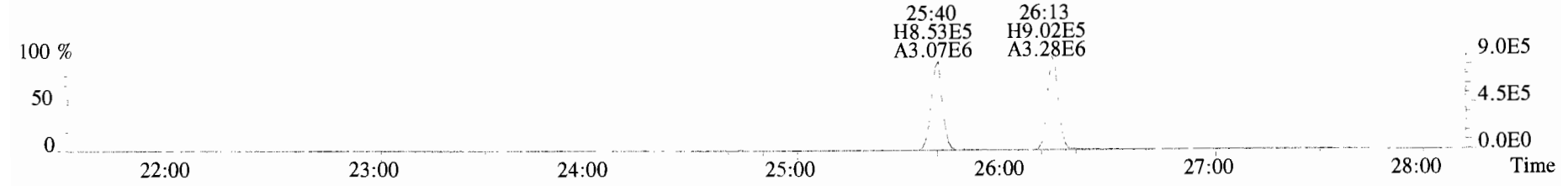
327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



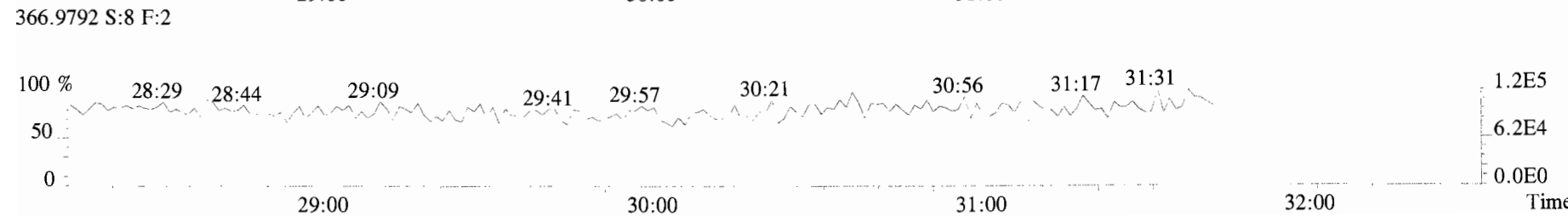
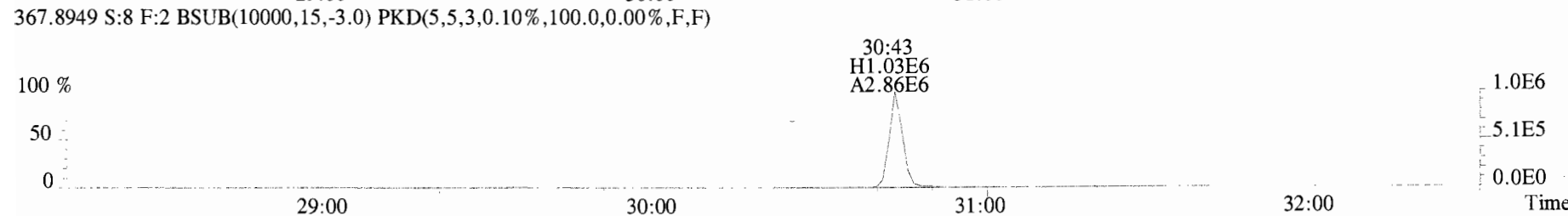
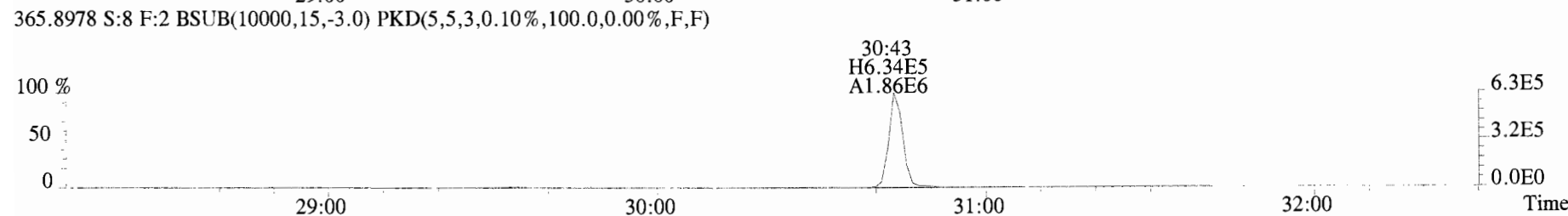
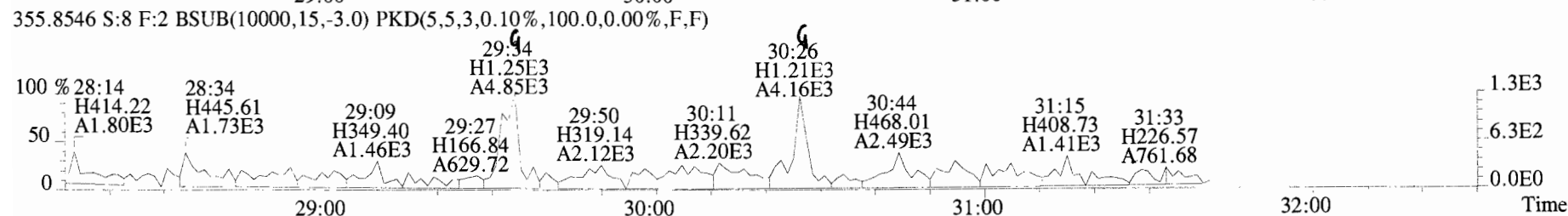
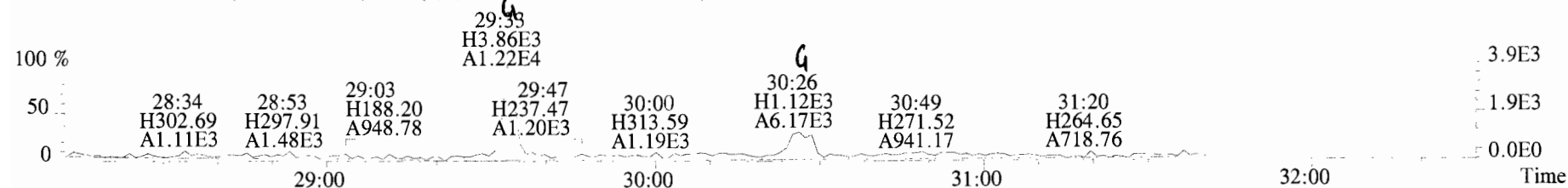
331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



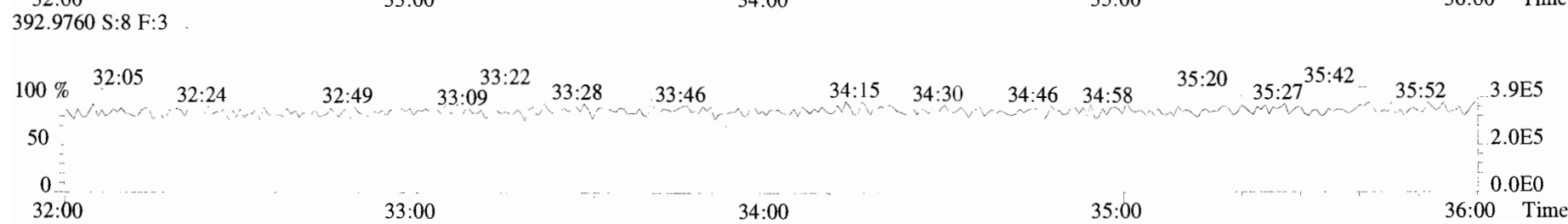
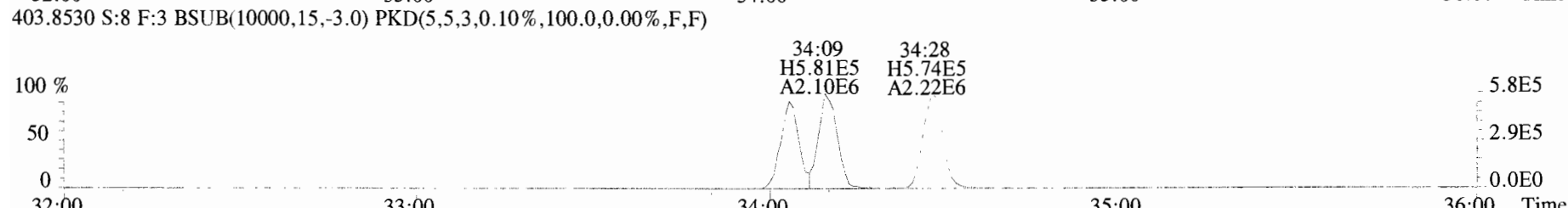
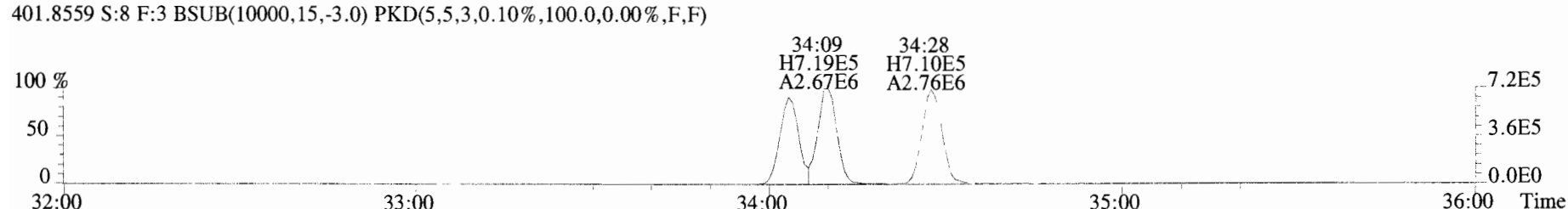
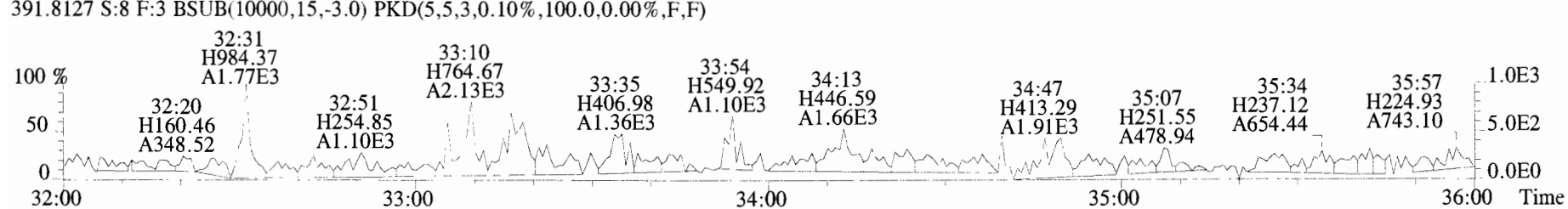
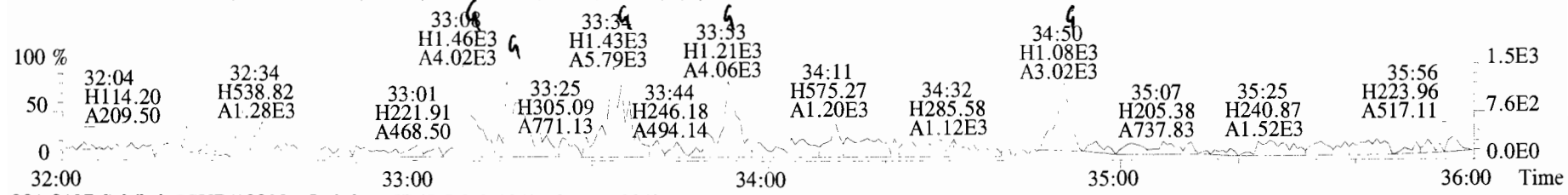
333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



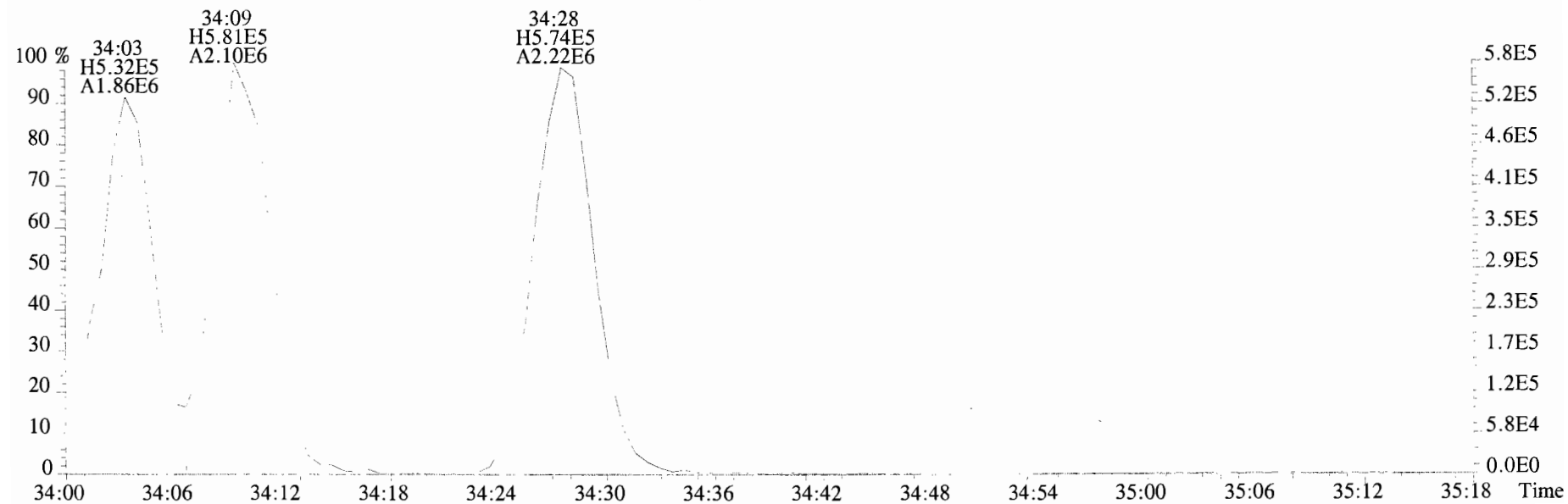
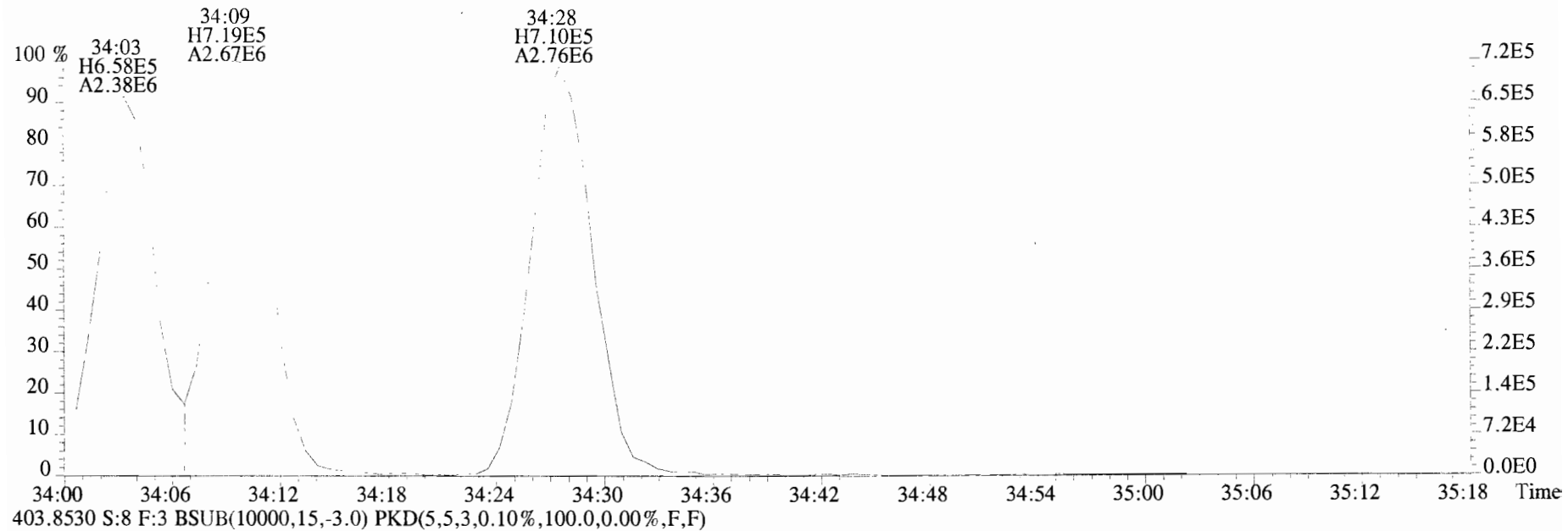
File: 191024D2 #1-211 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text: Vista Analytical Laboratory VG7 Text: 1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp: OCDD_DB5
 353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



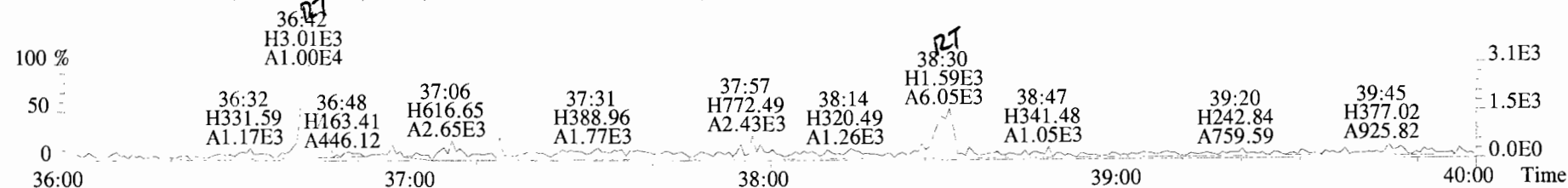
File: 191024D2 #1-384 Acq: 25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text: Vista Analytical Laboratory VG7 Text: 1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp: OCDD_DB5
 389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



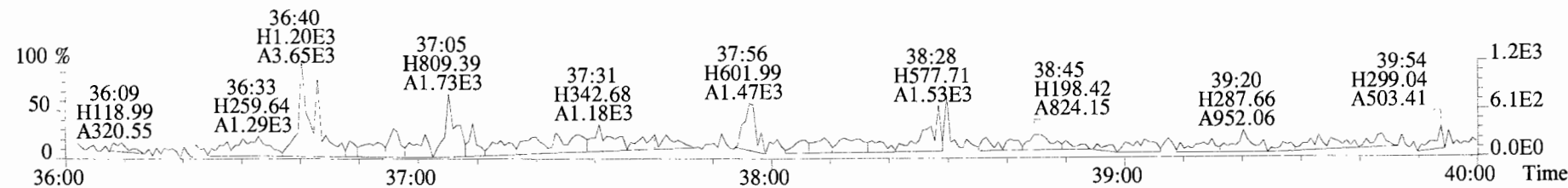
File:191024D2 #1-384 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



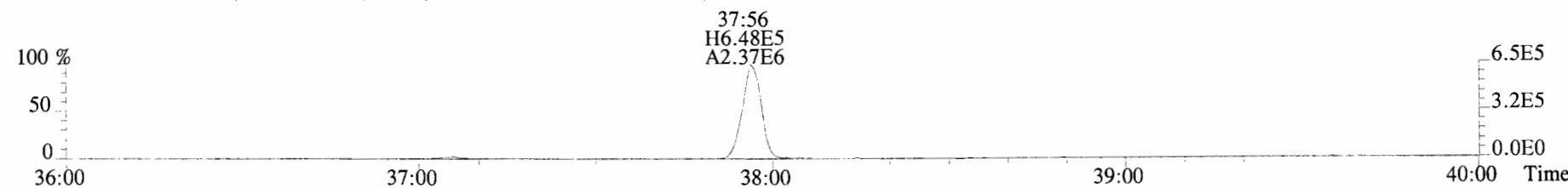
File:191024D2 #1-356 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



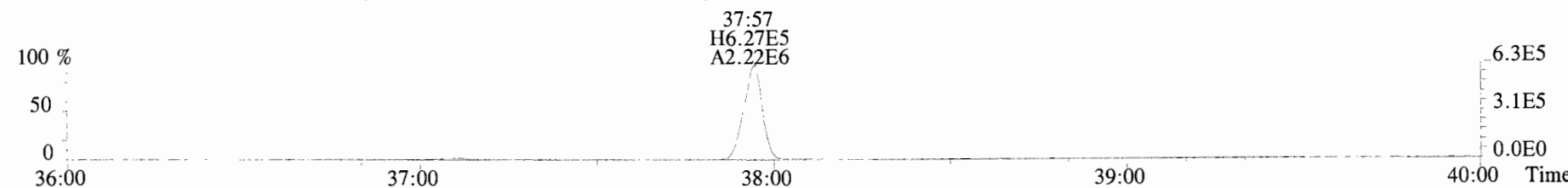
425.7737 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



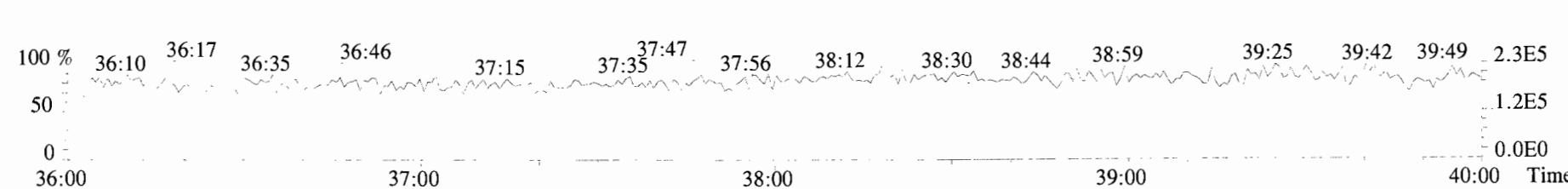
435.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



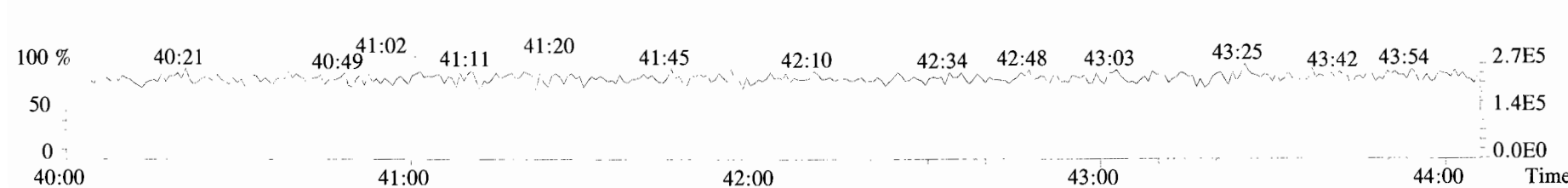
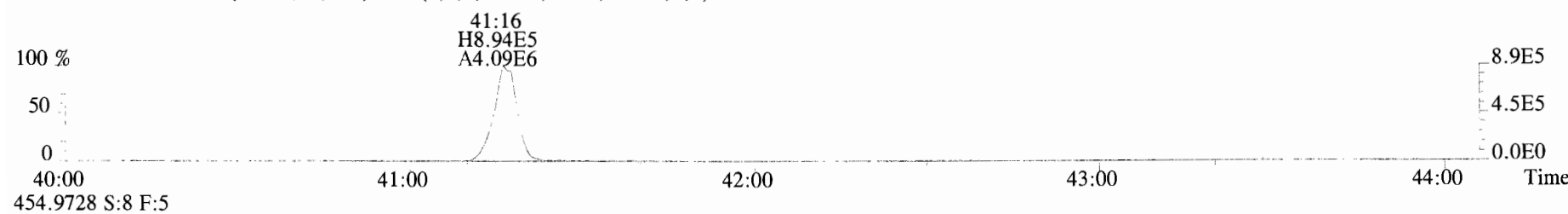
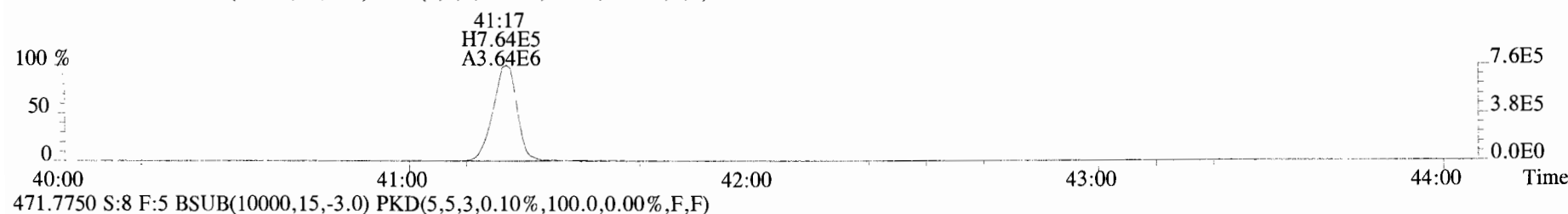
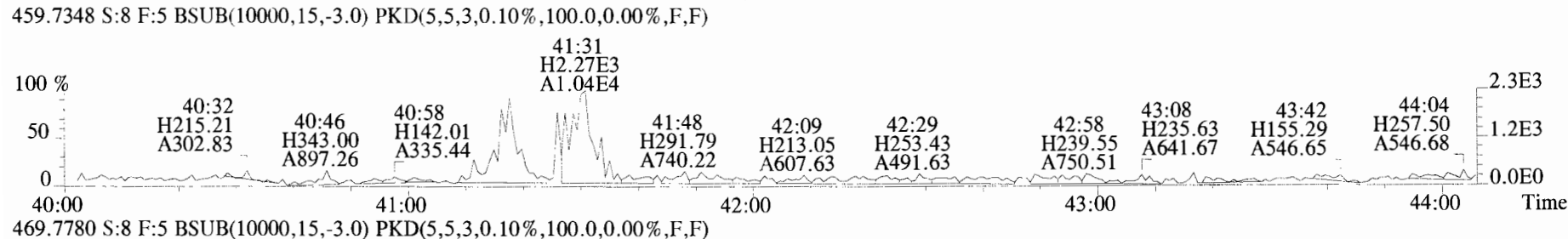
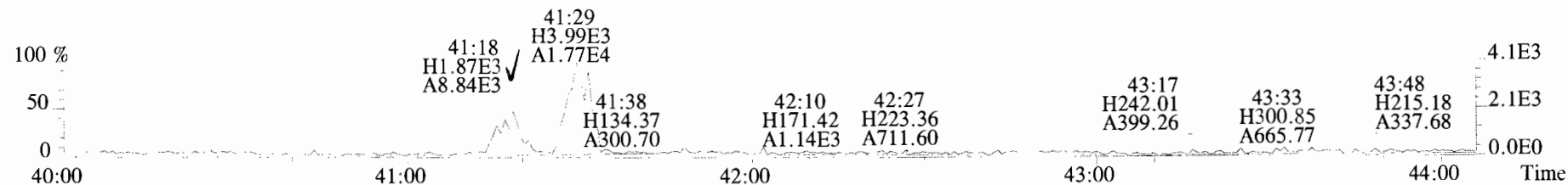
437.8140 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



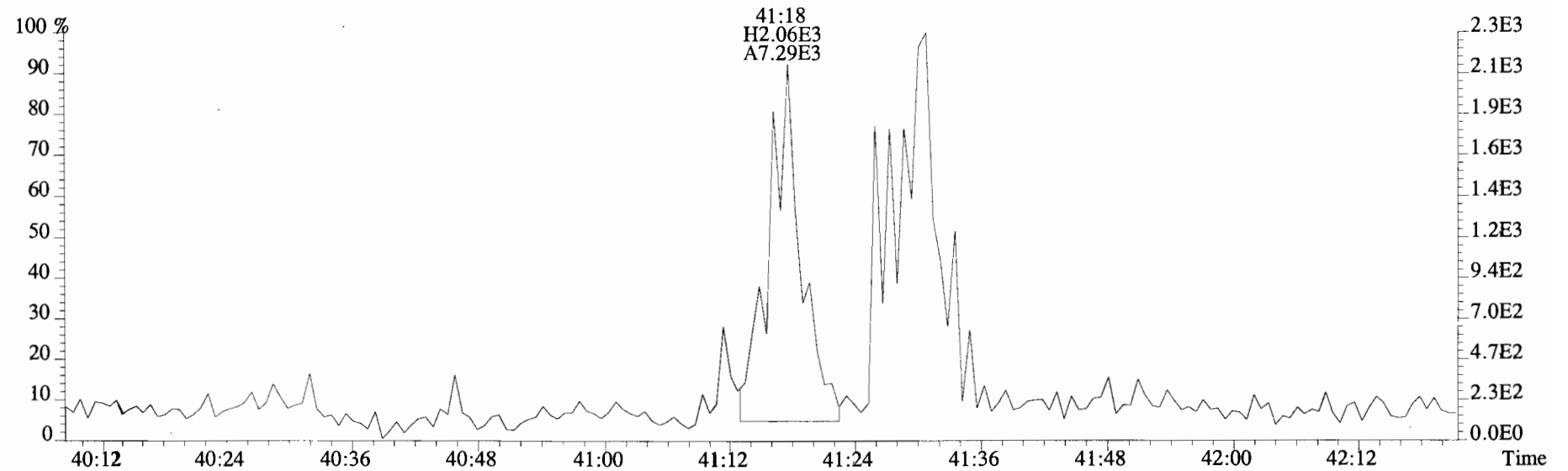
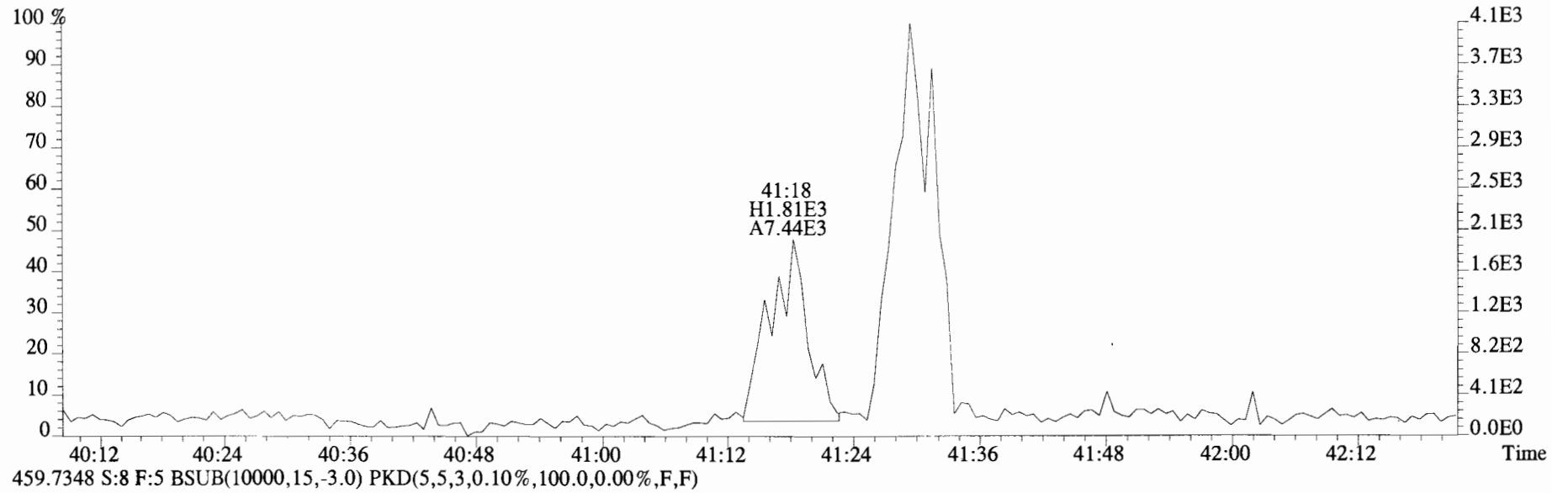
454.9728 S:8 F:4



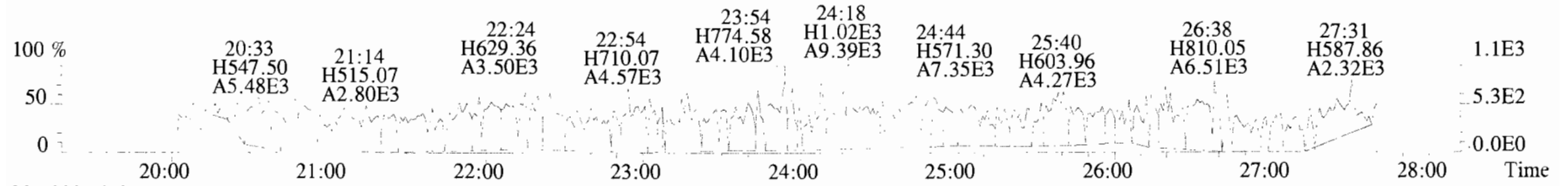
File:191024D2 #1-432 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



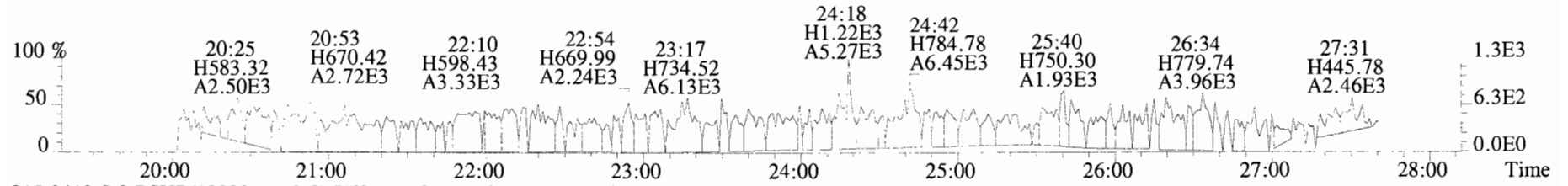
File:191024D2 #1-432 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



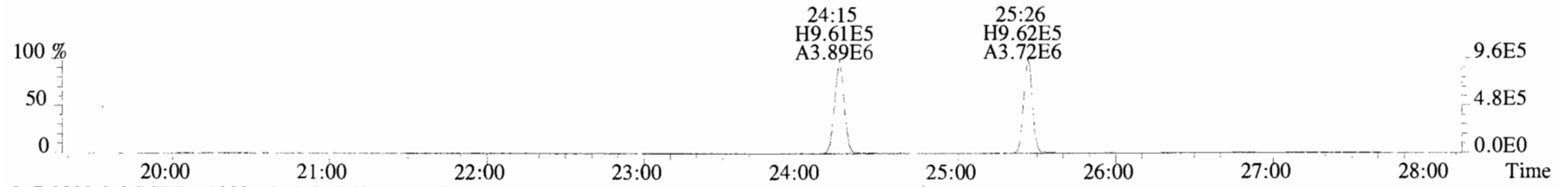
File:191024D2 #1-493 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
 303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



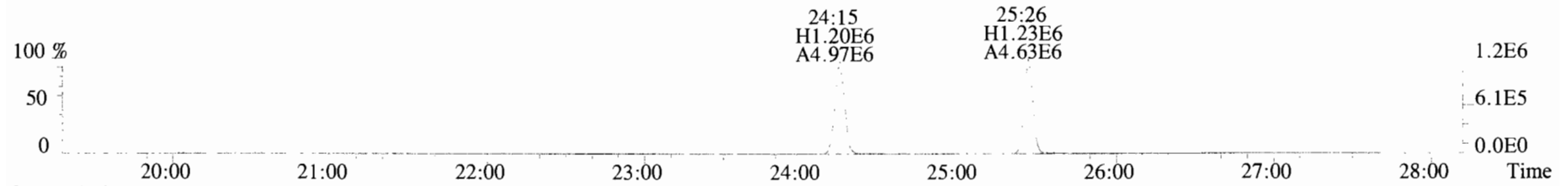
305.8987 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



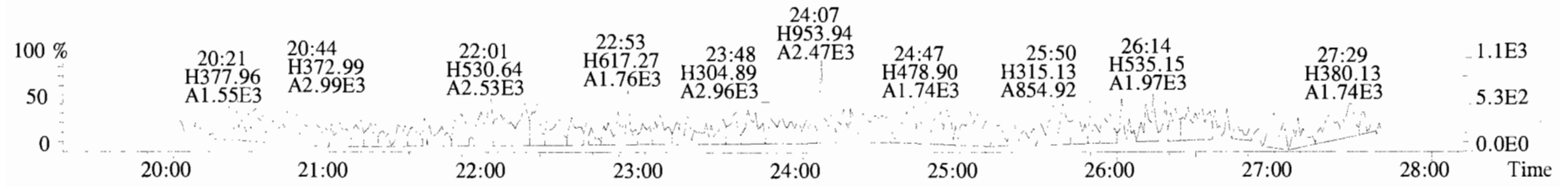
315.9419 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



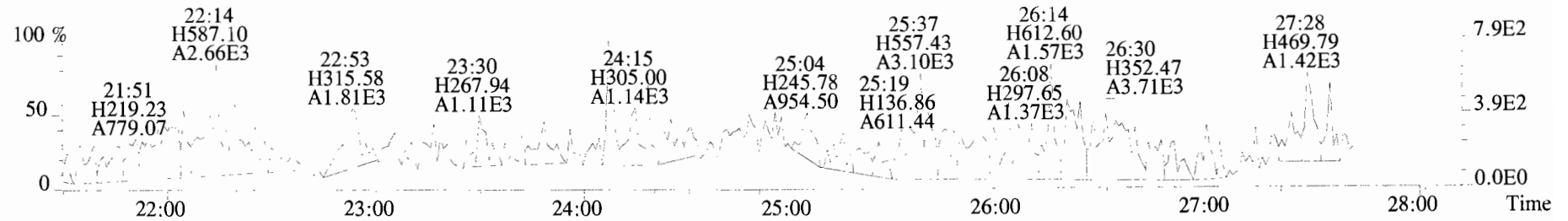
317.9389 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



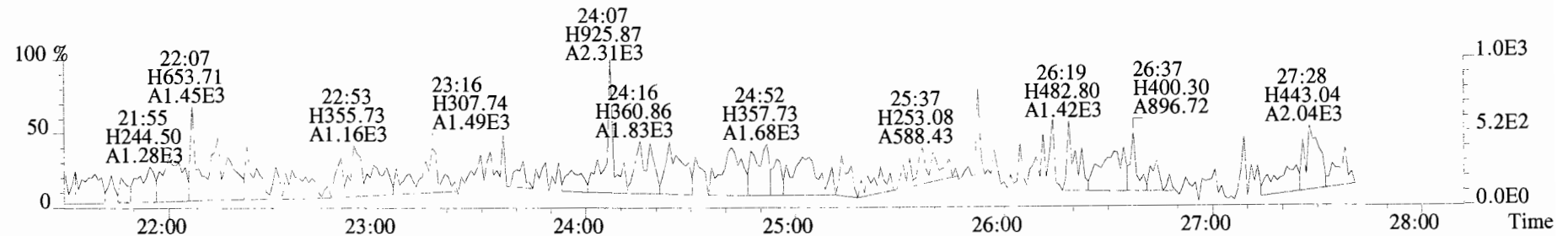
375.8364 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



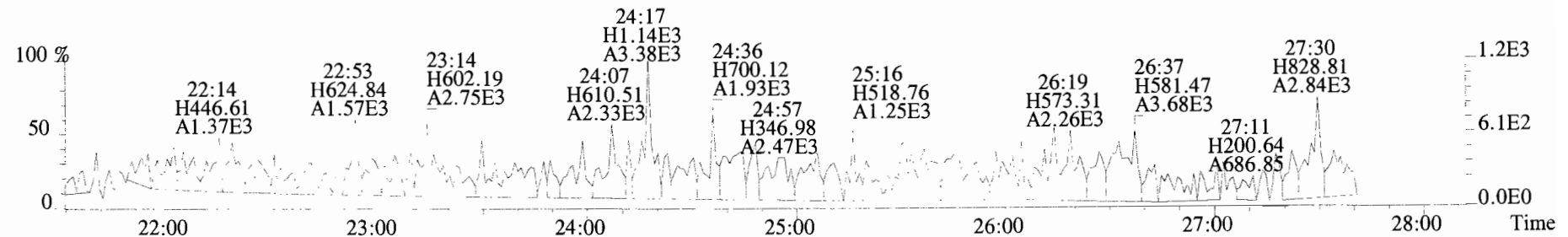
File:191024D2 #1-493 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
 339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



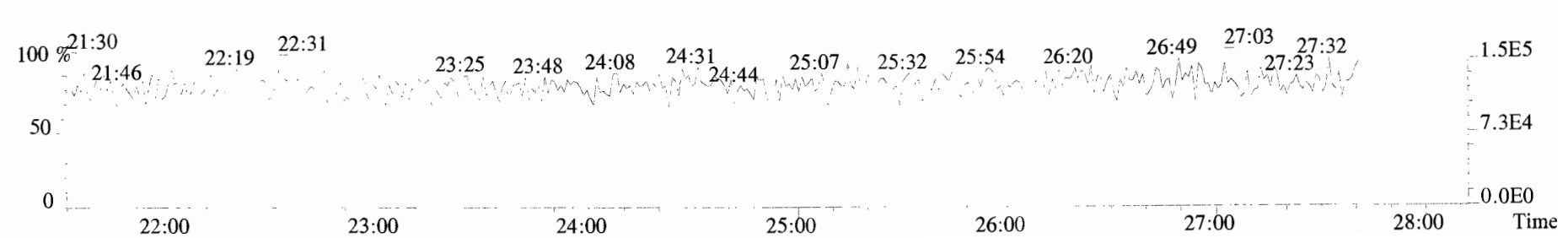
341.8568 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



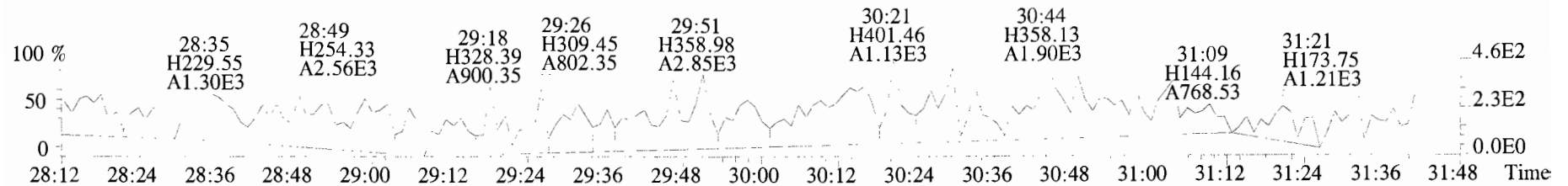
409.7974 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



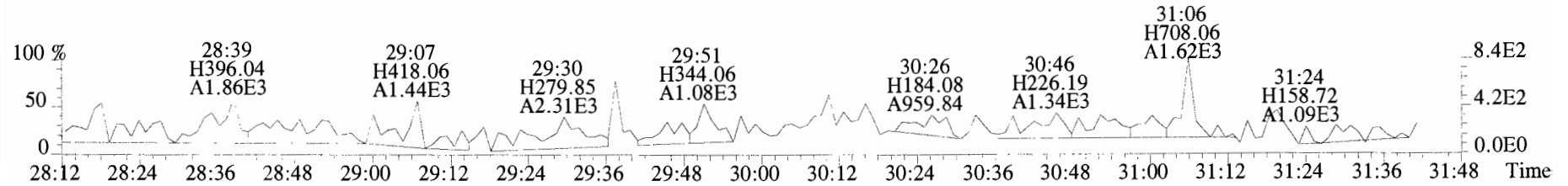
316.9824 S:8



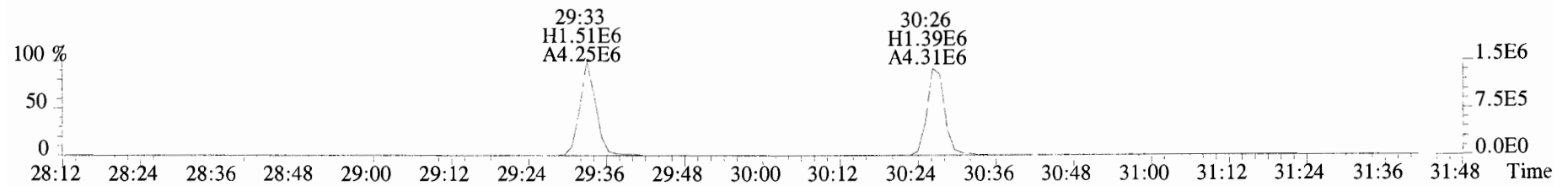
File:191024D2 #1-211 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
 339.8597 S:8 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



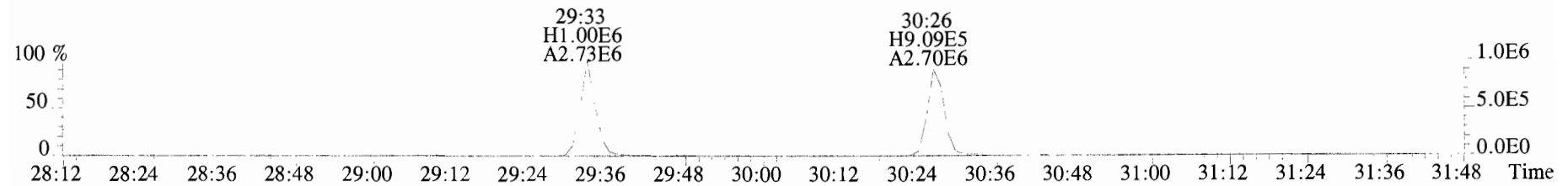
341.8568 S:8 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



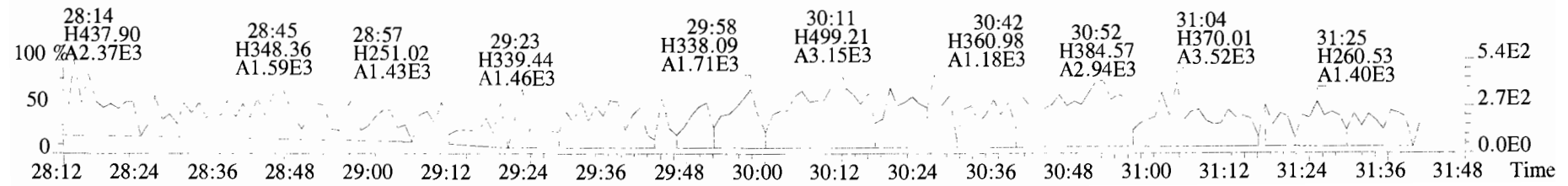
351.9000 S:8 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



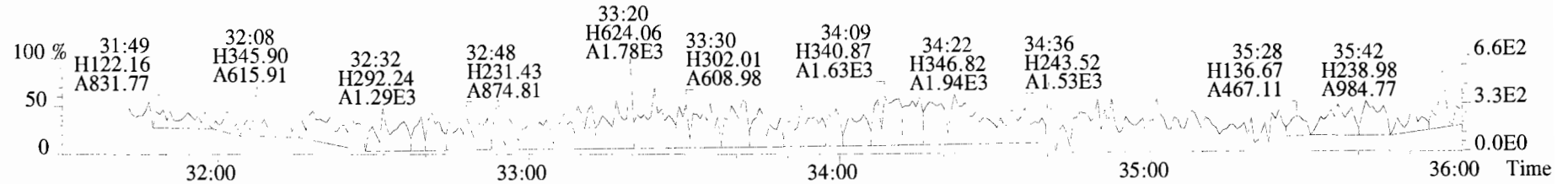
353.8970 S:8 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



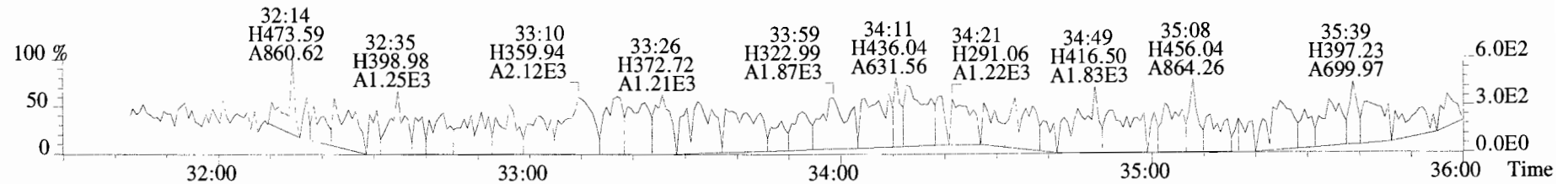
409.7974 S:8 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



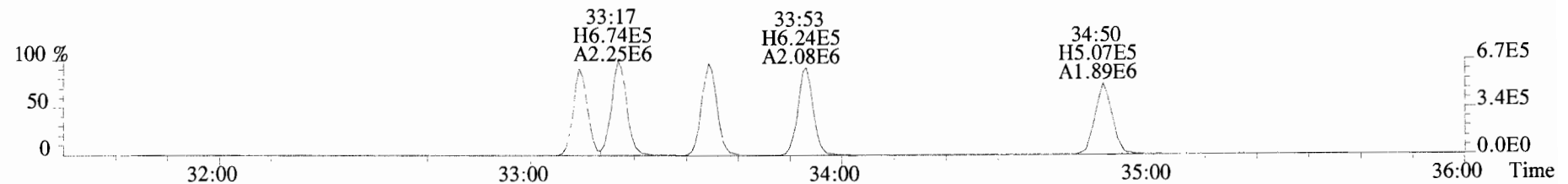
File:191024D2 #1-384 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
 373.8207 S:8 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



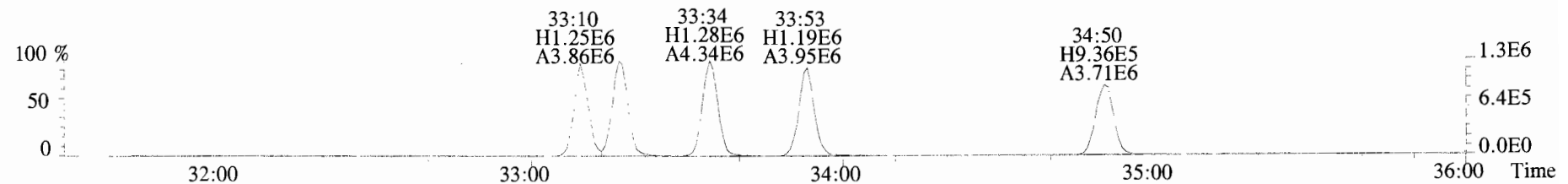
375.8178 S:8 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



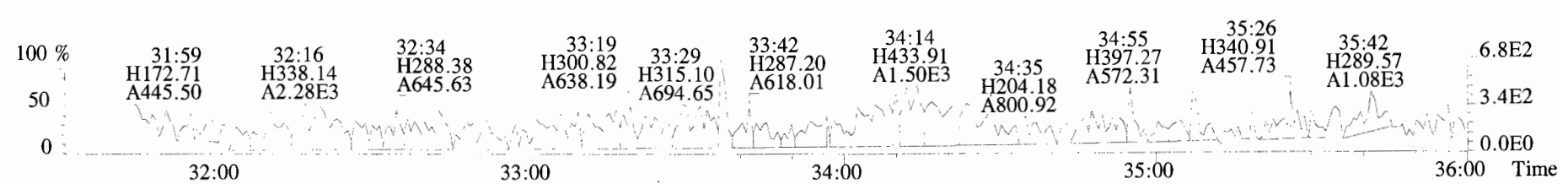
383.8639 S:8 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



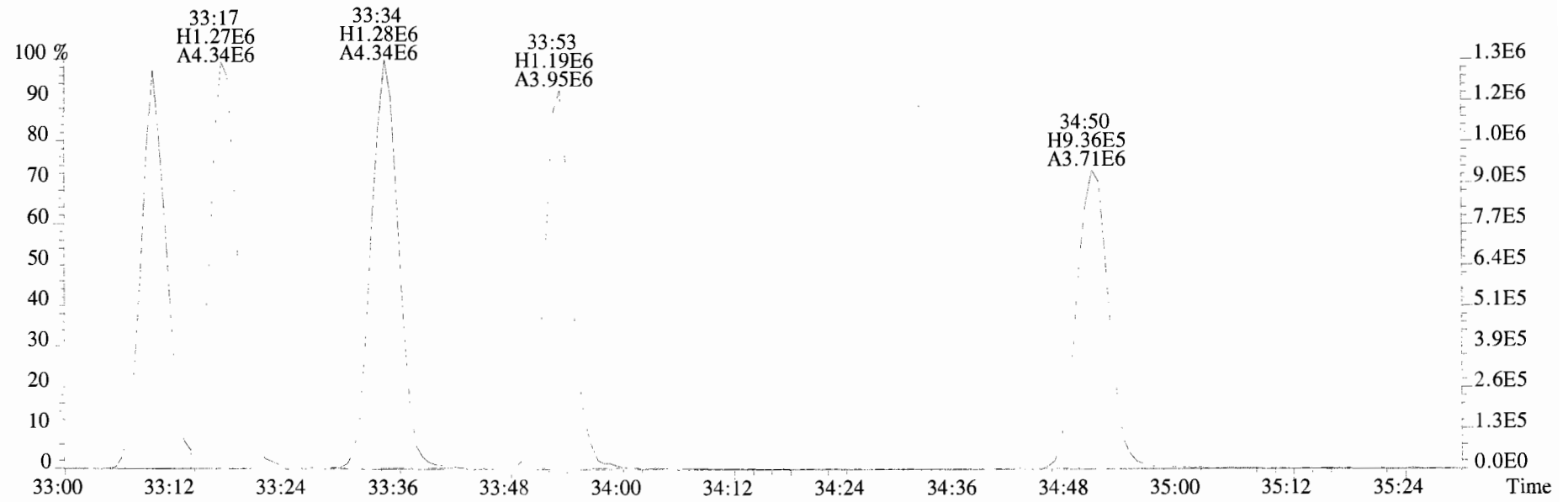
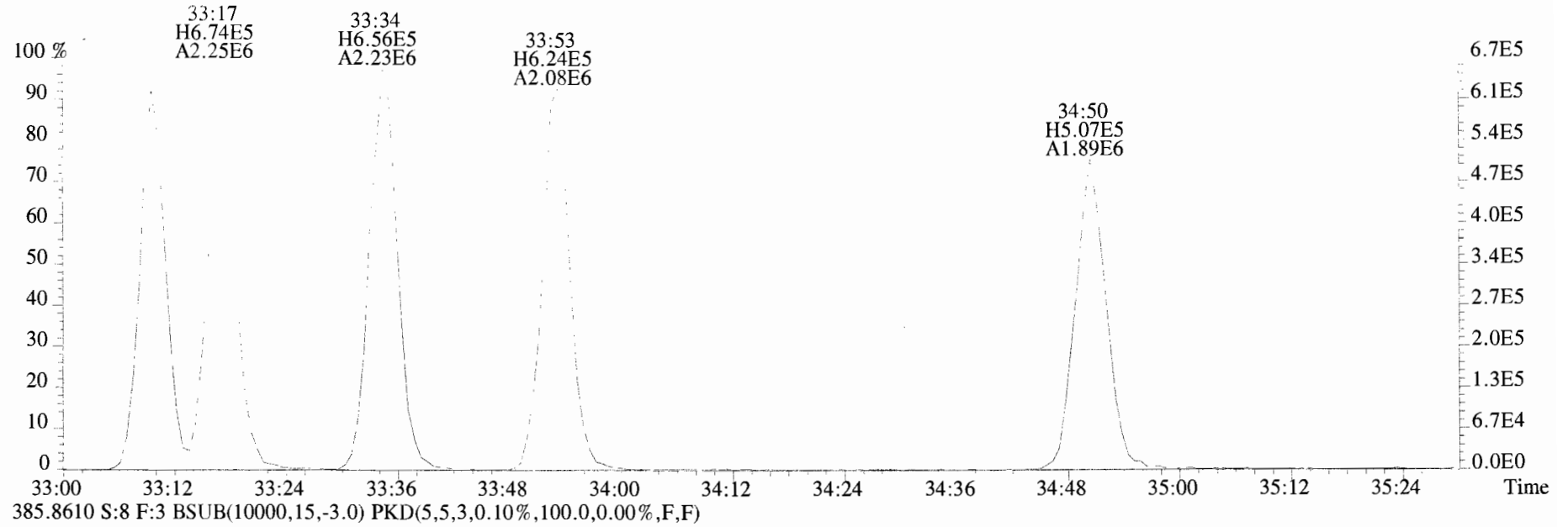
385.8610 S:8 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



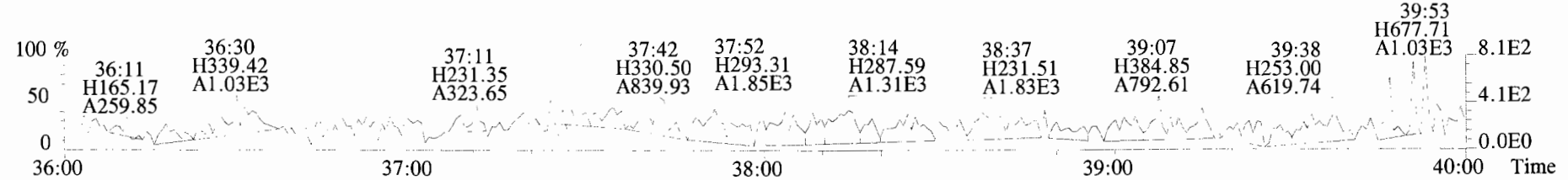
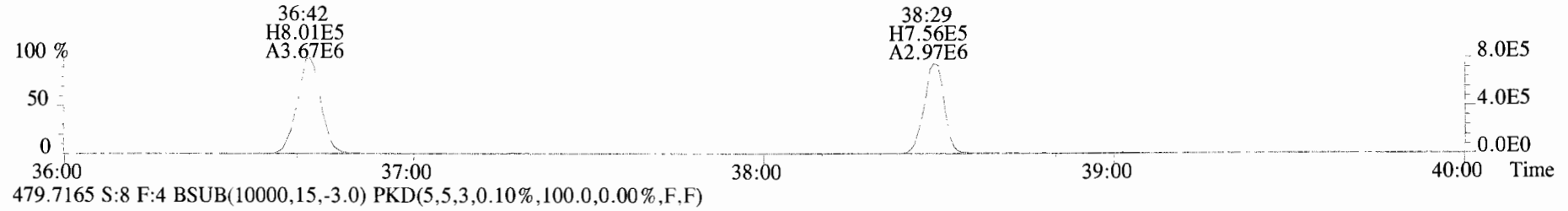
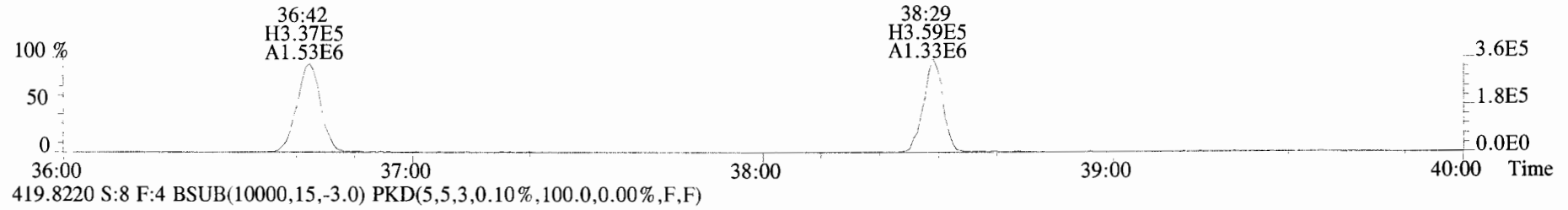
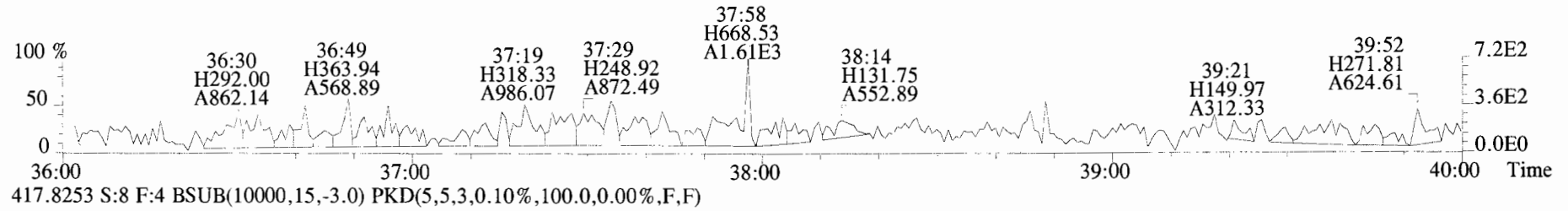
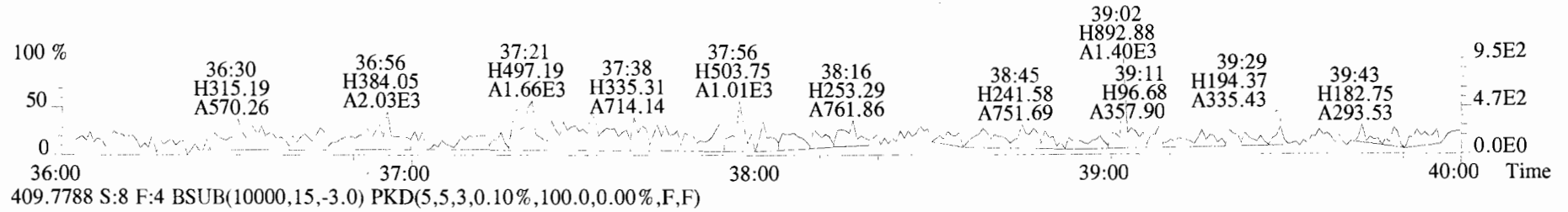
445.7555 S:8 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



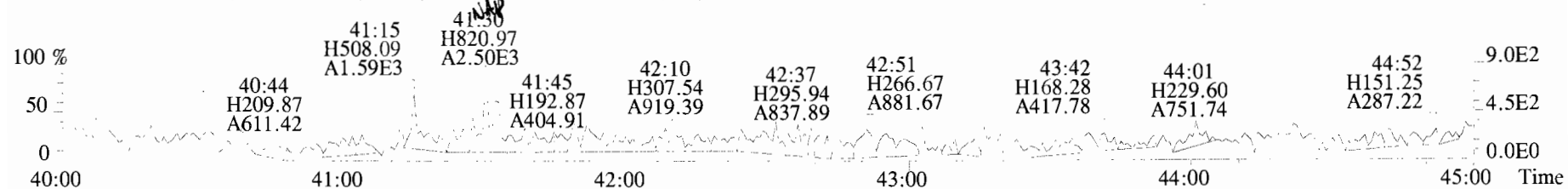
File:191024D2 #1-384 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



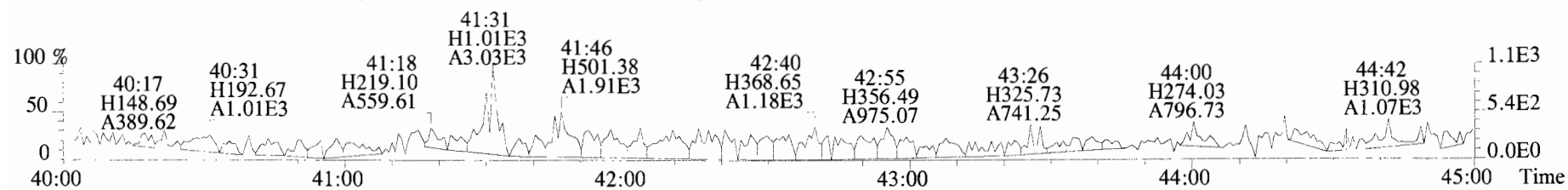
File:191024D2 #1-356 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory_VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
 407.7818 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



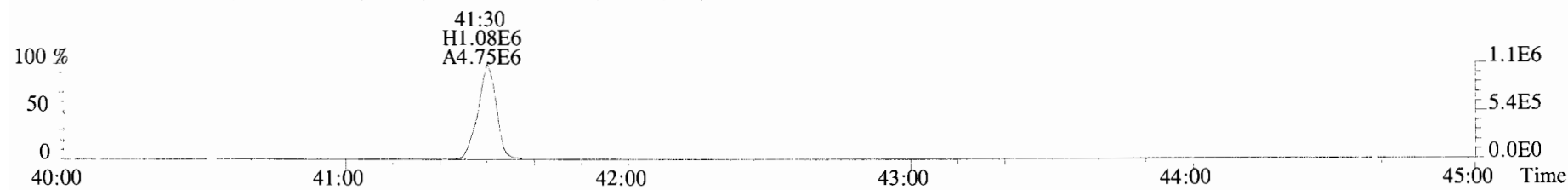
File:191024D2 #1-432 Acq:25-OCT-2019 09:24:24 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1903546-08 PDI-028SC-A-13-14.2-191003 13.69 Exp:OCDD_DB5
 441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



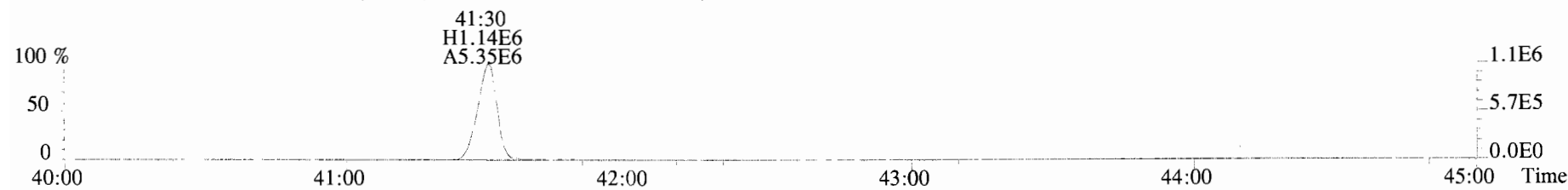
443.7398 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



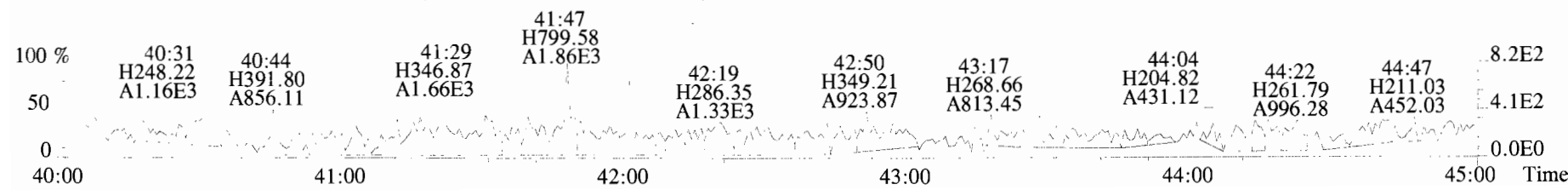
453.7831 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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)



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	NotFη	*		129	2.5	0.0719	Total Tetra-Dioxins	*	*		129	0.0719
1,2,3,7,8-PeCDD	*	* n	0.90	NotFη	*		242	2.5	0.132	Total Penta-Dioxins	*	*		242	0.132
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotFη	*		128	2.5	0.119	Total Hexa-Dioxins	0.718	0.718	*	*	
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotFη	*		128	2.5	0.123	Total Hepta-Dioxins	1.70	1.70	*	*	
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotFη	*		128	2.5	0.119	Total Tetra-Furans	*	*		153	0.0583
1,2,3,4,6,7,8-HpCDD	1.15e+04	1.04 y	0.98	37:56	0.63273		*	2.5	*	Total Penta-Furans	0.0000	0.0000		203	0.0960
OCDD	7.74e+04	0.89 y	0.96	41:14	4.5786		*	2.5	*	Total Hexa-Furans	*	*		128	0.0545
										Total Hepta-Furans	*	*		87.6	0.0557
2,3,7,8-TCDF	*	* n	0.95	NotFη	*		153	2.5	0.0583						
1,2,3,7,8-PeCDF	*	* n	0.96	NotFη	*		203	2.5	0.0970						
2,3,4,7,8-PeCDF	*	* n	1.01	NotFη	*		203	2.5	0.0950						
1,2,3,4,7,8-HxCDF	*	* n	1.18	NotFη	*		128	2.5	0.0453						
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotFη	*		128	2.5	0.0514						
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotFη	*		128	2.5	0.0553						
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotFη	*		128	2.5	0.0679						
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	NotFη	*		87.6	2.5	0.0610						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotFη	*		87.6	2.5	0.0498						
OCDF	4.20e+03	0.77 y	0.95	41:27	0.20142		*	2.5	*						
										Rec	Qual				
IS	13C-2,3,7,8-TCDD	6.34e+06	0.78 y	1.10	26:17	183.21				91.9					
IS	13C-1,2,3,7,8-PeCDD	4.95e+06	0.64 y	0.88	30:46	177.55				89.1					
IS	13C-1,2,3,4,7,8-HxCDD	3.94e+06	1.29 y	0.64	34:04	174.22				87.4					
IS	13C-1,2,3,6,7,8-HxCDD	4.46e+06	1.23 y	0.86	34:11	148.06				74.3					
IS	13C-1,2,3,7,8,9-HxCDD	4.62e+06	1.26 y	0.81	34:29	162.80				81.7					
IS	13C-1,2,3,4,6,7,8-HpCDD	3.70e+06	1.08 y	0.65	37:55	160.87				80.7					
IS	13C-OCDD	7.03e+06	0.89 y	0.58	41:13	344.42				86.4					
IS	13C-2,3,7,8-TCDF	9.60e+06	0.81 y	1.03	25:30	180.61				90.6					
IS	13C-1,2,3,7,8-PeCDF	8.33e+06	1.59 y	0.85	29:36	189.97				95.3					
IS	13C-2,3,4,7,8-PeCDF	8.32e+06	1.59 y	0.85	30:29	191.17				95.9					
IS	13C-1,2,3,4,7,8-HxCDF	5.67e+06	0.52 y	0.83	33:11	193.56				97.1					
IS	13C-1,2,3,6,7,8-HxCDF	6.06e+06	0.52 y	1.03	33:19	166.48				83.5					
IS	13C-2,3,4,6,7,8-HxCDF	5.60e+06	0.52 y	0.95	33:54	166.68				83.6					
IS	13C-1,2,3,7,8,9-HxCDF	5.10e+06	0.51 y	0.83	34:51	174.95				87.8					
IS	13C-1,2,3,4,6,7,8-HpCDF	4.09e+06	0.43 y	0.76	36:43	153.44				77.0					
IS	13C-1,2,3,4,7,8,9-HpCDF	3.56e+06	0.42 y	0.58	38:28	173.80				87.2					
IS	13C-OCDF	8.78e+06	0.89 y	0.69	41:27	361.84				90.8					
C/Up	37C1-2,3,7,8-TCDD	3.02e+06		1.20	26:18	79.798				100					
RS/RT	13C-1,2,3,4-TCDD	6.30e+06	0.78 y	1.00	25:43	199.27									
RS	13C-1,2,3,4-TCDF	1.02e+07	0.82 y	1.00	24:18	199.27									
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.02e+06	0.53 y	1.00	33:36	199.27									

Integrations Reviewed
 by DB by CT
 Analyst: DB Analyst: CT
 Date: 11/6/19 Date: 11/11/19

Totals class: HxCDD EMPC

Entry #: 23

Run: 12

File: 191101D1

S: 8 I: 1 F: 3

Acquired: 1-NOV-19 19:34:14 Processed: 4-NOV-19 10:36:46

Total Concentration: 0.71752

Unnamed Concentration: 0.718

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
32:33	5.832e+03	5.392e+03	1.08	y	1.122e+04	0.51944
33:23	2.448e+03	1.832e+03	1.34	y	4.280e+03	0.19808

Totals class: HpCDD EMPC

Entry #: 25

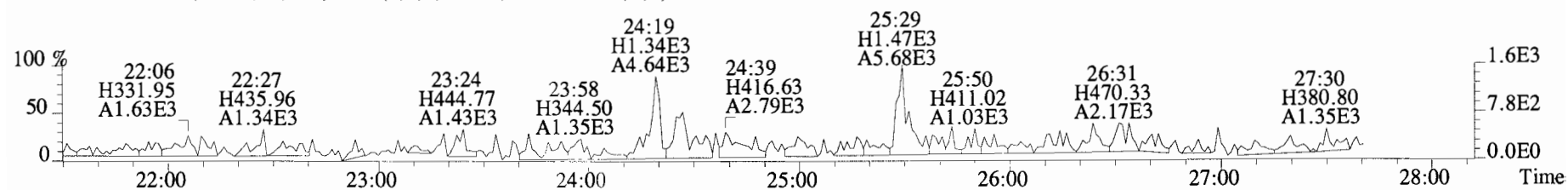
Run: 12 File: 191101D1 S: 8 I: 1 F: 4
Acquired: 1-NOV-19 19:34:14 Processed: 4-NOV-19 10:36:46

Total Concentration: 1.6996

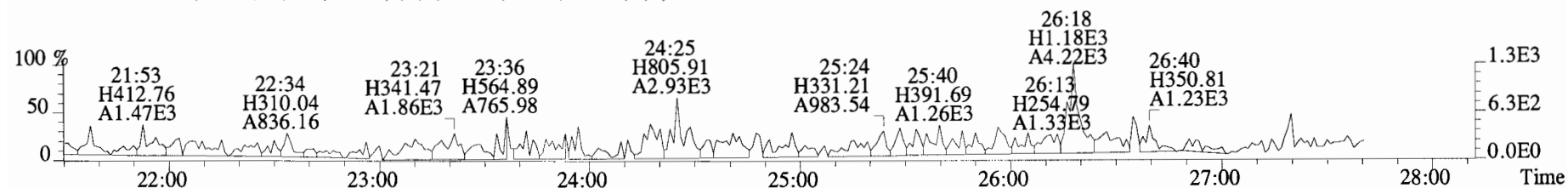
Unnamed Concentration: 1.067

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Resp Concentration	Name
37:06	9.545e+03	9.880e+03	0.97 y	1.943e+04	1.0669	
37:56	5.872e+03	5.648e+03	1.04 y	1.152e+04	0.63273	1,2,3,4,6,7,8-HpCDD

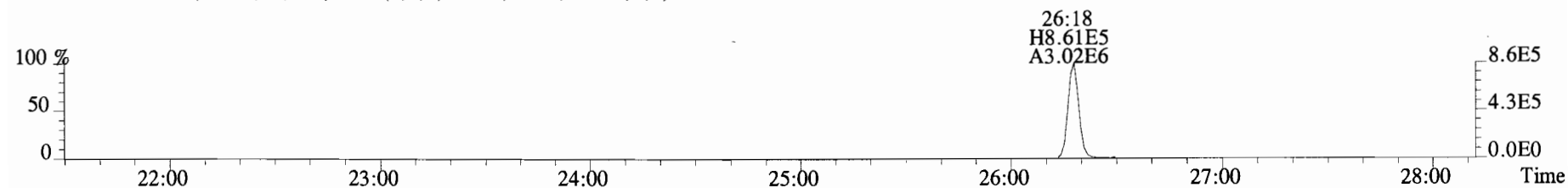
File:191101D1 #1-492 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



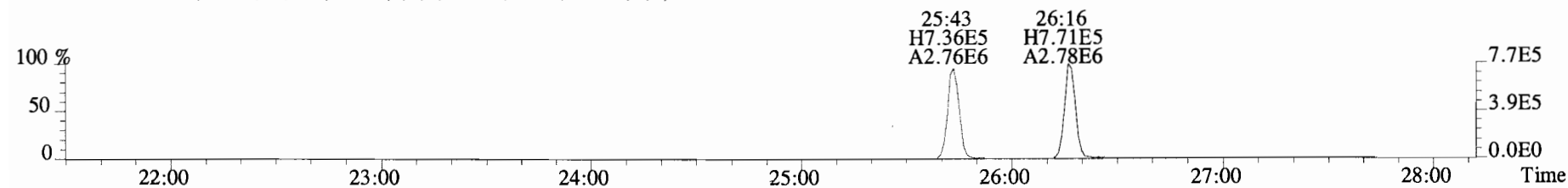
321.8936 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



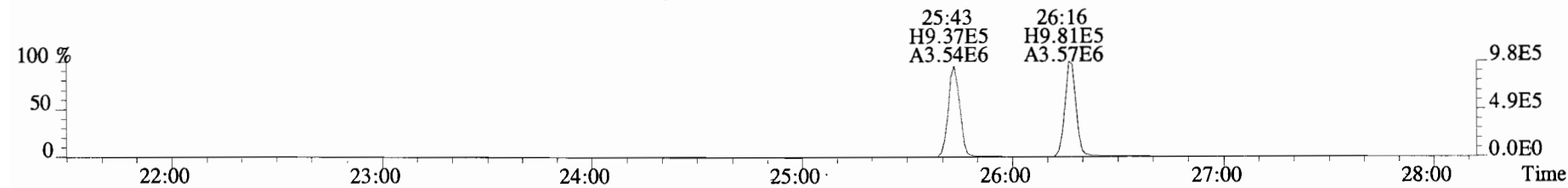
327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



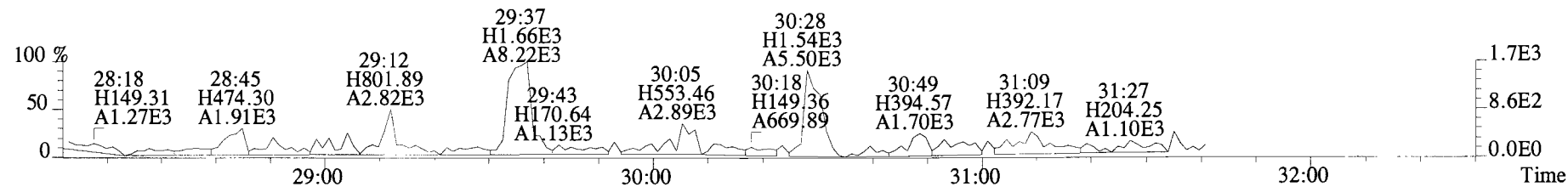
331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



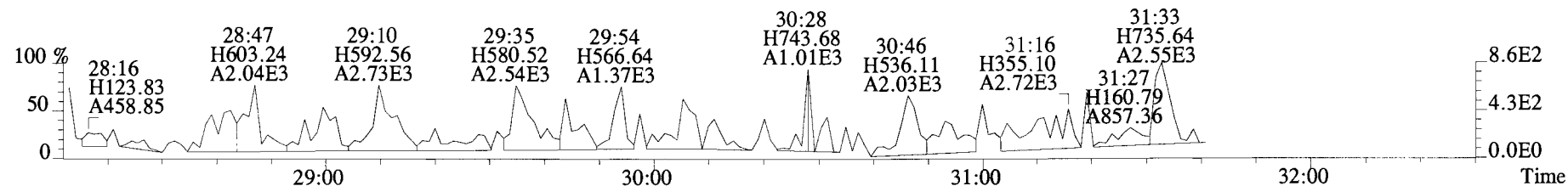
333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



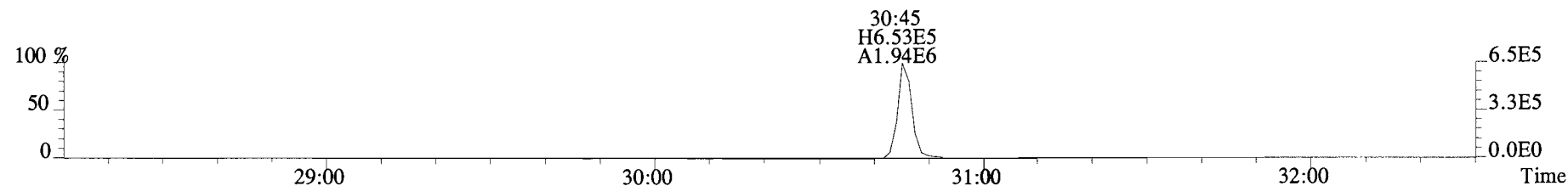
File:191101D1 #1-211 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Viata Analytical Laboratory_VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
 353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



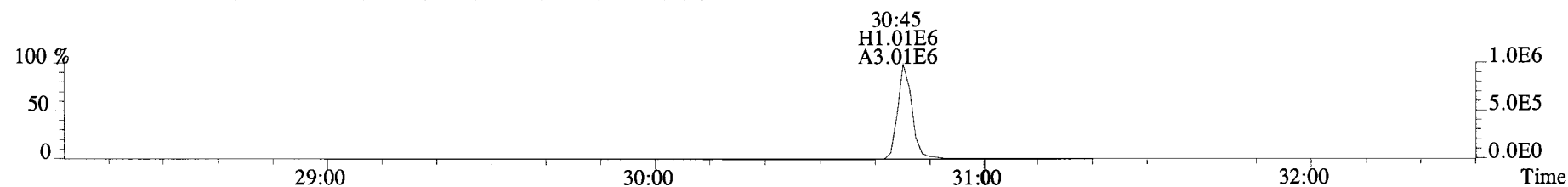
355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



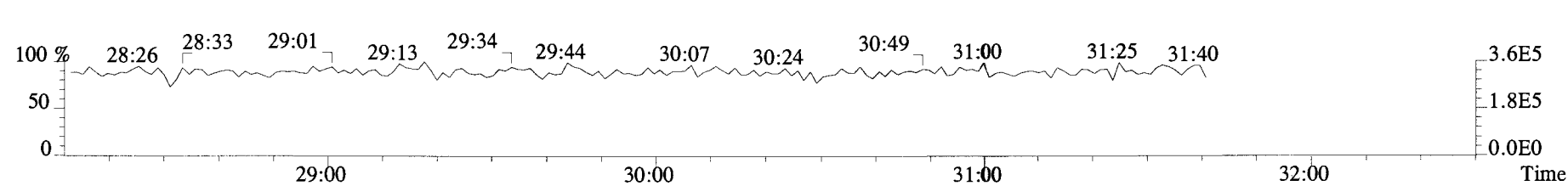
365.8978 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



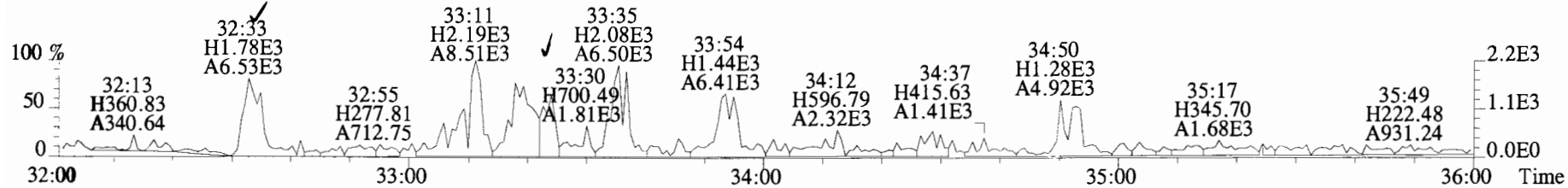
367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



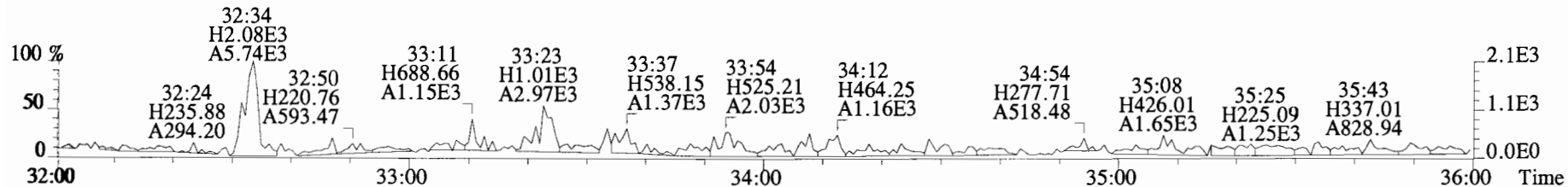
366.9792 S:8 F:2



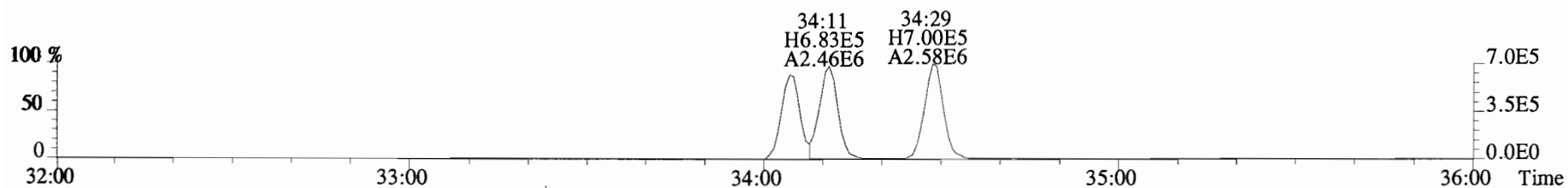
File:191101D1 #1-384 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
 389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



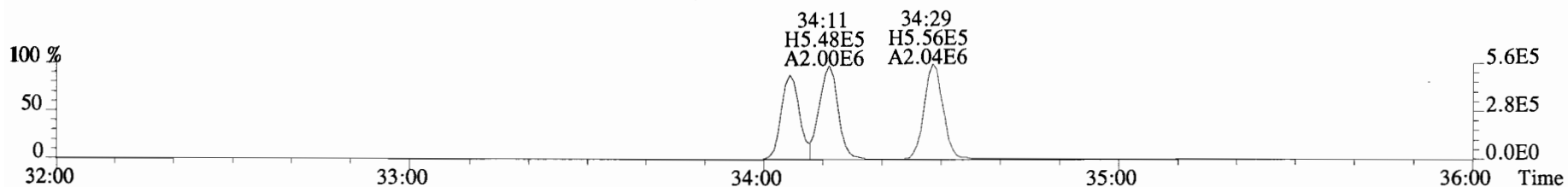
391.8127 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



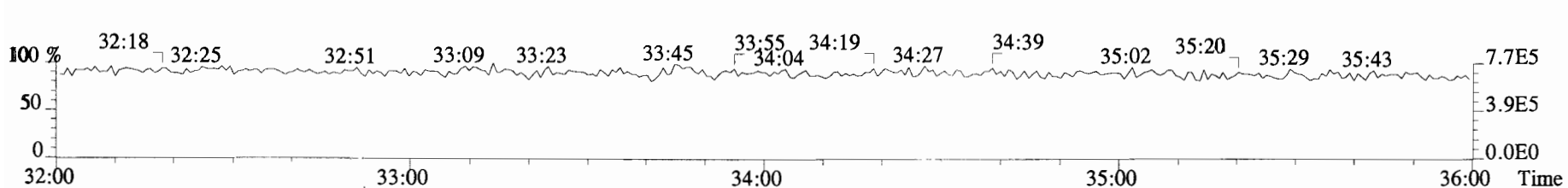
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



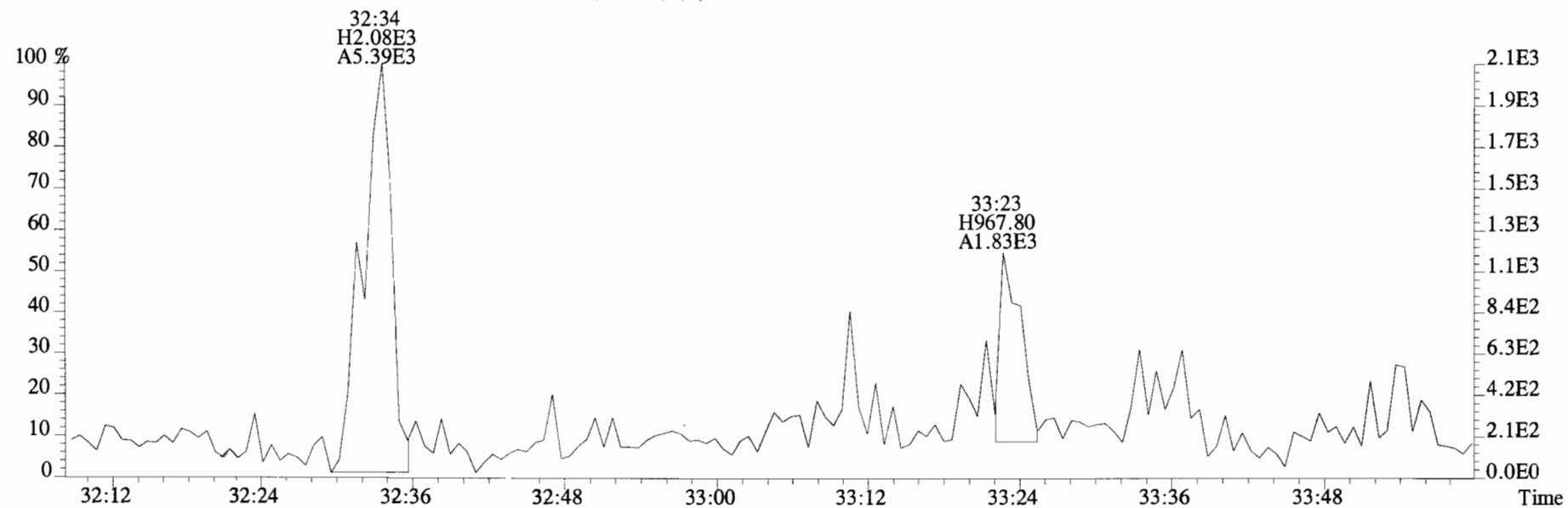
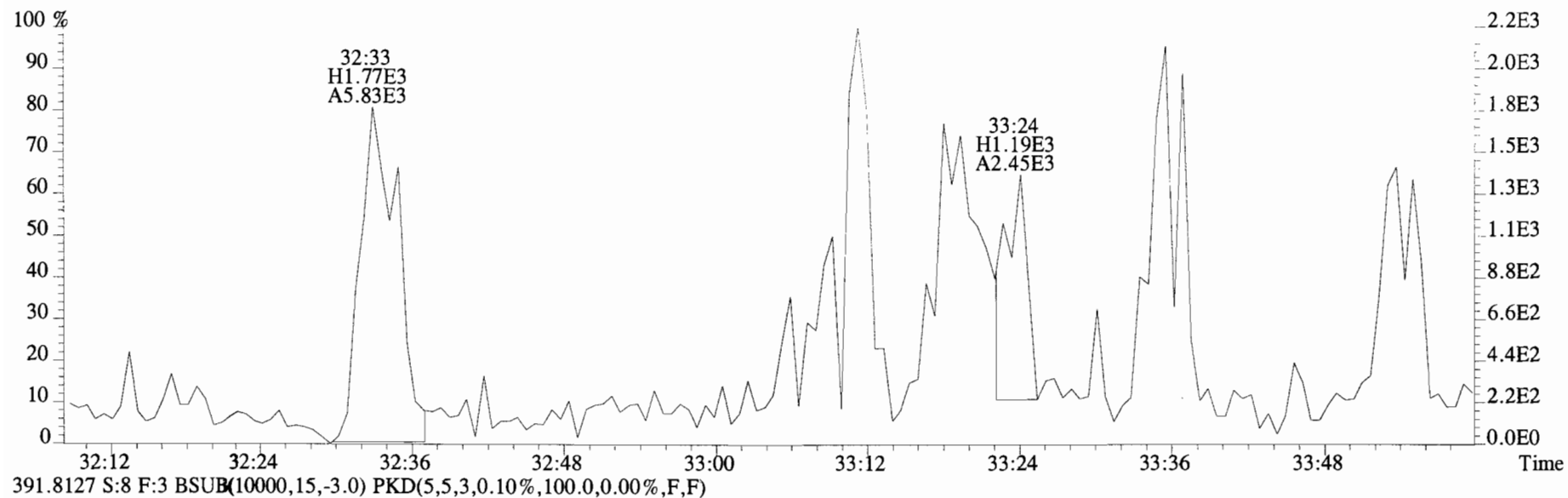
403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



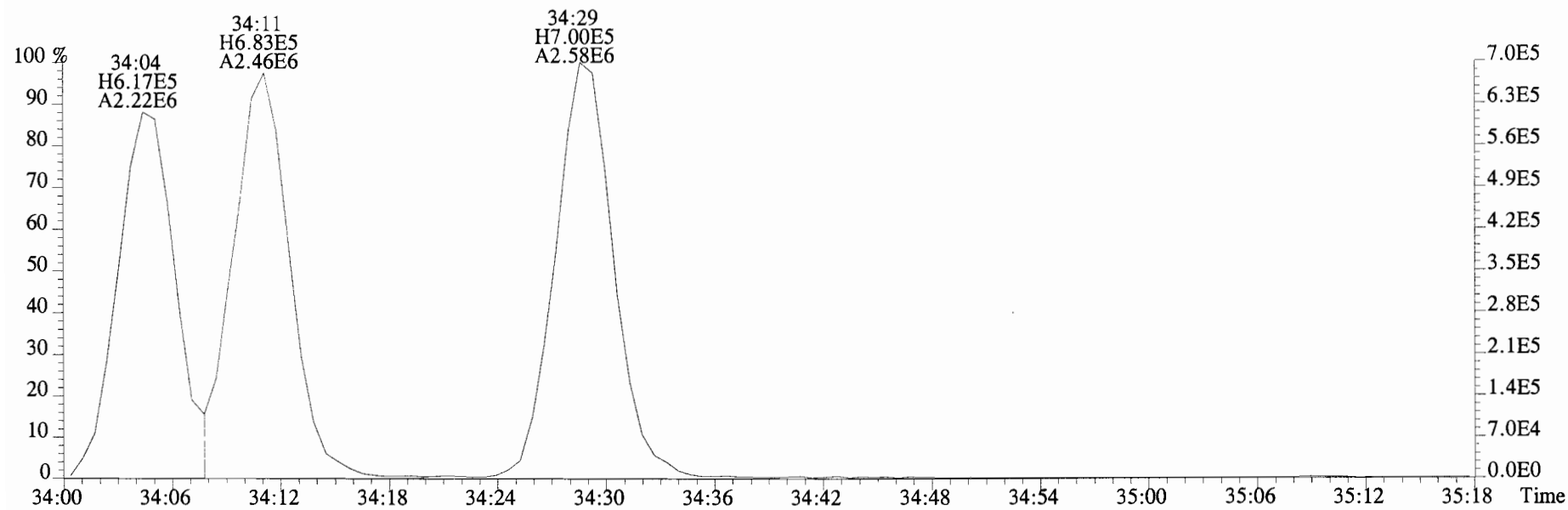
392.9760 S:8 F:3



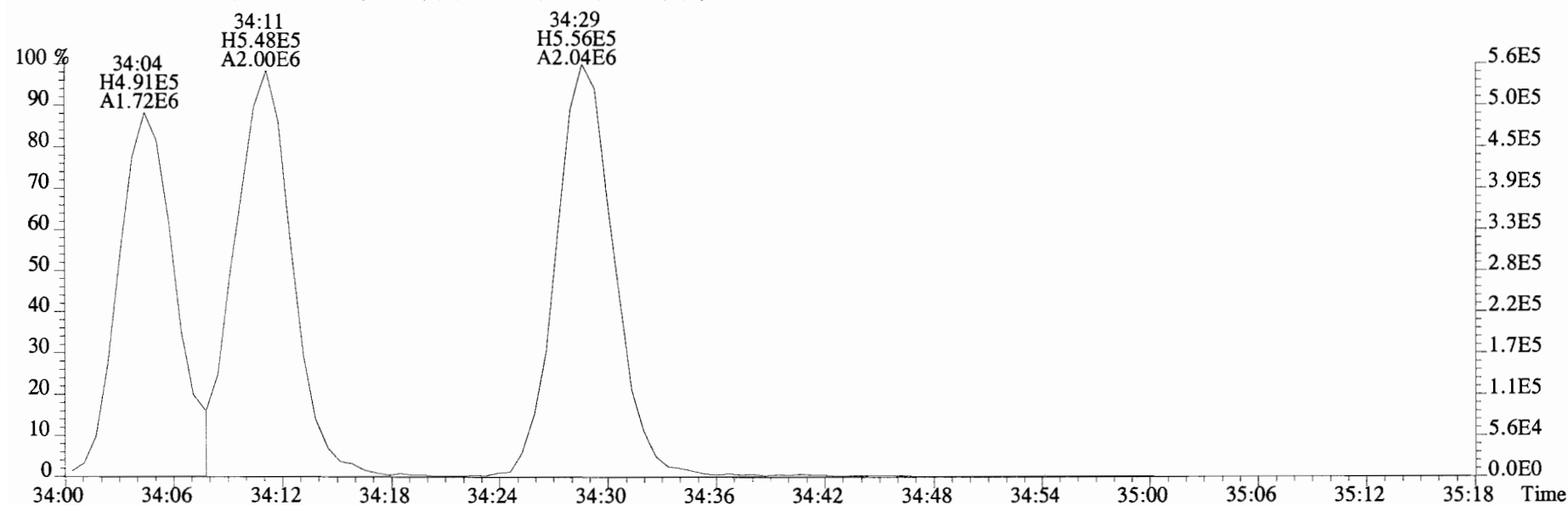
File:191101D1 #1-384 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata Analytical Laboratory VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



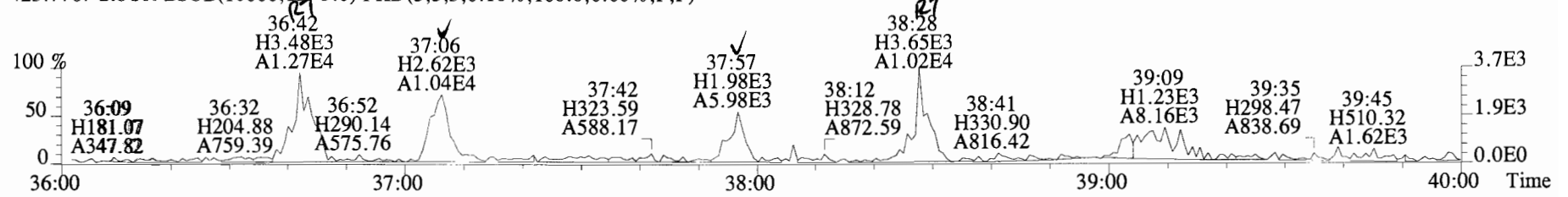
File:191101D1 #1-384 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata Analytical Laboratory VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
401.8559 S:8 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



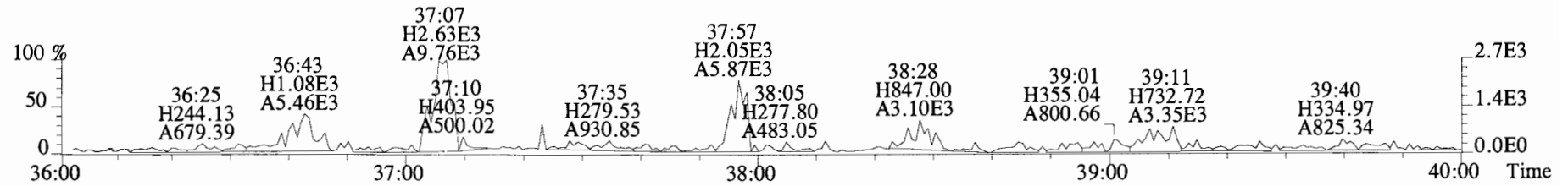
403.8530 S:8 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



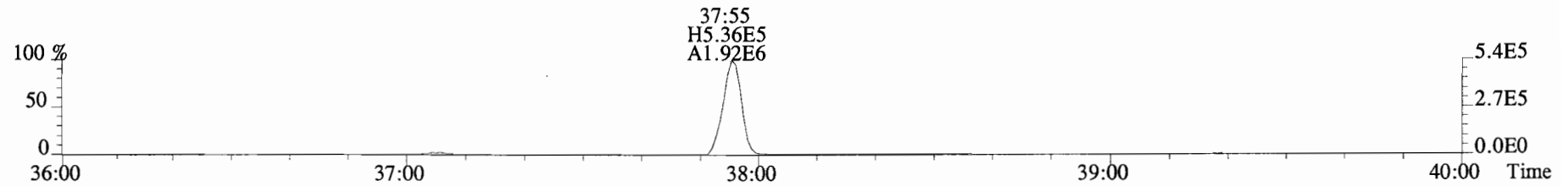
File:191101D1 #1-356 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata Analytical Laboratory VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
423.7767 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



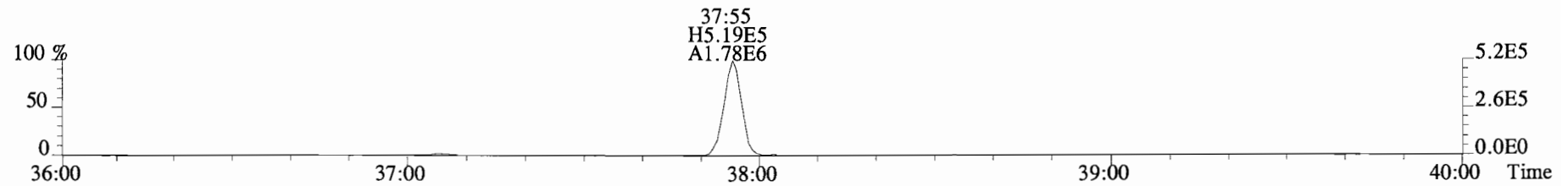
425.7737 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



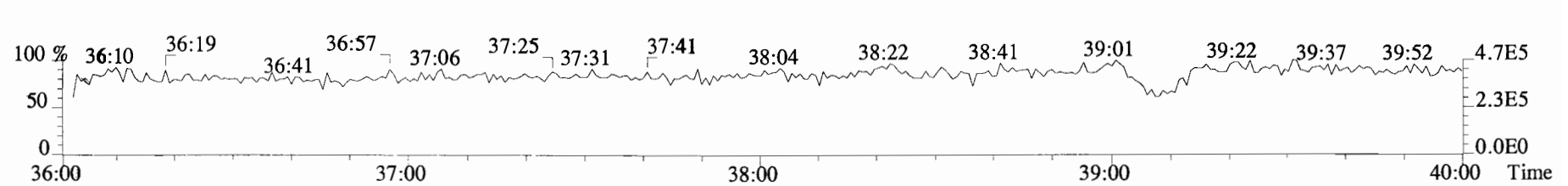
435.8169 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



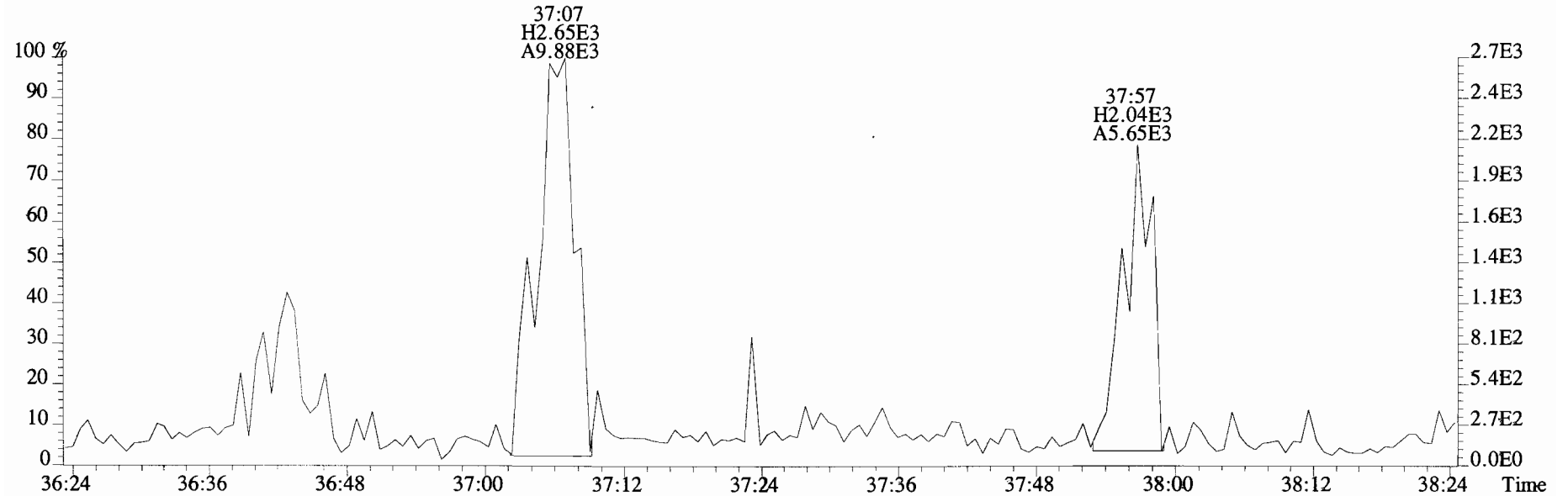
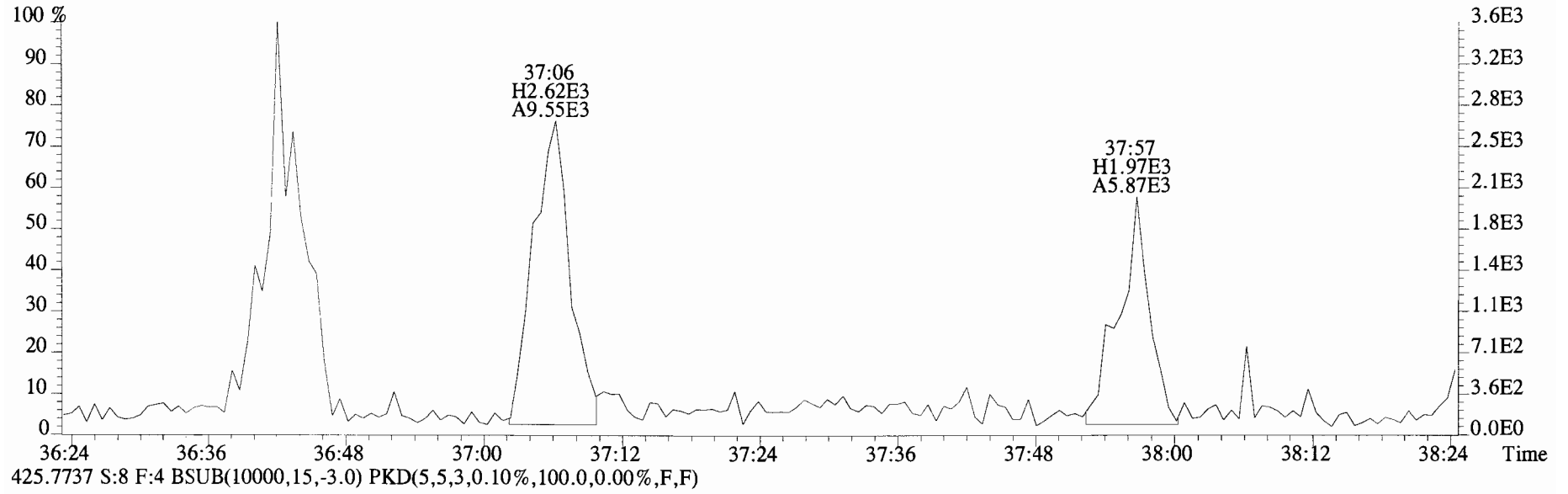
437.8140 S:8 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



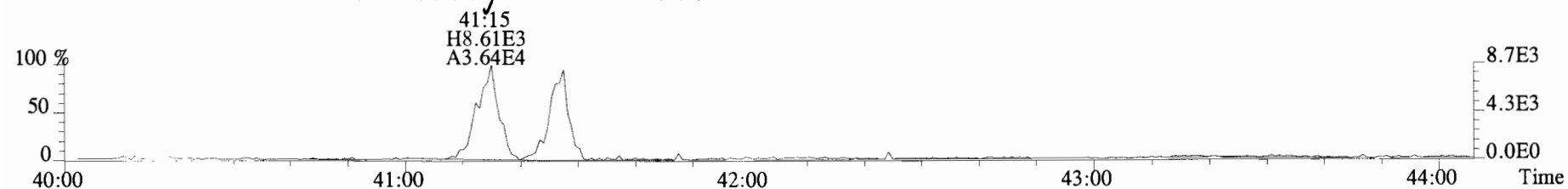
454.9728 S:8 F:4



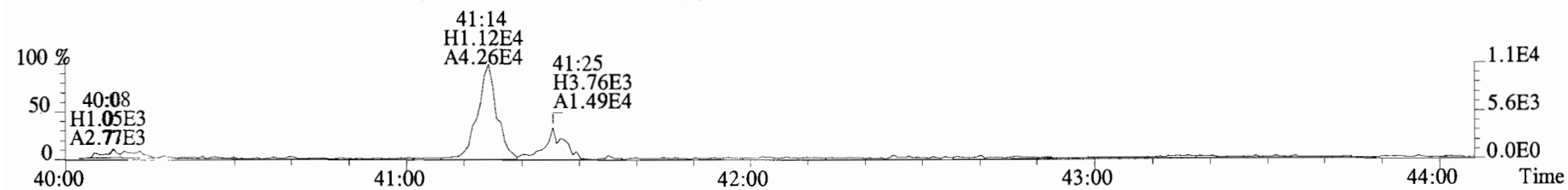
File:191101D1 #1-356 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata Analytical Laboratory VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



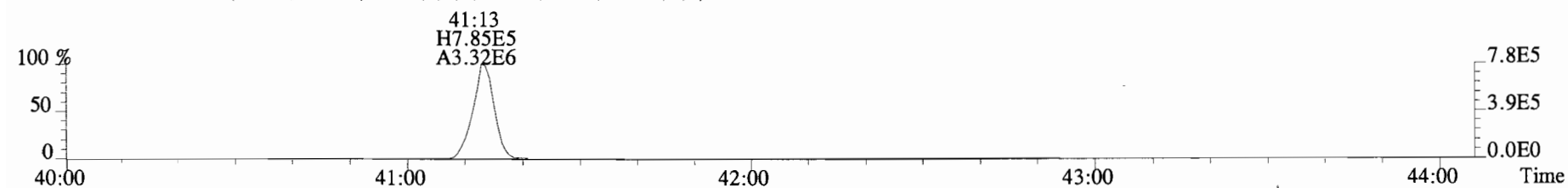
File:191101D1 #1-431 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata Analytical Laboratory VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



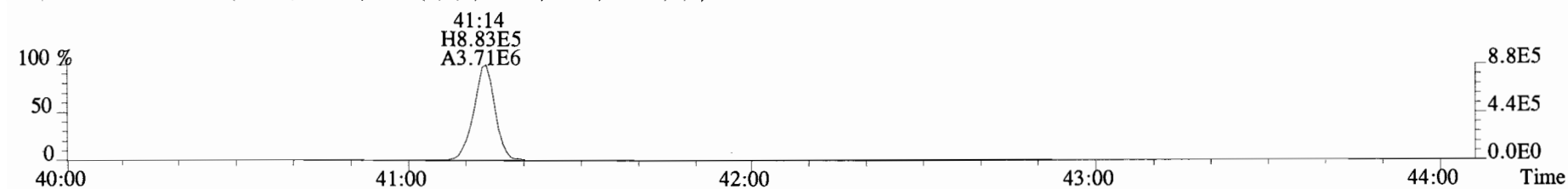
459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



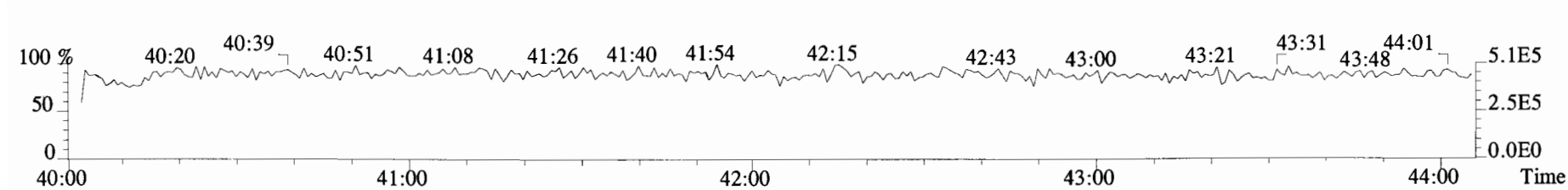
469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



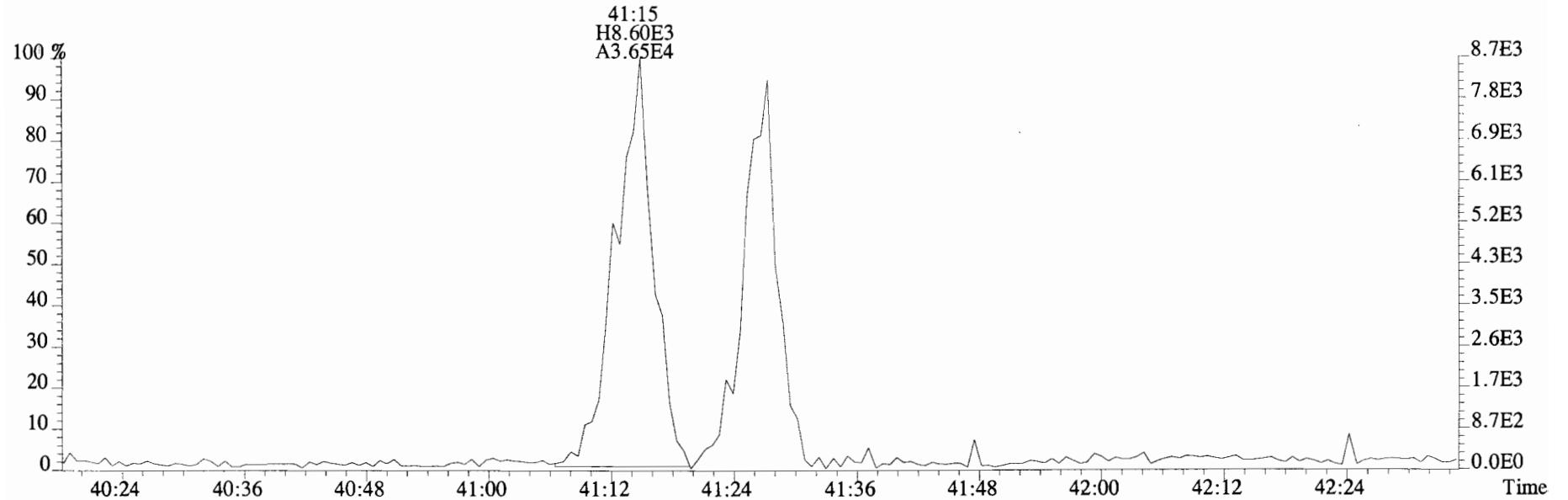
471.7750 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



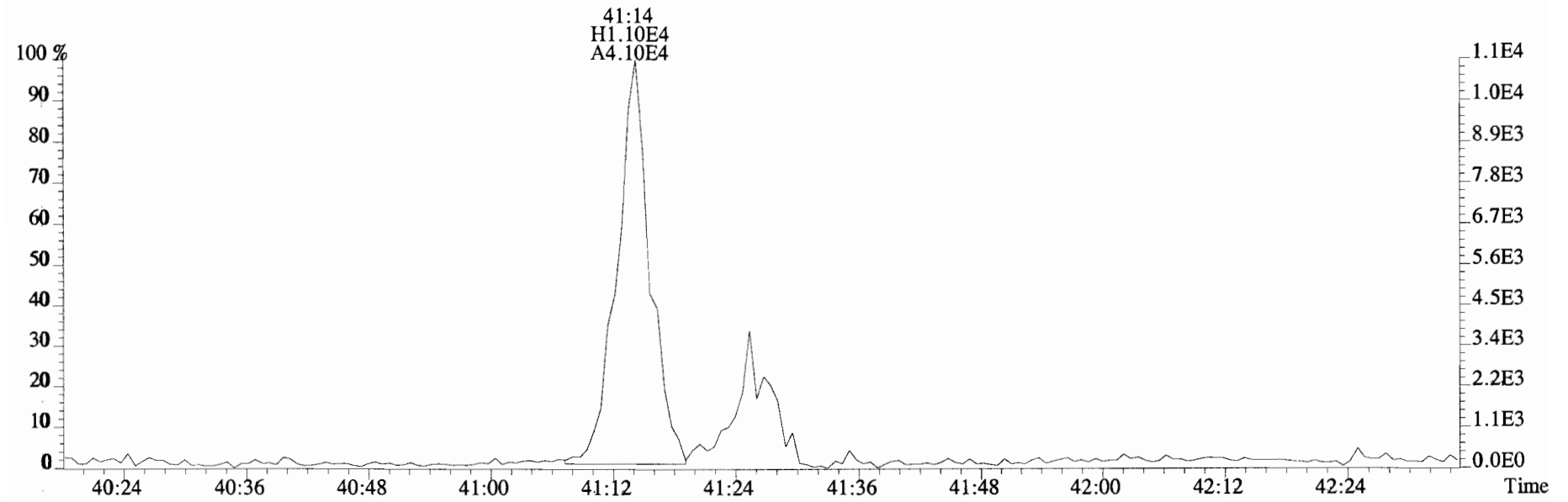
454.9728 S:8 F:5



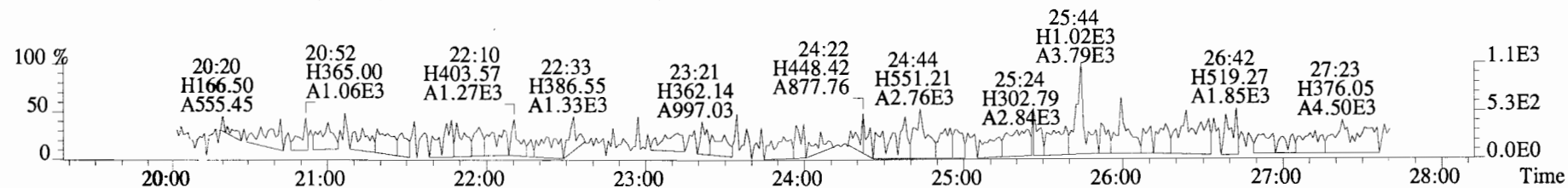
File:191101D1 #1-431 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata Analytical Laboratory VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



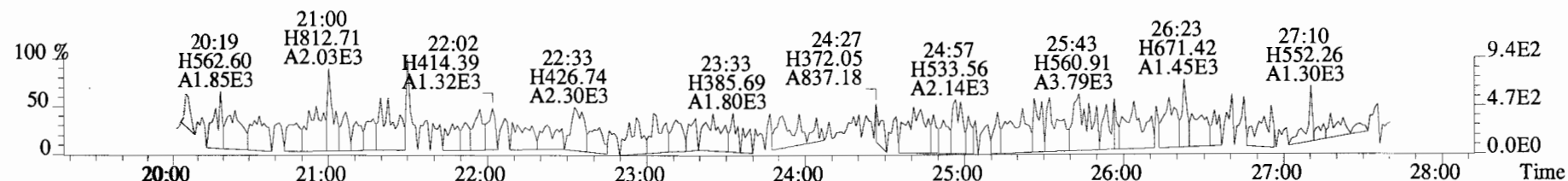
459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



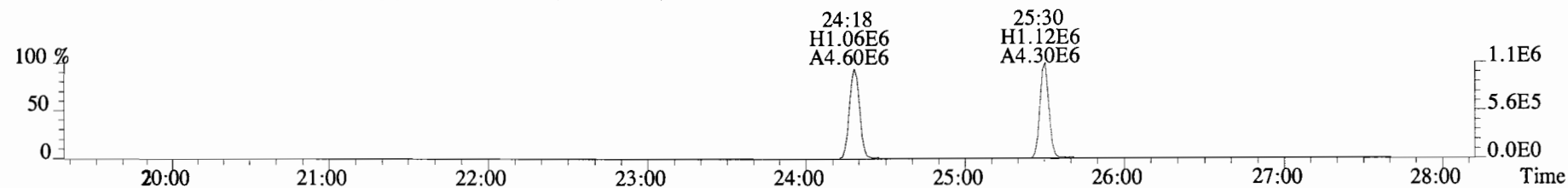
File:191101D1 #1-492 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



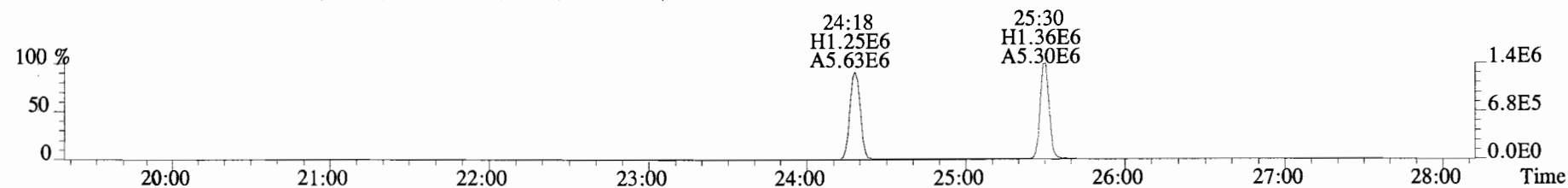
305.8987 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



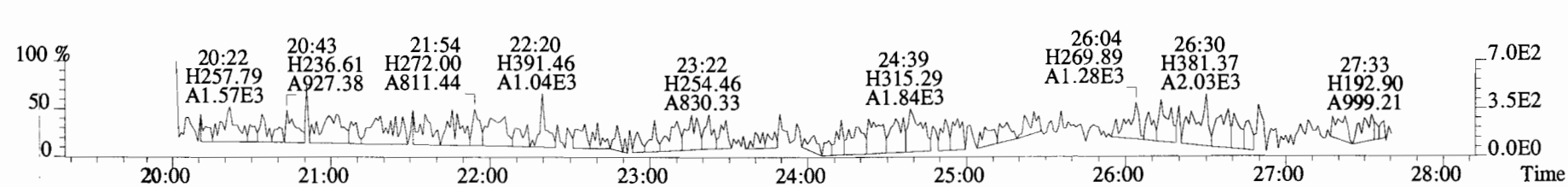
315.9419 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



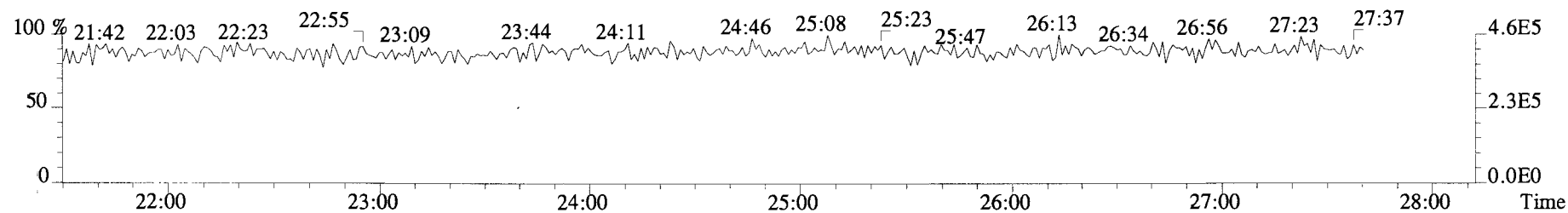
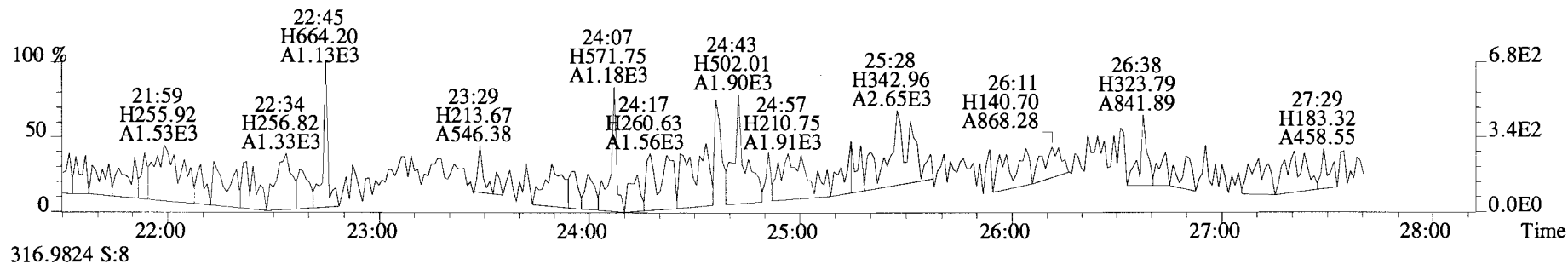
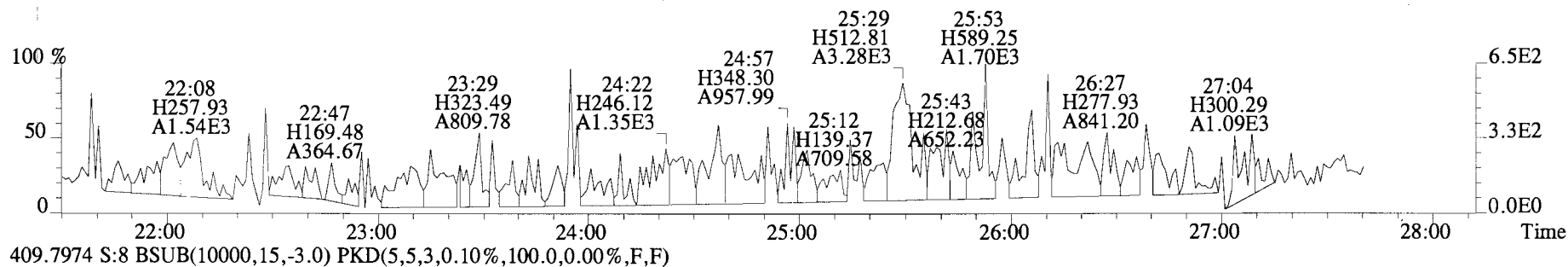
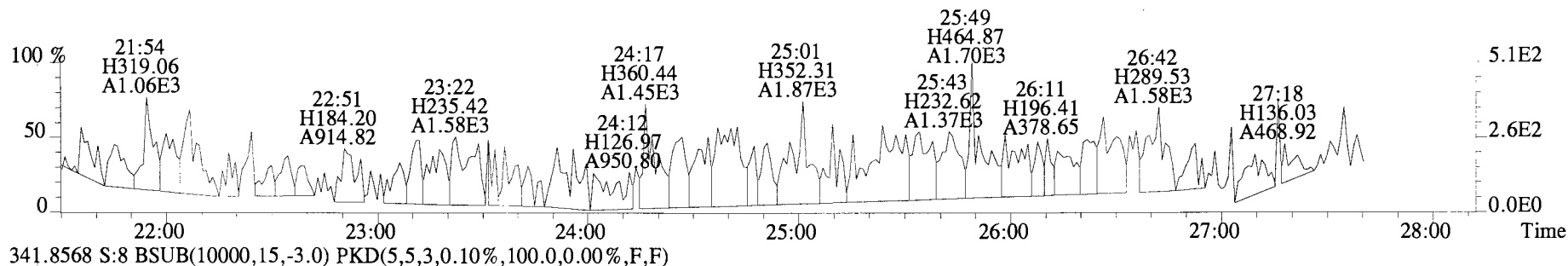
317.9389 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



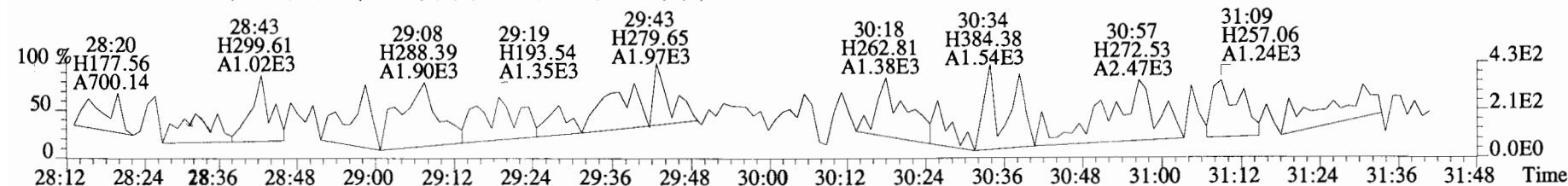
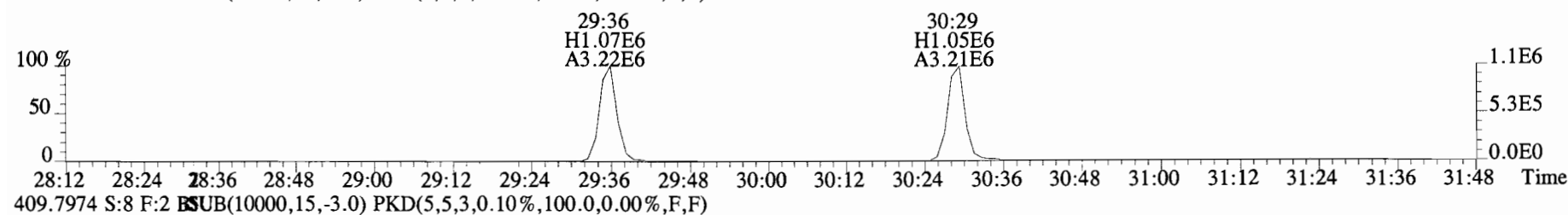
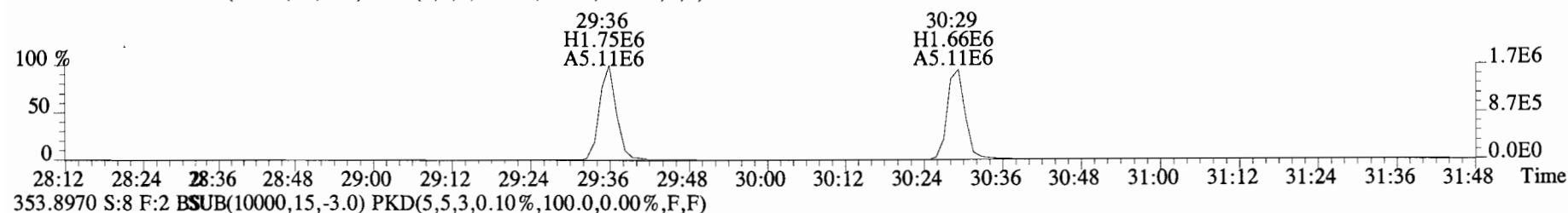
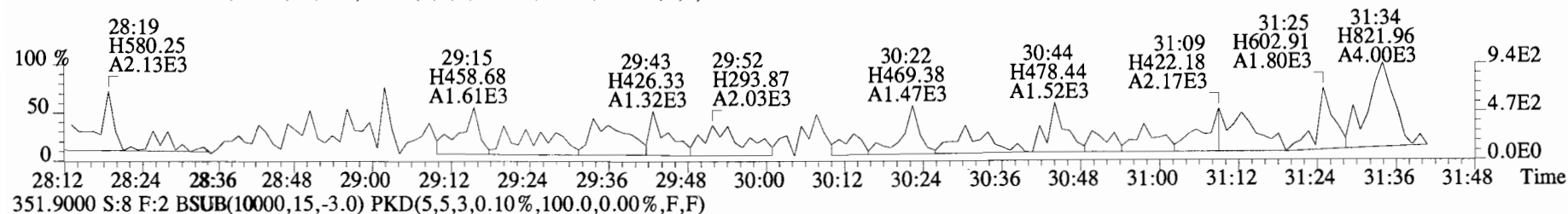
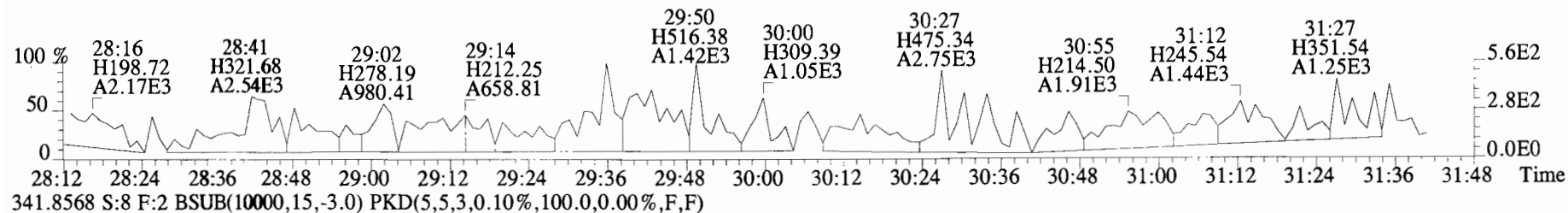
375.8364 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



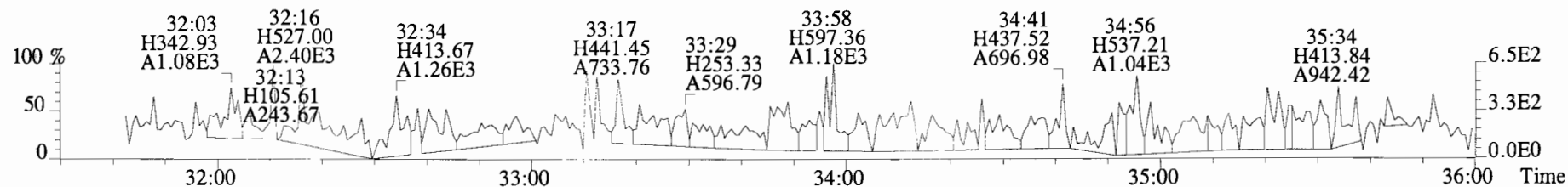
File:191101D1 #1-492 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata Analytical Laboratory VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



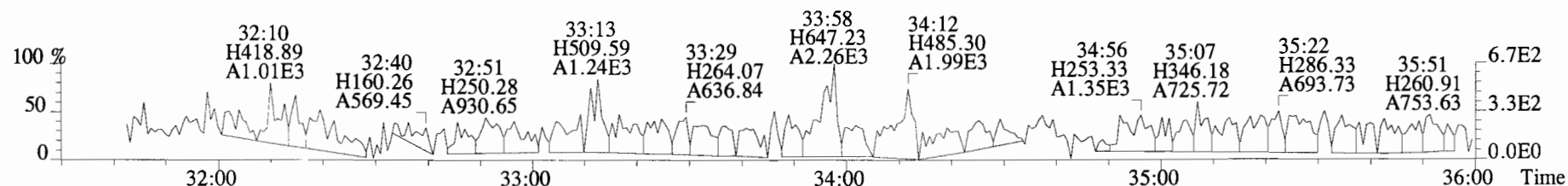
File:191101D1 #1-211 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
 339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



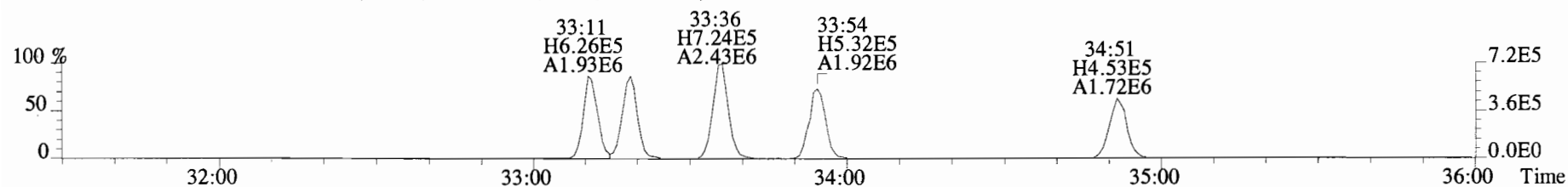
File:191101D1 #1-384 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



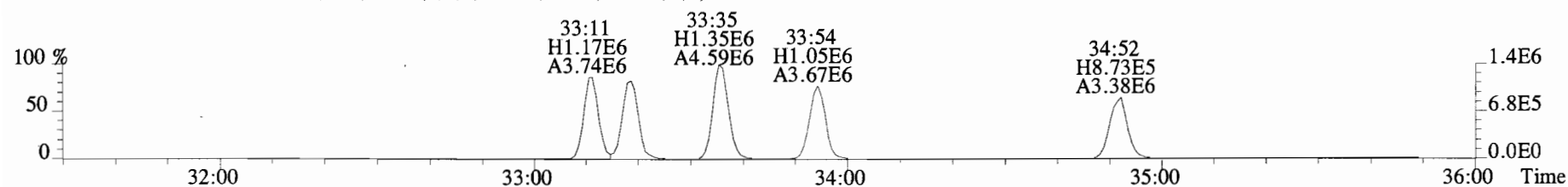
375.8178 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



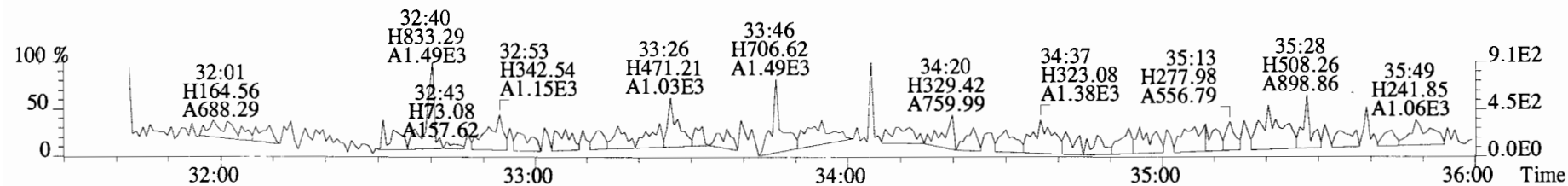
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



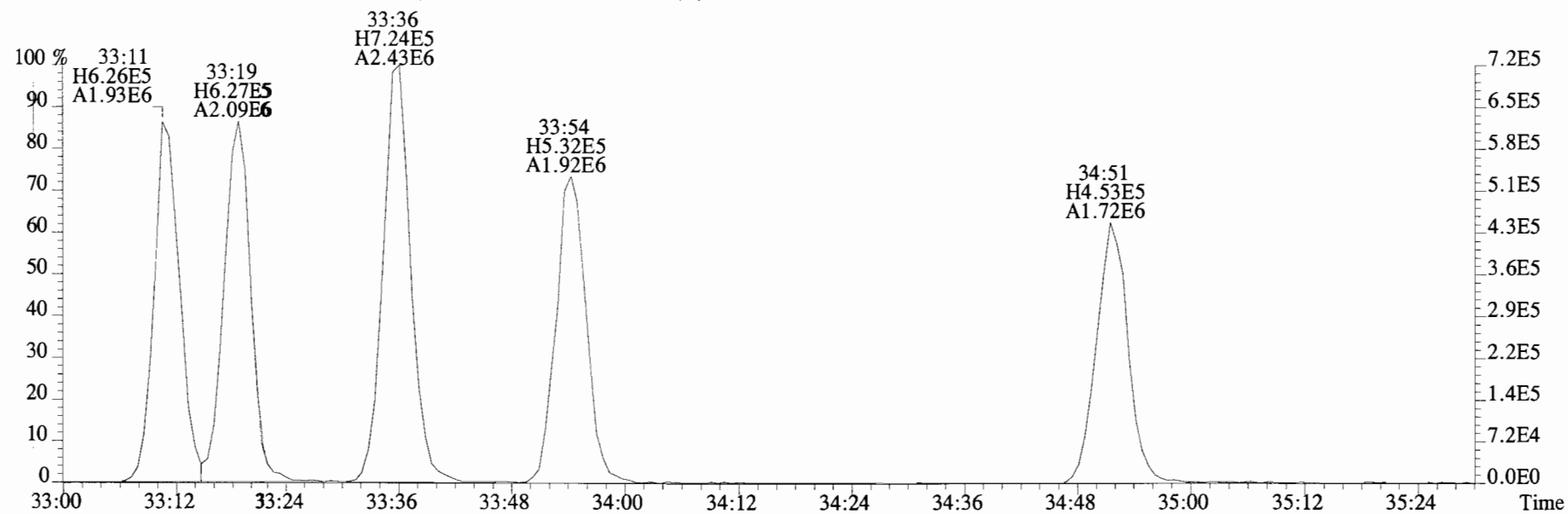
385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



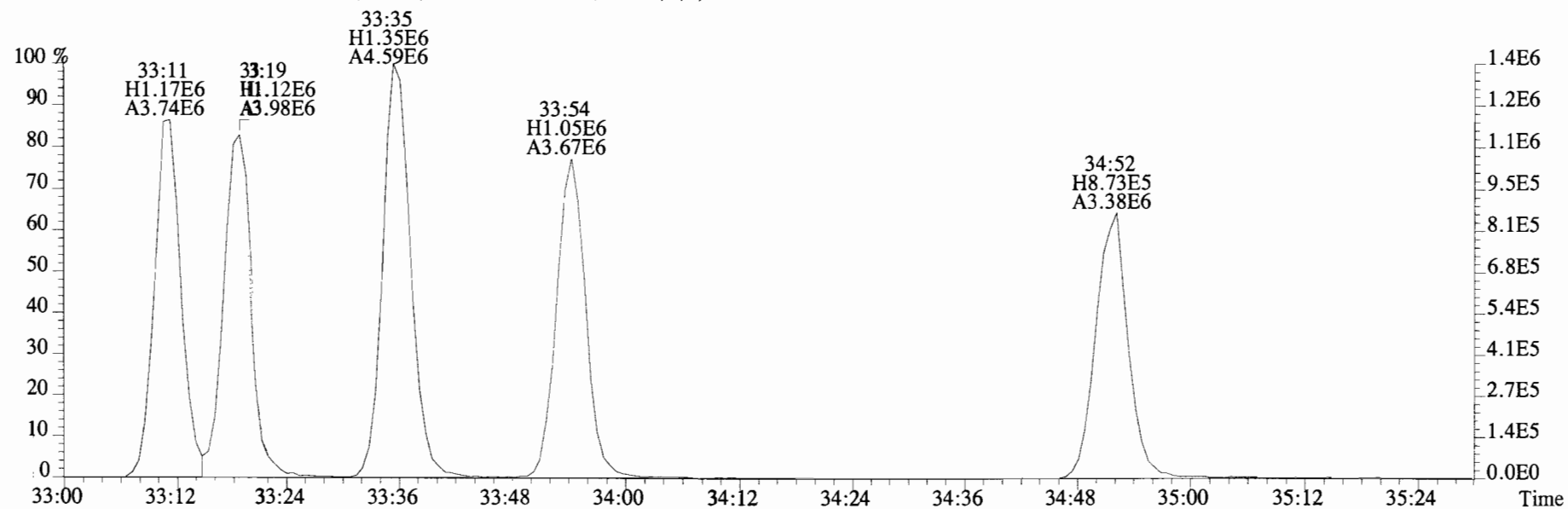
445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



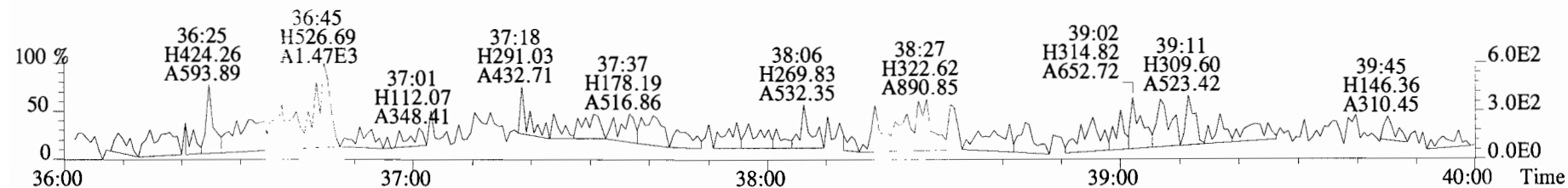
File:191101D1 #1-384 Acq: I-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Viata Analytical Laboratory VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
 383.8639 S:8 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



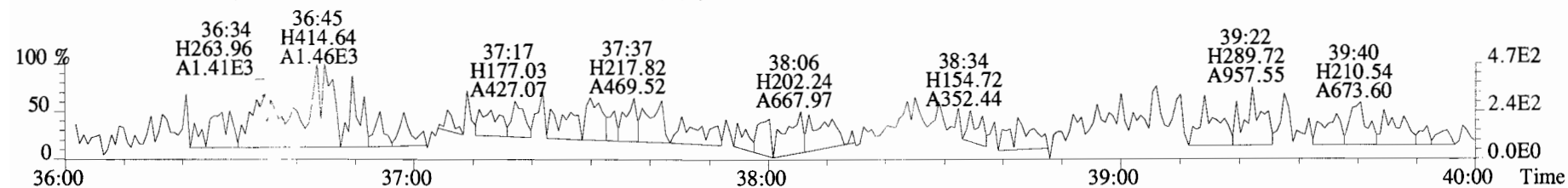
385.8610 S:8 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



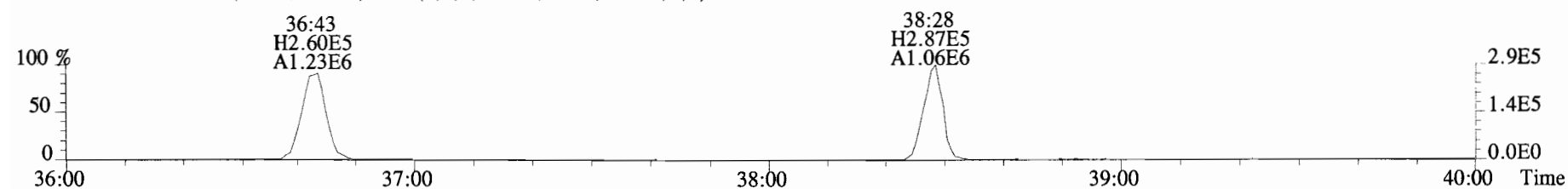
File:191101D1 #1-356 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Viata Analytical Laboratory VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
 407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



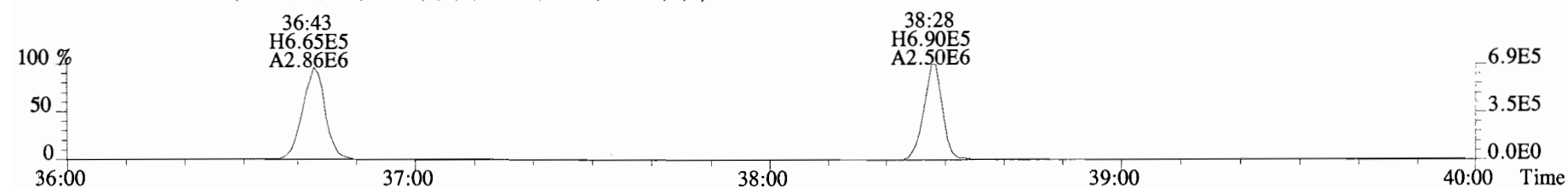
409.7788 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



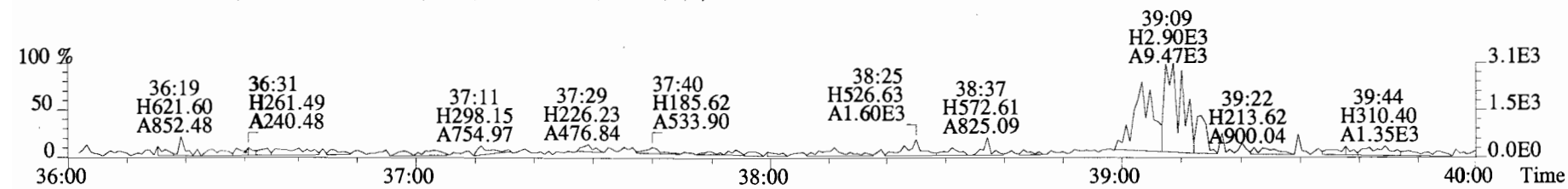
417.8253 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



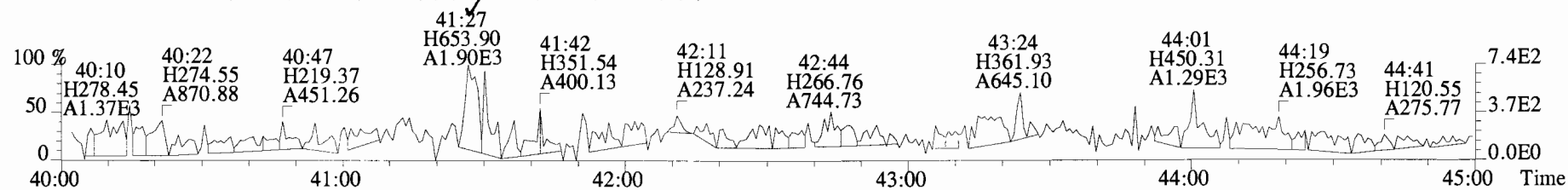
419.8220 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



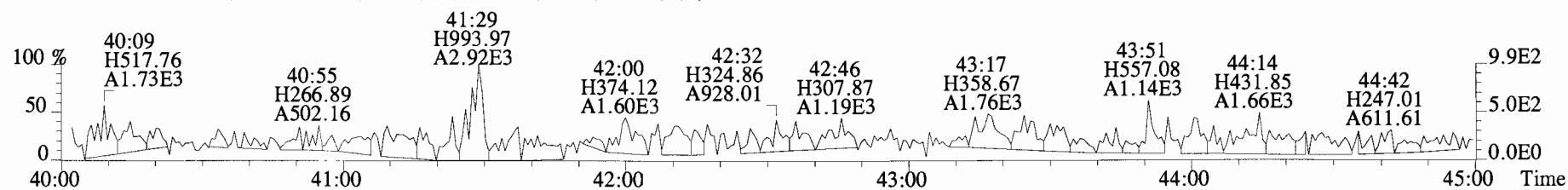
479.7165 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



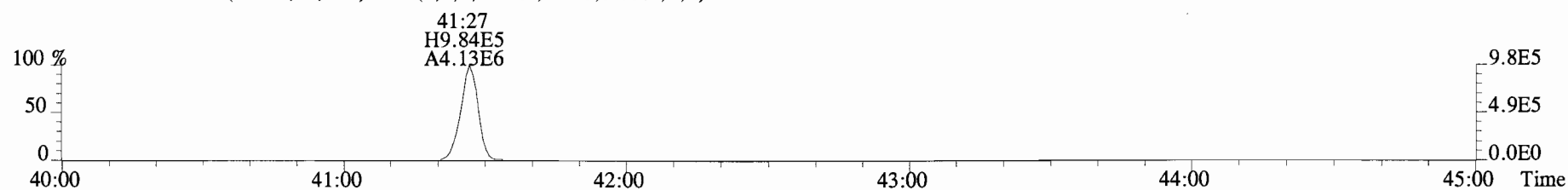
File:191101D1 #1-431 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata Analytical Laboratory VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 Exp:OCDD_DB5
441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



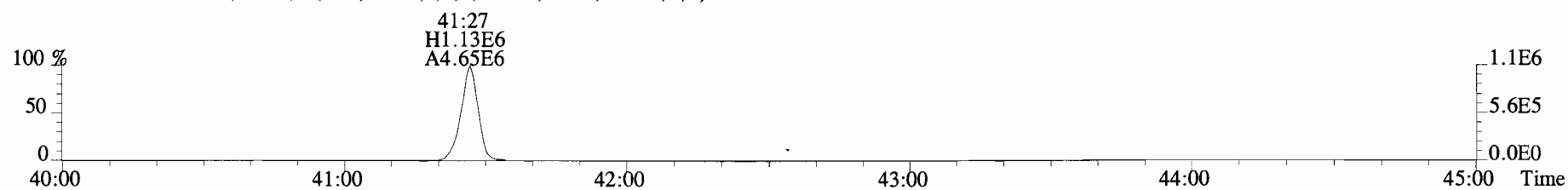
443.7398 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



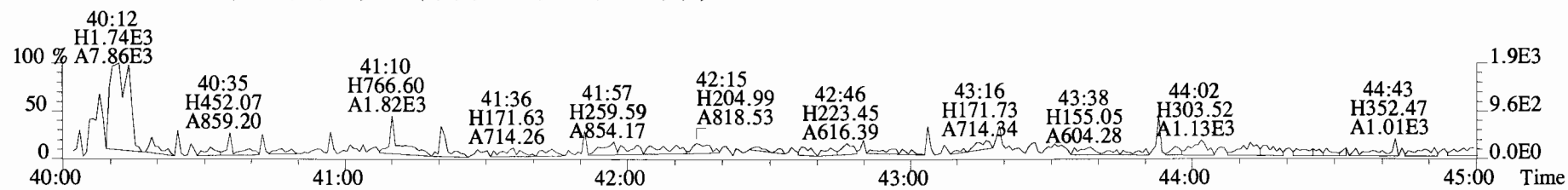
453.7831 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



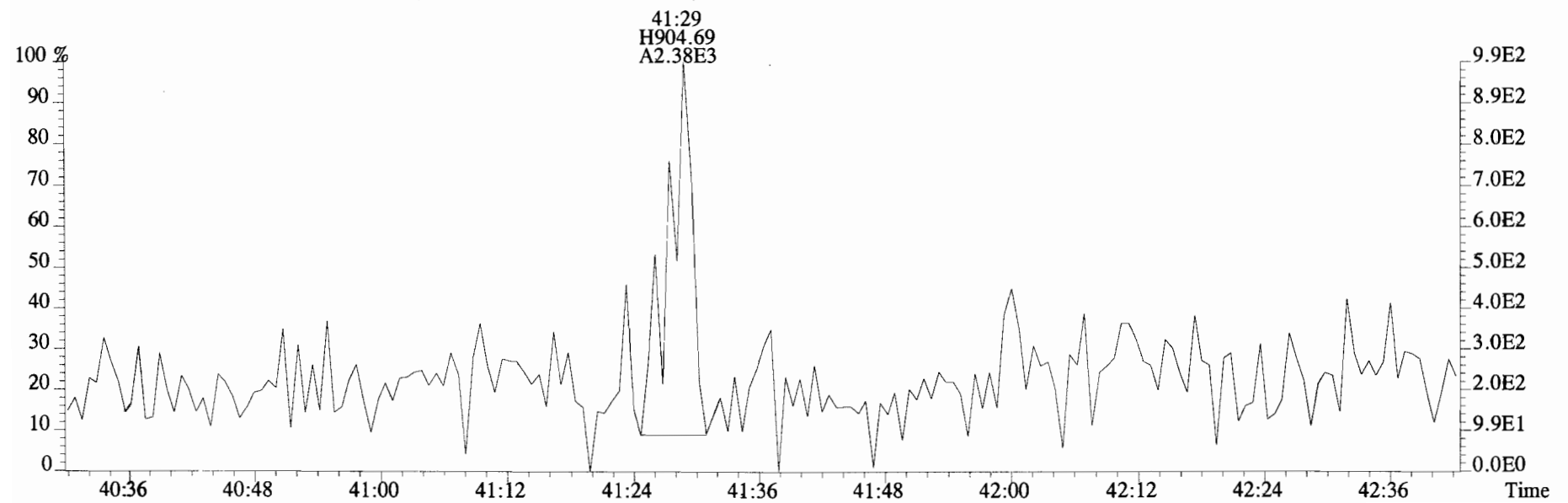
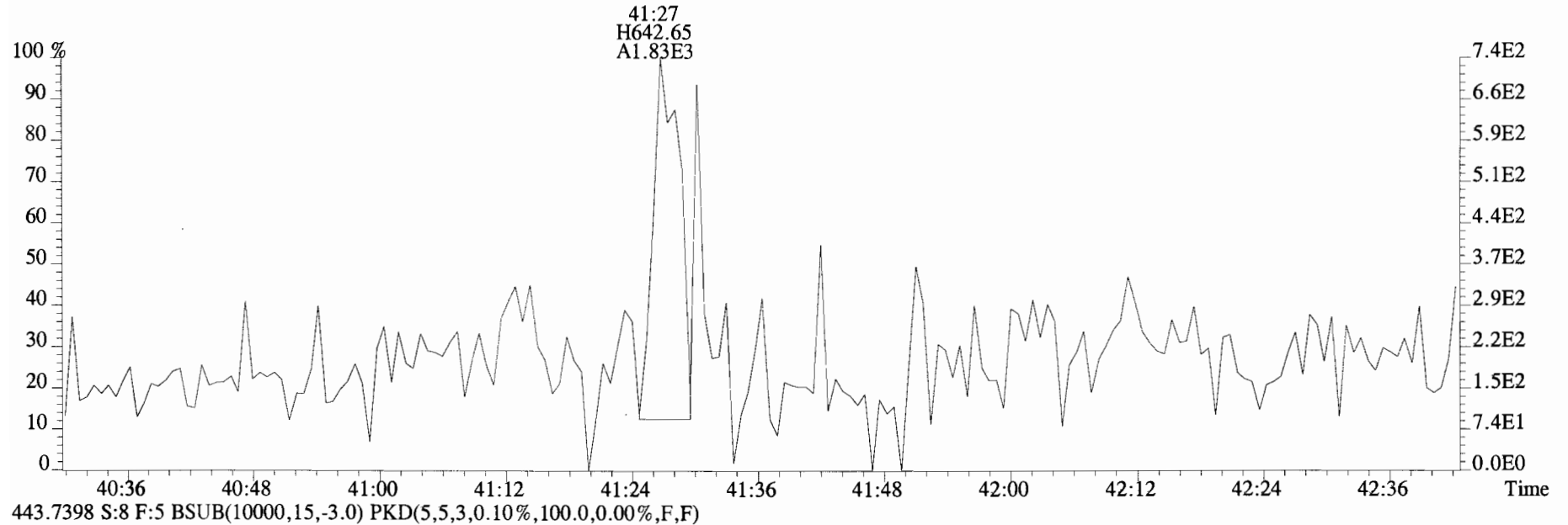
455.7801 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191101D1 #1-431 Acq: 1-NOV-2019 19:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Viata Analytical Laboratory VG7 Text:1903546-09RE1 PDI-1028SC-A-13-14.2-191003 13.47 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)



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	NotF7	*		178	2.5	0.140	Total Tetra-Dioxins	*	*		178	0.140
1,2,3,7,8-PeCDD	*	* n	0.90	NotF7	*		196	2.5	0.139	Total Penta-Dioxins	*	*		196	0.139
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF7	*		189	2.5	0.189	Total Hexa-Dioxins	0.541	0.541		*	*
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotF7	*		189	2.5	0.194	Total Hepta-Dioxins	3.19	3.19		*	*
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotF7	*		189	2.5	0.201	Total Tetra-Furans	*	*		154	0.0915
1,2,3,4,6,7,8-HpCDD	2.97e+04	1.00 y	0.98	37:55	1.5495		*	2.5	*	Total Penta-Furans	0.0000	0.0000		178	0.122
OCDD	1.39e+05	0.86 y	0.96	41:16	8.5950		*	2.5	*	Total Hexa-Furans	0.244	0.244		*	*
										Total Hepta-Furans	*	0.128		*	*
2,3,7,8-TCDF	*	* n	0.95	NotF7	*		154	2.5	0.0915						
1,2,3,7,8-PeCDF	*	* n	0.96	NotF7	*		178	2.5	0.122						
2,3,4,7,8-PeCDF	*	* n	1.01	NotF7	*		178	2.5	0.121						
1,2,3,4,7,8-HxCDF	6.73e+03	1.28 y	1.18	33:10	0.24396		*	2.5	*						
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotF7	*		129	2.5	0.0577						
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotF7	*		129	2.5	0.0650						
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotF7	*		129	2.5	0.0804						
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	NotF7	*		168	2.5	0.112						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotF7	*		168	2.5	0.0998						
OCDF	7.63e+03	1.12 n	0.95	41:29	0.37959		*	2.5	*						
										Rec	Qual				
IS	13C-2,3,7,8-TCDD	4.46e+06	0.78 y	1.10	26:14	152.31				76.2					
IS	13C-1,2,3,7,8-PeCDD	3.60e+06	0.63 y	0.88	30:43	152.68				76.4					
IS	13C-1,2,3,4,7,8-HxCDD	3.46e+06	1.24 y	0.64	34:03	167.33				83.7					
IS	13C-1,2,3,6,7,8-HxCDD	3.87e+06	1.26 y	0.86	34:09	140.37				70.2					
IS	13C-1,2,3,7,8,9-HxCDD	3.99e+06	1.23 y	0.81	34:27	153.57				76.8					
IS	13C-1,2,3,4,6,7,8-HpCDD	3.91e+06	1.06 y	0.65	37:55	185.42				92.8					
IS	13C-OCDD	6.75e+06	0.91 y	0.58	41:15	361.32				90.4					
IS	13C-2,3,7,8-TCDF	6.15e+06	0.80 y	1.03	25:27	137.02				68.6					
IS	13C-1,2,3,7,8-PeCDF	5.62e+06	1.61 y	0.85	29:33	151.71				75.9					
IS	13C-2,3,4,7,8-PeCDF	5.60e+06	1.59 y	0.85	30:27	152.40				76.2					
IS	13C-1,2,3,4,7,8-HxCDF	4.69e+06	0.51 y	0.83	33:09	175.00				87.6					
IS	13C-1,2,3,6,7,8-HxCDF	5.33e+06	0.53 y	1.03	33:17	159.84				80.0					
IS	13C-2,3,4,6,7,8-HxCDF	4.77e+06	0.51 y	0.95	33:53	155.32				77.7					
IS	13C-1,2,3,7,8,9-HxCDF	4.58e+06	0.53 y	0.83	34:50	171.79				85.9					
IS	13C-1,2,3,4,6,7,8-HpCDF	4.29e+06	0.44 y	0.76	36:41	175.89				88.0					
IS	13C-1,2,3,4,7,8,9-HpCDF	3.46e+06	0.43 y	0.58	38:28	184.61				92.4					
IS	13C-OCDF	8.49e+06	0.90 y	0.69	41:29	382.43				95.7					
C/Up	37C1-2,3,7,8-TCDD	2.67e+06		1.20	26:15	83.422				104					
RS/RT	13C-1,2,3,4-TCDD	5.35e+06	0.81 y	1.00	25:40	199.87									
RS	13C-1,2,3,4-TCDF	8.67e+06	0.80 y	1.00	24:15	199.87									
RS/RT	13C-1,2,3,4,6,9-HxCDF	6.44e+06	0.51 y	1.00	33:34	199.87									

Integrations Reviewed
 by DB by CT
 Analyst: DB Analyst: CT
 Date: 11/5/19 Date: 11/11/19

Totals class: HxCDD EMPC

Entry #: 23

Run: 15

File: 191024D2

S: 10 I: 1 F: 3

Acquired: 25-OCT-19 11:00:13

Processed: 28-OCT-19 09:58:51

Total Concentration: 0.54082

Unnamed Concentration: 0.541

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:30	5.211e+03	4.913e+03	1.06 y	1.012e+04	0.54082

Totals class: HpCDD EMPC

Entry #: 25

Run: 15 File: 191024D2 S: 10 I: 1 F: 4
Acquired: 25-OCT-19 11:00:13 Processed: 28-OCT-19 09:58:51

Total Concentration: 3.1913

Unnamed Concentration: 1.642

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Resp Concentration	Name
37:05	1.482e+04	1.660e+04	0.89 y	3.142e+04	1.6418	
37:55	1.479e+04	1.486e+04	1.00 y	2.965e+04	1.5495	1,2,3,4,6,7,8-HpCDD

Totals class: HxCDF EMPC

Entry #: 33

Run: 15 File: 191024D2 S: 10 I: 1 F: 3
Acquired: 25-OCT-19 11:00:13 Processed: 28-OCT-19 09:58:51

Total Concentration: 0.24396

Unnamed Concentration: *

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name	
33:10	3.784e+03	2.950e+03	1.28 y	6.734e+03	0.24396	1,2,3,4,7,8-HxCDF

Totals class: HpCDF EMPC

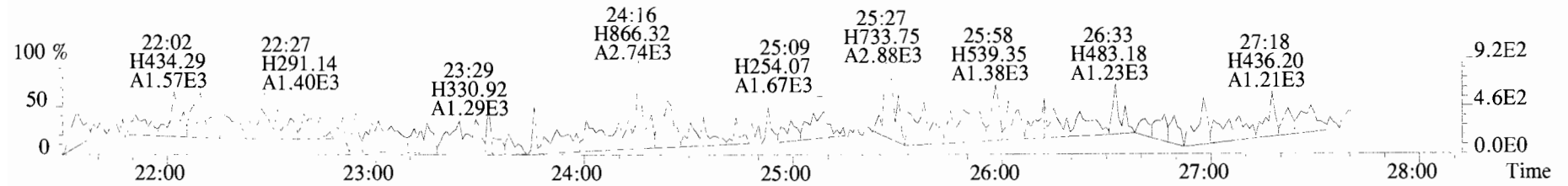
Entry #: 35

Run: 15 File: 191024D2 S: 10 I: 1 F: 4
Acquired: 25-OCT-19 11:00:13 Processed: 28-OCT-19 09:58:51

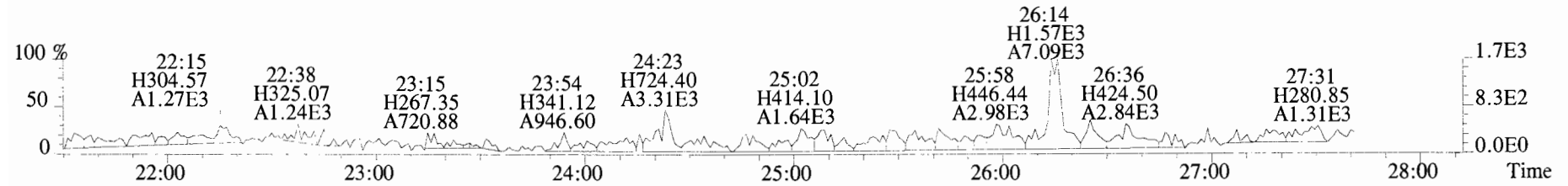
Total Concentration: 0.12794 Unnamed Concentration: 0.128

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:17	2.292e+03	1.451e+03	1.58 n	2.960e+03	0.12794

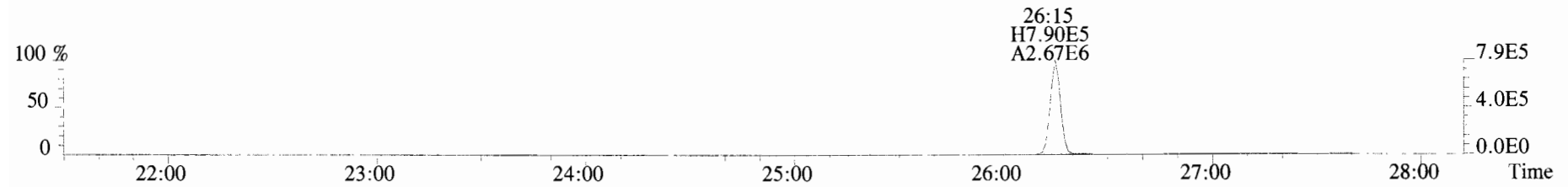
File:191024D2 #1-493 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory_VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
319.8965 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



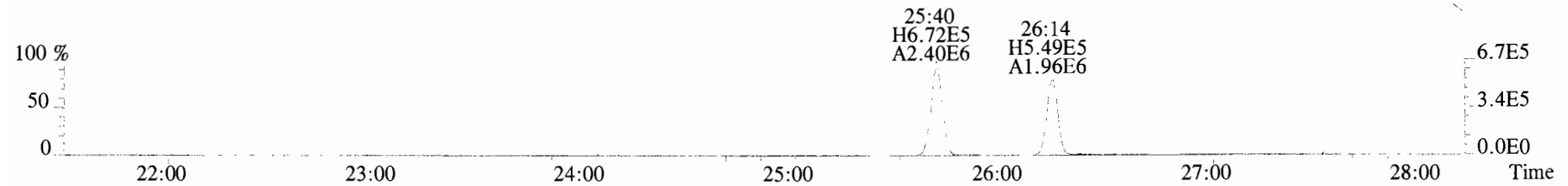
321.8936 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



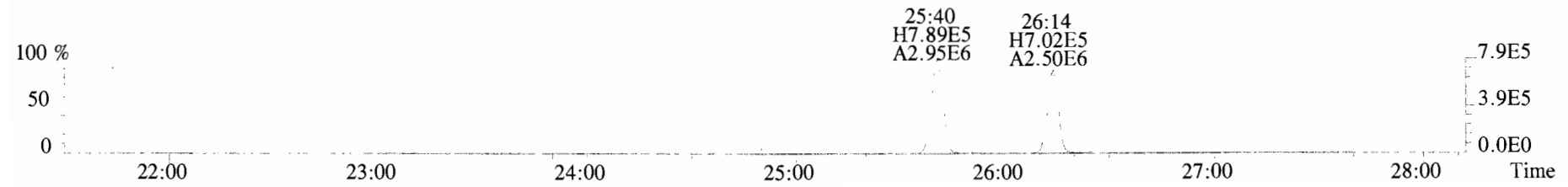
327.8847 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



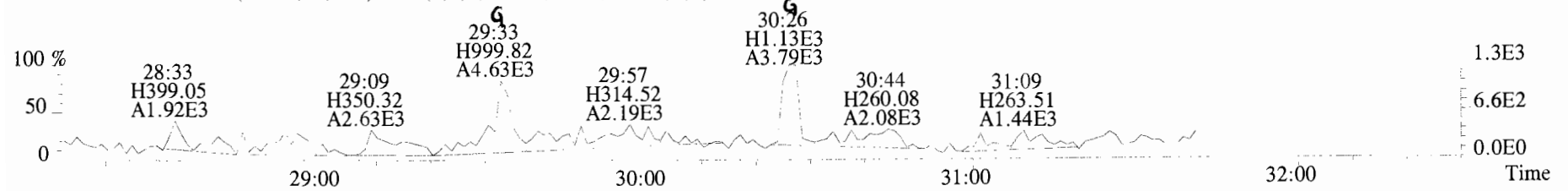
331.9368 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



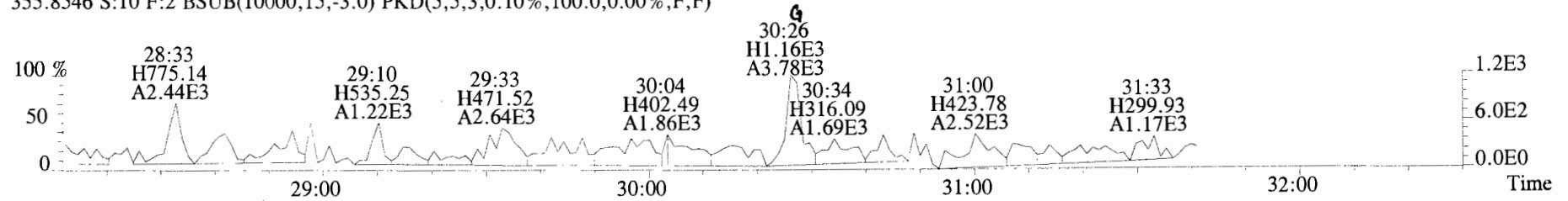
333.9339 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



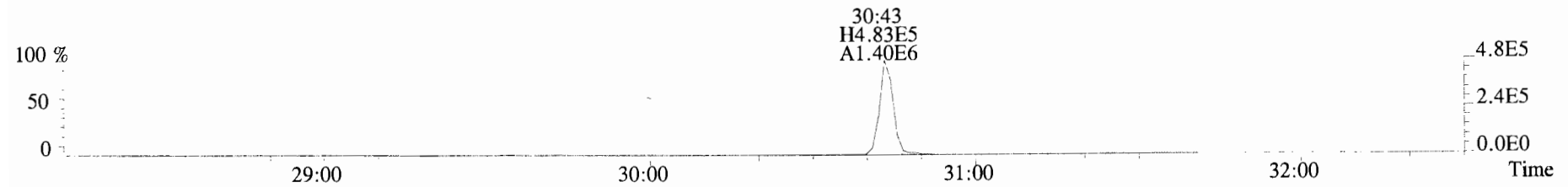
File:191024D2 #1-211 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory_VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
 353.8576 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



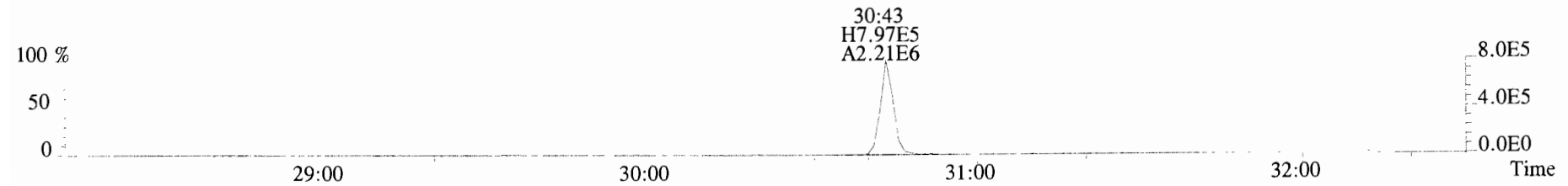
355.8546 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



365.8978 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



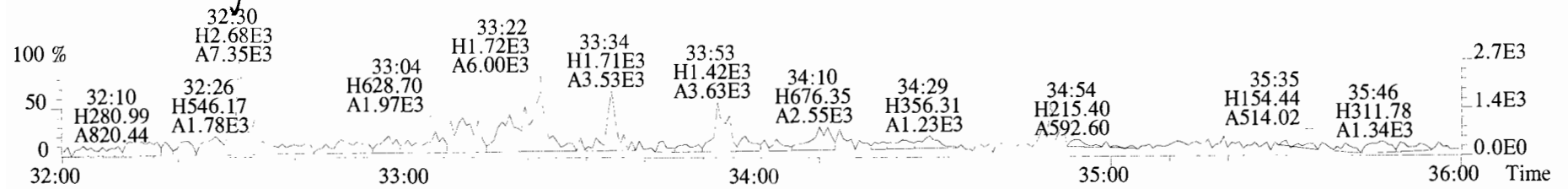
367.8949 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



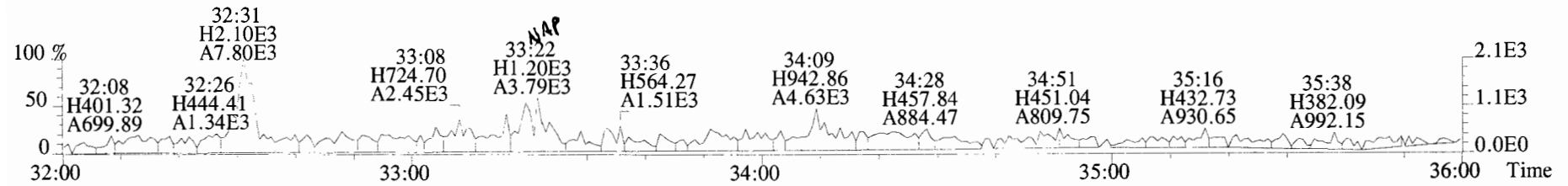
366.9792 S:10 F:2



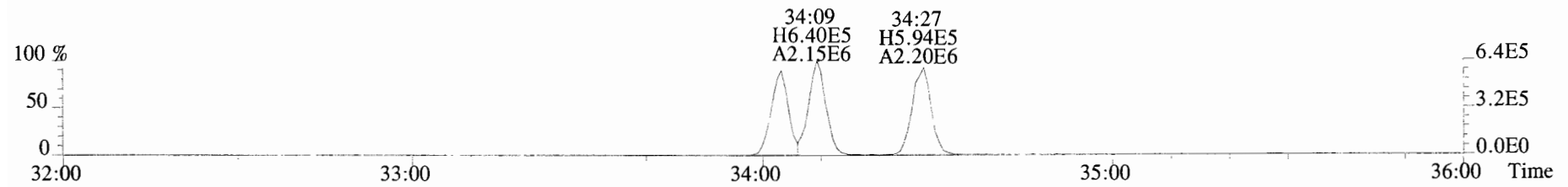
File:191024D2 #1-384 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory_VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
 389.8156 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



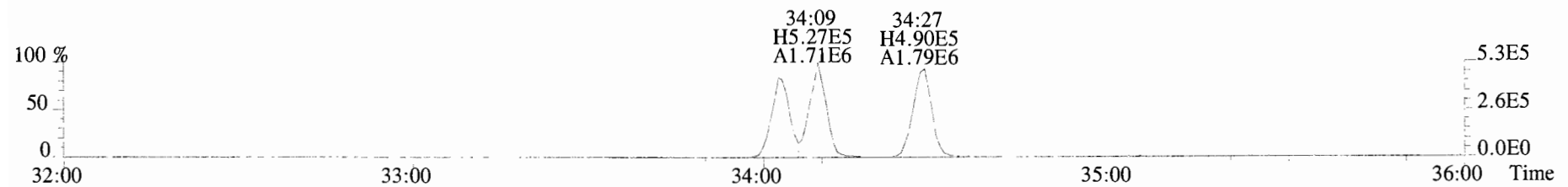
391.8127 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



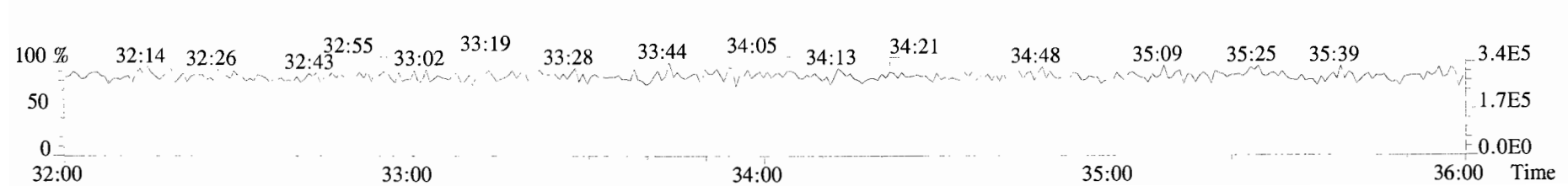
401.8559 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



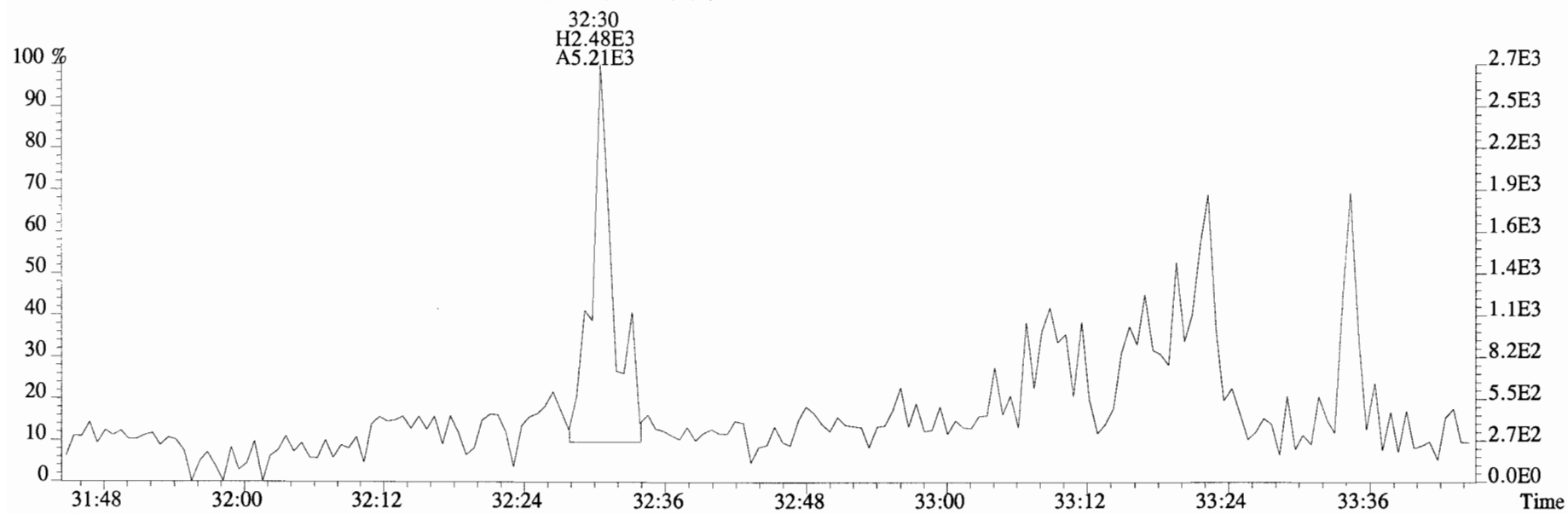
403.8530 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



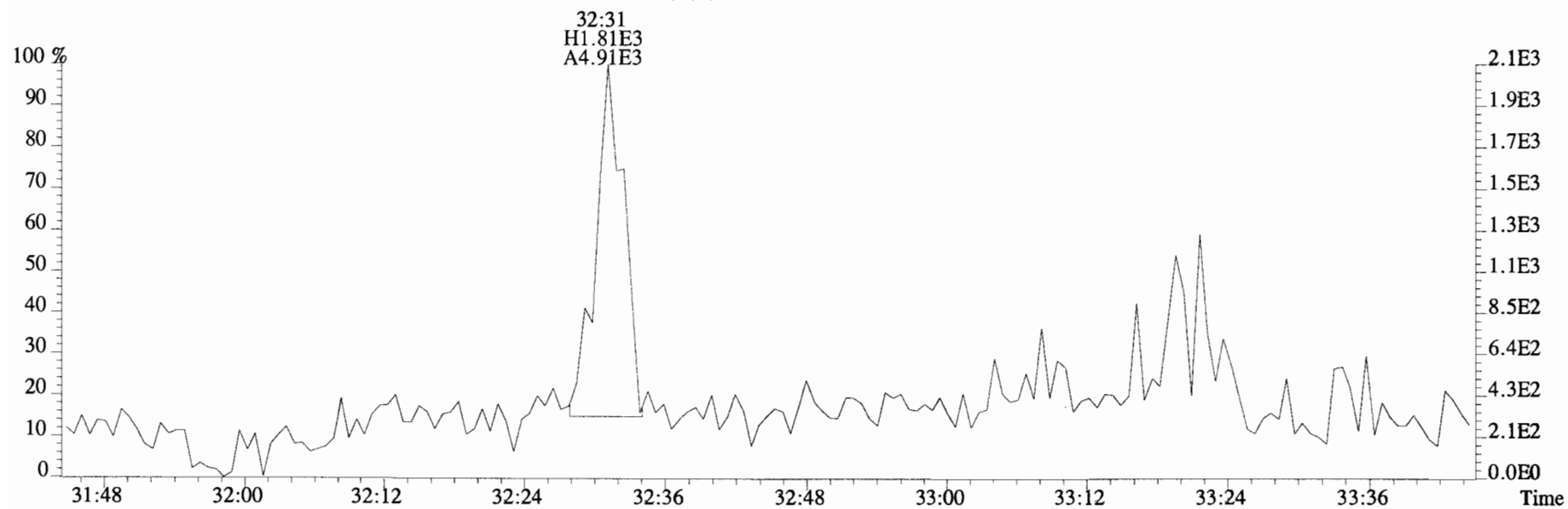
392.9760 S:10 F:3



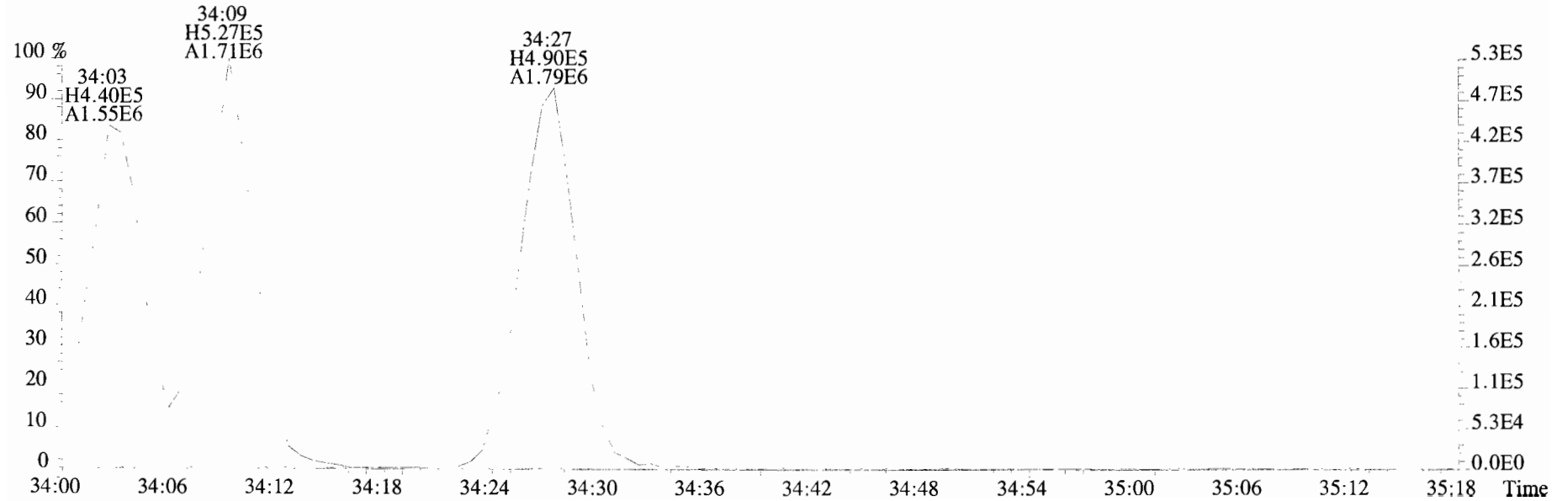
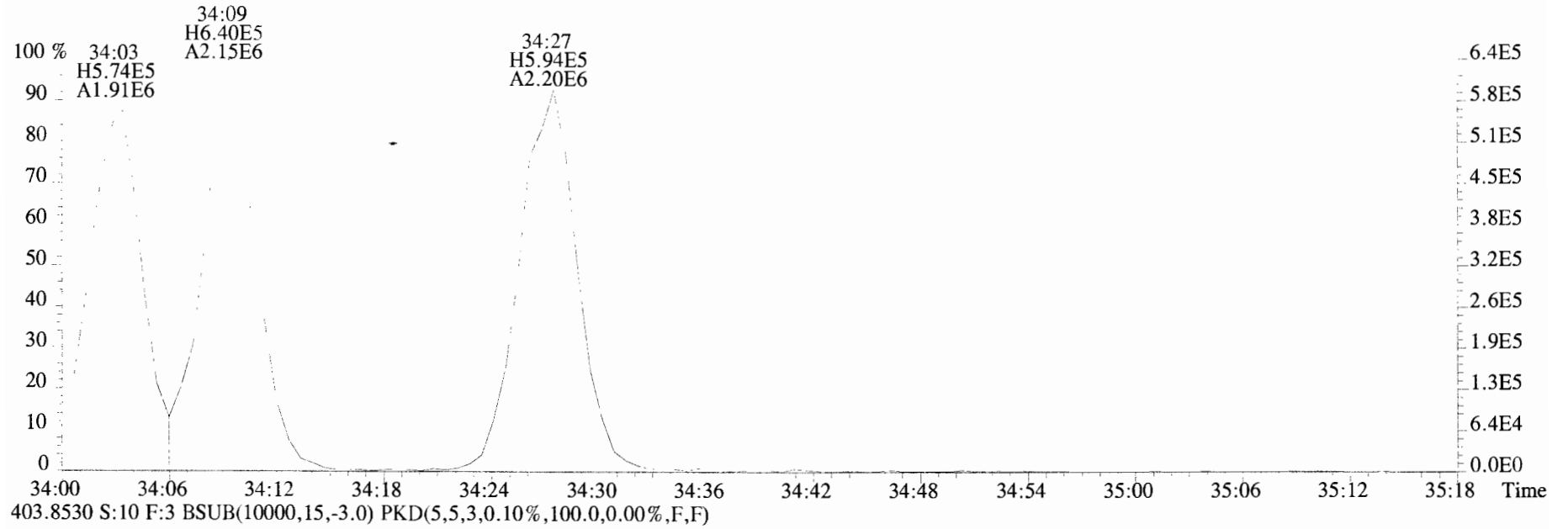
File:191024D2 #1-384 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
389.8156 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



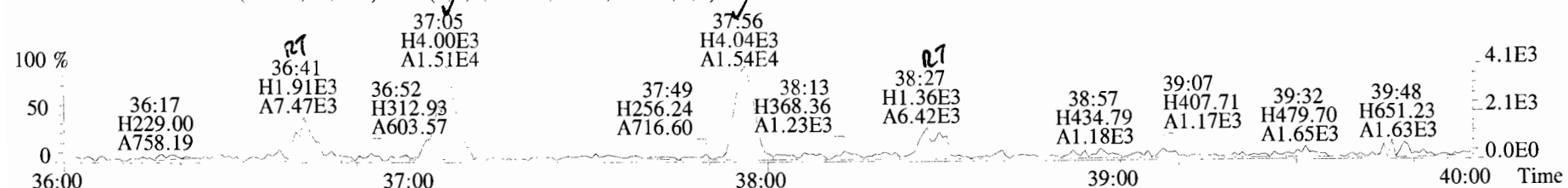
391.8127 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



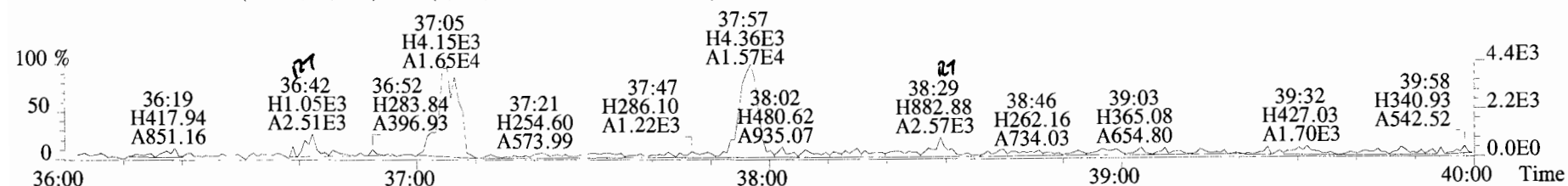
File:191024D2 #1-384 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory_VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
401.8559 S:10 F:3 BSUB(10000.15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



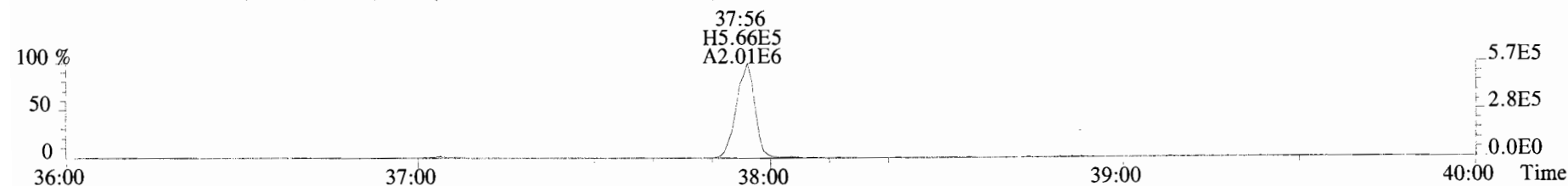
File:191024D2 #1-356 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory_VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
423.7767 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



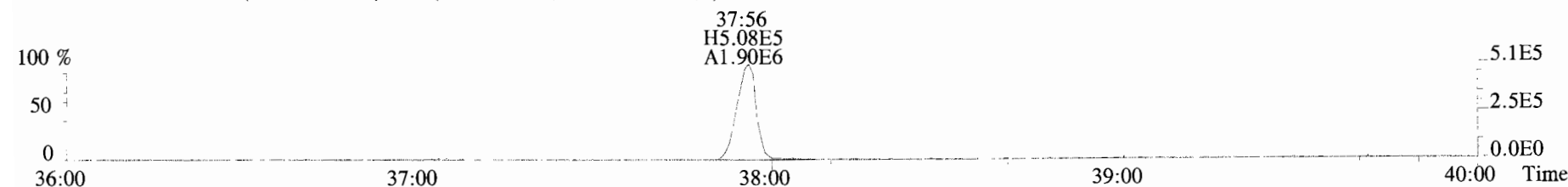
425.7737 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



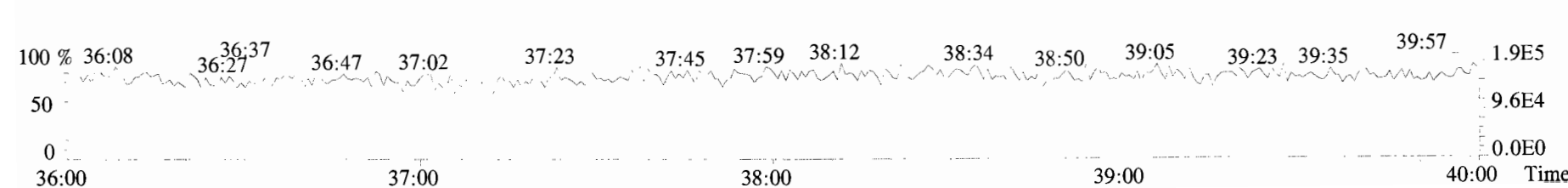
435.8169 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



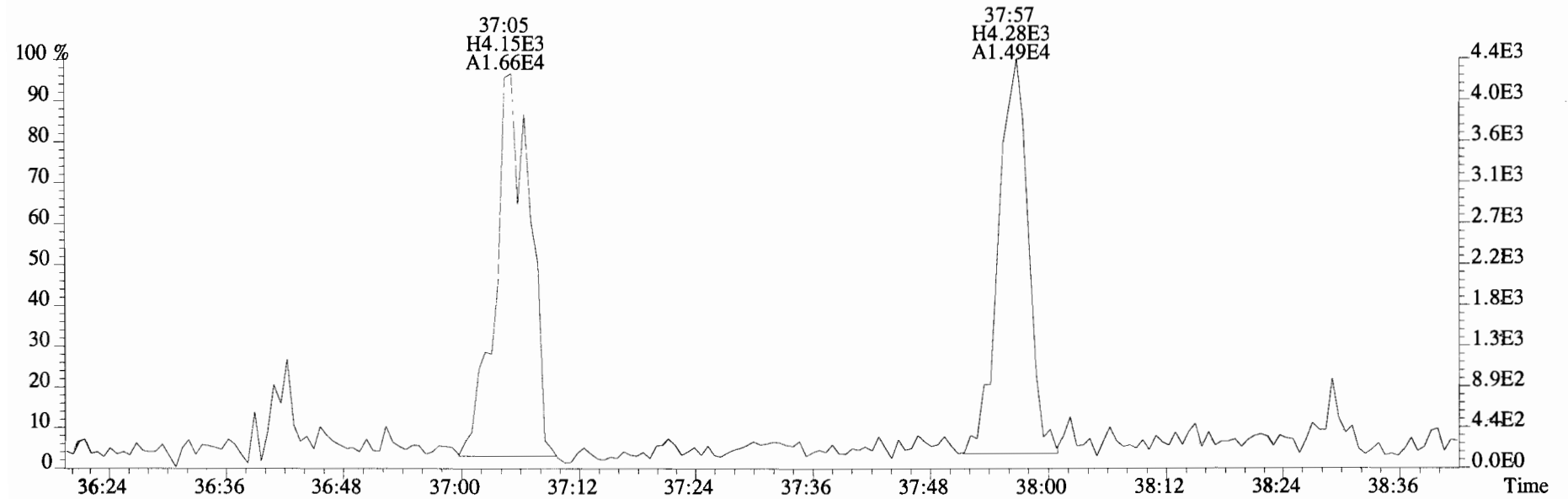
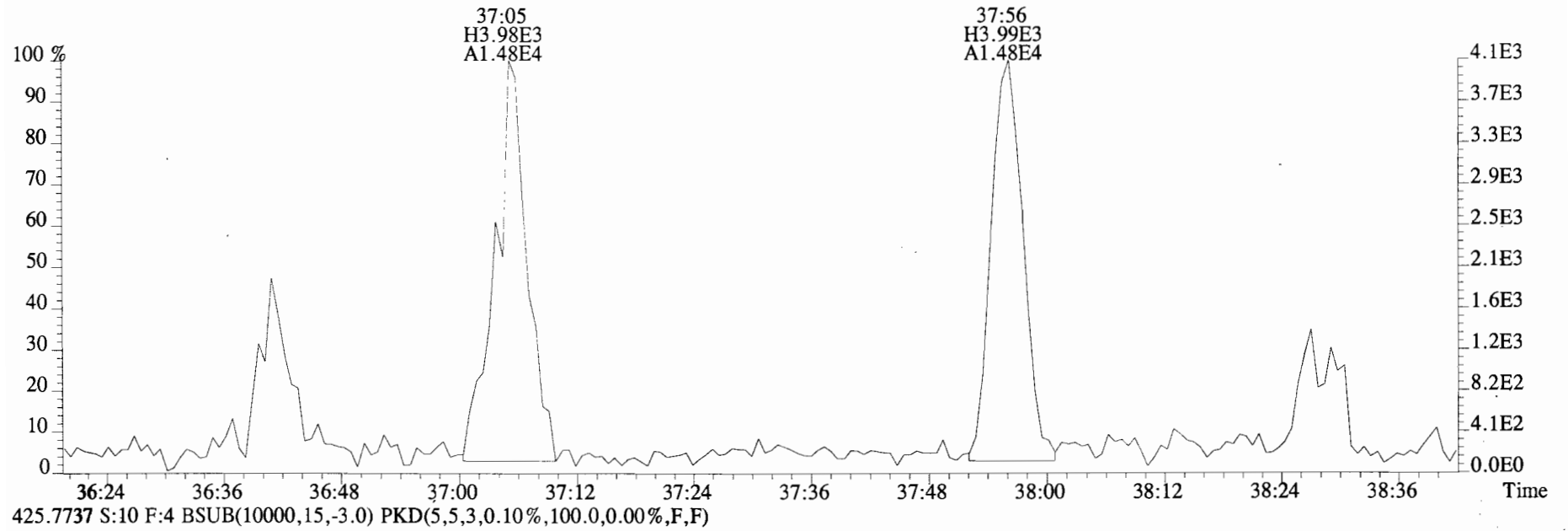
437.8140 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



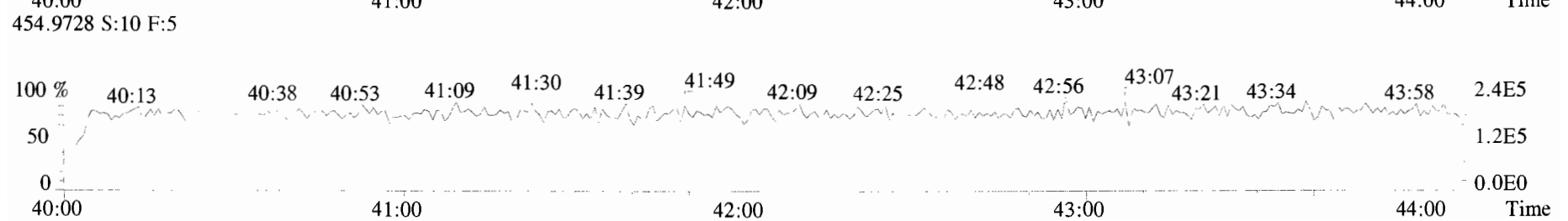
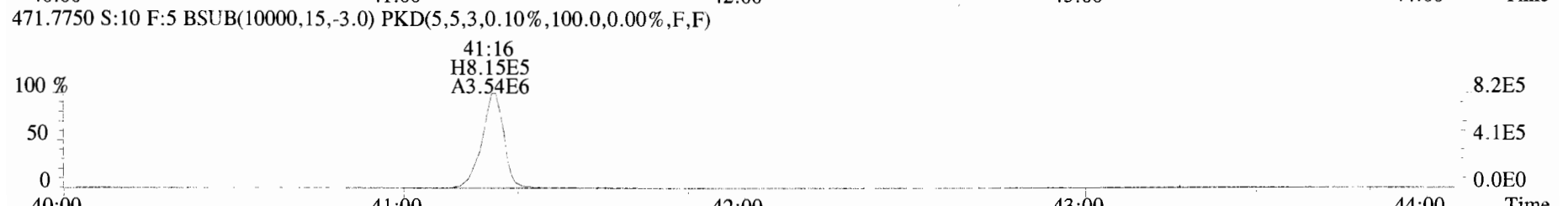
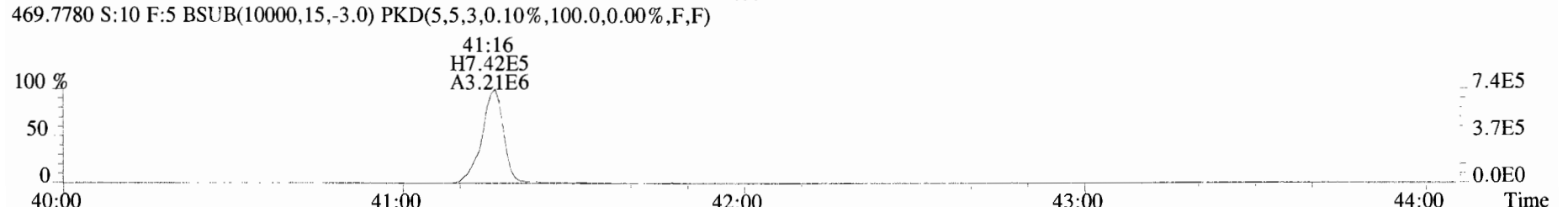
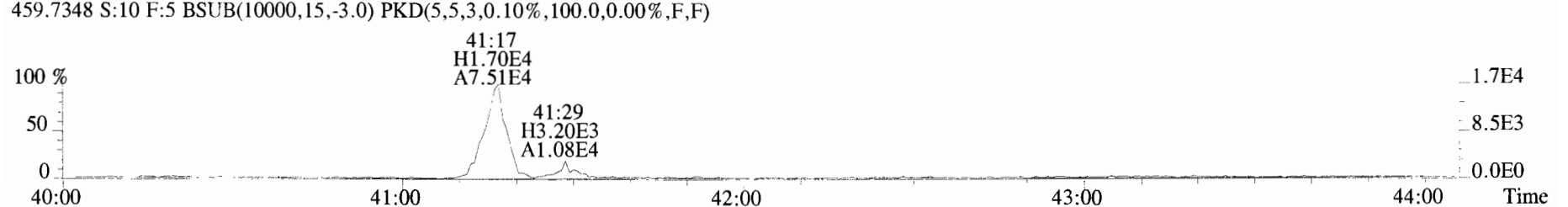
454.9728 S:10 F:4



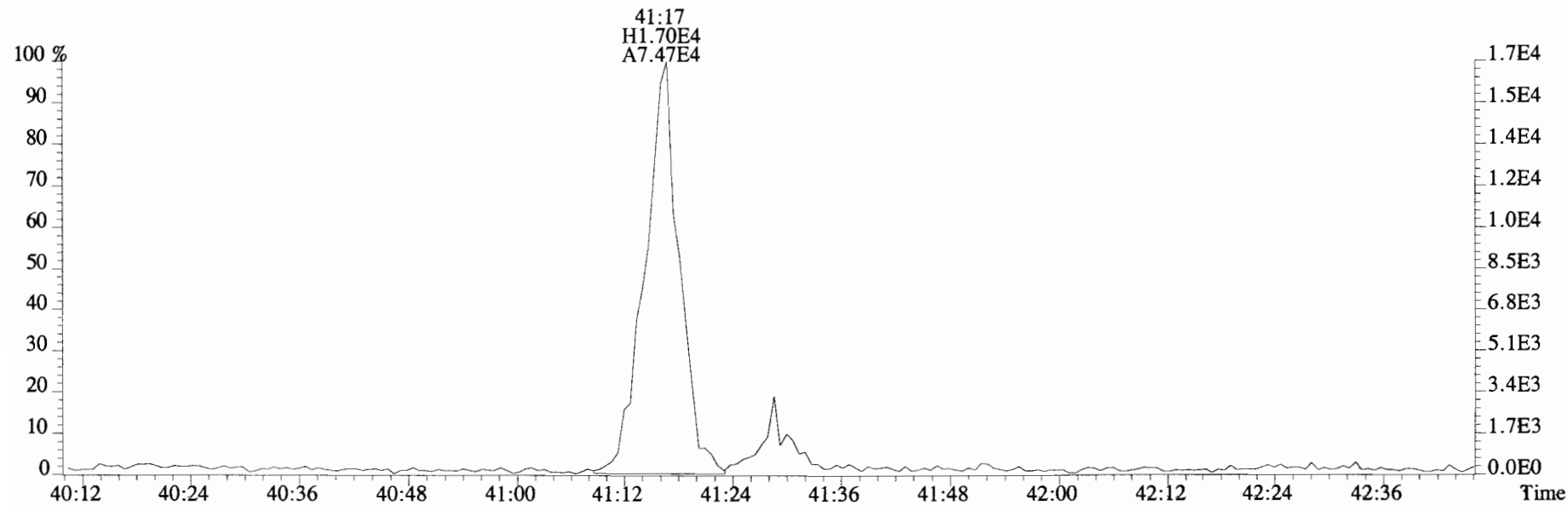
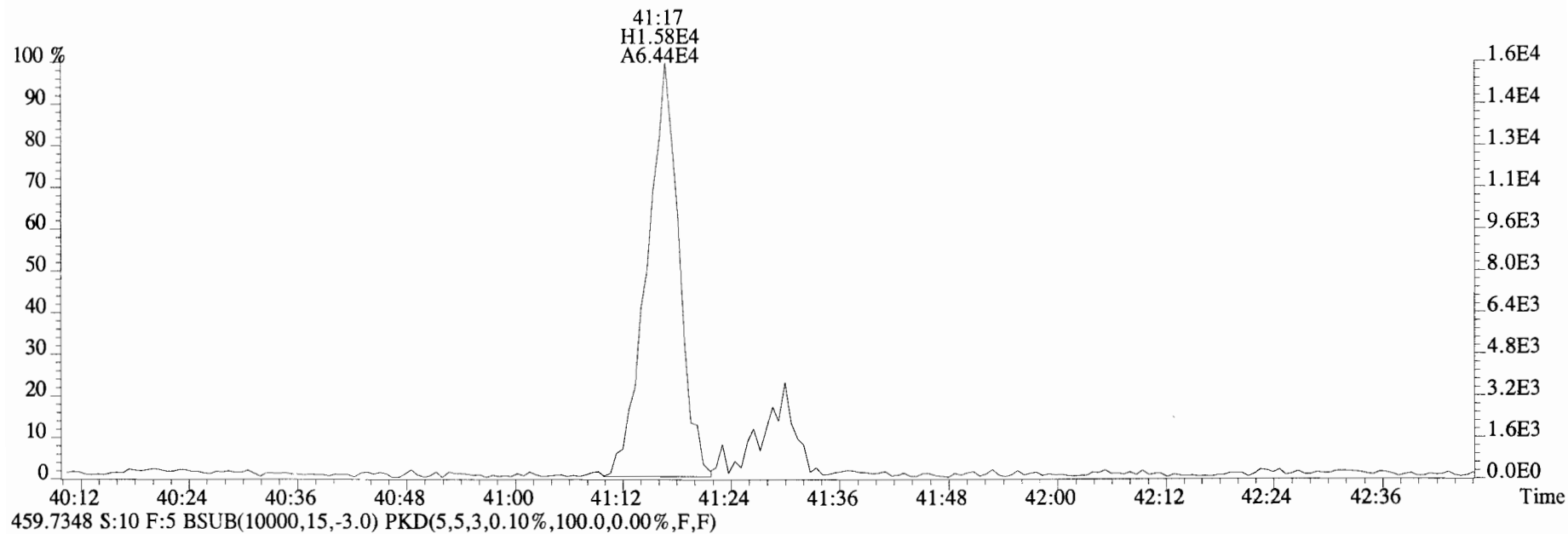
File:191024D2 #1-356 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
423.7767 S:10 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



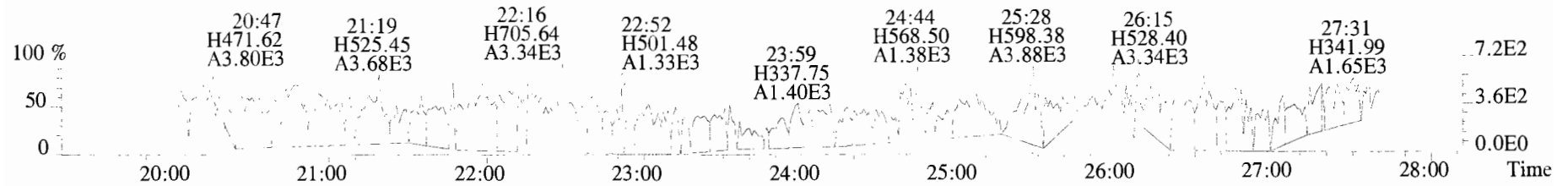
File:191024D2 #1-432 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
457.7377 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



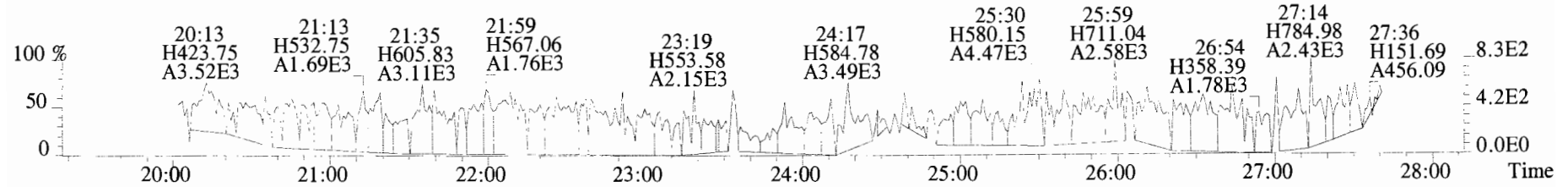
File:191024D2 #1-432 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
457.7377 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



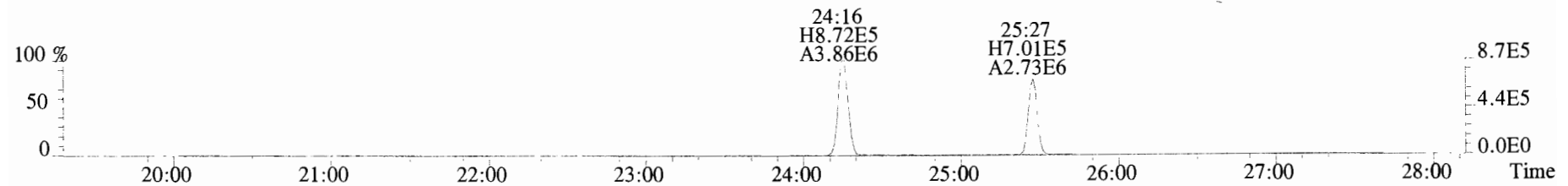
File:191024D2 #1-493 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory_VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
303.9016 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



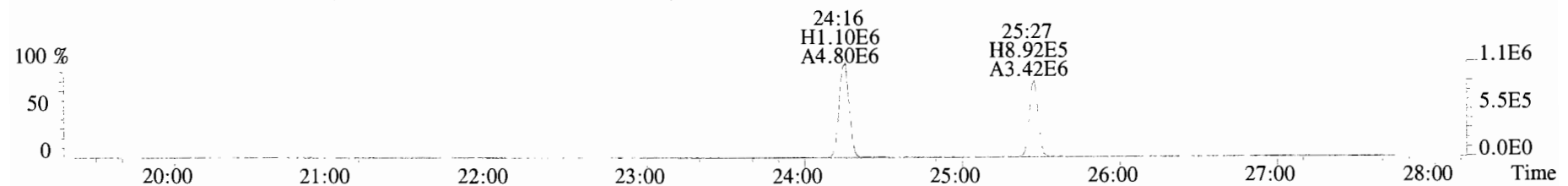
305.8987 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



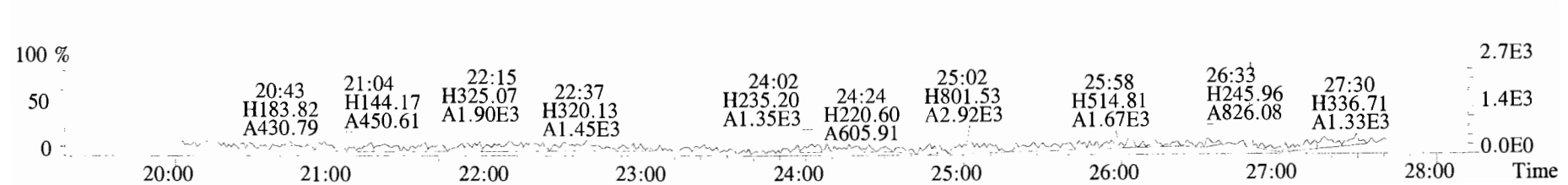
315.9419 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



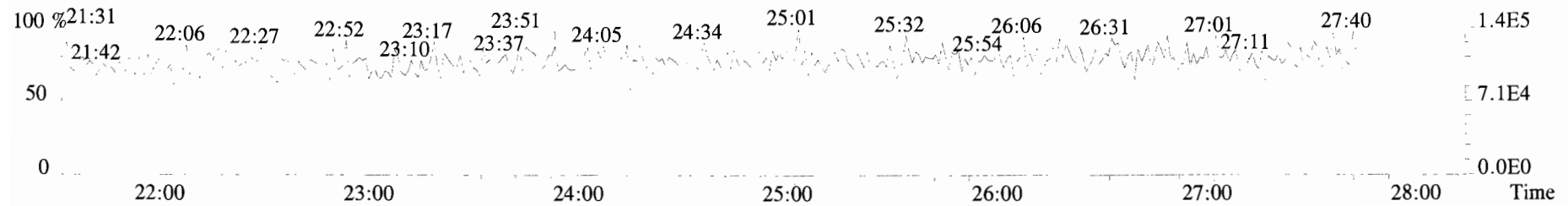
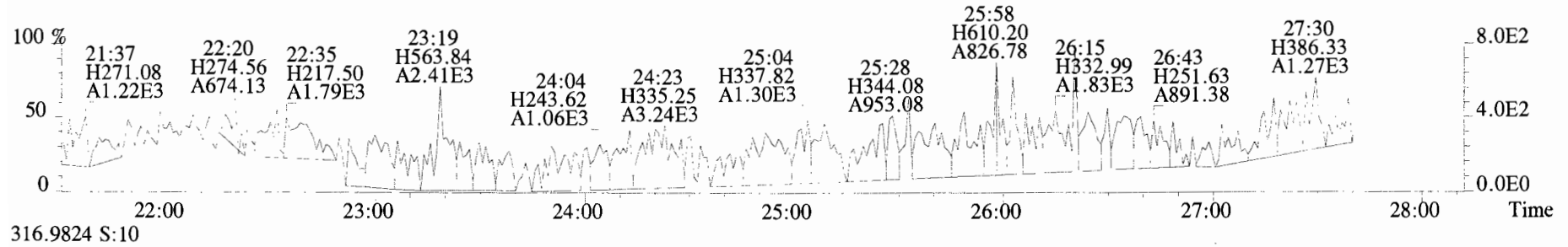
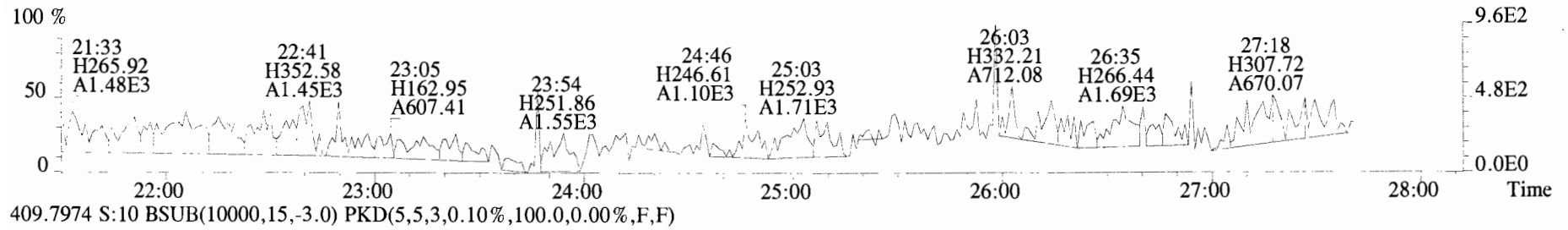
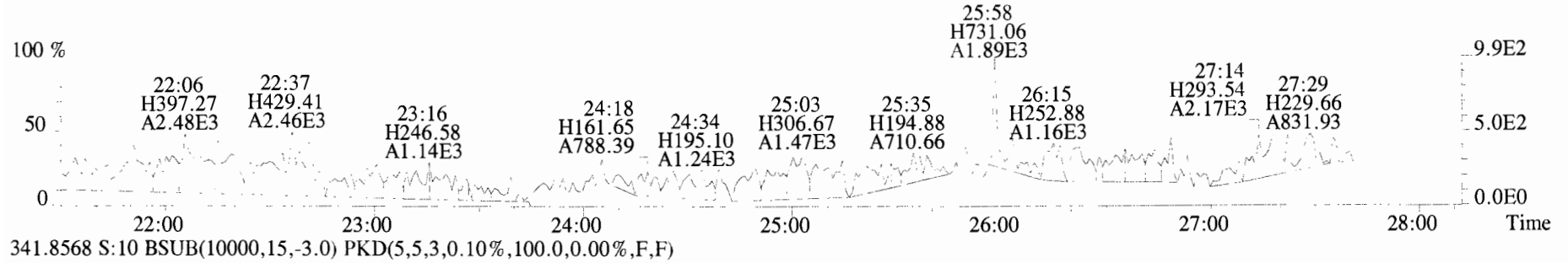
317.9389 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



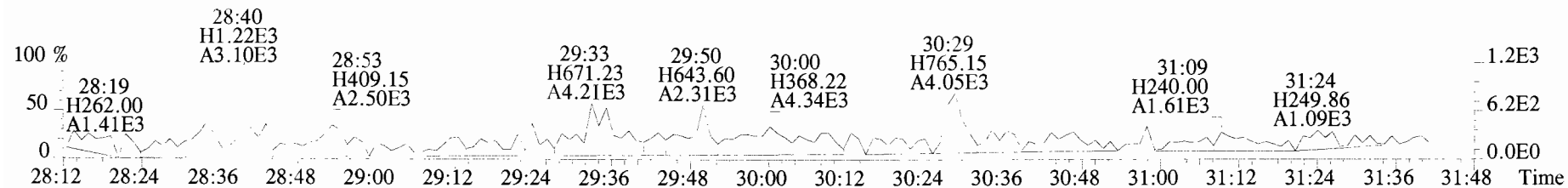
375.8364 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



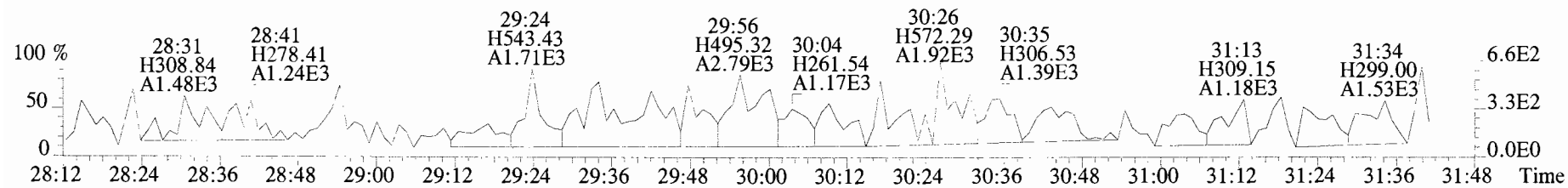
File:191024D2 #1-493 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory_VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
 339.8597 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



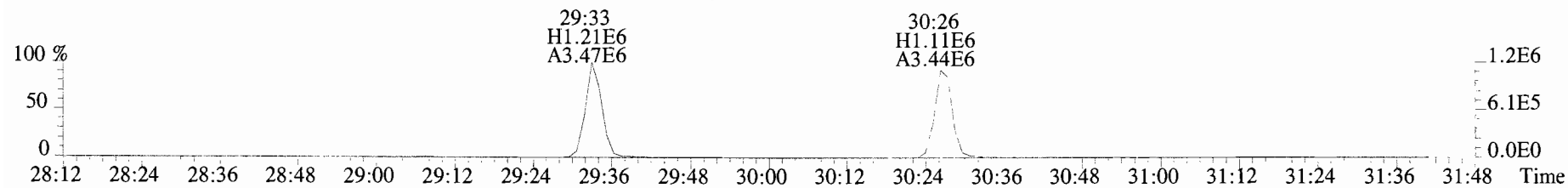
File:191024D2 #1-211 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
339.8597 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



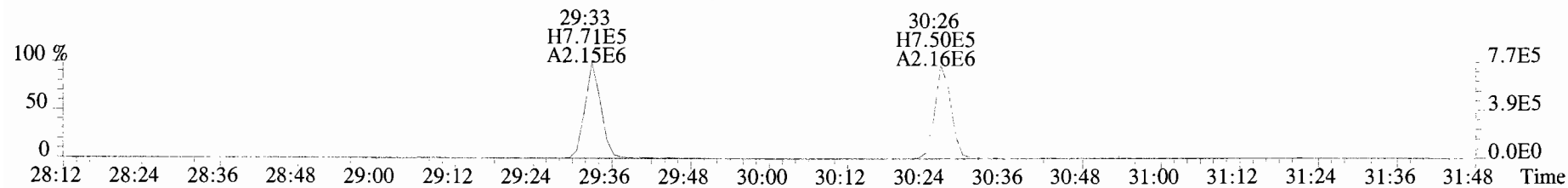
341.8568 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



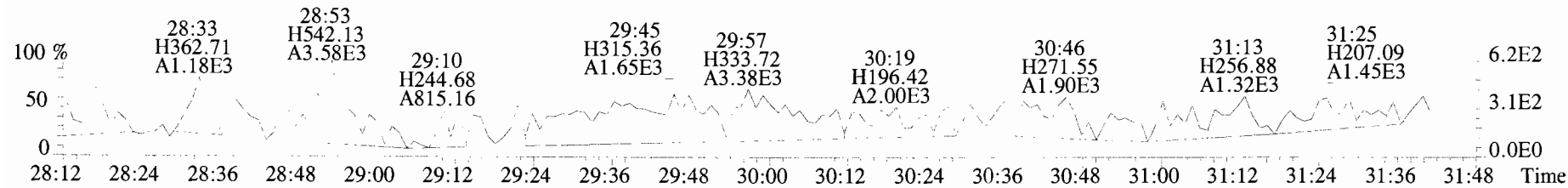
351.9000 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



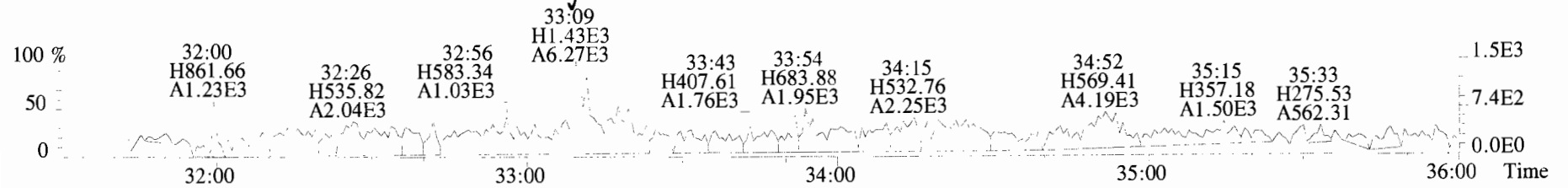
353.8970 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



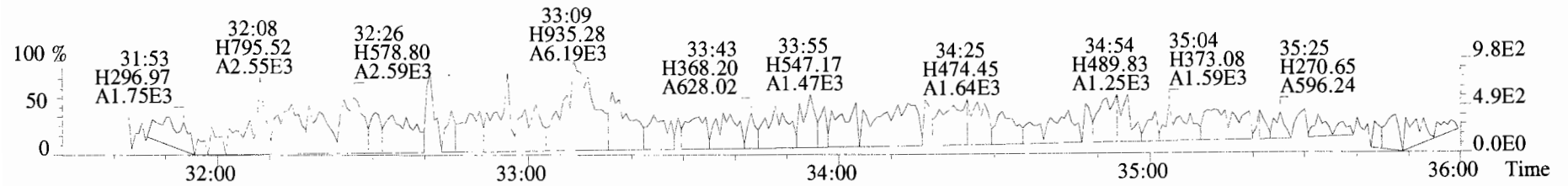
409.7974 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



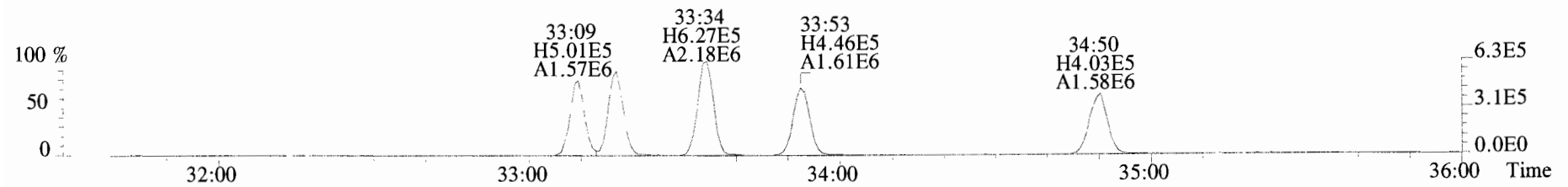
File:191024D2 #1-384 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
373.8207 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



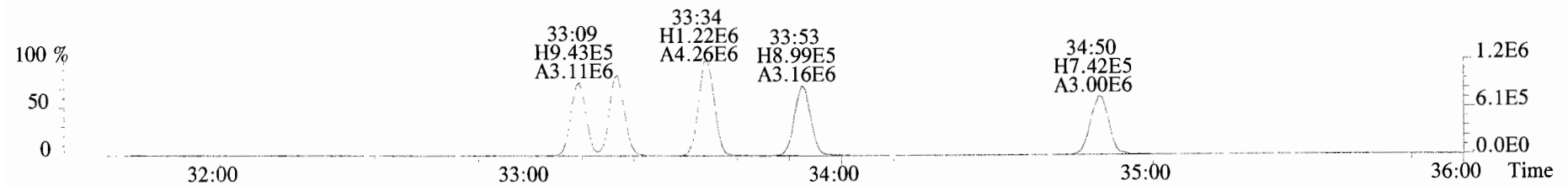
375.8178 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



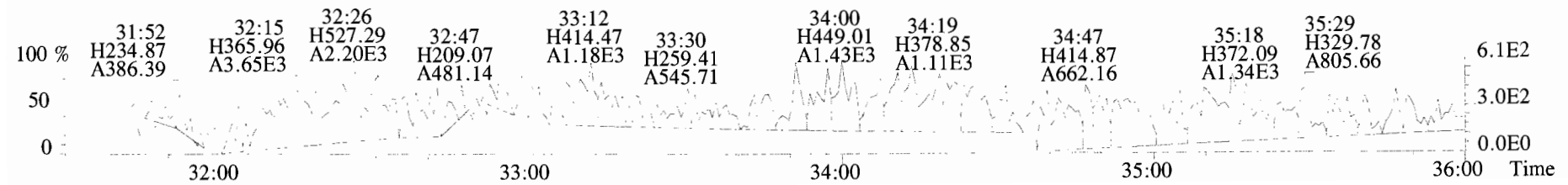
383.8639 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



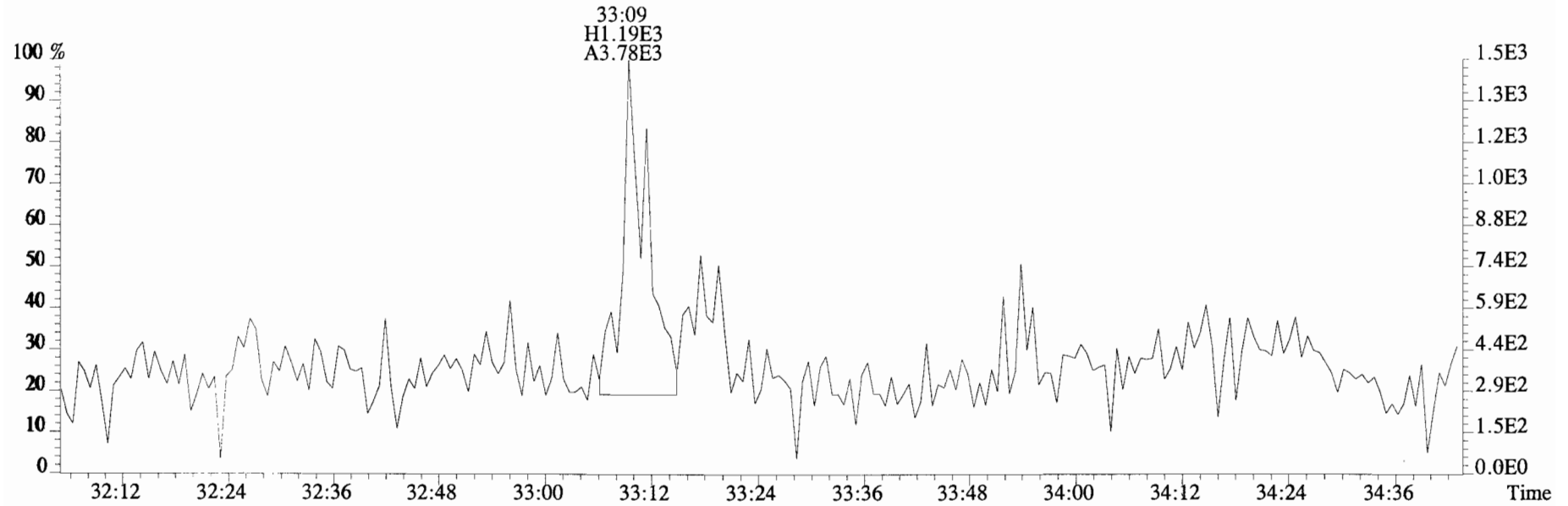
385.8610 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



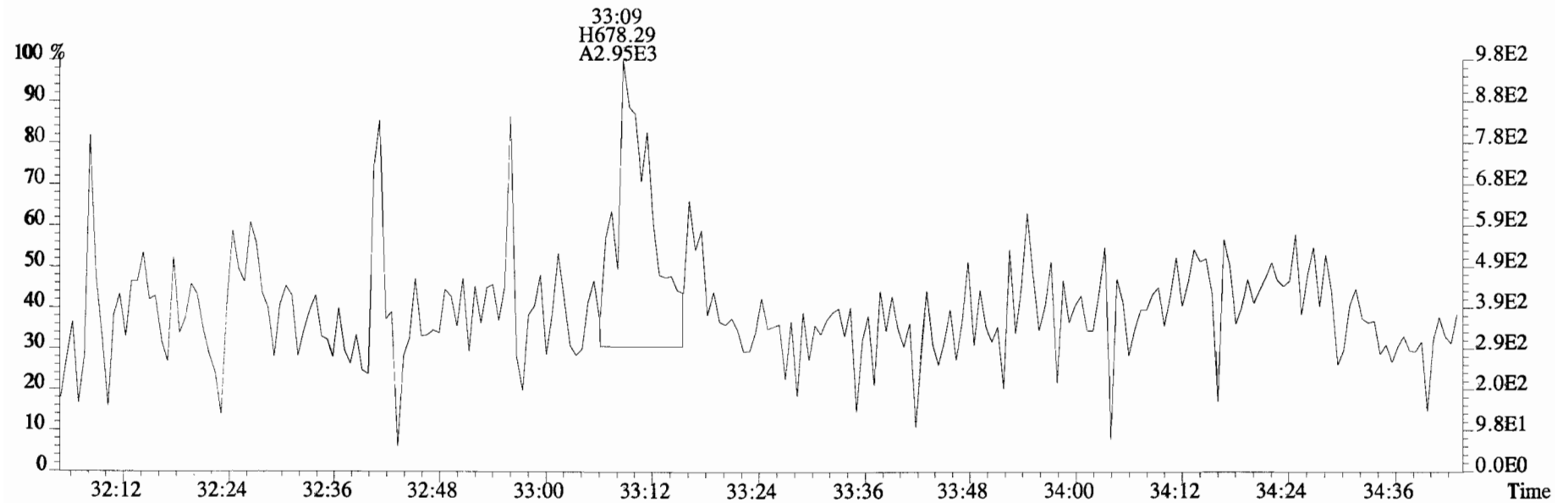
445.7555 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



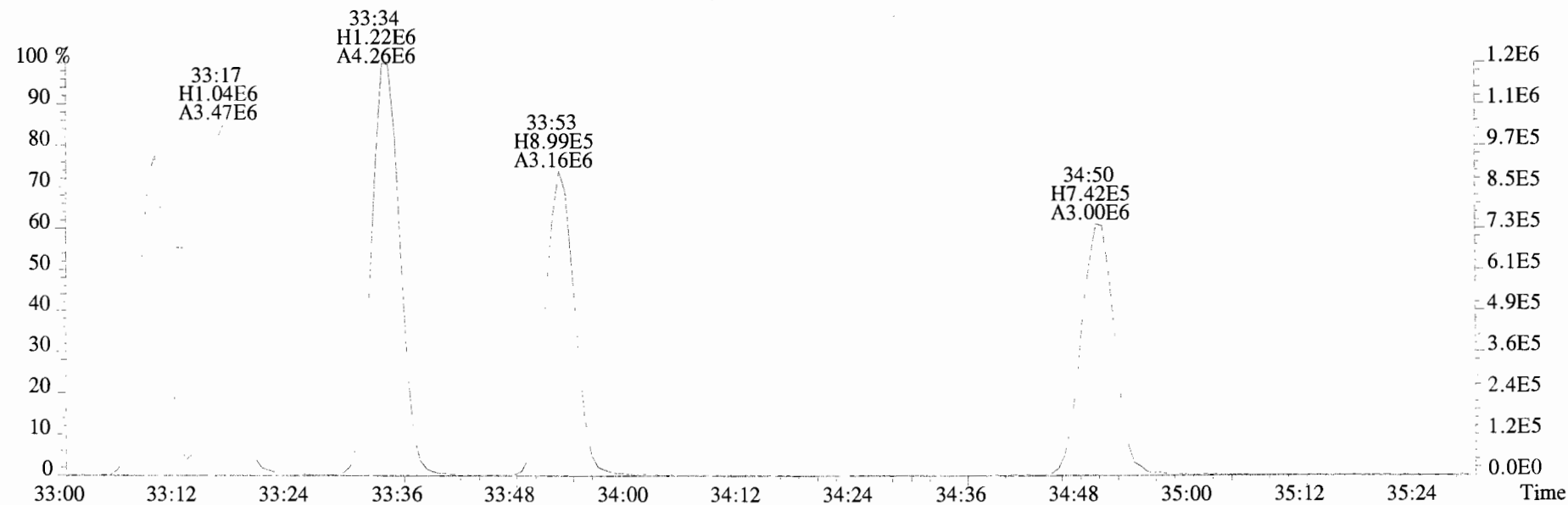
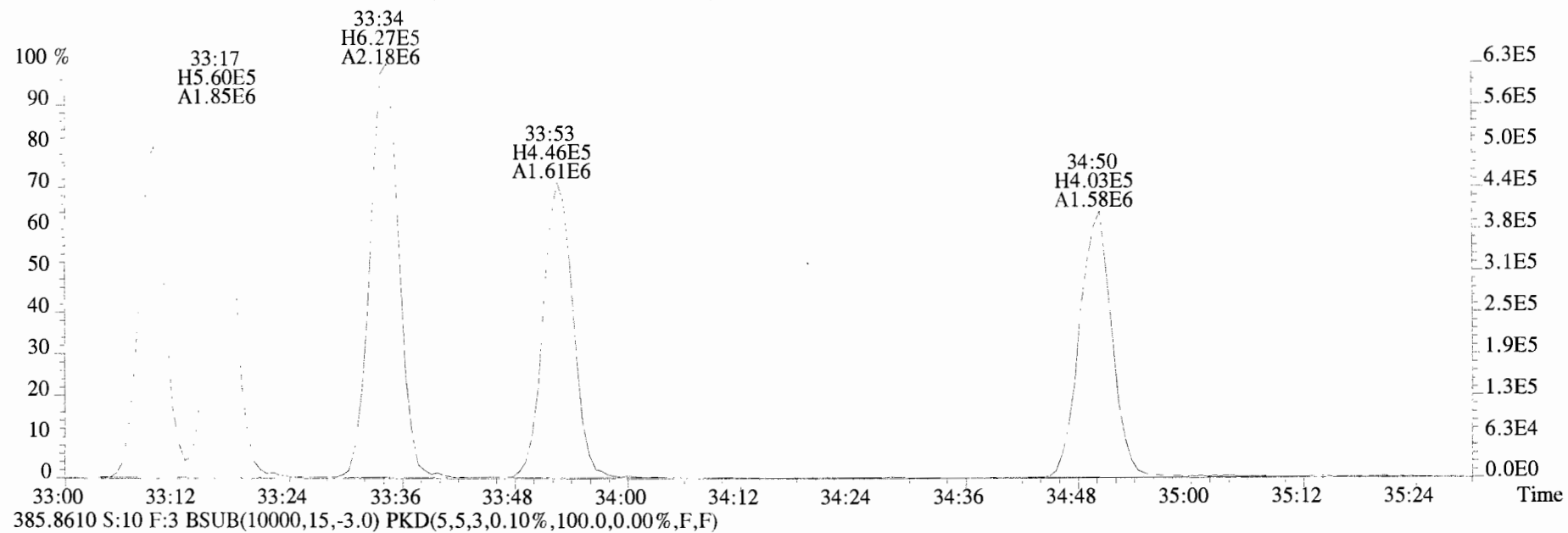
File:191024D2 #1-384 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
373.8207 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



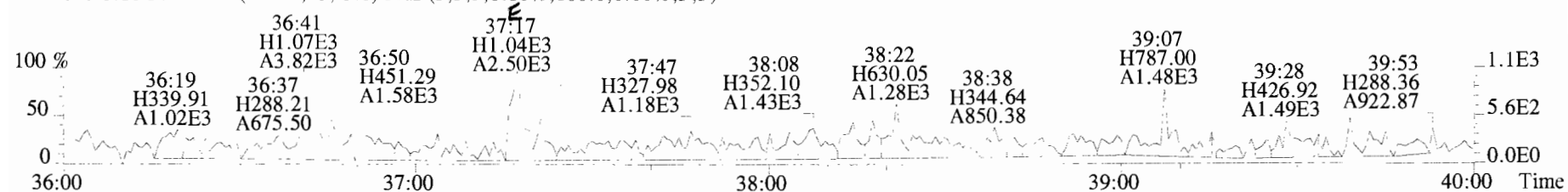
375.8178 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



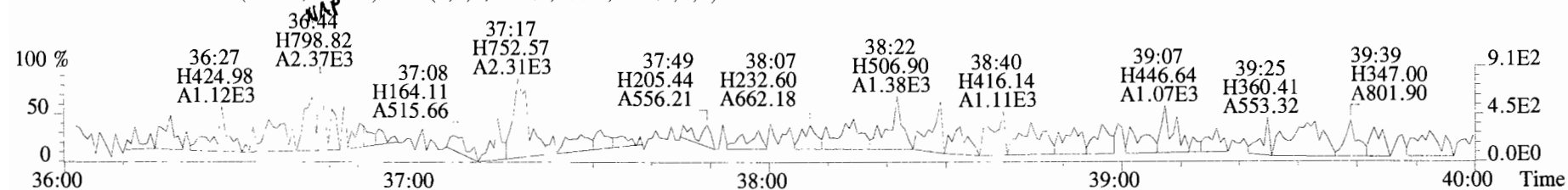
File:191024D2 #1-384 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
383.8639 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



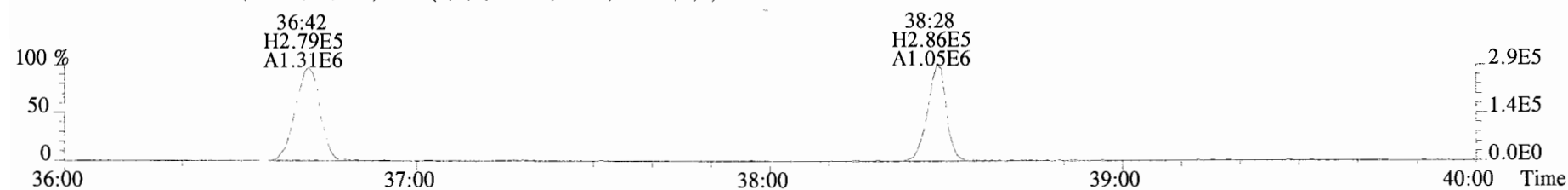
File:191024D2 #1-356 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
407.7818 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



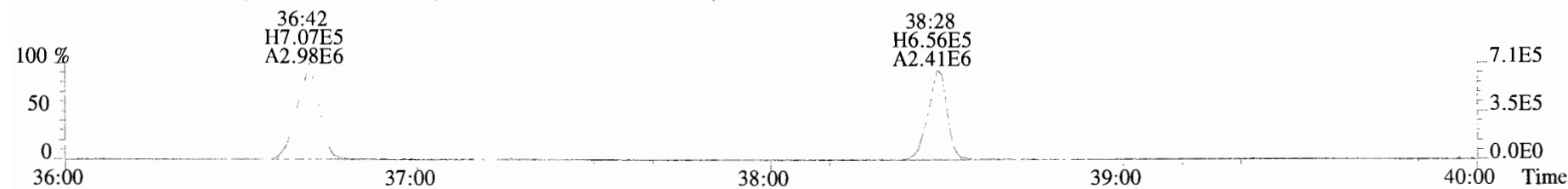
409.7788 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



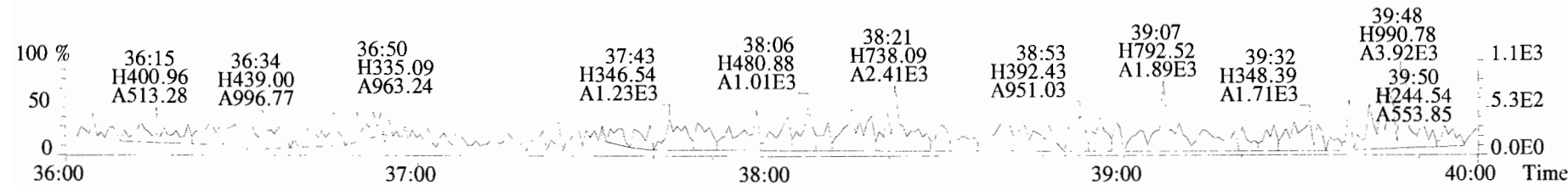
417.8253 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



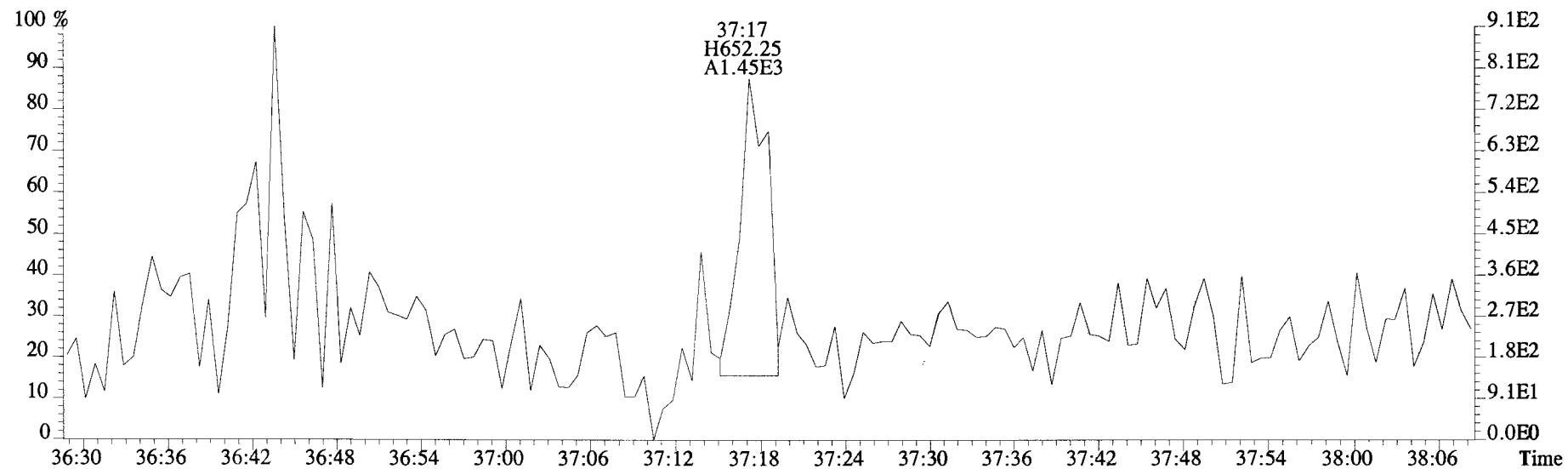
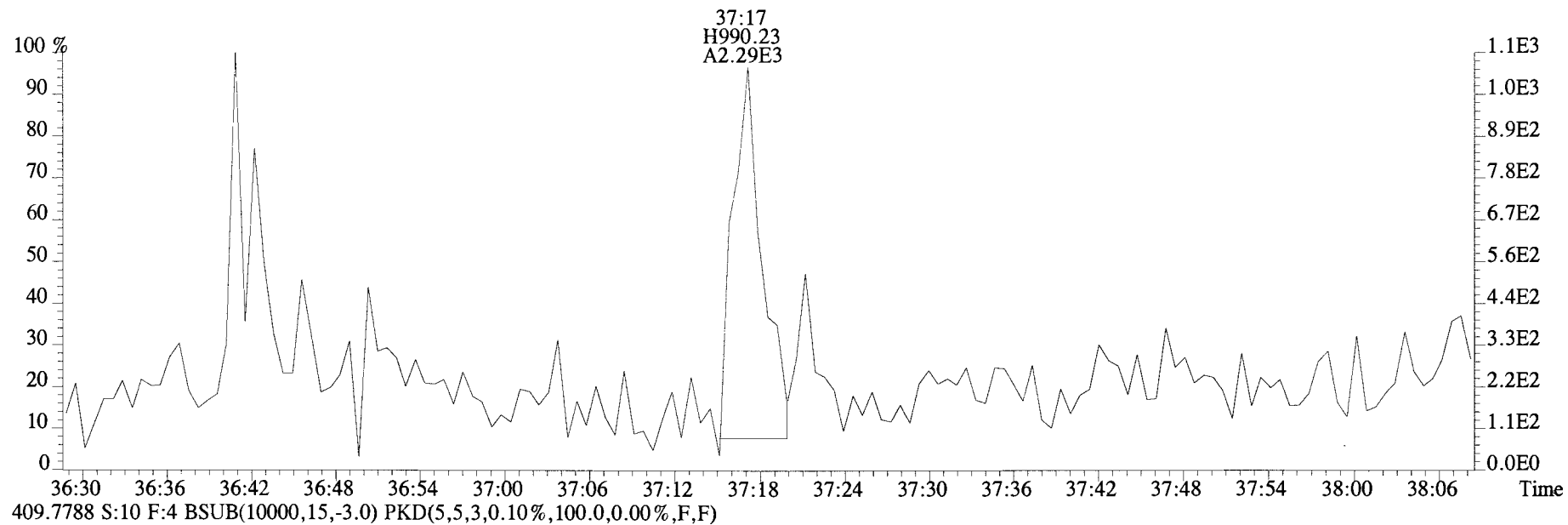
419.8220 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



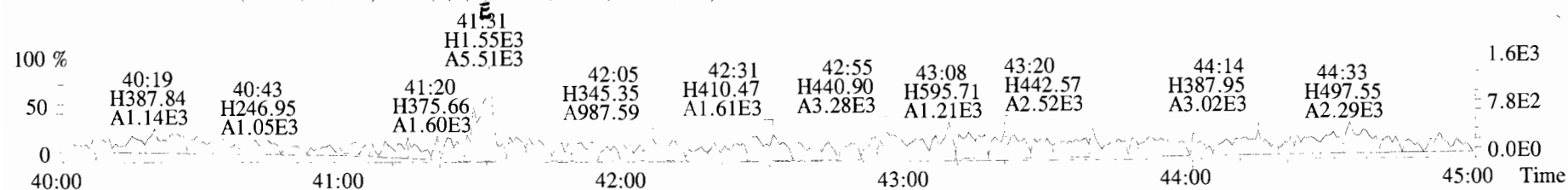
479.7165 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



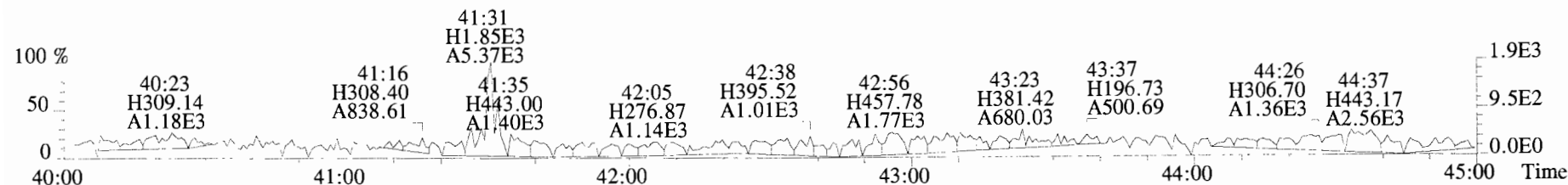
File:191024D2 #1-356 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
407.7818 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



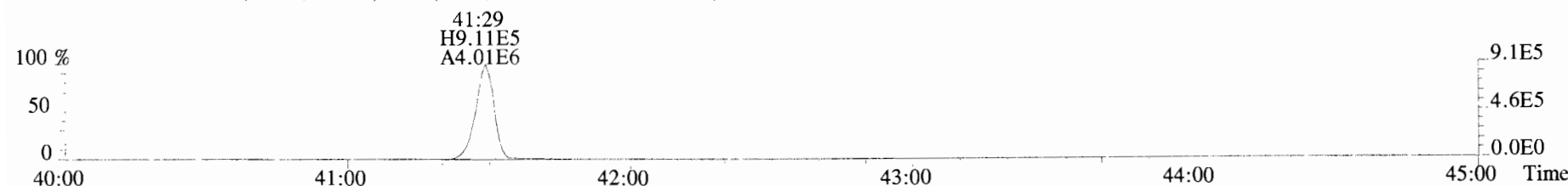
File:191024D2 #1-432 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
441.7428 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



443.7398 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



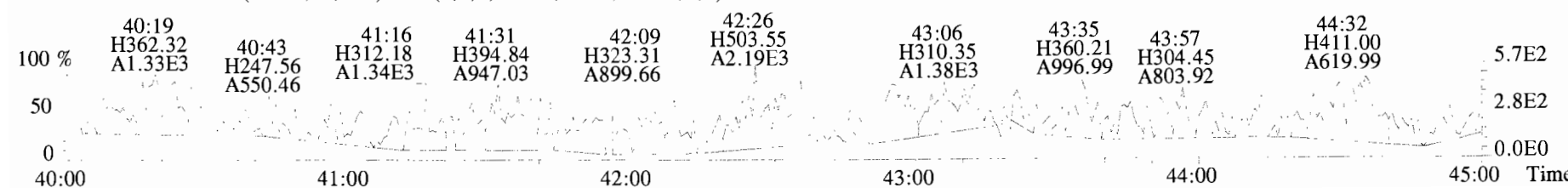
453.7831 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



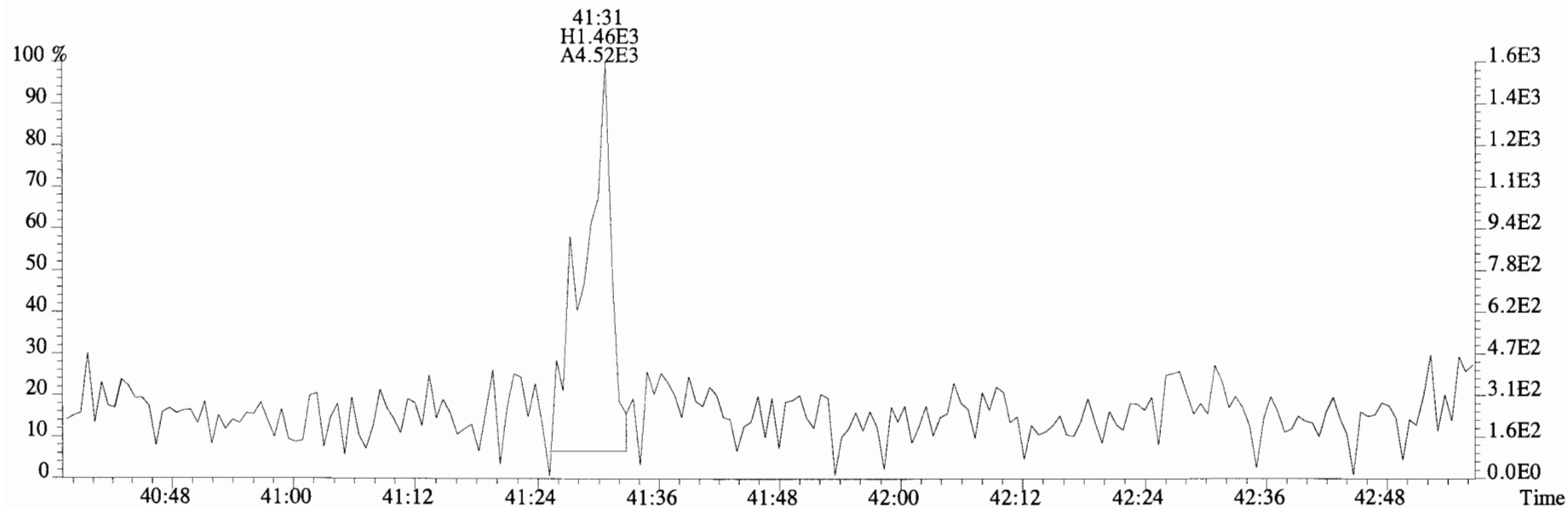
455.7801 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



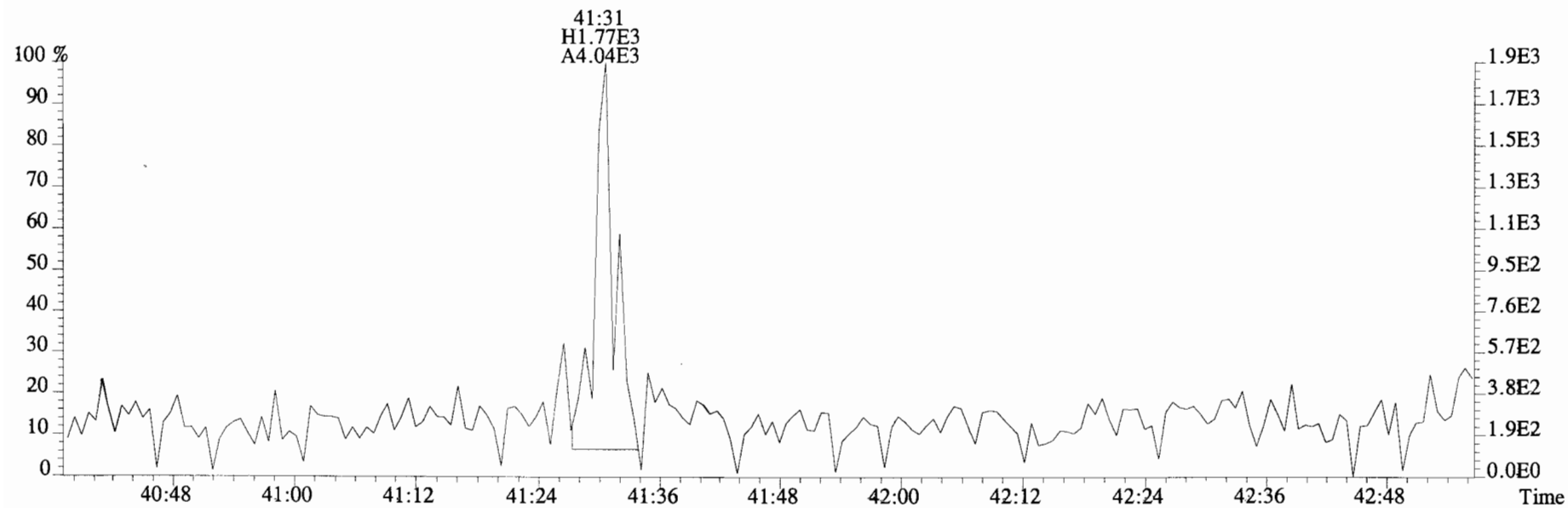
513.6775 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191024D2 #1-432 Acq:25-OCT-2019 11:00:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text: Vista Analytical Laboratory VG7 Text:1903546-10 PDI-081SC-A-12-13-191002 12.97 Exp:OCDD_DB5
441.7428 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



443.7398 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	NotF η	*		115	2.5	0.0834	Total Tetra-Dioxins	0.186	0.186		*	*
1,2,3,7,8-PeCDD	*	* n	0.90	NotF η	*		195	2.5	0.109	Total Penta-Dioxins	*	*		195	0.109
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF η	*		166	2.5	0.144	Total Hexa-Dioxins	0.776	0.776		*	*
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotF η	*		166	2.5	0.159	Total Hepta-Dioxins	2.20	4.24		*	*
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotF η	*		166	2.5	0.162	Total Tetra-Furans	0.305	0.556		*	*
1,2,3,4,6,7,8-HpCDD	4.38e+04	1.25 n	0.98	37:58	2.0429		*	2.5	*	Total Penta-Furans	0.0000	0.12709		*	*
OCDD	2.70e+05	0.89 y	0.96	41:18	15.049		*	2.5	*	Total Hexa-Furans	0.298	0.298		*	*
										Total Hepta-Furans	0.795	0.795		*	*
2,3,7,8-TCDF	8.43e+03	0.60 n	0.95	25:31	0.25072		*	2.5	*						
1,2,3,7,8-PeCDF	4.21e+03	2.01 n	0.96	29:36	0.12709		*	2.5	*						
2,3,4,7,8-PeCDF	*	* n	1.01	NotF η	*		159	2.5	0.0844						
1,2,3,4,7,8-HxCDF	9.30e+03	1.26 y	1.18	33:11	0.29775		*	2.5	*						
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotF η	*		200	2.5	0.0792						
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotF η	*		200	2.5	0.0796						
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotF η	*		200	2.5	0.102						
1,2,3,4,6,7,8-HpCDF	1.27e+04	1.00 y	1.13	36:43	0.45325		*	2.5	*						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotF η	*		244	2.5	0.126						
OCDF	1.62e+04	0.77 y	0.95	41:31	0.72856		*	2.5	*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	4.76e+06	0.81 y	1.10	26:15	163.86					82.1					
IS 13C-1,2,3,7,8-PeCDD	4.29e+06	0.63 y	0.88	30:45	183.67					92.0					
IS 13C-1,2,3,4,7,8-HxCDD	4.08e+06	1.26 y	0.64	34:04	199.24					99.8					
IS 13C-1,2,3,6,7,8-HxCDD	4.69e+06	1.27 y	0.86	34:11	172.13					86.3					
IS 13C-1,2,3,7,8,9-HxCDD	4.74e+06	1.27 y	0.81	34:29	184.28					92.3					
IS 13C-1,2,3,4,6,7,8-HpCDD	4.37e+06	1.04 y	0.65	37:57	209.86					105					
IS 13C-OCDD	7.46e+06	0.90 y	0.58	41:17	403.71					101					
IS 13C-2,3,7,8-TCDF	7.06e+06	0.76 y	1.03	25:29	162.55					81.5					
IS 13C-1,2,3,7,8-PeCDF	6.89e+06	1.59 y	0.85	29:35	192.15					96.3					
IS 13C-2,3,4,7,8-PeCDF	6.44e+06	1.53 y	0.85	30:28	181.28					90.8					
IS 13C-1,2,3,4,7,8-HxCDF	5.29e+06	0.52 y	0.83	33:11	199.78					100					
IS 13C-1,2,3,6,7,8-HxCDF	6.03e+06	0.52 y	1.03	33:18	182.95					91.7					
IS 13C-2,3,4,6,7,8-HxCDF	5.70e+06	0.50 y	0.95	33:54	187.78					94.1					
IS 13C-1,2,3,7,8,9-HxCDF	5.44e+06	0.52 y	0.83	34:51	206.45					103					
IS 13C-1,2,3,4,6,7,8-HpCDF	4.97e+06	0.43 y	0.76	36:43	205.93					103					
IS 13C-1,2,3,4,7,8,9-HpCDF	3.94e+06	0.41 y	0.58	38:30	212.68					107					
IS 13C-OCDF	9.40e+06	0.89 y	0.69	41:31	428.08					107					
C/Up 37Cl-2,3,7,8-TCDD	2.17e+06		1.20	26:17	68.358					85.6					
RS/RT 13C-1,2,3,4-TCDD	5.29e+06	0.82 y	1.00	25:42	199.56						Integrations	Reviewed			
RS 13C-1,2,3,4-TCDF	8.38e+06	0.79 y	1.00	24:17	199.56						by <u>DB</u>	by <u>C7</u>			
RS/RT 13C-1,2,3,4,6,9-HxCDF	6.36e+06	0.51 y	1.00	33:36	199.56						Analyst: <u>DB</u>	Analyst: <u>C7</u>			
											Date: <u>11/5/19</u>	Date: <u>11/11/19</u>			

Totals class: TCDD EMPC

Entry #: 19

Run: 16 File: 191024D2 S: 11 I: 1 F: 1
Acquired: 25-OCT-19 11:48:09 Processed: 28-OCT-19 09:58:52

Total Concentration: 0.18566 Unnamed Concentration: 0.186

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
24:23	1.752e+03	2.258e+03	0.78 y	4.010e+03	0.18566

Totals class: HxCDD EMPC

Entry #: 23

Run: 16

File: 191024D2

S: 11 I: 1 F: 3

Acquired: 25-OCT-19 11:48:09

Processed: 28-OCT-19 09:58:52

Total Concentration: 0.77588

Unnamed Concentration: 0.776

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:33	5.310e+03	4.556e+03	1.17 y	9.867e+03	0.44101
33:23	4.244e+03	3.248e+03	1.31 y	7.492e+03	0.33487

Totals class: HpCDD EMPC

Entry #: 25

Run: 16 File: 191024D2 S: 11 I: 1 F: 4
Acquired: 25-OCT-19 11:48:09 Processed: 28-OCT-19 09:58:52

Total Concentration: 4.2438

Unnamed Concentration: 2.201

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:06	2.263e+04	2.460e+04	0.92 y	4.723e+04	2.2009
37:58	2.692e+04	2.149e+04	1.25 n	4.384e+04	2.0429 1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 16 File: 191024D2 S: 11 I: 1 F: 1
Acquired: 25-OCT-19 11:48:09 Processed: 28-OCT-19 09:58:52

Total Concentration: 0.55592

Unnamed Concentration: 0.305

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
24:42	4.607e+03	5.651e+03	0.82 y	1.026e+04	0.30521	
25:31	3.666e+03	6.090e+03	0.60 n	8.427e+03	0.25072	2,3,7,8-TCDF

Totals class: PeCDF EMPC

Entry #: 31

Run: 16 File: 191024D2 S: 11 I: 1 F: 2
Acquired: 25-OCT-19 11:48:09 Processed: 28-OCT-19 09:58:52

Total Concentration: 0.12709

Unnamed Concentration: *

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:36	3.322e+03	1.652e+03	2.01 n	4.213e+03 0.12709	1,2,3,7,8-PeCDF

Totals class: HxCDF EMPC

Entry #: 33

Run: 16 File: 191024D2 S: 11 I: 1 F: 3
Acquired: 25-OCT-19 11:48:09 Processed: 28-OCT-19 09:58:52

Total Concentration: 0.29775 Unnamed Concentration: *

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
33:11	5.190e+03	4.106e+03	1.26	y	9.296e+03 0.29775	1,2,3,4,7,8-HxCDF

Totals class: HpCDF EMPC

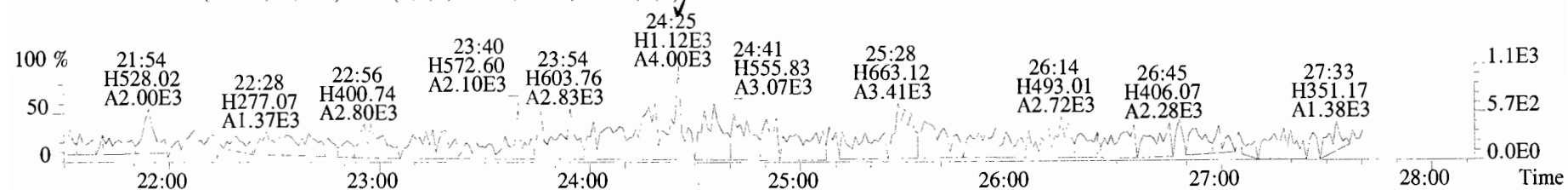
Entry #: 35

Run: 16 File: 191024D2 S: 11 I: 1 F: 4
Acquired: 25-OCT-19 11:48:09 Processed: 28-OCT-19 09:58:52

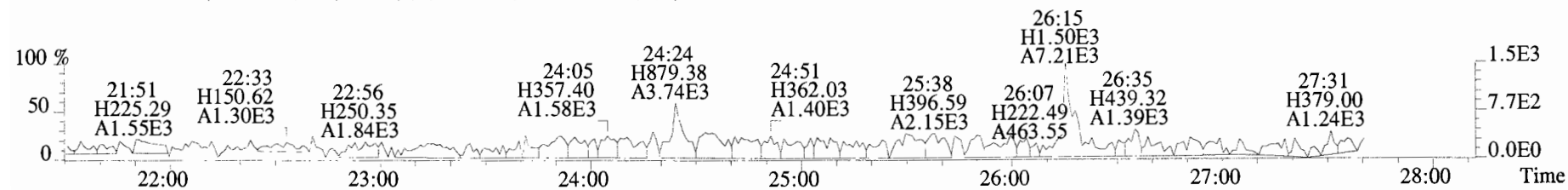
Total Concentration: 0.79513 Unnamed Concentration: 0.342

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
36:43	6.354e+03	6.375e+03	1.00	y	1.273e+04	0.45325	1,2,3,4,6,7,8-HpCDF
37:18	4.688e+03	4.422e+03	1.06	y	9.110e+03	0.34187	

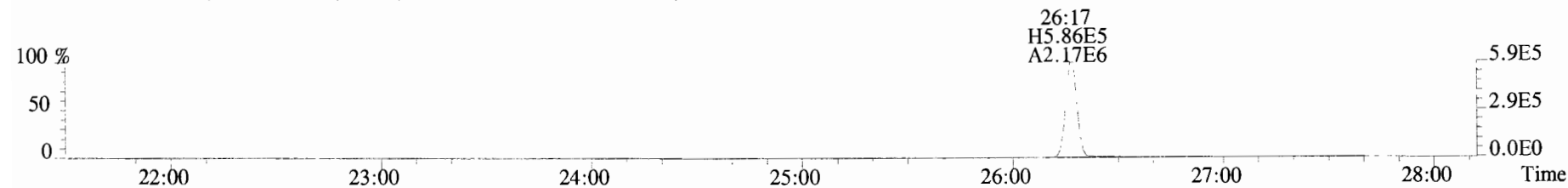
File:191024D2 #1-493 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory_VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



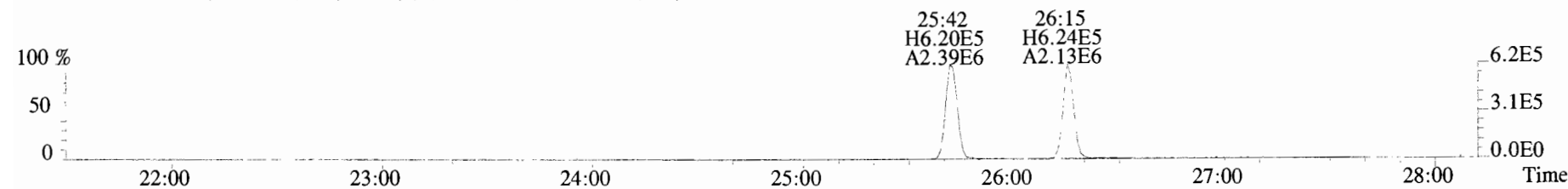
321.8936 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



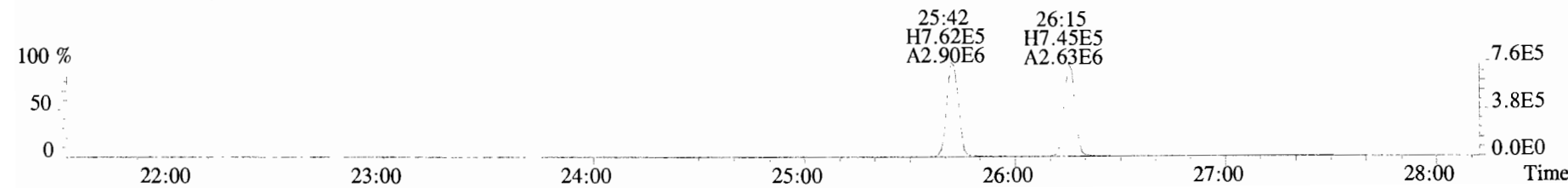
327.8847 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



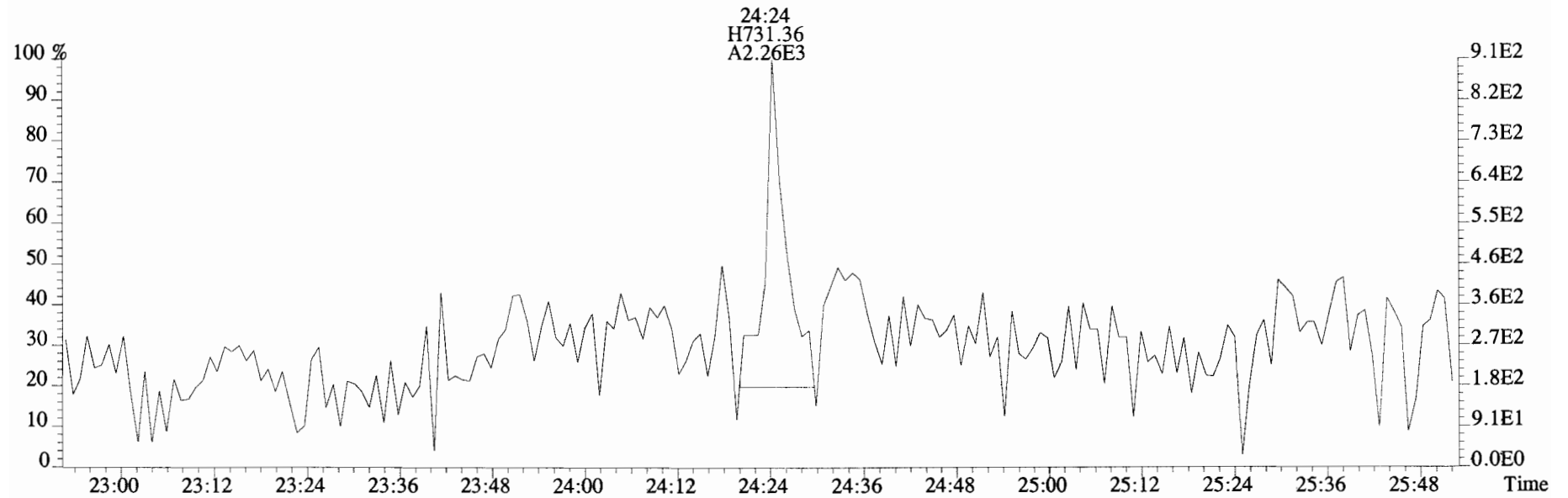
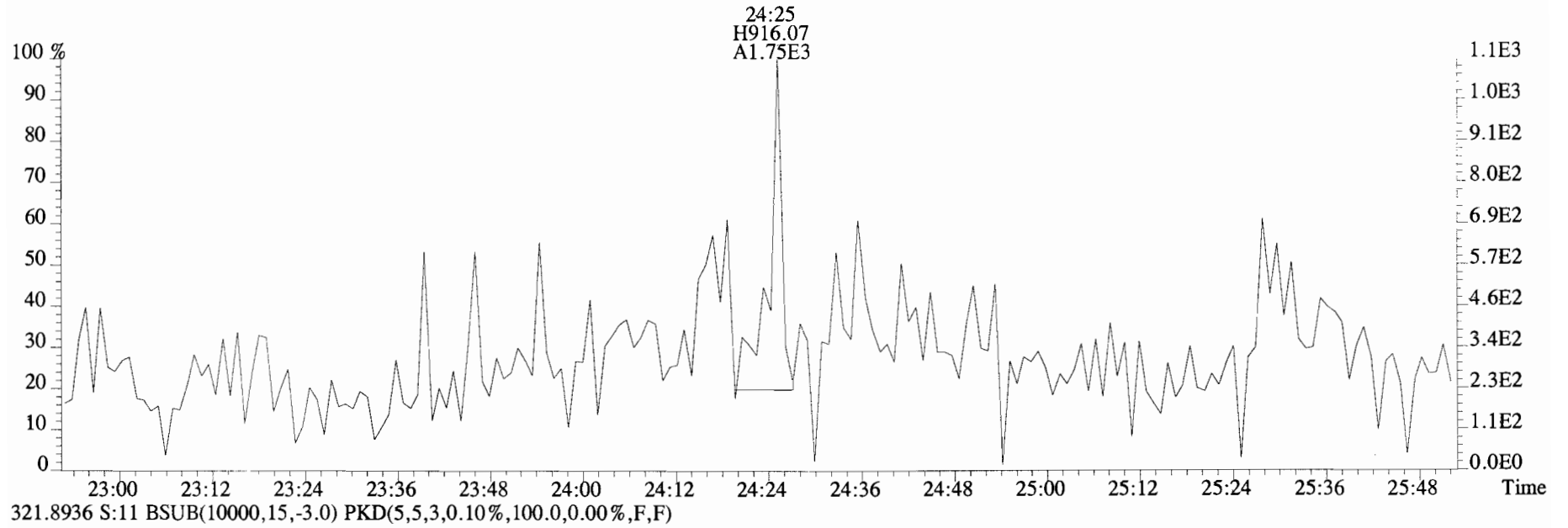
331.9368 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



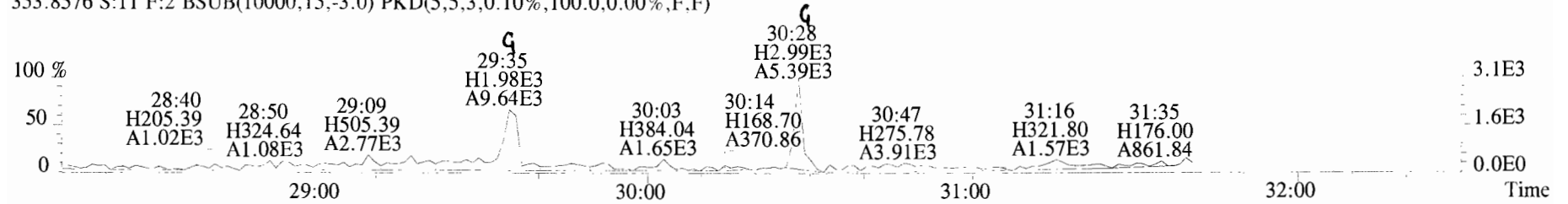
333.9339 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



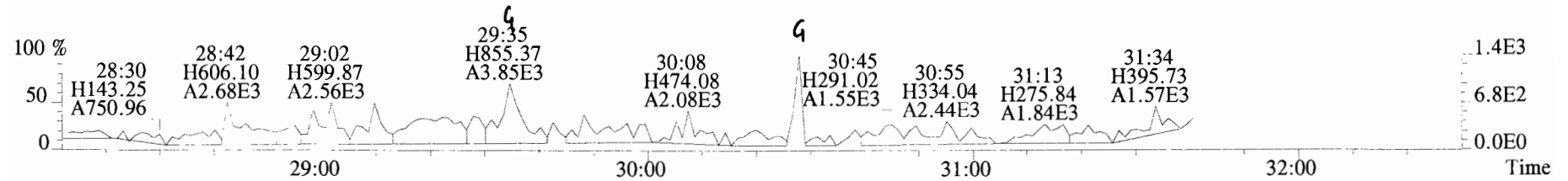
File:191024D2 #1-493 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



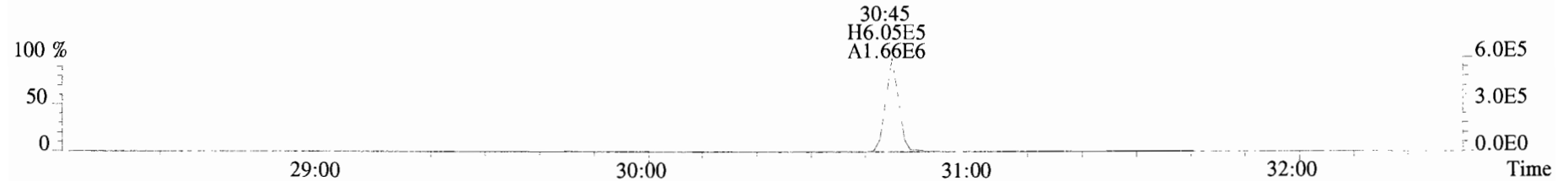
File:191024D2 #1-211 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
353.8576 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



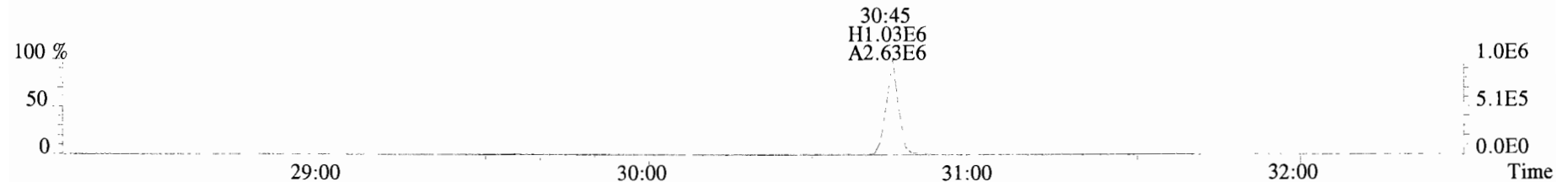
355.8546 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



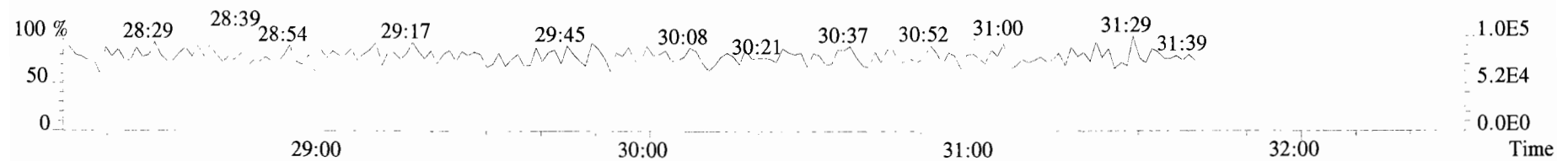
365.8978 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



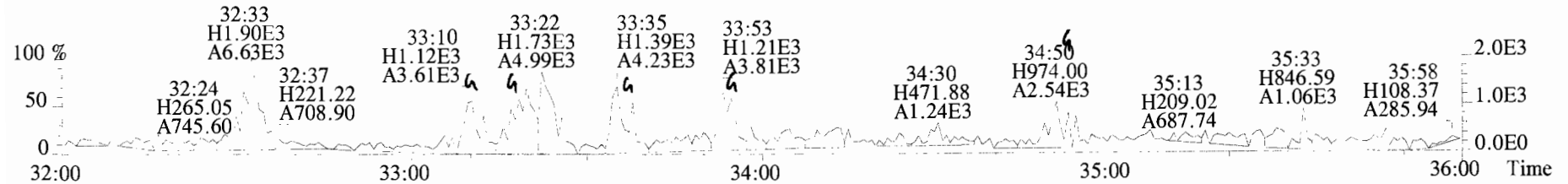
367.8949 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



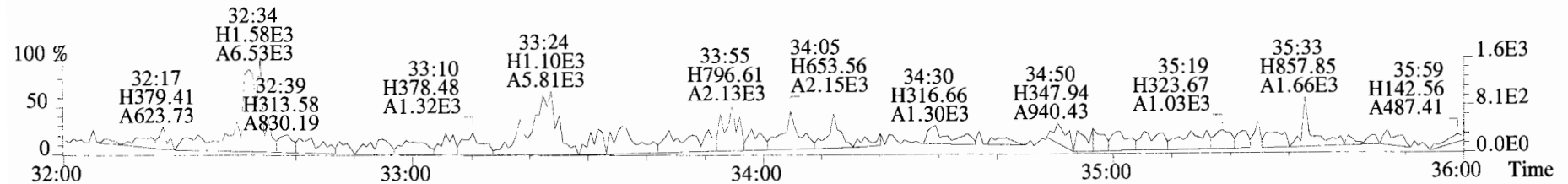
366.9792 S:11 F:2



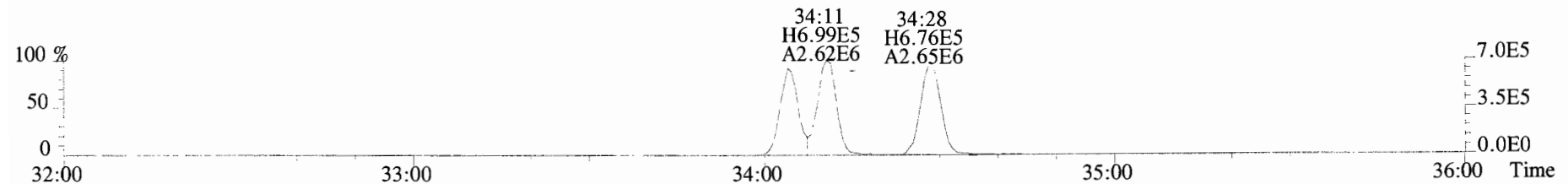
File:191024D2 #1-385 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text: Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
 389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



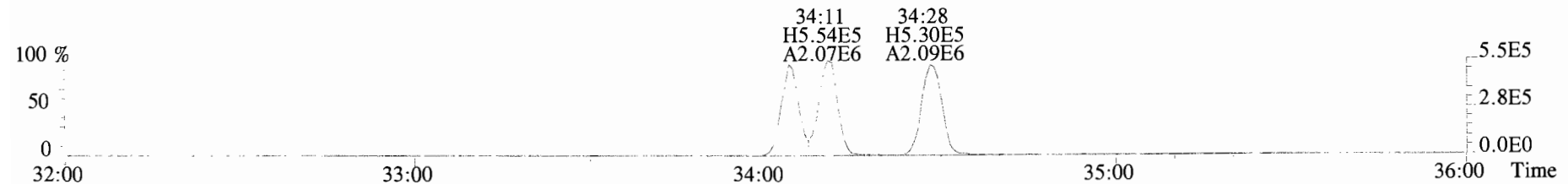
391.8127 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



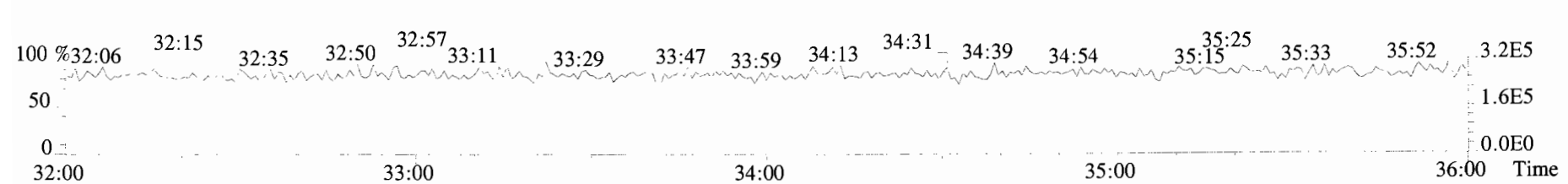
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



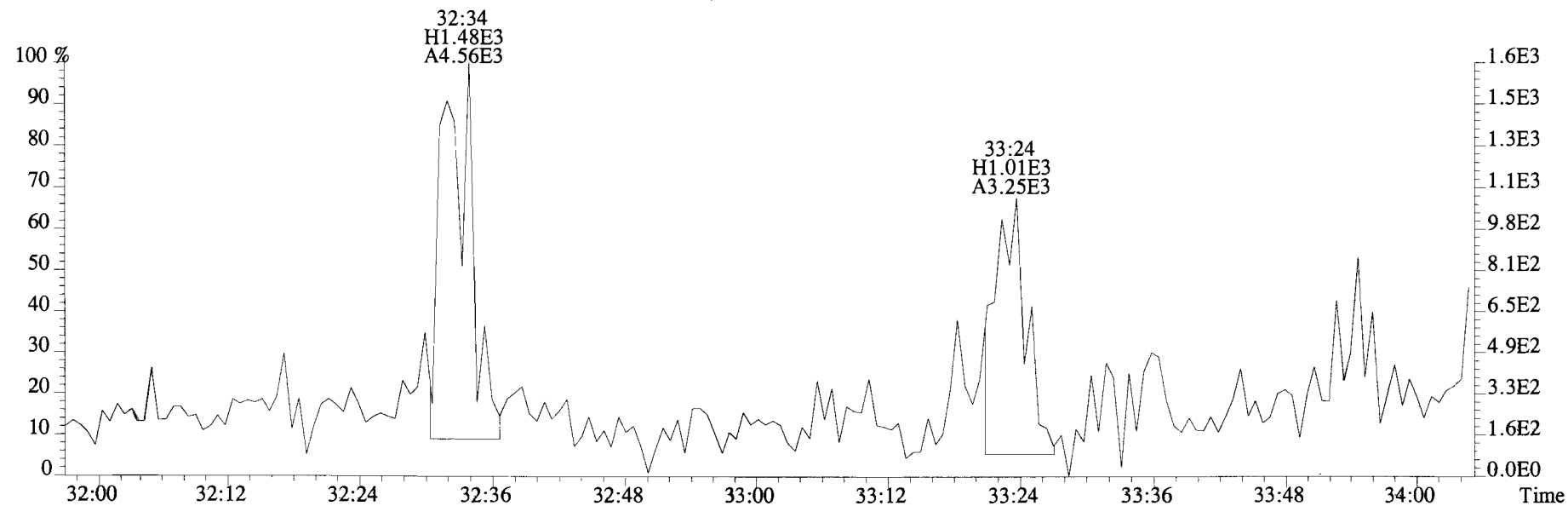
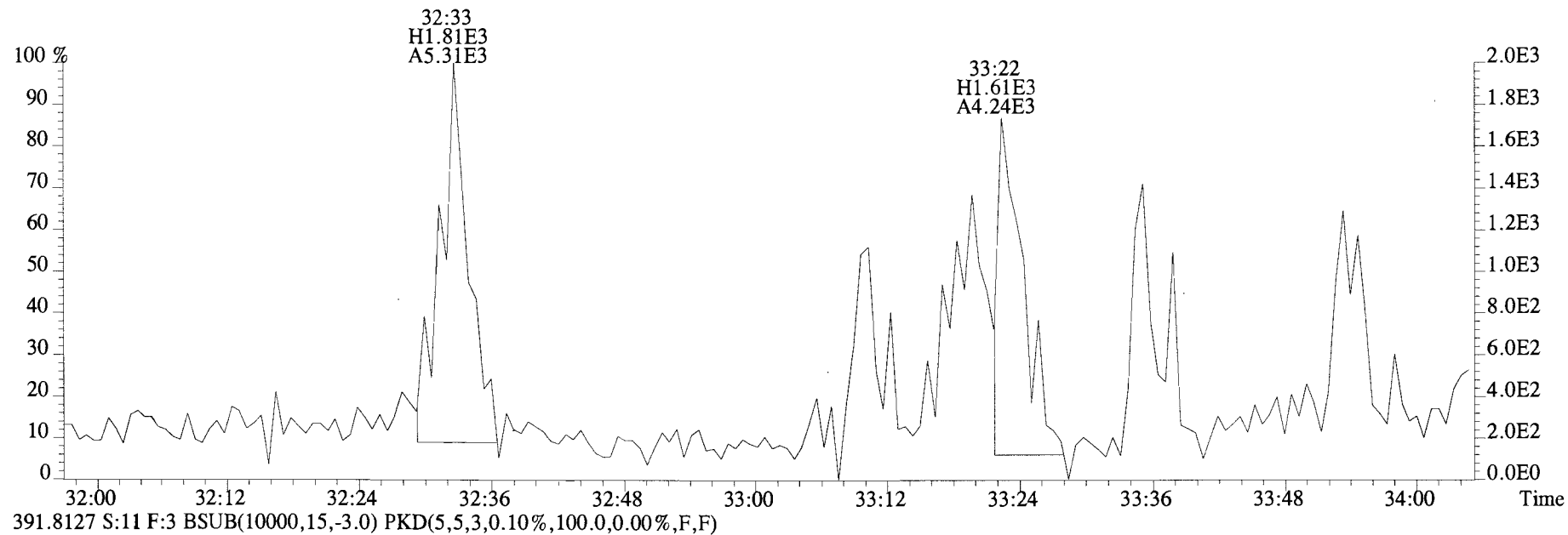
403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



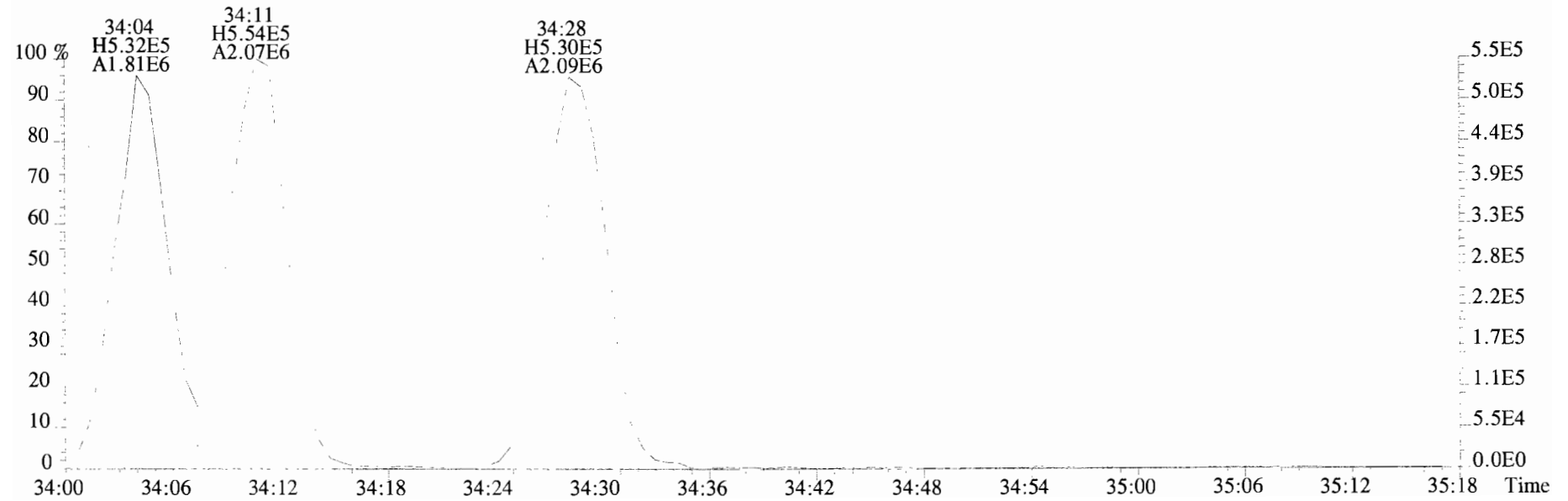
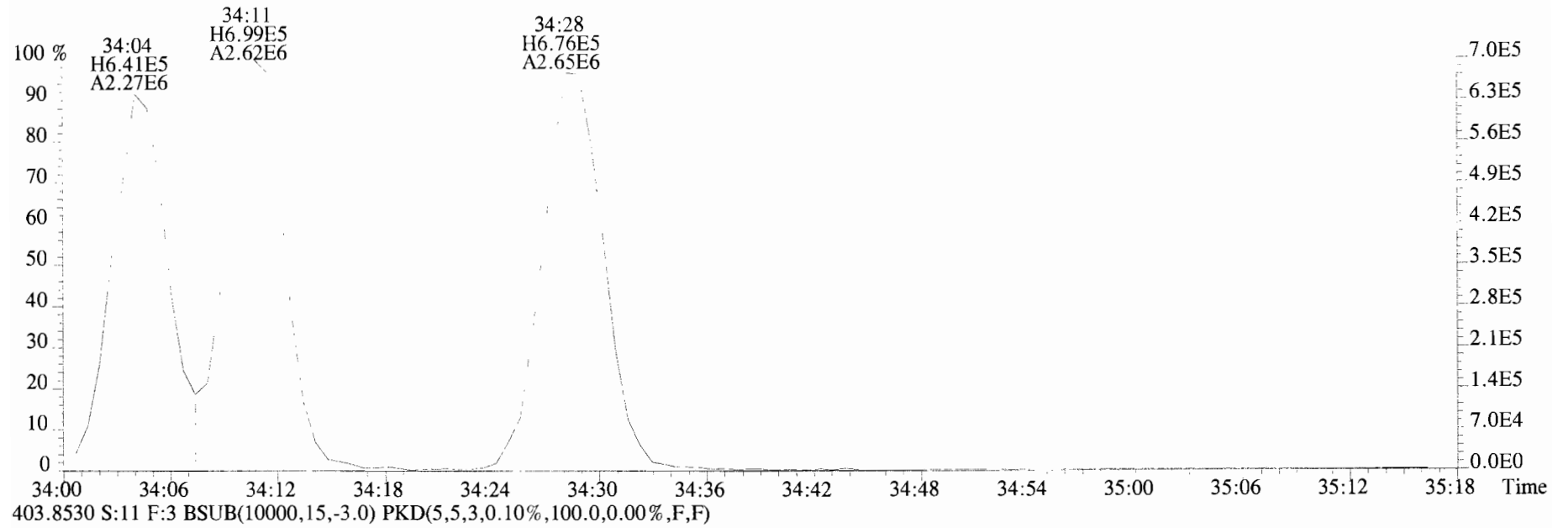
392.9760 S:11 F:3



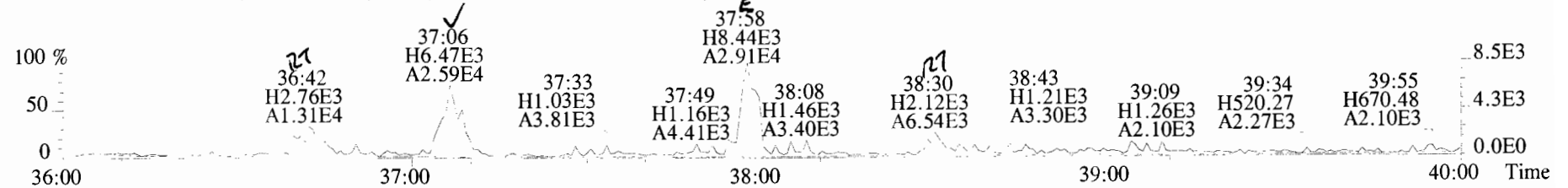
File:191024D2 #1-385 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



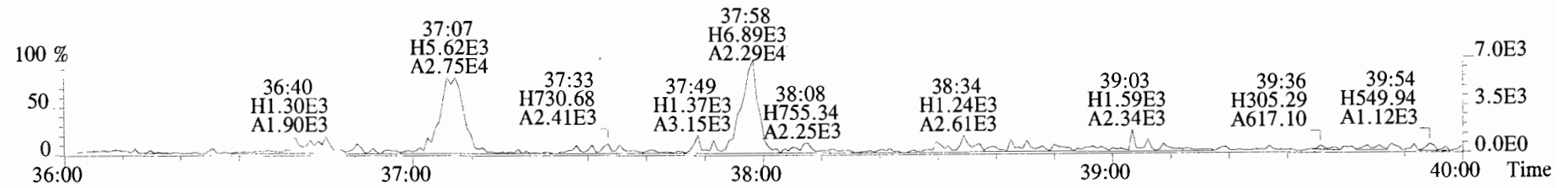
File:191024D2 #1-385 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory_VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



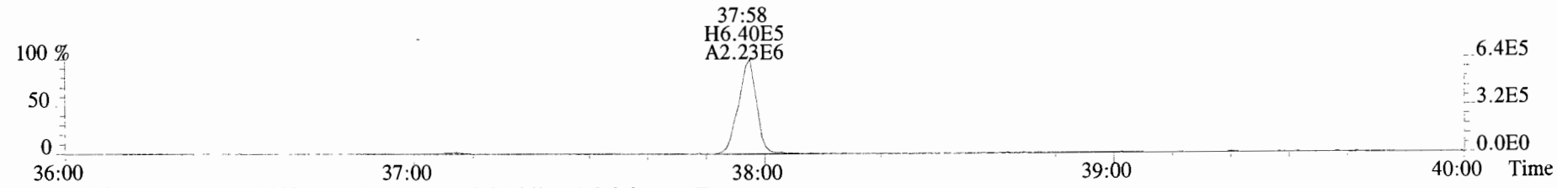
File:191024D2 #1-356 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



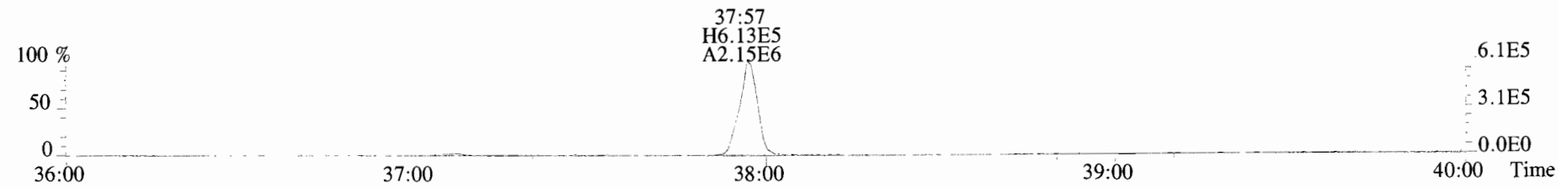
425.7737 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



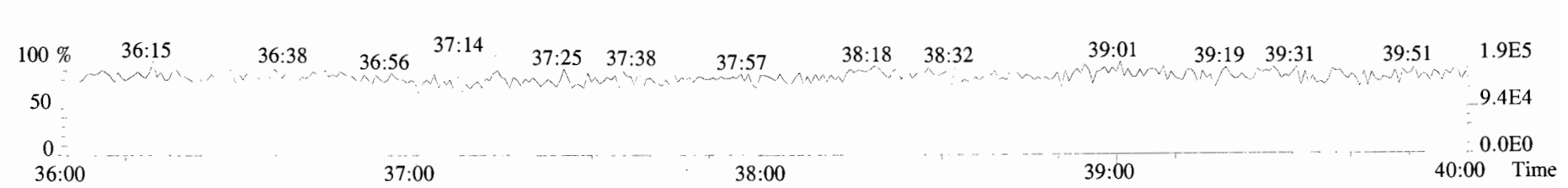
435.8169 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



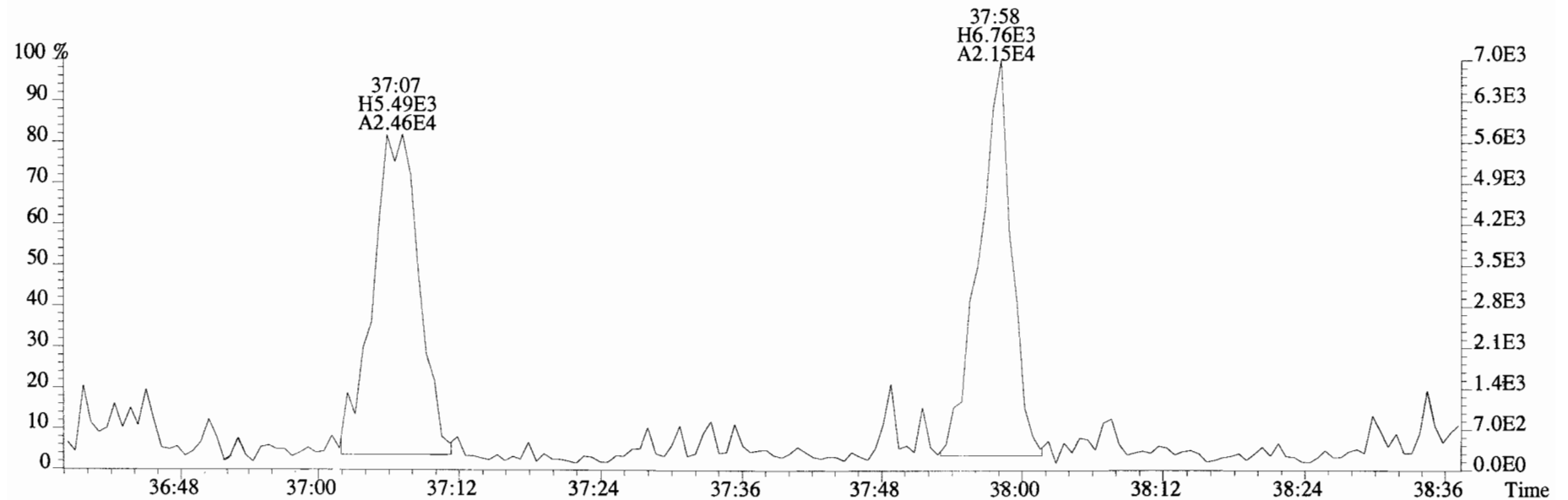
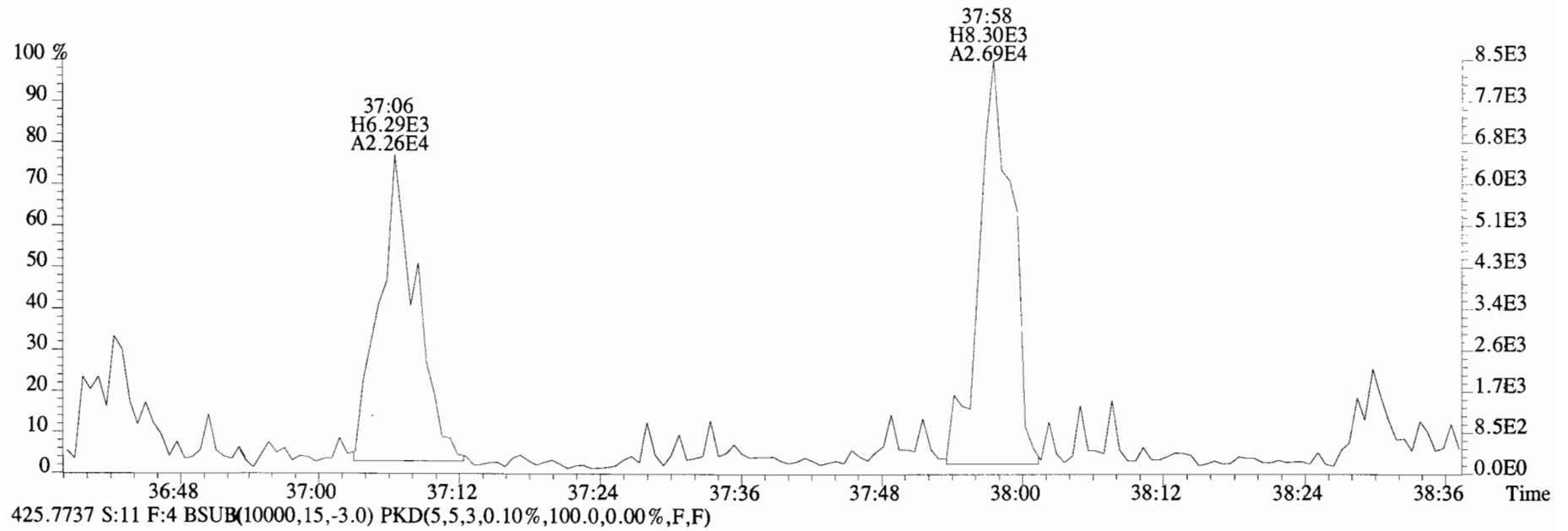
437.8140 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



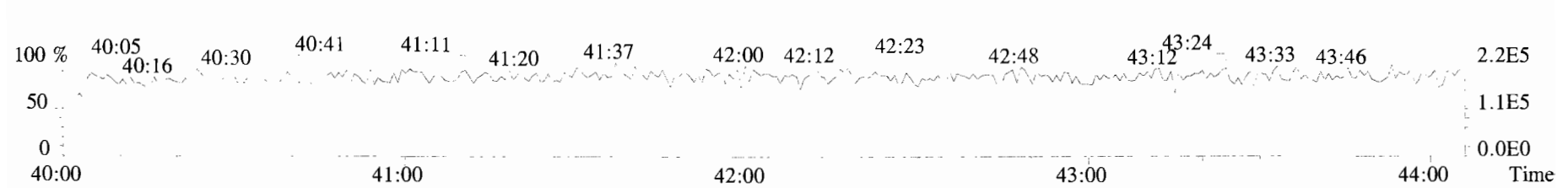
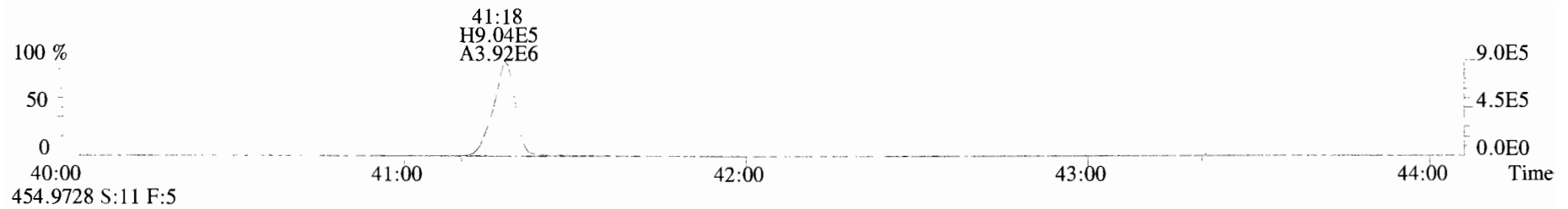
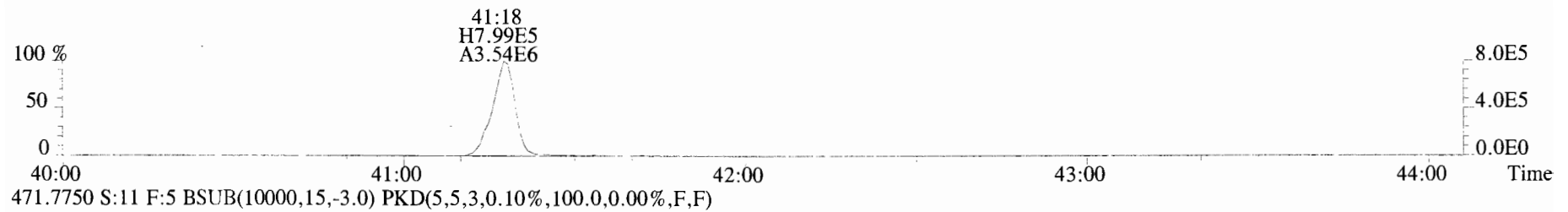
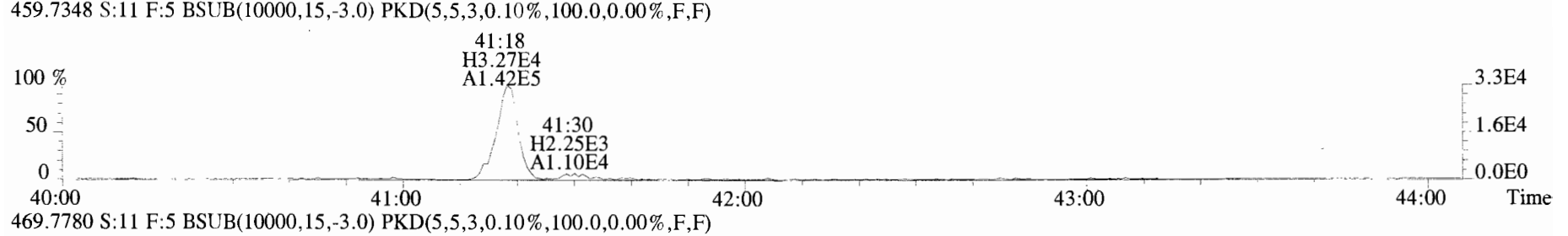
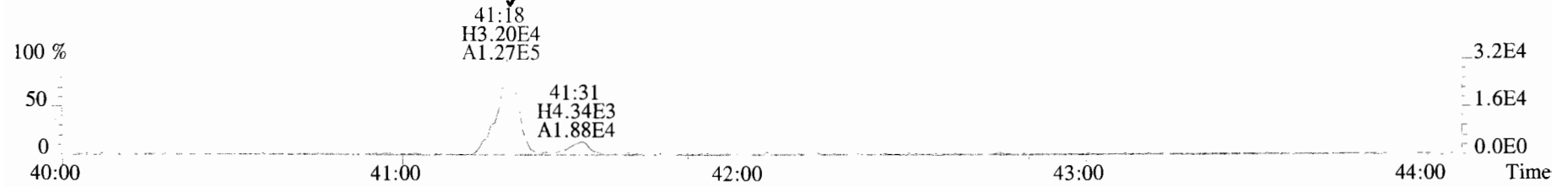
454.9728 S:11 F:4



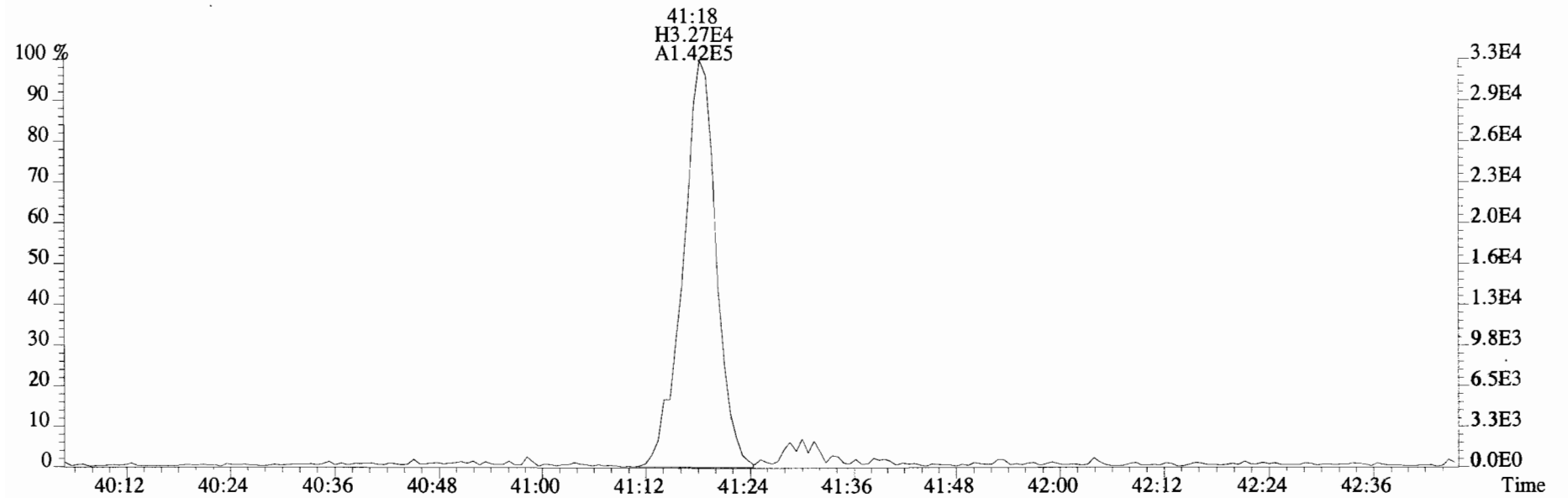
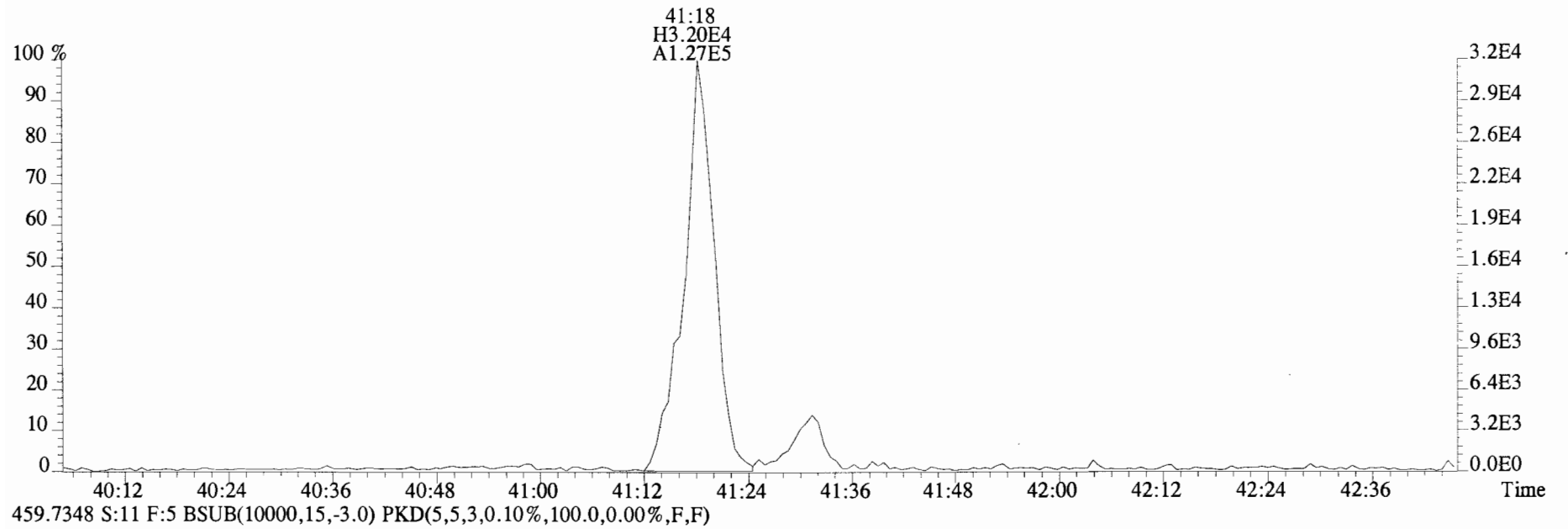
File:191024D2 #1-356 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



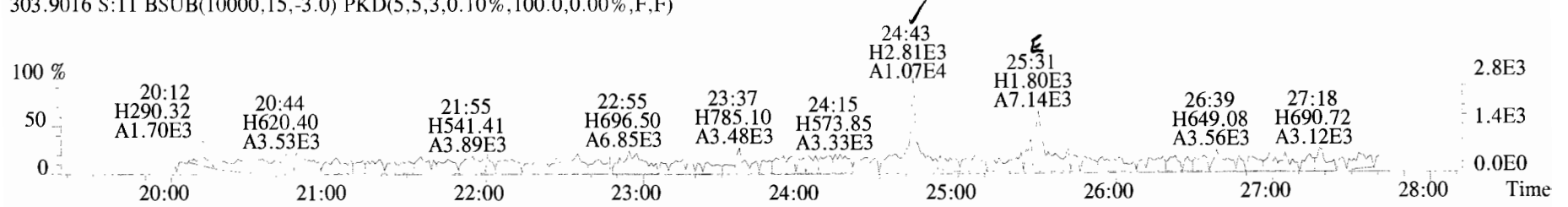
File:191024D2 #1-432 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



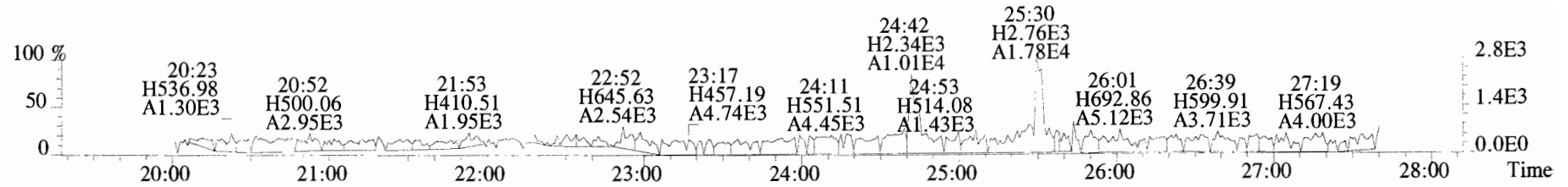
File:191024D2 #1-432 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



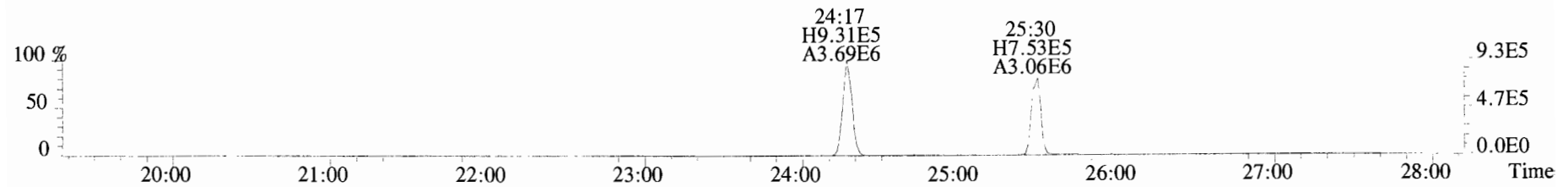
File:191024D2 #1-493 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory_VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
 303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



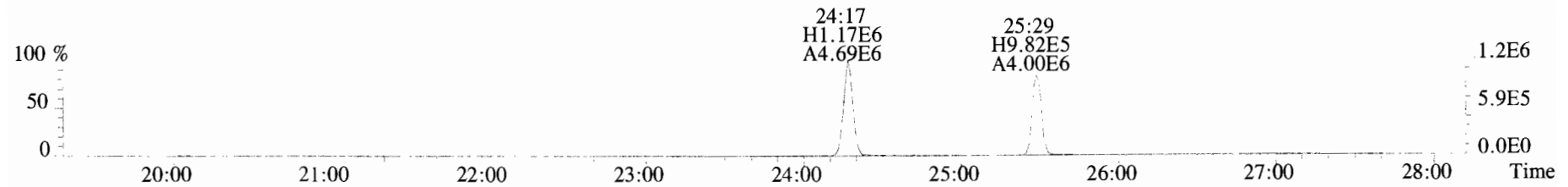
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



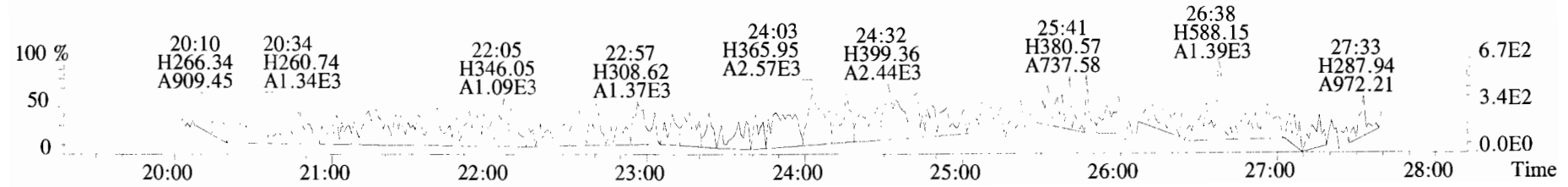
315.9419 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



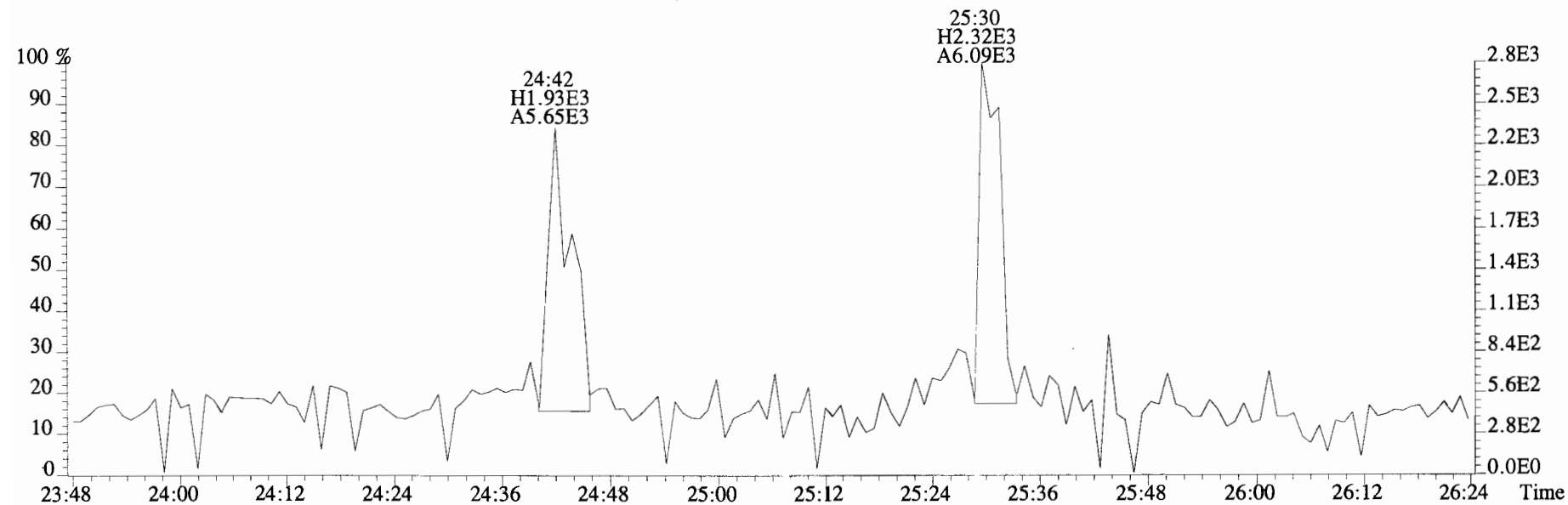
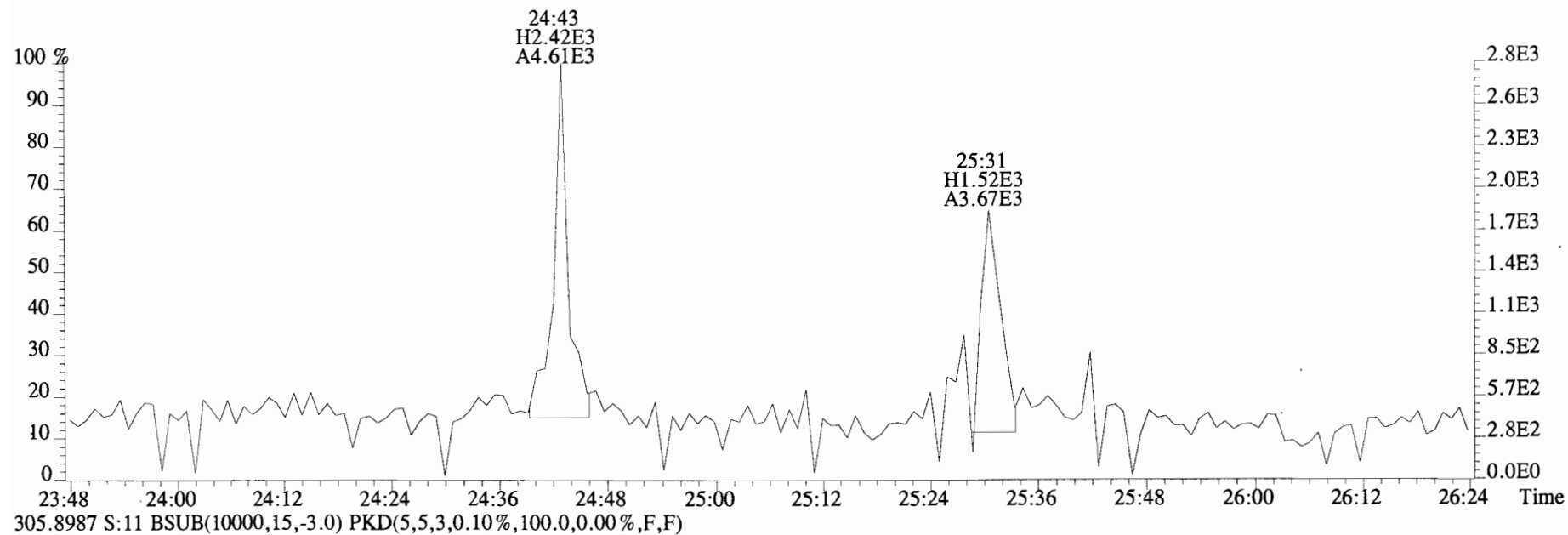
317.9389 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



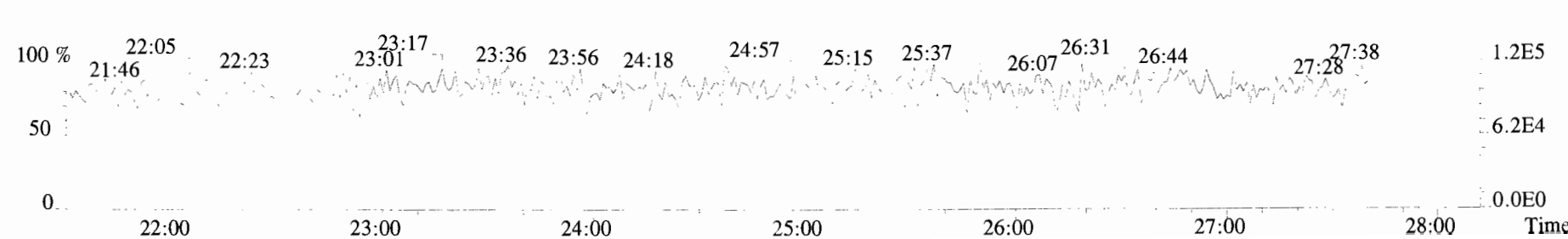
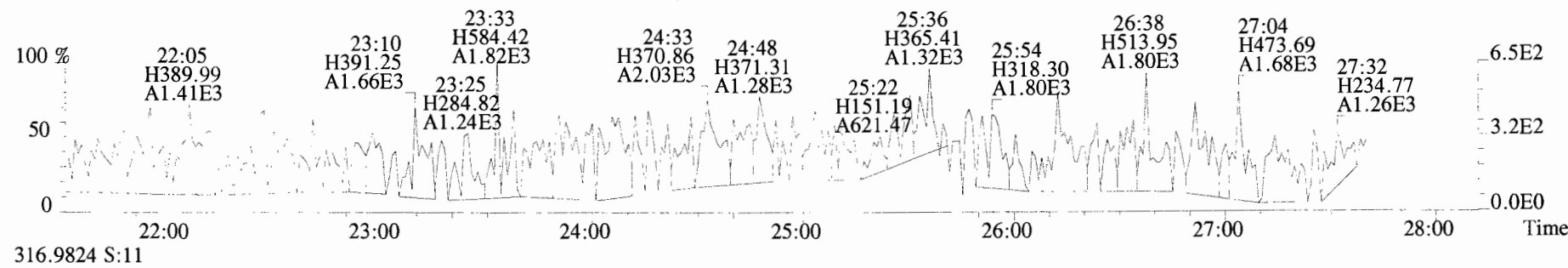
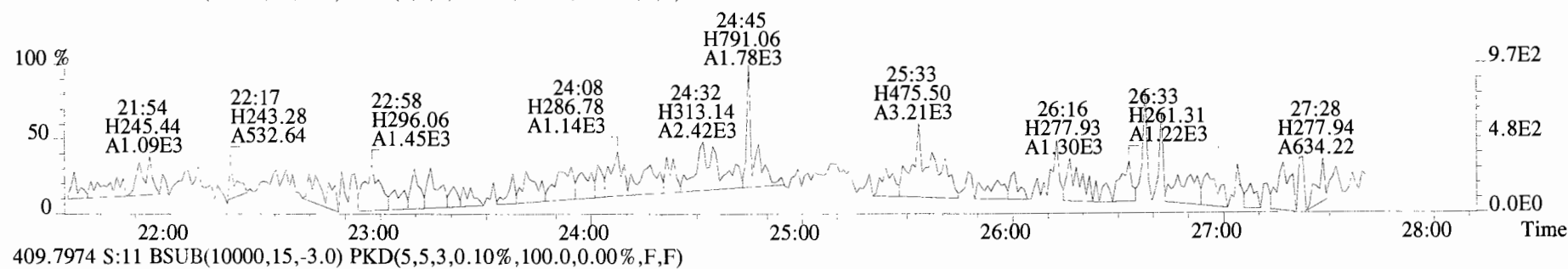
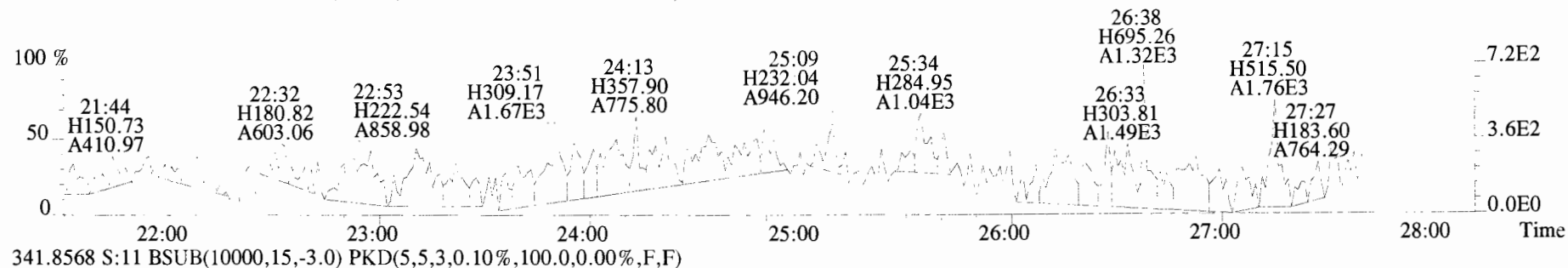
375.8364 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



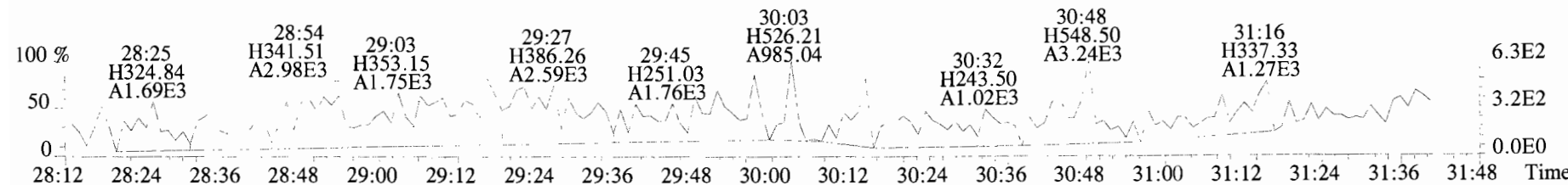
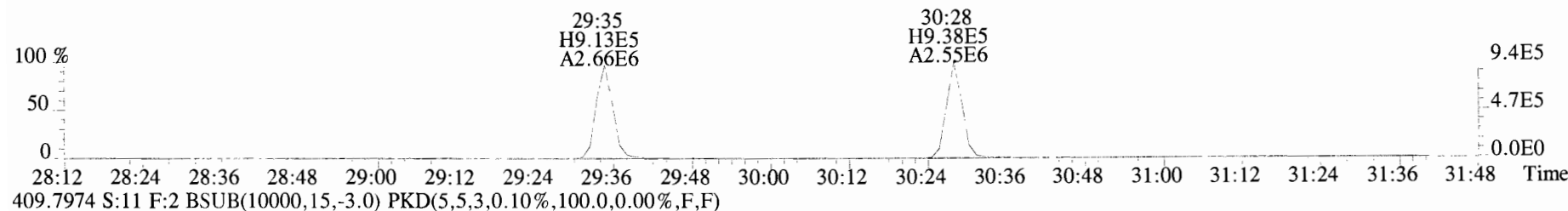
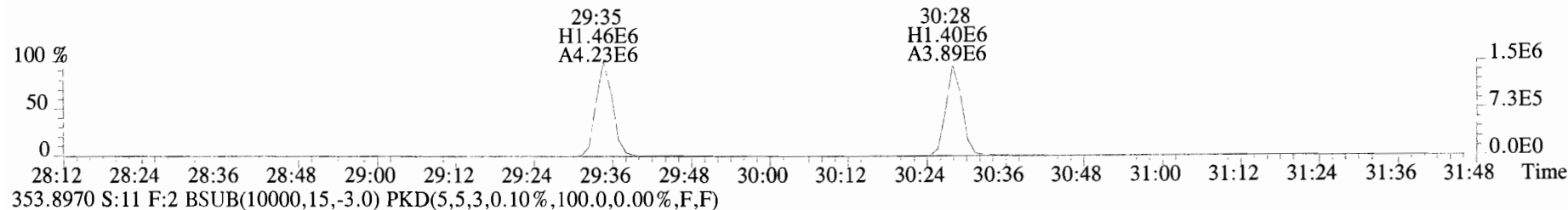
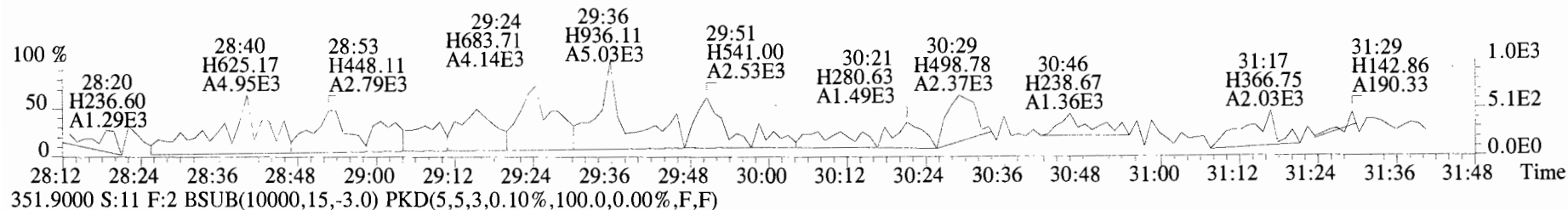
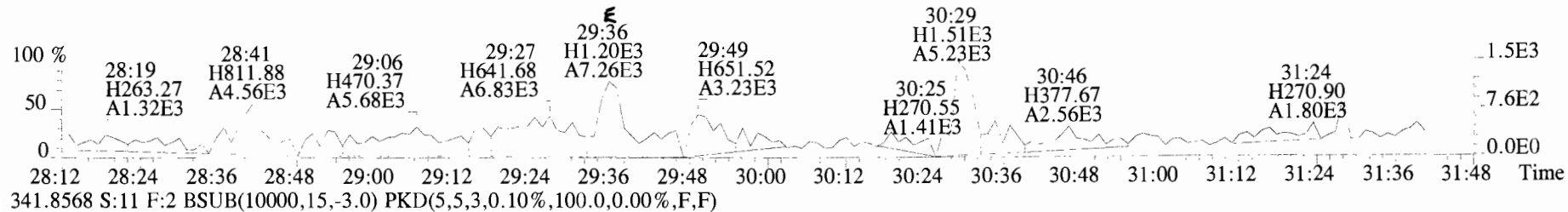
File:191024D2 #1-493 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



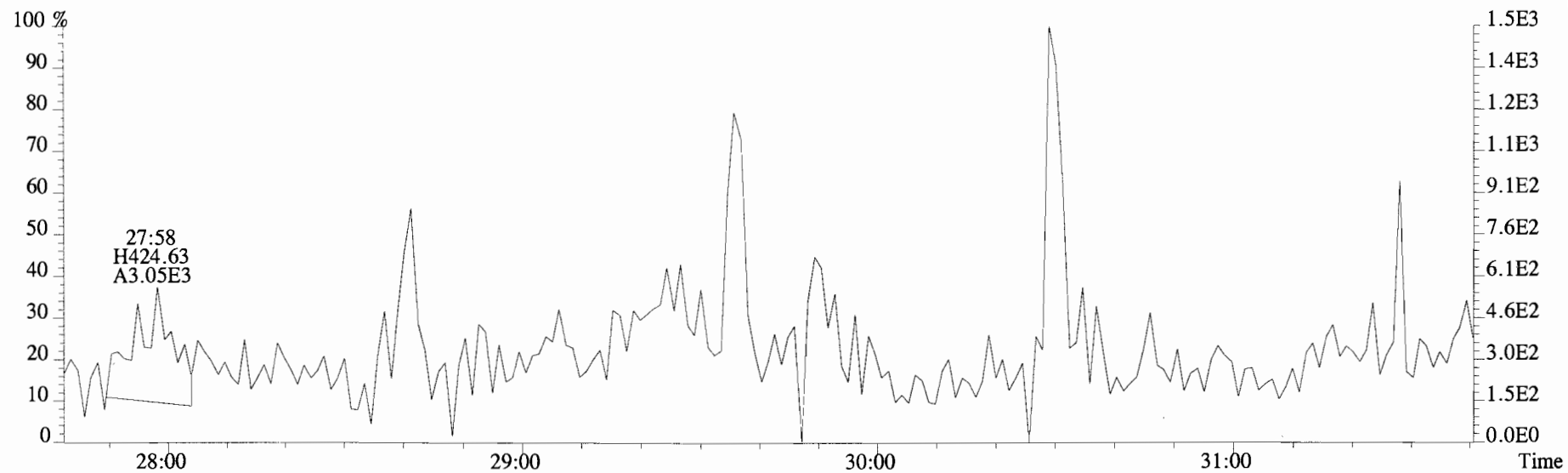
File:191024D2 #1-493 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
 339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



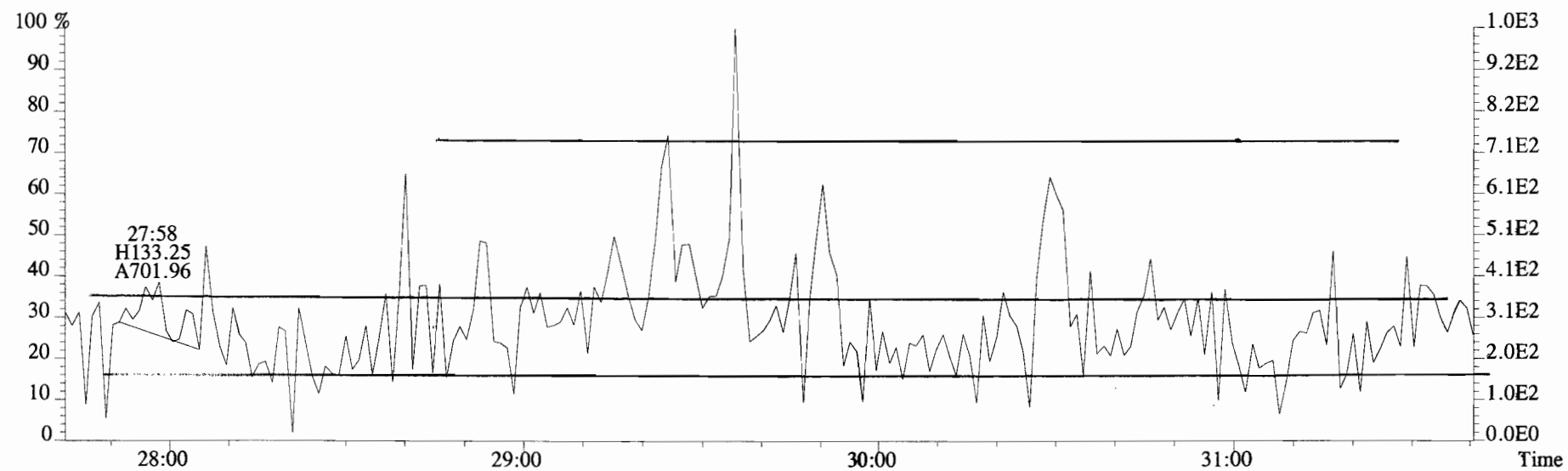
File:191024D2 #1-211 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



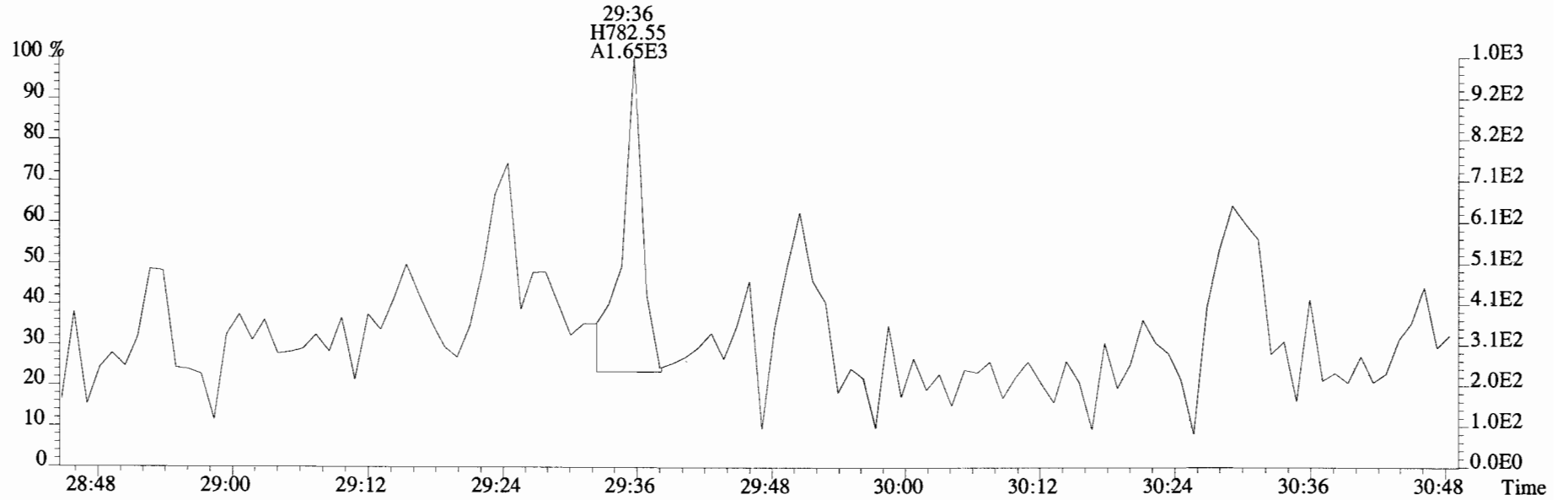
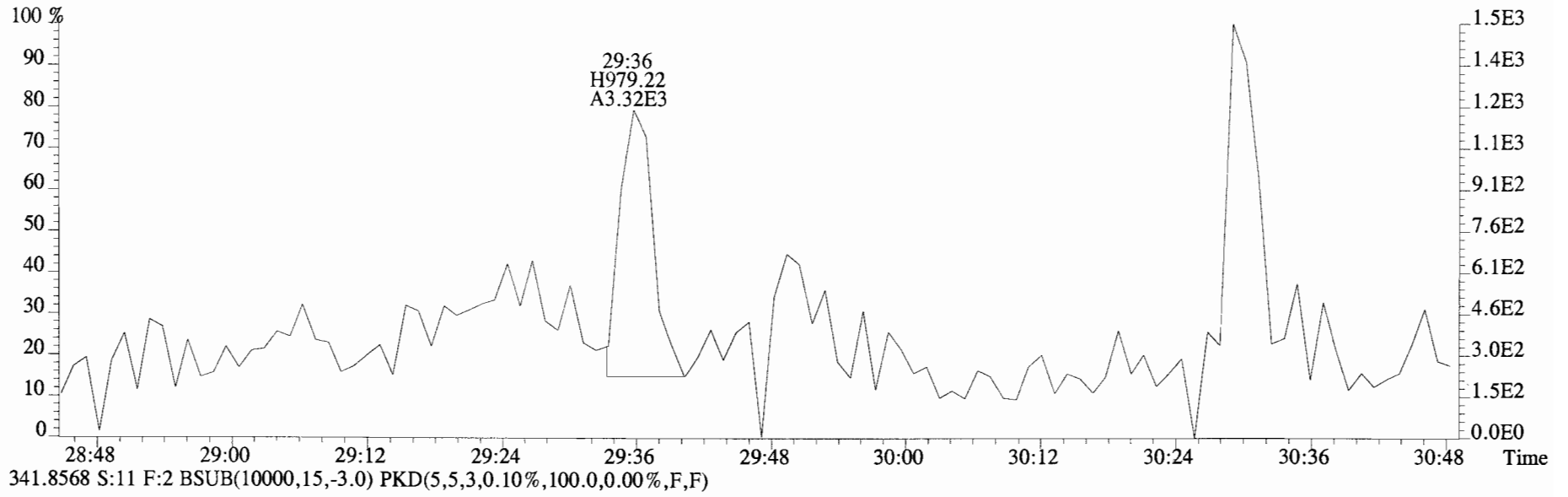
File:191024D2 #1-211 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



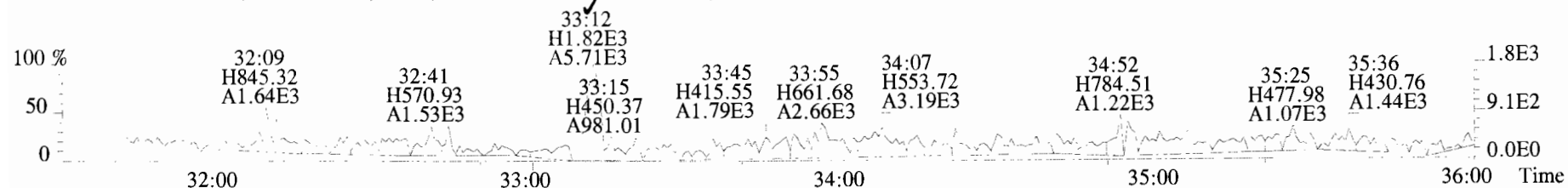
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



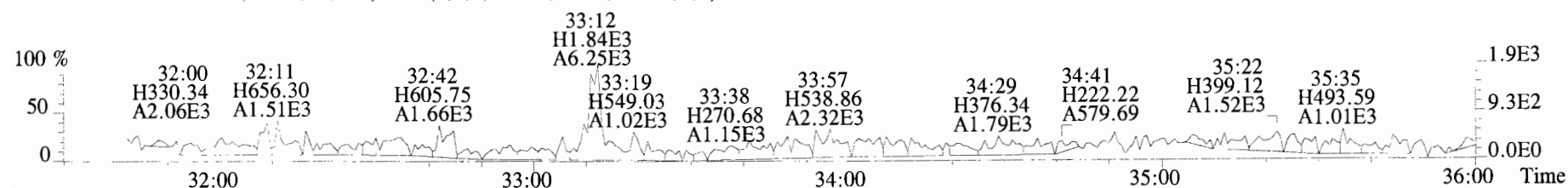
File:191024D2 #1-211 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



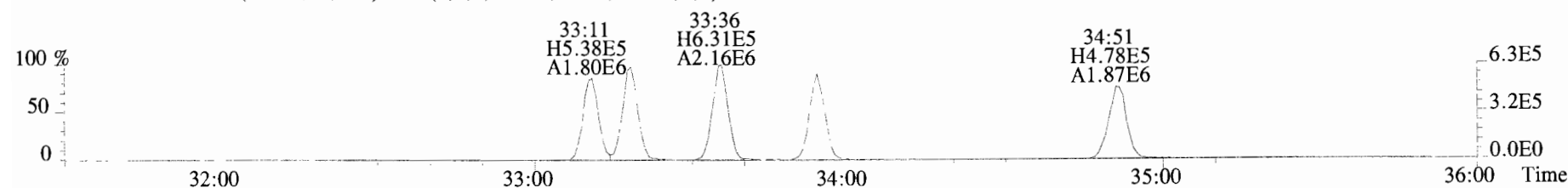
File:191024D2 #1-385 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



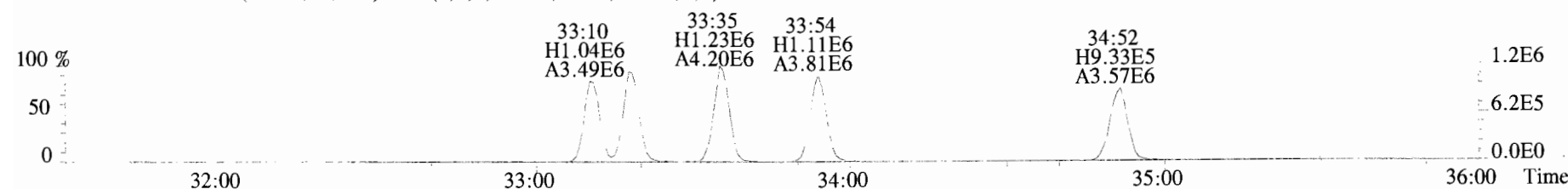
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



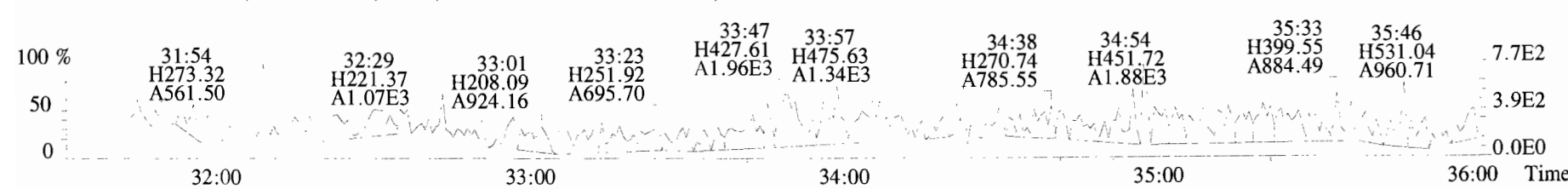
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



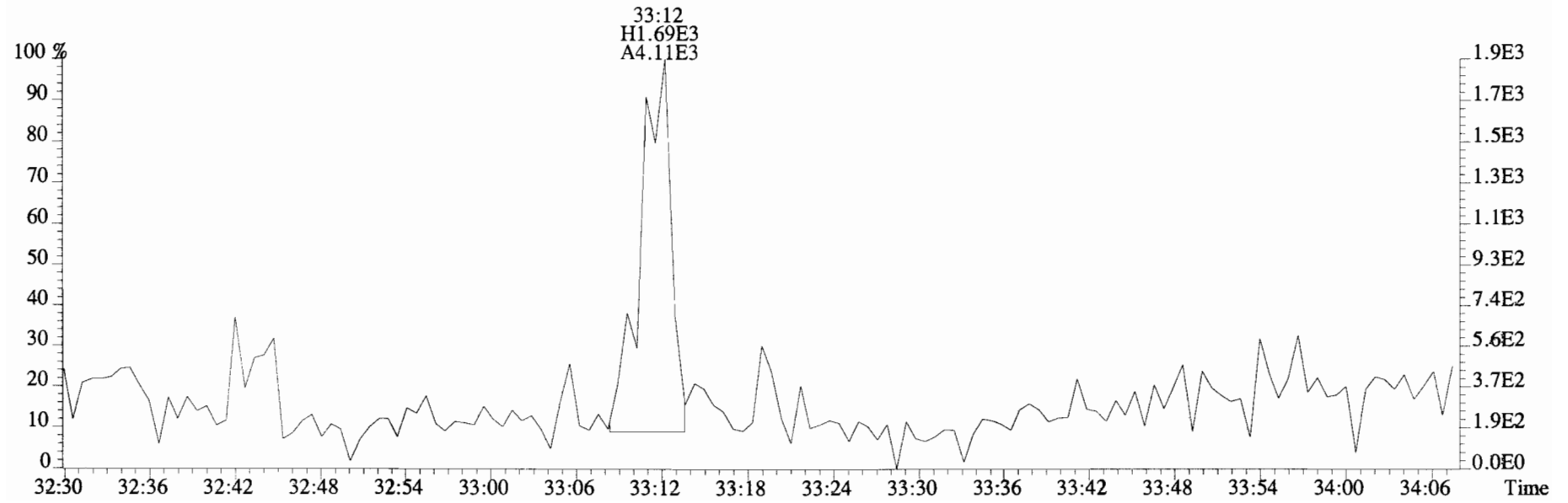
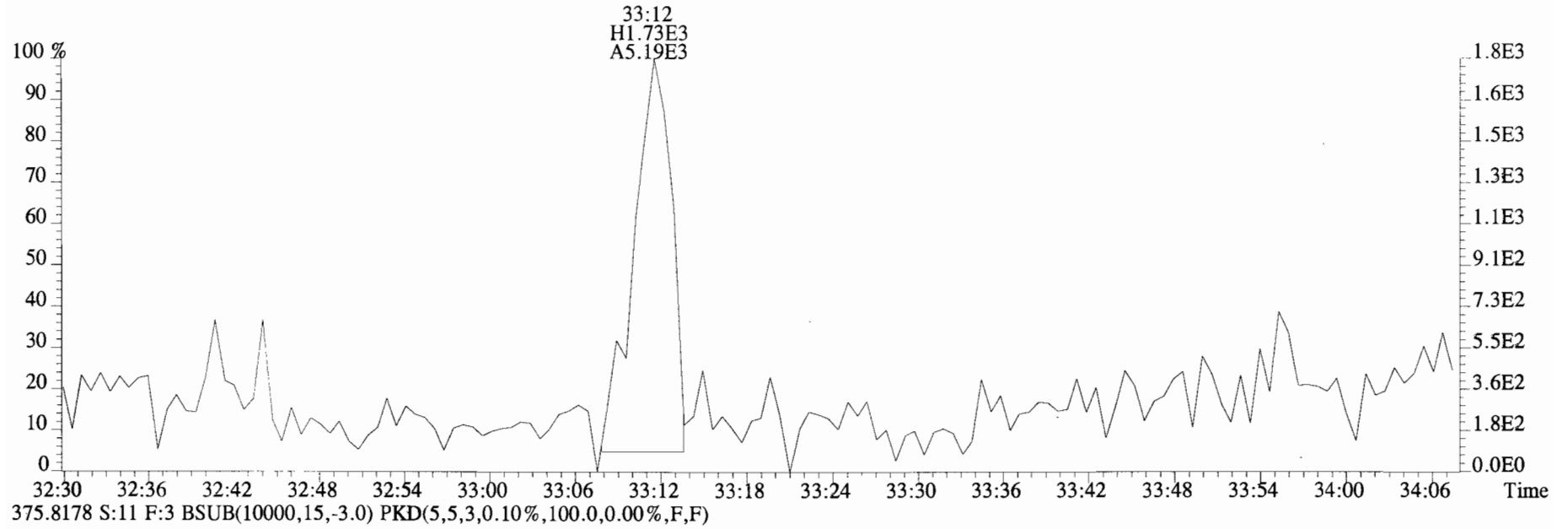
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



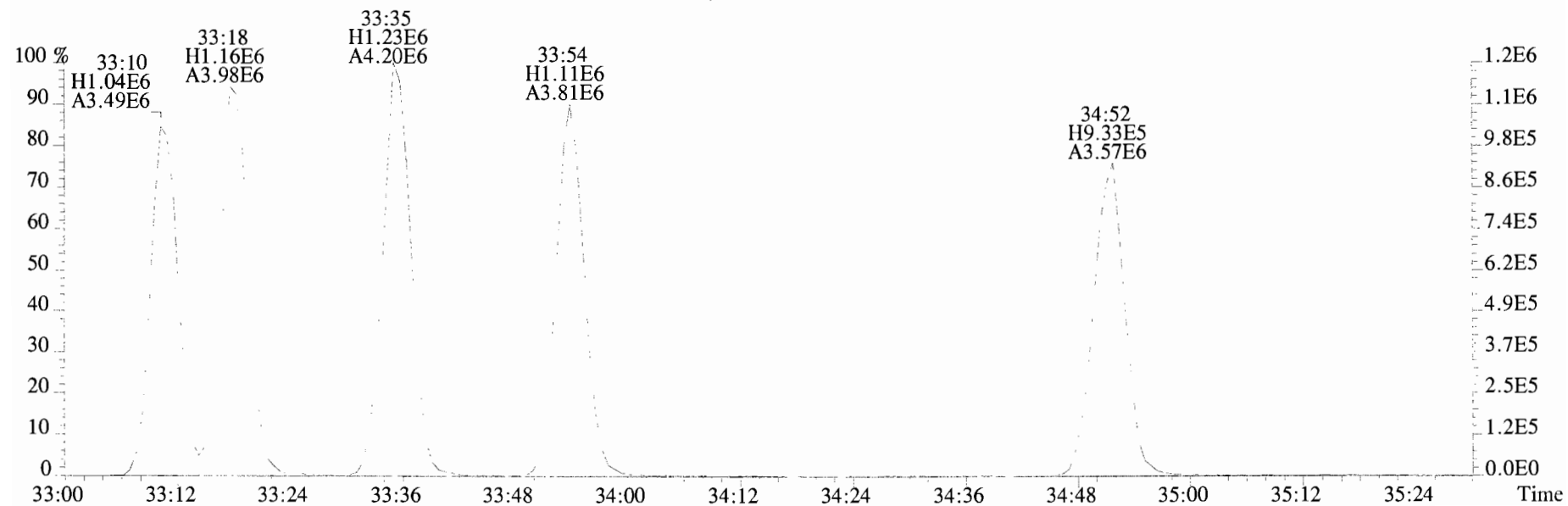
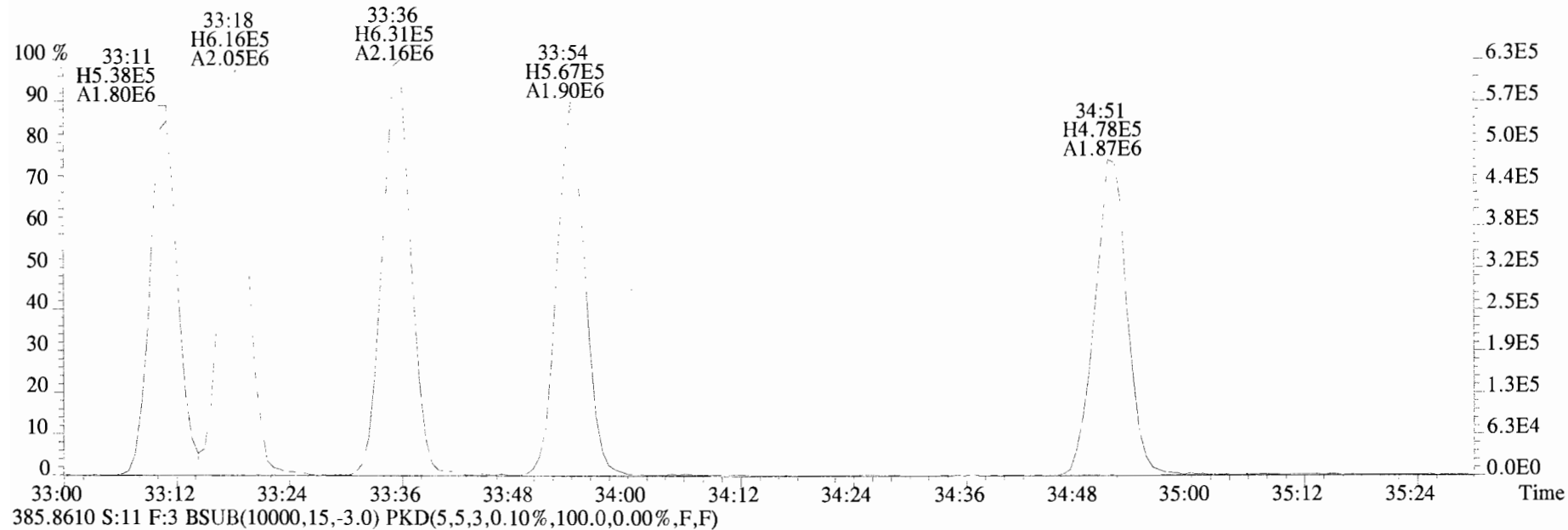
445.7555 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



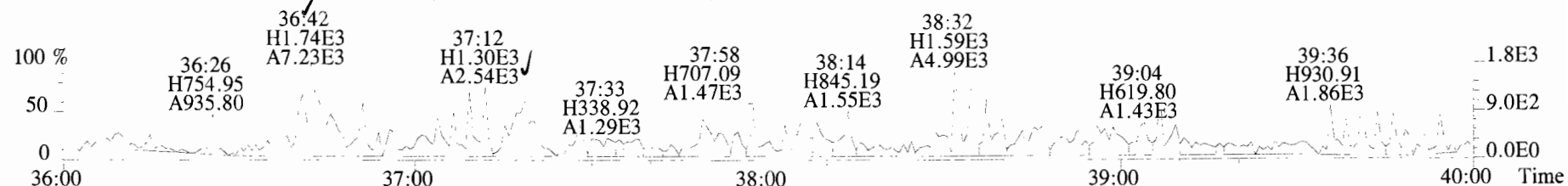
File:191024D2 #1-385 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



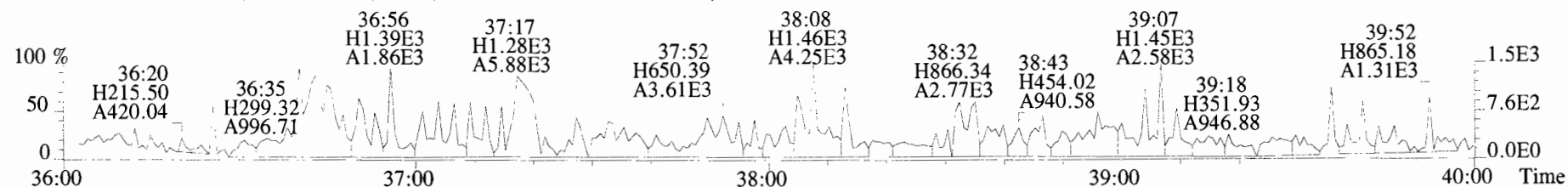
File:191024D2 #1-385 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory_VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F)



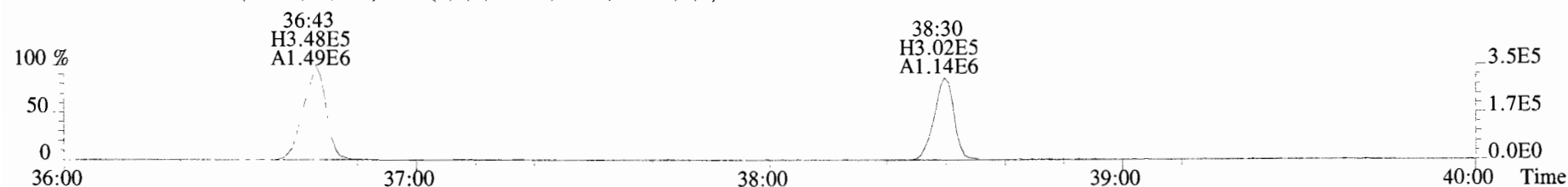
File:191024D2 #1-356 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



409.7788 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



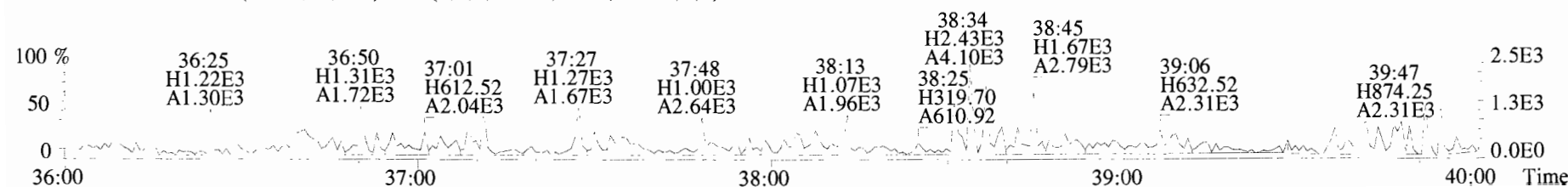
417.8253 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



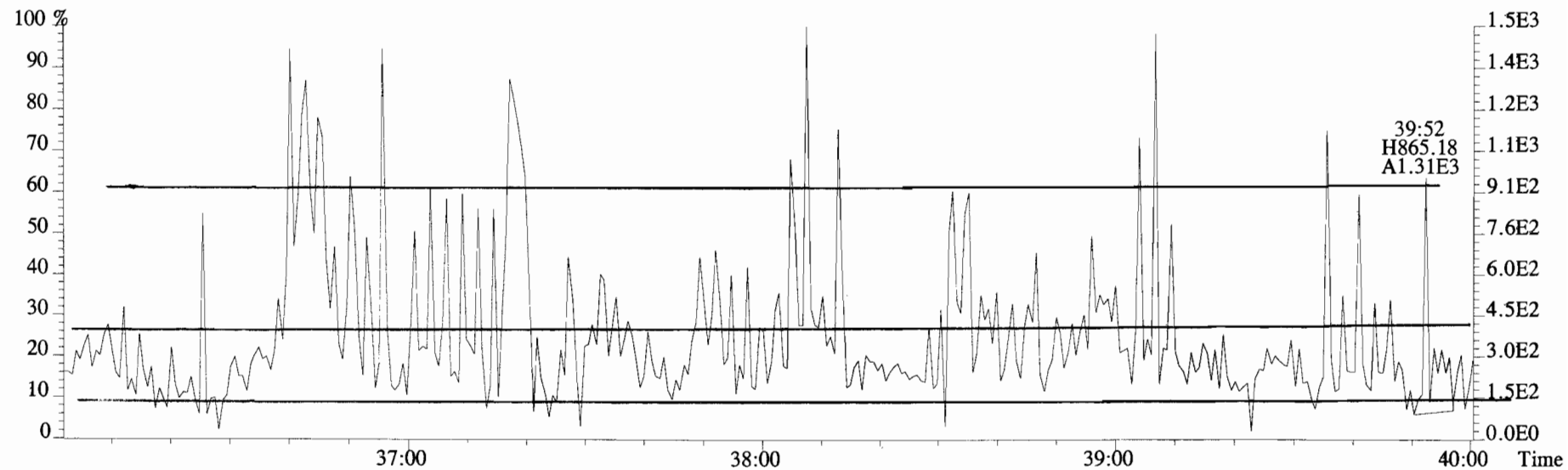
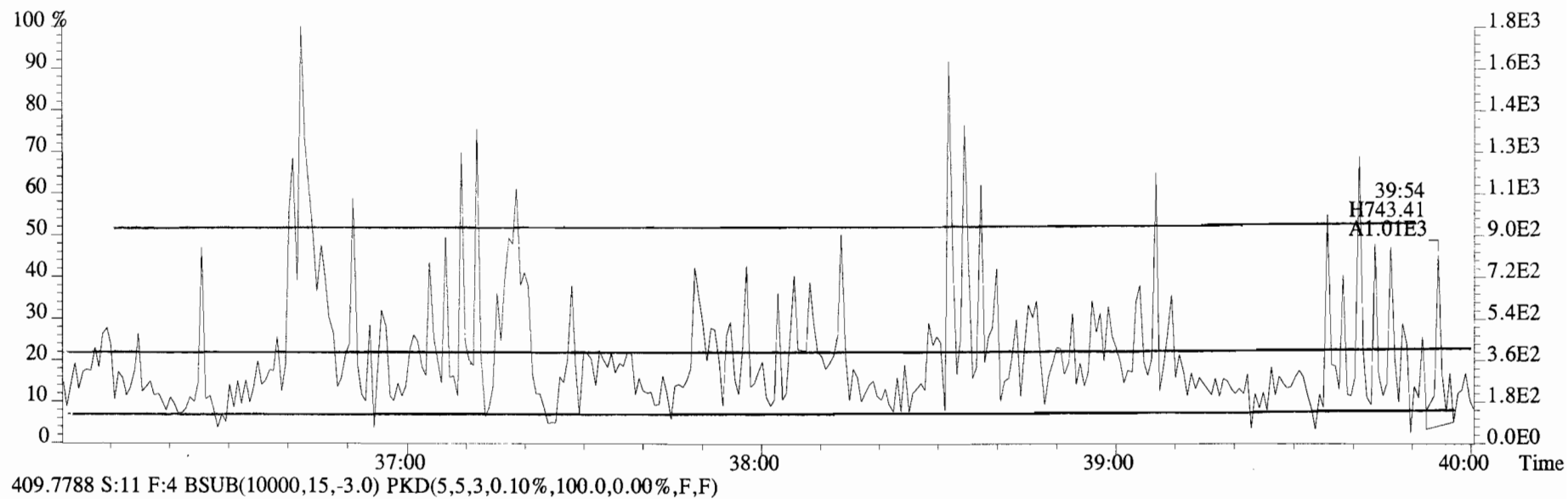
419.8220 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



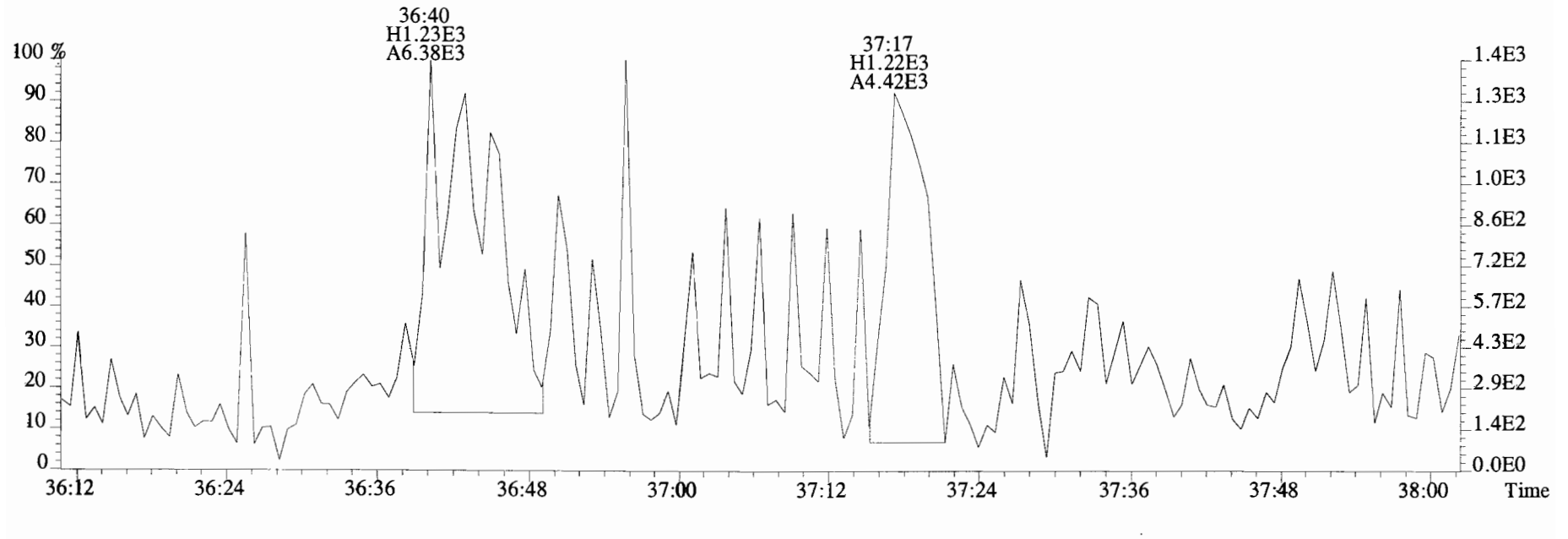
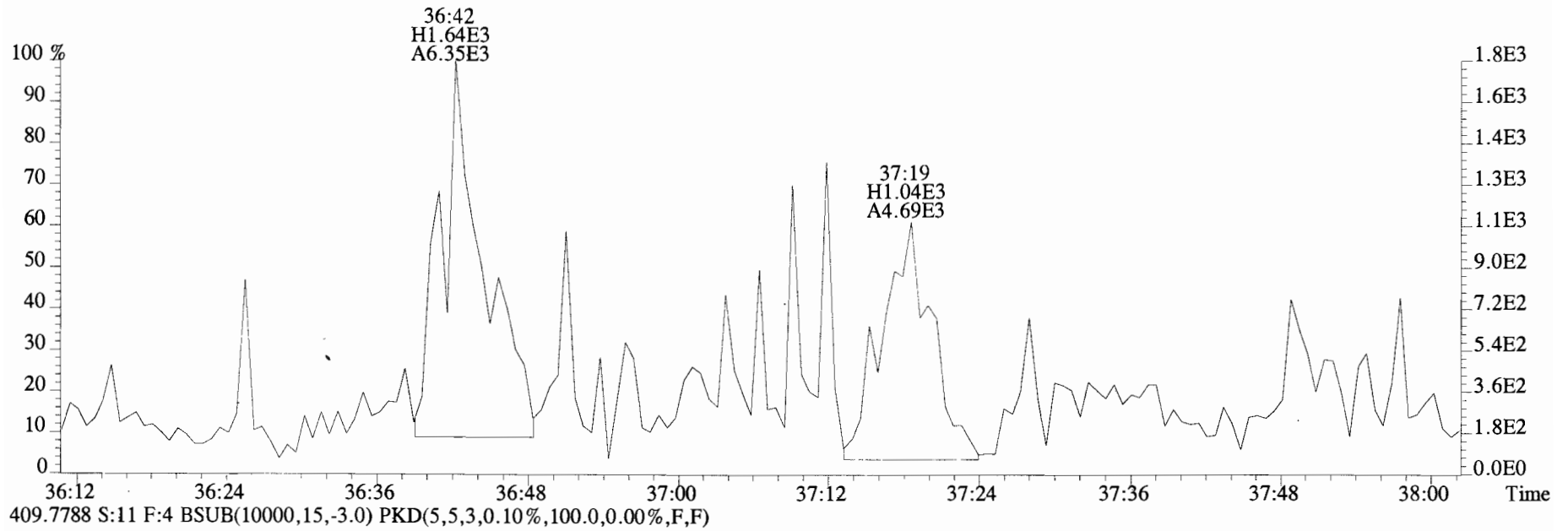
479.7165 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



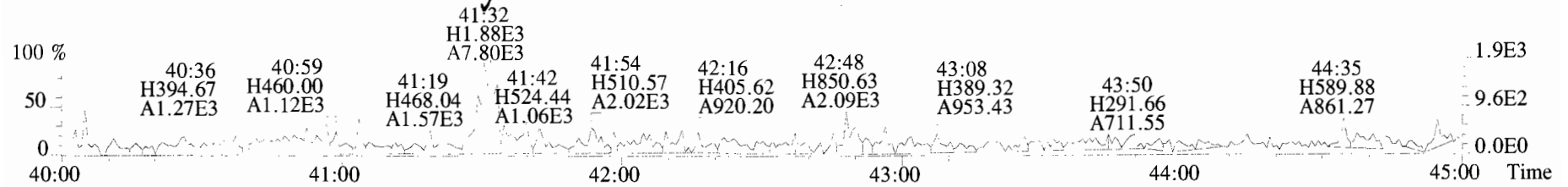
File:191024D2 #1-356 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



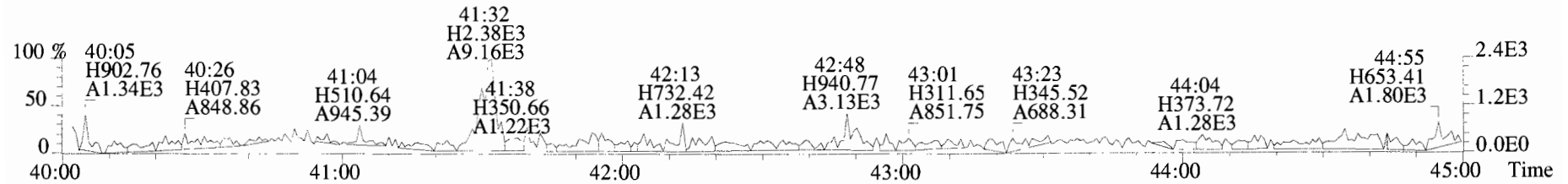
File:191024D2 #1-356 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
407.7818 S:11 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



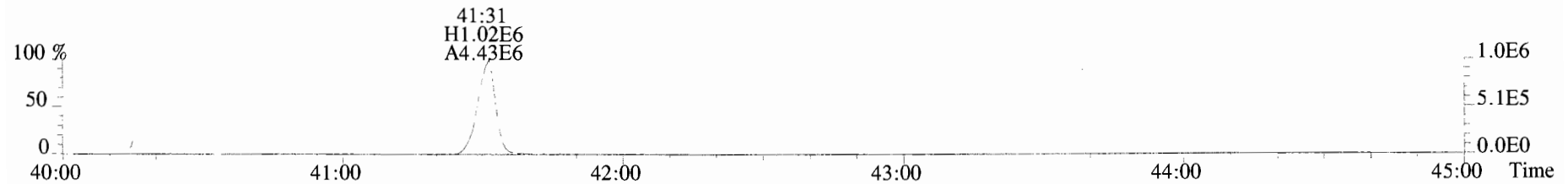
File:191024D2 #1-432 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory_VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



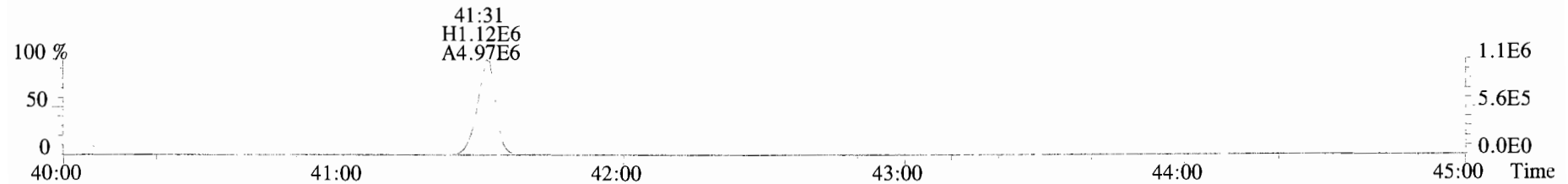
443.7398 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



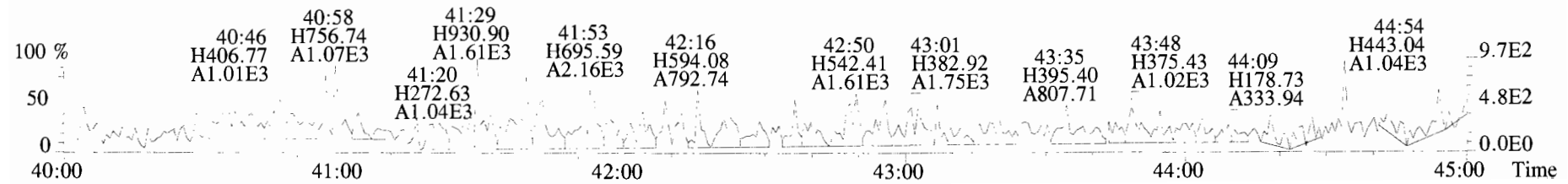
453.7831 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



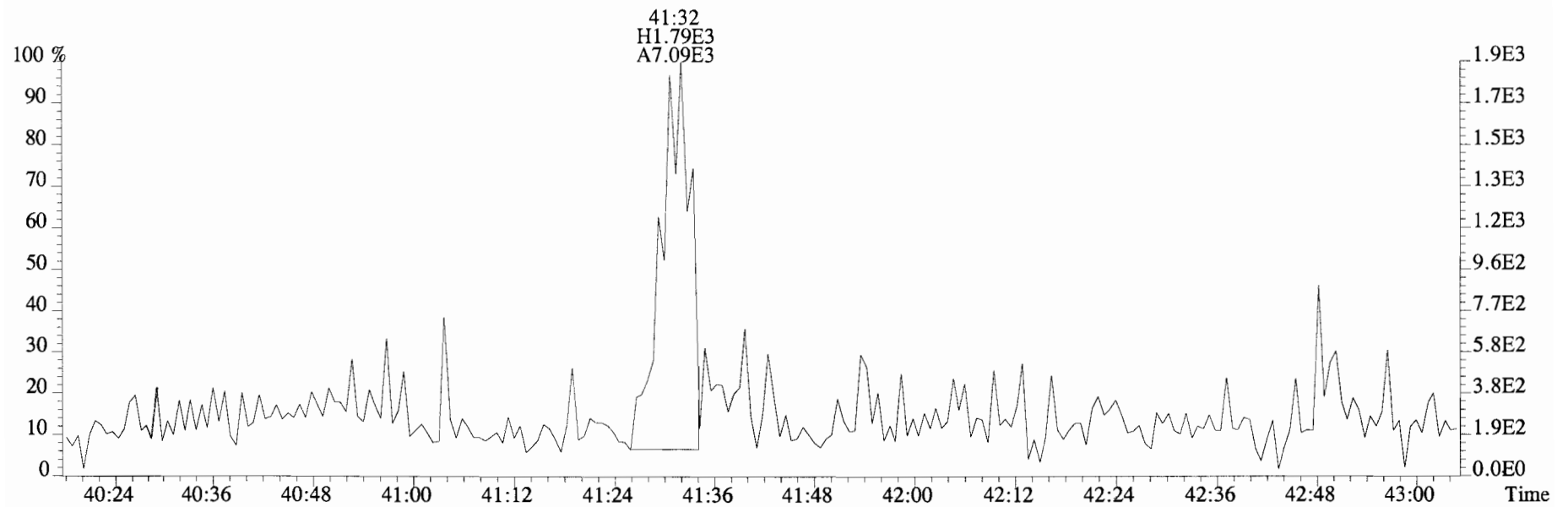
455.7801 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



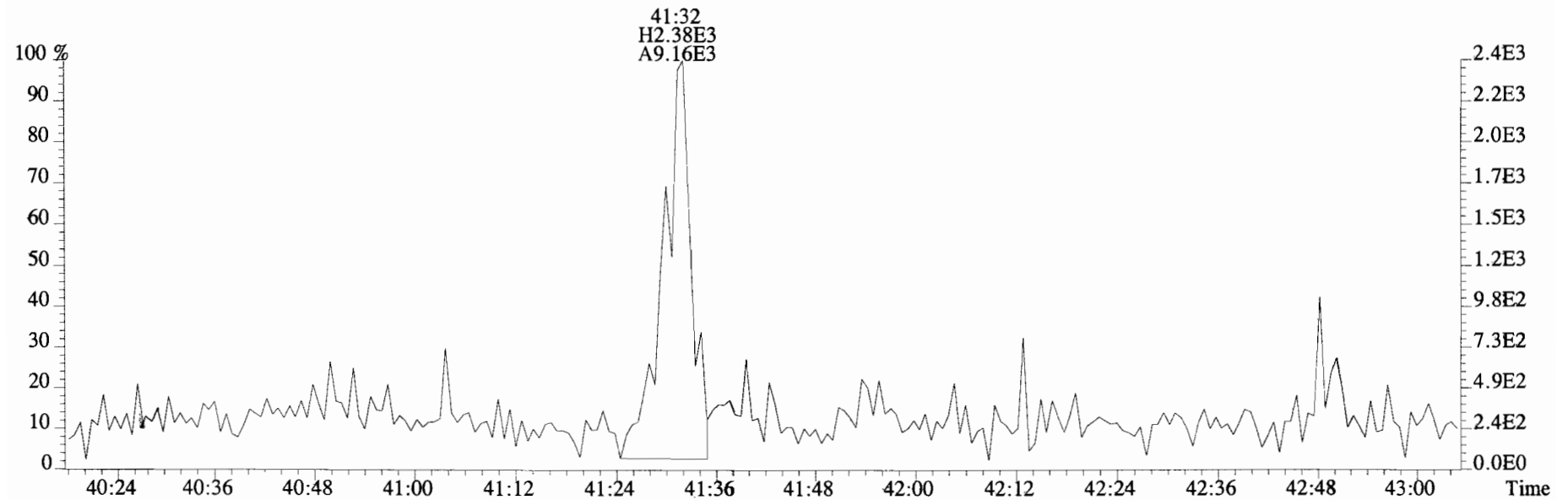
513.6775 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191024D2 #1-432 Acq:25-OCT-2019 11:48:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1903546-11 PDI-081SC-A-13-13.5-191002 13.4 Exp:OCDD_DB5
441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



443.7398 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	1.90e+04	0.61 n	0.91	26:16	1.5181		* 2.5		*	Total Tetra-Dioxins	71.1	73.6		*	*
1,2,3,7,8-PeCDD	3.39e+04	0.70 y	0.90	30:45	2.7280		* 2.5		*	Total Penta-Dioxins	40.3	49.1		*	*
1,2,3,4,7,8-HxCDD	8.16e+04	1.06 y	1.10	34:05	5.4393		* 2.5		*	Total Hexa-Dioxins	218	218		*	*
1,2,3,6,7,8-HxCDD	2.97e+05	1.21 y	0.94	34:11	20.630		* 2.5		*	Total Hepta-Dioxins	732	732		*	*
1,2,3,7,8,9-HxCDD	1.48e+05	1.07 y	0.96	34:30	9.9621		* 2.5		*	Total Tetra-Furans	232	232		*	*
1,2,3,4,6,7,8-HpCDD	4.80e+06	1.01 y	0.98	37:57	313.32		* 2.5		*	Total Penta-Furans	235.57	235.57		*	* P
OCDD	2.87e+07	0.91 y	0.96	41:17	2266.3		* 2.5		*	Total Hexa-Furans	162	163		*	*
										Total Hepta-Furans	98.6	98.6		*	*
2,3,7,8-TCDF	1.38e+06	0.76 y	0.95	25:29	73.888	CV	* 2.5		*						
1,2,3,7,8-PeCDF	1.61e+06	1.52 y	0.96	29:35	85.709		* 2.5		*						
2,3,4,7,8-PeCDF	5.96e+05	1.54 y	1.01	30:28	29.940		* 2.5		*						
1,2,3,4,7,8-HxCDF	1.58e+06	1.23 y	1.18	33:11	76.242		* 2.5		*						
1,2,3,6,7,8-HxCDF	3.67e+05	1.19 y	1.07	33:19	17.235		* 2.5		*						
2,3,4,6,7,8-HxCDF	1.32e+05	1.29 y	1.11	33:55	6.4218		* 2.5		*						
1,2,3,7,8,9-HxCDF	8.24e+04	1.22 y	1.06	34:52	4.4423		* 2.5		*						
1,2,3,4,6,7,8-HpCDF	5.74e+05	1.03 y	1.13	36:44	33.479		* 2.5		*						
1,2,3,4,7,8,9-HpCDF	1.92e+05	1.00 y	1.28	38:30	10.750		* 2.5		*						
OCDF	1.22e+06	0.89 y	0.95	41:31	80.353		* 2.5		*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	2.72e+06	0.79 y	1.10	26:15	92.299					46.8					
IS 13C-1,2,3,7,8-PeCDD	2.72e+06	0.61 y	0.88	30:45	114.42					58.0					
IS 13C-1,2,3,4,7,8-HxCDD	2.69e+06	1.24 y	0.64	34:04	134.13					68.0					
IS 13C-1,2,3,6,7,8-HxCDD	3.02e+06	1.26 y	0.86	34:11	113.19					57.4					
IS 13C-1,2,3,7,8,9-HxCDD	3.05e+06	1.23 y	0.81	34:29	121.29					61.5					
IS 13C-1,2,3,4,6,7,8-HpCDD	3.08e+06	1.05 y	0.65	37:57	151.07					76.6					
IS 13C-OCDD	5.22e+06	0.92 y	0.58	41:17	288.45					73.2					
IS 13C-2,3,7,8-TCDF	3.87e+06	0.76 y	1.03	25:28	88.818					45.1					
IS 13C-1,2,3,7,8-PeCDF	3.85e+06	1.64 y	0.85	29:35	107.06					54.3					
IS 13C-2,3,4,7,8-PeCDF	3.87e+06	1.57 y	0.85	30:28	108.52					55.0					
IS 13C-1,2,3,4,7,8-HxCDF	3.48e+06	0.54 y	0.83	33:11	134.07					68.0					
IS 13C-1,2,3,6,7,8-HxCDF	3.92e+06	0.51 y	1.03	33:18	121.63					61.7					
IS 13C-2,3,4,6,7,8-HxCDF	3.65e+06	0.51 y	0.95	33:54	122.65					62.2					
IS 13C-1,2,3,7,8,9-HxCDF	3.45e+06	0.51 y	0.83	34:51	133.48					67.7					
IS 13C-1,2,3,4,6,7,8-HpCDF	3.00e+06	0.40 y	0.76	36:43	126.79					64.3					
IS 13C-1,2,3,4,7,8,9-HpCDF	2.75e+06	0.43 y	0.58	38:30	151.61					76.9					
IS 13C-OCDF	6.31e+06	0.91 y	0.69	41:30	293.70					74.5					
C/Up 37C1-2,3,7,8-TCDD	1.73e+06		1.20	26:16	53.547					67.9					
											Integrations				Reviewed
											by				by
RS/RT 13C-1,2,3,4-TCDD	5.31e+06	0.81 y	1.00	25:41	197.13						Analyst: <u>DB</u>				Analyst: <u>CT</u>
RS 13C-1,2,3,4-TCDF	8.29e+06	0.81 y	1.00	24:16	197.13										
RS/RT 13C-1,2,3,4,6,9-HxCDF	6.15e+06	0.52 y	1.00	33:36	197.13										
										Date: <u>11/5/19</u>					Date: <u>11/11/19</u>

Totals class: TCDD EMPC

Entry #: 19

Run: 17 File: 191024D2 S: 12 I: 1 F: 1
Acquired: 25-OCT-19 12:36:05 Processed: 28-OCT-19 09:58:53

Total Concentration: 73.552

Unnamed Concentration: 72.034

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
22:53	2.401e+05	2.913e+05	0.82	y	5.314e+05	42.502
23:14	9.329e+04	1.067e+05	0.87	y	2.000e+05	15.992
23:39	7.048e+03	8.076e+03	0.87	y	1.512e+04	1.2095
24:36	1.188e+04	1.588e+04	0.75	y	2.776e+04	2.2203
24:47	2.292e+04	2.953e+04	0.78	y	5.245e+04	4.1951
25:20	6.090e+03	6.542e+03	0.93	n	1.158e+04	0.92605
26:01	2.309e+04	2.935e+04	0.79	y	5.244e+04	4.1937
26:16	8.258e+03	1.344e+04	0.61	n	1.898e+04	1.5181
26:33	4.514e+03	5.431e+03	0.83	y	9.945e+03	0.79531

Totals class: PeCDD EMPC

Entry #: 21

Run: 17 File: 191024D2 S: 12 I: 1 F: 2
 Acquired: 25-OCT-19 12:36:05 Processed: 28-OCT-19 09:58:53

Total Concentration: 49.061

Unnamed Concentration: 46.333

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
28:42	6.256e+04	1.126e+05	0.56	y	1.752e+05	14.086
29:10	1.701e+04	2.502e+04	0.68	y	4.203e+04	3.3790
29:37	5.420e+04	9.132e+04	0.59	y	1.455e+05	11.700
29:46	1.869e+04	2.952e+04	0.63	y	4.820e+04	3.8755
29:50	3.049e+04	5.820e+04	0.52	n	7.888e+04	6.3418
30:04	2.014e+04	3.592e+04	0.56	y	5.606e+04	4.5071
30:22	6.292e+03	7.306e+03	0.86	n	1.191e+04	0.95749
30:45	1.393e+04	2.000e+04	0.70	y	3.393e+04	2.7280
30:49	3.430e+03	7.165e+03	0.48	n	8.875e+03	0.71352
31:08	3.714e+03	7.437e+03	0.50	n	9.609e+03	0.77258

Totals class: HxCDD EMPC

Entry #: 23

Run: 17 File: 191024D2 S: 12 I: 1 F: 3
Acquired: 25-OCT-19 12:36:05 Processed: 28-OCT-19 09:58:53

Total Concentration: 218.19 Unnamed Concentration: 182.160

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
32:33	7.597e+05	6.295e+05	1.21	y	1.389e+06	94.570
33:07	1.059e+05	8.470e+04	1.25	y	1.906e+05	12.973
33:22	5.701e+05	4.509e+05	1.26	y	1.021e+06	69.507
33:30	2.563e+04	1.895e+04	1.35	y	4.458e+04	3.0351
34:05	4.201e+04	3.963e+04	1.06	y	8.164e+04	5.4393 1,2,3,4,7,8-HxCDD
34:11	1.626e+05	1.341e+05	1.21	y	2.967e+05	20.630 1,2,3,6,7,8-HxCDD
34:23	1.787e+04	1.262e+04	1.42	y	3.048e+04	2.0753
34:30	7.650e+04	7.177e+04	1.07	y	1.483e+05	9.9621 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 17 File: 191024D2 S: 12 I: 1 F: 4
Acquired: 25-OCT-19 12:36:05 Processed: 28-OCT-19 09:58:53

Total Concentration: 731.67

Unnamed Concentration: 418.355

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:06	3.213e+06	3.192e+06	1.01 y	6.405e+06	418.36
37:57	2.410e+06	2.387e+06	1.01 y	4.797e+06	313.32

Totals class: TCDF EMPC

Entry #: 27

Run: 17 File: 191024D2 S: 12 I: 1 F: 1
 Acquired: 25-OCT-19 12:36:05 Processed: 28-OCT-19 09:58:53

Total Concentration: 231.75

Unnamed Concentration: 157.861

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
20:46	8.580e+03	1.075e+04	0.80	y	1.933e+04	1.0373
21:20	1.801e+04	2.111e+04	0.85	y	3.912e+04	2.0995
21:58	1.403e+05	1.884e+05	0.74	y	3.287e+05	17.643
22:30	5.371e+04	6.687e+04	0.80	y	1.206e+05	6.4715
22:52	1.383e+05	1.831e+05	0.76	y	3.215e+05	17.253
23:16	5.157e+04	5.894e+04	0.87	y	1.105e+05	5.9306
23:24	1.819e+04	2.399e+04	0.76	y	4.218e+04	2.2637
23:33	3.395e+04	4.072e+04	0.83	y	7.468e+04	4.0079
23:55	5.761e+03	7.876e+03	0.73	y	1.364e+04	0.73191
24:02	1.453e+04	1.707e+04	0.85	y	3.159e+04	1.6955
24:09	3.277e+04	4.618e+04	0.71	y	7.895e+04	4.2374
24:16	9.552e+04	1.250e+05	0.76	y	2.205e+05	11.836
24:41	4.754e+05	5.878e+05	0.81	y	1.063e+06	57.060
24:56	2.017e+04	2.929e+04	0.69	y	4.945e+04	2.6540
25:06	8.599e+03	1.278e+04	0.67	y	2.138e+04	1.1473
25:22	7.072e+04	8.923e+04	0.79	y	1.599e+05	8.5844
25:29	5.966e+05	7.801e+05	0.76	y	1.377e+06	73.888
25:49	4.488e+04	5.294e+04	0.85	y	9.782e+04	5.2501
26:02	6.899e+03	1.031e+04	0.67	y	1.721e+04	0.92384
27:15	6.061e+04	7.046e+04	0.86	y	1.311e+05	7.0345

2,3,7,8-TCDF

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

Run: 17 File: 191024D2 S: 12 I: 1 F: 1
Acquired: 25-OCT-19 12:36:05 Processed: 28-OCT-19 09:58:53

Total Concentration: 15.429 Unnamed Concentration: 15.429

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:15	1.842e+05	1.138e+05	1.62 y	2.980e+05	15.429

Totals class: PeCDF EMPC

Entry #: 31

Run: 17 File: 191024D2 S: 12 I: 1 F: 2
 Acquired: 25-OCT-19 12:36:05 Processed: 28-OCT-19 09:58:53

Total Concentration: 220.14

Unnamed Concentration: 104.493

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
28:40	5.108e+05	3.399e+05	1.50	y	8.507e+05	44.042
29:03	7.641e+03	5.013e+03	1.52	y	1.265e+04	0.65505
29:13	1.068e+05	6.896e+04	1.55	y	1.757e+05	9.0970
29:24	8.347e+04	6.048e+04	1.38	y	1.439e+05	7.4522
29:35	9.685e+05	6.375e+05	1.52	y	1.606e+06	85.709
29:49	2.894e+05	1.872e+05	1.55	y	4.766e+05	24.673
30:22	9.167e+03	5.532e+03	1.66	y	1.470e+04	0.76099
30:28	3.617e+05	2.342e+05	1.54	y	5.959e+05	29.940
30:31	1.815e+05	1.098e+05	1.65	y	2.914e+05	15.083
31:21	3.282e+04	1.992e+04	1.65	y	5.273e+04	2.7300

Totals class: HxCDF EMPC

Entry #: 33

Run: 17 File: 191024D2 S: 12 I: 1 F: 3
 Acquired: 25-OCT-19 12:36:05 Processed: 28-OCT-19 09:58:53

Total Concentration: 162.95

Unnamed Concentration: 58.610

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name	
32:00	6.804e+04	5.632e+04	1.21 y	1.244e+05	6.1312	
32:10	2.124e+05	1.581e+05	1.34 y	3.705e+05	18.267	
32:31	7.536e+03	9.156e+03	0.82 n	1.361e+04	0.67112	
32:43	2.781e+05	2.308e+05	1.21 y	5.089e+05	25.088	
33:05	1.246e+04	9.222e+03	1.35 y	2.168e+04	1.0690	
33:11	8.730e+05	7.101e+05	1.23 y	1.583e+06	76.242	1,2,3,4,7,8-HxCDF
33:19	1.991e+05	1.677e+05	1.19 y	3.668e+05	17.235	1,2,3,6,7,8-HxCDF
33:36	7.993e+03	5.864e+03	1.36 y	1.386e+04	0.68319	
33:55	7.441e+04	5.790e+04	1.29 y	1.323e+05	6.4218	2,3,4,6,7,8-HxCDF
34:52	4.539e+04	3.706e+04	1.22 y	8.244e+04	4.4423	1,2,3,7,8,9-HxCDF
34:55	7.371e+04	6.219e+04	1.19 y	1.359e+05	6.7001	

Totals class: HpCDF EMPC

Entry #: 35

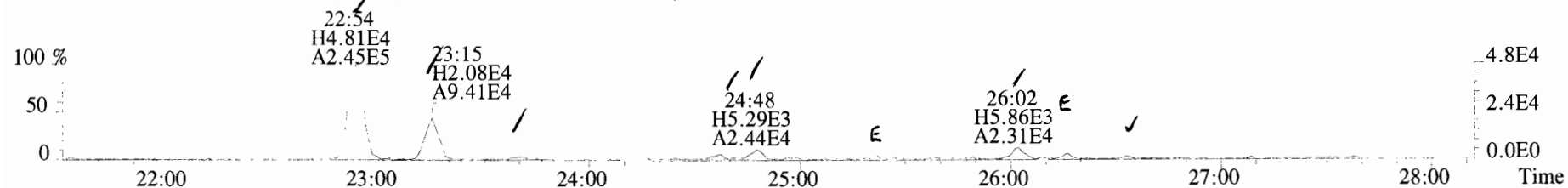
Run: 17 File: 191024D2 S: 12 I: 1 F: 4
Acquired: 25-OCT-19 12:36:05 Processed: 28-OCT-19 09:58:53

Total Concentration: 98.563

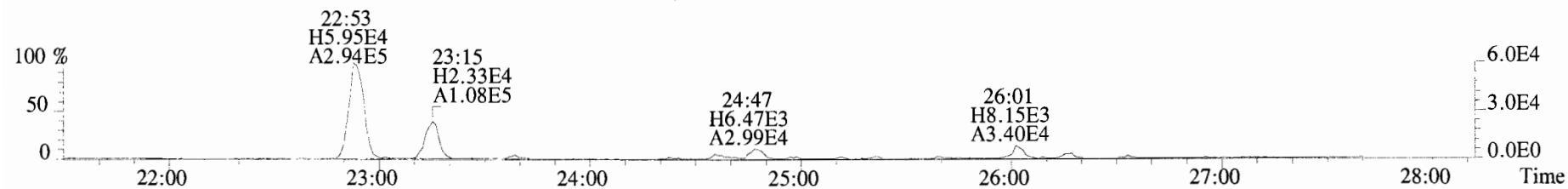
Unnamed Concentration: 54.334

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
36:44	2.913e+05	2.824e+05	1.03 y	5.737e+05	33.479	1,2,3,4,6,7,8-HpCDF
37:06	1.412e+04	1.270e+04	1.11 y	2.682e+04	1.5420	
37:18	4.730e+05	4.452e+05	1.06 y	9.182e+05	52.792	
38:30	9.608e+04	9.576e+04	1.00 y	1.918e+05	10.750	1,2,3,4,7,8,9-HpCDF

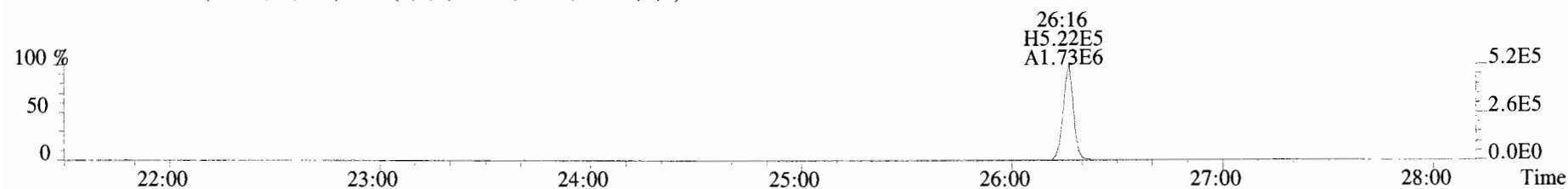
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



321.8936 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



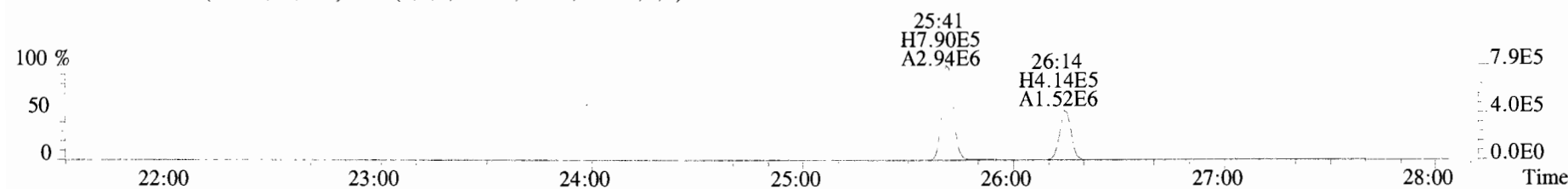
327.8847 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



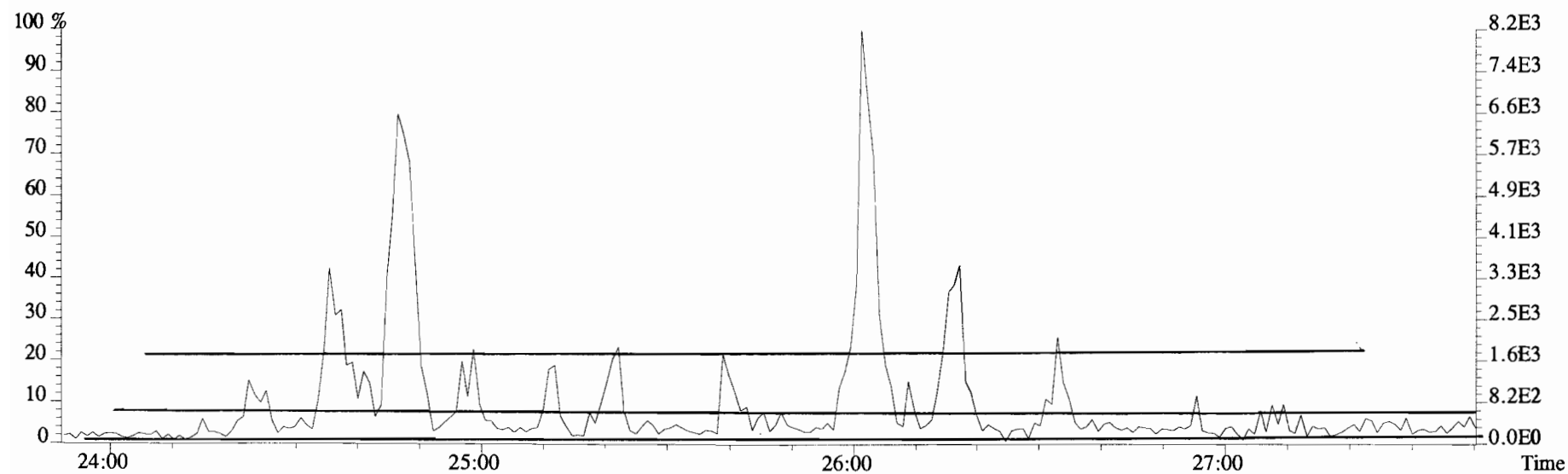
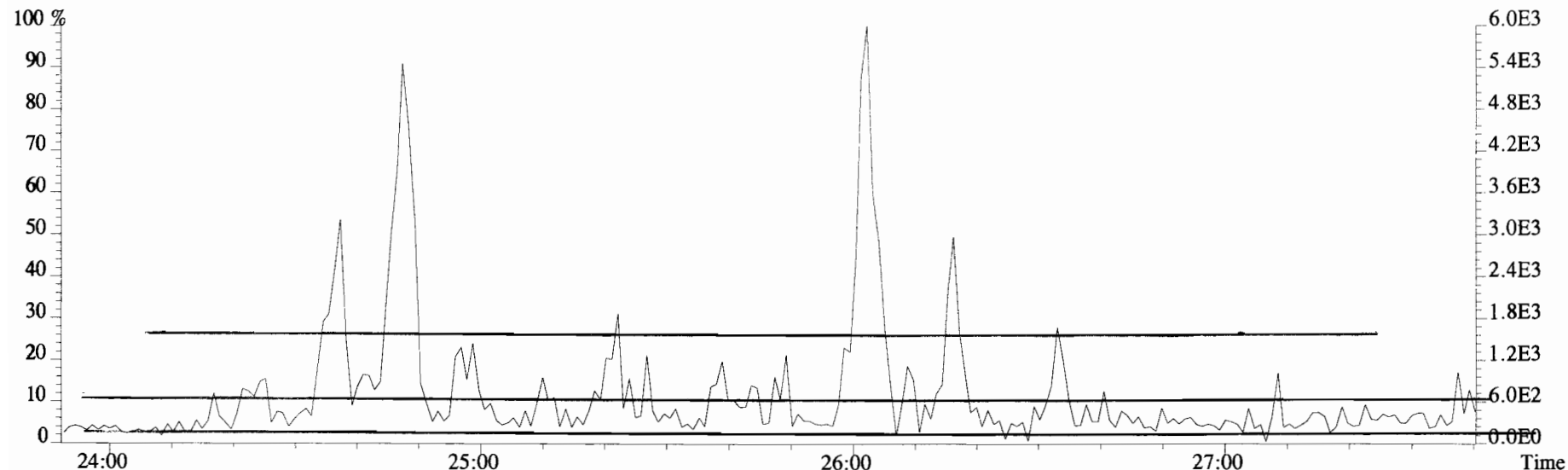
331.9368 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



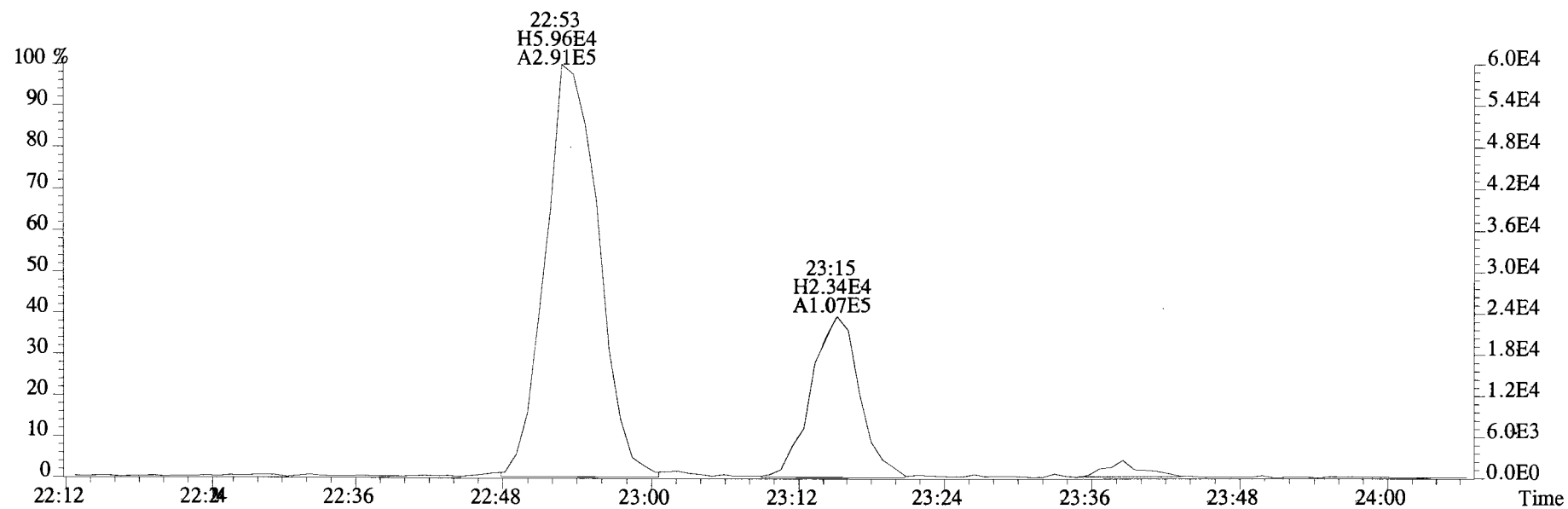
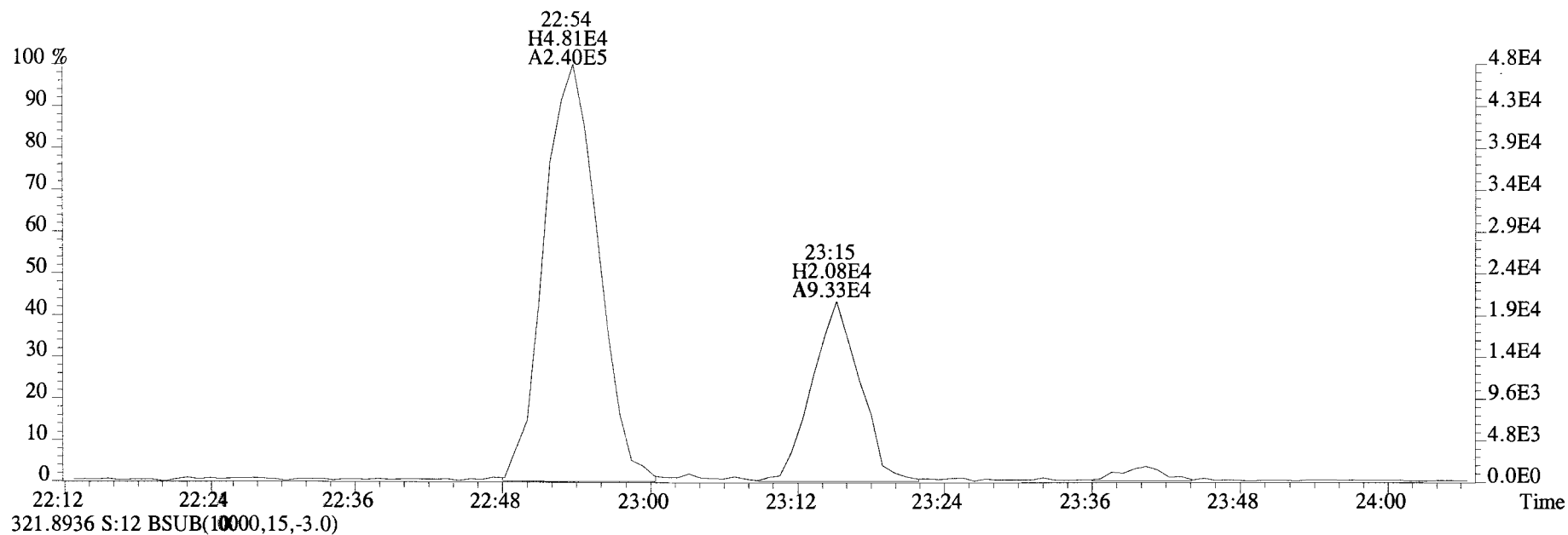
333.9339 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



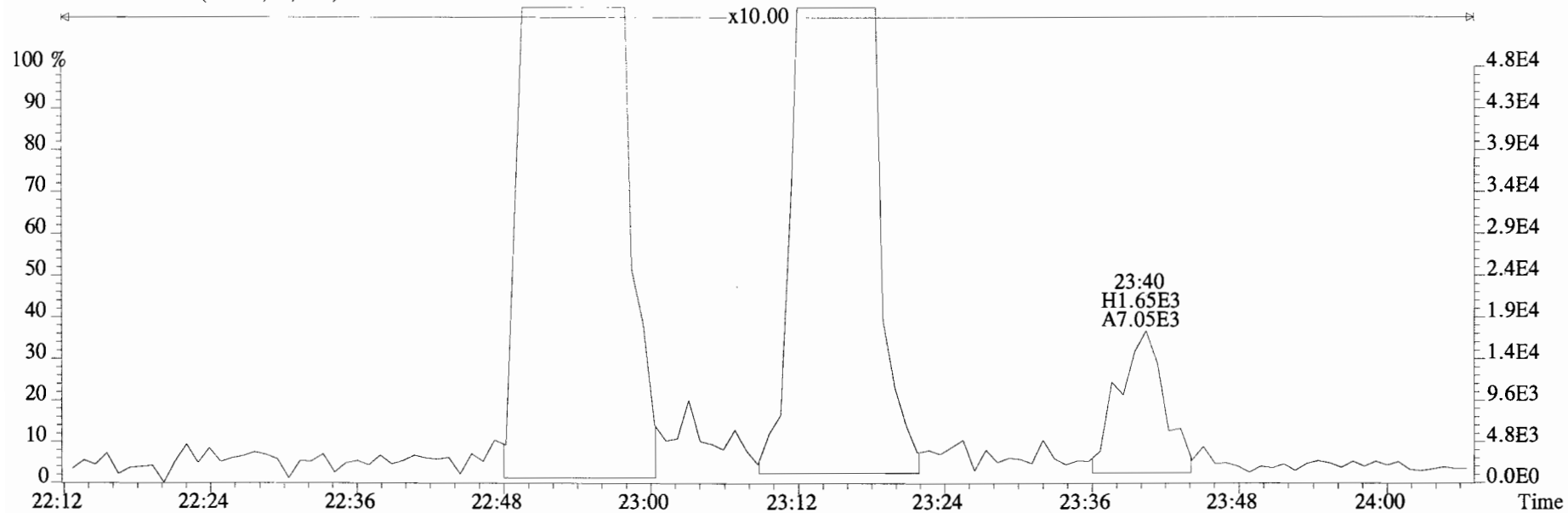
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



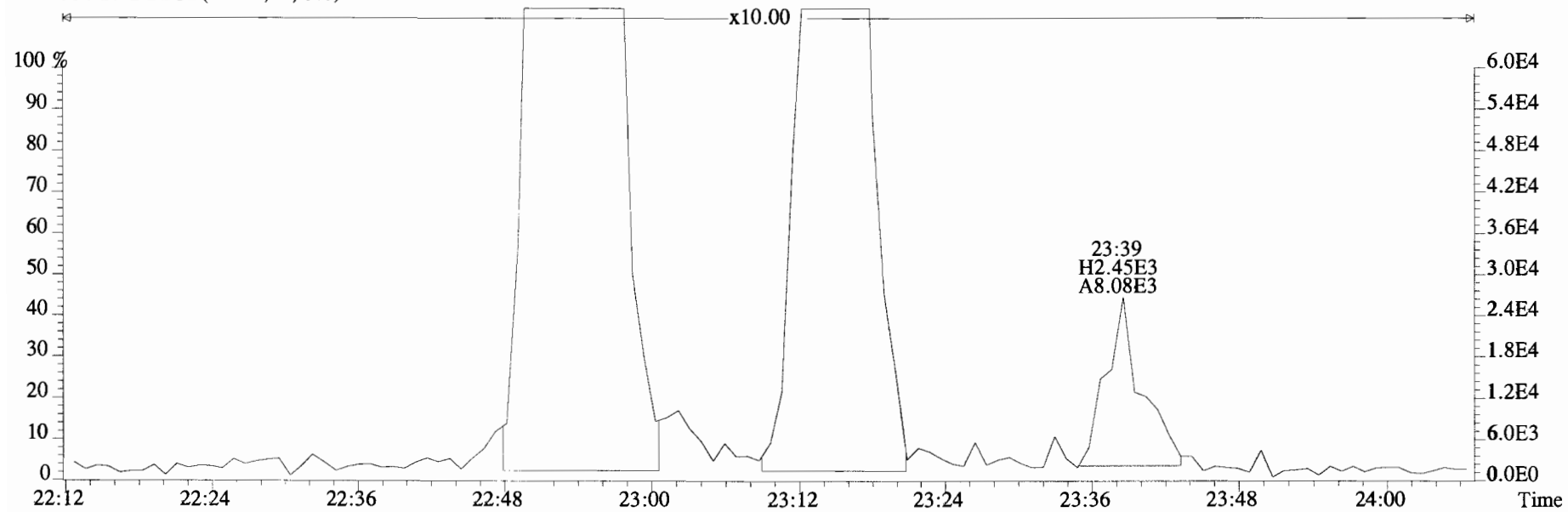
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
319.8965 S:12 BSUB(10000,15,-3.0)



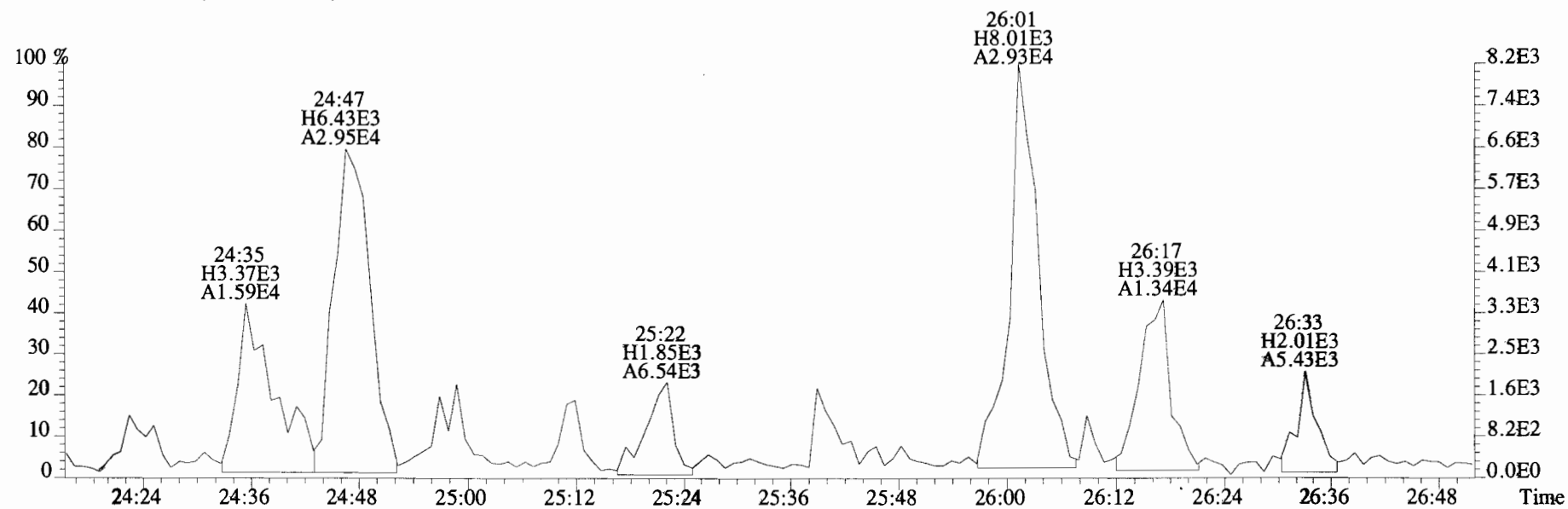
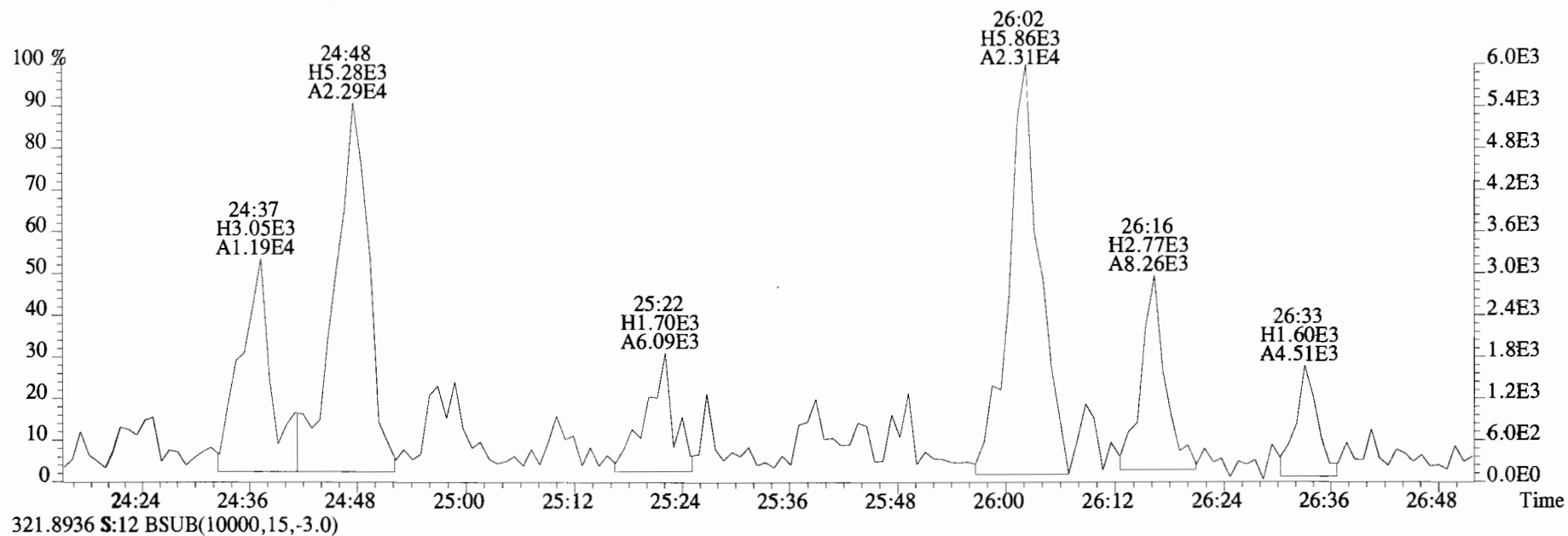
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
319.8965 S:12 BSUB(10000,15,-3.0)



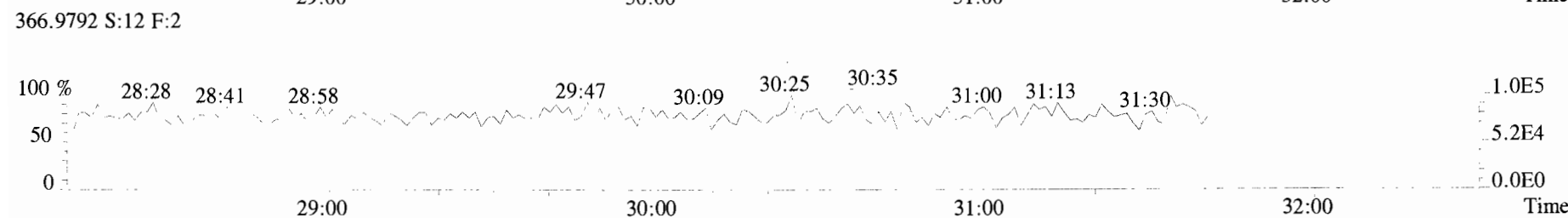
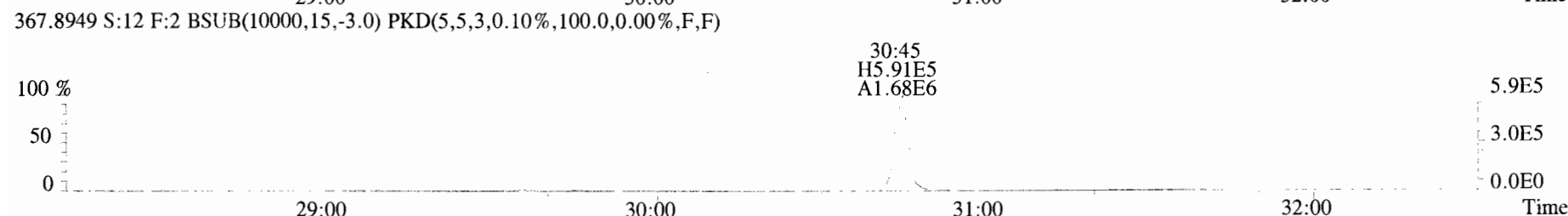
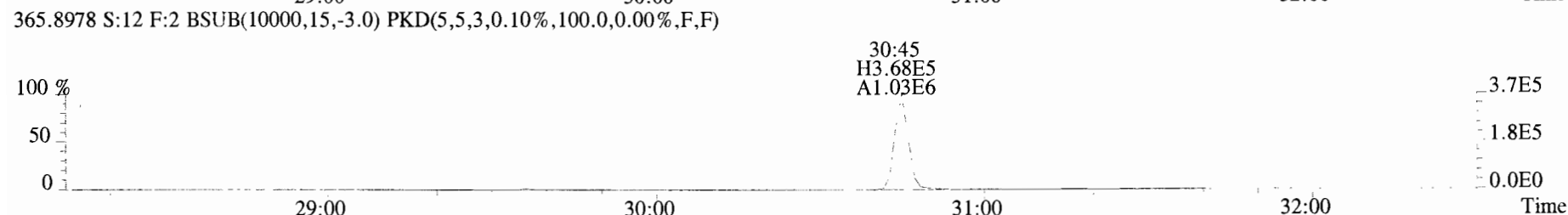
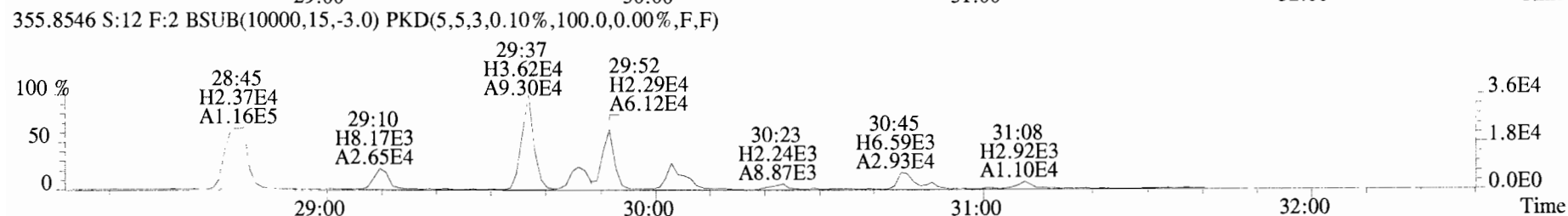
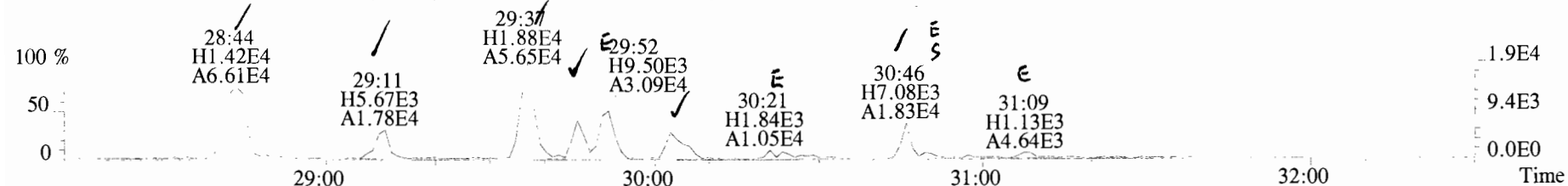
321.8936 S:12 BSUB(10000,15,-3.0)



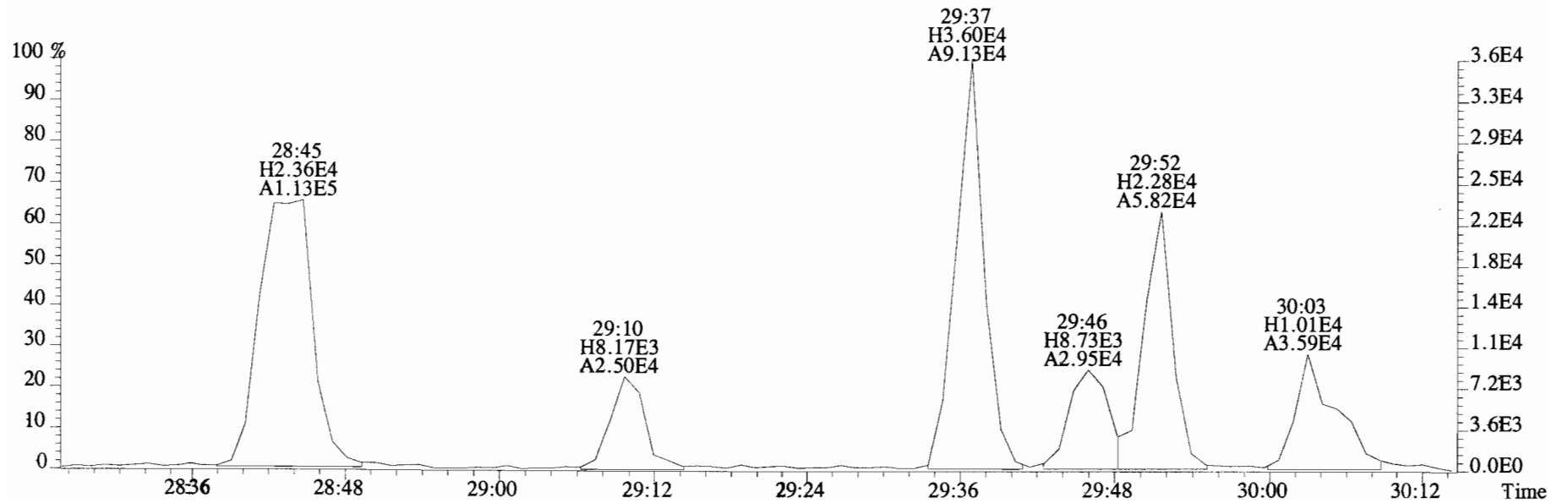
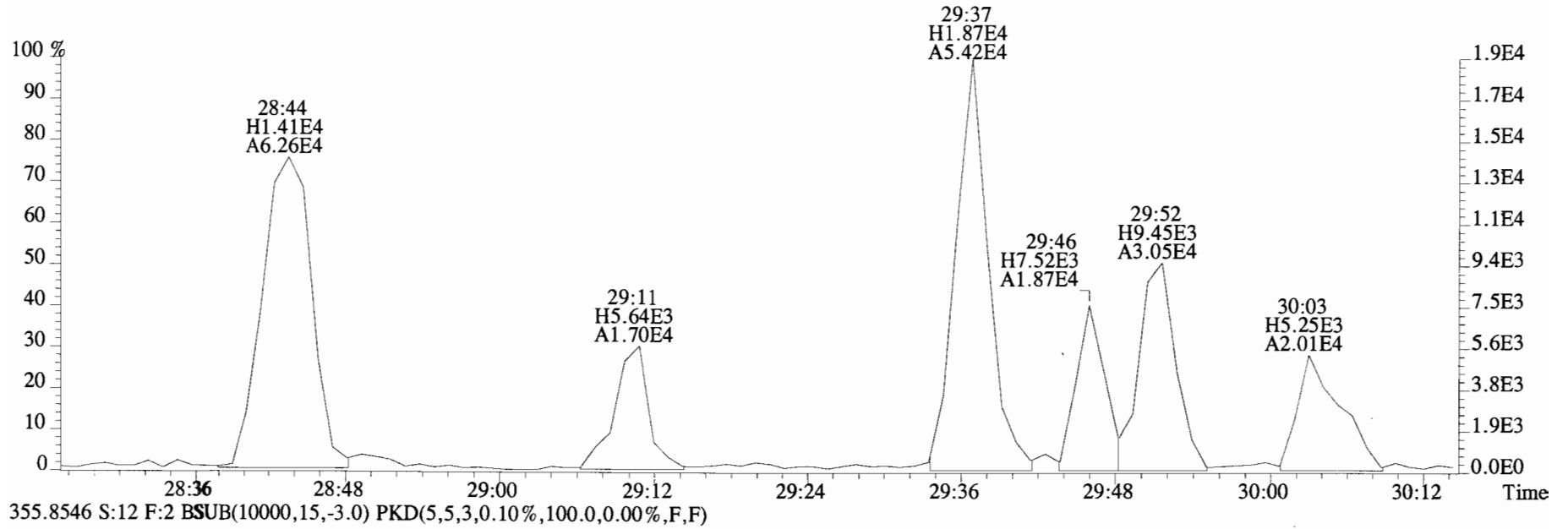
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
319.8965 S:12 BSUB(10000,15,-3.0)



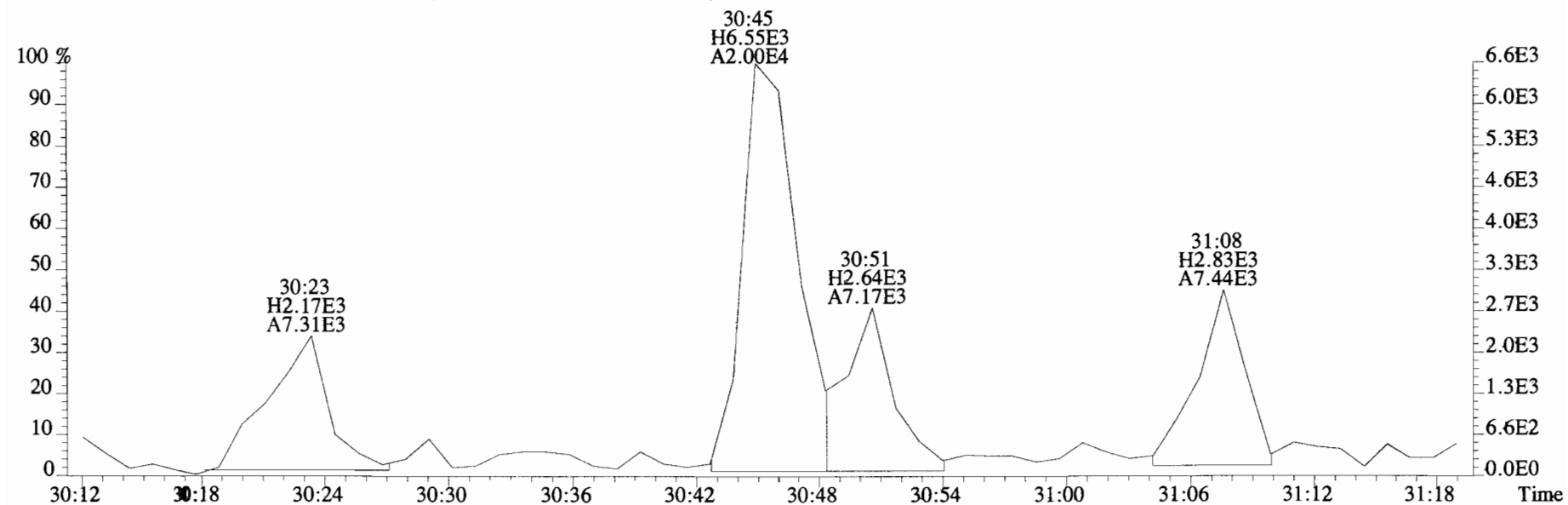
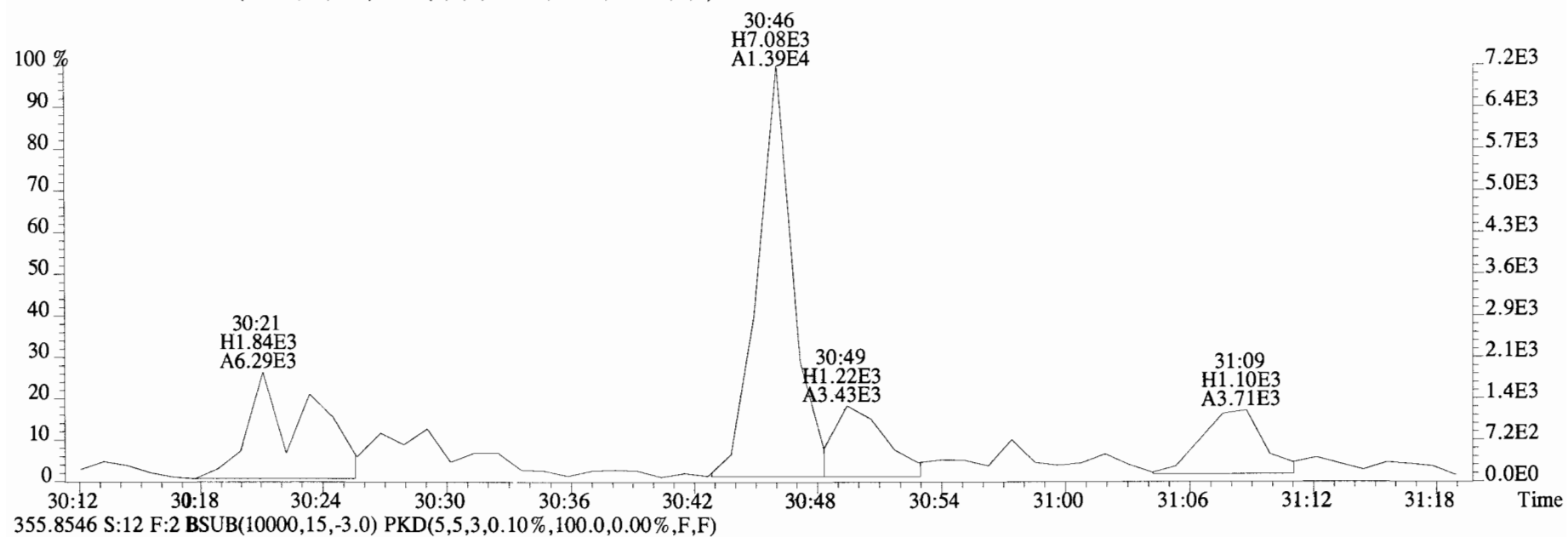
File:191024D2 #1-211 Acq:25-OCT-2019 12:36:05 GC E1+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
 353.8576 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



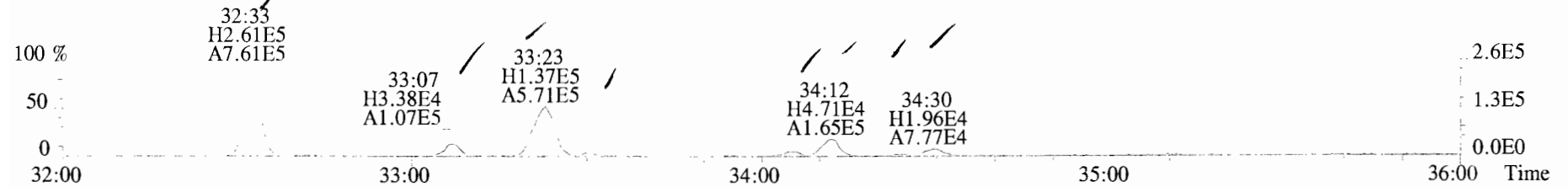
File:191024D2 #1-211 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
353.8576 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



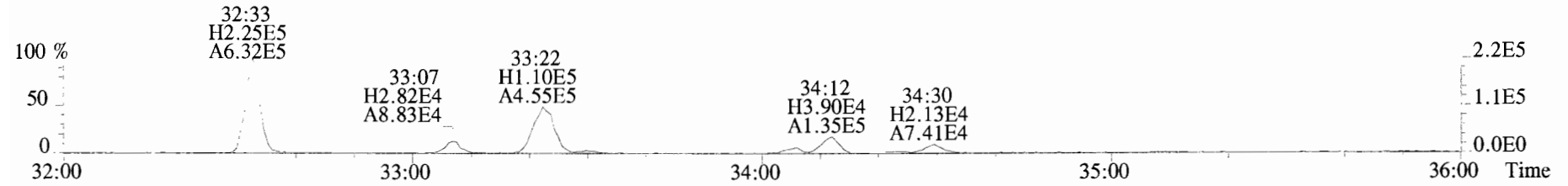
File:191024D2 #1-211 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
353.8576 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



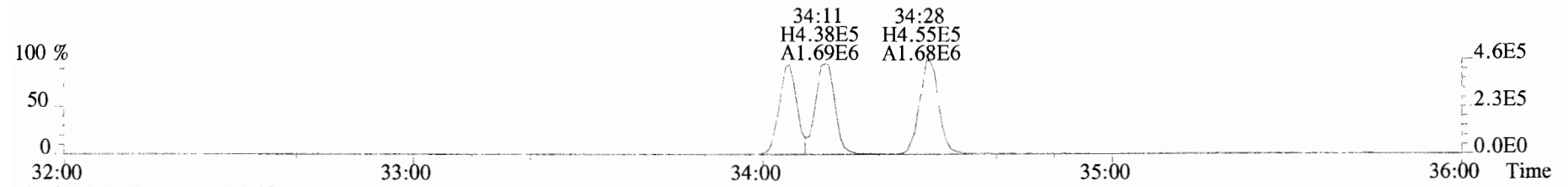
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



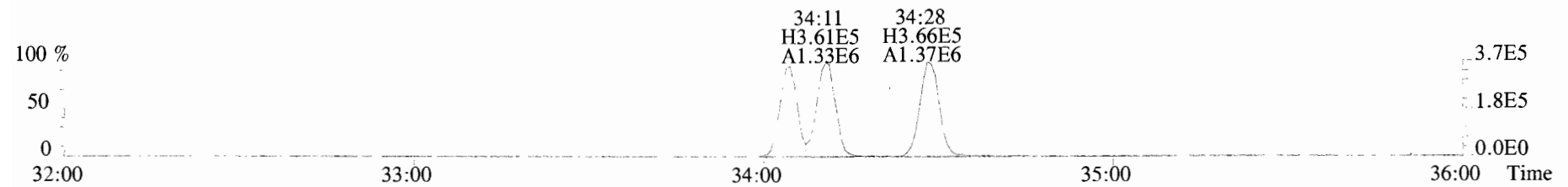
391.8127 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



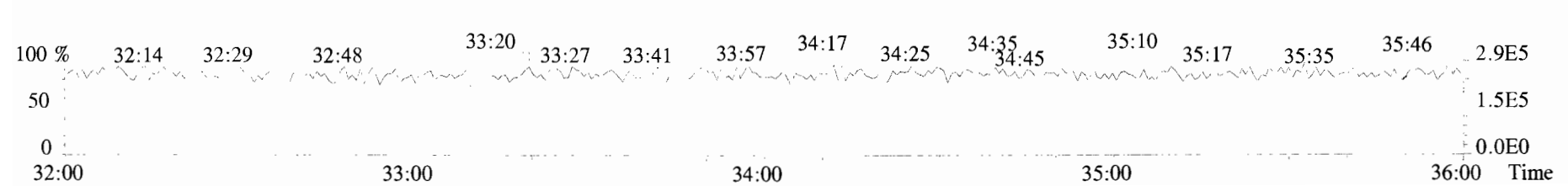
401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



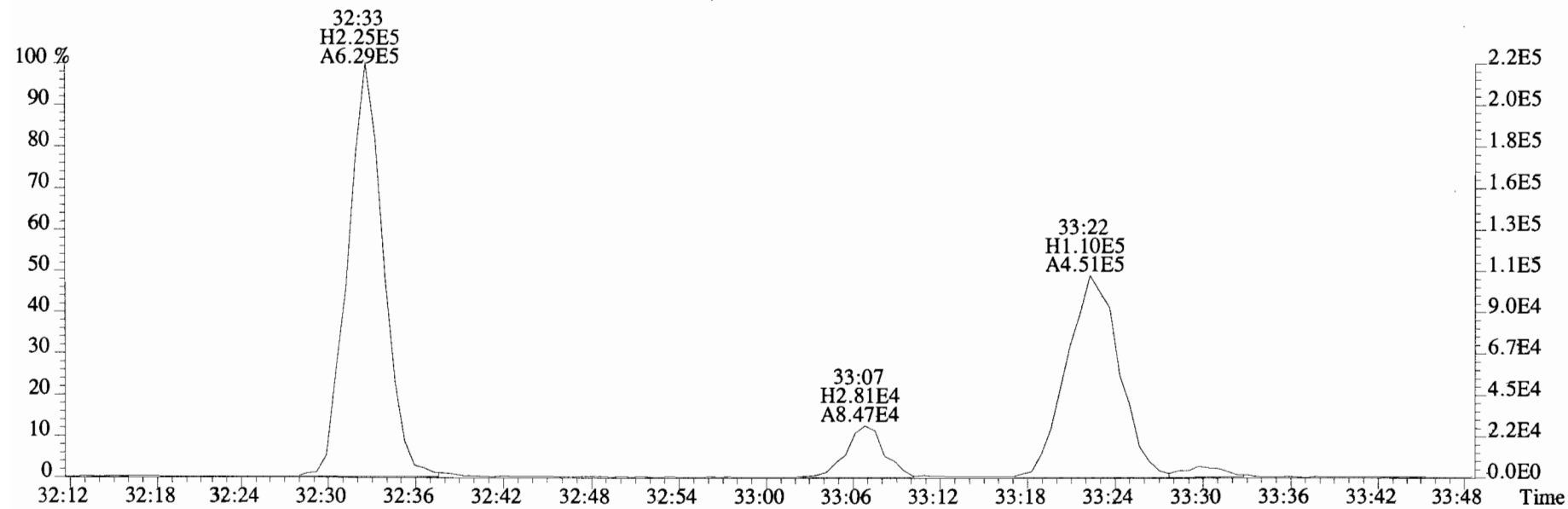
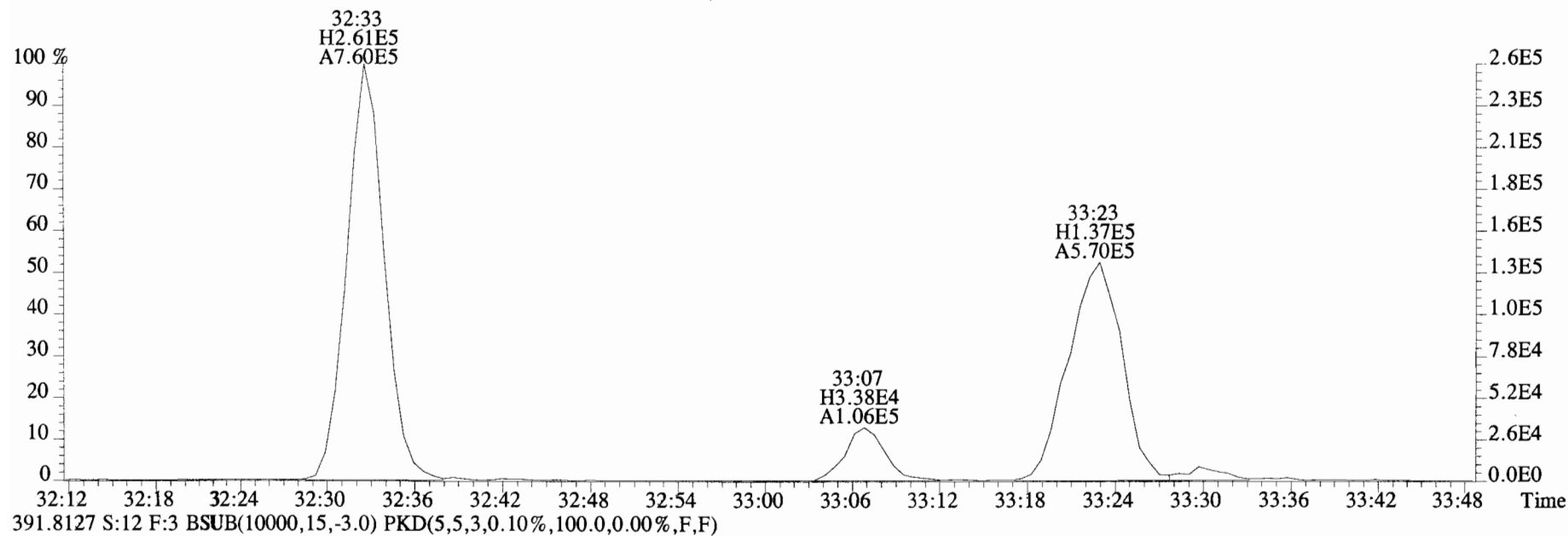
403.8530 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



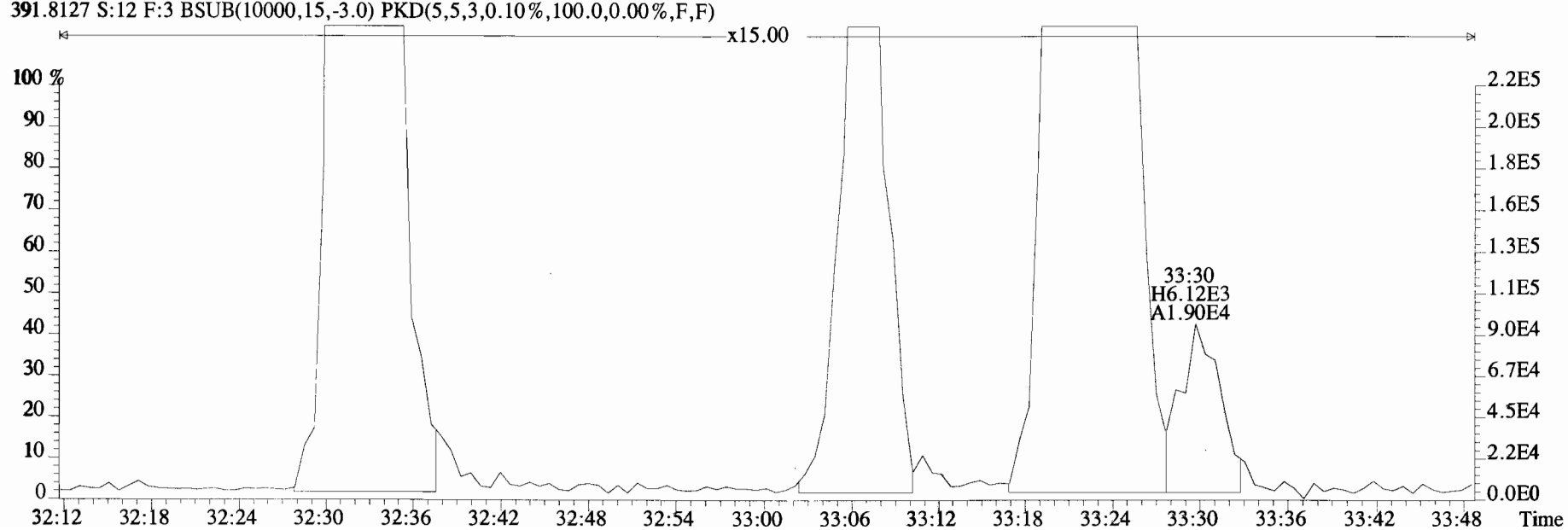
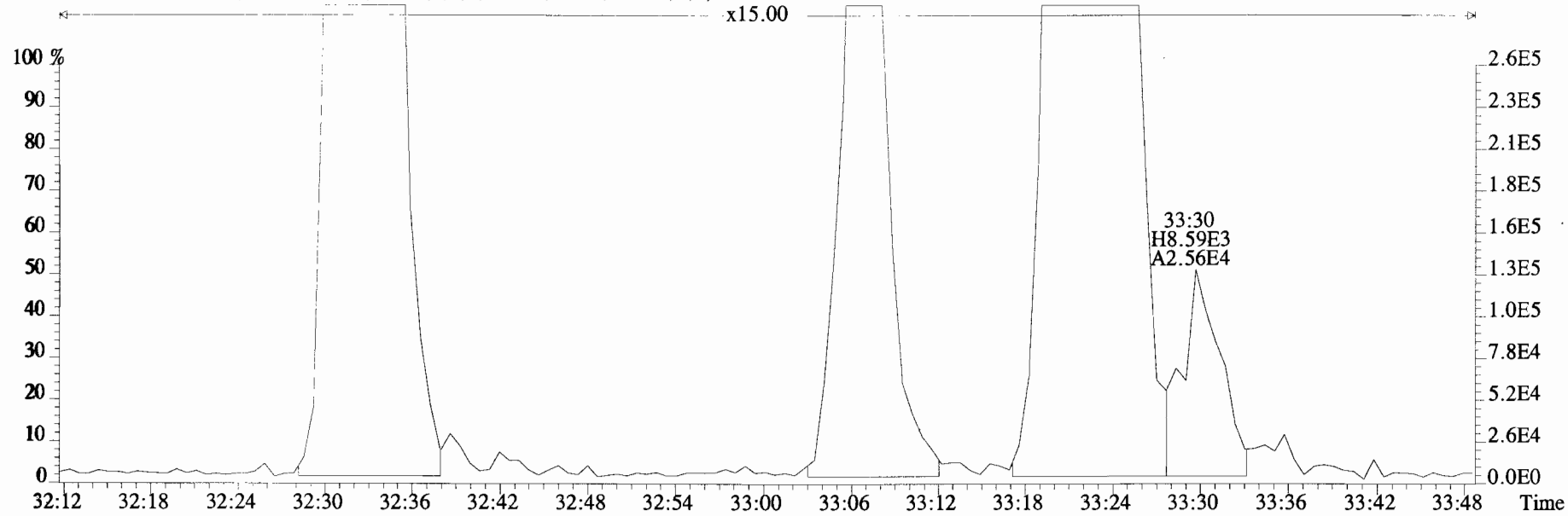
392.9760 S:12 F:3



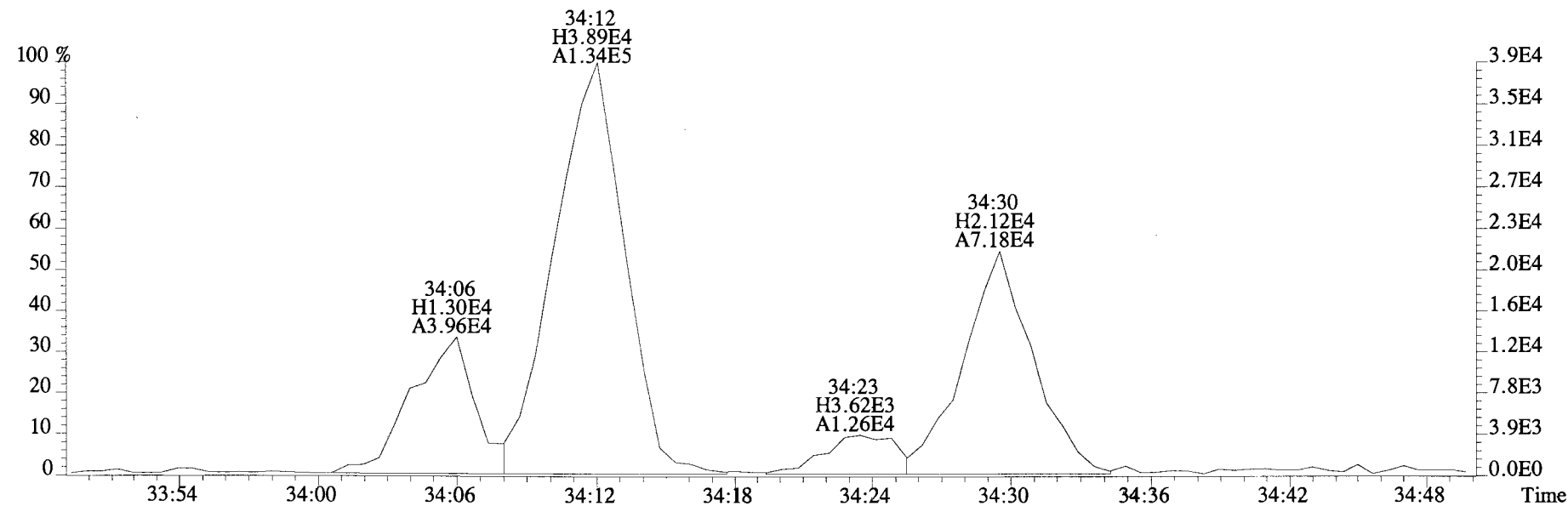
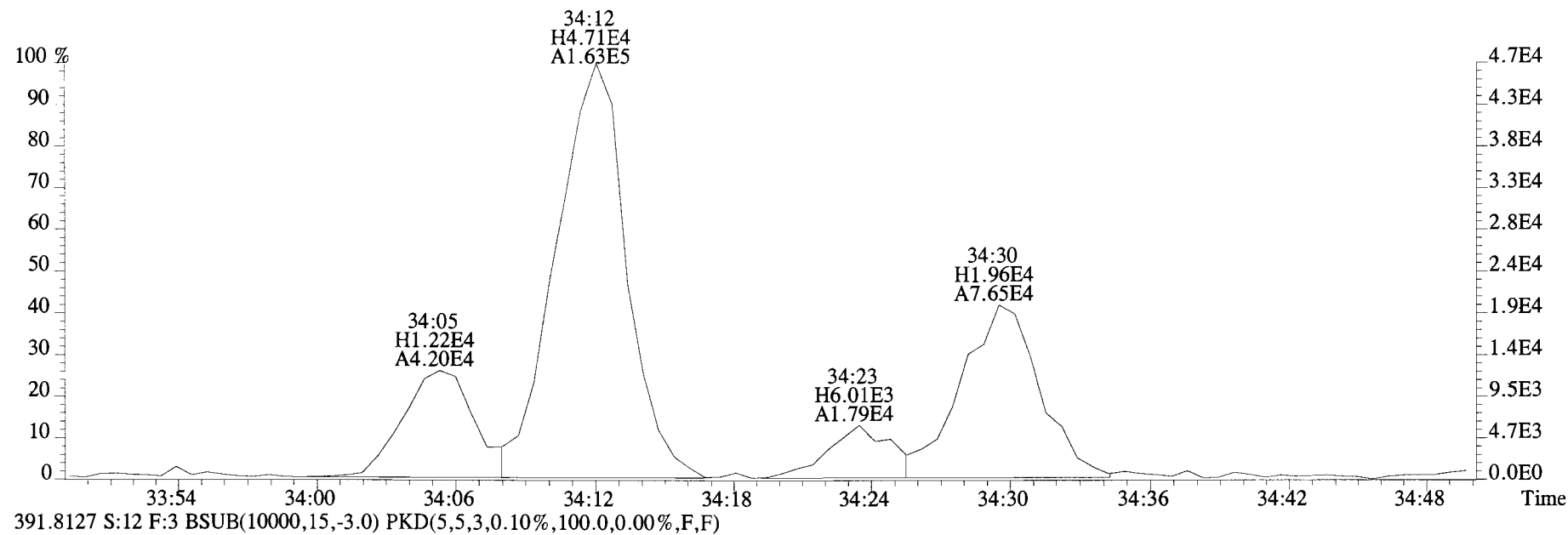
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
389.8156 S:12 F:3 BSUB(I0000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



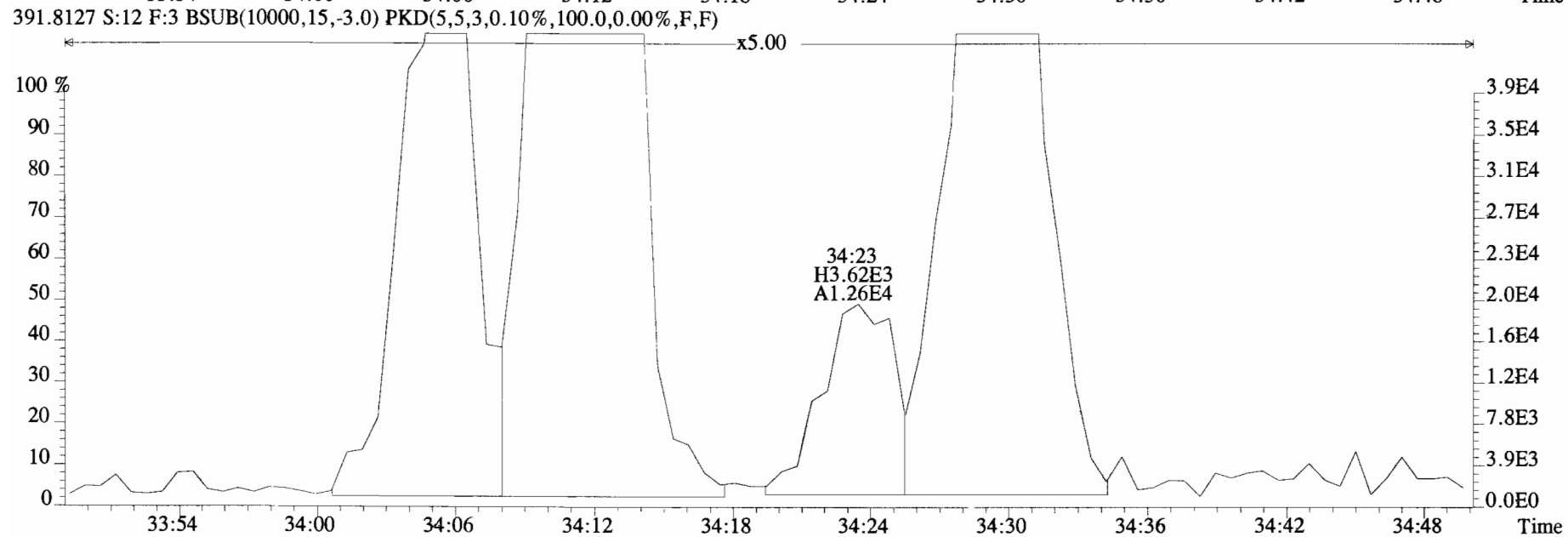
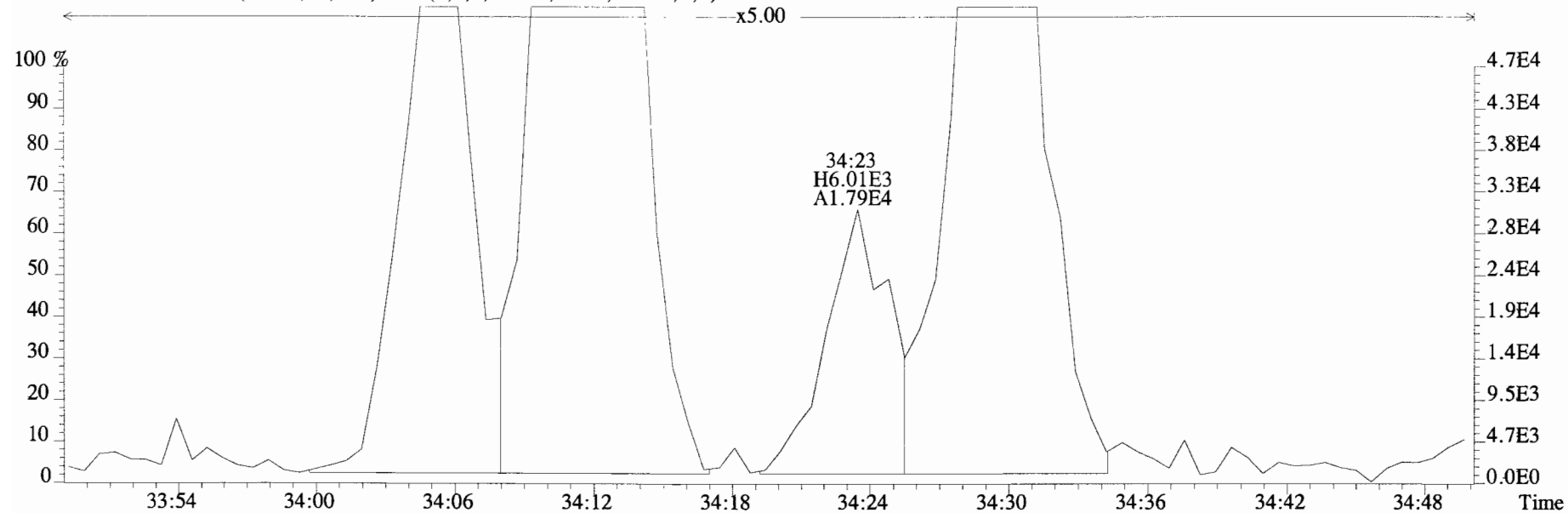
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



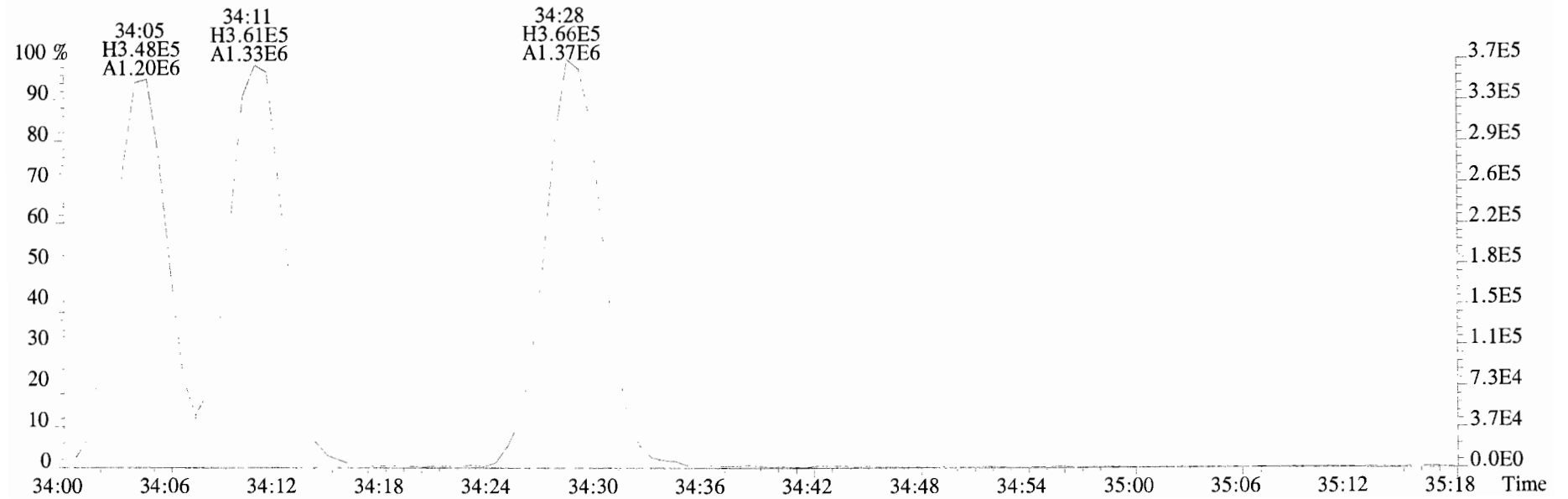
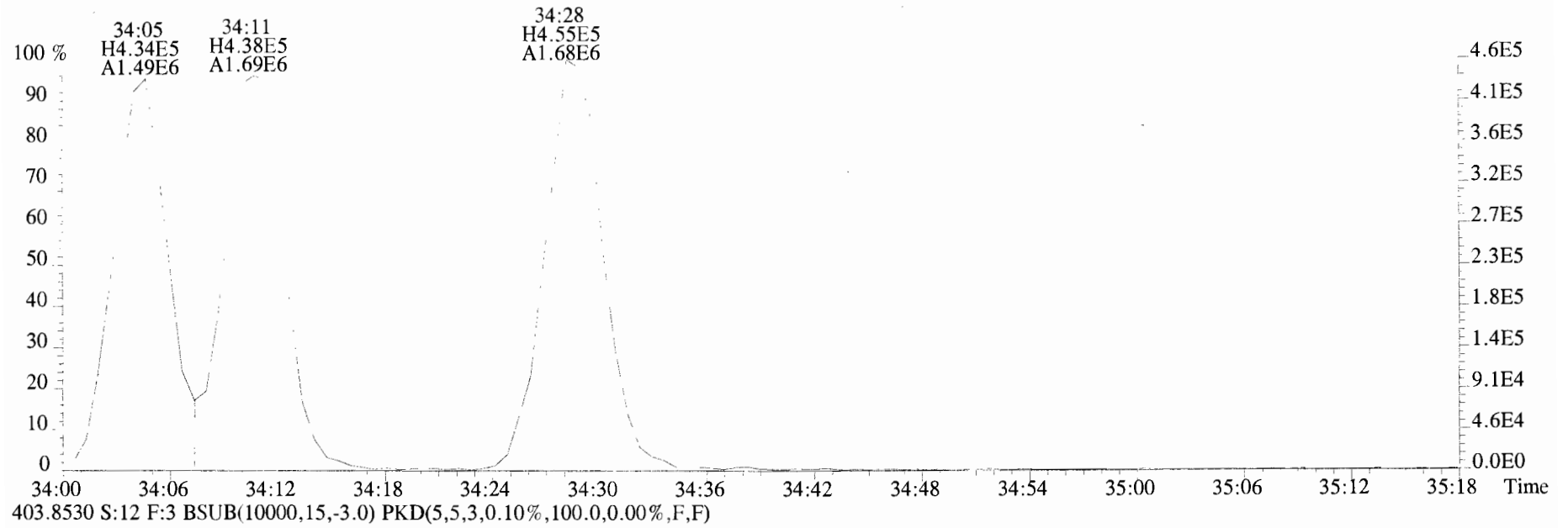
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



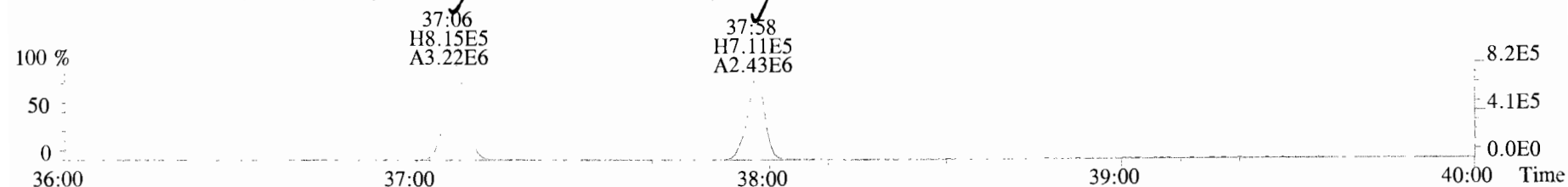
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



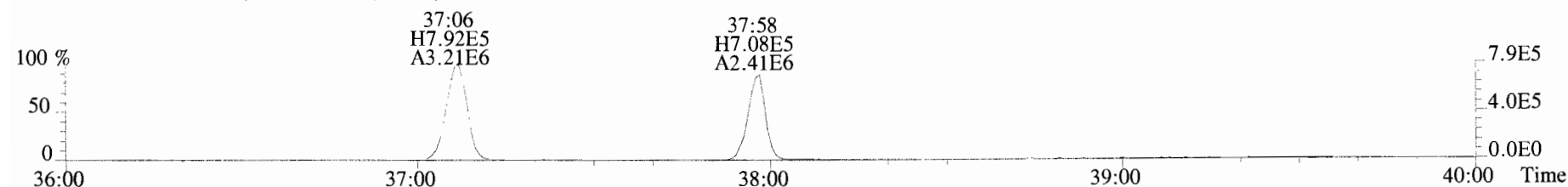
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



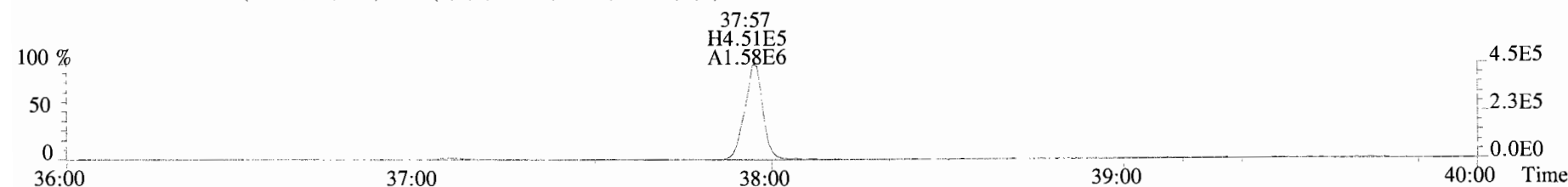
File:191024D2 #1-356 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



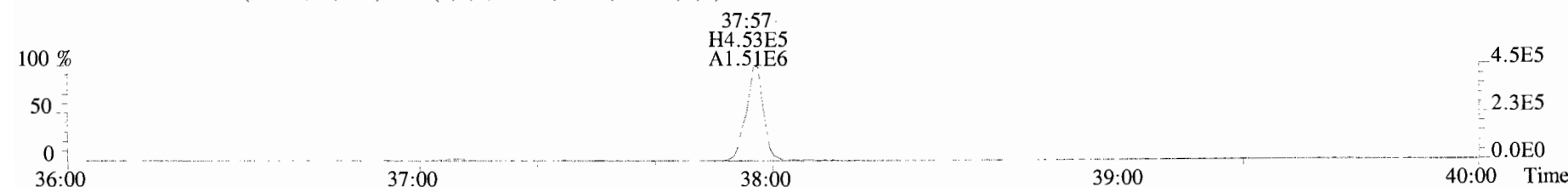
425.7737 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



435.8169 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



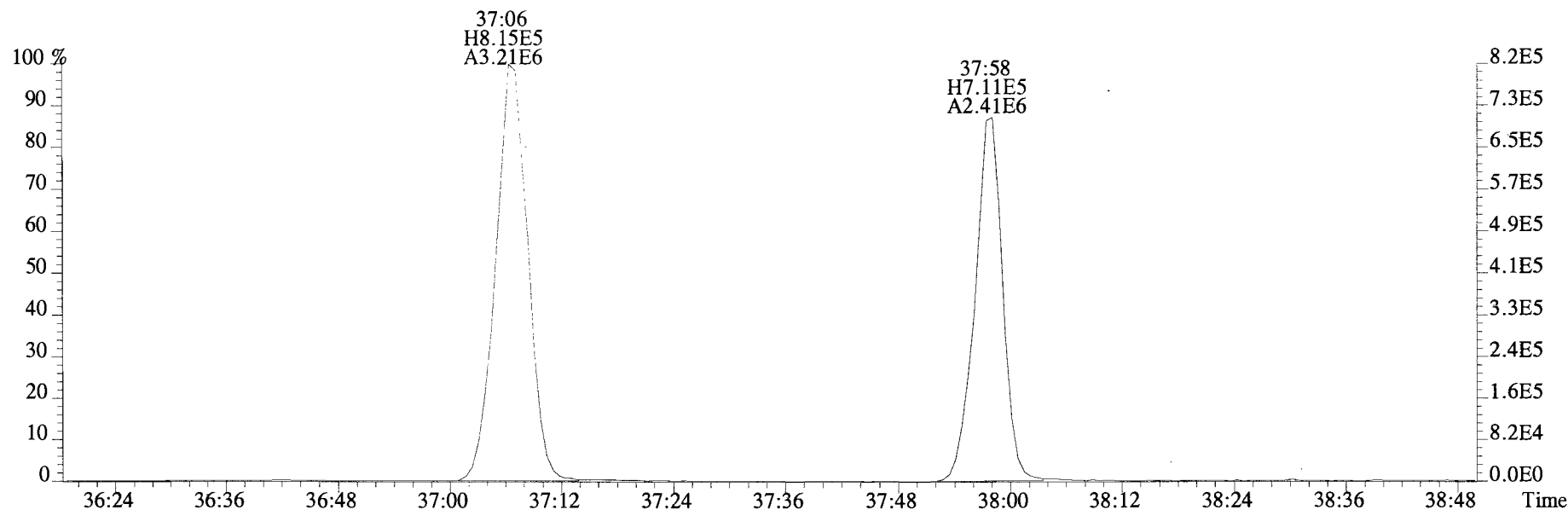
437.8140 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



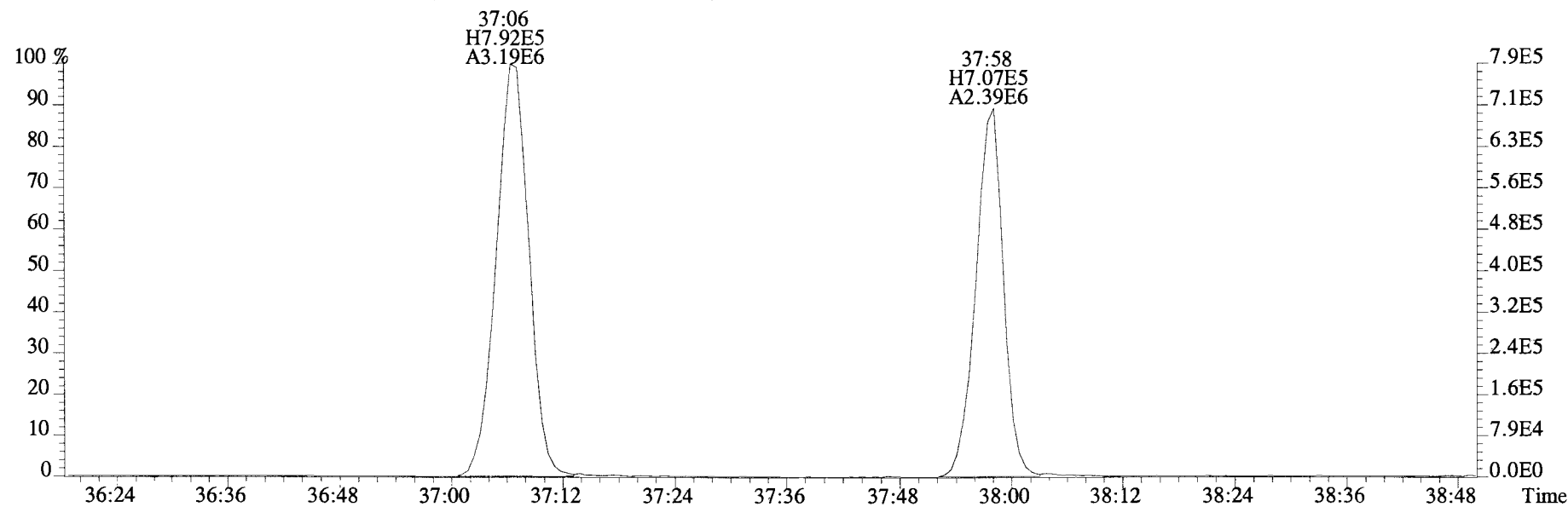
454.9728 S:12 F:4



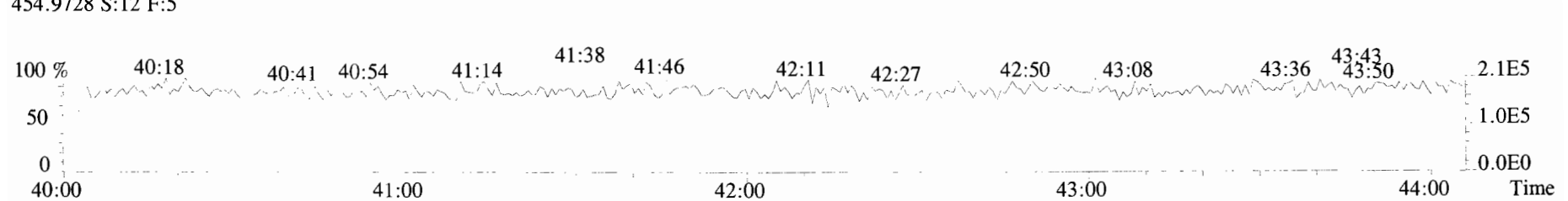
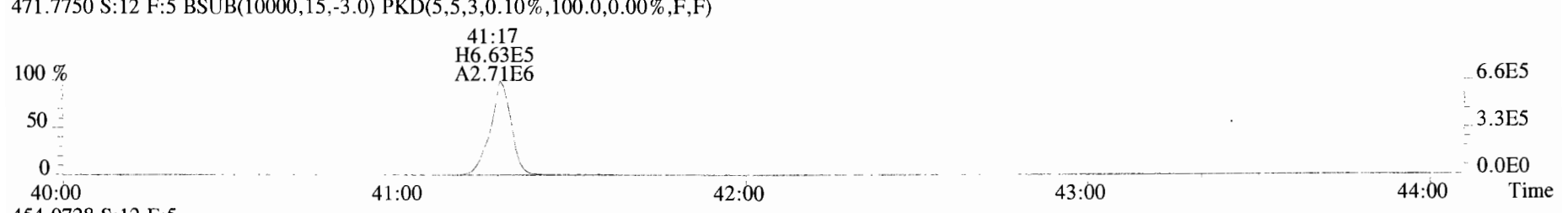
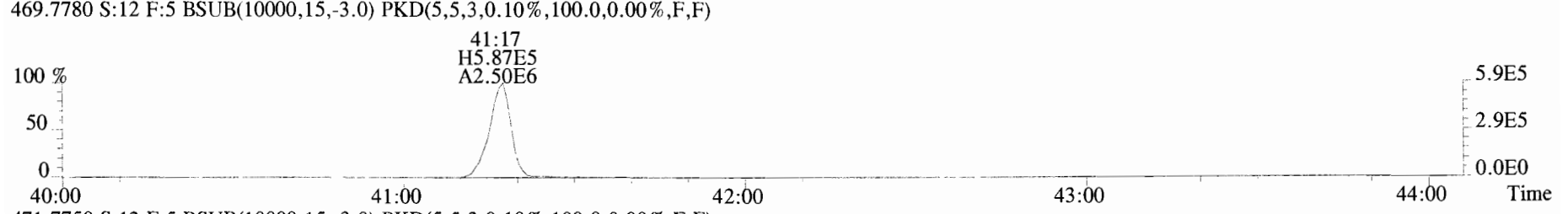
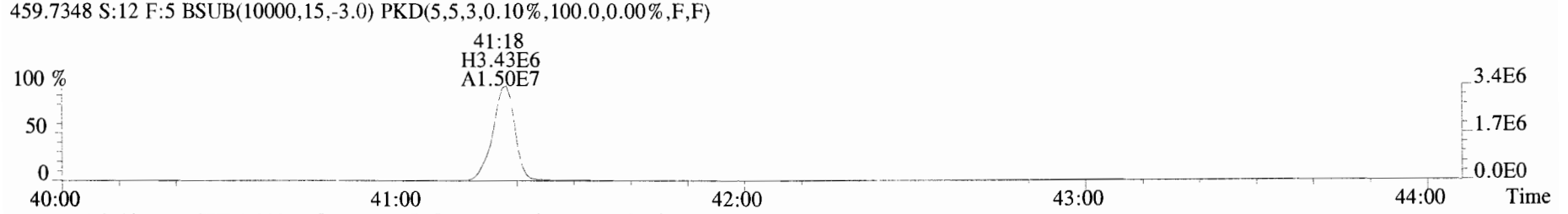
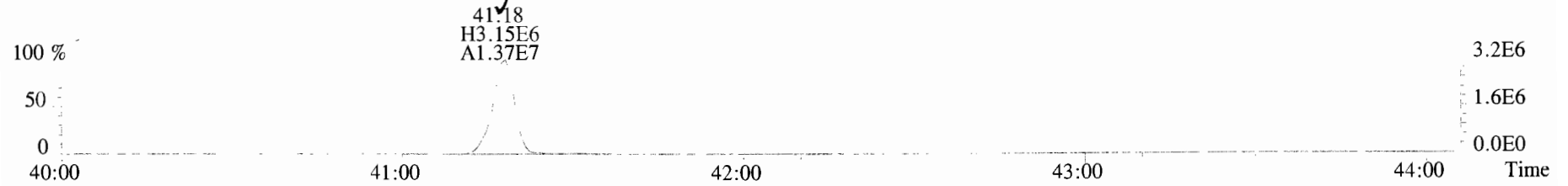
File:191024D2 #1-356 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



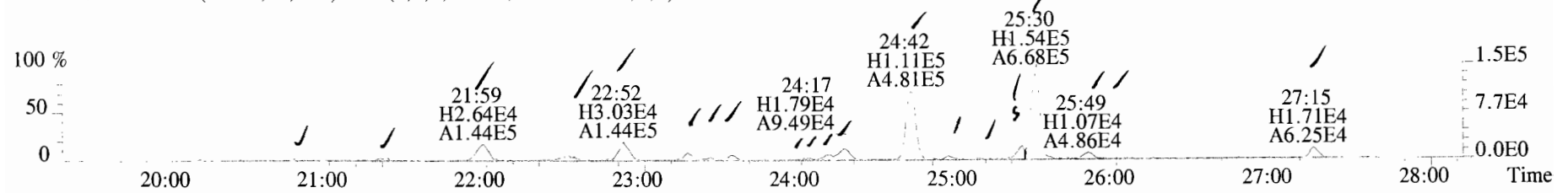
425.7737 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



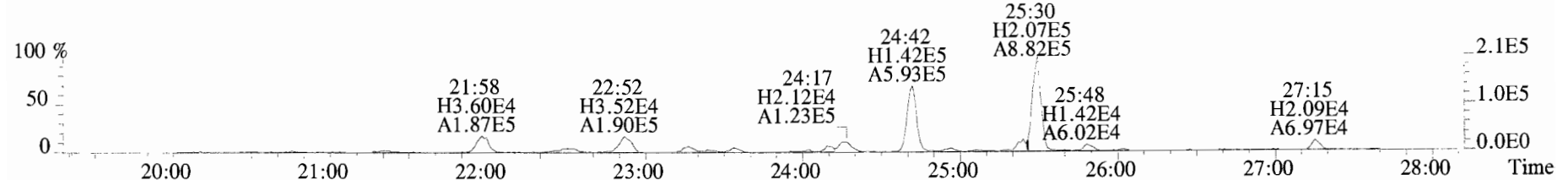
File:191024D2 #1-432 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
457.7377 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



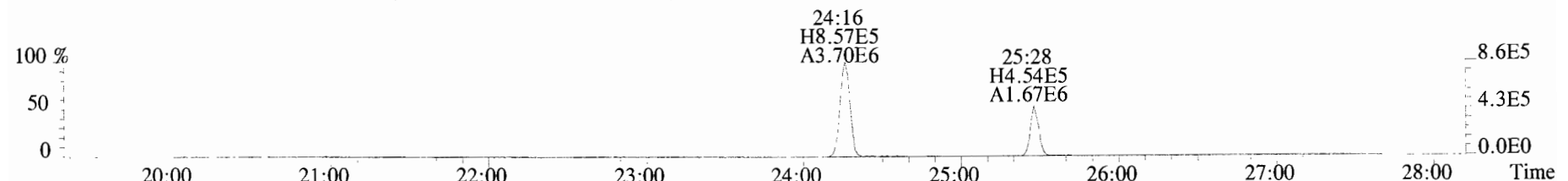
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC E1+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
 303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



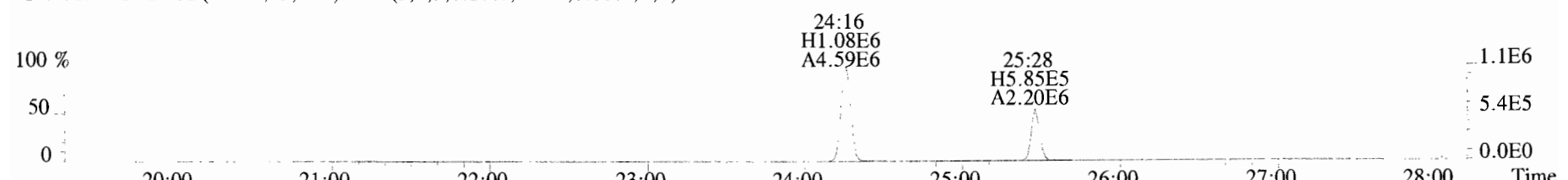
305.8987 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



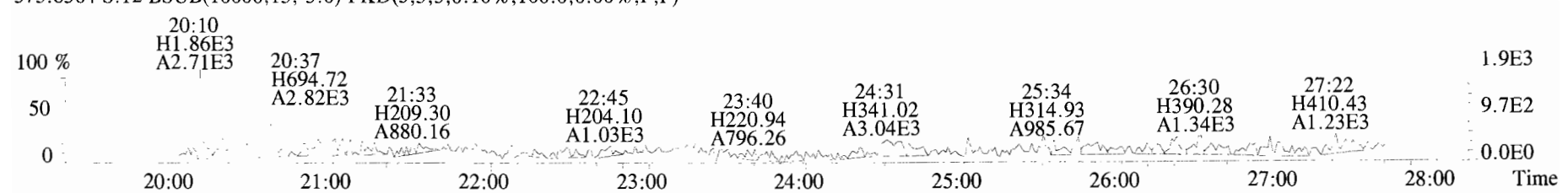
315.9419 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



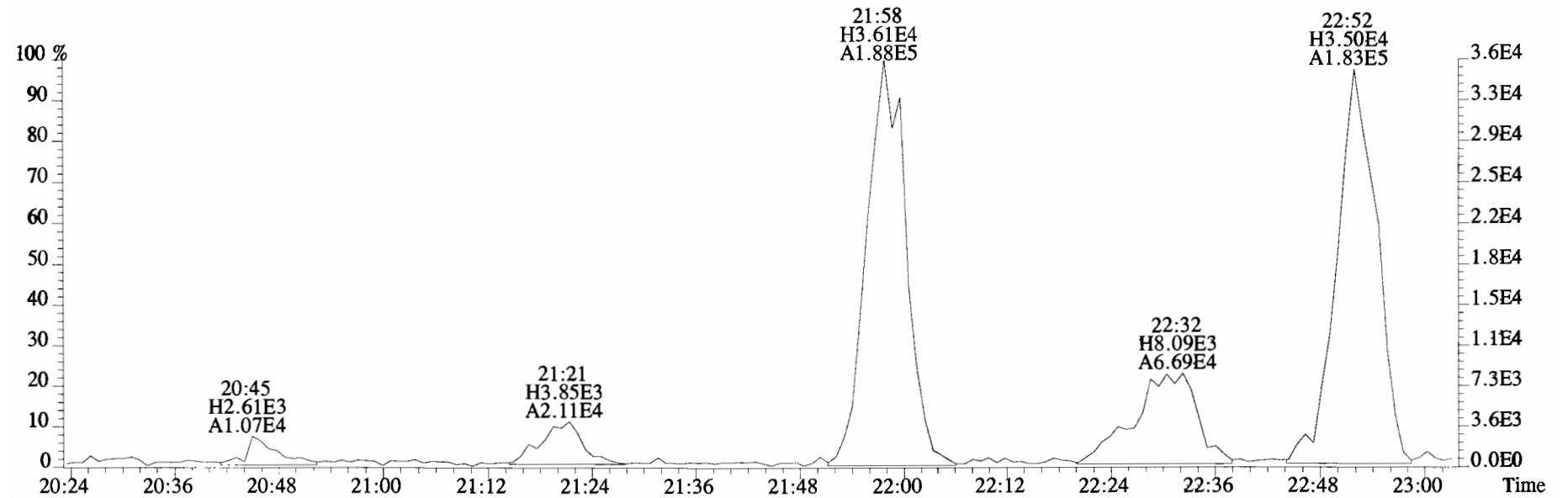
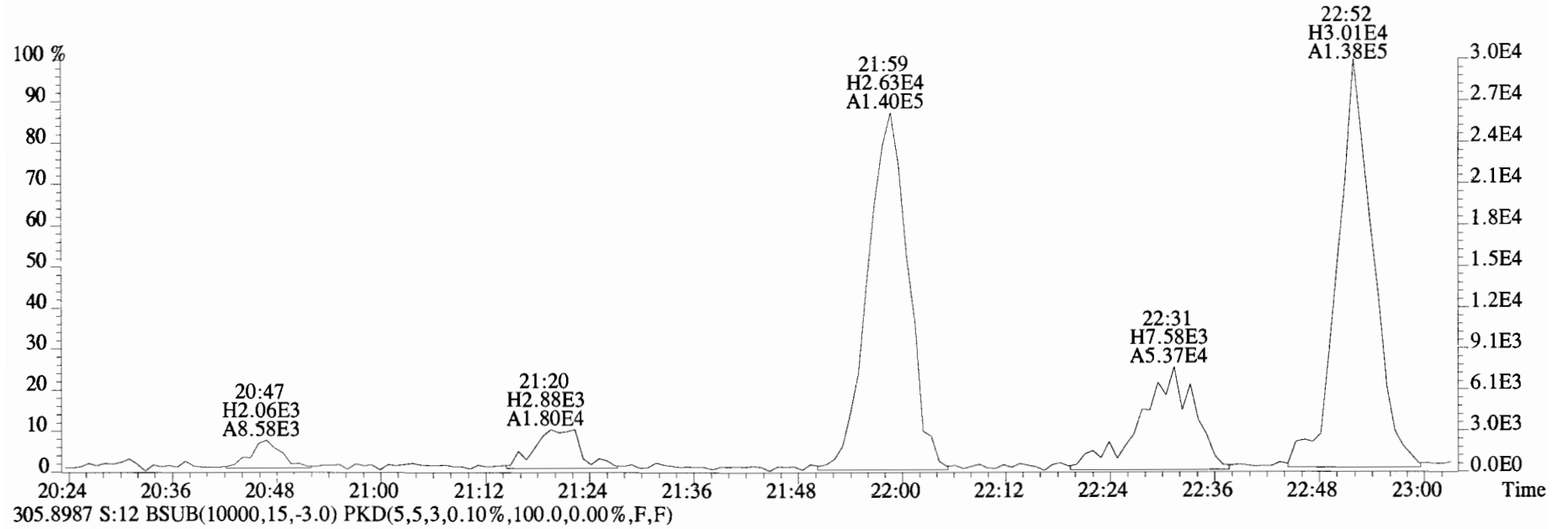
317.9389 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



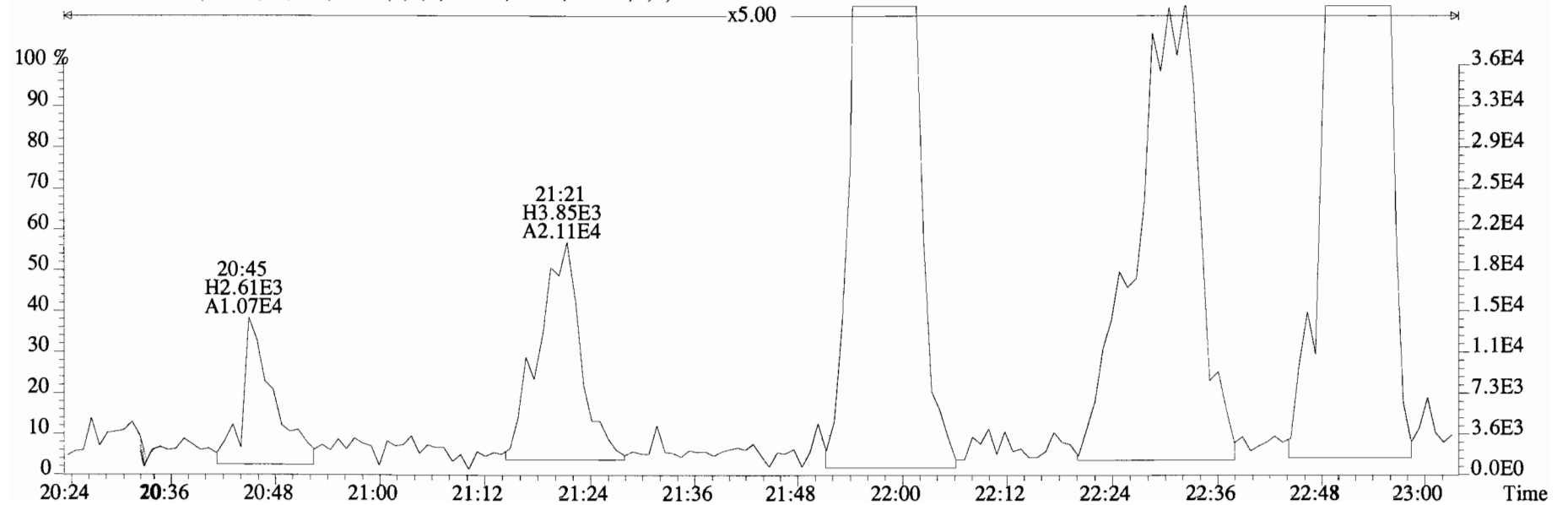
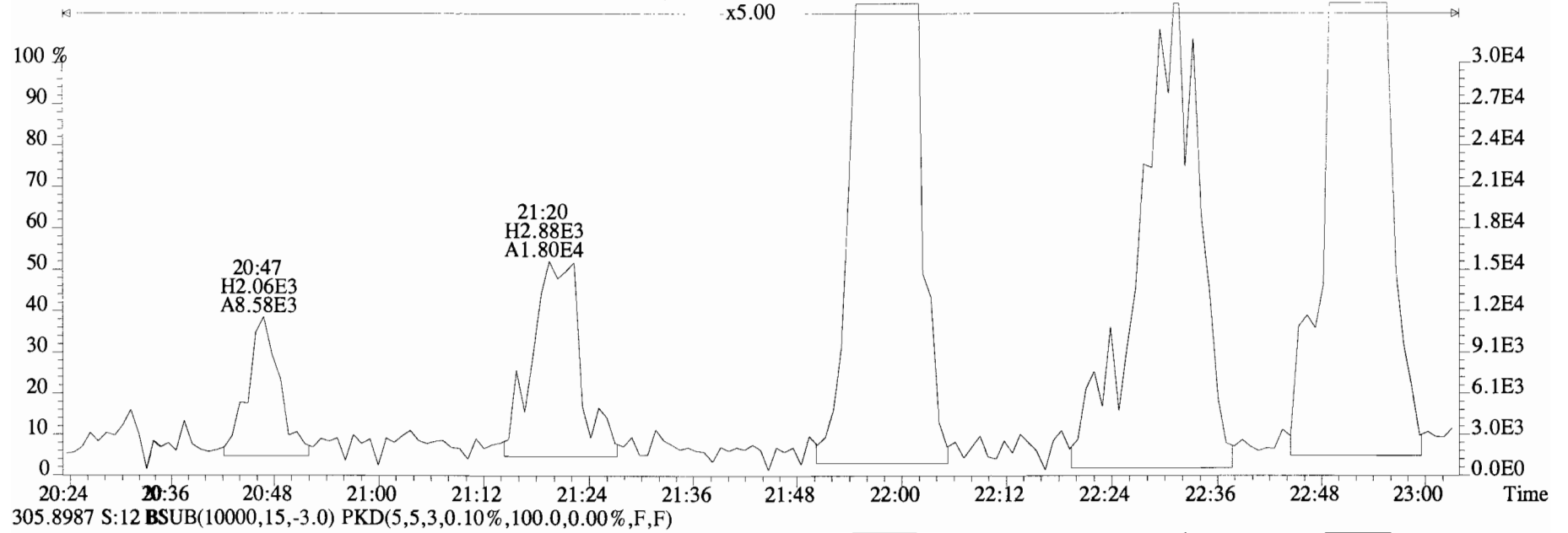
375.8364 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



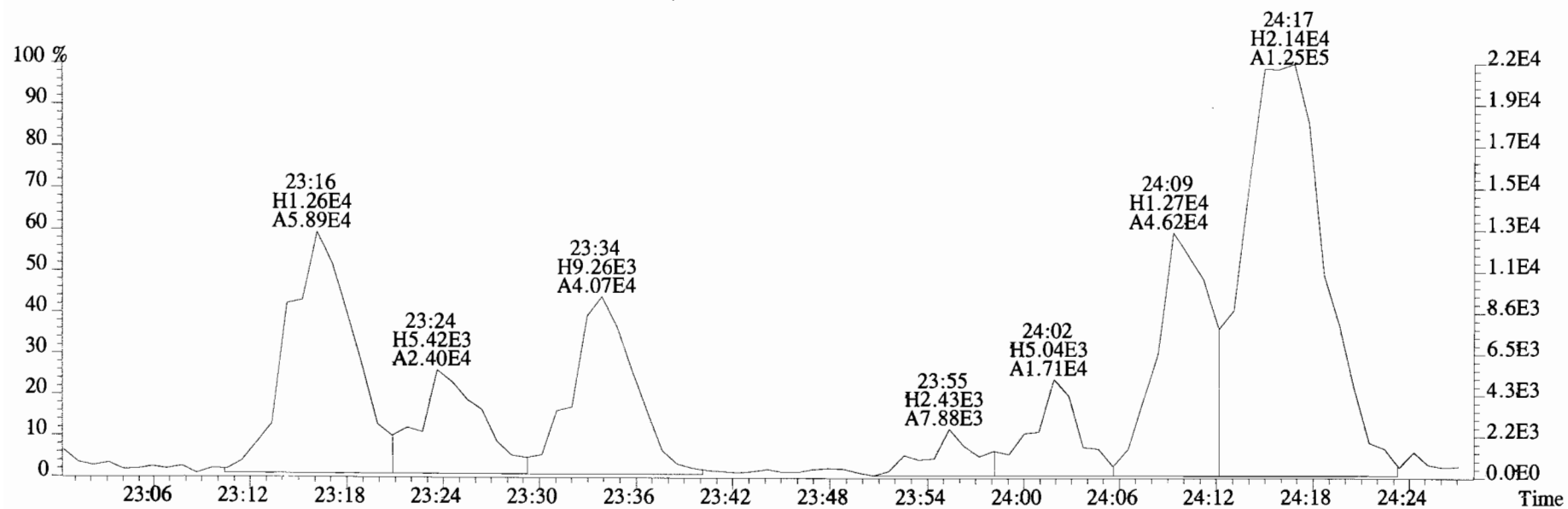
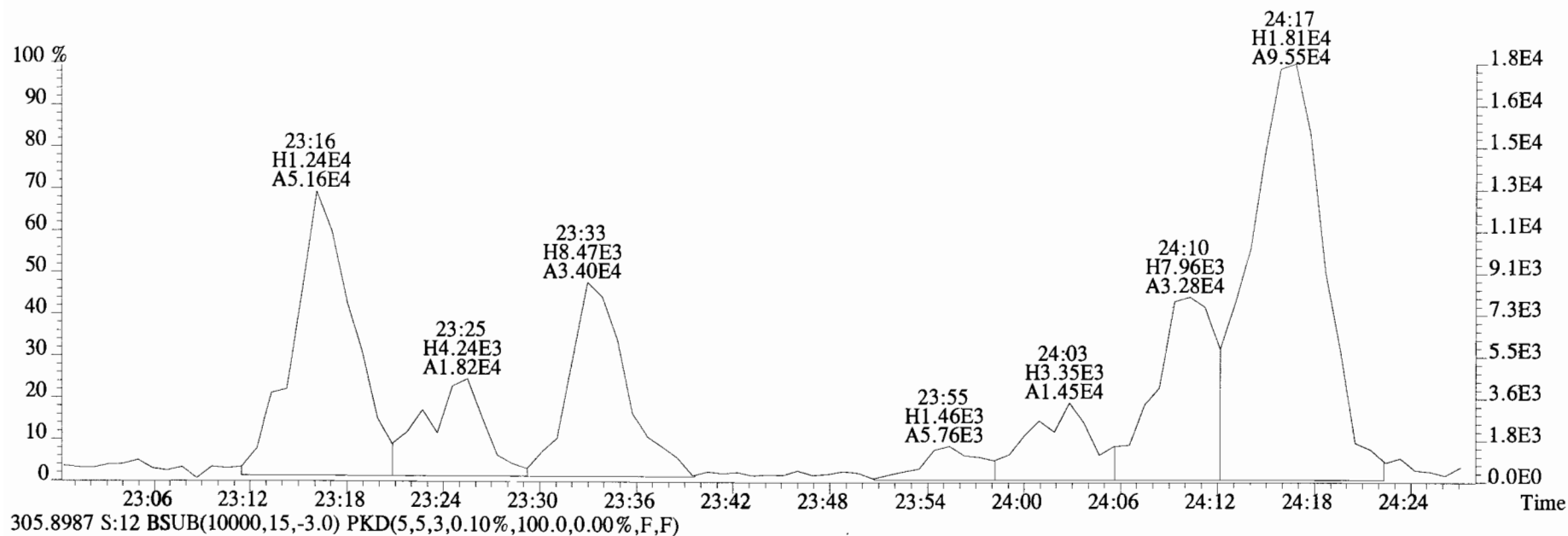
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



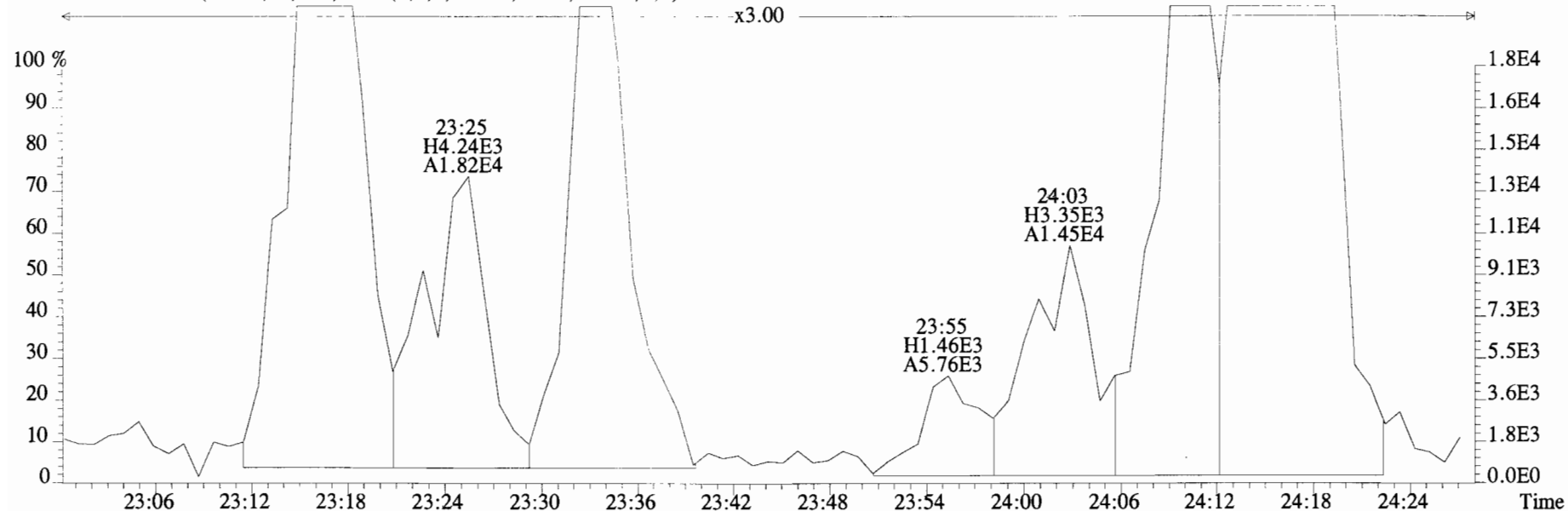
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



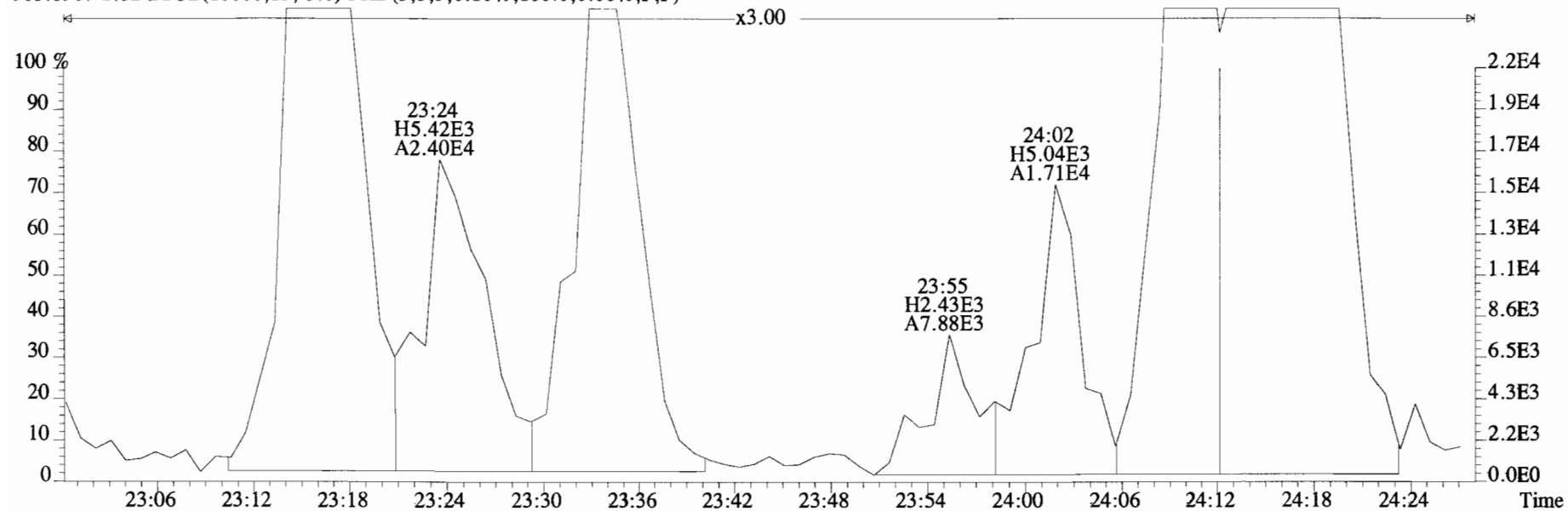
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text: Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
 303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



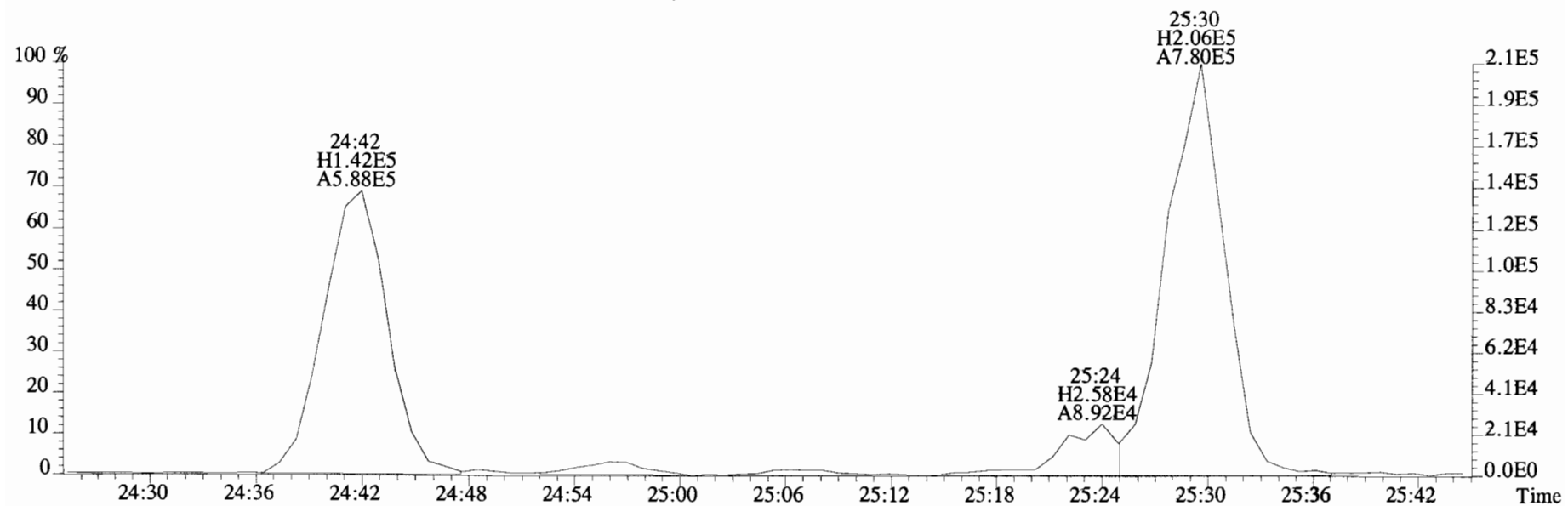
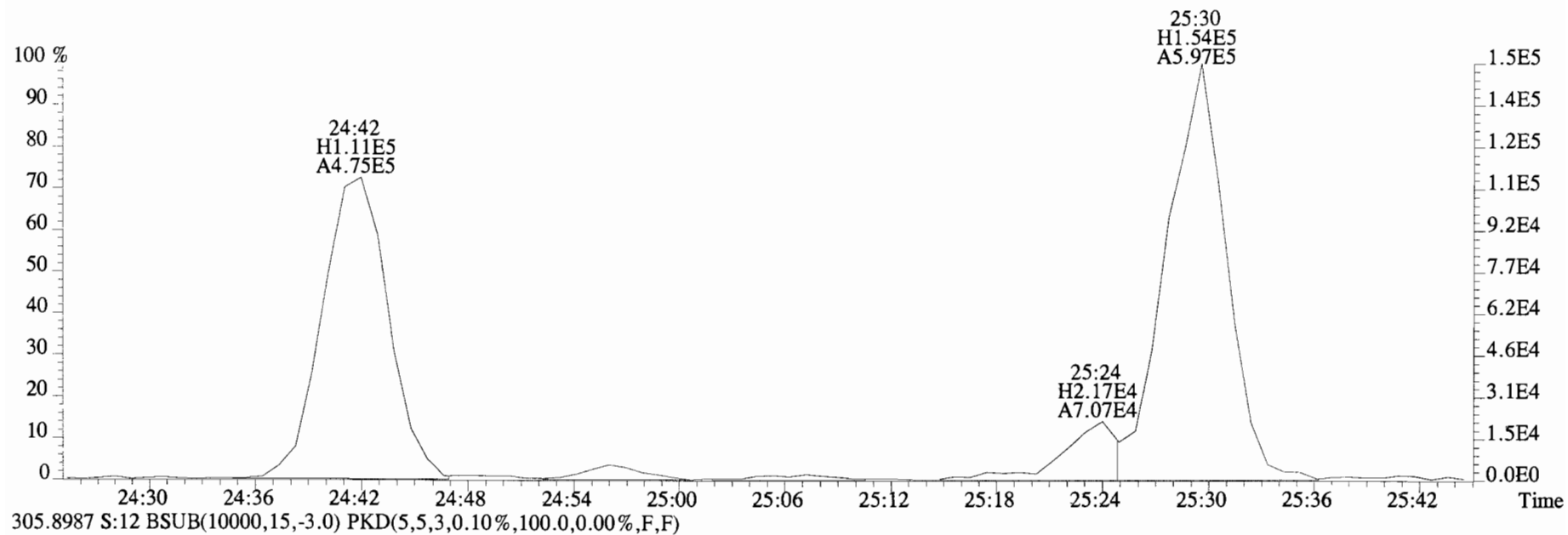
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 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
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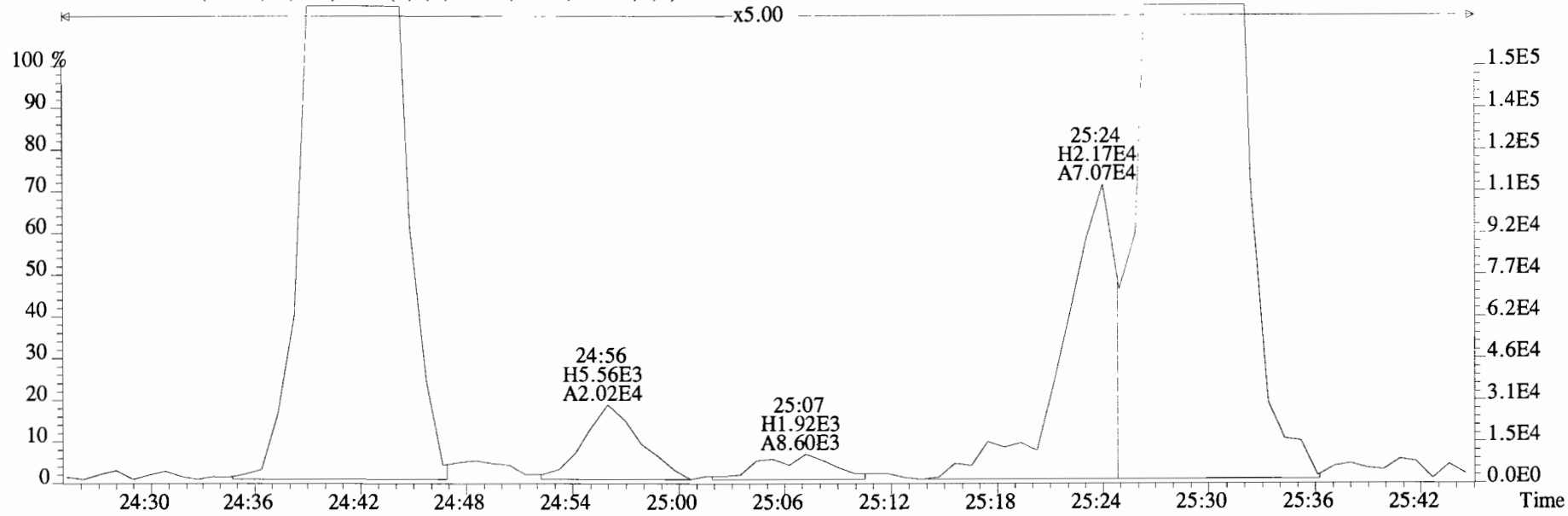
305.8987 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



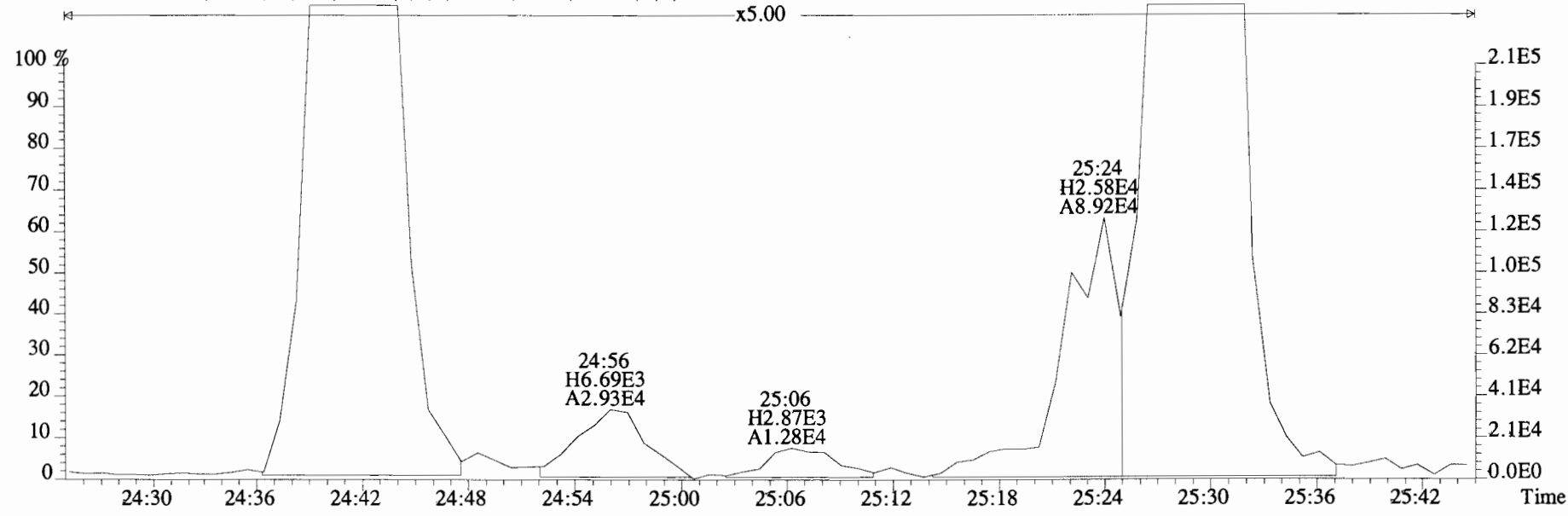
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



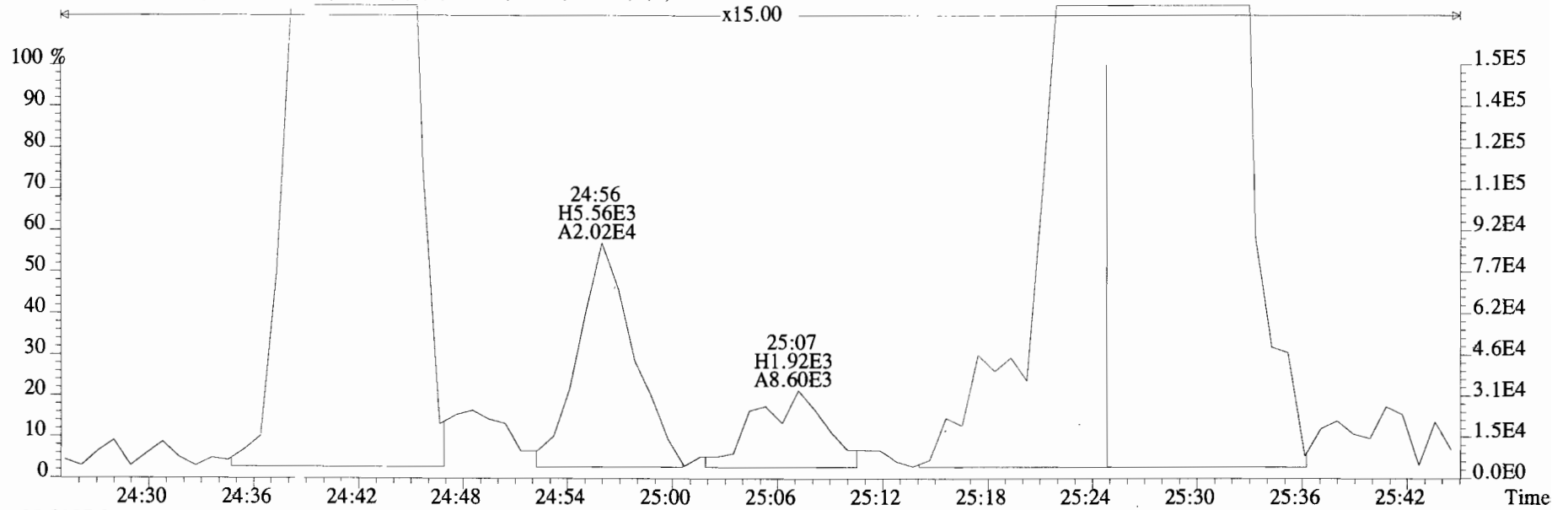
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
 303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



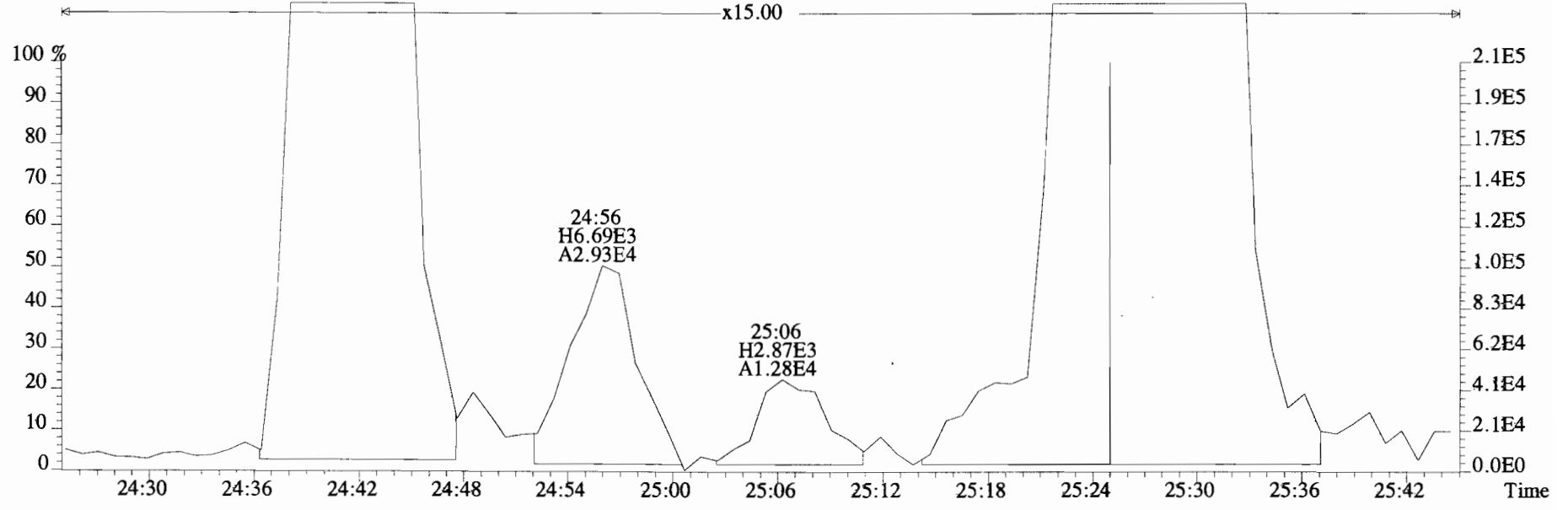
305.8987 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



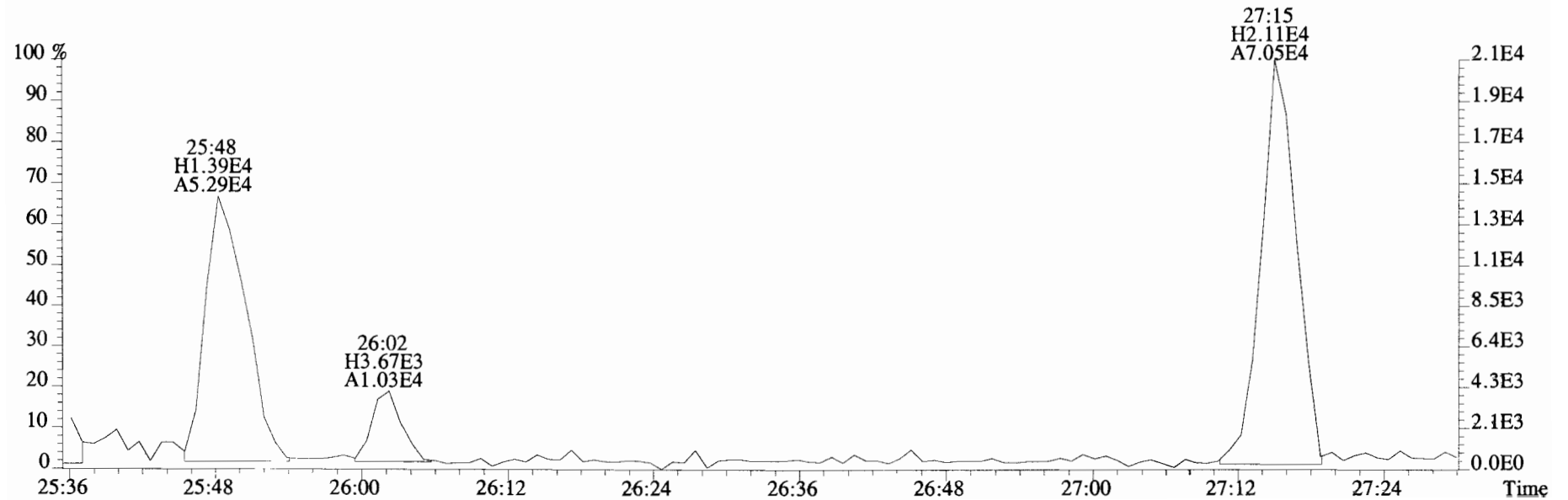
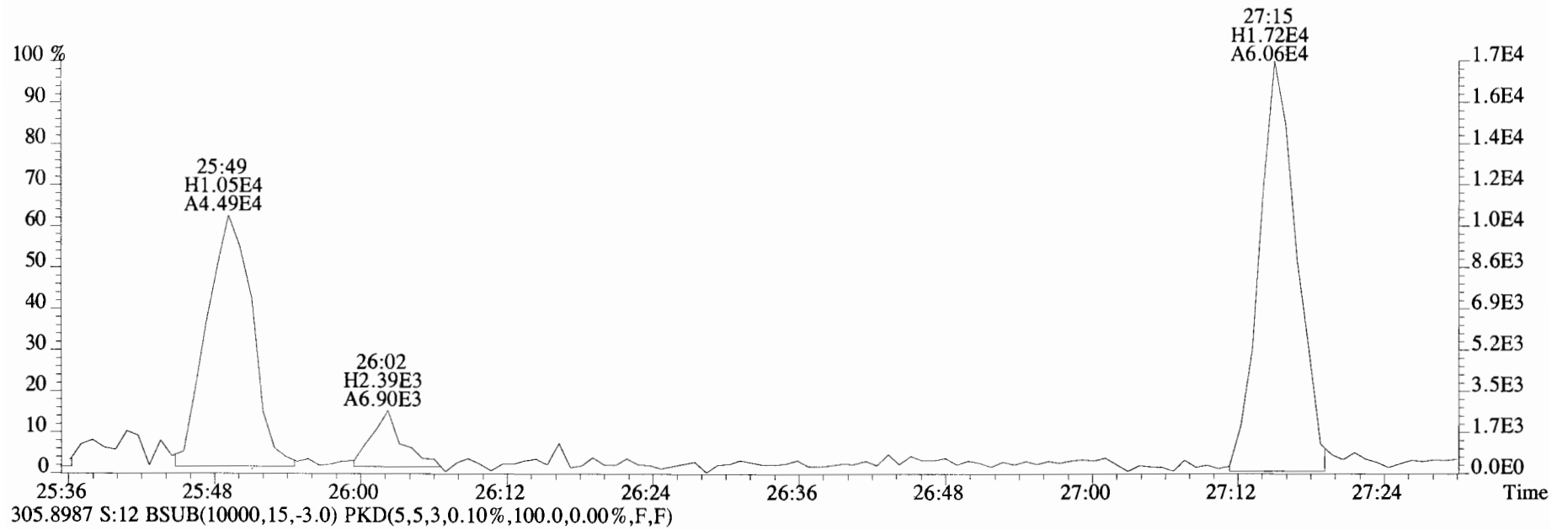
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



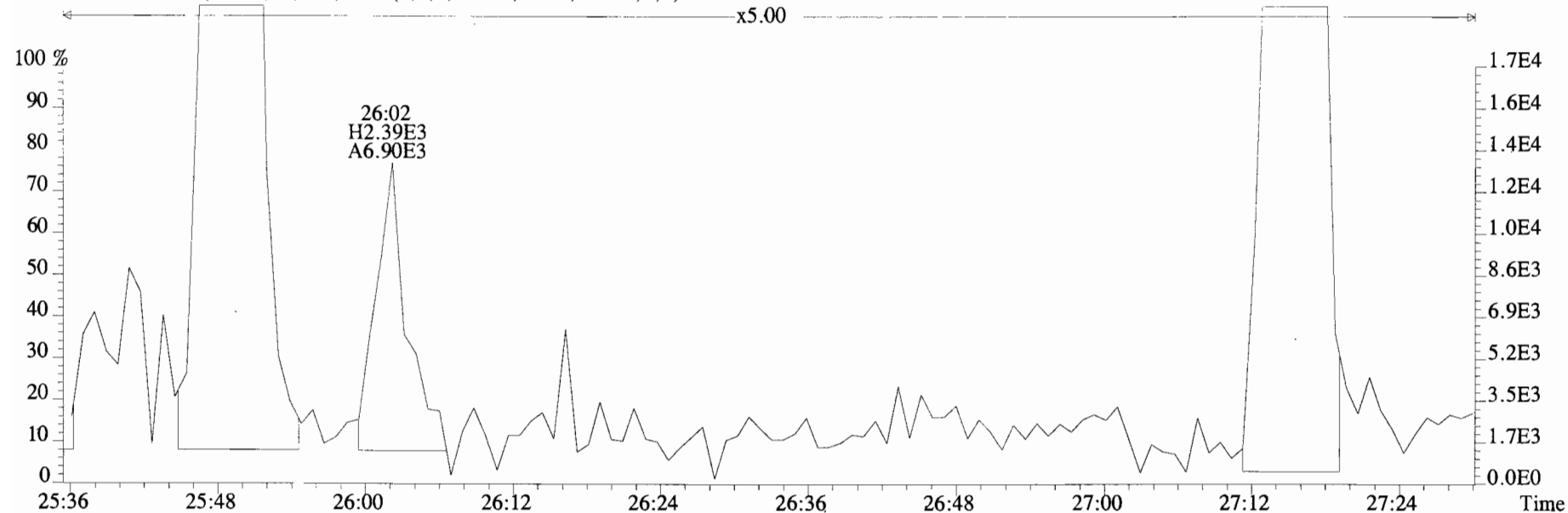
305.8987 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



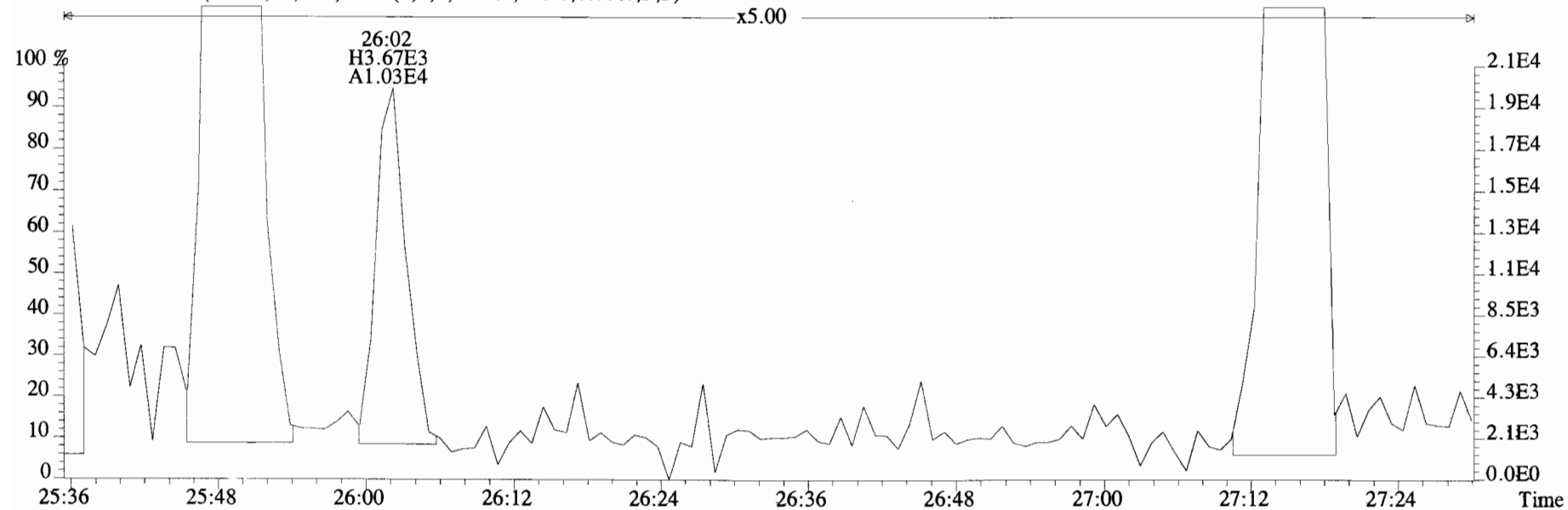
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



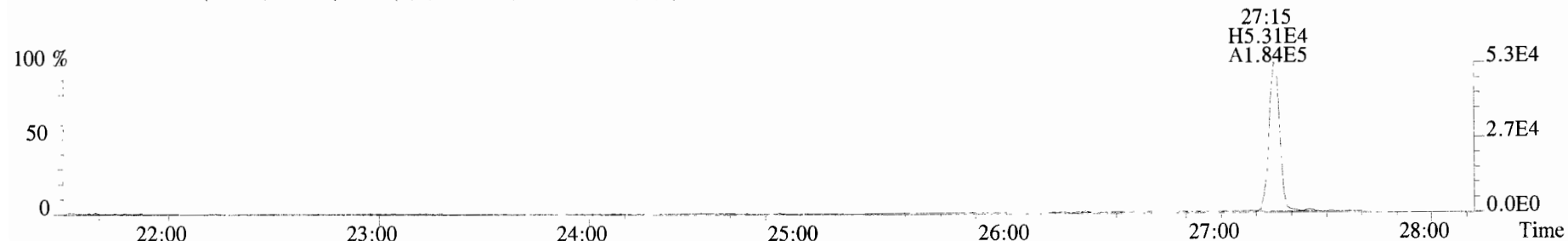
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



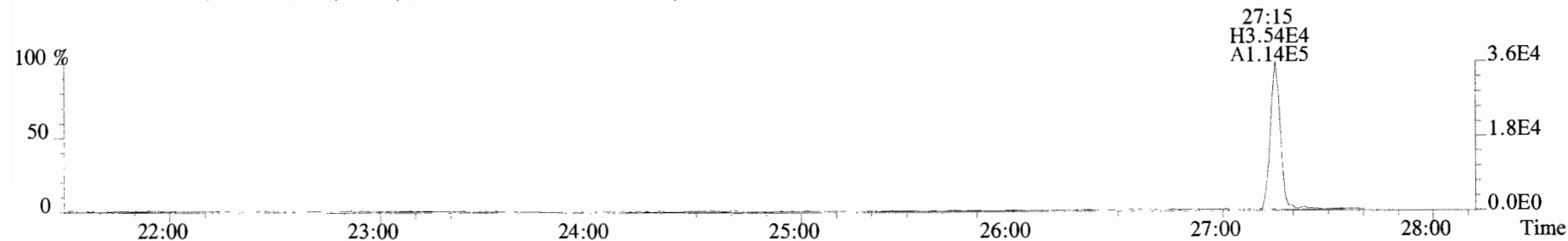
305.8987 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



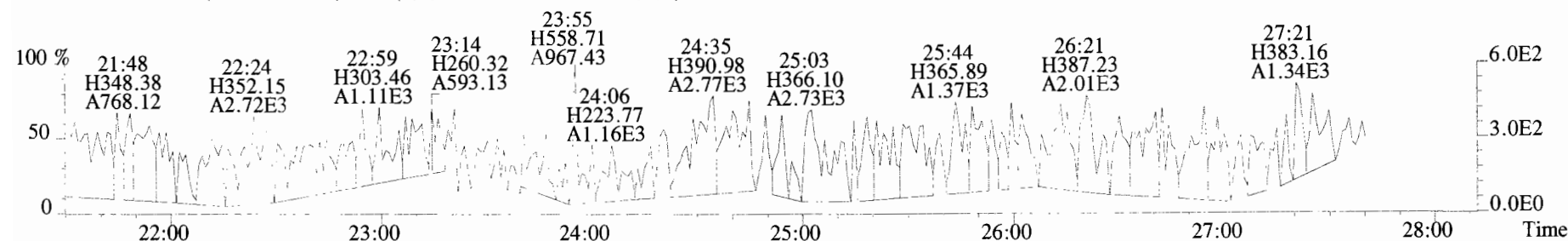
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
 339.8597 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



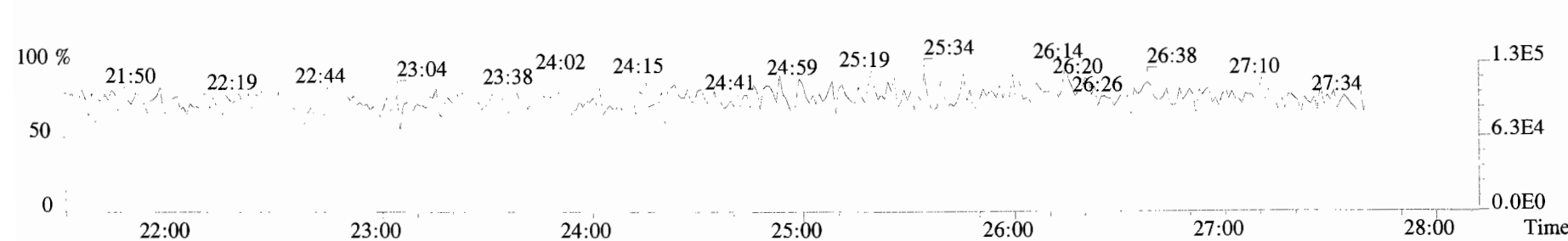
341.8568 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



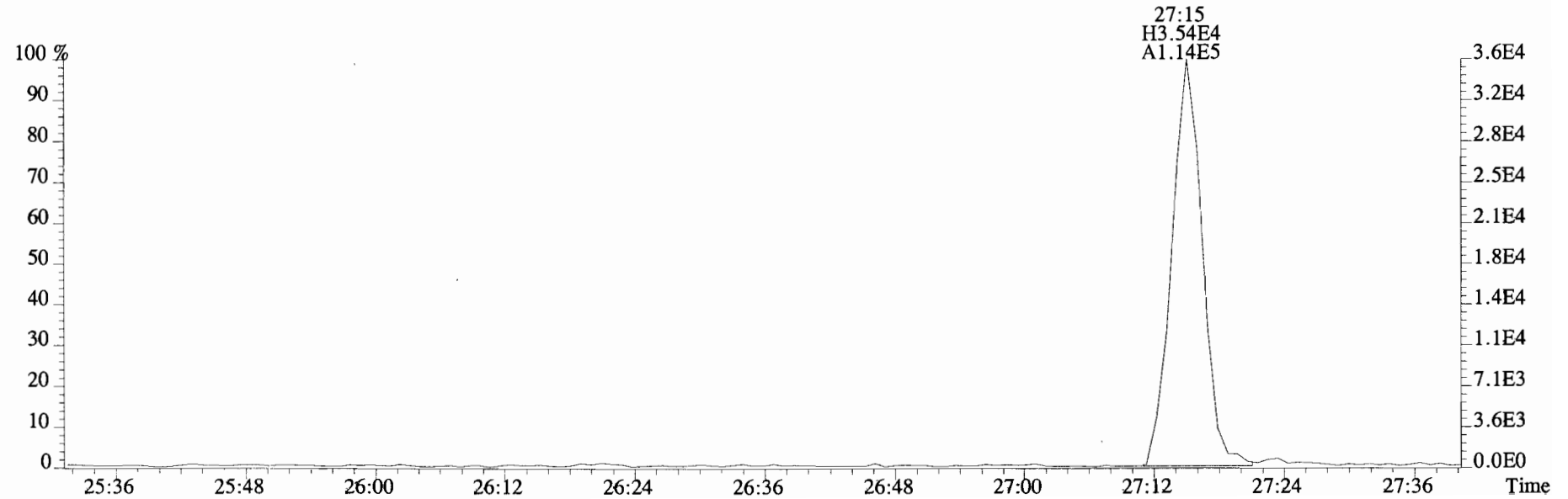
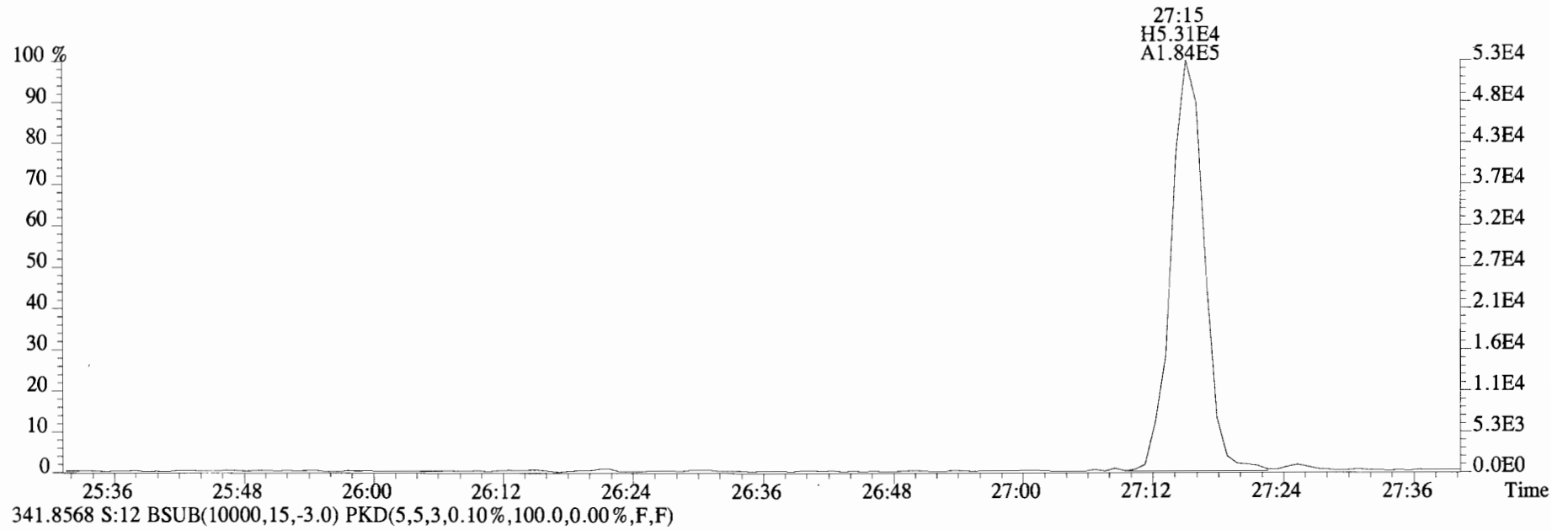
409.7974 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



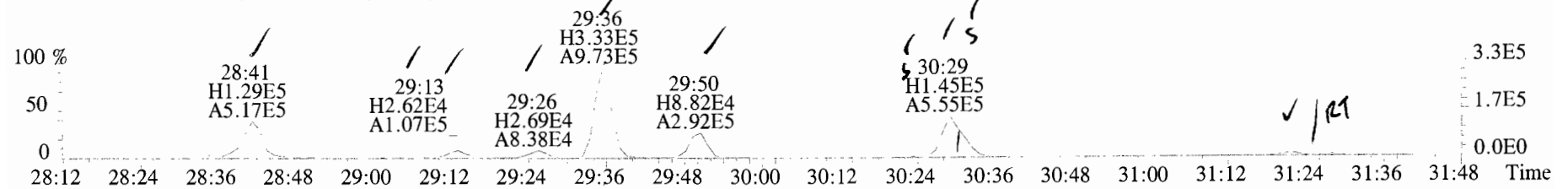
316.9824 S:12



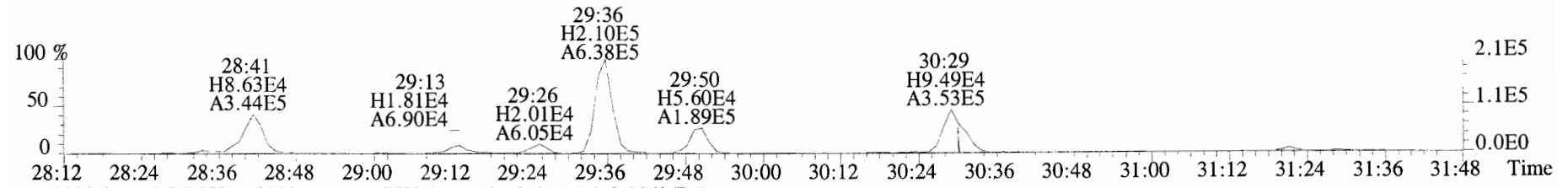
File:191024D2 #1-493 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
339.8597 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



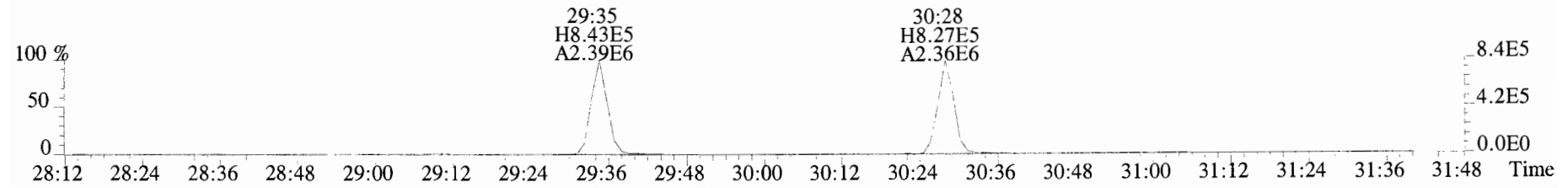
File:191024D2 #1-211 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



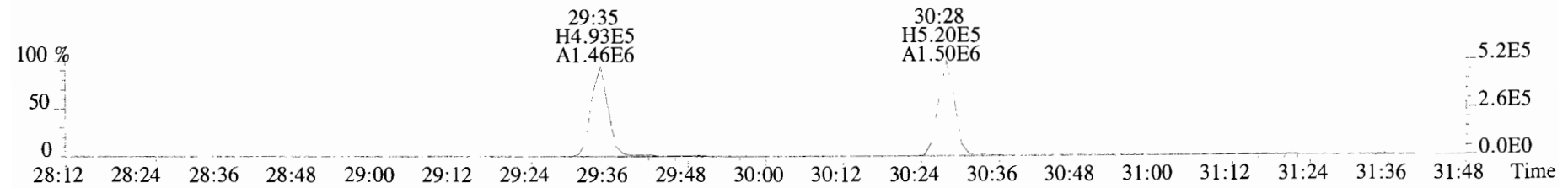
341.8568 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



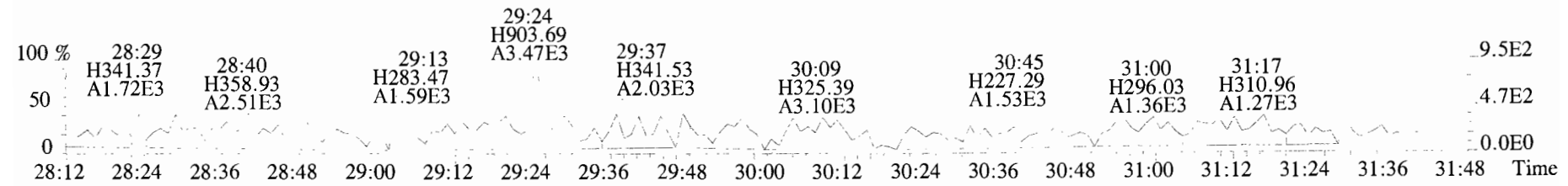
351.9000 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



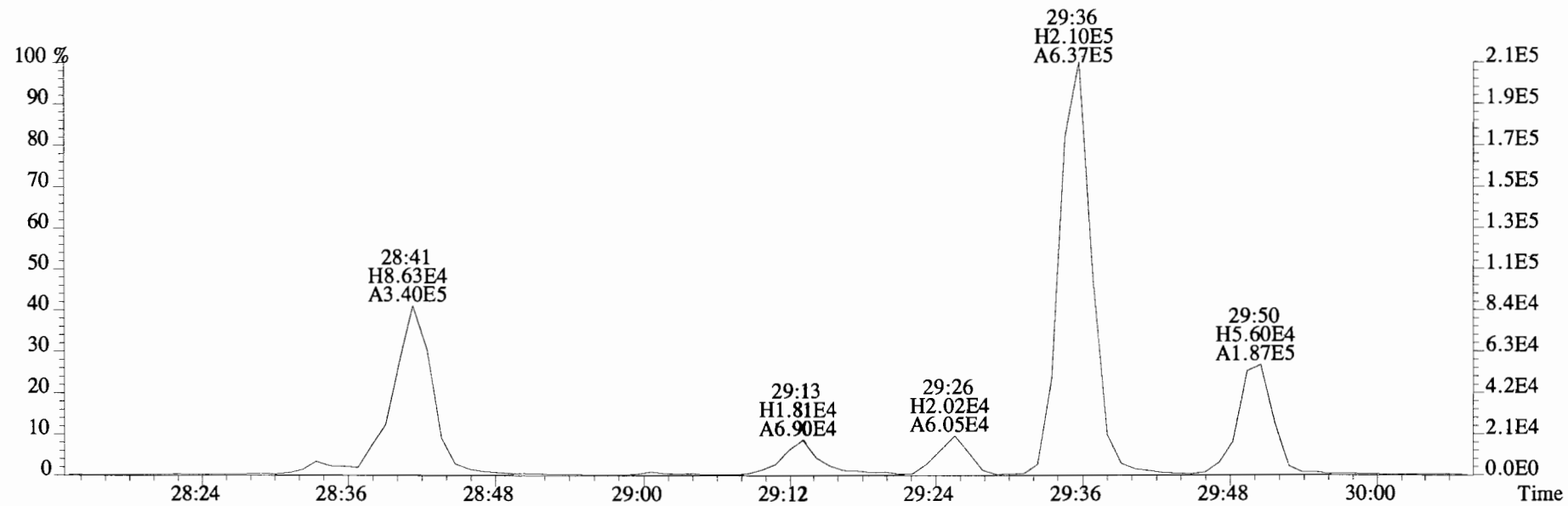
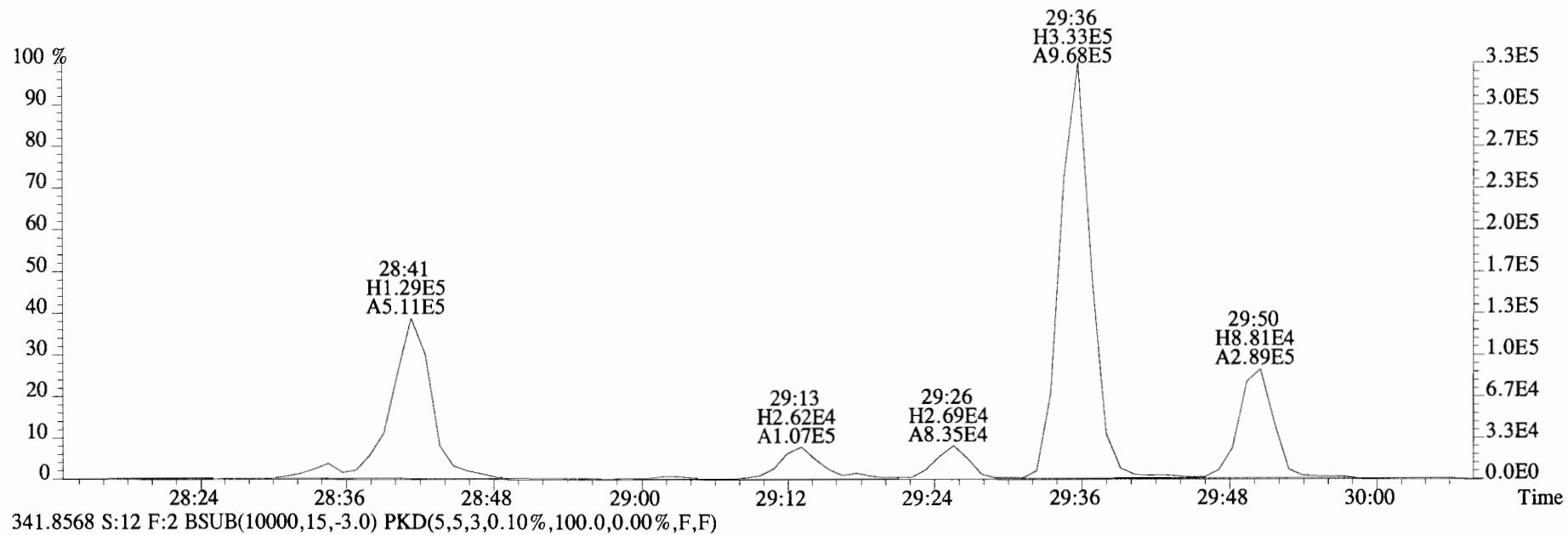
353.8970 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



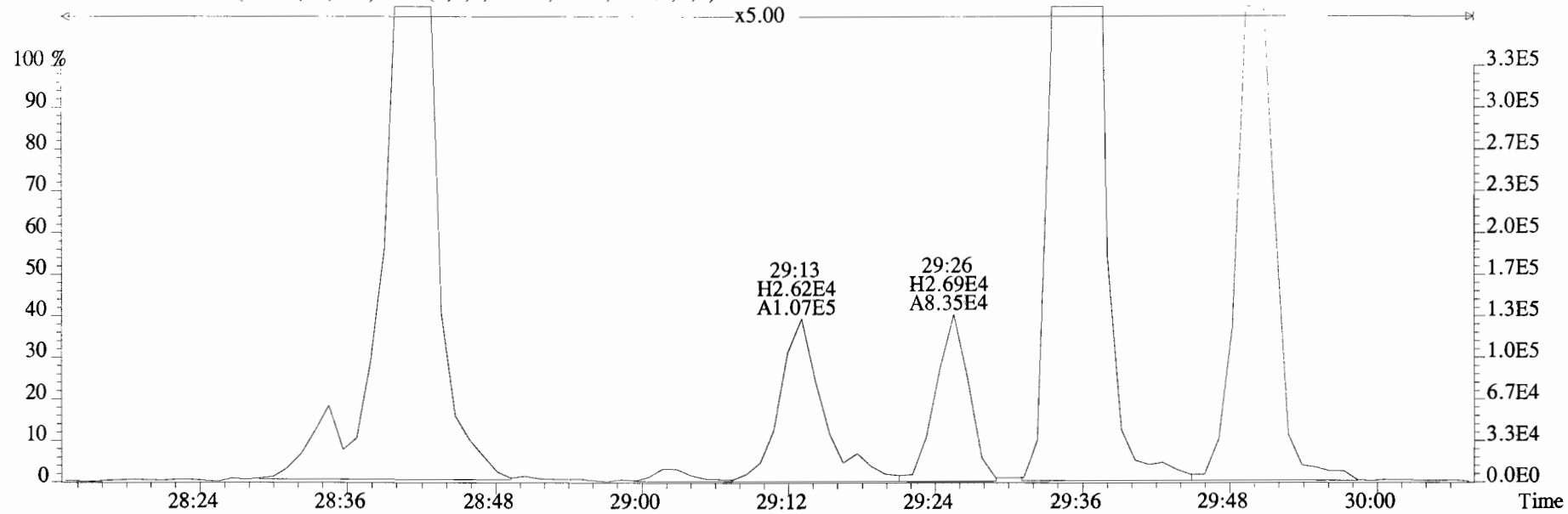
409.7974 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



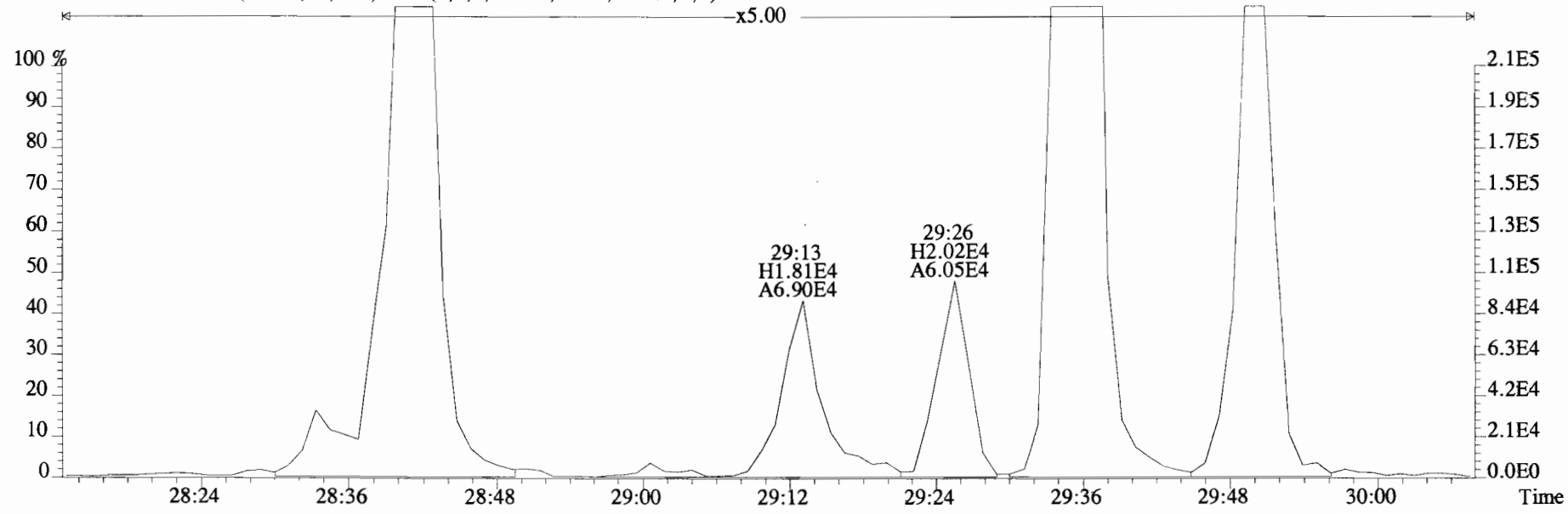
File:191024D2 #1-211 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



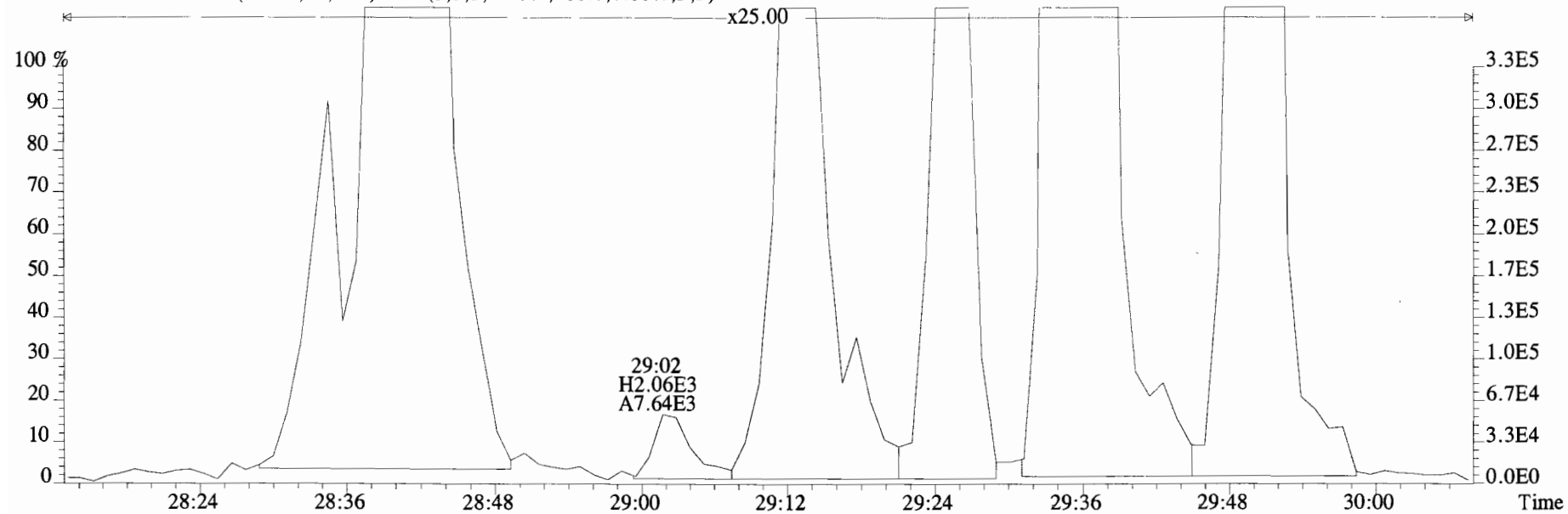
File:191024D2 #1-211 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



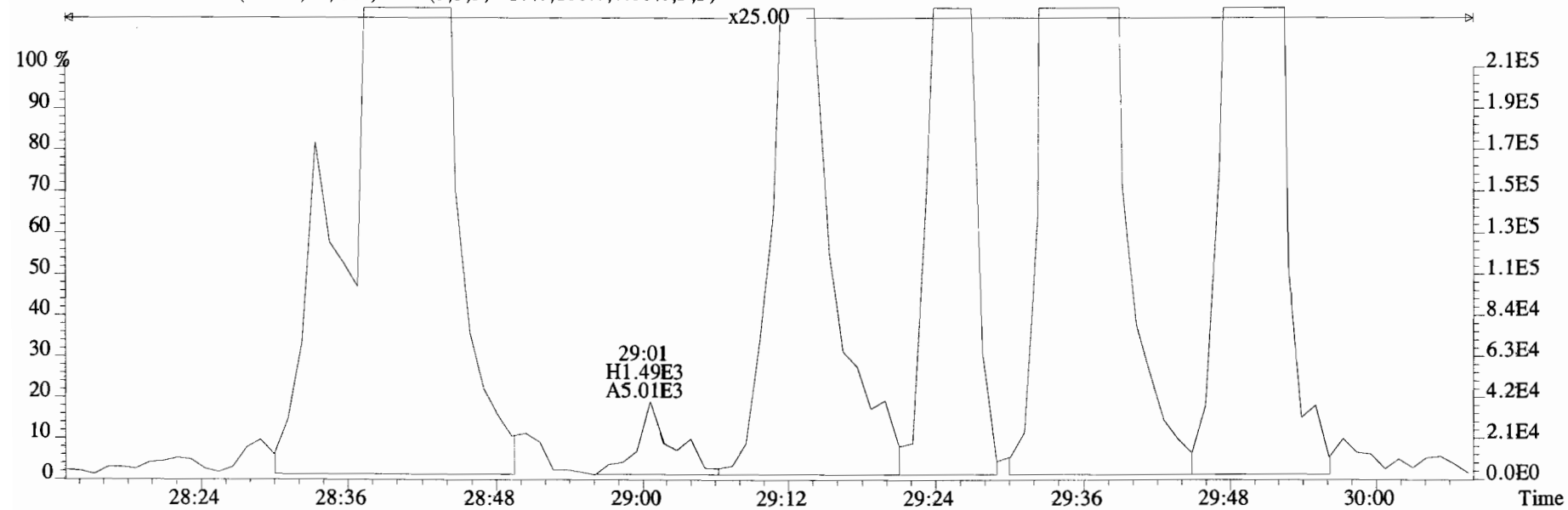
341.8568 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



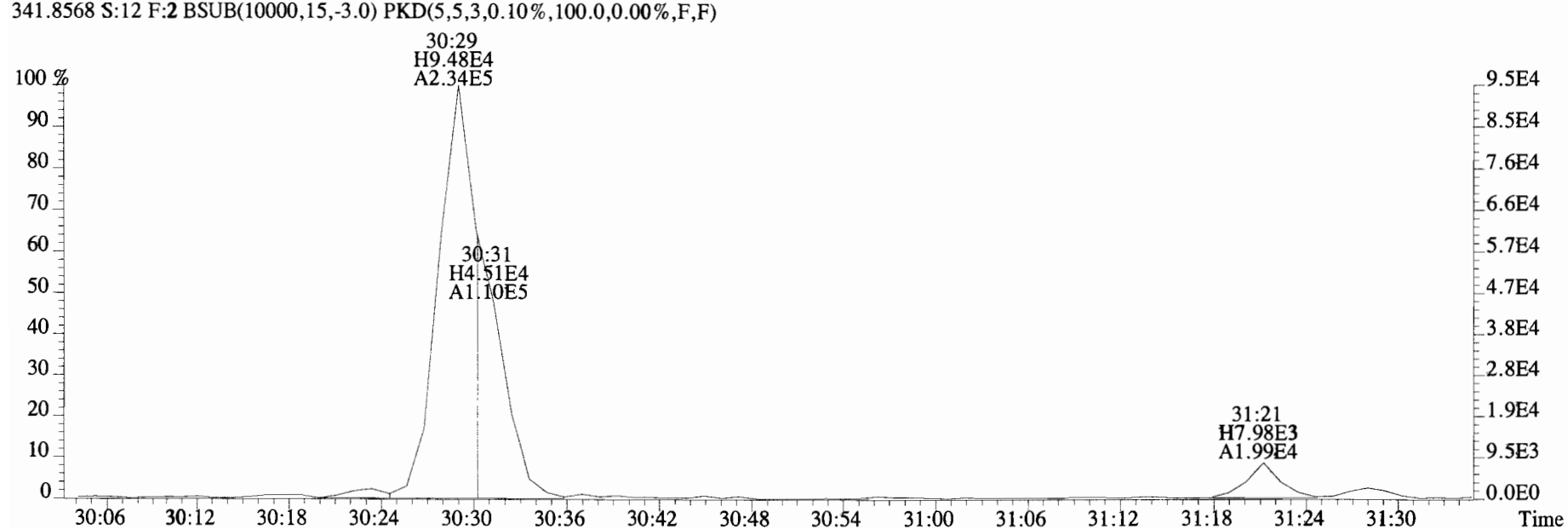
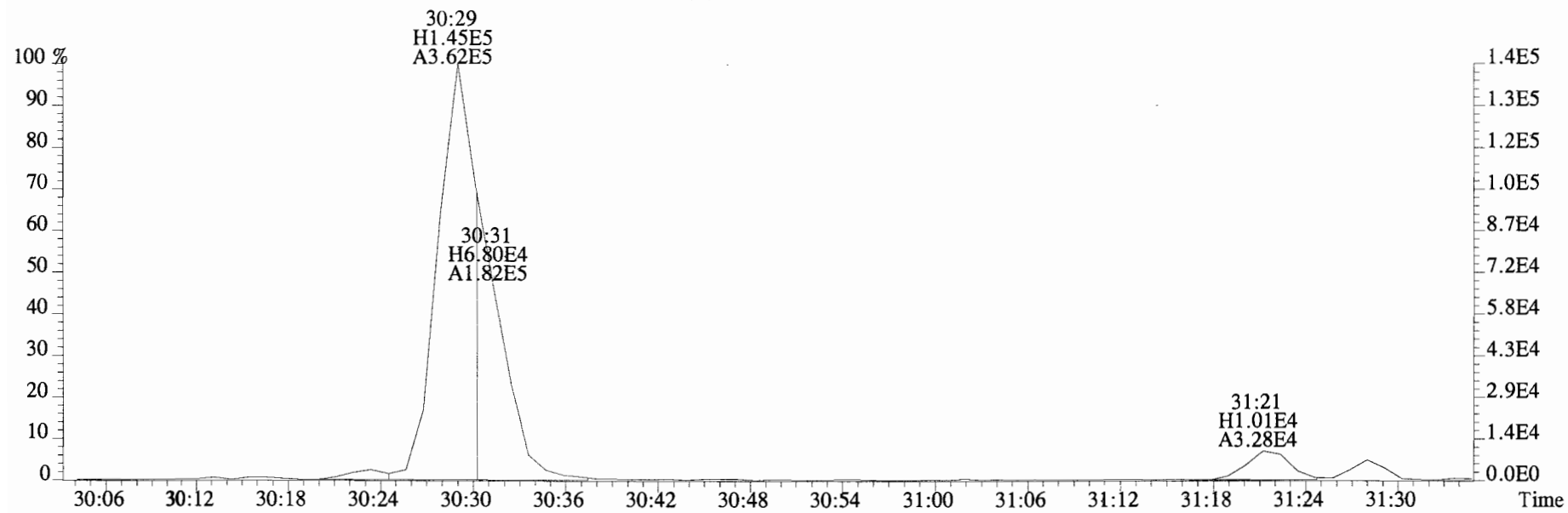
File:191024D2 #1-211 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



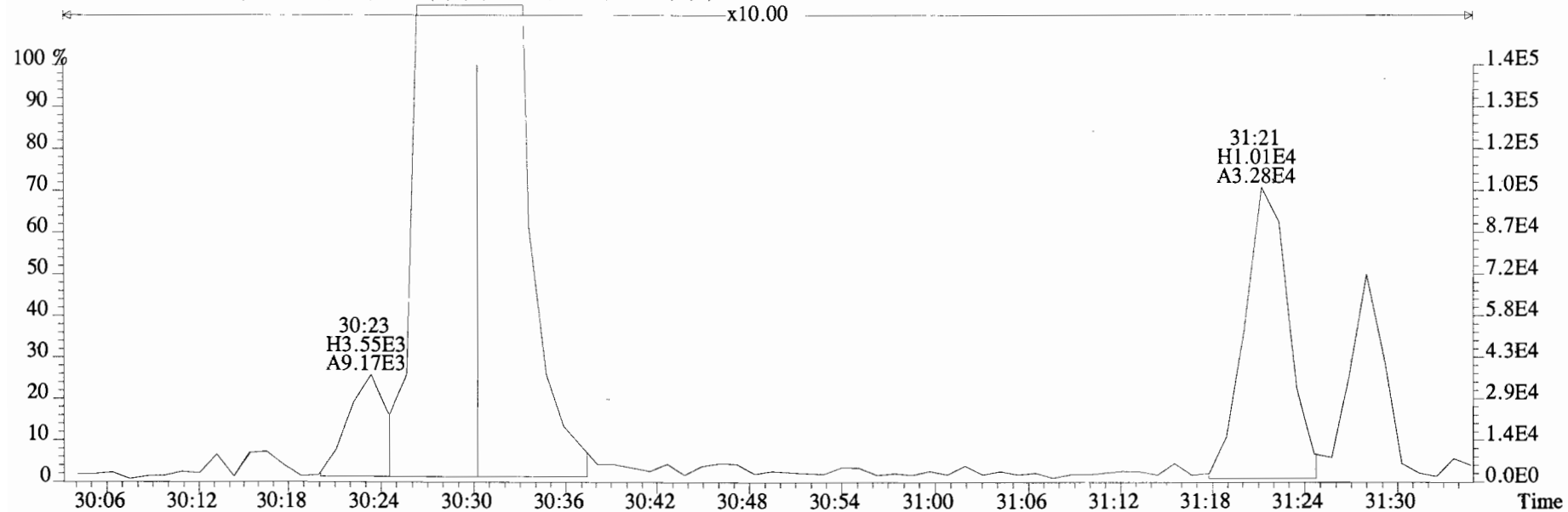
341.8568 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



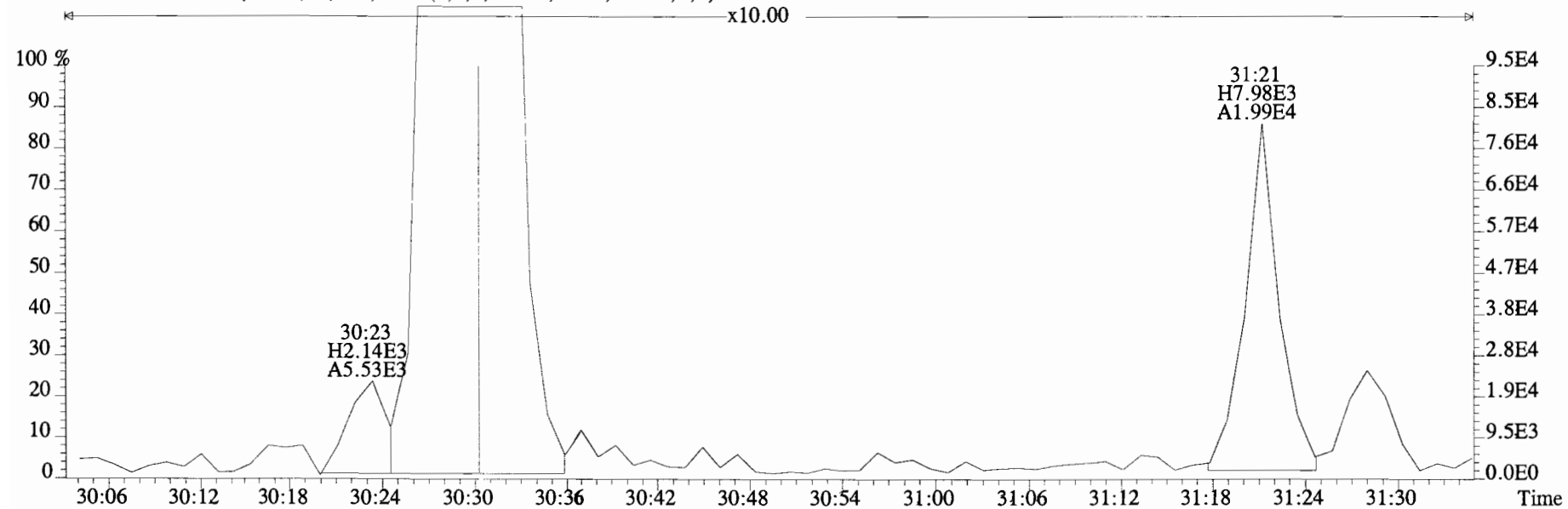
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Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



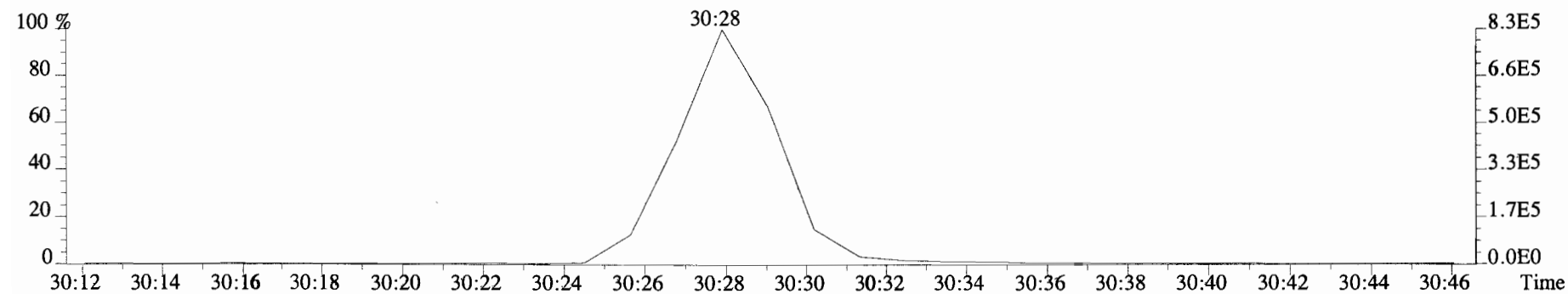
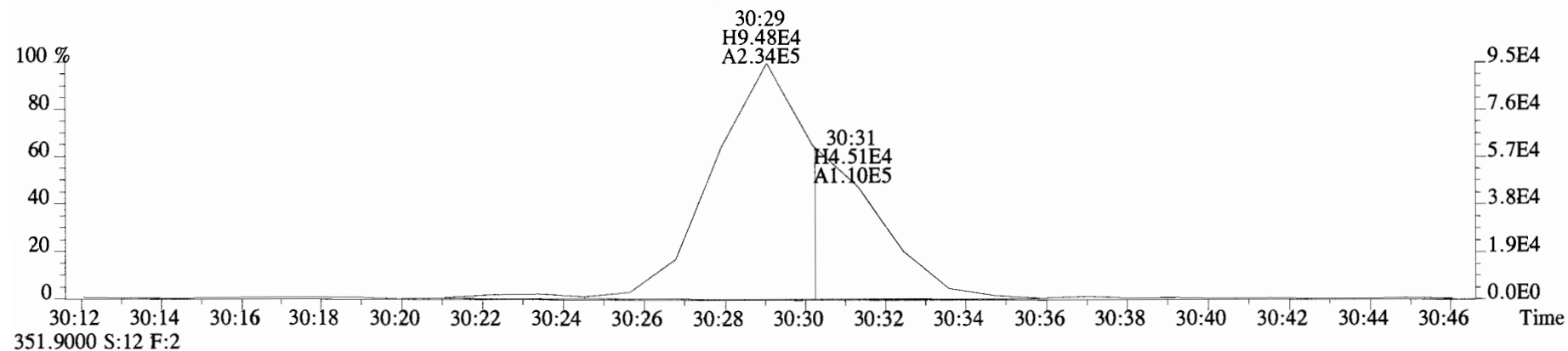
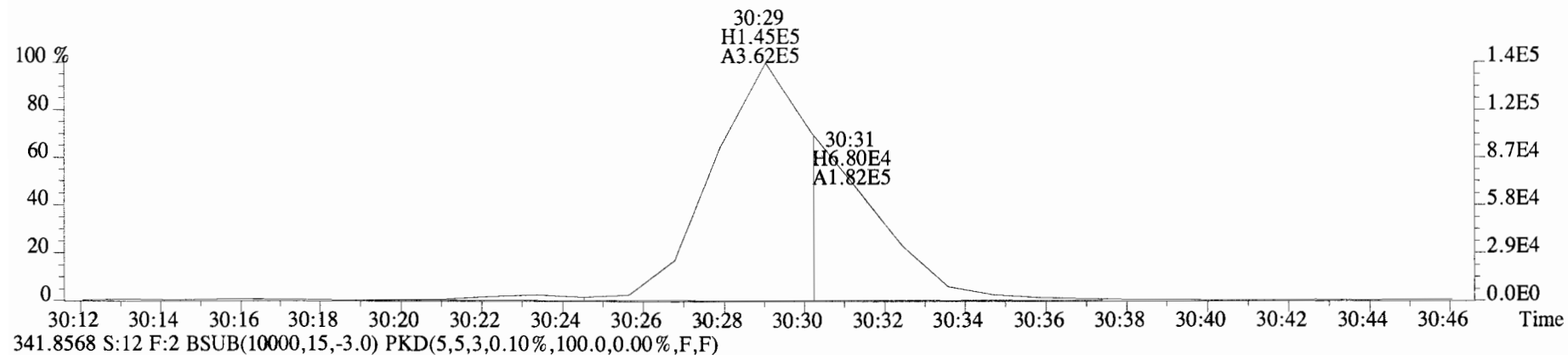
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Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



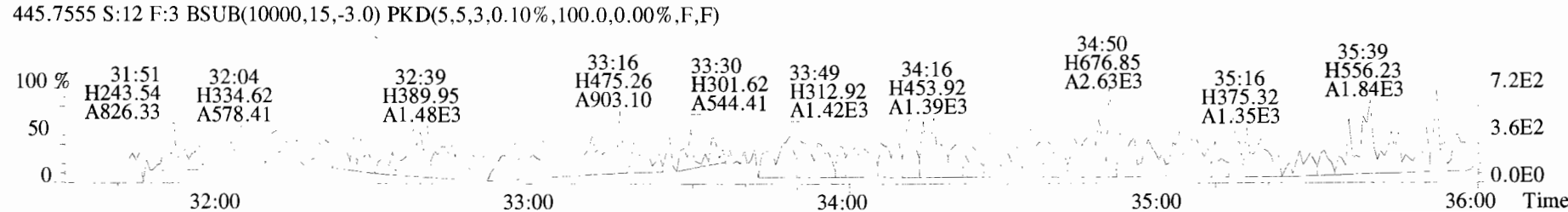
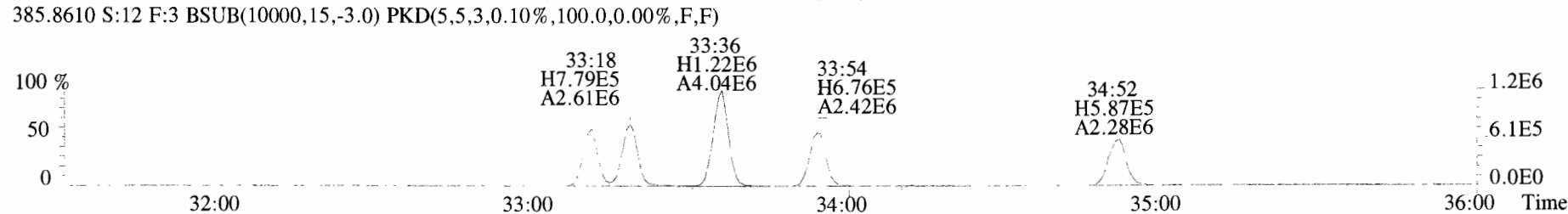
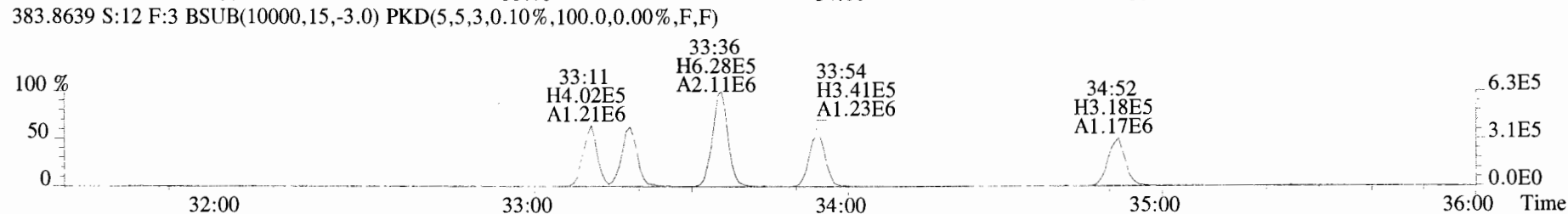
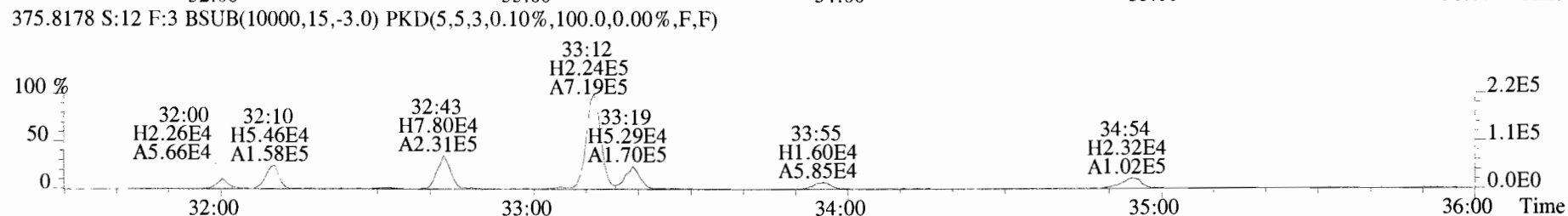
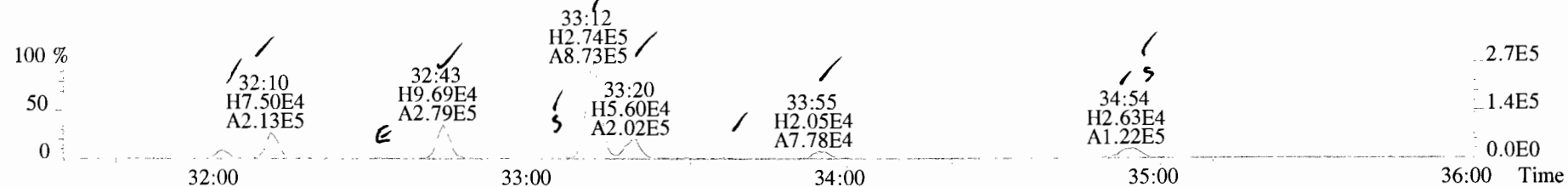
341.8568 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



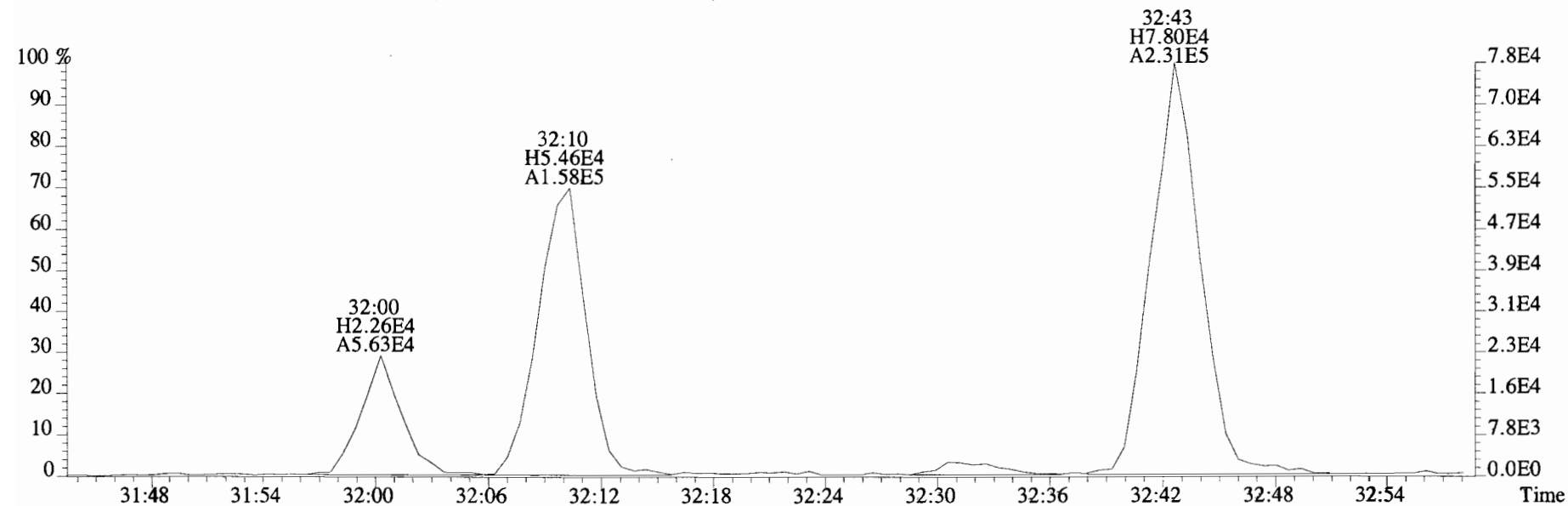
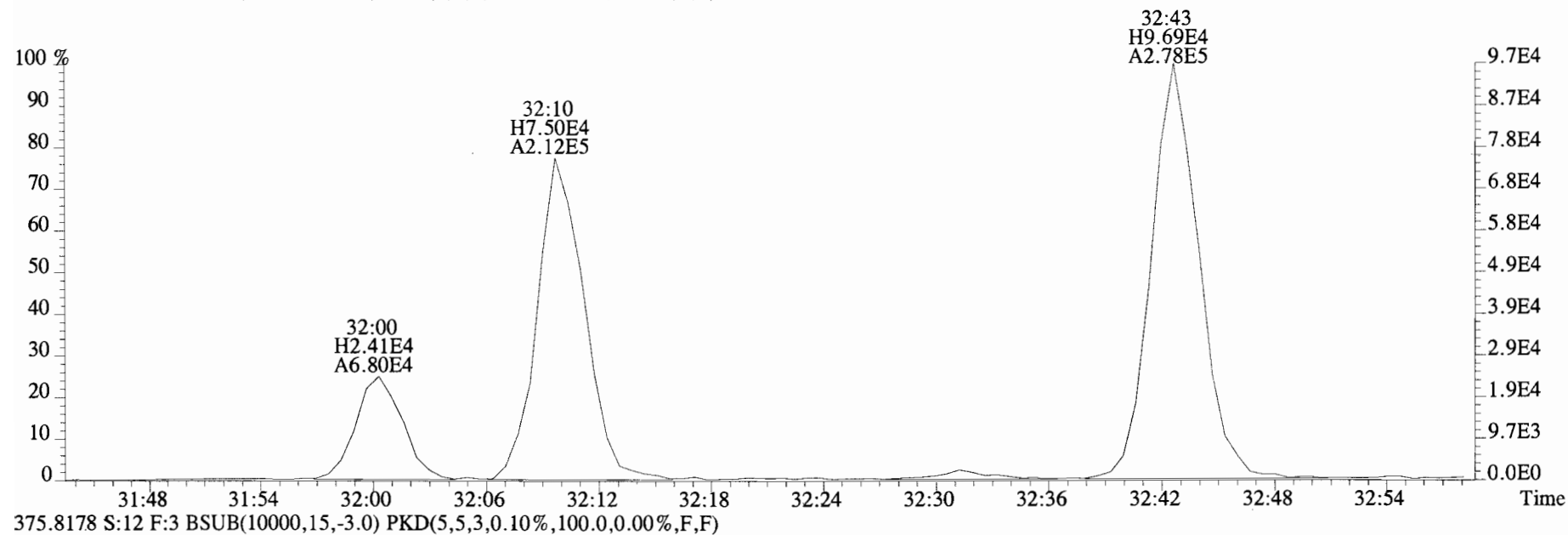
File:191024D2 #1-211 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



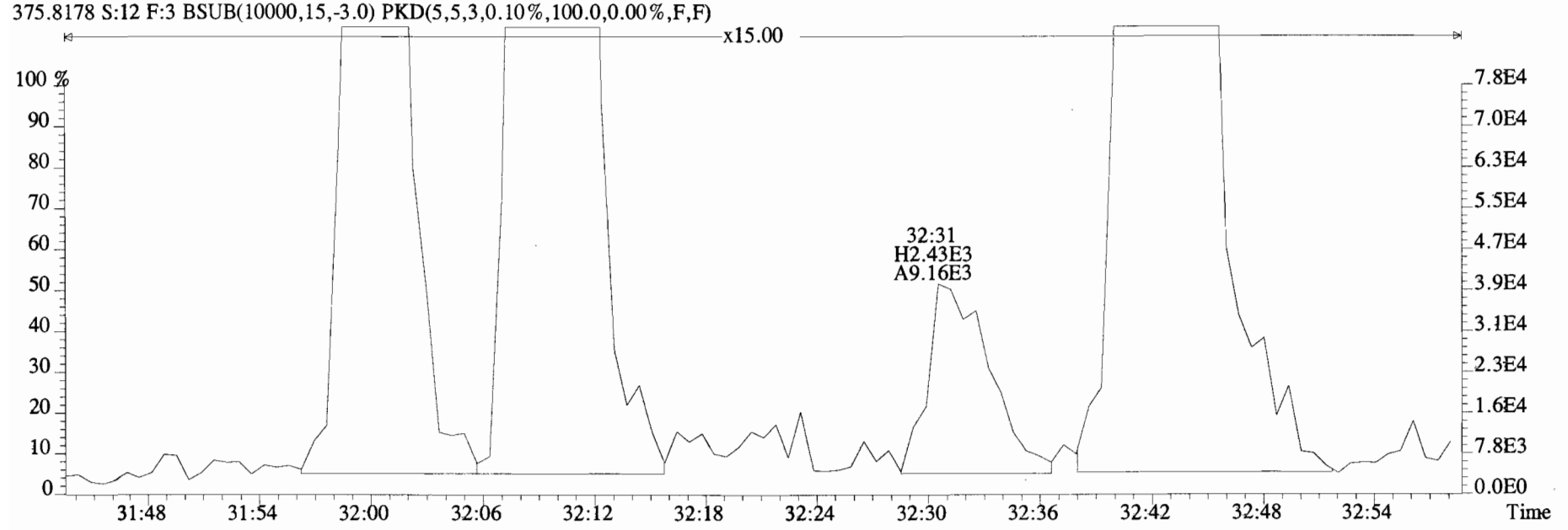
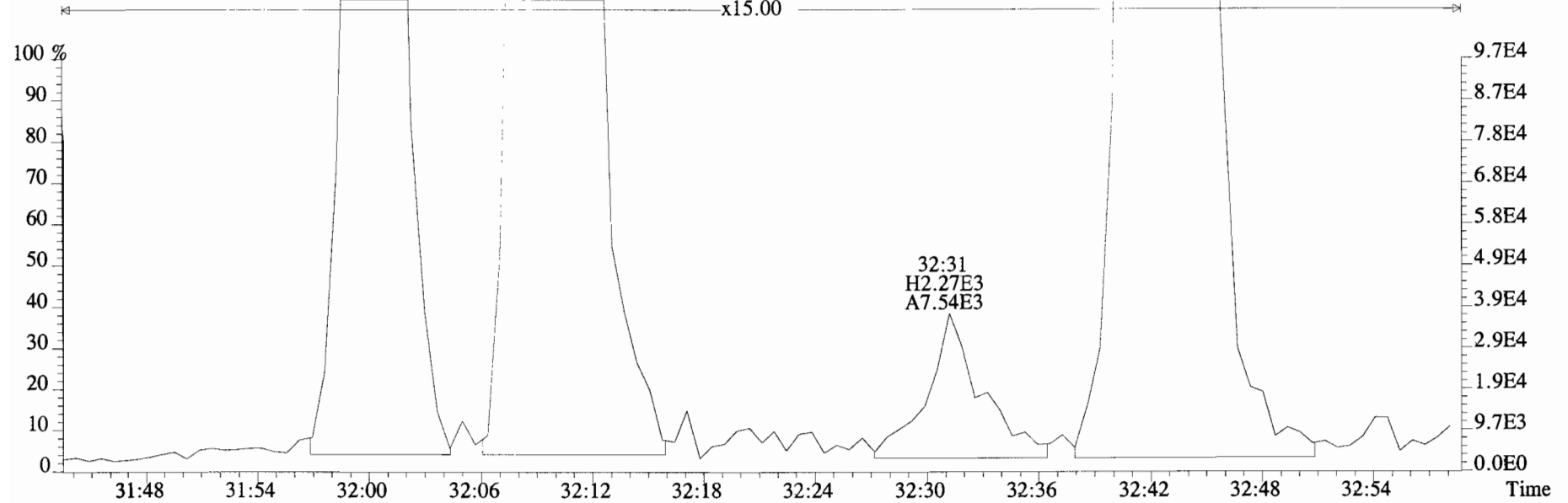
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
 373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



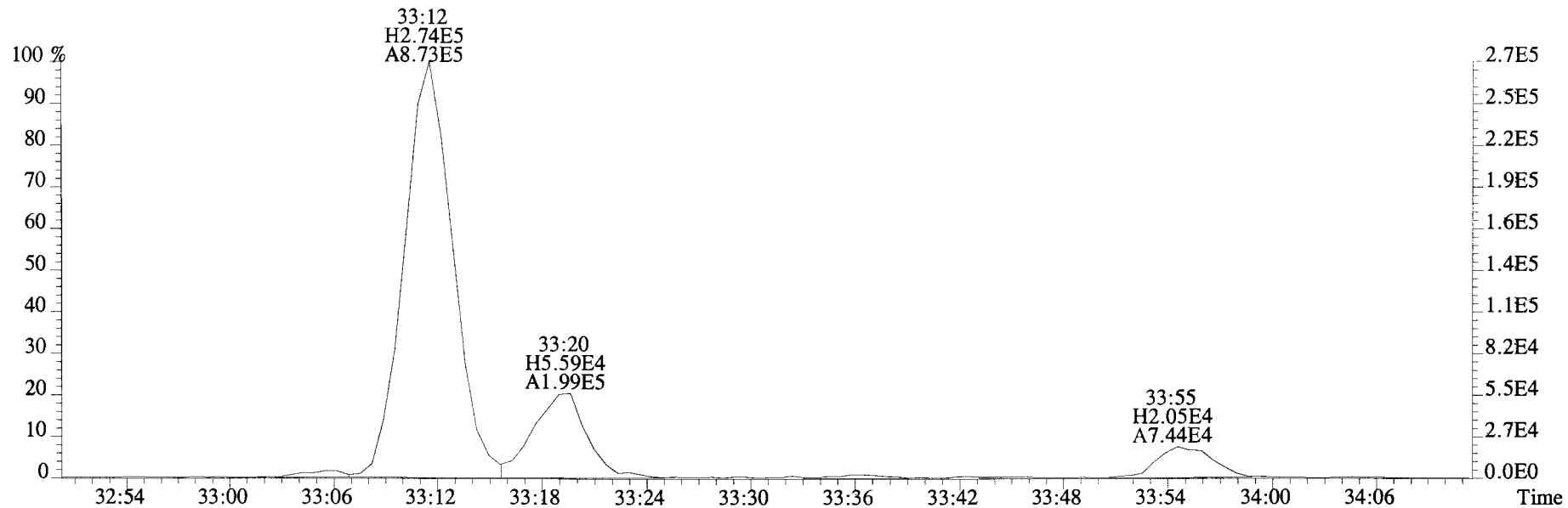
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
373.8207 S:12 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



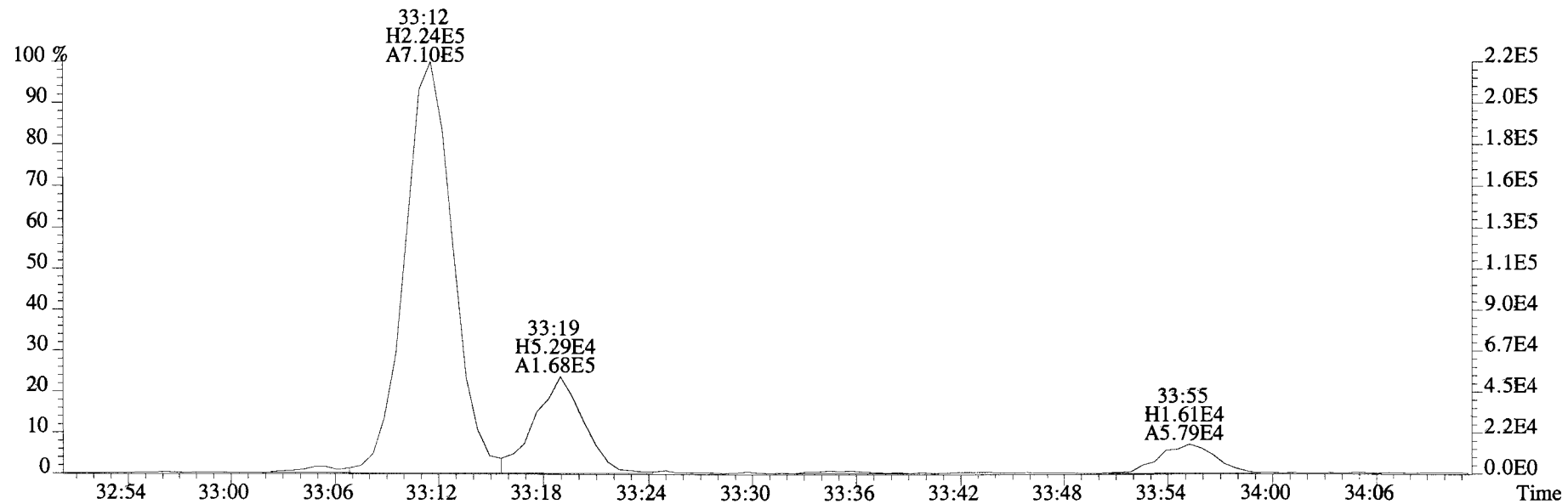
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



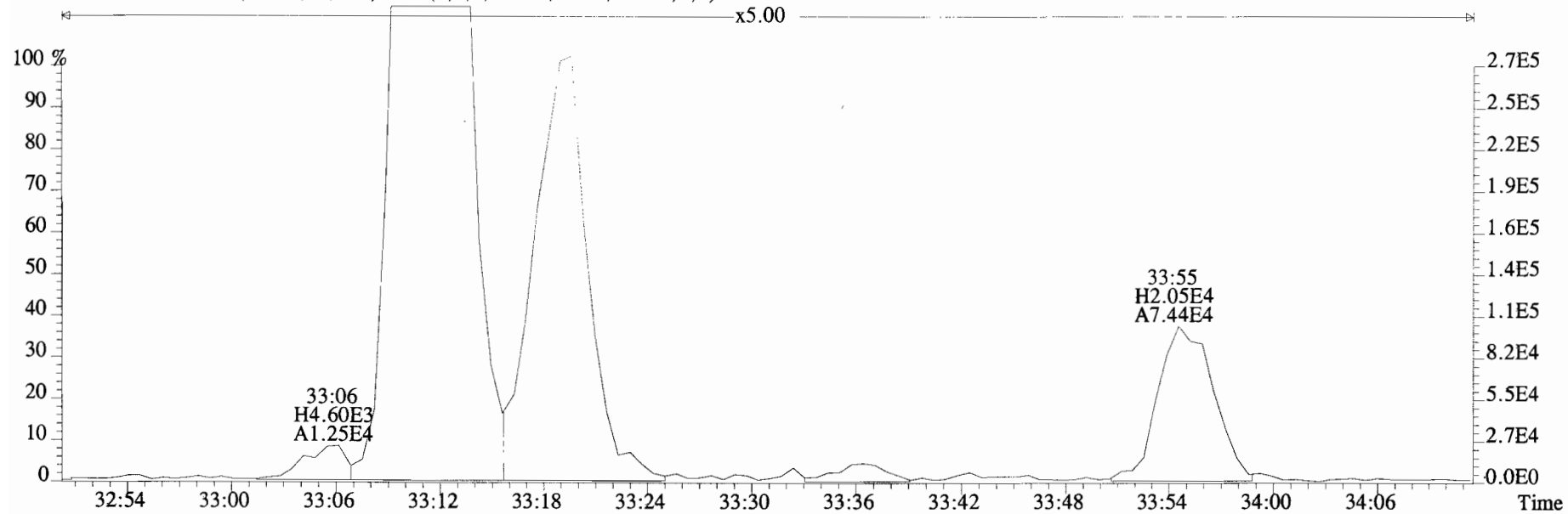
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



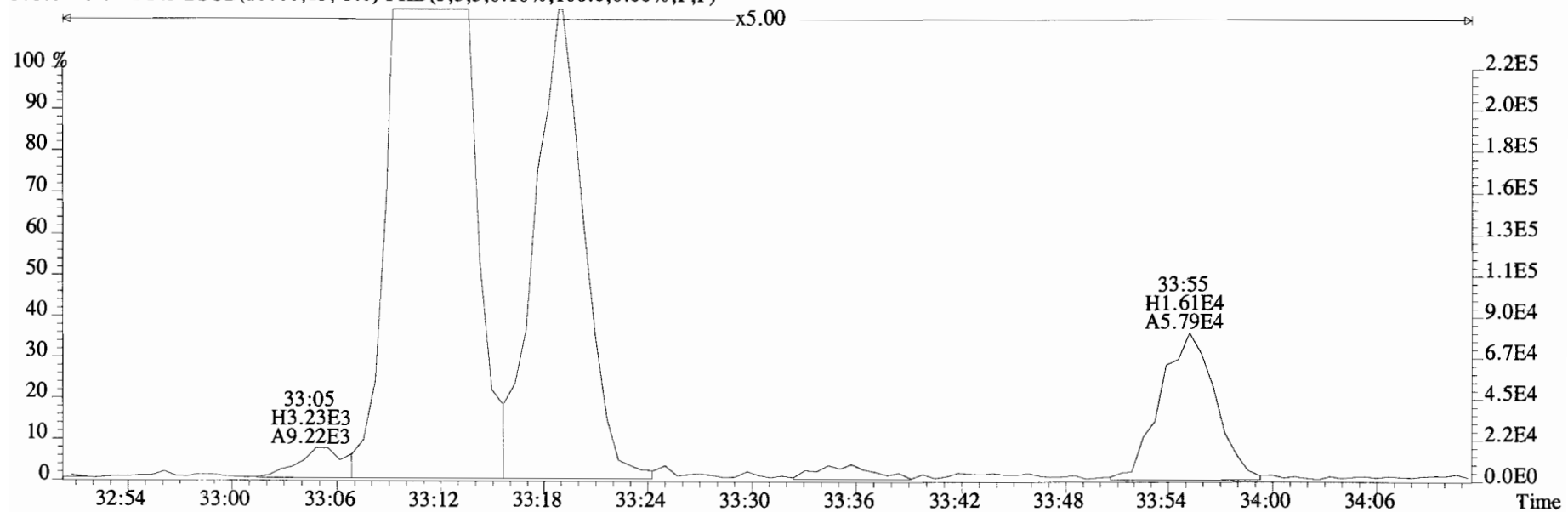
375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



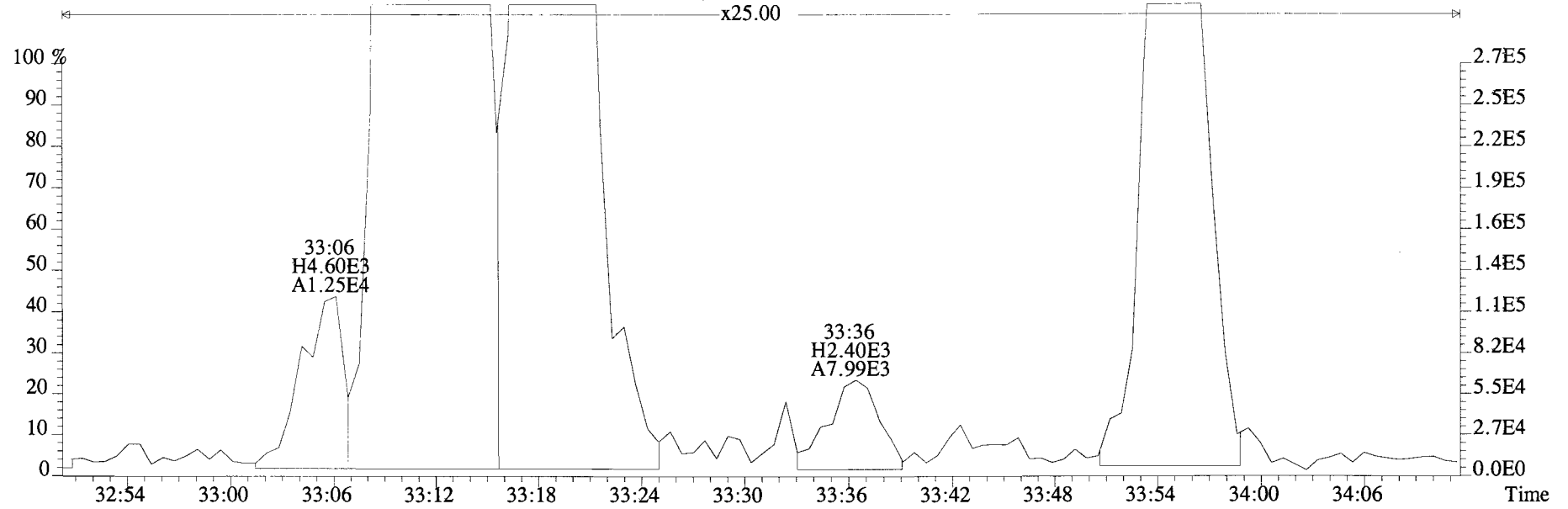
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



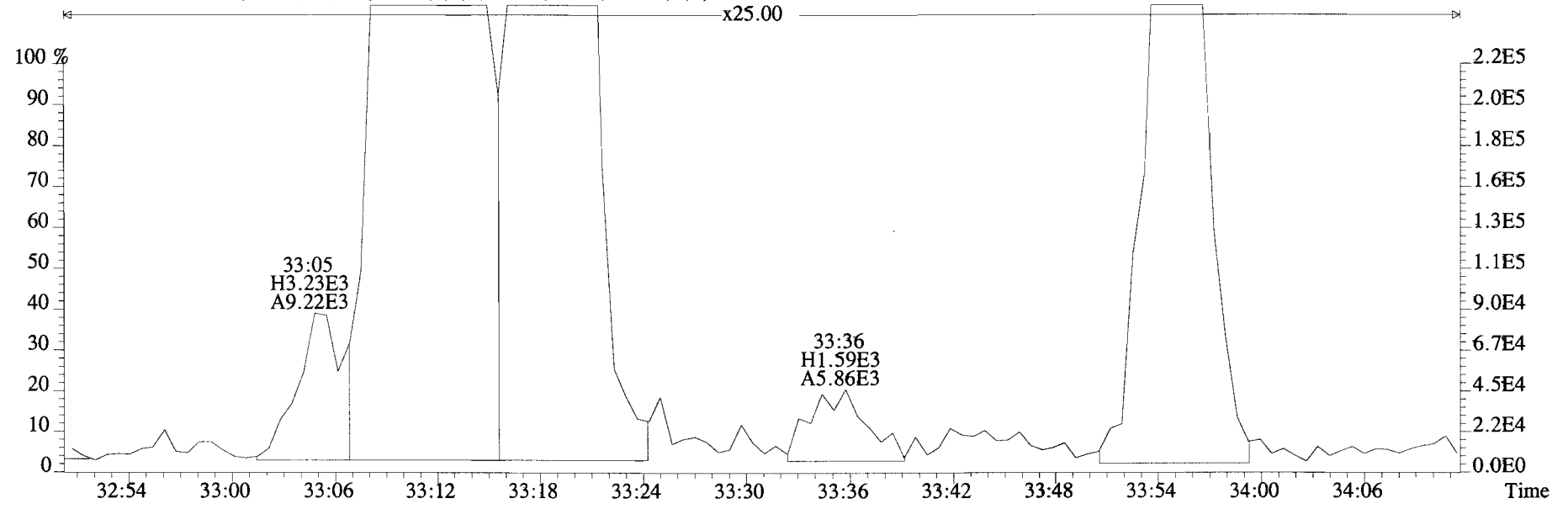
375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



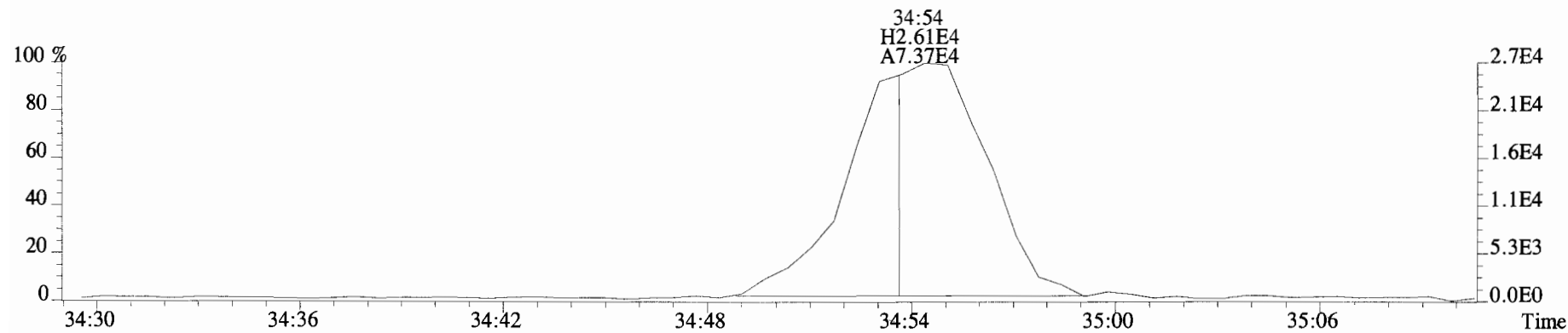
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



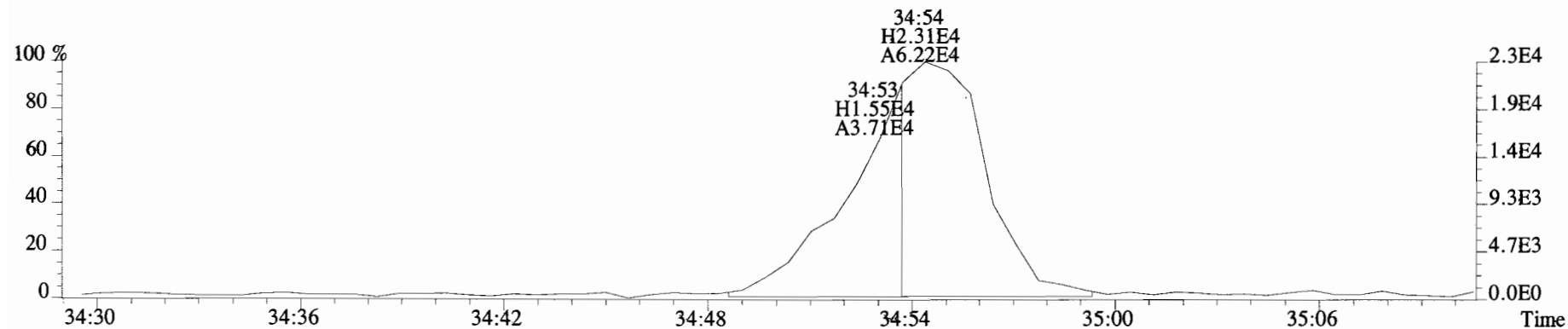
375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



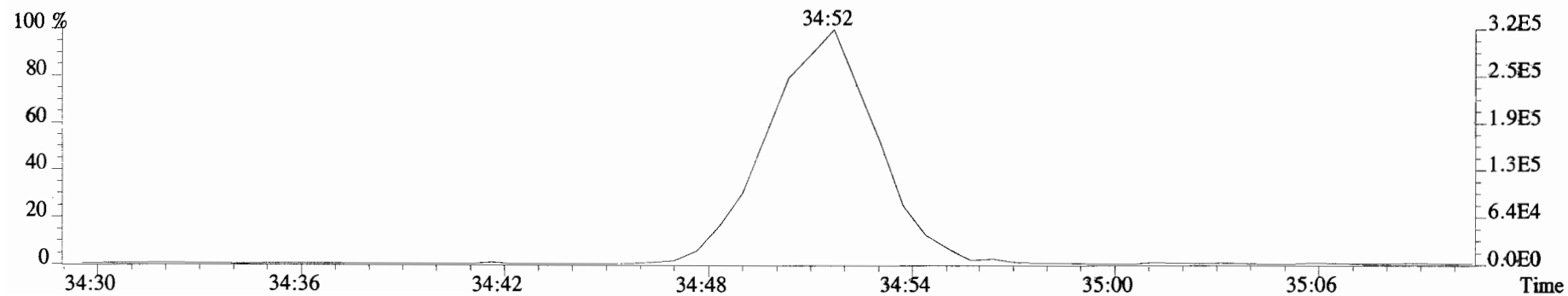
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



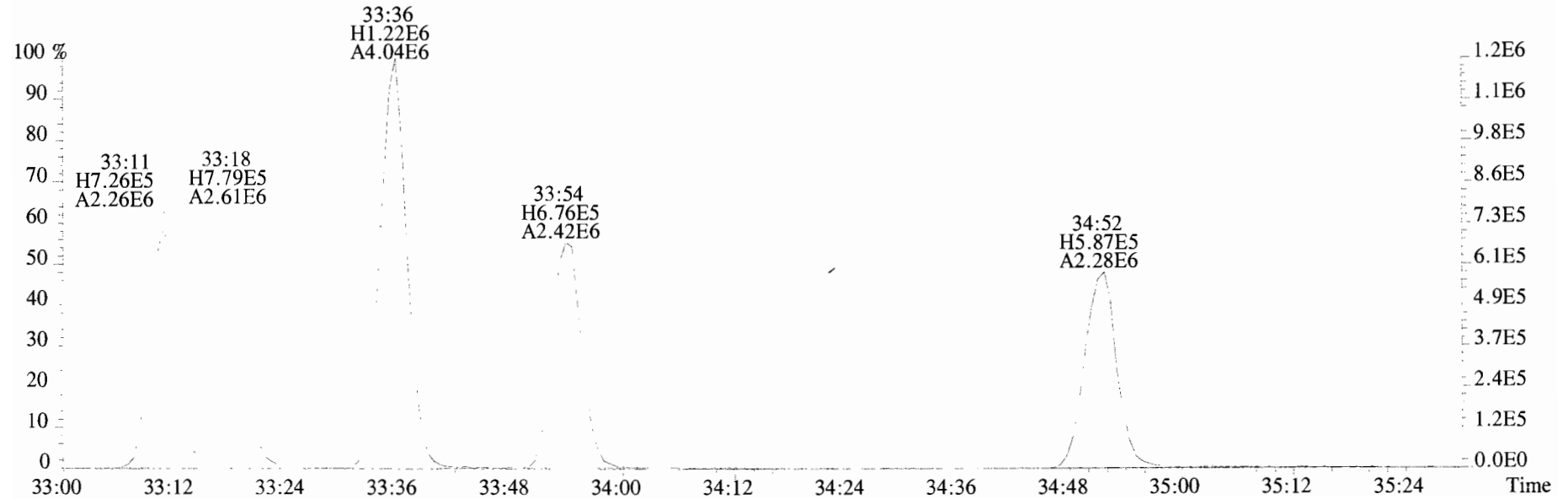
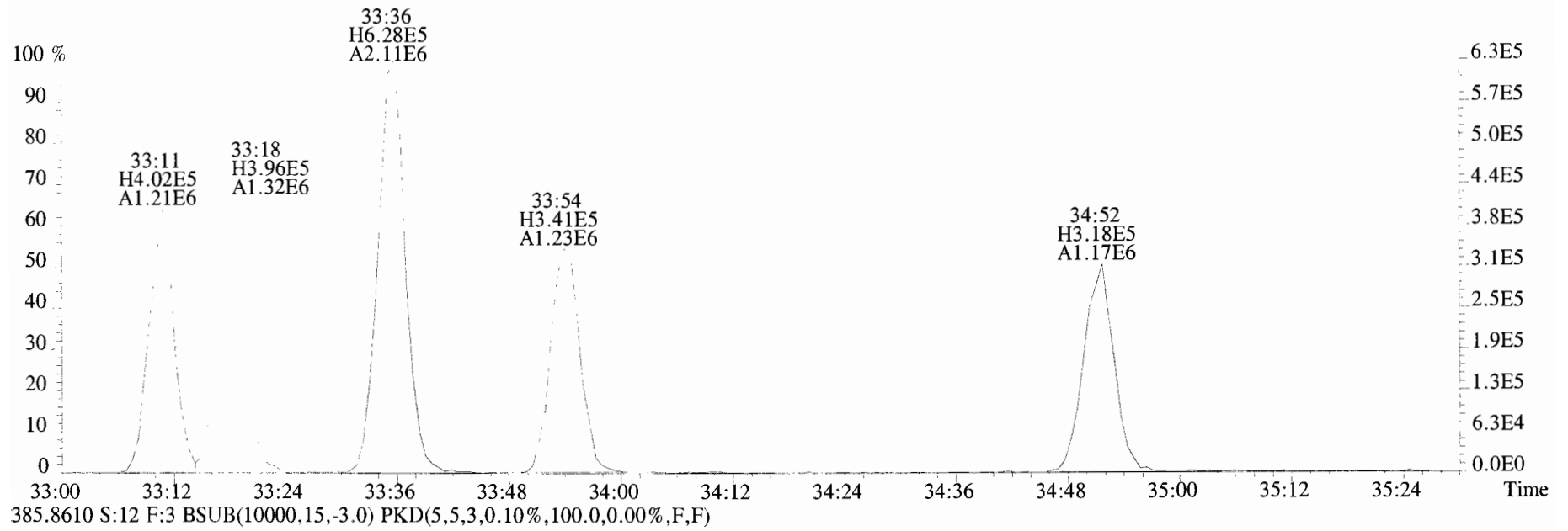
375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



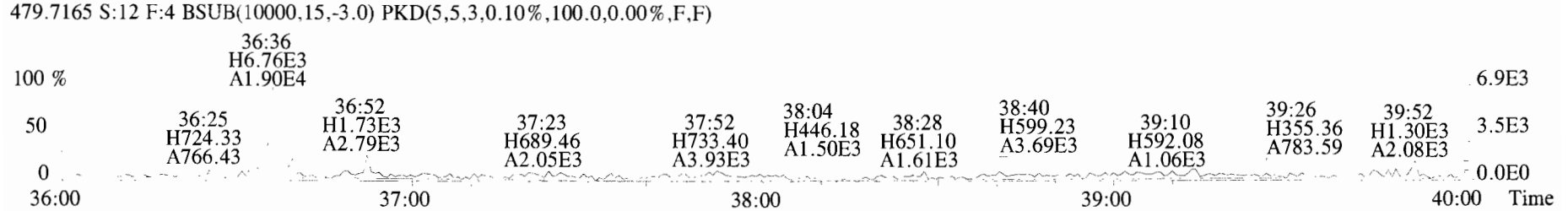
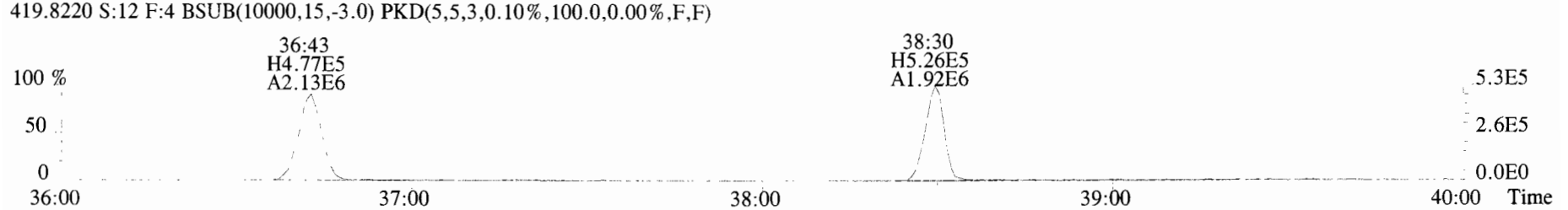
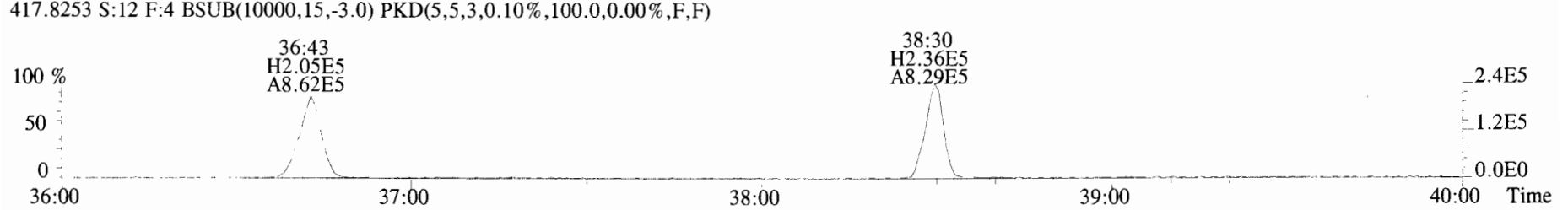
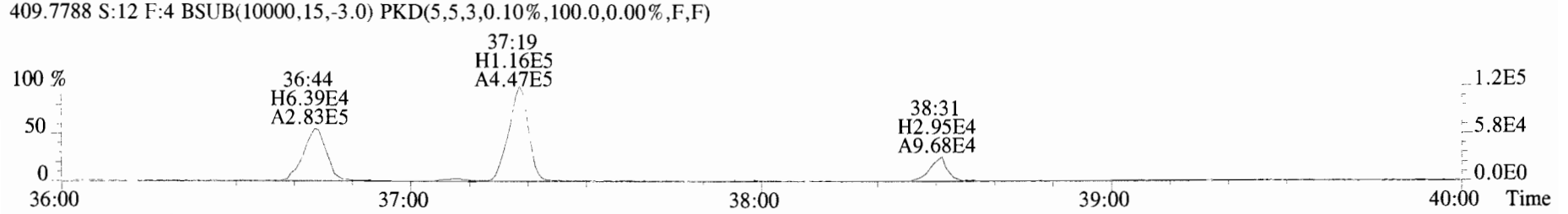
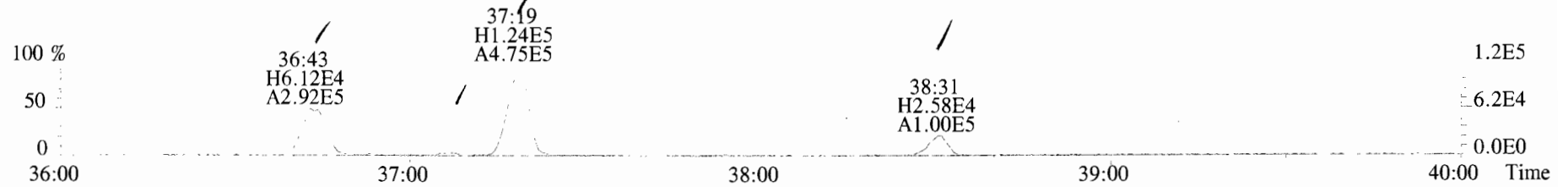
383.8639 S:12 F:3



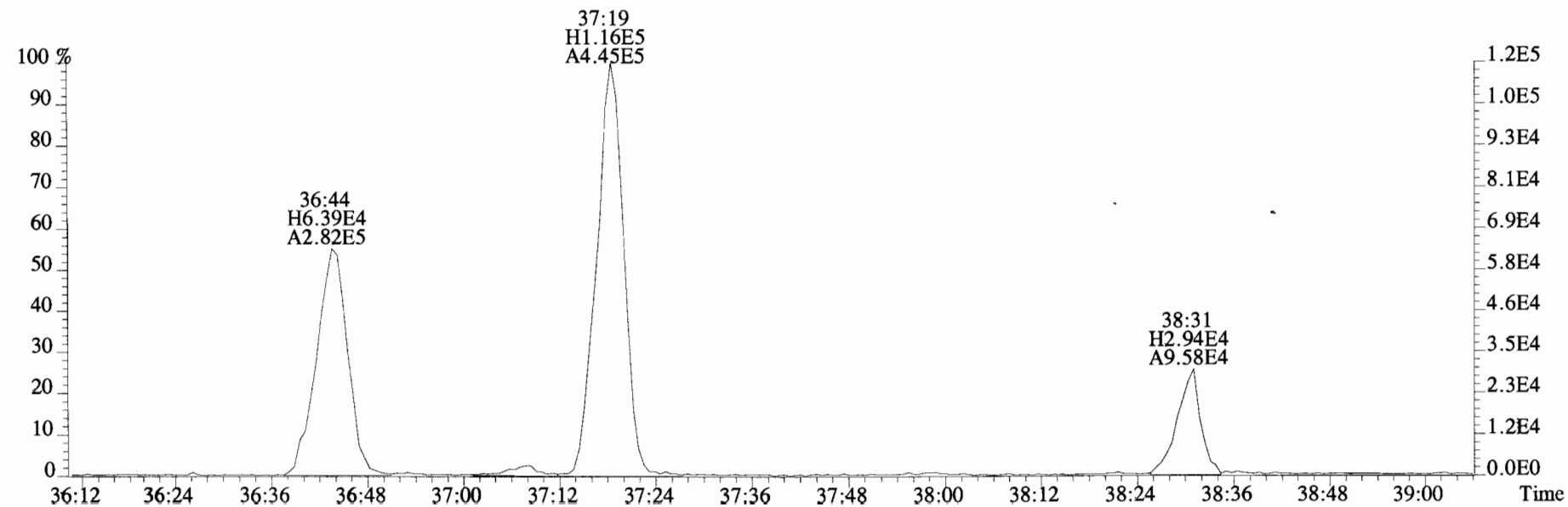
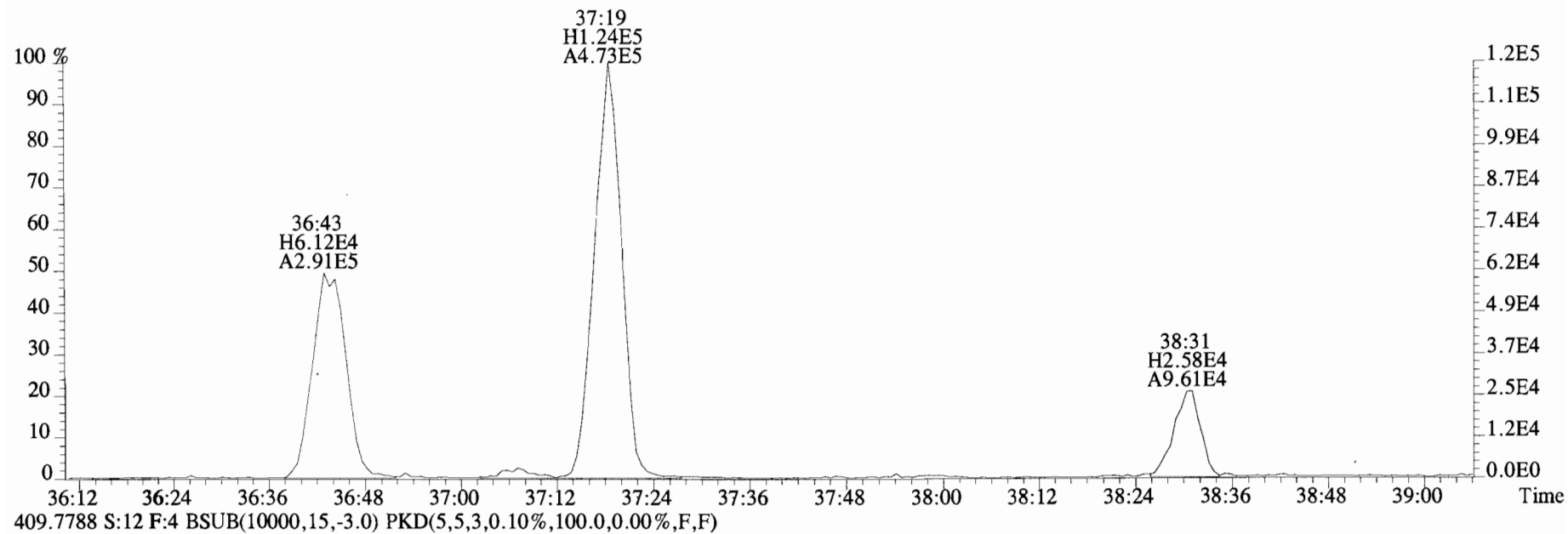
File:191024D2 #1-385 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
383.8639 S:12 F:3 BSUB(10000.15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



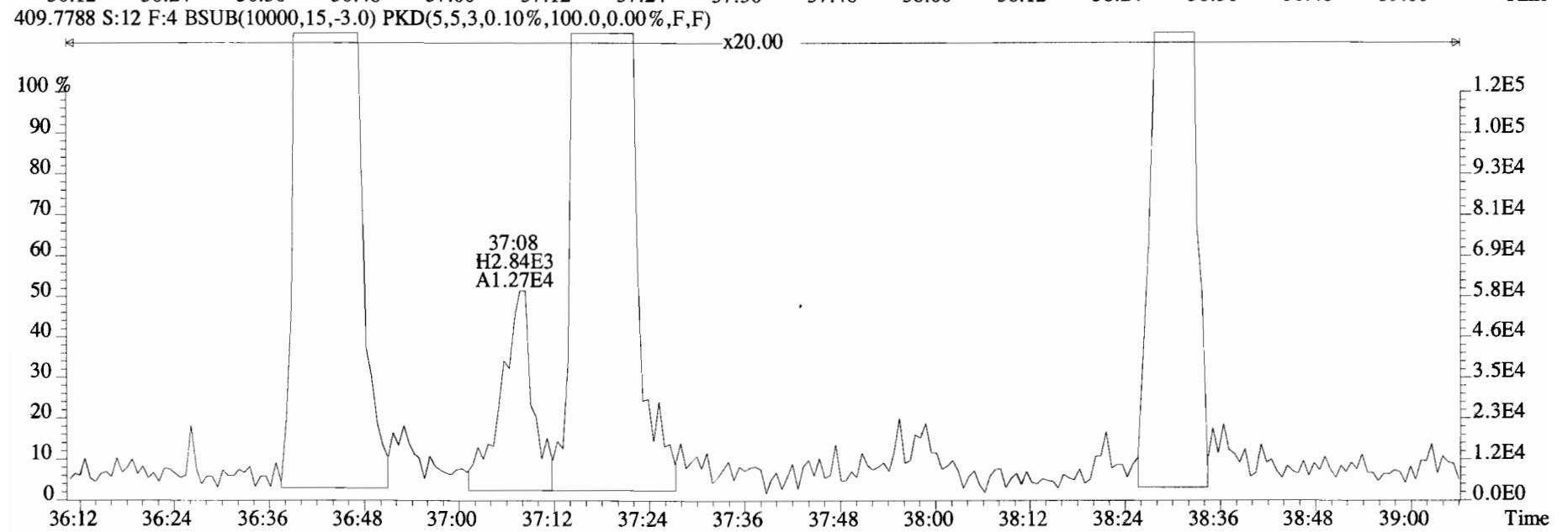
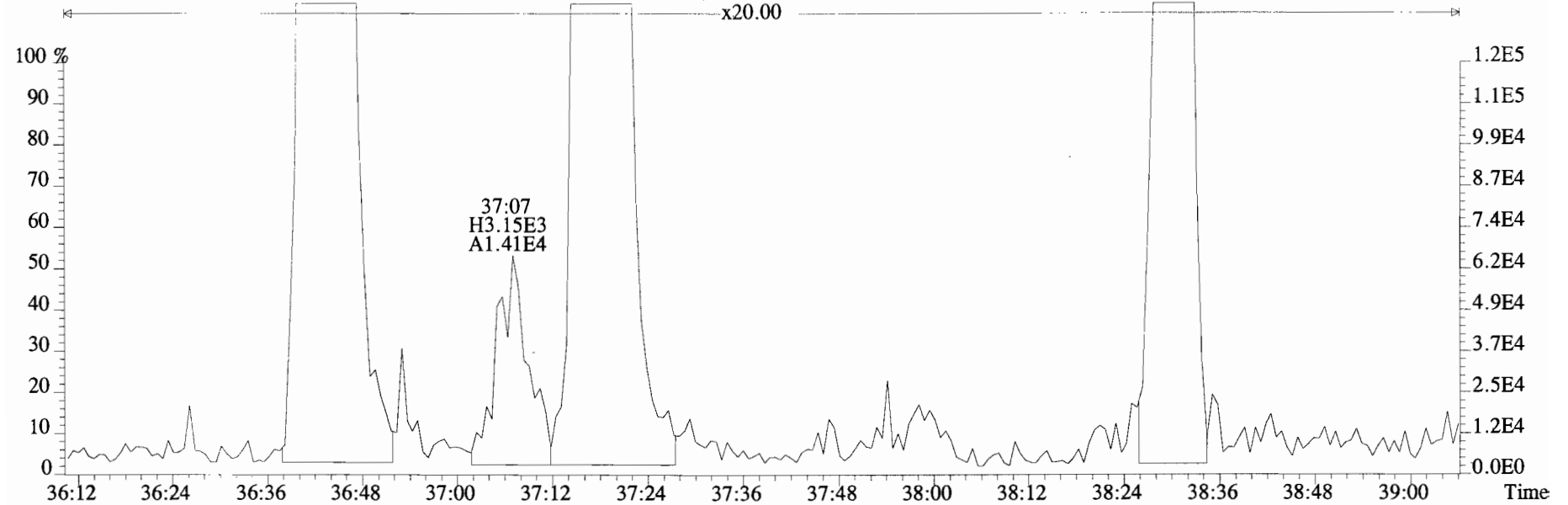
File:191024D2 #1-356 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
 407.7818 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



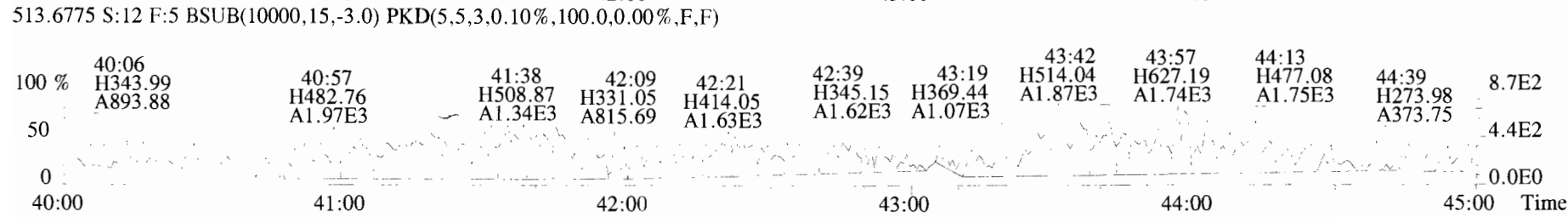
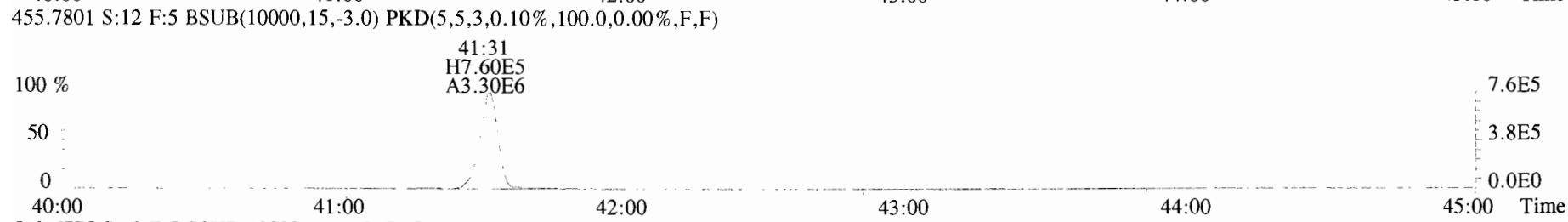
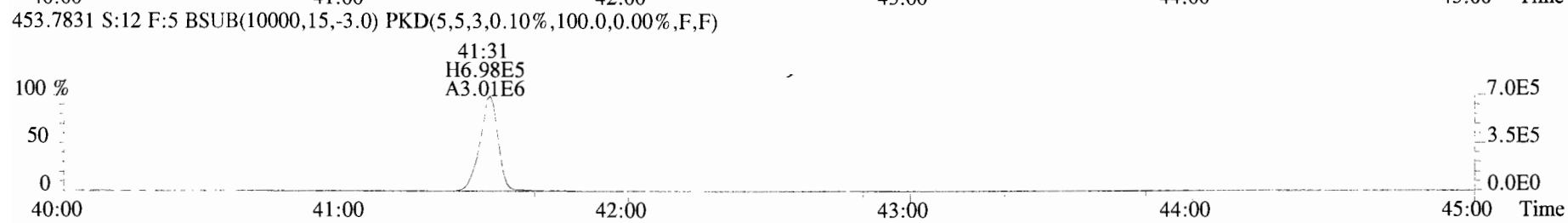
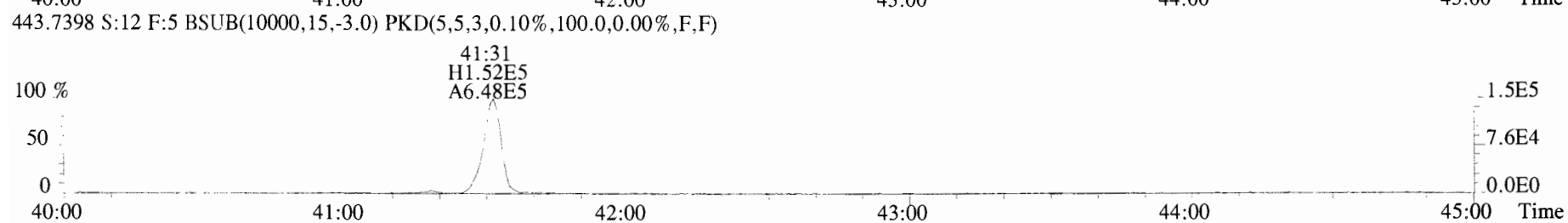
File:191024D2 #1-356 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
407.7818 S:12 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



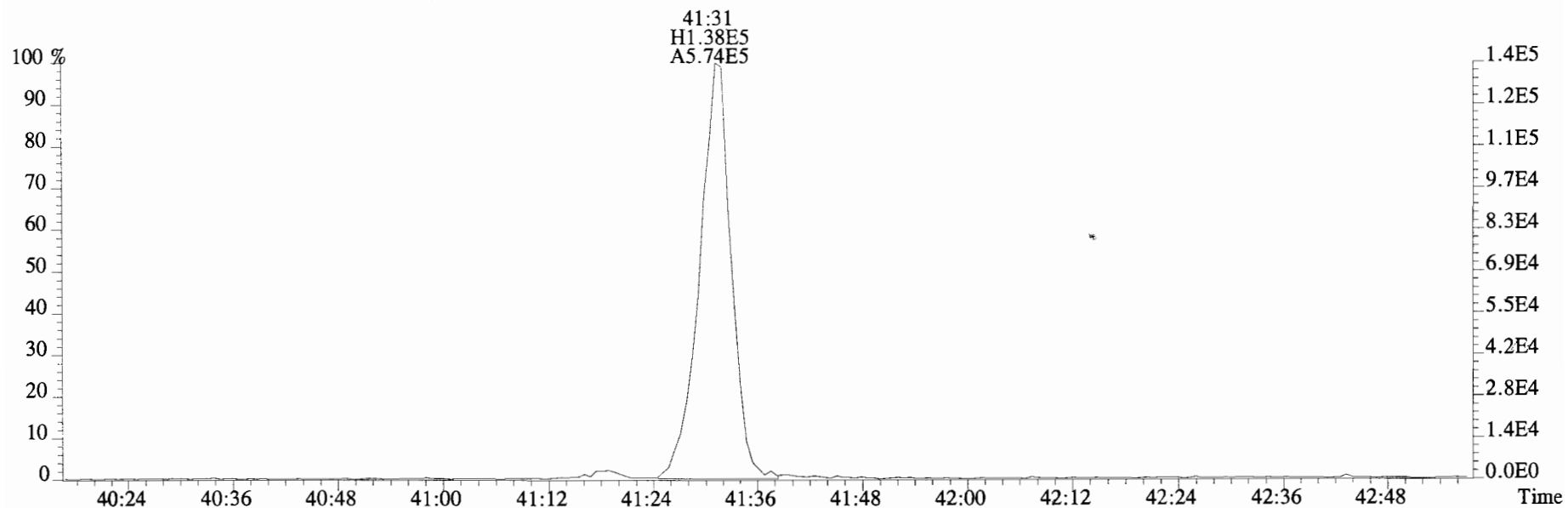
File:191024D2 #1-356 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
407.7818 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



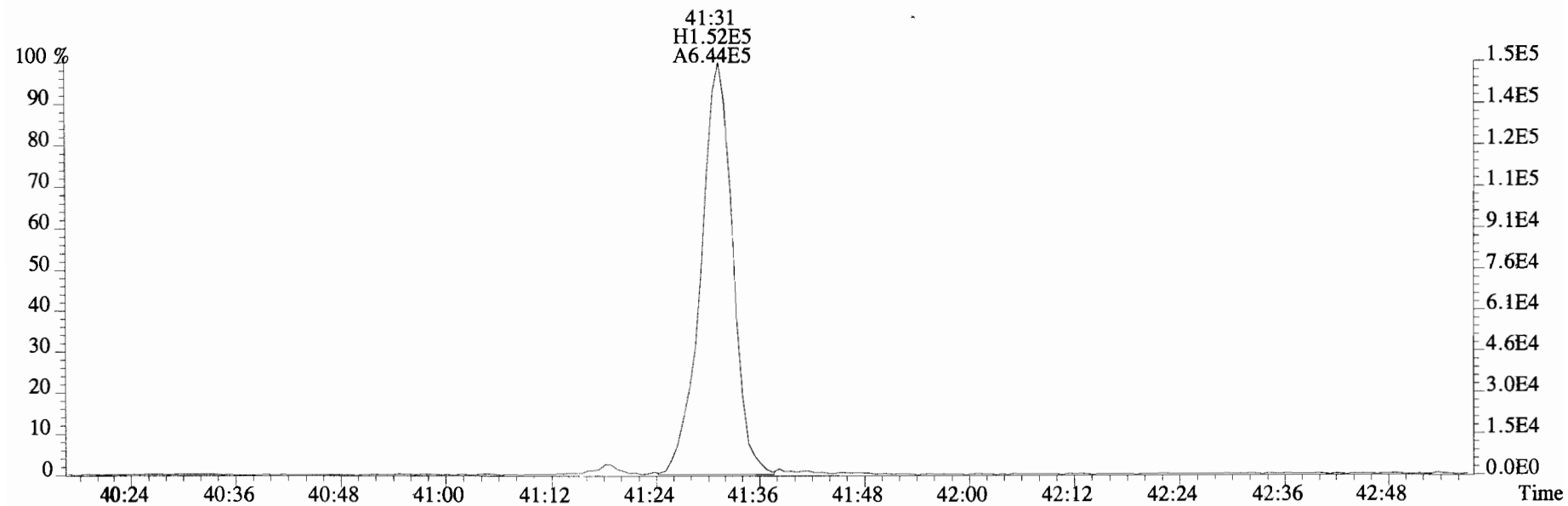
File:191024D2 #1-432 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 Exp:OCDD_DB5
 441.7428 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191024D2 #1-432 Acq:25-OCT-2019 12:36:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1903546-12 PDI-081SC-B-00-02-191002 21.71 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)



443.7398 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	1.55e+04	0.56 n	0.91	26:15	0.99686		* 2.5		*	Total Tetra-Dioxins	6.49	8.26		*	*
1,2,3,7,8-PeCDD	1.76e+04	0.78 n	0.90	30:45	1.3957		* 2.5		*	Total Penta-Dioxins	4.56	16.4		*	*
1,2,3,4,7,8-HxCDD	2.18e+04	1.70 n	1.10	34:05	1.4322		* 2.5		*	Total Hexa-Dioxins	89.0	90.4		*	*
1,2,3,6,7,8-HxCDD	1.33e+05	1.22 y	0.94	34:11	9.1438		* 2.5		*	Total Hepta-Dioxins	836	836		*	*
1,2,3,7,8,9-HxCDD	5.26e+04	1.17 y	0.96	34:30	3.3727		* 2.5		*	Total Tetra-Furans	252	262		*	*
1,2,3,4,6,7,8-HpCDD	5.25e+06	1.03 y	0.98	37:57	352.22		* 2.5		*	Total Penta-Furans	314.58	314.58		*	* P
OCDD	5.20e+07	0.91 y	0.96	41:17	4305.3		* 2.5		*	Total Hexa-Furans	316	318		*	*
										Total Hepta-Furans	261	261		*	*
2,3,7,8-TCDF	1.81e+06	0.80 y	0.95	25:30	81.305	OK	* 2.5		*						
1,2,3,7,8-PeCDF	2.57e+06	1.64 y	0.96	29:35	117.29		* 2.5		*						
2,3,4,7,8-PeCDF	1.02e+06	1.68 y	1.01	30:28	45.189		* 2.5		*						
1,2,3,4,7,8-HxCDF	3.79e+06	1.25 y	1.18	33:11	173.15		* 2.5		*						
1,2,3,6,7,8-HxCDF	9.82e+05	1.29 y	1.07	33:18	43.692		* 2.5		*						
2,3,4,6,7,8-HxCDF	2.59e+05	1.27 y	1.11	33:55	12.189		* 2.5		*						
1,2,3,7,8,9-HxCDF	1.52e+05	1.19 y	1.06	34:52	8.0316		* 2.5		*						
1,2,3,4,6,7,8-HpCDF	2.03e+06	1.04 y	1.13	36:44	107.95		* 2.5		*						
1,2,3,4,7,8,9-HpCDF	6.08e+05	0.99 y	1.28	38:30	35.292		* 2.5		*						
OCDF	3.74e+06	0.90 y	0.95	41:31	242.65		* 2.5		*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	3.45e+06	0.77 y	1.10	26:15	118.22					59.0					
IS 13C-1,2,3,7,8-PeCDD	2.81e+06	0.63 y	0.88	30:45	119.55					59.7					
IS 13C-1,2,3,4,7,8-HxCDD	2.77e+06	1.26 y	0.64	34:04	139.08					69.4					
IS 13C-1,2,3,6,7,8-HxCDD	3.11e+06	1.26 y	0.86	34:11	117.34					58.6					
IS 13C-1,2,3,7,8,9-HxCDD	3.25e+06	1.23 y	0.81	34:29	130.18					65.0					
IS 13C-1,2,3,4,6,7,8-HpCDD	3.05e+06	1.06 y	0.65	37:57	150.53					75.1					
IS 13C-OCDD	5.05e+06	0.92 y	0.58	41:17	281.26					70.2					
IS 13C-2,3,7,8-TCDF	4.69e+06	0.78 y	1.03	25:29	107.54					53.7					
IS 13C-1,2,3,7,8-PeCDF	4.57e+06	1.63 y	0.85	29:35	126.89					63.3					
IS 13C-2,3,4,7,8-PeCDF	4.45e+06	1.56 y	0.85	30:28	124.68					62.2					
IS 13C-1,2,3,4,7,8-HxCDF	3.72e+06	0.51 y	0.83	33:11	144.45					72.1					
IS 13C-1,2,3,6,7,8-HxCDF	4.21e+06	0.51 y	1.03	33:18	131.43					65.6					
IS 13C-2,3,4,6,7,8-HxCDF	3.82e+06	0.52 y	0.95	33:54	129.48					64.6					
IS 13C-1,2,3,7,8,9-HxCDF	3.57e+06	0.52 y	0.83	34:51	139.17					69.5					
IS 13C-1,2,3,4,6,7,8-HpCDF	3.34e+06	0.43 y	0.76	36:43	142.45					71.1					
IS 13C-1,2,3,4,7,8,9-HpCDF	2.70e+06	0.44 y	0.58	38:30	149.75					74.7					
IS 13C-OCDF	6.52e+06	0.89 y	0.69	41:30	305.58					76.2					
C/Up 37C1-2,3,7,8-TCDD	1.96e+06		1.20	26:16	61.419					76.6					
RS/RT 13C-1,2,3,4-TCDD	5.34e+06	0.77 y	1.00	25:42	200.39										
RS 13C-1,2,3,4-TCDF	8.45e+06	0.79 y	1.00	24:17	200.39										
RS/RT 13C-1,2,3,4,6,9-HxCDF	6.21e+06	0.51 y	1.00	33:35	200.39										

Integrations Reviewed
 by DB by CT
 Analyst: DB Analyst: CT
 Date: 11/5/19 Date: 11/11/19

Totals class: TCDD EMPC

Entry #: 19

Run: 18 File: 191024D2 S: 13 I: 1 F: 1
Acquired: 25-OCT-19 13:23:59 Processed: 28-OCT-19 09:58:54

Total Concentration: 8.2595

Unnamed Concentration: 7.263

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
22:54	1.927e+04	2.530e+04	0.76	y	4.458e+04	2.8614
23:15	6.951e+03	8.186e+03	0.85	y	1.514e+04	0.97172
23:58	2.669e+03	3.271e+03	0.82	y	5.940e+03	0.38131
24:23	3.342e+03	3.293e+03	1.01	n	5.829e+03	0.37416
24:37	3.128e+03	3.702e+03	0.85	y	6.830e+03	0.43846
24:48	3.479e+03	4.054e+03	0.86	y	7.534e+03	0.48361
25:41	3.680e+03	3.513e+03	1.05	n	6.218e+03	0.39914
26:02	9.677e+03	1.140e+04	0.85	y	2.107e+04	1.3528
26:15	6.756e+03	1.210e+04	0.56	n	1.553e+04	0.99686 2,3,7,8-TCDD

Totals class: PeCDD EMPC

Entry #: 21

Run: 18 File: 191024D2 S: 13 I: 1 F: 2
 Acquired: 25-OCT-19 13:23:59 Processed: 28-OCT-19 09:58:54

Total Concentration: 16.446

Unnamed Concentration: 15.050

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
28:42	2.533e+04	3.425e+04	0.74	n	5.583e+04	4.4169
29:10	5.281e+03	5.293e+03	1.00	n	8.628e+03	0.68258
29:15	3.294e+03	2.295e+03	1.44	n	3.740e+03	0.29589
29:36	1.941e+04	2.201e+04	0.88	n	3.588e+04	2.8386
29:45	6.820e+03	1.301e+04	0.52	n	1.764e+04	1.3959
29:50	4.838e+03	8.334e+03	0.58	y	1.317e+04	1.0420
29:57	7.762e+03	6.689e+03	1.16	n	1.090e+04	0.86257
30:04	7.933e+03	1.443e+04	0.55	y	2.236e+04	1.7691
30:27	5.899e+03	9.554e+03	0.62	y	1.545e+04	1.2225
30:45	8.455e+03	1.082e+04	0.78	n	1.764e+04	1.3957
30:49	2.784e+03	3.844e+03	0.72	y	6.628e+03	0.52438

1,2,3,7,8-PeCDD

Totals class: HxCDD EMPC

Entry #: 23

Run: 18 File: 191024D2 S: 13 I: 1 F: 3
Acquired: 25-OCT-19 13:23:59 Processed: 28-OCT-19 09:58:54

Total Concentration: 90.399

Unnamed Concentration: 76.450

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
32:33	2.791e+05	2.255e+05	1.24	y	5.046e+05	33.494
33:07	3.866e+04	2.817e+04	1.37	y	6.684e+04	4.4365
33:22	2.944e+05	2.415e+05	1.22	y	5.359e+05	35.570
33:30	1.258e+04	1.086e+04	1.16	y	2.344e+04	1.5560
34:05	1.657e+04	9.724e+03	1.70	n	2.178e+04	1.4322 1,2,3,4,7,8-HxCDD
34:11	7.318e+04	6.004e+04	1.22	y	1.332e+05	9.1438 1,2,3,6,7,8-HxCDD
34:23	1.137e+04	9.622e+03	1.18	y	2.099e+04	1.3935
34:30	2.844e+04	2.421e+04	1.17	y	5.265e+04	3.3727 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 18 File: 191024D2 S: 13 I: 1 F: 4
Acquired: 25-OCT-19 13:28:59 Processed: 28-OCT-19 09:58:54

Total Concentration: 835.54 Unnamed Concentration: 483.318

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:06	3.630e+06	3.575e+06	1.02 y	7.205e+06	483.32
37:57	2.659e+06	2.592e+06	1.03 y	5.251e+06	352.22 1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 18 File: 191024D2 S: 13 I: 1 F: 1
 Acquired: 25-OCT-19 13:23:59 Processed: 28-OCT-19 09:58:54

Total Concentration: 261.68 Unnamed Concentration: 180.371

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
21:21	9.404e+03	1.378e+04	0.68	y	2.318e+04	1.0423	
21:59	2.746e+05	3.668e+05	0.75	y	6.414e+05	28.839	
22:30	3.197e+04	4.855e+04	0.66	y	8.052e+04	3.6201	
22:53	1.795e+05	2.419e+05	0.74	y	4.215e+05	18.949	
23:17	6.556e+04	8.299e+04	0.79	y	1.486e+05	6.6789	
23:25	8.917e+03	1.327e+04	0.67	y	2.219e+04	0.99774	
23:34	3.741e+04	4.262e+04	0.88	y	8.003e+04	3.5982	
23:56	1.180e+04	8.879e+03	1.33	n	1.572e+04	0.70661	
24:03	7.475e+03	1.095e+04	0.68	y	1.842e+04	0.82817	
24:10	4.760e+04	6.379e+04	0.75	y	1.114e+05	5.0085	
24:17	1.460e+05	1.718e+05	0.85	y	3.178e+05	14.287	
24:42	6.559e+05	8.773e+05	0.75	y	1.533e+06	68.935	
24:56	3.339e+04	3.832e+04	0.87	y	7.172e+04	3.2244	
25:23	1.008e+05	1.275e+05	0.79	y	2.284e+05	10.267	
25:30	8.018e+05	1.007e+06	0.80	y	1.808e+06	81.305	2,3,7,8-TCDF
25:48	4.094e+04	6.048e+04	0.68	y	1.014e+05	4.5599	
26:02	9.570e+03	8.990e+03	1.06	n	1.591e+04	0.71539	
27:15	1.045e+05	1.020e+05	1.03	n	1.805e+05	8.1132	

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

Run: 18 File: 191024D2 S: 13 I: 1 F: 1
Acquired: 25-OCT-19 13:23:59 Processed: 28-OCT-19 09:58:54

Total Concentration: 17.938 Unnamed Concentration: 17.938

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:15	2.387e+05	1.600e+05	1.49 y	3.987e+05	17.938

Totals class: PeCDF EMPC

Entry #: 31

Run: 18 File: 191024D2 S: 13 I: 1 F: 2
 Acquired: 25-OCT-19 13:23:59 Processed: 28-OCT-19 09:58:54

Total Concentration: 296.64 Unnamed Concentration: 134.155

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:40	8.021e+05	5.140e+05	1.56 y	1.316e+06	59.216
29:13	1.150e+05	8.443e+04	1.36 y	1.994e+05	8.9718
29:24	1.710e+05	1.076e+05	1.59 y	2.786e+05	12.532
29:35	1.595e+06	9.736e+05	1.64 y	2.568e+06	117.29 1,2,3,7,8-PeCDF
29:49	4.747e+05	2.906e+05	1.63 y	7.653e+05	34.432
30:22	1.467e+04	8.972e+03	1.63 y	2.364e+04	1.0636
30:28	6.391e+05	3.797e+05	1.68 y	1.019e+06	45.189 2,3,4,7,8-PeCDF P
30:31	2.095e+05	1.228e+05	1.71 y	3.323e+05	14.952
31:21	3.870e+04	2.770e+04	1.40 y	6.640e+04	2.9876

Totals class: HxCDF EMPC

Entry #: 33

Run: 18 File: 191024D2 S: 13 I: 1 F: 3
 Acquired: 25-OCT-19 13:23:59 Processed: 28-OCT-19 05:58:54

Total Concentration: 317.68 Unnamed Concentration: 80.613

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
32:00	9.761e+04	7.742e+04	1.26	y	1.750e+05	8.2946
32:10	3.513e+05	2.723e+05	1.29	y	6.237e+05	29.555
32:31	8.230e+03	7.026e+03	1.17	y	1.526e+04	0.72298
32:43	3.367e+05	2.744e+05	1.23	y	6.111e+05	28.958
33:05	1.715e+04	1.752e+04	0.98	n	3.099e+04	1.4686
33:11	2.103e+06	1.683e+06	1.25	y	3.786e+06	173.15
33:18	5.533e+05	4.285e+05	1.29	y	9.819e+05	43.692
33:36	1.057e+04	9.487e+03	1.11	y	2.006e+04	0.95069
33:55	1.451e+05	1.140e+05	1.27	y	2.591e+05	12.189
34:52	8.260e+04	6.929e+04	1.19	y	1.519e+05	8.0316
34:55	1.253e+05	9.969e+04	1.26	y	2.250e+05	10.663
						1,2,3,4,7,8-HxCDF
						1,2,3,6,7,8-HxCDF
						2,3,4,6,7,8-HxCDF
						1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

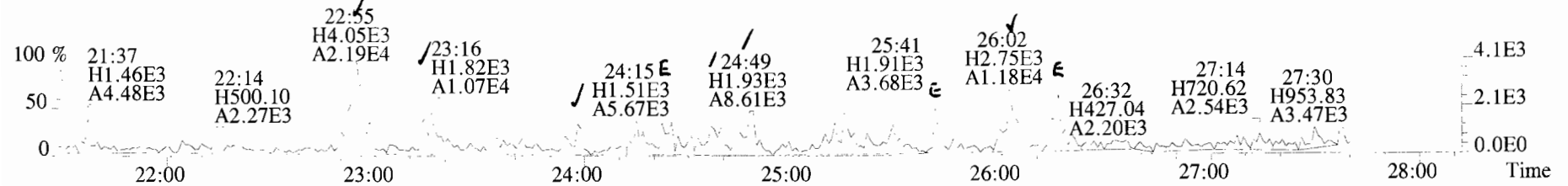
Entry #: 35

Run: 18 File: 191024D2 S: 13 I: 1 F: 4
Acquired: 25-OCT-19 13:23:59 Processed: 28-OCT-19 09:58:54

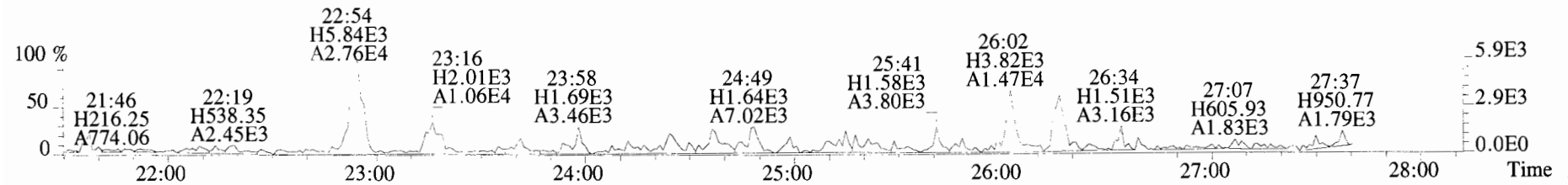
Total Concentration: 260.76 Unnamed Concentration: 117.517

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
36:44	1.035e+06	9.960e+05	1.04 y	2.031e+06	107.95	1,2,3,4,6,7,8-HpCDF
37:07	2.502e+04	2.129e+04	1.18 y	4.632e+04	2.5743	
37:18	1.061e+06	1.007e+06	1.05 y	2.068e+06	114.94	
38:30	3.028e+05	3.051e+05	0.99 y	6.079e+05	35.292	1,2,3,4,7,8,9-HpCDF

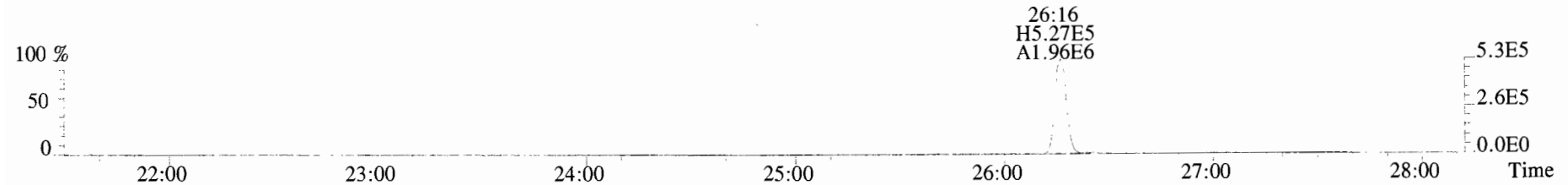
File:191024D2 #1-493 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



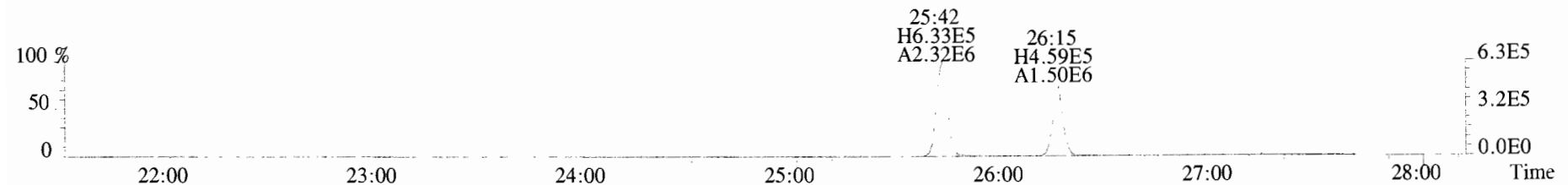
321.8936 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



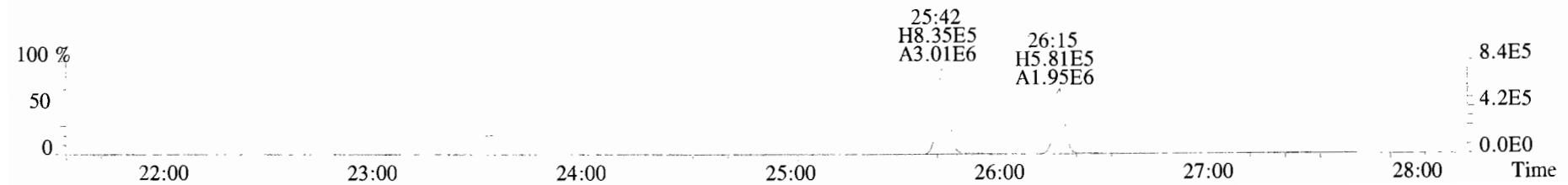
327.8847 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



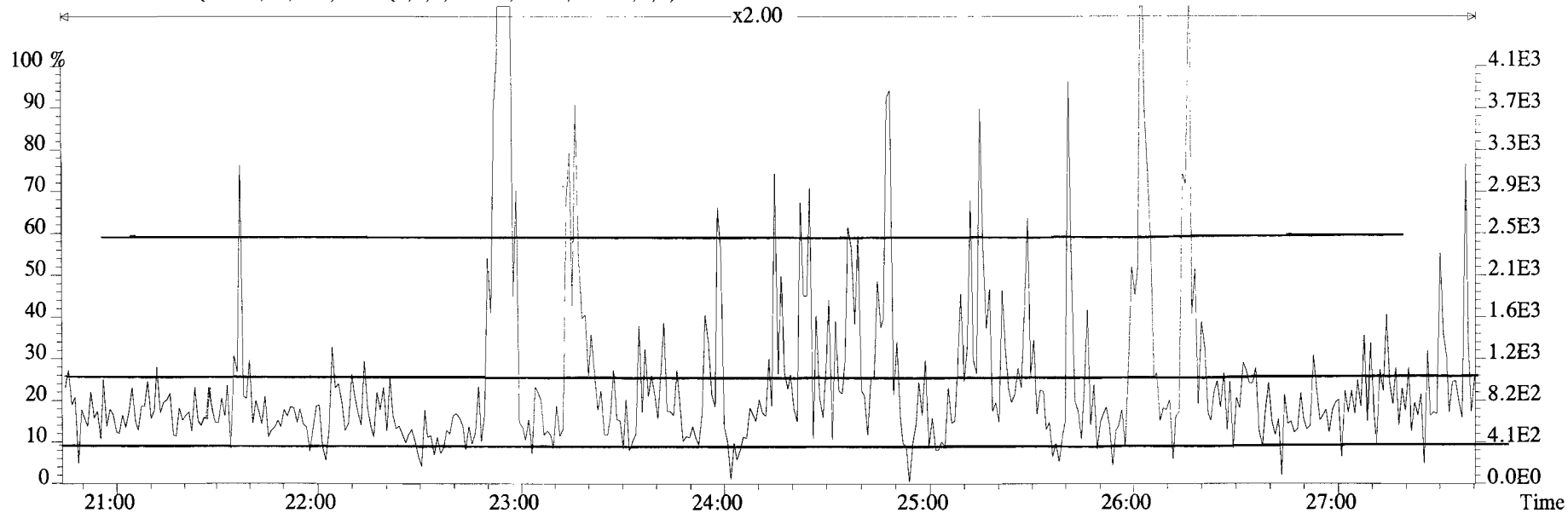
331.9368 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



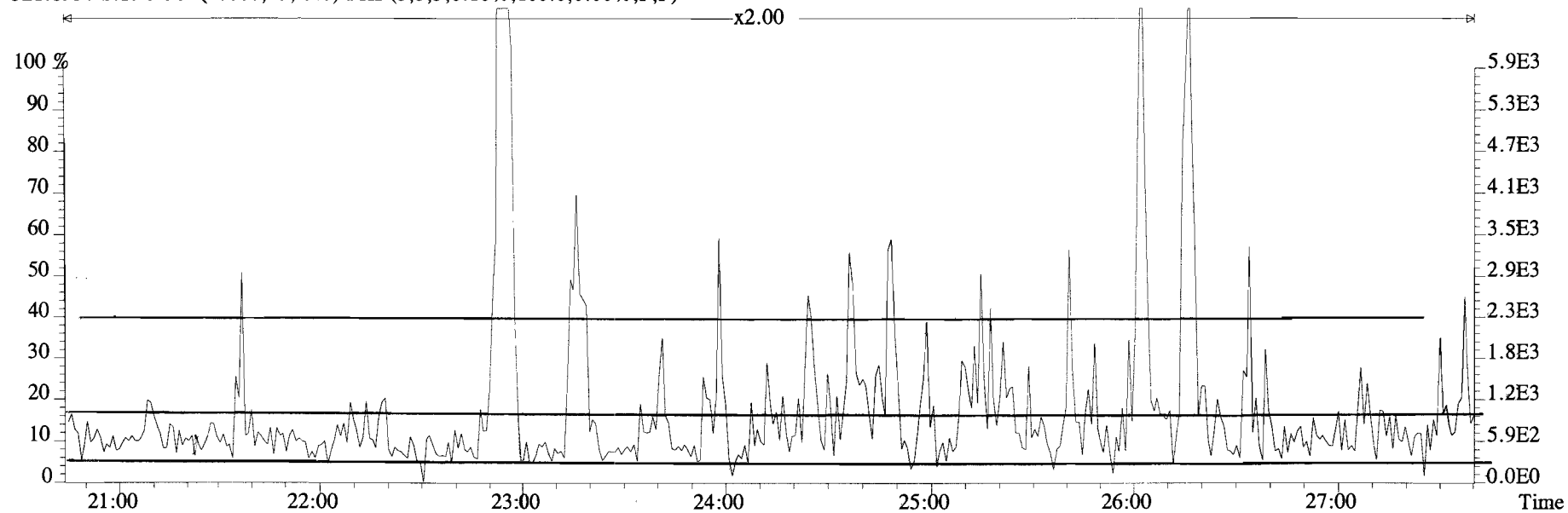
333.9339 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



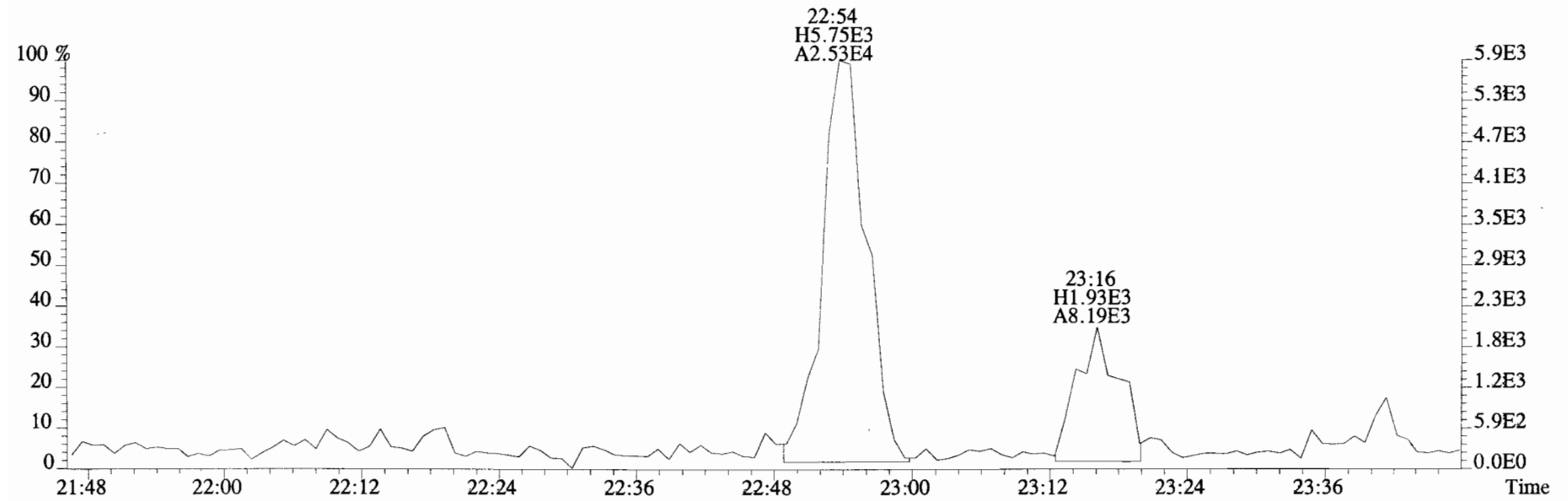
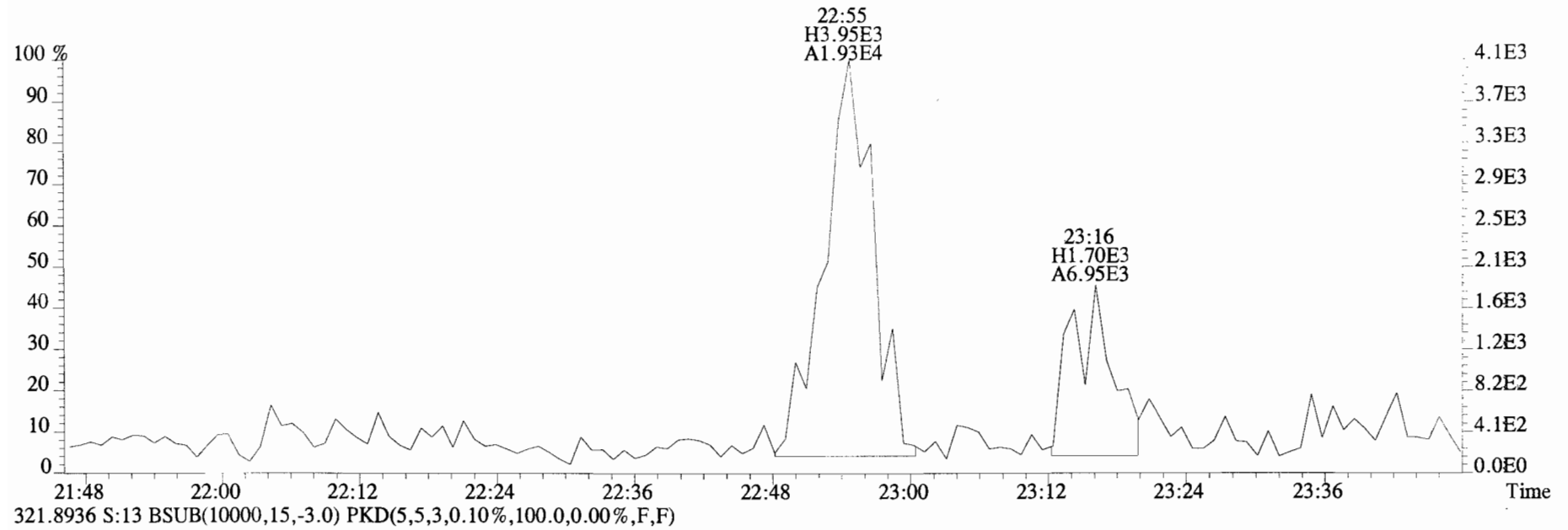
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Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
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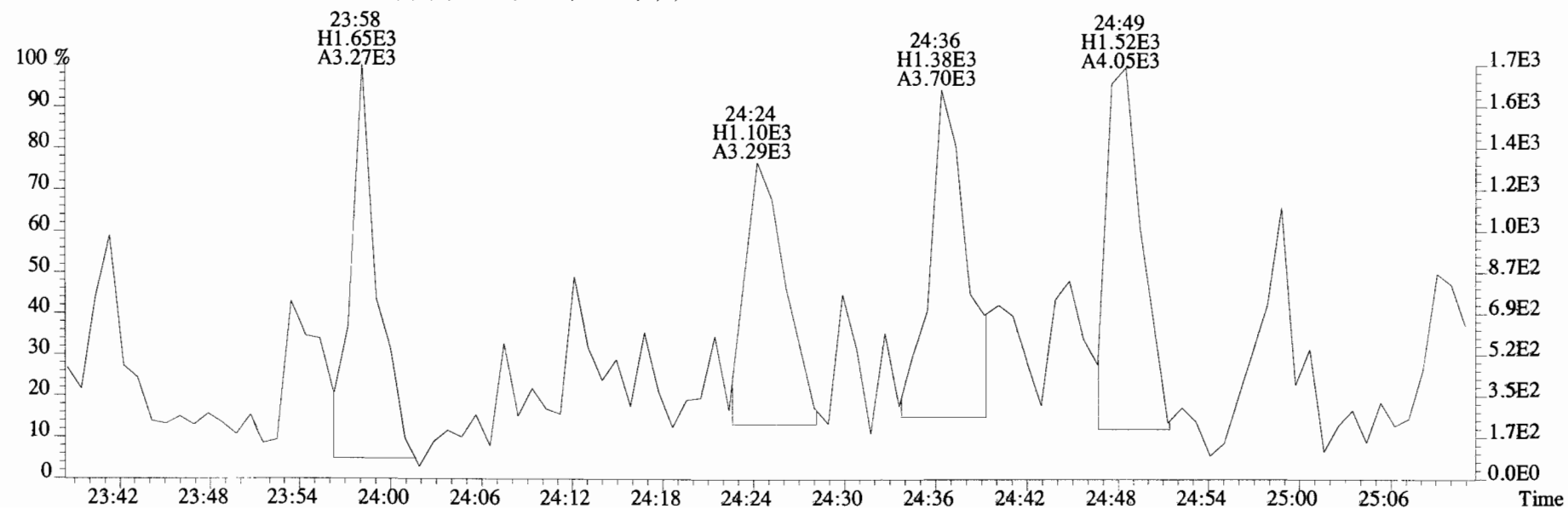
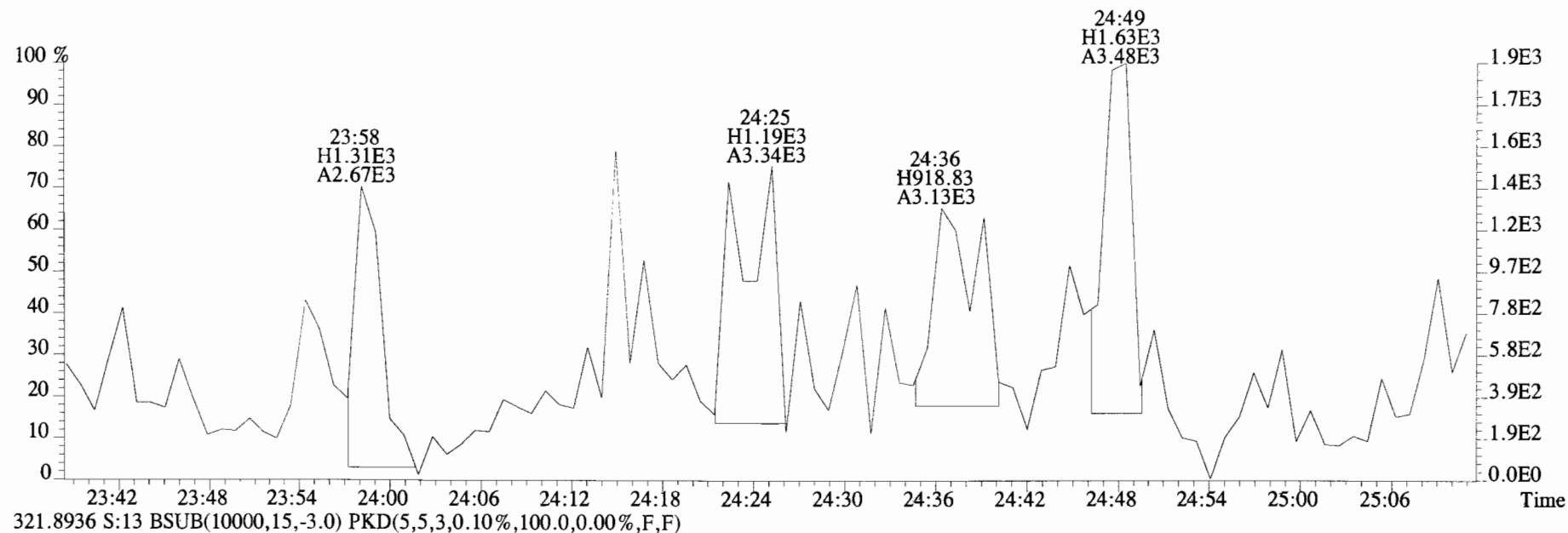
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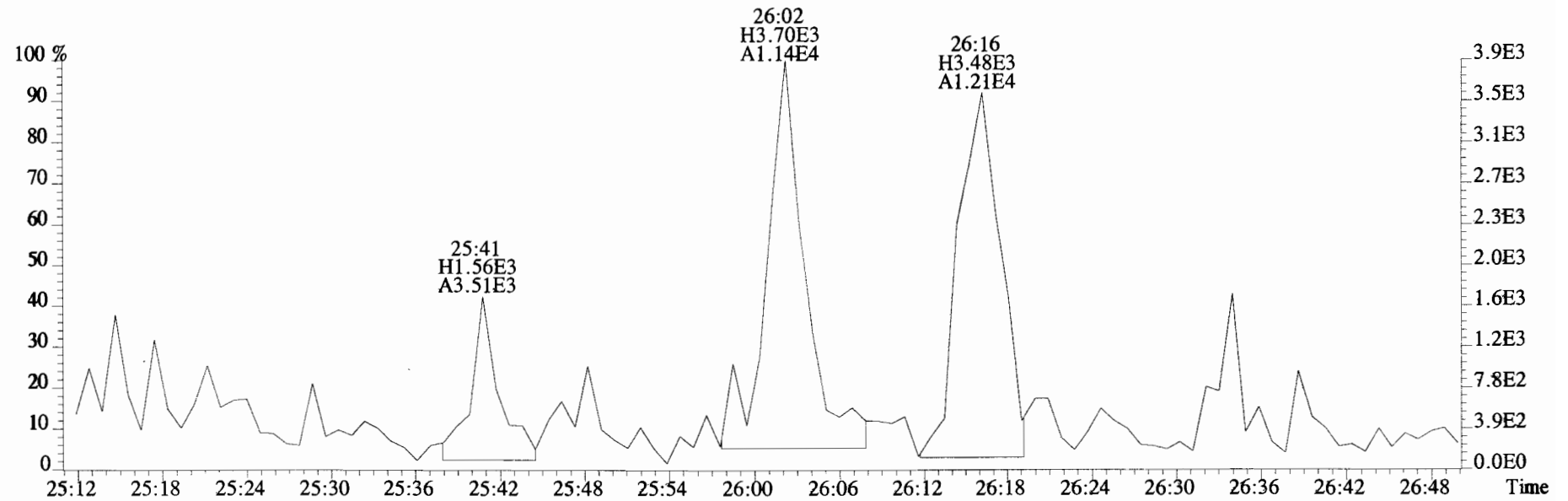
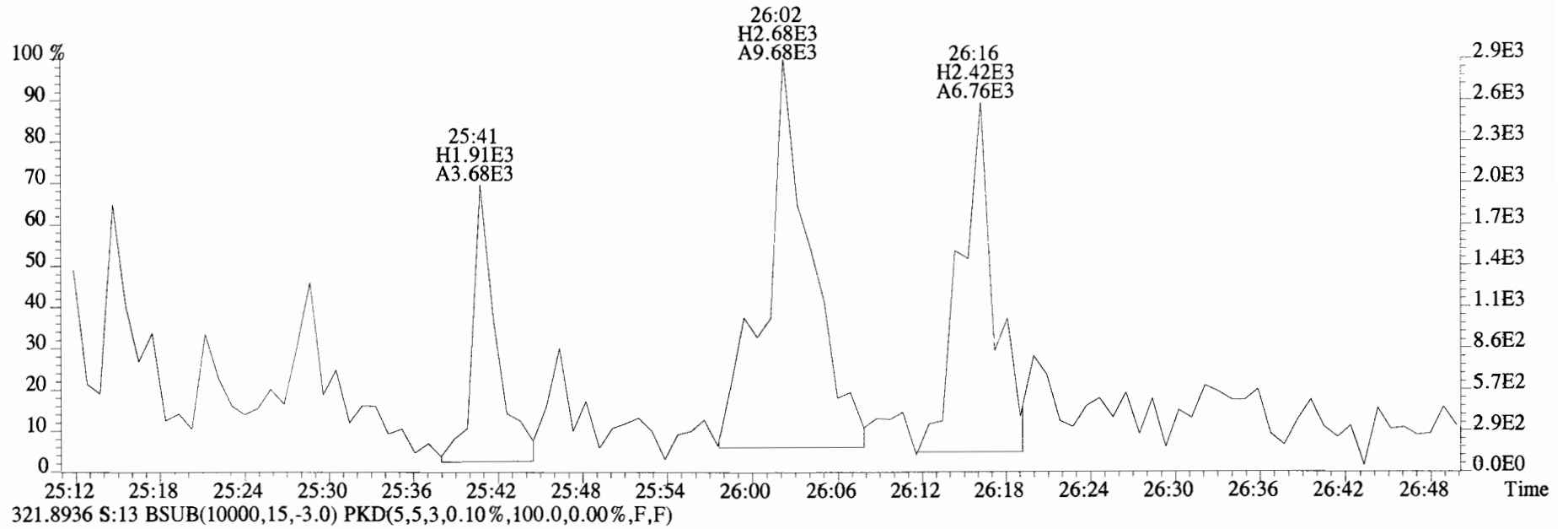
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319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



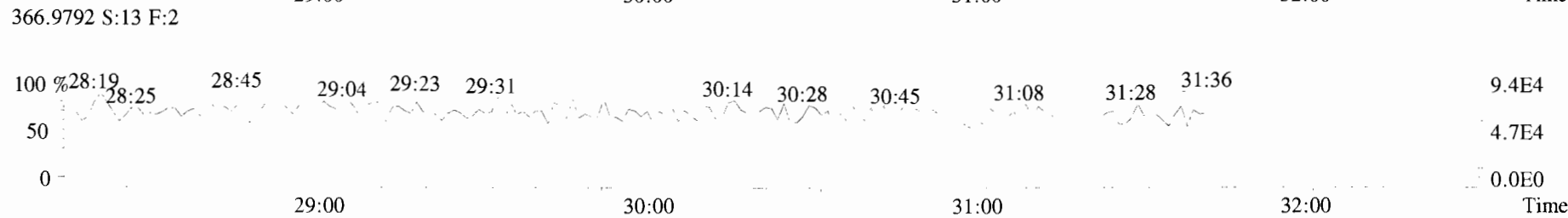
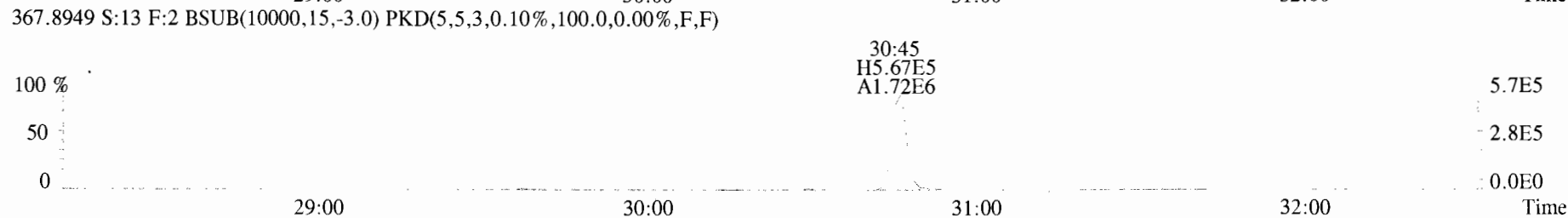
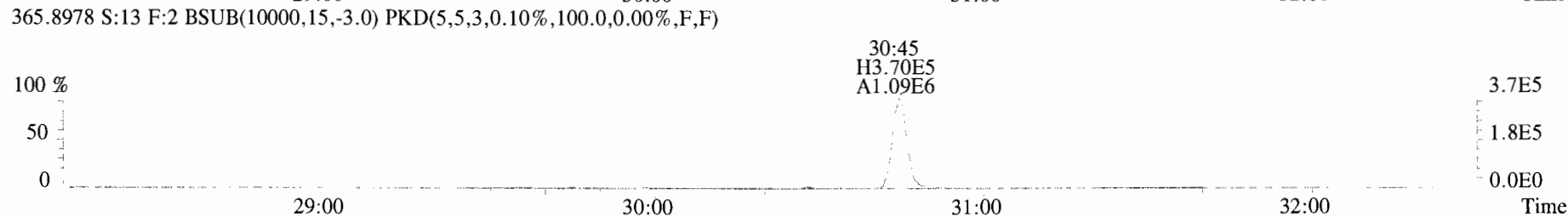
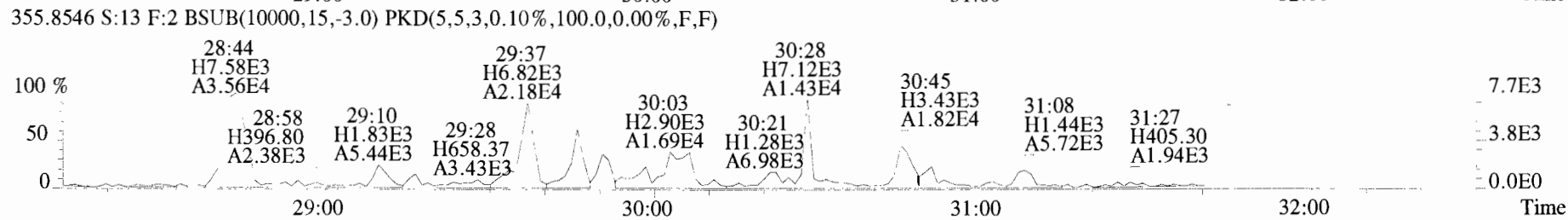
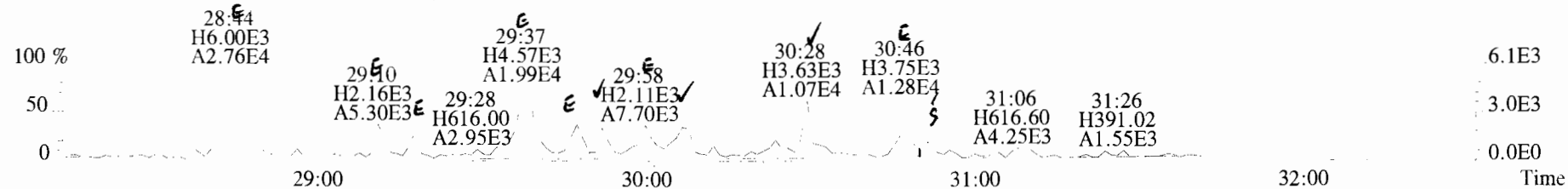
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Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



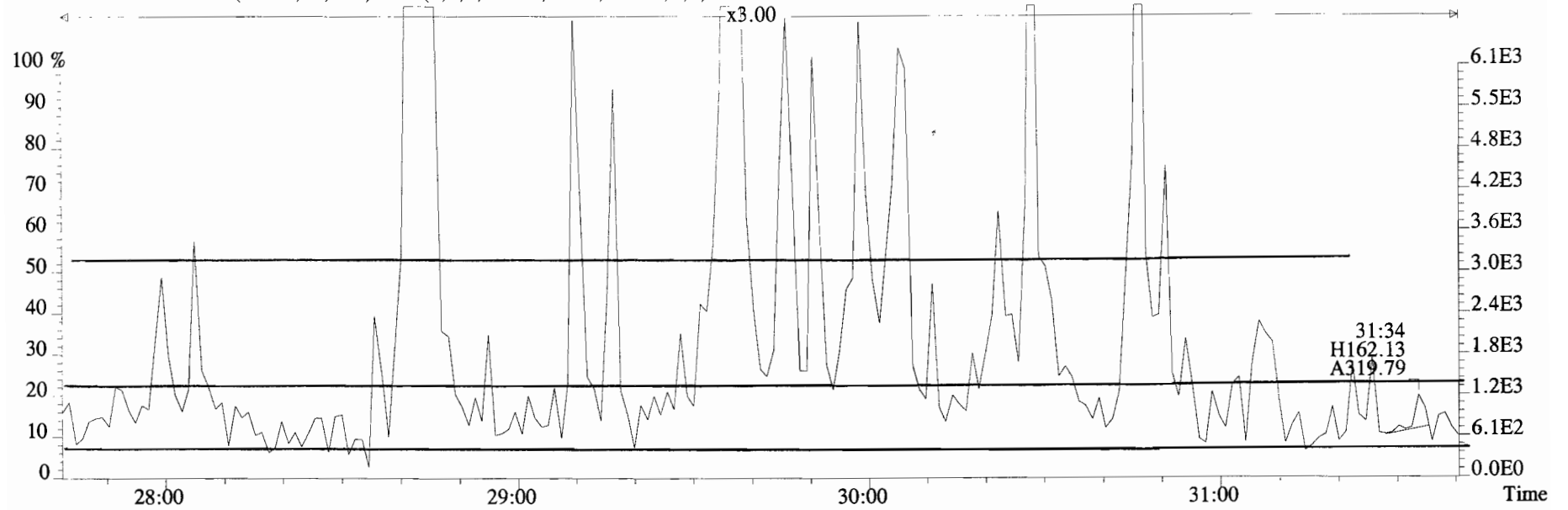
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Sample#13 File Text: Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



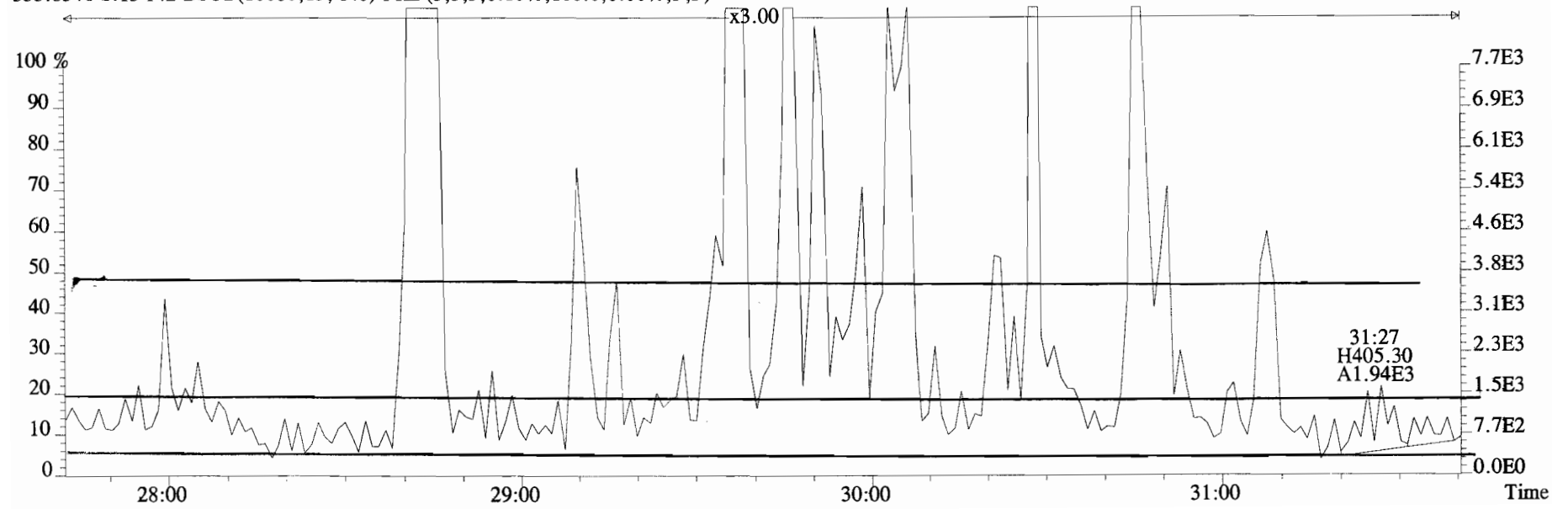
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 Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
 353.8576 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



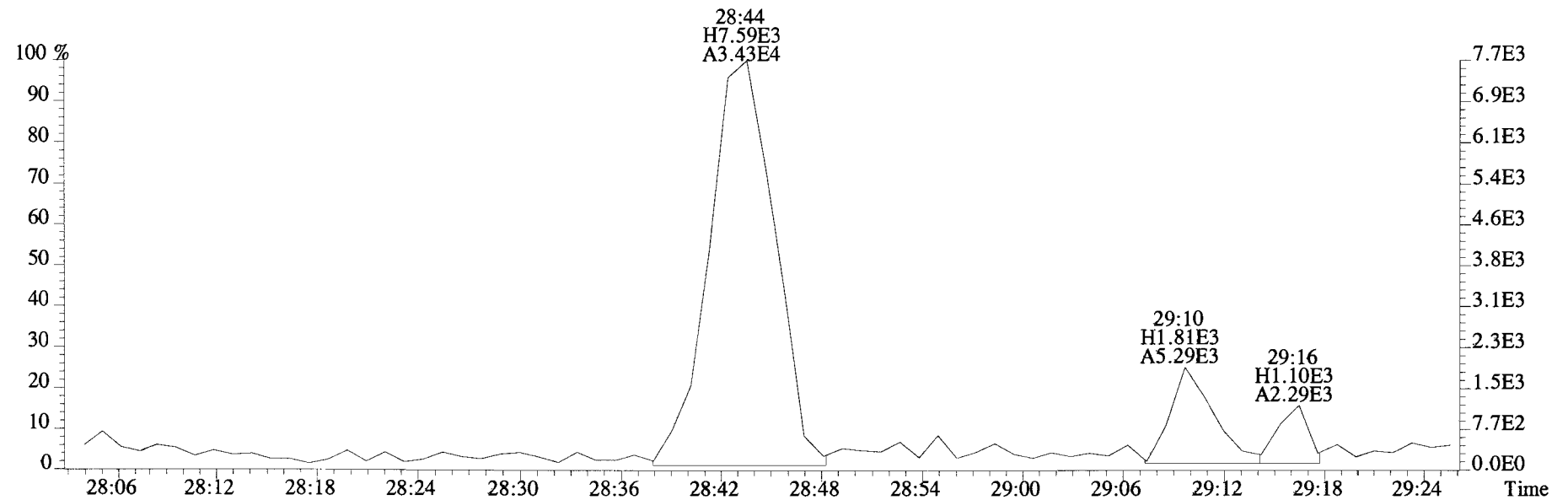
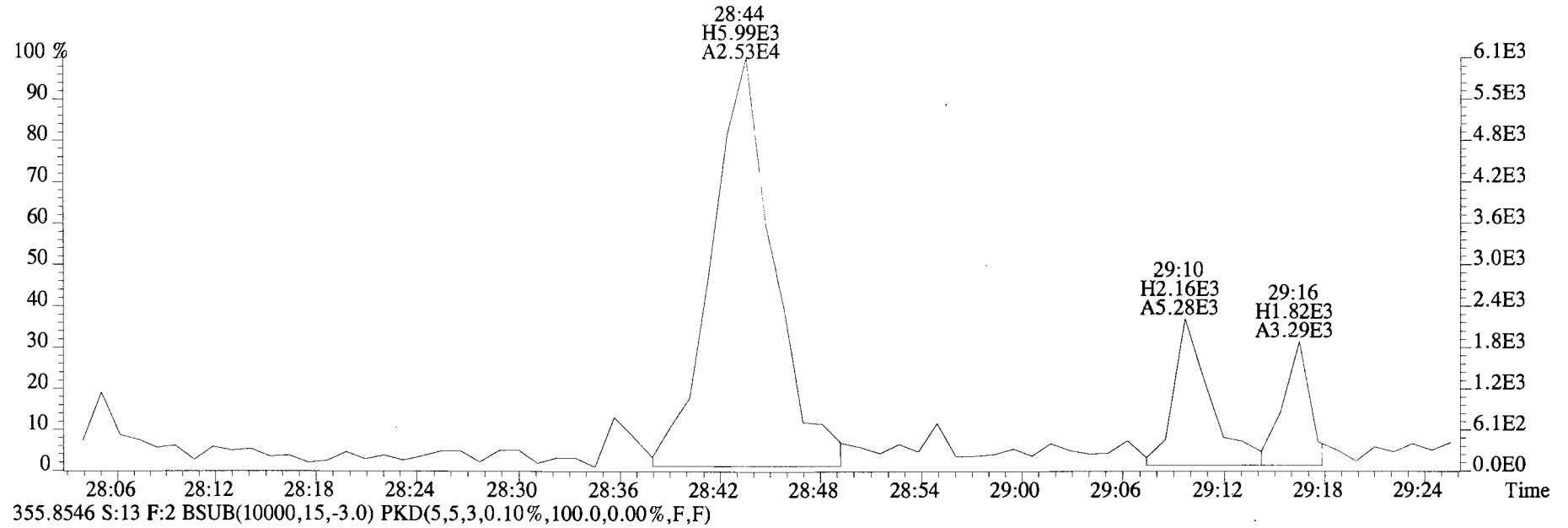
File:191024D2 #1-211 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text: Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
353.8576 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



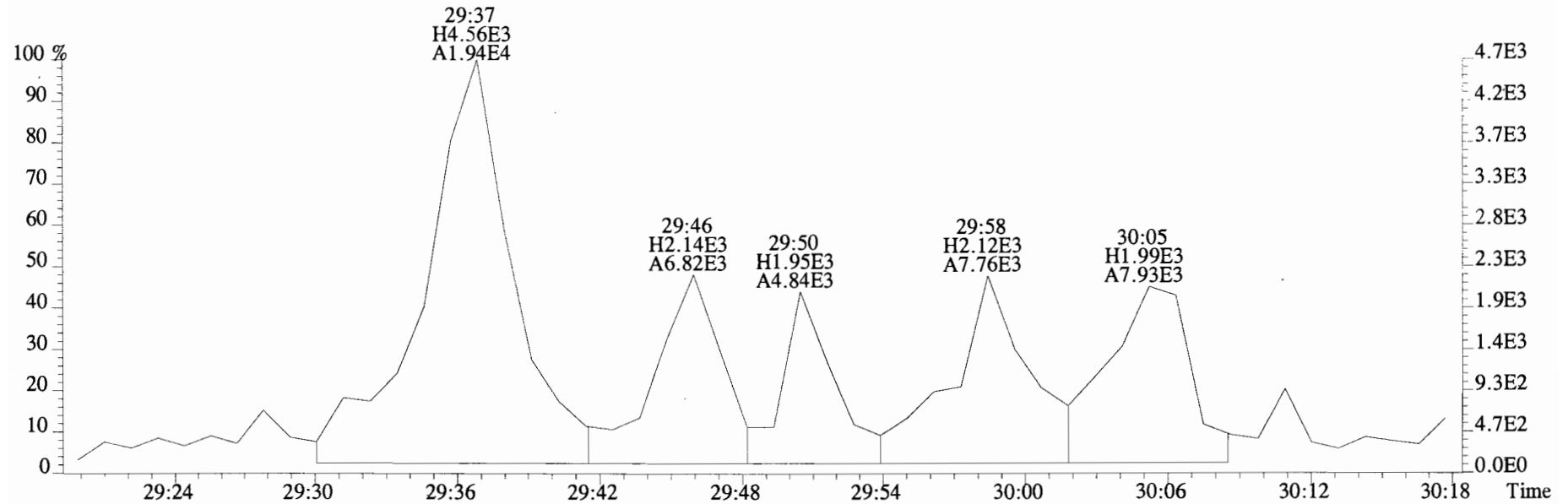
355.8546 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



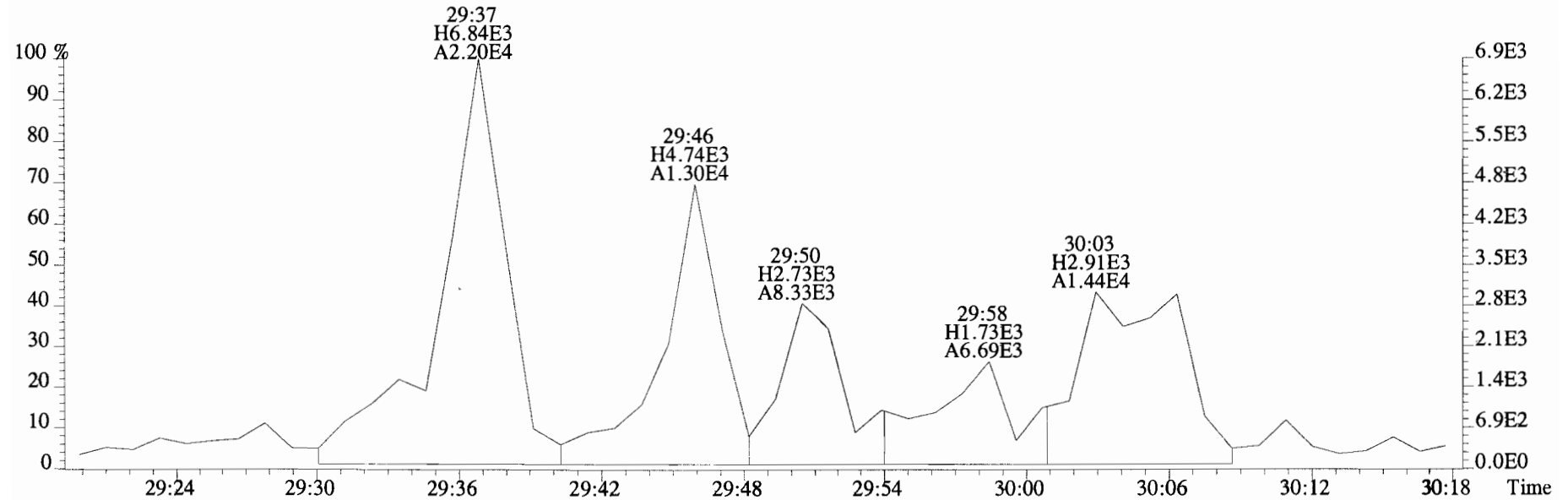
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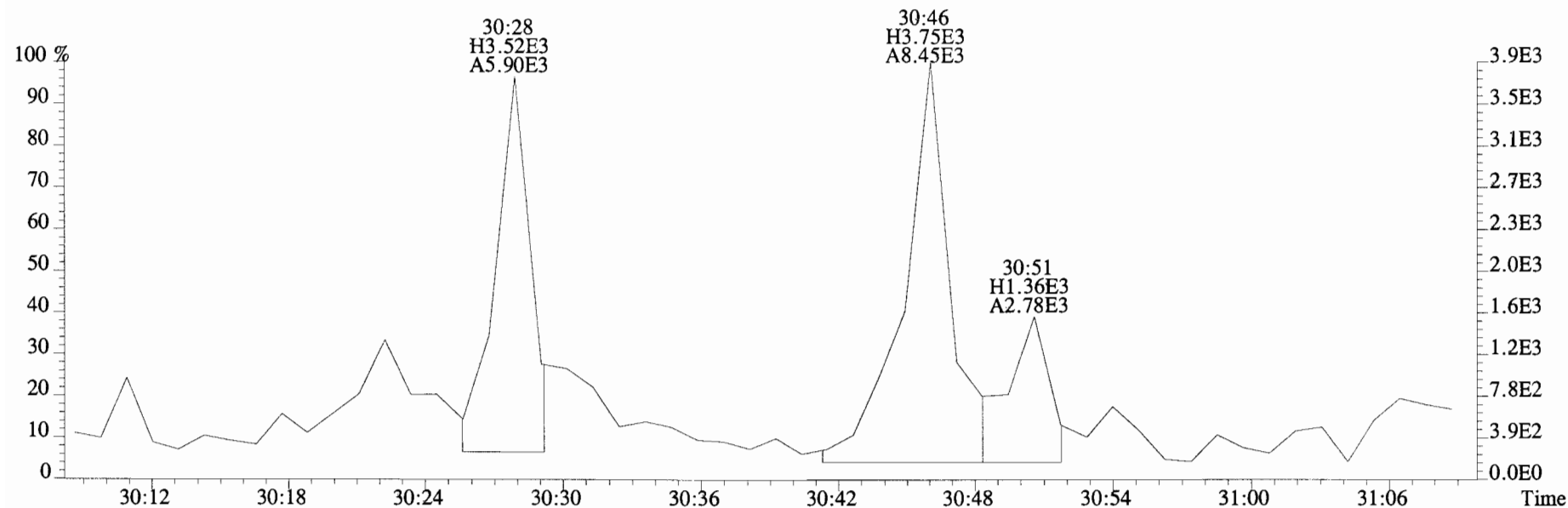
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 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
 353.8576 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



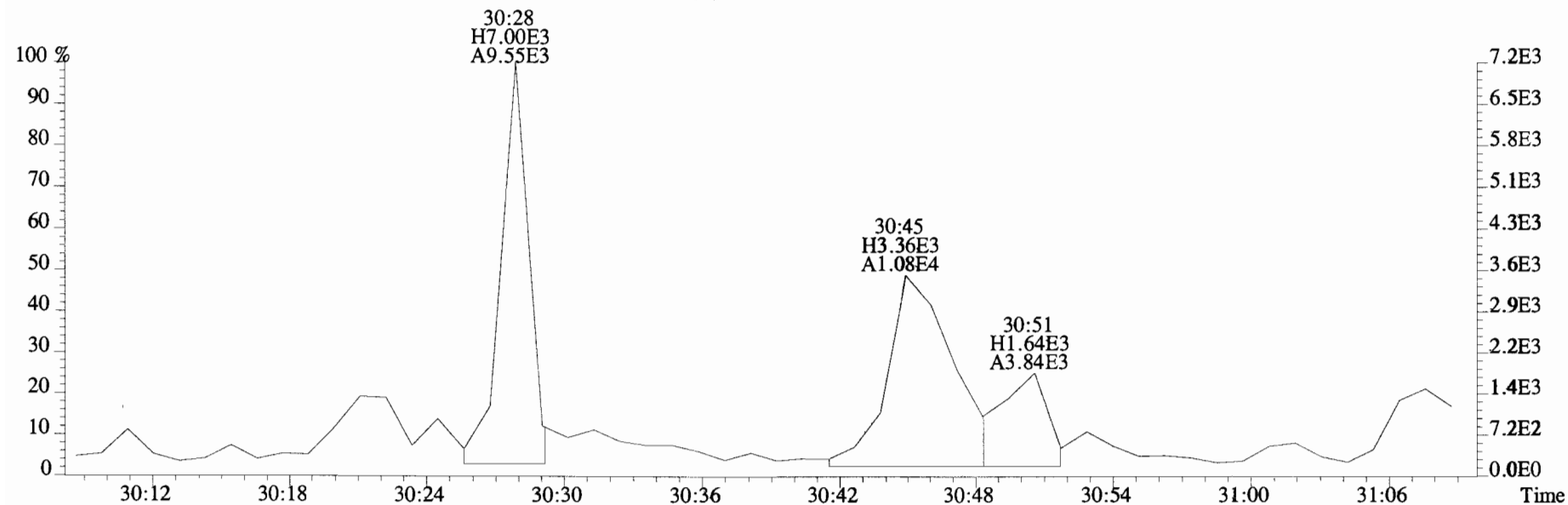
355.8546 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



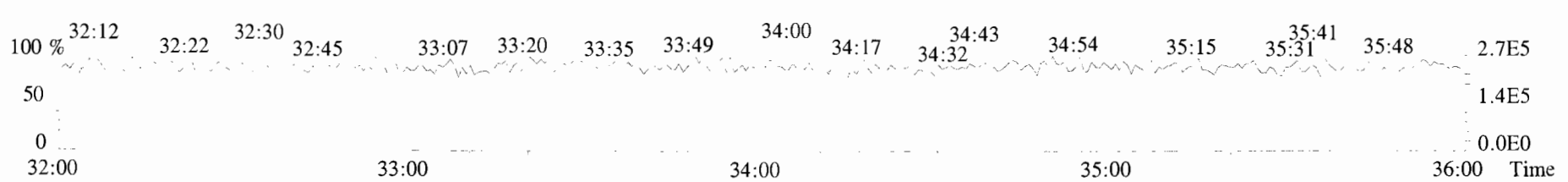
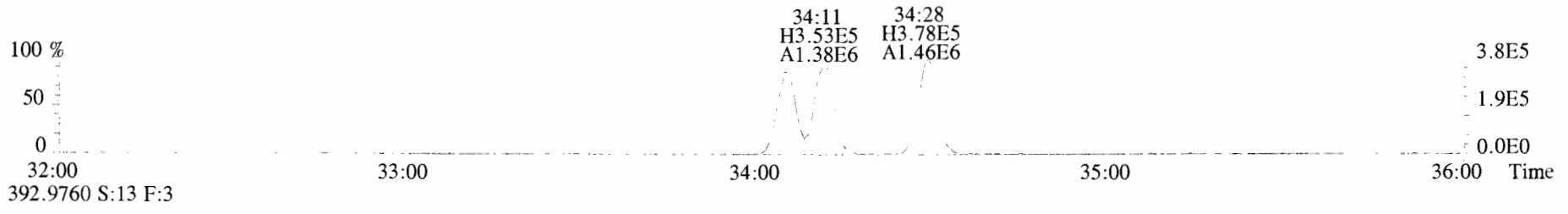
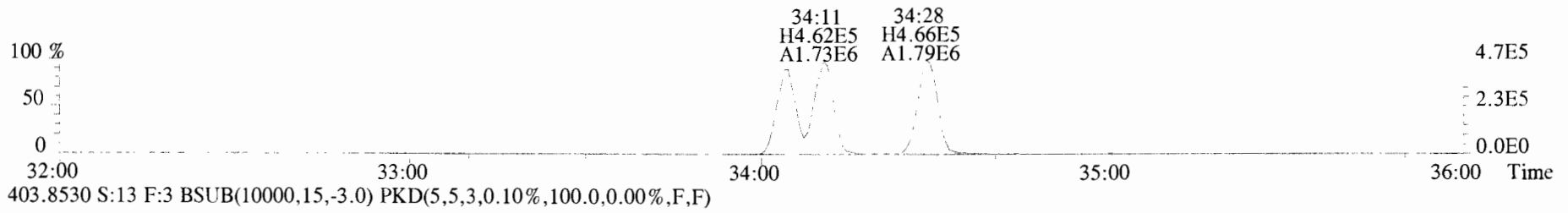
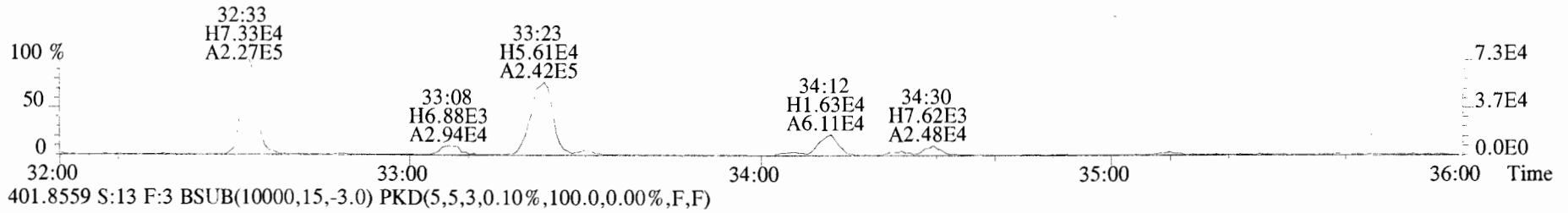
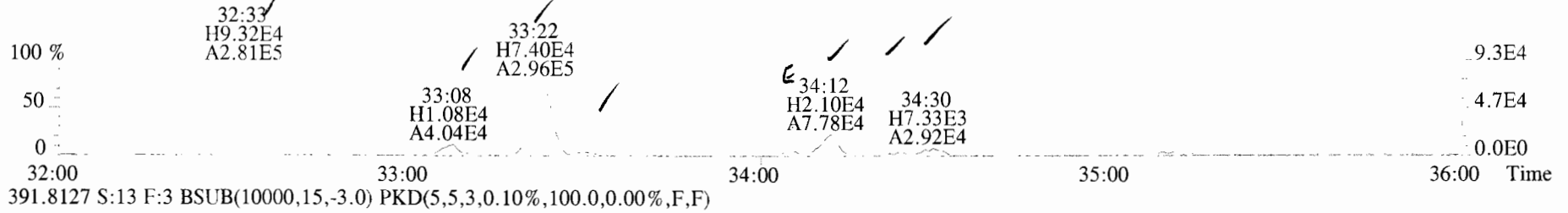
File:191024D2 #1-211 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
 353.8576 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



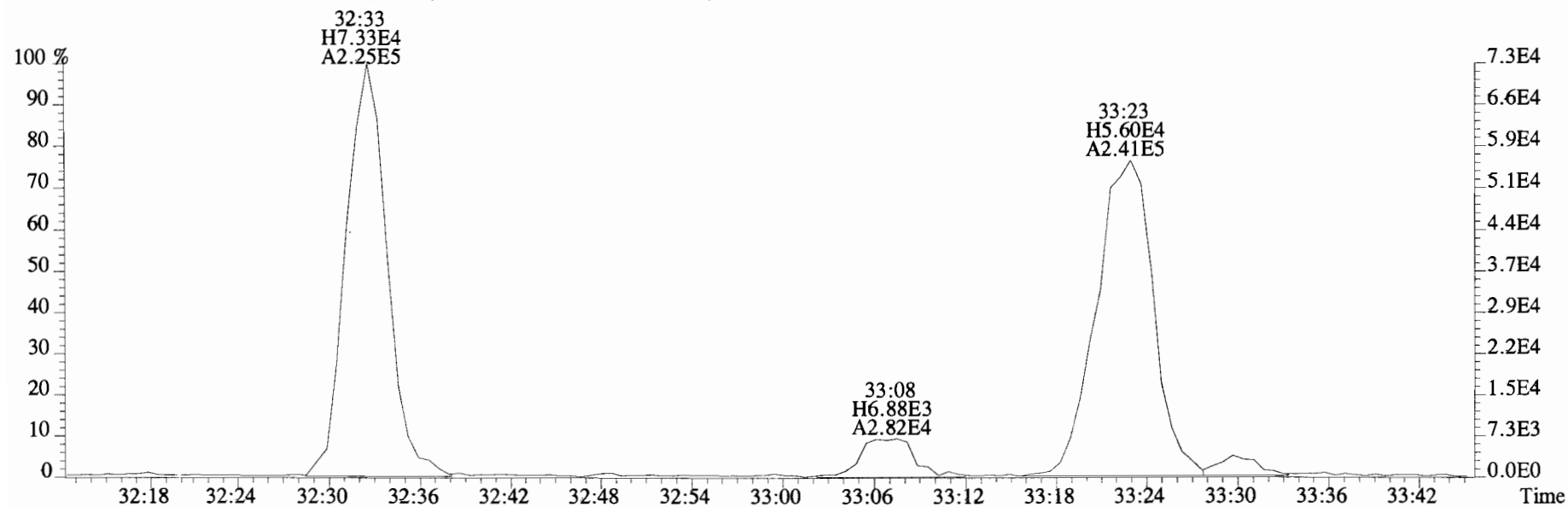
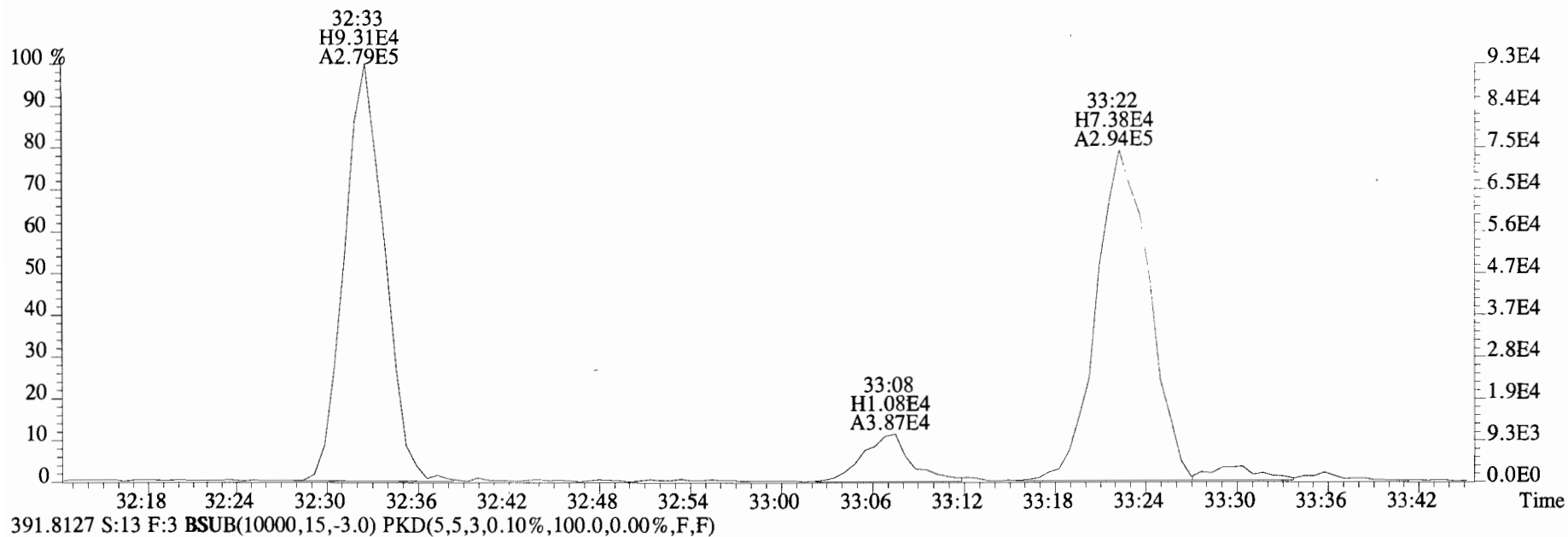
355.8546 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



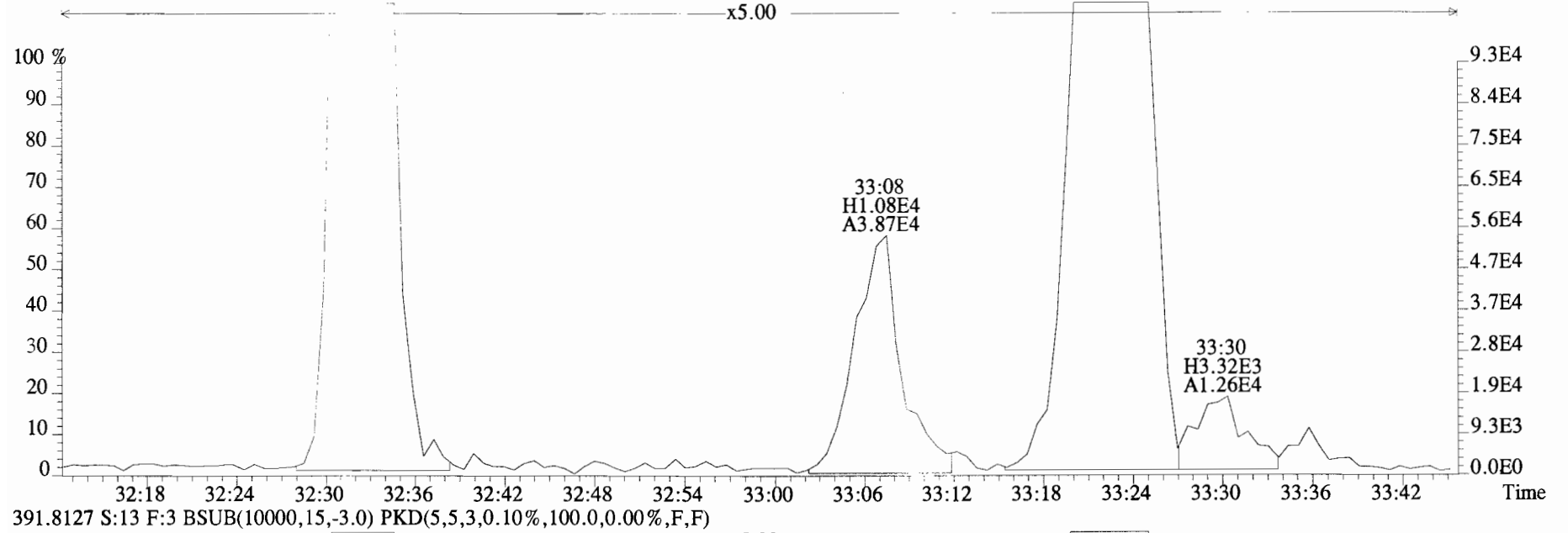
File:191024D2 #1-385 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



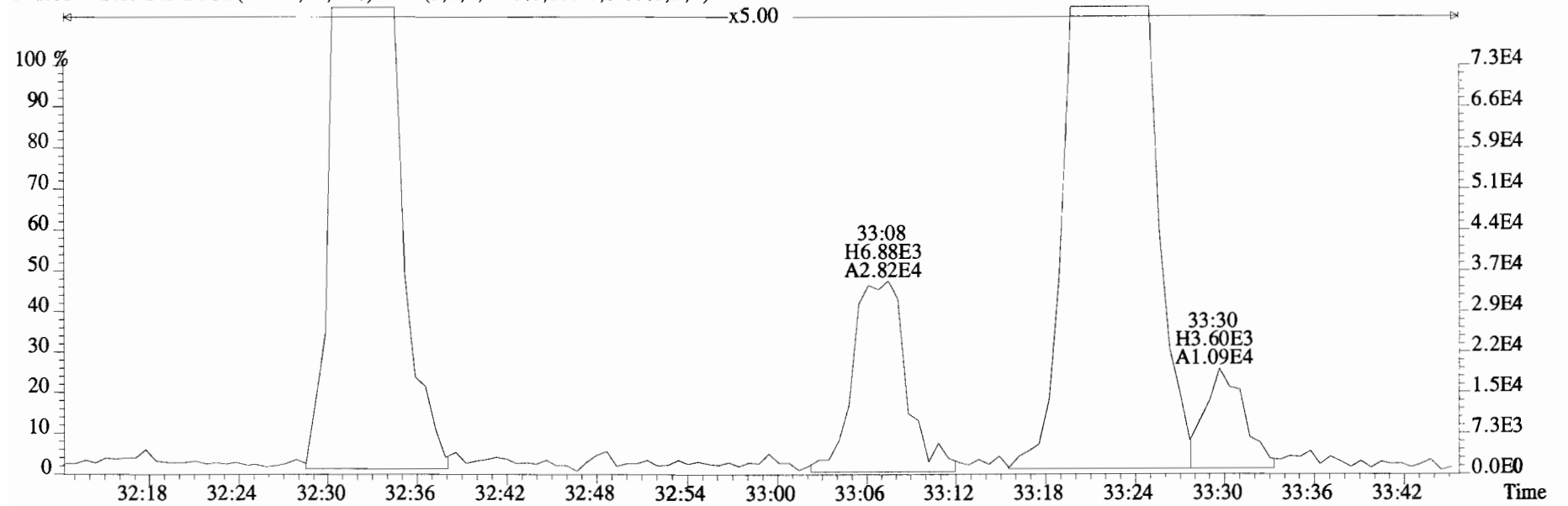
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Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



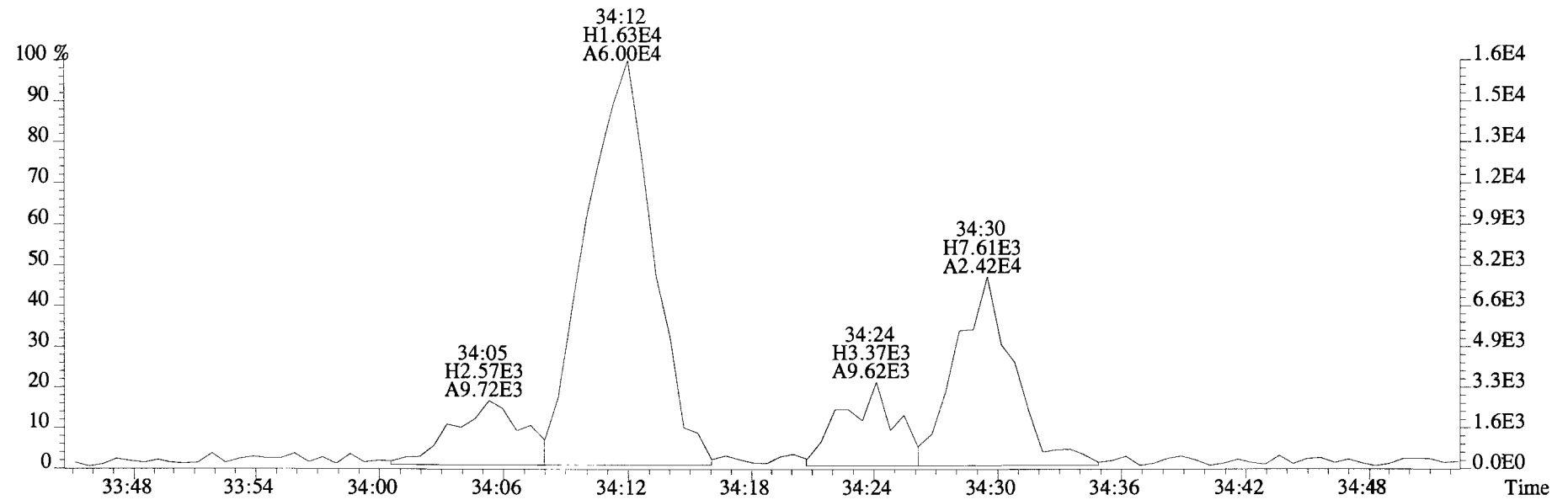
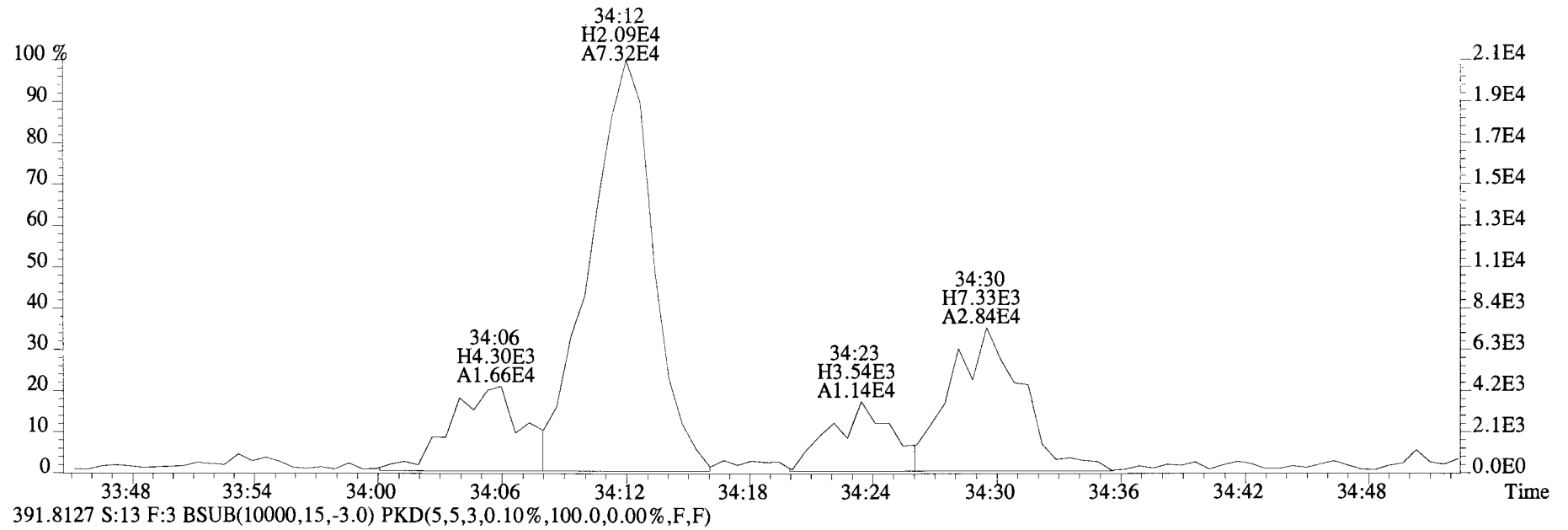
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Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
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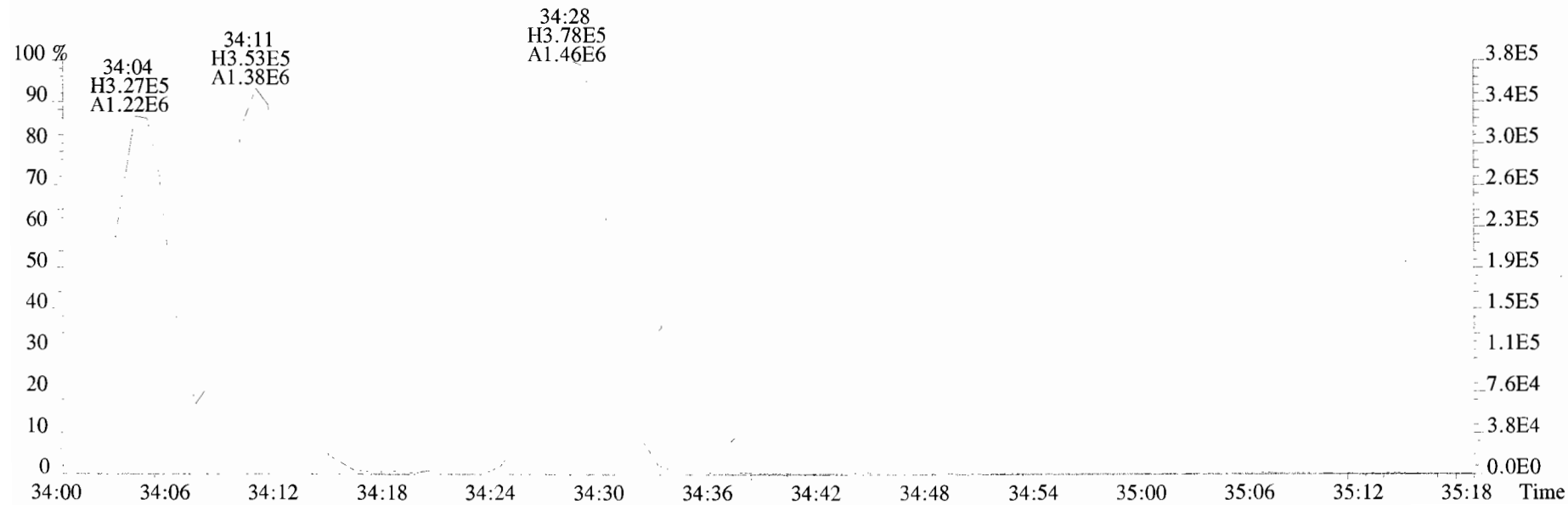
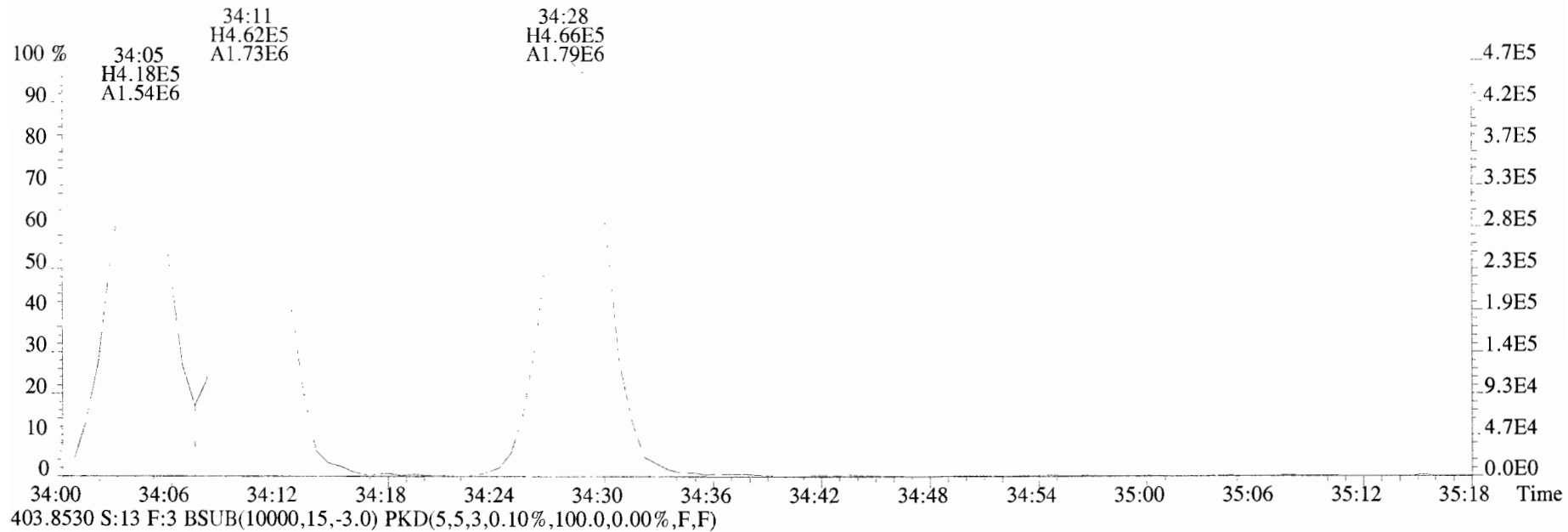
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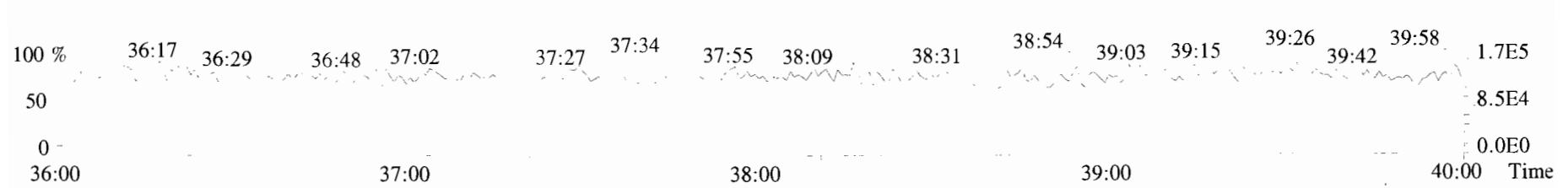
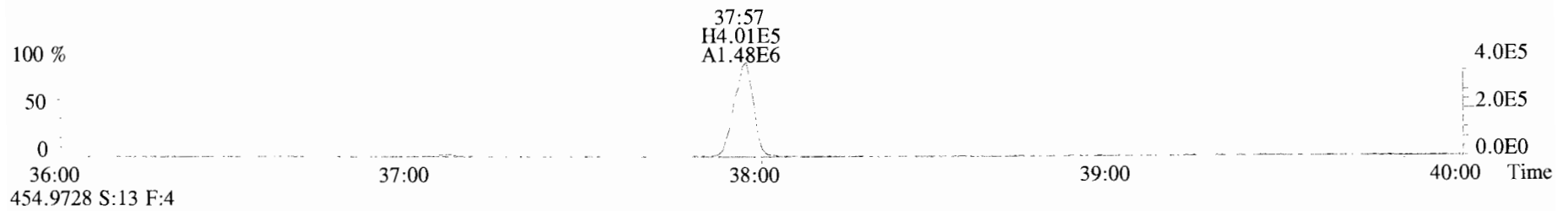
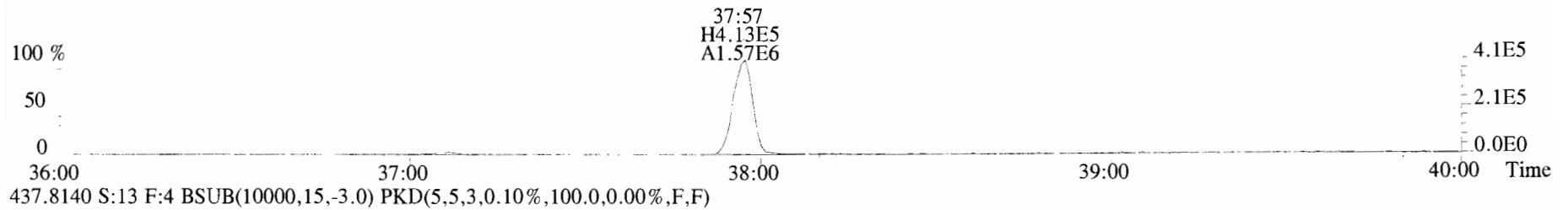
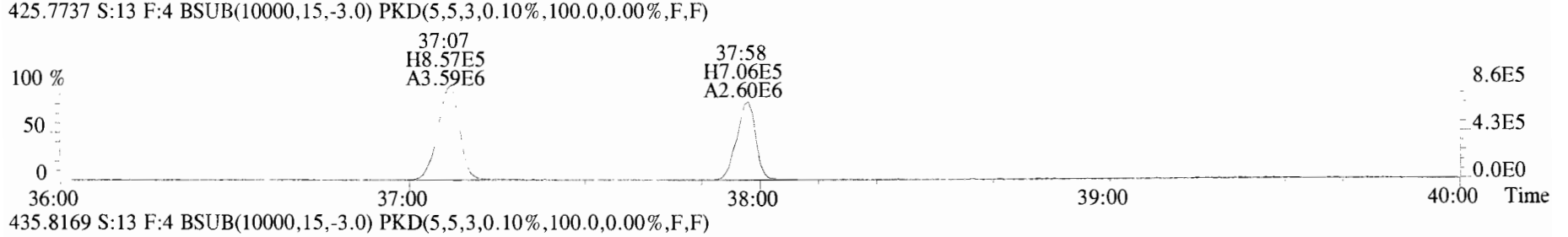
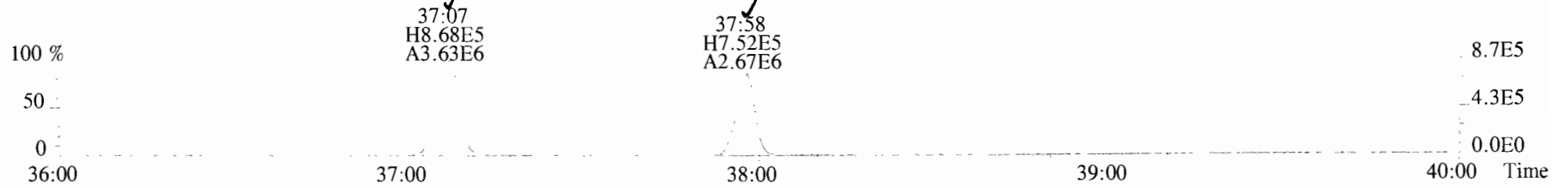
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Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



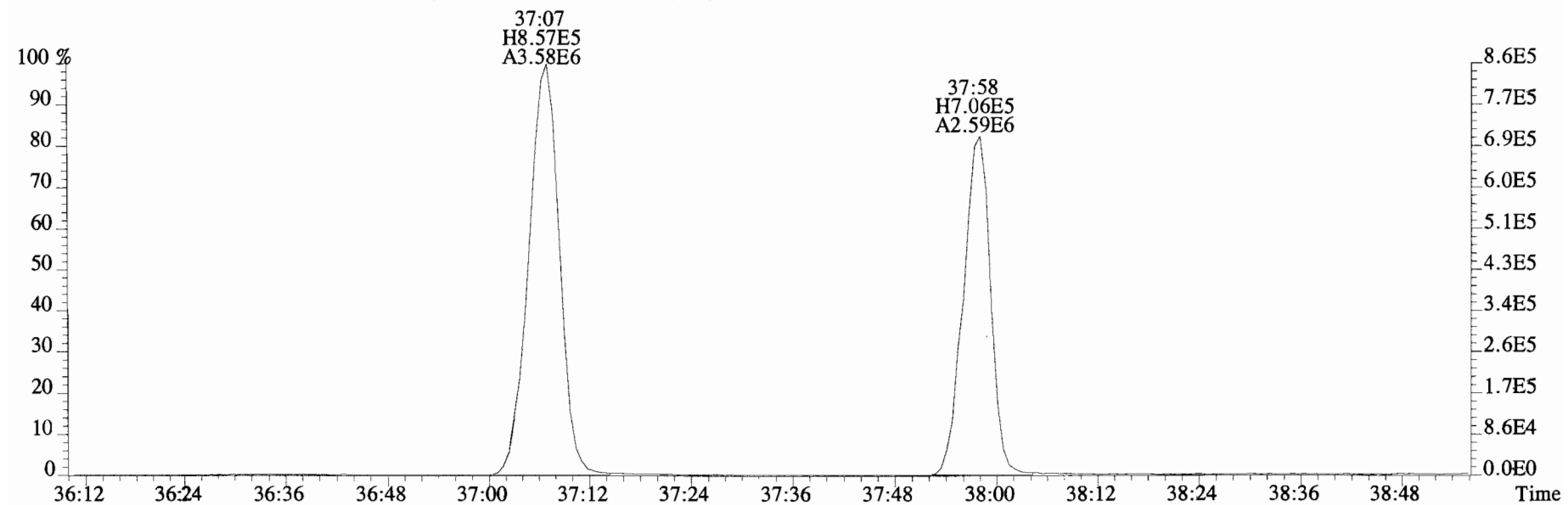
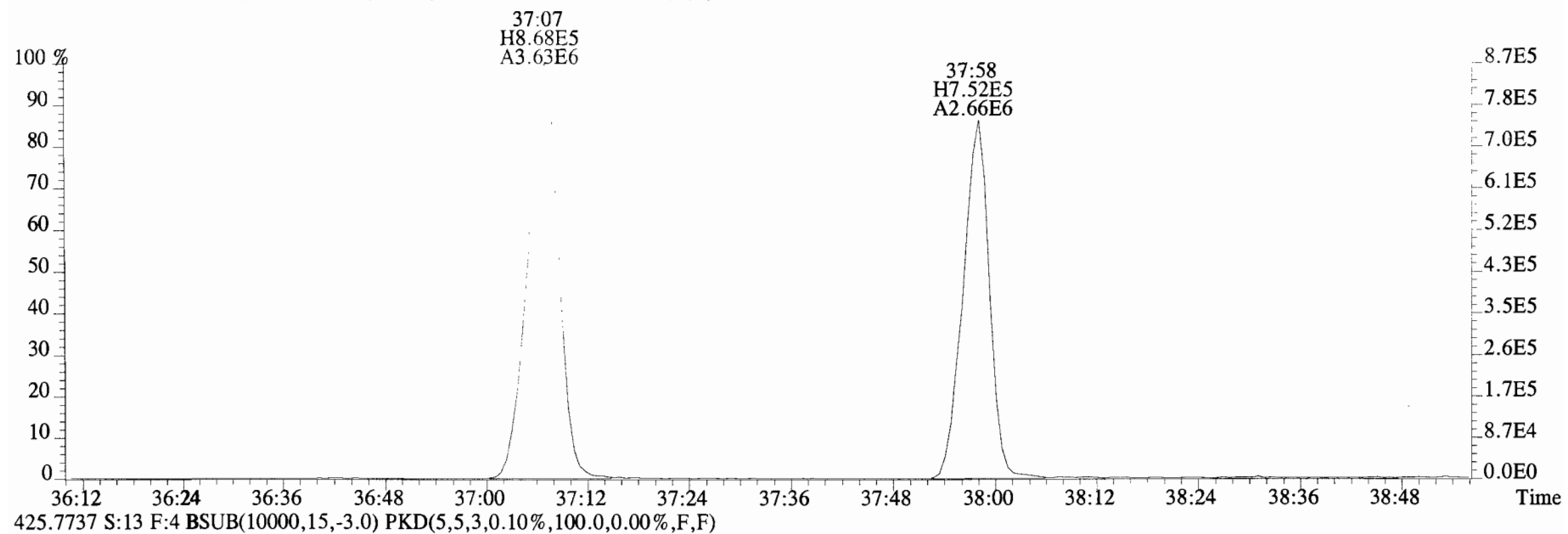
File:191024D2 #1-385 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
401.8559 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



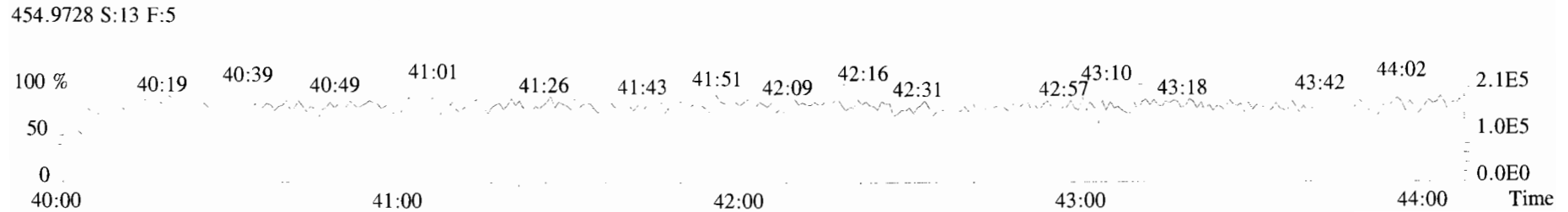
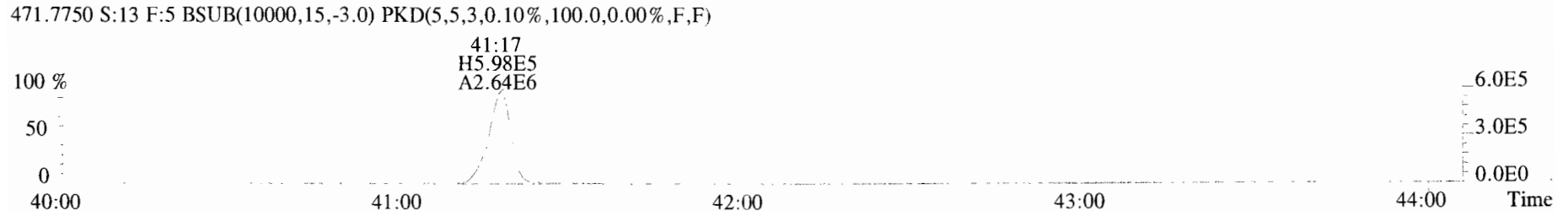
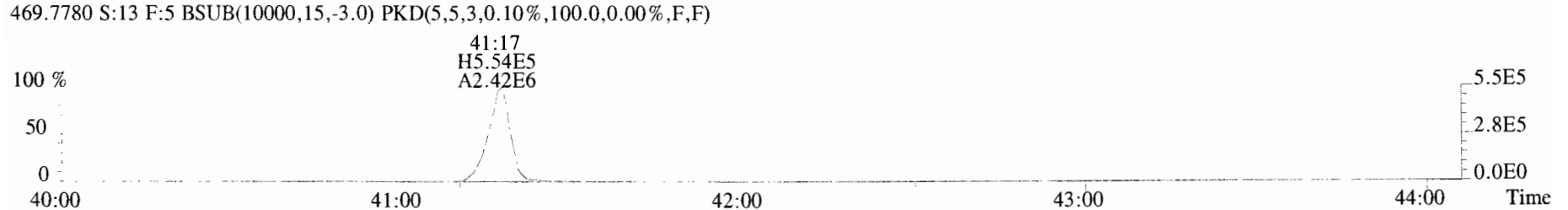
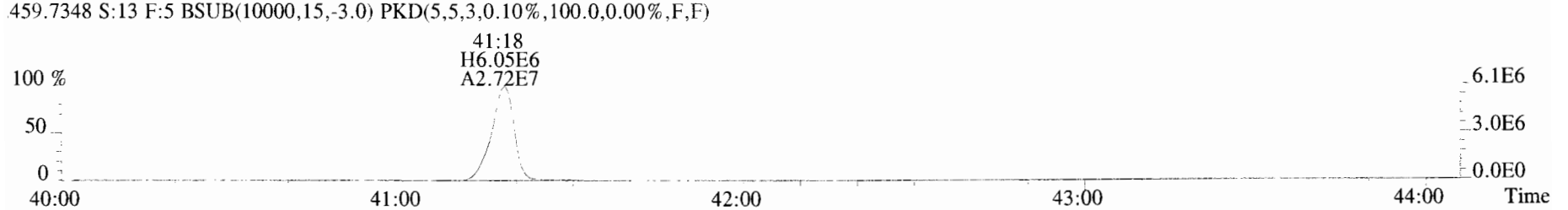
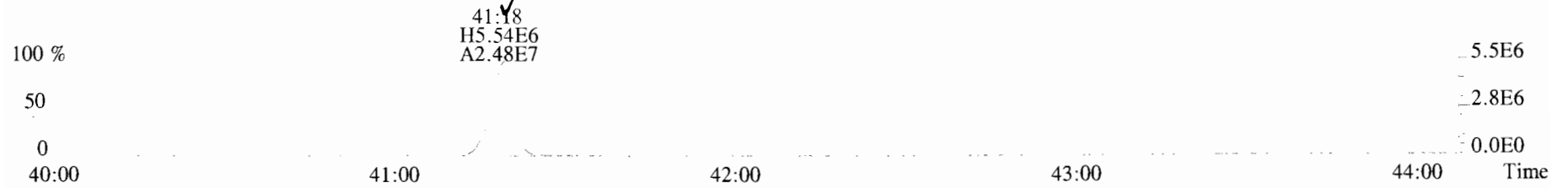
File:191024D2 #1-356 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
423.7767 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



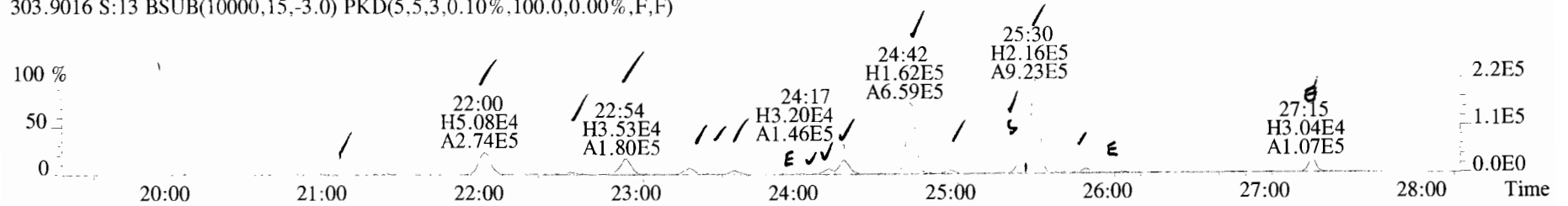
File:191024D2 #1-356 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
423.7767 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



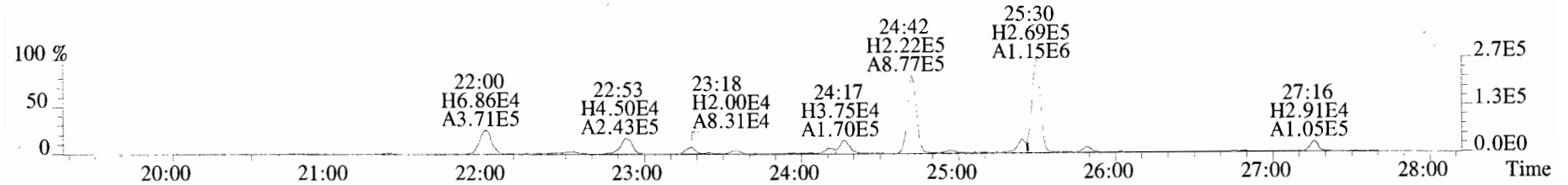
File:191024D2 #1-432 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
457.7377 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



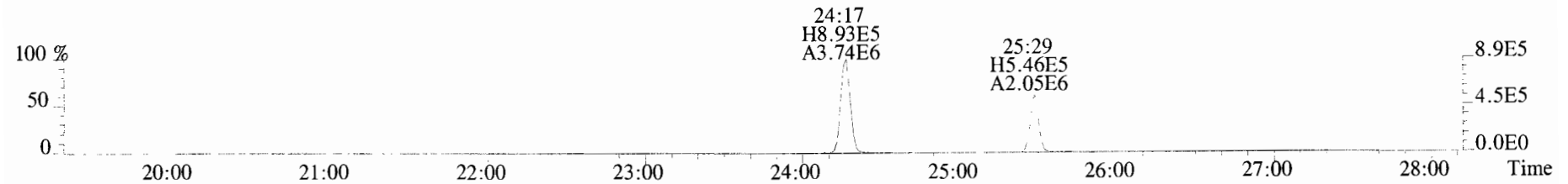
File:191024D2 #1-493 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
 303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



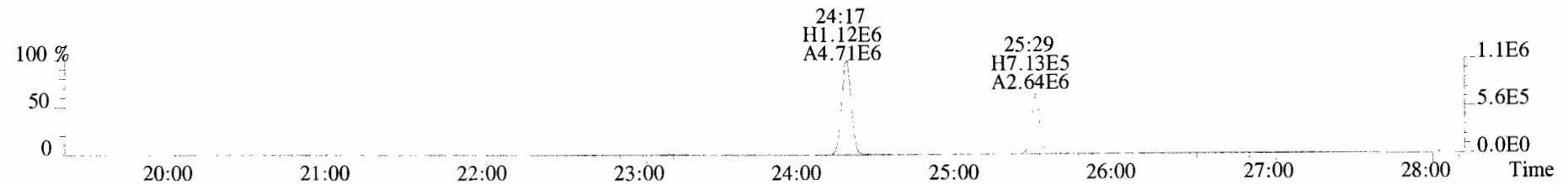
305.8987 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



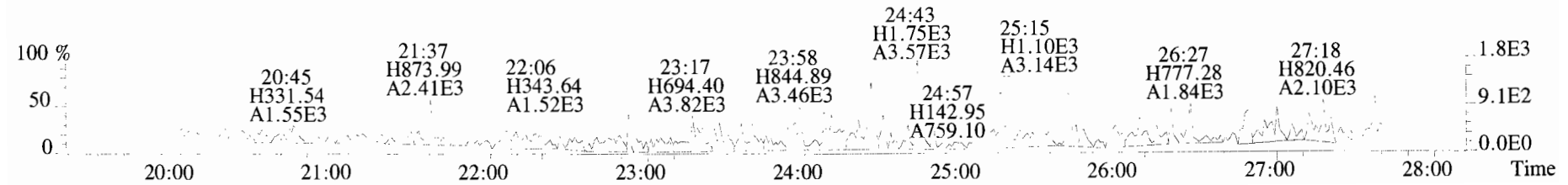
315.9419 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



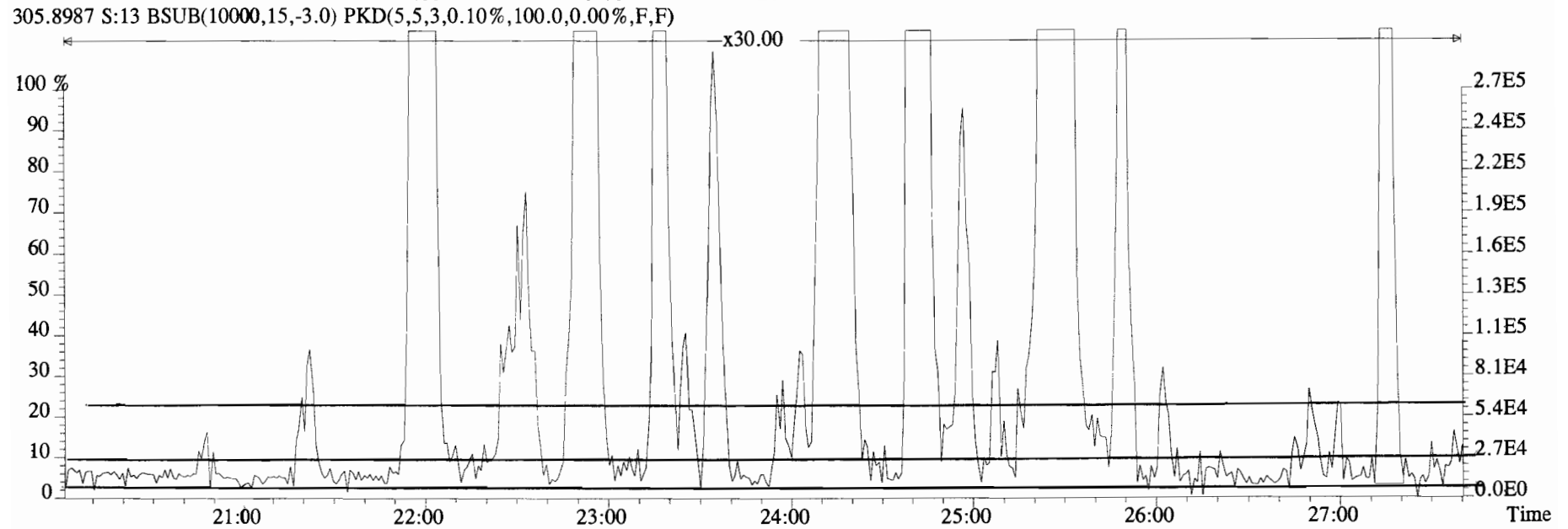
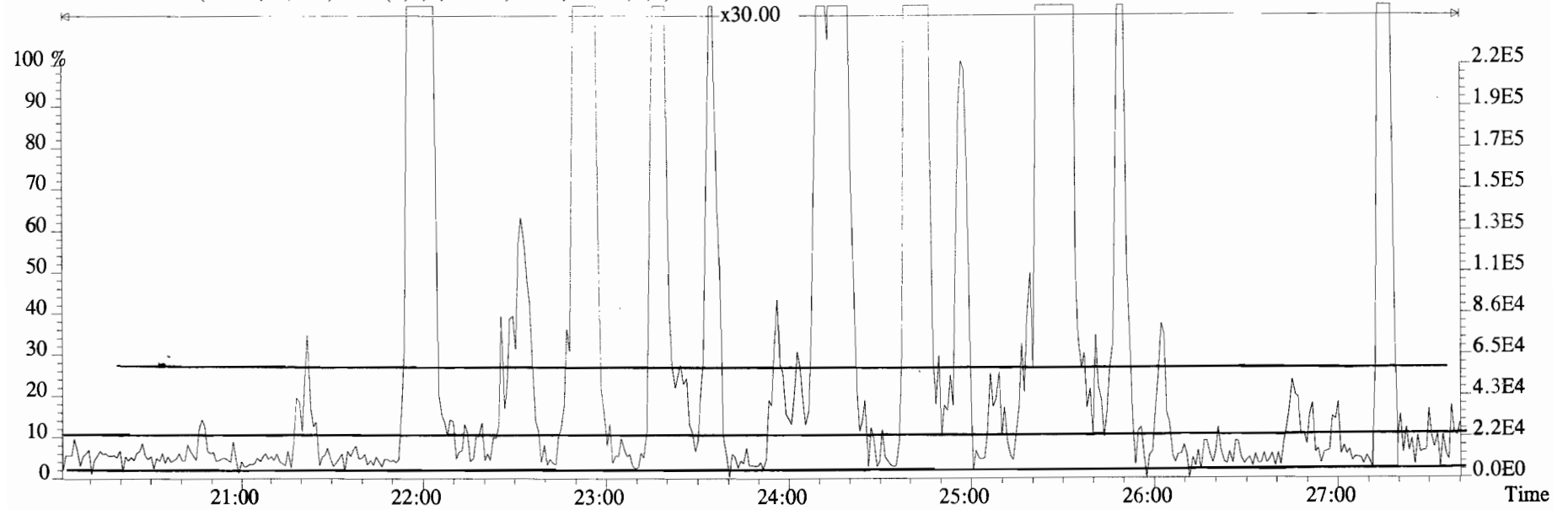
317.9389 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



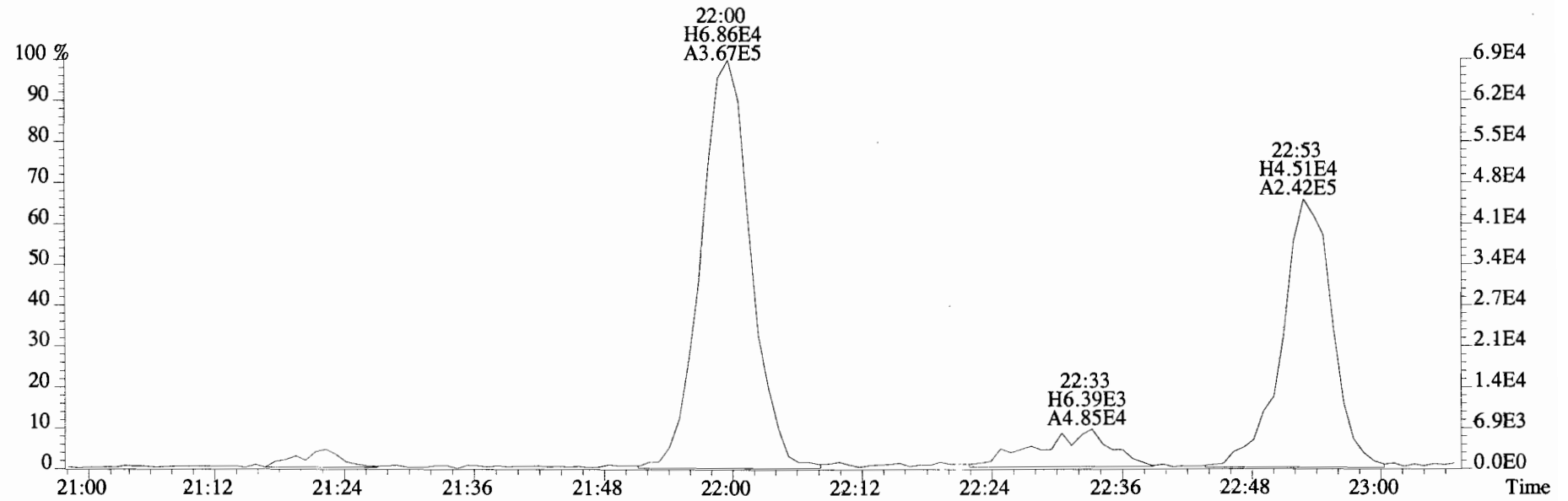
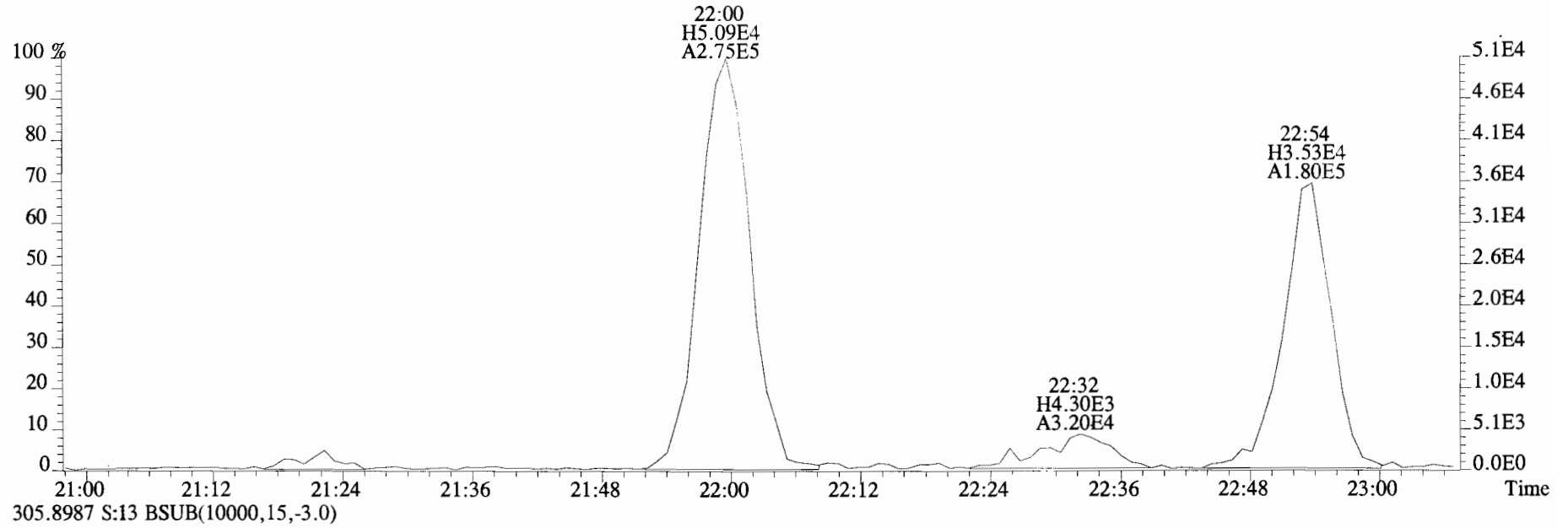
375.8364 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



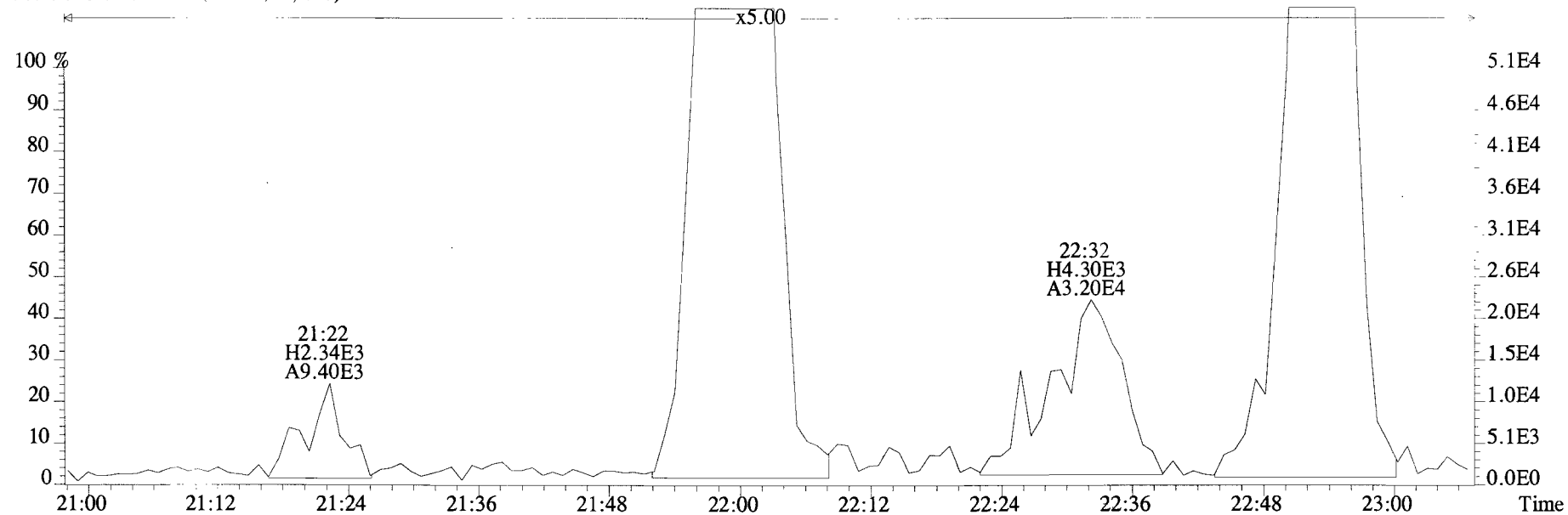
File:191024D2 #1-493 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text: Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



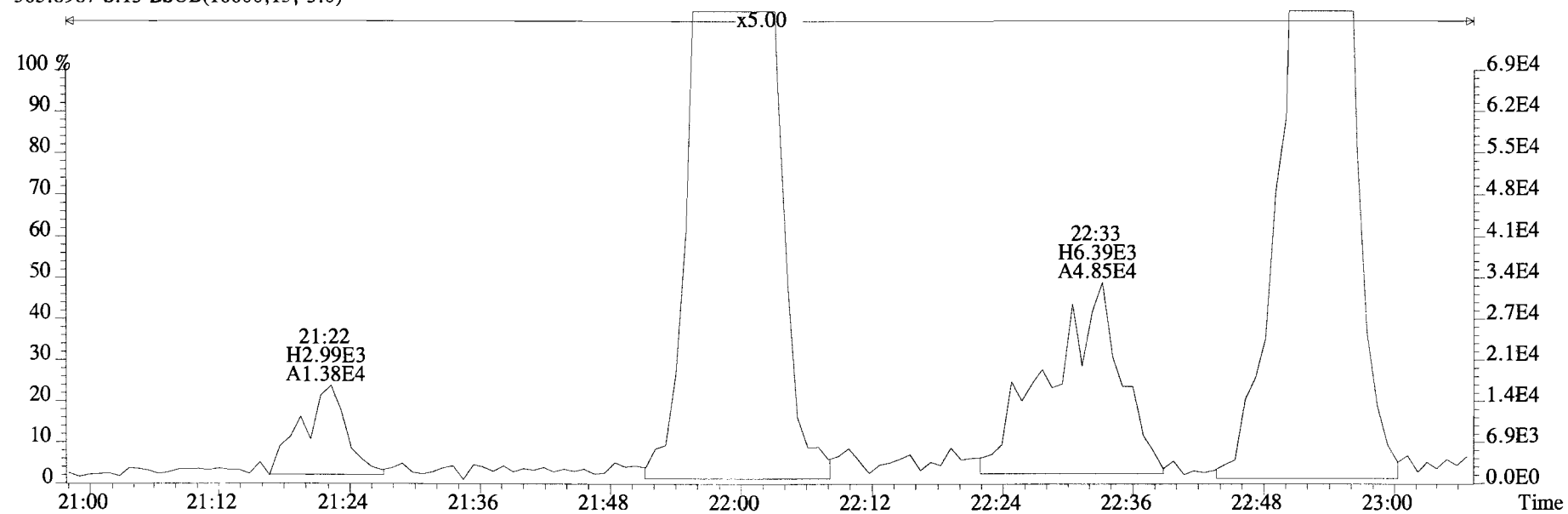
File:191024D2 #1-493 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0)



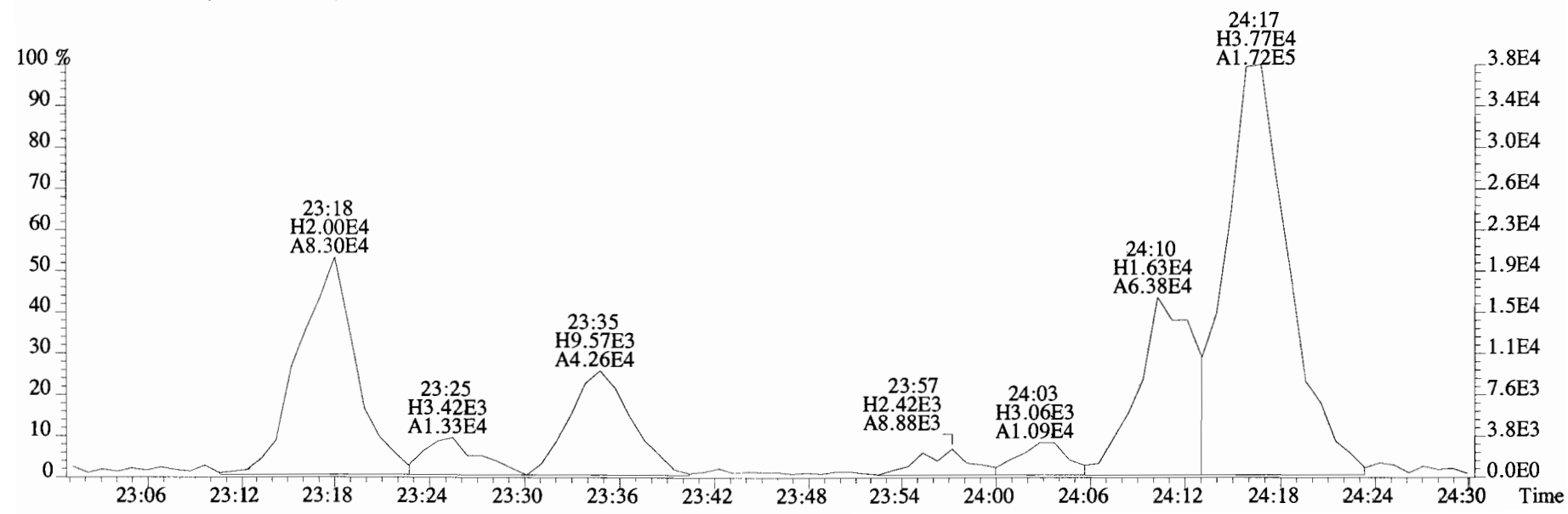
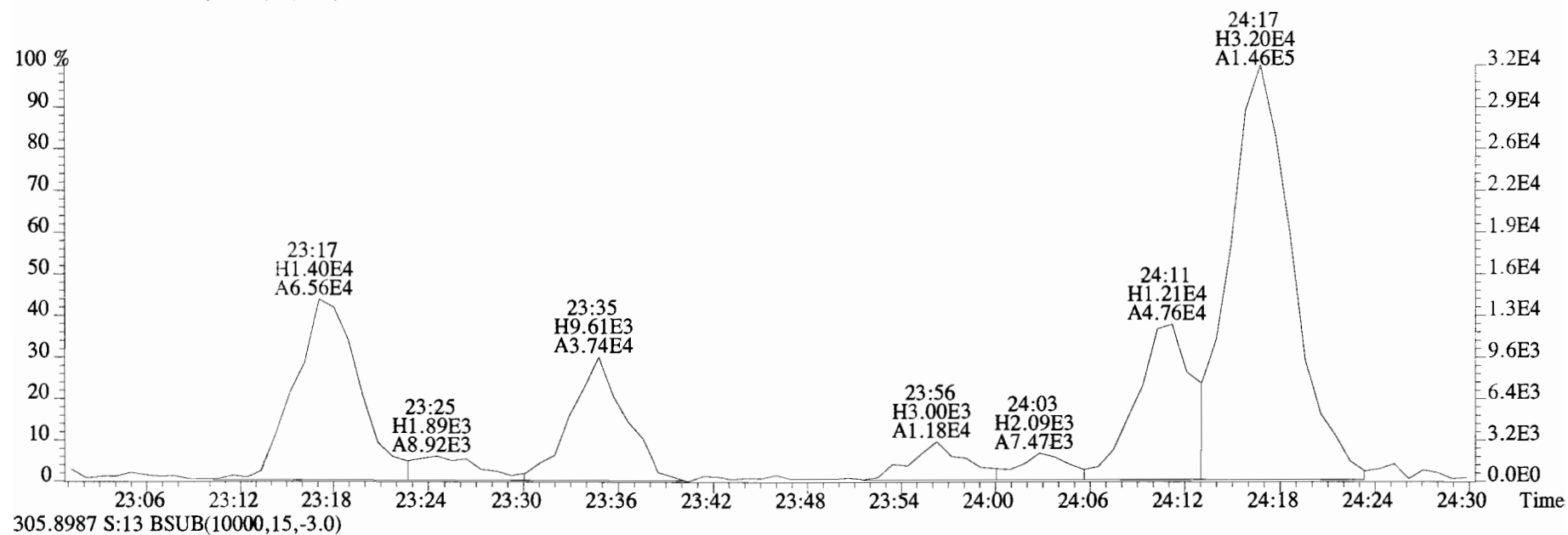
File:191024D2 #1-493 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0)



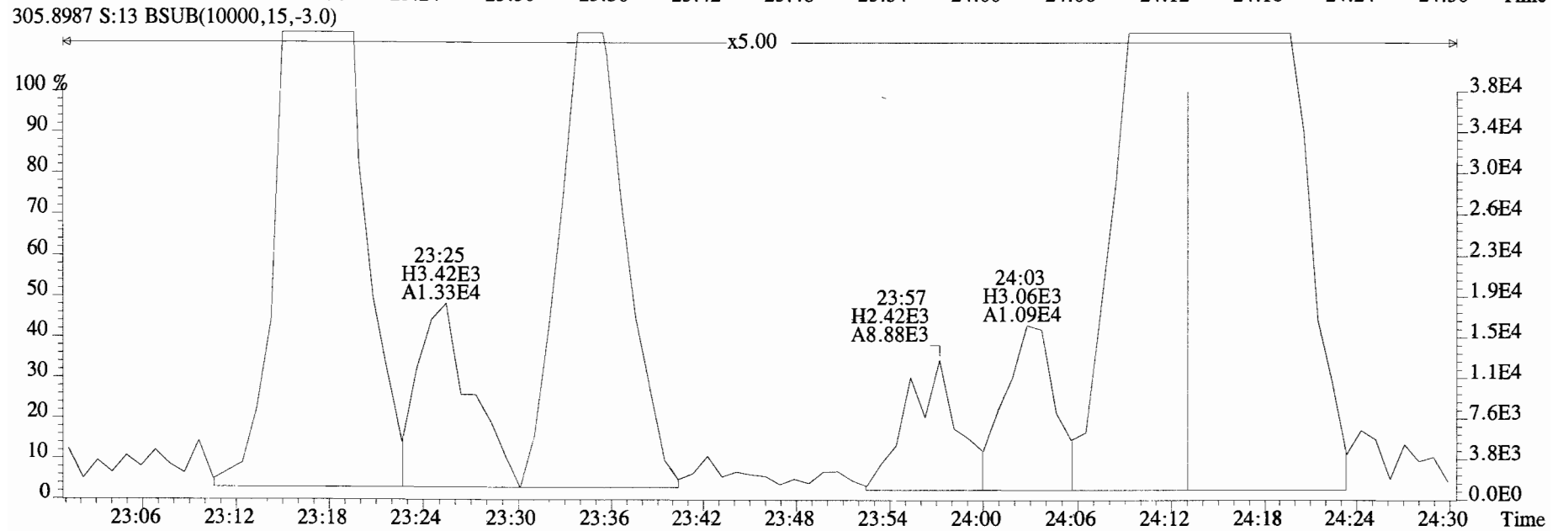
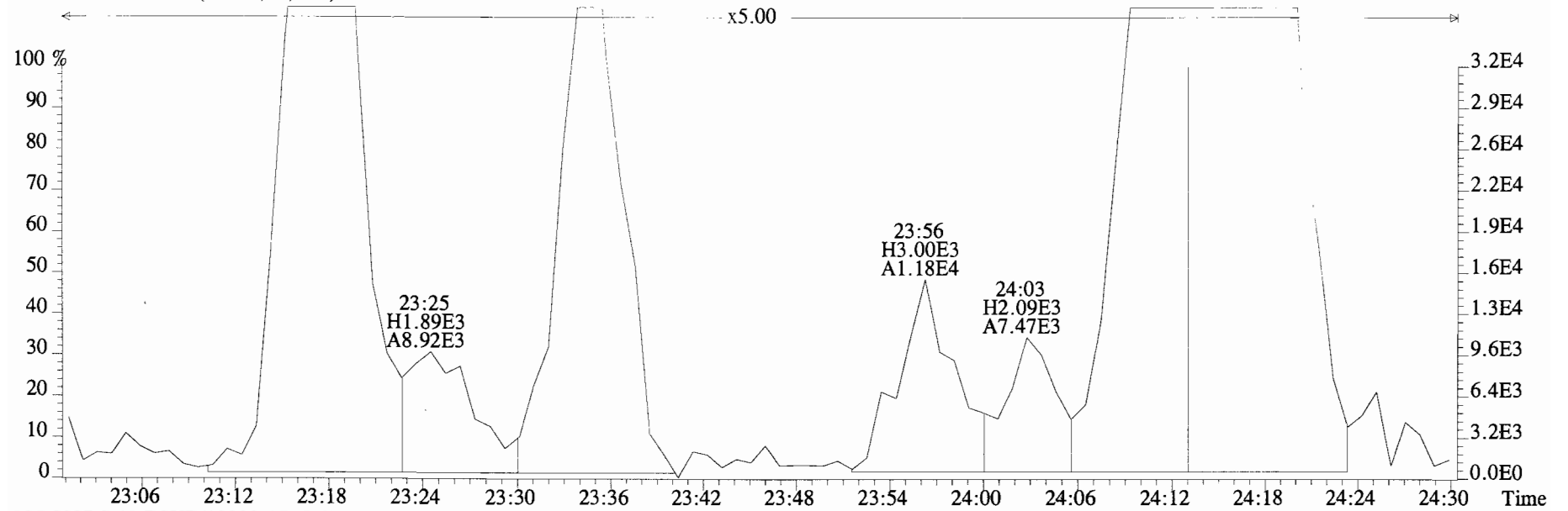
305.8987 S:13 BSUB(10000,15,-3.0)



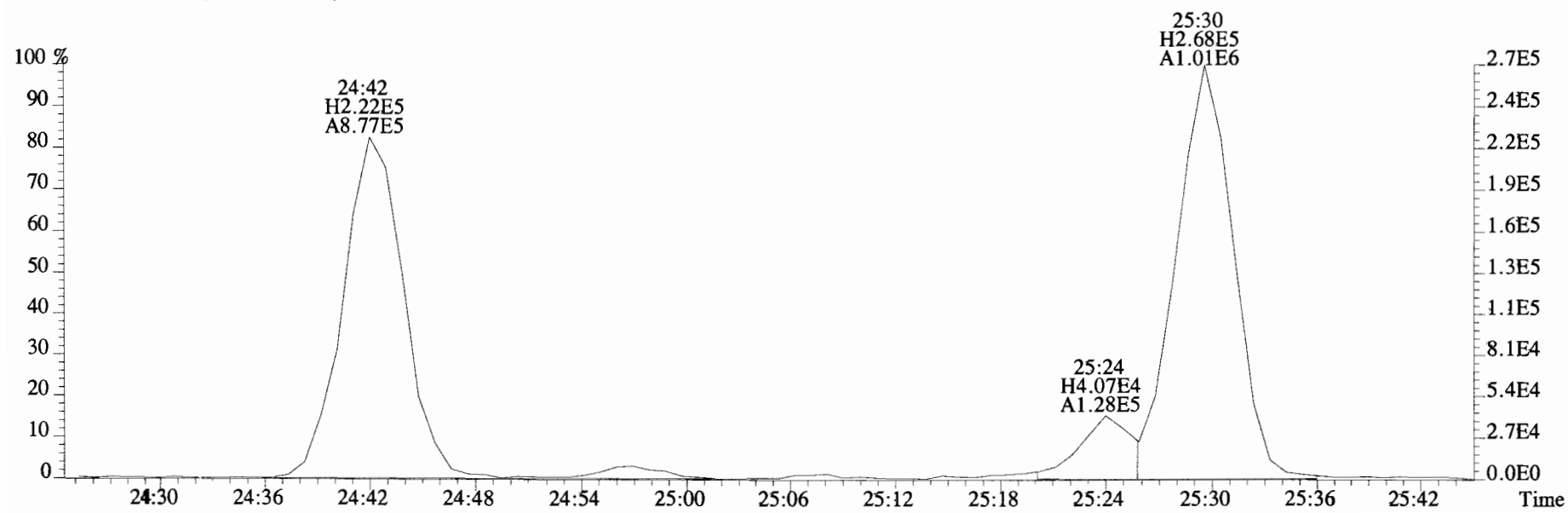
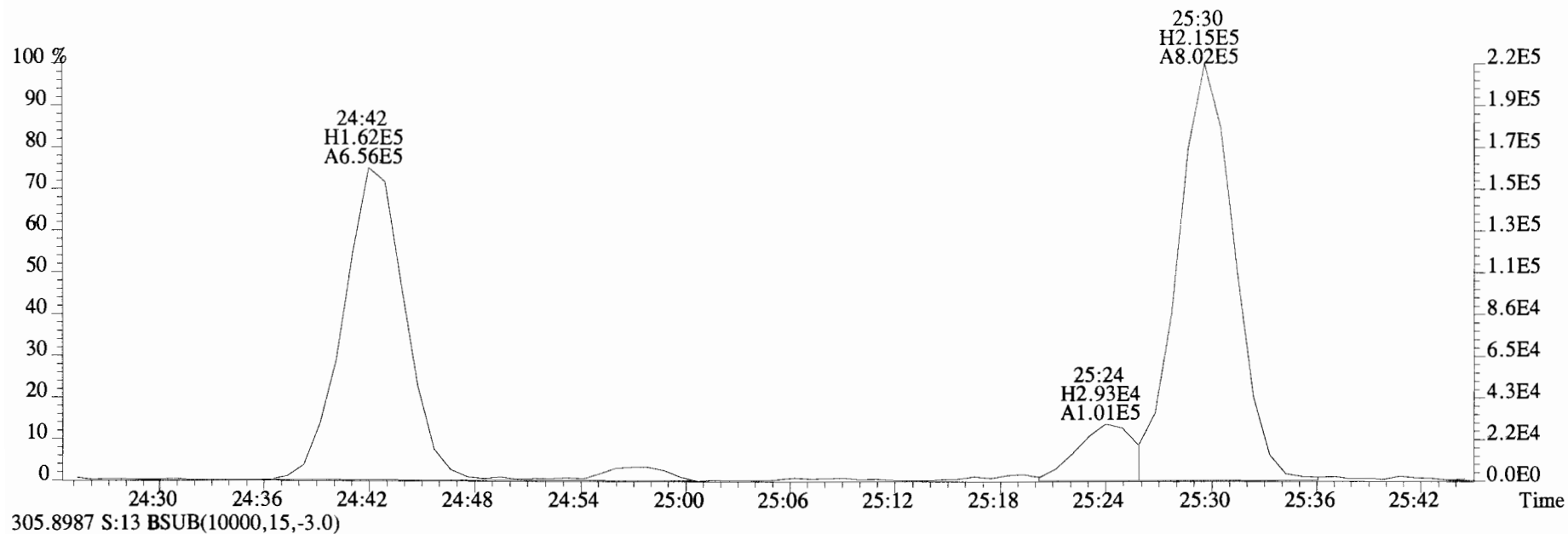
File:191024D2 #1-493 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
 303.9016 S:13 BSUB(10000,15,-3.0)



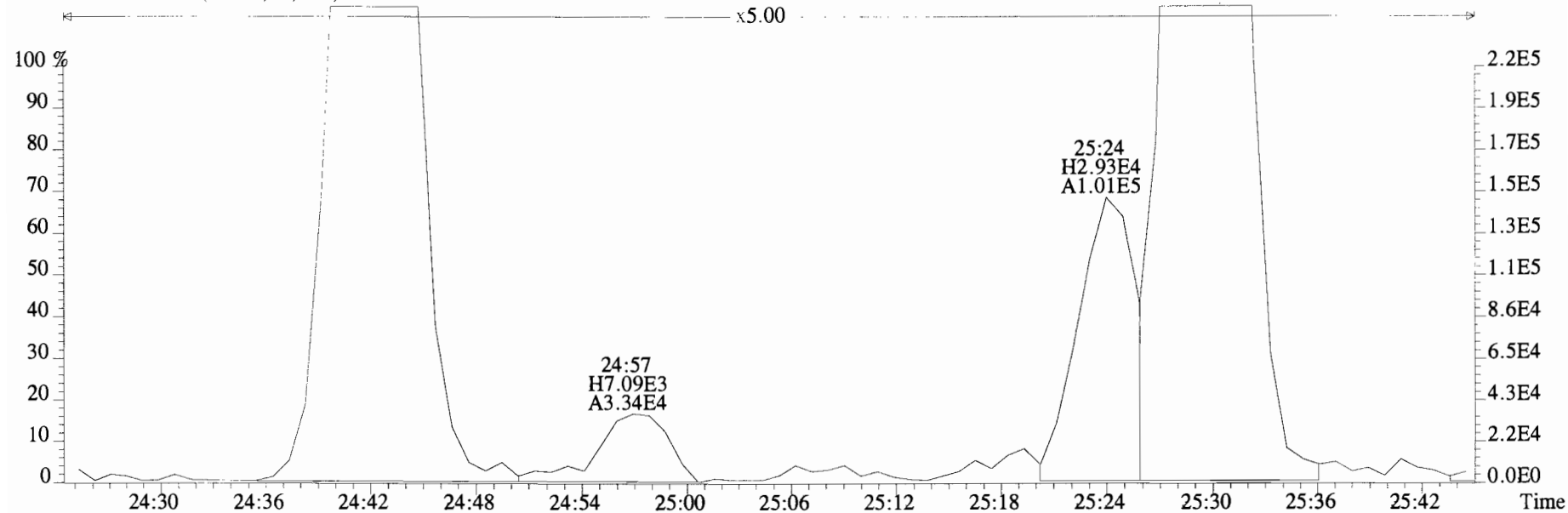
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Sample#13 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0)



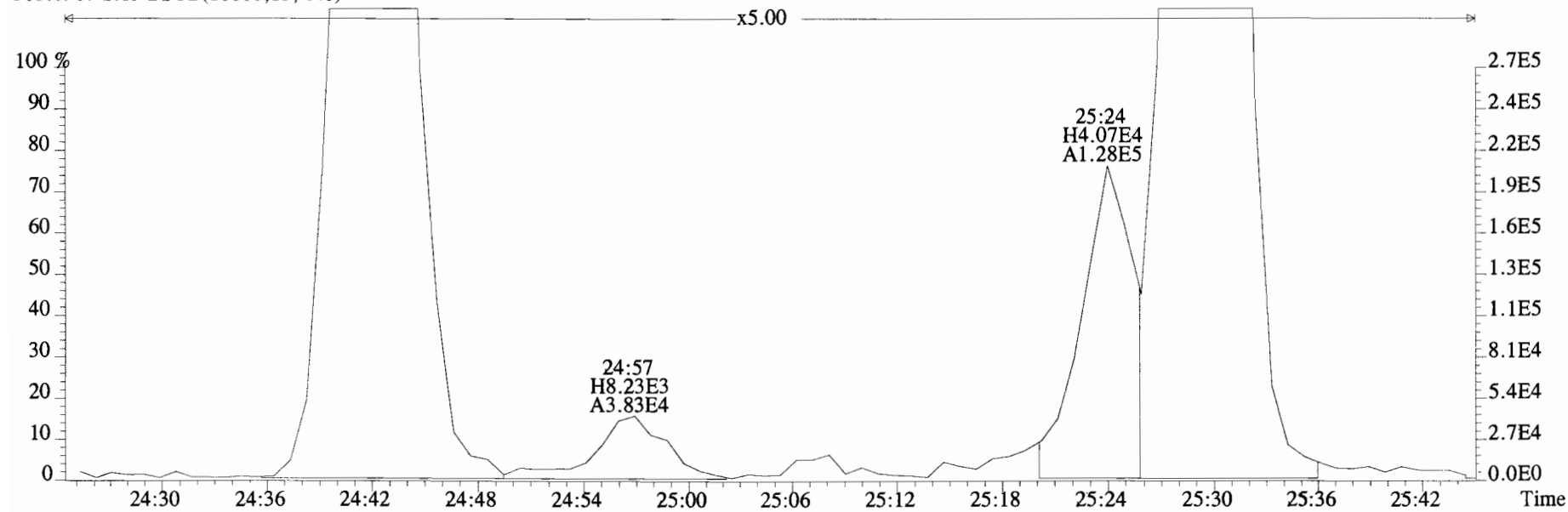
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Sample#13 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0)



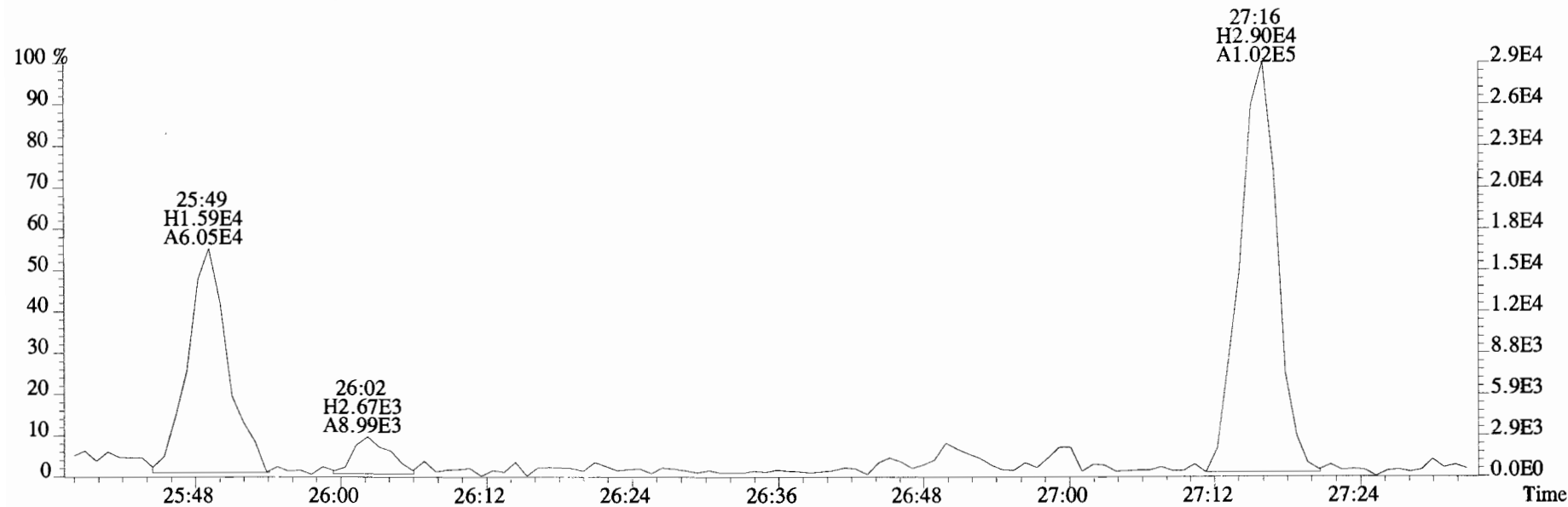
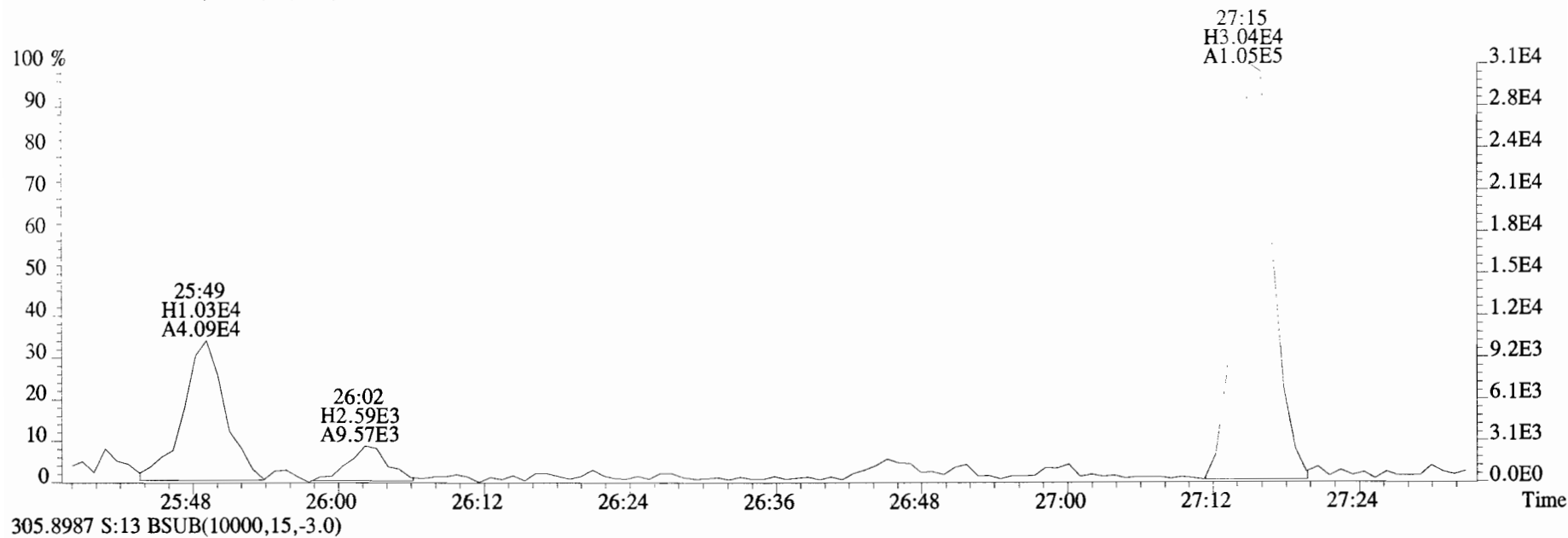
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Sample#13 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0)



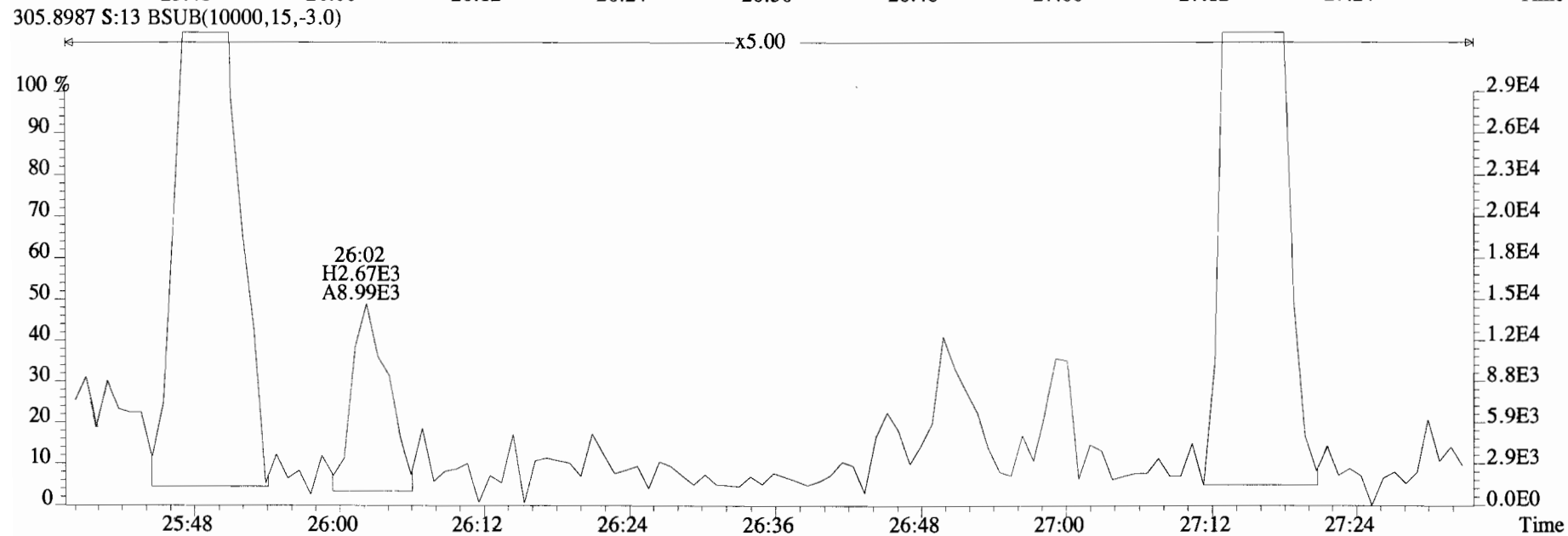
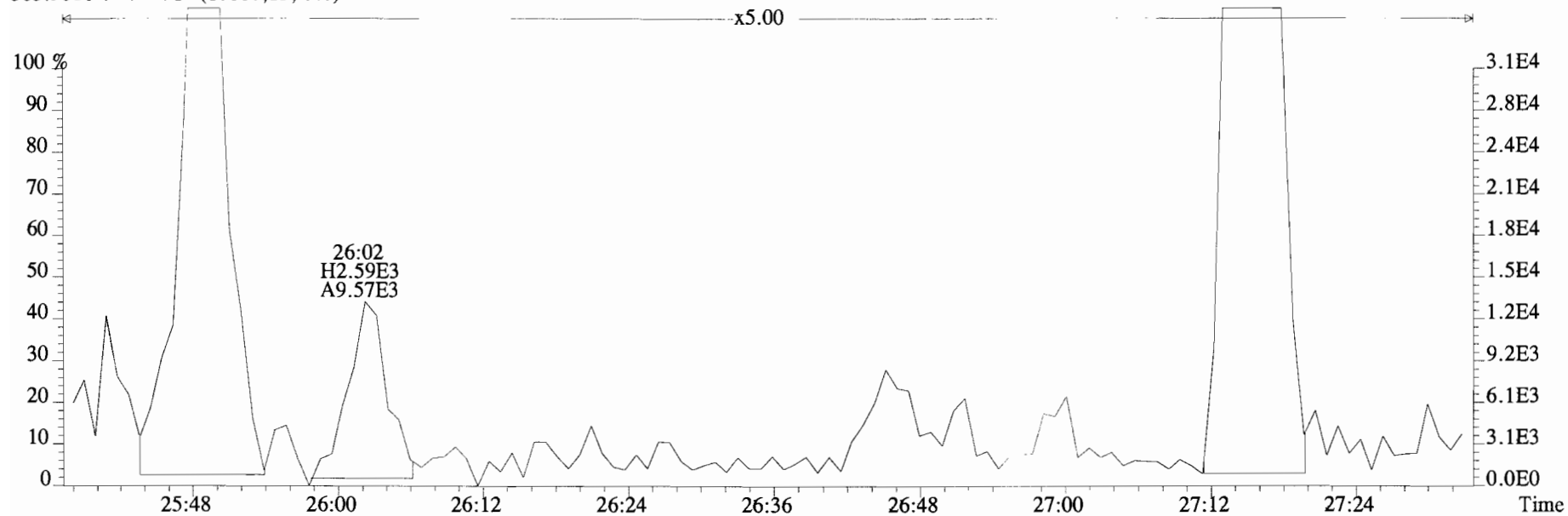
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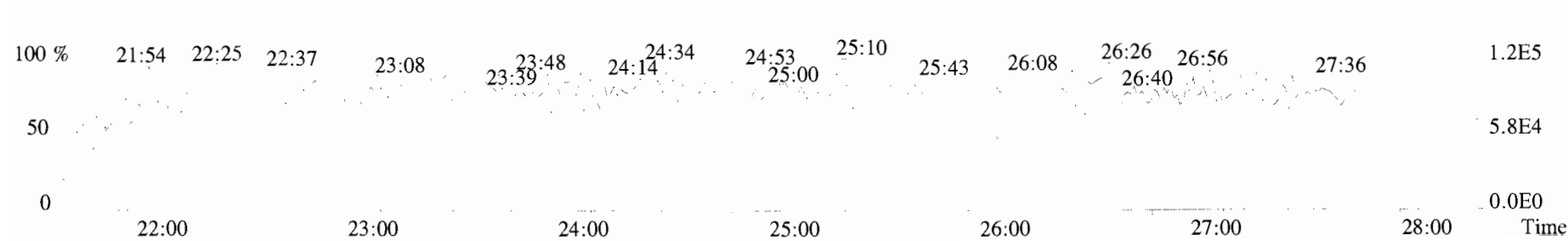
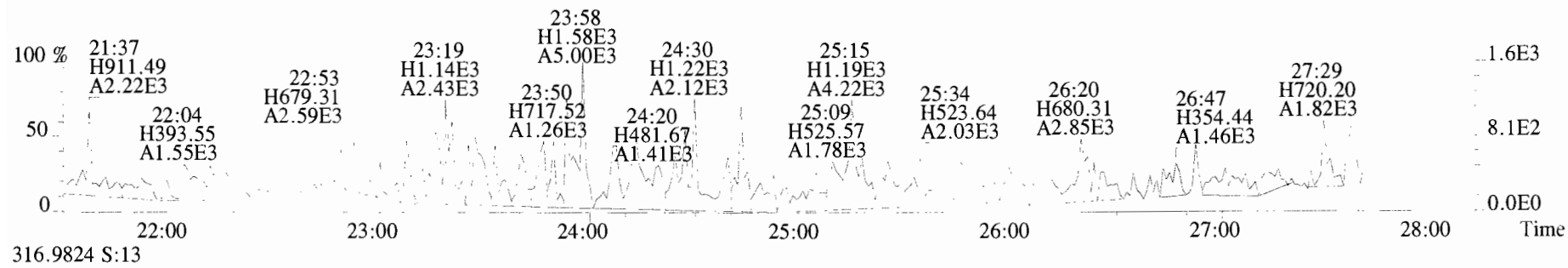
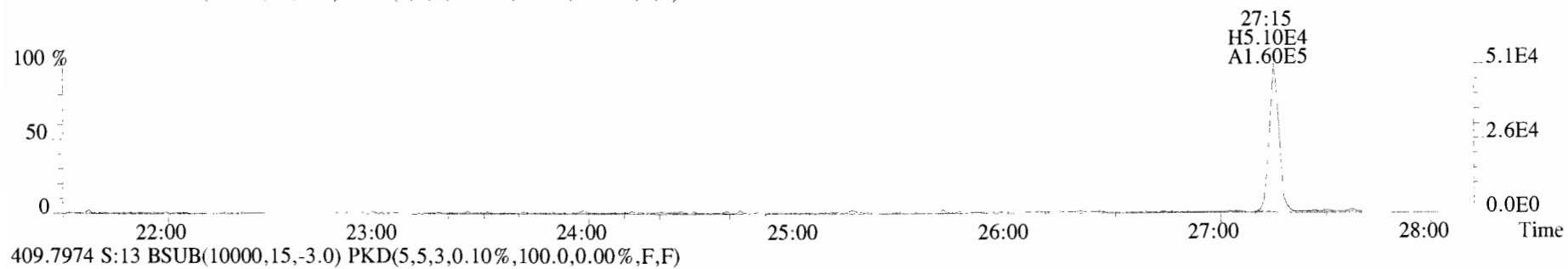
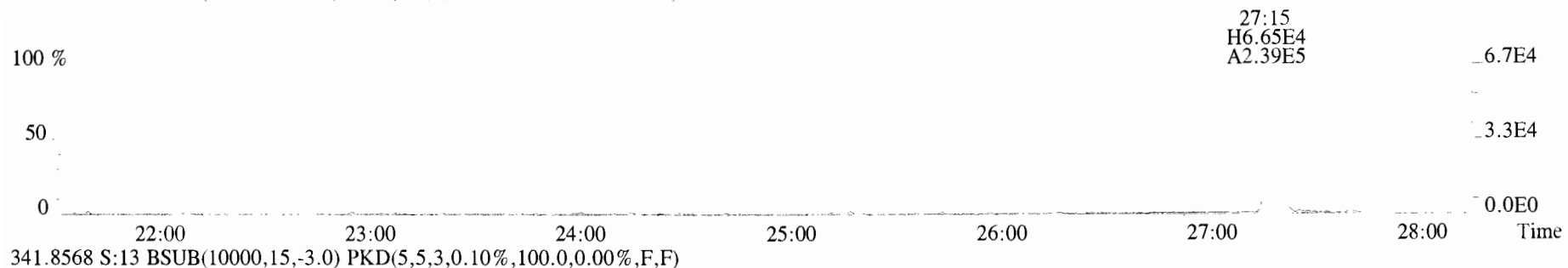
File:191024D2 #1-493 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0)



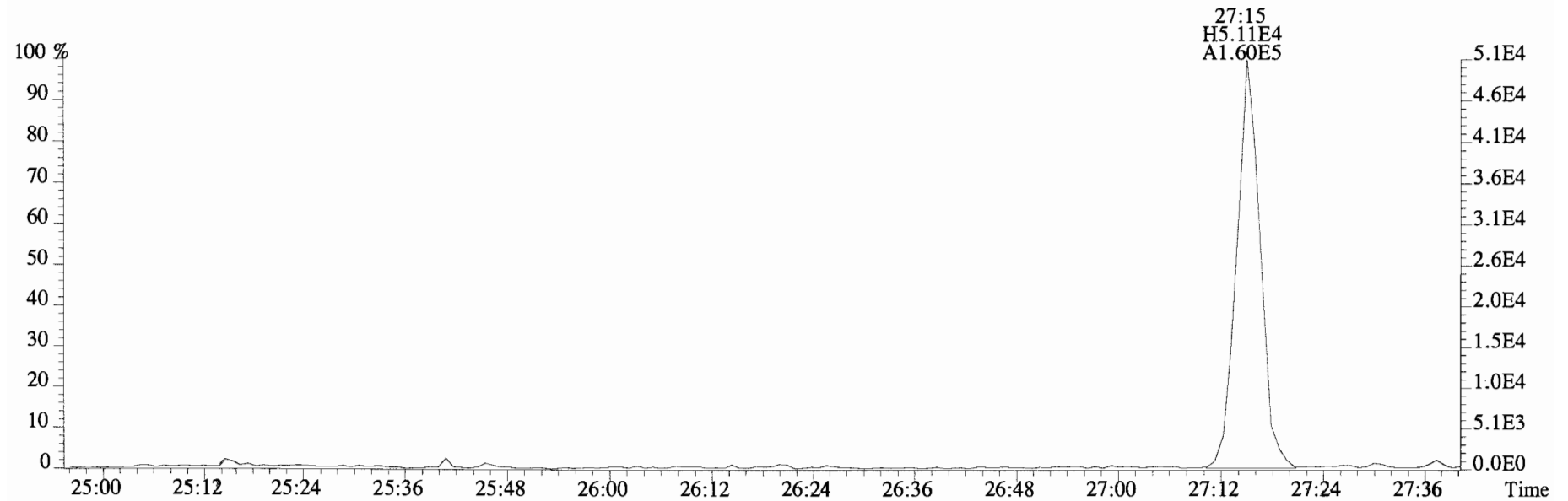
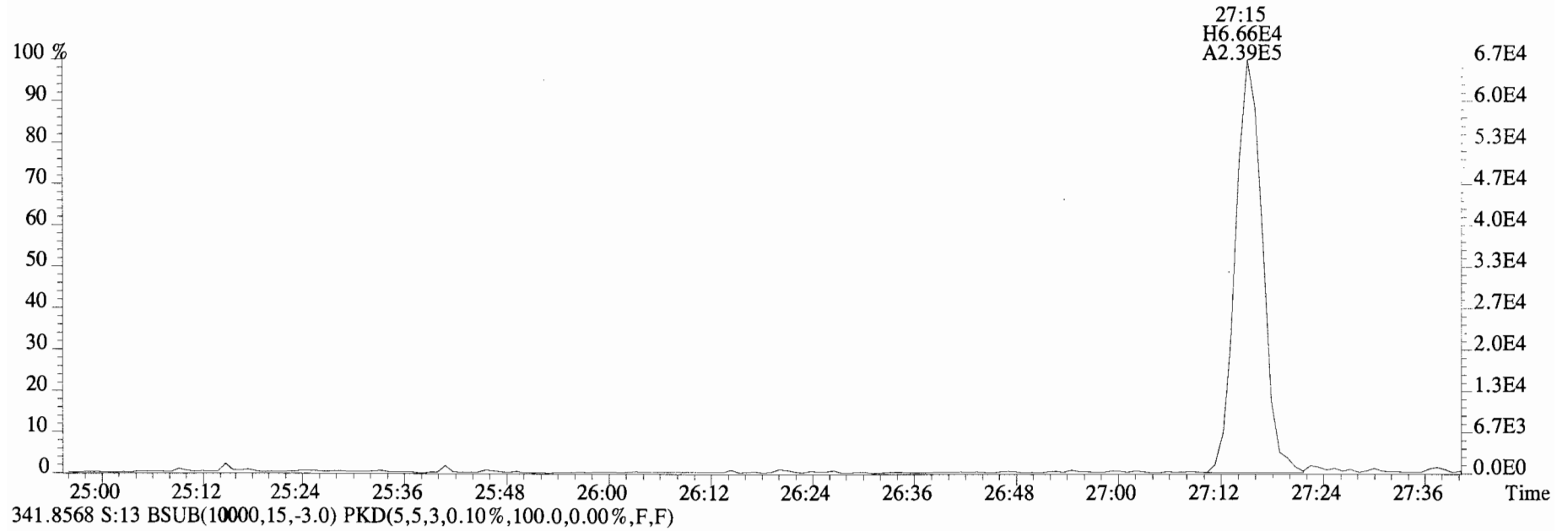
File:191024D2 #1-493 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text: Vista Analytical Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0)



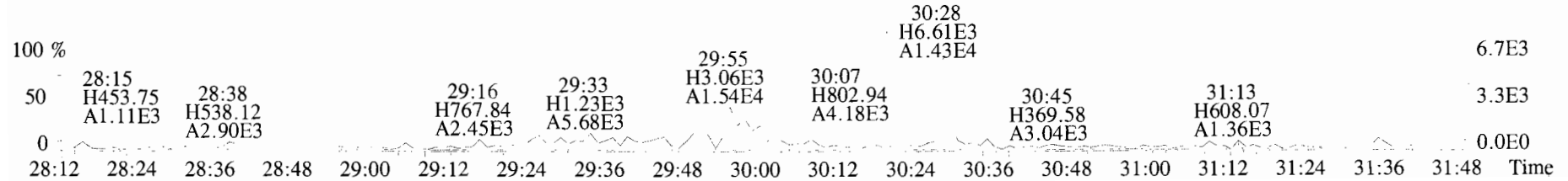
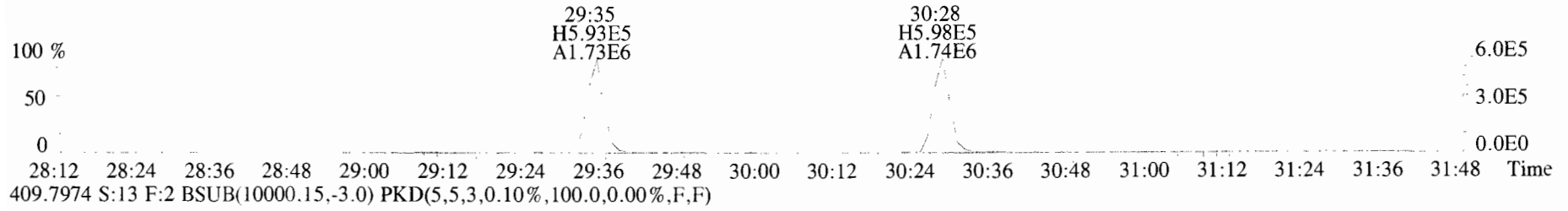
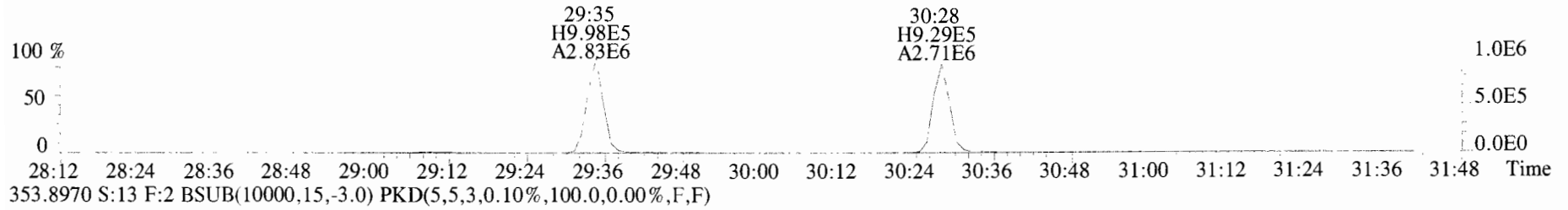
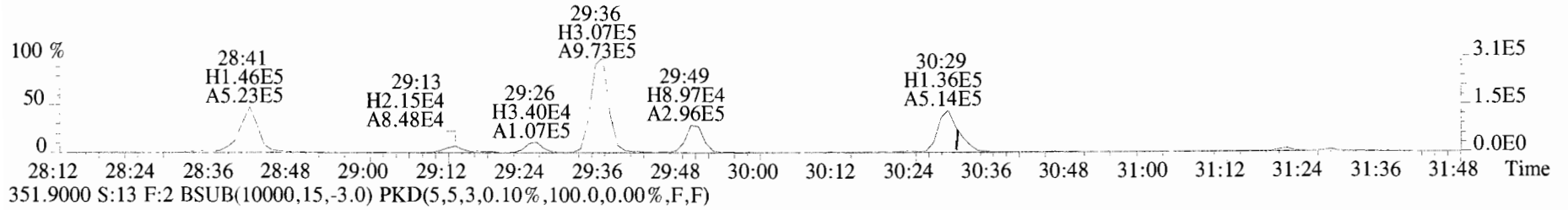
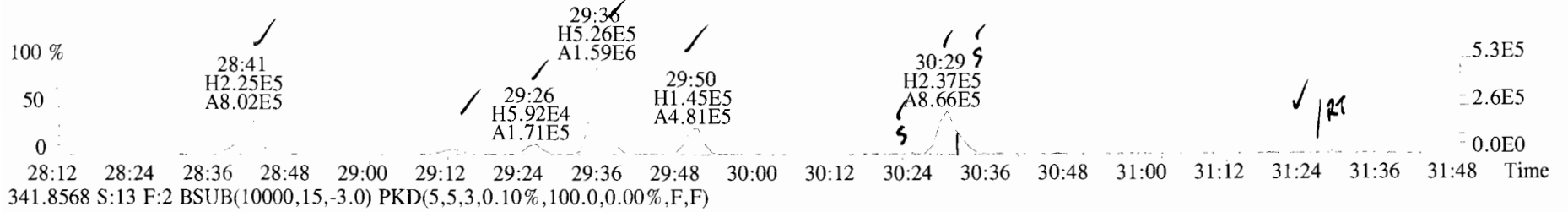
File:191024D2 #1-493 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
 339.8597 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



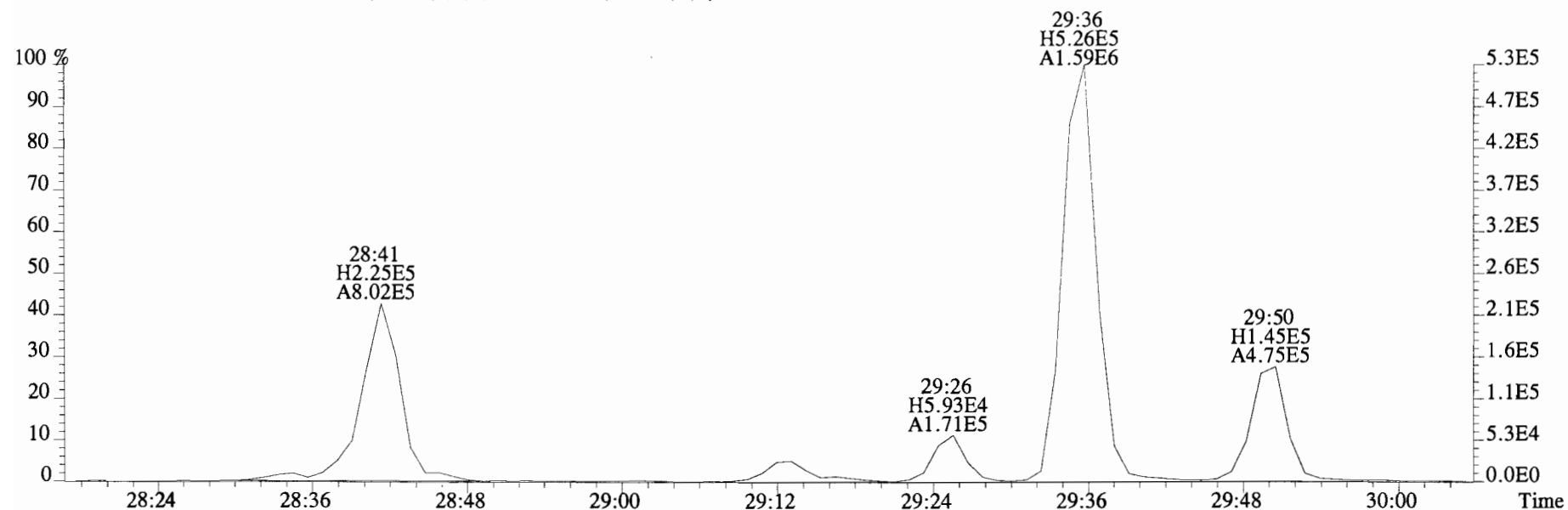
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339.8597 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



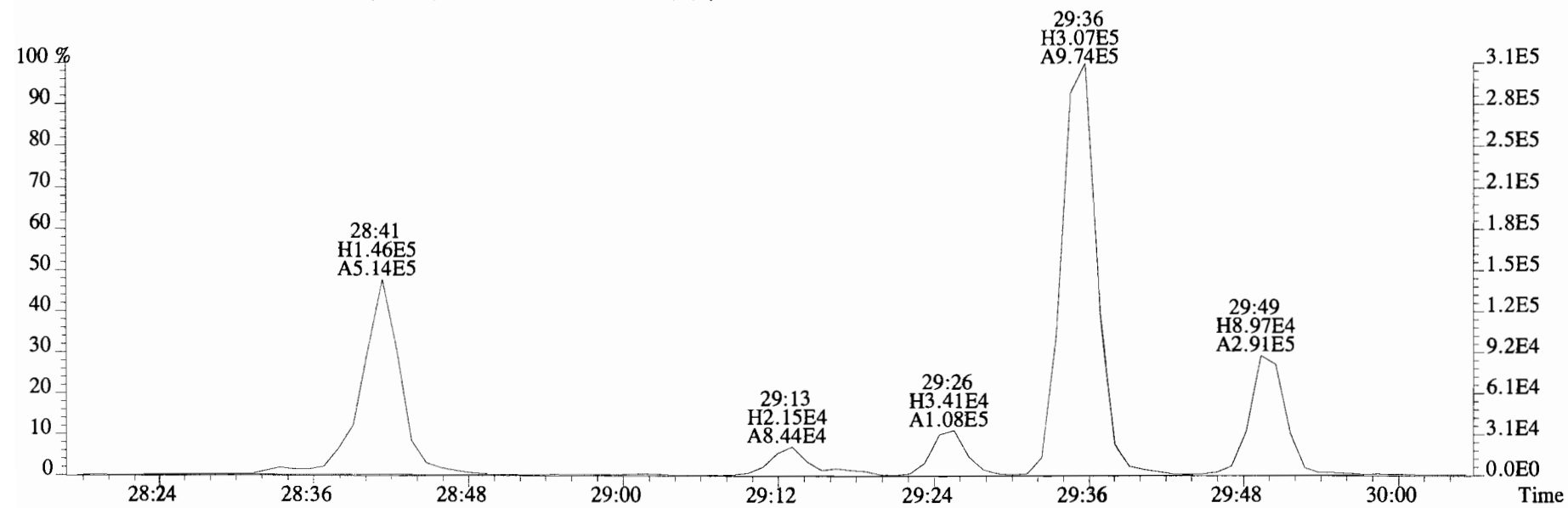
File:191024D2 #1-211 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
 339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



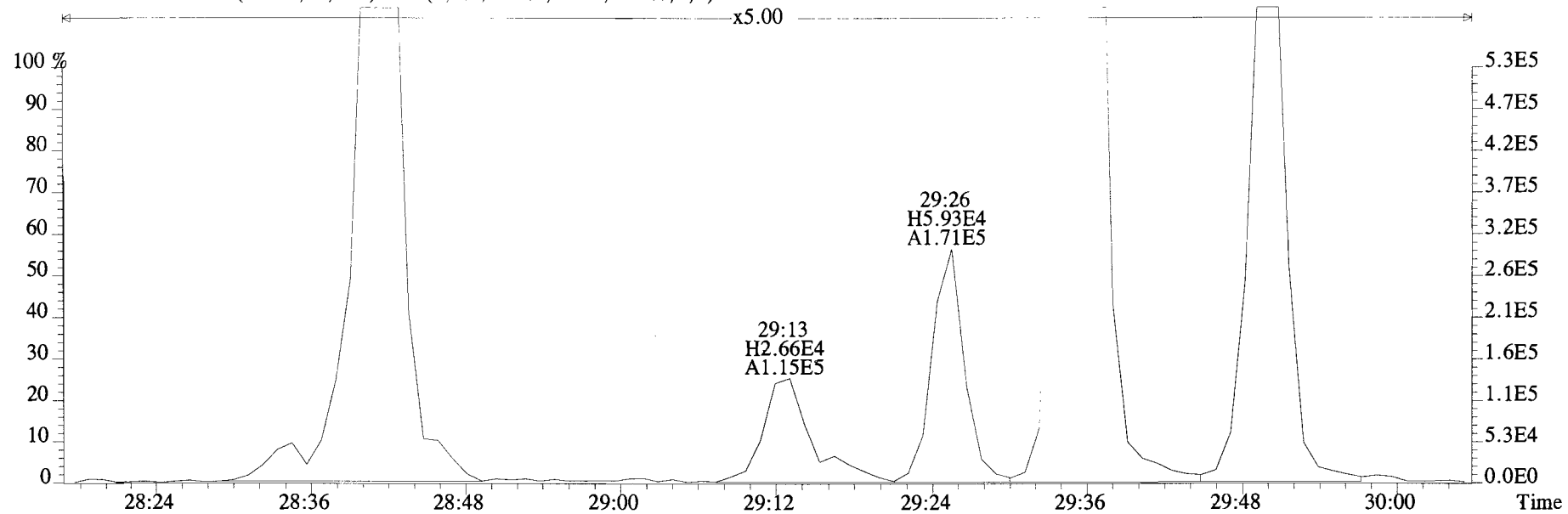
File:191024D2 #1-211 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



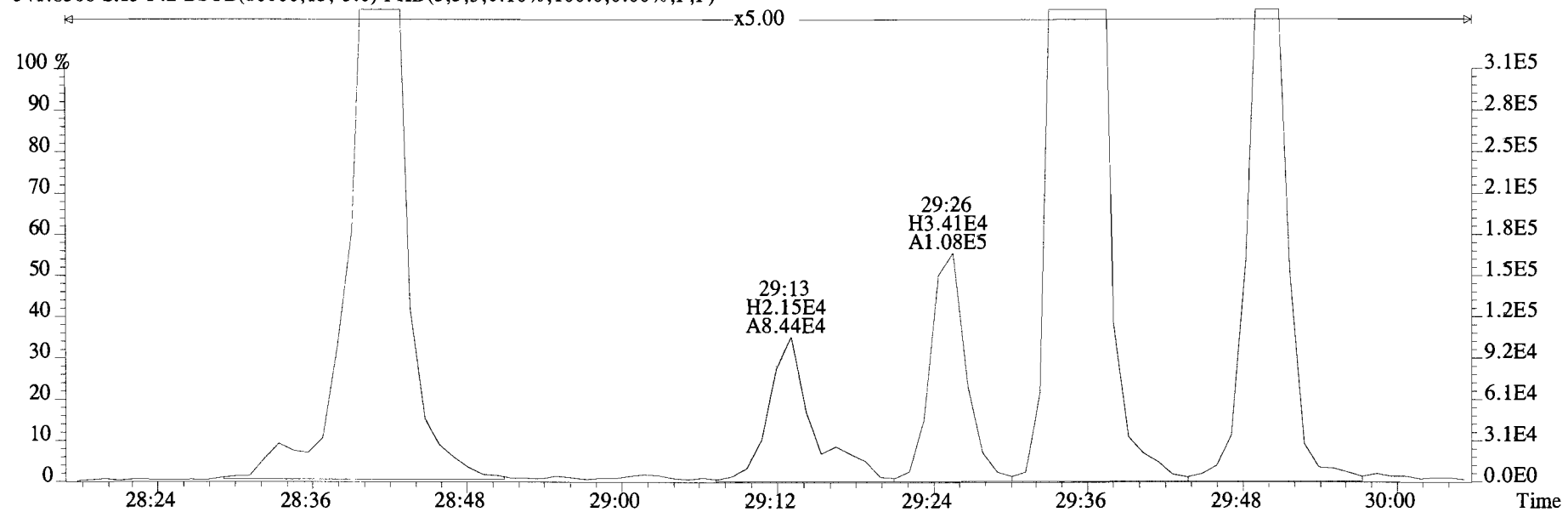
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



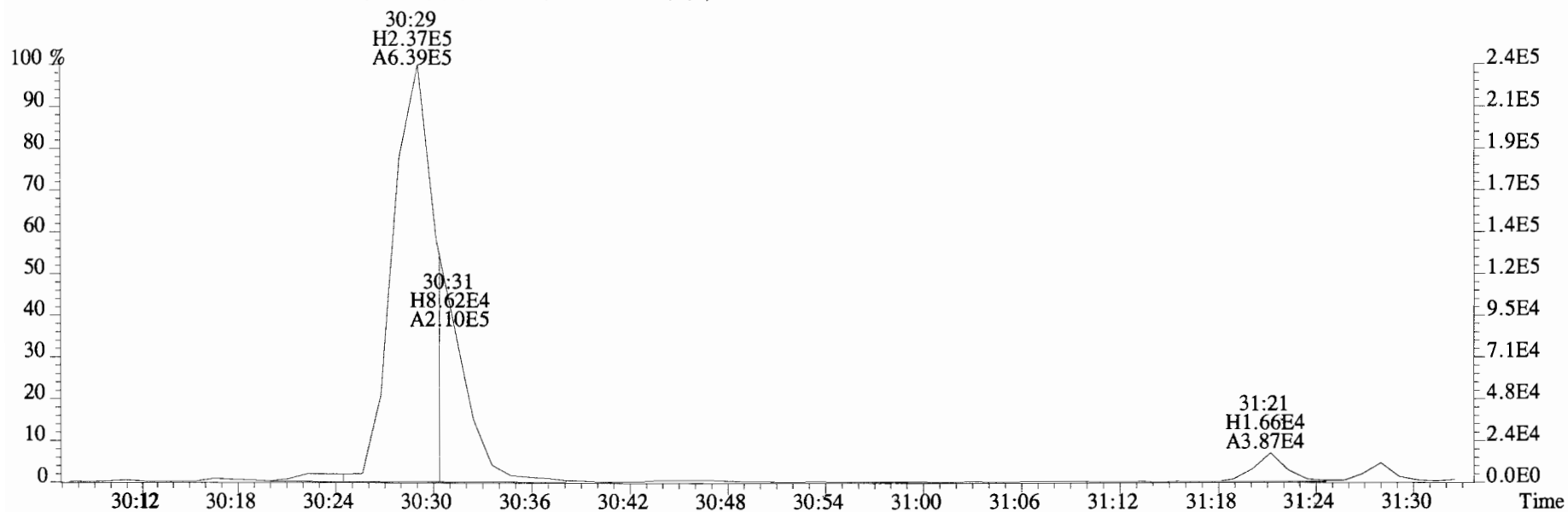
File:191024D2 #1-211 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text: Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



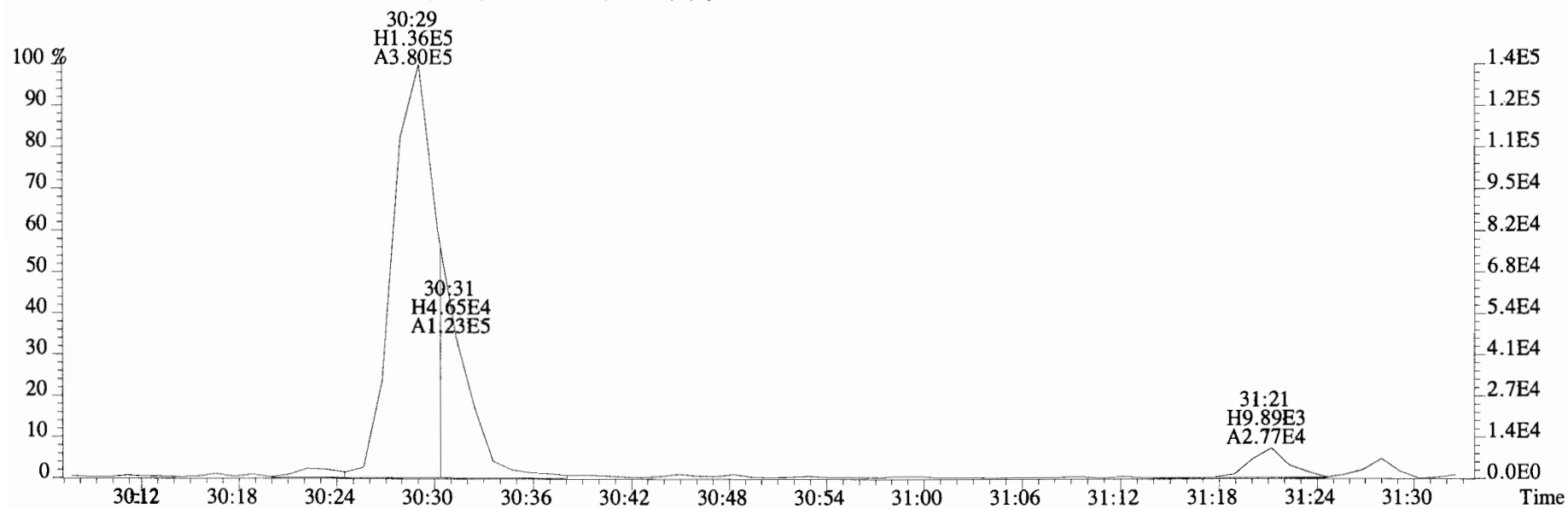
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



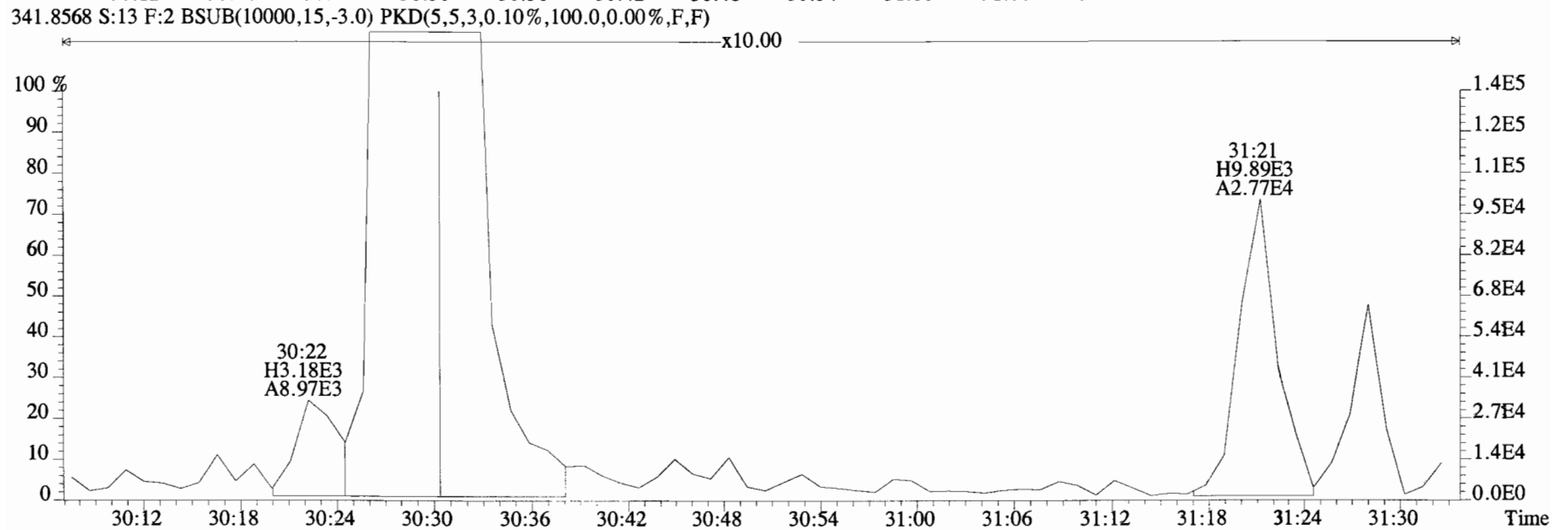
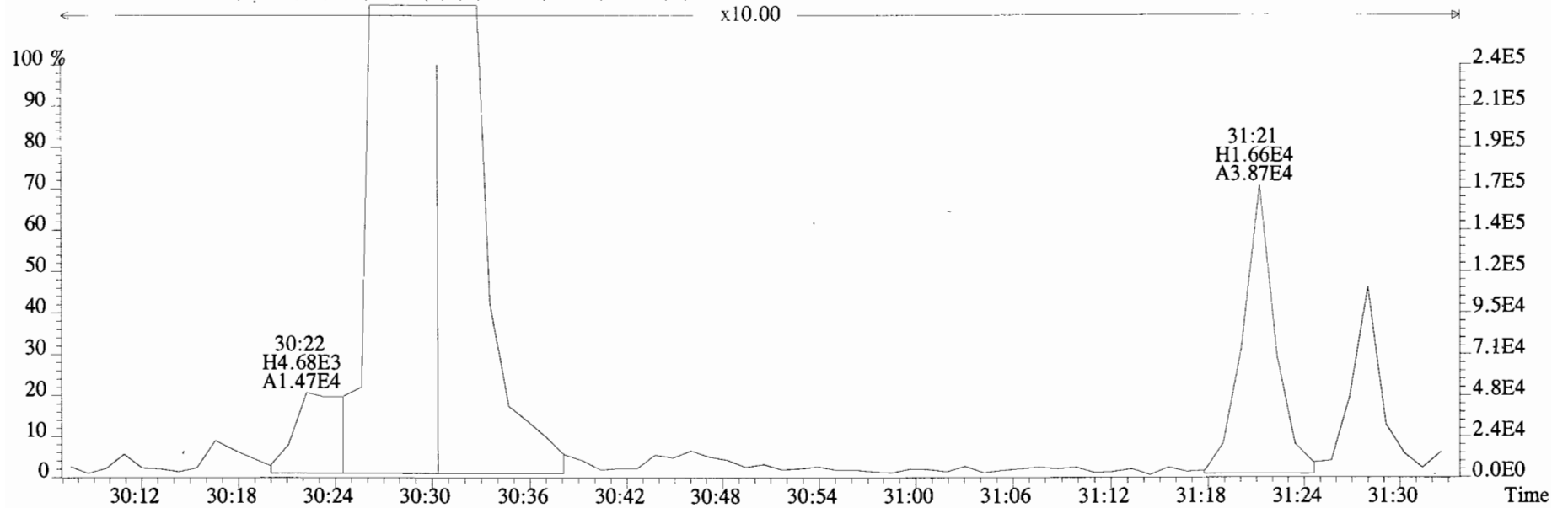
File:191024D2 #1-211 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text: Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



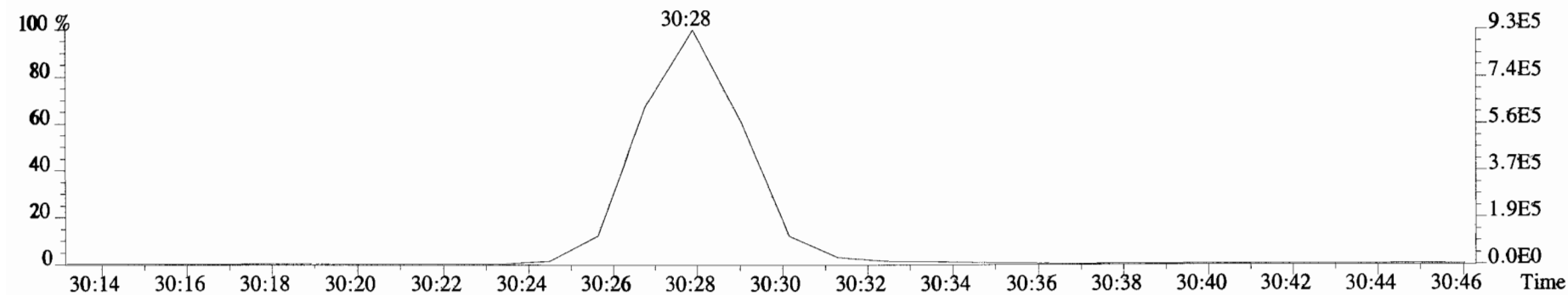
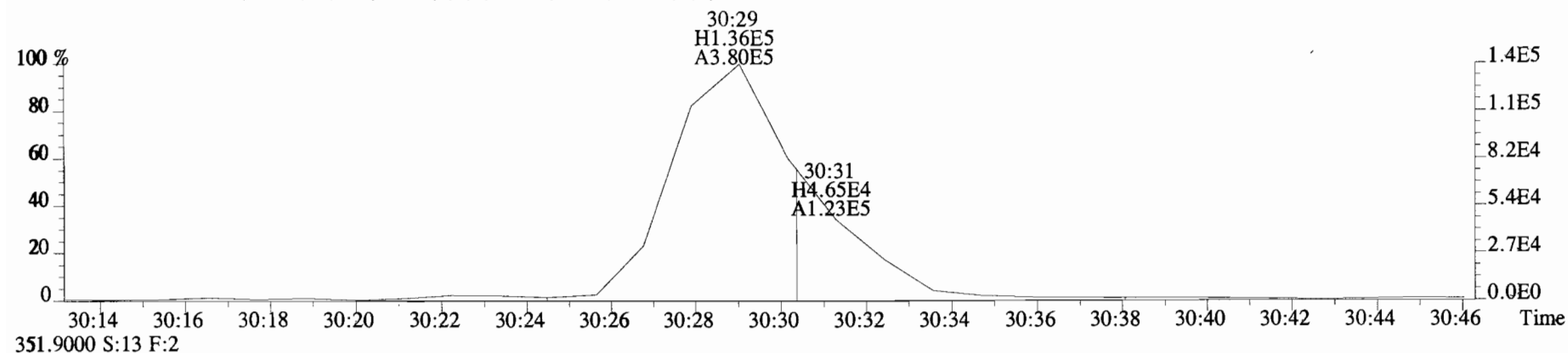
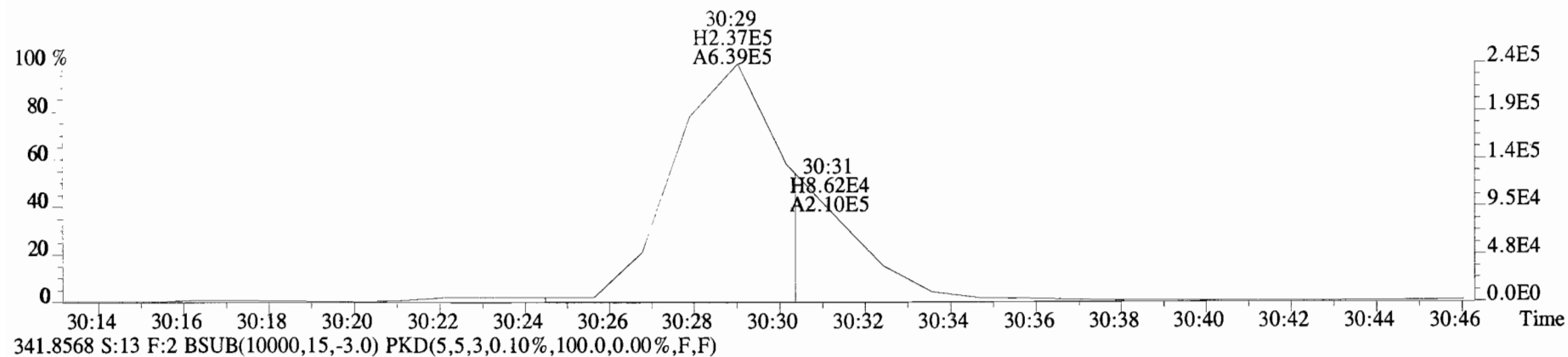
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



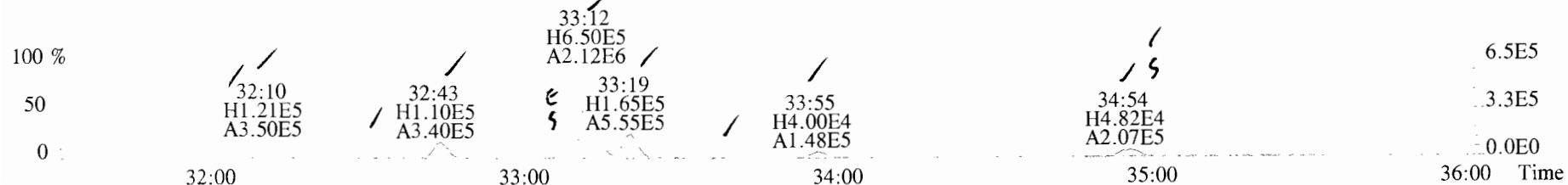
File:191024D2 #1-211 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



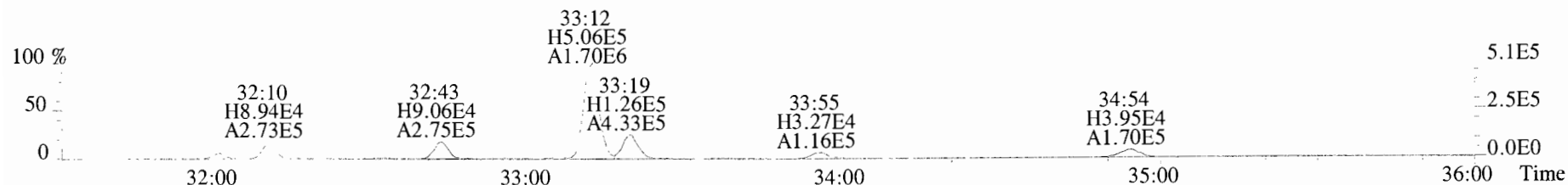
File:191024D2 #1-211 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



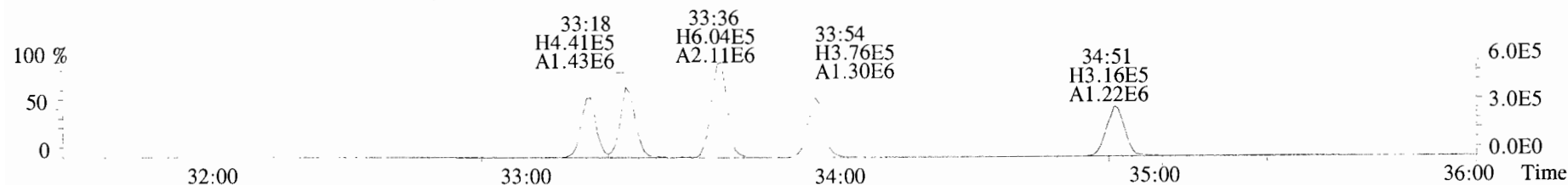
File:191024D2 #1-385 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
 373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



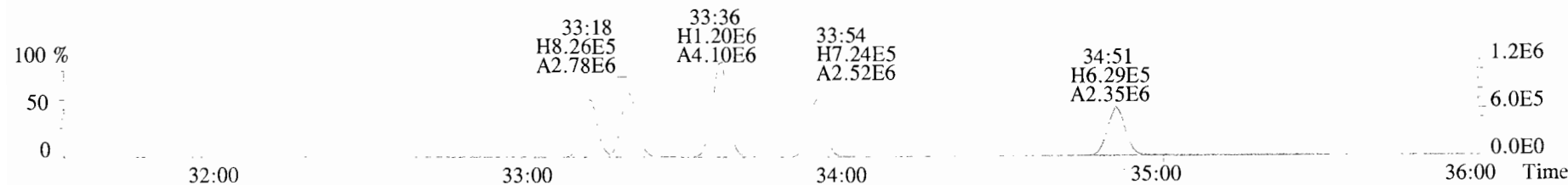
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



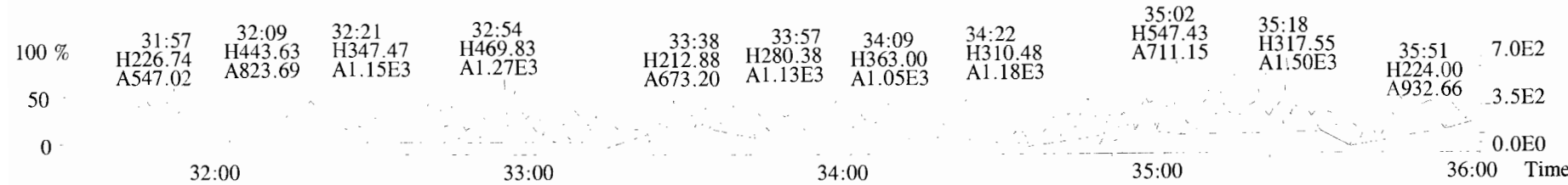
383.8639 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



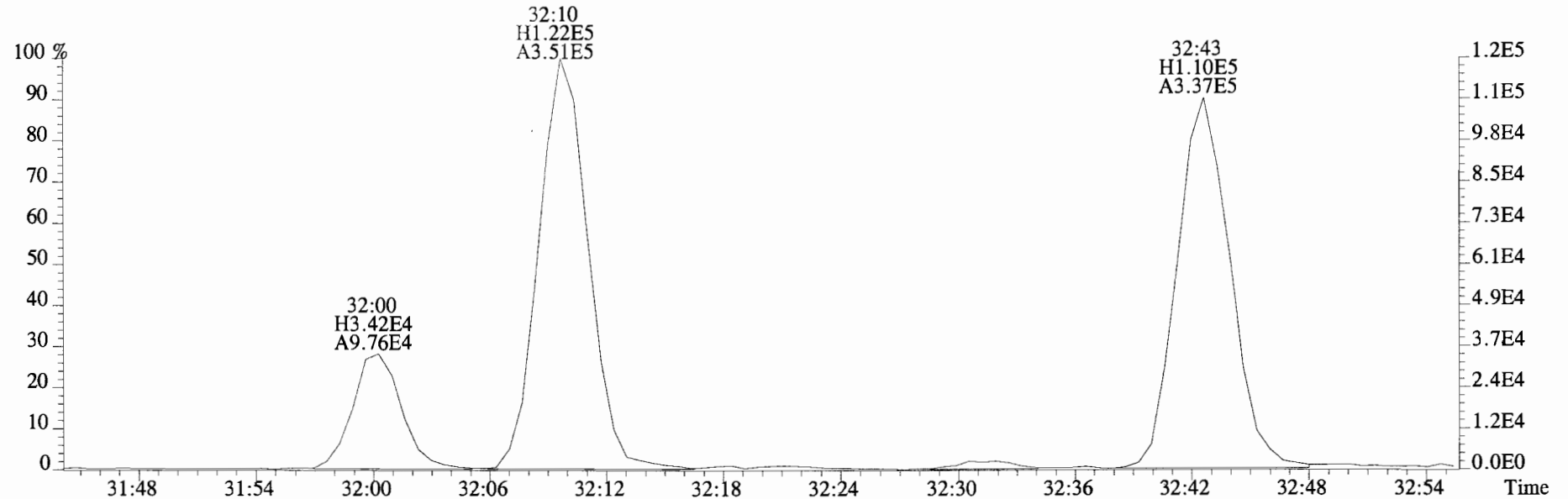
385.8610 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



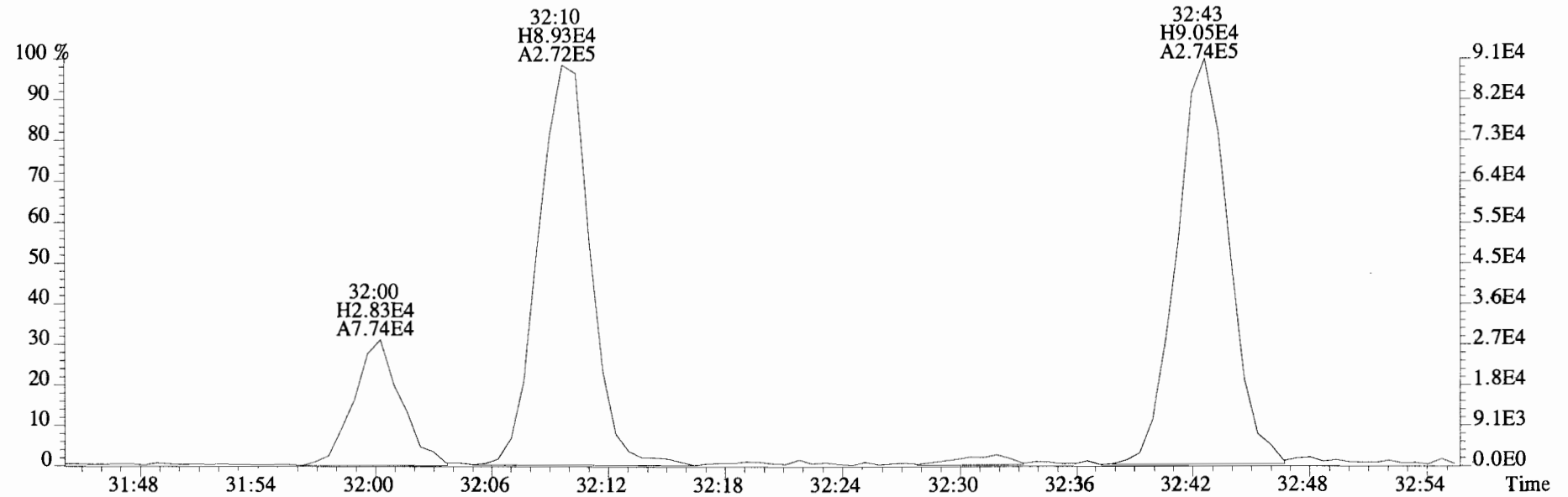
445.7555 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



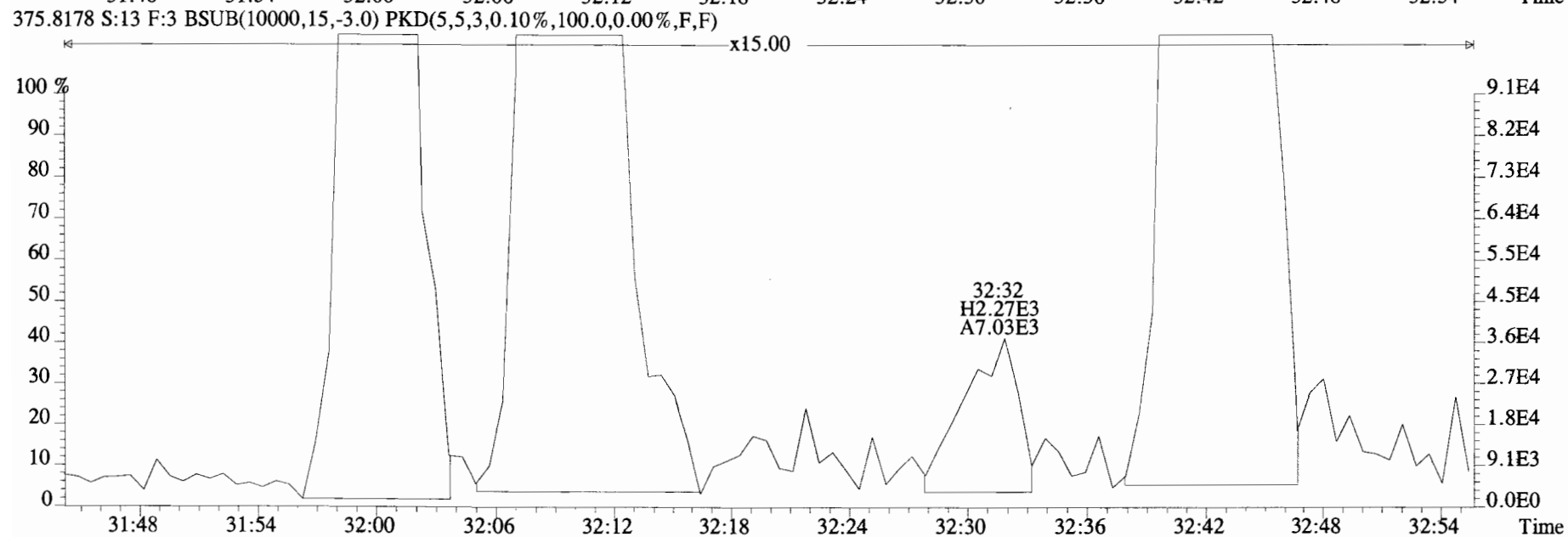
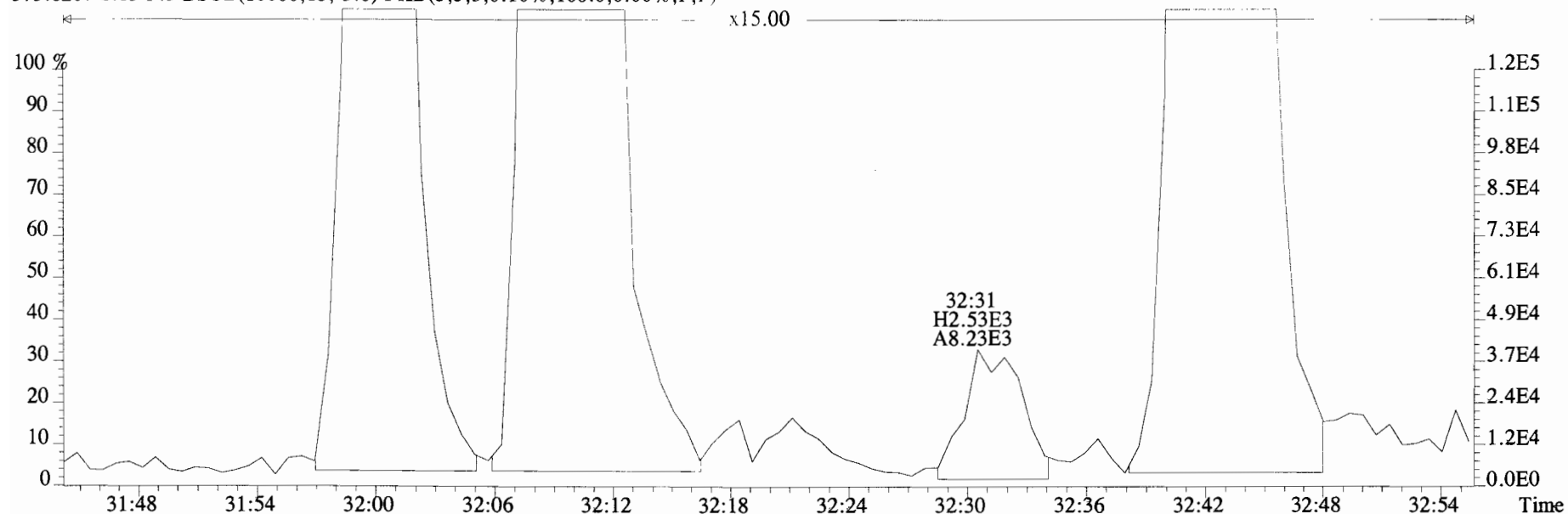
File:191024D2 #1-385 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



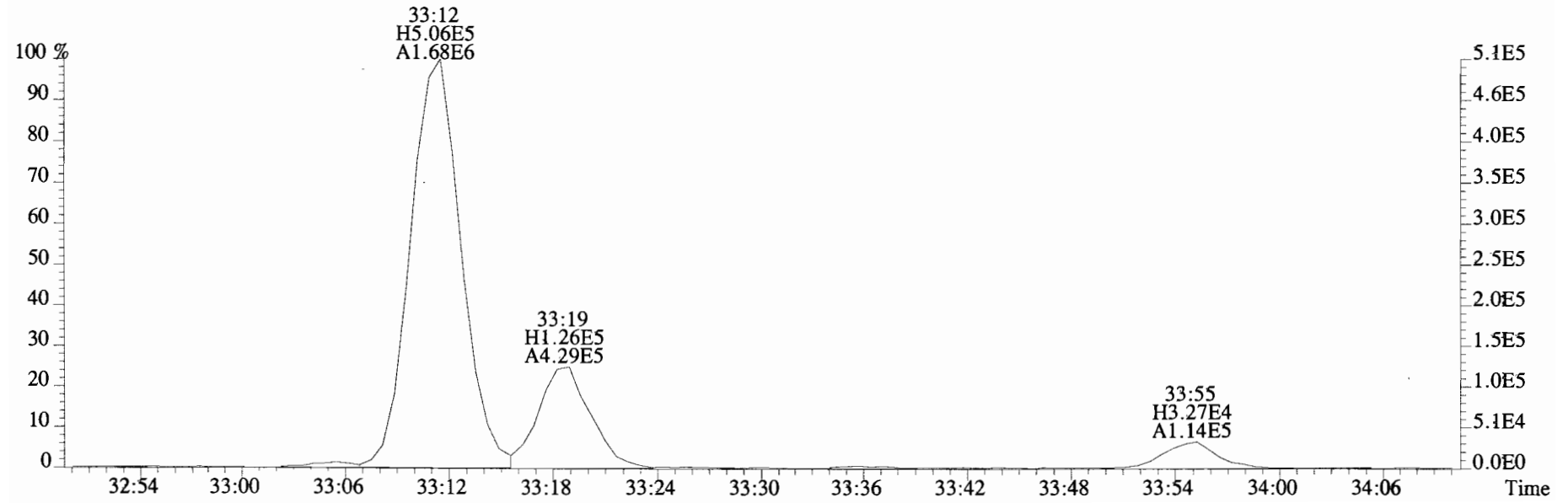
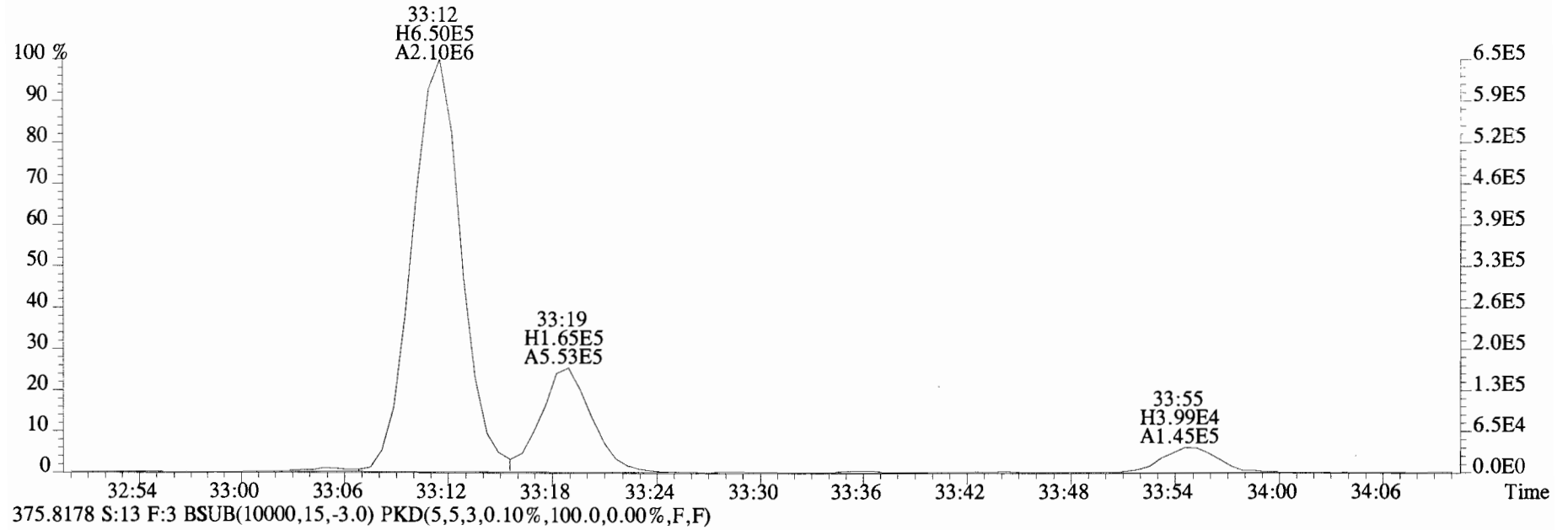
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



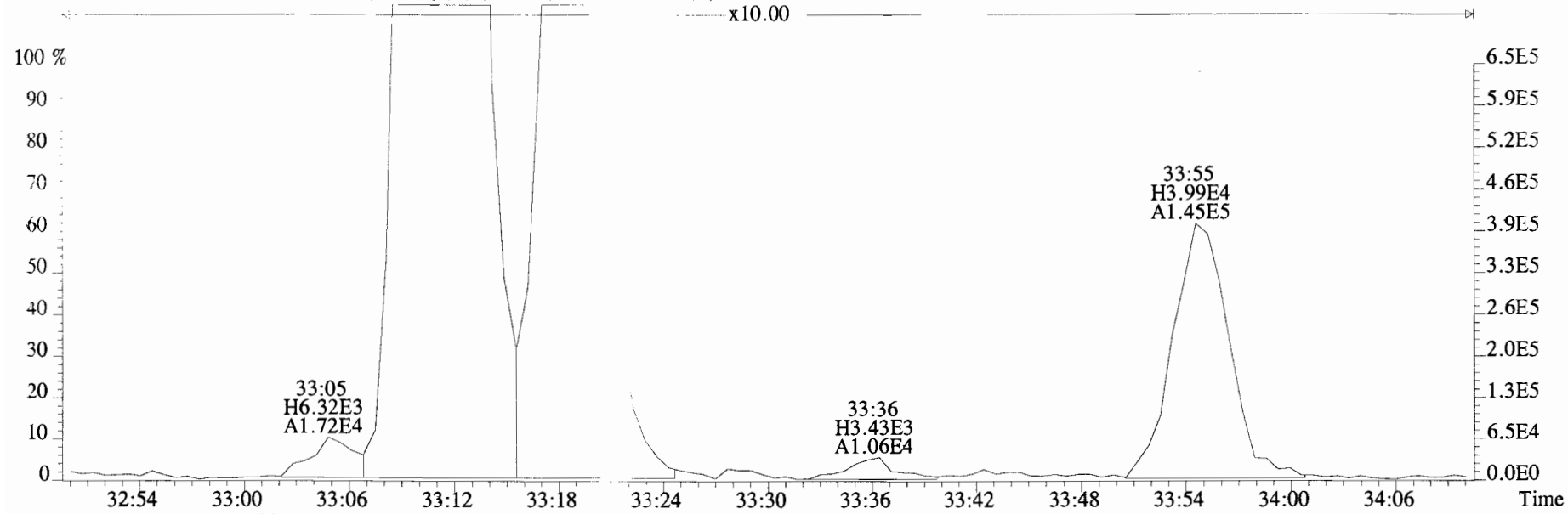
File:191024D2 #1-385 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



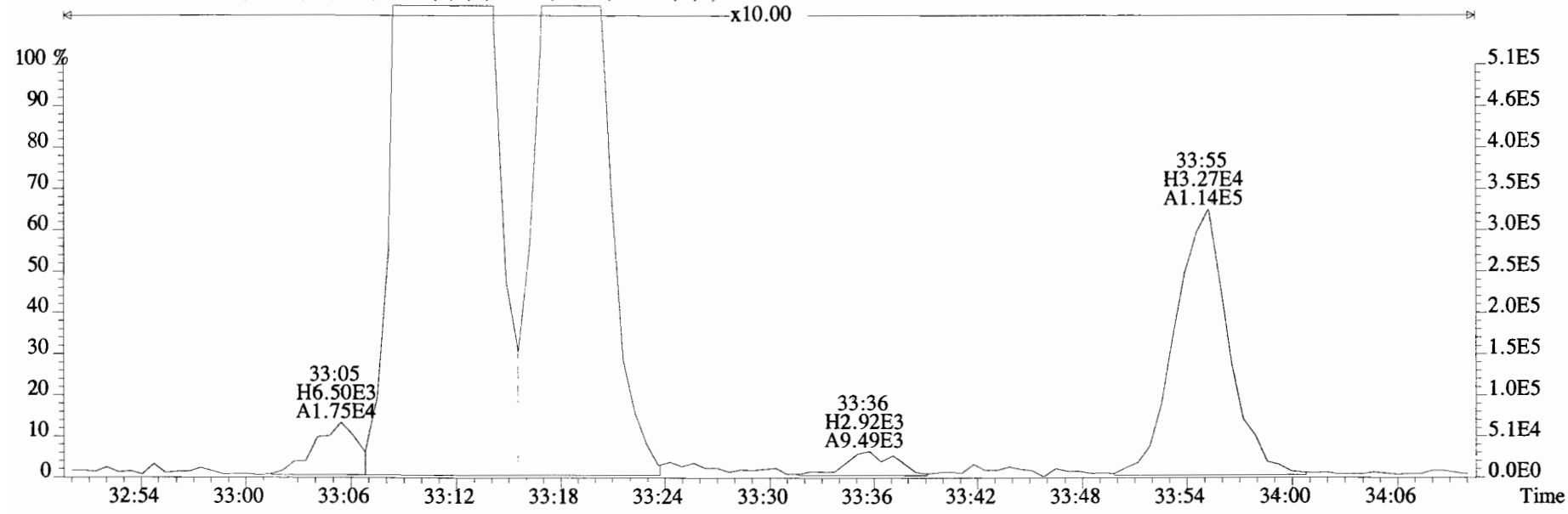
File:191024D2 #1-385 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



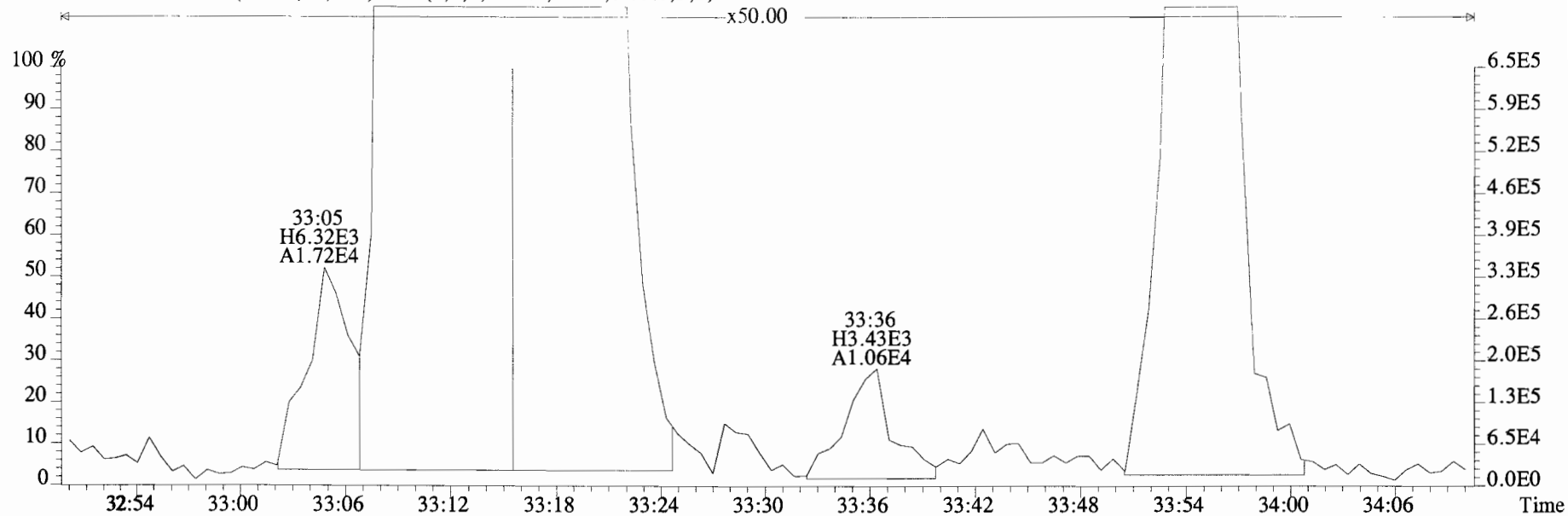
File:191024D2 #1-385 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



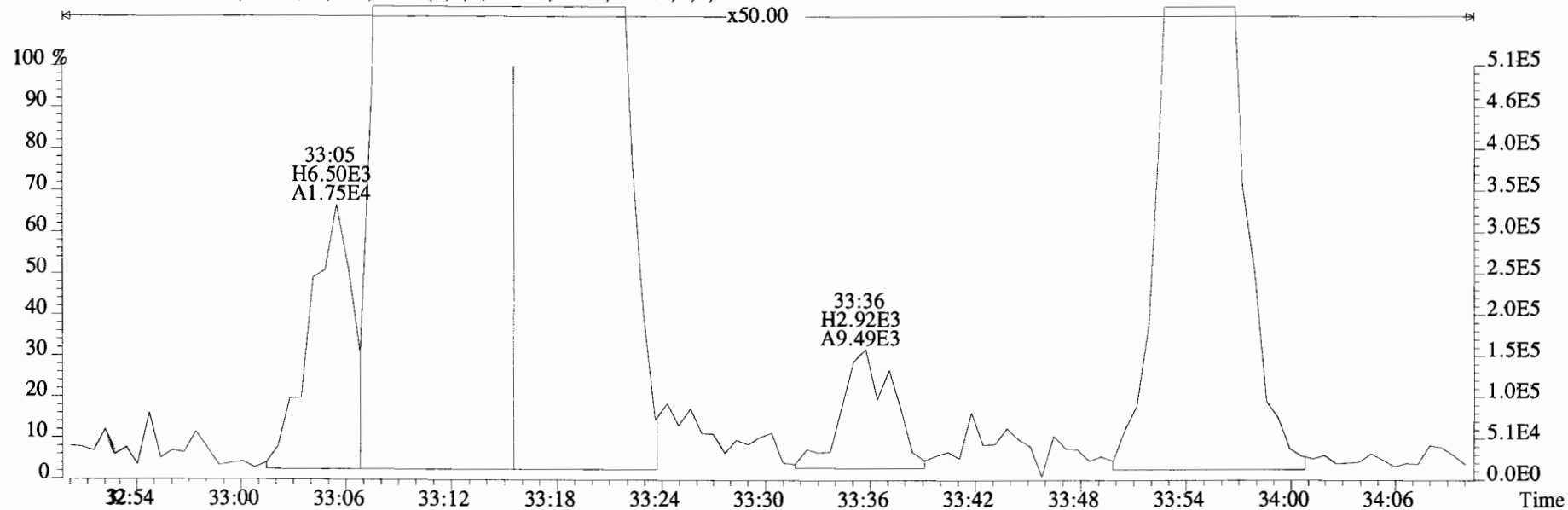
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



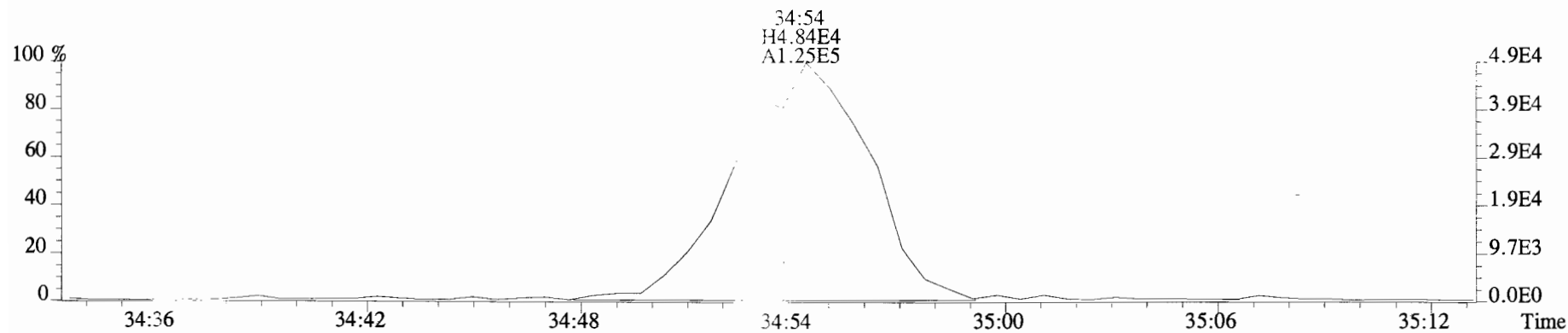
File:191024D2 #1-385 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



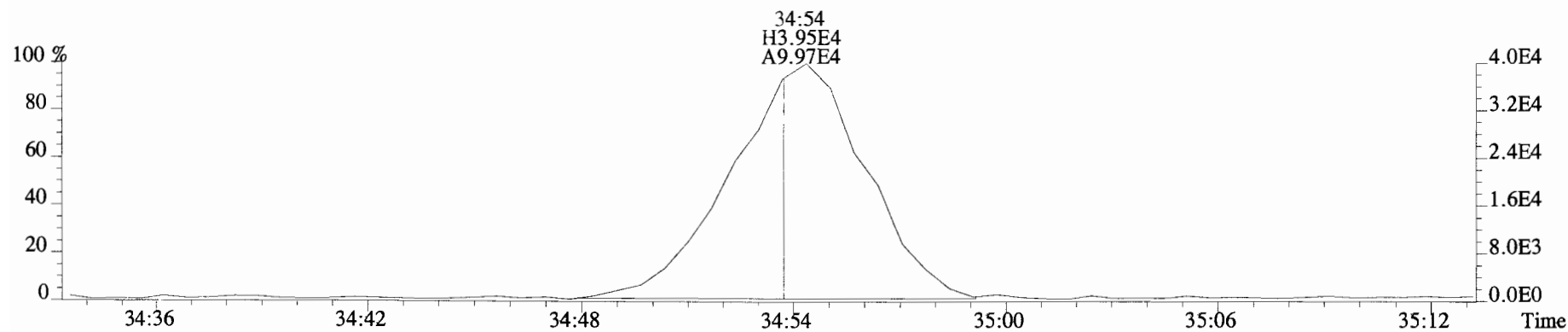
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



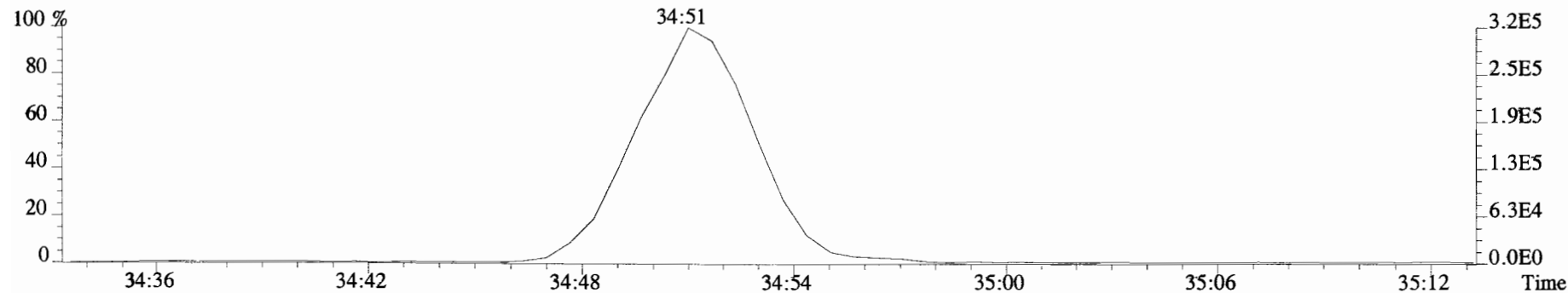
File:191024D2 #1-385 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



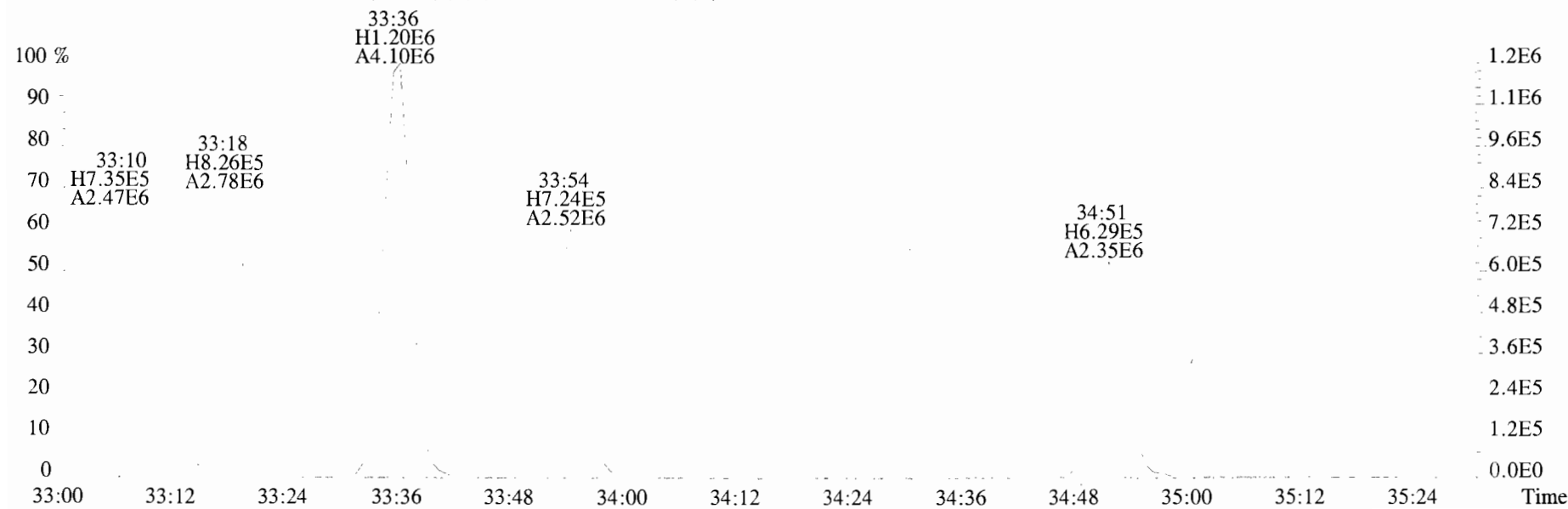
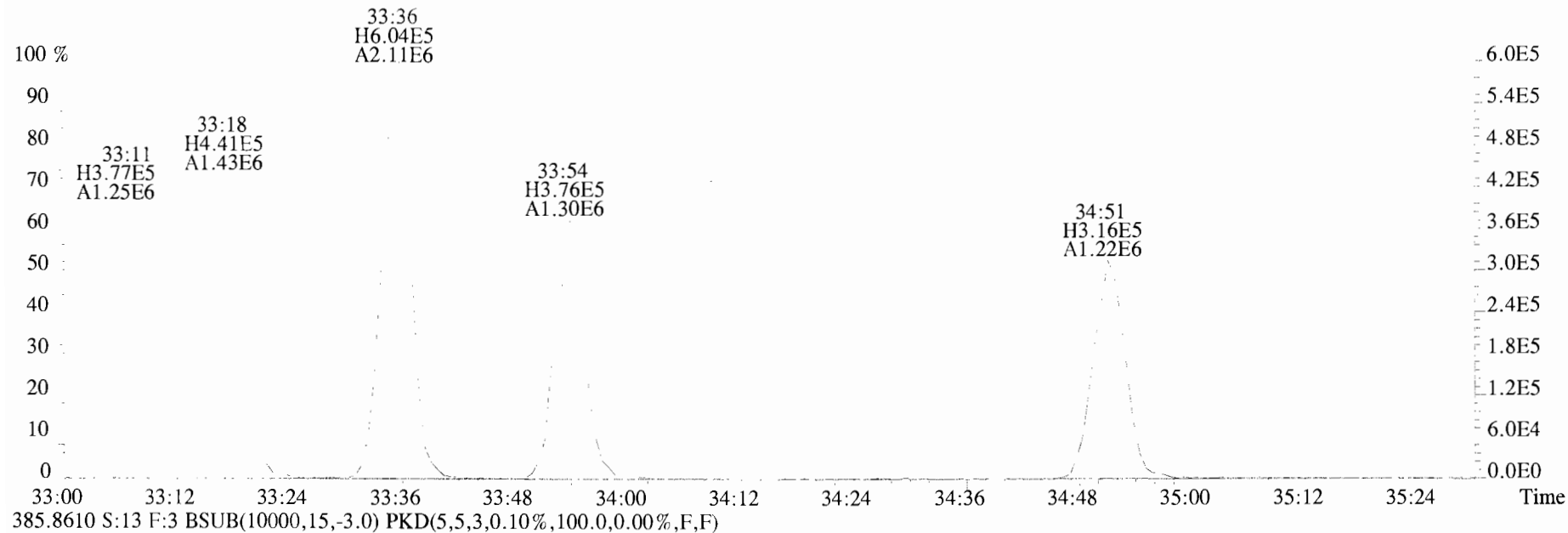
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



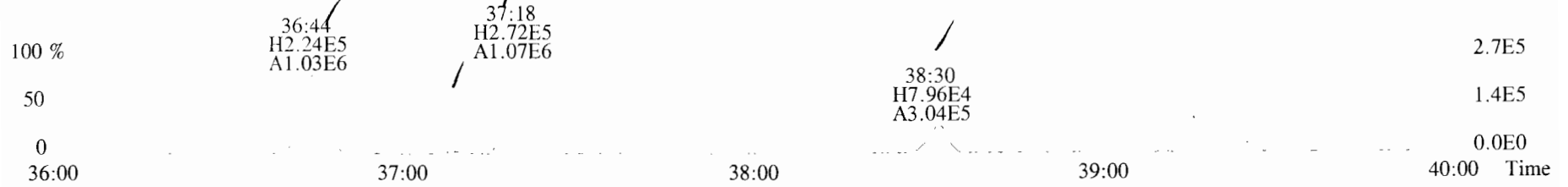
383.8639 S:13 F:3



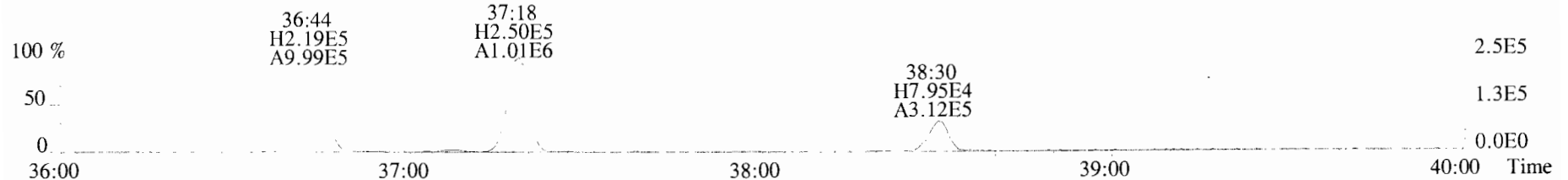
File:191024D2 #1-385 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
383.8639 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File: 191024D2 #1-356 Acq: 25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text: Vista_Analytical_Laboratory_VG7 Text: 1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp: OCDD_DB5
 407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



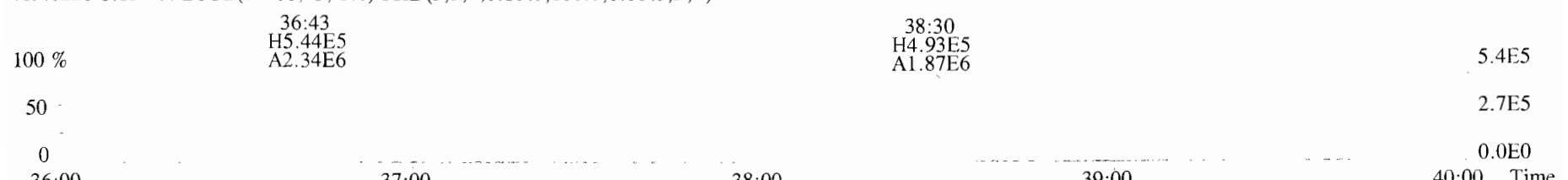
409.7788 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



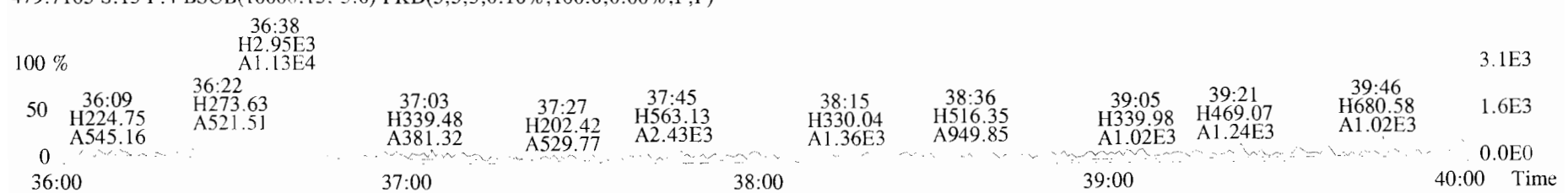
417.8253 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



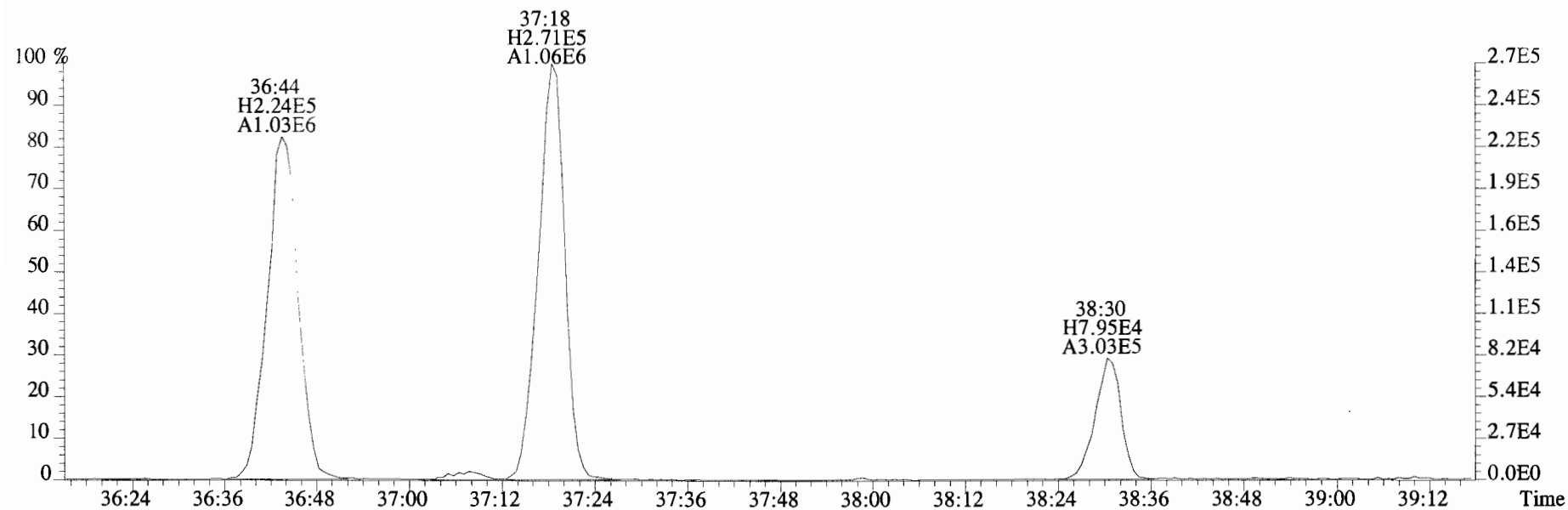
419.8220 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



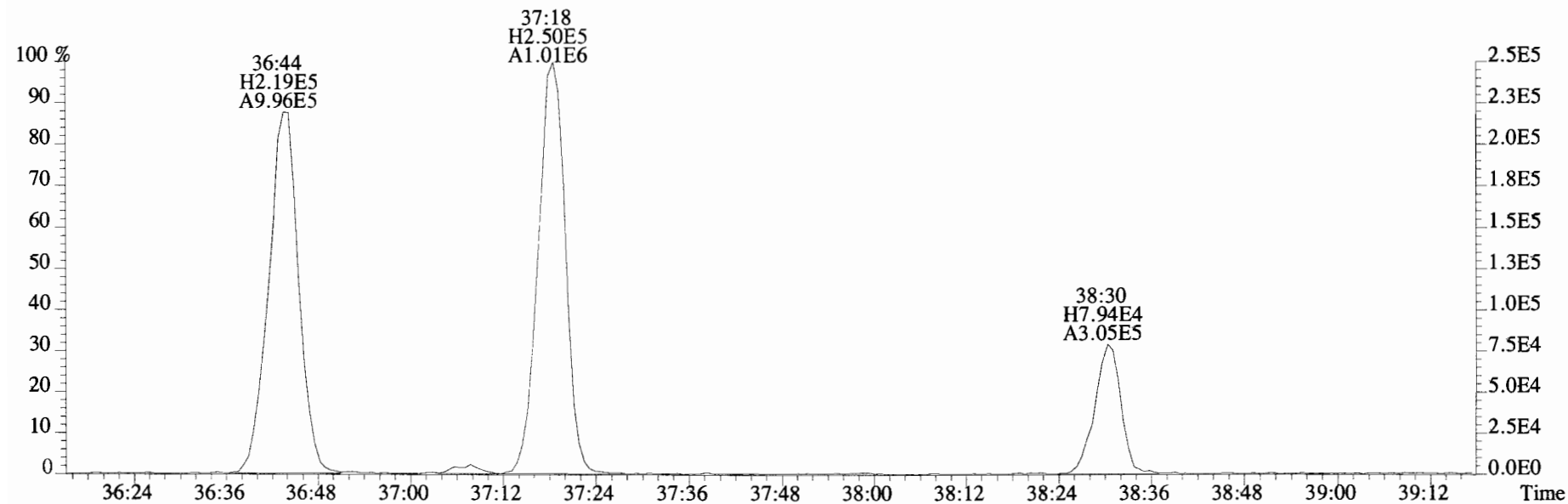
479.7165 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



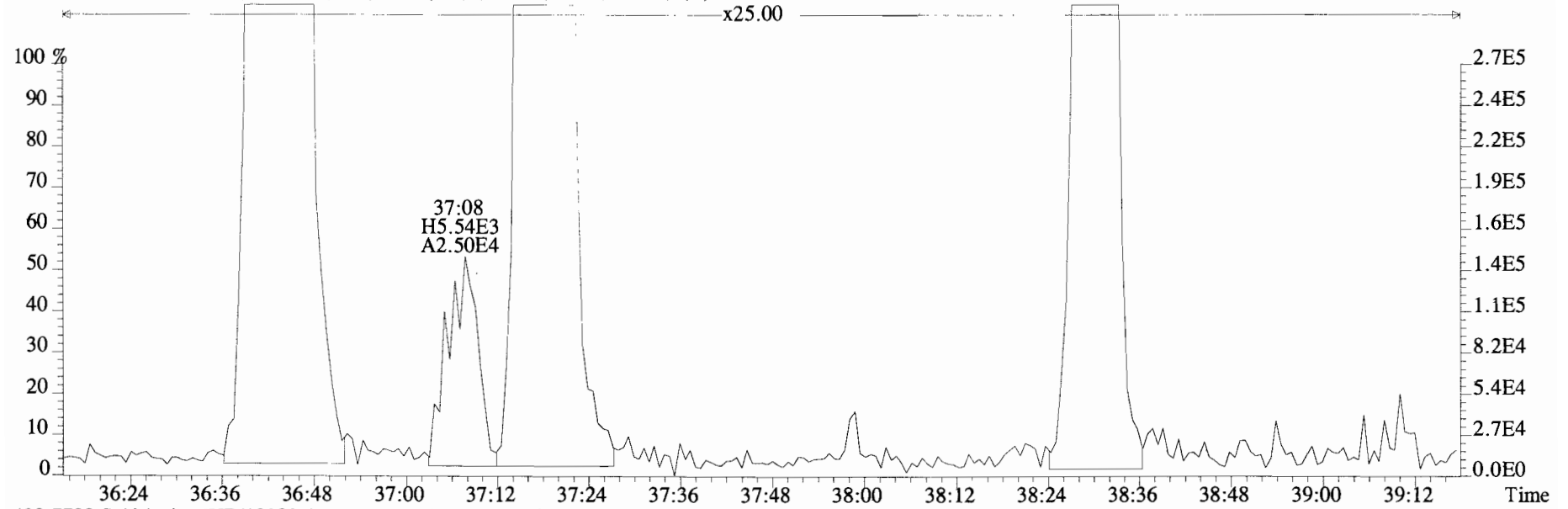
File:191024D2 #1-356 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



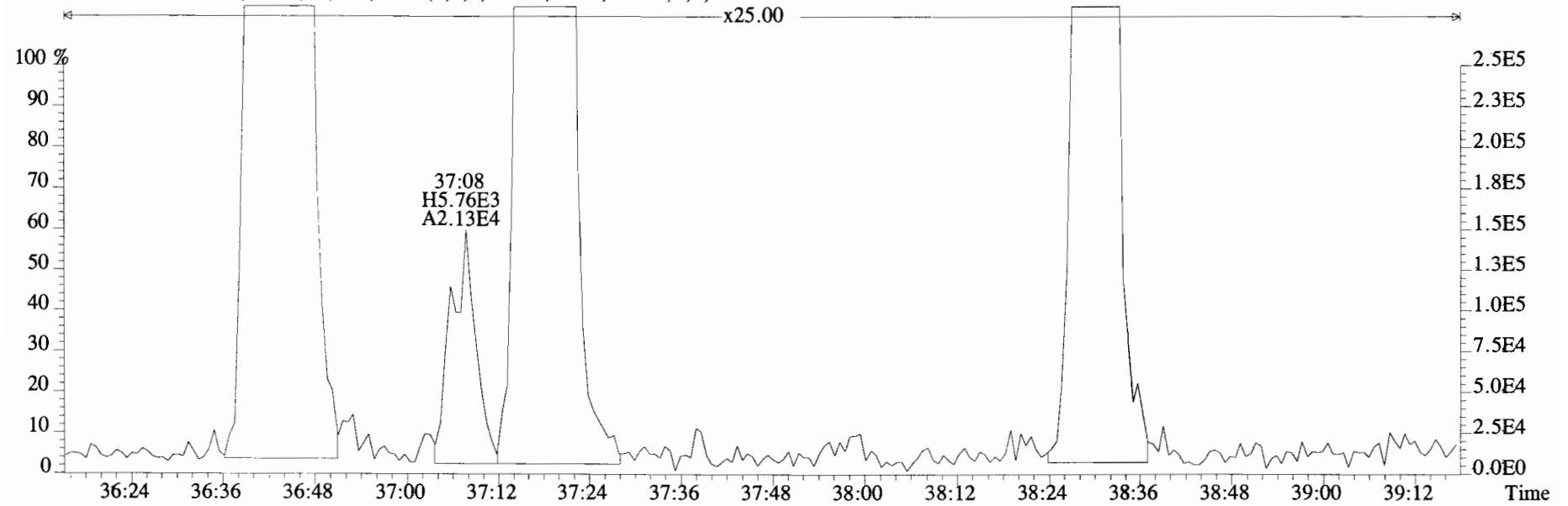
409.7788 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



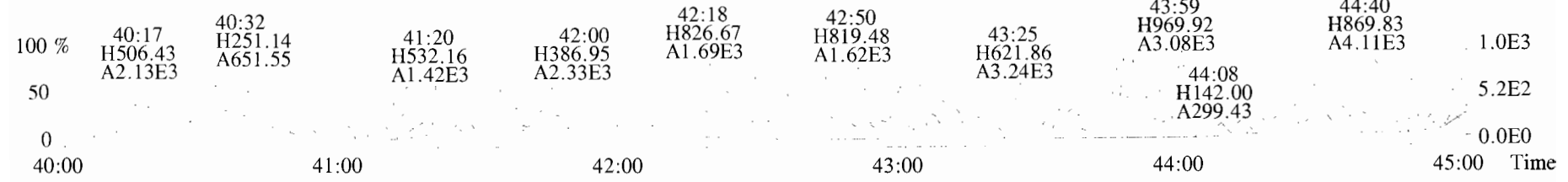
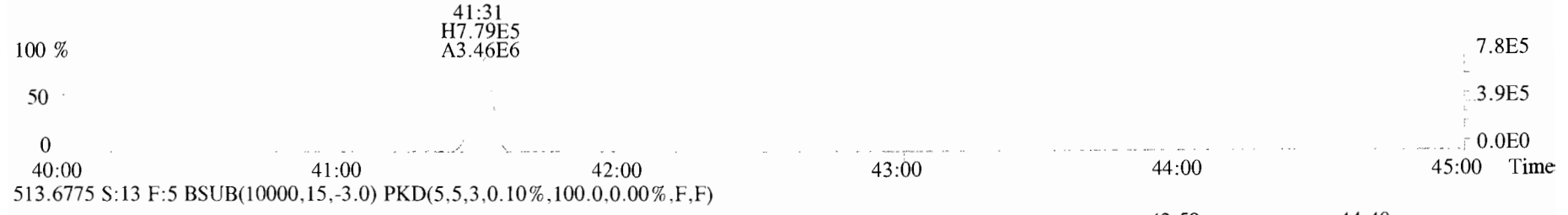
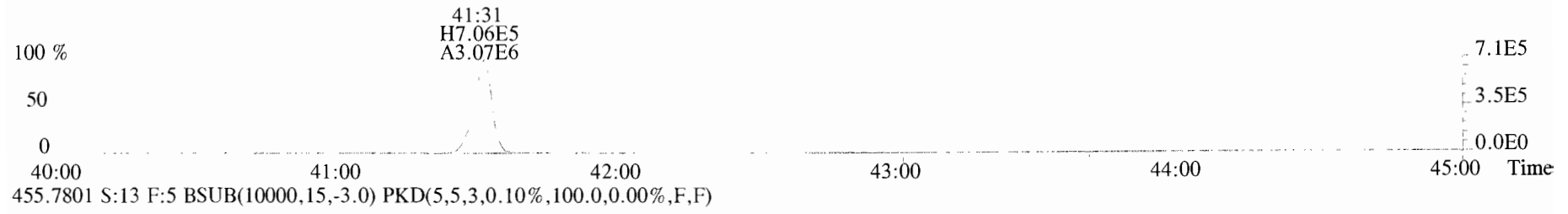
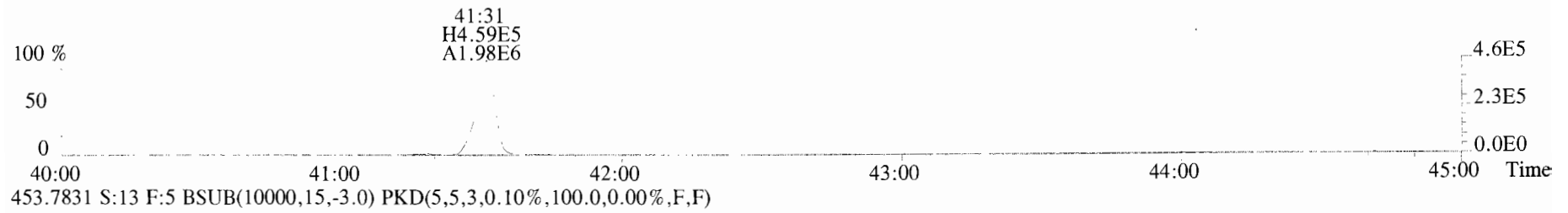
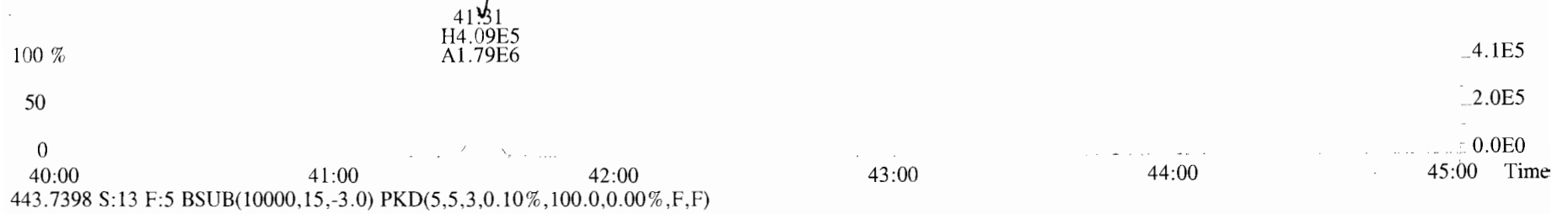
File:191024D2 #1-356 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



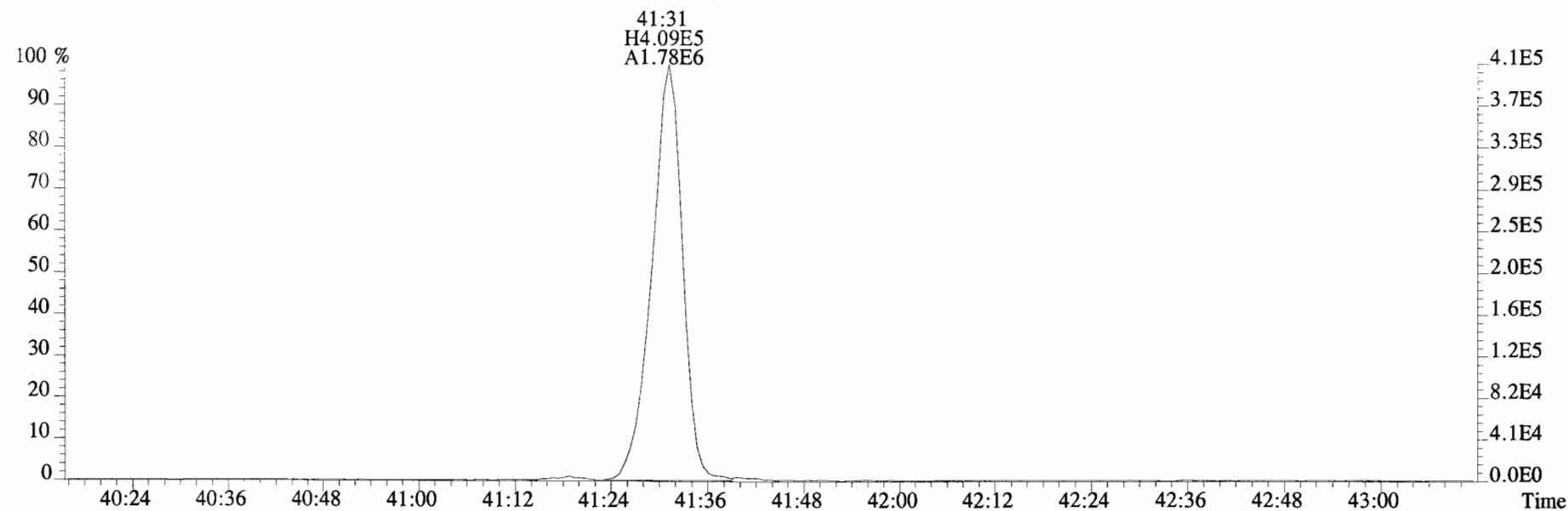
409.7788 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



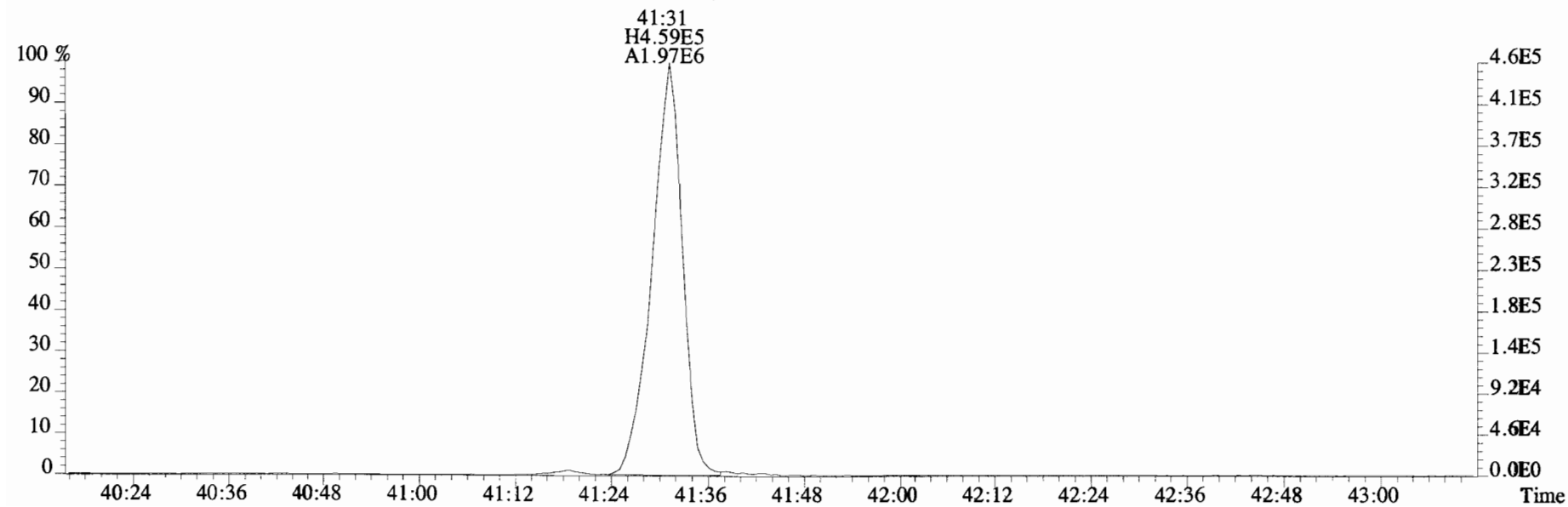
File:191024D2 #1-432 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
441.7428 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191024D2 #1-432 Acq:25-OCT-2019 13:23:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-13 PDI-081SC-B-02-04-191002 19.74 Exp:OCDD_DB5
441.7428 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



443.7398 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	NotF	*		118	2.5	0.124	Total Tetra-Dioxins	2.64	3.36	*	*	
1,2,3,7,8-PeCDD	*	* n	0.90	NotF	*		286	2.5	0.262	Total Penta-Dioxins	7.46	7.46	*	*	
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF	*		258	2.5	0.397	Total Hexa-Dioxins	70.4	70.4	*	*	
1,2,3,6,7,8-HxCDD	6.03e+04	1.41 y	0.94	34:12	4.6836		*	2.5	*	Total Hepta-Dioxins	313	313	*	*	
1,2,3,7,8,9-HxCDD	3.13e+04	1.31 y	0.96	34:29	2.2280		*	2.5	*	Total Tetra-Furans	40.9	42.7	*	*	
1,2,3,4,6,7,8-HpCDD	2.26e+06	1.05 y	0.98	37:58	165.36		*	2.5	*	Total Penta-Furans	50.788	51.621	*	*	
OCDD	9.62e+06	0.87 y	0.96	41:18	858.51		*	2.5	*	Total Hexa-Furans	39.7	39.7	*	*	
										Total Hepta-Furans	34.1	34.1	*	*	
2,3,7,8-TCDF	2.94e+05	0.77 y	0.95	25:29	13.396	c f	*	2.5	*						
1,2,3,7,8-PeCDF	3.32e+05	1.45 y	0.96	29:35	16.653		*	2.5	*						
2,3,4,7,8-PeCDF	1.35e+05	1.47 y	1.01	30:27	6.2978		*	2.5	*						
1,2,3,4,7,8-HxCDF	3.56e+05	1.28 y	1.18	33:11	18.336		*	2.5	*						
1,2,3,6,7,8-HxCDF	9.91e+04	1.32 y	1.07	33:19	5.0981		*	2.5	*						
2,3,4,6,7,8-HxCDF	3.20e+04	1.40 y	1.11	33:55	1.6925		*	2.5	*						
1,2,3,7,8,9-HxCDF	1.82e+04	1.18 y	1.06	34:52	1.1395		*	2.5	*						
1,2,3,4,6,7,8-HpCDF	2.05e+05	1.05 y	1.13	36:44	12.957		*	2.5	*						
1,2,3,4,7,8,9-HpCDF	4.33e+04	0.94 y	1.28	38:31	3.3324		*	2.5	*						
OCDF	3.42e+05	0.90 y	0.95	41:31	33.799		*	2.5	*						
										Rec	Qual				
IS	13C-2,3,7,8-TCDD	3.08e+06	0.78 y	1.10	26:15	102.50				52.0					
IS	13C-1,2,3,7,8-PeCDD	2.68e+06	0.61 y	0.88	30:44	110.61				56.1					
IS	13C-1,2,3,4,7,8-HxCDD	2.41e+06	1.27 y	0.64	34:04	121.77				61.7					
IS	13C-1,2,3,6,7,8-HxCDD	2.71e+06	1.22 y	0.86	34:11	102.48				51.9					
IS	13C-1,2,3,7,8,9-HxCDD	2.89e+06	1.25 y	0.81	34:29	115.89				58.7					
IS	13C-1,2,3,4,6,7,8-HpCDD	2.75e+06	1.02 y	0.65	37:57	136.24				69.1					
IS	13C-OCDD	4.61e+06	0.88 y	0.58	41:17	257.81				65.3					
IS	13C-2,3,7,8-TCDF	4.56e+06	0.76 y	1.03	25:28	102.10				51.8					
IS	13C-1,2,3,7,8-PeCDF	4.10e+06	1.63 y	0.85	29:34	111.20				56.4					
IS	13C-2,3,4,7,8-PeCDF	4.16e+06	1.68 y	0.85	30:28	113.82				57.7					
IS	13C-1,2,3,4,7,8-HxCDF	3.25e+06	0.50 y	0.83	33:11	126.74				64.2					
IS	13C-1,2,3,6,7,8-HxCDF	3.59e+06	0.51 y	1.03	33:18	112.36				57.0					
IS	13C-2,3,4,6,7,8-HxCDF	3.35e+06	0.52 y	0.95	33:54	113.84				57.7					
IS	13C-1,2,3,7,8,9-HxCDF	2.97e+06	0.51 y	0.83	34:51	116.27				58.9					
IS	13C-1,2,3,4,6,7,8-HpCDF	2.77e+06	0.43 y	0.76	36:43	118.45				60.0					
IS	13C-1,2,3,4,7,8,9-HpCDF	2.00e+06	0.43 y	0.58	38:30	111.52				56.5					
IS	13C-OCDF	4.22e+06	0.85 y	0.69	41:30	198.21				50.2					
C/Up	37C1-2,3,7,8-TCDD	2.14e+06		1.20	26:16	65.069				82.5					
RS/RT	13C-1,2,3,4-TCDD	5.41e+06	0.81 y	1.00	25:41	197.29									
RS	13C-1,2,3,4-TCDF	8.51e+06	0.80 y	1.00	24:16	197.29									
RS/RT	13C-1,2,3,4,6,9-HxCDF	6.09e+06	0.52 y	1.00	33:35	197.29									

Integrations
 by DB
 Analyst: DB
 Date: 11/16/19
 Reviewed
 by AT
 Analyst: AT
 Date: 11/11/19

Totals class: TCDD EMPC

Entry #: 19

Run: 19

File: 191024D2

S: 14 I: 1 F: 1

Acquired: 25-OCT-19 14:12:00

Processed: 28-OCT-19 09:58:55

Total Concentration: 3.3594

Unnamed Concentration: 3.359

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
22:53	1.731e+04	2.005e+04	0.86 y	3.736e+04	2.6421
23:15	7.182e+03	5.730e+03	1.25 n	1.014e+04	0.71727

Totals class: PeCDD EMPC

Entry #: 21

Run: 19 File: 191024D2 S: 14 I: 1 F: 2
Acquired: 25-OCT-19 14:12:00 Processed: 28-OCT-19 09:58:55

Total Concentration: 7.4615 Unnamed Concentration: 7.461

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:43	1.504e+04	2.510e+04	0.60 y	4.015e+04	3.2793
29:36	1.566e+04	2.172e+04	0.72 y	3.738e+04	3.0530
29:51	5.187e+03	8.638e+03	0.60 y	1.383e+04	1.1292

Totals class: HxCDD EMPC

Entry #: 23

Run: 19 File: 191024D2 S: 14 I: 1 F: 3
Acquired: 25-OCT-19 14:12:00 Processed: 28-OCT-19 09:58:55

Total Concentration: 70.412 Unnamed Concentration: 63.500

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
32:32	2.283e+05	1.819e+05	1.26	y	4.102e+05	30.574
33:07	2.264e+04	2.050e+04	1.10	y	4.315e+04	3.2158
33:22	2.079e+05	1.558e+05	1.33	y	3.637e+05	27.106
33:30	1.117e+04	8.154e+03	1.37	y	1.933e+04	1.4406
34:12	3.529e+04	2.502e+04	1.41	y	6.031e+04	4.6836 1,2,3,6,7,8-HxCDD
34:24	8.890e+03	6.722e+03	1.32	y	1.561e+04	1.1636
34:29	1.775e+04	1.358e+04	1.31	y	3.133e+04	2.2280 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 19 File: 191024D2 S: 14 I: 1 F: 4
Acquired: 25-OCT-19 14:12:00 Processed: 28-OCT-19 09:58:55

Total Concentration: 313.46 Unnamed Concentration: 148.105

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:07	1.004e+06	1.018e+06	0.99 y	2.022e+06	148.11
37:58	1.159e+06	1.099e+06	1.05 y	2.258e+06	165.36 1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 19 File: 191024D2 S: 14 I: 1 F: 1
 Acquired: 25-OCT-19 14:12:00 Processed: 28-OCT-19 09:58:55

Total Concentration: 42.727 Unnamed Concentration: 29.332

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
21:58	1.300e+04	1.823e+04	0.71	y	3.123e+04	1.4232
22:32	9.976e+03	1.450e+04	0.69	y	2.448e+04	1.1156
22:52	3.653e+04	4.540e+04	0.80	y	8.193e+04	3.7340
23:16	1.663e+04	2.175e+04	0.76	y	3.839e+04	1.7495
24:08	1.851e+04	2.369e+04	0.78	y	4.219e+04	1.9231
24:15	1.363e+04	1.922e+04	0.71	y	3.286e+04	1.4975
24:41	1.251e+05	1.530e+05	0.82	y	2.781e+05	12.675
24:55	5.361e+03	7.961e+03	0.67	y	1.332e+04	0.60716
25:23	1.890e+04	2.157e+04	0.88	y	4.046e+04	1.8443
25:29	1.282e+05	1.657e+05	0.77	y	2.939e+05	13.396
25:48	8.043e+03	1.162e+04	0.69	y	1.966e+04	0.89615
27:15	2.180e+04	2.313e+04	0.94	n	4.095e+04	1.8662

2,3,7,8-TCDF

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

Run: 19 File: 191024D2 S: 14 I: 1 F: 1
Acquired: 25-OCT-19 14:12:00 Processed: 28-OCT-19 09:58:55

Total Concentration: 4.7854 Unnamed Concentration: 4.785

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:15	6.287e+04	3.597e+04	1.75 y	9.884e+04	4.7854

Totals class: PeCDF EMPC

Entry #: 31

Run: 19 File: 191024D2 S: 14 I: 1 F: 2
 Acquired: 25-OCT-19 14:12:00 Processed: 28-OCT-19 09:58:55

Total Concentration: 46.835

Unnamed Concentration: 23.884

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
28:33	5.464e+03	4.343e+03	1.26	n	8.989e+03	0.43523	
28:41	1.127e+05	7.816e+04	1.44	y	1.908e+05	9.2389	
29:12	2.331e+04	1.505e+04	1.55	y	3.836e+04	1.8572	
29:25	2.552e+04	1.889e+04	1.35	y	4.441e+04	2.1501	
29:35	1.964e+05	1.357e+05	1.45	y	3.320e+05	16.653	1,2,3,7,8-PeCDF
29:50	6.911e+04	4.795e+04	1.44	y	1.171e+05	5.6677	
30:27	8.023e+04	5.443e+04	1.47	y	1.347e+05	6.2978	2,3,4,7,8-PeCDF
30:31	5.091e+04	3.454e+04	1.47	y	8.546e+04	4.1376	
31:20	8.416e+03	3.219e+03	2.61	n	8.207e+03	0.39737	

Totals class: HxCDF EMPC

Entry #: 33

Run: 19 File: 191024D2 S: 14 I: 1 F: 3

Acquired: 25-OCT-19 14:12:00 Processed: 28-OCT-19 09:58:55

Total Concentration: 39.683

Unnamed Concentration: 13.416

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
32:00	1.458e+04	1.049e+04	1.39	y	2.506e+04	1.3618
32:09	5.219e+04	3.734e+04	1.40	y	8.953e+04	4.8641
32:42	5.959e+04	4.926e+04	1.21	y	1.088e+05	5.9138
33:11	1.996e+05	1.564e+05	1.28	y	3.560e+05	18.336 1,2,3,4,7,8-HxCDF
33:19	5.635e+04	4.278e+04	1.32	y	9.912e+04	5.0981 1,2,3,6,7,8-HxCDF
33:55	1.866e+04	1.335e+04	1.40	y	3.201e+04	1.6925 2,3,4,6,7,8-HxCDF
34:52	9.845e+03	8.373e+03	1.18	y	1.822e+04	1.1395 1,2,3,7,8,9-HxCDF
34:55	1.345e+04	1.005e+04	1.34	y	2.350e+04	1.2767

Totals class: HpCDF EMPC

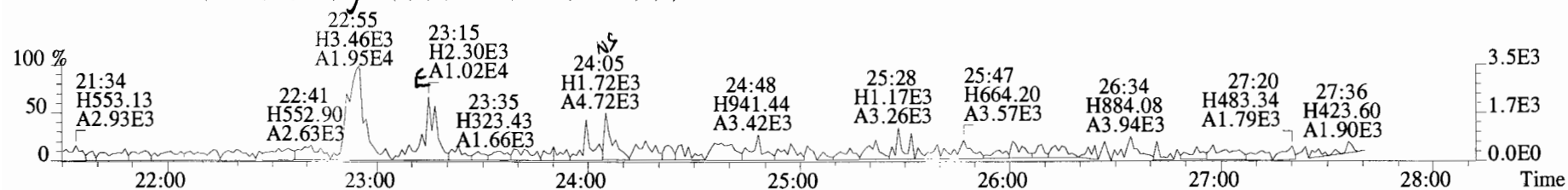
Entry #: 35

Run: 19 File: 191024D2 S: 14 I: 1 F: 4
Acquired: 25-OCT-19 14:12:00 Processed: 28-OCT-19 09:58:55

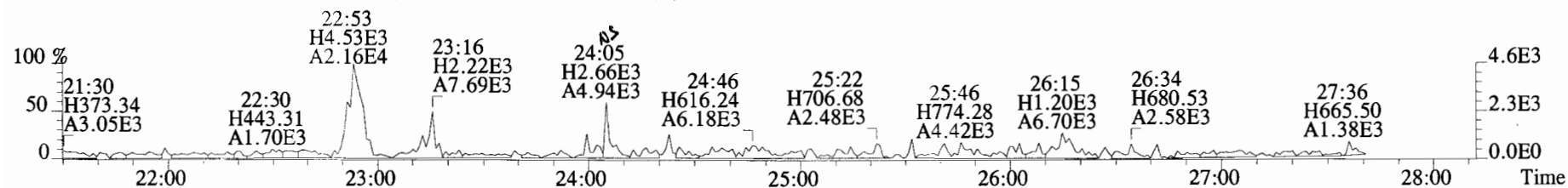
Total Concentration: 34.105 Unnamed Concentration: 17.816

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
36:44	1.050e+05	1.001e+05	1.05 y	2.051e+05	12.957	1,2,3,4,6,7,8-HpCDF
37:18	1.259e+05	1.312e+05	0.96 y	2.572e+05	17.816	
38:31	2.095e+04	2.231e+04	0.94 y	4.326e+04	3.3324	1,2,3,4,7,8,9-HpCDF

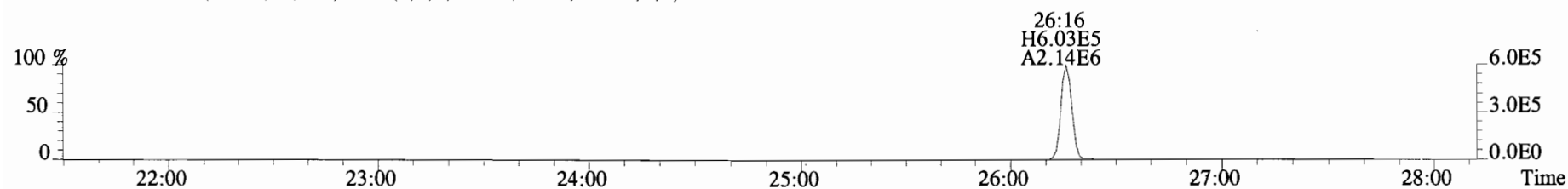
File:191024D2 #1-493 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
 319.8965 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



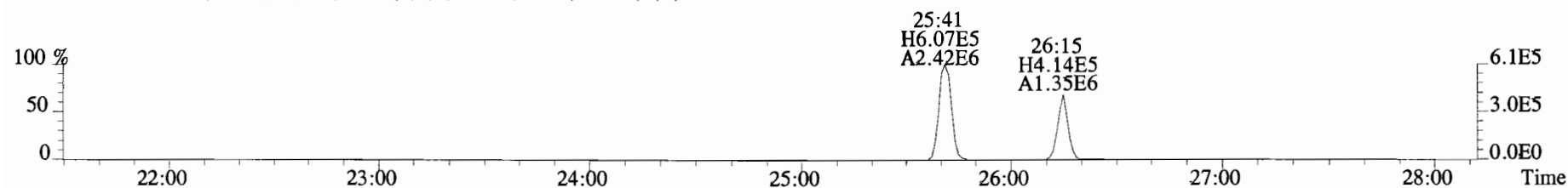
321.8936 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



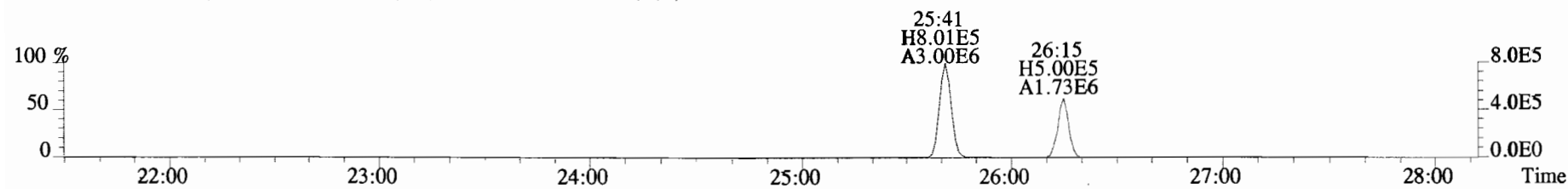
327.8847 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



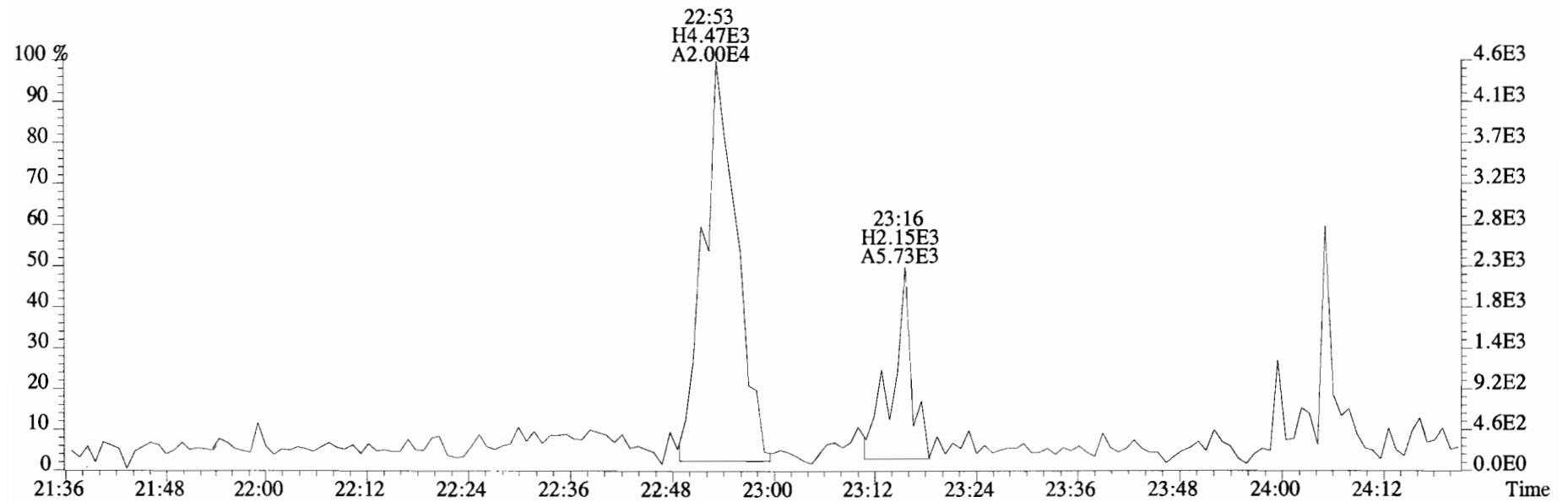
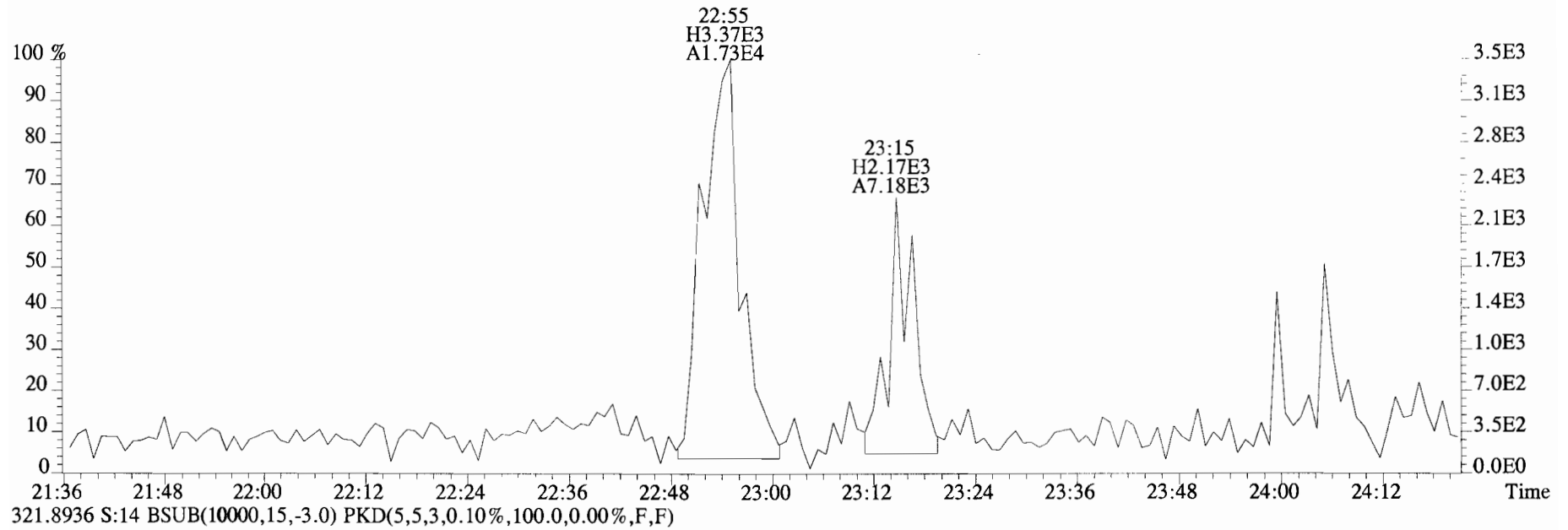
331.9368 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



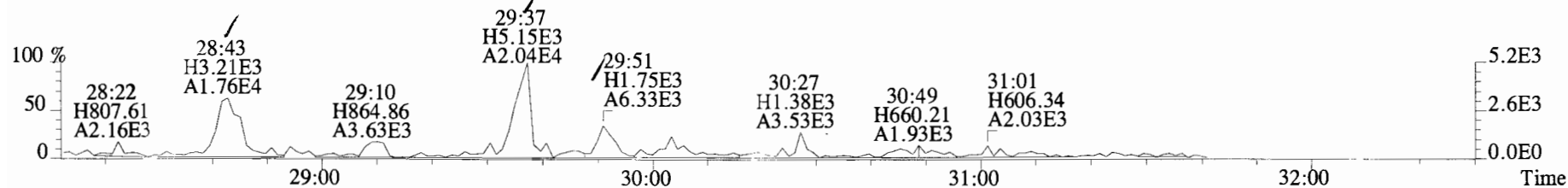
333.9339 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



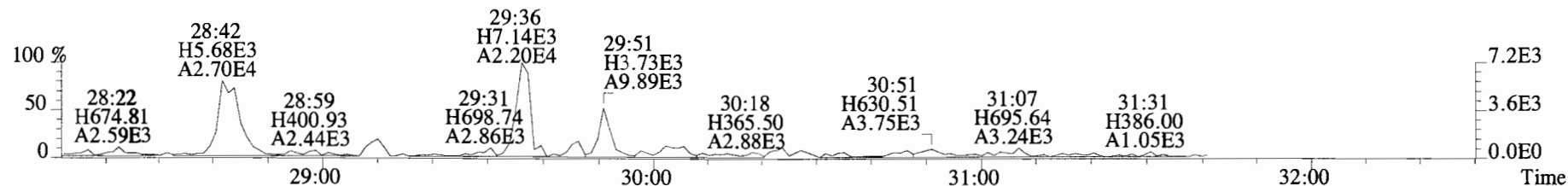
File:191024D2 #1-493 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
319.8965 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



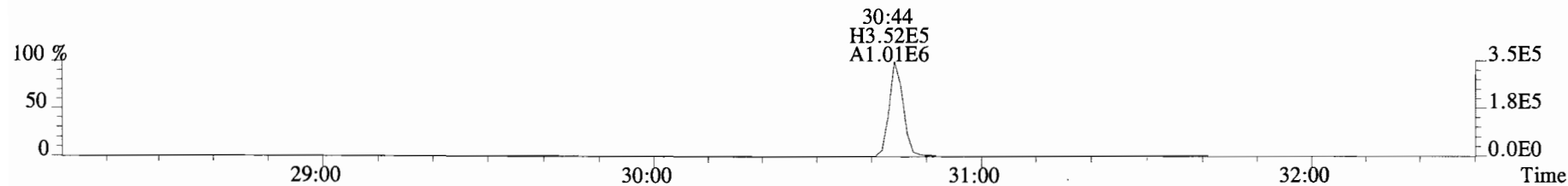
File:191024D2 #1-211 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
353.8576 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



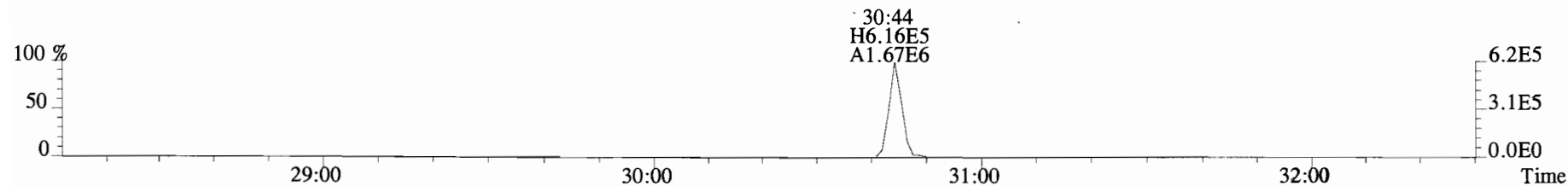
355.8546 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



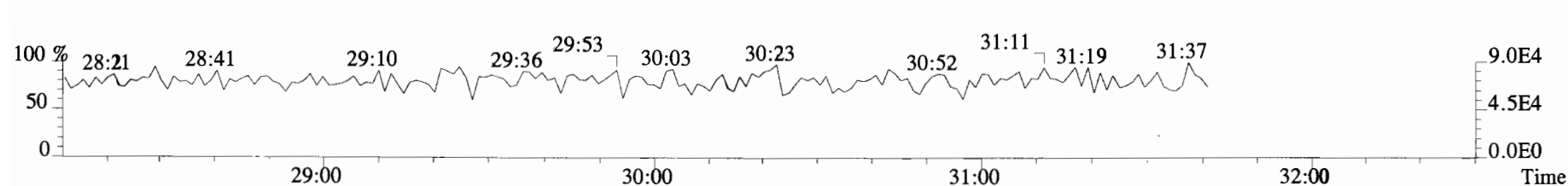
365.8978 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



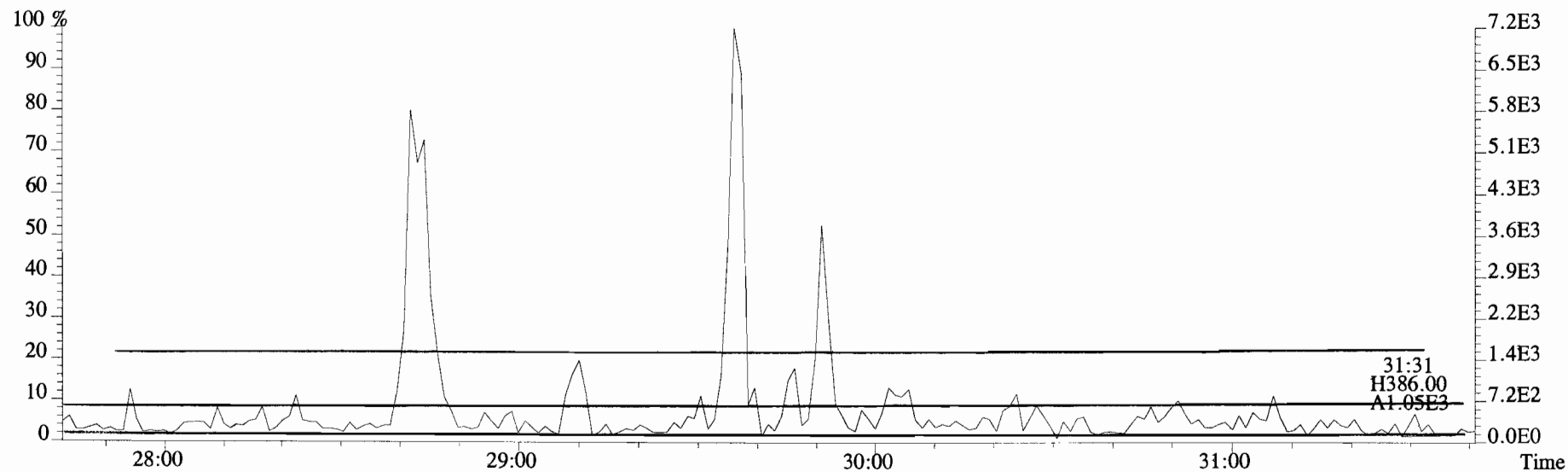
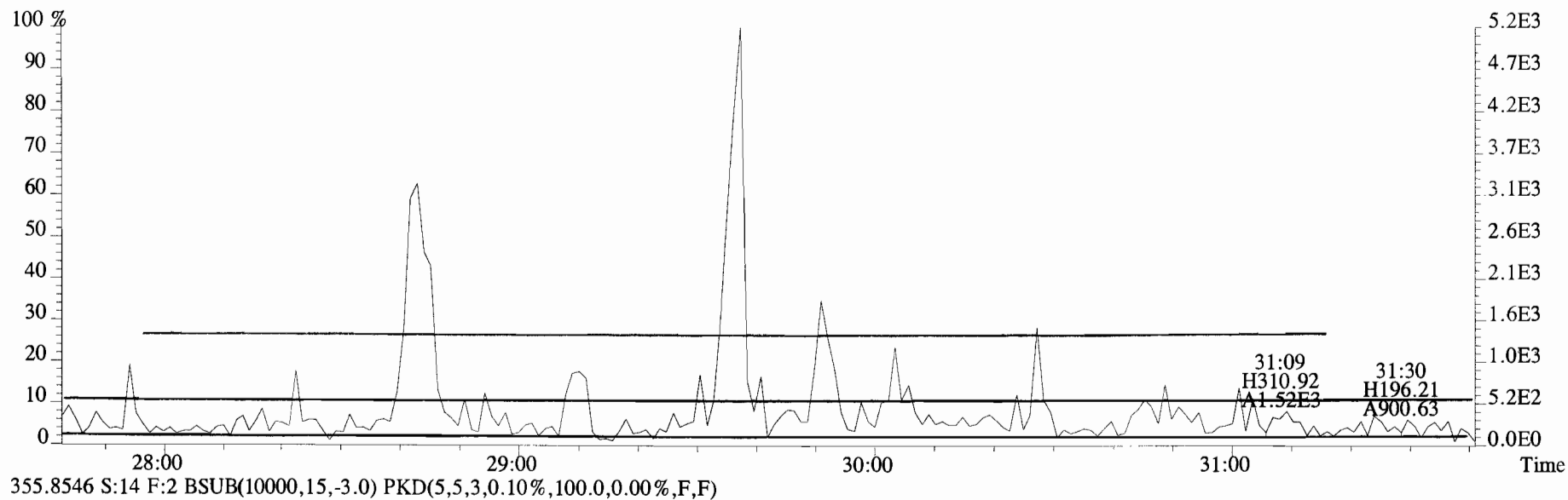
367.8949 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



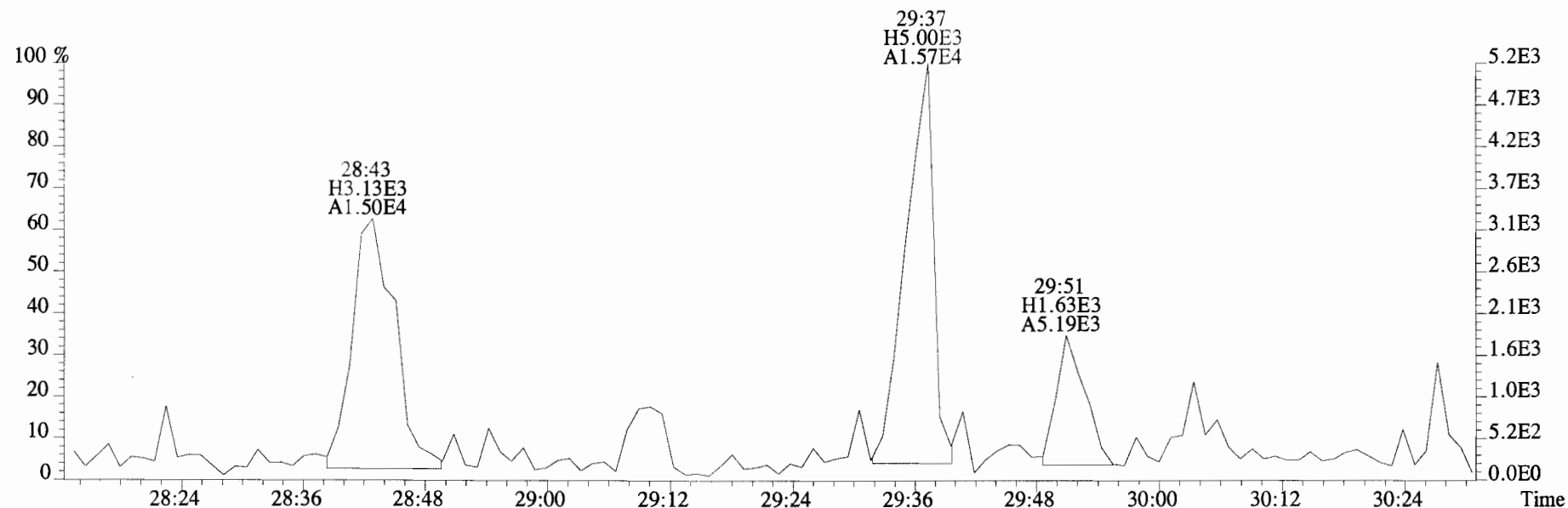
366.9792 S:14 F:2



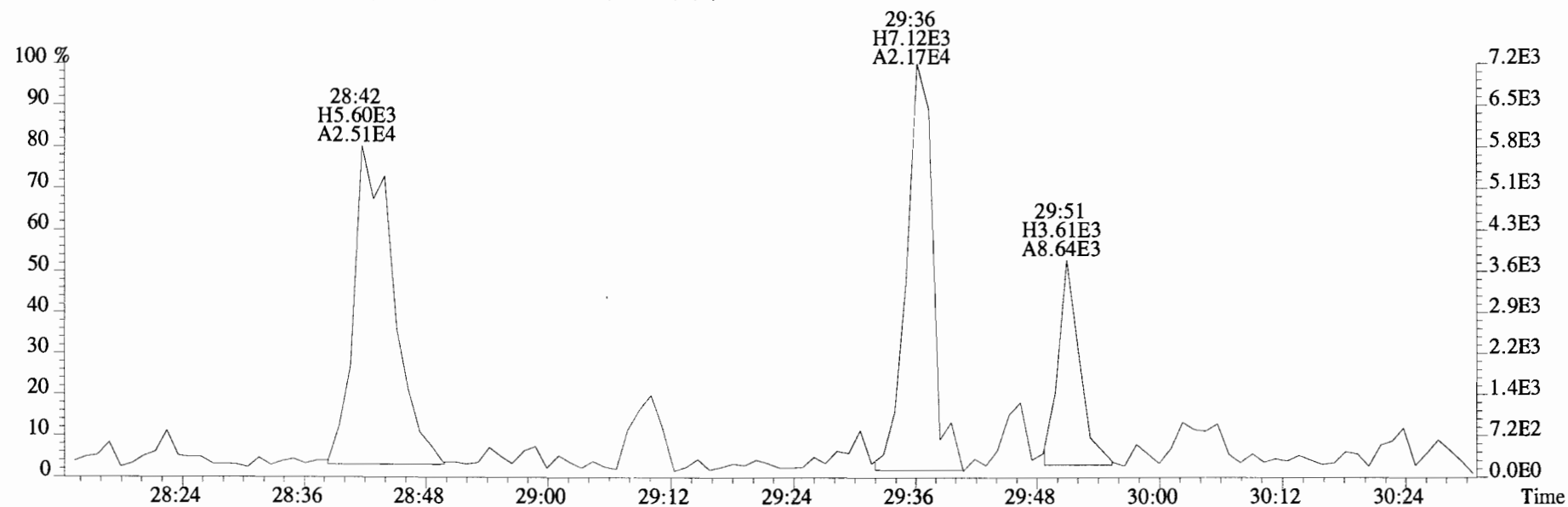
File:191024D2 #1-211 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
353.8576 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



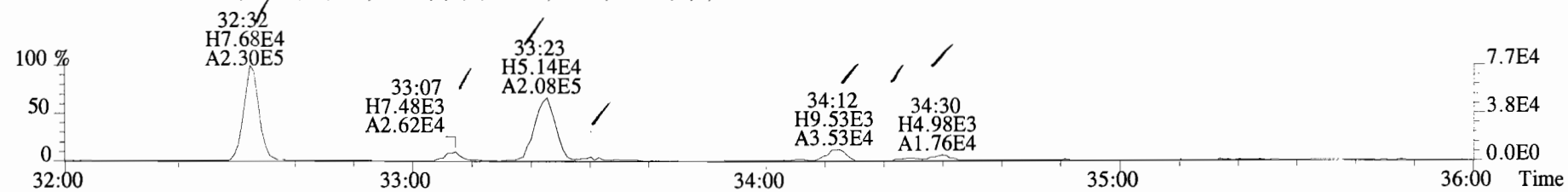
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Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
353.8576 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



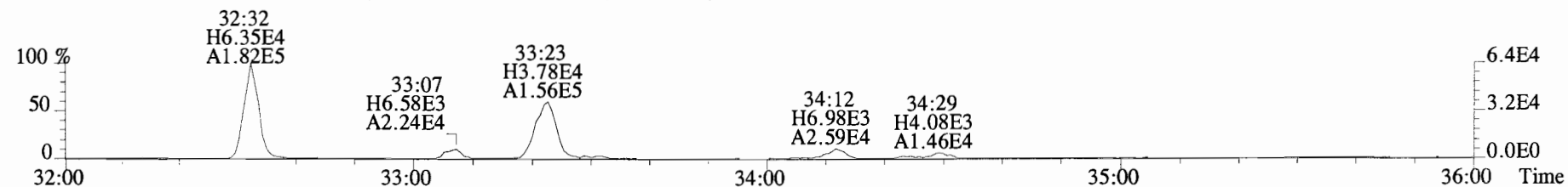
355.8546 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



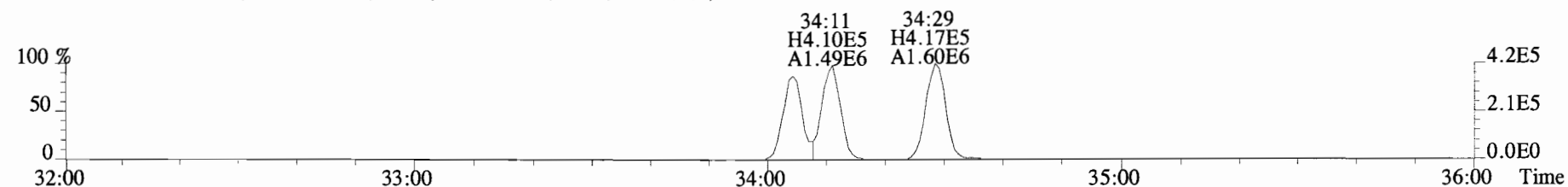
File:191024D2 #1-385 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
 389.8156 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



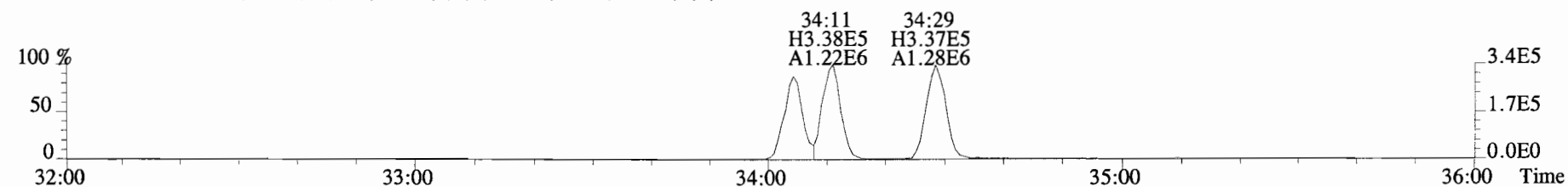
391.8127 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



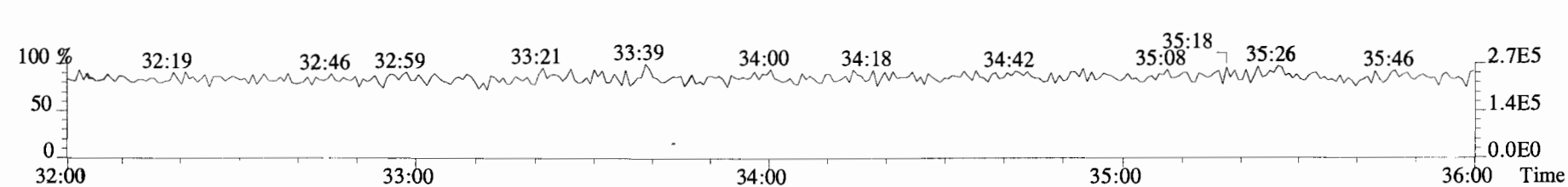
401.8559 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



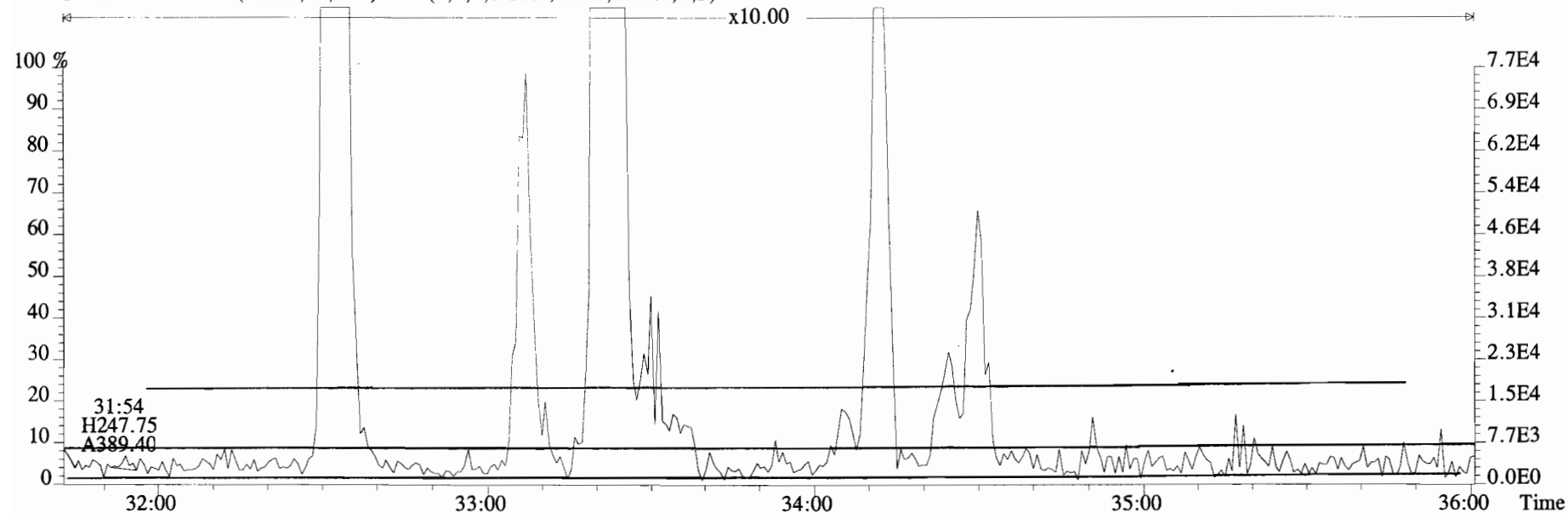
403.8530 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



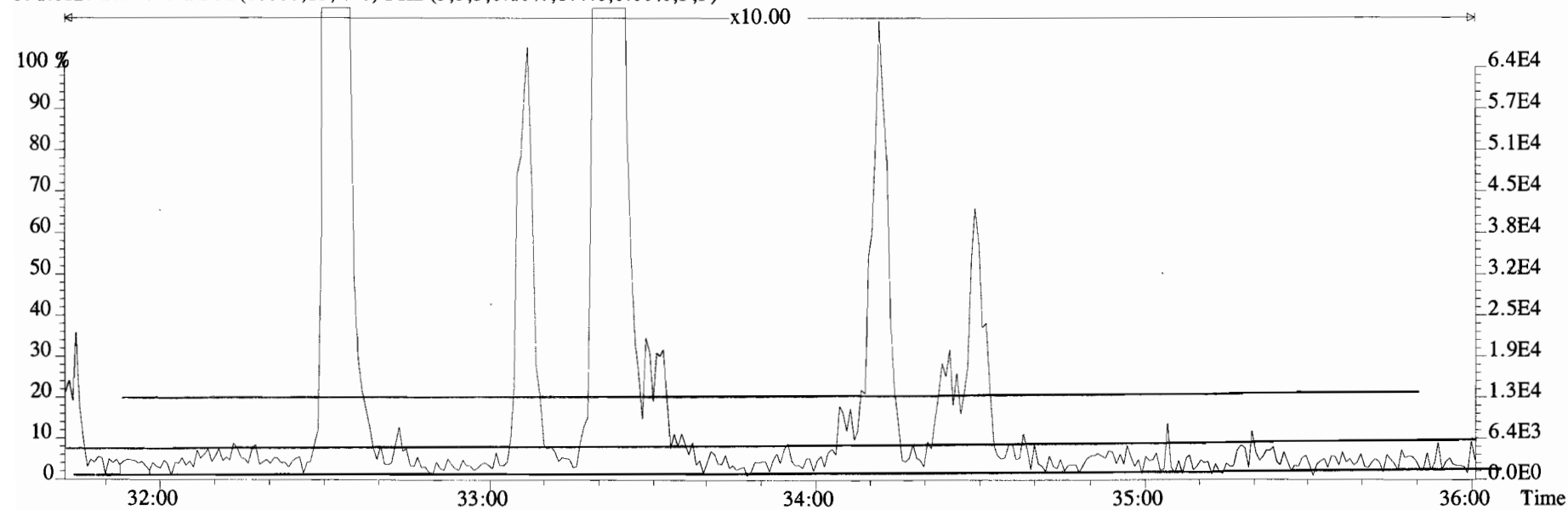
392.9760 S:14 F:3



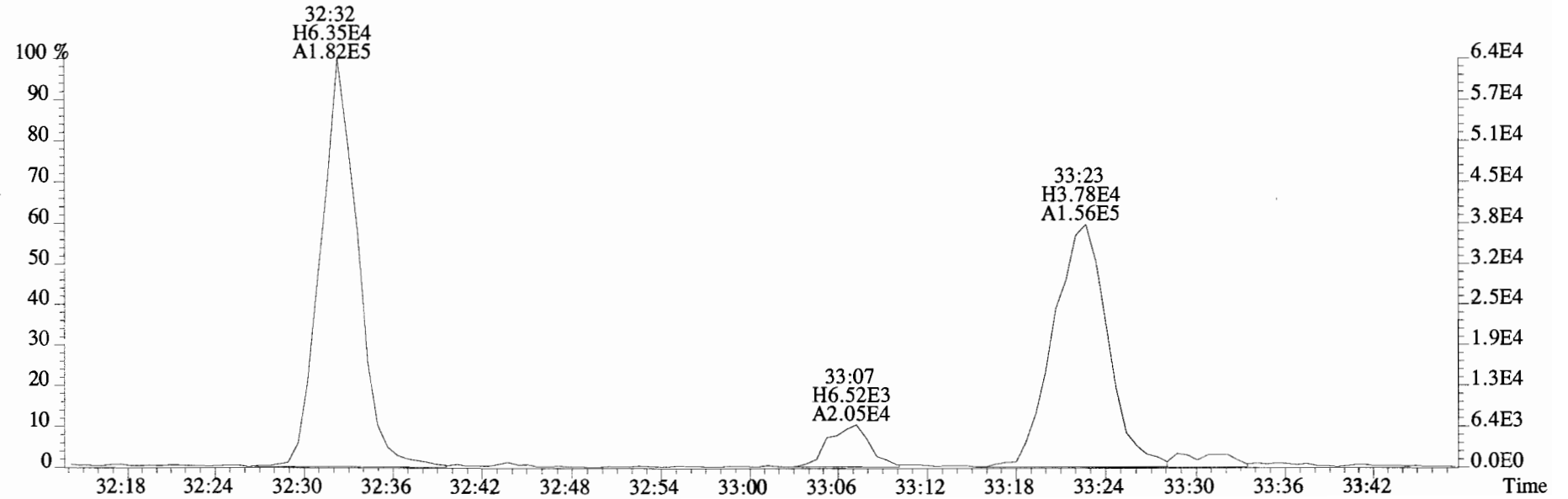
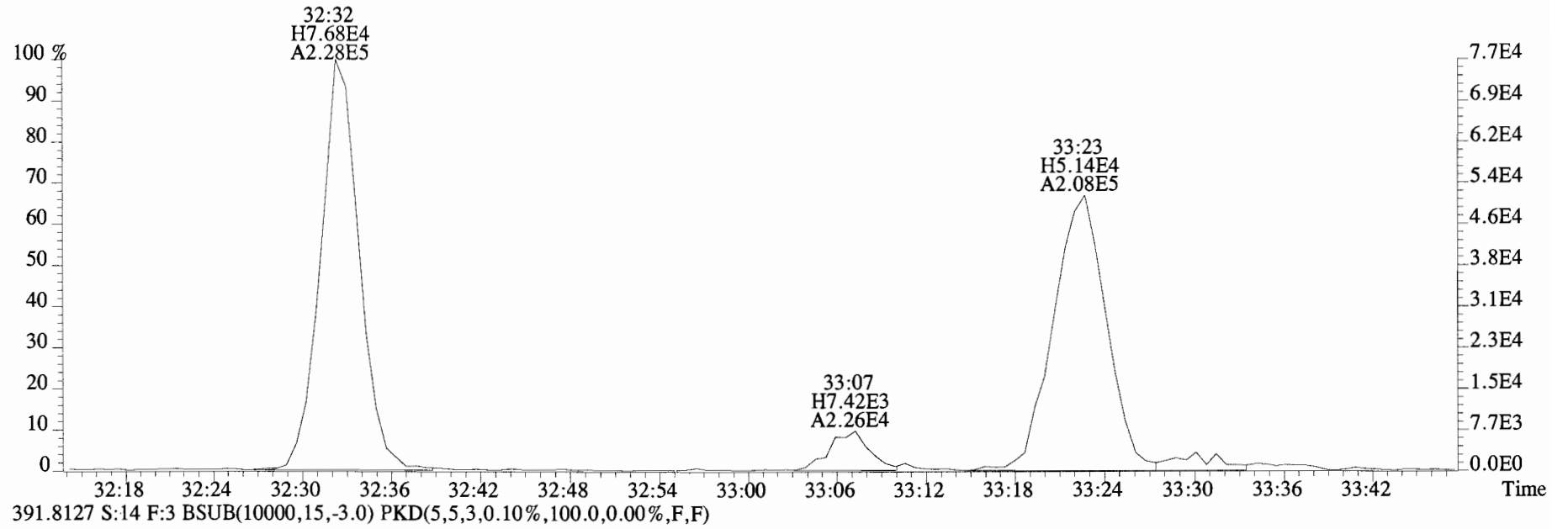
File:191024D2 #1-385 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PD1-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
389.8156 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



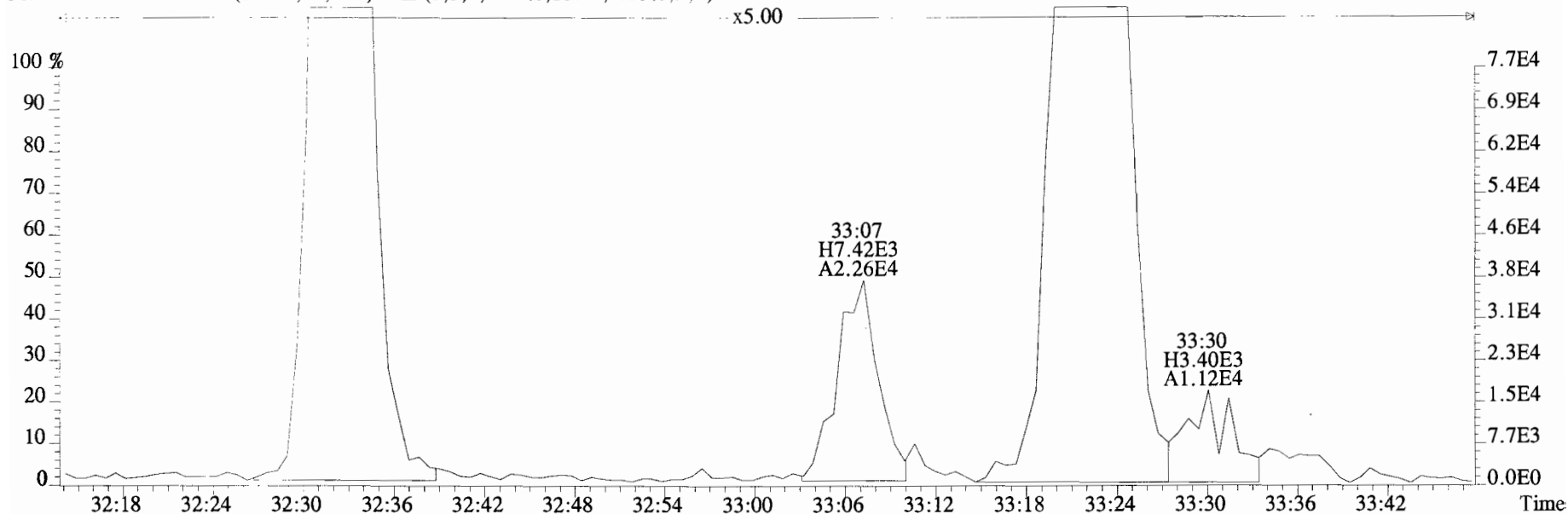
391.8127 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



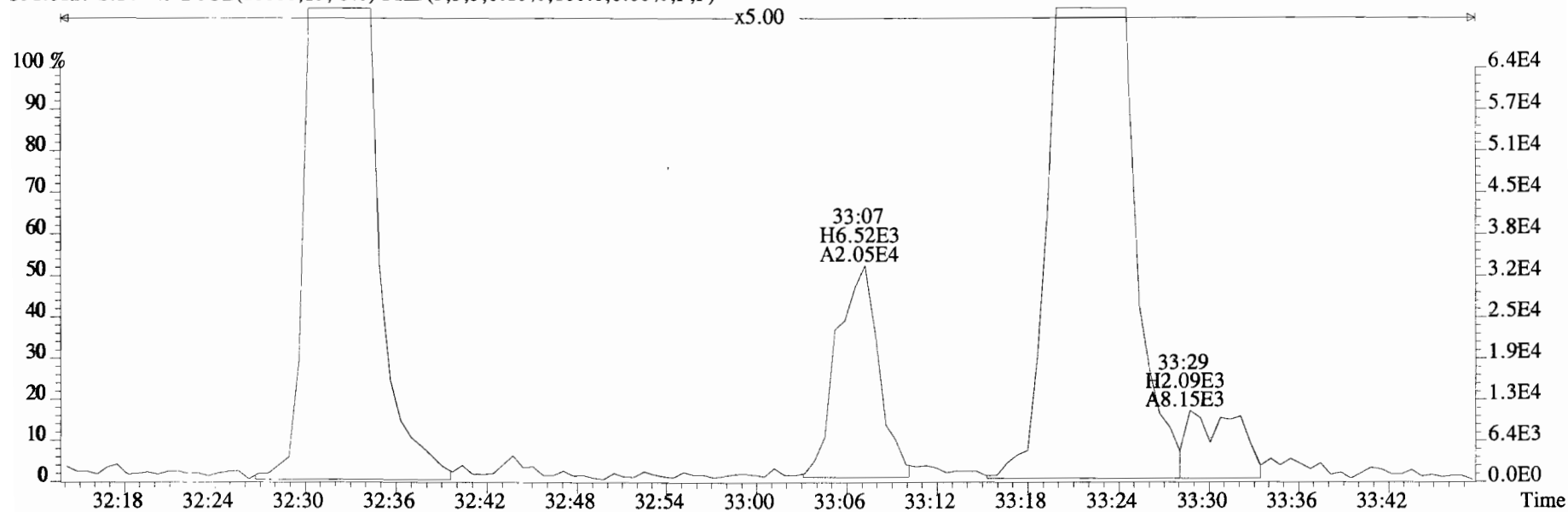
File:191024D2 #1-385 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
389.8156 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



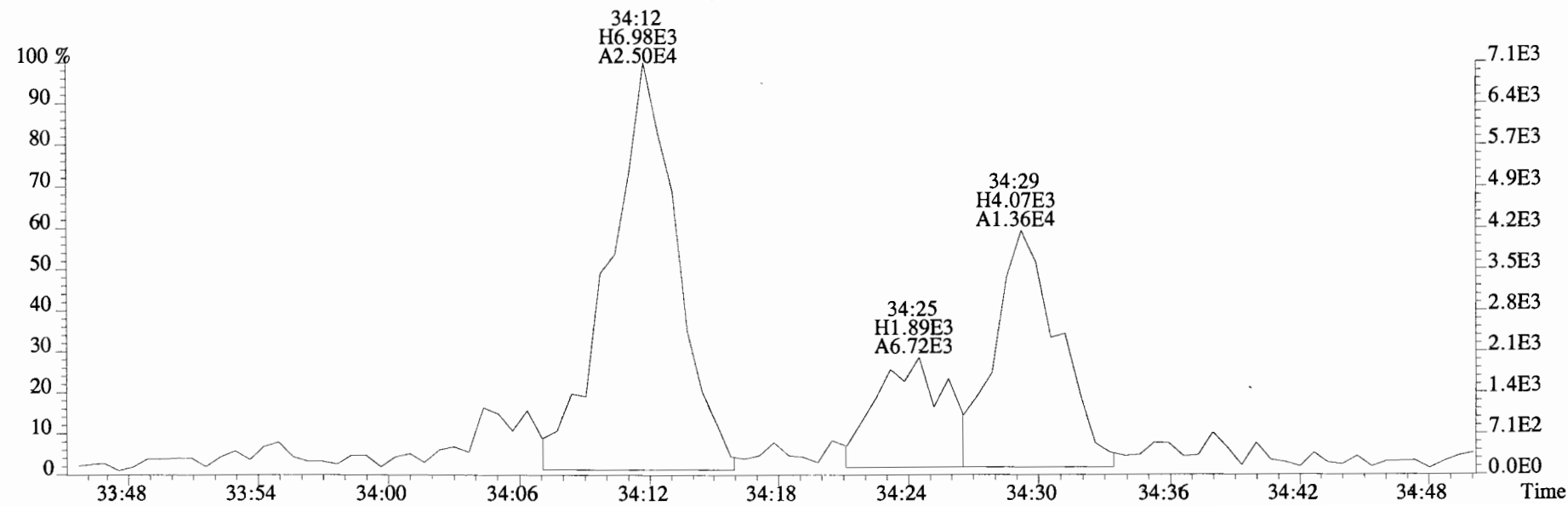
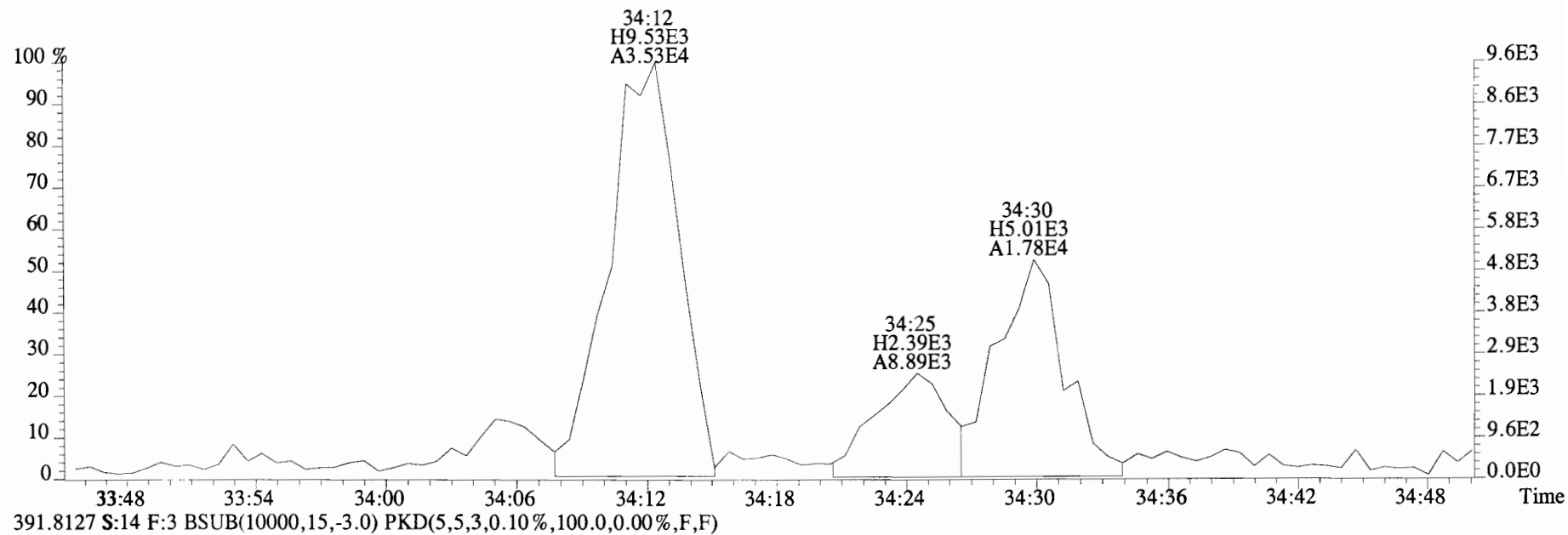
File:191024D2 #1-385 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PD1-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
389.8156 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



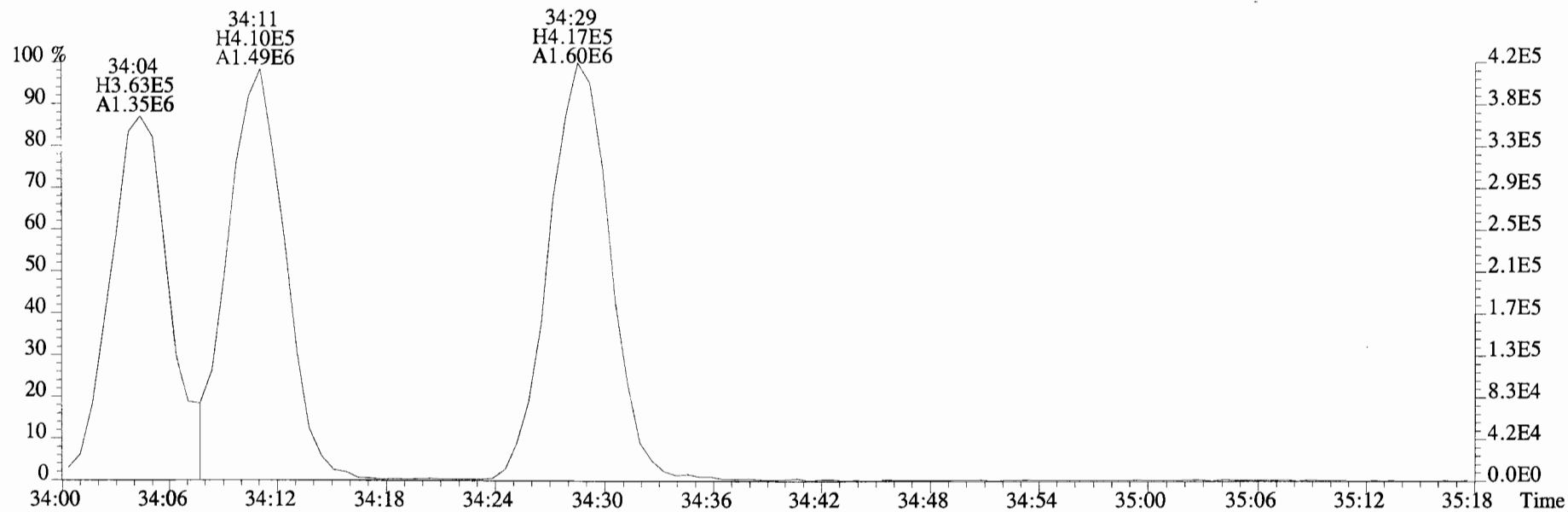
391.8127 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



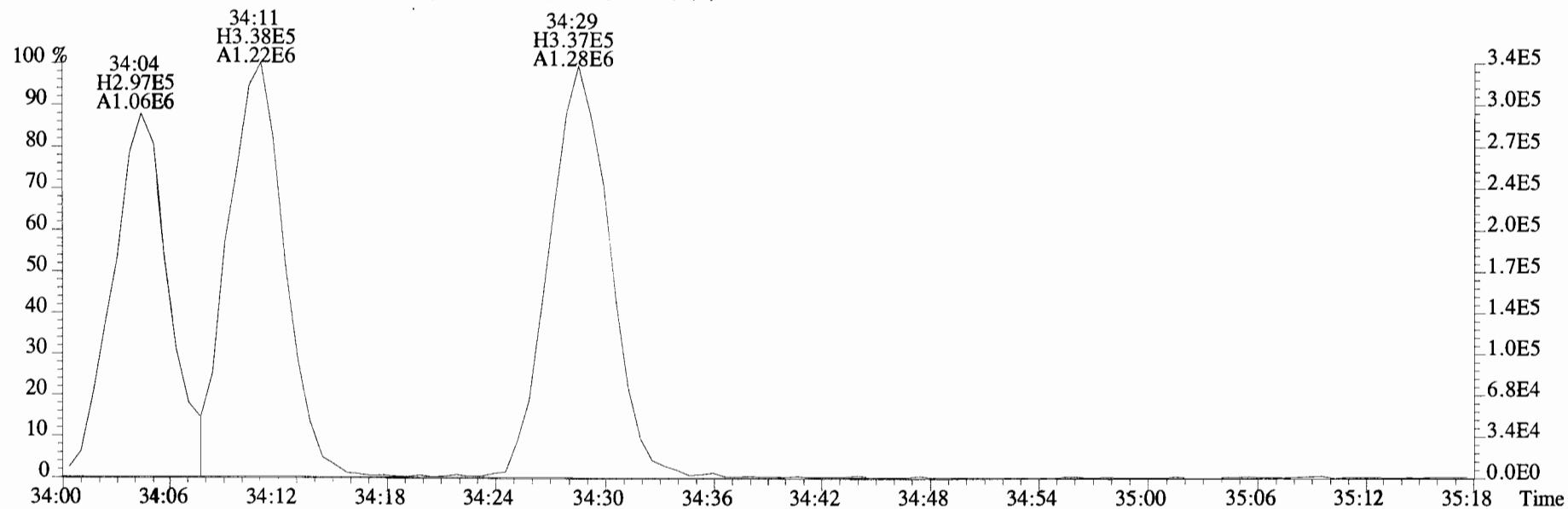
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Sample#14 File Text:Vista Analytical Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
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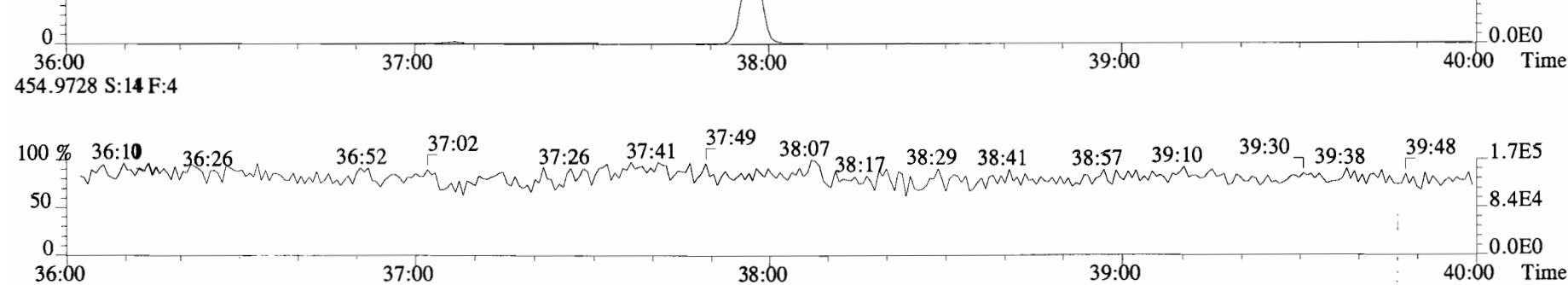
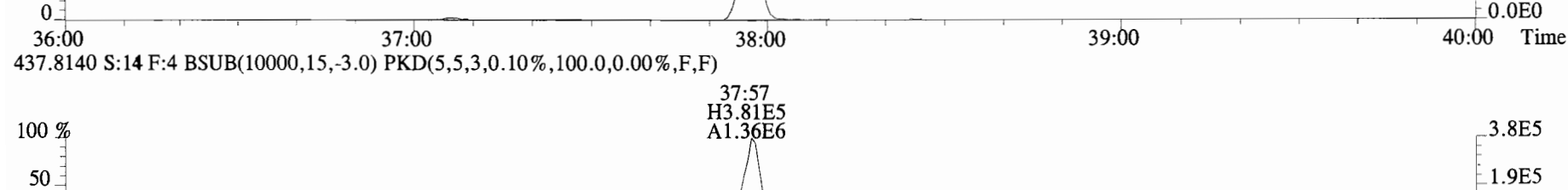
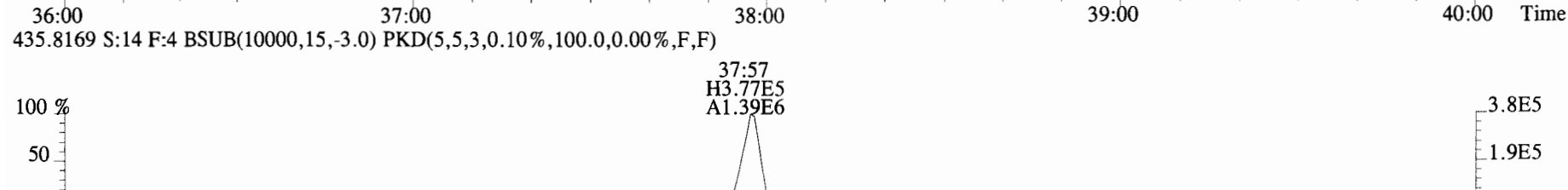
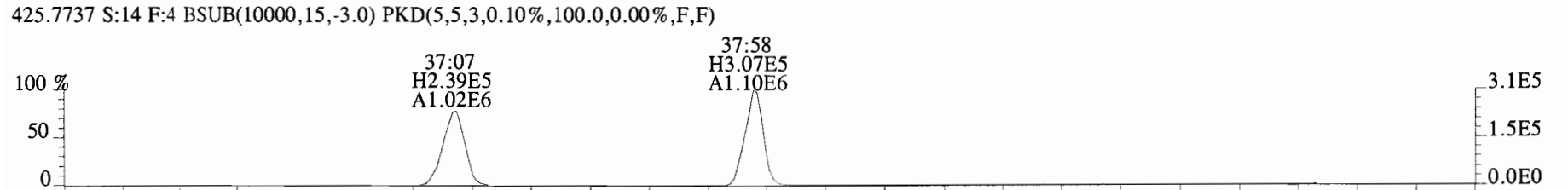
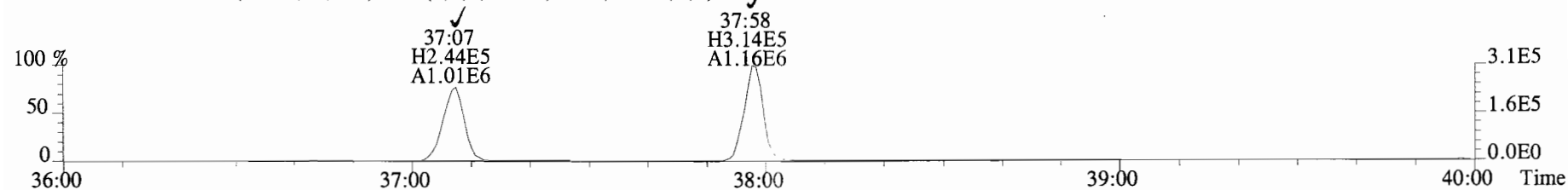
File:191024D2 #1-585 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text: Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
401.8559 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



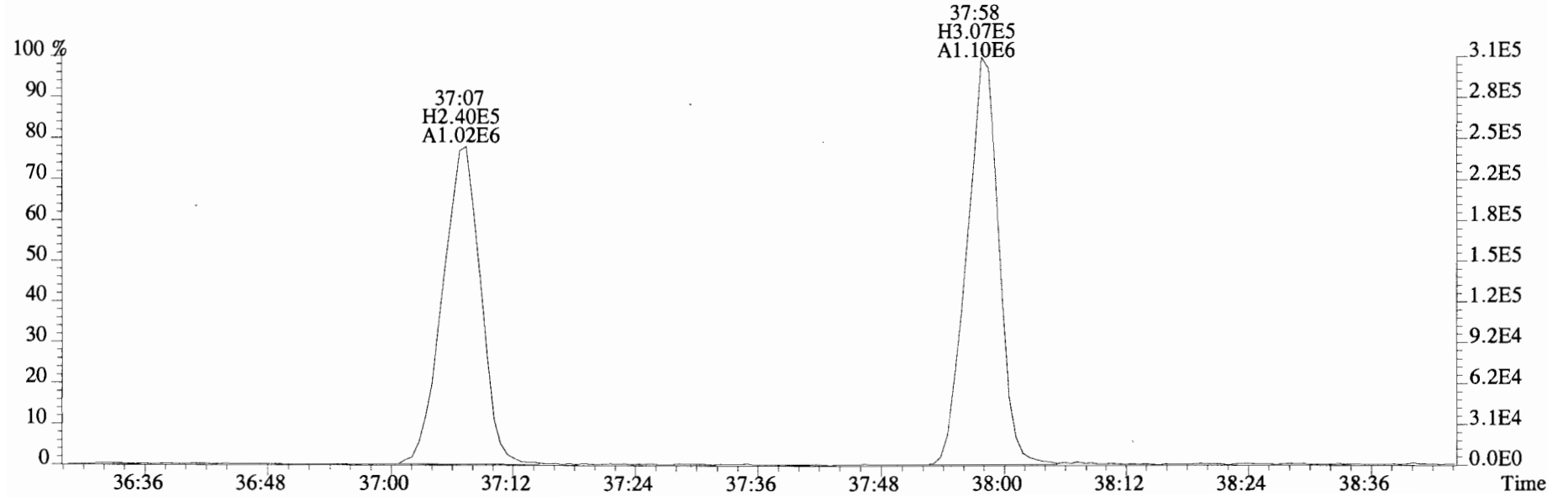
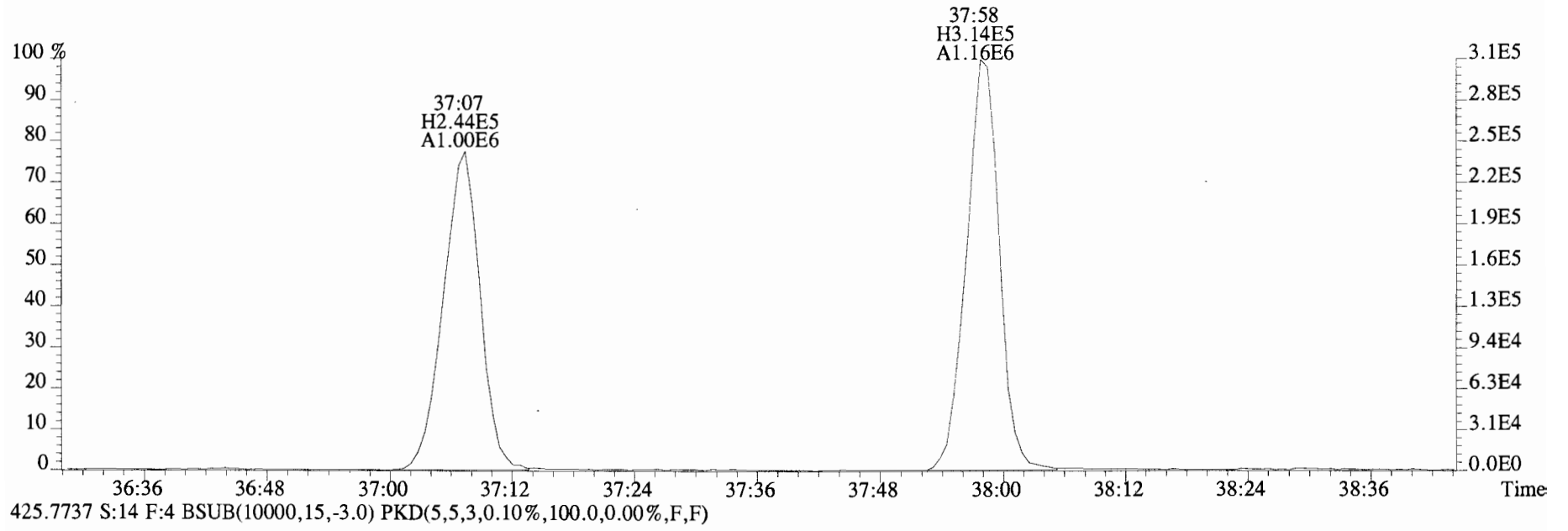
403.8530 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



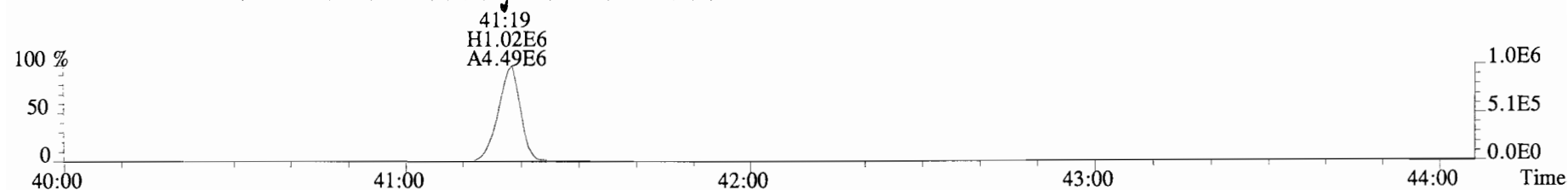
File:191024D2 #1-355 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
423.7767 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



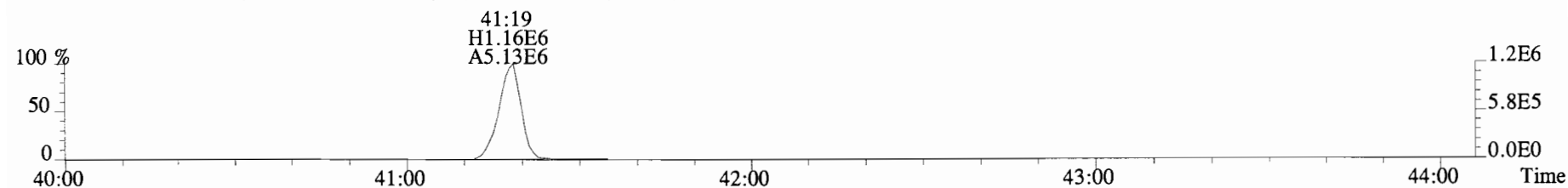
File:191024D2 #1-355 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
423.7767 S:14 F:4 BSUB(I0000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



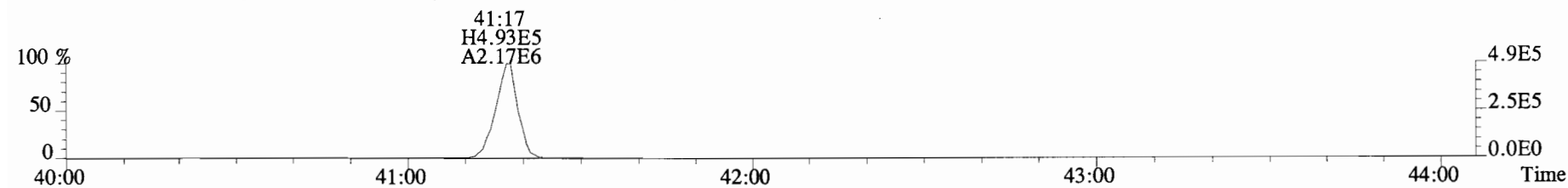
File:191024D2 #1-433 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
457.7377 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



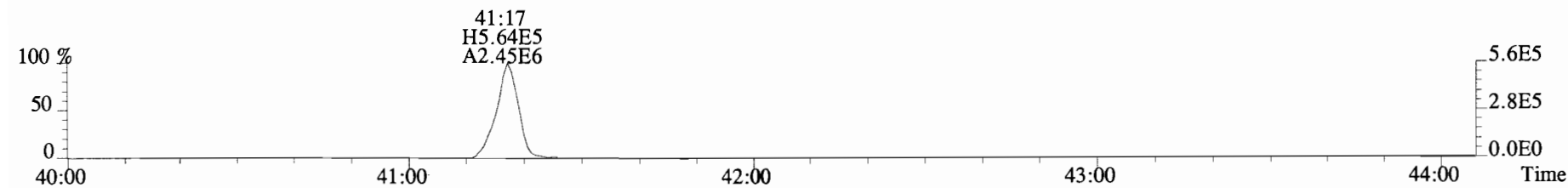
459.7348 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



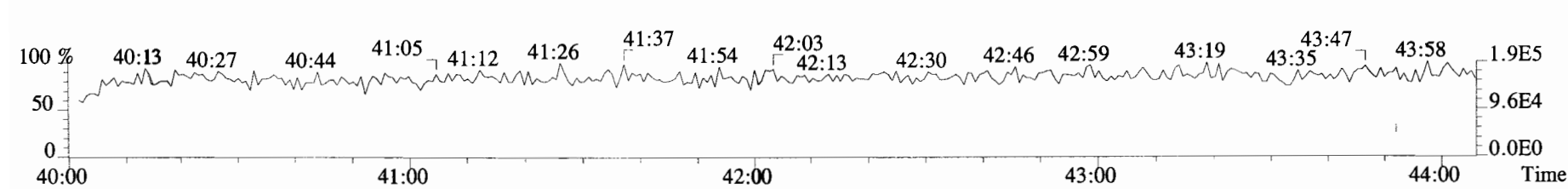
469.7780 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



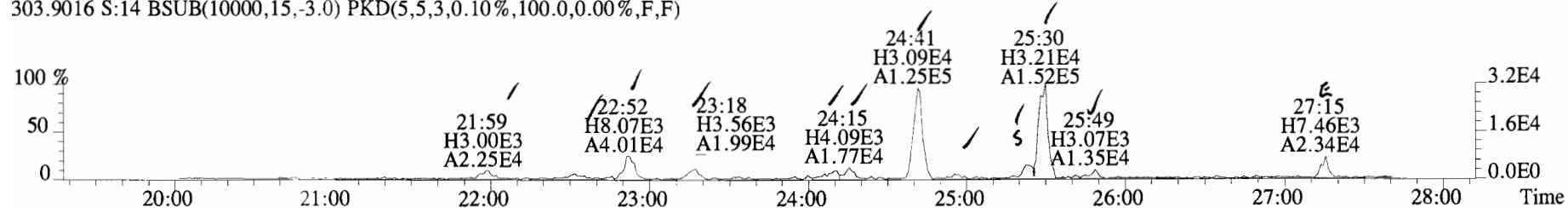
471.7750 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



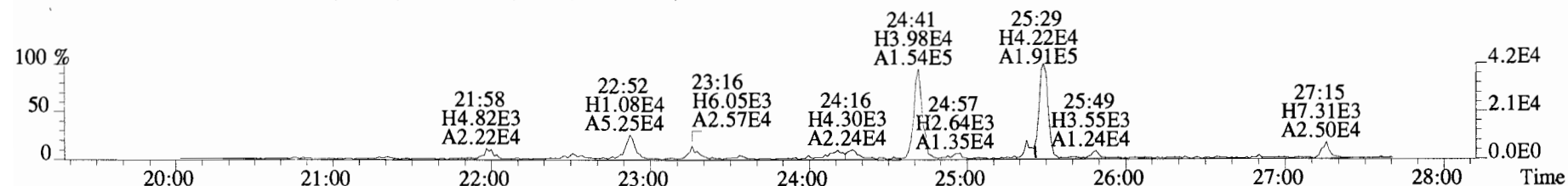
454.9728 S:14 F:5



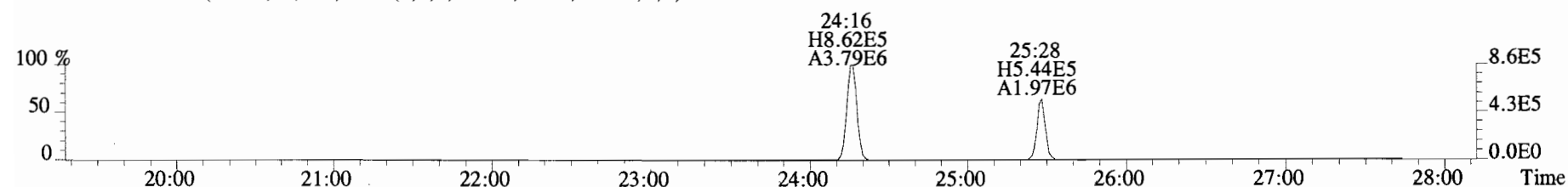
File:191024D2 #1-493 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
 303.9016 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



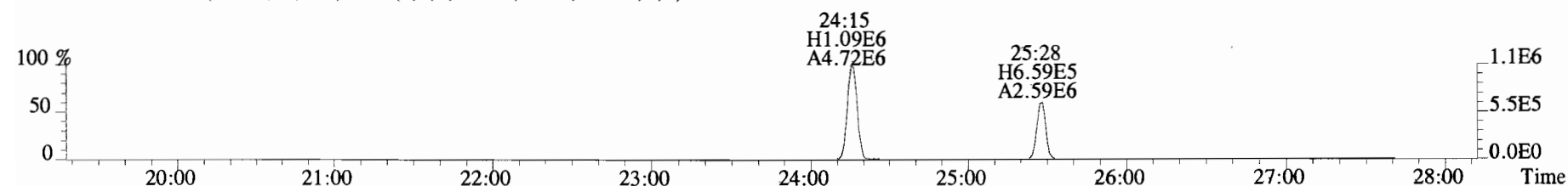
305.8987 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



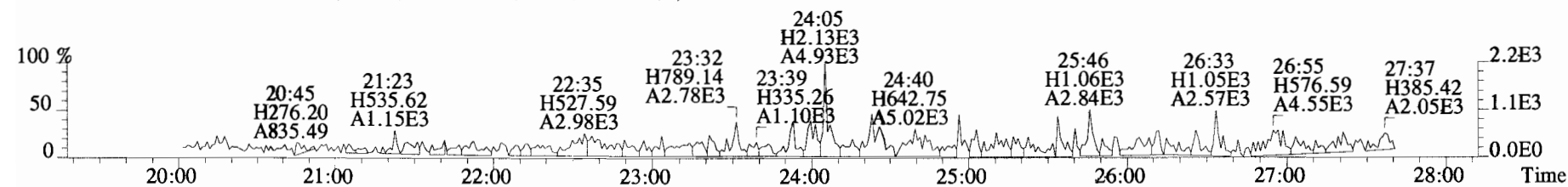
315.9419 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



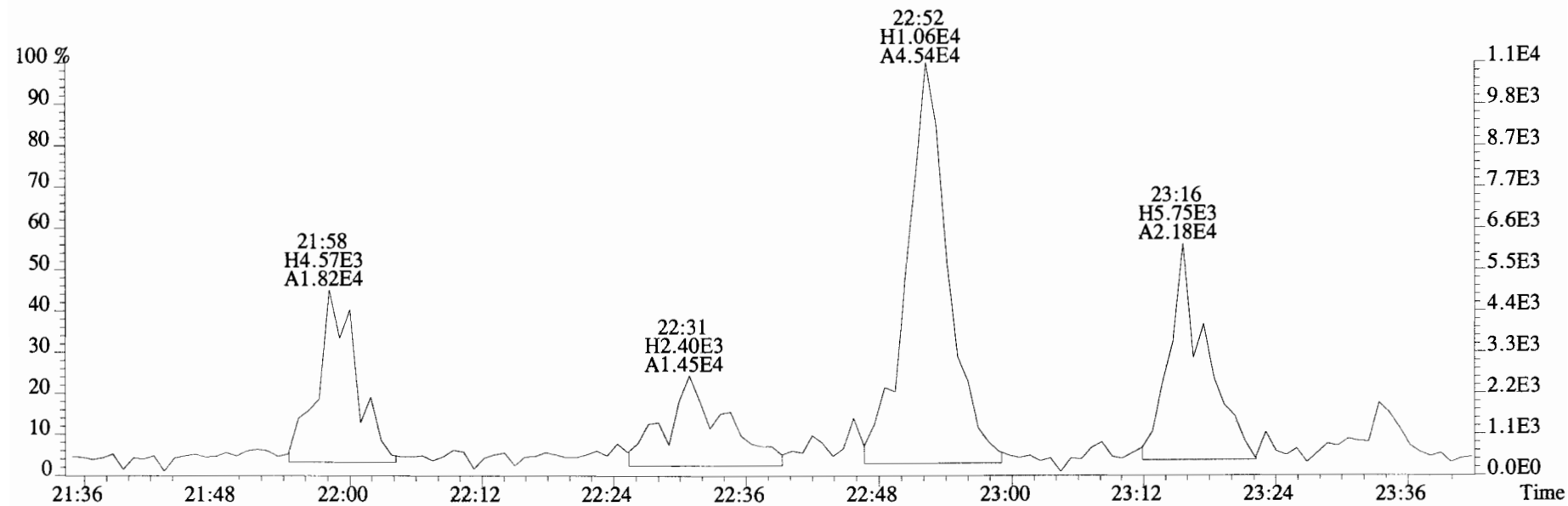
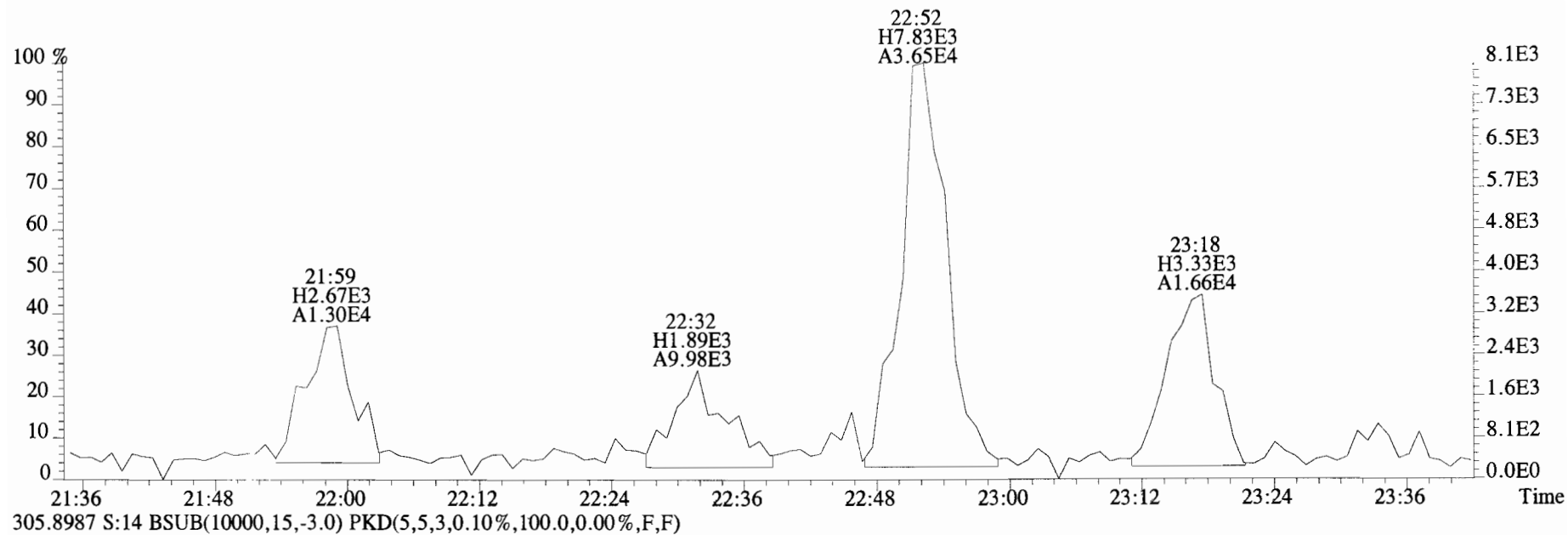
317.9389 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



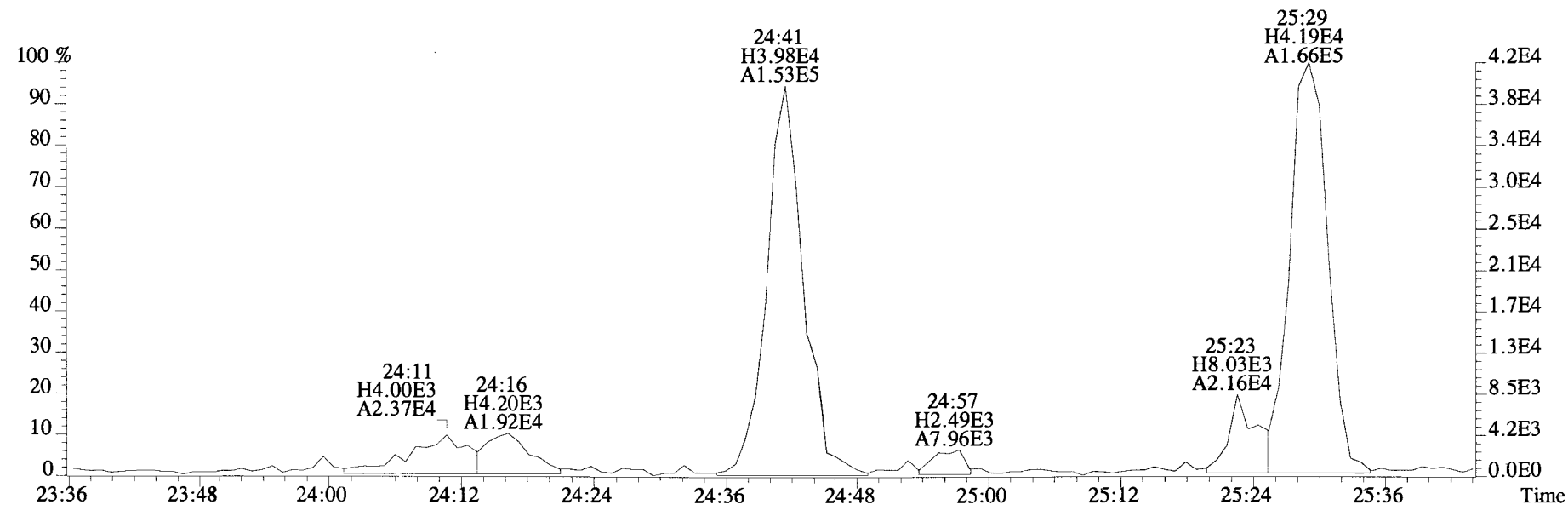
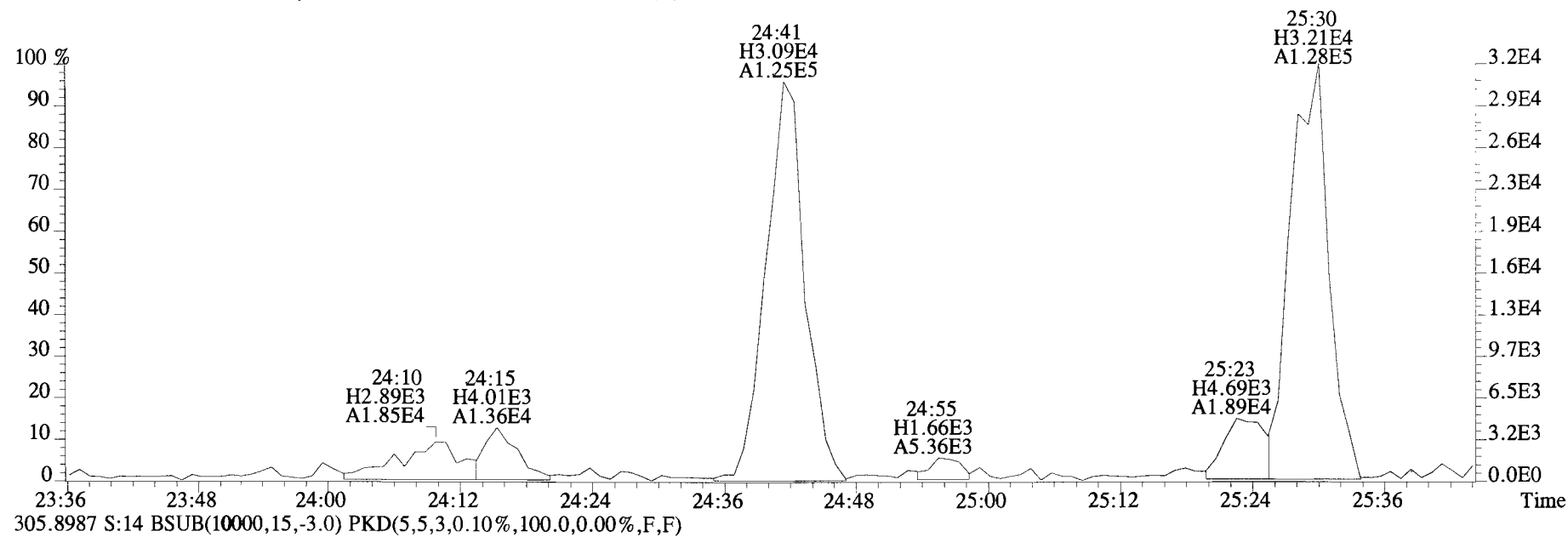
375.8364 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



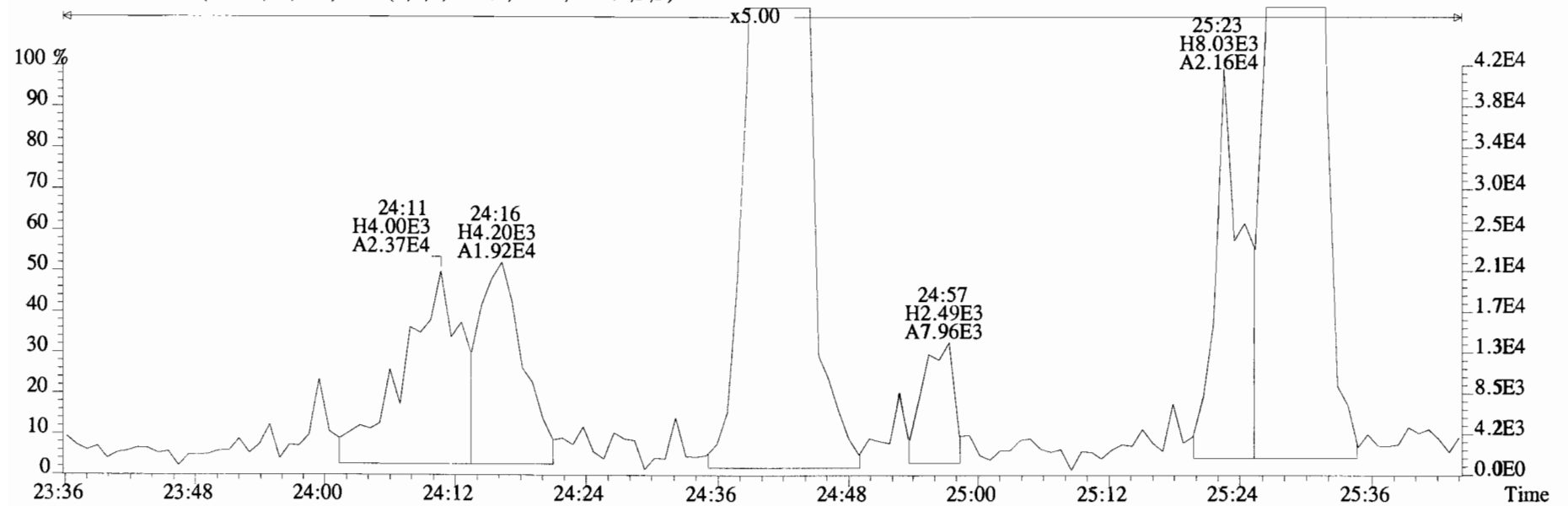
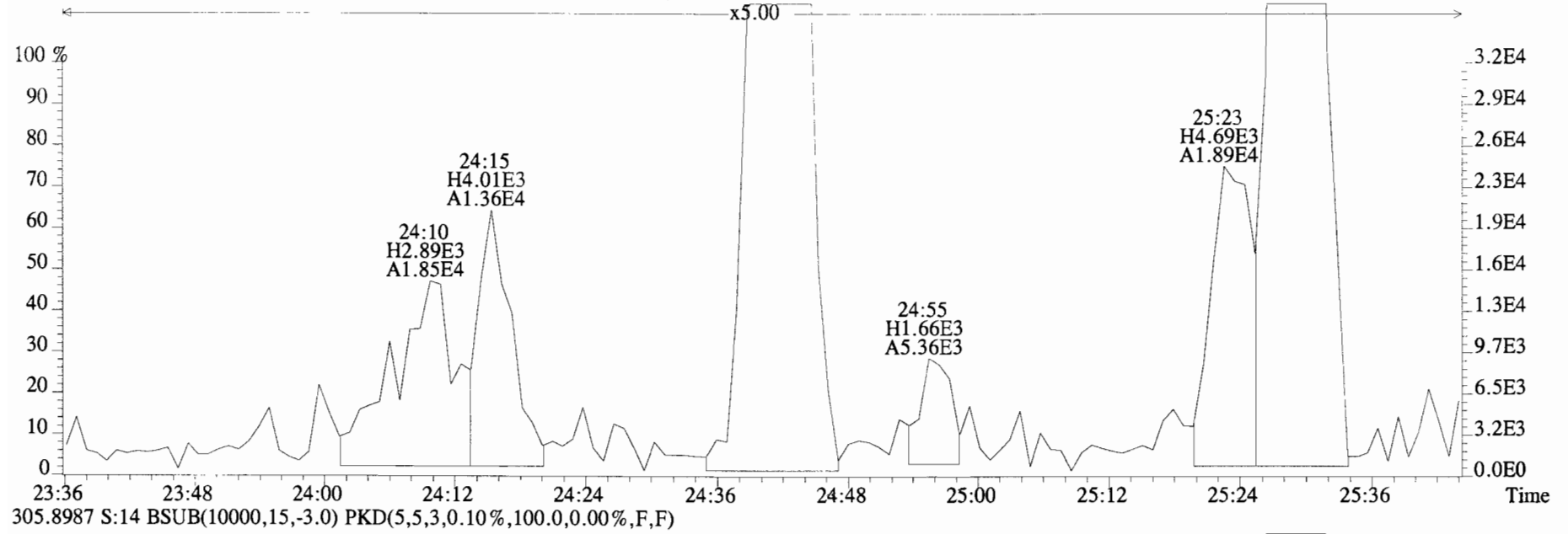
File:191024D2 #1-493 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text: Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
303.9016 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



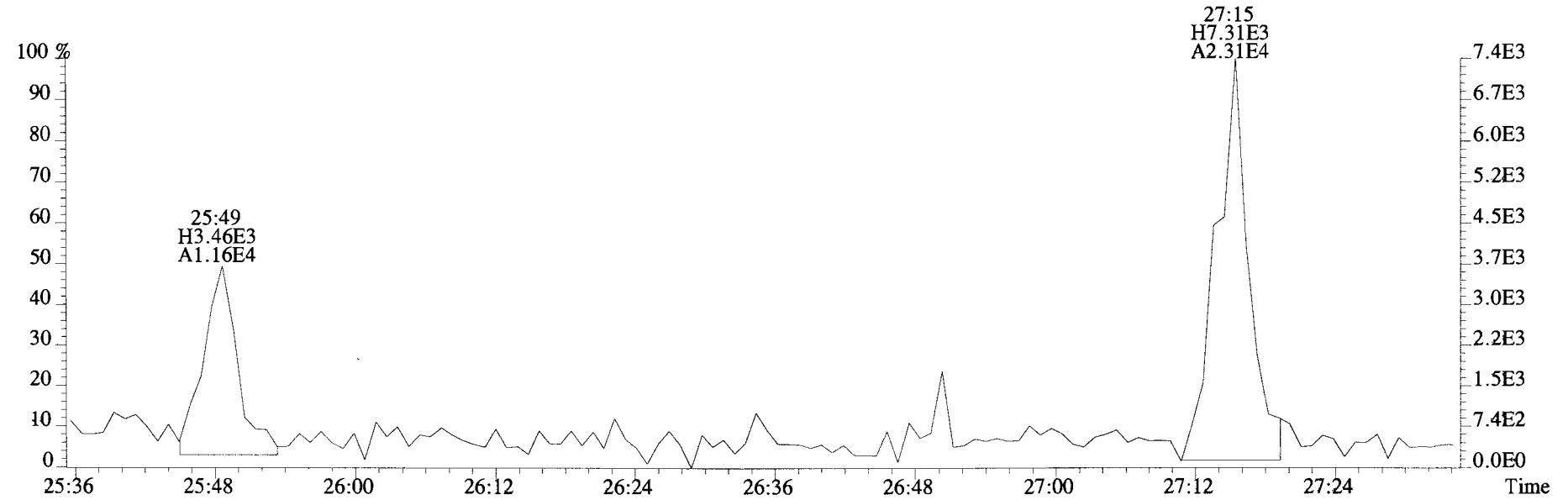
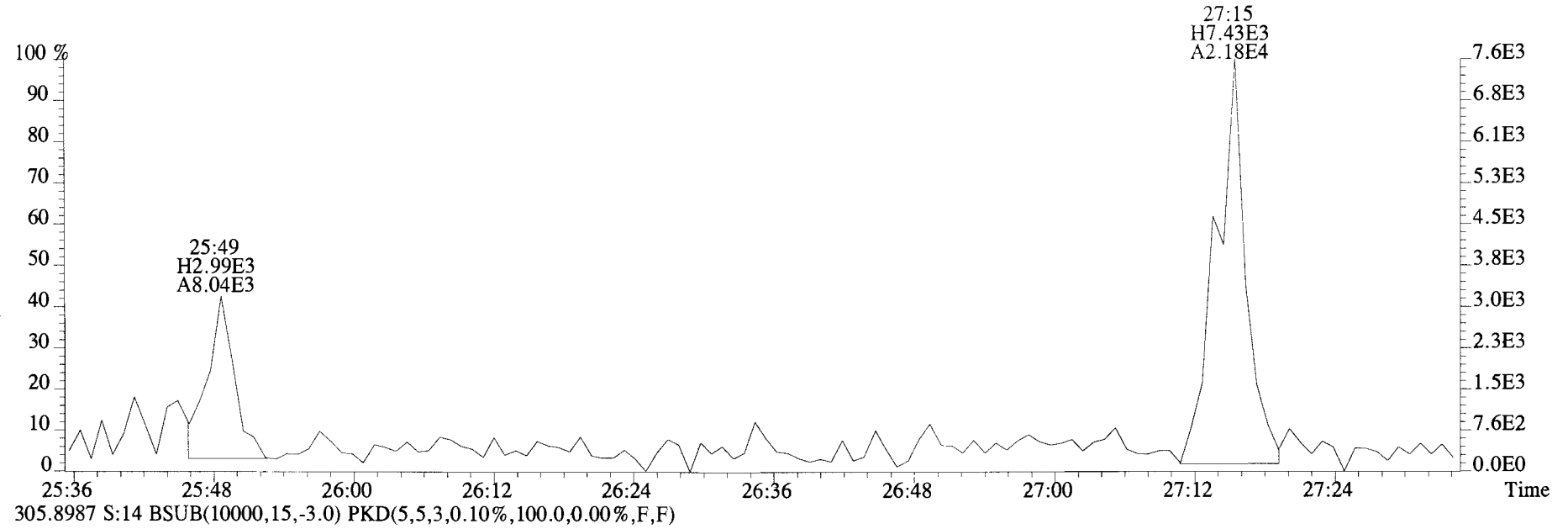
File:191024D2 #1-493 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
 303.9016 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



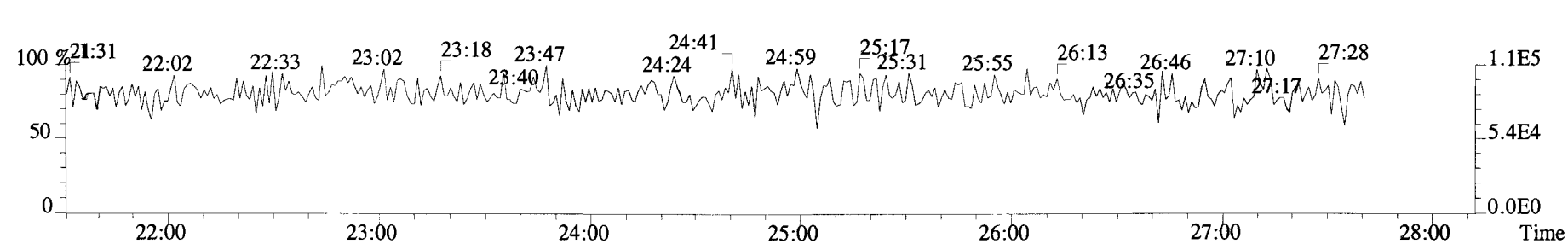
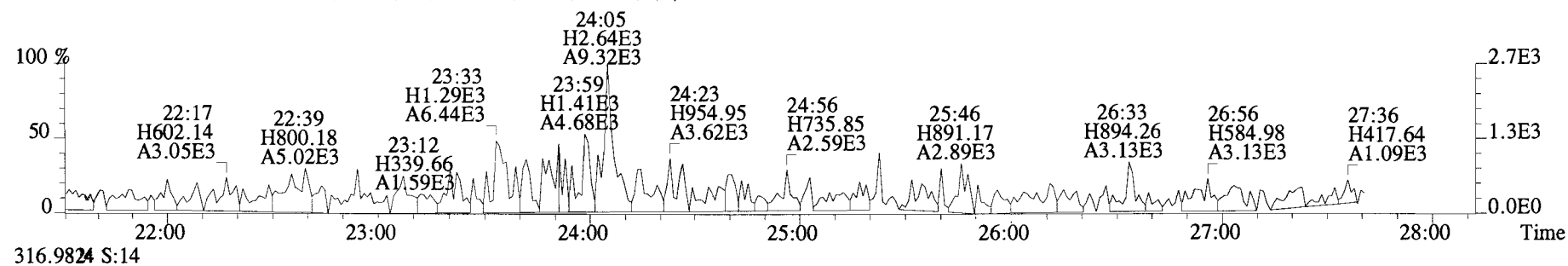
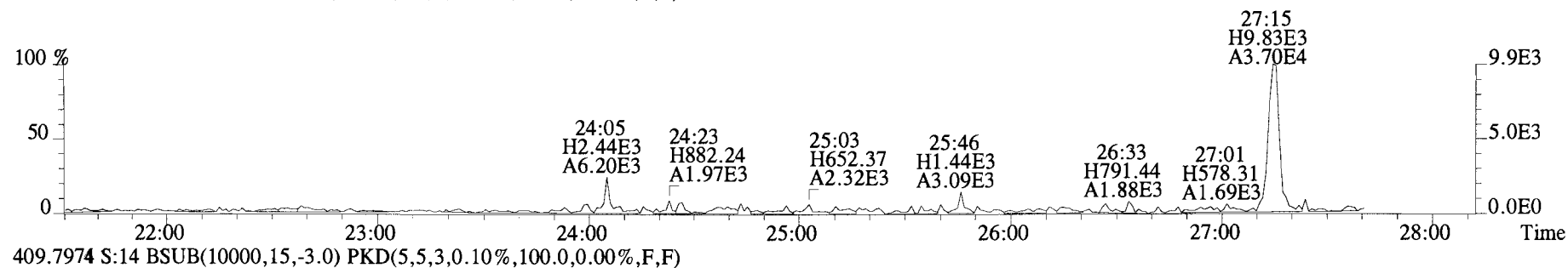
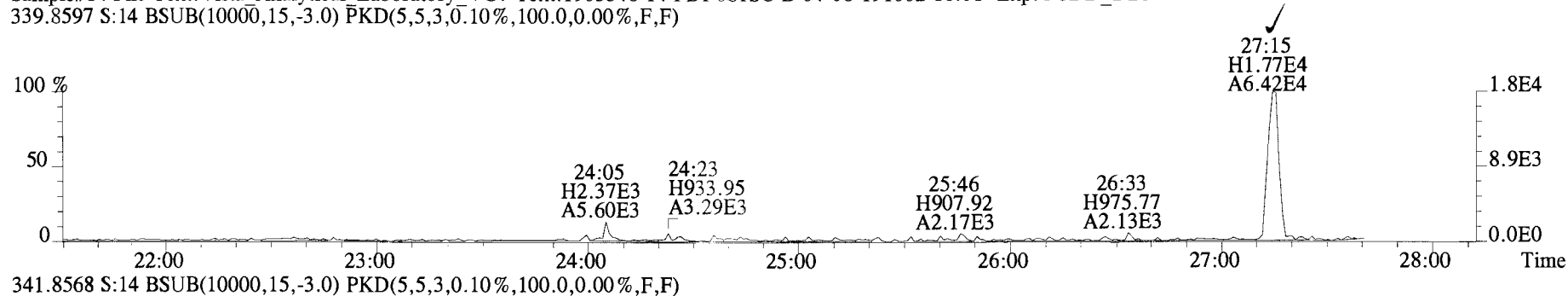
File:191024D2 #1-493 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text: Vista Analytical Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
303.9016 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



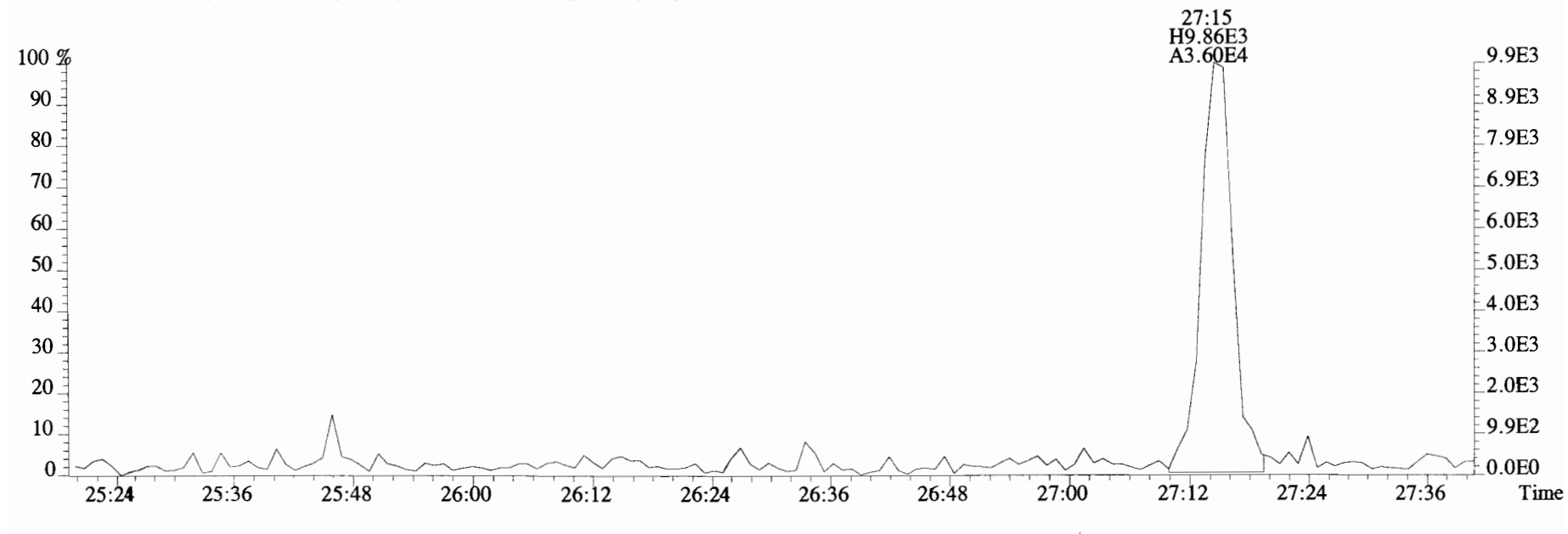
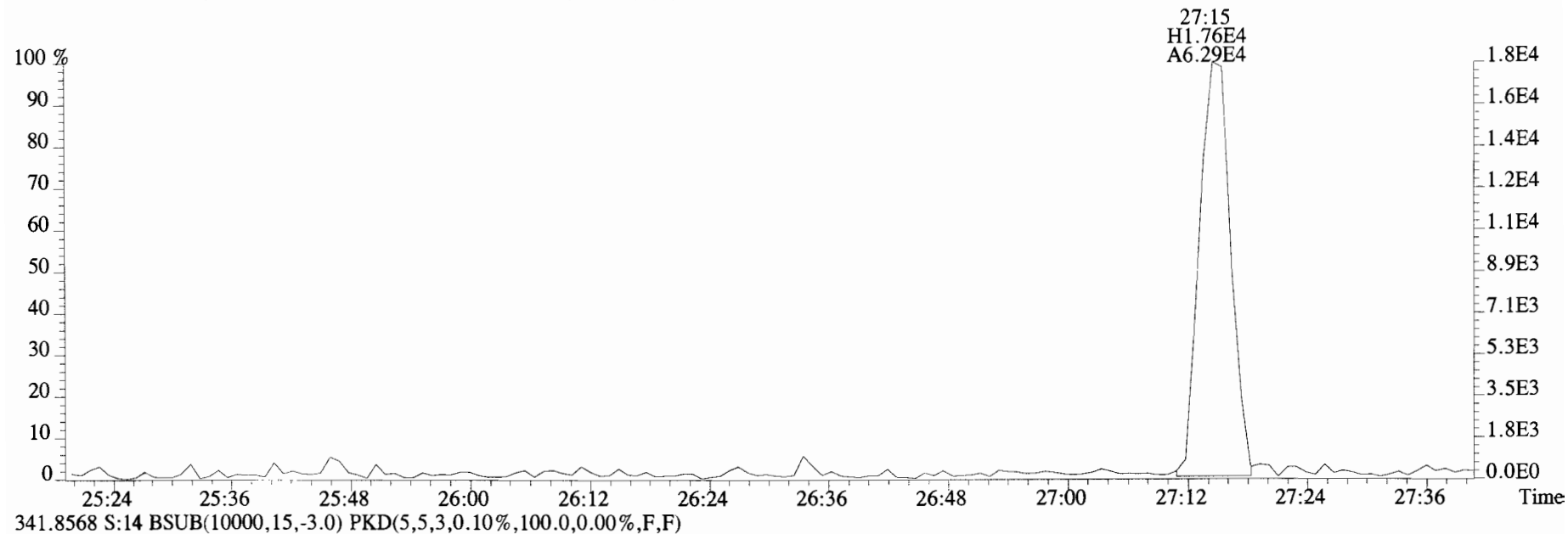
File:191024D2 #1-493 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
303.9016 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



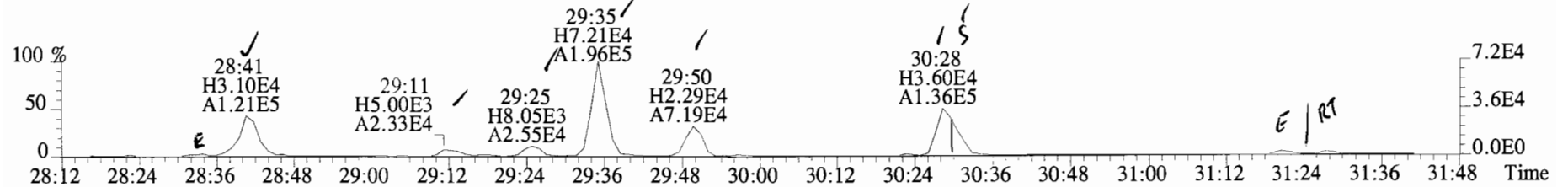
File:191024D2 #1-493 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PD1-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
 339.8597 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



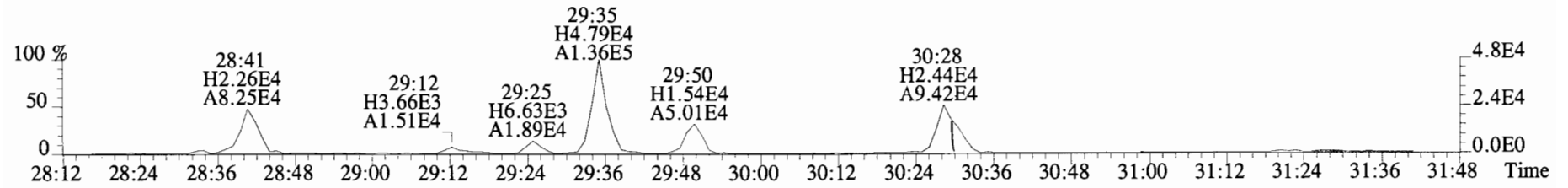
File:191024D2 #1-493 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
339.8597 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



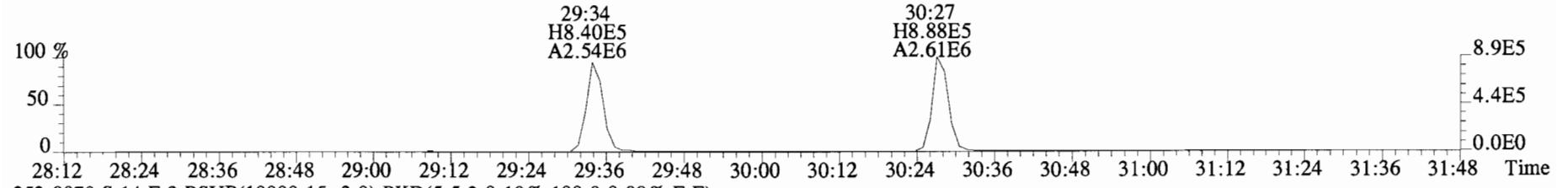
File:191024D2 #1-211 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
339.8597 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



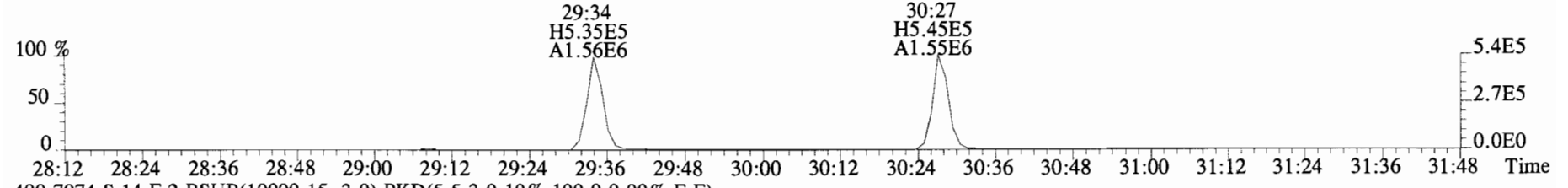
341.8568 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



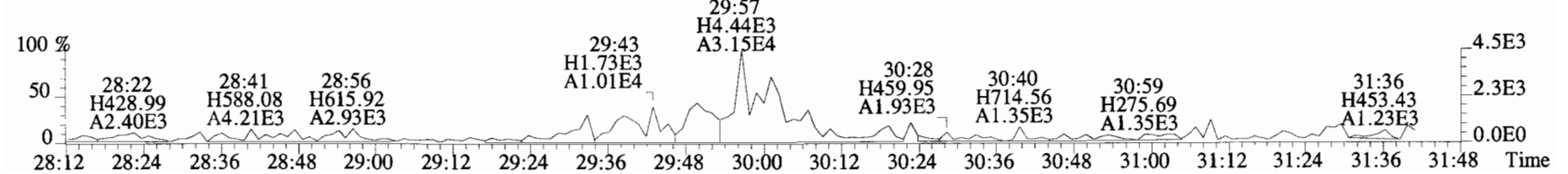
351.9000 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



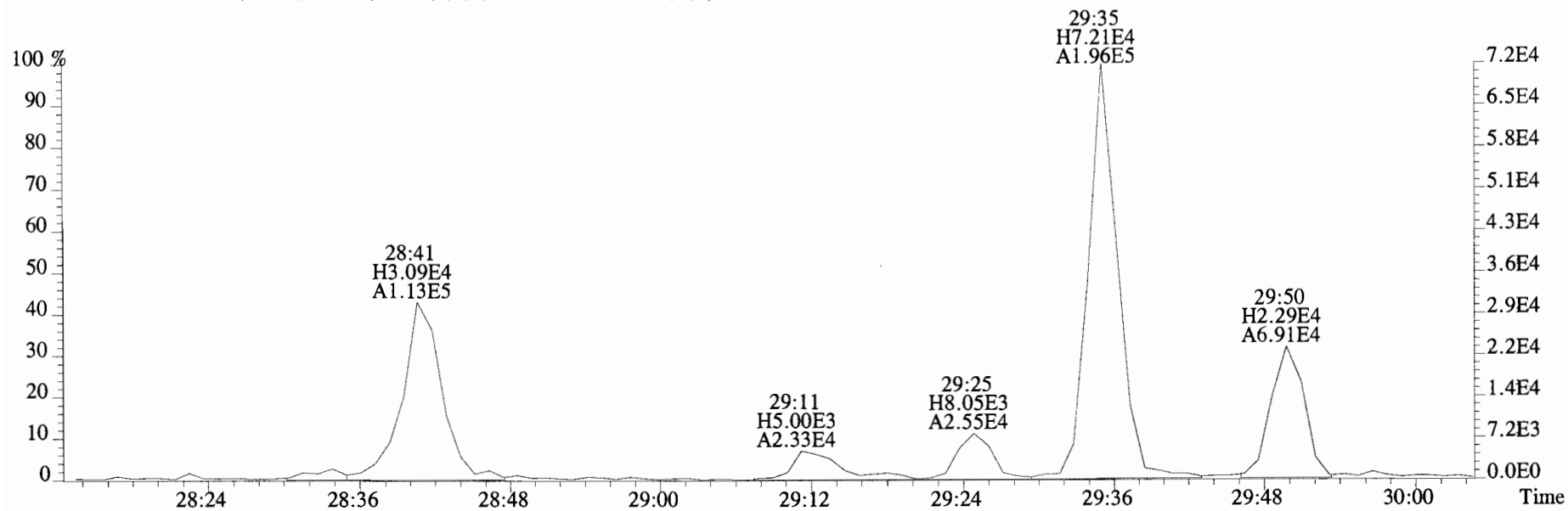
353.8970 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



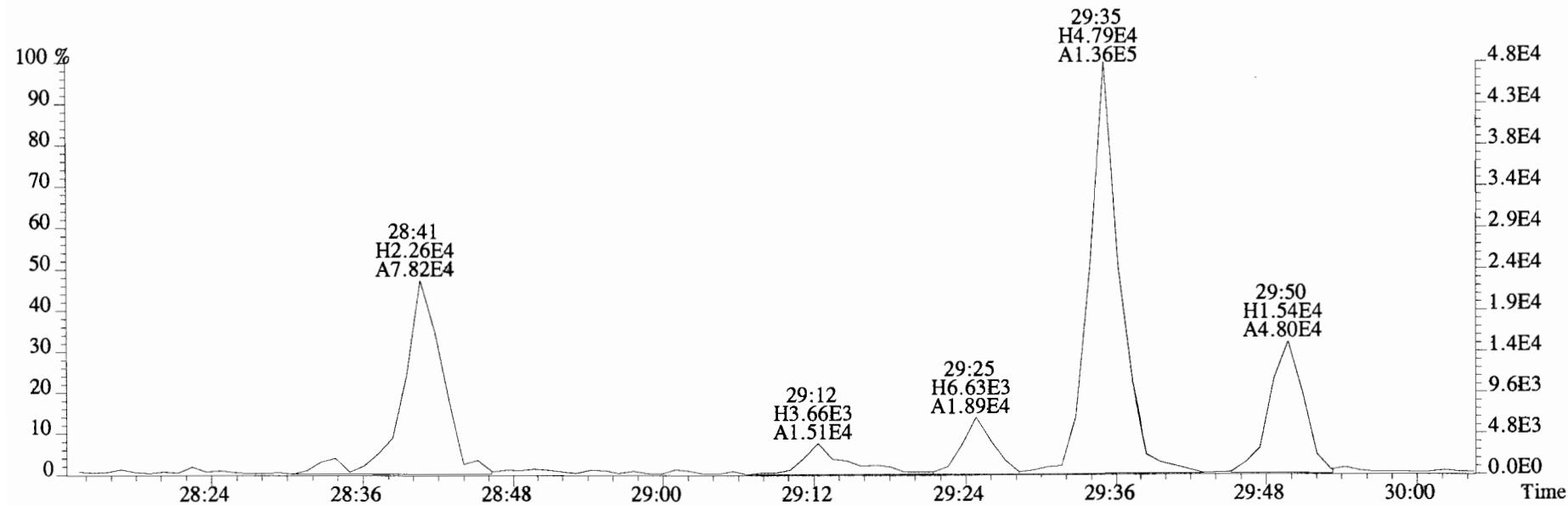
409.7974 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



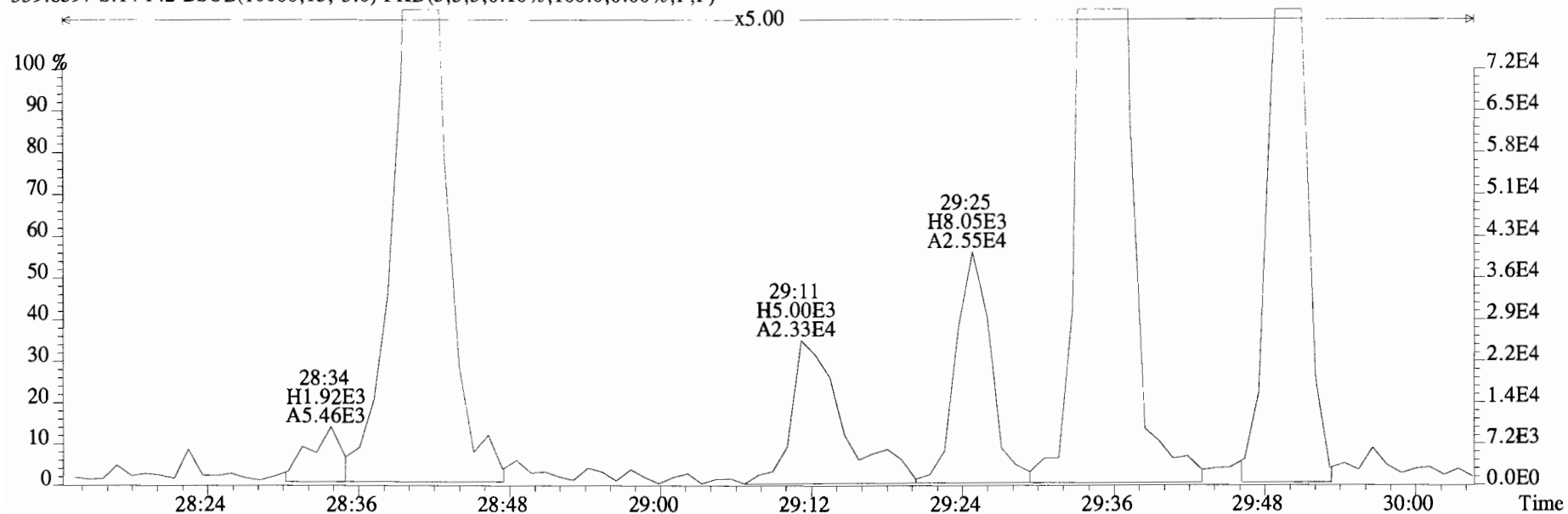
File:191024D2 #1-211 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
 339.8597 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



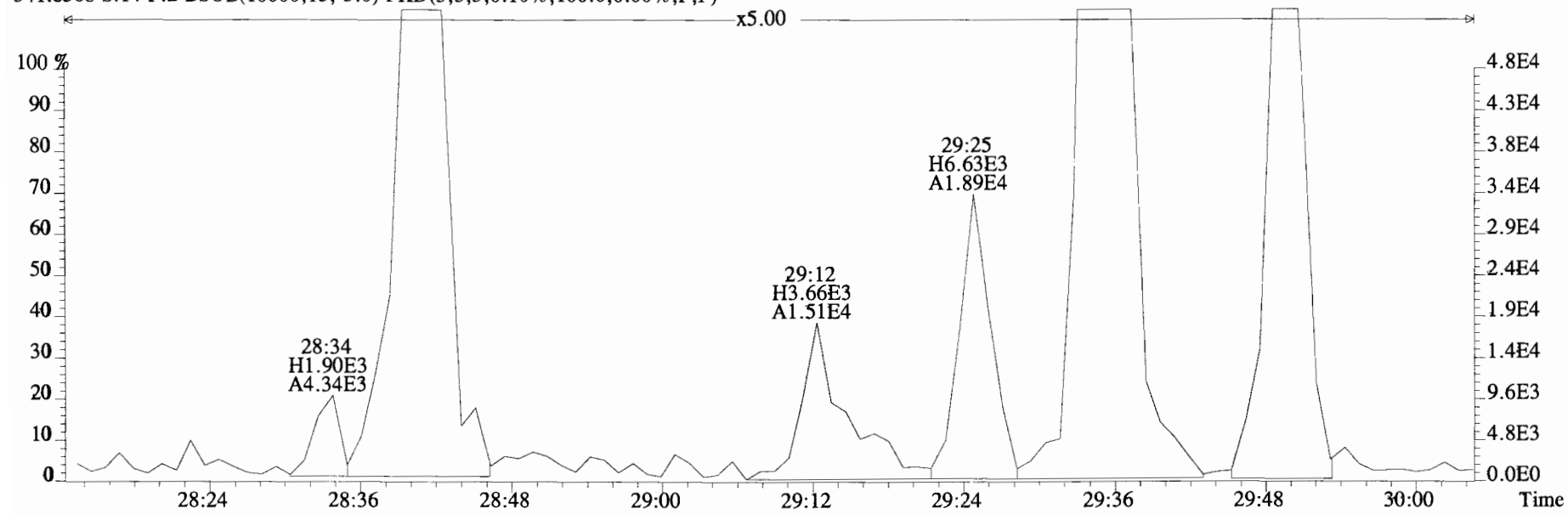
341.8568 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



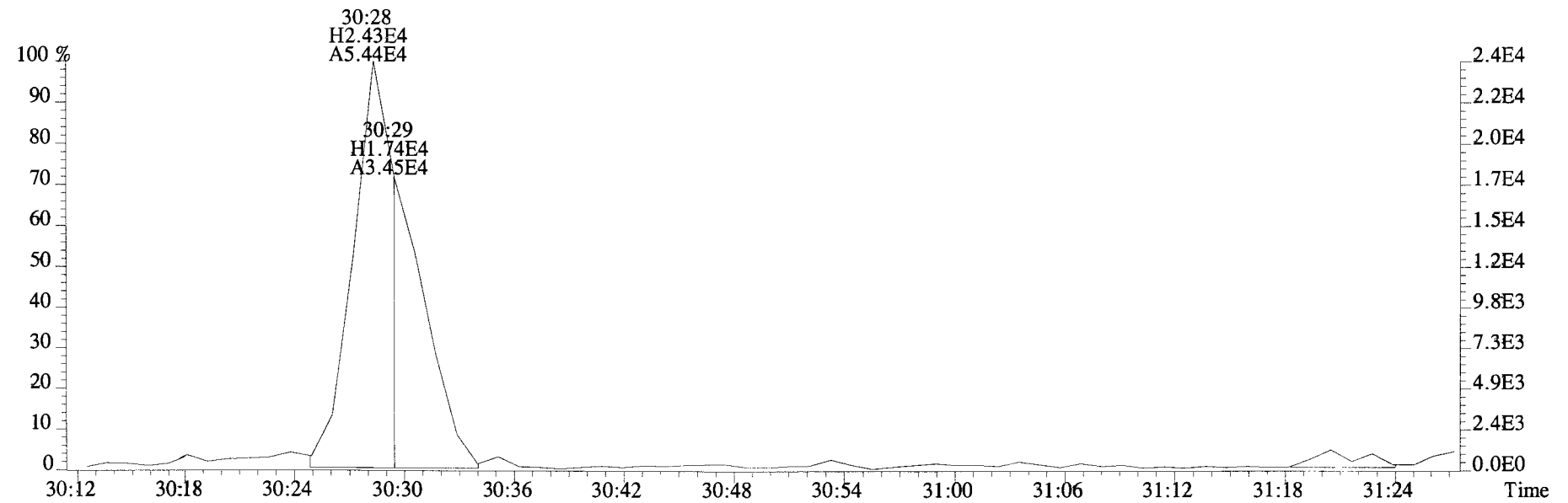
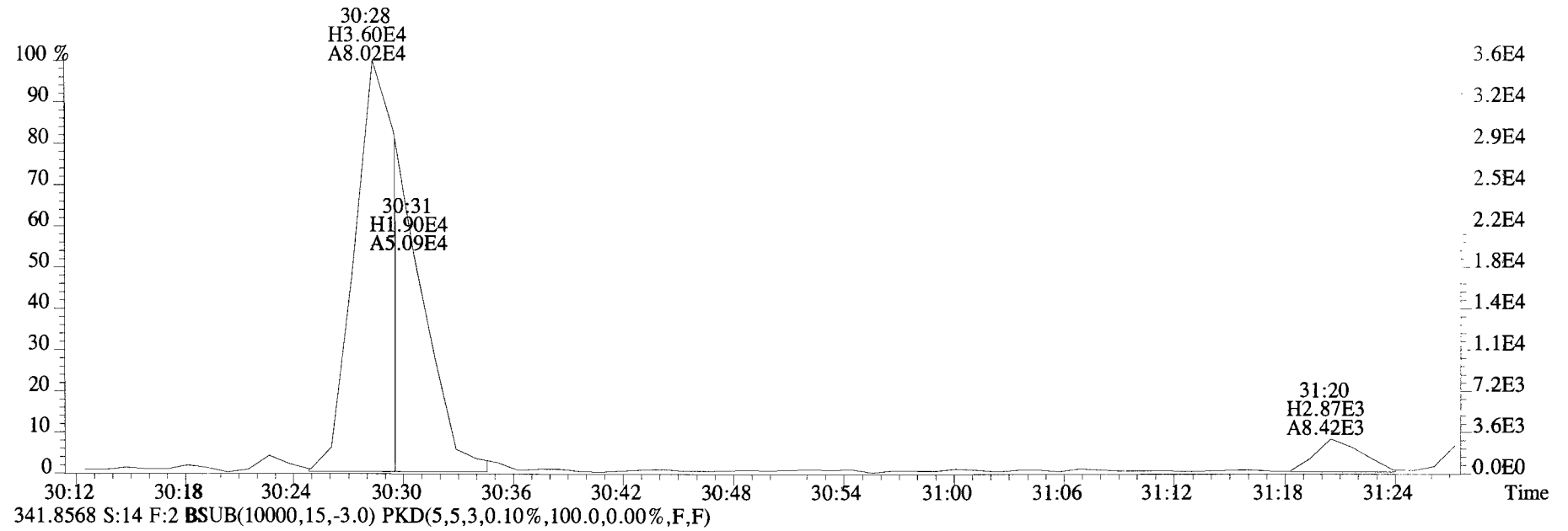
File:191024D2 #1-211 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
339.8597 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



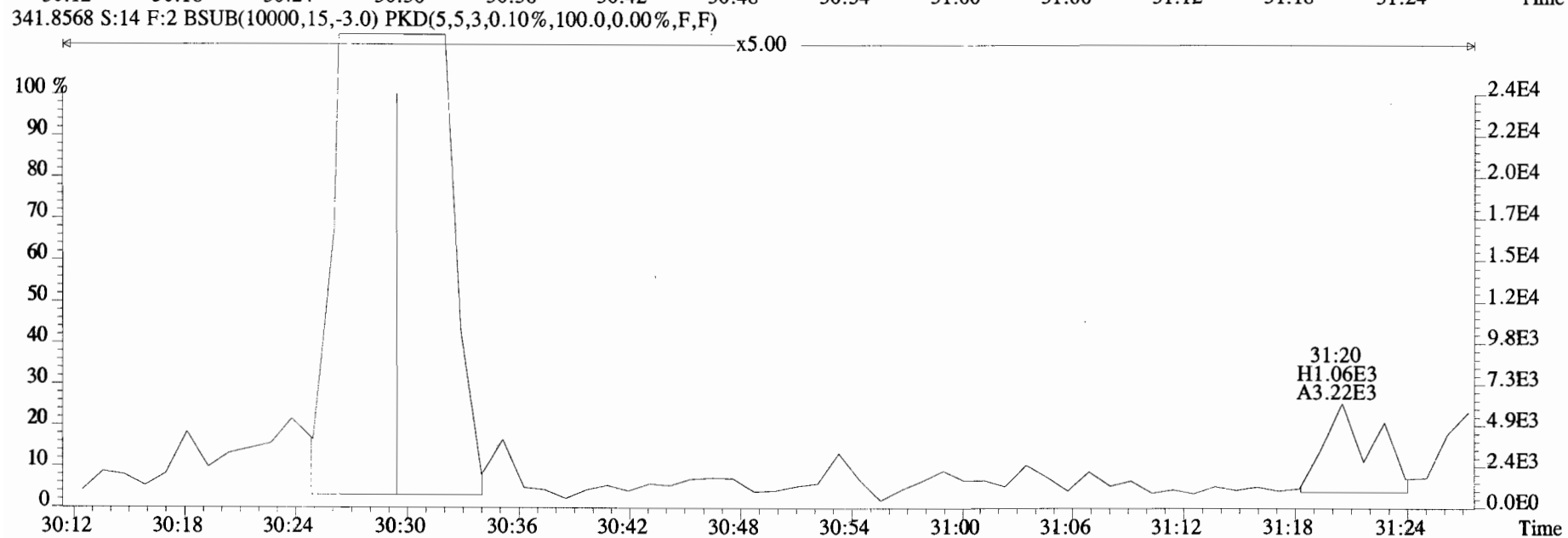
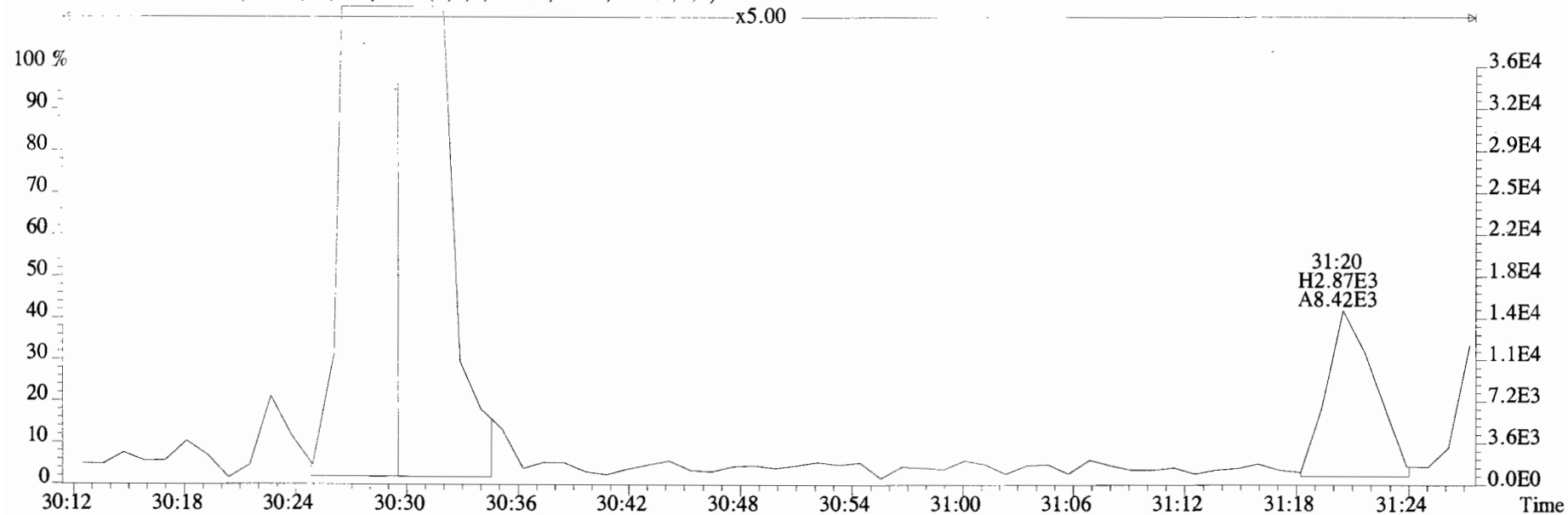
341.8568 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



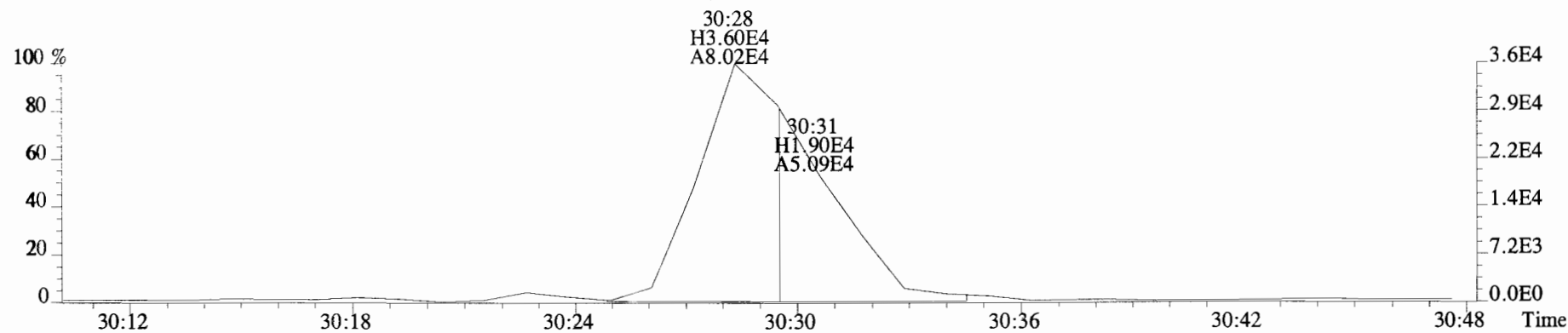
File:191024D2 #1-211 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
339.8597 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



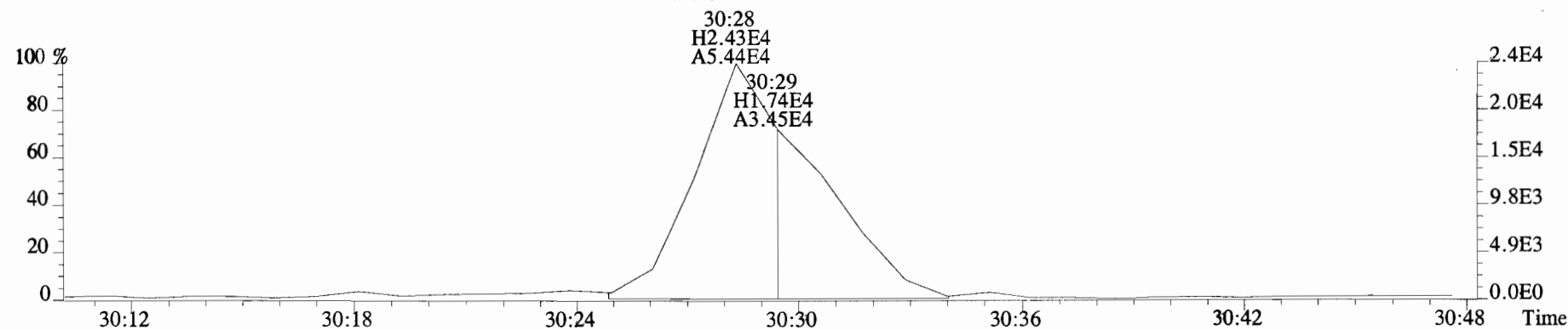
File:191024D2 #1-211 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
339.8597 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



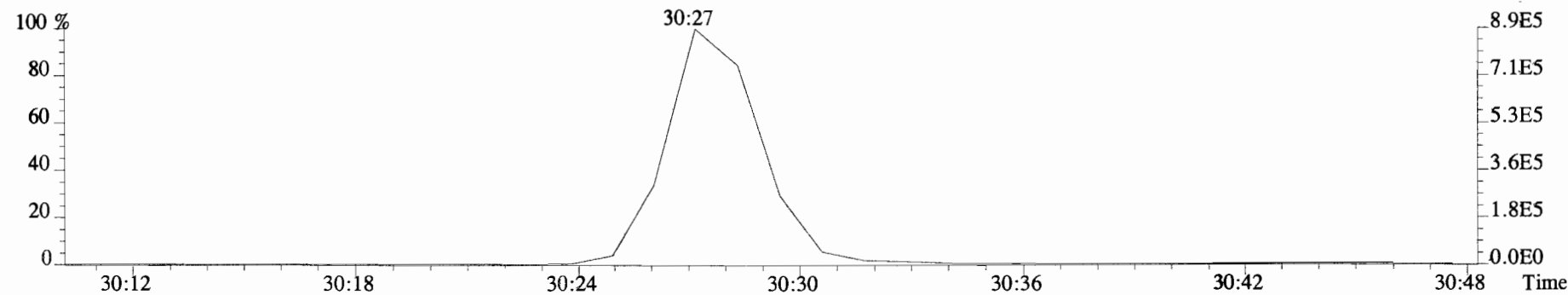
File: 191024D2 #1-211 Acq: 25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text: Vista Analytical Laboratory VG7 Text: 1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp: OCDD_DB5
339.8597 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



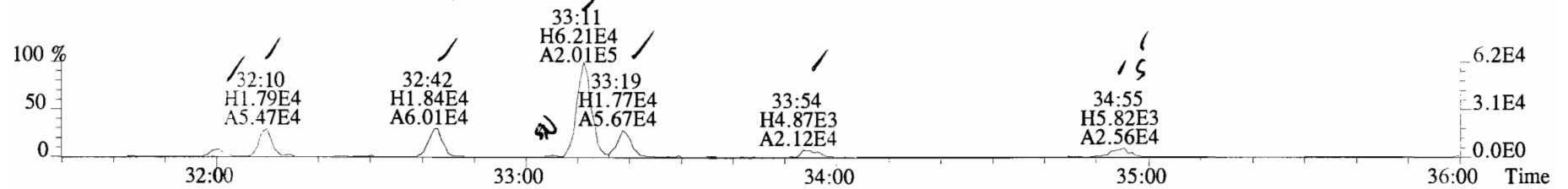
341.8568 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



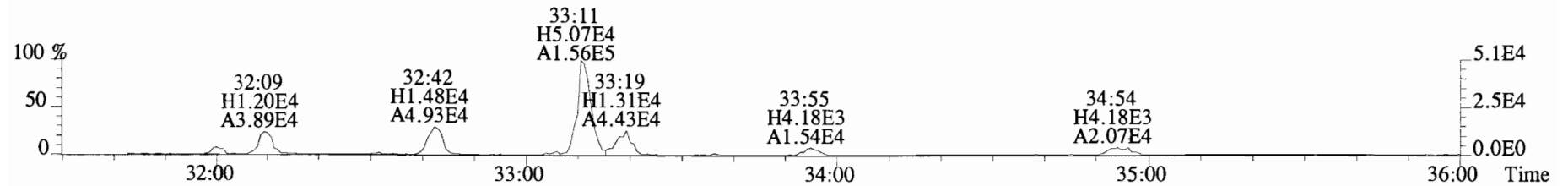
351.9000 S:14 F:2



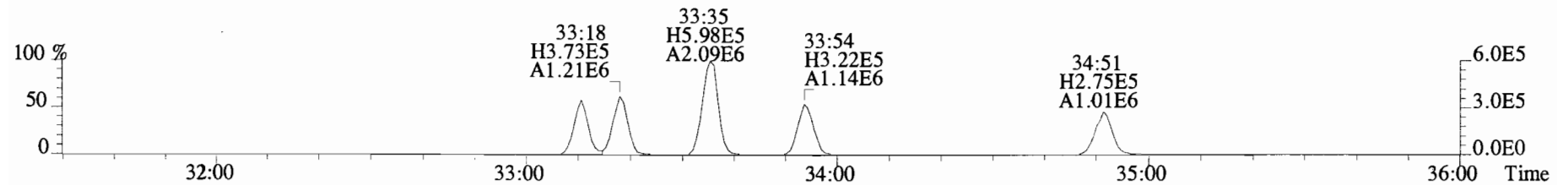
File:191024D2 #1-385 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
373.8207 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



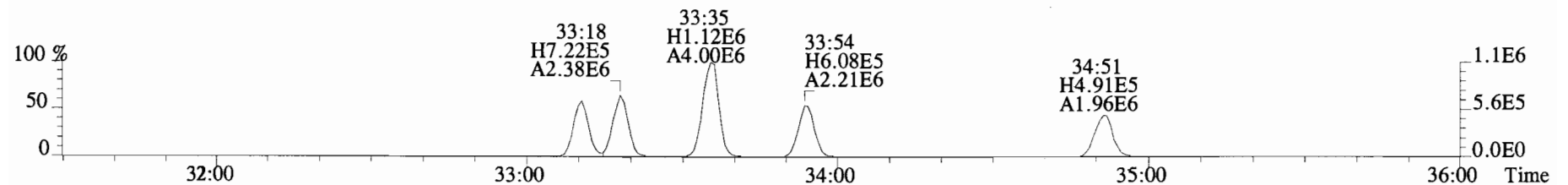
375.8178 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



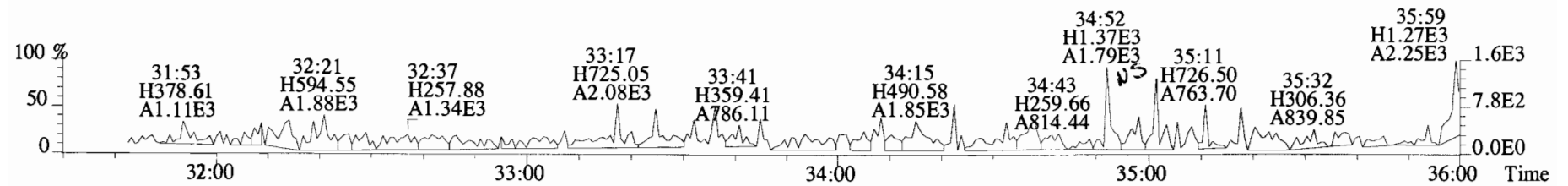
383.8639 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



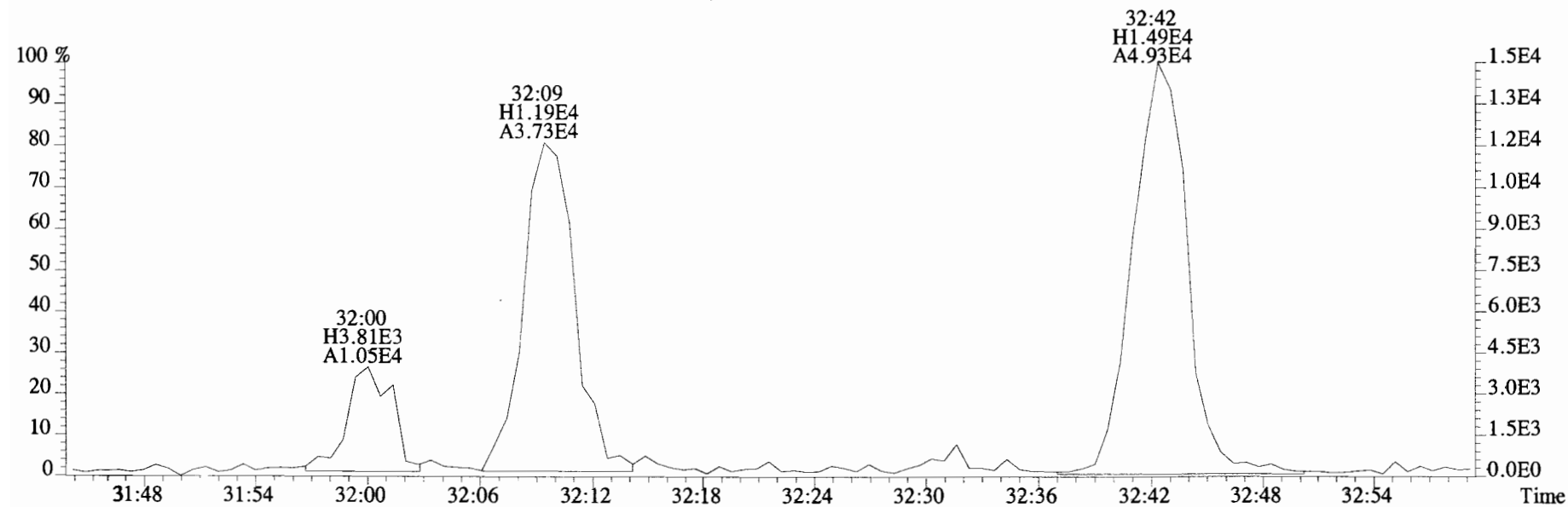
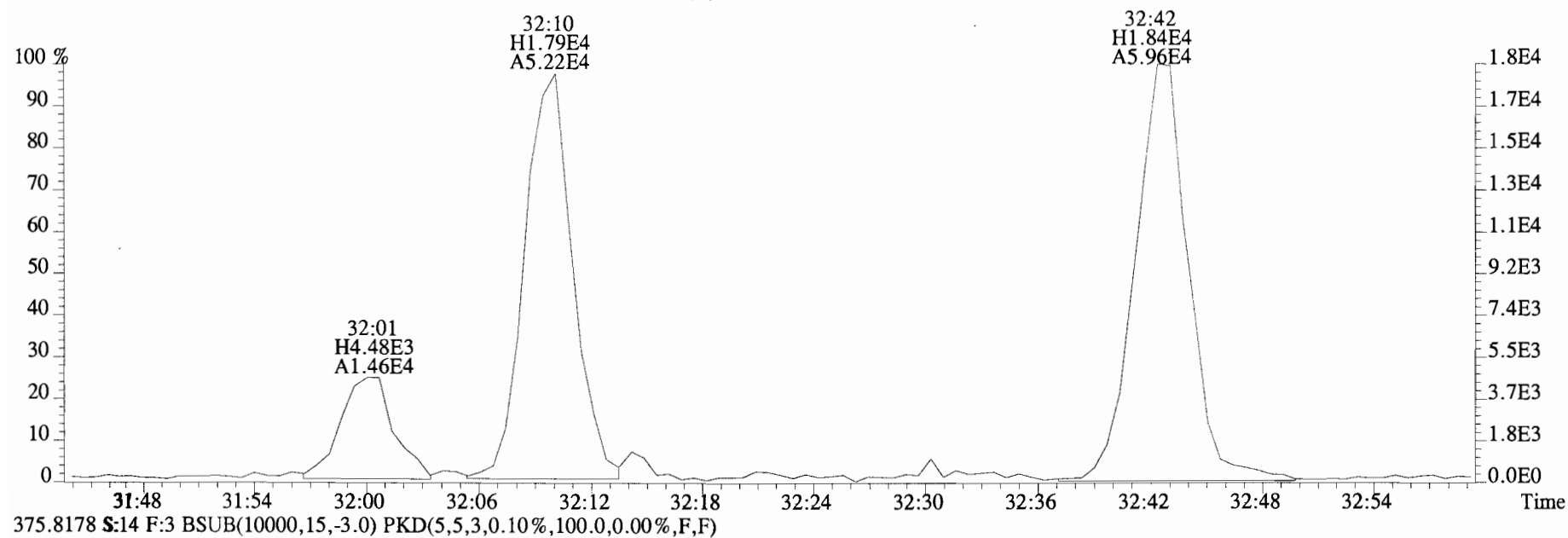
385.8610 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



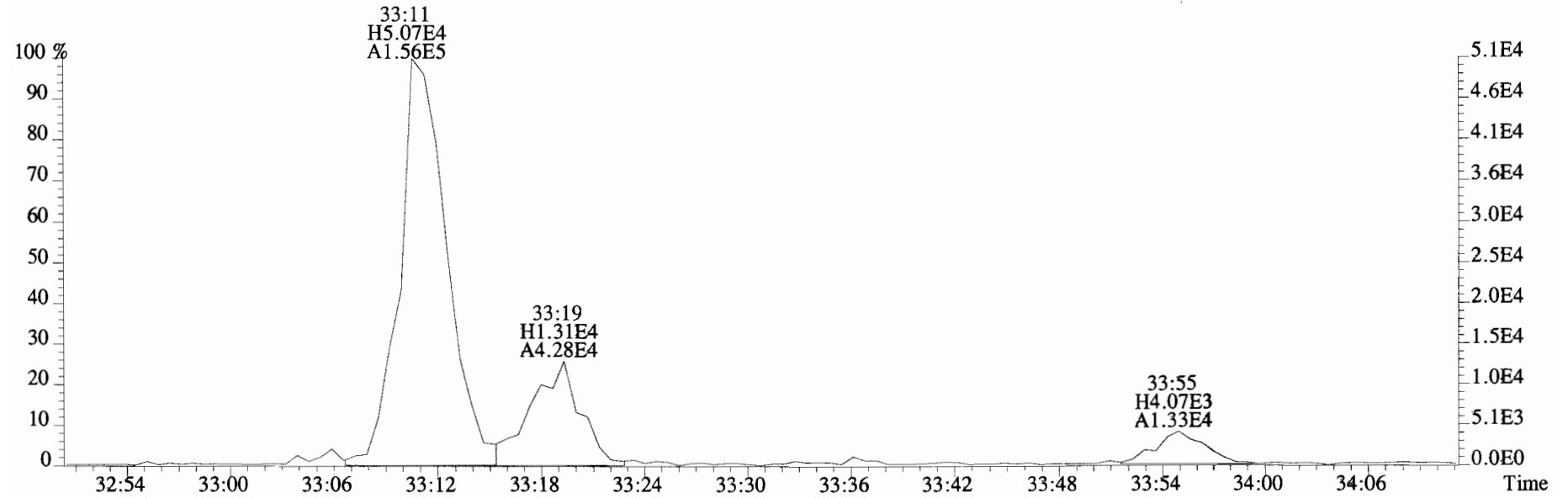
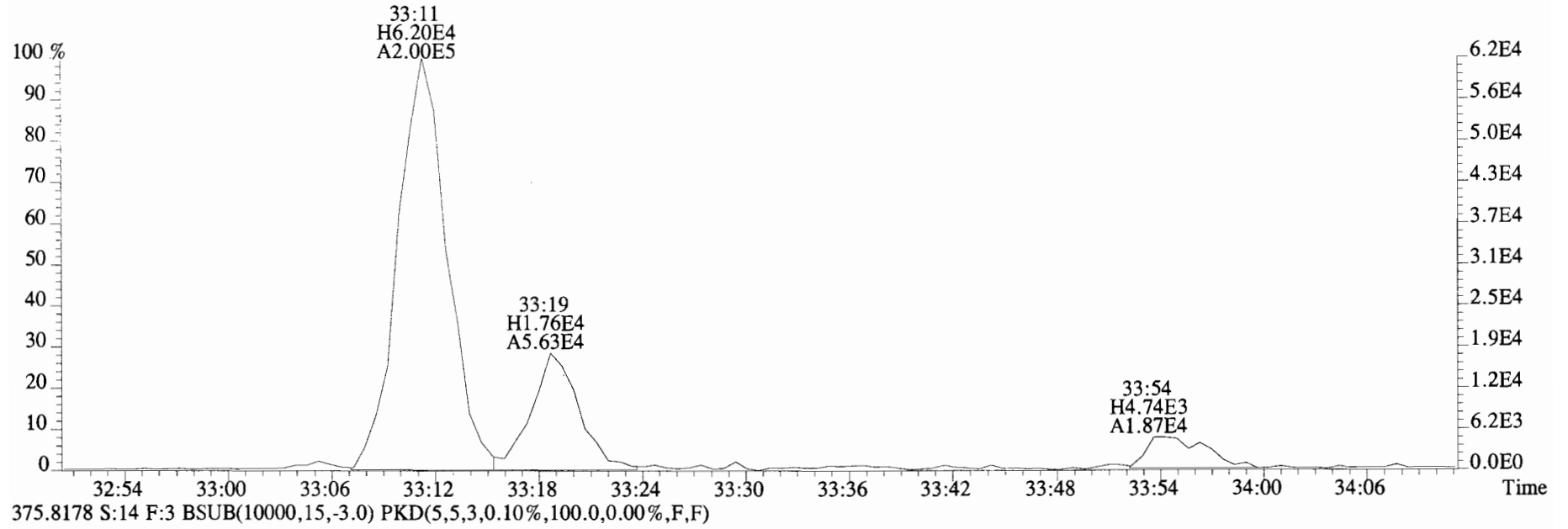
445.7555 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



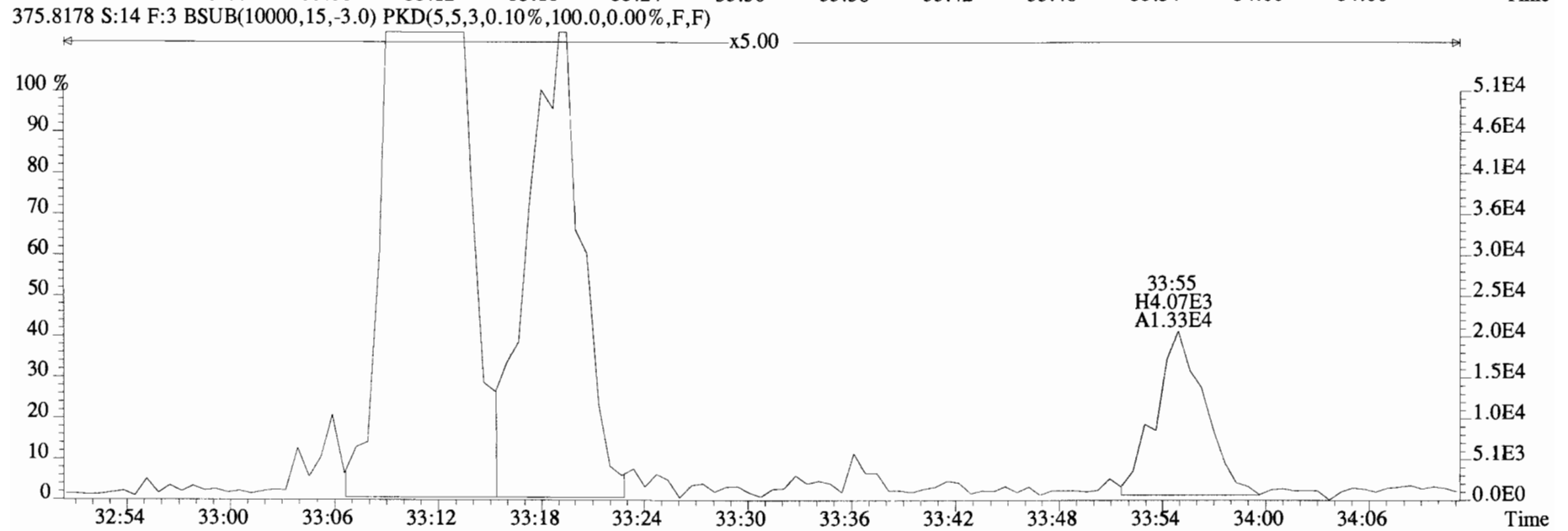
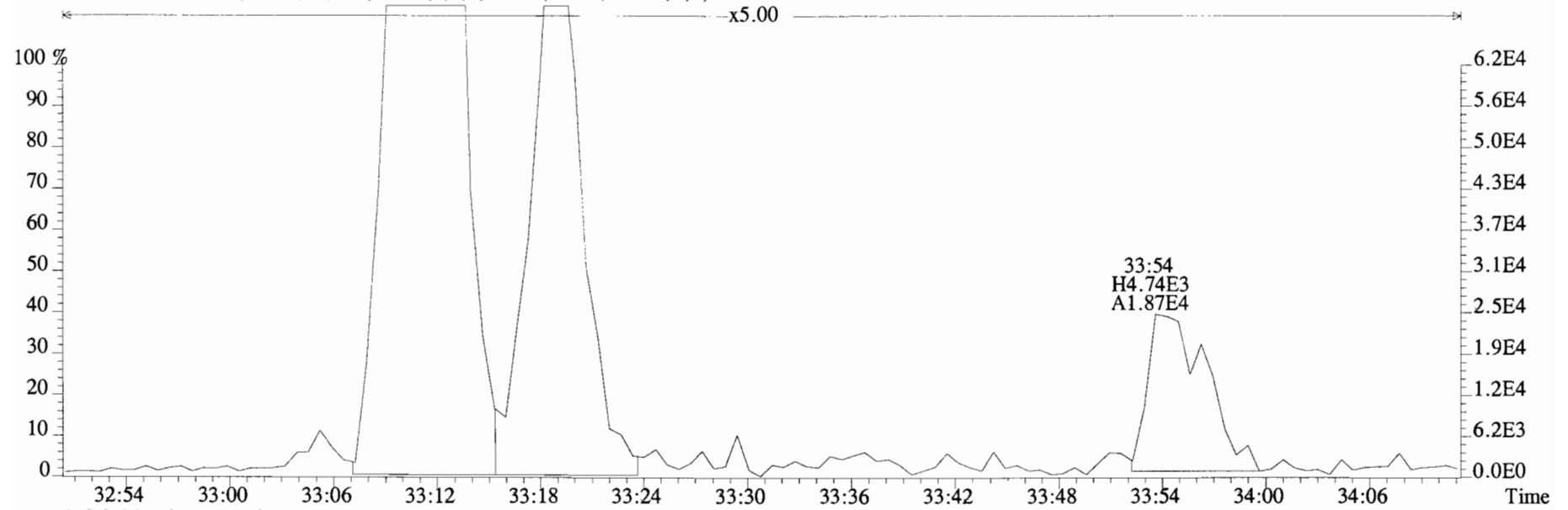
File:191024D2 #1-385 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
373.8207 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



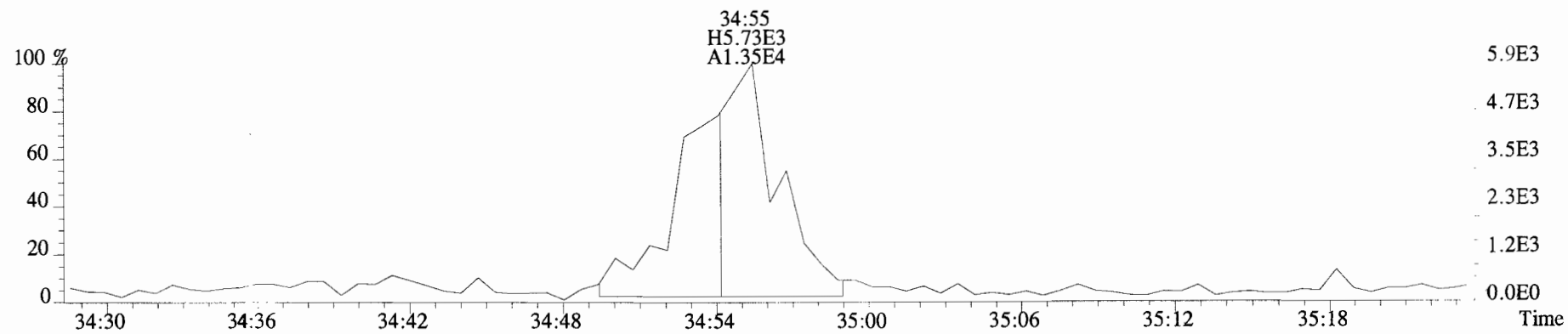
File:191024D2 #1-385 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text: Vista Analytical Laboratory_VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
373.8207 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



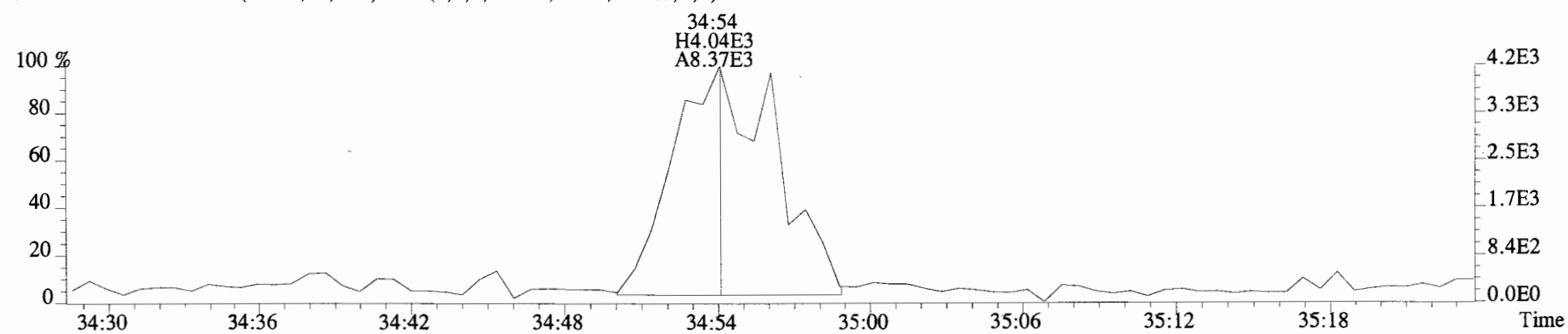
File:191024D2 #1-385 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text: Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
373.8207 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



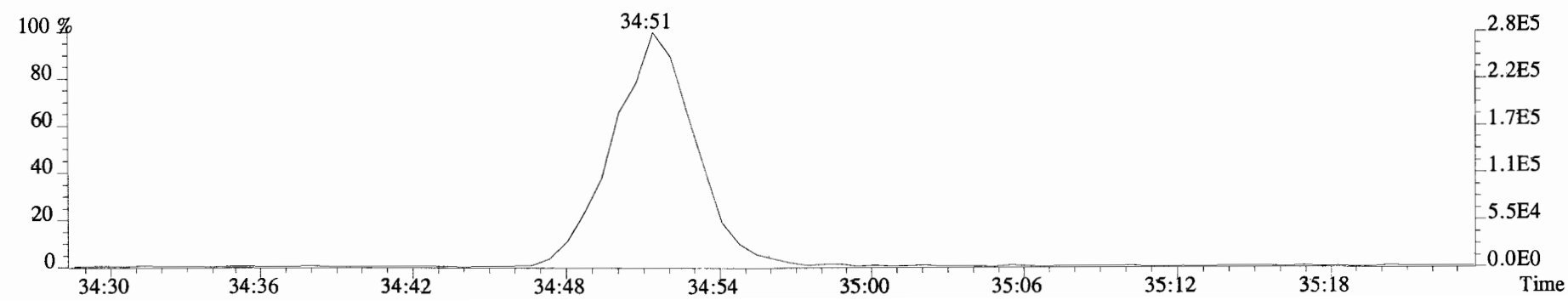
File:191024D2 #1-385 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
373.8207 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



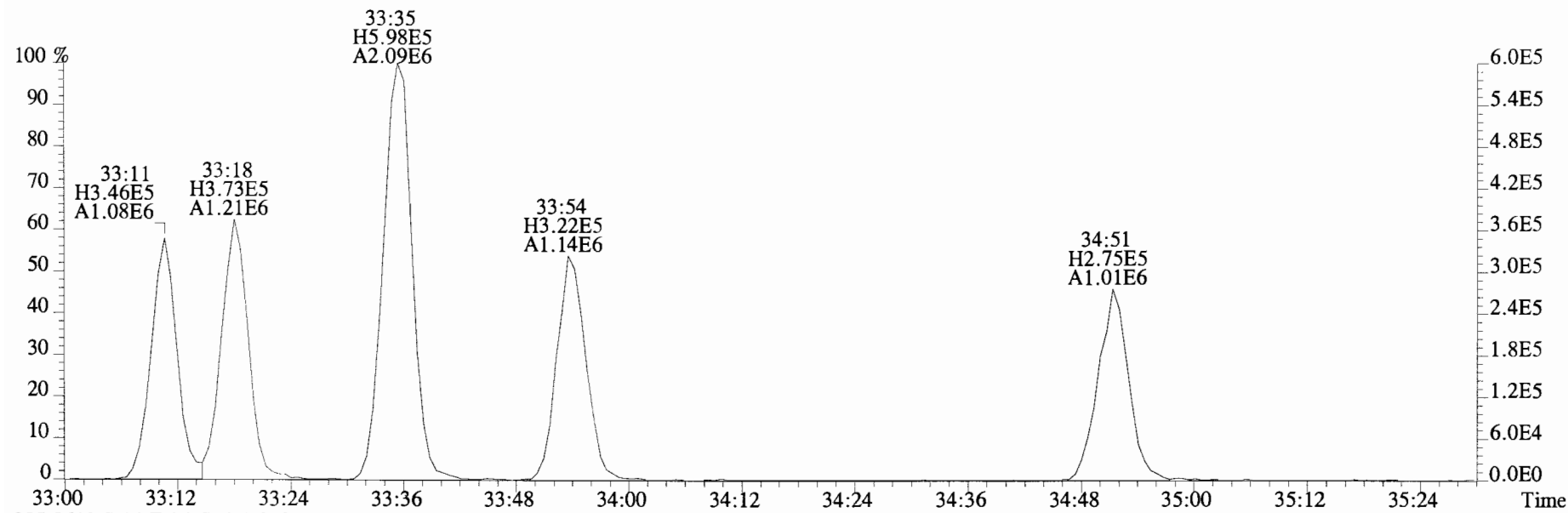
375.8178 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



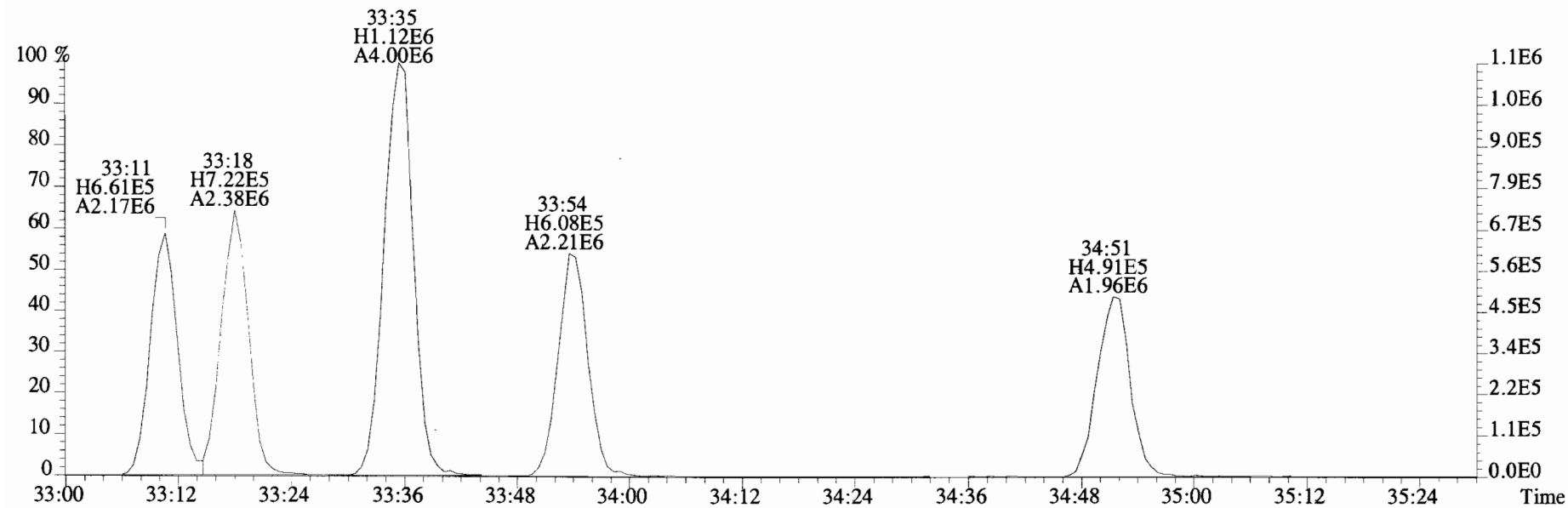
383.8639 S:14 F:3



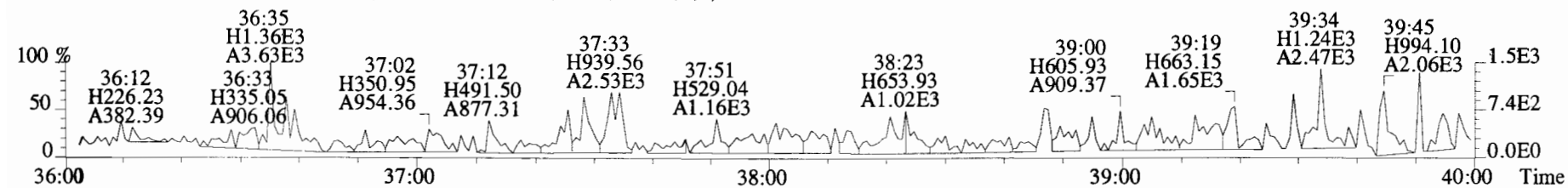
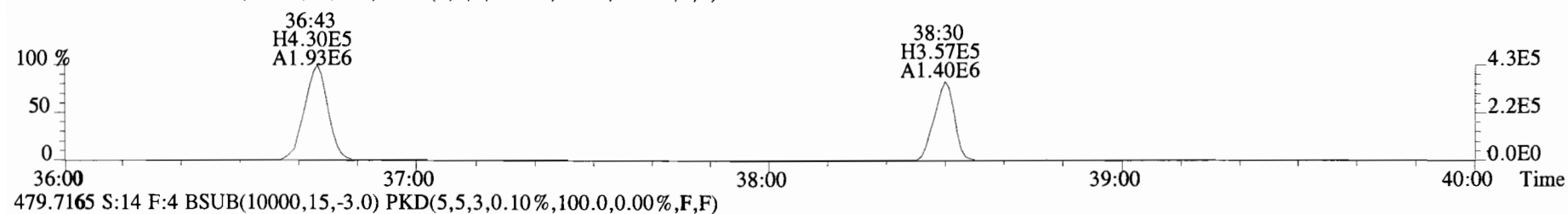
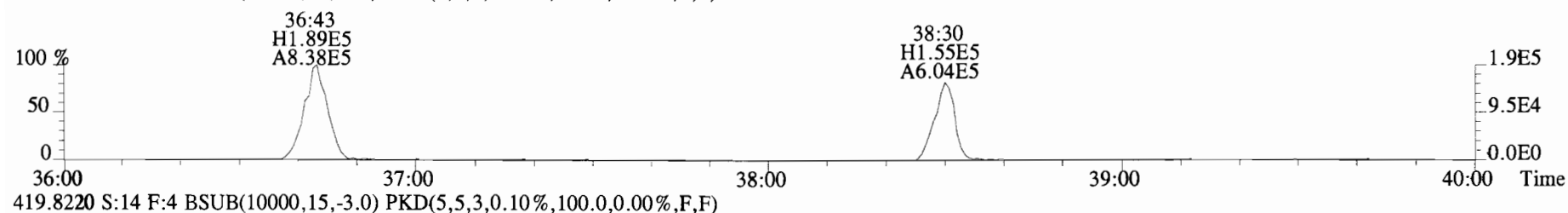
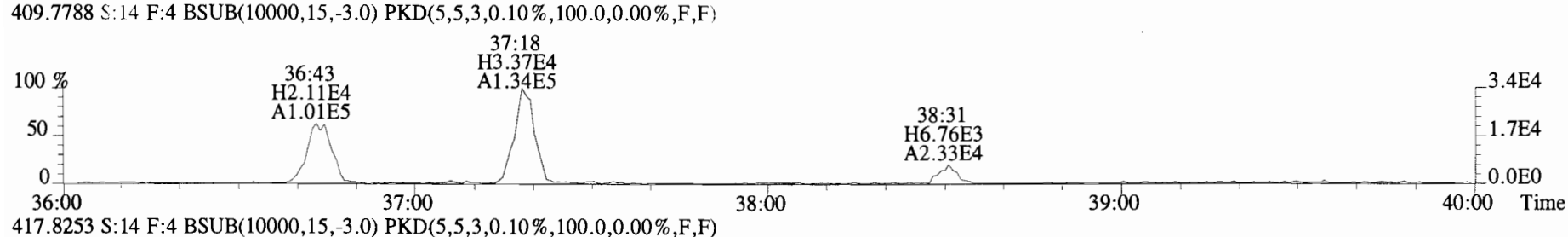
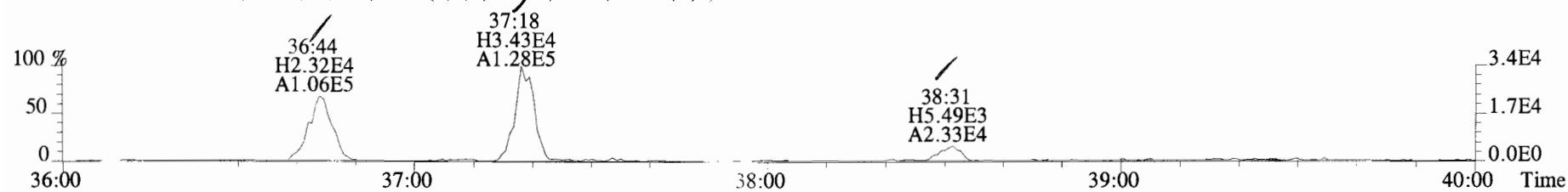
File:191024D2 #1-385 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
383.8639 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



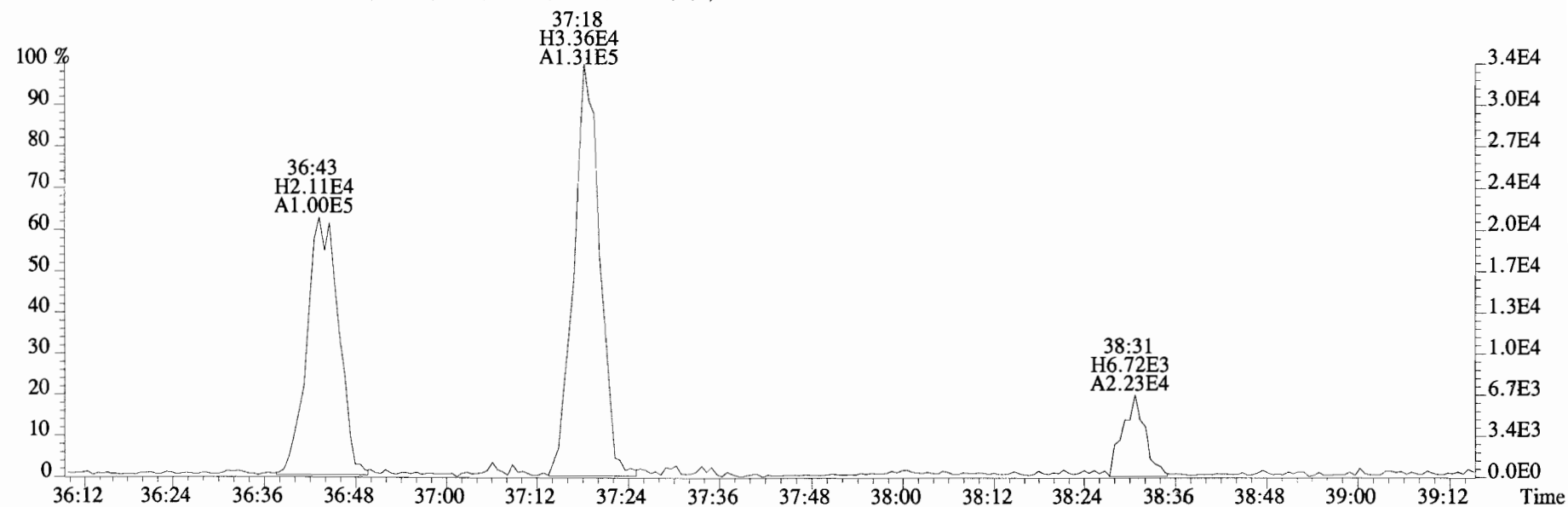
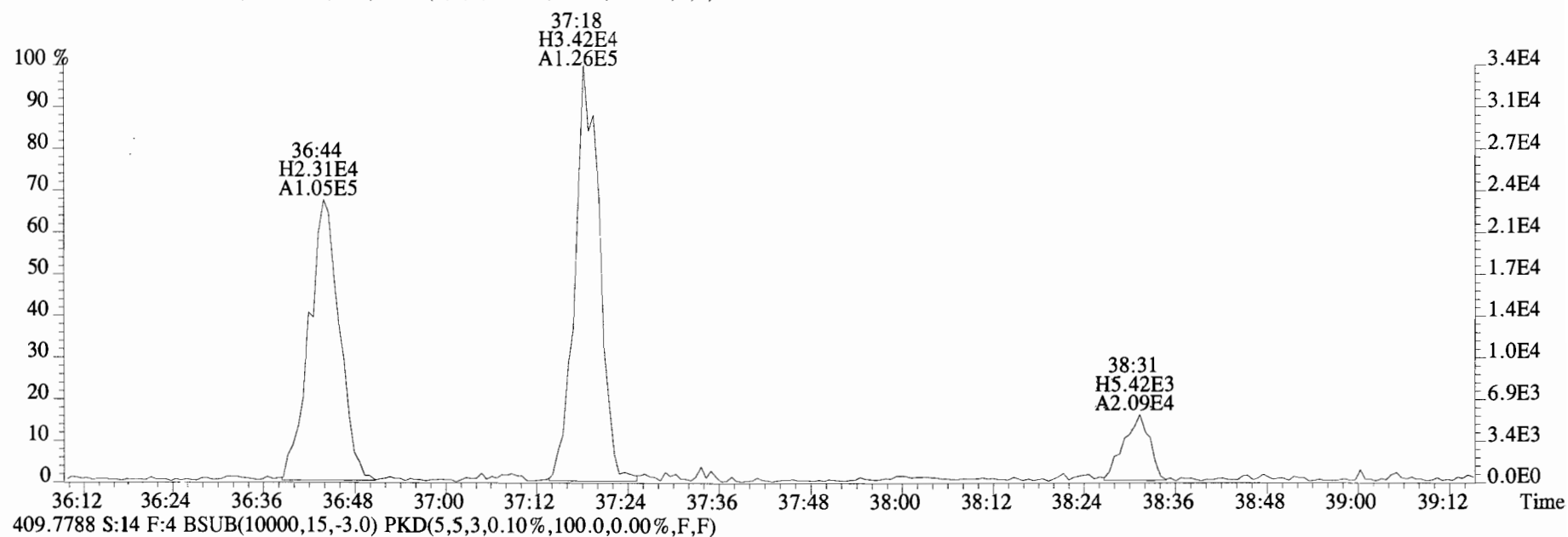
385.8610 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



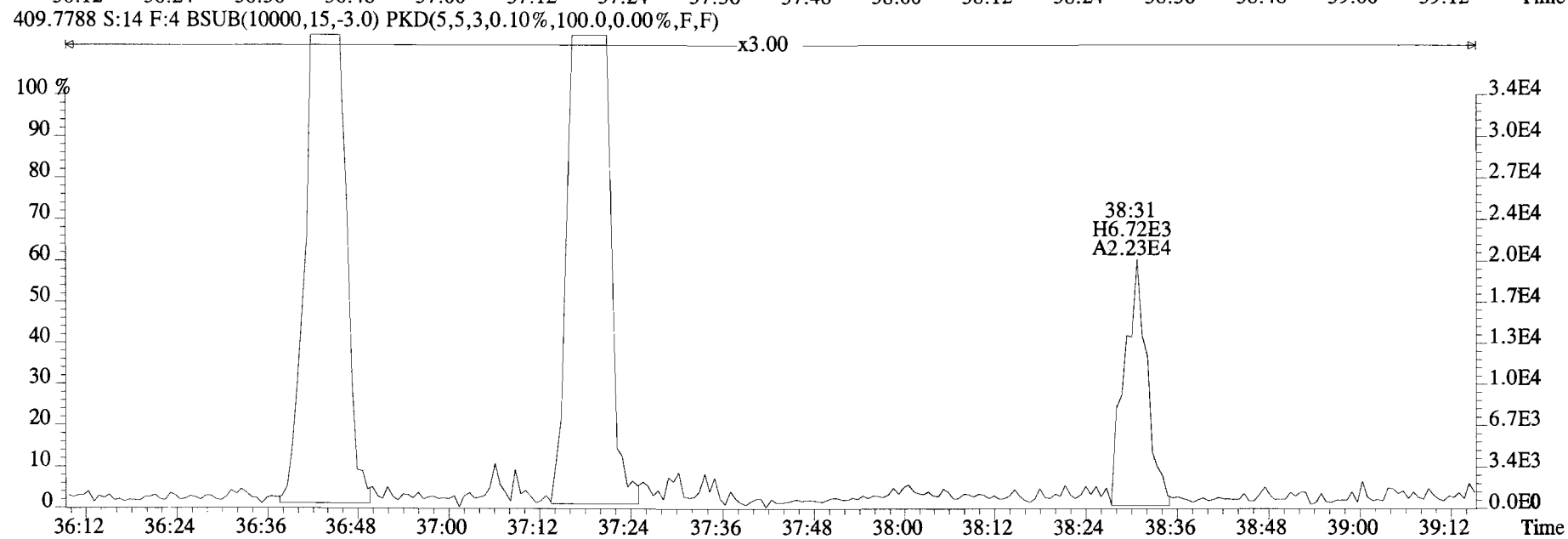
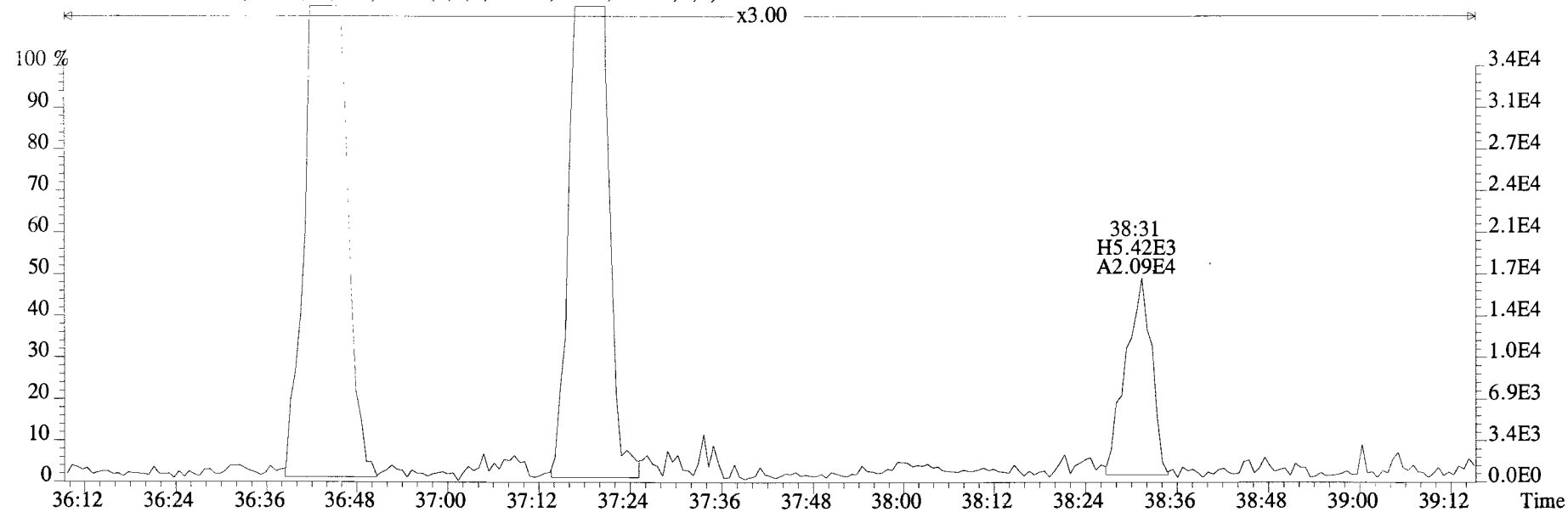
File:191024D2 #1-355 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
407.7818 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



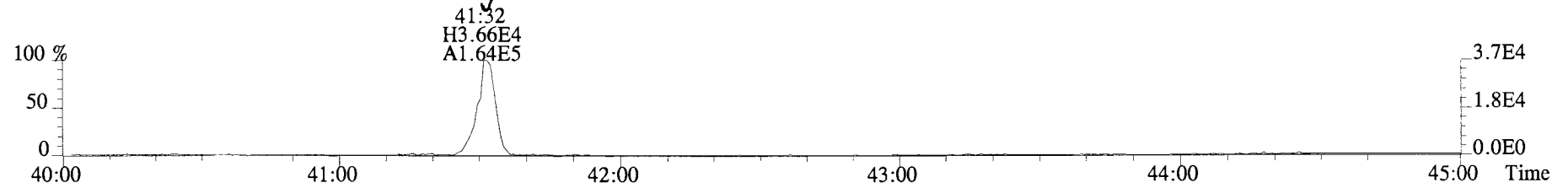
File:191024D2 #1-355 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
407.7818 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



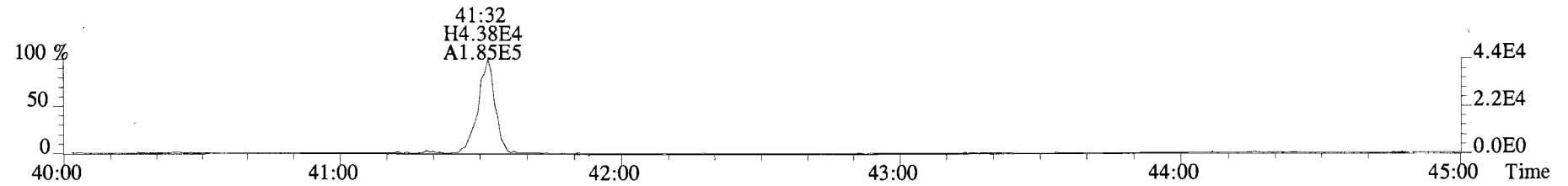
File:191024D2 #1-355 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
407.7818 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



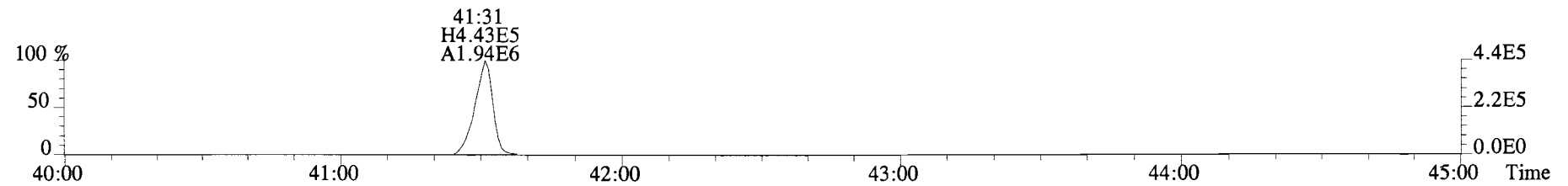
File:191024D2 #1-433 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
441.7428 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



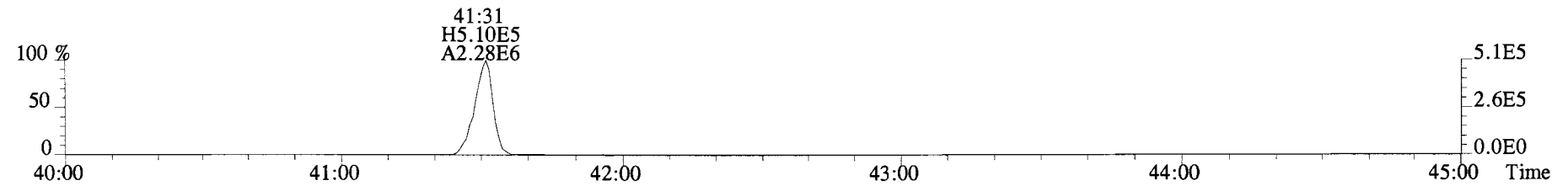
443.7398 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



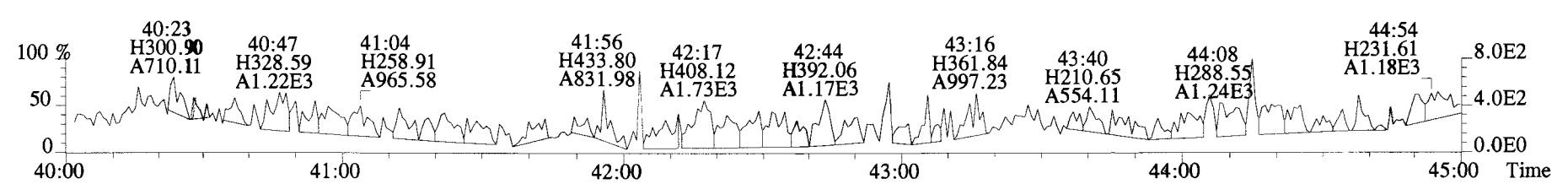
453.7831 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



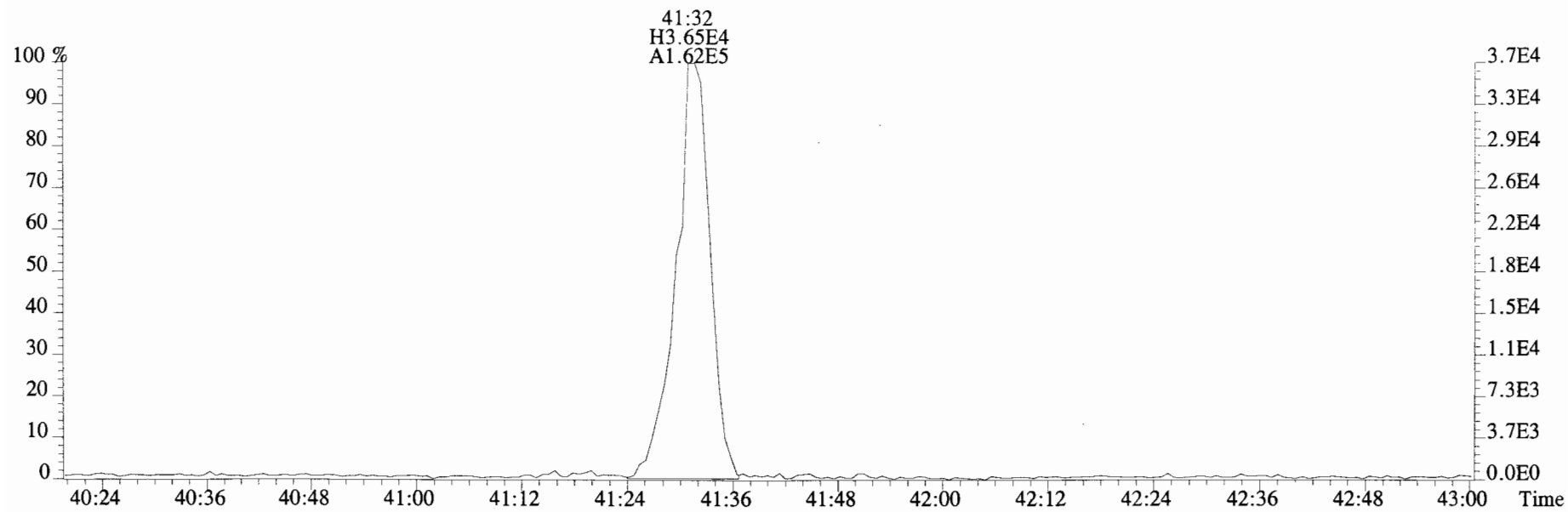
455.7801 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



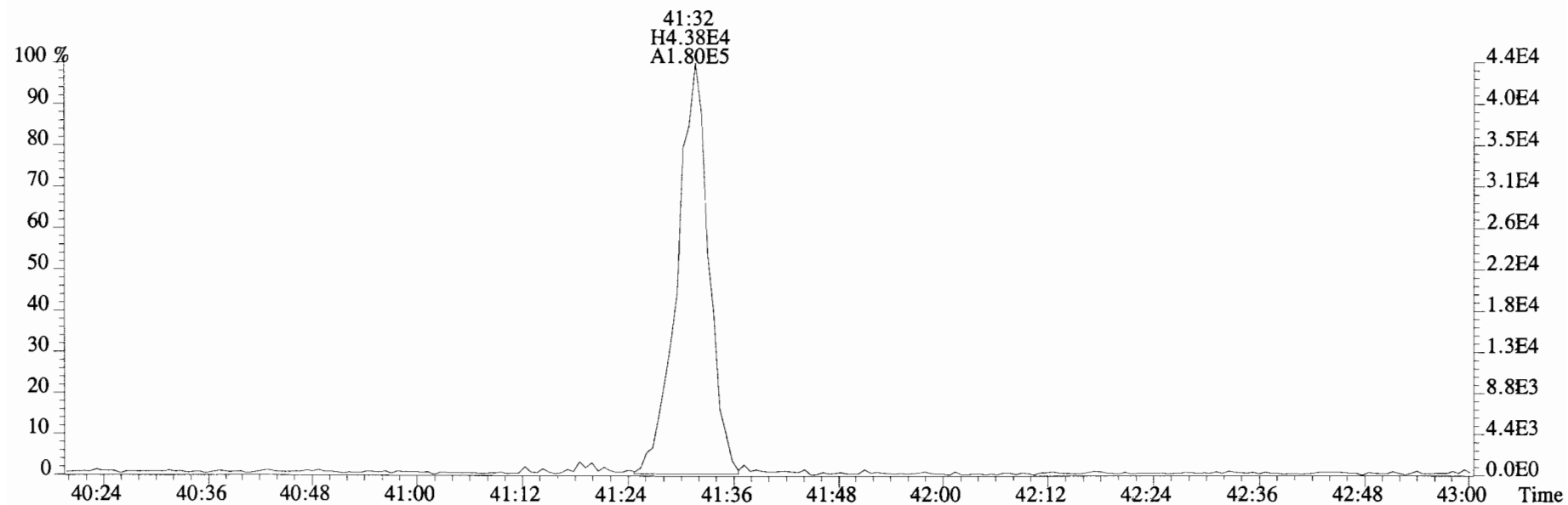
513.6775 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



File:191024D2 #1-433 Acq:25-OCT-2019 14:12:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista Analytical Laboratory VG7 Text:1903546-14 PDI-081SC-B-04-06-191002 16.01 Exp:OCDD_DB5
441.7428 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



443.7398 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	6.03e+03	0.37 n	0.91	26:17	0.17999			* 2.5	*	Total Tetra-Dioxins	*	1.64		*	*
1,2,3,7,8-PeCDD	6.60e+03	0.69 y	0.90	30:45	0.23764			* 2.5	*	Total Penta-Dioxins	1.36	1.36		*	*
1,2,3,4,7,8-HxCDD	*	* n	1.10	Not F ₇	*		294	2.5	0.222	Total Hexa-Dioxins	9.95	17.6		*	*
1,2,3,6,7,8-HxCDD	4.61e+04	1.25 y	0.94	34:12	1.8412			* 2.5	*	Total Hepta-Dioxins	224	224		*	*
1,2,3,7,8,9-HxCDD	1.49e+04	1.26 y	0.96	34:29	0.55337			* 2.5	*	Total Tetra-Furans	19.5	22.7		*	*
1,2,3,4,6,7,8-HpCDD	2.24e+06	1.04 y	0.98	37:56	101.03			* 2.5	*	Total Penta-Furans	45.870	45.870		*	*
OCDD	1.26e+07	0.89 y	0.96	41:14	635.68			* 2.5	*	Total Hexa-Furans	39.2	39.7		*	*
										Total Hepta-Furans	35.1	35.1		*	*
2,3,7,8-TCDF	4.38e+05	0.78 y	0.95	25:30	7.9785	ok		* 2.5	*						
1,2,3,7,8-PeCDF	7.37e+05	1.60 y	0.96	29:36	15.124			* 2.5	*						
2,3,4,7,8-PeCDF	3.00e+05	1.46 y	1.01	30:28	5.8303			* 2.5	*						
1,2,3,4,7,8-HxCDF	7.14e+05	1.20 y	1.18	33:11	16.572			* 2.5	*						
1,2,3,6,7,8-HxCDF	2.05e+05	1.32 y	1.07	33:19	4.9886			* 2.5	*						
2,3,4,6,7,8-HxCDF	8.46e+04	1.15 y	1.11	33:54	2.2159			* 2.5	*						
1,2,3,7,8,9-HxCDF	3.94e+04	1.07 y	1.06	34:52	1.1781			* 2.5	*						
1,2,3,4,6,7,8-HpCDF	3.34e+05	0.96 y	1.13	36:43	11.670			* 2.5	*						
1,2,3,4,7,8,9-HpCDF	8.94e+04	1.08 y	1.28	38:28	3.1171			* 2.5	*						
OCDF	7.85e+05	0.87 y	0.95	41:27	31.120			* 2.5	*						
										Rec	Qual				
IS	13C-2,3,7,8-TCDD	7.26e+06	0.79 y	1.10	26:16	209.66				107					
IS	13C-1,2,3,7,8-PeCDD	6.04e+06	0.63 y	0.88	30:45	216.86				110					
IS	13C-1,2,3,4,7,8-HxCDD	4.89e+06	1.32 y	0.64	34:04	209.84				107					
IS	13C-1,2,3,6,7,8-HxCDD	5.24e+06	1.27 y	0.86	34:11	168.66				85.9					
IS	13C-1,2,3,7,8,9-HxCDD	5.51e+06	1.27 y	0.81	34:29	188.20				95.9					
IS	13C-1,2,3,4,6,7,8-HpCDD	4.45e+06	1.05 y	0.65	37:55	187.40				95.5					
IS	13C-OCDD	8.15e+06	0.87 y	0.58	41:13	387.05				98.6					
IS	13C-2,3,7,8-TCDF	1.14e+07	0.78 y	1.03	25:30	210.38				107					
IS	13C-1,2,3,7,8-PeCDF	9.96e+06	1.57 y	0.85	29:36	223.71				114					
IS	13C-2,3,4,7,8-PeCDF	9.95e+06	1.57 y	0.85	30:28	225.31				115					
IS	13C-1,2,3,4,7,8-HxCDF	7.19e+06	0.53 y	0.83	33:11	237.99				121					
IS	13C-1,2,3,6,7,8-HxCDF	7.53e+06	0.51 y	1.03	33:18	200.54				102					
IS	13C-2,3,4,6,7,8-HxCDF	6.73e+06	0.53 y	0.95	33:54	194.54				99.1					
IS	13C-1,2,3,7,8,9-HxCDF	6.18e+06	0.53 y	0.83	34:51	205.73				105					
IS	13C-1,2,3,4,6,7,8-HpCDF	4.98e+06	0.43 y	0.76	36:43	181.07				92.2					
IS	13C-1,2,3,4,7,8,9-HpCDF	4.40e+06	0.43 y	0.58	38:28	208.41				106					
IS	13C-OCDF	1.05e+07	0.89 y	0.69	41:26	418.25				107					
C/Up	37Cl-2,3,7,8-TCDD	2.78e+06		1.20	26:18	73.487				93.6					
RS/RT	13C-1,2,3,4-TCDD	6.21e+06	0.79 y	1.00	25:43	196.30									
RS	13C-1,2,3,4-TCDF	1.02e+07	0.80 y	1.00	24:18	196.30									
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.13e+06	0.52 y	1.00	33:36	196.30									

Integrations
 by DB
 Analyst: DB
 Date: 11/6/19
 Reviewed
 by CT
 Analyst: CT
 Date: 11/11/19

Totals class: TCDD EMPC

Entry #: 19

Run: 13 File: 191101D1 S: 9 I: 1 F: 1
Acquired: 1-NOV-19 20:21:58 Processed: 4-NOV-19 10:36:47

Total Concentration: 1.6433

Unnamed Concentration: 1.463

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
22:56	1.713e+04	2.818e+04	0.61	n	3.937e+04	1.1756
23:20	3.249e+03	2.928e+03	1.11	n	5.182e+03	0.15476
26:04	2.356e+03	2.516e+03	0.94	n	4.453e+03	0.13298
26:17	2.622e+03	7.107e+03	0.37	n	6.027e+03	0.17999 2,3,7,8-TCDD

Totals class: PeCDD EMPC

Entry #: 21

Run: 13 File: 191101D1 S: 9 I: 1 F: 2
Acquired: 1-NOV-19 20:21:58 Processed: 4-NOV-19 10:36:47

Total Concentration: 1.3613

Unnamed Concentration: 1.124

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:44	8.192e+03	1.360e+04	0.60 y	2.179e+04	0.78414
29:49	3.658e+03	5.779e+03	0.63 y	9.437e+03	0.33957
30:45	2.696e+03	3.909e+03	0.69 y	6.605e+03	0.23764 1,2,3,7,8-PeCDD

Totals class: HxCDD EMPC

Entry #: 23

Run: 13 File: 191101D1 S: 9 I: 1 F: 3
Acquired: 1-NOV-19 20:21:58 Processed: 4-NOV-19 10:36:47

Total Concentration: 17.618

Unnamed Concentration: 15.224

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
32:32	1.094e+05	8.962e+04	1.22	y	1.990e+05	7.5573
33:07	1.622e+04	1.089e+04	1.49	n	2.438e+04	0.92575
33:22	1.139e+05	7.926e+04	1.44	n	1.775e+05	6.7409
34:12	2.558e+04	2.053e+04	1.25	y	4.611e+04	1.8412 1,2,3,6,7,8-HxCDD
34:29	8.312e+03	6.622e+03	1.26	y	1.493e+04	0.55335 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 13 File: 191101D1 S: 9 I: 1 F: 4
Acquired: 1-NOV-19 20:21:58 Processed: 4-NOV-19 10:36:47

Total Concentration: 223.70

Unnamed Concentration: 122.674

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:06	1.375e+06	1.348e+06	1.02 y	2.723e+06	122.67	
37:56	1.143e+06	1.099e+06	1.04 y	2.242e+06	101.03	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 13 File: 191101D1 S: 9 I: 1 F: 1
Acquired: 1-NOV-19 20:21:58 Processed: 4-NOV-19 10:36:47

Total Concentration: 22.719

Unnamed Concentration: 14.740

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
21:24	5.893e+03	5.462e+03	1.08	n	9.668e+03	0.17595
22:01	2.757e+04	2.912e+04	0.95	n	5.155e+04	0.93816
22:33	1.406e+04	1.964e+04	0.72	y	3.370e+04	0.61328
22:55	5.063e+04	5.921e+04	0.86	y	1.098e+05	1.9990
23:19	2.681e+04	3.675e+04	0.73	y	6.357e+04	1.1568
23:36	8.621e+03	1.498e+04	0.58	n	1.982e+04	0.36066
24:12	1.692e+04	2.373e+04	0.71	y	4.064e+04	0.73964
24:19	1.625e+04	2.013e+04	0.81	y	3.638e+04	0.66205
24:44	1.524e+05	1.967e+05	0.77	y	3.491e+05	6.3533
24:59	7.089e+03	7.106e+03	1.00	n	1.258e+04	0.22889
25:25	1.559e+04	2.571e+04	0.61	n	3.583e+04	0.65206
25:30	1.915e+05	2.469e+05	0.78	y	4.384e+05	7.9785
25:51	5.407e+03	1.166e+04	0.46	n	1.243e+04	0.22620
27:16	1.827e+04	1.969e+04	0.93	n	3.486e+04	0.63441

2,3,7,8-TCDF

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

Run: 13 File: 191101D1 S: 9 I: 1 F: 1
Acquired: 1-NOV-19 20:21:58 Processed: 4-NOV-19 10:36:47

Total Concentration: 4.2973 Unnamed Concentration: 4.297

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:16	1.306e+05	8.468e+04	1.54 y	2.153e+05	4.2973

Totals class: PeCDF EMPC

Entry #: 31

Run: 13 File: 191101D1 S: 9 I: 1 F: 2
Acquired: 1-NOV-19 20:21:58 Processed: 4-NOV-19 10:36:47

Total Concentration: 41.573

Unnamed Concentration: 20.619

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
28:42	2.844e+05	1.760e+05	1.62 y	4.604e+05	9.1899	
29:13	3.573e+04	2.109e+04	1.69 y	5.683e+04	1.1344	
29:26	4.478e+04	2.719e+04	1.65 y	7.197e+04	1.4368	
29:36	4.535e+05	2.838e+05	1.60 y	7.373e+05	15.124	1,2,3,7,8-PeCDF
29:51	1.405e+05	9.483e+04	1.48 y	2.354e+05	4.6989	
30:28	1.780e+05	1.220e+05	1.46 y	2.999e+05	5.8303	2,3,4,7,8-PeCDF
30:32	1.166e+05	6.707e+04	1.74 y	1.837e+05	3.6674	
31:22	1.474e+04	9.876e+03	1.49 y	2.462e+04	0.49146	

Totals class: HxCDF EMPC

Entry #: 33

Run: 13 File: 191101D1 S: 9 I: 1 F: 3
 Acquired: 1-NOV-19 20:21:58 Processed: 4-NOV-19 10:36:47

Total Concentration: 39.719

Unnamed Concentration: 14.764

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
32:01	3.399e+04	2.639e+04	1.29	y	6.038e+04	1.5554	
32:10	1.027e+05	8.605e+04	1.19	y	1.888e+05	4.8623	
32:42	1.228e+05	1.008e+05	1.22	y	2.236e+05	5.7599	
33:05	8.225e+03	8.099e+03	1.02	n	1.486e+04	0.38273	
33:11	3.888e+05	3.250e+05	1.20	y	7.138e+05	16.572	1,2,3,4,7,8-HxCDF
33:19	1.163e+05	8.830e+04	1.32	y	2.046e+05	4.9886	1,2,3,6,7,8-HxCDF
33:36	4.697e+03	3.076e+03	1.53	n	6.890e+03	0.17747	
33:54	4.530e+04	3.932e+04	1.15	y	8.463e+04	2.2159	2,3,4,6,7,8-HxCDF
34:52	2.040e+04	1.898e+04	1.07	y	3.938e+04	1.1781	1,2,3,7,8,9-HxCDF
34:55	4.532e+04	3.336e+04	1.36	y	7.868e+04	2.0266	

Totals class: HpCDF EMPC

Entry #: 35

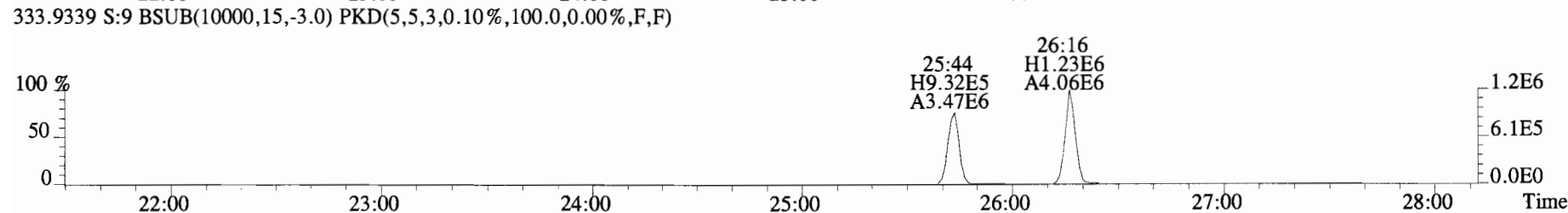
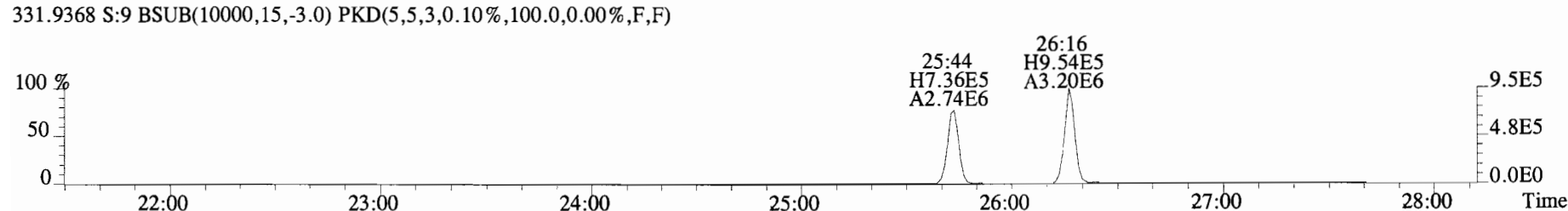
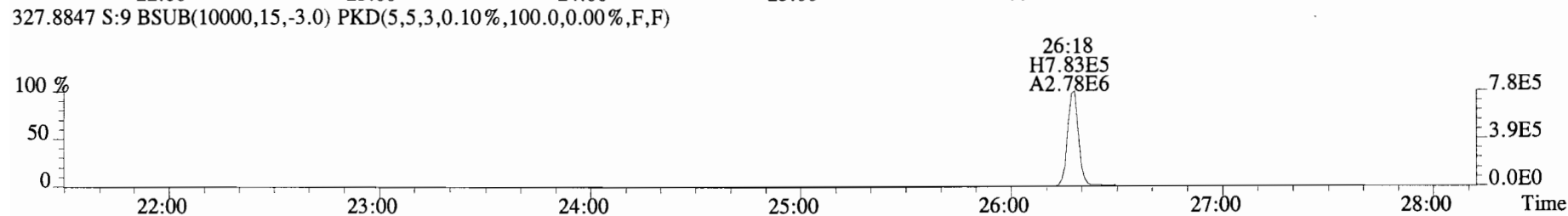
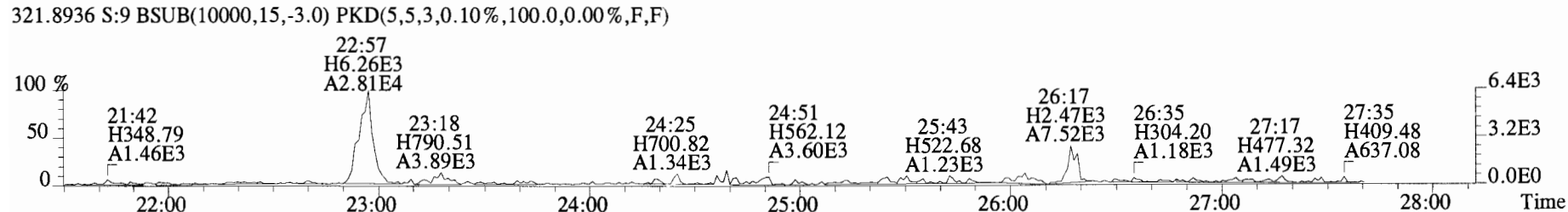
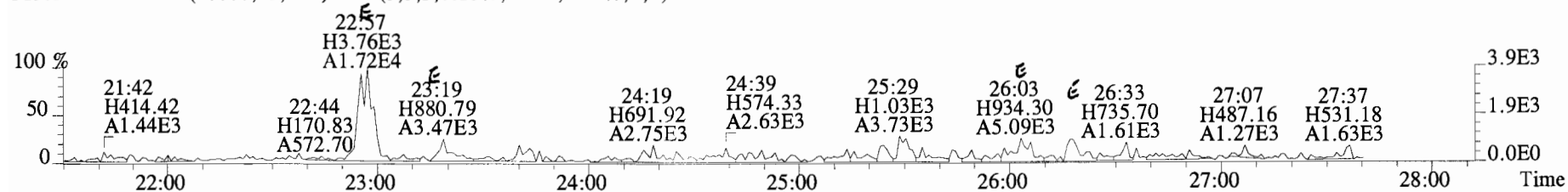
Run: 13 File: 191101D1 S: 9 I: 1 F: 4
Acquired: 1-NOV-19 20:21:58 Processed: 4-NOV-19 10:36:47

Total Concentration: 35.071

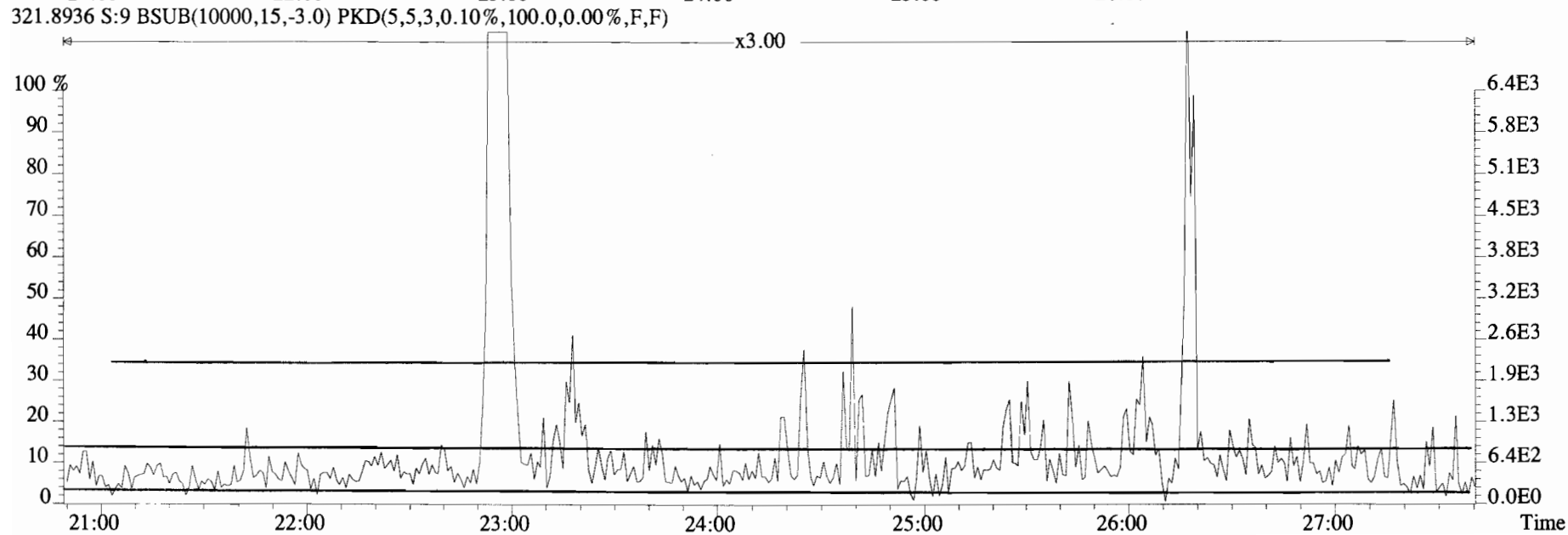
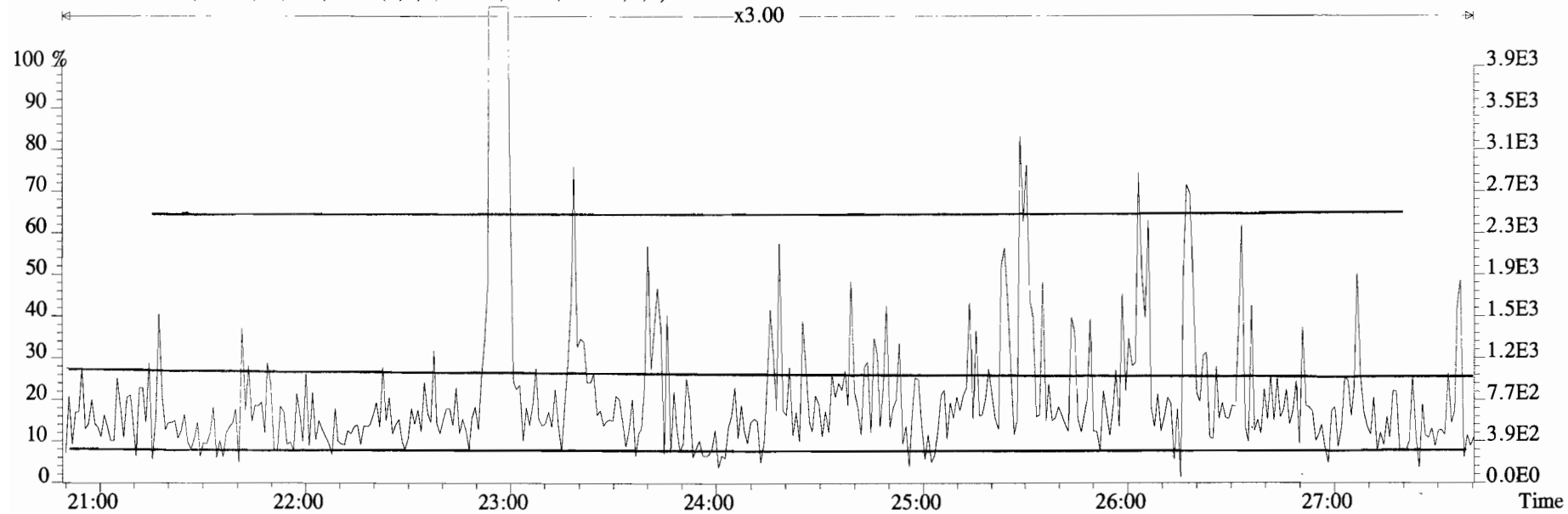
Unnamed Concentration: 20.284

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Resp Concentration	Name
36:43	1.631e+05	1.706e+05	0.96 y	3.337e+05	11.670	1,2,3,4,6,7,8-HpCDF
37:06	5.869e+03	5.667e+03	1.04 y	1.154e+04	0.40469	
37:17	2.853e+05	2.814e+05	1.01 y	5.667e+05	19.879	
38:28	4.632e+04	4.304e+04	1.08 y	8.936e+04	3.1171	1,2,3,4,7,8,9-HpCDF

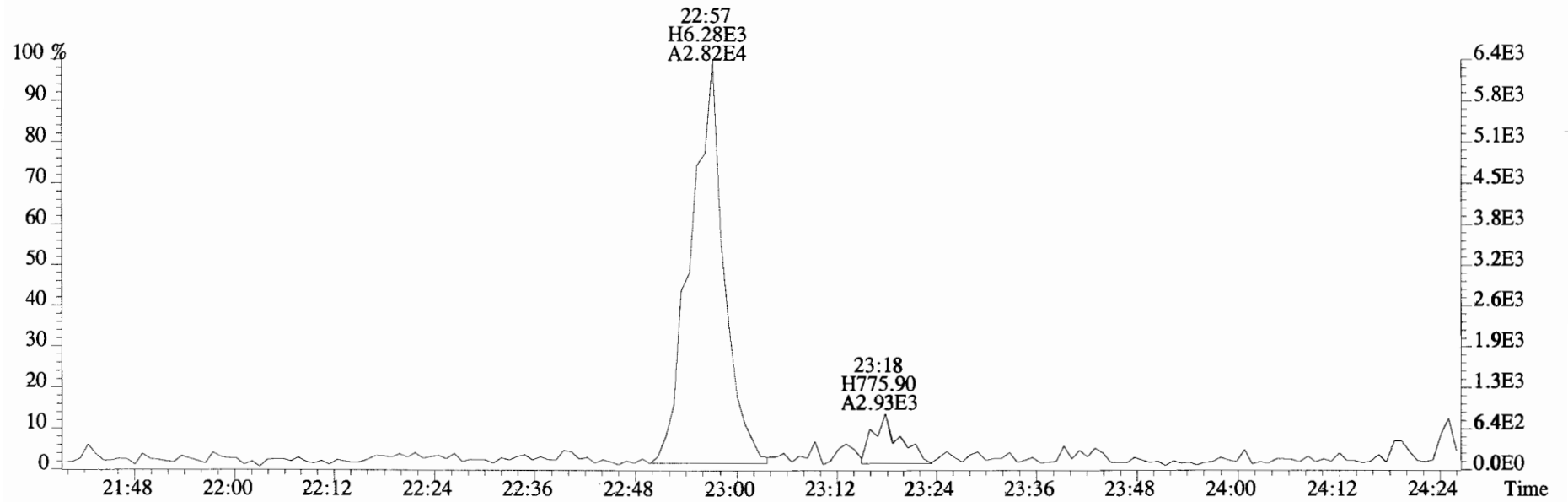
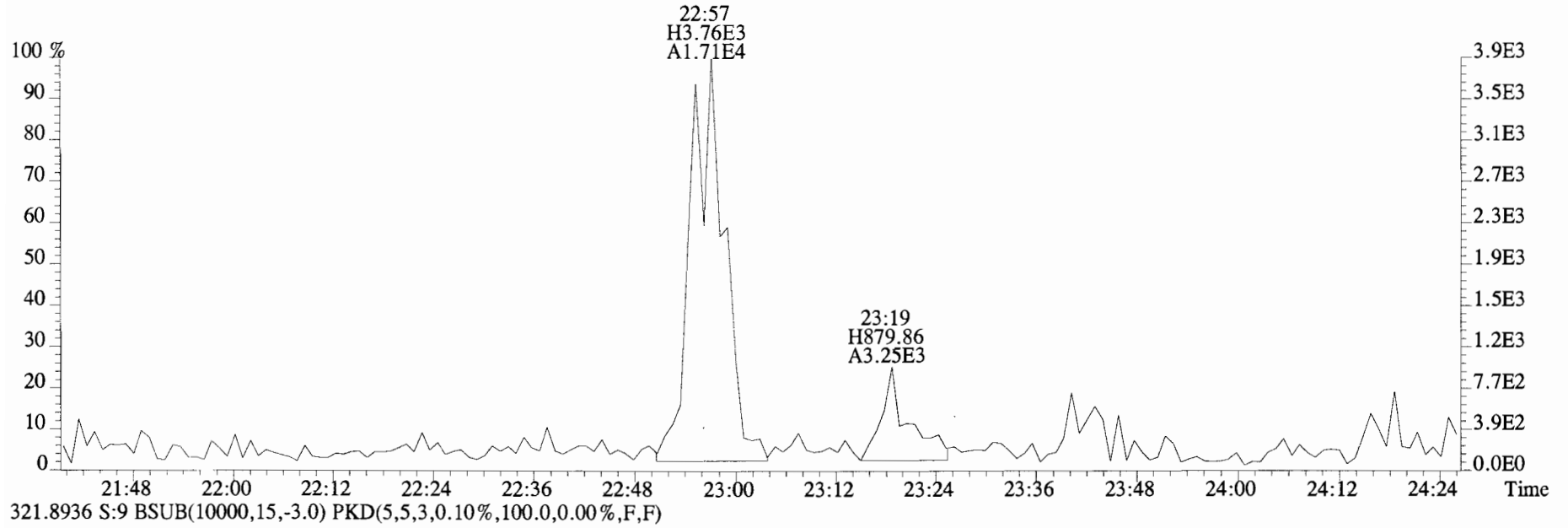
File:191101D1 #1-492 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata_Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



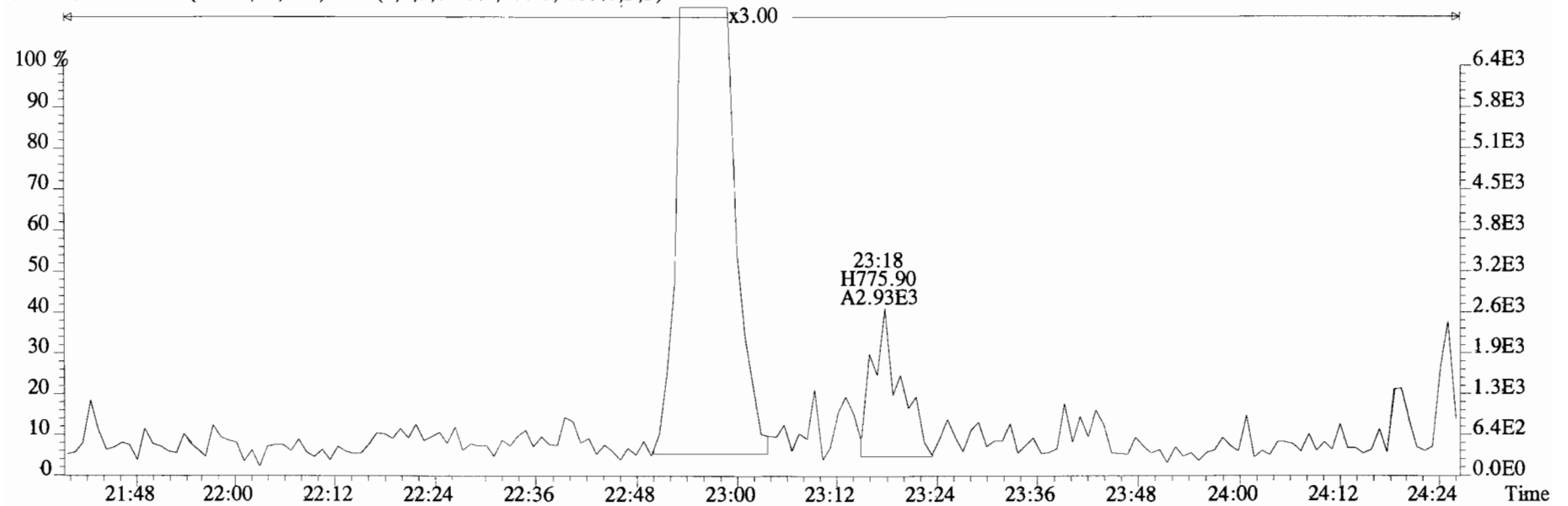
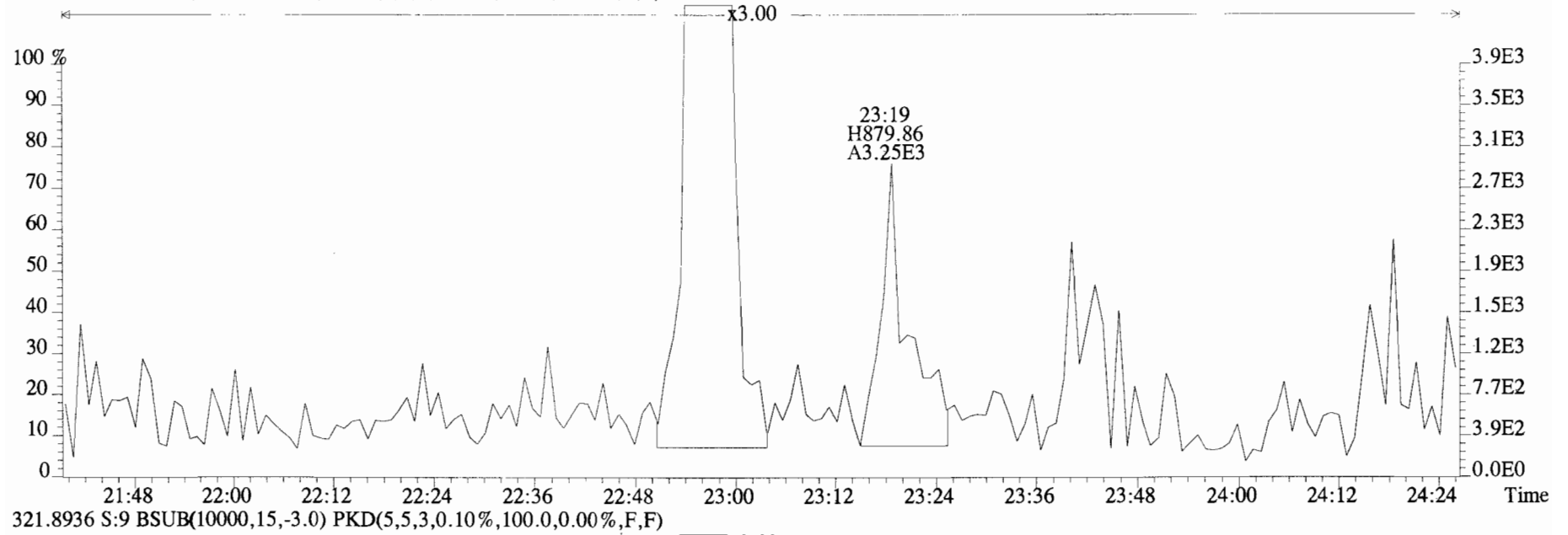
File:191101D1 #1-492 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



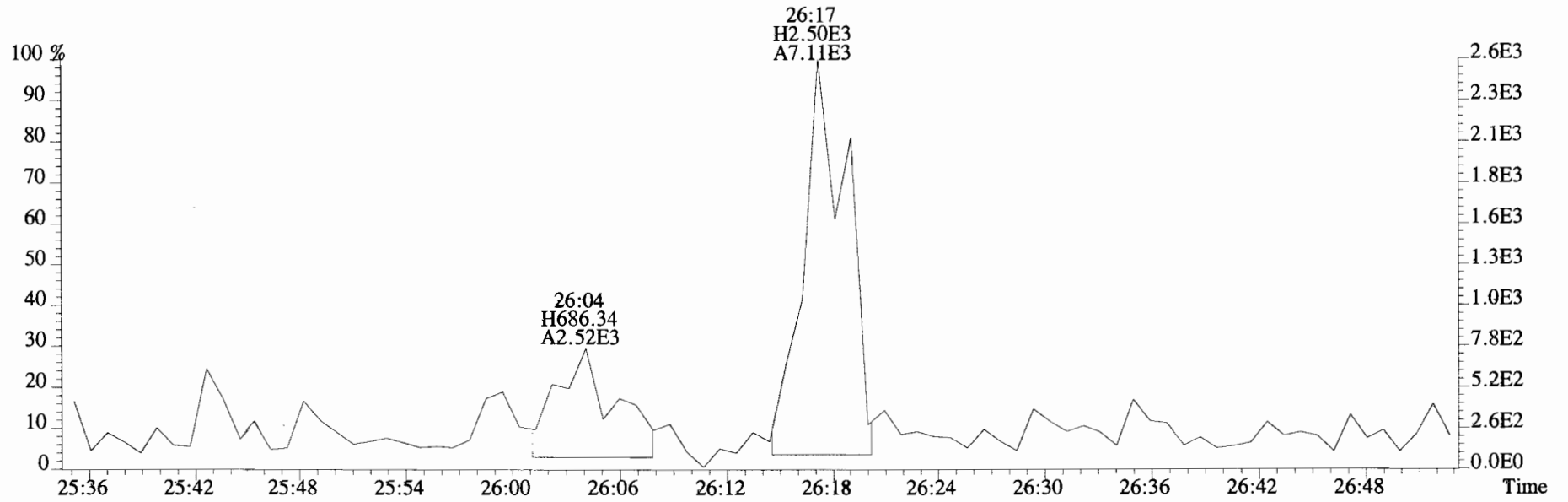
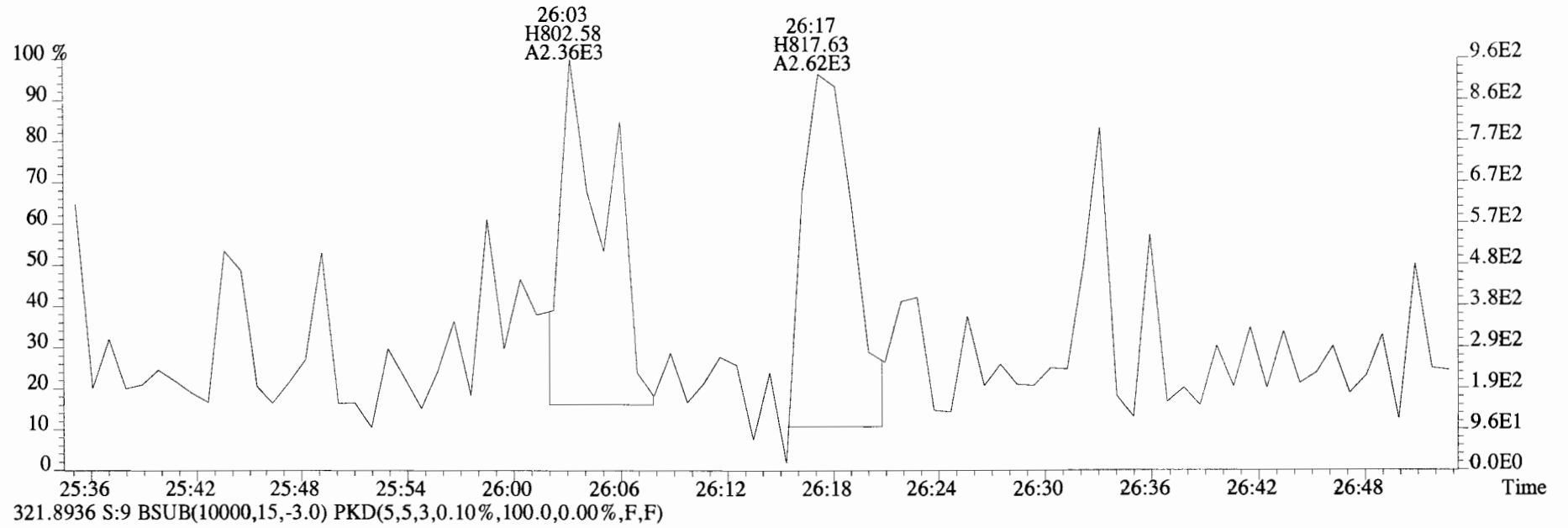
File:191101D1 #1-492 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



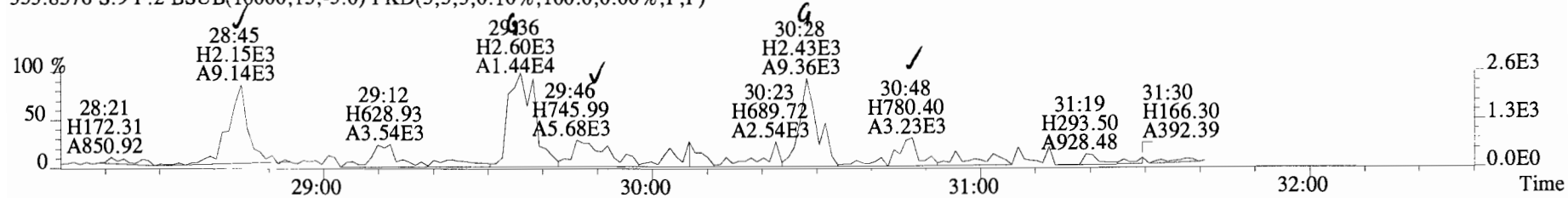
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Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



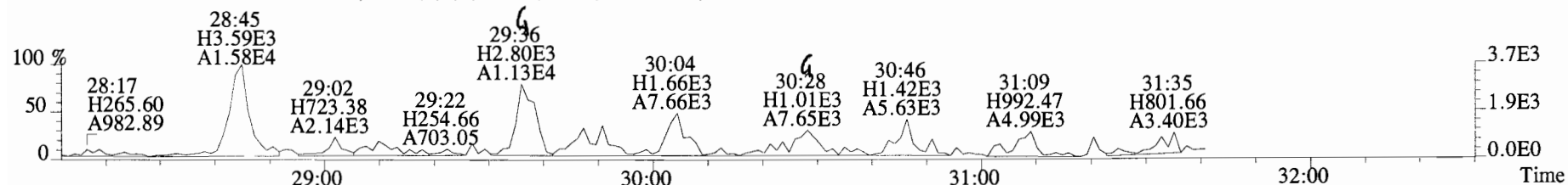
File:191101D1 #1-492 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



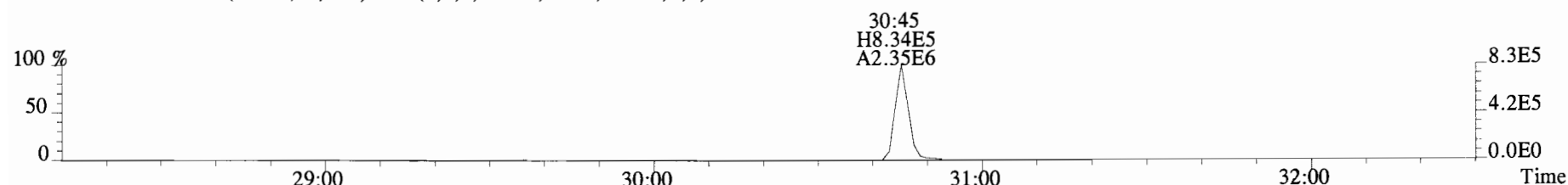
File:191101D1 #1-211 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
353.8576 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



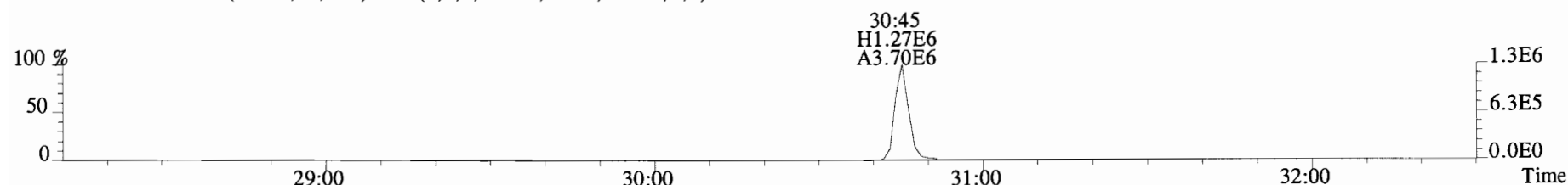
355.8546 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



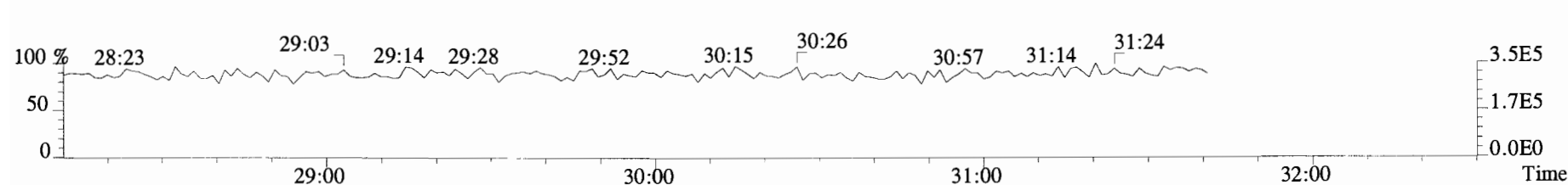
365.8978 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



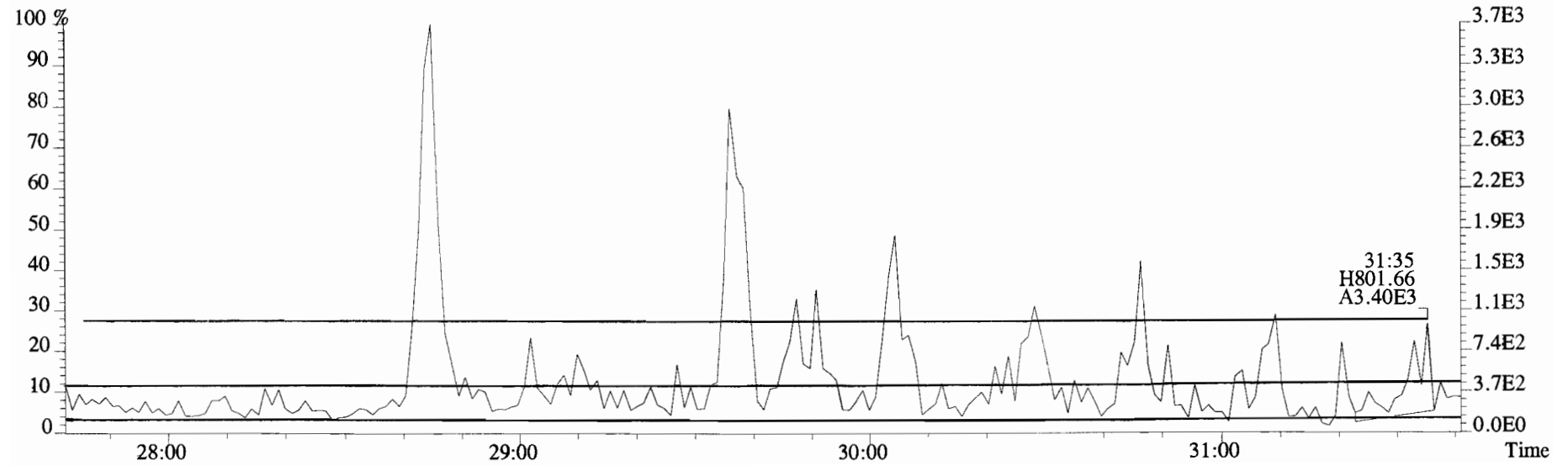
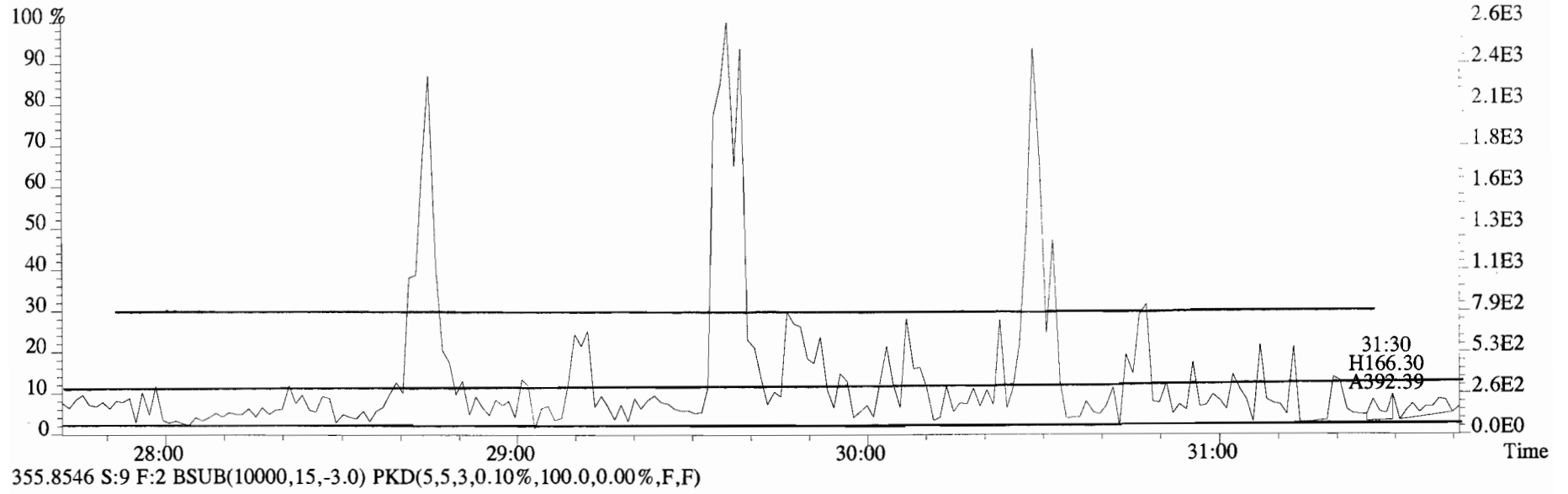
367.8949 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



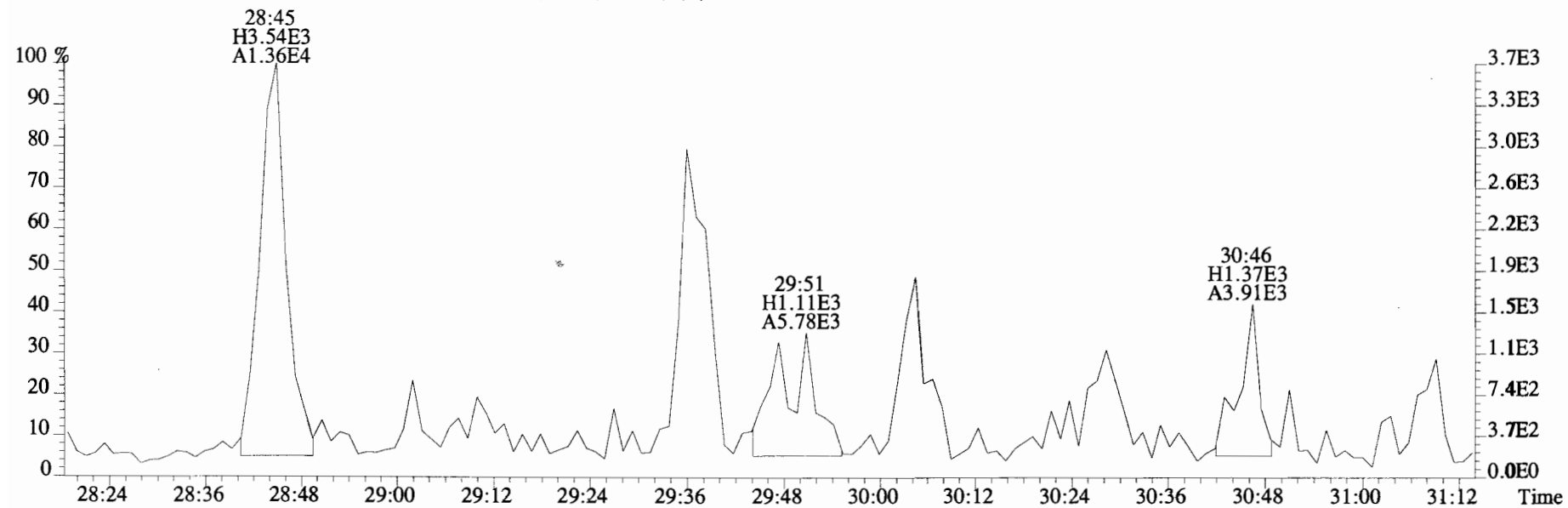
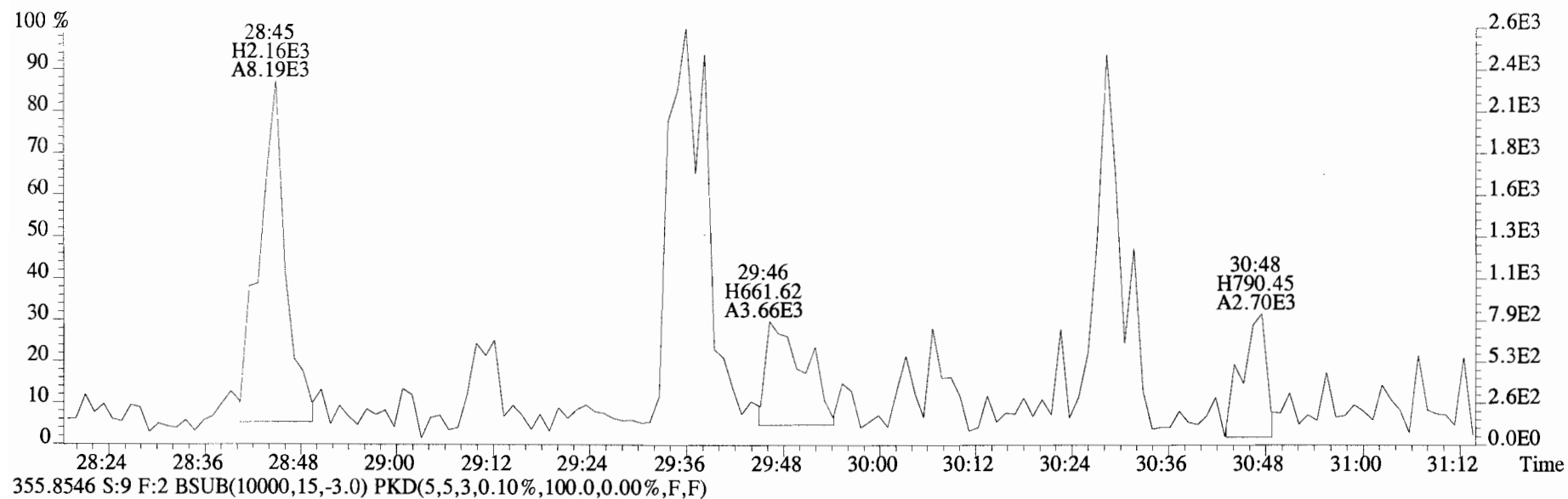
366.9792 S:9 F:2



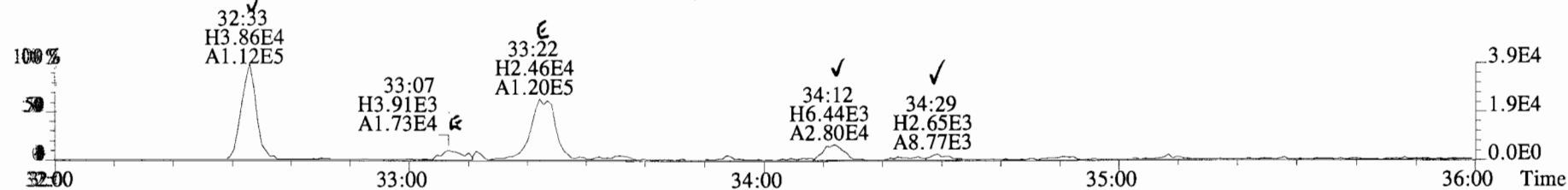
File:191101D1 #1-211 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
353.8576 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



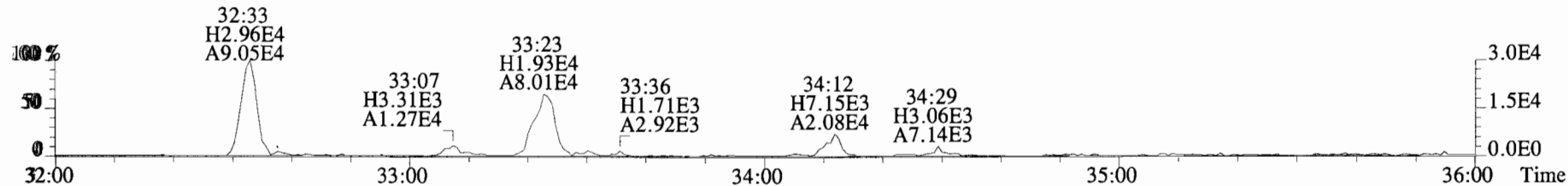
File:191101D1 #1-211 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
353.8576 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



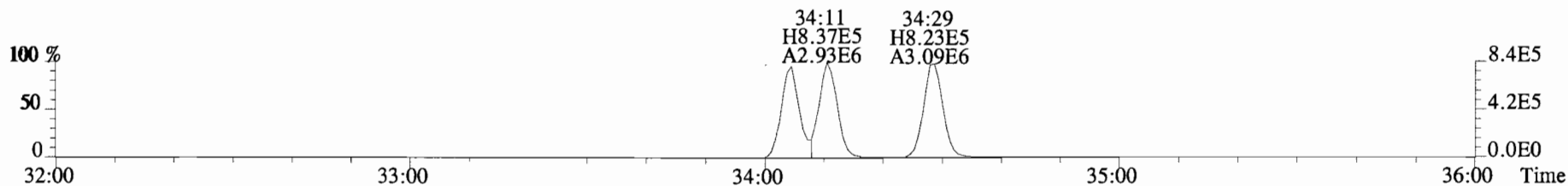
File: 191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample #9 File Text: Viata_Analytical_Laboratory_VG7 Text: 1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp: OCDD_DB5
 389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



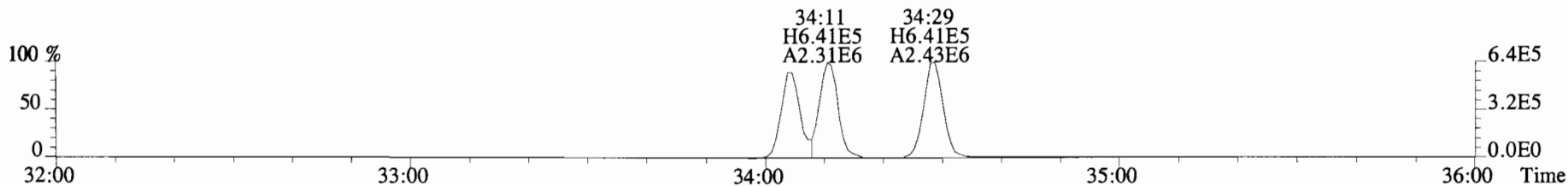
391.8127 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



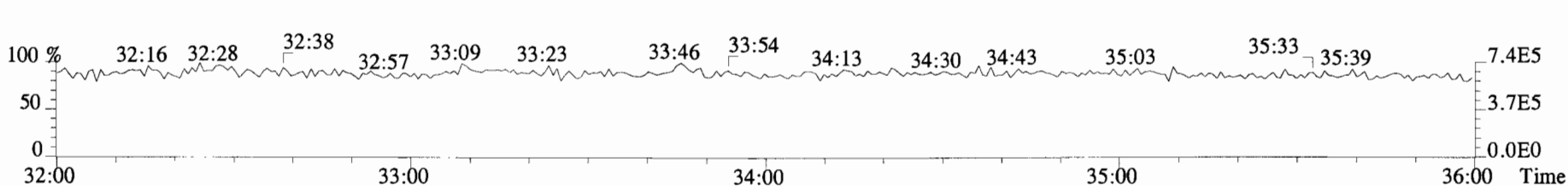
401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



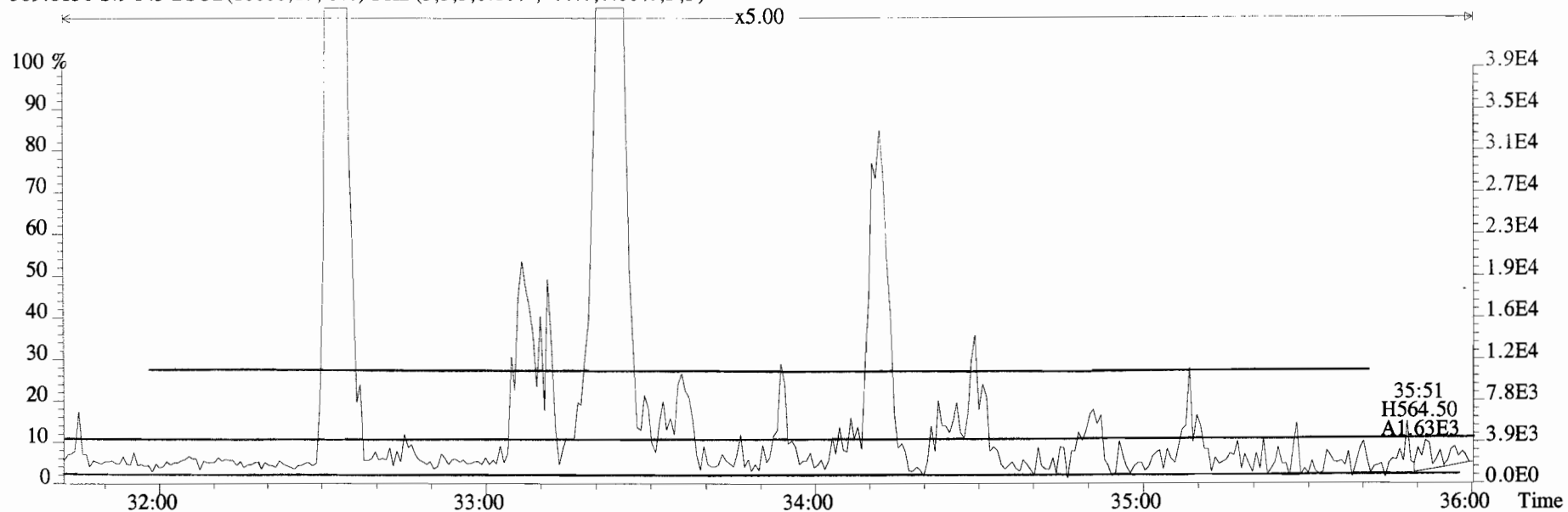
403.8530 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



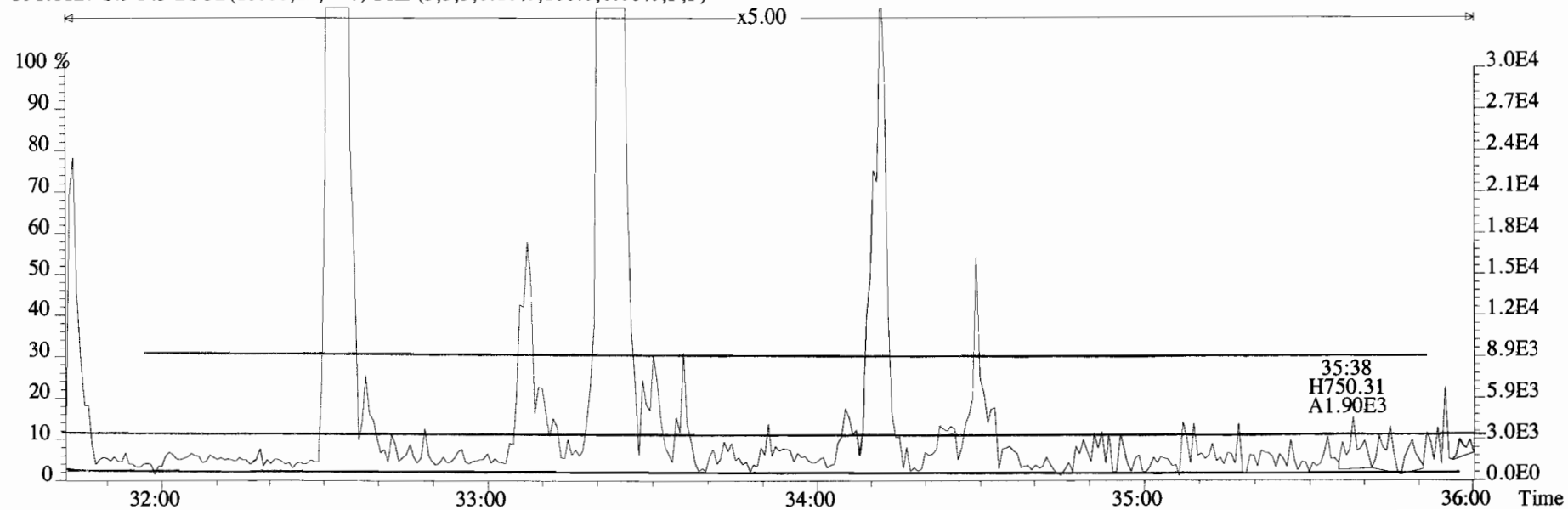
392.9760 S:9 F:3



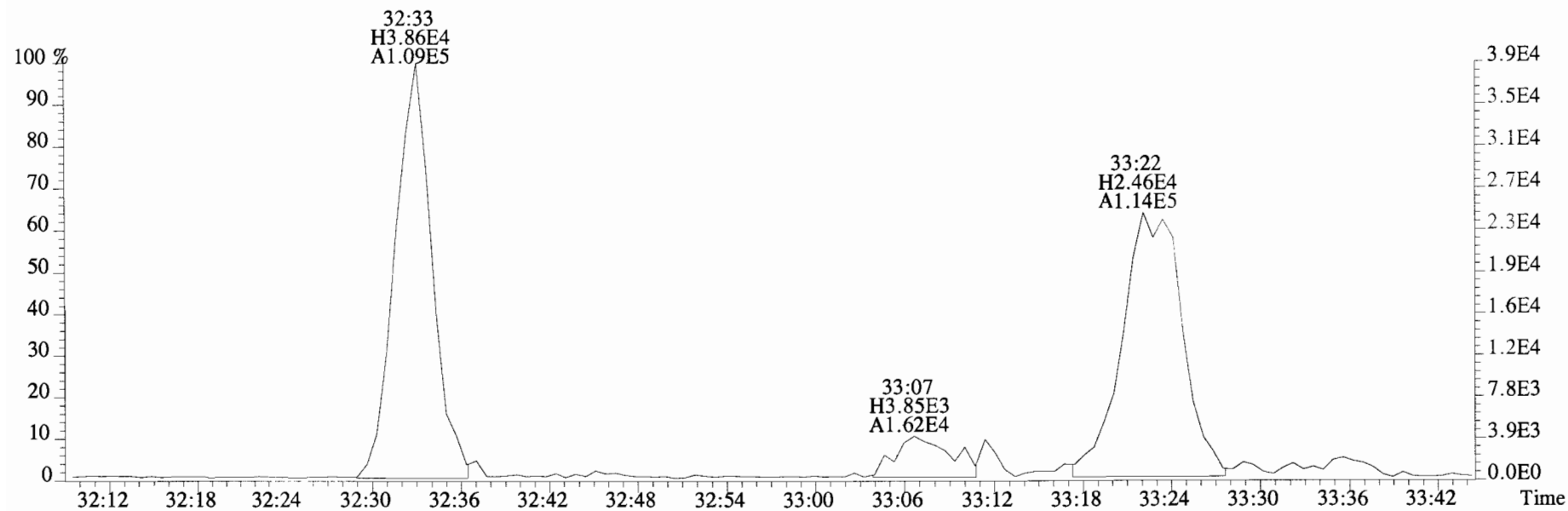
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



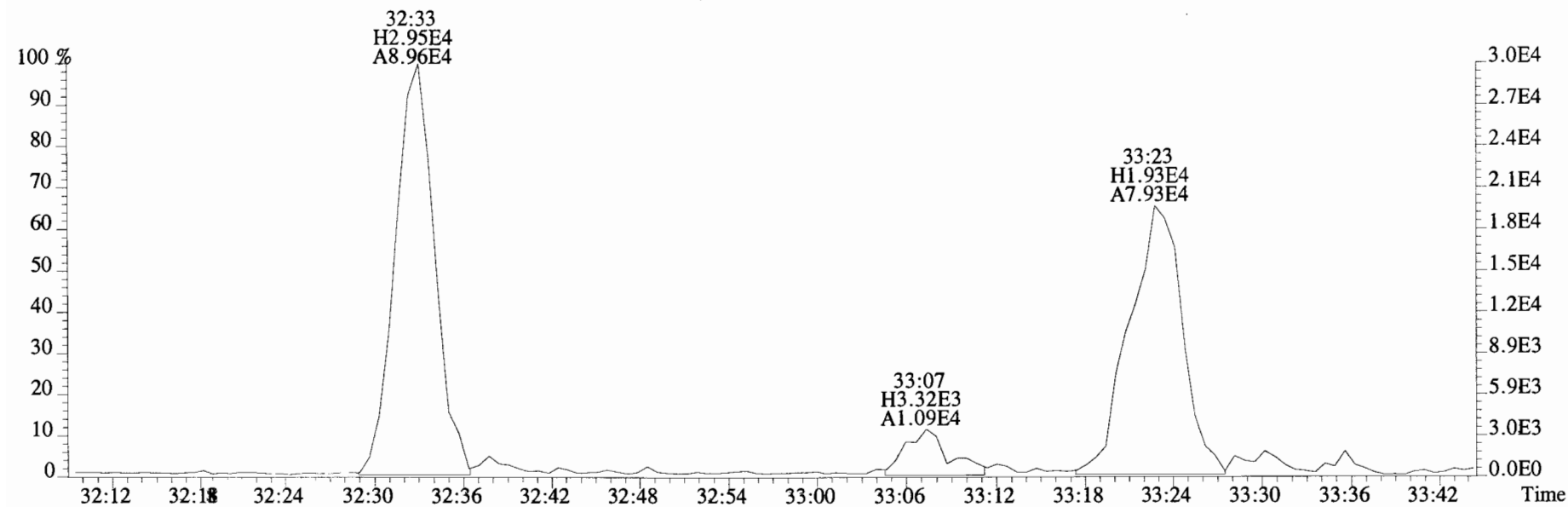
391.8127 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



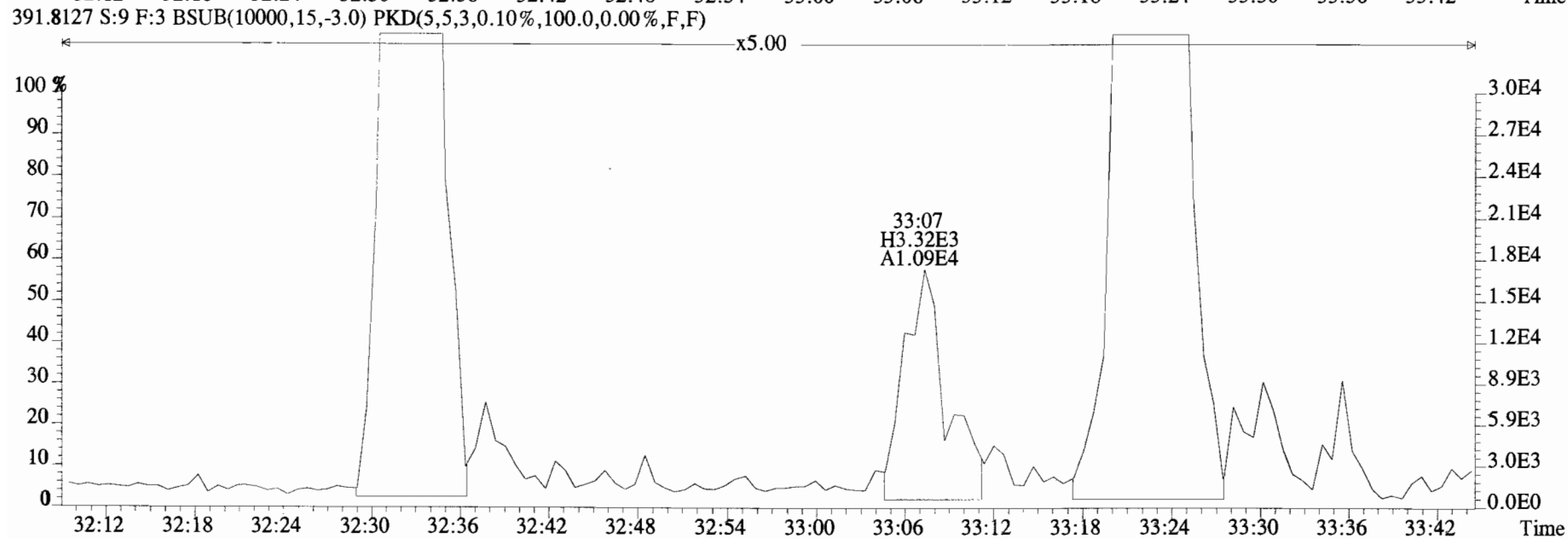
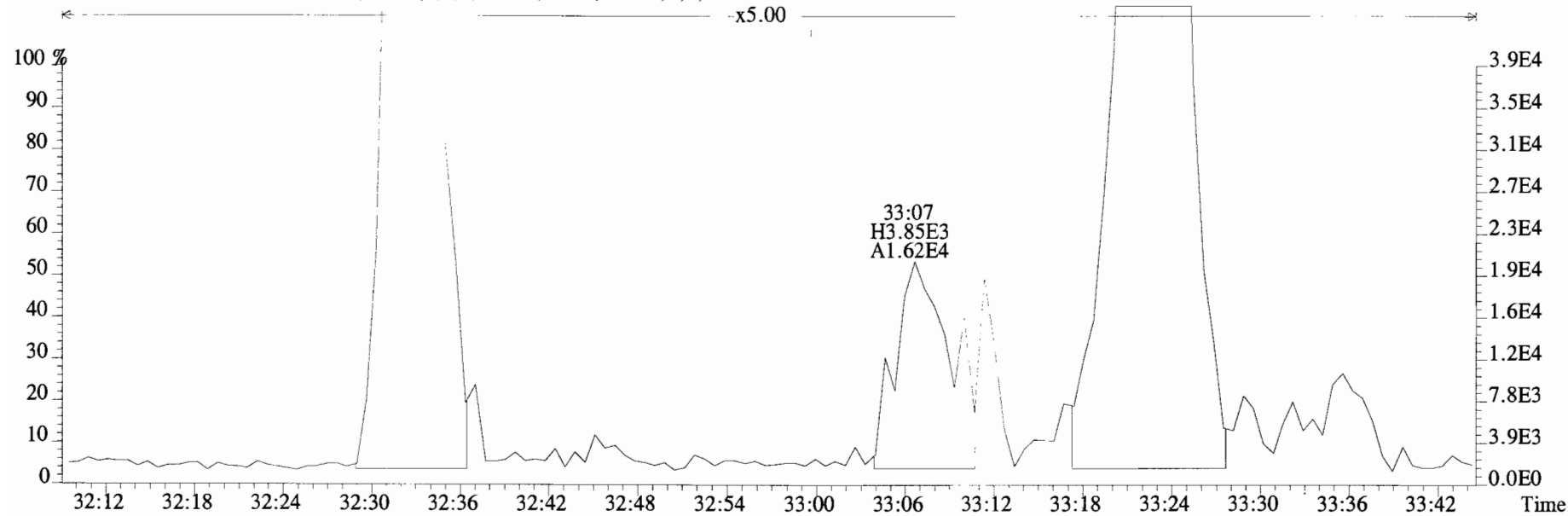
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



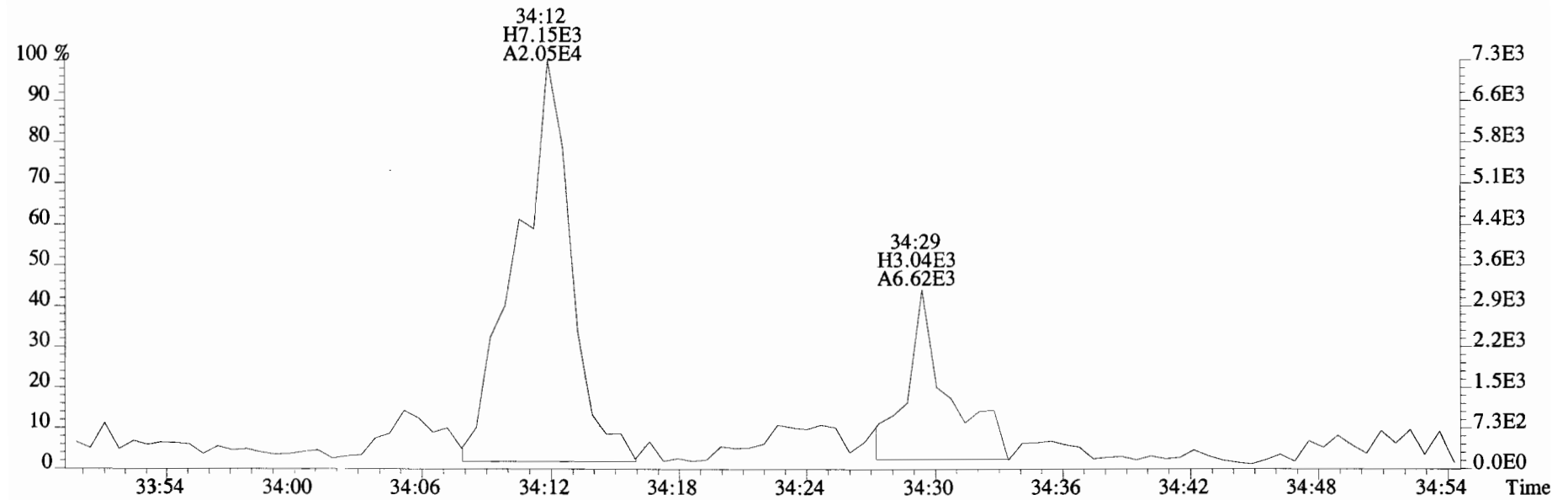
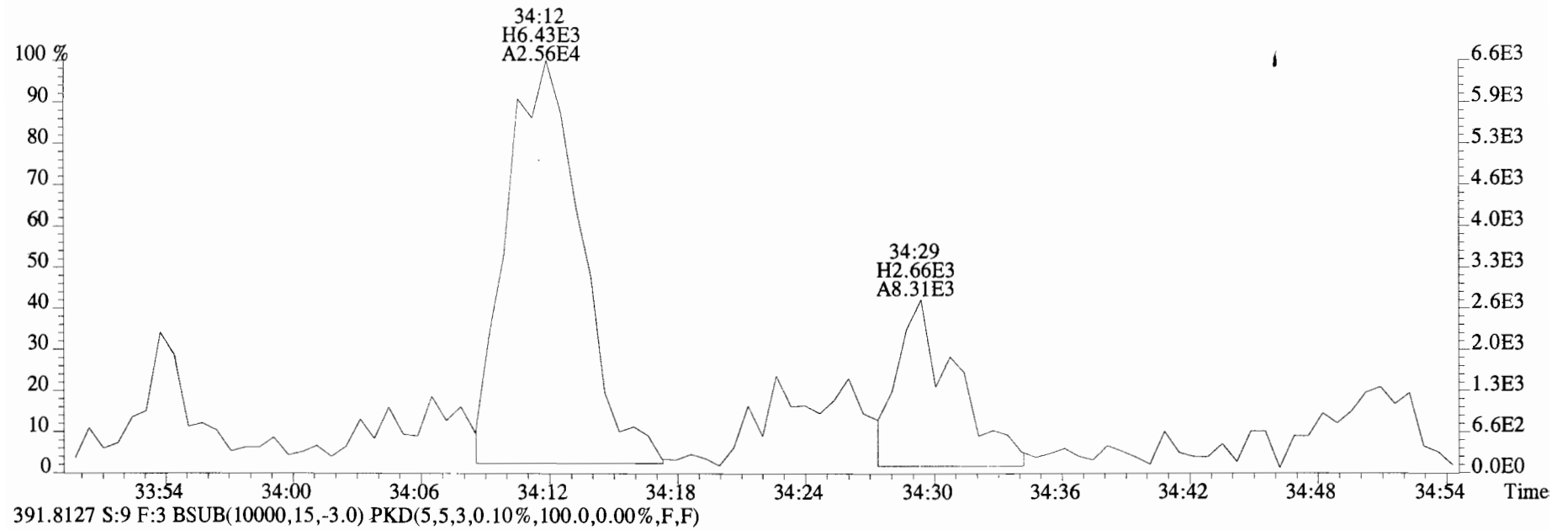
391.8127 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



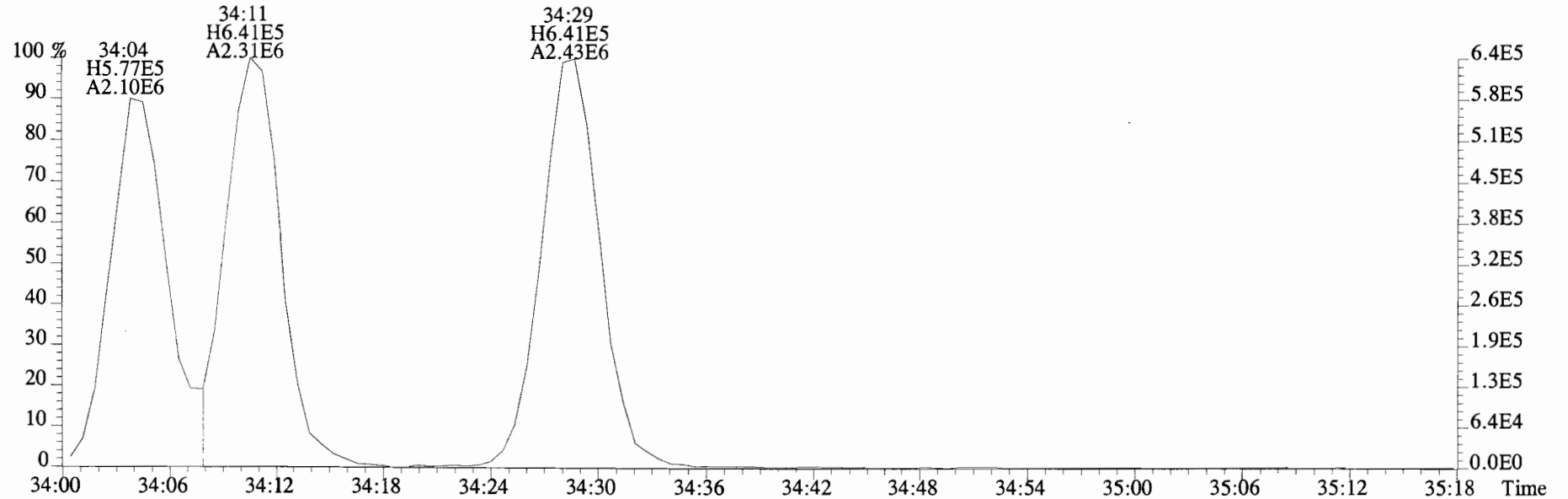
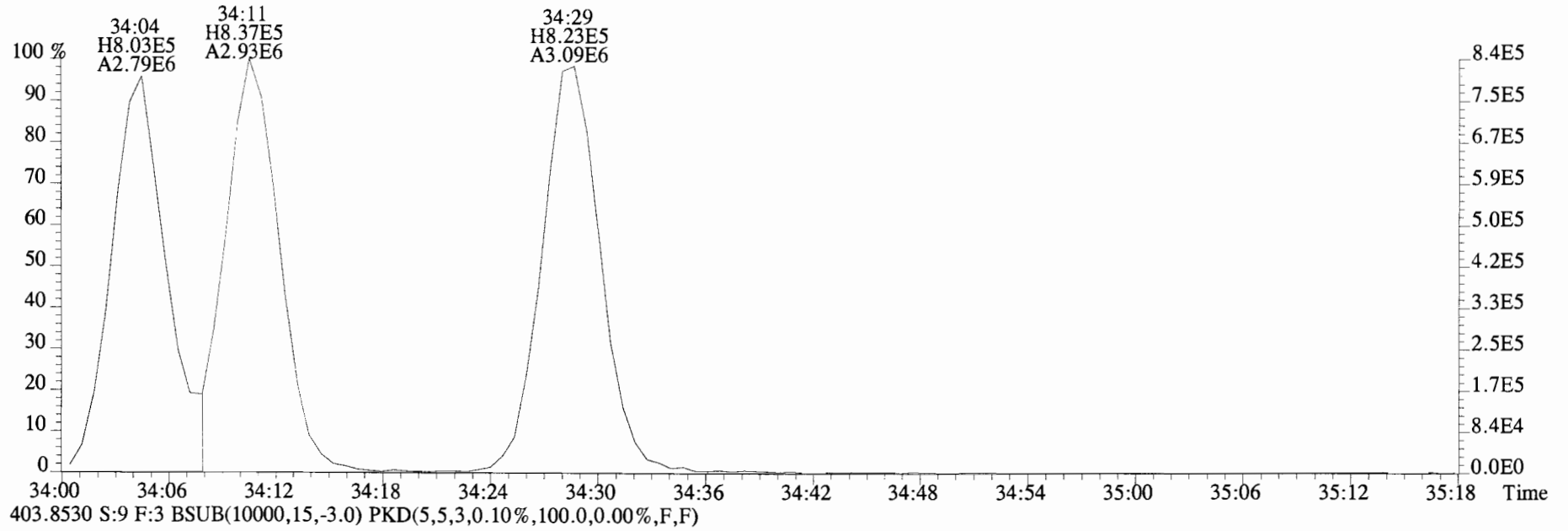
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



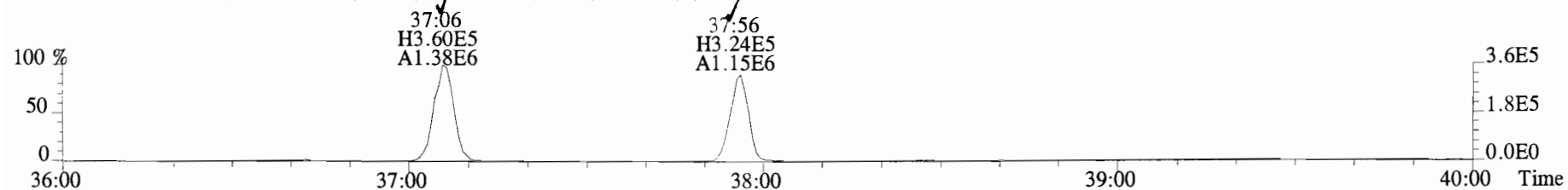
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
389.8156 S:9 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



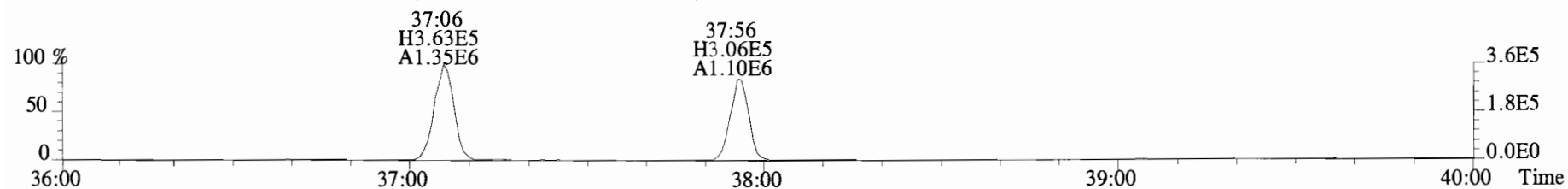
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical_Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



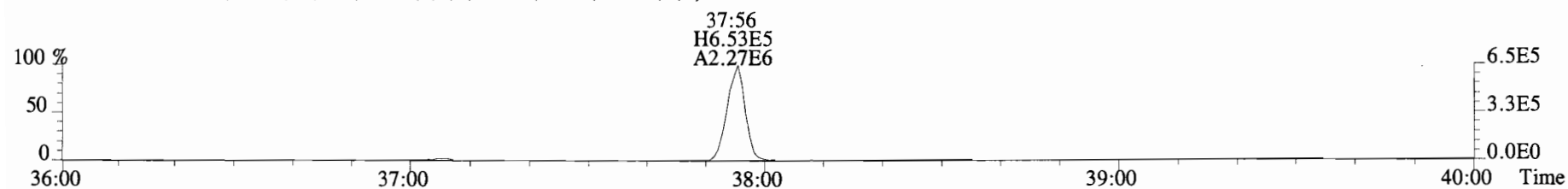
File:191101D1 #1-356 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
423.7767 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



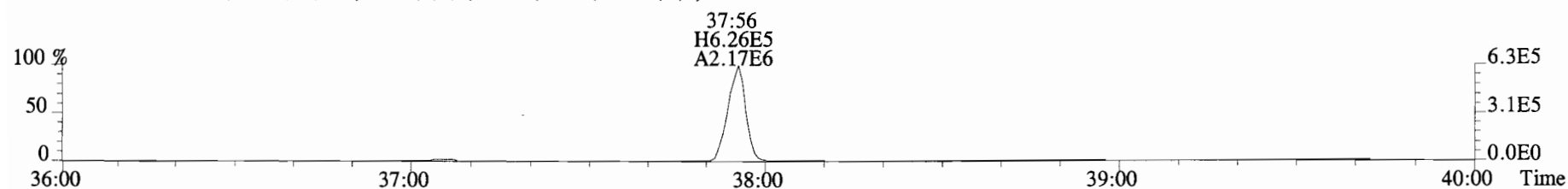
425.7737 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



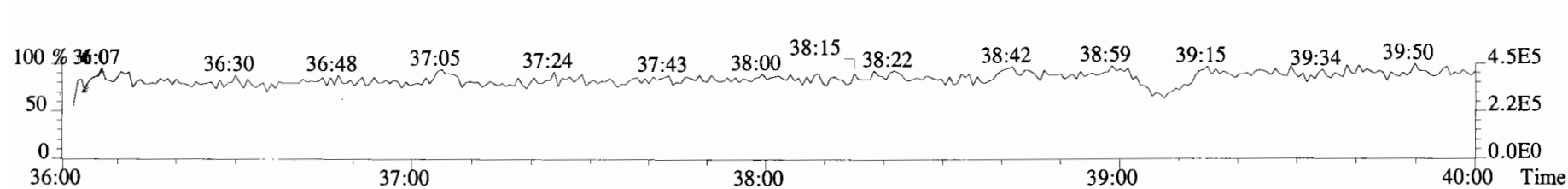
435.8169 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



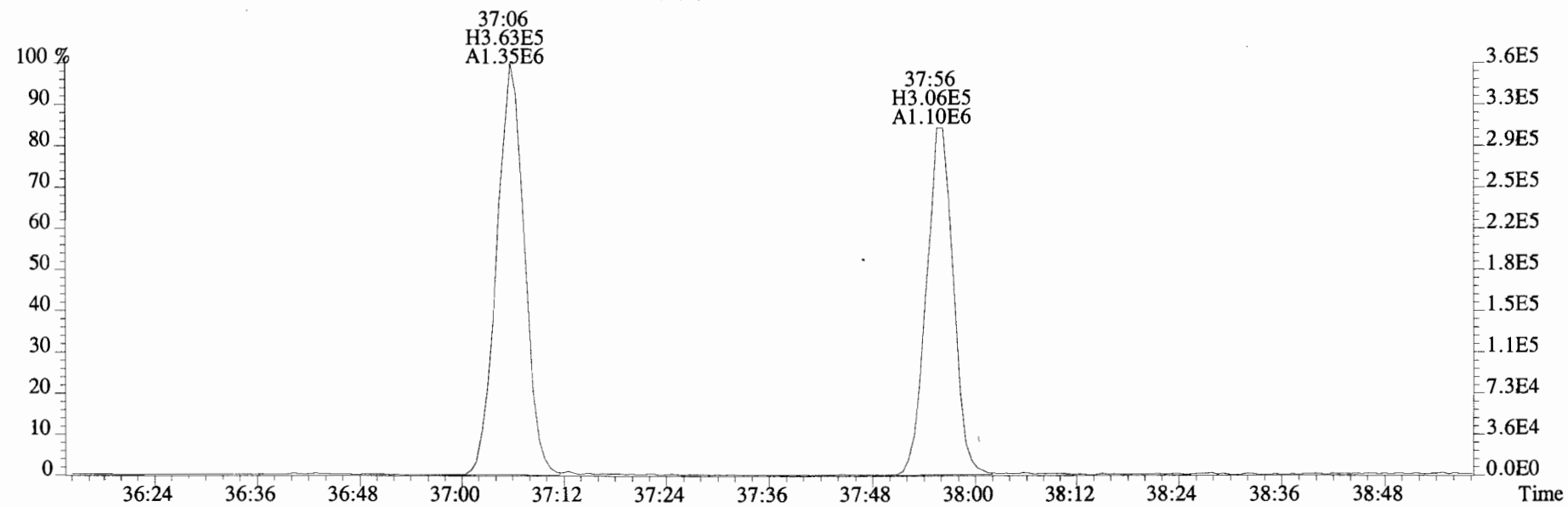
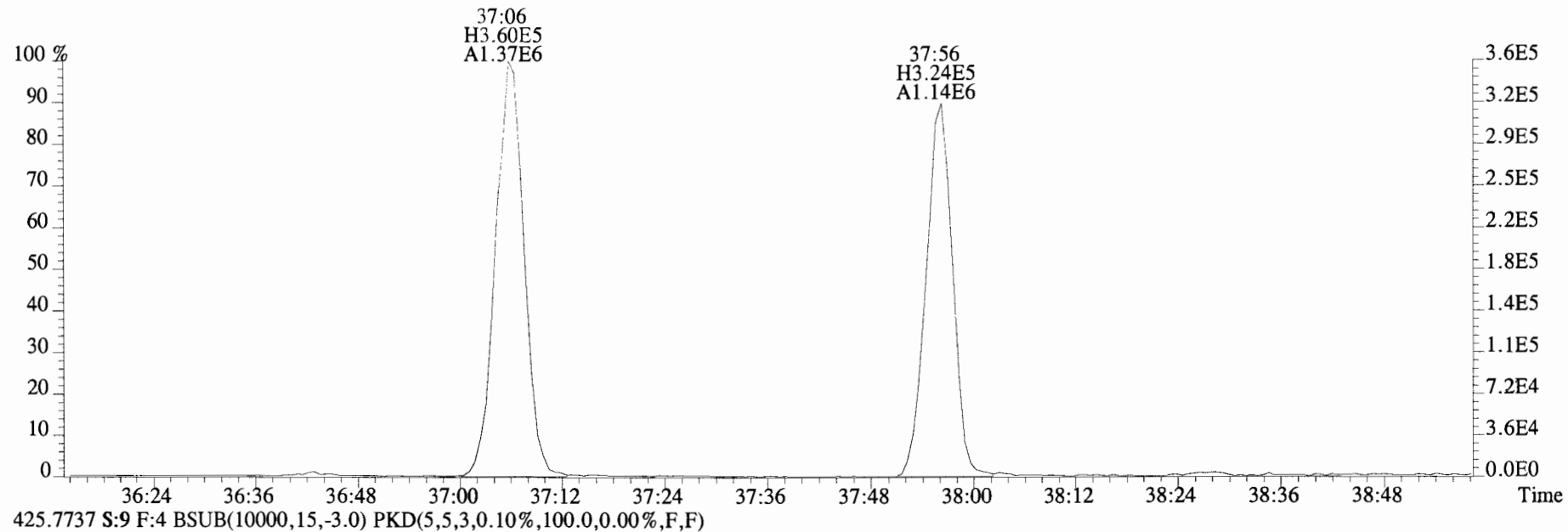
437.8140 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



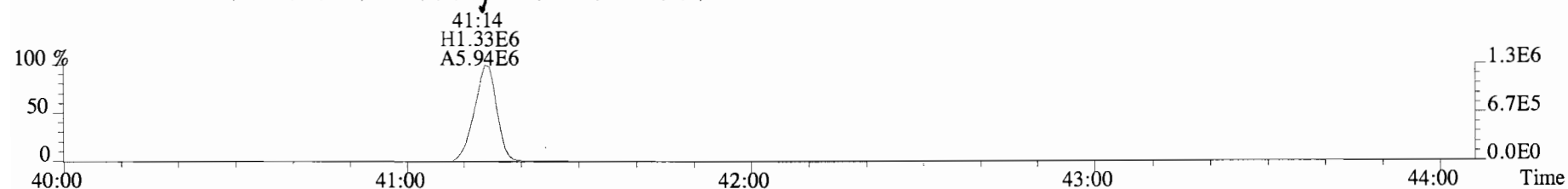
454.9728 S:9 F:4



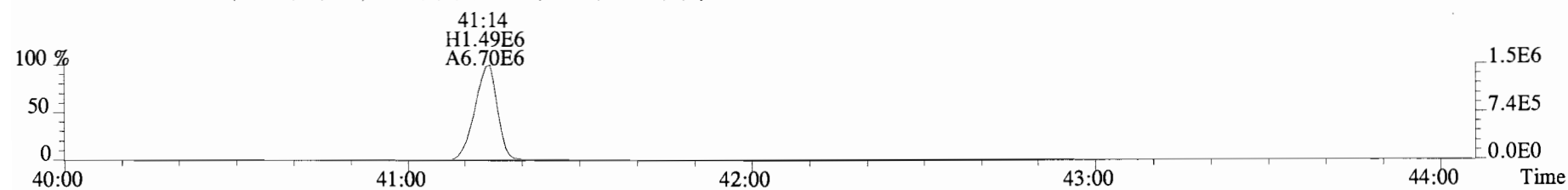
File:191101D1 #1-356 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
423.7767 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



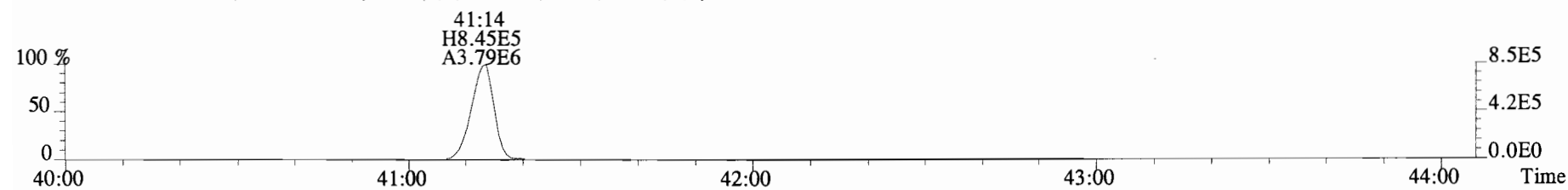
File:191101D1 #1-431 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
457.7377 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



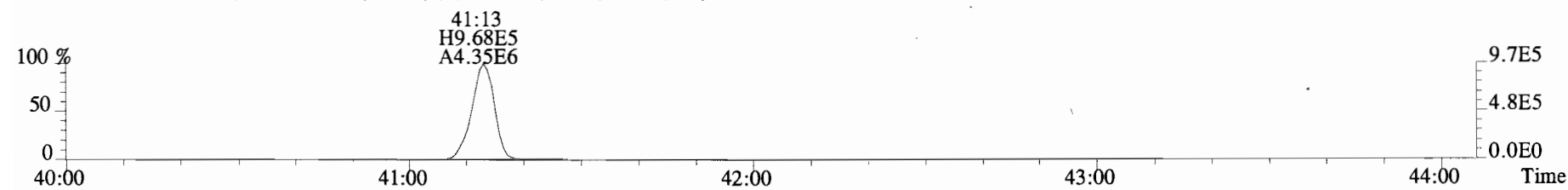
459.7348 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



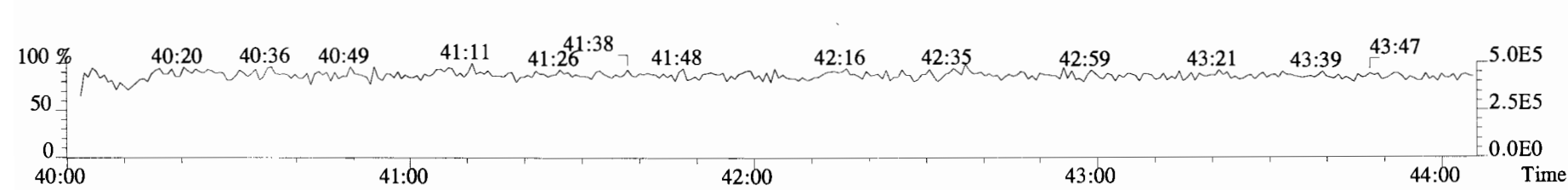
469.7780 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



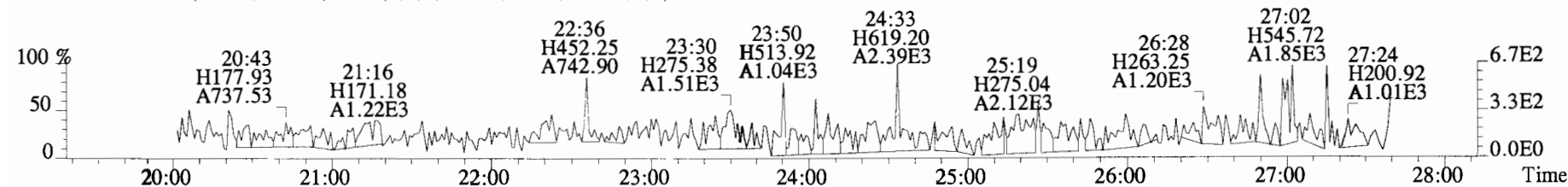
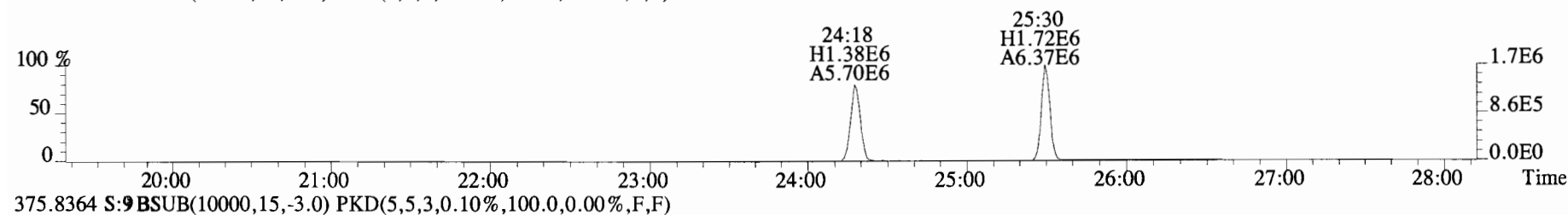
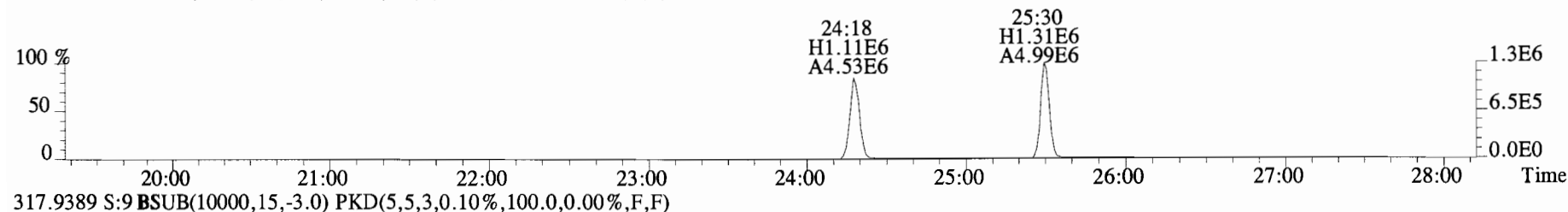
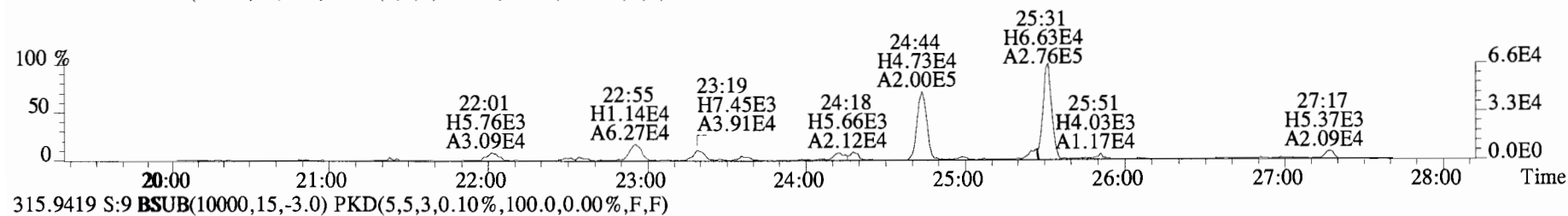
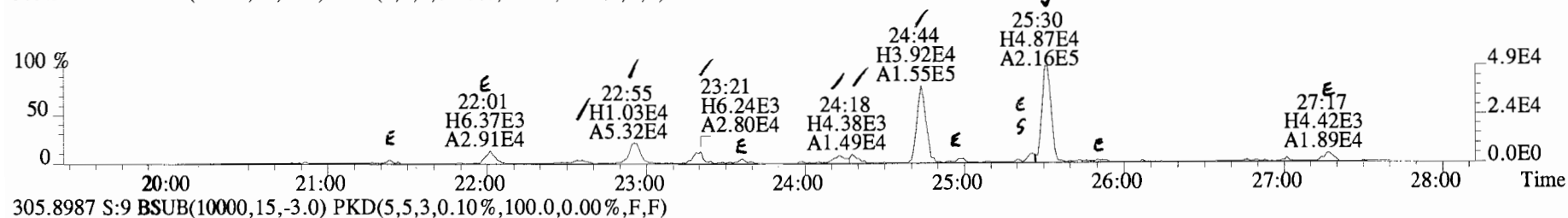
471.7750 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



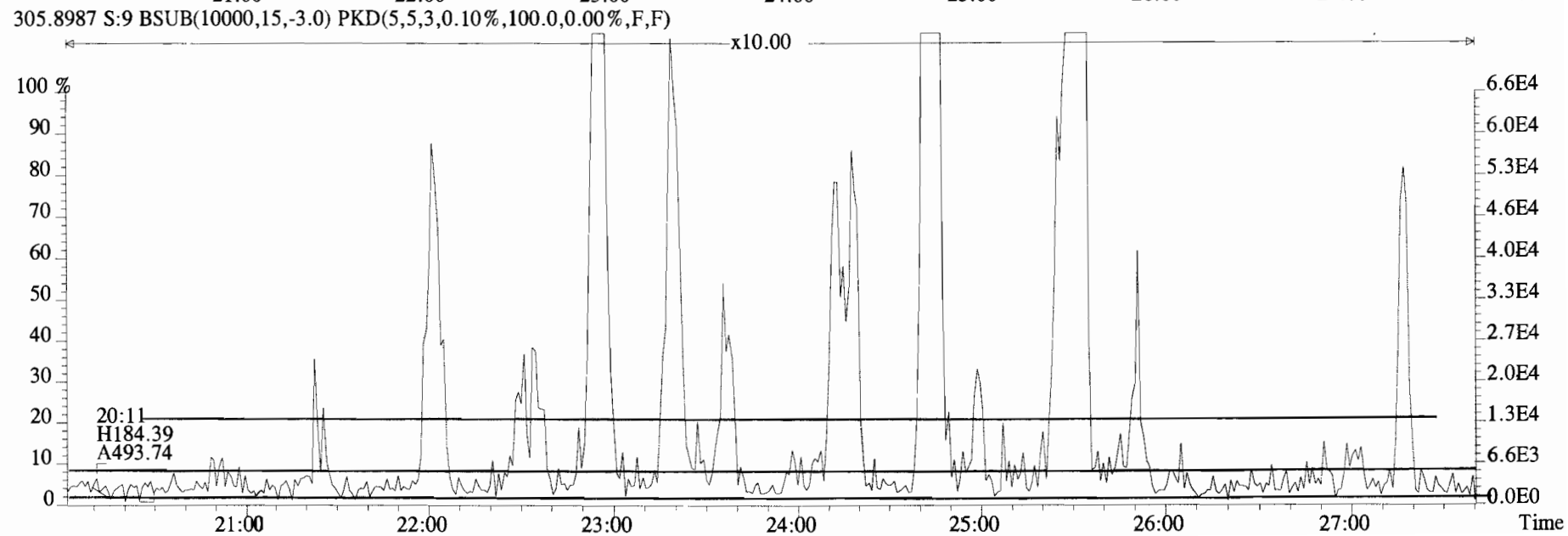
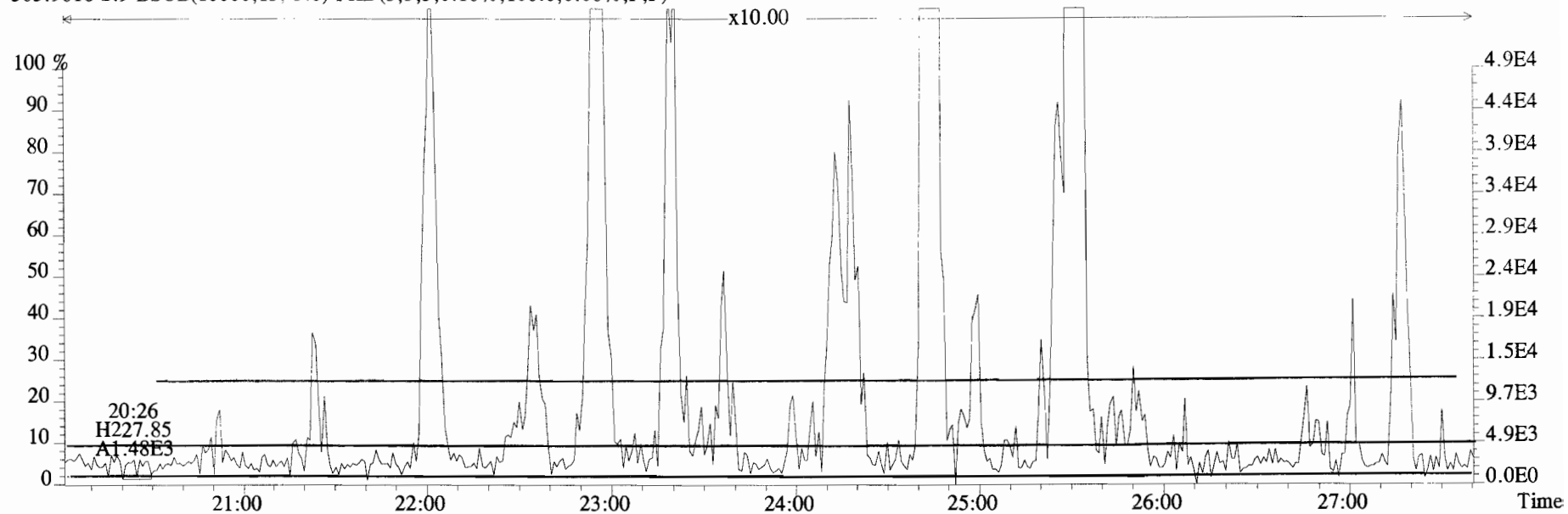
454.9728 S:9 F:5



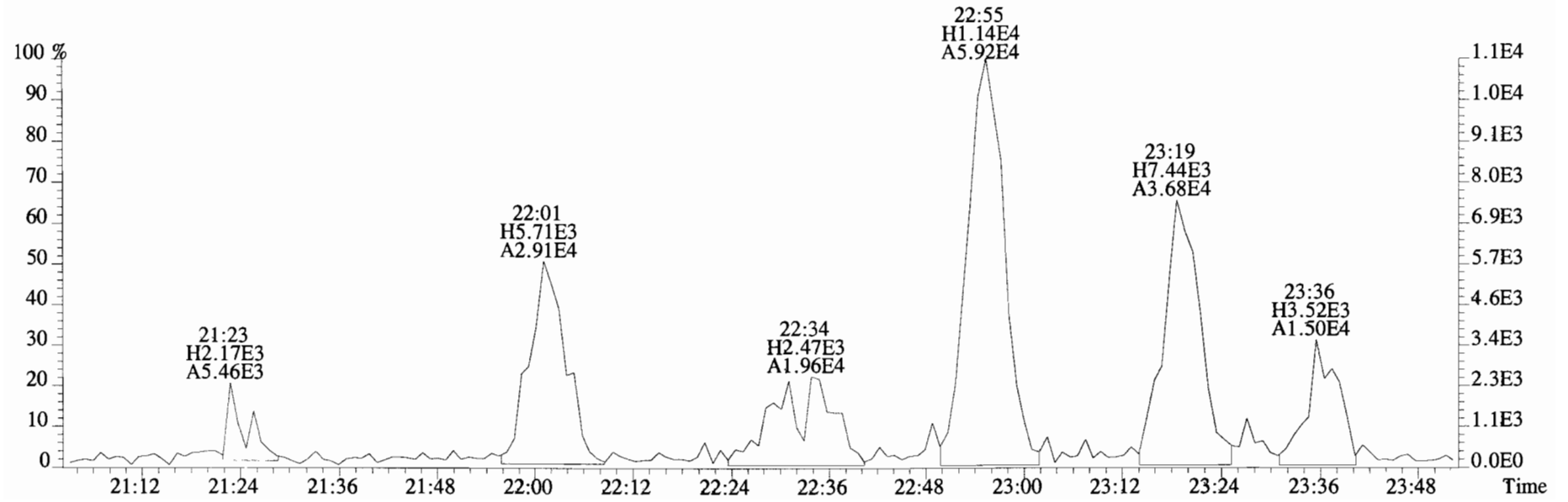
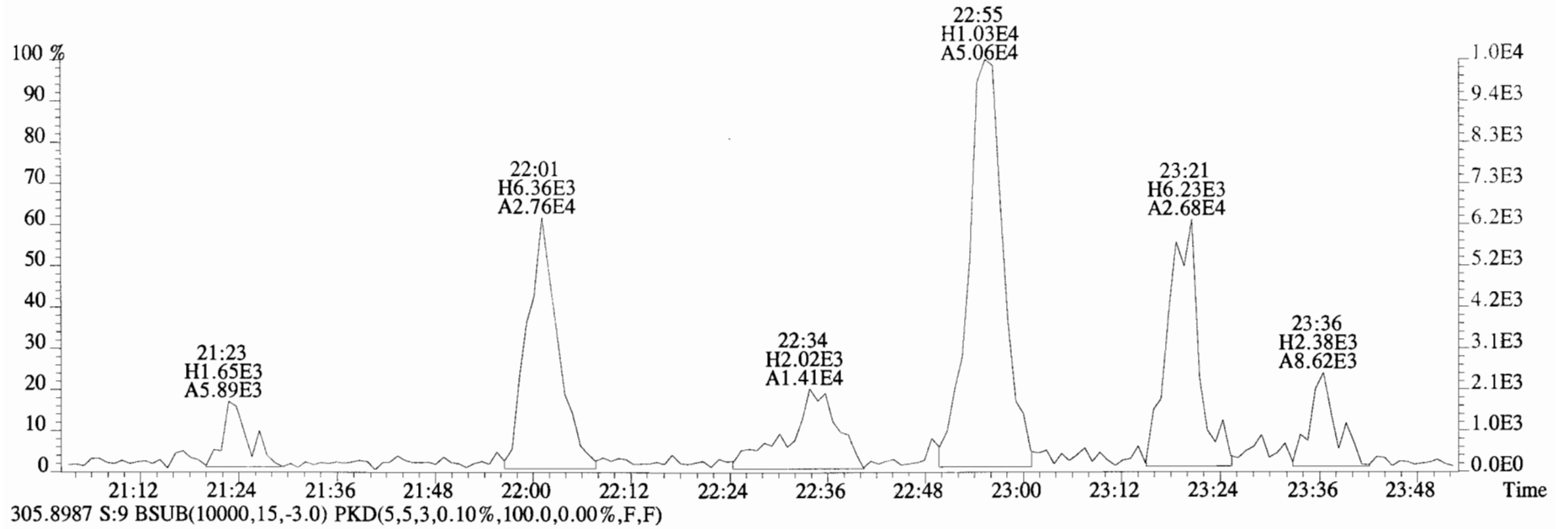
File:191101D1 #1-492 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
 303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



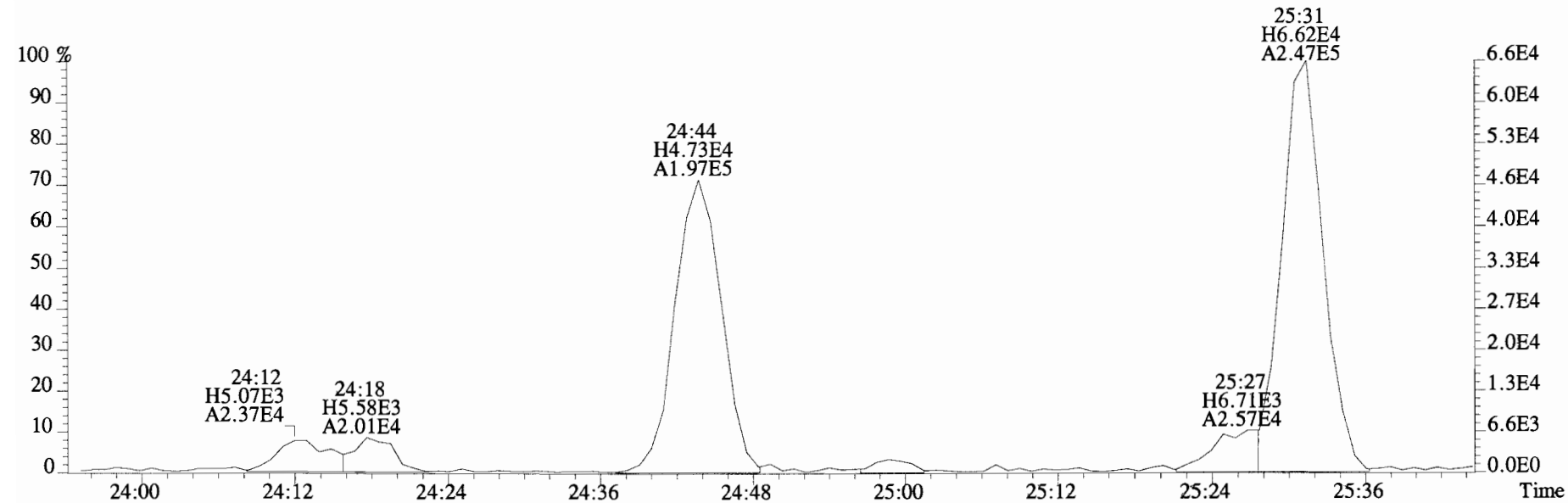
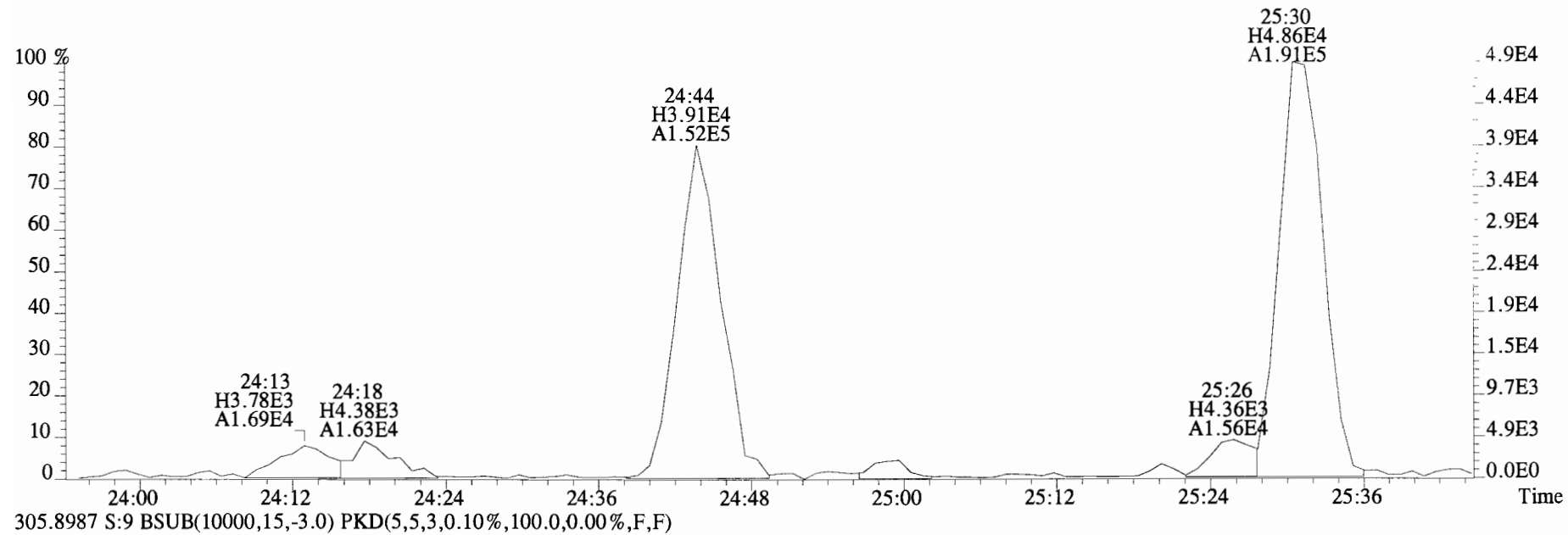
File:191101D1 #1-492 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



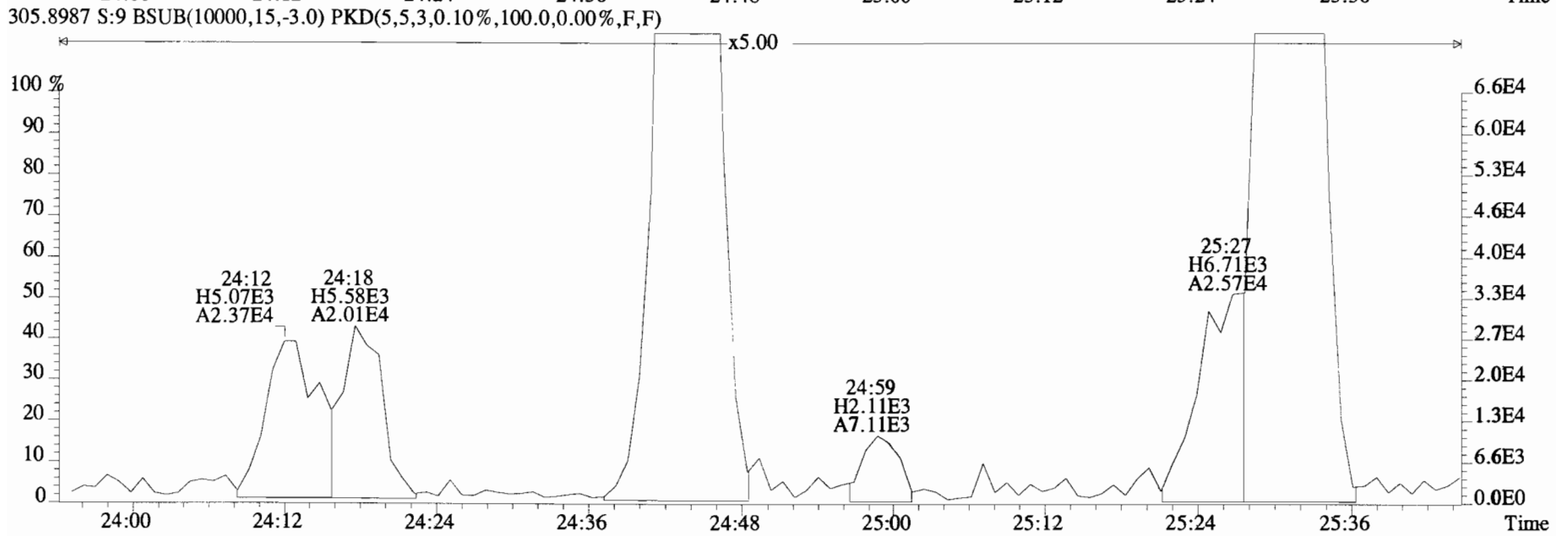
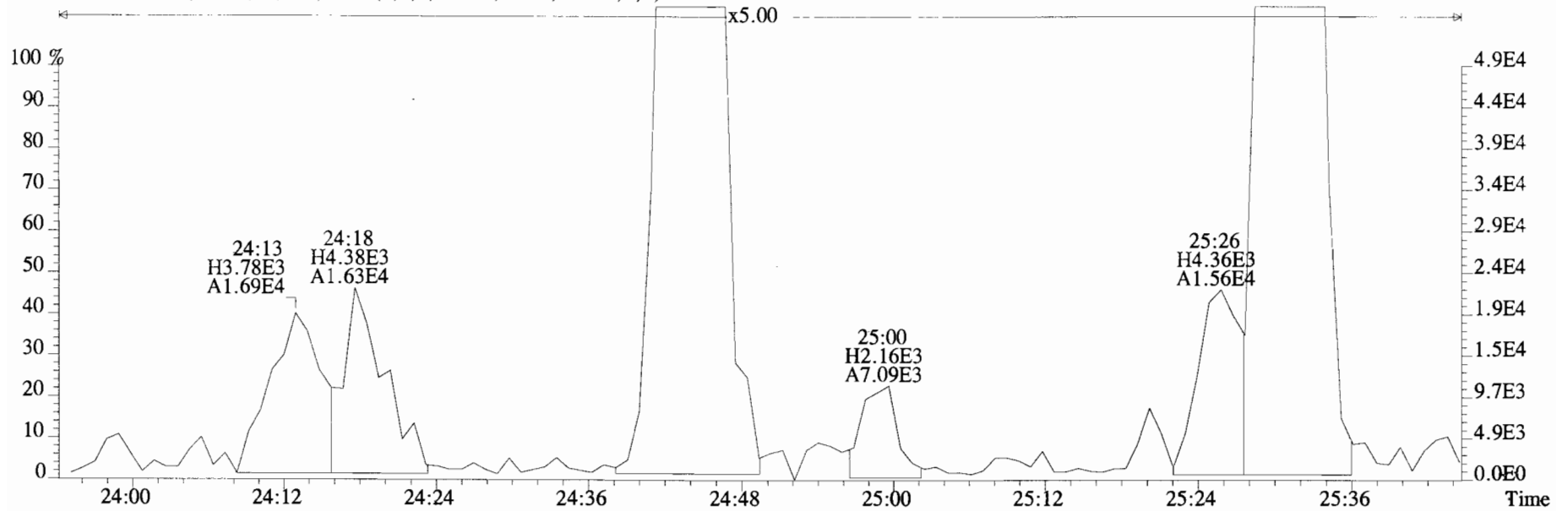
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 Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
 303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



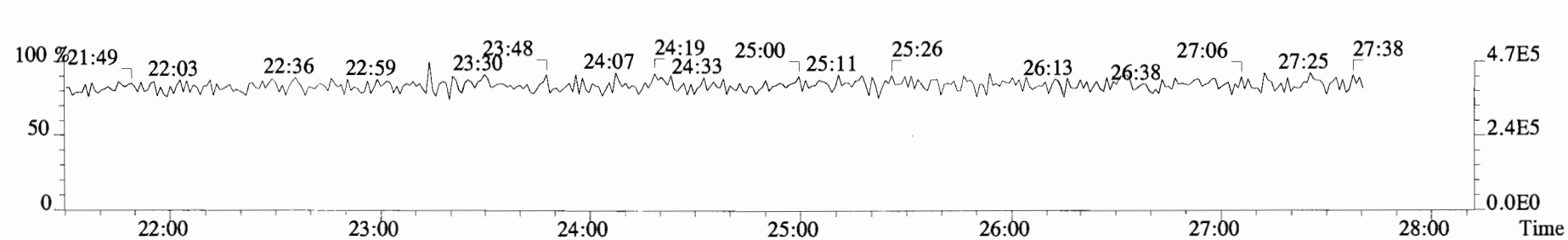
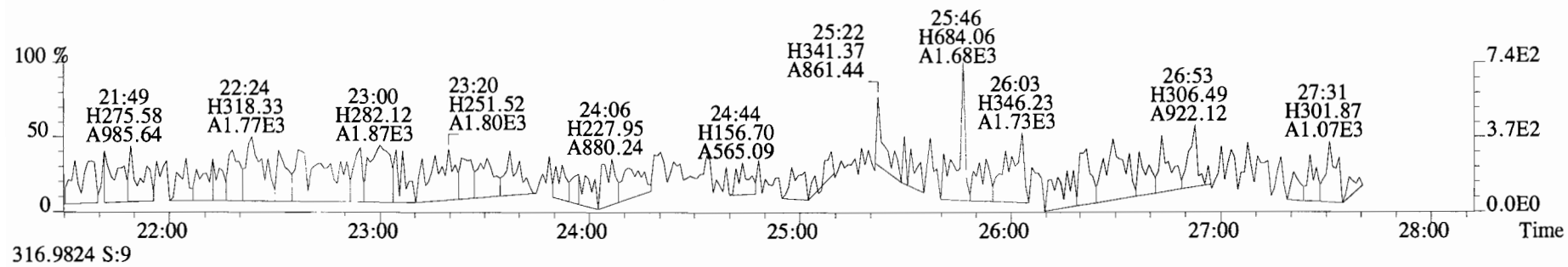
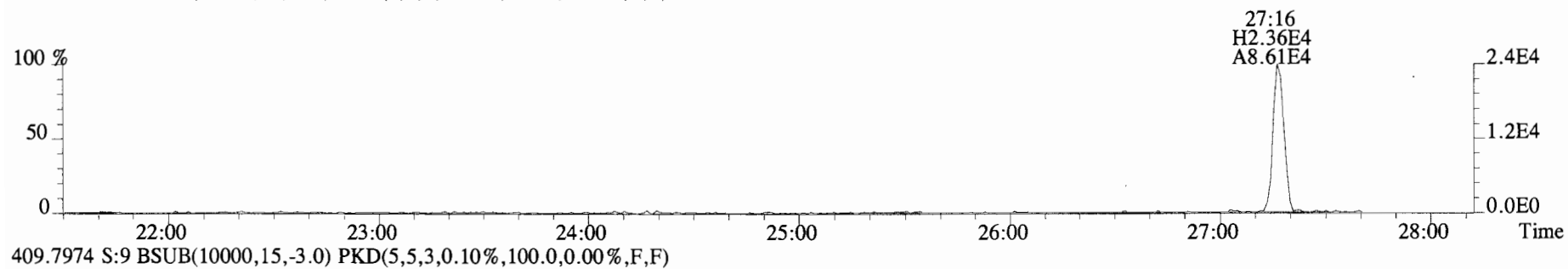
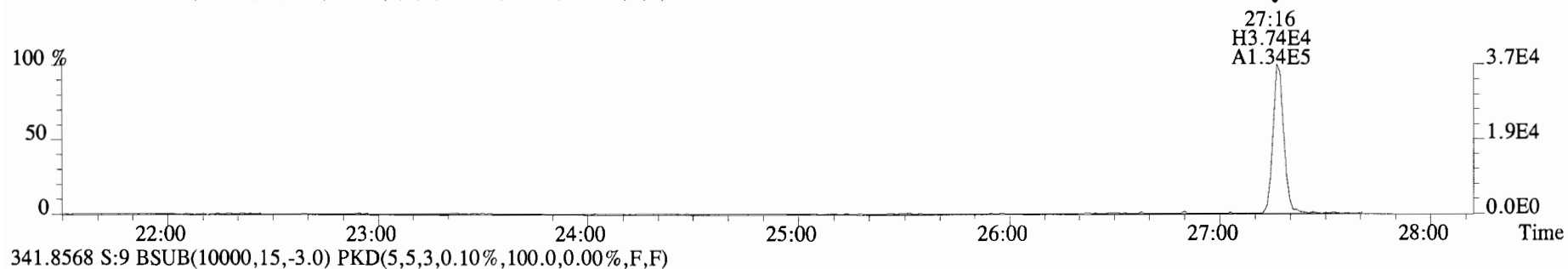
File:191101D1 #1-492 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



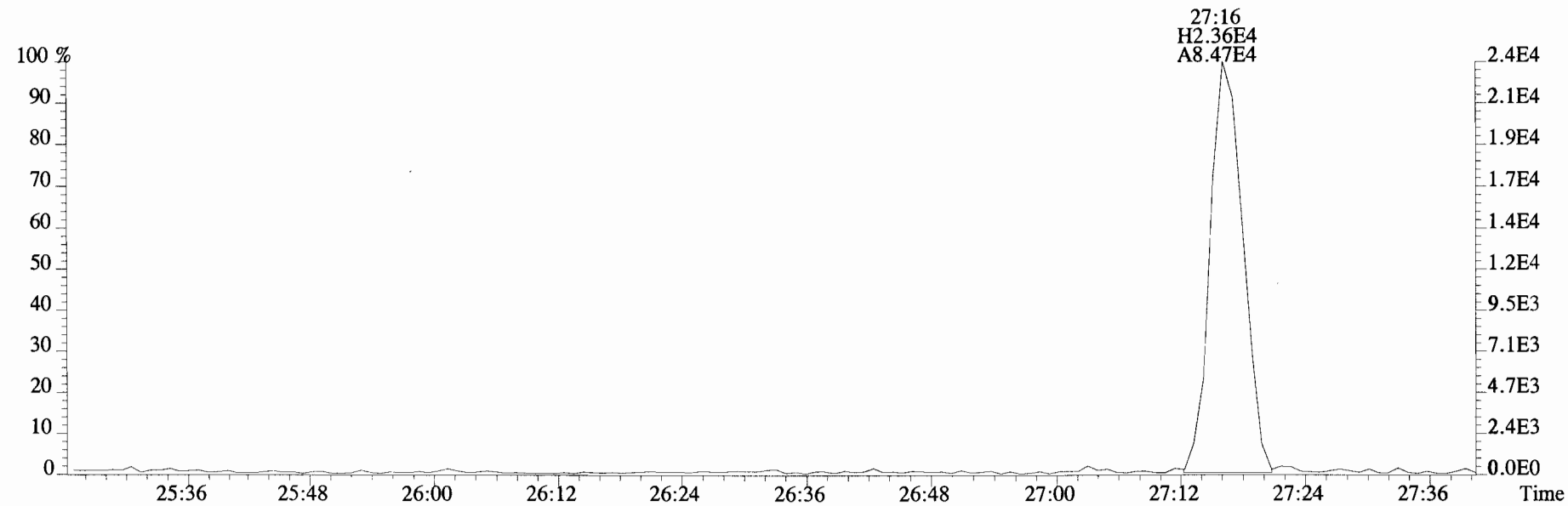
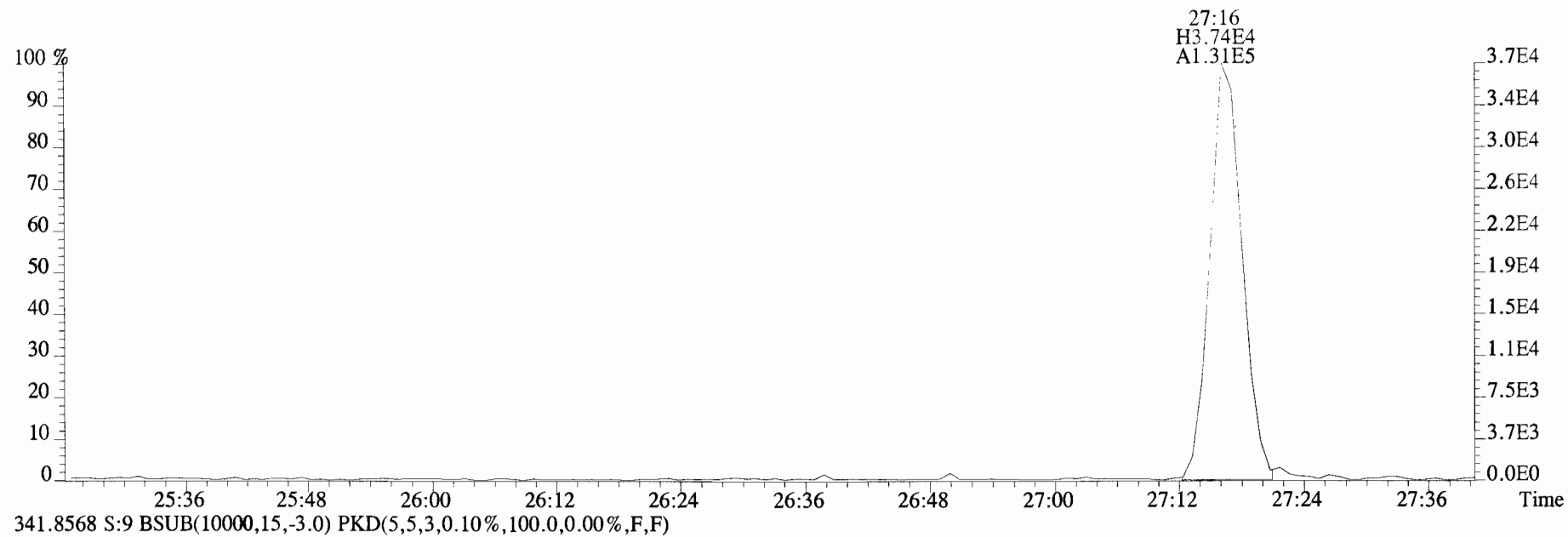
File:191101D1 #1-492 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
 303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



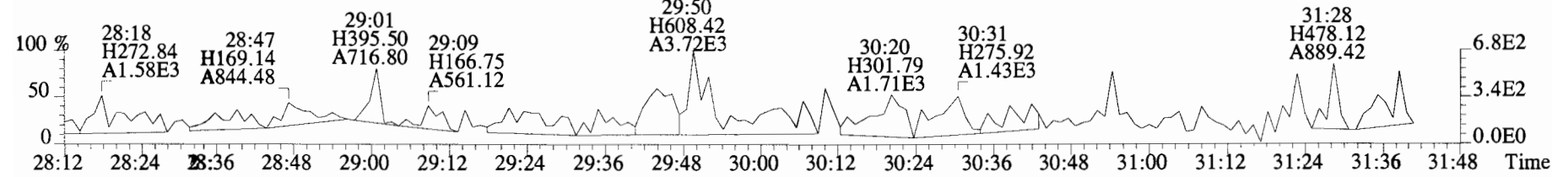
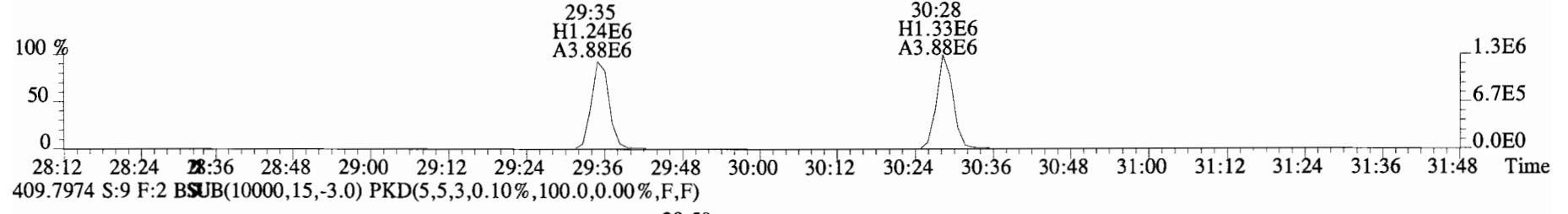
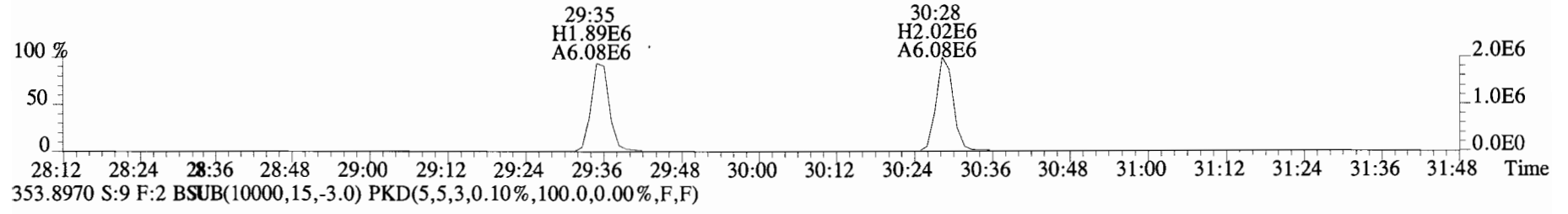
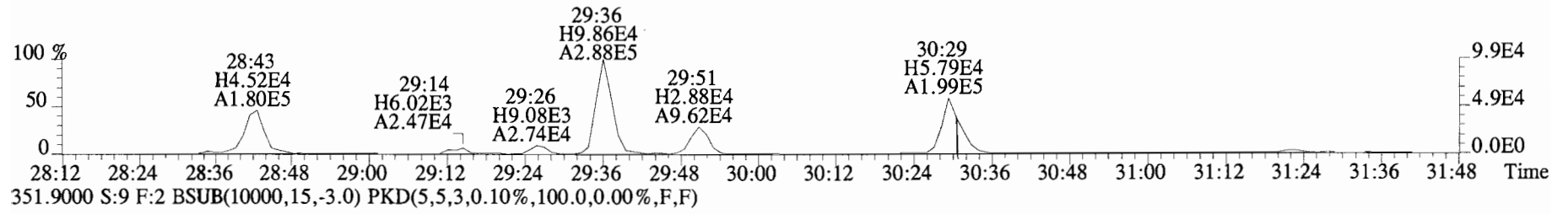
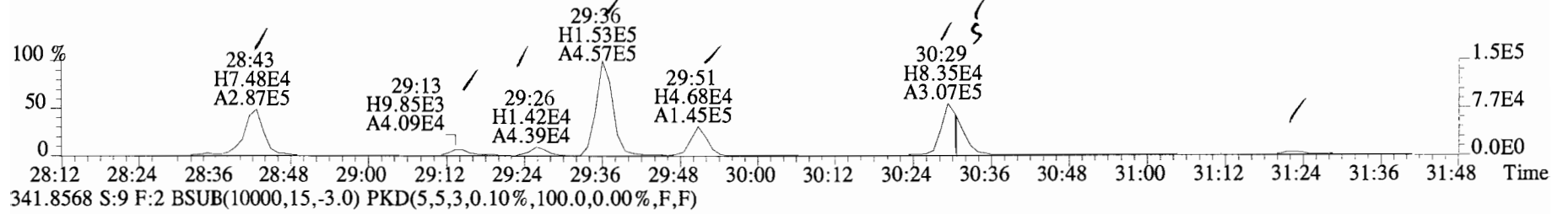
File:191101D1 #1-492 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
 339.8597 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



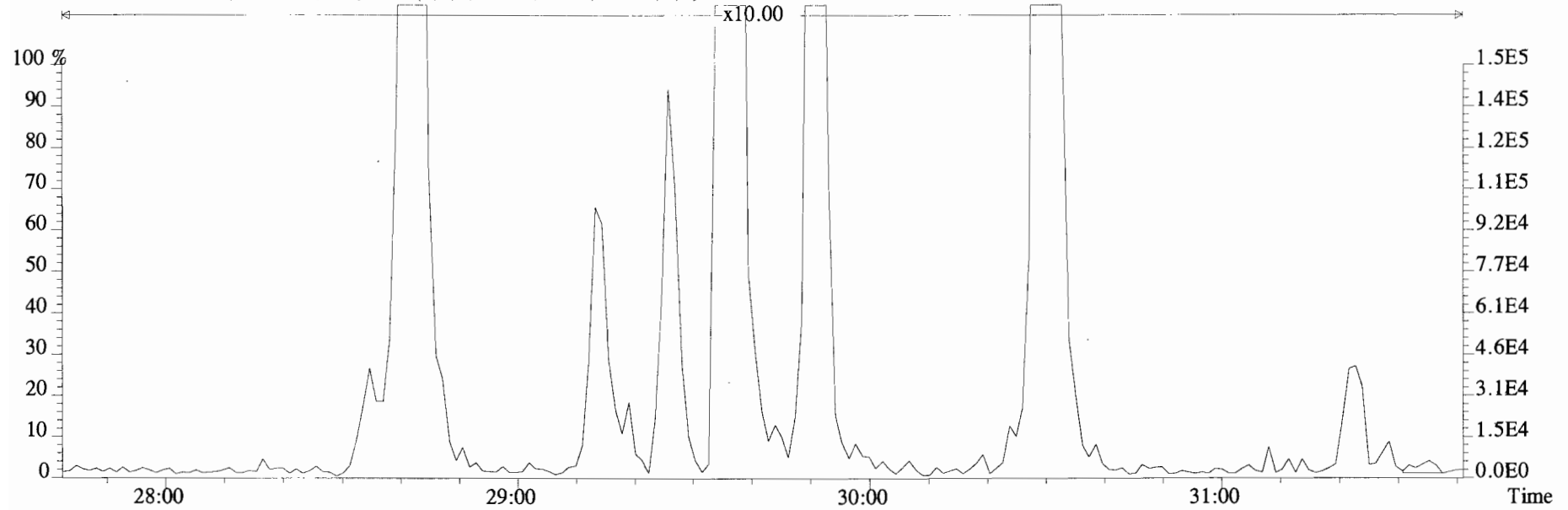
File:191101D1 #1-492 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
339.8597 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



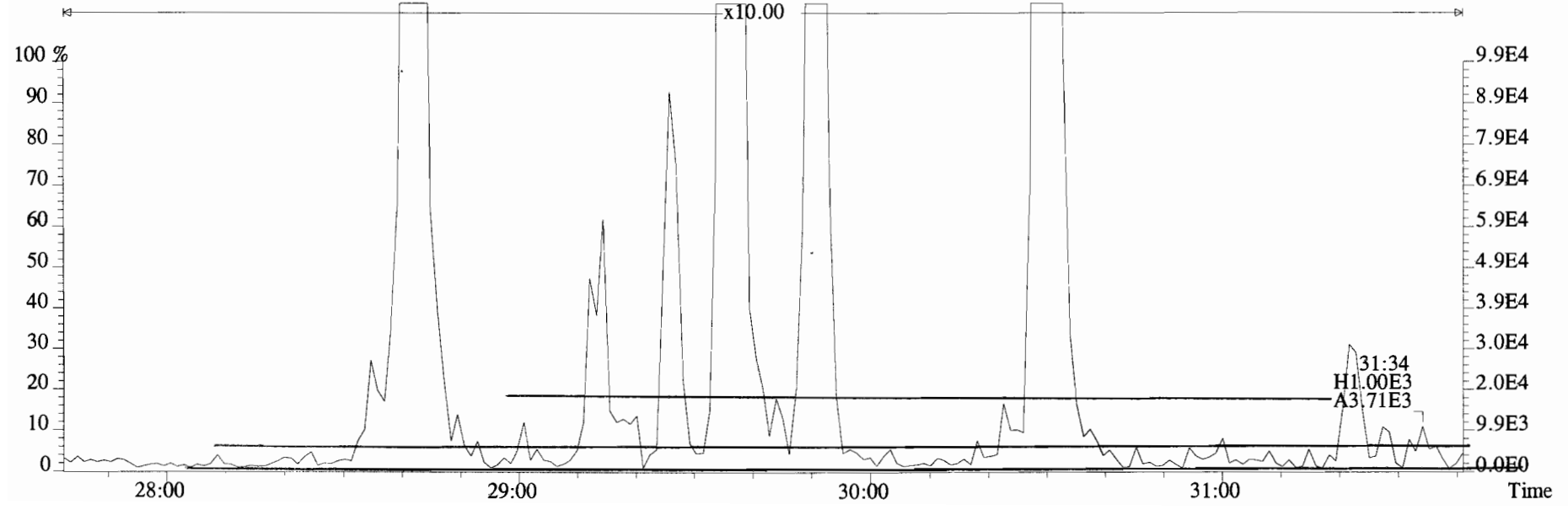
File:191101D1 #1-211 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
 339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



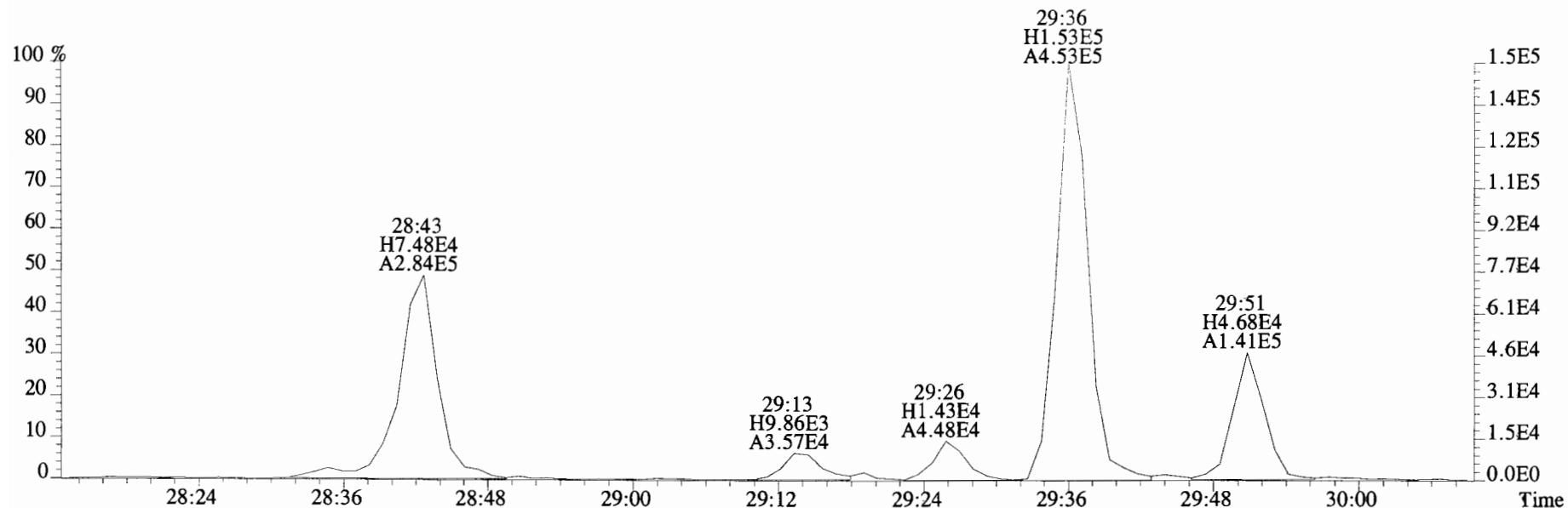
File:191101D1 #1-211 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



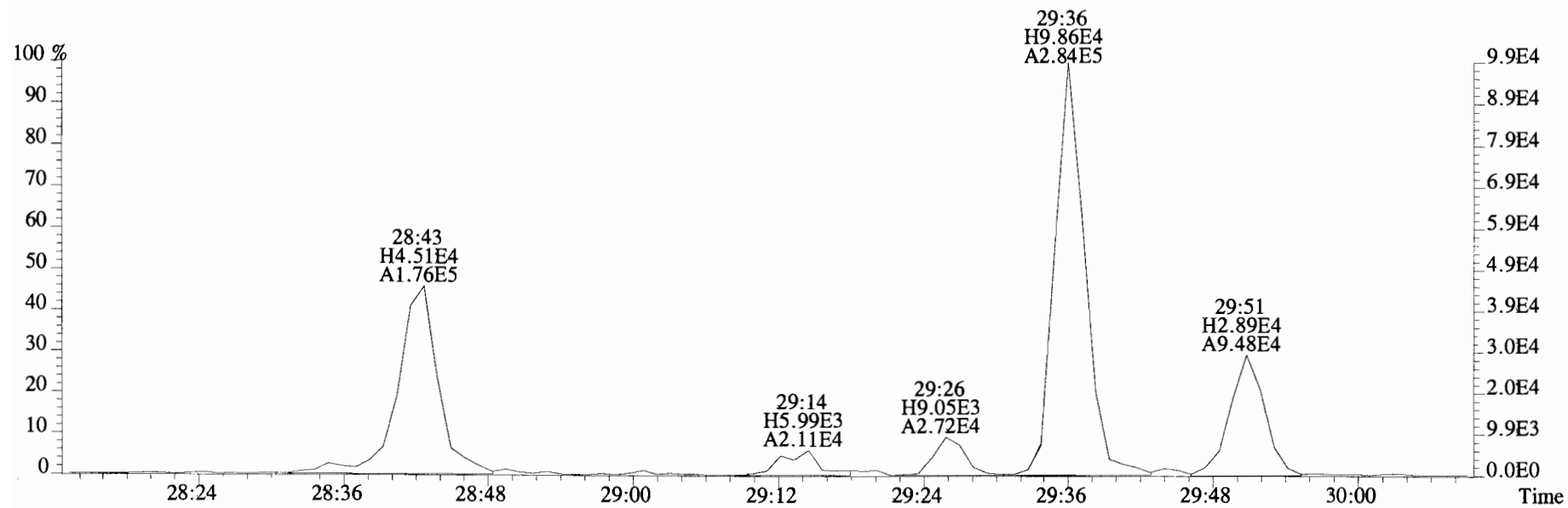
341.8568 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



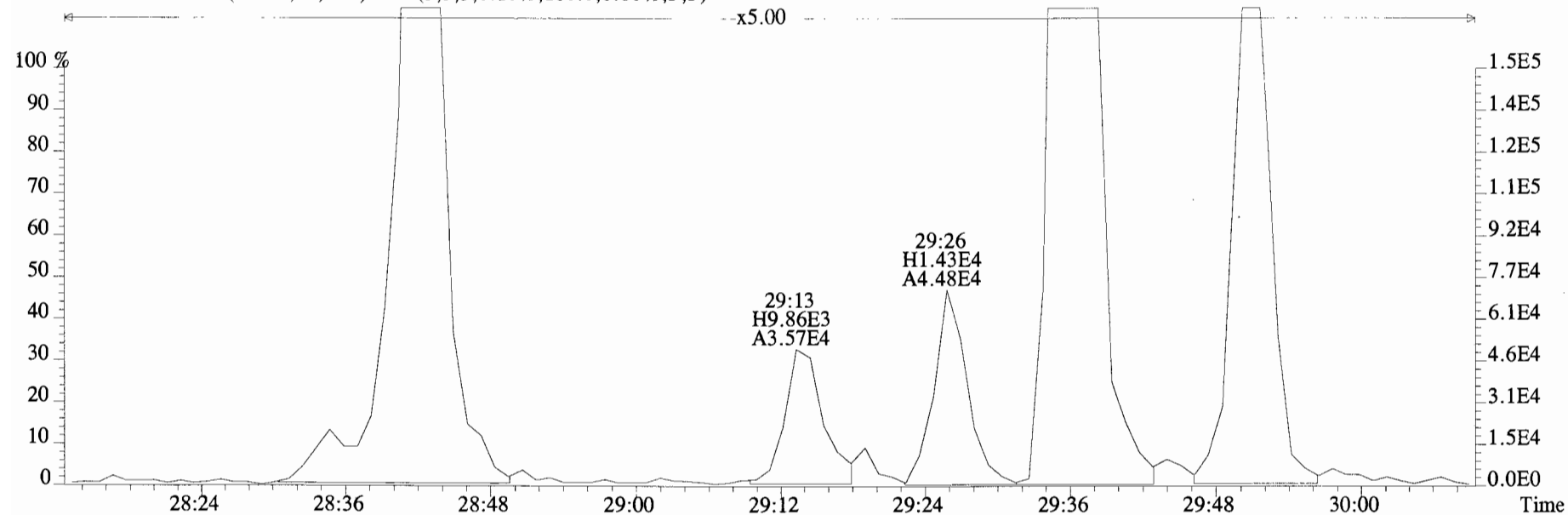
File:191101D1 #1-211 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
 339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



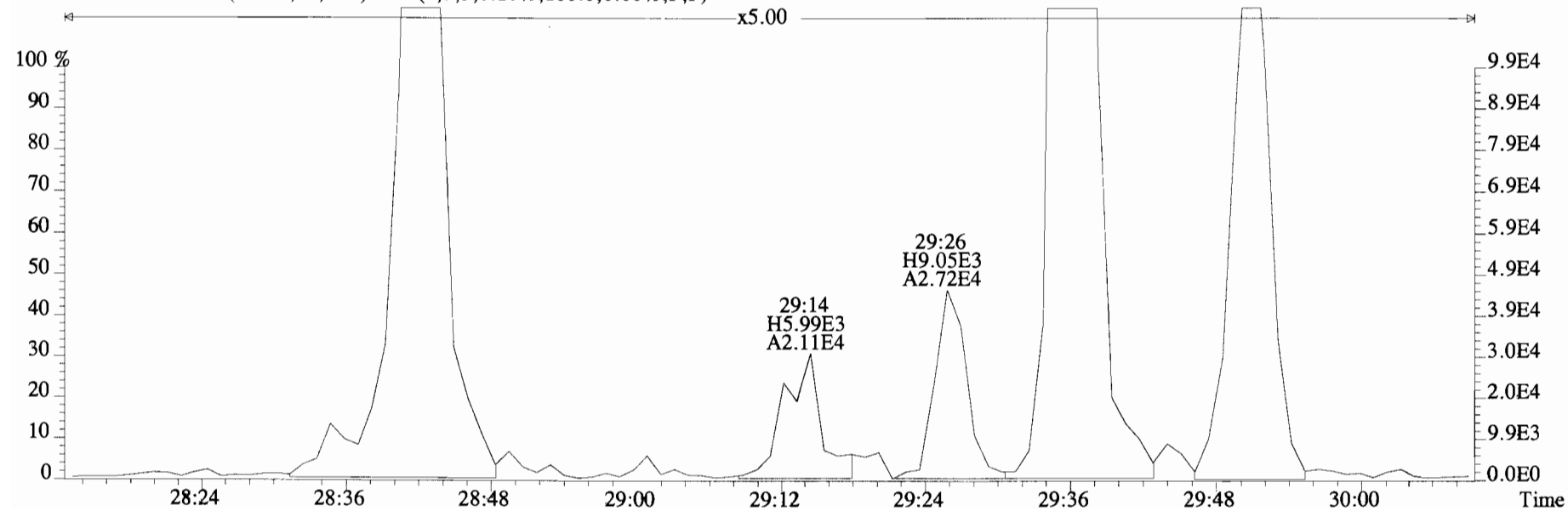
341.8568 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



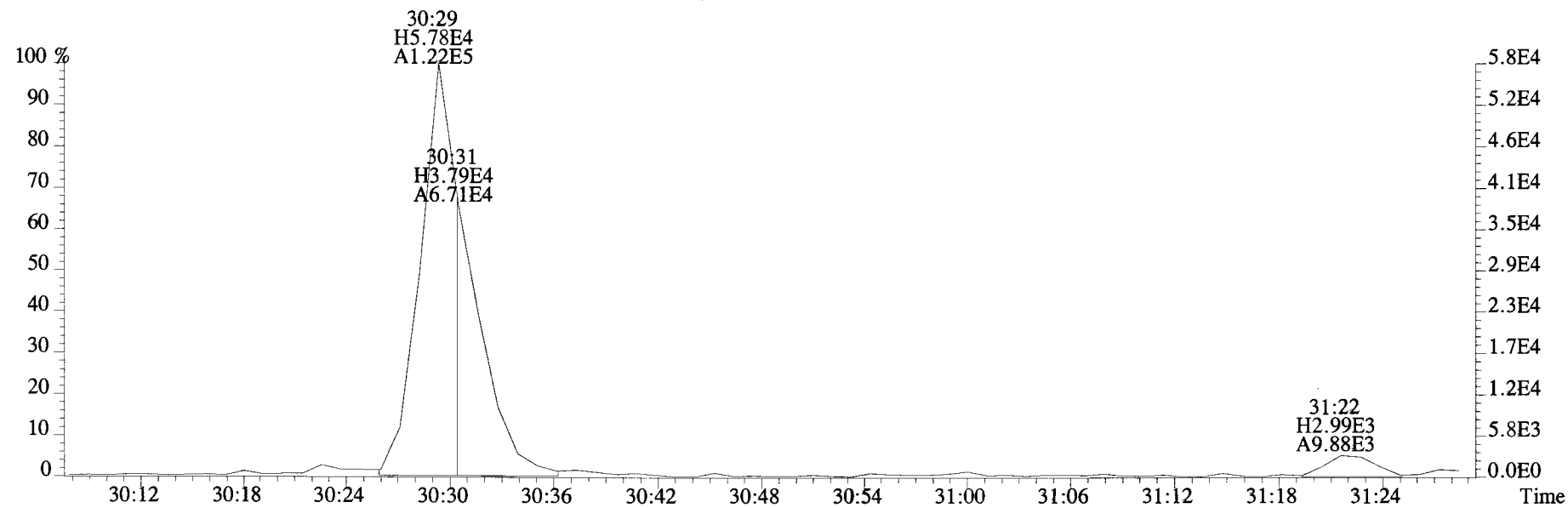
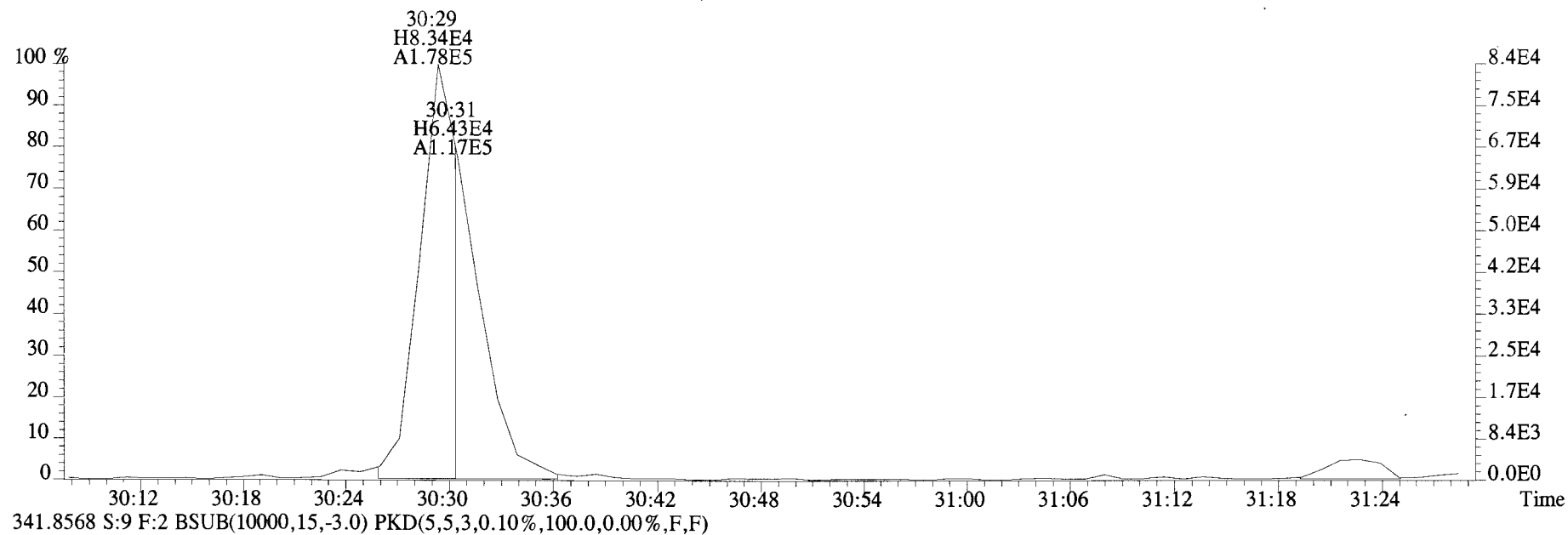
File:191101D1 #1-211 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



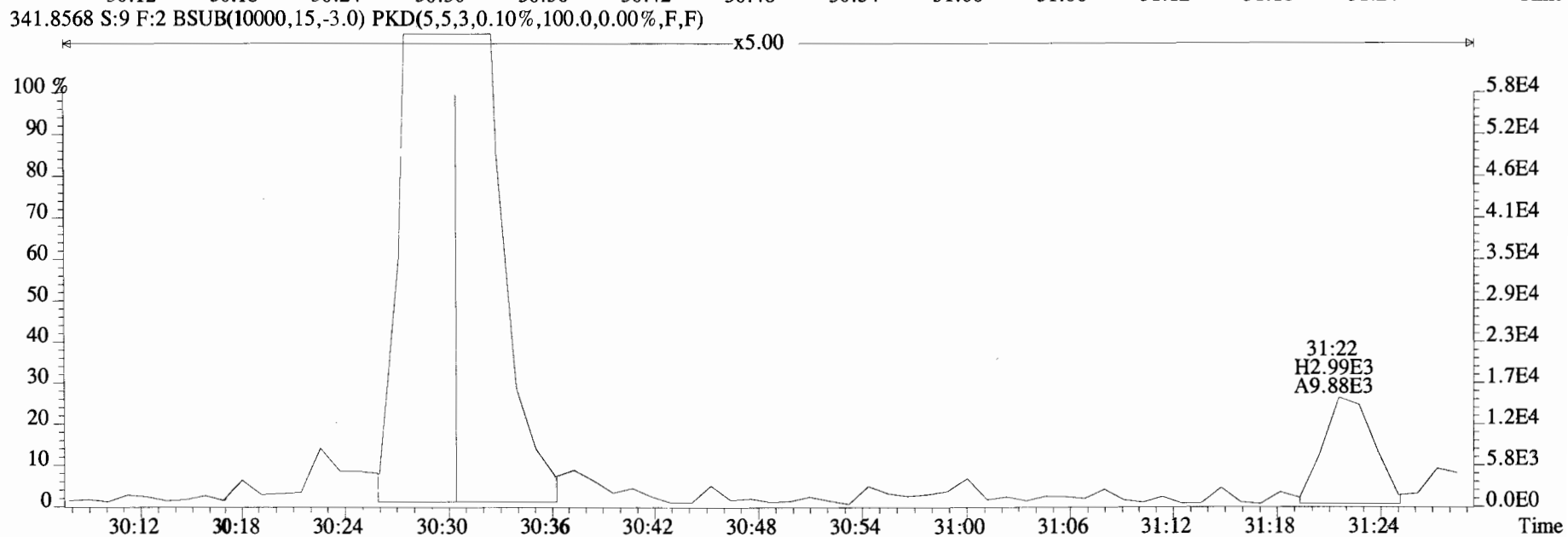
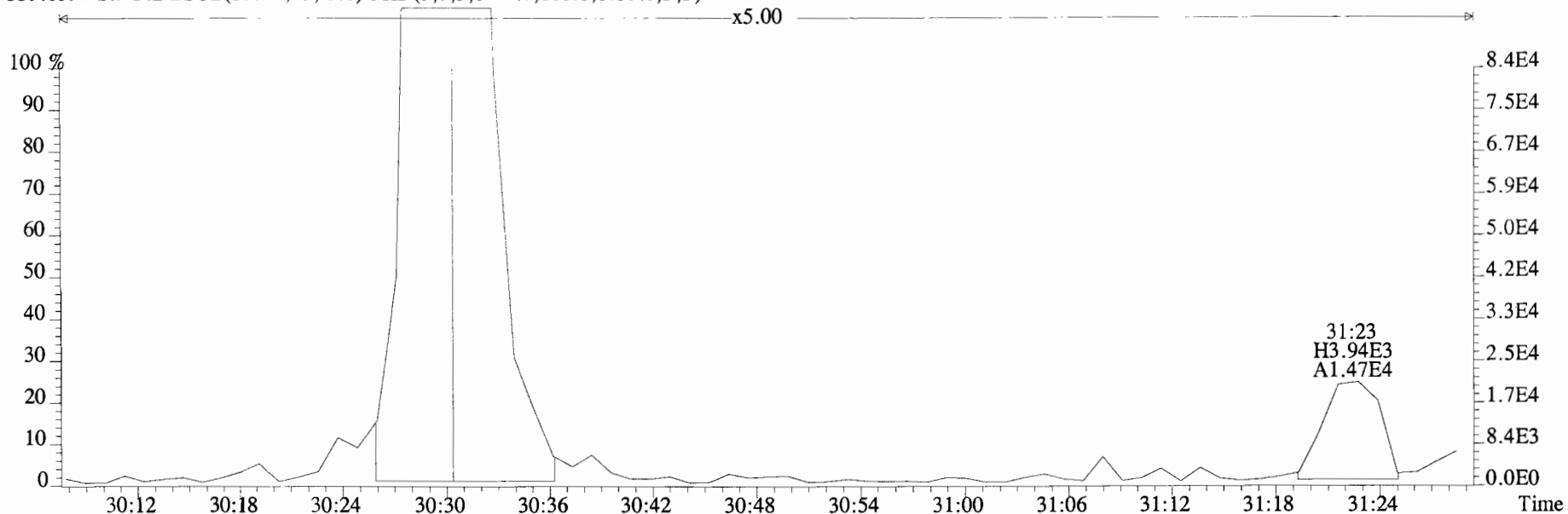
341.8568 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



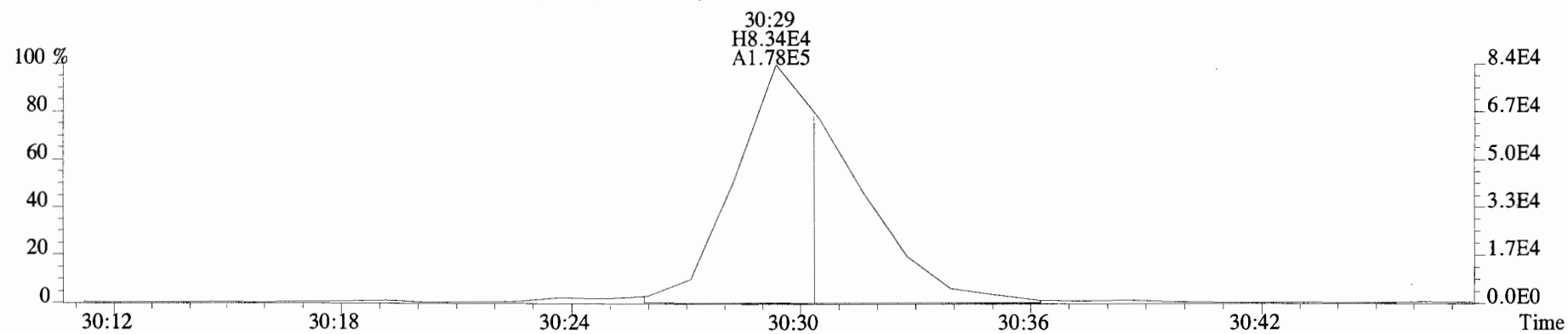
File:191101D1 #1-211 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



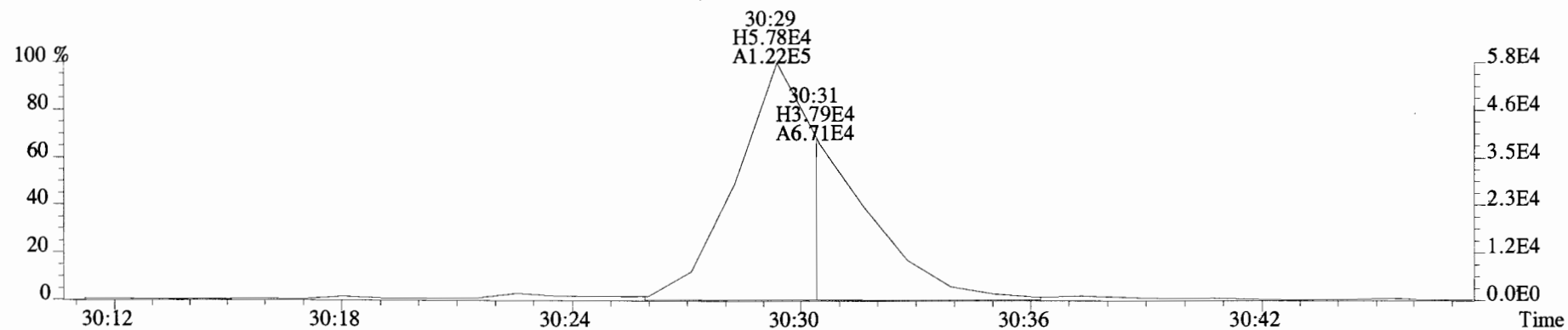
File:191101D1 #1-211 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



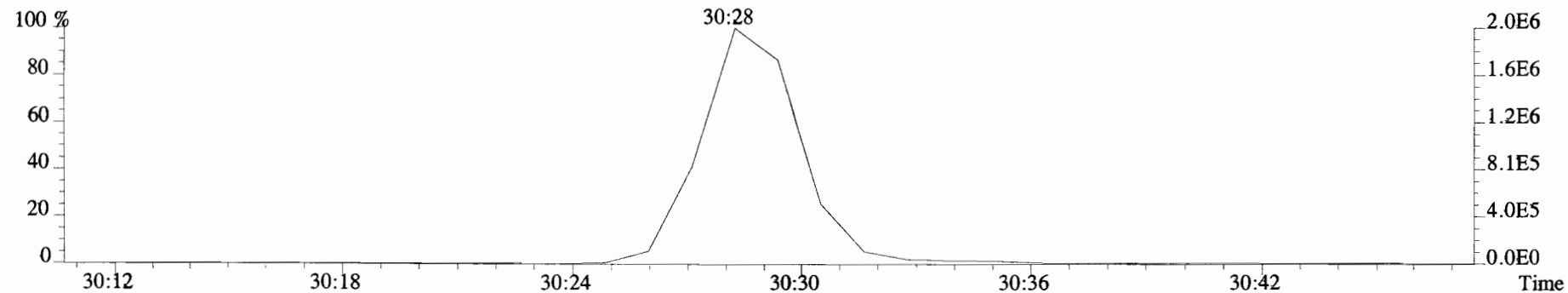
File:191101D1 #1-211 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



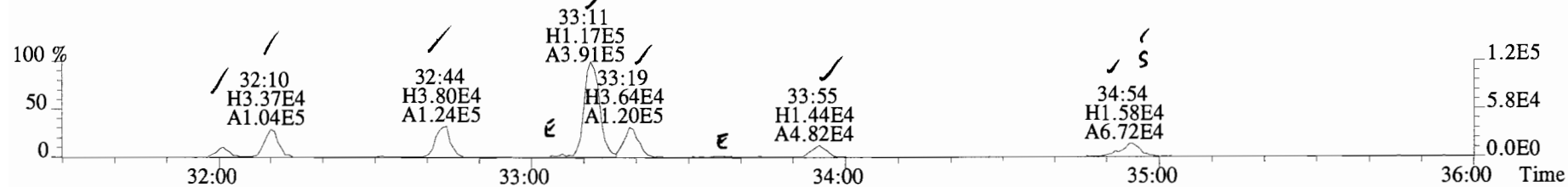
341.8568 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



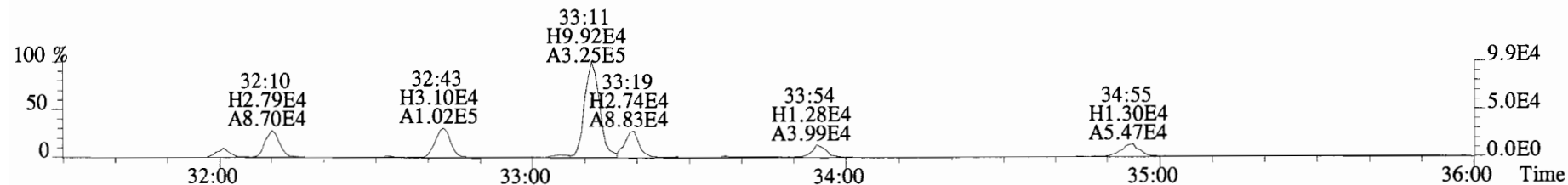
351.9000 S:9 F:2



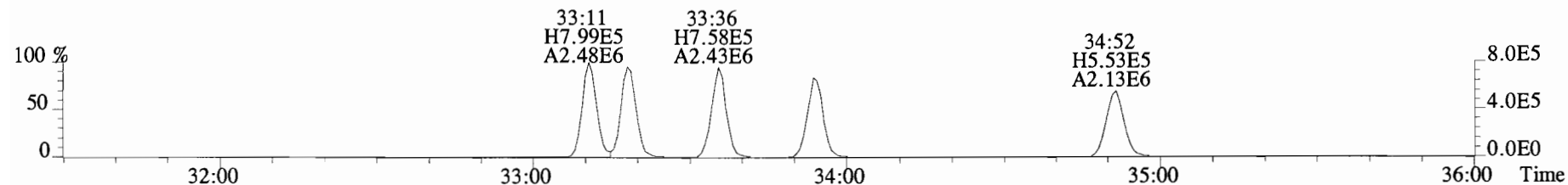
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
 373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



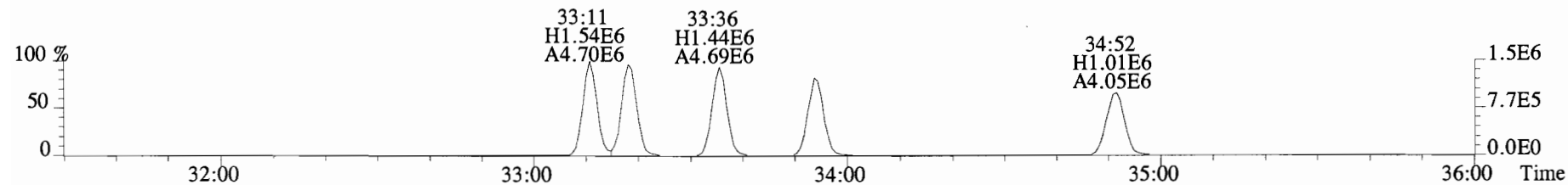
375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



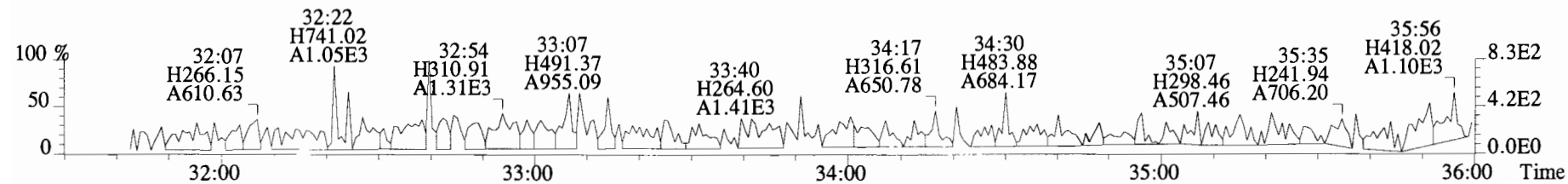
383.8639 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



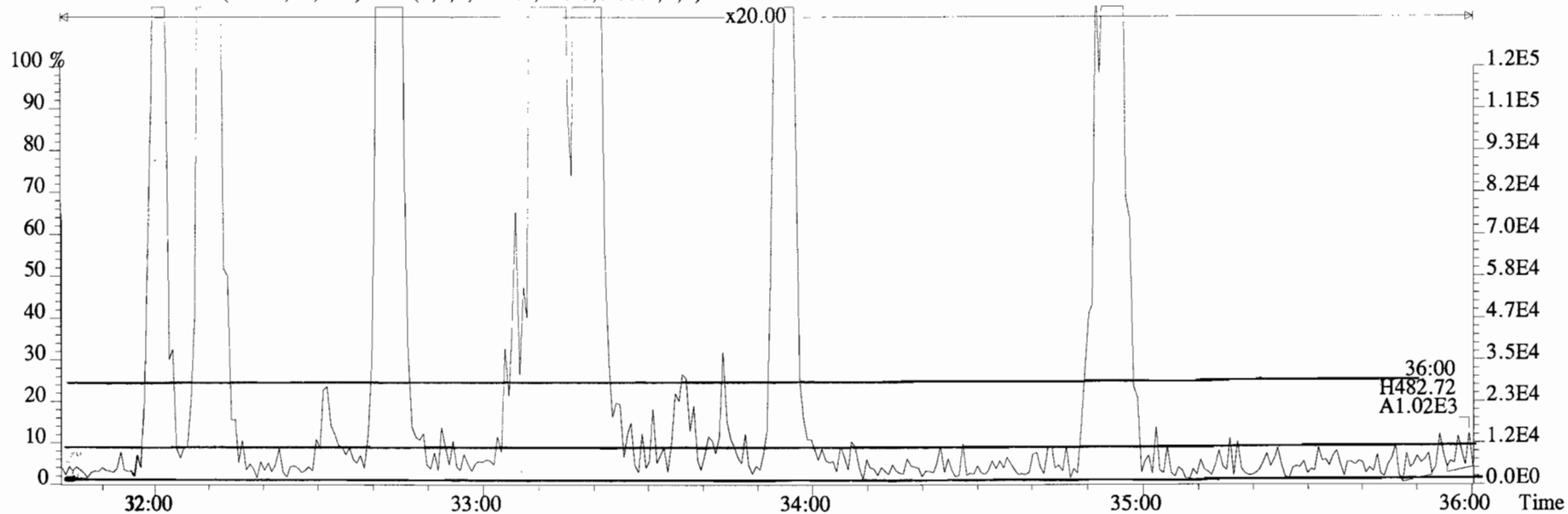
385.8610 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



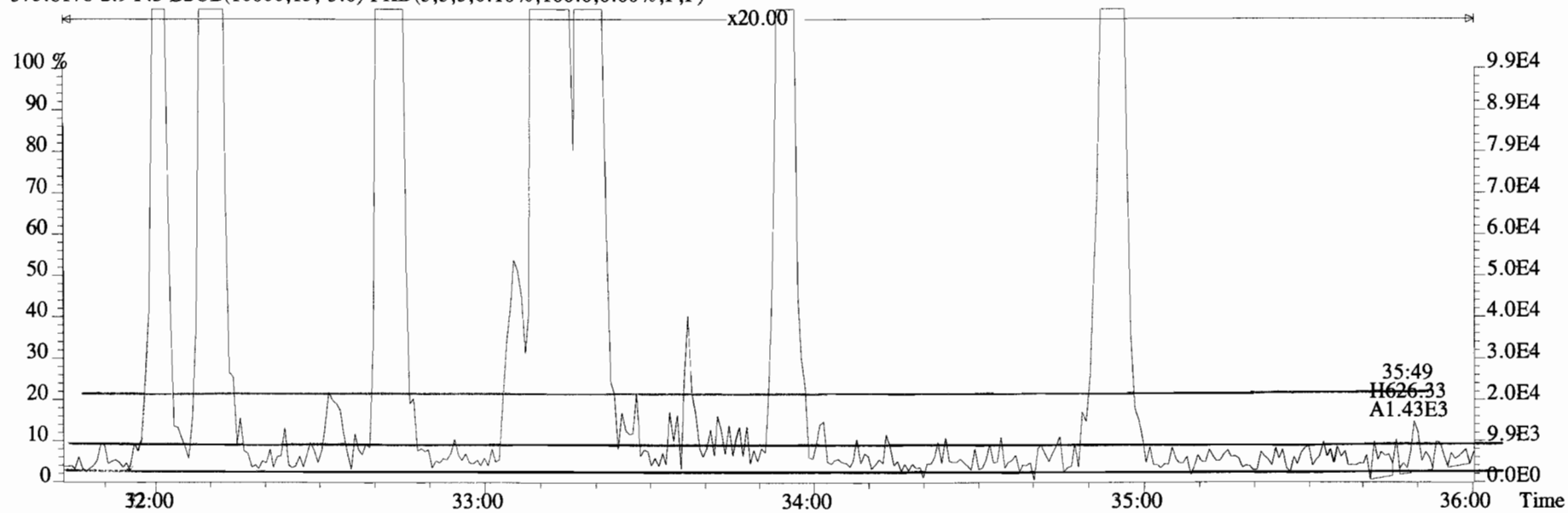
445.7555 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



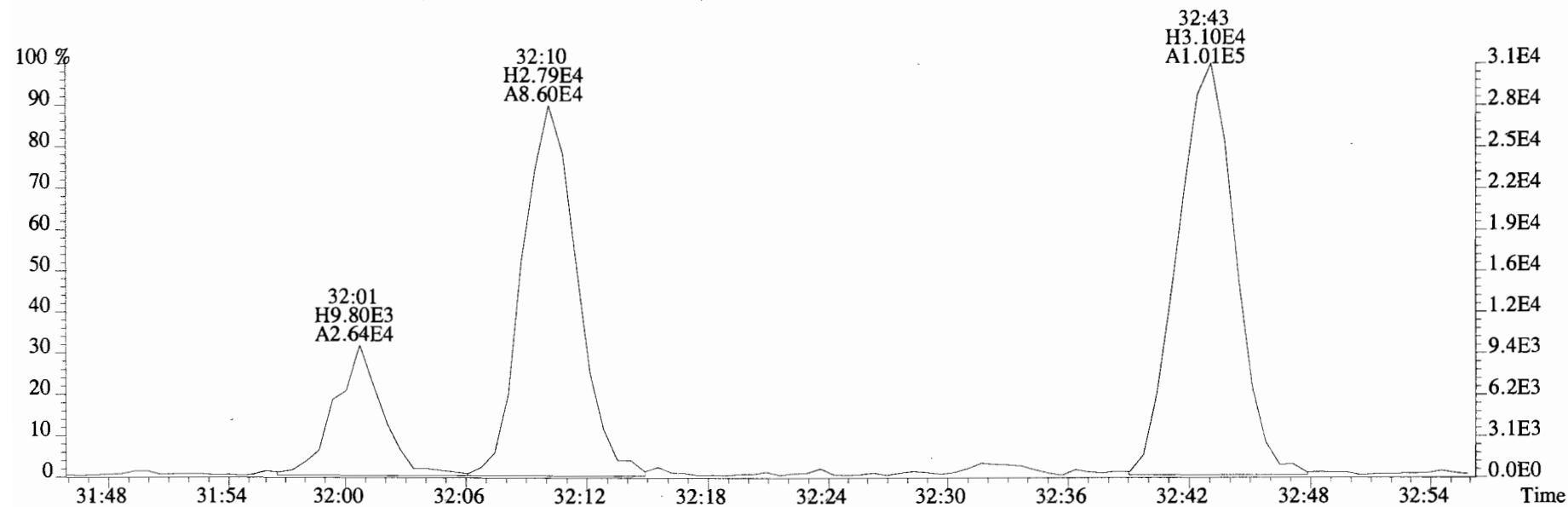
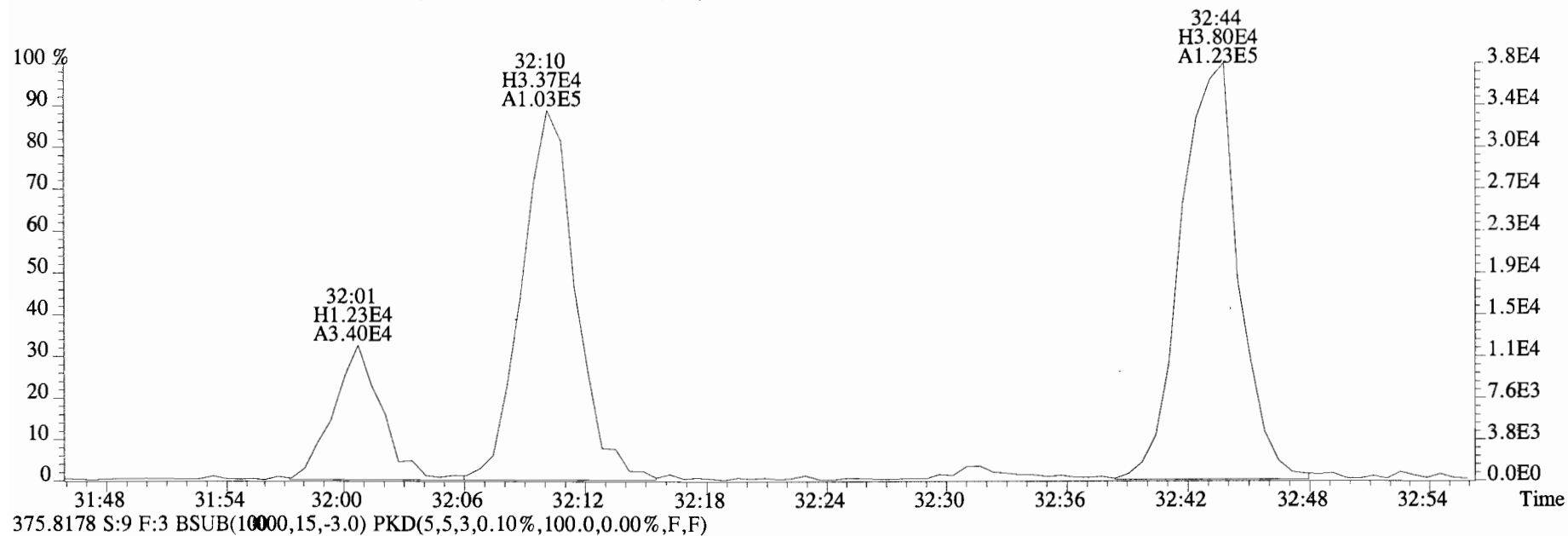
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



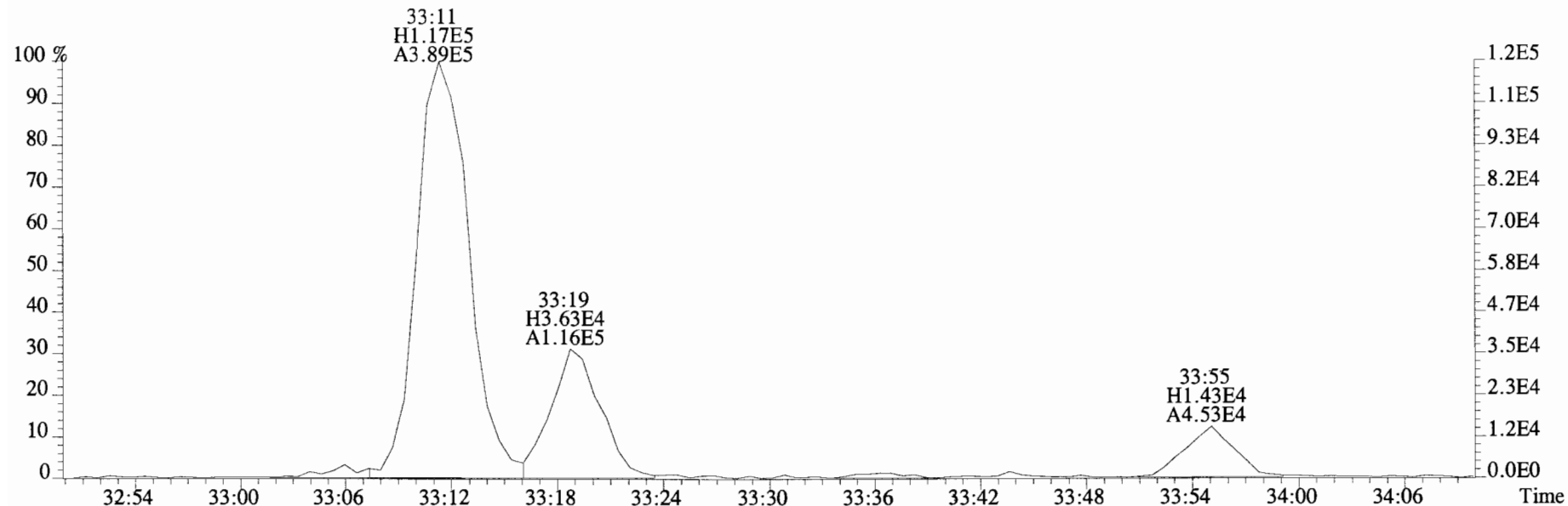
375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



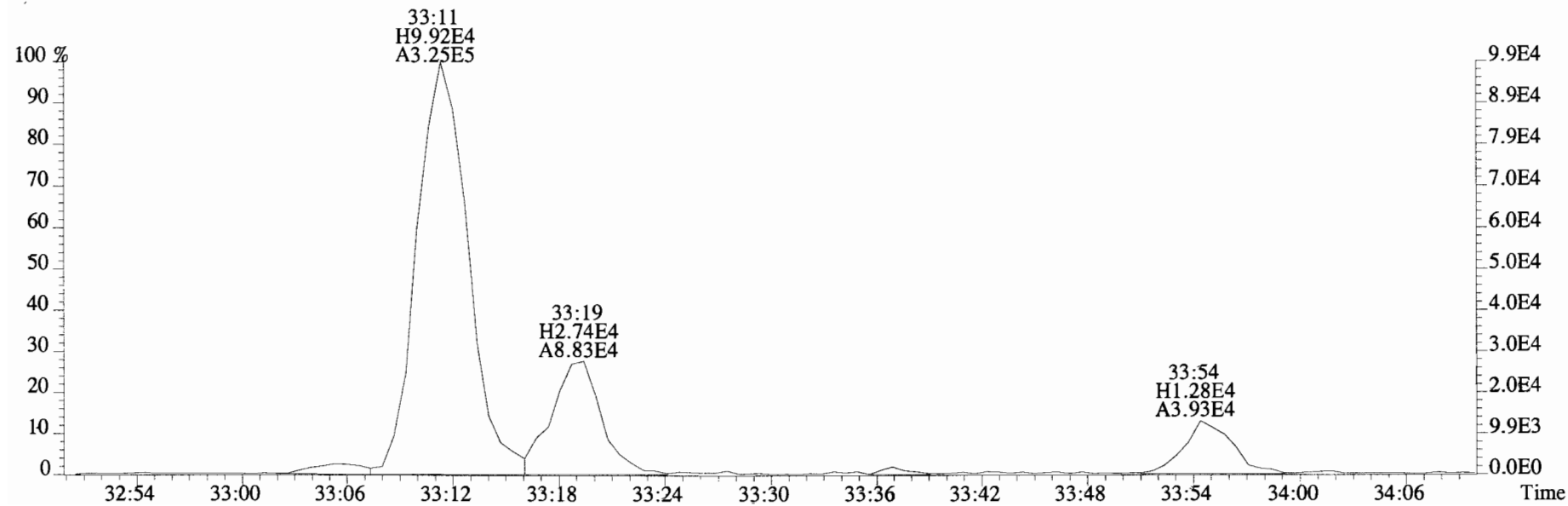
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



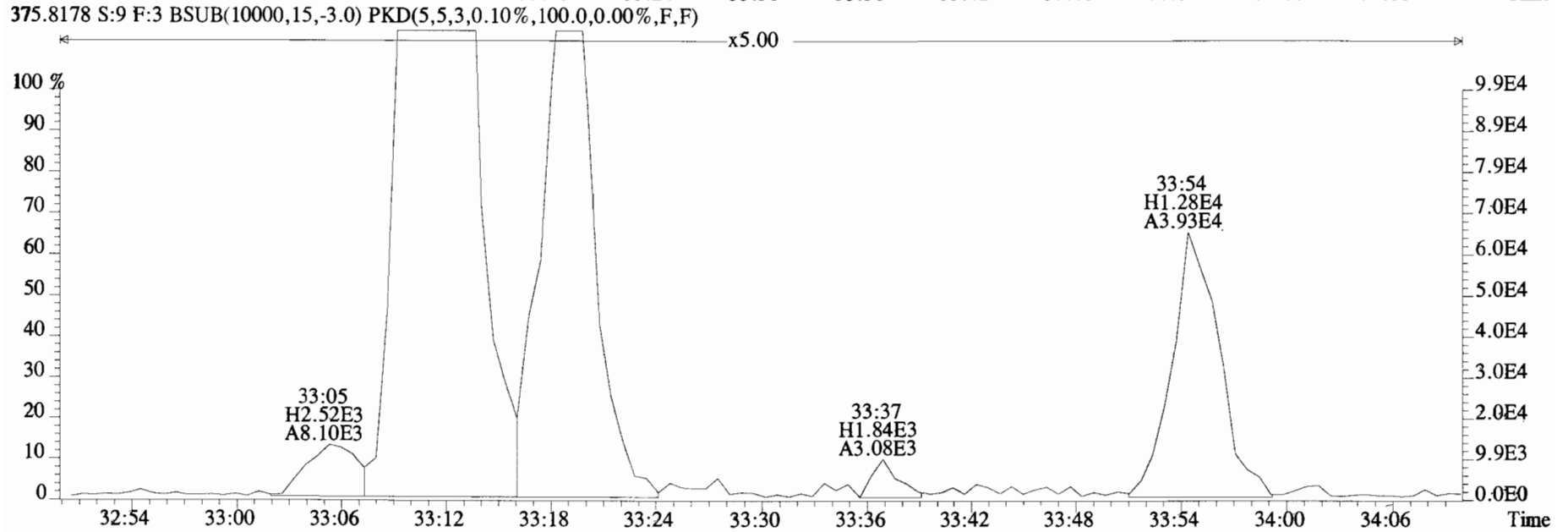
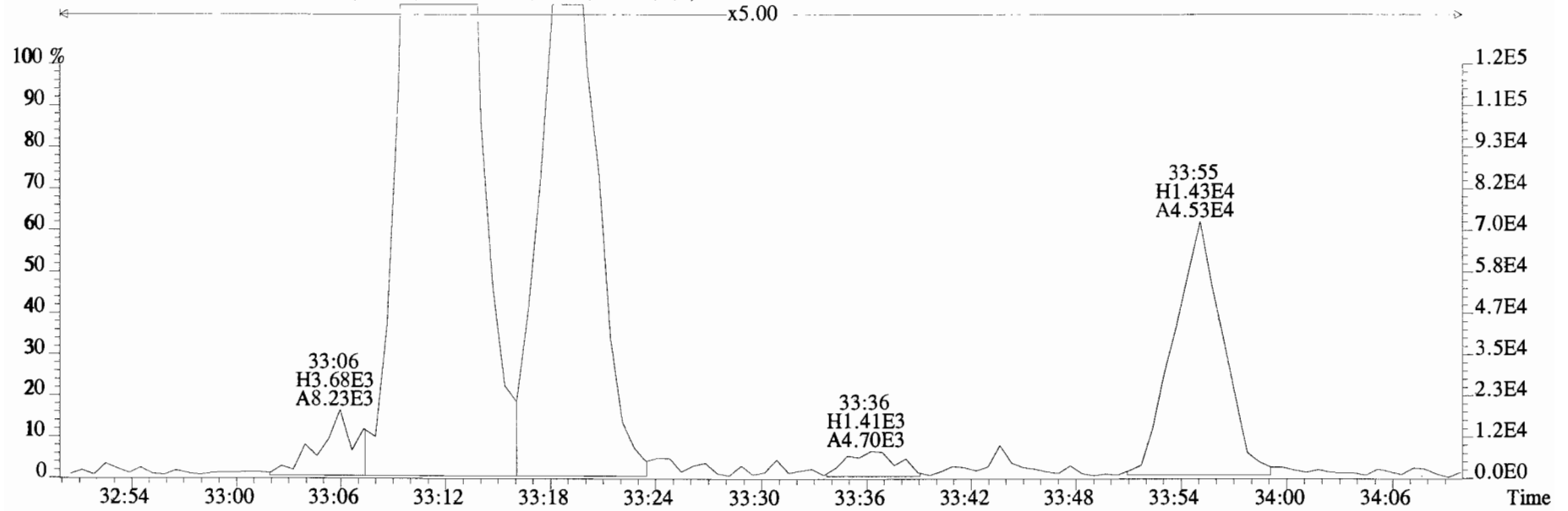
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



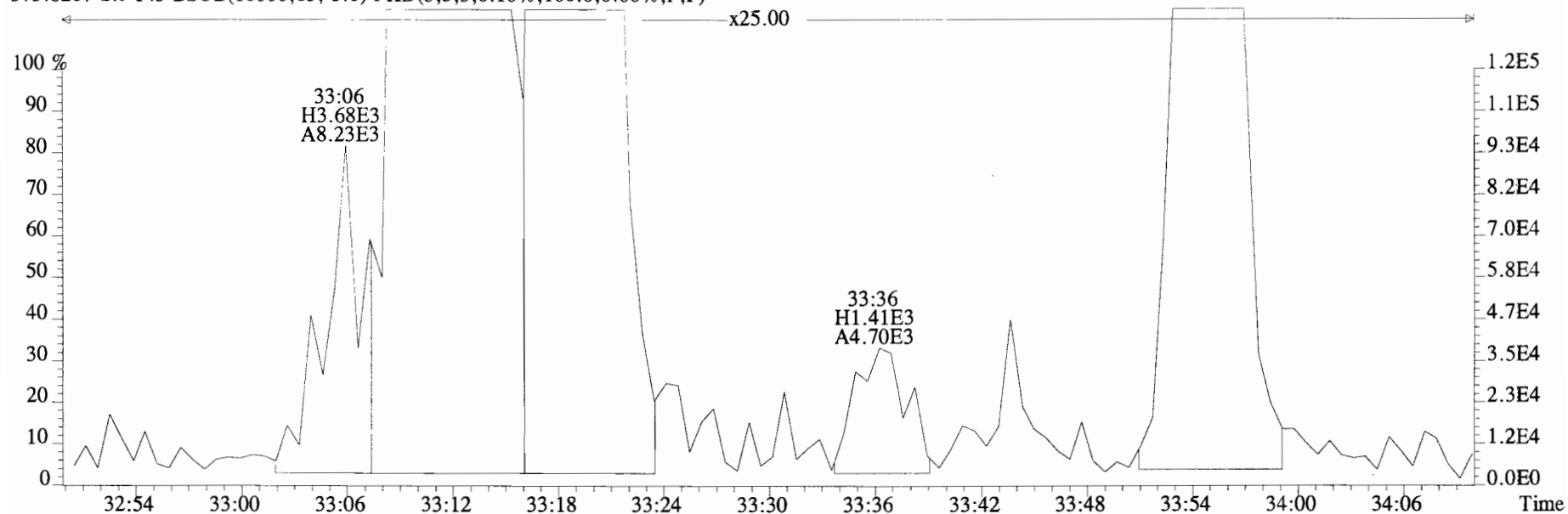
375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



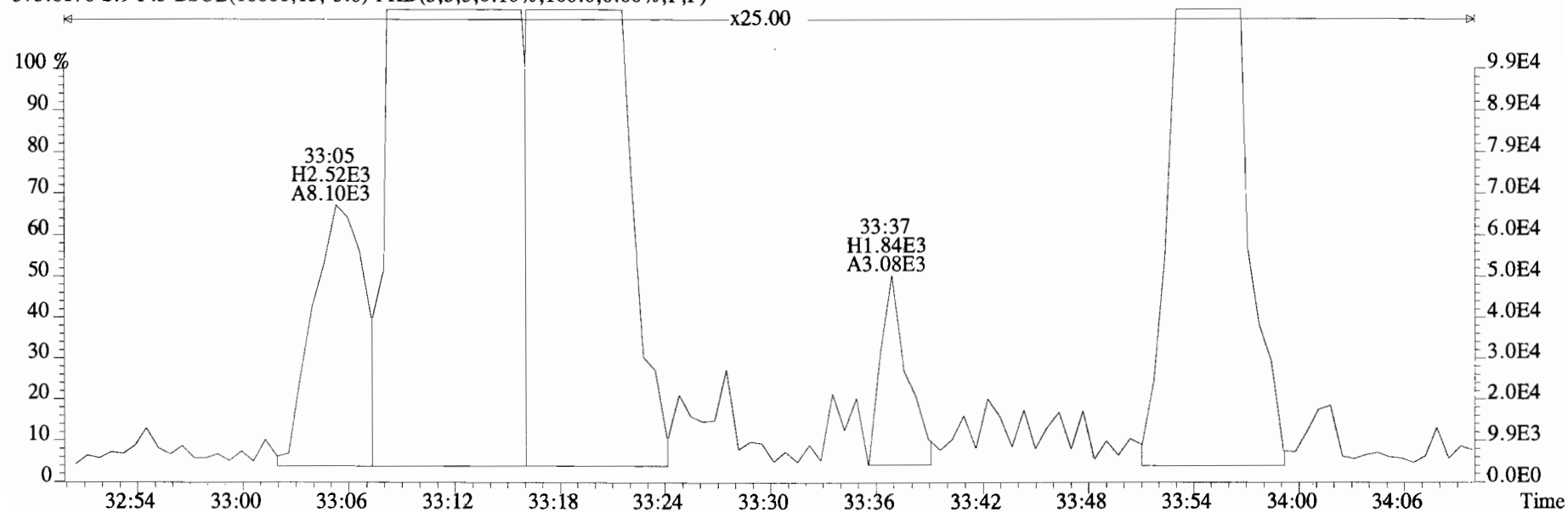
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text: Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



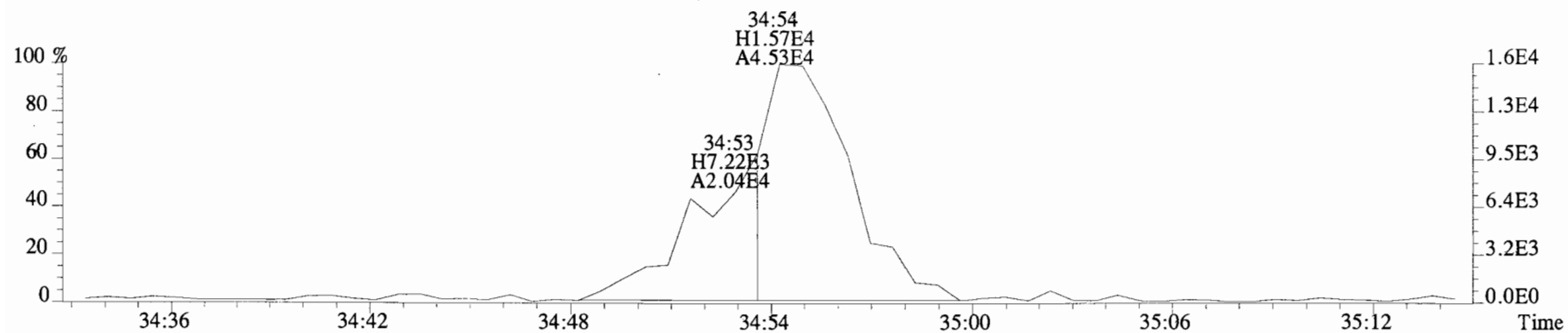
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



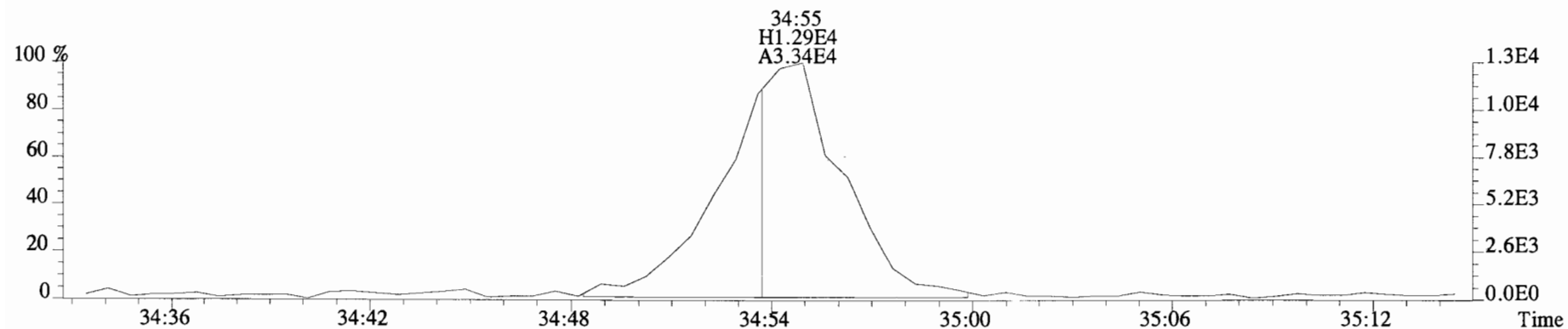
375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



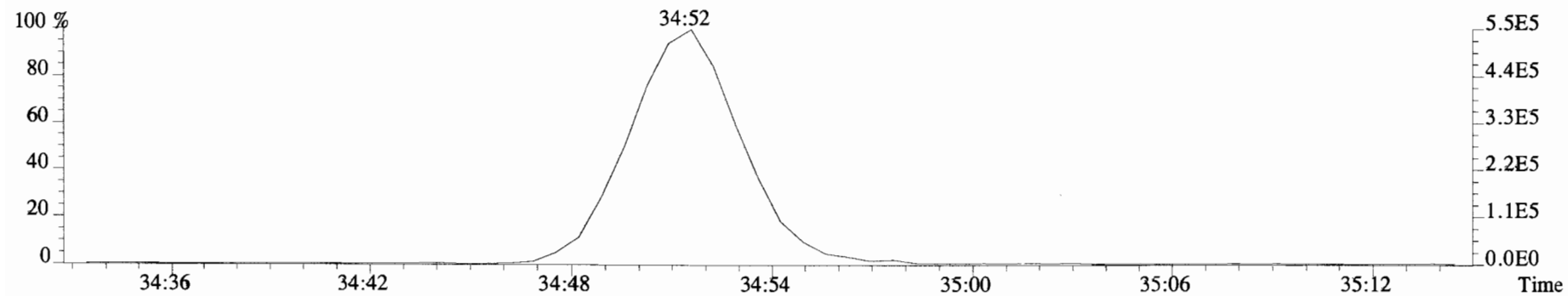
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



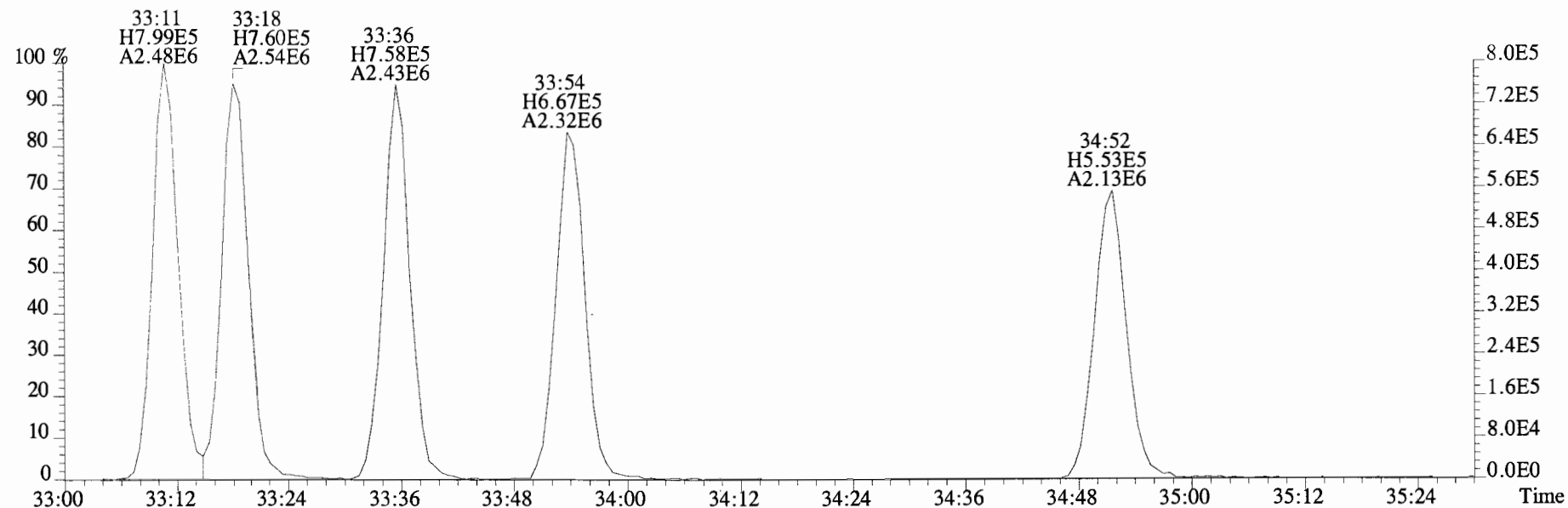
375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



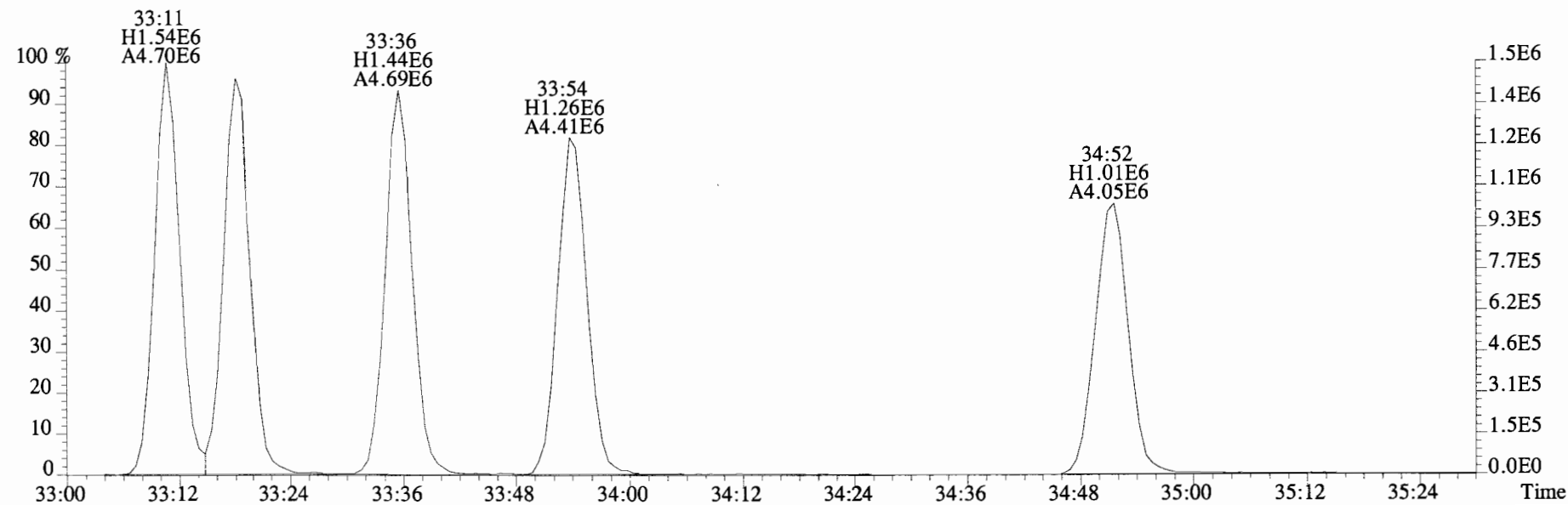
383.8639 S:9 F:3



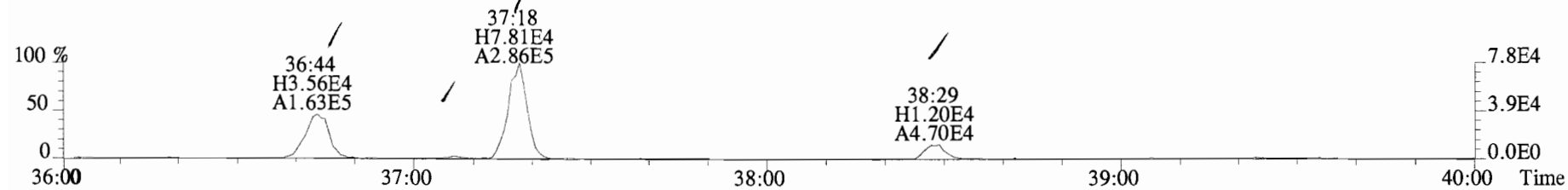
File:191101D1 #1-384 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
383.8639 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



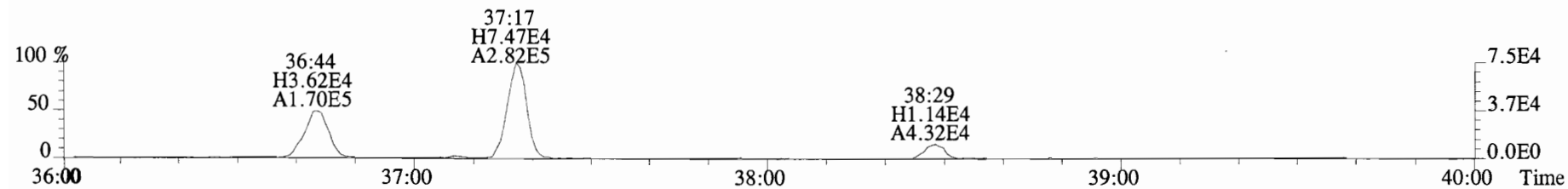
385.8610 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



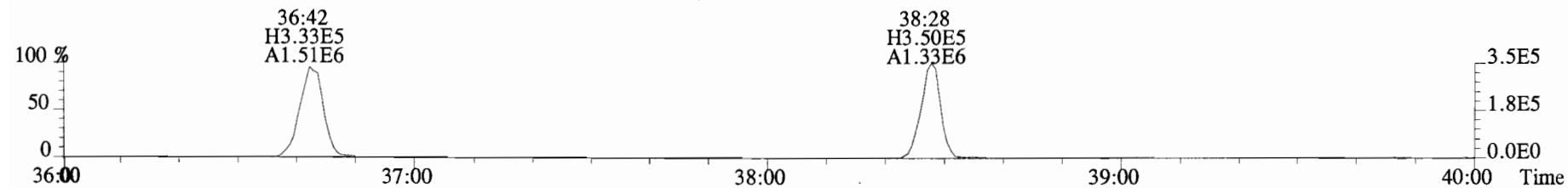
File:191101D1 #1-356 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Viata_Analytical_Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
 407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



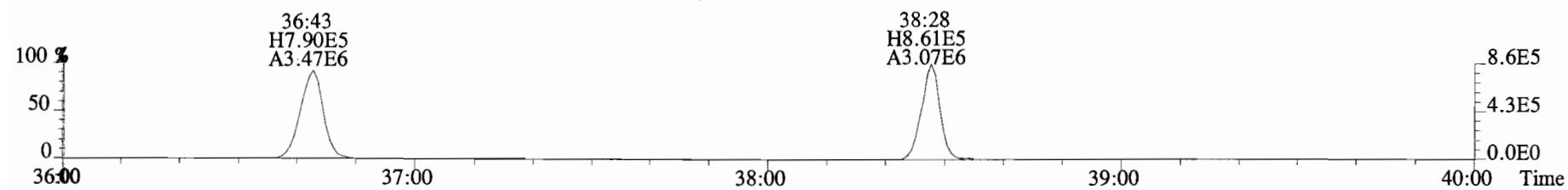
409.7788 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



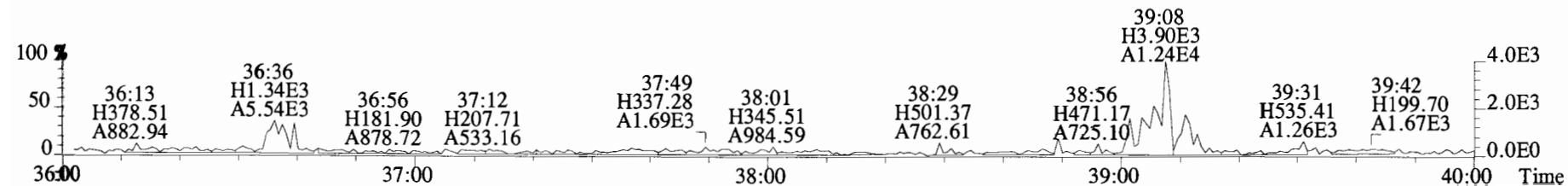
417.8253 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



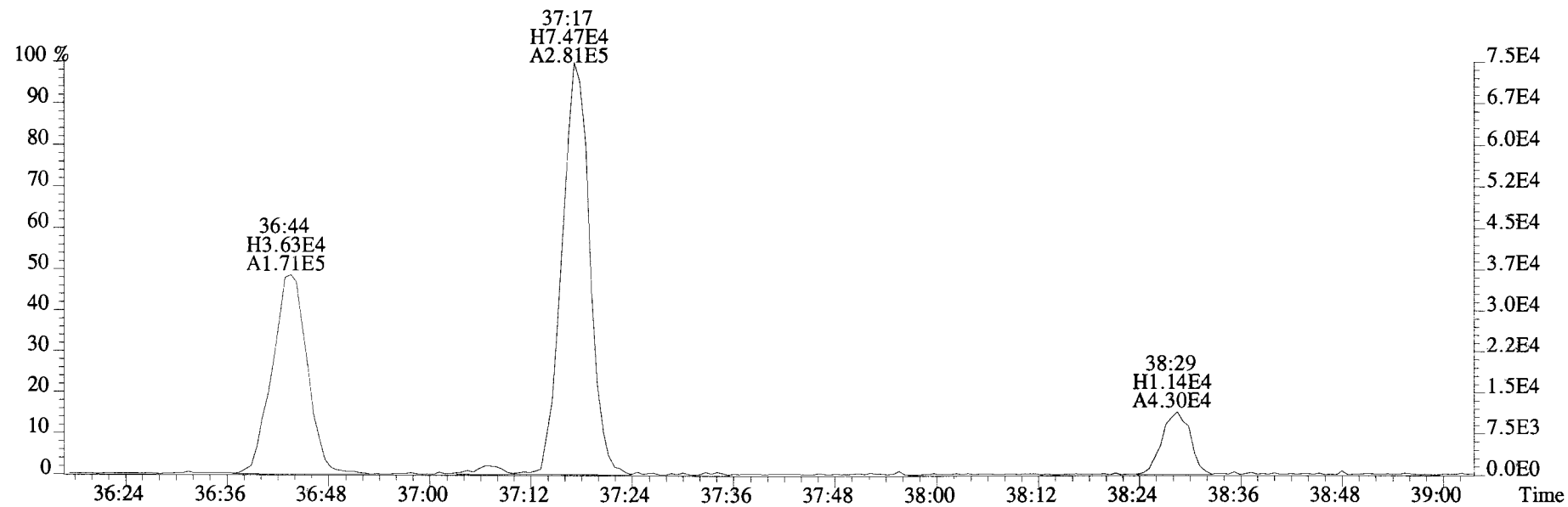
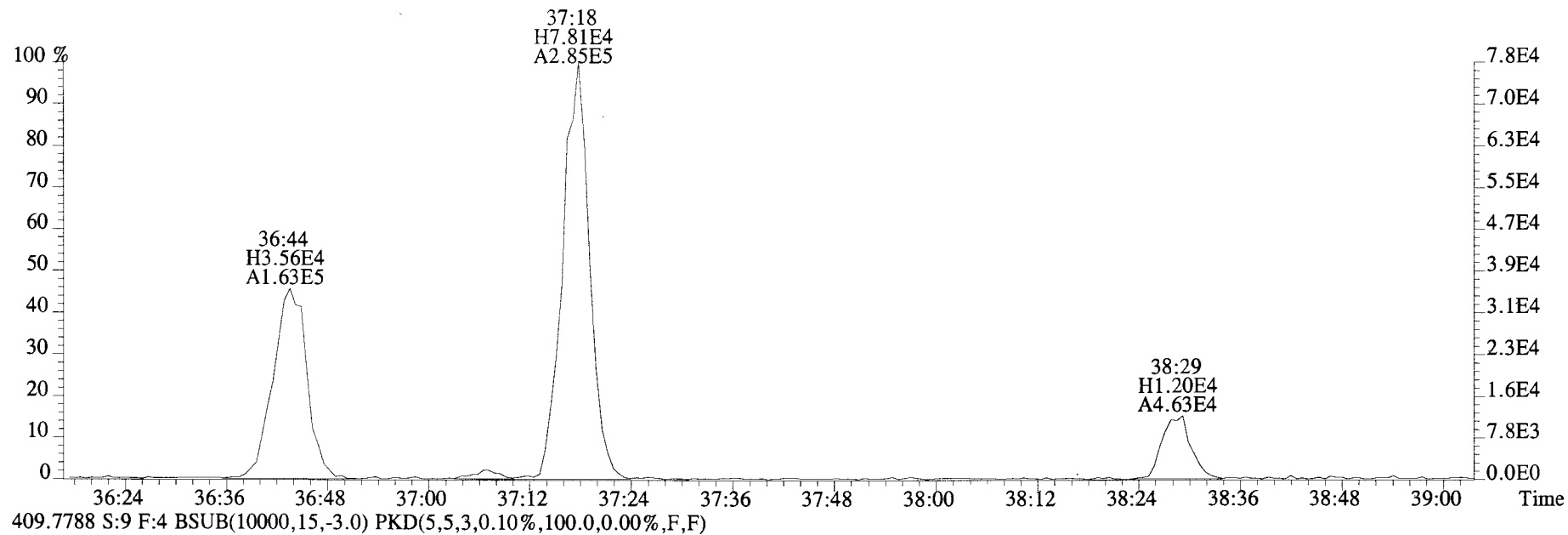
419.8220 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



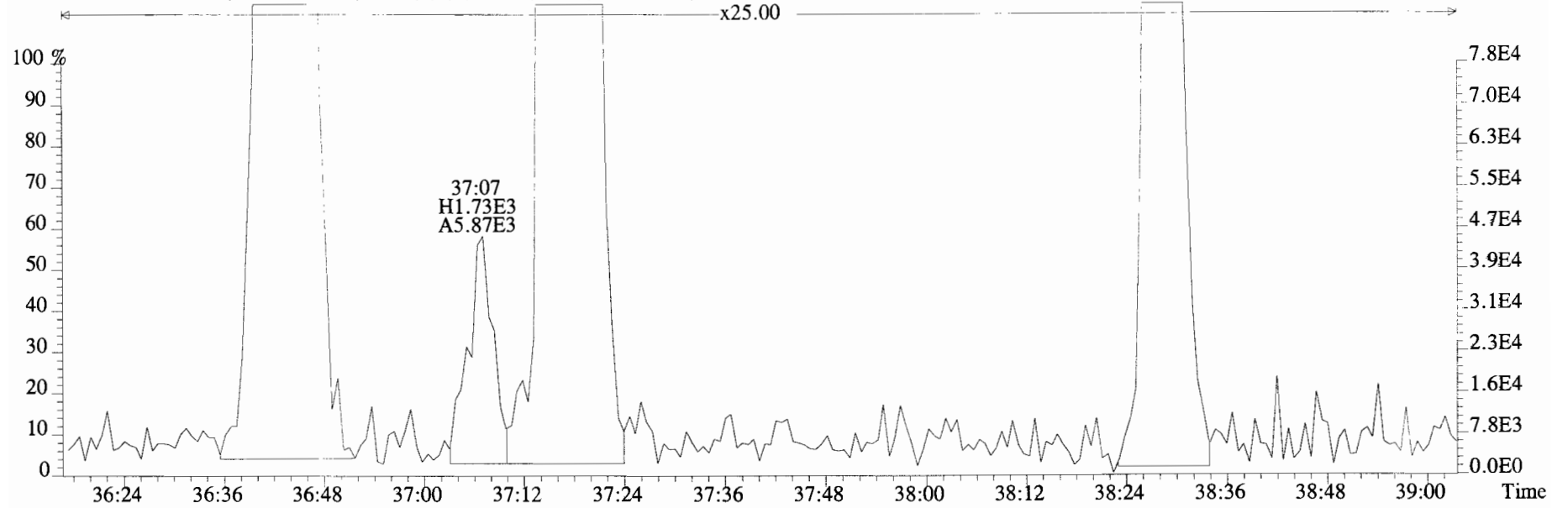
479.7165 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



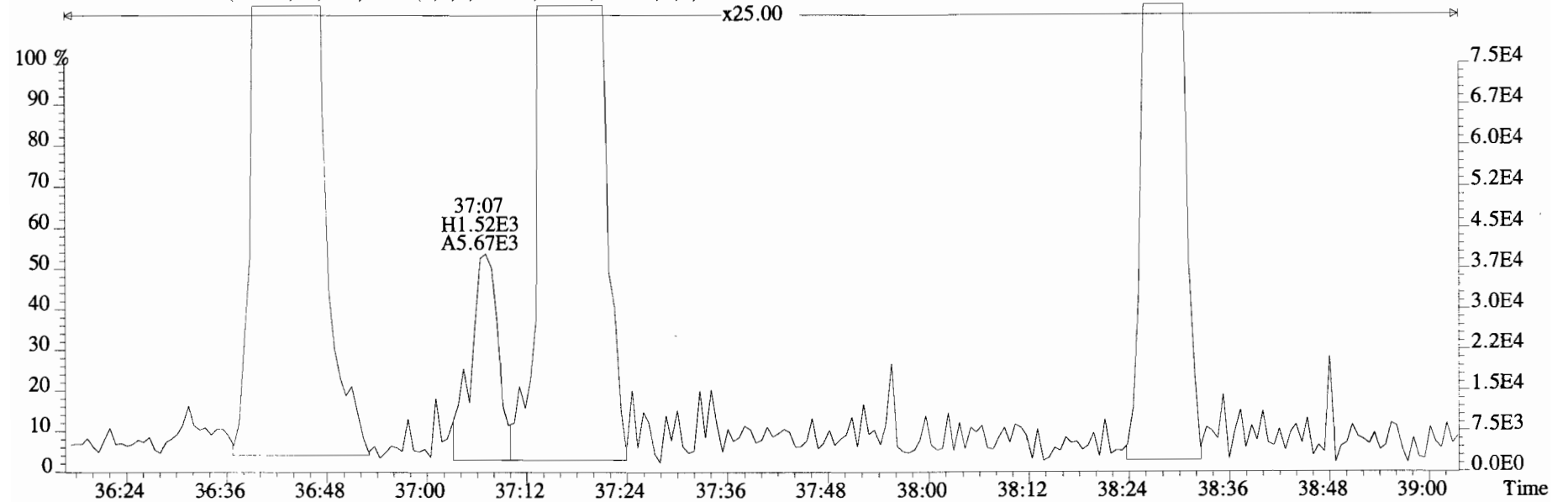
File:191101D1 #1-356 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



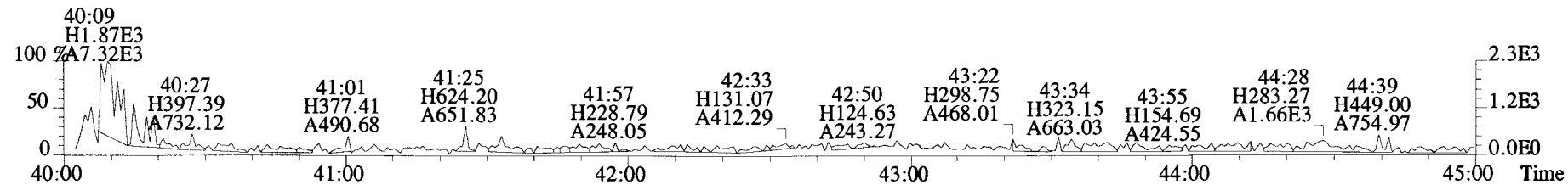
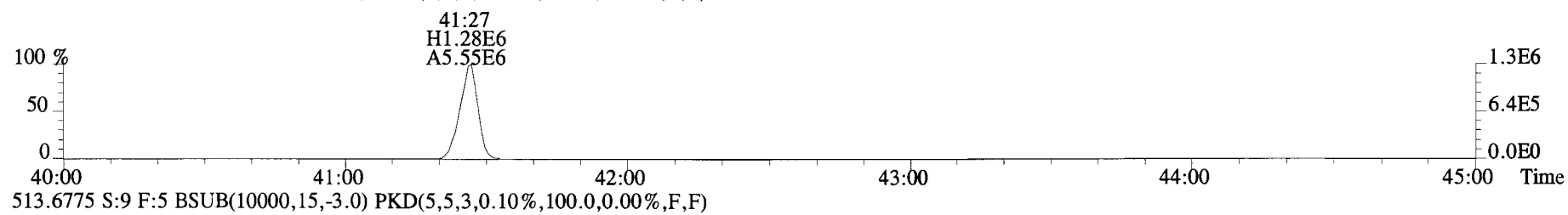
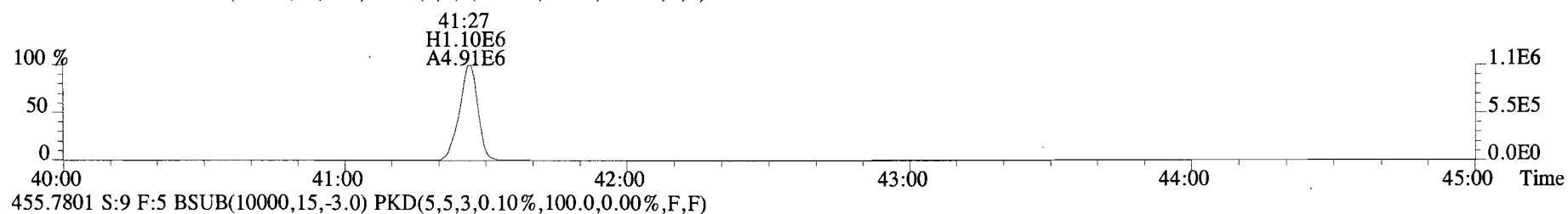
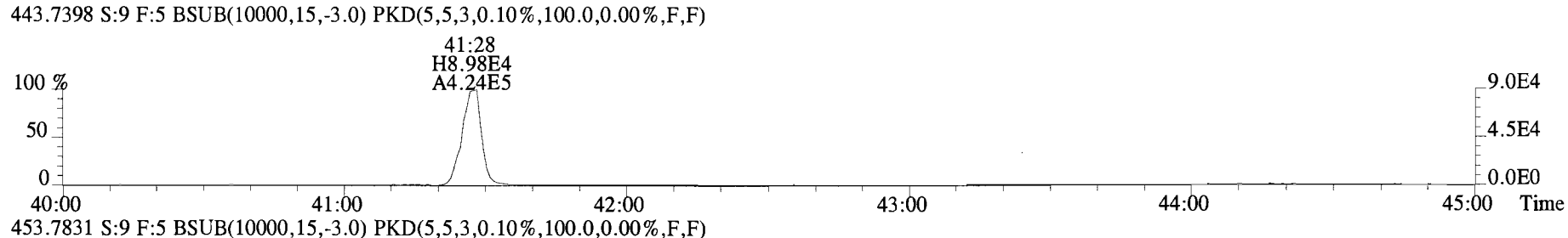
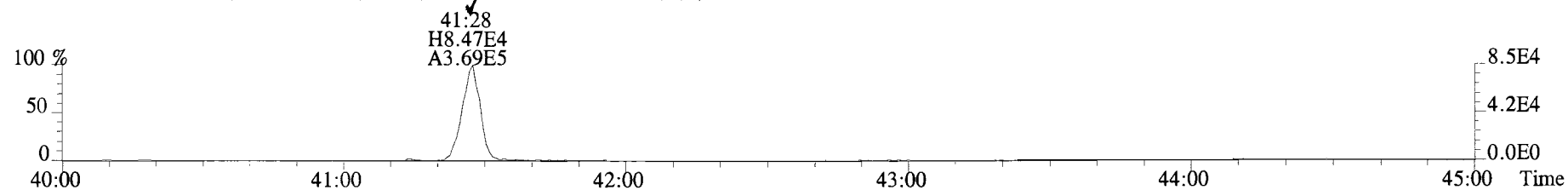
File:191101D1 #1-356 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



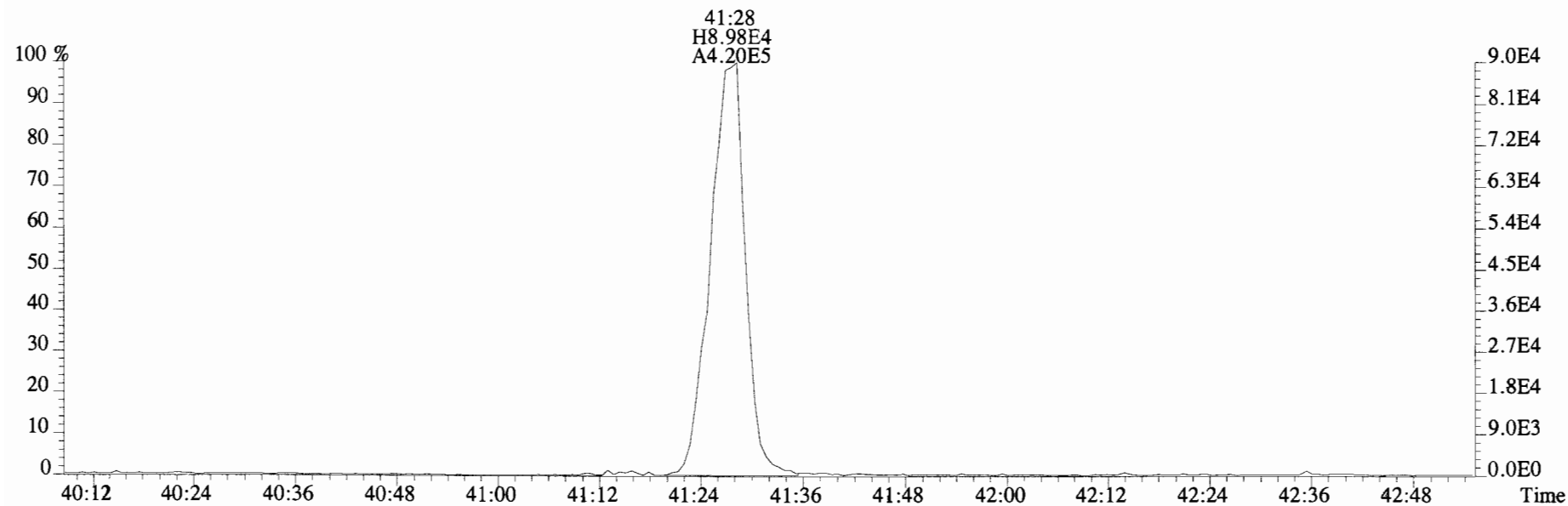
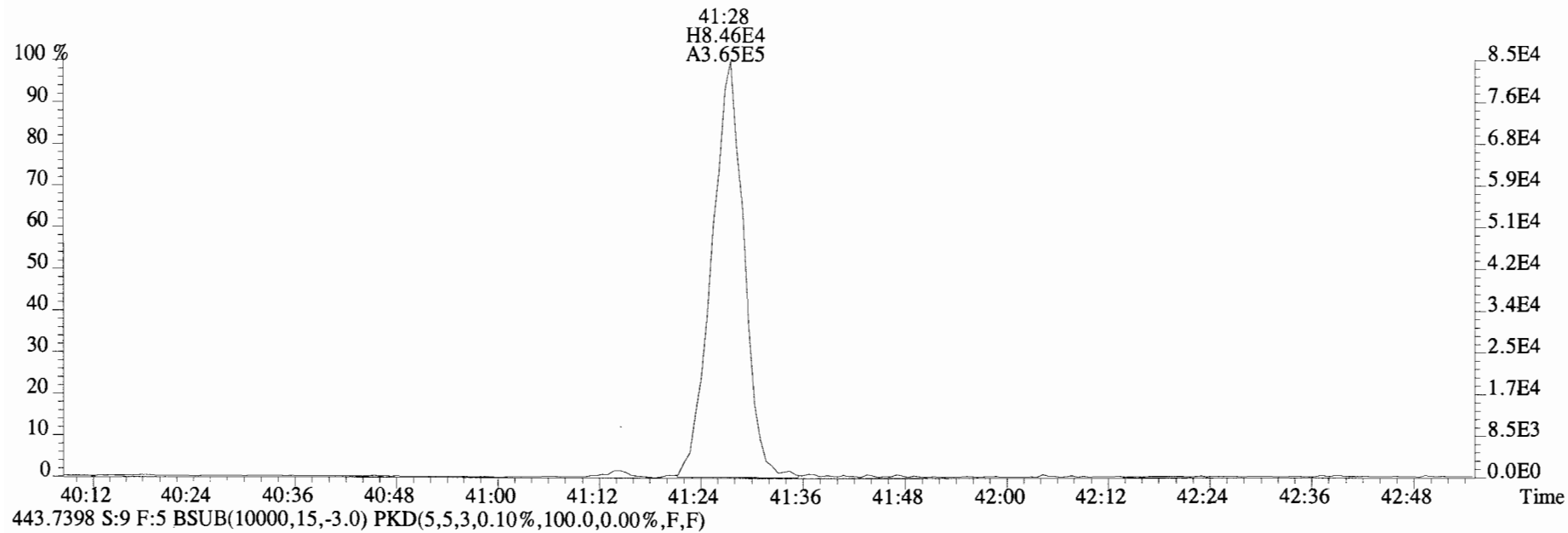
409.7788 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191101D1 #1-431 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
 441.7428 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191101D1 #1-431 Acq: 1-NOV-2019 20:21:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE1 PDI-081SC-B-06-08-191002 16.63 Exp:OCDD_DB5
441.7428 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



CONFIRMATION

Name	Resp	RA	RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.11e+07	0.80 y	15:35	1.00	197.1	-
13C-2,3,7,8-TCDF	5.34e+06	0.80 y	17:47	1.02	93.23	47.3
2,3,7,8-TCDF	1.96e+06	0.79 y	17:48	0.95	76.54	

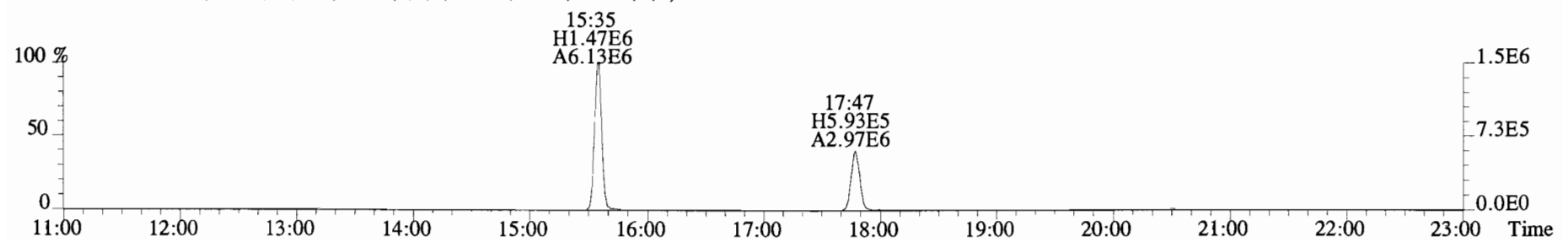
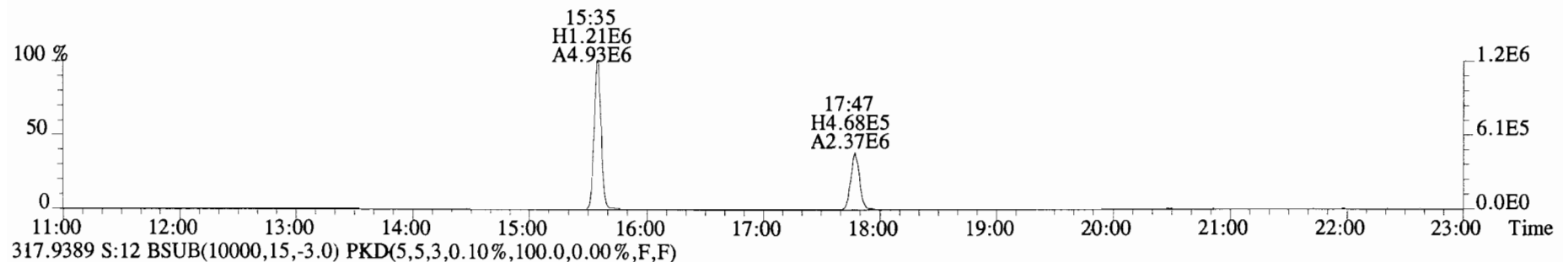
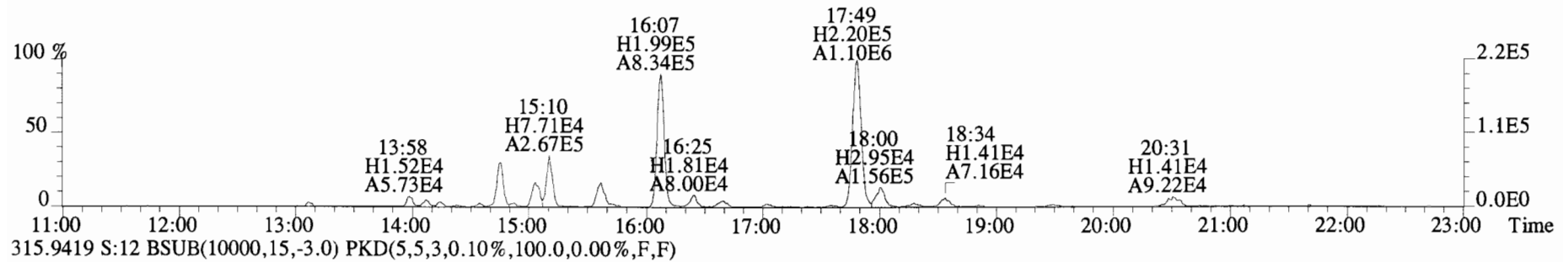
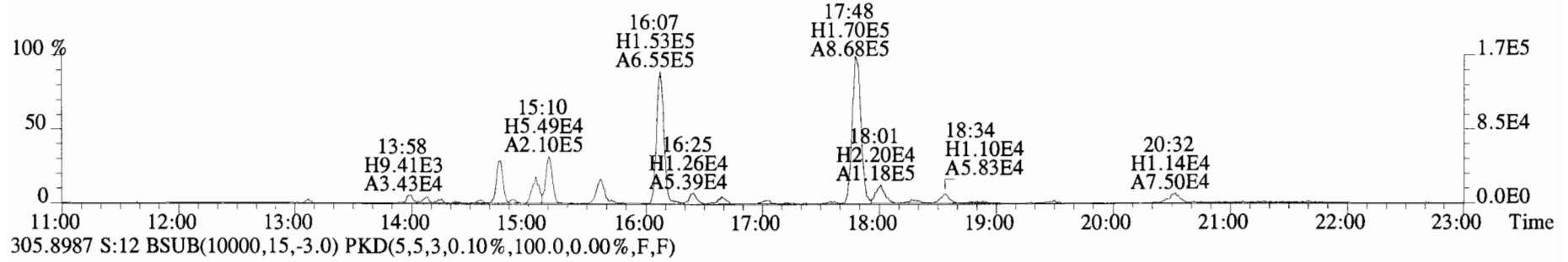
Integrations
by
Analyst: DB

Date: 10/31/19

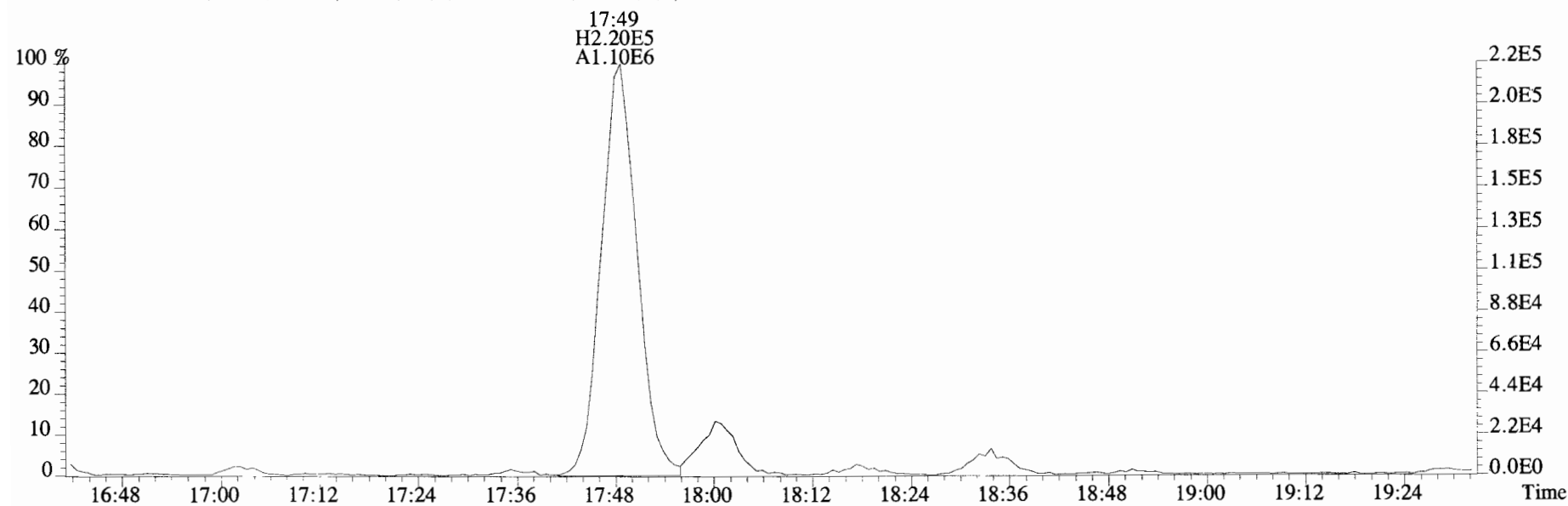
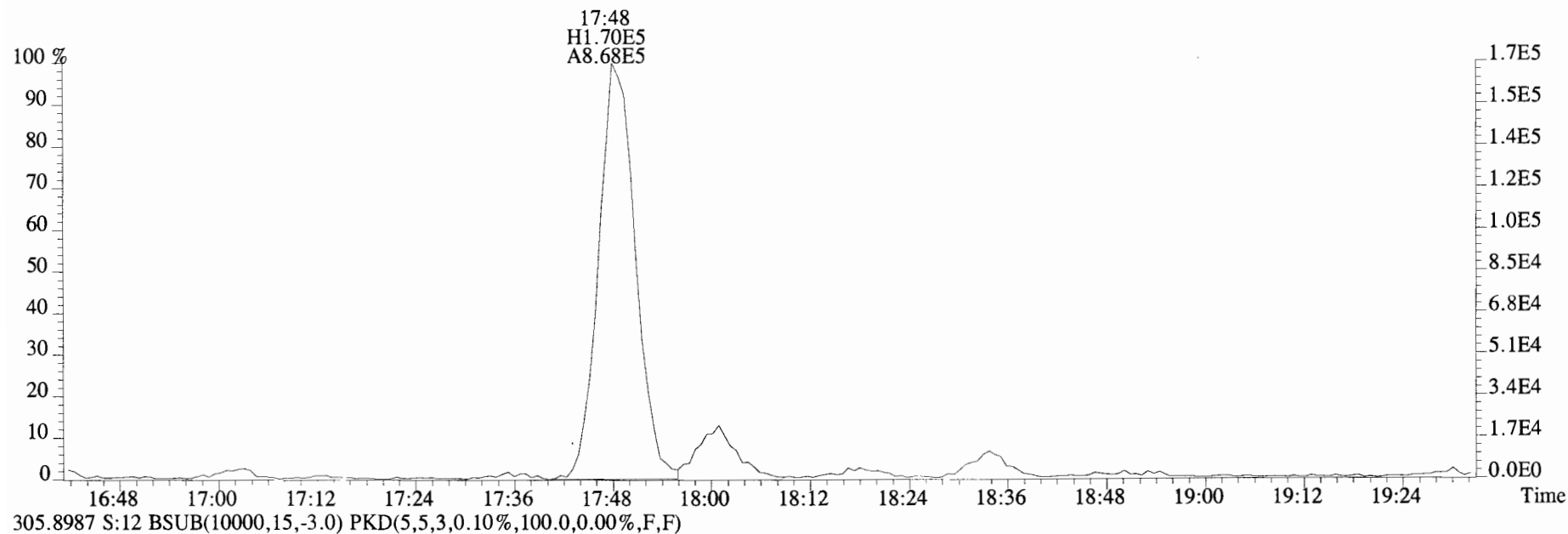
Reviewed
by
Analyst: CT

Date: 11/11/19

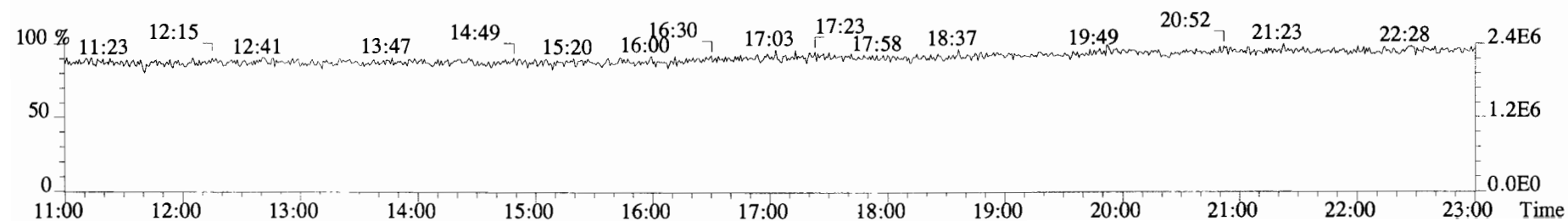
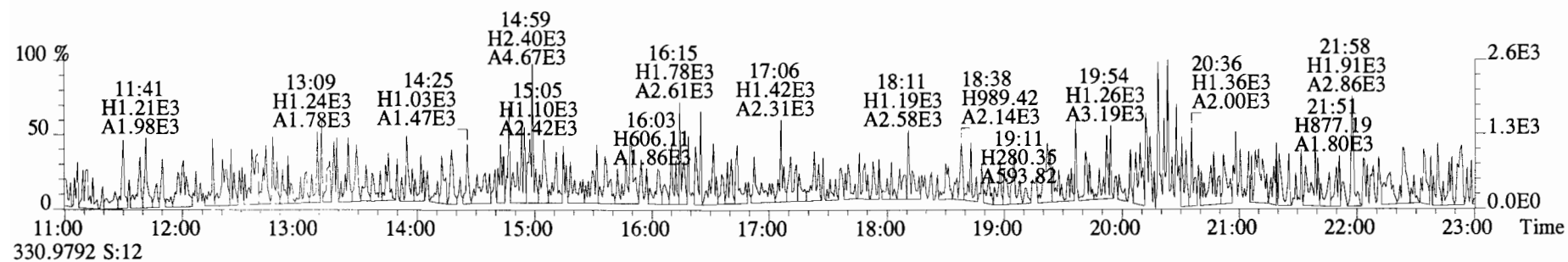
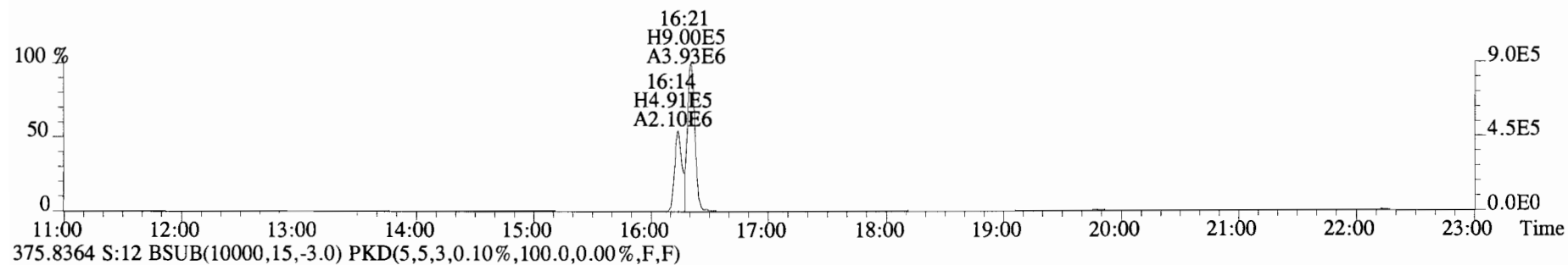
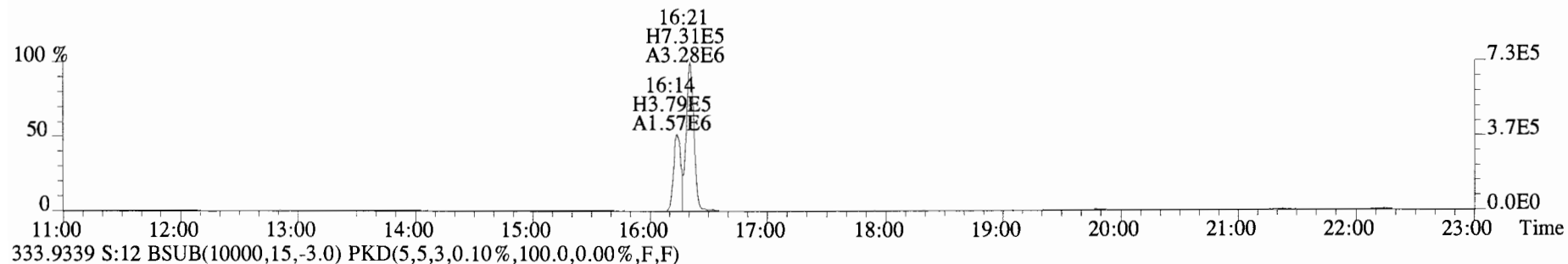
File:191030D1 #1-1683 Acq:30-OCT-2019 19:48:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Viata Analytical Laboratory VG7 Text:1903546-12RE1 PDI-081SC-B-00-02-191002 21.71 Exp:TCDF_DB225
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191030D1 #1-1683 Acq:30-OCT-2019 19:48:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Viata Analytical Laboratory_VG7 Text:1903546-12RE1 PDI-081SC-B-00-02-191002 21.71 Exp:TCDF_DB225
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191030D1 #1-1683 Acq:30-OCT-2019 19:48:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Viata Analytical Laboratory_VG7 Text:1903546-12RE1 PDI-081SC-B-00-02-191002 21.71 Exp:TCDF_DB225
331.9368 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.35e+07	0.78 y	15:34	1.00	200.4	-
13C-2,3,7,8-TCDF	8.28e+06	0.78 y	17:46	1.02	120.0	59.9
2,3,7,8-TCDF	3.19e+06	0.80 y	17:47	0.95	81.52	

Integrations

by
Analyst: DB

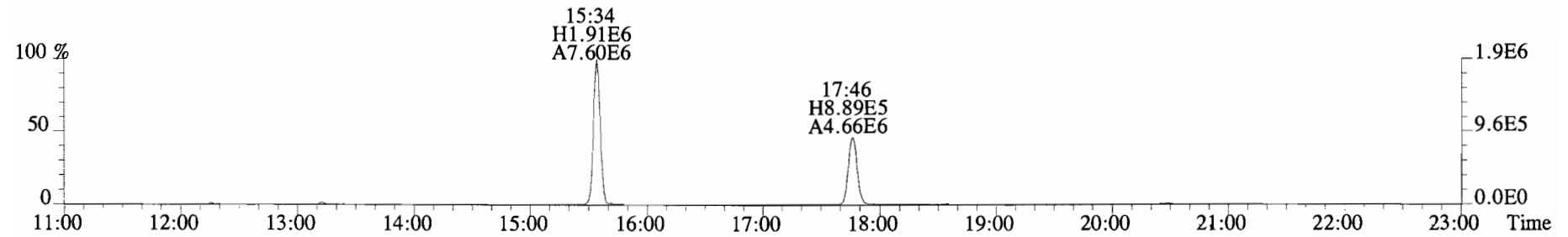
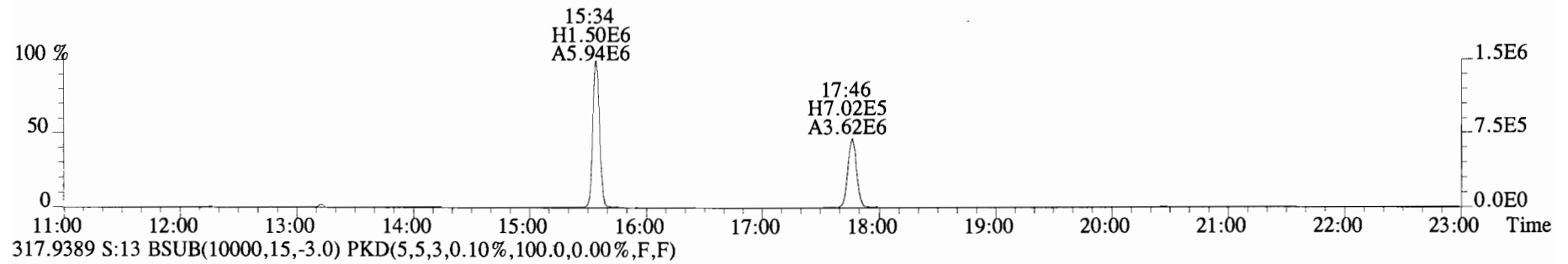
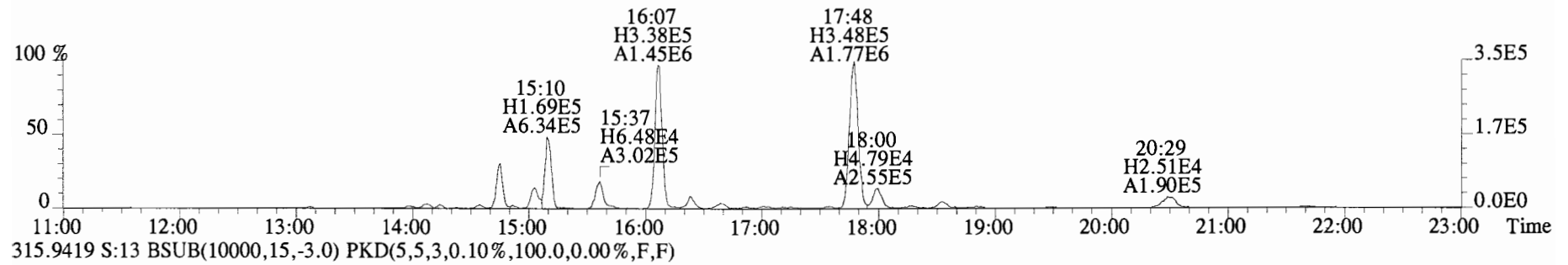
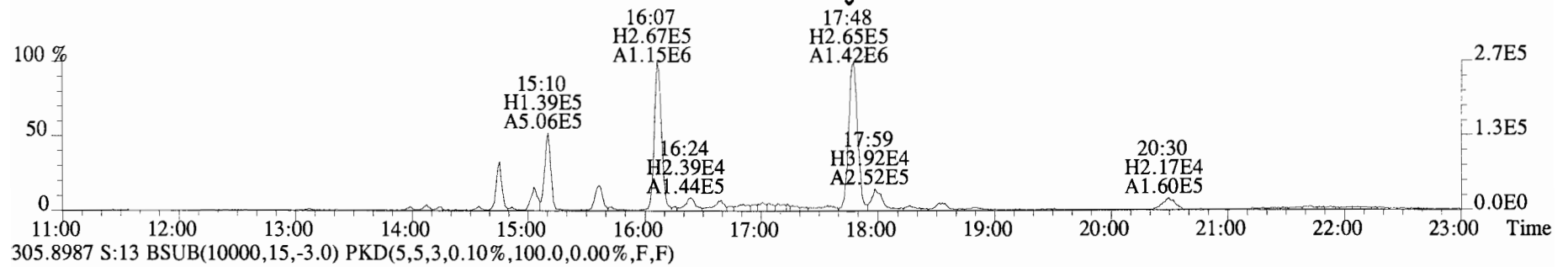
Date: 10/31/19

Reviewed

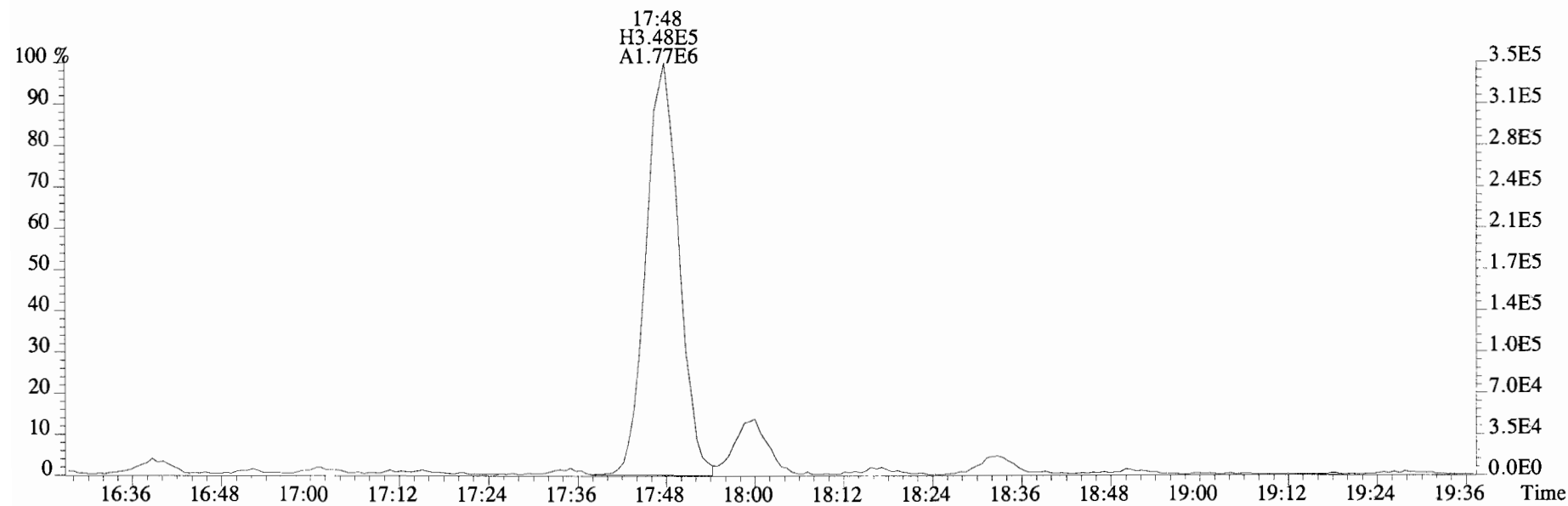
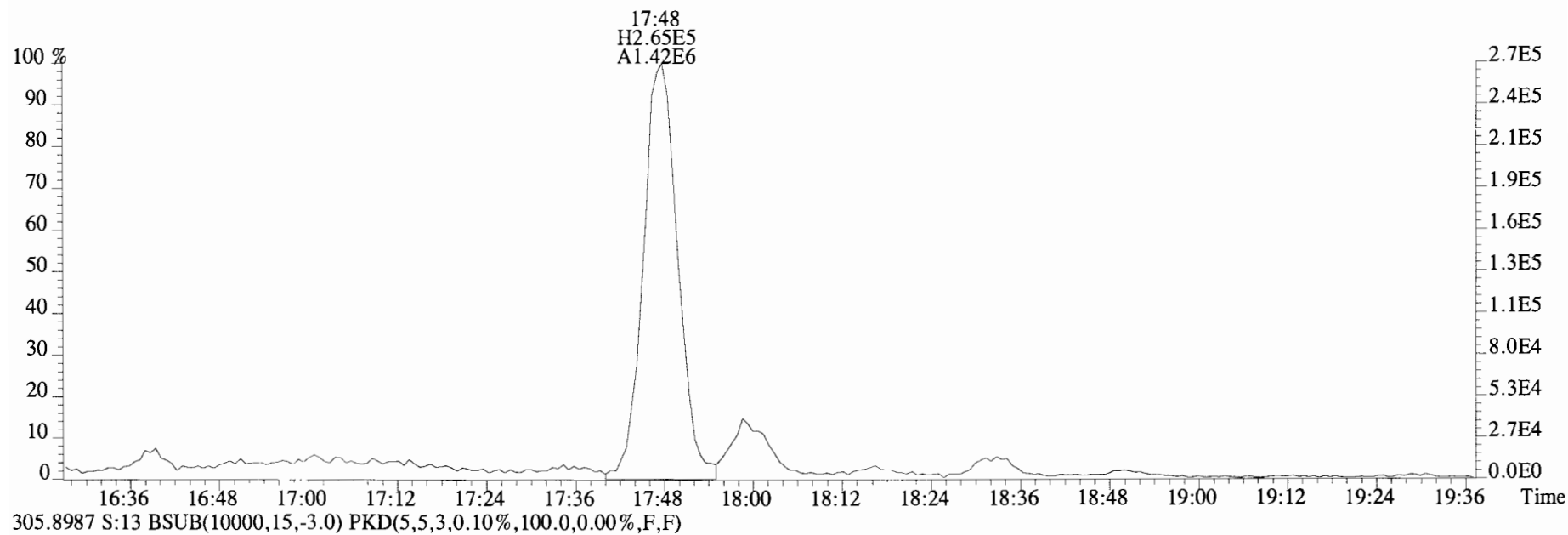
by
Analyst: C7

Date: 11/14/19

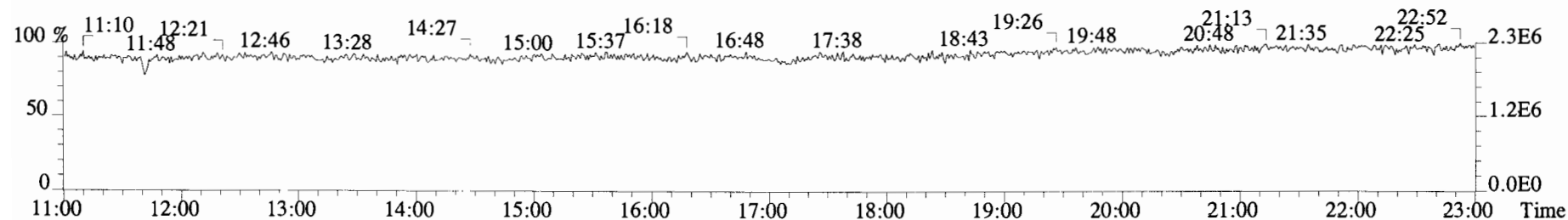
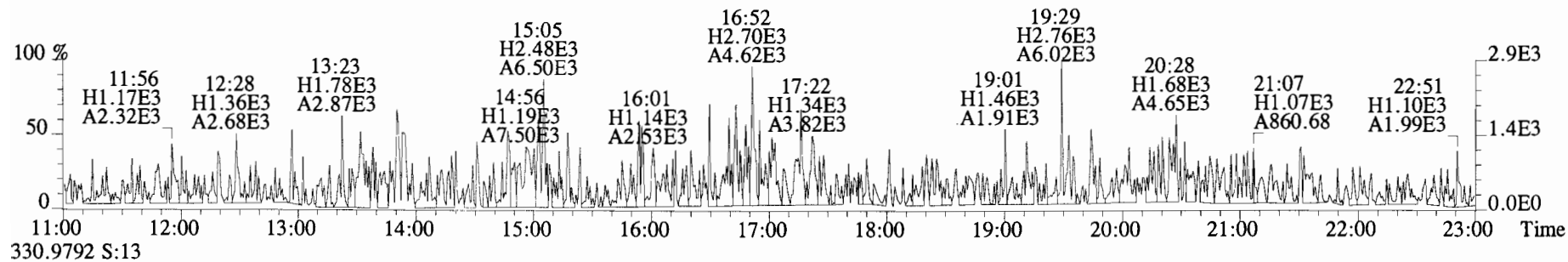
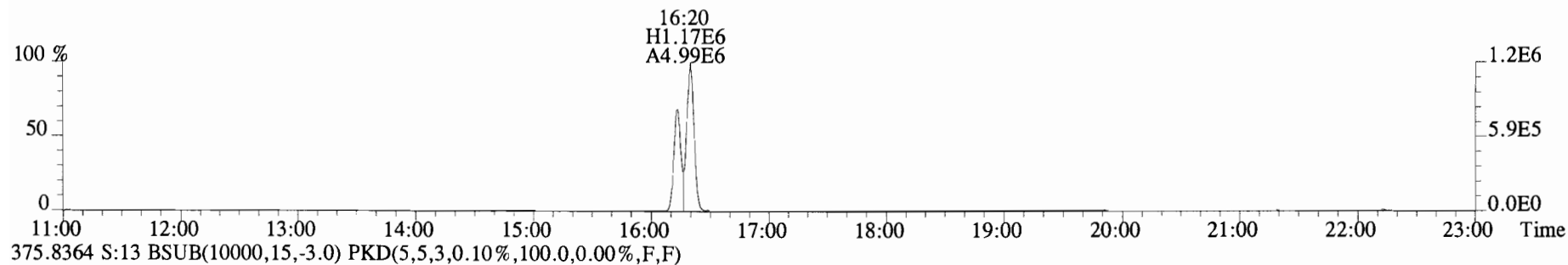
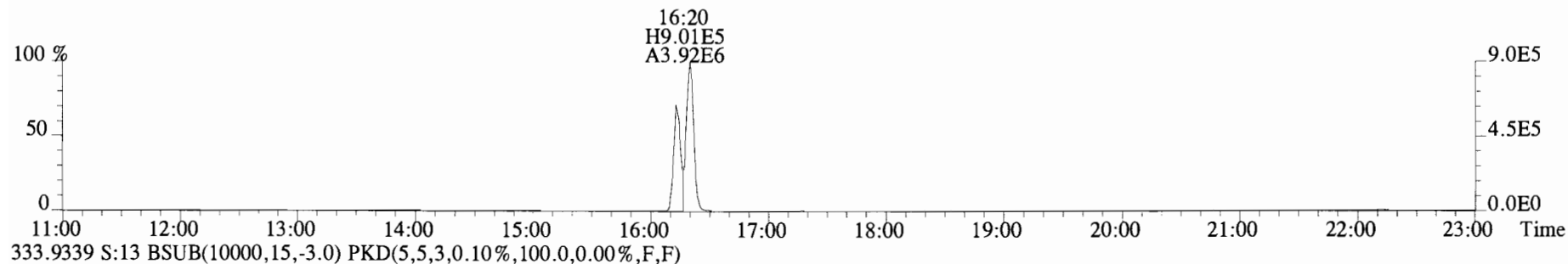
File:191030D1 #1-1683 Acq:30-OCT-2019 20:20:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Viata Analytical Laboratory VG7 Text:1903546-13RE1 PDI-081SC-B-02-04-191002 19.74 Exp:TCDF_DB225
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191030D1 #1-1683 Acq:30-OCT-2019 20:20:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Viata Analytical Laboratory_VG7 Text:1903546-13RE1 PDI-081SC-B-02-04-191002 19.74 Exp:TCDF_DB225
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191030D1 #1-1683 Acq:30-OCT-2019 20:20:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Viata Analytical Laboratory_VG7 Text:1903546-13RE1 PDI-081SC-B-02-04-191002 19.74 Exp:TCDF_DB225
331.9368 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.20e+07	0.80 y	15:35	1.00	197.3	-
13C-2,3,7,8-TCDF	6.68e+06	0.80 y	17:48	1.02	107.4	54.4
2,3,7,8-TCDF	4.37e+05	0.77 y	17:49	0.95	13.61	

Integrations

by DB
Analyst: DB

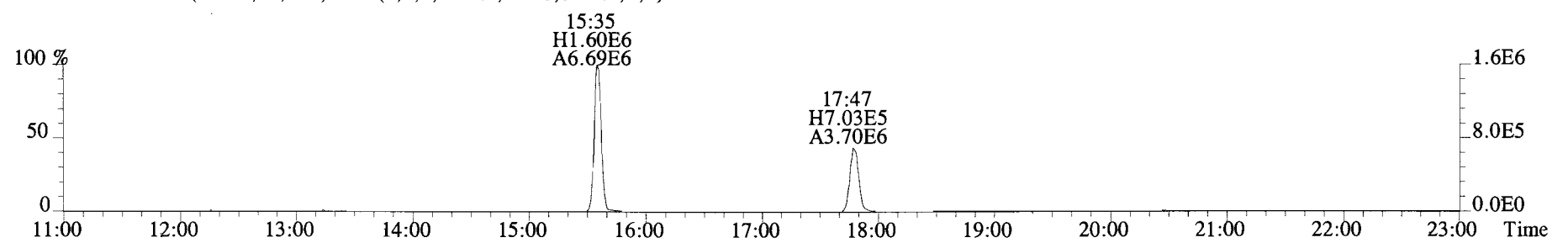
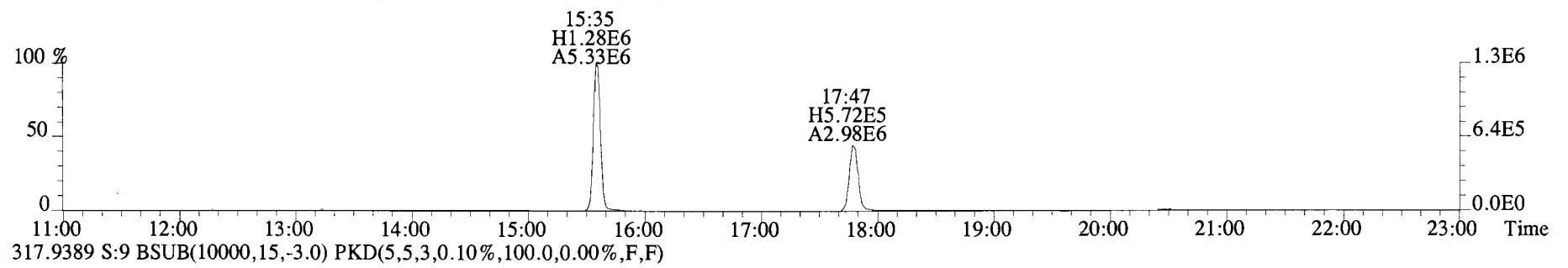
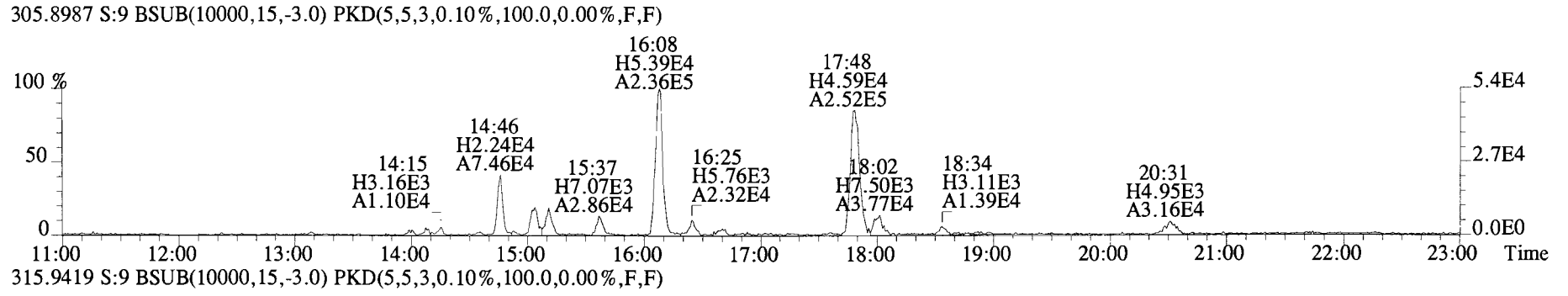
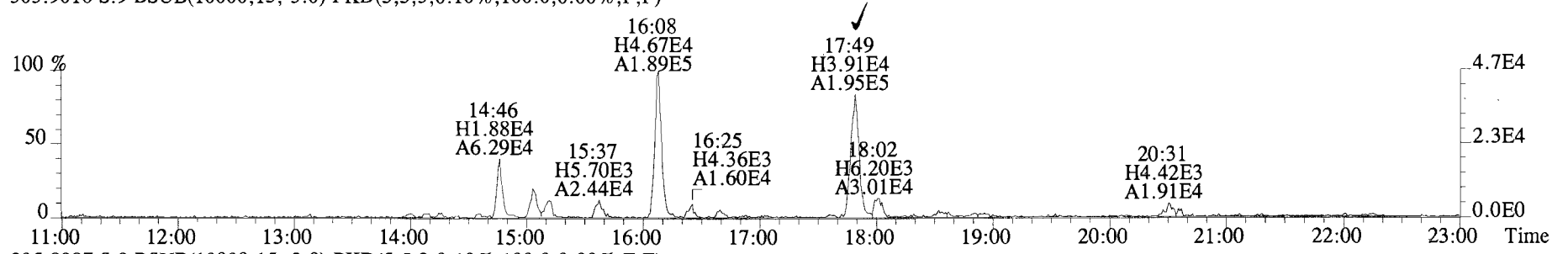
Date: 10/31/19

Reviewed

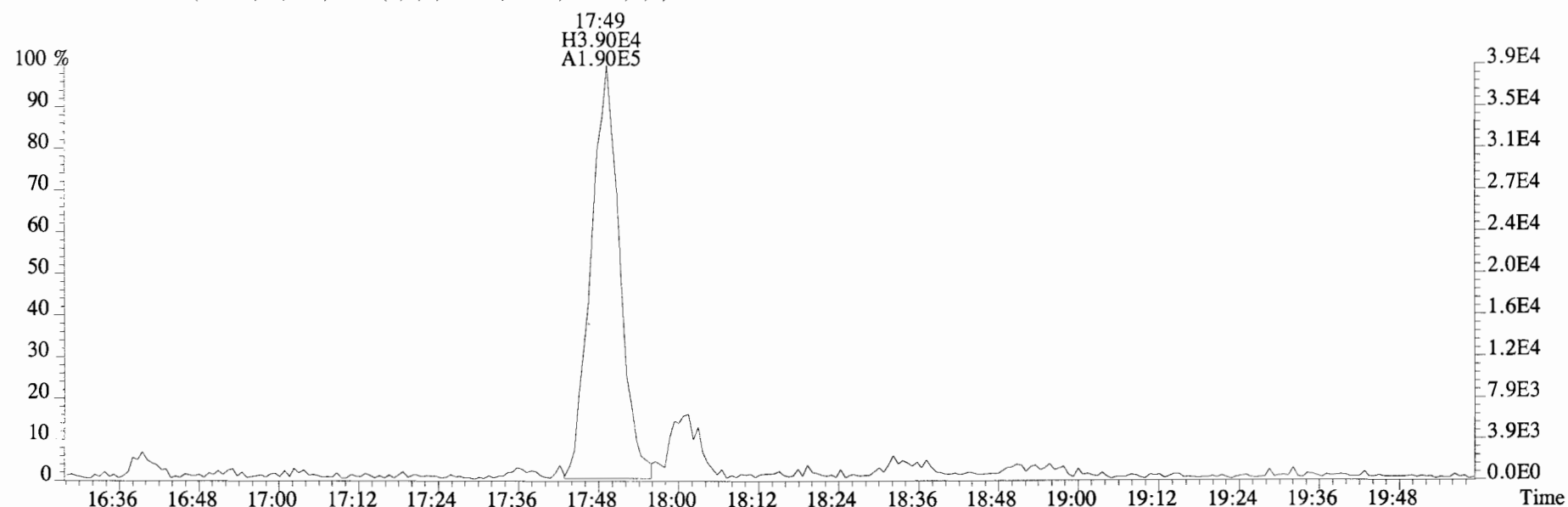
by CT
Analyst: CT

Date: 11/11/19

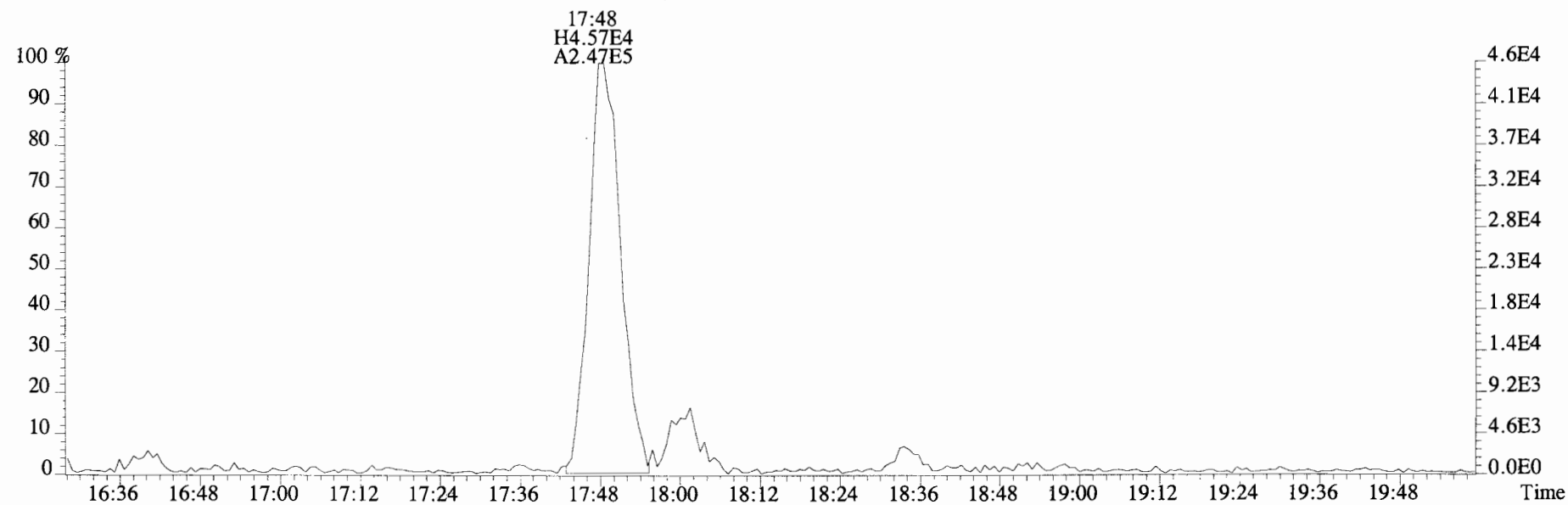
File:191030D1 #1-1683 Acq:30-OCT-2019 18:13:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-14RE1 PDI-081SC-B-04-06-191002 16.01 Exp:TCDF_DB225
303.9016 S:9 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



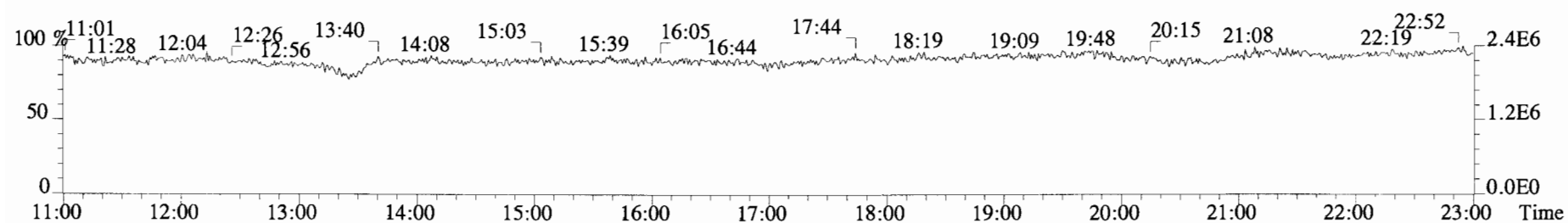
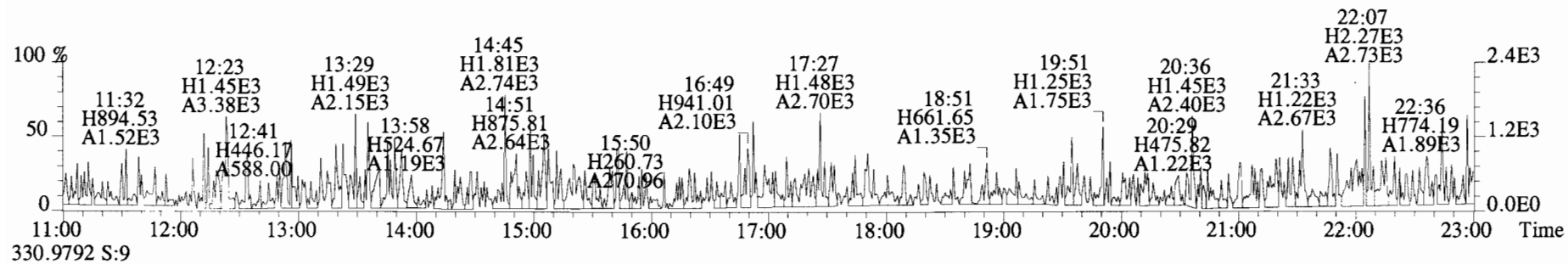
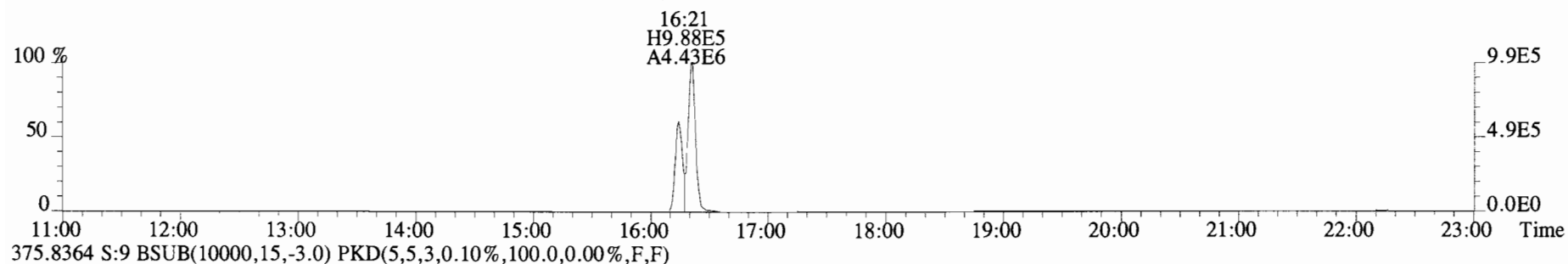
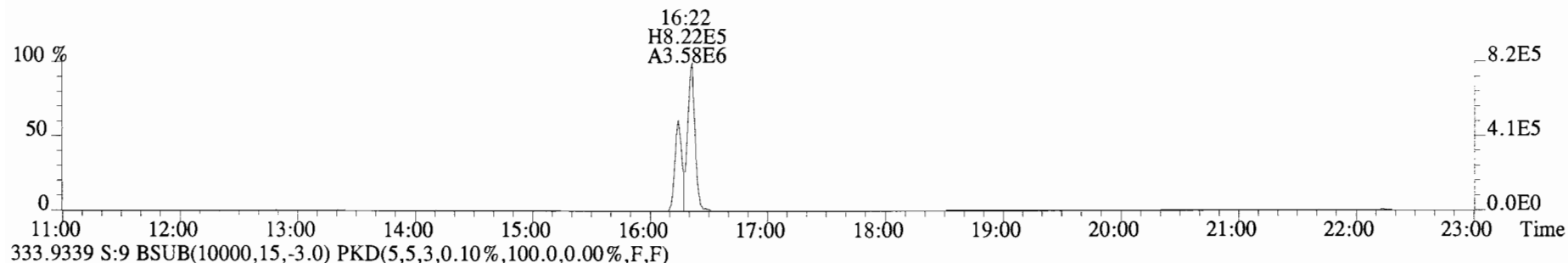
File:191030D1 #1-1683 Acq:30-OCT-2019 18:13:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Viata Analytical Laboratory_VG7 Text:1903546-14RE1 PDI-081SC-B-04-06-191002 16.01 Exp:TCDF_DB225
303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



305.8987 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191030D1 #1-1683 Acq:30-OCT-2019 18:13:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Viata Analytical Laboratory VG7 Text:1903546-14RE1 PDI-081SC-B-04-06-191002 16.01 Exp:TCDF_DB225
 331.9368 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Name	Resp	RA	RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.23e+07	0.82 y	15:36	1.00	196.3	-
13C-2,3,7,8-TCDF	1.31e+07	0.80 y	17:48	1.02	204.2	104.0
2,3,7,8-TCDF	5.12e+05	0.76 y	17:49	0.95	8.086	

Integrations

by DB

Analyst: DB

Date: 11/7/19

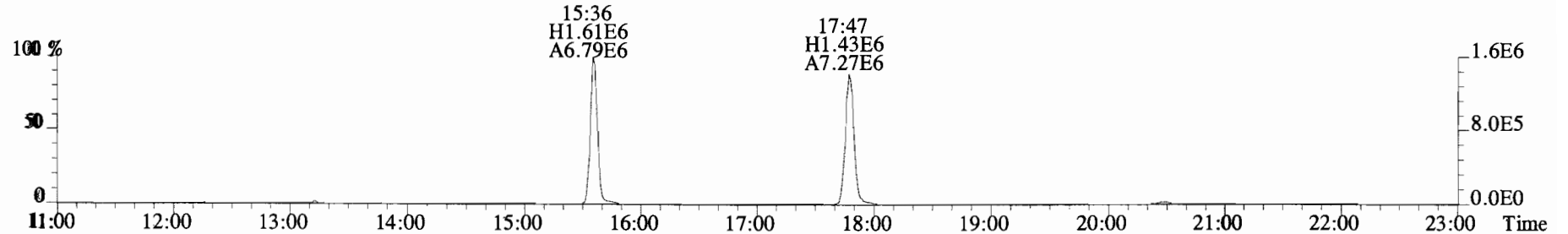
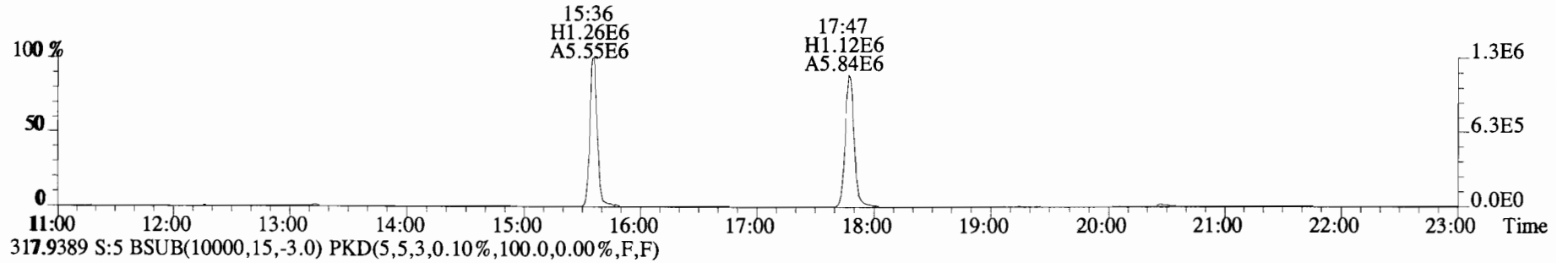
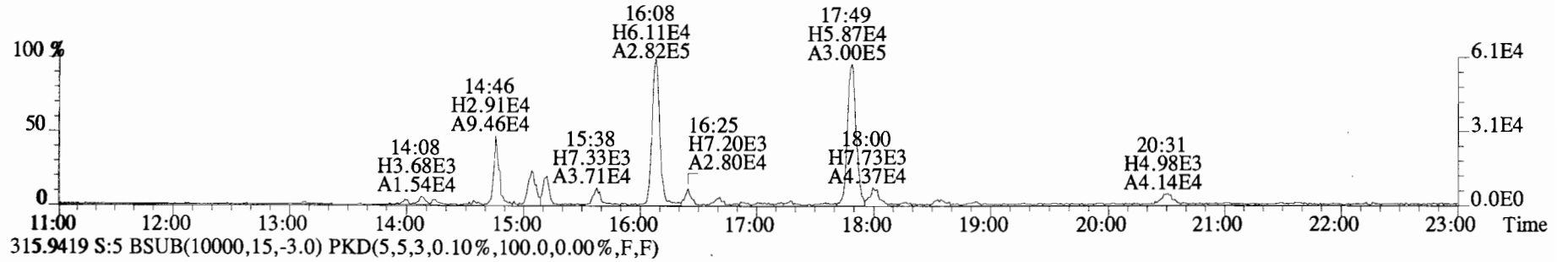
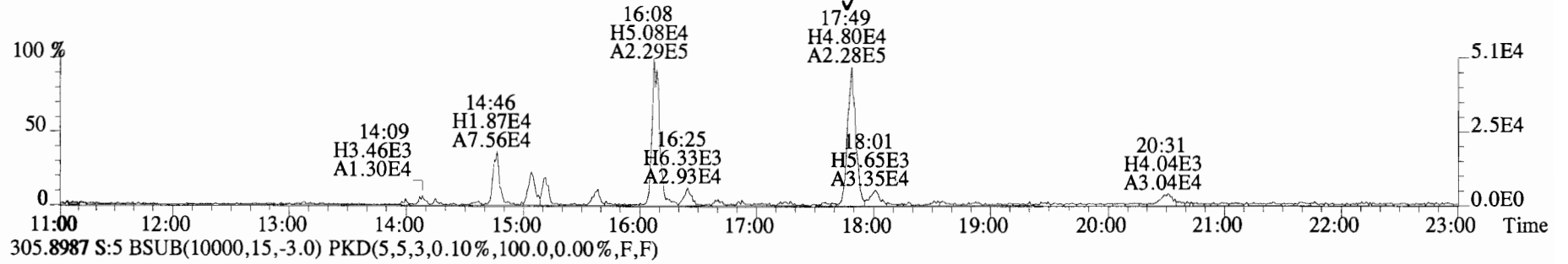
Reviewed

by C1

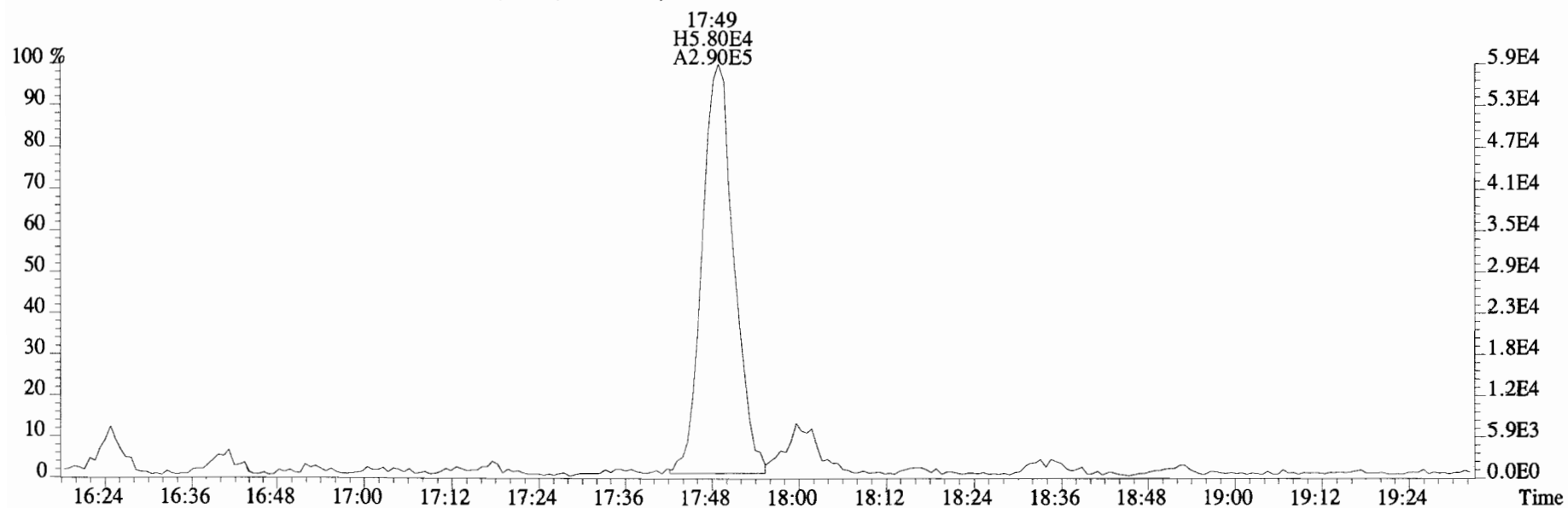
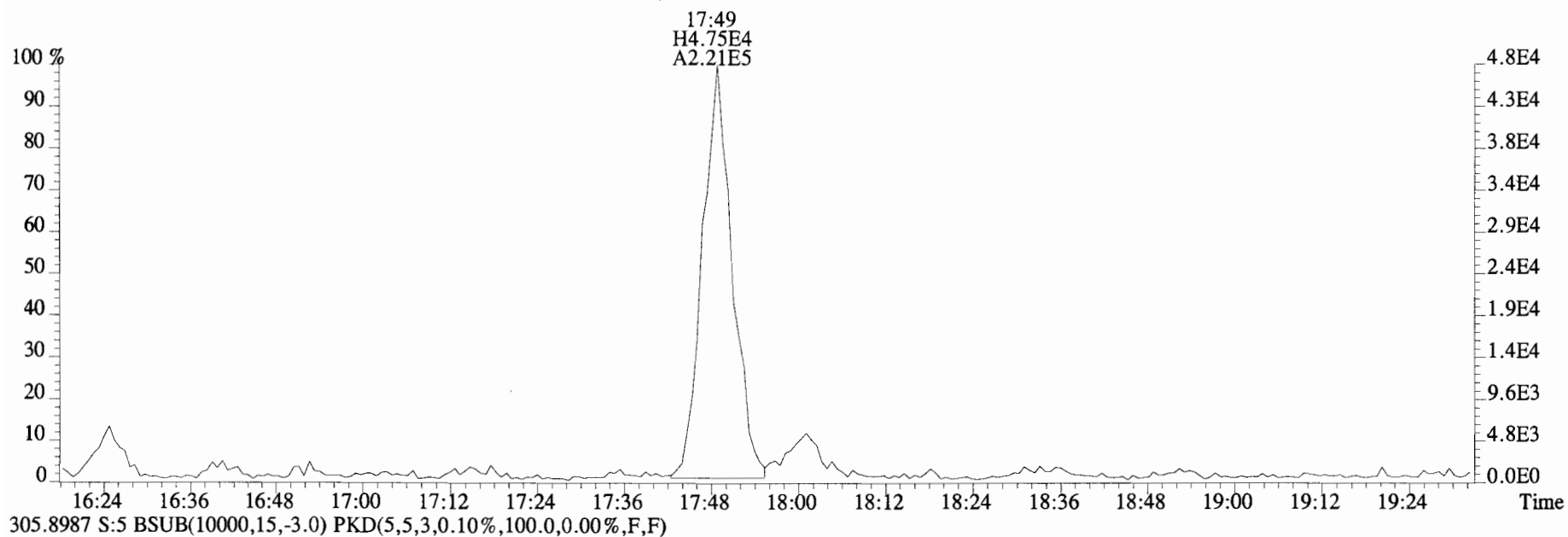
Analyst: C1

Date: 11/11/19

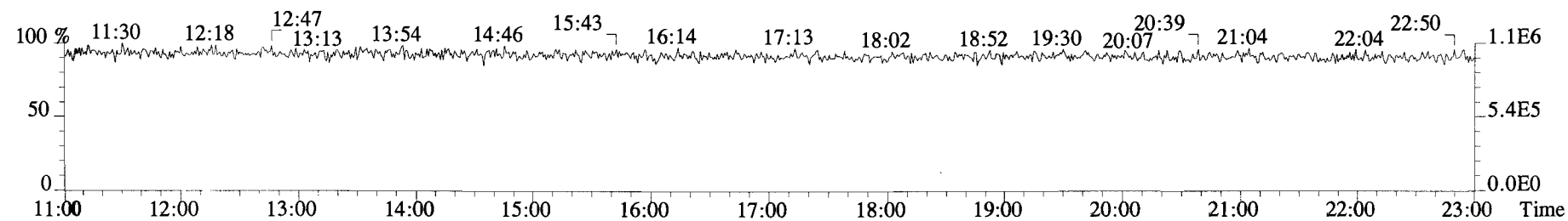
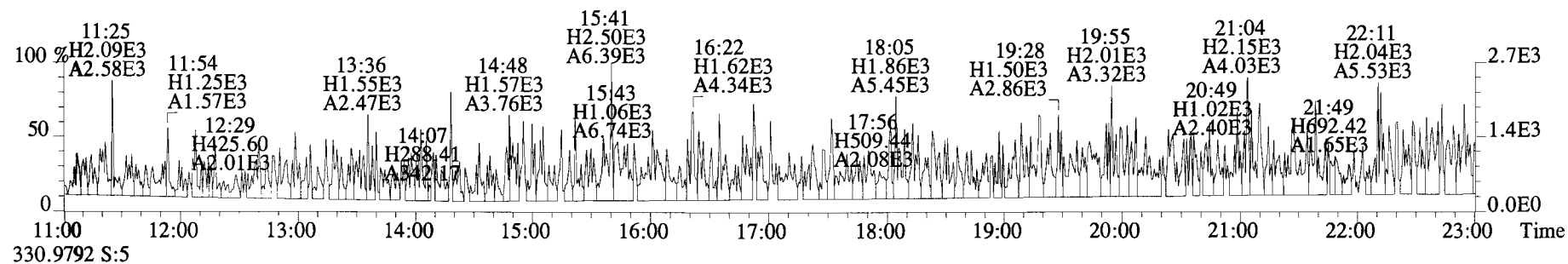
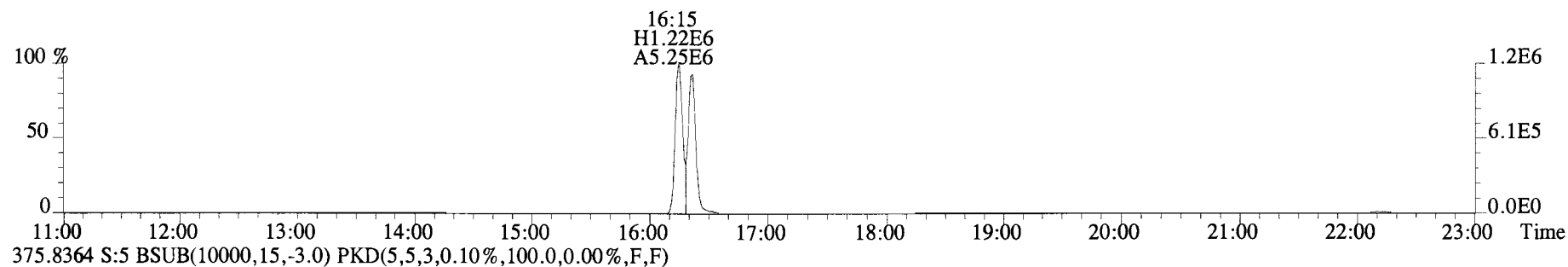
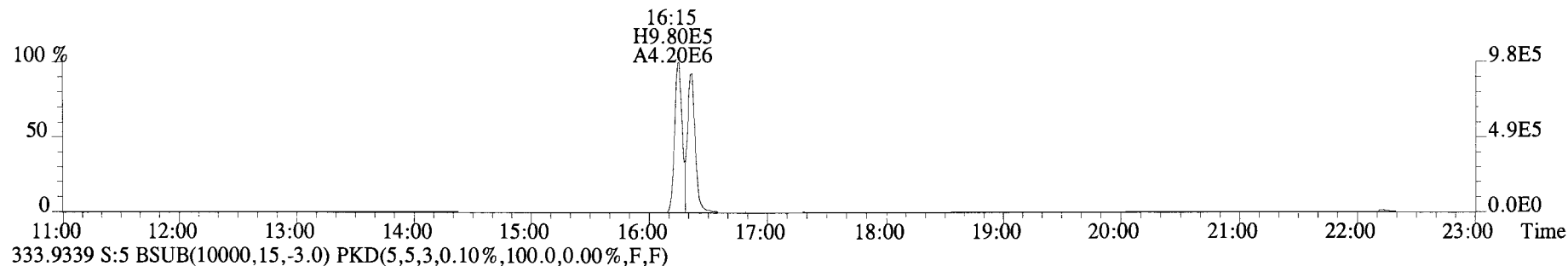
File:191107D1 #1-1683 Acq: 7-NOV-2019 12:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE2 PDI-081SC-B-06-08-191002 16.63 Exp:TCDF_DB225
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191107D1 #1-1683 Acq: 7-NOV-2019 12:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:1903546-15RE2 PDI-081SC-B-06-08-191002 16.63 Exp:TCDF_DB225
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191107D1 #1-1683 Acq: 7-NOV-2019 12:58:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory VG7 Text:1903546-15RE2 PDI-081SC-B-06-08-191002 16.63 Exp:TCDF_DB225
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



CONTINUING CALIBRATION

HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calibration ID: ST191023D1-1

Reviewed By: OT 10/23/19
Initials & Date

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Concentrations within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TCDD/TCDF Valleys <25%	<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?	<u>DB</u>	<input type="checkbox"/>
<u>Run Log:</u>		
- 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
- Bottle position verified?	<input checked="" type="checkbox"/> DB	<input type="checkbox"/>

Mass resolution \geq

5k 6-8K 8K 10K
 1614 1699 429 1613/1668/8280

Intergrated peaks display correctly? NA

GC Break <20% NA

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours NA

Comments:

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: ST191023D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191023D1 S#1 Analysis Date: 23-OCT-19 Time: 13:20:00

	M/Z'S	ION	QC	Pass	CONC.	CONC.
	FORMING	ABUND.	LIMITS		FOUND	RANGE (3)
NATIVE ANALYTES	RATIO (1)	RATIO	(2)			(ng/mL)
2,3,7,8-TCDD	M/M+2	0.88	0.65-0.89	y	10.7	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	y	46.7	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	50.2	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.17	1.05-1.43	y	53.1	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.20	1.05-1.43	y	52.9	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	49.0	43.0 - 58.0
OCDD	M+2/M+4	0.91	0.76-1.02	y	103	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	y	8.76	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	50.0	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.64	1.32-1.78	y	48.5	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	49.2	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	49.3	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	50.3	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	y	49.6	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88-1.20	y	48.4	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.88-1.20	y	47.4	43.0 - 58.0
OCDF	M+2/M+4	0.90	0.76-1.02	y	96.4	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: DB

Date: 10/23/19

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-SMS

VER Data Filename: 191023D1 S#1 Analysis Date: 23-OCT-19 Time: 13:20:00

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	0.78	0.65-0.89	y	106	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	95.1	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	103	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	86.8	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	92.6	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	103	72.0 - 138.0
13C-OCDD	M/M+2	0.90	0.76-1.02	y	202	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.79	0.65-0.89	y	107	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	91.2	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	97.2	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	106	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	96.5	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	99.3	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	106	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	98.3	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.44	0.37-0.51	y	109	77.0 - 129.0
13C-OCDF	M+2/M+4	0.91	0.76-1.02	y	208	96.0 - 415.0
CLEANUP STANDARD (3)						
37C1-2,3,7,8-TCDD					10.0	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: DB

Date: 10/23/19

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: 10-9-19

RT Window Data Filename: 191023D1 S#1 Analysis Date: 23-OCT-19 Time: 13:20:00

ZB-5MS IS Data Filename: 191023D1 S#1 Analysis Date: 23-OCT-19 Time: 13:20:00

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)	22:55	1,3,6,8-TCDF (F)	20:48
1,2,8,9-TCDD (L)	27:08	1,2,8,9-TCDF (L)	27:16
1,2,4,7,9-PeCDD (F)	28:44	1,3,4,6,8-PeCDF (F)	27:14
1,2,3,8,9-PeCDD (L)	31:08	1,2,3,8,9-PeCDF (L)	31:22
1,2,4,6,7,9-HxCDD (F)	32:33	1,2,3,4,6,8-HxCDF (F)	32:01
1,2,3,7,8,9-HxCDD (L)	34:30	1,2,3,7,8,9-HxCDF (L)	34:53
1,2,3,4,6,7,9-HpCDD (F)	37:08	1,2,3,4,6,7,8-HpCDF (F)	36:45
1,2,3,4,6,7,8-HpCDD (L)	37:58	1,2,3,4,7,8,9-HpCDF (L)	38:31

(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: DB

Date: 10/23/19

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191023D1 S#1 Analysis Date: 23-OCT-19 Time: 13:20:00

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002

LABELED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.197	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	1.151	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.186	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: DB

Date: 10/23/19

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191023D1 S#1 Analysis Date: 23-OCT-19 Time: 13:20:00

NATIVE ANALYTES	RETENTION TIME		RRT	RRT
	REFERENCE			QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF		1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF		1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF		1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF		1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD		1.001	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		1.001	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

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	1.038	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	1.018	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.027	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.093	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.146	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.130	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.229	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.236	1.091-1.371

Analyst: DB

Date: 10/23/19

Client ID: 1613 CS3 19C2204
Lab ID: ST191023D1-1

Filename: 191023D1 S:1 Acq:23 OCT-19 13:20:00
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000

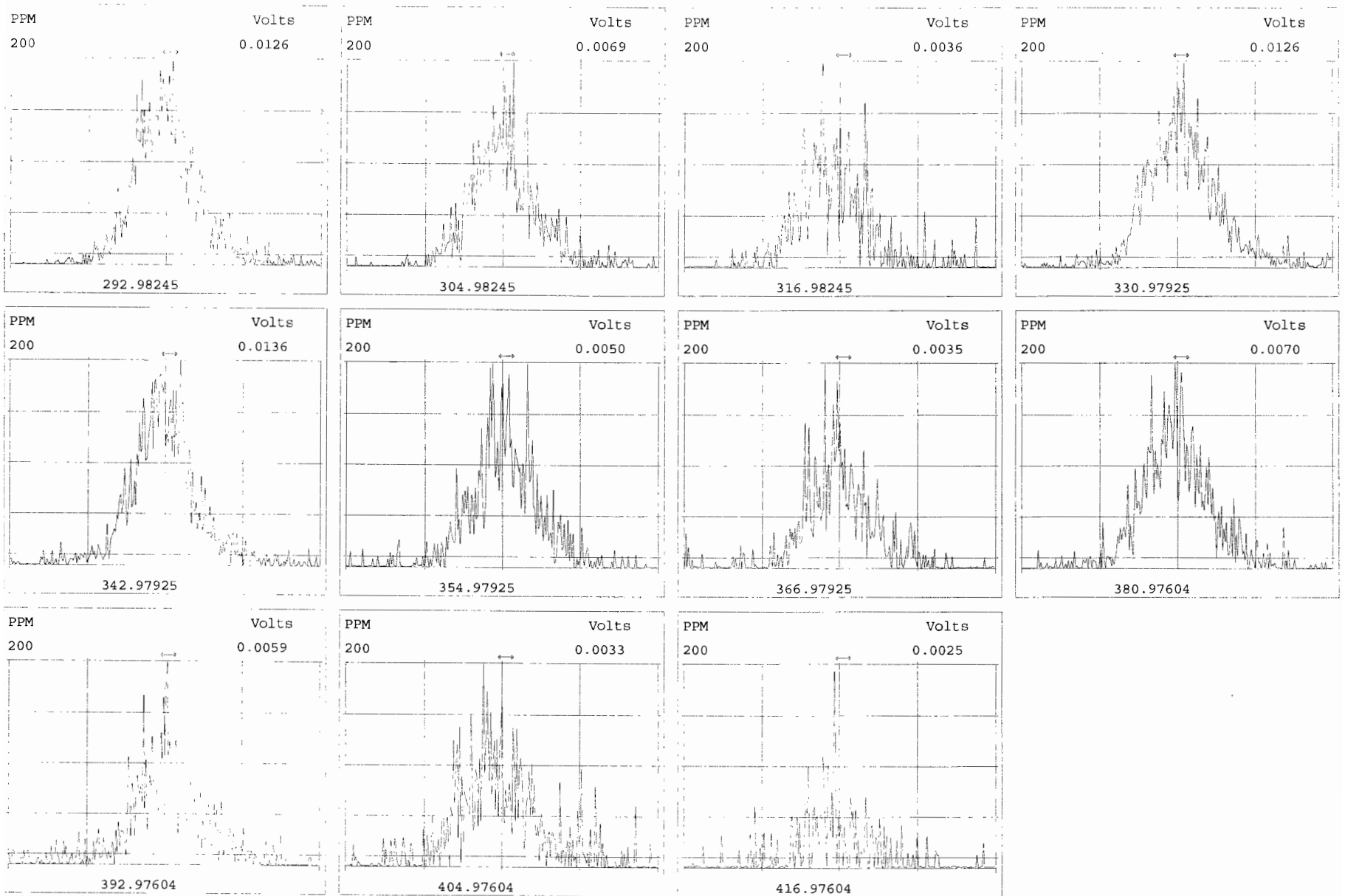
ConCal: ST191023D1 1
EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	8.89e+05	0.88 y	0.91	26:17	10.673		* 2.5		*	Total Tetra-Dioxins	77.8	78.2		*	*
1,2,3,7,8-PeCDD	2.80e+06	0.64 y	0.90	30:46	46.696		* 2.5		*	Total Penta-Dioxins	170	170		*	*
1,2,3,4,7,8-HxCDD	3.48e+06	1.26 y	1.10	34:06	50.196		* 2.5		*	Total Hexa-Dioxins	231	232		*	*
1,2,3,6,7,8-HxCDD	3.51e+06	1.17 y	0.94	34:12	53.072		* 2.5		*	Total Hepta-Dioxins	115	116		*	*
1,2,3,7,8,9-HxCDD	3.60e+06	1.20 y	0.96	34:30	52.885		* 2.5		*	Total Tetra-Furans	32.9	33.6		*	*
1,2,3,4,6,7,8-HpCDD	3.08e+06	1.04 y	0.98	37:58	49.017		* 2.5		*	Total Penta-Furans	217.74	218.09		*	*
OCDD	5.48e+06	0.91 y	0.96	41:19	102.68		* 2.5		*	Total Hexa-Furans	258	258		*	*
										Total Hepta-Furans	96.5	96.8		*	*
2,3,7,8-TCDF	1.13e+06	0.77 y	0.95	25:30	8.7560		* 2.5		*						
1,2,3,7,8-PeCDF	4.58e+06	1.63 y	0.96	29:36	50.004		* 2.5		*						
2,3,4,7,8-PeCDF	4.97e+06	1.64 y	1.01	30:29	48.503		* 2.5		*						
1,2,3,4,7,8-HxCDF	4.83e+06	1.22 y	1.18	33:12	49.226		* 2.5		*						
1,2,3,6,7,8-HxCDF	4.99e+06	1.22 y	1.07	33:20	49.307		* 2.5		*						
2,3,4,6,7,8-HxCDF	5.03e+06	1.23 y	1.11	33:55	50.273		* 2.5		*						
1,2,3,7,8,9-HxCDF	4.38e+06	1.25 y	1.06	34:53	49.583		* 2.5		*						
1,2,3,4,6,7,8-HpCDF	3.86e+06	1.03 y	1.13	36:45	48.382		* 2.5		*						
1,2,3,4,7,8,9-HpCDF	3.64e+06	1.01 y	1.28	38:31	47.427		* 2.5		*						
OCDF	6.22e+06	0.90 y	0.95	41:32	96.424		* 2.5		*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	9.20e+06	0.78 y	1.10	26:16	105.97					106					
IS 13C-1,2,3,7,8-PeCDD	6.65e+06	0.63 y	0.88	30:45	95.138					95.1					
IS 13C-1,2,3,4,7,8-HxCDD	6.29e+06	1.26 y	0.64	34:05	103.21					103					
IS 13C-1,2,3,6,7,8-HxCDD	7.04e+06	1.27 y	0.86	34:11	86.756					86.8					
IS 13C-1,2,3,7,8,9-HxCDD	7.09e+06	1.24 y	0.81	34:29	92.581					92.6					
IS 13C-1,2,3,4,6,7,8-HpCDD	6.42e+06	1.06 y	0.65	37:58	103.40					103					
IS 13C-OCDD	1.11e+07	0.90 y	0.58	41:18	202.25					101					
IS 13C-2,3,7,8-TCDF	1.36e+07	0.79 y	1.03	25:29	106.97					107					
IS 13C-1,2,3,7,8-PeCDF	9.55e+06	1.59 y	0.85	29:35	91.180					91.2					
IS 13C-2,3,4,7,8-PeCDF	1.01e+07	1.59 y	0.85	30:28	97.187					97.2					
IS 13C-1,2,3,4,7,8-HxCDF	8.35e+06	0.52 y	0.83	33:11	105.72					106					
IS 13C-1,2,3,6,7,8-HxCDF	9.47e+06	0.51 y	1.03	33:19	96.503					96.5					
IS 13C-2,3,4,6,7,8-HxCDF	8.99e+06	0.51 y	0.95	33:55	99.324					99.3					
IS 13C-1,2,3,7,8,9-HxCDF	8.31e+06	0.51 y	0.83	34:52	105.84					106					
IS 13C-1,2,3,4,6,7,8-HpCDF	7.07e+06	0.43 y	0.76	36:44	98.324					98.3					
IS 13C-1,2,3,4,7,8,9-HpCDF	6.00e+06	0.44 y	0.58	38:30	108.72					109					
IS 13C-OCDF	1.36e+07	0.91 y	0.69	41:31	208.38					104					
C/Up 37C1-2,3,7,8-TCDD	9.50e+05		1.20	26:17	10.003					100					
RS/RT 13C-1,2,3,4-TCDD	7.93e+06	0.77 y	1.00	25:42	100.00										
RS 13C-1,2,3,4-TCDF	1.23e+07	0.81 y	1.00	24:17	100.00										
RS/RT 13C-1,2,3,4,6,9-HxCDF	9.49e+06	0.52 y	1.00	33:36	100.00										

Integrations
by DB
Analyst: DB
Reviewed by CT
Analyst: CT
Date: 10/23/19
Date: 10/24/19

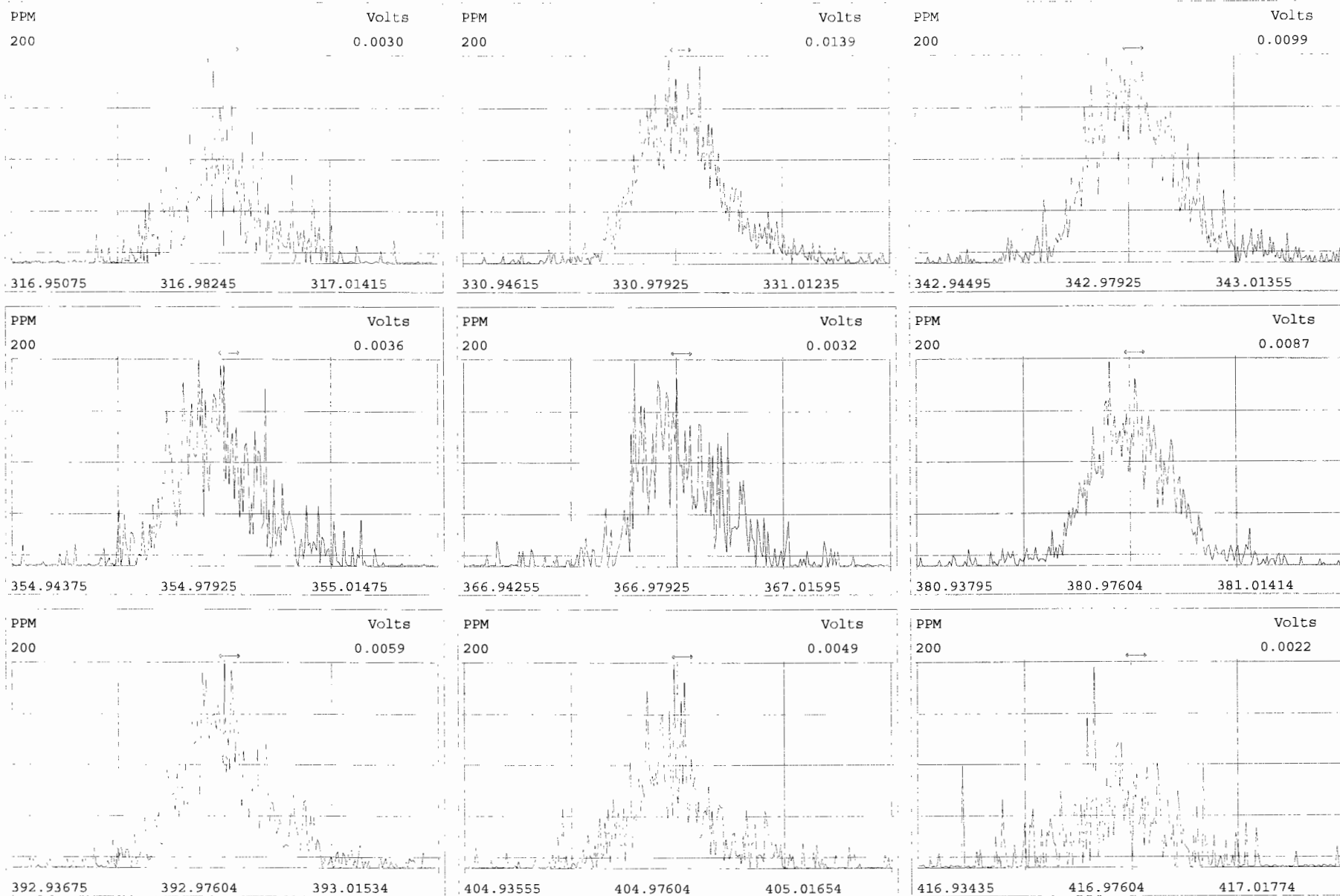
Vista Analytical Laboratory - Injection Log Run file: 191023D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

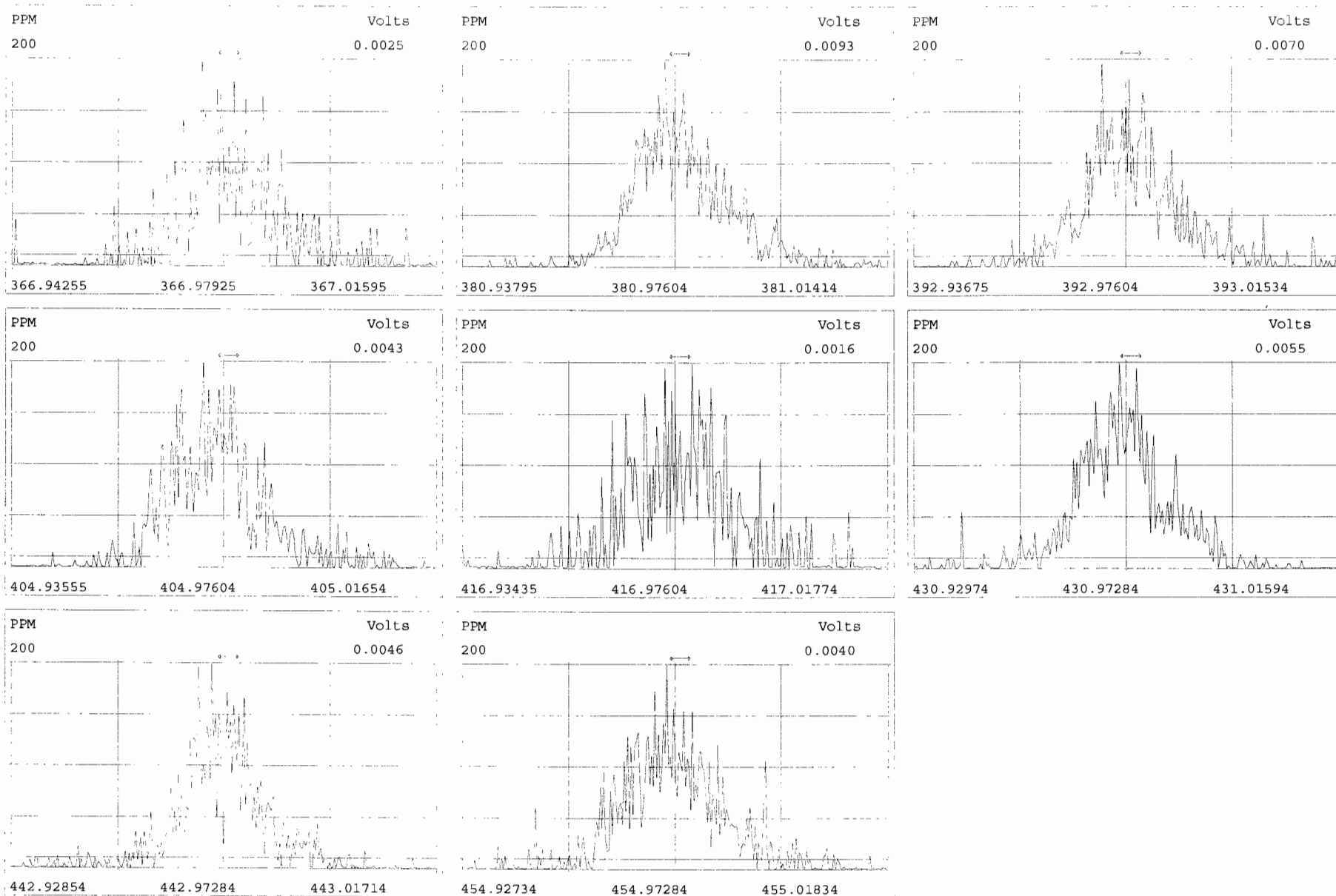
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191023D1	2	B9J0185-BS1	DB	23-OCT-19	14:07:54	ST191023D1-1	NA
191023D1	3	B9J0175-BS1	DB	23-OCT-19	14:55:56	ST191023D1-1	NA
191023D1	4	SOLVENT BLANK	DB	23-OCT-19	15:43:56	ST191023D1-1	NA
191023D1	5	B9J0185-BLK1	DB	23-OCT-19	16:31:52	ST191023D1-1	NA
191023D1	6	1903424-01	DB	23-OCT-19	17:19:48	ST191023D1-1	NA
191023D1	7	1903546-03	DB	23-OCT-19	18:07:38	ST191023D1-1	NA
191023D1	8	1903546-04	DB	23-OCT-19	18:55:33	ST191023D1-1	NA
191023D1	9	1903454-01	DB	23-OCT-19	19:43:23	ST191023D1-1	NA
191023D1	10	1903543-01	DB	23-OCT-19	20:31:06	ST191023D1-1	NA
191023D1	11	1903566-01	DB	23-OCT-19	21:19:01	ST191023D1-1	NA
191023D1	12	1903525-01	DB	23-OCT-19	22:06:50	ST191023D1-1	NA
191023D1	13	1903584-09	DB	23-OCT-19	22:54:39	ST191023D1-1	NA
191023D1	14	1903644-01	DB	23-OCT-19	23:42:33	ST191023D1-1	NA
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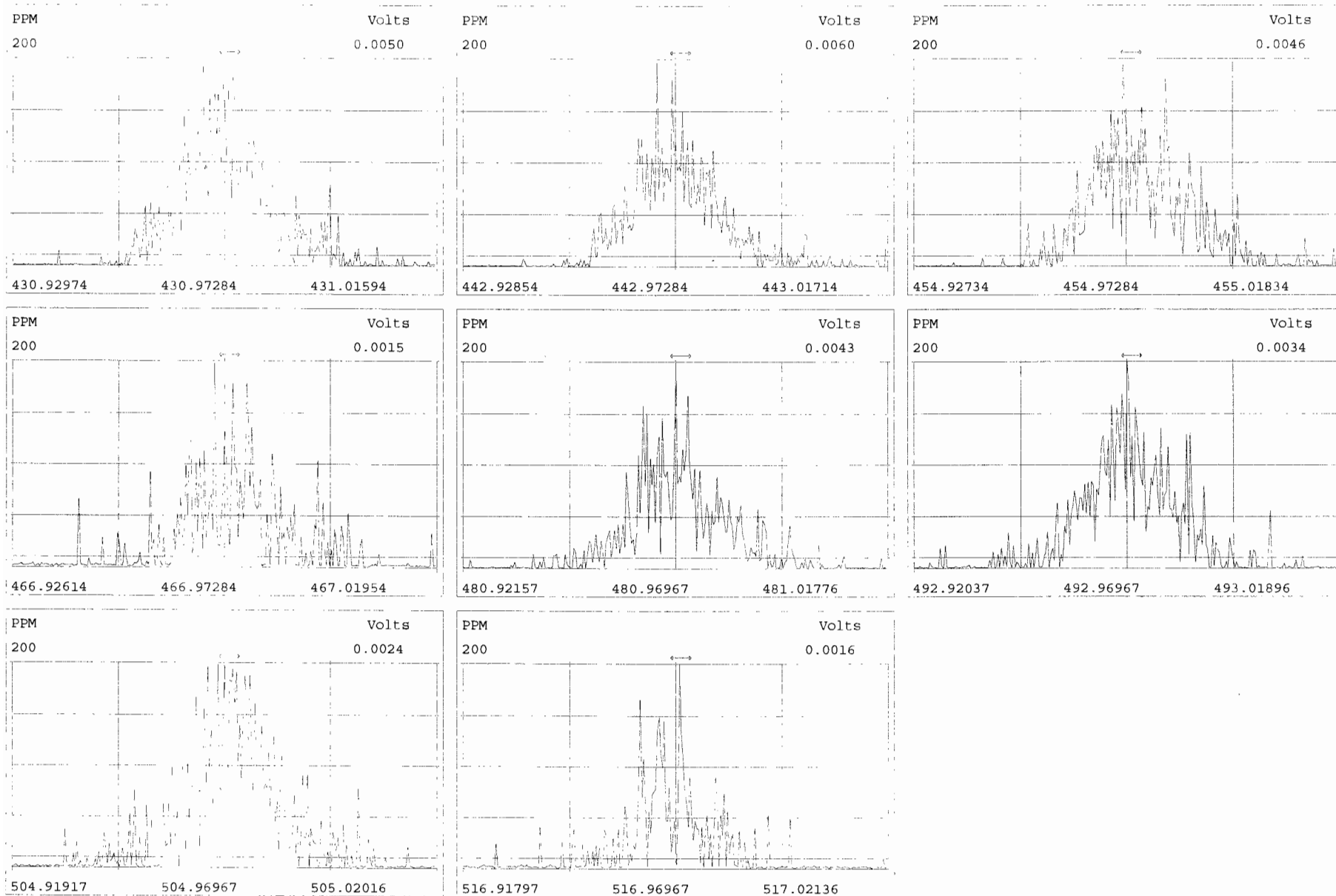


Peak Locate Examination:23-OCT-2019:13:17 File:191023D1

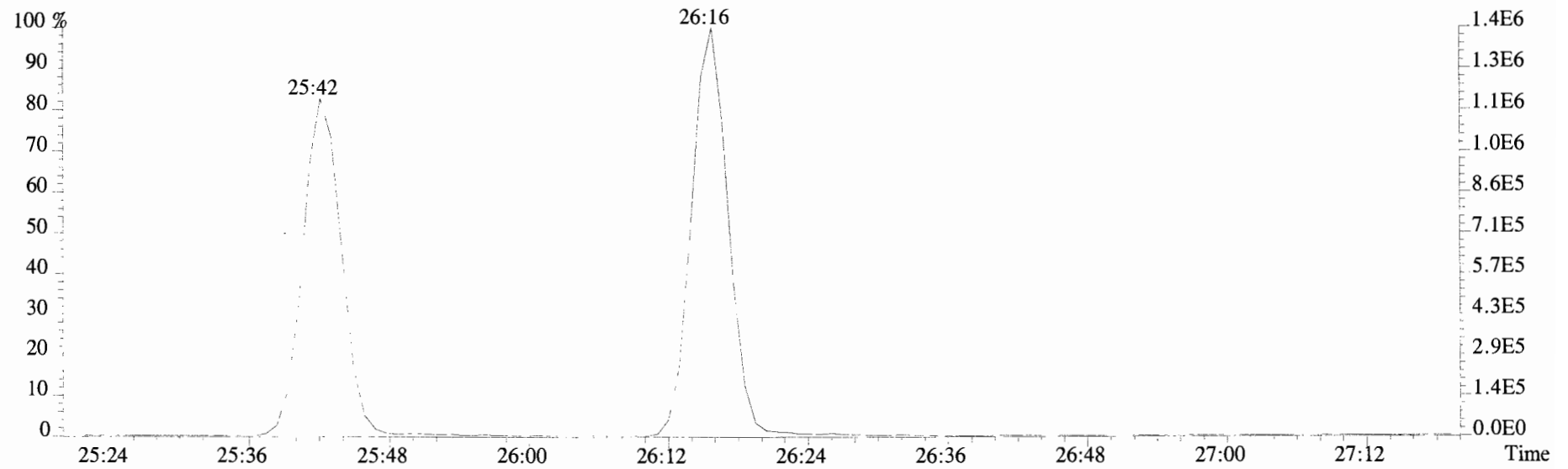
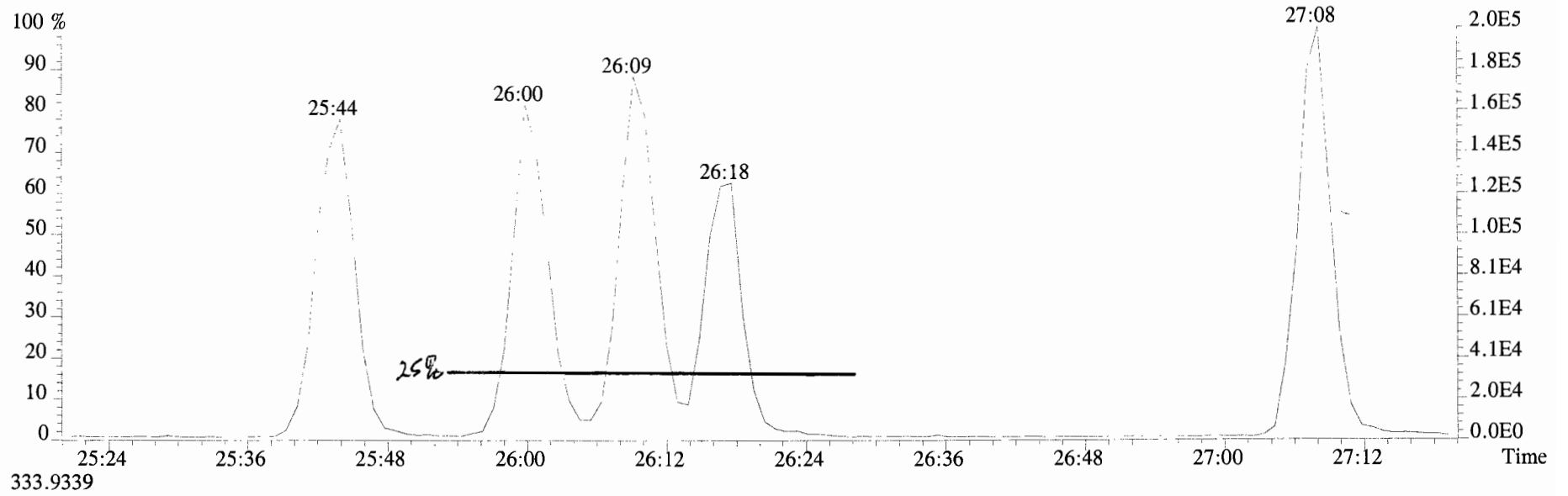
Experiment:OCDD_DB5 Function:2 Reference:PFK



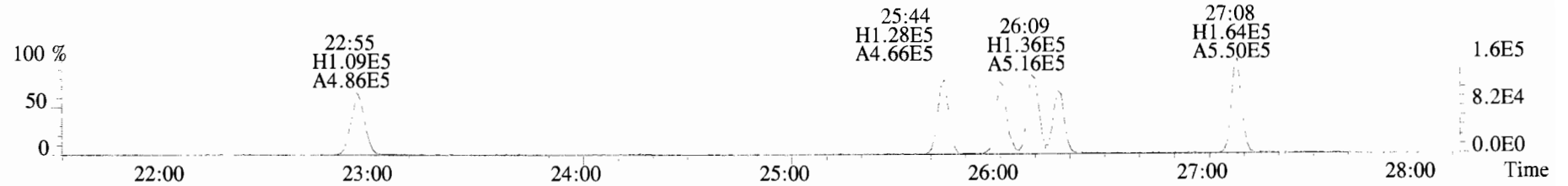




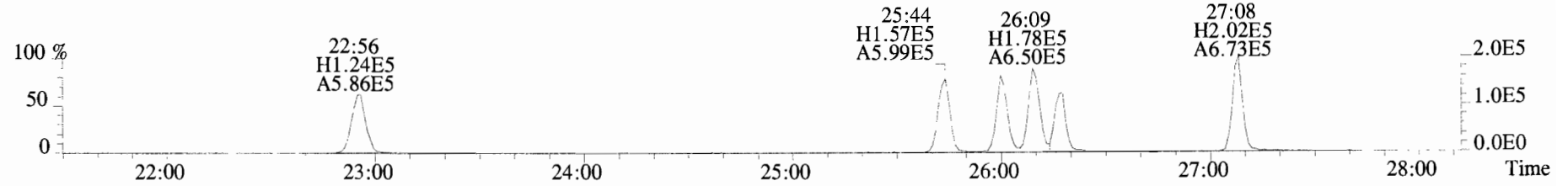
File:191023D1 #1-493 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
321.8936



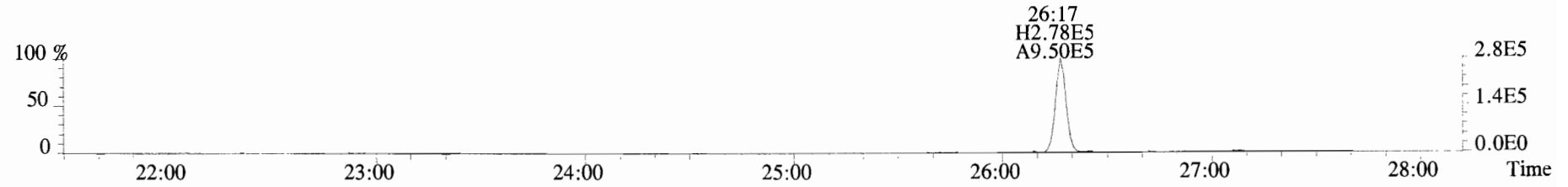
File:191023D1 #1-493 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



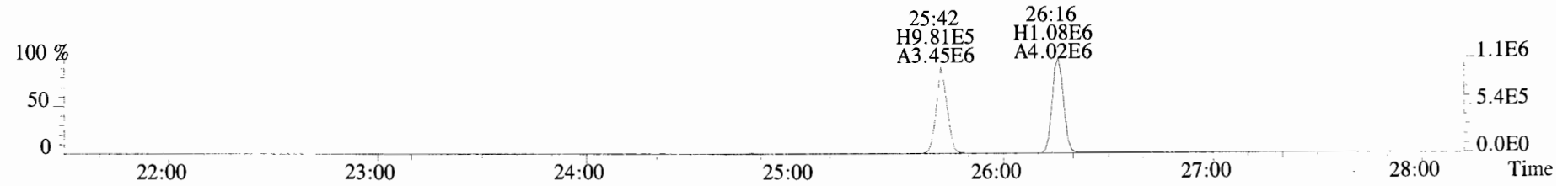
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



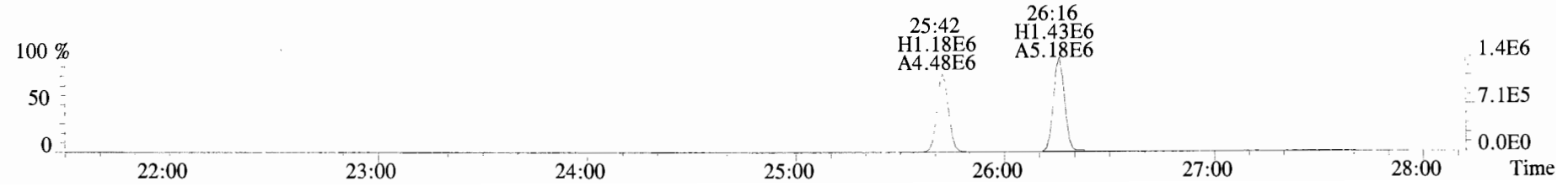
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



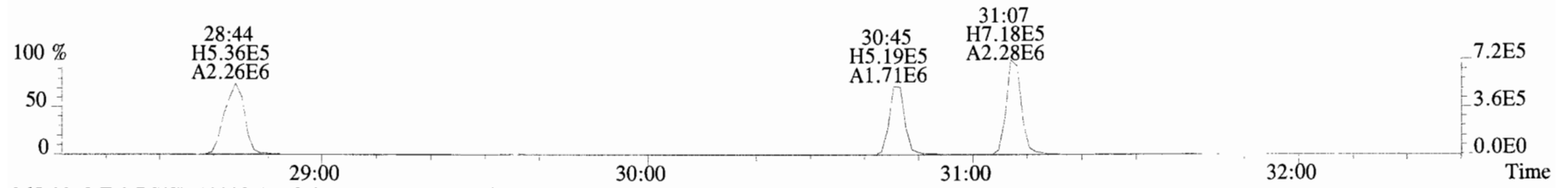
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



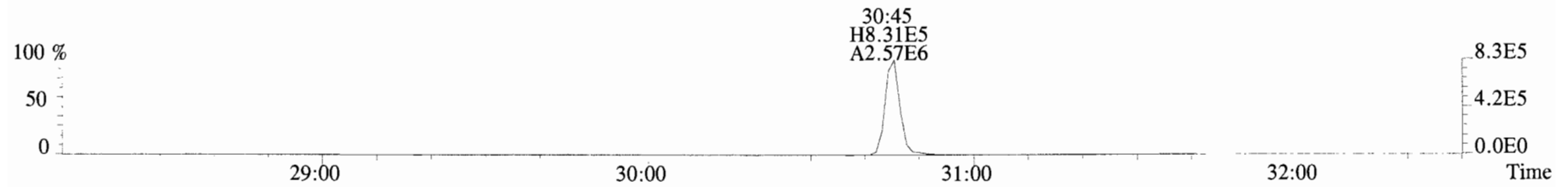
File:191023D1 #1-211 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



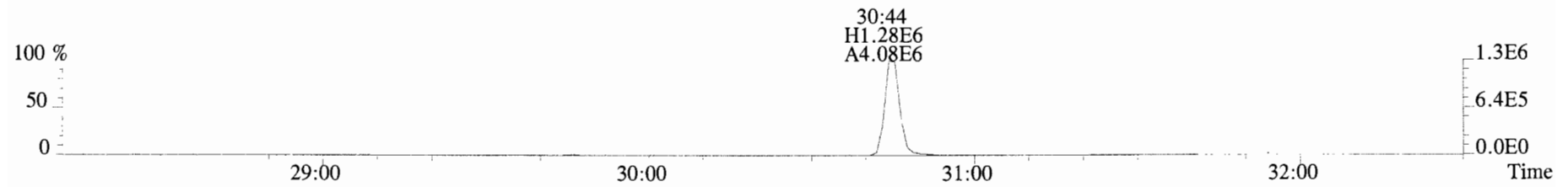
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



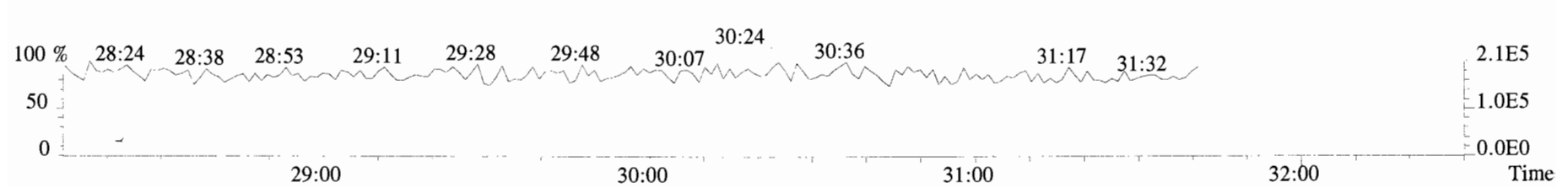
365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



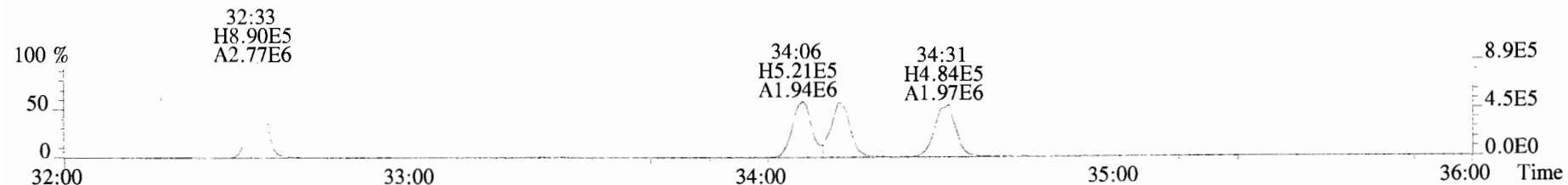
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



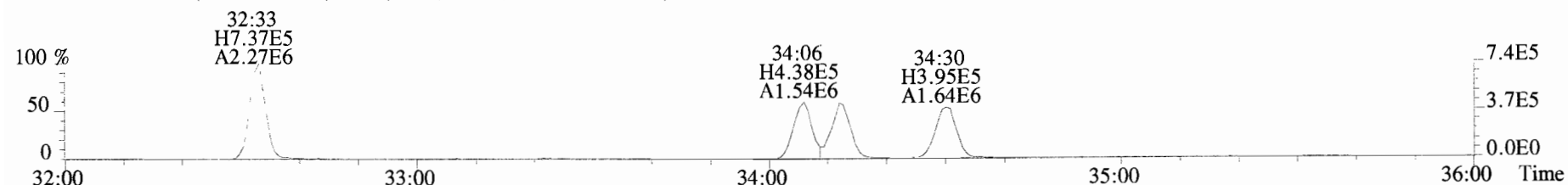
366.9792 F:2



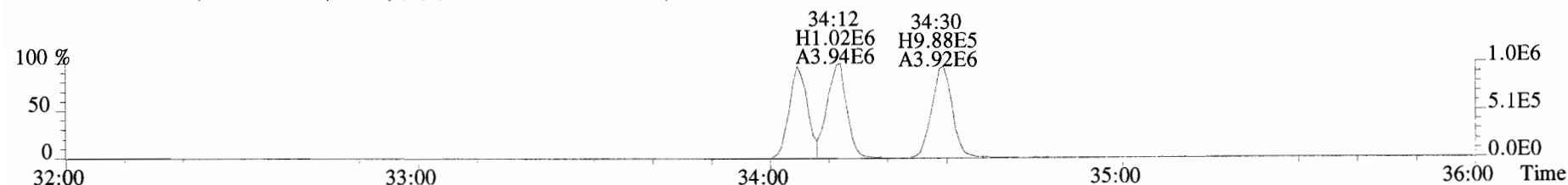
File:191023D1 #1-384 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



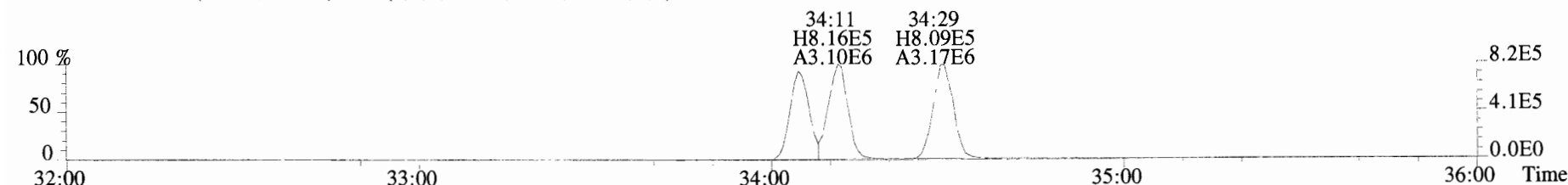
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



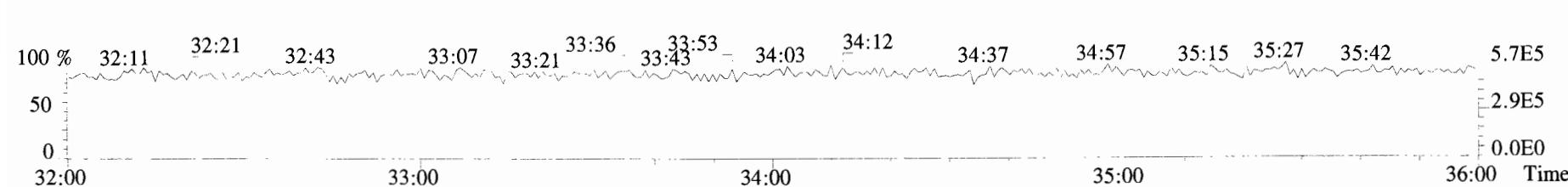
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



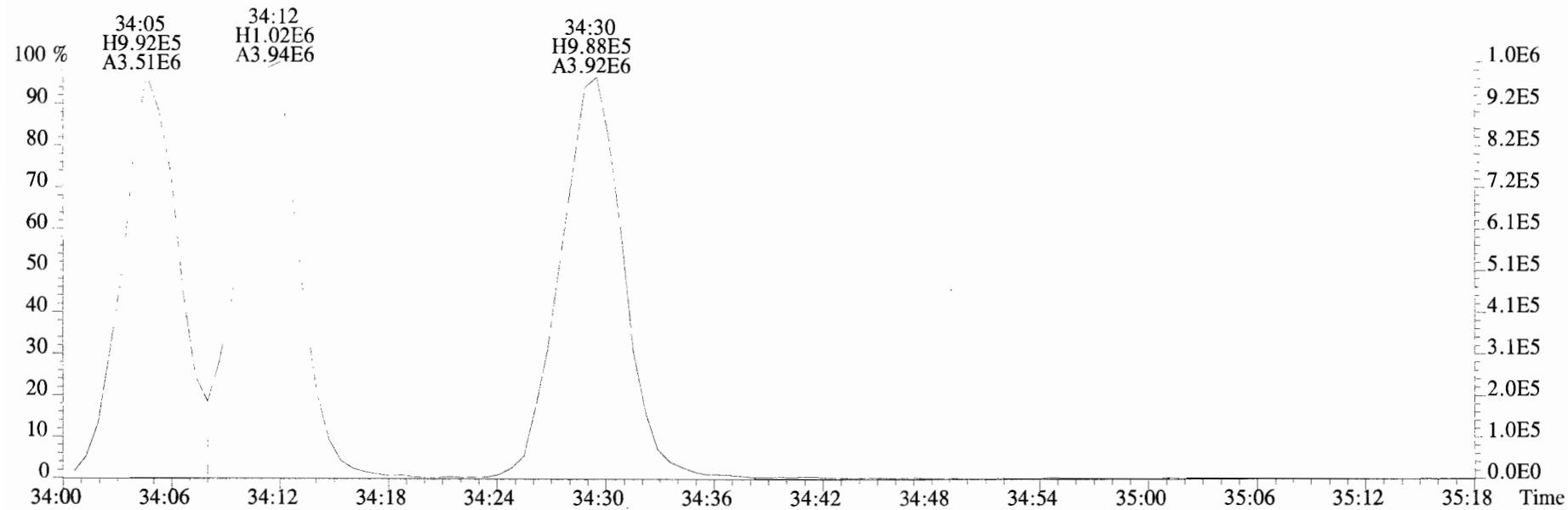
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



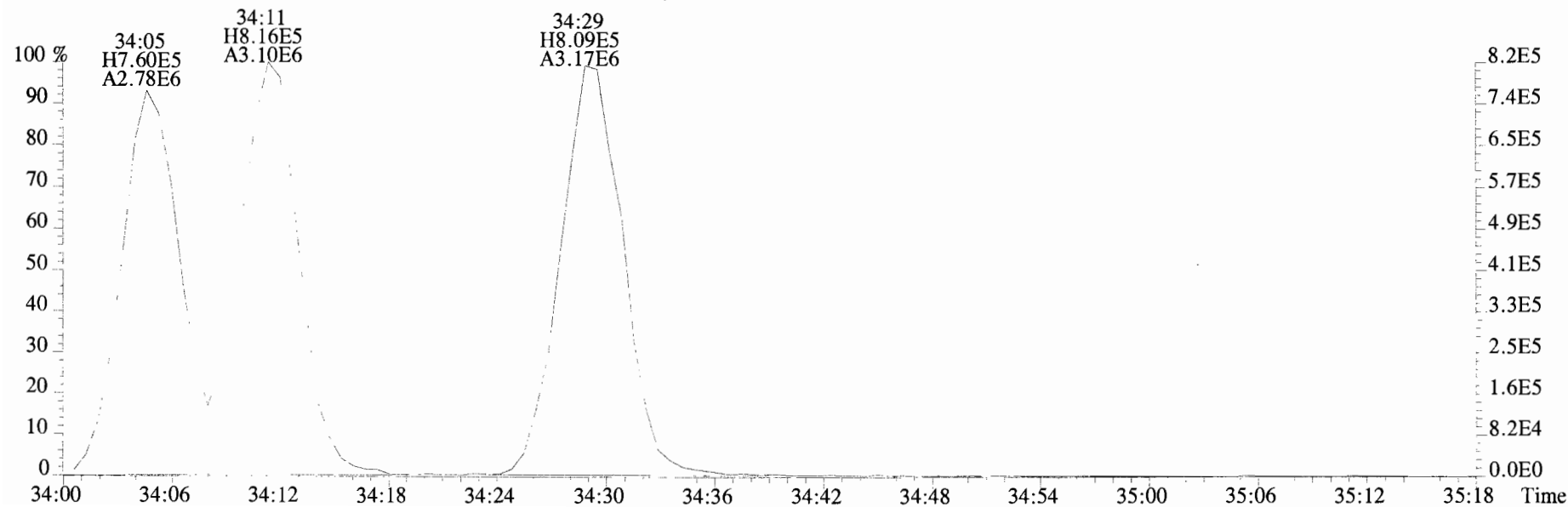
392.9760 F:3



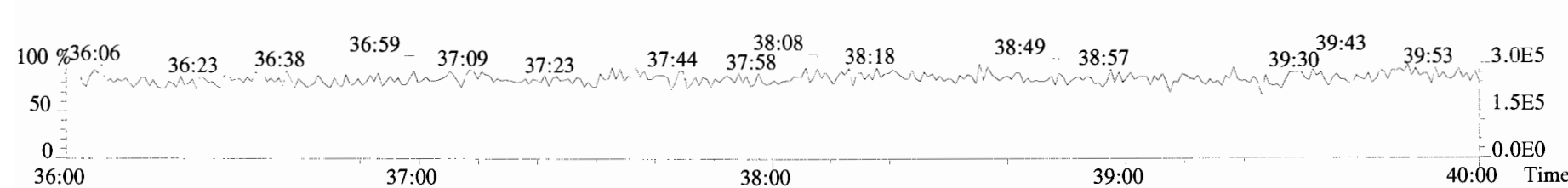
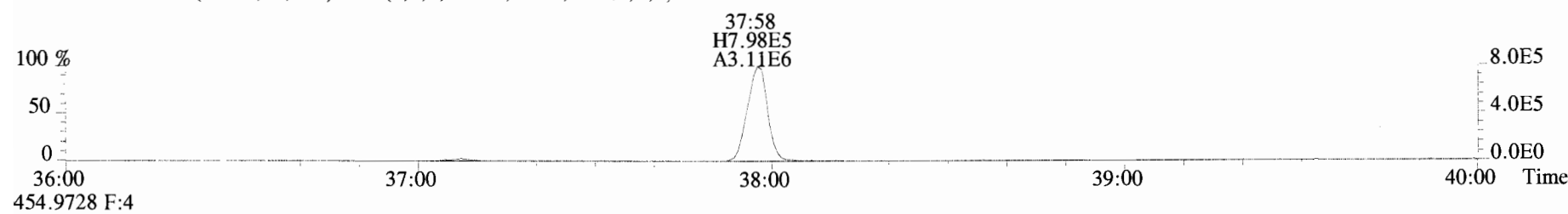
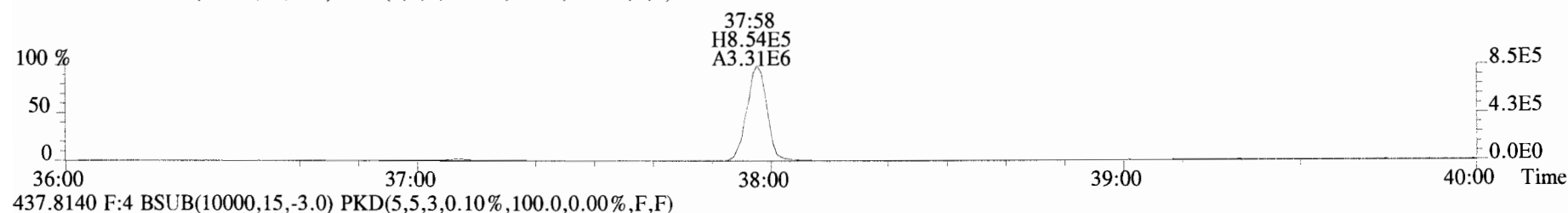
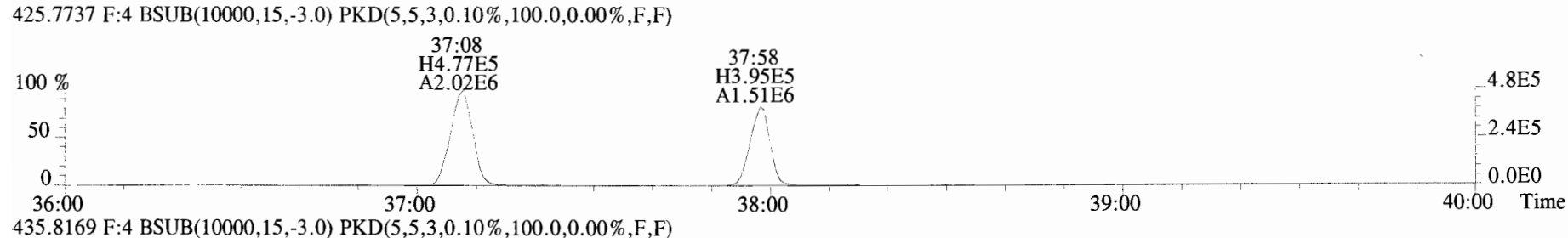
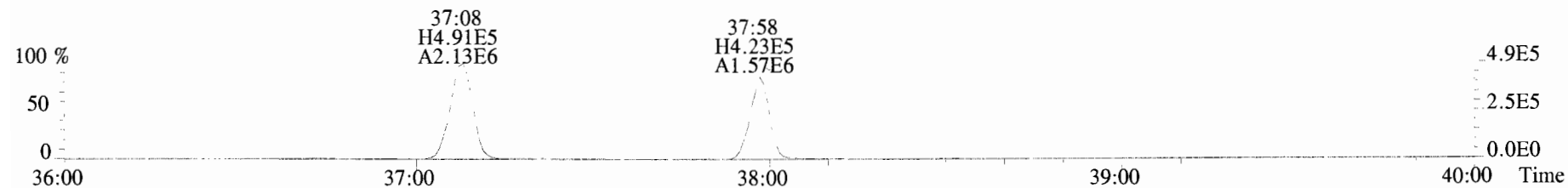
File:191023D1 #1-384 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



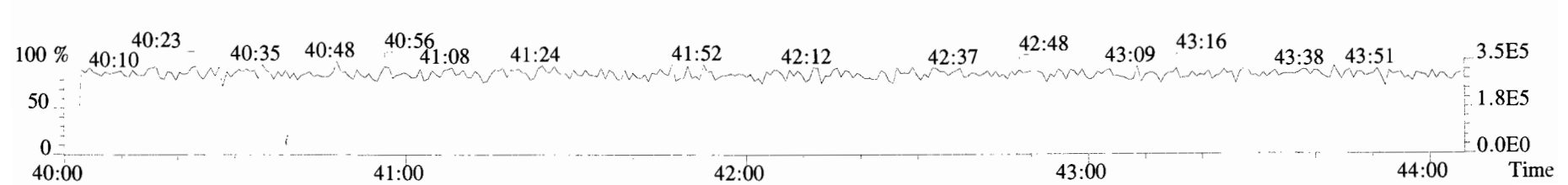
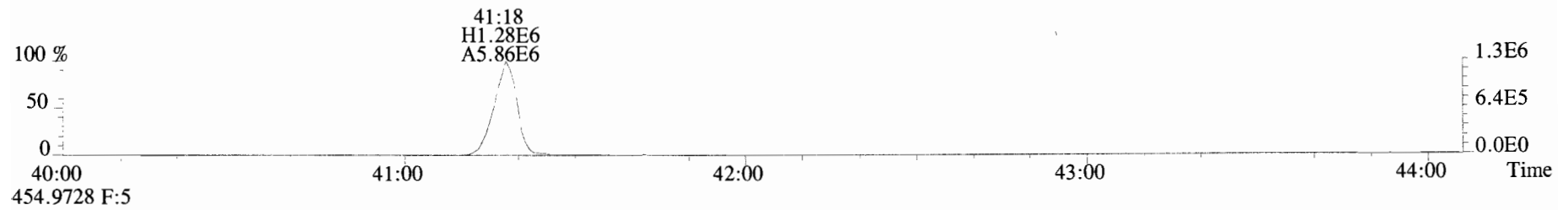
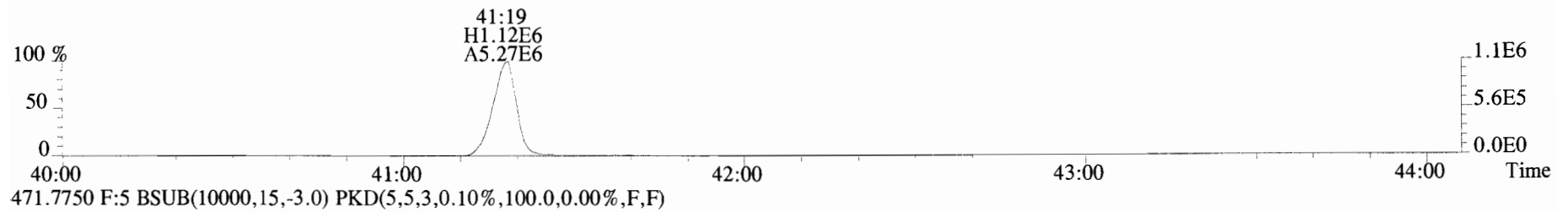
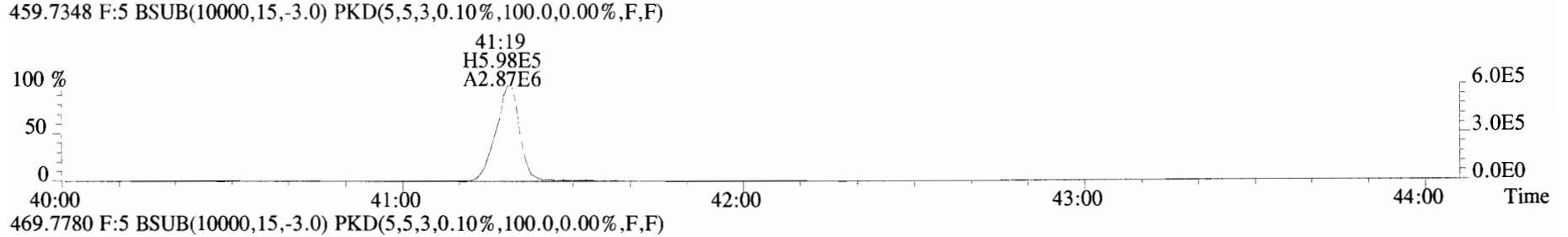
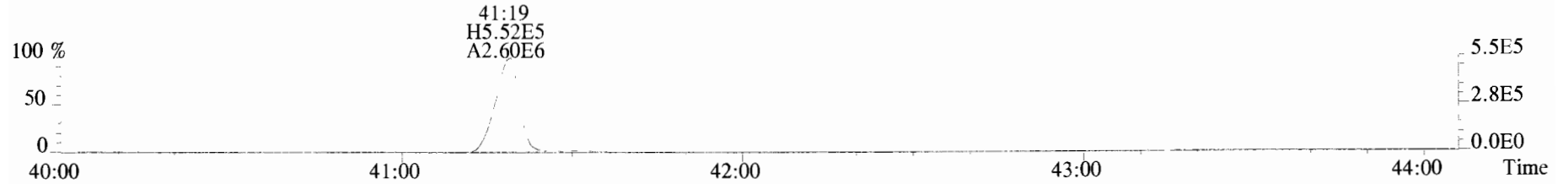
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



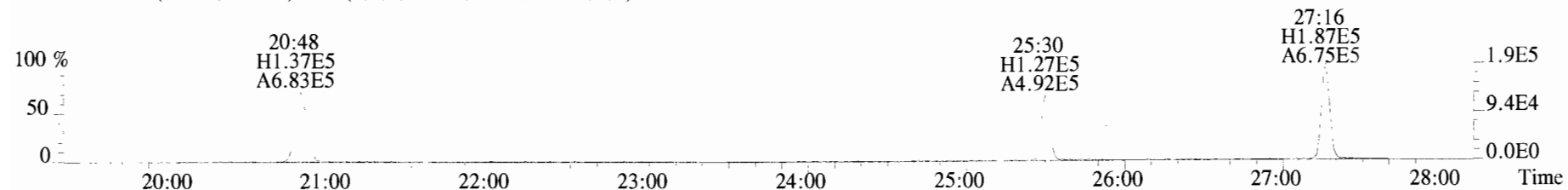
File:191023D1 #1-356 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



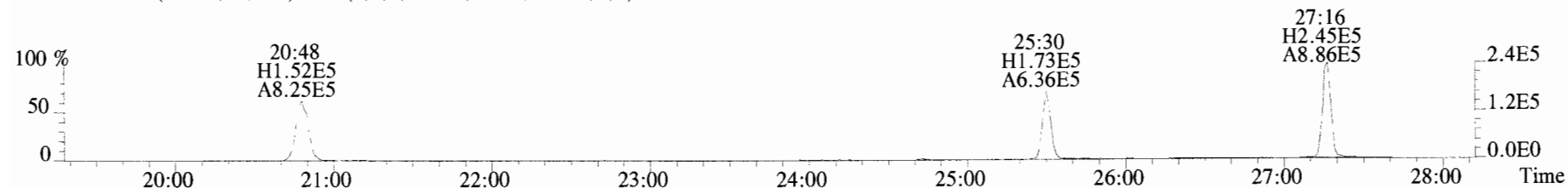
File:191023D1 #1-431 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



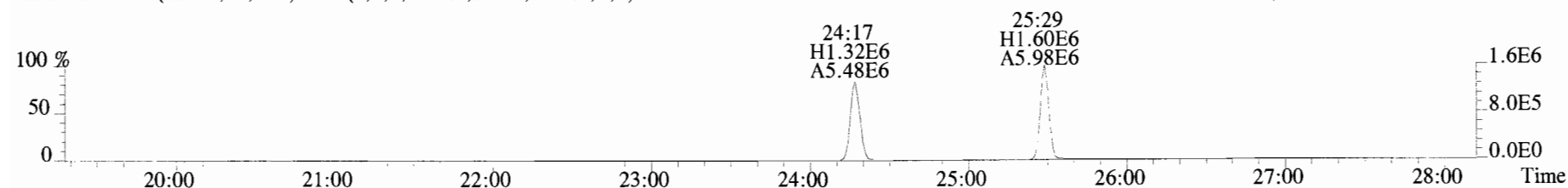
File:191023D1 #1-493 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



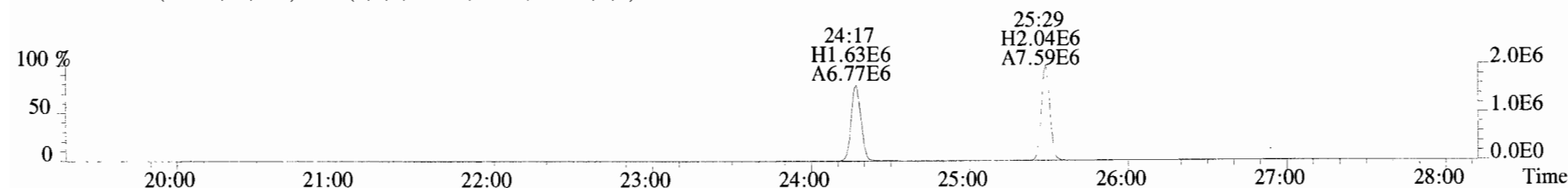
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



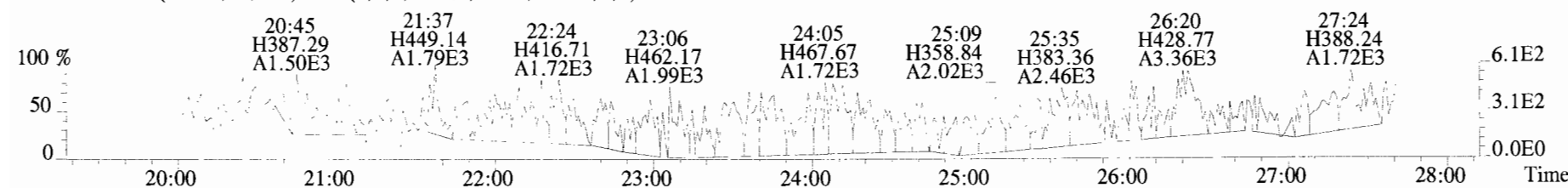
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



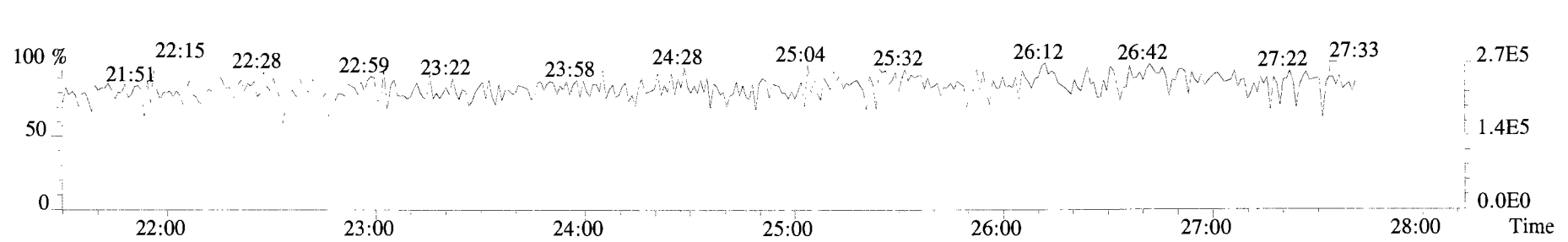
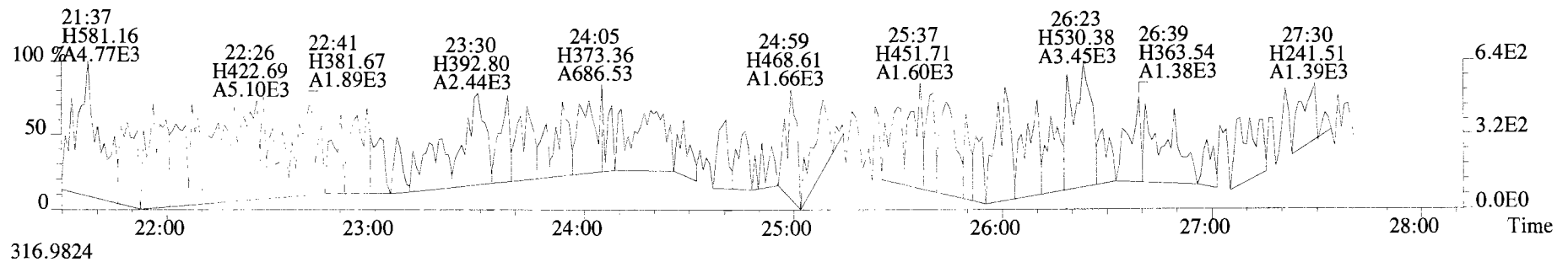
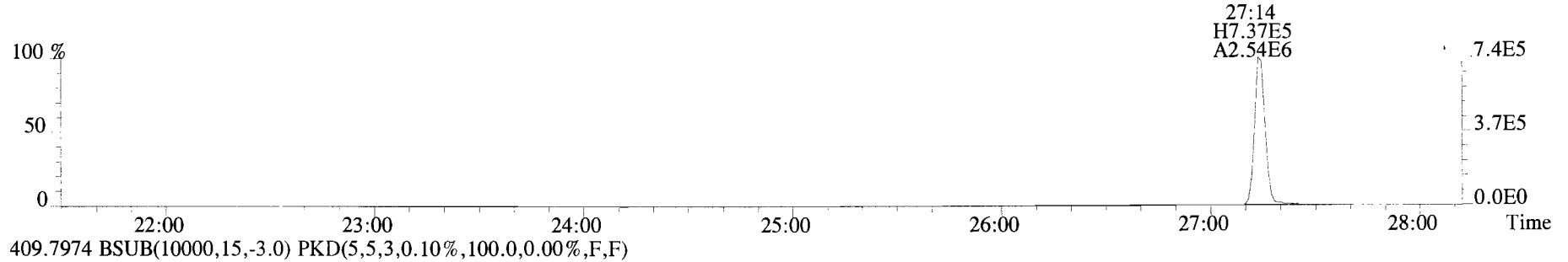
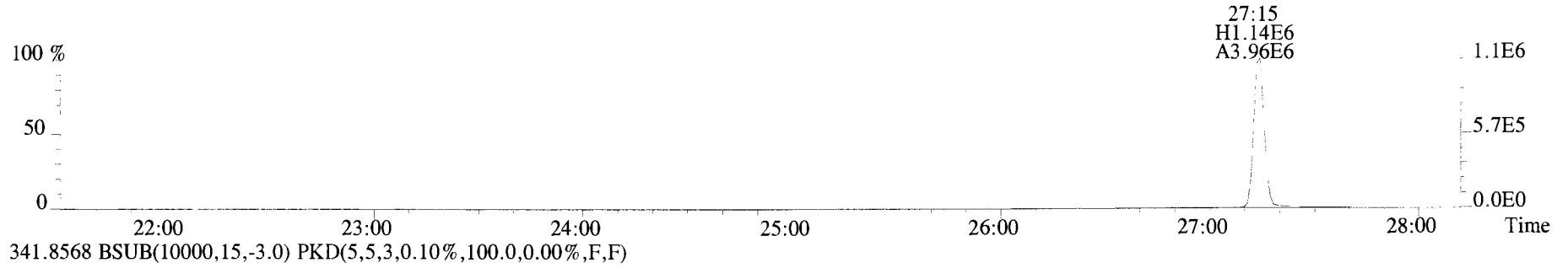
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



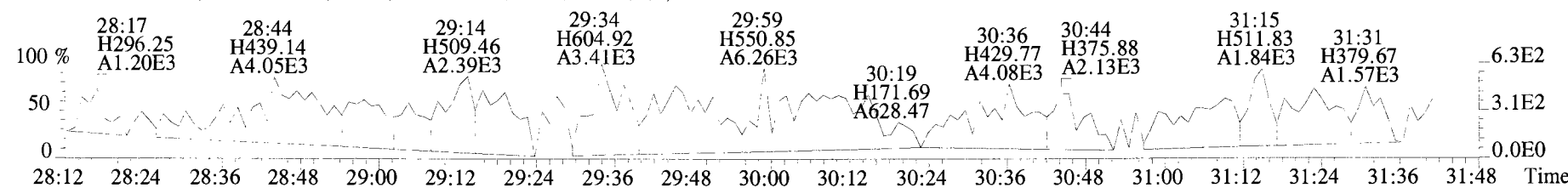
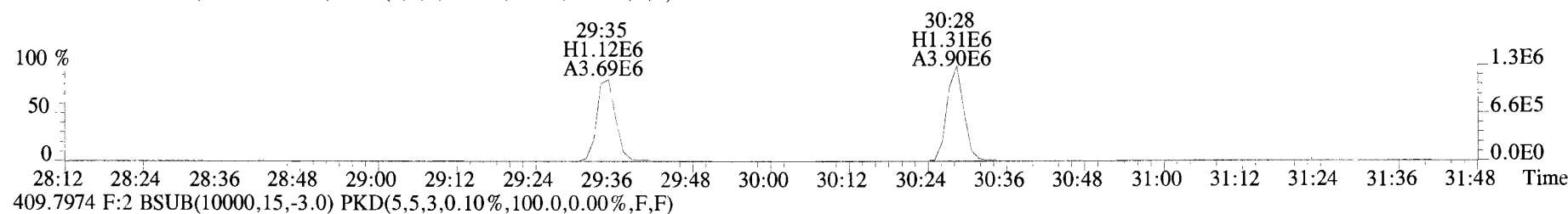
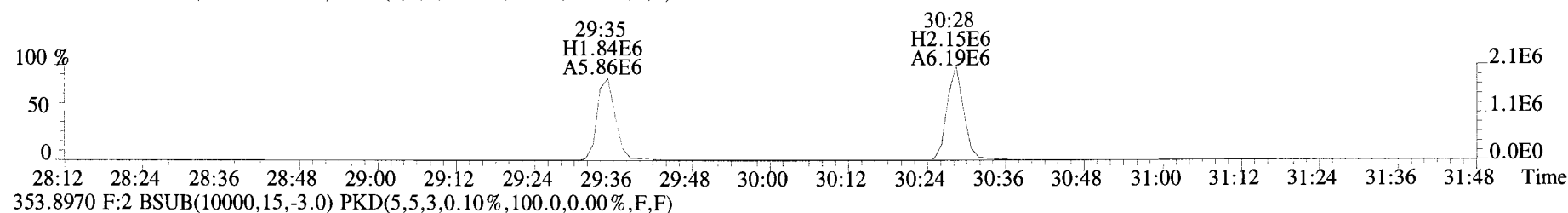
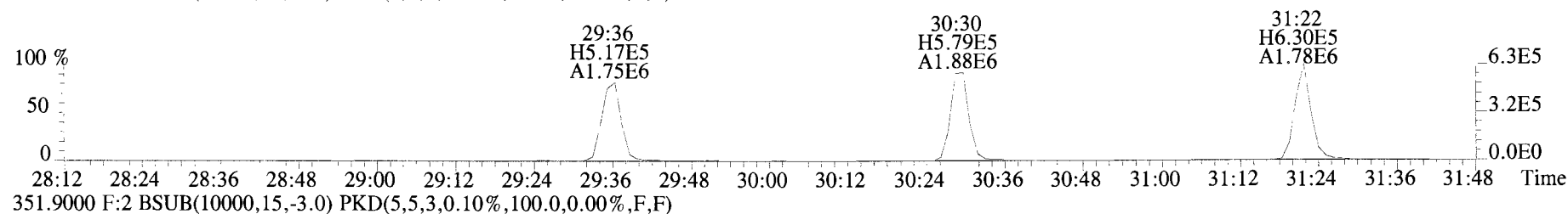
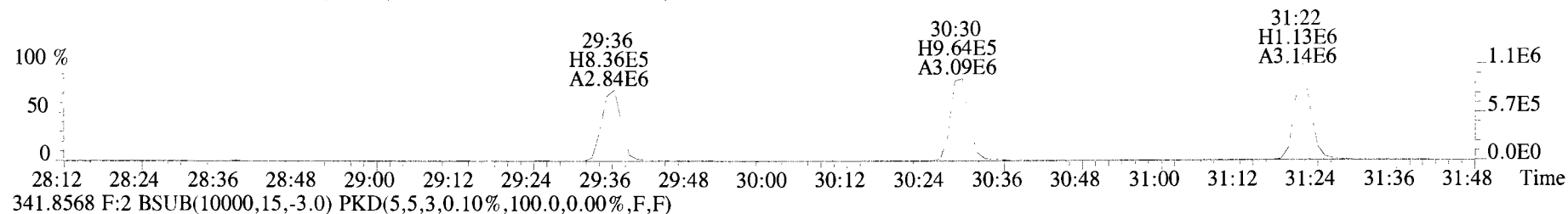
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



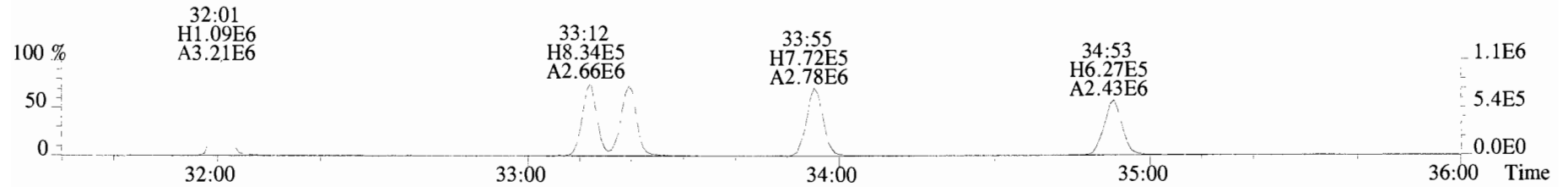
File:191023D1 #1-493 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



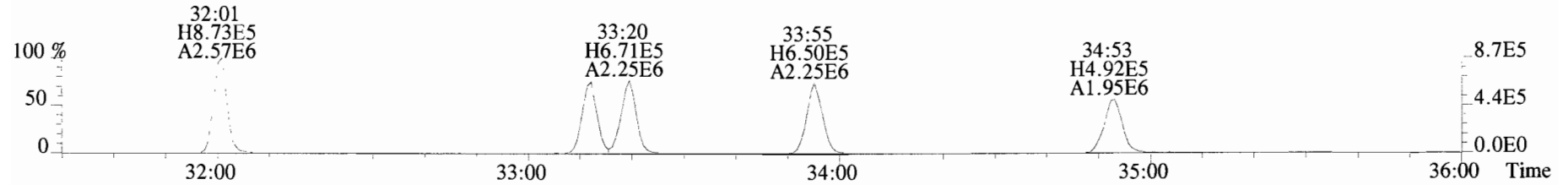
File:191023D1 #1-211 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



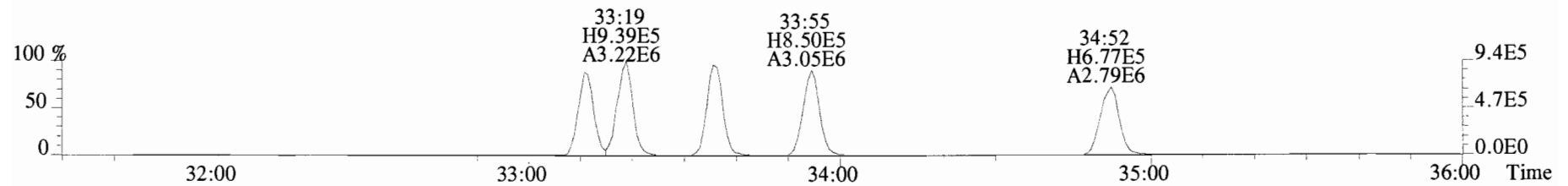
File:191023D1 #1-384 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



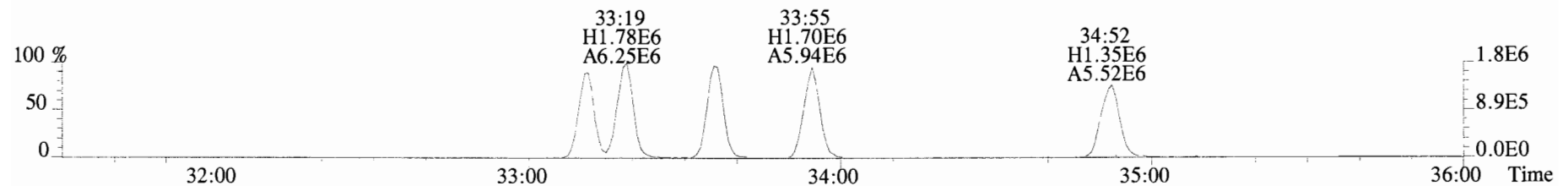
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



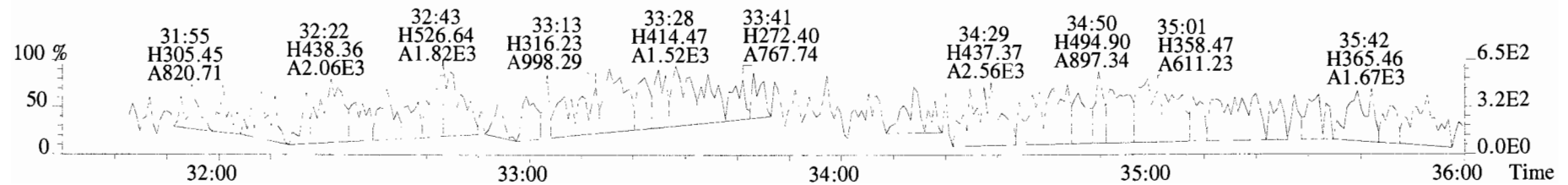
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



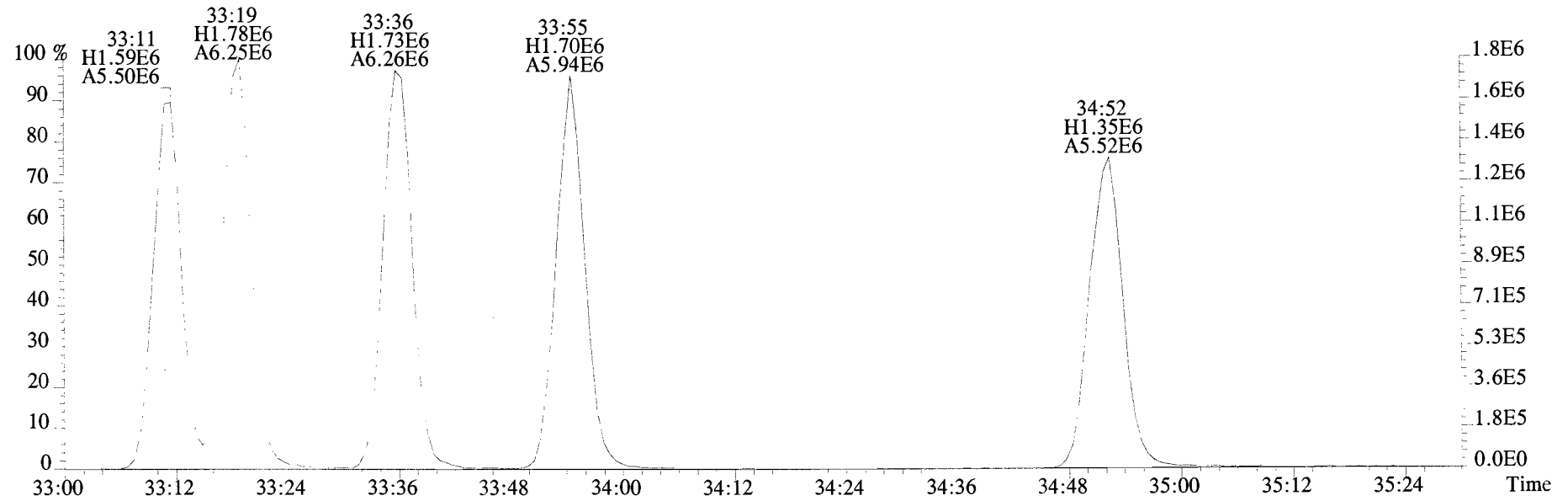
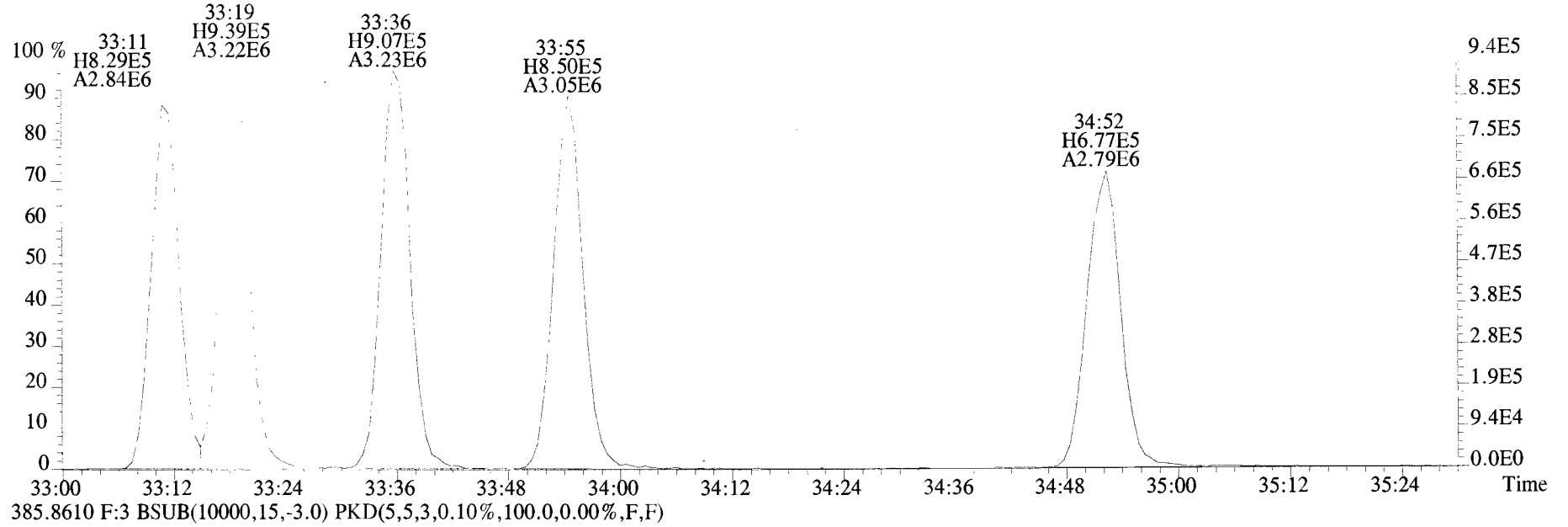
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



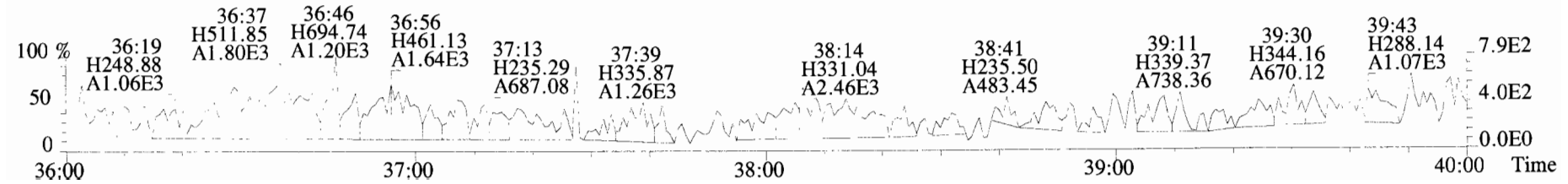
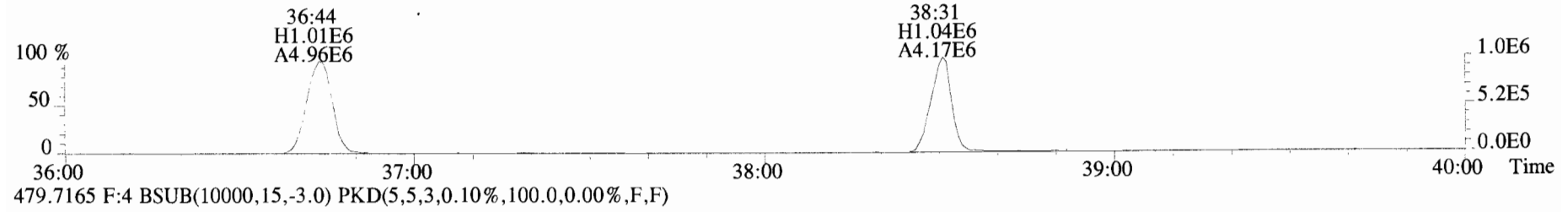
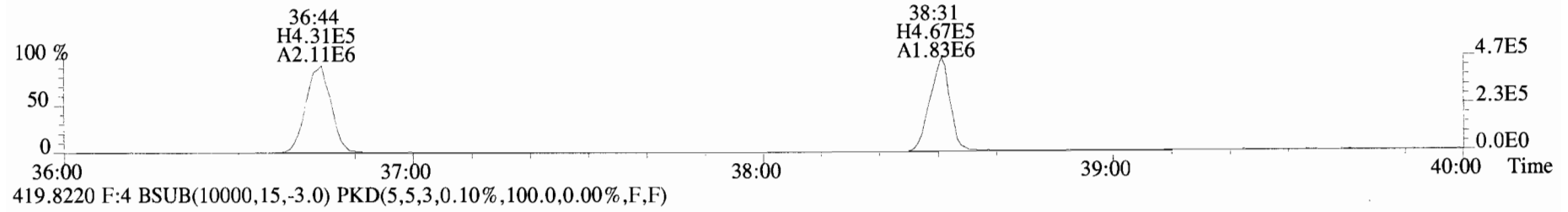
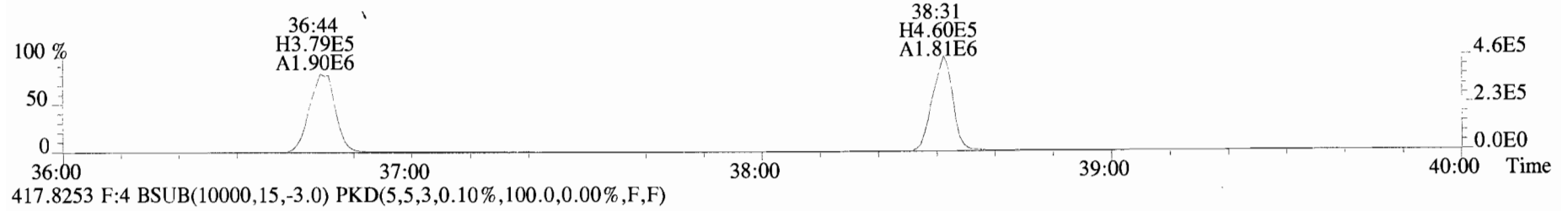
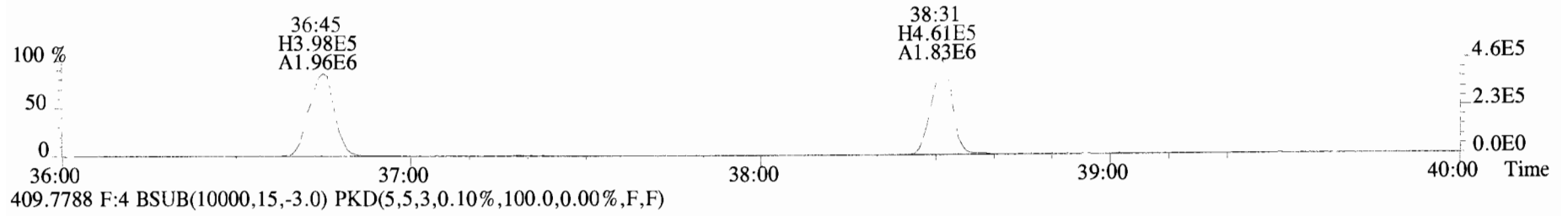
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



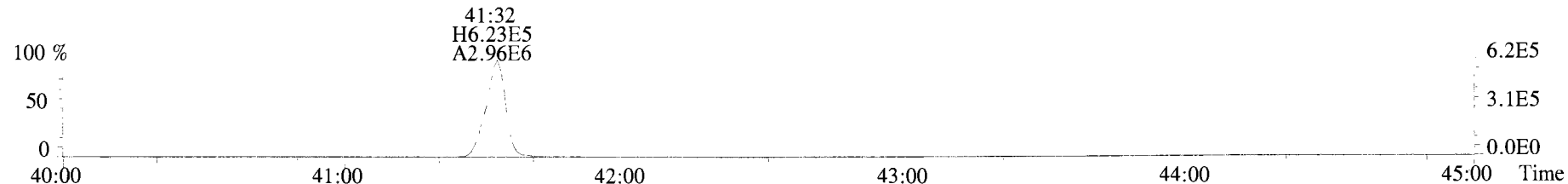
File:191023D1 #1-384 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



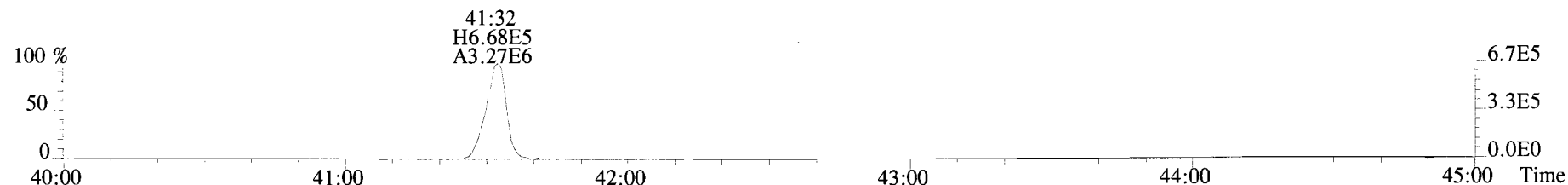
File:191023D1 #1-356 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



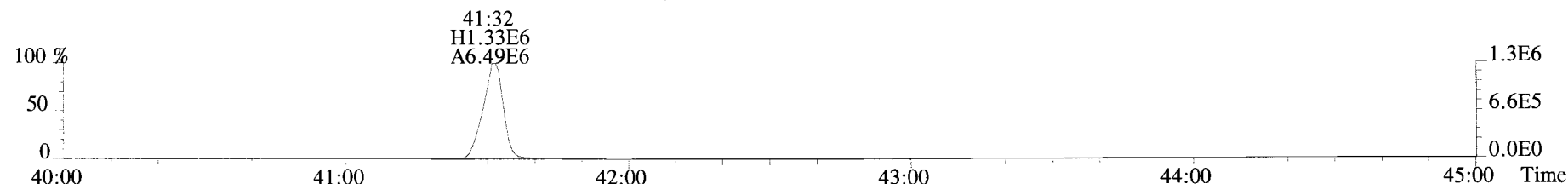
File:191023D1 #1-431 Acq:23-OCT-2019 13:20:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191023D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



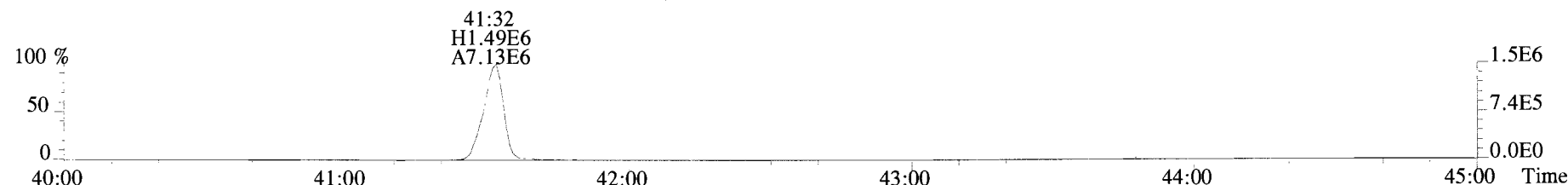
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



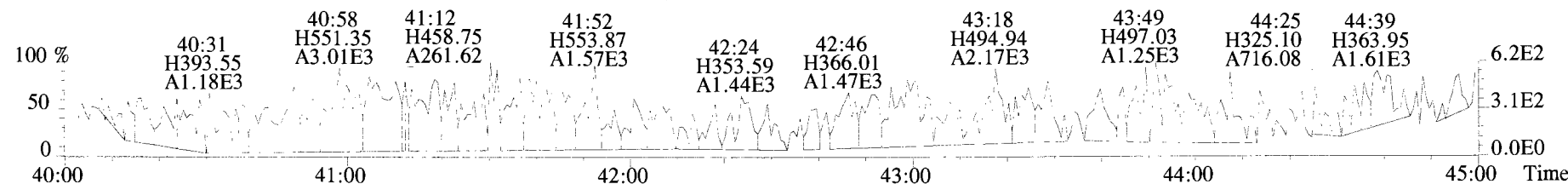
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

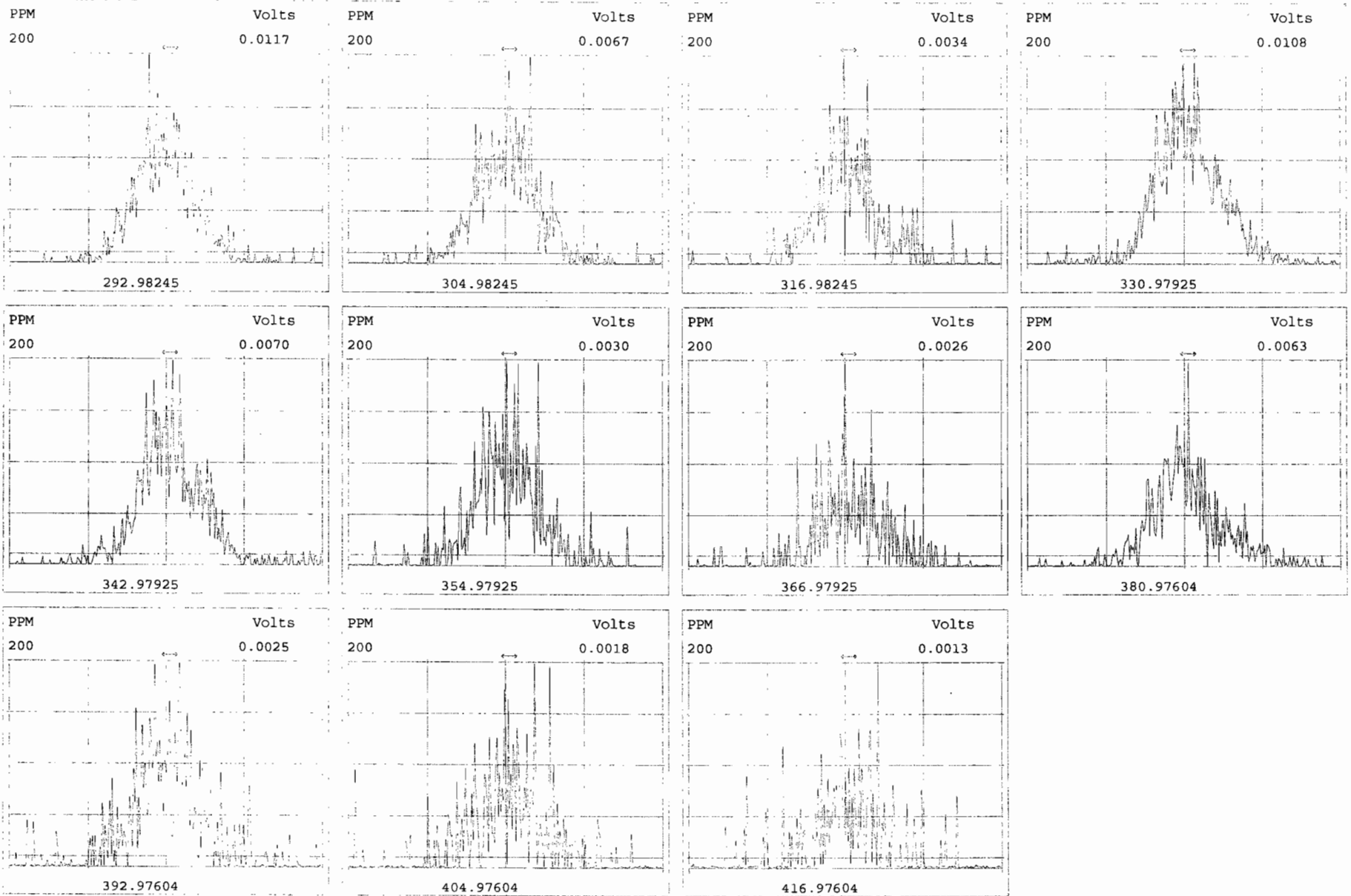


513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



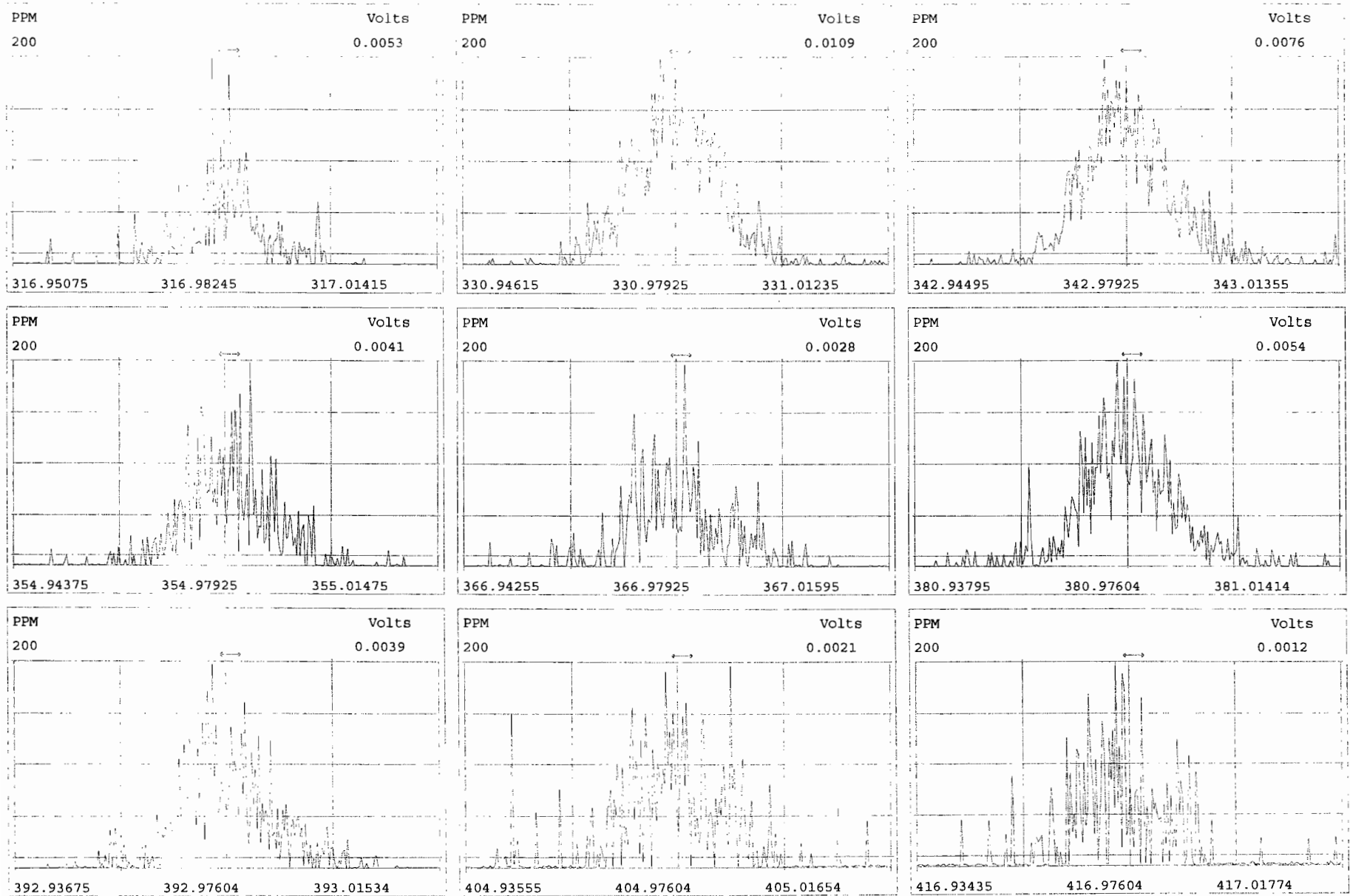
Peak Locate Examination:24-OCT-2019:01:27 File:RES_CHECK

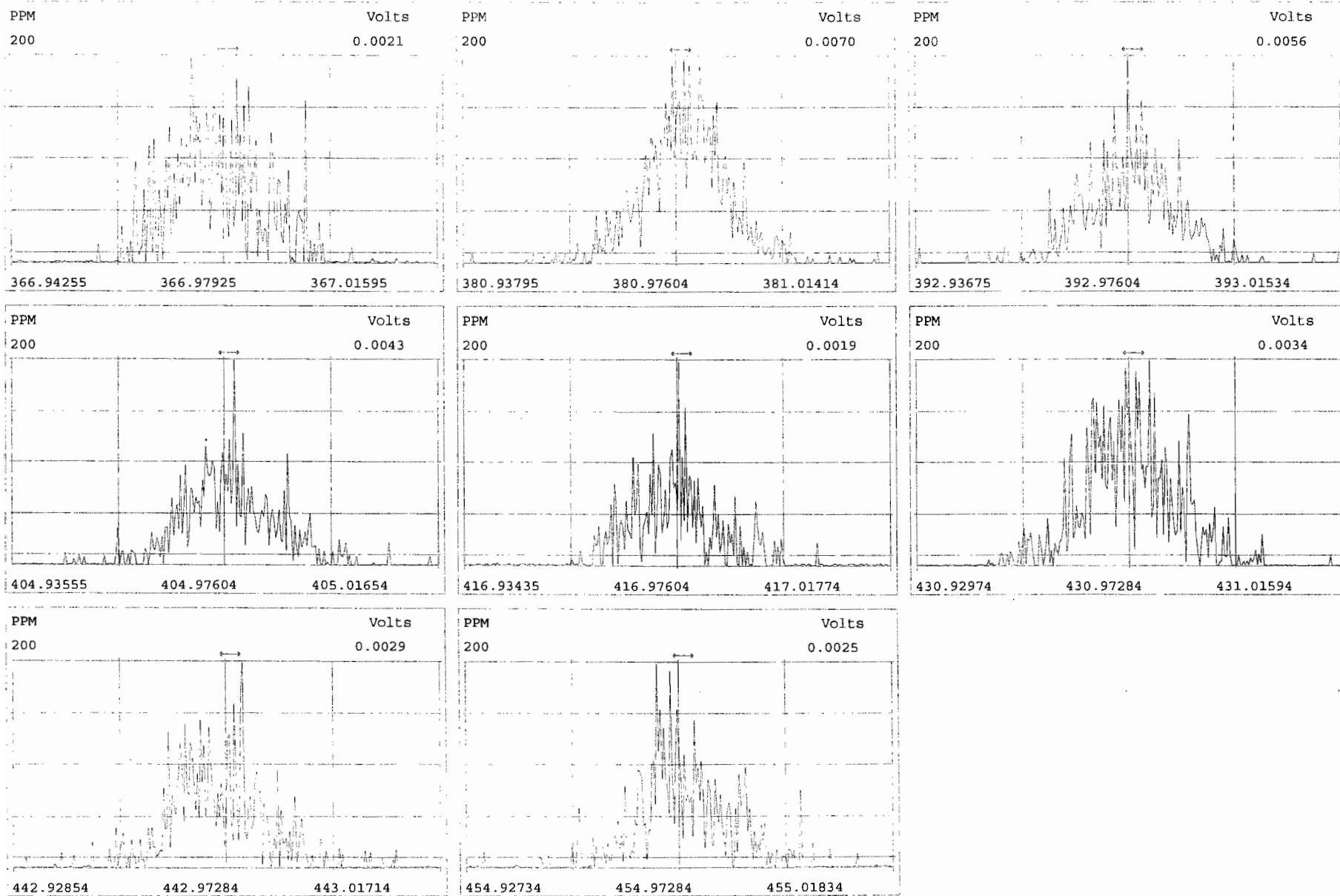
Experiment:OCDD_DB5 Function:1 Reference:PFK

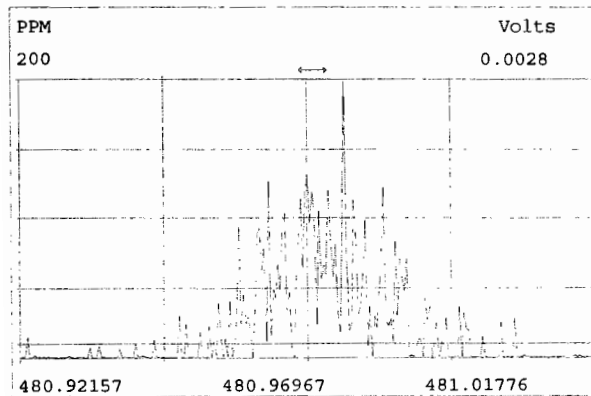
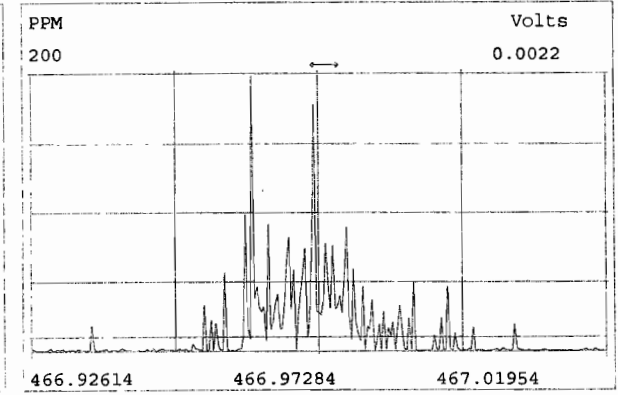
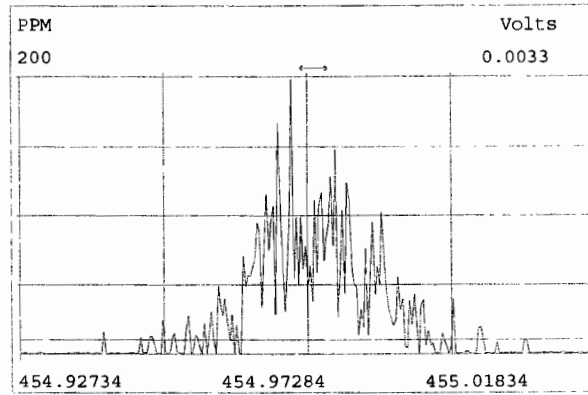
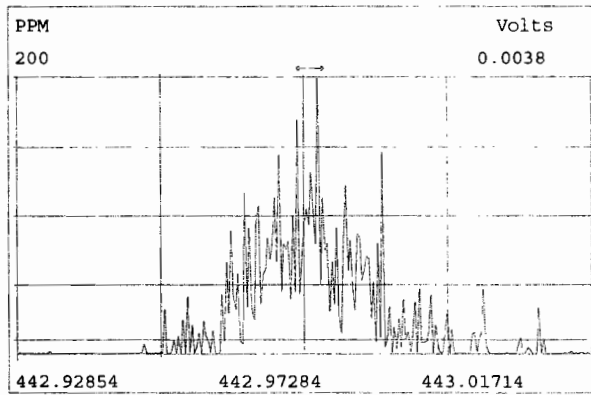
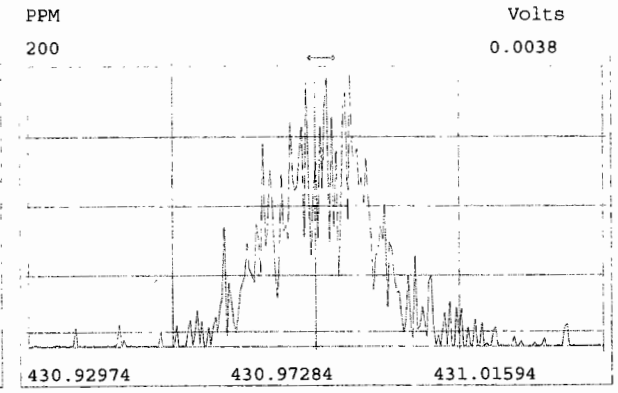
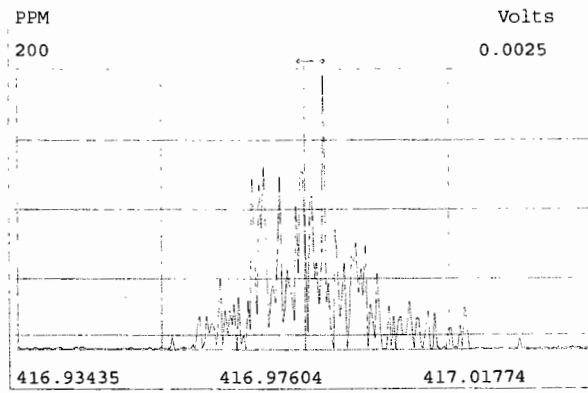
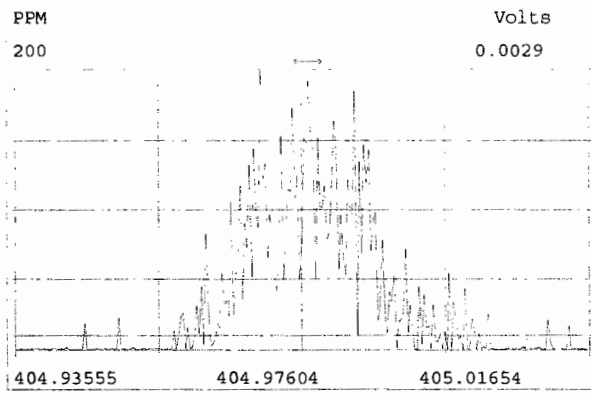


Peak Locate Examination:24-OCT-2019:01:28 File:RES_CHECK

Experiment:OCDD_DB5 Function:2 Reference:PFK

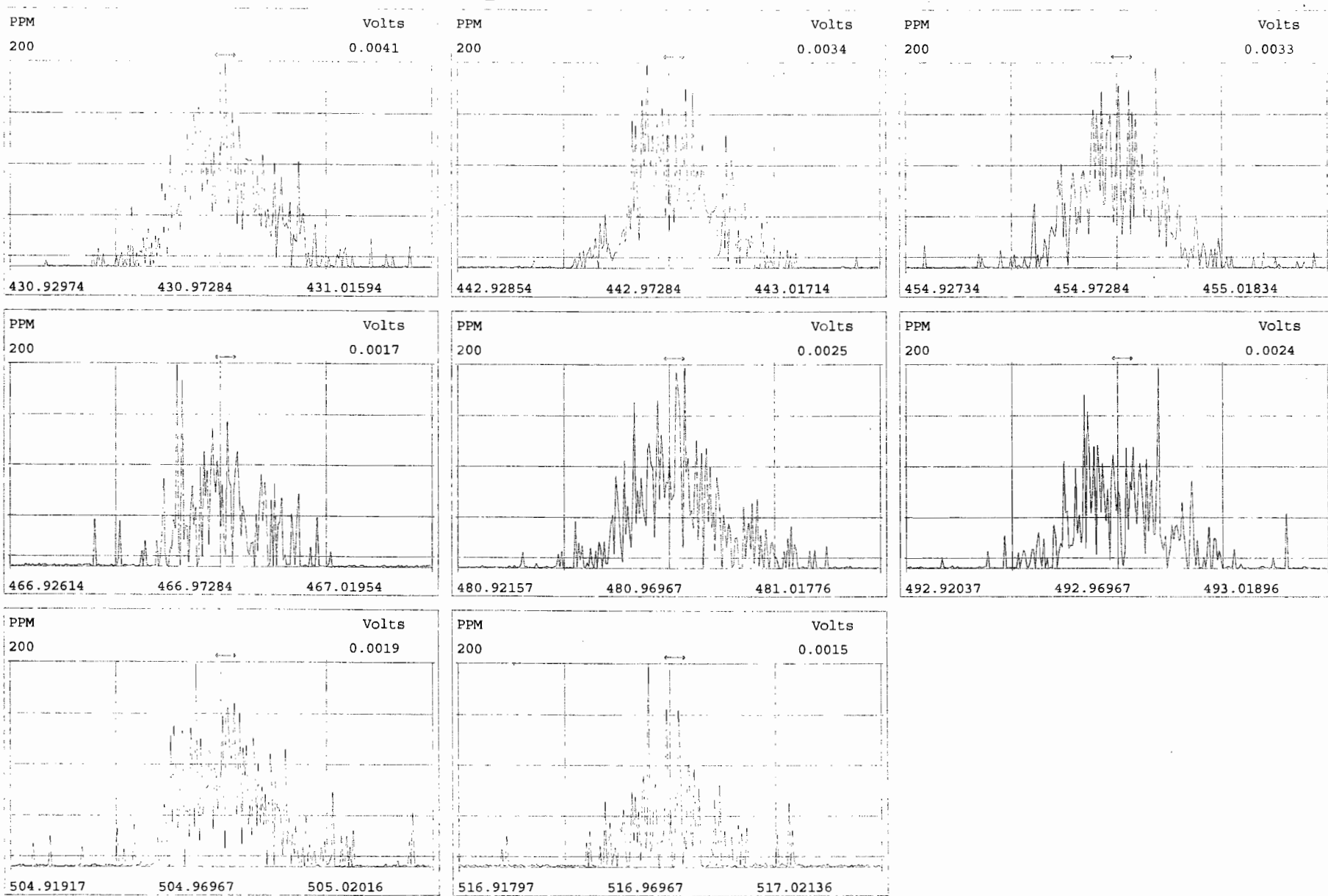






Peak Locate Examination:24-OCT-2019:01:31 File:RES_CHECK

Experiment:OCDD_DB5 Function:5 Reference:PFK



HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calibration ID: ST(91024)1-1

Reviewed By: OT 10/29/19
Initials & Date

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Concentrations within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TCDD/TCDF Valleys <25%	<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?	<u>DB</u>	<u>DB</u>
<u>Run Log:</u>		
- Correct instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/> VP
- Samples within 12 hour clock?	<input checked="" type="checkbox"/> Y	N
- Bottle position verified?	<u>DB</u>	<u>DB</u>

	<u>Beg.</u>	<u>End</u>
Mass resolution \geq	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> 5k <input type="checkbox"/> 6-8K <input type="checkbox"/> 8K <input checked="" type="checkbox"/> 10K 1614 1699 429 1613/1668/8280		
Intergrated peaks display correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
GC Break <20%		<input type="checkbox"/> NA
<u>8280 CS1 End Standard:</u>		
- Ratios within limits, S/N <2.5:1, CS1 within 12 hours		<input type="checkbox"/> NA

Comments:

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: ST191024D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

NATIVE ANALYTES	M/Z'S	ION	QC	Pass	CONC.	CONC.
	FORMING	ABUND.	LIMITS		FOUND	RANGE (3)
	RATIO (1)	RATIO	(2)			(ng/mL)
2,3,7,8-TCDD	M/M+2	0.84	0.65-0.89	y	11.4	7.8 - 12.9
						8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	54.8	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	51.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	54.4	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.20	1.05-1.43	y	52.8	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	49.8	43.0 - 58.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	103	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	y	10.1	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	52.4	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	52.7	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	50.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	51.4	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	y	52.0	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	y	50.5	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.02	0.88-1.20	y	49.9	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.88-1.20	y	48.5	43.0 - 58.0
OCDF	M+2/M+4	0.90	0.76-1.02	y	101	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: DB

Date: 10/24/19

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

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	102	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	106	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	102	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	87.5	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	96.0	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	105	72.0 - 138.0
13C-OCDD	M/M+2	0.88	0.76-1.02	y	211	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.79	0.65-0.89	y	101	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	99.9	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	101	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	104	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	97.5	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	99.8	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	106	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.45	0.37-0.51	y	104	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.43	0.37-0.51	y	112	77.0 - 129.0
13C-OCDF	M+2/M+4	0.89	0.76-1.02	y	216	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.2	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: DB

Date: 10/24/19

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: 10-9-19

RT Window Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

ZB-5MS IS Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

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)	22:54	1,3,6,8-TCDF (F)	20:46
1,2,8,9-TCDD (L)	27:07	1,2,8,9-TCDF (L)	27:15
1,2,4,7,9-PeCDD (F)	28:43	1,3,4,6,8-PeCDF (F)	27:13
1,2,3,8,9-PeCDD (L)	31:07	1,2,3,8,9-PeCDF (L)	31:21
1,2,4,6,7,9-HxCDD (F)	32:32	1,2,3,4,6,8-HxCDF (F)	32:00
1,2,3,7,8,9-HxCDD (L)	34:29	1,2,3,7,8,9-HxCDF (L)	34:52
1,2,3,4,6,7,9-HpCDD (F)	37:07	1,2,3,4,6,7,8-HpCDF (F)	36:44
1,2,3,4,6,7,8-HpCDD (L)	37:58	1,2,3,4,7,8,9-HpCDF (L)	38:31

(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: DBDate: 10/24/19

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002

LABELED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.197	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.151	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.186	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052

Analyst: DB

Date: 10/24/19

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

NATIVE ANALYTES	RETENTION TIME		RRT	QC LIMITS (1)
	REFERENCE	RRT		
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001	
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005	
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001	
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001	
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004	
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.001	0.998-1.004	
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001	
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001	
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001	
OCDD	13C-OCDD	1.000	0.999-1.001	
OCDF	13C-OCDF	1.000	0.999-1.001	

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	1.038	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	1.018	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	1.093	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.146	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.130	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.229	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.236	1.091-1.371

Analyst: DB

Date: 10/24/19

Client ID: 1613 CS3 19C2204
Lab ID: ST191024D1-1

Filename: 191024D1 S:1 Acq:24 OCT-19 15:36:32
GC Column ID: ZB-SMS ICal: 1613VG7-10-9-19 wt/vol: 1.000

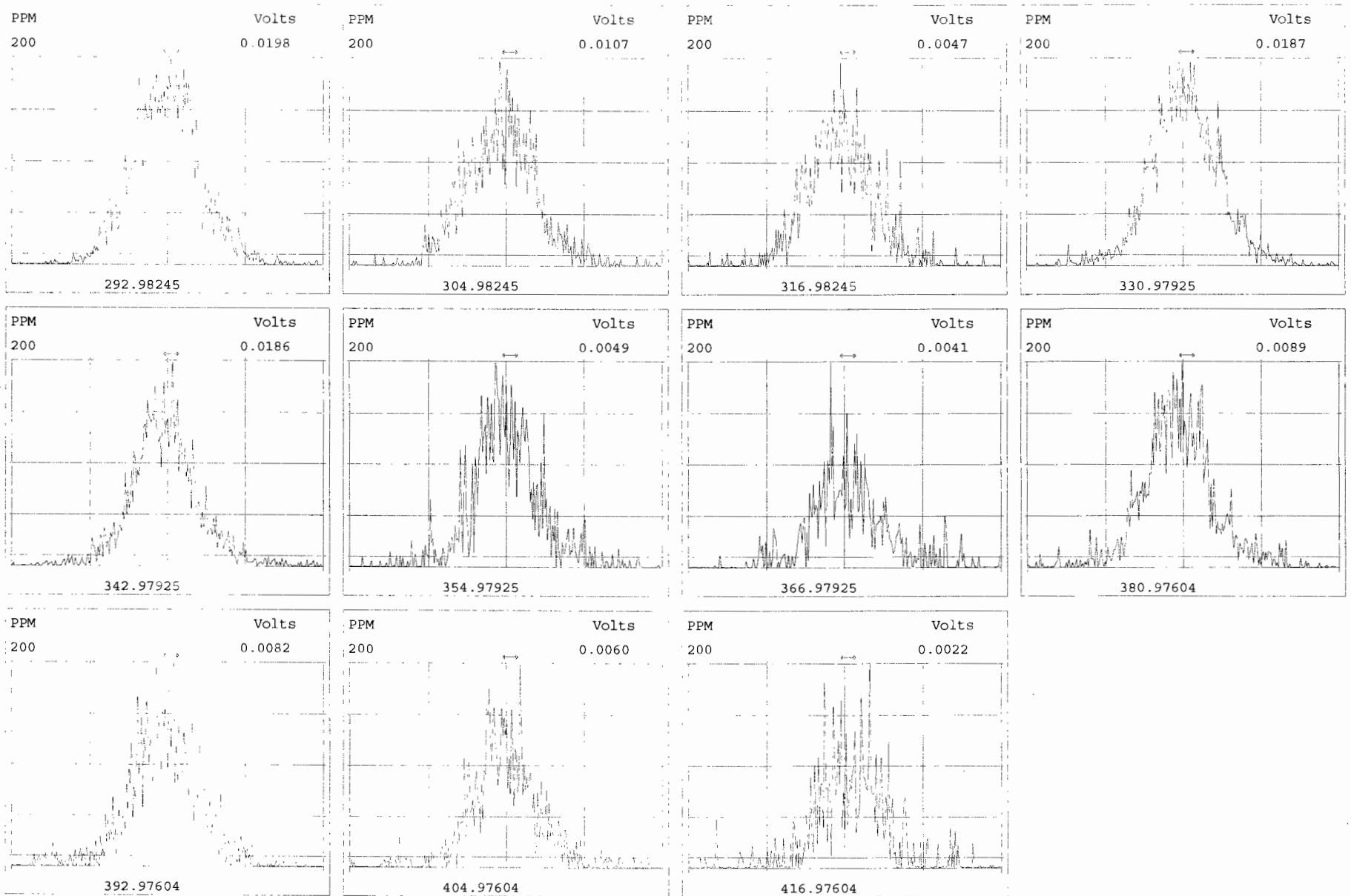
ConCal: ST191024D1 1
EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	5.89e+05	0.84 y	0.91	26:16	11.414		* 2.5		*	Total Tetra-Dioxins	82.8	84.7	*	*	
1,2,3,7,8-PeCDD	2.34e+06	0.62 y	0.90	30:46	54.821		* 2.5		*	Total Penta-Dioxins	196	196	*	*	
1,2,3,4,7,8-HxCDD	2.48e+06	1.21 y	1.10	34:05	51.917		* 2.5		*	Total Hexa-Dioxins	235	237	*	*	
1,2,3,6,7,8-HxCDD	2.52e+06	1.22 y	0.94	34:11	54.417		* 2.5		*	Total Hepta-Dioxins	114	115	*	*	
1,2,3,7,8,9-HxCDD	2.59e+06	1.20 y	0.96	34:29	52.775		* 2.5		*	Total Tetra-Furans	39.1	41.5	*	*	
1,2,3,4,6,7,8-HpCDD	2.20e+06	1.05 y	0.98	37:58	49.789		* 2.5		*	Total Penta-Furans	225.00	225.52	*	*	
OCDD	4.00e+06	0.89 y	0.96	41:18	103.15		* 2.5		*	Total Hexa-Furans	273	273	*	*	
										Total Hepta-Furans	98.6	99.4	*	*	
2,3,7,8-TCDF	8.41e+05	0.77 y	0.95	25:28	10.096		* 2.5		*						
1,2,3,7,8-PeCDF	3.60e+06	1.61 y	0.96	29:35	52.373		* 2.5		*						
2,3,4,7,8-PeCDF	3.84e+06	1.62 y	1.01	30:29	52.722		* 2.5		*						
1,2,3,4,7,8-HxCDF	3.36e+06	1.25 y	1.18	33:11	50.073		* 2.5		*						
1,2,3,6,7,8-HxCDF	3.66e+06	1.23 y	1.07	33:19	51.379		* 2.5		*						
2,3,4,6,7,8-HxCDF	3.64e+06	1.20 y	1.11	33:55	51.981		* 2.5		*						
1,2,3,7,8,9-HxCDF	3.10e+06	1.25 y	1.06	34:52	50.470		* 2.5		*						
1,2,3,4,6,7,8-HpCDF	2.92e+06	1.02 y	1.13	36:44	49.893		* 2.5		*						
1,2,3,4,7,8,9-HpCDF	2.66e+06	1.01 y	1.28	38:31	48.540		* 2.5		*						
OCDF	4.67e+06	0.90 y	0.95	41:31	100.61		* 2.5		*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	5.70e+06	0.77 y	1.10	26:15	102.41					102					
IS 13C-1,2,3,7,8-PeCDD	4.74e+06	0.63 y	0.88	30:44	105.79					106					
IS 13C-1,2,3,4,7,8-HxCDD	4.33e+06	1.27 y	0.64	34:04	102.19					102					
IS 13C-1,2,3,6,7,8-HxCDD	4.94e+06	1.28 y	0.86	34:11	87.500					87.5					
IS 13C-1,2,3,7,8,9-HxCDD	5.11e+06	1.26 y	0.81	34:28	96.009					96.0					
IS 13C-1,2,3,4,6,7,8-HpCDD	4.52e+06	1.02 y	0.65	37:57	104.75					105					
IS 13C-OCDD	8.09e+06	0.88 y	0.58	41:17	211.49					106					
IS 13C-2,3,7,8-TCDF	8.76e+06	0.79 y	1.03	25:28	100.90					101					
IS 13C-1,2,3,7,8-PeCDF	7.17e+06	1.63 y	0.85	29:34	99.949					99.9					
IS 13C-2,3,4,7,8-PeCDF	7.19e+06	1.62 y	0.85	30:27	101.08					101					
IS 13C-1,2,3,4,7,8-HxCDF	5.71e+06	0.51 y	0.83	33:10	103.95					104					
IS 13C-1,2,3,6,7,8-HxCDF	6.66e+06	0.51 y	1.03	33:18	97.518					97.5					
IS 13C-2,3,4,6,7,8-HxCDF	6.28e+06	0.51 y	0.95	33:54	99.835					99.8					
IS 13C-1,2,3,7,8,9-HxCDF	5.78e+06	0.52 y	0.83	34:51	105.89					106					
IS 13C-1,2,3,4,6,7,8-HpCDF	5.19e+06	0.45 y	0.76	36:43	103.76					104					
IS 13C-1,2,3,4,7,8,9-HpCDF	4.28e+06	0.43 y	0.58	38:30	111.62					112					
IS 13C-OCDF	9.80e+06	0.89 y	0.69	41:31	215.56					108					
C/Up 37Cl-2,3,7,8-TCDD	6.19e+05		1.20	26:16	10.166					102					
RS/RT 13C-1,2,3,4-TCDD	5.08e+06	0.80 y	1.00	25:41	100.00						Integrations	Reviewed			
RS 13C-1,2,3,4-TCDF	8.39e+06	0.80 y	1.00	24:15	100.00						by	by			
RS/RT 13C-1,2,3,4,6,9-HxCDF	6.60e+06	0.52 y	1.00	33:35	100.00						Analyst: <u>DB</u>	Analyst: <u>CT</u>			

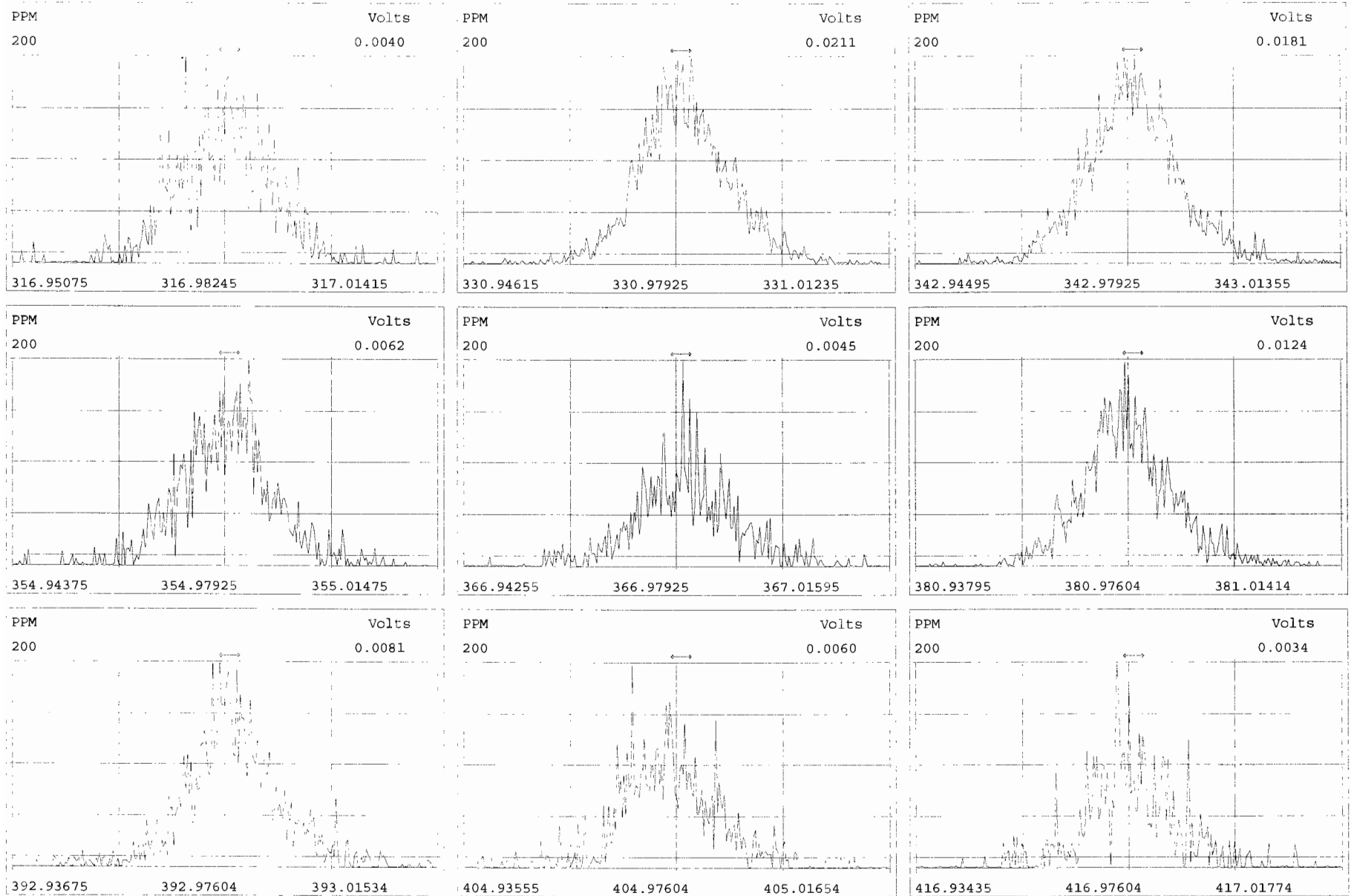
Date: 10/24/19 Date: 10/29/19

Vista Analytical Laboratory Injection Log Run file: 191024D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

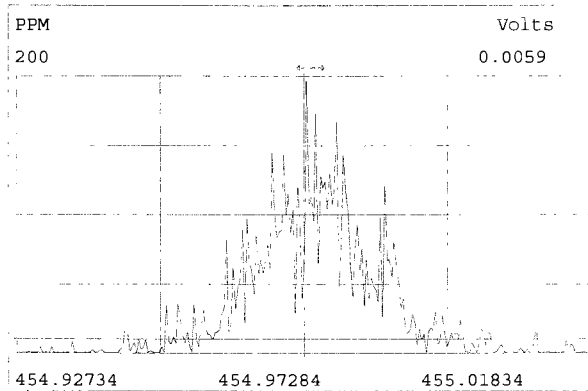
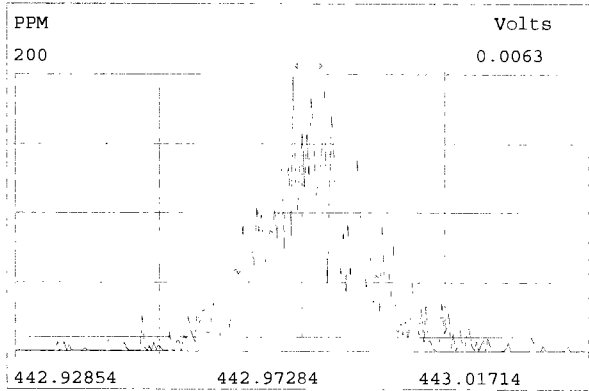
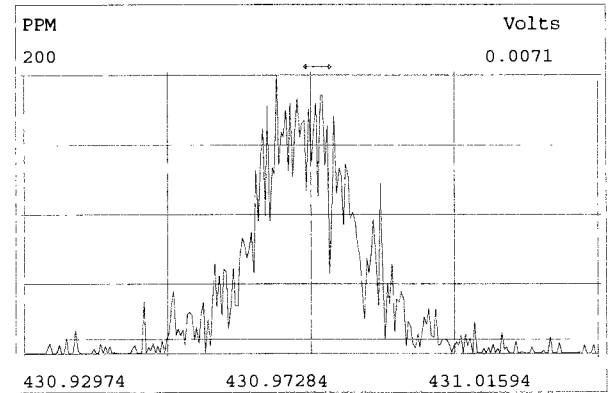
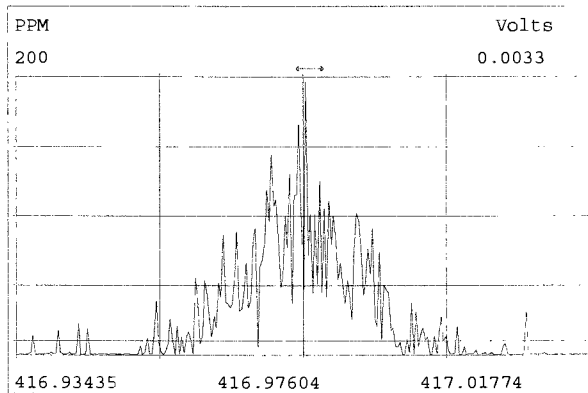
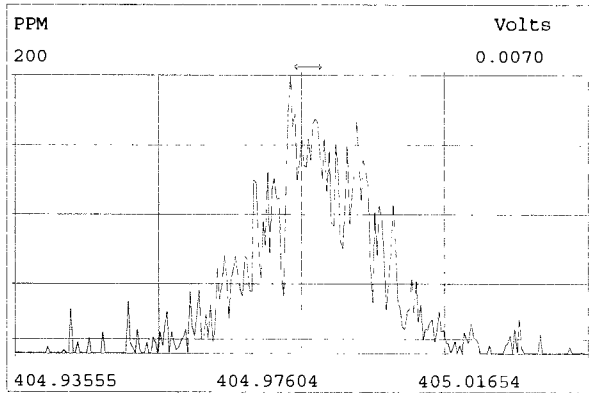
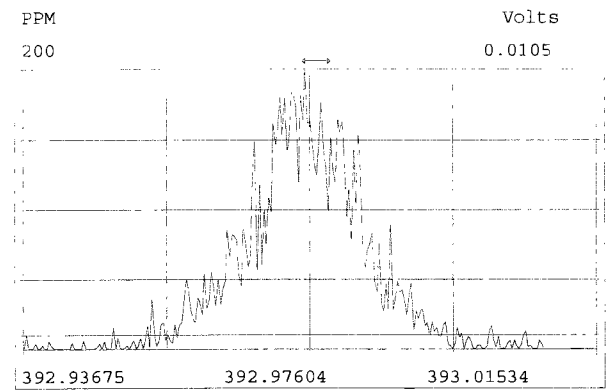
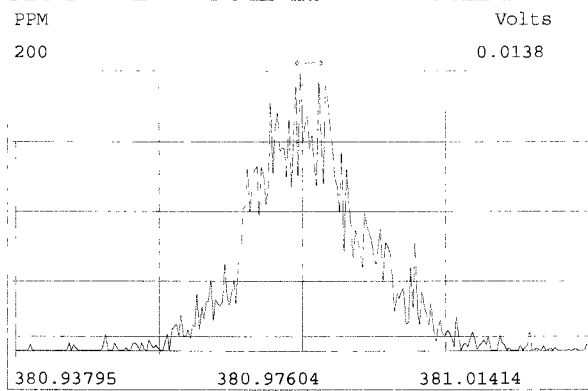
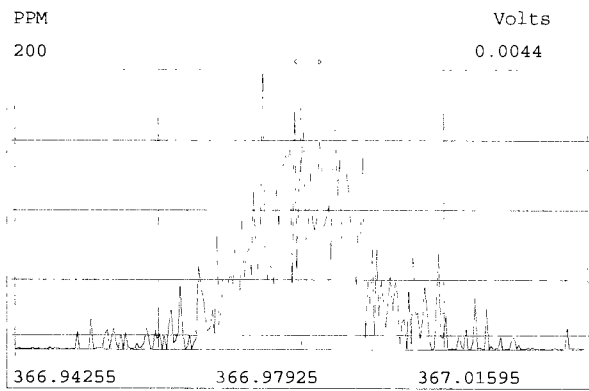
Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191024D1	1	ST191024D1-1	DB	24-OCT-19	15:36:32	ST191024D1-1	NA
191024D1	2	B9J0214-BS1	DB	24-OCT-19	16:24:28	ST191024D1-1	NA
191024D1	3	B9J0132-BS1	DB	24-OCT-19	17:12:25	ST191024D1-1	NA
191024D1	4	SOLVENT BLANK	DB	24-OCT-19	18:00:25	ST191024D1-1	NA
191024D1	5	B9J0214-BLK1	DB	24-OCT-19	18:48:20	ST191024D1-1	NA
191024D1	6	B9J0132-BLK1	DB	24-OCT-19	19:36:16	ST191024D1-1	NA
191024D1	7	QC191024D1-1	DB	24-OCT-19	20:24:01	ST191024D1-1	NA
191024D1	8	1903543-02	DB	24-OCT-19	21:11:47	ST191024D1-1	NA
191024D1	9	1903626-01	DB	24-OCT-19	21:59:42	ST191024D1-1	NA
191024D1	10	1903626-02	DB	24-OCT-19	22:47:35	ST191024D1-1	NA
191024D1	11	1903641-01	DB	24-OCT-19	23:35:24	ST191024D1-1	NA
191024D1	12	1903420-10	DB	25-OCT-19	00:23:09	ST191024D1-1	NA
191024D1	13	1903420-11	DB	25-OCT-19	01:11:03	ST191024D1-1	NA
191024D1	14	1903430-01	DB	25-OCT-19	01:58:52	ST191024D1-1	NA
191024D1	15	1903430-02	DB	25-OCT-19	02:46:42	ST191024D1-1	NA



Experiment:OCDD_DB5 Function:2 Reference:PFK

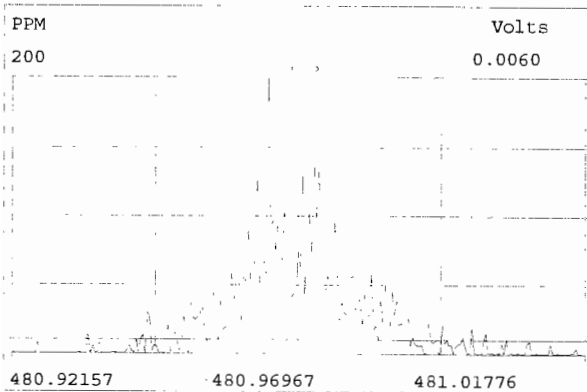
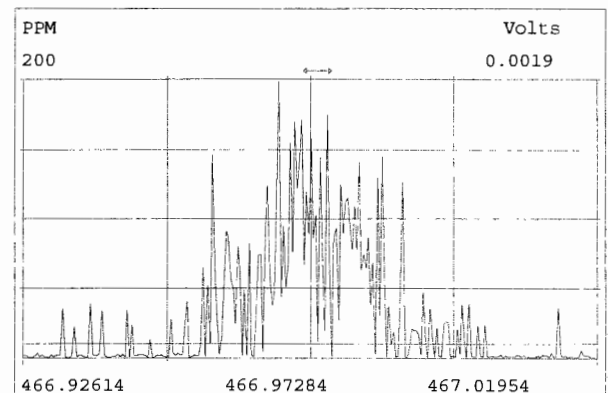
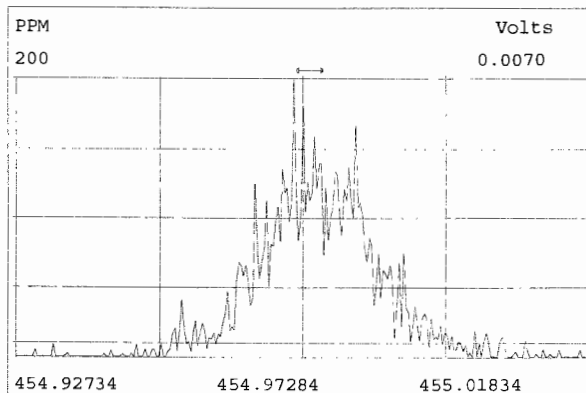
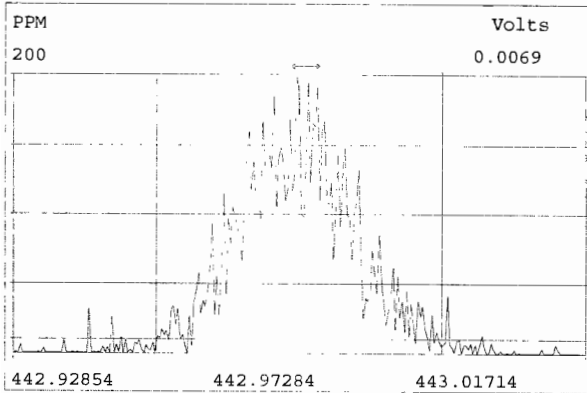
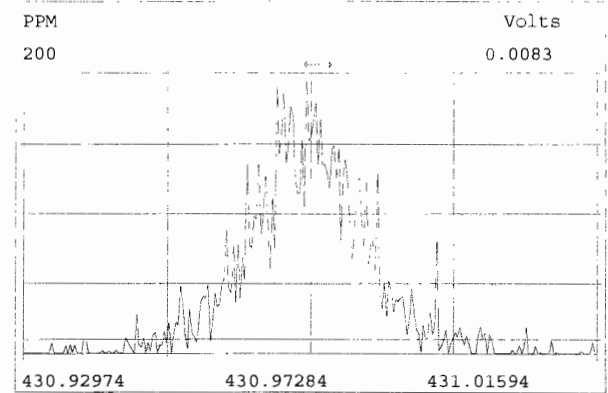
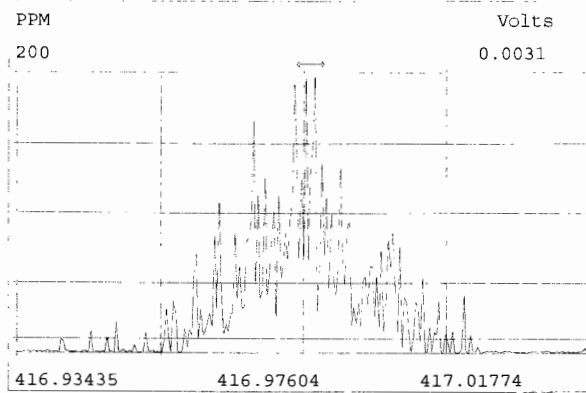
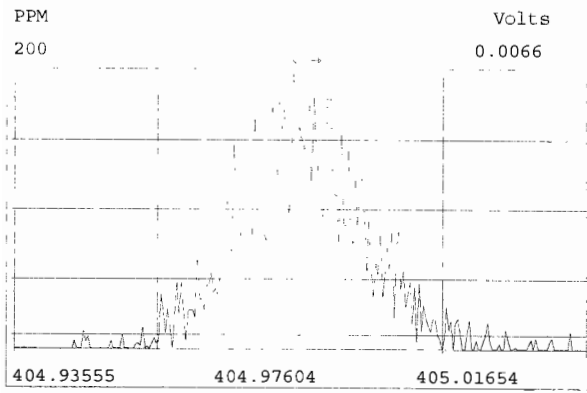


Experiment:OCDD_DB5 Function:3 Reference:PFK



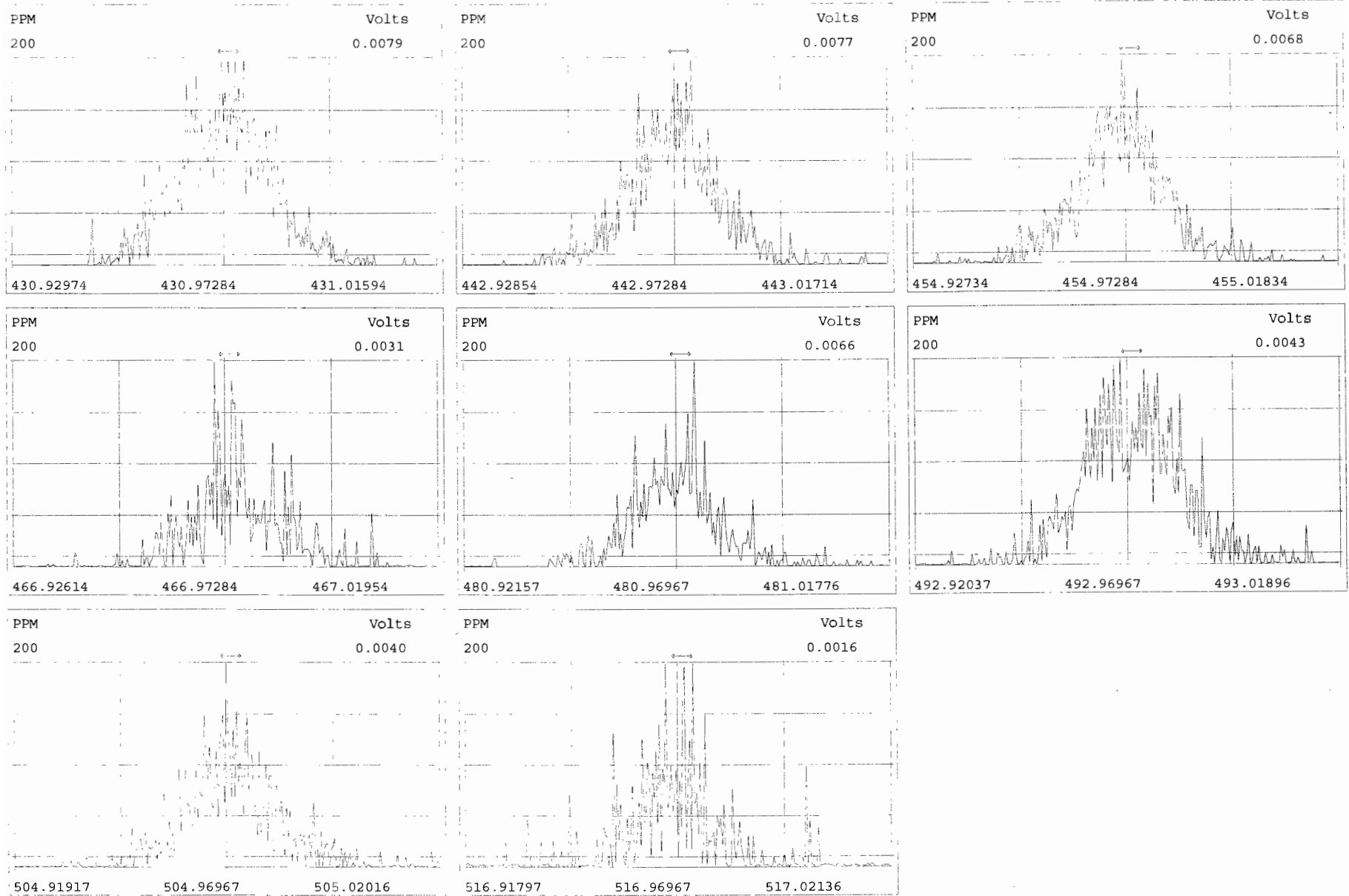
Peak Locate Examination:24-OCT-2019:15:35 File:191024D1

Experiment:OCDD_DB5 Function:4 Reference:PFK

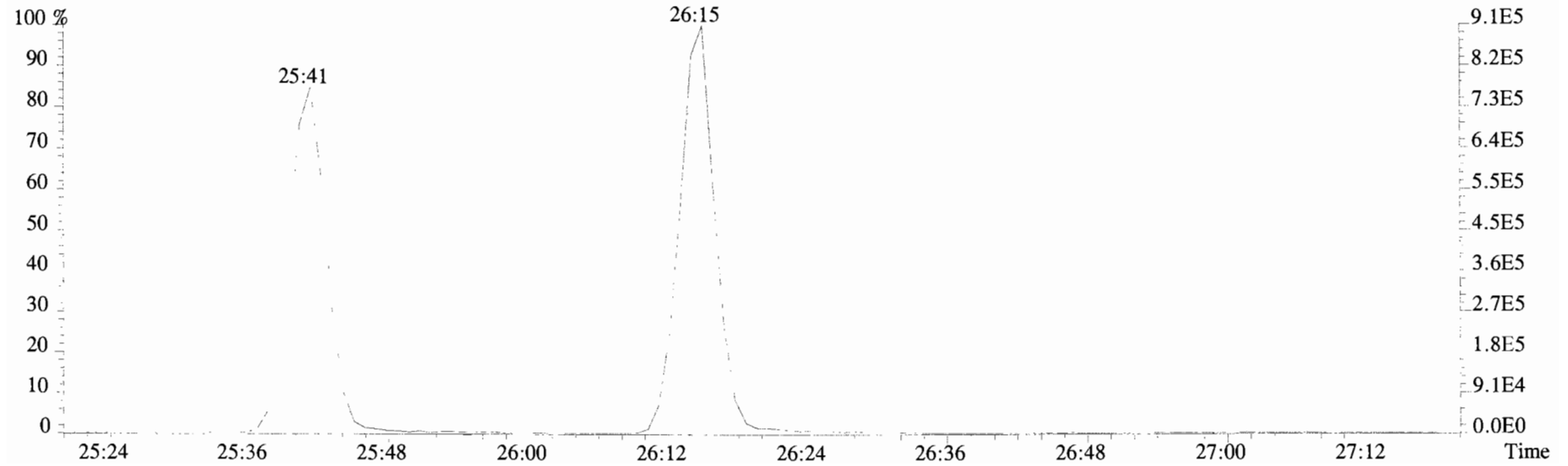
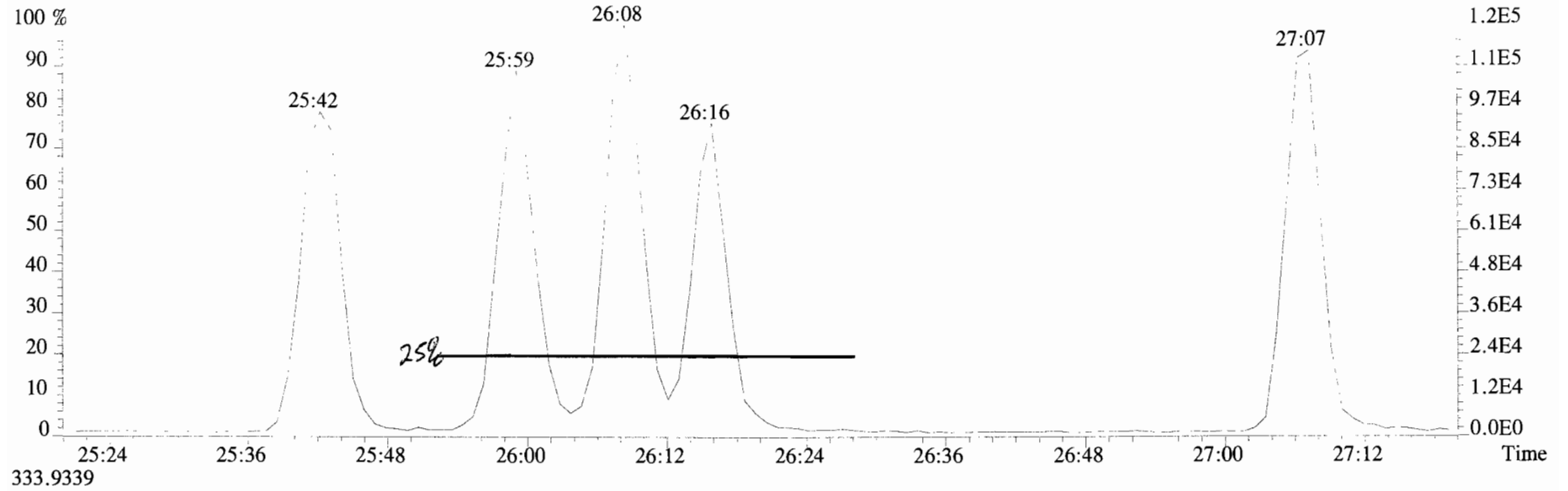


Peak Locate Examination:24-OCT-2019:15:35 File:191024D1

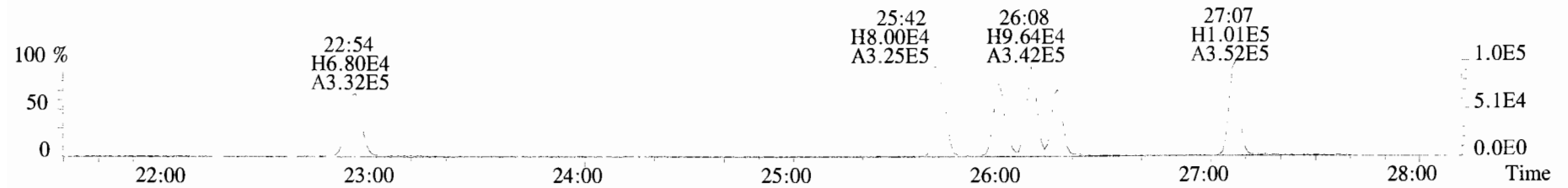
Experiment:OCDD_DB5 Function:5 Reference:PPK



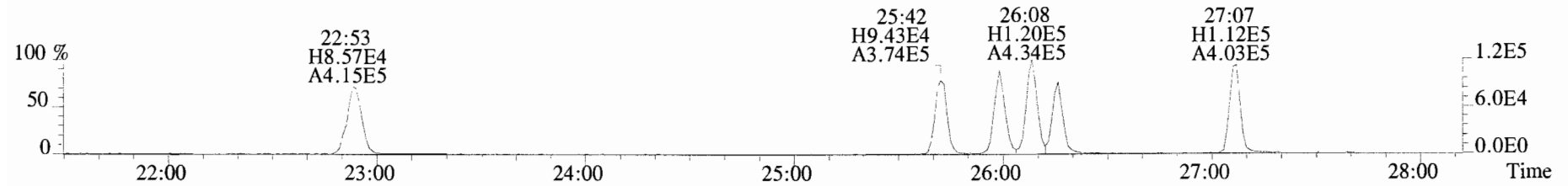
File:191024D1 #1-493 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
321.8936



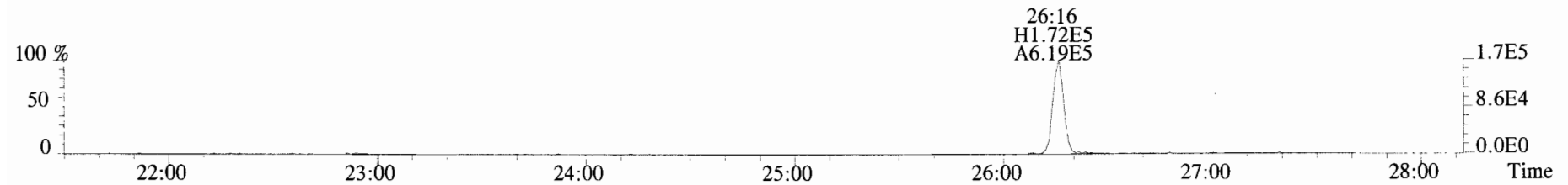
File:191024D1 #1-493 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



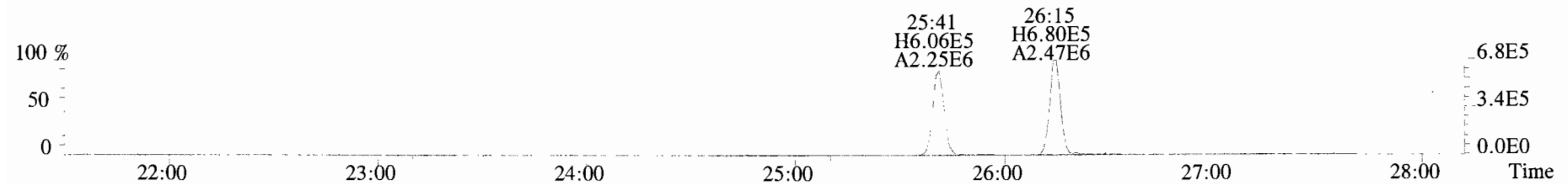
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



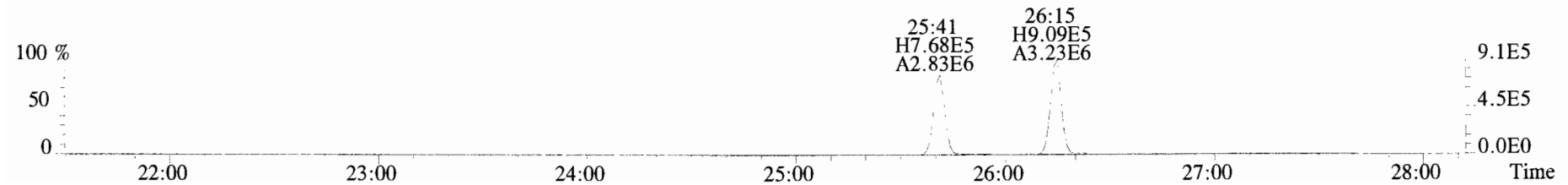
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



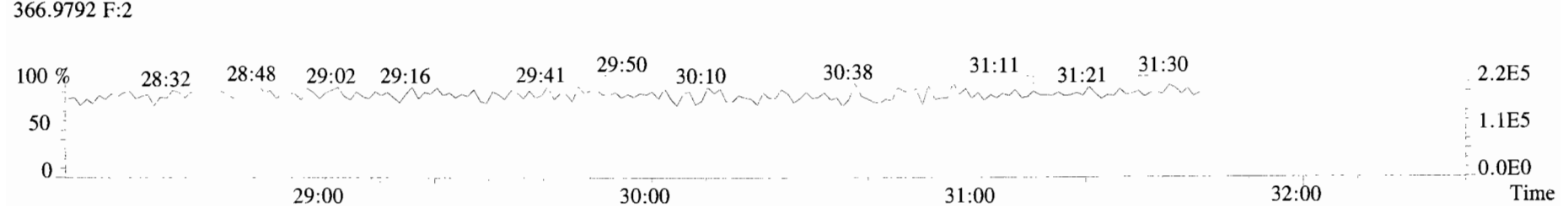
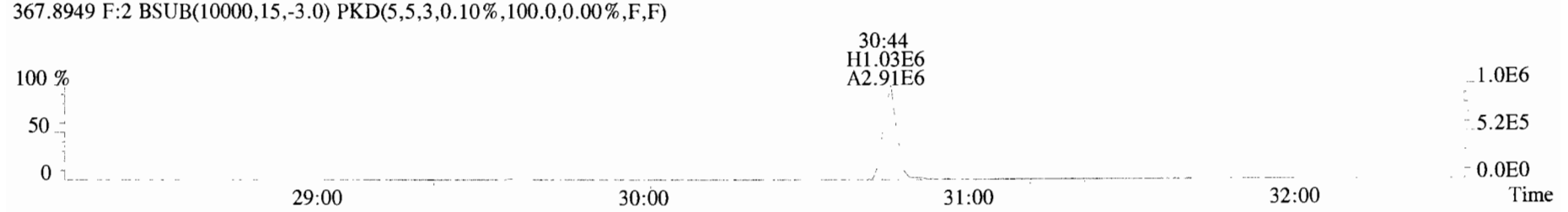
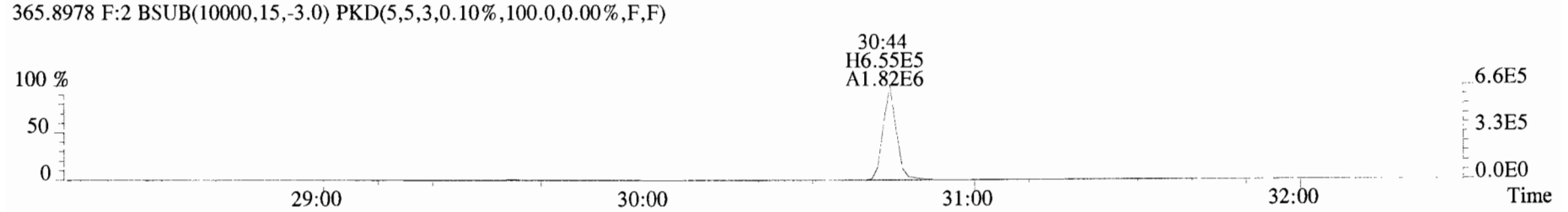
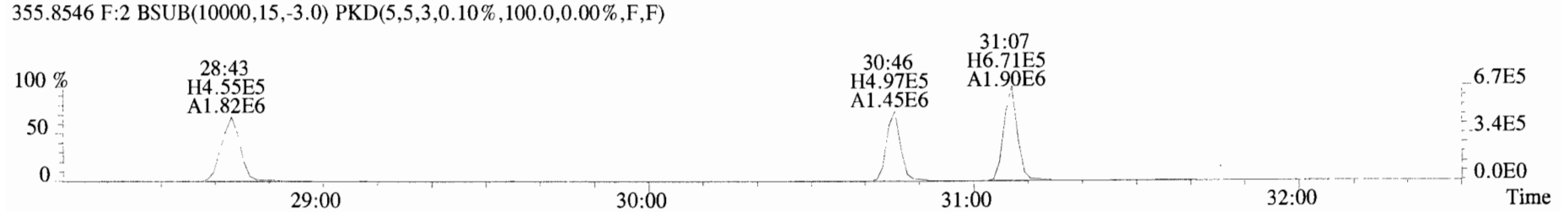
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



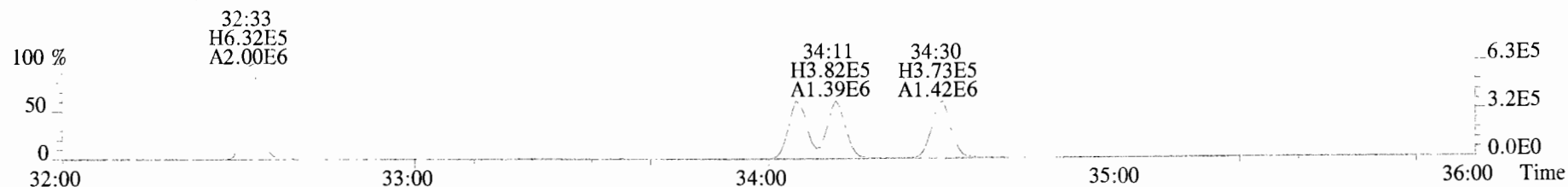
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



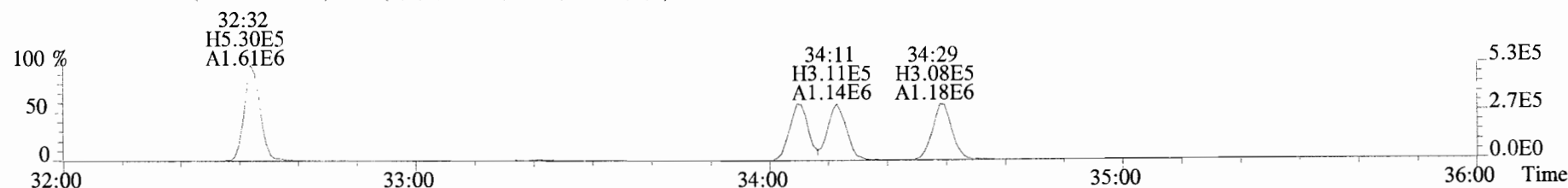
File:191024D1 #1-211 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



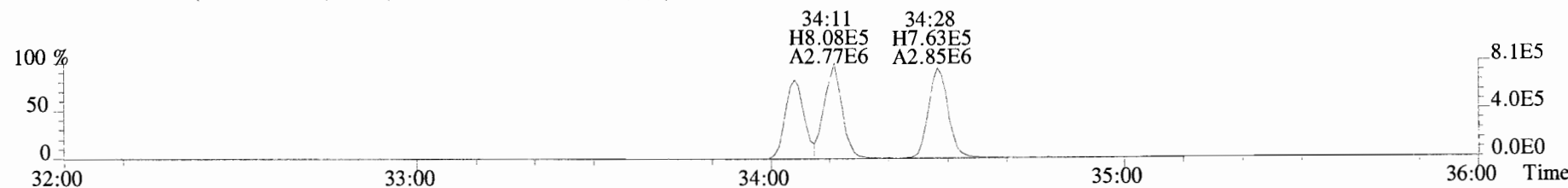
File:191024D1 #1-384 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



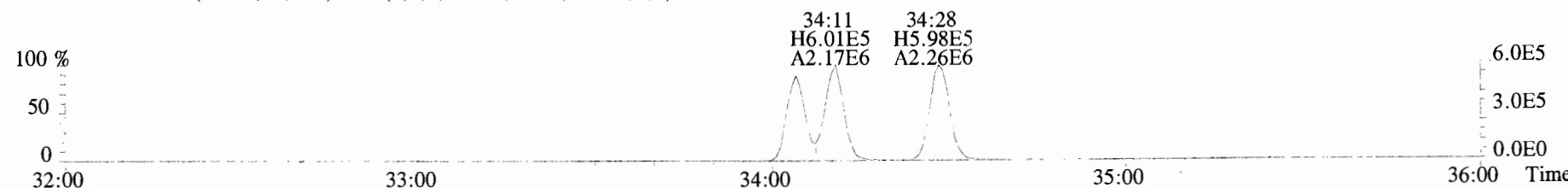
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



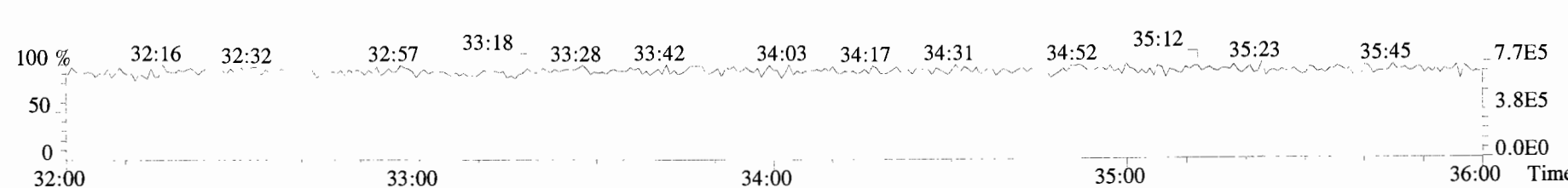
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



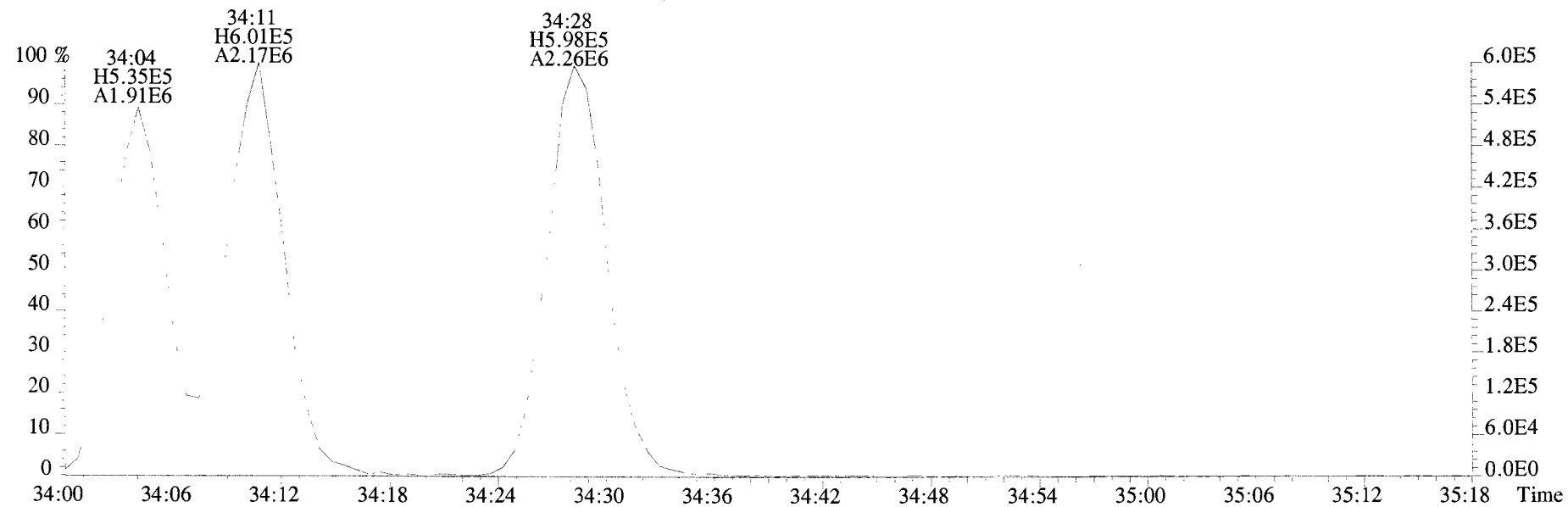
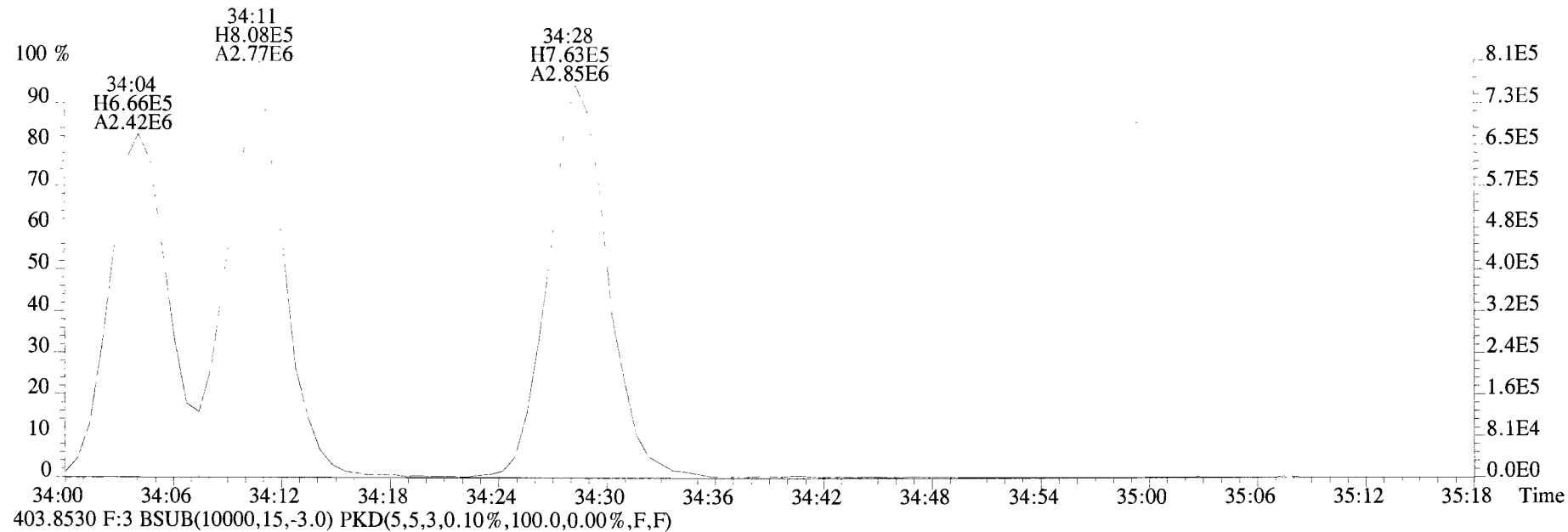
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



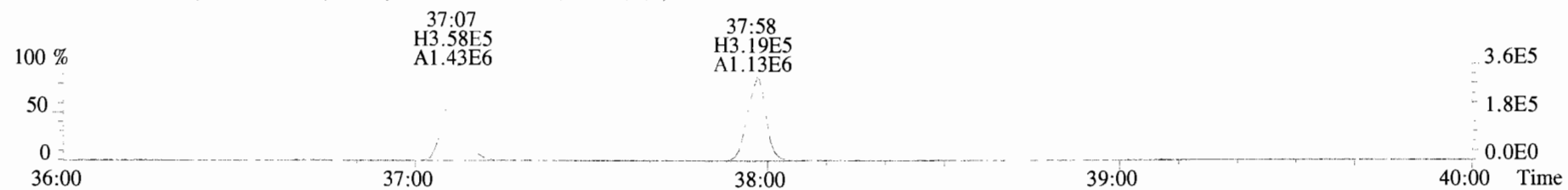
392.9760 F:3



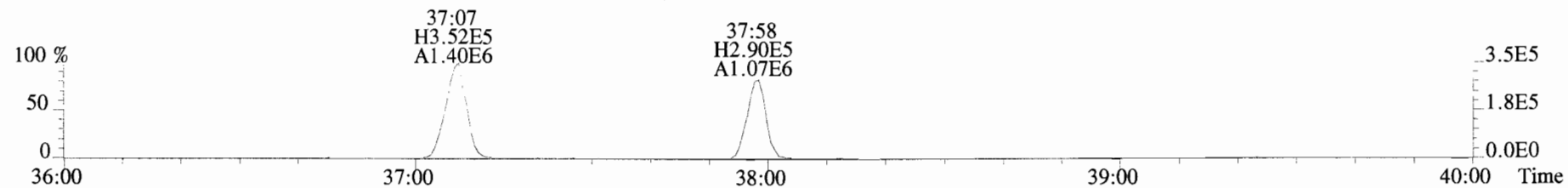
File:191024D1 #1-384 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



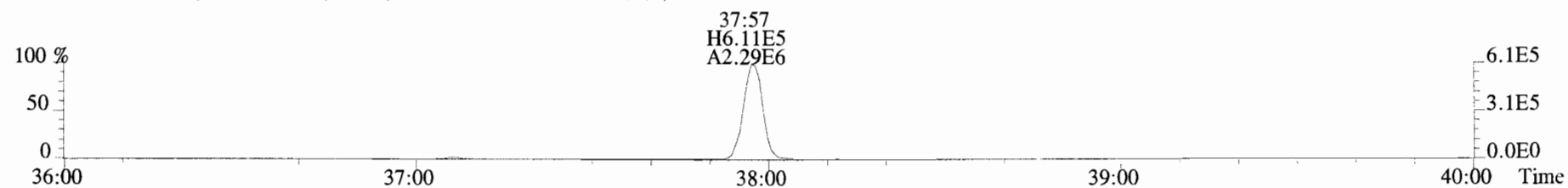
File:191024D1 #1-355 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text: Vista Analytical Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



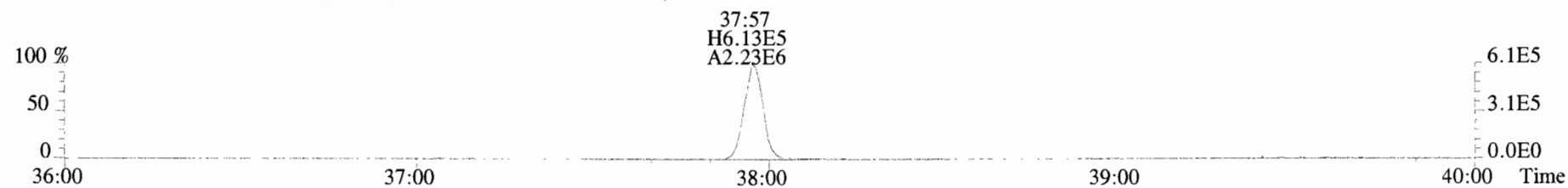
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



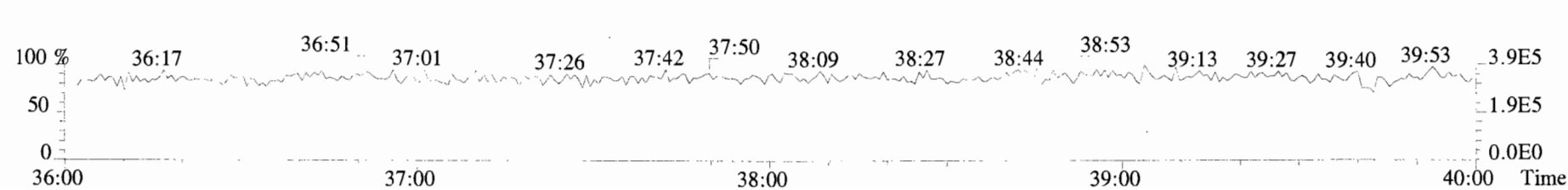
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



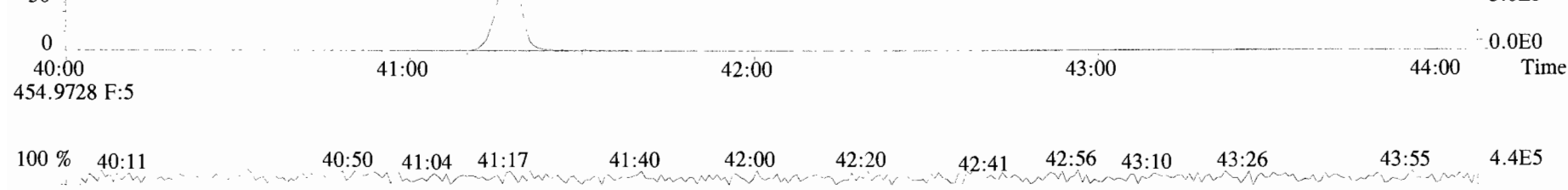
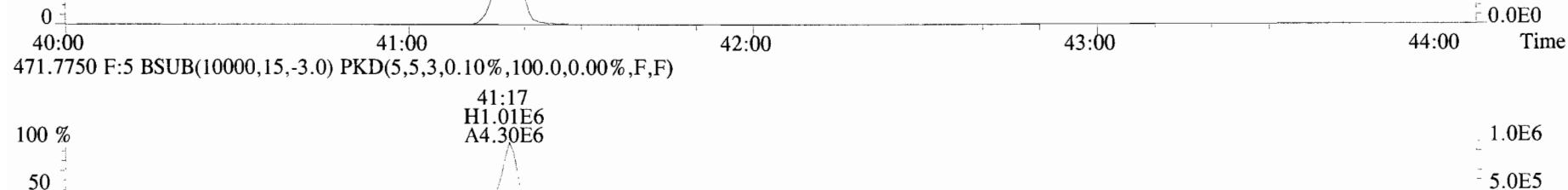
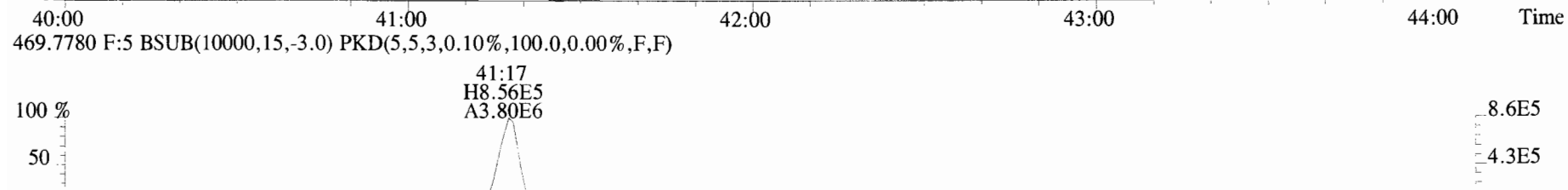
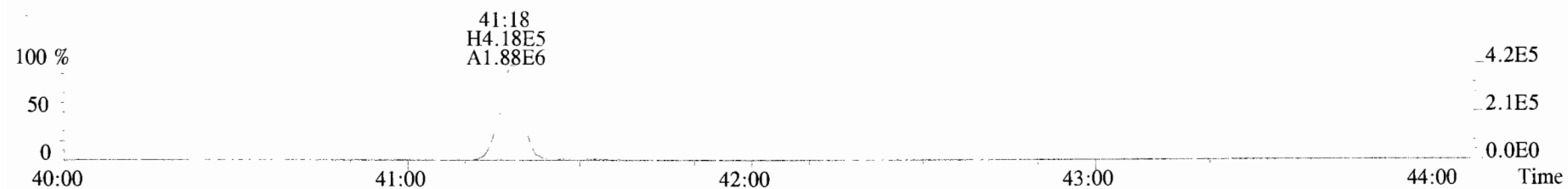
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



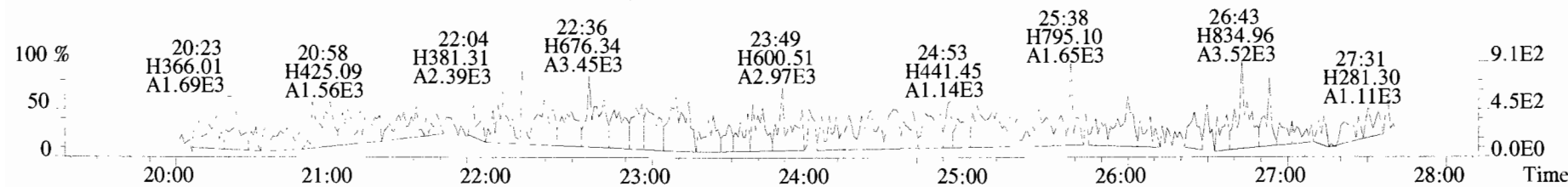
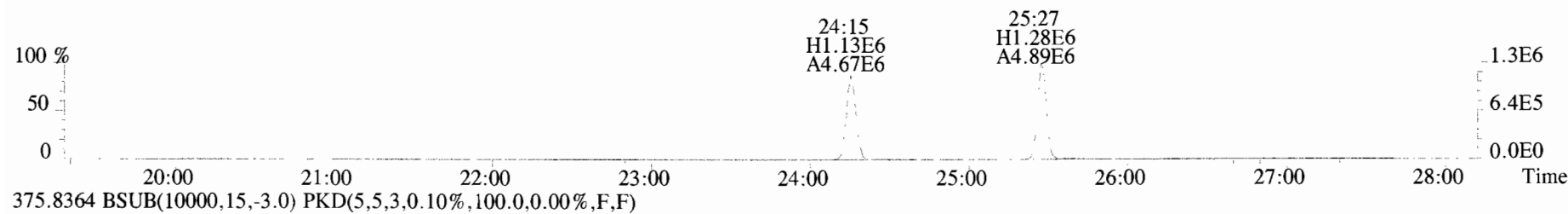
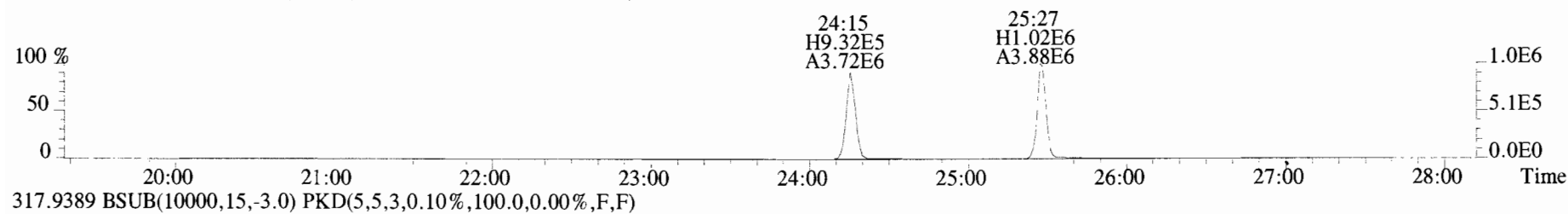
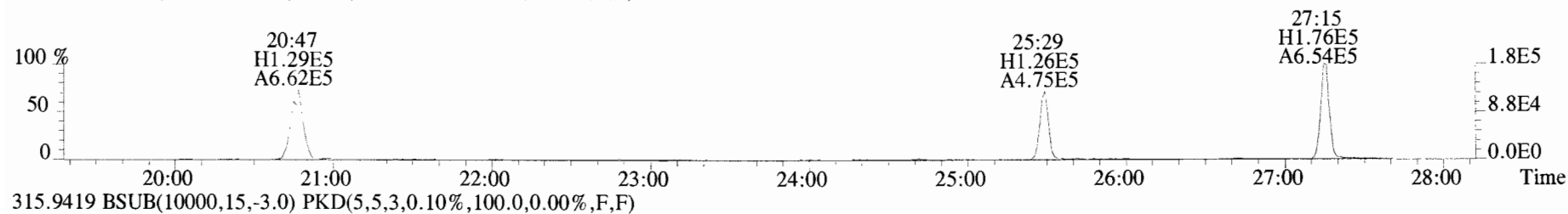
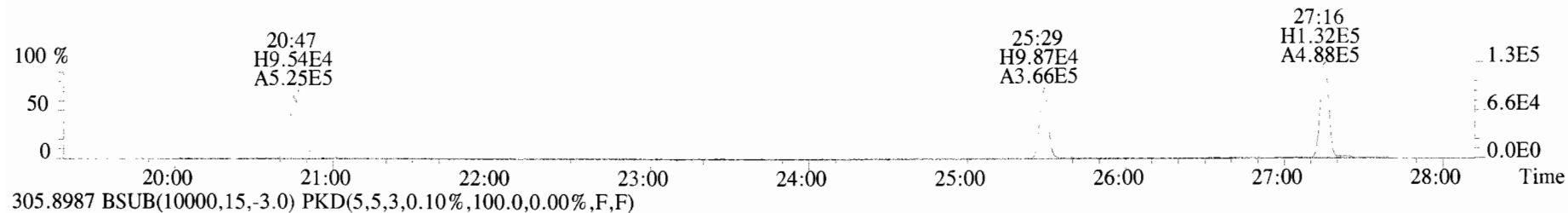
454.9728 F:4



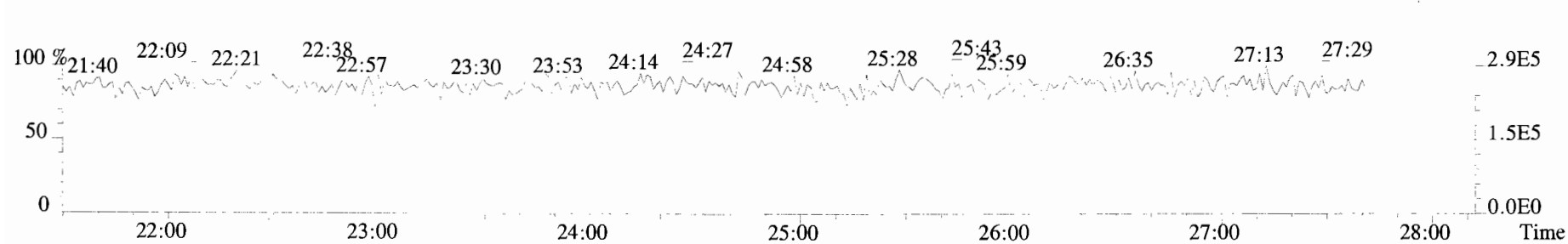
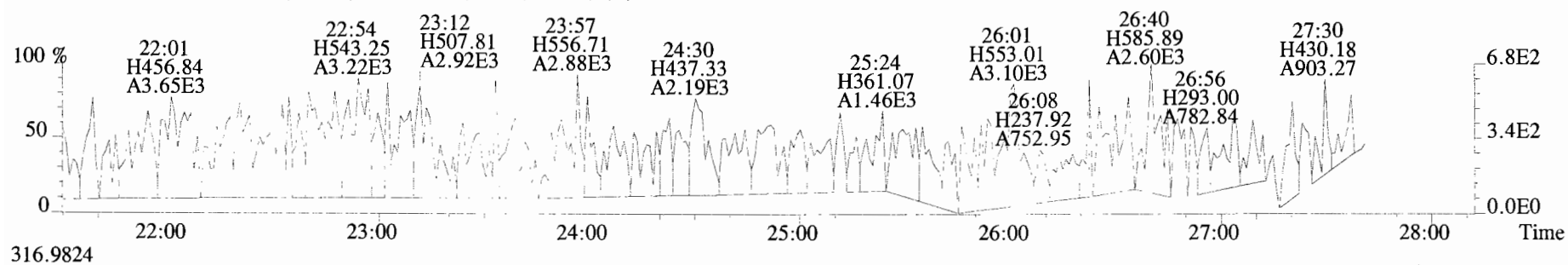
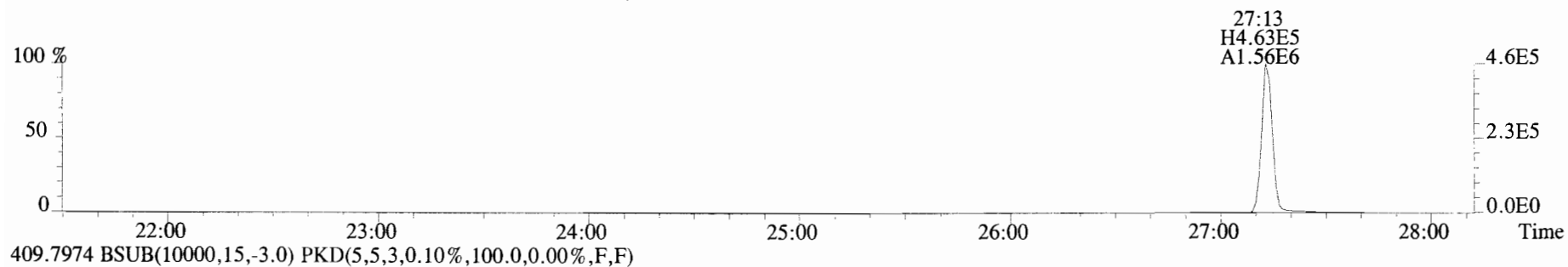
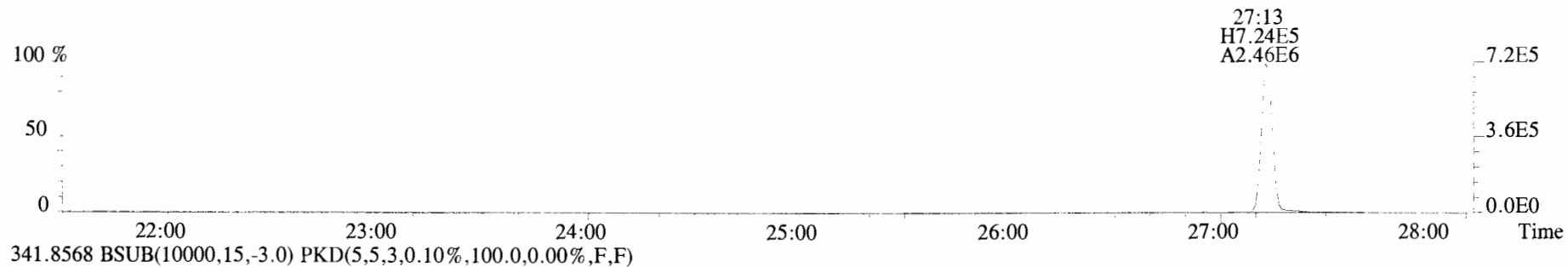
File:191024D1 #1-432 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



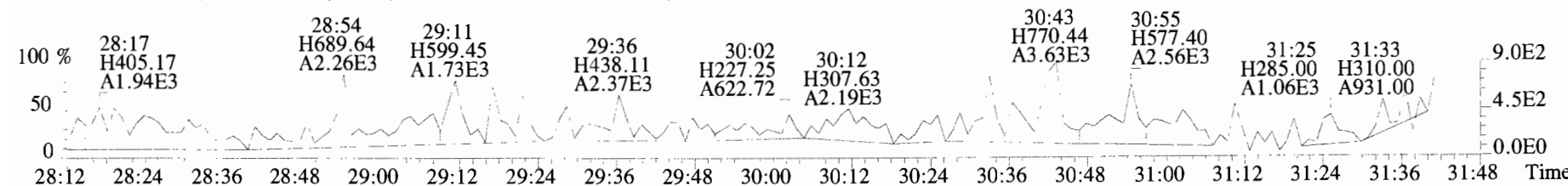
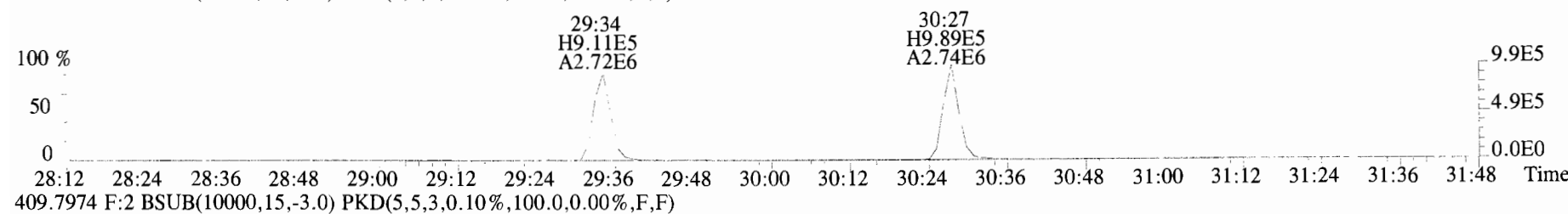
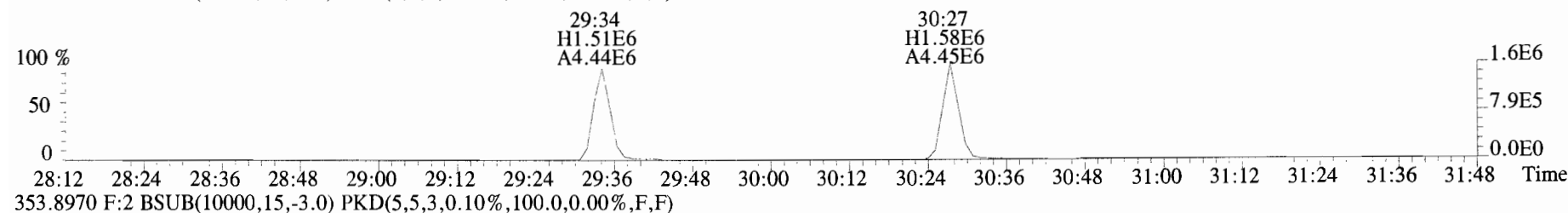
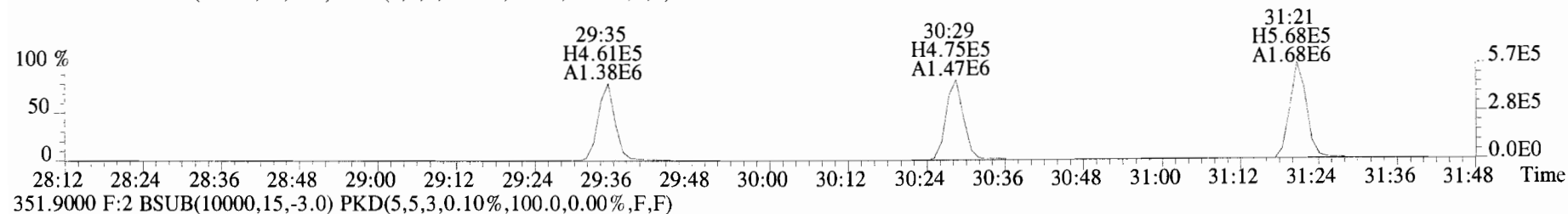
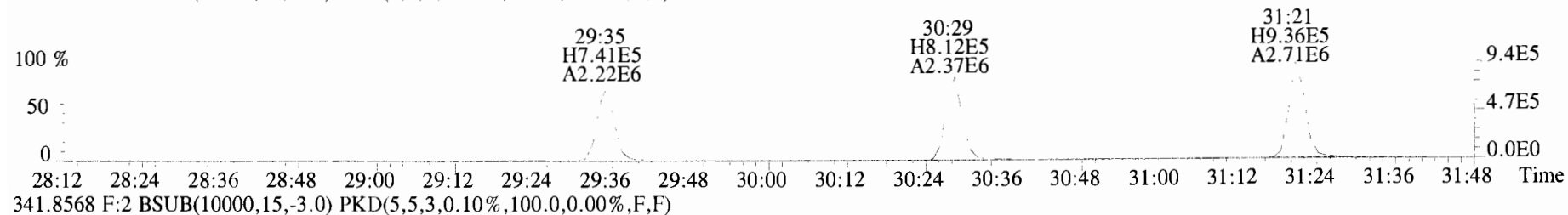
File:191024D1 #1-493 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



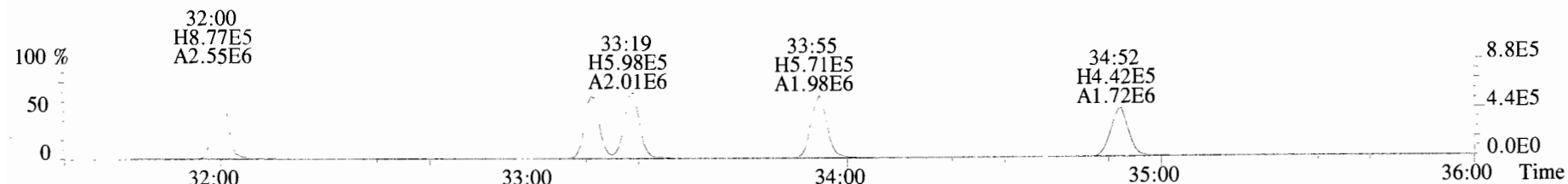
File:191024D1 #1-493 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



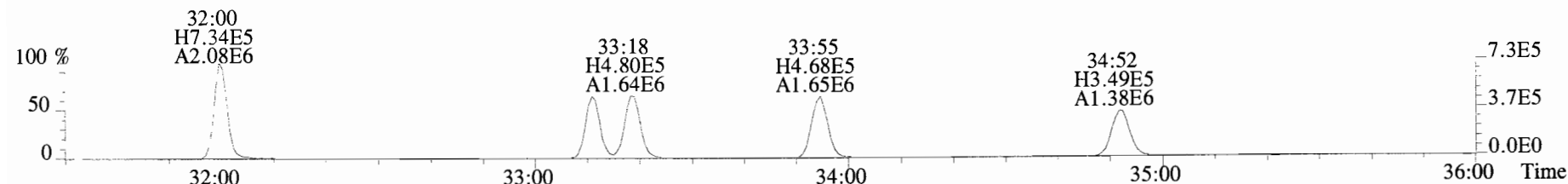
File:191024D1 #1-211 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



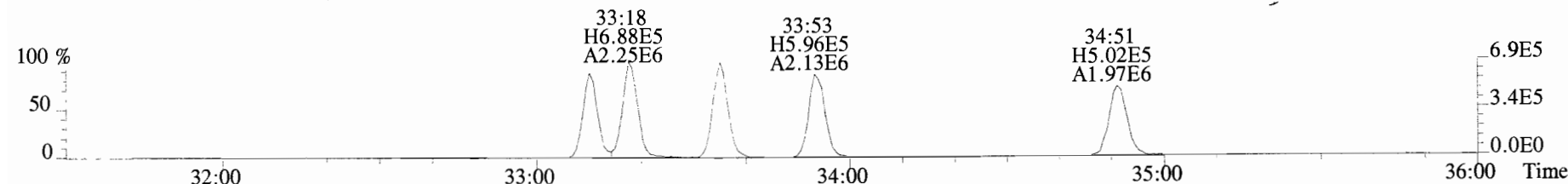
File:191024D1 #1-384 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



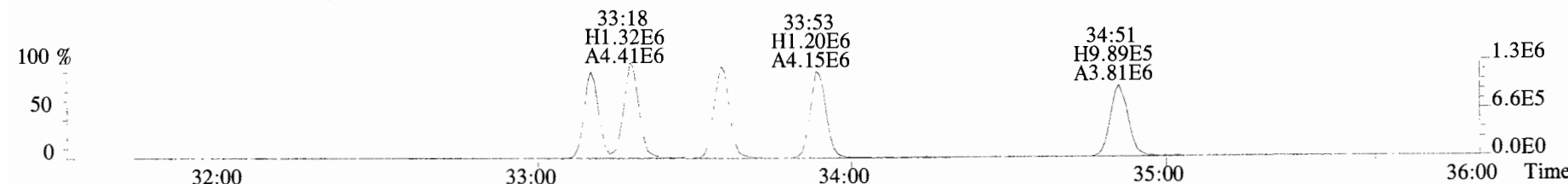
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



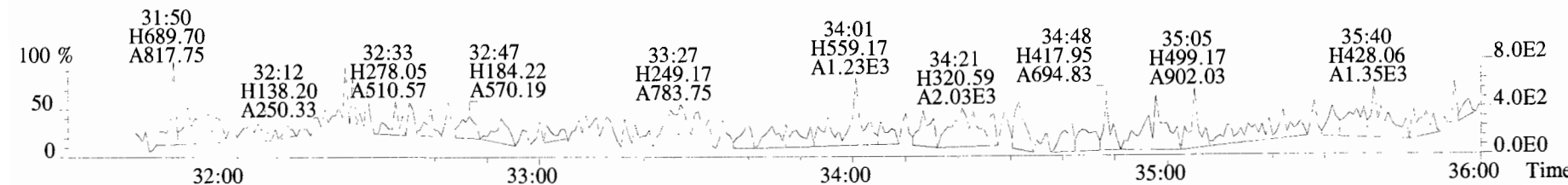
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



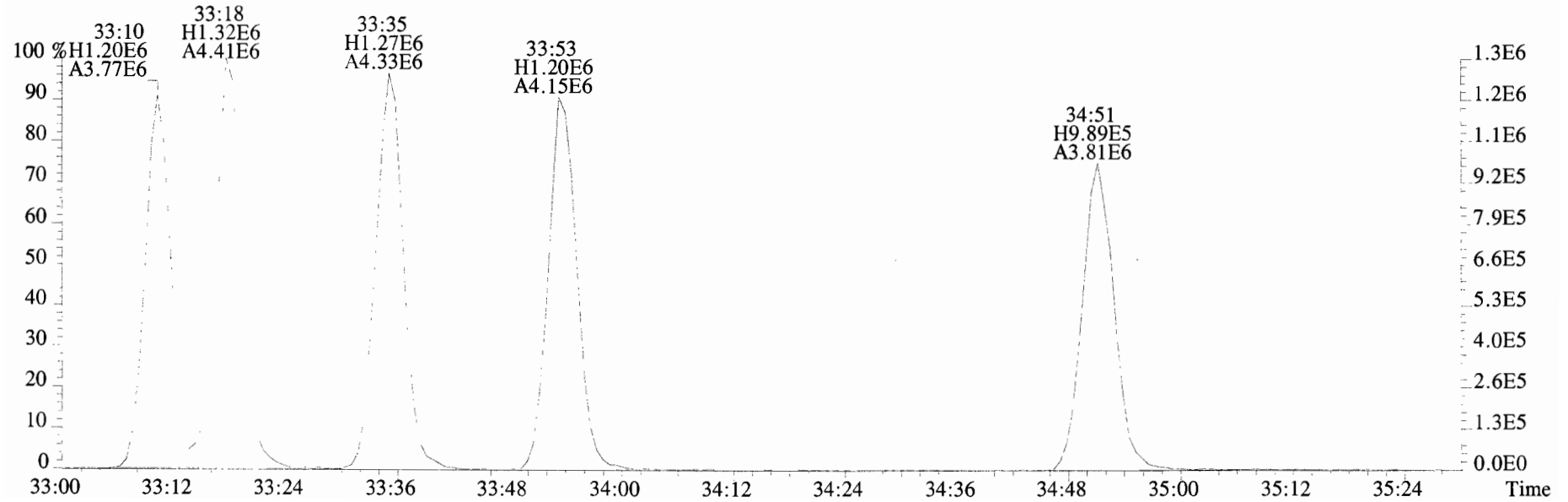
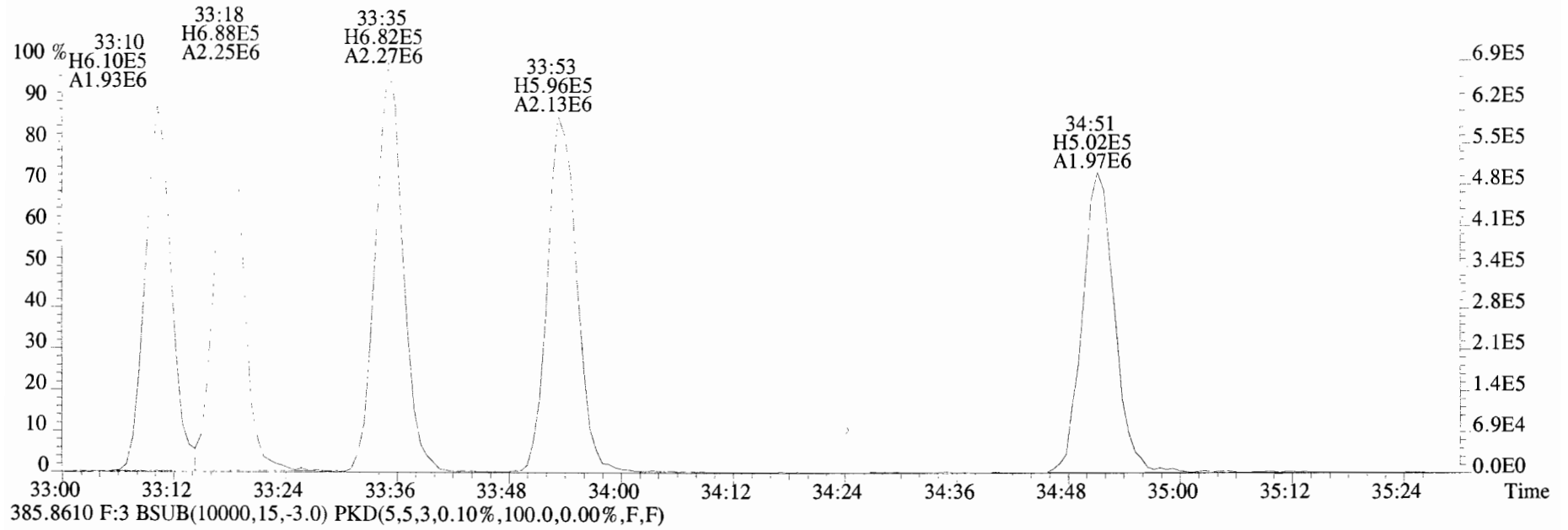
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



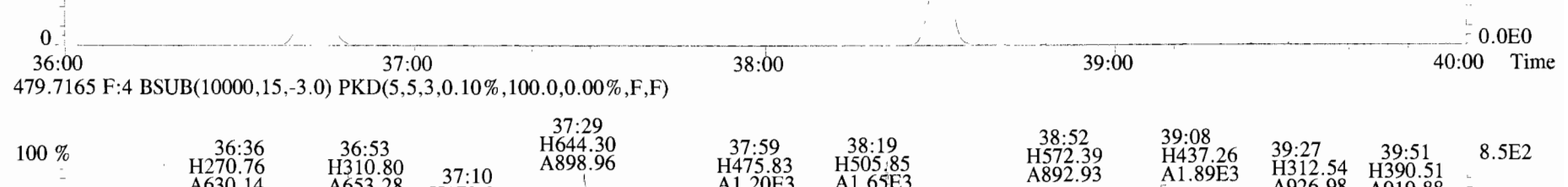
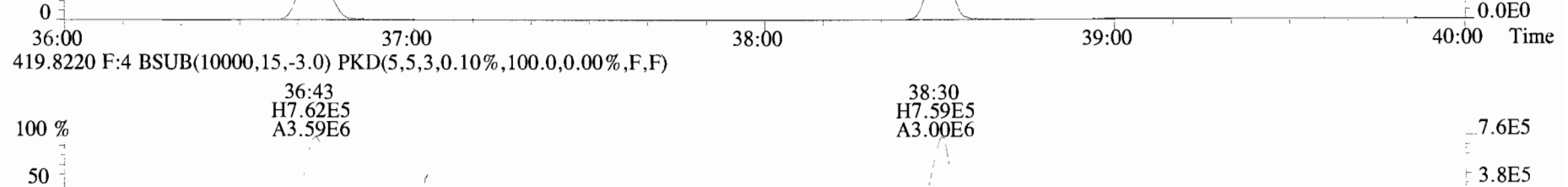
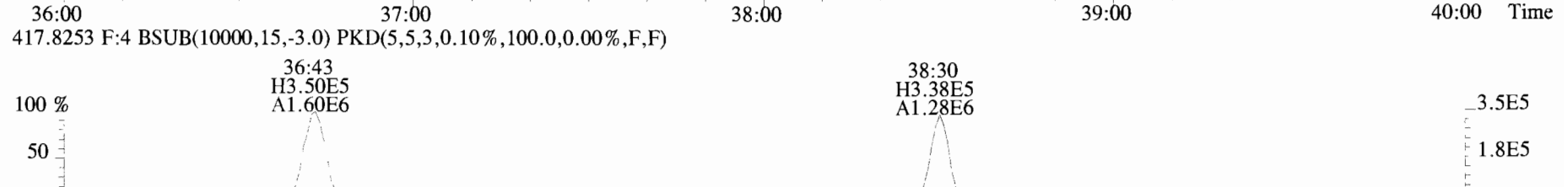
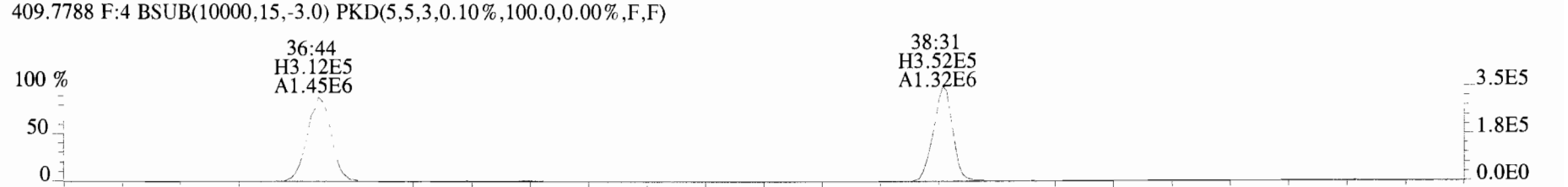
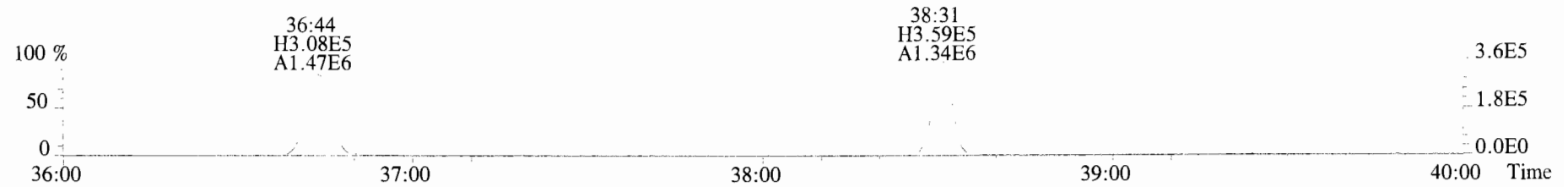
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



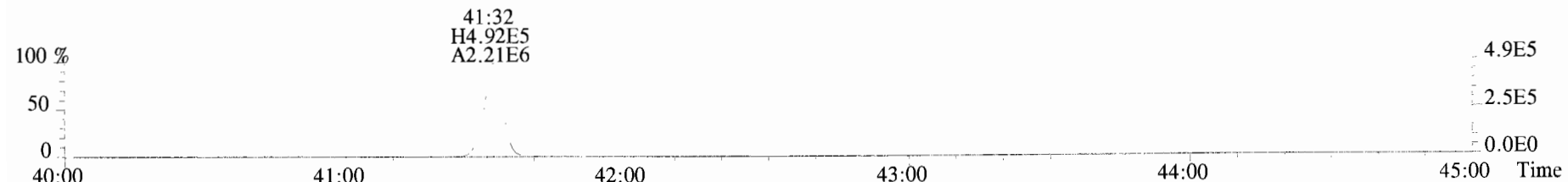
File:191024D1 #1-384 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



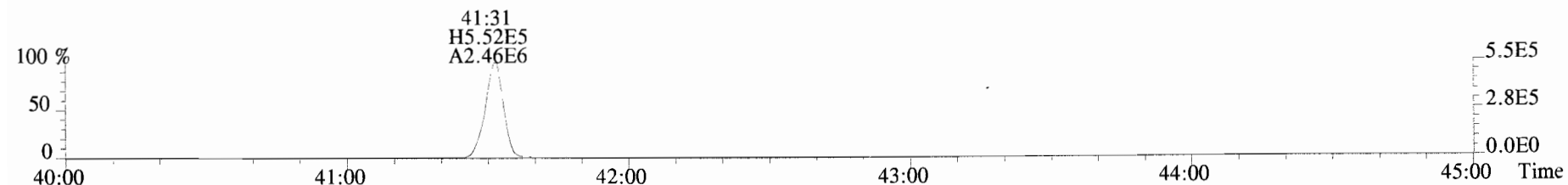
File:191024D1 #1-355 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



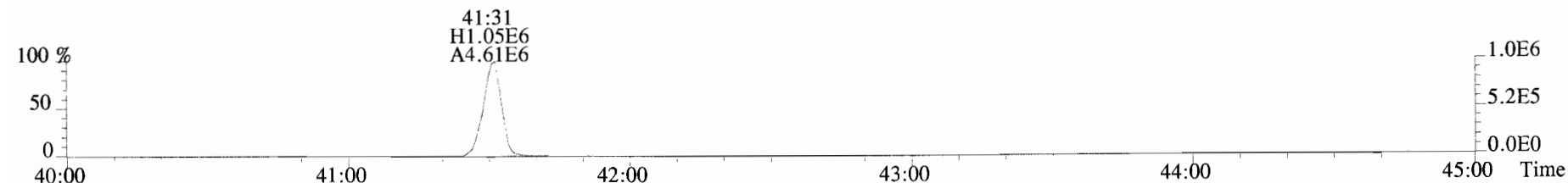
File:191024D1 #1-432 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



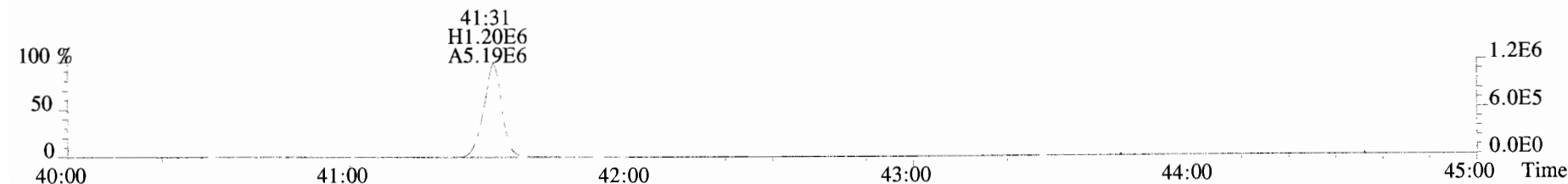
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



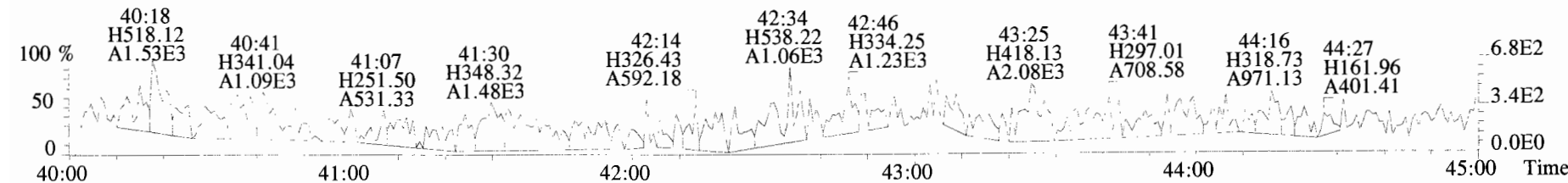
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

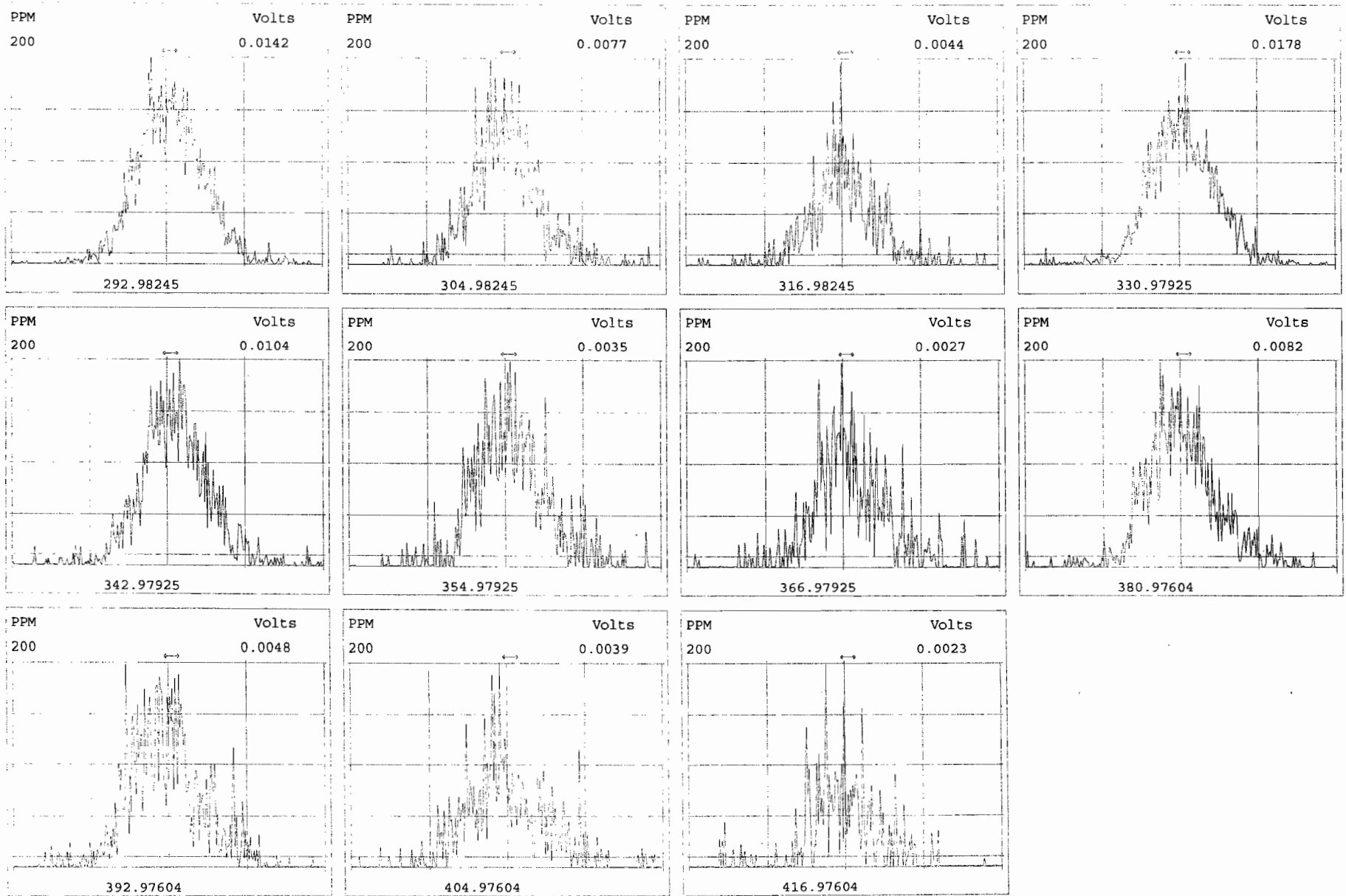


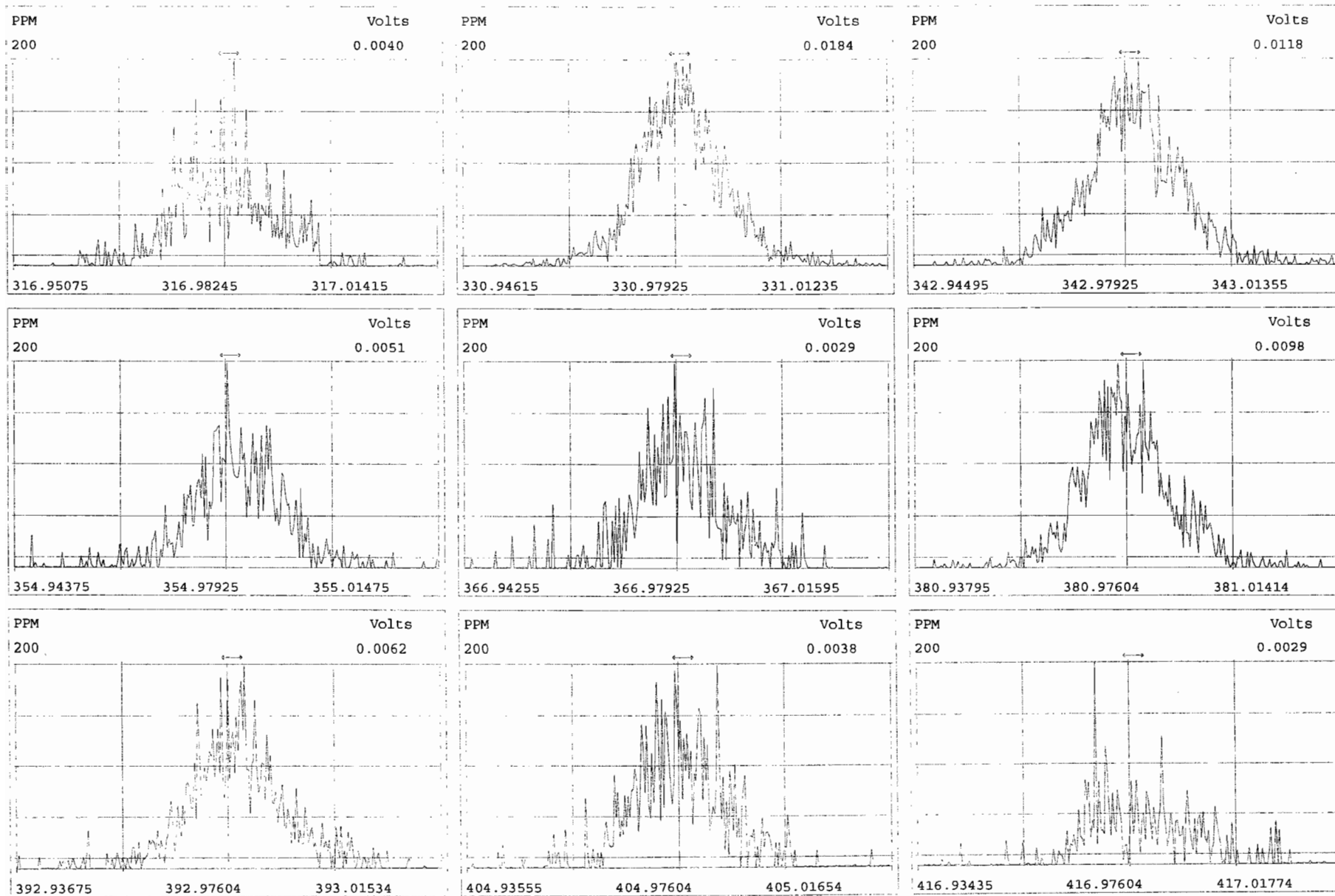
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

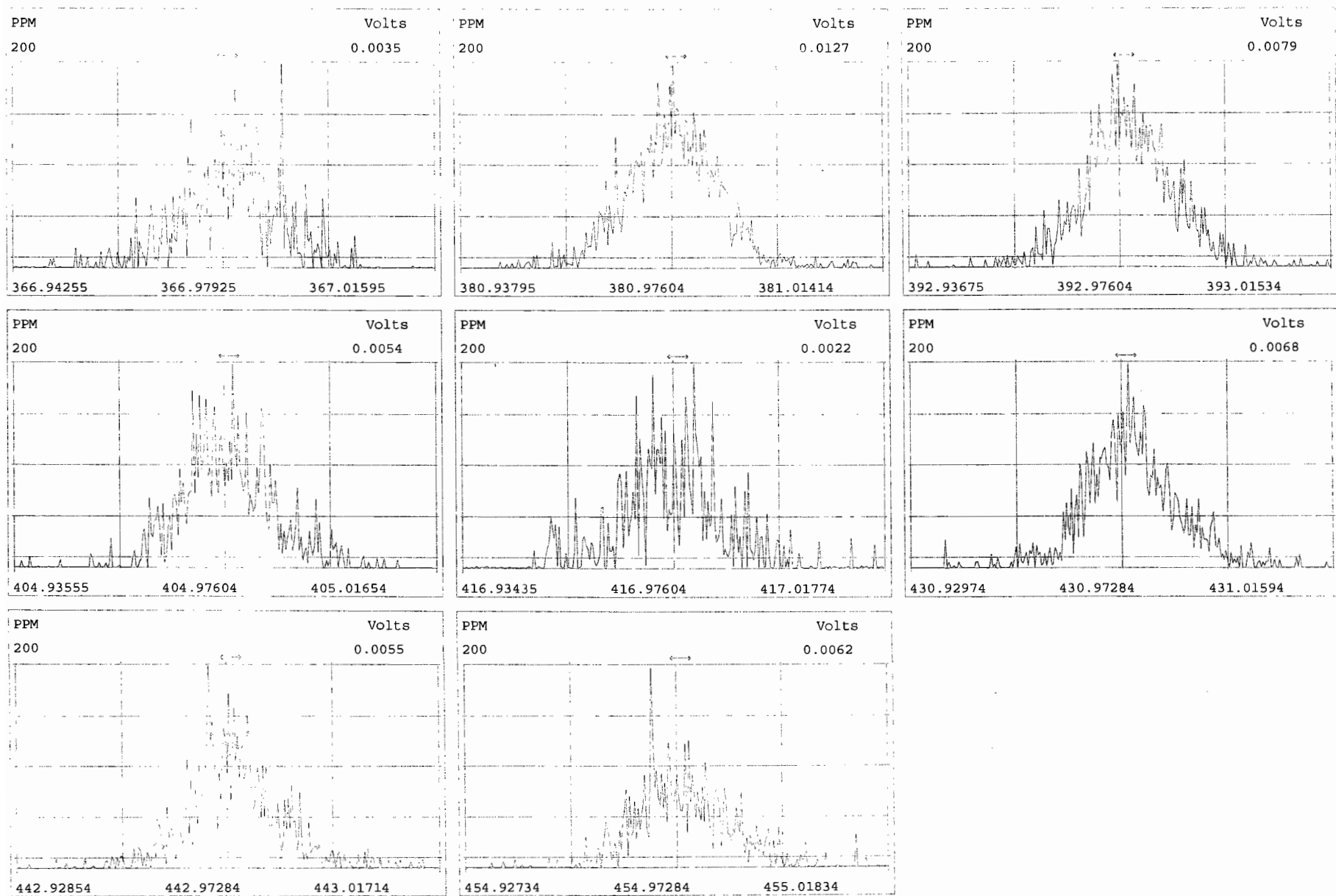


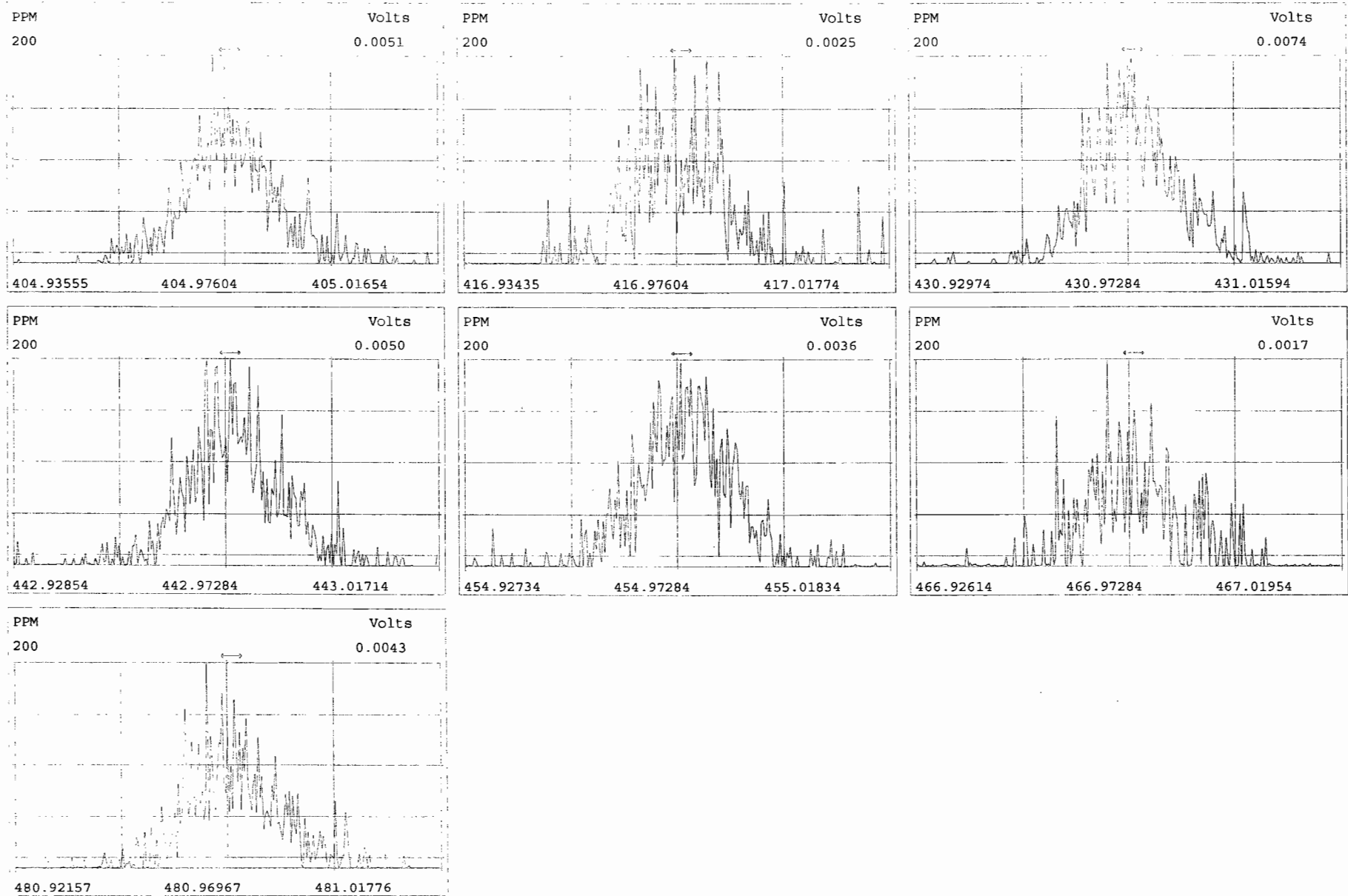




Peak Locate Examination:25-OCT-2019:03:46 File:RES_CHECK

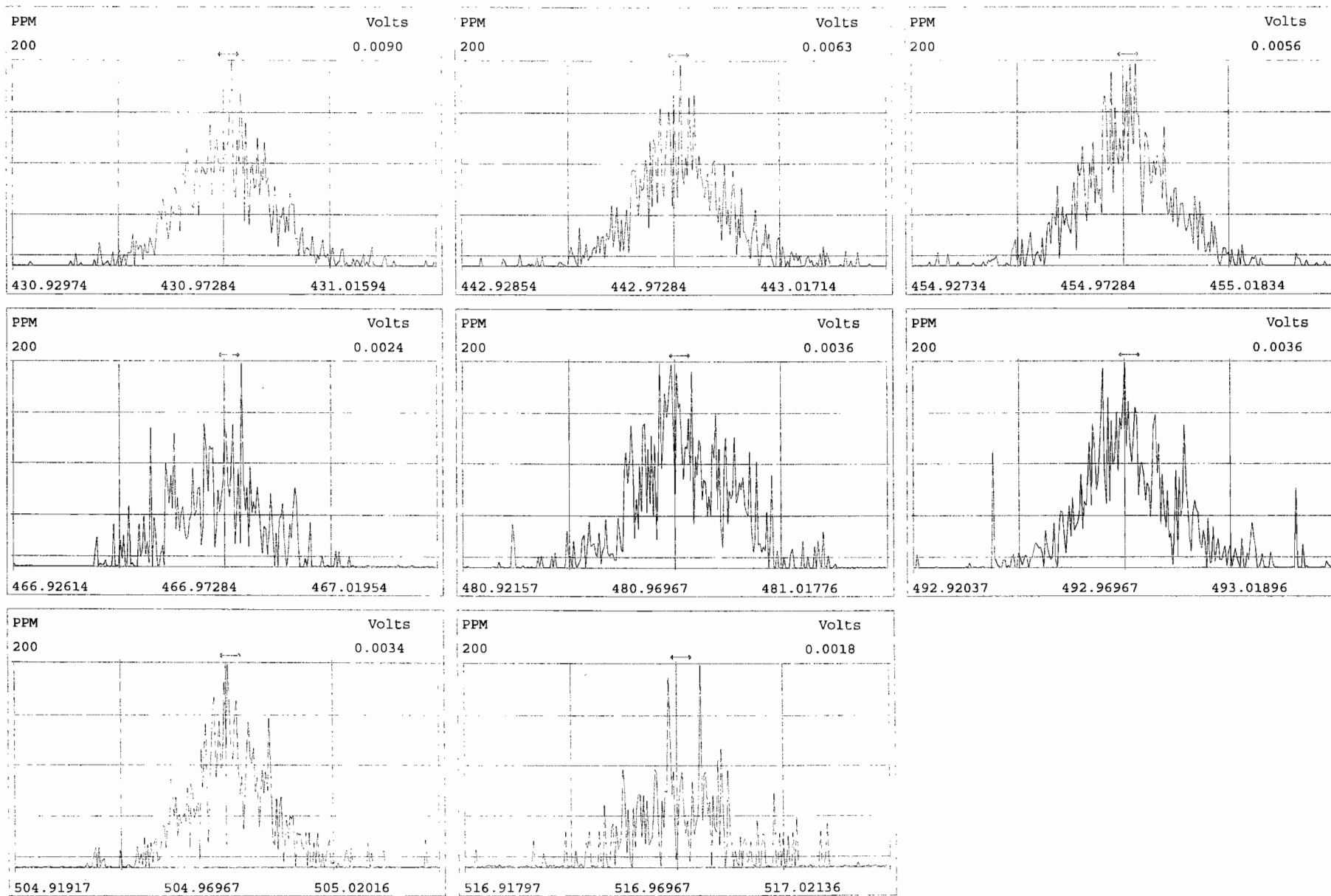
Experiment:OCDD_DB5 Function:3 Reference:PFK





Peak Locate Examination:25-OCT-2019:03:48 File:RES_CHECK

Experiment:OCDD_DB5 Function:5 Reference:PFK



HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calibration ID: ST(191024D)2-1

Reviewed By: CT 10/29/19
Initials & Date

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Concentrations within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TCDD/TCDF Valleys <25%	<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?	<u>DB</u>	<u>DB</u>
<u>Run Log:</u>		
- 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
- Bottle position verified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	<u>Beg.</u>	<u>End</u>
Mass resolution \geq	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> 5k <input type="checkbox"/> 6-8K <input type="checkbox"/> 8K <input checked="" type="checkbox"/> 10K 1614 1699 429 1613/1668/8280		
Intergrated peaks display correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
GC Break <20%		<input type="checkbox"/> NA
<u>8280 CS1 End Standard:</u>		
- Ratios within limits, S/N <2.5:1, CS1 within 12 hours		<input type="checkbox"/> NA

Comments:

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST191024D2-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191024D2 S#1 Analysis Date: 25-OCT-19 Time: 03:48:49

NATIVE ANALYTES	M/Z'S	ION	QC	Pass	CONC.	CONC.
	FORMING	ABUND.	LIMITS		FOUND	RANGE (3)
	RATIO (1)	RATIO	(2)			(ng/mL)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	10.6	7.8 - 12.9
						8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	y	52.7	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	52.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	54.0	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	53.2	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	52.0	43.0 - 58.0
OCDD	M+2/M+4	0.91	0.76-1.02	y	107	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	10.3	8.4 - 12.0
						8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	56.7	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	52.1	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	52.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	51.7	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	53.6	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	50.9	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.02	0.88-1.20	y	49.9	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.88-1.20	y	50.1	43.0 - 58.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	101	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: DB

Date: 10/28/19

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191024D2 S#1 Analysis Date: 25-OCT-19 Time: 03:48:49

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	0.76	0.65-0.89	y	102	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	102	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	1.30	1.05-1.43	y	87.1	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	94.1	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	110	72.0 - 138.0
13C-OCDD	M/M+2	0.92	0.76-1.02	y	229	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.78	0.65-0.89	y	104	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.64	1.32-1.78	y	99.7	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.65	1.32-1.78	y	105	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	107	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	98.0	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	101	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.54	0.43-0.59	y	109	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.42	0.37-0.51	y	114	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.42	0.37-0.51	y	120	77.0 - 129.0
13C-OCDF	M+2/M+4	0.90	0.76-1.02	y	250	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.75	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: DB

Date: 10/28/19

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: 10-9-19

RT Window Data Filename: 191024D2 S#1 Analysis Date: 25-OCT-19 Time: 03:48:49

ZB-5MS IS Data Filename: 191024D2 S#1 Analysis Date: 25-OCT-19 Time: 03:48:49

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)	22:55	1,3,6,8-TCDF (F)	20:48
1,2,8,9-TCDD (L)	27:07	1,2,8,9-TCDF (L)	27:15
1,2,4,7,9-PeCDD (F)	28:43	1,3,4,6,8-PeCDF (F)	27:13
1,2,3,8,9-PeCDD (L)	31:07	1,2,3,8,9-PeCDF (L)	31:20
1,2,4,6,7,9-HxCDD (F)	32:32	1,2,3,4,6,8-HxCDF (F)	32:00
1,2,3,7,8,9-HxCDD (L)	34:29	1,2,3,7,8,9-HxCDF (L)	34:52
1,2,3,4,6,7,9-HpCDD (F)	37:07	1,2,3,4,6,7,8-HpCDF (F)	36:44
1,2,3,4,6,7,8-HpCDD (L)	37:58	1,2,3,4,7,8,9-HpCDF (L)	38:30

(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: DBDate: 10/28/19

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191024D2 S#1 Analysis Date: 25-OCT-19 Time: 03:48:49

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	1.001	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	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002
Labeled Compounds			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.197	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	1.151	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.186	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: DB

Date: 10/28/19

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191024D2 S#1 Analysis Date: 25-OCT-19 Time: 03:48:49

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	1.000	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	1.000	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

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	1.038	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	1.093	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.146	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.130	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.229	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.236	1.091-1.371

Analyst: DB

Date: 10/28/19

Client ID: 1613 CS3 100220
Lab ID: ST191024D2-1

File Name: 191024D2 File Aq: 25-OCT-19 02:48:43
GC Column ID: ZB-SMS ICat: 1613VG7-10-9-19 wt/vol: 1.000

ConCAL: ST191024D2 1
EndCAL: NA

Page 1 of 1

Name	Resp	RA	RRF	RI	Conc	Qual	noise	Pac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	6.62e+05	0.80 y	0.91	26:16	10.590			* 2.5	*	Total Tetra-Dioxins	78.4	79.0	*	*	
1,2,3,7,8-PeCDD	2.64e+06	0.64 y	0.90	30:45	52.722			* 2.5	*	Total Penta-Dioxins	196	196	*	*	
1,2,3,4,7,8-HxCDD	3.00e+06	1.24 y	1.10	34:05	52.904			* 2.5	*	Total Hexa-Dioxins	234	235	*	*	
1,2,3,6,7,8-HxCDD	2.96e+06	1.25 y	0.94	34:12	53.981			* 2.5	*	Total Hepta-Dioxins	120	120	*	*	
1,2,3,7,8,9-HxCDD	3.04e+06	1.24 y	0.96	34:29	53.244			* 2.5	*	Total Tetra-Furans	40.3	41.1	*	*	
1,2,3,4,6,7,8-HpCDD	2.86e+06	1.04 y	0.98	37:58	51.980			* 2.5	*	Total Penta-Furans	231.73	232.86	*	*	
OCDD	5.32e+06	0.91 y	0.96	41:18	106.74			* 2.5	*	Total Hexa-Furans	277	277	*	*	
										Total Hepta-Furans	100	101	*	*	
2,3,7,8-TCDF	1.01e+06	0.80 y	0.95	25:29	10.325			* 2.5	*						
1,2,3,7,8-PeCDF	4.42e+06	1.56 y	0.96	29:35	56.732			* 2.5	*						
2,3,4,7,8-PeCDF	4.48e+06	1.54 y	1.01	30:28	52.141			* 2.5	*						
1,2,3,4,7,8-HxCDF	4.26e+06	1.26 y	1.18	33:11	52.081			* 2.5	*						
1,2,3,6,7,8-HxCDF	4.39e+06	1.24 y	1.07	33:19	51.742			* 2.5	*						
2,3,4,6,7,8-HxCDF	4.50e+06	1.24 y	1.11	33:55	53.632			* 2.5	*						
1,2,3,7,8,9-HxCDF	3.80e+06	1.27 y	1.06	34:52	50.857			* 2.5	*						
1,2,3,4,6,7,8-HpCDF	3.79e+06	1.02 y	1.13	36:44	49.905			* 2.5	*						
1,2,3,4,7,8,9-HpCDF	3.51e+06	1.01 y	1.28	38:30	50.108			* 2.5	*						
OCDF	6.49e+06	0.91 y	0.95	41:32	101.43			* 2.5	*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	6.91e+06	0.76 y	1.10	26:15	102.01					102					
IS 13C-1,2,3,7,8-PeCDD	5.55e+06	0.63 y	0.88	30:44	101.78					102					
IS 13C-1,2,3,4,7,8-HxCDD	5.14e+06	1.25 y	0.64	34:04	102.26					102					
IS 13C-1,2,3,6,7,8-HxCDD	5.84e+06	1.30 y	0.86	34:11	87.074					87.1					
IS 13C-1,2,3,7,8,9-HxCDD	5.94e+06	1.25 y	0.81	34:29	94.058					94.1					
IS 13C-1,2,3,4,6,7,8-HpCDD	5.62e+06	1.07 y	0.65	37:57	109.77					110					
IS 13C-OCDD	1.04e+07	0.92 y	0.58	41:17	229.11					115					
IS 13C-2,3,7,8-TCDF	1.03e+07	0.78 y	1.03	25:28	104.06					104					
IS 13C-1,2,3,7,8-PeCDF	8.11e+06	1.64 y	0.85	29:34	99.653					99.7					
IS 13C-2,3,4,7,8-PeCDF	8.47e+06	1.65 y	0.85	30:27	104.97					105					
IS 13C-1,2,3,4,7,8-HxCDF	6.95e+06	0.52 y	0.83	33:10	106.71					107					
IS 13C-1,2,3,6,7,8-HxCDF	7.94e+06	0.53 y	1.03	33:18	97.998					98.0					
IS 13C-2,3,4,6,7,8-HxCDF	7.53e+06	0.52 y	0.95	33:54	100.82					101					
IS 13C-1,2,3,7,8,9-HxCDF	7.04e+06	0.54 y	0.83	34:51	108.56					109					
IS 13C-1,2,3,4,6,7,8-HpCDF	6.74e+06	0.42 y	0.76	36:43	113.60					114					
IS 13C-1,2,3,4,7,8,9-HpCDF	5.47e+06	0.42 y	0.58	38:30	120.02					120					
IS 13C-OCDF	1.35e+07	0.90 y	0.69	41:31	250.14					125					
C/Up 37Cl-2,3,7,8-TCDD	7.22e+05		1.20	26:16	9.7543					97.5					
RS/RT 13C-1,2,3,4-TCDD	6.18e+06	0.80 y	1.00	25:41	100.00						Integrations		Reviewed		
RS 13C-1,2,3,4-TCDF	9.53e+06	0.81 y	1.00	24:16	100.00						by		by		
RS/RT 13C-1,2,3,4,6,9-HxCDF	7.84e+06	0.52 y	1.00	33:35	100.00						Analyst: DB		Analyst: CJ		

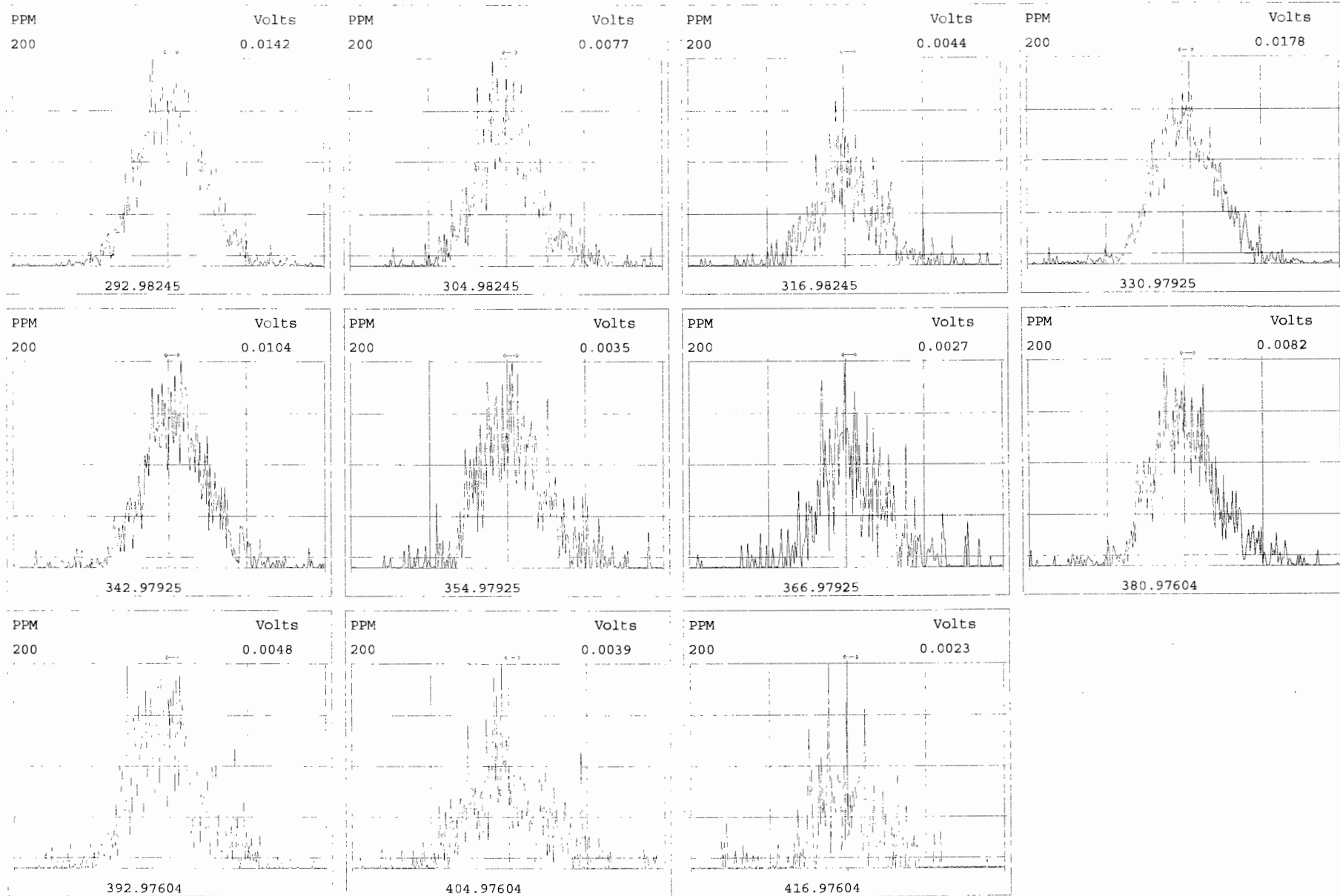
Date: 10/28/19 Date: 10/29/19

Vista Analytical Laboratory - Injection Log Run file: 191024D2 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191024D2	1	ST191024D2-1	DB	25-OCT-19	03:48:49	ST191024D2-1	NA
191024D2	2	SOLVENT BLANK	DB	25-OCT-19	04:36:43	ST191024D2-1	NA
191024D2	3	1903546-01	DB	25-OCT-19	05:24:41	ST191024D2-1	NA
191024D2	4	1903546-02	DB	25-OCT-19	06:12:37	ST191024D2-1	NA
191024D2	5	1903546-05	DB	25-OCT-19	07:00:34	ST191024D2-1	NA
191024D2	6	1903546-06	DB	25-OCT-19	07:48:31	ST191024D2-1	NA
191024D2	7	1903546-07	DB	25-OCT-19	08:36:27	ST191024D2-1	NA
191024D2	8	1903546-08	DB	25-OCT-19	09:24:24	ST191024D2-1	NA
191024D2	9	1903546-09	DB	25-OCT-19	10:12:17	ST191024D2-1	NA
191024D2	10	1903546-10	DB	25-OCT-19	11:00:13	ST191024D2-1	NA
191024D2	11	1903546-11	DB	25-OCT-19	11:48:09	ST191024D2-1	NA
191024D2	12	1903546-12	DB	25-OCT-19	12:36:05	ST191024D2-1	NA
191024D2	13	1903546-13	DB	25-OCT-19	13:23:59	ST191024D2-1	NA
191024D2	14	1903546-14	DB	25-OCT-19	14:12:00	ST191024D2-1	NA
191024D2	15	1903546-15	DB	25-OCT-19	15:00:01	ST191024D2-1	NA

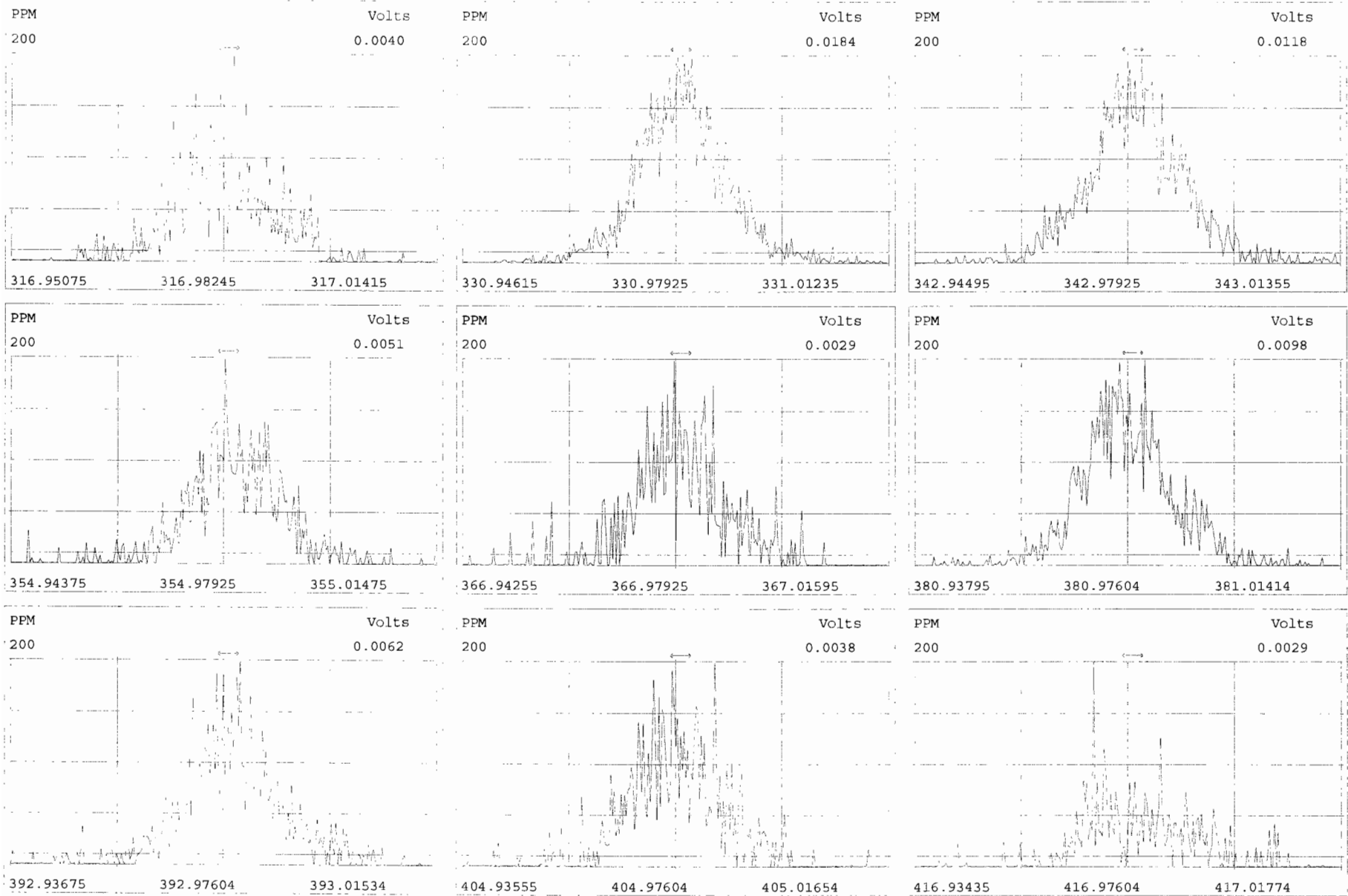
Peak Locate Examination:25-OCT-2019:03:44 File:RES_CHECK

Experiment:OCDD_DB5 Function:1 Reference:PFK



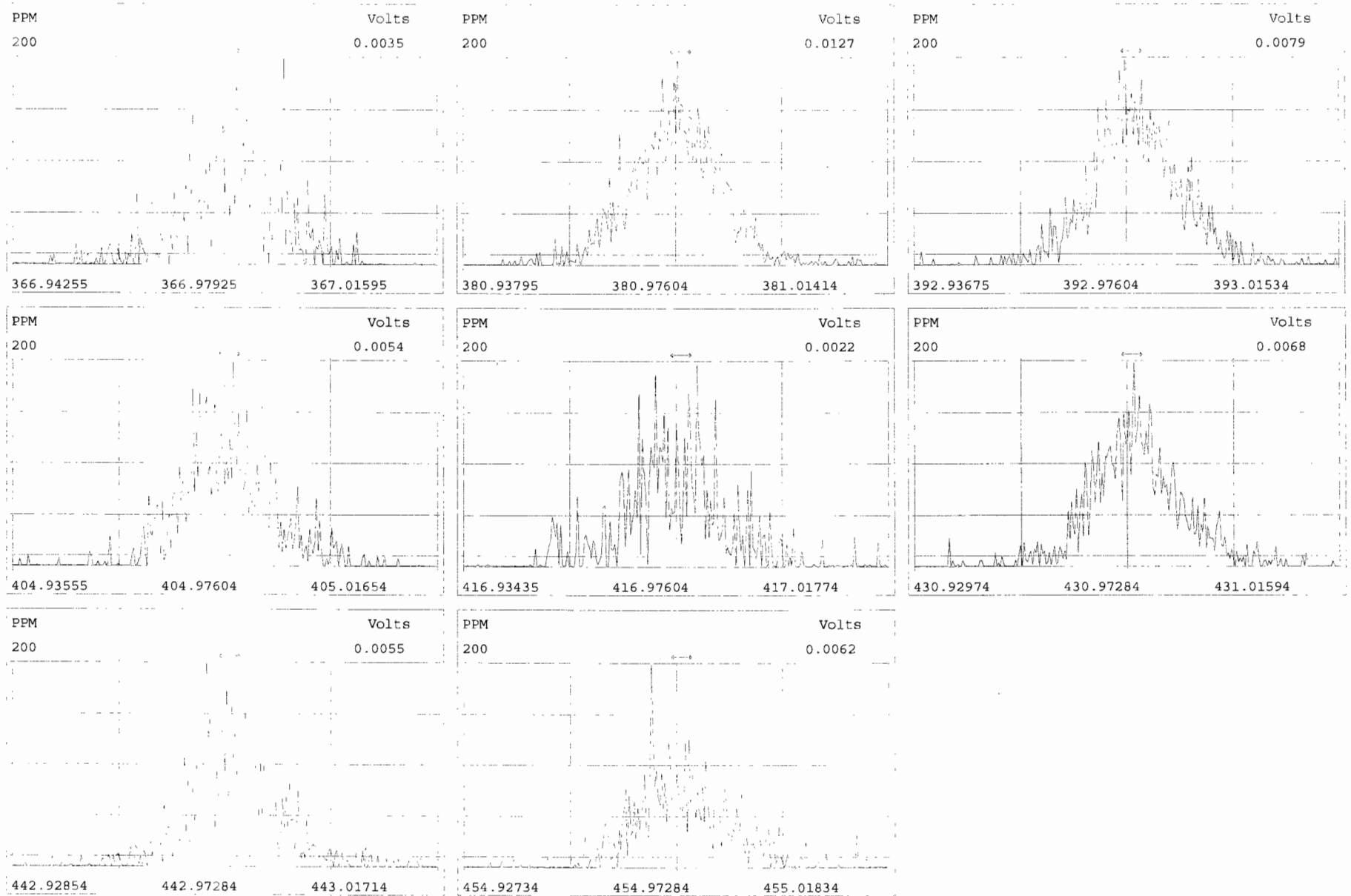
Peak Locate Examination:25-OCT-2019:03:45 File:RES_CHECK

Experiment:OCDD_DE5 Function:2 Reference:PFK



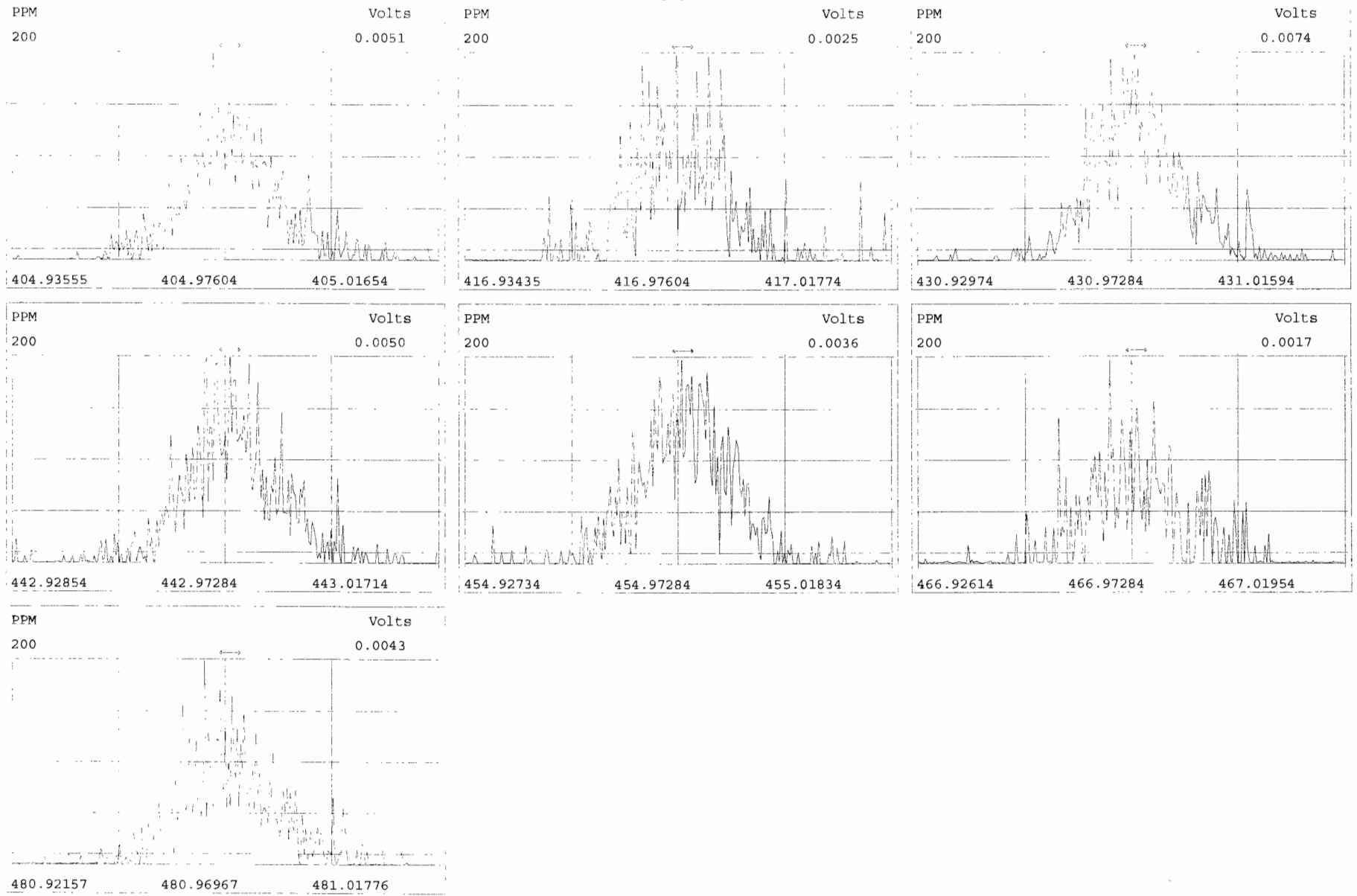
Peak Locate Examination:25-OCT 2019:03:46 File:RES_CHECK

Experiment:OCDD_DB5 Function:3 Reference:PFK



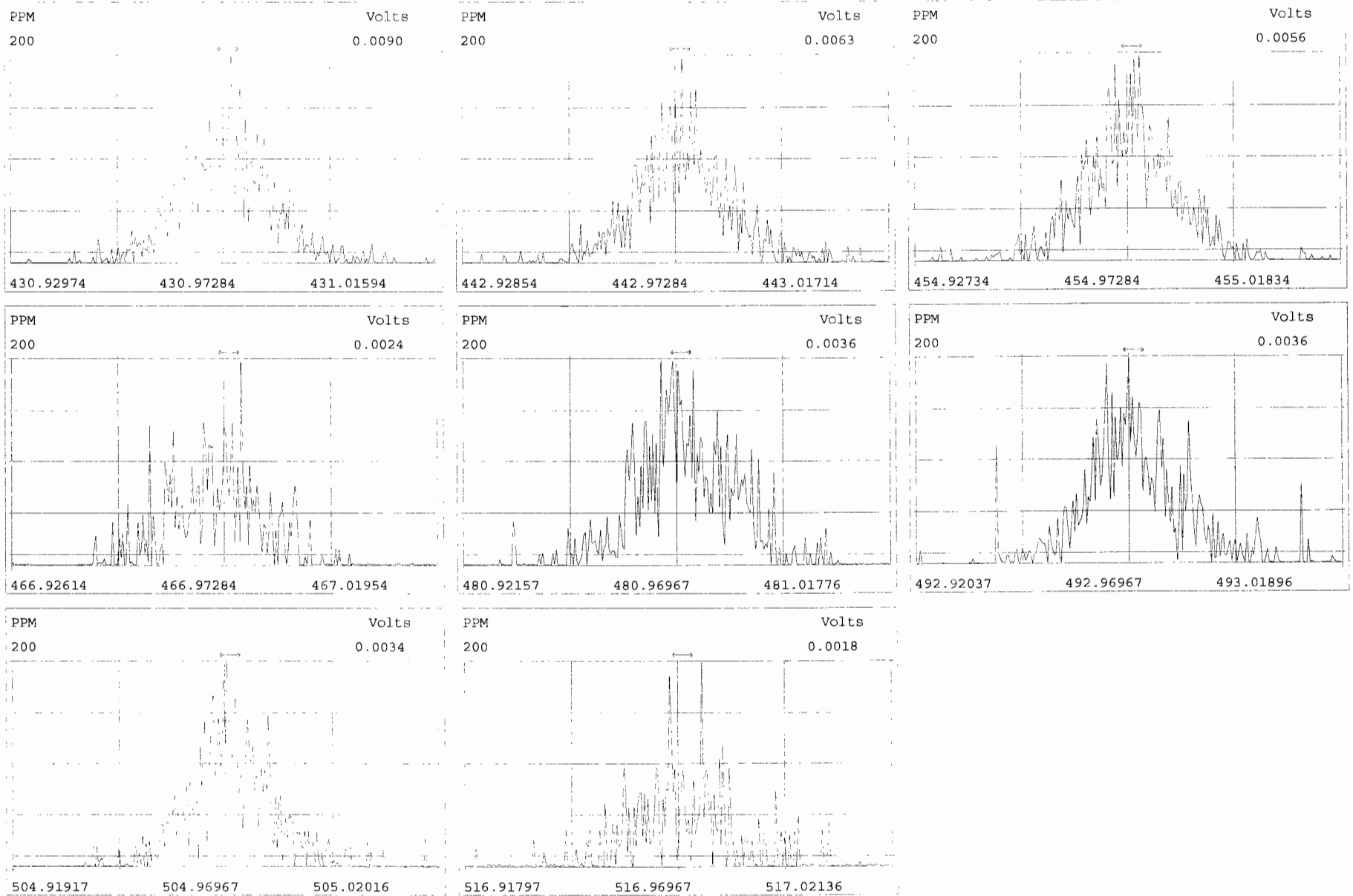
Peak Locate Examination:25-OCT-2019:03:47 File:RES_CHECK

Experiment:OCDD_DB5 Function:4 Reference:PFK

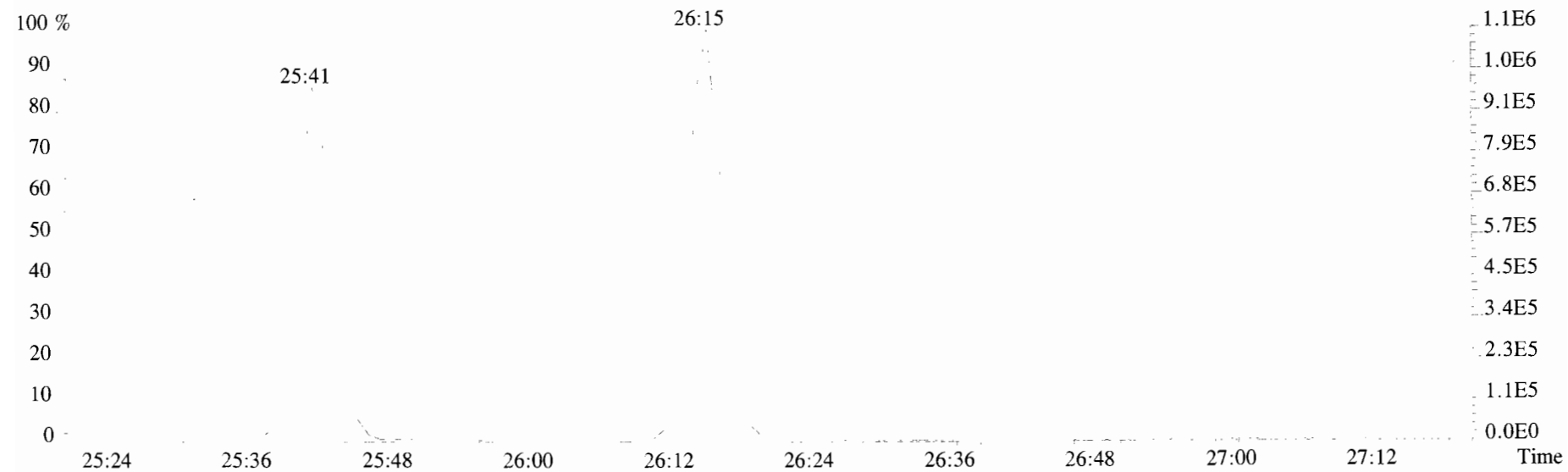
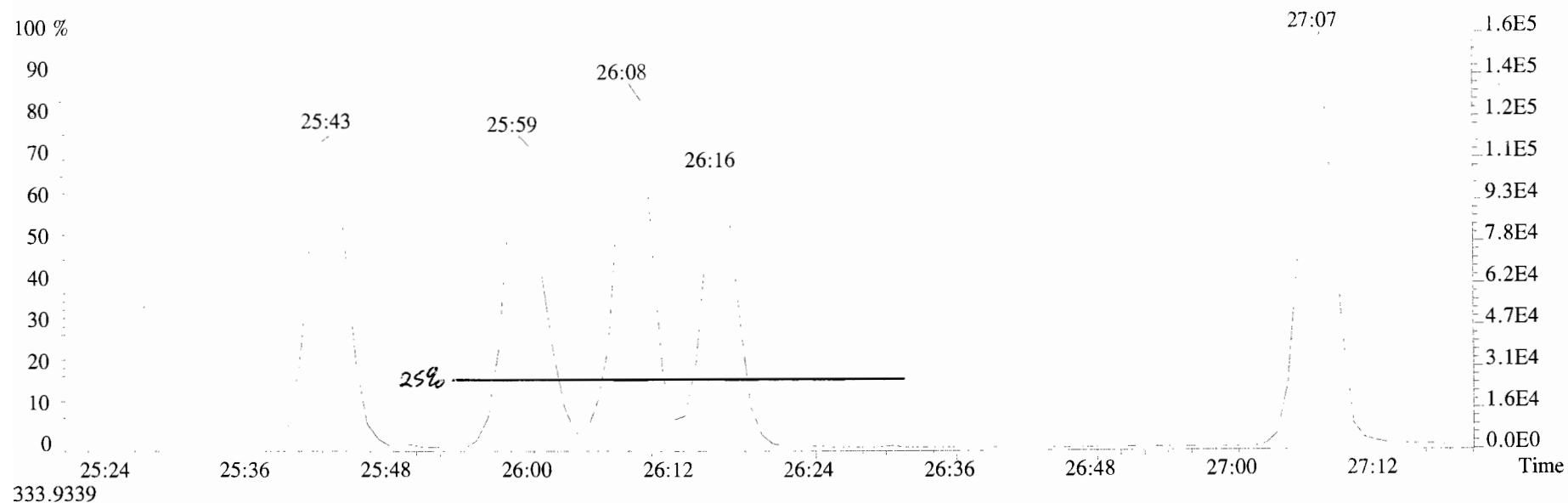


Peak Locate Examination:25-OCT-2019:03:48 File:RES_CHECK

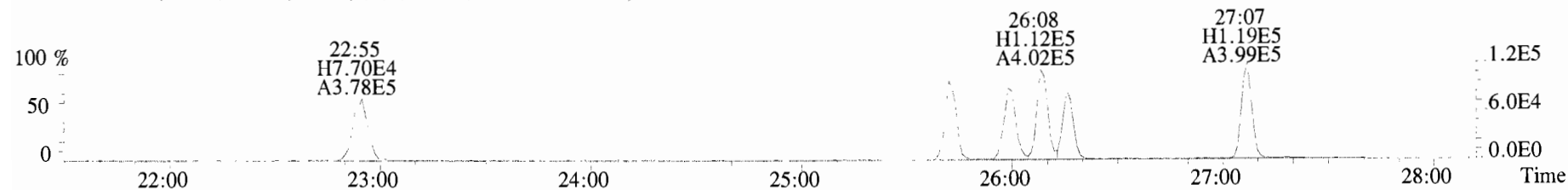
Experiment:OCDD_DB5 Function:5 Reference:PFK



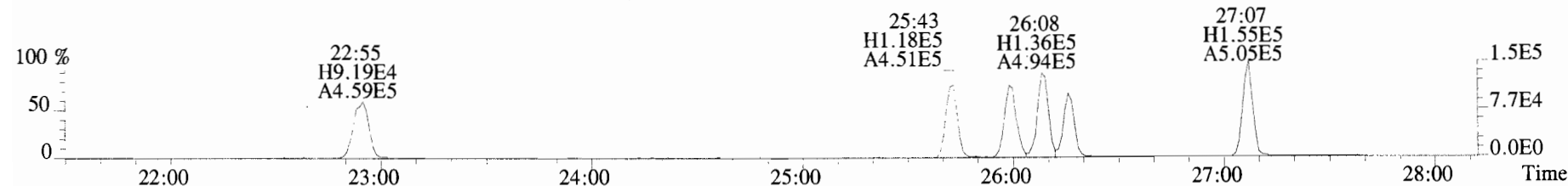
File:191024D2 #1-493 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
321.8936



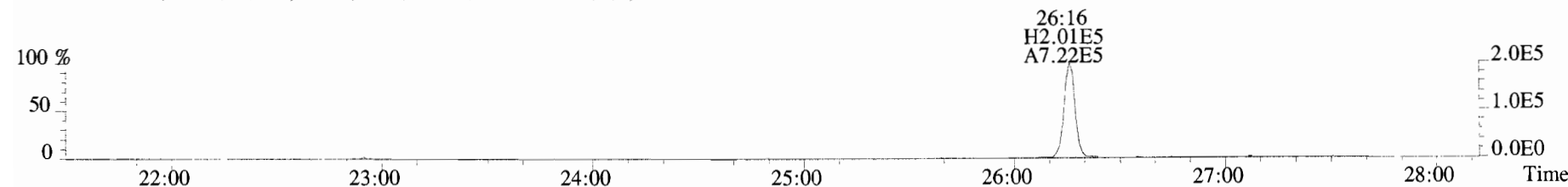
File:191024D2 #1-493 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



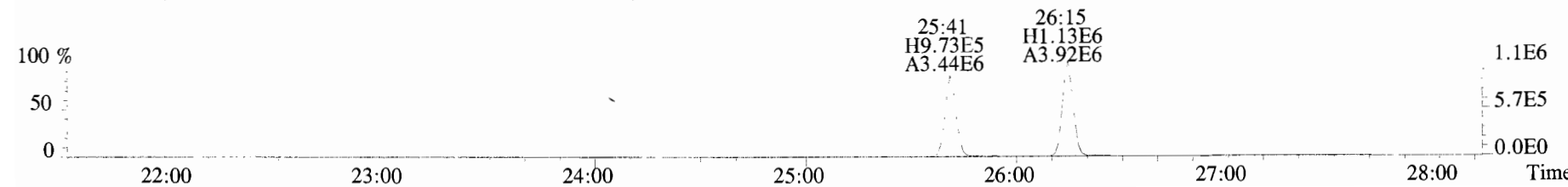
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



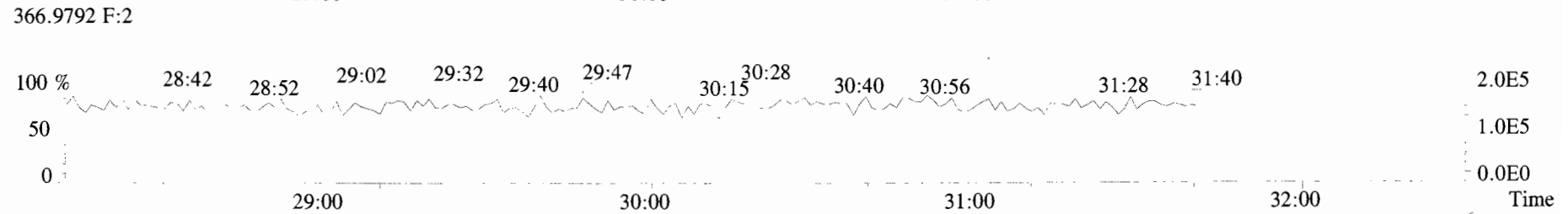
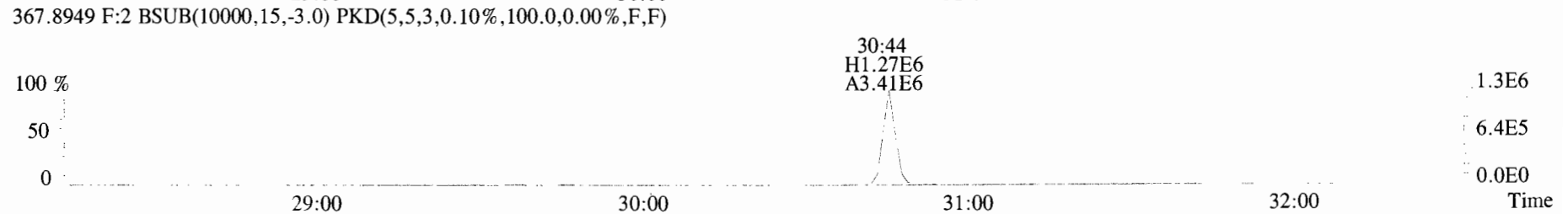
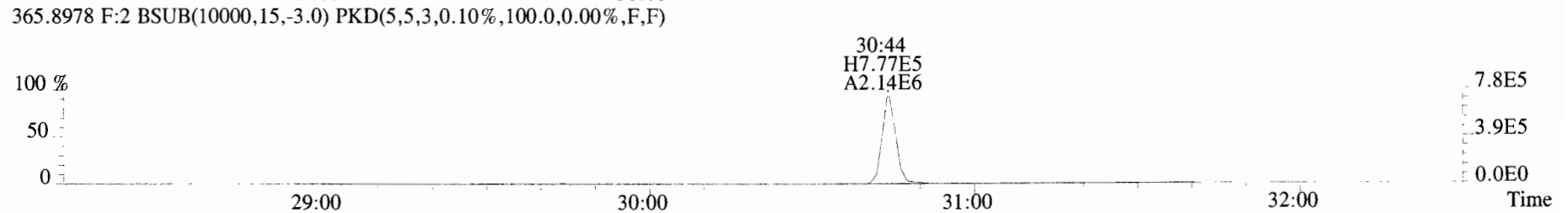
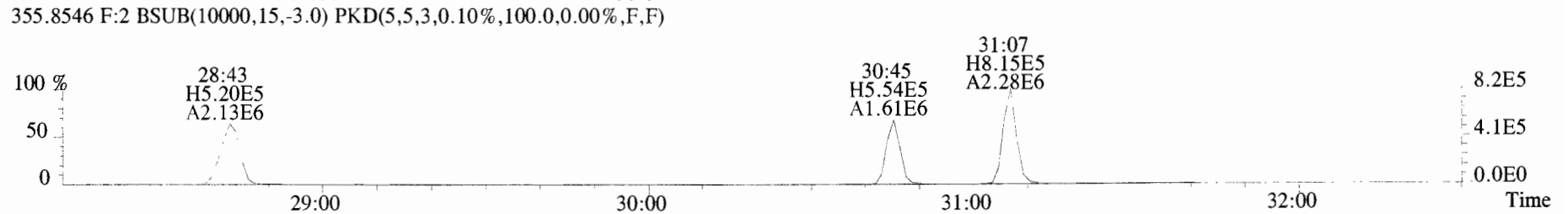
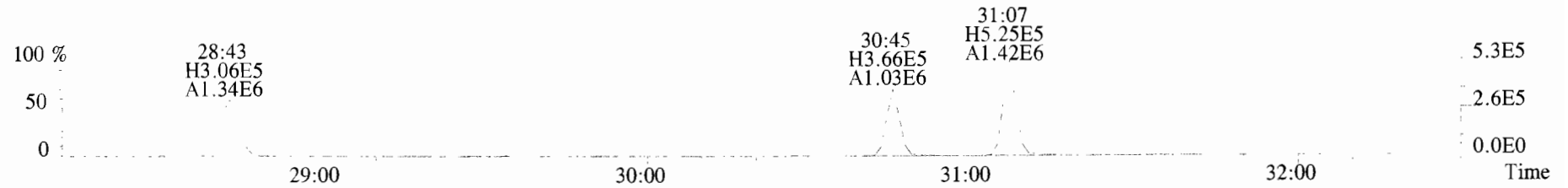
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



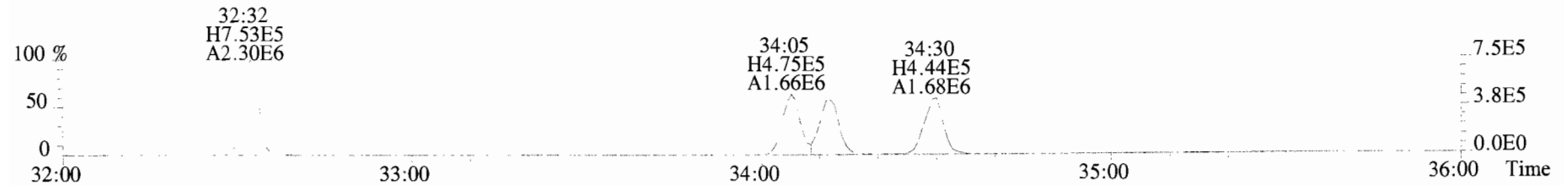
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



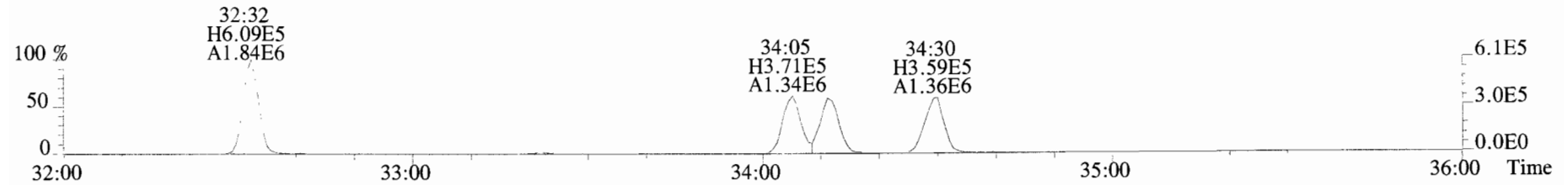
File:191024D2 #1-211 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



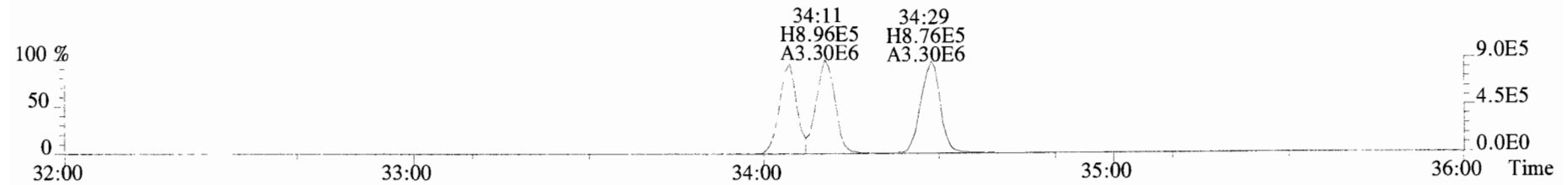
File:191024D2 #1-384 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



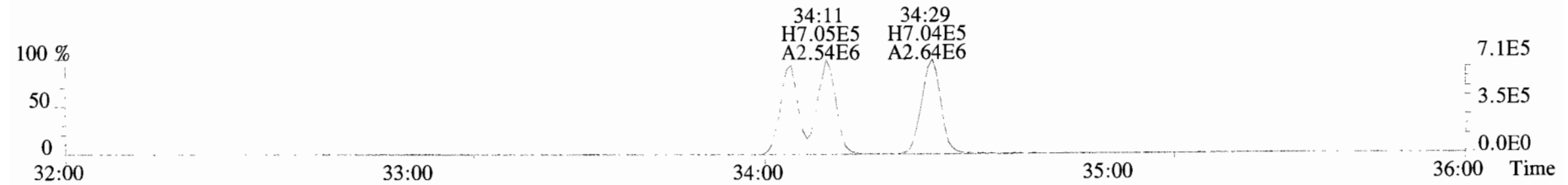
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



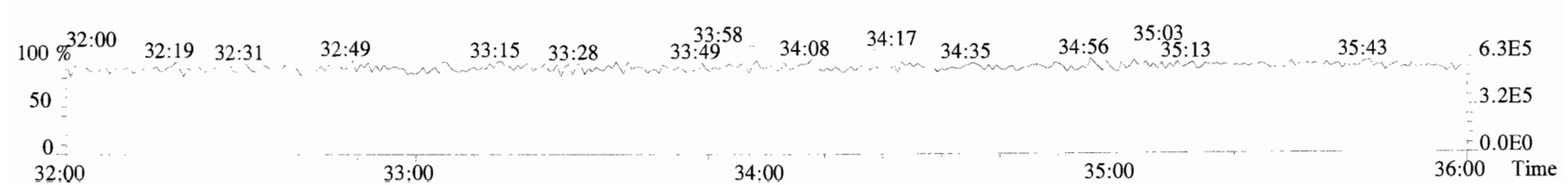
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



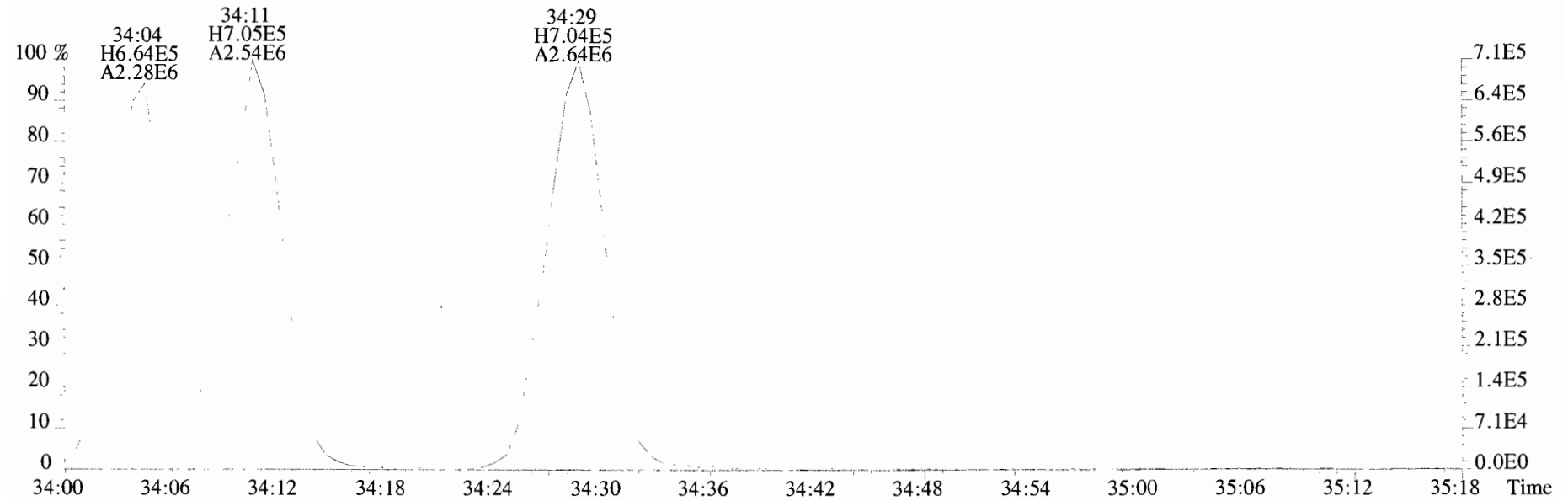
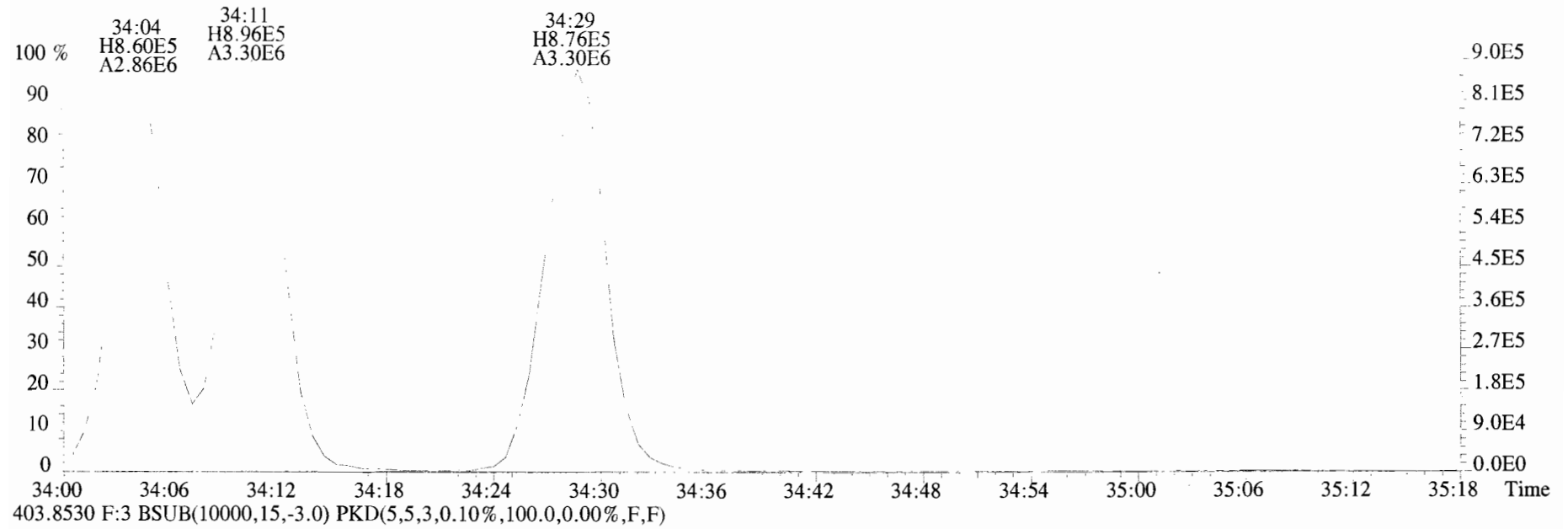
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



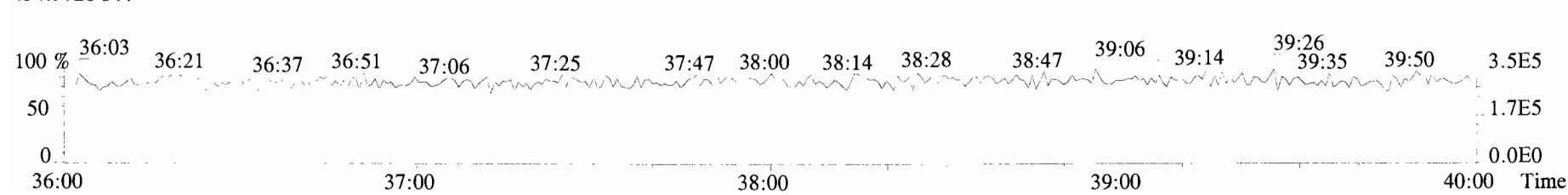
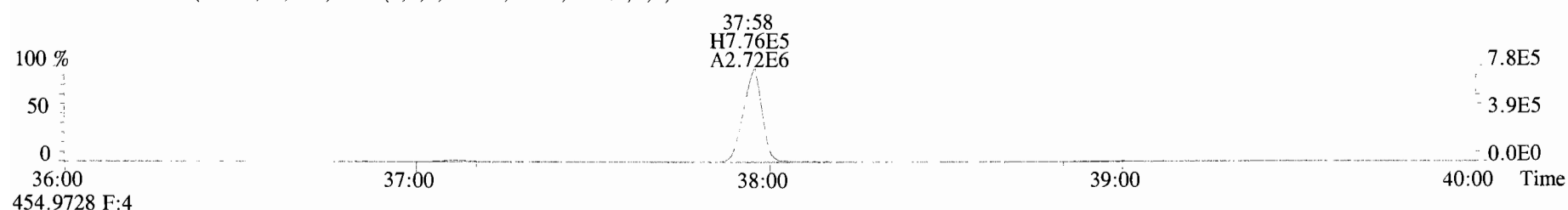
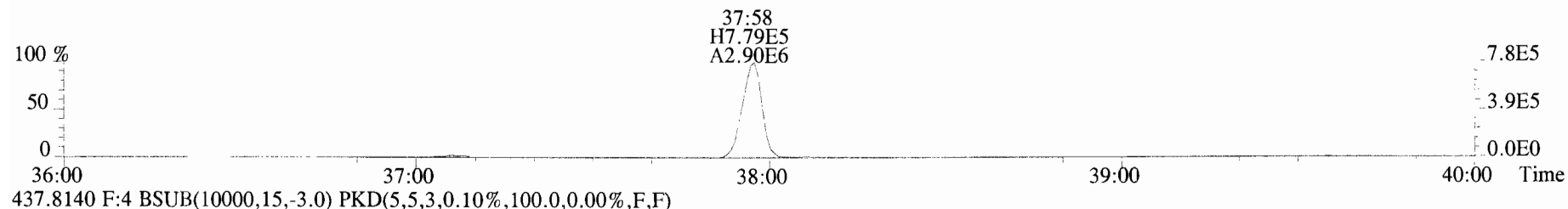
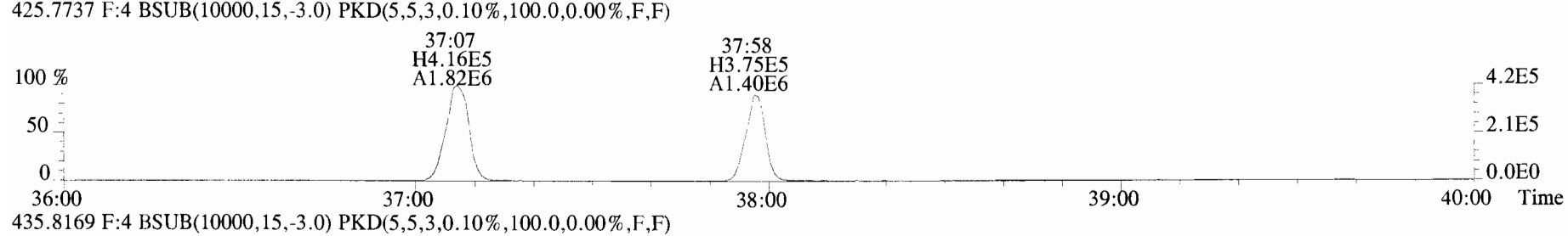
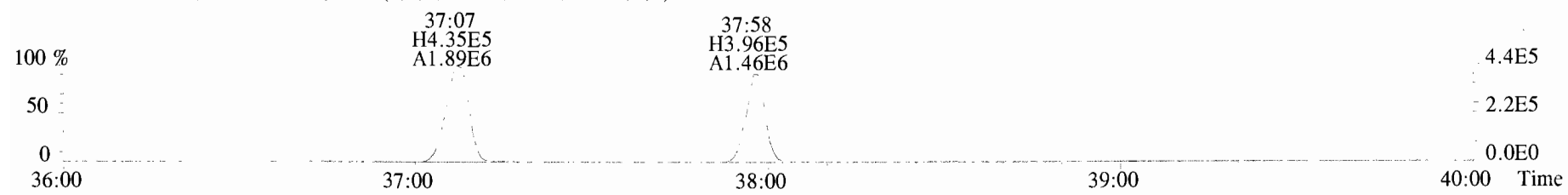
392.9760 F:3



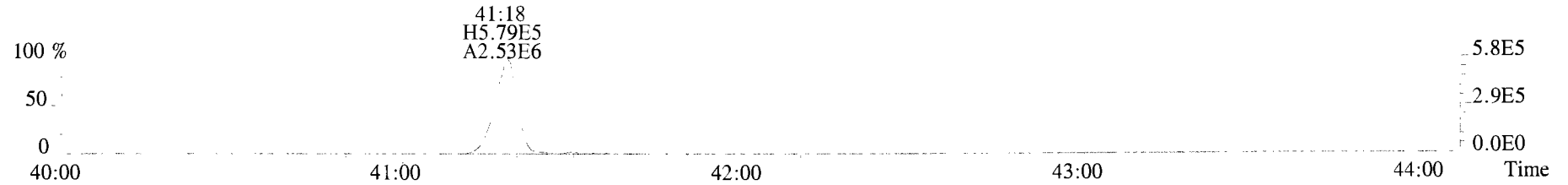
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Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



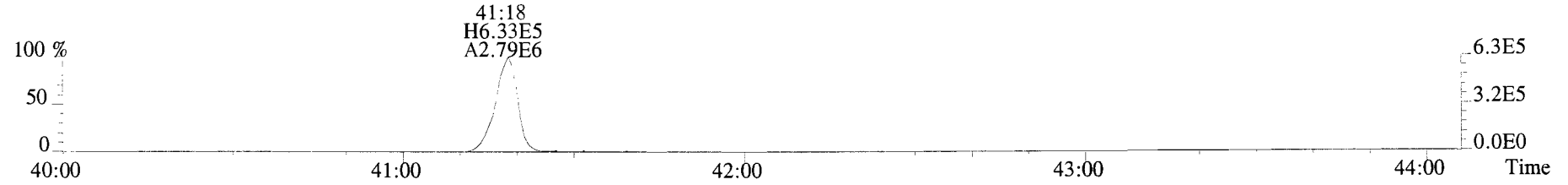
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Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



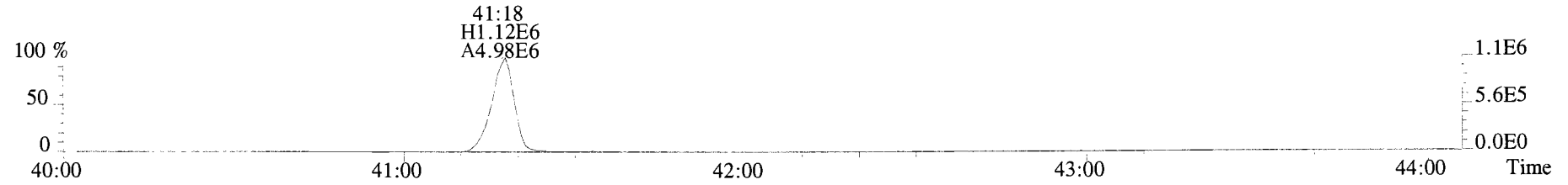
File:191024D2 #1-431 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



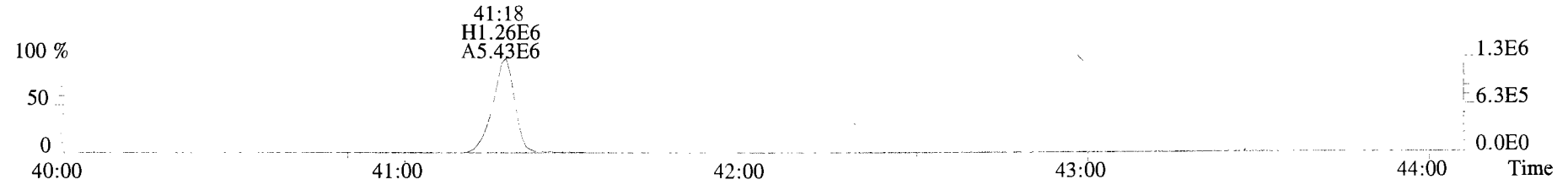
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



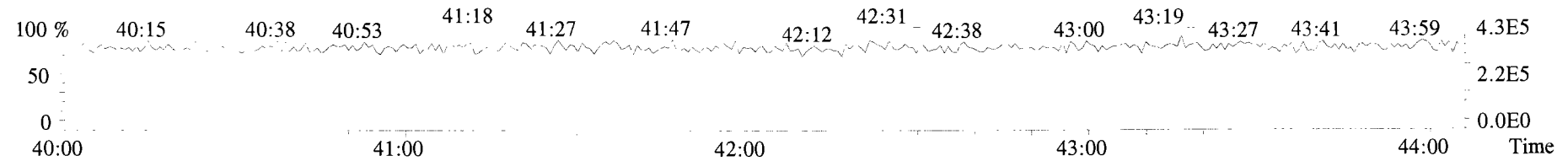
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



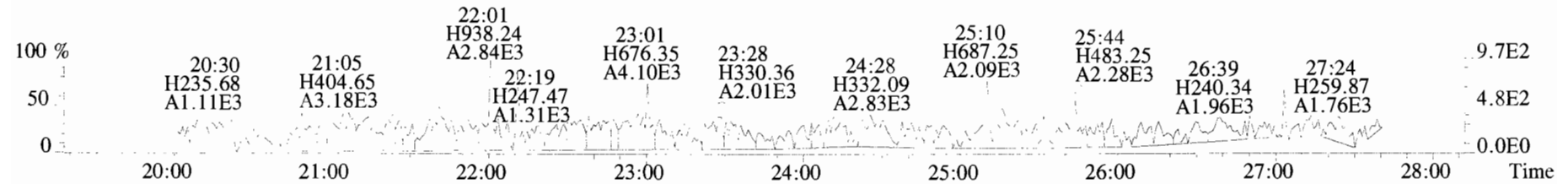
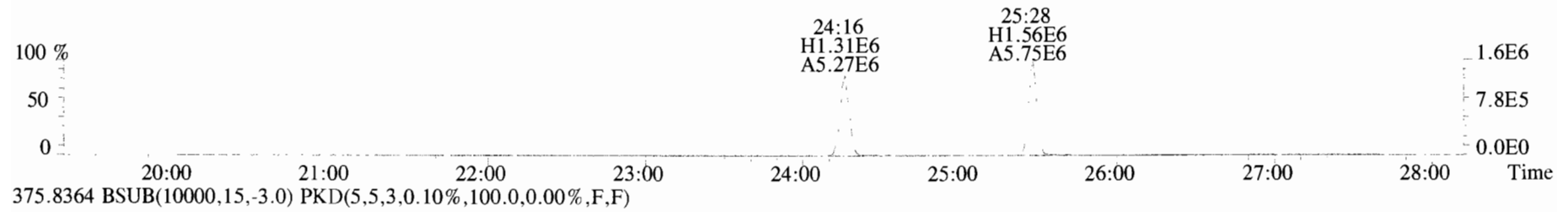
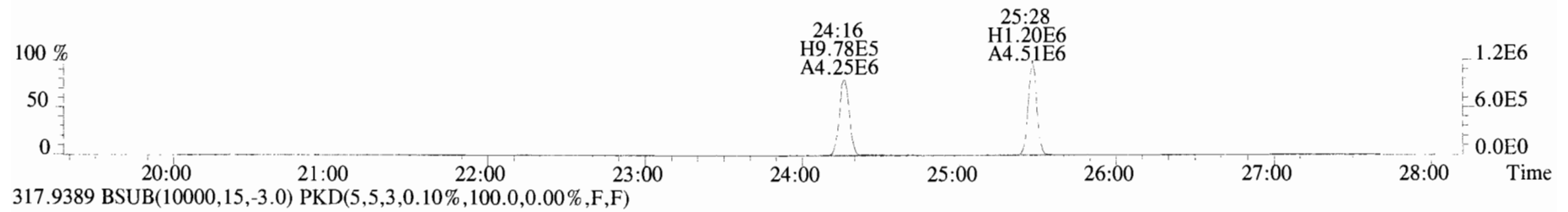
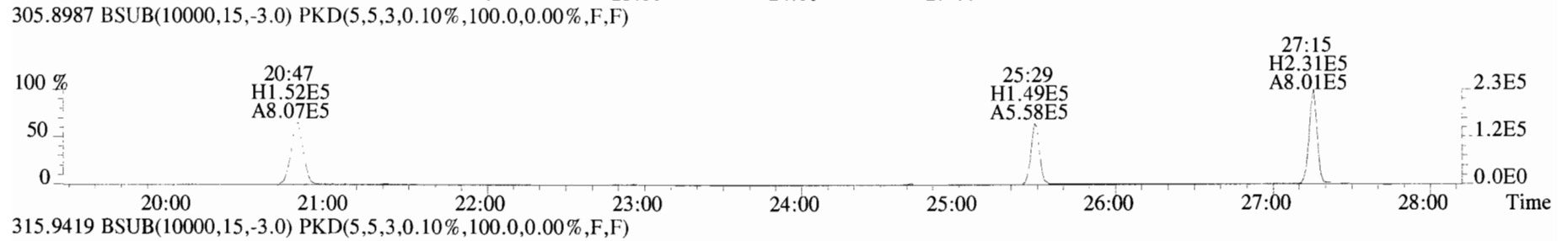
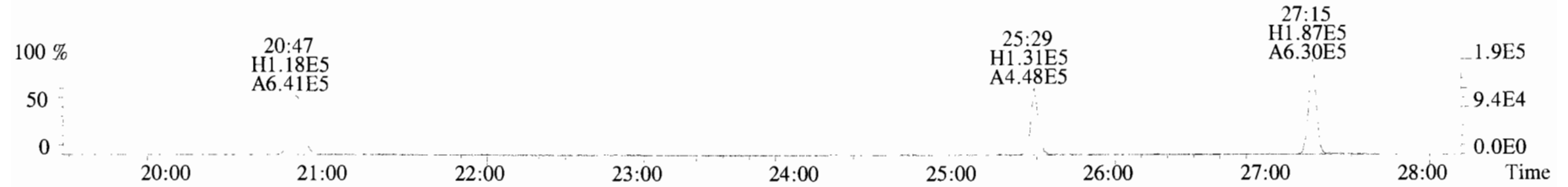
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



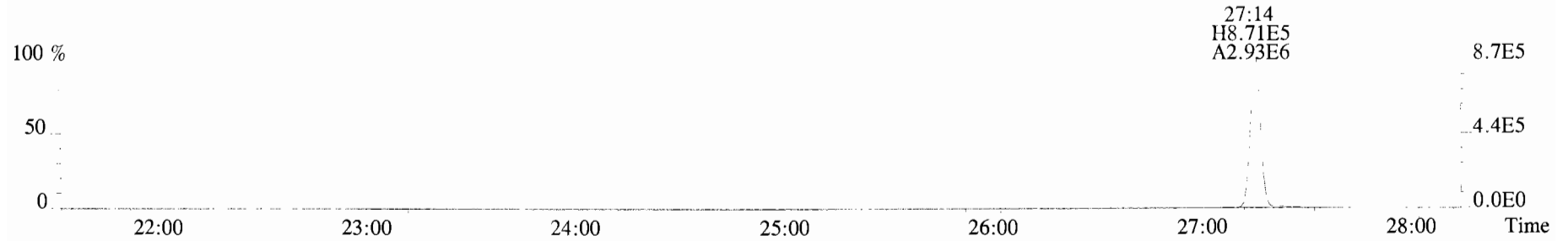
454.9728 F:5



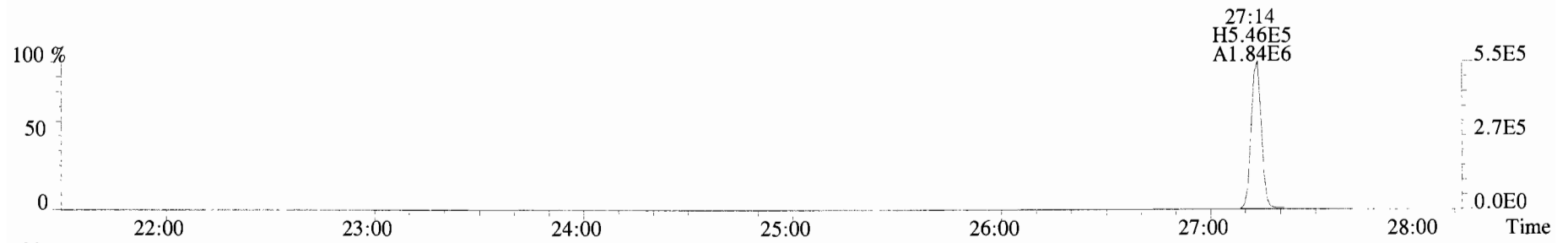
File:191024D2 #1-493 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



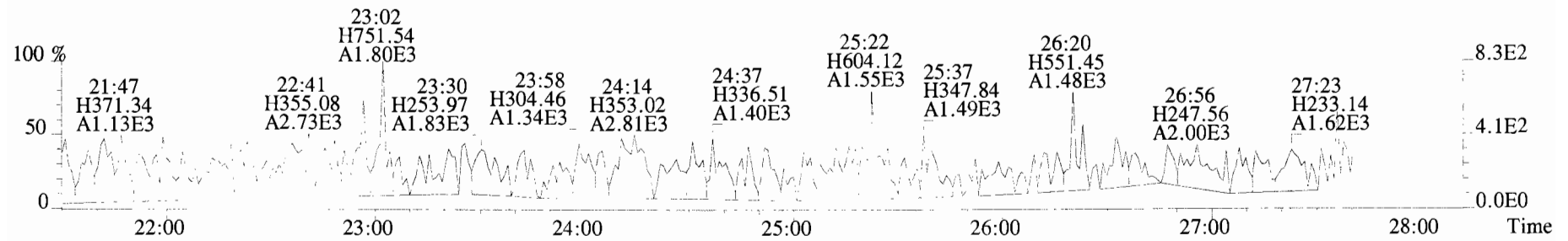
File:191024D2 #1-493 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



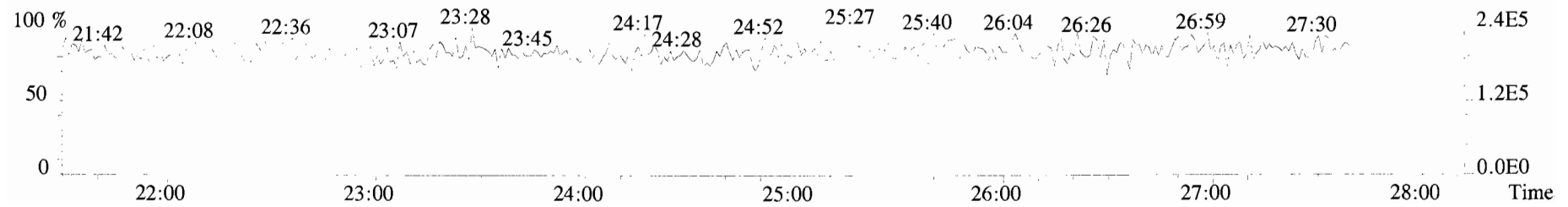
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



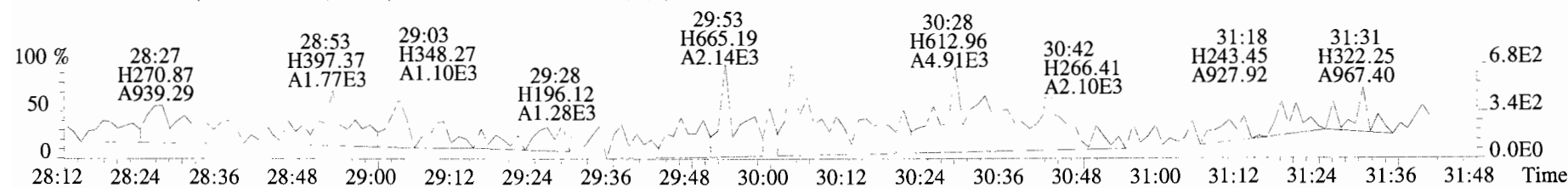
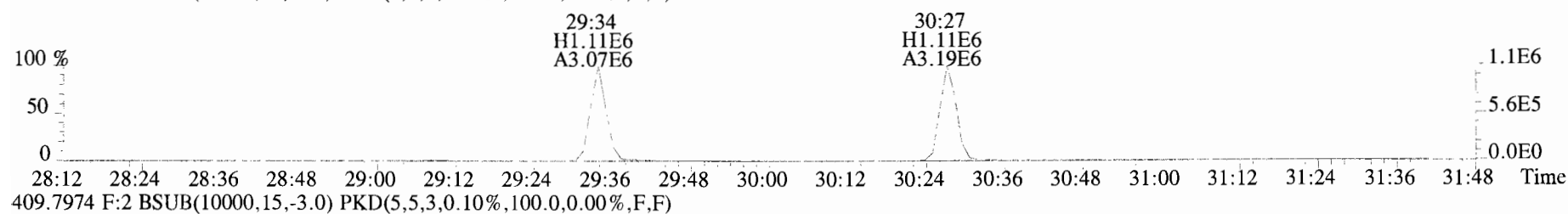
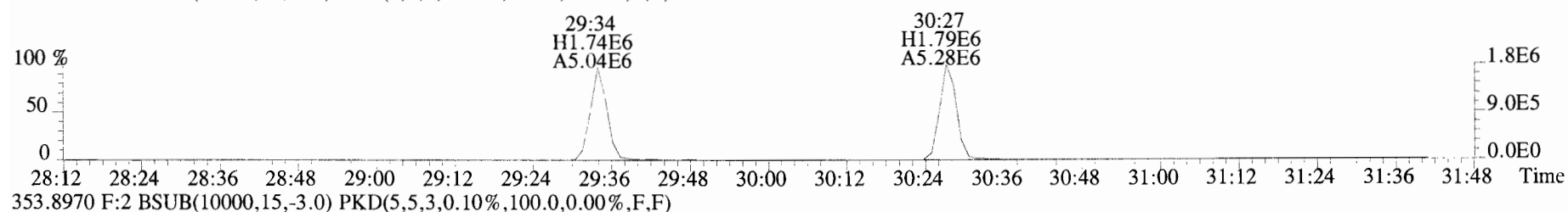
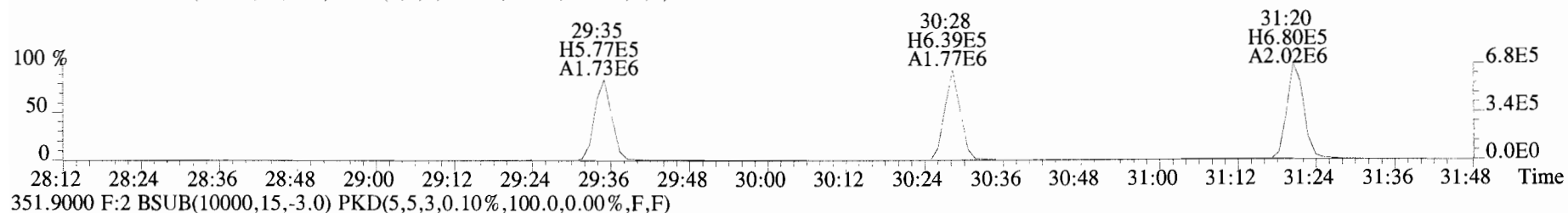
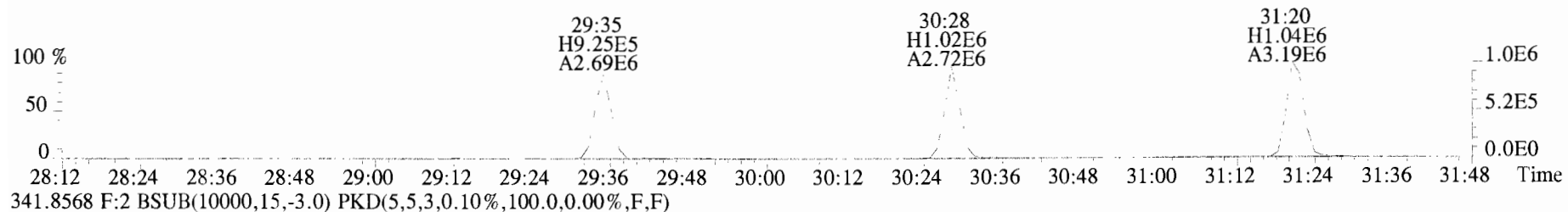
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



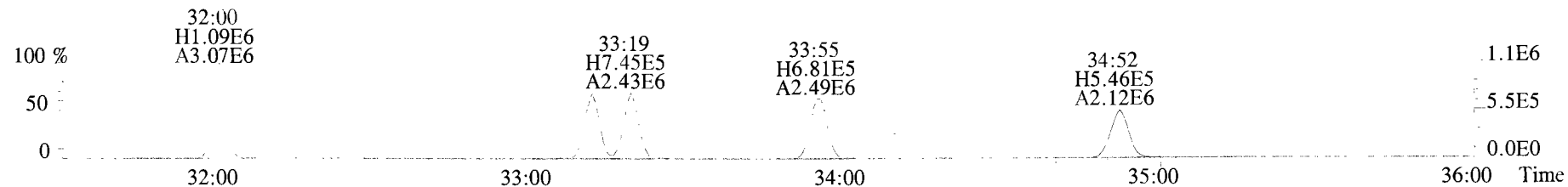
316.9824



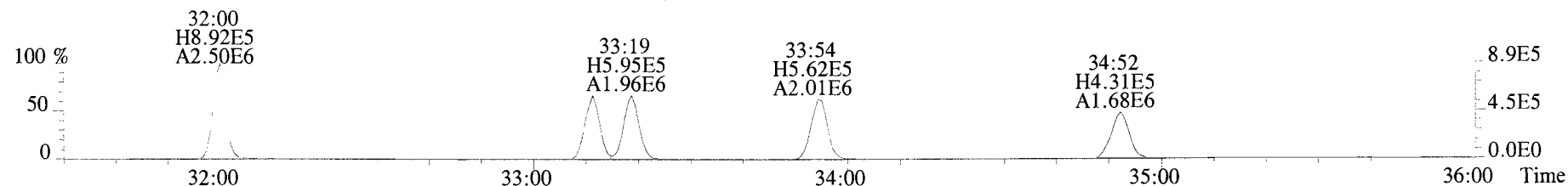
File:191024D2 #1-211 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



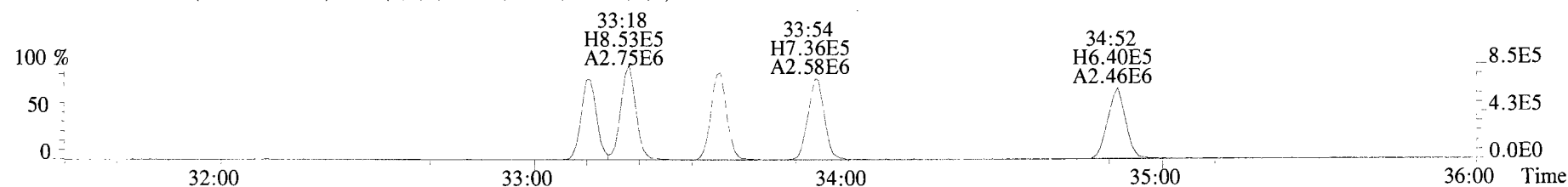
File:191024D2 #1-384 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



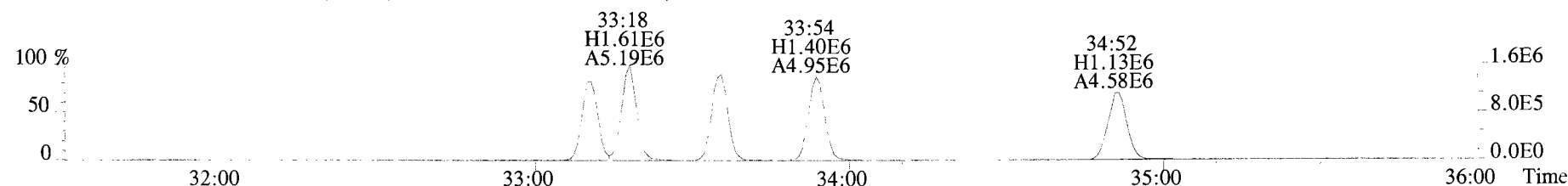
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



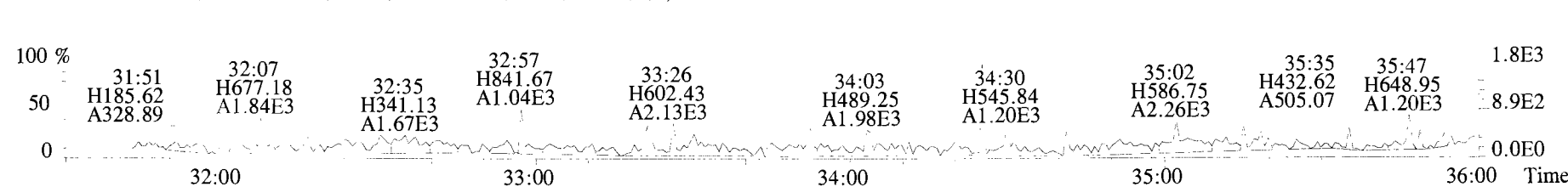
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



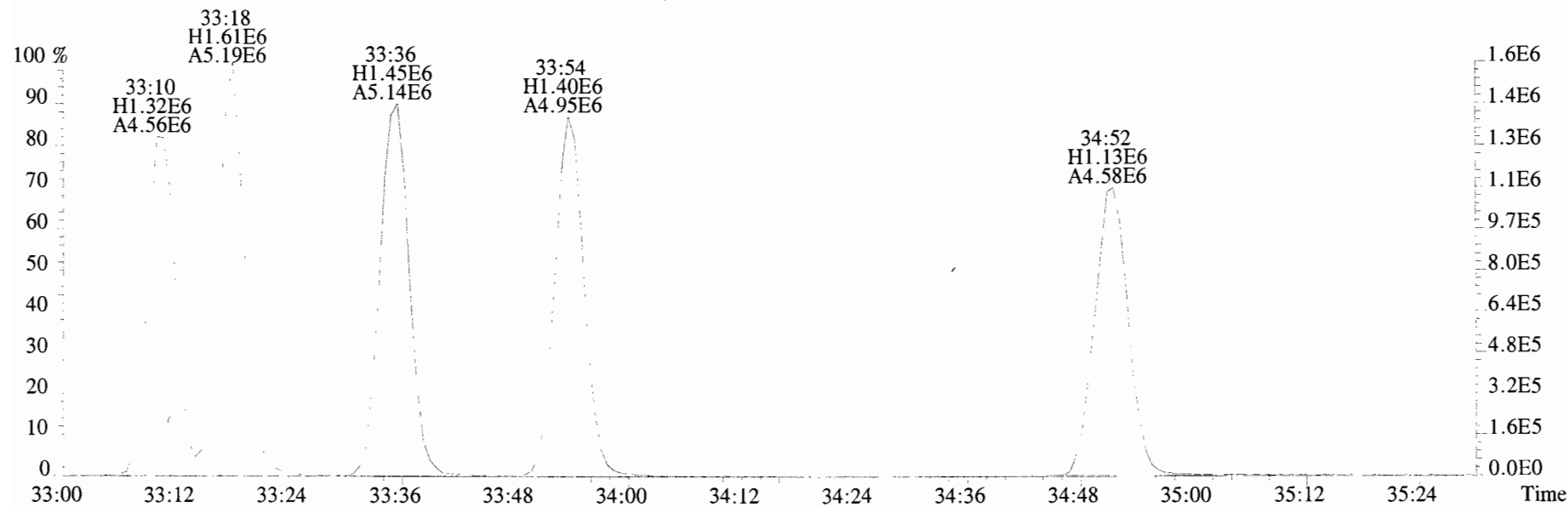
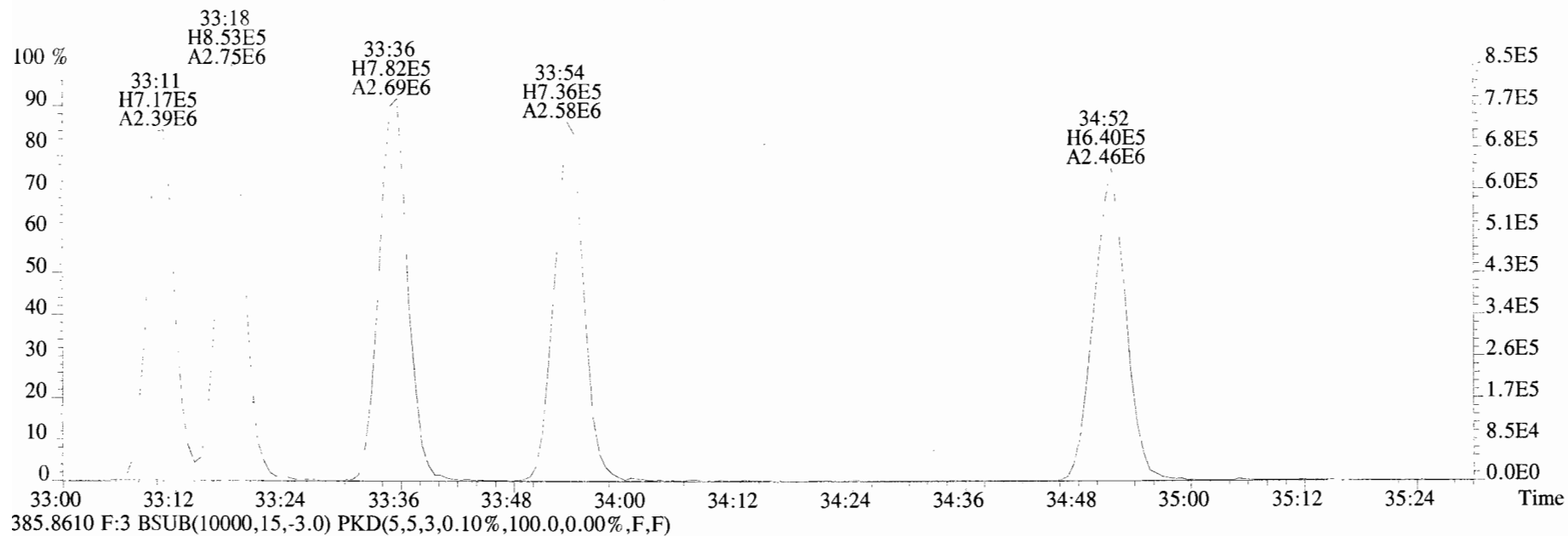
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



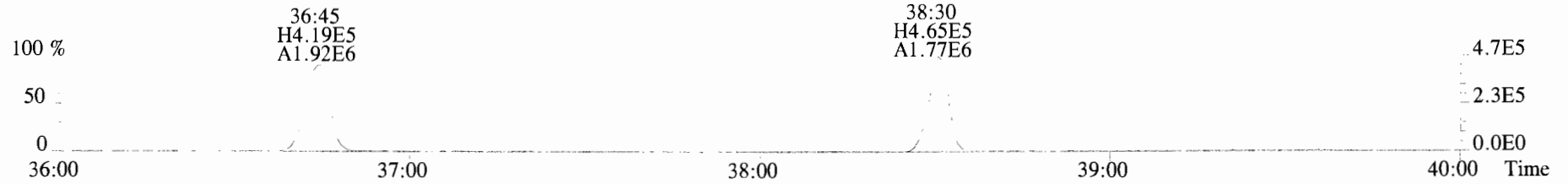
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



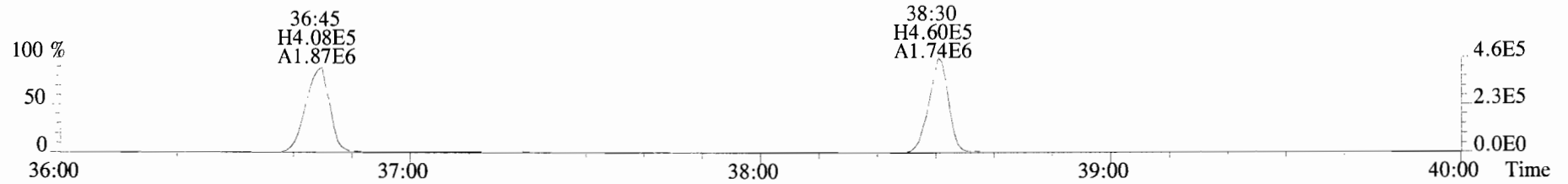
File:191024D2 #1-384 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



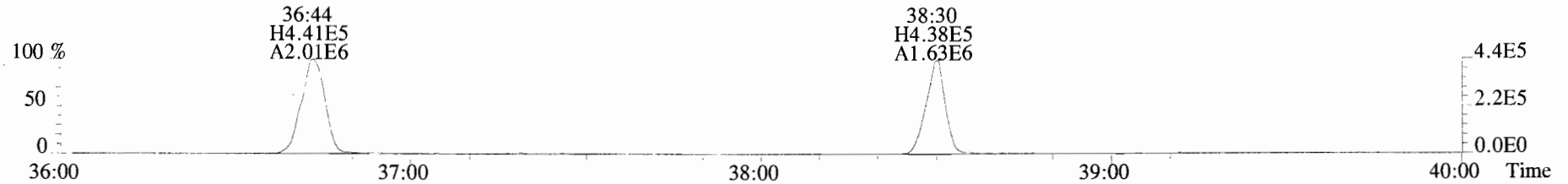
File:191024D2 #1-356 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



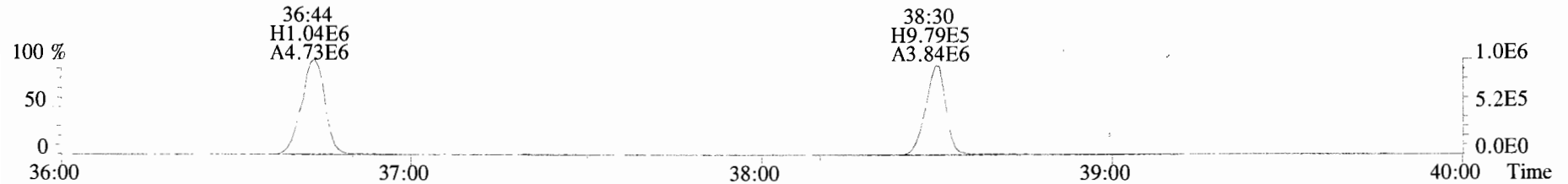
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



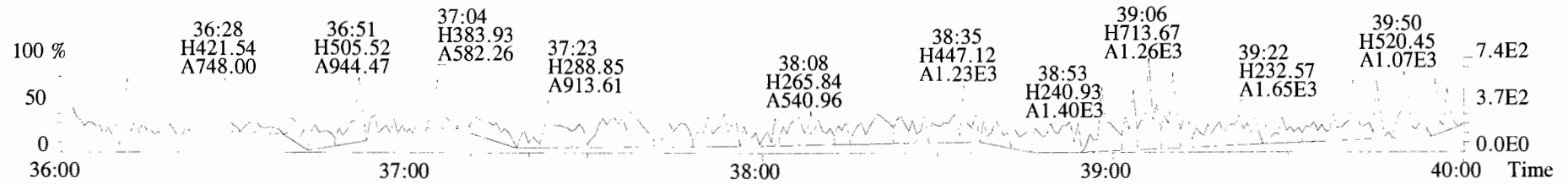
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



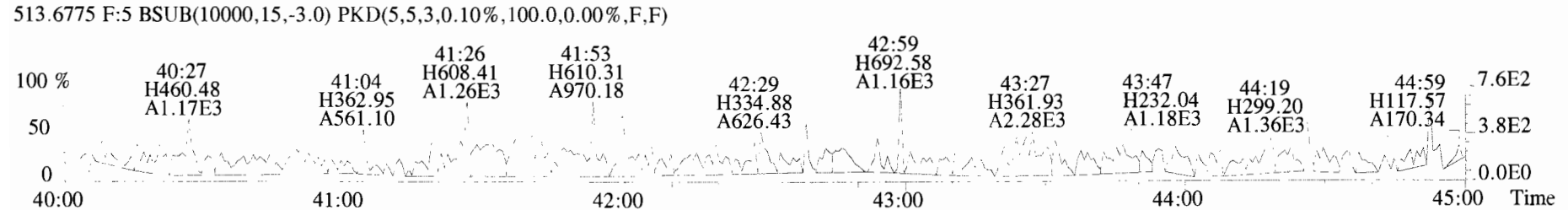
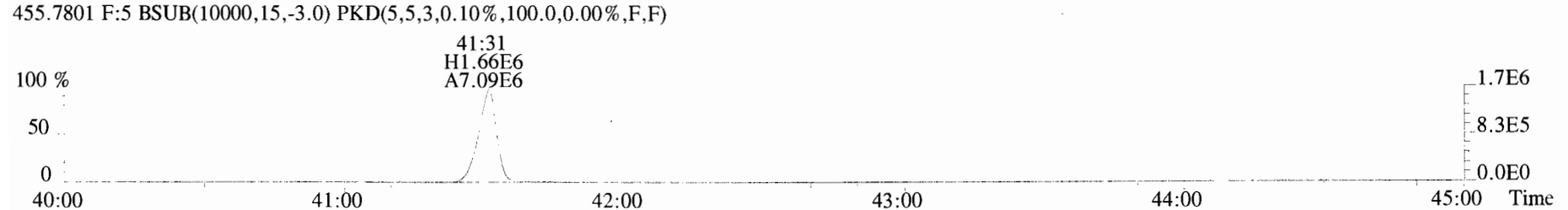
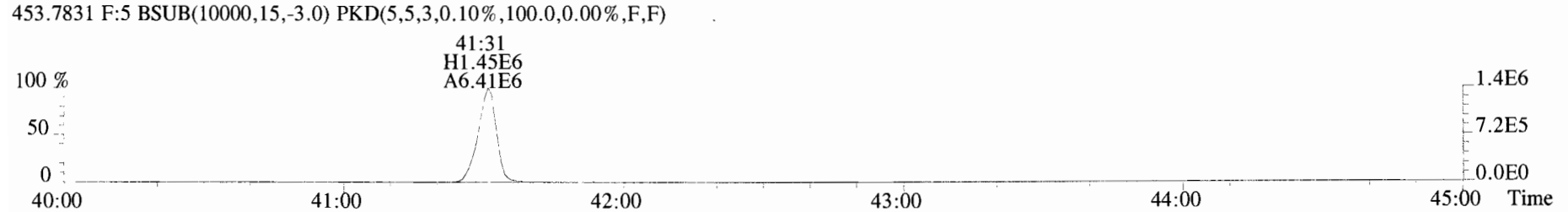
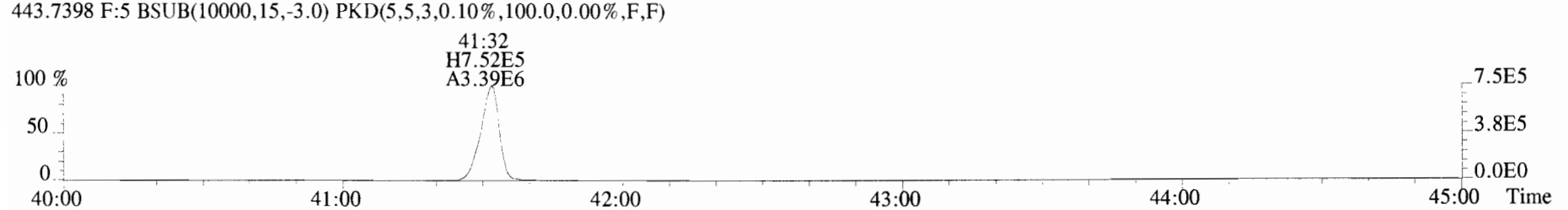
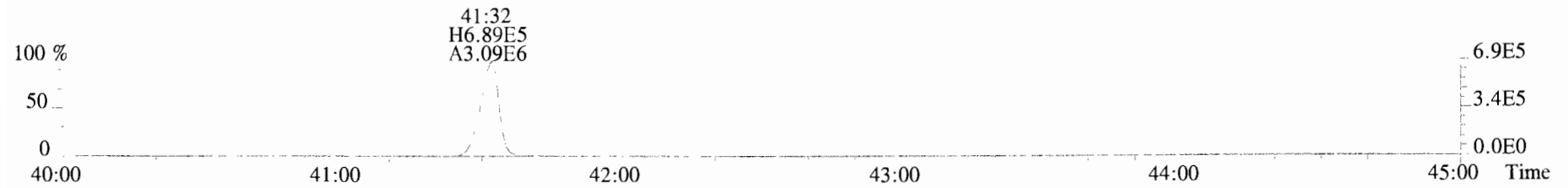
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

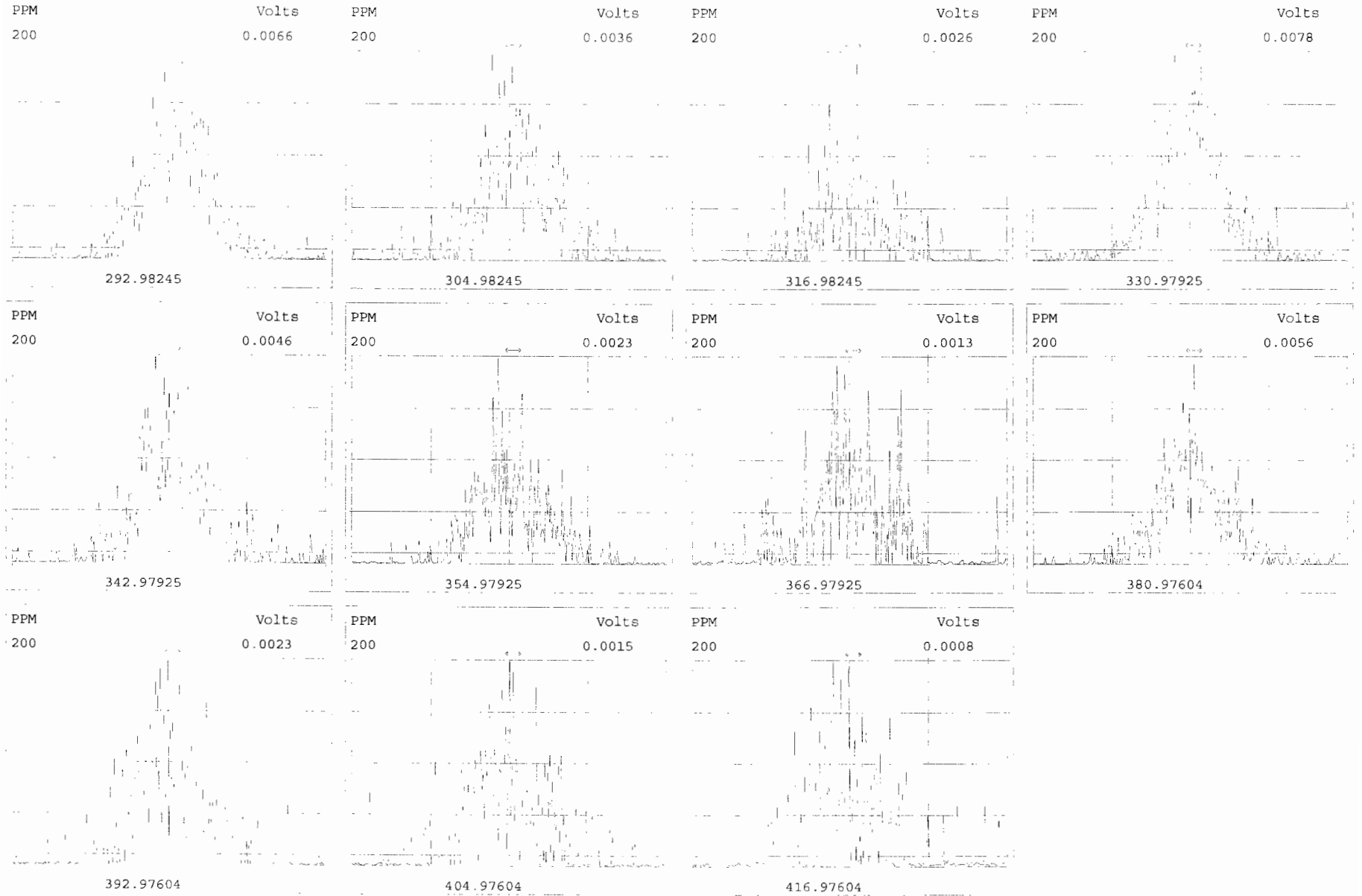


File:191024D2 #1-431 Acq:25-OCT-2019 03:48:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191024D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



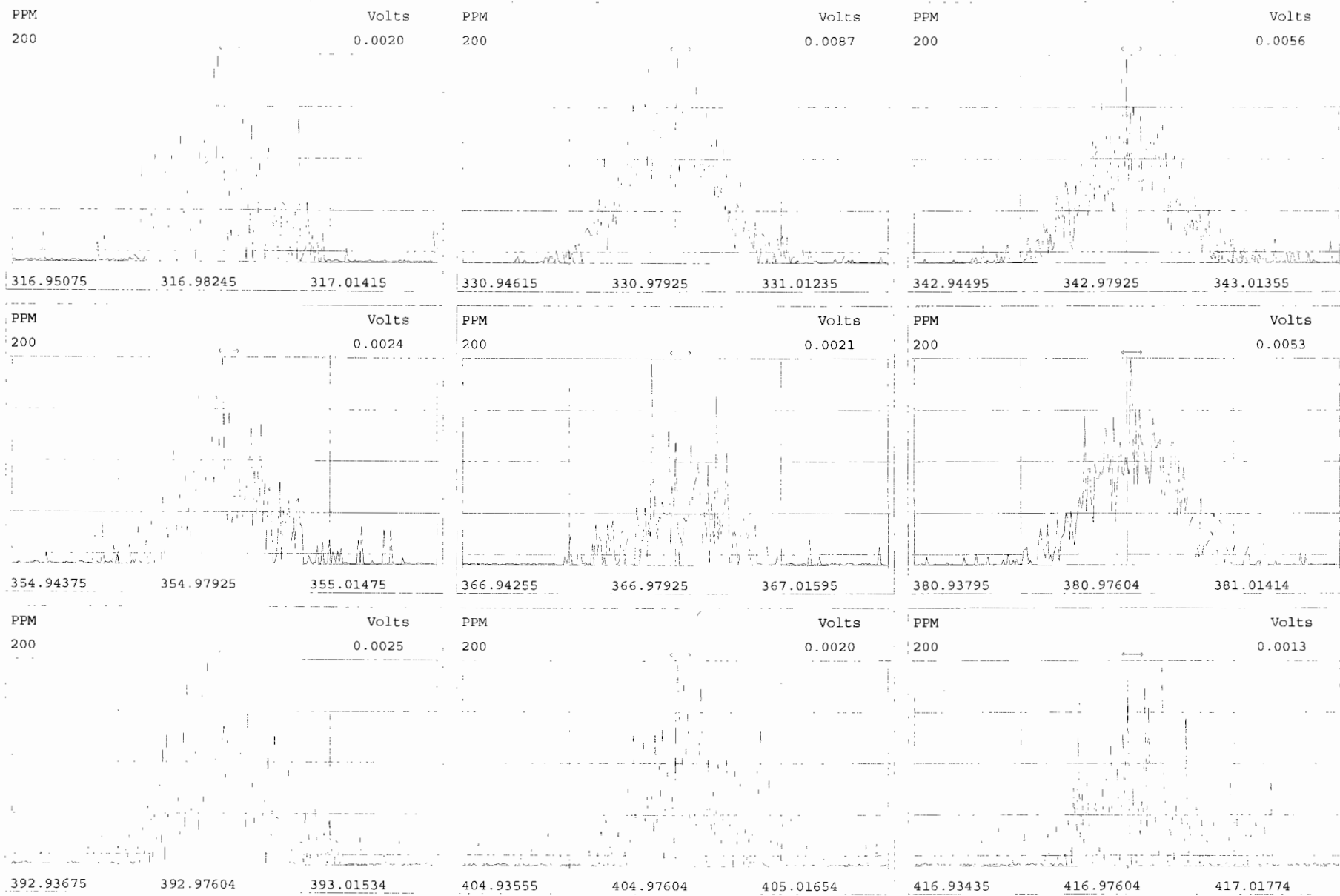
Peak Locate Examination:25-OCT-2019:15:57 File:RES_CHECK

Experiment:OCLD_DB5 Function:1 Reference:PFK



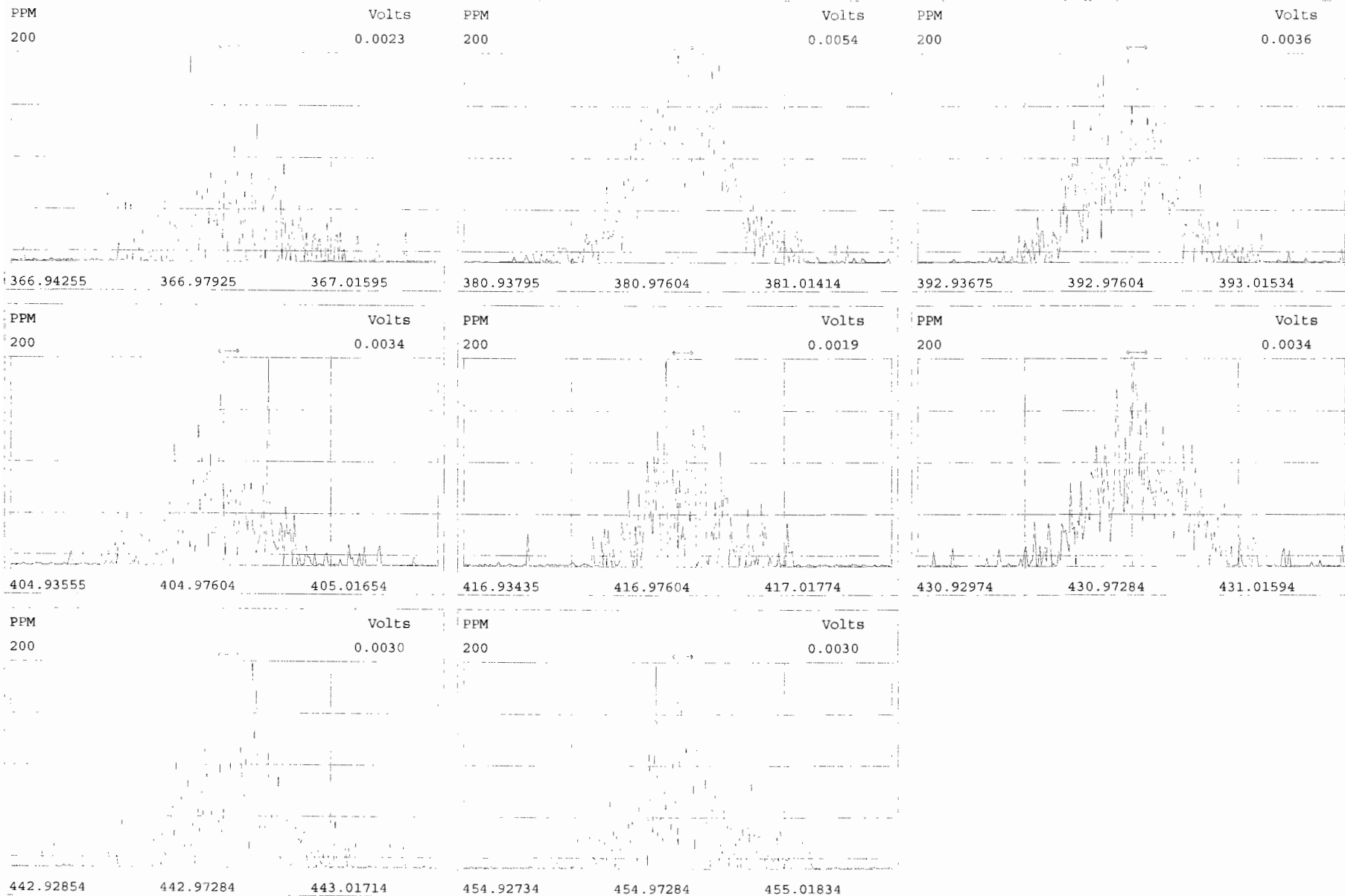
Peak Locate Examination: 25 OCT-2019:15:58 File: RES_CHECK

Experiment: OCDD_DB5 Function: 2 Reference: PPK



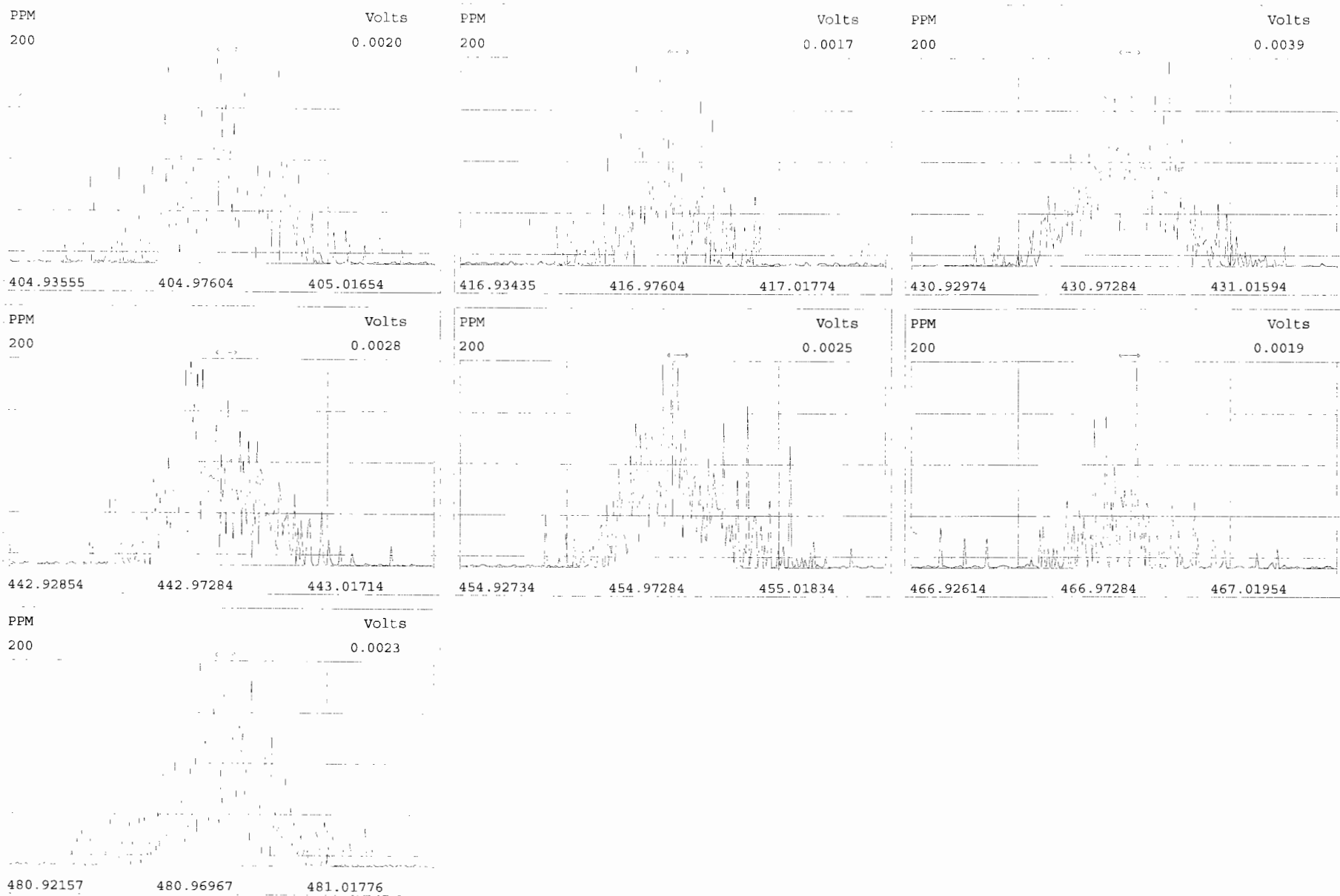
Peak Locate Examination:25-OCT-2019:15:59 File:RES_CHECK

Experiment:OCDD_DB5 Function:3 Reference:PFK



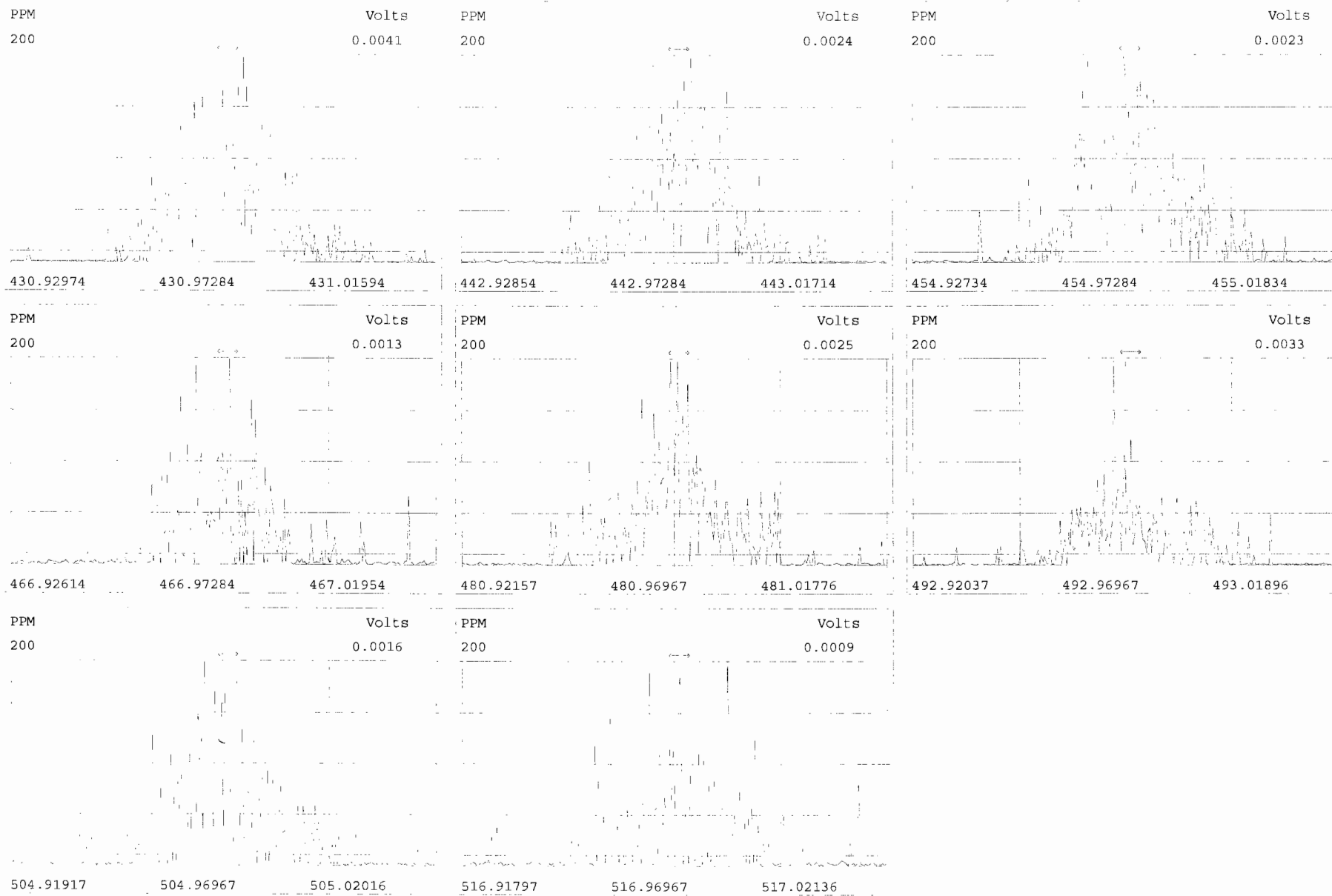
Peak Locate Examination:25-OCT-2019:16:00 File:RES_CHECK

Experiment:OCDD_DB5 Function:4 Reference:PFK



Peak Locate Examination: 25-OCT-2019:16:01 File: RES_CHECK

Experiment: OCDD_DB5 Function: 5 Reference: PFK



HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calibration ID: ST191029D1-1

Reviewed By: AT 10/30/19

Initials & Date

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Concentrations within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TCDD/TCDF Valleys <25%	<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?	<u>DB</u>	<input type="checkbox"/>
<u>Run Log:</u>		
- 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
- Bottle position verified?	<u>DB</u>	<input type="checkbox"/>

Mass resolution \geq

5k 6-8K 8K 10K
 1614 1699 429 1613/1668/8280

Intergrated peaks display correctly?

GC Break <20%

NA

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours

NA

Comments:

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory

Episode No.:

CCAL ID: ST191029D1-1

Contract No.:

SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

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	0.76	0.65-0.89	y	10.8	7.8 - 12.9
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	51.0	8.2 - 12.3 (4) 39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	50.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	50.3	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.20	1.05-1.43	y	51.5	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	48.5	43.0 - 58.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	103	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	y	9.21	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	52.2	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	50.9	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	47.9	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	47.2	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	48.9	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.22	1.05-1.43	y	48.4	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.99	0.88-1.20	y	46.7	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	y	46.4	43.0 - 58.0
OCDF	M+2/M+4	0.90	0.76-1.02	y	94.9	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: DBDate: 10/29/19

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

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	0.78	0.65-0.89	y	112	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	103	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	110	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	98.2	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	y	99.8	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	110	72.0 - 138.0
13C-OCDD	M/M+2	0.90	0.76-1.02	y	218	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.82	0.65-0.89	y	103	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	106	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	106	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	106	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	101	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	103	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	104	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.44	0.37-0.51	y	103	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	110	77.0 - 129.0
13C-OCDF	M+2/M+4	0.87	0.76-1.02	y	223	96.0 - 415.0
CLEANUP STANDARD (3) 37Cl-2,3,7,8-TCDD					10.2	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: DB

Date: 10/29/19

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME		RRT	QC LIMITS (1)
	REFERENCE			
2,3,7,8-TCDD	13C-2,3,7,8-TCDD		1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD		1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF		1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF		1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF		1.000	0.999-1.002

LABELED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.198	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	1.152	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.187	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: DB

Date: 10/29/19

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

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	1.000	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	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	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

LABELLED 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	1.038	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	1.018	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.027	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.093	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.146	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.130	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.229	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.236	1.091-1.371

Analyst: DB

Date: 10/29/19

Client ID: 1613 CS? 19C2204
Lab ID: ST191029D1-1

Filename: ^91029D1 S:1 Acq:29-OCT-19 10:15:38
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000

ConCal: ST191029D1-1
EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	8.83e+05	0.76 y	0.91	26:14	10.833		* 2.5		*	Total Tetra-Dioxins	73.5	74.3	*	*	
1,2,3,7,8-PeCDD	3.04e+06	0.61 y	0.90	30:45	50.988		* 2.5		*	Total Penta-Dioxins	193	194	*	*	
1,2,3,4,7,8-HxCDD	3.04e+06	1.21 y	1.10	34:04	50.856		* 2.5		*	Total Hexa-Dioxins	227	227	*	*	
1,2,3,6,7,8-HxCDD	3.04e+06	1.21 y	0.94	34:11	50.256		* 2.5		*	Total Hepta-Dioxins	115	116	*	*	
1,2,3,7,8,9-HxCDD	3.06e+06	1.20 y	0.96	34:28	51.544		* 2.5		*	Total Tetra-Furans	34.7	35.8	*	*	
1,2,3,4,6,7,8-HpCDD	2.61e+06	1.05 y	0.98	37:57	48.519		* 2.5		*	Total Penta-Furans	229.18	229.26	*	*	
OCDD	4.78e+06	0.90 y	0.96	41:16	102.73		* 2.5		*	Total Hexa-Furans	256	256	*	*	
										Total Hepta-Furans	93.9	95.5	*	*	
2,3,7,8-TCDF	9.94e+05	0.79 y	0.95	25:27	9.2148		* 2.5		*						
1,2,3,7,8-PeCDF	4.83e+06	1.58 y	0.96	29:34	52.152		* 2.5		*						
2,3,4,7,8-PeCDF	4.94e+06	1.56 y	1.01	30:28	50.886		* 2.5		*						
1,2,3,4,7,8-HxCDF	3.81e+06	1.23 y	1.18	33:10	47.883		* 2.5		*						
1,2,3,6,7,8-HxCDF	4.06e+06	1.26 y	1.07	33:18	47.222		* 2.5		*						
2,3,4,6,7,8-HxCDF	4.10e+06	1.23 y	1.11	33:54	48.936		* 2.5		*						
1,2,3,7,8,9-HxCDF	3.41e+06	1.22 y	1.06	34:51	48.406		* 2.5		*						
1,2,3,4,6,7,8-HpCDF	3.15e+06	0.99 y	1.13	36:42	46.665		* 2.5		*						
1,2,3,4,7,8,9-HpCDF	2.90e+06	1.02 y	1.28	38:30	46.357		* 2.5		*						
OCDF	5.29e+06	0.90 y	0.95	41:30	94.854		* 2.5		*						
										Rec	Qual				
IS 13C-2,3,7,8-TCDD	9.01e+06	0.78 y	1.10	26:13	112.45					112					
IS 13C-1,2,3,7,8-PeCDD	6.61e+06	0.61 y	0.88	30:44	102.57					103					
IS 13C-1,2,3,4,7,8-HxCDD	5.43e+06	1.31 y	0.64	34:03	110.27					110					
IS 13C-1,2,3,6,7,8-HxCDD	6.44e+06	1.31 y	0.86	34:10	98.225					98.2					
IS 13C-1,2,3,7,8,9-HxCDD	6.17e+06	1.27 y	0.81	34:28	99.839					99.8					
IS 13C-1,2,3,4,6,7,8-HpCDD	5.50e+06	1.07 y	0.65	37:56	109.71					110					
IS 13C-OCDD	9.71e+06	0.90 y	0.58	41:16	218.37					109					
IS 13C-2,3,7,8-TCDF	1.14e+07	0.82 y	1.03	25:26	103.27					103					
IS 13C-1,2,3,7,8-PeCDF	9.65e+06	1.57 y	0.85	29:33	106.34					106					
IS 13C-2,3,4,7,8-PeCDF	9.56e+06	1.56 y	0.85	30:27	106.27					106					
IS 13C-1,2,3,4,7,8-HxCDF	6.76e+06	0.50 y	0.83	33:09	106.08					106					
IS 13C-1,2,3,6,7,8-HxCDF	8.04e+06	0.51 y	1.03	33:17	101.38					101					
IS 13C-2,3,4,6,7,8-HxCDF	7.52e+06	0.51 y	0.95	33:53	102.86					103					
IS 13C-1,2,3,7,8,9-HxCDF	6.63e+06	0.51 y	0.83	34:50	104.48					104					
IS 13C-1,2,3,4,6,7,8-HpCDF	6.00e+06	0.44 y	0.76	36:42	103.24					103					
IS 13C-1,2,3,4,7,8,9-HpCDF	4.88e+06	0.45 y	0.58	38:29	109.51					110					
IS 13C-OCDF	1.18e+07	0.87 y	0.69	41:29	222.81					111					
C/Up 37Cl-2,3,7,8-TCDD	8.97e+05		1.20	26:14	10.243					102					
RS/RT 13C-1,2,3,4-TCDD	7.31e+06	0.77 y	1.00	25:39	100.00						Integrations	Reviewed			
RS 13C-1,2,3,4-TCDF	1.06e+07	0.81 y	1.00	24:13	100.00						by	by			
RS/RT 13C-1,2,3,4,6,9-HxCDF	7.67e+06	0.52 y	1.00	33:34	100.00						Analyst: <u>DB</u>	Analyst: <u>CT</u>			

Date: 10/29/19 Date: 10/30/19

Vista Analytical Laboratory - Injection Log Run file: 191029D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191029D1	1	ST191029D1-1	DB	29-OCT-19	10:15:38	ST191029D1-1	NA
191029D1	2	B9J0132-BS1	DB	29-OCT-19	11:03:33	ST191029D1-1	NA
191029D1	3	B9J0286-BS1	DB	29-OCT-19	11:51:28	ST191029D1-1	NA
191029D1	4	B9J0253-BS1	DB	29-OCT-19	12:39:19	ST191029D1-1	NA
191029D1	5	SOLVENT BLANK	DB	29-OCT-19	13:27:14	ST191029D1-1	NA
191029D1	6	B9J0286-BLK1	DB	29-OCT-19	14:15:00	ST191029D1-1	NA
191029D1	7	B9J0253-BLK1	DB	29-OCT-19	15:02:56	ST191029D1-1	NA
191029D1	8	1903259-01RE1	DB	29-OCT-19	15:50:41	ST191029D1-1	NA
191029D1	9	1903259-03RE1	DB	29-OCT-19	16:38:36	ST191029D1-1	NA
191029D1	10	1903566-01RE1	DB	29-OCT-19	17:26:30	ST191029D1-1	NA
191029D1	11	1903285-01@5X	DB	29-OCT-19	18:14:19	ST191029D1-1	NA
191029D1	12	1903285-02@5X	DB	29-OCT-19	19:02:03	ST191029D1-1	NA
191029D1	13	1903285-03@5X	DB	29-OCT-19	19:49:46	ST191029D1-1	NA
191029D1	14	1903420-11	DB	29-OCT-19	20:37:30	ST191029D1-1	NA
191029D1	15	1903460-08RE1	DB	29-OCT-19	21:25:15	ST191029D1-1	NA

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: 10-9-19

RT Window Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

ZB-5MS IS Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

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)	22:51	1,3,6,8-TCDF (F)	20:43
1,2,8,9-TCDD (L)	27:05	1,2,8,9-TCDF (L)	27:14
1,2,4,7,9-PeCDD (F)	28:42	1,3,4,6,8-PeCDF (F)	27:12
1,2,3,8,9-PeCDD (L)	31:06	1,2,3,8,9-PeCDF (L)	31:20
1,2,4,6,7,9-HxCDD (F)	32:31	1,2,3,4,6,8-HxCDF (F)	31:59
1,2,3,7,8,9-HxCDD (L)	34:28	1,2,3,7,8,9-HxCDF (L)	34:51
1,2,3,4,6,7,9-HpCDD (F)	37:06	1,2,3,4,6,7,8-HpCDF (F)	36:42
1,2,3,4,6,7,8-HpCDD (L)	37:57	1,2,3,4,7,8,9-HpCDF (L)	38:30

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

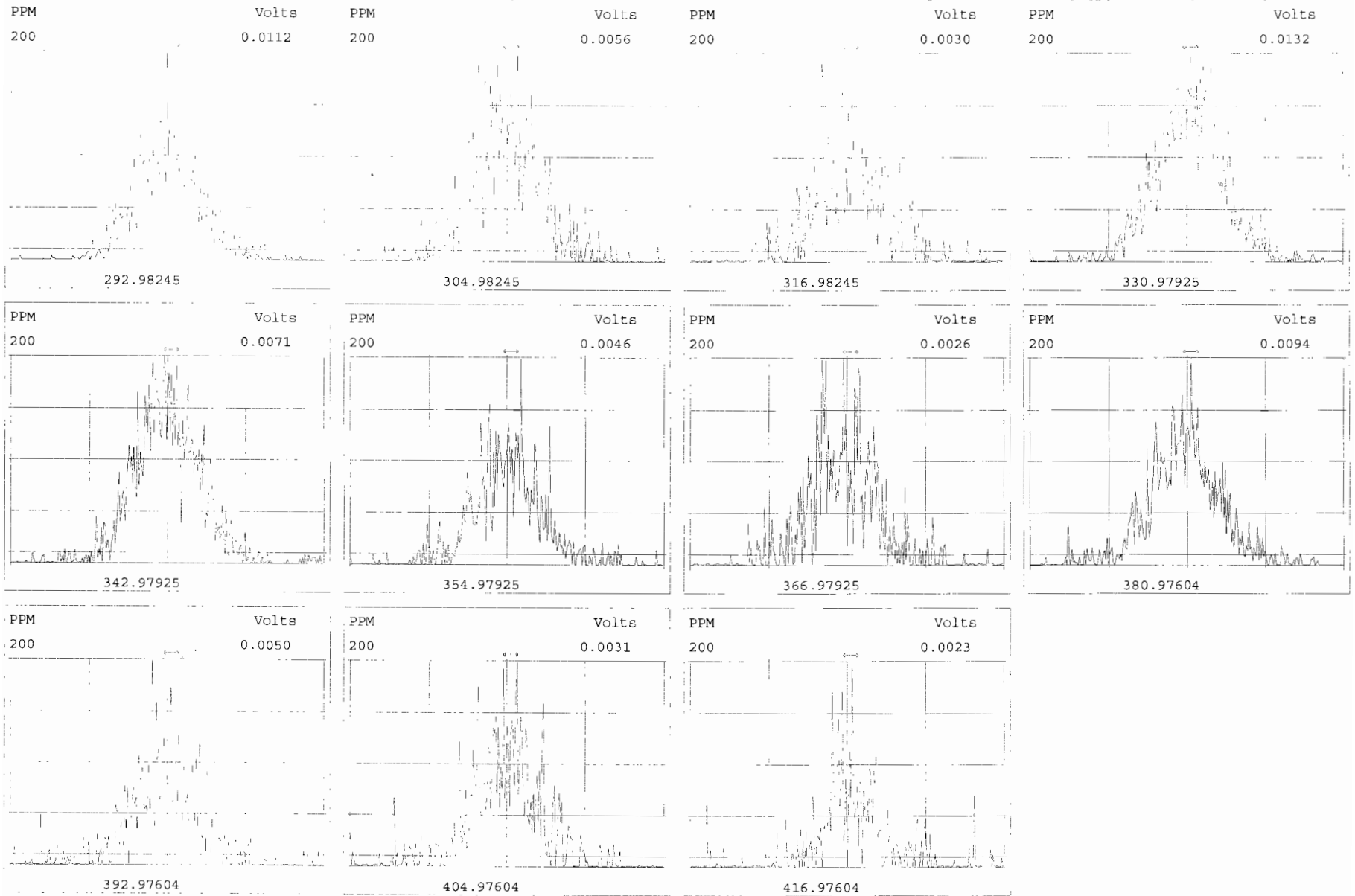
% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

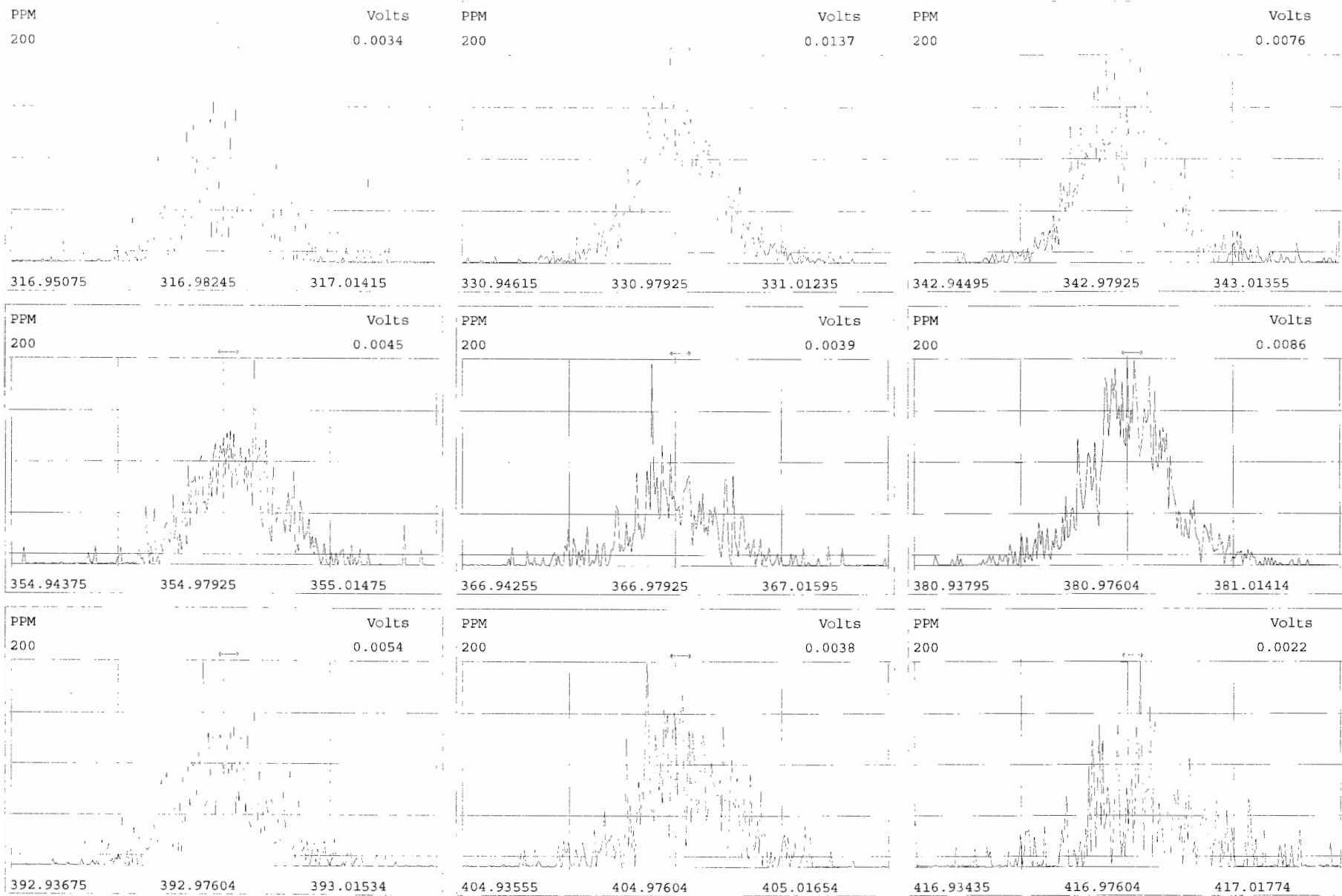
<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: DB

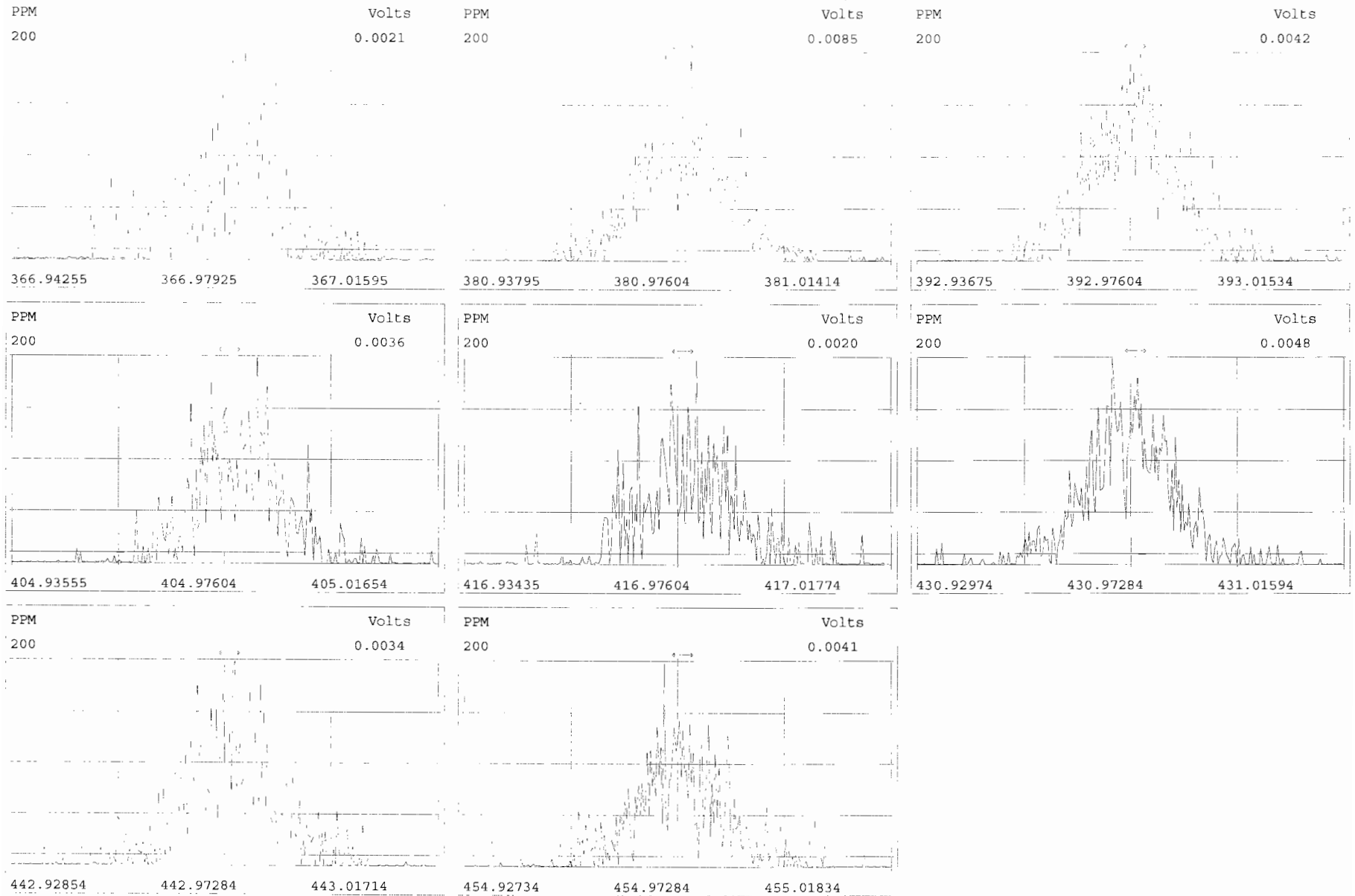
Date: 10/29/19





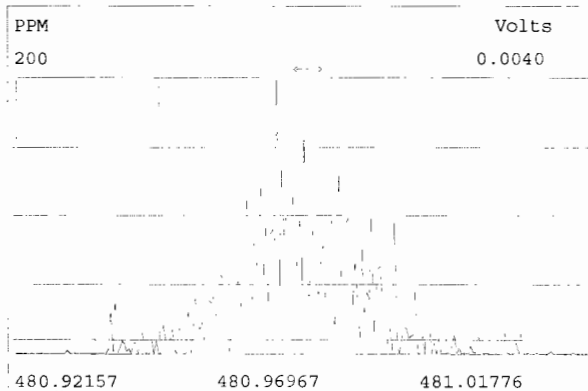
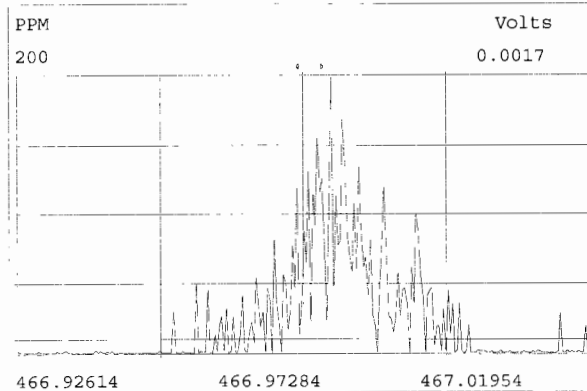
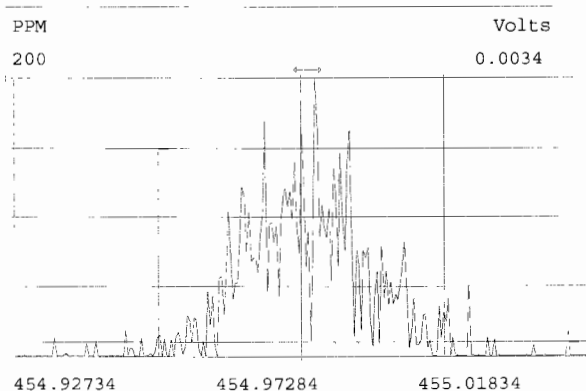
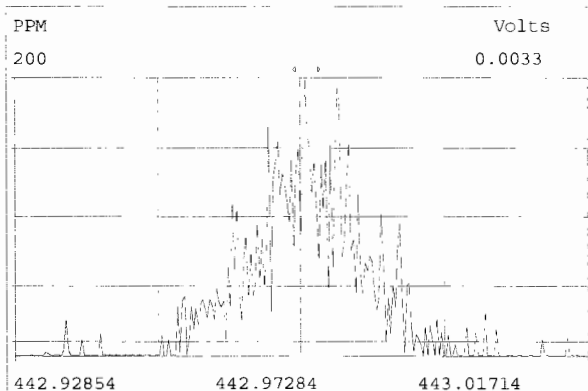
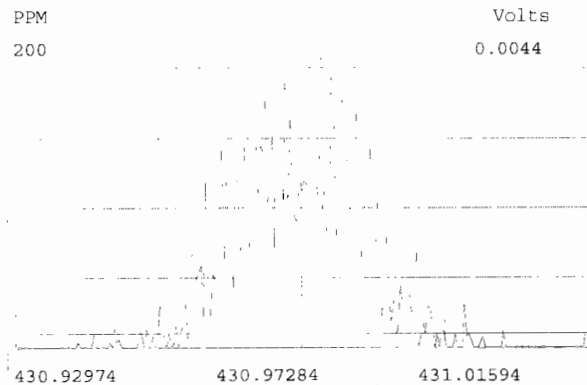
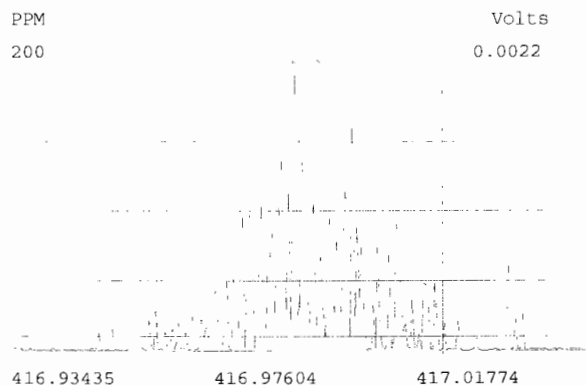
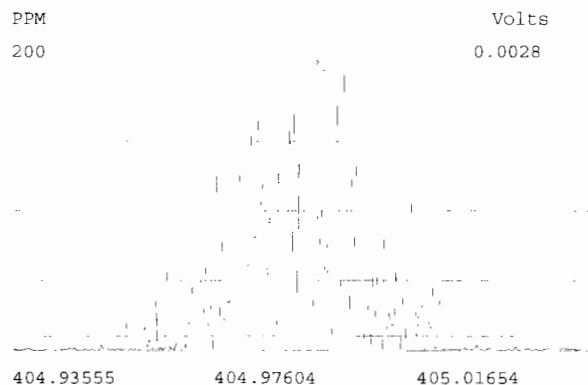
Peak Locate Examination:29-OCT-2019:10:12 File:191029D1

Experiment:OCDD_DB5 Function:3 Reference:PFK



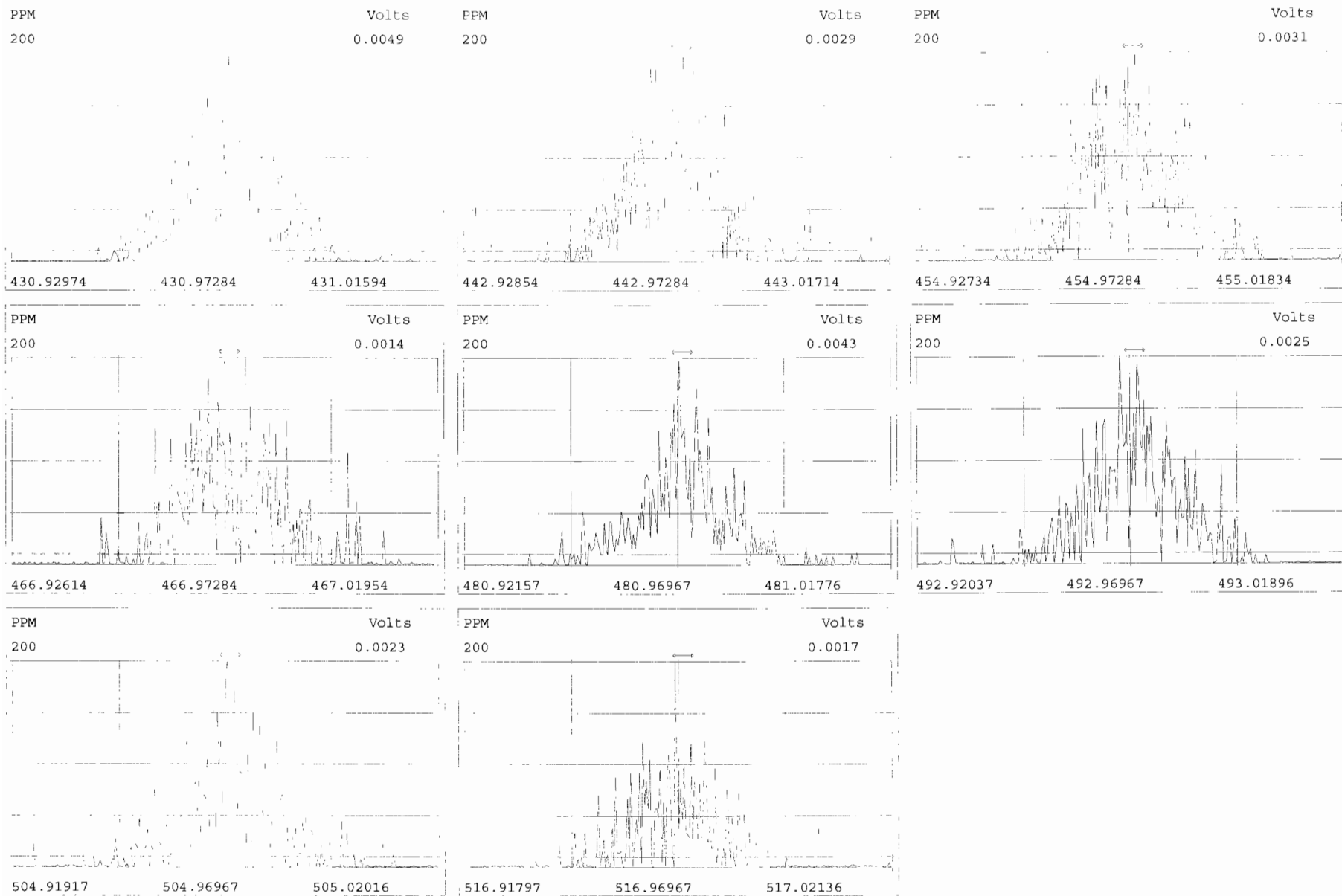
Peak Locate Examination:29-OCT-2019:10:13 File:191029D1

Experiment:OCDD_DB5 Function:4 Reference:PFK

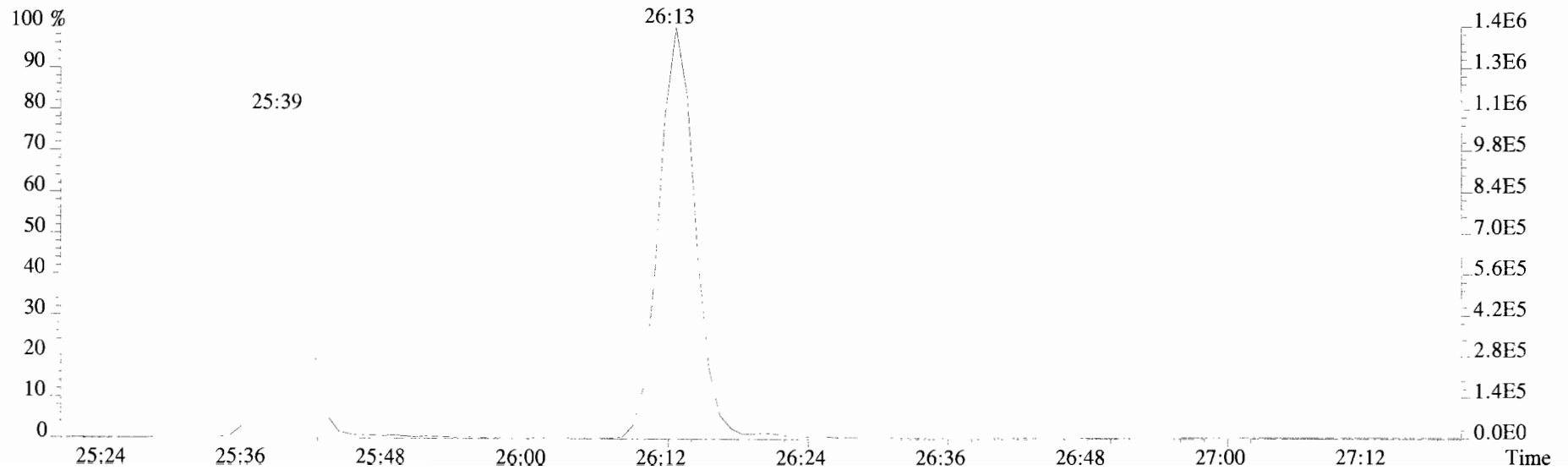
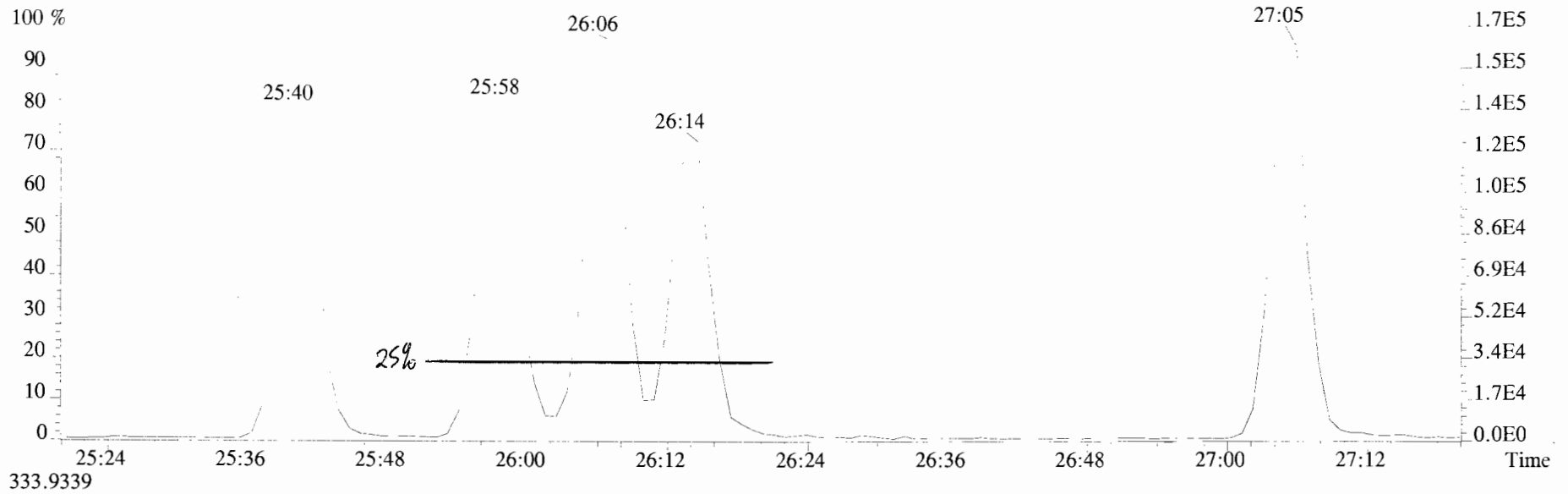


Peak Locate Examination:29 OCT 2019:10:14 File:191029D1

Experiment:OCDD_DB5 Function:5 Reference:PFK



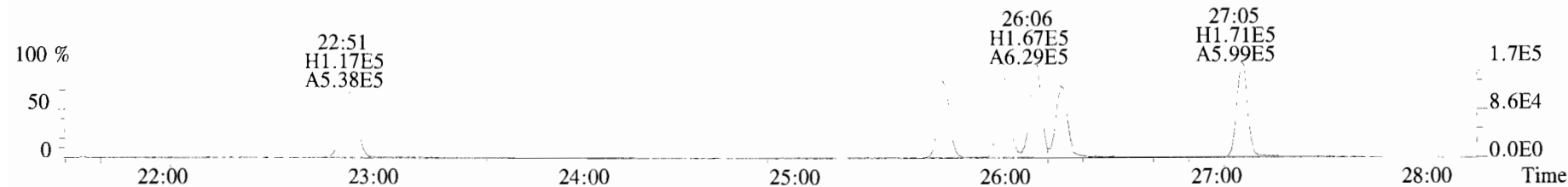
File:191029D1 #1-493 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
321.8936



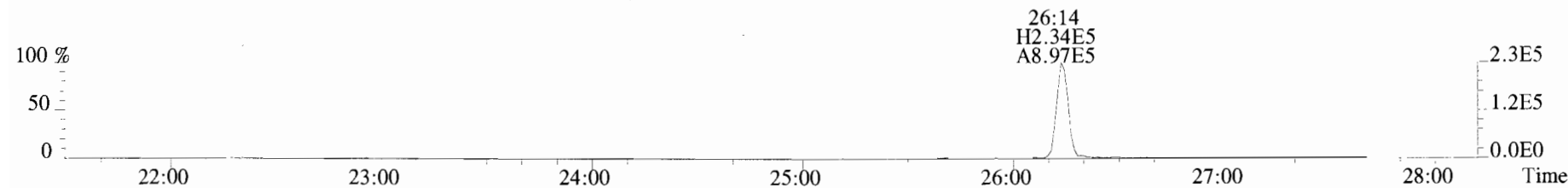
File:191029D1 #1-493 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



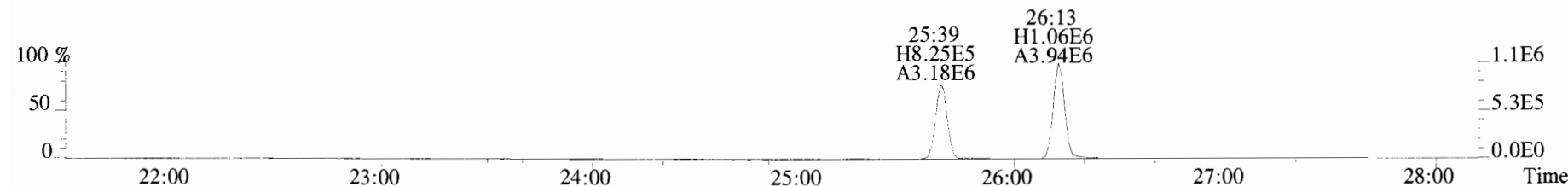
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



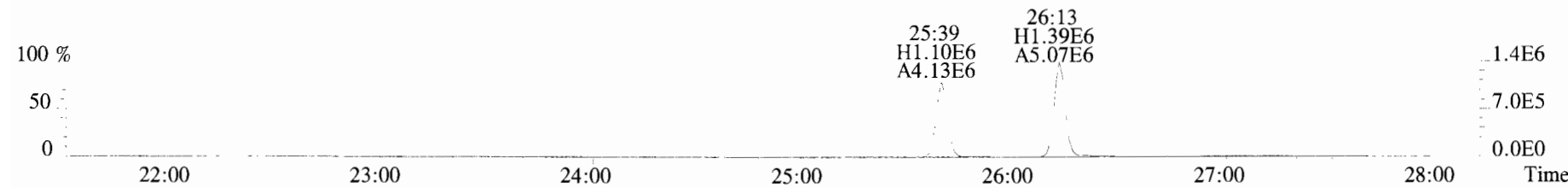
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



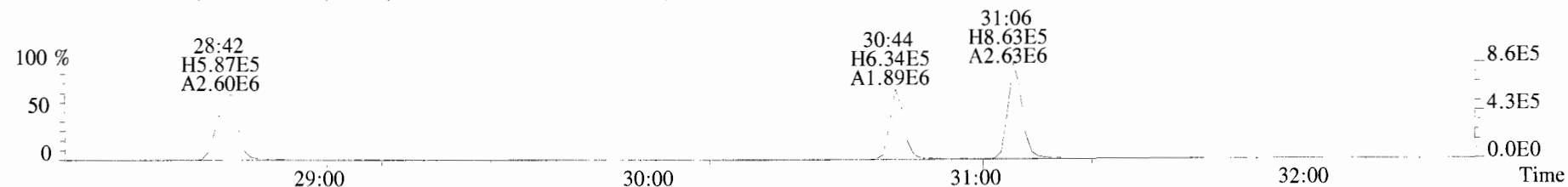
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



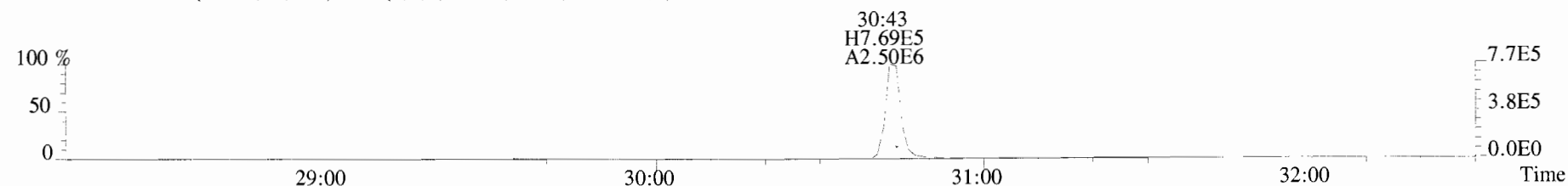
File:191029D1 #1-211 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



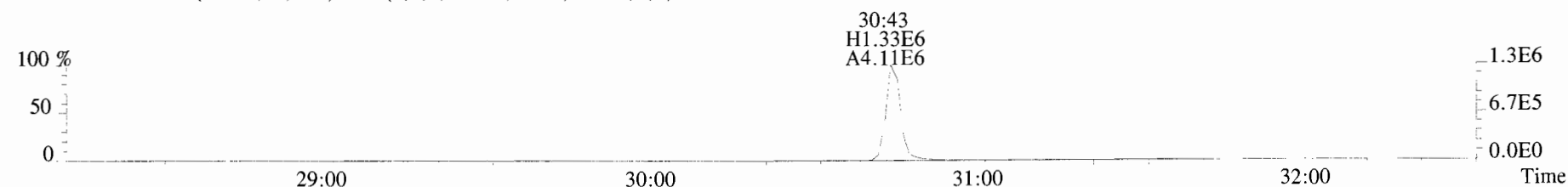
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



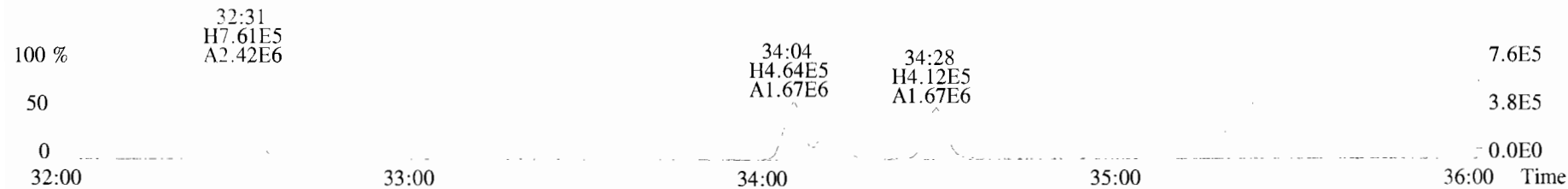
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



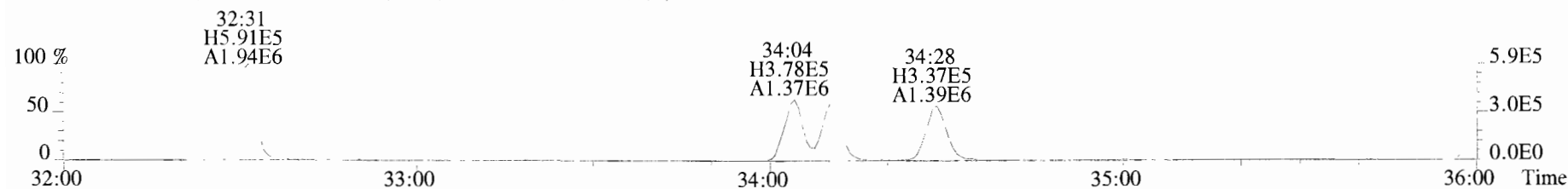
366.9792 F:2



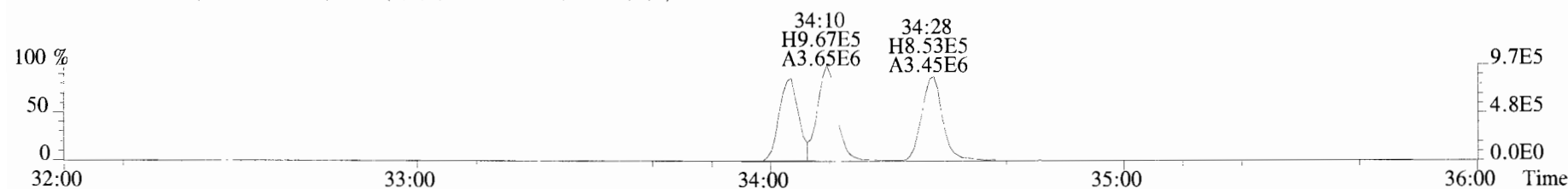
File:191029D1 #1-385 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaF
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



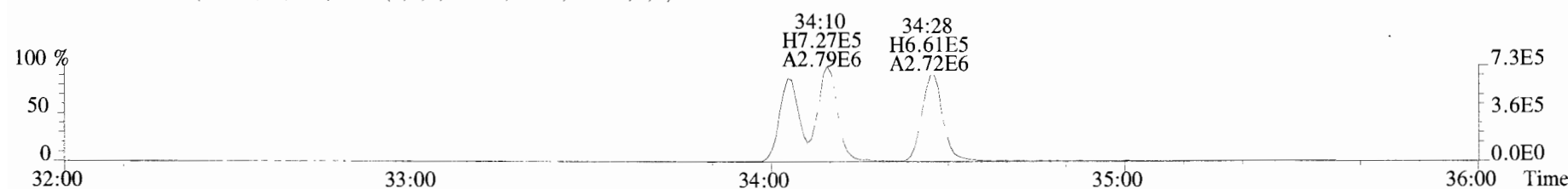
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



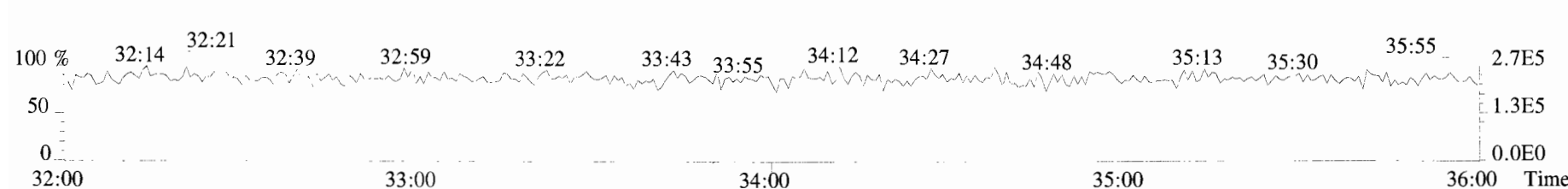
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



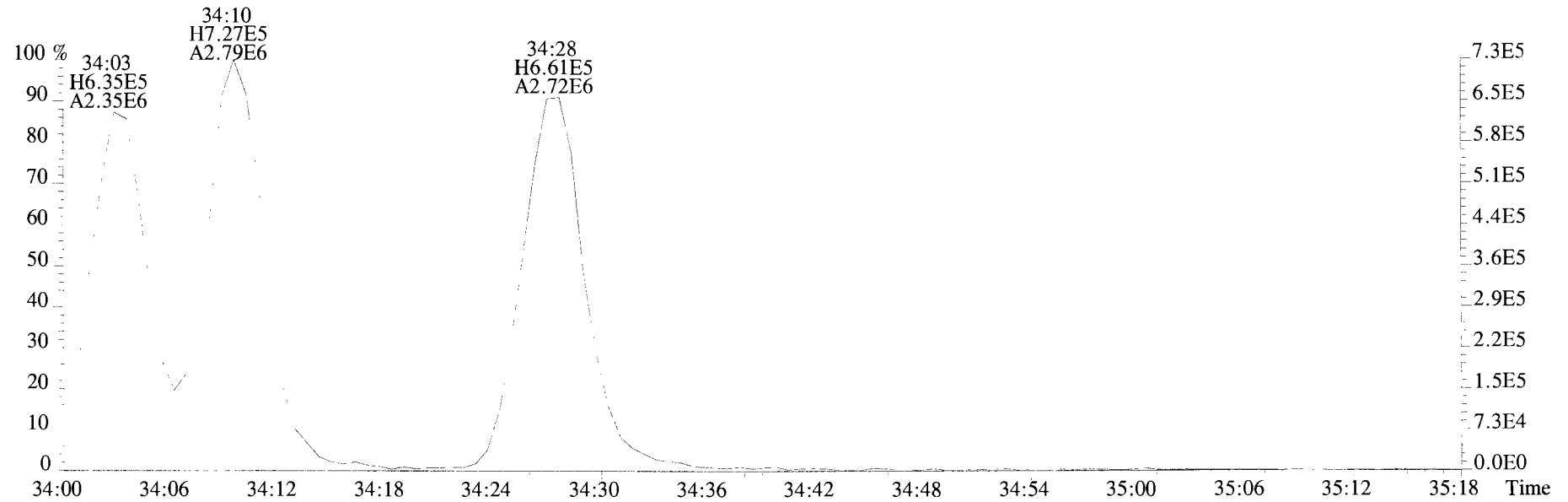
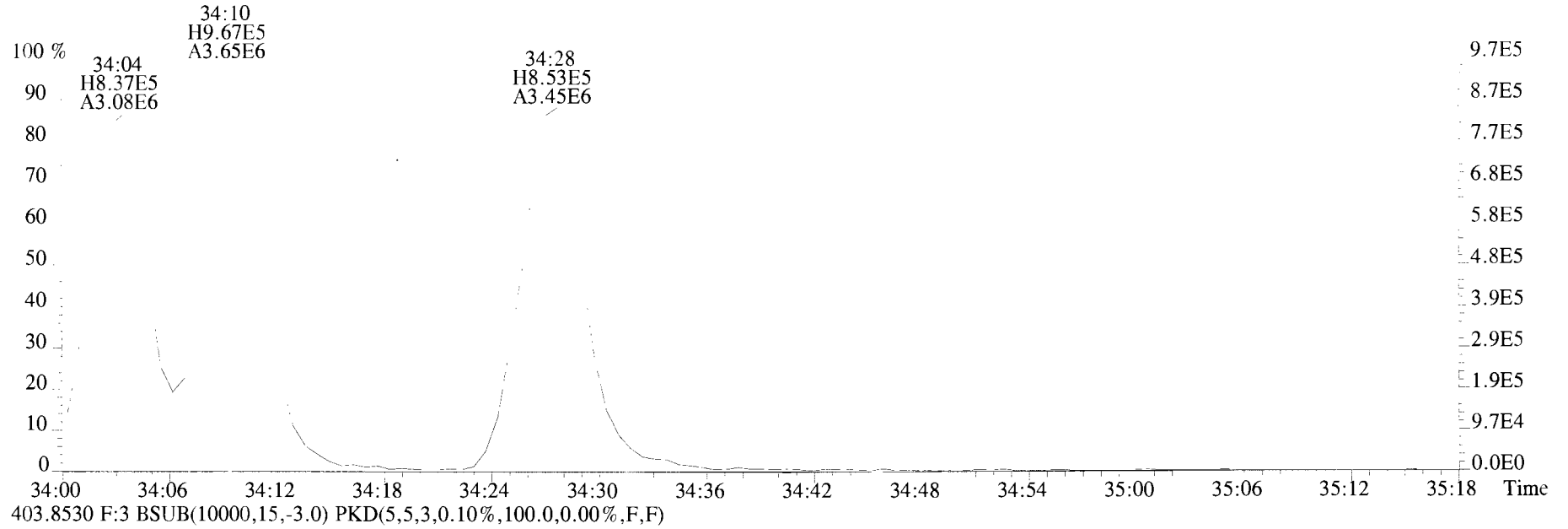
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



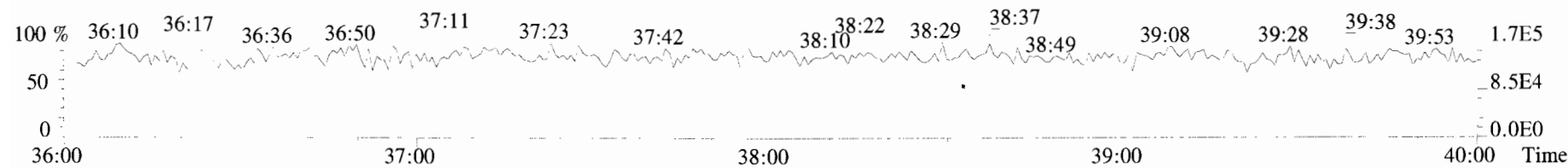
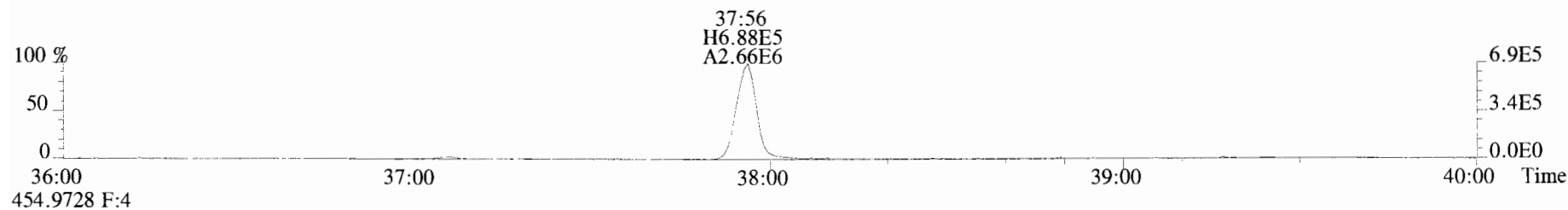
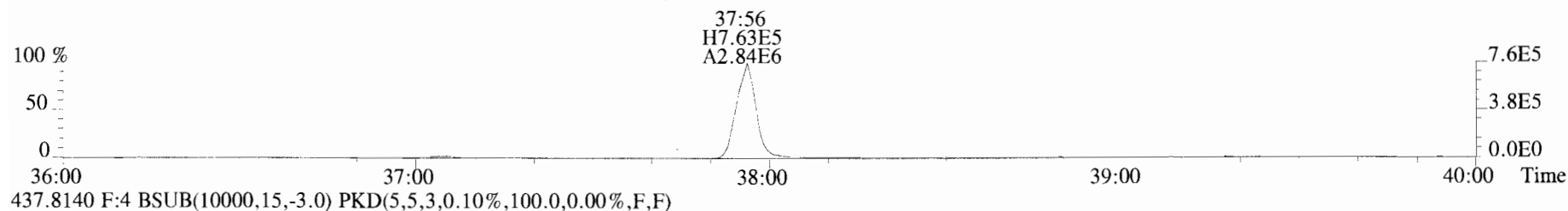
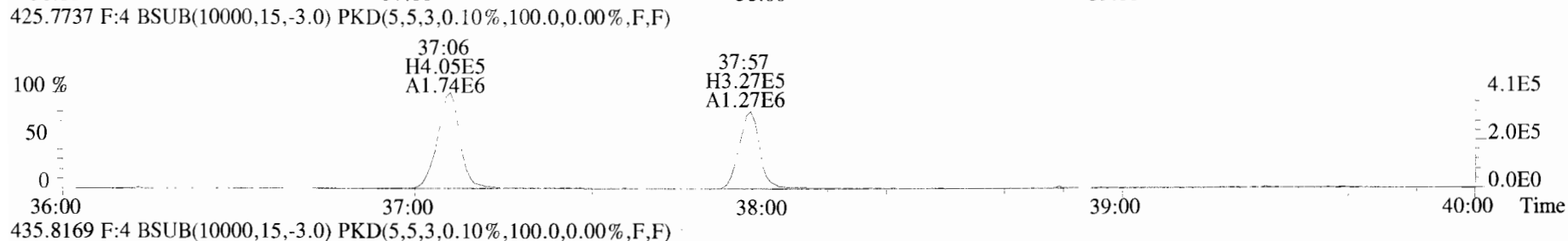
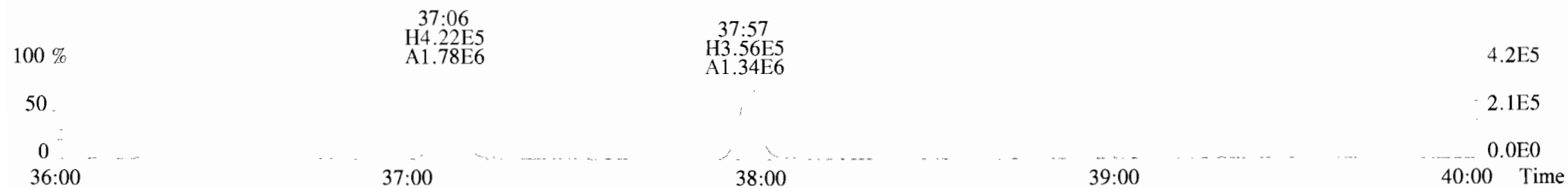
392.9760 F:3



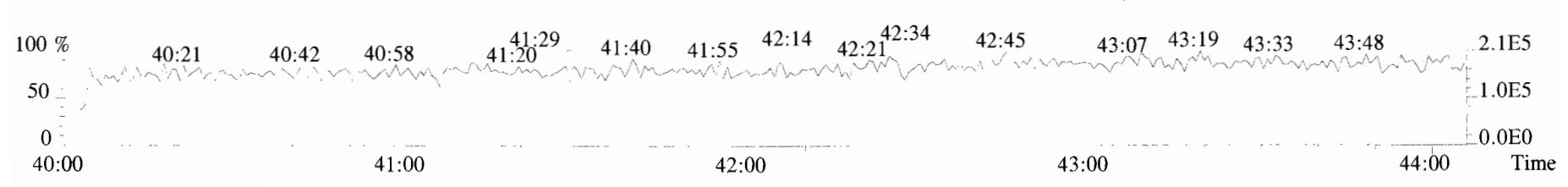
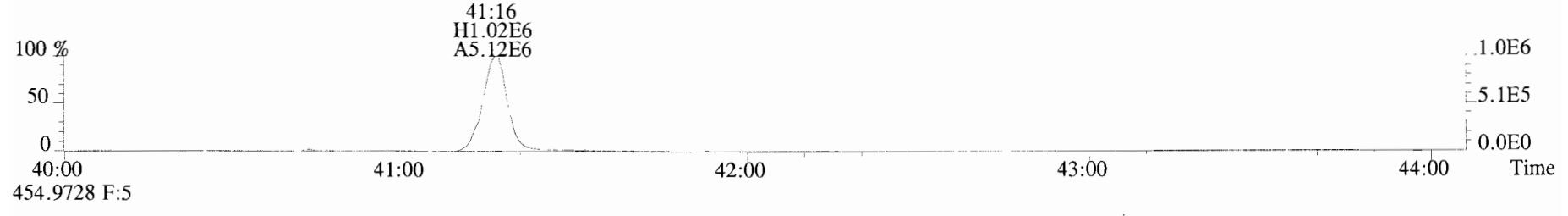
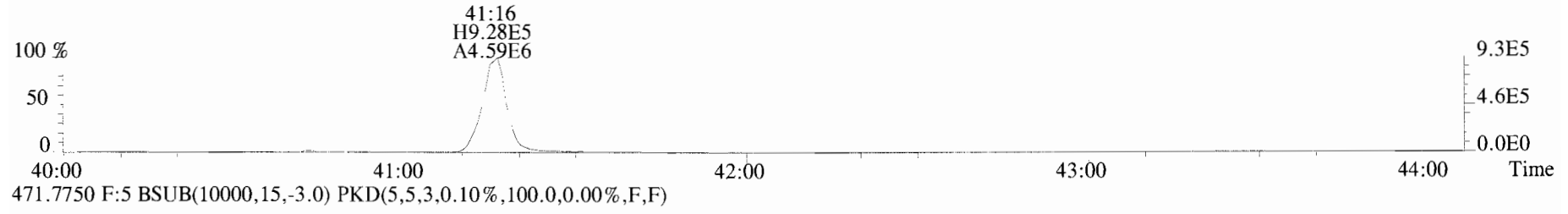
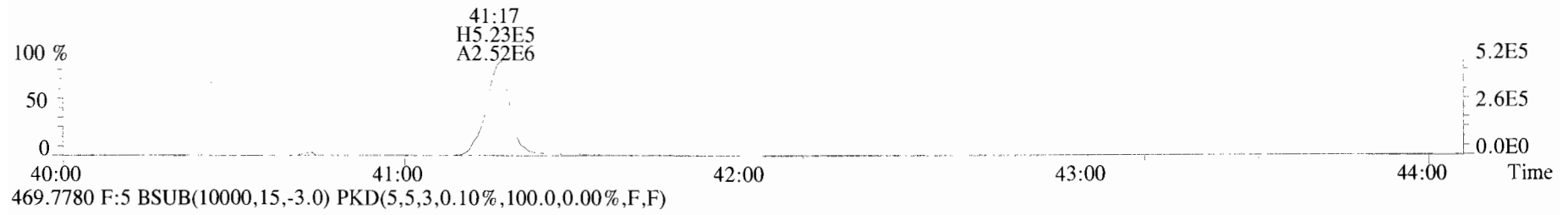
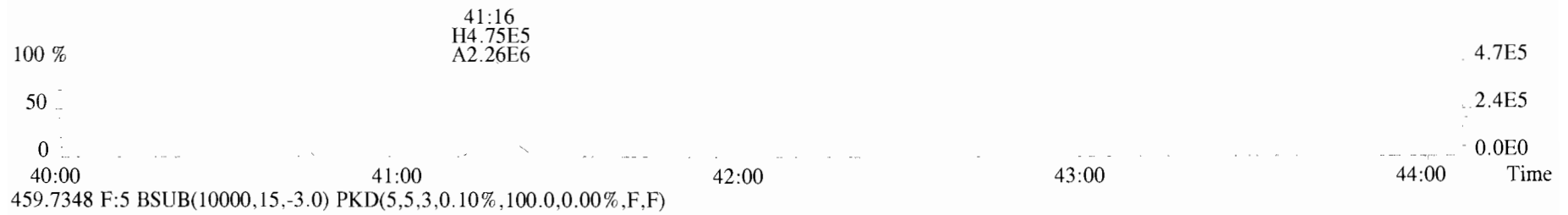
File:191029D1 #1-385 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



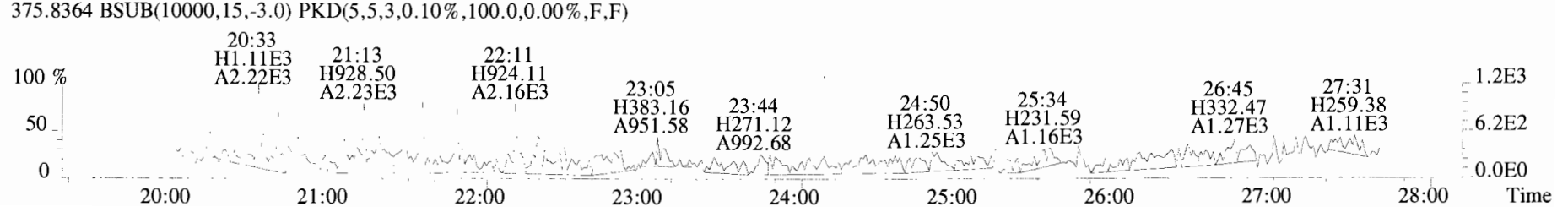
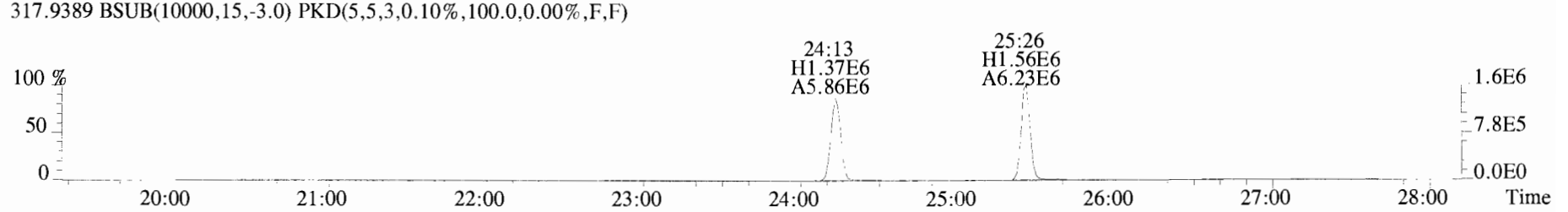
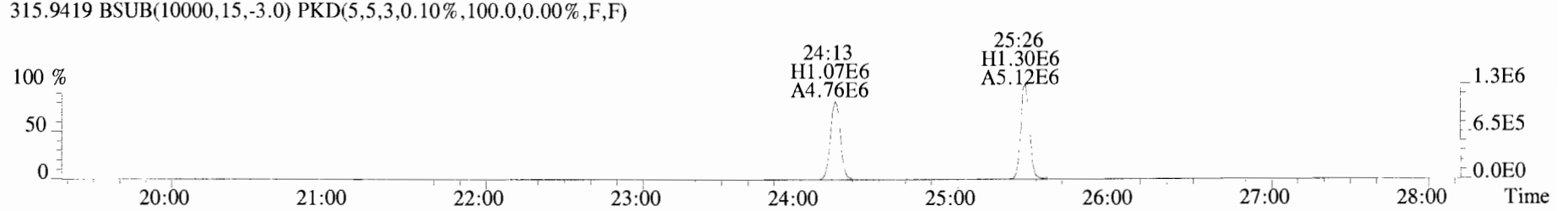
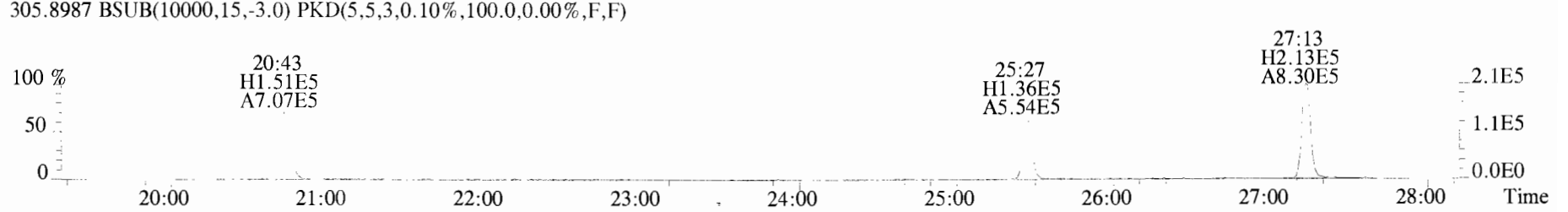
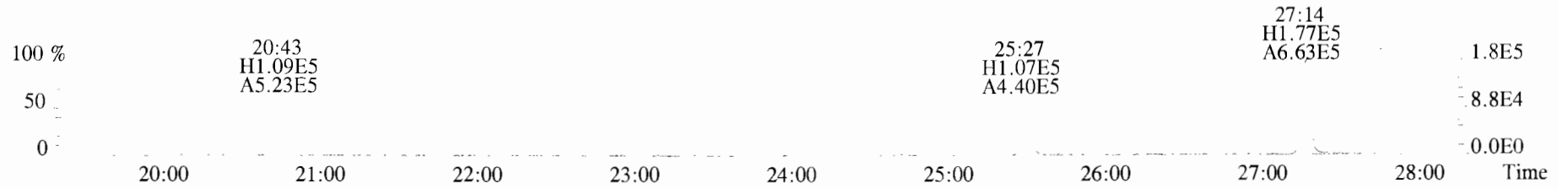
File:191029D1 #1-356 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



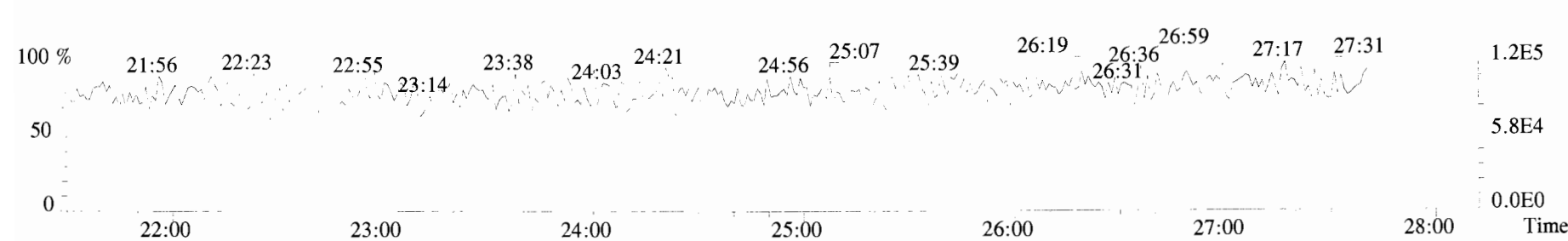
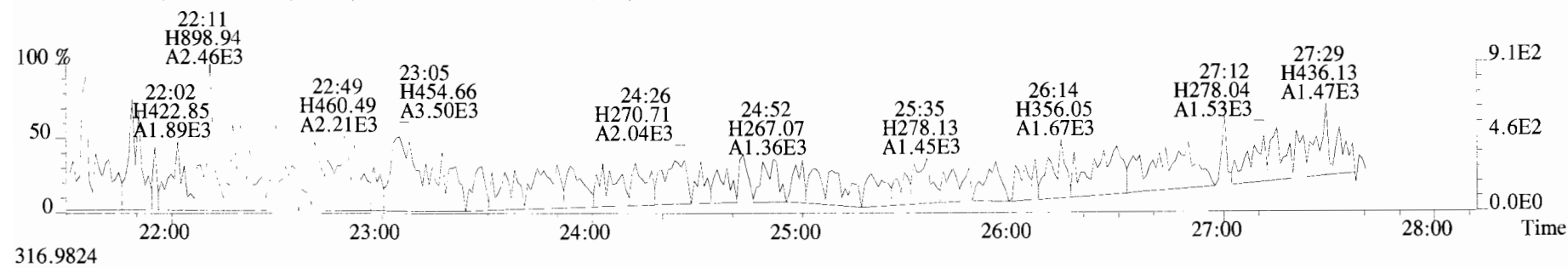
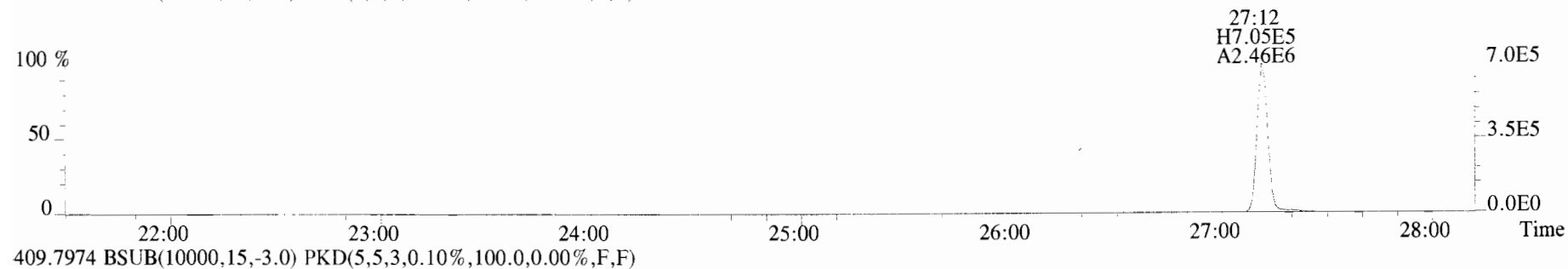
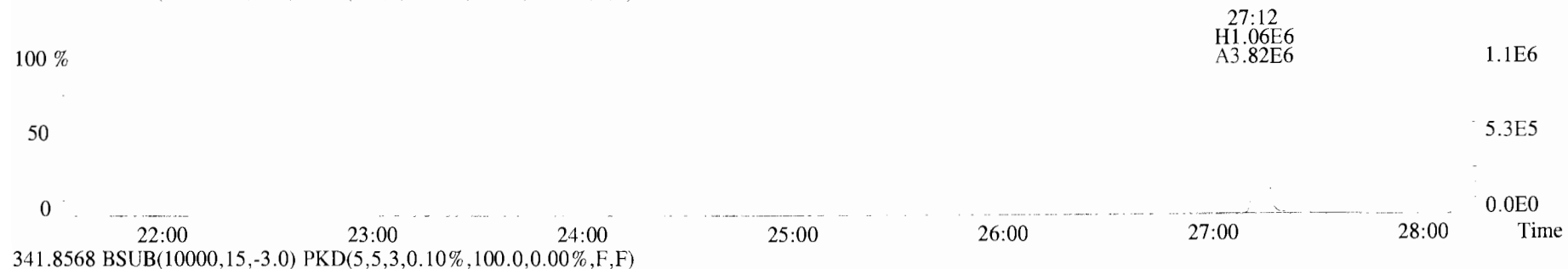
File:191029D1 #1-432 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



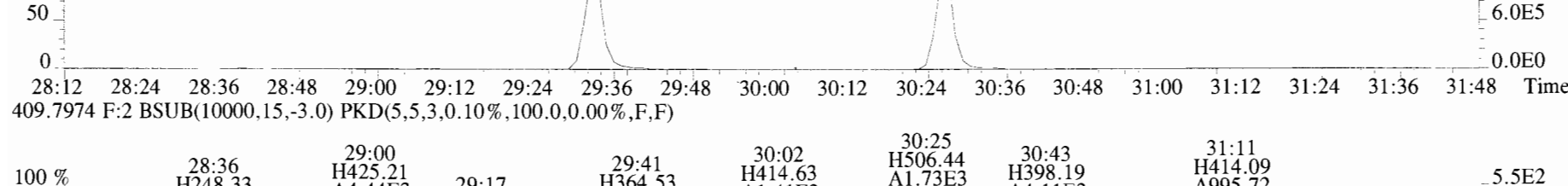
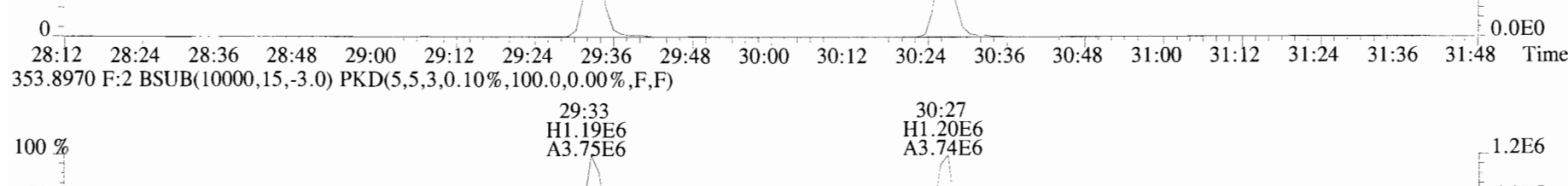
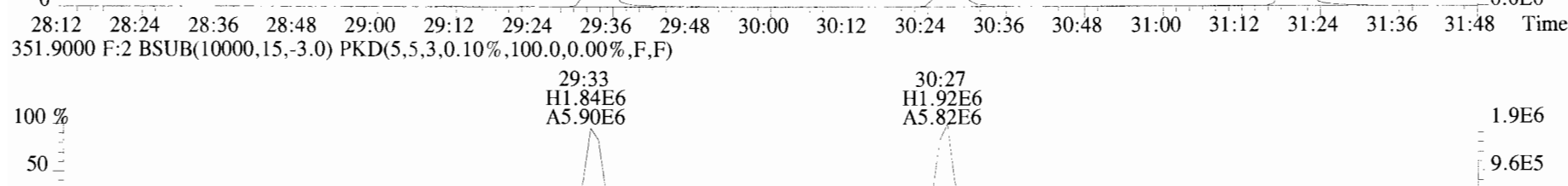
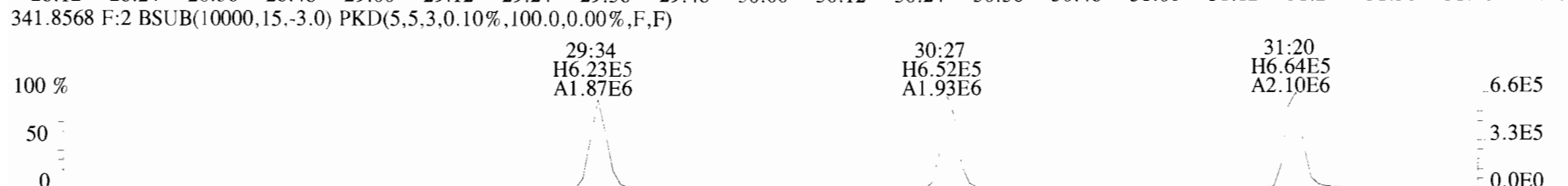
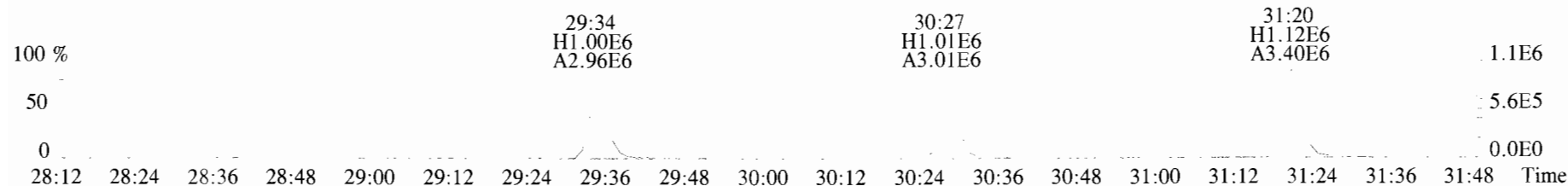
File:191029D1 #1-493 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



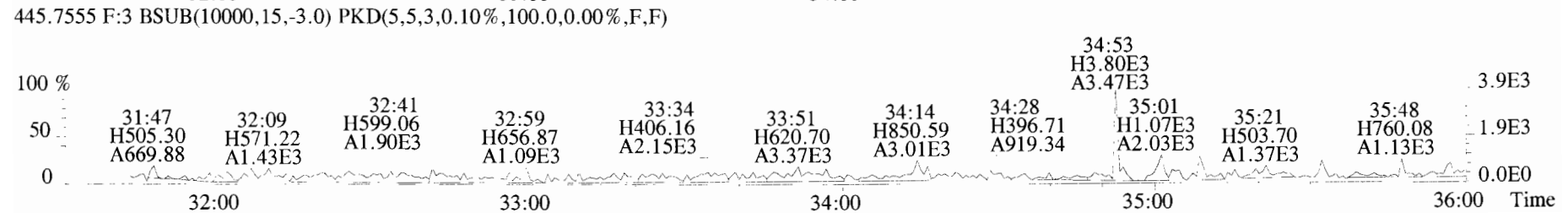
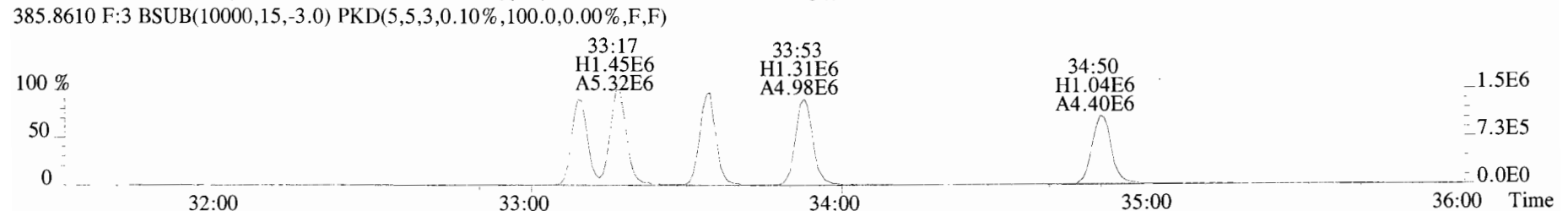
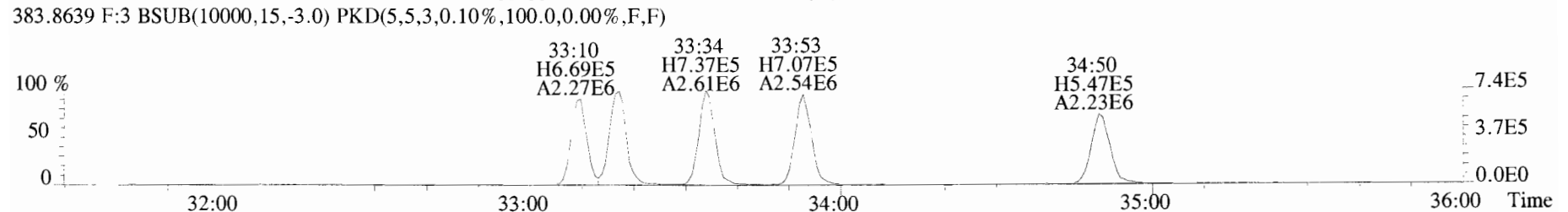
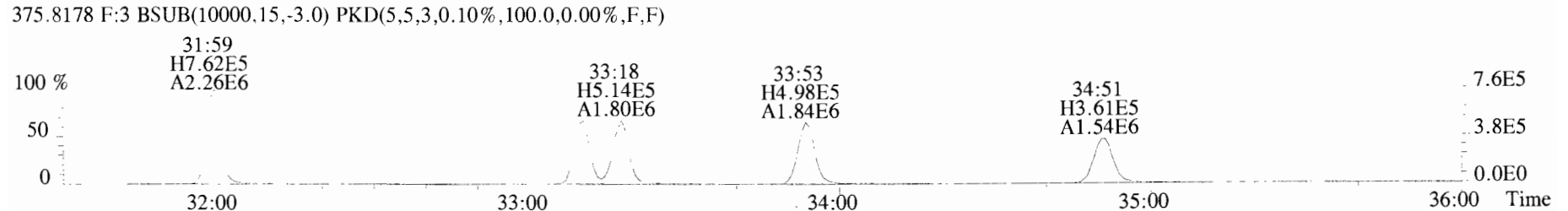
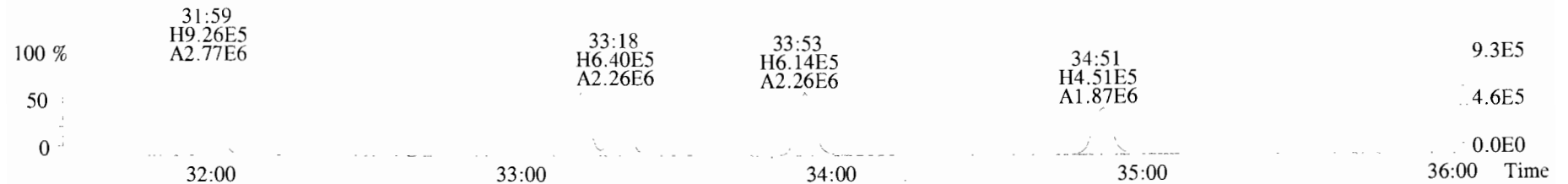
File:191029D1 #1-493 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 339.8597 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F)



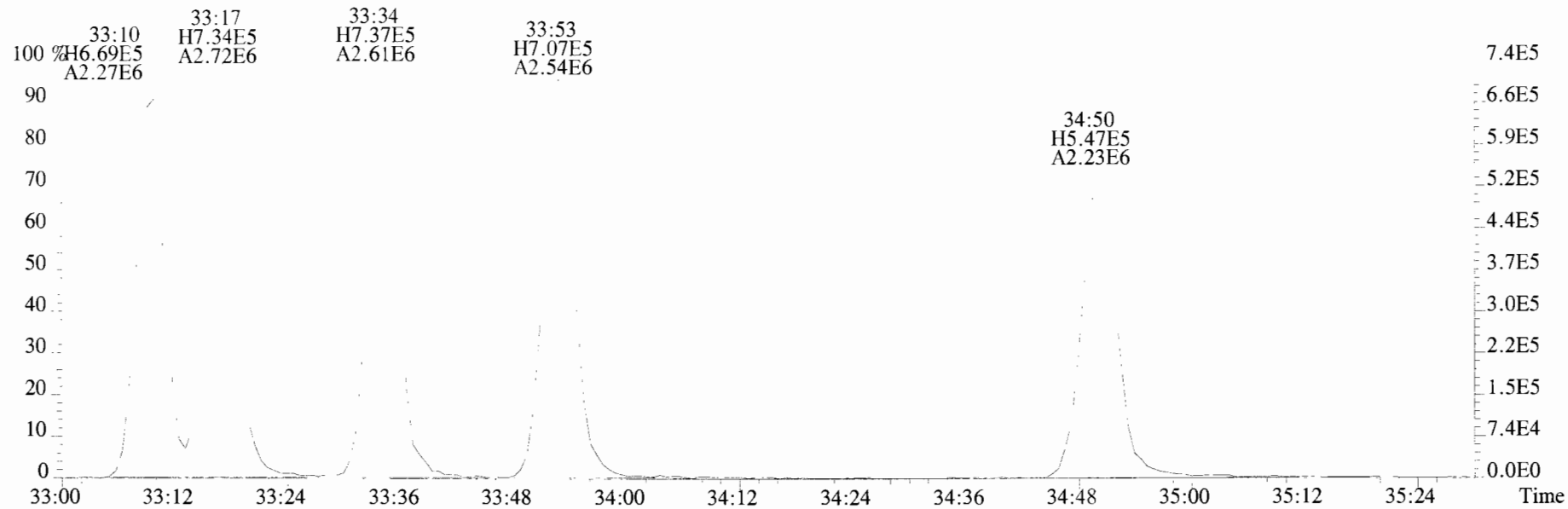
File:191029D1 #1-211 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



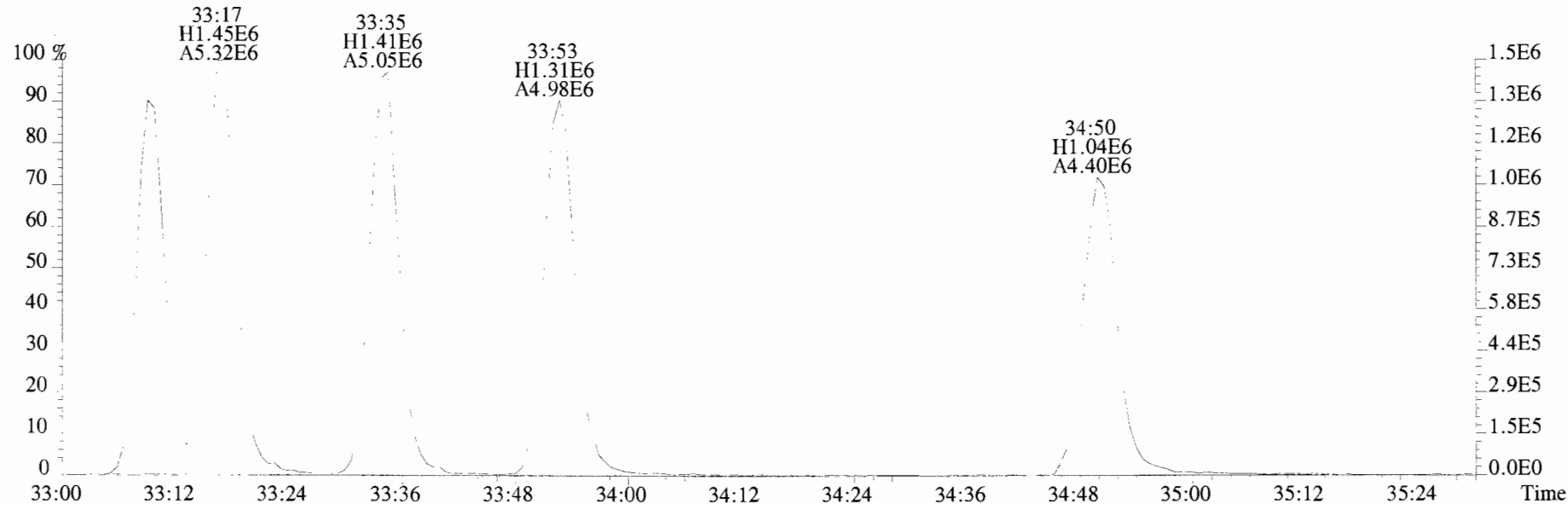
File:191029D1 #1-385 Acq:29-OCT-2019 10:15:38 GC FI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



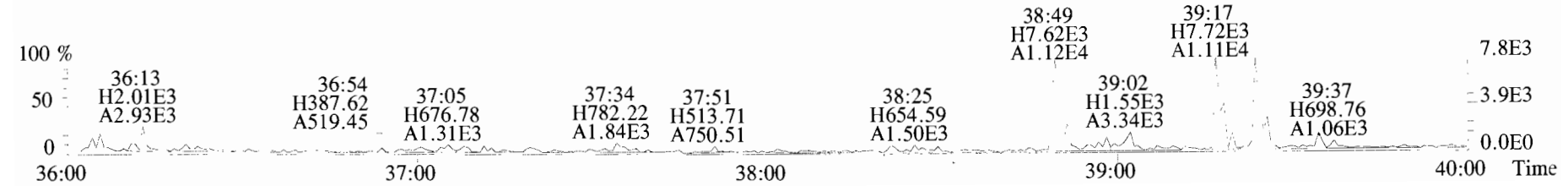
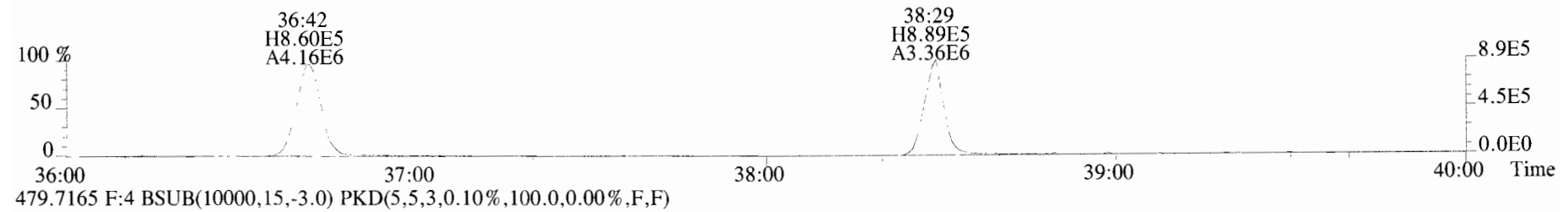
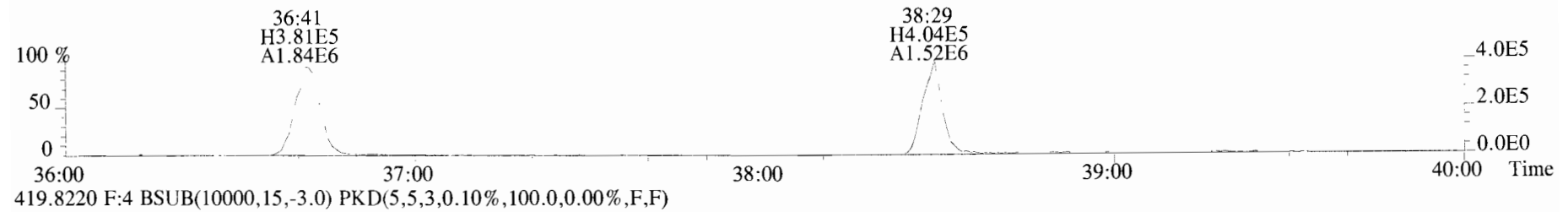
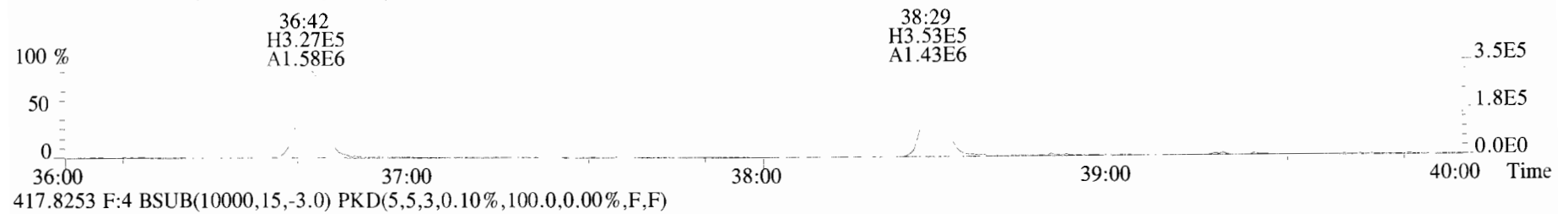
File:191029D1 #1-385 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



File:191029D1 #1-356 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



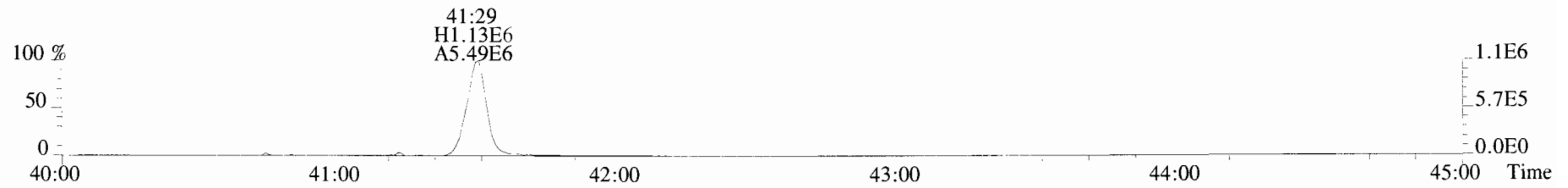
File:191029D1 #1-432 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



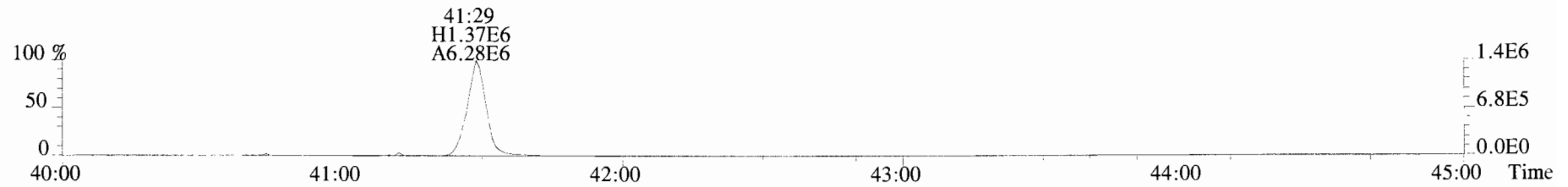
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

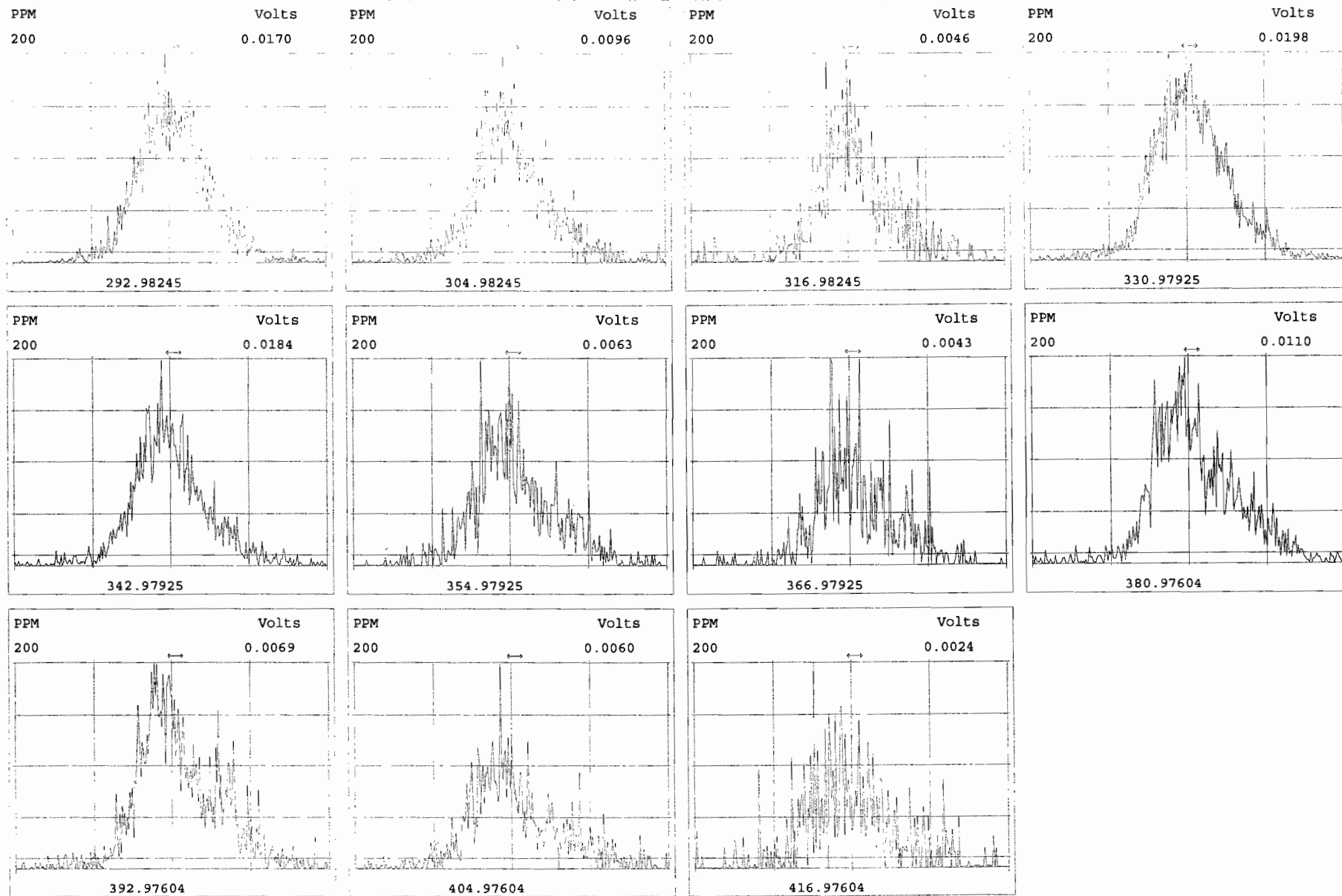


513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



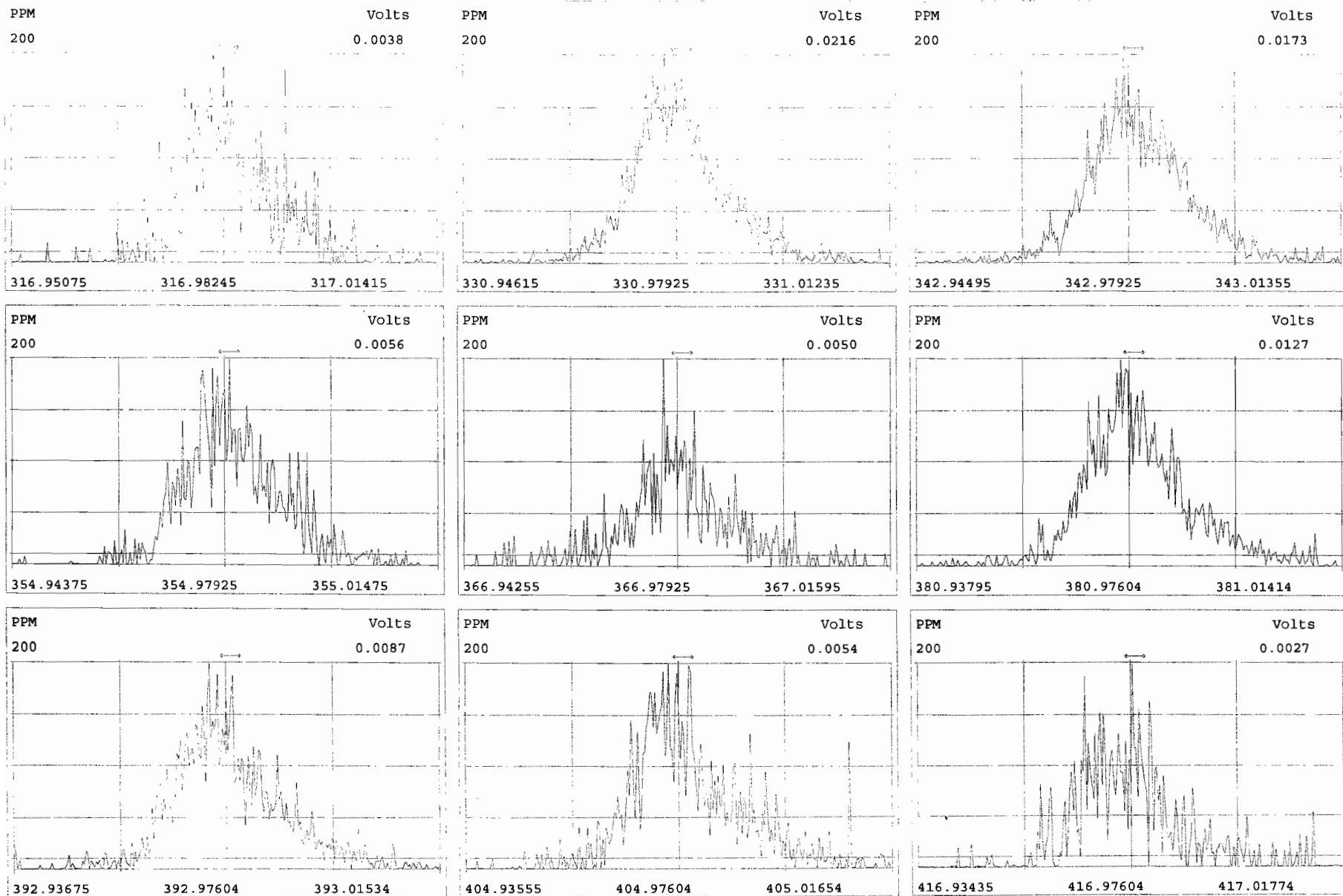
Peak Locate Examination:29-OCT-2019:22:22 File:RES_CHECK

Experiment:OCDD_DB5 Function:1 Reference:PFK



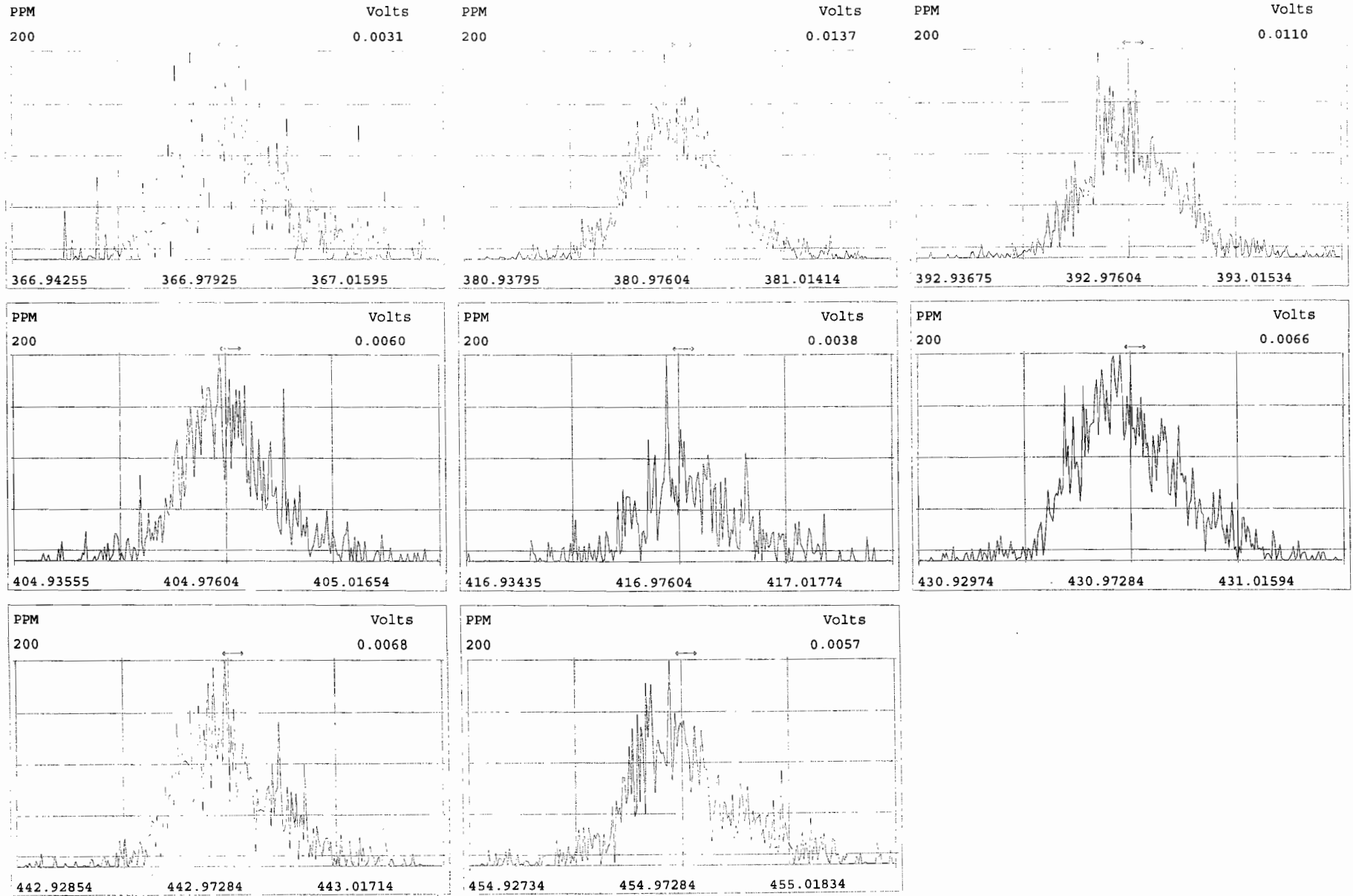
Peak Locate Examination:29-OCT-2019:22:23 File:RES_CHECK

Experiment:OCDD_DB5 Function:2 Reference:PFK



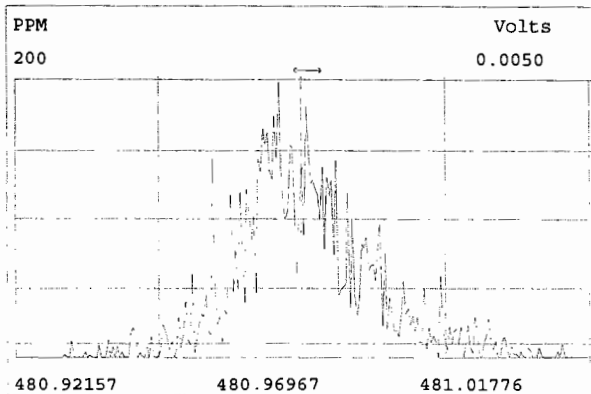
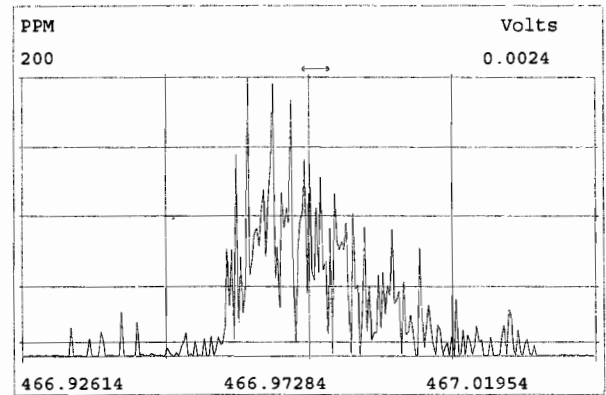
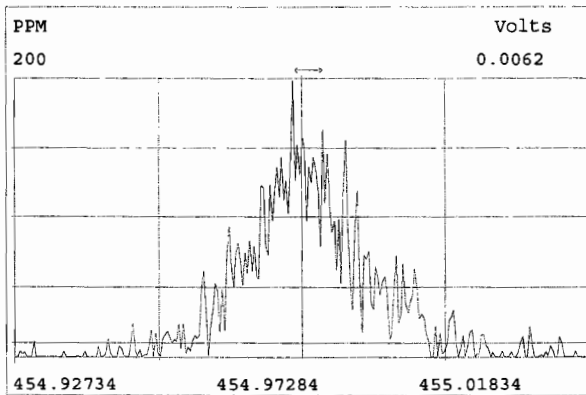
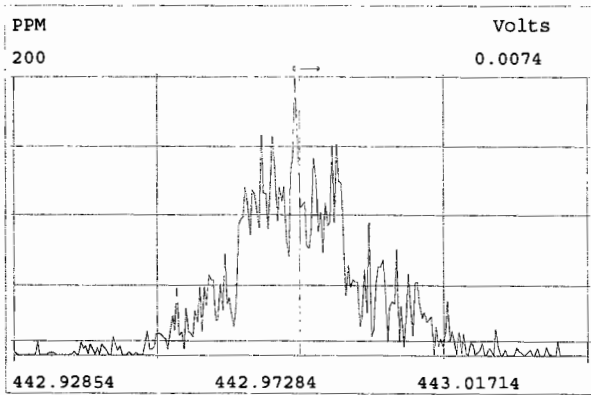
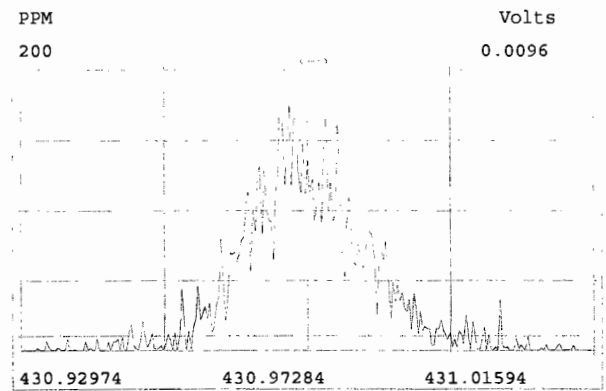
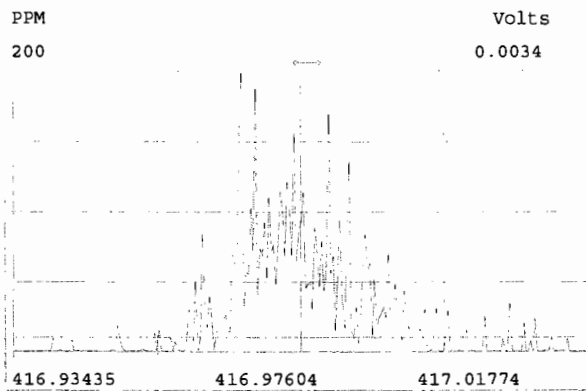
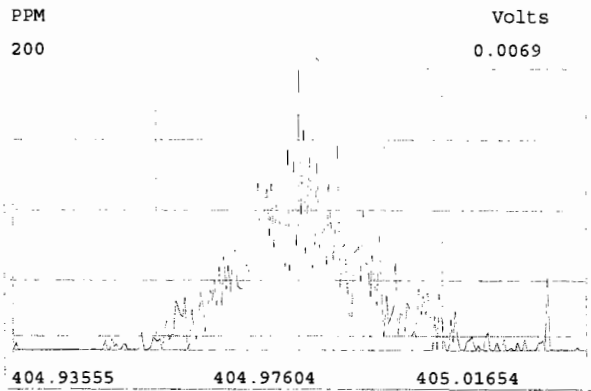
Peak Locate Examination:29-OCT-2019:22:24 File:RES_CHECK

Experiment:OCDD_DB5 Function:3 Reference:PFK



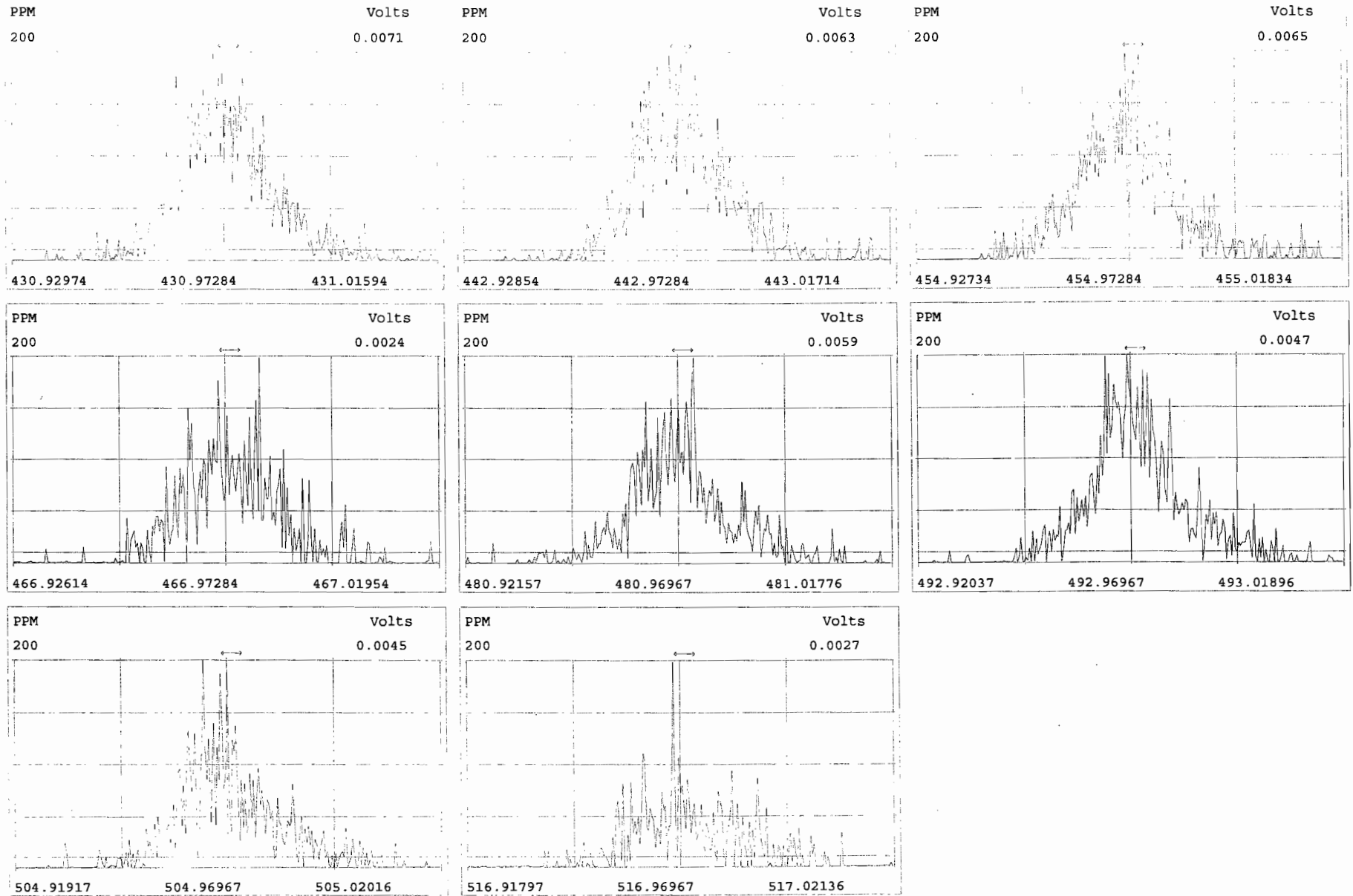
Peak Locate Examination:29-OCT-2019:22:25 File:RES_CHECK

Experiment:OCDD_DB5 Function:4 Reference:PFK



Peak Locate Examination:29-OCT-2019:22:26 File:RES_CHECK

Experiment:OCDD_DB5 Function:5 Reference:PFK



HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calibration ID: ST191101D1-1

Reviewed By: CT 11/04/19
Initials & Date

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Concentrations within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TCDD/TCDF Valleys <25%	<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?	DB	<input type="checkbox"/>
<u>Run Log:</u>		
- Correct instrument listed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
- Samples within 12 hour clock?	(Y)	N
- Bottle position verified?	DB	

Mass resolution \geq

5k 6-8K 8K 10K
 1614 1699 429 1613/1668/8280

Intergrated peaks display correctly?

GC Break <20%

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours

Comments:

Vista Analytical Laboratory - Injection Log Run file: 191101D1 Instrument ID: V9-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191101D1	1	ST191101D1-1	DB	1-NOV-19	13:59:13	ST191101D1-1	NA
191101D1	2	ST191101D1-2	DB	1-NOV-19	14:47:02	ST191101D1-2	ST191101D1-3
191101D1	3	B9J0312-BS1	DB	1-NOV-19	15:34:58	ST191101D1-1	NA
191101D1	4	SOLVENT BLANK	DB	1-NOV-19	16:22:53	NA	NA
191101D1	5	B9J0312-BLK1	DB	1-NOV-19	17:10:44	ST191101D1-1	NA
191101D1	6	1903546-07RE2	DB	1-NOV-19	17:58:35	ST191101D1-1	NA
191101D1	7	B9J0312-DUP1	DB	1-NOV-19	18:46:30	ST191101D1-1	NA
191101D1	8	1903546-09RE1	DB	1-NOV-19	19:34:14	ST191101D1-1	NA
191101D1	9	1903546-15RE1	DB	1-NOV-19	20:21:58	ST191101D1-1	NA
191101D1	10	1903565-09RE1	DB	1-NOV-19	21:09:47	ST191101D1-1	NA
191101D1	11	1903565-14RE1	DB	1-NOV-19	21:57:30	ST191101D1-1	NA
191101D1	12	1903565-15RE1	DB	1-NOV-19	22:45:15	ST191101D1-1	NA
191101D1	13	1903565-16RE1@20X	DB	1-NOV-19	23:32:58	ST191101D1-1	NA
191101D1	14	1903260-01RE2@10X	DB	2-NOV-19	00:20:37	ST191101D1-2	ST191101D1-3
191101D1	15	SOLVENT BLANK	DB	2-NOV-19	01:08:28	NA	NA
191101D1	16	ST191101D1-3	DB	2-NOV-19	01:56:13	ST191101D1-2	ST191101D1-3

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: ST191101D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191101D1 S#1 Analysis Date: 1-NOV-19 Time: 13:59:13

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	0.79	0.65-0.89	y	10.2	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	y	50.6	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	47.3	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	51.8	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	51.3	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	48.4	43.0 - 58.0
OCDD	M+2/M+4	0.88	0.76-1.02	y	99.8	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.74	0.65-0.89	y	9.83	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	51.8	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	51.8	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	46.2	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	47.6	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	49.0	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.24	1.05-1.43	y	48.0	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	y	46.8	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	y	46.6	43.0 - 58.0
OCDF	M+2/M+4	0.87	0.76-1.02	y	92.6	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: JB

Date: 11/1/19

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191101D1 S#1 Analysis Date: 1-NOV-19 Time: 13:59:13

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	0.78	0.65-0.89	y	106	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	103	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	111	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	92.8	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	y	100	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	109	72.0 - 138.0
13C-OCDD	M/M+2	0.89	0.76-1.02	y	239	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.80	0.65-0.89	y	99.8	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	106	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.67	1.32-1.78	y	101	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	112	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	101	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	100	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	105	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.45	0.37-0.51	y	98.7	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.44	0.37-0.51	y	110	77.0 - 129.0
13C-OCDF	M+2/M+4	0.86	0.76-1.02	y	239	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.51	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: DB

Date: 11/1/19

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: 10-9-19

RT Window Data Filename: 191101D1 S#1 Analysis Date: 1-NOV-19 Time: 13:59:13

ZB-5MS IS Data Filename: 191101D1 S#1 Analysis Date: 1-NOV-19 Time: 13:59:13

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)	22:54	1,3,6,8-TCDF (F)	20:47
1,2,8,9-TCDD (L)	27:07	1,2,8,9-TCDF (L)	27:15
1,2,4,7,9-PeCDD (F)	28:42	1,3,4,6,8-PeCDF (F)	27:13
1,2,3,8,9-PeCDD (L)	31:06	1,2,3,8,9-PeCDF (L)	31:20
1,2,4,6,7,9-HxCDD (F)	32:31	1,2,3,4,6,8-HxCDF (F)	31:59
1,2,3,7,8,9-HxCDD (L)	34:28	1,2,3,7,8,9-HxCDF (L)	34:50
1,2,3,4,6,7,9-HpCDD (F)	37:04	1,2,3,4,6,7,8-HpCDF (F)	36:41
1,2,3,4,6,7,8-HpCDD (L)	37:54	1,2,3,4,7,8,9-HpCDF (L)	38:26

(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: DB

Date: 11/1/19

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191101D1 S#1 Analysis Date: 1-NOV-19 Time: 13:59:13

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002

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	1.196	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.151	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.185	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: DB

Date: 11/1/19

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191101D1 S#1 Analysis Date: 1-NOV-19 Time: 13:59:13

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	1.000	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	1.000	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	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.001	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	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

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	1.038	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	1.018	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	1.093	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.145	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.129	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.227	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.234	1.091-1.371

Analyst: DB

Date: 11/1/19

Client ID: 1613 CS3 19C2204
Lab ID: ST191101D1-1

Filename: 191101D1 S:1 Acq: 1-NOV-19 13:59:13
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000

ConCal: ST191101D1-1
EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	7.33e+05	0.79 y	0.91	26:16	10.229		* 2.5		*	Total Tetra-Dioxins	74.2	74.8	*	*	
1,2,3,7,8-PeCDD	2.83e+06	0.64 y	0.90	30:45	50.570		* 2.5		*	Total Penta-Dioxins	201	202	*	*	
1,2,3,4,7,8-HxCDD	2.75e+06	1.25 y	1.10	34:03	47.317		* 2.5		*	Total Hexa-Dioxins	219	220	*	*	
1,2,3,6,7,8-HxCDD	2.85e+06	1.23 y	0.94	34:10	51.789		* 2.5		*	Total Hepta-Dioxins	111	113	*	*	
1,2,3,7,8,9-HxCDD	2.95e+06	1.24 y	0.96	34:28	51.334		* 2.5		*	Total Tetra-Furans	37.6	38.5	*	*	
1,2,3,4,6,7,8-HpCDD	2.50e+06	1.03 y	0.98	37:54	48.355		* 2.5		*	Total Penta-Furans	225.38	226.79	*	*	
OCDD	4.90e+06	0.88 y	0.96	41:11	99.819		* 2.5		*	Total Hexa-Furans	253	254	*	*	
										Total Hepta-Furans	93.6	94.9	*	*	
2,3,7,8-TCDF	1.05e+06	0.74 y	0.95	25:28	9.8324		* 2.5		*						
1,2,3,7,8-PeCDF	4.87e+06	1.60 y	0.96	29:35	51.787		* 2.5		*						
2,3,4,7,8-PeCDF	4.87e+06	1.60 y	1.01	30:28	51.831		* 2.5		*						
1,2,3,4,7,8-HxCDF	3.75e+06	1.25 y	1.18	33:10	46.232		* 2.5		*						
1,2,3,6,7,8-HxCDF	3.95e+06	1.23 y	1.07	33:17	47.630		* 2.5		*						
2,3,4,6,7,8-HxCDF	3.86e+06	1.23 y	1.11	33:53	48.962		* 2.5		*						
1,2,3,7,8,9-HxCDF	3.28e+06	1.24 y	1.06	34:50	47.983		* 2.5		*						
1,2,3,4,6,7,8-HpCDF	2.92e+06	1.04 y	1.13	36:41	46.792		* 2.5		*						
1,2,3,4,7,8,9-HpCDF	2.81e+06	1.02 y	1.28	38:26	46.553		* 2.5		*						
OCDF	5.34e+06	0.87 y	0.95	41:25	92.554		* 2.5		*						
										Rec	Qual				
IS	13C-2,3,7,8-TCDD	7.91e+06	0.78 y	1.10	26:14	105.52				106					
IS	13C-1,2,3,7,8-PeCDD	6.19e+06	0.63 y	0.88	30:44	102.58				103					
IS	13C-1,2,3,4,7,8-HxCDD	5.28e+06	1.25 y	0.64	34:02	111.19				111					
IS	13C-1,2,3,6,7,8-HxCDD	5.87e+06	1.27 y	0.86	34:09	92.752				92.8					
IS	13C-1,2,3,7,8,9-HxCDD	5.98e+06	1.27 y	0.81	34:27	100.20				100					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.28e+06	1.05 y	0.65	37:53	109.19				109					
IS	13C-OCDD	1.03e+07	0.89 y	0.58	41:11	239.04				120					
IS	13C-2,3,7,8-TCDF	1.12e+07	0.80 y	1.03	25:28	99.845				99.8					
IS	13C-1,2,3,7,8-PeCDF	9.79e+06	1.63 y	0.85	29:34	105.55				106					
IS	13C-2,3,4,7,8-PeCDF	9.26e+06	1.67 y	0.85	30:27	100.73				101					
IS	13C-1,2,3,4,7,8-HxCDF	6.88e+06	0.51 y	0.83	33:09	111.90				112					
IS	13C-1,2,3,6,7,8-HxCDF	7.75e+06	0.52 y	1.03	33:17	101.26				101					
IS	13C-2,3,4,6,7,8-HxCDF	7.09e+06	0.53 y	0.95	33:52	100.49				100					
IS	13C-1,2,3,7,8,9-HxCDF	6.44e+06	0.53 y	0.83	34:49	105.25				105					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.53e+06	0.45 y	0.76	36:40	98.710				98.7					
IS	13C-1,2,3,4,7,8,9-HpCDF	4.72e+06	0.44 y	0.58	38:26	109.86				110					
IS	13C-OCDF	1.22e+07	0.86 y	0.69	41:24	239.07				120					
C/Up	37Cl-2,3,7,8-TCDD	7.80e+05		1.20	26:15	9.5098				95.1					
RS/RT	13C-1,2,3,4-TCDD	6.85e+06	0.80 y	1.00	25:41	100.00									
RS	13C-1,2,3,4-TCDF	1.09e+07	0.79 y	1.00	24:15	100.00									
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.40e+06	0.52 y	1.00	33:33	100.00									

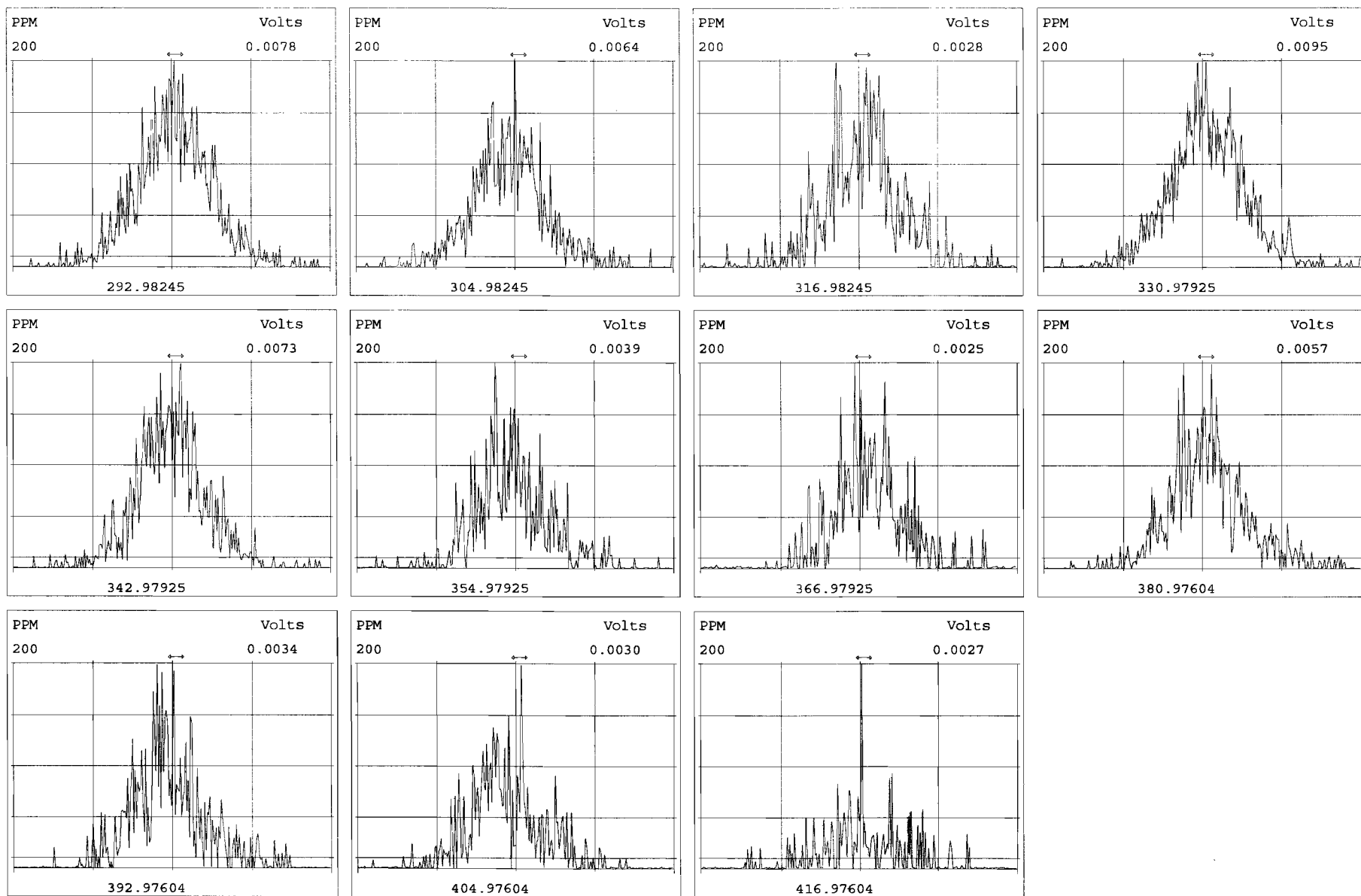
Integrations
by DB
Analyst: DB
Date: 11/1/19
Reviewed
by CT
Analyst: CT
Date: 11/04/19

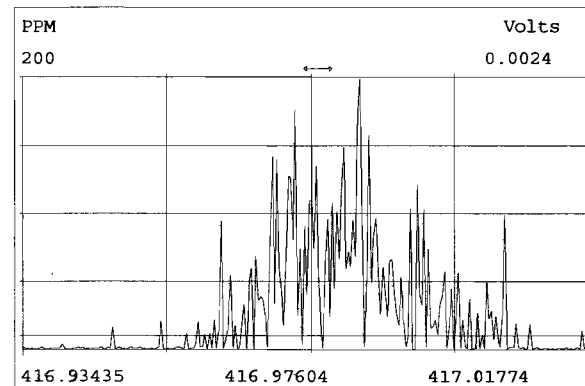
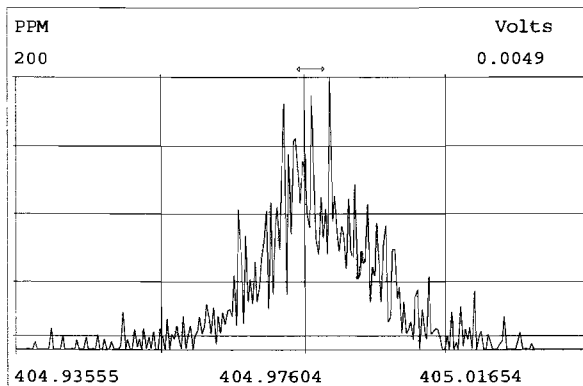
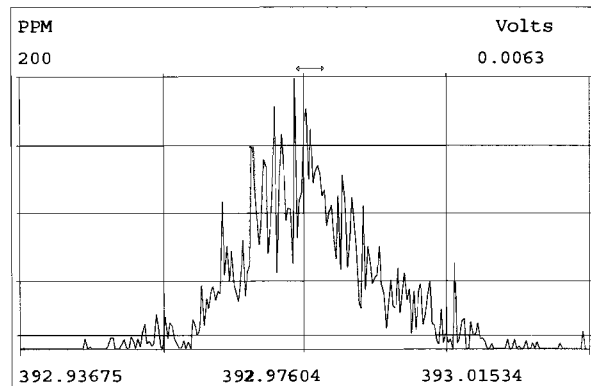
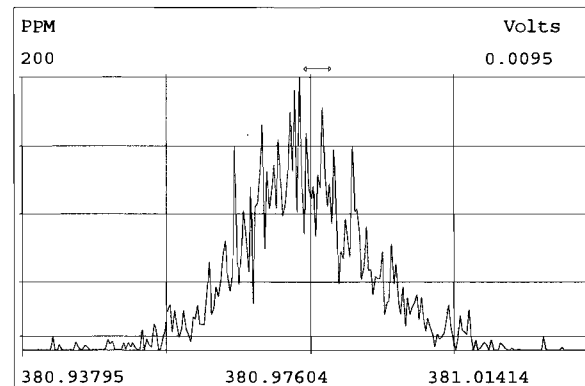
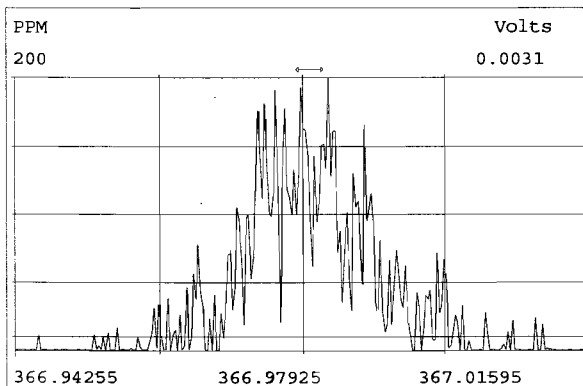
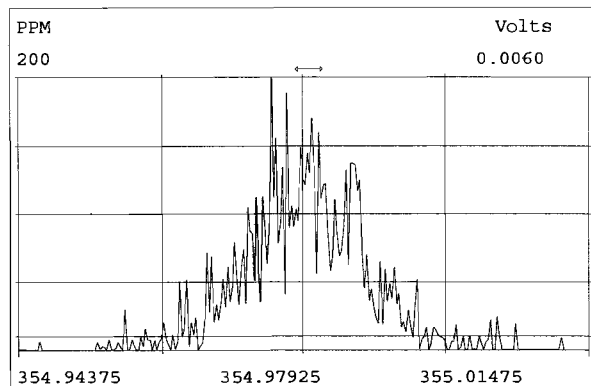
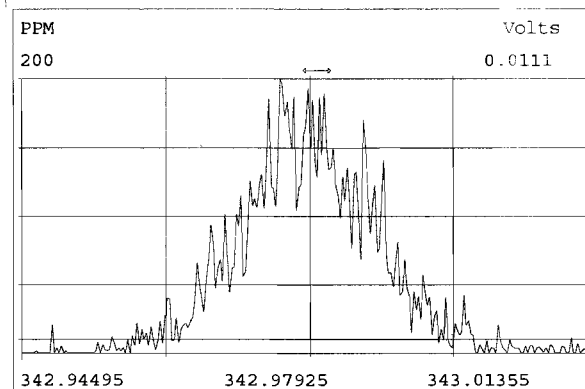
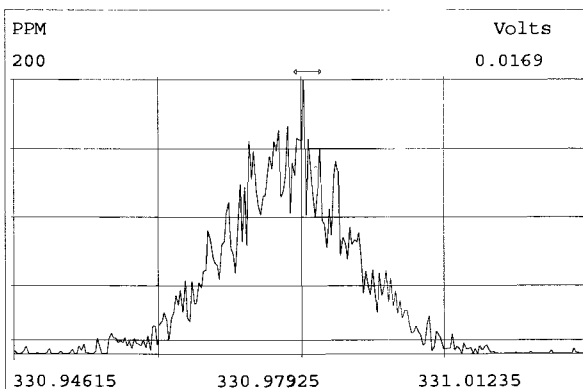
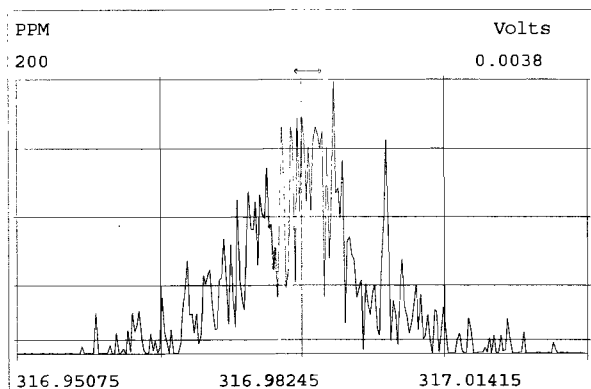
Vista Analytical Laboratory - Injection Log Run file: 191101D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
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191101D1	2	ST191101D1-2	DB	1-NOV-19	14:47:02	ST191101D1-2	ST191101D1-3
191101D1	3	B9J0312-BS1	DB	1-NOV-19	15:34:58	ST191101D1-1	NA
191101D1	4	SOLVENT BLANK	DB	1-NOV-19	16:22:53	NA	NA
191101D1	5	B9J0312-BLK1	DB	1-NOV-19	17:10:44	ST191101D1-1	NA
191101D1	6	1903546-07RE2	DB	1-NOV-19	17:58:35	ST191101D1-1	NA
191101D1	7	B9J0312-DUP1	DB	1-NOV-19	18:46:30	ST191101D1-1	NA
191101D1	8	1903546-09RE1	DB	1-NOV-19	19:34:14	ST191101D1-1	NA
191101D1	9	1903546-15RE1	DB	1-NOV-19	20:21:58	ST191101D1-1	NA
191101D1	10	1903565-09RE1	DB	1-NOV-19	21:09:47	ST191101D1-1	NA
191101D1	11	1903565-14RE1	DB	1-NOV-19	21:57:30	ST191101D1-1	NA
191101D1	12	1903565-15RE1	DB	1-NOV-19	22:45:15	ST191101D1-1	NA
191101D1	13	1903565-16RE1@20X	DB	1-NOV-19	23:32:58	ST191101D1-1	NA
191101D1	14	1903260-01RE2@10X	DB	2-NOV-19	00:20:37	ST191101D1-2	ST191101D1-3
191101D1	15	SOLVENT BLANK	DB	2-NOV-19	01:08:28	NA	NA
191101D1	16	ST191101D1-3	DB	2-NOV-19	01:56:13	ST191101D1-2	ST191101D1-3

Peak Locate Examination: 1-NOV-2019:13:54 File:191101D1

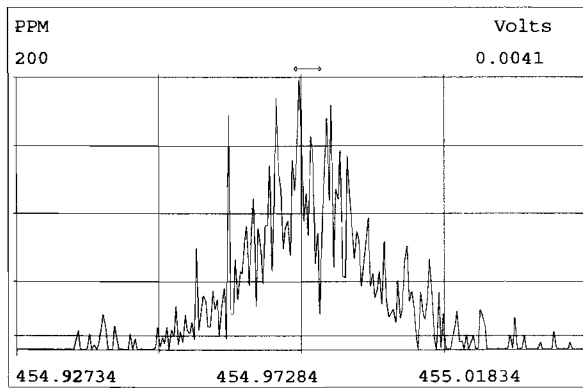
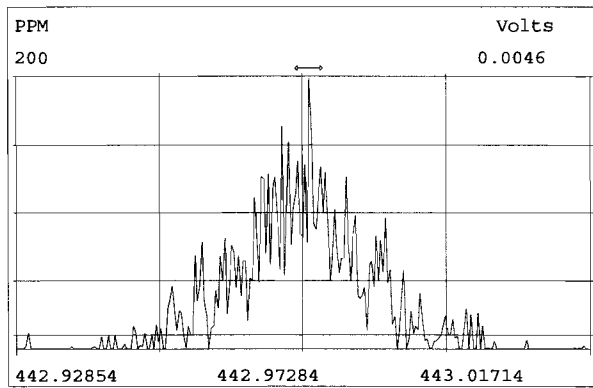
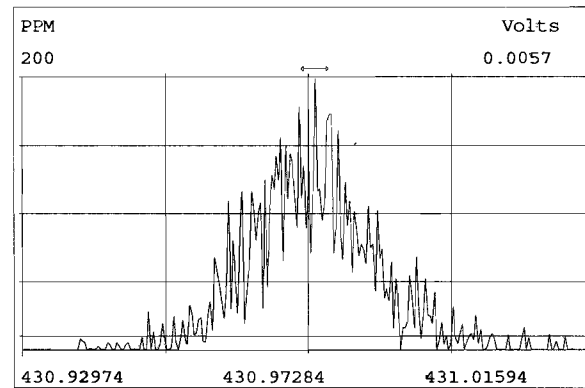
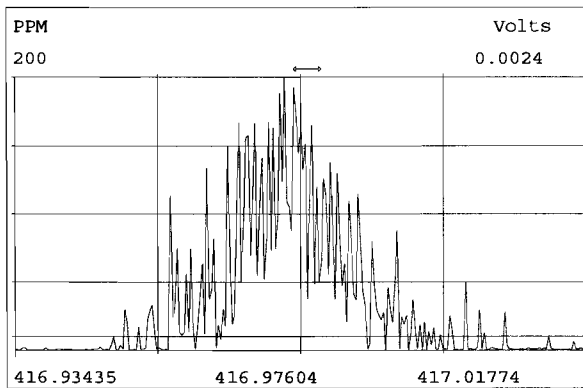
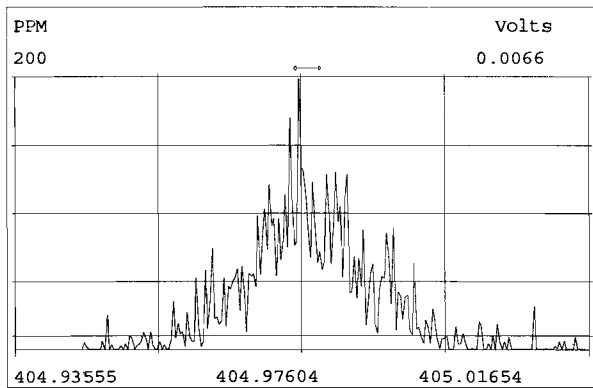
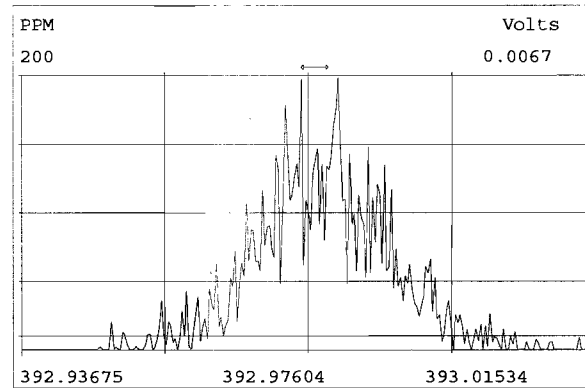
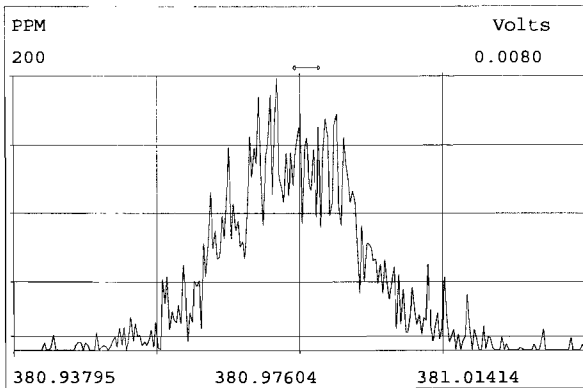
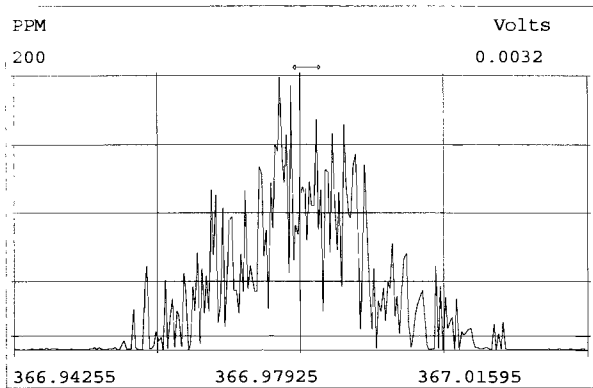
Experiment:OCDD_DB5 Function:1 Reference:PFK

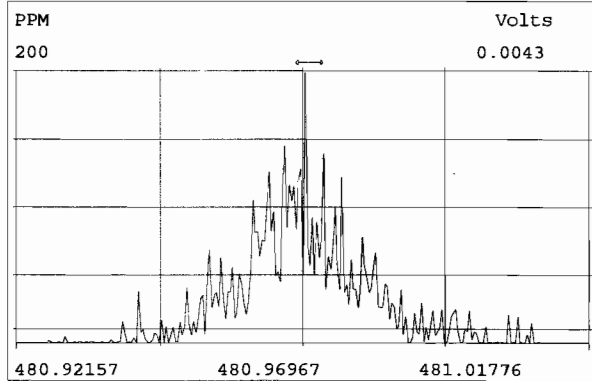
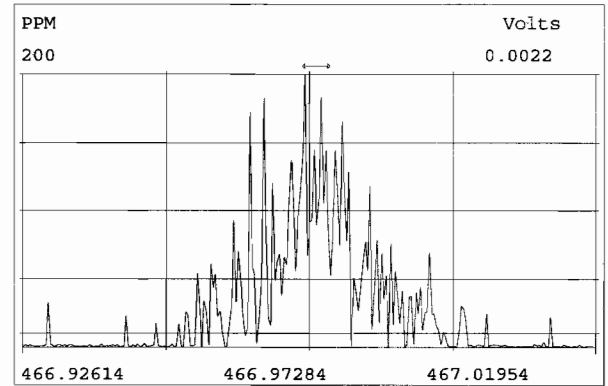
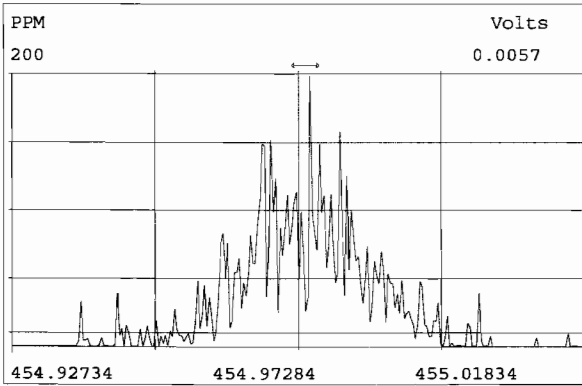
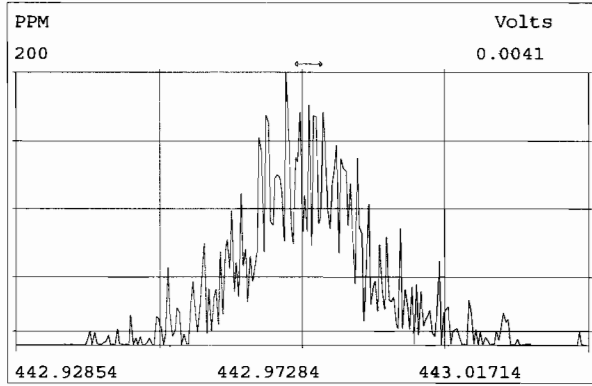
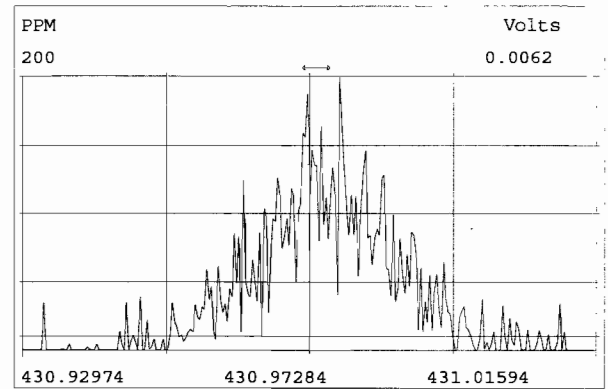
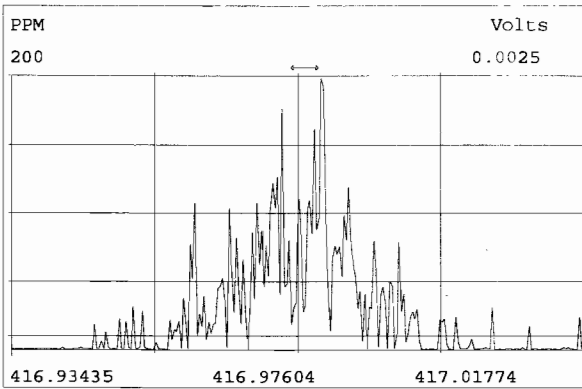
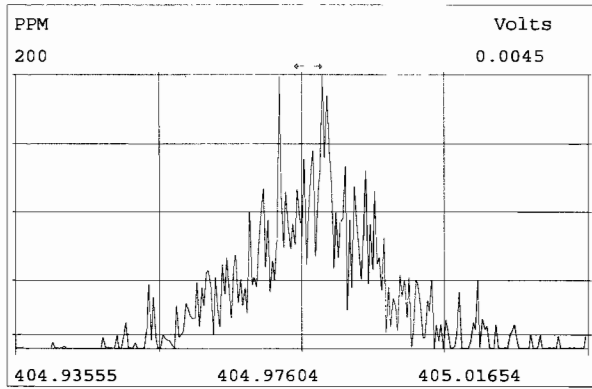




Peak Locate Examination: 1-NOV-2019:13:56 File:191101D1

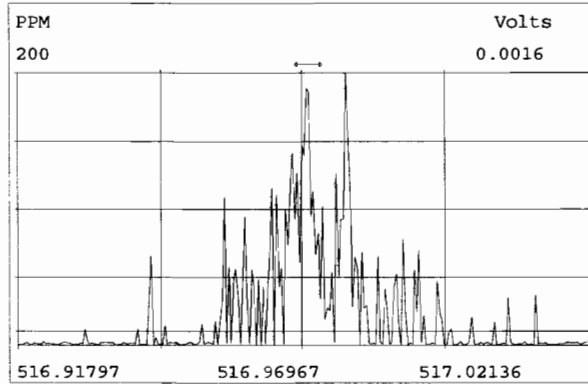
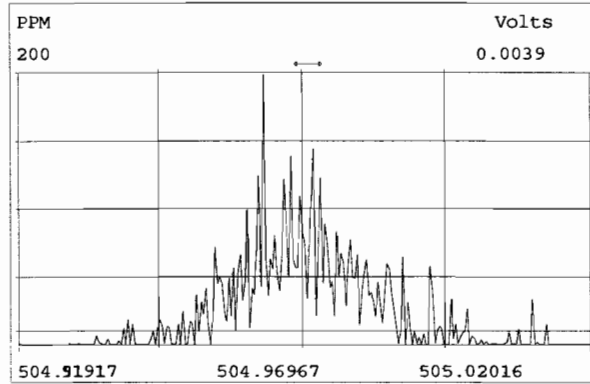
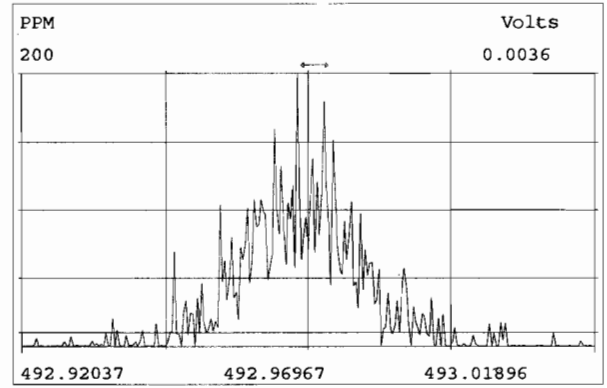
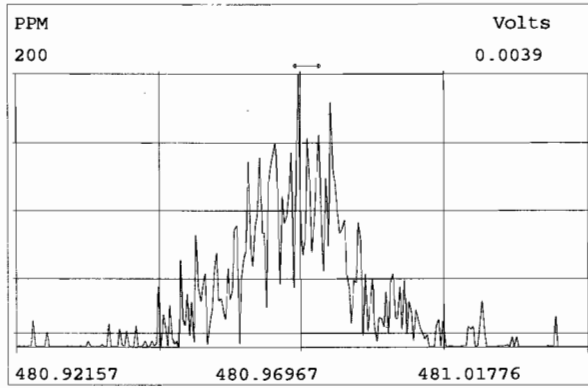
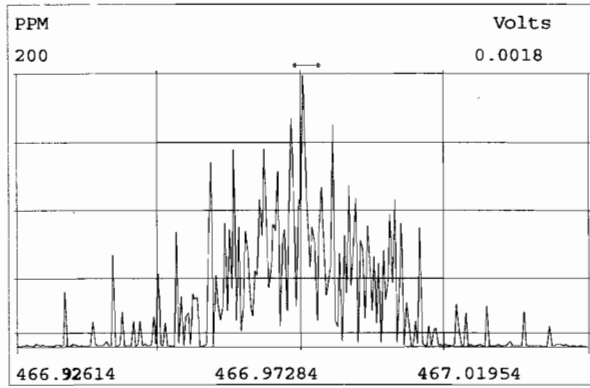
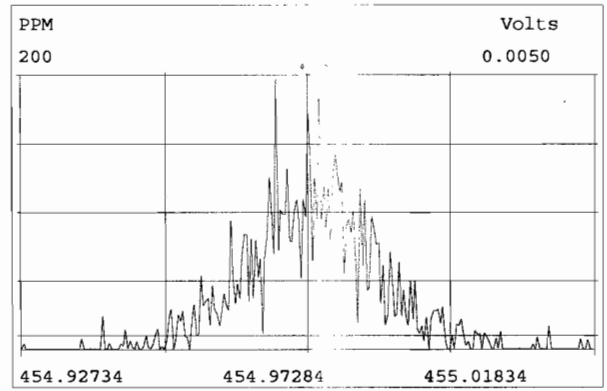
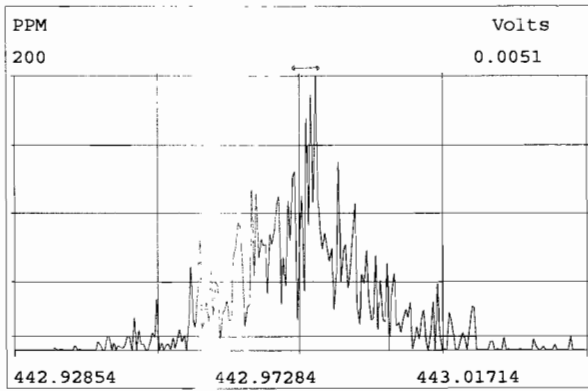
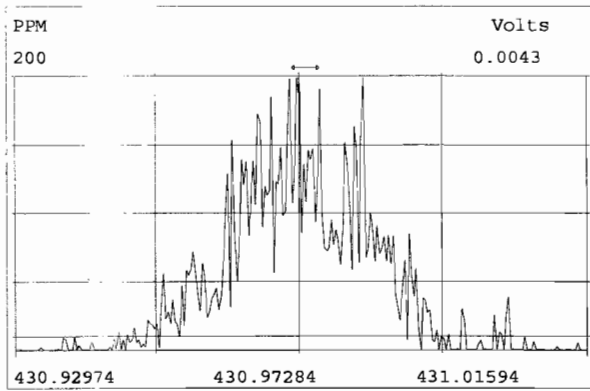
Experiment:OCDD_DB5 Function:3 Reference:PFK



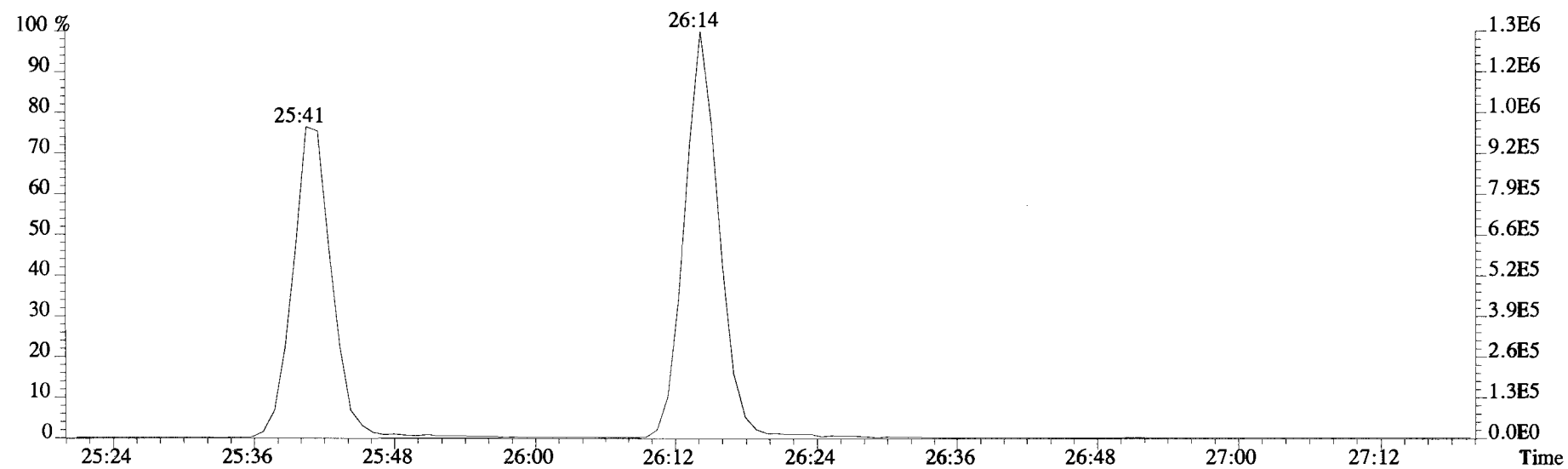
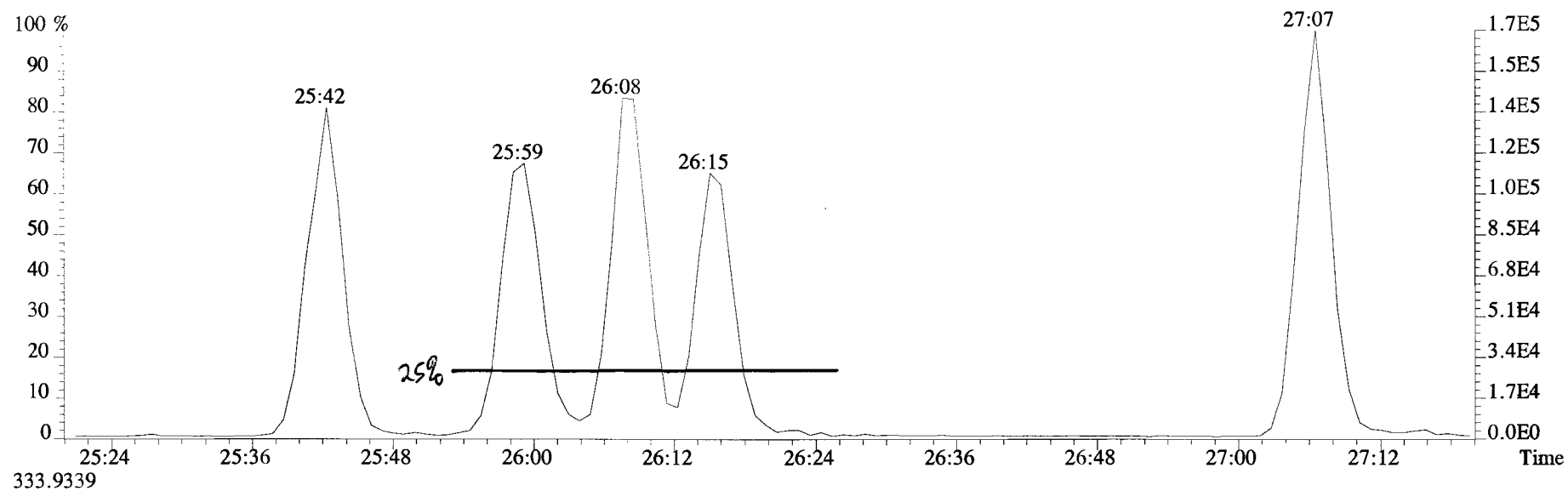


Peak Locate Examination: 1-NOV-2019:13:58 File:191101D1

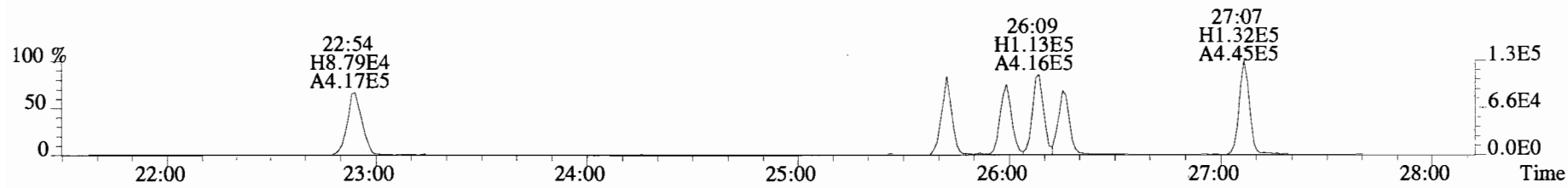
Experiment:OCDD_DB5 Function:5 Reference:PFK



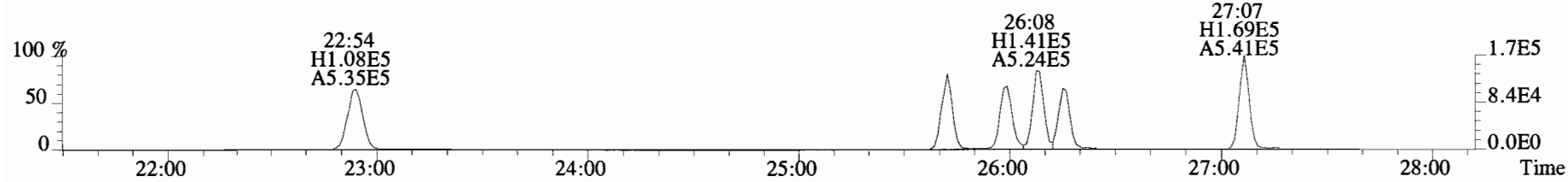
File:191101D1 #1-492 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
321.8936



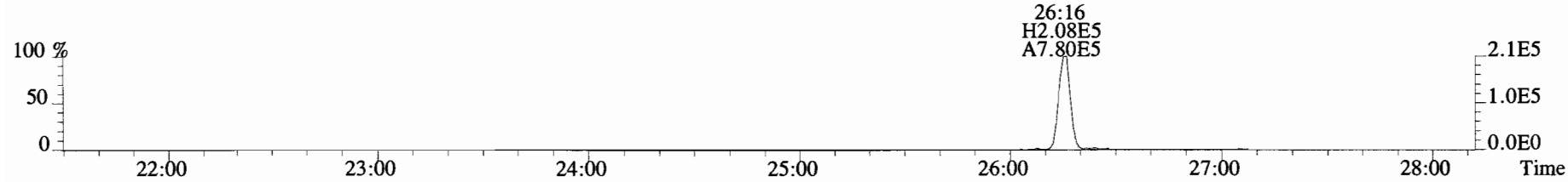
File:191101D1 #1-492 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



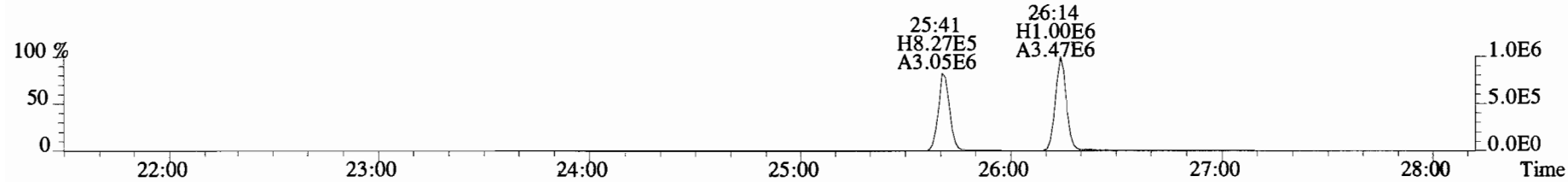
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



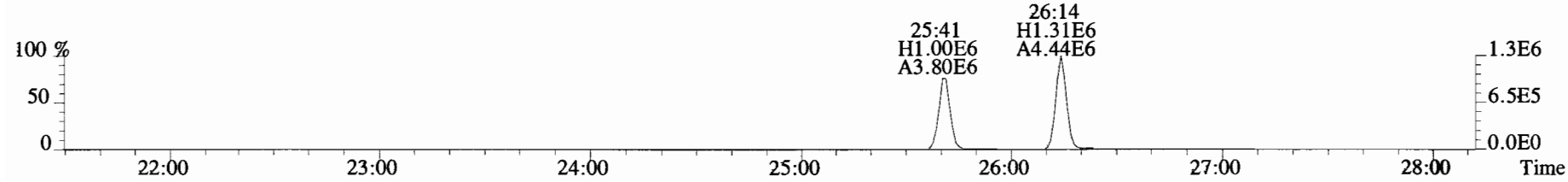
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



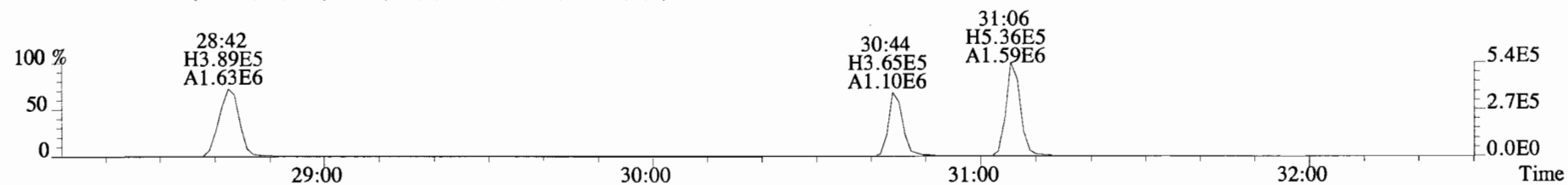
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



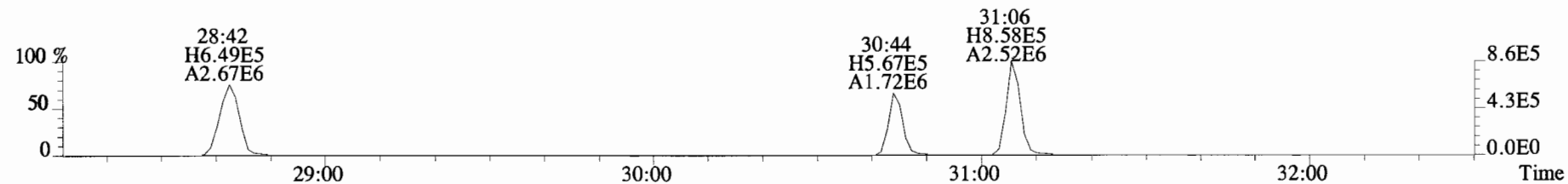
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



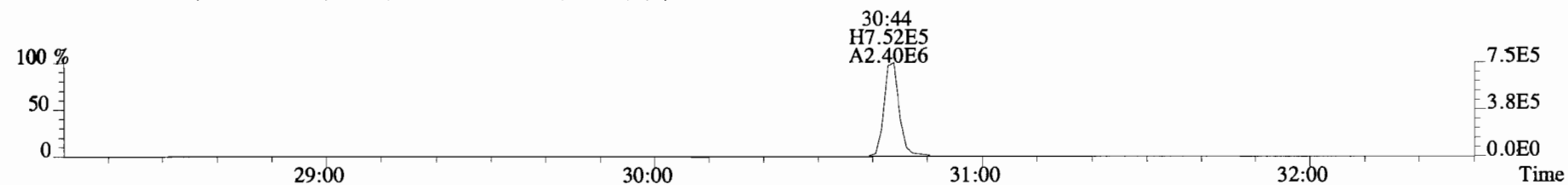
File:191101D1 #1-211 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



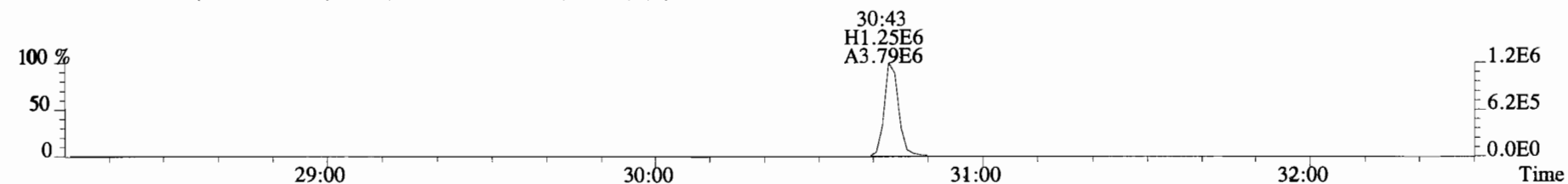
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



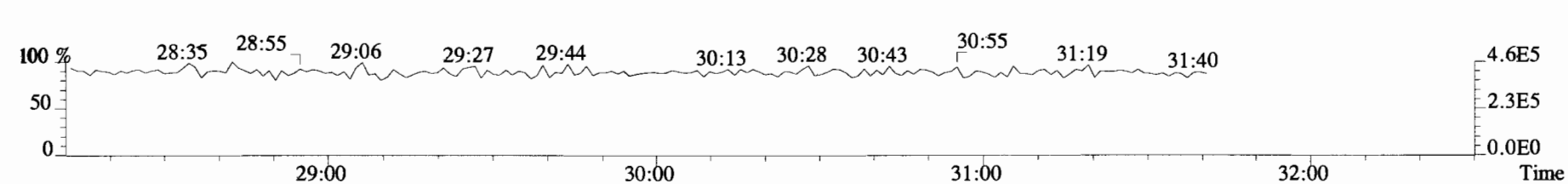
365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



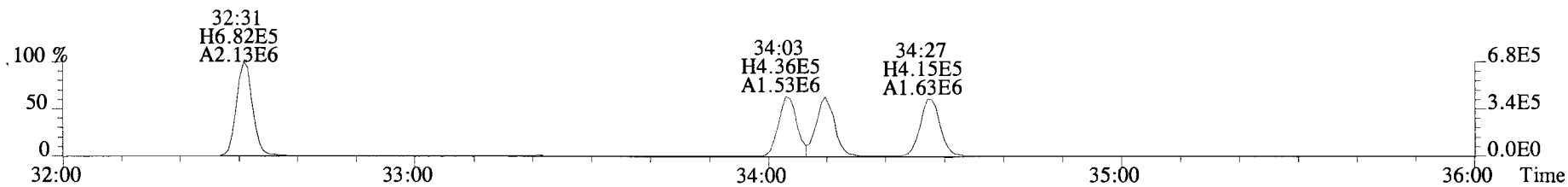
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



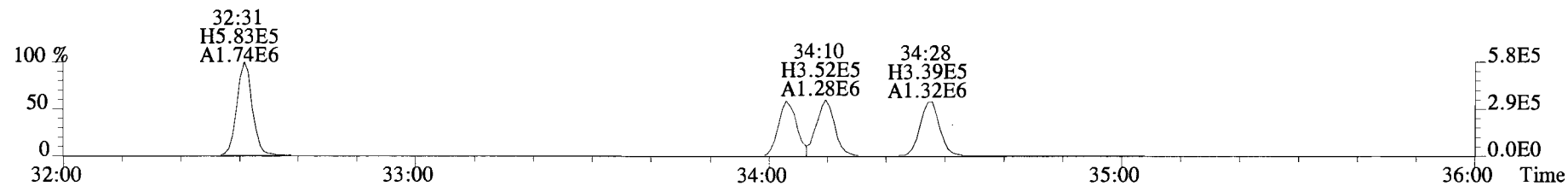
366.9792 F:2



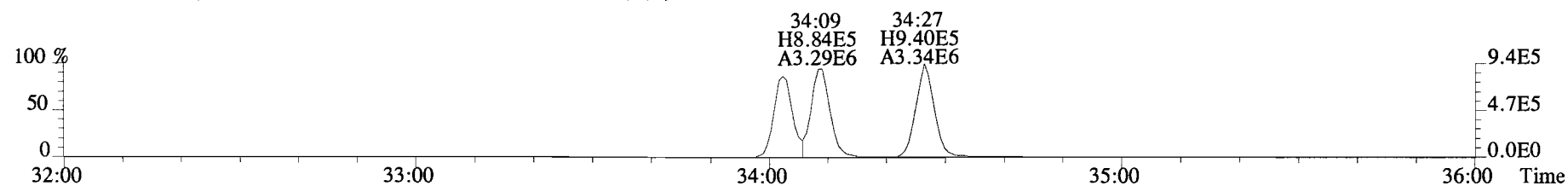
File:191101D1 #1-384 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



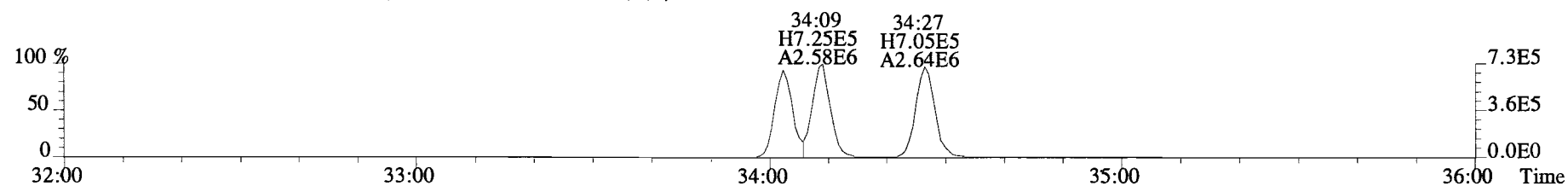
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



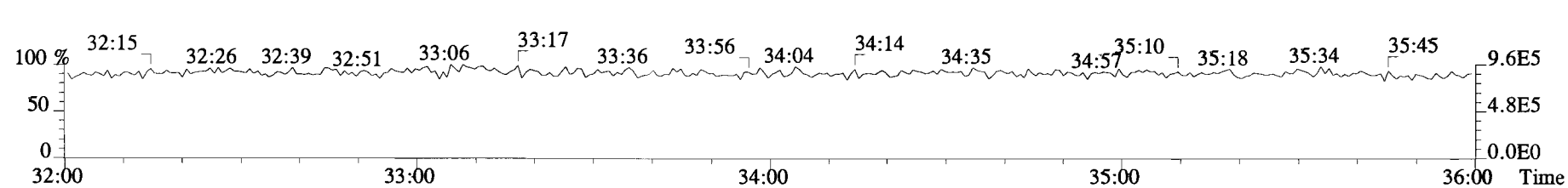
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



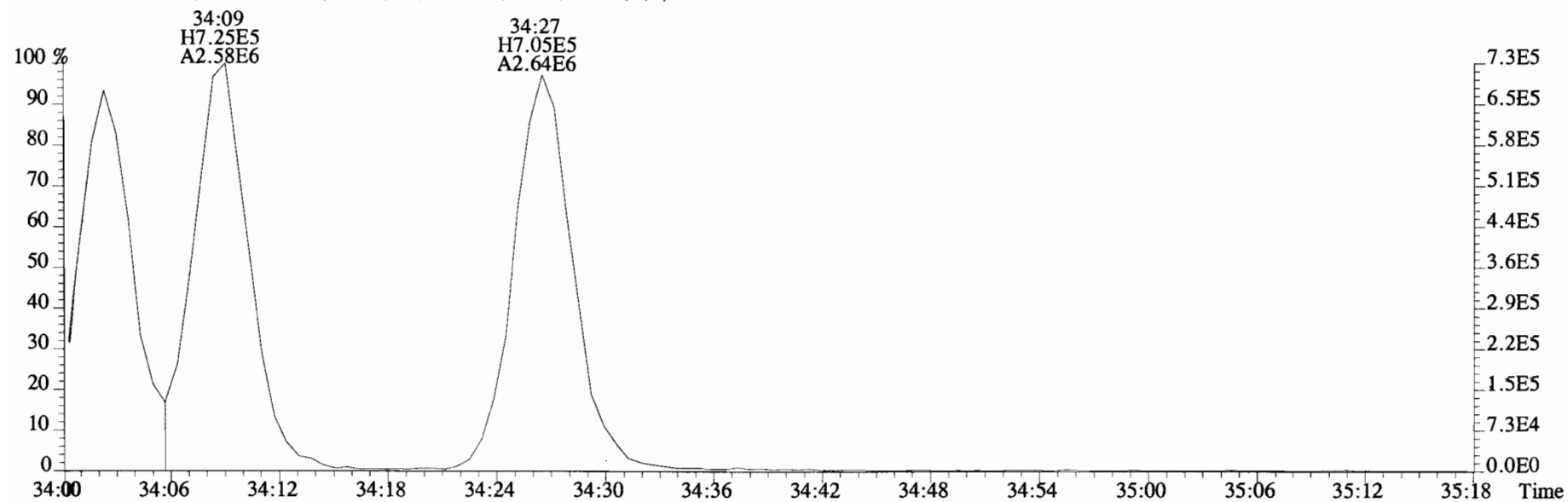
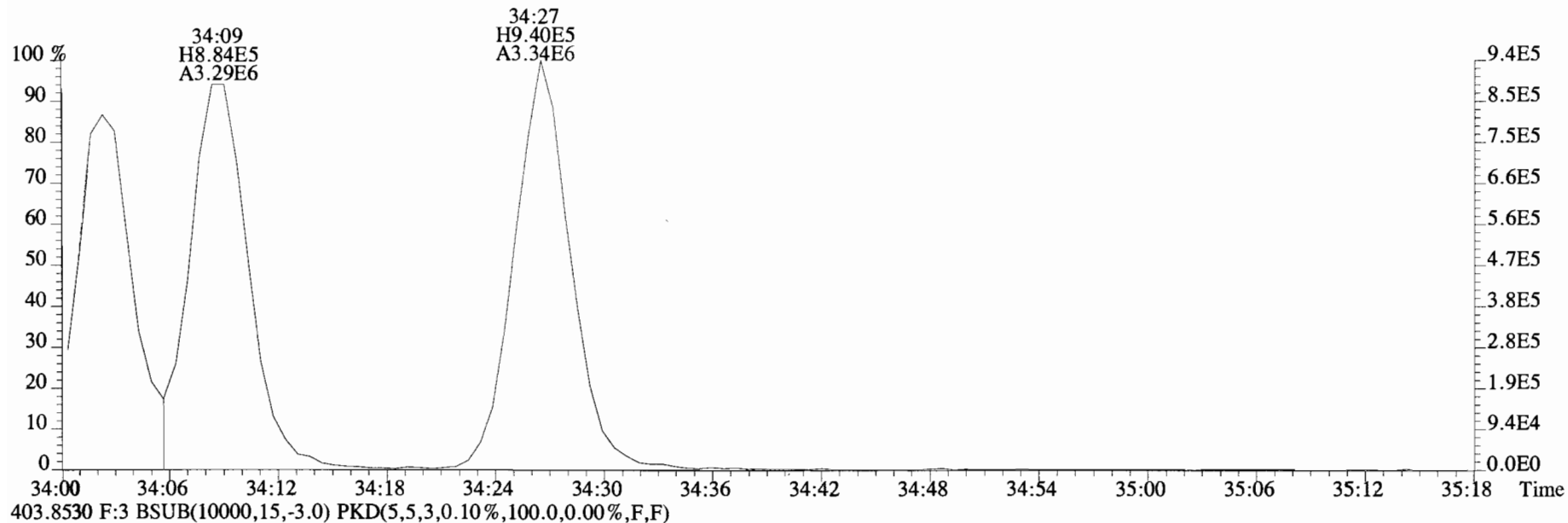
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



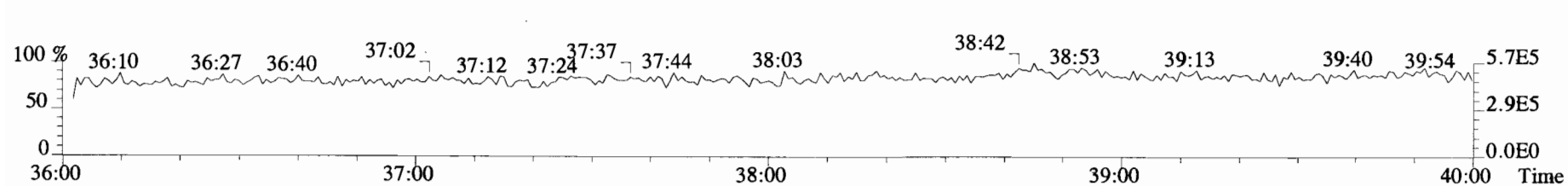
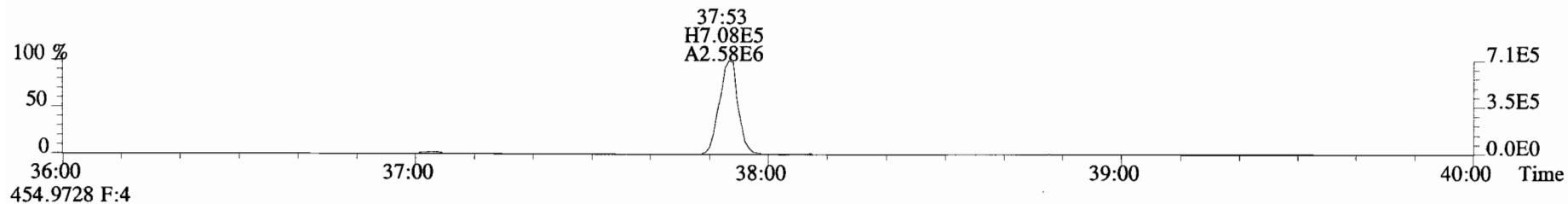
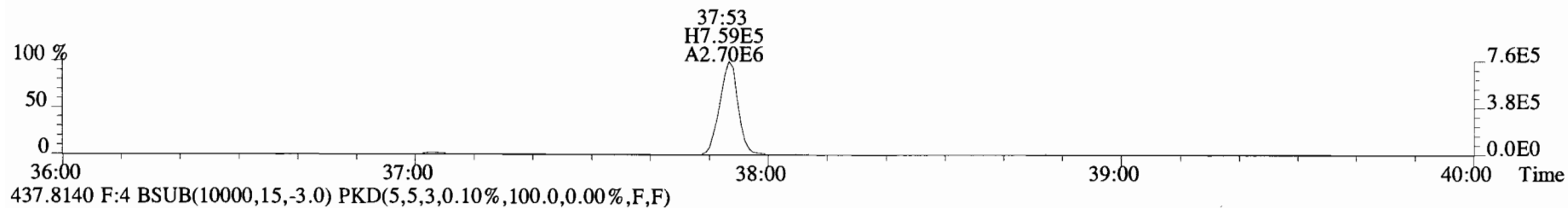
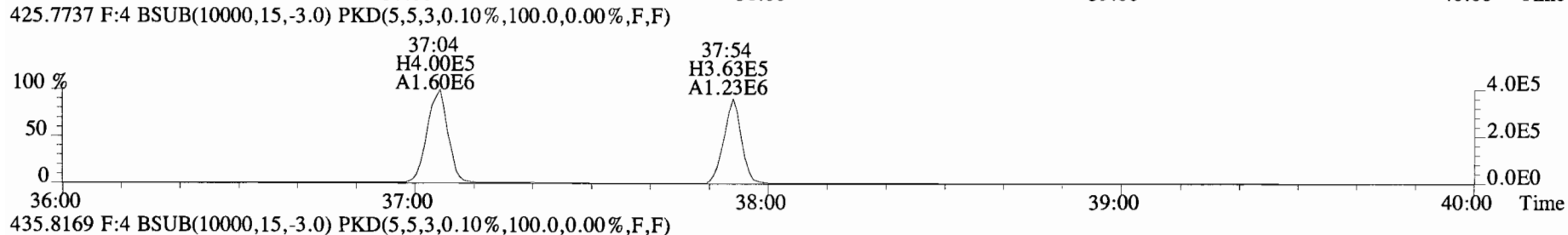
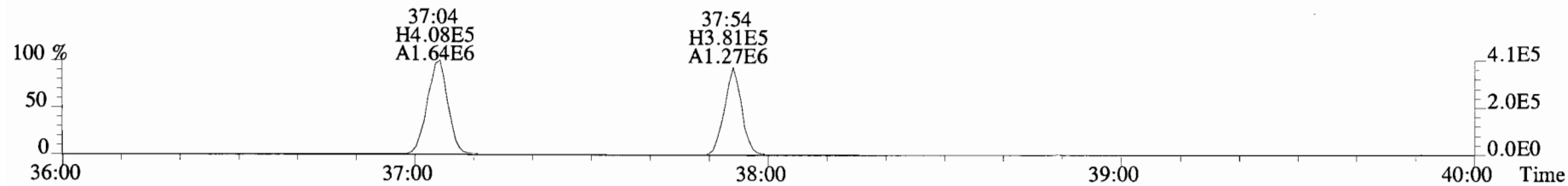
392.9760 F:3



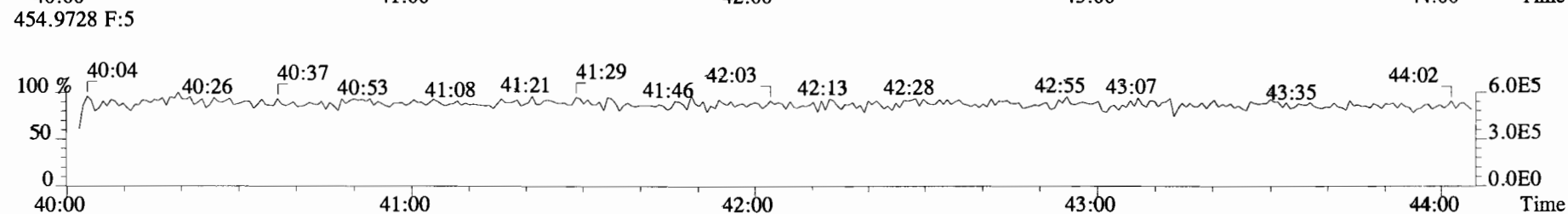
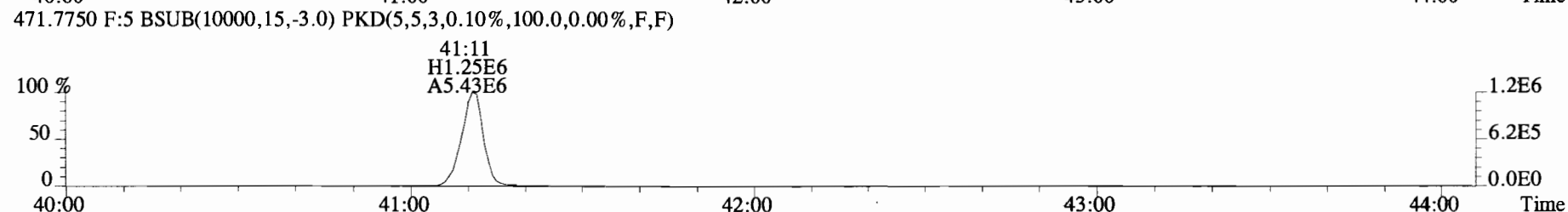
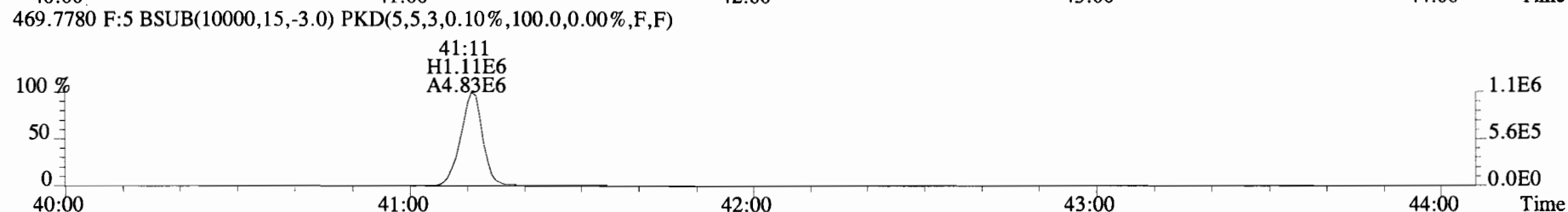
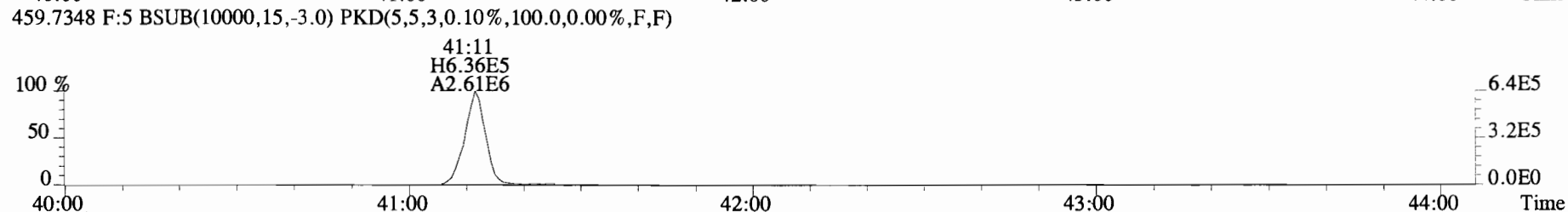
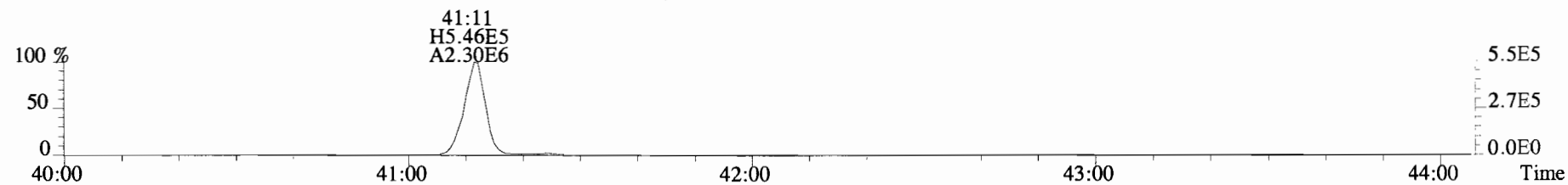
File:191101D1 #1-384 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



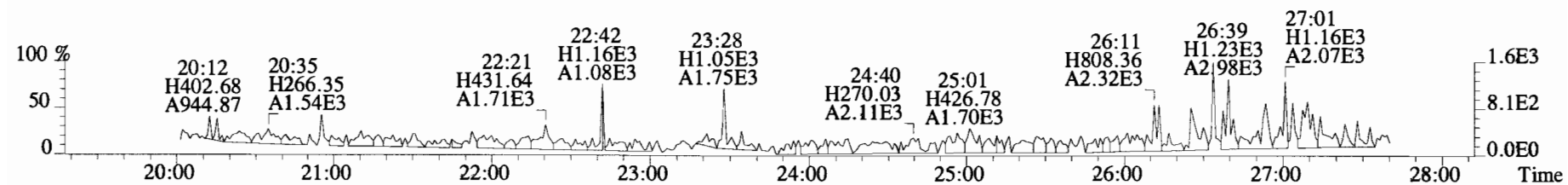
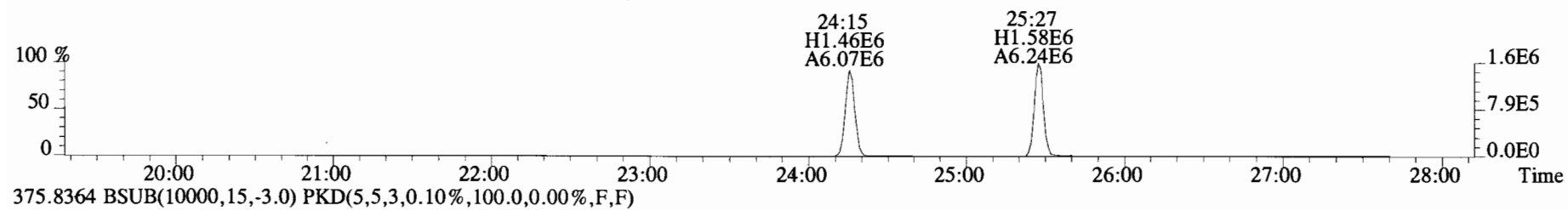
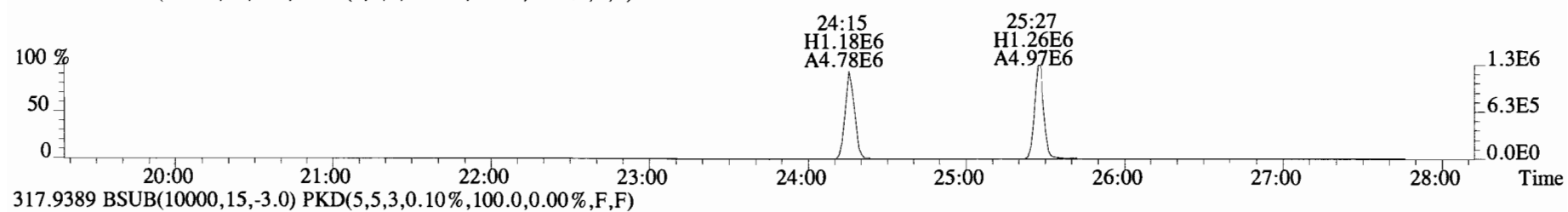
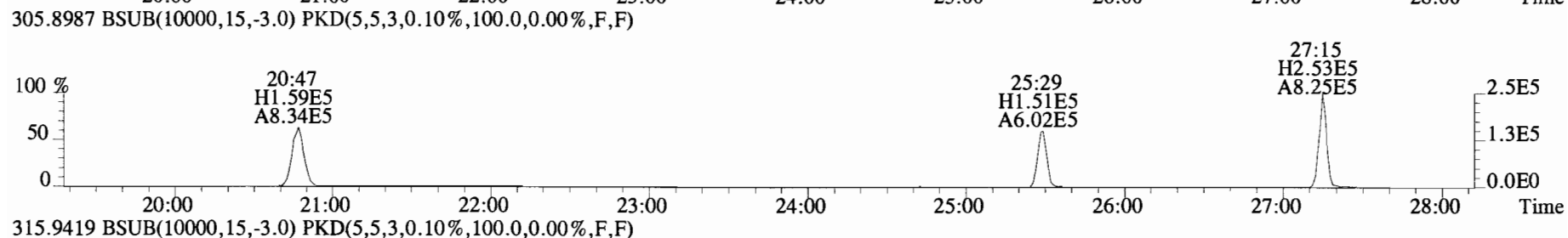
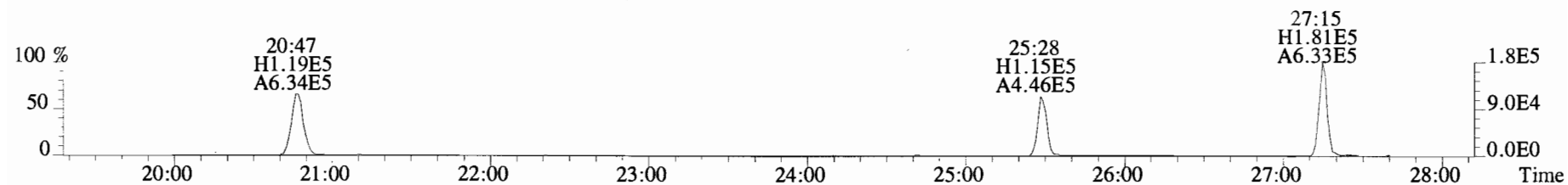
File:191101D1 #1-356 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



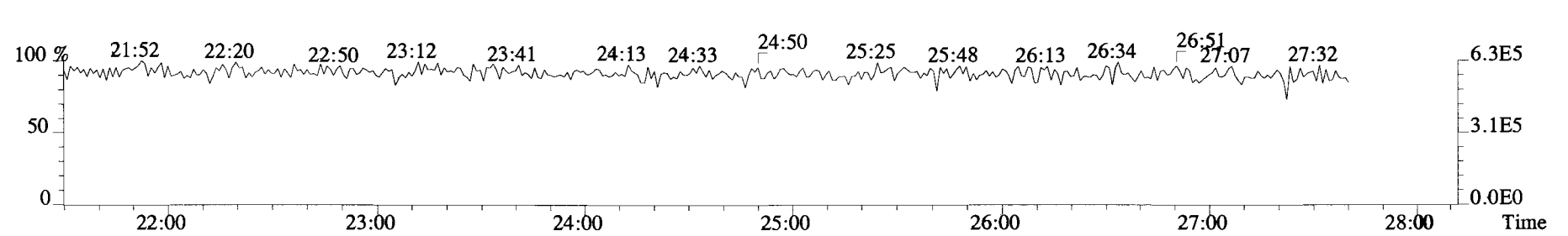
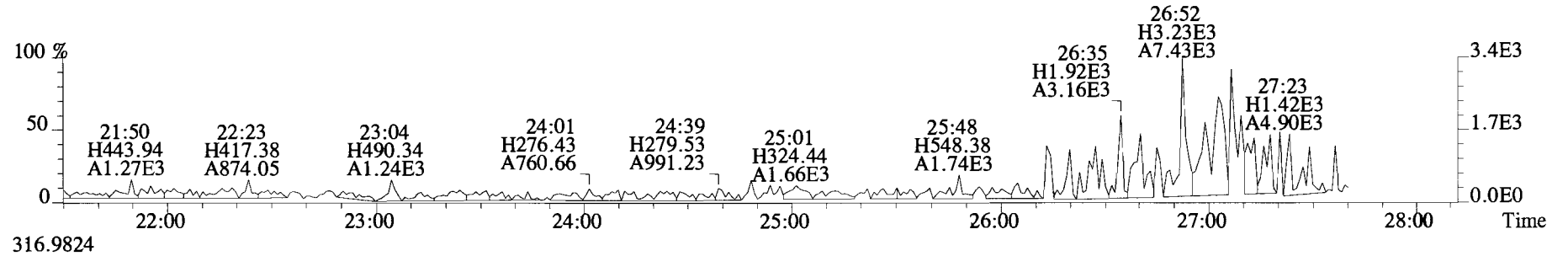
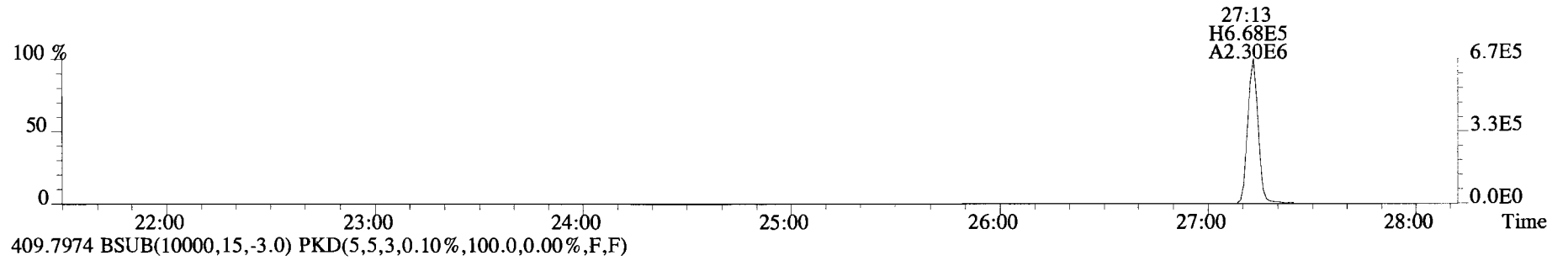
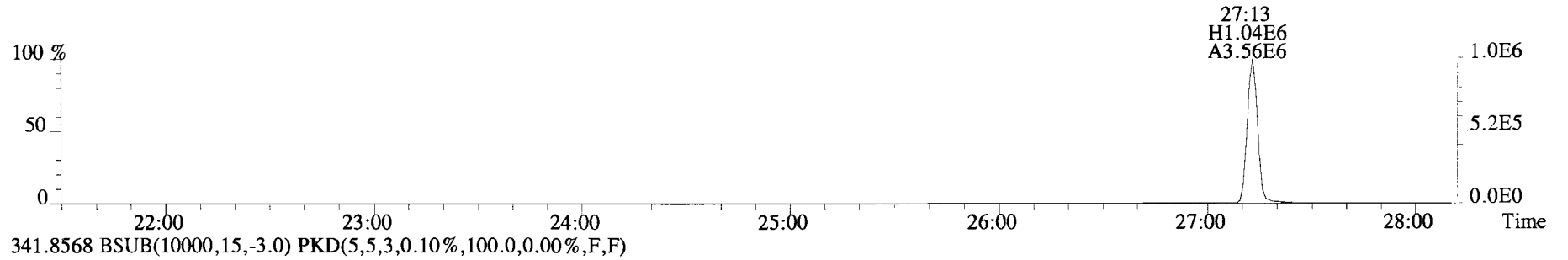
File:191101D1 #1-431 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



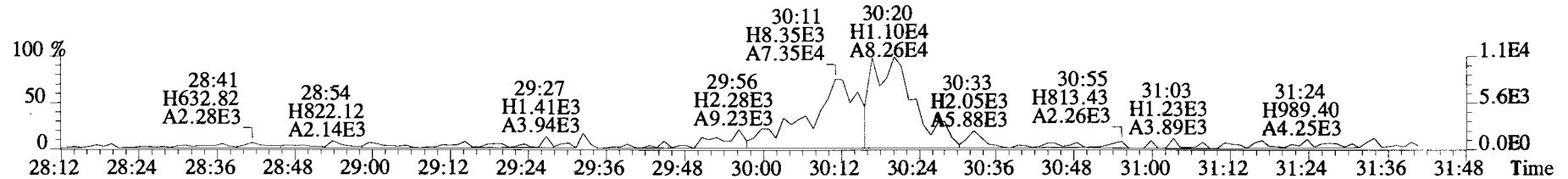
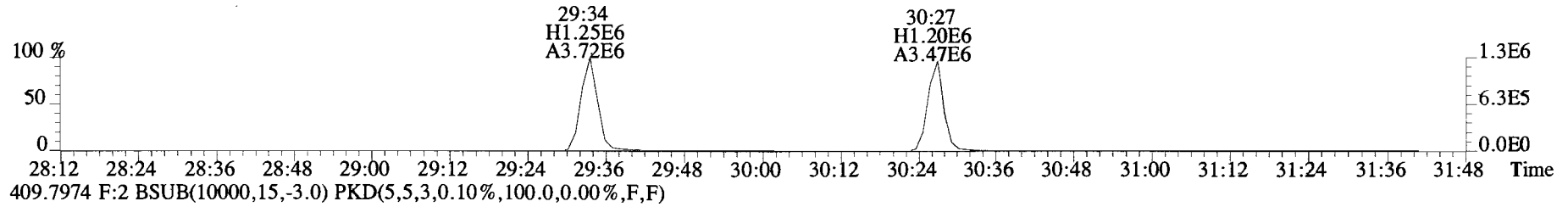
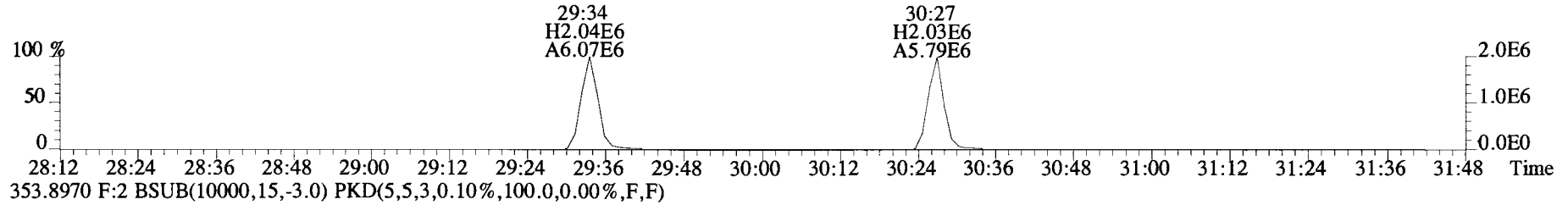
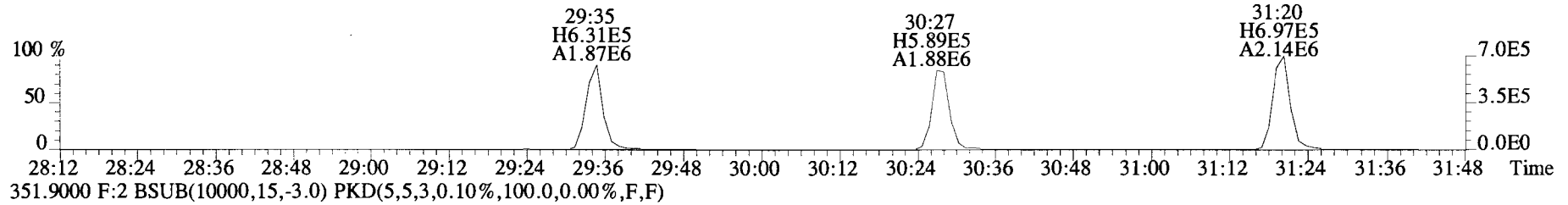
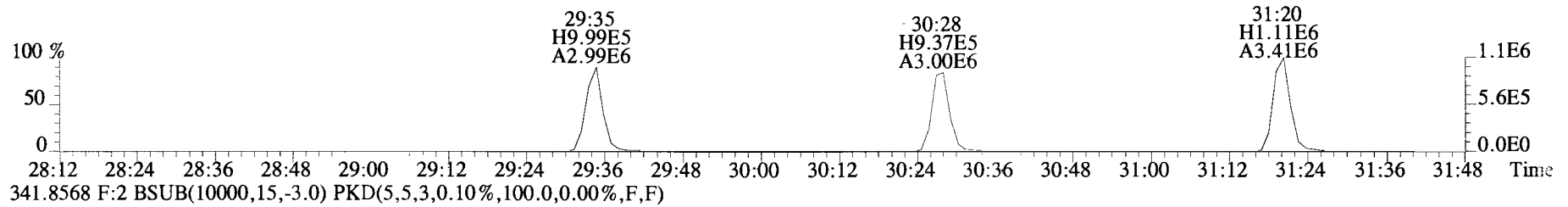
File:191101D1 #1-492 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



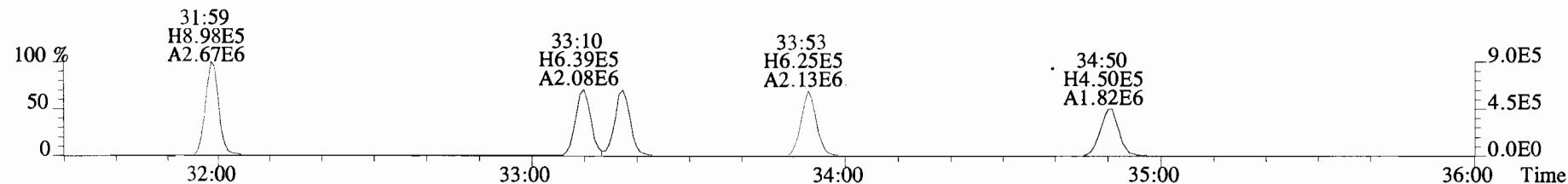
File:191101D1 #1-492 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



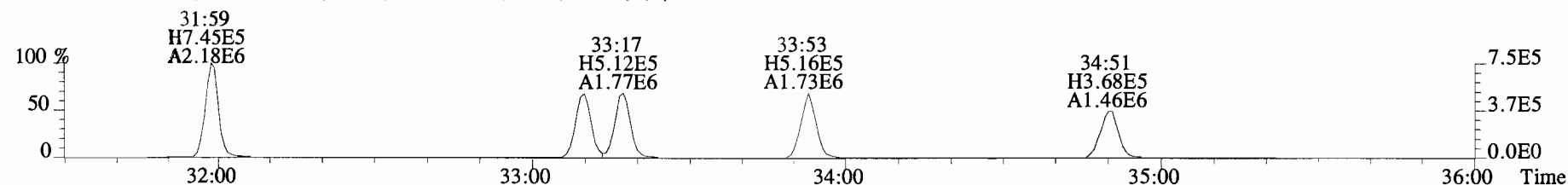
File:191101D1 #1-211 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



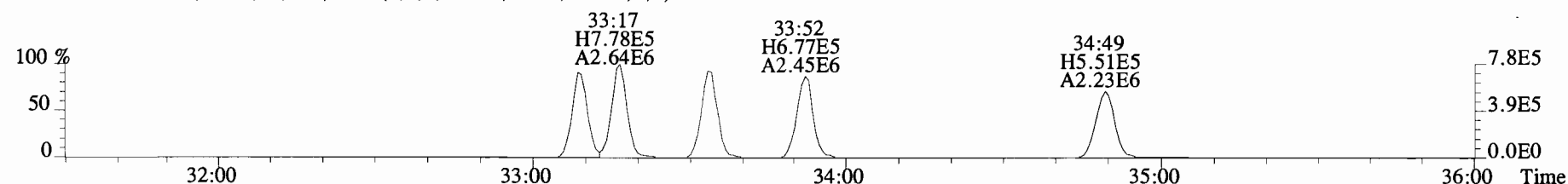
File:191101D1 #1-384 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



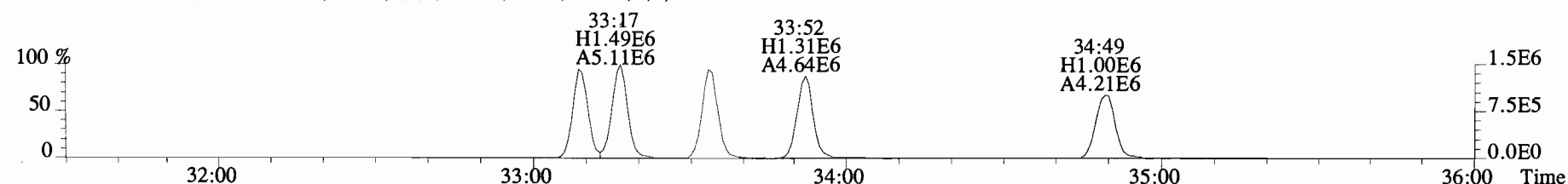
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



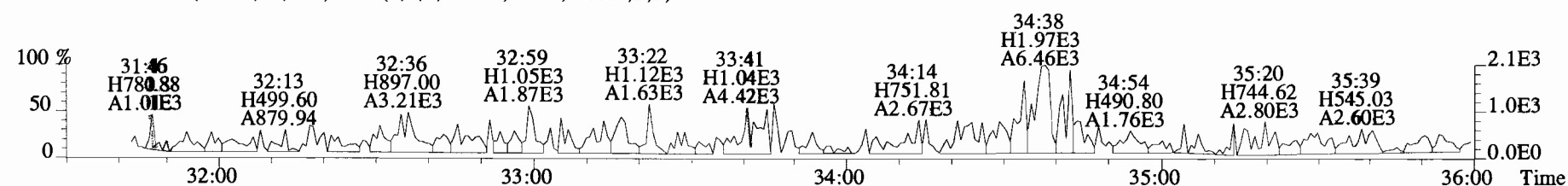
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



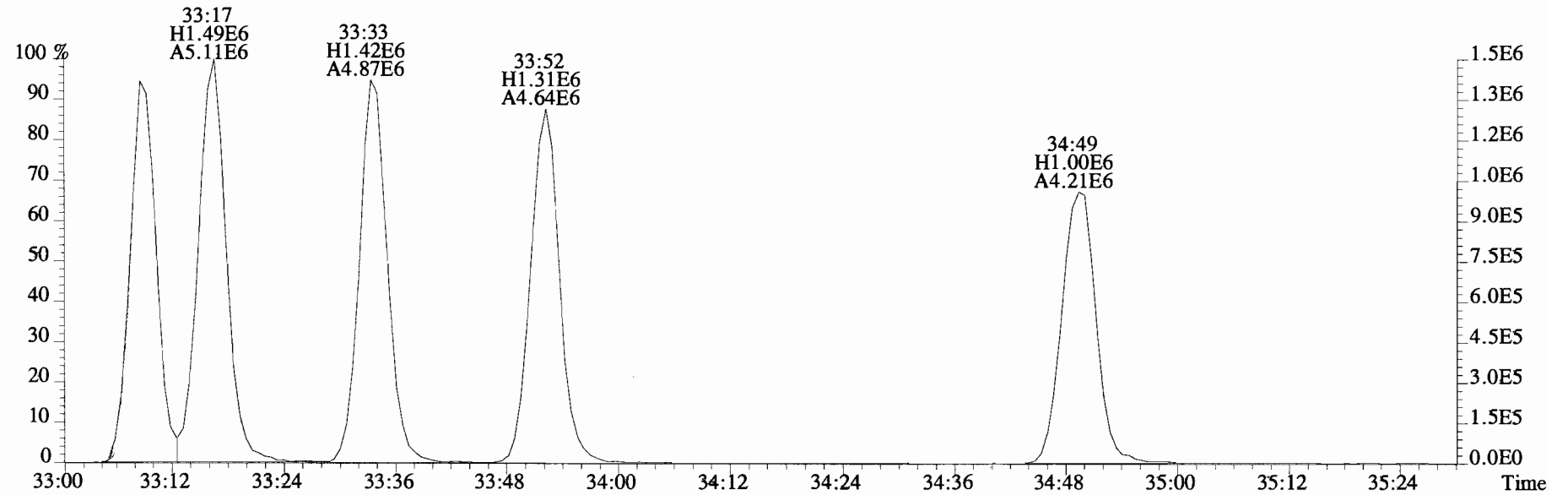
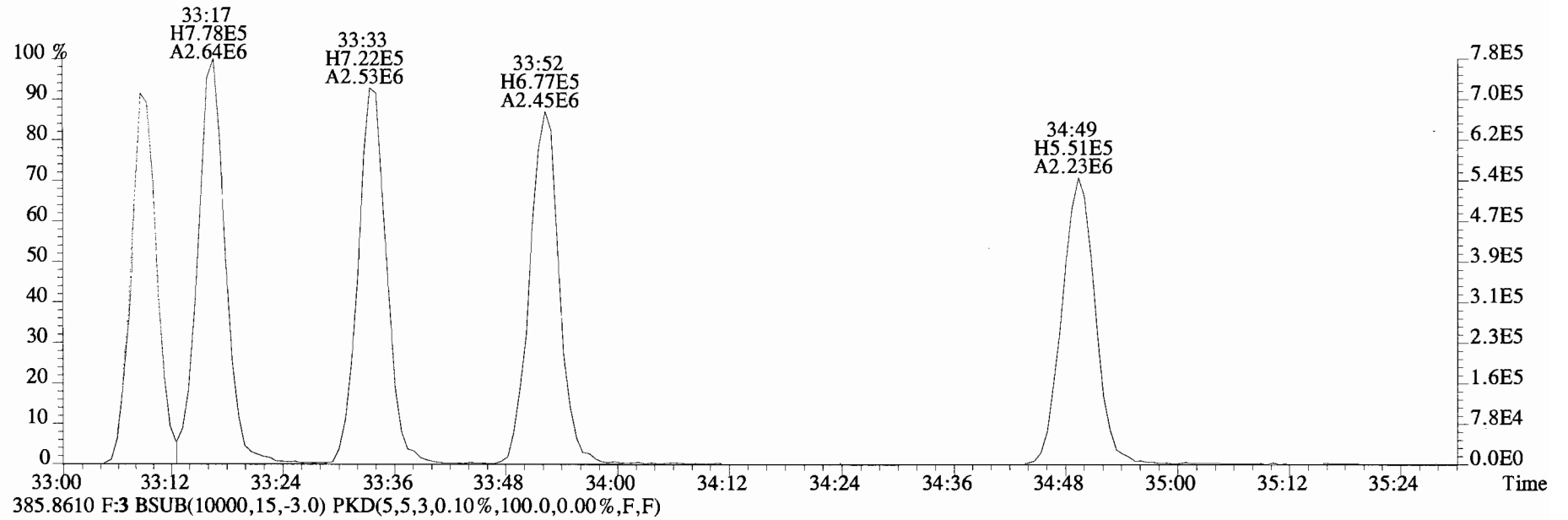
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



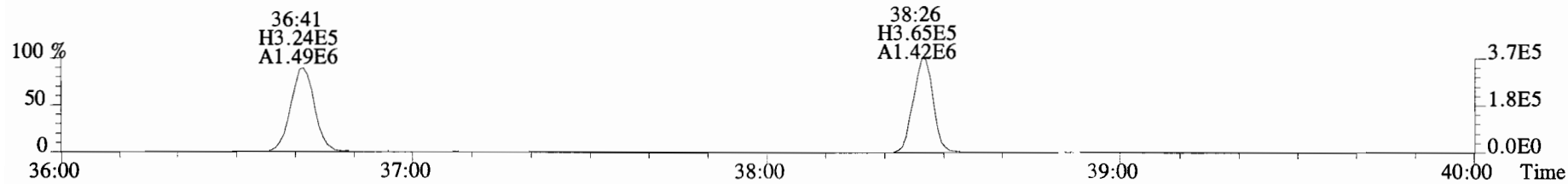
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



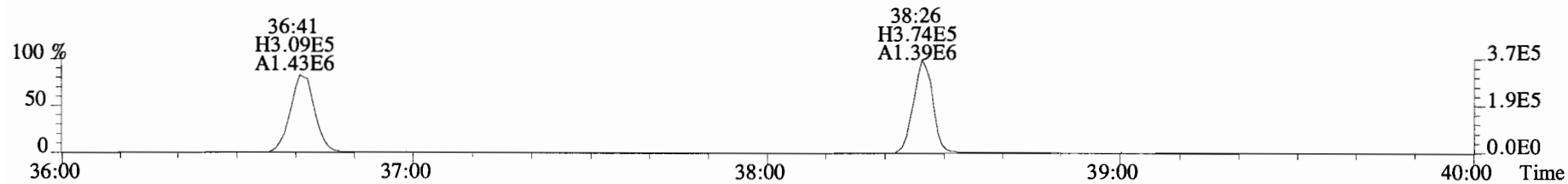
File:191101D1 #1-384 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



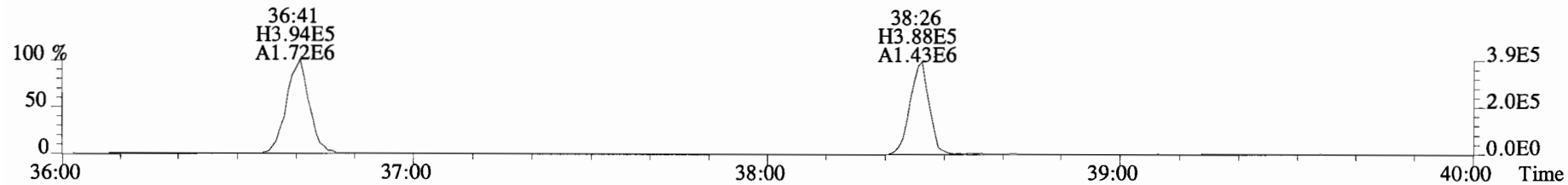
File:191101D1 #1-356 Acq: 1-NOV-2019 13:59:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



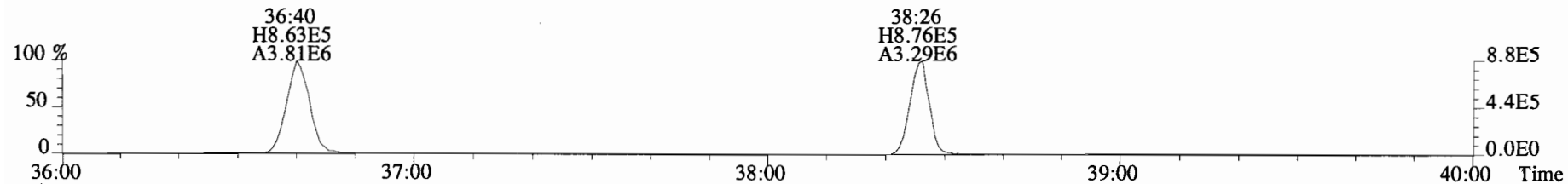
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



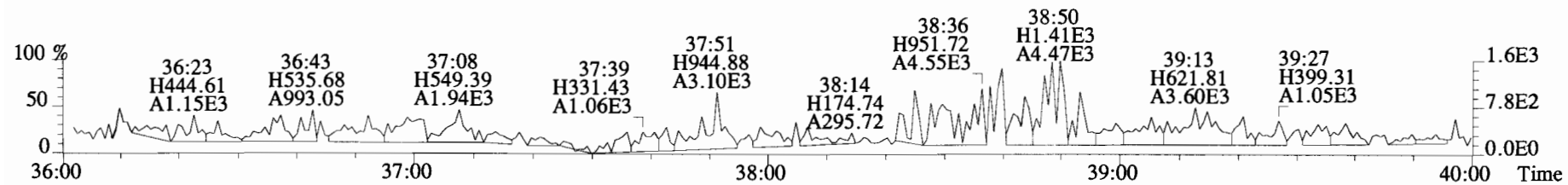
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



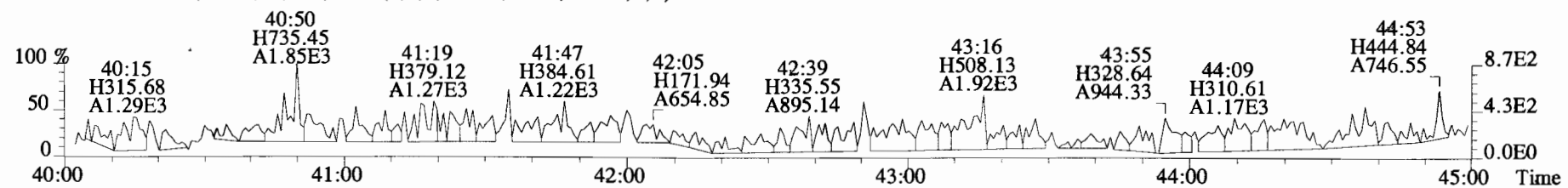
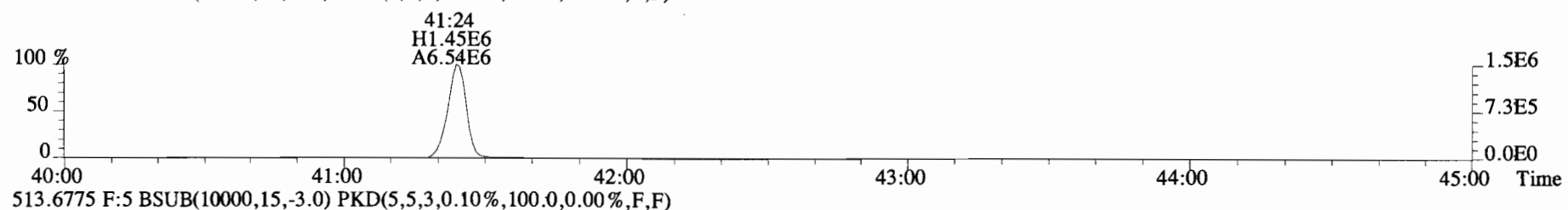
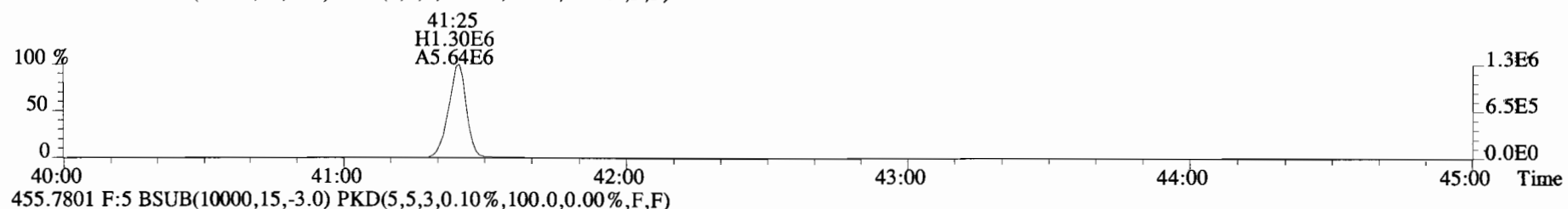
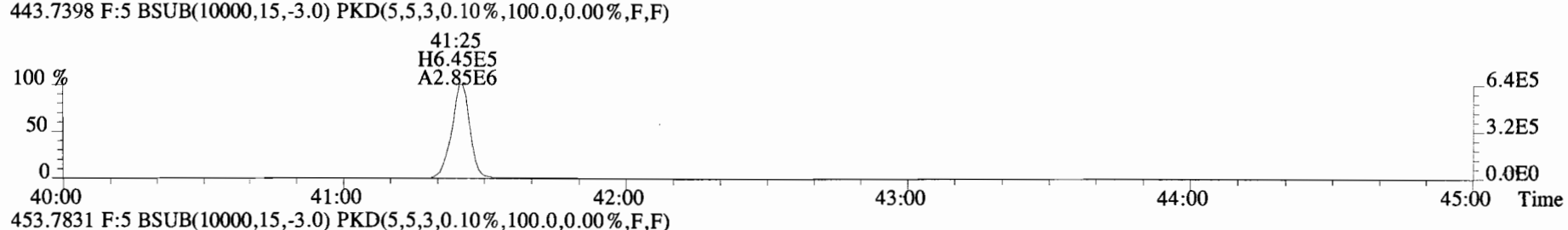
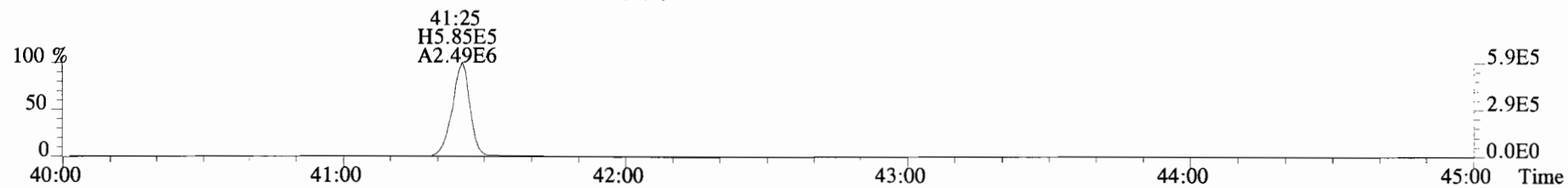
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479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

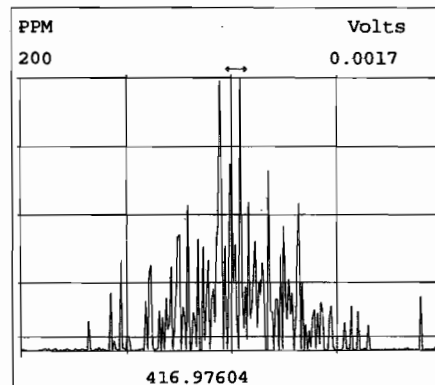
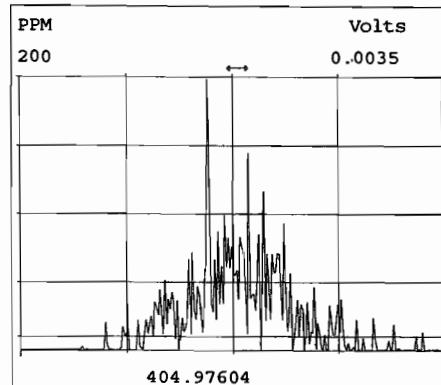
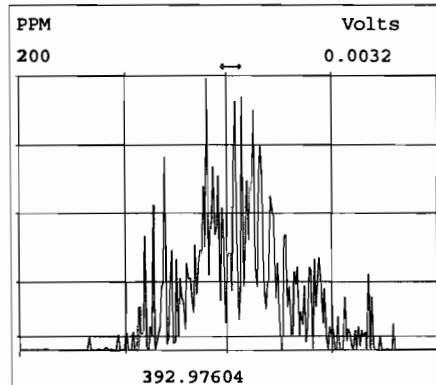
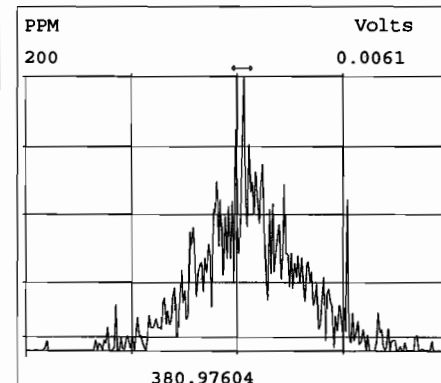
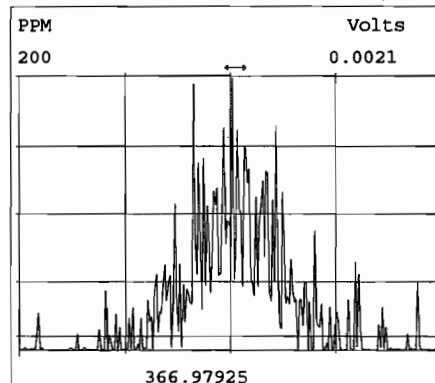
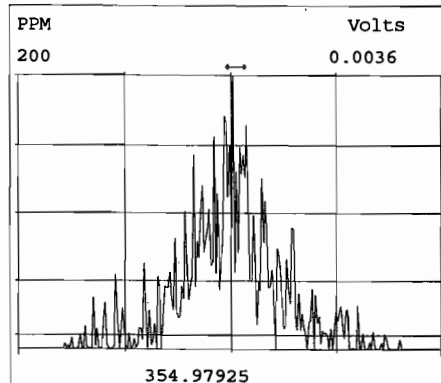
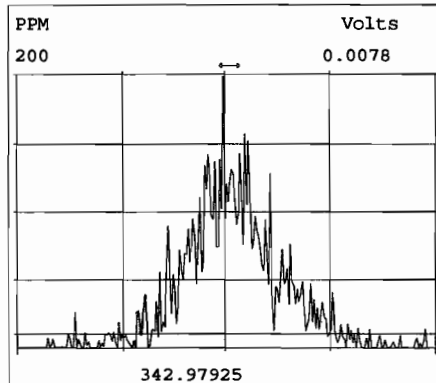
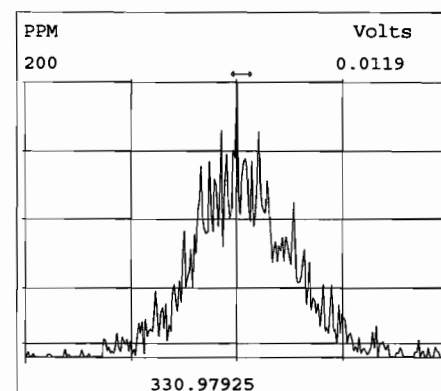
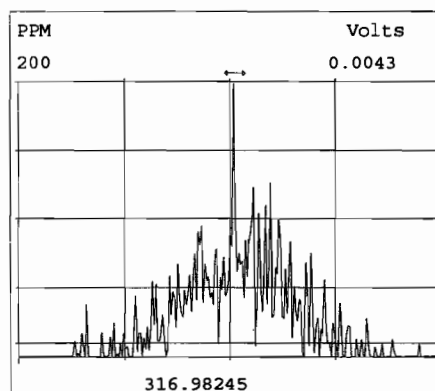
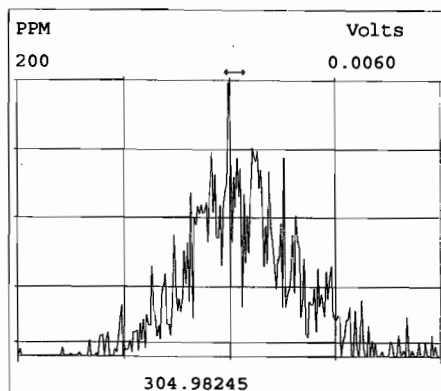
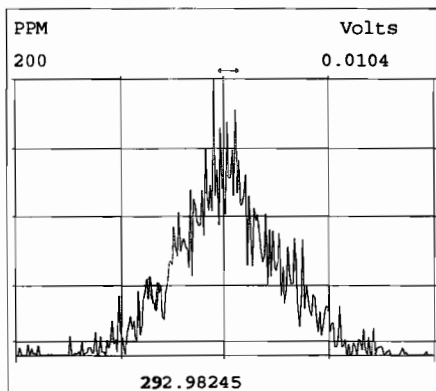


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Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191101D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



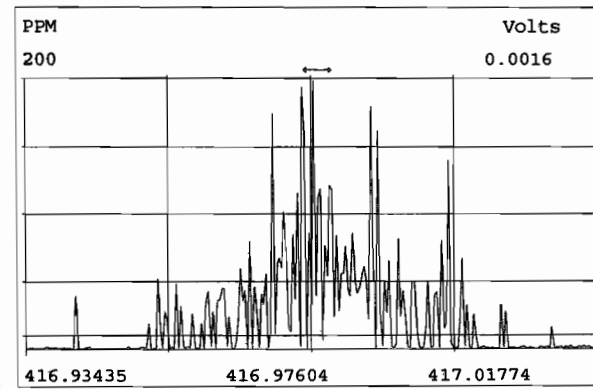
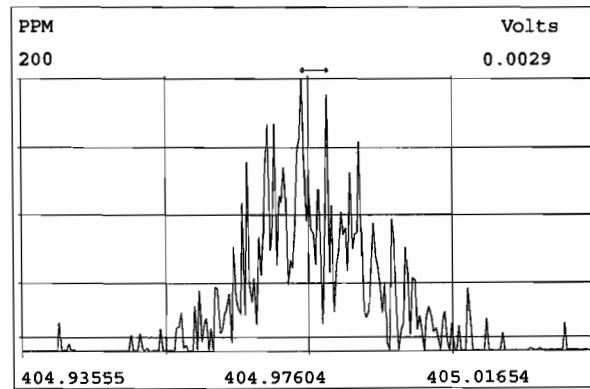
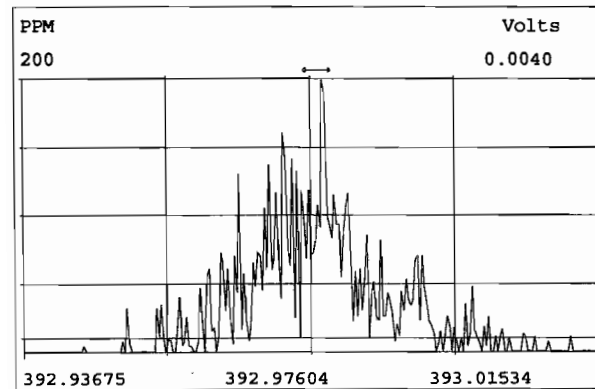
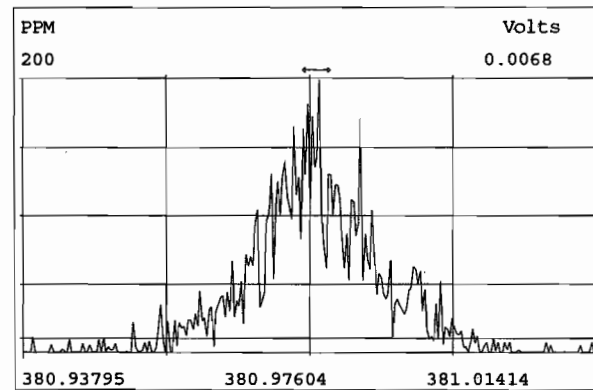
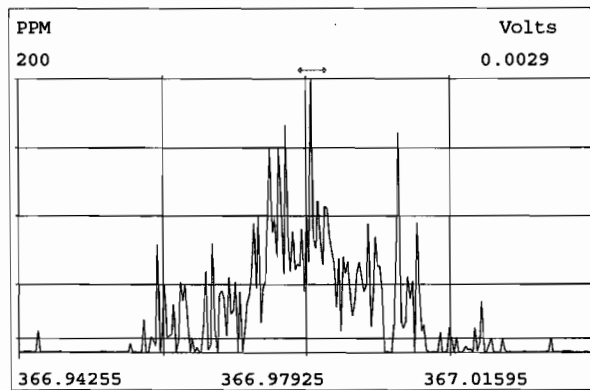
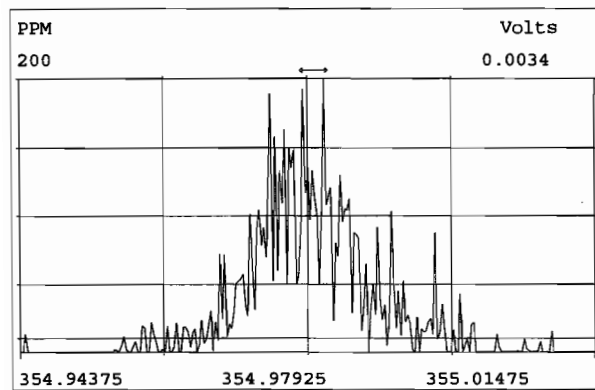
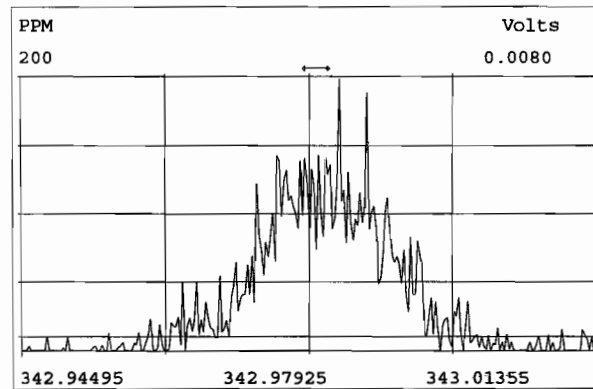
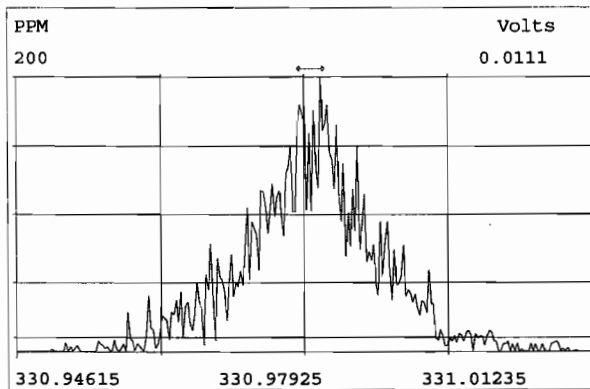
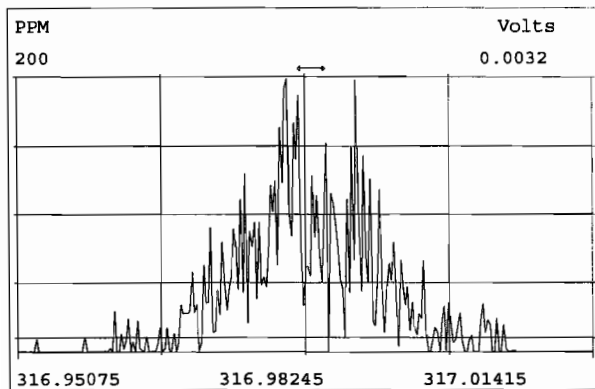
Peak Locate Examination: 2-NOV-2019:02:53 File:RES_CHECK

Experiment:OCDD_DB5 Function:1 Reference:PFK



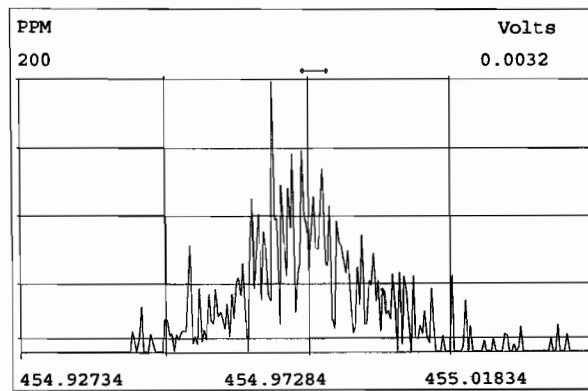
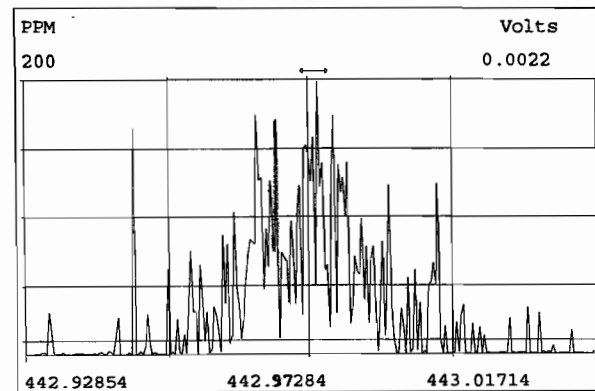
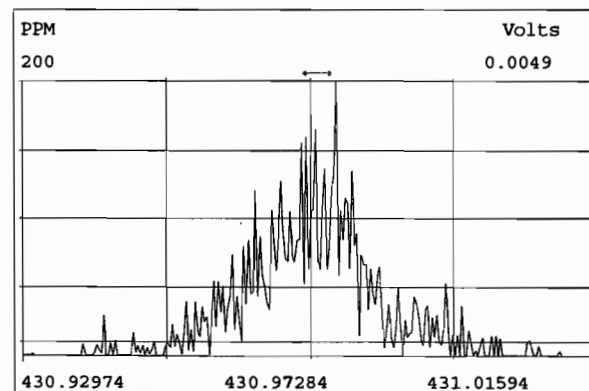
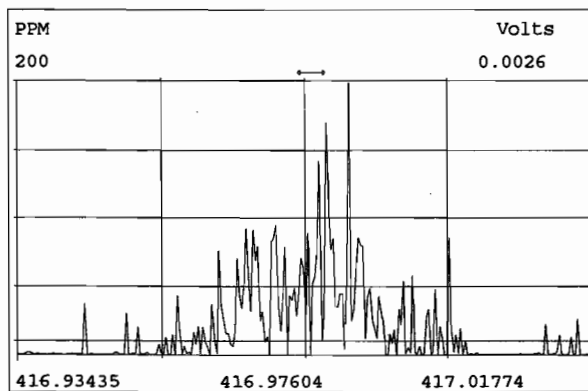
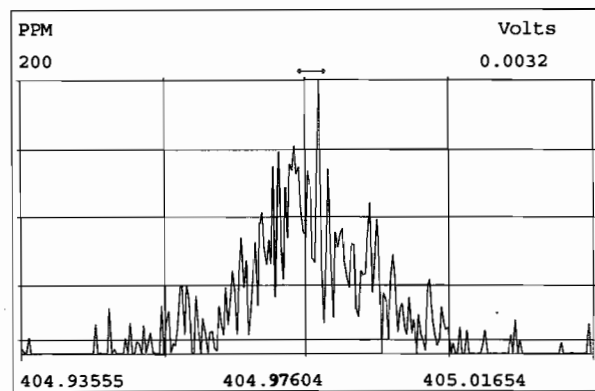
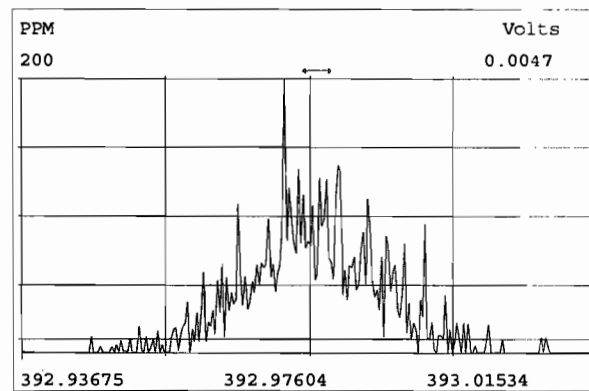
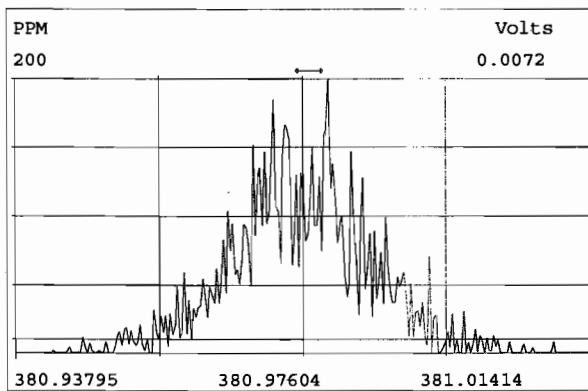
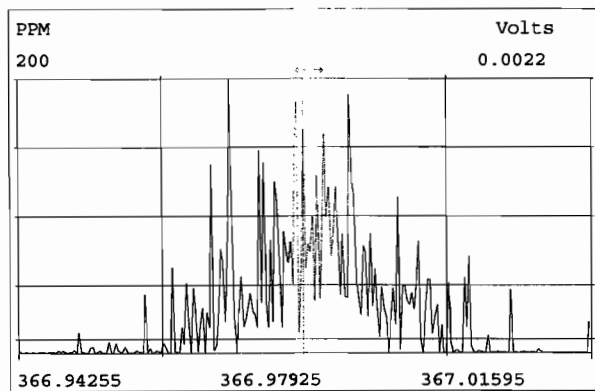
Peak Locate Examination: 2-NOV-2019:02:54 File:RES_CHECK

Experiment:OCDD_DB5 Function:2 Reference:PFK



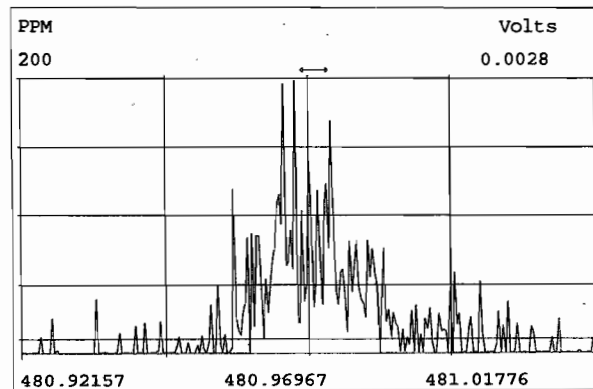
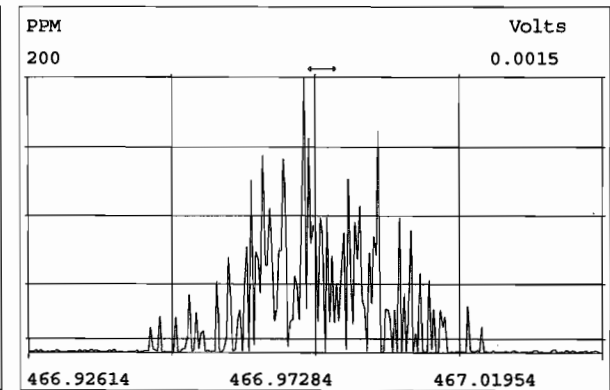
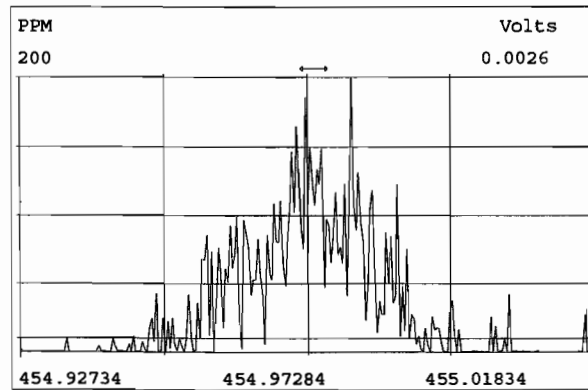
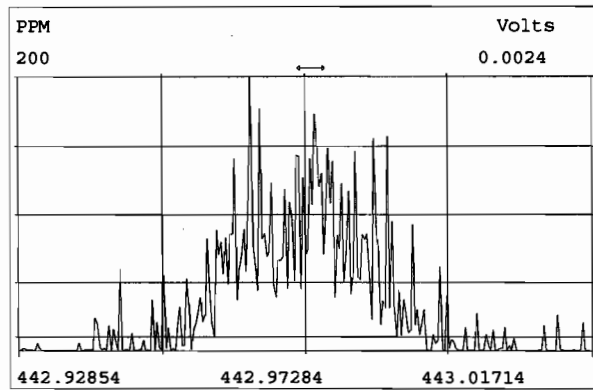
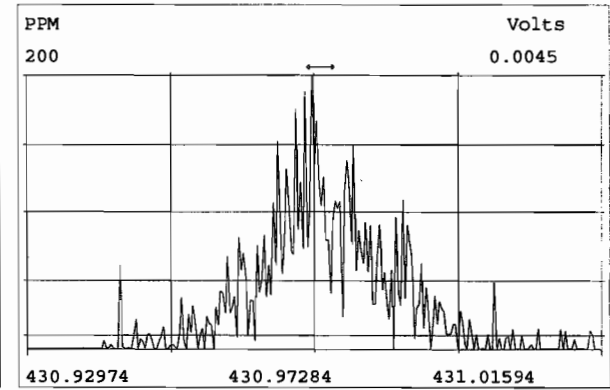
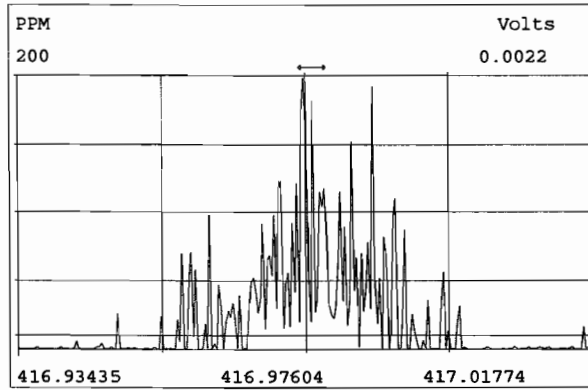
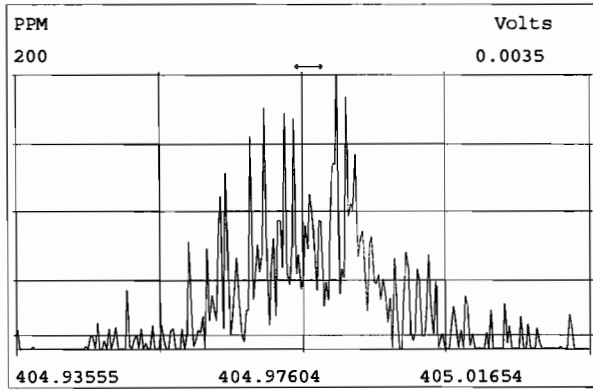
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Experiment:OCDD_DB5 Function:3 Reference:PFK



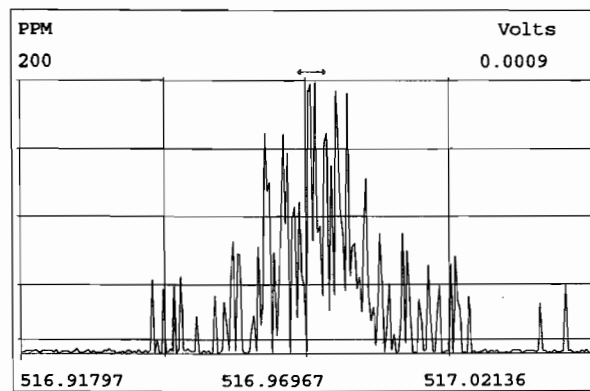
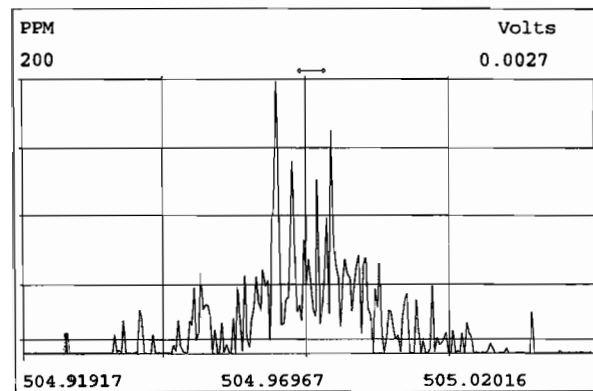
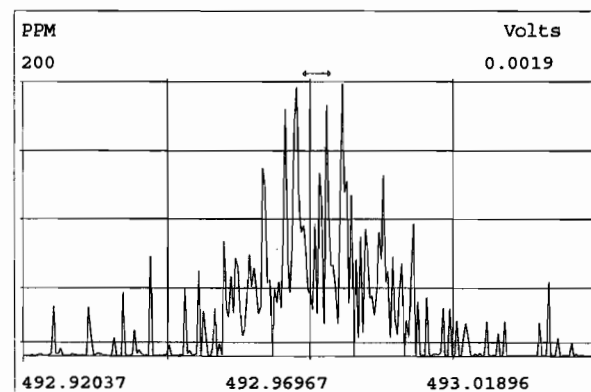
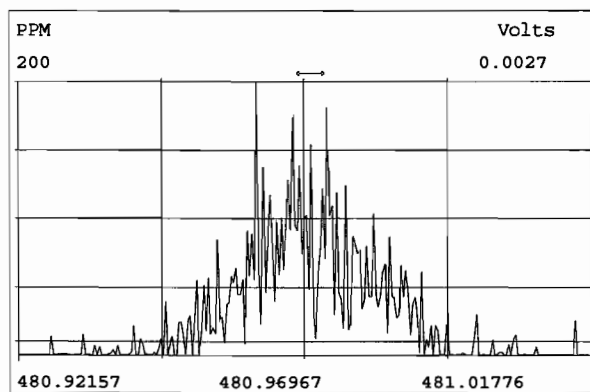
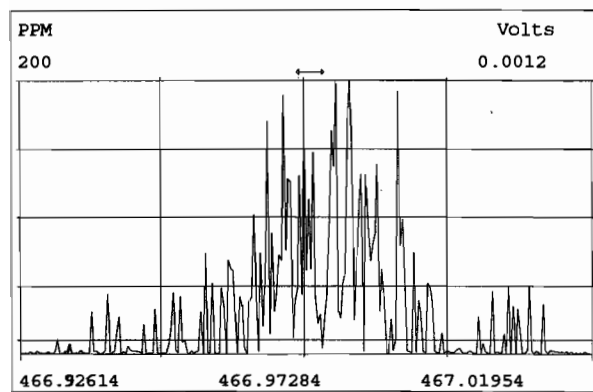
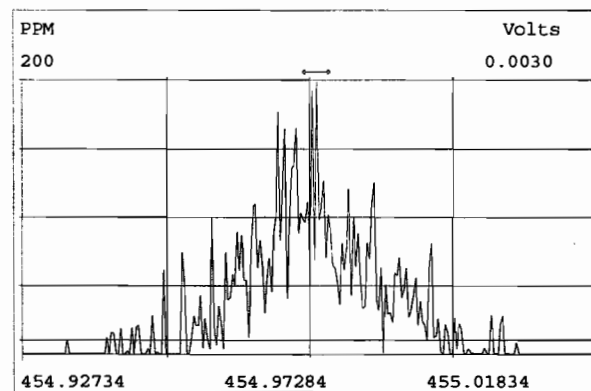
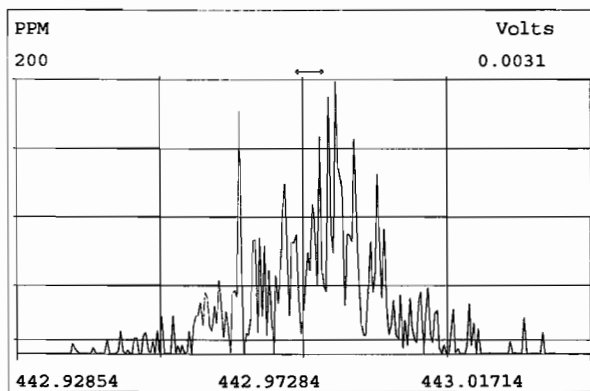
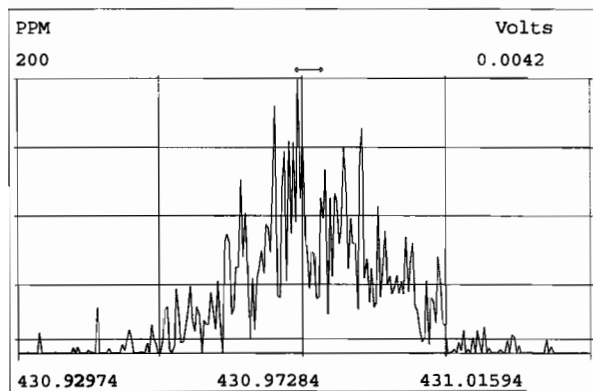
Peak Locate Examination: 2-NOV-2019:02:56 File:RES_CHECK

Experiment:OCDD_DB5 Function:4 Reference:PFK



Peak Locate Examination: 2-NOV-2019:02:57 File:RES_CHECK

Experiment:OCDD_DB5 Function:5 Reference:PFK



HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calibration ID: ST191030D1-1

Reviewed By: CT 11/01/19
Initials & Date

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Concentrations within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TCDD/TCDF Valleys <25%	<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?	<u>DB</u>	<u>DB</u>
<u>Run Log:</u>		
- Correct instrument listed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
- Samples within 12 hour clock?	(Y)	N
- Bottle position verified?	<u>DB</u>	<u>DB</u>

Mass resolution \geq
 5k 6-8K 8K 10K
 1614 1699 429 1613/1668/8280

Intergrated peaks display correctly? NA

GC Break <20% NA

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours NA

Comments:

FORM 4A/4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory

CCAL ID: ST191030D1-1

Initial Calibration Date: 5-30-19

Instrument ID: VG-7

GC Column ID: DB-225

VER Data Filename: 191030D1 S#2 Analysis Date: 30-OCT-19 Time: 14:30:32

ANALYTES	M/Z'S	ION	QC	CONC.	CONC. RANGE	CONC. RANGE
	FORMING RATIO (1)	ABUND. RATIO	LIMITS (2)		1613 (ng/mL)	8290 (ng/mL)
2,3,7,8-TCDF	M/M+2	0.73	0.65-0.89	9.7	8.4 - 12.0 (3) 8.6 - 11.6 (4)	8.0 - 12.0
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	103.6	71.0 - 140.0 (3) 76.0 - 131.0 (4)	70.0 - 130.0

- (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 6a, Method 1613, under VER.
- (4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DBDate: 10/30/19

Client ID: 1613 CS3 19C2204
Lab ID: ST191030D1-1

Filename: 191030D1 S:2 Acq:30-OCT-19 14:30:32
GC Column ID: DB-225 ICal: 1613TCDFVG7-5-30-19 wt/vol: 1.000

ConCal: ST191030D1-1
EndCAL: NA

Page 1 of 1

Name	Resp	RA	RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.37e+07	0.80 y	15:34	1.00	100.0	-
13C-2,3,7,8-TCDF	1.45e+07	0.79 y	17:46	1.02	103.6	103.6
2,3,7,8-TCDF	1.34e+06	0.73 y	17:47	0.95	9.749	

Integrations

by
Analyst: DB

Date: 10/30/19

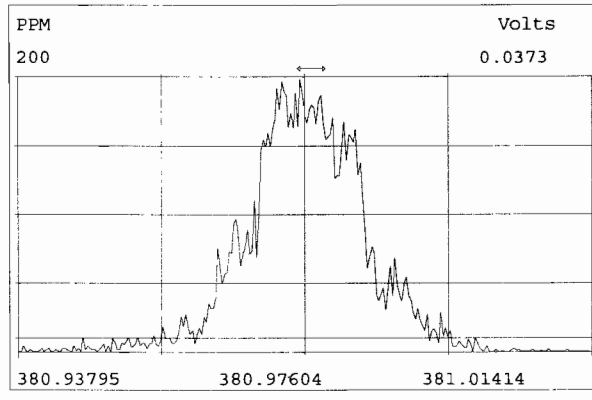
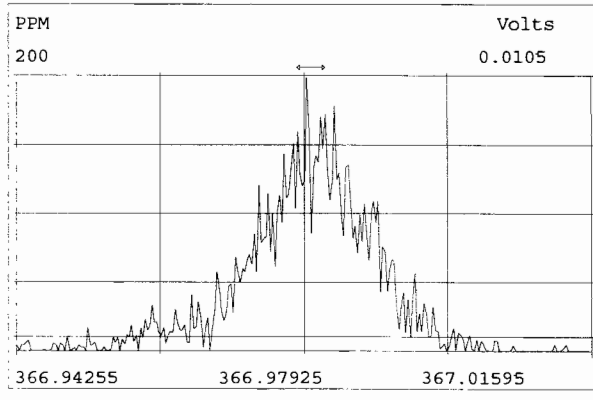
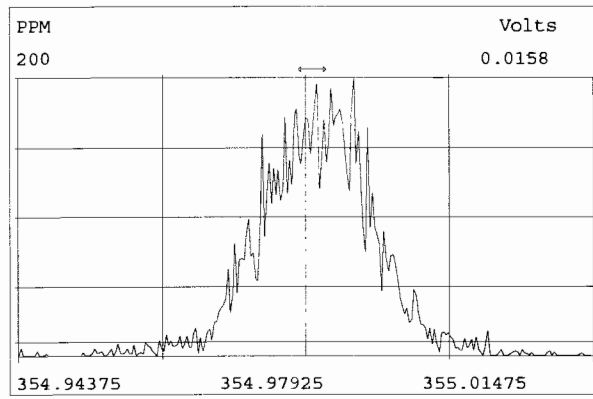
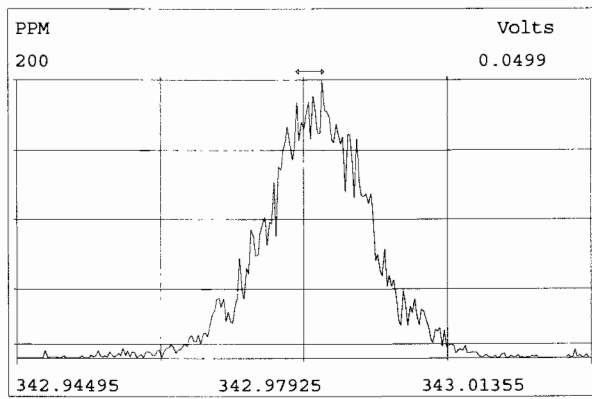
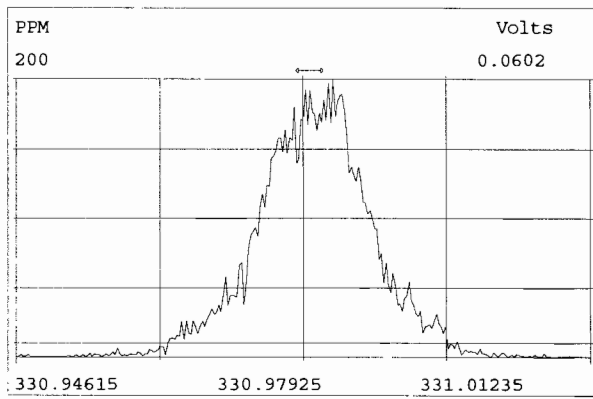
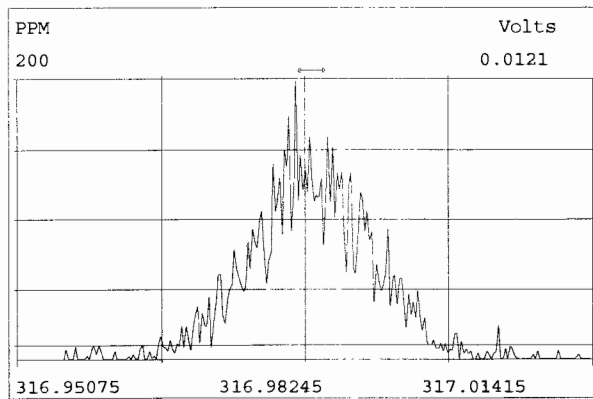
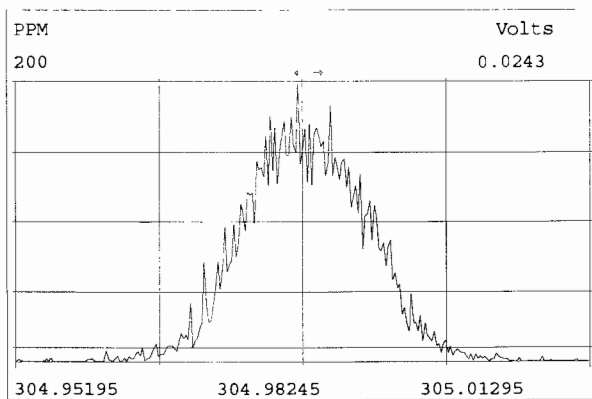
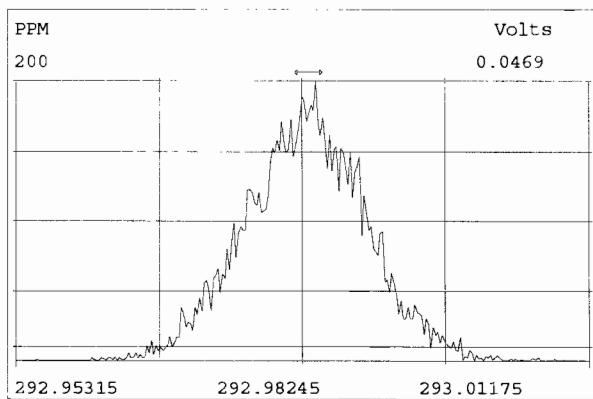
Reviewed

by
Analyst: CT

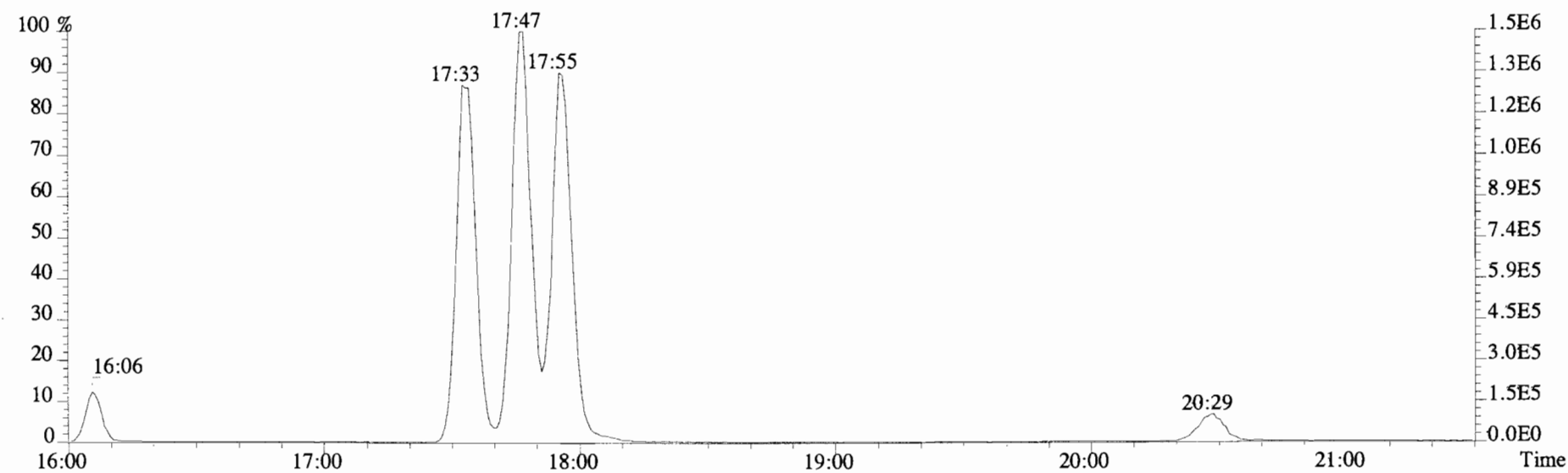
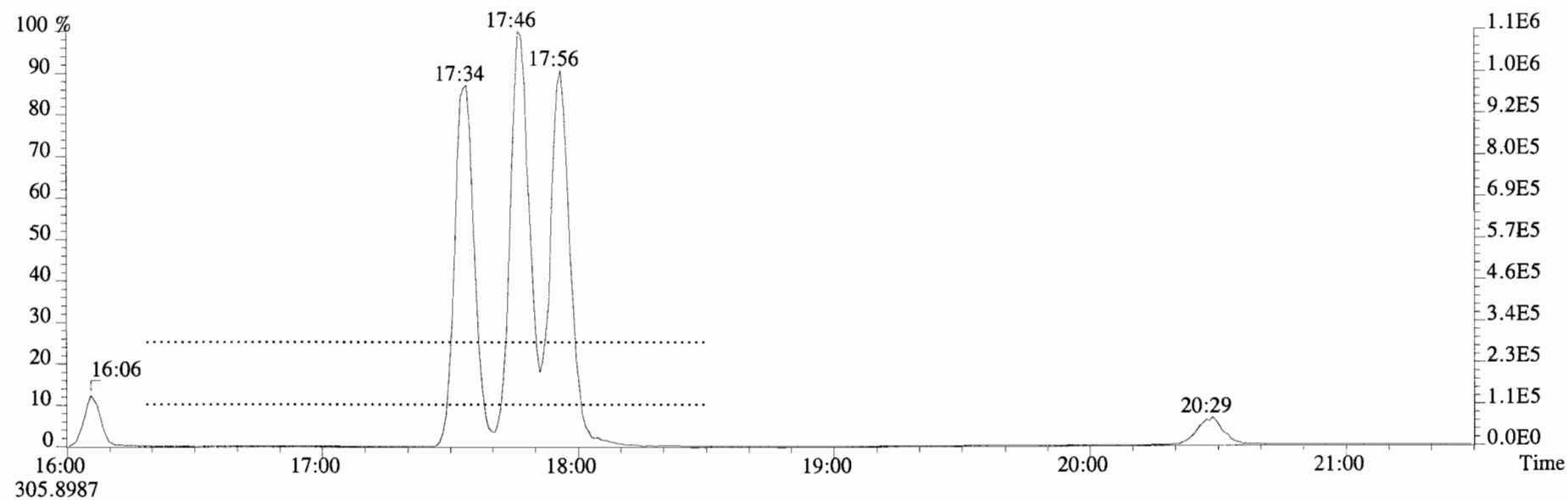
Date: 11/01/19

Vista Analytical Laboratory - Injection Log Run file: 191030D1 Instrument ID: VG-7 GC Column ID: DB-225

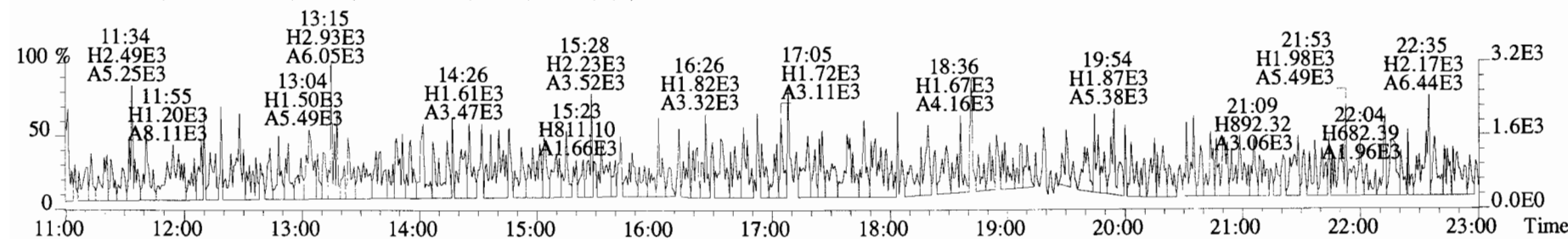
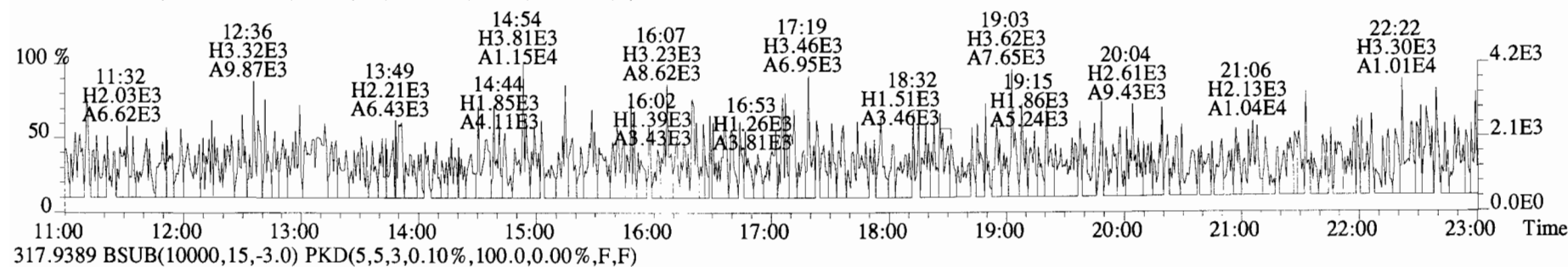
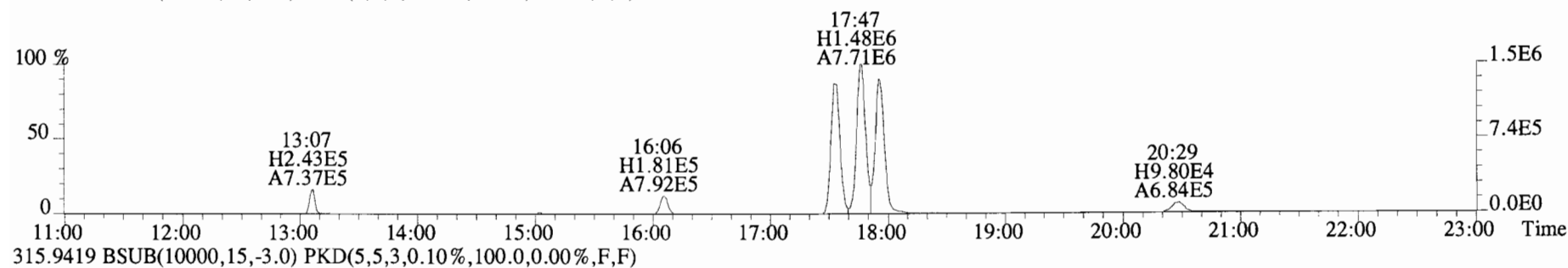
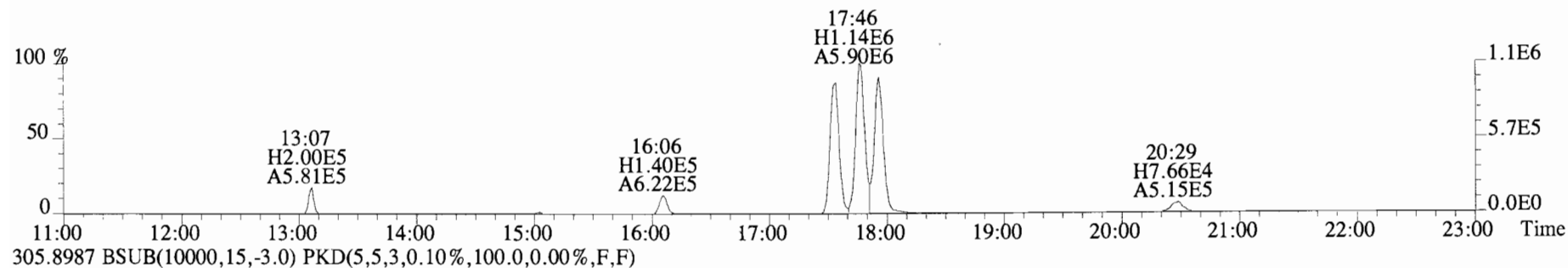
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191030D1	2	ST191030D1-1	DB	30-OCT-19	14:30:32	ST191030D1-1	NA
191030D1	3	SOLVENT BLANK	DB	30-OCT-19	15:02:23	ST191030D1-1	NA
191030D1	4	1903430-13RE1	DB	30-OCT-19	15:34:14	ST191030D1-1	NA
191030D1	5	1903420-10RE1	DB	30-OCT-19	16:06:00	ST191030D1-1	NA
191030D1	6	1903285-06RE3	DB	30-OCT-19	16:37:44	ST191030D1-1	NA
191030D1	7	B9J0052-DUP1RE1	DB	30-OCT-19	17:09:35	ST191030D1-1	NA
191030D1	8	1903420-09RE1	DB	30-OCT-19	17:41:21	ST191030D1-1	NA
191030D1	9	1903546-14RE1	DB	30-OCT-19	18:13:11	ST191030D1-1	NA
191030D1	10	1903430-05RE1	DB	30-OCT-19	18:45:00	ST191030D1-1	NA
191030D1	11	1903430-06RE1	DB	30-OCT-19	19:16:49	ST191030D1-1	NA
191030D1	12	1903546-12RE1	DB	30-OCT-19	19:48:39	ST191030D1-1	NA
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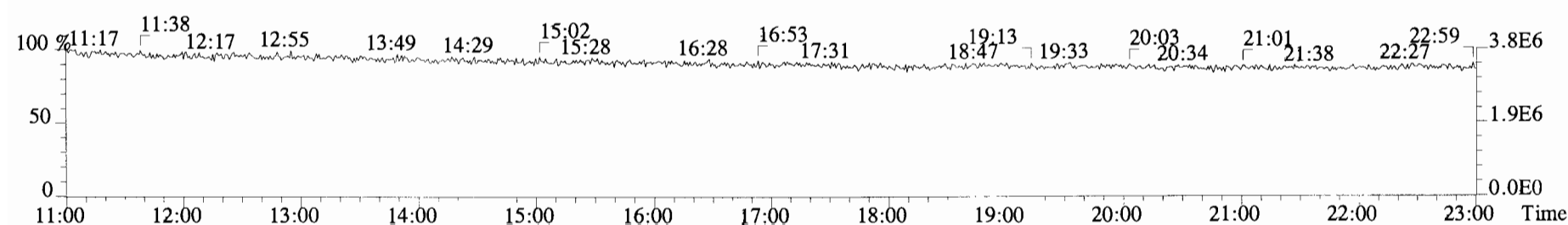
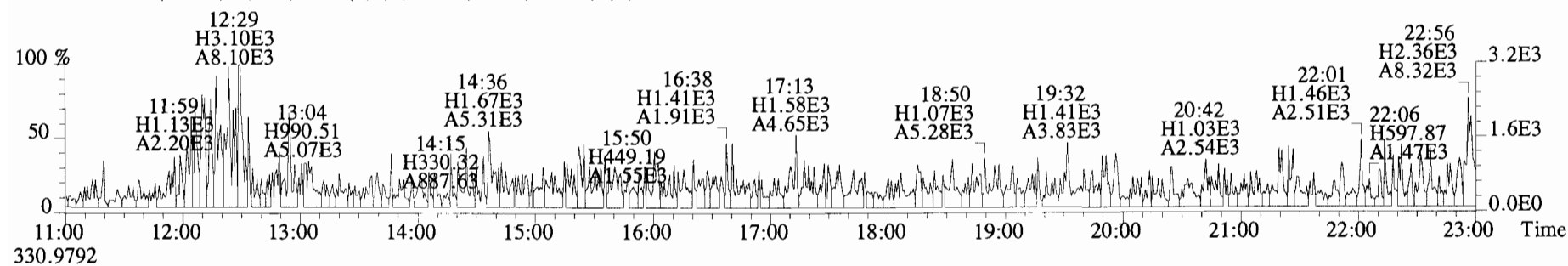
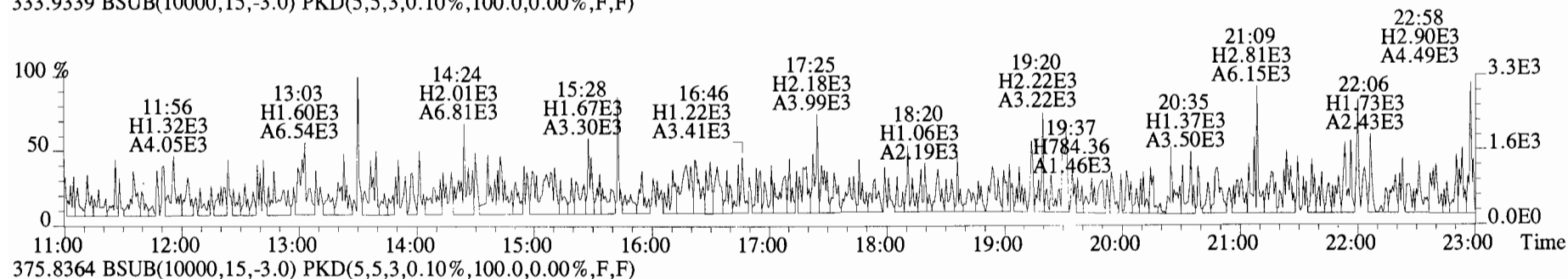
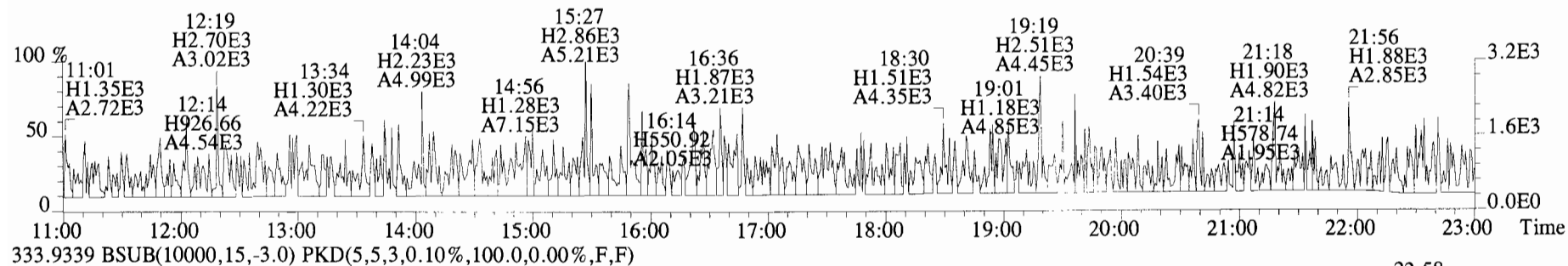
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Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:CP191030D1-1 DB225 CPSM Exp:TCDF_DB225
303.9016



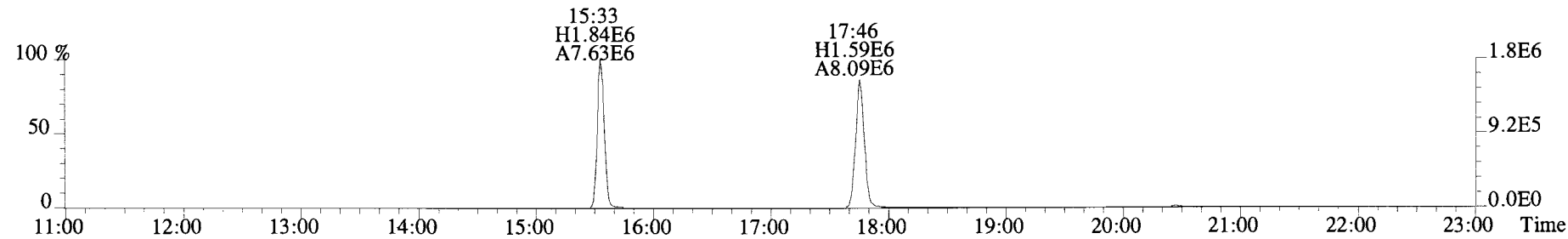
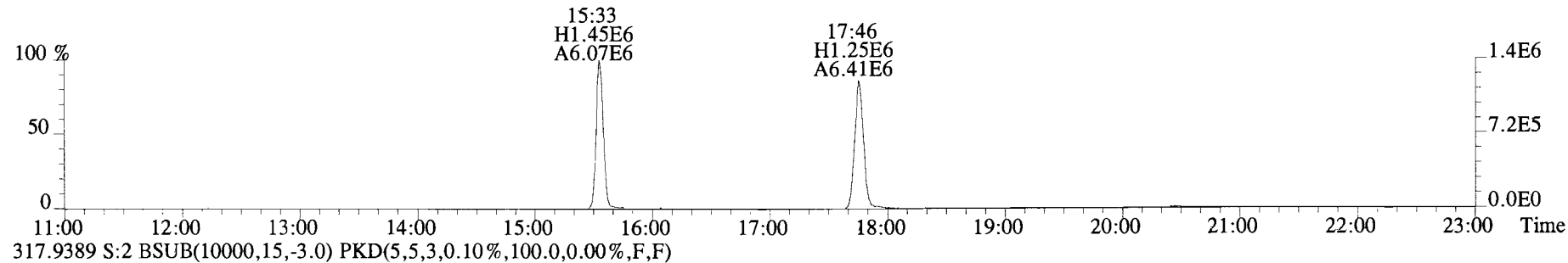
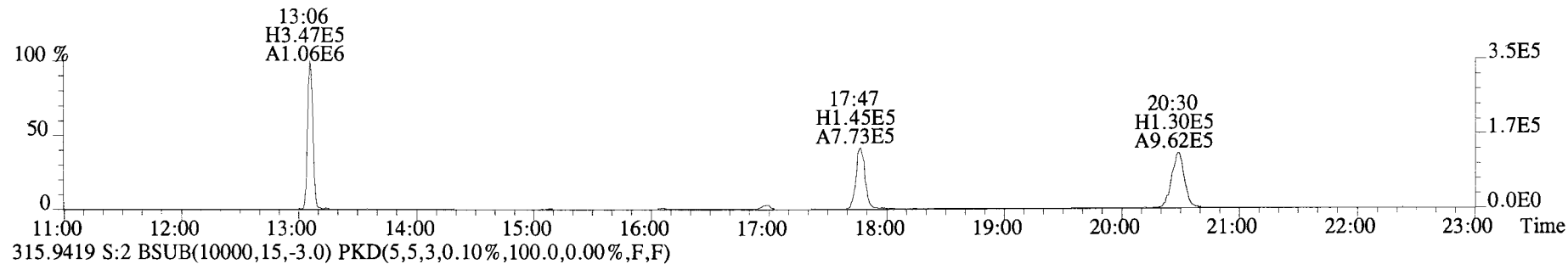
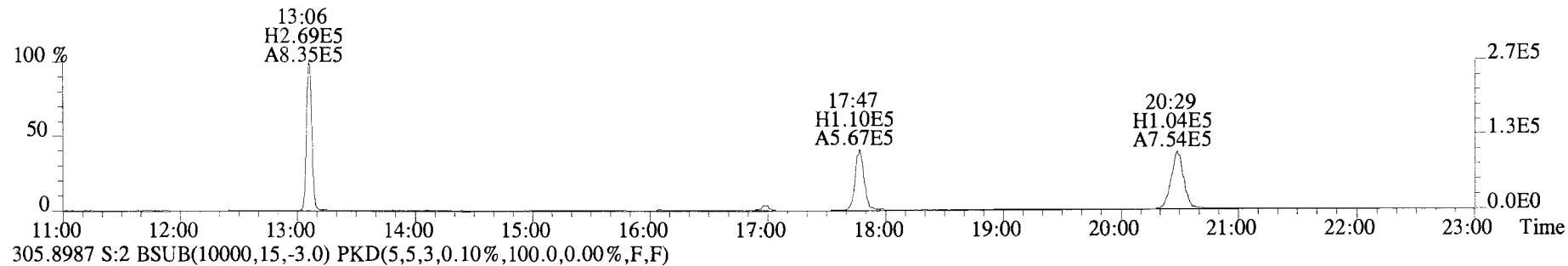
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Sample#1 File Text:Viata Analytical Laboratory VG7 Text:CP191030D1-1 DB225 CPSM Exp:TCDF_DB225
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



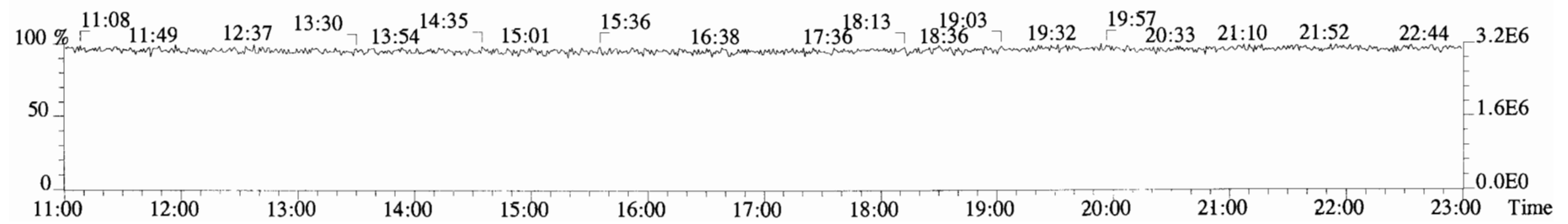
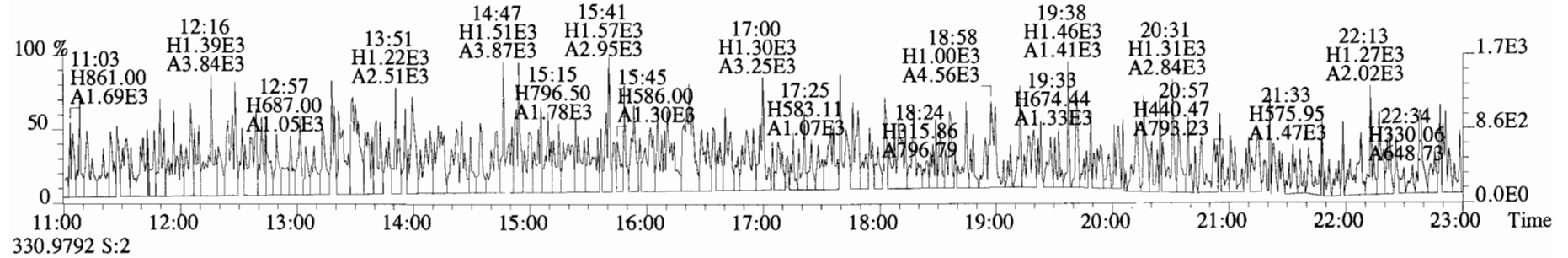
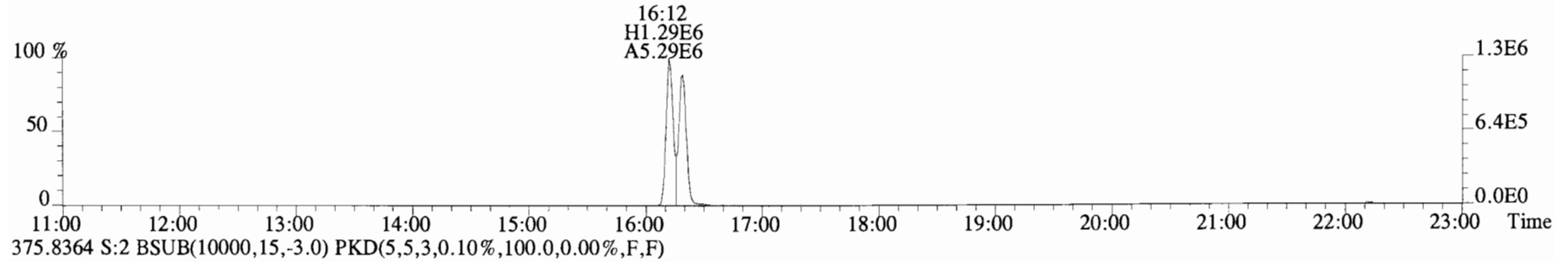
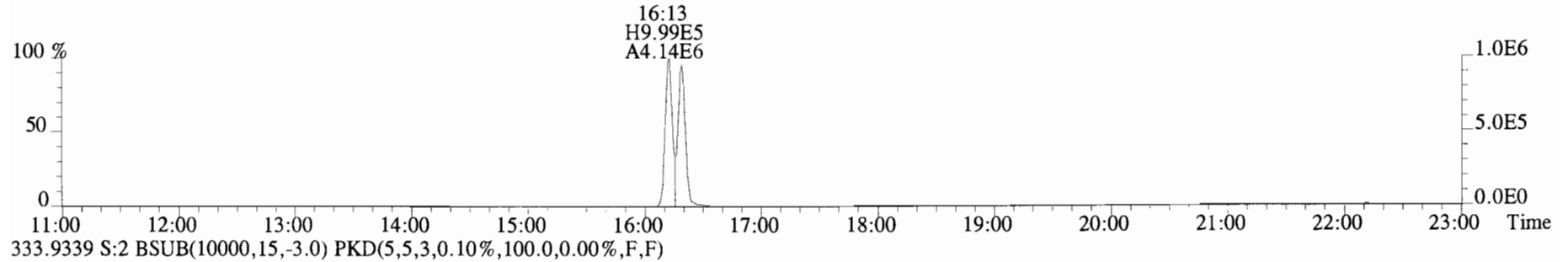
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 Sample#1 File Text:Viata Analytical Laboratory VG7 Text:CP191030D1-1 DB225 CPSM Exp:TCDF_DB225
 331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

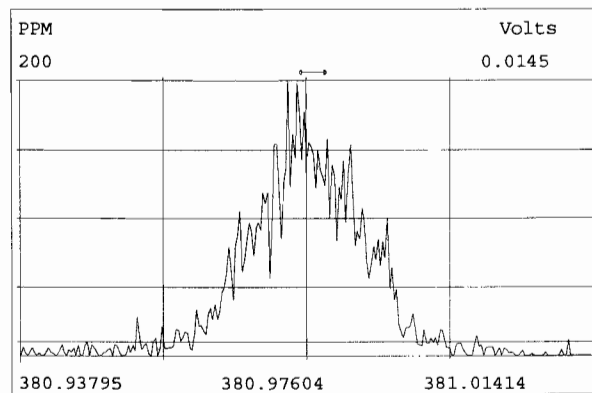
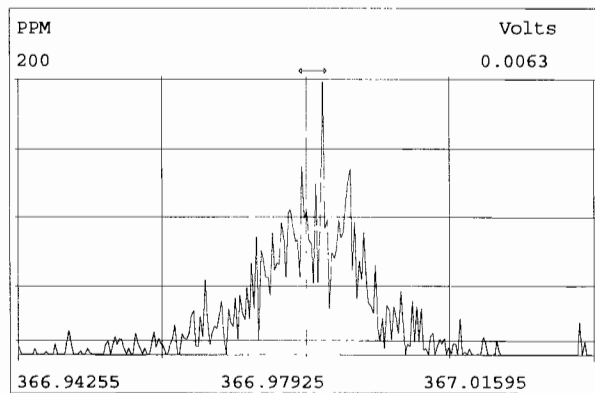
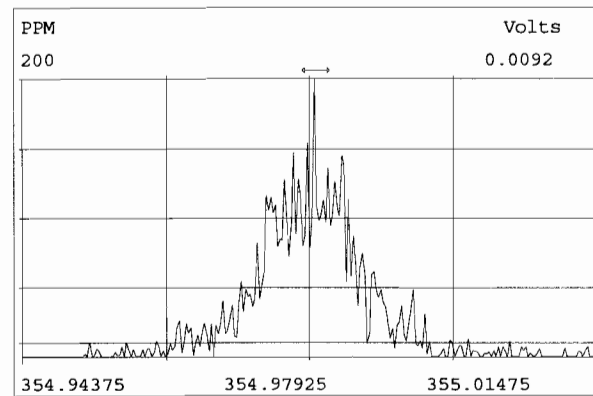
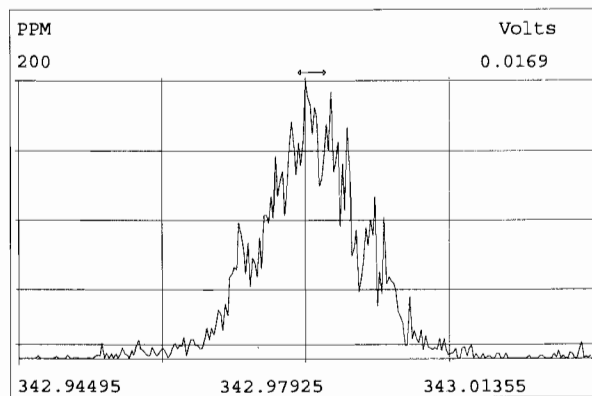
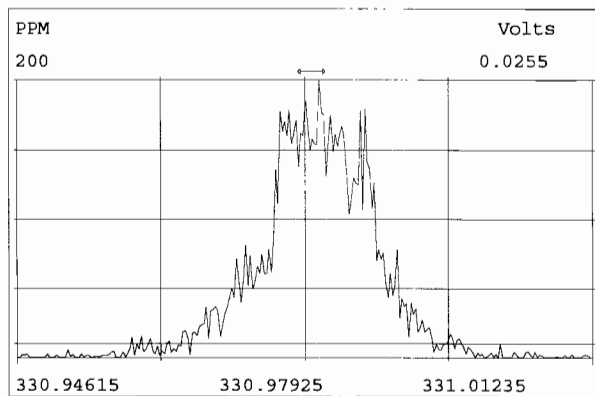
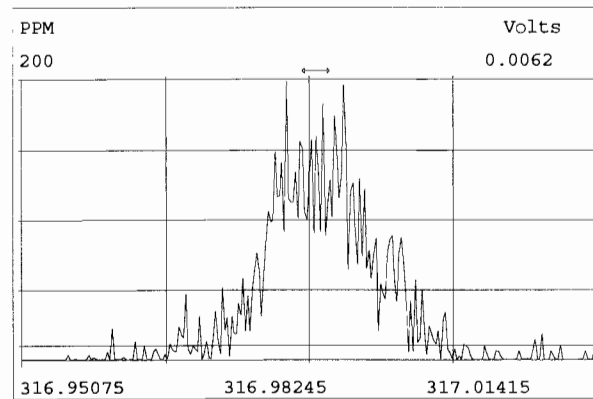
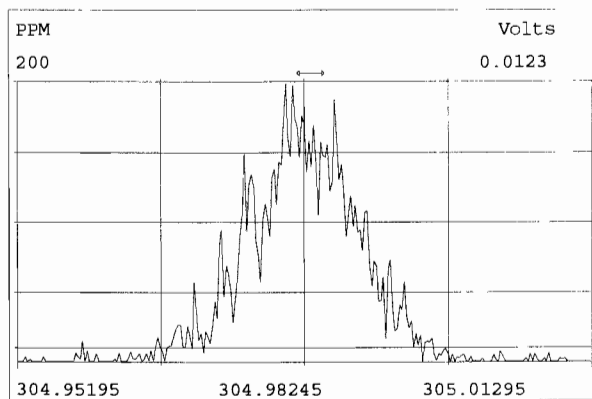
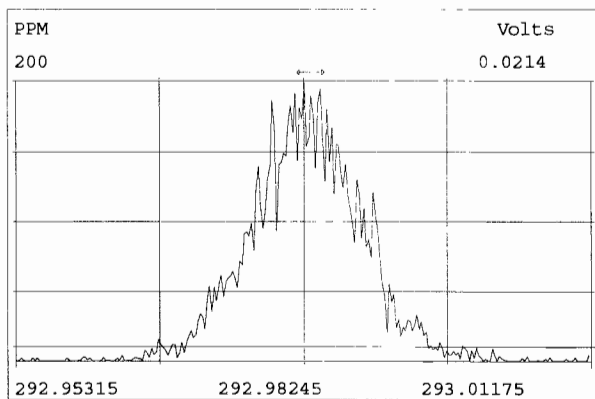


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Sample#2 File Text:Viata Analytical Laboratory_VG7 Text:ST191030D1-1 1613 CS3 19C2204 Exp:TCDF_DB225
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191030D1 #1-1682 Acq:30-OCT-2019 14:30:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata Analytical Laboratory VG7 Text:ST191030D1-1 1613 CS3 19C2204 Exp:TCDF_DB225
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)





HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calibration ID: ST191107D1-1

Reviewed By: CT 11/07/19
Initials & Date

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
Concentrations within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TCDD/TCDF Valleys <25%	<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?	<u>DB</u>	<input type="checkbox"/>
<u>Run Log:</u>		
- 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
- Bottle position verified?		

Mass resolution \geq

5k 6-8K 8K 10K
 1614 1699 429 1613/1668/8280

Intergrated peaks display correctly?

GC Break <20%

NA

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours

Comments:

	<u>Beg.</u>	<u>End</u>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA

FORM 4A/4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory

CCAL ID: ST191107D1-1

Initial Calibration Date: 5-30-19

Instrument ID: VG-7

GC Column ID: DB-225

VER Data Filename: 191107D1 S#2 Analysis Date: 7-NOV-19 Time: 11:22:48

ANALYTES	M/Z'S	ION	QC	CONC.	CONC. RANGE	CONC. RANGE
	FORMING	ABUND.	LIMITS		1613	8290
	RATIO (1)	RATIO	(2)	FOUND	(ng/mL)	(ng/mL)
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	10.5	8.4 - 12.0 (3) 8.6 - 11.6 (4)	8.0 - 12.0
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	109.1	71.0 - 140.0 (3) 76.0 - 131.0 (4)	70.0 - 130.0

- (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 6a, Method 1613, under VER.
- (4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DBDate: 11/7/19

Client ID: 1613 CS3 19C2204

Filename: 191107D1 S:2 Acq: 7-NOV-19 11:22:48

ConCal: ST191107D1-1

Page 1 of 1

Lab ID: ST191107D1-1

GC Column ID: DB-225 ICal: 1613TCDFVG7-5-30-19 wt/vol: 1.000

EndCAL: NA

Name	Resp	RA	RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.37e+07	0.82 y	15:35	1.00	100.0	-
13C-2,3,7,8-TCDF	1.53e+07	0.80 y	17:47	1.02	109.1	109.1
2,3,7,8-TCDF	1.52e+06	0.78 y	17:48	0.95	10.50	

Integrations

by
Analyst: DB

Reviewed

by
Analyst: CT

Date: 11/7/19

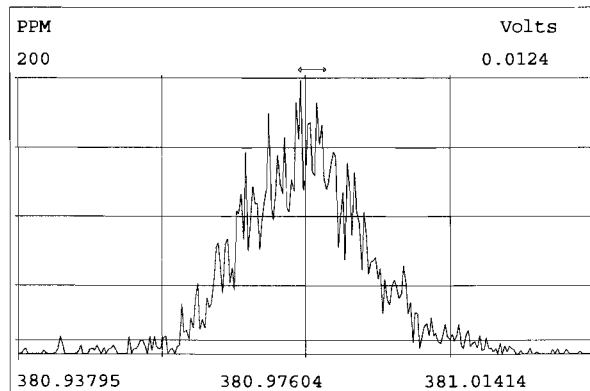
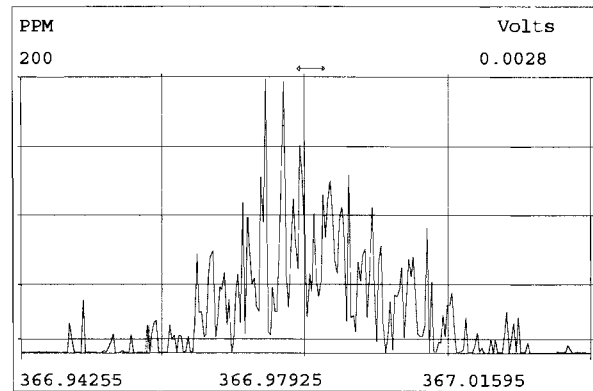
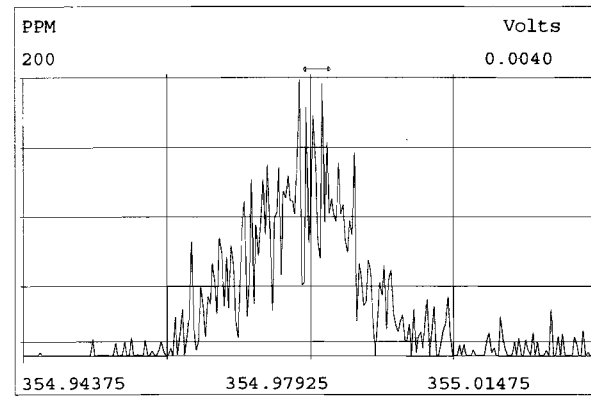
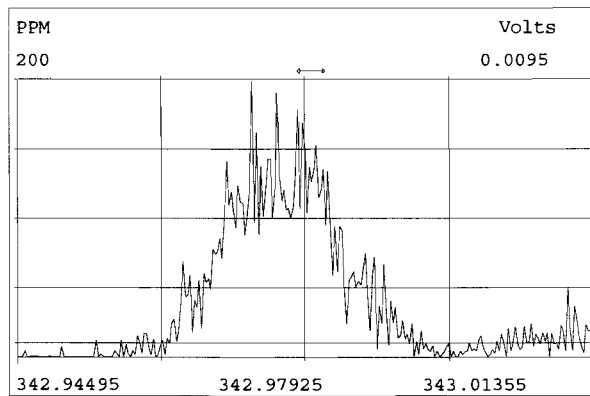
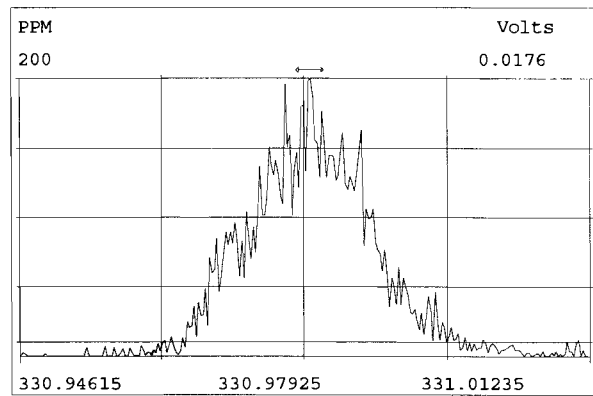
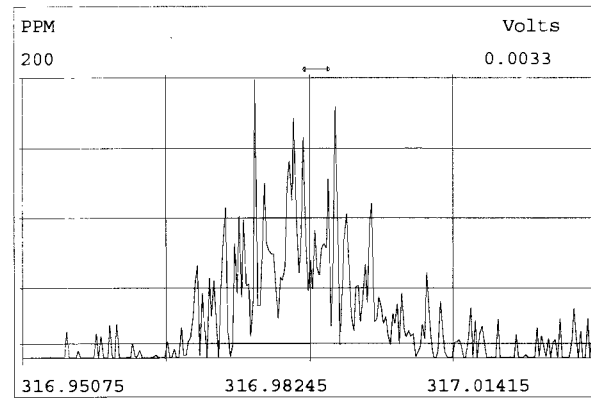
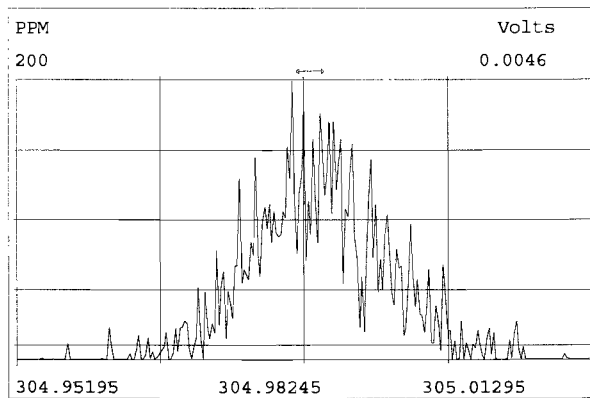
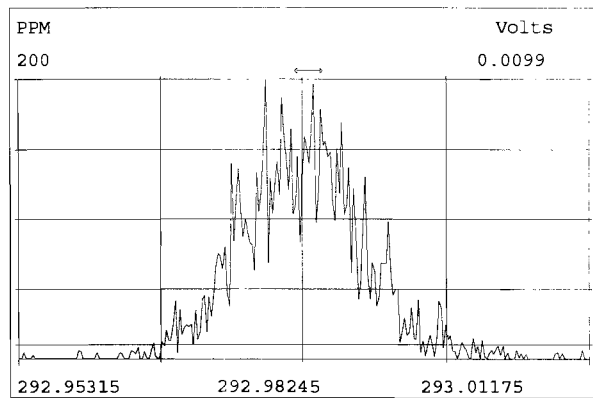
Date: 11/07/19

Vista Analytical Laboratory - Injection Log Run file: 191107D1 Instrument ID: VG-7 GC Column ID: DB-225

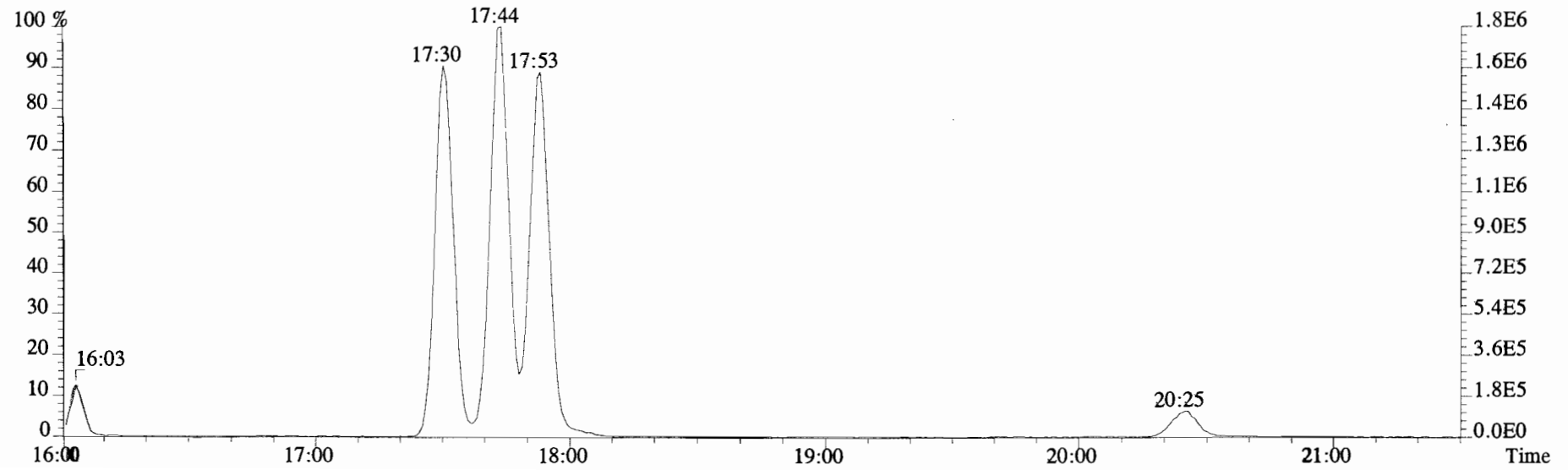
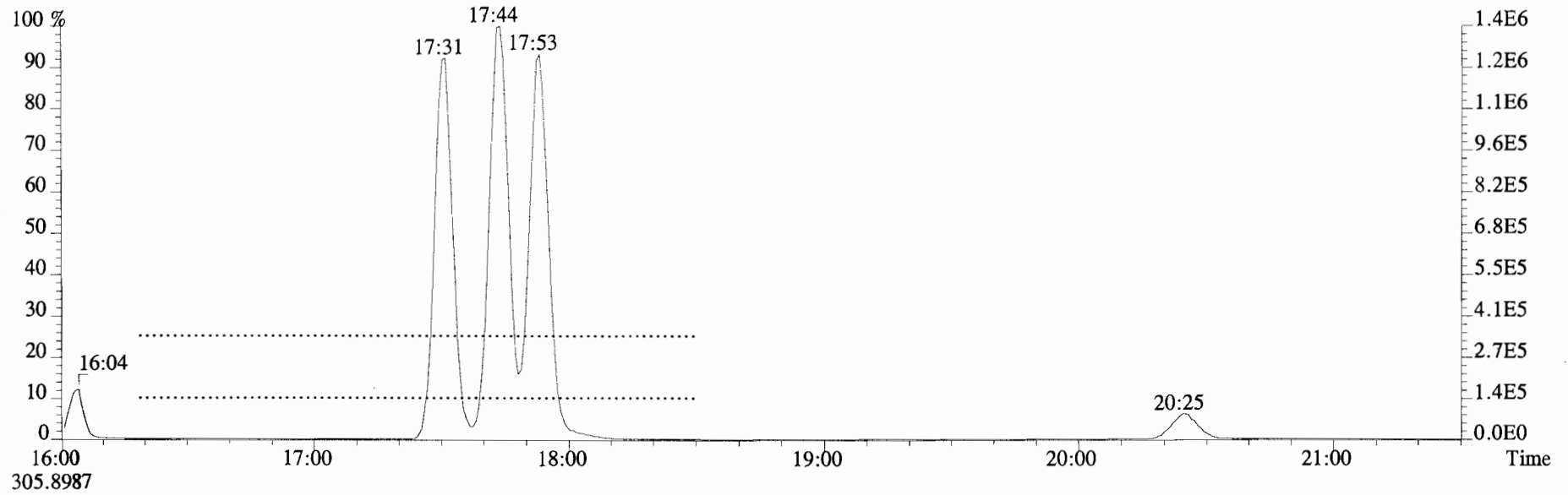
Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191107D1	1	CP191107D1-1	DB	7-NOV-19	10:51:03	ST191107D1-1	NA
191107D1	2	ST191107D1-1	DB	7-NOV-19	11:22:48	ST191107D1-1	NA
191107D1	3	SOLVENT BLANK	DB	7-NOV-19	11:54:33	ST191107D1-1	NA
191107D1	4	1903651-04RE1	DB	7-NOV-19	12:26:19	ST191107D1-1	NA
191107D1	5	1903546-15RE2	DB	7-NOV-19	12:58:04	ST191107D1-1	NA
191107D1	6	1903565-16RE2	DB	7-NOV-19	13:29:50	ST191107D1-1	NA
191107D1	7	1903431-06RE1	DB	7-NOV-19	14:01:35	ST191107D1-1	NA

Peak Locate Examination: 7-NOV-2019:10:50 File:191107D1

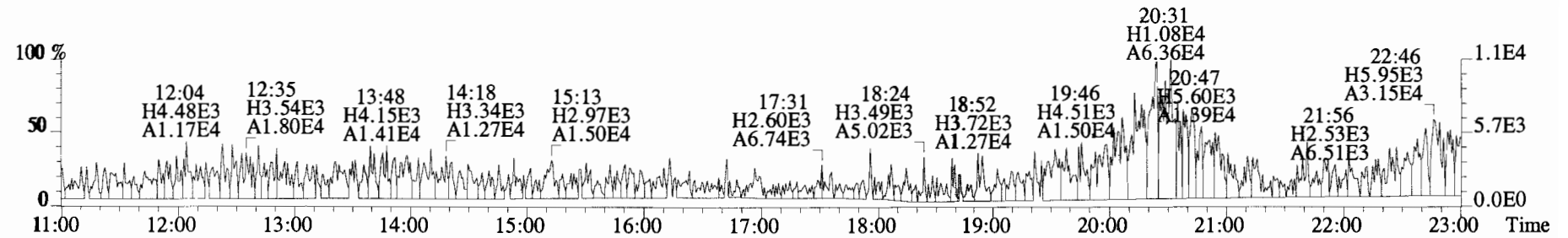
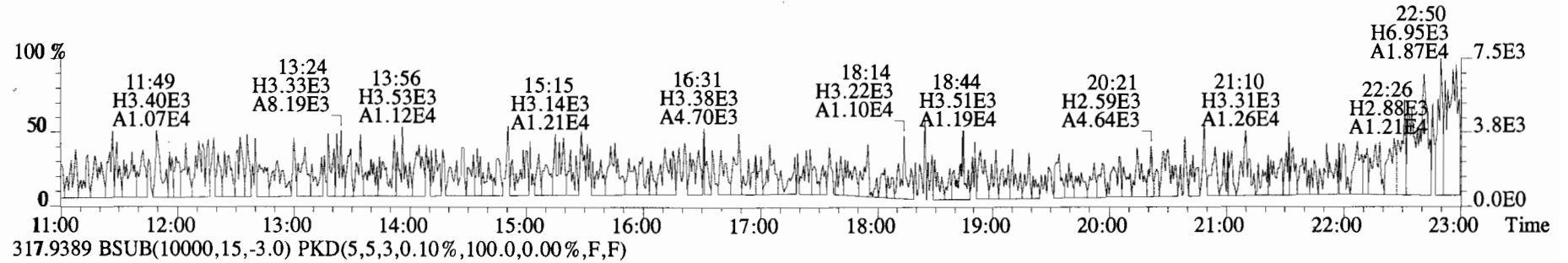
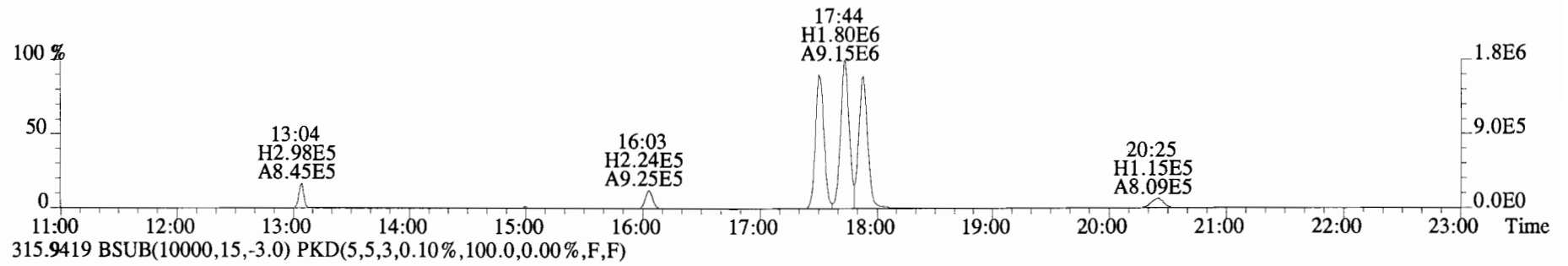
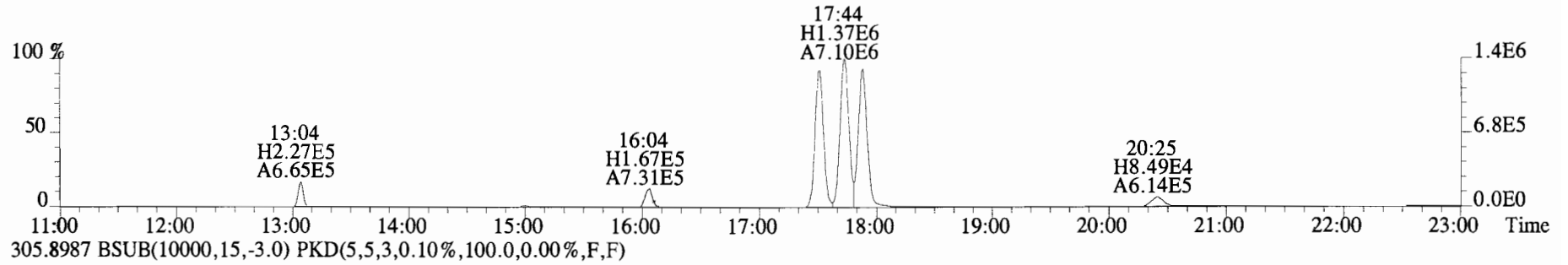
Experiment:TCDF_DB225 Function:1 Reference:PFK



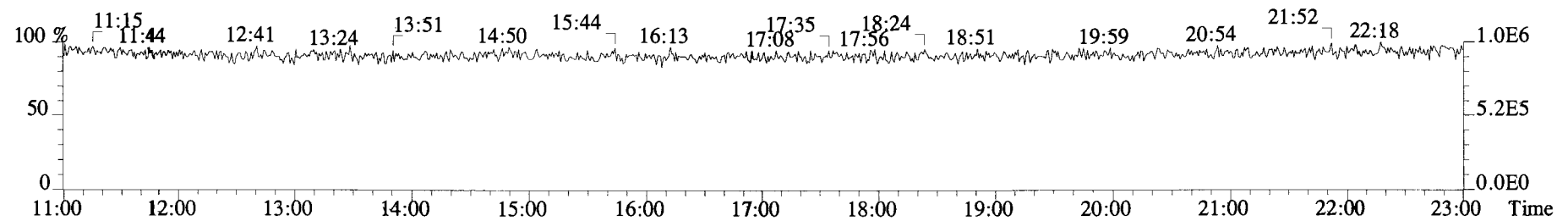
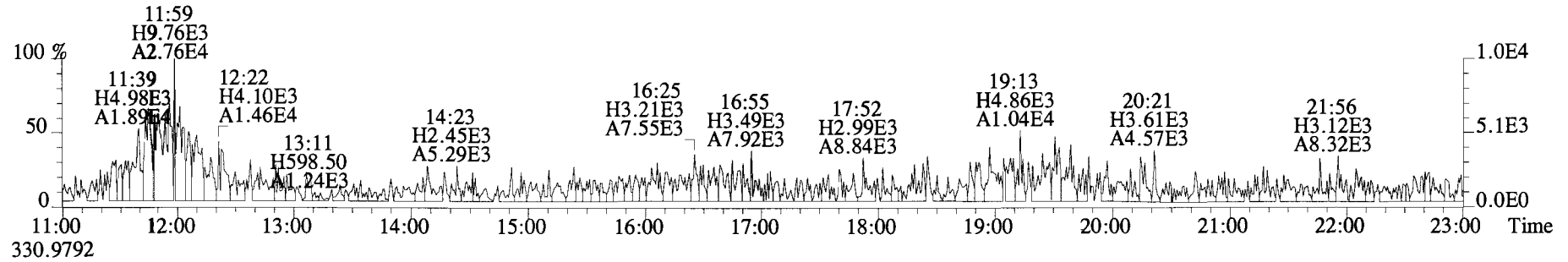
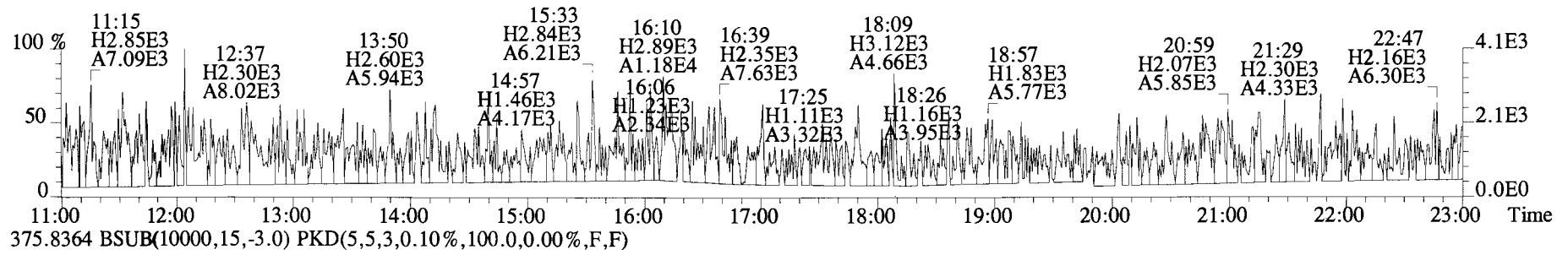
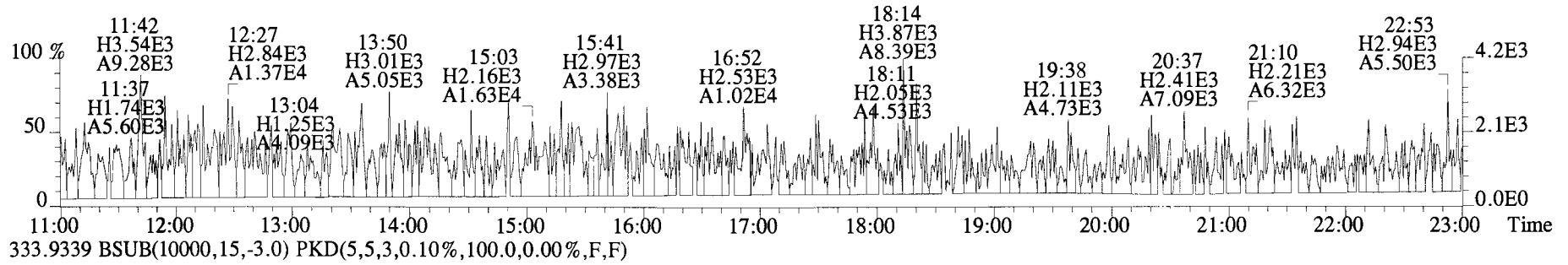
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Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:CP191107D1-1 DB225 CPSM Exp:TCDF_DB225
303.9016



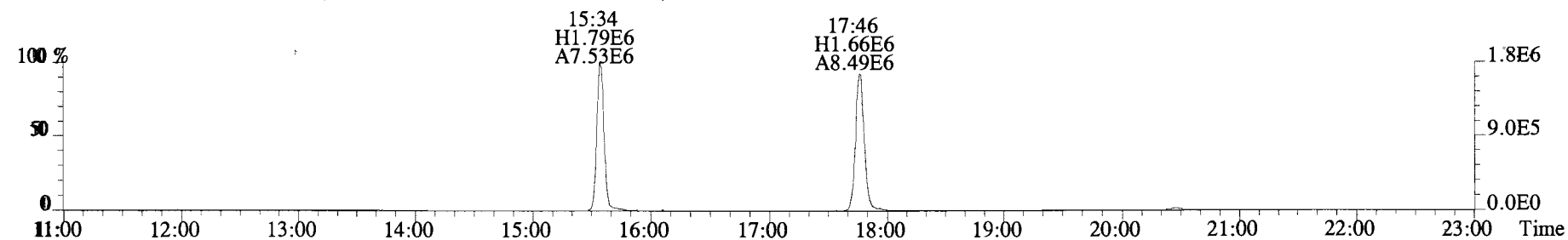
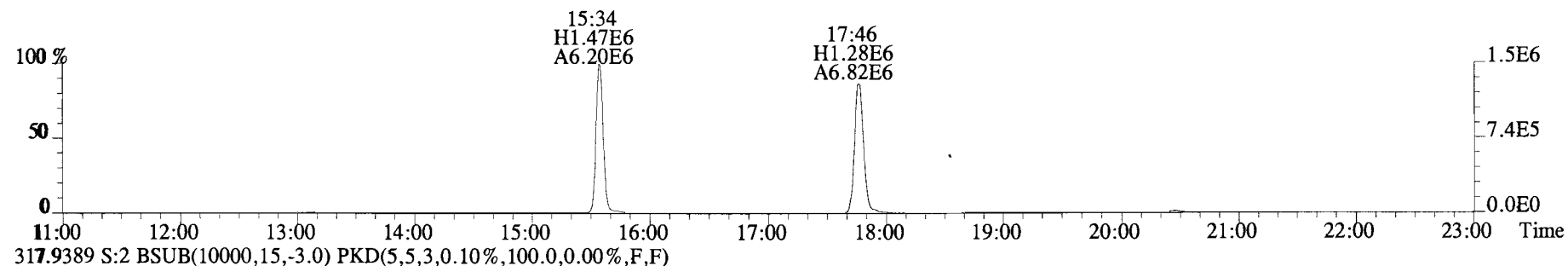
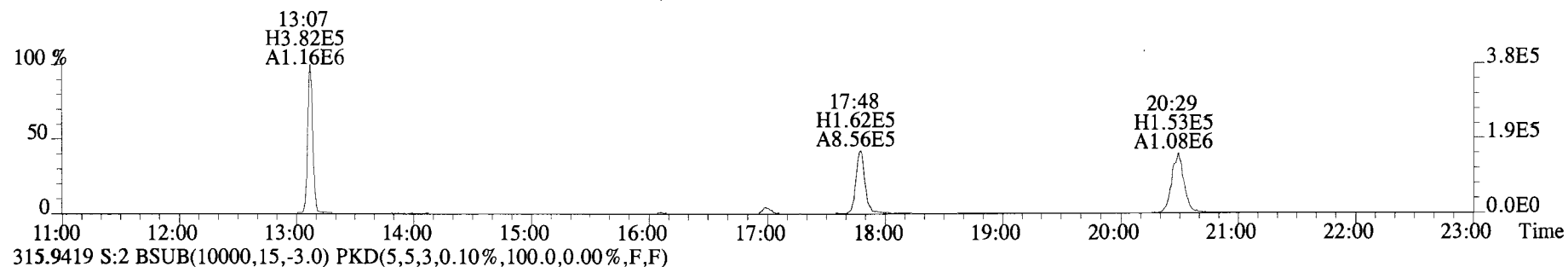
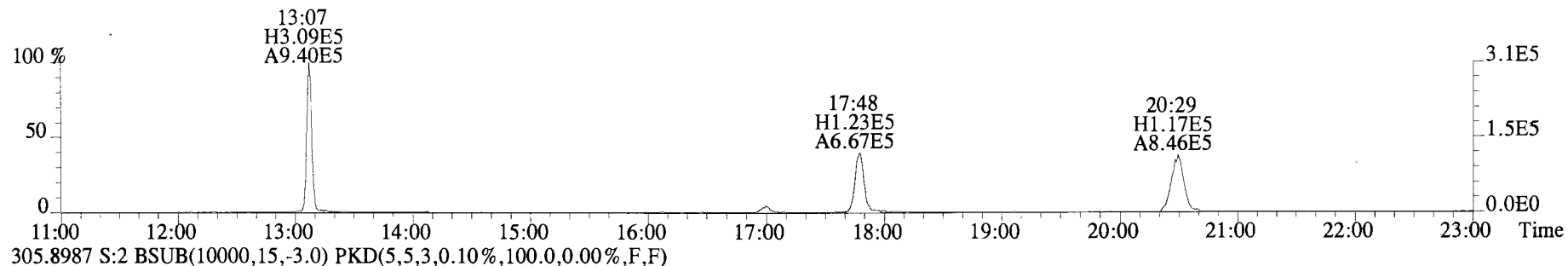
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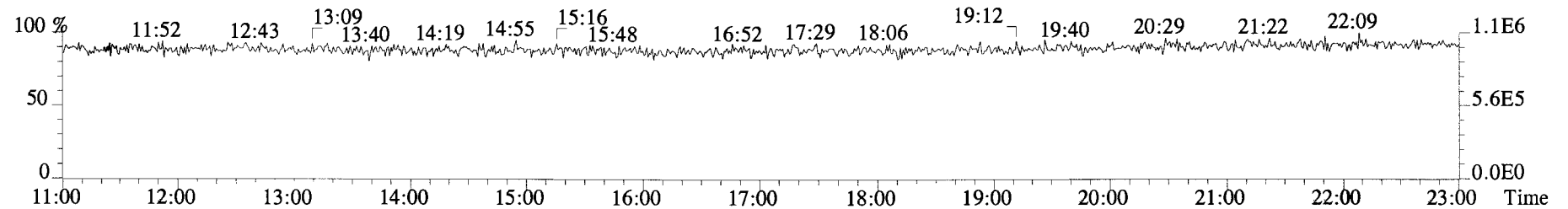
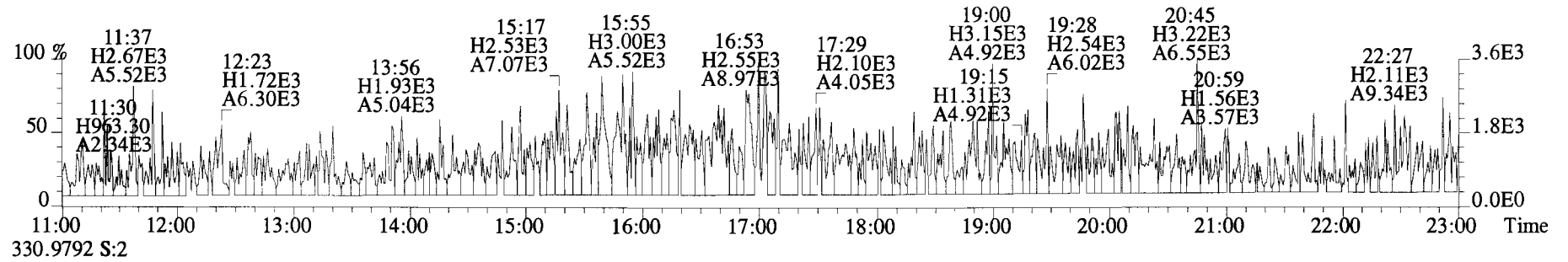
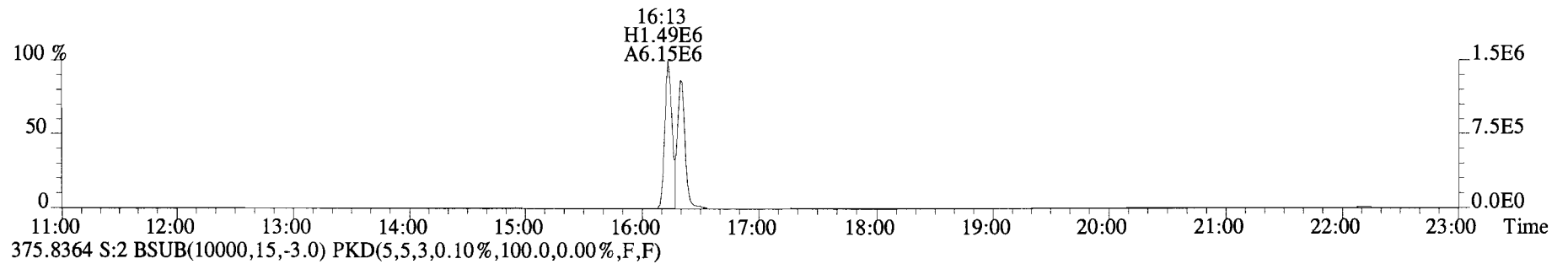
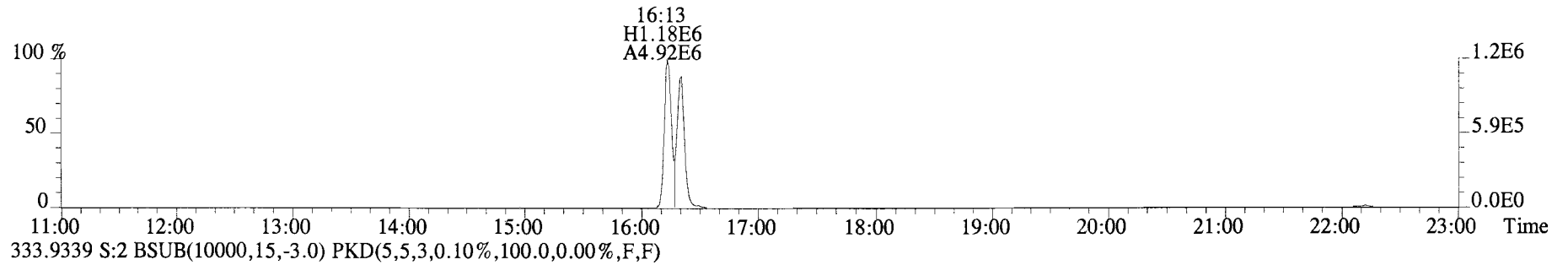
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File:191107D1 #1-1682 Acq: 7-NOV-2019 11:22:48 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata Analytical Laboratory_VG7 Text:ST191107D1-1 1613 CS3 19C2204 Exp:TCDF_DB225
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

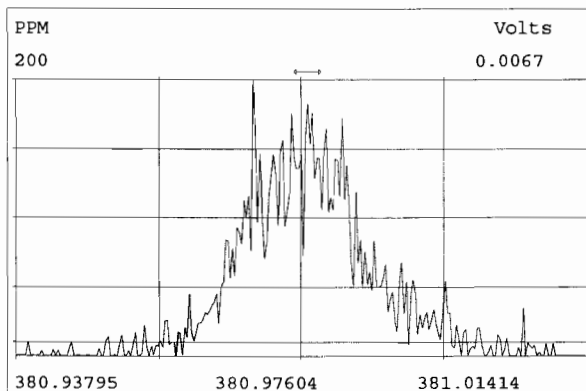
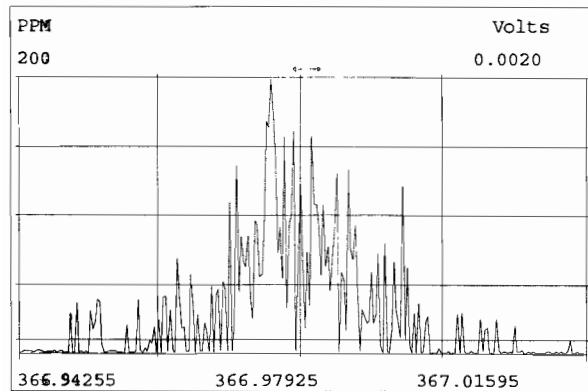
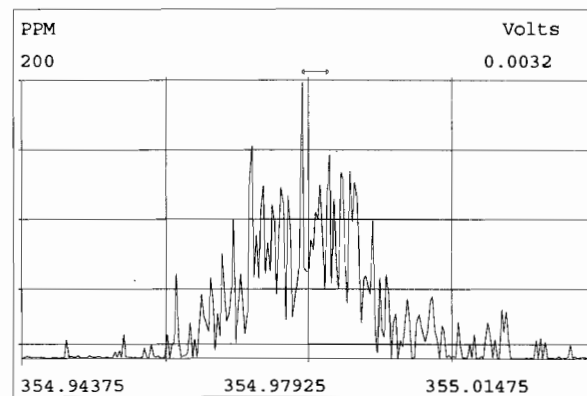
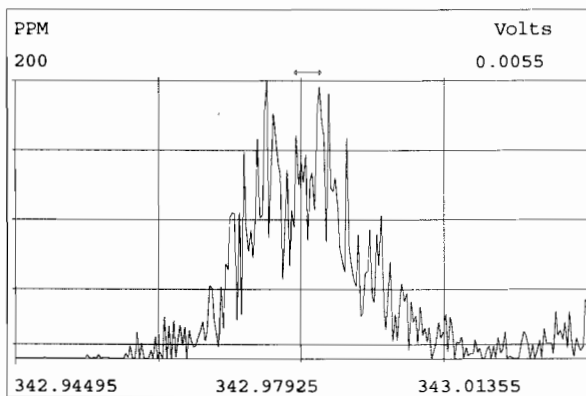
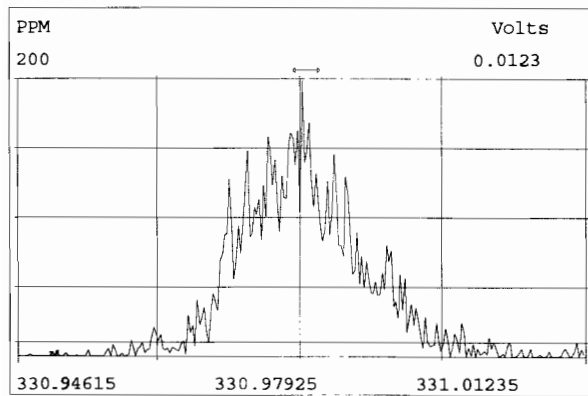
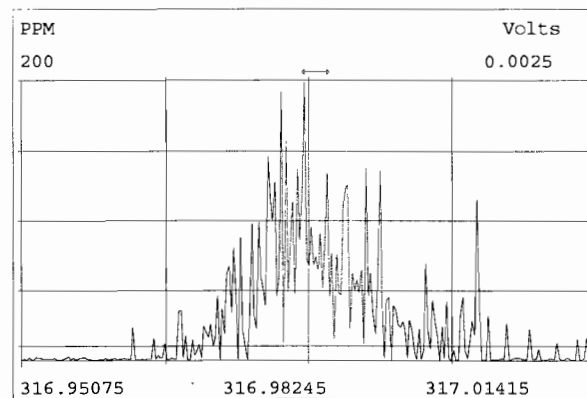
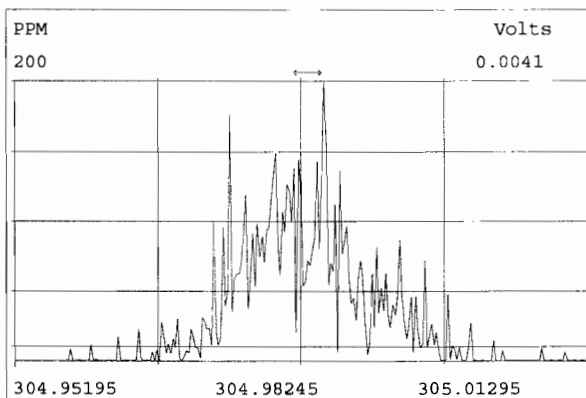
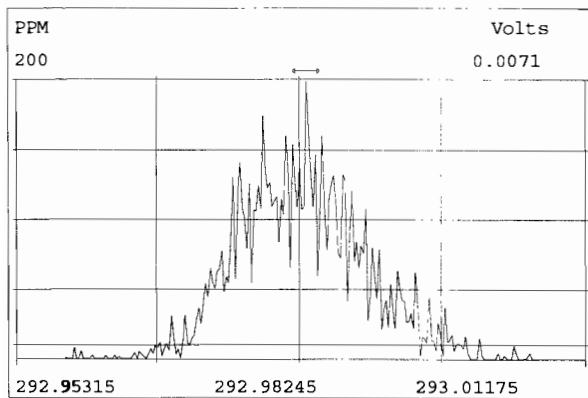


File:191107D1 #1-1682 Acq: 7-NOV-2019 11:22:48 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata Analytical Laboratory_VG7 Text:ST191107D1-1 1613 CS3 19C2204 Exp:TCDF_DB225
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Peak Locate Examination: 7-NOV-2019:14:42 File:RES_CHECK

Experiment:TCDF_DB225 Function:1 Reference:PFK



INITIAL CALIBRATION

Data filename: 191009D1
 Samp# 1 0.25 Samp# 2 0.50 Samp# 3 2.0 Samp# 4 10 Samp# 5 40 Samp# 6 300

Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
2,3,7,8-TCDD	0.9053	7.55 %	0.84	0.83	0.87	0.99	0.92	0.98
1,2,3,7,8-PeCDD	0.9027	4.95 %	0.86	0.87	0.88	0.88	0.96	0.96
1,2,3,4,7,8-HxCDD	1.1013	3.97 %	1.12	1.13	1.03	1.08	1.09	1.15
1,2,3,6,7,8-HxCDD	0.9386	7.68 %	0.83	0.88	1.01	0.92	0.98	1.00
1,2,3,7,8,9-HxCDD	0.9613	4.62 %	0.95	0.90	0.93	0.95	1.00	1.03
1,2,3,4,6,7,8-HpCDD	0.9794	5.84 %	0.90	0.97	0.95	0.96	1.03	1.06
OCDD	0.9585	4.07 %	0.93	0.94	0.92	0.94	1.01	1.01
2,3,7,8-TCDF	0.9501	8.27 %	1.09	0.90	0.89	0.89	0.95	0.99
1,2,3,7,8-PeCDF	0.9603	4.05 %	0.94	0.94	0.92	0.95	1.00	1.01
2,3,4,7,8-PeCDF	1.0148	3.01 %	1.00	0.99	1.00	1.00	1.03	1.07
1,2,3,4,7,8-HxCDF	1.1768	4.35 %	1.23	1.11	1.15	1.14	1.20	1.24
1,2,3,6,7,8-HxCDF	1.0689	3.63 %	1.01	1.07	1.06	1.05	1.12	1.11
2,3,4,6,7,8-HxCDF	1.1136	5.58 %	1.06	1.03	1.12	1.11	1.16	1.20
1,2,3,7,8,9-HxCDF	1.0616	3.91 %	1.05	1.02	1.02	1.06	1.08	1.13
1,2,3,4,6,7,8-HpCDF	1.1276	3.90 %	1.13	1.13	1.06	1.10	1.17	1.18
1,2,3,4,7,8,9-HpCDF	1.2799	3.29 %	1.30	1.24	1.25	1.25	1.31	1.34
OCDF	0.9472	3.80 %	0.95	0.92	0.91	0.92	1.00	0.98
13C-2,3,7,8-TCDD	1.0954	1.91 %	1.11	1.08	1.06	1.10	1.12	1.11
13C-1,2,3,7,8-PeCDD	0.8814	5.11 %	0.89	0.86	0.83	0.86	0.89	0.96
13C-1,2,3,4,7,8-HxCDD	0.6421	10.35 %	0.65	0.60	0.58	0.61	0.65	0.77
13C-1,2,3,6,7,8-HxCDD	0.8555	4.13 %	0.86	0.87	0.82	0.87	0.80	0.90
13C-1,2,3,7,8,9-HxCDD	0.8066	5.57 %	0.84	0.80	0.76	0.80	0.76	0.88
13C-1,2,3,4,6,7,8-HpCDD	0.6539	9.07 %	0.70	0.63	0.59	0.62	0.63	0.75
13C-OCDD	0.5797	10.98 %	0.60	0.52	0.53	0.55	0.59	0.69
13C-2,3,7,8-TCDF	1.0349	1.62 %	1.04	1.00	1.03	1.05	1.04	1.04
13C-1,2,3,7,8-PeCDF	0.8542	4.58 %	0.84	0.82	0.82	0.87	0.86	0.92
13C-2,3,4,7,8-PeCDF	0.8471	3.79 %	0.81	0.84	0.83	0.84	0.85	0.91
13C-1,2,3,4,7,8-HxCDF	0.8317	8.50 %	0.76	0.80	0.79	0.86	0.83	0.96
13C-1,2,3,6,7,8-HxCDF	1.0344	5.35 %	1.00	1.03	1.03	1.03	0.98	1.14
13C-2,3,4,6,7,8-HxCDF	0.9533	6.17 %	0.94	0.94	0.90	0.93	0.93	1.07
13C-1,2,3,7,8,9-HxCDF	0.8277	8.68 %	0.82	0.80	0.77	0.78	0.83	0.96
13C-1,2,3,4,6,7,8-HpCDF	0.7575	6.47 %	0.76	0.73	0.72	0.75	0.73	0.85
13C-1,2,3,4,7,8,9-HpCDF	0.5812	8.97 %	0.62	0.54	0.52	0.55	0.58	0.66
13C-OCDF	0.6890	12.48 %	0.69	0.62	0.62	0.65	0.72	0.85
37Cl-2,3,7,8-TCDD	1.1977	8.83 %	1.40	1.16	1.16	1.11	1.15	1.21
13C-1,2,3,4-TCDD	1.0000	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4-TCDF	1.0000	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4,6,9-HxCDF	1.0000	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

DB CT
 10/10/19 10/10/19

Filename: 191009D1 S: 1 Acquired: 9-OCT-19 16:13:04
 Run: 191009D1 Analyte: Cal: 1613VG7-10-9-19 Results:
 Sample text: ST191009D1-1 1613 CS0 19C2201

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.25	1.97e+04	0.80 y	26:32	-	0.84
2	Unk	1,2,3,7,8-PeCDD	1.25	8.06e+04	0.62 y	30:54	-	0.86
3	Unk	1,2,3,4,7,8-HxCDD	1.25	7.34e+04	1.23 y	34:16	-	1.12
4	Unk	1,2,3,6,7,8-HxCDD	1.25	7.23e+04	1.12 y	34:23	-	0.83
5	Unk	1,2,3,7,8,9-HxCDD	1.25	8.01e+04	1.19 y	34:43	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	1.25	6.39e+04	1.06 y	38:05	-	0.90
7	Unk	OCDD	2.50	1.14e+05	0.95 y	41:28	-	0.93
8	Unk	2,3,7,8-TCDF	0.25	3.62e+04	0.85 y	25:49	-	1.09
9	Unk	1,2,3,7,8-PeCDF	1.25	1.26e+05	1.52 y	29:46	-	0.94
10	Unk	2,3,4,7,8-PeCDF	1.25	1.31e+05	1.52 y	30:40	-	1.00
11	Unk	1,2,3,4,7,8-HxCDF	1.25	9.36e+04	1.22 y	33:22	-	1.23
12	Unk	1,2,3,6,7,8-HxCDF	1.25	1.02e+05	1.11 y	33:29	-	1.01
13	Unk	2,3,4,6,7,8-HxCDF	1.25	1.01e+05	1.30 y	34:07	-	1.06
14	Unk	1,2,3,7,8,9-HxCDF	1.25	8.74e+04	1.10 y	35:08	-	1.05
15	Unk	1,2,3,4,6,7,8-HpCDF	1.25	8.63e+04	1.01 y	36:57	-	1.13
16	Unk	1,2,3,4,7,8,9-HpCDF	1.25	8.18e+04	1.14 y	38:40	-	1.30
17	Unk	OCDF	2.50	1.32e+05	0.94 y	41:43	-	0.95
36	IS	13C-2,3,7,8-TCDD	100.00	9.40e+06	0.78 y	26:32	-	1.11
37	IS	13C-1,2,3,7,8-PeCDD	100.00	7.48e+06	0.62 y	30:55	-	0.89
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	5.24e+06	1.19 y	34:15	-	0.65
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	6.96e+06	1.32 y	34:22	-	0.86
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	6.74e+06	1.31 y	34:42	-	0.84
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	5.68e+06	1.05 y	38:05	-	0.70
42	IS	13C-OCDD	200.00	9.75e+06	0.88 y	41:28	-	0.60
43	IS	13C-2,3,7,8-TCDF	100.00	1.33e+07	0.79 y	25:49	-	1.04
44	IS	13C-1,2,3,7,8-PeCDF	100.00	1.07e+07	1.58 y	29:46	-	0.84
45	IS	13C-2,3,4,7,8-PeCDF	100.00	1.05e+07	1.58 y	30:39	-	0.81
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	6.11e+06	0.51 y	33:21	-	0.76
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	8.04e+06	0.50 y	33:29	-	1.00
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	7.61e+06	0.50 y	34:07	-	0.94
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	6.66e+06	0.48 y	35:07	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	6.12e+06	0.42 y	36:57	-	0.76
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	5.02e+06	0.45 y	38:41	-	0.62
52	IS	13C-OCDF	200.00	1.11e+07	0.90 y	41:43	-	0.69
53	C/Up	37Cl-2,3,7,8-TCDD	0.25	2.97e+04		26:33	-	1.40
54	RS/RT	13C-1,2,3,4-TCDD	100.00	8.45e+06	0.80 y	25:59	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	1.28e+07	0.79 y	24:39	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	8.07e+06	0.52 y	33:47	-	1.00

DB
10/10/14

Filename: 191009D1 S: 2 Acquired: 9-OCT-19 17:00:45
 Run: 191009D1 Analyte: Cal: 1613VG7-10-9-19 Results:
 Sample text: ST191009D1-2 1613 CS1 19C2202

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.50	3.54e+04	0.78 y	26:34	-	0.83
2	Unk	1,2,3,7,8-PeCDD	2.50	1.46e+05	0.60 y	30:56	-	0.87
3	Unk	1,2,3,4,7,8-HxCDD	2.50	1.25e+05	1.20 y	34:16	-	1.13
4	Unk	1,2,3,6,7,8-HxCDD	2.50	1.40e+05	1.22 y	34:23	-	0.88
5	Unk	1,2,3,7,8,9-HxCDD	2.50	1.33e+05	1.15 y	34:43	-	0.90
6	Unk	1,2,3,4,6,7,8-HpCDD	2.50	1.13e+05	0.97 y	38:06	-	0.97
7	Unk	OCDD	5.00	1.78e+05	0.90 y	41:28	-	0.94
8	Unk	2,3,7,8-TCDF	0.50	5.25e+04	0.74 y	25:51	-	0.90
9	Unk	1,2,3,7,8-PeCDF	2.50	2.25e+05	1.59 y	29:48	-	0.94
10	Unk	2,3,4,7,8-PeCDF	2.50	2.42e+05	1.50 y	30:40	-	0.99
11	Unk	1,2,3,4,7,8-HxCDF	2.50	1.62e+05	1.16 y	33:22	-	1.11
12	Unk	1,2,3,6,7,8-HxCDF	2.50	2.03e+05	1.20 y	33:30	-	1.07
13	Unk	2,3,4,6,7,8-HxCDF	2.50	1.79e+05	1.30 y	34:07	-	1.03
14	Unk	1,2,3,7,8,9-HxCDF	2.50	1.49e+05	1.24 y	35:08	-	1.02
15	Unk	1,2,3,4,6,7,8-HpCDF	2.50	1.51e+05	0.91 y	36:57	-	1.13
16	Unk	1,2,3,4,7,8,9-HpCDF	2.50	1.23e+05	0.94 y	38:41	-	1.24
17	Unk	OCDF	5.00	2.09e+05	0.91 y	41:43	-	0.92
36	IS	13C-2,3,7,8-TCDD	100.00	8.50e+06	0.78 y	26:34	-	1.08
37	IS	13C-1,2,3,7,8-PeCDD	100.00	6.74e+06	0.63 y	30:56	-	0.86
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	4.41e+06	1.38 y	34:16	-	0.60
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	6.35e+06	1.20 y	34:23	-	0.87
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	5.87e+06	1.26 y	34:42	-	0.80
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	4.64e+06	1.05 y	38:05	-	0.63
42	IS	13C-OCDD	200.00	7.58e+06	0.89 y	41:28	-	0.52
43	IS	13C-2,3,7,8-TCDF	100.00	1.17e+07	0.80 y	25:51	-	1.00
44	IS	13C-1,2,3,7,8-PeCDF	100.00	9.60e+06	1.59 y	29:48	-	0.82
45	IS	13C-2,3,4,7,8-PeCDF	100.00	9.80e+06	1.58 y	30:40	-	0.84
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	5.84e+06	0.52 y	33:21	-	0.80
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	7.58e+06	0.51 y	33:29	-	1.03
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	6.92e+06	0.51 y	34:07	-	0.94
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	5.84e+06	0.49 y	35:08	-	0.80
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	5.38e+06	0.43 y	36:57	-	0.73
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	3.99e+06	0.43 y	38:41	-	0.54
52	IS	13C-OCDF	200.00	9.05e+06	0.88 y	41:43	-	0.62
53	C/Up	37Cl-2,3,7,8-TCDD	0.50	4.55e+04		26:34	-	1.16
54	RS/RT	13C-1,2,3,4-TCDD	100.00	7.86e+06	0.77 y	26:01	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	1.17e+07	0.83 y	24:41	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	7.33e+06	0.52 y	33:47	-	1.00

DB
10/10/19

Filename: 191009D1 S: 3 Acquired: 9-OCT-19 17:48:27

Run: 191009D1 Analyte: Cal: 1613VG7-10-9-19

Results:

Sample text: ST191009D1-3 1613 CS2 19C2203

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	2.00	1.35e+05	0.74 y	26:33	-	0.87
2	Unk	1,2,3,7,8-PeCDD	10.00	5.33e+05	0.64 y	30:56	-	0.88
3	Unk	1,2,3,4,7,8-HxCDD	10.00	3.94e+05	1.22 y	34:16	-	1.03
4	Unk	1,2,3,6,7,8-HxCDD	10.00	5.50e+05	1.25 y	34:23	-	1.01
5	Unk	1,2,3,7,8,9-HxCDD	10.00	4.71e+05	1.36 y	34:43	-	0.93
6	Unk	1,2,3,4,6,7,8-HpCDD	10.00	3.70e+05	1.02 y	38:06	-	0.95
7	Unk	OCDD	20.00	6.41e+05	0.90 y	41:29	-	0.92
8	Unk	2,3,7,8-TCDF	2.00	1.90e+05	0.83 y	25:49	-	0.89
9	Unk	1,2,3,7,8-PeCDF	10.00	7.88e+05	1.58 y	29:47	-	0.92
10	Unk	2,3,4,7,8-PeCDF	10.00	8.71e+05	1.56 y	30:40	-	1.00
11	Unk	1,2,3,4,7,8-HxCDF	10.00	6.02e+05	1.14 y	33:22	-	1.15
12	Unk	1,2,3,6,7,8-HxCDF	10.00	7.20e+05	1.27 y	33:30	-	1.06
13	Unk	2,3,4,6,7,8-HxCDF	10.00	6.66e+05	1.26 y	34:08	-	1.12
14	Unk	1,2,3,7,8,9-HxCDF	10.00	5.16e+05	1.16 y	35:08	-	1.02
15	Unk	1,2,3,4,6,7,8-HpCDF	10.00	5.02e+05	1.05 y	36:57	-	1.06
16	Unk	1,2,3,4,7,8,9-HpCDF	10.00	4.31e+05	1.08 y	38:41	-	1.25
17	Unk	OCDF	20.00	7.38e+05	0.91 y	41:44	-	0.91
36	IS	13C-2,3,7,8-TCDD	100.00	7.73e+06	0.78 y	26:33	-	1.06
37	IS	13C-1,2,3,7,8-PeCDD	100.00	6.03e+06	0.62 y	30:55	-	0.83
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	3.81e+06	1.24 y	34:15	-	0.58
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	5.44e+06	1.28 y	34:22	-	0.82
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	5.03e+06	1.21 y	34:42	-	0.76
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	3.89e+06	1.09 y	38:05	-	0.59
42	IS	13C-OCDD	200.00	6.97e+06	0.90 y	41:28	-	0.53
43	IS	13C-2,3,7,8-TCDF	100.00	1.08e+07	0.82 y	25:49	-	1.03
44	IS	13C-1,2,3,7,8-PeCDF	100.00	8.55e+06	1.59 y	29:47	-	0.82
45	IS	13C-2,3,4,7,8-PeCDF	100.00	8.70e+06	1.59 y	30:40	-	0.83
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	5.22e+06	0.49 y	33:21	-	0.79
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	6.80e+06	0.51 y	33:29	-	1.03
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	5.93e+06	0.52 y	34:07	-	0.90
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	5.05e+06	0.51 y	35:08	-	0.77
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	4.73e+06	0.44 y	36:57	-	0.72
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	3.46e+06	0.45 y	38:41	-	0.52
52	IS	13C-OCDF	200.00	8.15e+06	0.92 y	41:44	-	0.62
53	C/Up	37Cl-2,3,7,8-TCDD	2.00	1.69e+05		26:33	-	1.16
54	RS/RT	13C-1,2,3,4-TCDD	100.00	7.29e+06	0.77 y	25:59	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	1.04e+07	0.82 y	24:39	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	6.60e+06	0.52 y	33:47	-	1.00

DB
10/10/19

Filename: 191009D1 S: 4 Acquired: 9-OCT-19 18:36:09
 Run: 191009D1 Analyte: Cal: 1613VG7-10-9-19 Results:
 Sample text: ST191009D1-4 1613 CS3 19C2204

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	10.00	8.37e+05	0.80 y	26:35	-	0.99
2	Unk	1,2,3,7,8-PeCDD	50.00	2.94e+06	0.61 y	30:56	-	0.88
3	Unk	1,2,3,4,7,8-HxCDD	50.00	2.38e+06	1.21 y	34:16	-	1.08
4	Unk	1,2,3,6,7,8-HxCDD	50.00	2.90e+06	1.19 y	34:23	-	0.92
5	Unk	1,2,3,7,8,9-HxCDD	50.00	2.74e+06	1.24 y	34:42	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	50.00	2.15e+06	1.03 y	38:05	-	0.96
7	Unk	OCDD	100.00	3.73e+06	0.91 y	41:28	-	0.94
8	Unk	2,3,7,8-TCDF	10.00	1.05e+06	0.80 y	25:51	-	0.89
9	Unk	1,2,3,7,8-PeCDF	50.00	4.65e+06	1.59 y	29:47	-	0.95
10	Unk	2,3,4,7,8-PeCDF	50.00	4.70e+06	1.68 y	30:40	-	1.00
11	Unk	1,2,3,4,7,8-HxCDF	50.00	3.52e+06	1.24 y	33:21	-	1.14
12	Unk	1,2,3,6,7,8-HxCDF	50.00	3.92e+06	1.25 y	33:29	-	1.05
13	Unk	2,3,4,6,7,8-HxCDF	50.00	3.74e+06	1.22 y	34:07	-	1.11
14	Unk	1,2,3,7,8,9-HxCDF	50.00	3.00e+06	1.19 y	35:07	-	1.06
15	Unk	1,2,3,4,6,7,8-HpCDF	50.00	2.97e+06	1.04 y	36:57	-	1.10
16	Unk	1,2,3,4,7,8,9-HpCDF	50.00	2.49e+06	1.07 y	38:41	-	1.25
17	Unk	OCDF	100.00	4.33e+06	0.91 y	41:43	-	0.92
36	IS	13C-2,3,7,8-TCDD	100.00	8.46e+06	0.74 y	26:33	-	1.10
37	IS	13C-1,2,3,7,8-PeCDD	100.00	6.66e+06	0.62 y	30:55	-	0.86
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	4.42e+06	1.25 y	34:15	-	0.61
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	6.30e+06	1.28 y	34:22	-	0.87
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	5.76e+06	1.27 y	34:41	-	0.80
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	4.47e+06	1.05 y	38:05	-	0.62
42	IS	13C-OCDD	200.00	7.90e+06	0.94 y	41:27	-	0.55
43	IS	13C-2,3,7,8-TCDF	100.00	1.18e+07	0.79 y	25:50	-	1.05
44	IS	13C-1,2,3,7,8-PeCDF	100.00	9.79e+06	1.62 y	29:47	-	0.87
45	IS	13C-2,3,4,7,8-PeCDF	100.00	9.43e+06	1.61 y	30:39	-	0.84
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	6.19e+06	0.50 y	33:21	-	0.86
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	7.47e+06	0.51 y	33:29	-	1.03
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	6.75e+06	0.49 y	34:06	-	0.93
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	5.64e+06	0.49 y	35:07	-	0.78
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	5.40e+06	0.43 y	36:55	-	0.75
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	3.99e+06	0.44 y	38:40	-	0.55
52	IS	13C-OCDF	200.00	9.37e+06	0.89 y	41:43	-	0.65
53	C/Up	37Cl-2,3,7,8-TCDD	10.00	8.56e+05		26:35	-	1.11
54	RS/RT	13C-1,2,3,4-TCDD	100.00	7.70e+06	0.75 y	26:00	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	1.13e+07	0.82 y	24:41	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	7.23e+06	0.51 y	33:47	-	1.00

DB

10/10/19

Filename: 191009D1 S: 5 Acquired: 9-OCT-19 19:23:46
 Run: 191009D1 Analyte: Cal: 1613VG7-10-9-19 Results:
 Sample text: ST191009D1-5 1613 CS4 19C2205

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	40.00	3.53e+06	0.81 y	26:35	-	0.92
2	Unk	1,2,3,7,8-PeCDD	200.00	1.48e+07	0.63 y	30:55	-	0.96
3	Unk	1,2,3,4,7,8-HxCDD	200.00	1.19e+07	1.19 y	34:15	-	1.09
4	Unk	1,2,3,6,7,8-HxCDD	200.00	1.34e+07	1.20 y	34:22	-	0.98
5	Unk	1,2,3,7,8,9-HxCDD	200.00	1.30e+07	1.18 y	34:41	-	1.00
6	Unk	1,2,3,4,6,7,8-HpCDD	200.00	1.10e+07	1.03 y	38:04	-	1.03
7	Unk	OCDD	400.00	2.03e+07	0.91 y	41:26	-	1.01
8	Unk	2,3,7,8-TCDF	40.00	5.17e+06	0.77 y	25:52	-	0.95
9	Unk	1,2,3,7,8-PeCDF	200.00	2.24e+07	1.58 y	29:47	-	1.00
10	Unk	2,3,4,7,8-PeCDF	200.00	2.29e+07	1.55 y	30:40	-	1.03
11	Unk	1,2,3,4,7,8-HxCDF	200.00	1.69e+07	1.21 y	33:21	-	1.20
12	Unk	1,2,3,6,7,8-HxCDF	200.00	1.85e+07	1.21 y	33:29	-	1.12
13	Unk	2,3,4,6,7,8-HxCDF	200.00	1.83e+07	1.21 y	34:06	-	1.16
14	Unk	1,2,3,7,8,9-HxCDF	200.00	1.53e+07	1.22 y	35:06	-	1.08
15	Unk	1,2,3,4,6,7,8-HpCDF	200.00	1.46e+07	1.04 y	36:56	-	1.17
16	Unk	1,2,3,4,7,8,9-HpCDF	200.00	1.30e+07	1.05 y	38:39	-	1.31
17	Unk	OCDF	400.00	2.42e+07	0.91 y	41:41	-	1.00
36	IS	13C-2,3,7,8-TCDD	100.00	9.63e+06	0.75 y	26:34	-	1.12
37	IS	13C-1,2,3,7,8-PeCDD	100.00	7.72e+06	0.63 y	30:54	-	0.89
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	5.48e+06	1.31 y	34:14	-	0.65
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	6.83e+06	1.22 y	34:21	-	0.80
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	6.48e+06	1.26 y	34:40	-	0.76
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	5.36e+06	1.08 y	38:03	-	0.63
42	IS	13C-OCDD	200.00	1.01e+07	0.91 y	41:25	-	0.59
43	IS	13C-2,3,7,8-TCDF	100.00	1.36e+07	0.80 y	25:51	-	1.04
44	IS	13C-1,2,3,7,8-PeCDF	100.00	1.12e+07	1.57 y	29:46	-	0.86
45	IS	13C-2,3,4,7,8-PeCDF	100.00	1.11e+07	1.52 y	30:39	-	0.85
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	7.05e+06	0.50 y	33:20	-	0.83
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	8.28e+06	0.49 y	33:28	-	0.98
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	7.90e+06	0.51 y	34:05	-	0.93
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	7.08e+06	0.51 y	35:06	-	0.83
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	6.23e+06	0.46 y	36:55	-	0.73
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	4.95e+06	0.44 y	38:38	-	0.58
52	IS	13C-OCDF	200.00	1.22e+07	0.90 y	41:40	-	0.72
53	C/Up	37Cl-2,3,7,8-TCDD	40.00	3.96e+06		26:35	-	1.15
54	RS/RT	13C-1,2,3,4-TCDD	100.00	8.64e+06	0.78 y	26:00	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	1.30e+07	0.83 y	24:41	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	8.48e+06	0.51 y	33:46	-	1.00

D/B
10/10/19

Filename: 191009D1 S: 6 Acquired: 9-OCT-19 20:11:17
 Run: 191009D1 Analyte: Cal: 1613VG7-10-9-19 Results:
 Sample text: ST191009D1-6 1613 CS5 19C2206

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	300.00	2.80e+07	0.81 y	26:35	- 0.98
2	Unk	1,2,3,7,8-PeCDD	1500.00	1.19e+08	0.62 y	30:55	- 0.96
3	Unk	1,2,3,4,7,8-HxCDD	1500.00	1.04e+08	1.22 y	34:15	- 1.15
4	Unk	1,2,3,6,7,8-HxCDD	1500.00	1.07e+08	1.21 y	34:22	- 1.00
5	Unk	1,2,3,7,8,9-HxCDD	1500.00	1.06e+08	1.23 y	34:41	- 1.03
6	Unk	1,2,3,4,6,7,8-HpCDD	1500.00	9.32e+07	1.05 y	38:03	- 1.06
7	Unk	OCDD	3000.00	1.64e+08	0.92 y	41:25	- 1.01
8	Unk	2,3,7,8-TCDF	300.00	3.95e+07	0.79 y	25:52	- 0.99
9	Unk	1,2,3,7,8-PeCDF	1500.00	1.79e+08	1.58 y	29:47	- 1.01
10	Unk	2,3,4,7,8-PeCDF	1500.00	1.86e+08	1.57 y	30:39	- 1.07
11	Unk	1,2,3,4,7,8-HxCDF	1500.00	1.40e+08	1.20 y	33:21	- 1.24
12	Unk	1,2,3,6,7,8-HxCDF	1500.00	1.48e+08	1.21 y	33:29	- 1.11
13	Unk	2,3,4,6,7,8-HxCDF	1500.00	1.51e+08	1.22 y	34:06	- 1.20
14	Unk	1,2,3,7,8,9-HxCDF	1500.00	1.28e+08	1.25 y	35:06	- 1.13
15	Unk	1,2,3,4,6,7,8-HpCDF	1500.00	1.18e+08	1.03 y	36:55	- 1.18
16	Unk	1,2,3,4,7,8,9-HpCDF	1500.00	1.04e+08	1.05 y	38:38	- 1.34
17	Unk	OCDF	3000.00	1.96e+08	0.91 y	41:40	- 0.98
36	IS	13C-2,3,7,8-TCDD	100.00	9.53e+06	0.73 y	26:33	- 1.11
37	IS	13C-1,2,3,7,8-PeCDD	100.00	8.28e+06	0.64 y	30:54	- 0.96
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	6.01e+06	1.21 y	34:14	- 0.77
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	7.08e+06	1.32 y	34:21	- 0.90
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	6.90e+06	1.26 y	34:39	- 0.88
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	5.86e+06	1.08 y	38:03	- 0.75
42	IS	13C-OCDD	200.00	1.08e+07	0.92 y	41:25	- 0.69
43	IS	13C-2,3,7,8-TCDF	100.00	1.33e+07	0.80 y	25:51	- 1.04
44	IS	13C-1,2,3,7,8-PeCDF	100.00	1.18e+07	1.59 y	29:46	- 0.92
45	IS	13C-2,3,4,7,8-PeCDF	100.00	1.16e+07	1.60 y	30:38	- 0.91
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	7.52e+06	0.51 y	33:20	- 0.96
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	8.92e+06	0.50 y	33:28	- 1.14
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	8.38e+06	0.51 y	34:05	- 1.07
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	7.57e+06	0.52 y	35:05	- 0.96
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	6.70e+06	0.43 y	36:54	- 0.85
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	5.19e+06	0.43 y	38:37	- 0.66
52	IS	13C-OCDF	200.00	1.33e+07	0.89 y	41:39	- 0.85
53	C/Up	37Cl-2,3,7,8-TCDD	199.98	2.09e+07		26:35	- 1.21
54	RS/RT	13C-1,2,3,4-TCDD	100.00	8.62e+06	0.76 y	26:01	- 1.00
55	RS	13C-1,2,3,4-TCDF	100.00	1.27e+07	0.84 y	24:41	- 1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	7.85e+06	0.49 y	33:45	- 1.00

DB

10/10/19

Run: 191009D1 Analyte: Cal: 1613VG7-10 9-19 Inst. ID: VG-7

Data filename: 191009D1

Samp# 1	Samp# 2	Samp# 3	Samp# 4	Samp# 5	Samp# 6
0.25	0.50	2.0	10	40	300

Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
Total Tetra-Dioxins	0.9053	7.55 %	0.84	0.83	0.87	0.99	0.92	0.98
TCDD EMPC	0.9053	7.55 %	0.84	0.83	0.87	0.99	0.92	0.98
Total Penta-Dioxins	0.9027	4.95 %	0.86	0.87	0.88	0.88	0.96	0.96
PeCDD EMPC	0.9027	4.95 %	0.86	0.87	0.88	0.88	0.96	0.96
Total Hexa-Dioxins	0.9918	4.02 %	0.95	0.96	0.99	0.97	1.02	1.06
HxCDD EMPC	0.9918	4.02 %	0.95	0.96	0.99	0.97	1.02	1.06
Total Hepta-Dioxins	0.9794	5.84 %	0.90	0.97	0.95	0.96	1.03	1.06
HpCDD EMPC	0.9794	5.84 %	0.90	0.97	0.95	0.96	1.03	1.06
Total Tetra-Furans	0.9501	8.27 %	1.09	0.90	0.89	0.89	0.95	0.99
TCDF EMPC	0.9501	8.27 %	1.09	0.90	0.89	0.89	0.95	0.99
1st Func. Penta-Furans	0.9875	3.40 %	0.97	0.96	0.96	0.97	1.02	1.04
1st Func. PeCDF EMPC	0.9875	3.40 %	0.97	0.96	0.96	0.97	1.02	1.04
Total Penta-Furans	0.9875	3.40 %	0.97	0.96	0.96	0.97	1.02	1.04
PeCDF EMPC	0.9875	3.40 %	0.97	0.96	0.96	0.97	1.02	1.04
Total Hexa-Furans	1.1033	3.70 %	1.08	1.06	1.09	1.09	1.14	1.17
HxCDF EMPC	1.1033	3.70 %	1.08	1.06	1.09	1.09	1.14	1.17
Total Hepta-Furans	1.1937	3.56 %	1.21	1.17	1.14	1.16	1.23	1.25
HpCDF EMPC	1.1937	3.56 %	1.21	1.17	1.14	1.16	1.23	1.25

DB
10/10/19

Run: 191009D1

Analyte:

Cal: 1613VG7-10-9-19

Inst. ID: VG-7

Data filename: 191009D1

		Samp# 1	Samp# 2	Samp# 3	Samp# 4	Samp# 5	Samp# 6
		0.25	0.50	2.0	10	40	300
RRT Limits							
Name	Lower Upper	RRT#1	RRT#2	RRT#3	RRT#4	RRT#5	RRT#6
2,3,7,8-TCDD	0.999 -1.002	1.000	1.000	1.000	1.001	1.001	1.001
1,2,3,7,8-PeCDD	0.999 -1.002	0.999	1.000	1.001	1.001	1.001	1.001
1,2,3,4,7,8-HxCDD	0.999 -1.001	1.000	1.000	1.001	1.000	1.000	1.000
1,2,3,6,7,8-HxCDD	0.998 -1.004	1.000	1.000	1.000	1.001	1.001	1.000
1,2,3,7,8,9-HxCDD	0.998 -1.004	1.001	1.000	1.000	1.000	1.001	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	1.000	1.000	1.000	1.001	1.001	1.001
1,2,3,7,8-PeCDF	0.999 -1.002	1.000	1.000	1.000	1.000	1.000	1.001
2,3,4,7,8-PeCDF	0.999 -1.002	1.000	1.000	1.000	1.001	1.001	1.001
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	1.000	1.000	1.001	1.000	1.000	1.000
2,3,4,6,7,8-HxCDF	0.999 -1.001	1.000	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	1.000	1.000	1.000
1,2,3,4,6,7,8-HpCDF	0.999 -1.001	1.000	1.000	1.000	1.001	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	1.022	1.022	1.022	1.021	1.021	1.021
13C-1,2,3,7,8-PeCDD	1.000 -1.567	1.190	1.189	1.190	1.189	1.188	1.188
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	1.018	1.018	1.017	1.017	1.018
13C-1,2,3,7,8,9-HxCDD	1.014 -1.038	1.027	1.027	1.027	1.027	1.027	1.027
13C-1,2,3,4,6,7,8-HpCDD	1.117 -1.141	1.127	1.127	1.128	1.127	1.127	1.127
13C-OCDD	1.085 -1.365	1.227	1.227	1.228	1.227	1.227	1.227
13C-2,3,7,8-TCDF	0.923 -1.103	0.994	0.994	0.994	0.994	0.994	0.994
13C-1,2,3,7,8-PeCDF	1.000 -1.425	1.146	1.146	1.146	1.145	1.145	1.144
13C-2,3,4,7,8-PeCDF	1.011 -1.526	1.180	1.179	1.180	1.179	1.178	1.178
13C-1,2,3,4,7,8-HxCDF	0.975 -1.001	0.987	0.987	0.987	0.987	0.987	0.987
13C-1,2,3,6,7,8-HxCDF	0.979 -1.005	0.991	0.991	0.991	0.991	0.991	0.991
13C-2,3,4,6,7,8-HxCDF	1.001 -1.020	1.010	1.010	1.010	1.009	1.009	1.010
13C-1,2,3,7,8,9-HxCDF	1.002 -1.072	1.040	1.040	1.040	1.039	1.039	1.039
13C-1,2,3,4,6,7,8-HpCDF	1.069 -1.111	1.093	1.093	1.094	1.093	1.093	1.093
13C-1,2,3,4,7,8,9-HpCDF	1.098 -1.192	1.145	1.145	1.145	1.145	1.144	1.144
13C-OCDF	1.091 -1.371	1.235	1.234	1.235	1.235	1.234	1.234
37Cl-2,3,7,8-TCDD	0.989 -1.052	1.022	1.021	1.022	1.022	1.022	1.022
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	*	*	*	*	*	*

D)B
10/10/19

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: 10-9-19

RT Window Data Filename: 191009D1 S#4 Analysis Date: 9-OCT-19 Time: 18:36:09

ZB-5MS IS Data Filename: 191009D1 S#4 Analysis Date: 9-OCT-19 Time: 18:36:09

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)	23:24	1,3,6,8-TCDF (F)	21:25
1,2,8,9-TCDD (L)	27:24	1,2,8,9-TCDF (L)	27:33
1,2,4,7,9-PeCDD (F)	28:55	1,3,4,6,8-PeCDF (F)	27:28
1,2,3,8,9-PeCDD (L)	31:17	1,2,3,8,9-PeCDF (L)	31:32
1,2,4,6,7,9-HxCDD (F)	32:41	1,2,3,4,6,8-HxCDF (F)	32:08
1,2,3,7,8,9-HxCDD (L)	34:42	1,2,3,7,8,9-HxCDF (L)	35:07
1,2,3,4,6,7,9-HpCDD (F)	37:16	1,2,3,4,6,7,8-HpCDF (F)	36:57
1,2,3,4,6,7,8-HpCDD (L)	38:05	1,2,3,4,7,8,9-HpCDF (L)	38:41

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

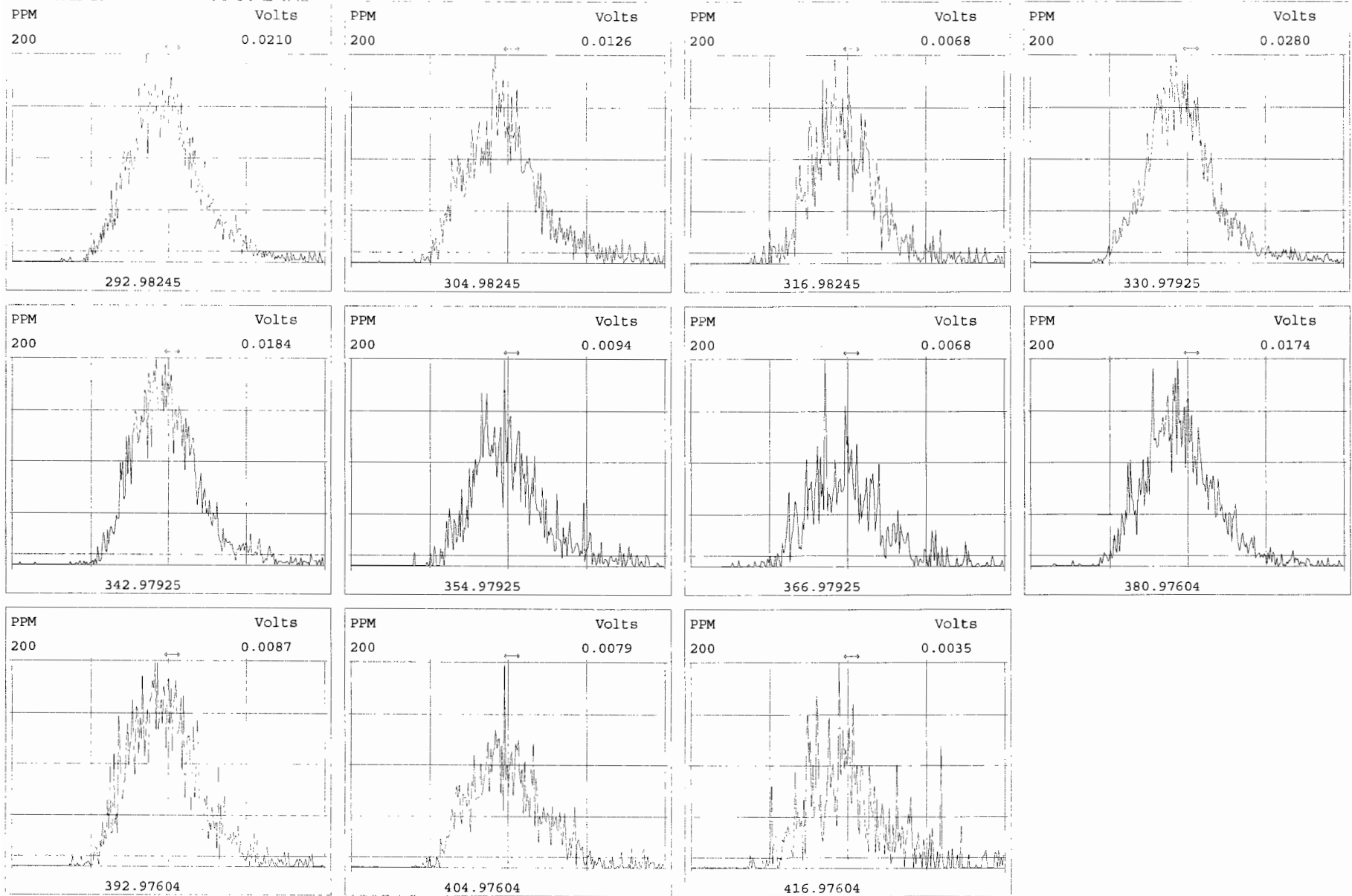
% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

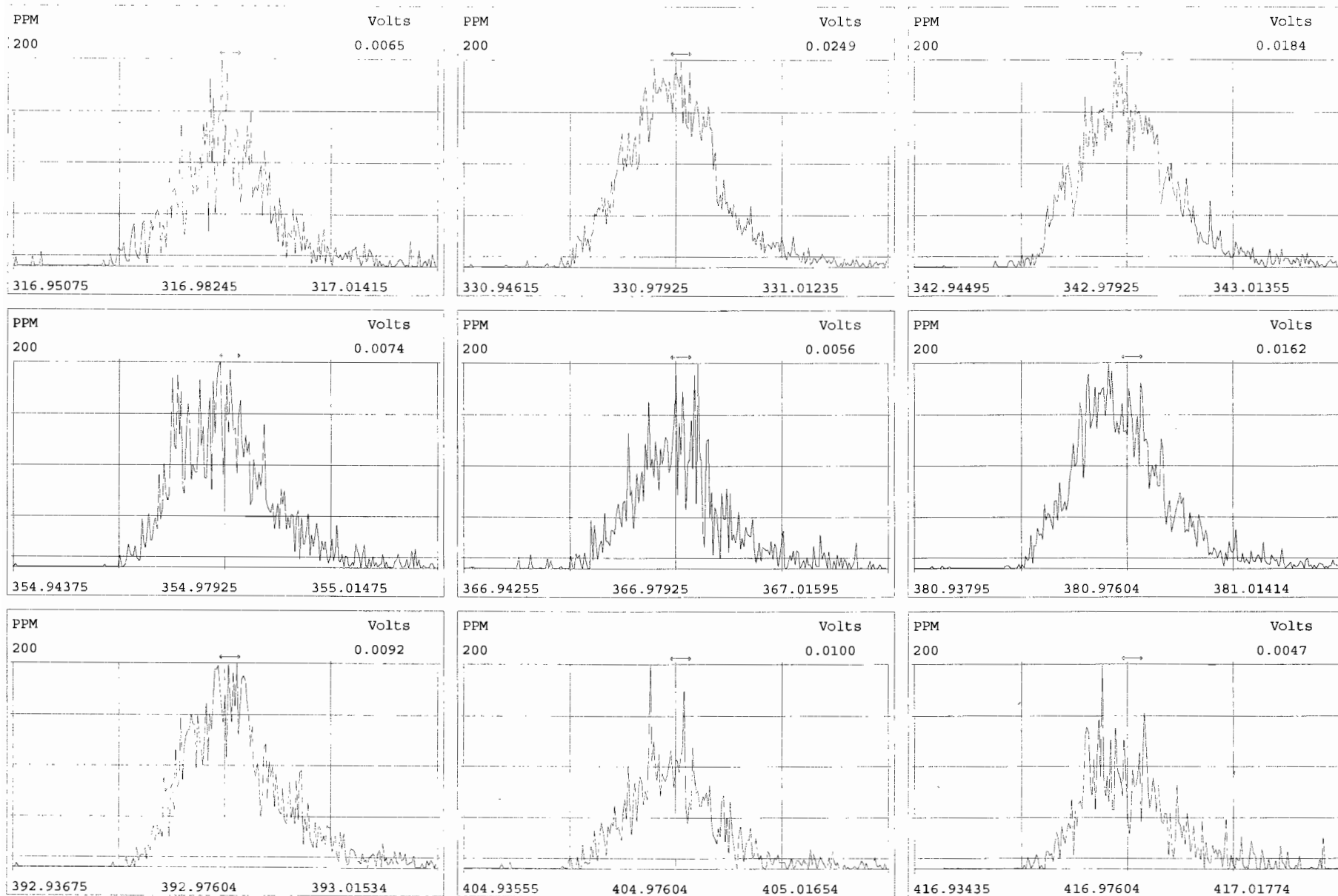
Analyst: DB

Date: 10/10/19



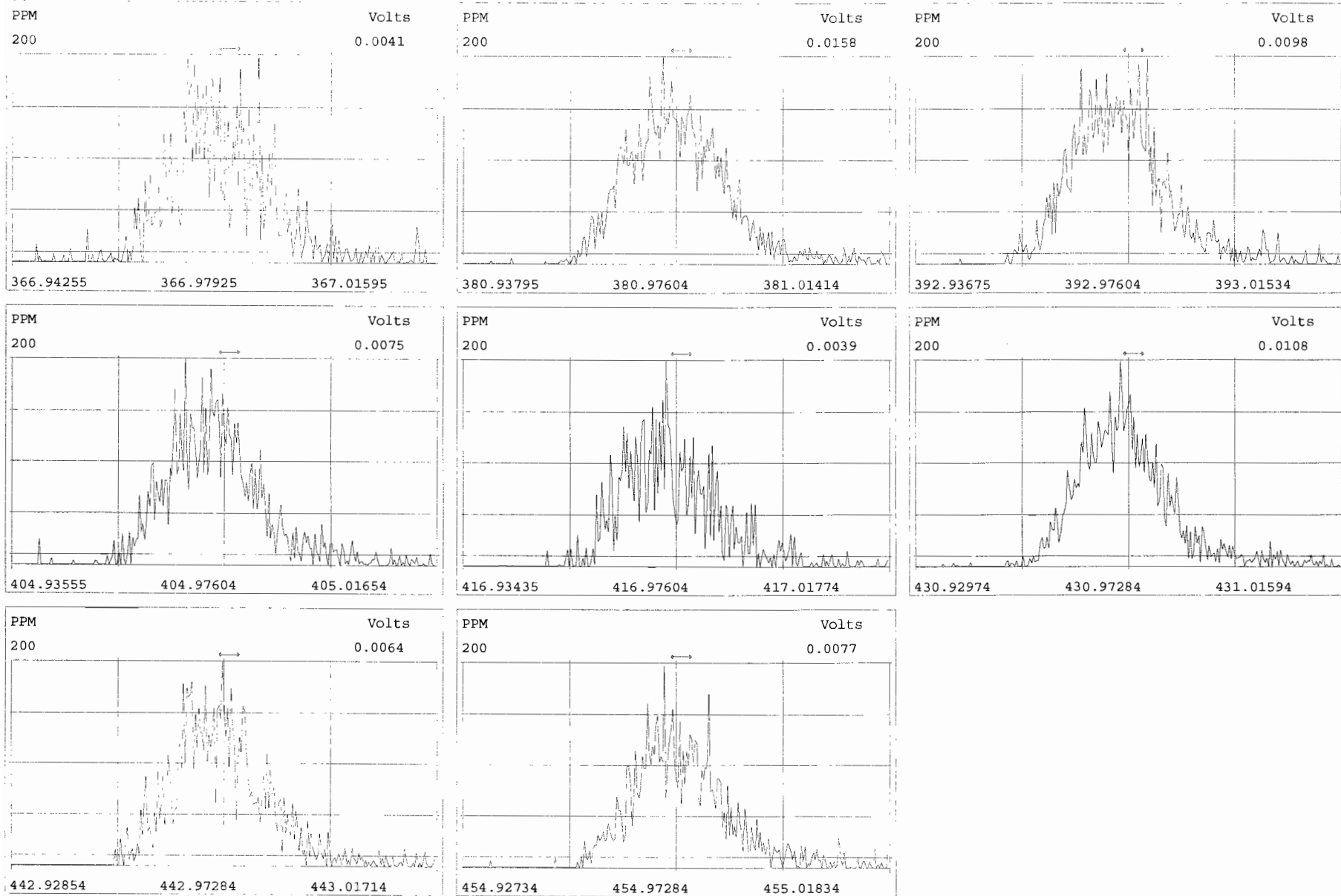
Peak Locate Examination: 9-OCT-2019:16:10 File:191009D1

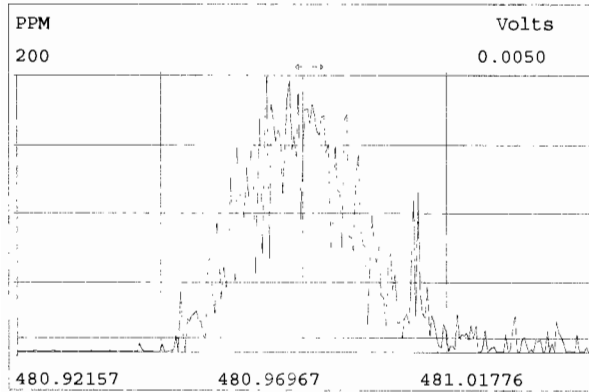
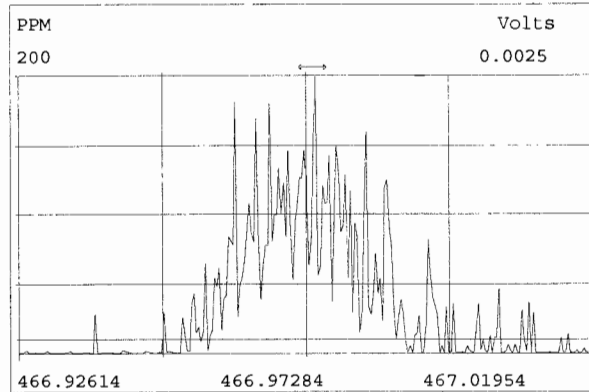
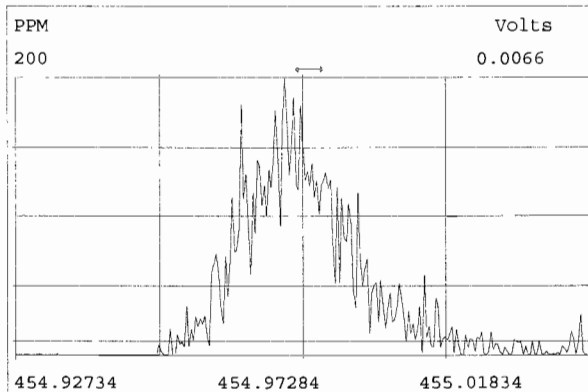
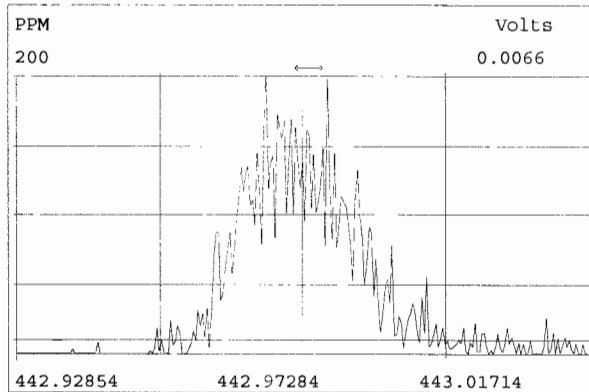
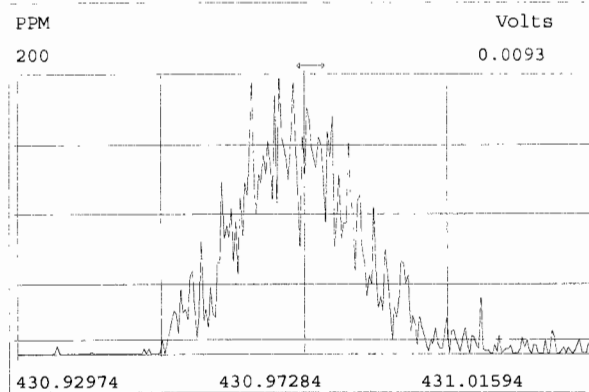
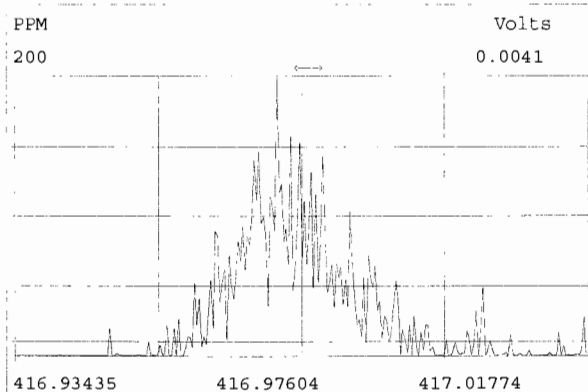
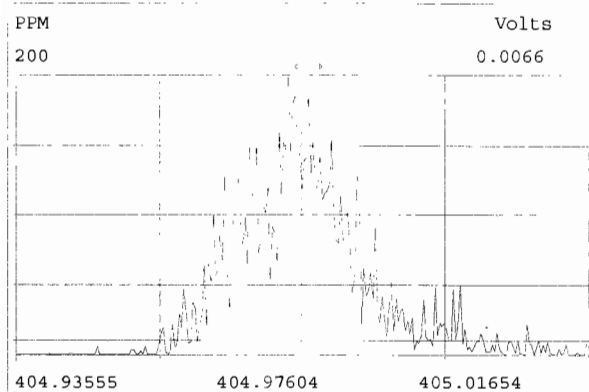
Experiment:OCDD_DB5 Function:2 Reference:PFK



Peak Locate Examination: 9-OCT-2019:16:11 File:191009D1

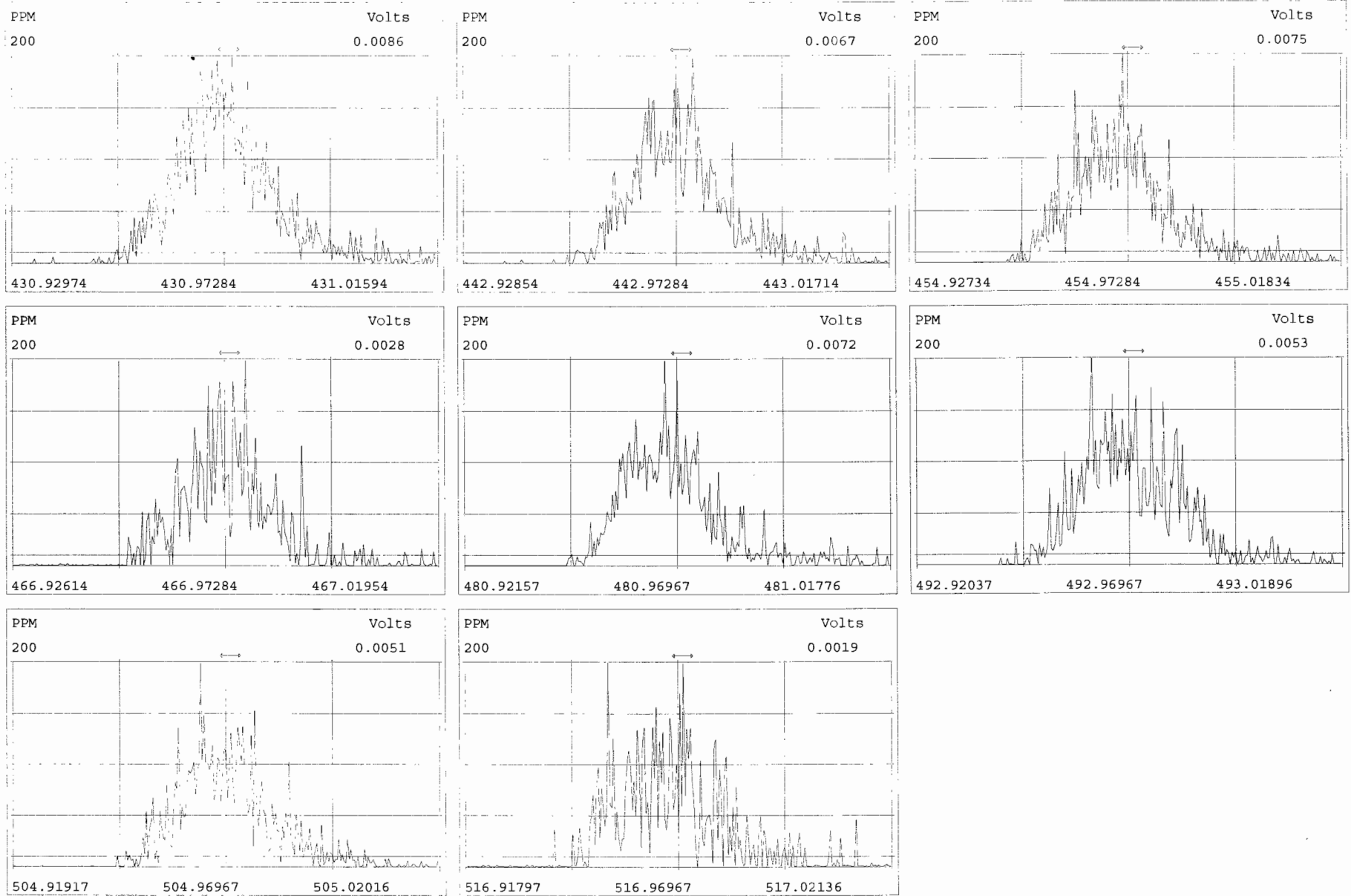
Experiment:OCDD_DB5 Function:3 Reference:PFK





Peak Locate Examination: 9-OCT-2019:16:12 File:191009D1

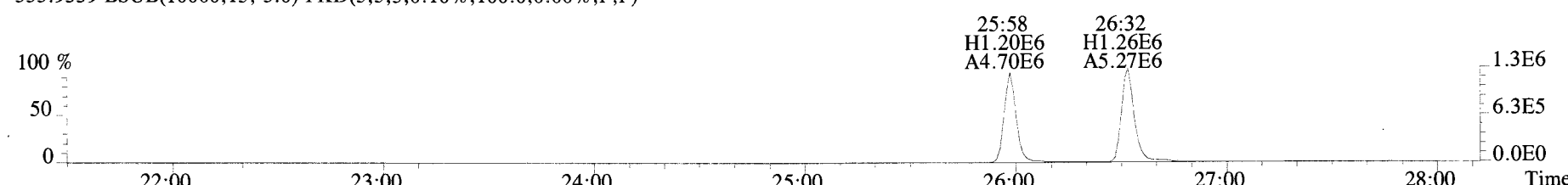
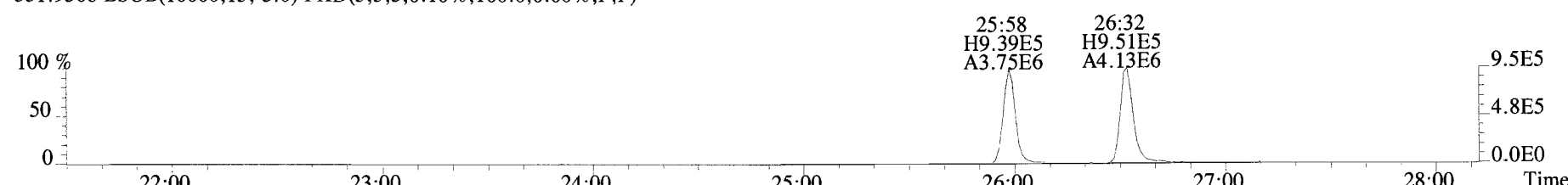
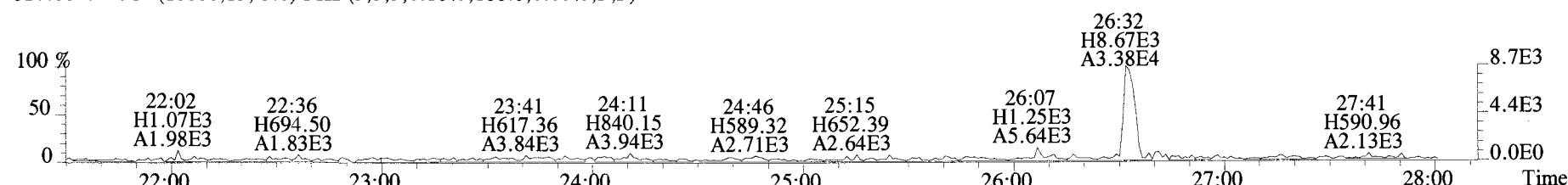
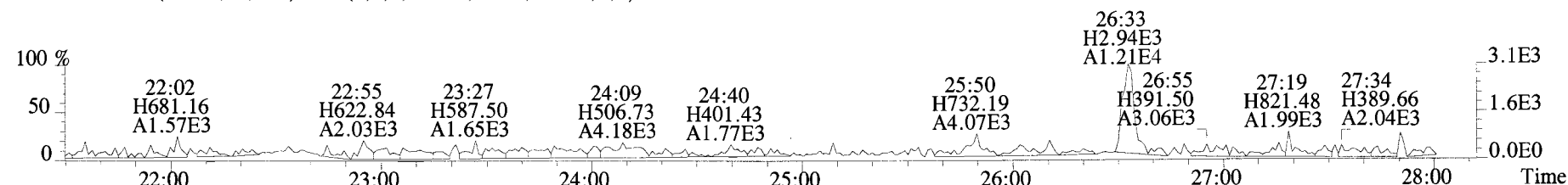
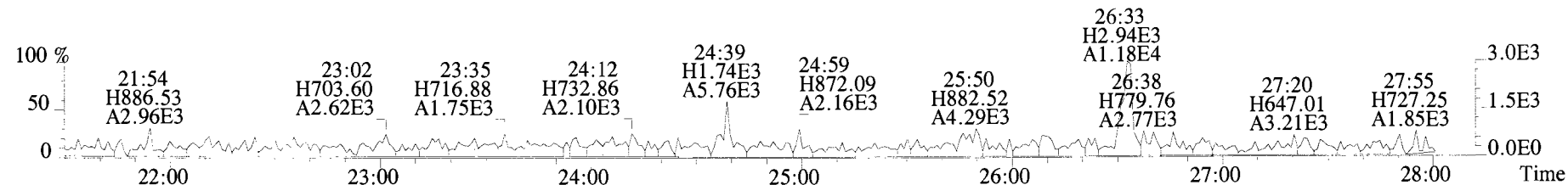
Experiment:OCDD_DB5 Function:5 Reference:PFK



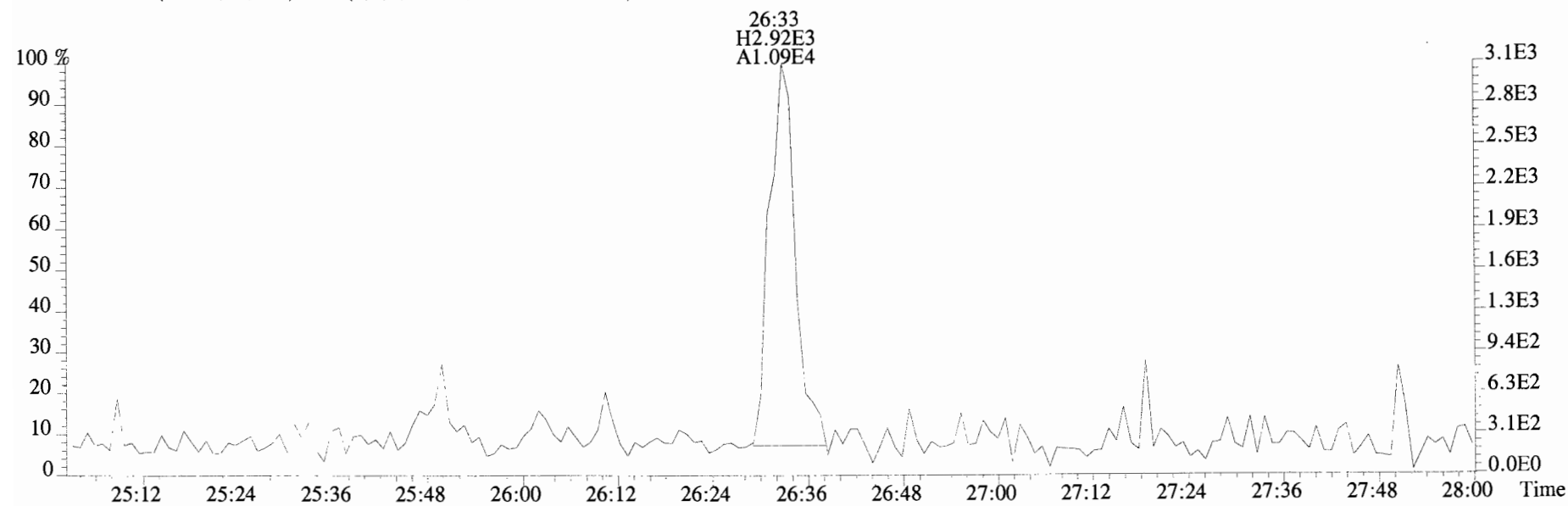
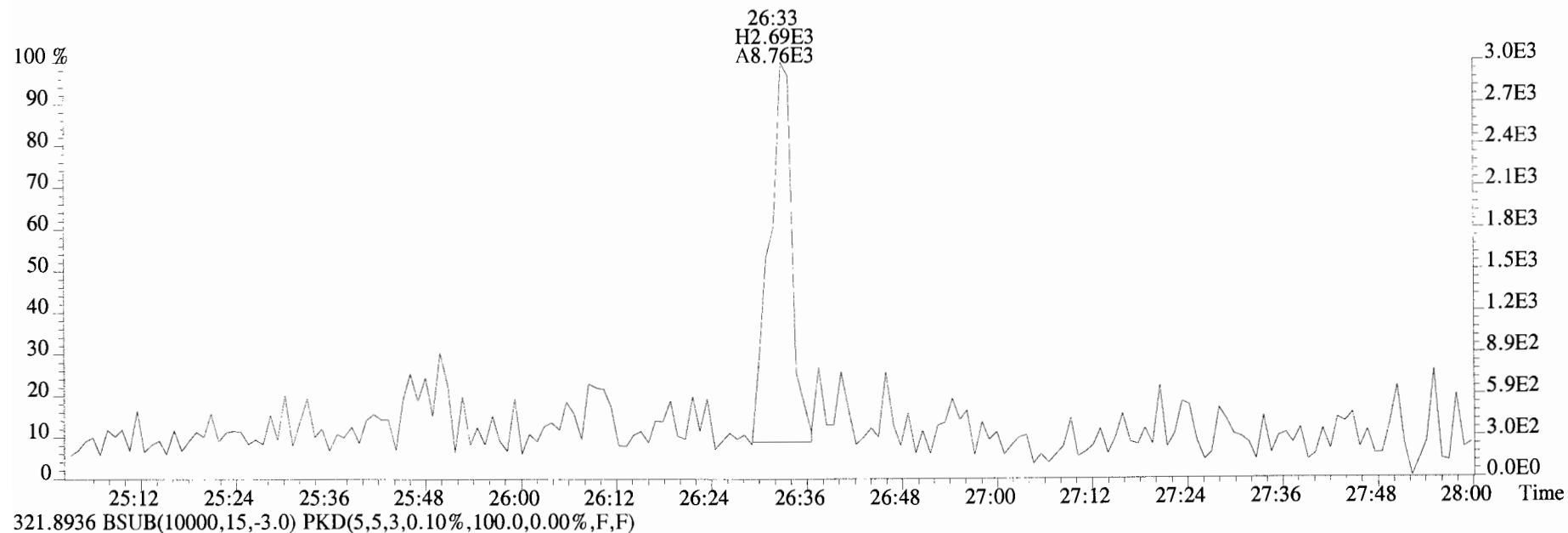
Vista Analytical Laboratory - Injection Log Run file: 191009D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191009D1	1	ST191009D1-1	DB	9-OCT-19	16:13:04	ST191009D1-4	NA
191009D1	2	ST191009D1-2	DB	9-OCT-19	17:00:45	ST191009D1-4	NA
191009D1	3	ST191009D1-3	DB	9-OCT-19	17:48:27	ST191009D1-4	NA
191009D1	4	ST191009D1-4	DB	9-OCT-19	18:36:09	ST191009D1-4	NA
191009D1	5	ST191009D1-5	DB	9-OCT-19	19:23:46	ST191009D1-4	NA
191009D1	6	ST191009D1-6	DB	9-OCT-19	20:11:17	ST191009D1-4	NA
191009D1	7	SOLVENT BLANK	DB	9-OCT-19	20:58:57	ST191009D1-4	NA
191009D1	8	SS191009D1-1	DB	9-OCT-19	21:46:34	ST191009D1-4	NA
191009D1	9	B9J0001-BS1	DB	9-OCT-19	22:34:09	ST191009D1-4	NA
191009D1	10	SOLVENT BLANK	DB	9-OCT-19	23:21:45	ST191009D1-4	NA
191009D1	11	B9J0001-BLK1	DB	10-OCT-19	00:09:30	ST191009D1-4	NA
191009D1	12	QC191007D1-1	DB	10-OCT-19	00:57:00	ST191009D1-4	NA
191009D1	13	1903285-08	DB	10-OCT-19	01:44:36	ST191009D1-4	NA
191009D1	14	1903285-09	DB	10-OCT-19	02:32:11	ST191009D1-4	NA
191009D1	15	1903285-10	DB	10-OCT-19	03:19:47	ST191009D1-4	NA
191009D1	16	1903103-02@5X	DB	10-OCT-19	04:07:23	ST191009D1-4	NA
191009D1	17	1903103-01@5X	DB	10-OCT-19	04:54:54	ST191009D1-4	NA
191009D1	18	B9I0240-DUP1@5X	DB	10-OCT-19	05:42:38	ST191009D1-4	NA

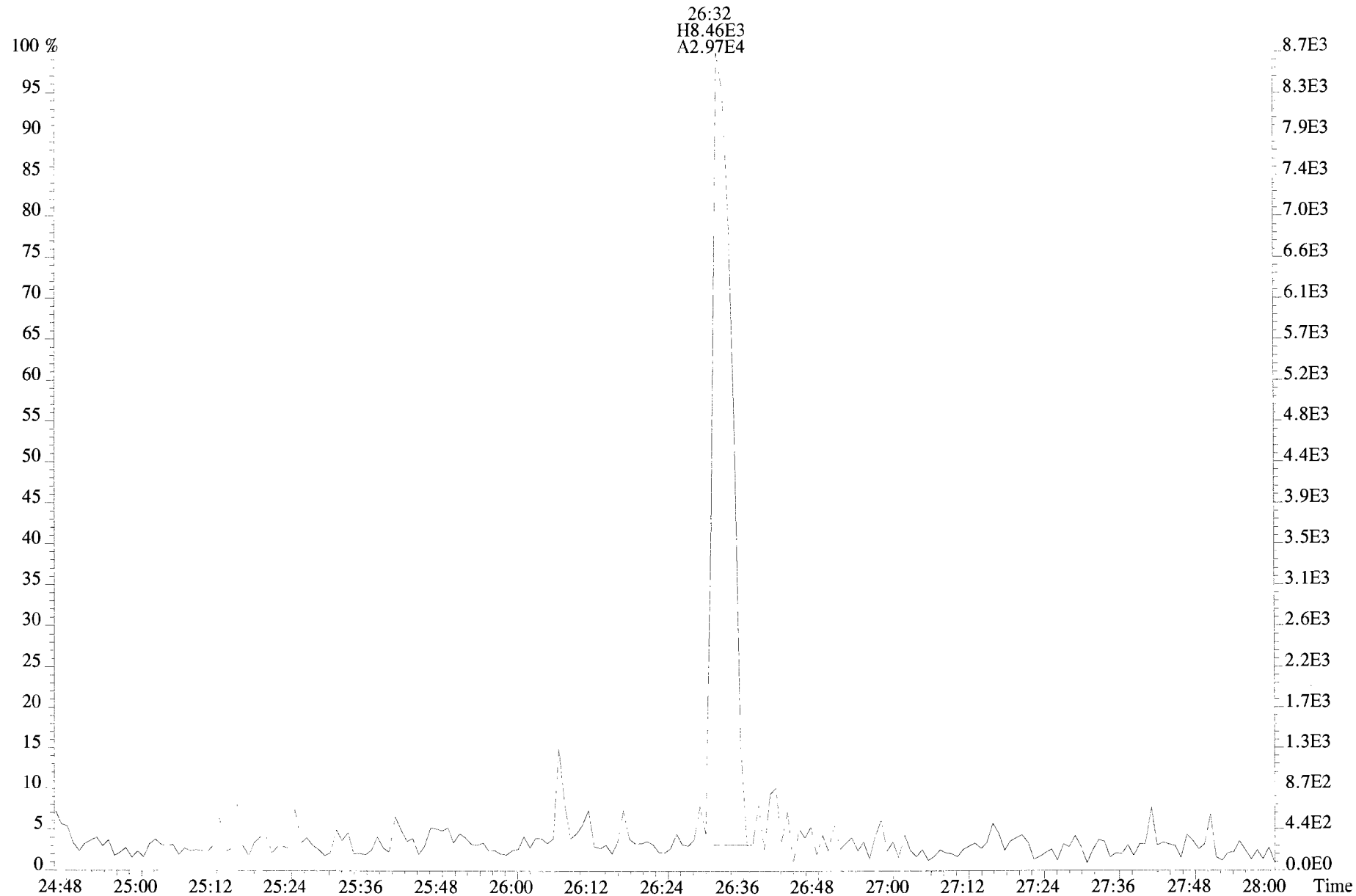
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



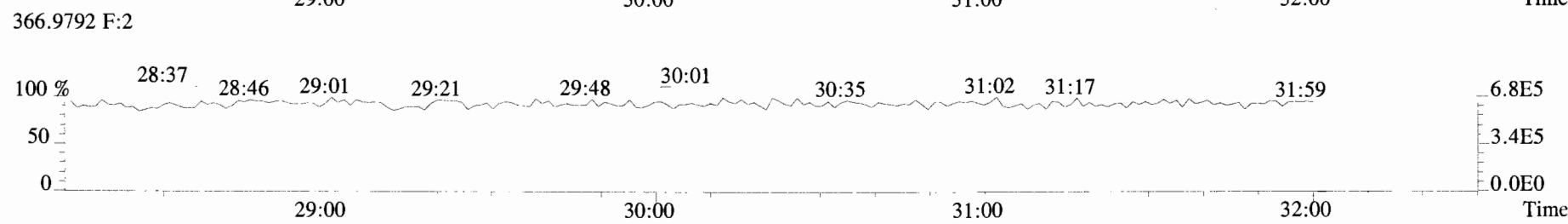
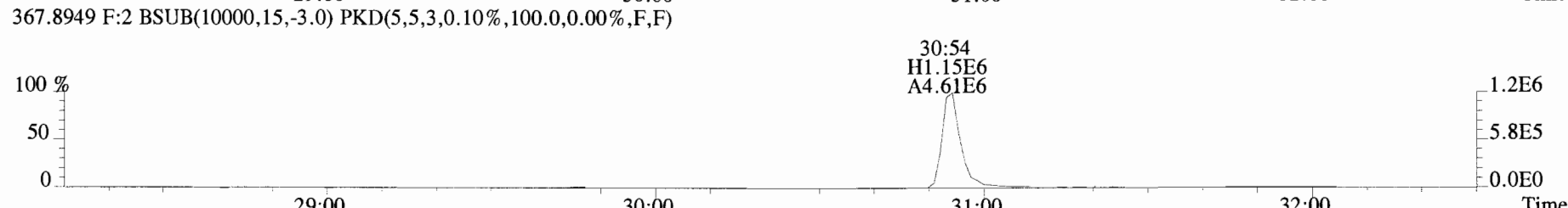
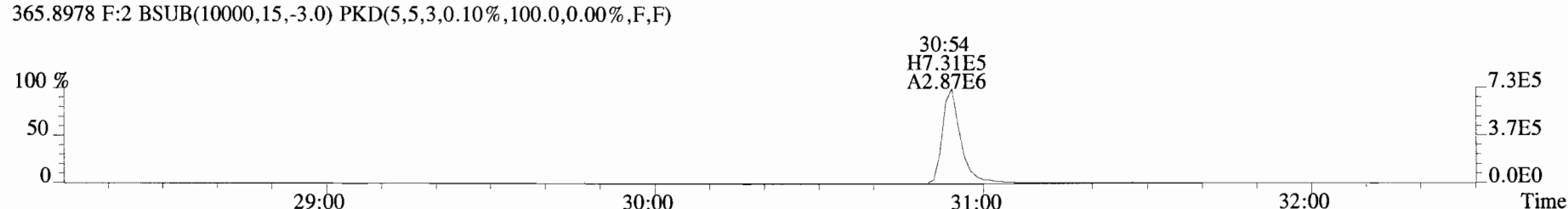
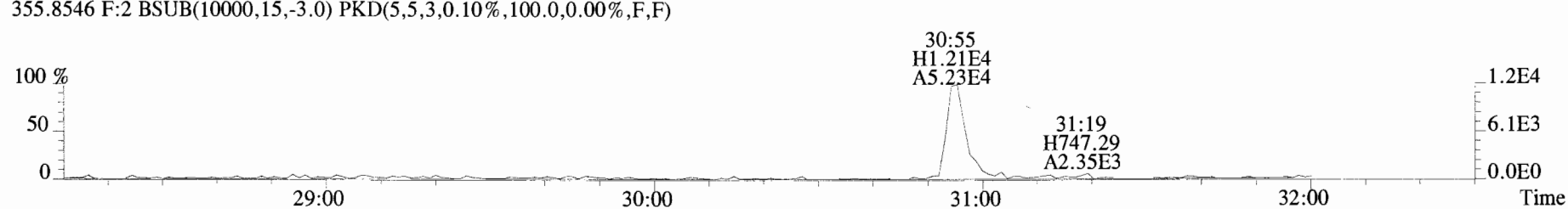
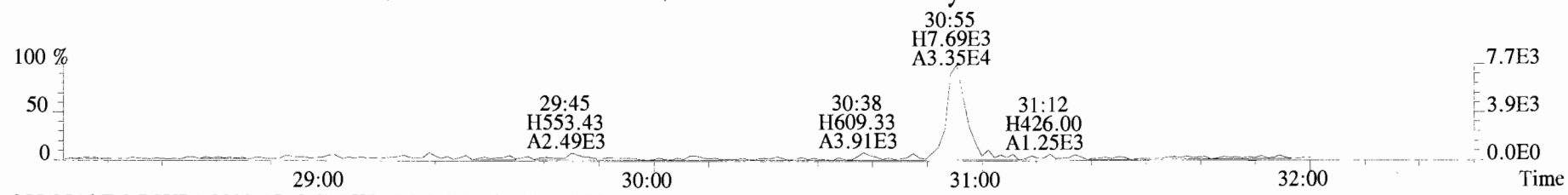
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



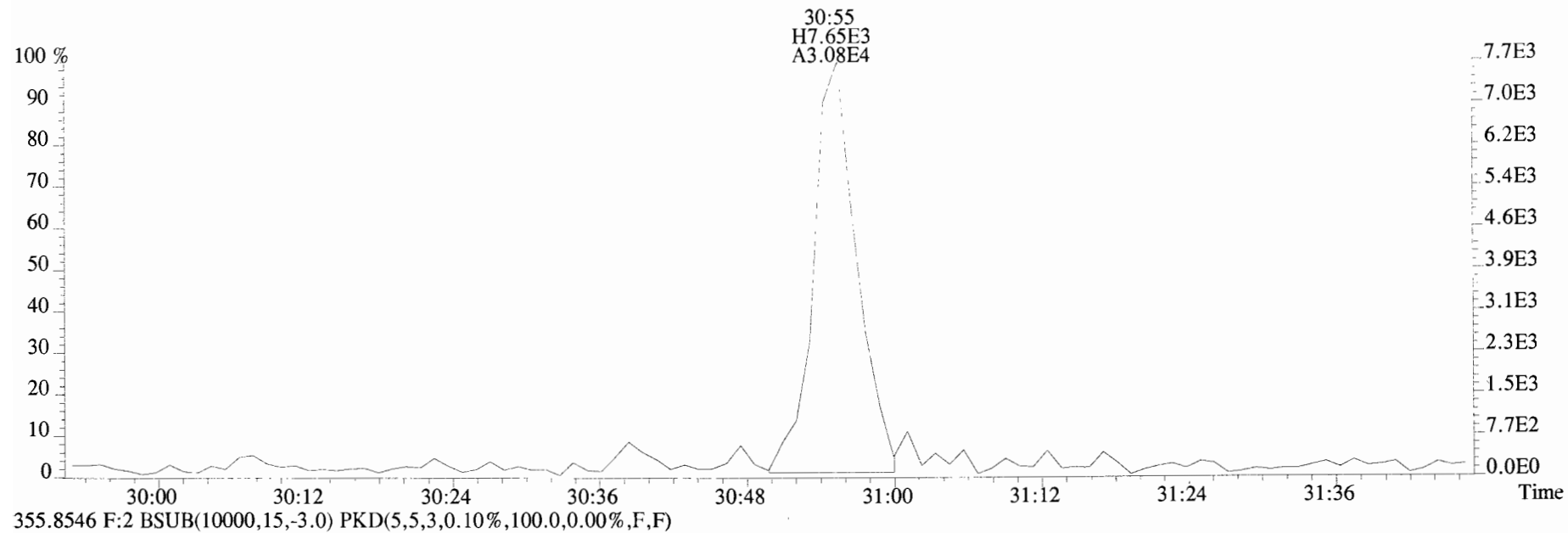
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
327.8847 BSub(10000,15,-3.0)



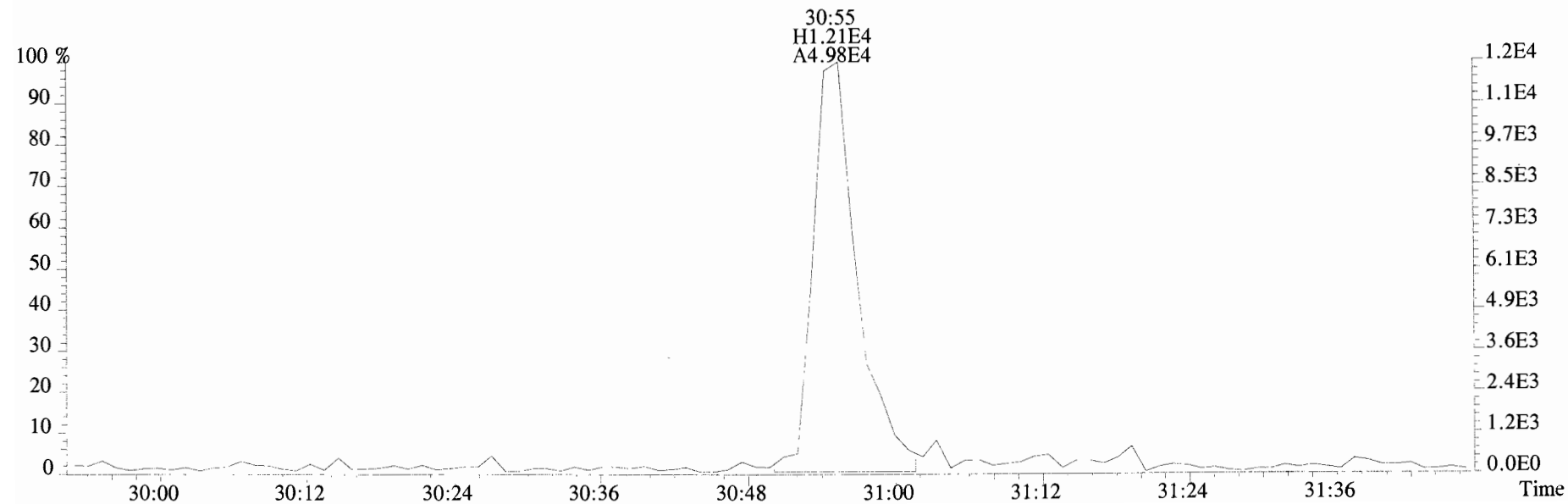
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



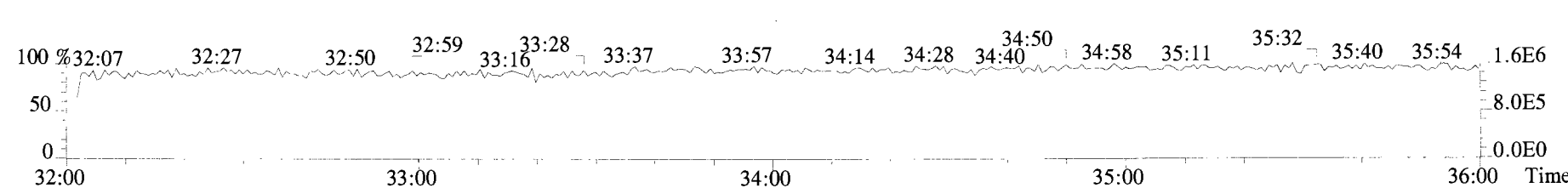
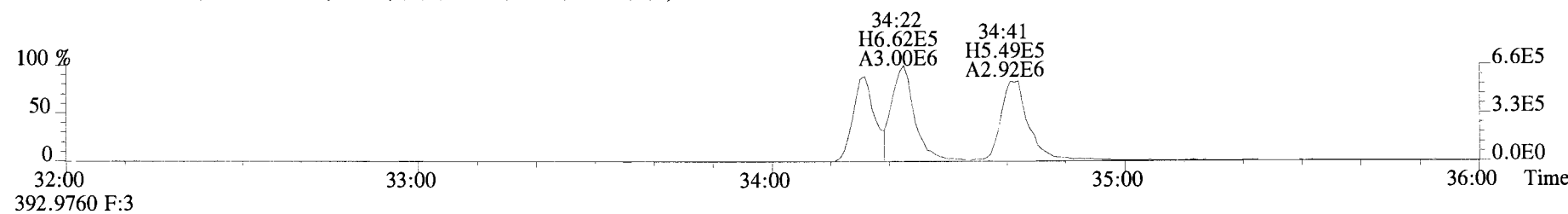
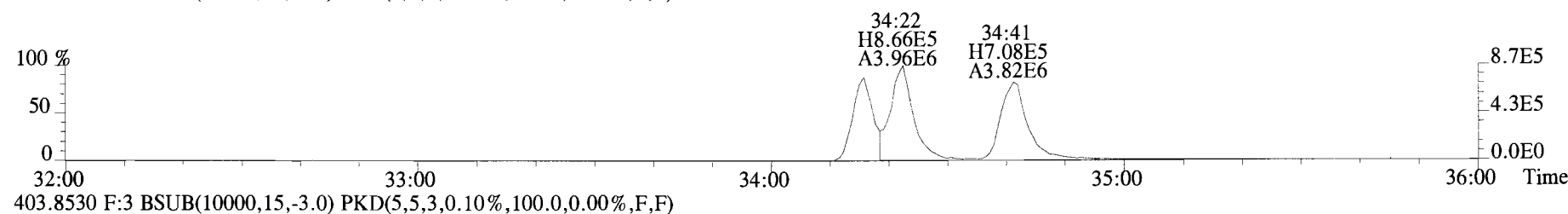
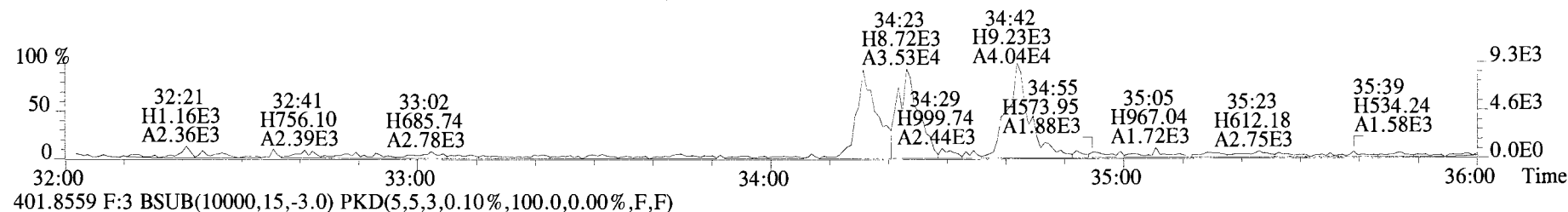
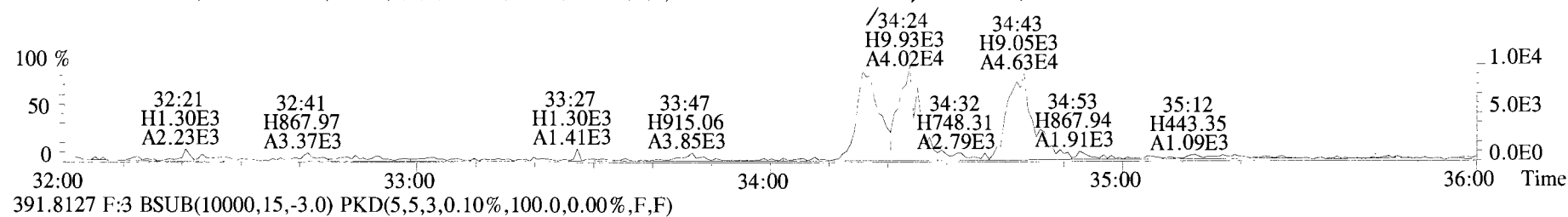
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



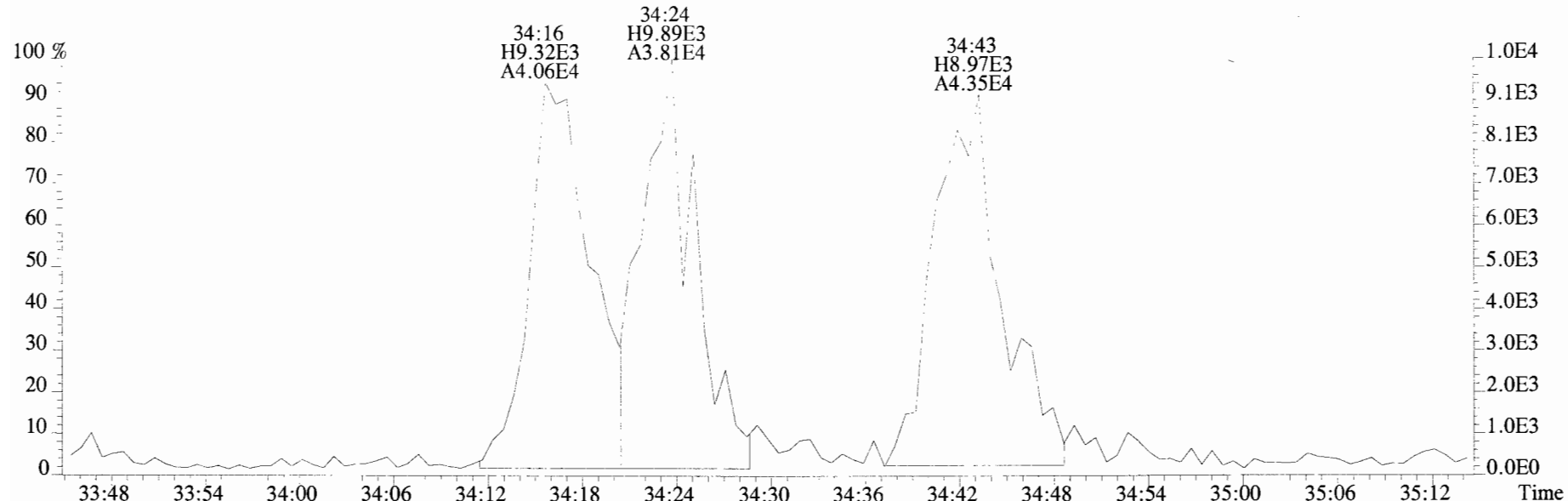
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



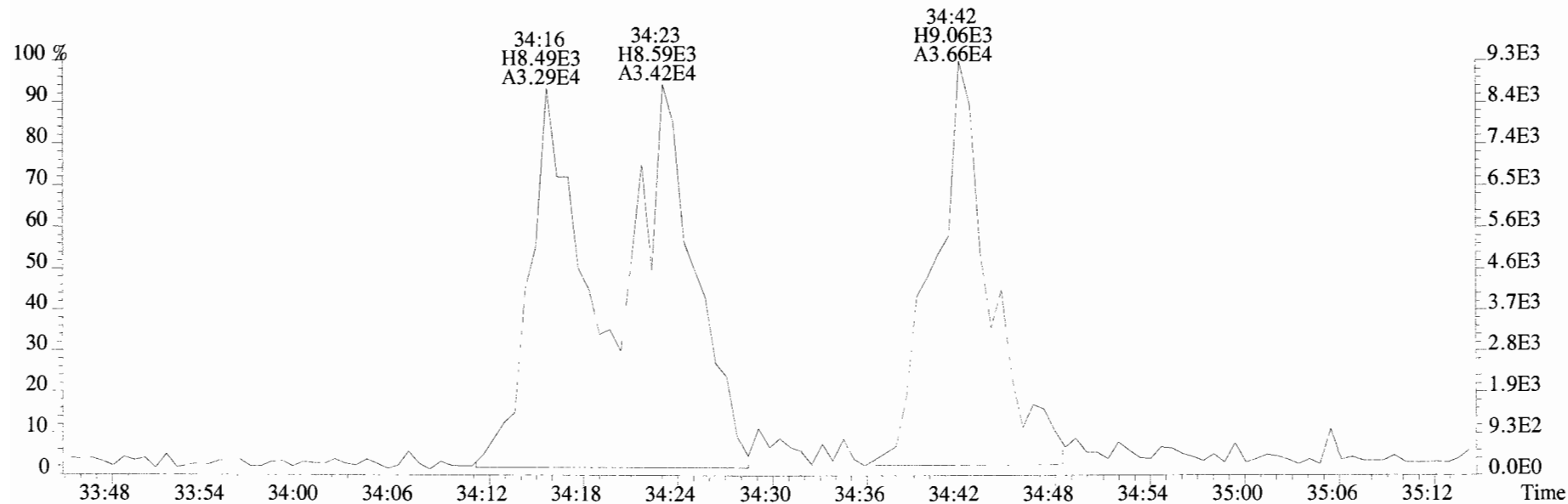
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



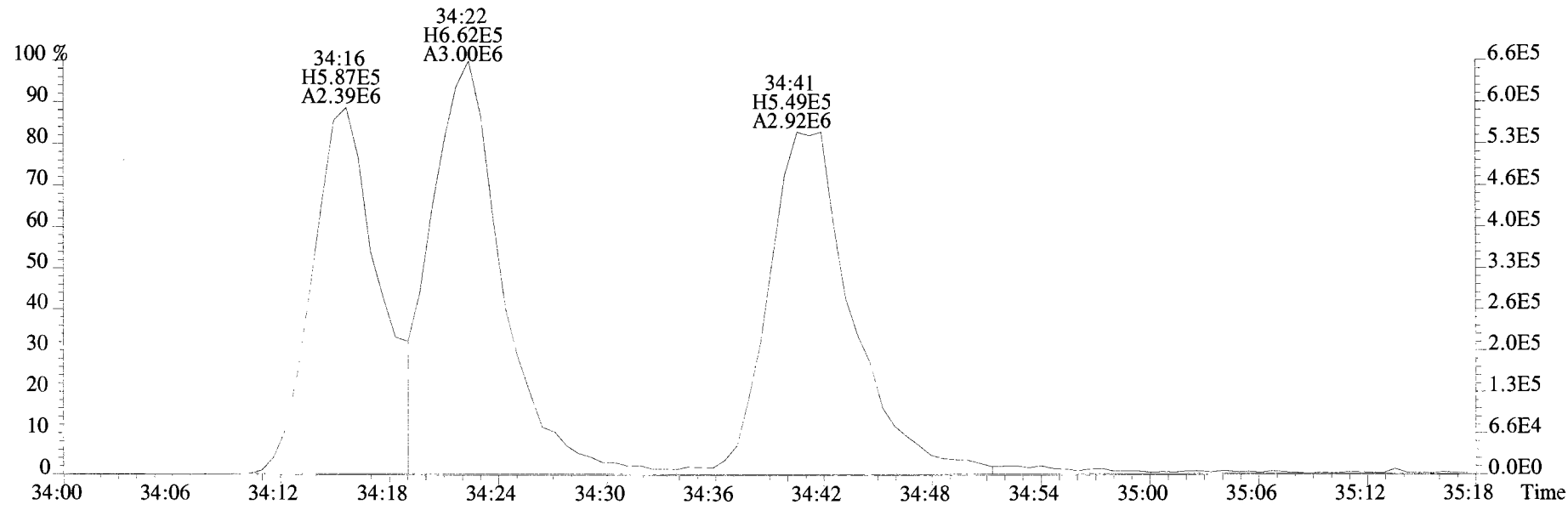
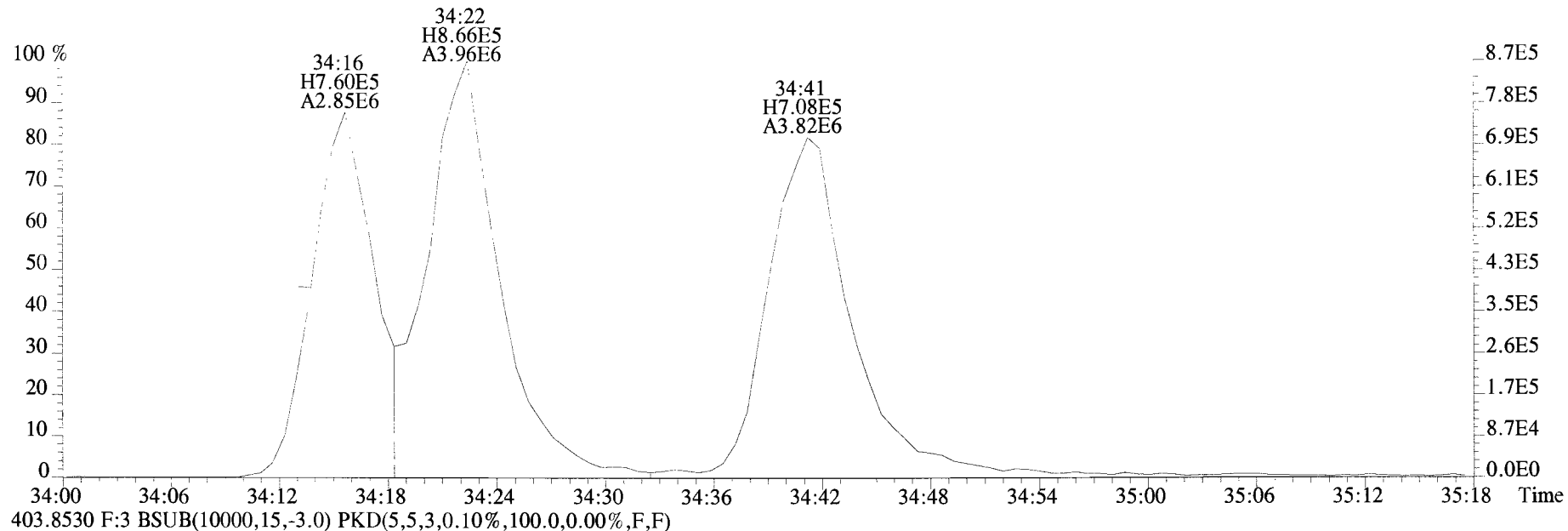
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



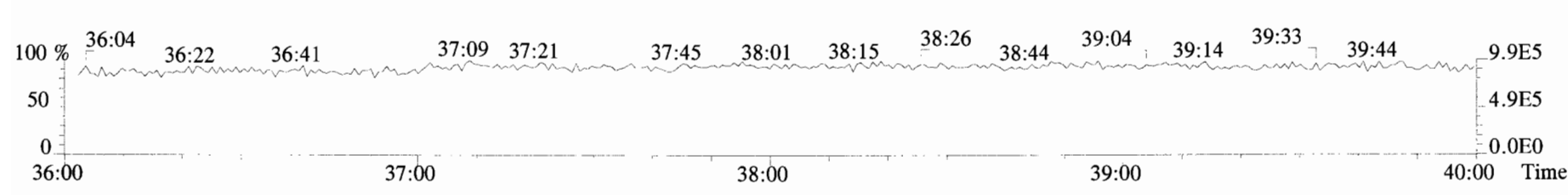
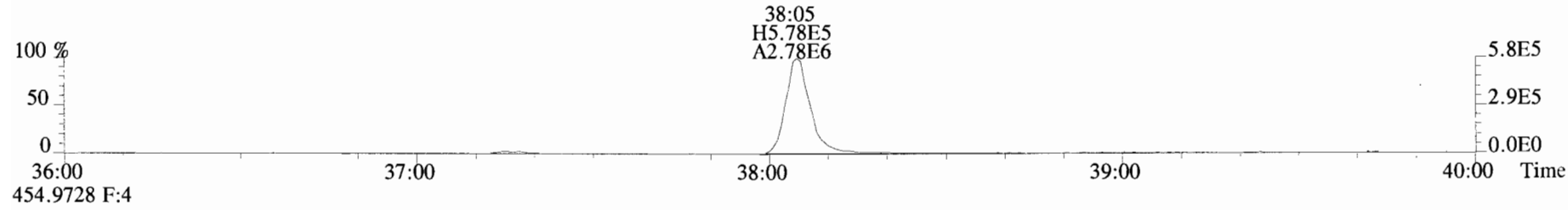
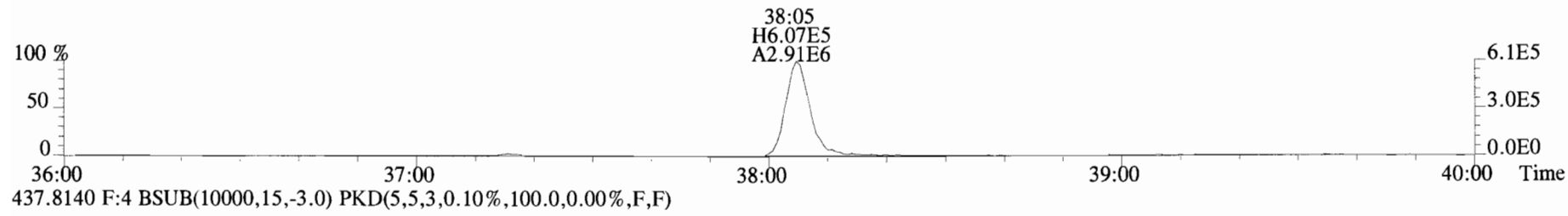
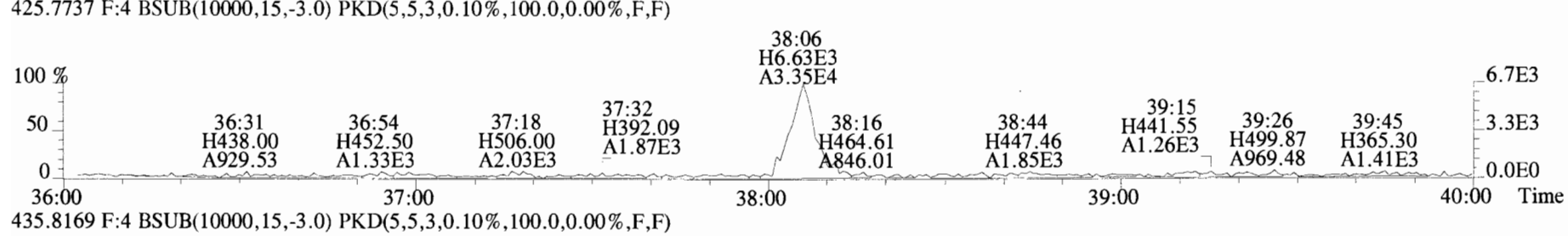
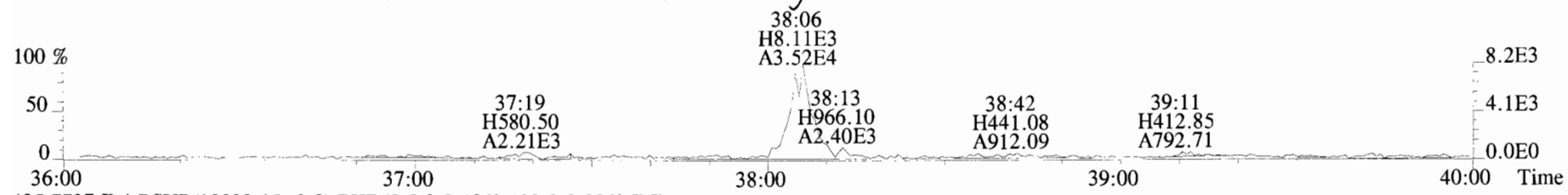
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



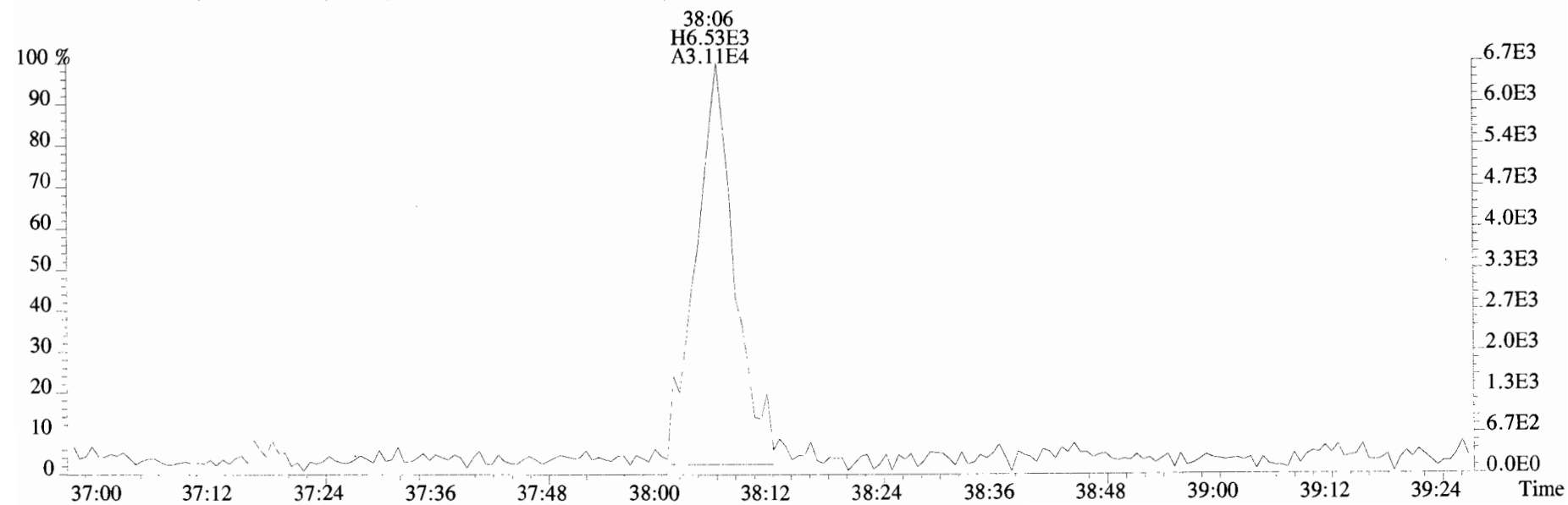
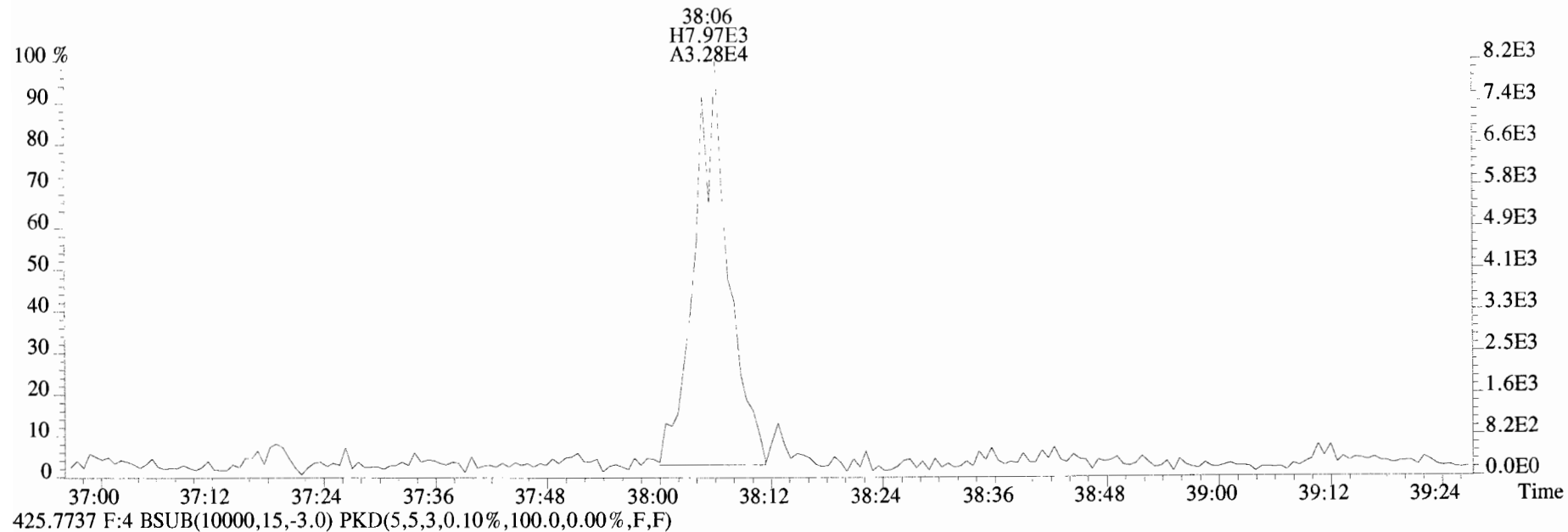
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



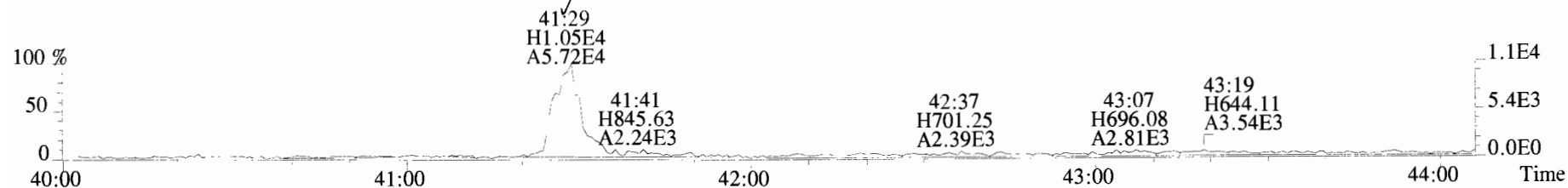
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
 423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



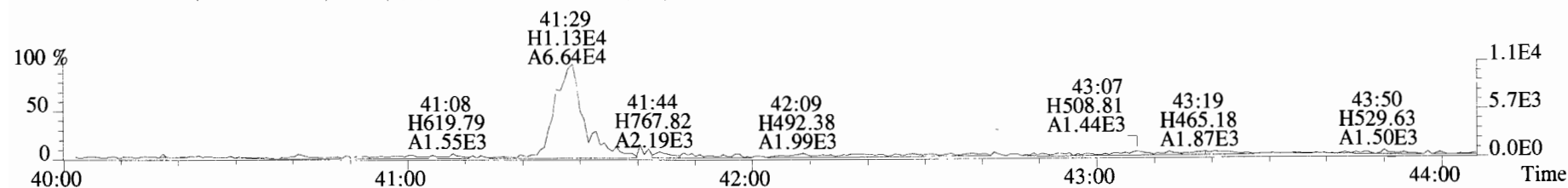
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



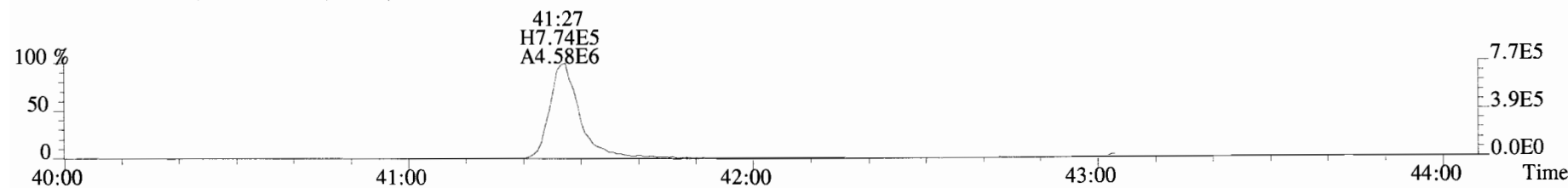
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



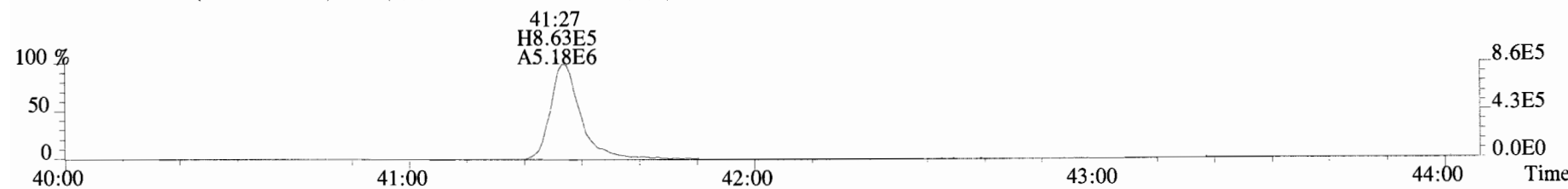
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



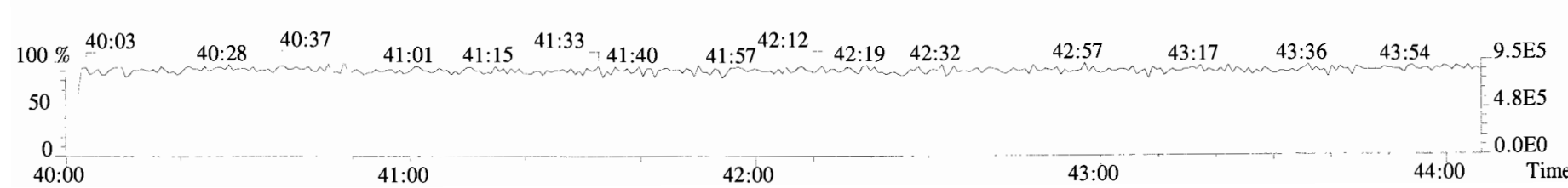
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



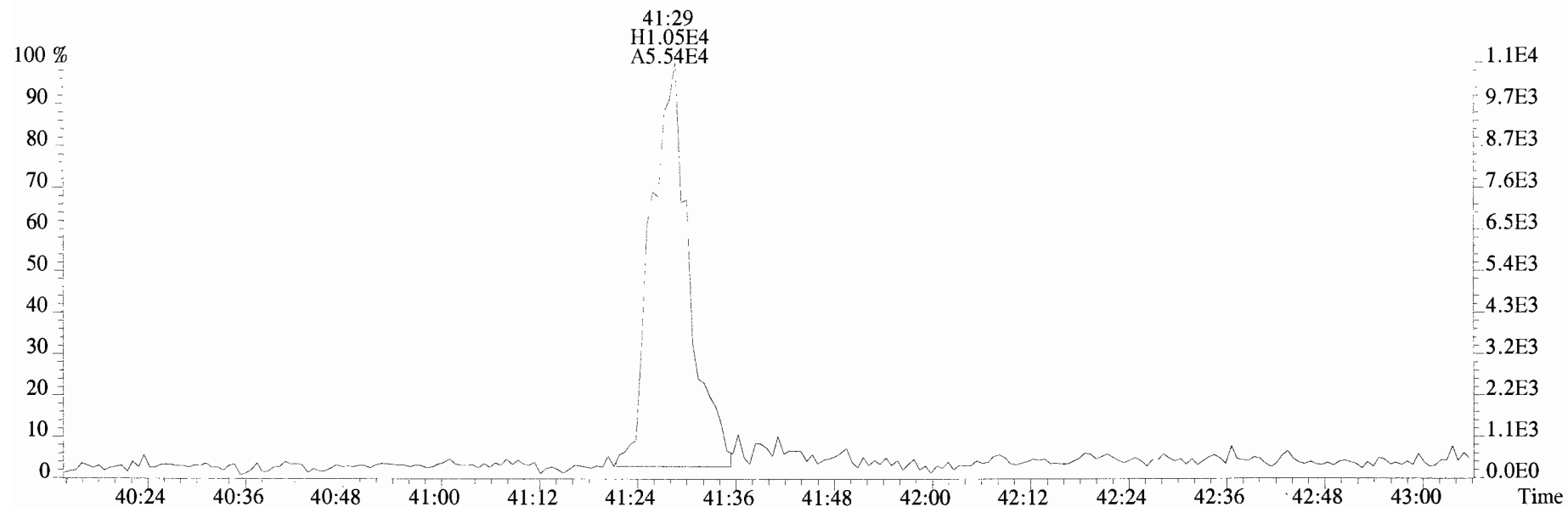
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



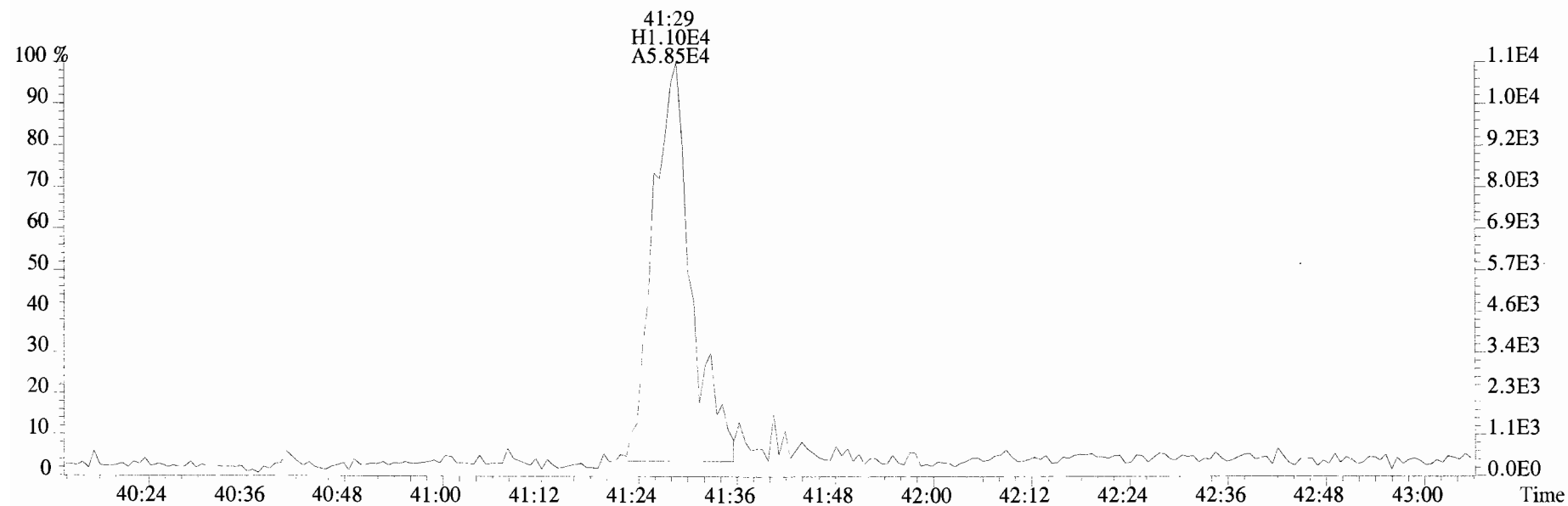
454.9728 F:5



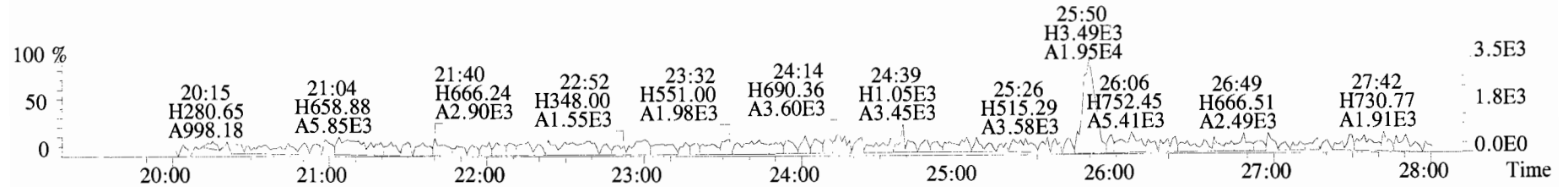
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



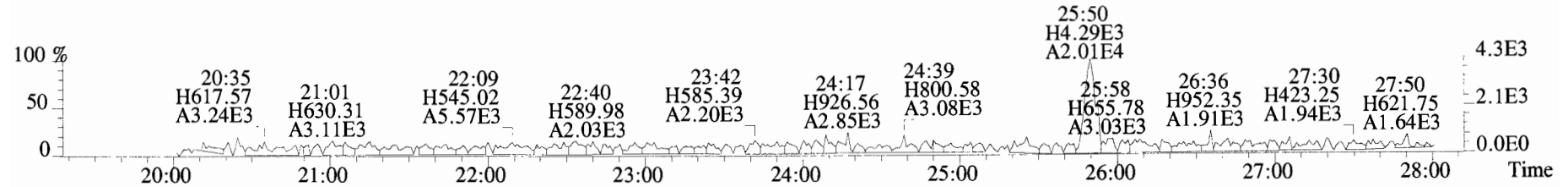
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



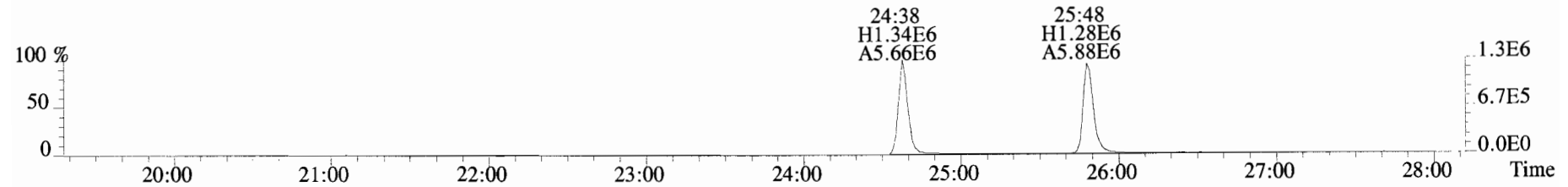
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



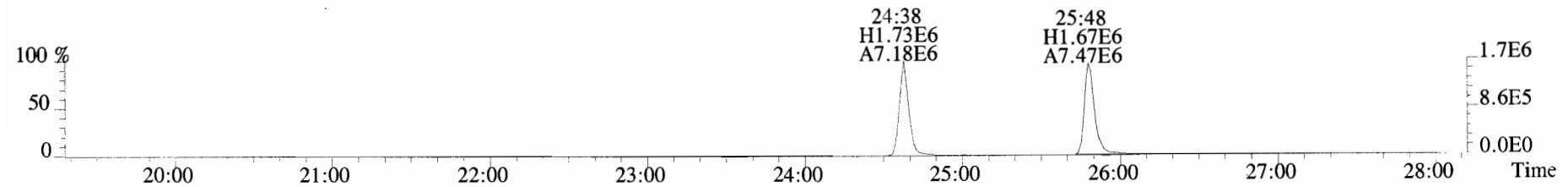
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



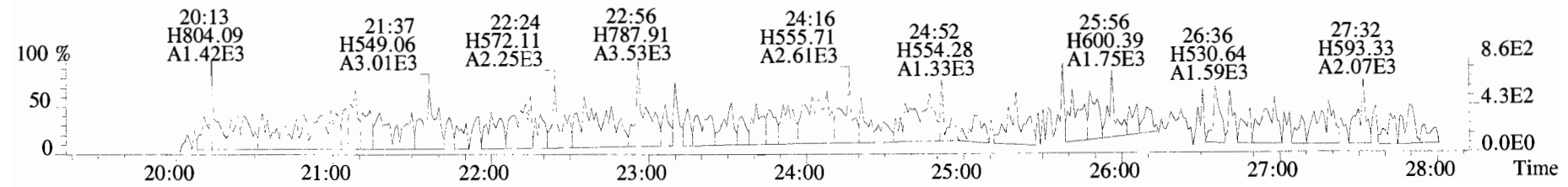
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



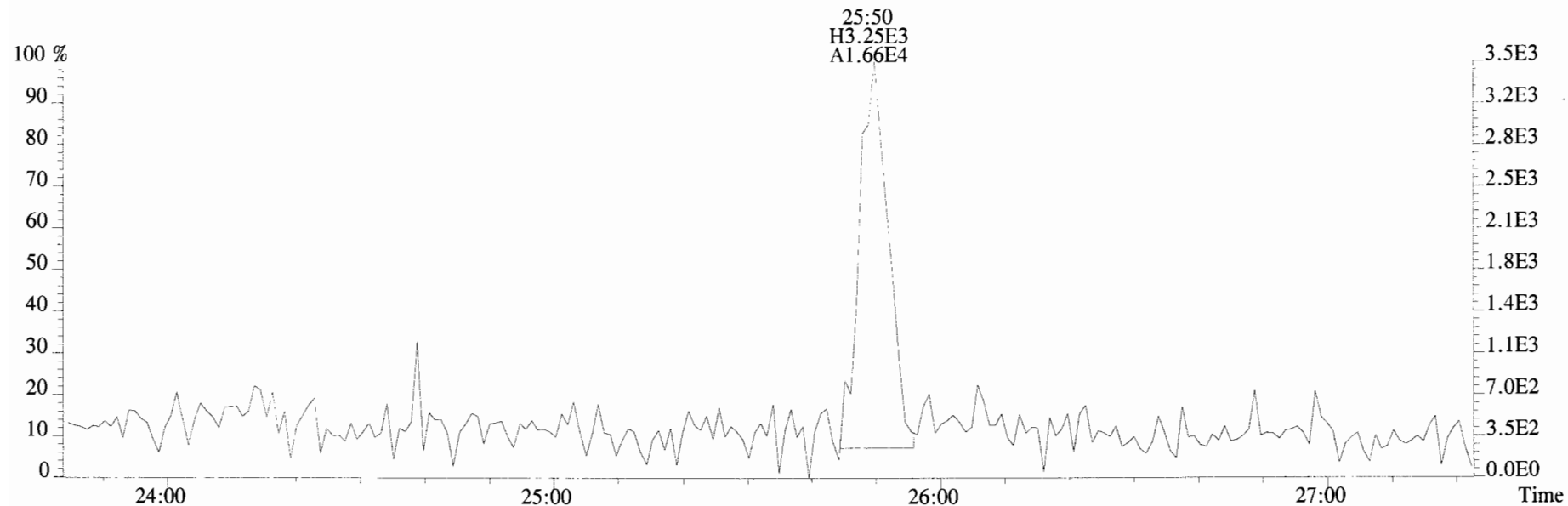
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



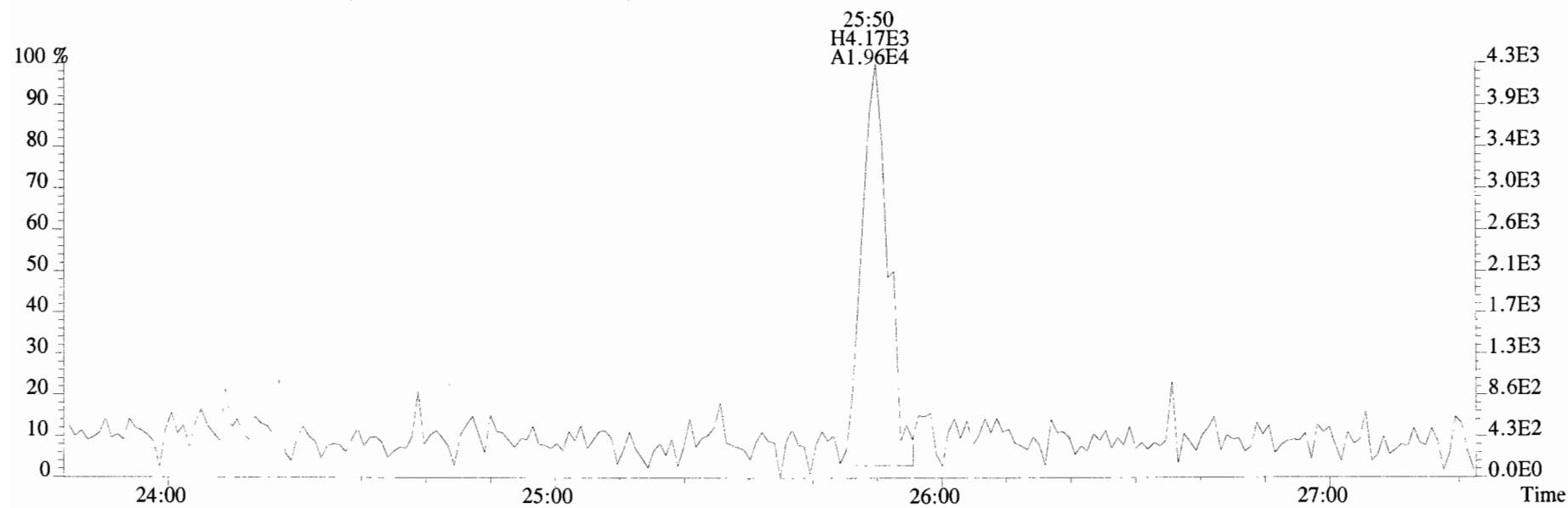
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



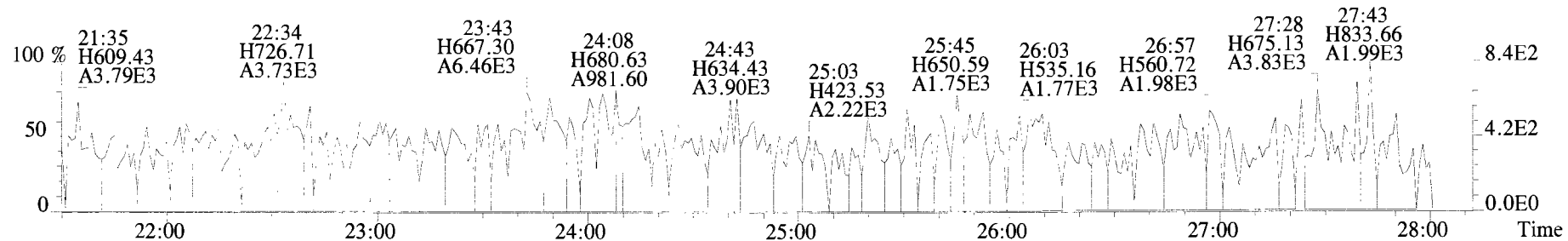
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



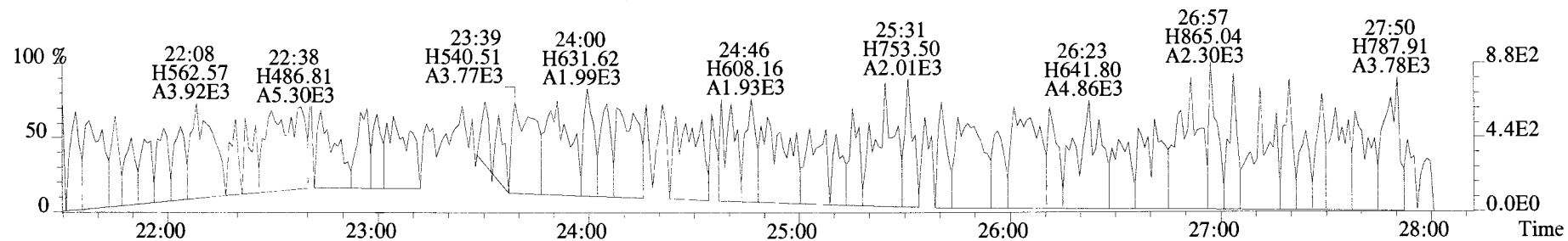
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



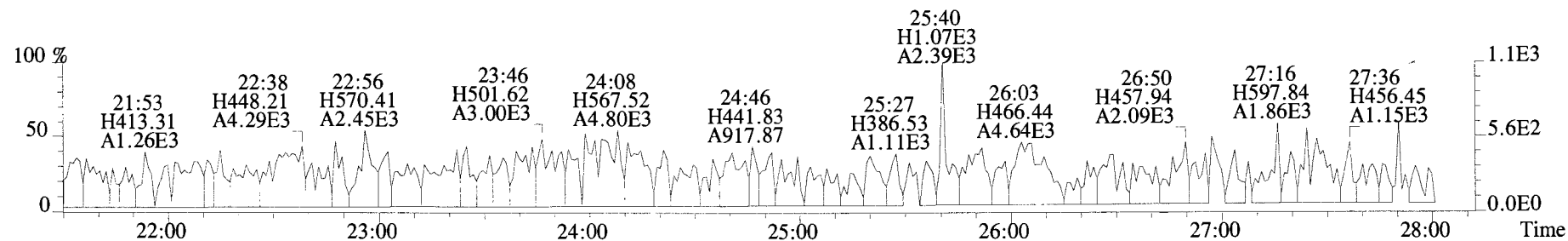
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



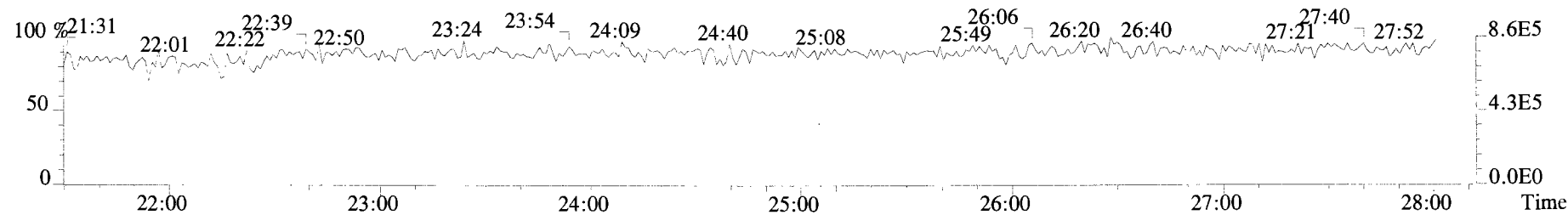
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



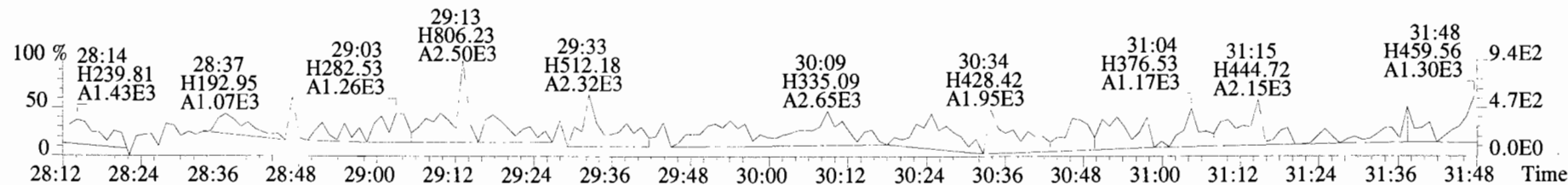
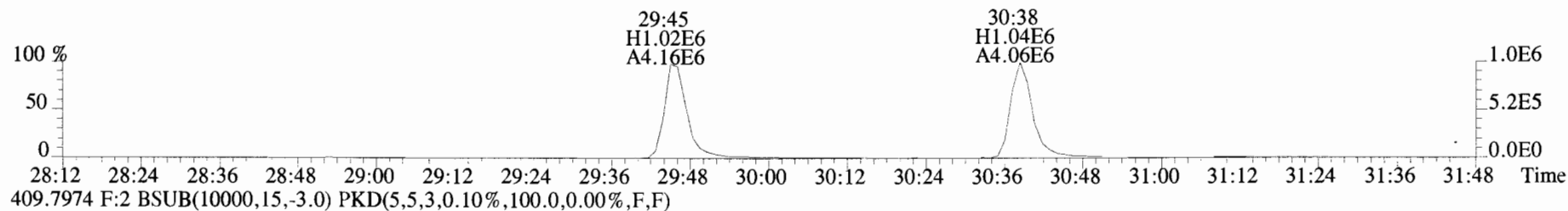
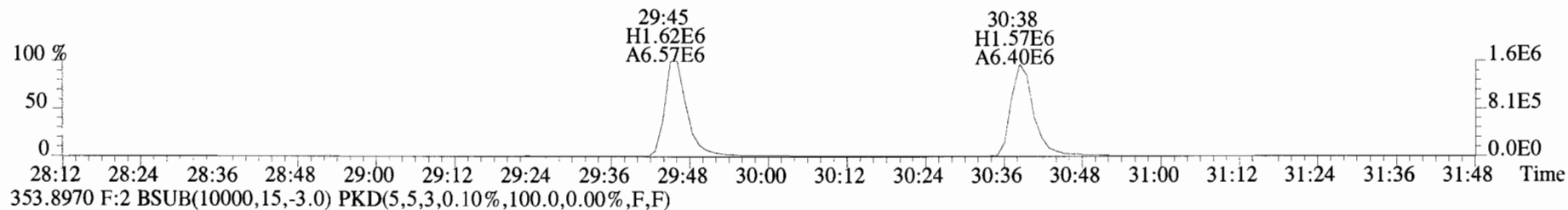
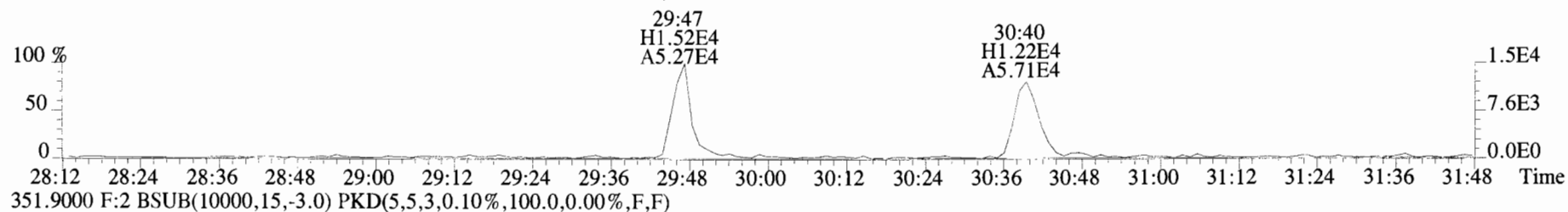
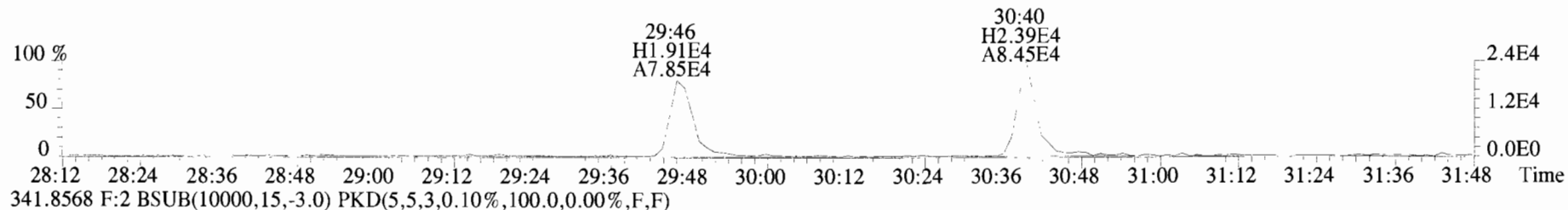
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



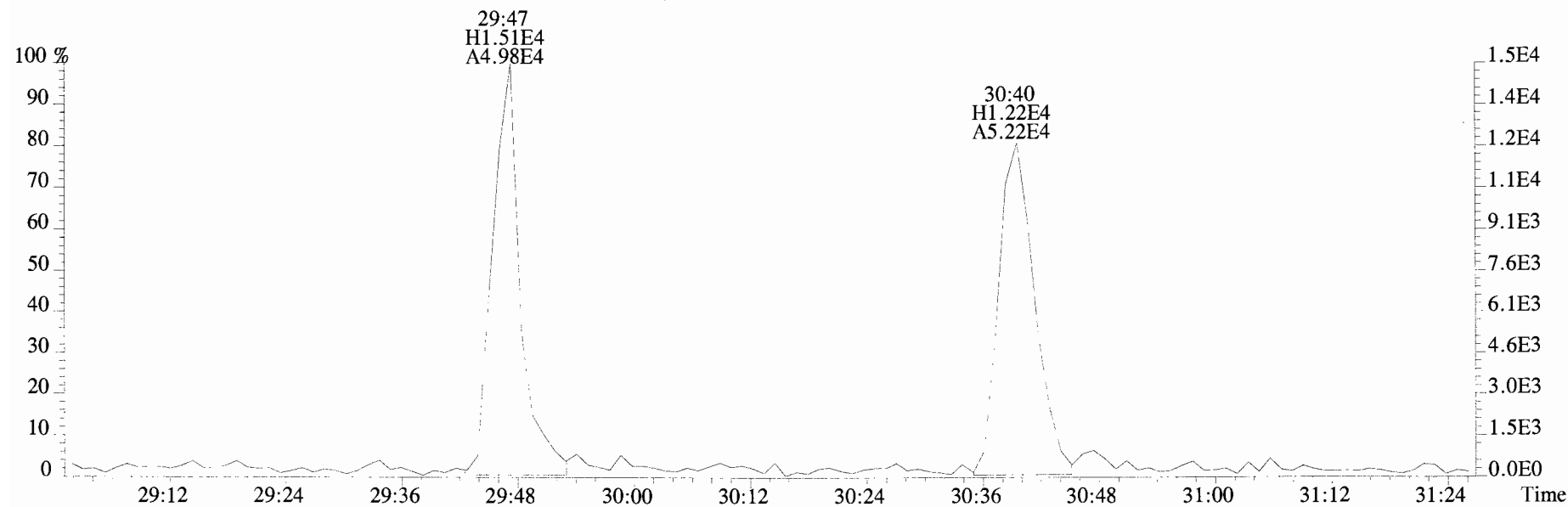
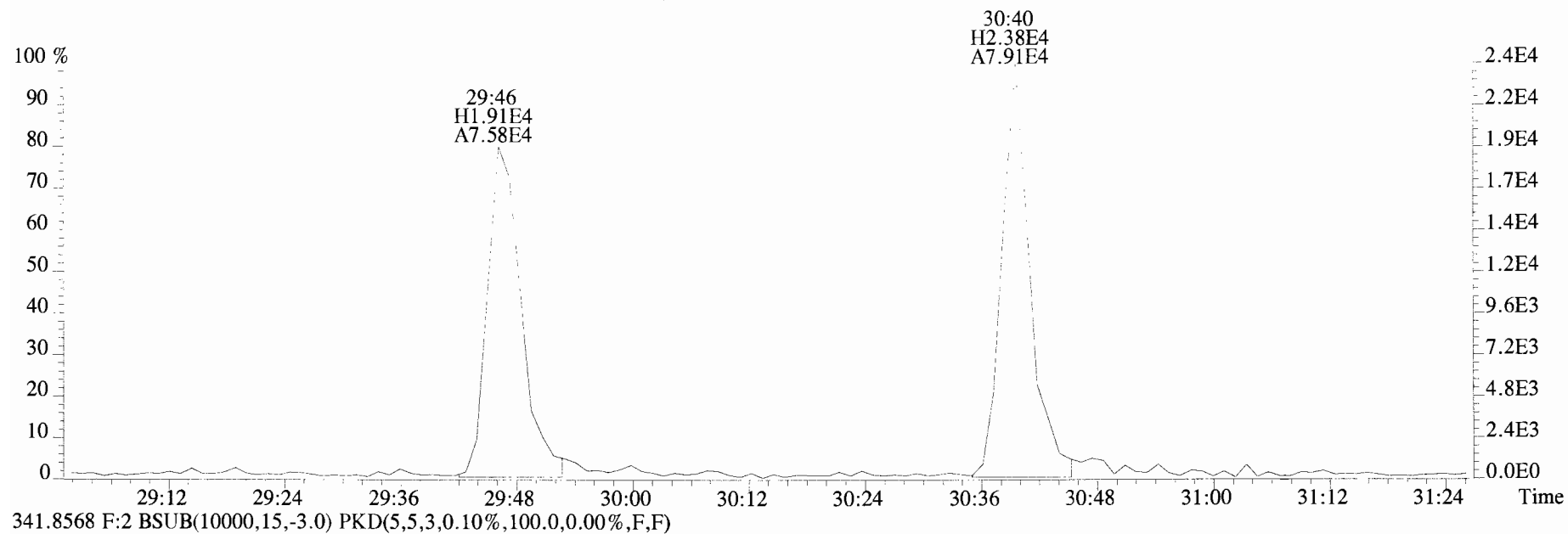
316.9824



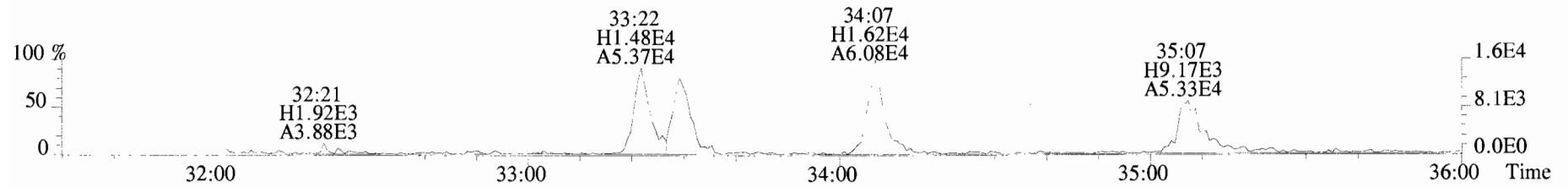
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



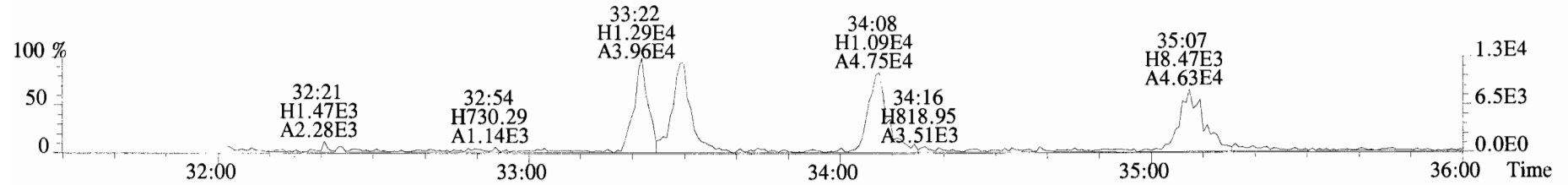
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



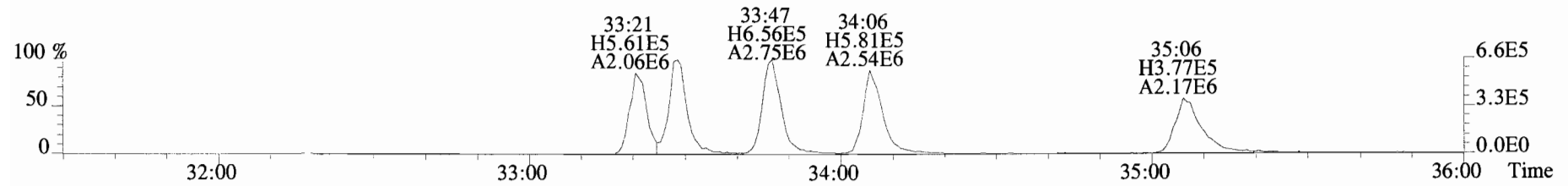
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



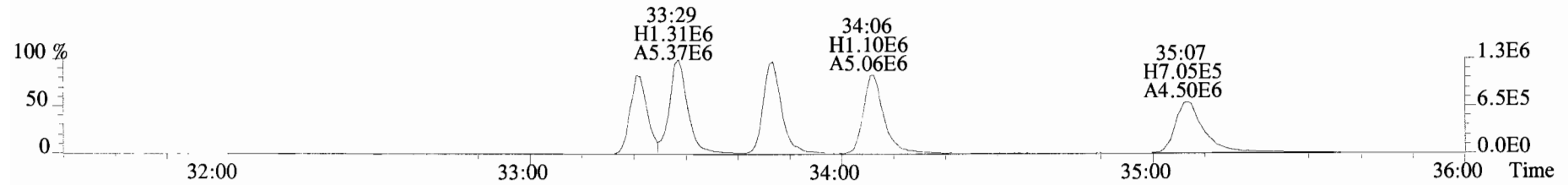
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



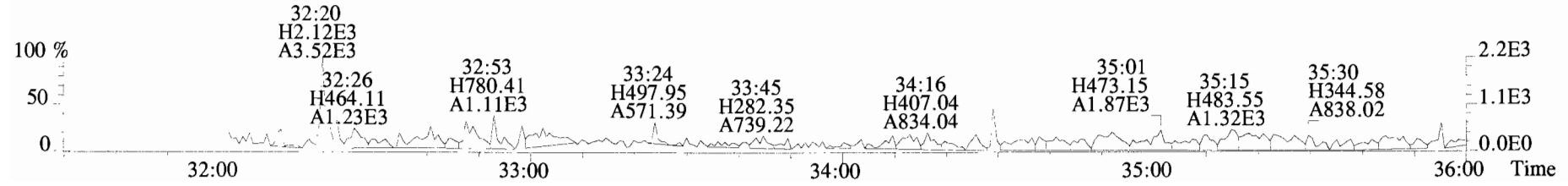
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



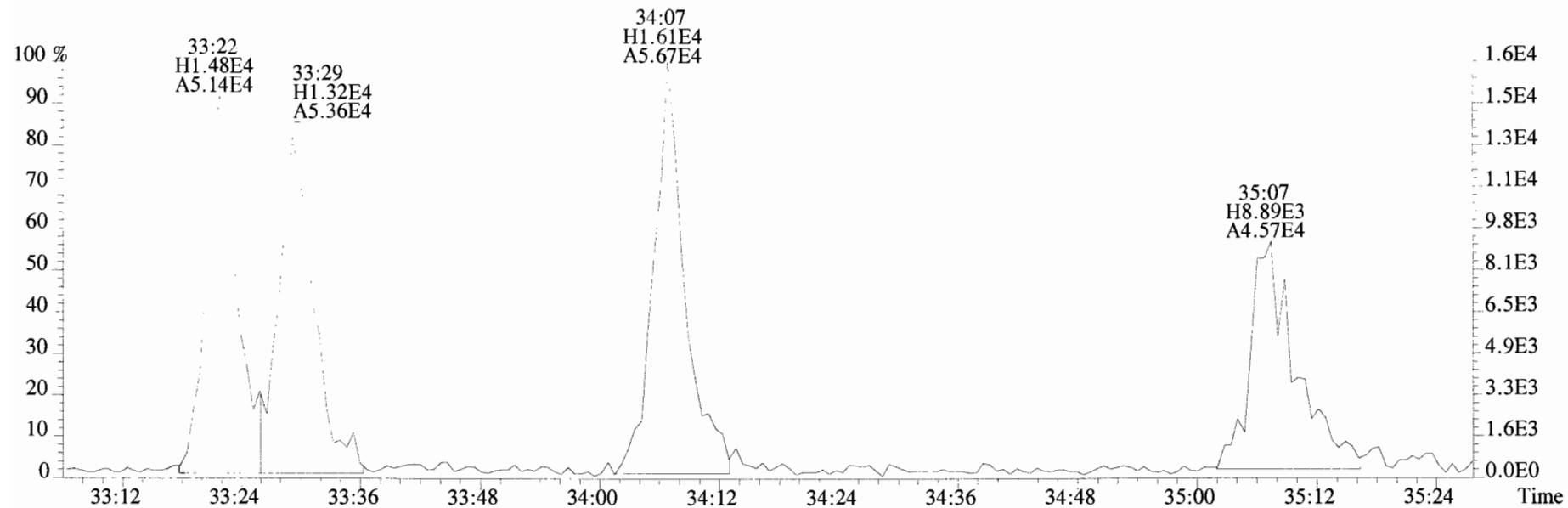
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



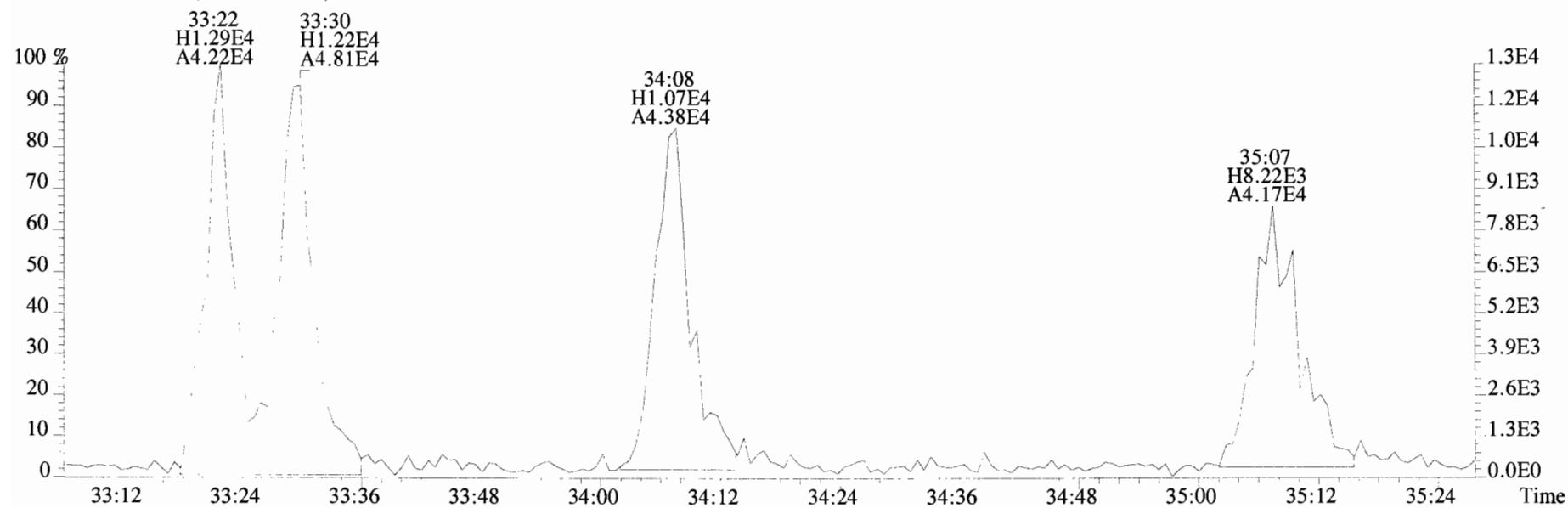
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



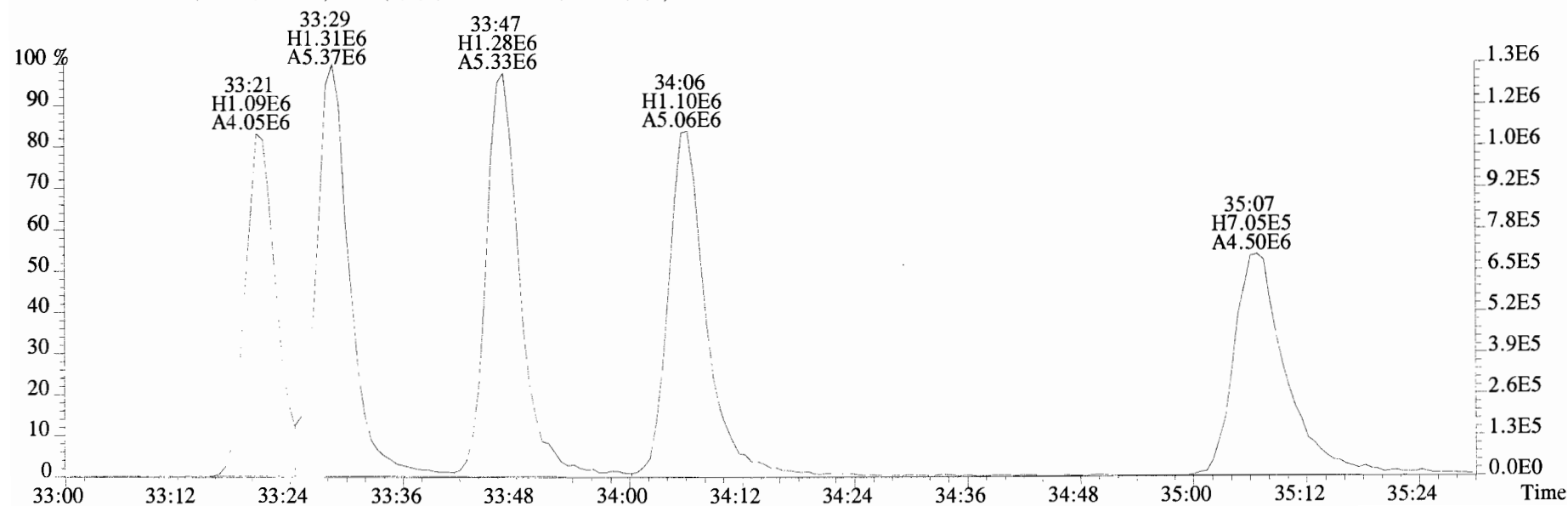
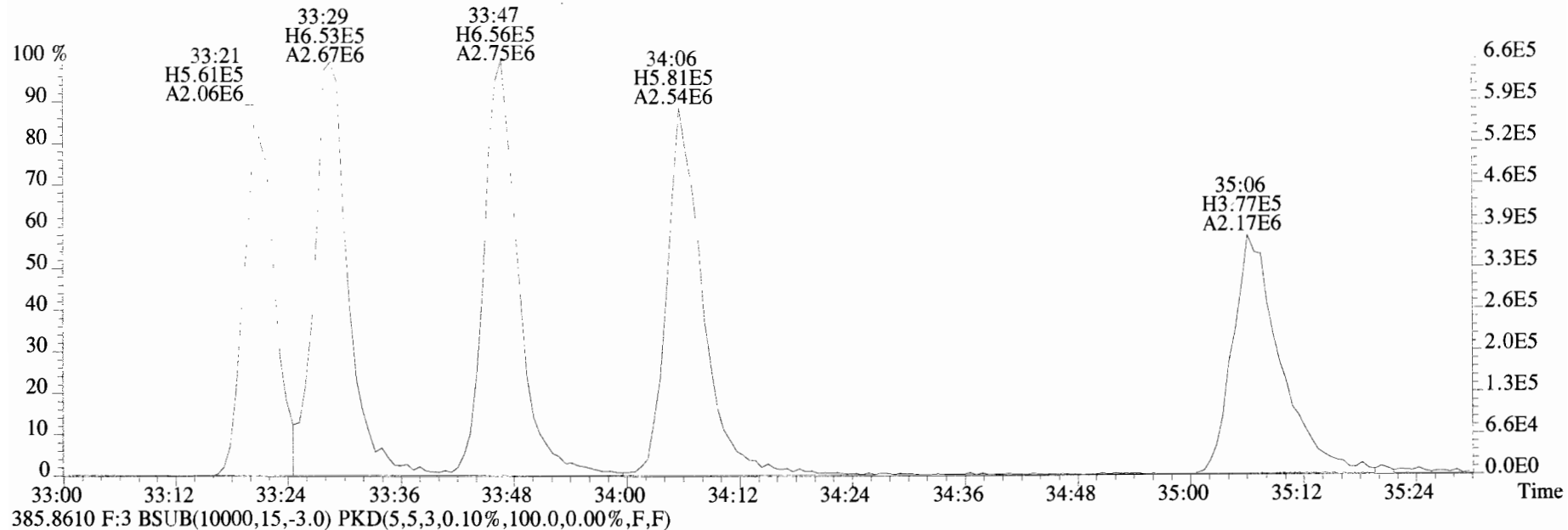
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
373.8207 F:3 BSUB(10000,15,-3.0)



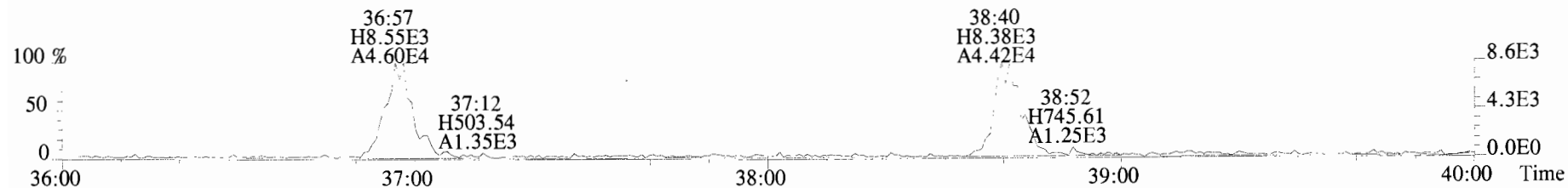
375.8178 F:3 BSUB(10000,15,-3.0)



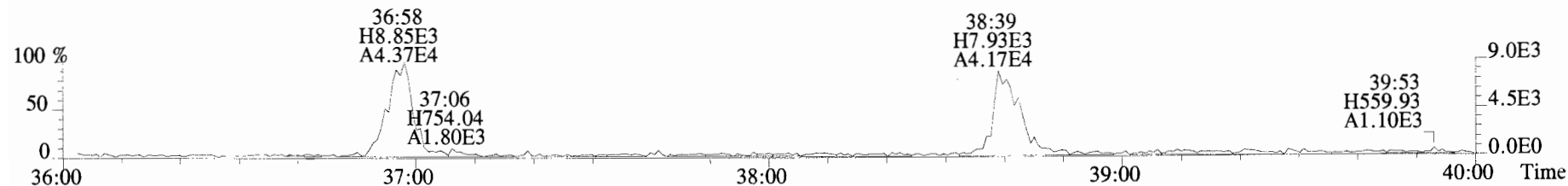
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
383.8639 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



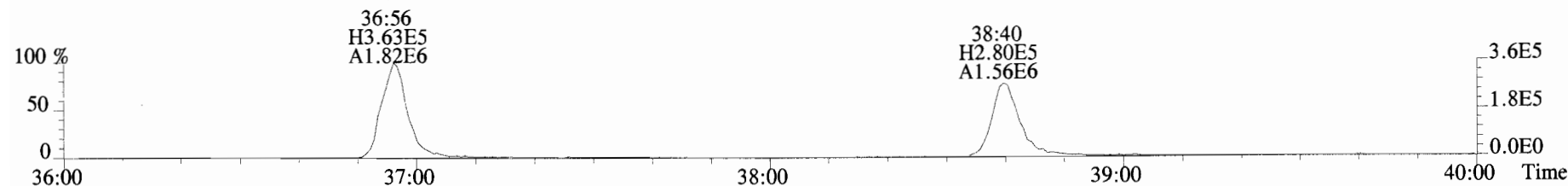
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



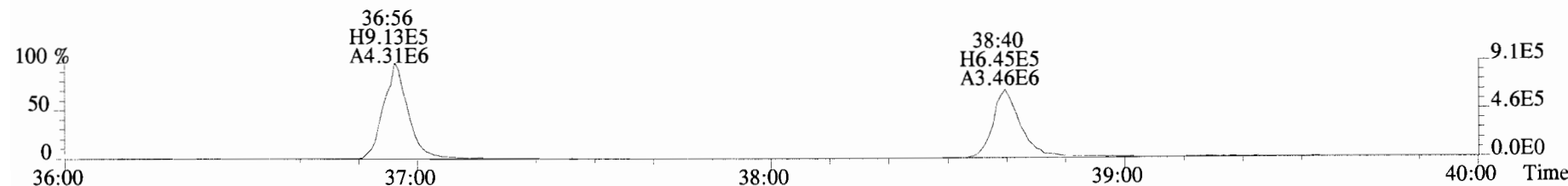
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



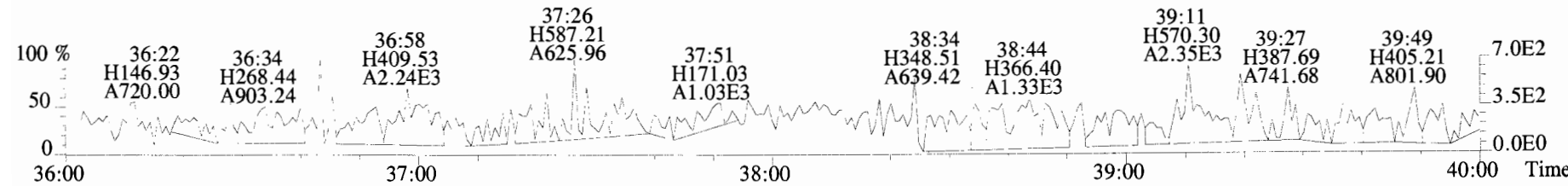
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



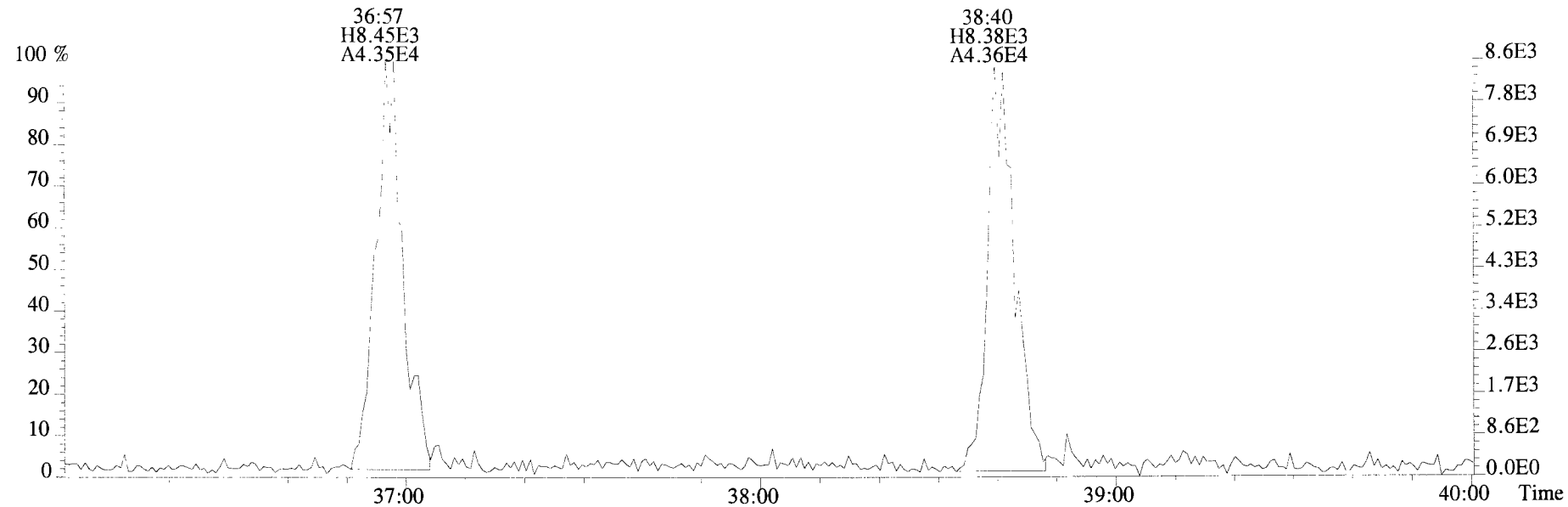
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



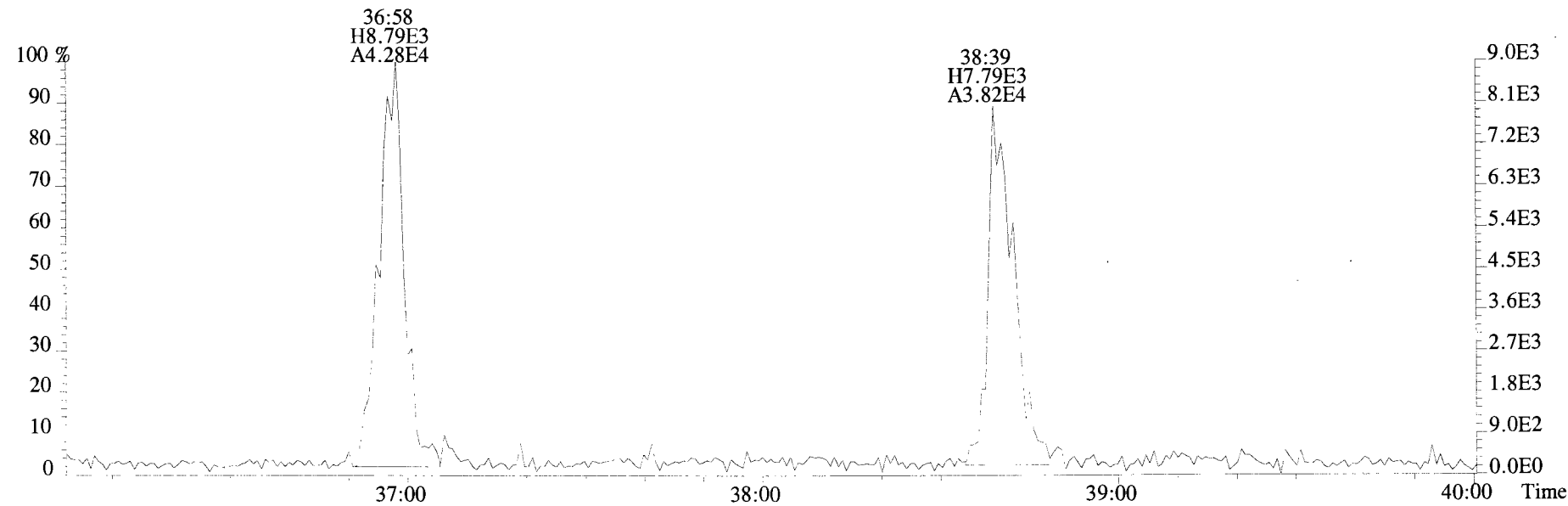
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



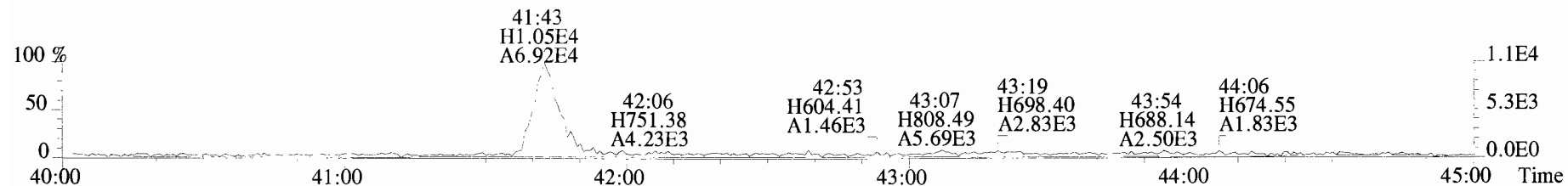
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



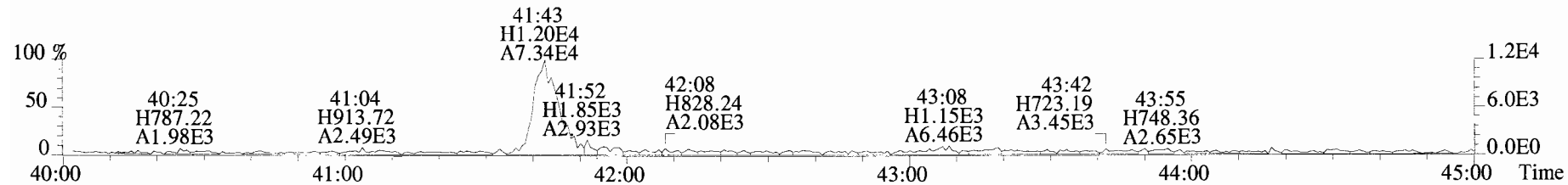
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



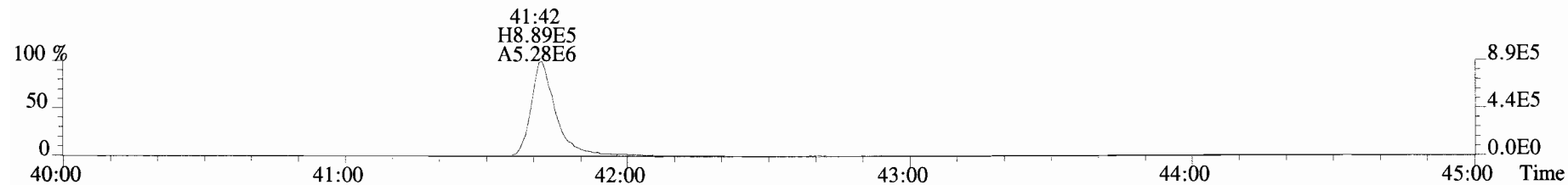
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



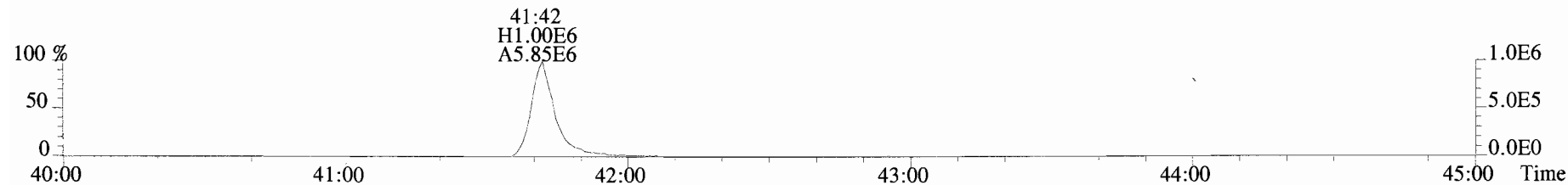
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



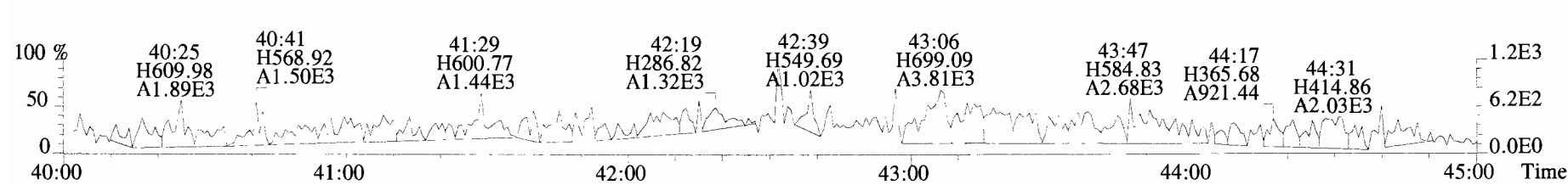
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



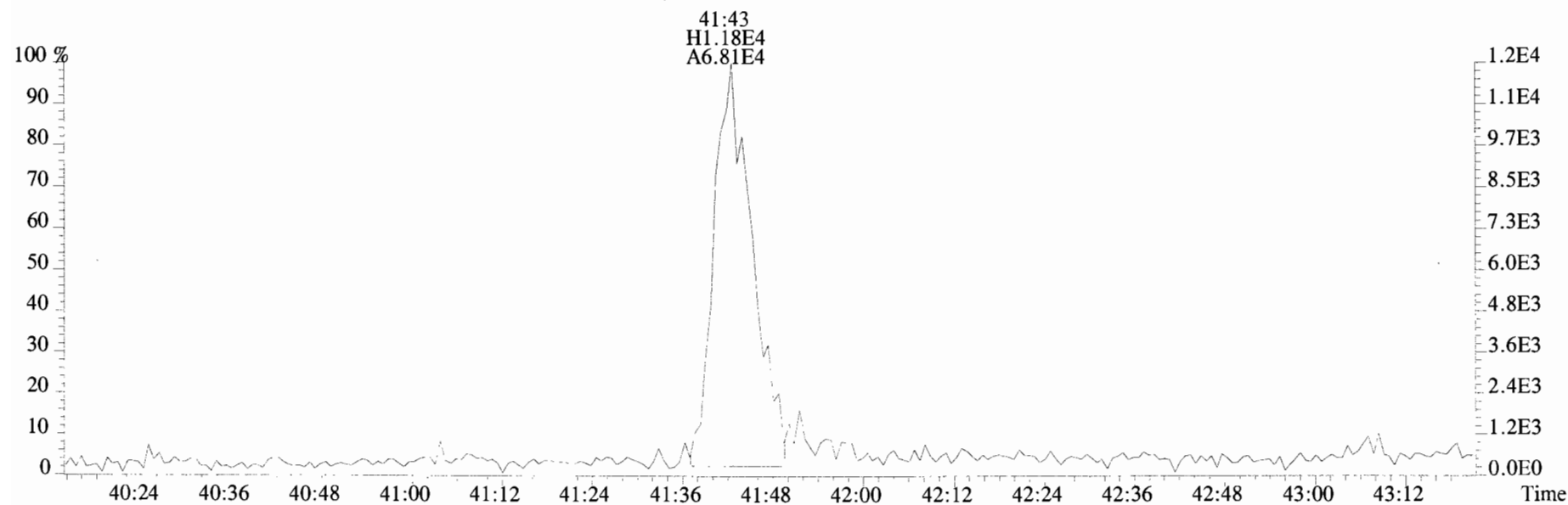
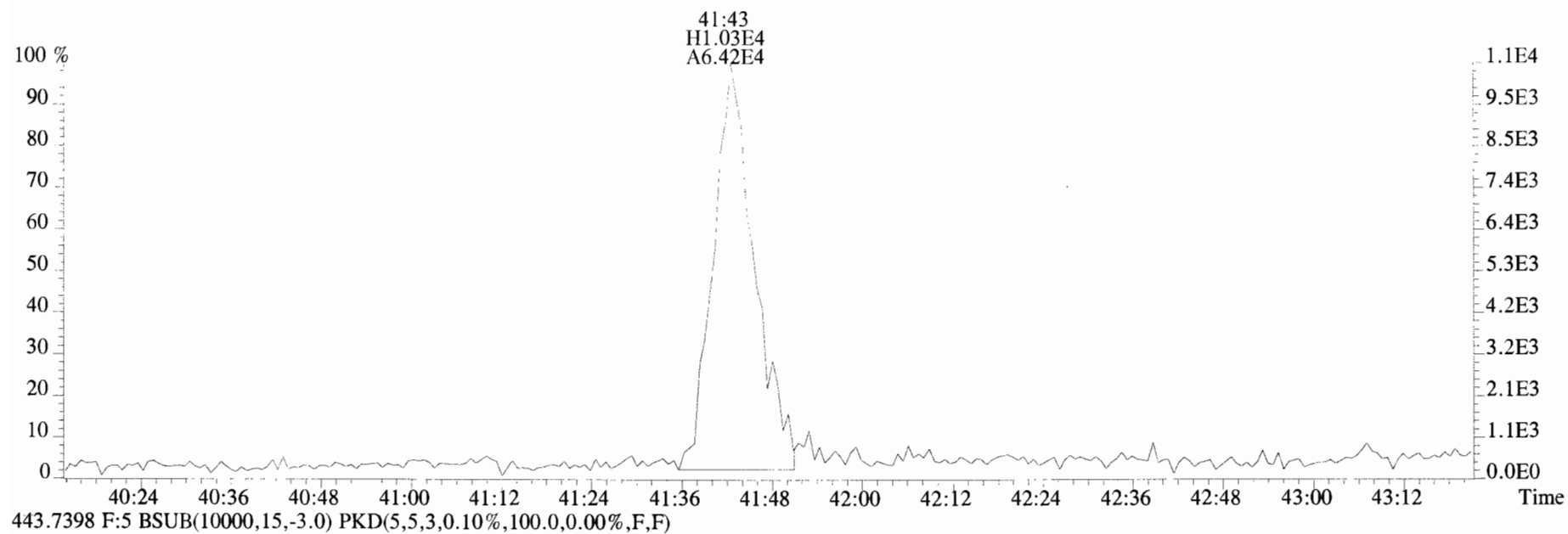
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



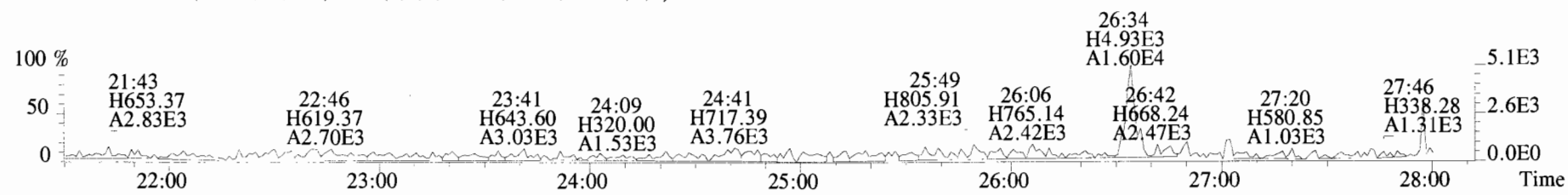
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



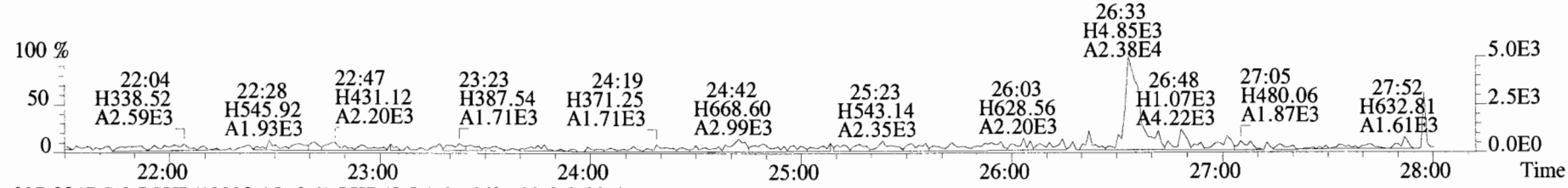
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



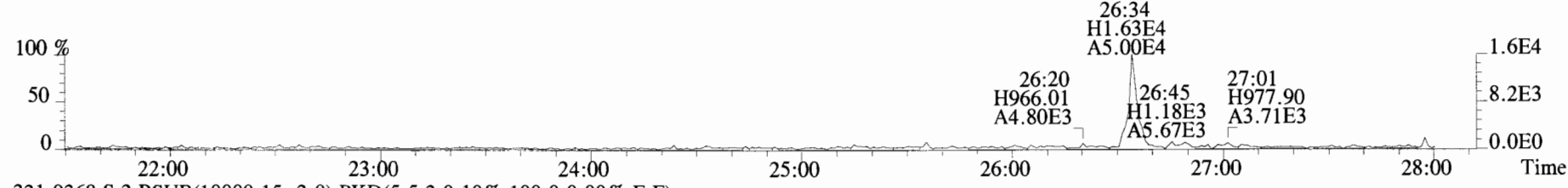
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



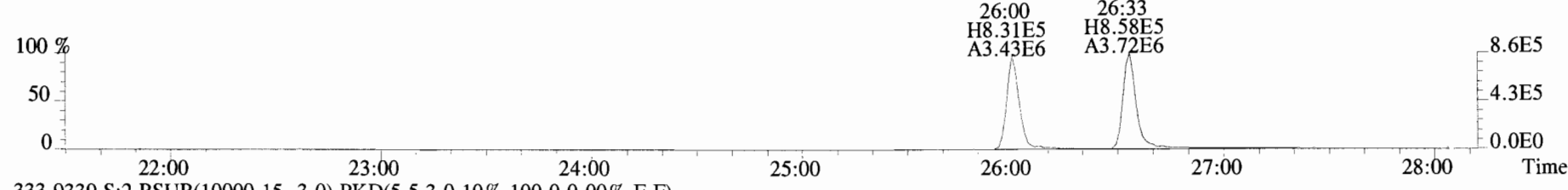
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



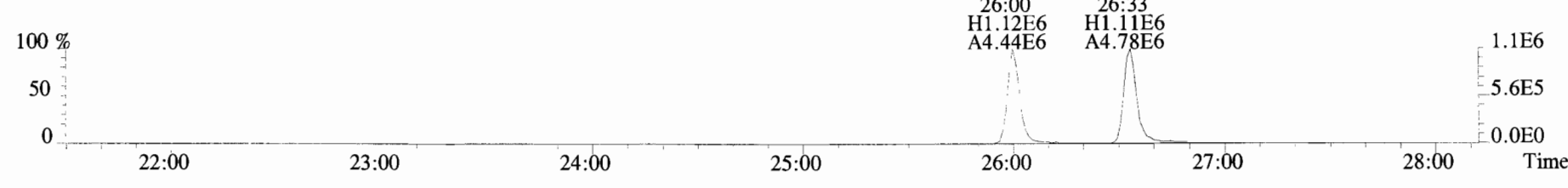
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



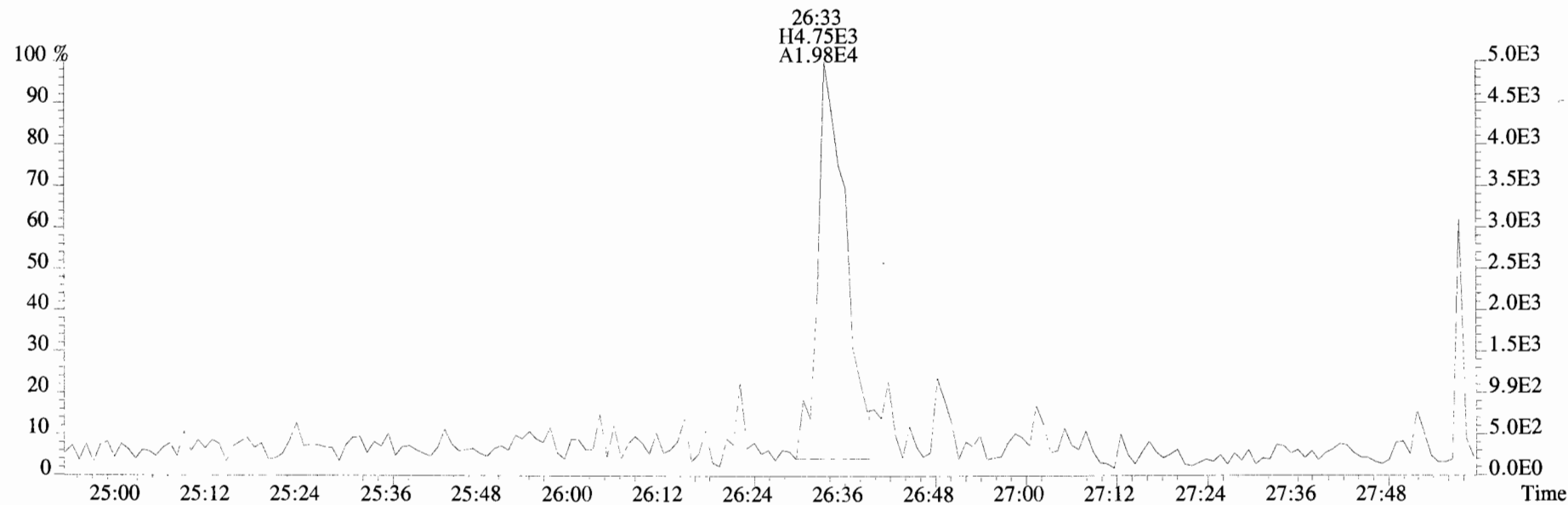
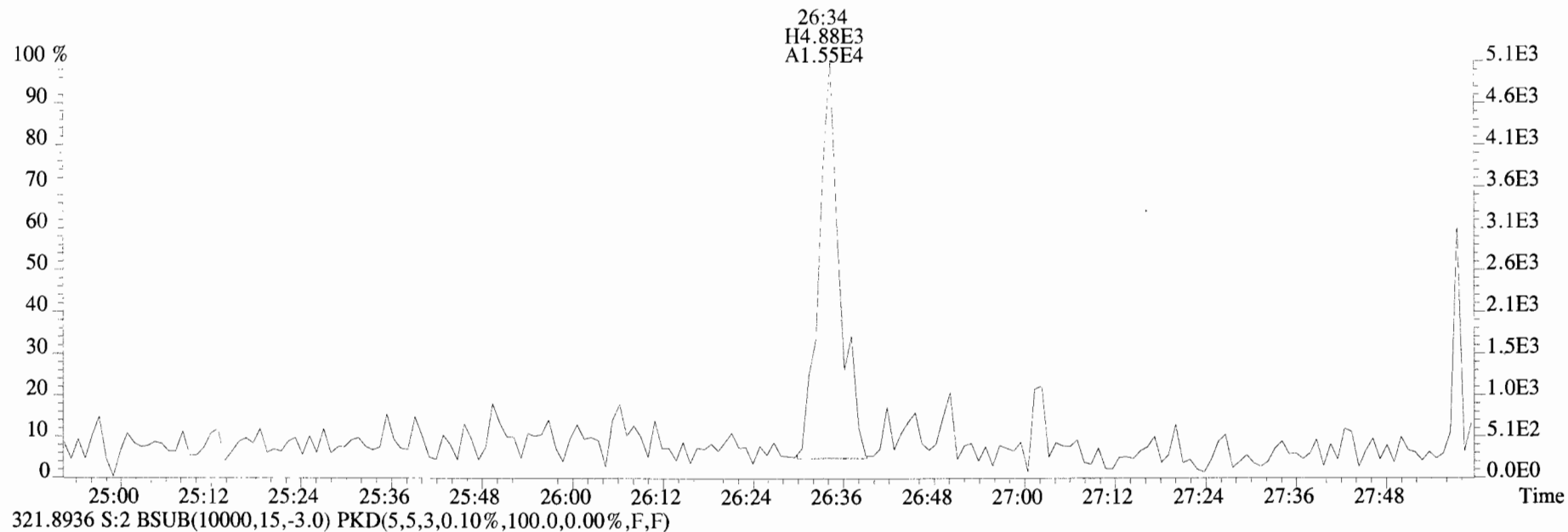
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



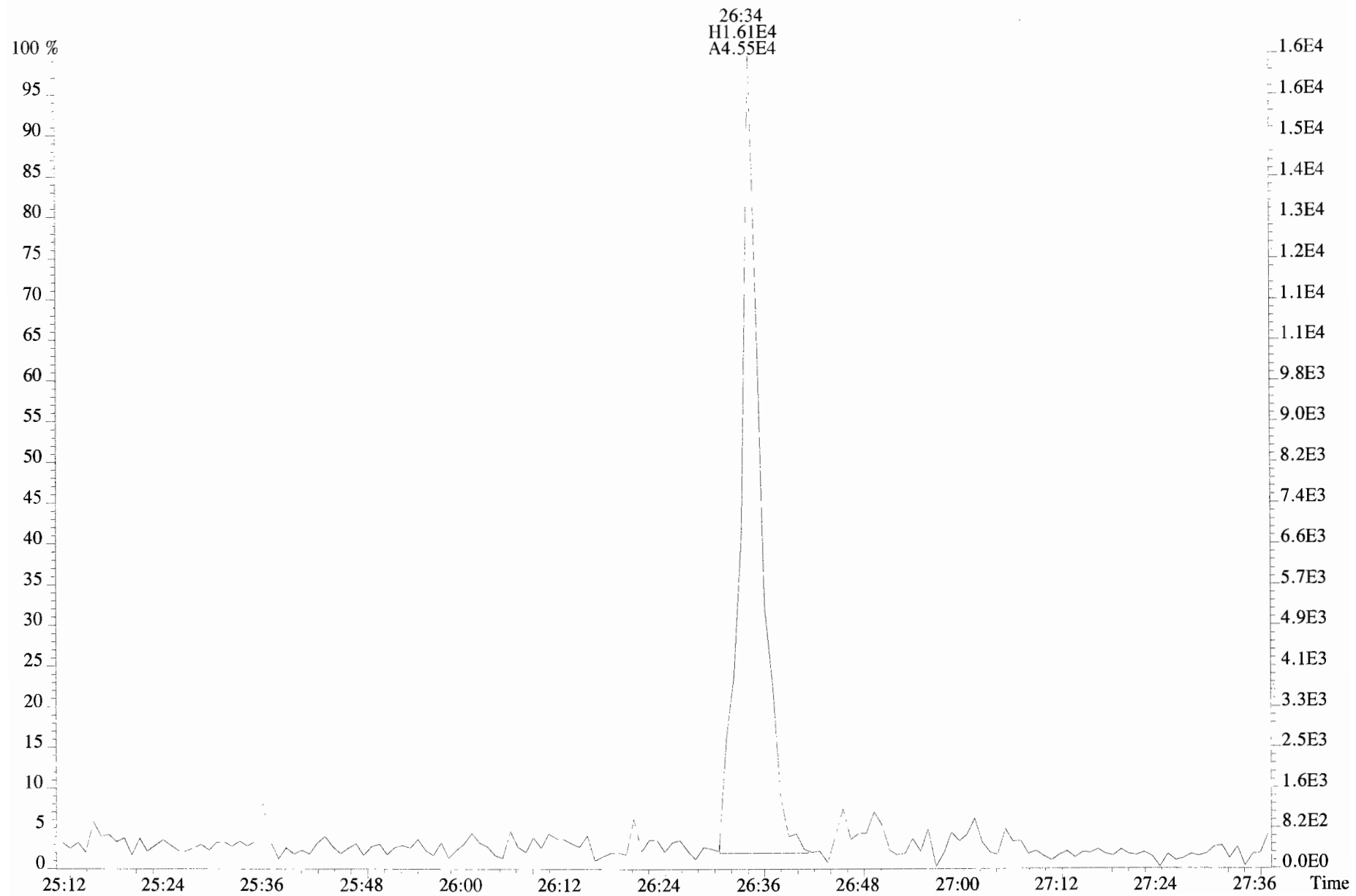
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



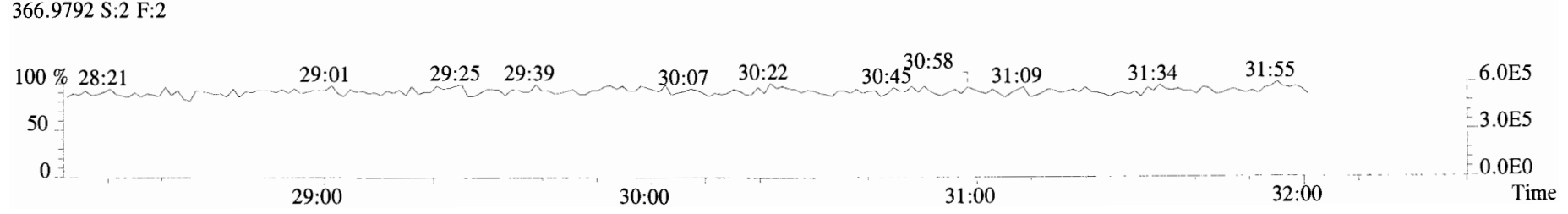
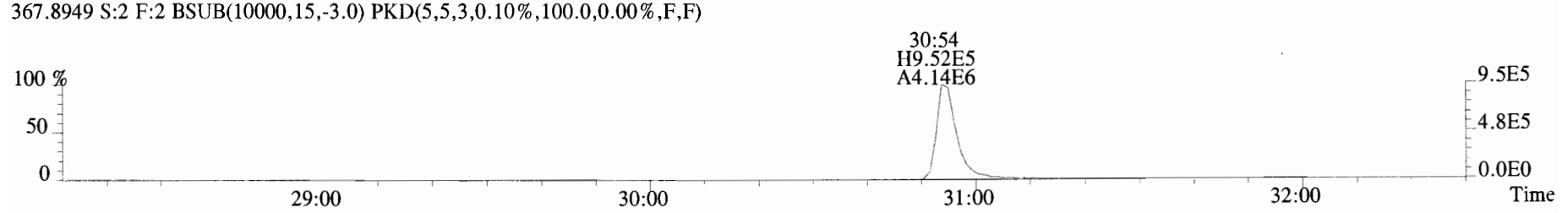
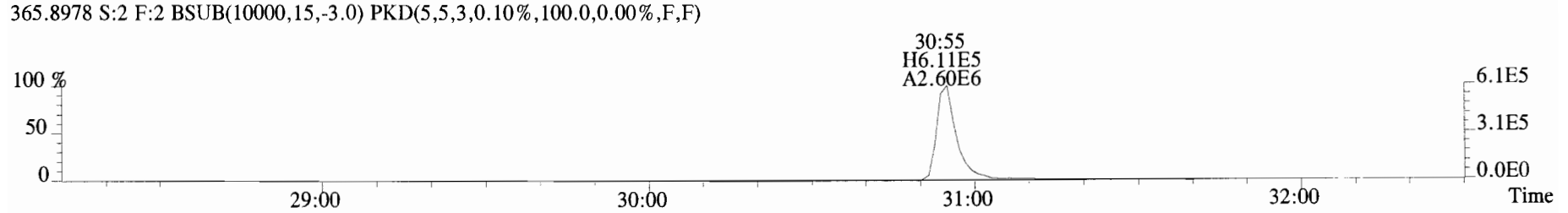
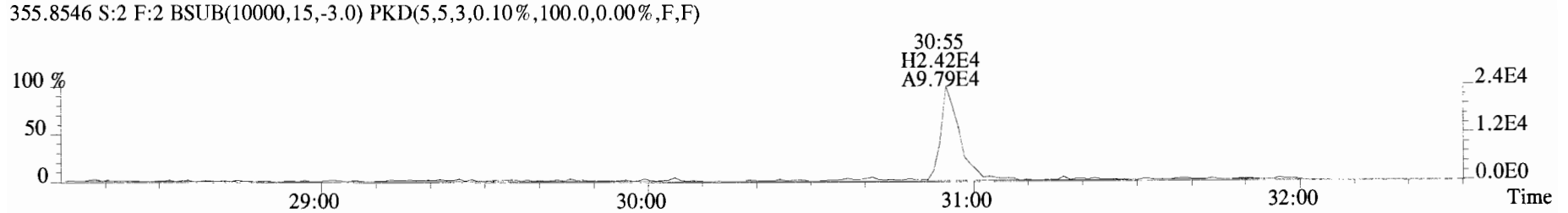
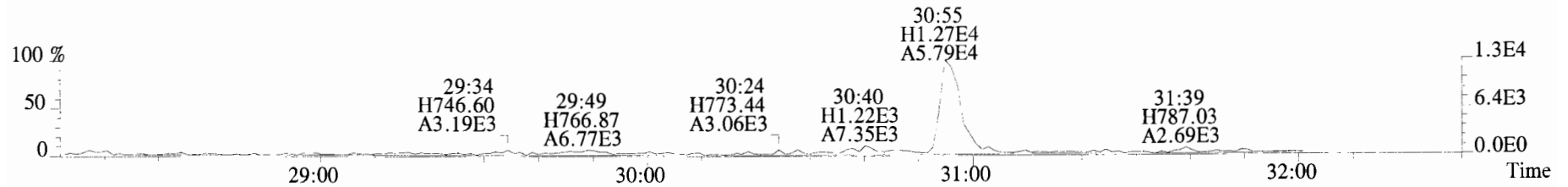
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



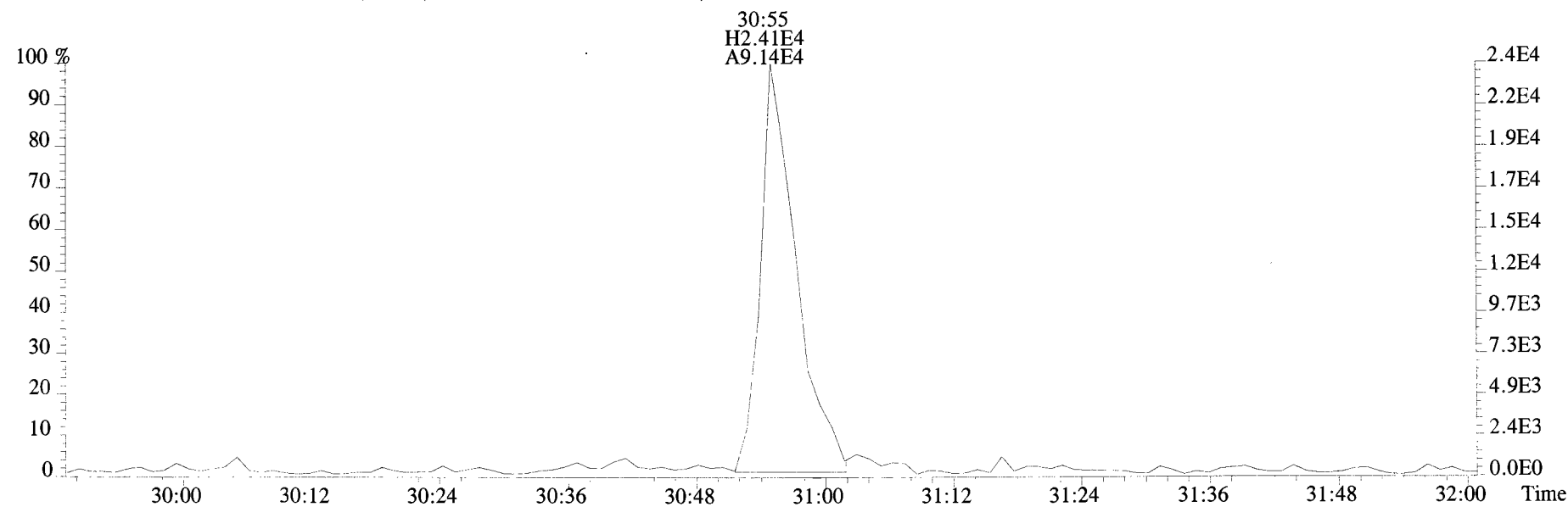
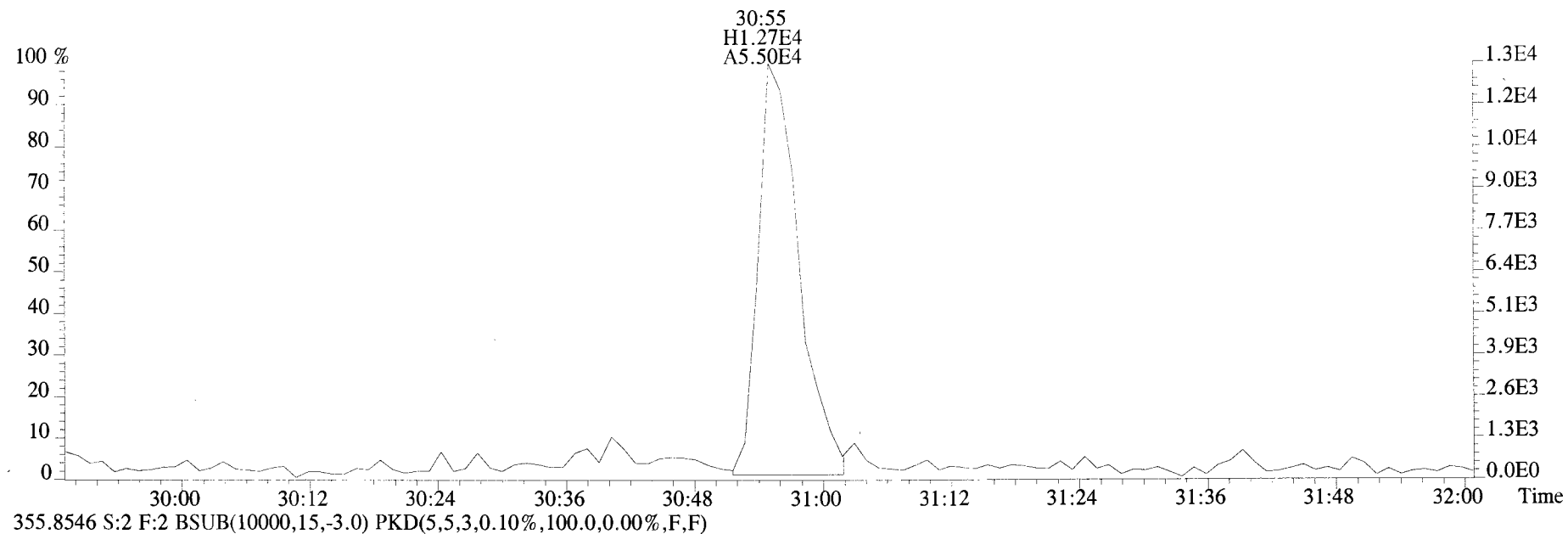
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
327.8847 S:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



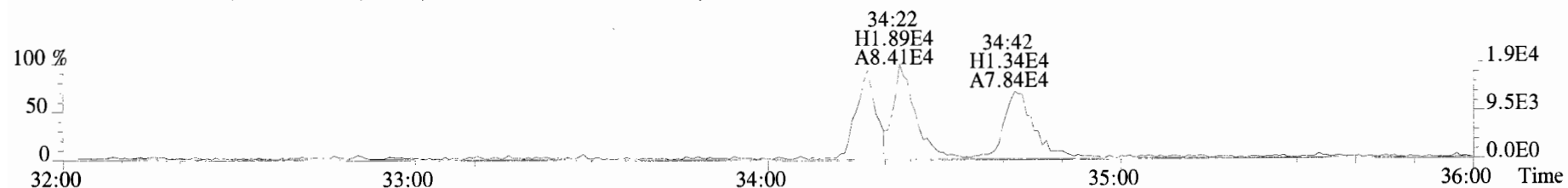
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



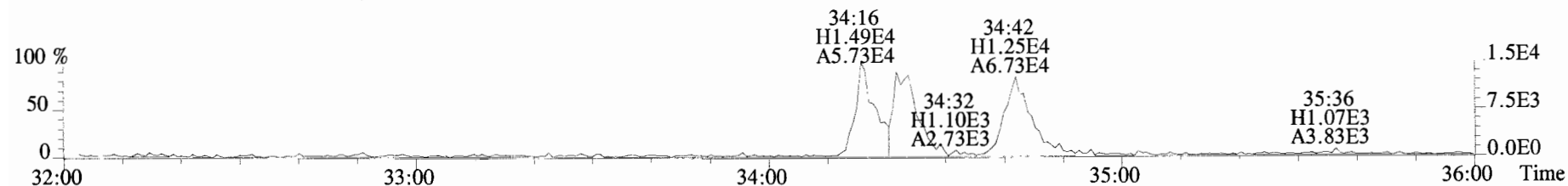
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



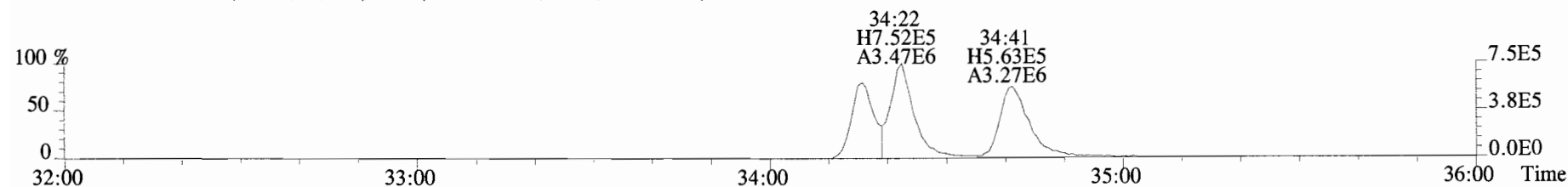
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



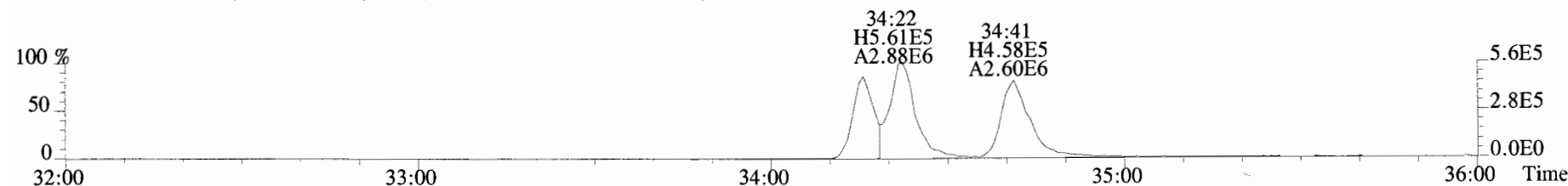
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



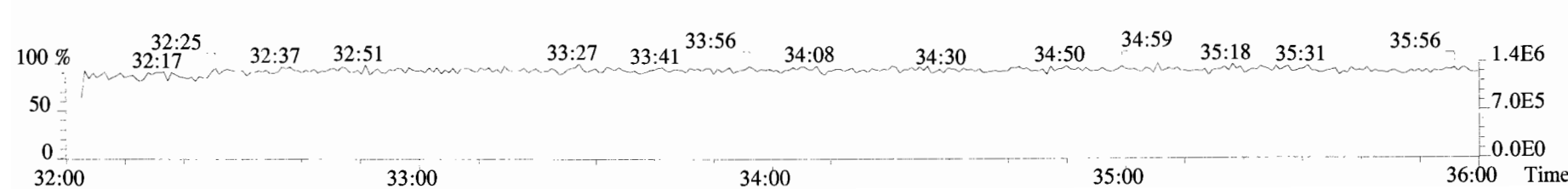
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



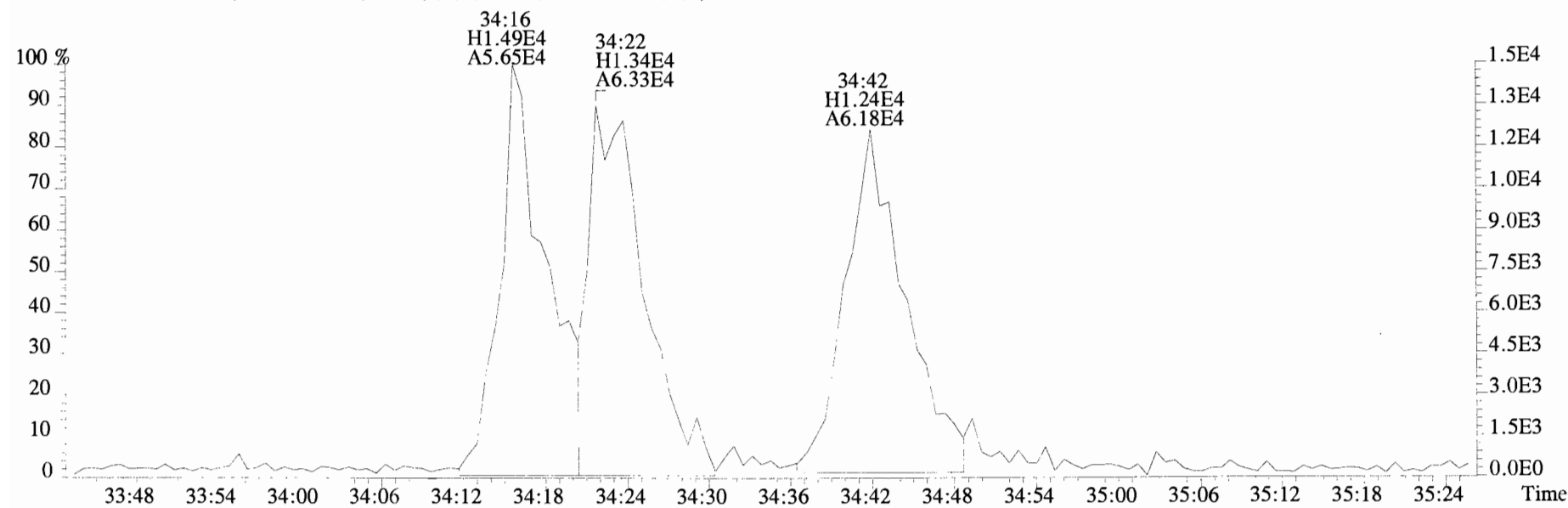
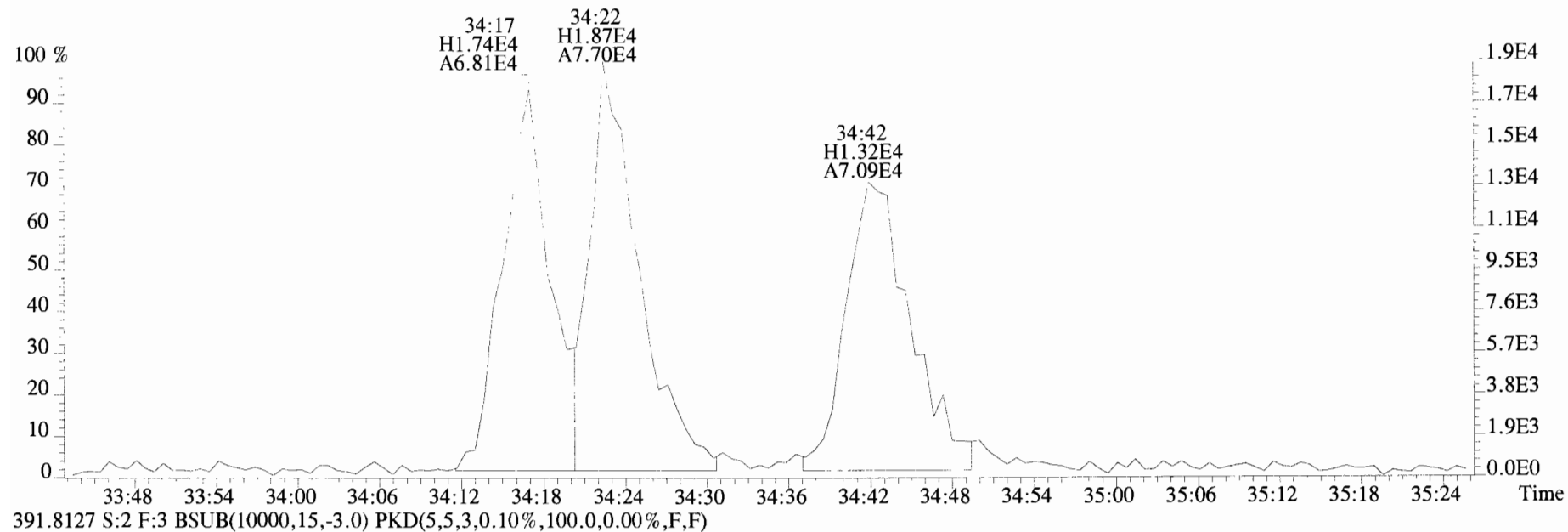
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



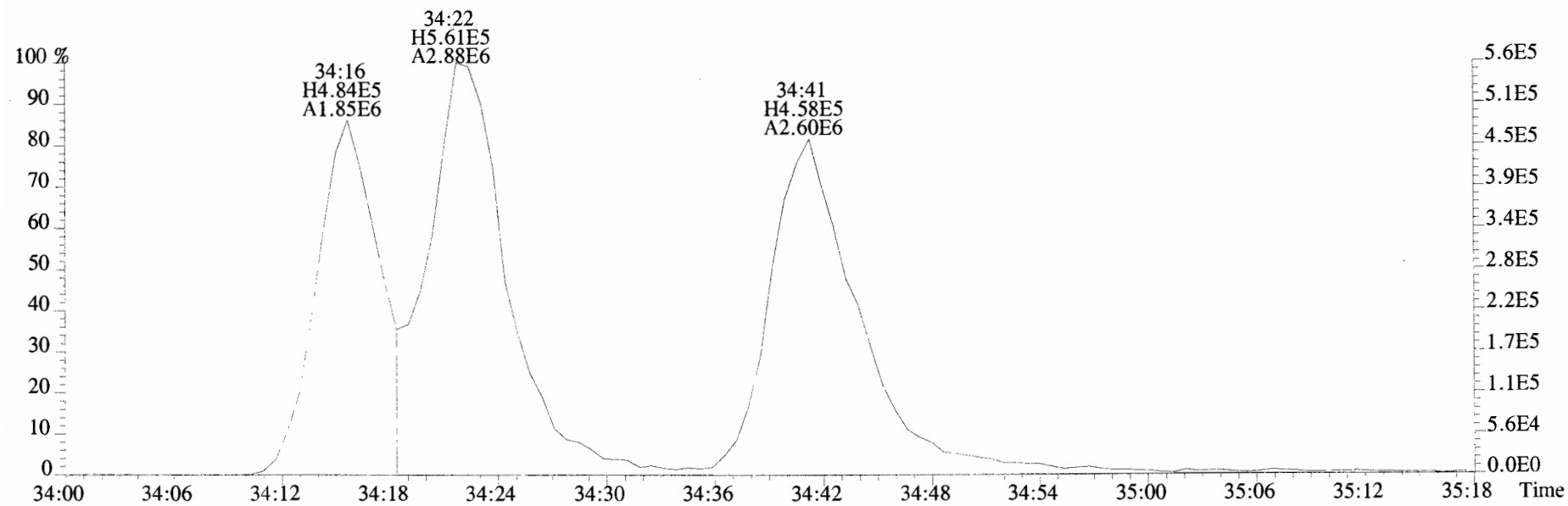
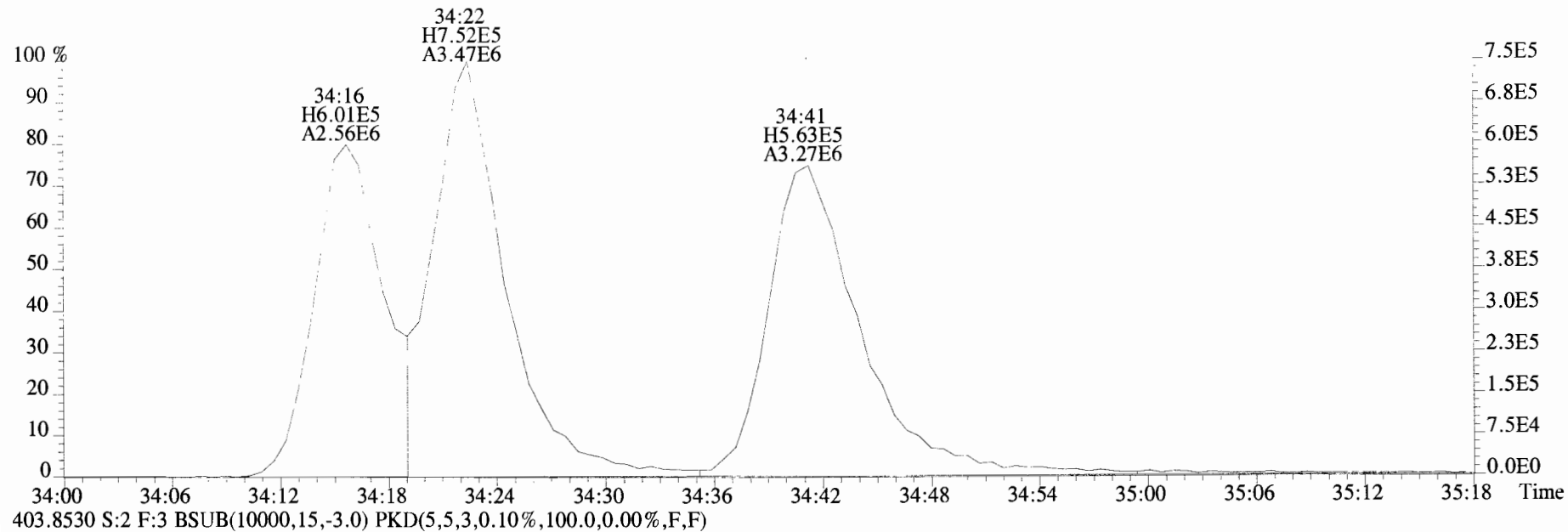
392.9760 S:2 F:3



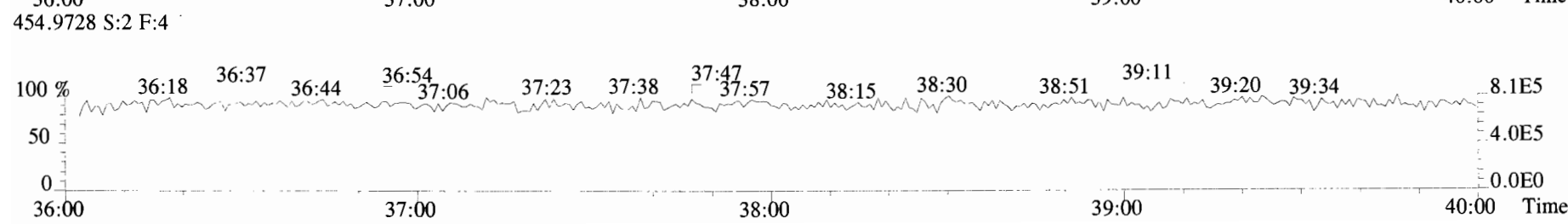
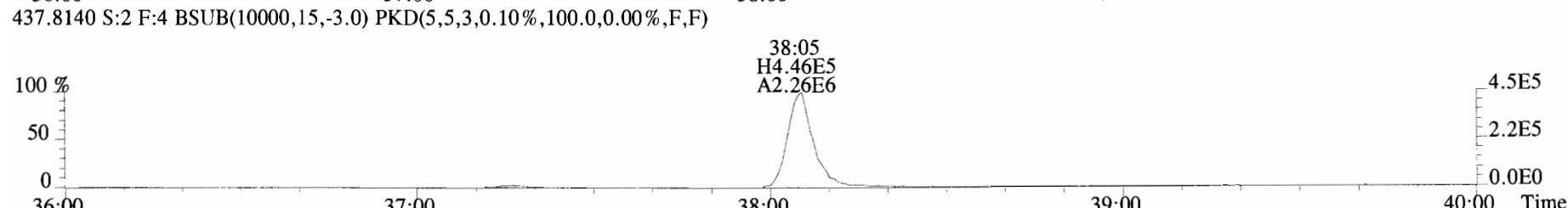
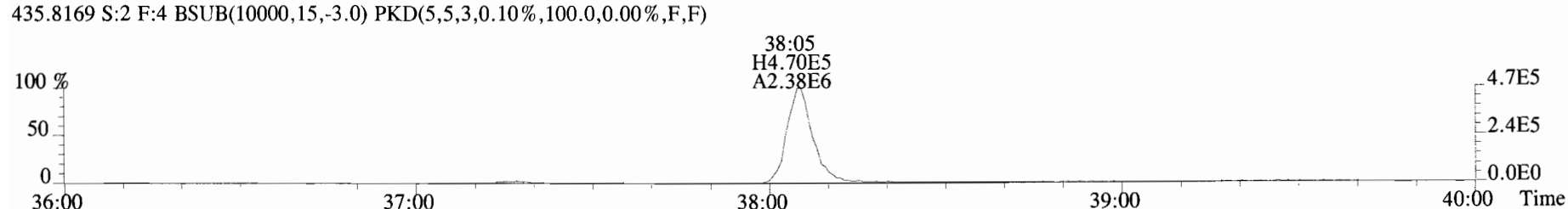
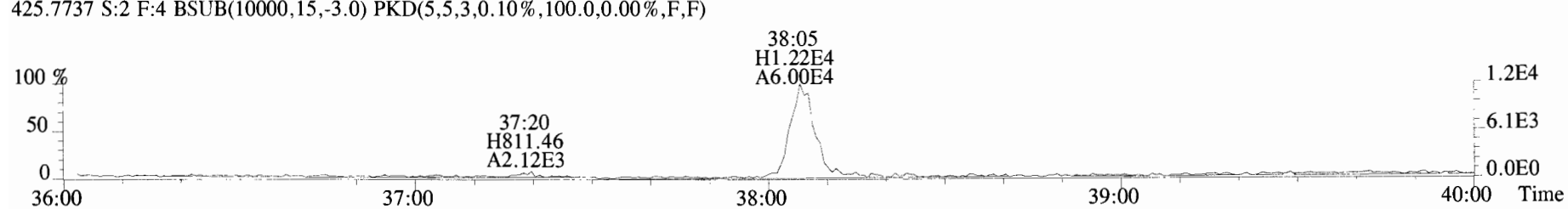
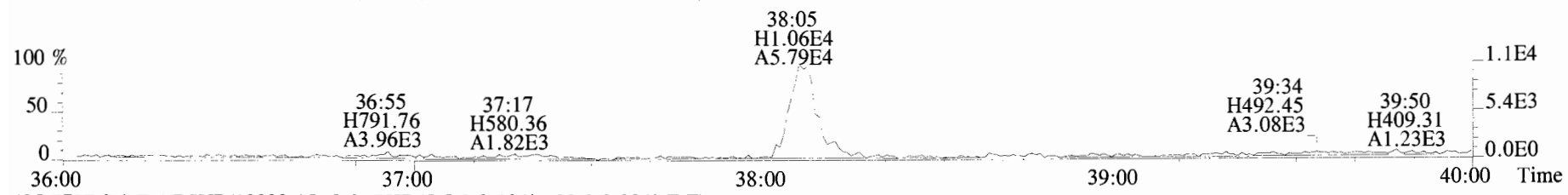
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



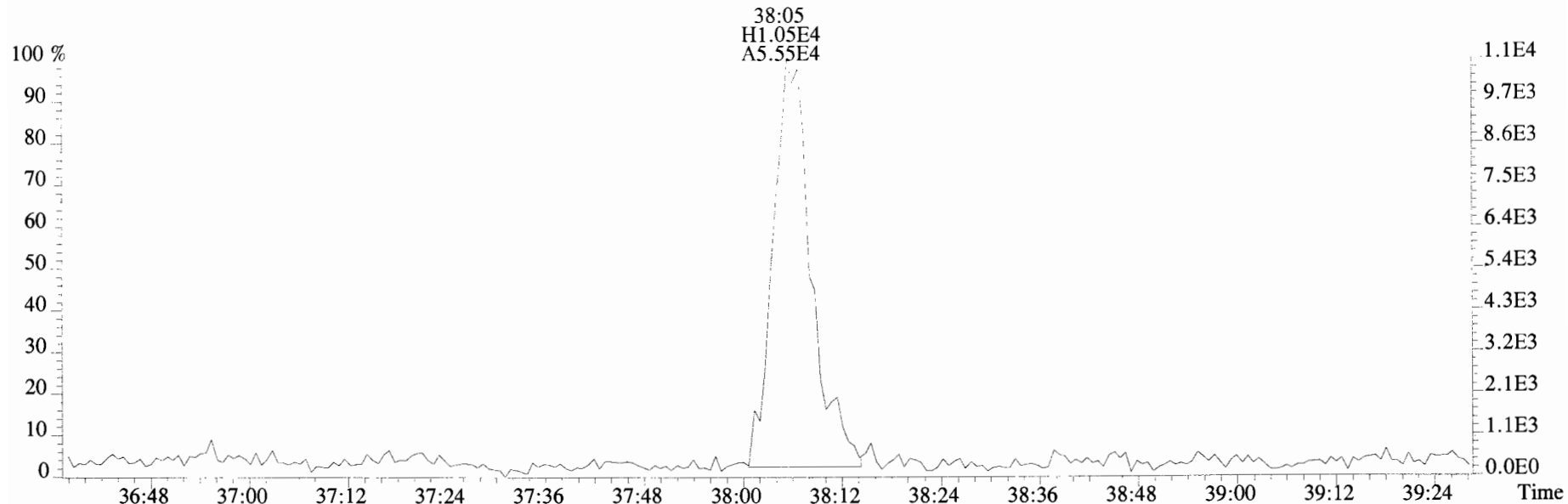
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



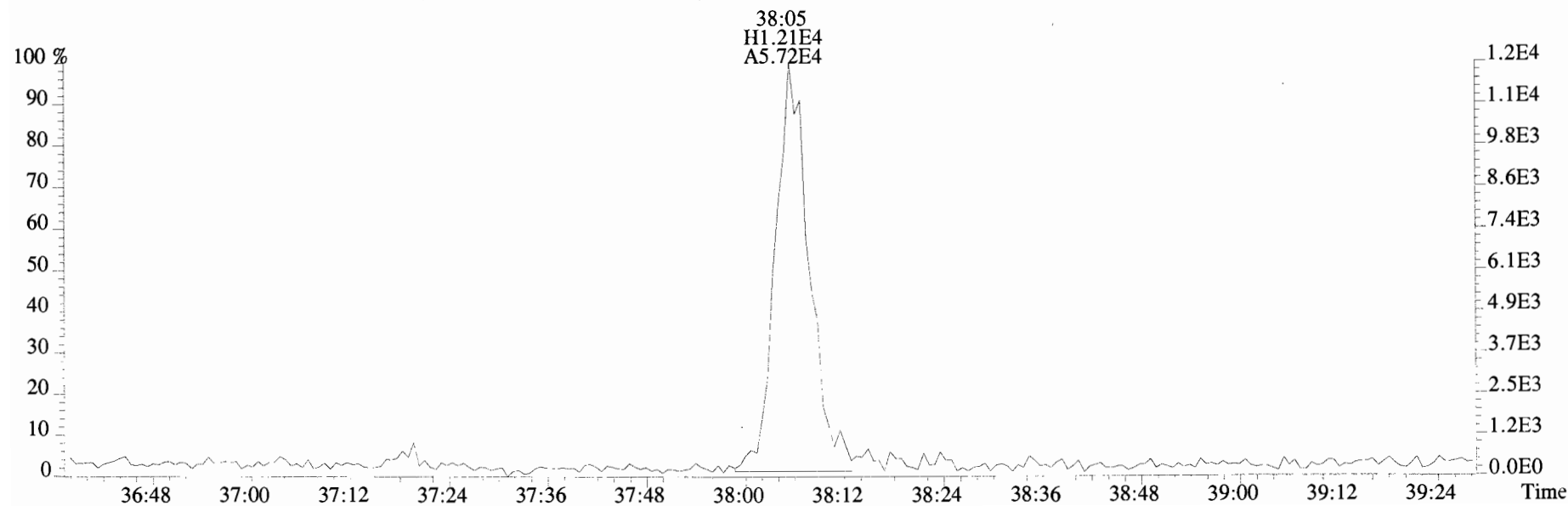
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



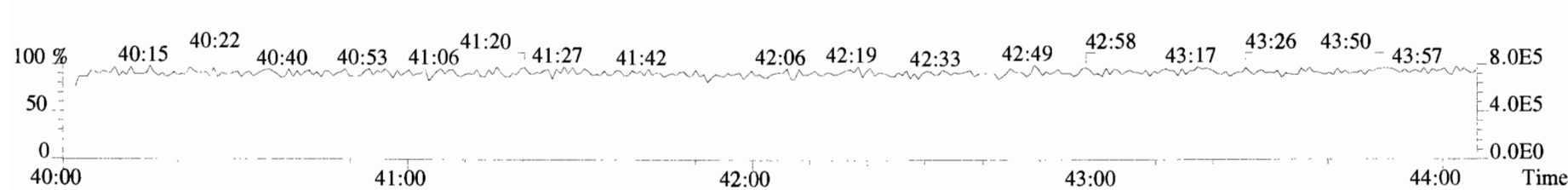
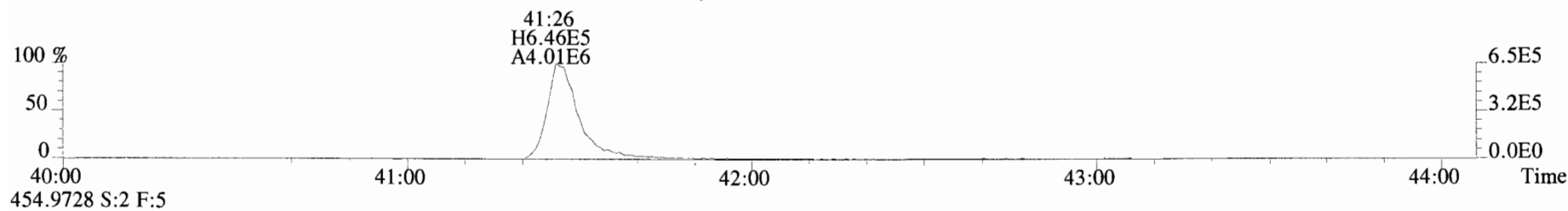
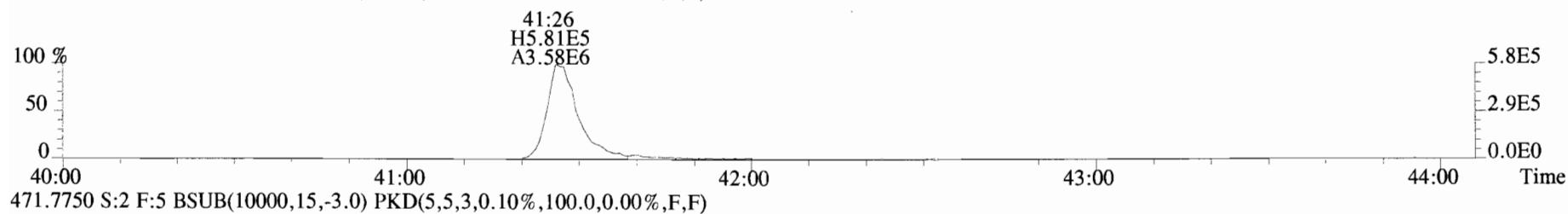
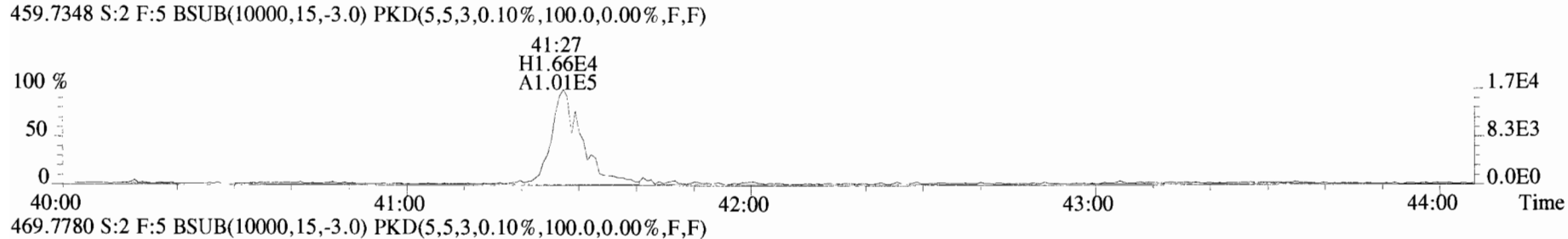
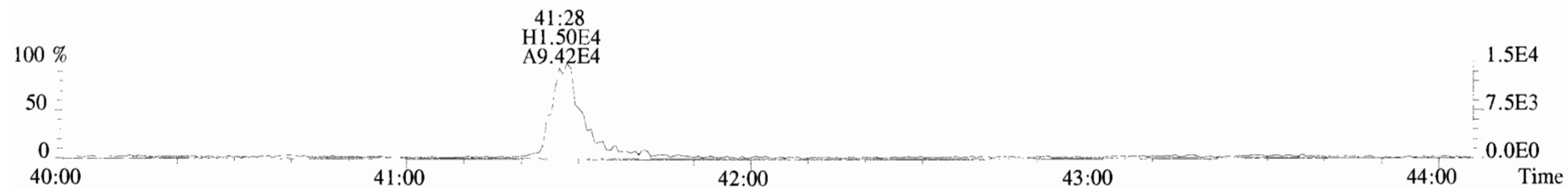
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
423.7767 S:2 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



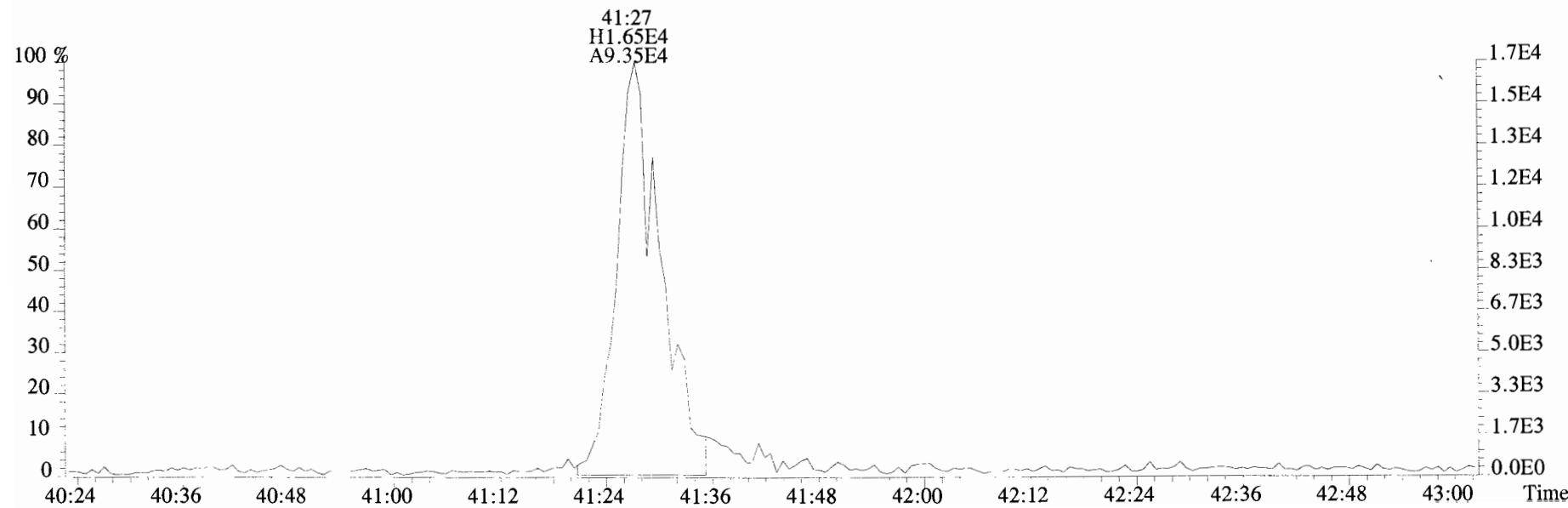
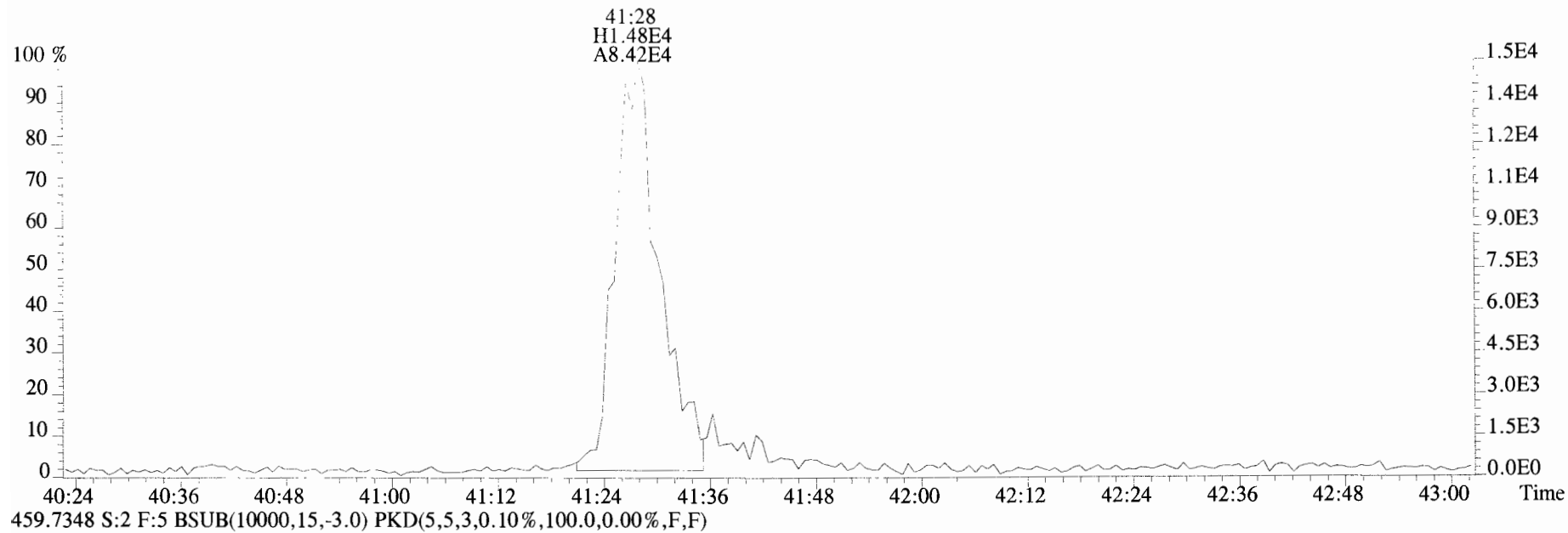
425.7737 S:2 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



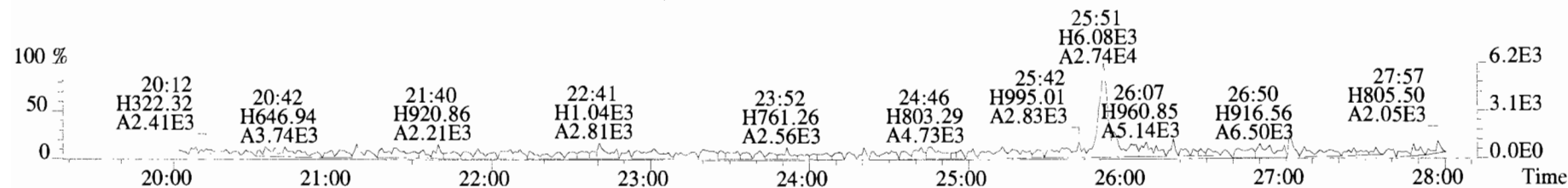
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



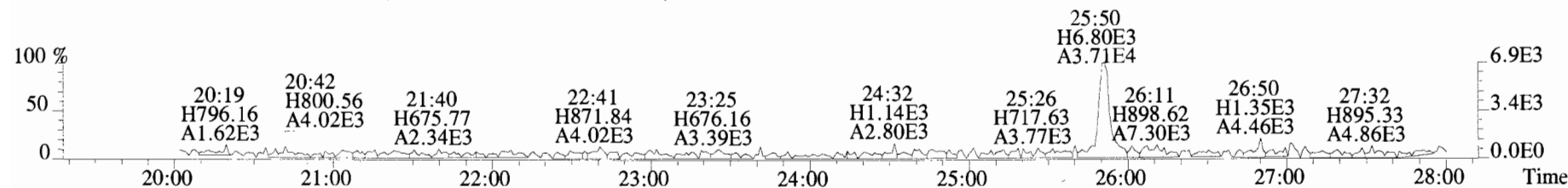
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



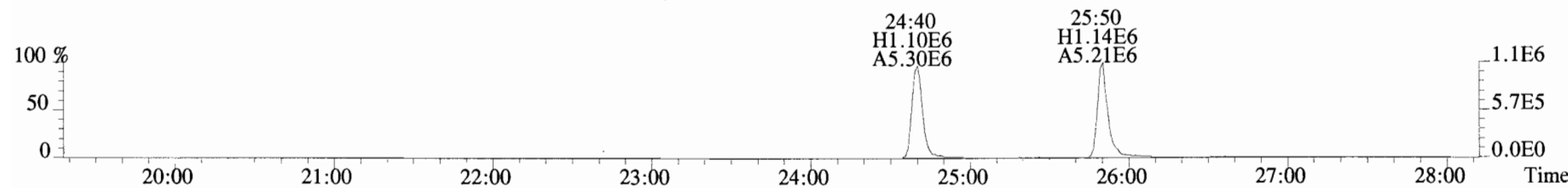
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
 303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



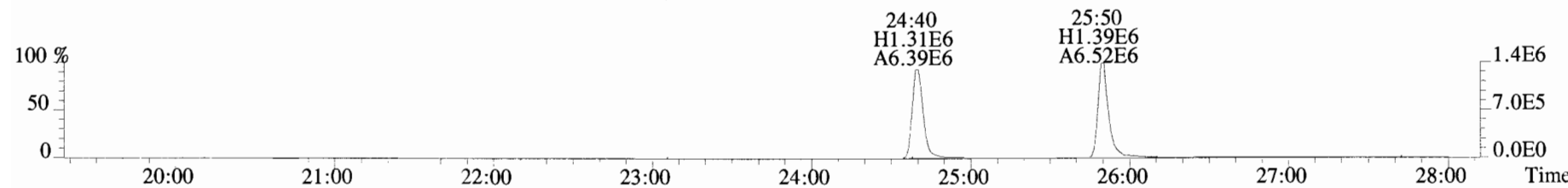
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



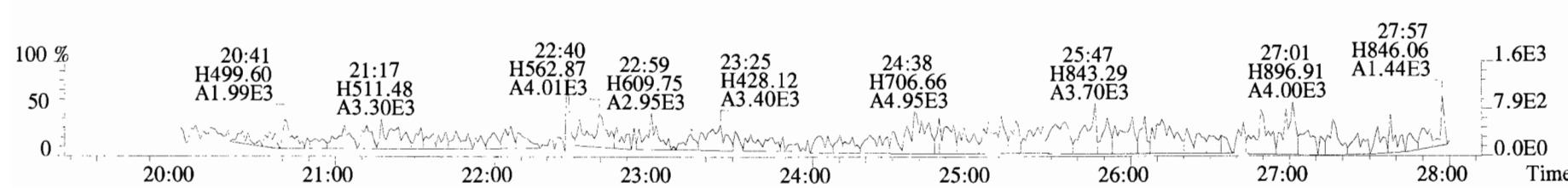
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



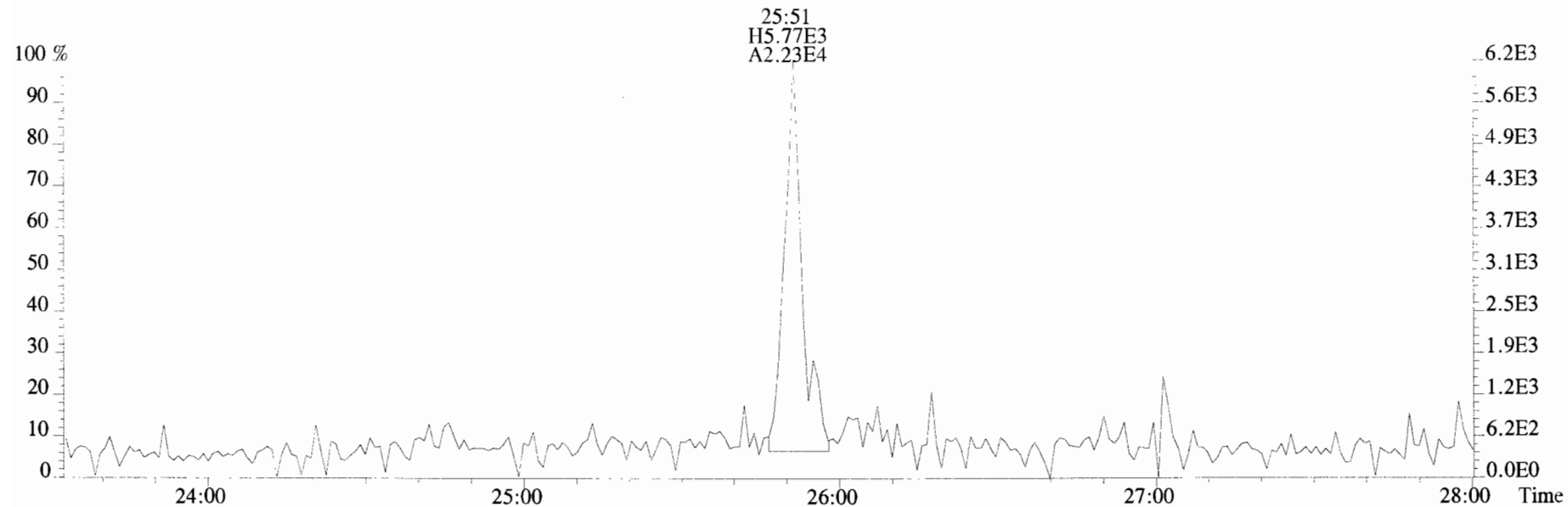
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



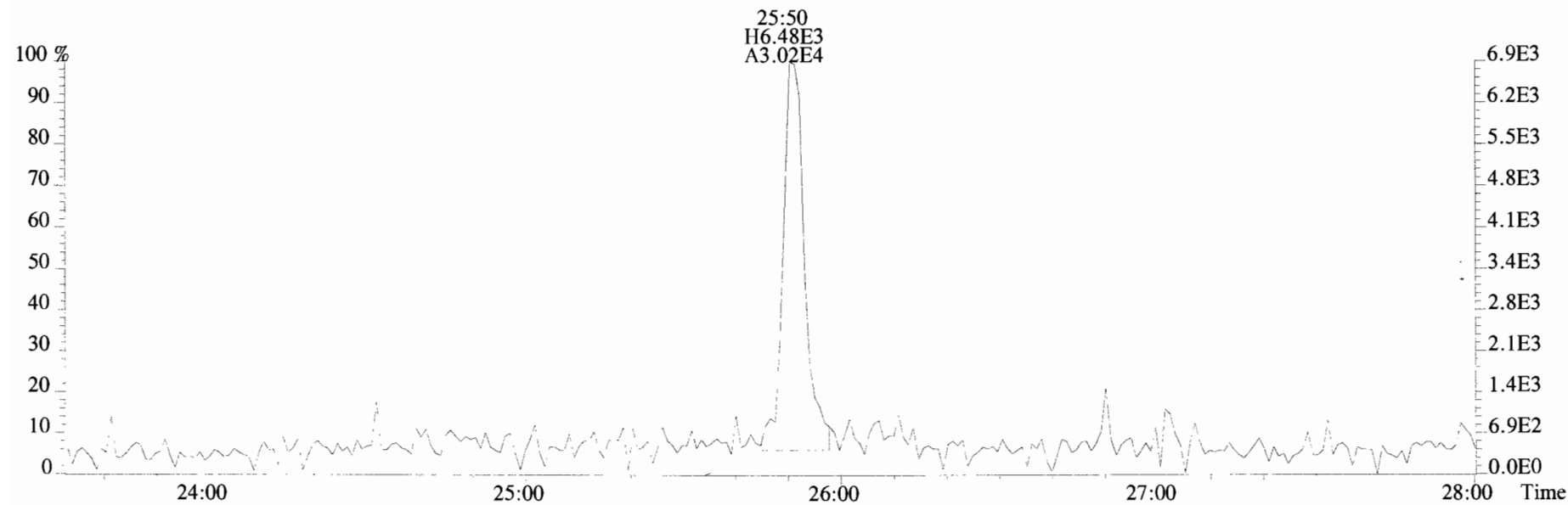
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



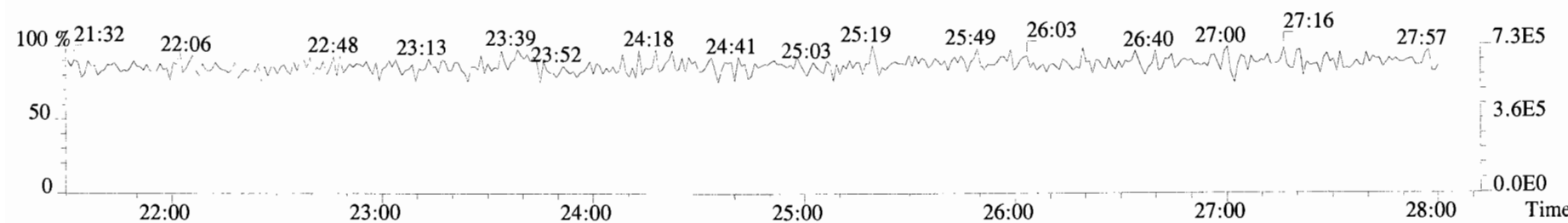
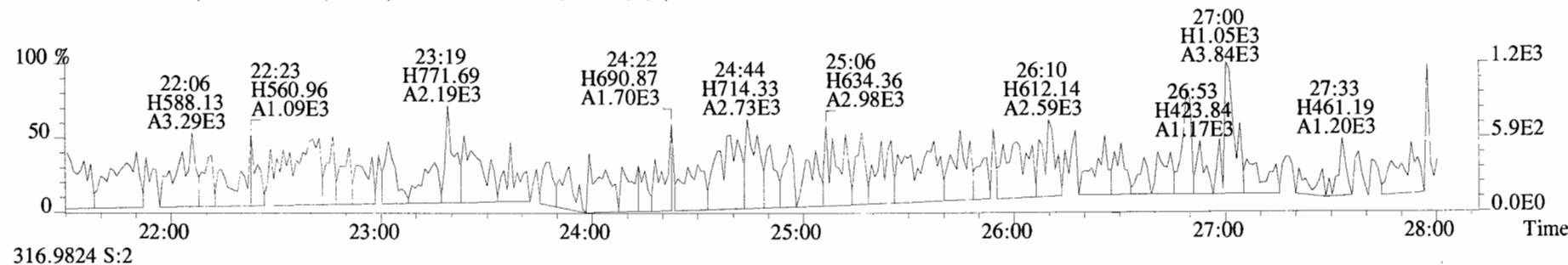
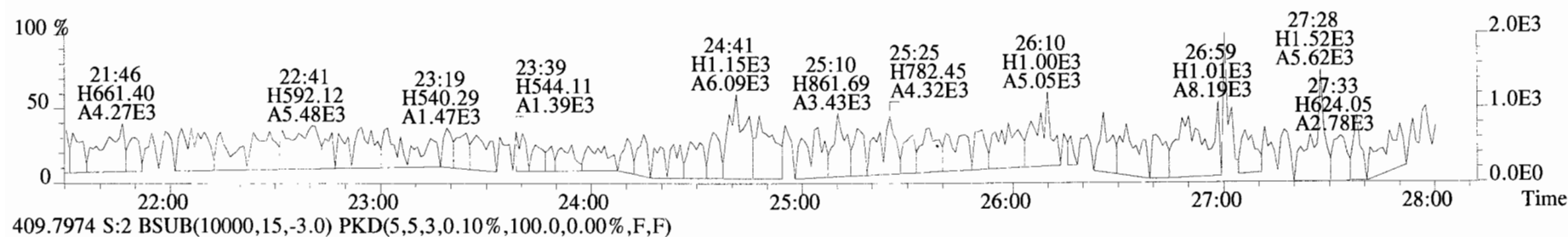
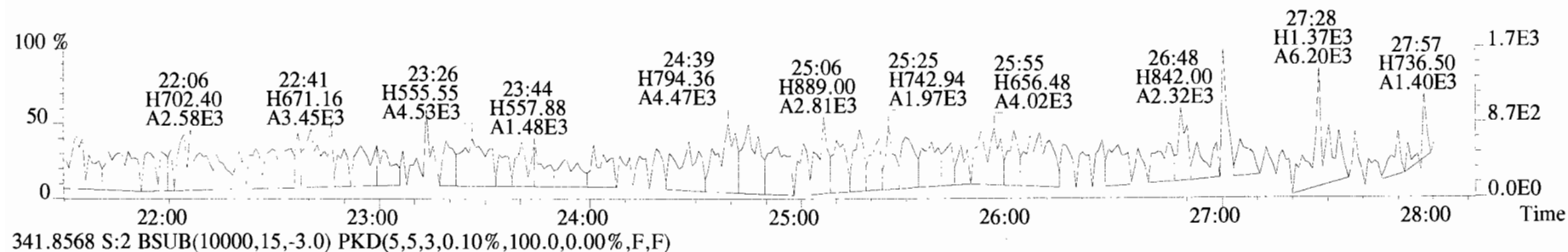
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



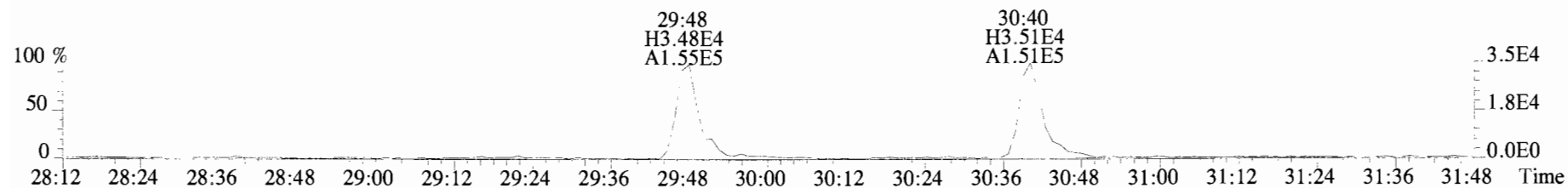
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



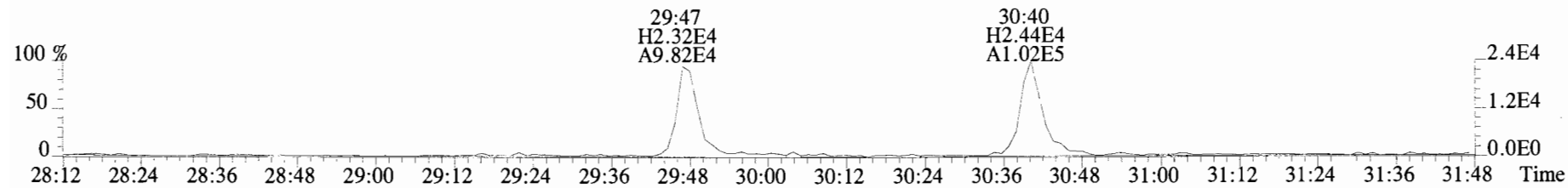
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



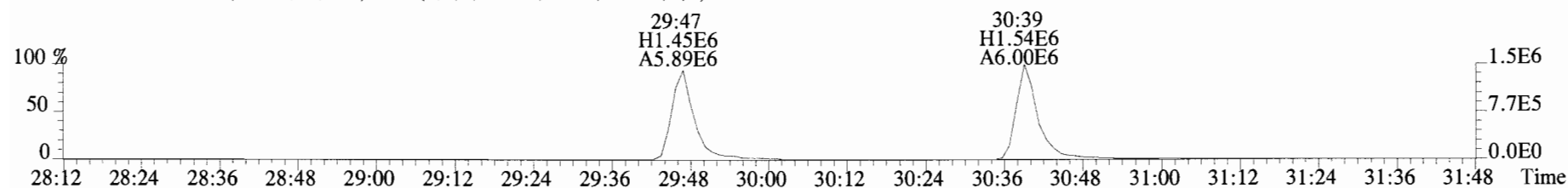
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



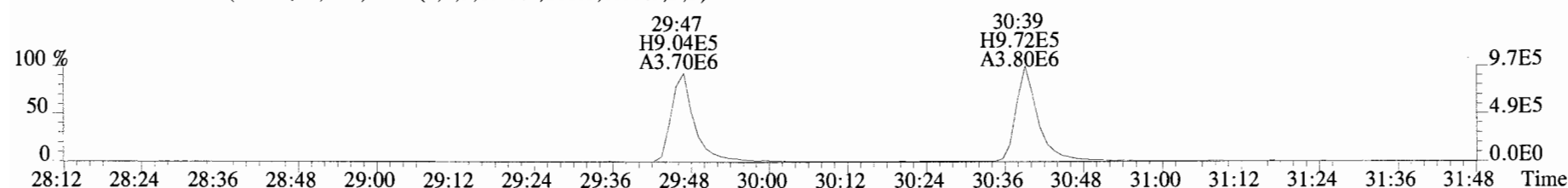
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



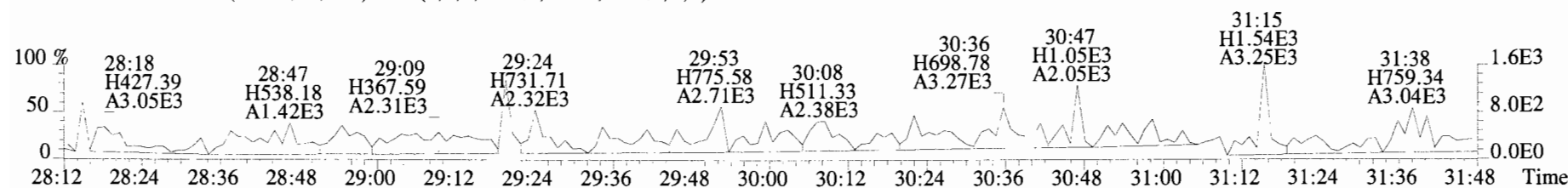
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



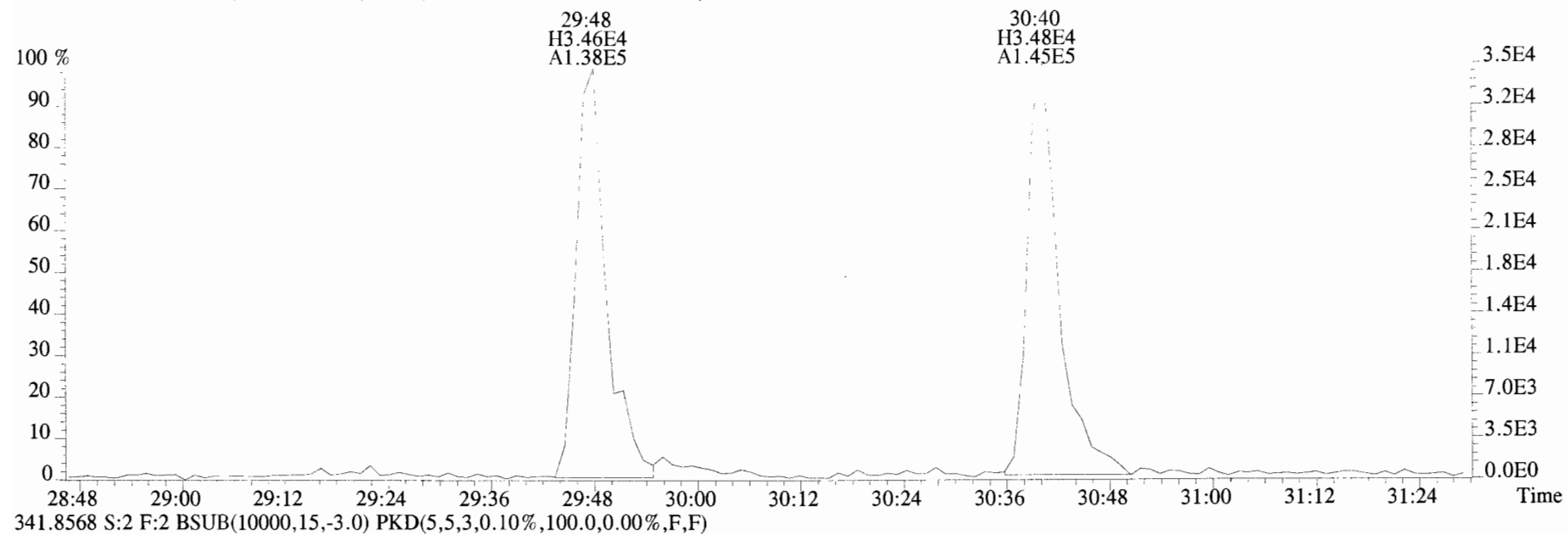
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



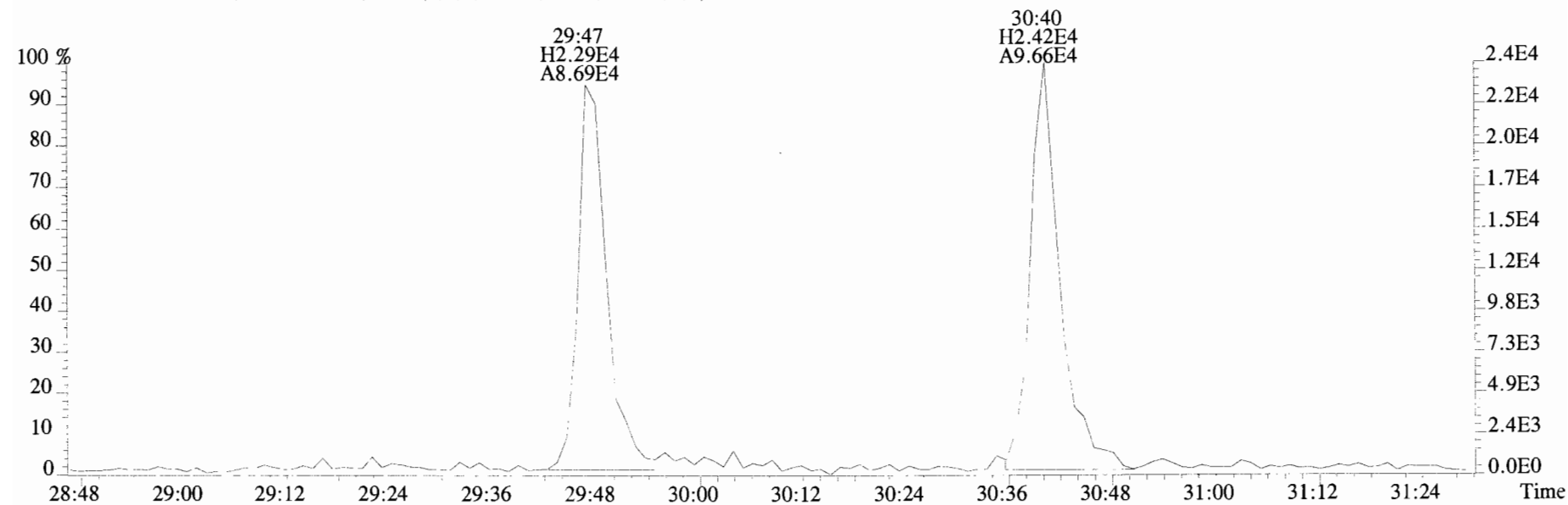
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



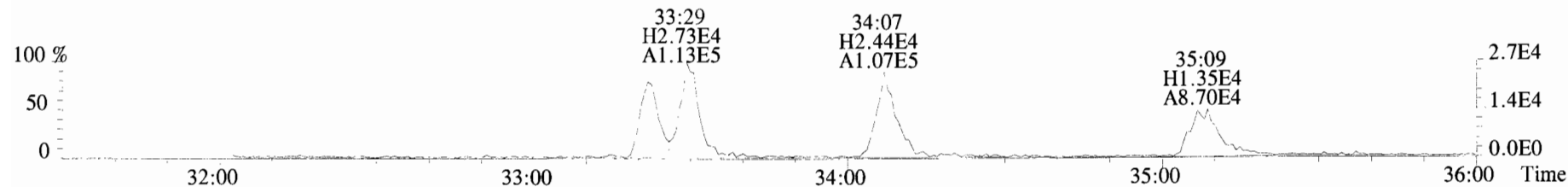
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



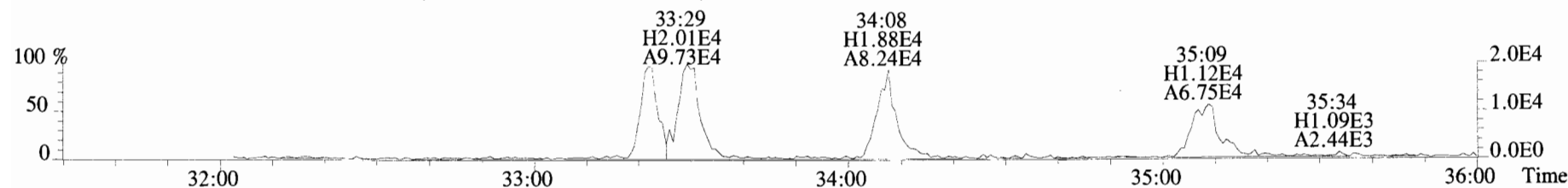
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



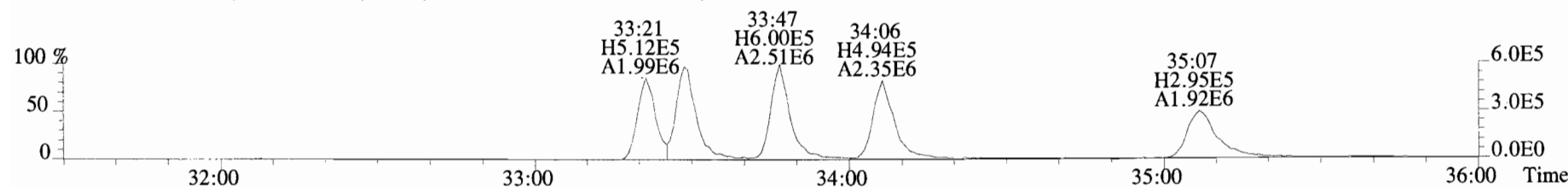
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
 373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



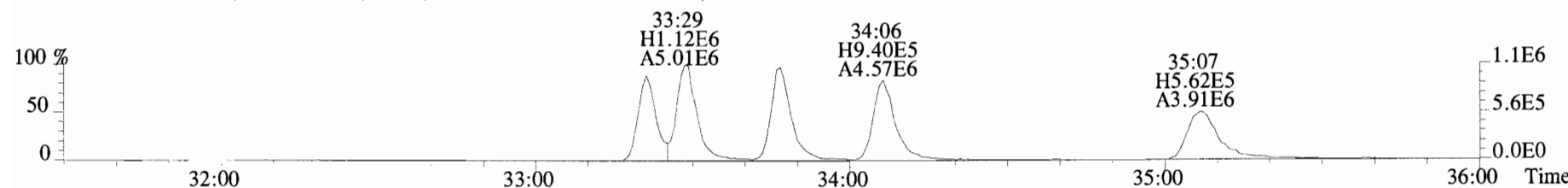
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



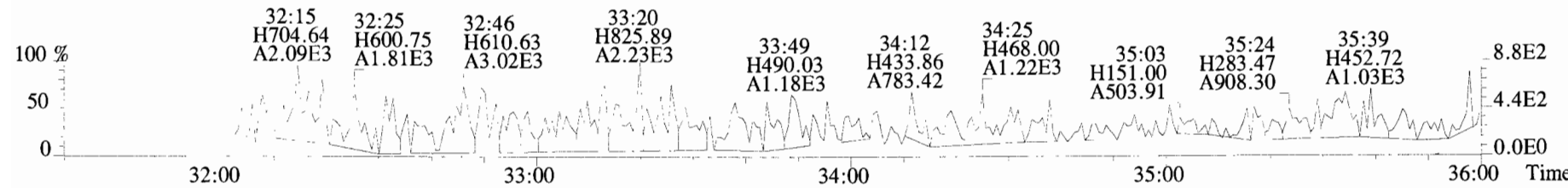
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



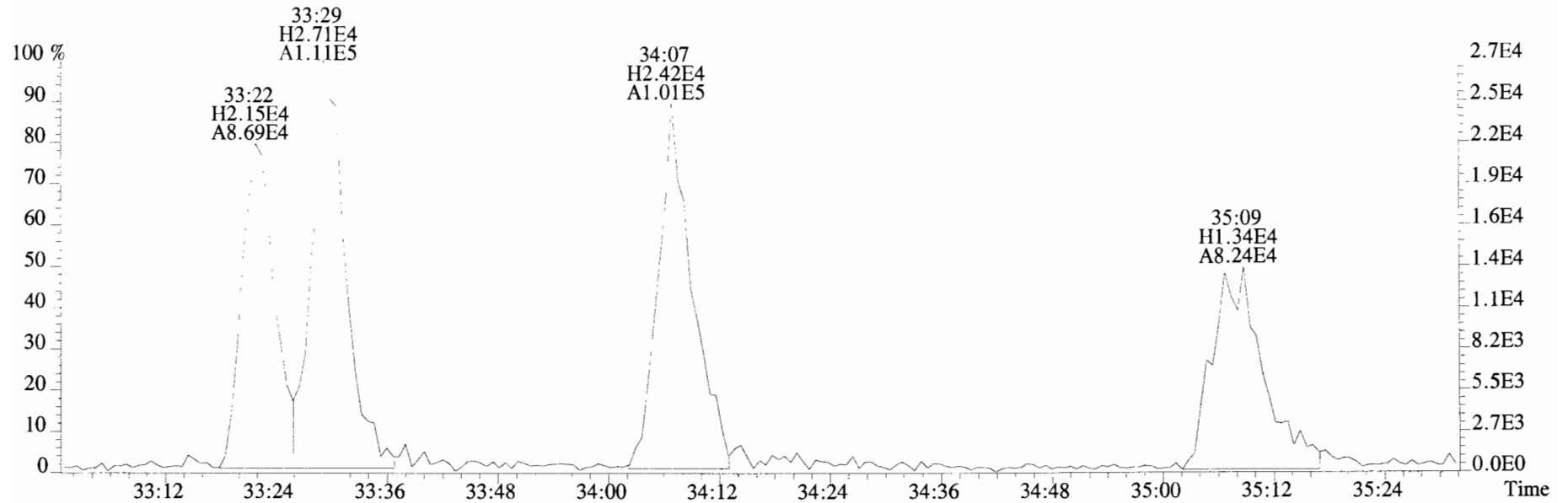
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



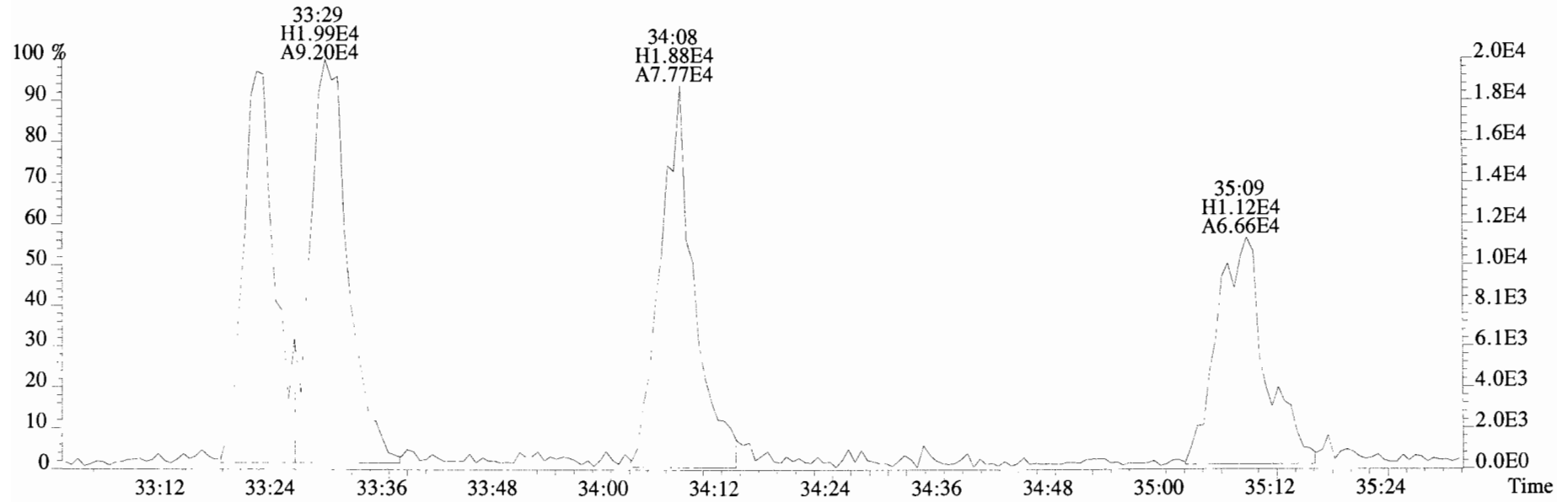
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



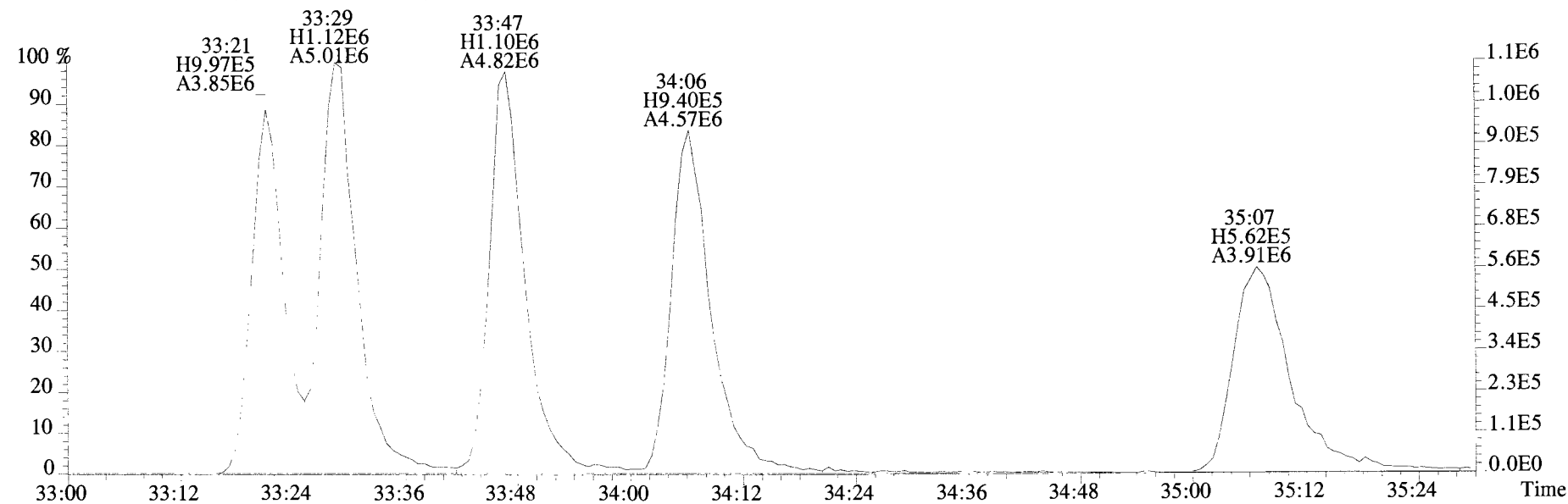
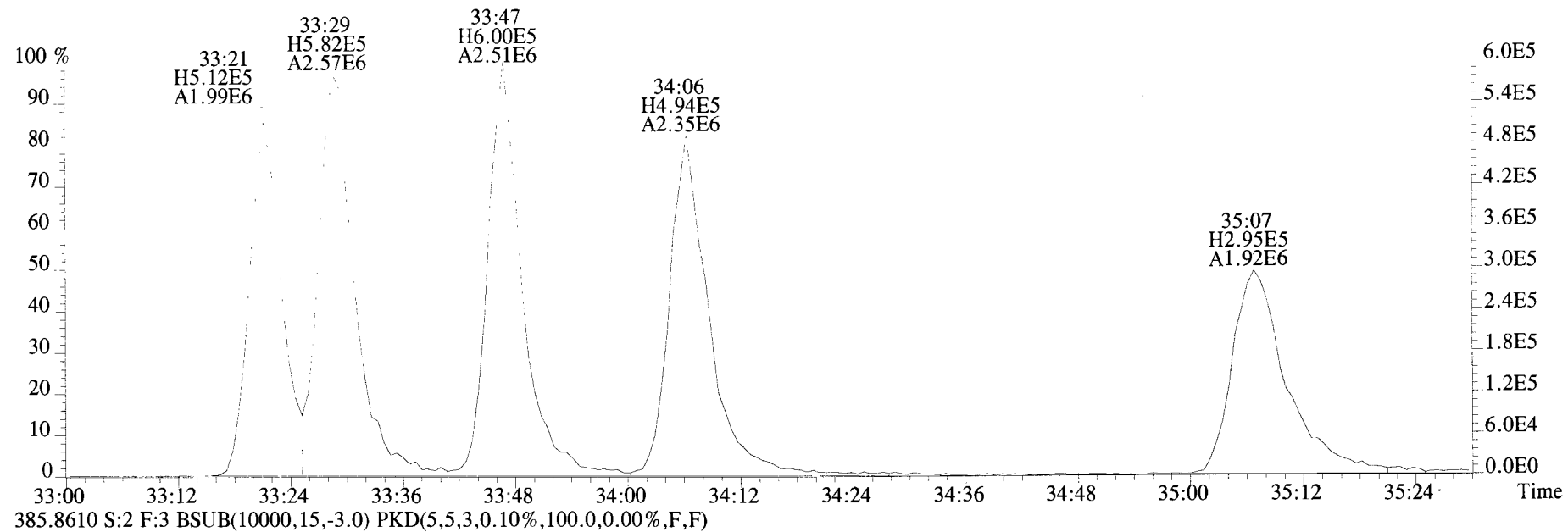
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



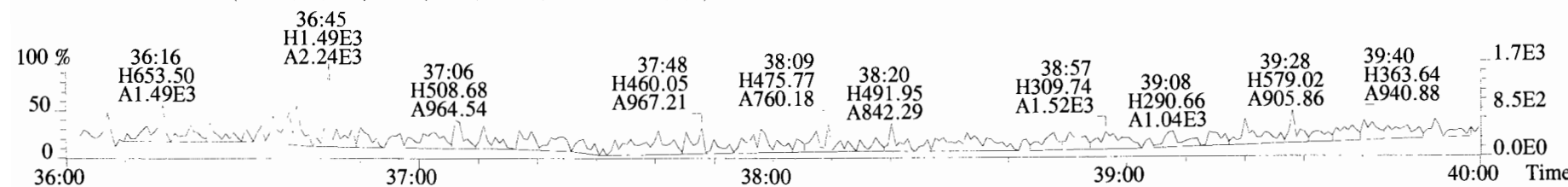
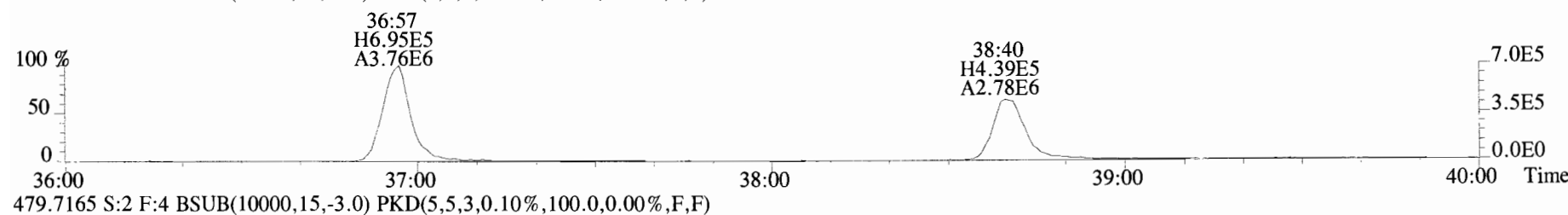
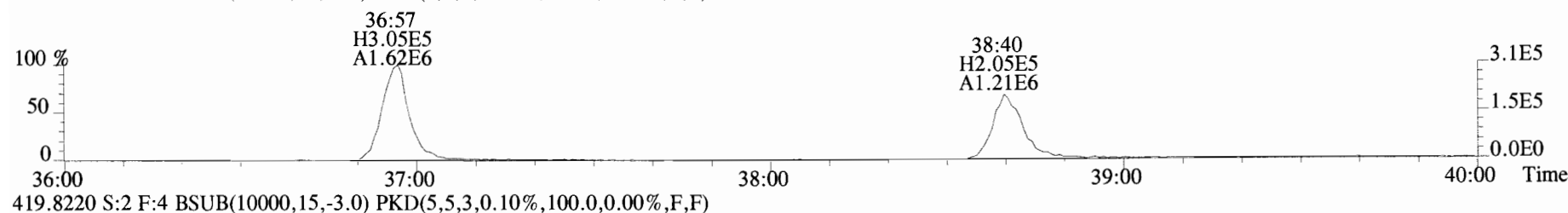
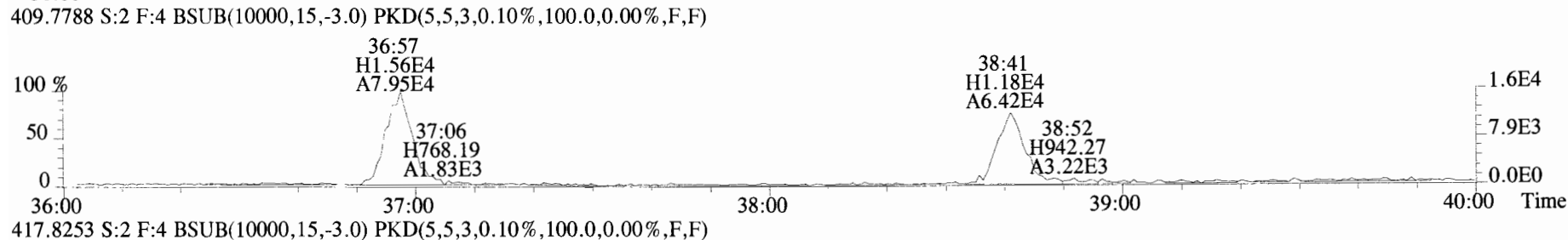
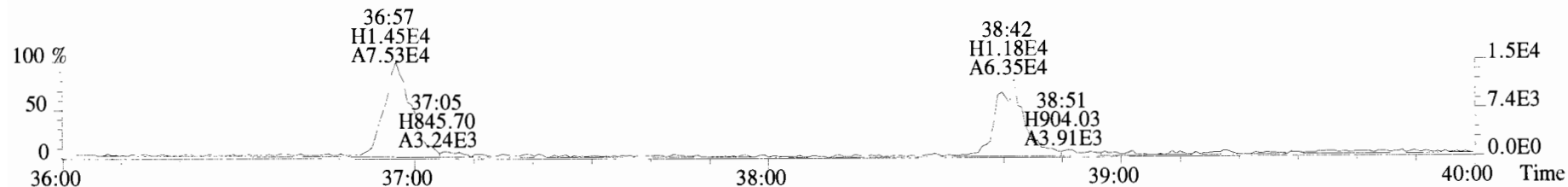
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



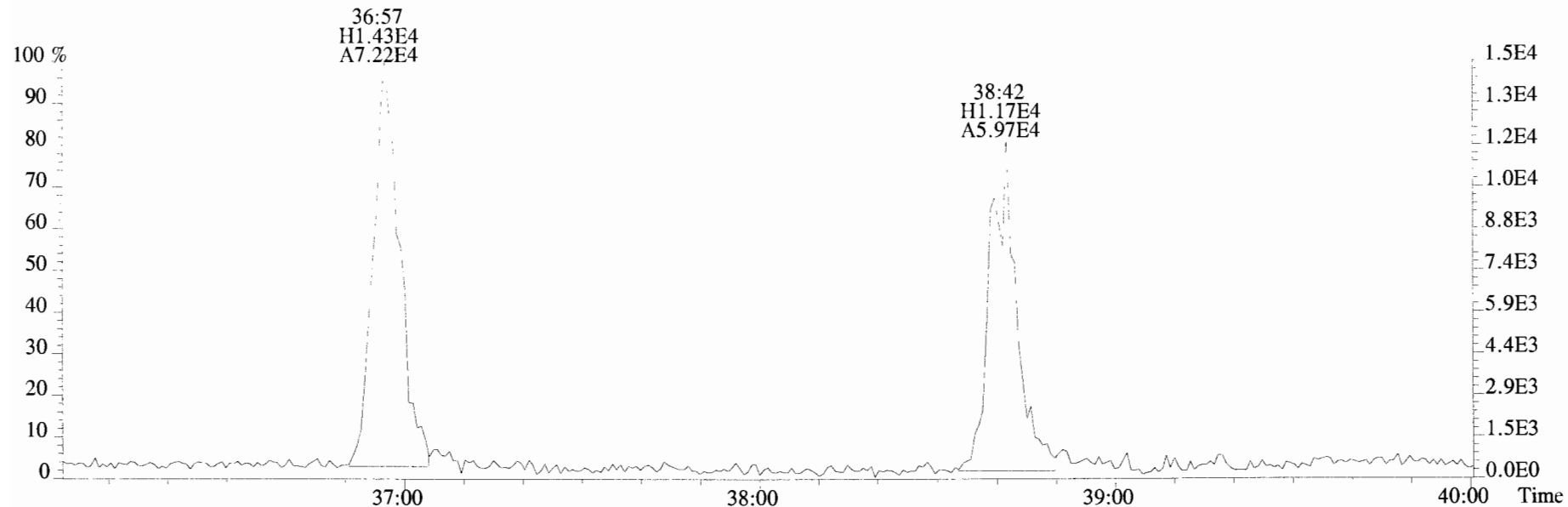
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



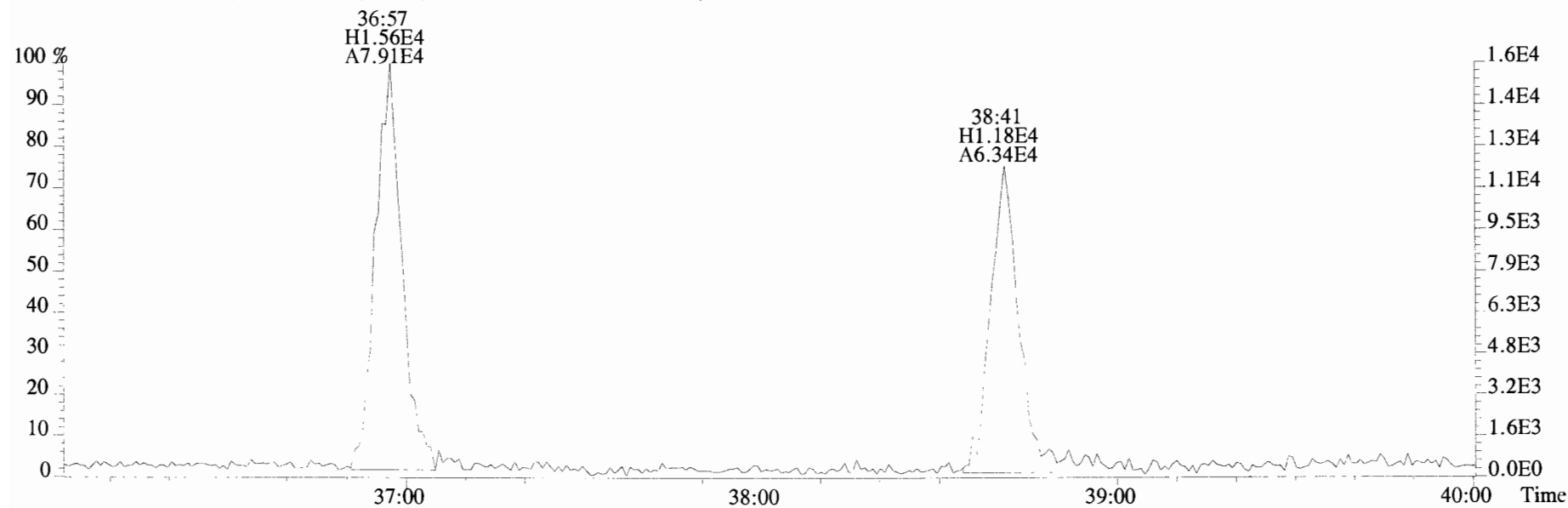
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text: Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
 407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



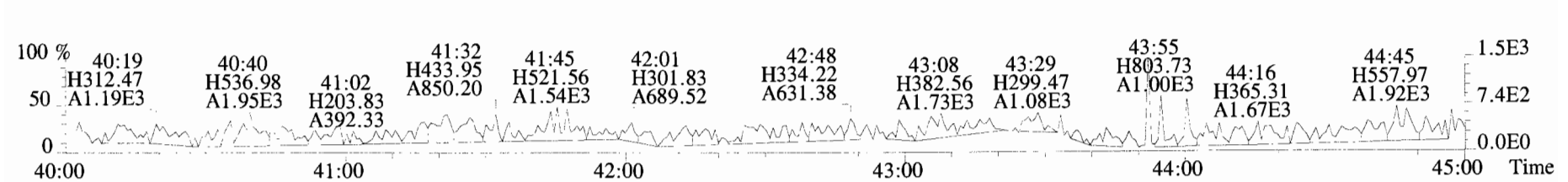
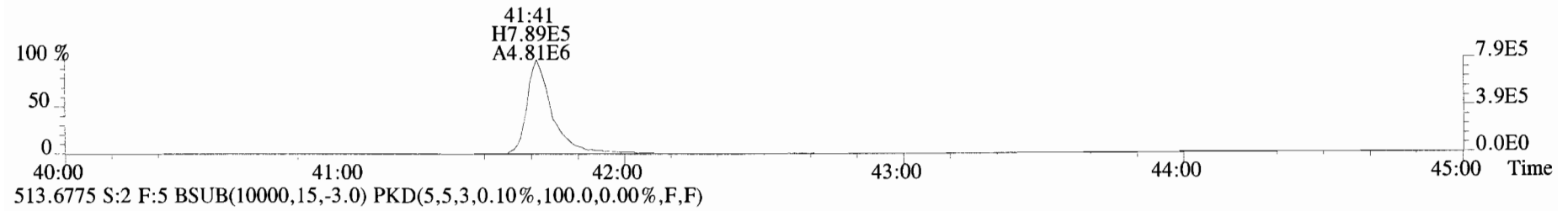
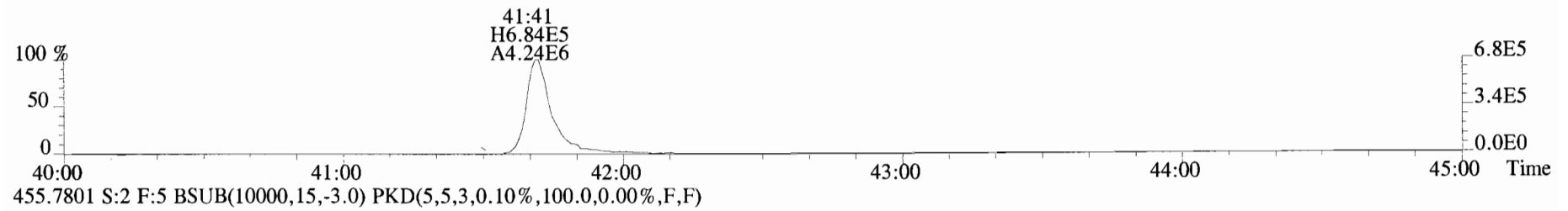
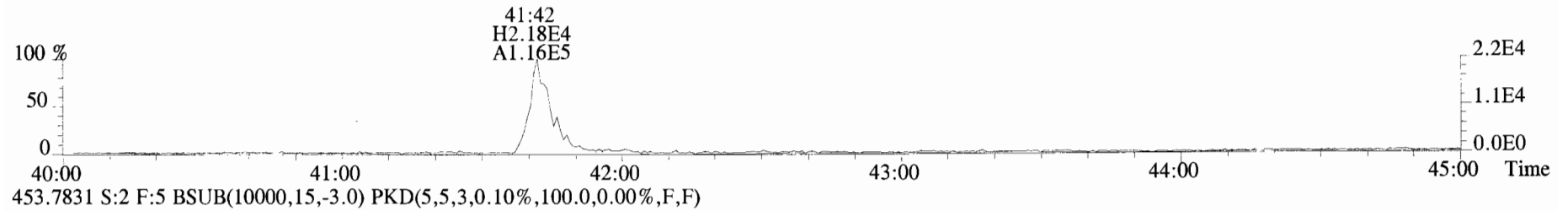
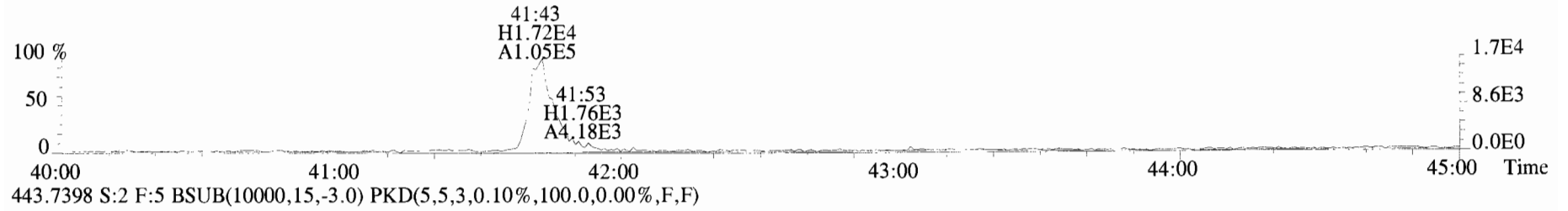
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



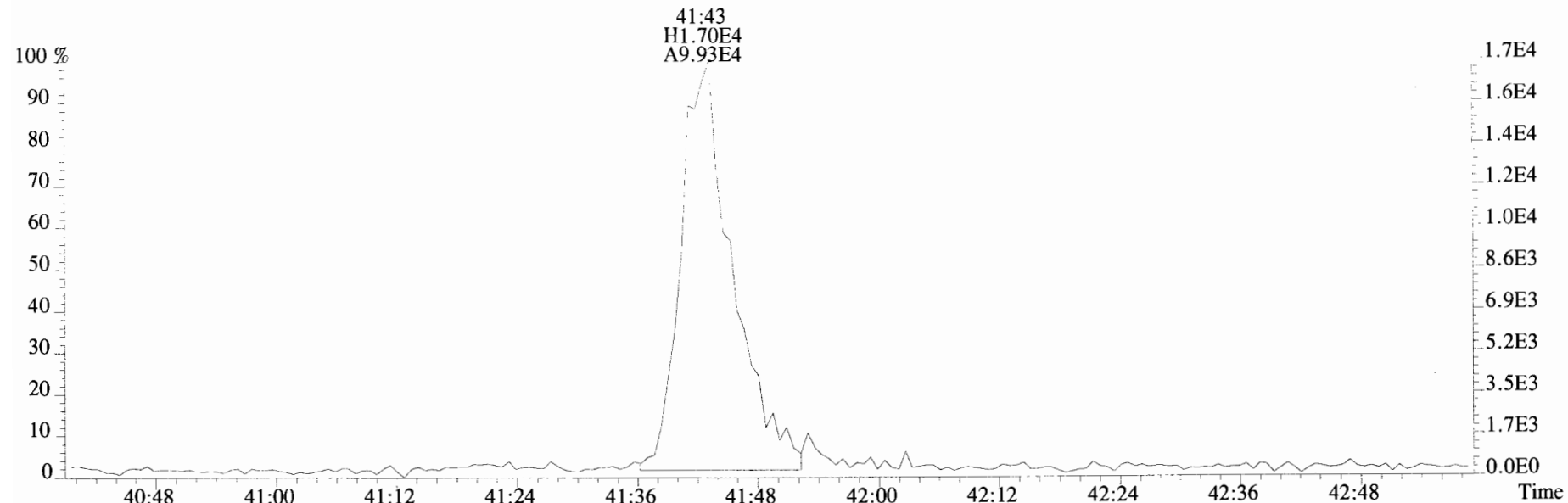
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



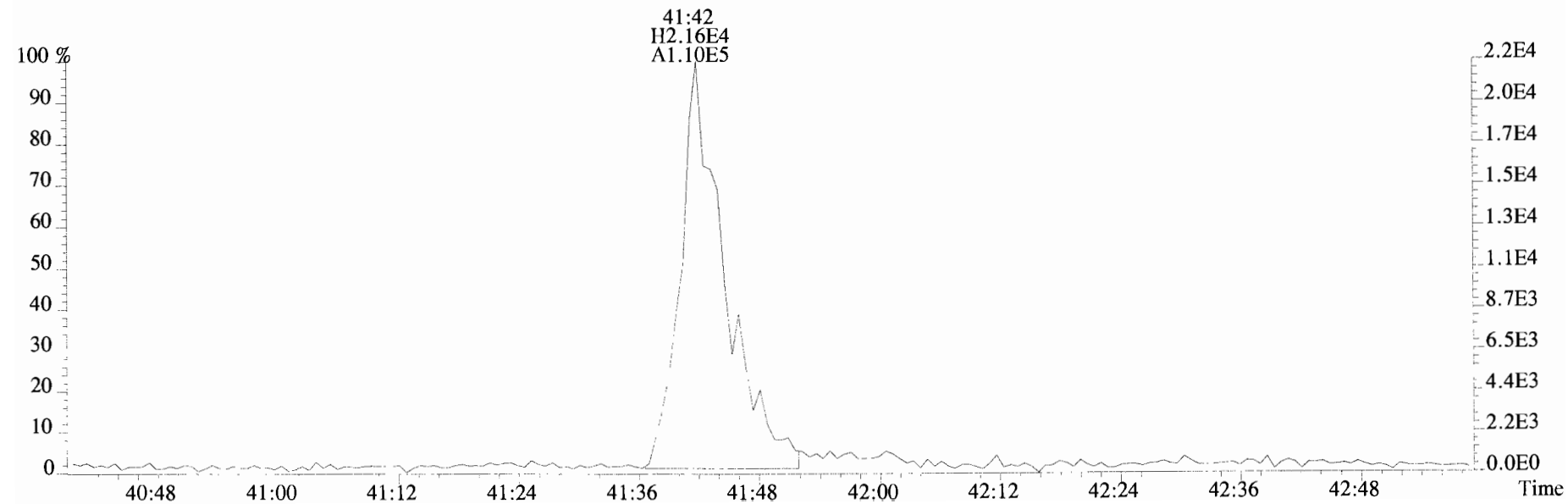
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
 441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



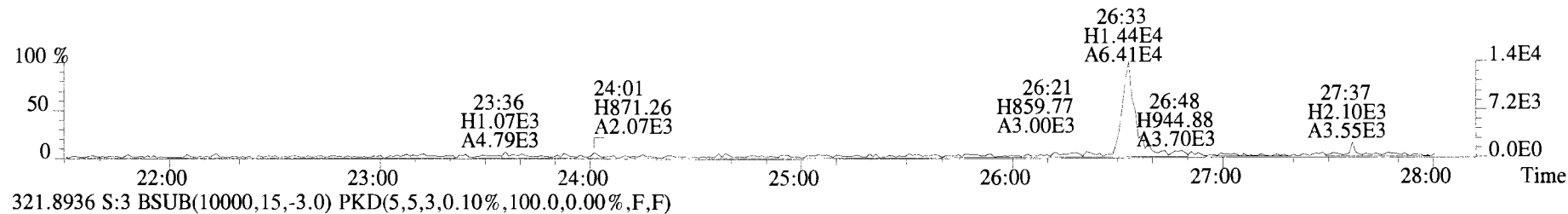
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



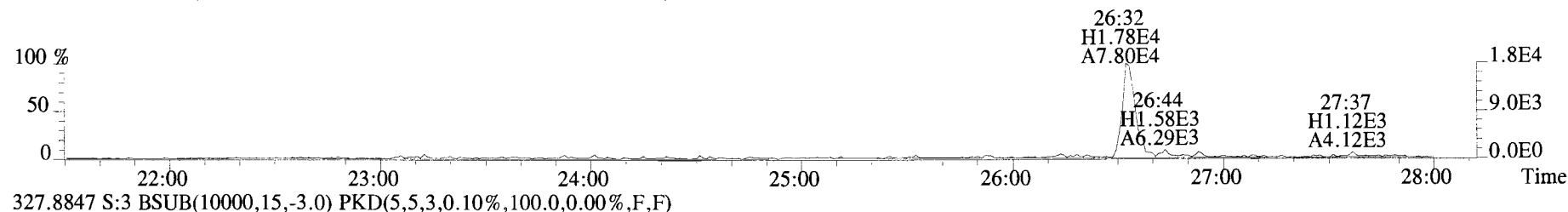
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



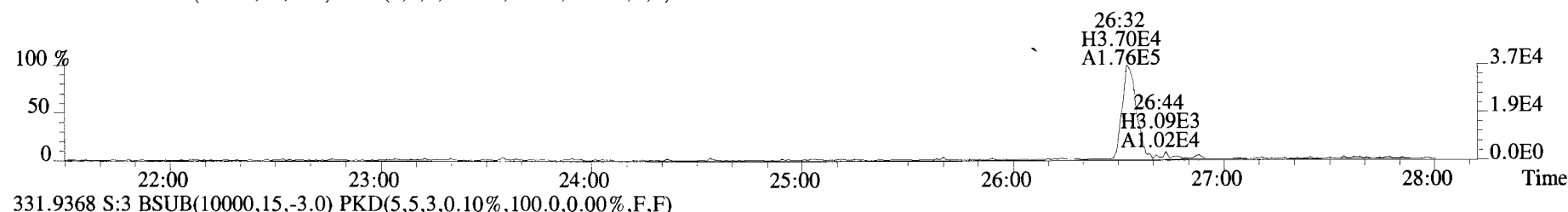
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



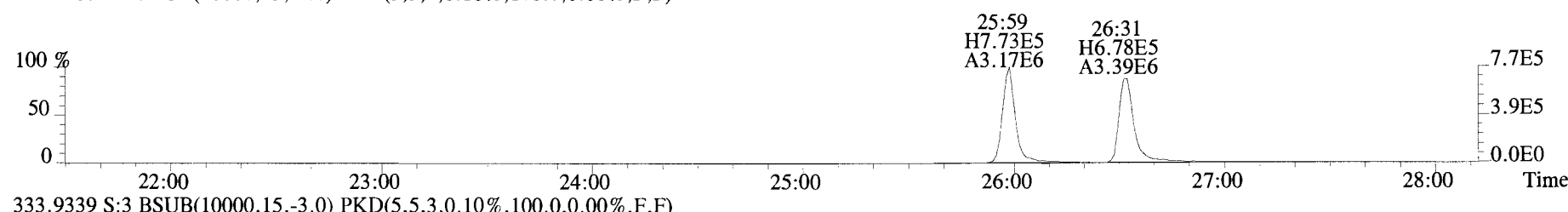
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



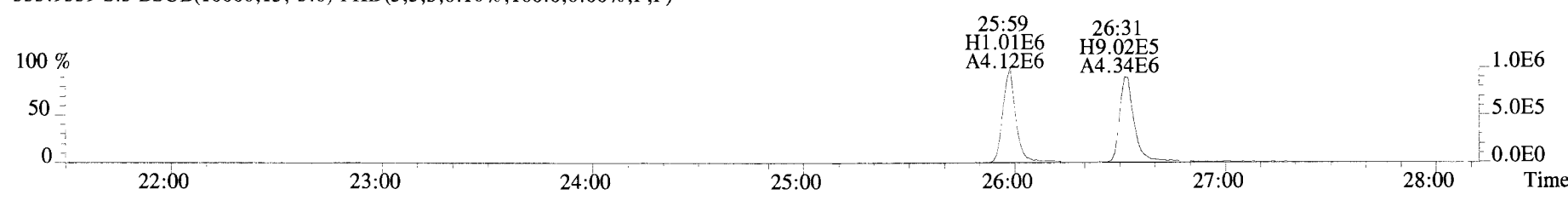
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



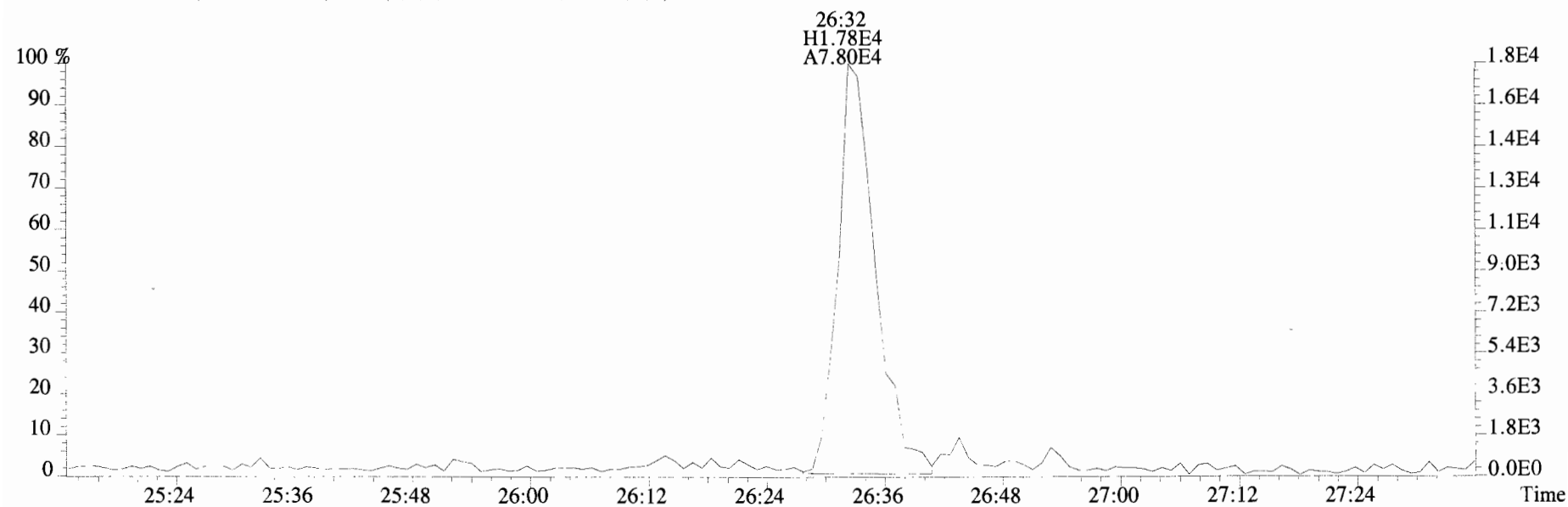
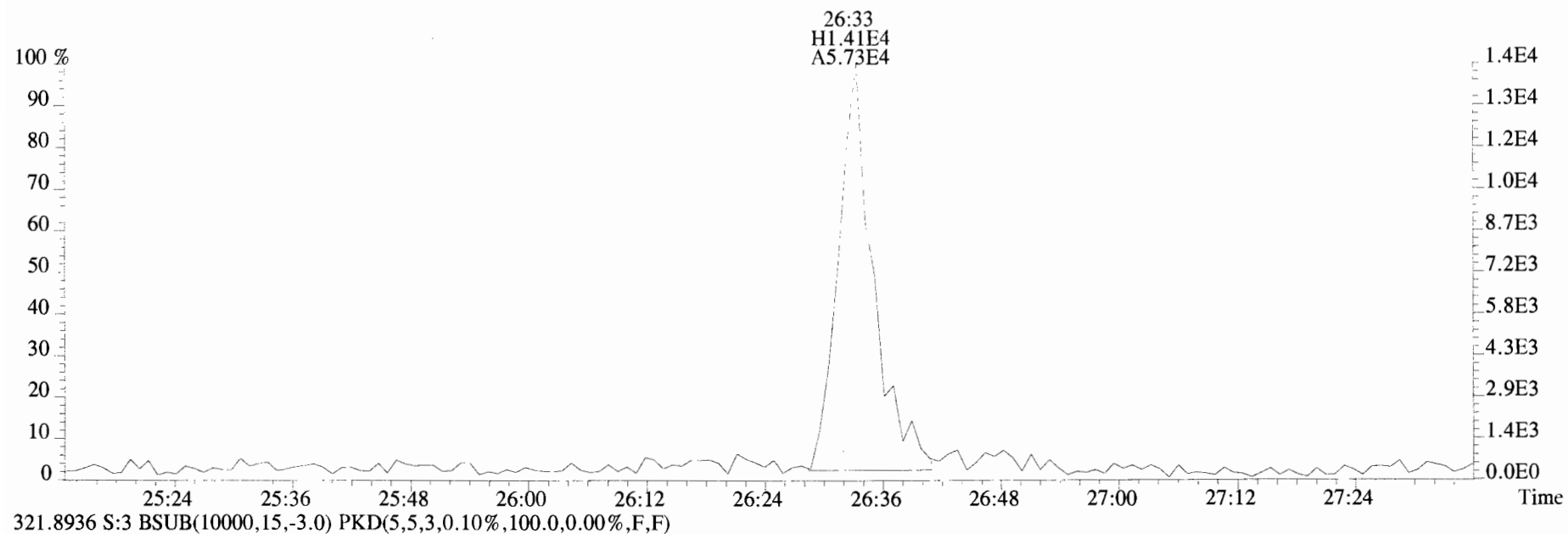
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



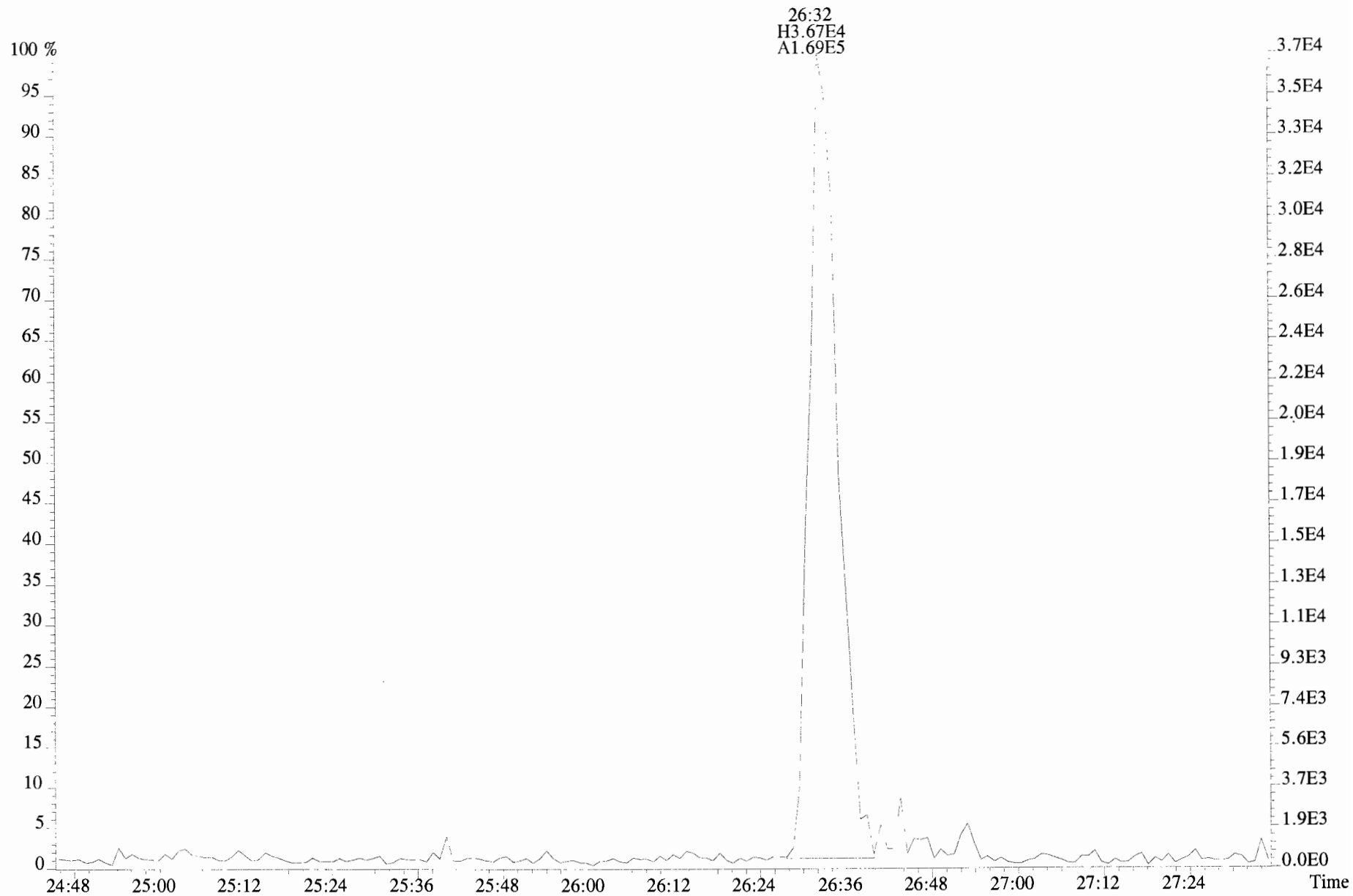
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



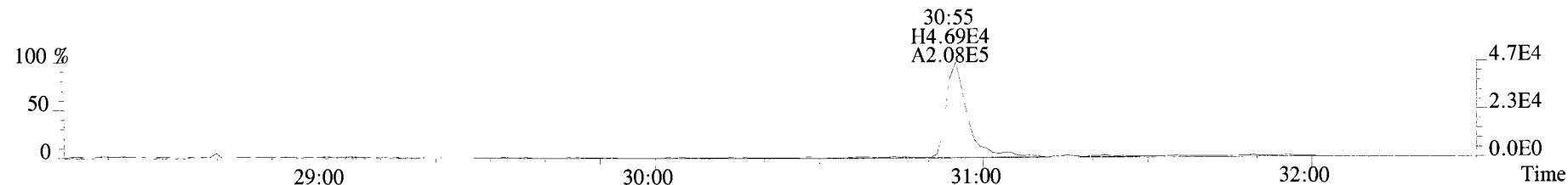
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



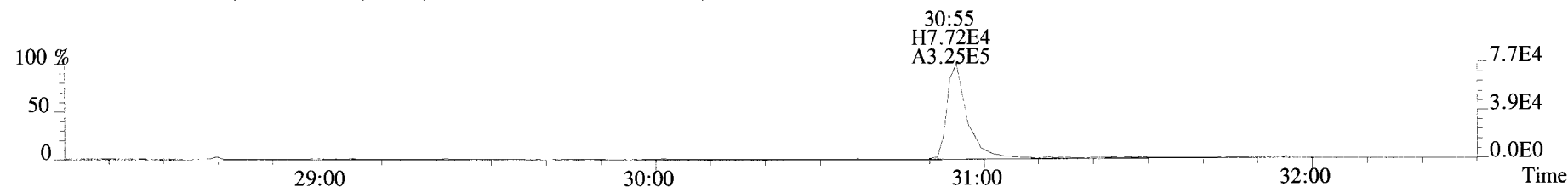
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
327.8847 S:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



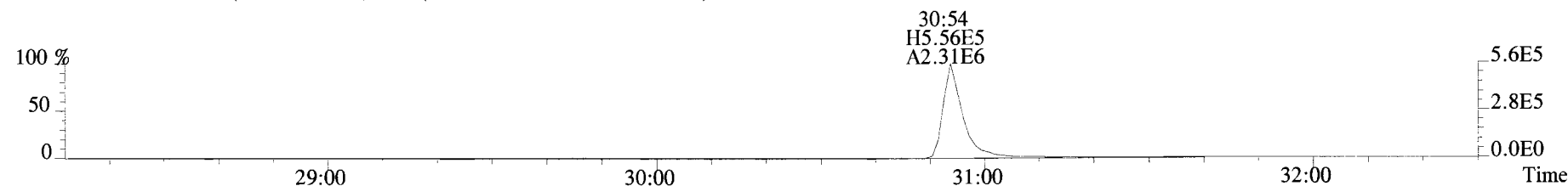
File:191009D1 #1-211 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



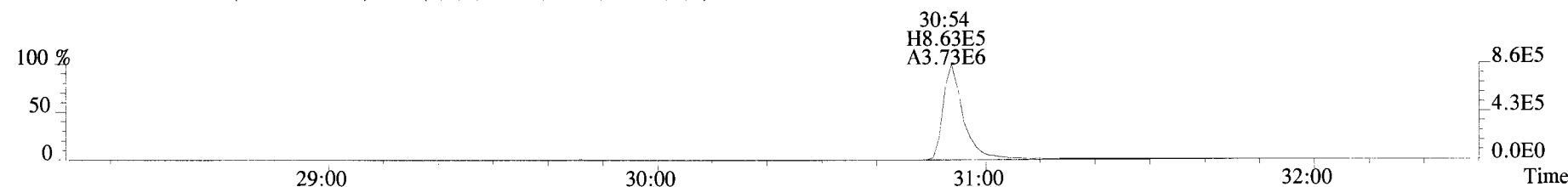
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



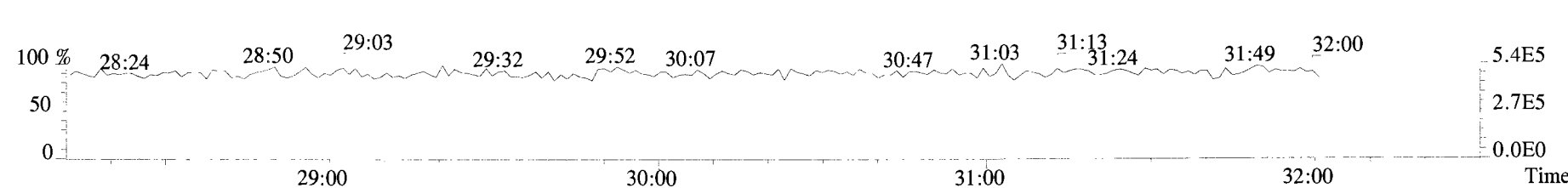
365.8978 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



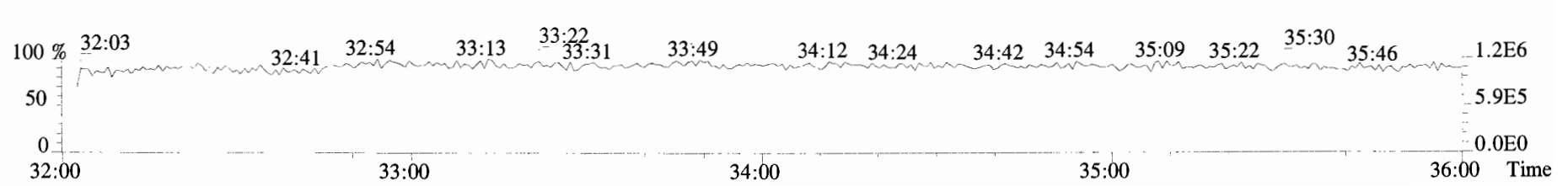
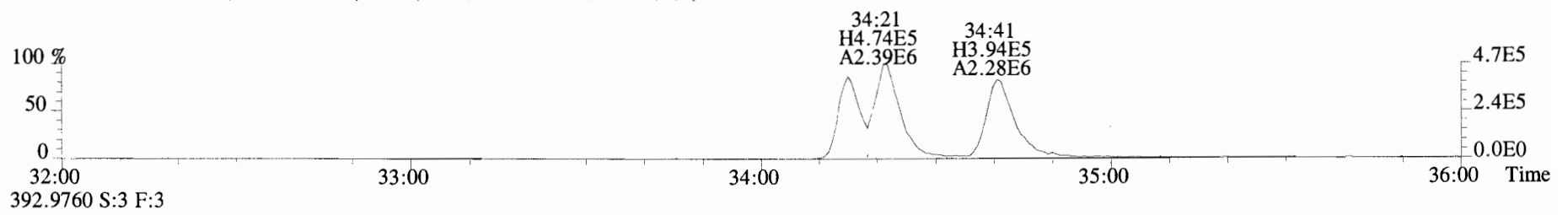
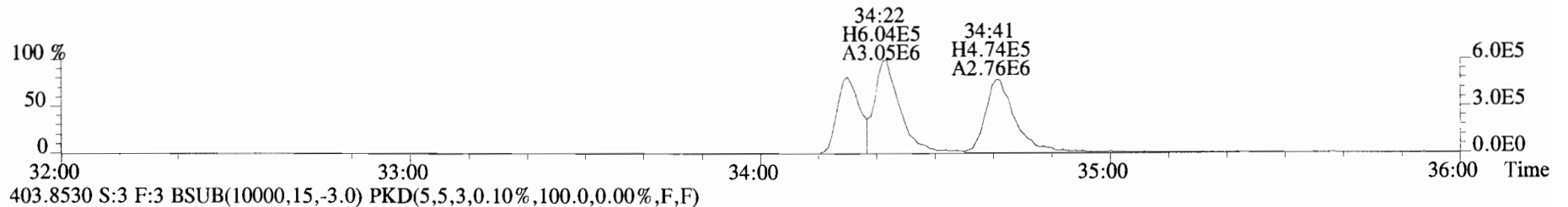
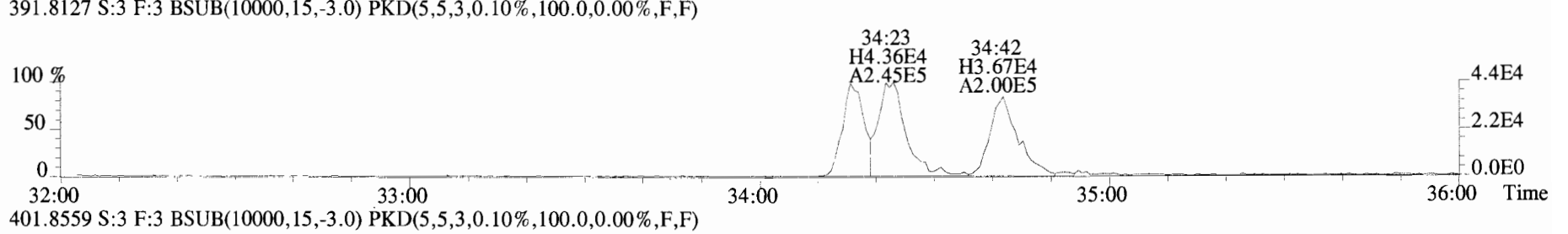
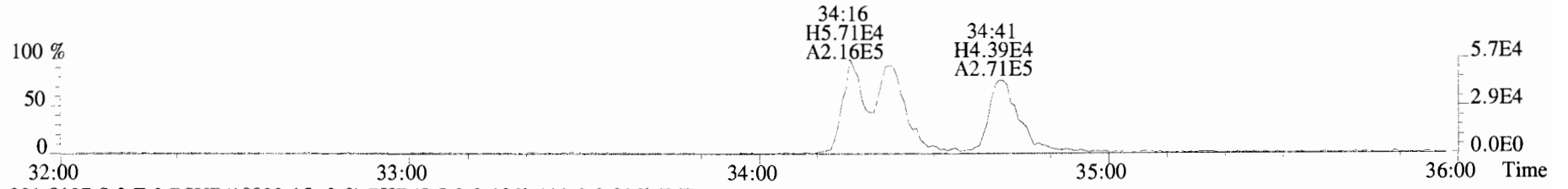
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



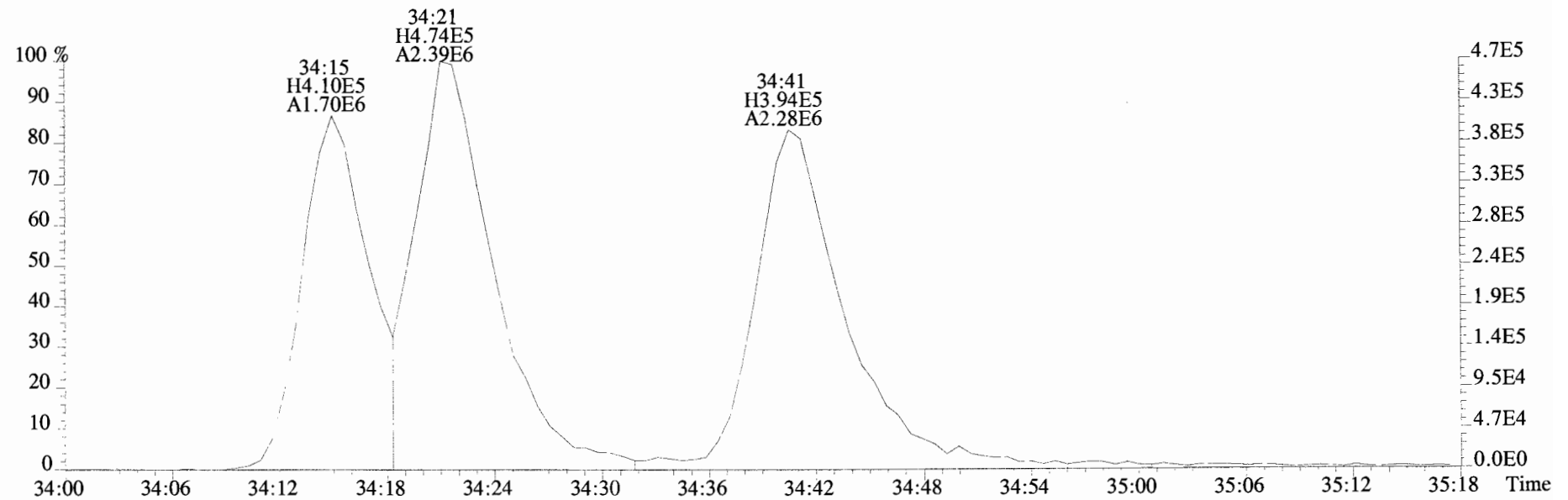
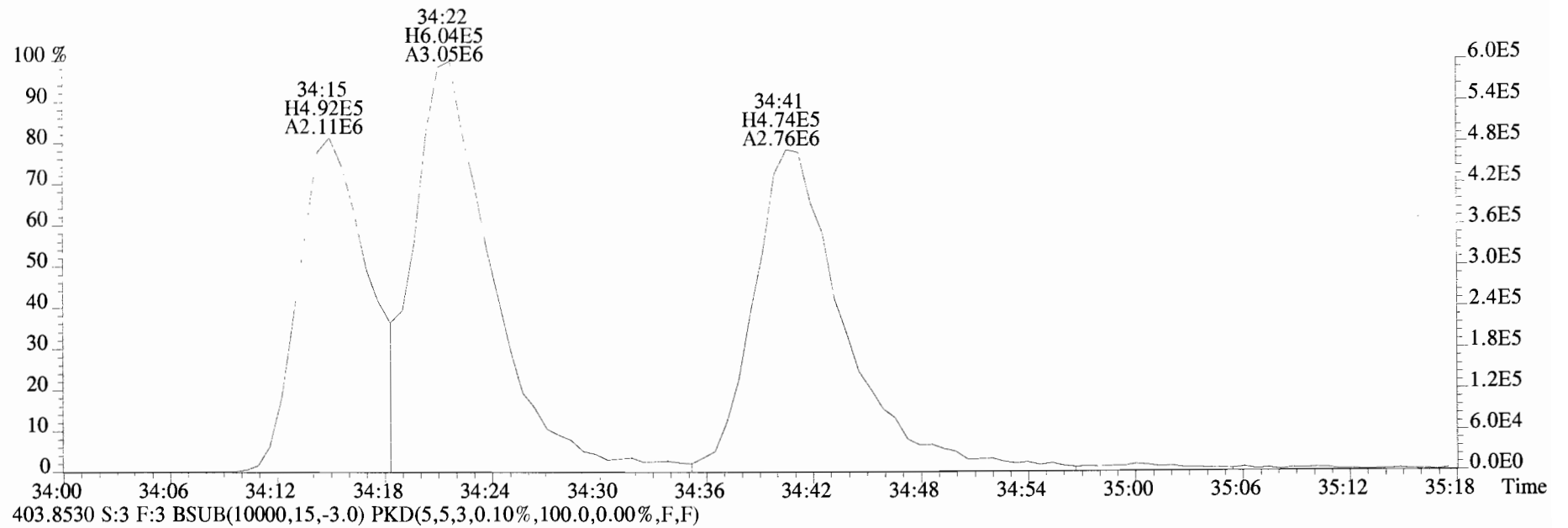
366.9792 S:3 F:2



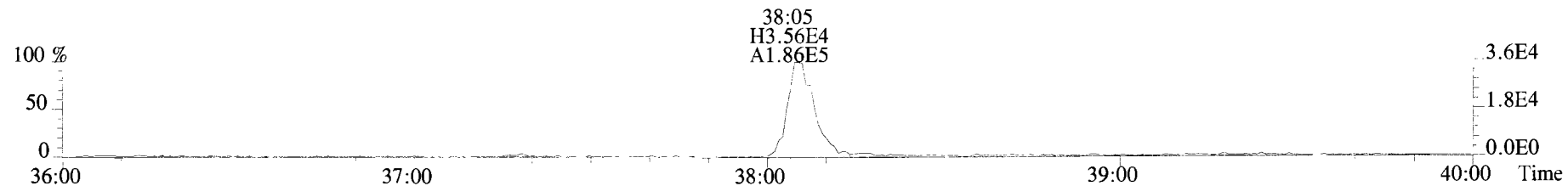
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



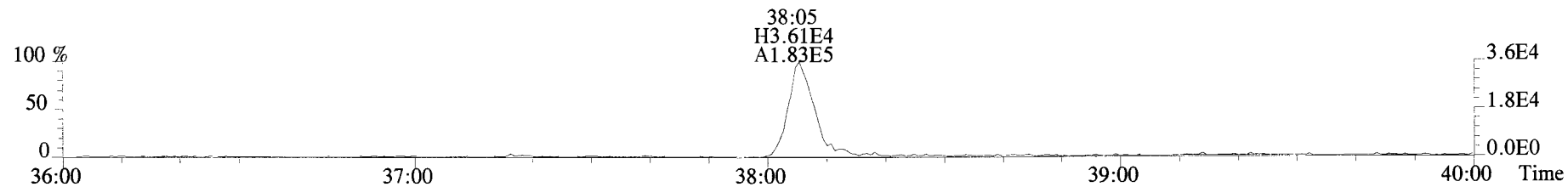
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text: Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



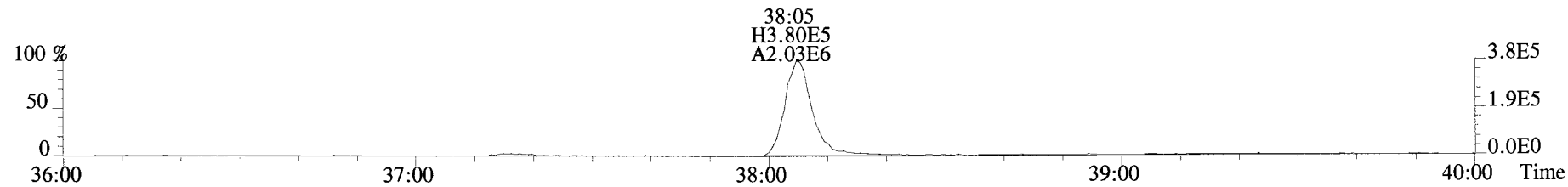
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



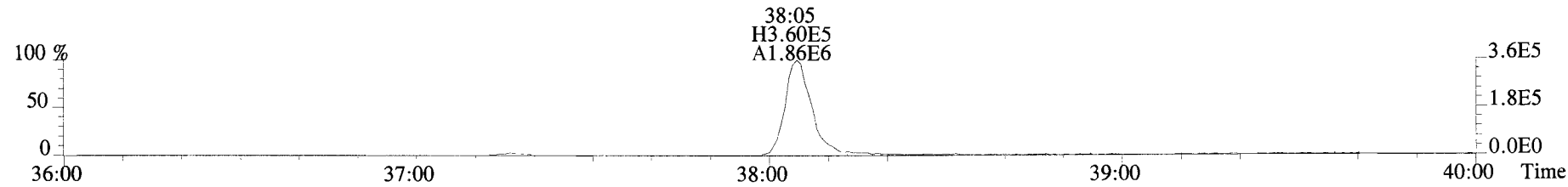
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



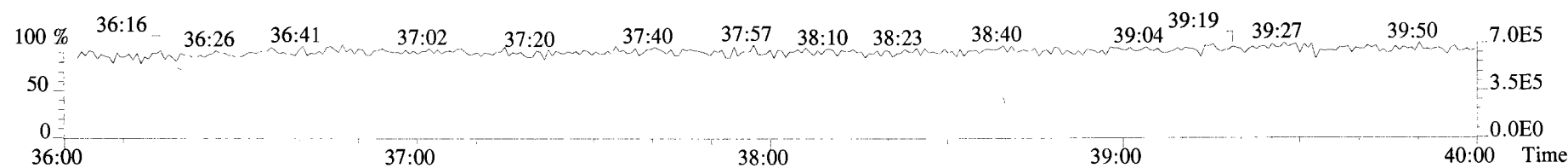
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



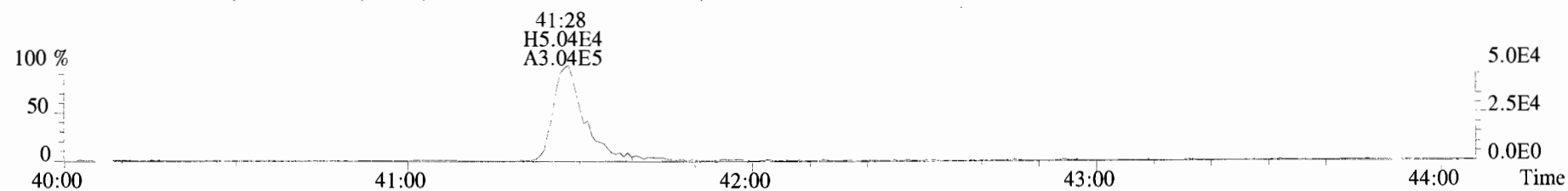
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



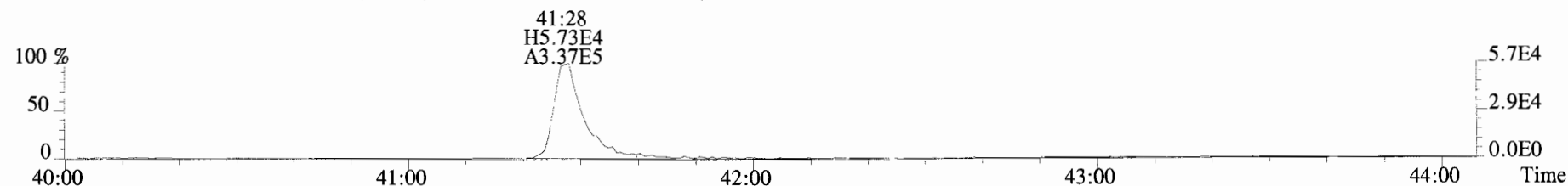
454.9728 S:3 F:4



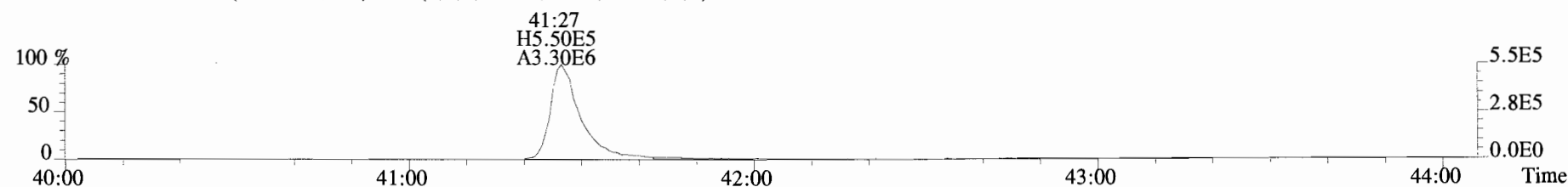
File:191009D1 #1-432 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



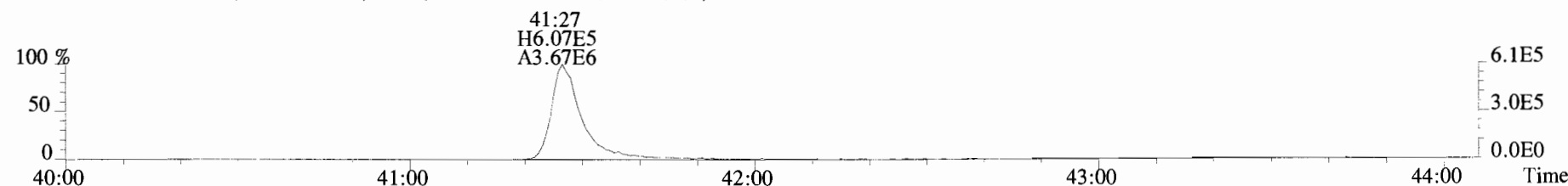
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



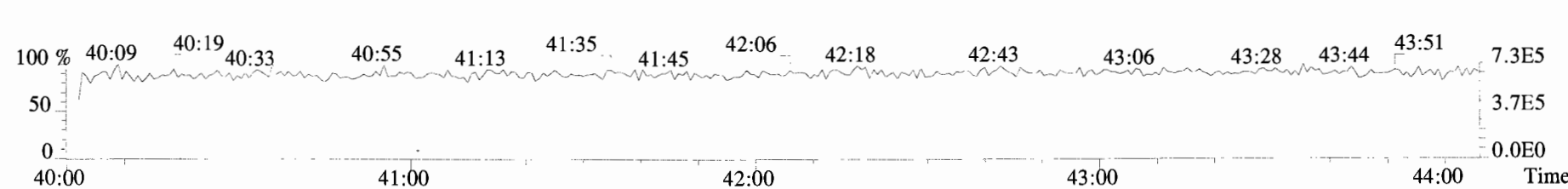
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



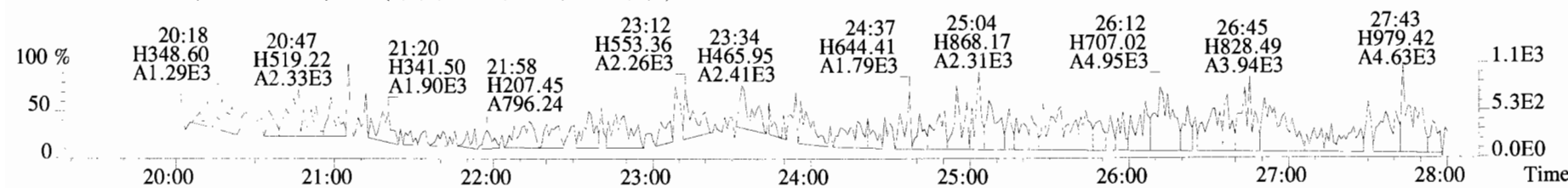
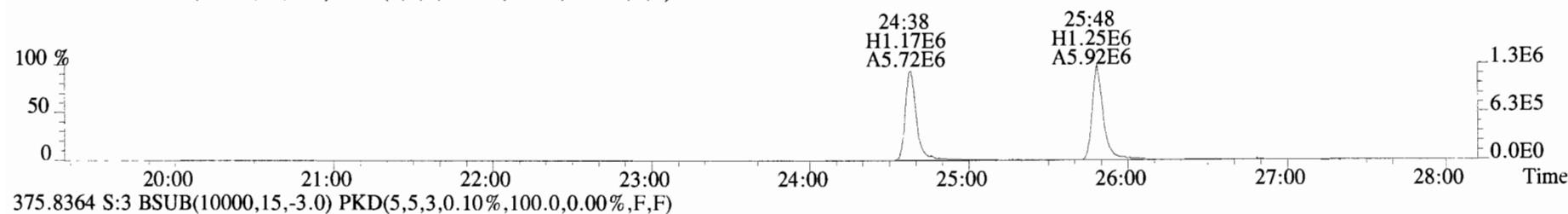
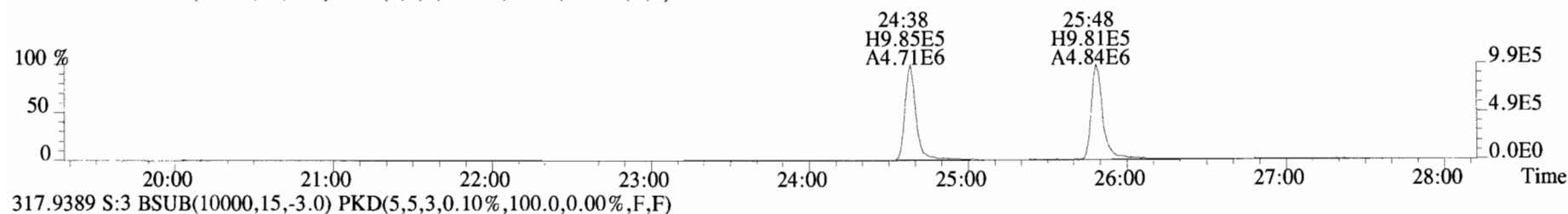
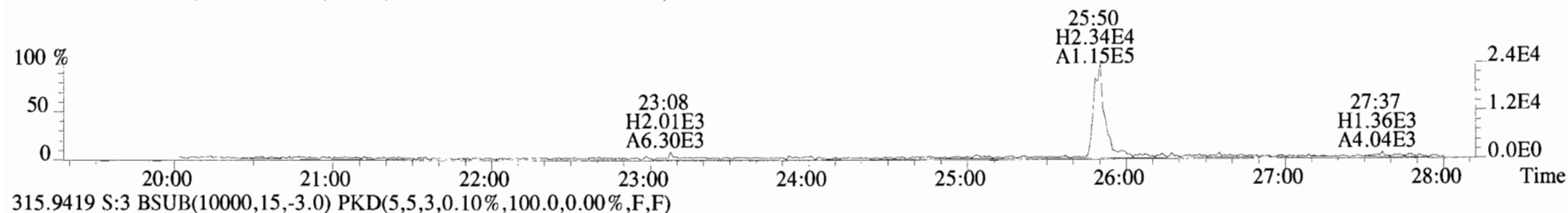
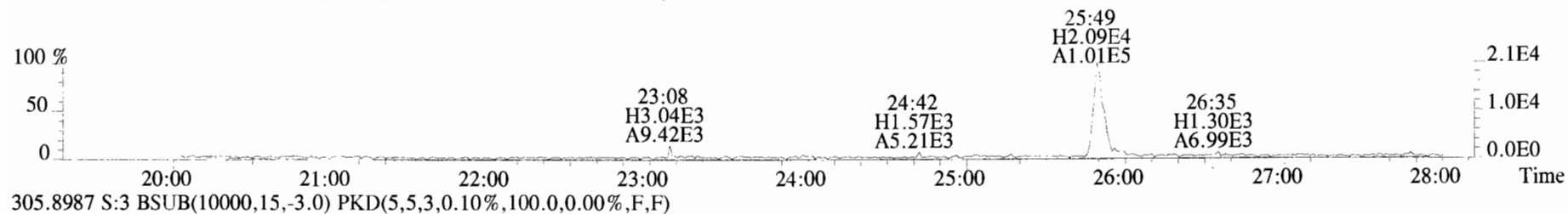
471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



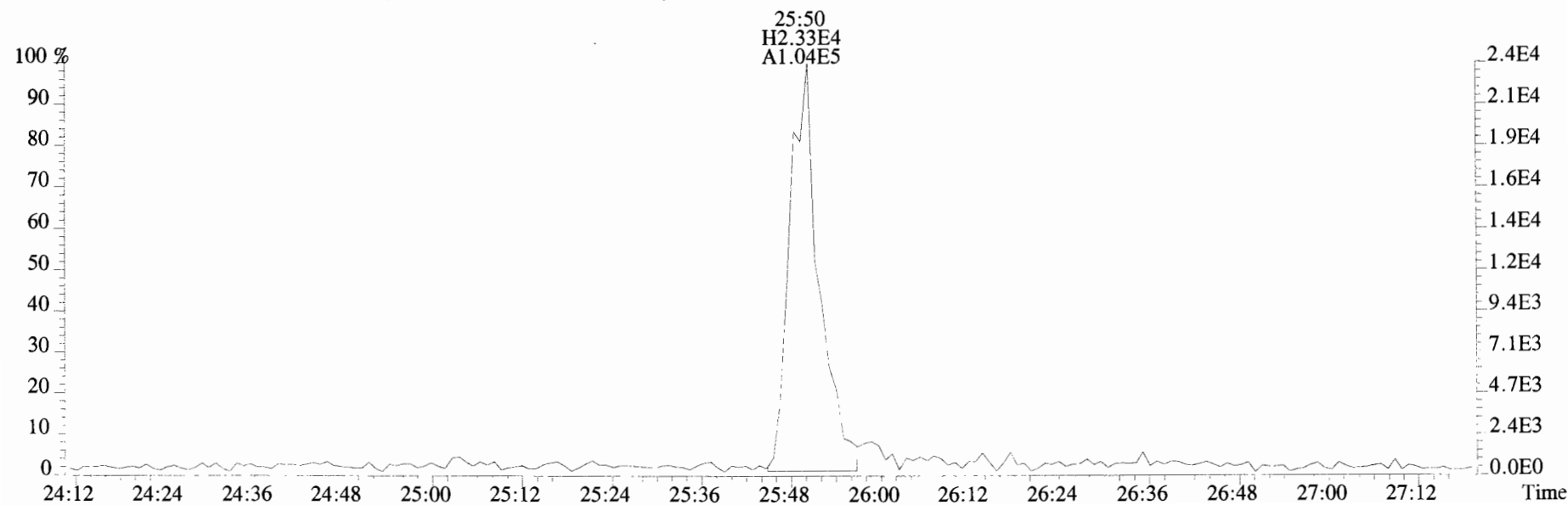
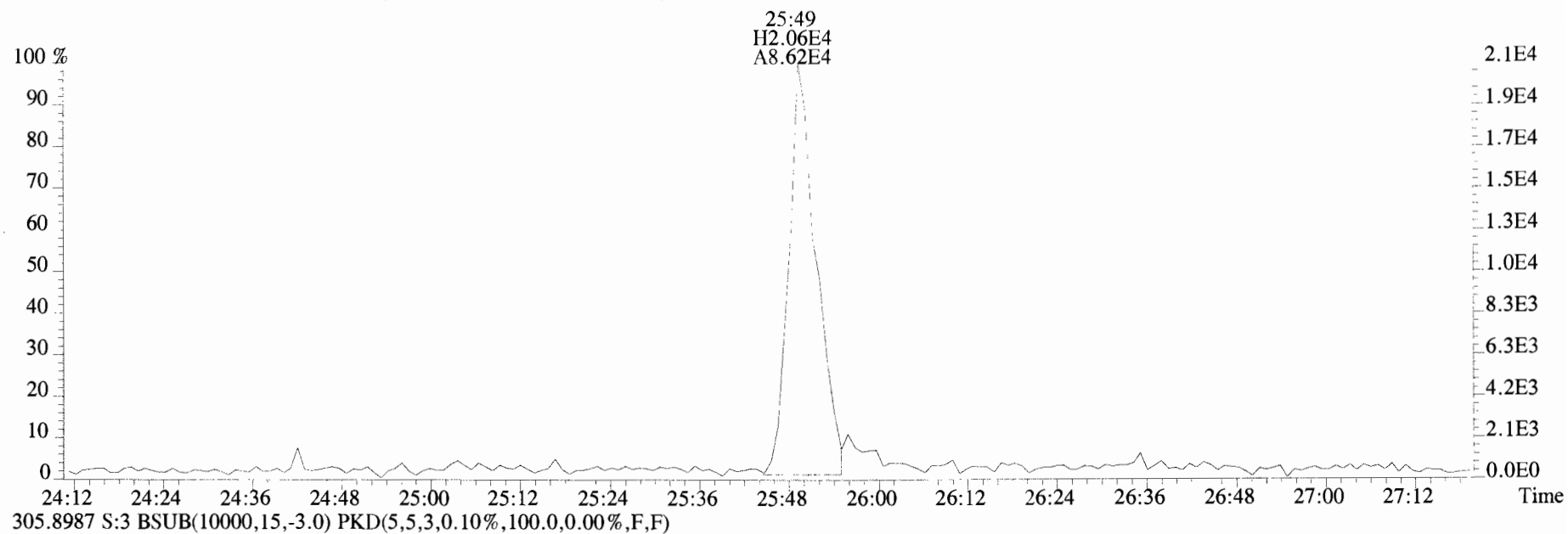
454.9728 S:3 F:5



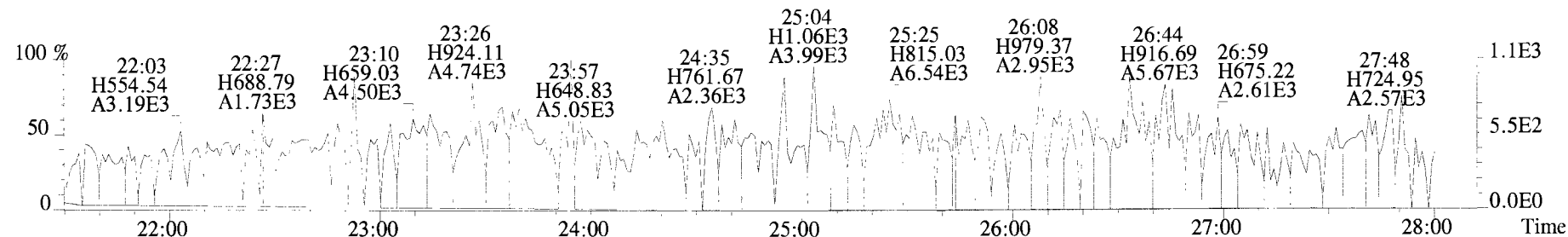
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



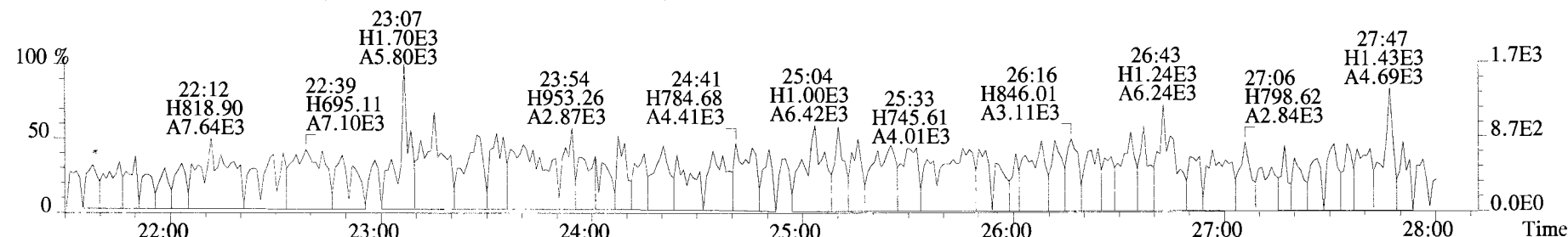
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



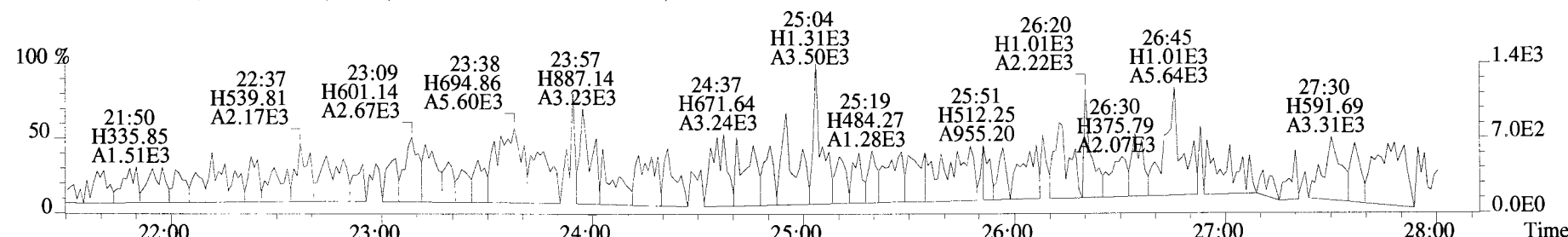
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



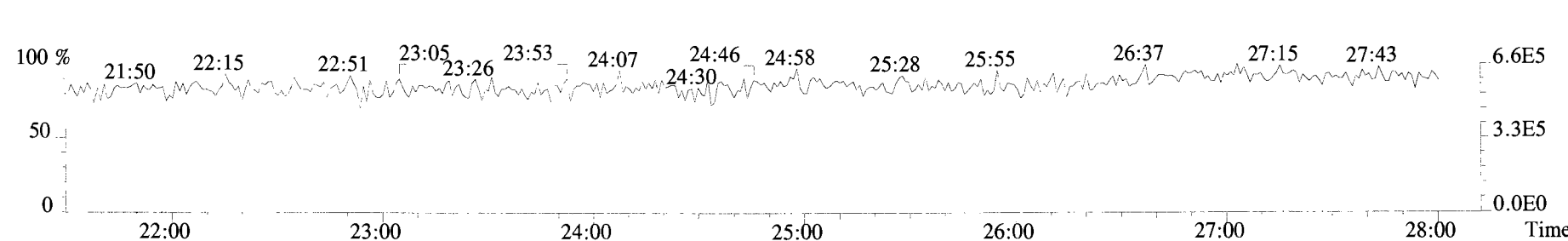
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



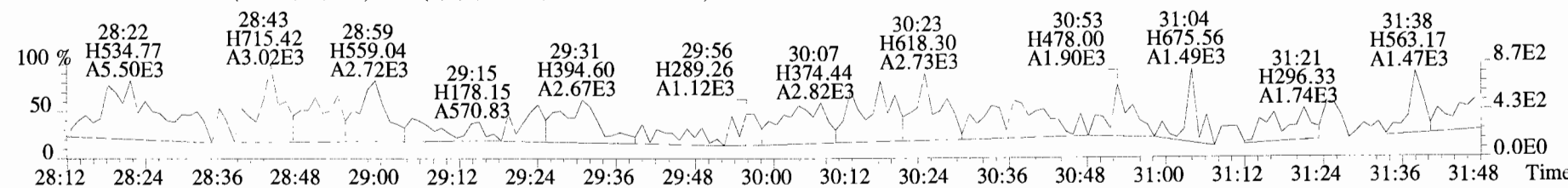
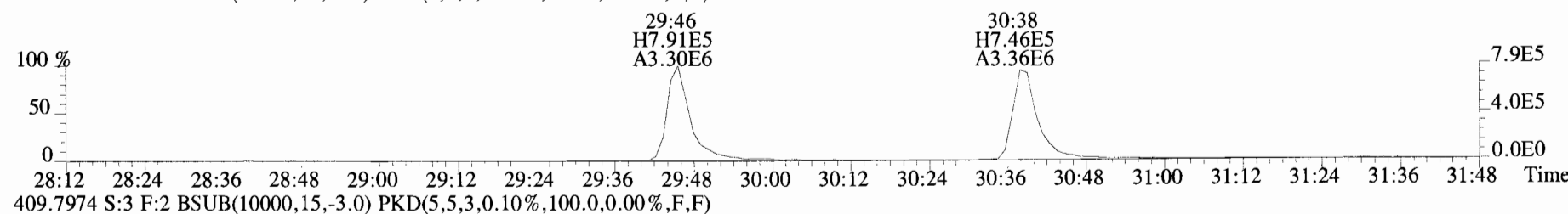
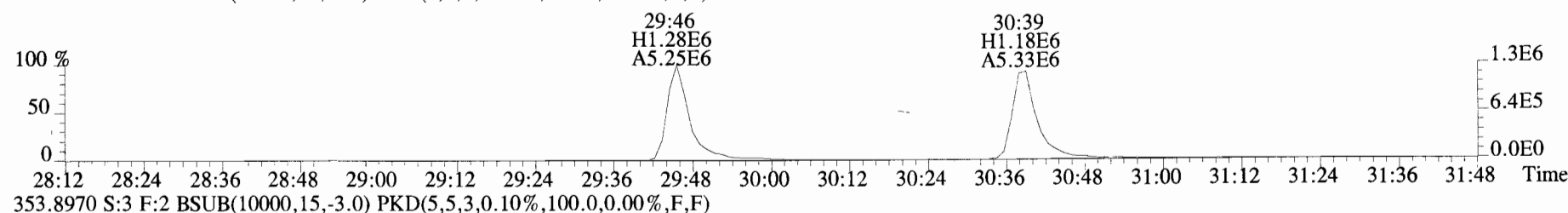
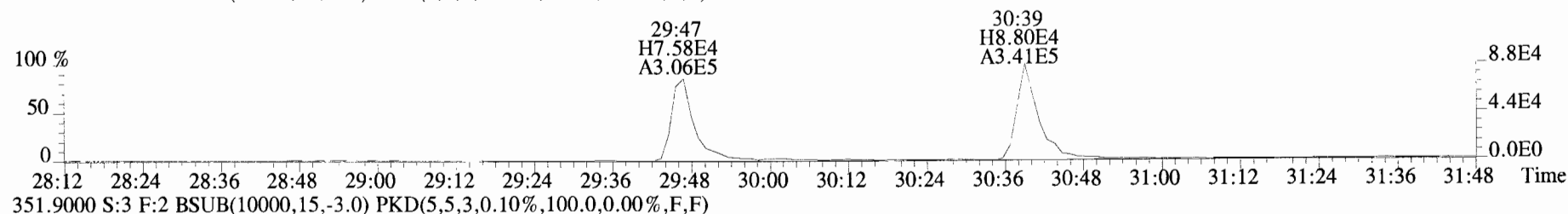
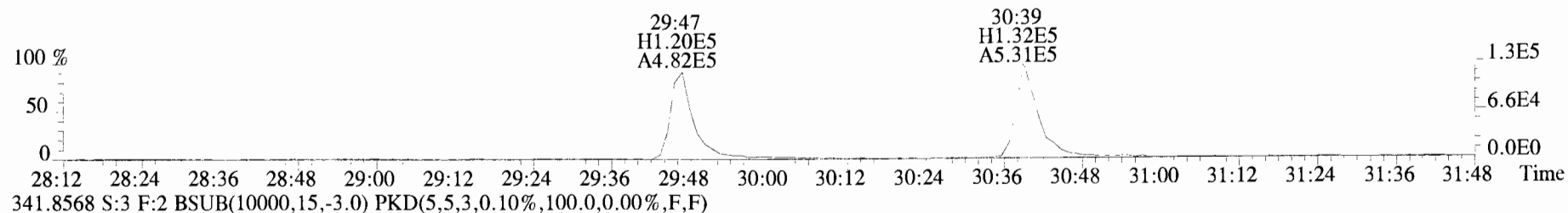
409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



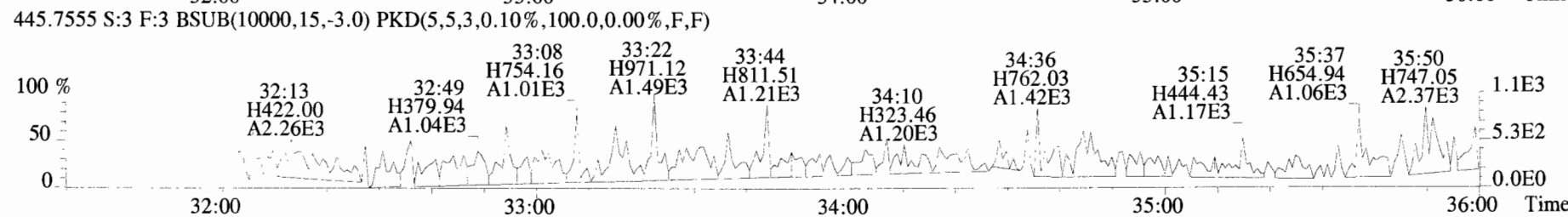
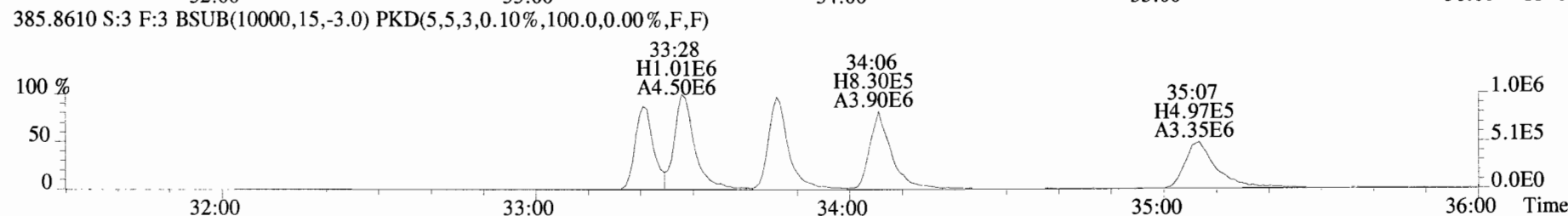
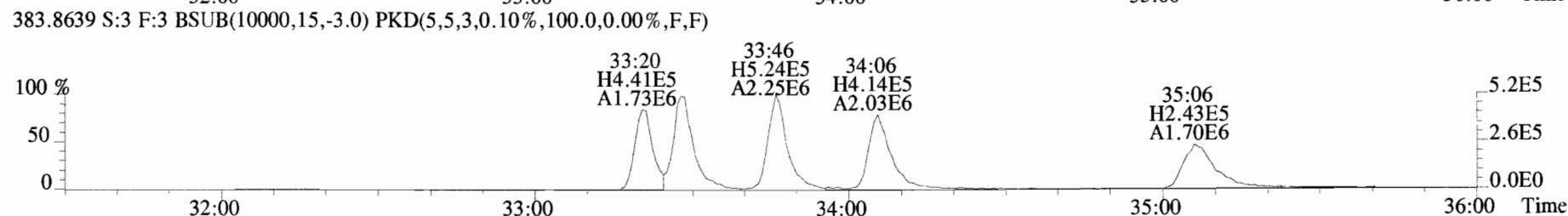
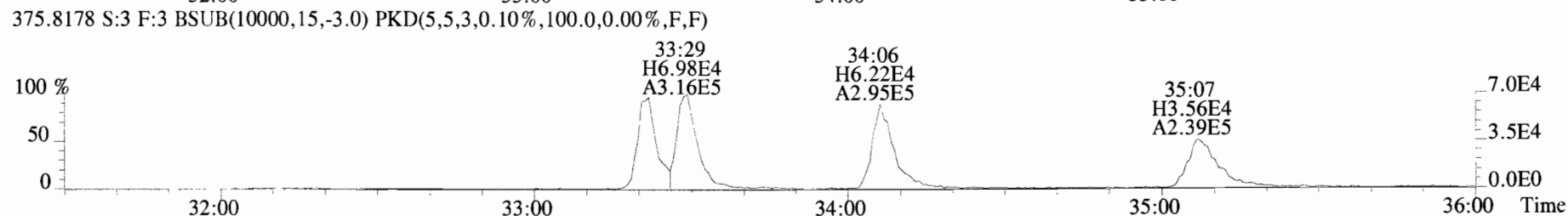
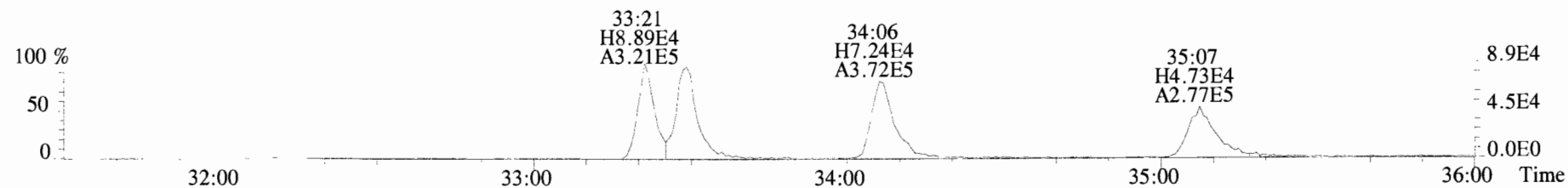
316.9824 S:3



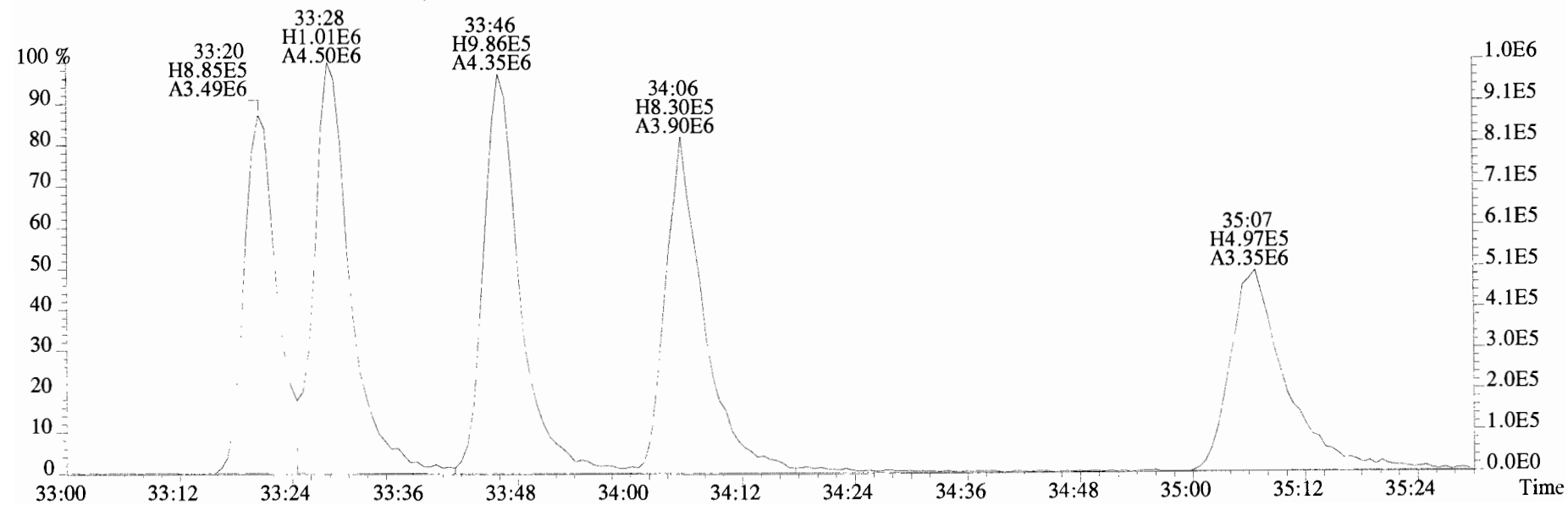
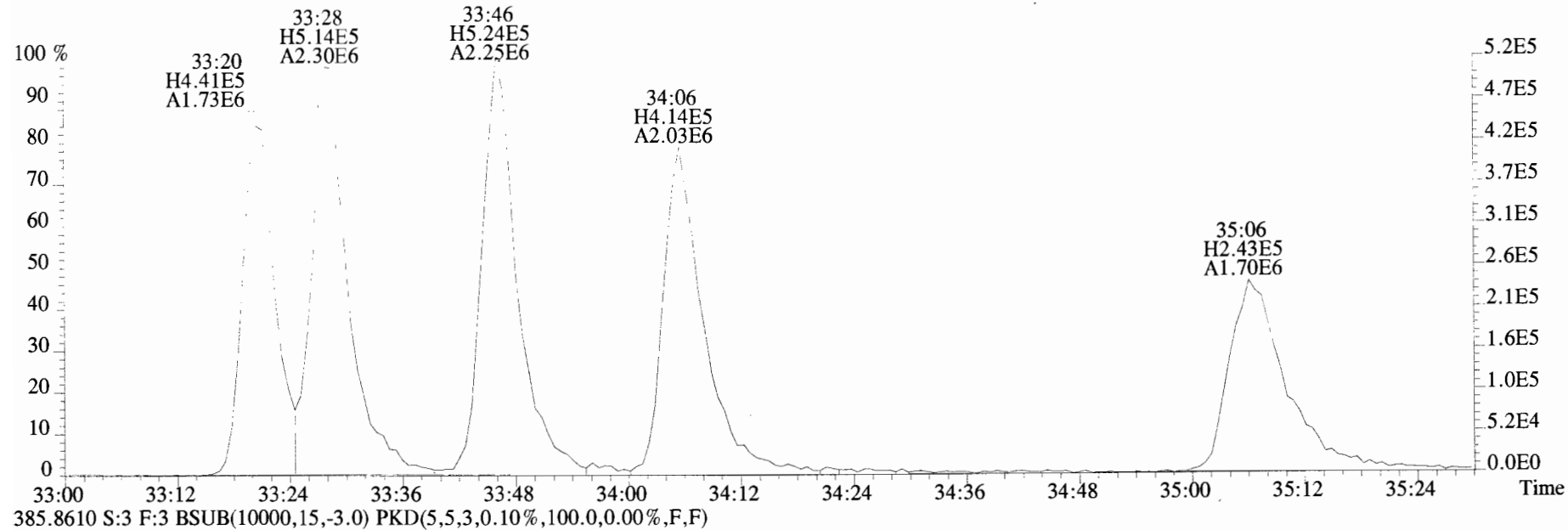
File:191009D1 #1-211 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



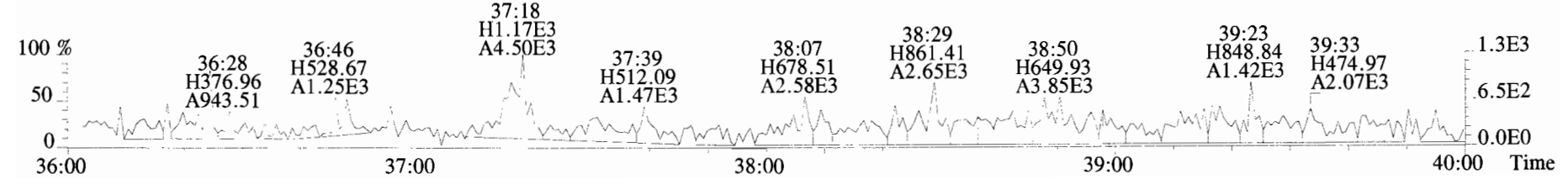
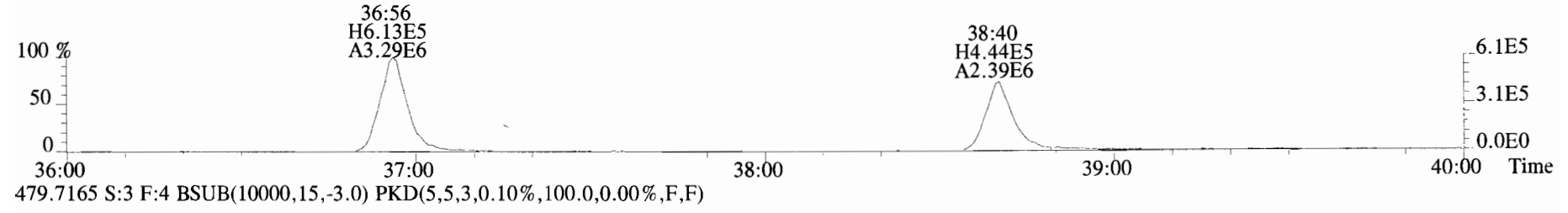
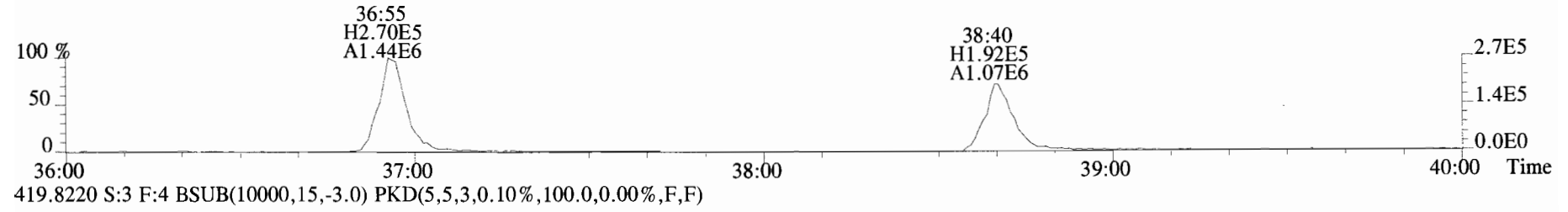
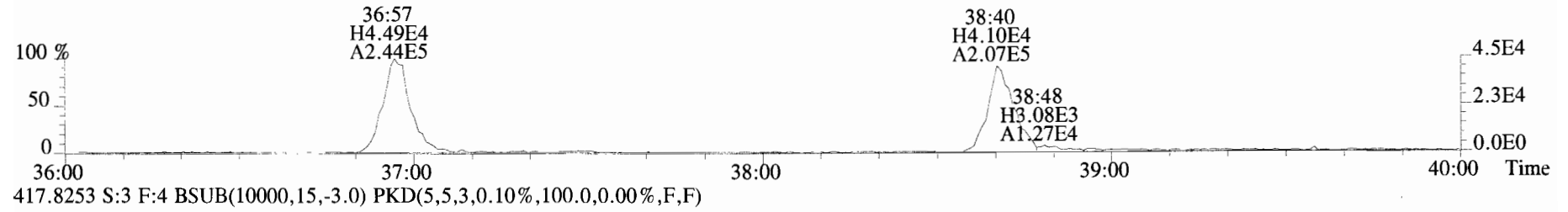
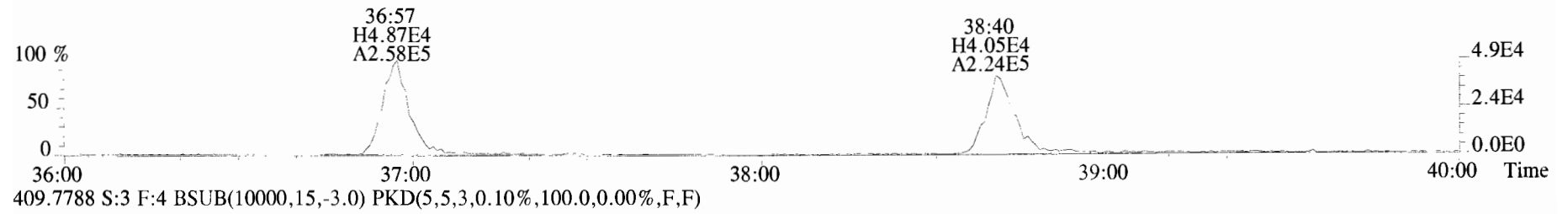
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
 373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



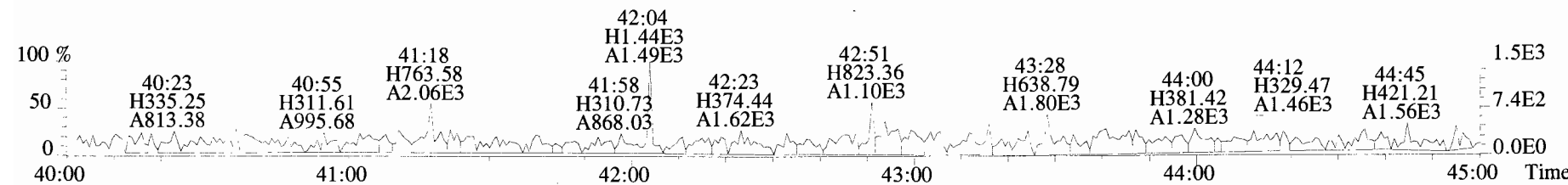
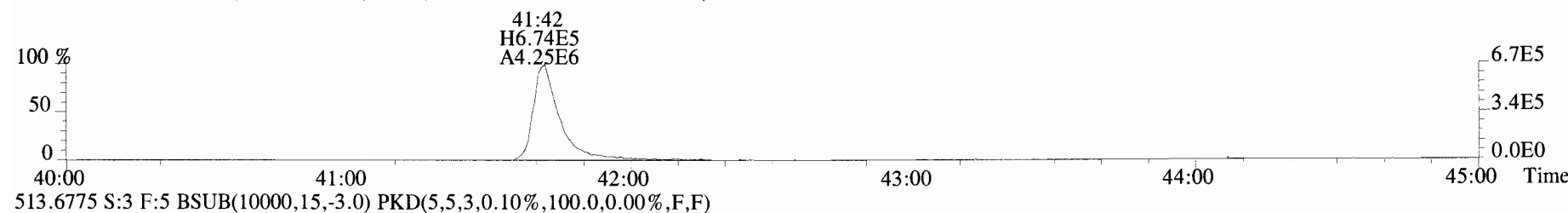
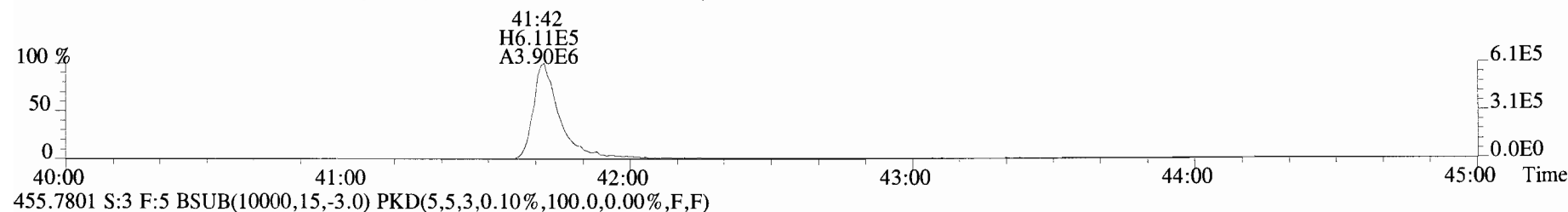
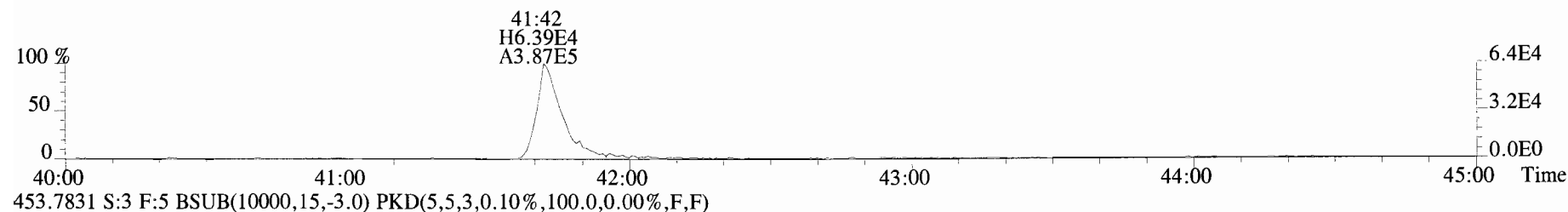
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



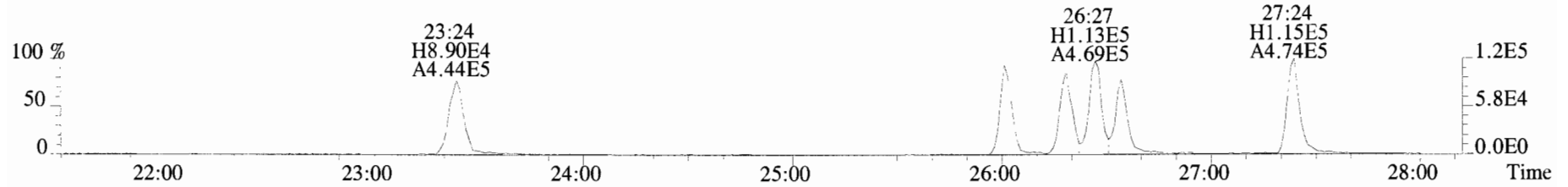
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



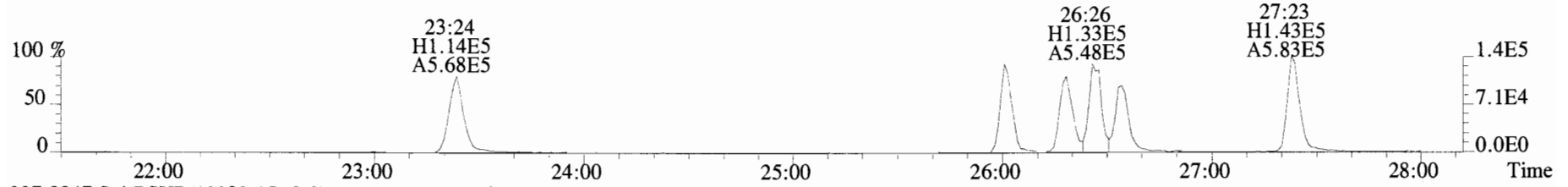
File:191009D1 #1-432 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



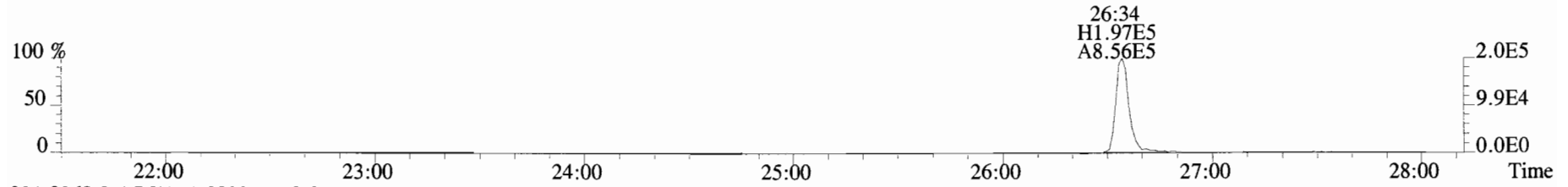
File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



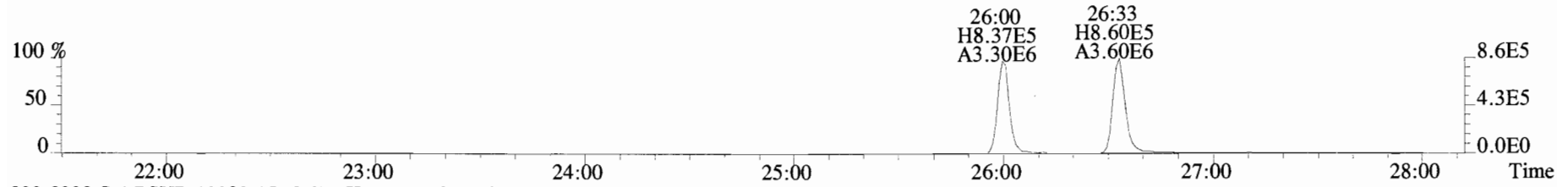
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



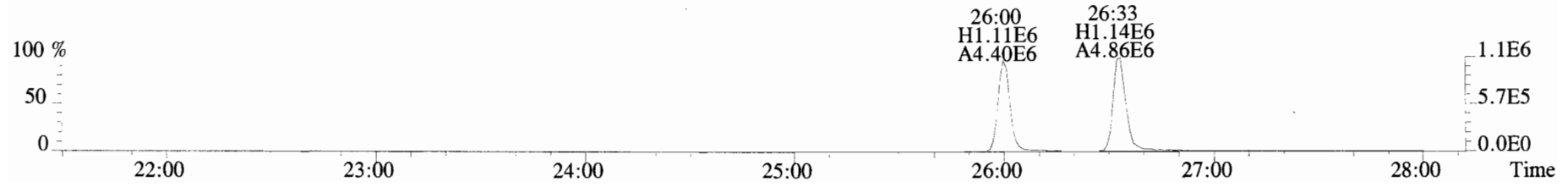
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



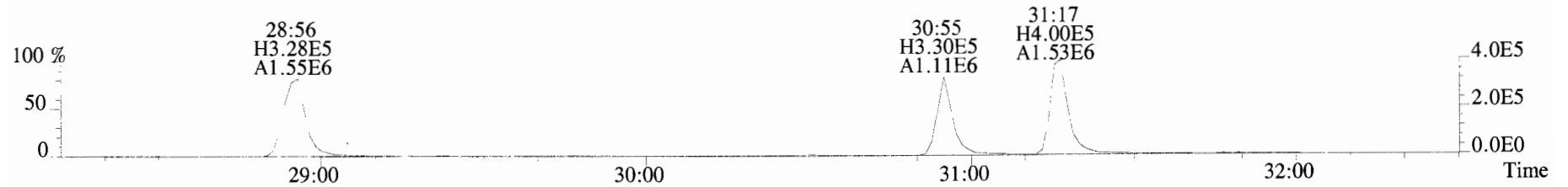
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



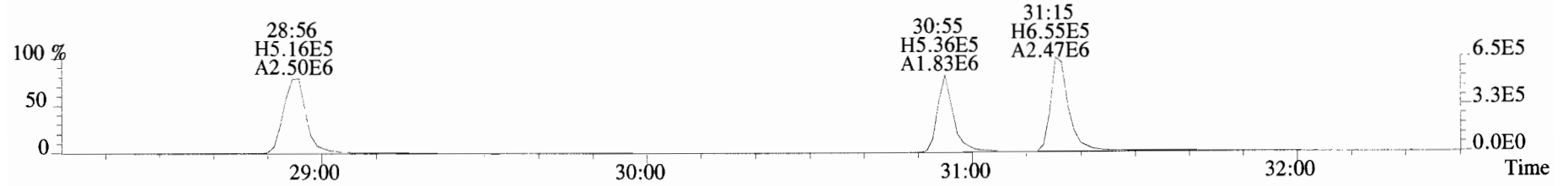
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



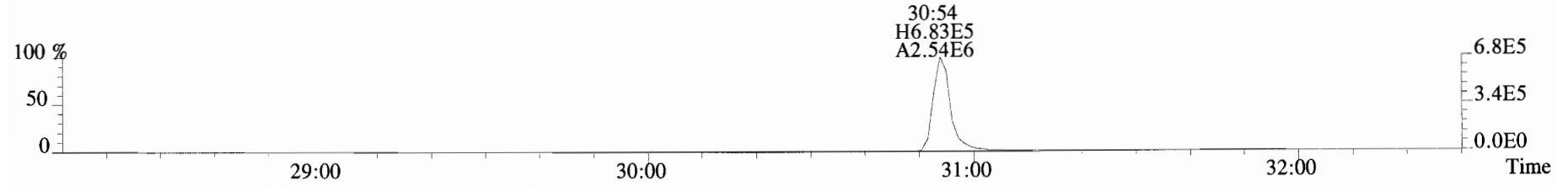
File:191009D1 #1-211 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



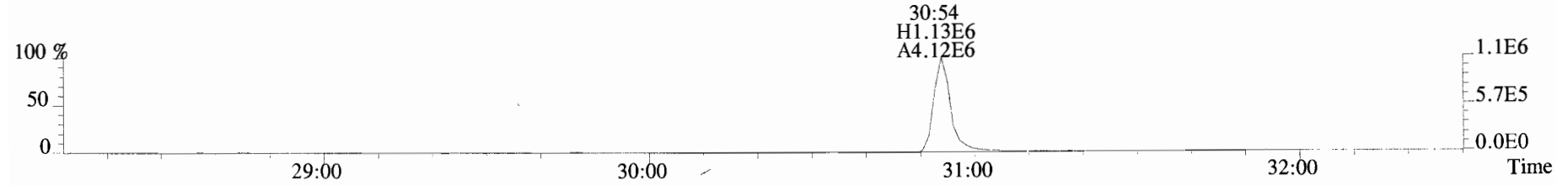
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



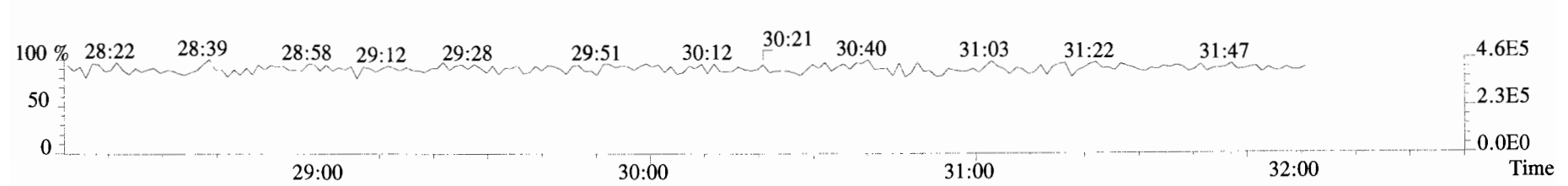
365.8978 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



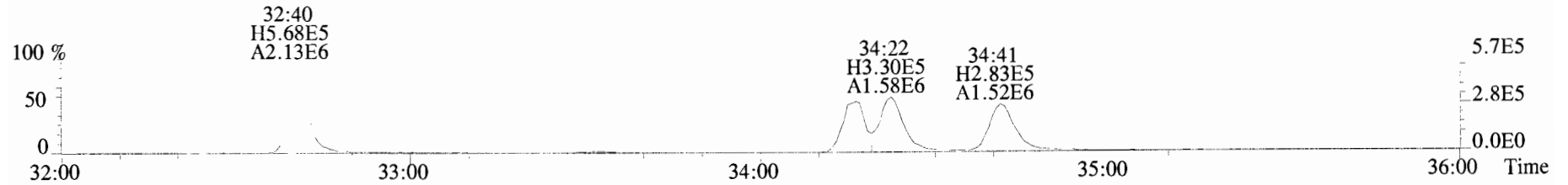
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



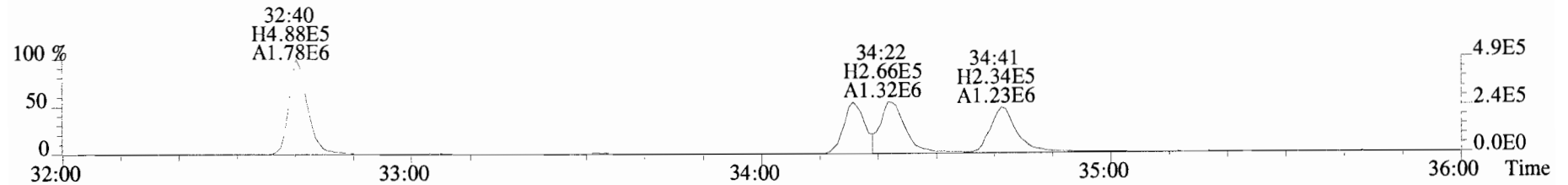
366.9792 S:4 F:2



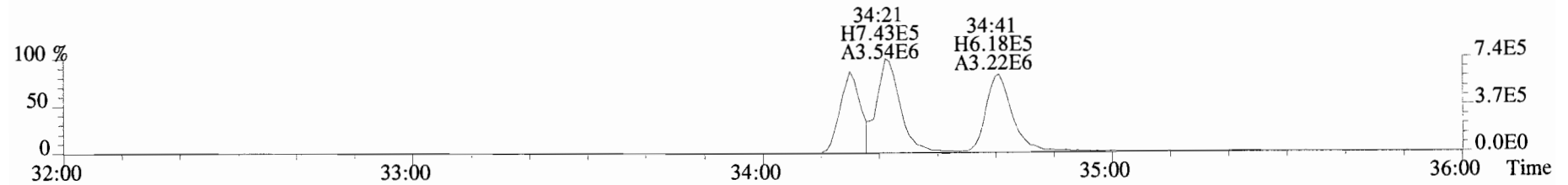
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



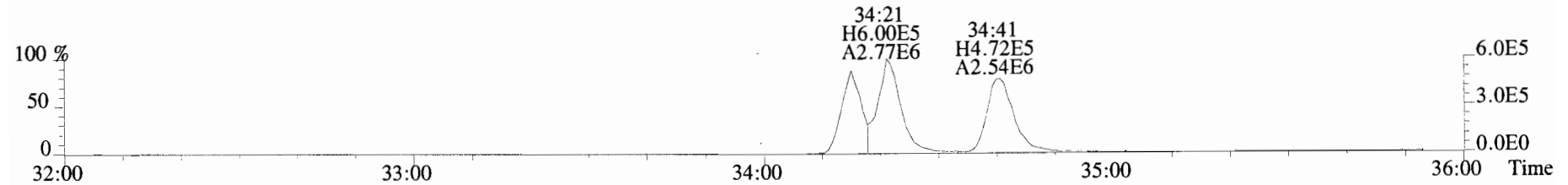
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



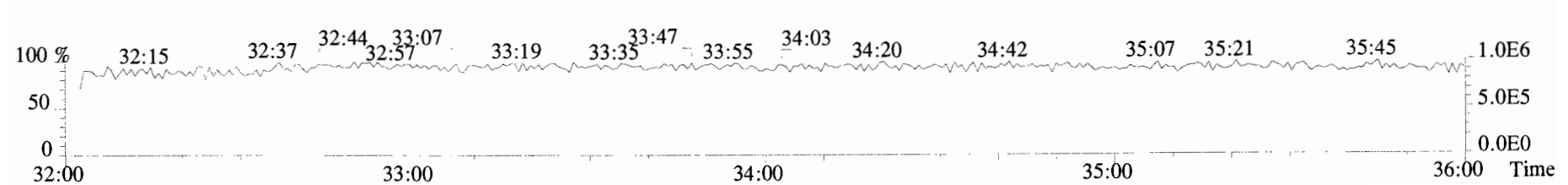
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



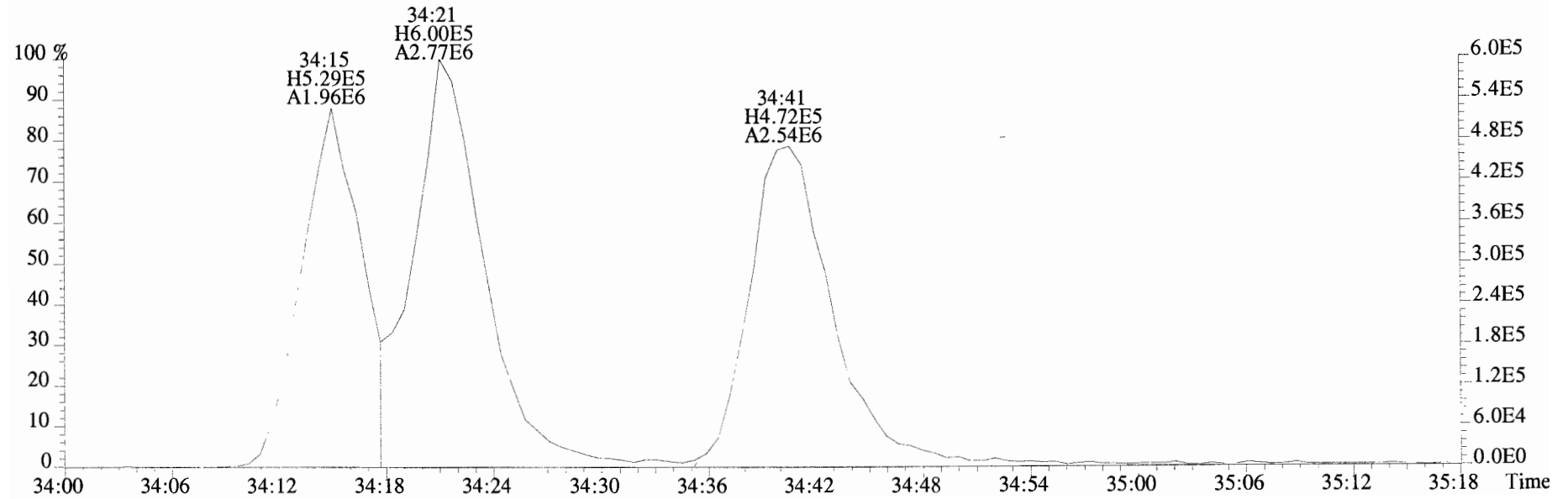
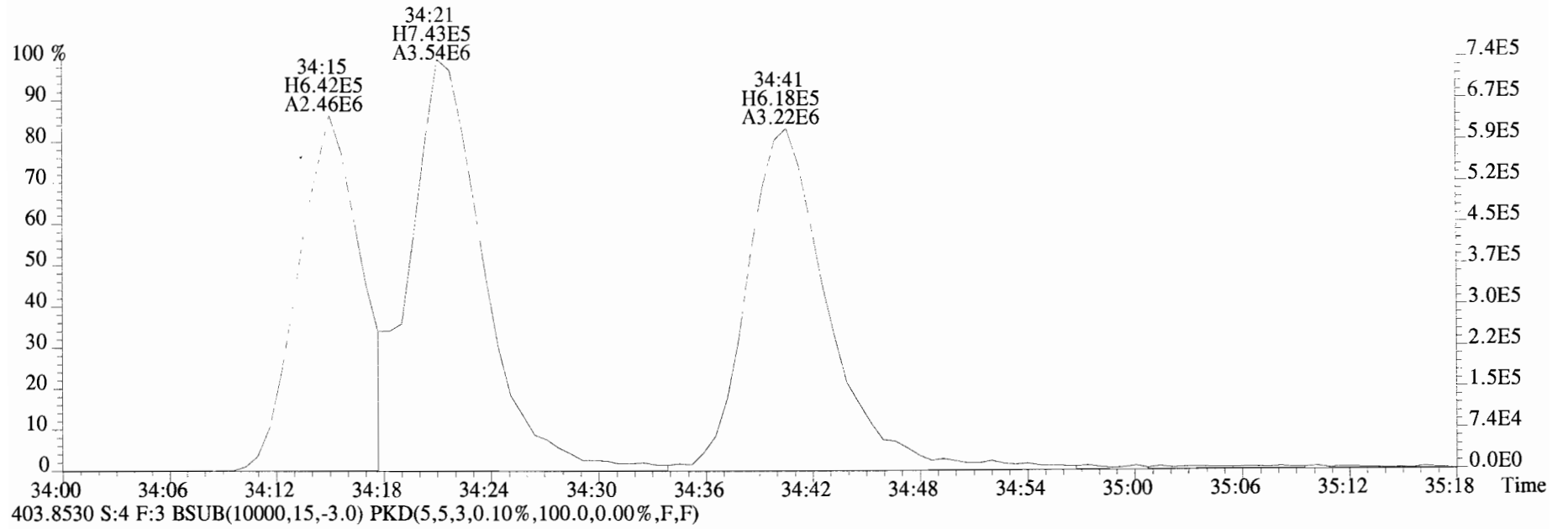
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



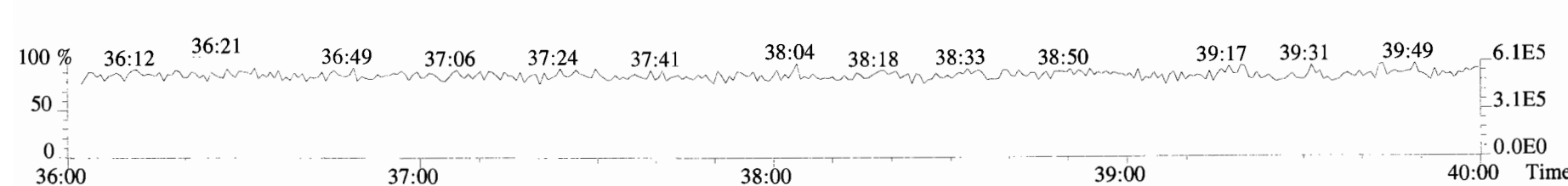
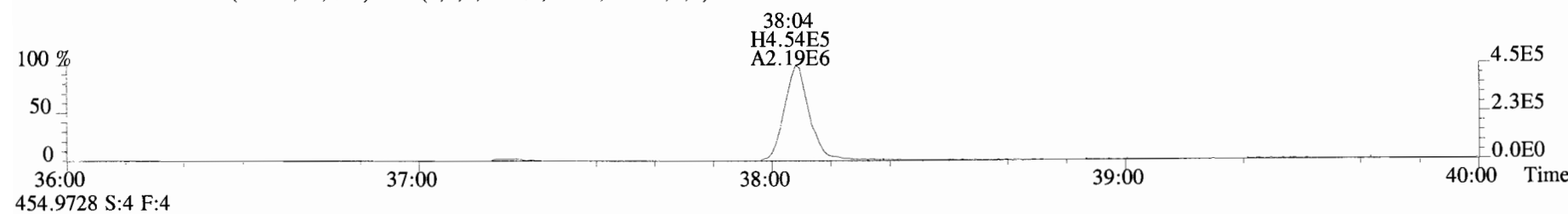
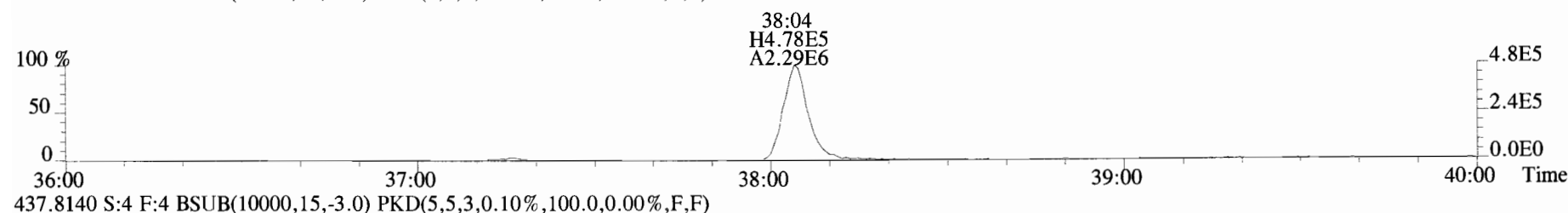
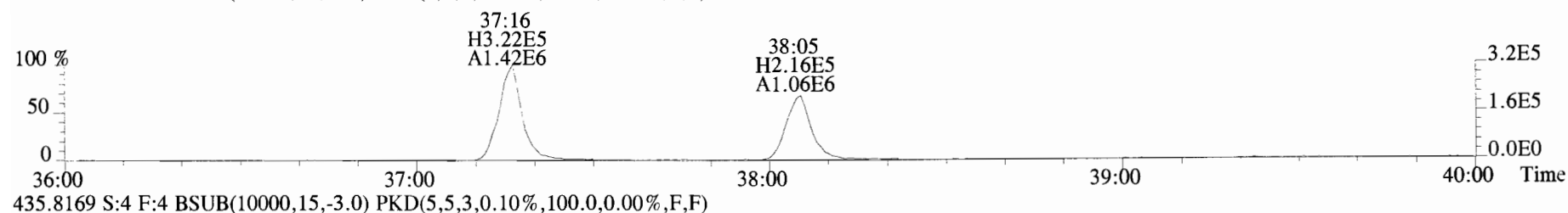
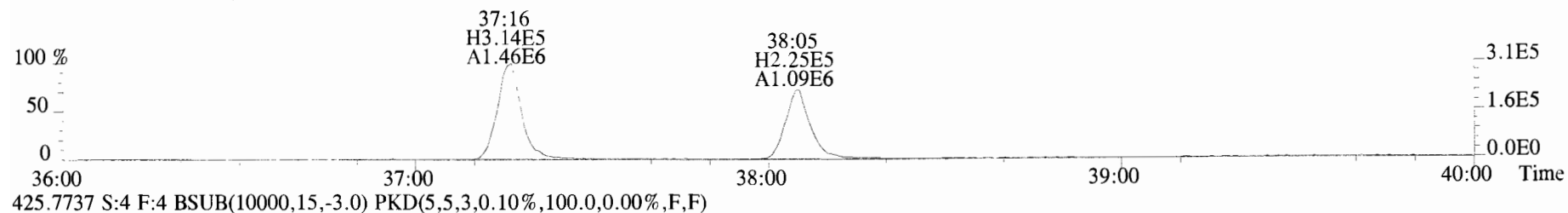
392.9760 S:4 F:3



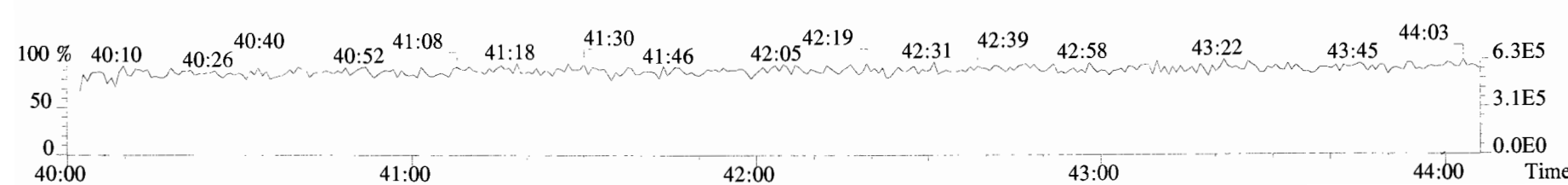
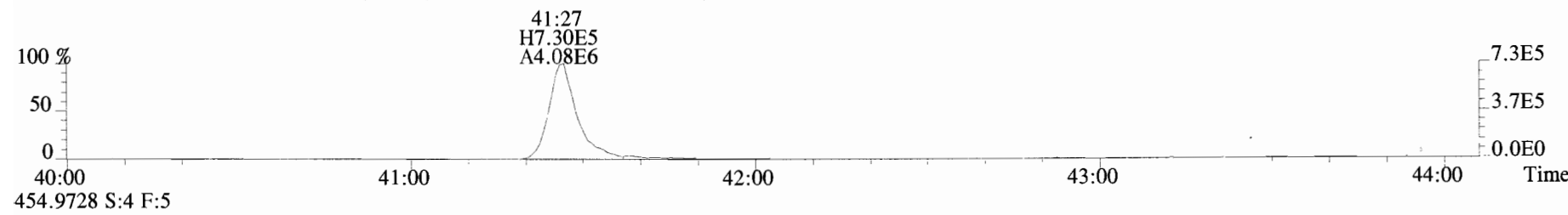
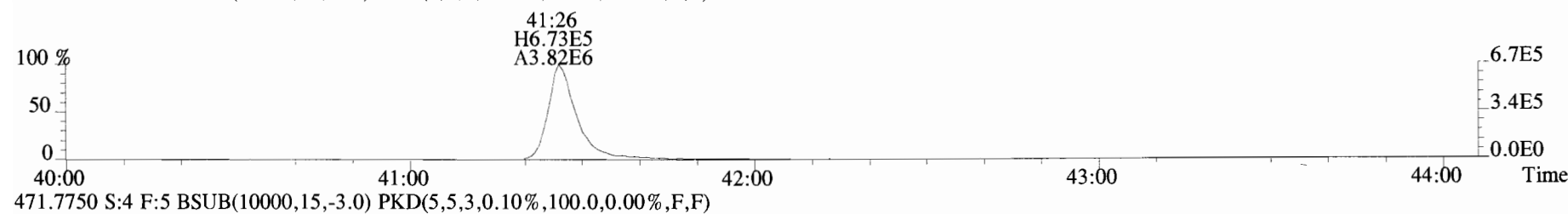
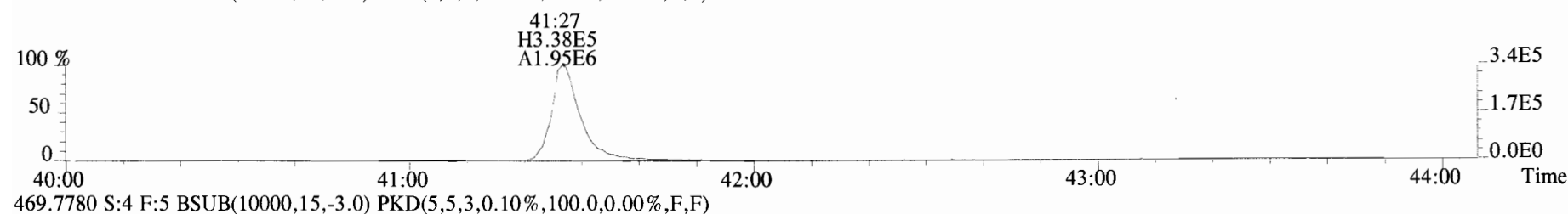
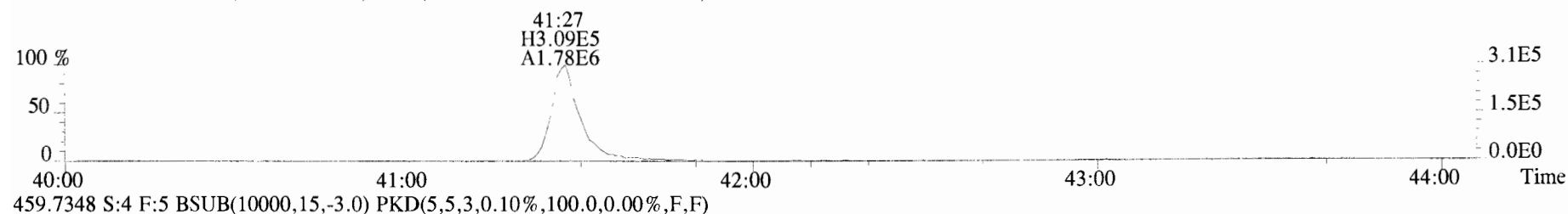
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



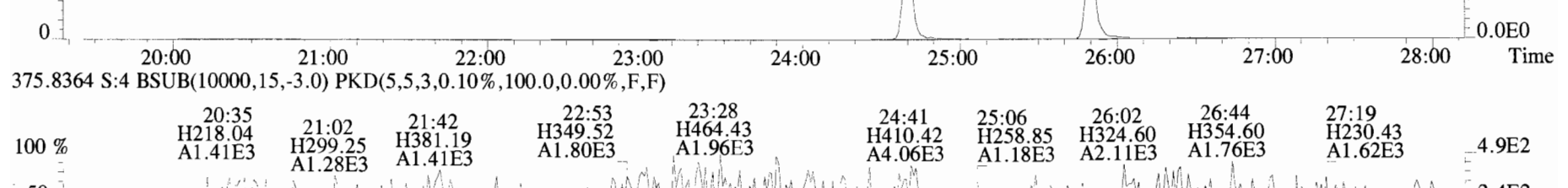
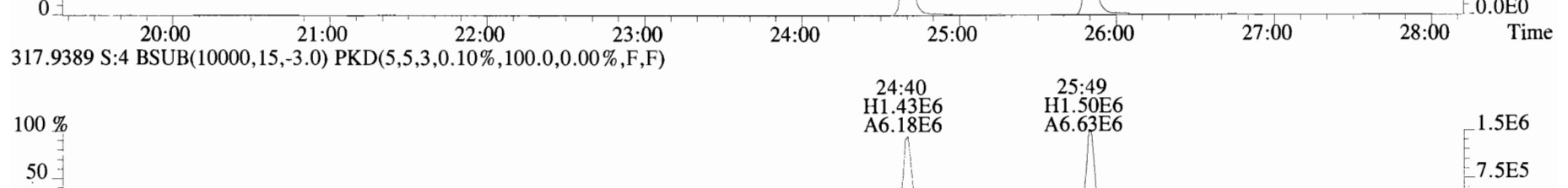
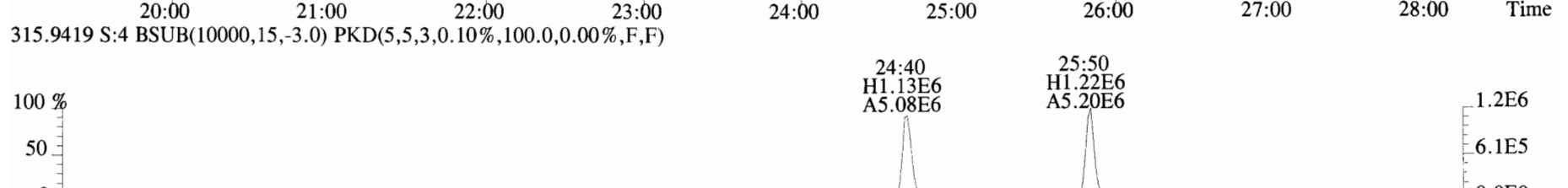
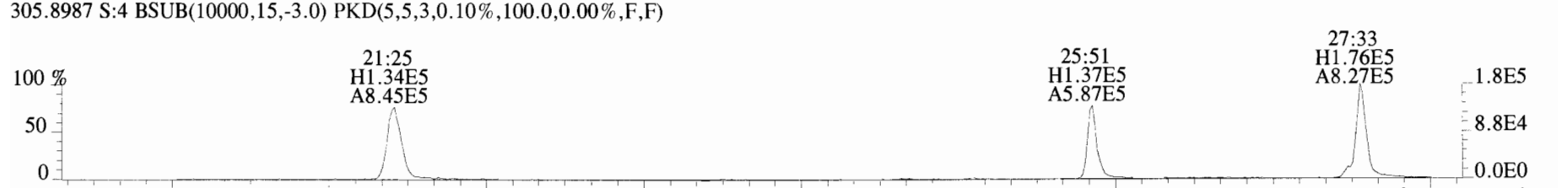
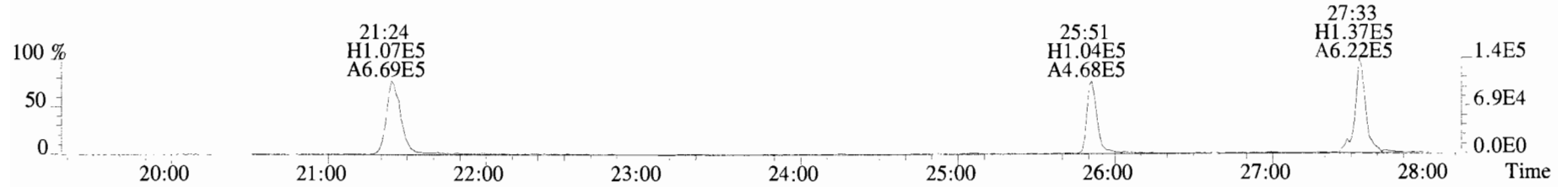
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



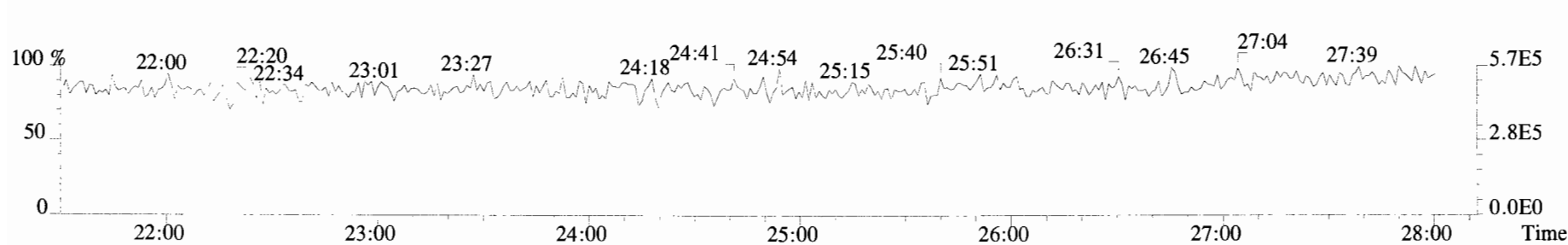
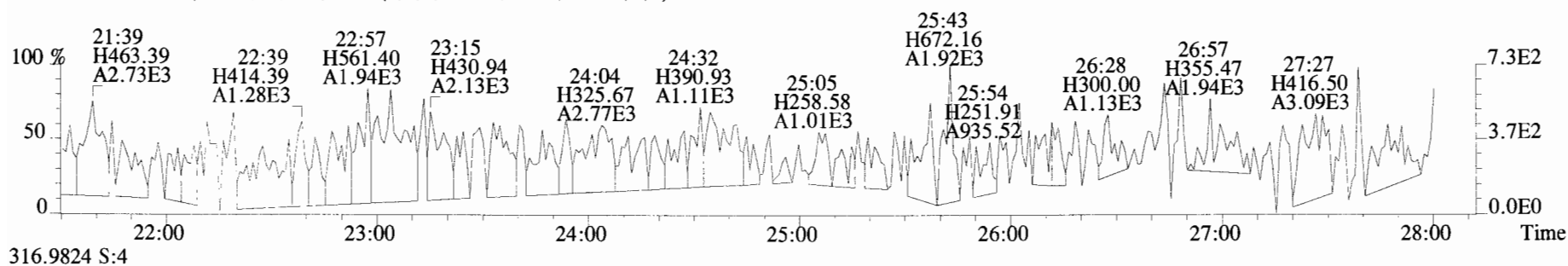
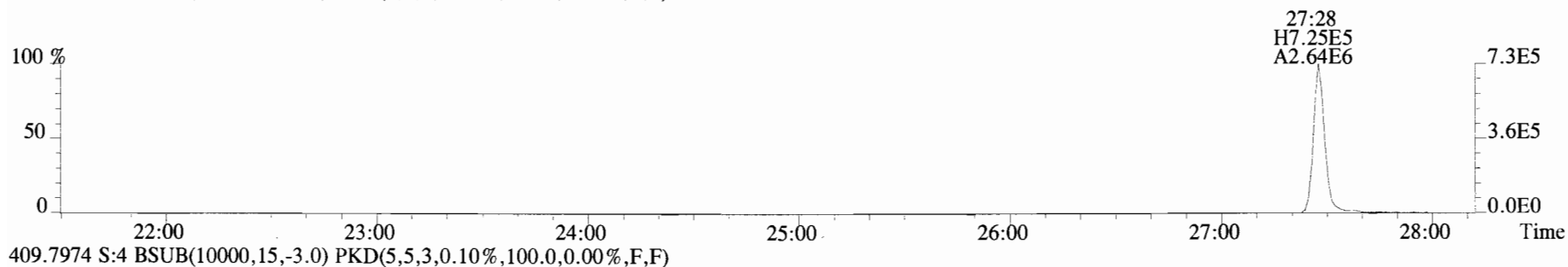
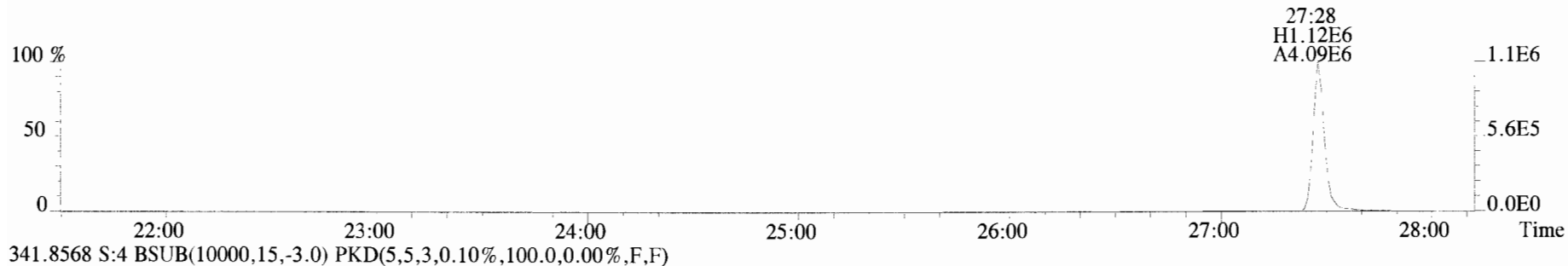
File:191009D1 #1-432 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



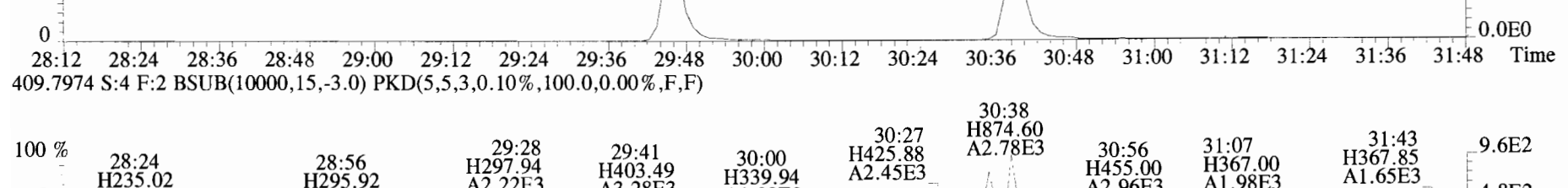
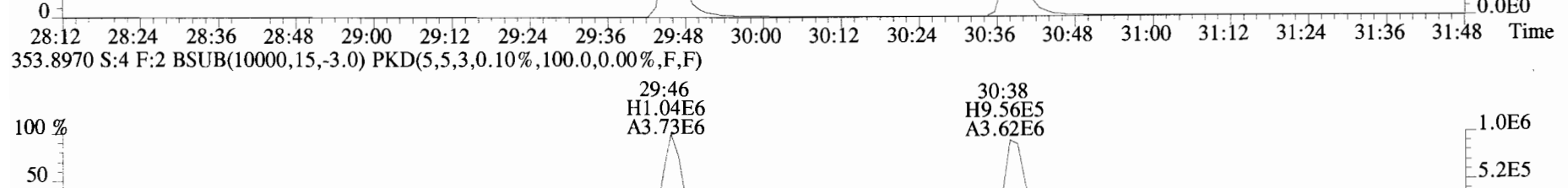
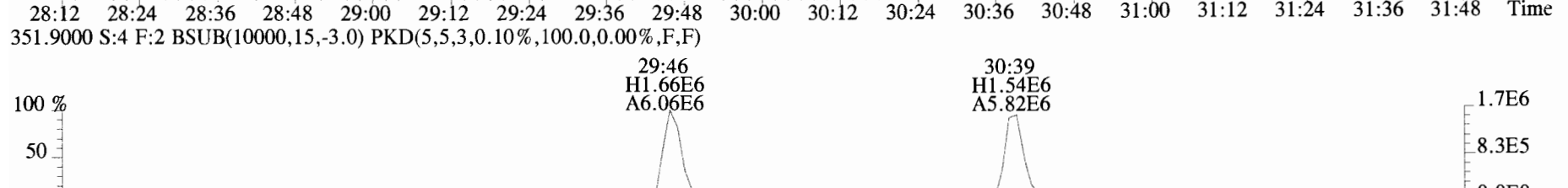
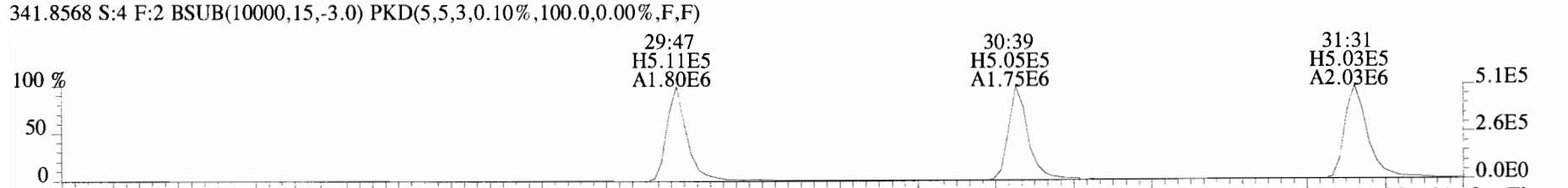
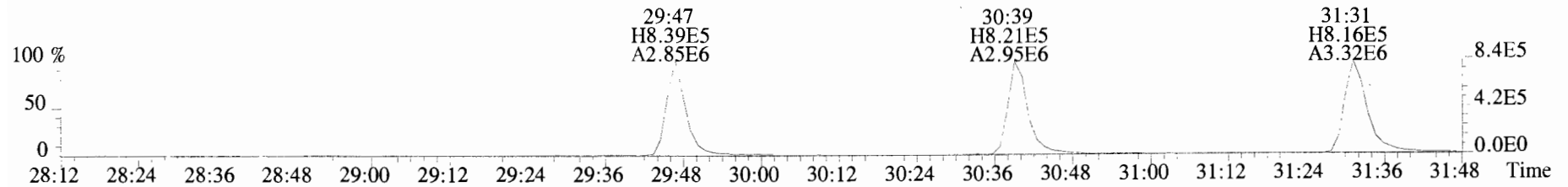
File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
 303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



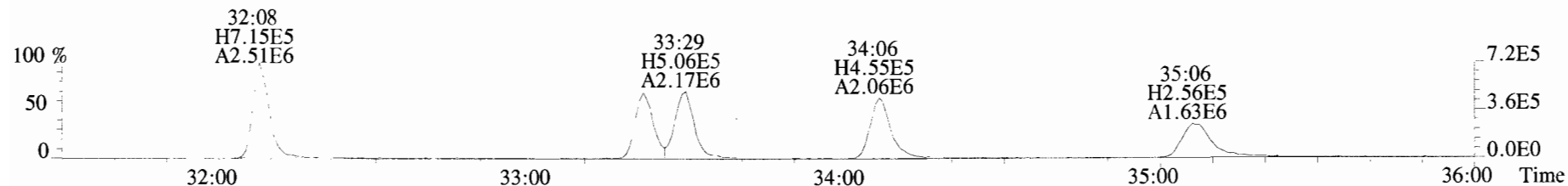
File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



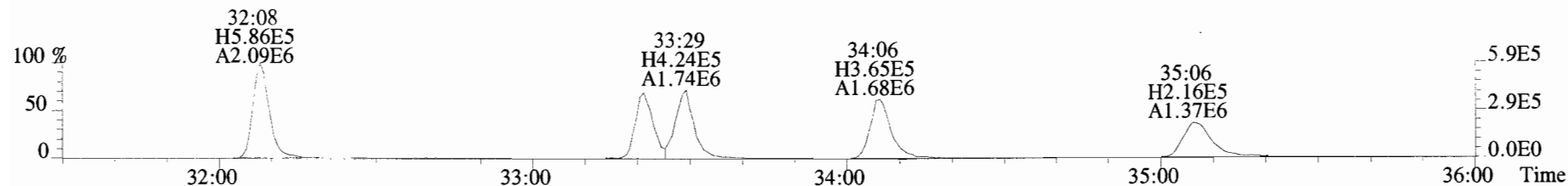
File:191009D1 #1-211 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



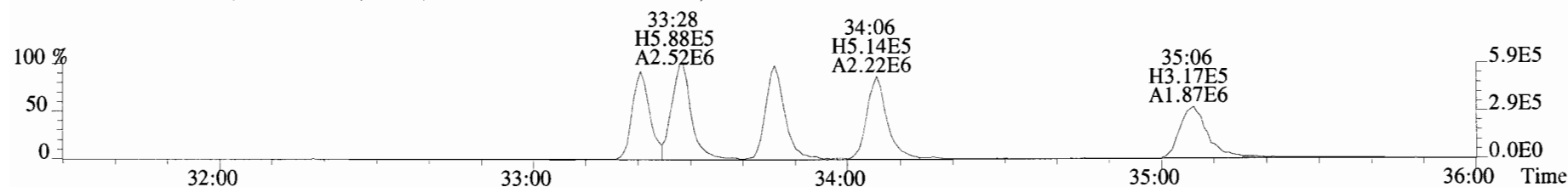
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



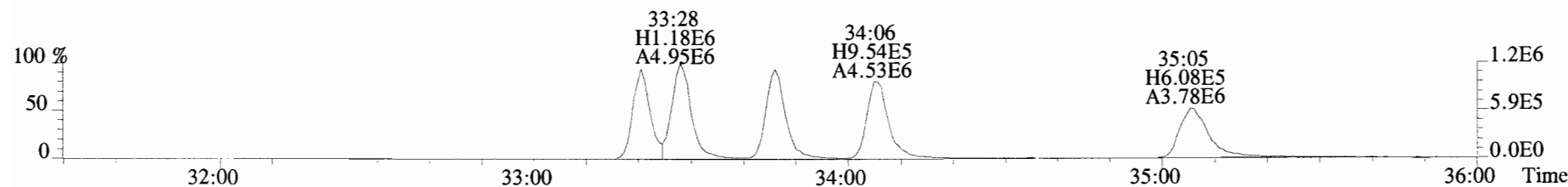
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



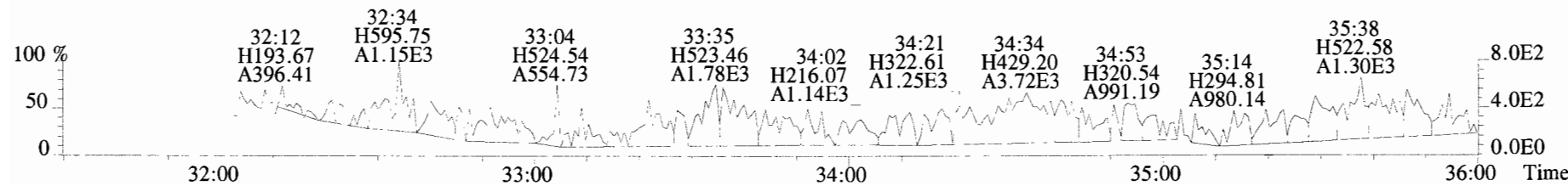
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



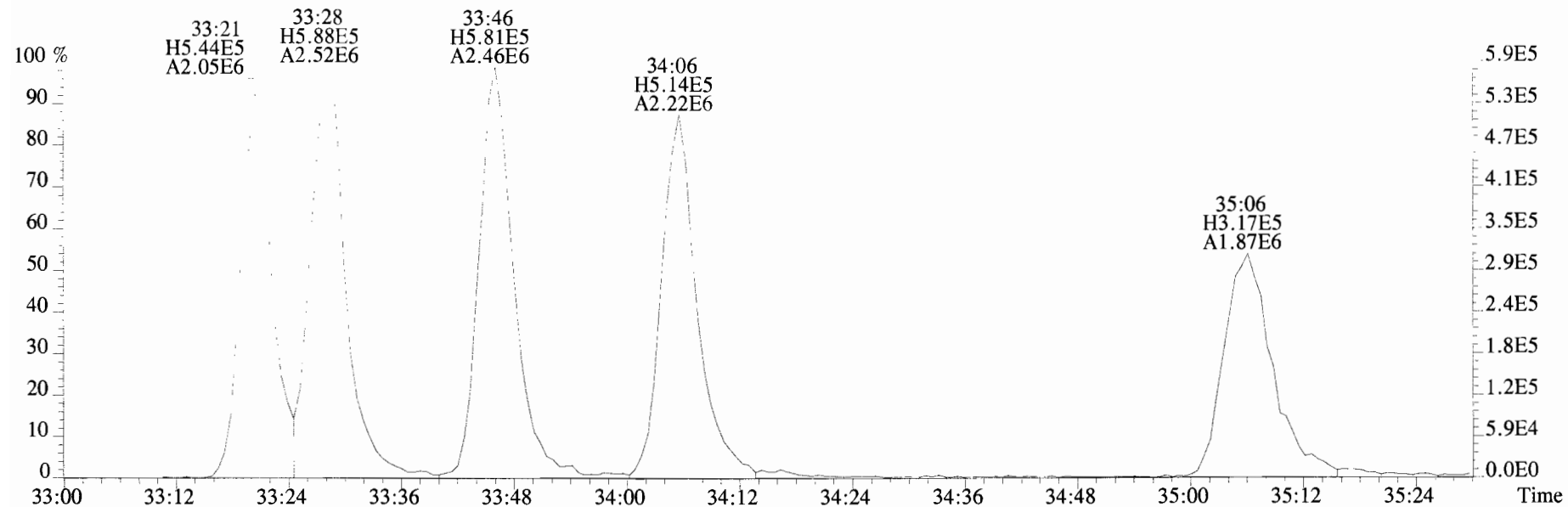
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



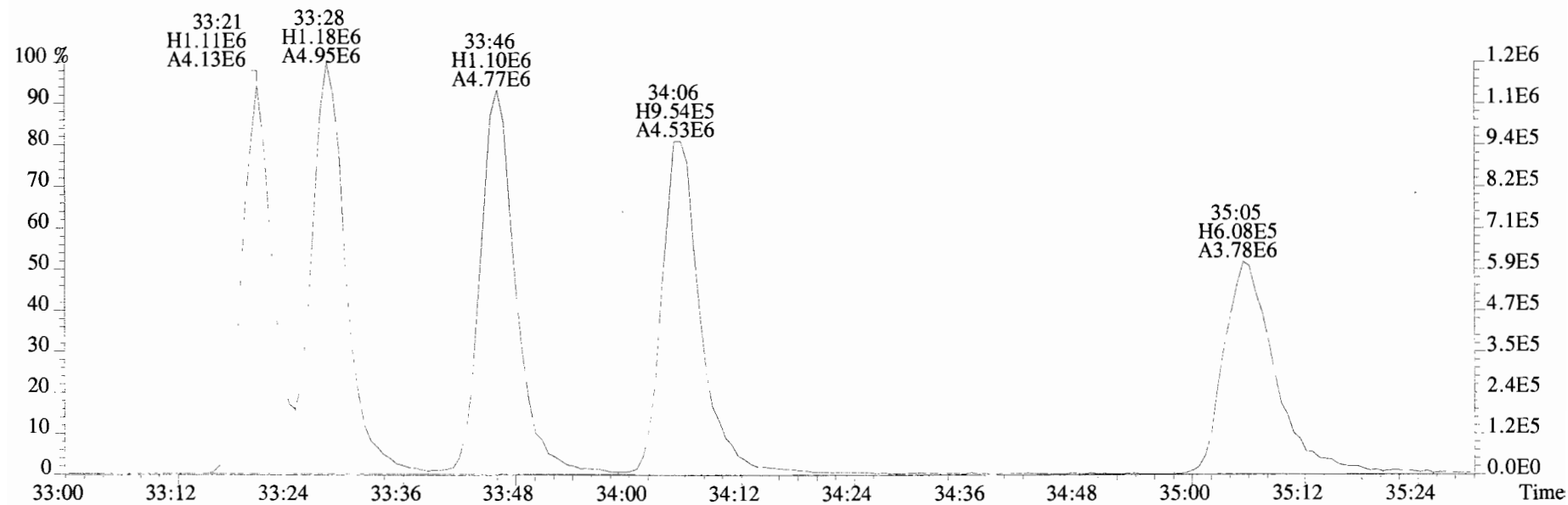
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



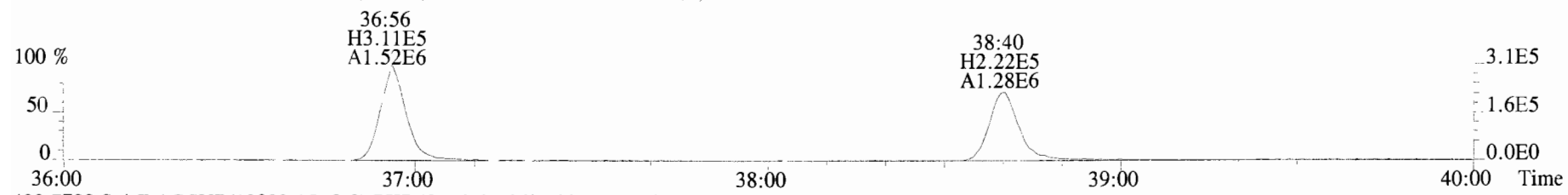
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



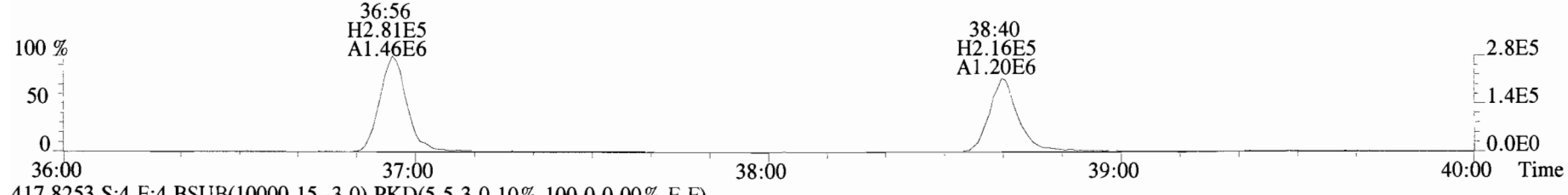
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



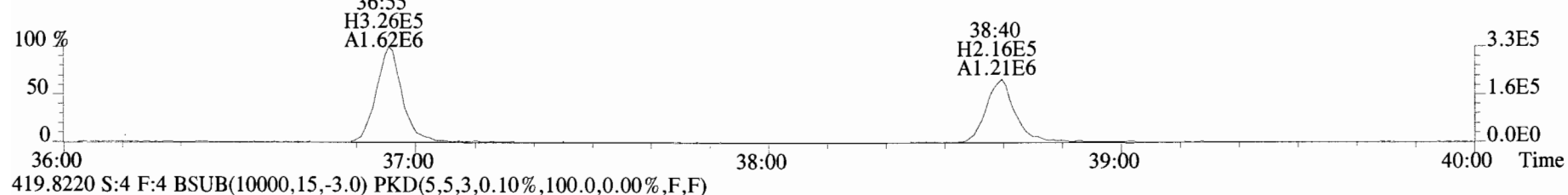
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
 407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



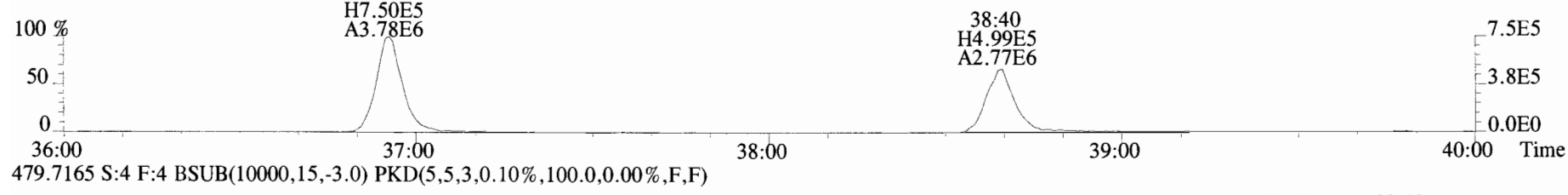
409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



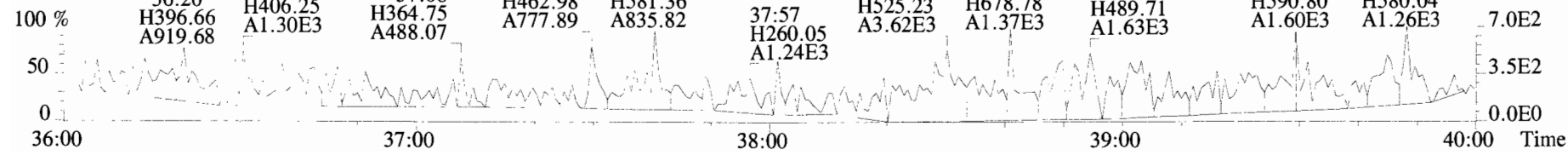
417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



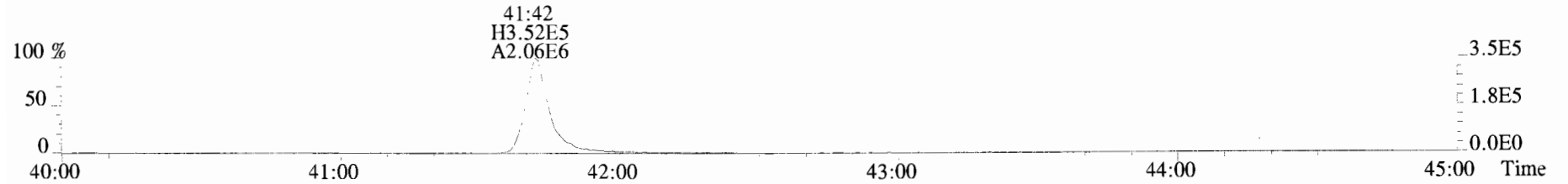
419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



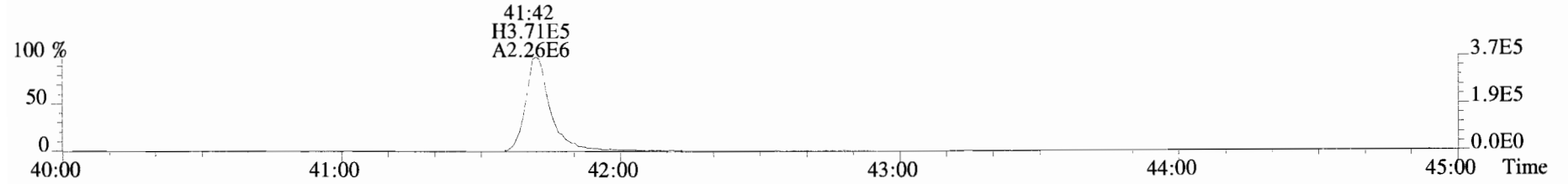
479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



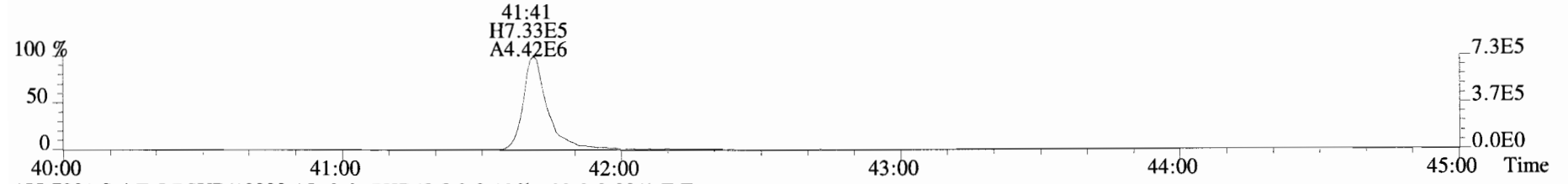
File:191009D1 #1-432 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



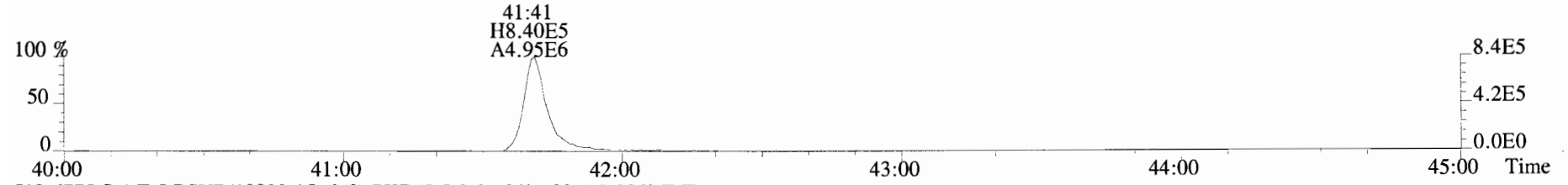
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



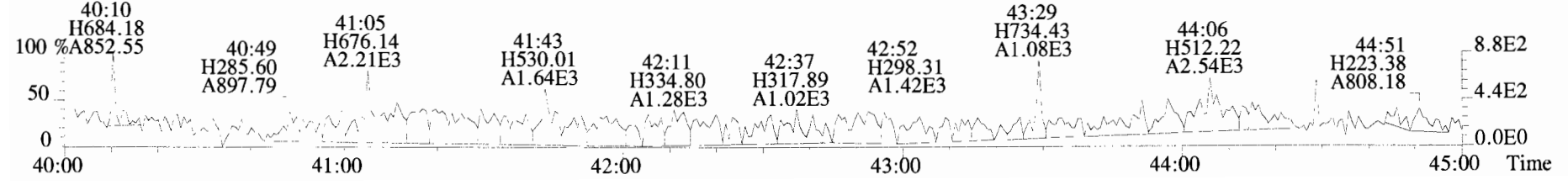
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



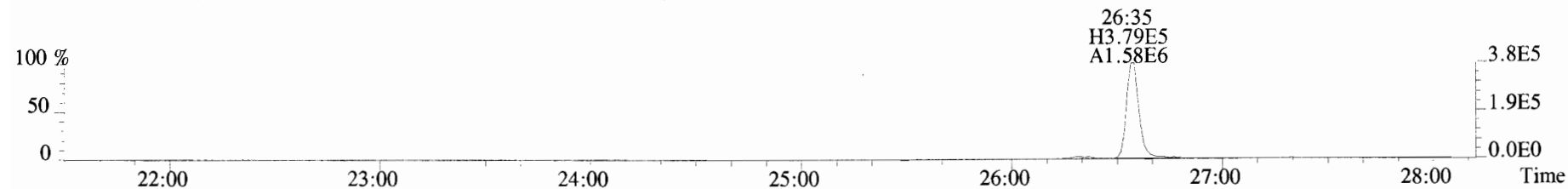
455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



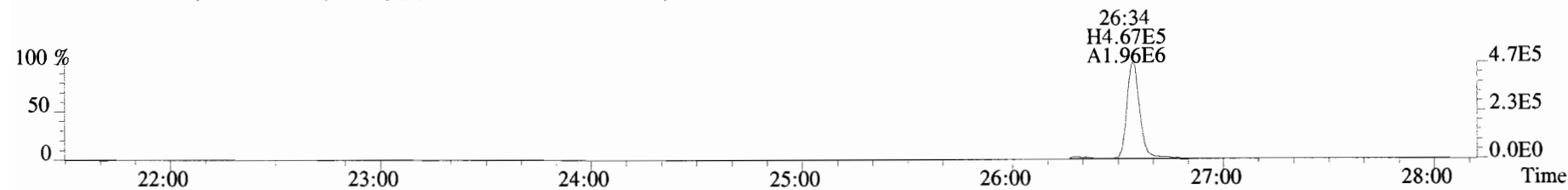
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



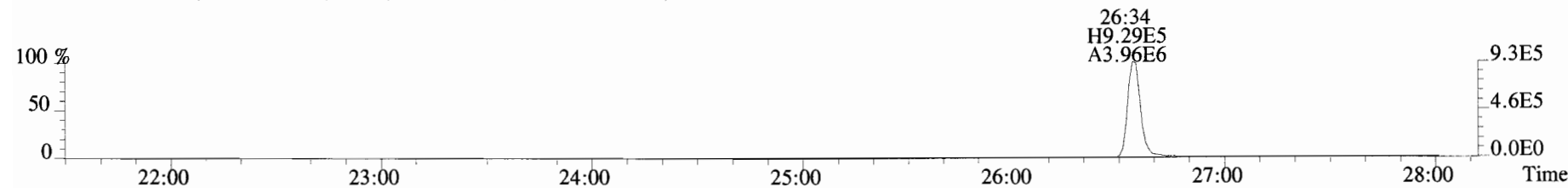
File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



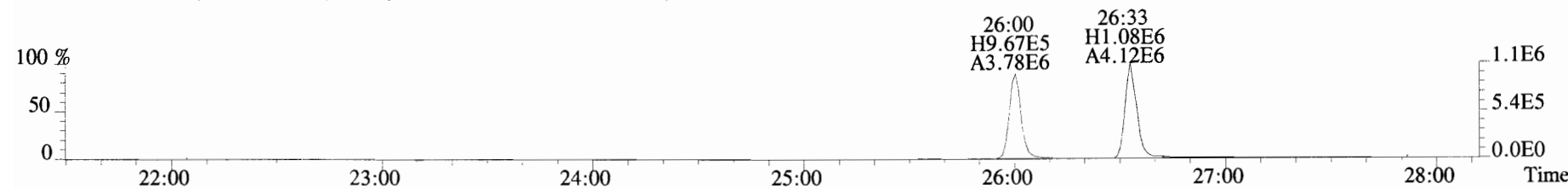
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



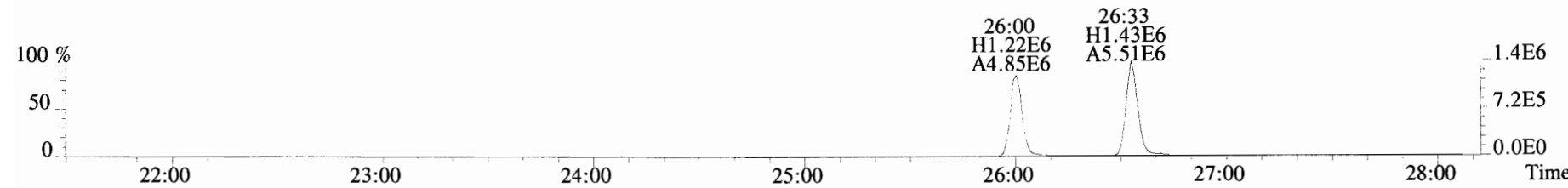
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



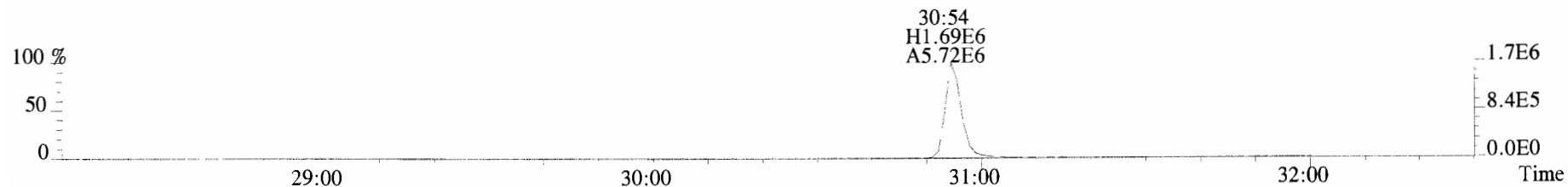
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



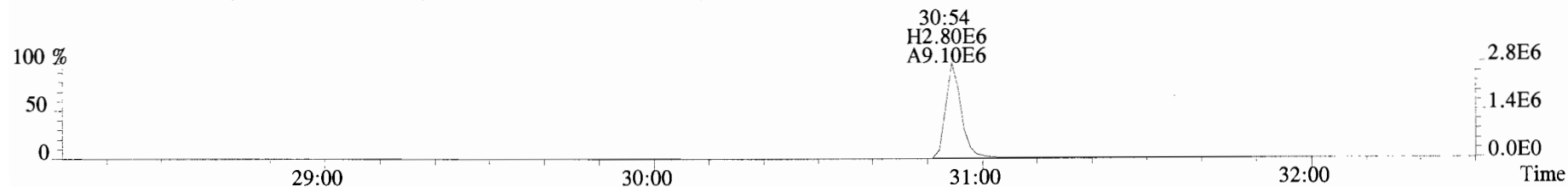
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



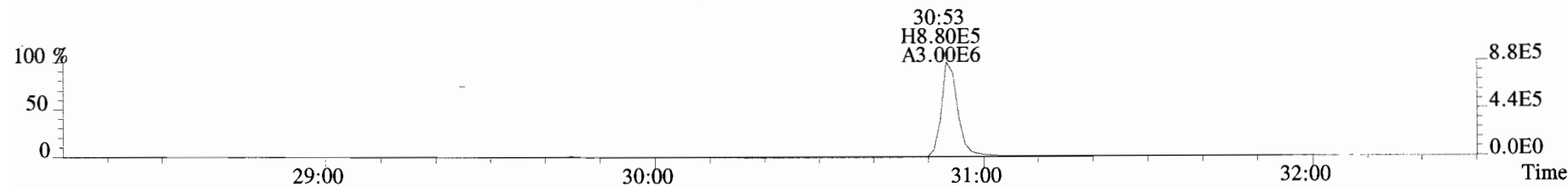
File:191009D1 #1-210 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



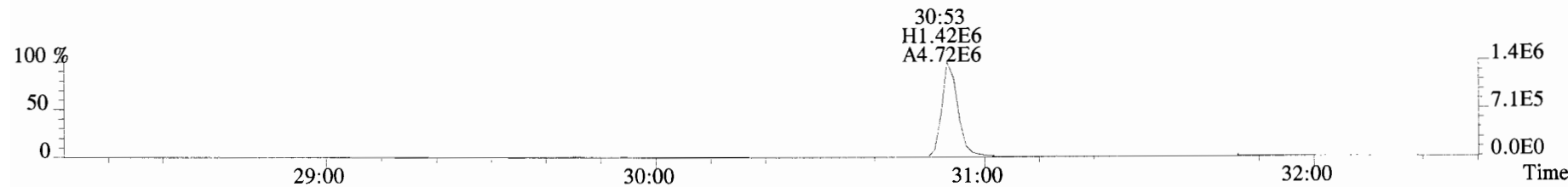
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



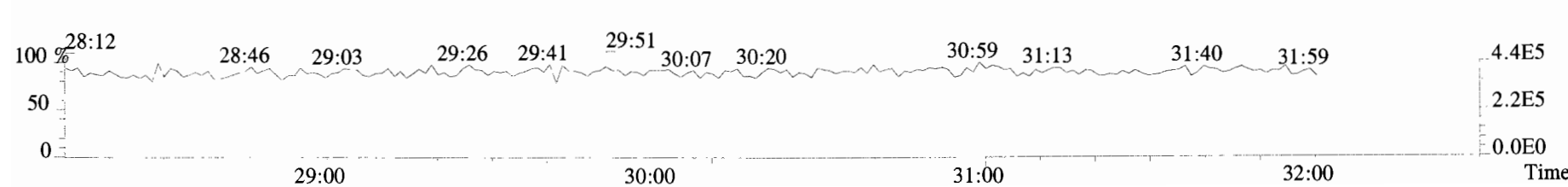
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



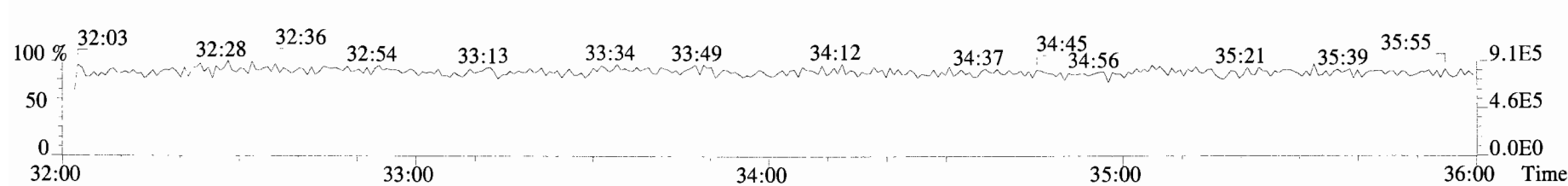
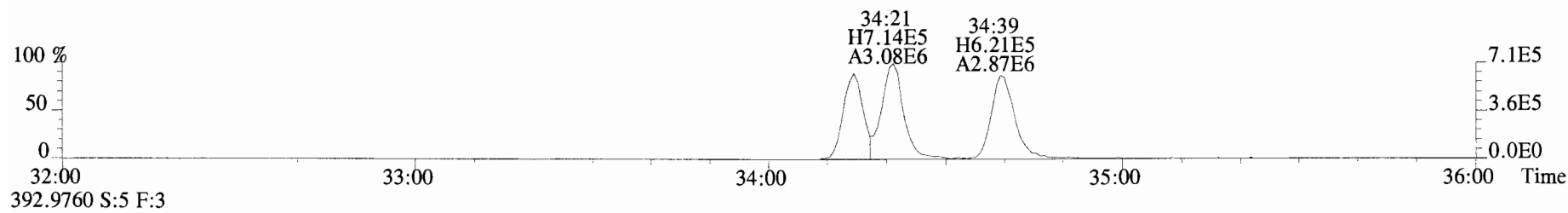
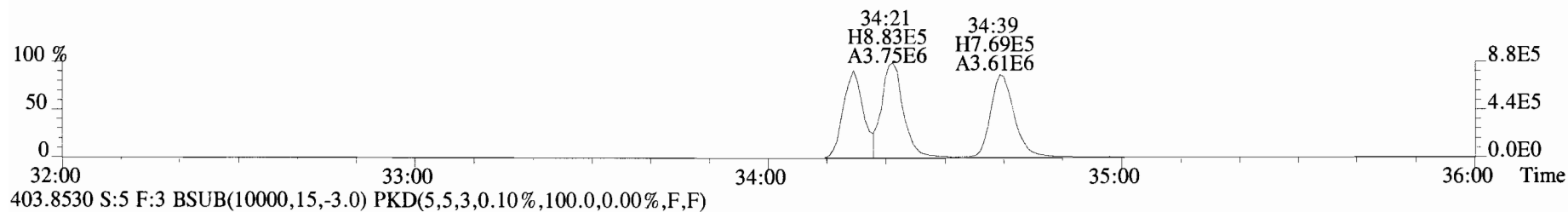
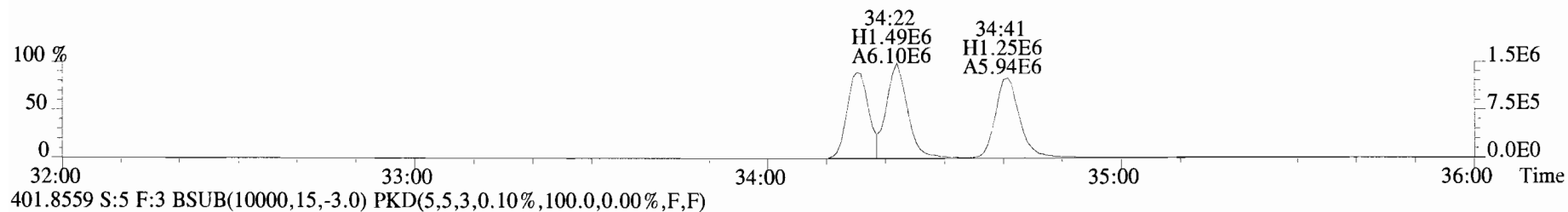
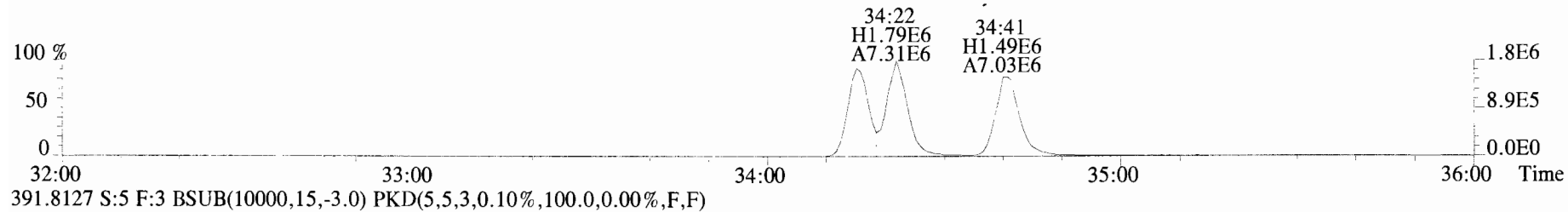
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



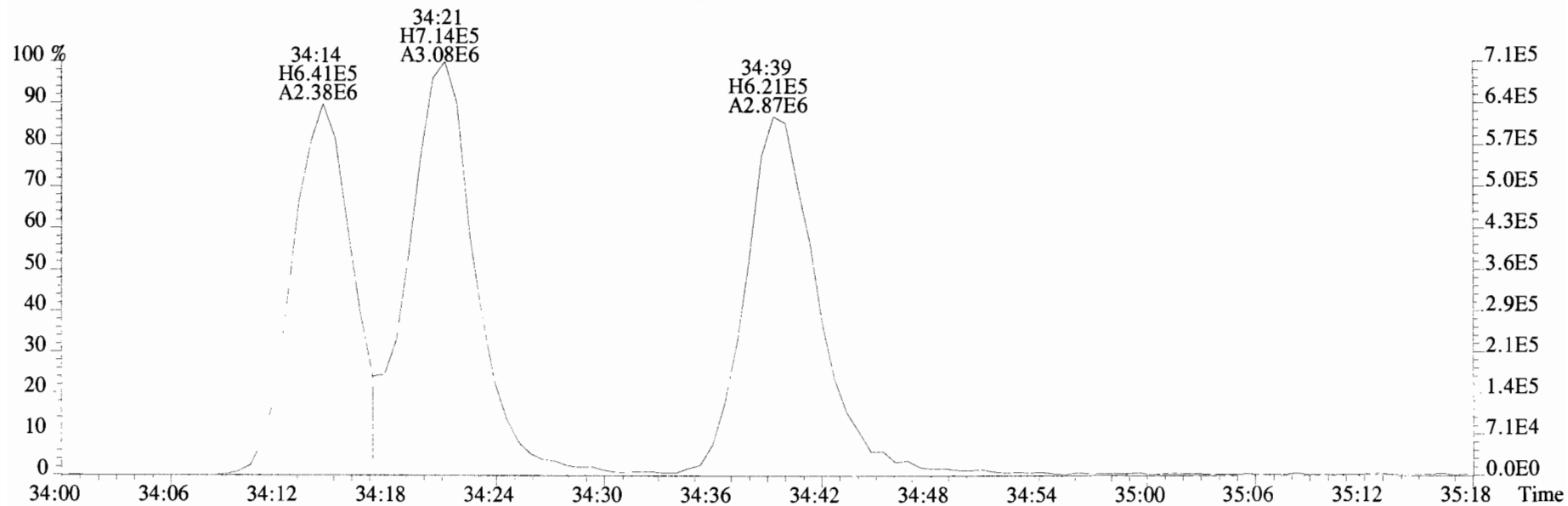
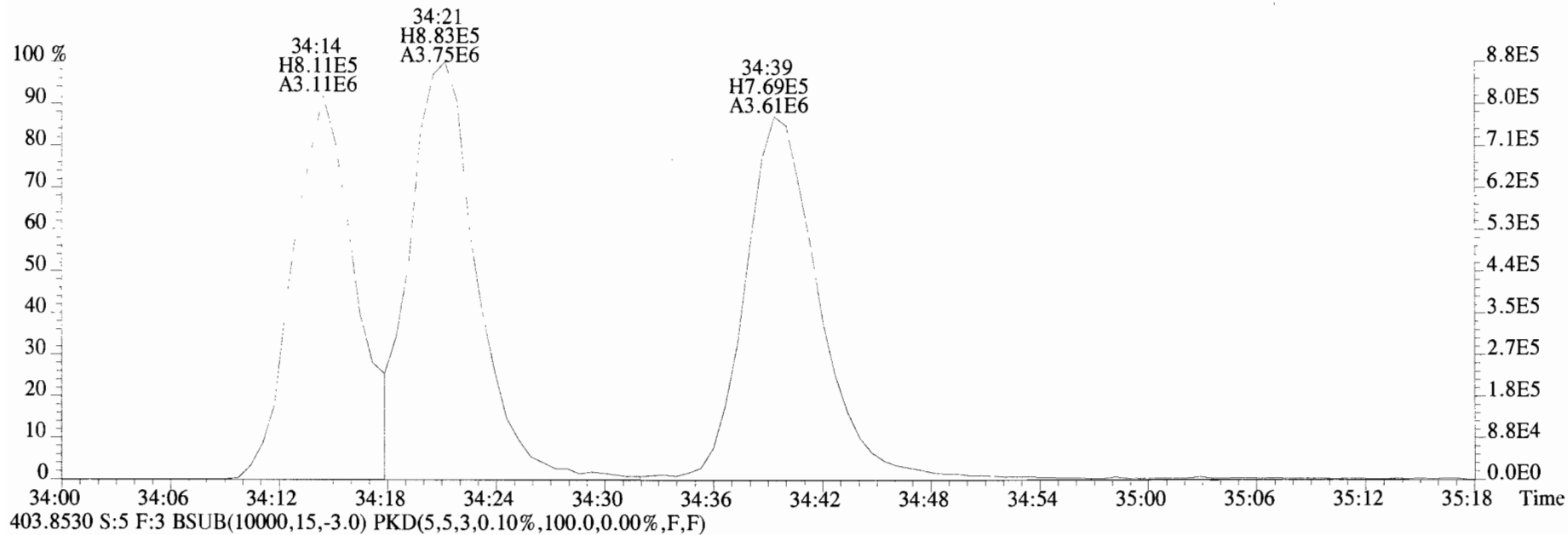
366.9792 S:5 F:2



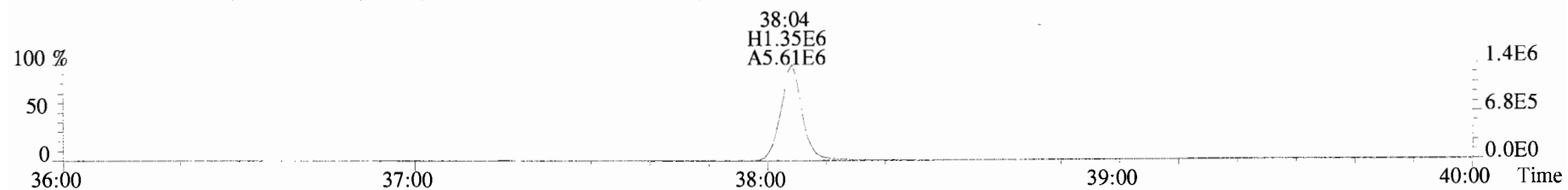
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



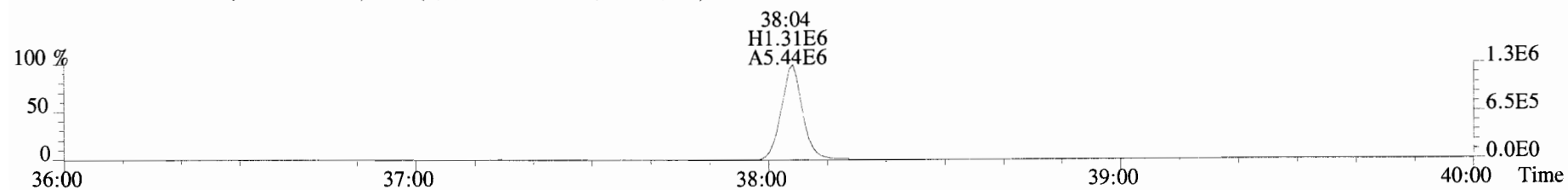
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



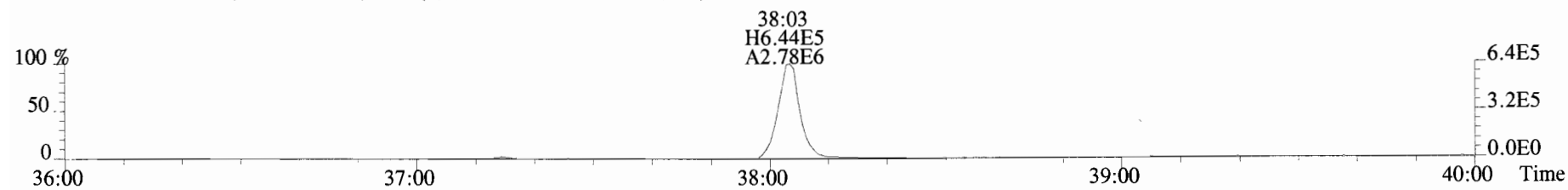
File:191009D1 #1-356 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



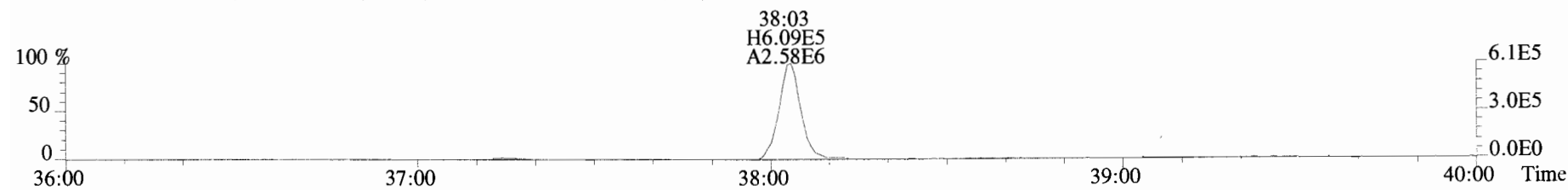
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



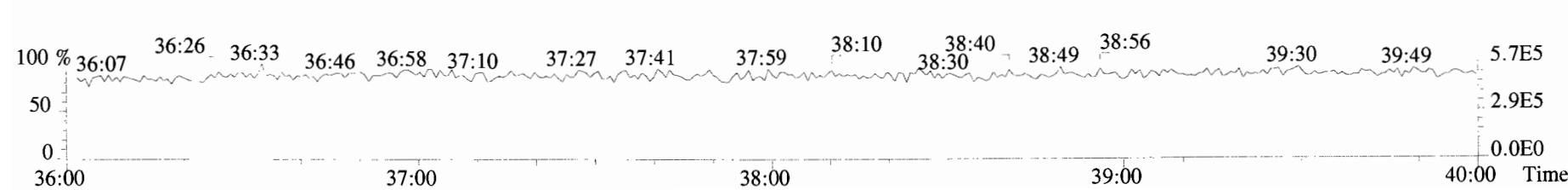
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



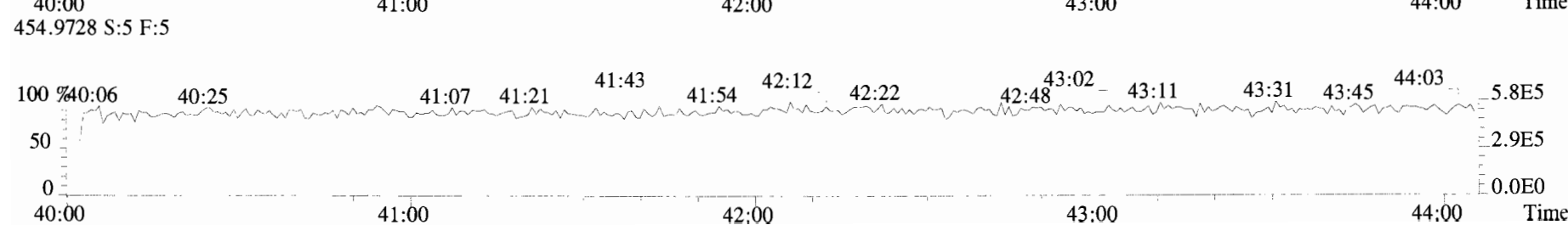
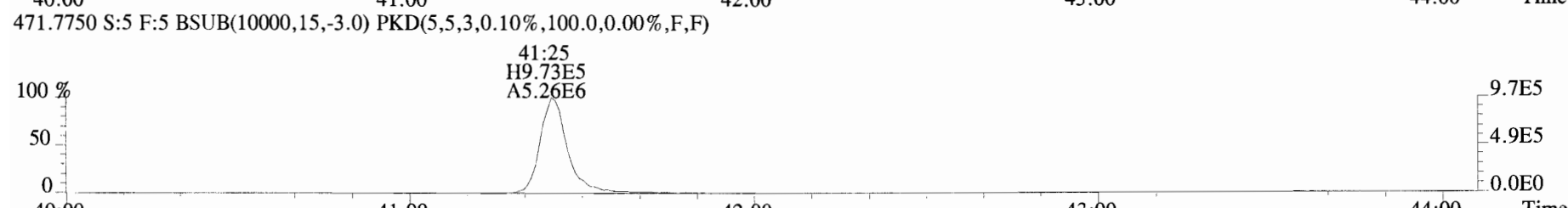
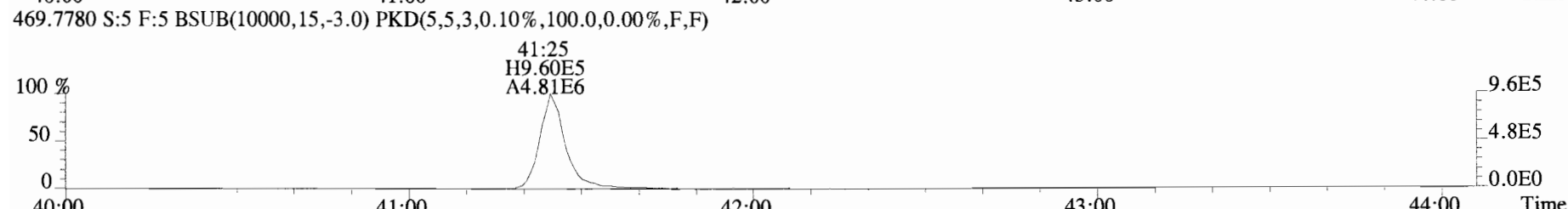
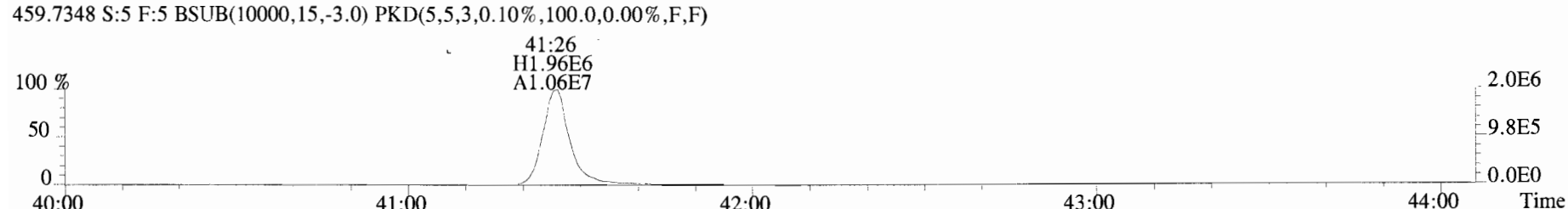
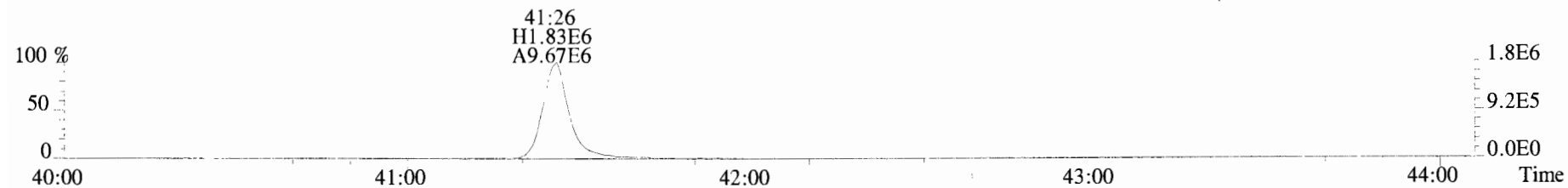
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



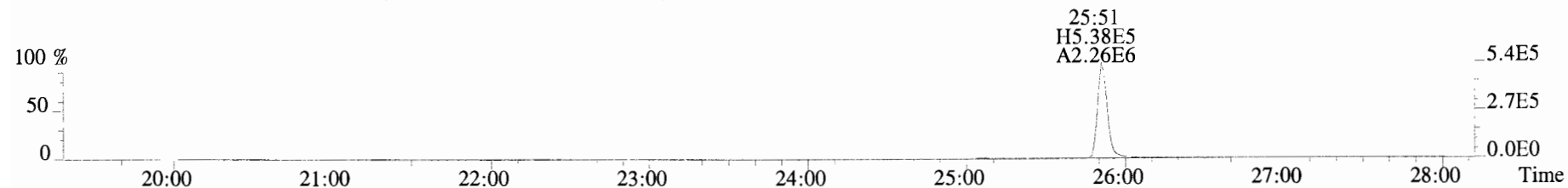
454.9728 S:5 F:4



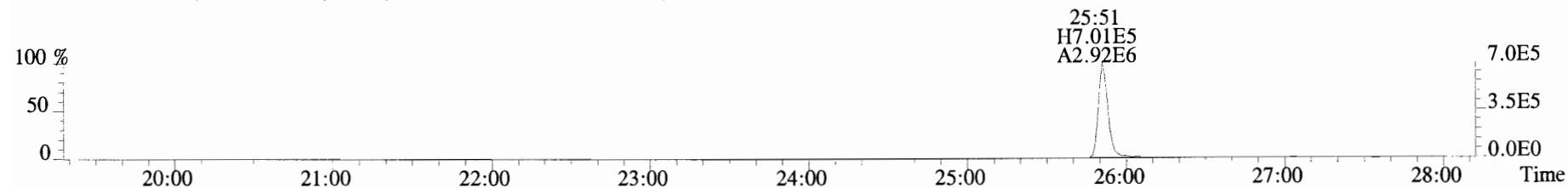
File:191009D1 #1-431 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



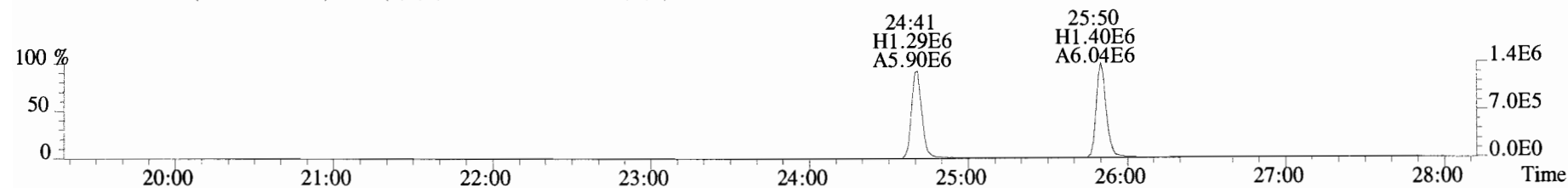
File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



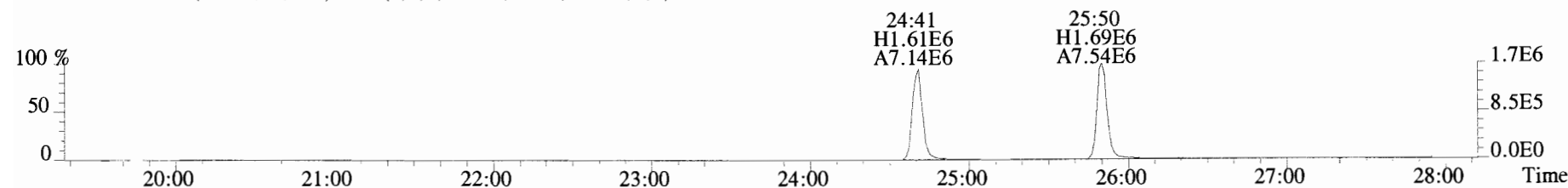
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



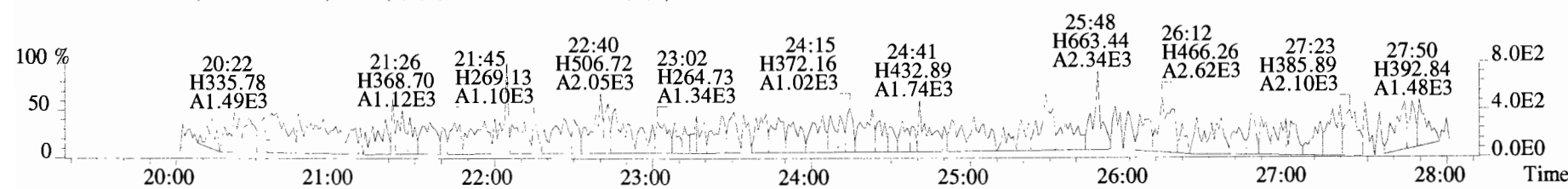
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



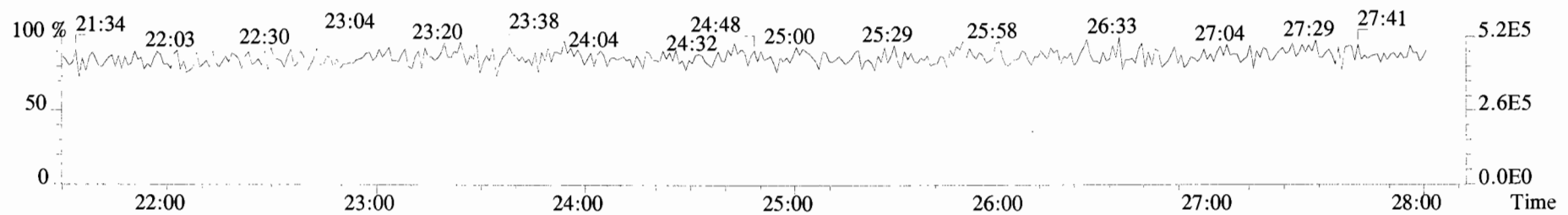
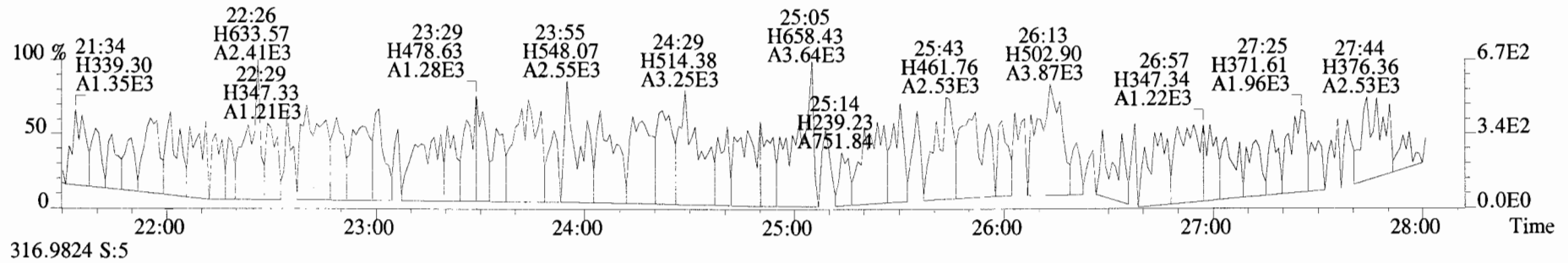
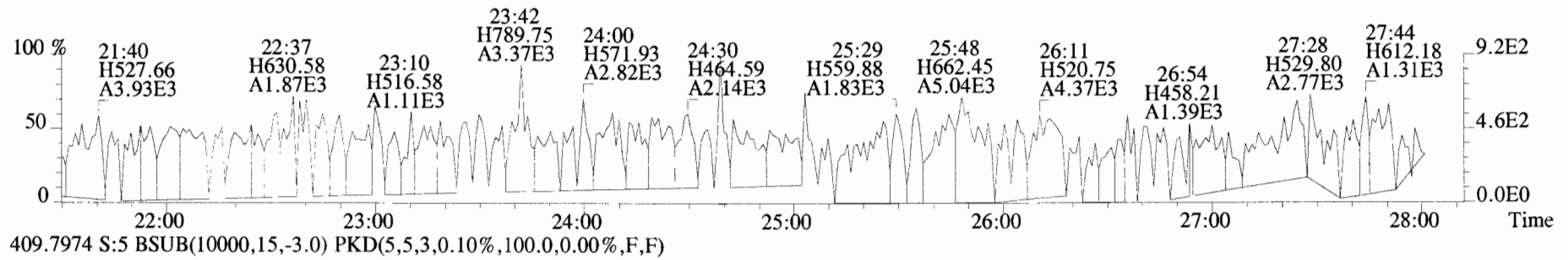
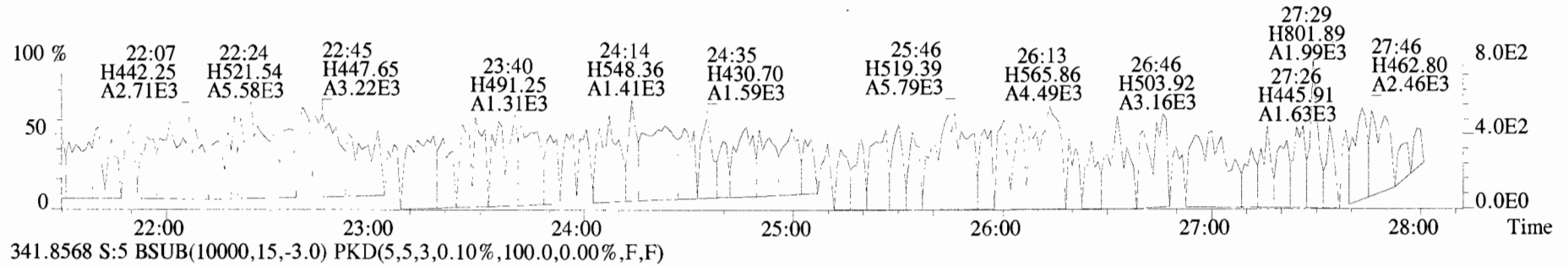
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



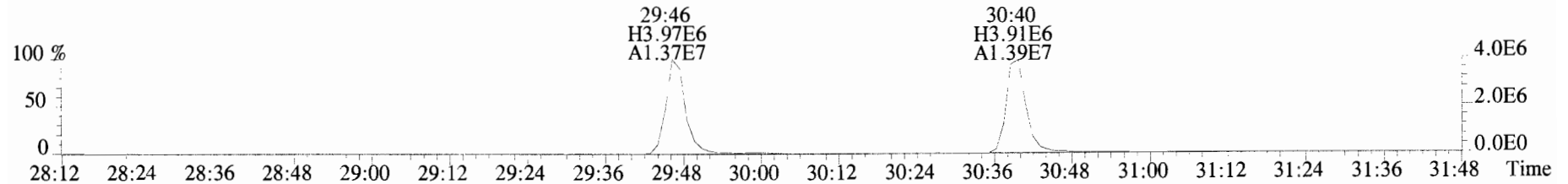
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



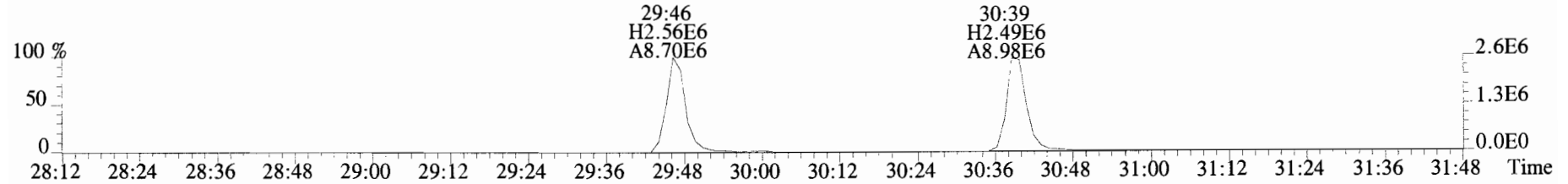
File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
 339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



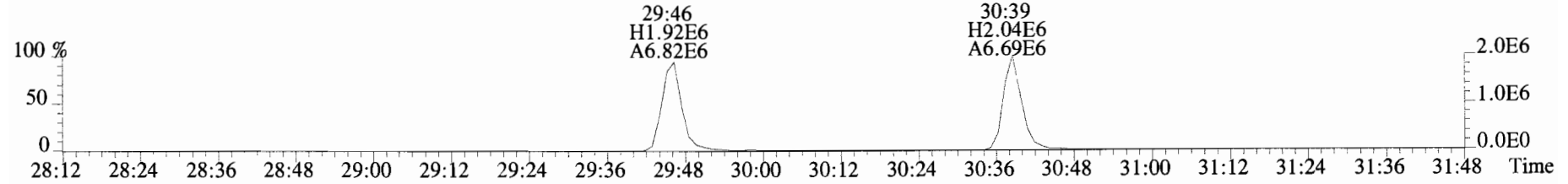
File:191009D1 #1-210 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



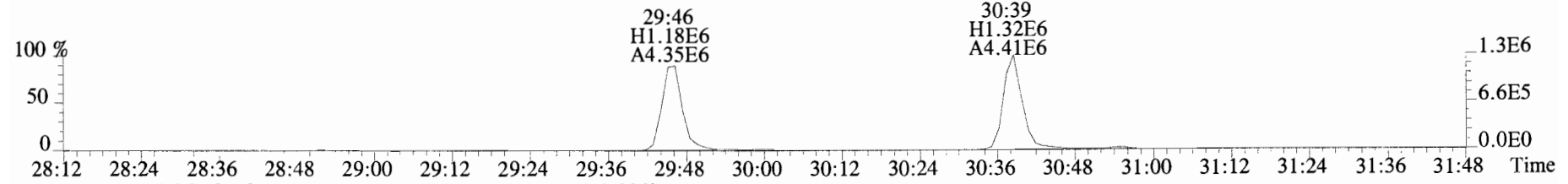
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



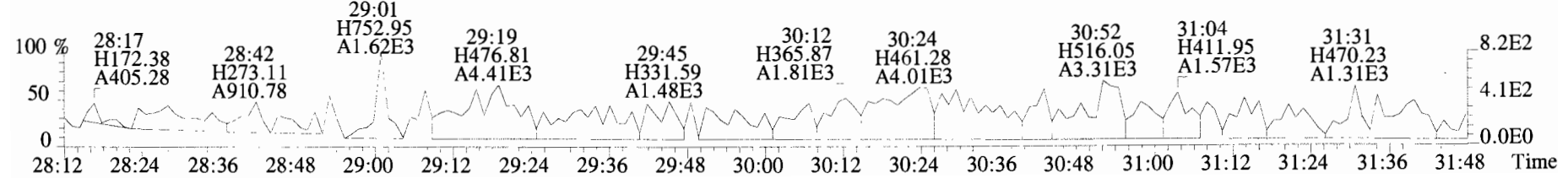
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



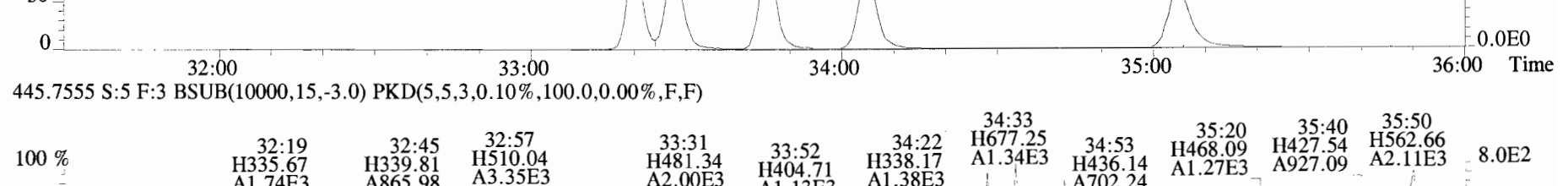
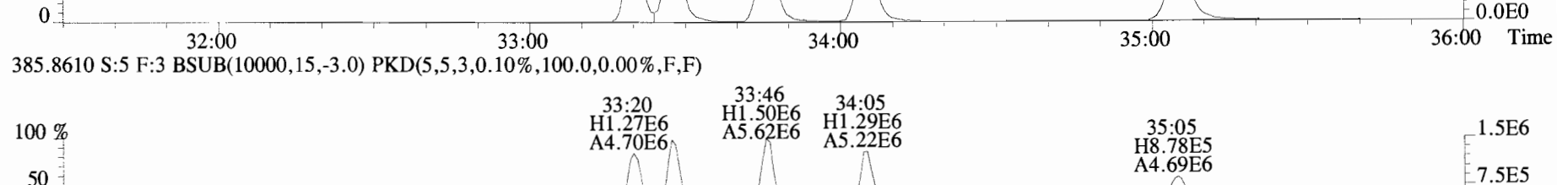
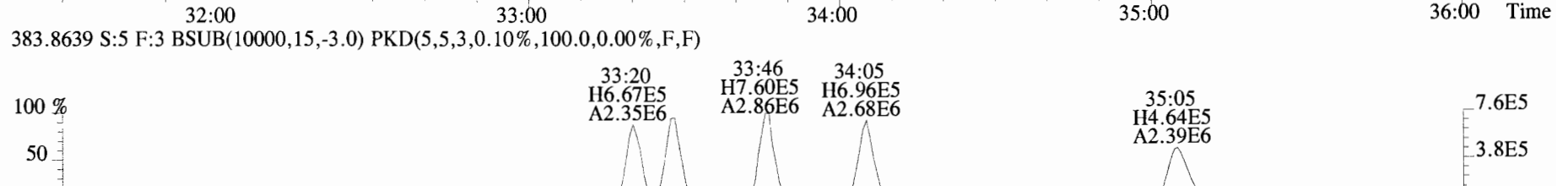
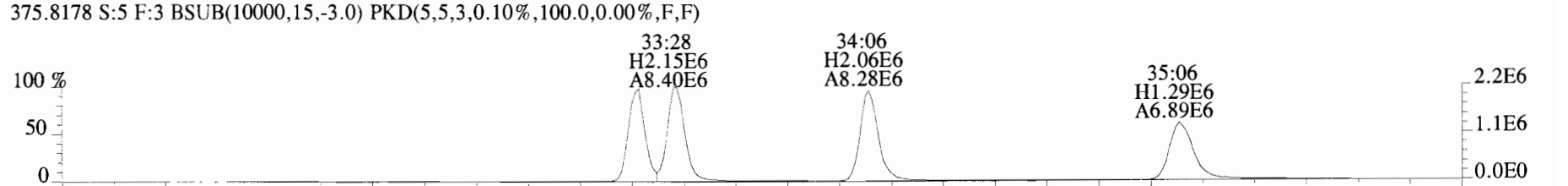
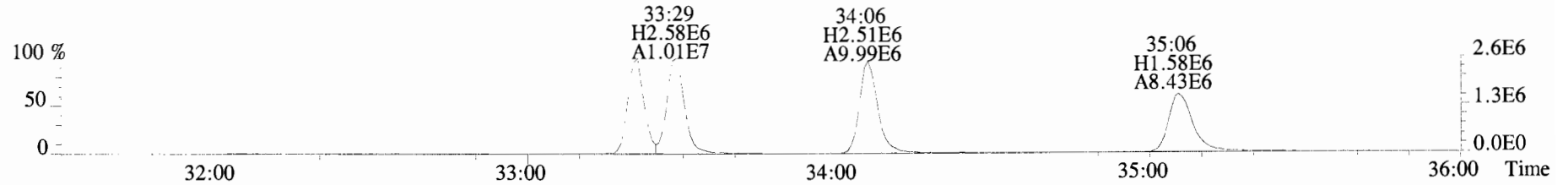
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



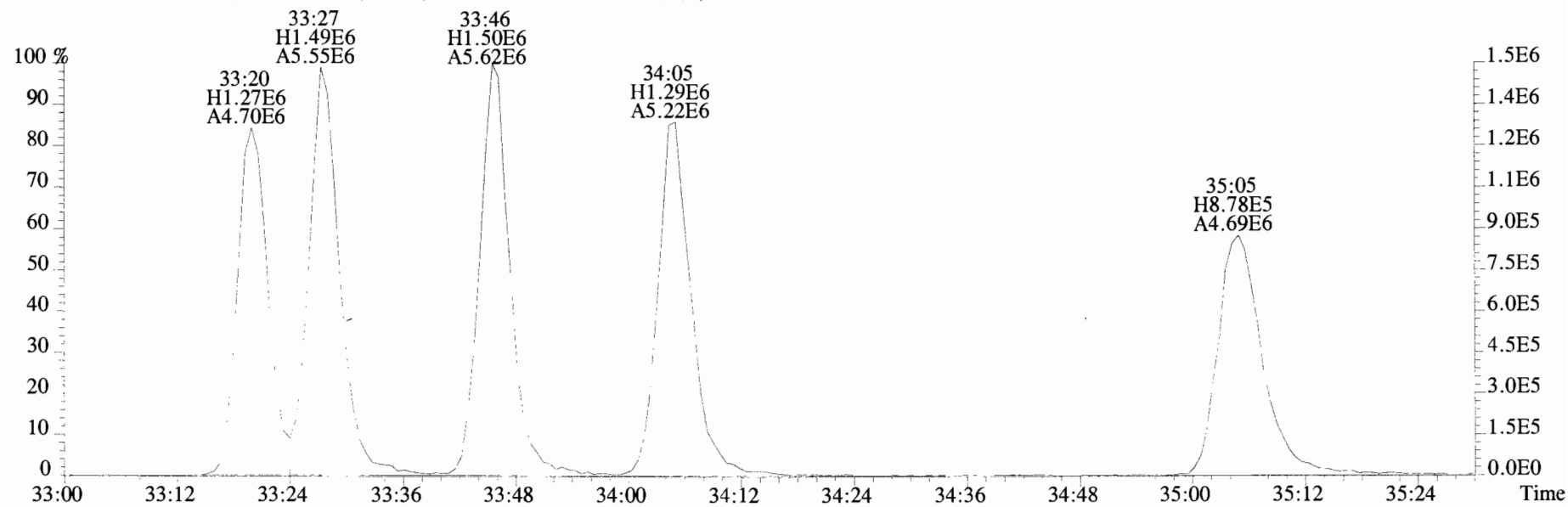
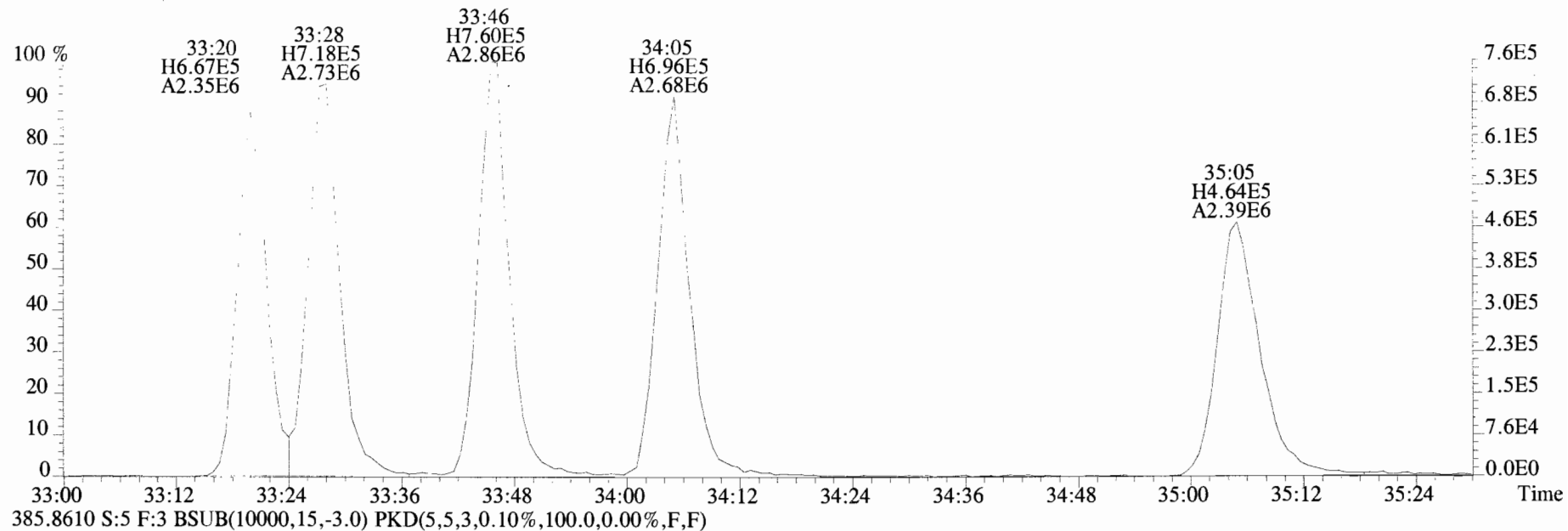
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



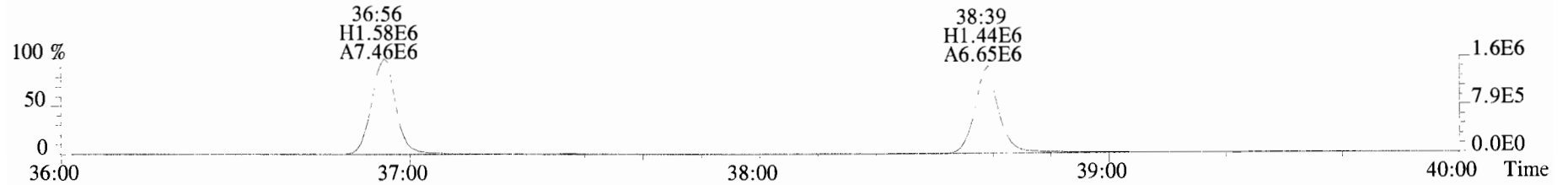
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



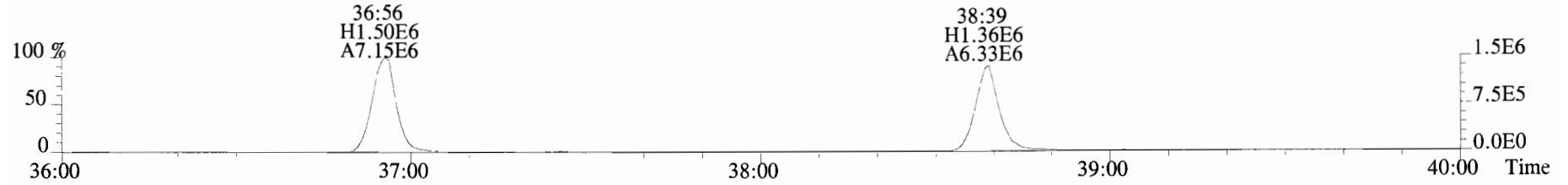
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



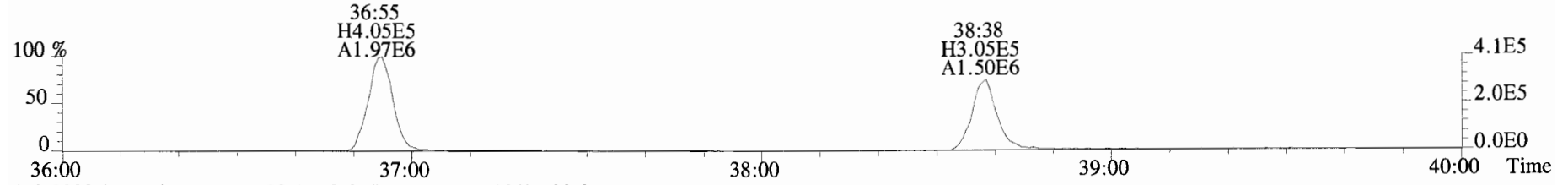
File:191009D1 #1-356 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



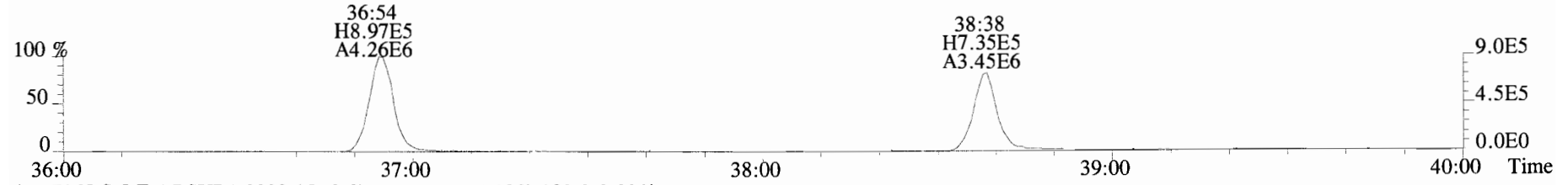
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



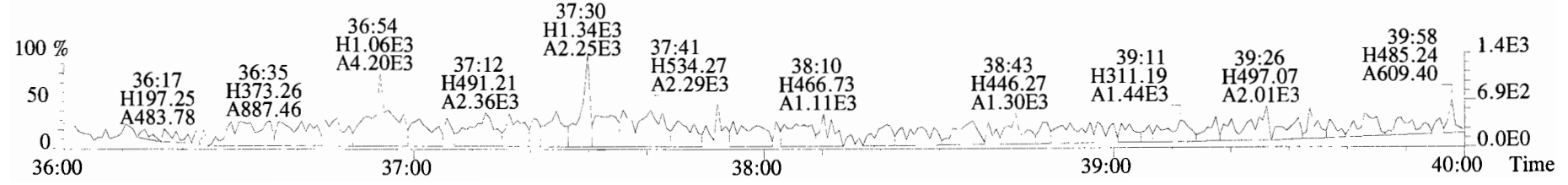
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



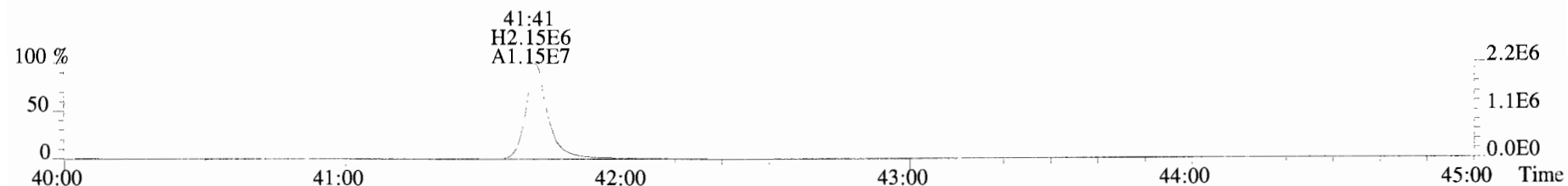
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



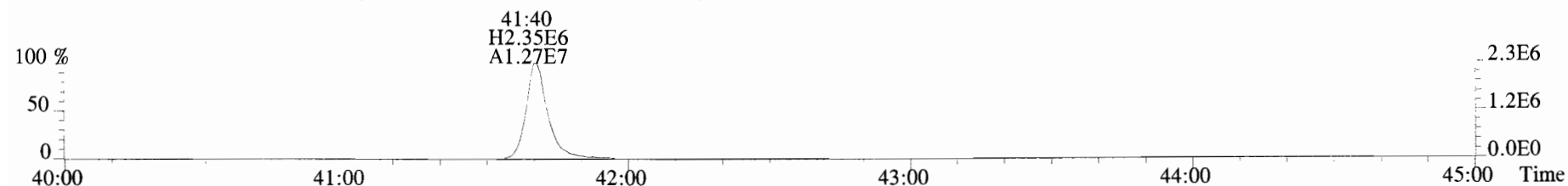
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



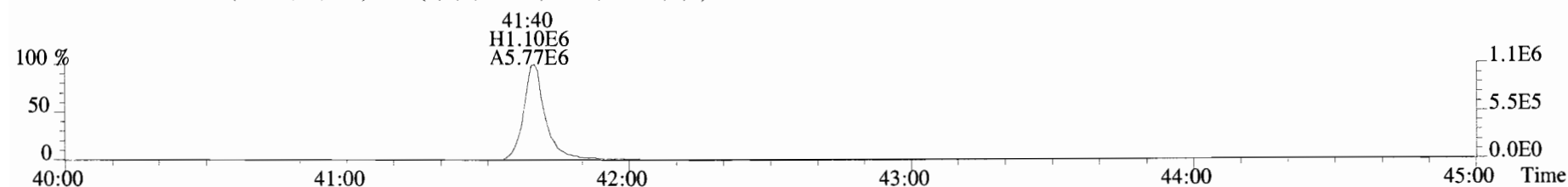
File:191009D1 #1-431 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



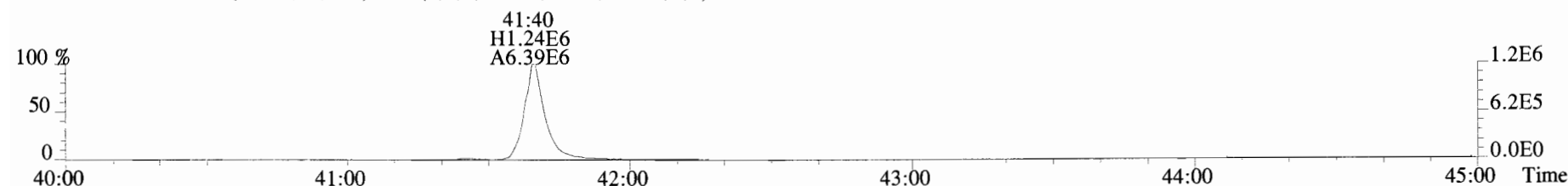
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



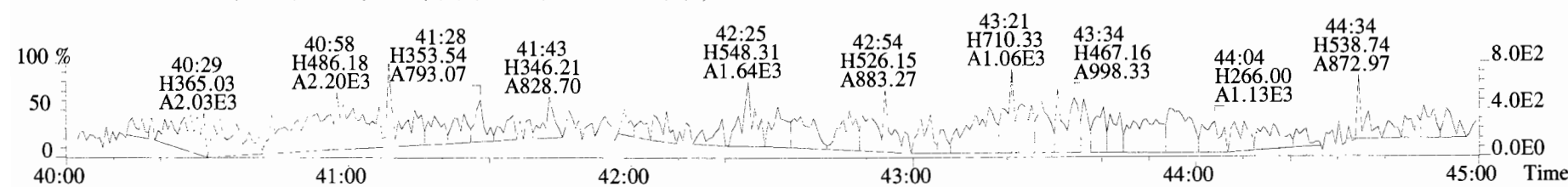
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



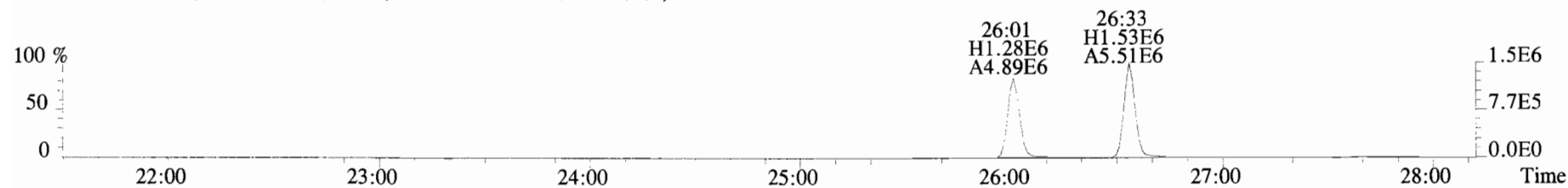
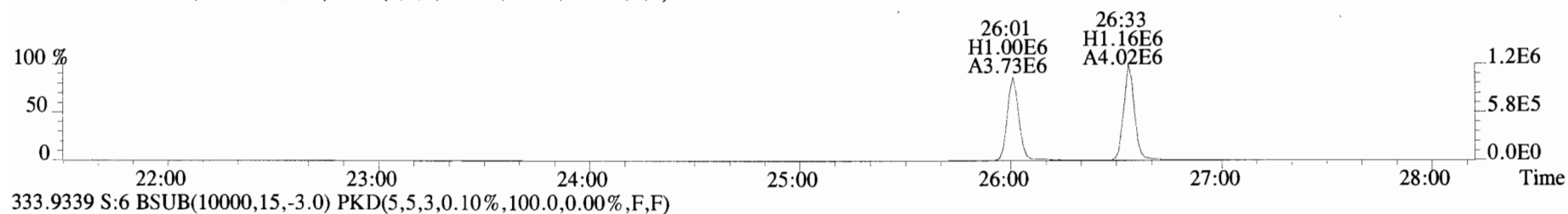
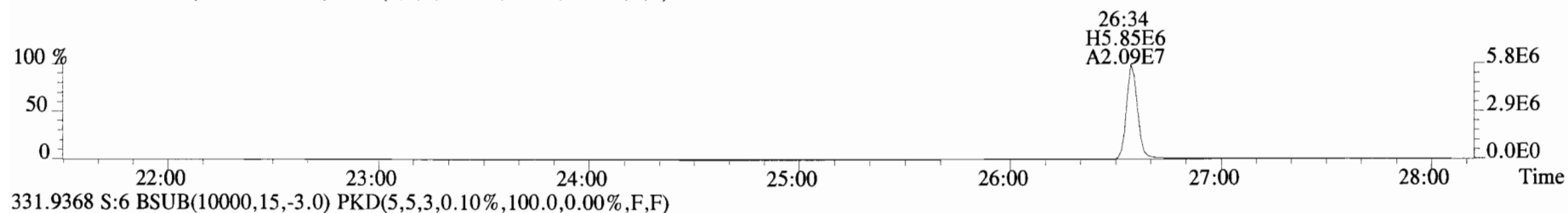
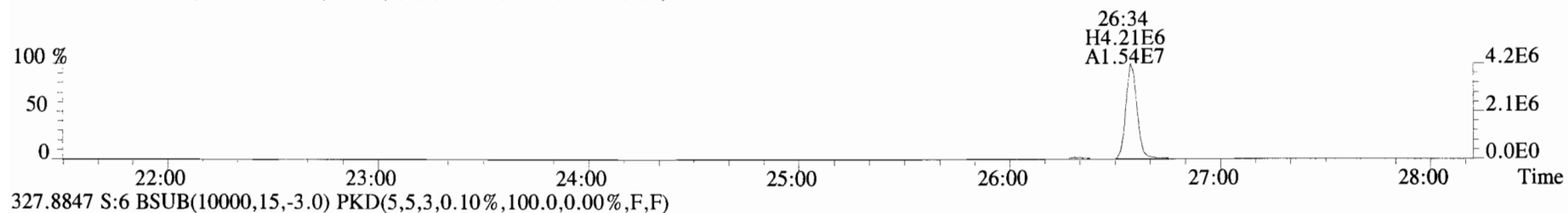
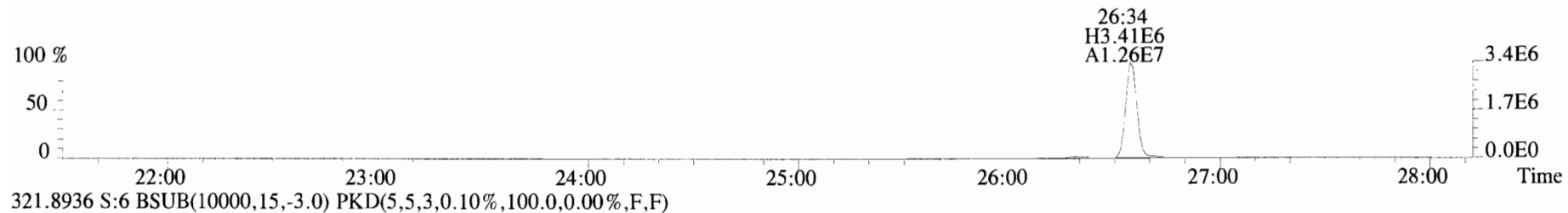
455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



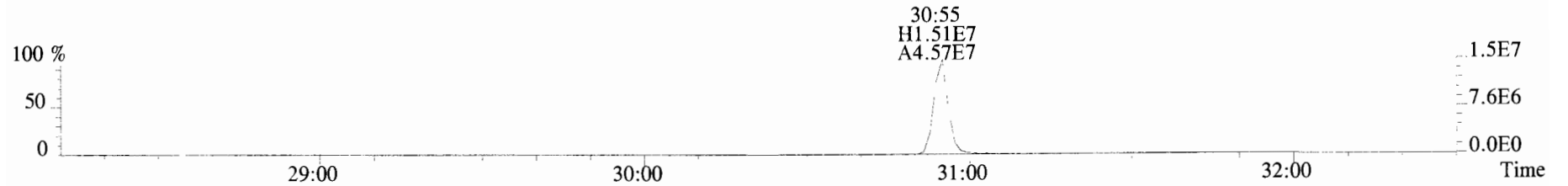
513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



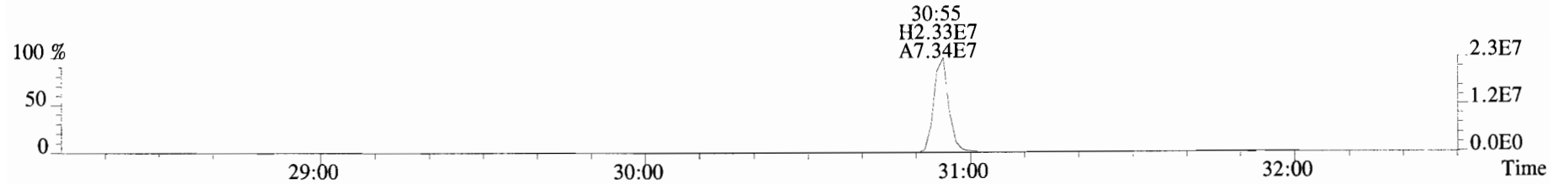
File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



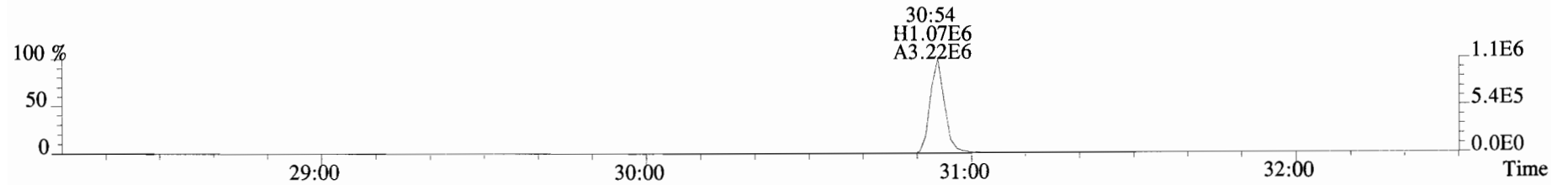
File:191009D1 #1-211 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



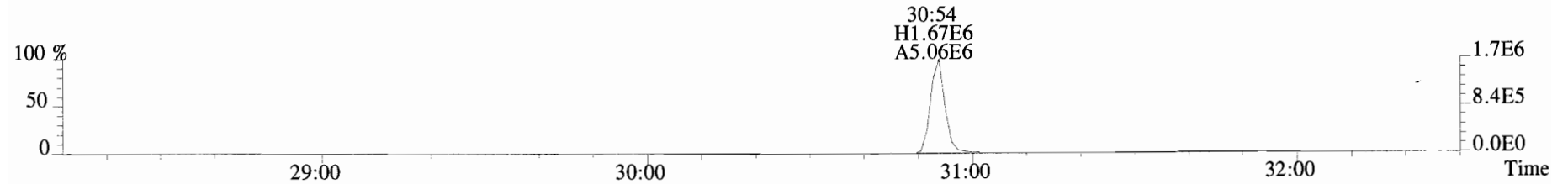
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



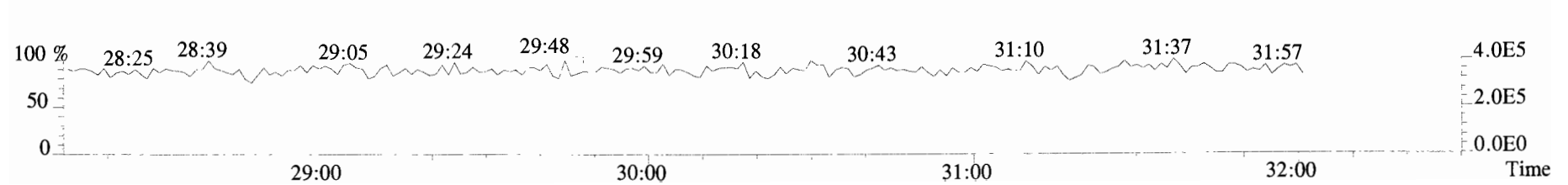
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



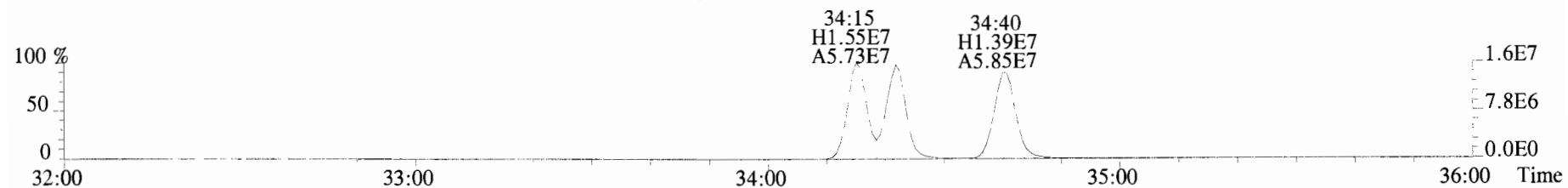
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



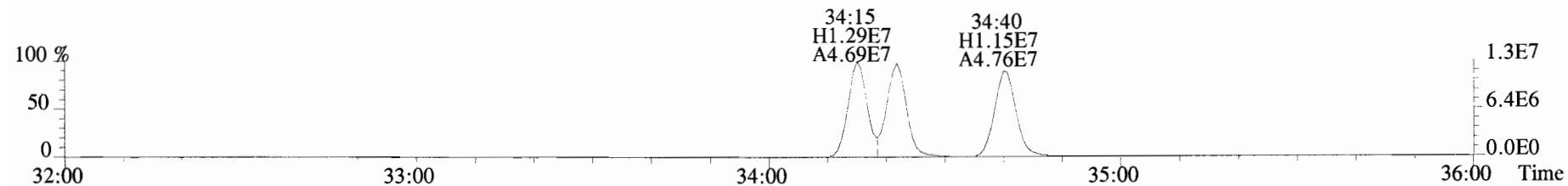
366.9792 S:6 F:2



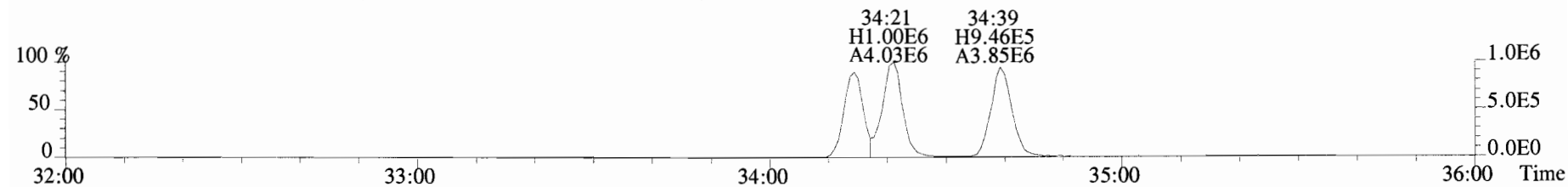
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



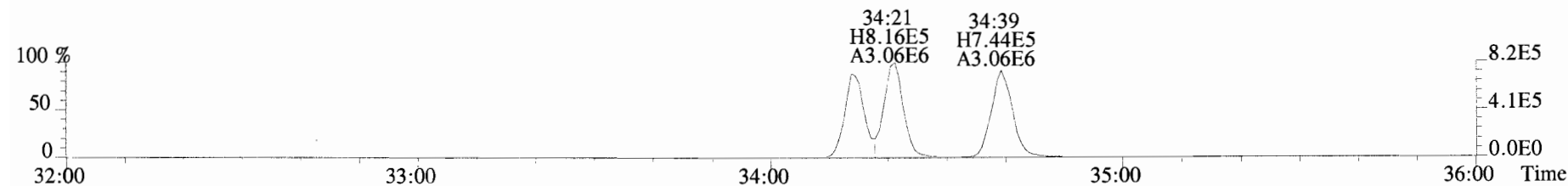
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



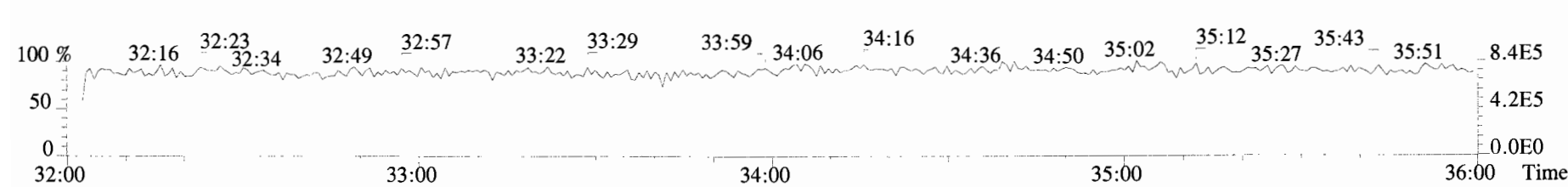
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



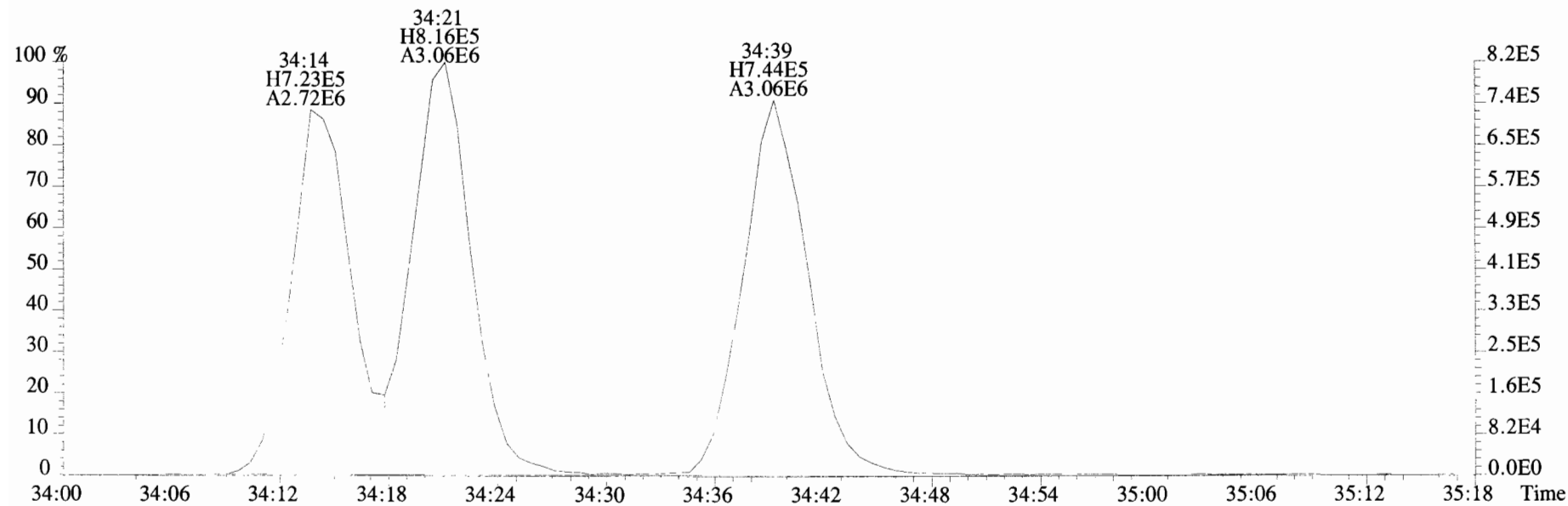
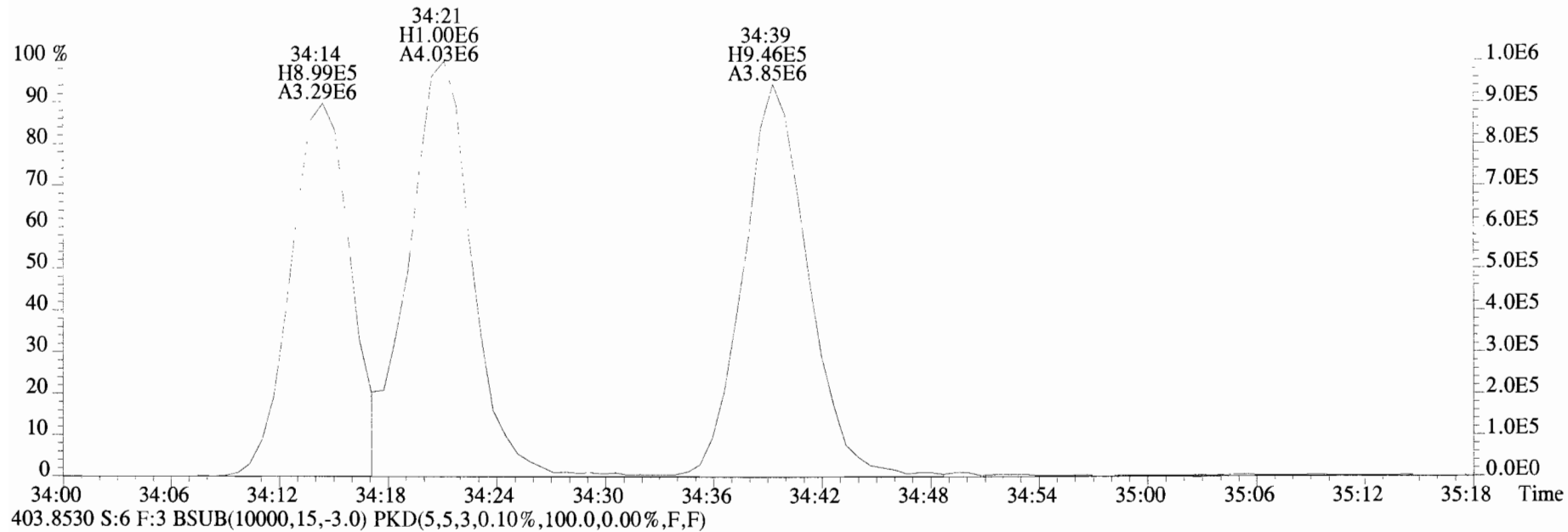
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



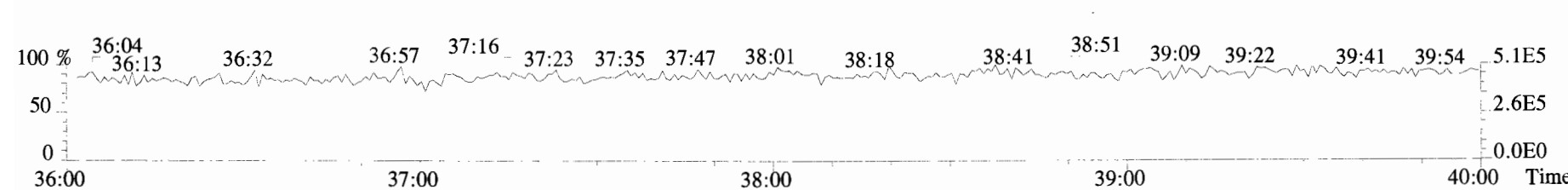
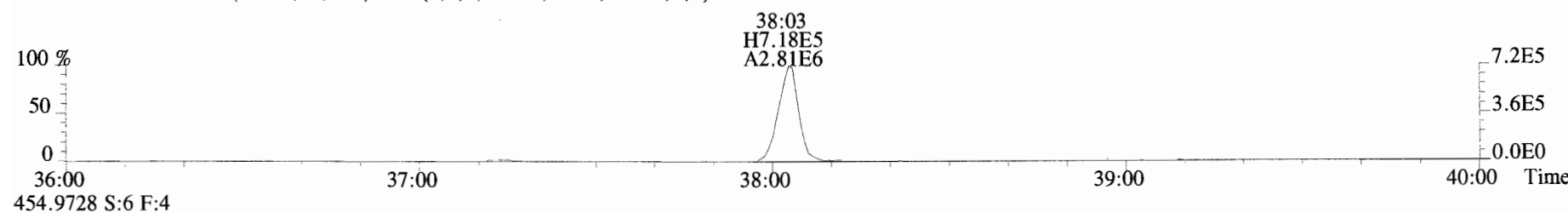
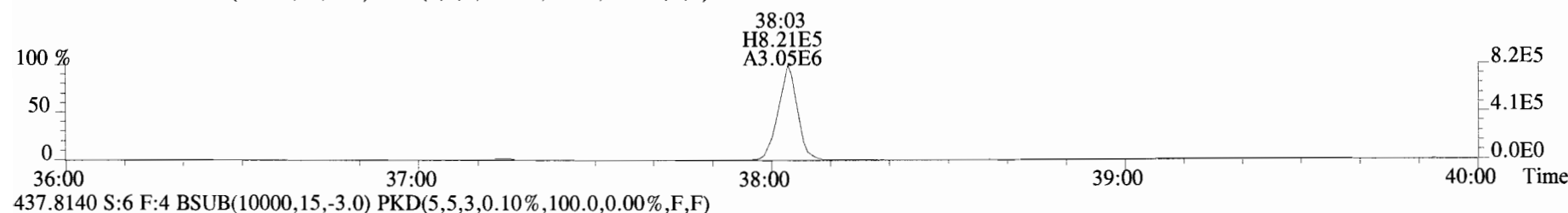
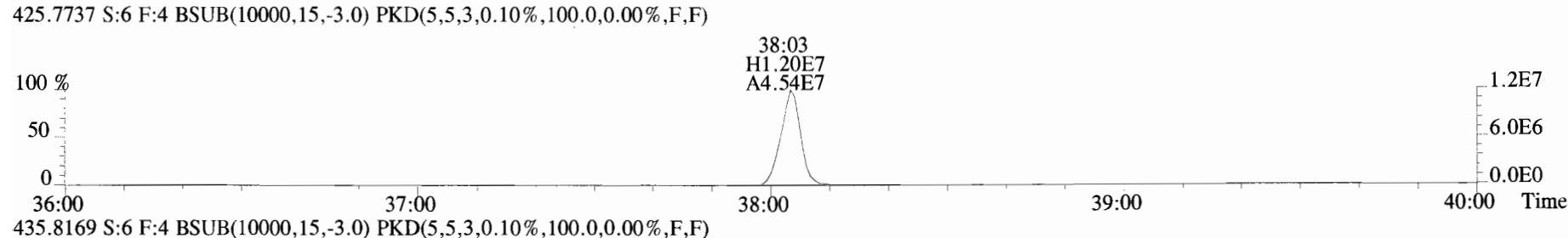
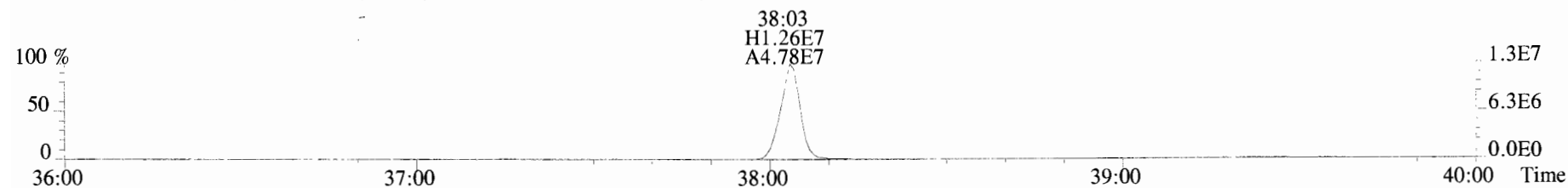
392.9760 S:6 F:3



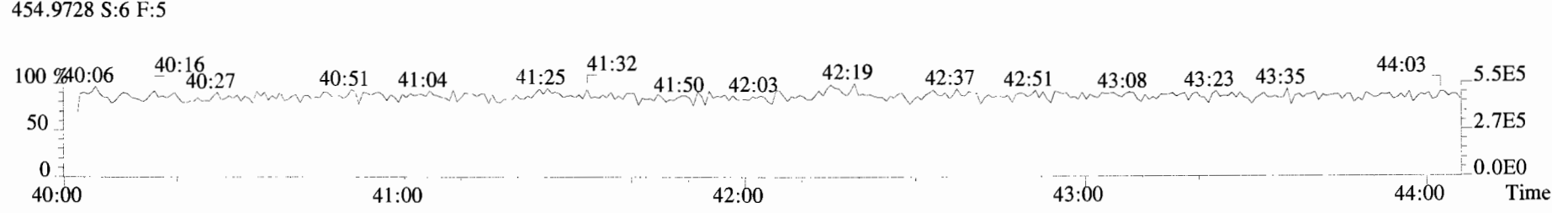
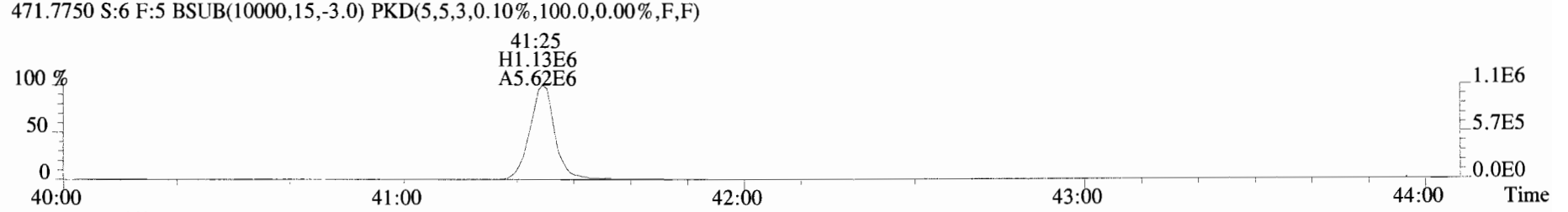
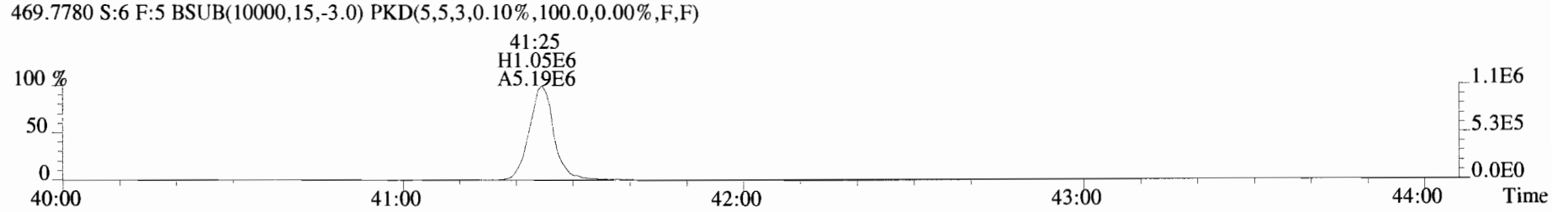
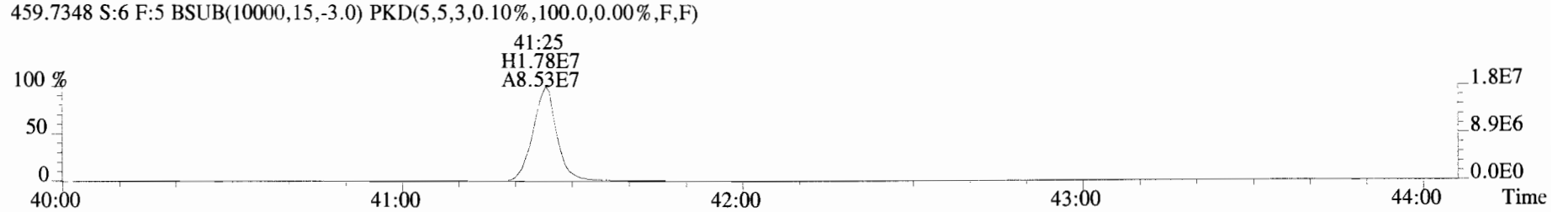
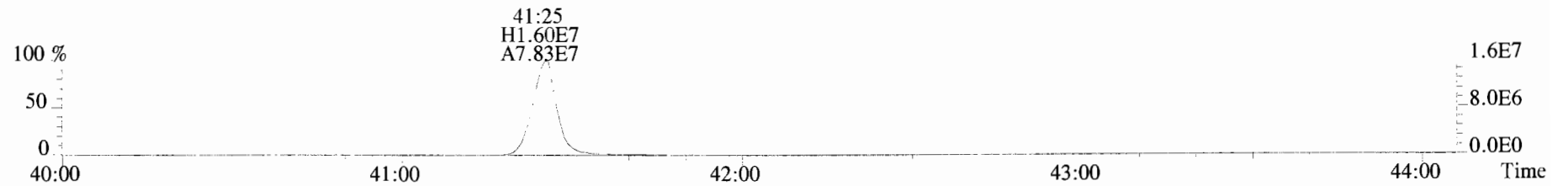
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



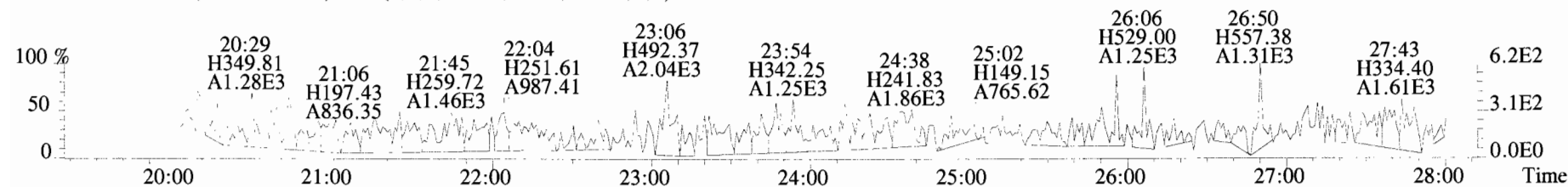
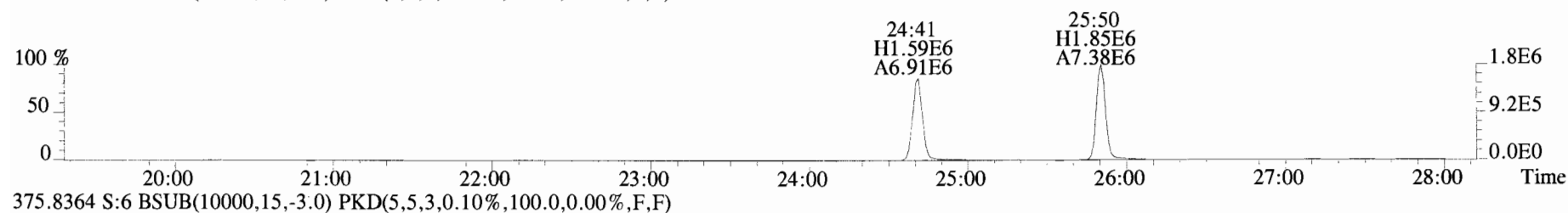
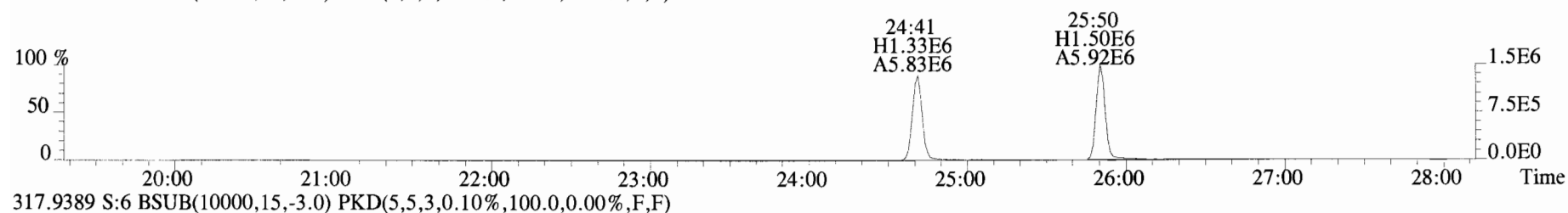
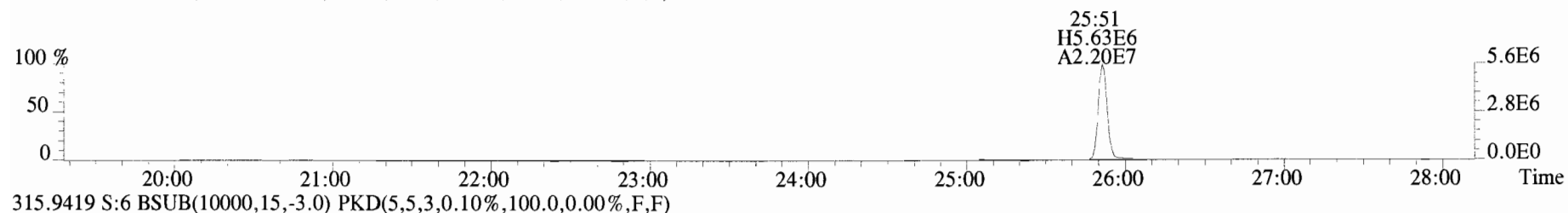
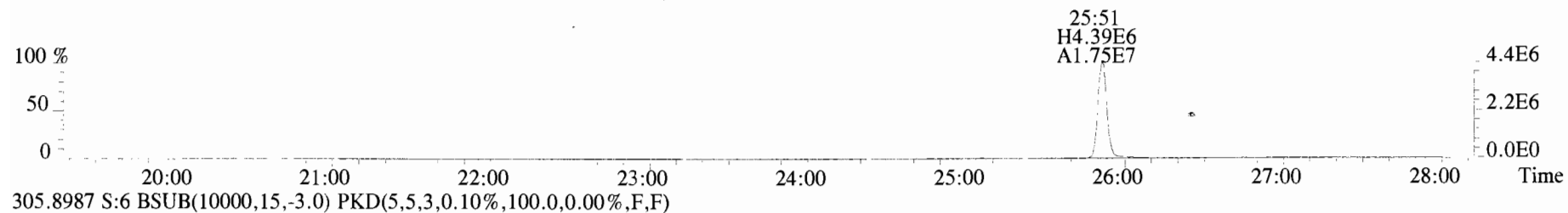
File:191009D1 #1-356 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



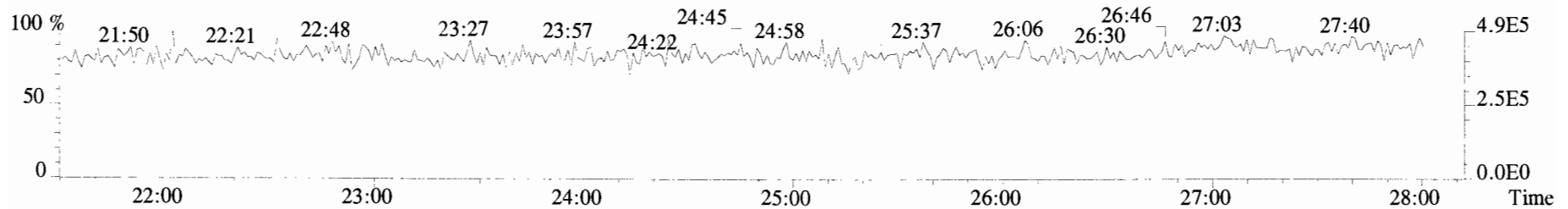
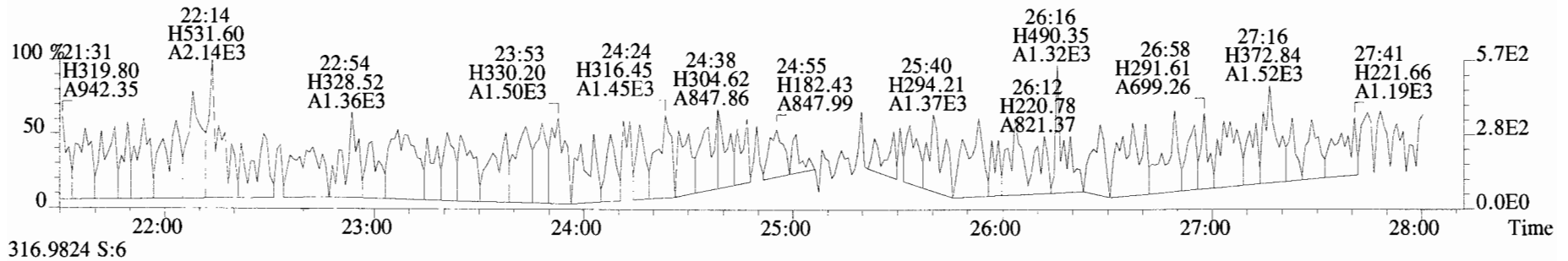
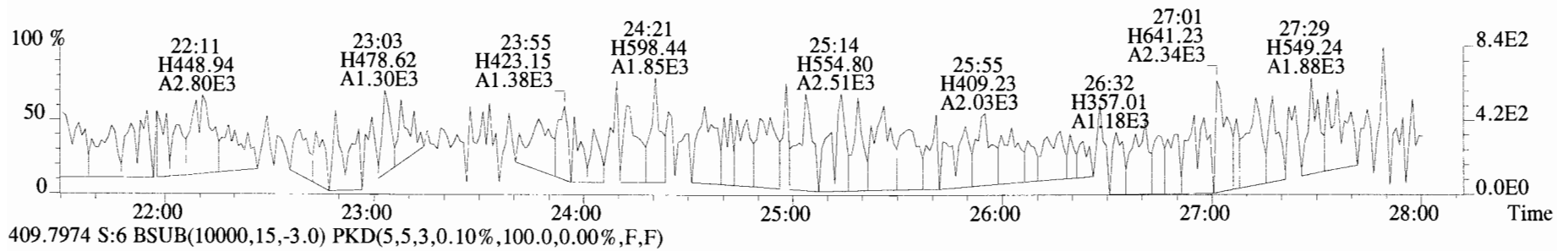
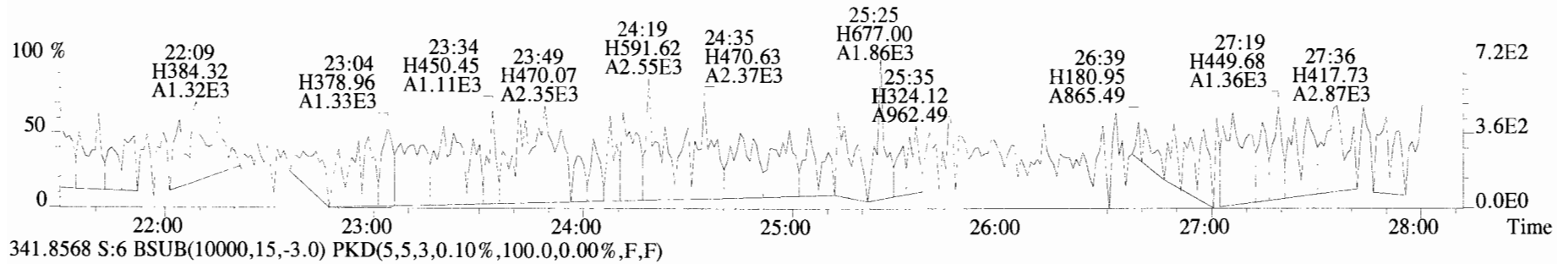
File:191009D1 #1-431 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



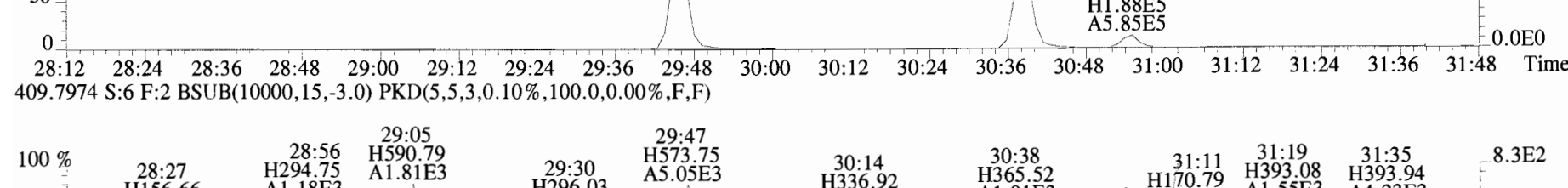
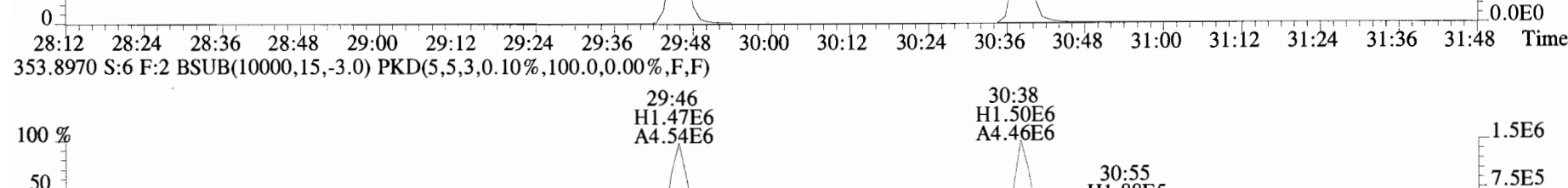
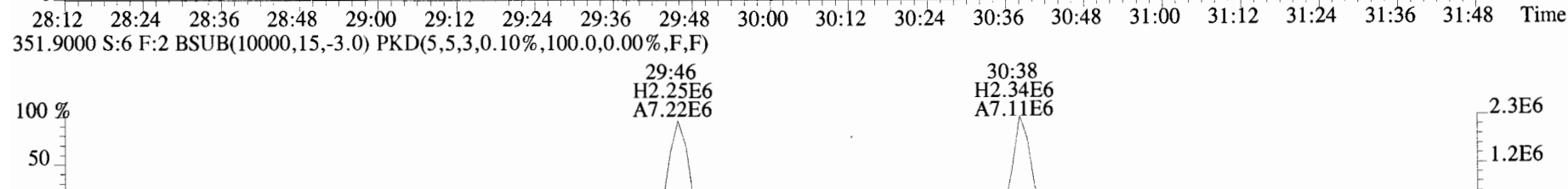
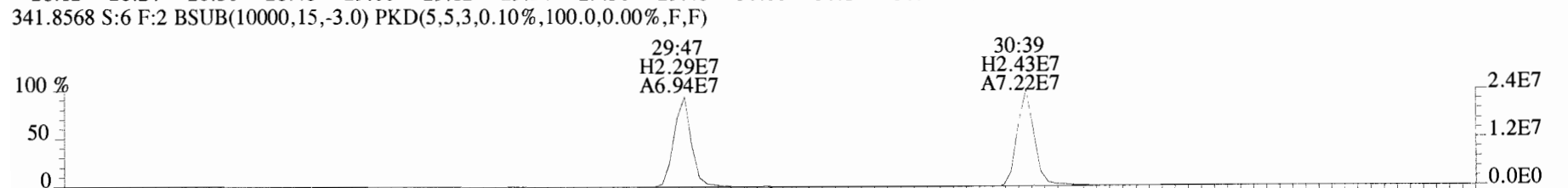
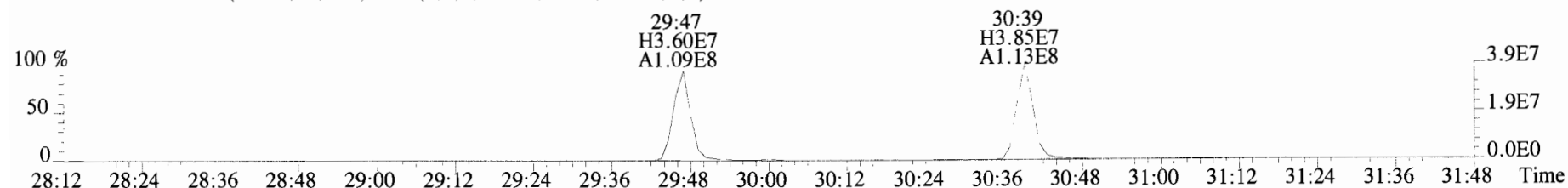
File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



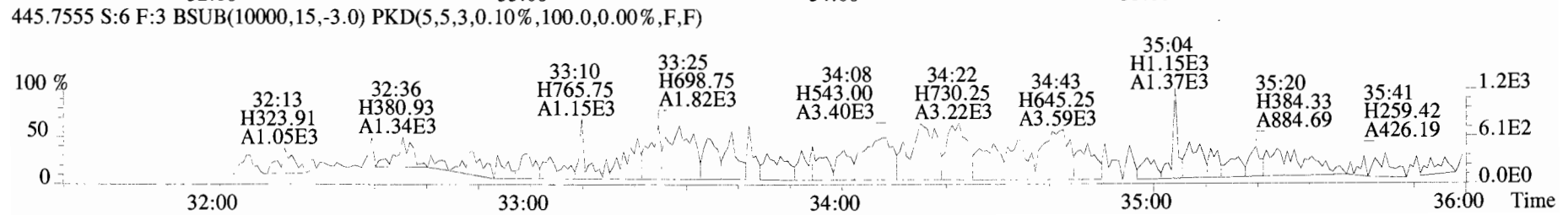
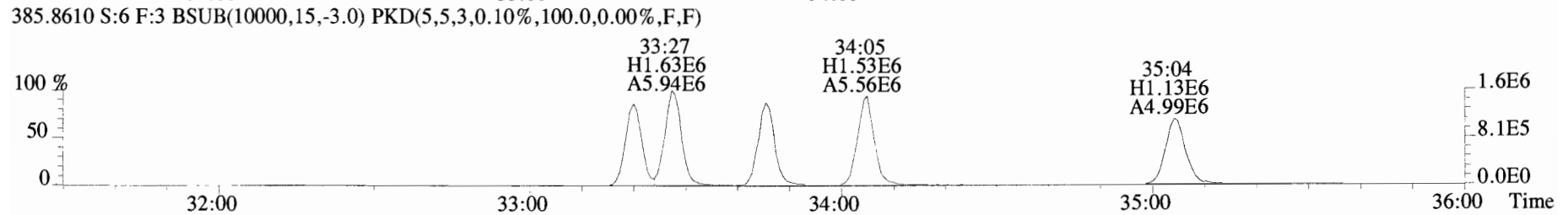
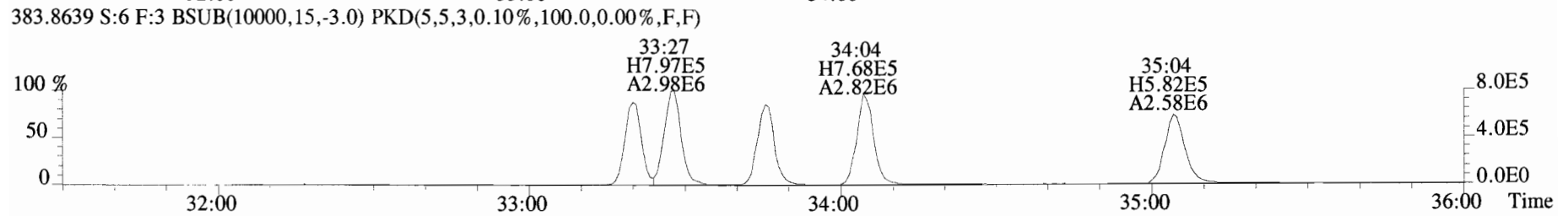
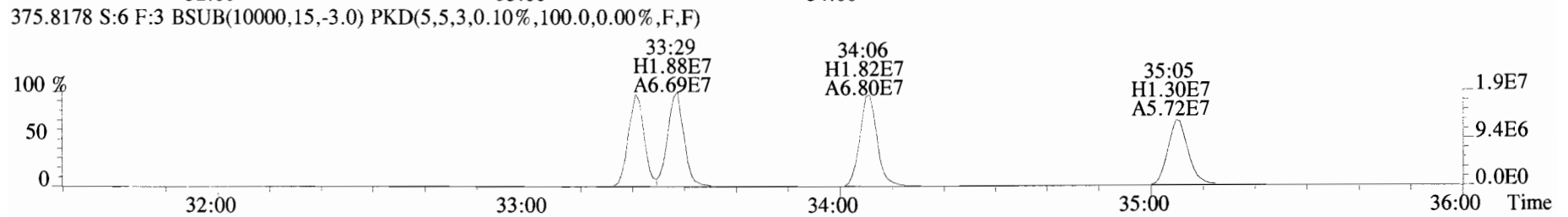
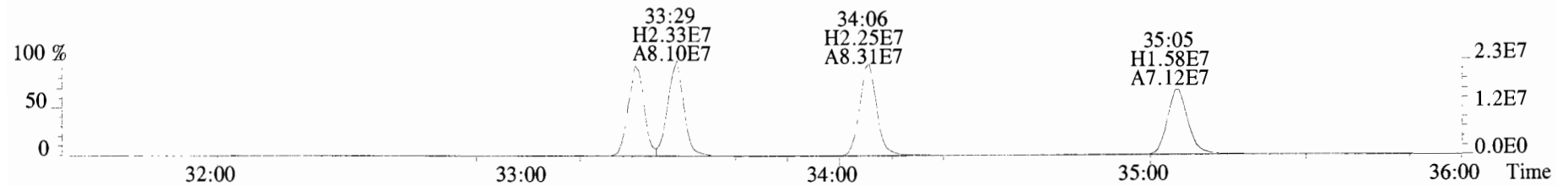
File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



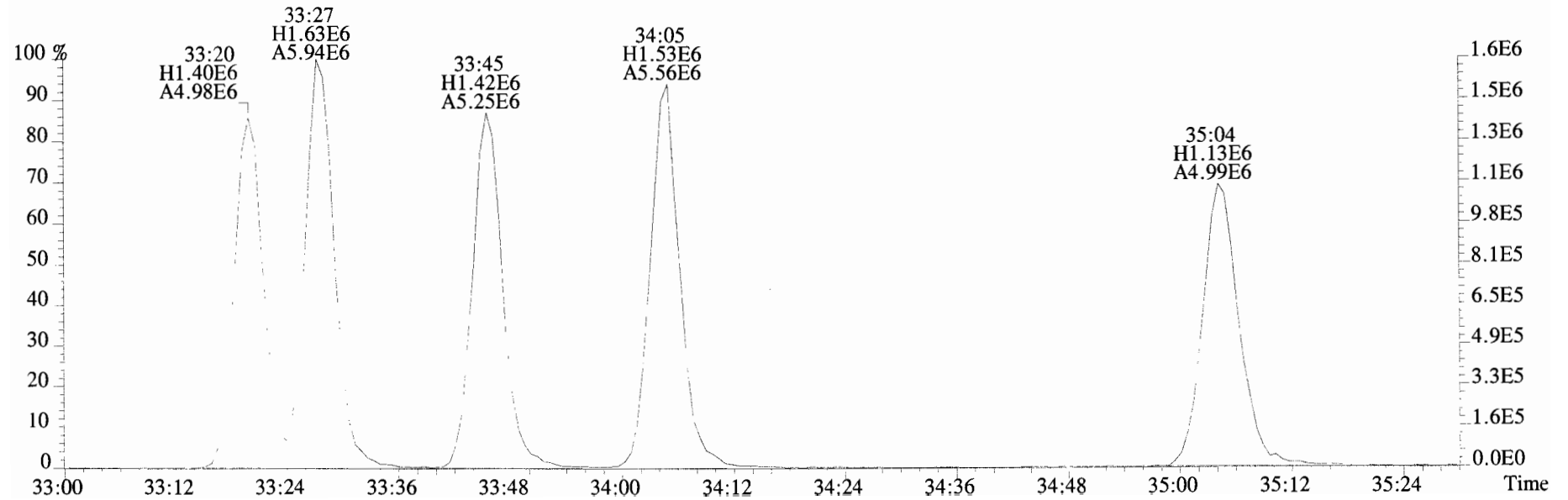
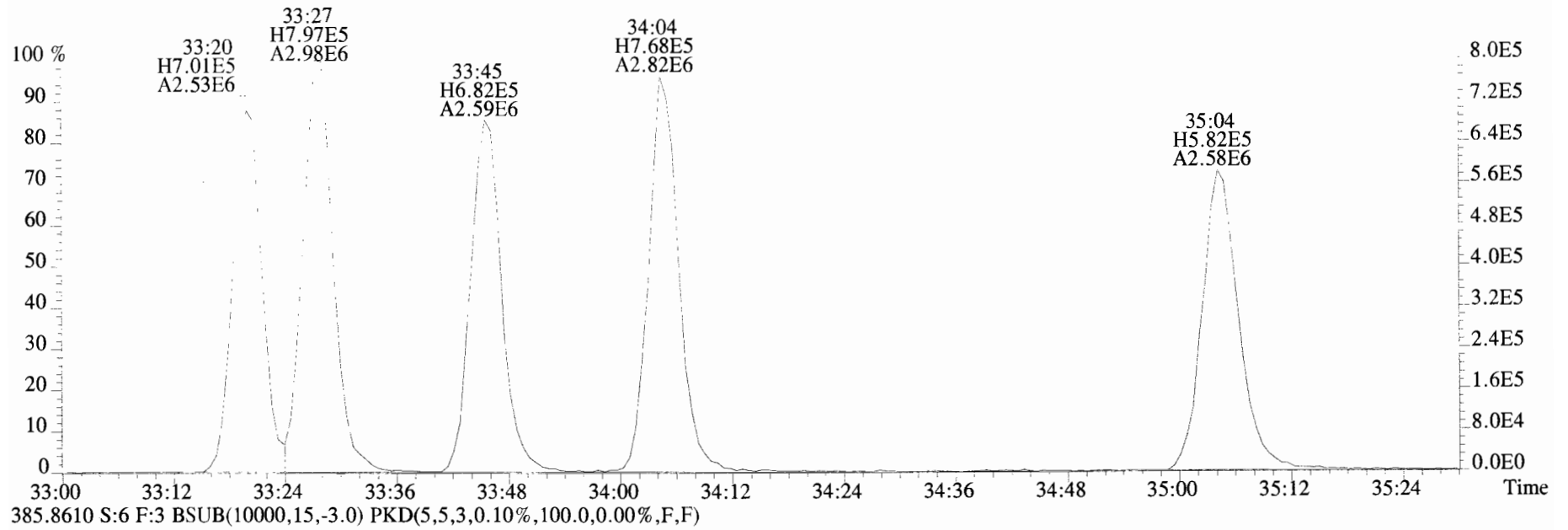
File:191009D1 #1-211 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
 339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



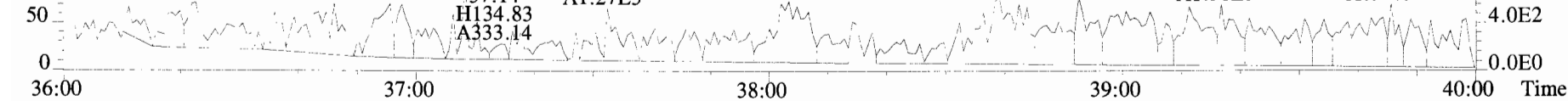
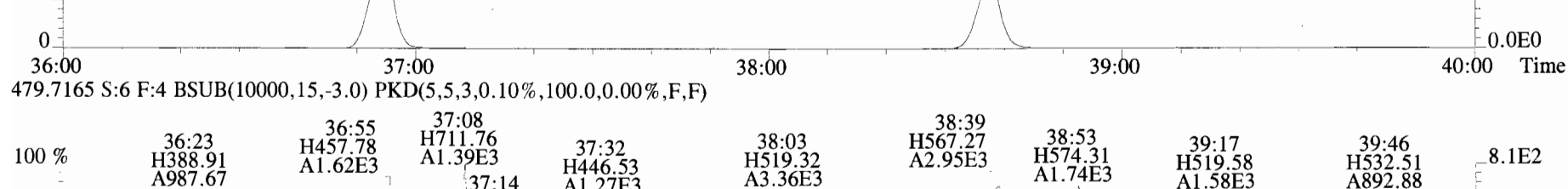
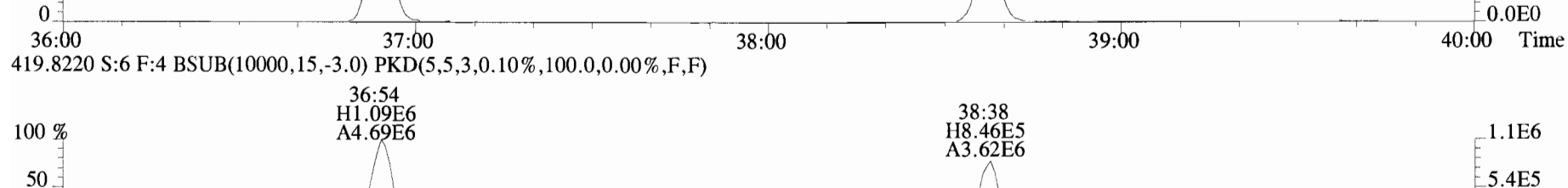
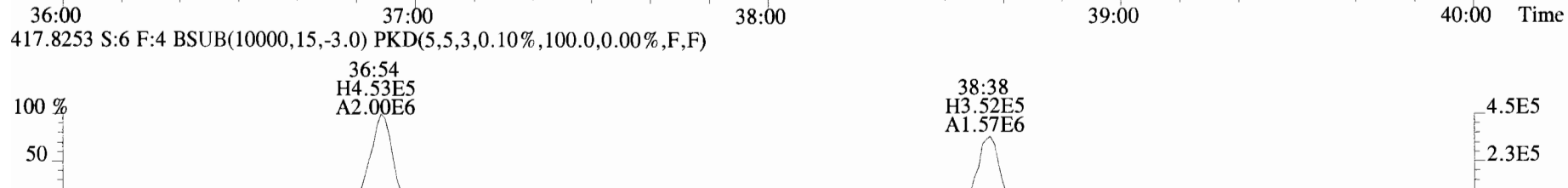
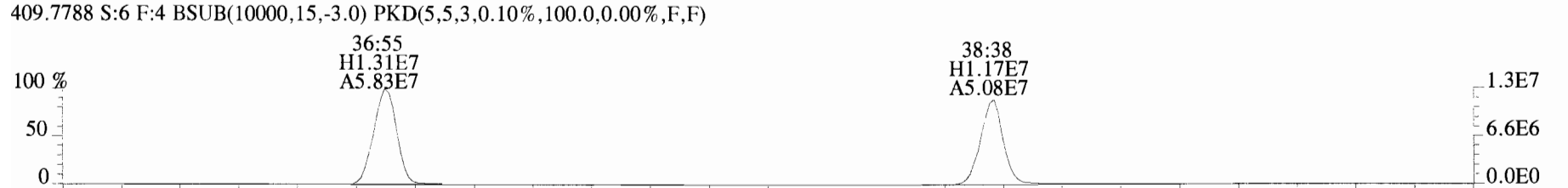
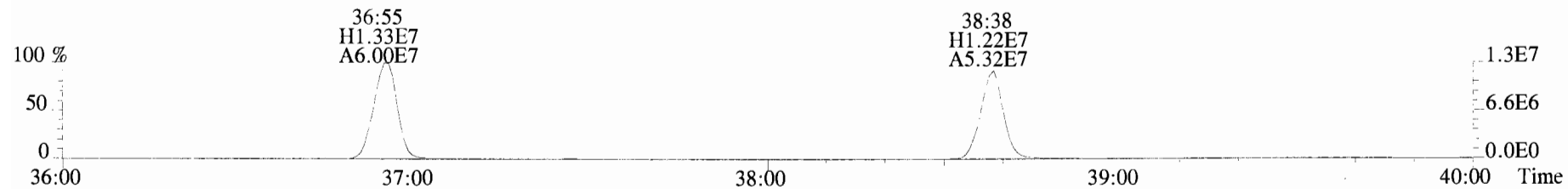
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



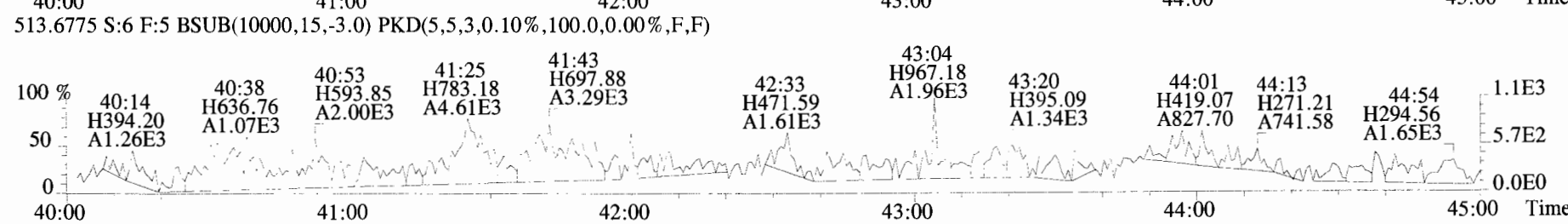
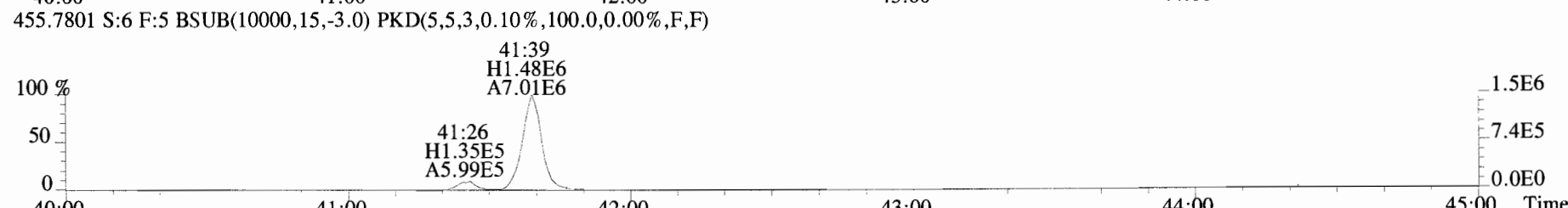
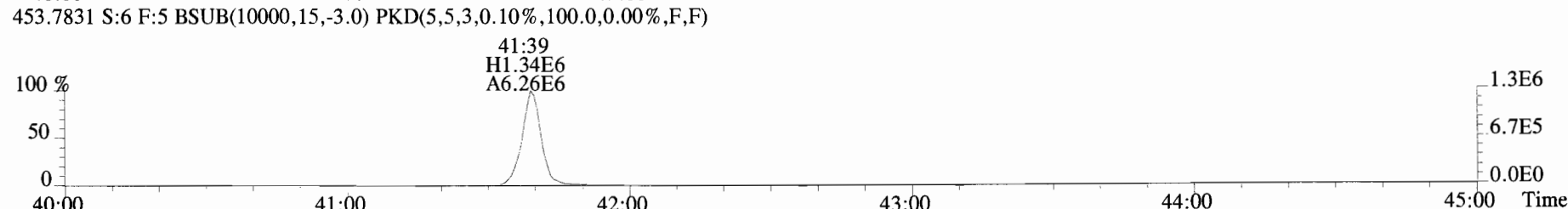
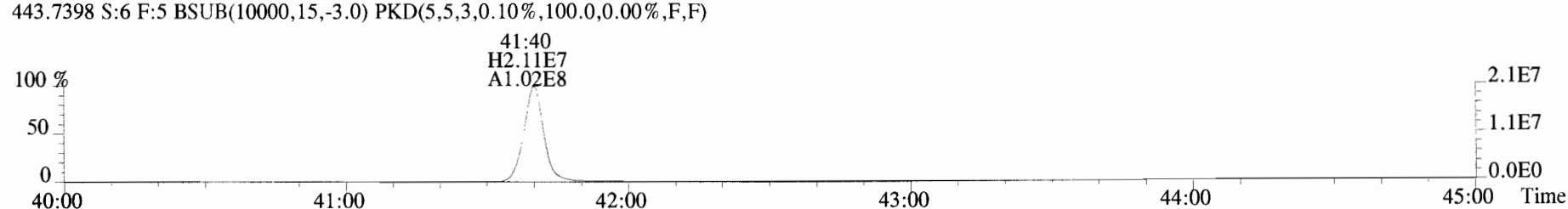
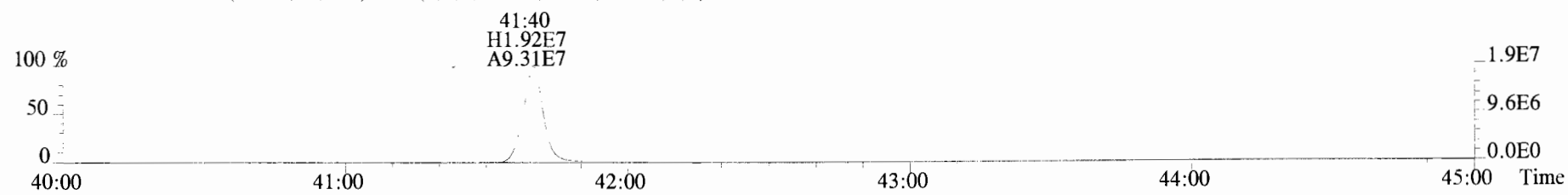
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191009D1 #1-356 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
 407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

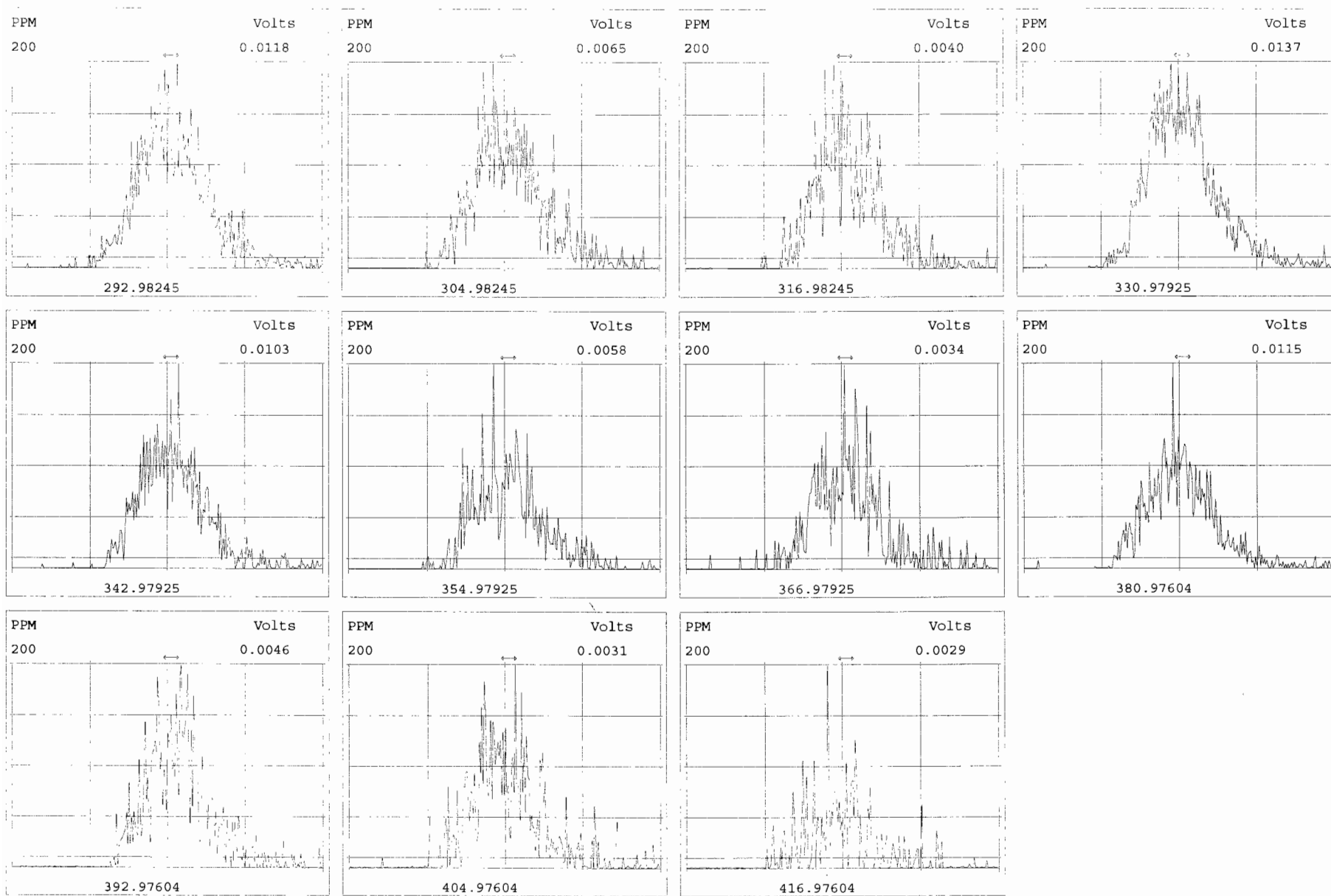


File:191009D1 #1-431 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



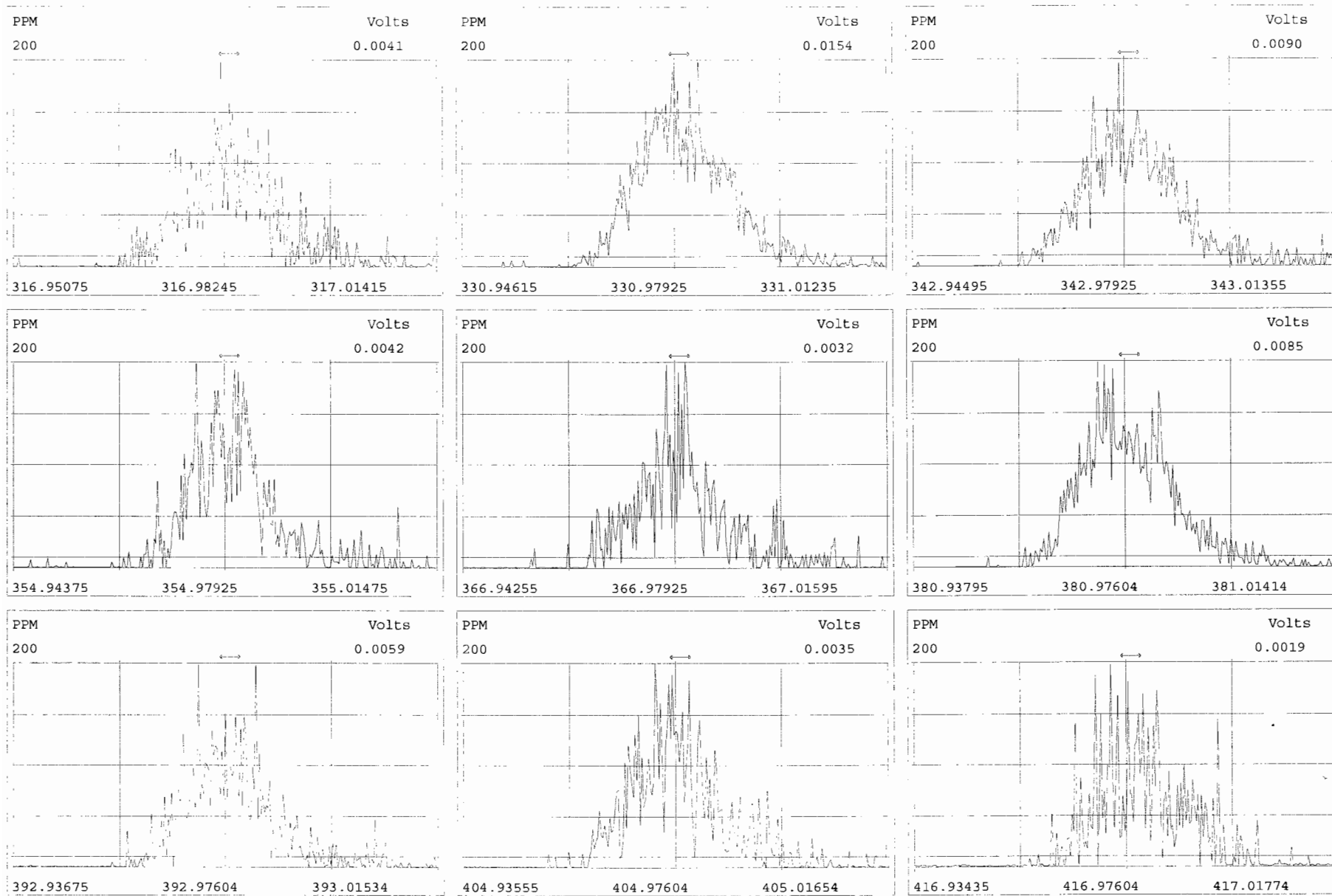
Peak Locate Examination:10-OCT-2019:06:40 File:RES_CHECK

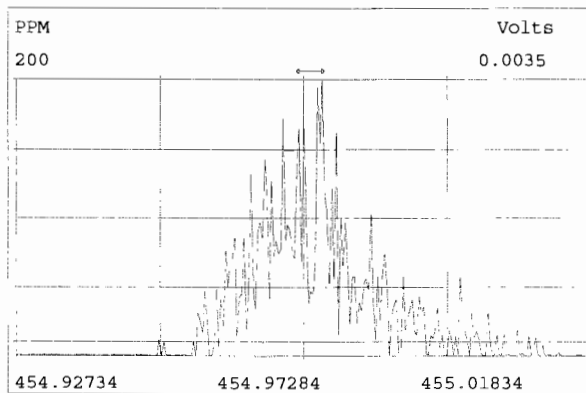
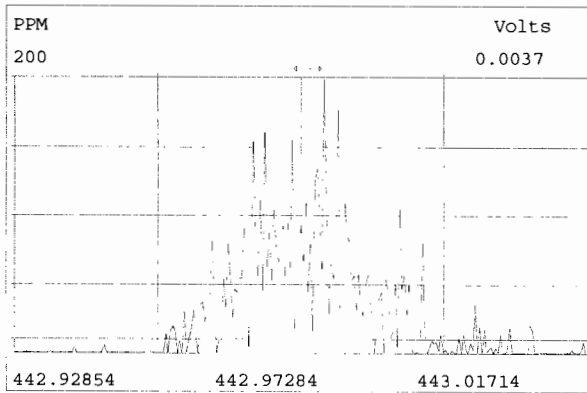
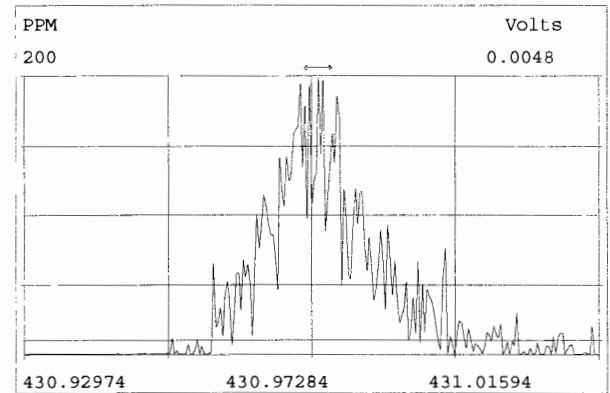
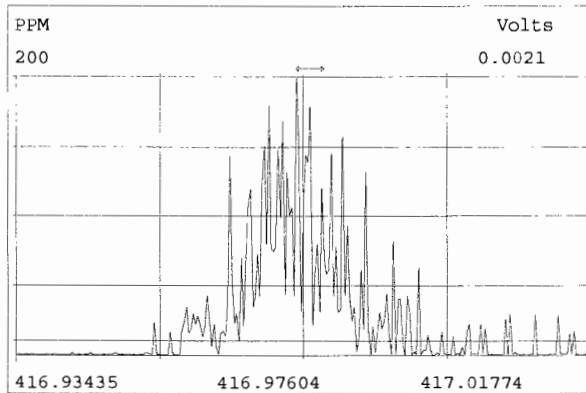
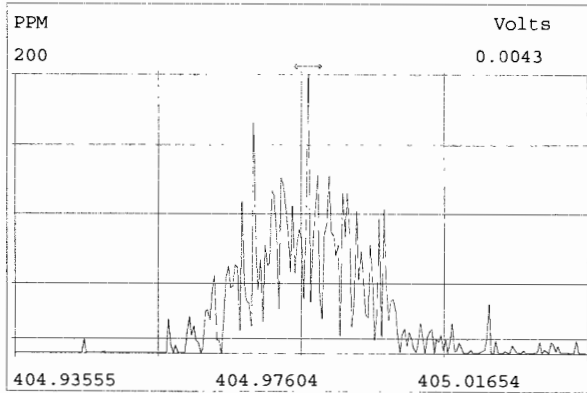
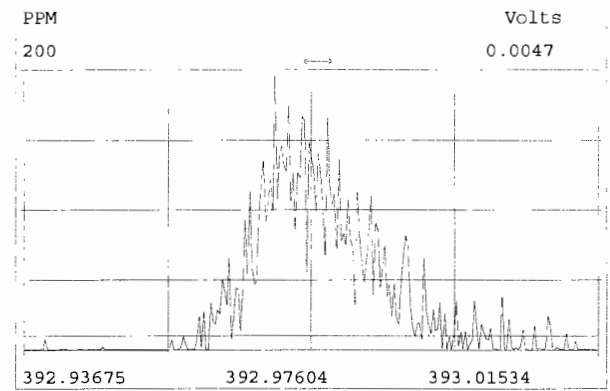
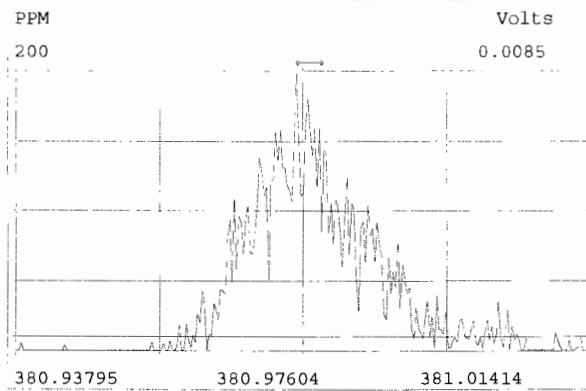
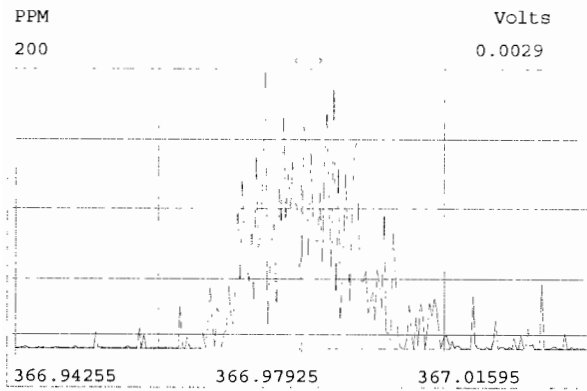
Experiment:OCDD_DB5 Function:1 Reference:PFK

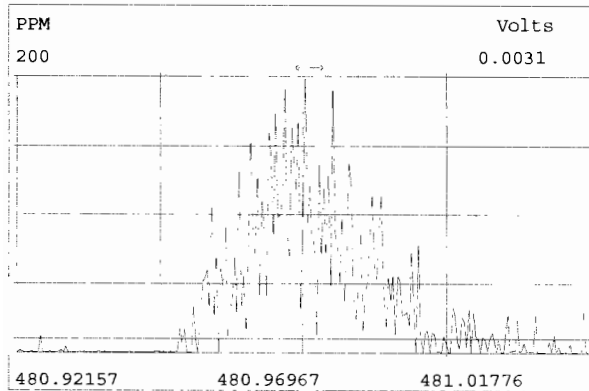
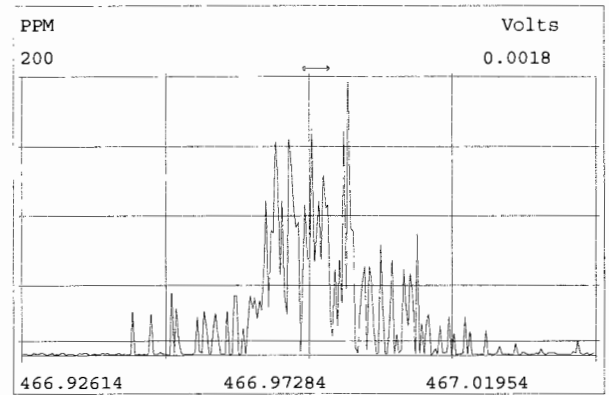
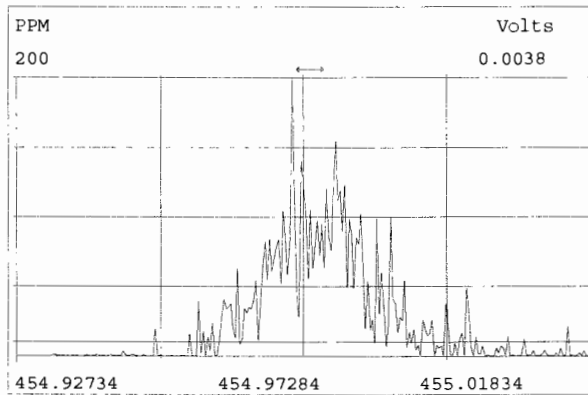
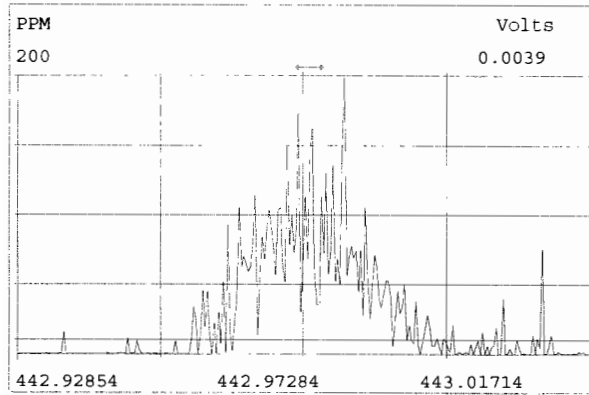
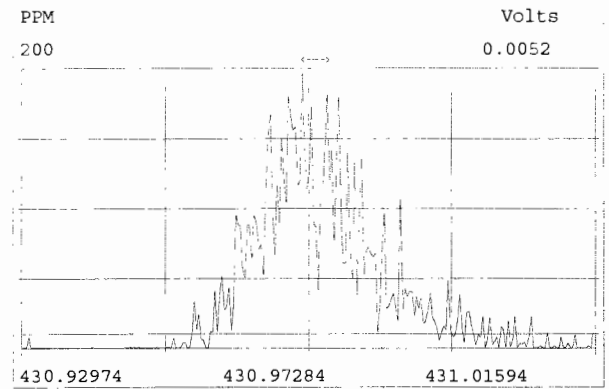
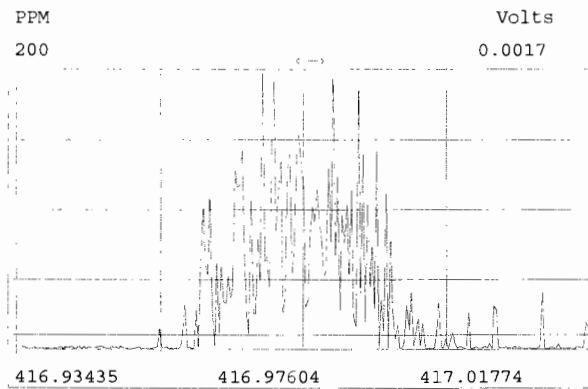
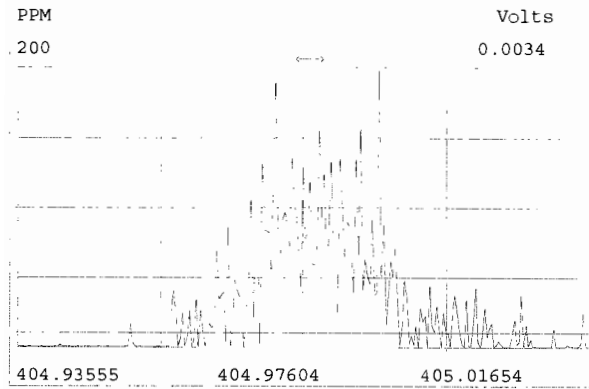


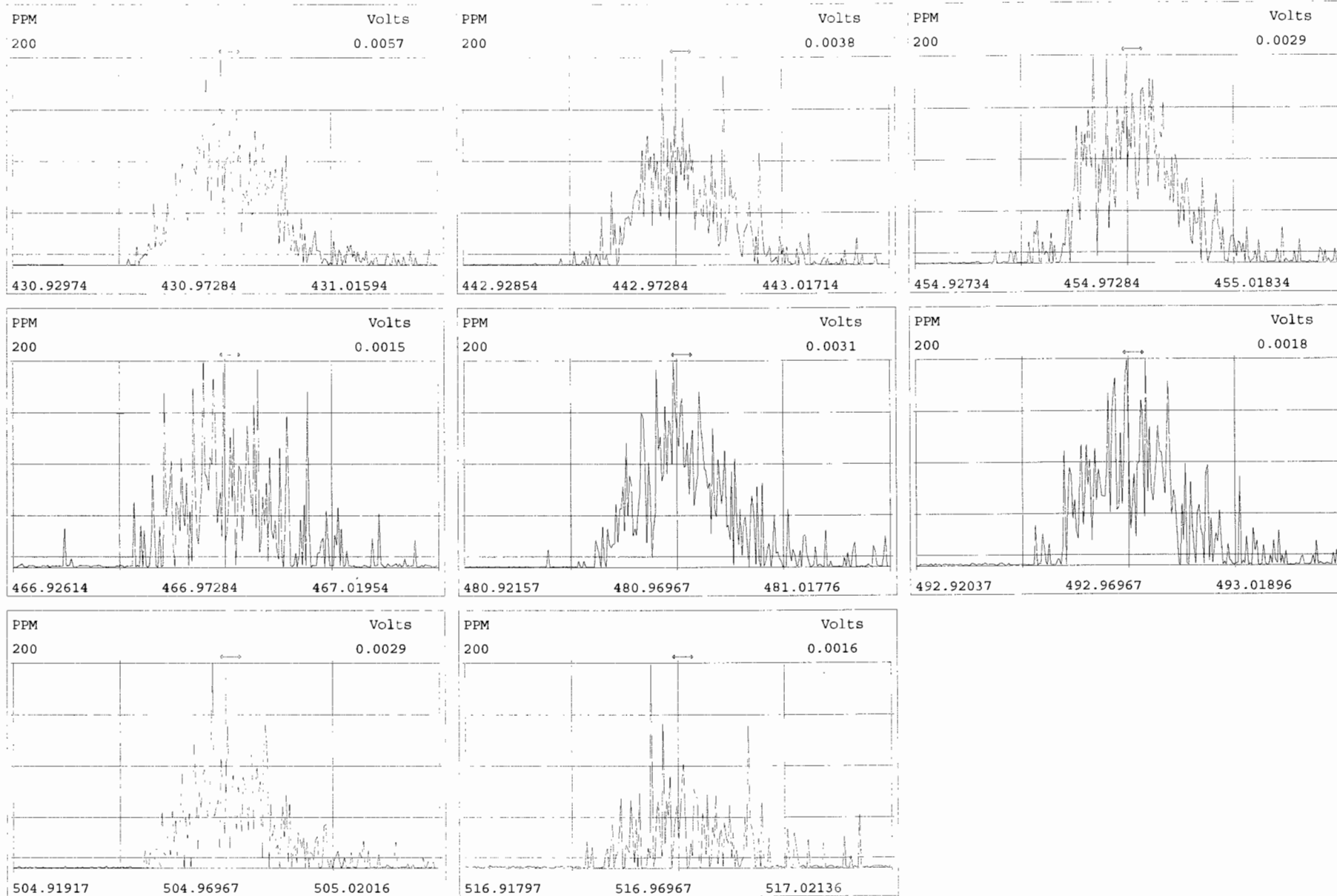
Peak Locate Examination:10-OCT-2019:06:41 File:RES_CHECK

Experiment:OCDD_DB5 Function:2 Reference:PFK









FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: SS191009D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191009D1 S#8 Analysis Date: 9-OCT-19 Time: 21:46:34

NATIVE ANALYTES	M/Z'S	ION	QC	Pass	CONC.	CONC.
	FORMING	ABUND.	LIMITS		FOUND	RANGE (3)
	RATIO (1)	RATIO	(2)		FOUND	(ng/mL)
2,3,7,8-TCDD	M/M+2	0.83	0.65-0.89	y	10.2	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	51.3	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	48.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.18	1.05-1.43	y	52.4	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.17	1.05-1.43	y	50.4	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	51.9	43.0 - 58.0
OCDD	M+2/M+4	0.92	0.76-1.02	y	105	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	10.3	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	50.2	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	56.7	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	51.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	51.5	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	y	51.5	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.24	1.05-1.43	y	50.9	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	y	53.0	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	50.2	43.0 - 58.0
OCDF	M+2/M+4	0.92	0.76-1.02	y	102	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: DB

Date: 10/10/19

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191009D1 S#8 Analysis Date: 9-OCT-19 Time: 21:46:34

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	0.72	0.65-0.89	y	100	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	y	101	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	95.9	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	95.6	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	94.3	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	91.7	72.0 - 138.0
13C-OCDD	M/M+2	0.92	0.76-1.02	y	190	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.78	0.65-0.89	y	97.2	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	97.4	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	96.6	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	102	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	101	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	97.1	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	99.0	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	96.6	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.44	0.37-0.51	y	102	77.0 - 129.0
13C-OCDF	M+2/M+4	0.88	0.76-1.02	y	197	96.0 - 415.0
CLEANUP STANDARD (3) 37Cl-2,3,7,8-TCDD					9.08	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: DB

Date: 10/10/19

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191009D1 S#8 Analysis Date: 9-OCT-19 Time: 21:46:34

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	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
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.189	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.994	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.145	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.179	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: DB

Date: 10/10/19

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191009D1 S#8 Analysis Date: 9-OCT-19 Time: 21:46:34

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	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.001	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001

LABELED COMPOUNDS

13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.987	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	1.010	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.040	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	1.018	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.027	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.093	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.145	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	1.227	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.235	1.091-1.371

Analyst: DB

Date: 10/10/19

Client ID: 1613 SSS 19C2207
Lab ID: SS191009D1-1

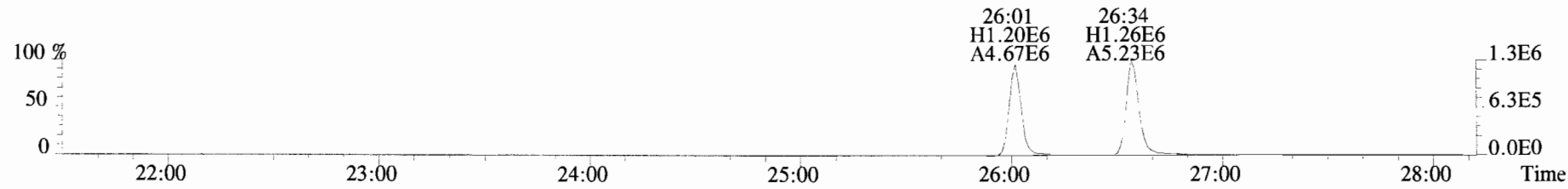
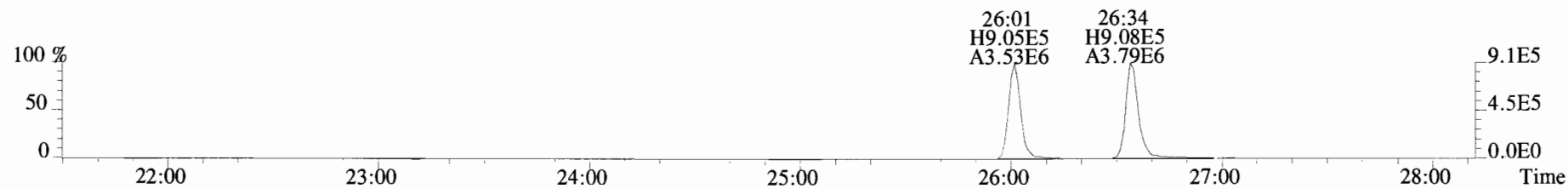
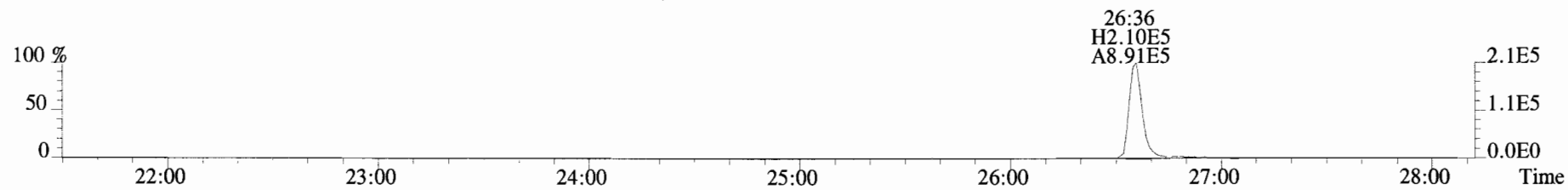
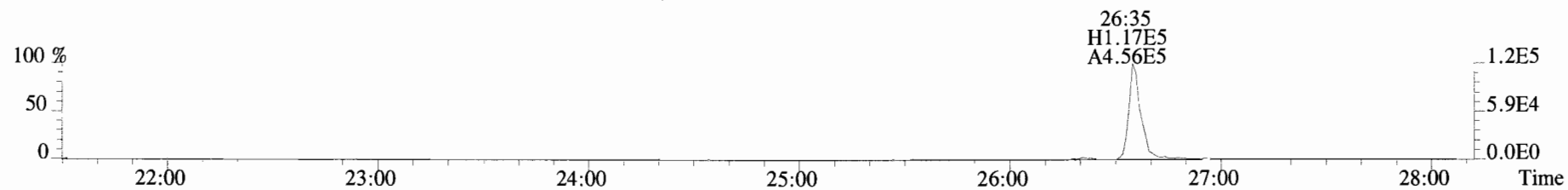
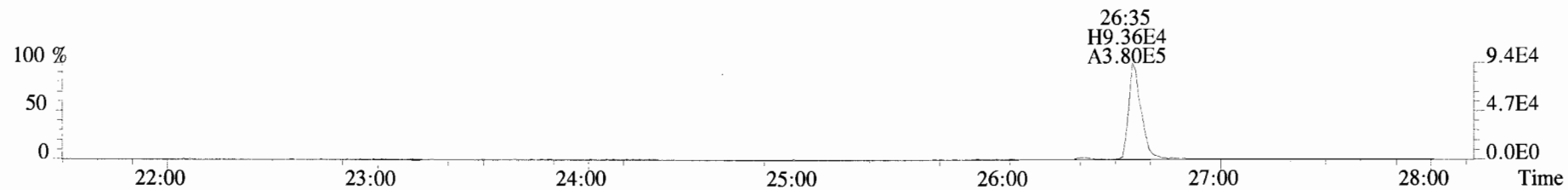
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EndCAL: NA

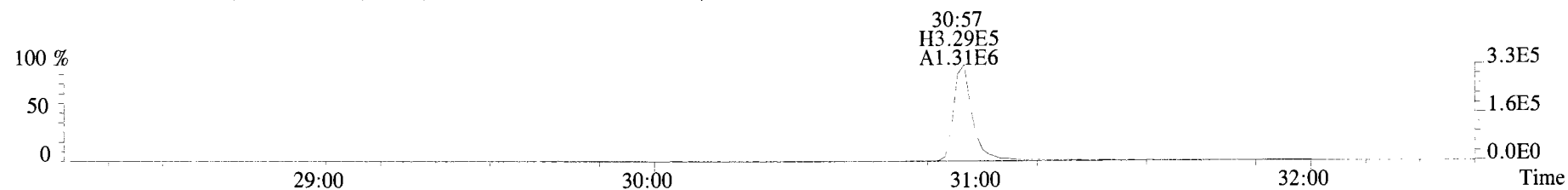
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	8.36e+05	0.83 y	0.91	26:36	10.234		* 2.5		*	Total Tetra-Dioxins	10.4	11.4		*	*
1,2,3,7,8-PeCDD	3.38e+06	0.63 y	0.90	30:57	51.323		* 2.5		*	Total Penta-Dioxins	51.4	51.7		*	*
1,2,3,4,7,8-HxCDD	2.55e+06	1.31 y	1.10	34:18	48.909		* 2.5		*	Total Hexa-Dioxins	153	153		*	*
1,2,3,6,7,8-HxCDD	3.09e+06	1.18 y	0.94	34:24	52.378		* 2.5		*	Total Hepta-Dioxins	53.5	54.4		*	*
1,2,3,7,8,9-HxCDD	2.83e+06	1.17 y	0.96	34:44	50.434		* 2.5		*	Total Tetra-Furans	10.7	11.4		*	*
1,2,3,4,6,7,8-HpCDD	2.34e+06	1.02 y	0.98	38:07	51.915		* 2.5		*	Total Penta-Furans	110.38	111.73		*	*
OCDD	4.27e+06	0.92 y	0.96	41:30	105.37		* 2.5		*	Total Hexa-Furans	205	207		*	*
										Total Hepta-Furans	104	106		*	*
2,3,7,8-TCDF	1.24e+06	0.78 y	0.95	25:53	10.342		* 2.5		*						
1,2,3,7,8-PeCDF	5.03e+06	1.54 y	0.96	29:48	50.200		* 2.5		*						
2,3,4,7,8-PeCDF	5.90e+06	1.60 y	1.01	30:42	56.719		* 2.5		*						
1,2,3,4,7,8-HxCDF	3.94e+06	1.22 y	1.18	33:23	51.086		* 2.5		*						
1,2,3,6,7,8-HxCDF	4.44e+06	1.23 y	1.07	33:31	51.491		* 2.5		*						
2,3,4,6,7,8-HxCDF	4.08e+06	1.20 y	1.11	34:08	51.474		* 2.5		*						
1,2,3,7,8,9-HxCDF	3.40e+06	1.24 y	1.06	35:10	50.903		* 2.5		*						
1,2,3,4,6,7,8-HpCDF	3.36e+06	1.05 y	1.13	36:58	53.010		* 2.5		*						
1,2,3,4,7,8,9-HpCDF	2.94e+06	1.05 y	1.28	38:42	50.216		* 2.5		*						
OCDF	5.04e+06	0.92 y	0.95	41:45	102.23		* 2.5		*						
IS	13C-2,3,7,8-TCDD	9.02e+06	0.72 y	1.10	26:35	100.49				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	7.29e+06	0.64 y	0.88	30:56	100.87				100					
IS	13C-1,2,3,4,7,8-HxCDD	4.73e+06	1.23 y	0.64	34:16	95.948				101					
IS	13C-1,2,3,6,7,8-HxCDD	6.28e+06	1.25 y	0.86	34:24	95.558				95.9					
IS	13C-1,2,3,7,8,9-HxCDD	5.85e+06	1.26 y	0.81	34:43	94.306				95.6					
IS	13C-1,2,3,4,6,7,8-HpCDD	4.61e+06	1.06 y	0.65	38:06	91.680				94.3					
IS	13C-OCDD	8.45e+06	0.92 y	0.58	41:29	189.68				91.7					
IS	13C-2,3,7,8-TCDF	1.26e+07	0.78 y	1.03	25:52	97.199				94.8					
IS	13C-1,2,3,7,8-PeCDF	1.04e+07	1.62 y	0.85	29:48	97.425				97.2					
IS	13C-2,3,4,7,8-PeCDF	1.03e+07	1.59 y	0.85	30:41	96.649				97.4					
IS	13C-1,2,3,4,7,8-HxCDF	6.55e+06	0.51 y	0.83	33:22	102.43				96.6					
IS	13C-1,2,3,6,7,8-HxCDF	8.06e+06	0.51 y	1.03	33:30	101.42				102					
IS	13C-2,3,4,6,7,8-HxCDF	7.11e+06	0.51 y	0.95	34:08	97.073				101					
IS	13C-1,2,3,7,8,9-HxCDF	6.30e+06	0.51 y	0.83	35:09	98.999				97.1					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.62e+06	0.43 y	0.76	36:57	96.588				99.0					
IS	13C-1,2,3,4,7,8,9-HpCDF	4.58e+06	0.44 y	0.58	38:42	102.46				96.6					
IS	13C-OCDF	1.04e+07	0.88 y	0.69	41:44	196.65				102					
C/Up	37Cl-2,3,7,8-TCDD	8.91e+05		1.20	26:36	9.0817				98.3					
RS/RT	13C-1,2,3,4-TCDD	8.20e+06	0.76 y	1.00	26:01	100.00									
RS	13C-1,2,3,4-TCDF	1.25e+07	0.82 y	1.00	24:42	100.00									
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.68e+06	0.50 y	1.00	33:48	100.00									

Integrations
by DB
Analyst: DB
Reviewed
by CT
Analyst: CT
Date: 10/10/19
Date: 10/10/19

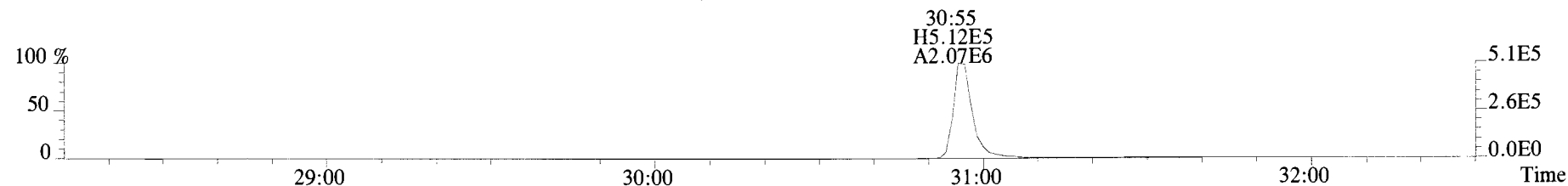
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319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



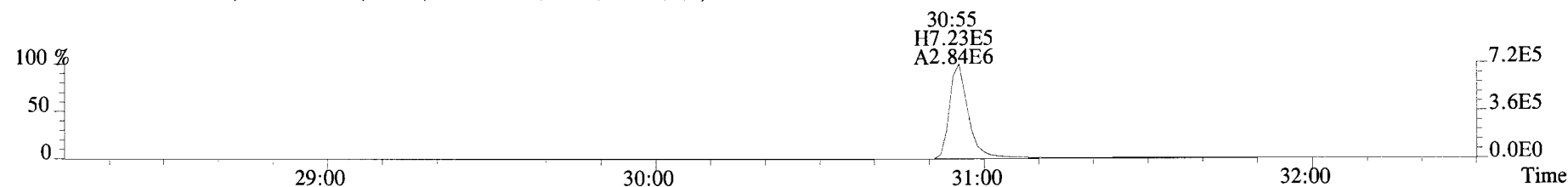
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353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



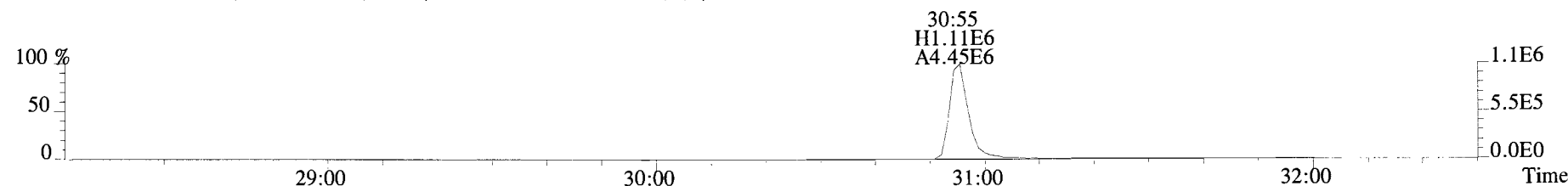
355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



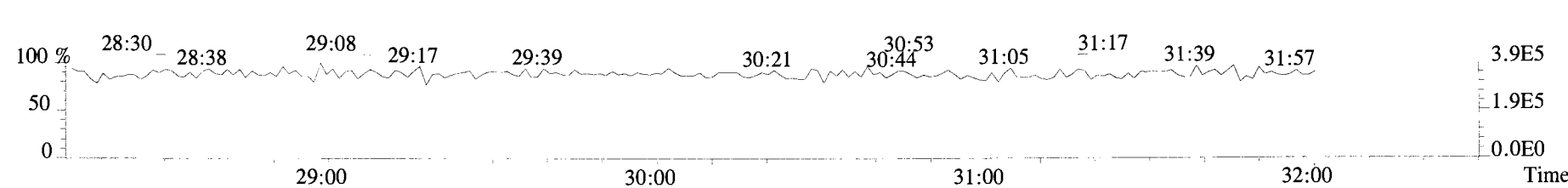
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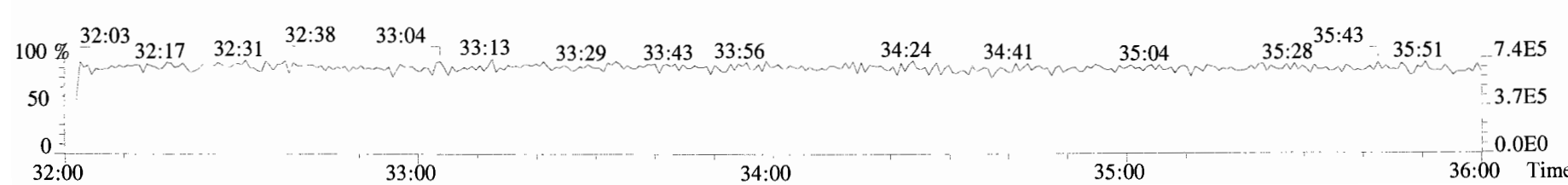
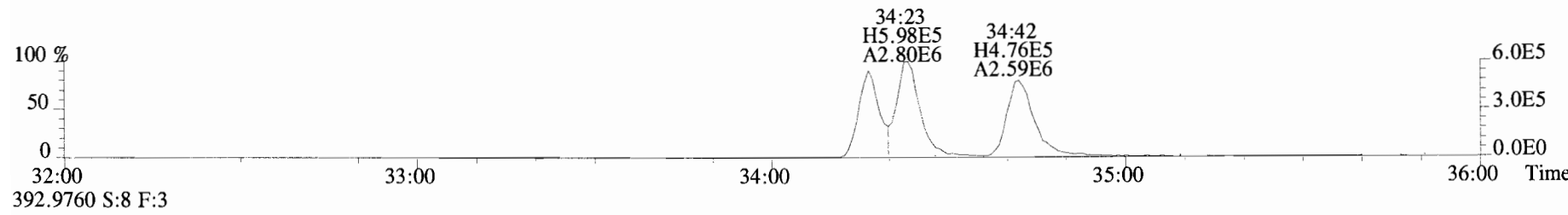
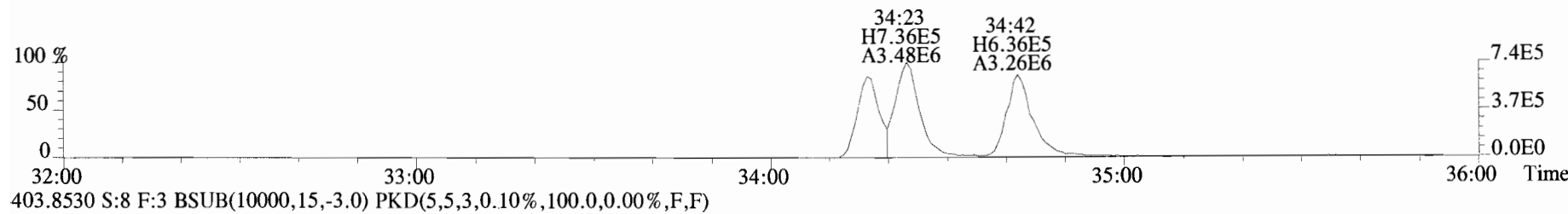
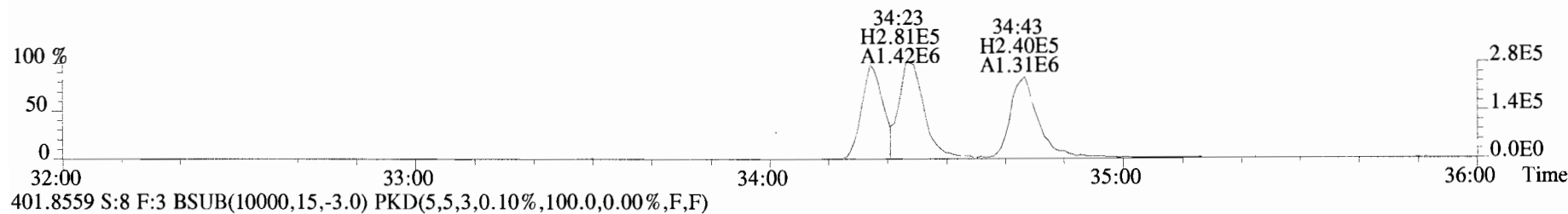
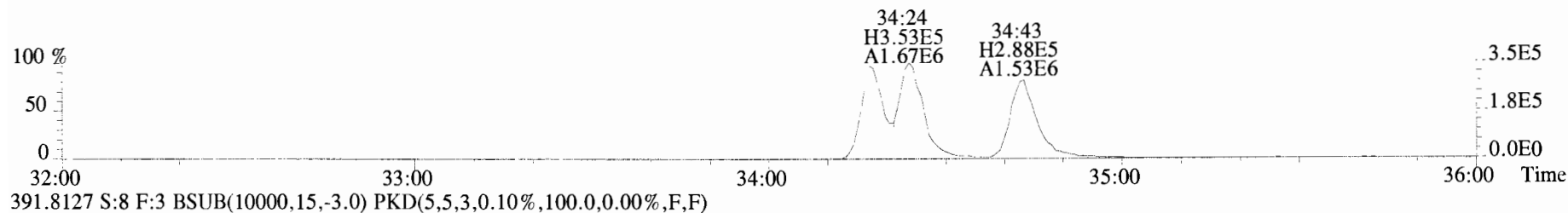
367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



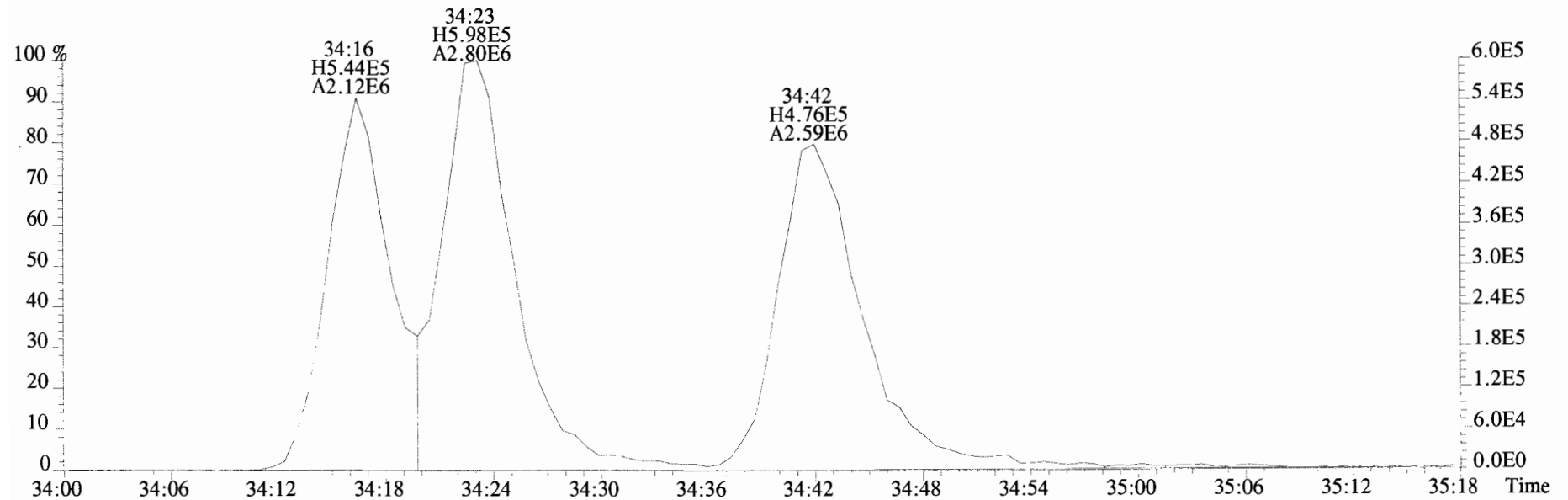
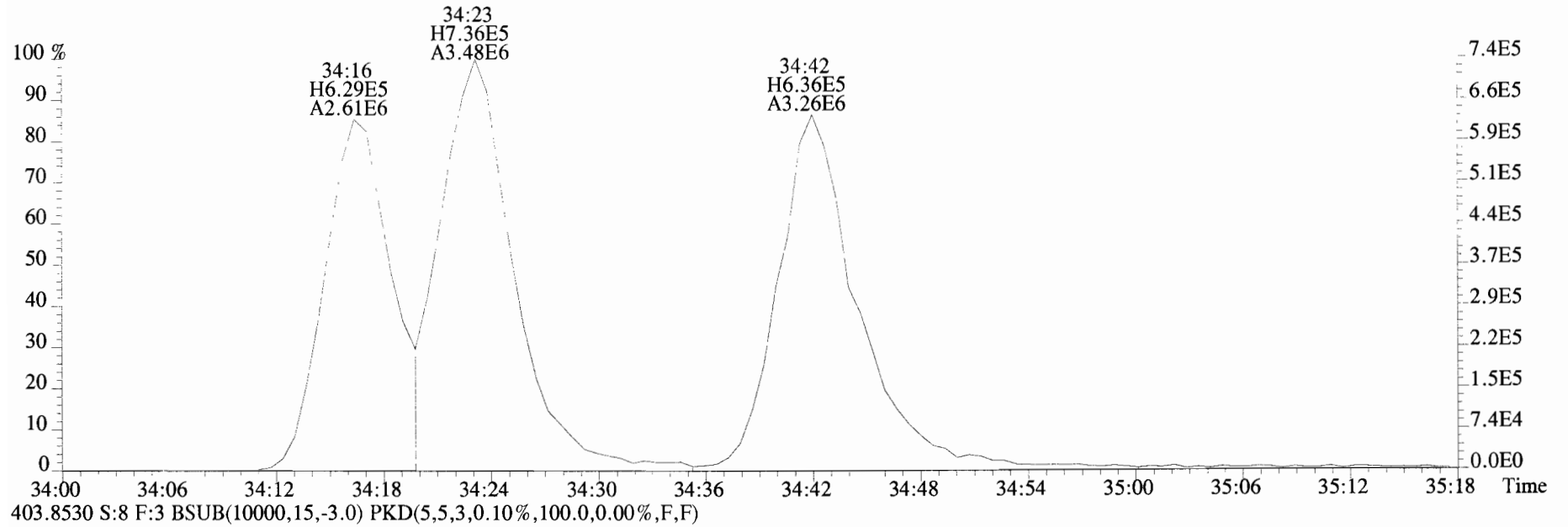
366.9792 S:8 F:2



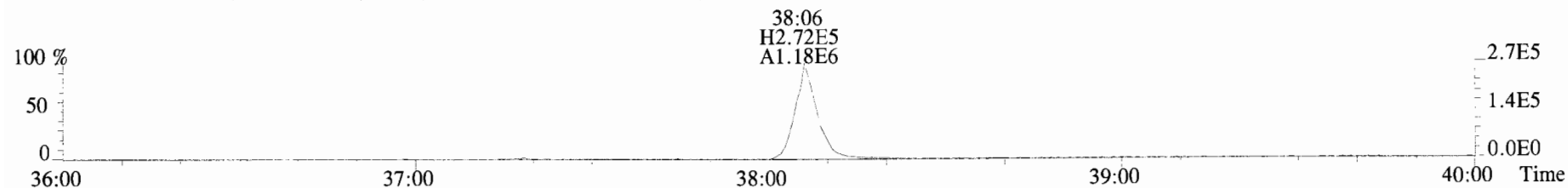
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



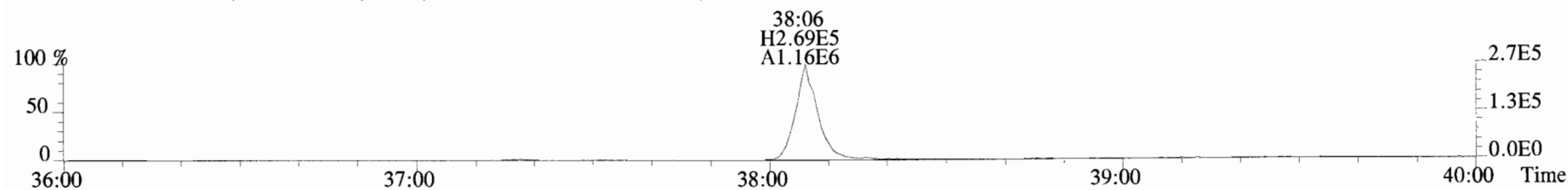
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



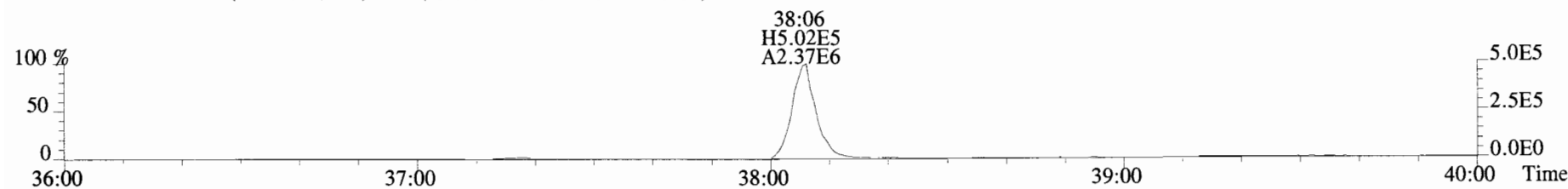
File:191009D1 #1-356 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



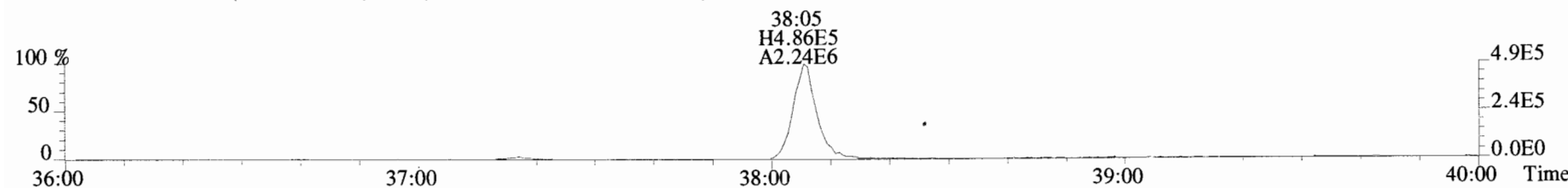
425.7737 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



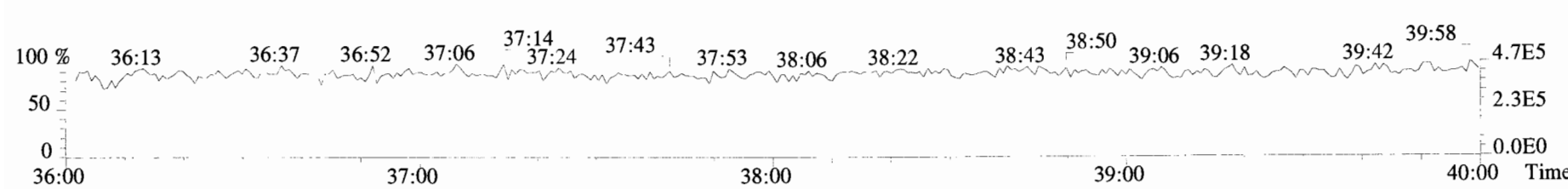
435.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



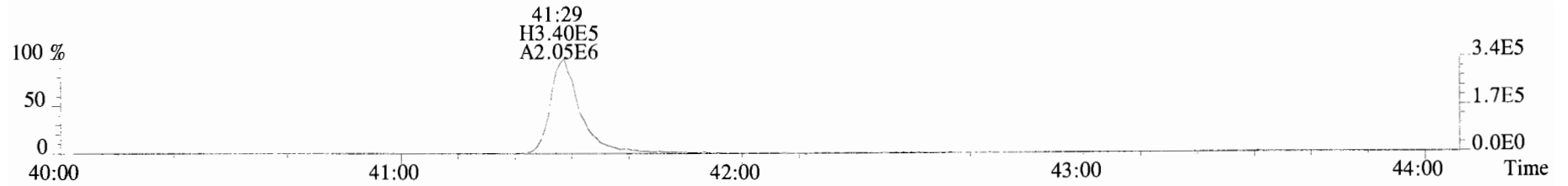
437.8140 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



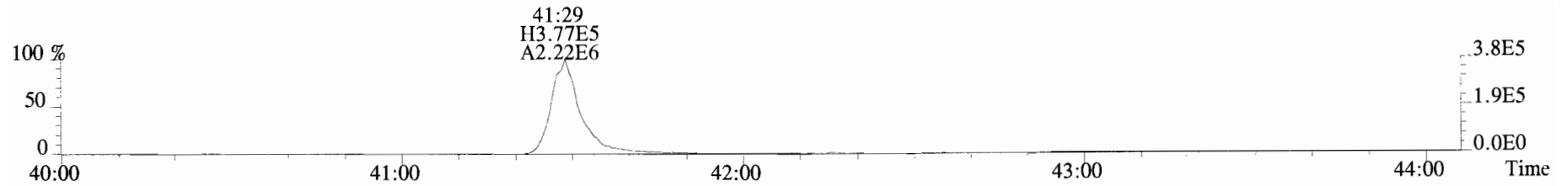
454.9728 S:8 F:4



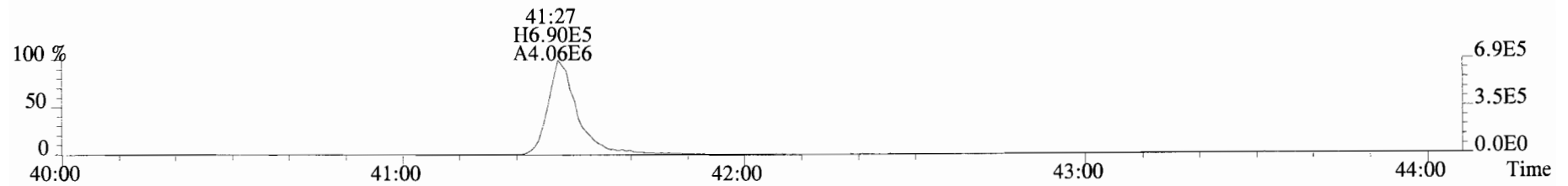
File:191009D1 #1-431 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



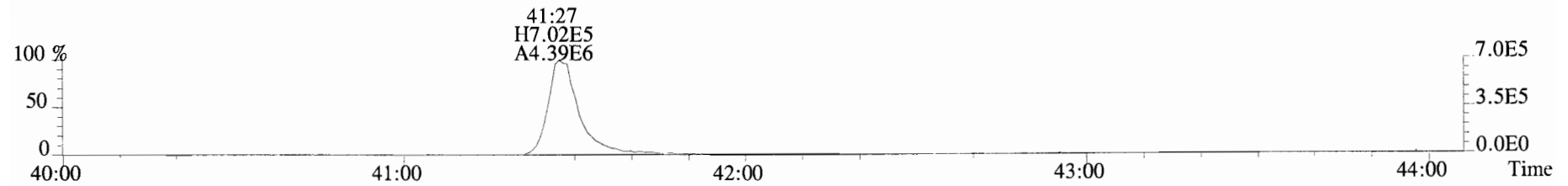
459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



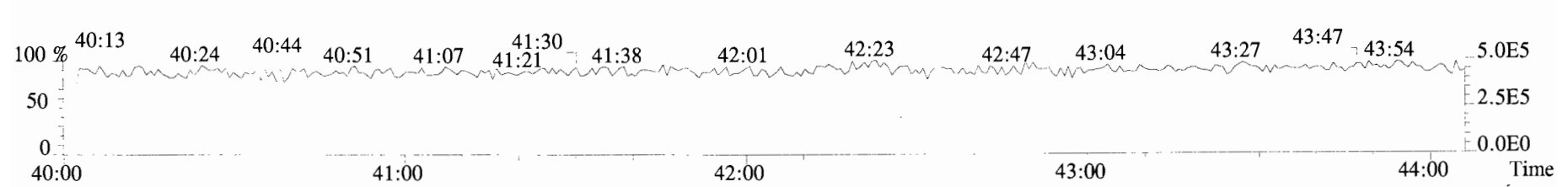
469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



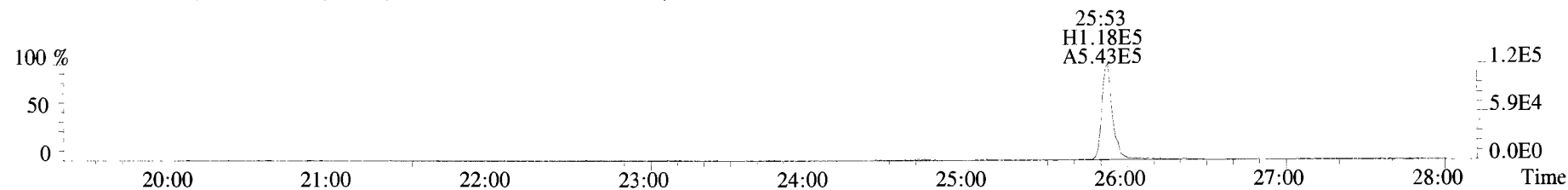
471.7750 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



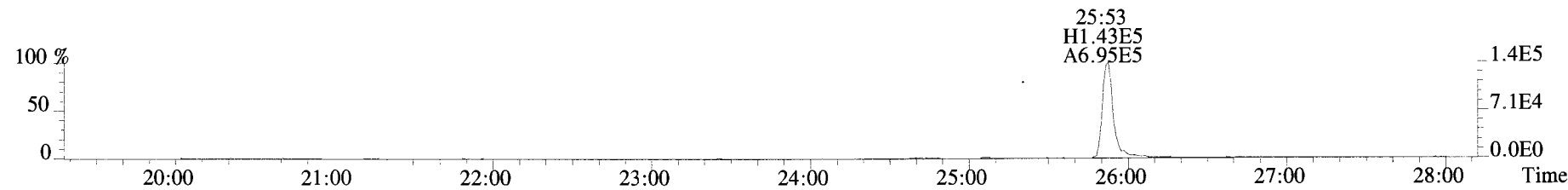
454.9728 S:8 F:5



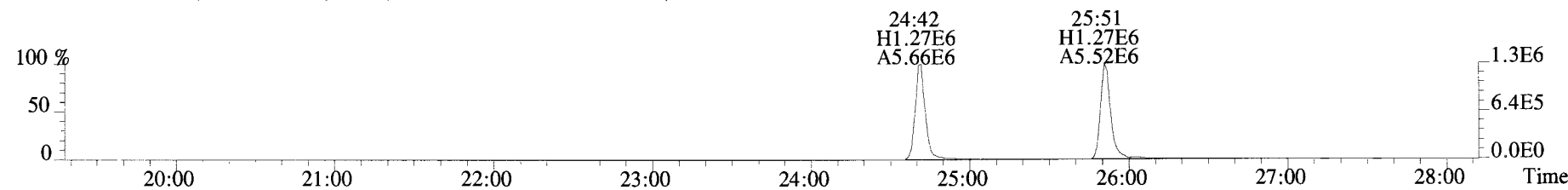
File:191009D1 #1-514 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text: Vista Analytical Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



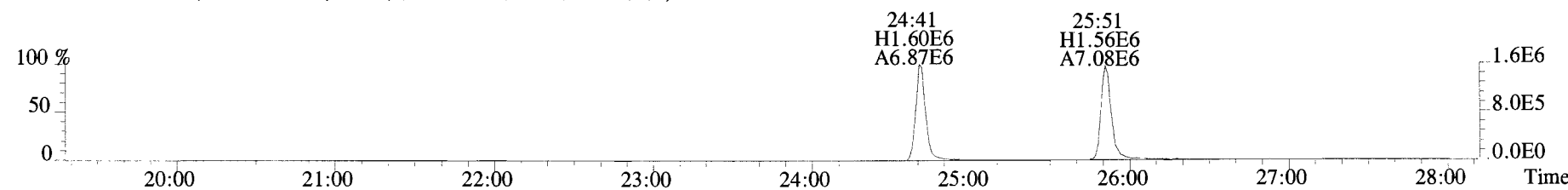
305.8987 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



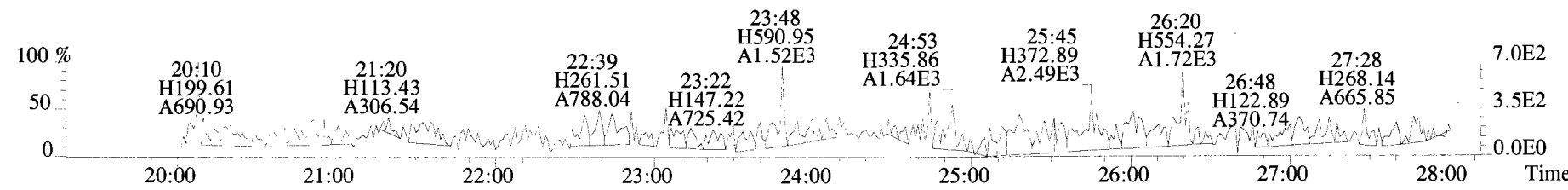
315.9419 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



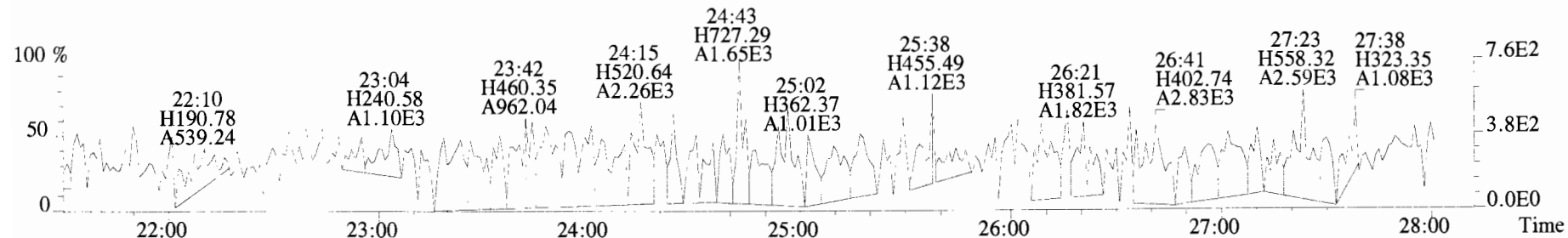
317.9389 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



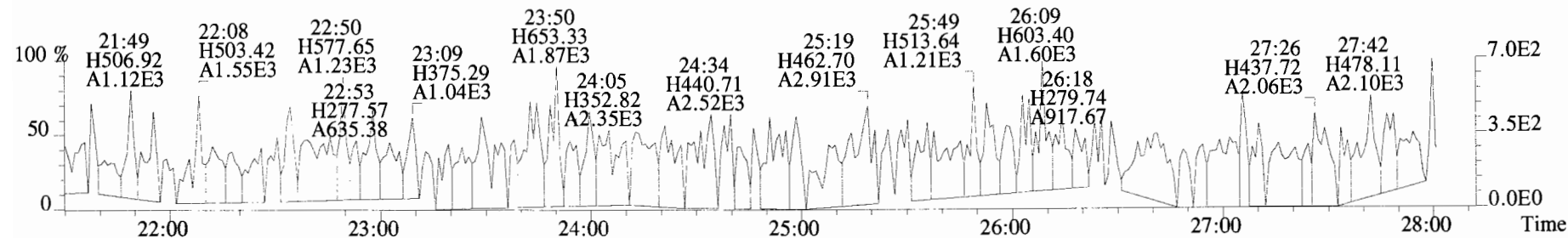
375.8364 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



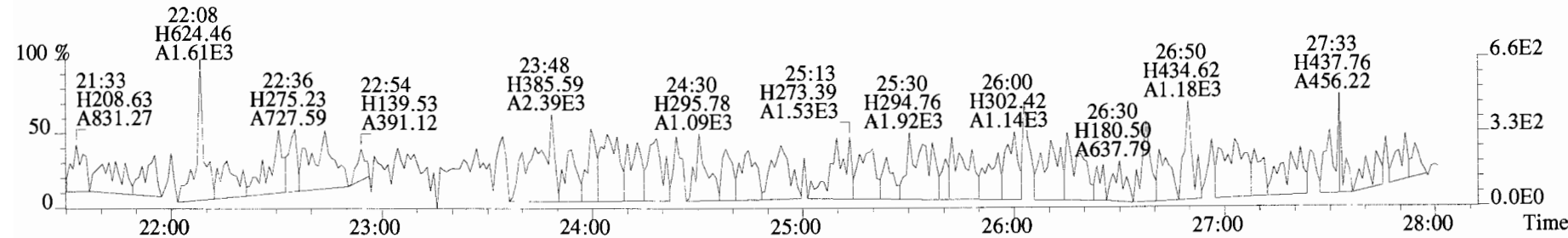
File:191009D1 #1-514 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



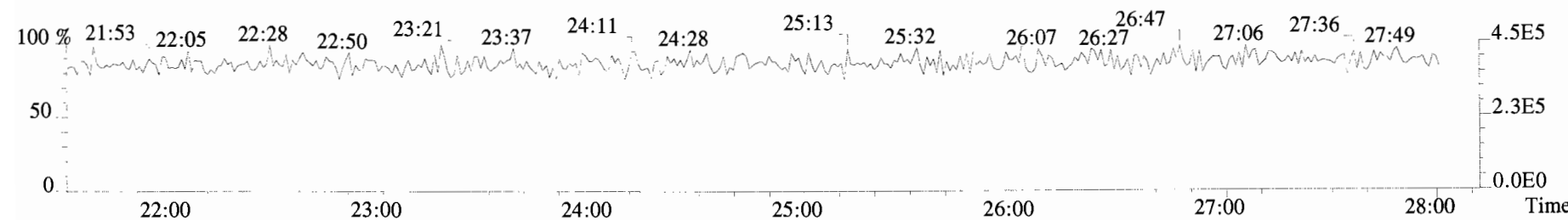
341.8568 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



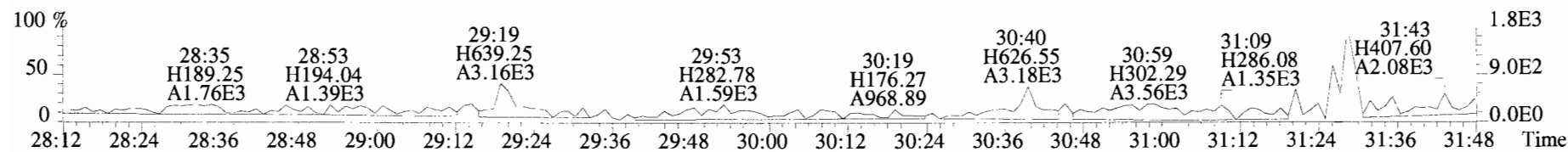
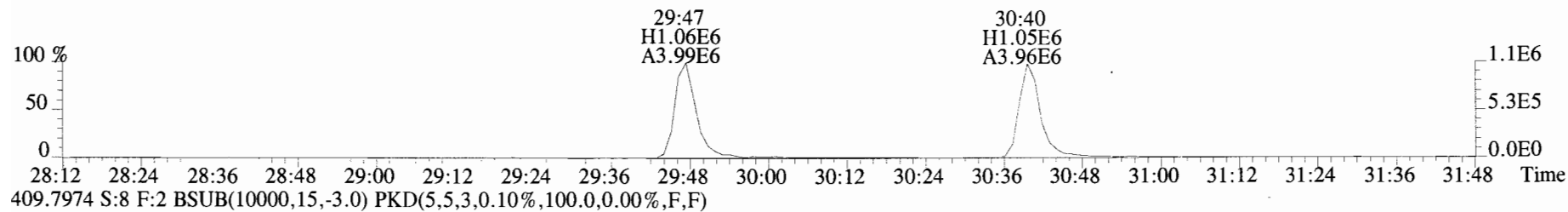
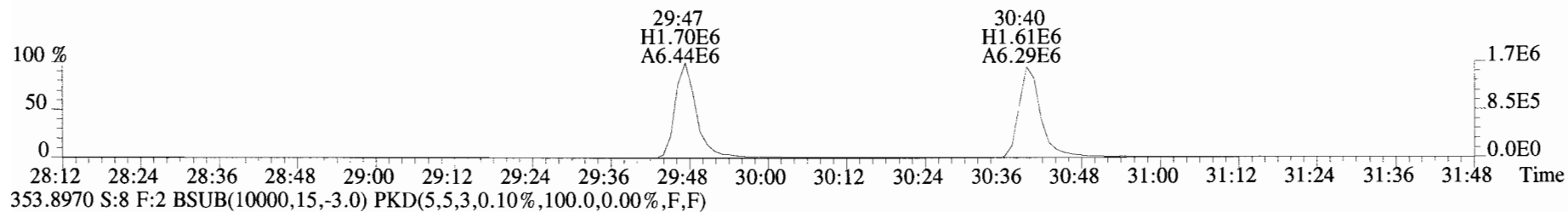
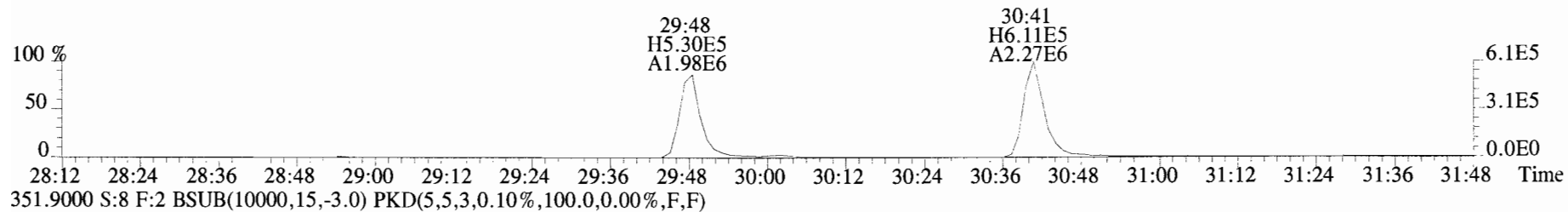
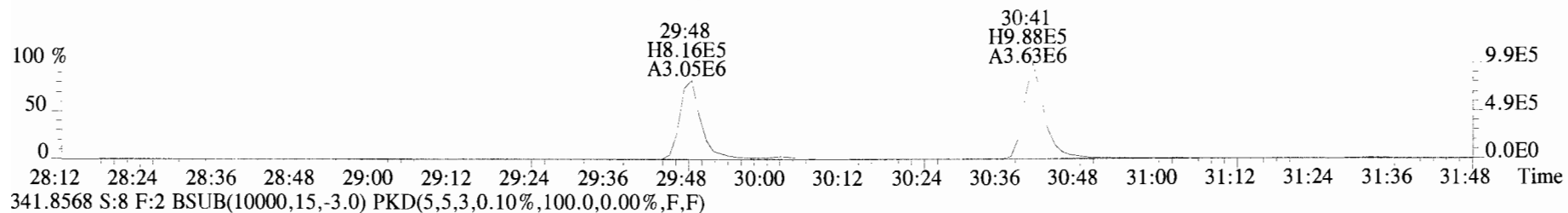
409.7974 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



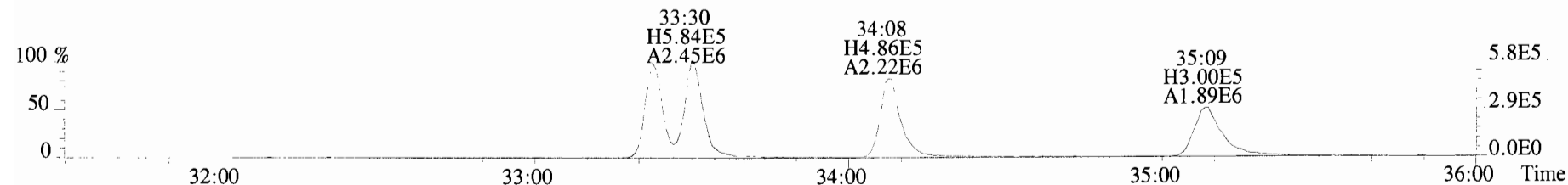
316.9824 S:8



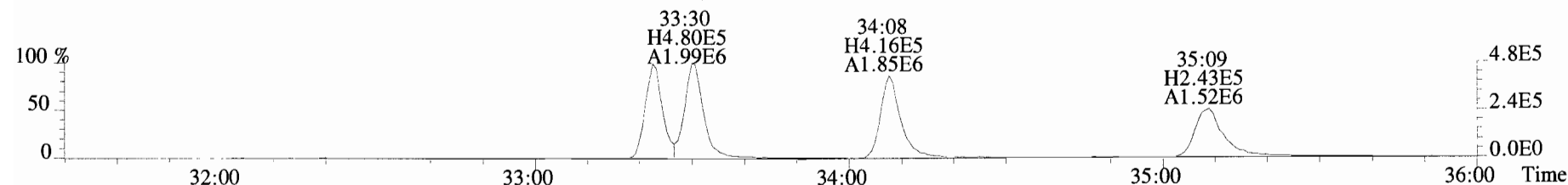
File:191009D1 #1-210 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



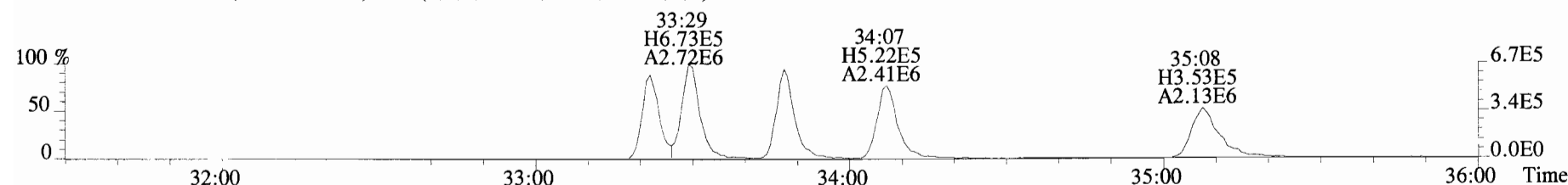
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
 373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



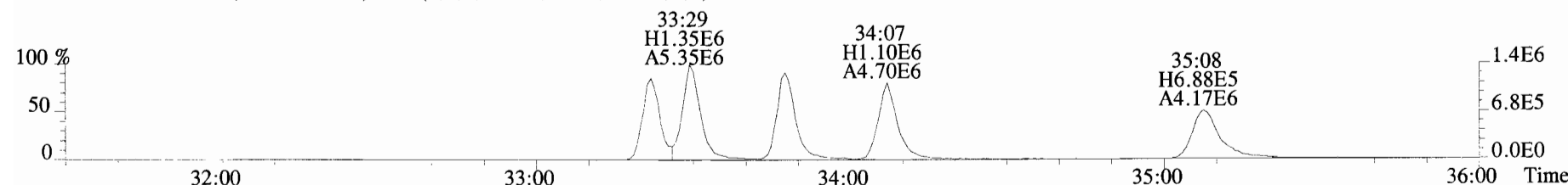
375.8178 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



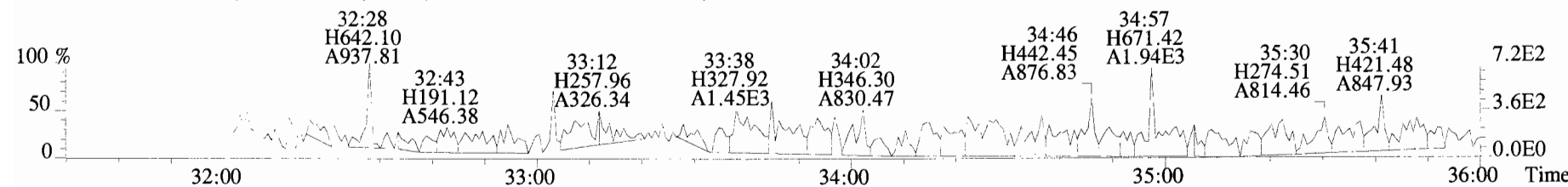
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



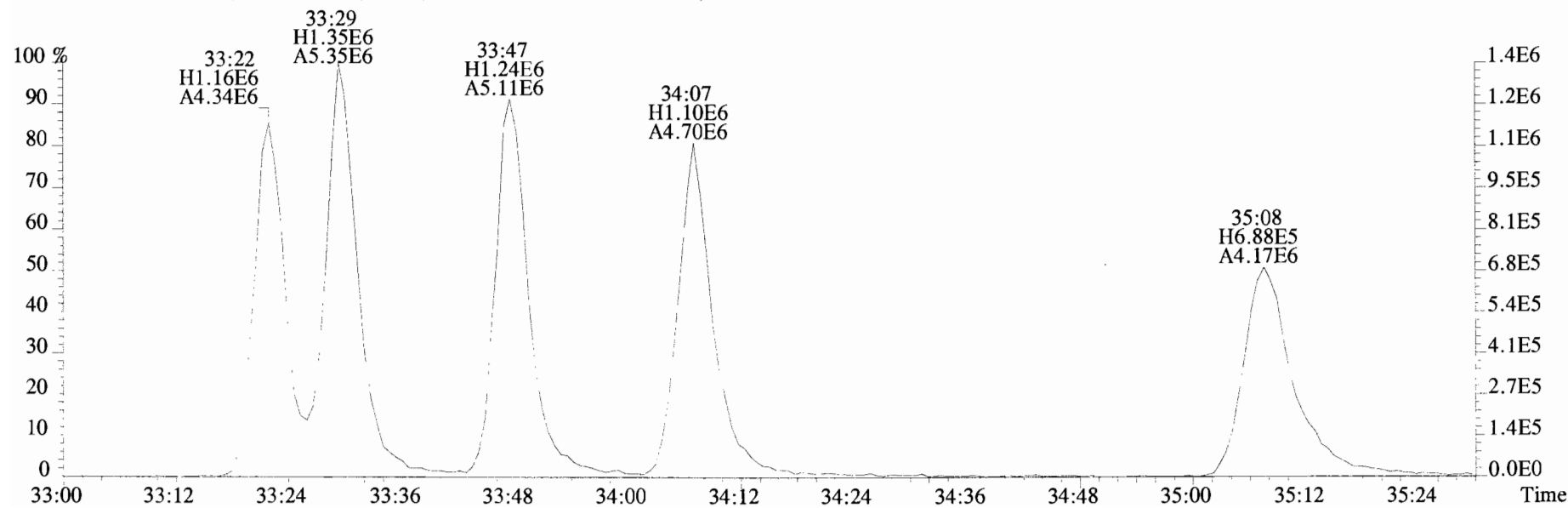
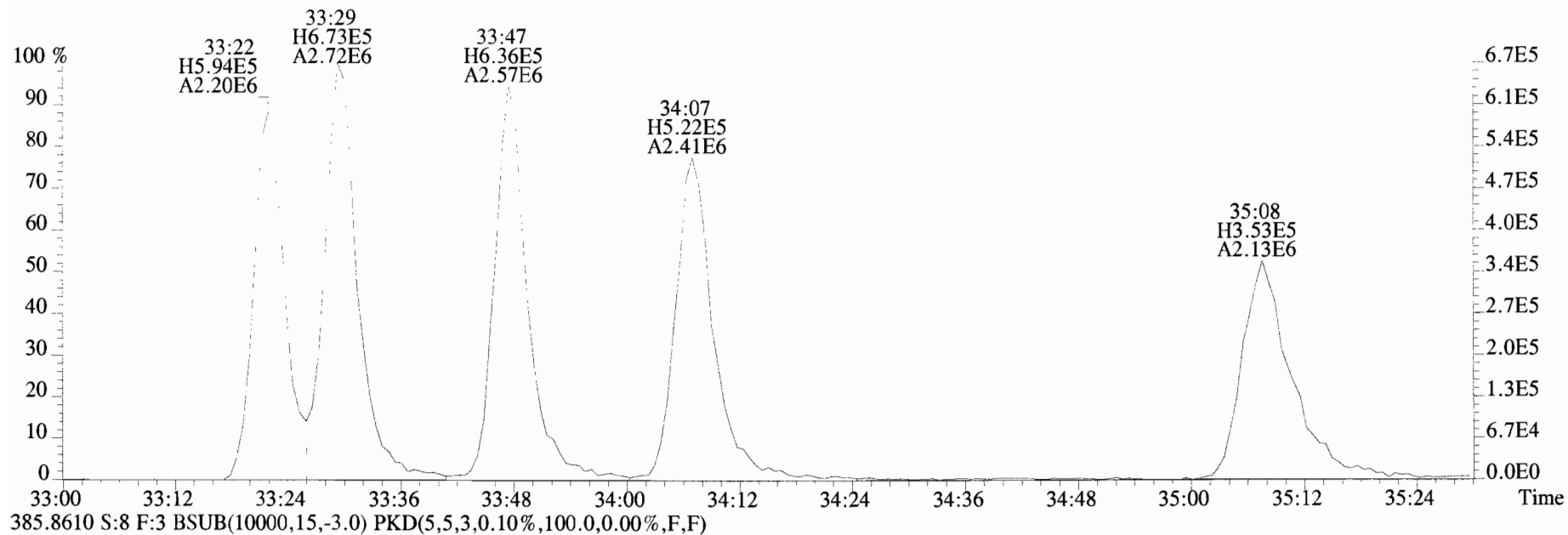
385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



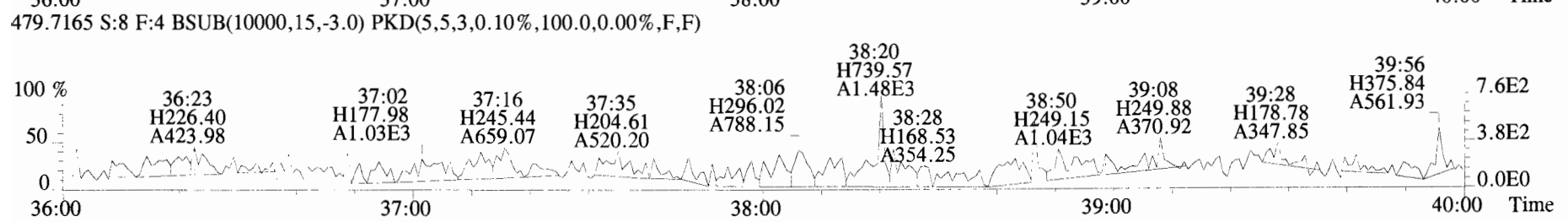
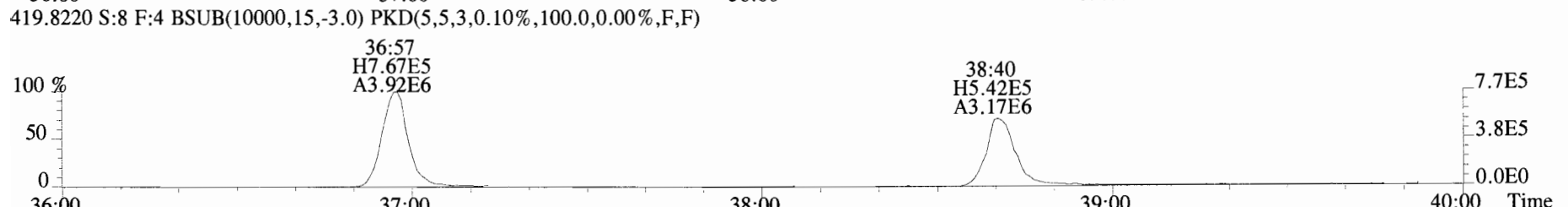
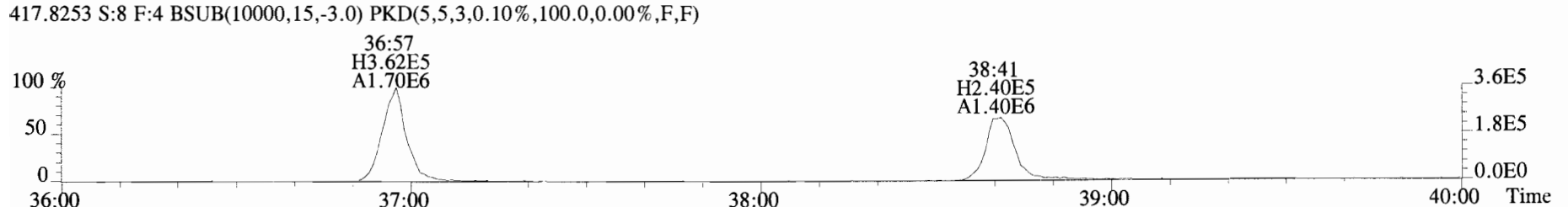
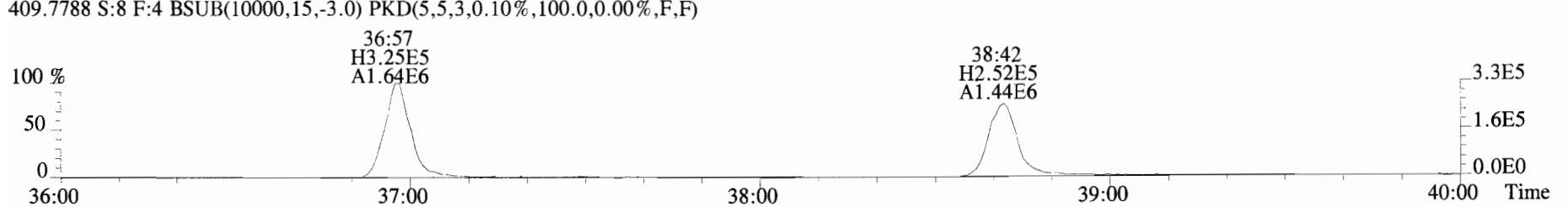
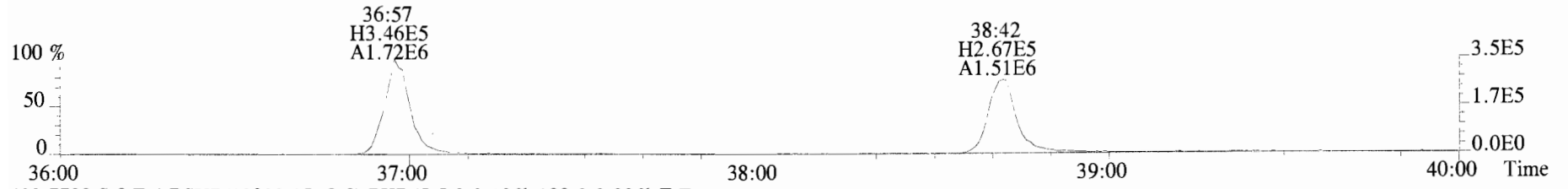
445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



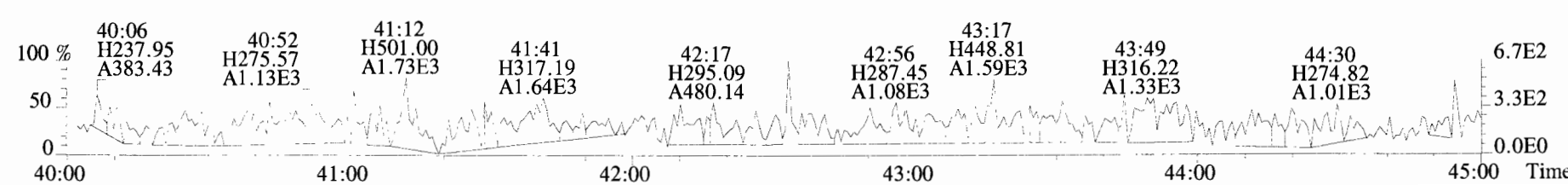
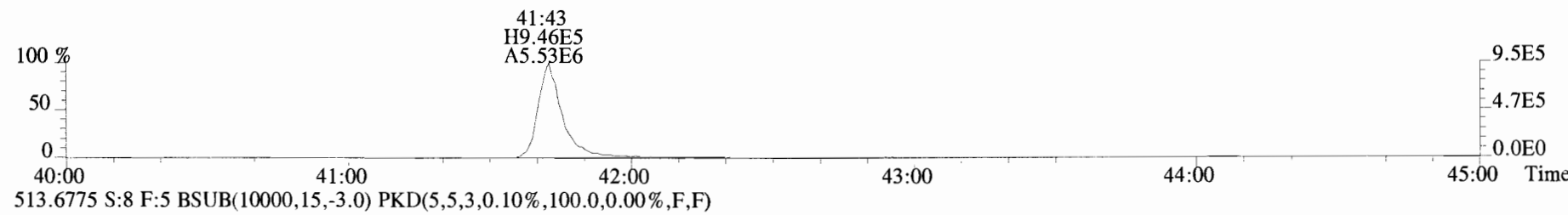
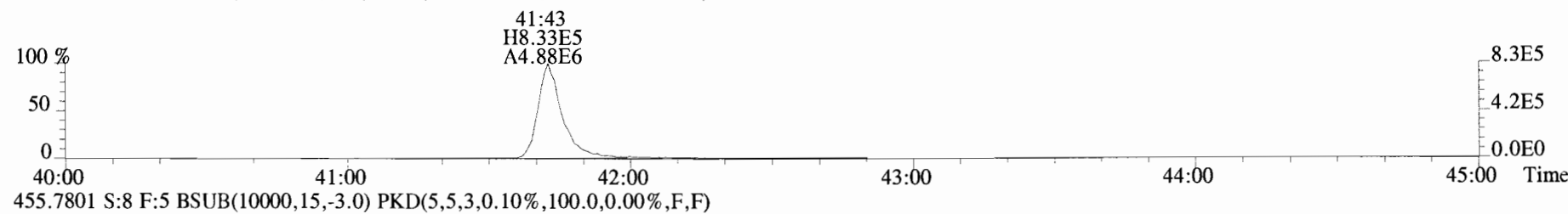
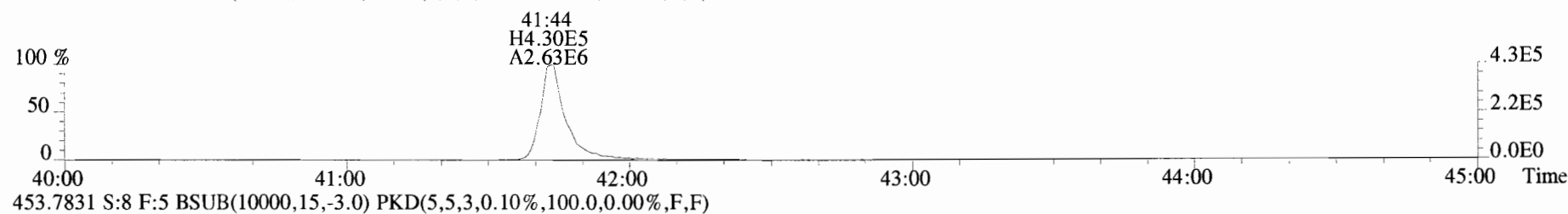
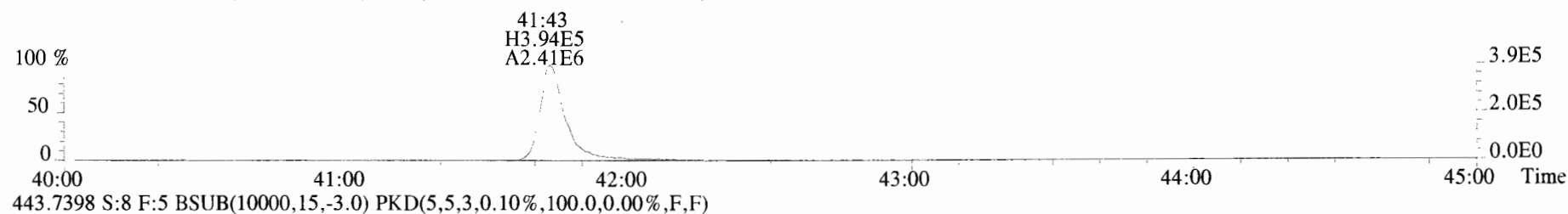
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191009D1 #1-356 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 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:191009D1 #1-431 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 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)



Initial Calibration RRF Summary (ICAL)

Vista Analytical Laboratory

Run: Analyte: TCDF

Cal: 1613TCDFVG7-5-30-19

Inst. ID. VG-7

Data filename: 190530D1

Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 7	Samp# 8
100	100	100	100	100	100

Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
13C-1,2,3,4-TCDF	1.0000	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-2,3,7,8-TCDF	1.0212	4.27 %	1.07	1.04	1.03	1.05	0.98	0.96
2,3,7,8-TCDF	0.9476	9.58 %	1.12	0.93	0.88	0.87	0.97	0.92

DB CT
5/30/19 05/31/19

Filename: 190530D1 S: 3 Acquired: 30-MAY-19 12:05:38
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-1 1613 CS0 19C2201

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.38e+07	0.80 y	15:49	-	1.00
13C-2,3,7,8-TCDF	100	1.47e+07	0.81 y	18:05	-	1.07
2,3,7,8-TCDF	0.250	4.11e+04	0.87 y	18:06	-	1.12

DB
5/30/19

Filename: 190530D1 S: 4 Acquired: 30-MAY-19 12:37:29
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-2 1613 CS1 19C2202

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.24e+07	0.82 y	15:49	-	1.00
13C-2,3,7,8-TCDF	100	1.30e+07	0.78 y	18:05	-	1.04
2,3,7,8-TCDF	0.500	6.06e+04	0.67 y	18:05	-	0.93

DB
5/30/19

Filename: 190530D1 S: 5 Acquired: 30-MAY-19 13:09:20
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-3 1613 CS2 19C2203

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.21e+07	0.82 y	15:48	-	1.00
13C-2,3,7,8-TCDF	100	1.24e+07	0.80 y	18:04	-	1.03
2,3,7,8-TCDF	2.00	2.18e+05	0.74 y	18:05	-	0.88

DB
5/30/19

Filename: 190530D1 S: 6 Acquired: 30-MAY-19 13:41:11
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-4 1613 CS3 19C2204

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.28e+07	0.81 y	15:49	-	1.00
13C-2,3,7,8-TCDF	100	1.34e+07	0.80 y	18:05	-	1.05
2,3,7,8-TCDF	10.0	1.17e+06	0.73 y	18:06	-	0.87

DB
5/30/19

Filename: 190530D1 S: 7 Acquired: 30-MAY-19 14:13:01
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-5 1613 CS4 19C2205

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.30e+07	0.81 y	15:49	-	1.00
13C-2,3,7,8-TCDF	100	1.28e+07	0.80 y	18:05	-	0.98
2,3,7,8-TCDF	40.0	4.95e+06	0.77 y	18:06	-	0.97

DB
5/30/19

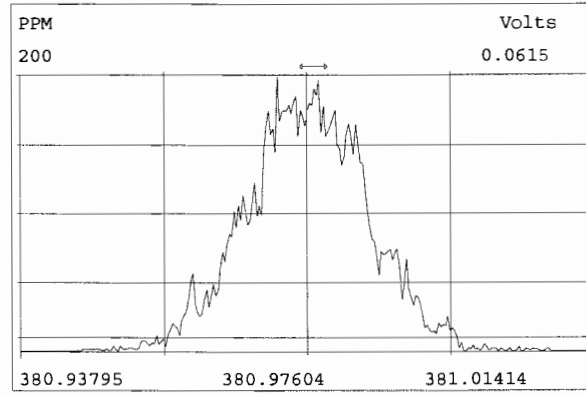
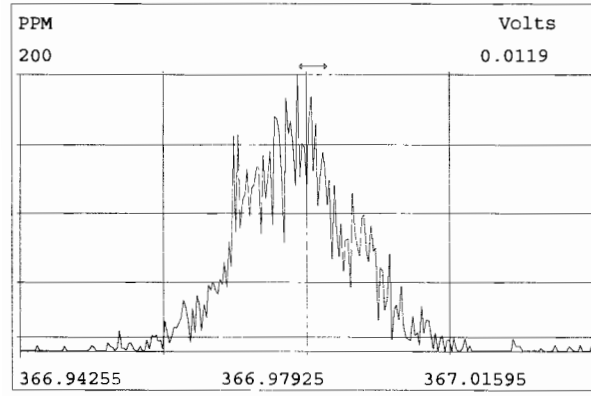
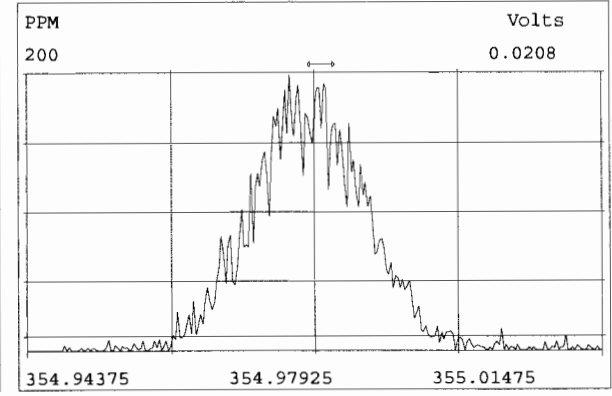
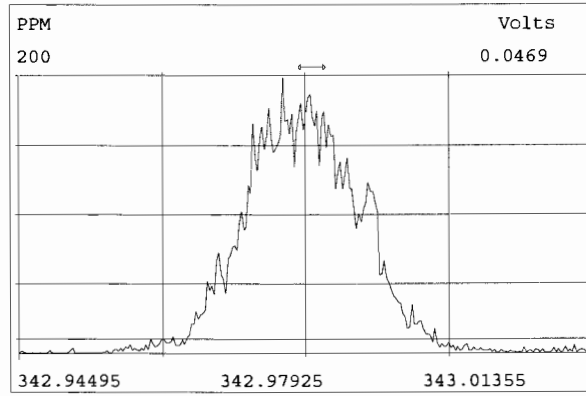
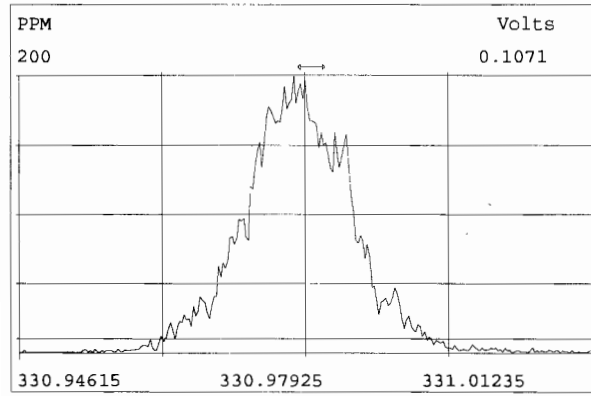
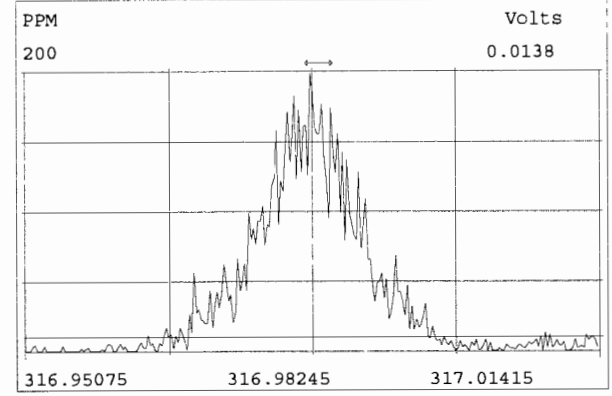
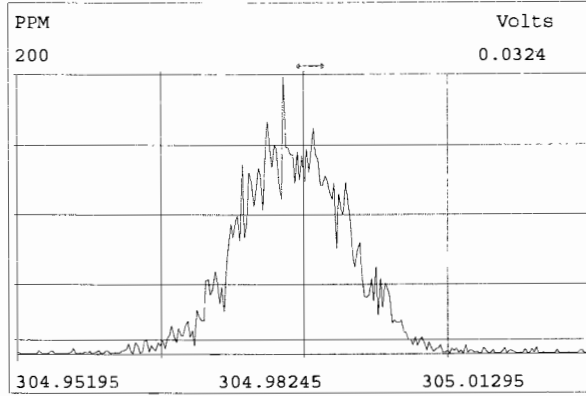
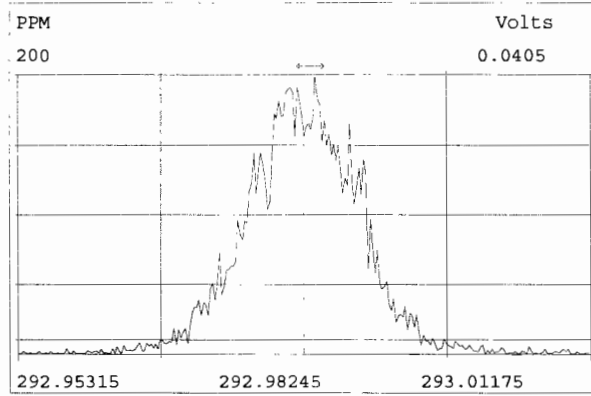
Filename: 190530D1 S: 8 Acquired: 30-MAY-19 14:44:52
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-6 1613 CS5 19C2206

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.29e+07	0.80 y	15:48	-	1.00
13C-2,3,7,8-TCDF	100	1.24e+07	0.80 y	18:05	-	0.96
2,3,7,8-TCDF	300	3.42e+07	0.74 y	18:06	-	0.92

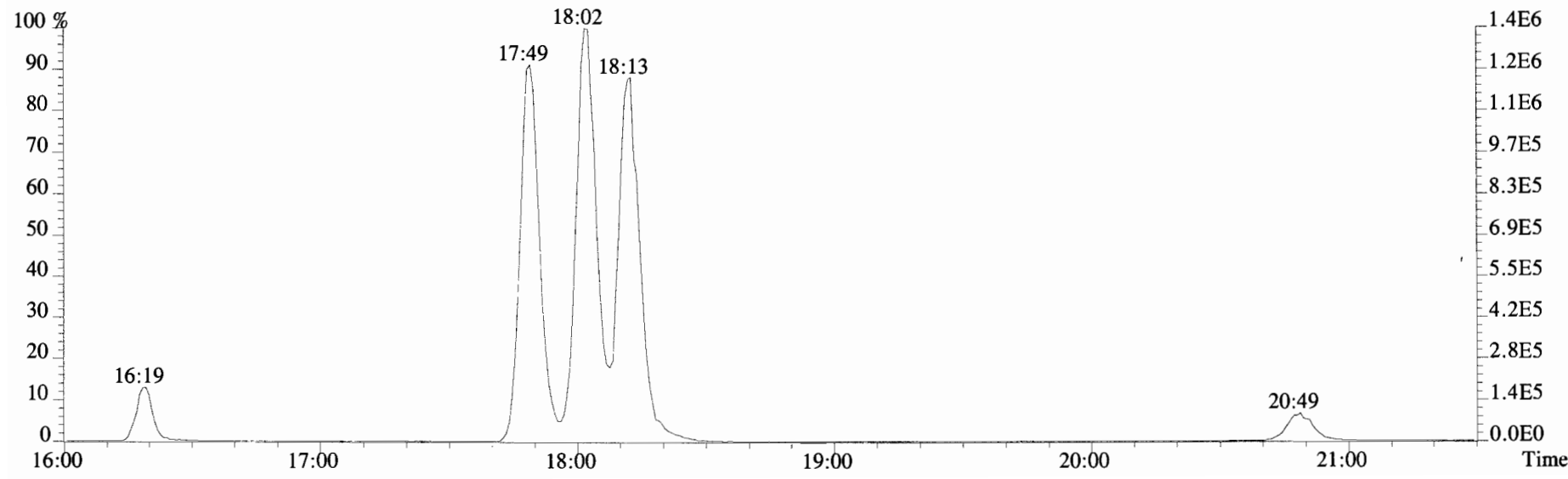
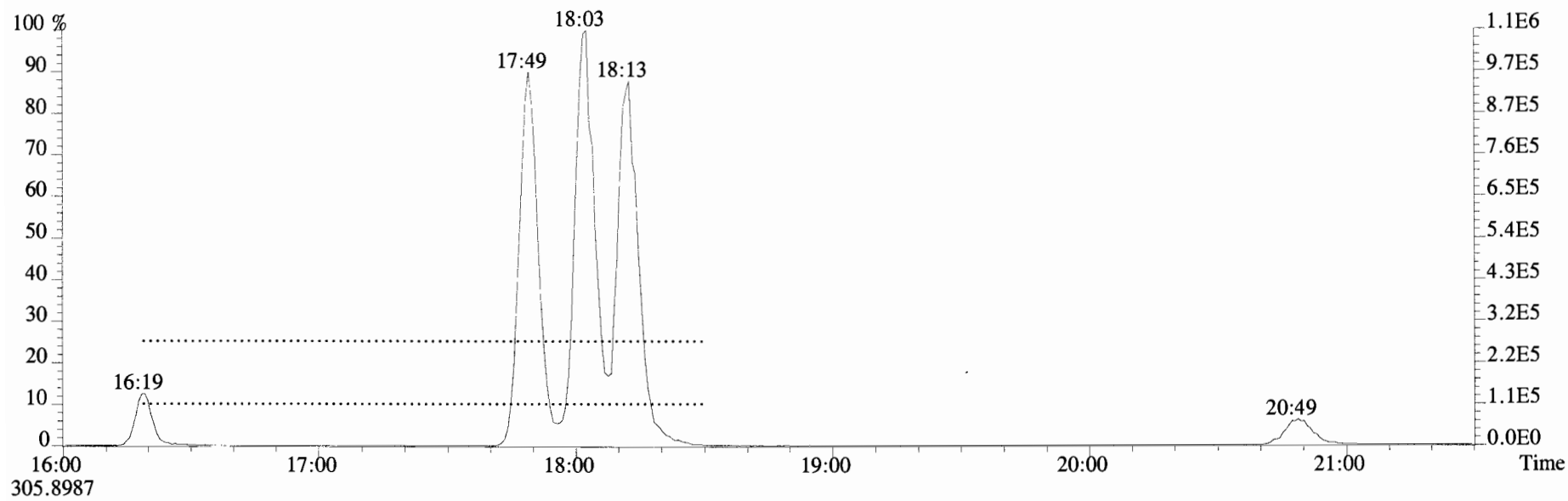
DB
5/30/19

Vista Analytical Laboratory - Injection Log Run file: 190530D1 Instrument ID: VG-7 GC Column ID: DB-225

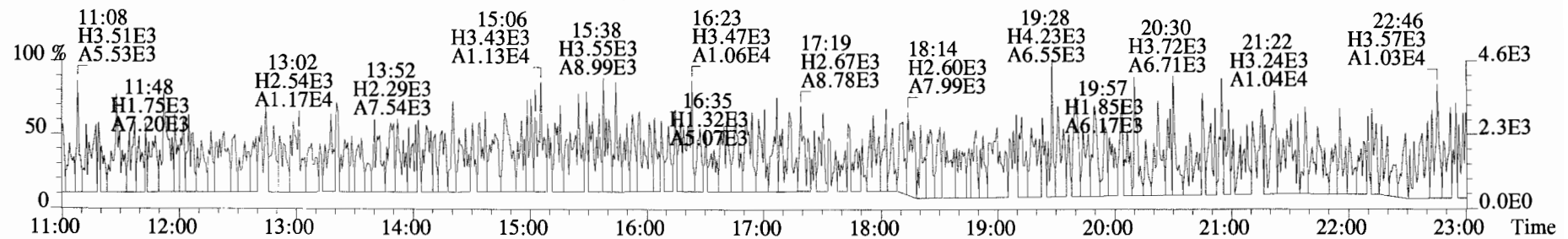
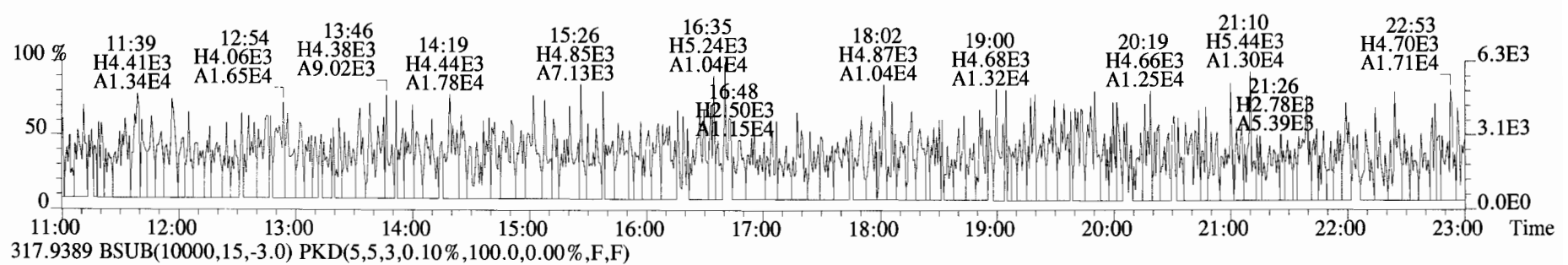
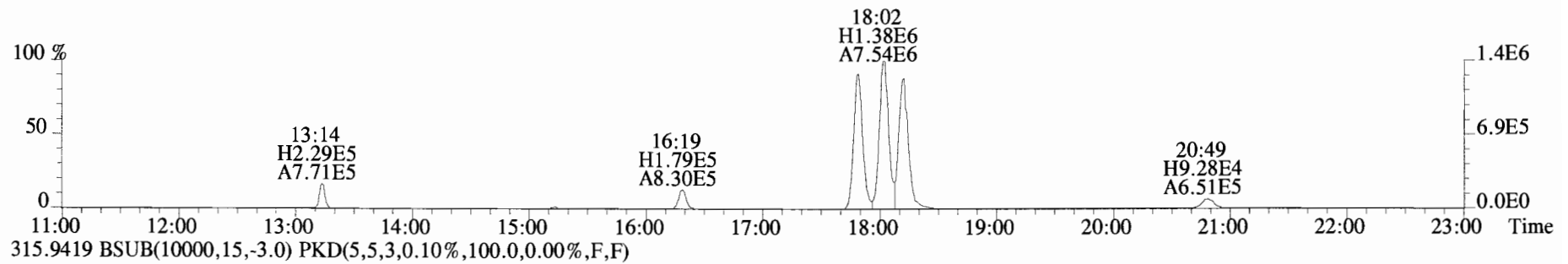
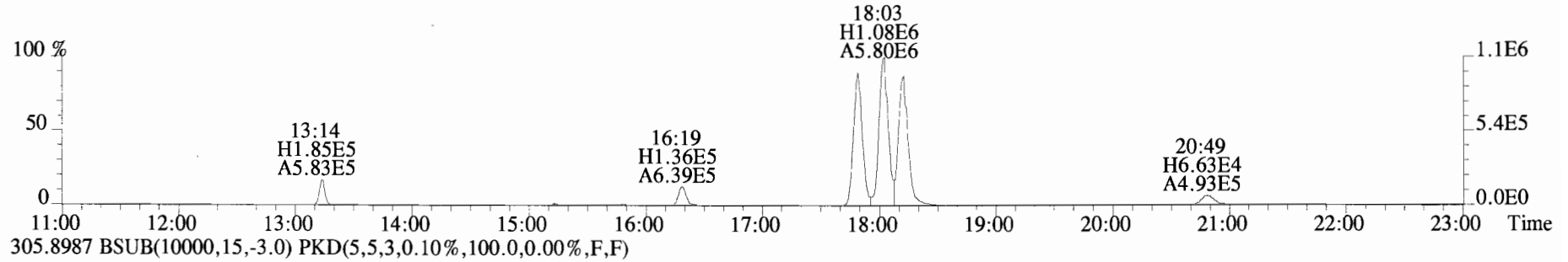
Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
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190530D1	2	SOLVENT BLANK	DB	30-MAY-19	11:33:52	ST190530D1-4	NA
190530D1	3	ST190530D1-1	DB	30-MAY-19	12:05:38	ST190530D1-4	NA
190530D1	4	ST190530D1-2	DB	30-MAY-19	12:37:29	ST190530D1-4	NA
190530D1	5	ST190530D1-3	DB	30-MAY-19	13:09:20	ST190530D1-4	NA
190530D1	6	ST190530D1-4	DB	30-MAY-19	13:41:11	ST190530D1-4	NA
190530D1	7	ST190530D1-5	DB	30-MAY-19	14:13:01	ST190530D1-4	NA
190530D1	8	ST190530D1-6	DB	30-MAY-19	14:44:52	ST190530D1-4	NA
190530D1	9	SOLVENT BLANK	DB	30-MAY-19	15:16:42	ST190530D1-4	NA
190530D1	10	SS190528D1-1	DB	30-MAY-19	15:48:32	ST190530D1-4	NA
190530D1	11	SOLVENT BLANK	DB	30-MAY-19	16:20:23	ST190530D1-4	NA
190530D1	12	1901028-05RE1	DB	30-MAY-19	16:52:12	ST190530D1-4	NA
190530D1	13	1901028-07RE1	DB	30-MAY-19	17:24:02	ST190530D1-4	NA
190530D1	14	1901028-08RE1	DB	30-MAY-19	17:55:52	ST190530D1-4	NA
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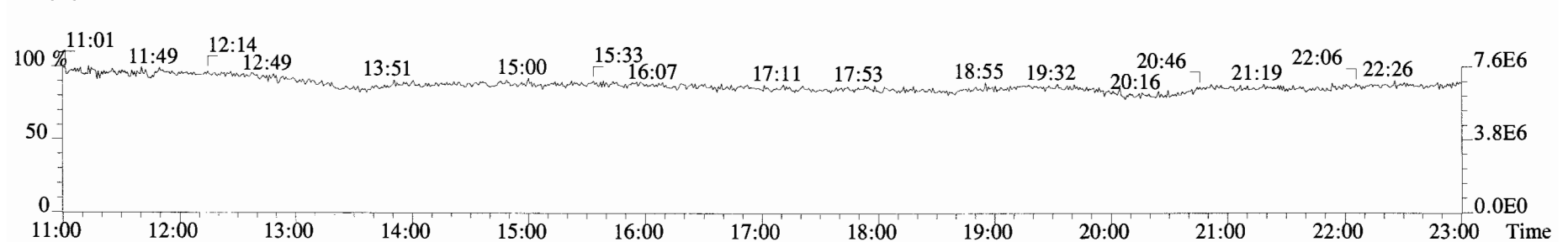
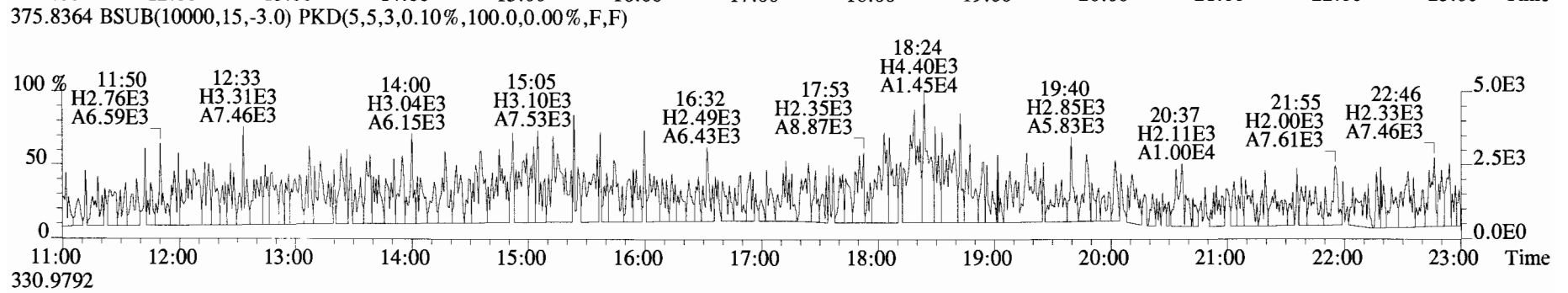
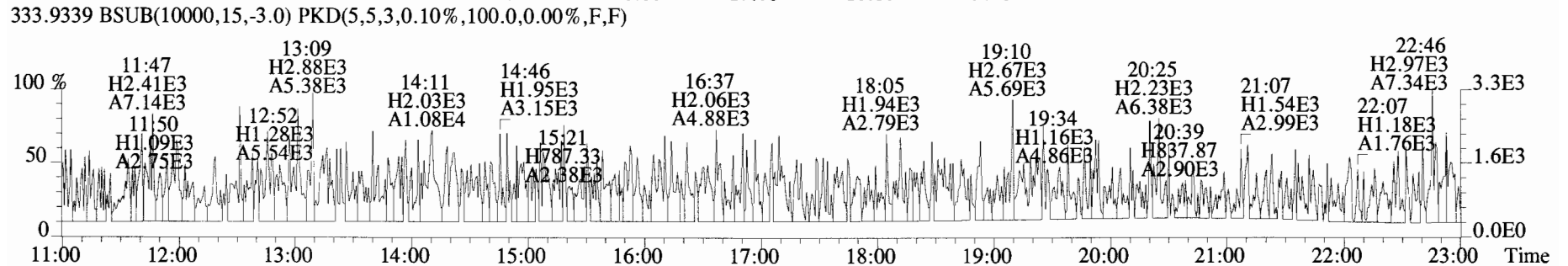
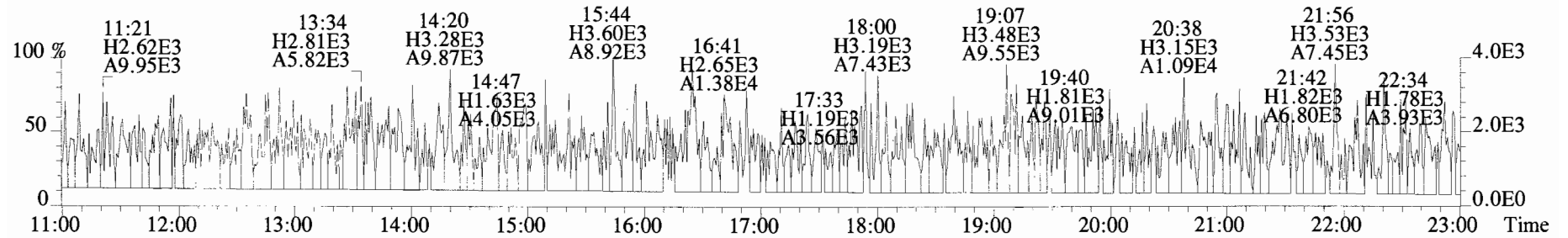
File:190530D1 #1-1559 Acq:30-MAY-2019 11:02:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:CP190530D1-1 DB225 CPSM Exp:TCDF_DB225
303.9016



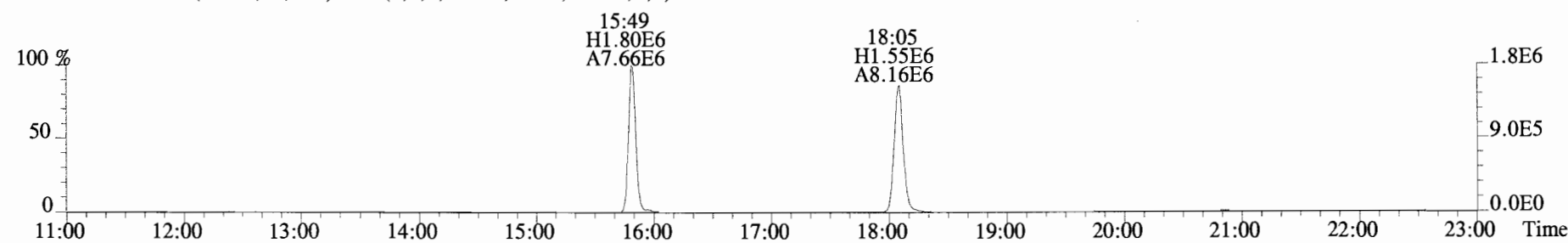
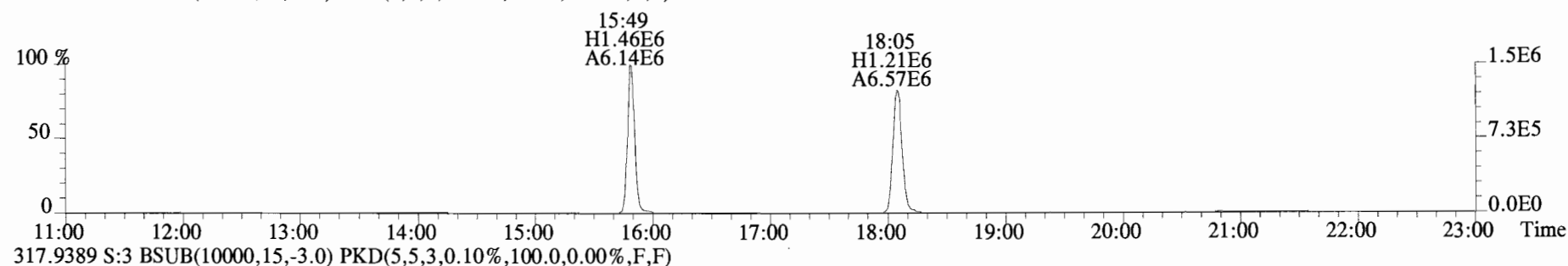
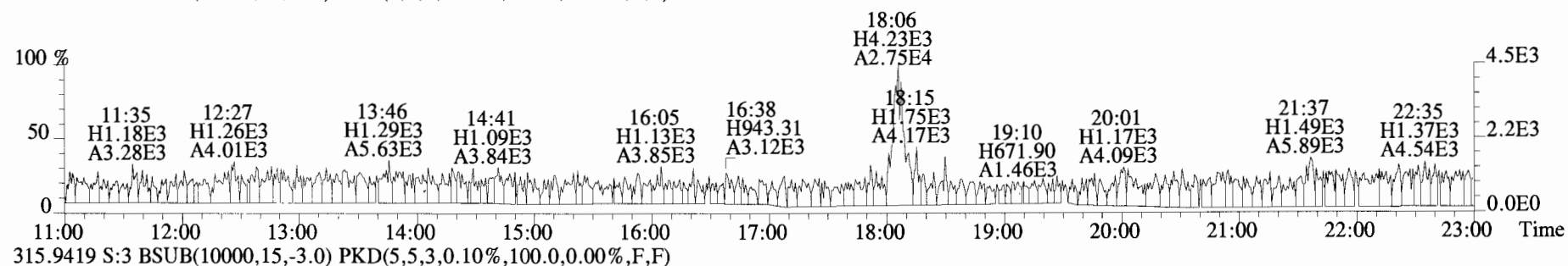
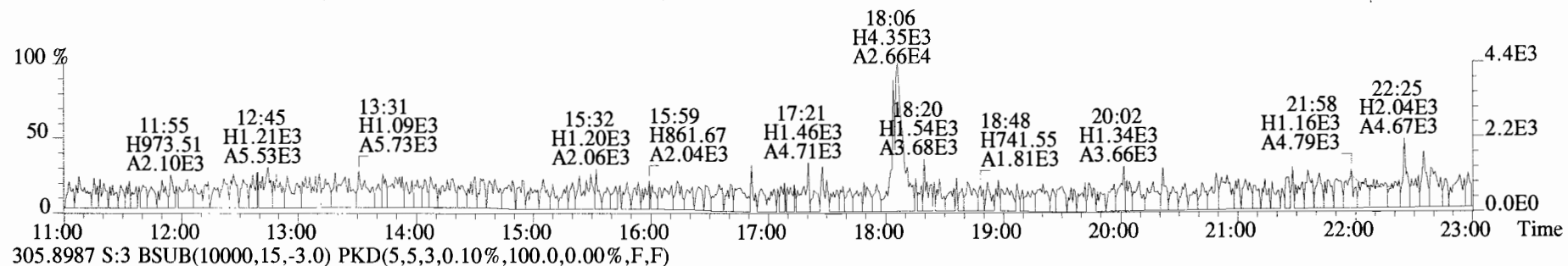
File:190530D1 #1-1682 Acq:30-MAY-2019 11:02:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:CP190530D1-1 DB225 CPSM Exp:TCDF_DB225
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



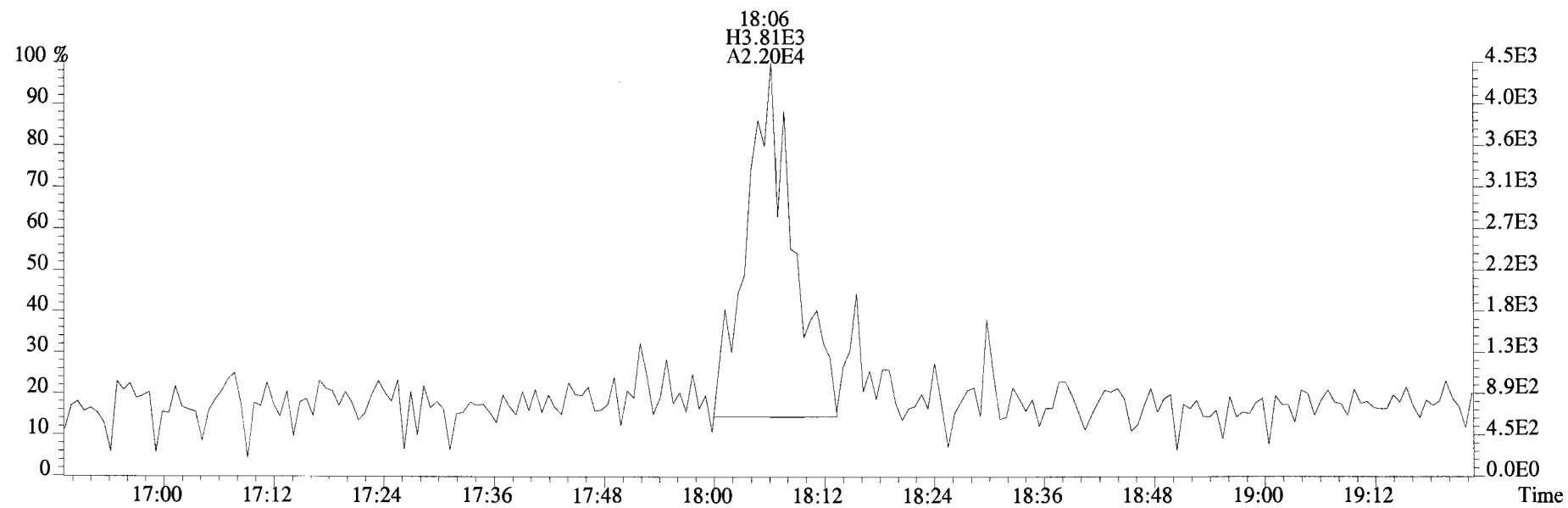
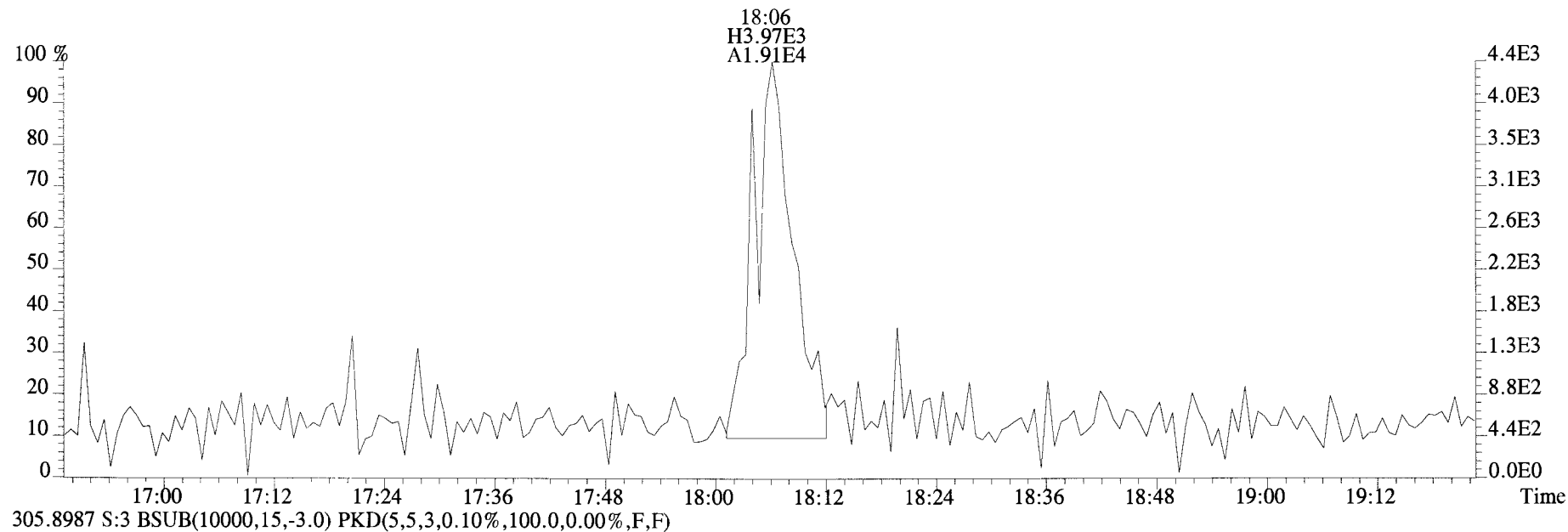
File:190530D1 #1-1682 Acq:30-MAY-2019 11:02:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:CP190530D1-1 DB225 CPSM Exp:TCDF_DB225
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



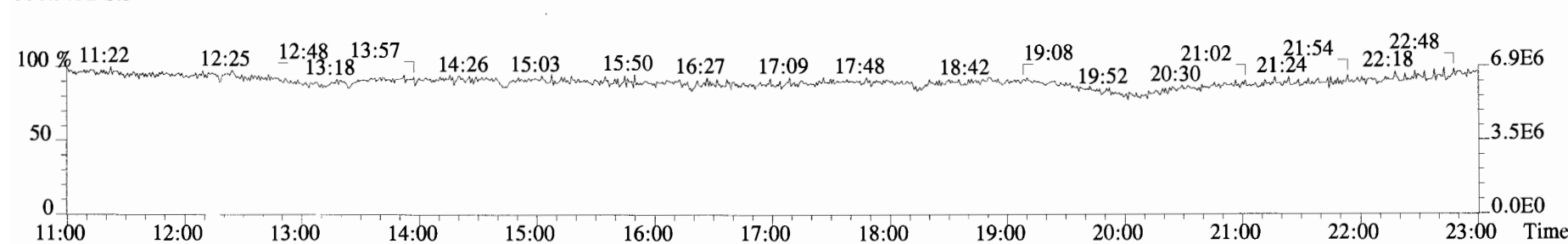
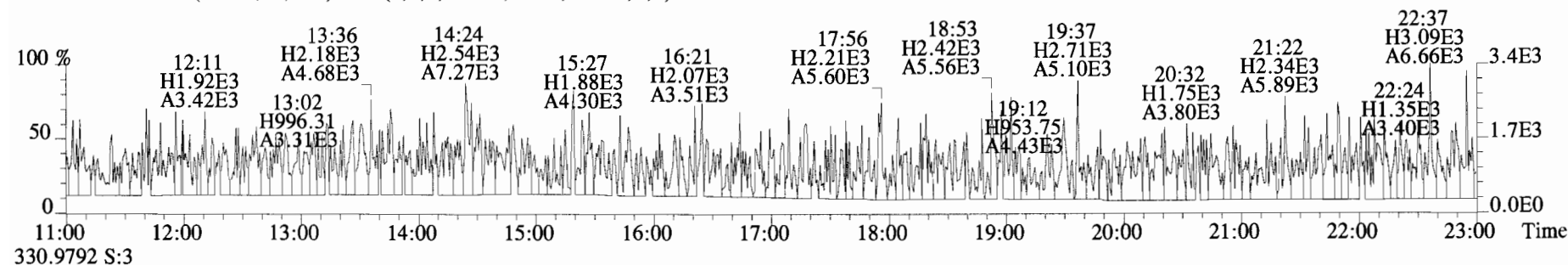
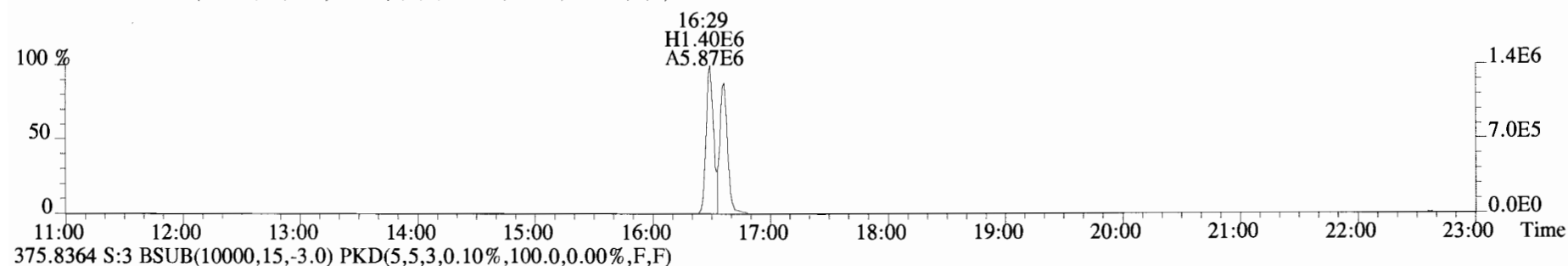
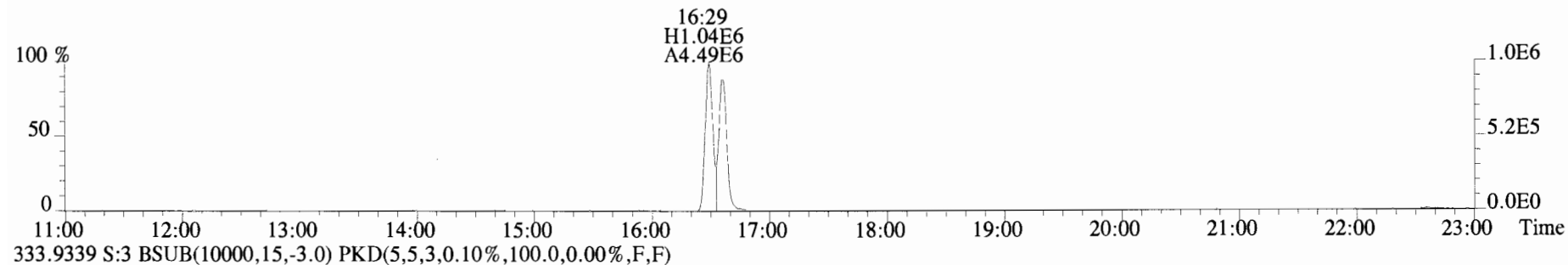
File:190530D1 #1-1682 Acq:30-MAY-2019 12:05:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST190530D1-1 1613 CS0 19C2201 Exp:TCDF_DB225
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



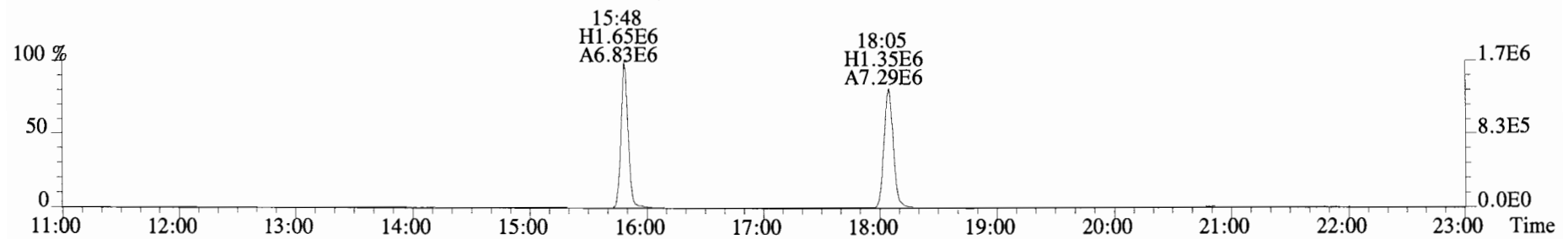
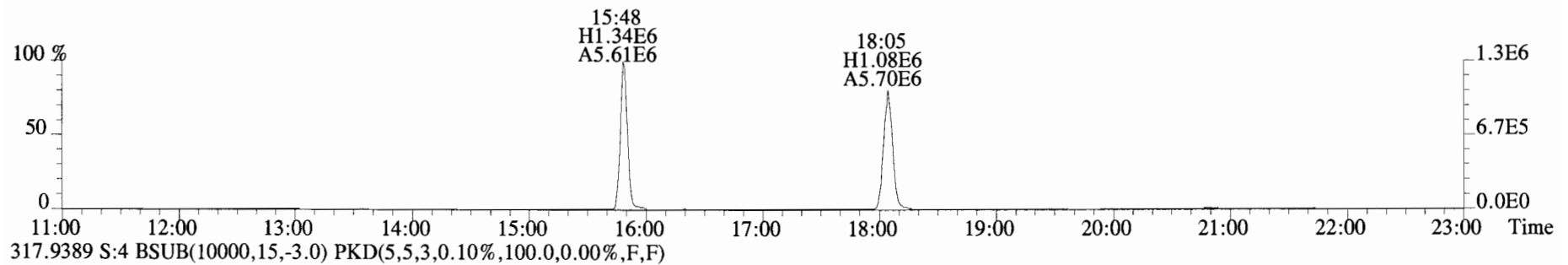
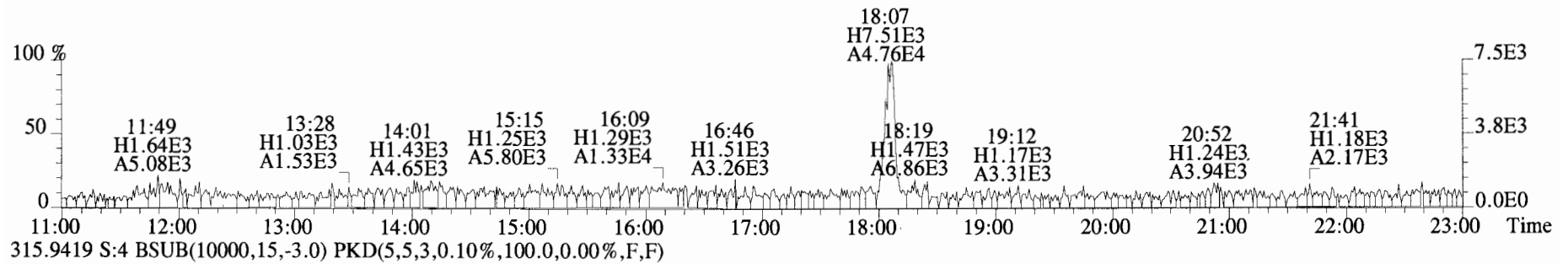
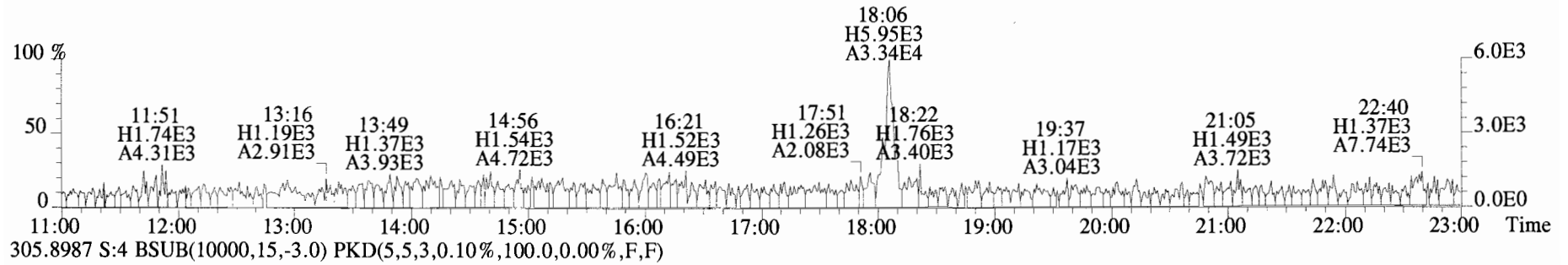
File:190530D1 #1-1682 Acq:30-MAY-2019 12:05:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST190530D1-1 1613 CS0 19C2201 Exp:TCDF_DB225
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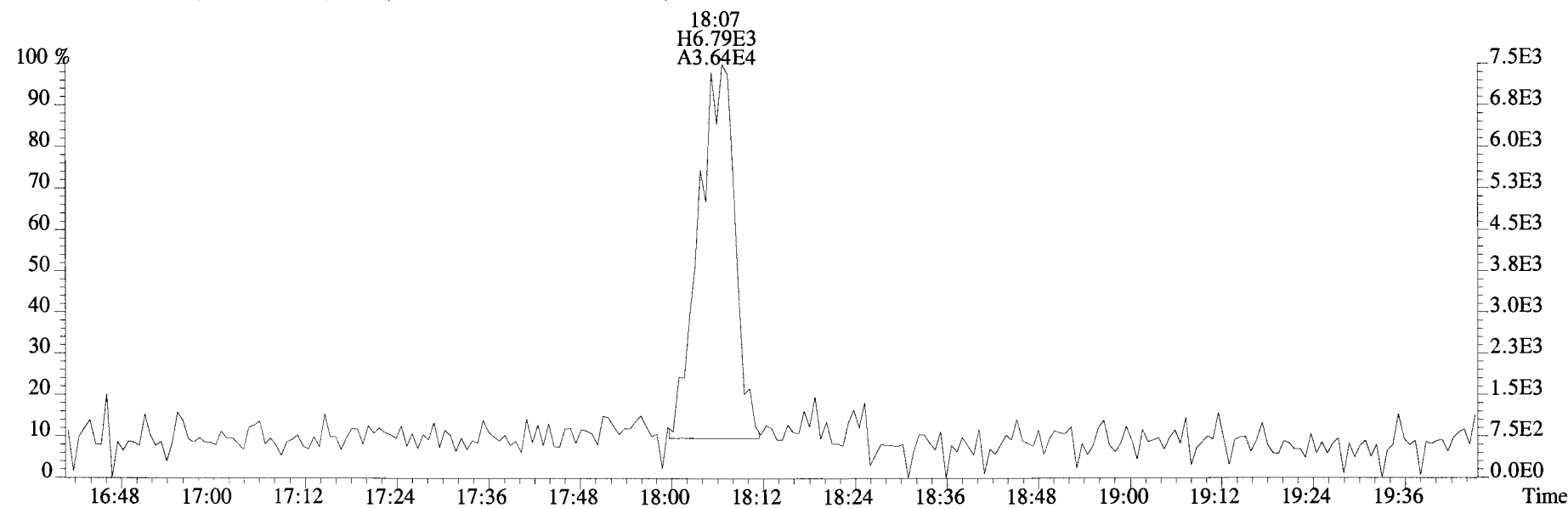
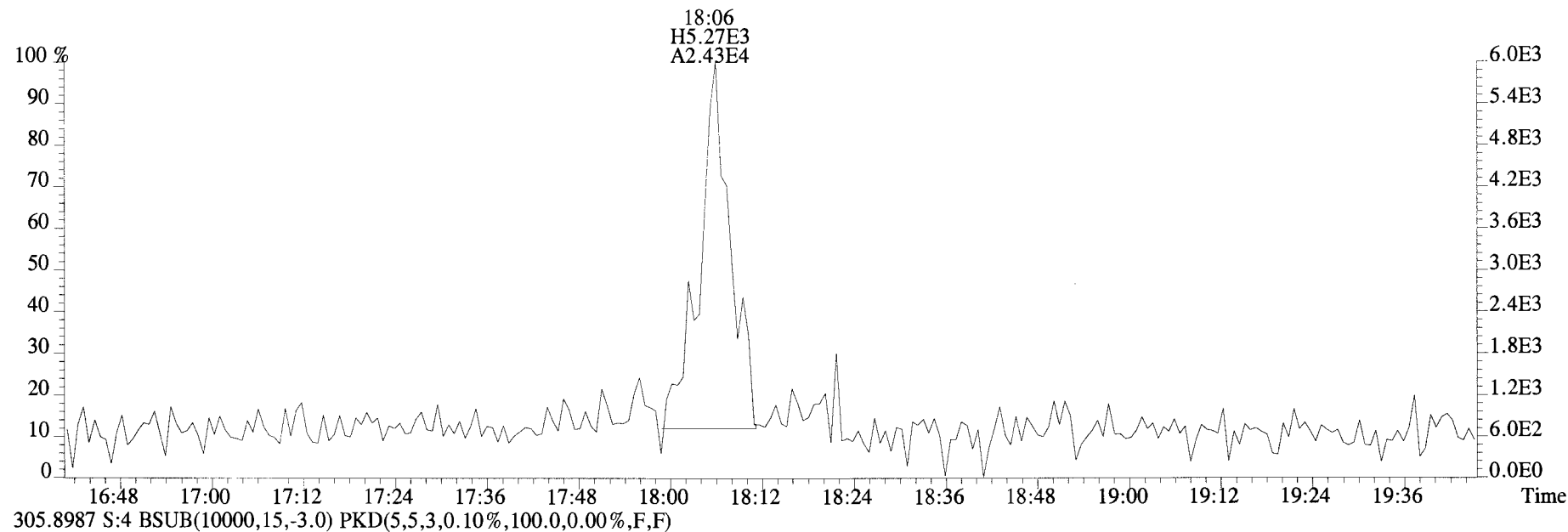
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Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:ST190530D1-1 1613 CS0 19C2201 Exp:TCDF_DB225
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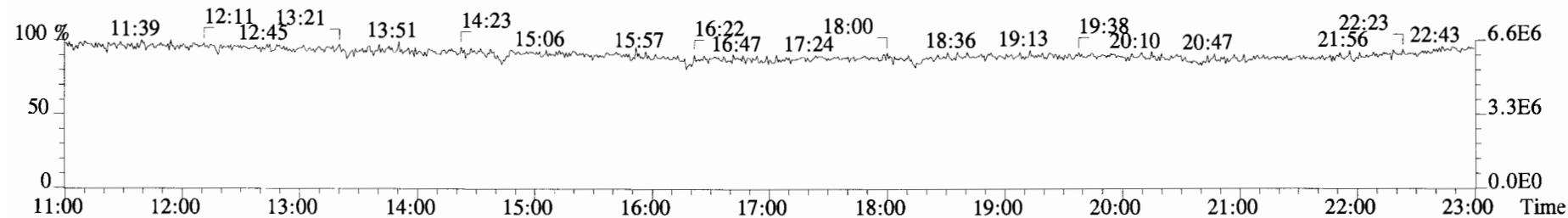
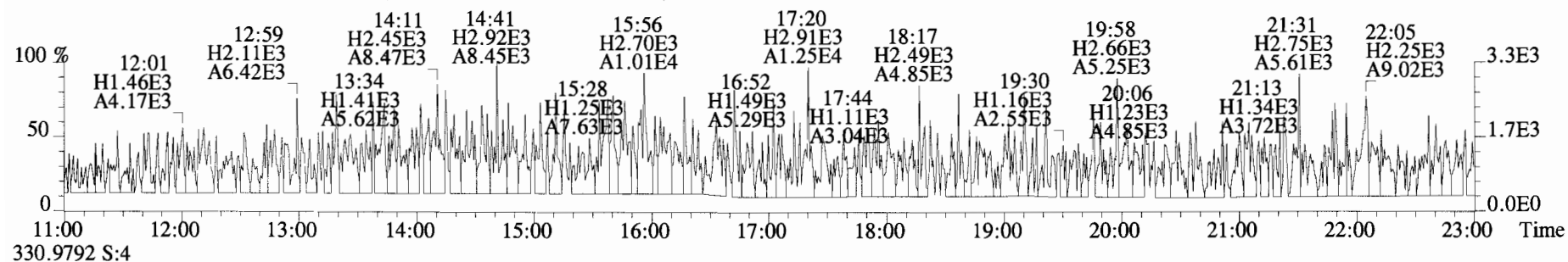
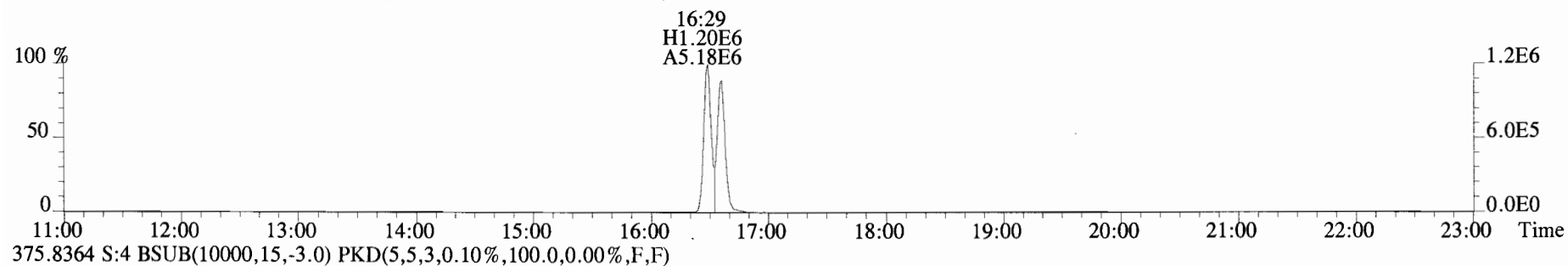
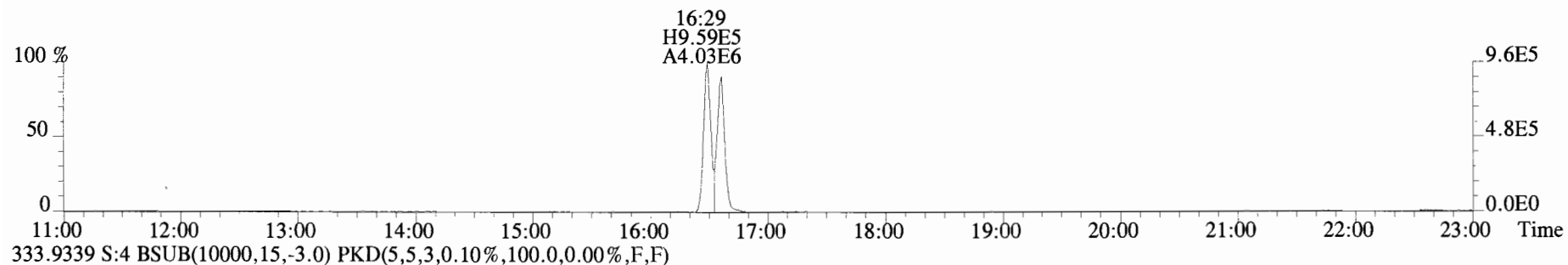
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Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST190530D1-2 1613 CS1 19C2202 Exp:TCDF_DB225
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



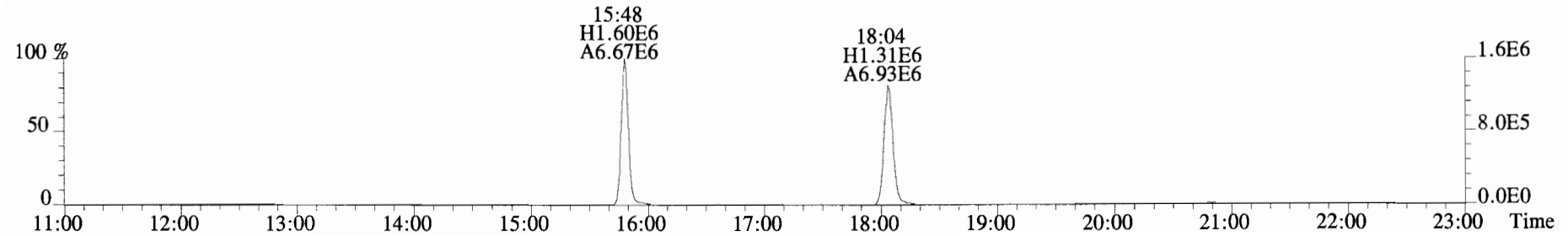
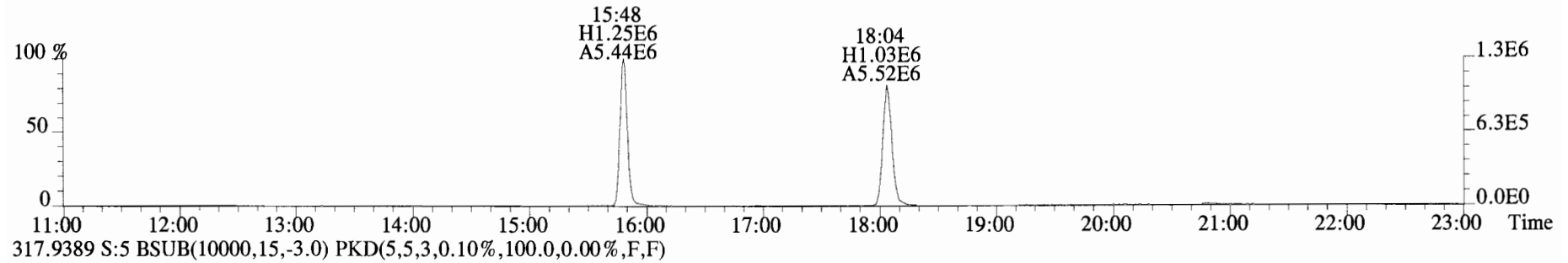
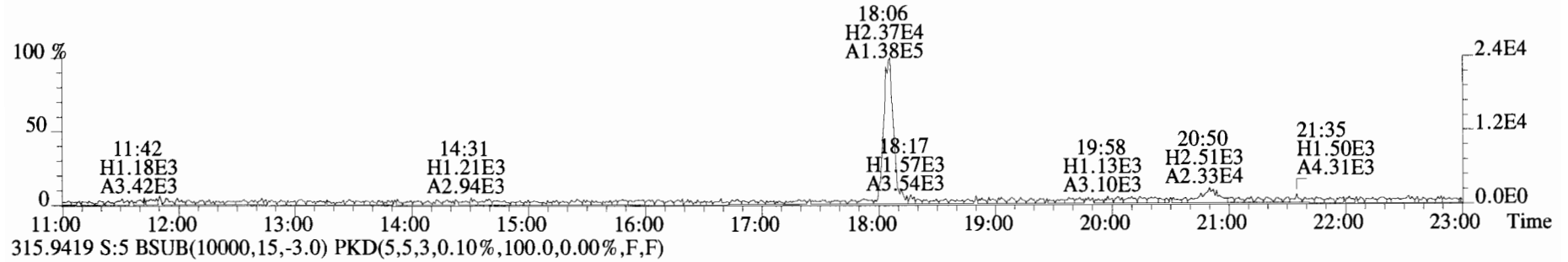
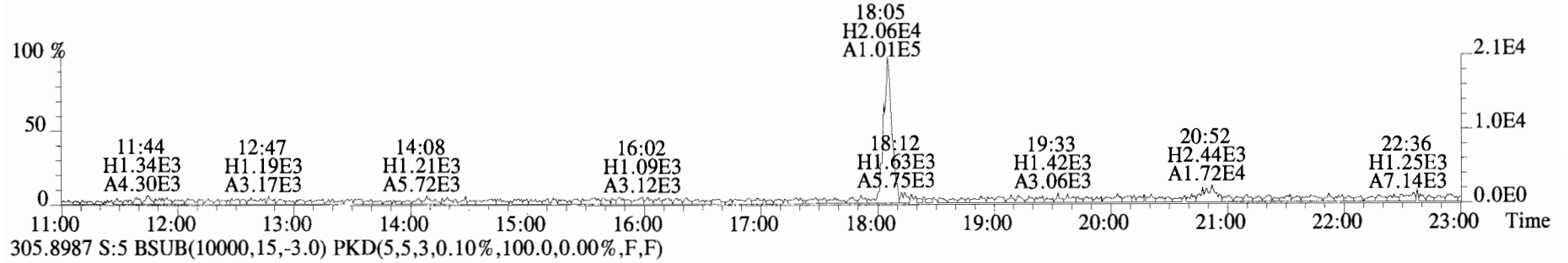
File:190530D1 #1-1683 Acq:30-MAY-2019 12:37:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST190530D1-2 1613 CS1 19C2202 Exp:TCDF_DB225
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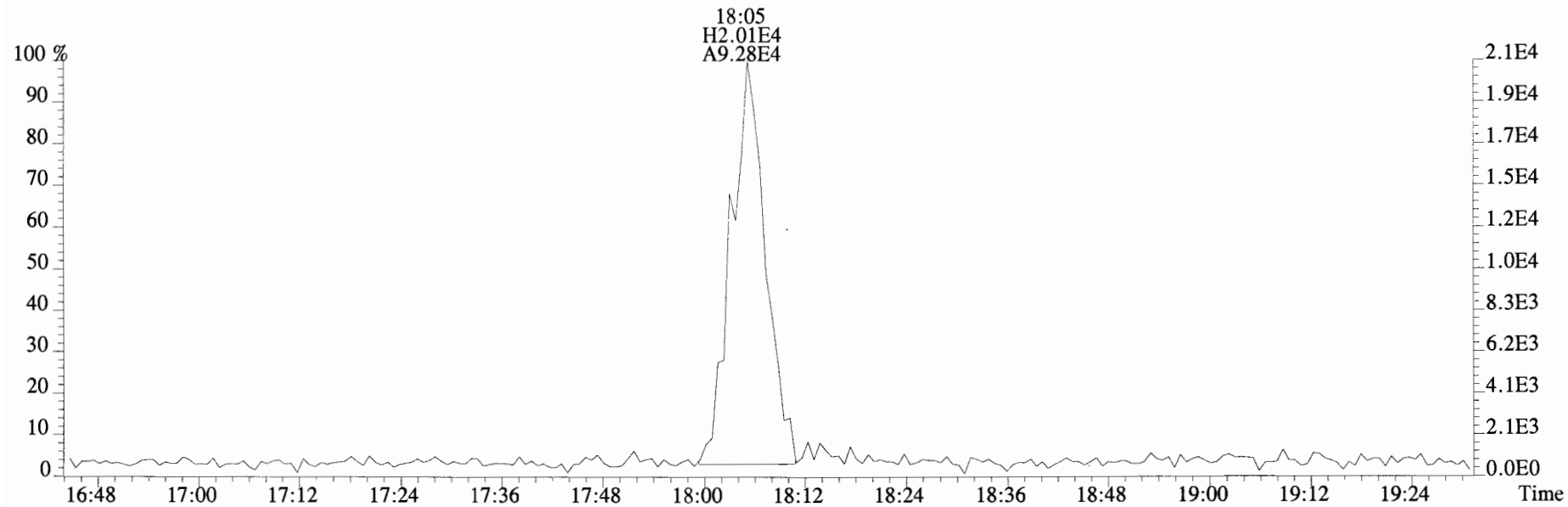
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Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:ST190530D1-2 1613 CS1 19C2202 Exp:TCDF_DB225
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



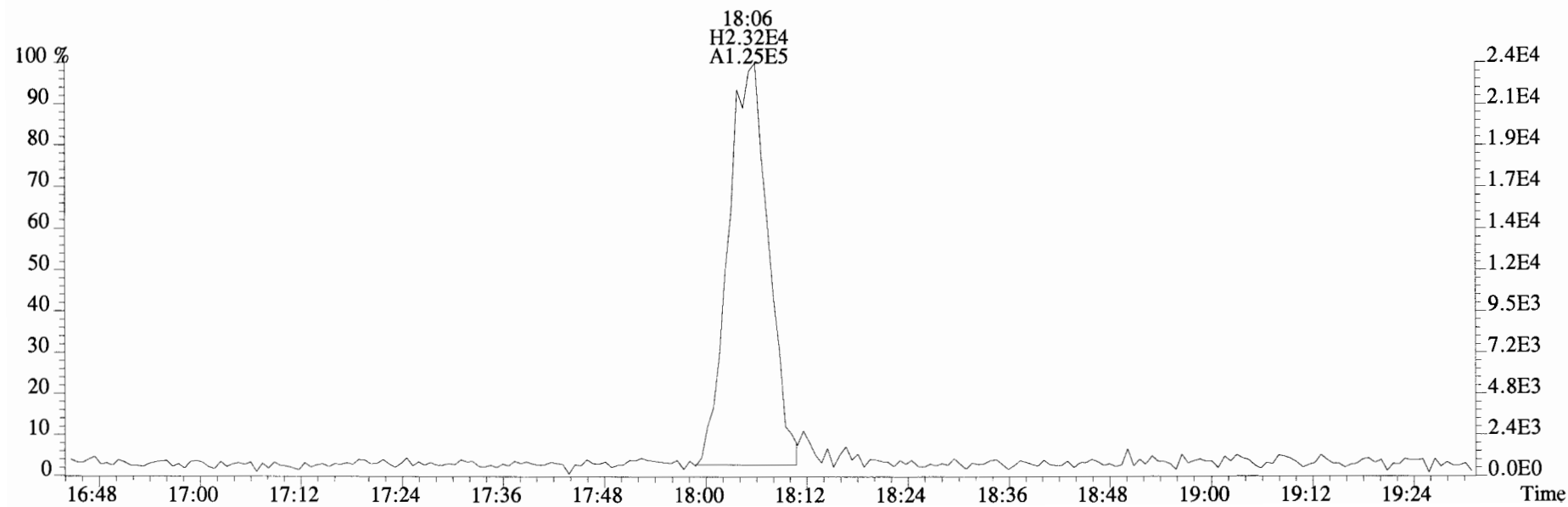
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Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST190530D1-3 1613 CS2 19C2203 Exp:TCDF_DB225
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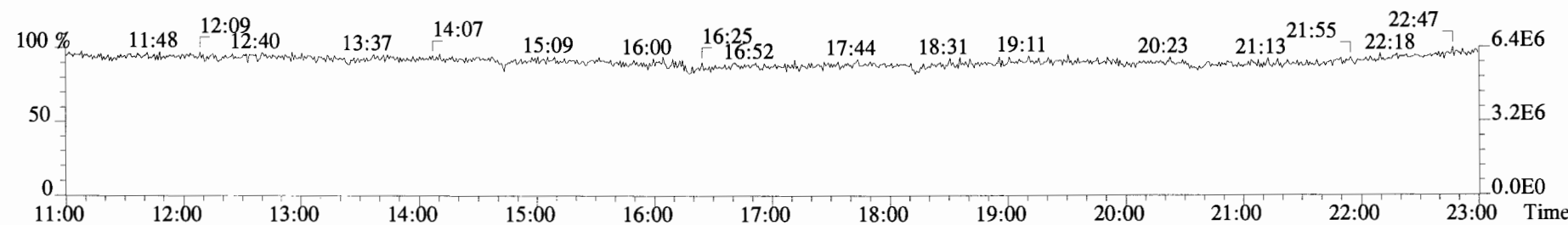
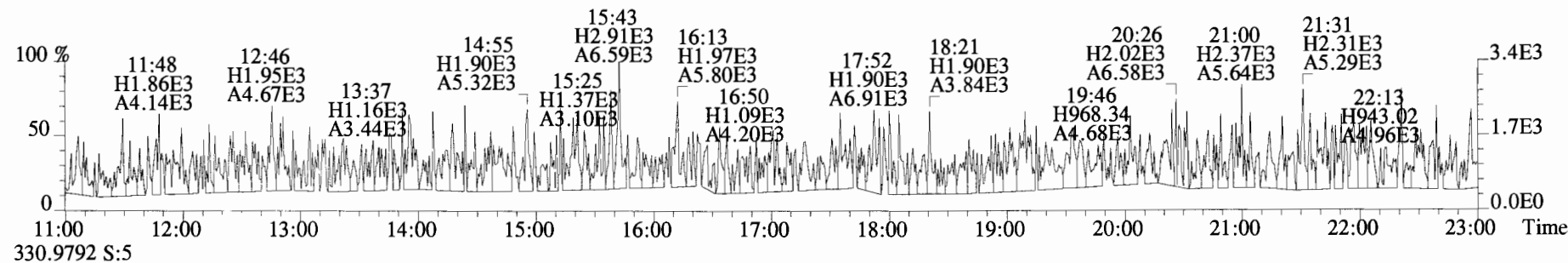
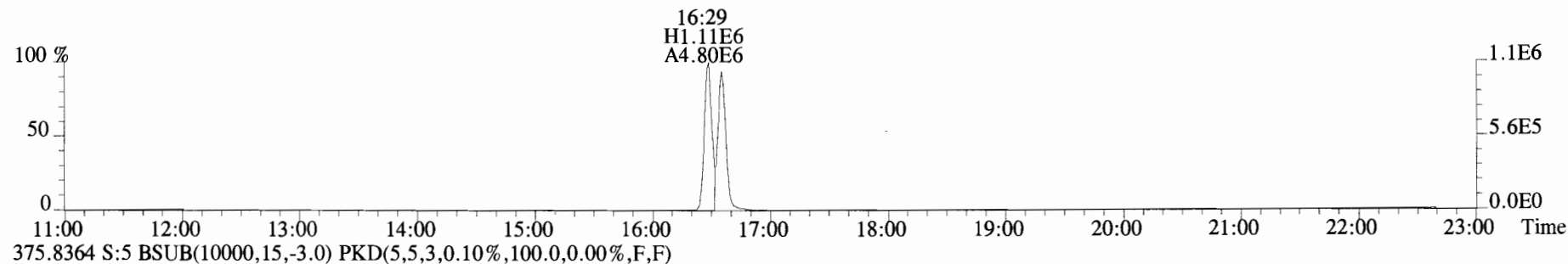
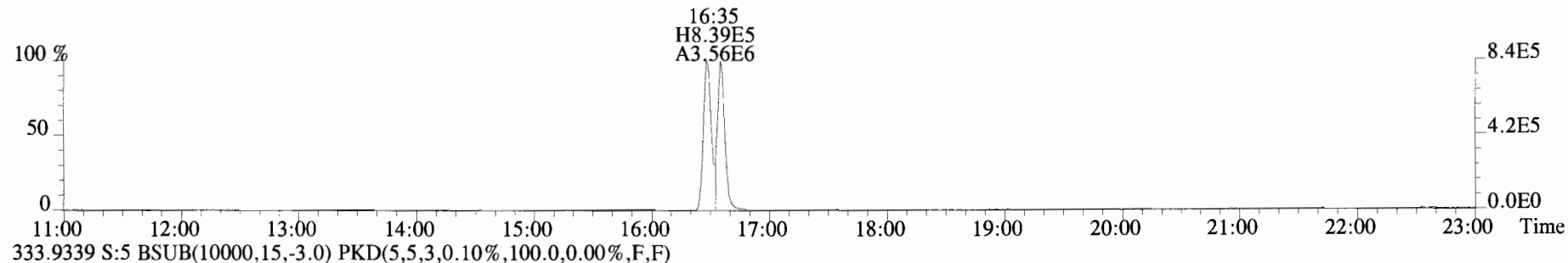
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Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST190530D1-3 1613 CS2 19C2203 Exp:TCDF_DB225
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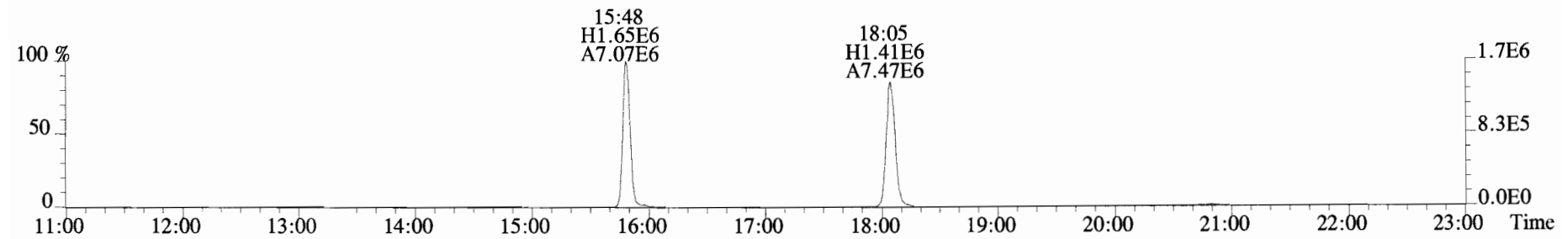
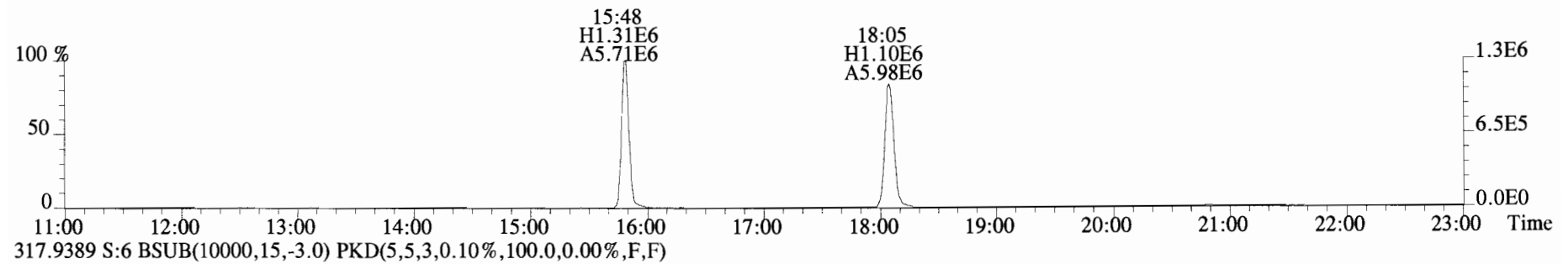
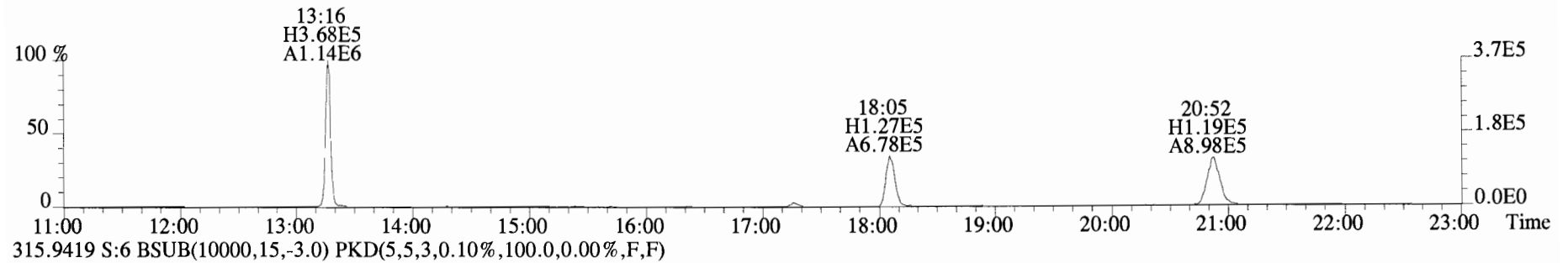
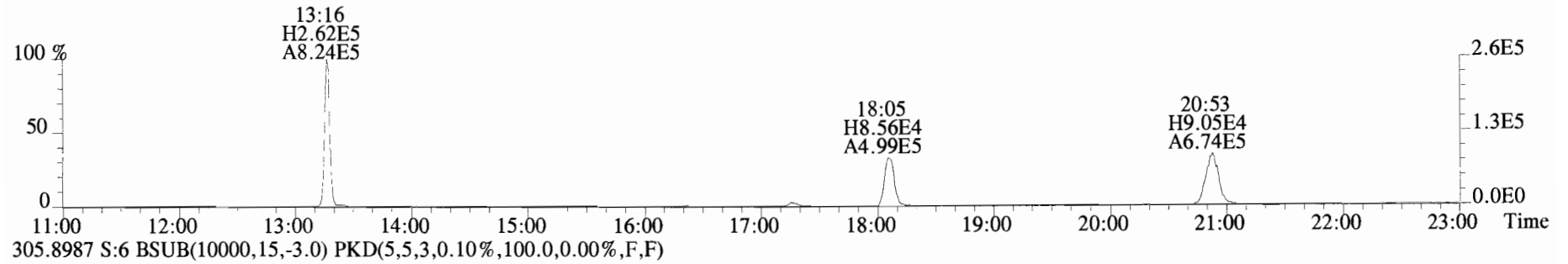
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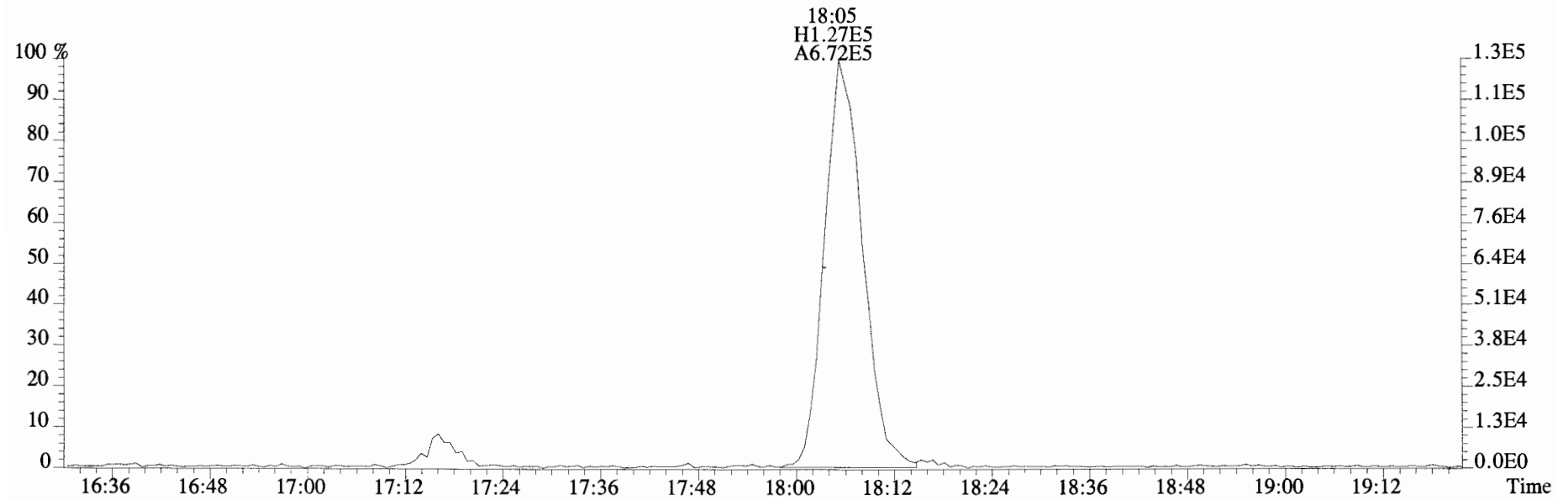
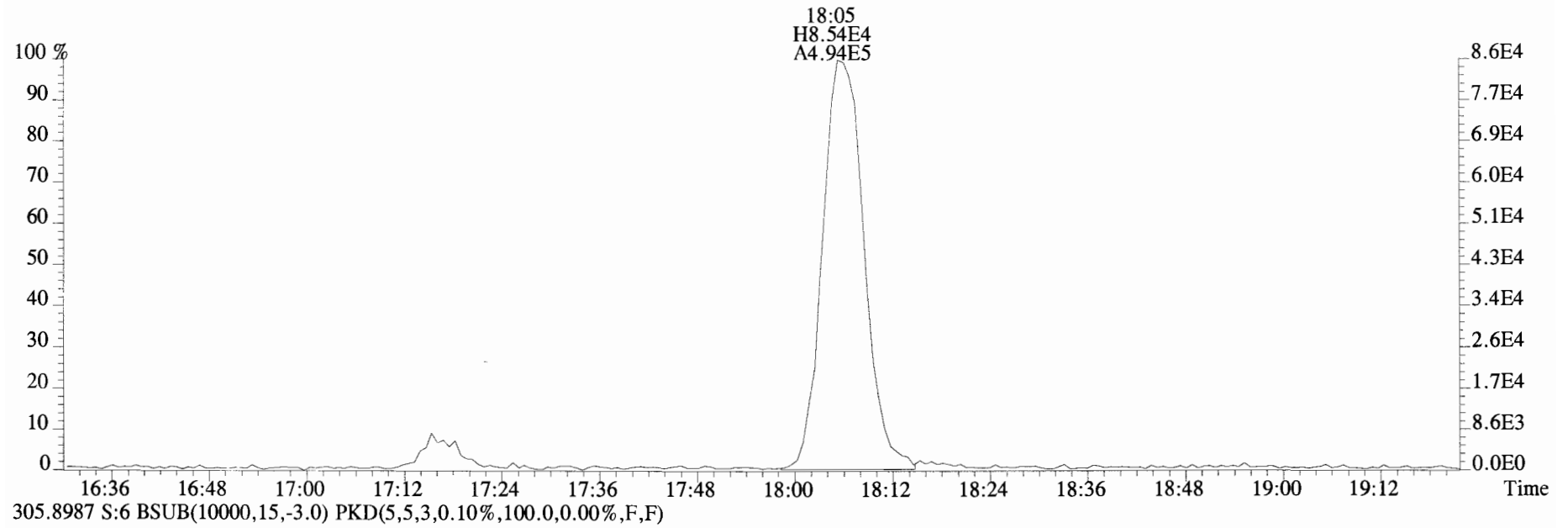
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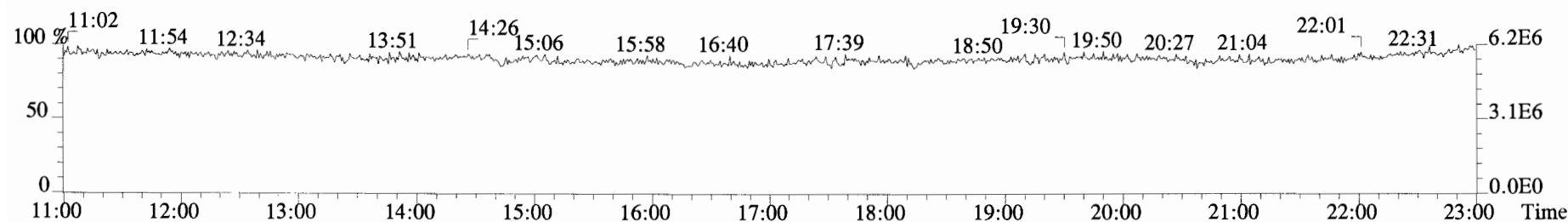
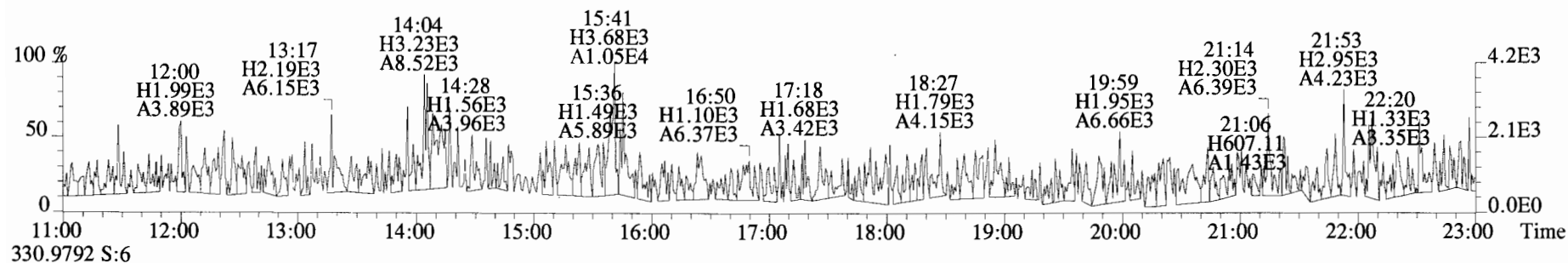
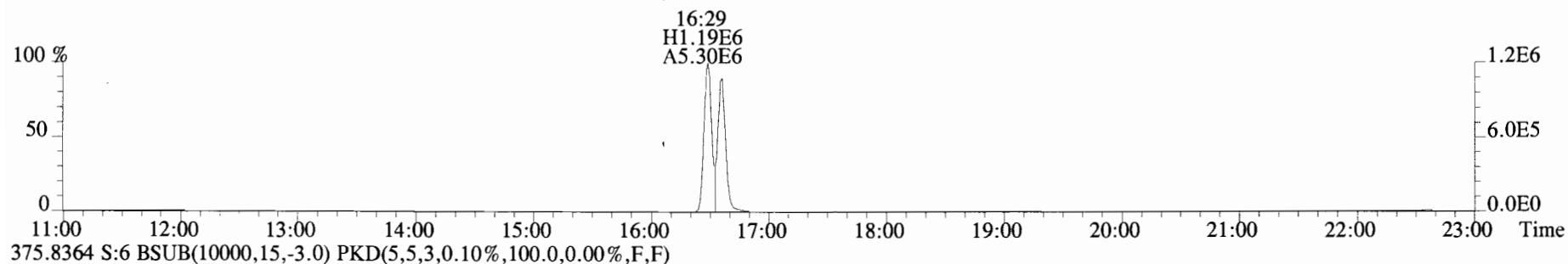
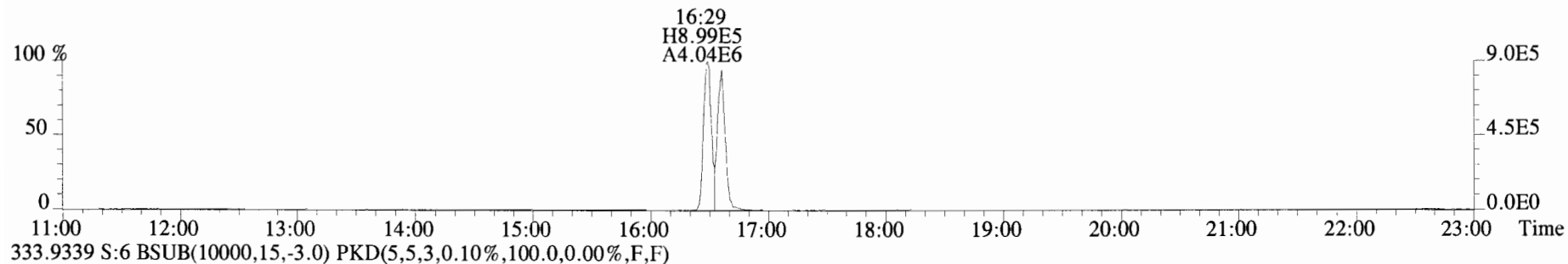
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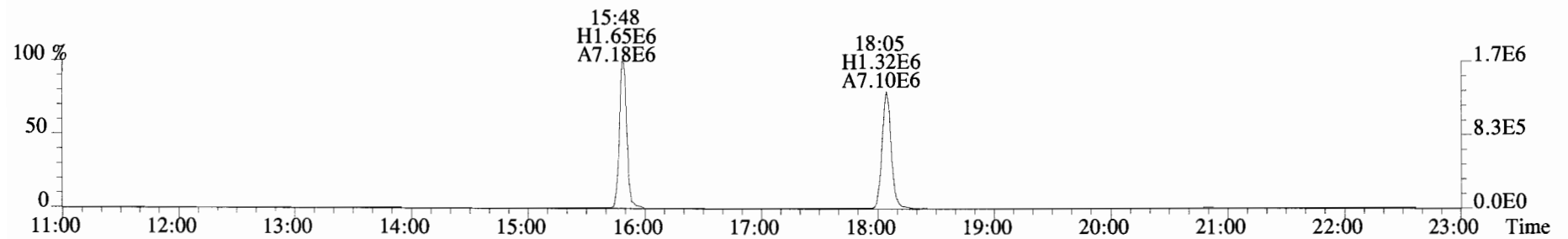
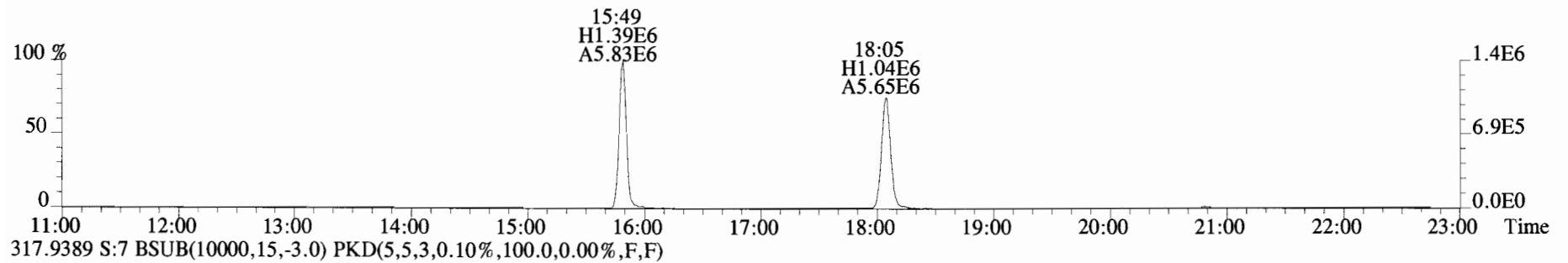
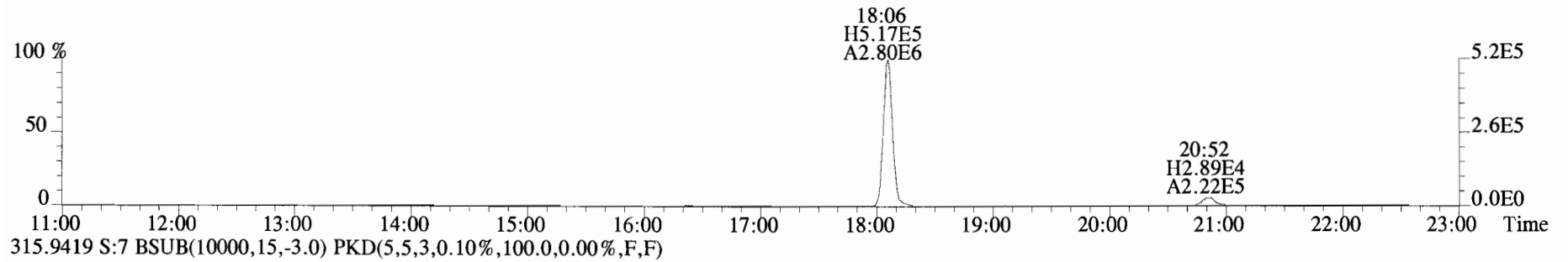
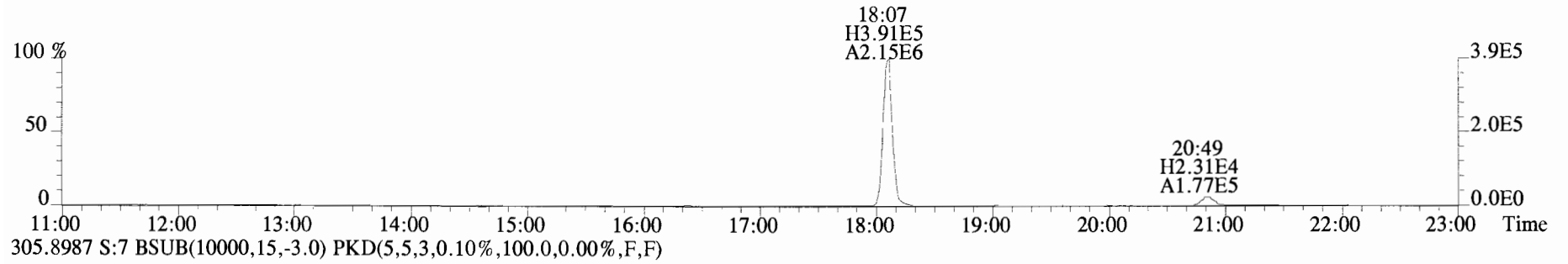
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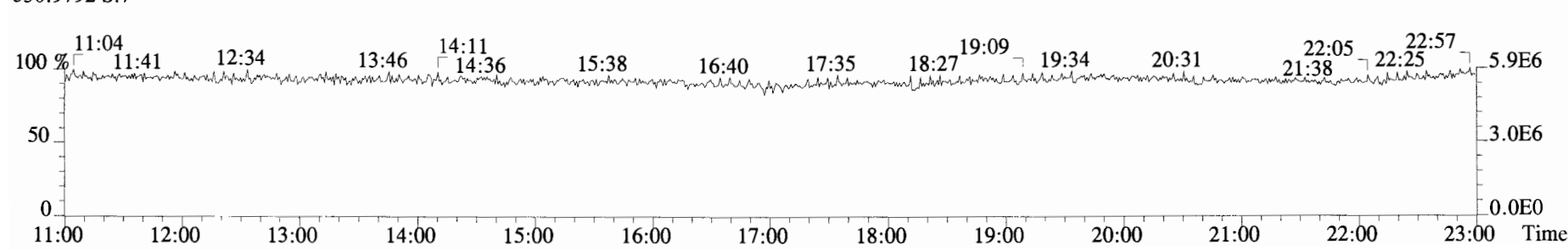
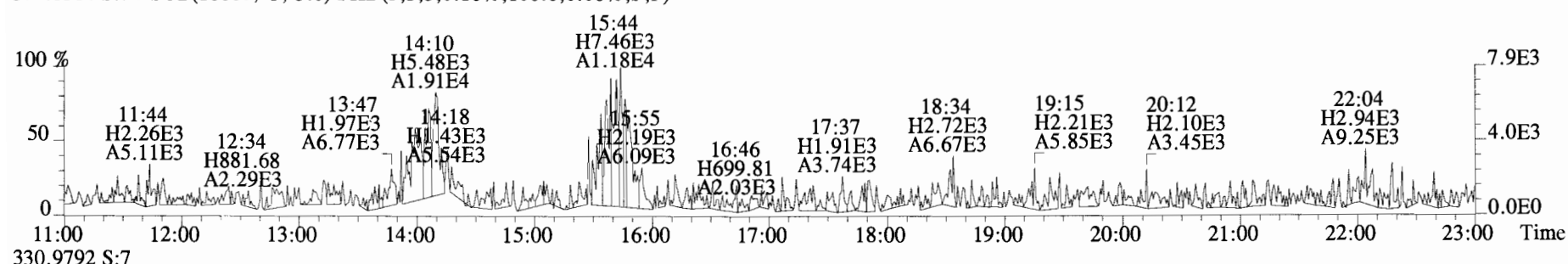
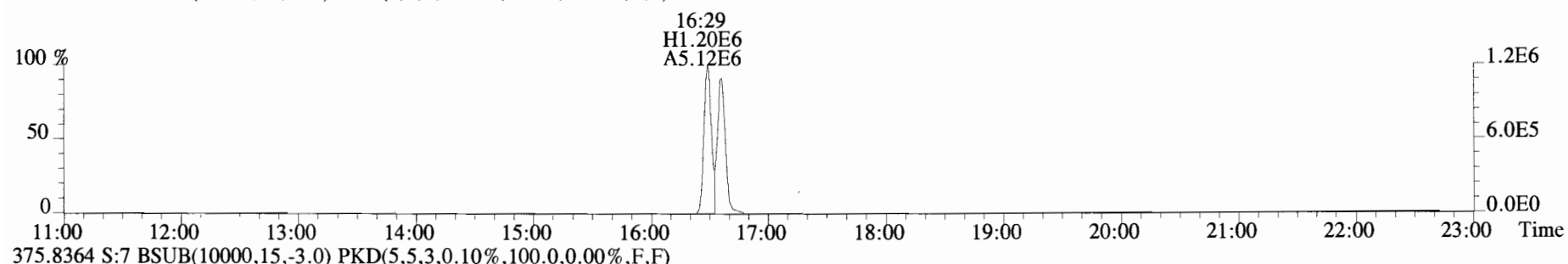
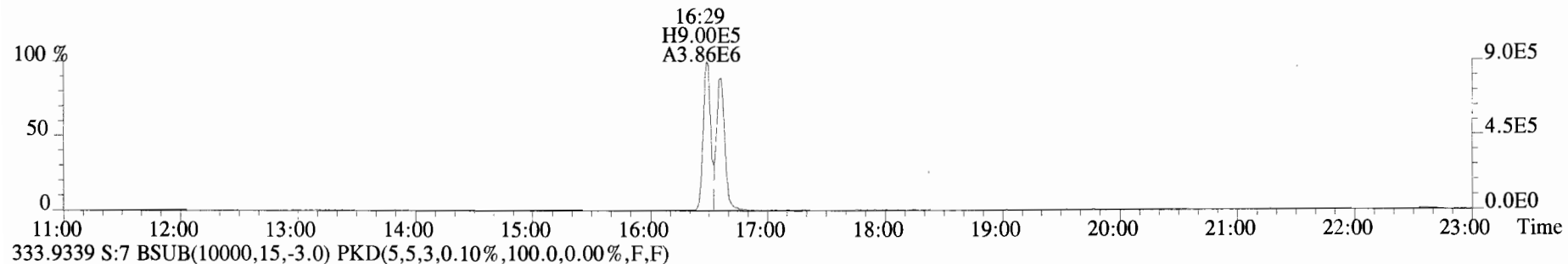
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331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



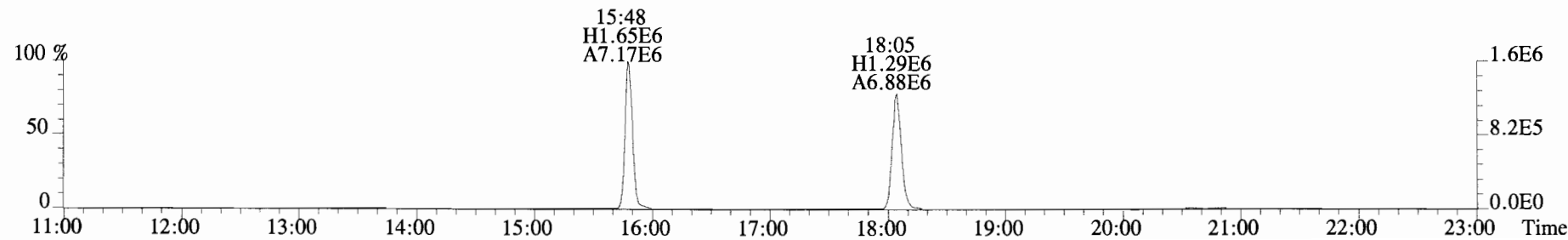
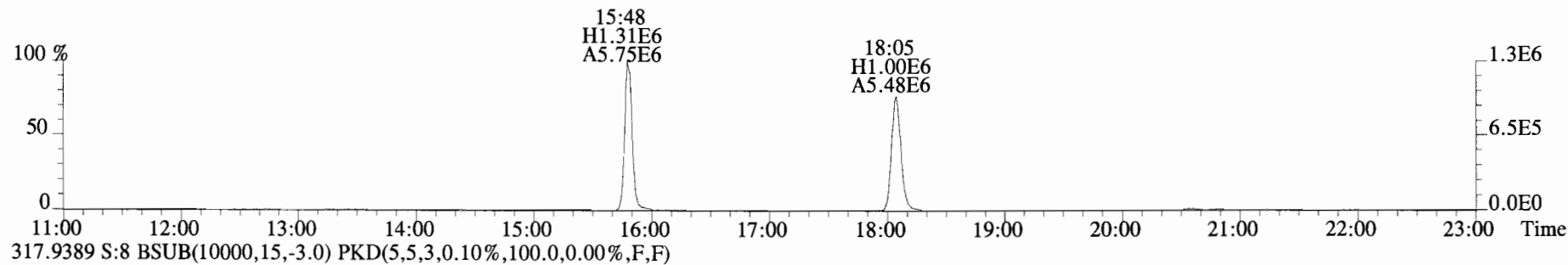
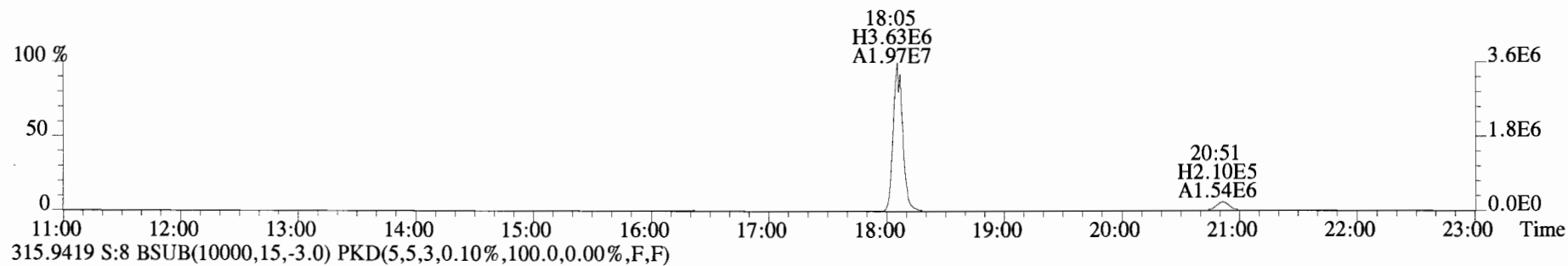
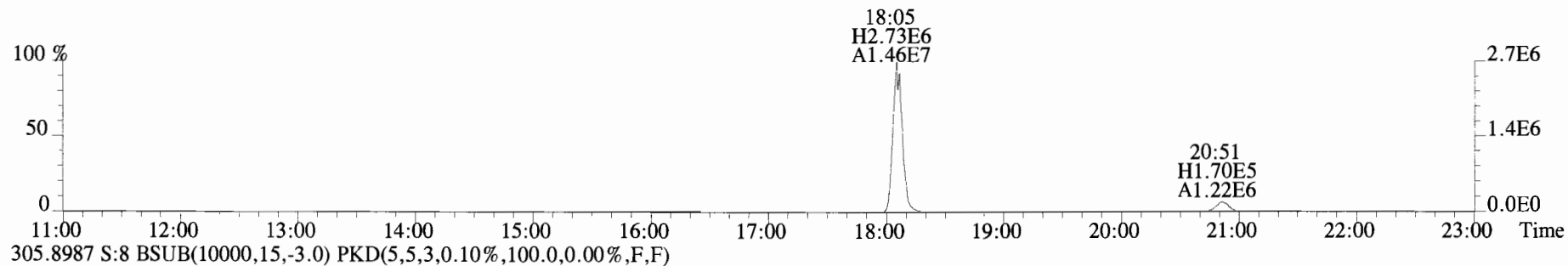
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Sample#7 File Text:Vista Analytical Laboratory VG7 Text:ST190530D1-5 1613 CS4 19C2205 Exp:TCDF_DB225
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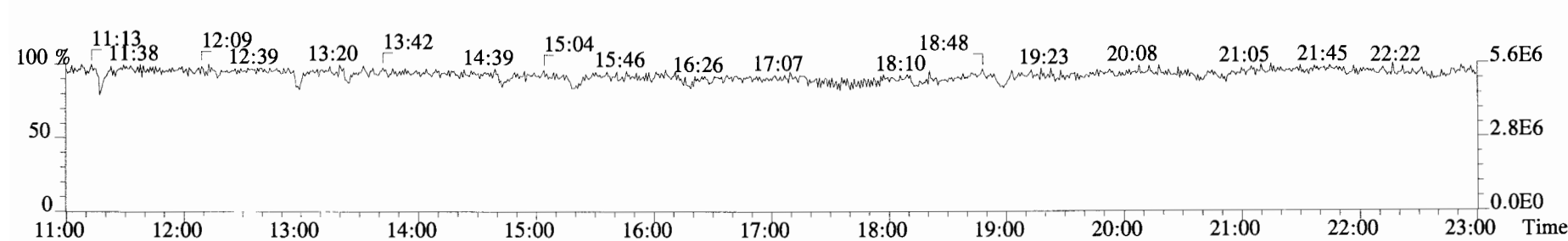
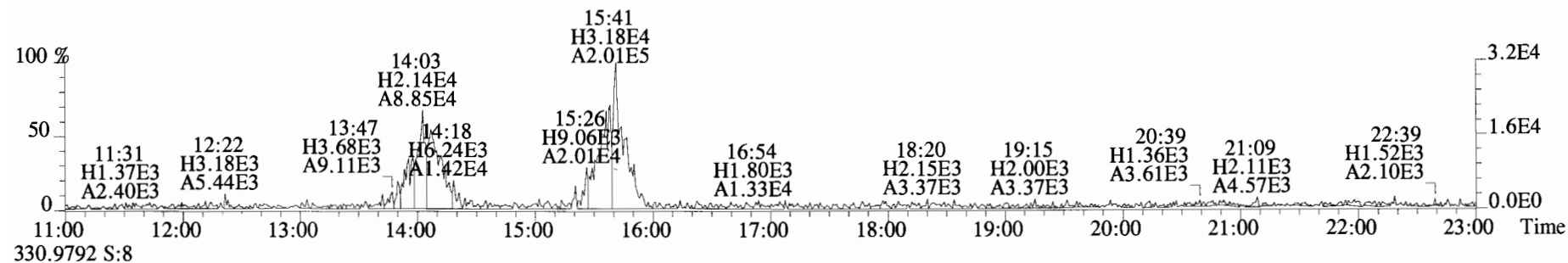
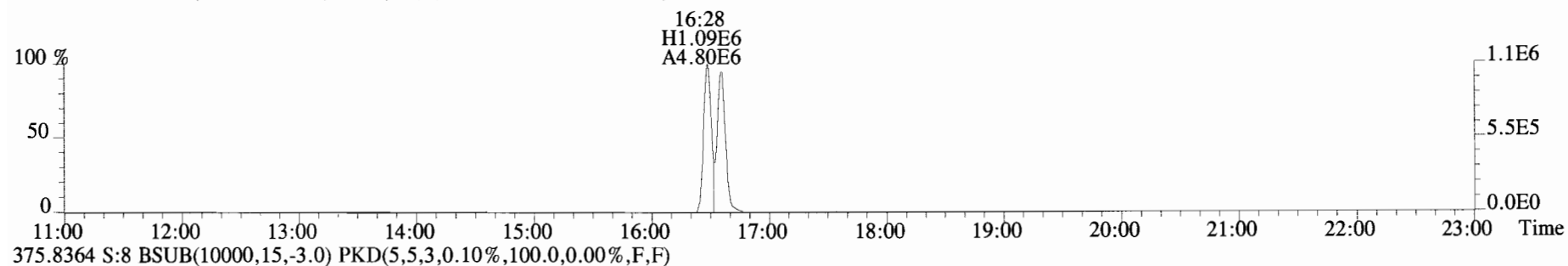
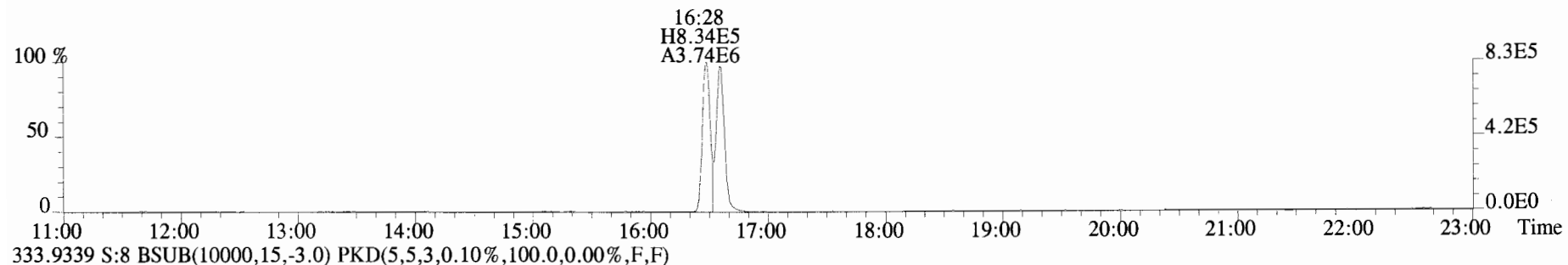
File:190530D1 #1-1682 Acq:30-MAY-2019 14:13:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:ST190530D1-5 1613 CS4 19C2205 Exp:TCDF_DB225
331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

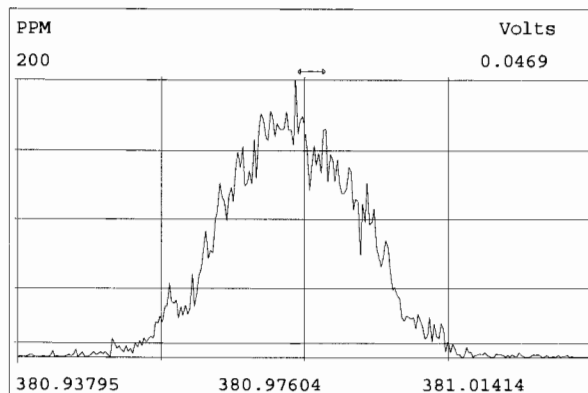
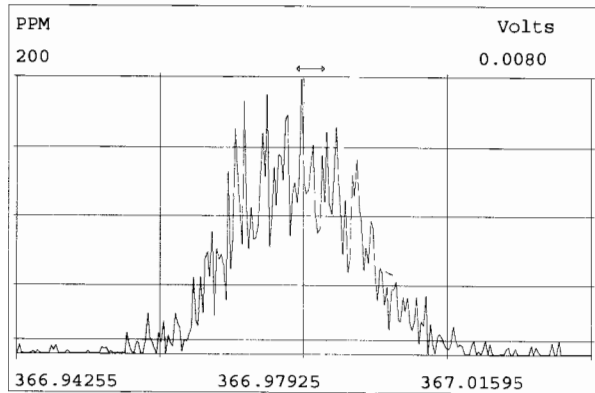
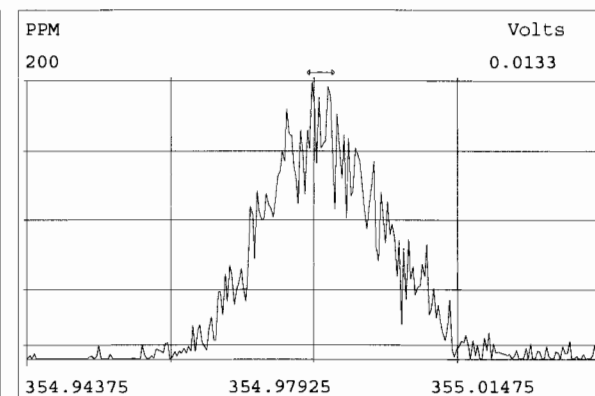
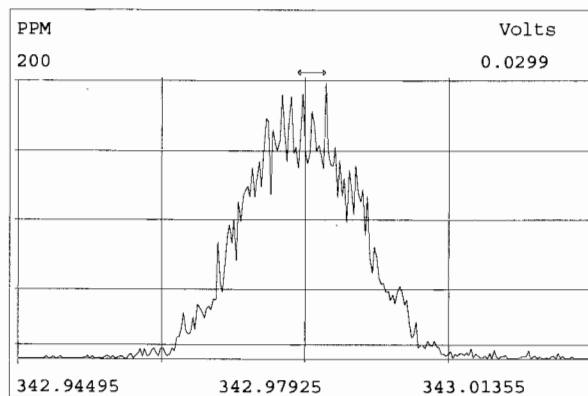
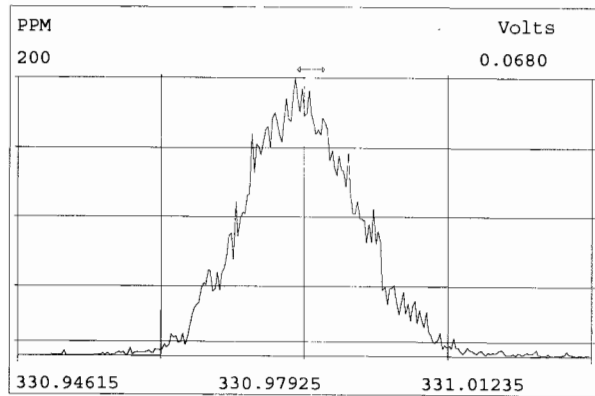
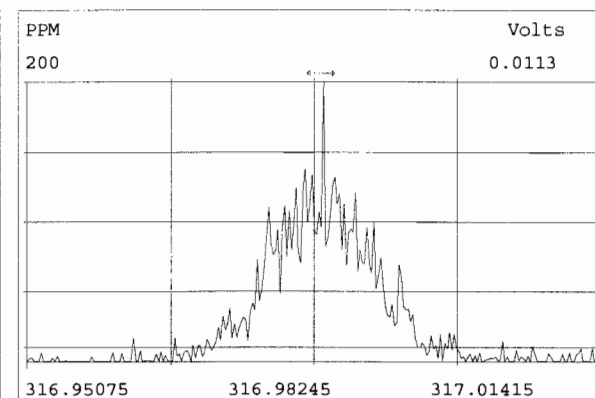
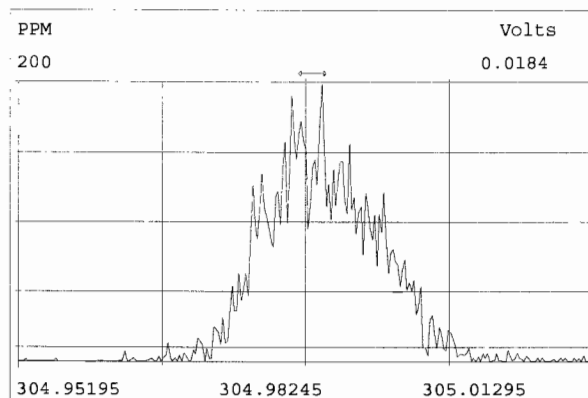
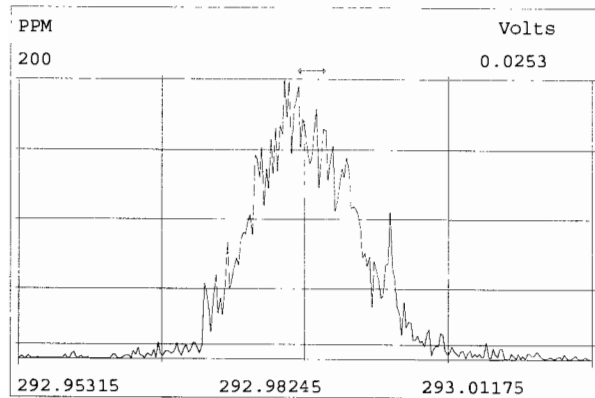


File:190530D1 #1-1682 Acq:30-MAY-2019 14:44:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:ST190530D1-6 1613 CS5 19C2206 Exp:TCDF_DB225
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:190530D1 #1-1682 Acq:30-MAY-2019 14:44:52 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:ST190530D1-6 1613 CS5 19C2206 Exp:TCDF_DB225
 331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)





Client ID: 1613 SSS 19C2207
Lab ID: SS190528D1-1

Filename: 190530D1 S:10 Acq:30-MAY-19 15:48:32
GC Column ID: DB-225 ICal: 1613TCDFVG7-5-30-19 wt/vol: 1.000

ConCal: ST190530D1-4
EndCAL: NA

Name	Resp	RA	RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.15e+07	0.82 y	15:48	1.00	100.0	-
13C-2,3,7,8-TCDF	1.18e+07	0.80 y	18:04	1.02	100.0	100.0
2,3,7,8-TCDF	1.08e+06	0.74 y	18:05	0.95	9.628	

Integrations

by
Analyst: DB

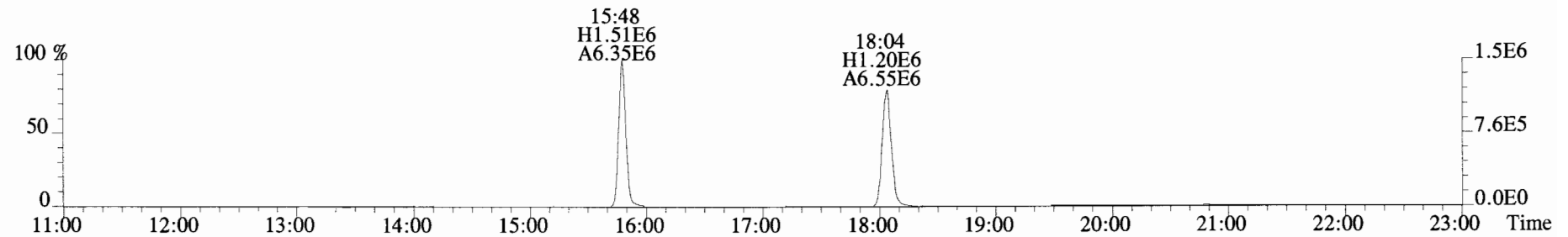
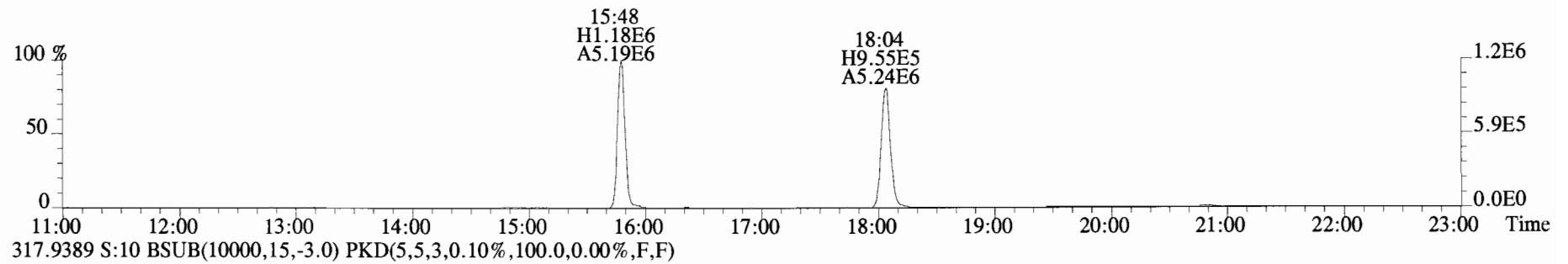
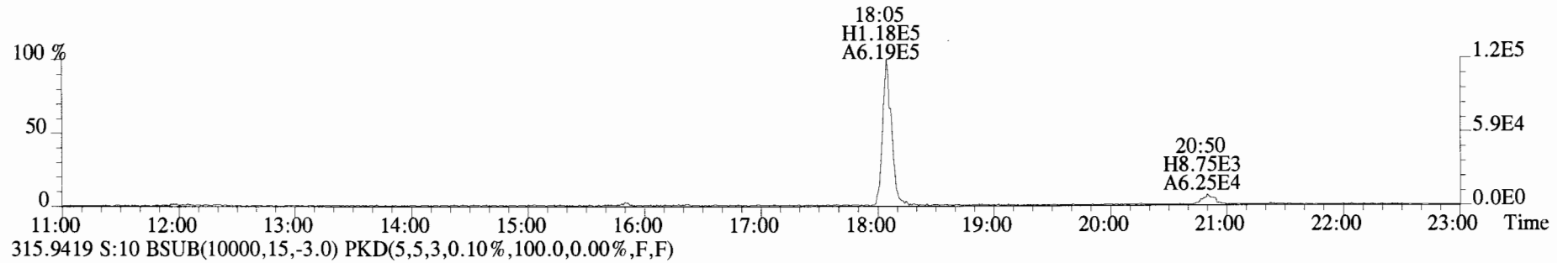
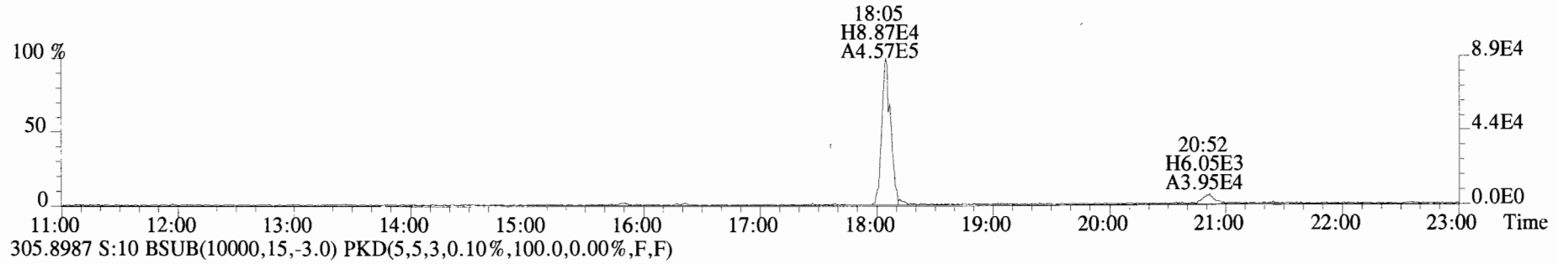
Date: 5/31/19

Reviewed

by
Analyst: CT

Date: 05/31/19

File:190530D1 #1-1682 Acq:30-MAY-2019 15:48:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory_VG7 Text:SS190528D1-1 1613 SSS 19C2207 Exp:TCDF_DB225
303.9016 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:190530D1 #1-1682 Acq:30-MAY-2019 15:48:32 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text: Vista Analytical Laboratory VG7 Text:SS190528D1-1 1613 SSS 19C2207 Exp:TCDF_DB225
 331.9368 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

