

November 27, 2019

Vista Work Order No. 1903829

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 25, 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. 1903829

Case Narrative

Sample Condition on Receipt:

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

Analytical Notes:

EPA Method 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.

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 the preparation batch. No analytes were detected in the Method Blank. The OPR recoveries were within the method acceptance criteria.

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

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1903829-01	PDI-057SC-A-13-14-191023	23-Oct-19 13:01	25-Oct-19 08:40	Amber Glass, 120 mL
1903829-02	PDI-057SC-A-14-15.3-191023	23-Oct-19 13:01	25-Oct-19 08:40	Amber Glass, 120 mL
1903829-03	PDI-062SC-A-13-14-191023	23-Oct-19 09:33	25-Oct-19 08:40	Amber Glass, 120 mL
1903829-04	PDI-062SC-A-14-14.8-191023	23-Oct-19 09:42	25-Oct-19 08:40	Amber Glass, 120 mL

ANALYTICAL RESULTS

Sample ID: Method Blank					EPA Method 1613B			
Matrix: Solid Sample Size: 10.0 g		QC Batch: B9K0034 Date Extracted: 05-Nov-2019 7:54		Lab Sample: B9K0034-BLK1 Date Analyzed: 19-Nov-19 19:53 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	95.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0766			13C-1,2,3,7,8-PeCDD	88.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0998			13C-1,2,3,4,7,8-HxCDD	96.0	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.109			13C-1,2,3,6,7,8-HxCDD	81.6	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.108			13C-1,2,3,7,8,9-HxCDD	84.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.0905			13C-1,2,3,4,6,7,8-HpCDD	93.5	23 - 140	
OCDD	ND	0.0694			13C-OCDD	96.2	17 - 157	
2,3,7,8-TCDF	ND	0.0528			13C-2,3,7,8-TCDF	97.5	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0839			13C-1,2,3,7,8-PeCDF	84.5	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0788			13C-2,3,4,7,8-PeCDF	82.3	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0354			13C-1,2,3,4,7,8-HxCDF	105	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0379			13C-1,2,3,6,7,8-HxCDF	93.3	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0390			13C-2,3,4,6,7,8-HxCDF	96.7	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0496			13C-1,2,3,7,8,9-HxCDF	101	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0432			13C-1,2,3,4,6,7,8-HpCDF	101	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0367			13C-1,2,3,4,7,8,9-HpCDF	112	26 - 138	
OCDF	ND	0.0884			13C-OCDF	107	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	97.0	35 - 197	
					Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)			
					TEQMinWHO2005Dioxin 0.00			
TOTALS								
Total TCDD	ND	0.0541						
Total PeCDD	ND	0.0766						
Total HxCDD	ND	0.106						
Total HpCDD	ND	0.0905						
Total TCDF	ND	0.0528						
Total PeCDF	ND	0.0813						
Total HxCDF	ND	0.0402						
Total HpCDF	ND	0.0402						

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: B9K0034 Date Extracted: 05-Nov-2019 7:54		Lab Sample: B9K0034-BS1 Date Analyzed: 19-Nov-19 15:54 Column: ZB-5MS			
Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	20.8	20.0	104	67 - 158	IS 13C-2,3,7,8-TCDD	97.7	20 - 175
1,2,3,7,8-PeCDD	102	100	102	70 - 142	13C-1,2,3,7,8-PeCDD	89.4	21 - 227
1,2,3,4,7,8-HxCDD	101	100	101	70 - 164	13C-1,2,3,4,7,8-HxCDD	92.7	21 - 193
1,2,3,6,7,8-HxCDD	103	100	103	76 - 134	13C-1,2,3,6,7,8-HxCDD	82.4	25 - 163
1,2,3,7,8,9-HxCDD	103	100	103	64 - 162	13C-1,2,3,7,8,9-HxCDD	85.9	21 - 193
1,2,3,4,6,7,8-HpCDD	102	100	102	70 - 140	13C-1,2,3,4,6,7,8-HpCDD	92.4	26 - 166
OCDD	198	200	98.8	78 - 144	13C-OCDD	89.8	13 - 199
2,3,7,8-TCDF	19.4	20.0	97.1	75 - 158	13C-2,3,7,8-TCDF	98.8	22 - 152
1,2,3,7,8-PeCDF	104	100	104	80 - 134	13C-1,2,3,7,8-PeCDF	89.3	21 - 192
2,3,4,7,8-PeCDF	104	100	104	68 - 160	13C-2,3,4,7,8-PeCDF	87.7	13 - 328
1,2,3,4,7,8-HxCDF	97.0	100	97.0	72 - 134	13C-1,2,3,4,7,8-HxCDF	103	19 - 202
1,2,3,6,7,8-HxCDF	96.8	100	96.8	84 - 130	13C-1,2,3,6,7,8-HxCDF	93.9	21 - 159
2,3,4,6,7,8-HxCDF	100	100	100	70 - 156	13C-2,3,4,6,7,8-HxCDF	93.9	22 - 176
1,2,3,7,8,9-HxCDF	97.0	100	97.0	78 - 130	13C-1,2,3,7,8,9-HxCDF	98.8	17 - 205
1,2,3,4,6,7,8-HpCDF	95.3	100	95.3	82 - 122	13C-1,2,3,4,6,7,8-HpCDF	96.2	21 - 158
1,2,3,4,7,8,9-HpCDF	90.4	100	90.4	78 - 138	13C-1,2,3,4,7,8,9-HpCDF	99.0	20 - 186
OCDF	193	200	96.5	63 - 170	13C-OCDF	96.9	13 - 199
					CRS 37Cl-2,3,7,8-TCDD	97.7	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: PDI-057SC-A-13-14-191023 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903829-01 Date Received: 25-Oct-2019 8:40
Project: Gasco PDI	Sample Size: 14.7 g	QC Batch: B9K0034 Date Extracted: 05-Nov-2019 7:54
Date Collected: 23-Oct-2019 13:01	% Solids: 69.0	Date Analyzed: 21-Nov-19 03:47 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0815			IS 13C-2,3,7,8-TCDD	75.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.143			13C-1,2,3,7,8-PeCDD	73.8	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.141			13C-1,2,3,4,7,8-HxCDD	79.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.158			13C-1,2,3,6,7,8-HxCDD	64.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.153			13C-1,2,3,7,8,9-HxCDD	70.2	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND		0.137		13C-1,2,3,4,6,7,8-HpCDD	74.1	23 - 140	
OCDD	1.08			J	13C-OCDD	70.8	17 - 157	
2,3,7,8-TCDF	ND	0.0600			13C-2,3,7,8-TCDF	74.1	24 - 169	
1,2,3,7,8-PeCDF	ND	0.117			13C-1,2,3,7,8-PeCDF	75.8	24 - 185	
2,3,4,7,8-PeCDF	ND	0.103			13C-2,3,4,7,8-PeCDF	75.1	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0504			13C-1,2,3,4,7,8-HxCDF	80.7	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0537			13C-1,2,3,6,7,8-HxCDF	71.9	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0579			13C-2,3,4,6,7,8-HxCDF	71.1	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0768			13C-1,2,3,7,8,9-HxCDF	76.8	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0782			13C-1,2,3,4,6,7,8-HpCDF	74.5	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0720			13C-1,2,3,4,7,8,9-HpCDF	77.2	26 - 138	
OCDF	ND	0.147			13C-OCDF	73.3	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	97.1	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)
 TEQMinWHO2005Dioxin 0.000324

TOTALS								
Total TCDD	ND	0.0815						
Total PeCDD	ND	0.143						
Total HxCDD	ND	0.151						
Total HpCDD	ND		0.369					
Total TCDF	ND	0.0600						
Total PeCDF	ND	0.110						
Total HxCDF	ND	0.0592						
Total HpCDF	ND	0.0753						

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-057SC-A-14-15.3-191023 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903829-02 Date Received: 25-Oct-2019 8:40
Project: Gasco PDI	Sample Size: 14.7 g	QC Batch: B9K0034 Date Extracted: 05-Nov-2019 7:54
Date Collected: 23-Oct-2019 13:01	% Solids: 69.8	Date Analyzed : 21-Nov-19 04:34 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0692			IS 13C-2,3,7,8-TCDD	97.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.104			13C-1,2,3,7,8-PeCDD	102	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0877			13C-1,2,3,4,7,8-HxCDD	105	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0945			13C-1,2,3,6,7,8-HxCDD	87.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0926			13C-1,2,3,7,8,9-HxCDD	96.0	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND		0.175		13C-1,2,3,4,6,7,8-HpCDD	102	23 - 140	
OCDD	0.887			J	13C-OCDD	93.0	17 - 157	
2,3,7,8-TCDF	ND	0.0417			13C-2,3,7,8-TCDF	93.1	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0854			13C-1,2,3,7,8-PeCDF	98.2	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0774			13C-2,3,4,7,8-PeCDF	96.5	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0315			13C-1,2,3,4,7,8-HxCDF	107	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0335			13C-1,2,3,6,7,8-HxCDF	94.6	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0376			13C-2,3,4,6,7,8-HxCDF	94.7	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0444			13C-1,2,3,7,8,9-HxCDF	106	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0699			13C-1,2,3,4,6,7,8-HpCDF	94.5	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0582			13C-1,2,3,4,7,8,9-HpCDF	107	26 - 138	
OCDF	ND	0.0915			13C-OCDF	97.6	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	95.6	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)
 TEQMinWHO2005Dioxin 0.000266

TOTALS								
Total TCDD	ND	0.0692						
Total PeCDD	ND	0.104						
Total HxCDD	ND		0.0854					
Total HpCDD	0.250		0.425					
Total TCDF	ND	0.0417						
Total PeCDF	ND	0.0813						
Total HxCDF	ND	0.0366						
Total HpCDF	ND	0.0644						

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-062SC-A-13-14-191023 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903829-03 Date Received: 25-Oct-2019 8:40
Project: Gasco PDI	Sample Size: 14.2 g	QC Batch: B9K0034 Date Extracted: 05-Nov-2019 7:54
Date Collected: 23-Oct-2019 9:33	% Solids: 70.7	Date Analyzed: 21-Nov-19 05:22 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0638			IS 13C-2,3,7,8-TCDD	87.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.129			13C-1,2,3,7,8-PeCDD	82.8	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0920			13C-1,2,3,4,7,8-HxCDD	93.5	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0926			13C-1,2,3,6,7,8-HxCDD	76.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.101			13C-1,2,3,7,8,9-HxCDD	81.1	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.143			J	13C-1,2,3,4,6,7,8-HpCDD	91.7	23 - 140	
OCDD	1.12			J	13C-OCDD	88.5	17 - 157	
2,3,7,8-TCDF	ND	0.0482			13C-2,3,7,8-TCDF	89.7	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0804			13C-1,2,3,7,8-PeCDF	88.3	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0760			13C-2,3,4,7,8-PeCDF	86.2	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0389			13C-1,2,3,4,7,8-HxCDF	93.5	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0382			13C-1,2,3,6,7,8-HxCDF	84.0	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0423			13C-2,3,4,6,7,8-HxCDF	83.3	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0582			13C-1,2,3,7,8,9-HxCDF	87.5	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND		0.270		13C-1,2,3,4,6,7,8-HpCDF	83.4	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0379			13C-1,2,3,4,7,8,9-HpCDF	98.9	26 - 138	
OCDF	1.75			J	13C-OCDF	93.4	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	98.0	35 - 197	

Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)
 TEQMinWHO2005Dioxin 0.00229

TOTALS								
Total TCDD	ND	0.0638						
Total PeCDD	ND	0.129						
Total HxCDD	0.101							
Total HpCDD	0.407							
Total TCDF	ND	0.0482						
Total PeCDF	ND		0.0837					
Total HxCDF	ND	0.0439						
Total HpCDF	ND		0.270					

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-062SC-A-14-14.8-191023 **EPA Method 1613B**

Client Data	Sample Data	Laboratory Data
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903829-04 Date Received: 25-Oct-2019 8:40
Project: Gasco PDI	Sample Size: 14.7 g	QC Batch: B9K0034 Date Extracted: 05-Nov-2019 7:54
Date Collected: 23-Oct-2019 9:42	% Solids: 68.4	Date Analyzed: 21-Nov-19 06:10 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0691			IS 13C-2,3,7,8-TCDD	99.3	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0792			13C-1,2,3,7,8-PeCDD	98.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.101			13C-1,2,3,4,7,8-HxCDD	103	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.106			13C-1,2,3,6,7,8-HxCDD	84.5	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.109			13C-1,2,3,7,8,9-HxCDD	89.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.0704			13C-1,2,3,4,6,7,8-HpCDD	98.1	23 - 140	
OCDD	0.349			J	13C-OCDD	96.7	17 - 157	
2,3,7,8-TCDF	ND	0.0473			13C-2,3,7,8-TCDF	97.5	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0632			13C-1,2,3,7,8-PeCDF	101	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0588			13C-2,3,4,7,8-PeCDF	96.8	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0319			13C-1,2,3,4,7,8-HxCDF	105	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0320			13C-1,2,3,6,7,8-HxCDF	92.1	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0366			13C-2,3,4,6,7,8-HxCDF	92.5	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0477			13C-1,2,3,7,8,9-HxCDF	97.5	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0531			13C-1,2,3,4,6,7,8-HpCDF	89.6	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0423			13C-1,2,3,4,7,8,9-HpCDF	102	26 - 138	
OCDF	ND	0.0838			13C-OCDF	101	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	96.1	35 - 197	

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

TEQMinWHO2005Dioxin 0.000105

TOTALS		
Total TCDD	ND	0.0691
Total PeCDD	ND	0.0792
Total HxCDD	ND	0.106
Total HpCDD	ND	0.0704
Total TCDF	ND	0.0473
Total PeCDF	ND	0.0610
Total HxCDF	ND	0.0367
Total HpCDF	ND	0.0479

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.

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

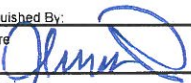
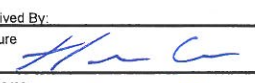
1903829 4.4°C, 2.9°C

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

Project: Gasco PDI
Client: NW Natural

COC ID: VISTA-20191023-151553
Sample Custodian: CO, SN, BJ, SS
Lab: VISTA

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Time	Containers #	Lab QC*	Test Request	Method	TAT**	Preservative
001	PDI-057SC-A-13-14-191023	N	SE	10/23/2019	13:01	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
002	PDI-057SC-A-14-15.3-191023	N	SE	10/23/2019	13:01	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
003	PDI-062SC-A-13-14-191023	N	SE	10/23/2019	9:33	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
004	PDI-062SC-A-14-14.8-191023	N	SE	10/23/2019	9:42	1	<input type="checkbox"/>	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C

Comment:					
Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature 	Signature 	Signature	Signature	Signature	Signature
Print Name C. O'BRIEN	Print Name Hayden Grand	Print Name	Print Name	Print Name	Print Name
Company AQ	Company VAL	Company	Company	Company	Company
Date/Time 10/24/19 0855	Date/Time 10/25/19 08:40	Date/Time	Date/Time	Date/Time	Date/Time

* Lab QC Requested for sample when box is checked ** TAT = Turn Around Time in DAYS # POC = Project Point of Contact

Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 1903829 TAT std

Samples Arrival:	Date/Time 10/25/19 08:40	Initials: HOG	Location: WR-2
			Shelf/Rack: NA
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 checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: 4.4 (uncorrected)	Probe used: Y <input checked="" type="checkbox"/> N		Thermometer ID: IR-3
Temp °C: 4.4 (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>1 of 2</u> Trk # <u>7768 1066 2343</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/> Return
			<input type="checkbox"/> Dispose
Chain of Custody / Sample Documentation Present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Chain of Custody / Sample Documentation Complete?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Holding Time Acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Logged In:	Date/Time 10/27/19 2058	Initials: KCC	Location: WR-2
			Shelf/Rack: D-7
COC Anomaly/Sample Acceptance Form completed?			<input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Comments:

Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 1903829 TAT std

Samples Arrival:	Date/Time		Initials:		Location: <u>WR-2</u>		
	<u>10/25/19 08:40</u>		<u>HOG</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 checked="" type="checkbox"/> Ice		<input type="checkbox"/> Blue Ice		<input type="checkbox"/> Dry Ice		<input type="checkbox"/> None
Temp °C:	<u>2.9</u> (uncorrected)	Probe used: <u>Y</u> <input checked="" type="checkbox"/> <u>N</u>			Thermometer ID: <u>IR-3</u>		
Temp °C:	<u>2.9</u> (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>2 of 2</u> Trk # <u>7768 1066 2354</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
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>10/27/19 2058</u>		<u>Klu</u>		Shelf/Rack: <u>D-7</u>	
COC Anomaly/Sample Acceptance Form completed?		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

Comments:

CoC/Label Reconciliation Report WO# 1903829

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	Sample Comments
1903829-01	A PDI-057SC-A-13-14-191023 1	<input checked="" type="checkbox"/>		001	23-Oct-19 13:01	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	
1903829-02	A PDI-057SC-A-14-15.3-191023 1	<input checked="" type="checkbox"/>		002	23-Oct-19 13:01	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	
1903829-03	A PDI-062SC-A-13-14-191023 2	<input checked="" type="checkbox"/>		003	23-Oct-19 09:33	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	
1903829-04	A PDI-062SC-A-14-14.8-191023 2	<input checked="" type="checkbox"/>		004	23-Oct-19 09:42	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	

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

Comments:

cooler 1 = "1"
cooler 2 = "2"

Verified by/Date: HDC 10/28/19

EXTRACTION INFORMATION

Process Sheet
 Workorder: **1903829**

Prep Expiration: 2020-10-22
 Client: Anchor QEA, LLC

Workorder Due: **22-Nov-19 00:00**

TAT: 28

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

Prep Batch: B9ka34

Prep Data Entered: DT 11/11/19
Date and Initials

Initial Sequence: S9K0033

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1903829-01	A <input checked="" type="checkbox"/>	PDI-057SC-A-13-14-191023	25-Oct-19 08:40	WR-2 D-7	
1903829-02	A <input checked="" type="checkbox"/>	PDI-057SC-A-14-15.3-191023	25-Oct-19 08:40	WR-2 D-7	
1903829-03	A <input checked="" type="checkbox"/>	PDI-062SC-A-13-14-191023	25-Oct-19 08:40	WR-2 D-7	
1903829-04	A <input checked="" type="checkbox"/>	PDI-062SC-A-14-14.8-191023	25-Oct-19 08:40	WR-2 D-7	

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

Pre-Prep Check Out: TL 10/31/19 Prep Check Out: TL 11/05/19
 Pre-Prep Check In: TL 10/31/19 Prep Check In: TL 11/05/19

Prep Reconciled Inits/Date: TL 10/31/19

Spike Reconciled Inits/Date: TL 11/05/19

VialBoxID: Rise Against

PREPARATION BENCH SHEET

Matrix: Solid

B9K0034

Chemist: TL

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 05-Nov-19 07:54

Method: 8290 Full List

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"/>	B9K0034-BLK1	NA	(10.00)	TL 11/05/19	TL 11/06/19	NA	TL 11/06/19	TL 11/06/19	DF 11/11/19	DF 11/11/19
<input type="checkbox"/>	B9K0034-BS1	NA	(10.00)							
<input type="checkbox"/>	1903565-15RET ^(B)	19.63	19.65							
<input type="checkbox"/>	1903565-17RET ^(B)	17.31	17.42							
<input type="checkbox"/>	1903565-18RET ^(B)	17.90	17.95							
<input type="checkbox"/>	1903770-01	12.45	12.62							
<input type="checkbox"/>	1903770-02 ^(A)	11.43	11.55							
<input type="checkbox"/>	1903829-01	14.50	14.67							
<input type="checkbox"/>	1903829-02	14.32	14.66							
<input type="checkbox"/>	1903829-03	14.15	14.20							
<input type="checkbox"/>	1903829-04	14.63	14.68							

^(A) Sample poured through glass wool to remove particulate. TL 11/06/19

^(B) RET TL 11/06/19

^(V2) IS Name PCDD/F 19L1902 10ul	^(V3) NS Name PCDD/F 18F1913 10ul	^(V3) CRS Name PCDD/F 19I1602 10ul	^(V7) RS Name PCDD/F 19I1603 10ul	Cycle Time Start Date/Time 11/05/19 1350	APP: SEFUN SOX ^(SDS) SOLV: Toluene Other NA	Check Out: Chemist/Date: TL 11/09/19
PCB	PCB	PCB	PCB	Stop Date/Time 11/06/19 600	Final Volume(s) C14 20ul	Check In: Chemist/Date: TL 11/09/19
PAH	PAH	PAH	PAH			Balance ID: HRMS-8

Red dryness on rotovap
rotovap; lost < 5%
high Na2SO4 to remove water
Final Volume

5 = Sample homogenized in secondary container
6 = Sample clogged during extraction; pipetted and used Nitrogen to assist

Batch: B9K0034

Matrix: Solid

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1903565-15RE2	19.65 ✓	50.93526	10.0088	20	05-Nov-19 07:54	TL			Sediment	1613 Full List
1903565-17RE2	17.42 ✓	57.76987	10.0635	20	05-Nov-19 07:54	TL			Sediment	1613 Full List
1903565-18RE2	17.95 ✓	55.86298	10.0274	20	05-Nov-19 07:54	TL			Sediment	1613 Full List
1903770-01	12.62 ✓	80.33282	10.1380	20	05-Nov-19 07:54	TL			Clay	8290 Full List
1903770-02	11.55 ✓	87.52418	10.1090	20	05-Nov-19 07:54	TL			Clay	8290 Full List
1903829-01	14.67 ✓	68.95887	10.1163	20	05-Nov-19 07:54	TL			Sediment	1613 Full List
1903829-02	14.66 ✓	69.83204	10.2374	20	05-Nov-19 07:54	TL			Sediment	1613 Full List
1903829-03	14.2 ✓	70.66176	10.0340	20	05-Nov-19 07:54	TL			Sediment	1613 Full List
1903829-04	14.68 ✓	68.3573	10.0349	20	05-Nov-19 07:54	TL			Sediment	1613 Full List
B9K0034-BLK1	10 ✓			20	05-Nov-19 07:54	TL				QC
B9K0034-BS1	10 ✓			20	05-Nov-19 07:54	TL	18F1913 ✓	10 ✓		QC

All bolded data on report verified against written benchsheet by (initial/date) DF 11/11/19

SAMPLE DATA – EPA METHOD 1613

Client ID: Method Blank
Lab ID: B9K0034-BLK1

Filename: 191119D1 S:10 Acq:19-NOV-19 19:53:57
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.000

ConCal: ST191119D1-1
EndCAL: NA

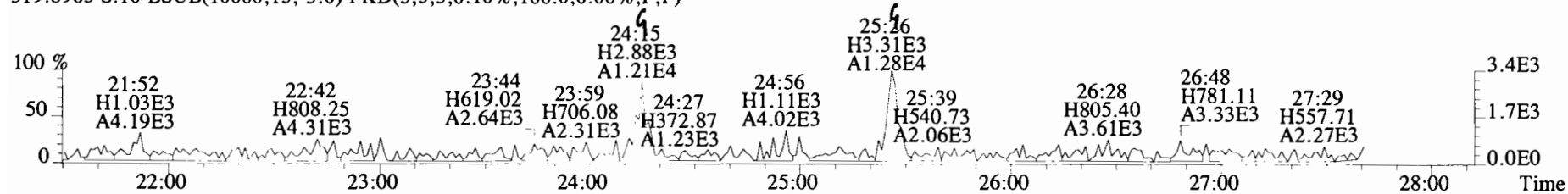
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
2,3,7,8-TCDD	*	* n	0.91	NotF η	*		197	2.5	0.0541
1,2,3,7,8-PeCDD	*	* n	0.90	NotF η	*		277	2.5	0.0766
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF η	*		226	2.5	0.0998
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotF η	*		226	2.5	0.109
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotF η	*		226	2.5	0.108
1,2,3,4,6,7,8-HpCDD	*	* n	0.98	NotF η	*		190	2.5	0.0905
OCDD	*	* n	0.96	NotF η	*		116	2.5	0.0694
2,3,7,8-TCDF	*	* n	0.95	NotF η	*		294	2.5	0.0528
1,2,3,7,8-PeCDF	*	* n	0.96	NotF η	*		276	2.5	0.0839
2,3,4,7,8-PeCDF	*	* n	1.01	NotF η	*		276	2.5	0.0788
1,2,3,4,7,8-HxCDF	*	* n	1.18	NotF η	*		203	2.5	0.0354
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotF η	*		203	2.5	0.0379
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotF η	*		203	2.5	0.0390
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotF η	*		203	2.5	0.0496
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	NotF η	*		149	2.5	0.0432
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotF η	*		149	2.5	0.0367
OCDF	*	* n	0.95	NotF η	*		194	2.5	0.0884

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		197	0.0541
Total Penta-Dioxins	*	*		277	0.0766
Total Hexa-Dioxins	*	*		226	0.106
Total Hepta-Dioxins	*	*		190	0.0905
Total Tetra-Furans	*	*		294	0.0528
Total Penta-Furans	0.0000	0.0000		276	0.0813
Total Hexa-Furans	*	*		203	0.0402
Total Hepta-Furans	*	*		149	0.0402

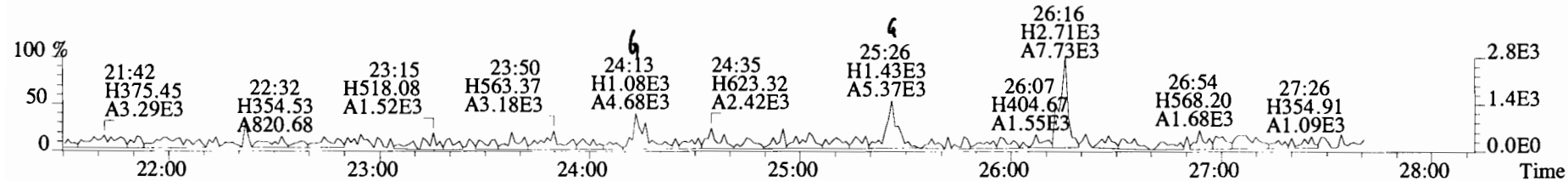
IS	13C-2,3,7,8-TCDD	1.26e+07	0.75 y	1.10	26:13	190.16	Rec	Qual
IS	13C-1,2,3,7,8-PeCDD	9.48e+06	0.63 y	0.88	30:42	177.70	95.1	
IS	13C-1,2,3,4,7,8-HxCDD	8.56e+06	1.29 y	0.64	34:00	192.02	88.9	
IS	13C-1,2,3,6,7,8-HxCDD	9.70e+06	1.27 y	0.86	34:07	163.25	96.0	
IS	13C-1,2,3,7,8,9-HxCDD	9.51e+06	1.24 y	0.81	34:24	169.83	81.6	
IS	13C-1,2,3,4,6,7,8-HpCDD	8.50e+06	1.08 y	0.65	37:51	187.10	84.9	
IS	13C-OCDD	1.55e+07	0.90 y	0.58	41:08	384.87	93.5	
IS	13C-2,3,7,8-TCDF	2.06e+07	0.81 y	1.03	25:27	195.06	96.2	
IS	13C-1,2,3,7,8-PeCDF	1.48e+07	1.62 y	0.85	29:33	169.05	97.5	
IS	13C-2,3,4,7,8-PeCDF	1.43e+07	1.60 y	0.85	30:26	164.64	84.5	
IS	13C-1,2,3,4,7,8-HxCDF	1.22e+07	0.52 y	0.83	33:07	210.46	82.3	
IS	13C-1,2,3,6,7,8-HxCDF	1.34e+07	0.52 y	1.03	33:15	186.59	105	
IS	13C-2,3,4,6,7,8-HxCDF	1.28e+07	0.52 y	0.95	33:51	193.39	93.3	
IS	13C-1,2,3,7,8,9-HxCDF	1.16e+07	0.53 y	0.83	34:47	202.29	96.7	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.06e+07	0.44 y	0.76	36:38	202.03	101	
IS	13C-1,2,3,4,7,8,9-HpCDF	9.02e+06	0.44 y	0.58	38:24	223.51	101	
IS	13C-OCDF	2.06e+07	0.91 y	0.69	41:21	429.98	112	
C/Up	37Cl-2,3,7,8-TCDD	5.63e+06		1.20	26:14	77.593	107	
RS/RT	13C-1,2,3,4-TCDD	1.21e+07	0.78 y	1.00	25:40	200.00		
RS	13C-1,2,3,4-TCDF	2.05e+07	0.79 y	1.00	24:15	200.00		
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.39e+07	0.51 y	1.00	33:32	200.00		

Integrations
by DB
Analyst: DB
Date: 11/20/19
Reviewed
by CT
Analyst: CT
Date: 11/27/19

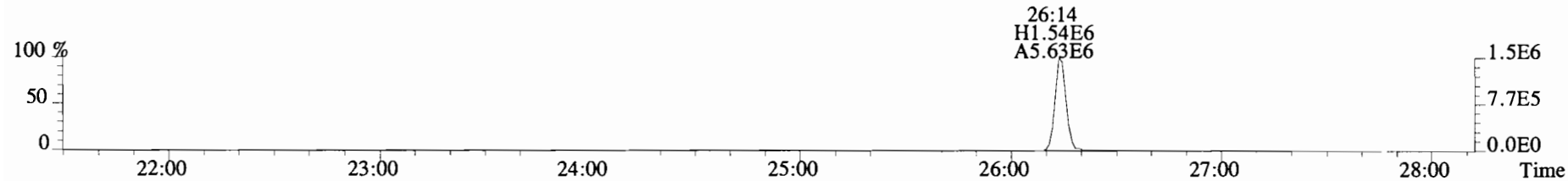
File:191119D1 #1-492 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata_Analytical_Laboratory_VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
319.8965 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



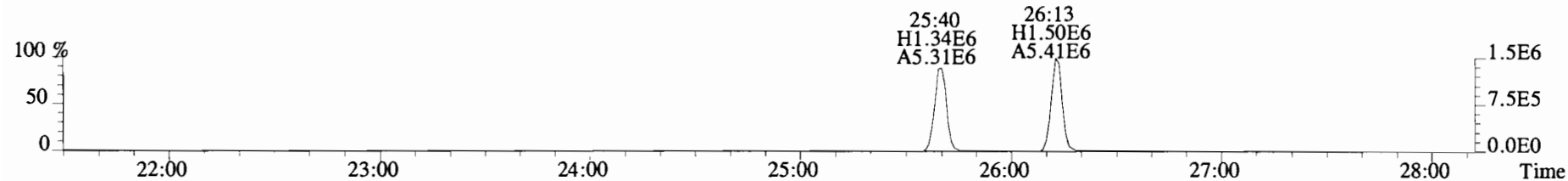
321.8936 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



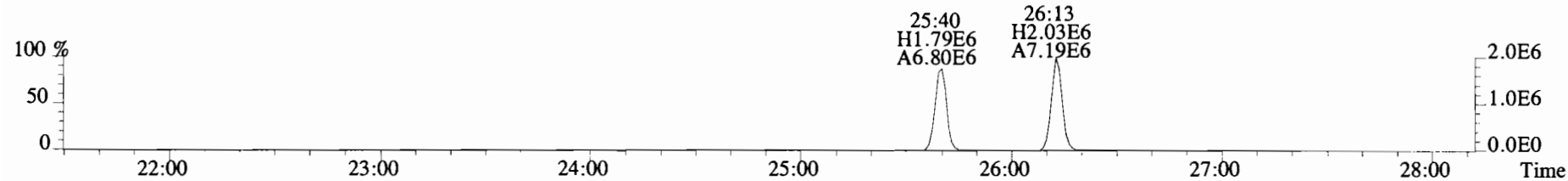
327.8847 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



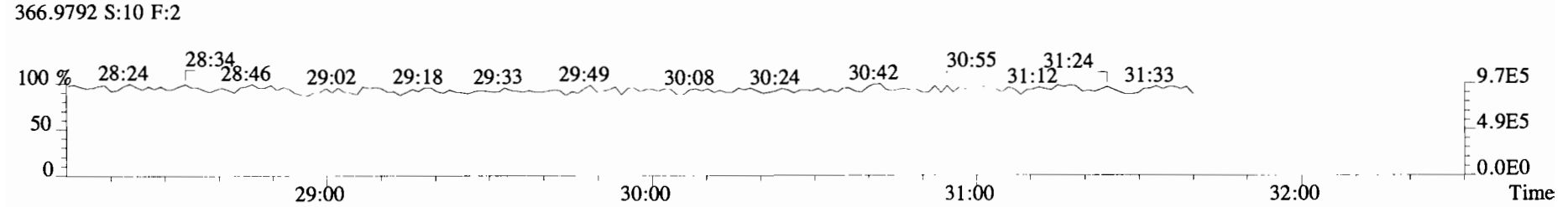
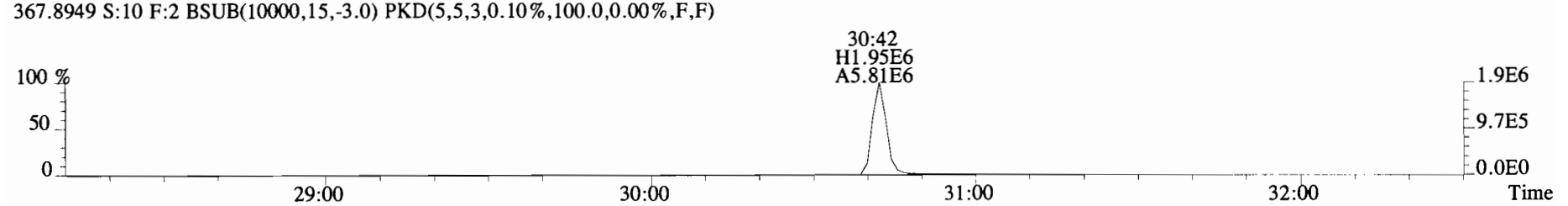
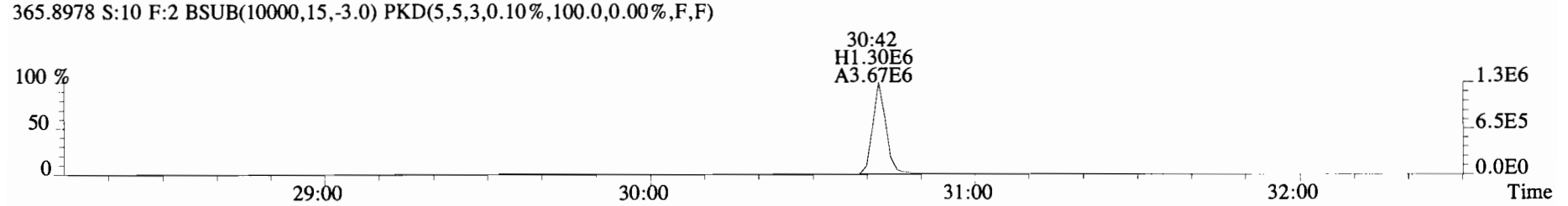
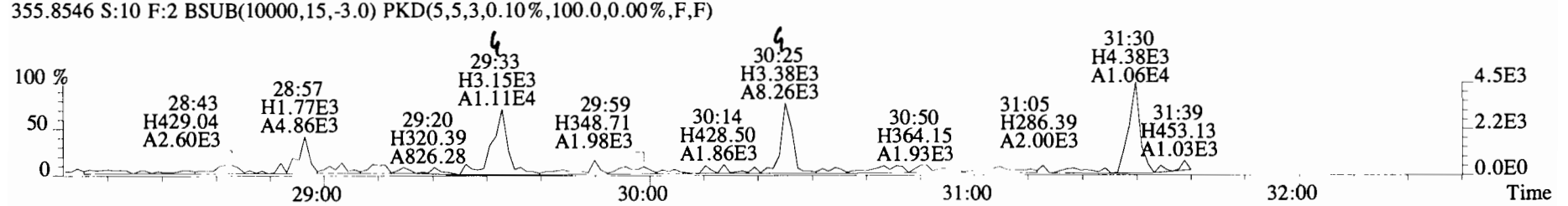
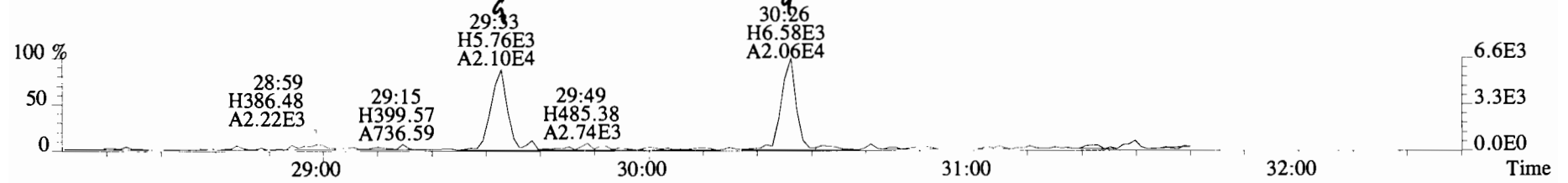
331.9368 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



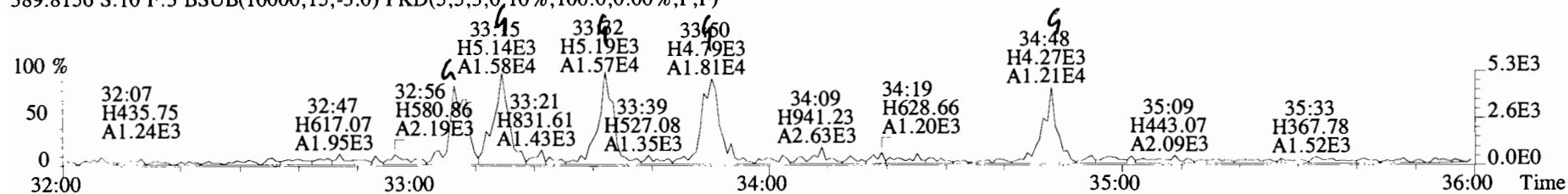
333.9339 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



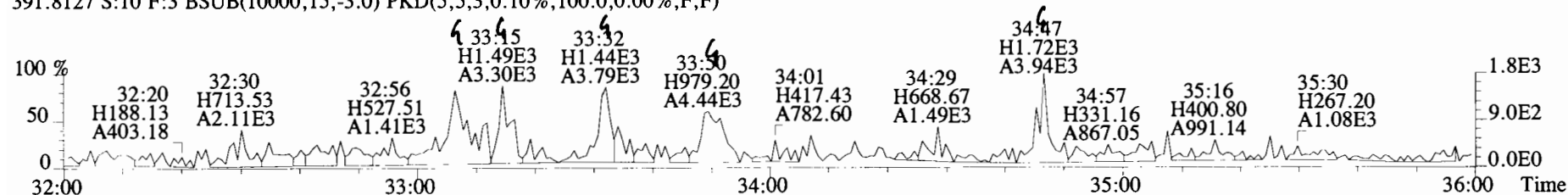
File:191119D1 #1-210 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Viata_Analytical_Laboratory_VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
 353.8576 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



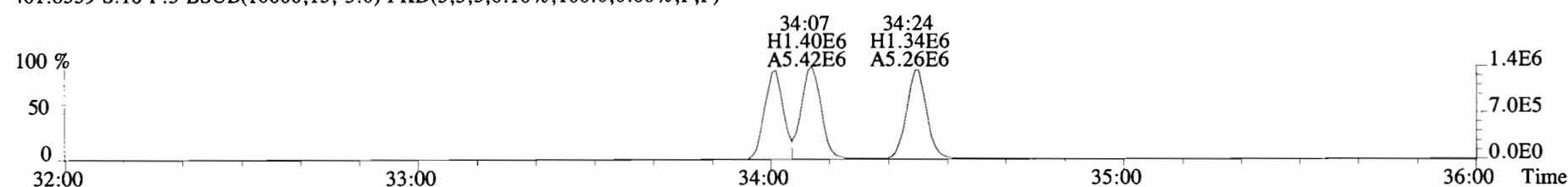
File:191119D1 #1-385 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Viata Analytical Laboratory VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
 389.8156 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



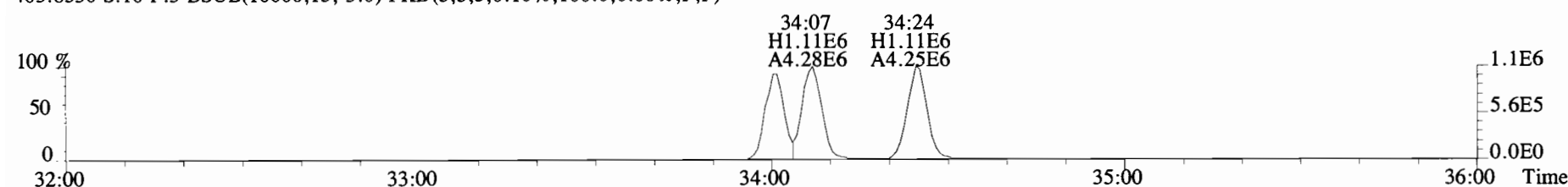
391.8127 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



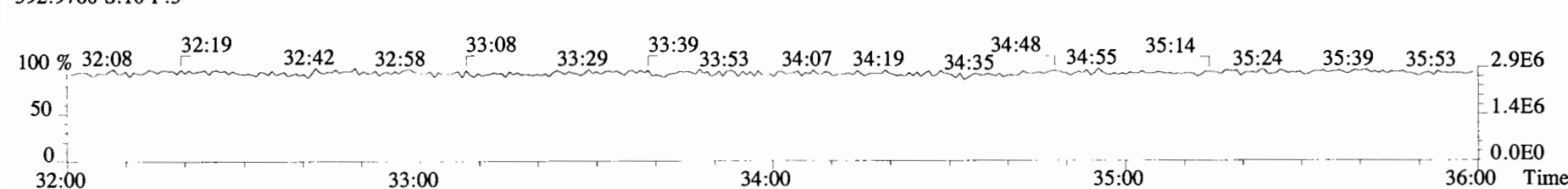
401.8559 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



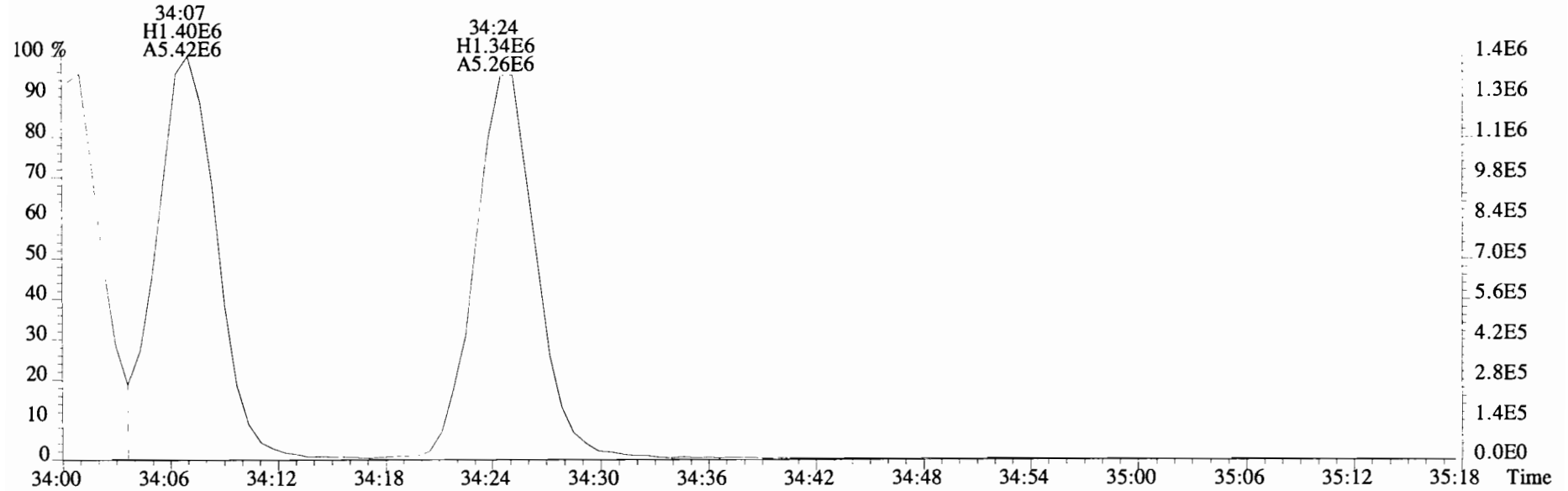
403.8530 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



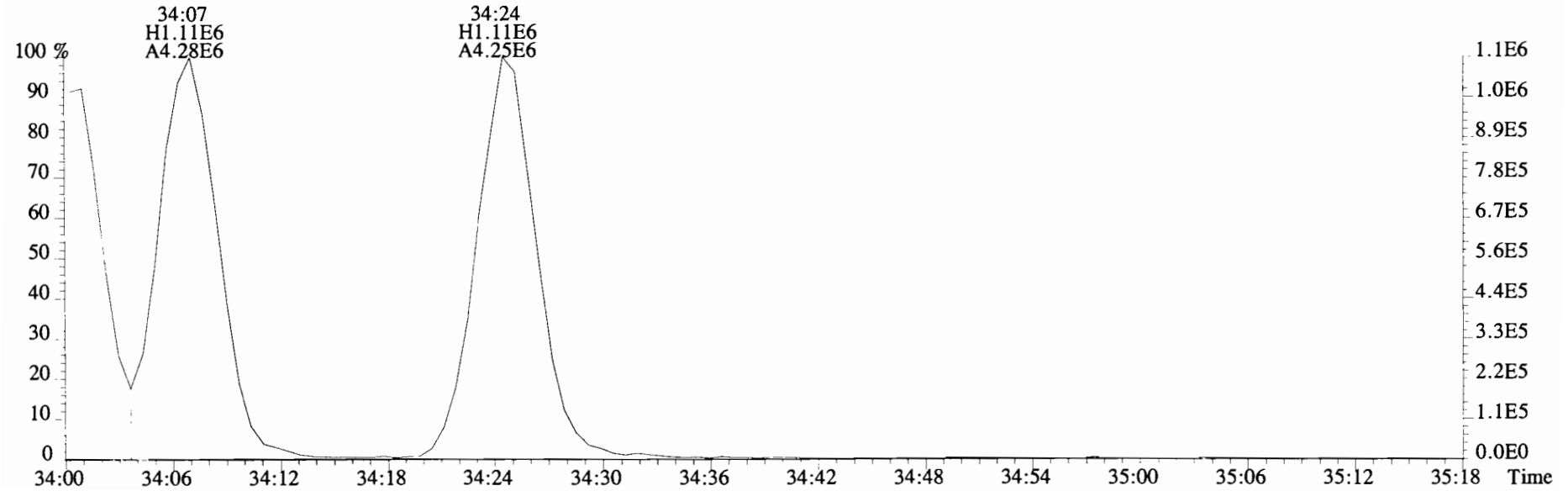
392.9760 S:10 F:3



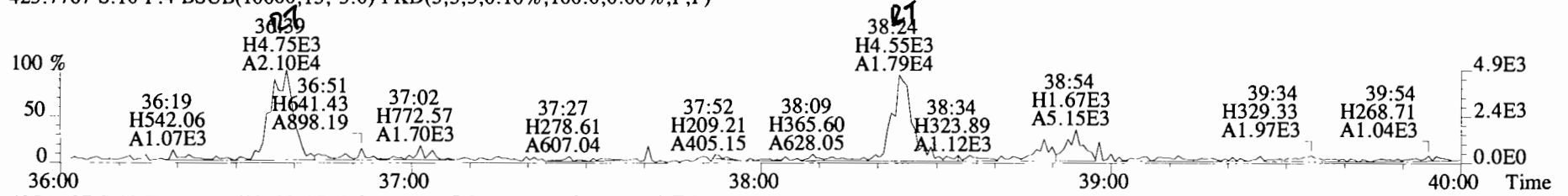
File:191119D1 #1-385 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata Analytical Laboratory_VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
401.8559 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



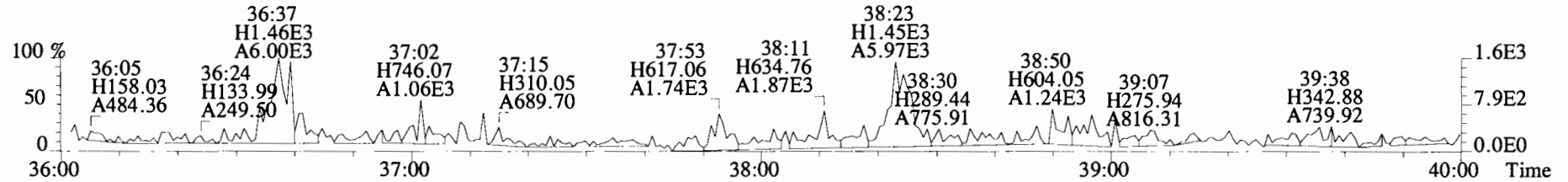
403.8530 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



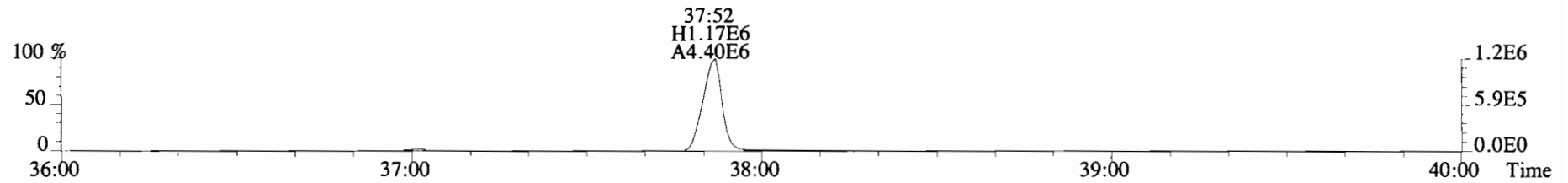
File:191119D1 #1-356 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata_Analytical_Laboratory_VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
423.7767 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



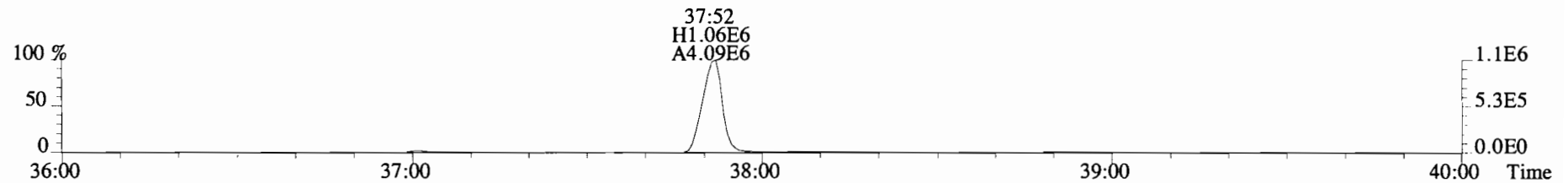
425.7737 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



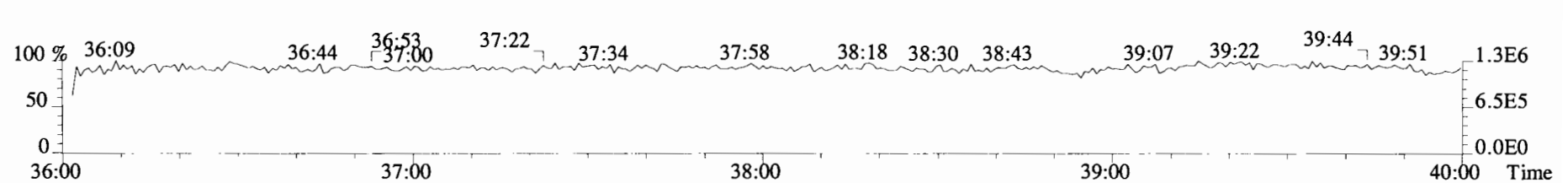
435.8169 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



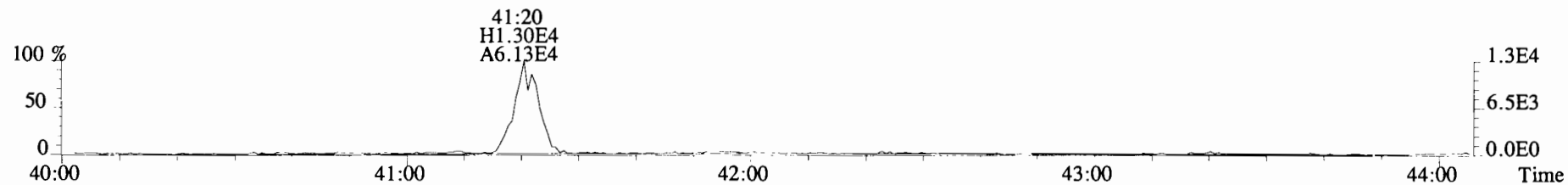
437.8140 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



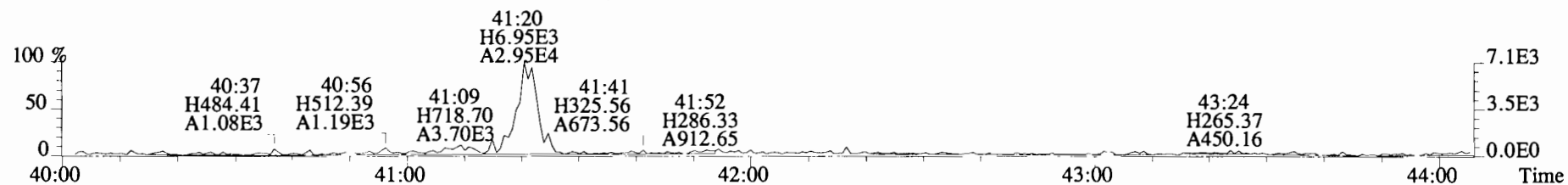
454.9728 S:10 F:4



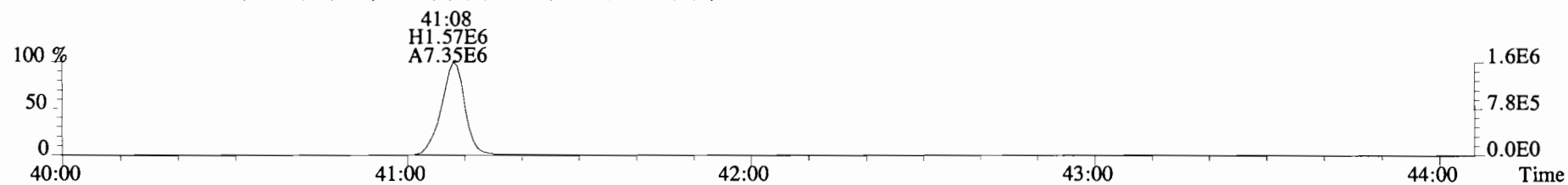
File:191119D1 #1-431 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata_Analytical_Laboratory_VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
457.7377 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



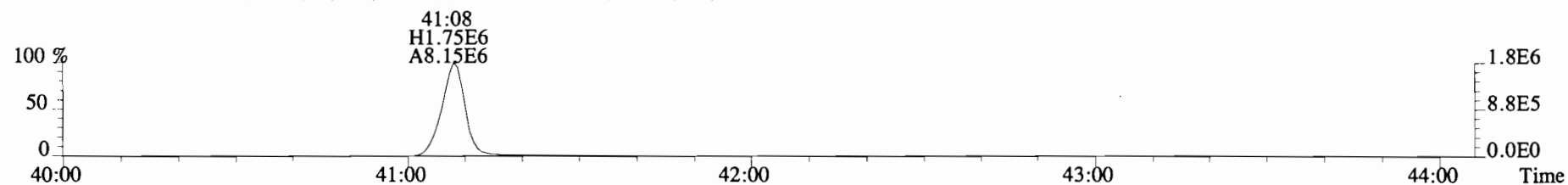
459.7348 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



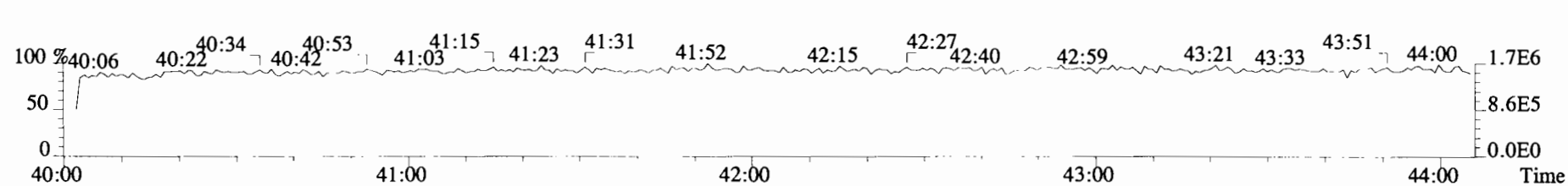
469.7780 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



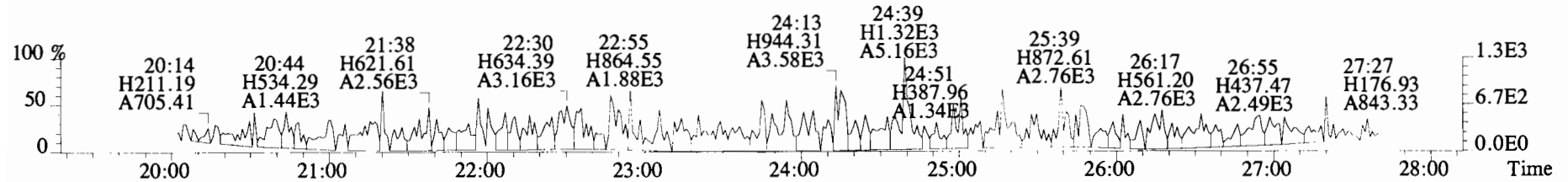
471.7750 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



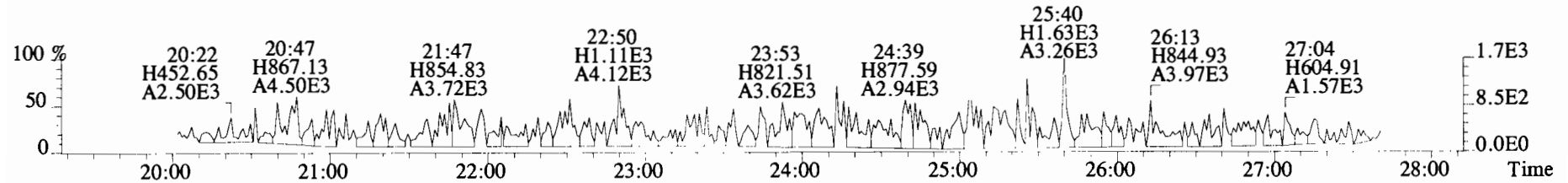
454.9728 S:10 F:5



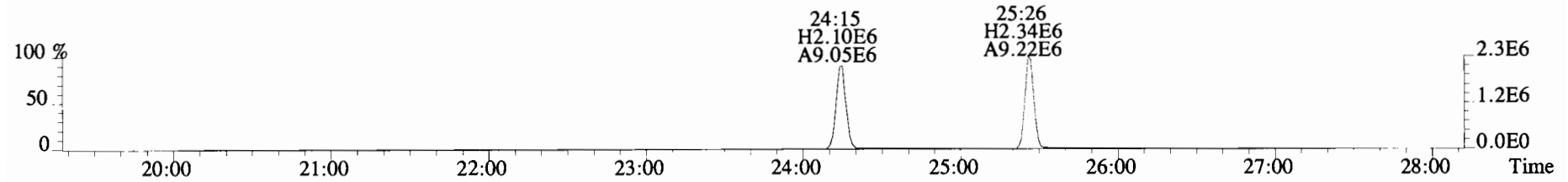
File:191119D1 #1-492 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata Analytical Laboratory VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
303.9016 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



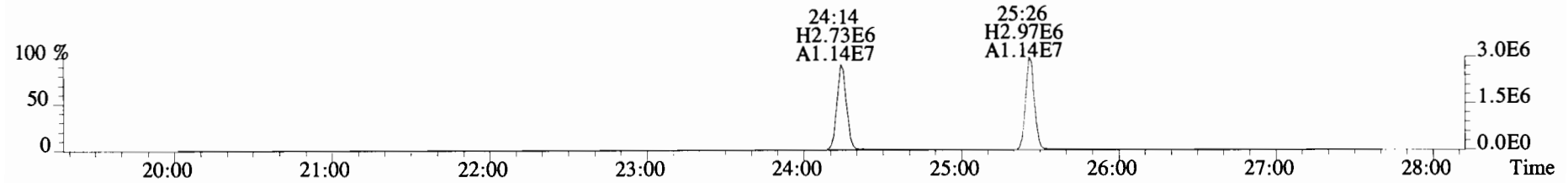
305.8987 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



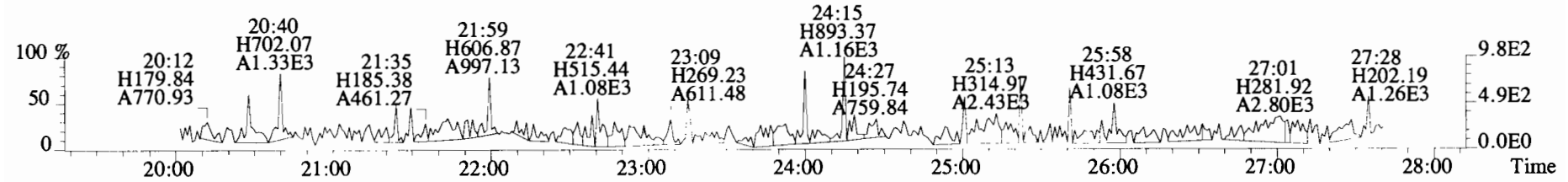
315.9419 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



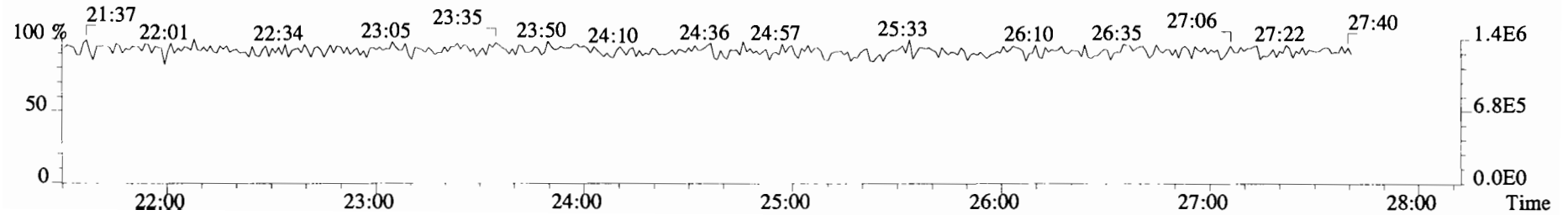
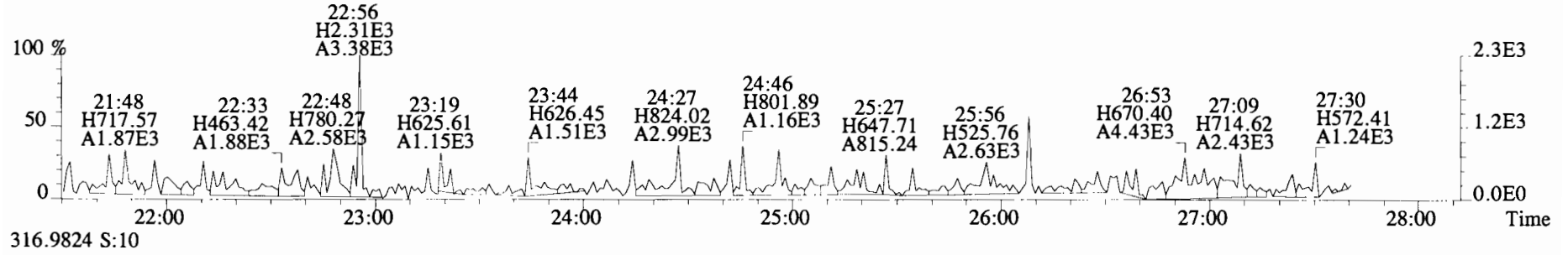
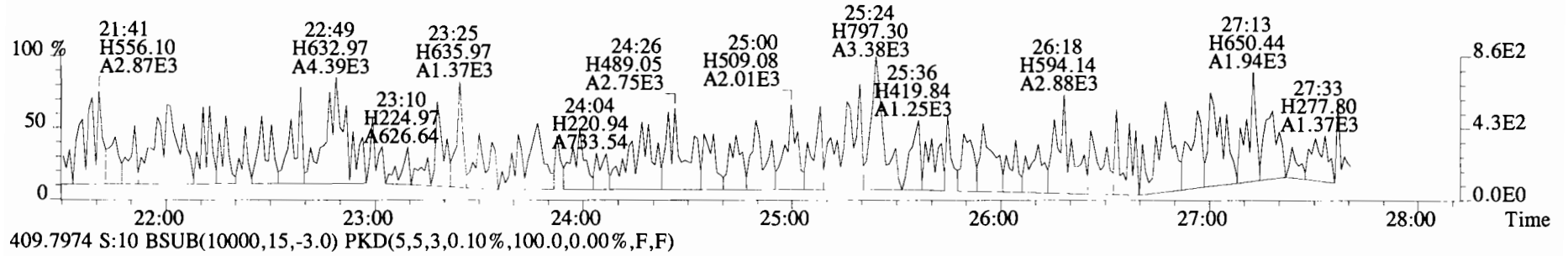
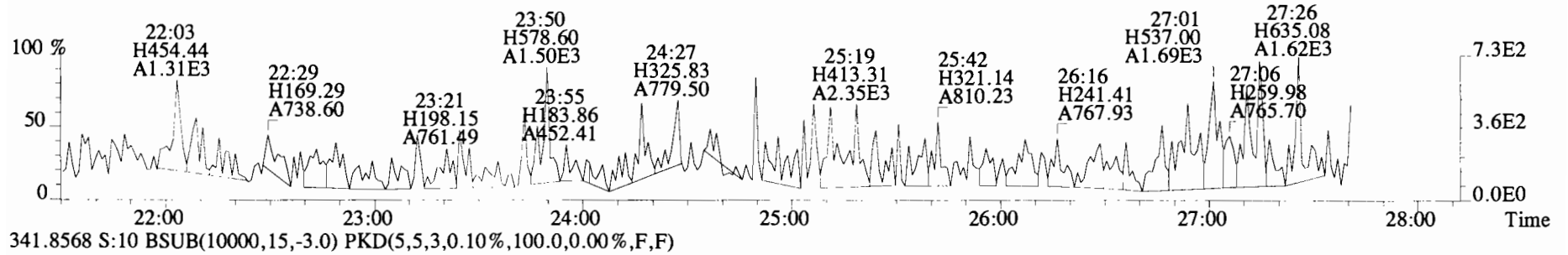
317.9389 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



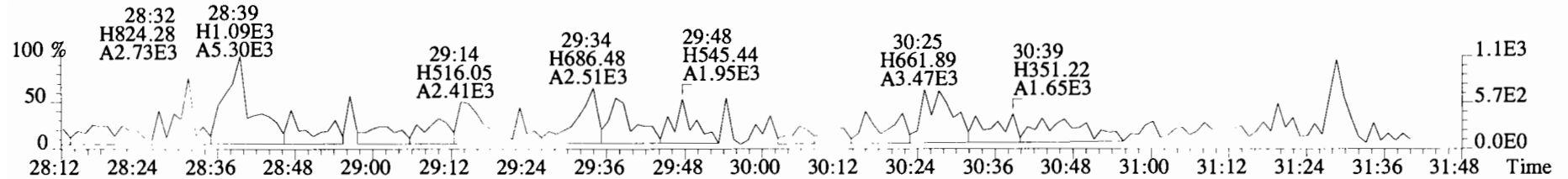
375.8364 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



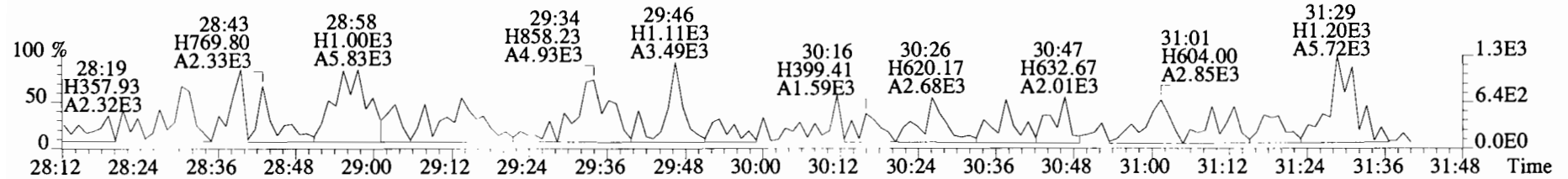
File:191119D1 #1-492 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Viata Analytical Laboratory VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
 339.8597 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



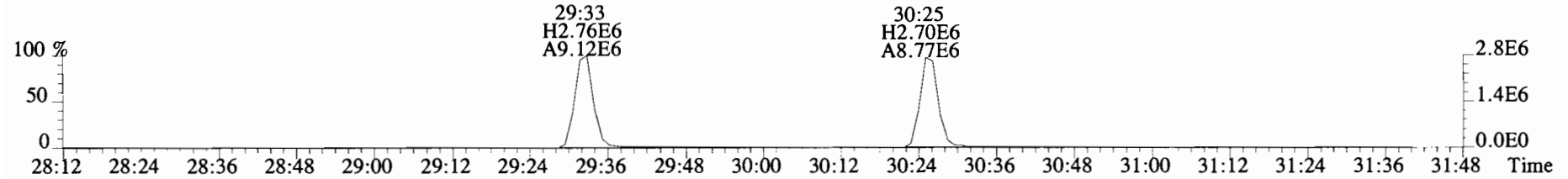
File:191119D1 #1-210 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata Analytical Laboratory VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



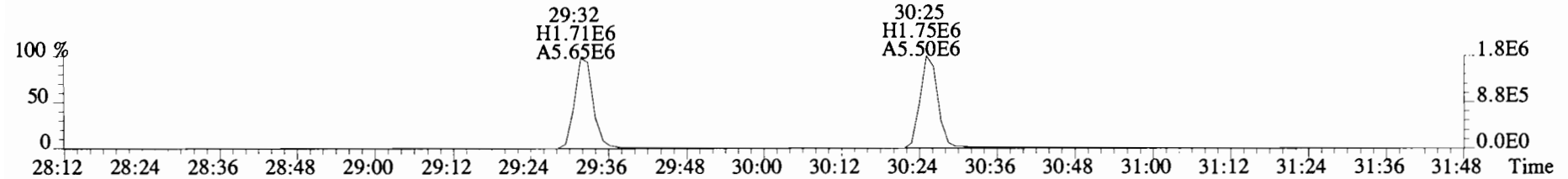
341.8568 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



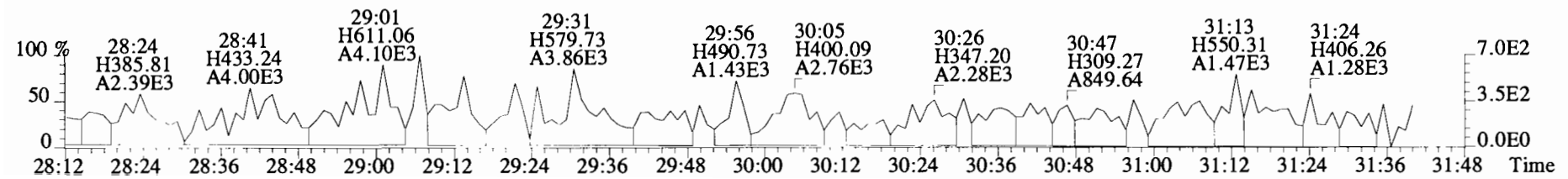
351.9000 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



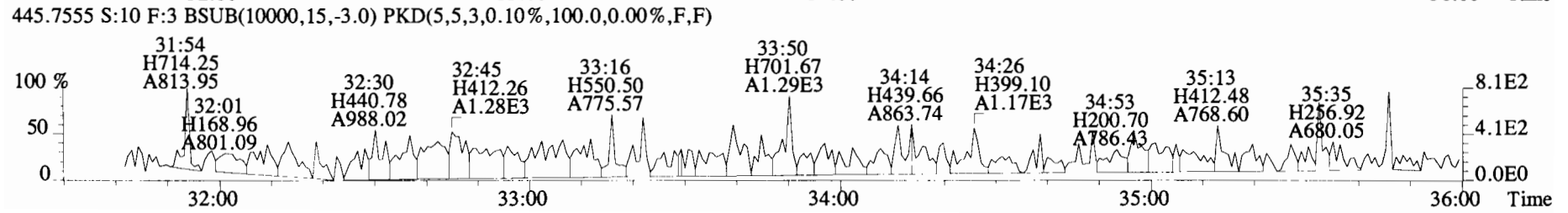
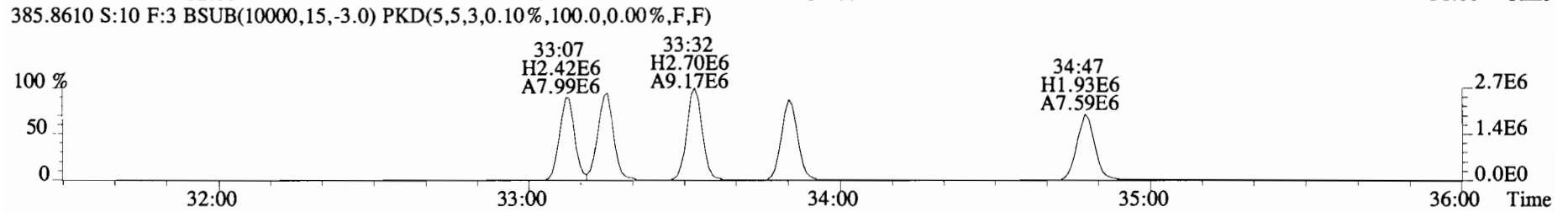
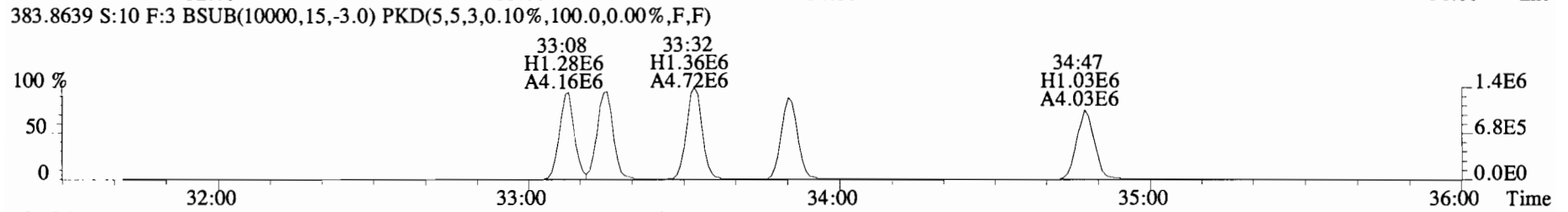
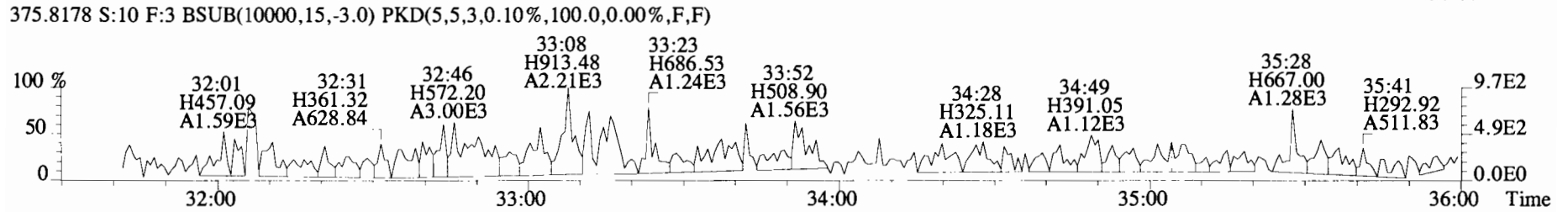
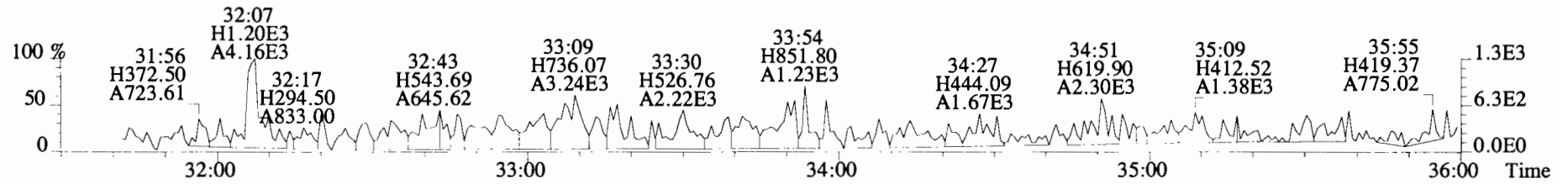
353.8970 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



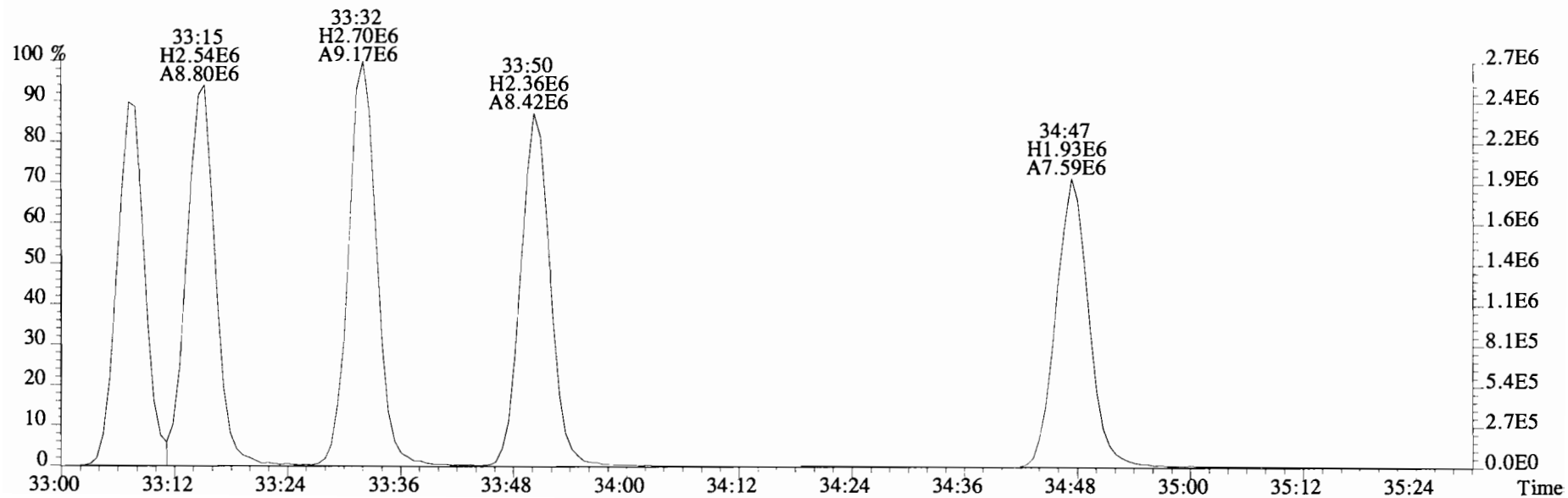
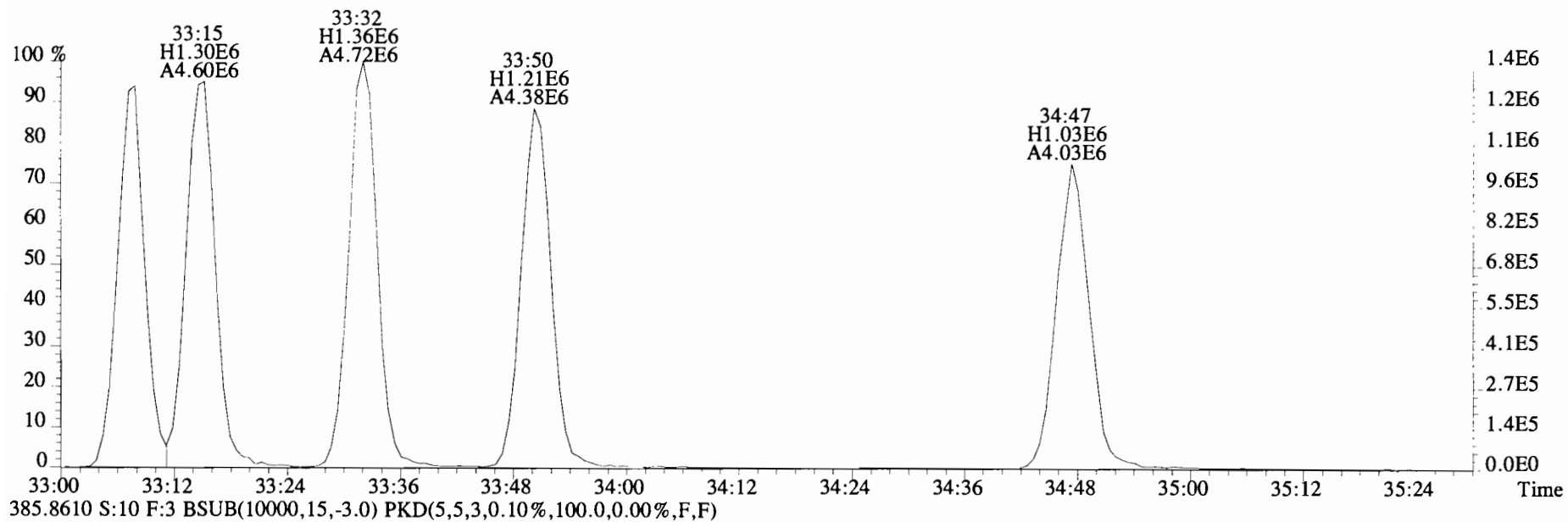
409.7974 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



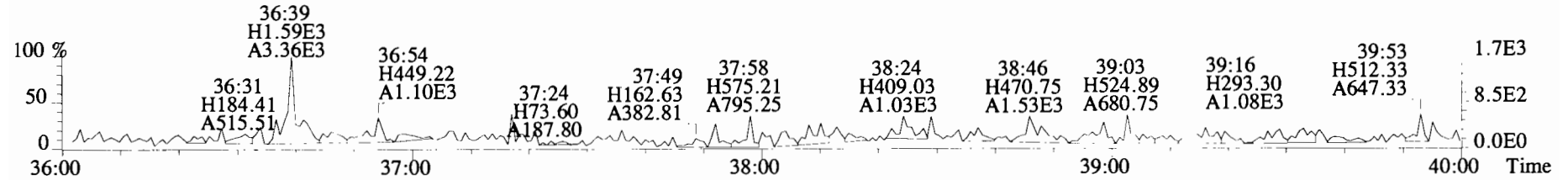
File:191119D1 #1-385 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Viata Analytical Laboratory VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
 373.8207 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



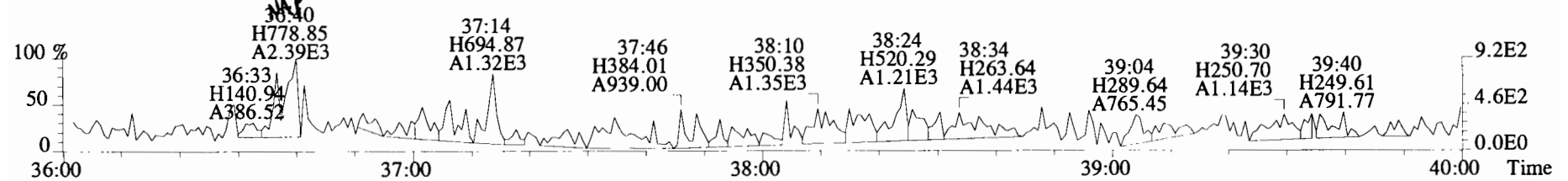
File:191119D1 #1-385 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata Analytical Laboratory VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
383.8639 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



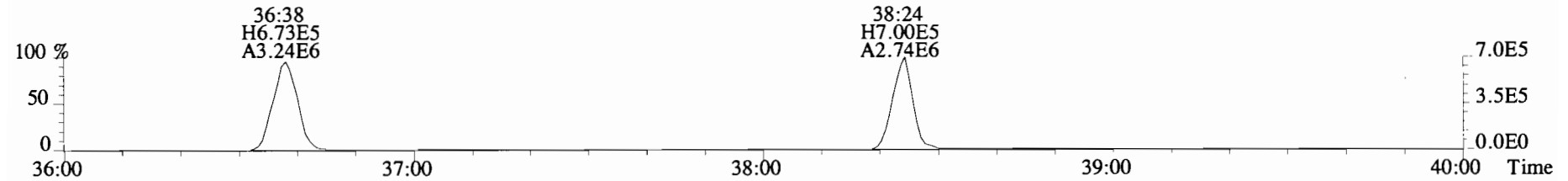
File:191119D1 #1-356 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata Analytical Laboratory VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
407.7818 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



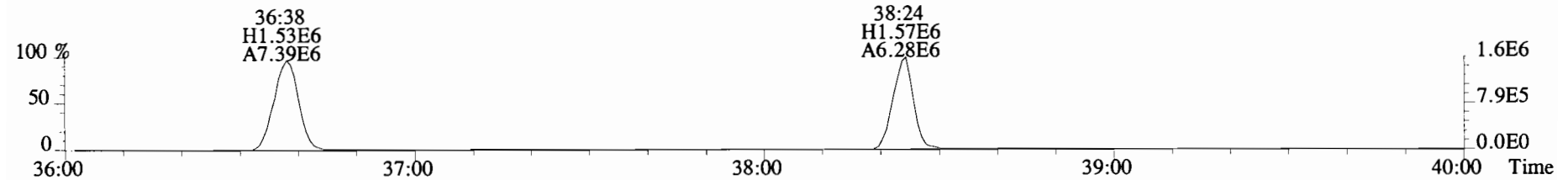
409.7788 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



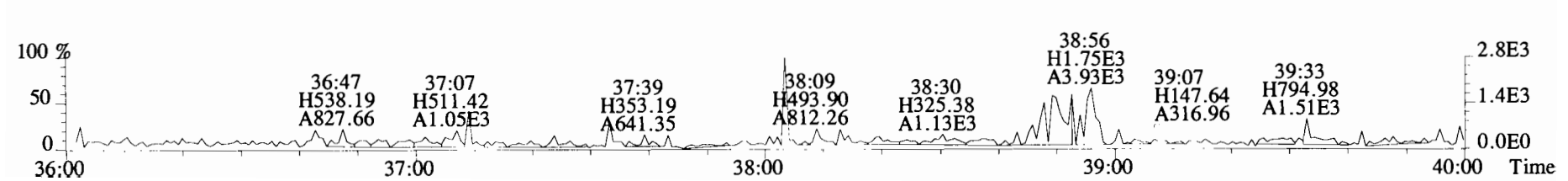
417.8253 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



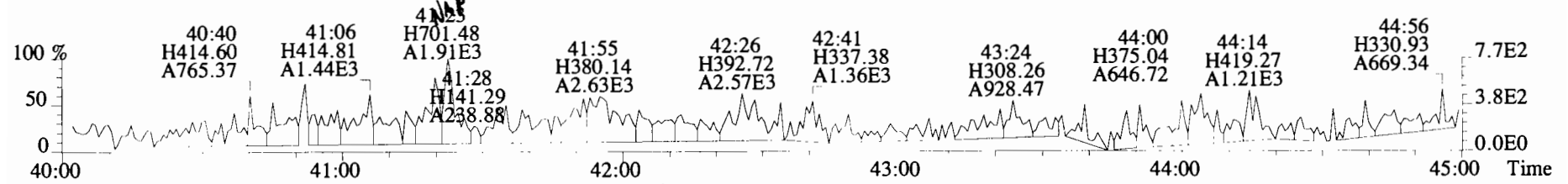
419.8220 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



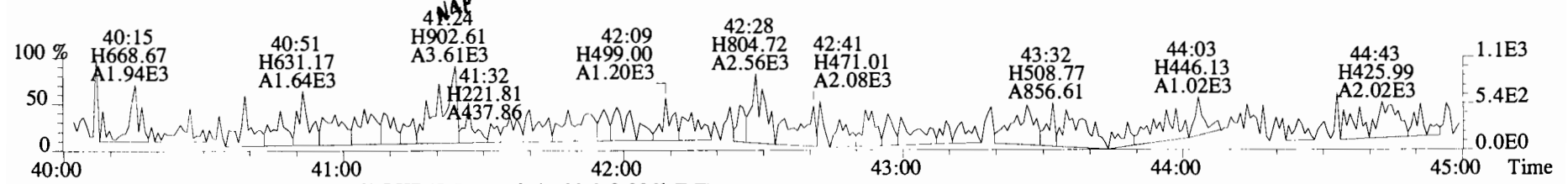
479.7165 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



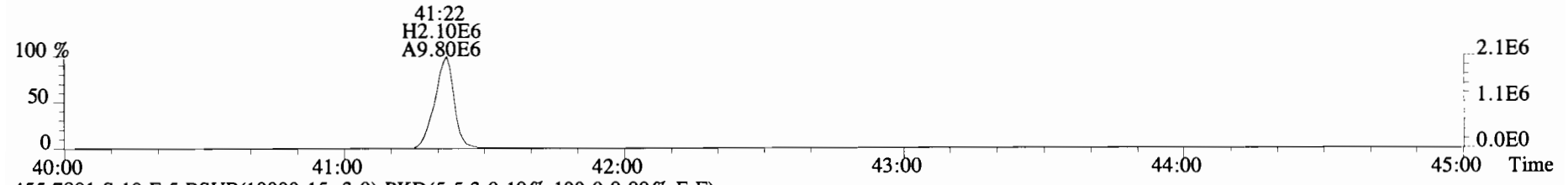
File:191119D1 #1-431 Acq:19-NOV-2019 19:53:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata_Analytical_Laboratory_VG7 Text:B9K0034-BLK1 Method Blank 10 Exp:OCDD_DB5
441.7428 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



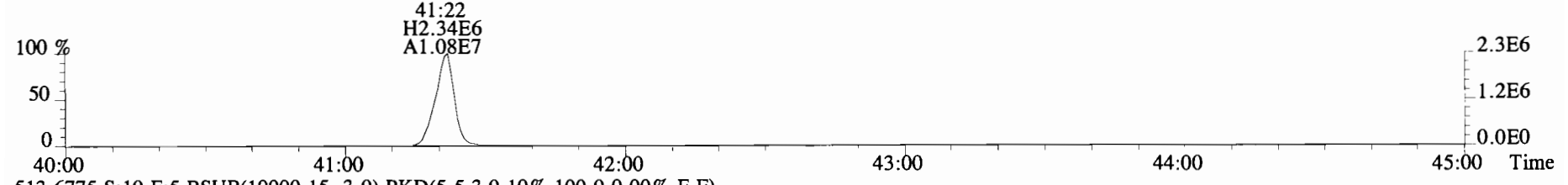
443.7398 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



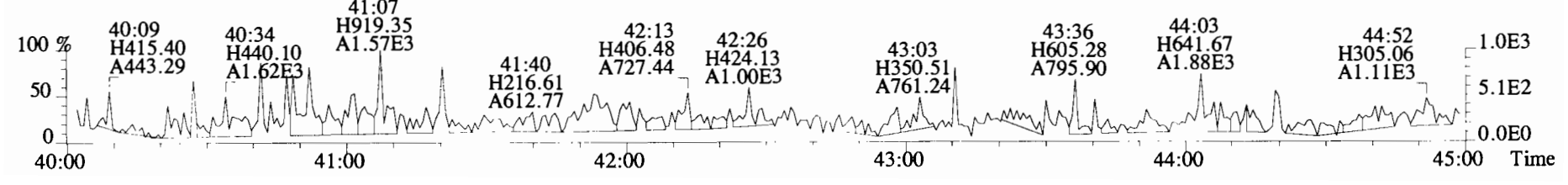
453.7831 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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)



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

Lab Name: Vista Analytical Laboratory Extraction Batch: B9K0034-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 191119D1-5

Ext. Date: Shift: Day Analysis Date: 19-NOV-19 Time: 15:54:57

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	10.4	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	51.0	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	50.6	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	51.5	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	51.5	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	51.1	35.0 - 70.0
OCDD	100	98.8	78.0 - 144.0
2,3,7,8-TCDF	10	9.71	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	51.8	40.0 - 67.0
2,3,4,7,8-PeCDF	50	51.8	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	48.5	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	48.4	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	48.5	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	47.7	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	45.2	39.0 - 69.0
OCDF	100	96.5	63.0 - 170.0

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR as specified in Table 6a, Method 1613. 10/94

Analyst: DB

Date: 11/19/19

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

Lab Name: Vista Analytical Laboratory Extraction Batch: B9K0034-BS1
 Contract No.: SAS No.:
 Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 191119D1-5
 Ext. Date: Shift: Day Analysis Date: 19-NOV-19 Time: 15:54:57

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	97.7	20.0 - 175.0 25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	89.4	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	92.7	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	82.4	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	85.9	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	92.4	26.0 - 166.0
13C-OCDD	200	180	26.0 - 397.0
13C-2,3,7,8-TCDF	100	98.8	22.0 - 152.0 26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	89.3	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	87.7	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	103	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	93.9	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	93.9	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	98.8	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	96.2	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	99.0	20.0 - 186.0
13C-OCDF	200	194	26.0 - 397.0
CLEANUP STANDARD			
37C1-2,3,7,8-TCDD	40	39.1	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: 11/19/19

Client ID: OPR
Lab ID: B9K0034-BS1

Filename: 191119D1 S:5 Acq:19-NOV-19 15:54:57
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000

ConCal: ST191119D1-1
EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
2,3,7,8-TCDD	1.41e+06	0.78 y	0.91	26:13	10.382		* 2.5		*
1,2,3,7,8-PeCDD	5.08e+06	0.61 y	0.90	30:43	51.031		* 2.5		*
1,2,3,4,7,8-HxCDD	5.18e+06	1.22 y	1.10	34:01	50.583		* 2.5		*
1,2,3,6,7,8-HxCDD	5.32e+06	1.24 y	0.94	34:08	51.506		* 2.5		*
1,2,3,7,8,9-HxCDD	5.36e+06	1.24 y	0.96	34:25	51.504		* 2.5		*
1,2,3,4,6,7,8-HpCDD	4.72e+06	1.01 y	0.98	37:52	51.129		* 2.5		*
OCDD	7.69e+06	0.91 y	0.96	41:08	98.783		* 2.5		*
2,3,7,8-TCDF	2.09e+06	0.80 y	0.95	25:27	9.7088		* 2.5		*
1,2,3,7,8-PeCDF	8.42e+06	1.57 y	0.96	29:33	51.812		* 2.5		*
2,3,4,7,8-PeCDF	8.68e+06	1.57 y	1.01	30:26	51.844		* 2.5		*
1,2,3,4,7,8-HxCDF	7.66e+06	1.25 y	1.18	33:08	48.519		* 2.5		*
1,2,3,6,7,8-HxCDF	7.84e+06	1.23 y	1.07	33:15	48.380		* 2.5		*
2,3,4,6,7,8-HxCDF	7.79e+06	1.24 y	1.11	33:51	50.098		* 2.5		*
1,2,3,7,8,9-HxCDF	6.57e+06	1.24 y	1.06	34:48	48.477		* 2.5		*
1,2,3,4,6,7,8-HpCDF	6.11e+06	1.07 y	1.13	36:39	47.661		* 2.5		*
1,2,3,4,7,8,9-HpCDF	5.20e+06	1.02 y	1.28	38:24	45.175		* 2.5		*
OCDF	9.52e+06	0.89 y	0.95	41:22	96.464		* 2.5		*

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	10.5	11.3		*	*
Total Penta-Dioxins	51.2	51.7		*	*
Total Hexa-Dioxins	154	154		*	*
Total Hepta-Dioxins	51.2	53.0		*	*
Total Tetra-Furans	9.97	10.5		*	*
Total Penta-Furans	104.53	105.58		*	*
Total Hexa-Furans	196	196		*	*
Total Hepta-Furans	93.2	94.3		*	*

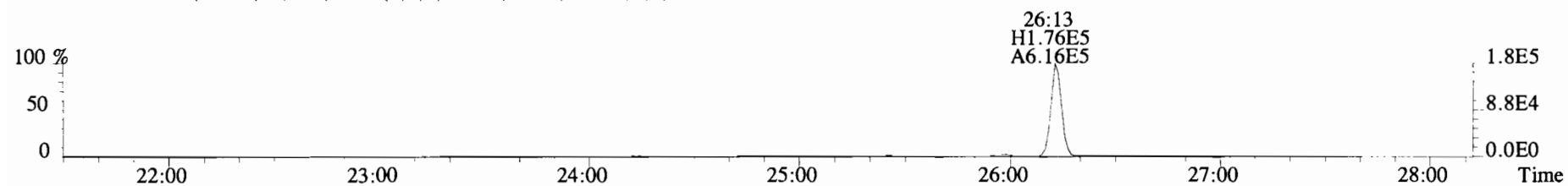
IS	13C-2,3,7,8-TCDD	1.50e+07	0.78 y	1.10	26:12	97.720
IS	13C-1,2,3,7,8-PeCDD	1.10e+07	0.64 y	0.88	30:42	89.374
IS	13C-1,2,3,4,7,8-HxCDD	9.30e+06	1.25 y	0.64	34:00	92.746
IS	13C-1,2,3,6,7,8-HxCDD	1.10e+07	1.27 y	0.86	34:07	82.375
IS	13C-1,2,3,7,8,9-HxCDD	1.08e+07	1.26 y	0.81	34:25	85.905
IS	13C-1,2,3,4,6,7,8-HpCDD	9.43e+06	0.96 y	0.65	37:51	92.415
IS	13C-OCDD	1.63e+07	0.91 y	0.58	41:07	179.59
IS	13C-2,3,7,8-TCDF	2.27e+07	0.80 y	1.03	25:25	98.796
IS	13C-1,2,3,7,8-PeCDF	1.69e+07	1.58 y	0.85	29:32	89.258
IS	13C-2,3,4,7,8-PeCDF	1.65e+07	1.62 y	0.85	30:25	87.712
IS	13C-1,2,3,4,7,8-HxCDF	1.34e+07	0.52 y	0.83	33:07	103.36
IS	13C-1,2,3,6,7,8-HxCDF	1.52e+07	0.52 y	1.03	33:15	93.903
IS	13C-2,3,4,6,7,8-HxCDF	1.40e+07	0.51 y	0.95	33:50	93.880
IS	13C-1,2,3,7,8,9-HxCDF	1.28e+07	0.51 y	0.83	34:47	98.801
IS	13C-1,2,3,4,6,7,8-HpCDF	1.14e+07	0.44 y	0.76	36:38	96.216
IS	13C-1,2,3,4,7,8,9-HpCDF	8.99e+06	0.43 y	0.58	38:24	99.049
IS	13C-OCDF	2.08e+07	0.90 y	0.69	41:21	193.71
C/Up	37C1-2,3,7,8-TCDD	6.55e+06		1.20	26:13	39.065
RS/RT	13C-1,2,3,4-TCDD	1.40e+07	0.77 y	1.00	25:38	100.00
RS	13C-1,2,3,4-TCDF	2.22e+07	0.77 y	1.00	24:13	100.00
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.56e+07	0.52 y	1.00	33:32	100.00

Rec Qual
97.7
89.4
92.7
82.4
85.9
92.4
89.8
98.8
89.3
87.7
103
93.9
93.9
98.8
96.2
99.0
96.9

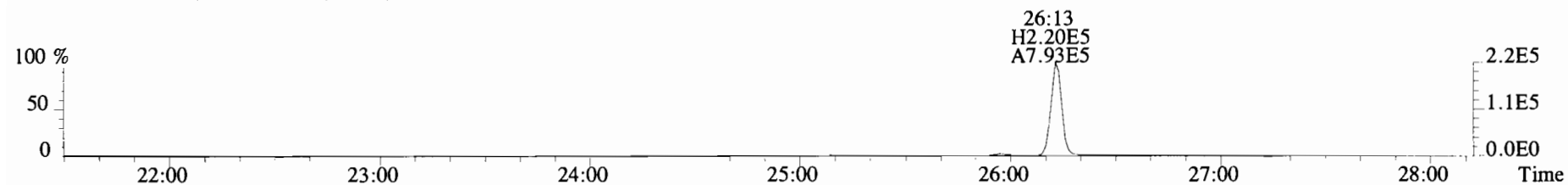
Integrations
by DB
Analyst: DB
Date: 11/19/19

Reviewed
by CT
Analyst: CT
Date: 11/27/19

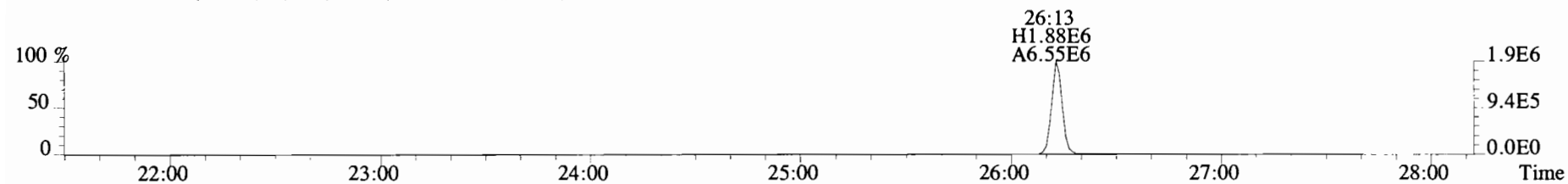
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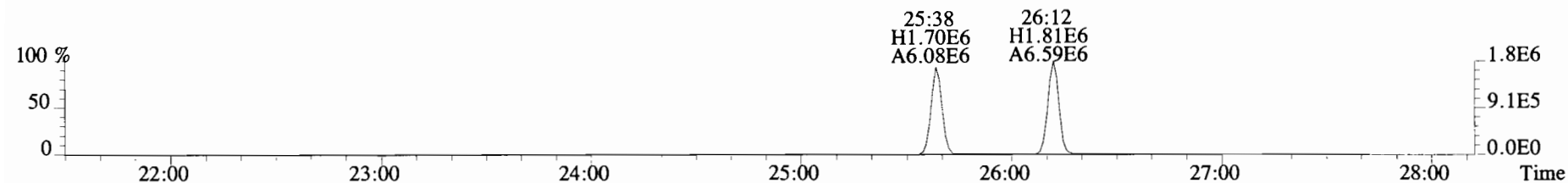
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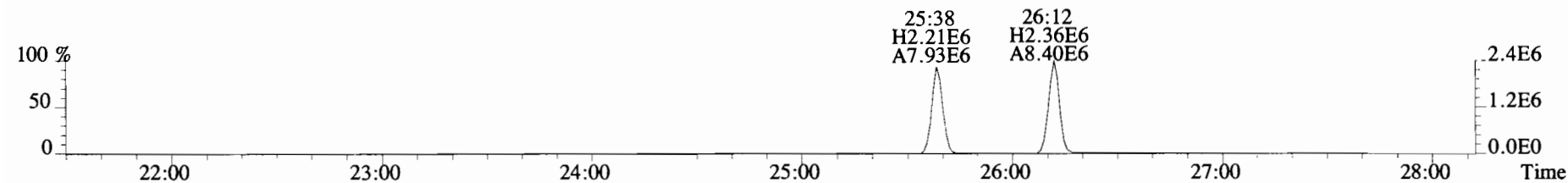
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



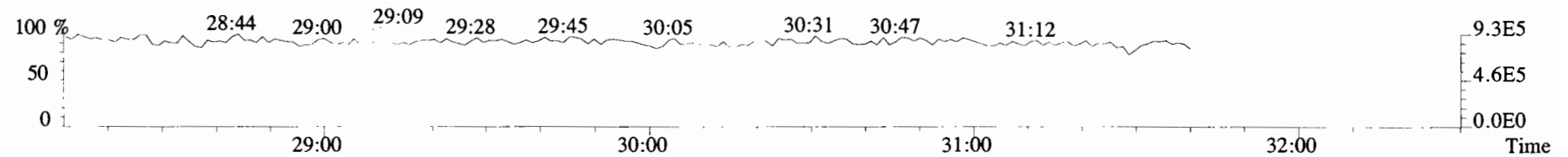
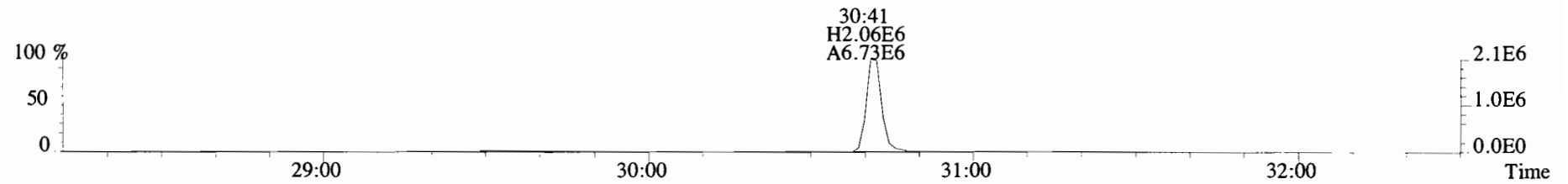
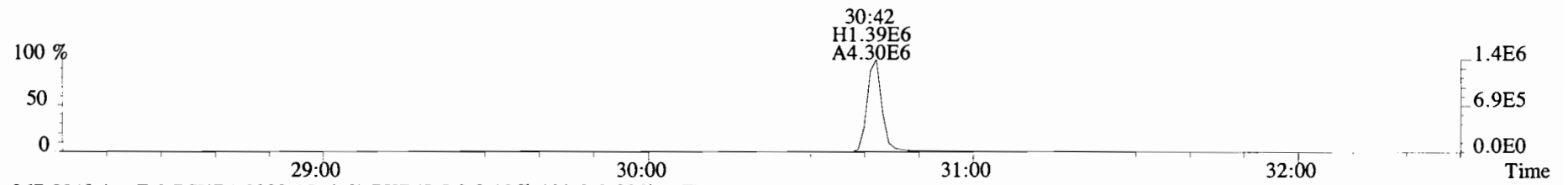
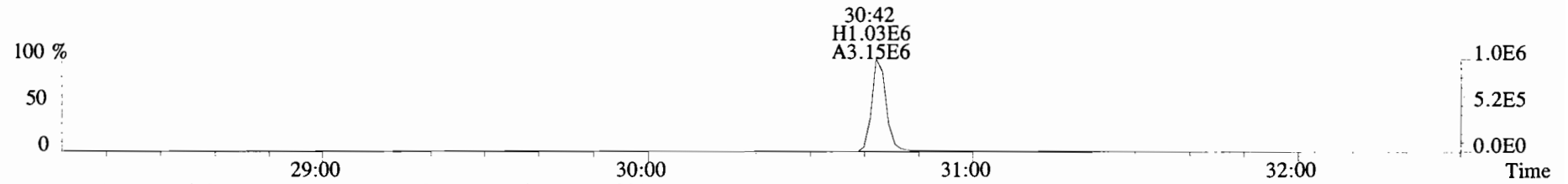
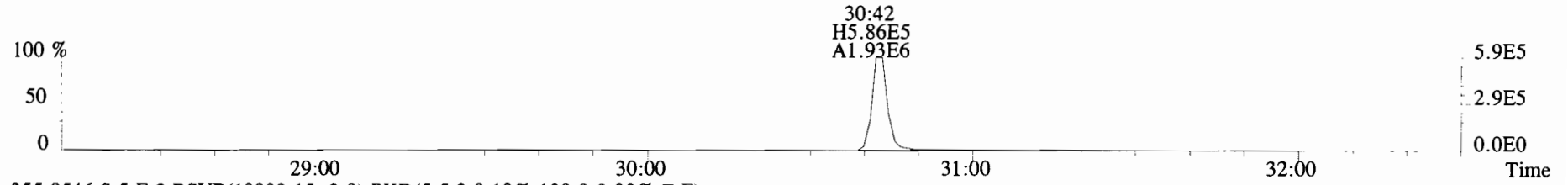
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



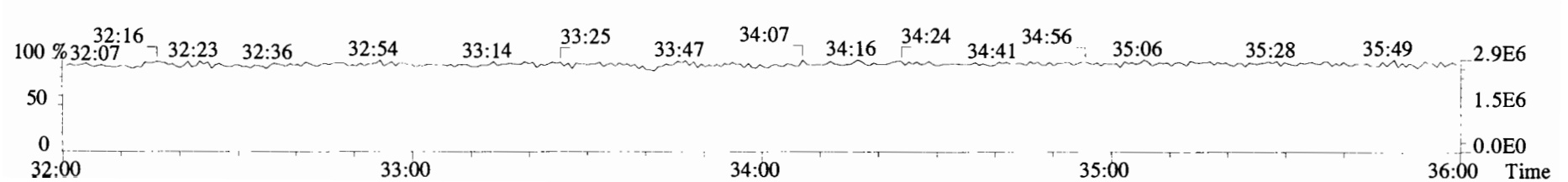
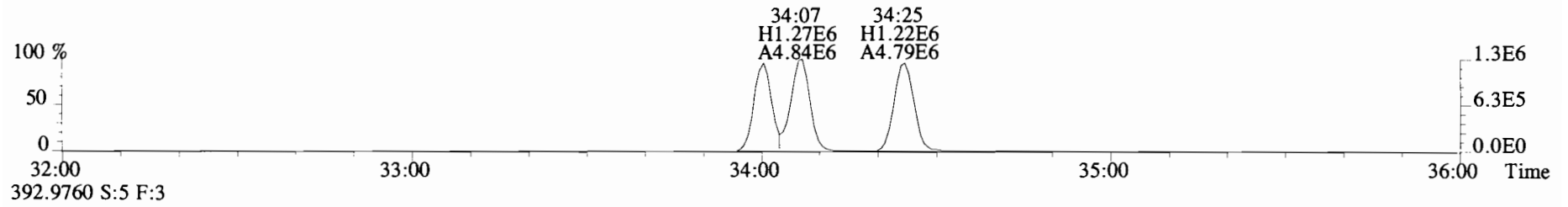
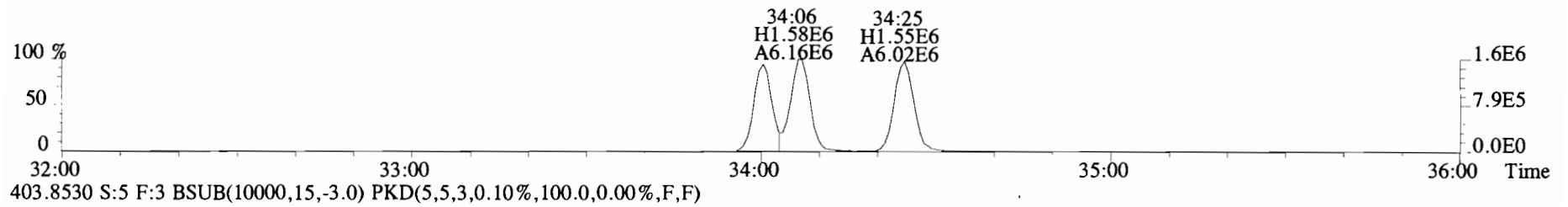
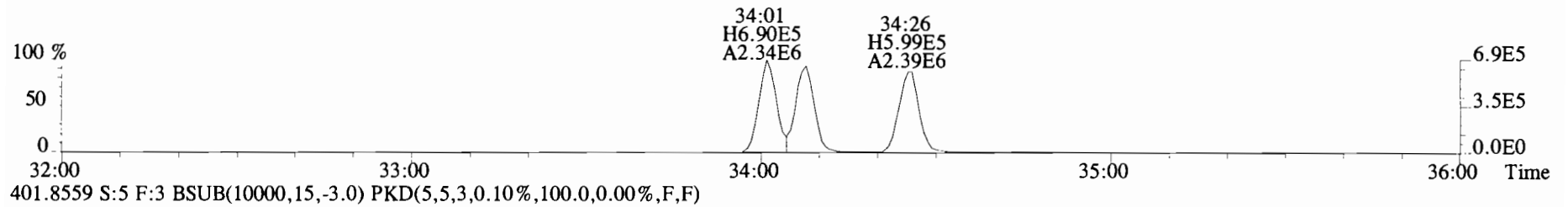
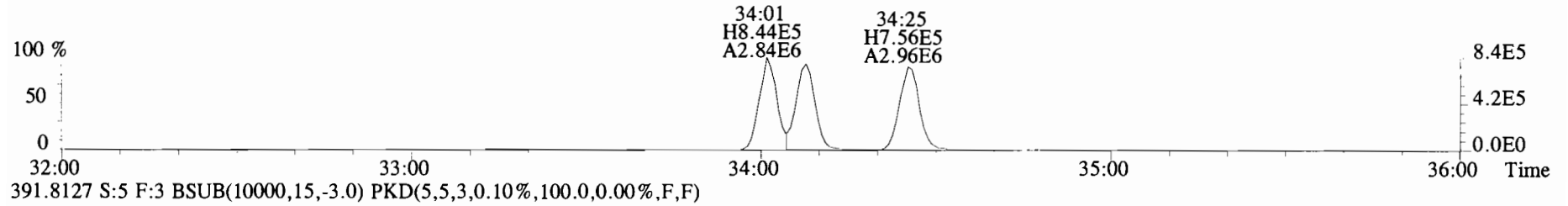
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



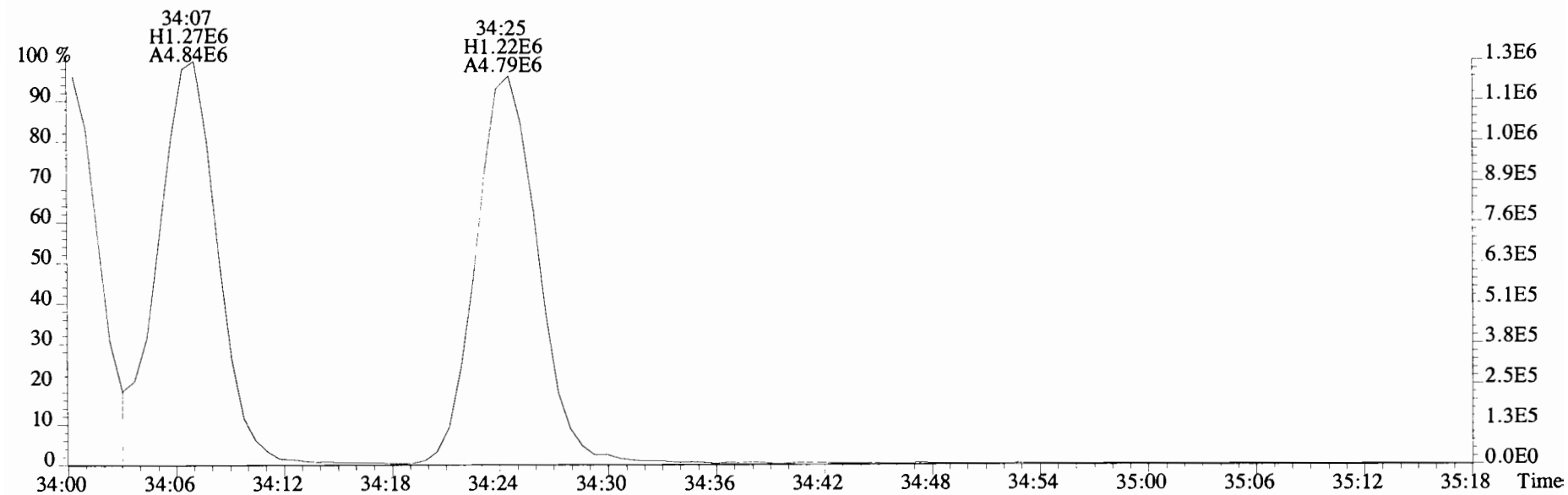
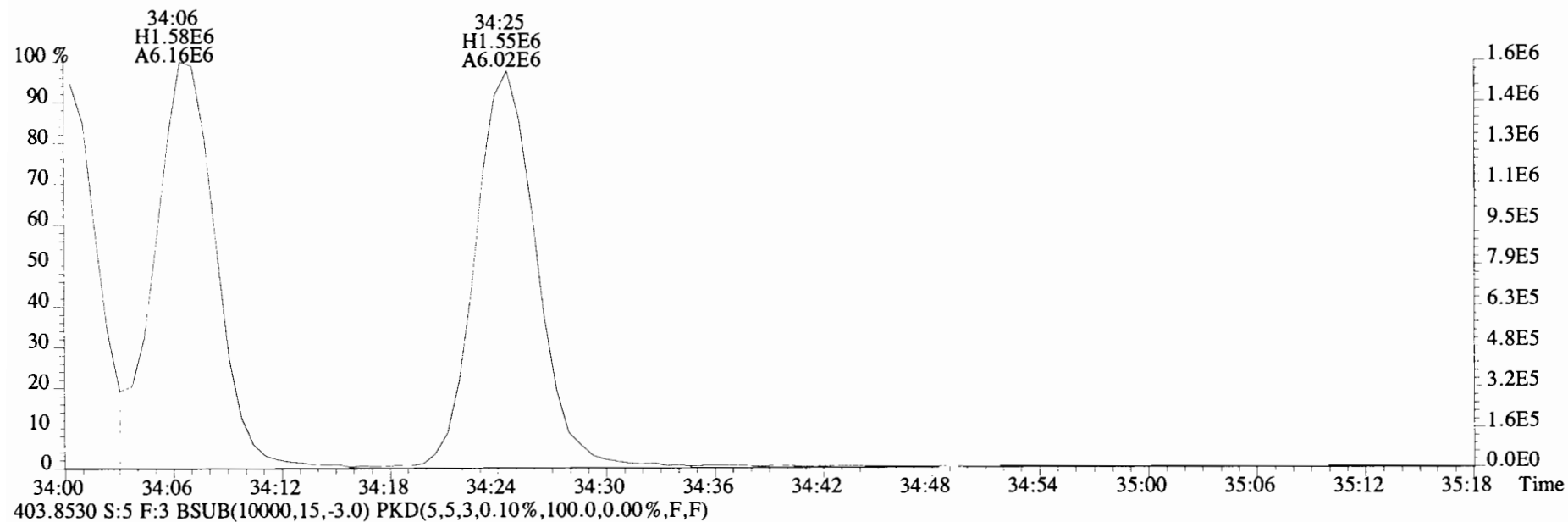
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353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



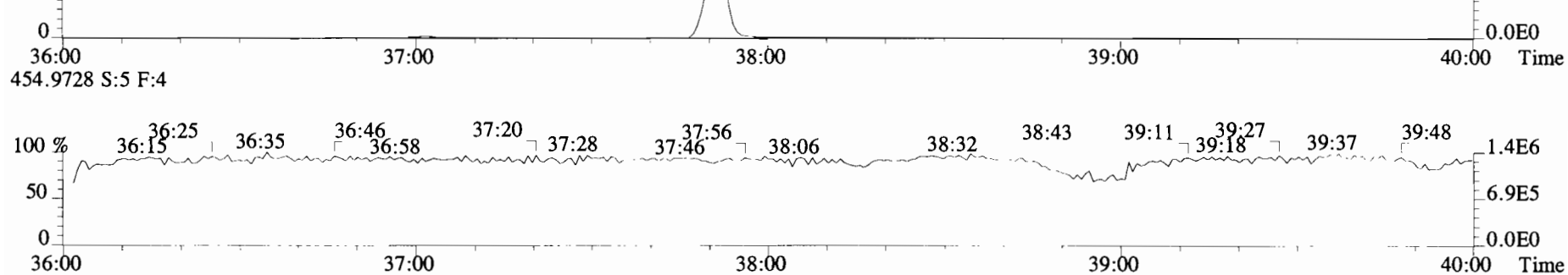
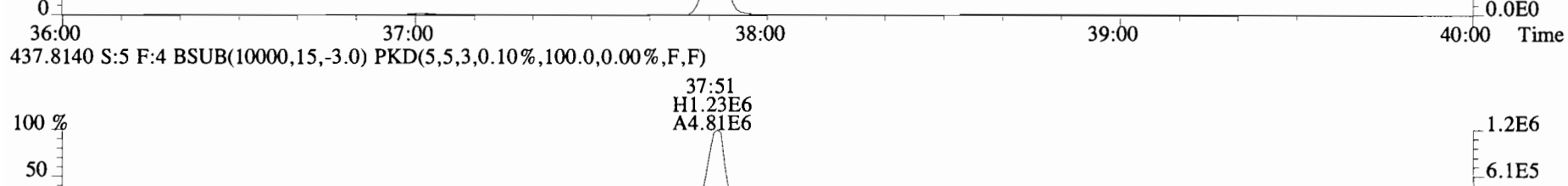
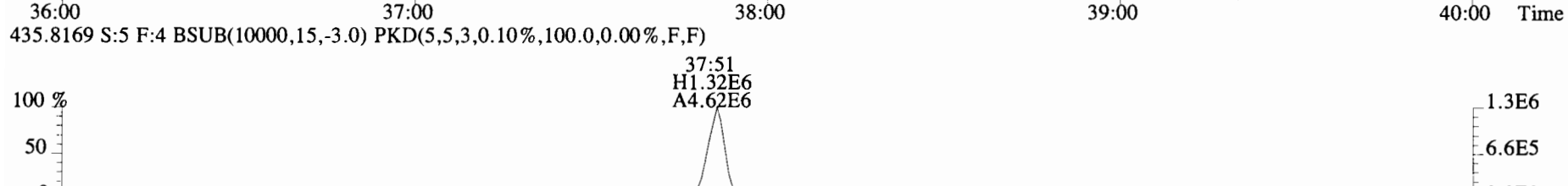
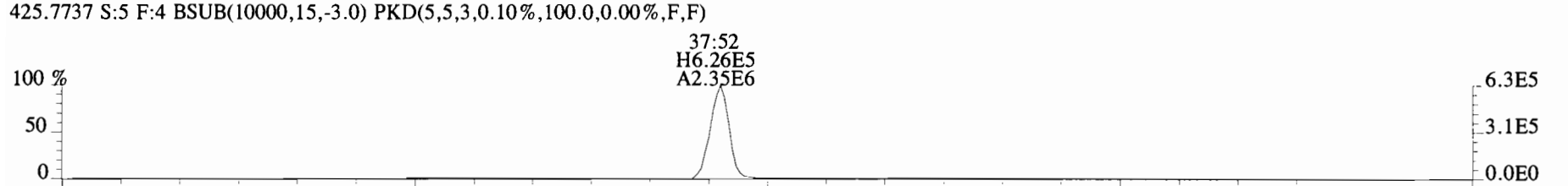
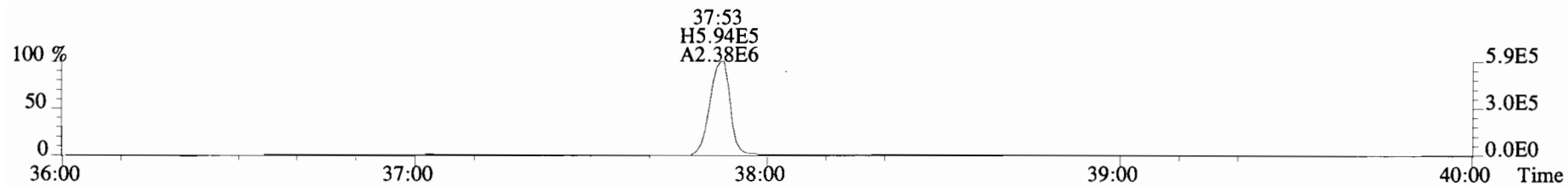
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Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:B9K0034-BS1 OPR 10 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



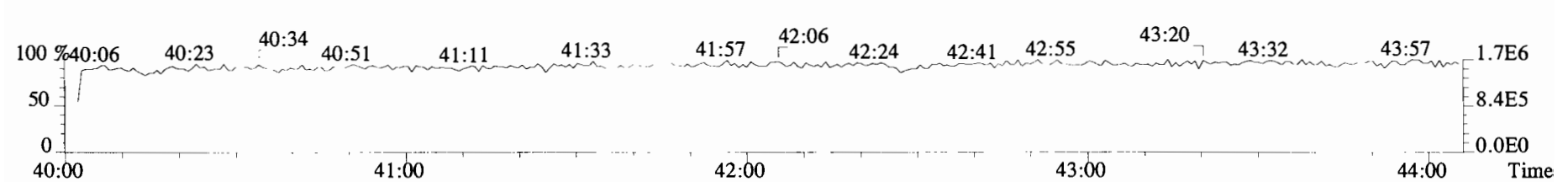
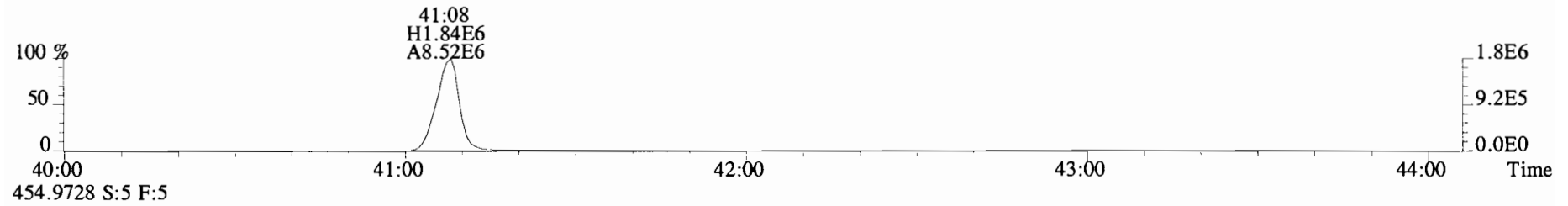
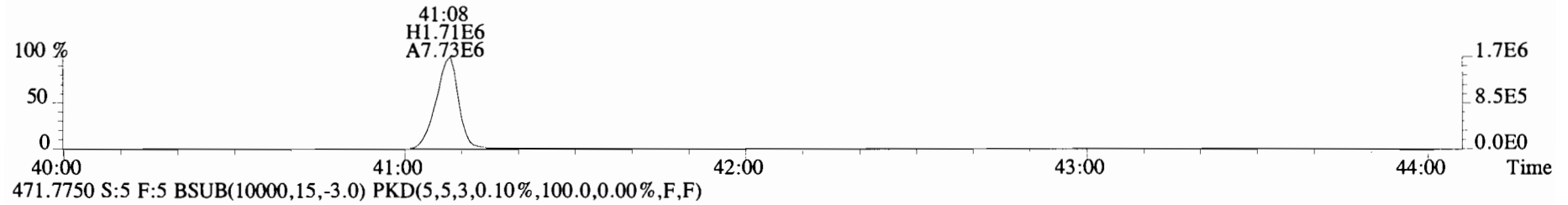
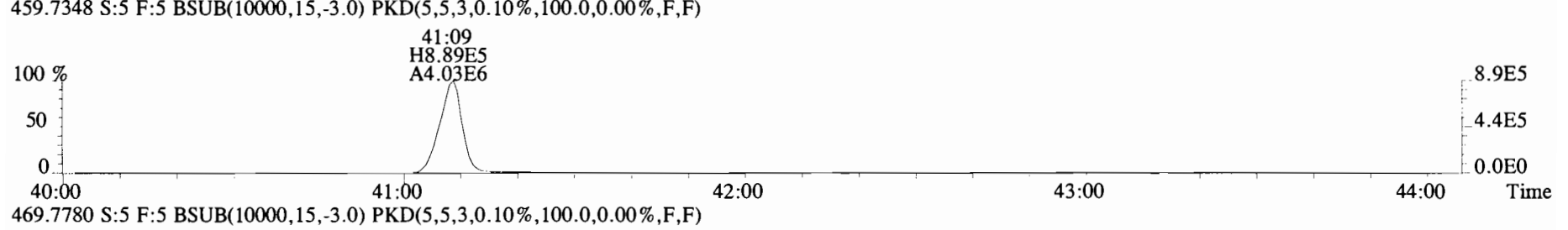
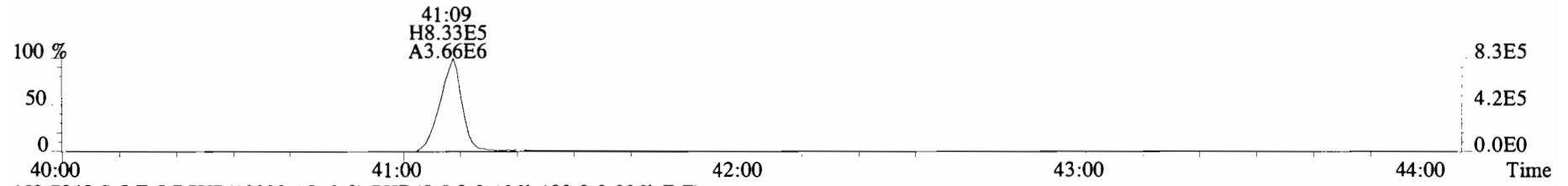
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401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



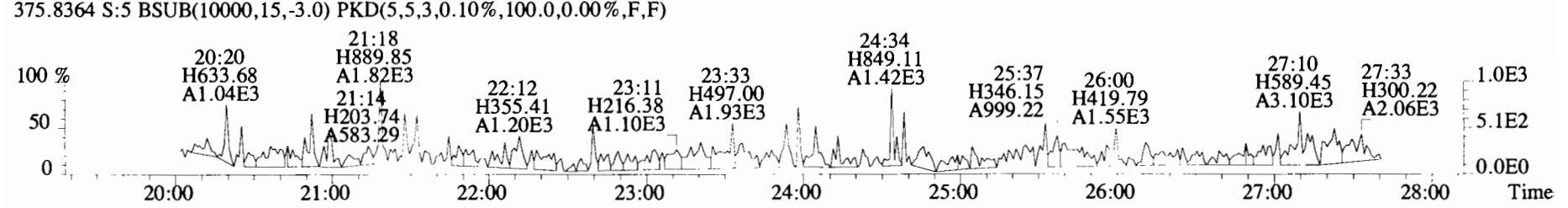
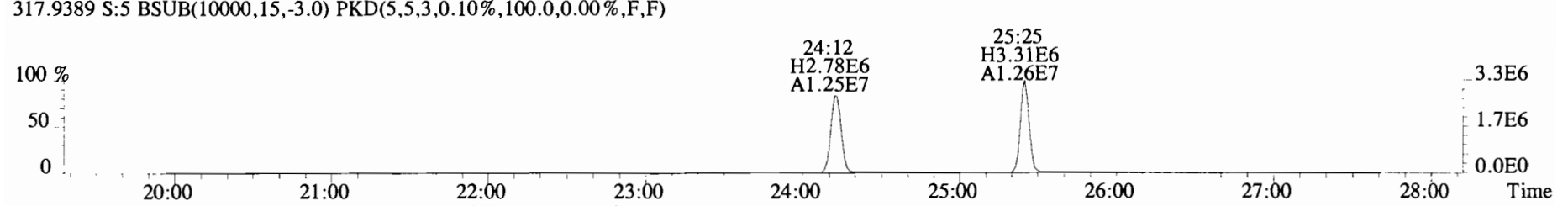
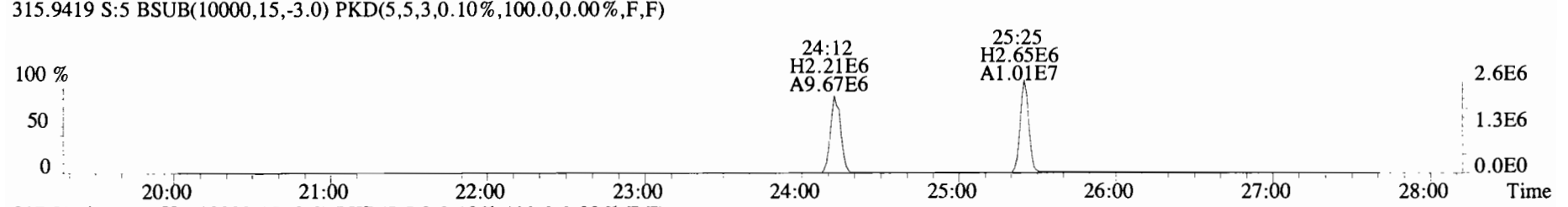
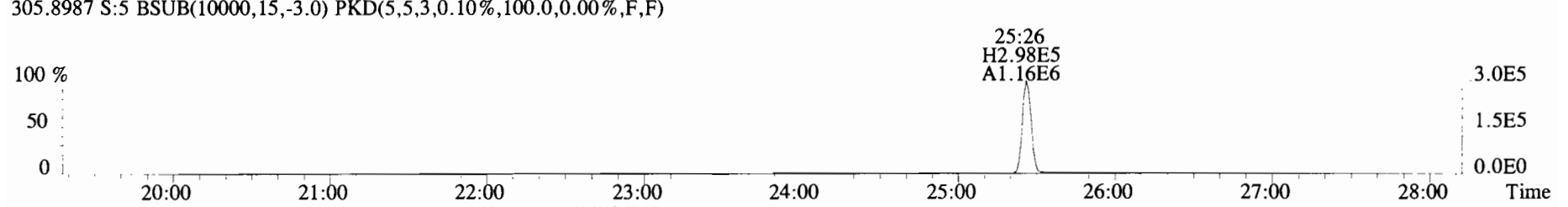
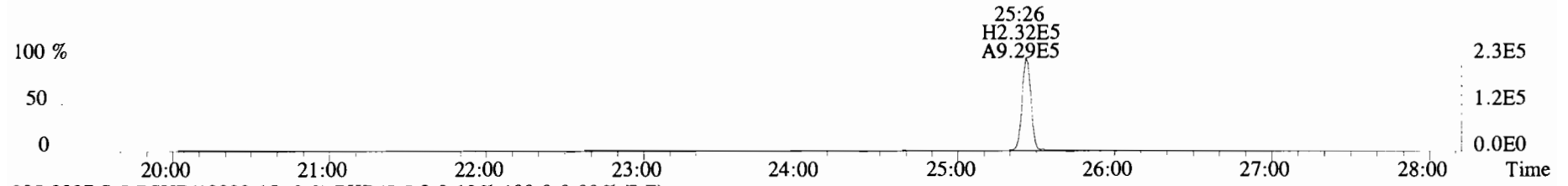
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Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:B9K0034-BS1 OPR 10 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



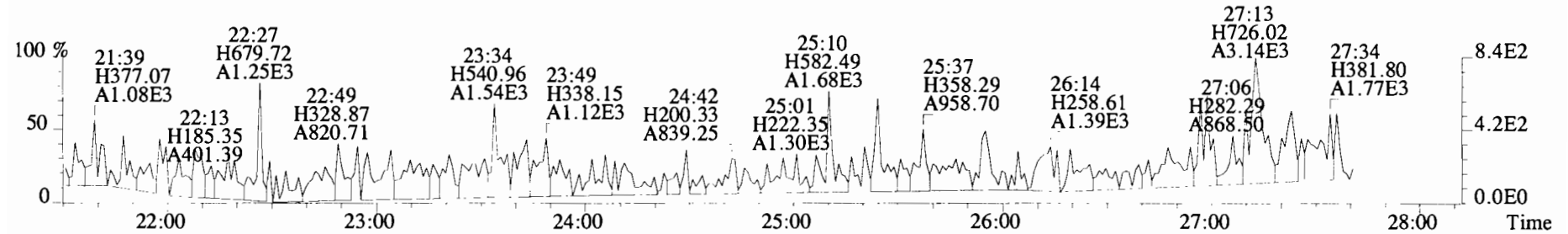
File:191119D1 #1-431 Acq:19-NOV-2019 15:54:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:B9K0034-BS1 OPR 10 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



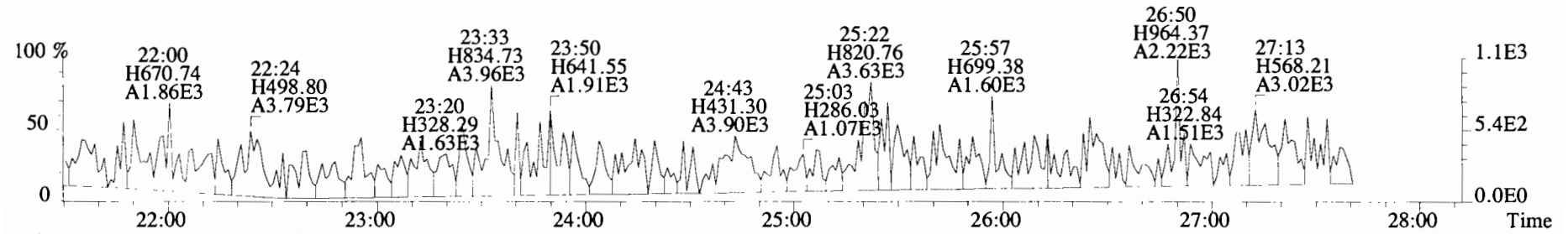
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Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:B9K0034-BS1 OPR 10 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



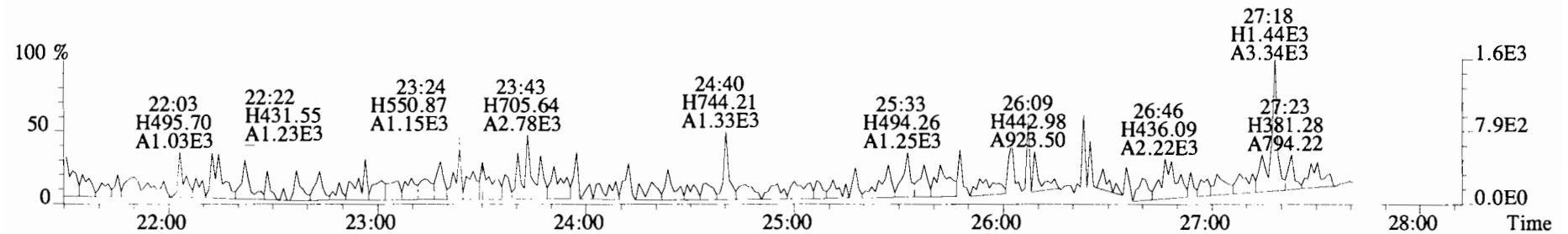
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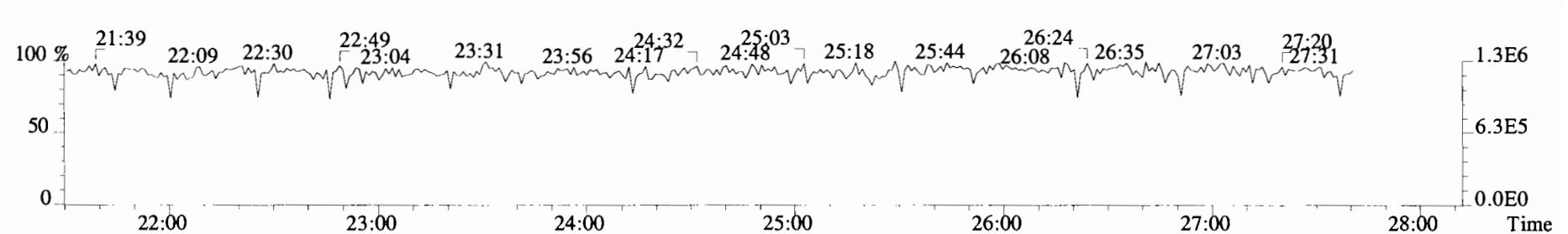
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



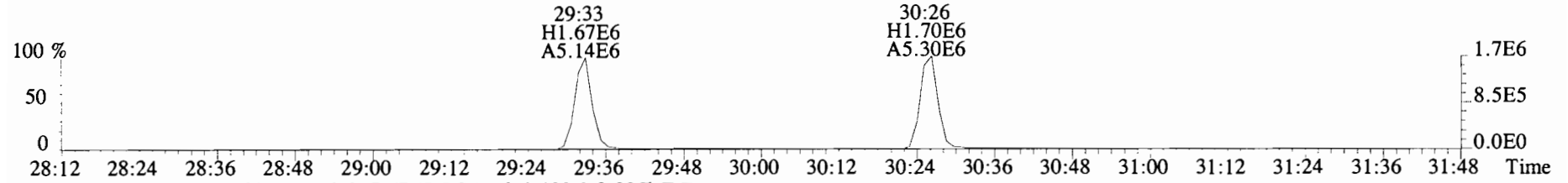
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



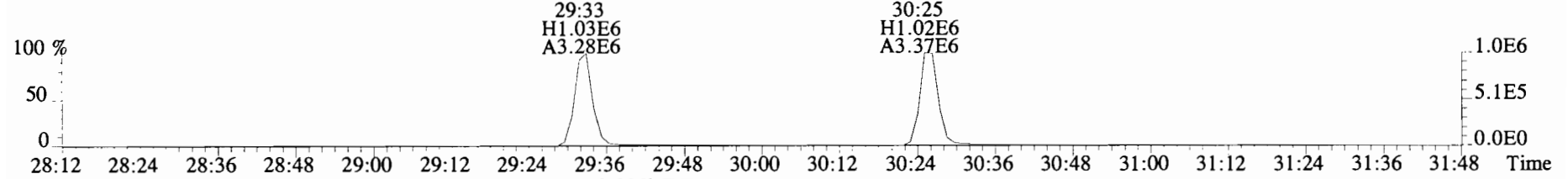
316.9824 S:5



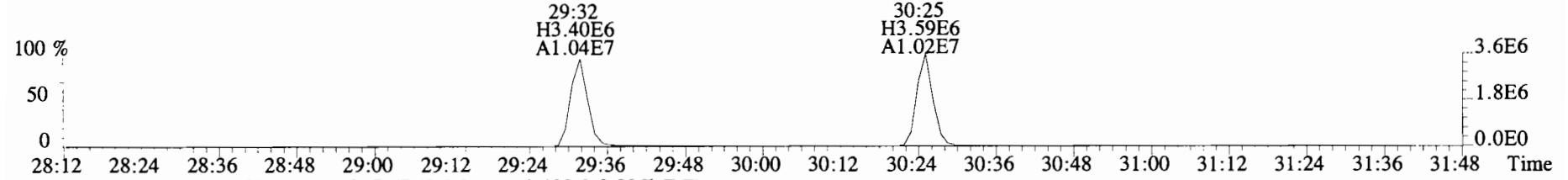
File:191119D1 #1-210 Acq:19-NOV-2019 15:54:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:B9K0034-BS1 OPR 10 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



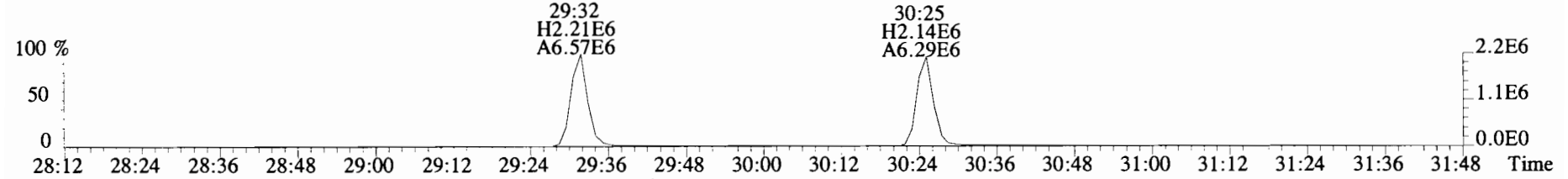
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



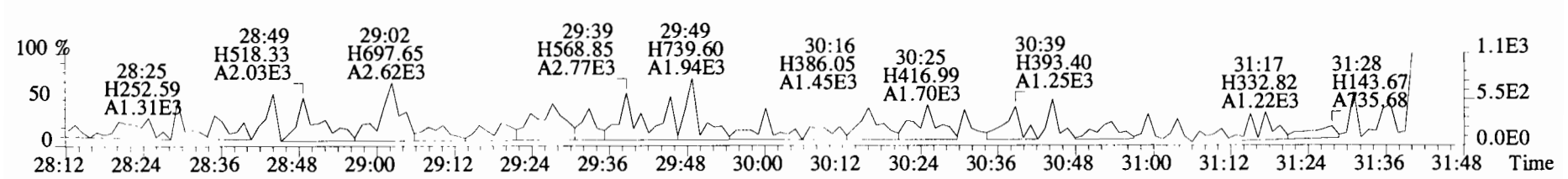
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



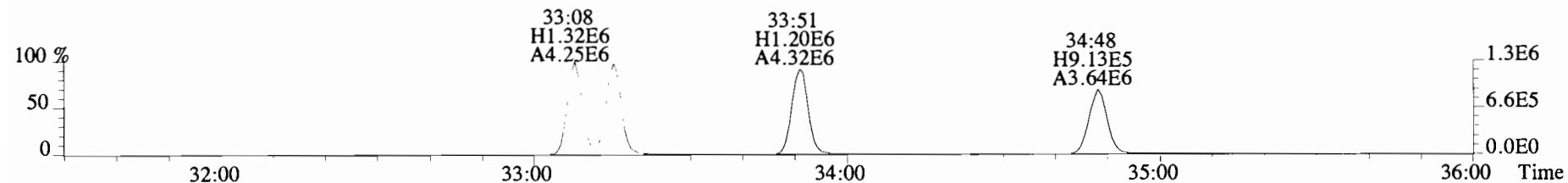
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



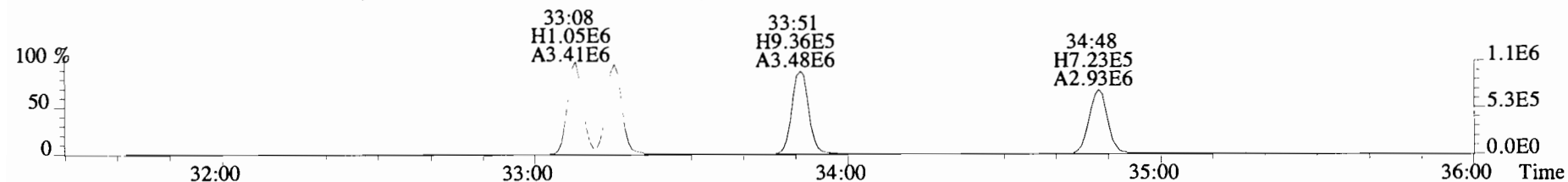
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



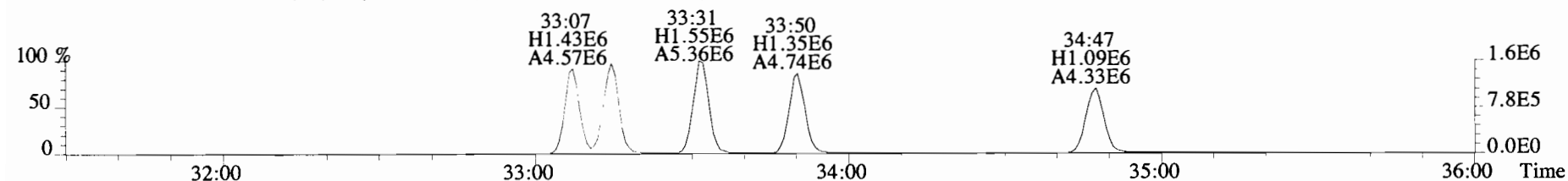
File:191119D1 #1-385 Acq:19-NOV-2019 15:54:57 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:B9K0034-BS1 OPR 10 Exp:OCDD_DB5
 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



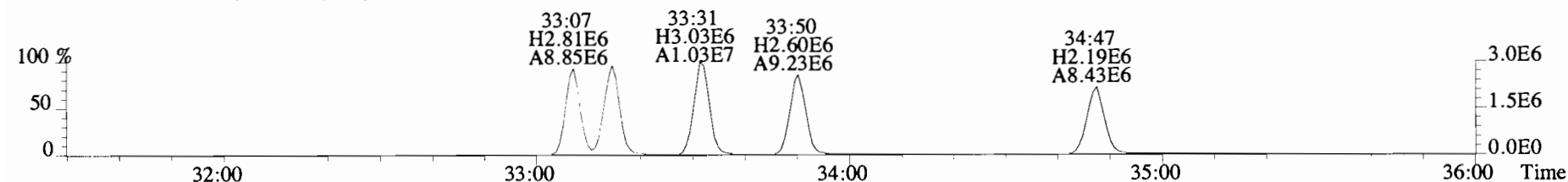
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



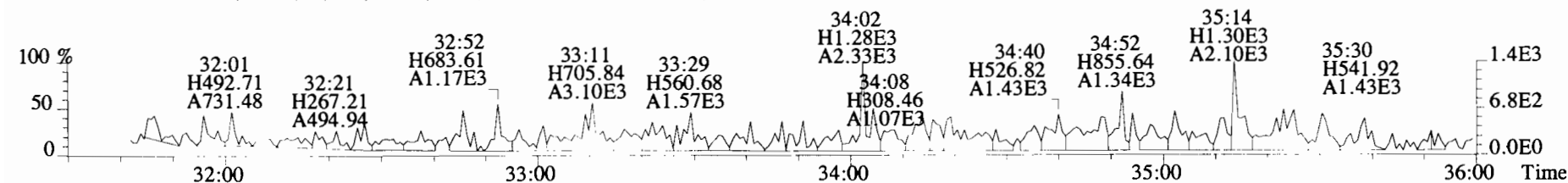
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



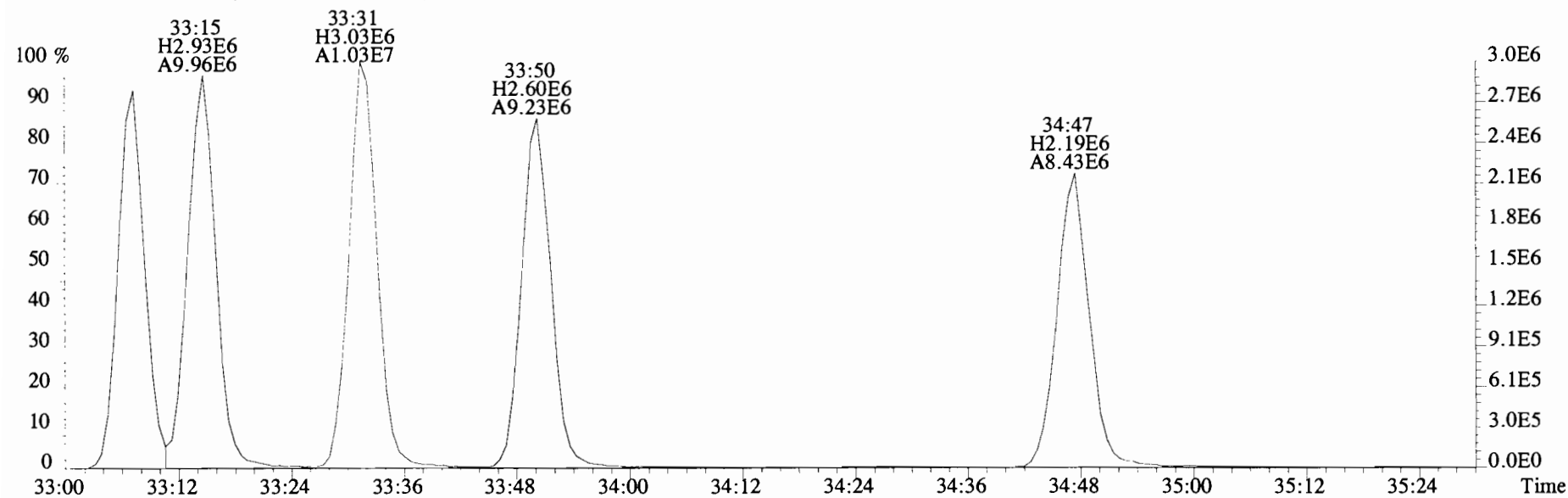
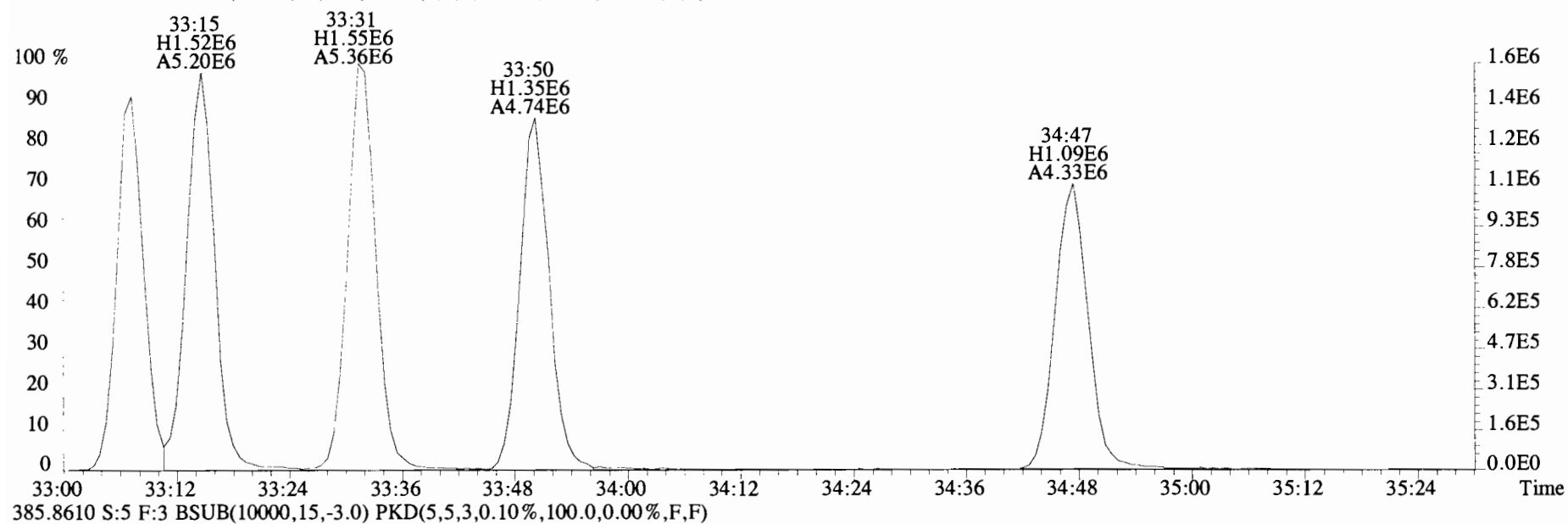
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



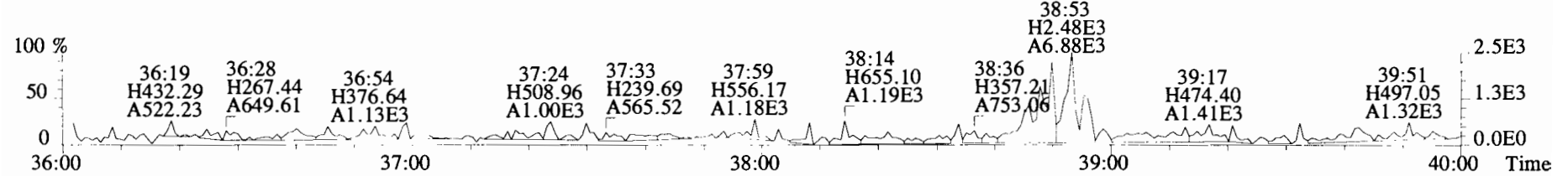
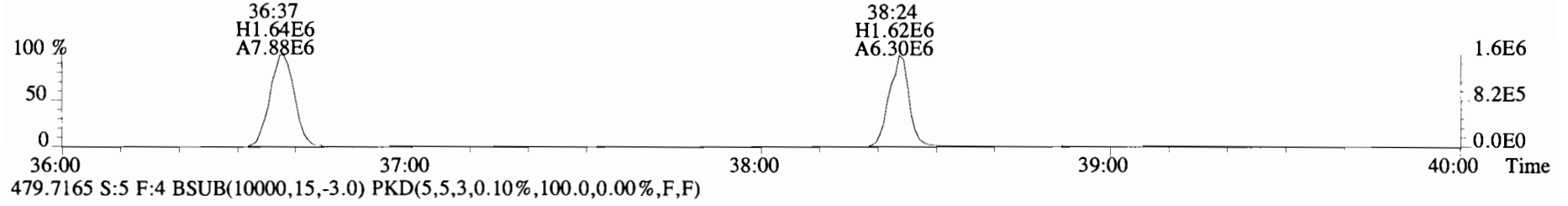
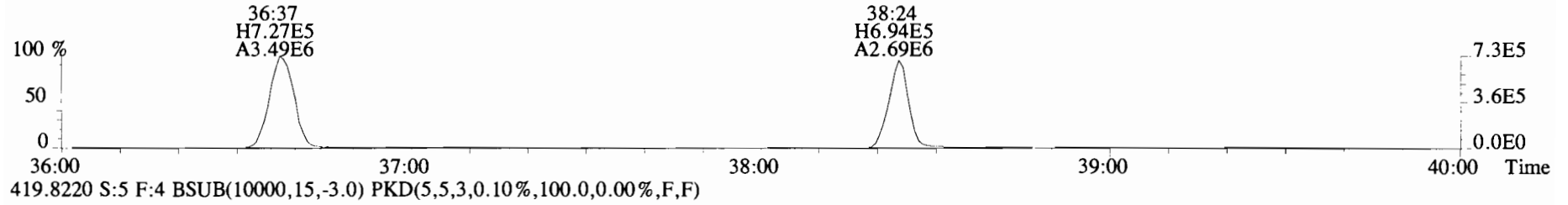
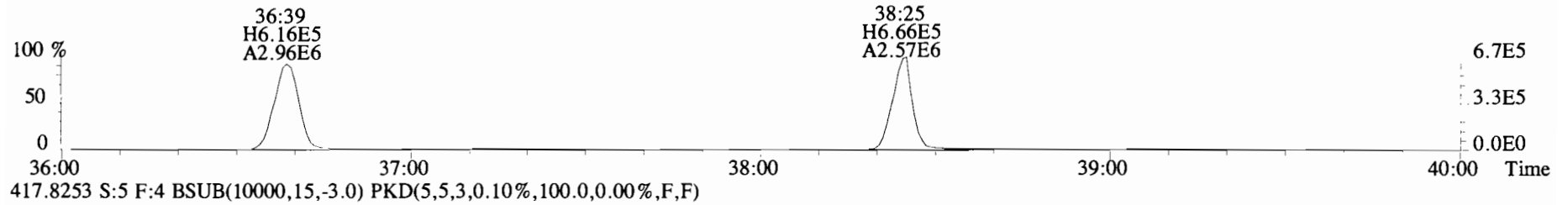
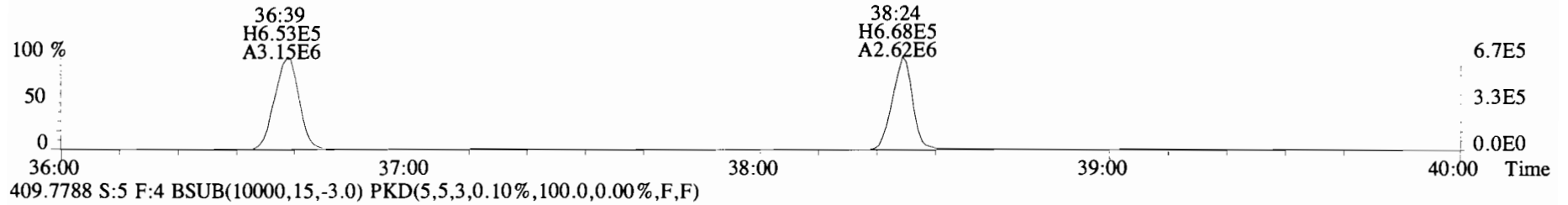
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



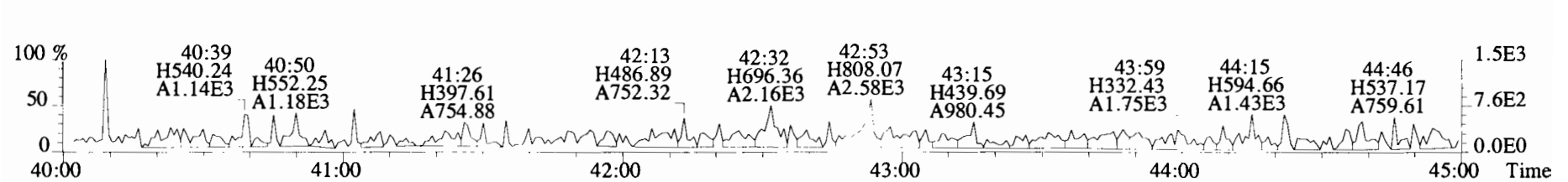
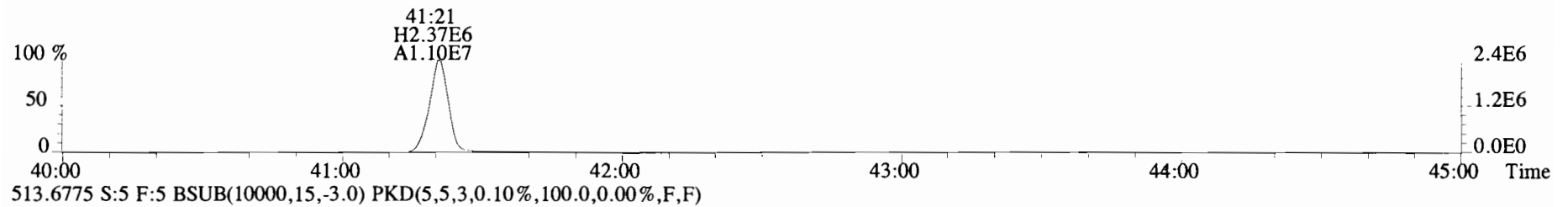
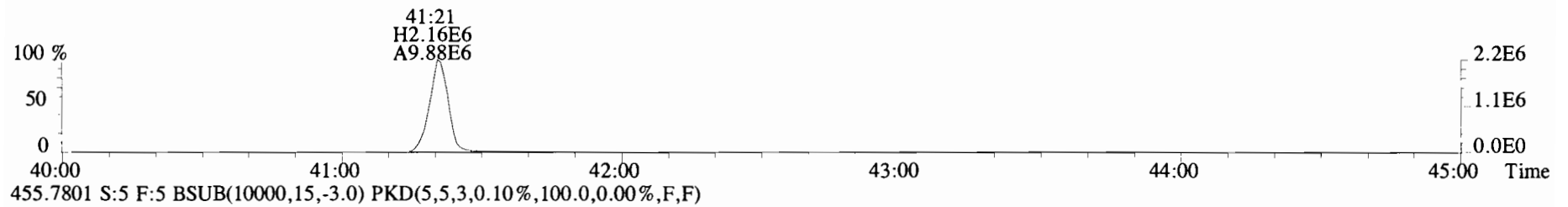
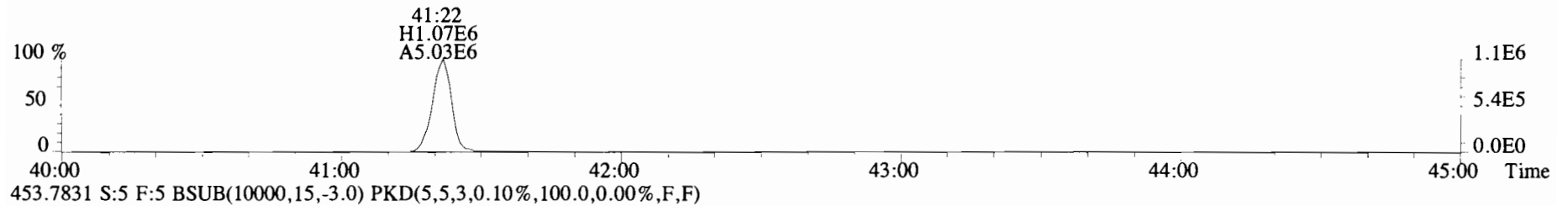
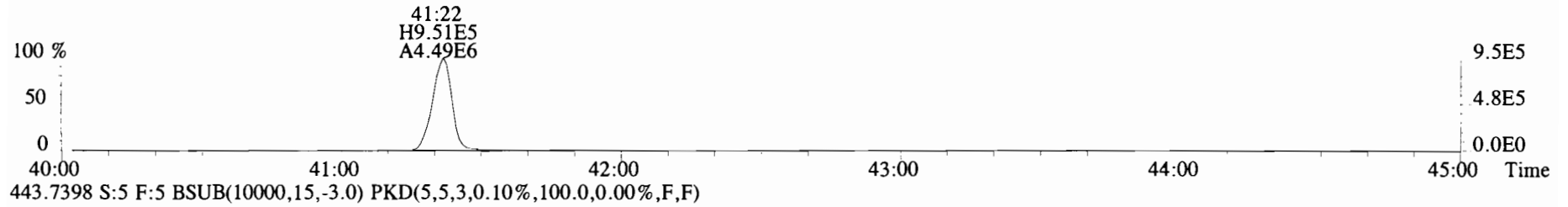
File:191119D1 #1-385 Acq:19-NOV-2019 15:54:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory VG7 Text:B9K0034-BS1 OPR 10 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191119D1 #1-356 Acq:19-NOV-2019 15:54:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:B9K0034-BS1 OPR 10 Exp:OCDD_DB5
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191119D1 #1-431 Acq:19-NOV-2019 15:54:57 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:B9K0034-BS1 OPR 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)



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	*		159	2.5	0.0815	Total Tetra-Dioxins	*	*		159	0.0815
1,2,3,7,8-PeCDD	*	* n	0.90	Not Fη	*		306	2.5	0.143	Total Penta-Dioxins	*	*		306	0.143
1,2,3,4,7,8-HxCDD	*	* n	1.10	Not Fη	*		181	2.5	0.141	Total Hexa-Dioxins	*	*		181	0.151
1,2,3,6,7,8-HxCDD	*	* n	0.94	Not Fη	*		181	2.5	0.158	Total Hepta-Dioxins	*	0.369		*	*
1,2,3,7,8,9-HxCDD	*	* n	0.96	Not Fη	*		181	2.5	0.153	Total Tetra-Furans	*	*		165	0.0600
1,2,3,4,6,7,8-HpCDD	3.02e+03	1.56 n	0.98	37:51	0.13666		*	2.5	*	Total Penta-Furans	0.0000	0.0000		250	0.110
OCDD	1.99e+04	0.90 y	0.96	41:07	1.0831		*	2.5	*	Total Hexa-Furans	*	*		157	0.0592
										Total Hepta-Furans	*	*		143	0.0753
2,3,7,8-TCDF	*	* n	0.95	Not Fη	*		165	2.5	0.0600						
1,2,3,7,8-PeCDF	*	* n	0.96	Not Fη	*		250	2.5	0.117						
2,3,4,7,8-PeCDF	*	* n	1.01	Not Fη	*		250	2.5	0.103						
1,2,3,4,7,8-HxCDF	*	* n	1.18	Not Fη	*		157	2.5	0.0504						
1,2,3,6,7,8-HxCDF	*	* n	1.07	Not Fη	*		157	2.5	0.0537						
2,3,4,6,7,8-HxCDF	*	* n	1.11	Not Fη	*		157	2.5	0.0579						
1,2,3,7,8,9-HxCDF	*	* n	1.06	Not Fη	*		157	2.5	0.0768						
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	Not Fη	*		143	2.5	0.0782						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	Not Fη	*		143	2.5	0.0720						
OCDF	*	* n	0.95	Not Fη	*		161	2.5	0.147						
IS	13C-2,3,7,8-TCDD	7.18e+06	0.79 y	1.10	26:10	148.24				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	5.69e+06	0.61 y	0.88	30:41	145.85				75.0					
IS	13C-1,2,3,4,7,8-HxCDD	4.71e+06	1.26 y	0.64	33:59	157.40				73.8					
IS	13C-1,2,3,6,7,8-HxCDD	5.11e+06	1.28 y	0.86	34:06	128.14				79.6					
IS	13C-1,2,3,7,8,9-HxCDD	5.22e+06	1.28 y	0.81	34:23	138.85				64.8					
IS	13C-1,2,3,4,6,7,8-HpCDD	4.46e+06	1.04 y	0.65	37:51	146.42				70.2					
IS	13C-OCDD	7.56e+06	0.91 y	0.58	41:07	280.02				74.1					
IS	13C-2,3,7,8-TCDF	1.01e+07	0.79 y	1.03	25:24	146.56				70.8					
IS	13C-1,2,3,7,8-PeCDF	8.51e+06	1.57 y	0.85	29:30	149.76				74.1					
IS	13C-2,3,4,7,8-PeCDF	8.36e+06	1.54 y	0.85	30:24	148.41				75.8					
IS	13C-1,2,3,4,7,8-HxCDF	6.18e+06	0.51 y	0.83	33:06	159.46				75.1					
IS	13C-1,2,3,6,7,8-HxCDF	6.85e+06	0.52 y	1.03	33:13	142.10				80.7					
IS	13C-2,3,4,6,7,8-HxCDF	6.24e+06	0.53 y	0.95	33:49	140.47				71.9					
IS	13C-1,2,3,7,8,9-HxCDF	5.85e+06	0.51 y	0.83	34:46	151.79				71.1					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.20e+06	0.44 y	0.76	36:37	147.29				76.8					
IS	13C-1,2,3,4,7,8,9-HpCDF	4.13e+06	0.46 y	0.58	38:23	152.66				74.5					
IS	13C-OCDF	9.30e+06	0.90 y	0.69	41:20	289.83				77.2					
C/Up	37C1-2,3,7,8-TCDD	4.07e+06		1.20	26:11	76.823				73.3					
RS/RT	13C-1,2,3,4-TCDD	8.74e+06	0.82 y	1.00	25:37	197.70				97.1					
RS	13C-1,2,3,4-TCDF	1.32e+07	0.79 y	1.00	24:11	197.70					Integrations	Reviewed			
RS/RT	13C-1,2,3,4,6,9-HxCDF	9.21e+06	0.53 y	1.00	33:31	197.70					by	by			
											Analyst: <u>JB</u>	Analyst: <u>CT</u>			
											Date: <u>11/26/19</u>	Date: <u>11/27/19</u>			

Totals class: HpCDD EMPC

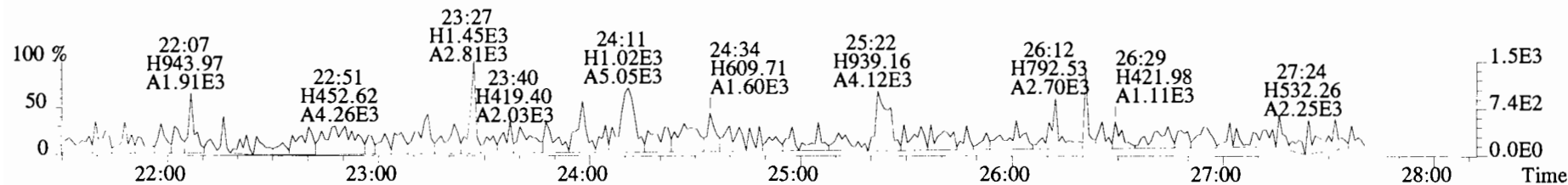
Entry #: 25

Run: 8 File: 191120D2 S: 3 I: 1 F: 4
Acquired: 21-NOV-19 03:47:07 Processed: 26-NOV-19 12:21:43

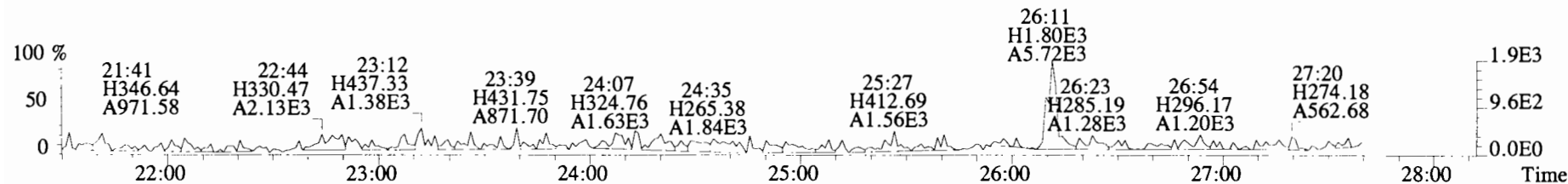
Total Concentration: 0.36902 Unnamed Concentration: 0.232

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:01	3.298e+03	2.517e+03	1.31	n	5.135e+03	0.23236
37:51	2.311e+03	1.481e+03	1.56	n	3.020e+03	0.13666 1,2,3,4,6,7,8-HpCDD

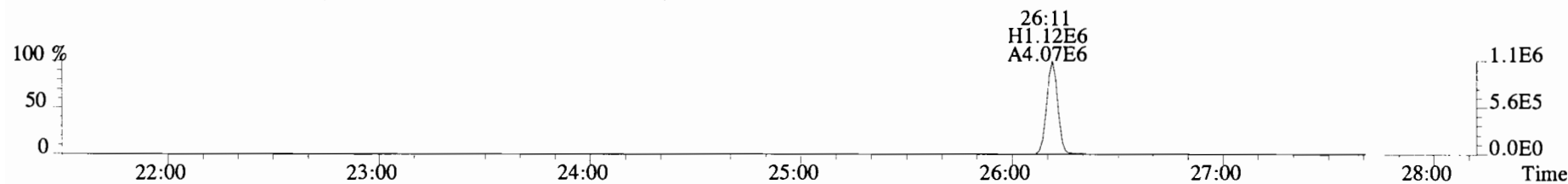
File:191120D2 #1-492 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
 319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



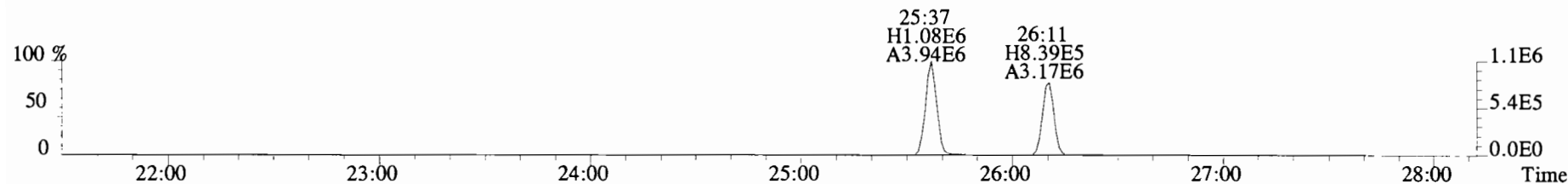
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



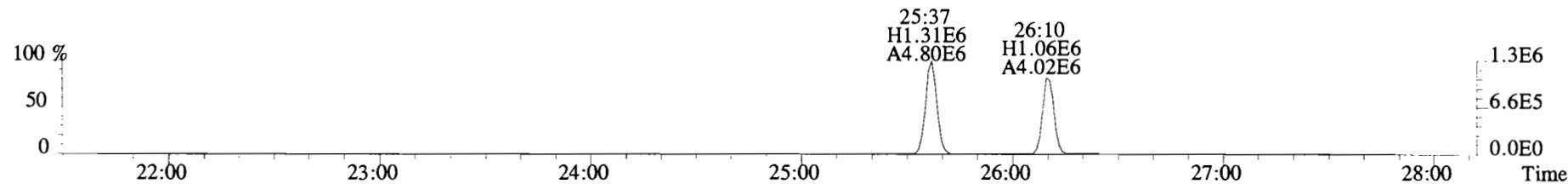
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



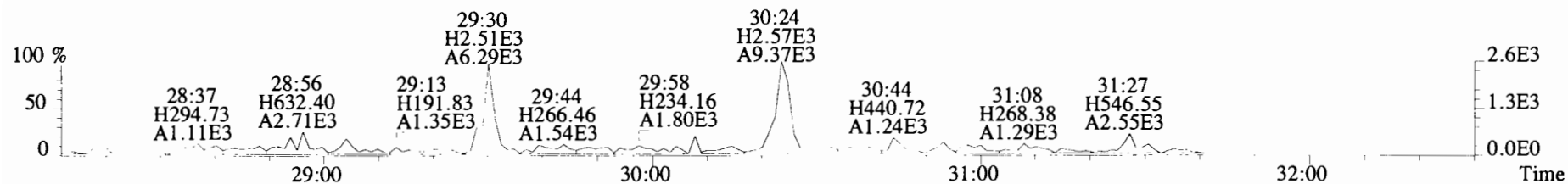
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



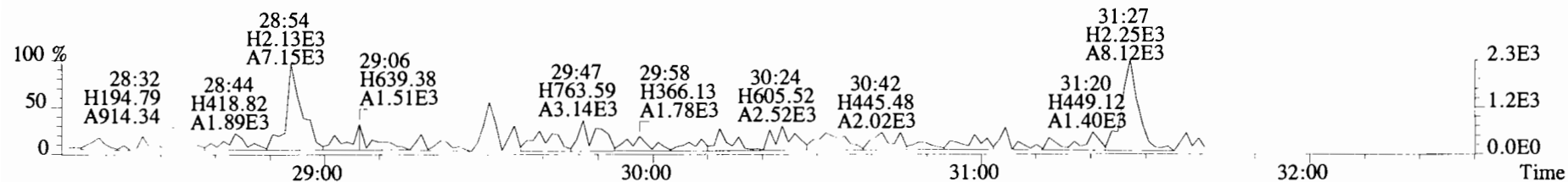
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



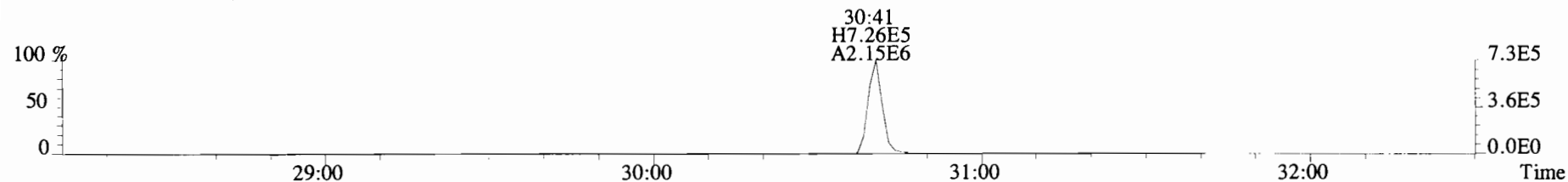
File:191120D2 #1-211 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Viata Analytical Laboratory_VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
 353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



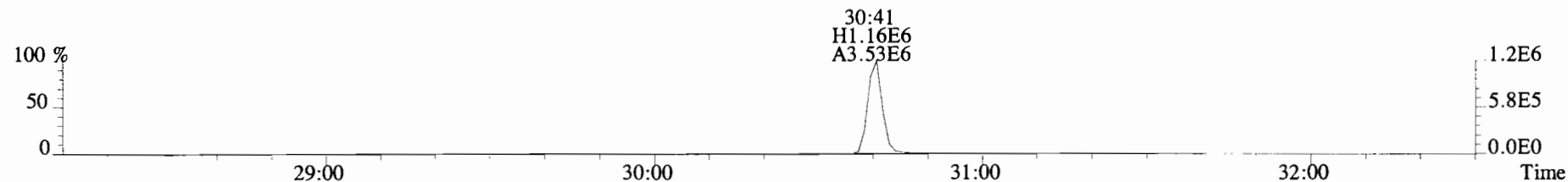
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



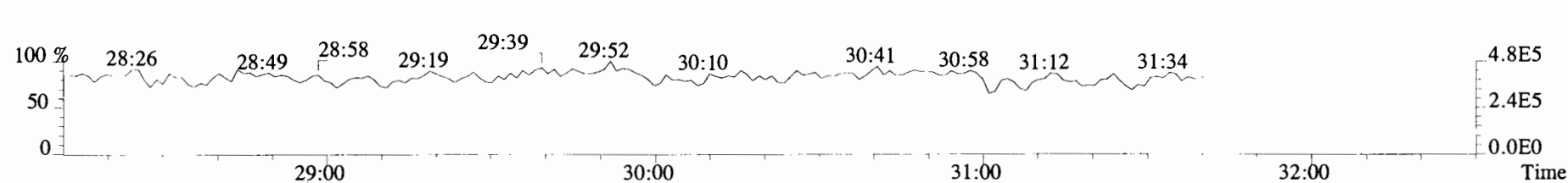
365.8978 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



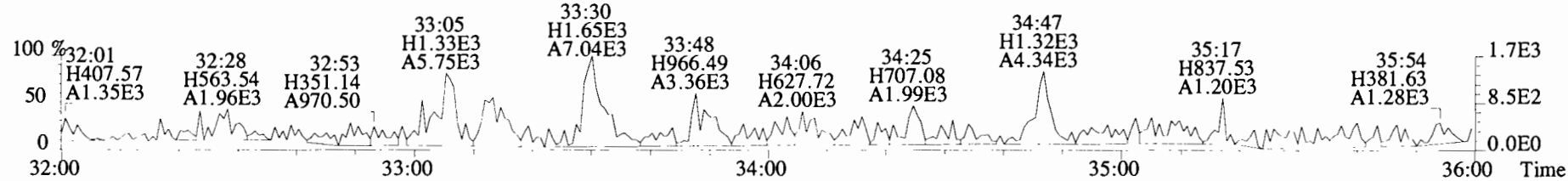
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



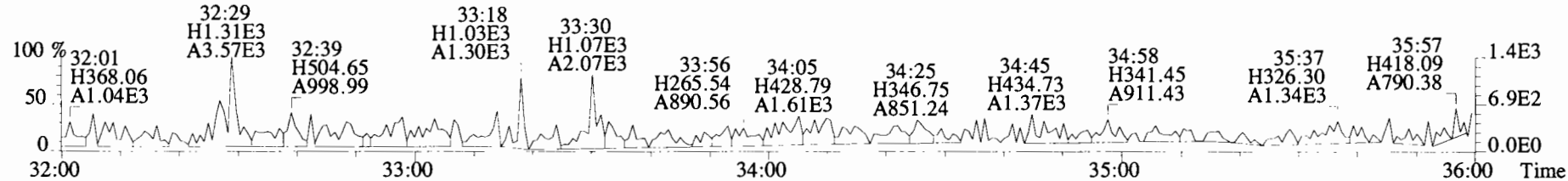
366.9792 S:3 F:2



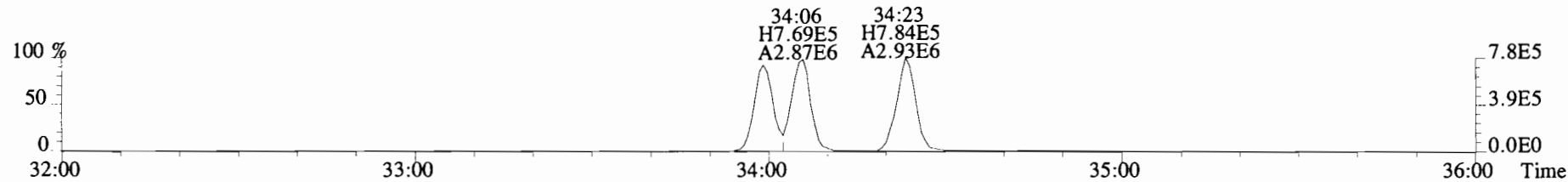
File:191120D2 #1-384 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



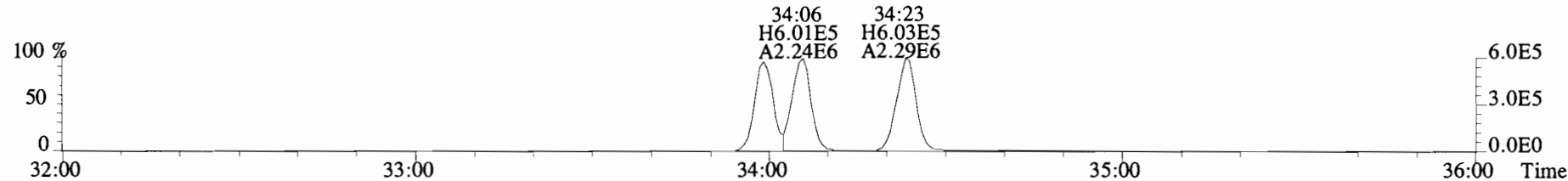
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



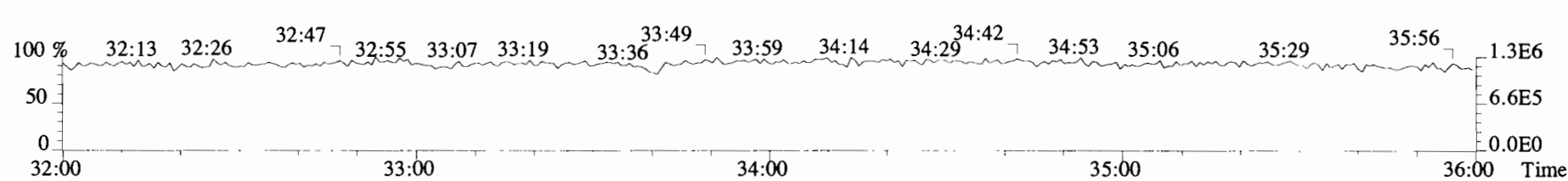
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



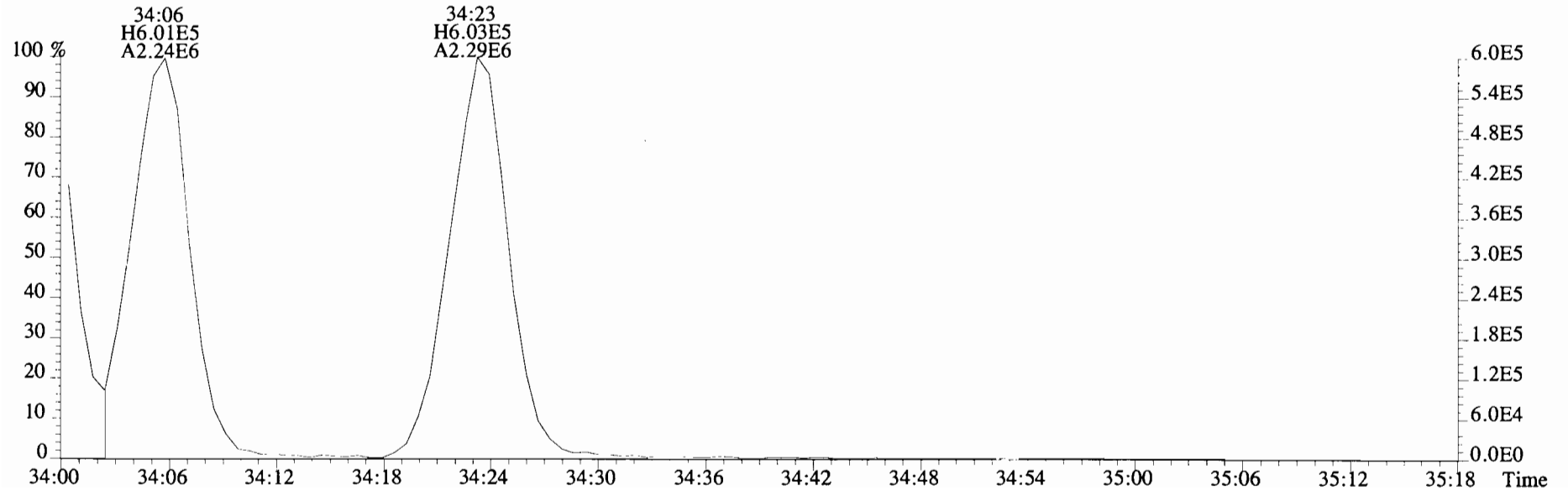
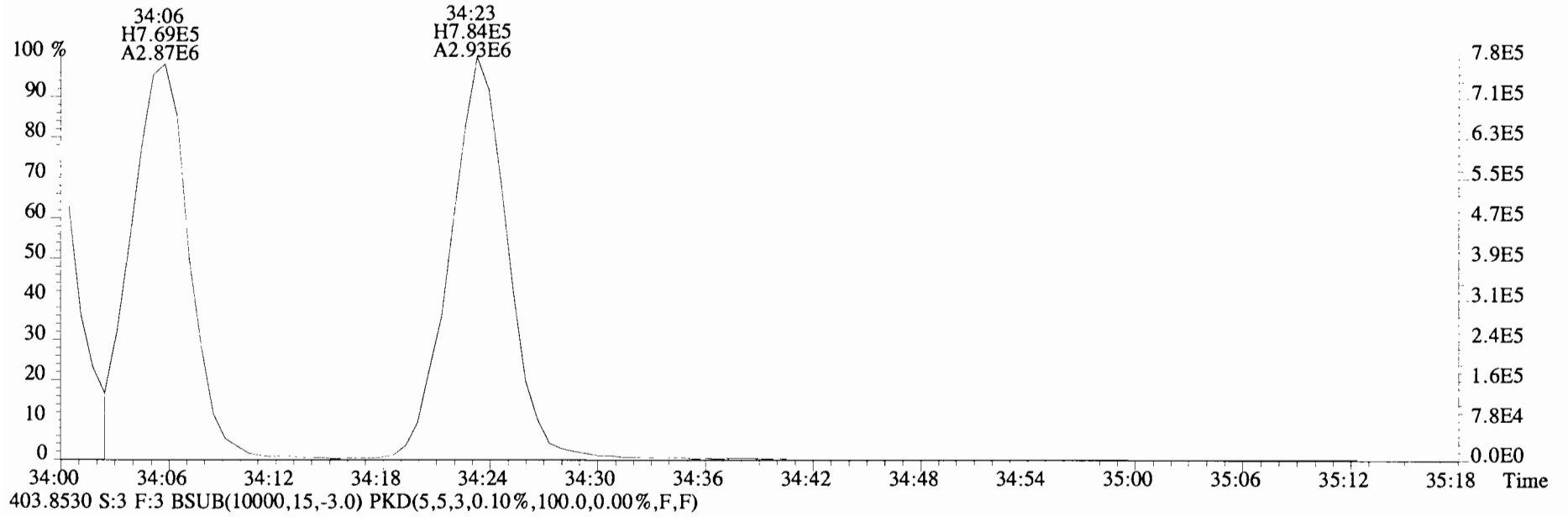
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



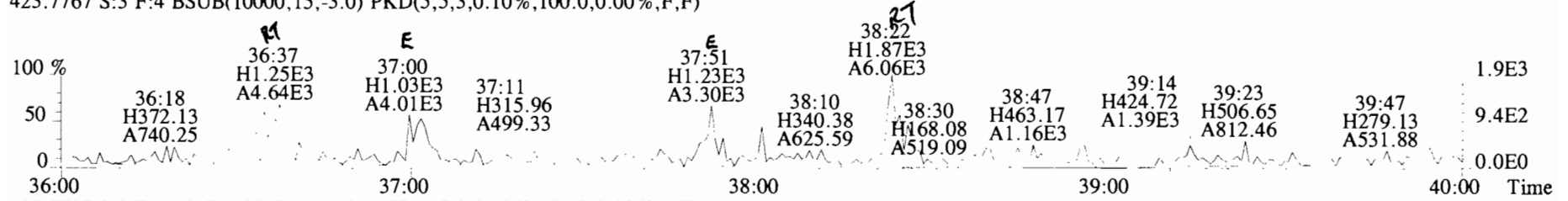
392.9760 S:3 F:3



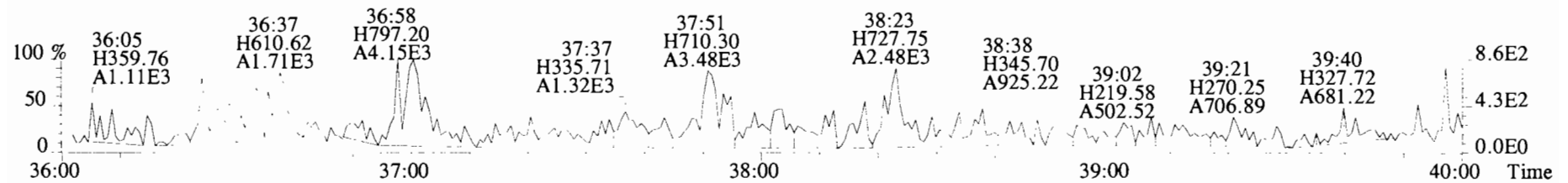
File:191120D2 #1-384 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata Analytical Laboratory VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



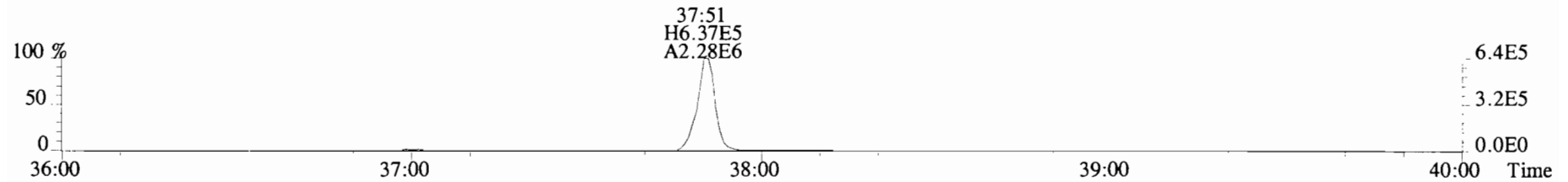
File:191120D2 #1-356 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



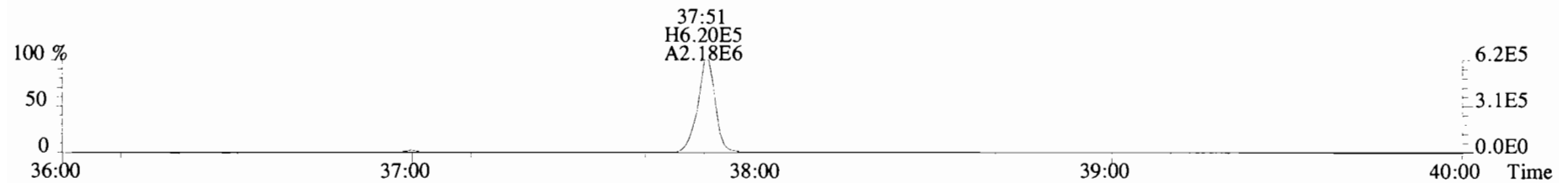
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



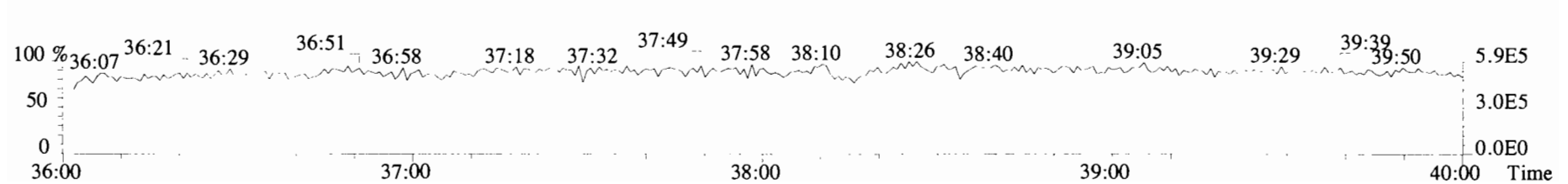
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



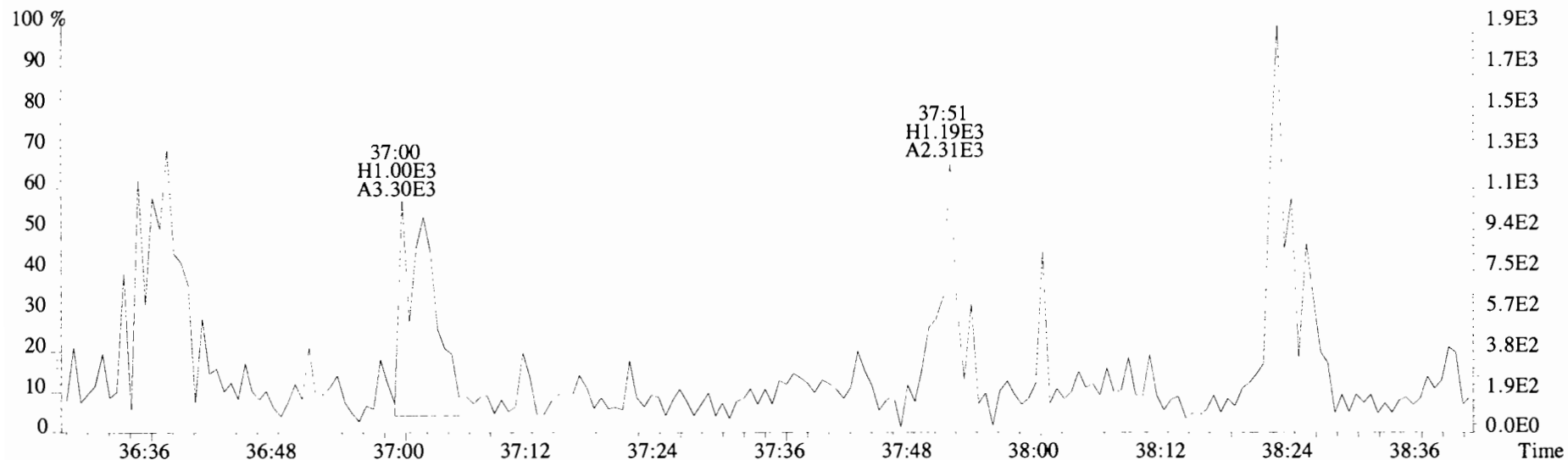
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



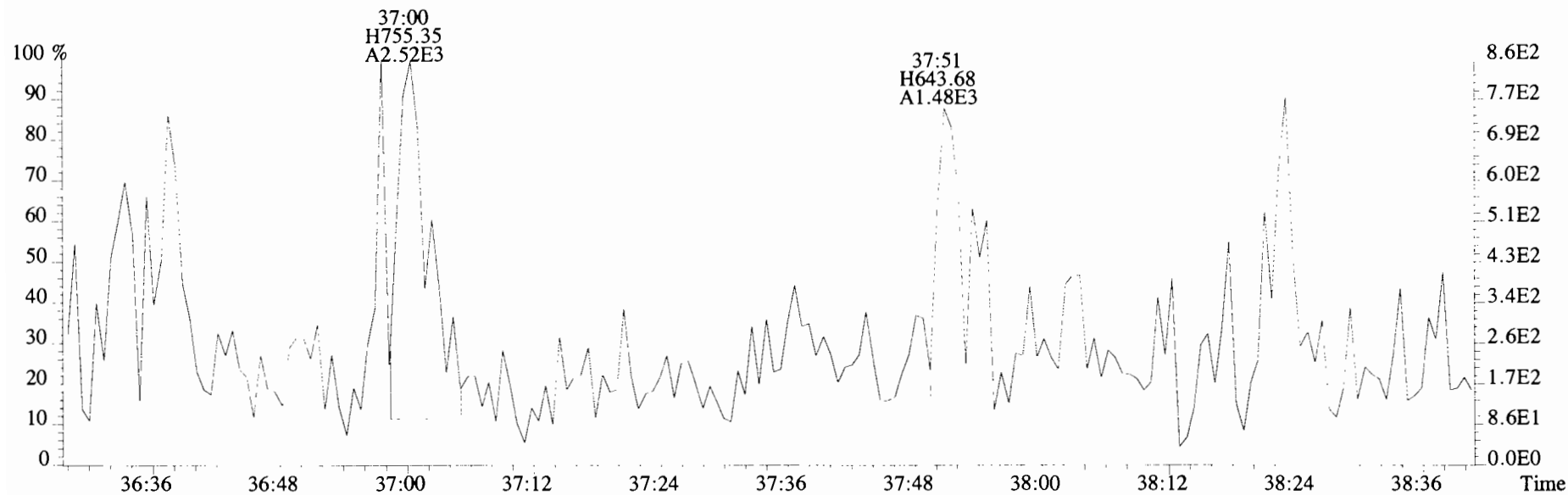
454.9728 S:3 F:4



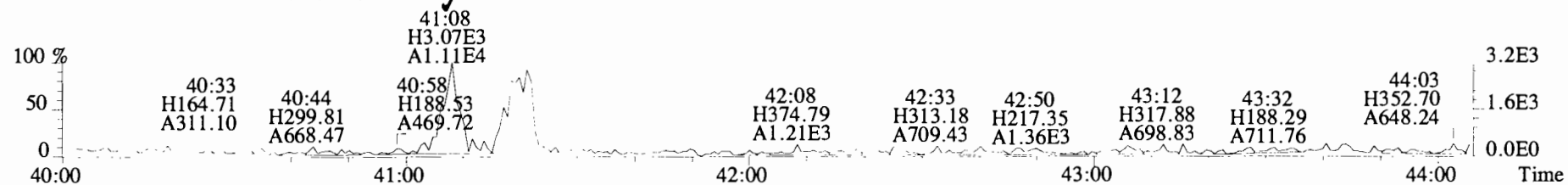
File:191120D2 #1-356 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata Analytical Laboratory VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(I0000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



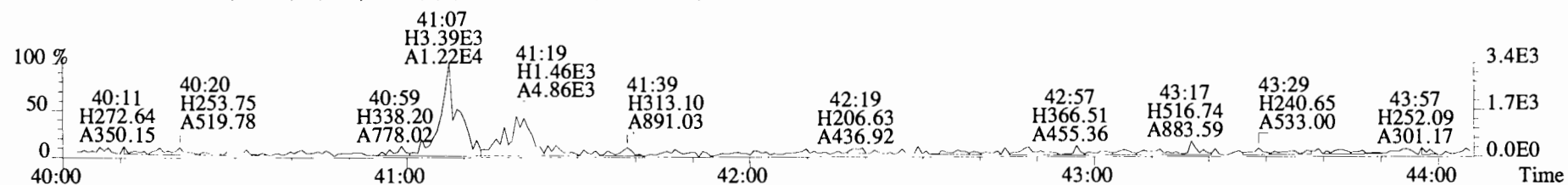
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



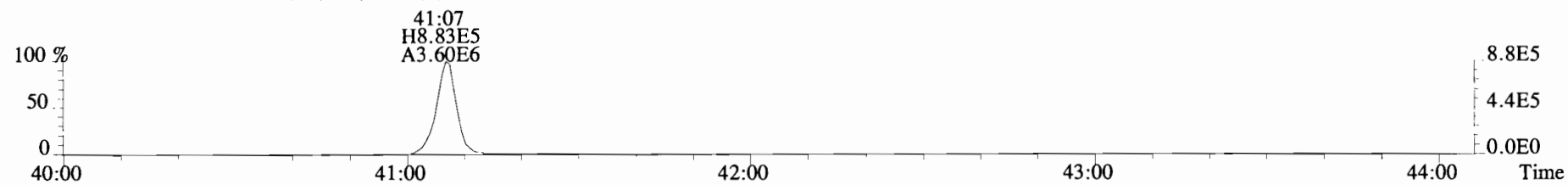
File:191120D2 #1-431 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



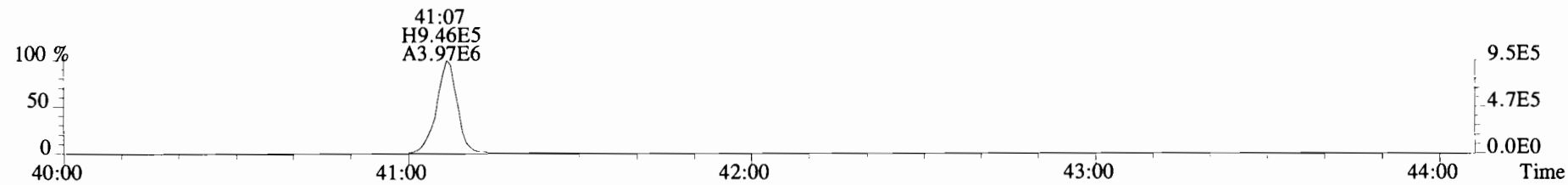
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



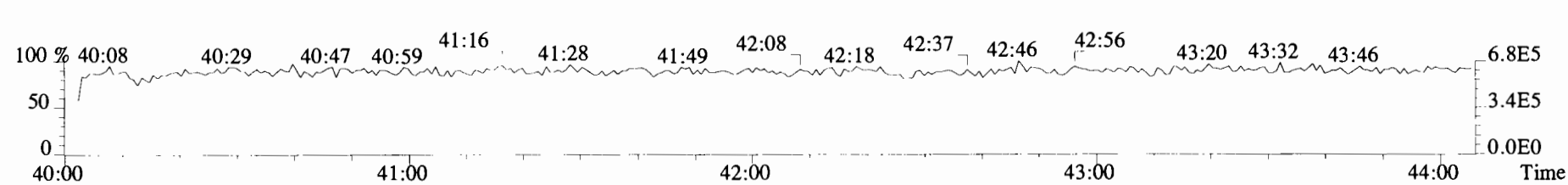
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



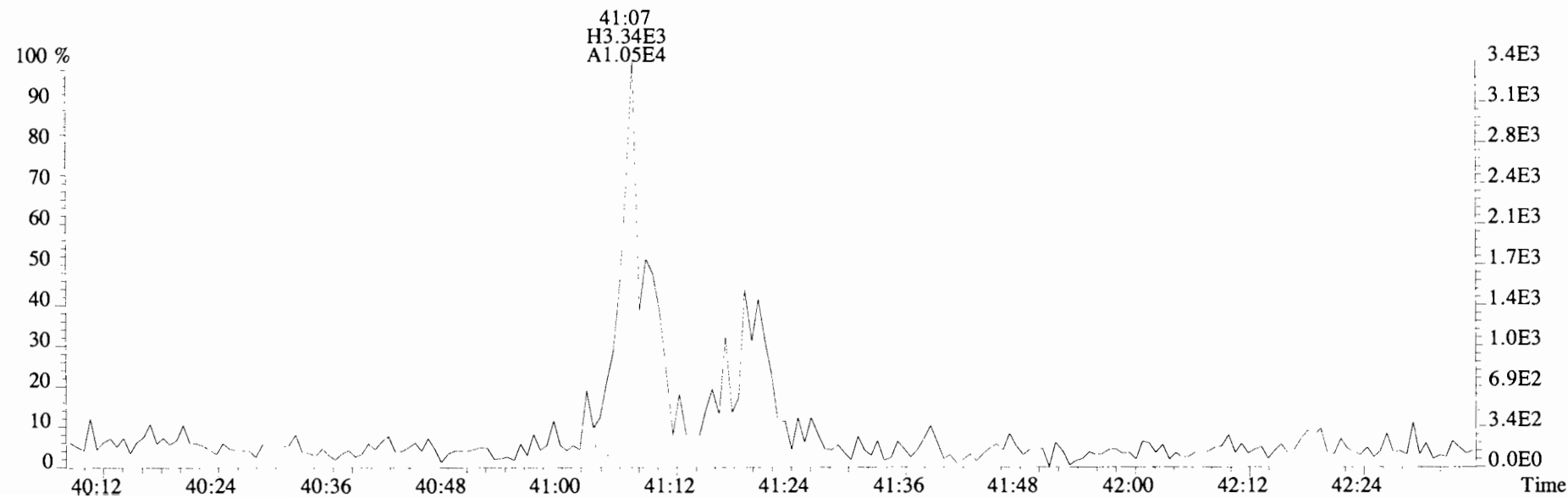
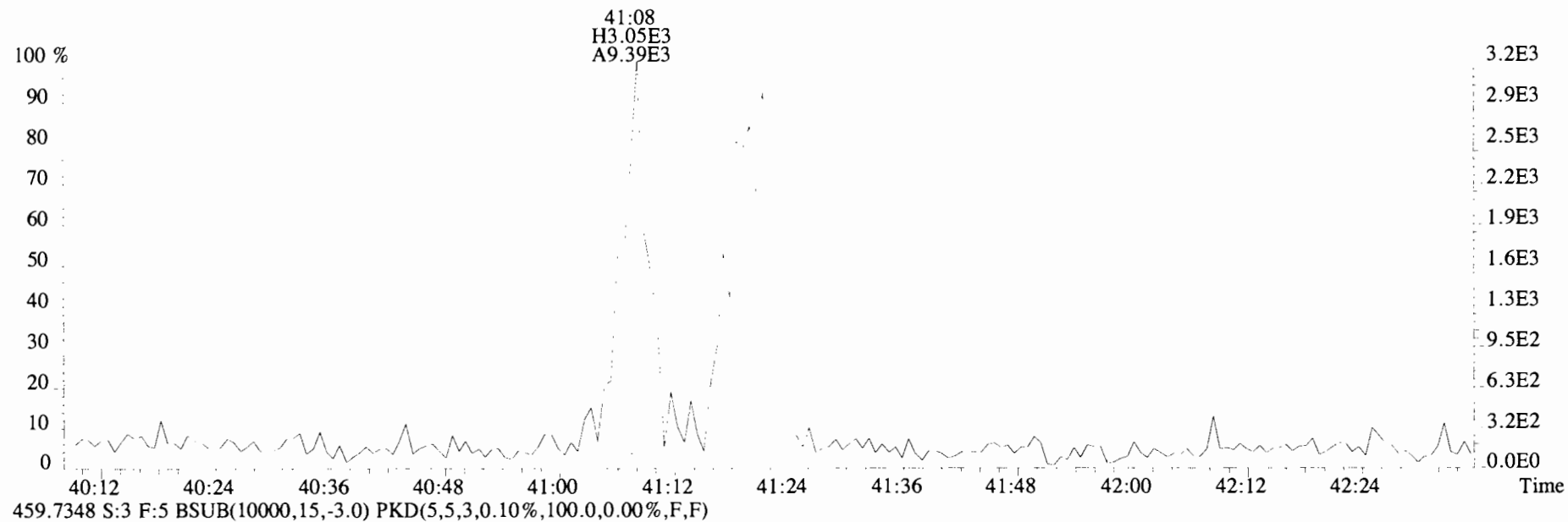
471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



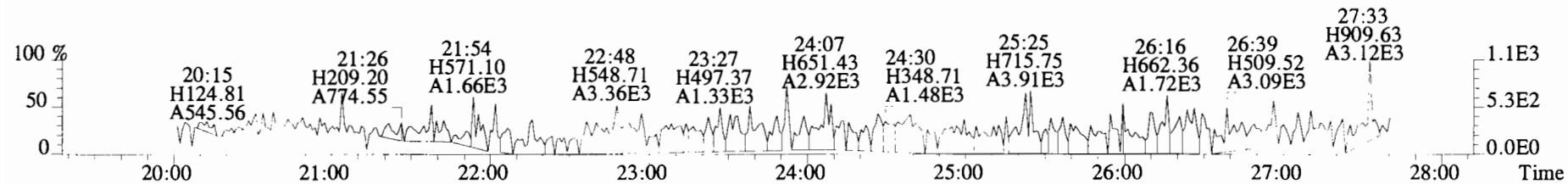
454.9728 S:3 F:5



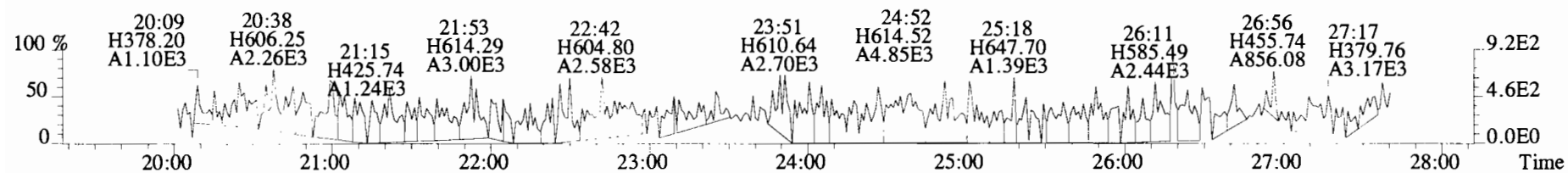
File:191120D2 #1-431 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata Analytical Laboratory_VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



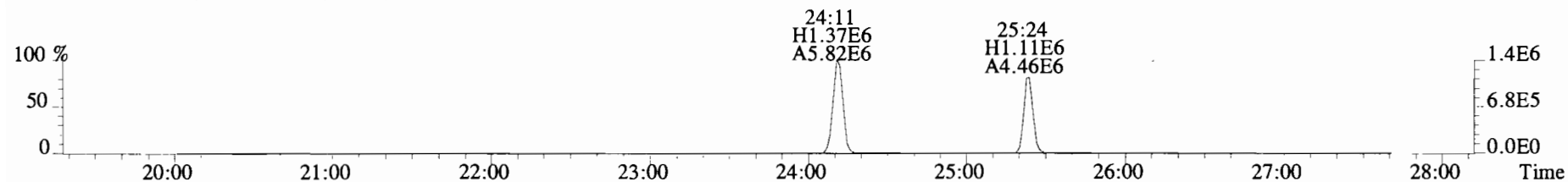
File:191120D2 #1-492 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Viata Analytical Laboratory VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
 303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



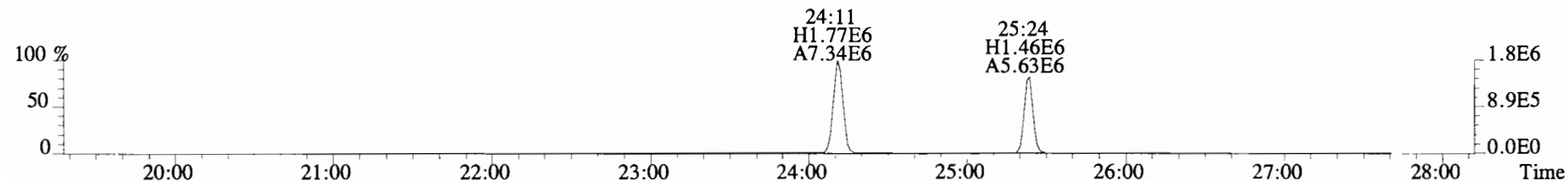
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



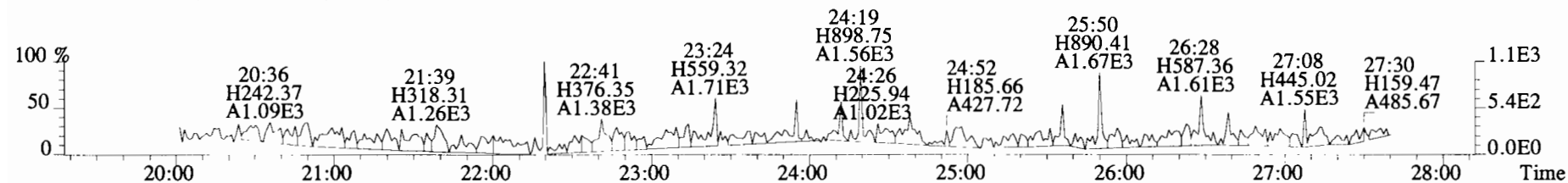
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



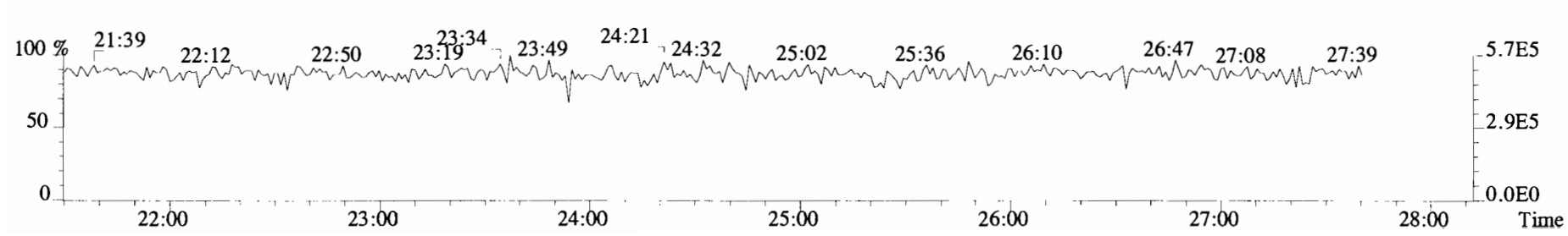
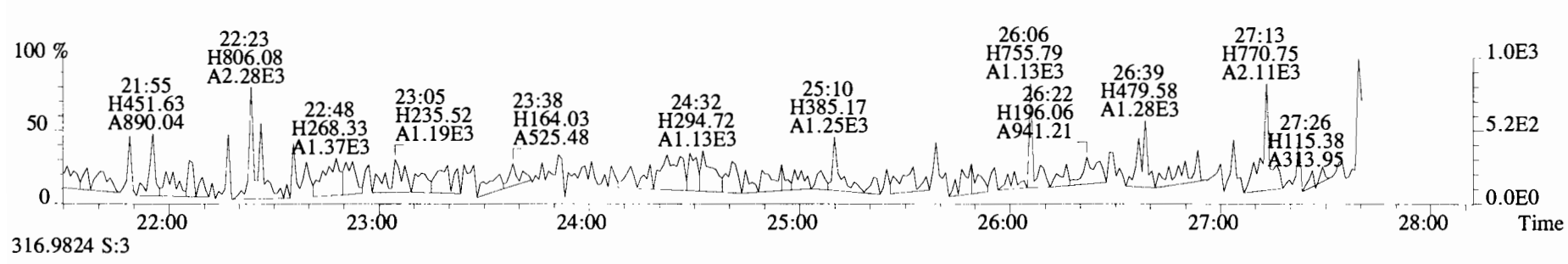
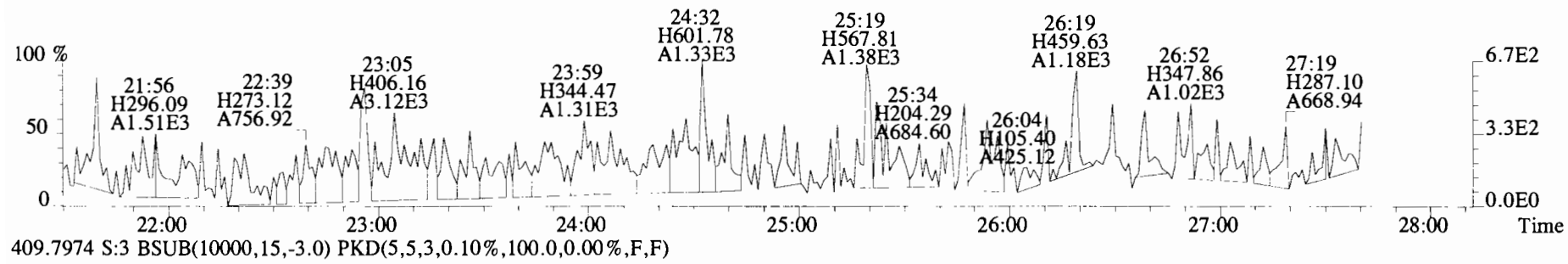
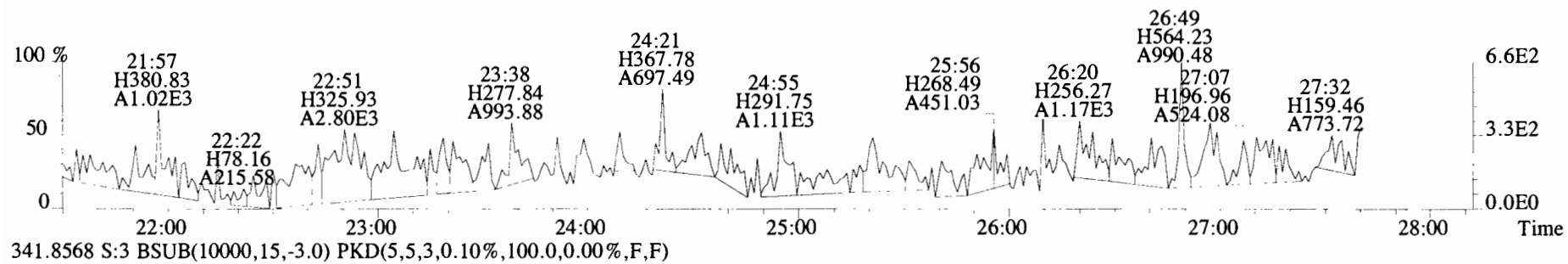
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



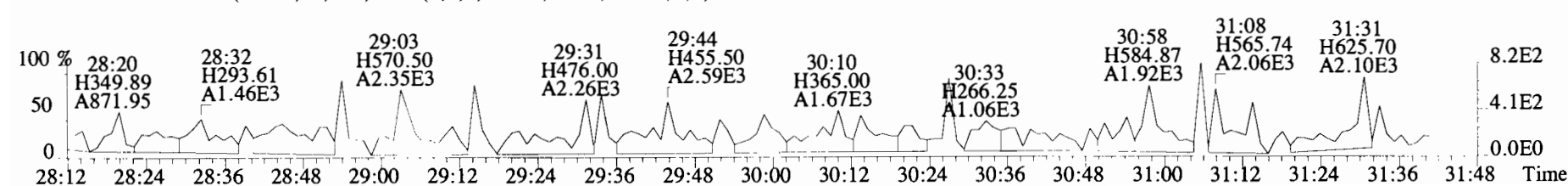
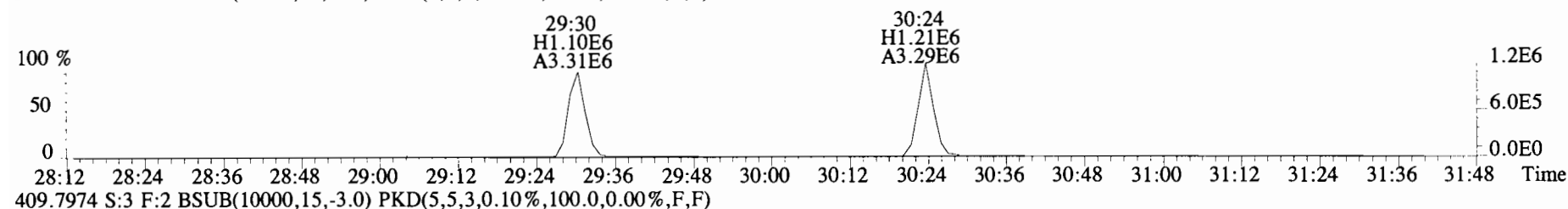
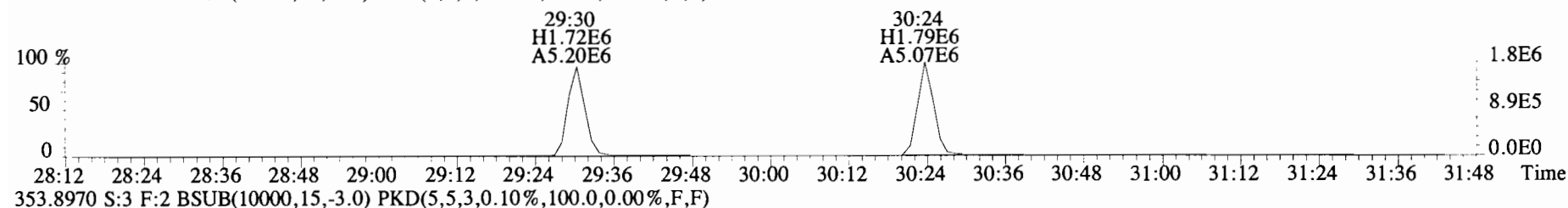
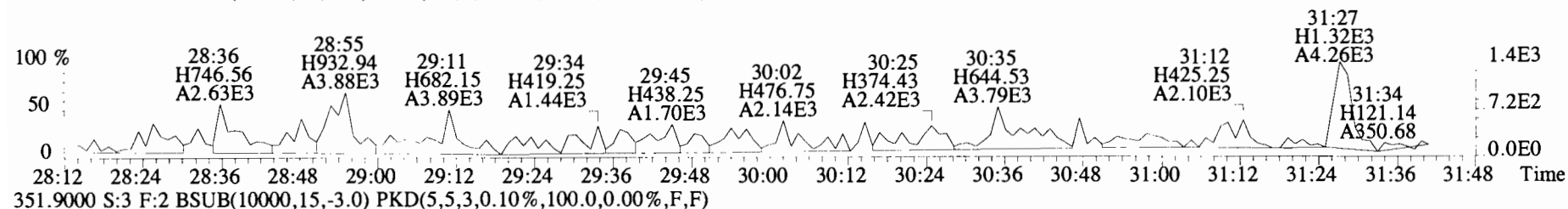
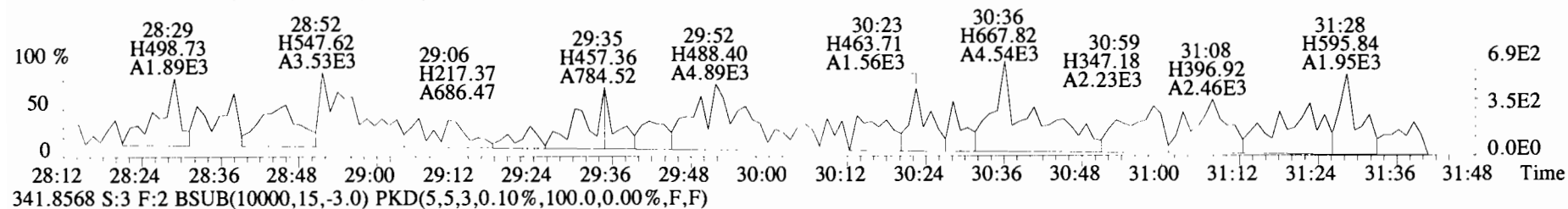
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



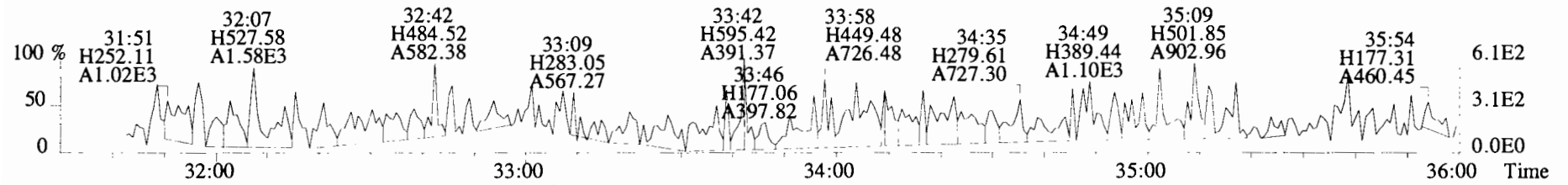
File:191120D2 #1-492 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Viata Analytical Laboratory VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
 339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



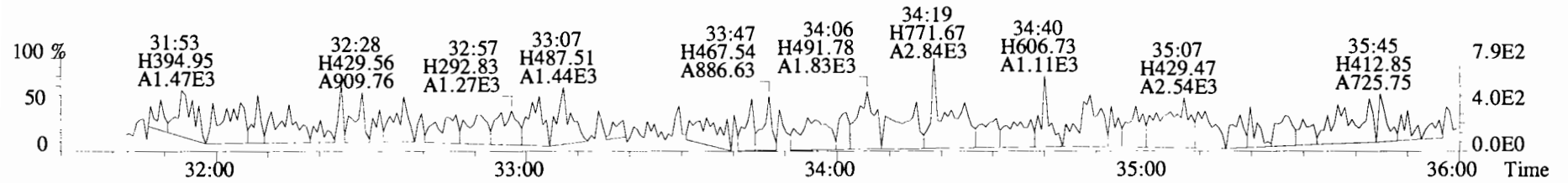
File:191120D2 #1-211 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
 339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



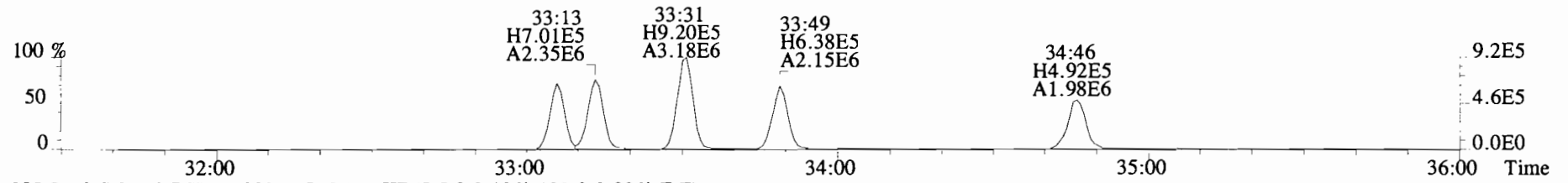
File:191120D2 #1-384 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata Analytical Laboratory_VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



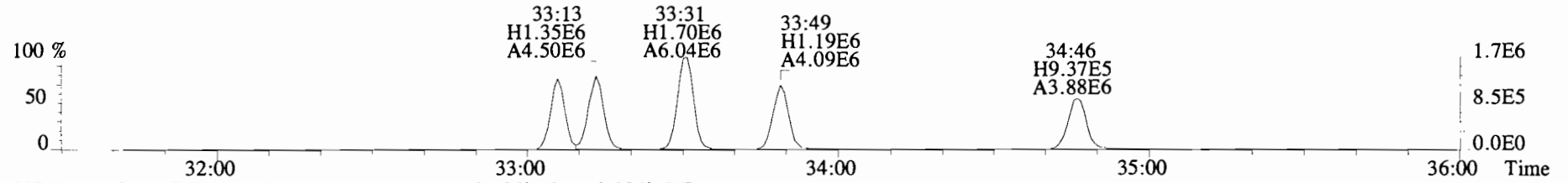
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



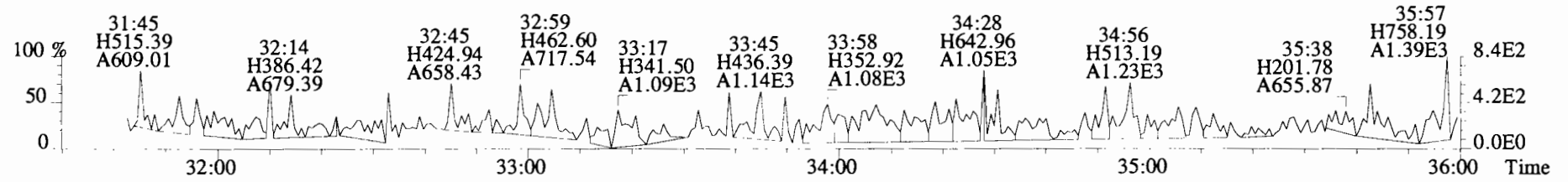
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



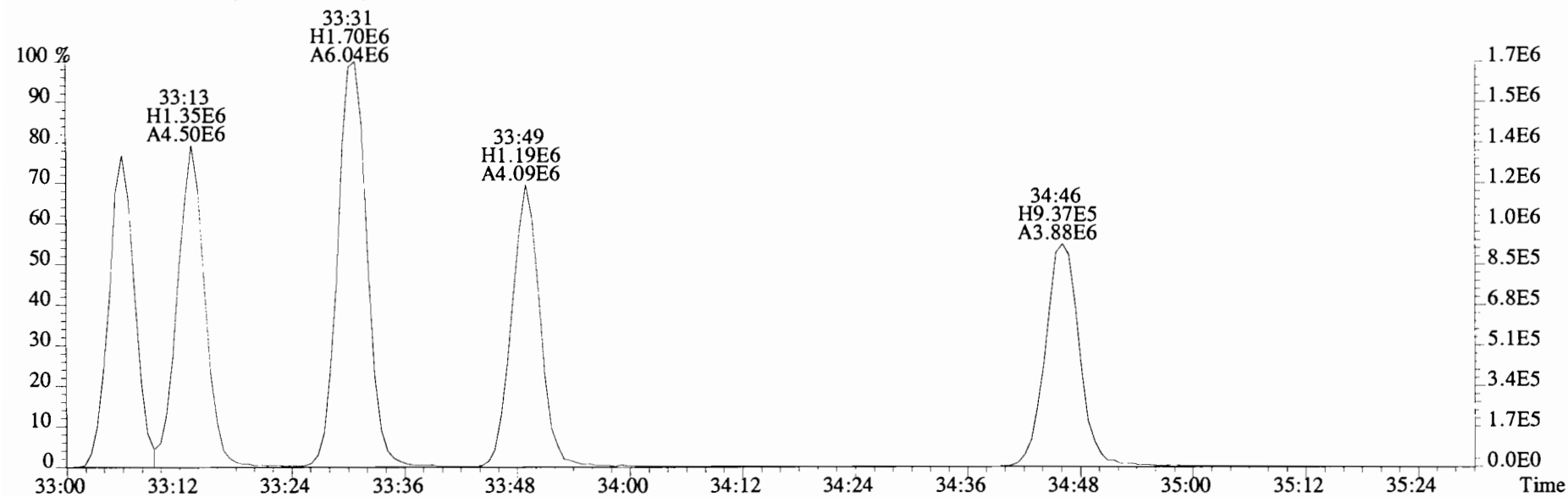
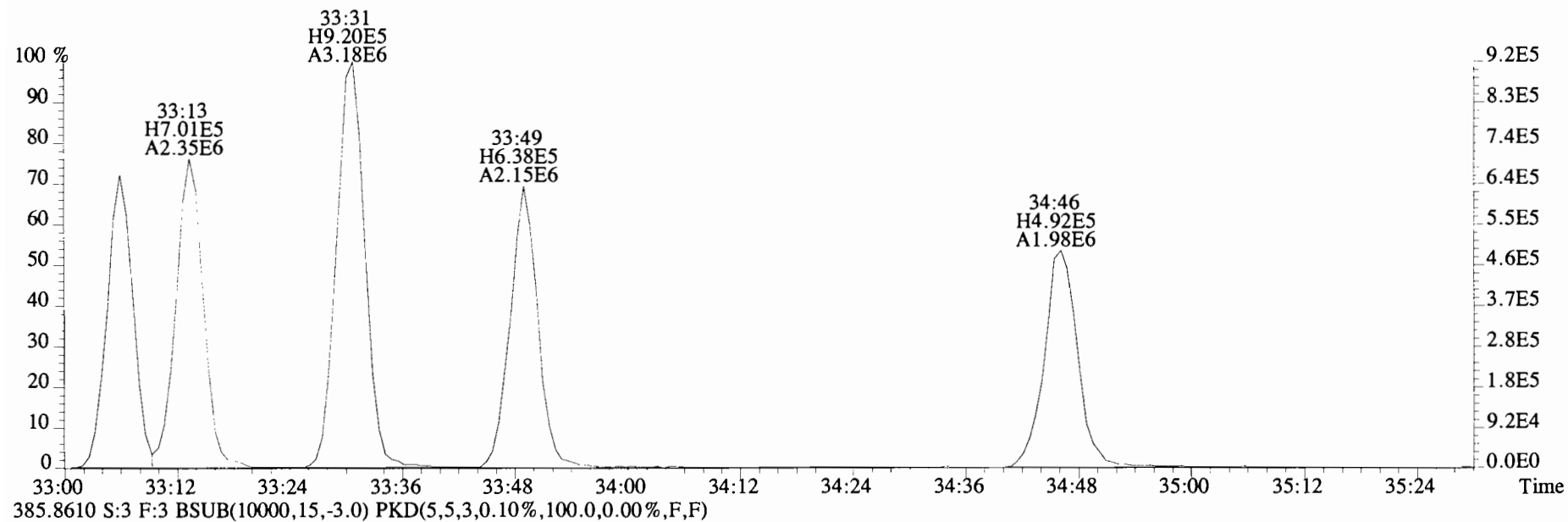
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



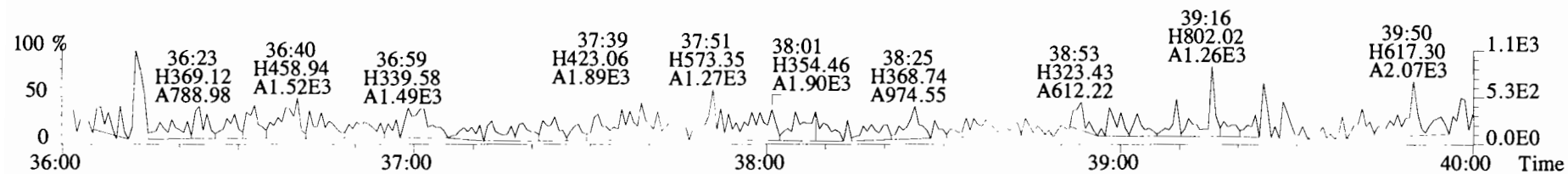
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



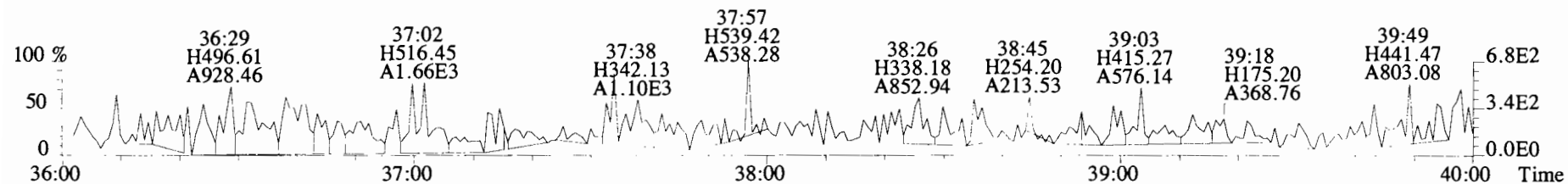
File:191120D2 #1-384 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata Analytical Laboratory VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



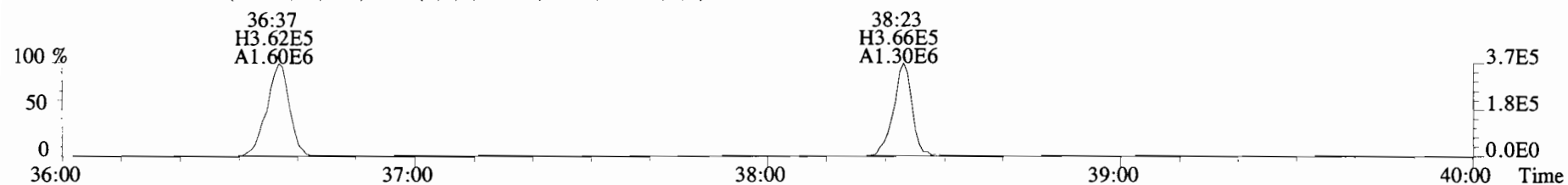
File:191120D2 #1-356 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
407.7818 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



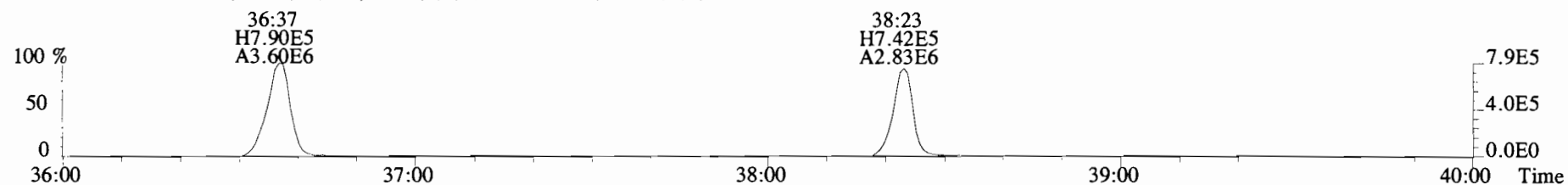
409.7788 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



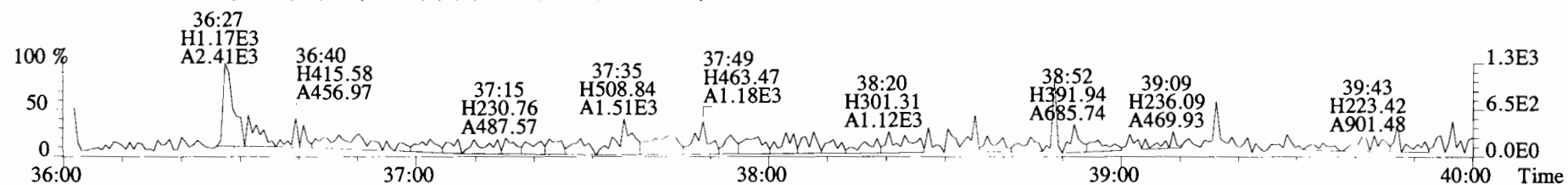
417.8253 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



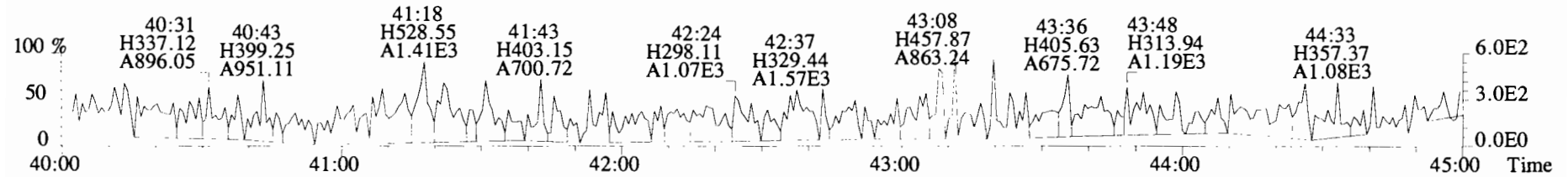
419.8220 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



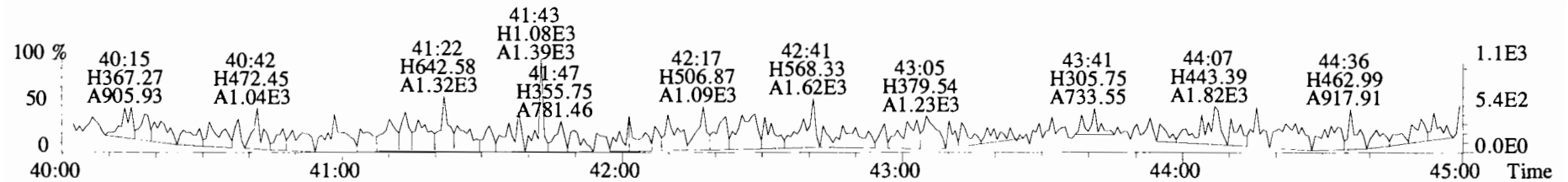
479.7165 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



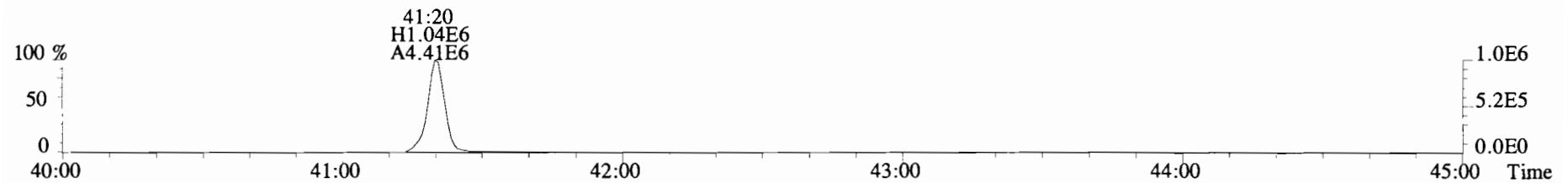
File:191120D2 #1-431 Acq:21-NOV-2019 03:47:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-01 PDI-057SC-A-13-14-191023 14.67 Exp:OCDD_DB5
441.7428 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



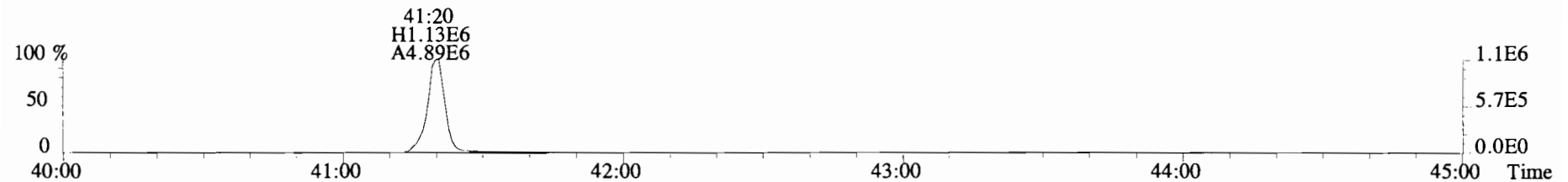
443.7398 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



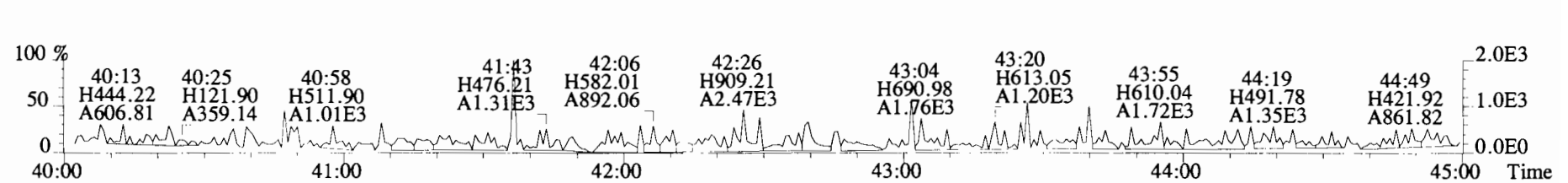
453.7831 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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	Not Fη	*		167	2.5	0.0692	Total Tetra-Dioxins	*	*		167	0.0692
1,2,3,7,8-PeCDD	*	* n	0.90	Not Fη	*		274	2.5	0.104	Total Penta-Dioxins	*	*		274	0.104
1,2,3,4,7,8-HxCDD	*	* n	1.10	Not Fη	*		145	2.5	0.0877	Total Hexa-Dioxins	*	0.0854		*	*
1,2,3,6,7,8-HxCDD	*	* n	0.94	Not Fη	*		145	2.5	0.0945	Total Hepta-Dioxins	0.250	0.425		*	*
1,2,3,7,8,9-HxCDD	*	* n	0.96	Not Fη	*		145	2.5	0.0926	Total Tetra-Furans	*	*		148	0.0417
1,2,3,4,6,7,8-HpCDD	5.23e+03	0.77 n	0.98	37:52	0.17464		*	2.5	*	Total Penta-Furans	0.0000	0.0000		234	0.0813
OCDD	2.10e+04	0.98 y	0.96	41:07	0.88666		*	2.5	*	Total Hexa-Furans	*	*		125	0.0366
										Total Hepta-Furans	*	*		149	0.0644
2,3,7,8-TCDF	*	* n	0.95	Not Fη	*		148	2.5	0.0417						
1,2,3,7,8-PeCDF	*	* n	0.96	Not Fη	*		234	2.5	0.0854						
2,3,4,7,8-PeCDF	*	* n	1.01	Not Fη	*		234	2.5	0.0774						
1,2,3,4,7,8-HxCDF	*	* n	1.18	Not Fη	*		125	2.5	0.0315						
1,2,3,6,7,8-HxCDF	*	* n	1.07	Not Fη	*		125	2.5	0.0335						
2,3,4,6,7,8-HxCDF	*	* n	1.11	Not Fη	*		125	2.5	0.0376						
1,2,3,7,8,9-HxCDF	*	* n	1.06	Not Fη	*		125	2.5	0.0444						
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	Not Fη	*		149	2.5	0.0699						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	Not Fη	*		149	2.5	0.0582						
OCDF	*	* n	0.95	Not Fη	*		133	2.5	0.0915						
										Rec	Qual				
IS	13C-2,3,7,8-TCDD	8.49e+06	0.82 y	1.10	26:10	189.87				97.2					
IS	13C-1,2,3,7,8-PeCDD	7.15e+06	0.62 y	0.88	30:40	198.61				102					
IS	13C-1,2,3,4,7,8-HxCDD	6.03e+06	1.29 y	0.64	33:58	205.21				105					
IS	13C-1,2,3,6,7,8-HxCDD	6.72e+06	1.28 y	0.86	34:05	171.81				87.9					
IS	13C-1,2,3,7,8,9-HxCDD	6.92e+06	1.24 y	0.81	34:23	187.63				96.0					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.98e+06	1.06 y	0.65	37:50	199.87				102					
IS	13C-OCDD	9.64e+06	0.91 y	0.58	41:07	363.47				93.0					
IS	13C-2,3,7,8-TCDF	1.26e+07	0.77 y	1.03	25:23	181.94				93.1					
IS	13C-1,2,3,7,8-PeCDF	1.10e+07	1.53 y	0.85	29:30	191.93				98.2					
IS	13C-2,3,4,7,8-PeCDF	1.07e+07	1.54 y	0.85	30:24	188.52				96.5					
IS	13C-1,2,3,4,7,8-HxCDF	7.92e+06	0.52 y	0.83	33:05	208.11				107					
IS	13C-1,2,3,6,7,8-HxCDF	8.74e+06	0.52 y	1.03	33:13	184.76				94.6					
IS	13C-2,3,4,6,7,8-HxCDF	8.07e+06	0.51 y	0.95	33:48	184.97				94.7					
IS	13C-1,2,3,7,8,9-HxCDF	7.85e+06	0.52 y	0.83	34:46	207.24				106					
IS	13C-1,2,3,4,6,7,8-HpCDF	6.40e+06	0.44 y	0.76	36:36	184.61				94.5					
IS	13C-1,2,3,4,7,8,9-HpCDF	5.55e+06	0.44 y	0.58	38:22	208.64				107					
IS	13C-OCDF	1.20e+07	0.89 y	0.69	41:20	381.44				97.6					
C/Up	37C1-2,3,7,8-TCDD	3.65e+06		1.20	26:11	74.714				95.6					
RS/RT	13C-1,2,3,4-TCDD	7.98e+06	0.82 y	1.00	25:37	195.36									
RS	13C-1,2,3,4-TCDF	1.31e+07	0.80 y	1.00	24:11	195.36									
RS/RT	13C-1,2,3,4,6,9-HxCDF	8.94e+06	0.51 y	1.00	33:30	195.36									

Integrations
 by DB
 Analyst: DB
 Reviewed
 by CT
 Analyst: CT
 Date: 11/26/19
 Date: 11/27/19

Totals class: HxCDD EMPC

Entry #: 23

Run: 9 File: 191120D2 S: 4 I: 1 F: 3
Acquired: 21-NOV-19 04:34:51 Processed: 26-NOV-19 12:21:44

Total Concentration: 0.085356 Unnamed Concentration: 0.085

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:28	1.964e+03	1.269e+03	1.55 n	2.841e+03	0.085356

Totals class: HpCDD EMPC

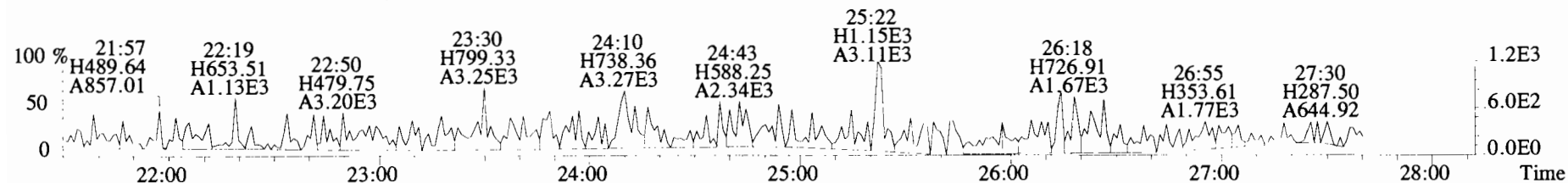
Entry #: 25

Run: 9 File: 191120D2 S: 4 I: 1 F: 4
Acquired: 21-NOV-19 04:34:51 Processed: 26-NOV-19 12:21:44

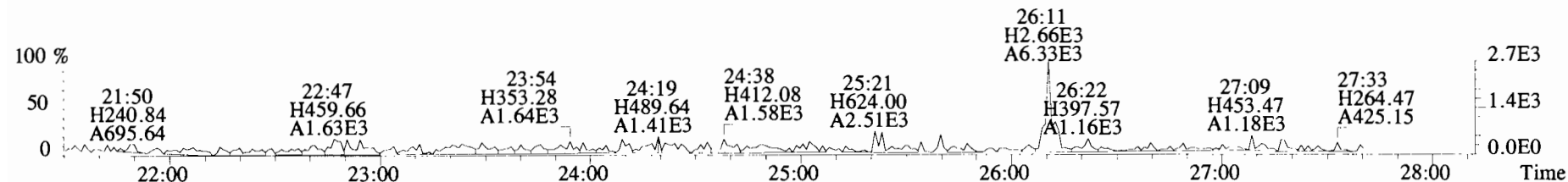
Total Concentration: 0.42493 Unnamed Concentration: 0.250

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:00	3.876e+03	3.625e+03	1.07 y		7.501e+03 0.25029	
37:52	2.668e+03	3.457e+03	0.77 n		5.234e+03 0.17464	1,2,3,4,6,7,8-HpCDD

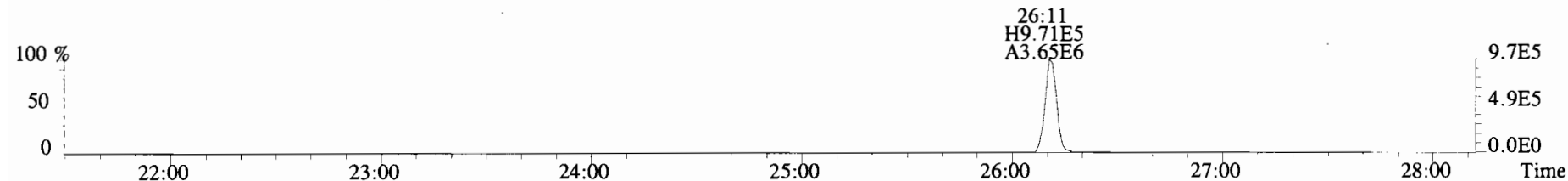
File:191120D2 #1-492 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Viata Analytical Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
 319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



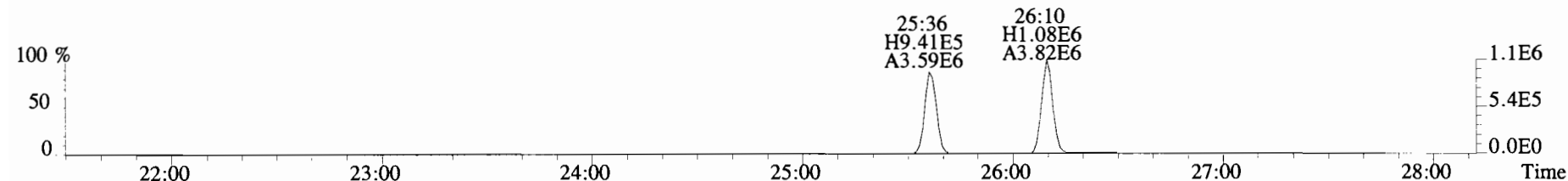
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



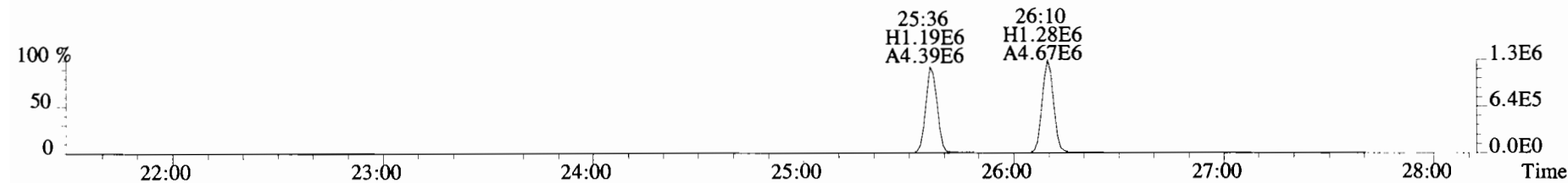
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



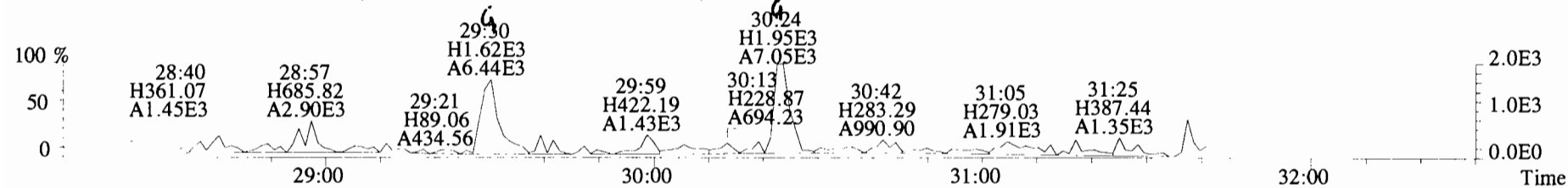
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



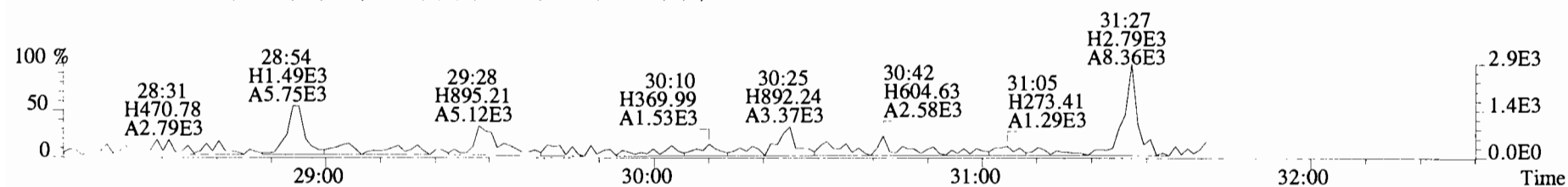
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



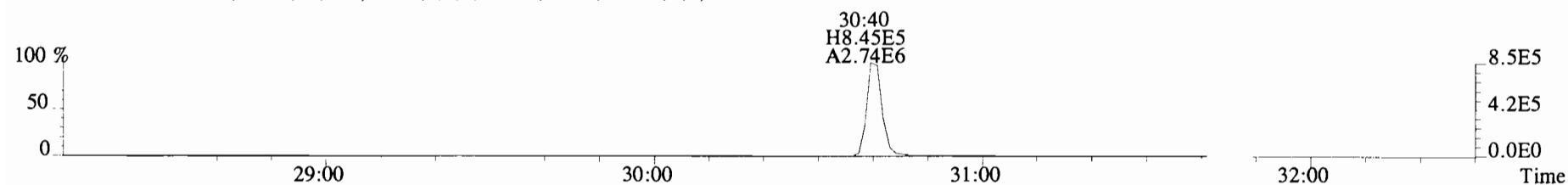
File:191120D2 #1-211 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Viata Analytical Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
 353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



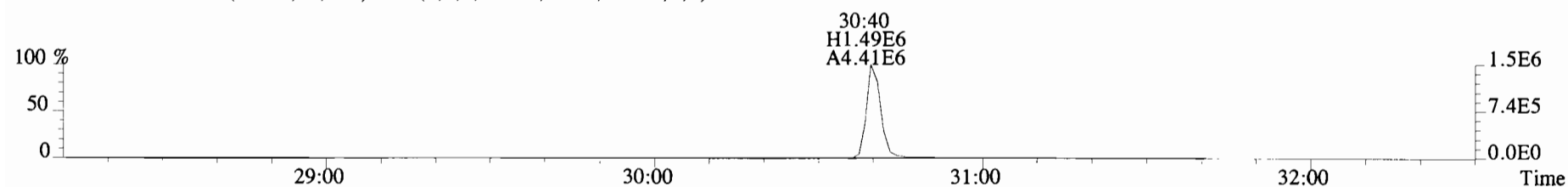
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



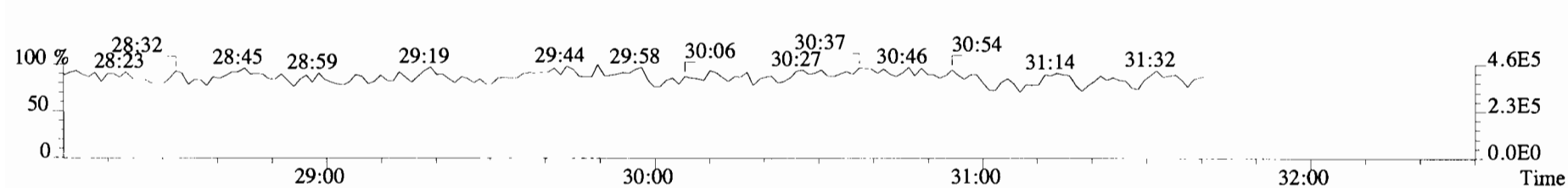
365.8978 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



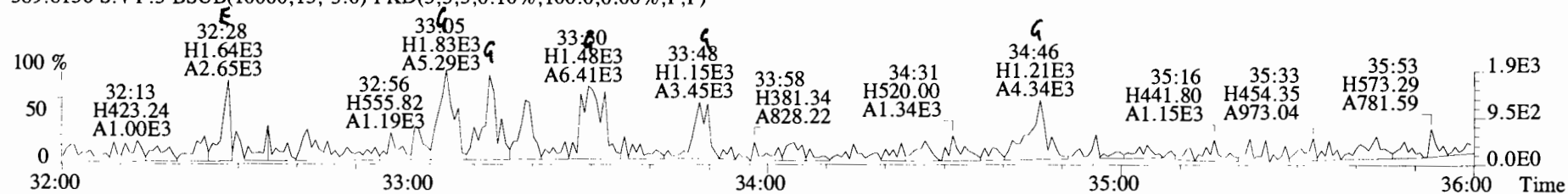
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



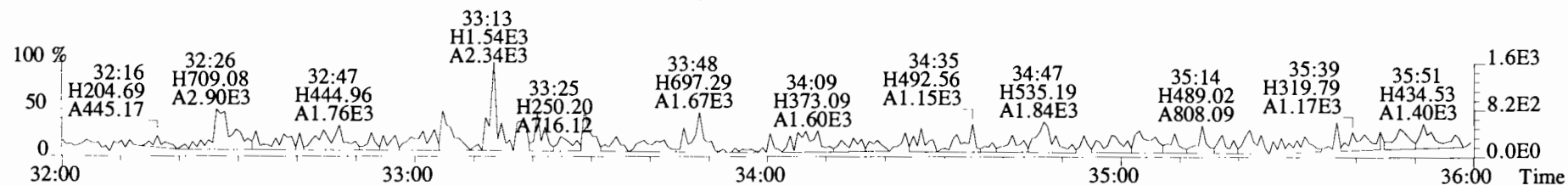
366.9792 S:4 F:2



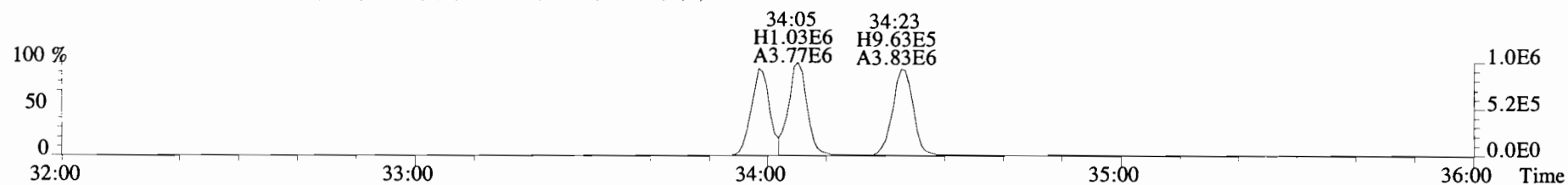
File:191120D2 #1-384 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
 389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



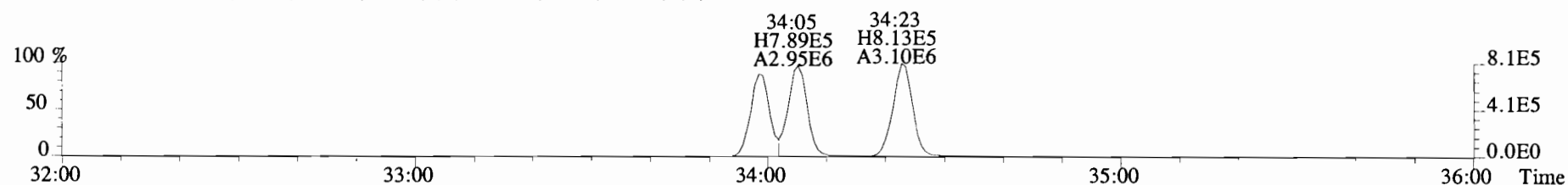
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



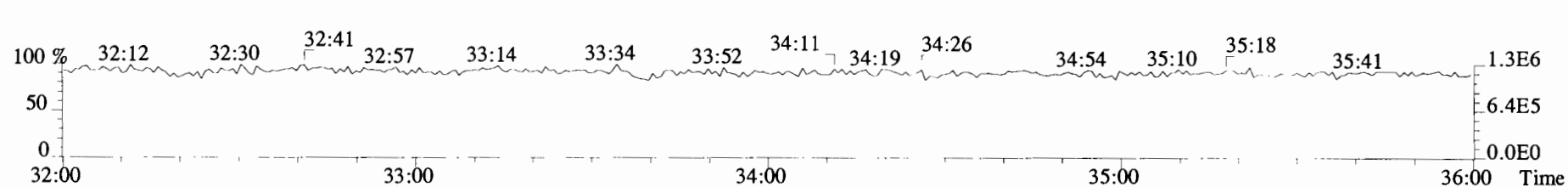
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



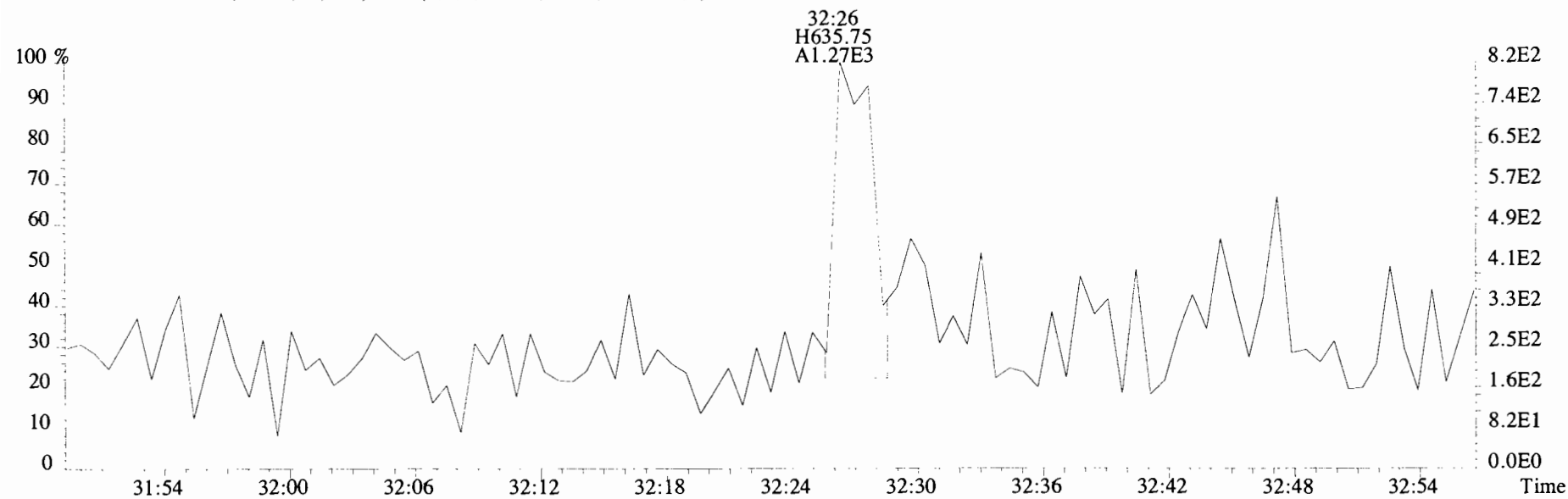
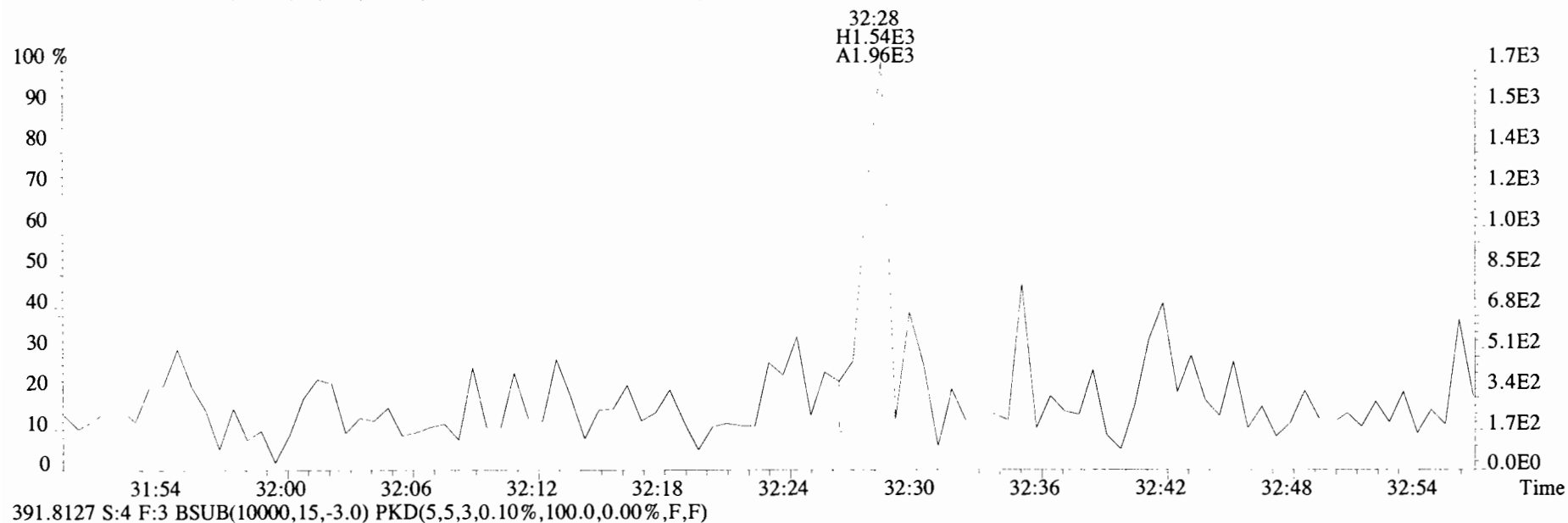
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



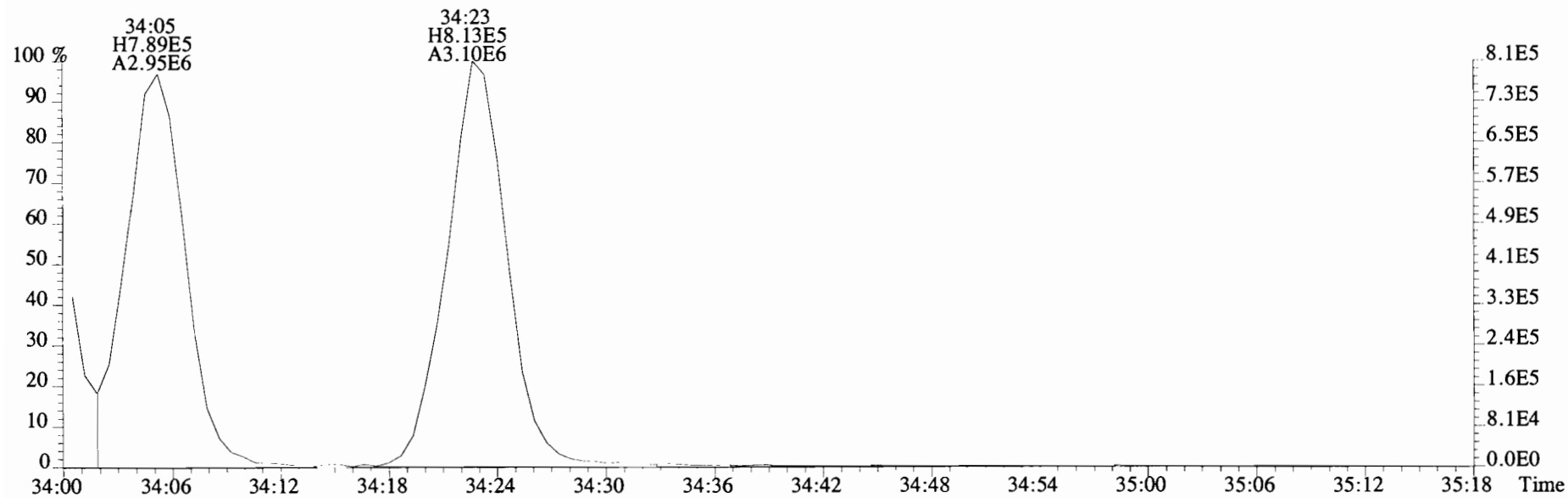
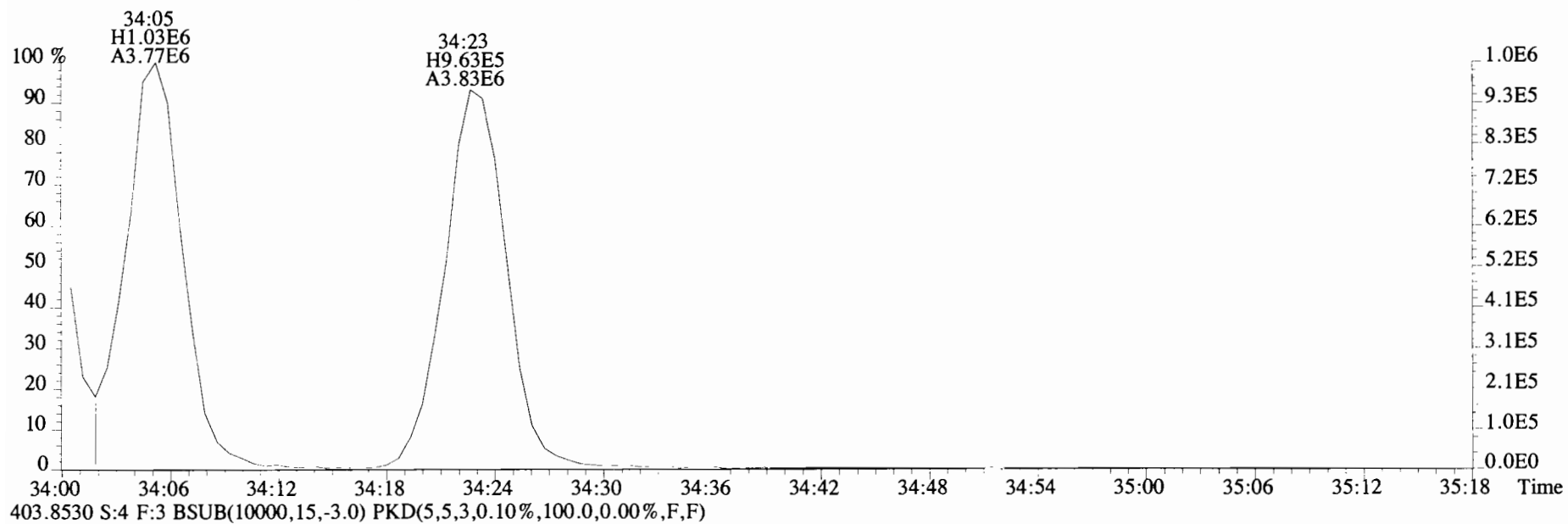
392.9760 S:4 F:3



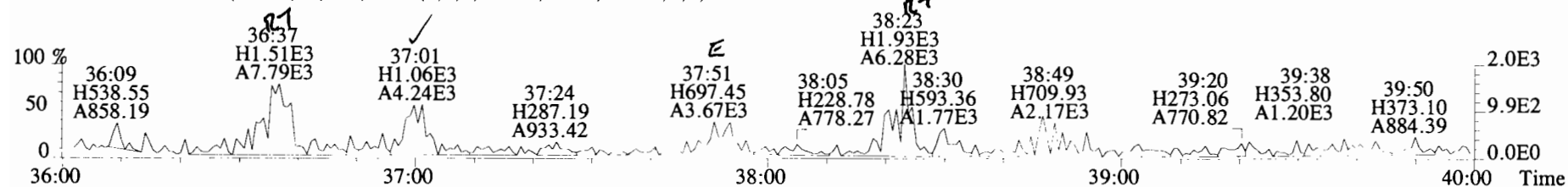
File:191120D2 #1-384 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata Analytical Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



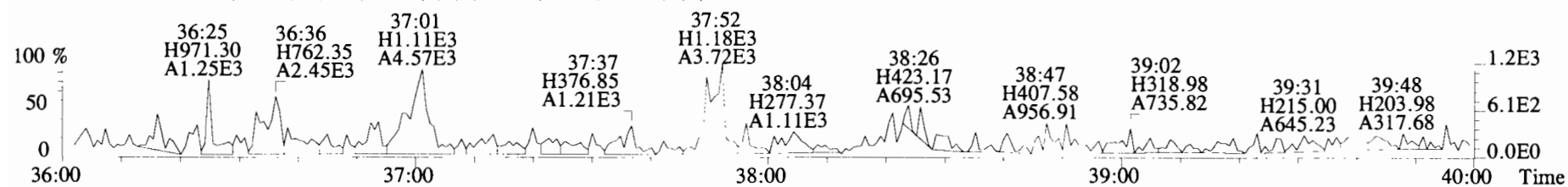
File:191120D2 #1-384 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata Analytical Laboratory VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
401.8559 S:4 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



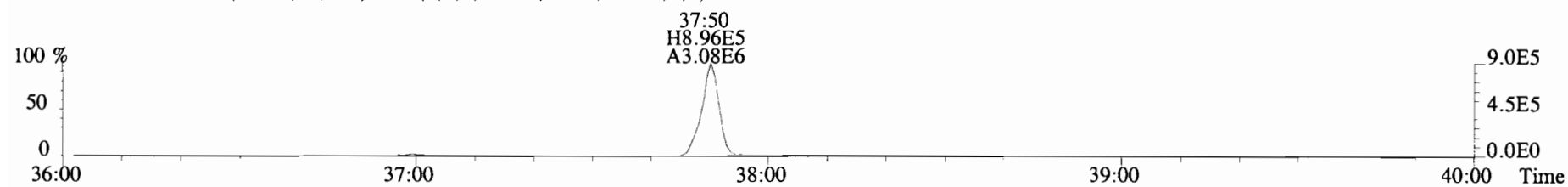
File:191120D2 #1-355 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata Analytical Laboratory VG7 Text:1903829-02 PDI-0575C-A-14-15.3-191023 14.66 Exp:OCDD_DB5
423.7767 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



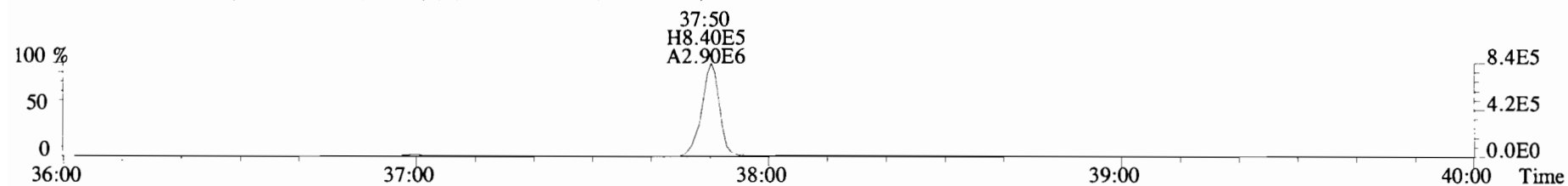
425.7737 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



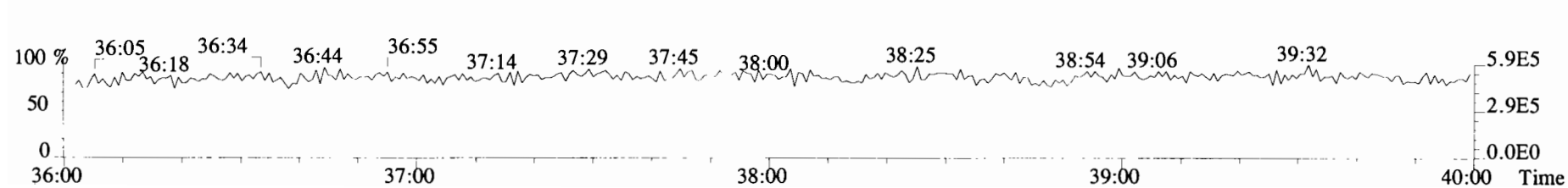
435.8169 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



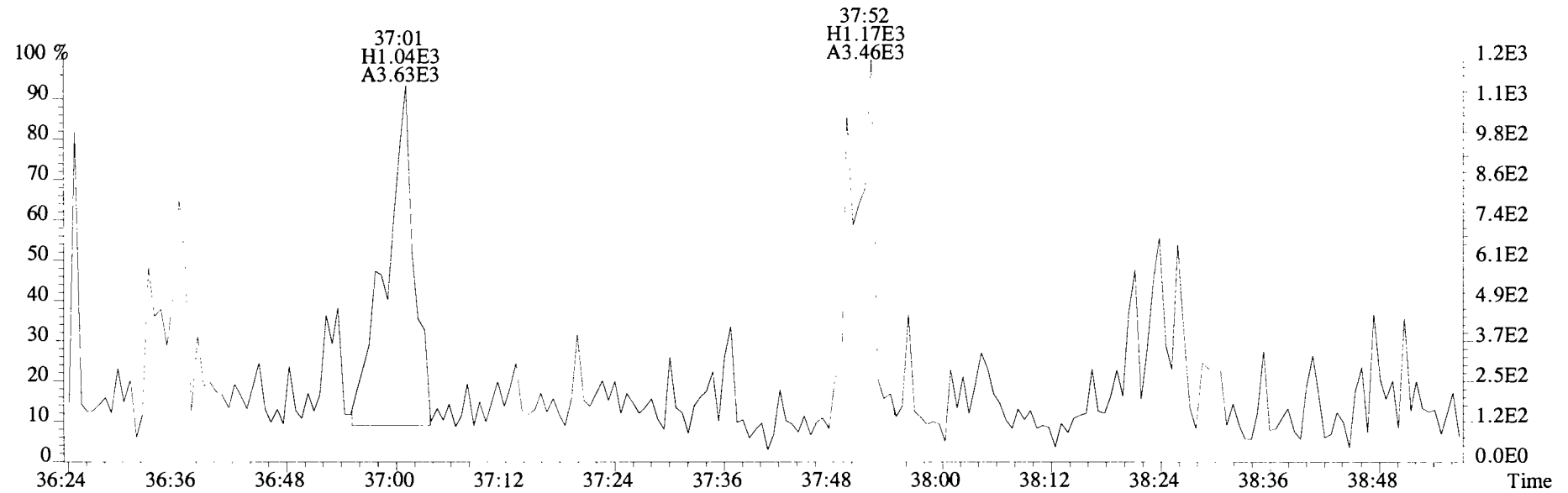
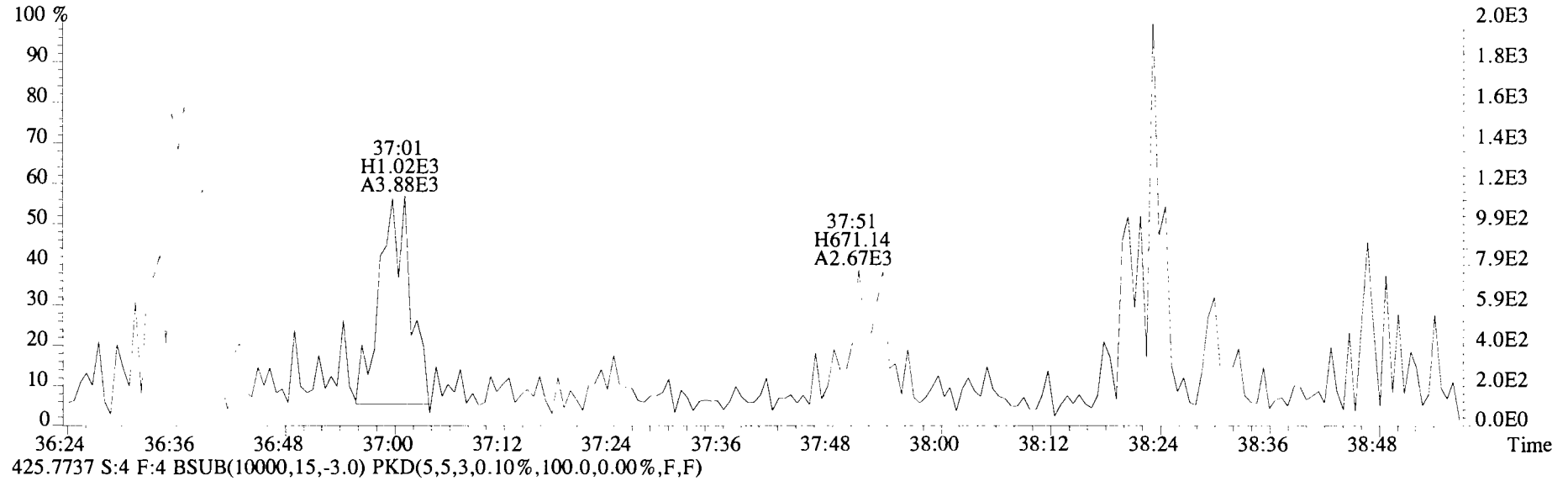
437.8140 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



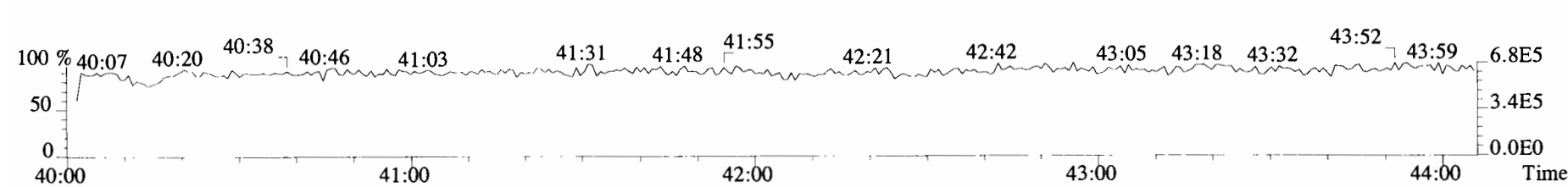
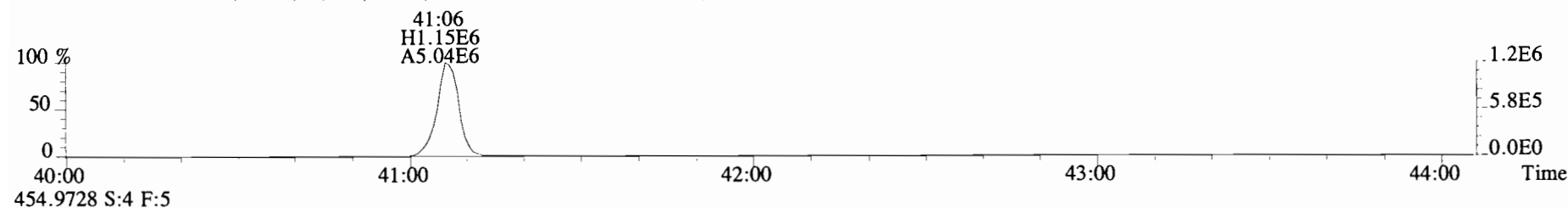
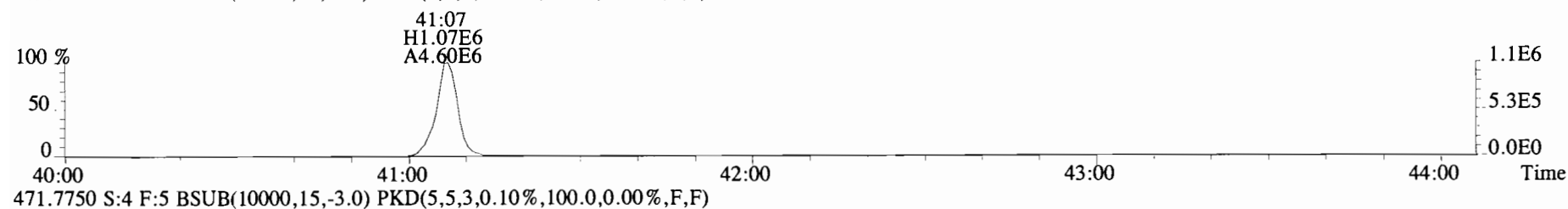
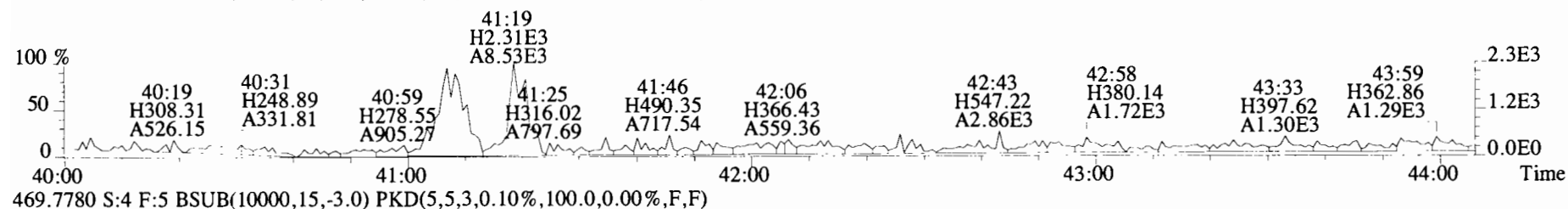
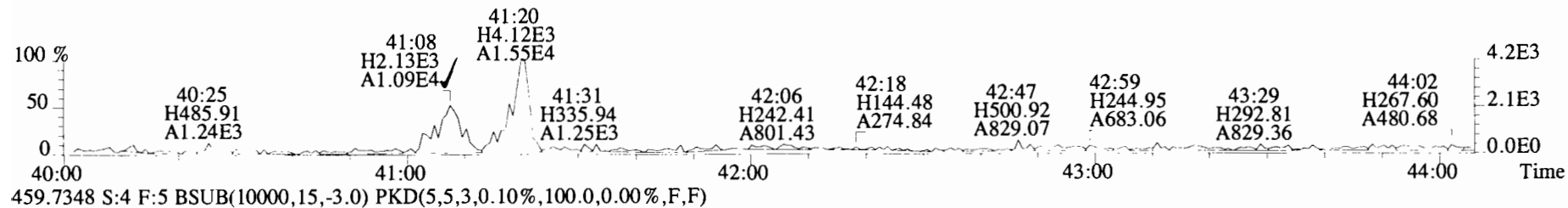
454.9728 S:4 F:4



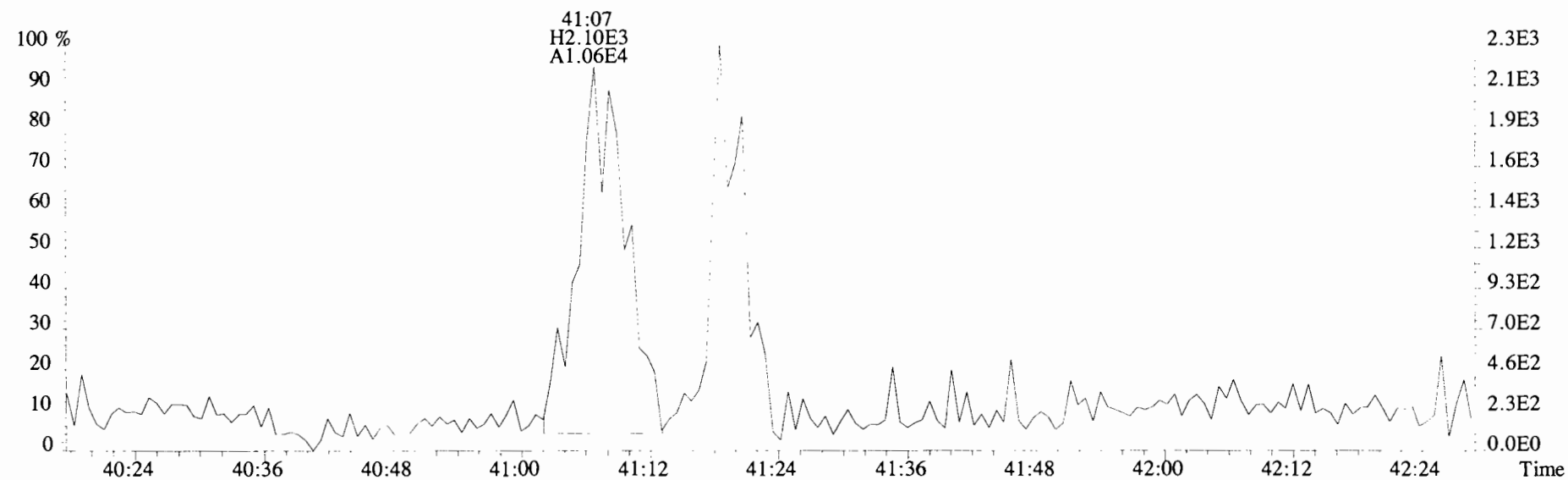
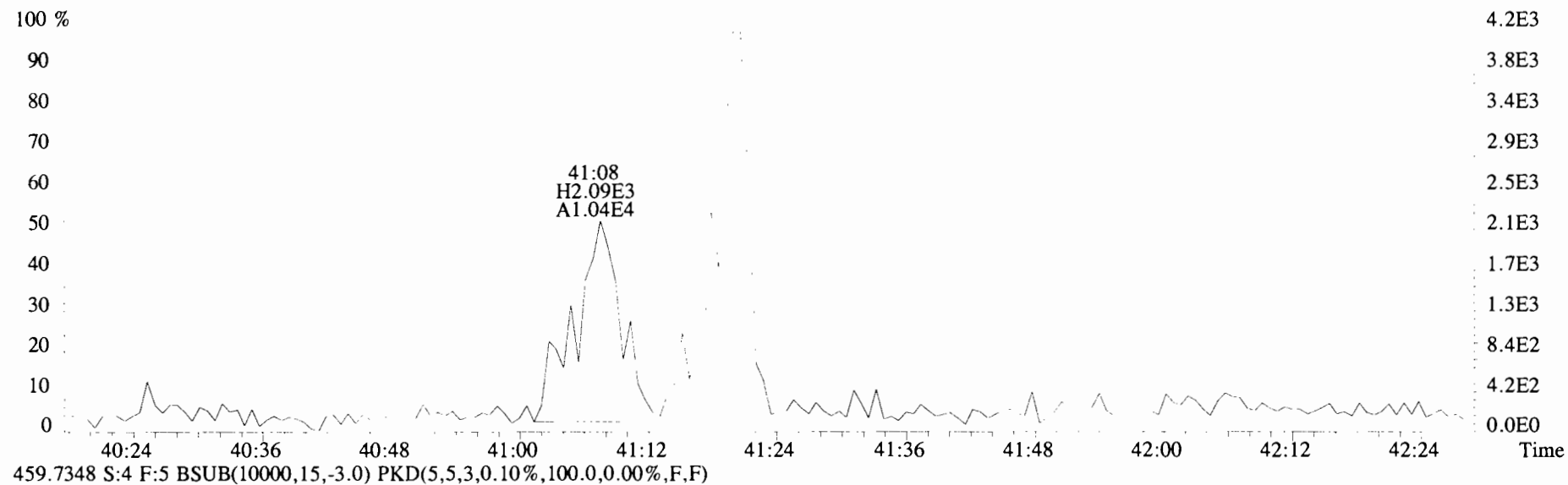
File:191120D2 #1-355 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
423.7767 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



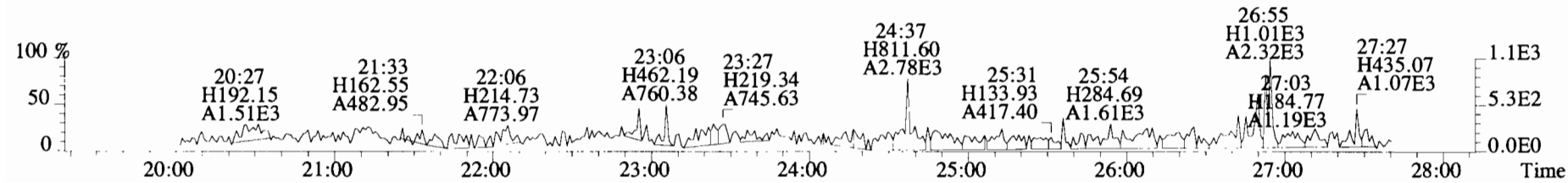
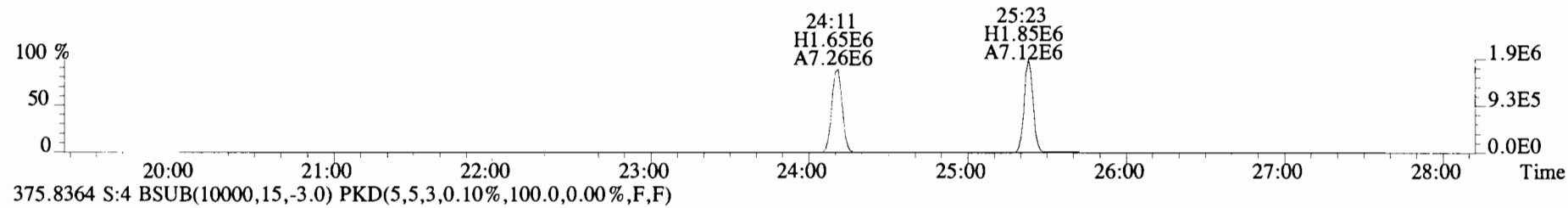
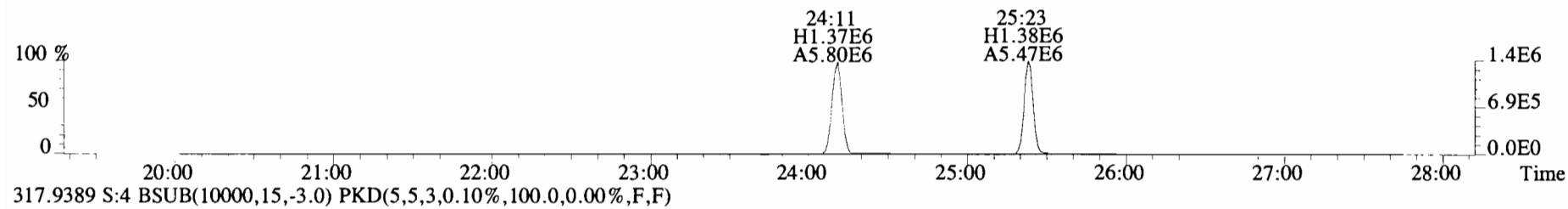
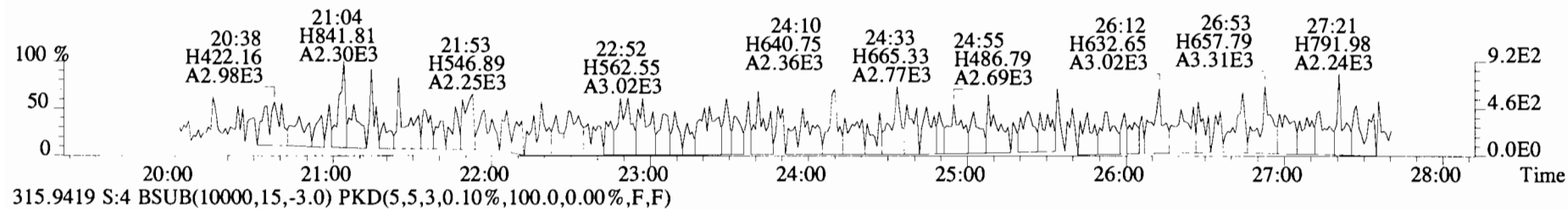
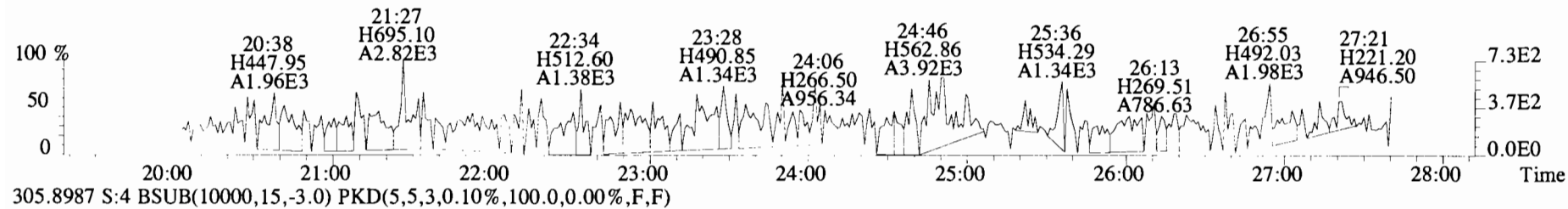
File:191120D2 #1-432 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Viata Analytical Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
 457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



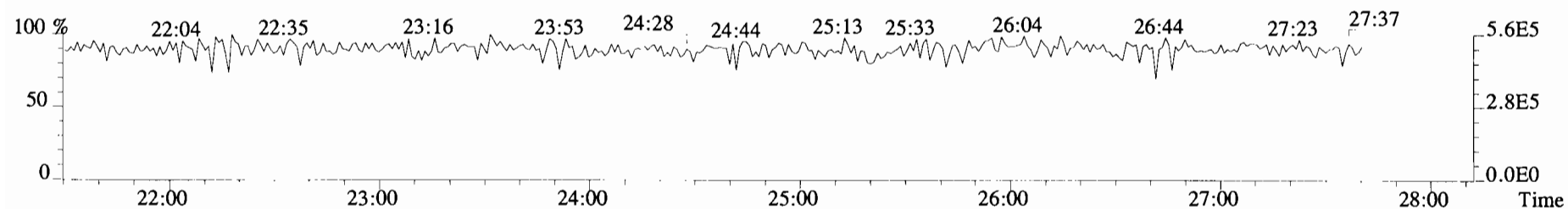
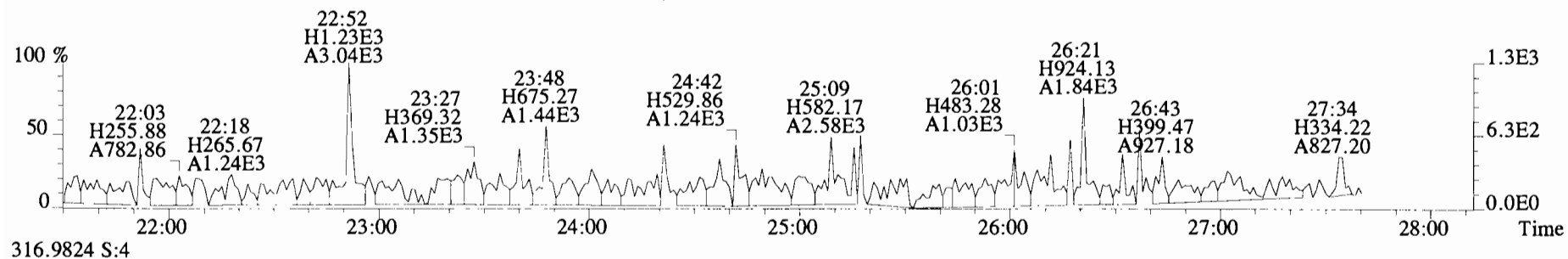
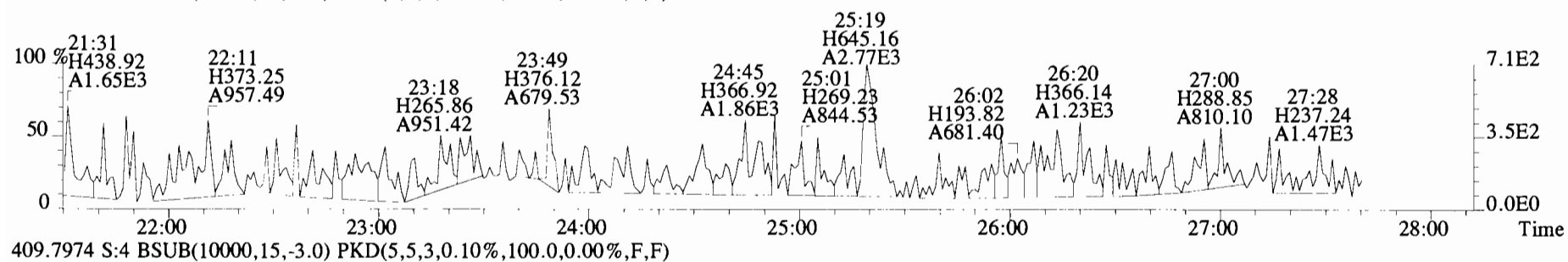
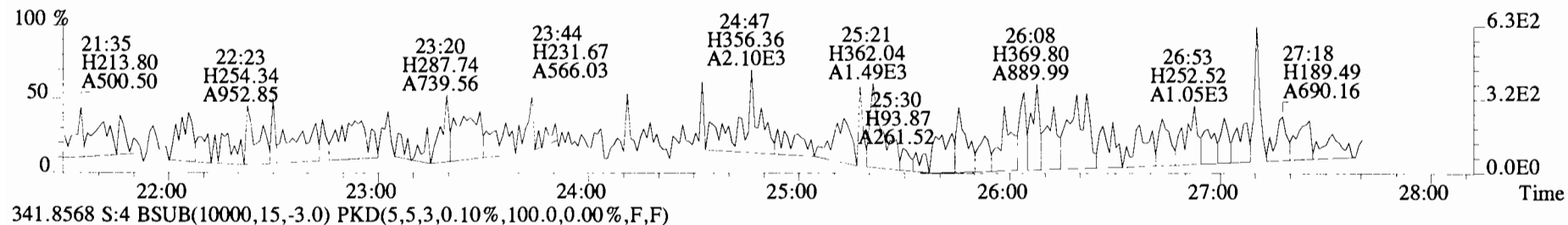
File:191120D2 #1-432 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata Analytical Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



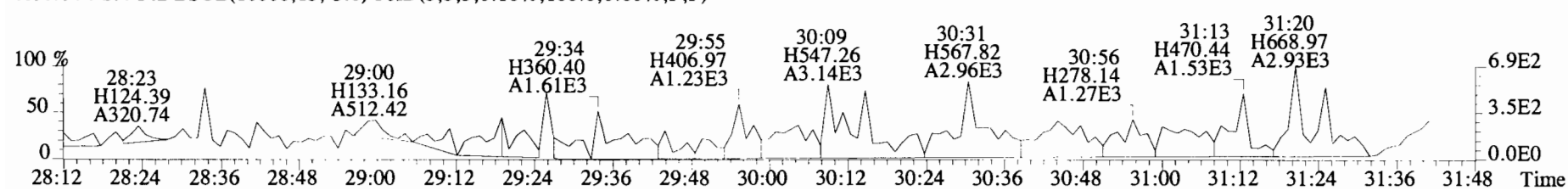
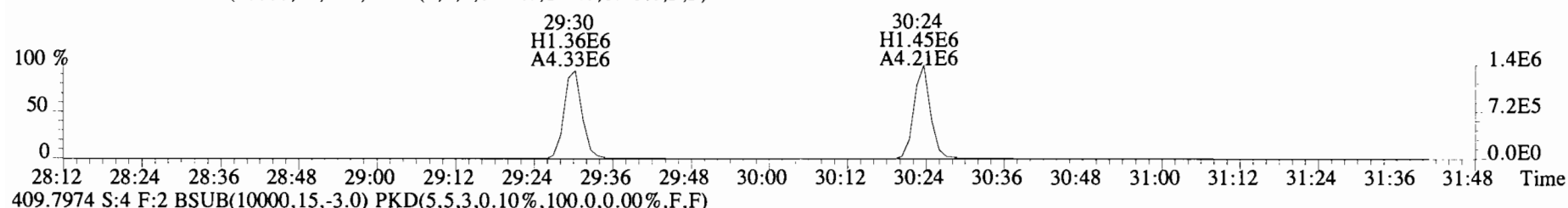
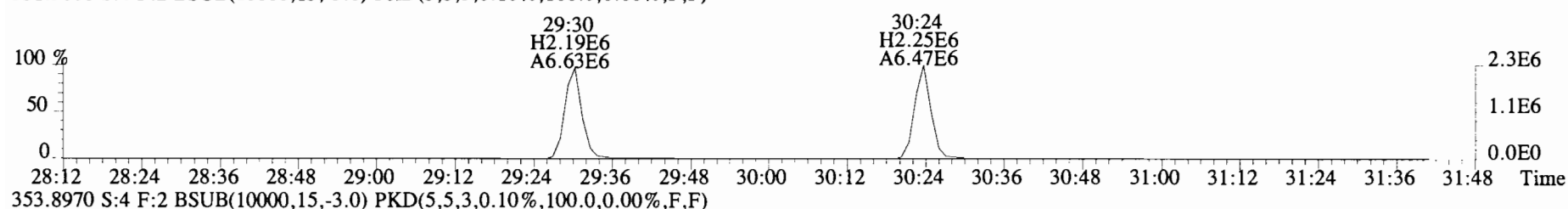
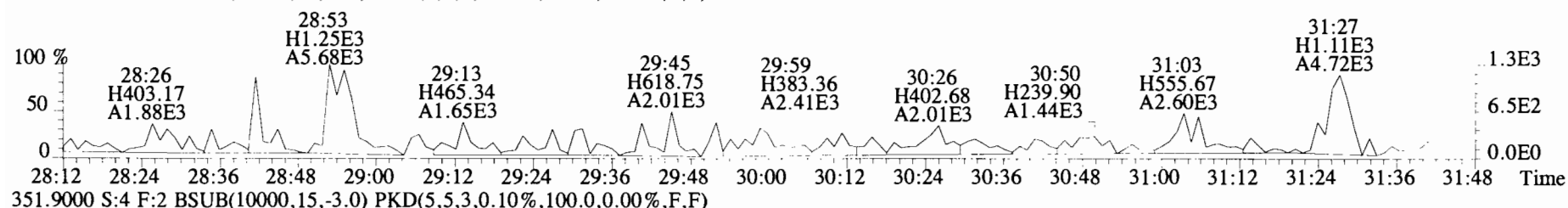
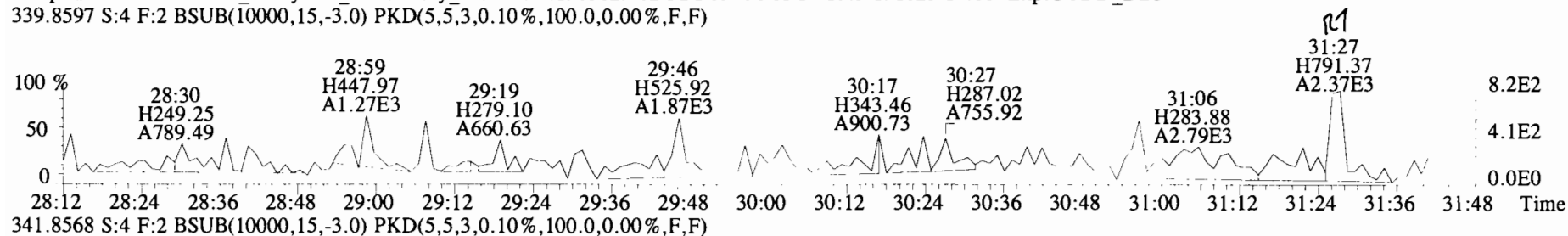
File:191120D2 #1-492 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
 303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



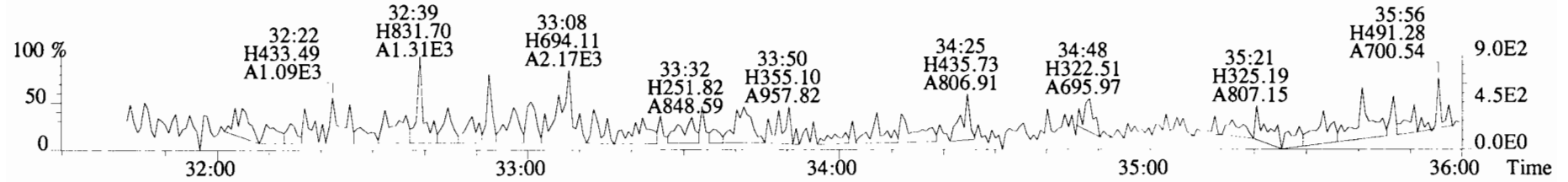
File:191120D2 #1-492 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Viata Analytical Laboratory VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
 339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



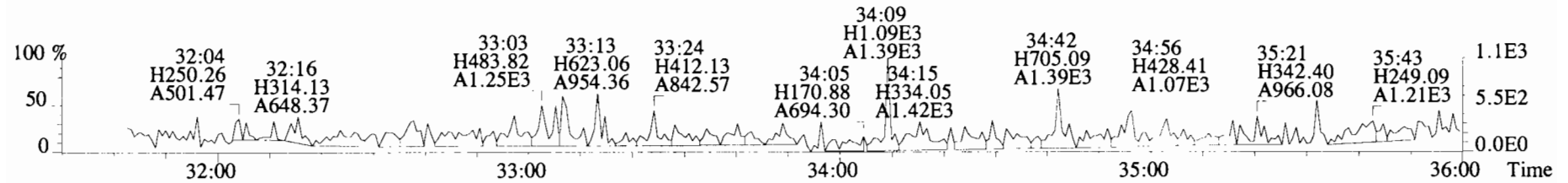
File:191120D2 #1-211 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
 339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



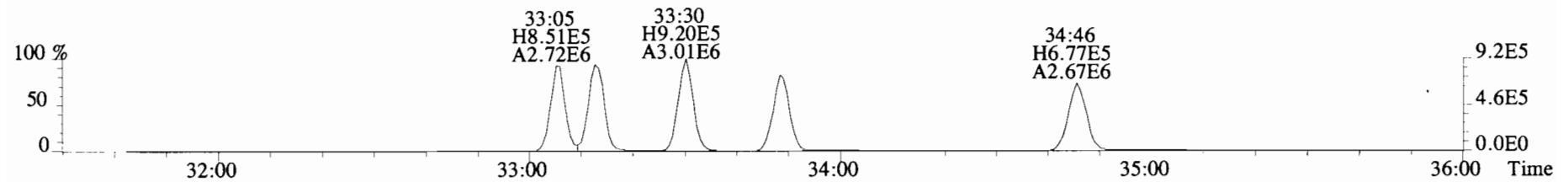
File:191120D2 #1-384 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



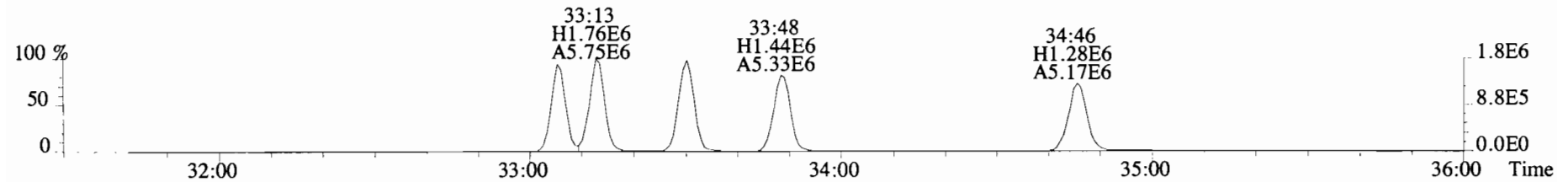
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



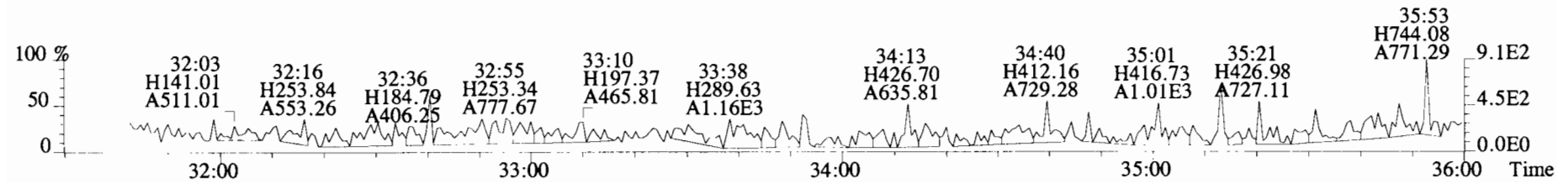
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



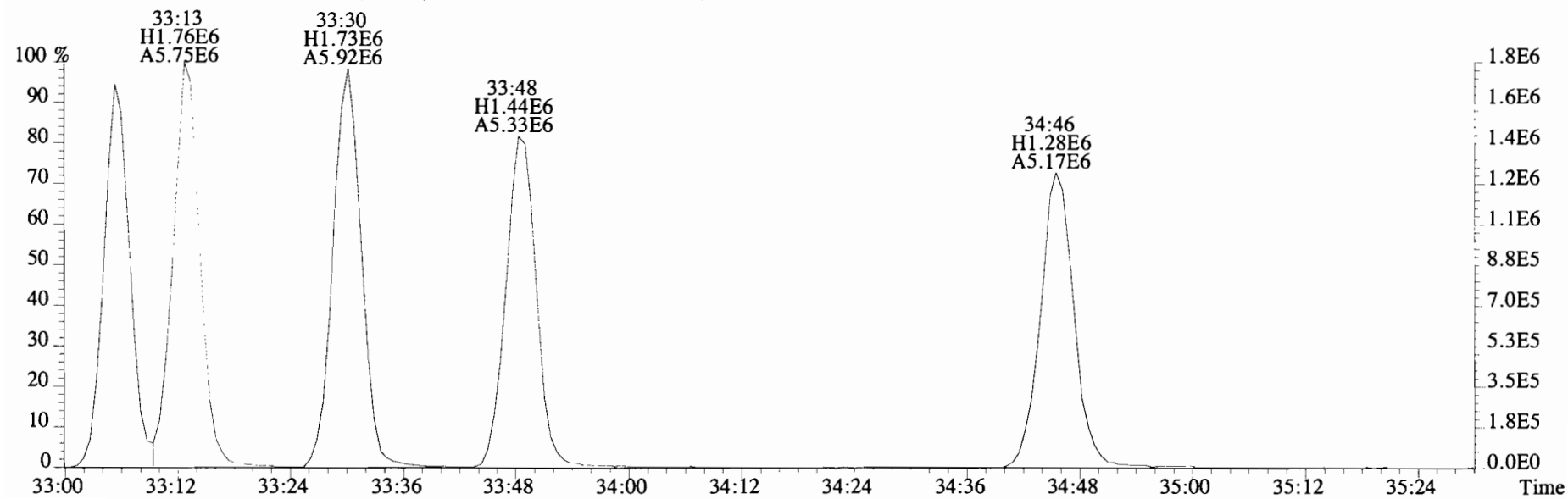
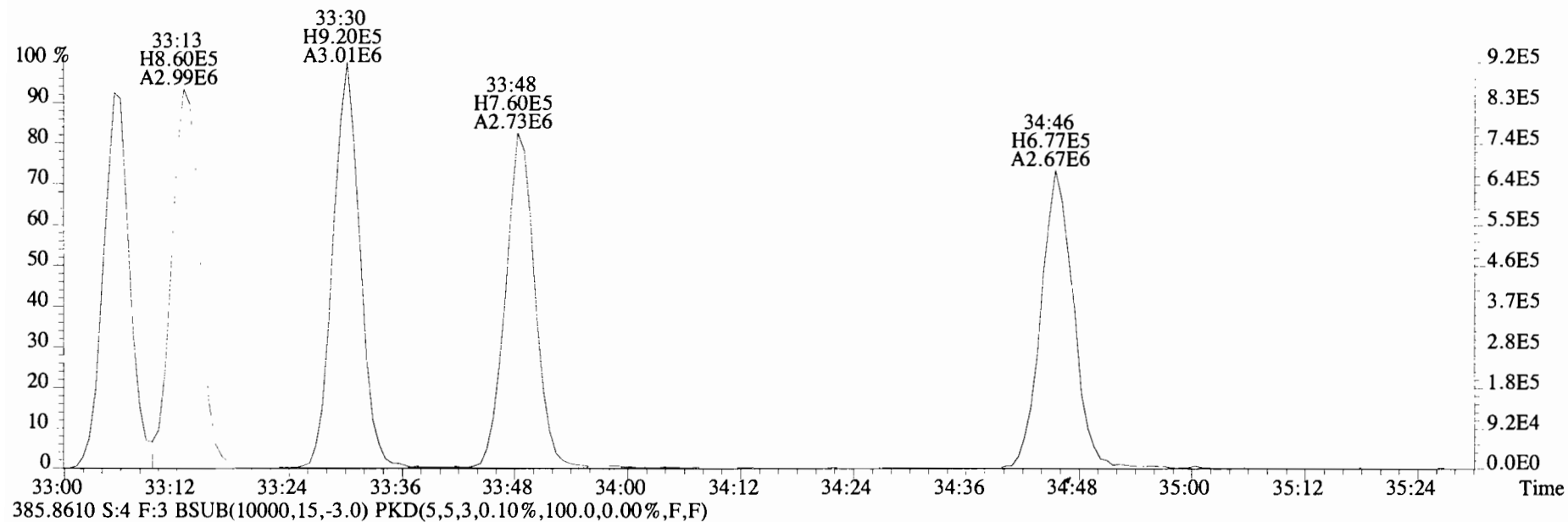
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



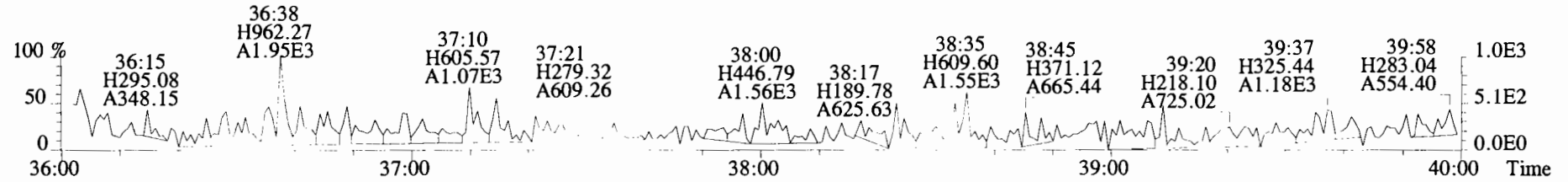
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



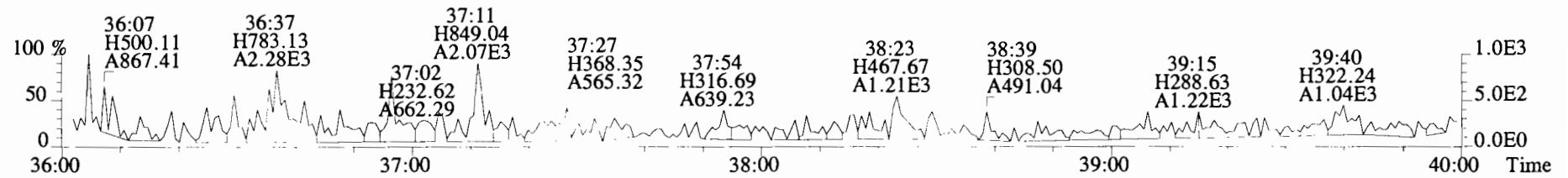
File:191120D2 #1-384 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata Analytical Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
383.8639 S:4 F:3 BSUB(I0000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



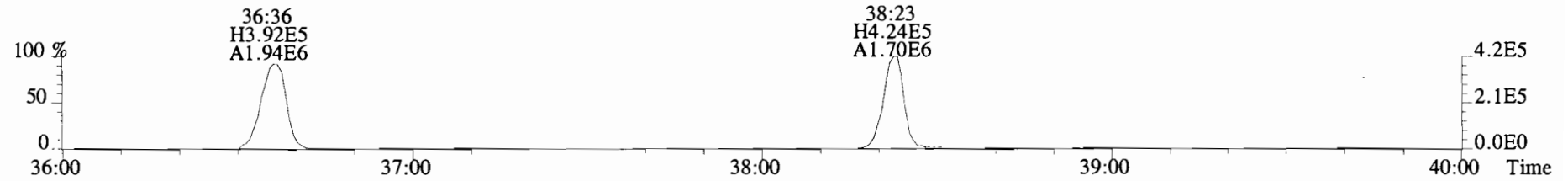
File:191120D2 #1-355 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



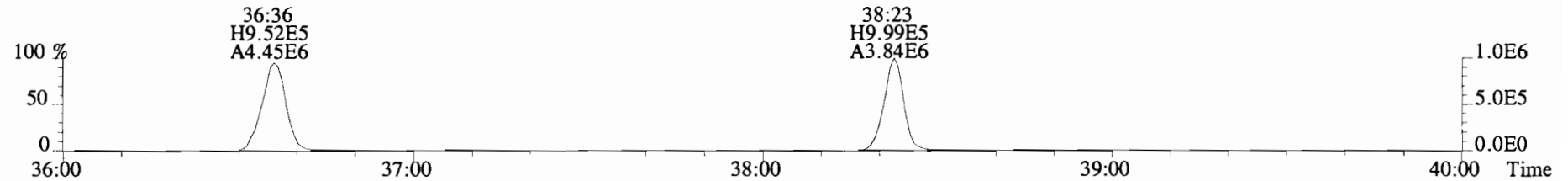
409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



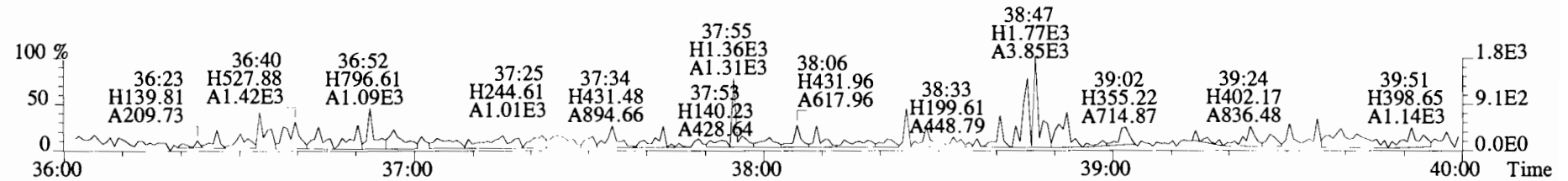
417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



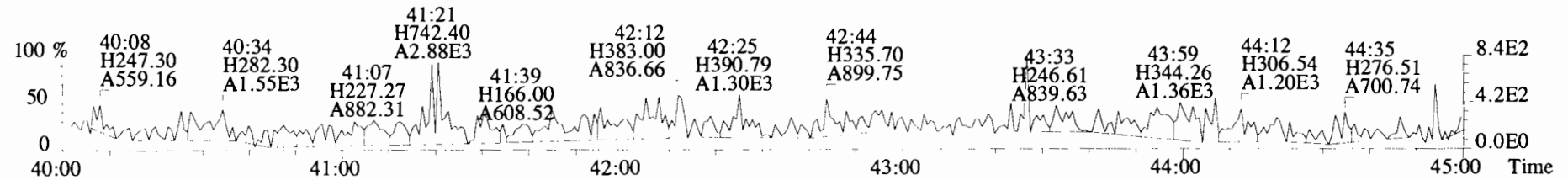
419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



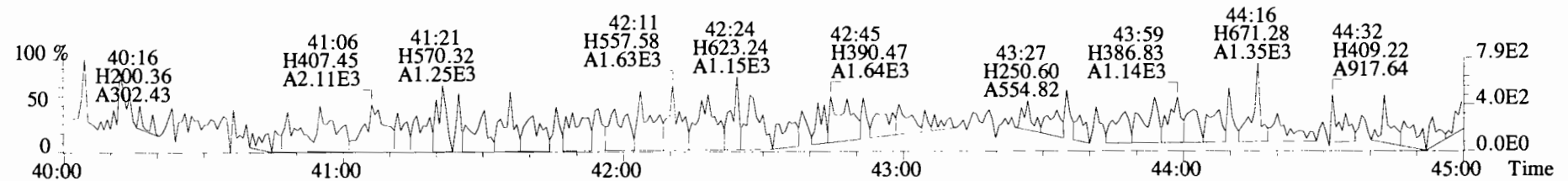
479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



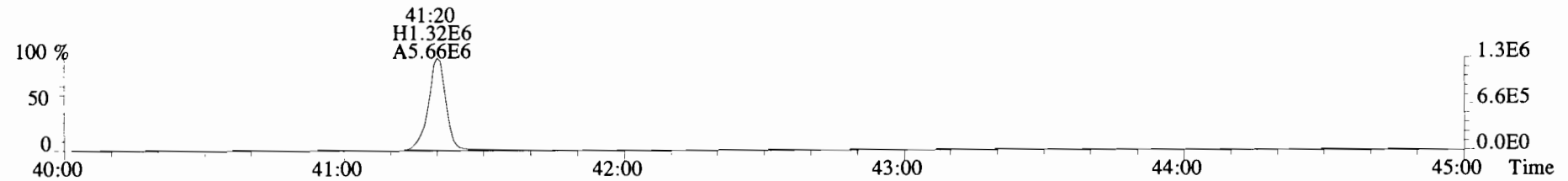
File:191120D2 #1-432 Acq:21-NOV-2019 04:34:51 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-02 PDI-057SC-A-14-15.3-191023 14.66 Exp:OCDD_DB5
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



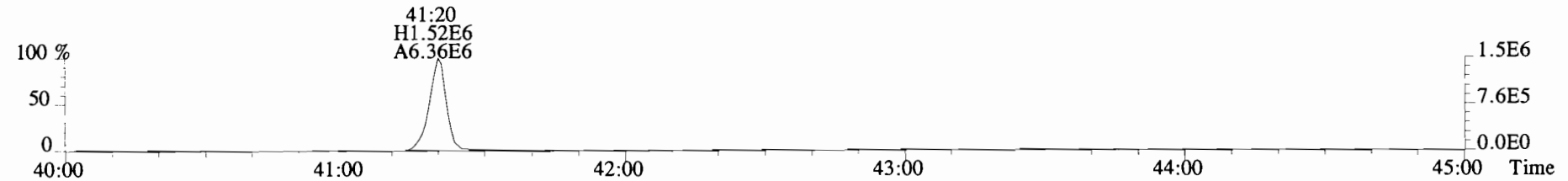
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



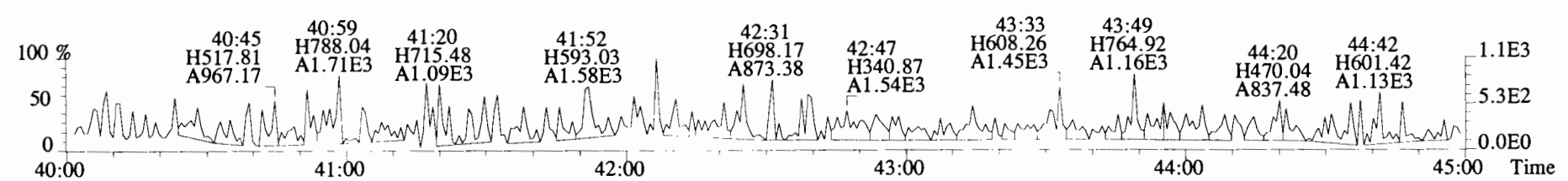
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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)



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	*		141	2.5	0.0638	Total Tetra-Dioxins	*	*		141	0.0638
1,2,3,7,8-PeCDD	*	* n	0.90	NotF	*		312	2.5	0.129	Total Penta-Dioxins	*	*		312	0.129
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotF	*		134	2.5	0.0920	Total Hexa-Dioxins	0.101	0.101	*	*	
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotF	*		134	2.5	0.0926	Total Hepta-Dioxins	0.407	0.407	*	*	
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotF	*		134	2.5	0.101	Total Tetra-Furans	*	*		167	0.0482
1,2,3,4,6,7,8-HpCDD	3.87e+03	1.00 y	0.98	37:52	0.14350		*	2.5	*	Total Penta-Furans	0.0000	0.083715	*	*	
OCDD	2.54e+04	0.91 y	0.96	41:08	1.1231		*	2.5	*	Total Hexa-Furans	*	*		132	0.0439
2,3,7,8-TCDF	*	* n	0.95	NotF	*		167	2.5	0.0482	Total Hepta-Furans	*	0.270	*	*	
1,2,3,7,8-PeCDF	*	* n	0.96	NotF	*		187	2.5	0.0804						
2,3,4,7,8-PeCDF	*	* n	1.01	NotF	*		187	2.5	0.0760						
1,2,3,4,7,8-HxCDF	*	* n	1.18	NotF	*		132	2.5	0.0389						
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotF	*		132	2.5	0.0382						
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotF	*		132	2.5	0.0423						
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotF	*		132	2.5	0.0582						
1,2,3,4,6,7,8-HpCDF	8.86e+03	0.84 n	1.13	36:38	0.27048		*	2.5	*						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotF	*		95.4	2.5	0.0379						
OCDF	4.91e+04	0.88 y	0.95	41:21	1.7526		*	2.5	*						
IS	13C-2,3,7,8-TCDD	8.25e+06	0.79 y	1.10	26:11	173.42				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	6.32e+06	0.63 y	0.88	30:41	165.07				87.0					
IS	13C-1,2,3,4,7,8-HxCDD	5.50e+06	1.32 y	0.64	34:00	186.27				82.8					
IS	13C-1,2,3,6,7,8-HxCDD	5.98e+06	1.23 y	0.86	34:06	152.05				93.5					
IS	13C-1,2,3,7,8,9-HxCDD	6.00e+06	1.27 y	0.81	34:24	161.69				76.3					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.49e+06	1.07 y	0.65	37:51	182.77				81.1					
IS	13C-OCDD	9.41e+06	0.91 y	0.58	41:07	352.92				91.7					
IS	13C-2,3,7,8-TCDF	1.24e+07	0.79 y	1.03	25:24	178.70				88.5					
IS	13C-1,2,3,7,8-PeCDF	1.01e+07	1.58 y	0.85	29:31	175.94				89.7					
IS	13C-2,3,4,7,8-PeCDF	9.74e+06	1.63 y	0.85	30:25	171.88				88.3					
IS	13C-1,2,3,4,7,8-HxCDF	7.13e+06	0.52 y	0.83	33:06	186.36				86.2					
IS	13C-1,2,3,6,7,8-HxCDF	7.97e+06	0.52 y	1.03	33:14	167.51				93.5					
IS	13C-2,3,4,6,7,8-HxCDF	7.28e+06	0.51 y	0.95	33:50	166.11				84.0					
IS	13C-1,2,3,7,8,9-HxCDF	6.64e+06	0.53 y	0.83	34:47	174.44				83.3					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.79e+06	0.45 y	0.76	36:37	166.33				87.5					
IS	13C-1,2,3,4,7,8,9-HpCDF	5.27e+06	0.45 y	0.58	38:24	197.16				83.4					
IS	13C-OCDF	1.18e+07	0.89 y	0.69	41:21	372.27				98.9					
C/Up	37C1-2,3,7,8-TCDD	4.06e+06		1.20	26:12	78.145				93.4					
RS/RT	13C-1,2,3,4-TCDD	8.65e+06	0.79 y	1.00	25:38	199.32									
RS	13C-1,2,3,4-TCDF	1.33e+07	0.79 y	1.00	24:12	199.32									
RS/RT	13C-1,2,3,4,6,9-HxCDF	9.16e+06	0.52 y	1.00	33:31	199.32									

Integrations
 by DB
 Analyst: DB
 Date: 11/27/19
 Reviewed
 by CT
 Analyst: CT
 Date: 11/27/19

Totals class: HxCDD EMPC

Entry #: 23

Run: 10 File: 191120D2 S: 5 I: 1 F: 3

Acquired: 21-NOV-19 05:22:35 Processed: 26-NOV-19 12:21:45

Total Concentration: 0.10119

Unnamed Concentration: 0.101

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:28	1.545e+03	1.387e+03	1.11 y	2.933e+03	0.10119

Totals class: HpCDD EMPC

Entry #: 25

Run: 10 File: 191120D2 S: 5 I: 1 F: 4

Acquired: 21-NOV-19 05:22:35 Processed: 26-NOV-19 12:21:45

Total Concentration: 0.40690

Unnamed Concentration: 0.263

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:01	3.714e+03	3.397e+03	1.09	y	7.111e+03	0.26339
37:52	1.933e+03	1.942e+03	1.00	y	3.874e+03	0.14350 1,2,3,4,6,7,8-HpCDD

Totals class: PeCDF EMPC

Entry #: 31

Run: 10 File: 191120D2 S: 5 I: 1 F: 2
Acquired: 21-NOV-19 05:22:35 Processed: 26-NOV-19 12:21:45

Total Concentration: 0.083715 Unnamed Concentration: 0.084

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28.55	2.495e+03	3.160e+03	0.79 n	4.104e+03	0.083715

Totals class: HpCDF EMPC

Entry #: 35

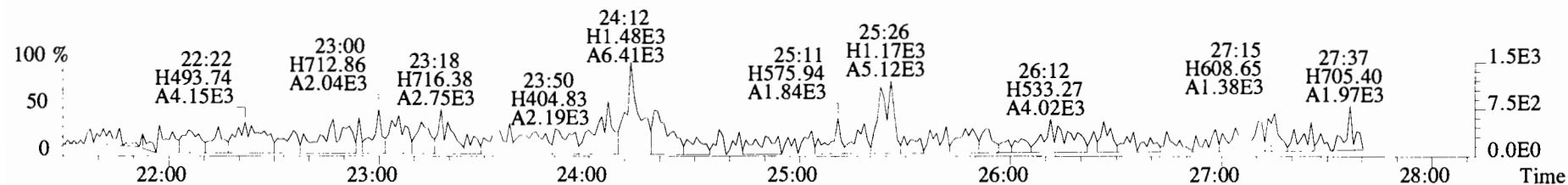
Run: 10 File: 191120D2 S: 5 I: 1 F: 4
Acquired: 21-NOV-19 05:22:35 Processed: 26-NOV-19 12:21:45

Total Concentration: 0.27048

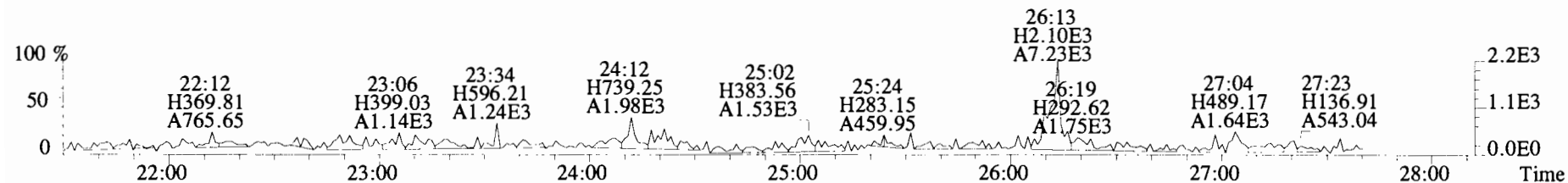
Unnamed Concentration: *

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
36:38	4.518e+03	5.373e+03	0.84 n	8.863e+03 0.27048	1,2,3,4,6,7,8-HpCDF

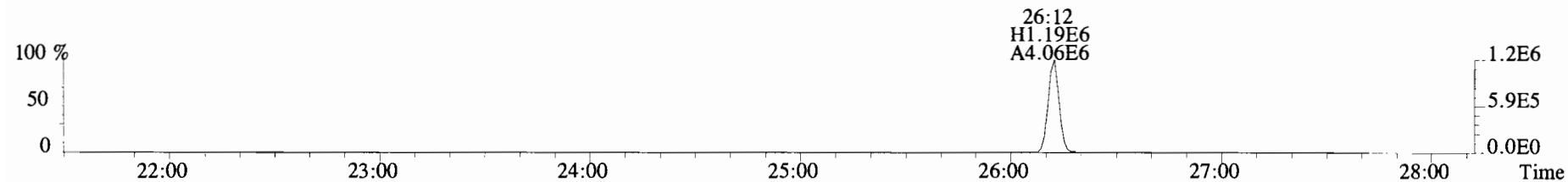
File:191120D2 #1-492 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



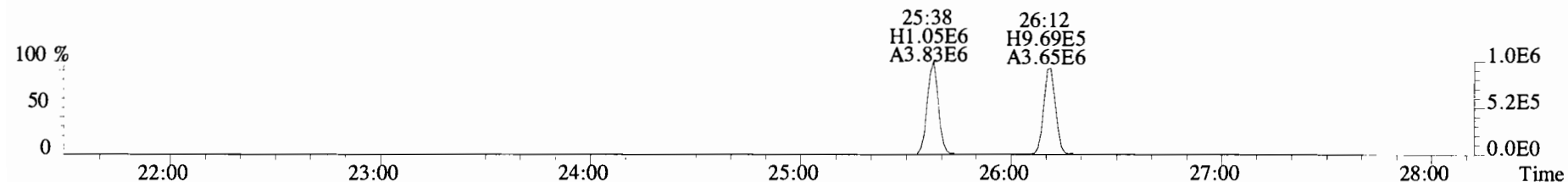
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



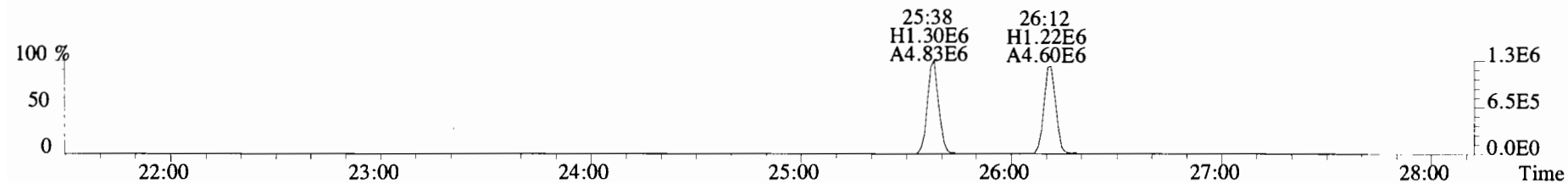
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



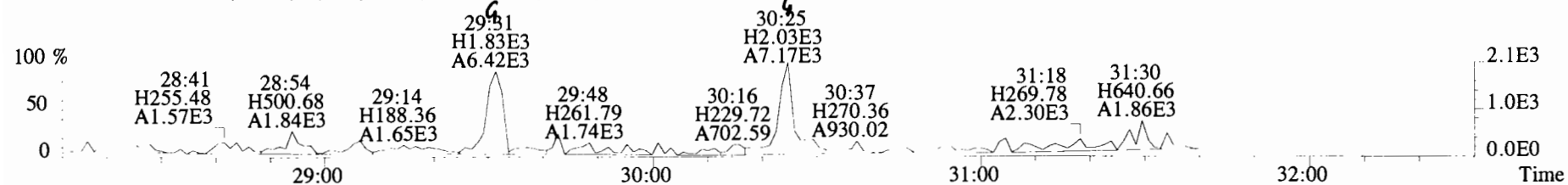
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



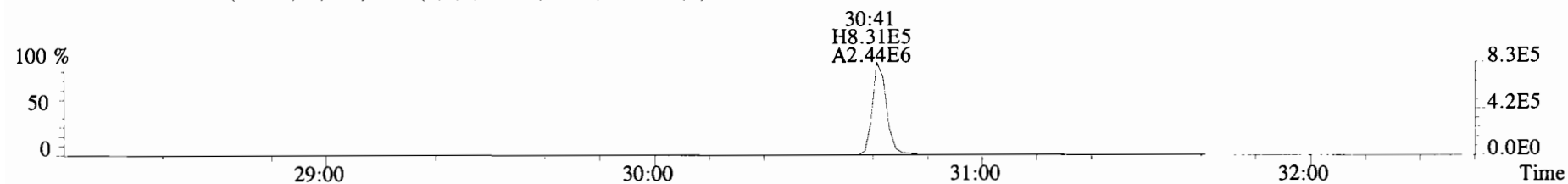
File:191120D2 #1-211 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
 353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



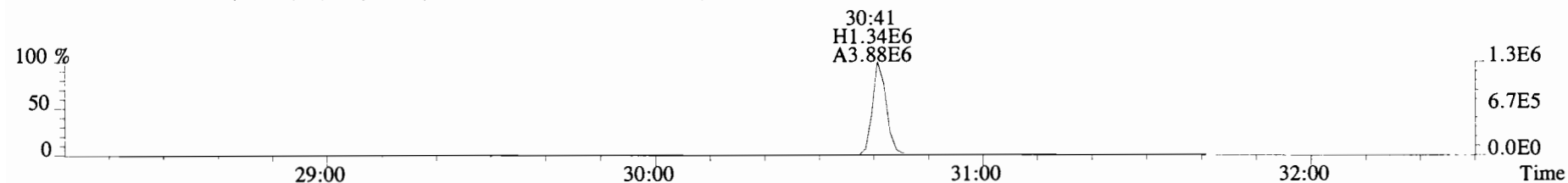
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



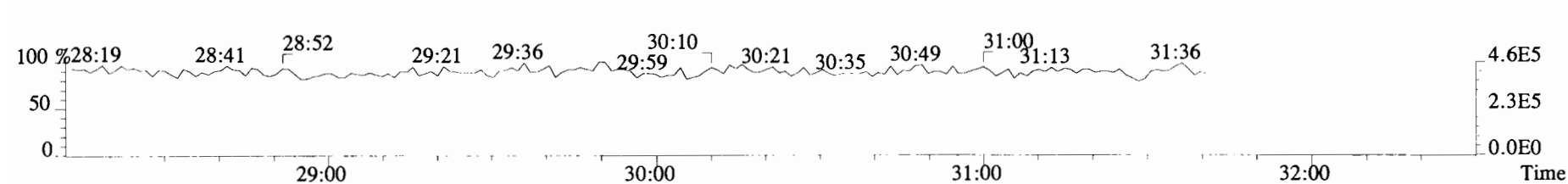
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



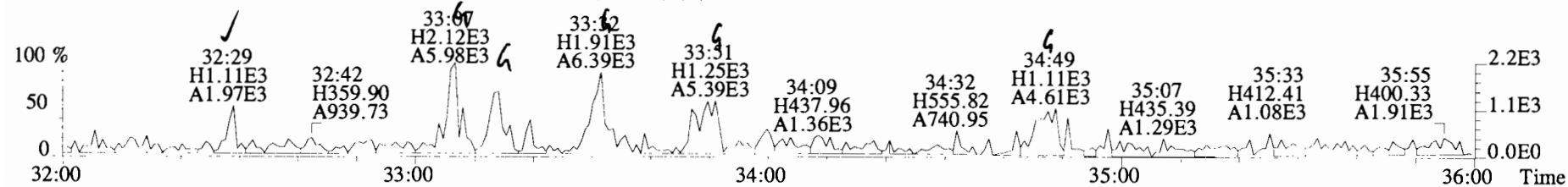
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



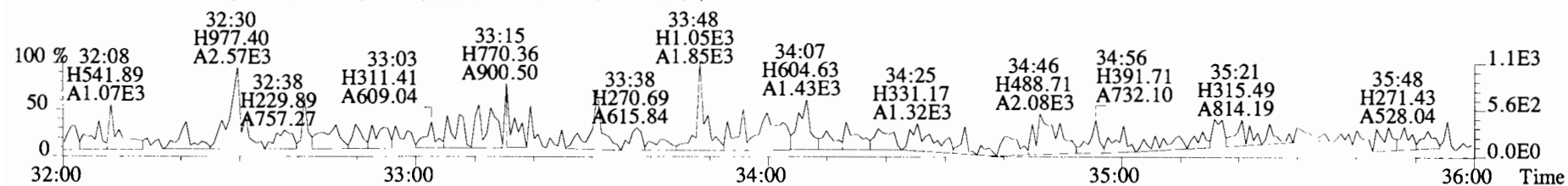
366.9792 S:5 F:2



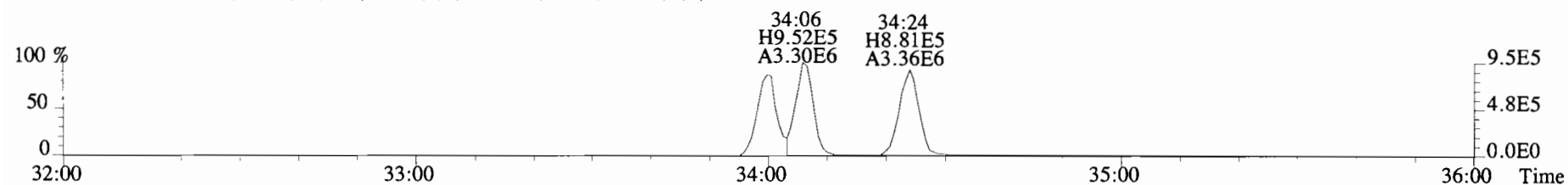
File:191120D2 #1-384 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
 389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



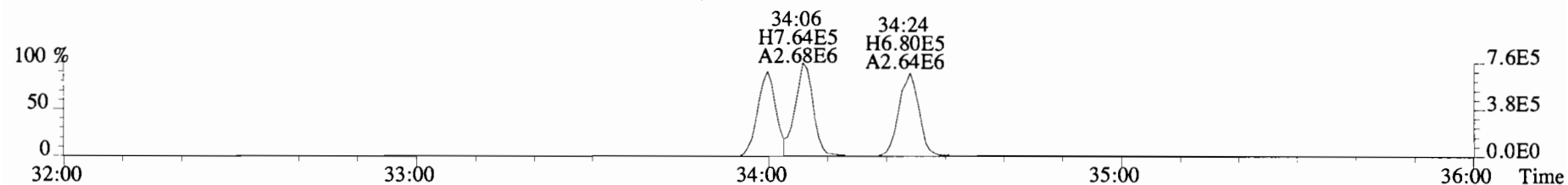
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



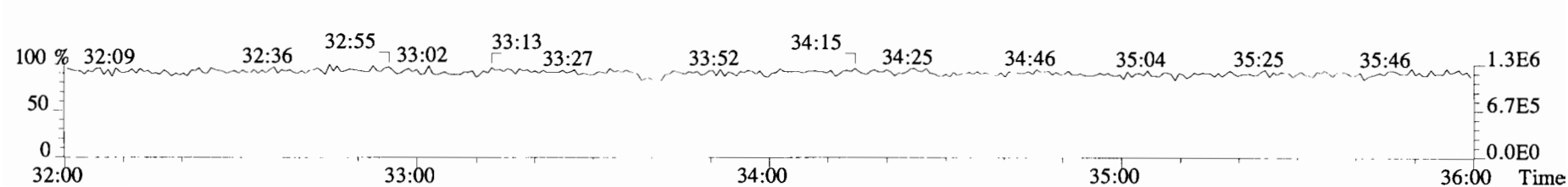
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



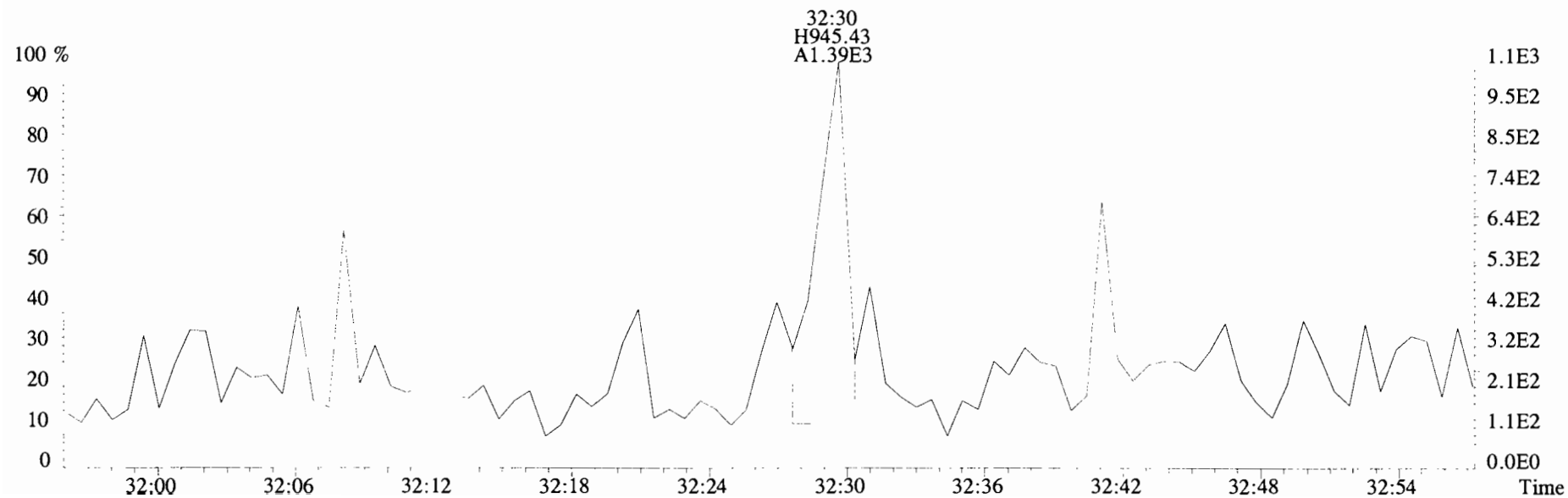
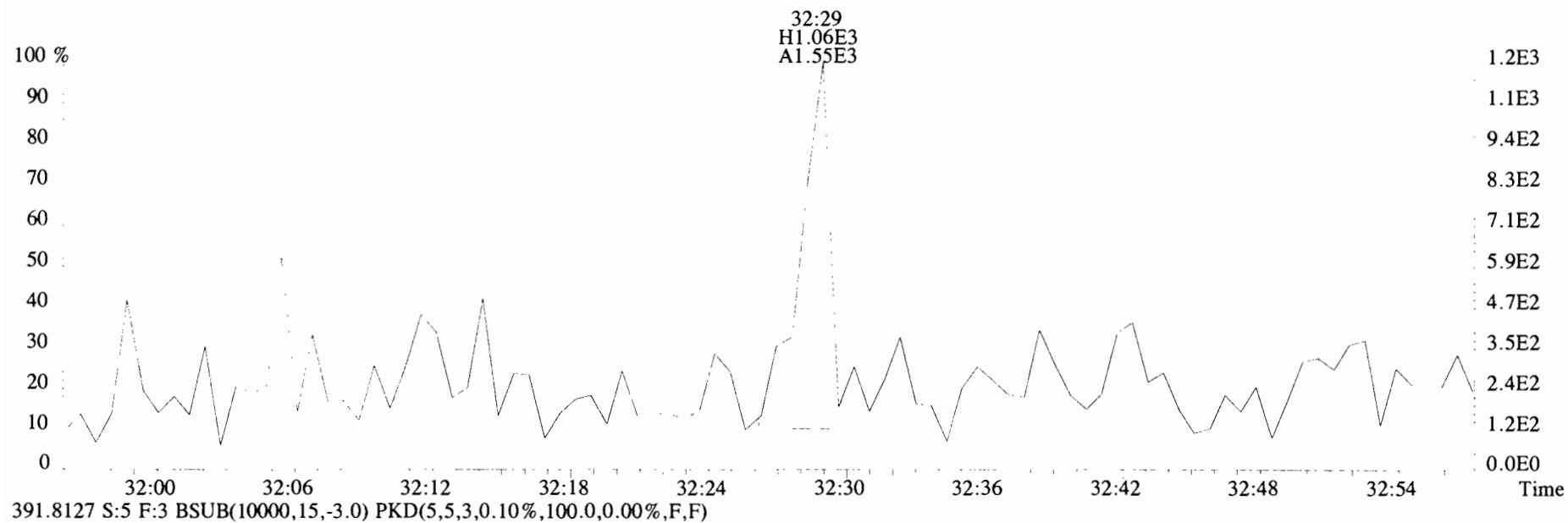
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



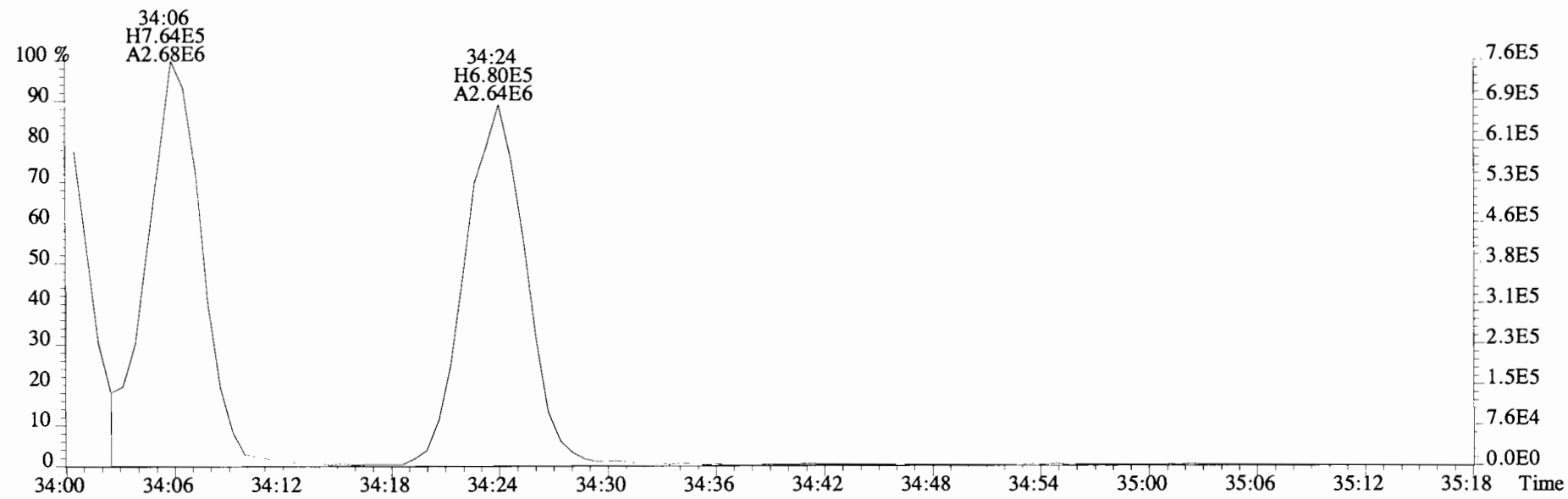
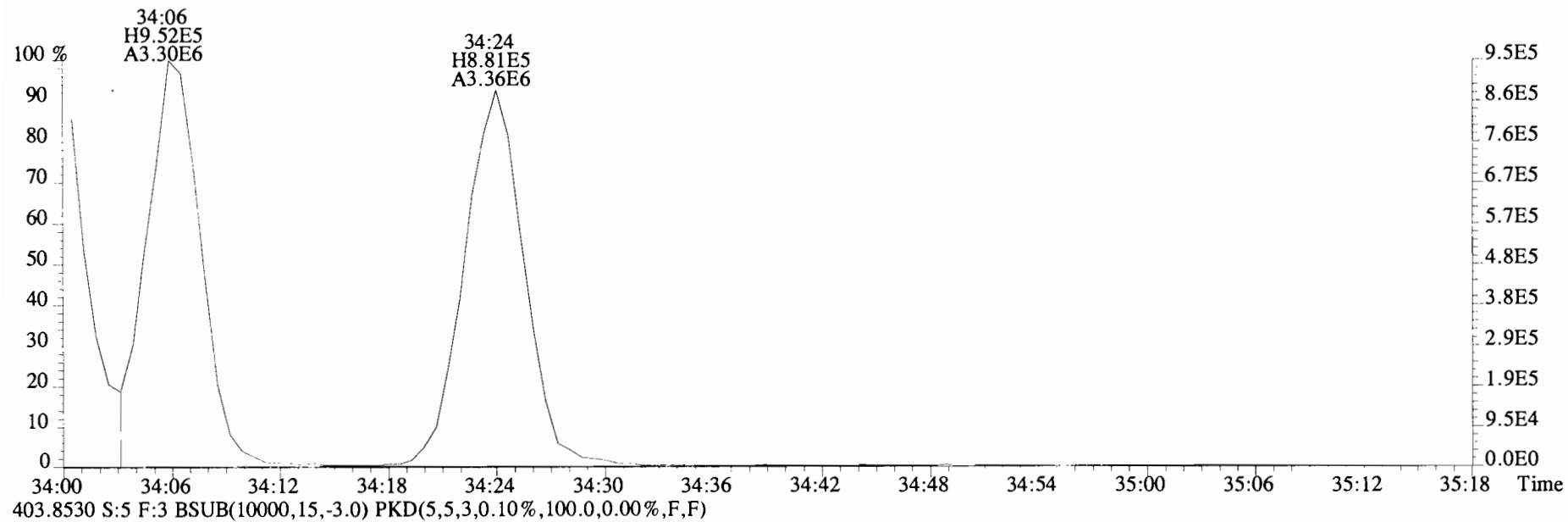
392.9760 S:5 F:3



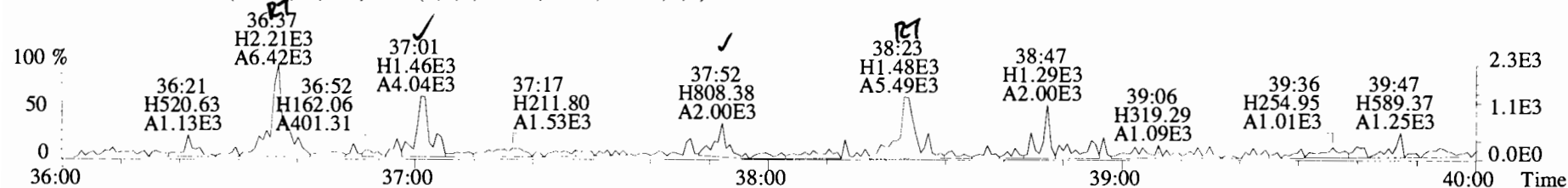
File:191120D2 #1-384 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



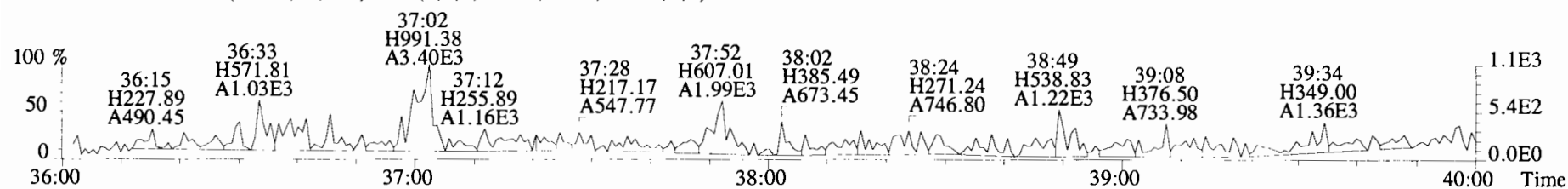
File:191120D2 #1-384 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



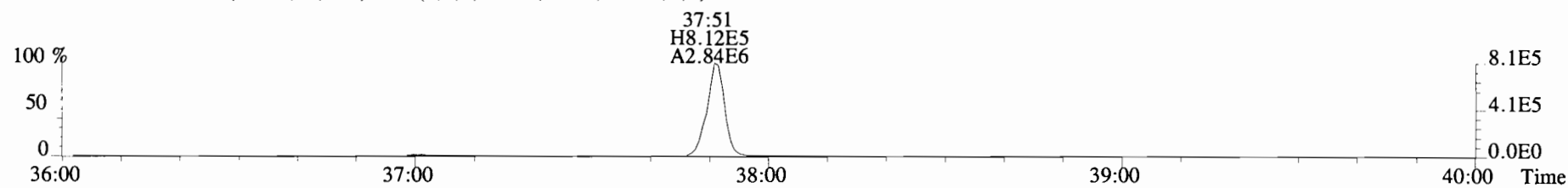
File:191120D2 #1-356 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
 423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



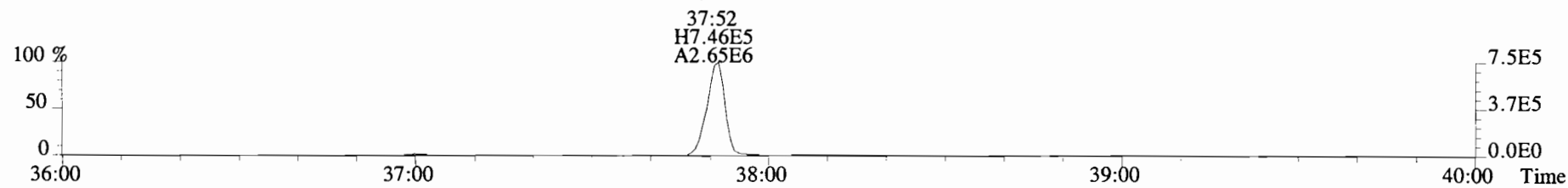
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



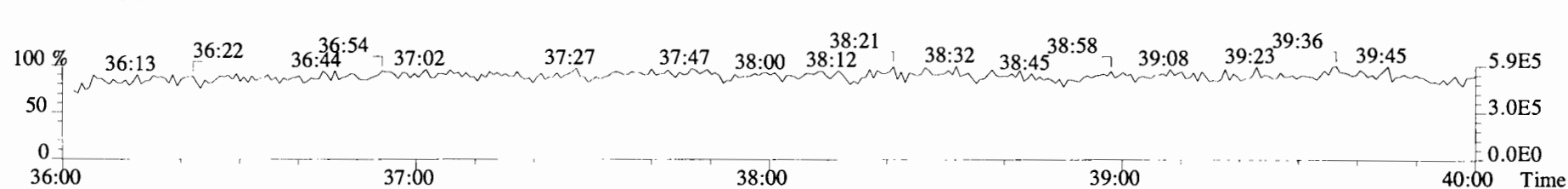
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



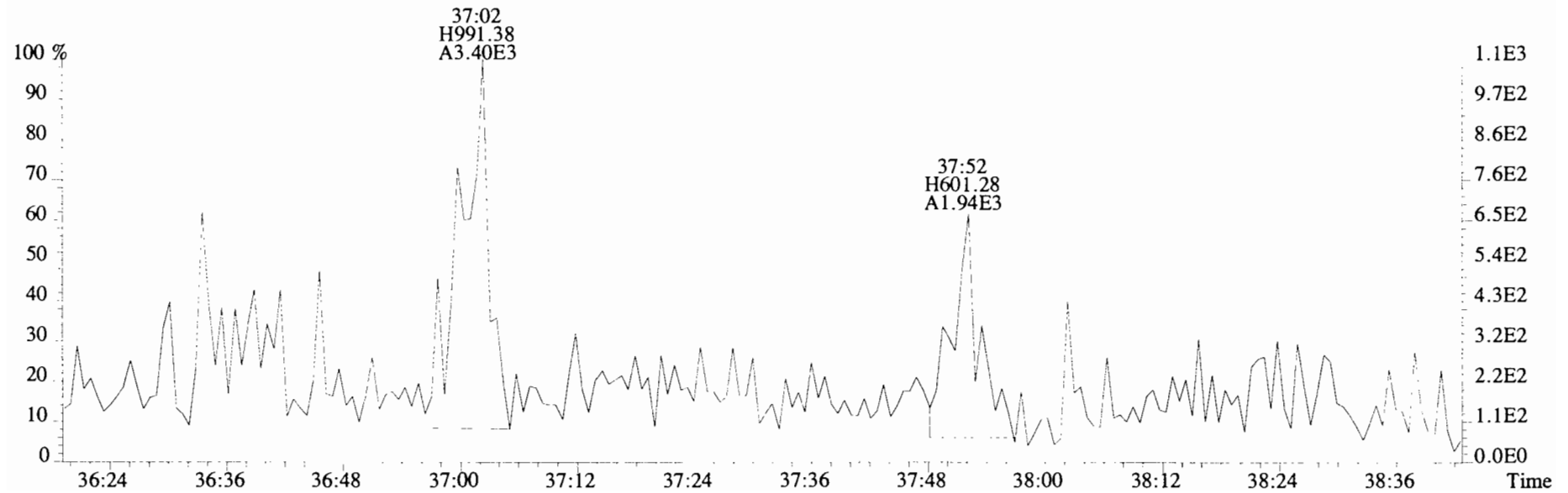
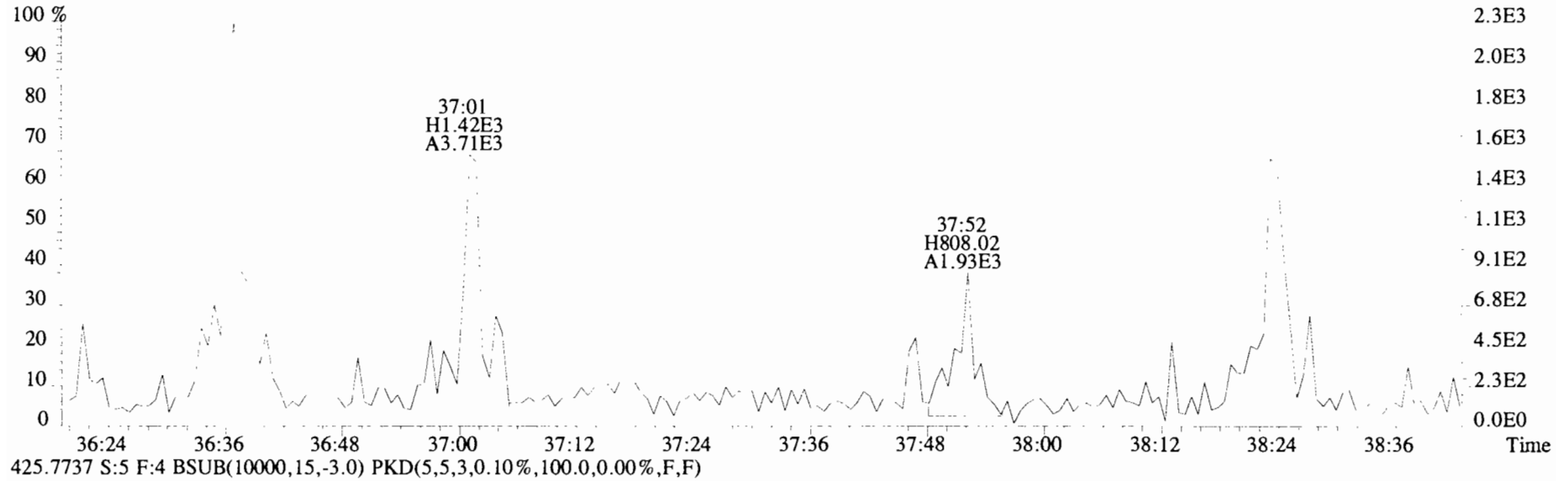
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



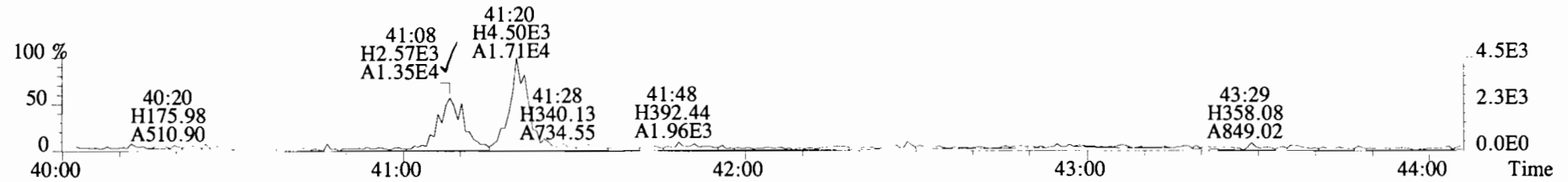
454.9728 S:5 F:4



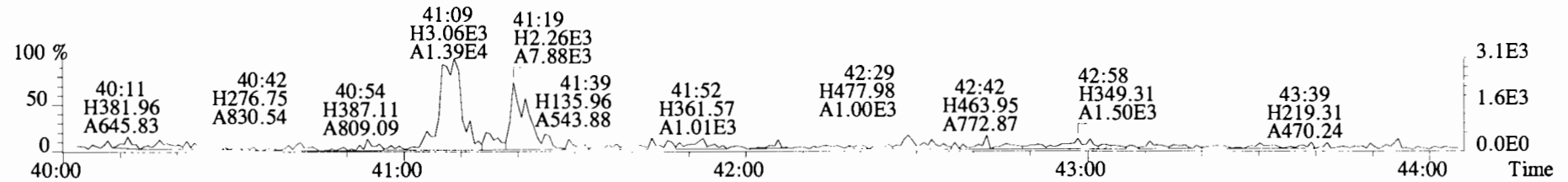
File:191120D2 #1-356 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
423.7767 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



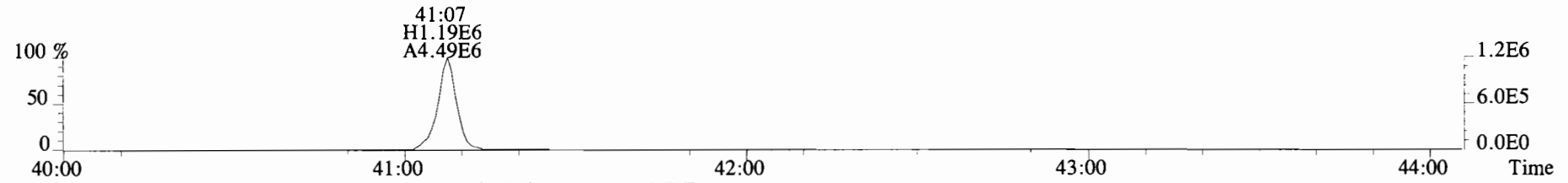
File:191120D2 #1-431 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



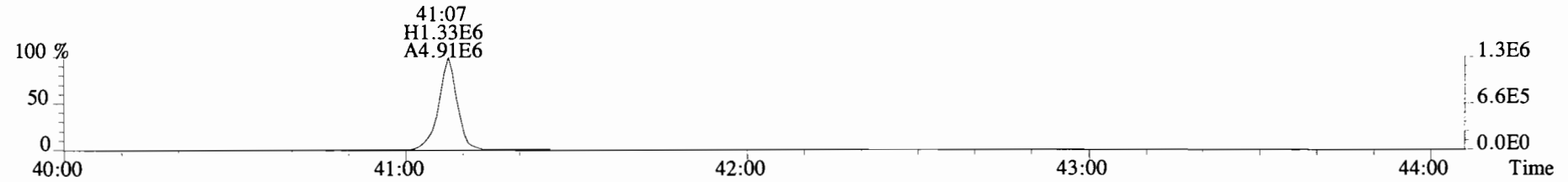
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



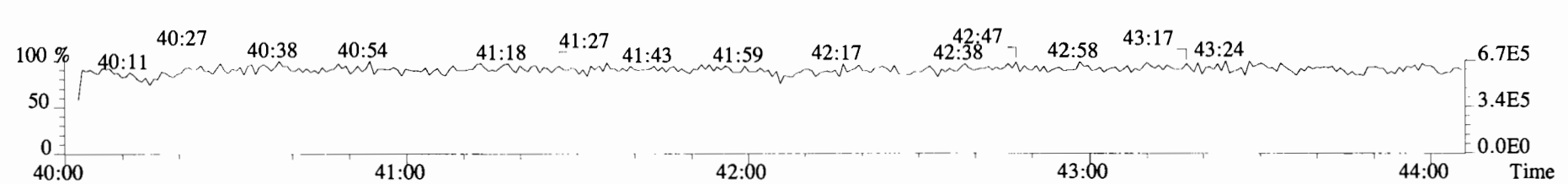
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



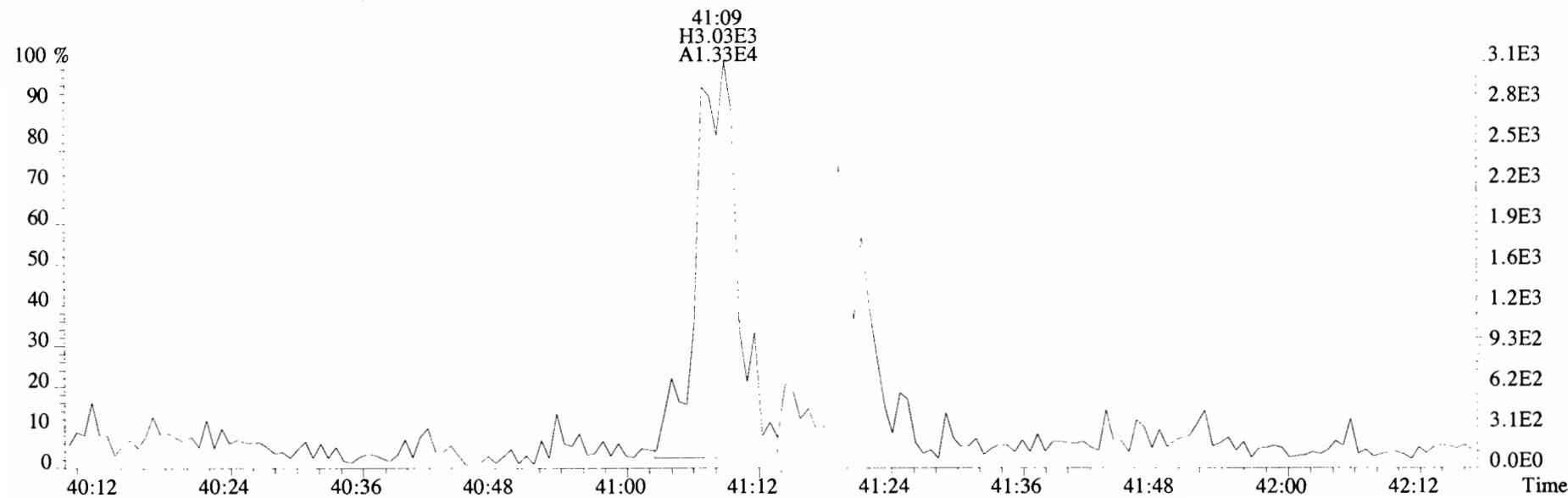
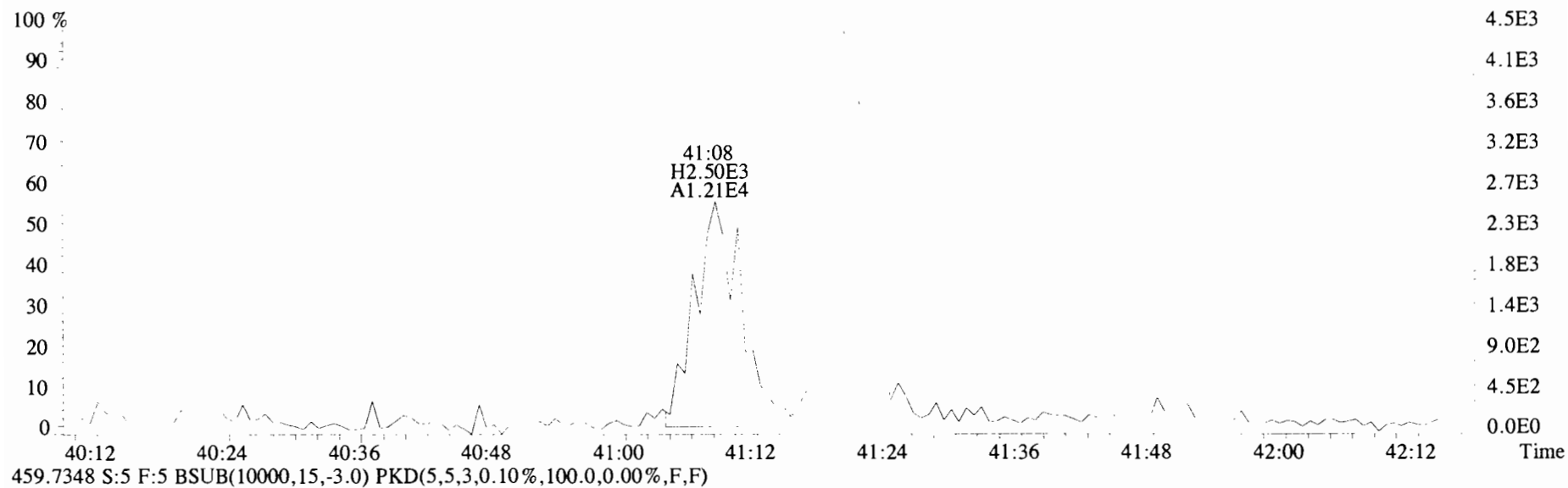
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



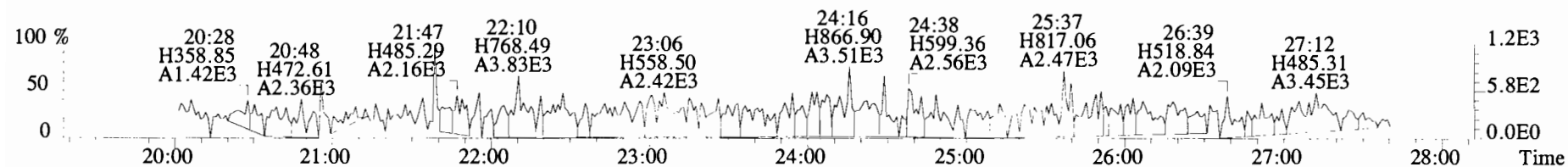
454.9728 S:5 F:5



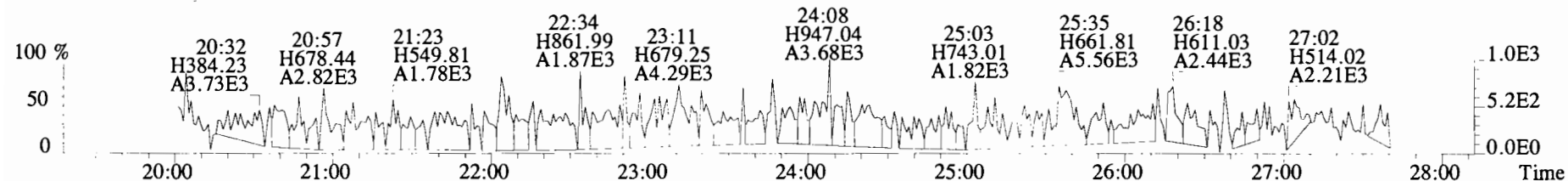
File:191120D2 #1-431 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



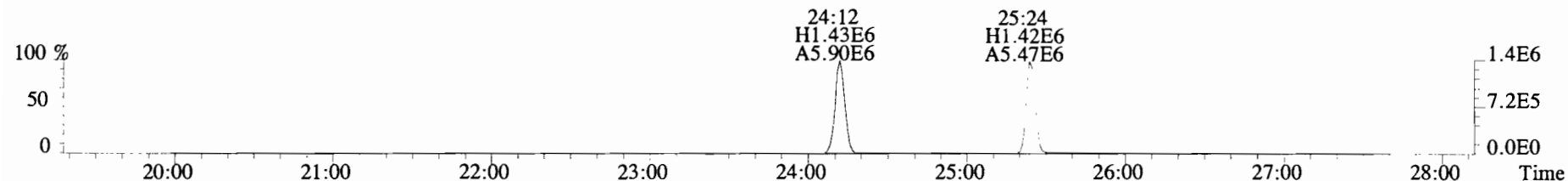
File:191120D2 #1-492 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
 303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



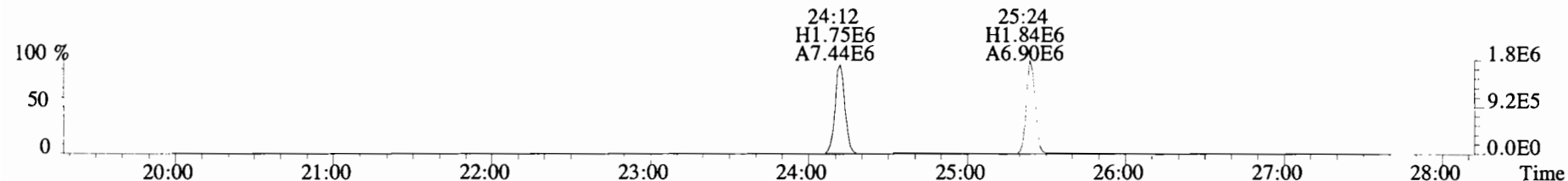
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



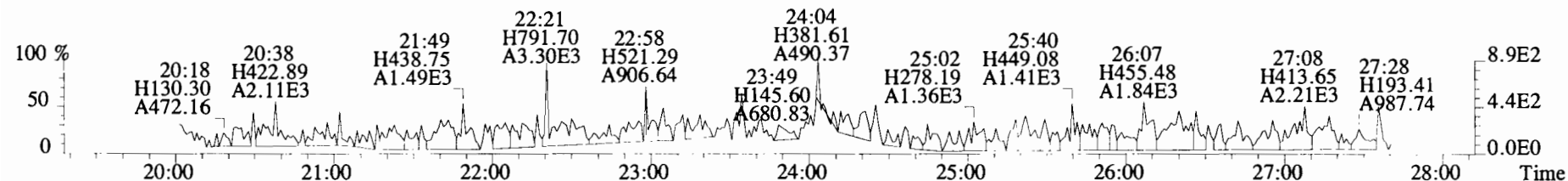
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



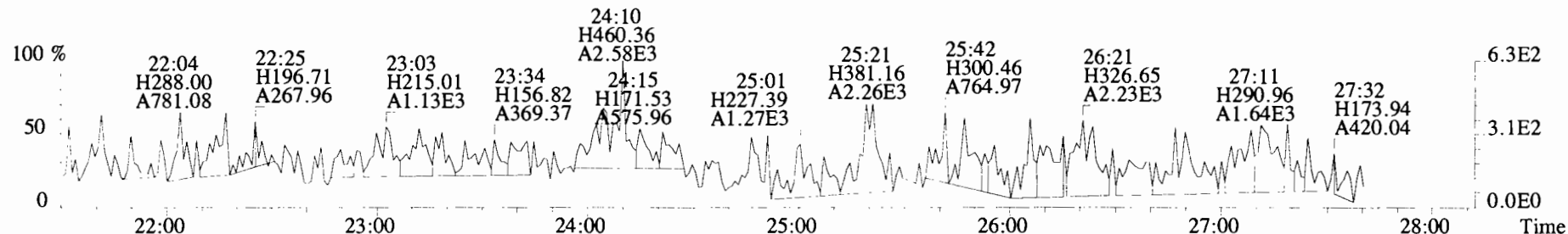
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



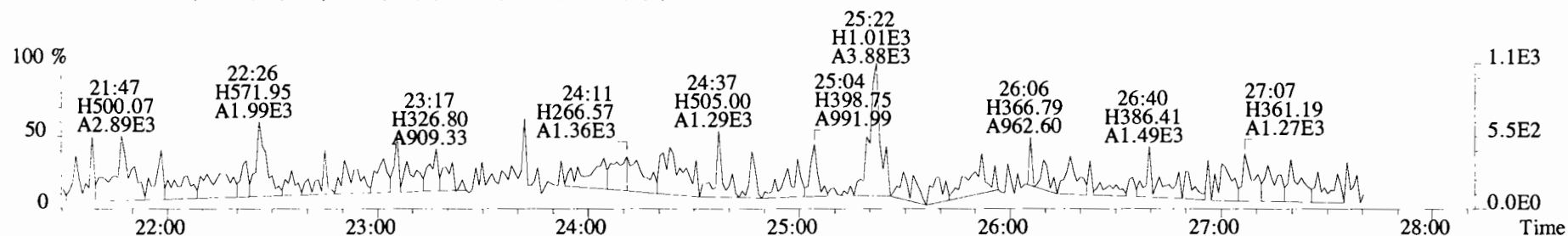
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



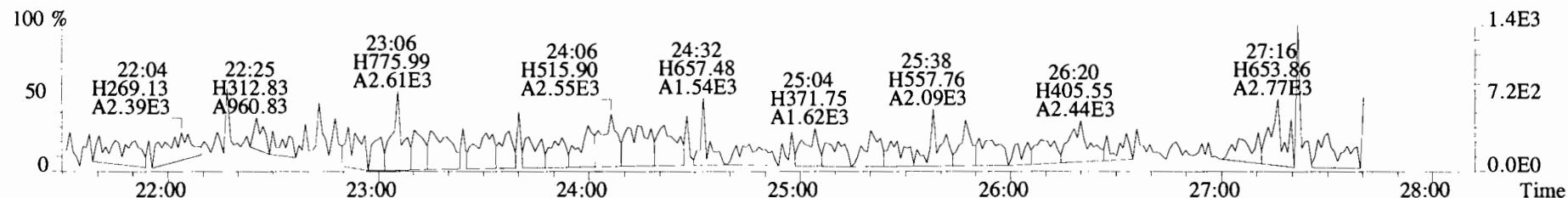
File:191120D2 #1-492 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
 339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



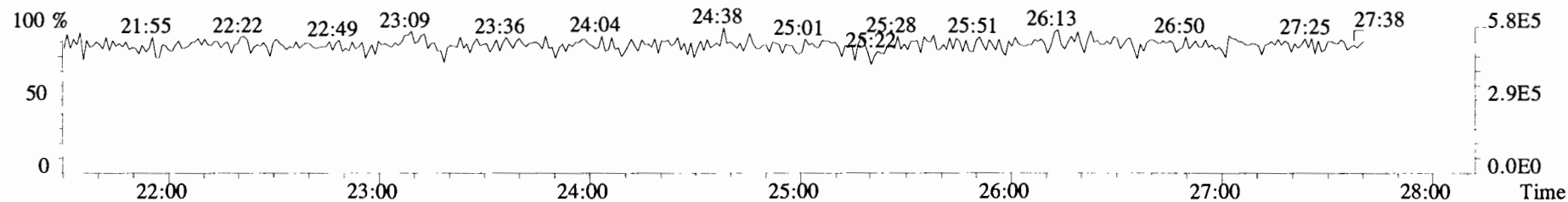
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



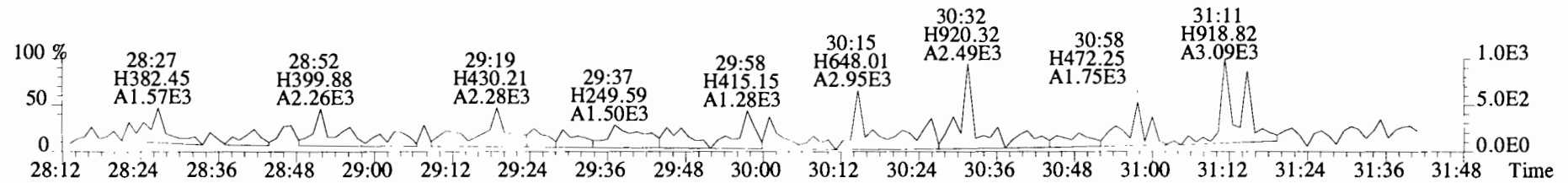
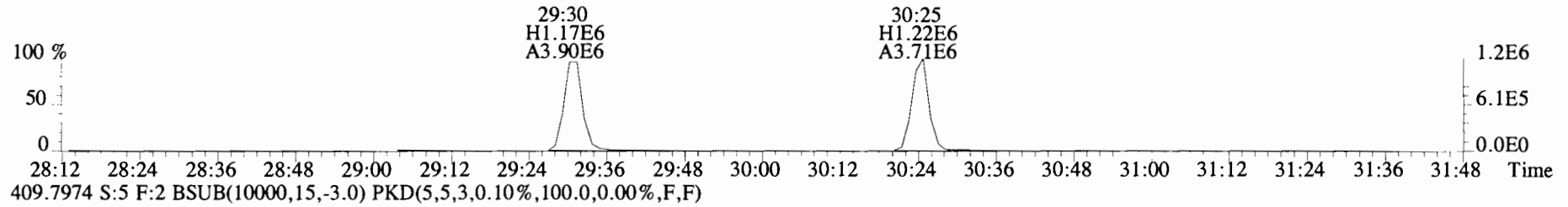
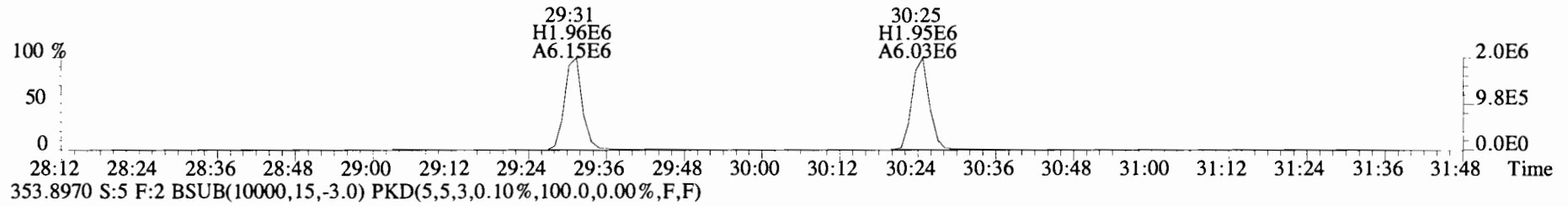
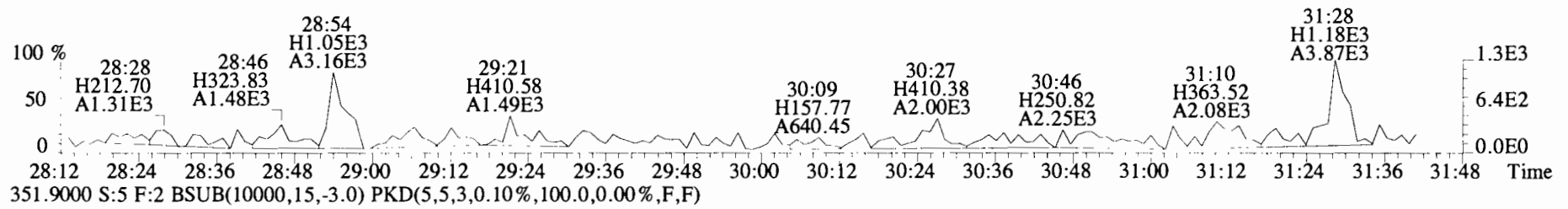
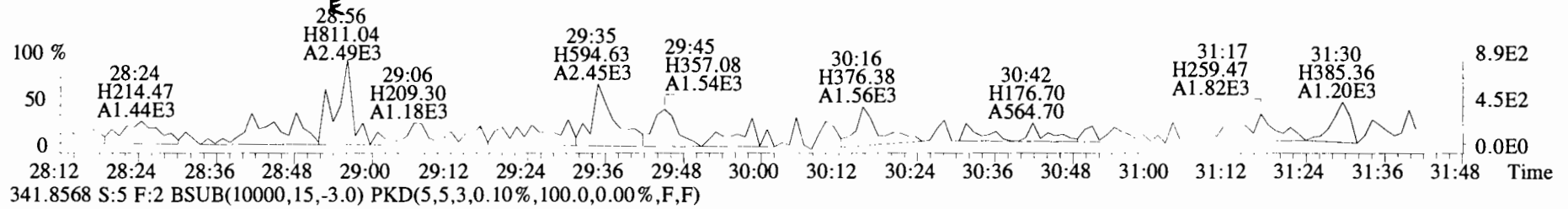
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



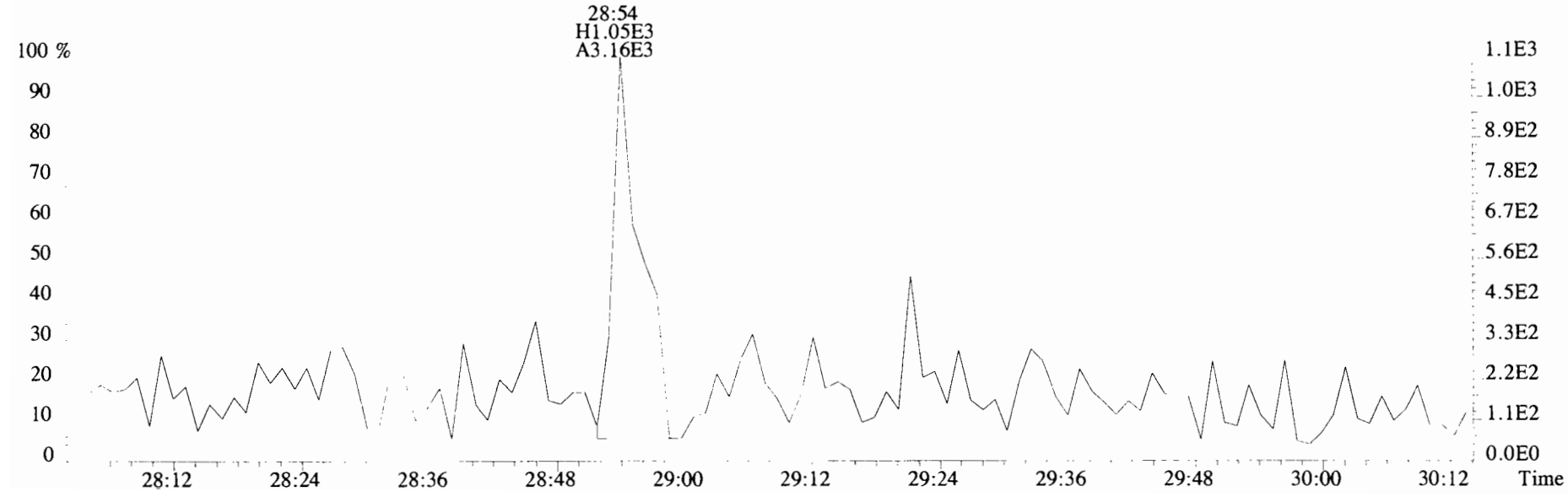
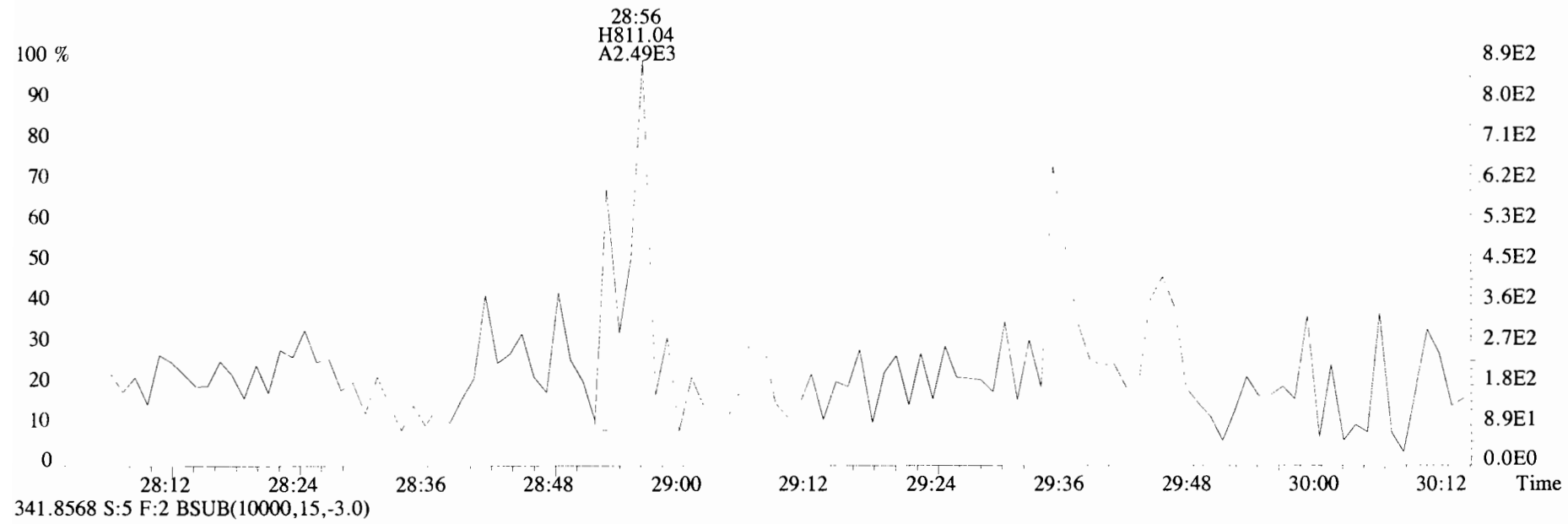
316.9824 S:5



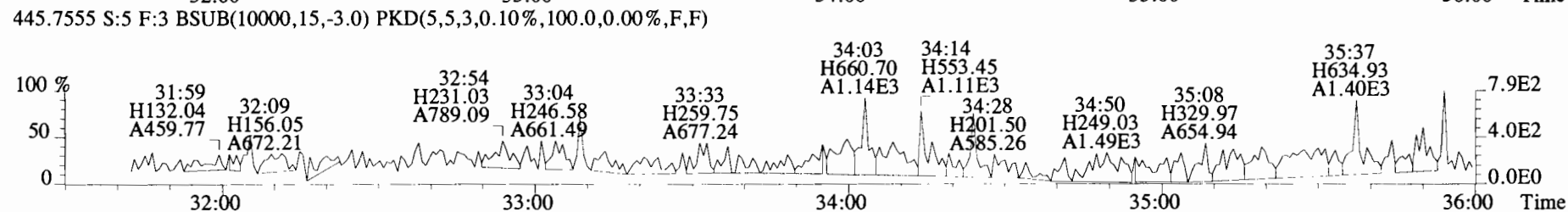
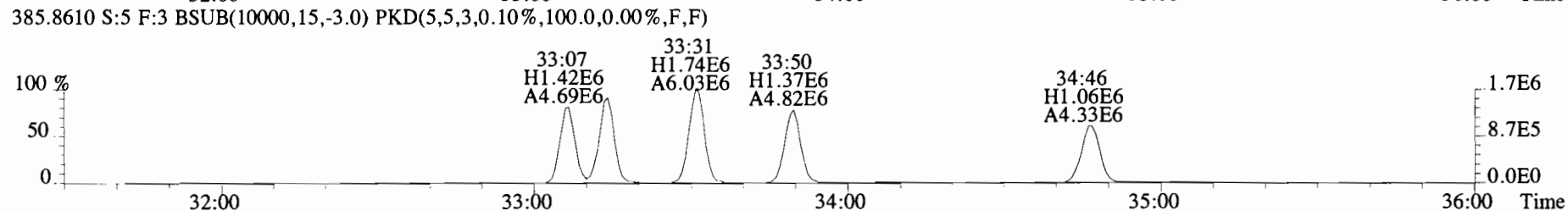
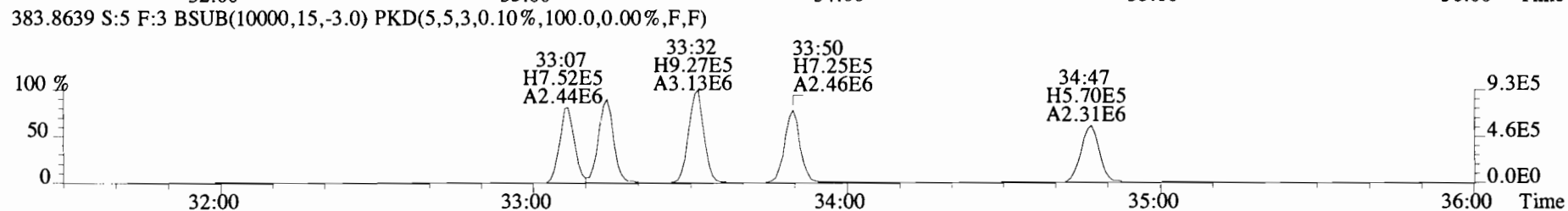
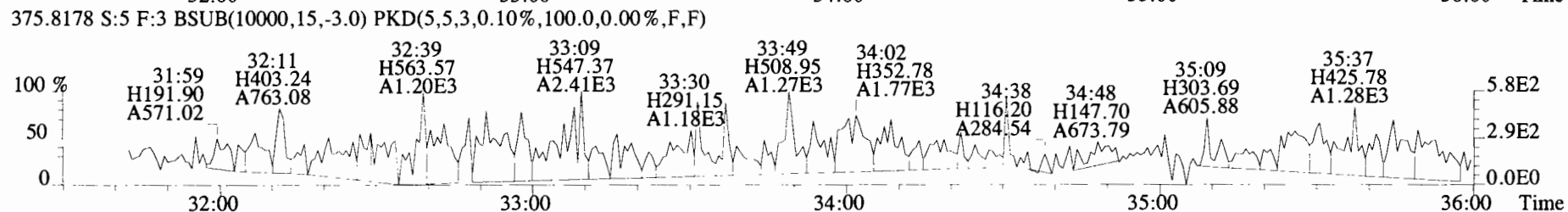
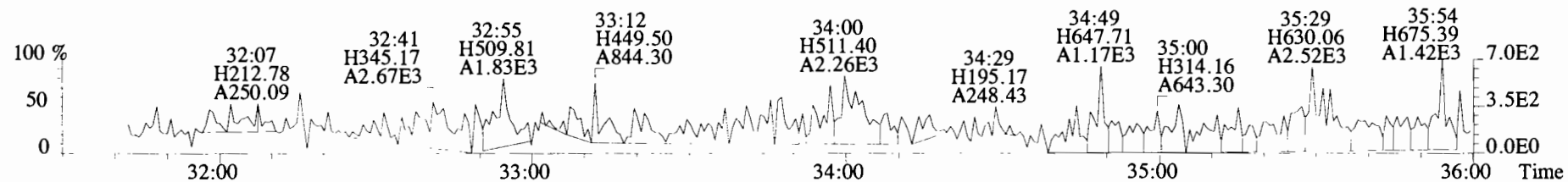
File:191120D2 #1-211 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
 339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



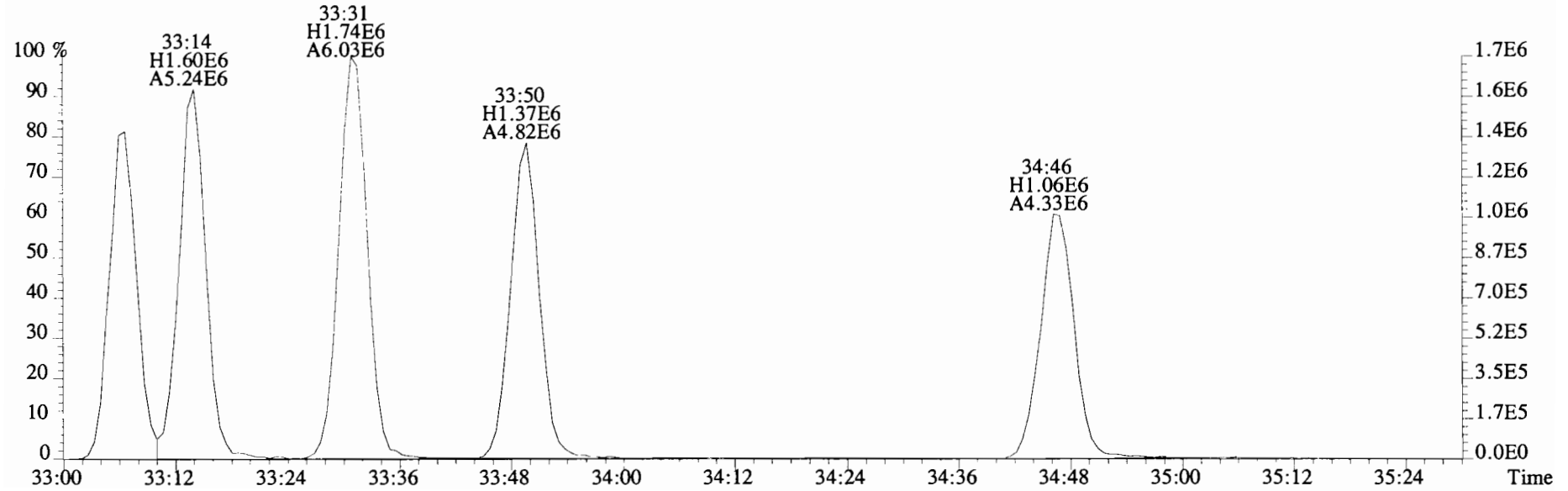
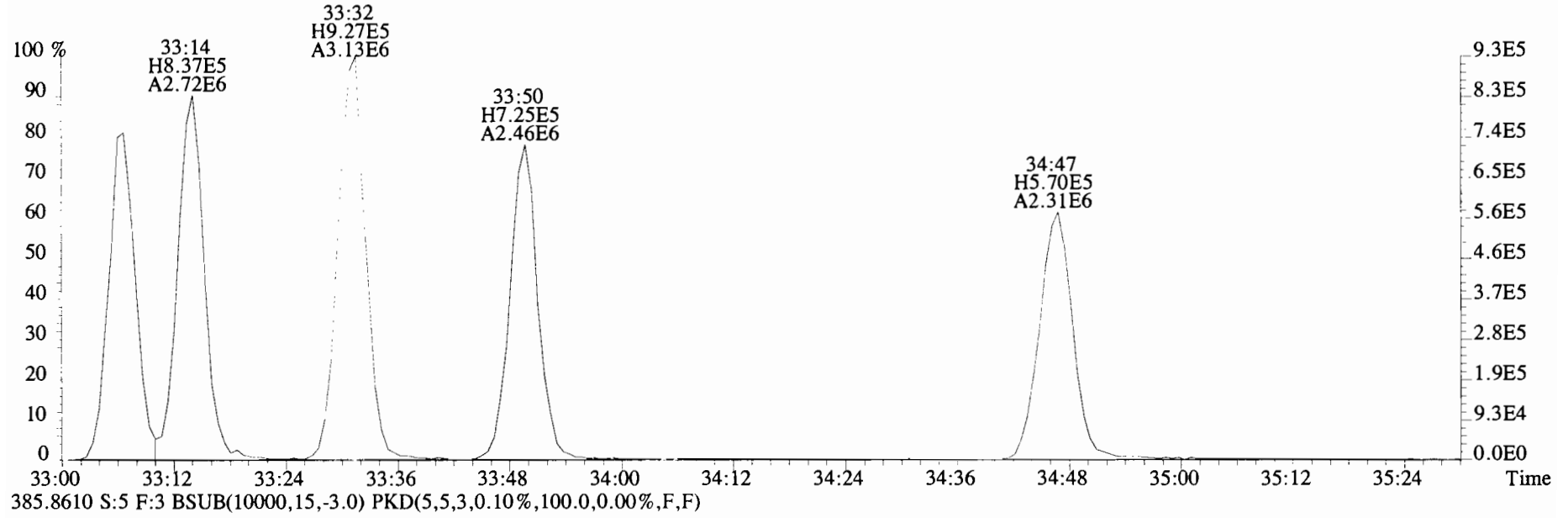
File:191120D2 #1-211 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0)



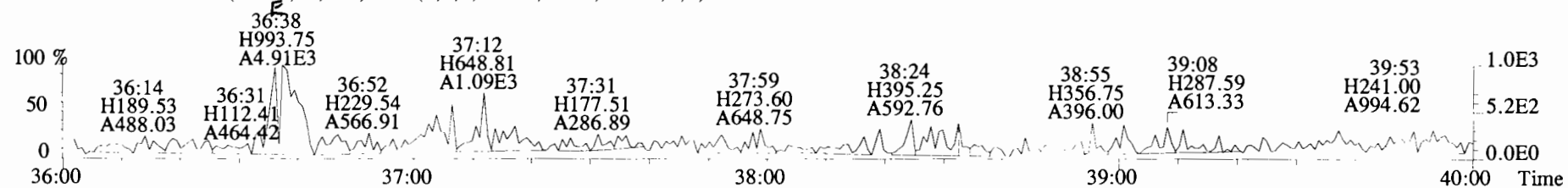
File:191120D2 #1-384 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



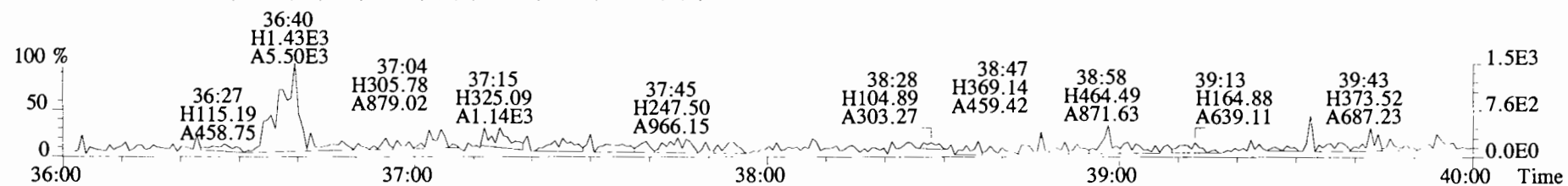
File:191120D2 #1-384 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



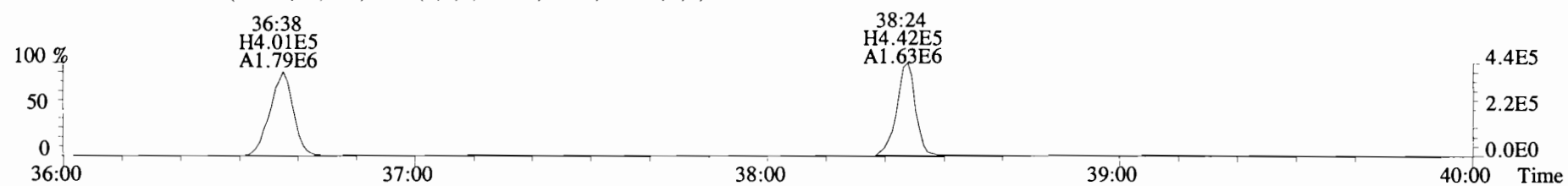
File:191120D2 #1-356 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
 407.7818 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



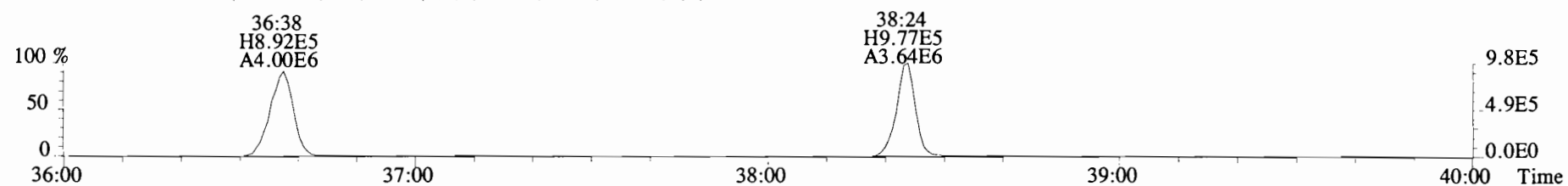
409.7788 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



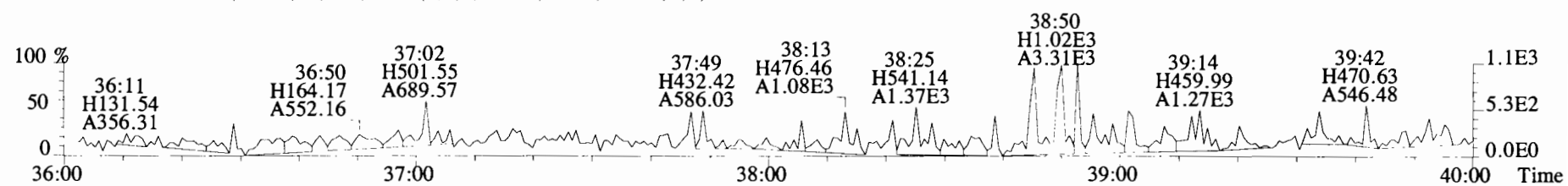
417.8253 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



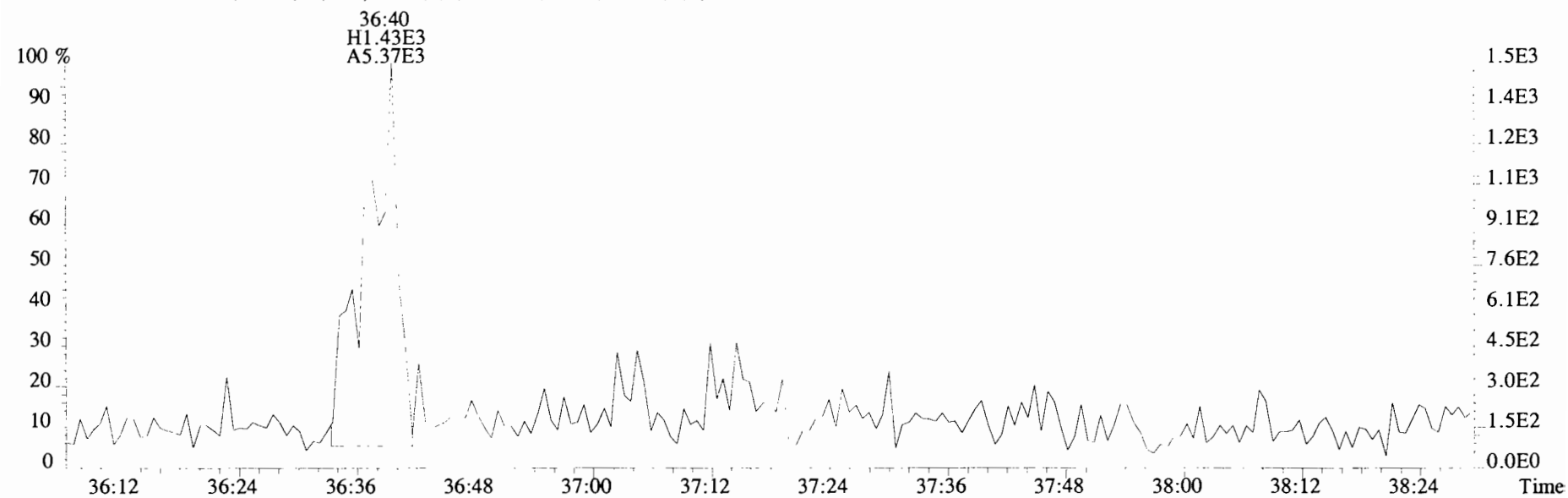
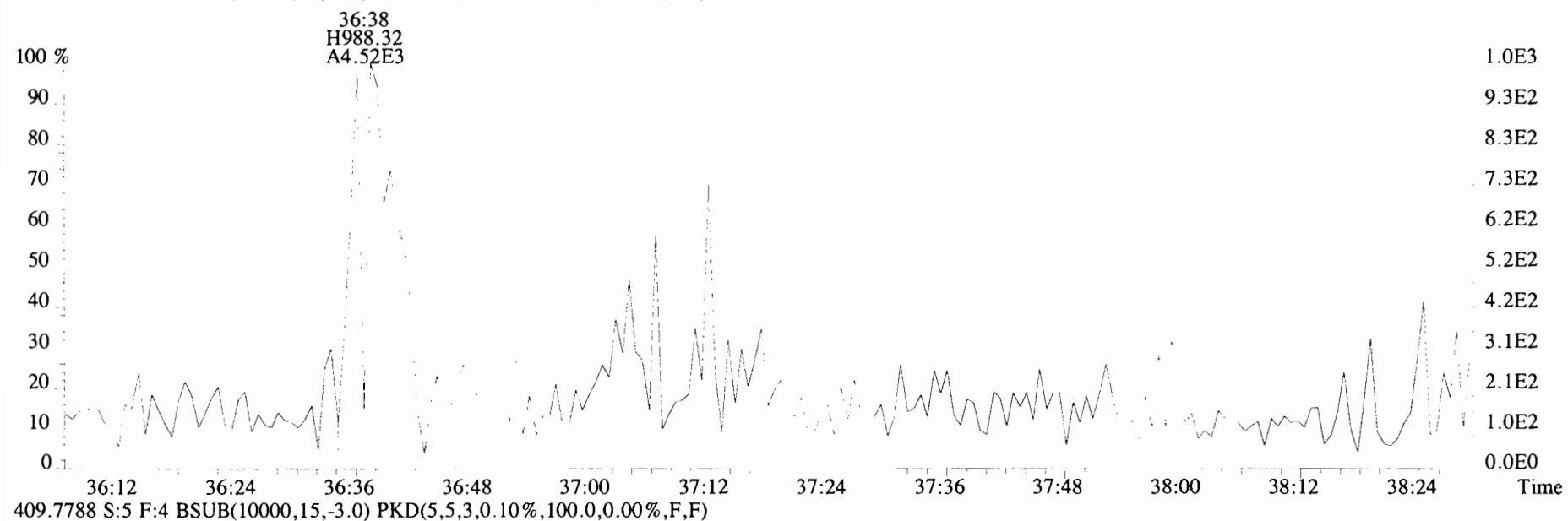
419.8220 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



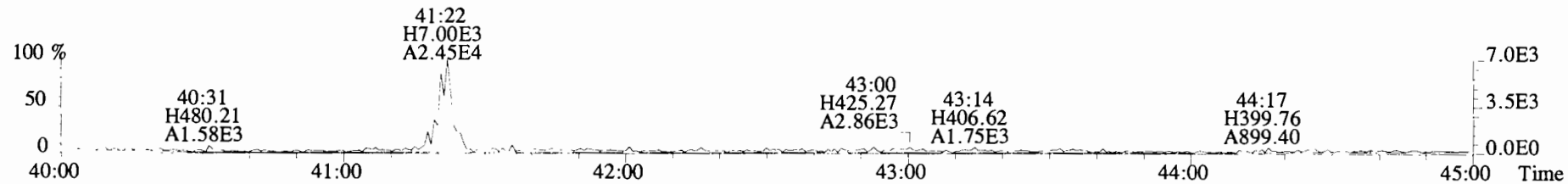
479.7165 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



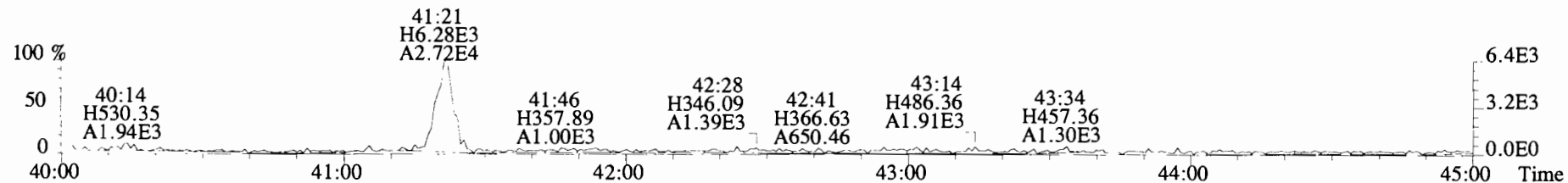
File:191120D2 #1-356 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
407.7818 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



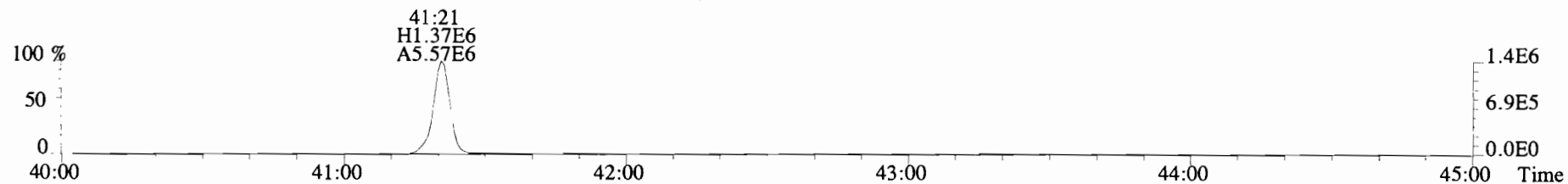
File:191120D2 #1-431 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
441.7428 S:5 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



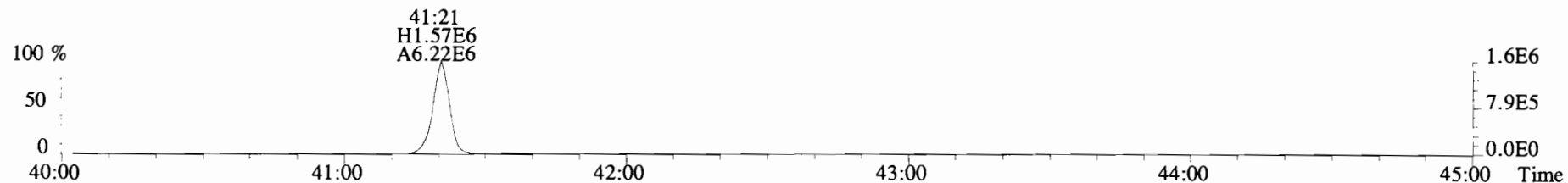
443.7398 S:5 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



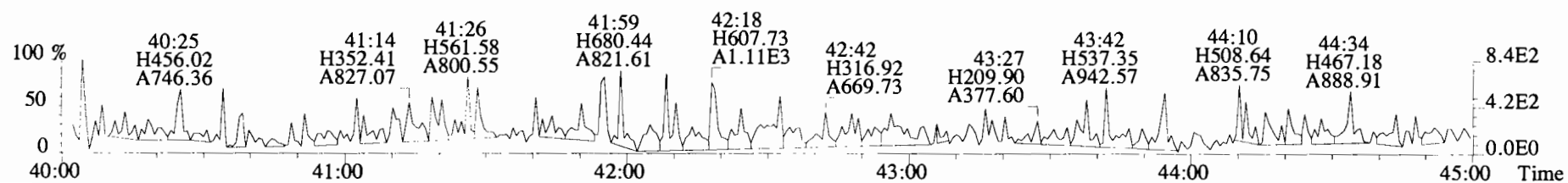
453.7831 S:5 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



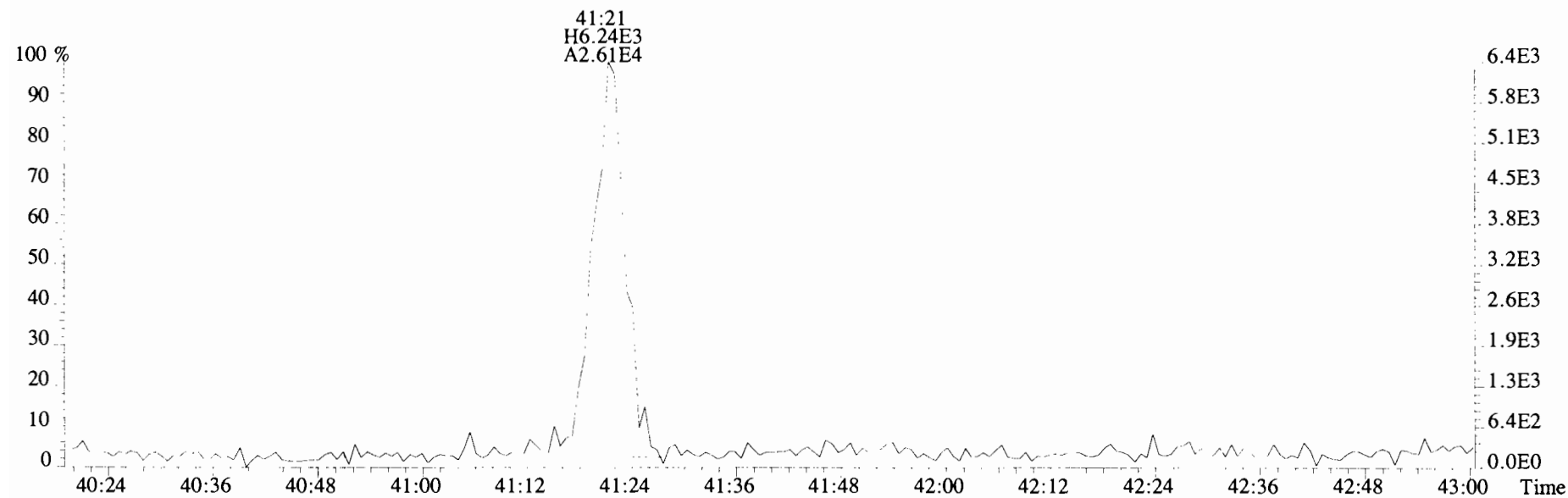
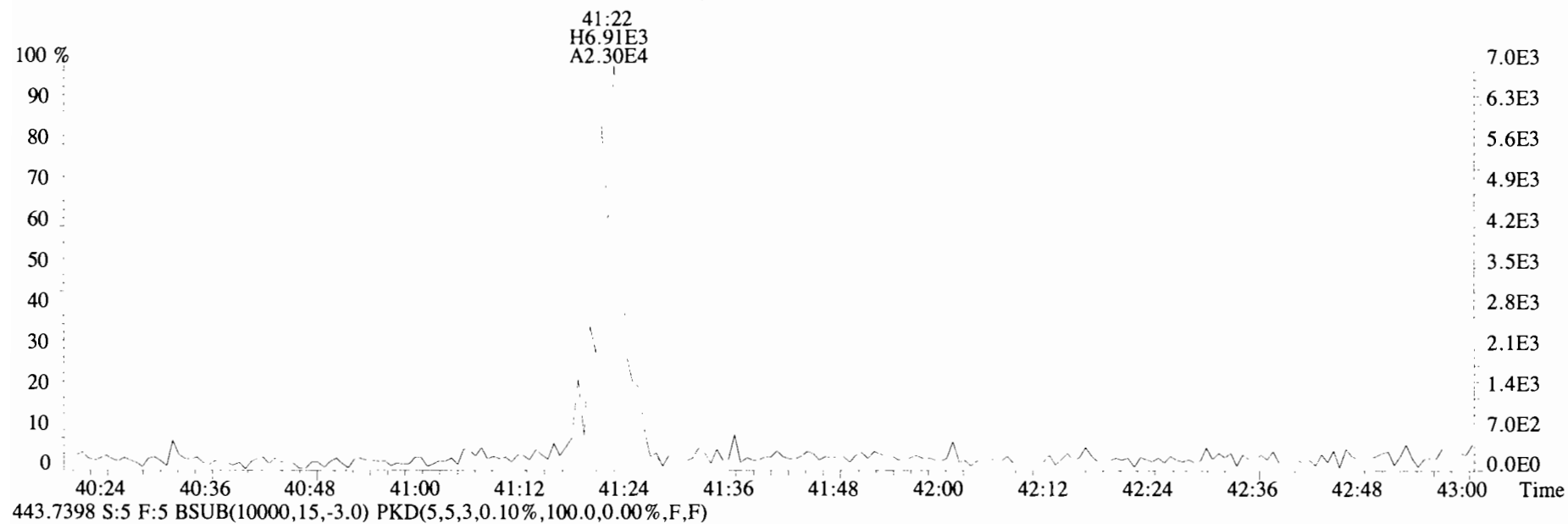
455.7801 S:5 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



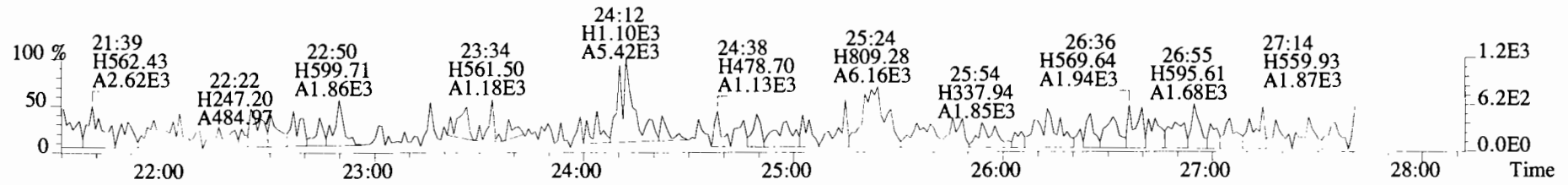
File:191120D2 #1-431 Acq:21-NOV-2019 05:22:35 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Viata Analytical Laboratory VG7 Text:1903829-03 PDI-062SC-A-13-14-191023 14.2 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



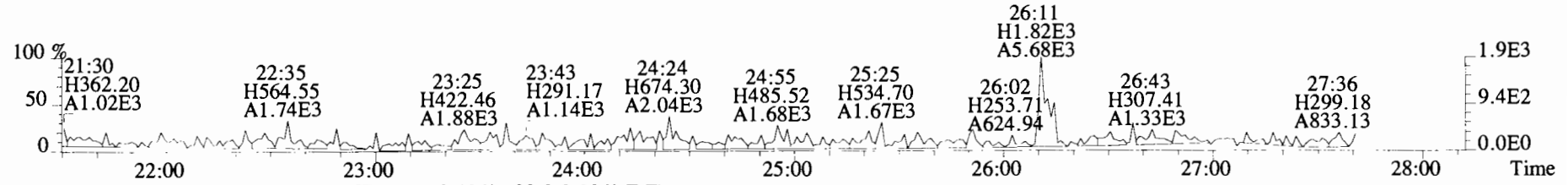
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	NotFη	*		185 2.5	0.0691		Total Tetra-Dioxins	*	*		185 0.0691	
1,2,3,7,8-PeCDD	*	* n	0.90	NotFη	*		226 2.5	0.0792		Total Penta-Dioxins	*	*		226 0.0792	
1,2,3,4,7,8-HxCDD	*	* n	1.10	NotFη	*		165 2.5	0.101		Total Hexa-Dioxins	*	*		165 0.106	
1,2,3,6,7,8-HxCDD	*	* n	0.94	NotFη	*		165 2.5	0.106		Total Hepta-Dioxins	*	*		121 0.0704	
1,2,3,7,8,9-HxCDD	*	* n	0.96	NotFη	*		165 2.5	0.109		Total Tetra-Furans	*	*		189 0.0473	
1,2,3,4,6,7,8-HpCDD	*	* n	0.98	NotFη	*		121 2.5	0.0704		Total Penta-Furans	0.0000	0.0000		178 0.0610	
OCDD	8.68e+03	0.86 y	0.96	41:08	0.34937		* 2.5	*		Total Hexa-Furans	*	*		125 0.0367	
2,3,7,8-TCDF	*	* n	0.95	NotFη	*		189 2.5	0.0473		Total Hepta-Furans	*	*		115 0.0479	
1,2,3,7,8-PeCDF	*	* n	0.96	NotFη	*		178 2.5	0.0632							
2,3,4,7,8-PeCDF	*	* n	1.01	NotFη	*		178 2.5	0.0588							
1,2,3,4,7,8-HxCDF	*	* n	1.18	NotFη	*		125 2.5	0.0319							
1,2,3,6,7,8-HxCDF	*	* n	1.07	NotFη	*		125 2.5	0.0320							
2,3,4,6,7,8-HxCDF	*	* n	1.11	NotFη	*		125 2.5	0.0366							
1,2,3,7,8,9-HxCDF	*	* n	1.06	NotFη	*		125 2.5	0.0477							
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	NotFη	*		115 2.5	0.0531							
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	NotFη	*		115 2.5	0.0423							
OCDF	*	* n	0.95	NotFη	*		135 2.5	0.0838							
IS	13C-2,3,7,8-TCDD	9.29e+06	0.80 y	1.10	26:11		197.83			Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	7.43e+06	0.61 y	0.88	30:41		196.62			99.3					
IS	13C-1,2,3,4,7,8-HxCDD	6.10e+06	1.27 y	0.64	33:59		205.51			98.7					
IS	13C-1,2,3,6,7,8-HxCDD	6.66e+06	1.26 y	0.86	34:06		168.50			103					
IS	13C-1,2,3,7,8,9-HxCDD	6.68e+06	1.23 y	0.81	34:24		179.27			84.5					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.91e+06	1.08 y	0.65	37:51		195.57			89.9					
IS	13C-OCDD	1.03e+07	0.90 y	0.58	41:07		385.54			98.1					
IS	13C-2,3,7,8-TCDF	1.36e+07	0.76 y	1.03	25:24		194.41			96.7					
IS	13C-1,2,3,7,8-PeCDF	1.16e+07	1.59 y	0.85	29:31		201.32			97.5					
IS	13C-2,3,4,7,8-PeCDF	1.10e+07	1.54 y	0.85	30:24		192.97			101					
IS	13C-1,2,3,4,7,8-HxCDF	8.05e+06	0.51 y	0.83	33:06		209.48			96.8					
IS	13C-1,2,3,6,7,8-HxCDF	8.78e+06	0.51 y	1.03	33:14		183.59			105					
IS	13C-2,3,4,6,7,8-HxCDF	8.13e+06	0.53 y	0.95	33:49		184.43			92.1					
IS	13C-1,2,3,7,8,9-HxCDF	7.43e+06	0.51 y	0.83	34:46		194.31			92.5					
IS	13C-1,2,3,4,6,7,8-HpCDF	6.25e+06	0.46 y	0.76	36:37		178.51			97.5					
IS	13C-1,2,3,4,7,8,9-HpCDF	5.49e+06	0.45 y	0.58	38:23		204.28			89.6					
IS	13C-OCDF	1.29e+07	0.88 y	0.69	41:20		404.08			102					
C/Up	37C1-2,3,7,8-TCDD	3.93e+06		1.20	26:12		76.616			96.1					
RS/RT	13C-1,2,3,4-TCDD	8.54e+06	0.81 y	1.00	25:37		199.31								
RS	13C-1,2,3,4-TCDF	1.34e+07	0.80 y	1.00	24:11		199.31								
RS/RT	13C-1,2,3,4,6,9-HxCDF	9.21e+06	0.52 y	1.00	33:31		199.31								

Integrations Reviewed
 by Analyst: DB by Analyst: CT
 Date: 11/26/19 Date: 11/27/19

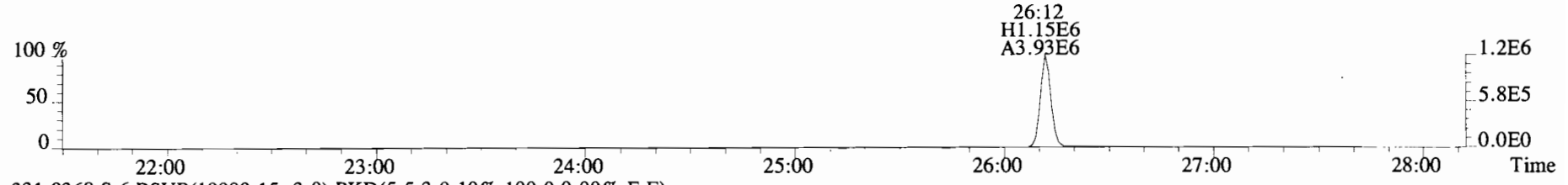
File:191120D2 #1-492 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
 319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



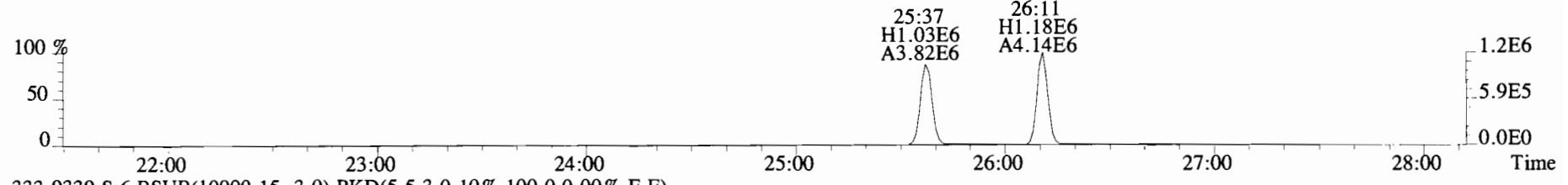
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



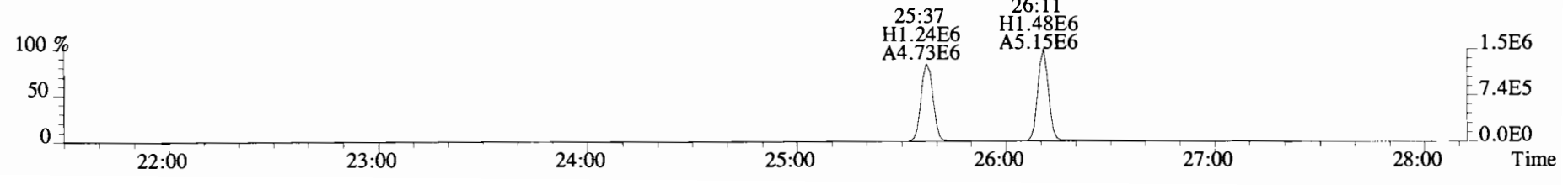
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



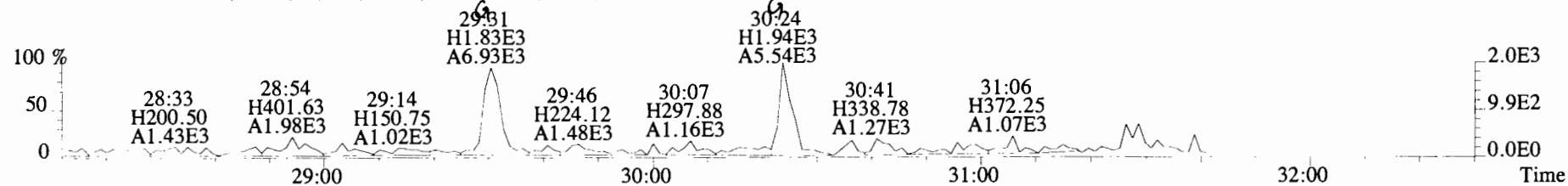
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



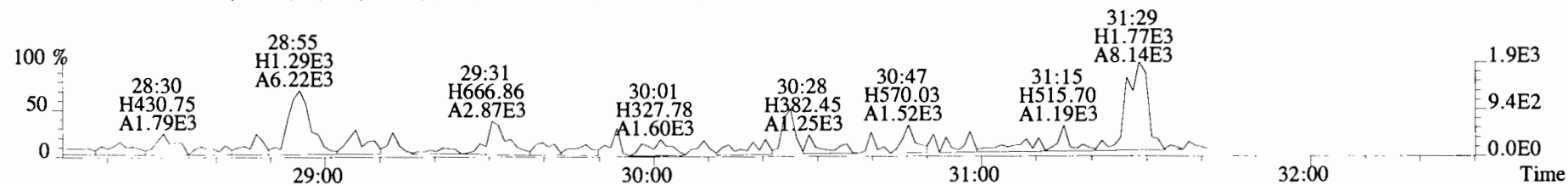
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



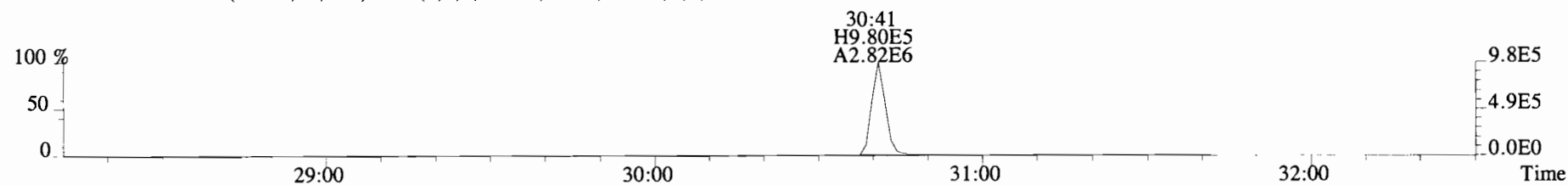
File:191120D2 #1-211 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
 353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



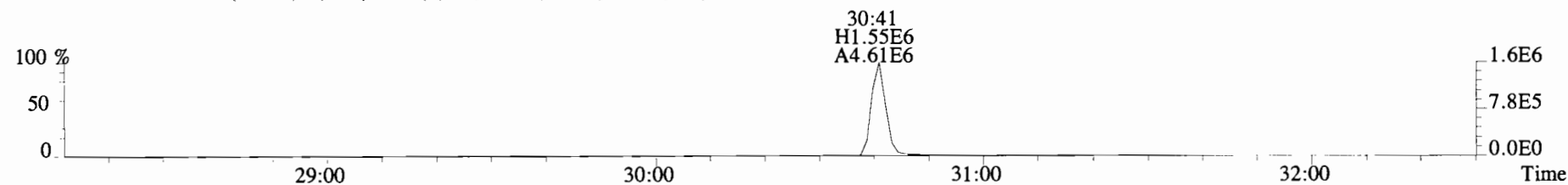
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



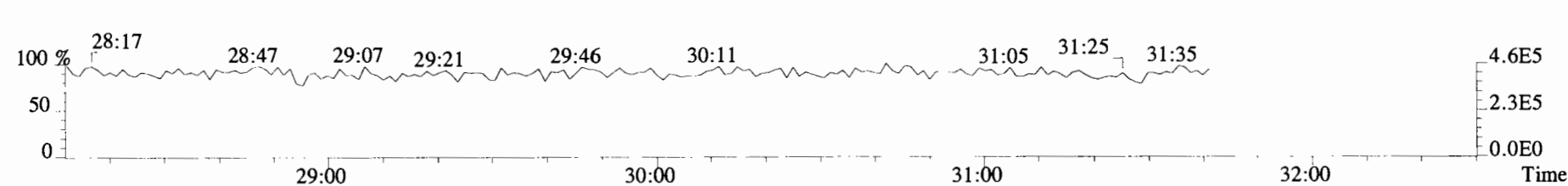
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



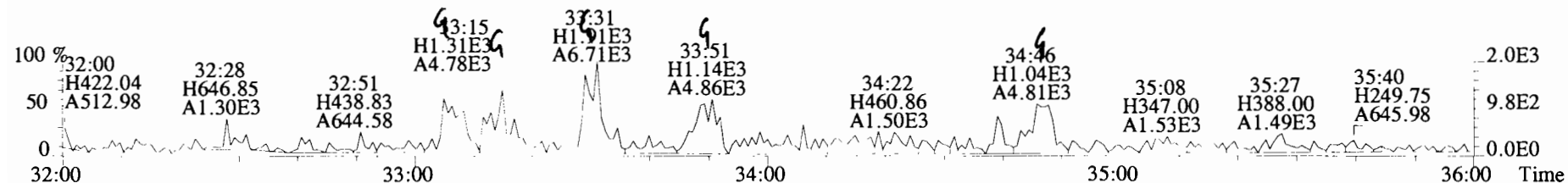
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



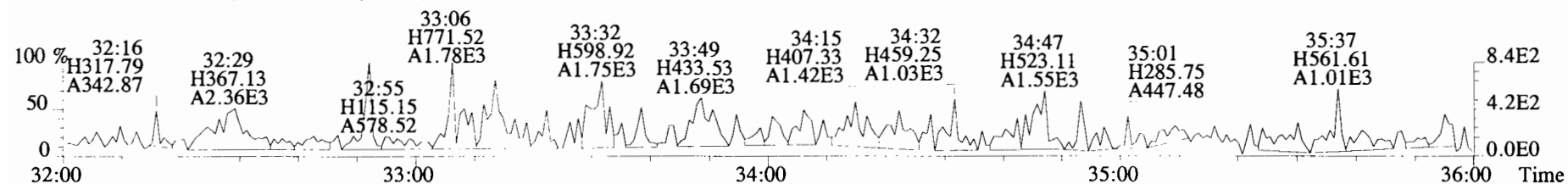
366.9792 S:6 F:2



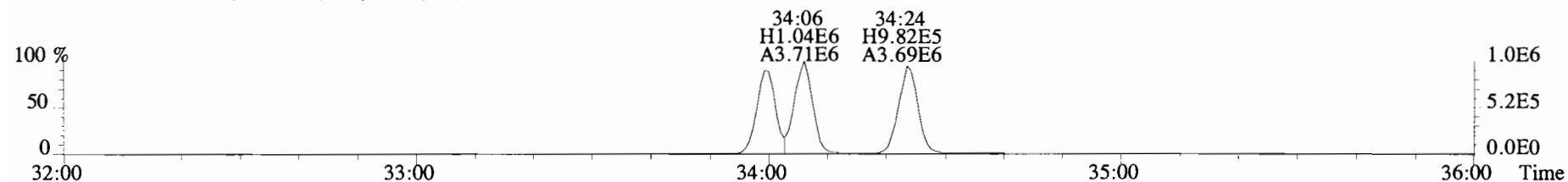
File:191120D2 #1-384 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



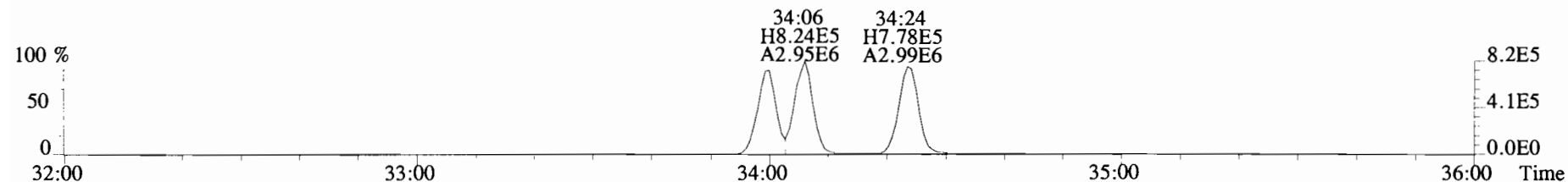
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



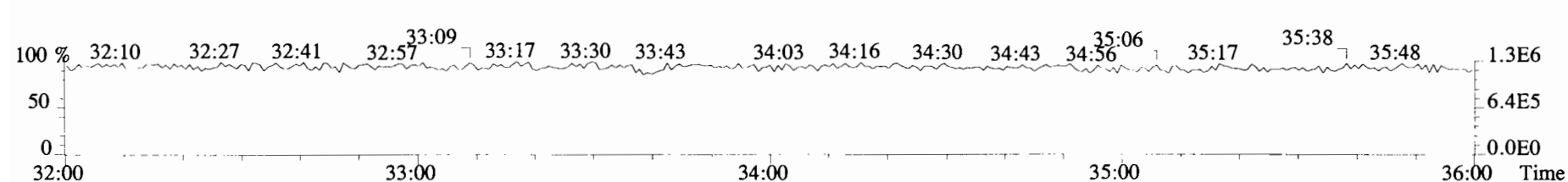
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



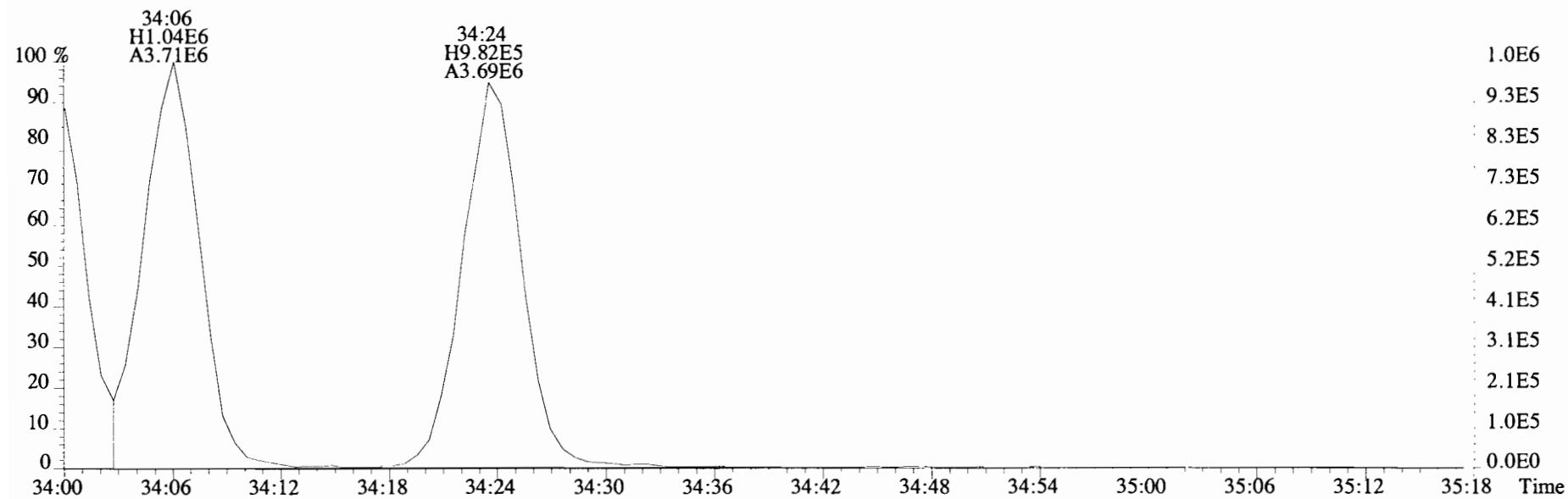
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



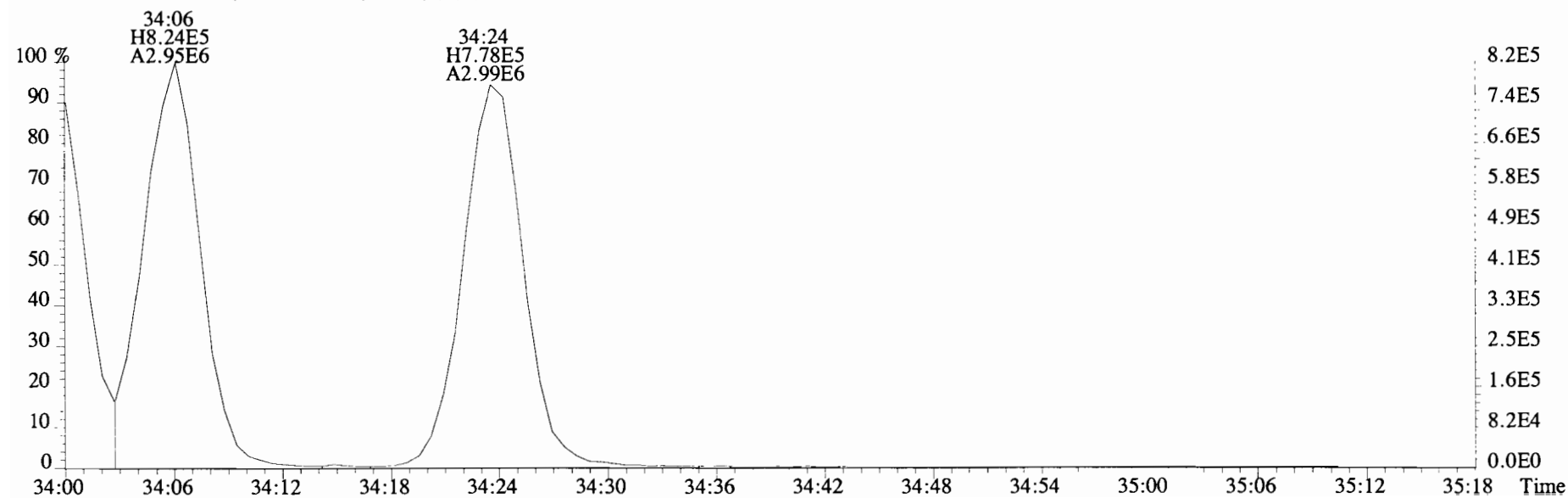
392.9760 S:6 F:3



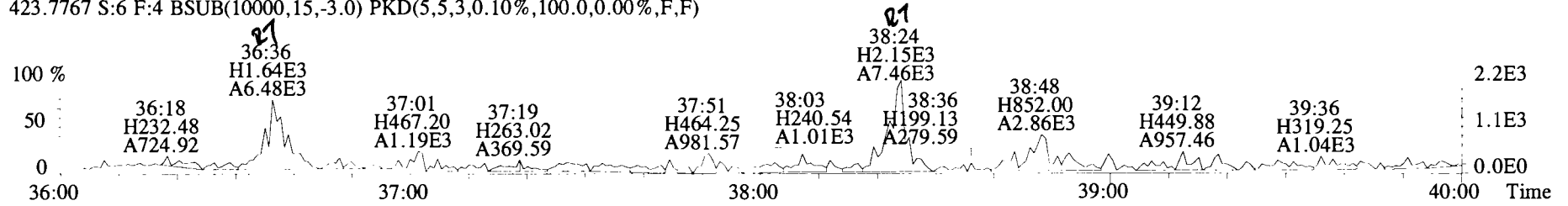
File:191120D2 #1-384 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
 401.8559 S:6 F:3 BSUB(I0000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



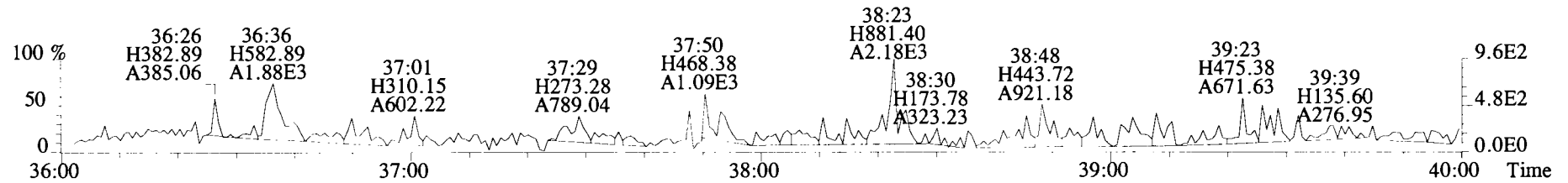
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



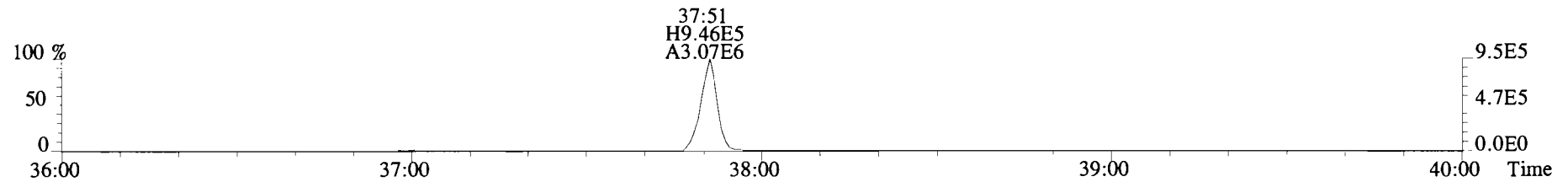
File:191120D2 #1-355 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



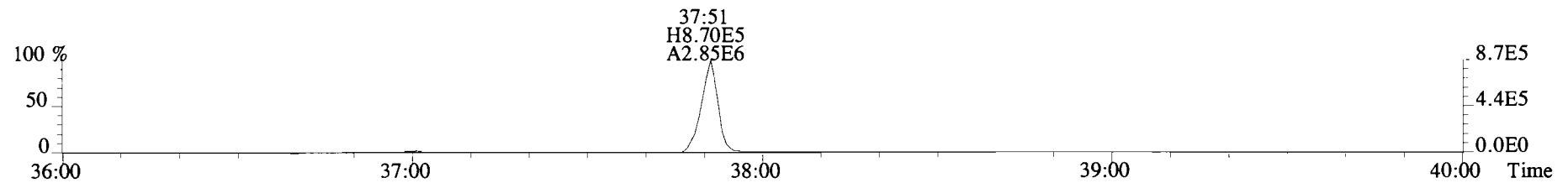
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



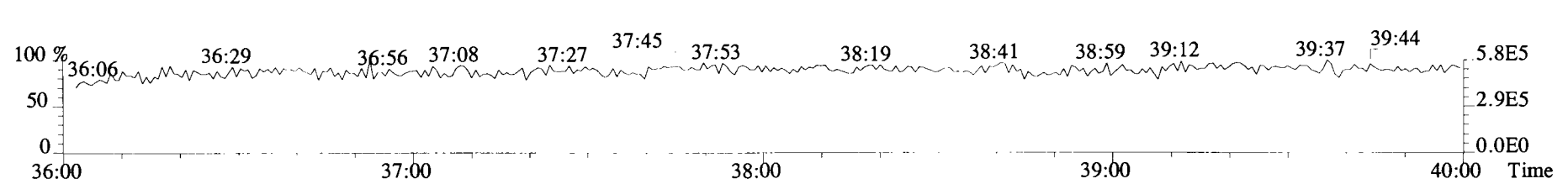
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



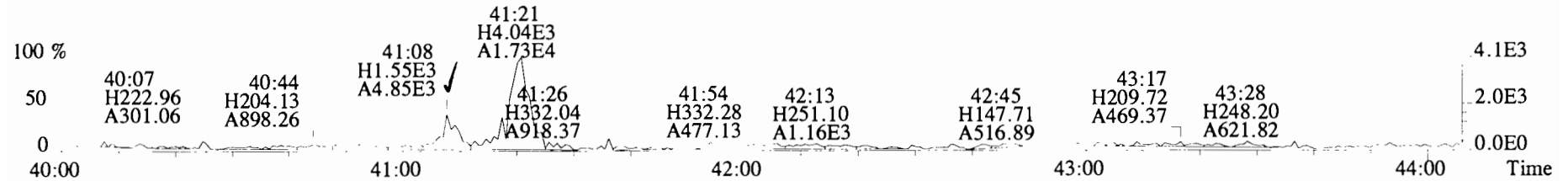
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



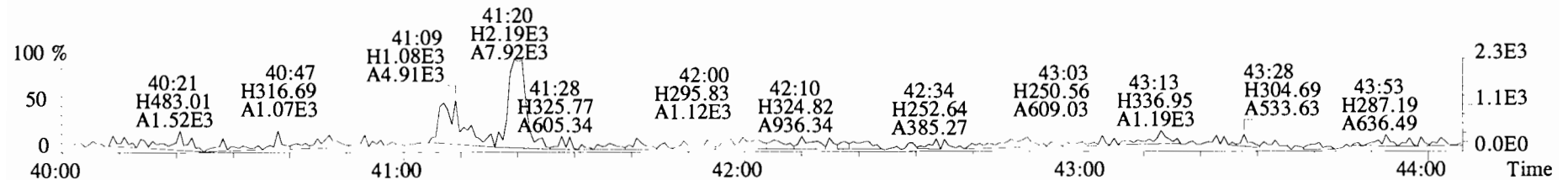
454.9728 S:6 F:4



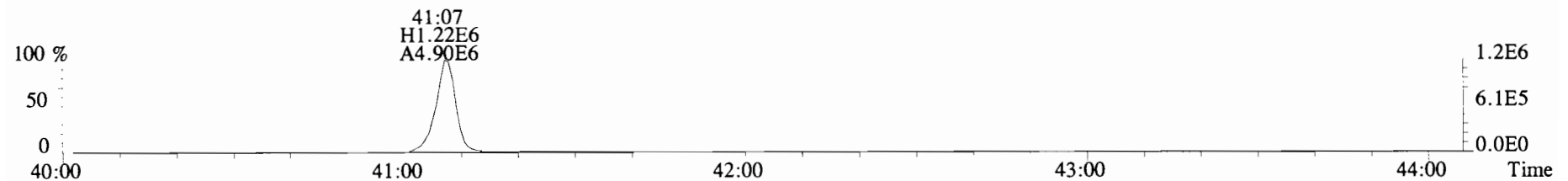
File:191120D2 #1-432 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



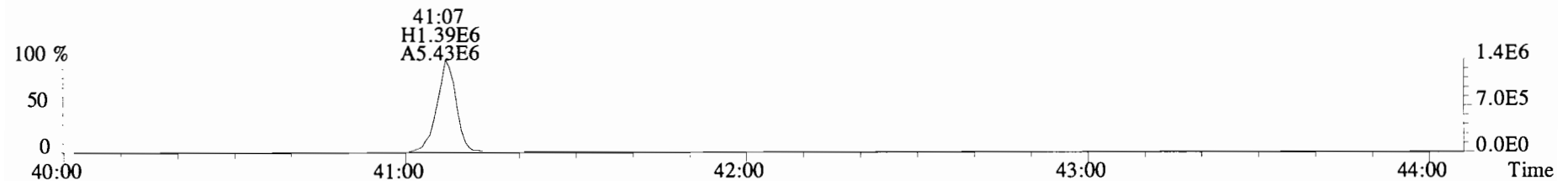
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



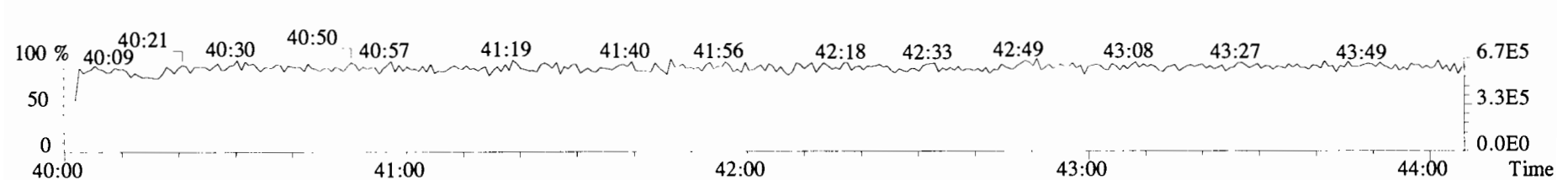
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



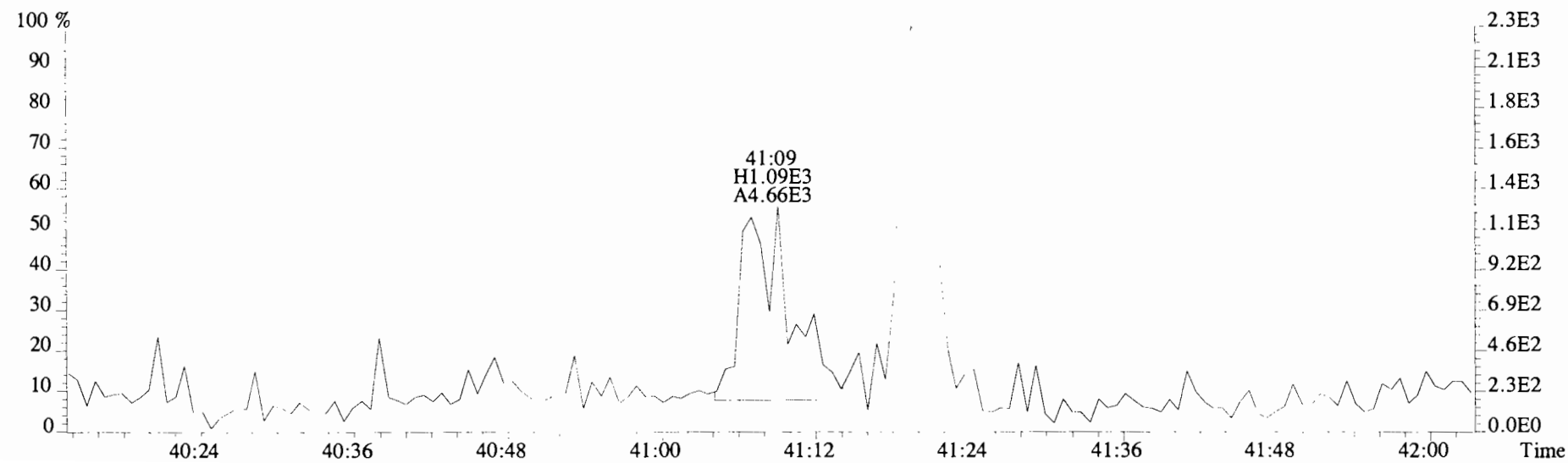
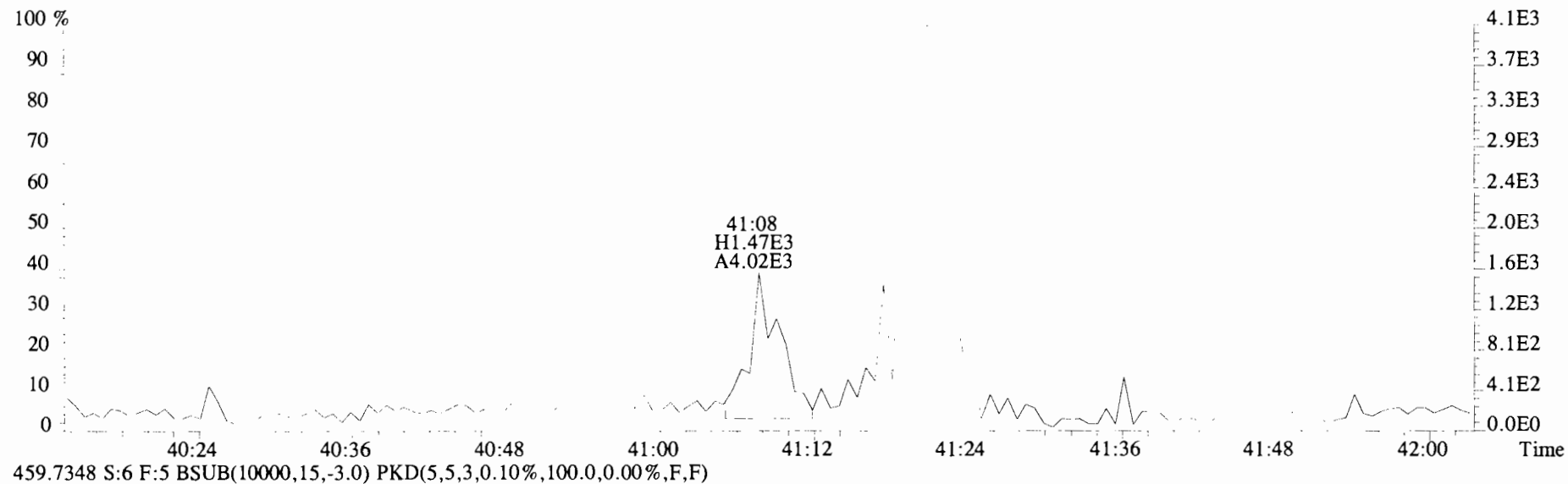
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



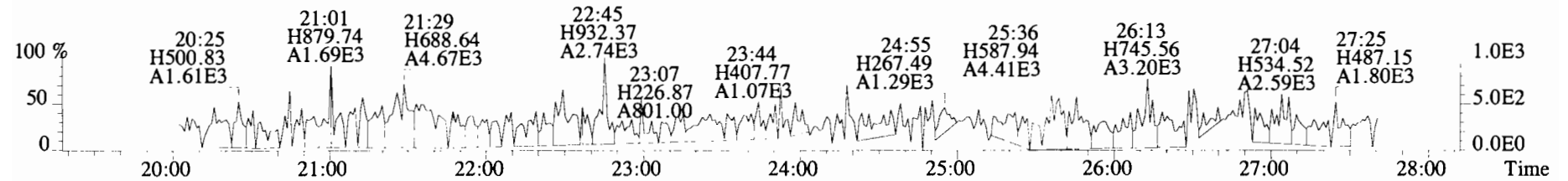
454.9728 S:6 F:5



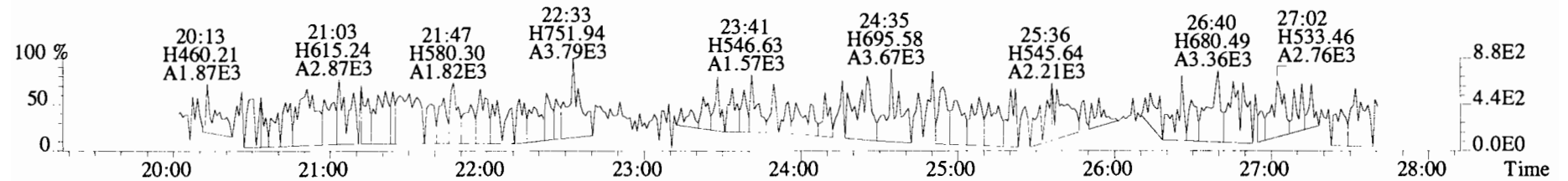
File:191120D2 #1-432 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



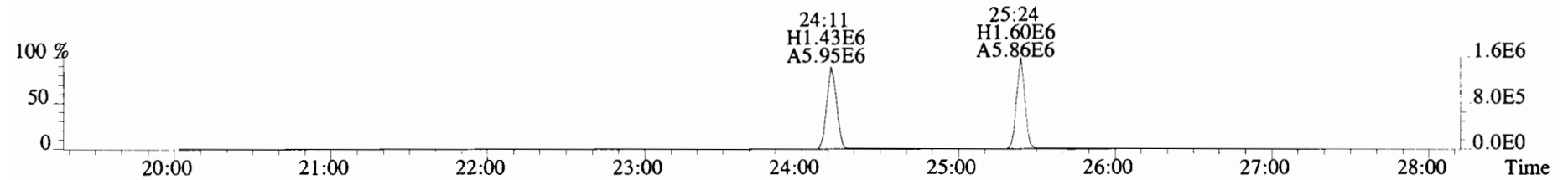
File:191120D2 #1-492 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical Laboratory_VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



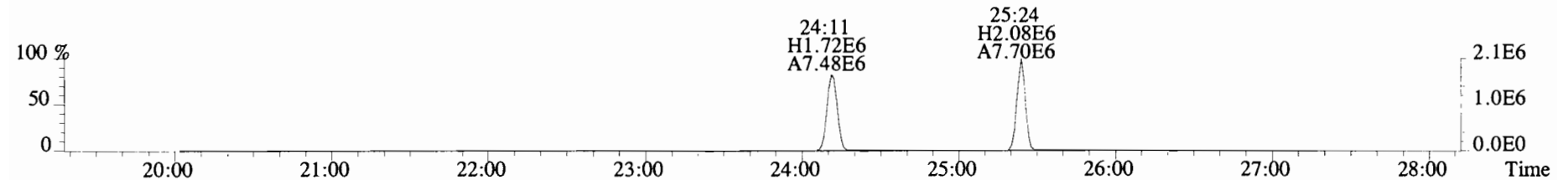
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



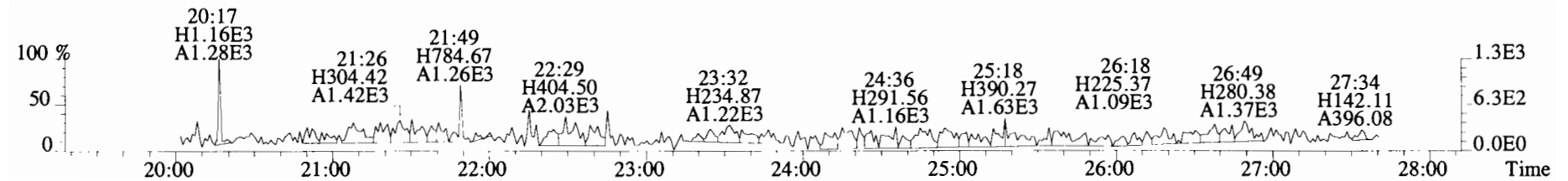
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



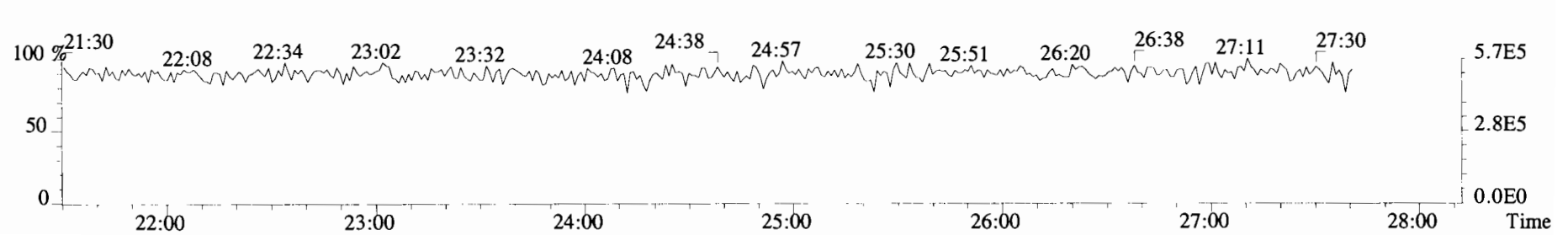
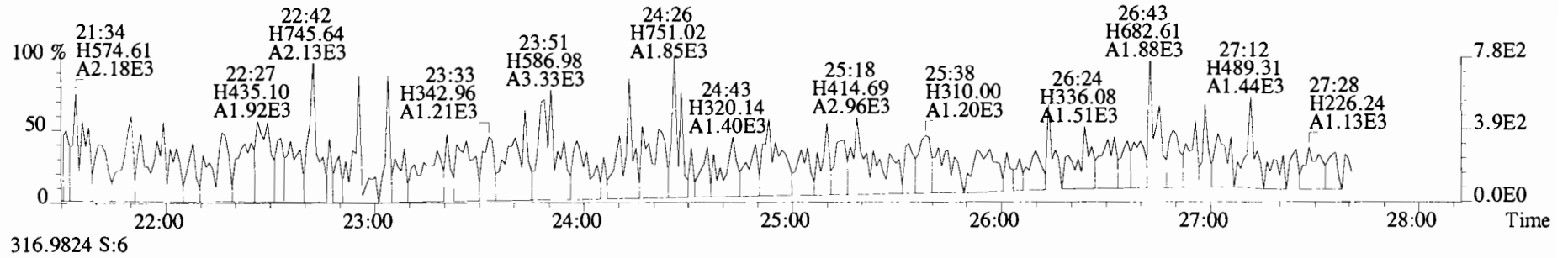
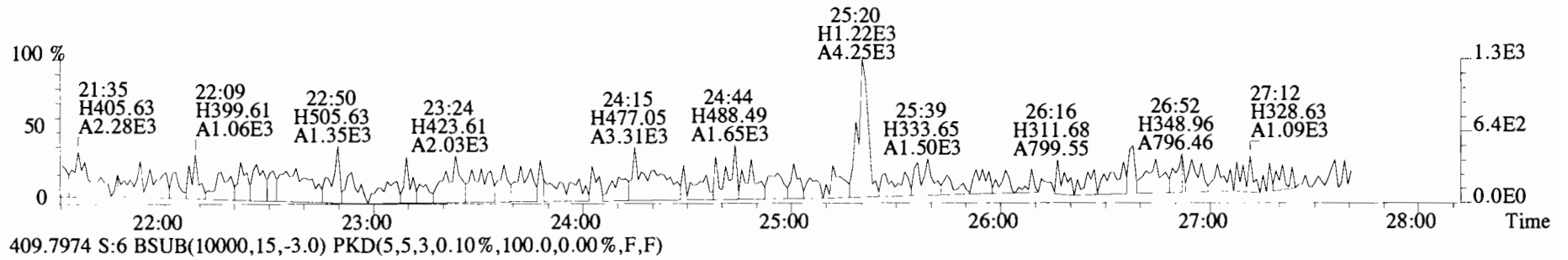
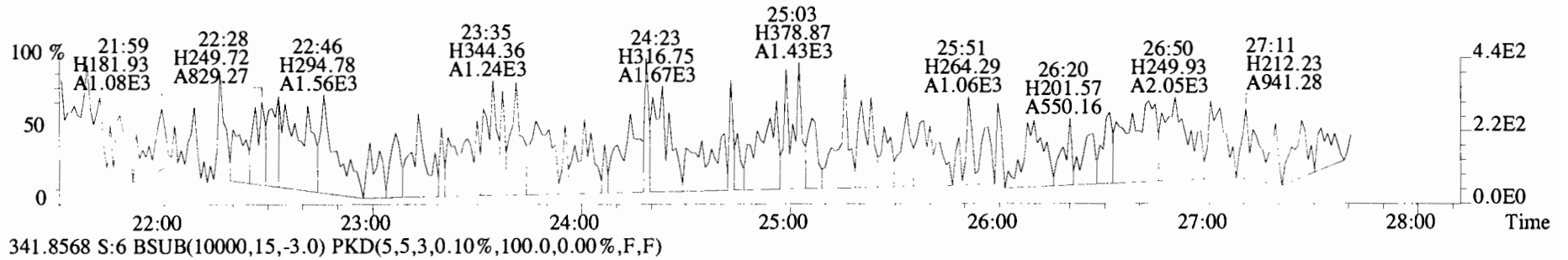
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



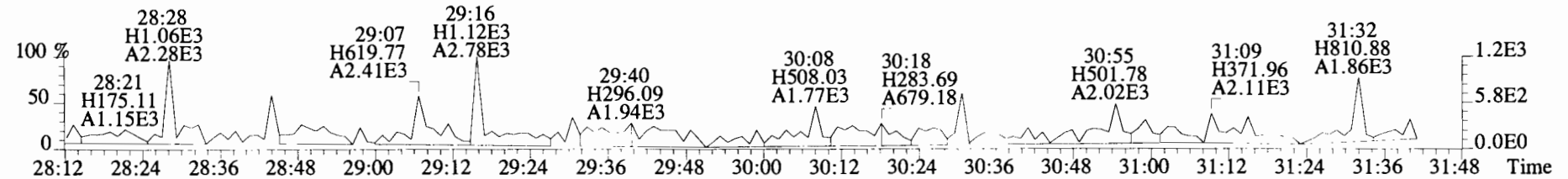
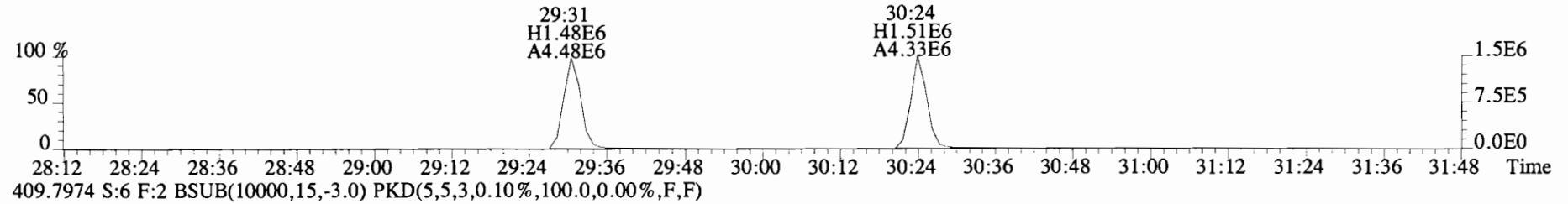
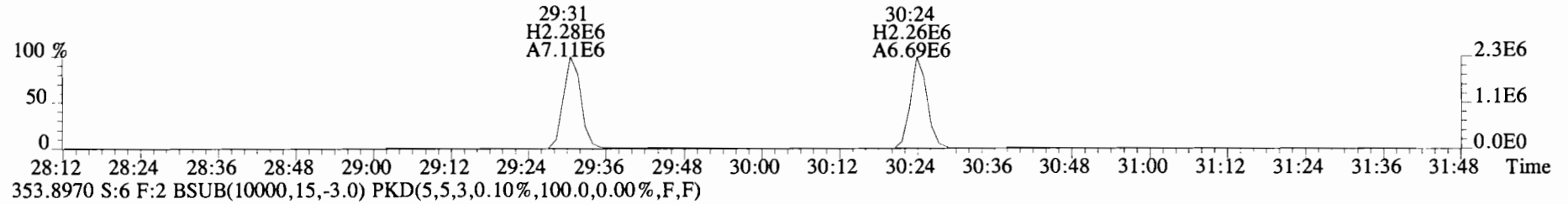
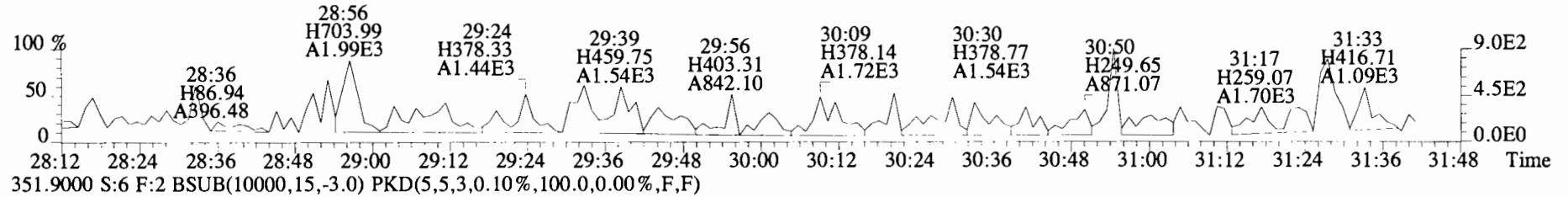
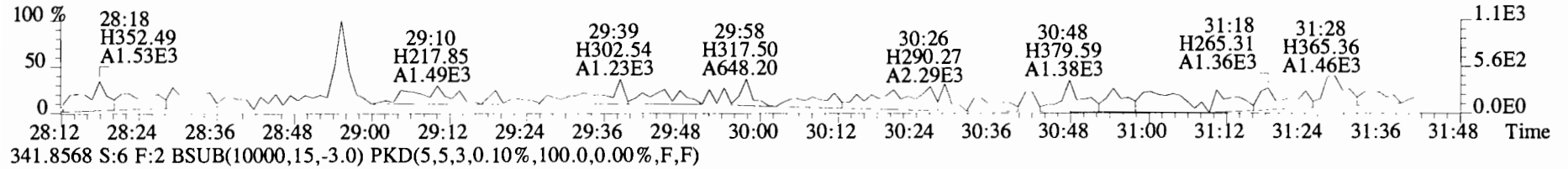
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



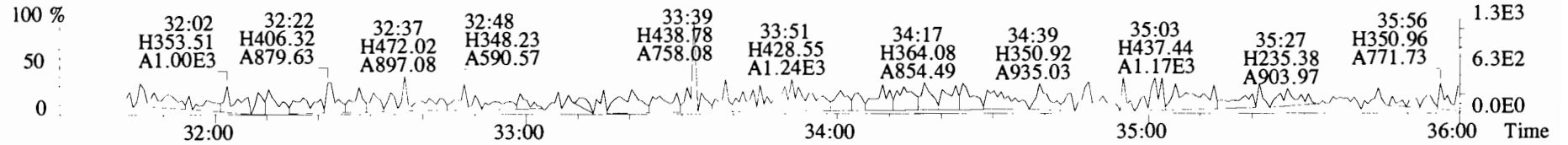
File:191120D2 #1-492 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
 339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



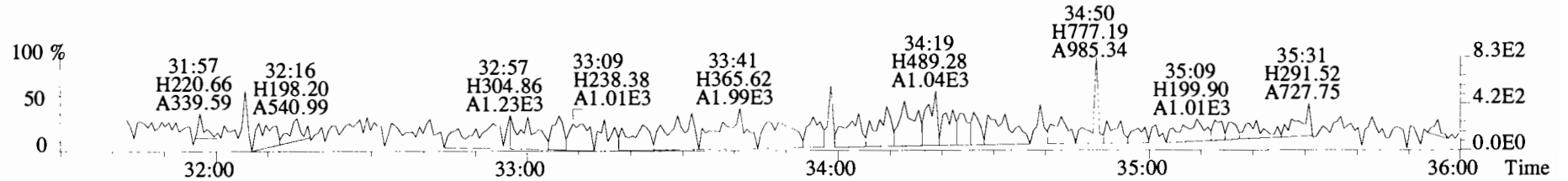
File:191120D2 #1-211 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



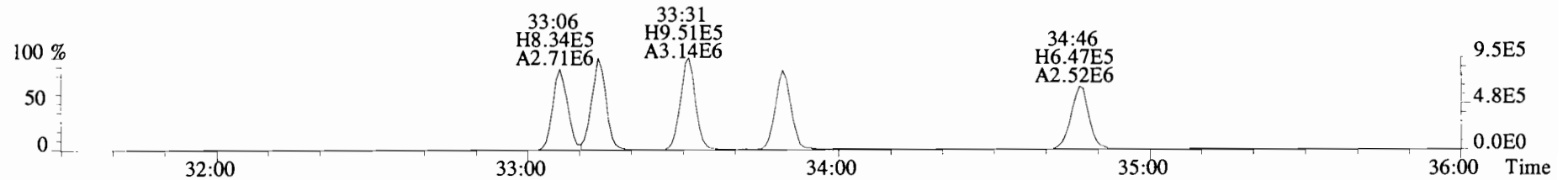
File:191120D2 #1-384 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata_Analytical_Laboratory_VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



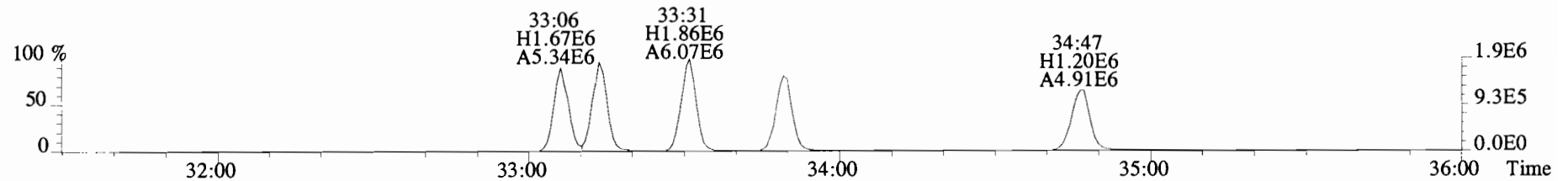
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



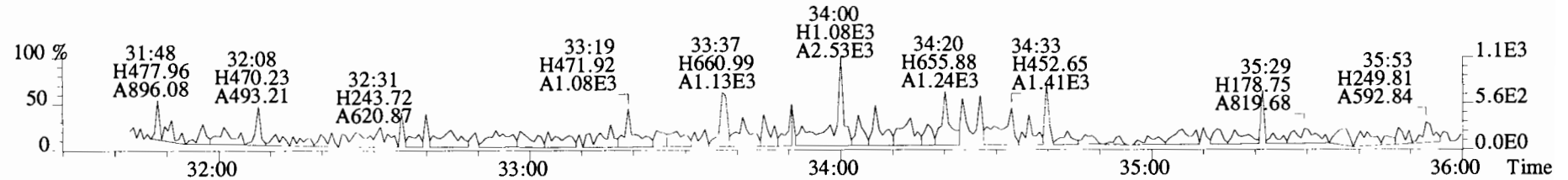
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



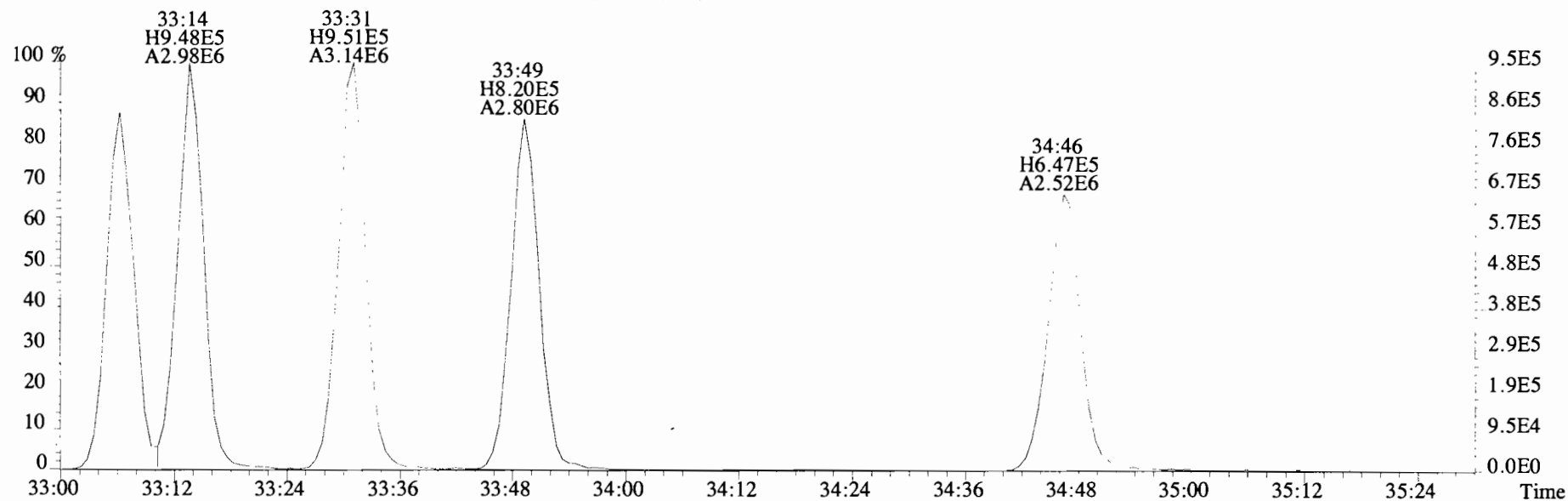
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



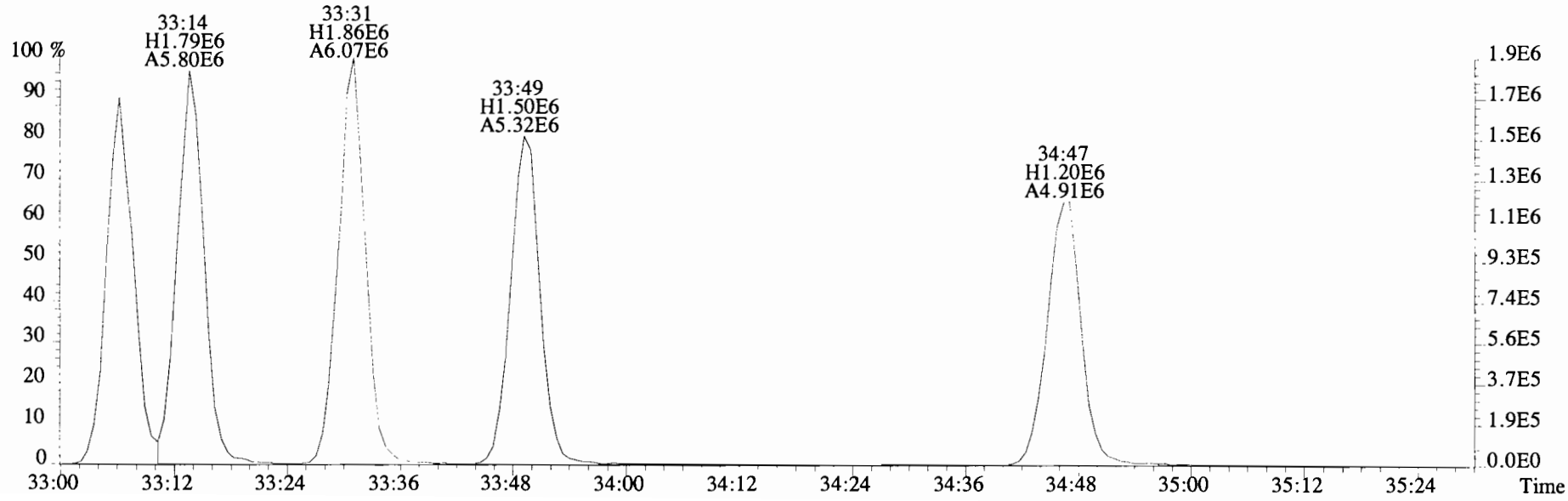
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



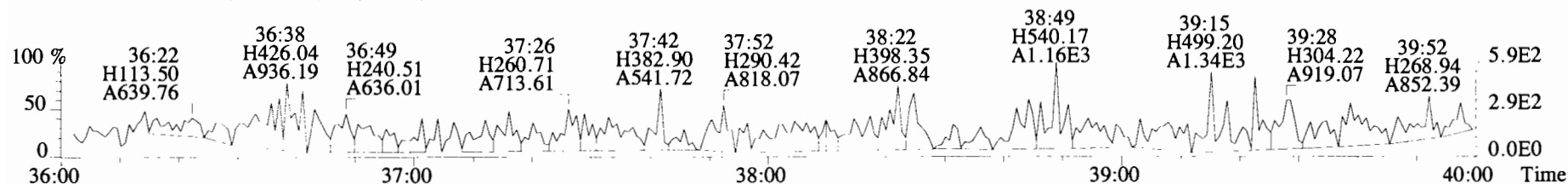
File:191120D2 #1-384 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



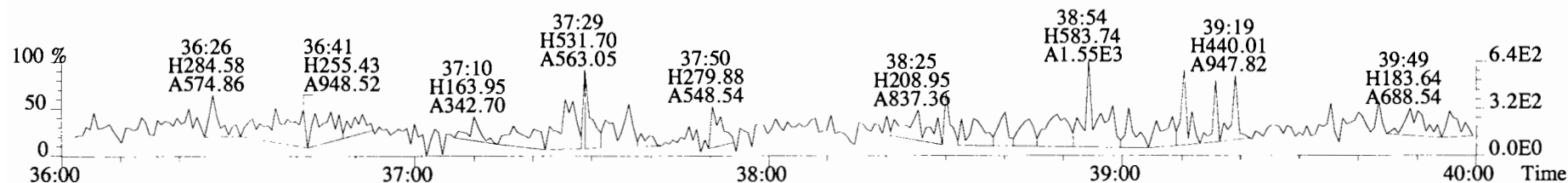
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



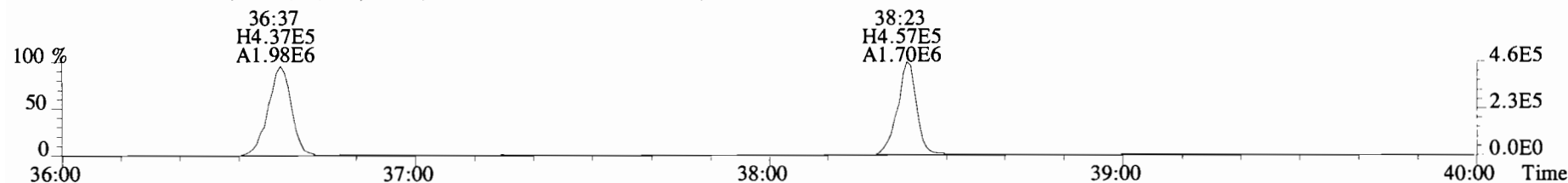
File:191120D2 #1-355 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
 407.7818 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



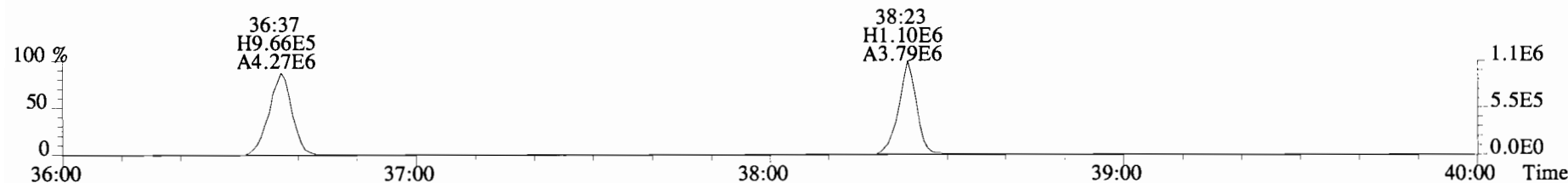
409.7788 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



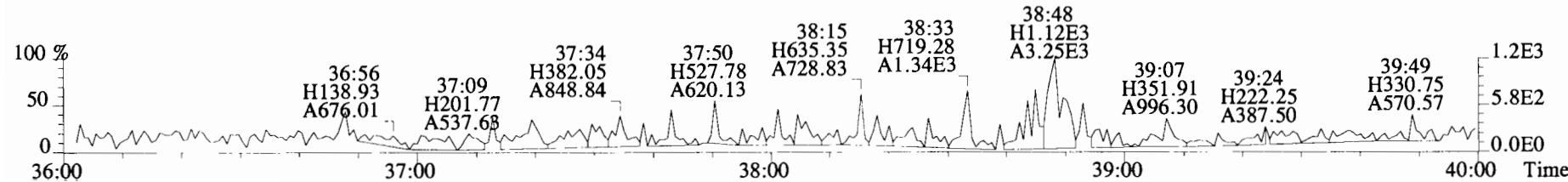
417.8253 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



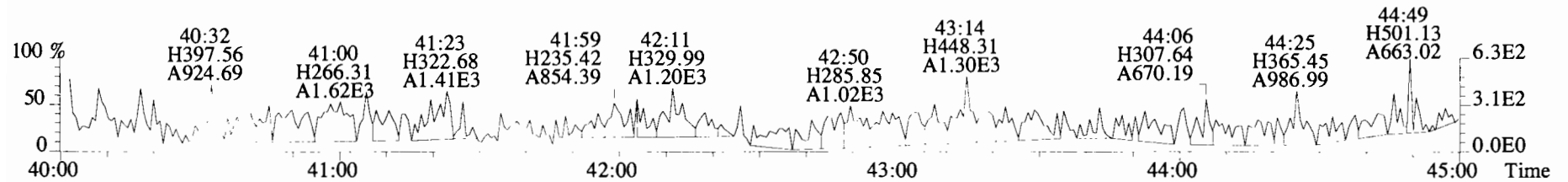
419.8220 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



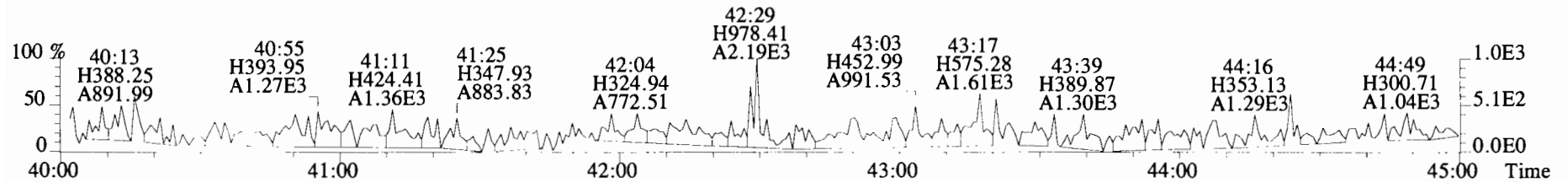
479.7165 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



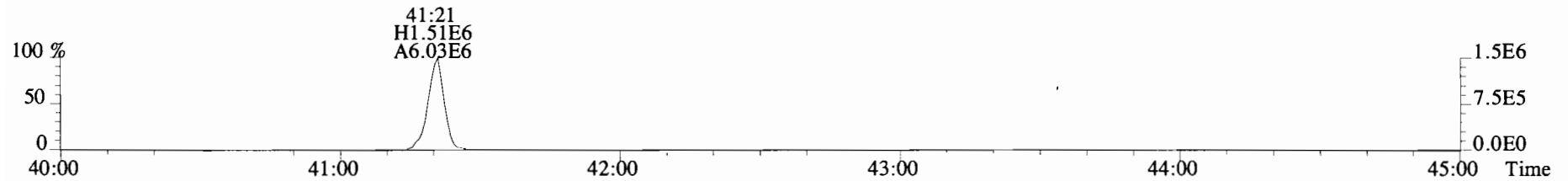
File:191120D2 #1-432 Acq:21-NOV-2019 06:10:19 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Viata Analytical Laboratory VG7 Text:1903829-04 PDI-062SC-A-14-14.8-191023 14.68 Exp:OCDD_DB5
 441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



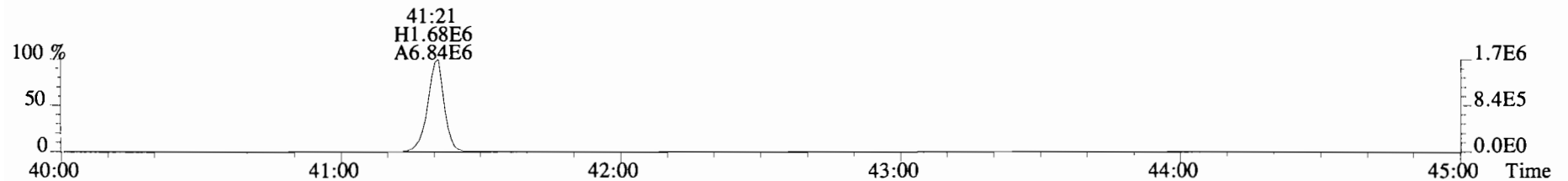
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



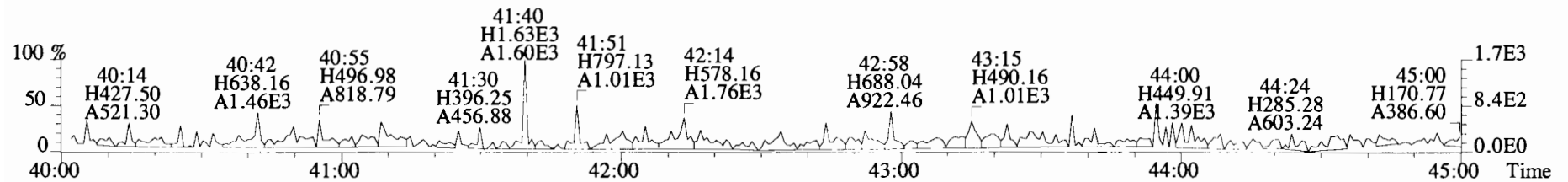
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



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



CONTINUING CALIBRATION

HKMS CALIBRATION STANDARDS REVIEW CHECKLIST

Begin Calibration ID: ST191119D1-1

Reviewed By: CT 11/20/19
Initials & Date

End Calibration ID: NA

	<u>Begin</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>
Run Log:		
- Correct Instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/> Y
- Samples within 12 hour clock?	<input checked="" type="checkbox"/> (Y)	<input type="checkbox"/> N
- Bottle position verified?	<u>DB</u>	<u>DB</u>

	<u>Begin</u>	<u>End</u>
Mass resolution \geq	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> A)
<input type="checkbox"/> 5k <input type="checkbox"/> 6-8K <input type="checkbox"/> 8K <input checked="" type="checkbox"/> 10K 1614 1699 429 1613/1668/8280		
Integrated 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:
 A) SIOS CRASHED DURING END R/S CHECK
 2 FUNCTIONS PRINTED.
 DB 11/20/19

Vista Analytical Laboratory - Injection Log Run file: 191119D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191119D1	1	ST191119D1-1	DB	19-NOV-19	12:43:27	ST191119D1-1	NA
191119D1	2	B9K0094-BS1	DB	19-NOV-19	13:31:22	ST191119D1-1	NA
191119D1	3	B9K0124-BS1	DB	19-NOV-19	14:19:14	ST191119D1-1	NA
191119D1	4	B9K0051-BS1	DB	19-NOV-19	15:07:00	ST191119D1-1	NA
191119D1	5	B9K0034-BS1	DB	19-NOV-19	15:54:57	ST191119D1-1	NA
191119D1	6	SOLVENT BLANK	DB	19-NOV-19	16:42:53	ST191119D1-1	NA
191119D1	7	B9K0094-BLK1	DB	19-NOV-19	17:30:39	ST191119D1-1	NA
191119D1	8	B9K0124-BLK1	DB	19-NOV-19	18:18:25	ST191119D1-1	NA
191119D1	9	B9K0051-BLK1	DB	19-NOV-19	19:06:15	ST191119D1-1	NA
191119D1	10	B9K0034-BLK1	DB	19-NOV-19	19:53:57	ST191119D1-1	NA
191119D1	11	1903994-01	DB	19-NOV-19	20:41:41	ST191119D1-1	NA
191119D1	12	1903856-01	DB	19-NOV-19	21:29:30	ST191119D1-1	NA
191119D1	13	1903784-01	DB	19-NOV-19	22:17:14	ST191119D1-1	NA
191119D1	14	1903784-02	DB	19-NOV-19	23:04:57	ST191119D1-1	NA
191119D1	15	1903784-03	DB	19-NOV-19	23:52:05	ST191119D1-1	NA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: ST191119D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191119D1 S#1 Analysis Date: 19-NOV-19 Time: 12:43:27

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	0.79	0.65-0.89	y	10.4	7.8 - 12.9
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	52.1	8.2 - 12.3 (4) 39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	51.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	52.4	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	y	52.1	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	51.8	43.0 - 58.0
OCDD	M+2/M+4	0.88	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	9.98	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	52.6	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	51.5	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	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	51.4	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	52.1	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	51.6	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.00	0.88-1.20	y	48.7	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	y	49.2	43.0 - 58.0
OCDF	M+2/M+4	0.89	0.76-1.02	y	100.0	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: 11/19/19

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: 191119D1 S#1 Analysis Date: 19-NOV-19 Time: 12:43:27

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	102	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	101	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	106	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	92.8	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	99.5	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	110	72.0 - 138.0
13C-OCDD	M/M+2	0.87	0.76-1.02	y	260	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.79	0.65-0.89	y	103	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	103	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	101	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	98.6	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	0.53	0.43-0.59	y	107	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.44	0.37-0.51	y	111	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	117	77.0 - 129.0
13C-OCDF	M+2/M+4	0.87	0.76-1.02	y	267	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.68	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: 11/19/19

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: 191119D1 S#1 Analysis Date: 19-NOV-19 Time: 12:43:27

ZB-5MS IS Data Filename: 191119D1 S#1 Analysis Date: 19-NOV-19 Time: 12:43:27

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)	22:49	1,3,6,8-TCDF (F)	20:41
1,2,8,9-TCDD (L)	27:04	1,2,8,9-TCDF (L)	27:12
1,2,4,7,9-PeCDD (F)	28:40	1,3,4,6,8-PeCDF (F)	27:10
1,2,3,8,9-PeCDD (L)	31:04	1,2,3,8,9-PeCDF (L)	31:18
1,2,4,6,7,9-HxCDD (F)	32:29	1,2,3,4,6,8-HxCDF (F)	31:57
1,2,3,7,8,9-HxCDD (L)	34:25	1,2,3,7,8,9-HxCDF (L)	34:48
1,2,3,4,6,7,9-HpCDD (F)	37:02	1,2,3,4,6,7,8-HpCDF (F)	36:39
1,2,3,4,6,7,8-HpCDD (L)	37:52	1,2,3,4,7,8,9-HpCDF (L)	38:25

(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: 11/19/19

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-SMS

VER Data Filename: 191119D1 S#1 Analysis Date: 19-NOV-19 Time: 12:43:27

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	1.000	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	0.991	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	1.023	0.989-1.052

Analyst: DB

Date: 11/19/19

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: 191119D1 S#1 Analysis Date: 19-NOV-19 Time: 12:43:27

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	1.000	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	0.992	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	1.017	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	1.145	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	1.233	1.091-1.371

Analyst: DB

Date: 11/19/19

Client ID: 1613 CS3 19C2204
Lab ID: ST191119D1-1

Filename: 191119D1 S:1 Acq:19-NOV-19 12:43:27
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000

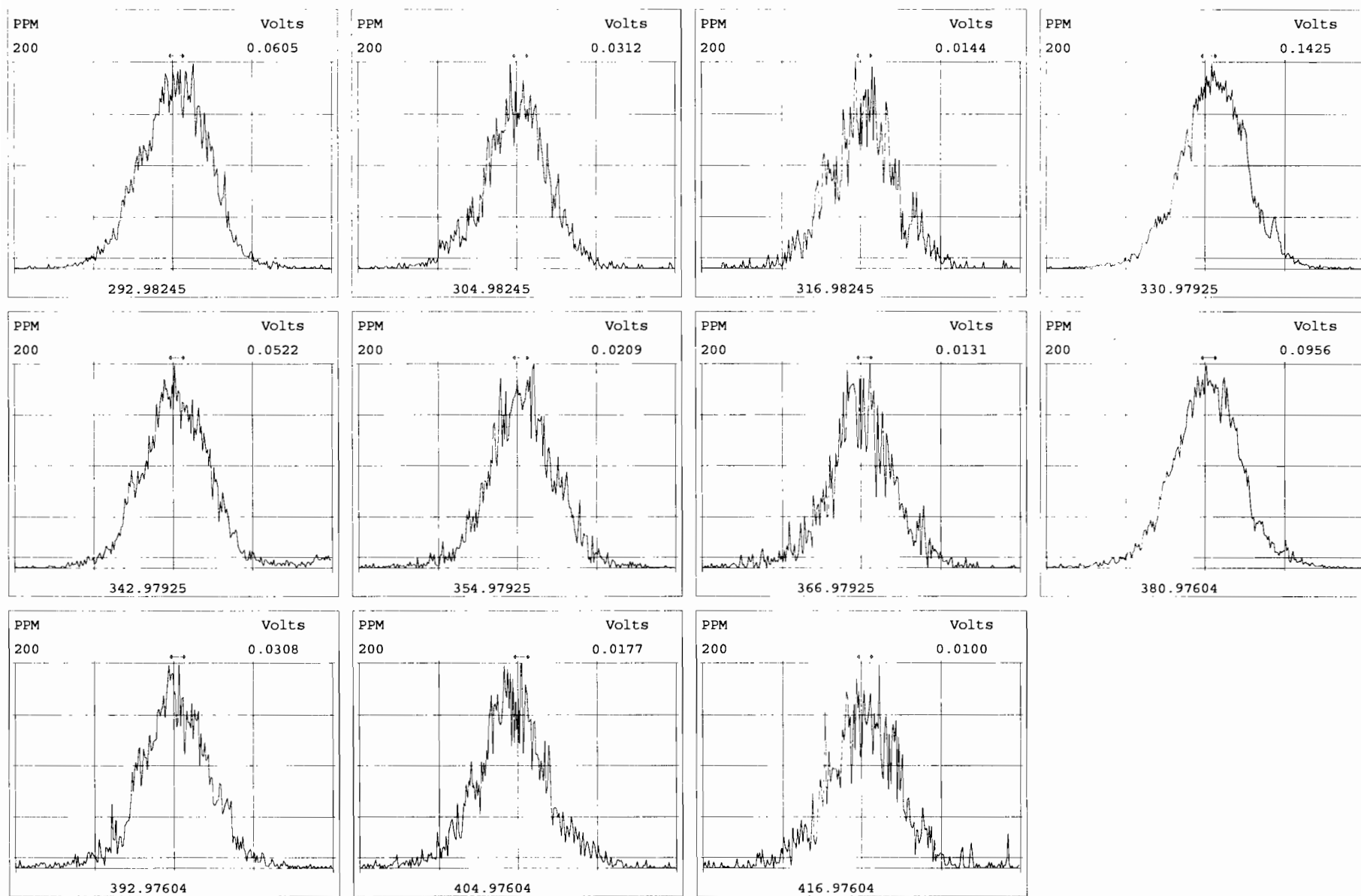
ConCal: ST191119D1-1
EndCAL: NA

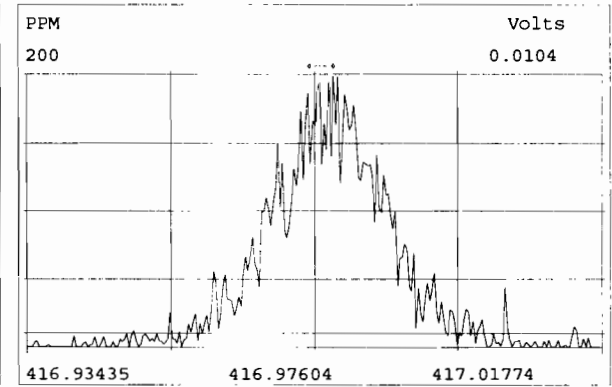
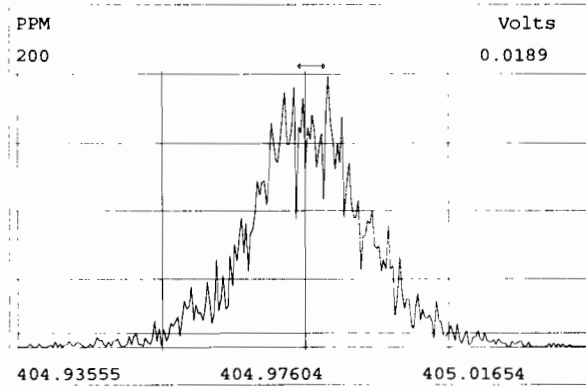
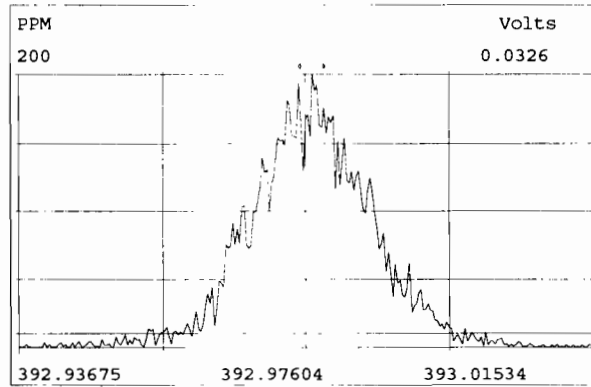
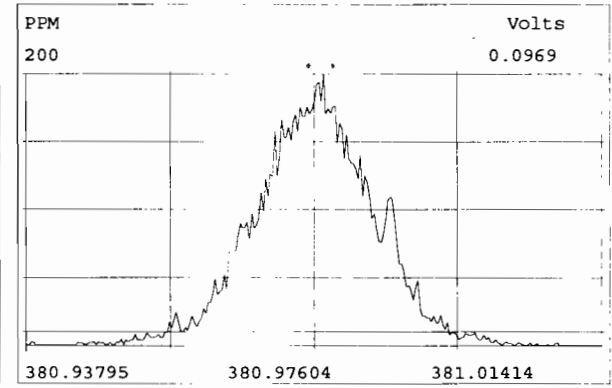
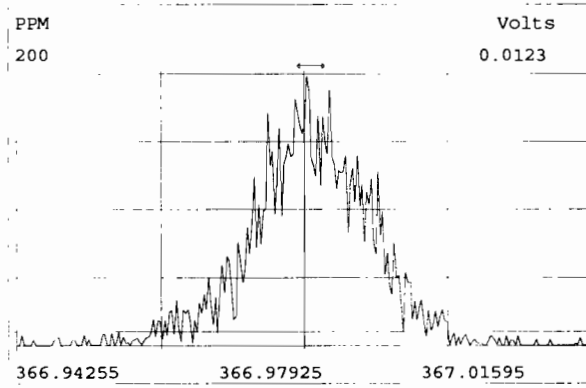
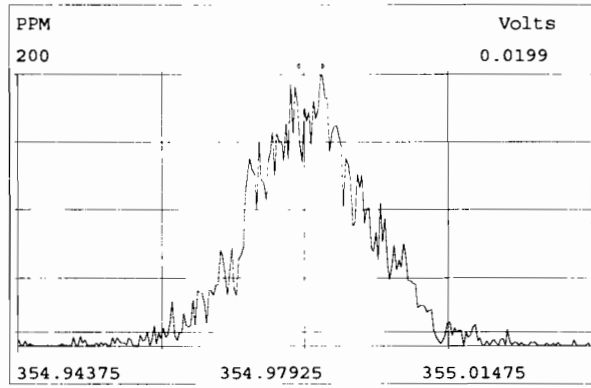
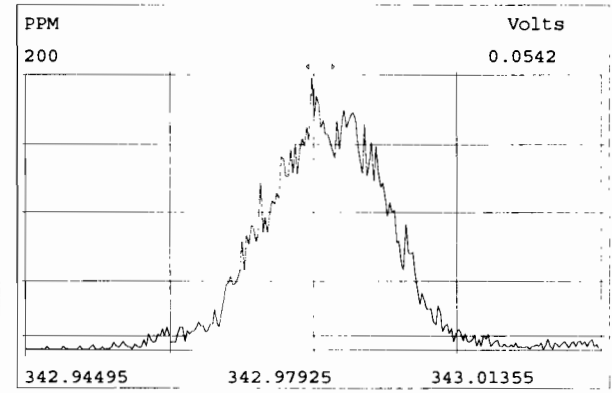
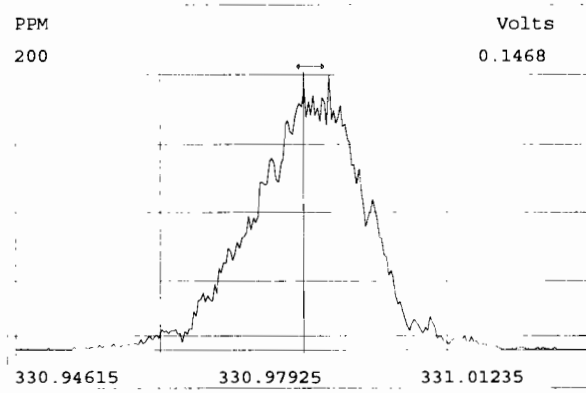
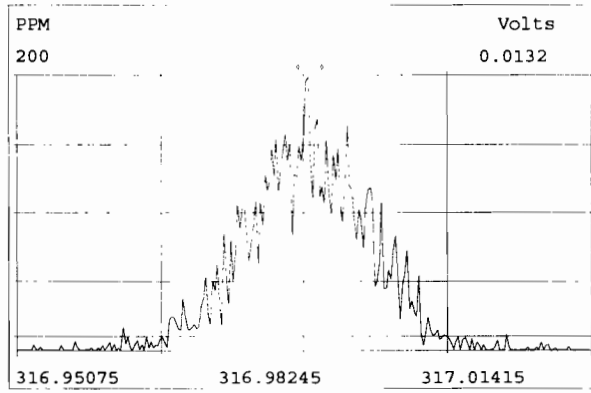
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	1.20e+06	0.79 y	0.91	26:12	10.368		* 2.5	*	*	Total Tetra-Dioxins	75.4	76.1	*	*	*
1,2,3,7,8-PeCDD	4.76e+06	0.61 y	0.90	30:42	52.086		* 2.5	*	*	Total Penta-Dioxins	194	194	*	*	*
1,2,3,4,7,8-HxCDD	4.99e+06	1.25 y	1.10	34:01	51.854		* 2.5	*	*	Total Hexa-Dioxins	228	229	*	*	*
1,2,3,6,7,8-HxCDD	5.00e+06	1.25 y	0.94	34:08	52.358		* 2.5	*	*	Total Hepta-Dioxins	120	121	*	*	*
1,2,3,7,8,9-HxCDD	5.15e+06	1.27 y	0.96	34:25	52.062		* 2.5	*	*	Total Tetra-Furans	37.0	37.4	*	*	*
1,2,3,4,6,7,8-HpCDD	4.67e+06	1.05 y	0.98	37:52	51.781		* 2.5	*	*	Total Penta-Furans	231.17	232.11	*	*	*
OCDD	9.61e+06	0.88 y	0.96	41:08	103.50		* 2.5	*	*	Total Hexa-Furans	273	274	*	*	*
										Total Hepta-Furans	98.7	99.1	*	*	*
2,3,7,8-TCDF	1.71e+06	0.77 y	0.95	25:26	9.9832		* 2.5	*	*						
1,2,3,7,8-PeCDF	7.47e+06	1.58 y	0.96	29:32	52.572		* 2.5	*	*						
2,3,4,7,8-PeCDF	7.53e+06	1.56 y	1.01	30:26	51.482		* 2.5	*	*						
1,2,3,4,7,8-HxCDF	6.84e+06	1.24 y	1.18	33:08	51.055		* 2.5	*	*						
1,2,3,6,7,8-HxCDF	7.19e+06	1.23 y	1.07	33:15	51.442		* 2.5	*	*						
2,3,4,6,7,8-HxCDF	7.20e+06	1.23 y	1.11	33:51	52.114		* 2.5	*	*						
1,2,3,7,8,9-HxCDF	6.19e+06	1.27 y	1.06	34:48	51.561		* 2.5	*	*						
1,2,3,4,6,7,8-HpCDF	5.92e+06	1.00 y	1.13	36:39	48.717		* 2.5	*	*						
1,2,3,4,7,8,9-HpCDF	5.49e+06	1.04 y	1.28	38:25	49.174		* 2.5	*	*						
OCDF	1.12e+07	0.89 y	0.95	41:22	99.967		* 2.5	*	*						
IS 13C-2,3,7,8-TCDD	1.28e+07	0.78 y	1.10	26:11	102.43					Rec	Qual				
IS 13C-1,2,3,7,8-PeCDD	1.01e+07	0.62 y	0.88	30:42	100.84					102					
IS 13C-1,2,3,4,7,8-HxCDD	8.75e+06	1.27 y	0.64	34:00	106.17					101					
IS 13C-1,2,3,6,7,8-HxCDD	1.02e+07	1.25 y	0.86	34:06	92.782					106					
IS 13C-1,2,3,7,8,9-HxCDD	1.03e+07	1.25 y	0.81	34:24	99.524					92.8					
IS 13C-1,2,3,4,6,7,8-HpCDD	9.20e+06	1.06 y	0.65	37:51	109.72					99.5					
IS 13C-OCDD	1.94e+07	0.87 y	0.58	41:08	260.42					110					
IS 13C-2,3,7,8-TCDF	1.80e+07	0.79 y	1.03	25:24	103.42					130					
IS 13C-1,2,3,7,8-PeCDF	1.48e+07	1.60 y	0.85	29:31	103.11					103					
IS 13C-2,3,4,7,8-PeCDF	1.44e+07	1.59 y	0.85	30:25	101.32					103					
IS 13C-1,2,3,4,7,8-HxCDF	1.14e+07	0.52 y	0.83	33:07	106.70					101					
IS 13C-1,2,3,6,7,8-HxCDF	1.31e+07	0.53 y	1.03	33:14	98.555					107					
IS 13C-2,3,4,6,7,8-HxCDF	1.24e+07	0.52 y	0.95	33:50	101.42					98.6					
IS 13C-1,2,3,7,8,9-HxCDF	1.13e+07	0.53 y	0.83	34:47	106.58					101					
IS 13C-1,2,3,4,6,7,8-HpCDF	1.08e+07	0.44 y	0.76	36:38	110.99					107					
IS 13C-1,2,3,4,7,8,9-HpCDF	8.72e+06	0.45 y	0.58	38:24	116.89					111					
IS 13C-OCDF	2.36e+07	0.87 y	0.69	41:21	266.76					117					
C/Up 37C1-2,3,7,8-TCDD	1.32e+06		1.20	26:12	9.6843					133					
RS/RT 13C-1,2,3,4-TCDD	1.14e+07	0.79 y	1.00	25:38	100.00					96.8					
RS 13C-1,2,3,4-TCDF	1.68e+07	0.79 y	1.00	24:12	100.00										
RS/RT 13C-1,2,3,4,6,9-HxCDF	1.28e+07	0.53 y	1.00	33:31	100.00										

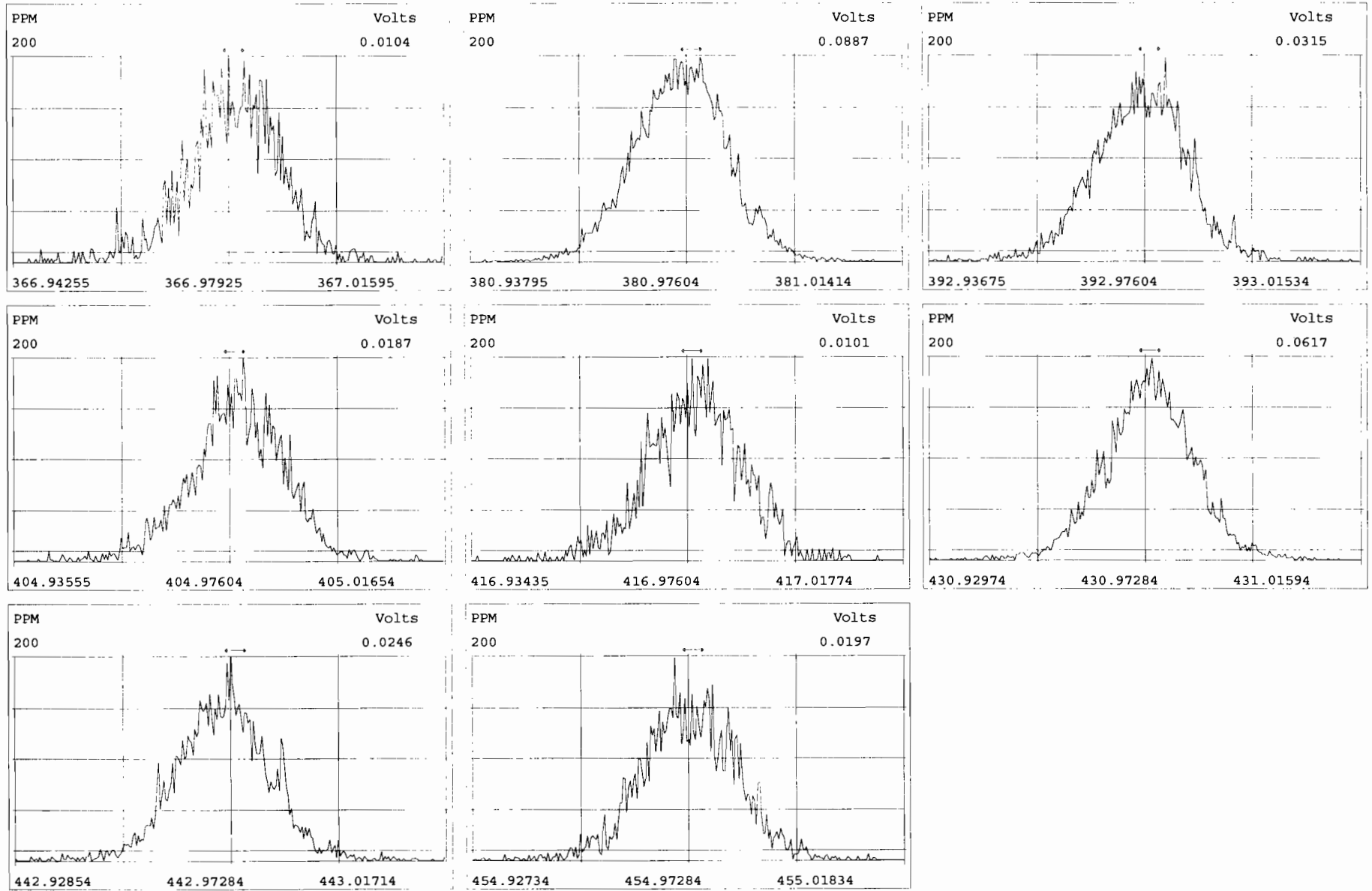
Integrations Reviewed
by DB by OT
Analyst: DB Analyst: OT
Date: 11/19/19 Date: 11/20/19

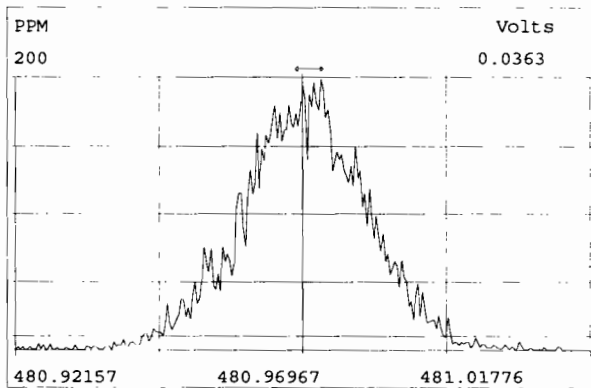
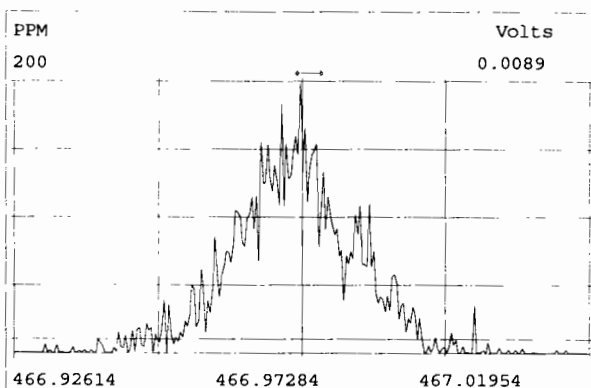
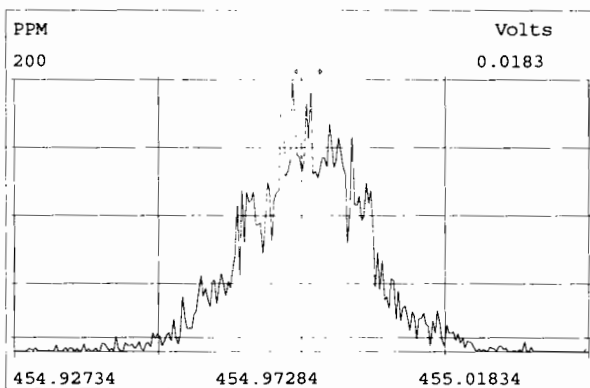
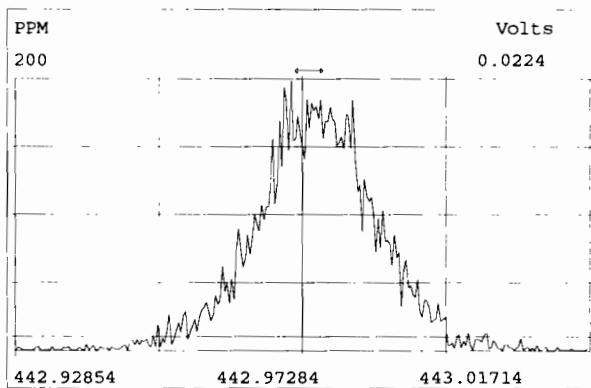
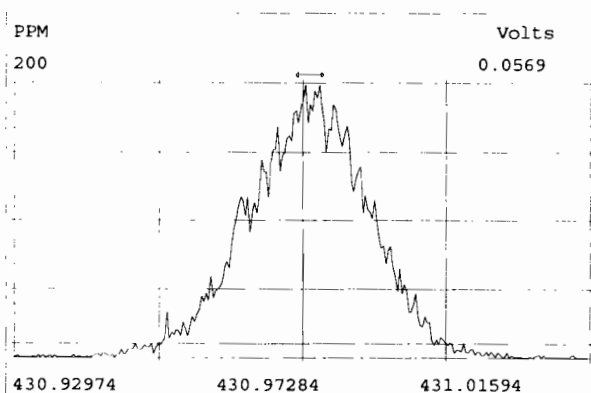
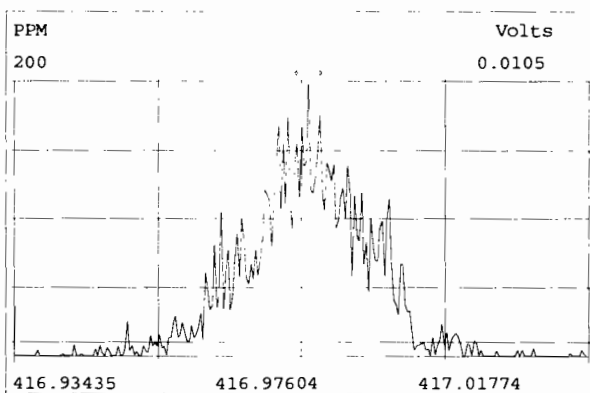
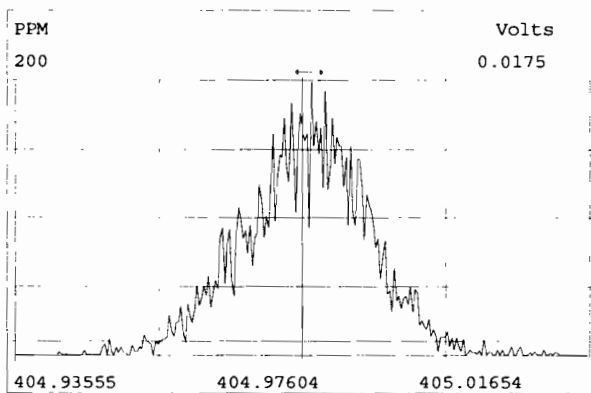
Vista Analytical Laboratory - Injection Log Run file: 191119D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

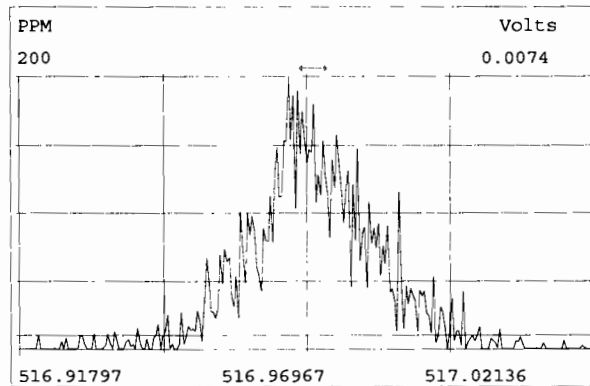
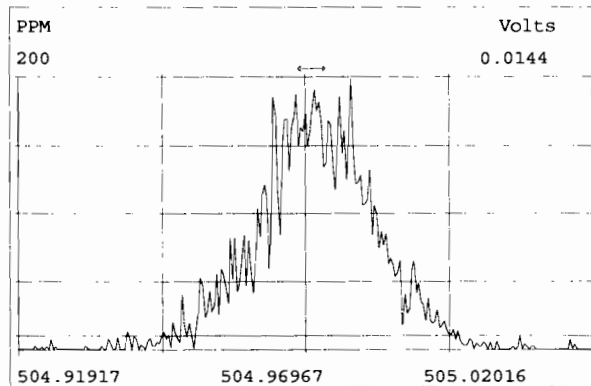
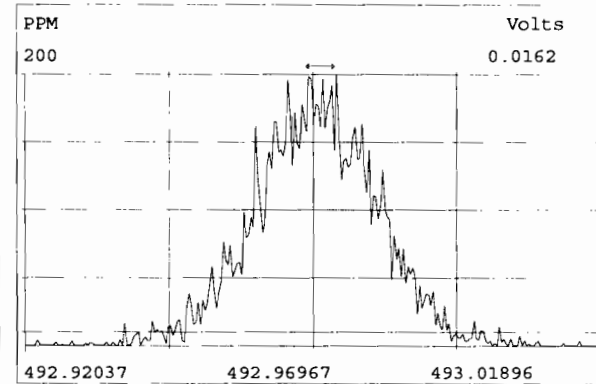
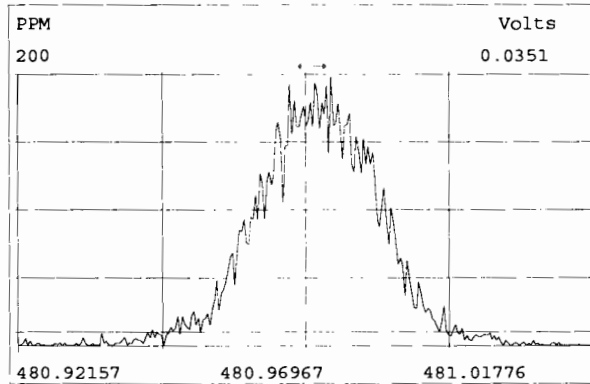
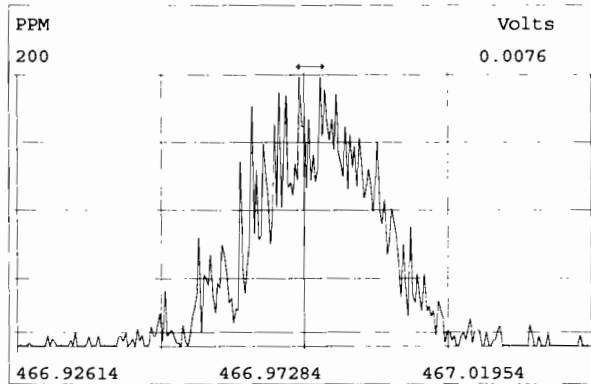
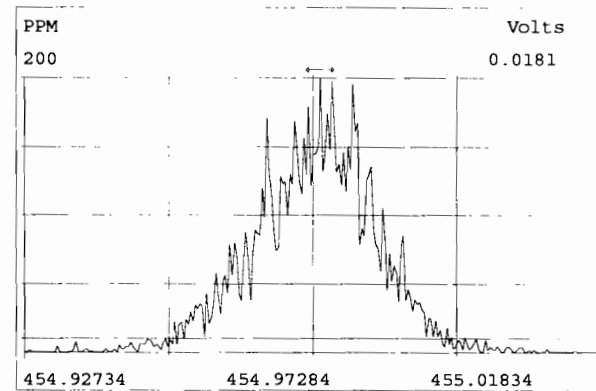
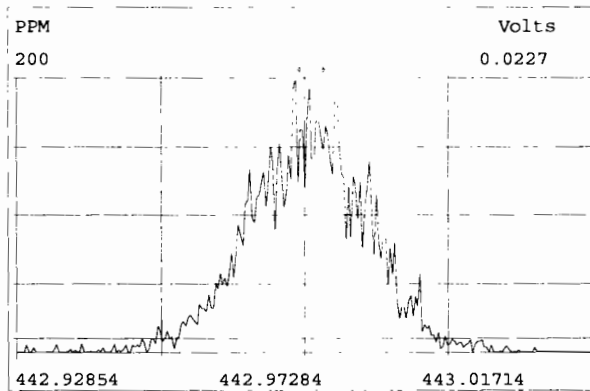
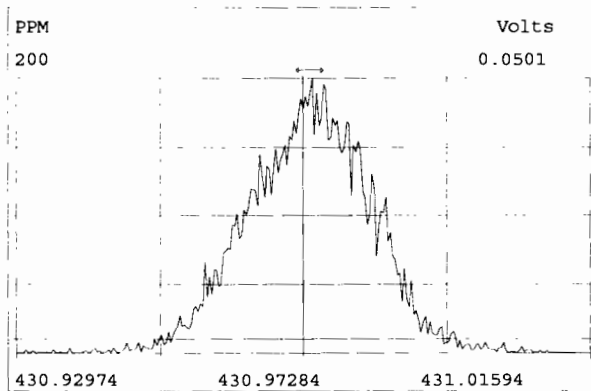
Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191119D1	1	ST191119D1-1	DB	19-NOV-19	12:43:27	ST191119D1-1	NA
191119D1	2	B9K0094-BS1	DB	19-NOV-19	13:31:22	ST191119D1-1	NA
191119D1	3	B9K0124-BS1	DB	19-NOV-19	14:19:14	ST191119D1-1	NA
191119D1	4	B9K0051-BS1	DB	19-NOV-19	15:07:00	ST191119D1-1	NA
191119D1	5	B9K0034-BS1	DB	19-NOV-19	15:54:57	ST191119D1-1	NA
191119D1	6	SOLVENT BLANK	DB	19-NOV-19	16:42:53	ST191119D1-1	NA
191119D1	7	B9K0094-BLK1	DB	19-NOV-19	17:30:39	ST191119D1-1	NA
191119D1	8	B9K0124-BLK1	DB	19-NOV-19	18:18:25	ST191119D1-1	NA
191119D1	9	B9K0051-BLK1	DB	19-NOV-19	19:06:15	ST191119D1-1	NA
191119D1	10	B9K0034-BLK1	DB	19-NOV-19	19:53:57	ST191119D1-1	NA
191119D1	11	1903994-01	DB	19-NOV-19	20:41:41	ST191119D1-1	NA
191119D1	12	1903856-01	DB	19-NOV-19	21:29:30	ST191119D1-1	NA
191119D1	13	1903784-01	DB	19-NOV-19	22:17:14	ST191119D1-1	NA
191119D1	14	1903784-02	DB	19-NOV-19	23:04:57	ST191119D1-1	NA
191119D1	15	1903784-03	DB	19-NOV-19	23:52:05	ST191119D1-1	NA



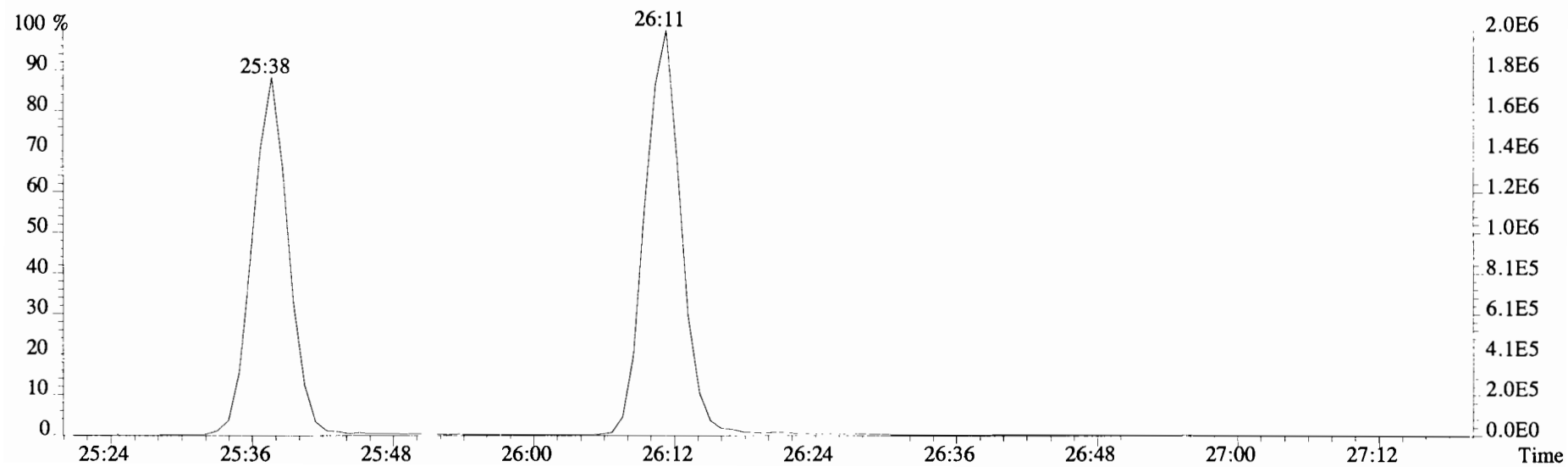
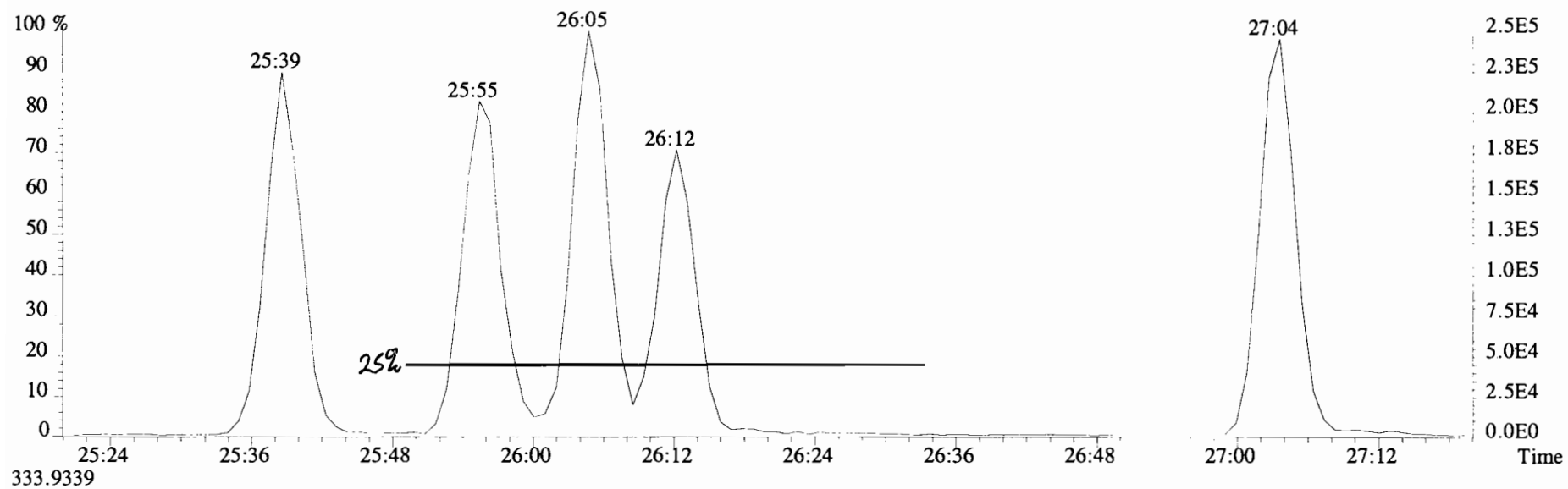




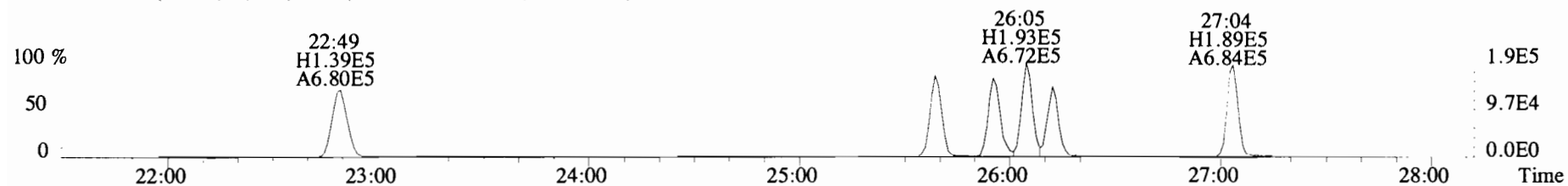




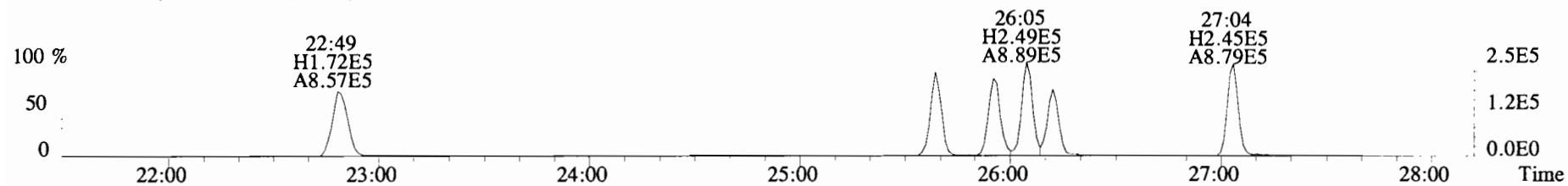
File:191119D1 #1-492 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
321.8936



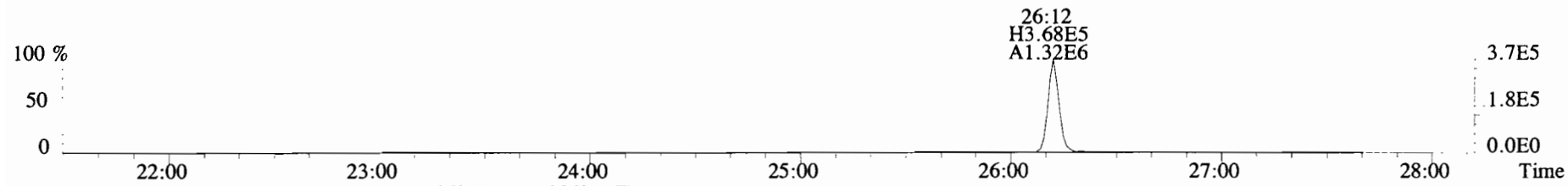
File:191119D1 #1-492 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



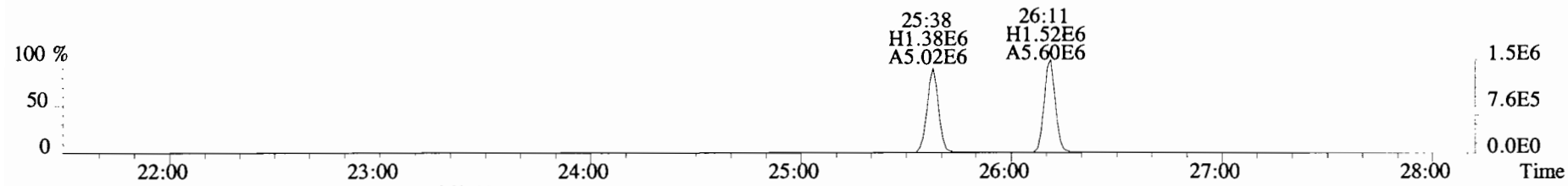
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



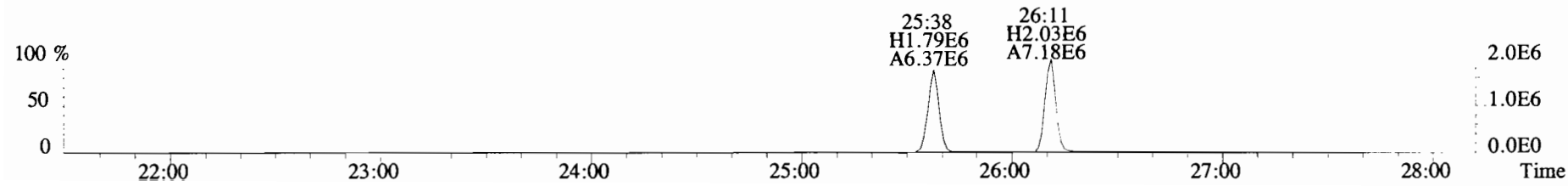
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



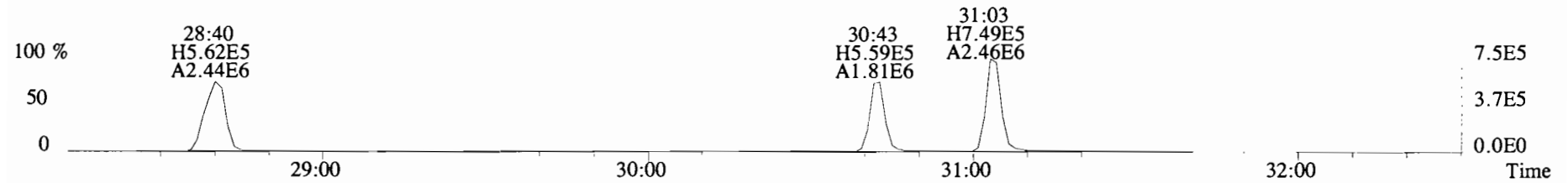
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



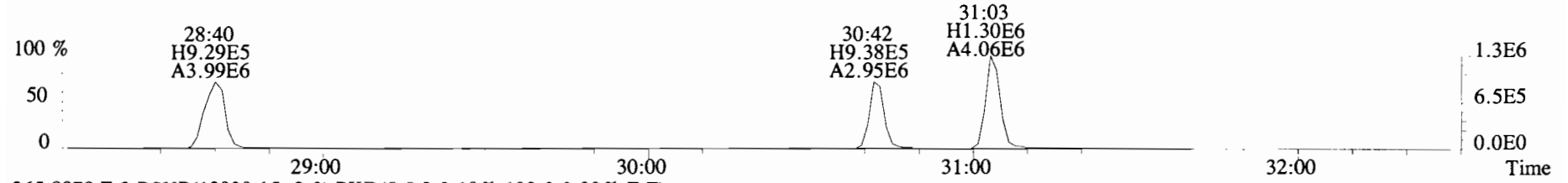
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



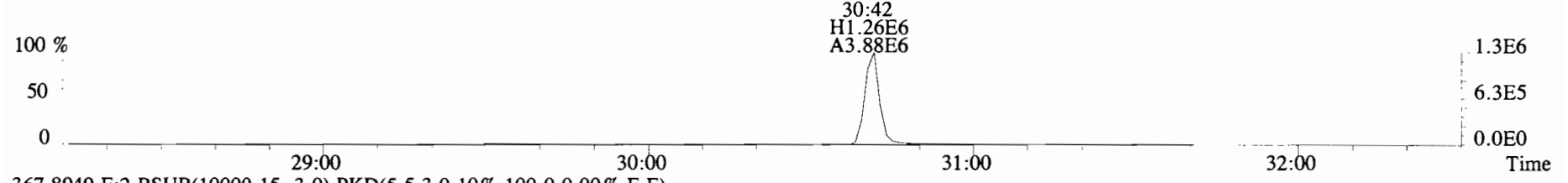
File:191119D1 #1-211 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



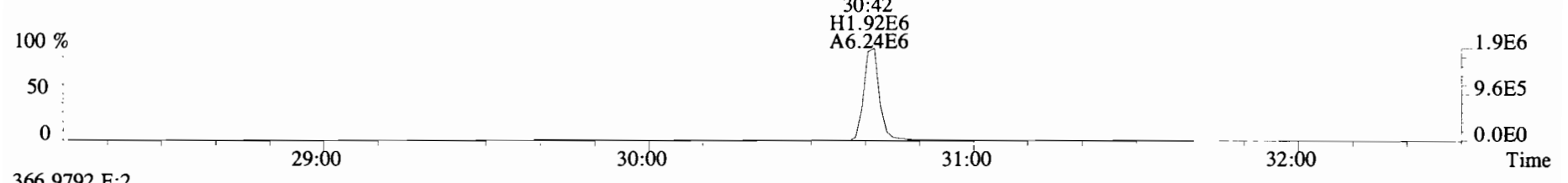
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



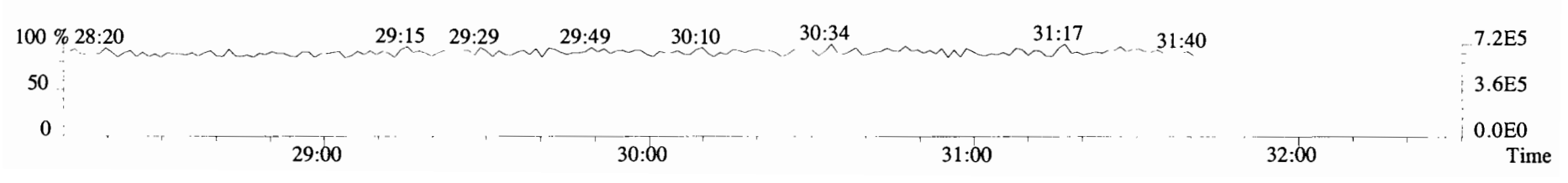
365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



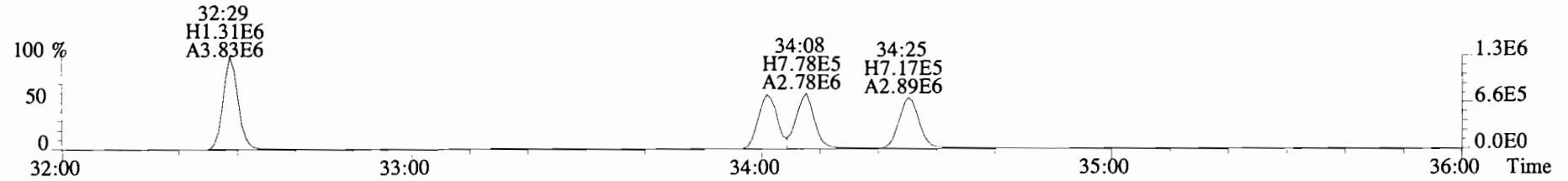
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



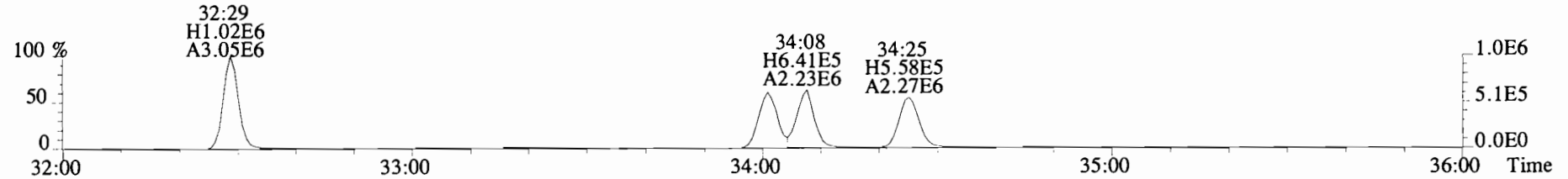
366.9792 F:2



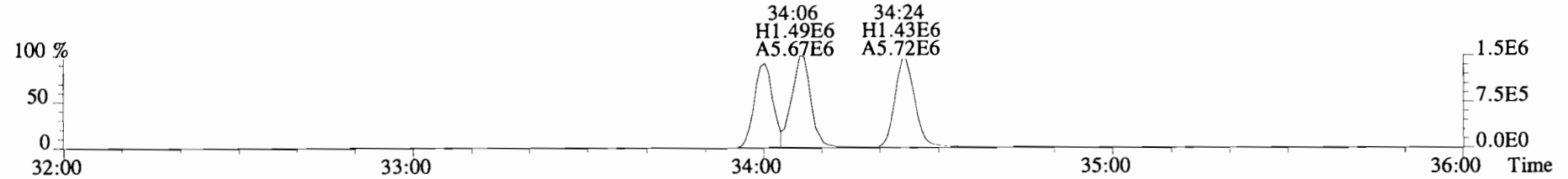
File:191119D1 #1-385 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



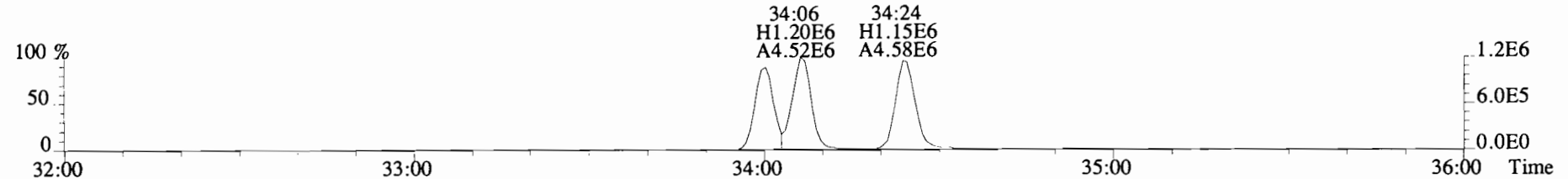
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



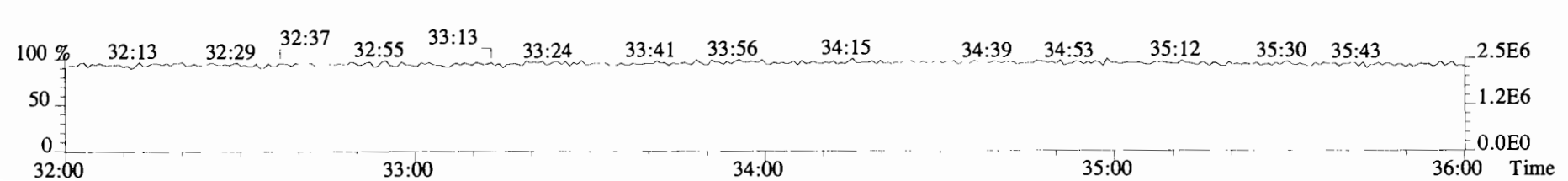
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



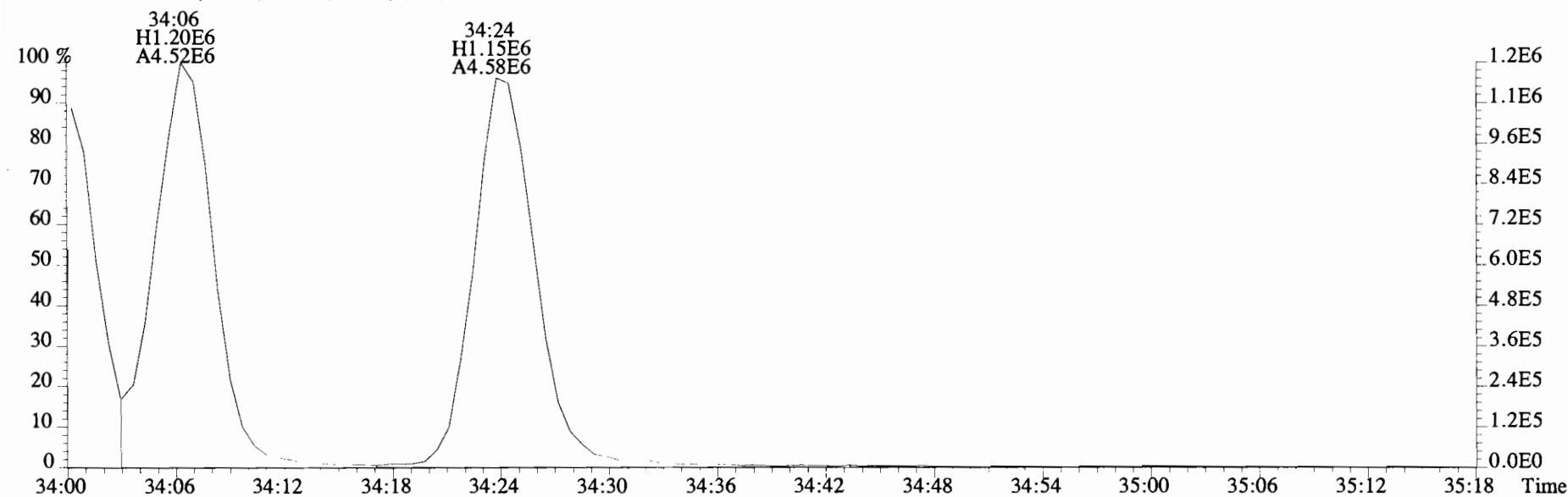
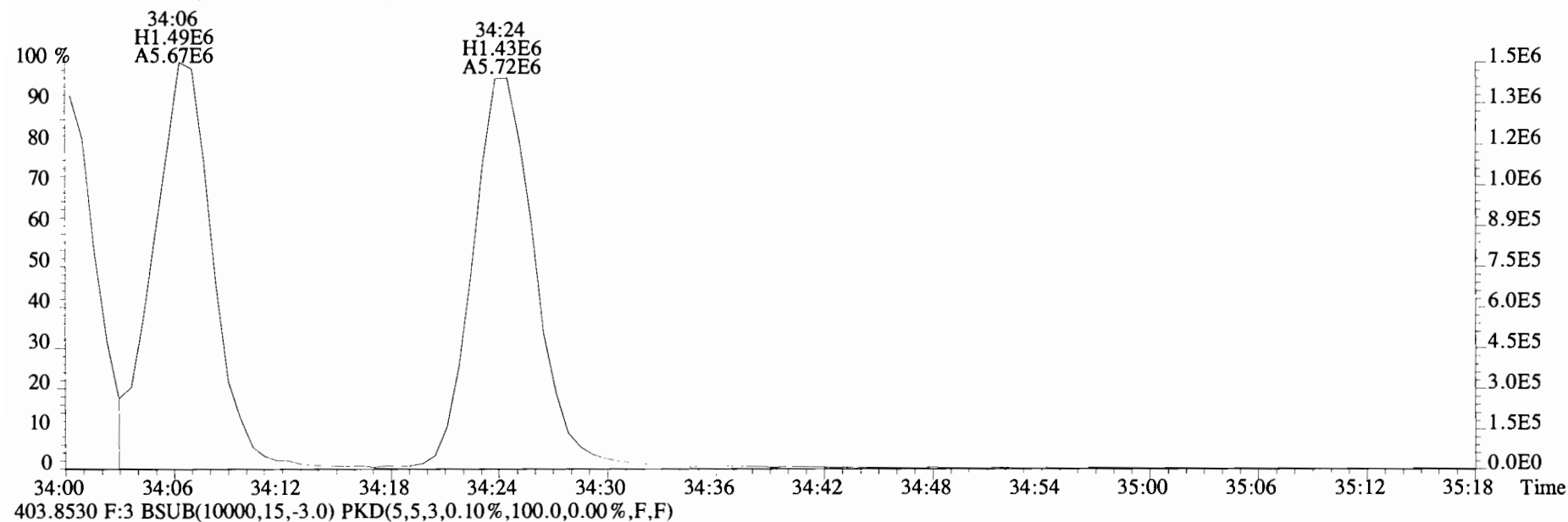
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



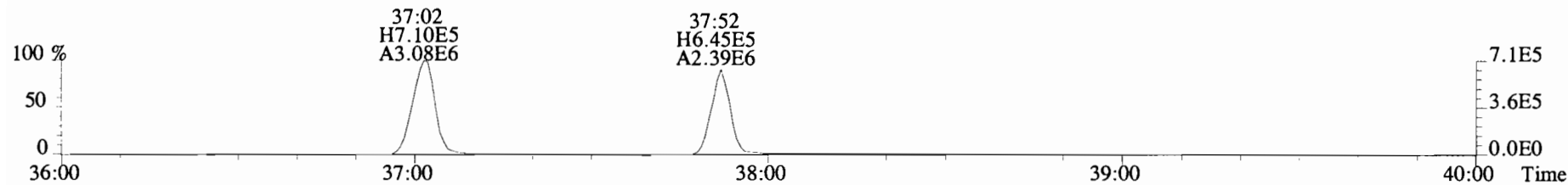
392.9760 F:3



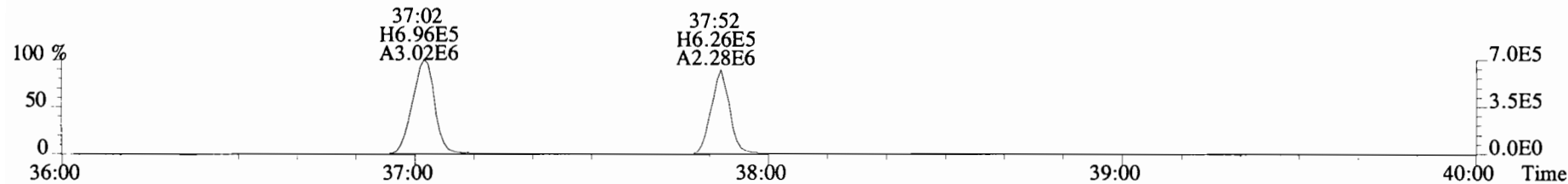
File:191119D1 #1-385 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



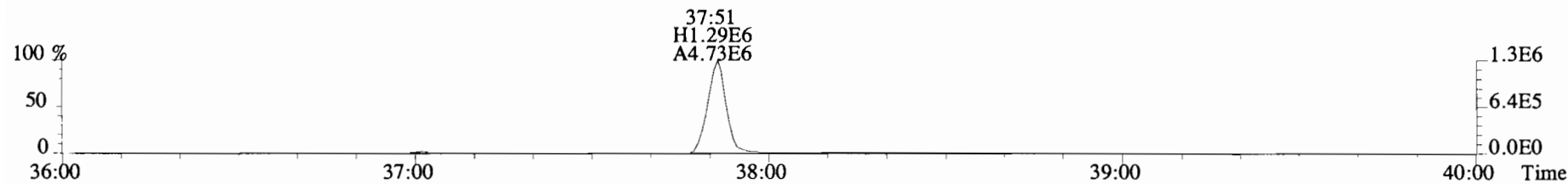
File:191119D1 #1-355 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



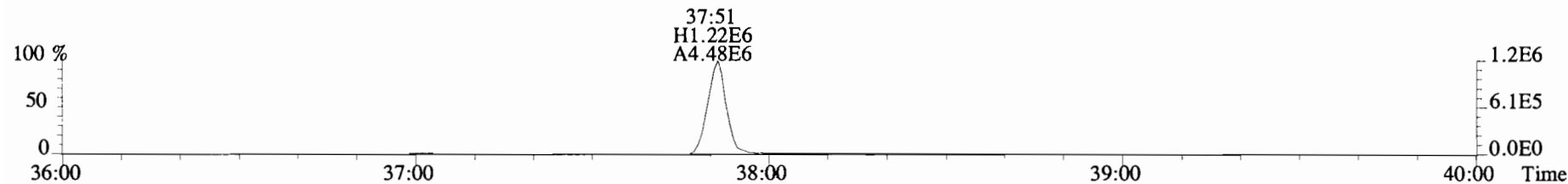
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



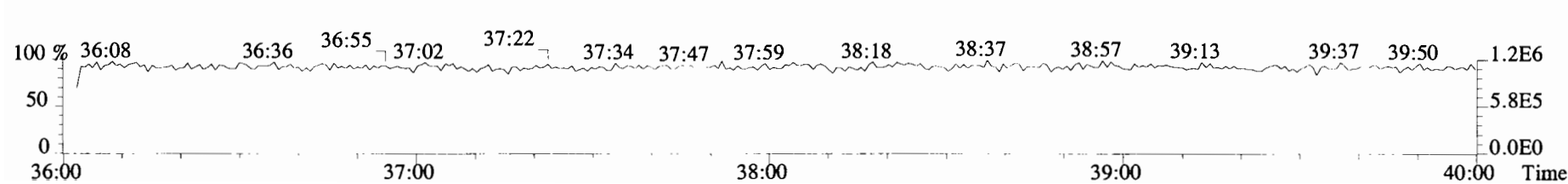
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



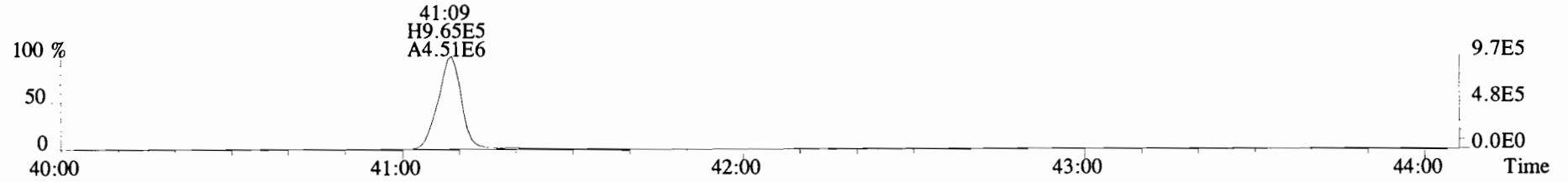
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



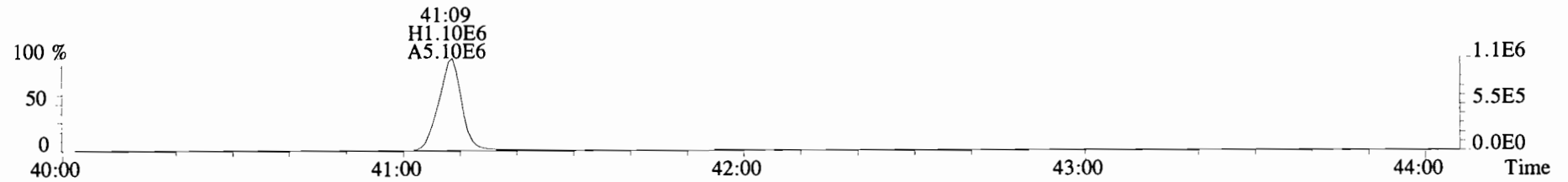
454.9728 F:4



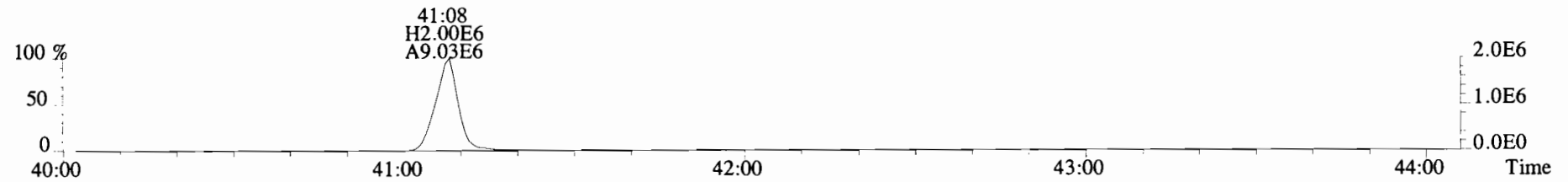
File:191119D1 #1-431 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



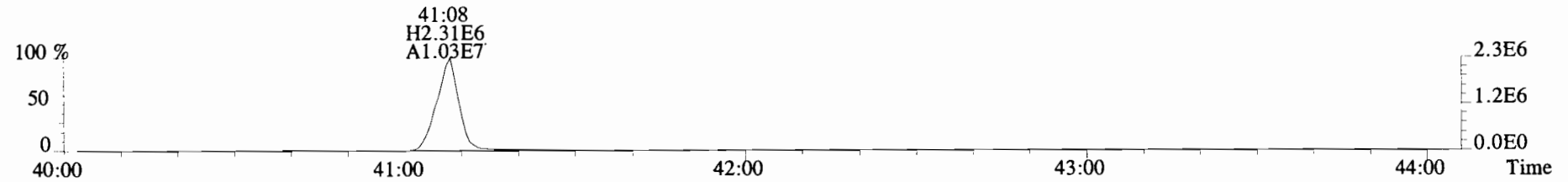
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



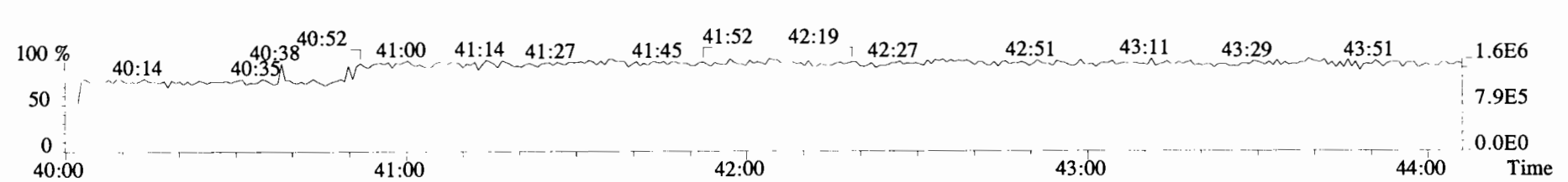
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



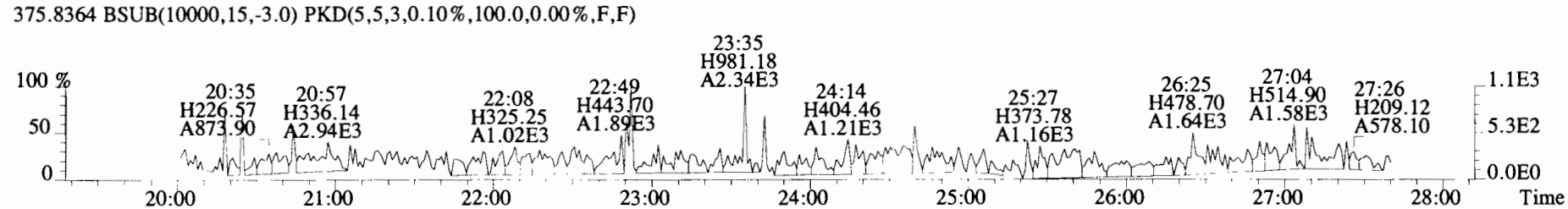
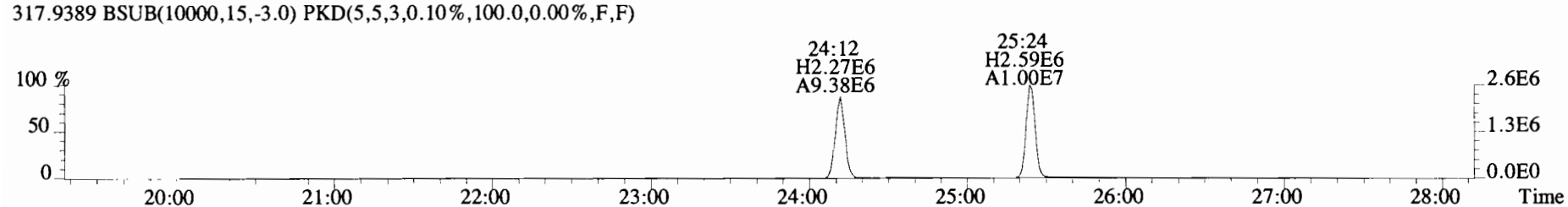
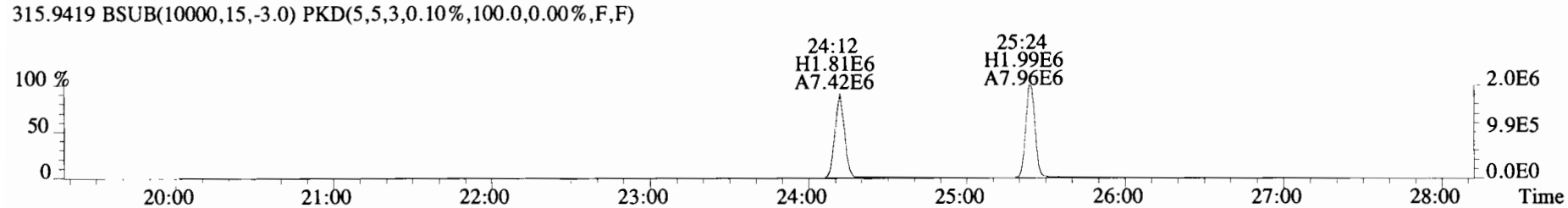
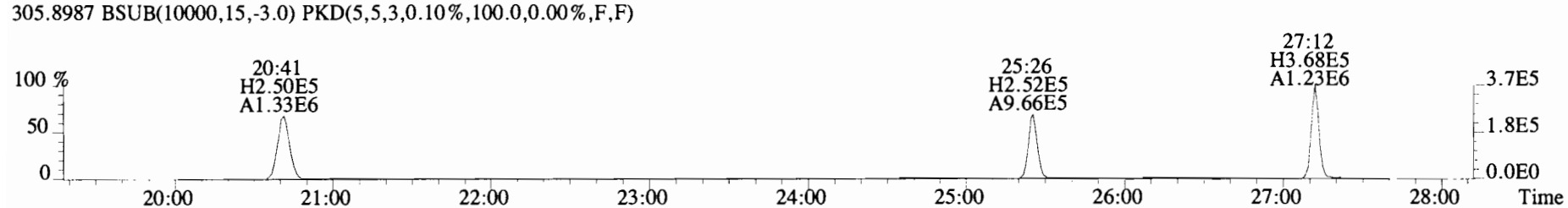
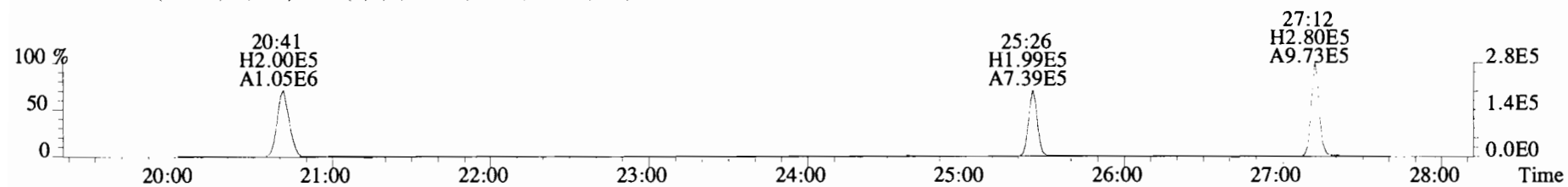
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



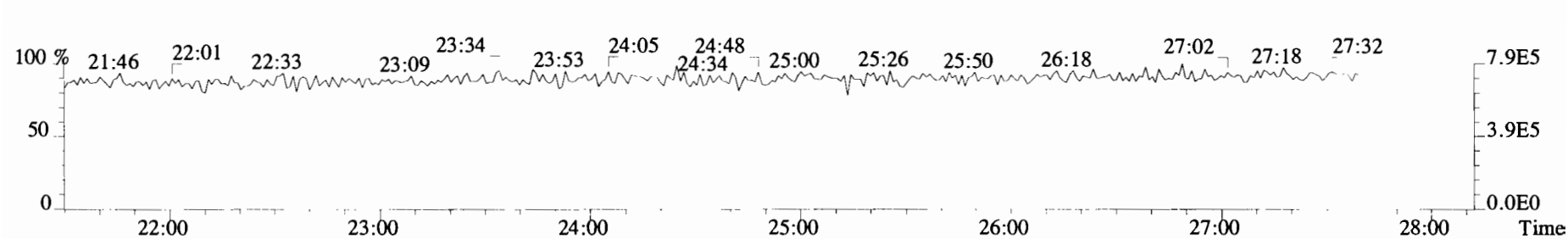
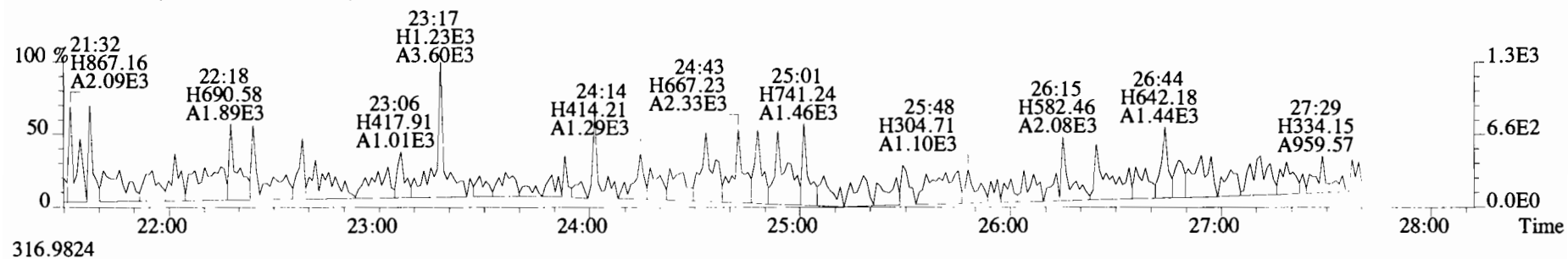
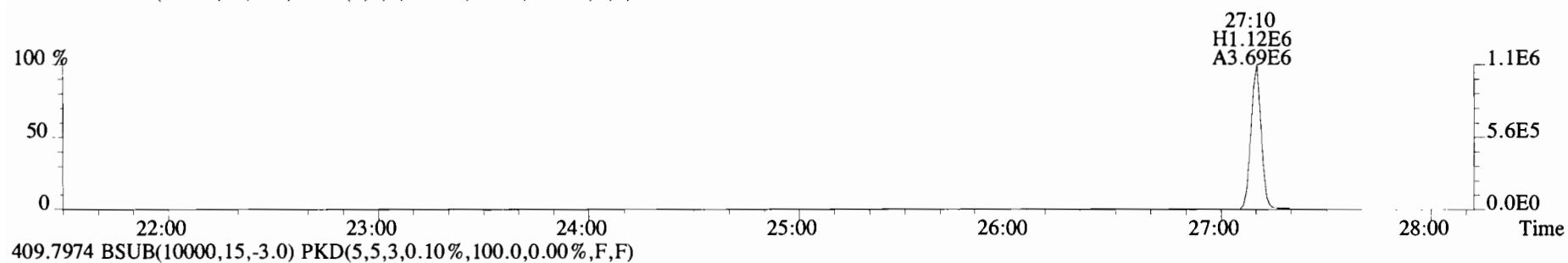
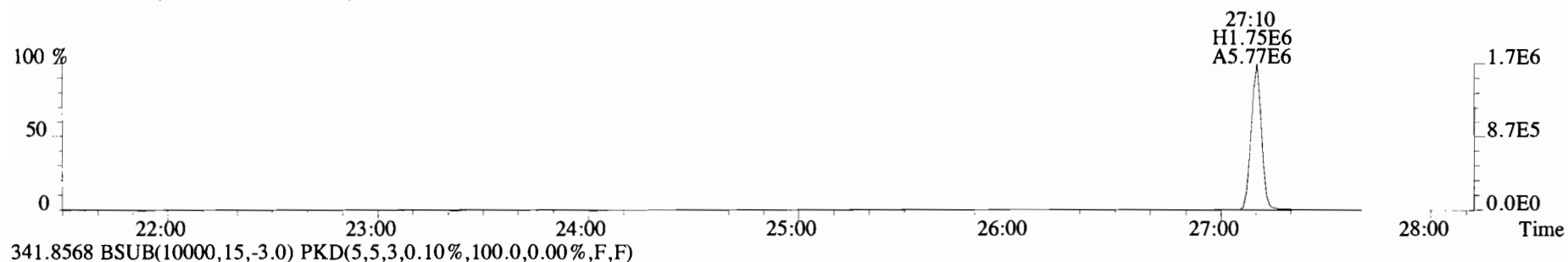
454.9728 F:5



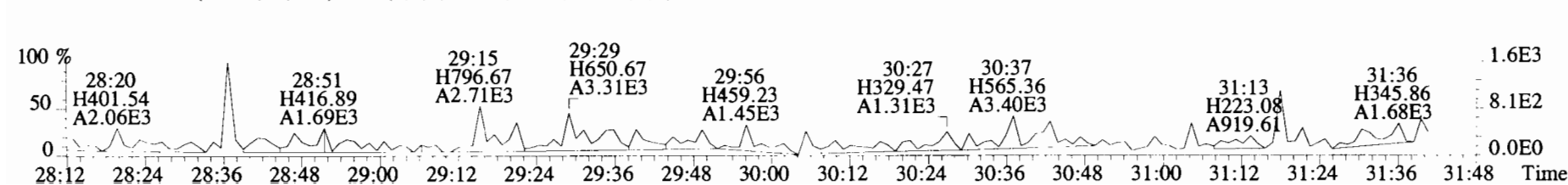
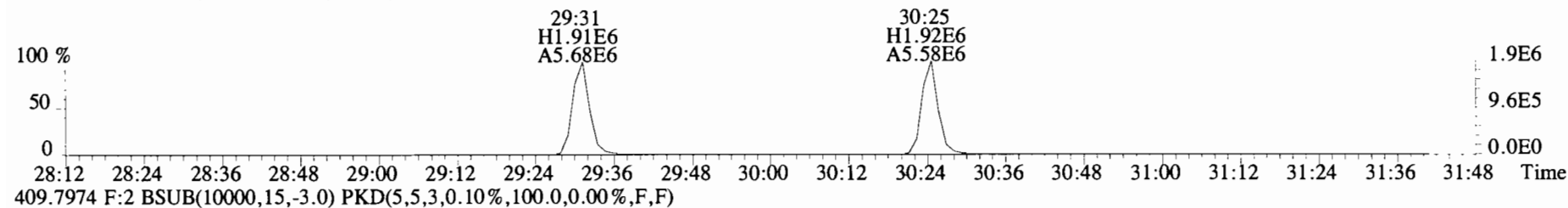
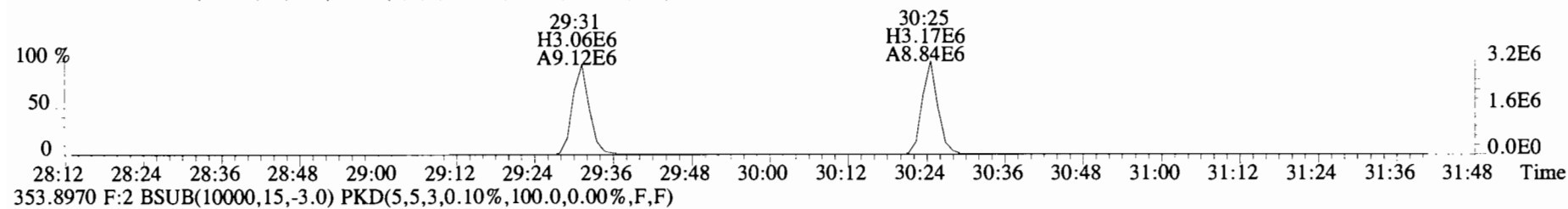
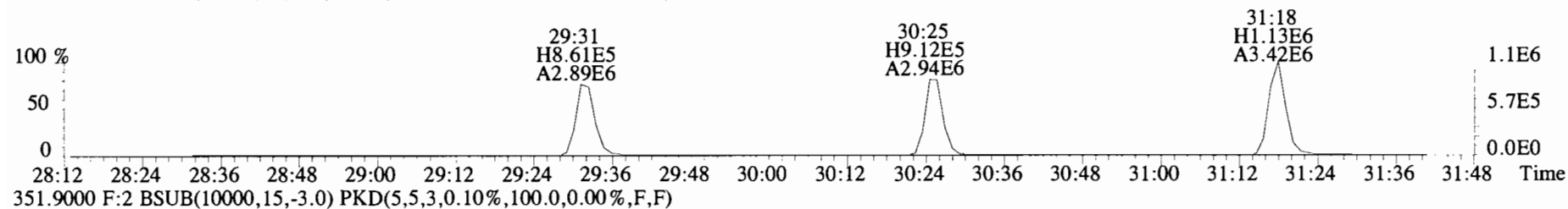
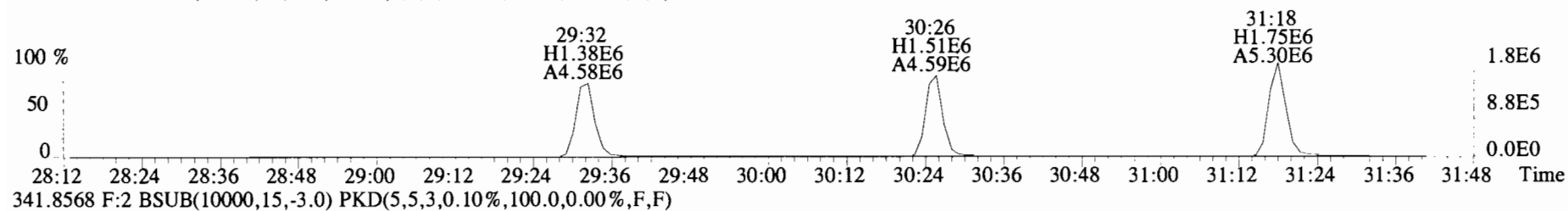
File:191119D1 #1-492 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



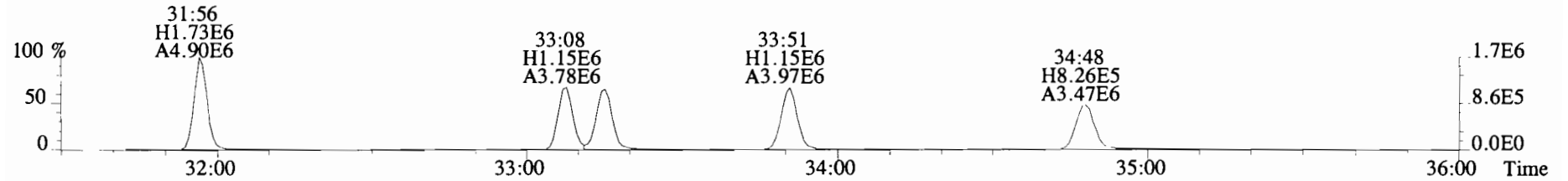
File:191119D1 #1-492 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



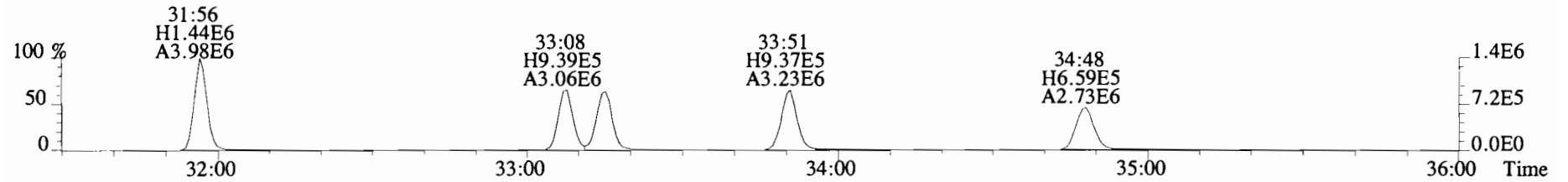
File:191119D1 #1-211 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



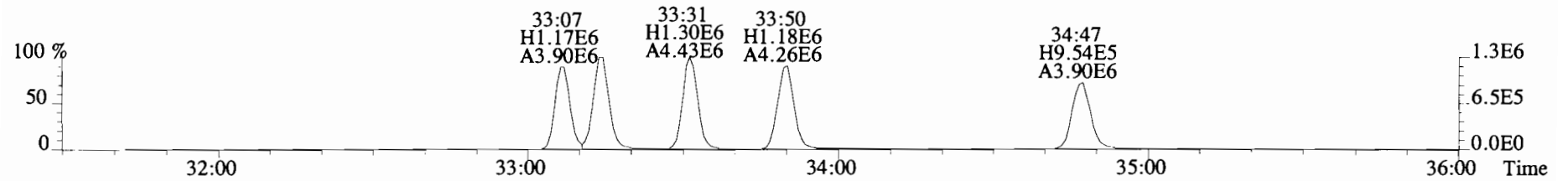
File:191119D1 #1-385 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



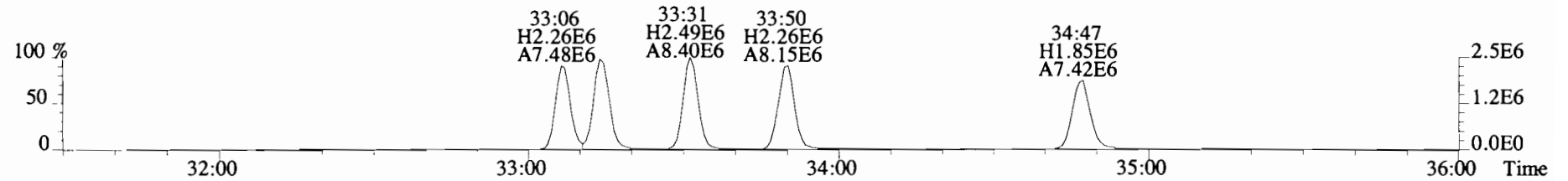
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



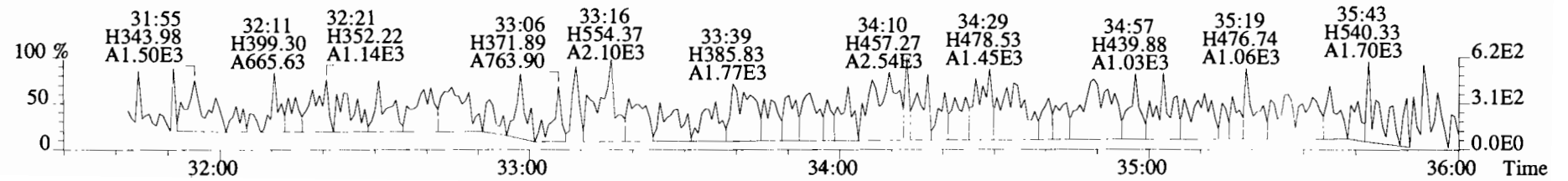
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



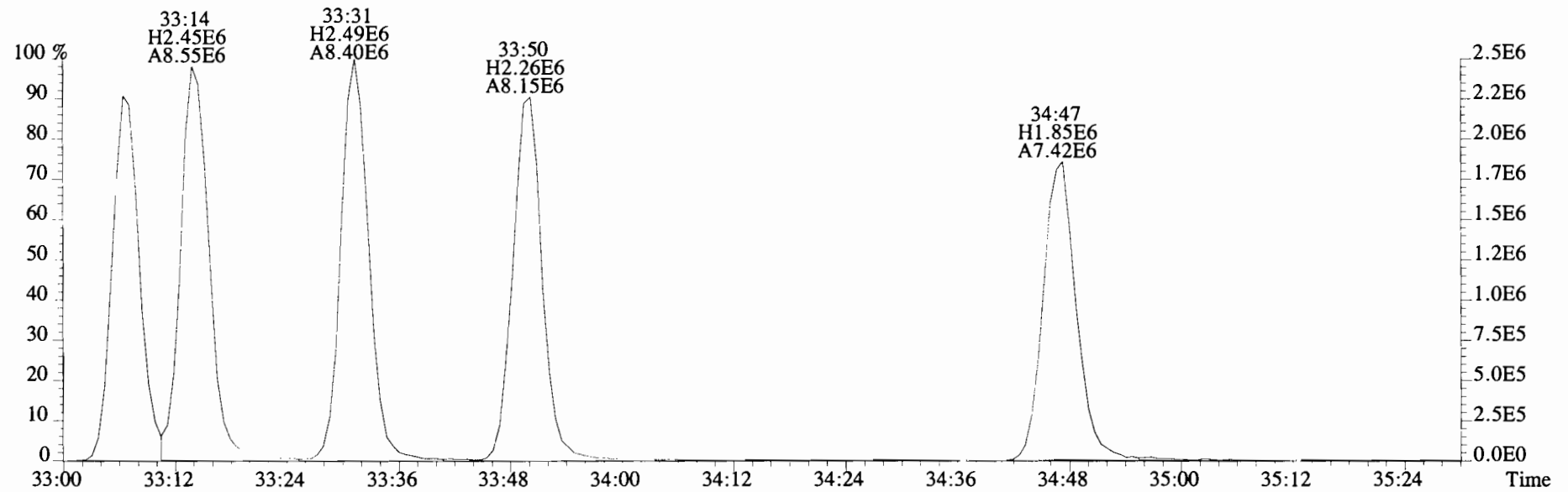
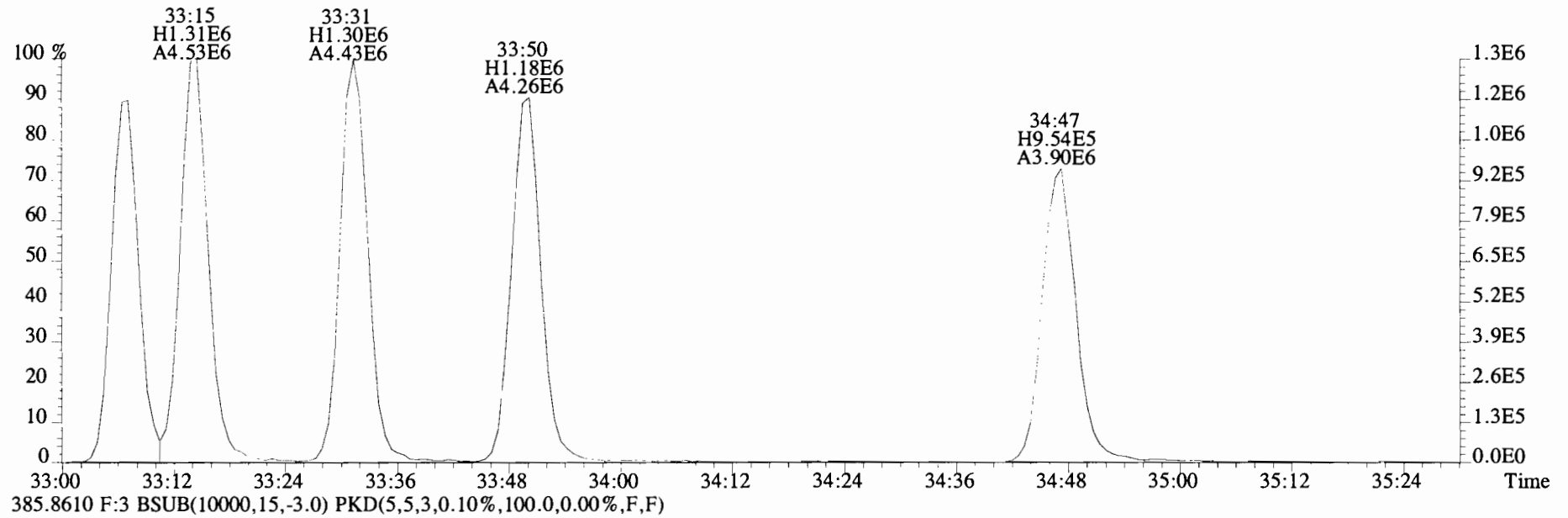
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



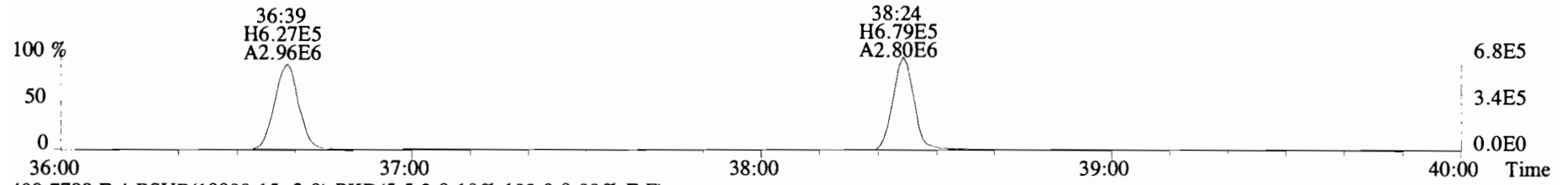
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



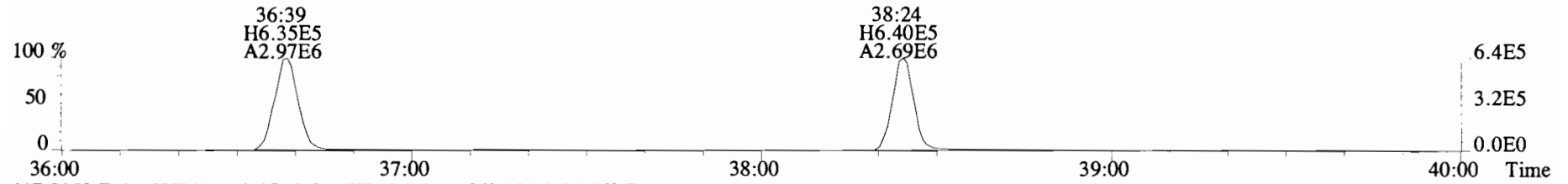
File:191119D1 #1-385 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



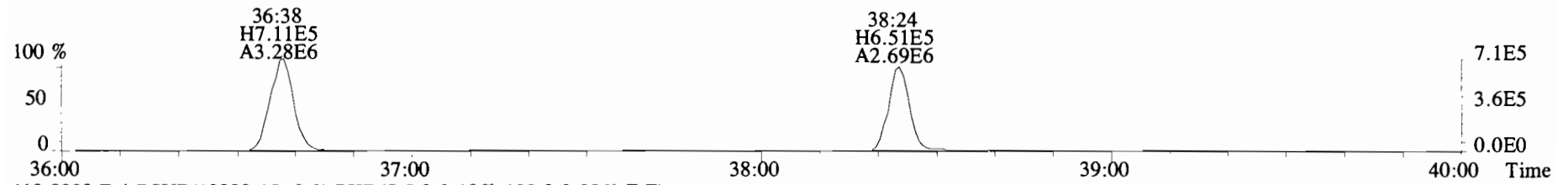
File:191119D1 #1-355 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
 407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



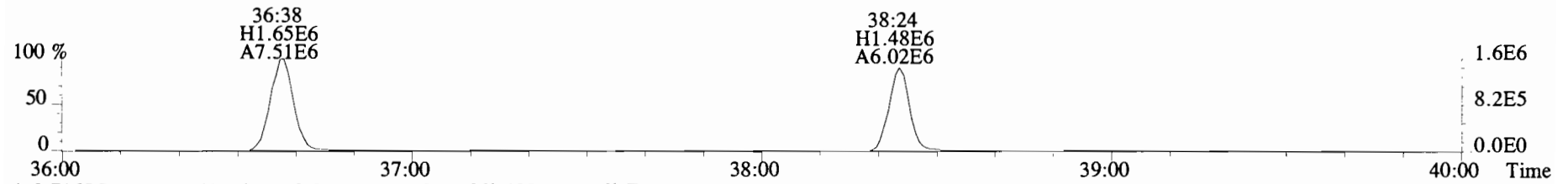
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



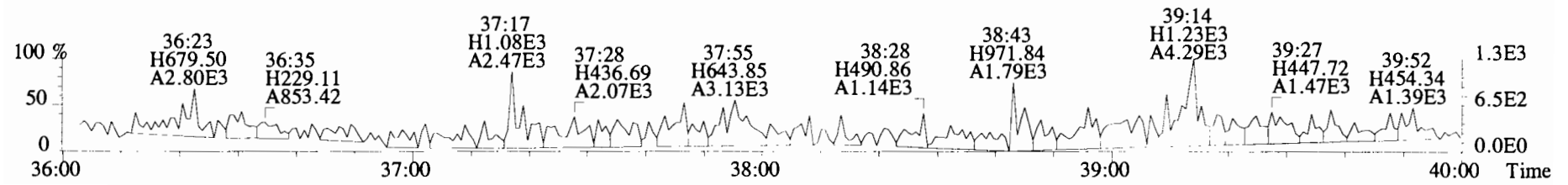
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



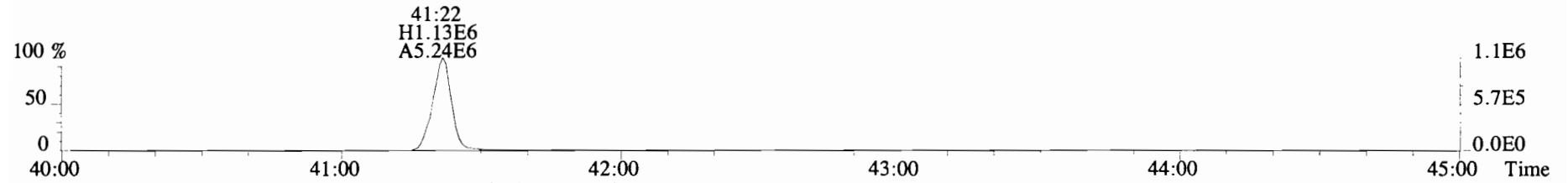
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



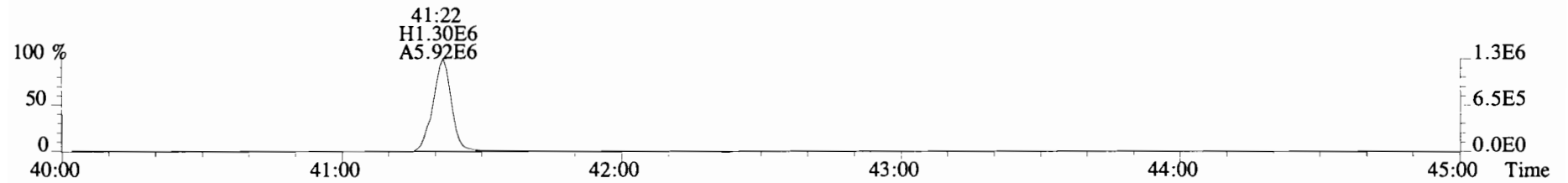
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



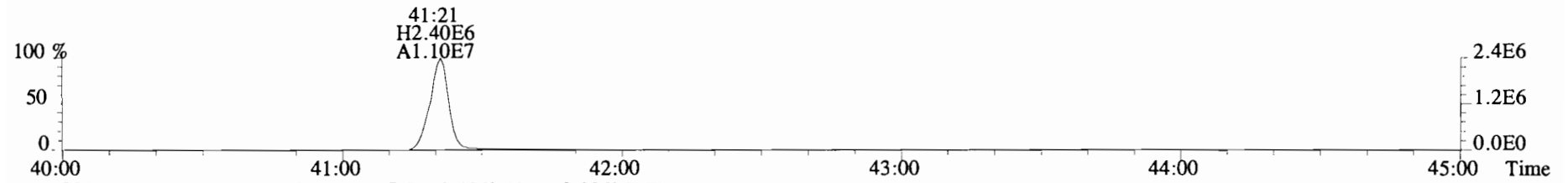
File:191119D1 #1-431 Acq:19-NOV-2019 12:43:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191119D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



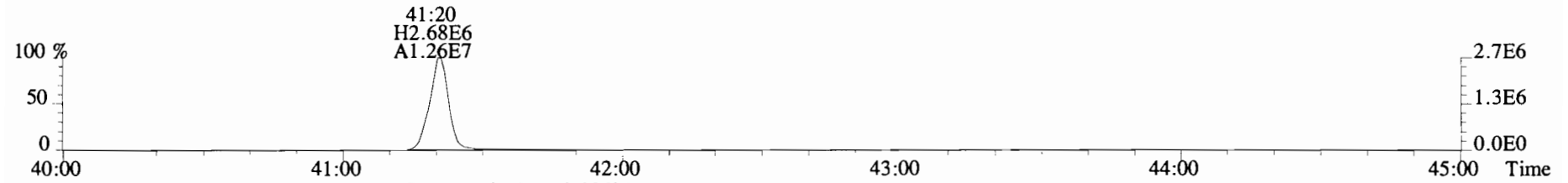
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



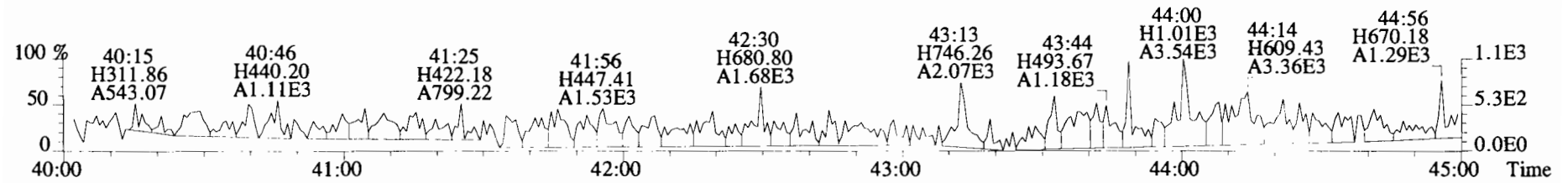
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

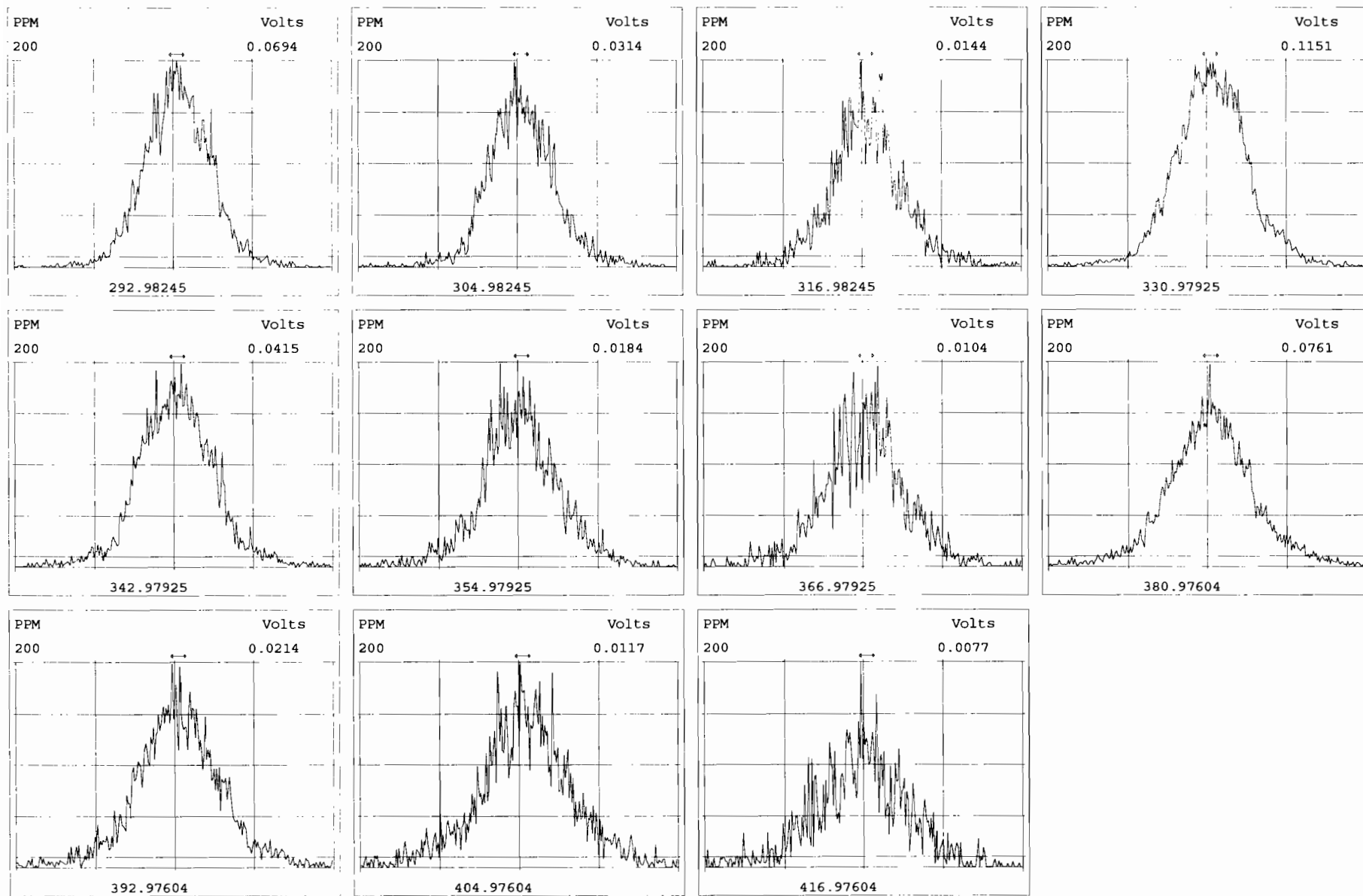


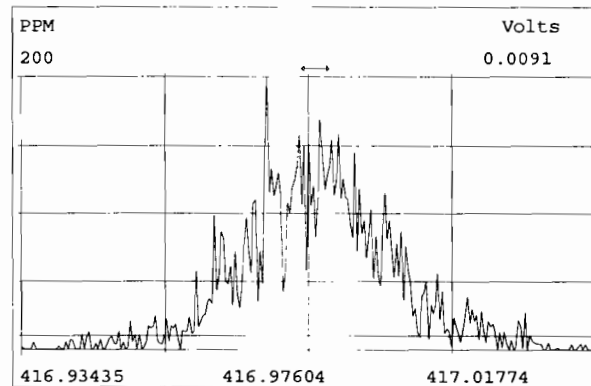
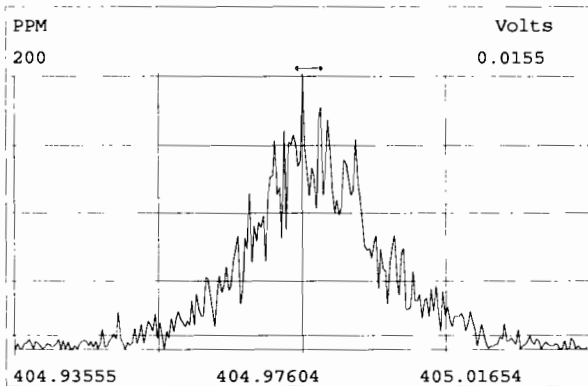
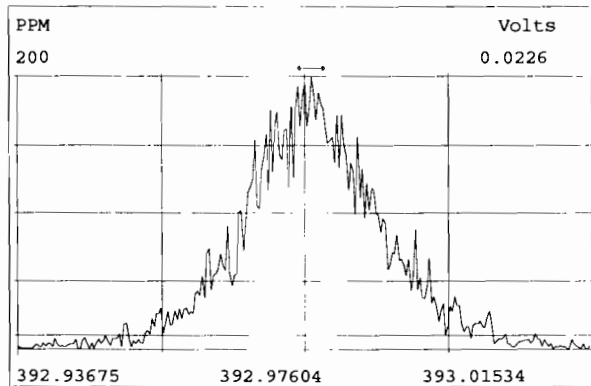
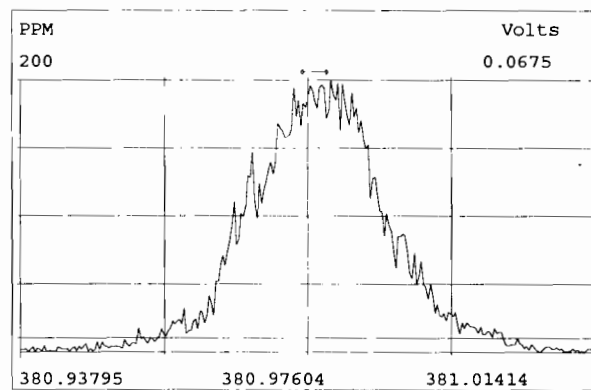
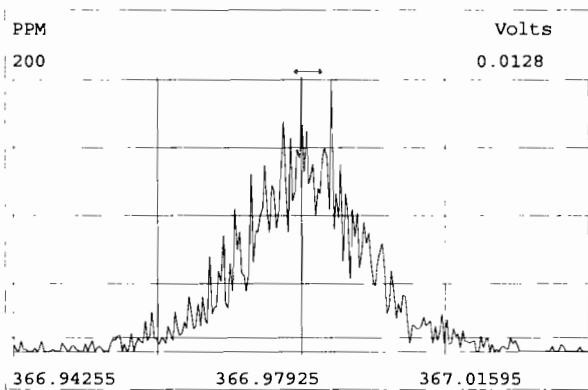
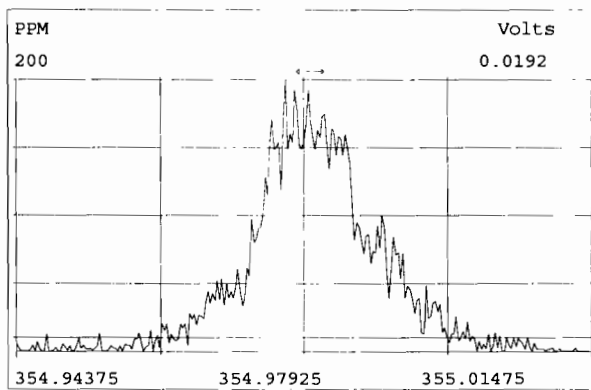
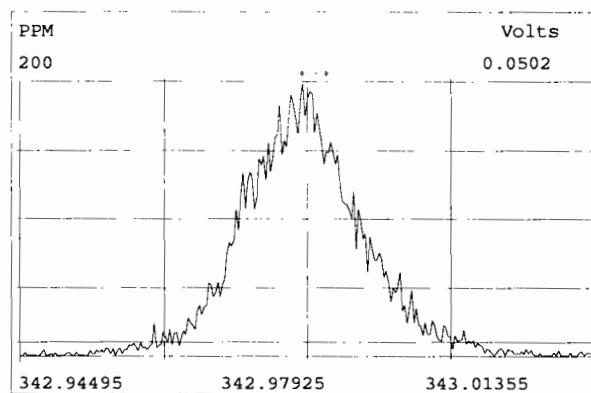
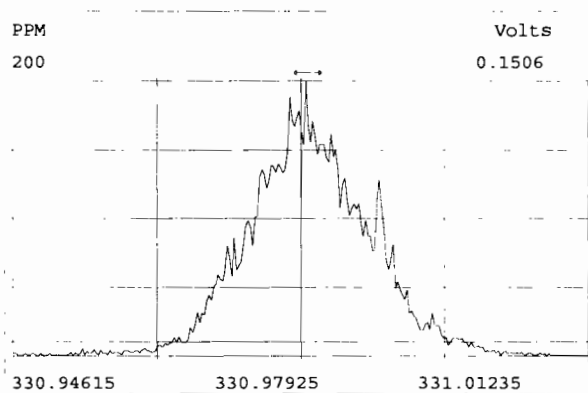
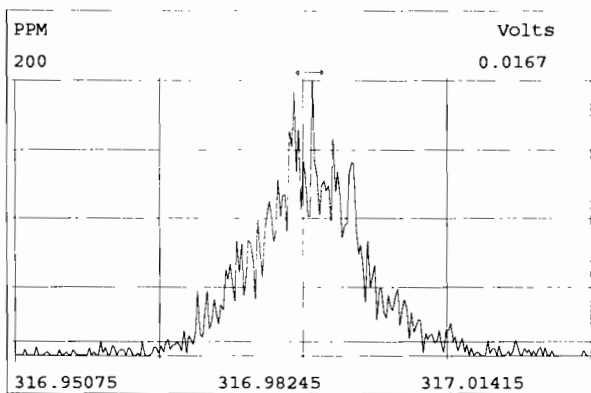
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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







IRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calibration ID: ST191120D2-1

Reviewed By: CT 11/26/19
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 type="checkbox"/> V
- Samples within 12 hour clock?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
- Bottle position verified?	<u>DB</u>	<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:

Vista Analytical Laboratory - Injection Log Run file: 191120D2 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191120D2	1	ST191120D2-1	DB	21-NOV-19	02:11:41	ST191120D2-1	NA
191120D2	2	SOLVENT BLANK	DB	21-NOV-19	02:59:21	ST191120D2-1	NA
191120D2	3	1903829-01	DB	21-NOV-19	03:47:07	ST191120D2-1	NA
191120D2	4	1903829-02	DB	21-NOV-19	04:34:51	ST191120D2-1	NA
191120D2	5	1903829-03	DB	21-NOV-19	05:22:35	ST191120D2-1	NA
191120D2	6	1903829-04	DB	21-NOV-19	06:10:19	ST191120D2-1	NA
191120D2	7	B9K0068-DUP1	DB	21-NOV-19	06:58:02	ST191120D2-1	NA
191120D2	8	1903653-01RE1	DB	21-NOV-19	07:45:49	ST191120D2-1	NA
191120D2	9	1903653-02RE1	DB	21-NOV-19	08:33:35	ST191120D2-1	NA
191120D2	10	1903653-03RE1	DB	21-NOV-19	09:21:31	ST191120D2-1	NA
191120D2	11	1903651-01RE1	DB	21-NOV-19	10:09:23	ST191120D2-1	NA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: ST191120D2-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191120D2 S#1 Analysis Date: 21-NOV-19 Time: 02:11:41

NATIVE ANALYTES	M/Z'S	ION	QC	Pass	CONC. FOUND	CONC.
	FORMING RATIO (1)	ABUND. RATIO	LIMITS (2)			RANGE (3) (ng/mL)
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	10.3	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	50.5	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	48.4	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	51.3	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	y	51.8	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	50.4	43.0 - 58.0
OCDD	M+2/M+4	0.88	0.76-1.02	y	101	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.73	0.65-0.89	y	9.51	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	50.7	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	50.2	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	49.6	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	50.5	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	51.1	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.24	1.05-1.43	y	49.7	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88-1.20	y	47.5	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	y	47.0	43.0 - 58.0
OCDF	M+2/M+4	0.88	0.76-1.02	y	98.1	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: 11/26/19

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: 191120D2 S#1 Analysis Date: 21-NOV-19 Time: 02:11:41

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	102	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	104	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	111	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	91.8	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	101	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.08	0.88-1.20	y	102	72.0 - 138.0
13C-OCDD	M/M+2	0.89	0.76-1.02	y	247	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.77	0.65-0.89	y	103	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	106	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	106	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	110	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	99.4	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	0.51	0.43-0.59	y	103	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.45	0.37-0.51	y	106	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	119	77.0 - 129.0
13C-OCDF	M+2/M+4	0.87	0.76-1.02	y	239	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.37	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: 11/26/19

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: 191120D2 S#1 Analysis Date: 21-NOV-19 Time: 02:11:41

ZB-5MS IS Data Filename: 191120D2 S#1 Analysis Date: 21-NOV-19 Time: 02:11:41

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)	22:49	1,3,6,8-TCDF (F)	20:42
1,2,8,9-TCDD (L)	27:03	1,2,8,9-TCDF (L)	27:12
1,2,4,7,9-PeCDD (F)	28:39	1,3,4,6,8-PeCDF (F)	27:10
1,2,3,8,9-PeCDD (L)	31:03	1,2,3,8,9-PeCDF (L)	31:17
1,2,4,6,7,9-HxCDD (F)	32:29	1,2,3,4,6,8-HxCDF (F)	31:56
1,2,3,7,8,9-HxCDD (L)	34:25	1,2,3,7,8,9-HxCDF (L)	34:48
1,2,3,4,6,7,9-HpCDD (F)	37:01	1,2,3,4,6,7,8-HpCDF (F)	36:38
1,2,3,4,6,7,8-HpCDD (L)	37:52	1,2,3,4,7,8,9-HpCDF (L)	38:24

(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: 11/26/19

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: 191120D2 S#1 Analysis Date: 21-NOV-19 Time: 02:11:41

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		1.001	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	1.198	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	1.152	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: 11/26/19

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: 191120D2 S#1 Analysis Date: 21-NOV-19 Time: 02:11:41

NATIVE ANALYTES	RETENTION TIME		RRT	QC LIMITS (1)
	REFERENCE			
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		1.001	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		1.001	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	0.991	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	1.145	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: 11/26/19

Client ID: 1613 CS3 19C2204
Lab ID: ST191120D2-1

Filename: 191120D2 S:1 Acq:21-NOV-19 02:11:41
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000

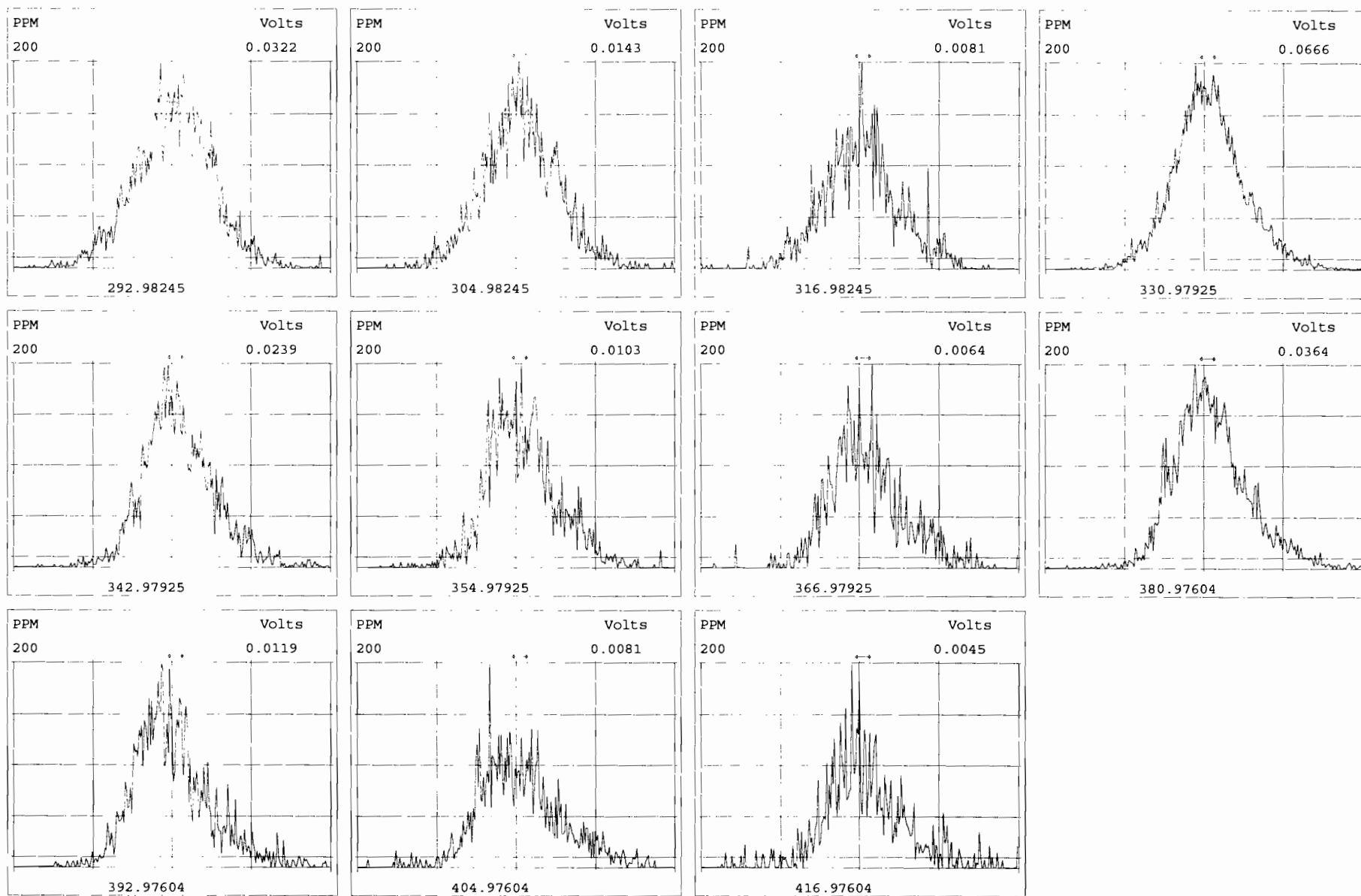
ConCal: ST191120D2-1
EndCAL: NA

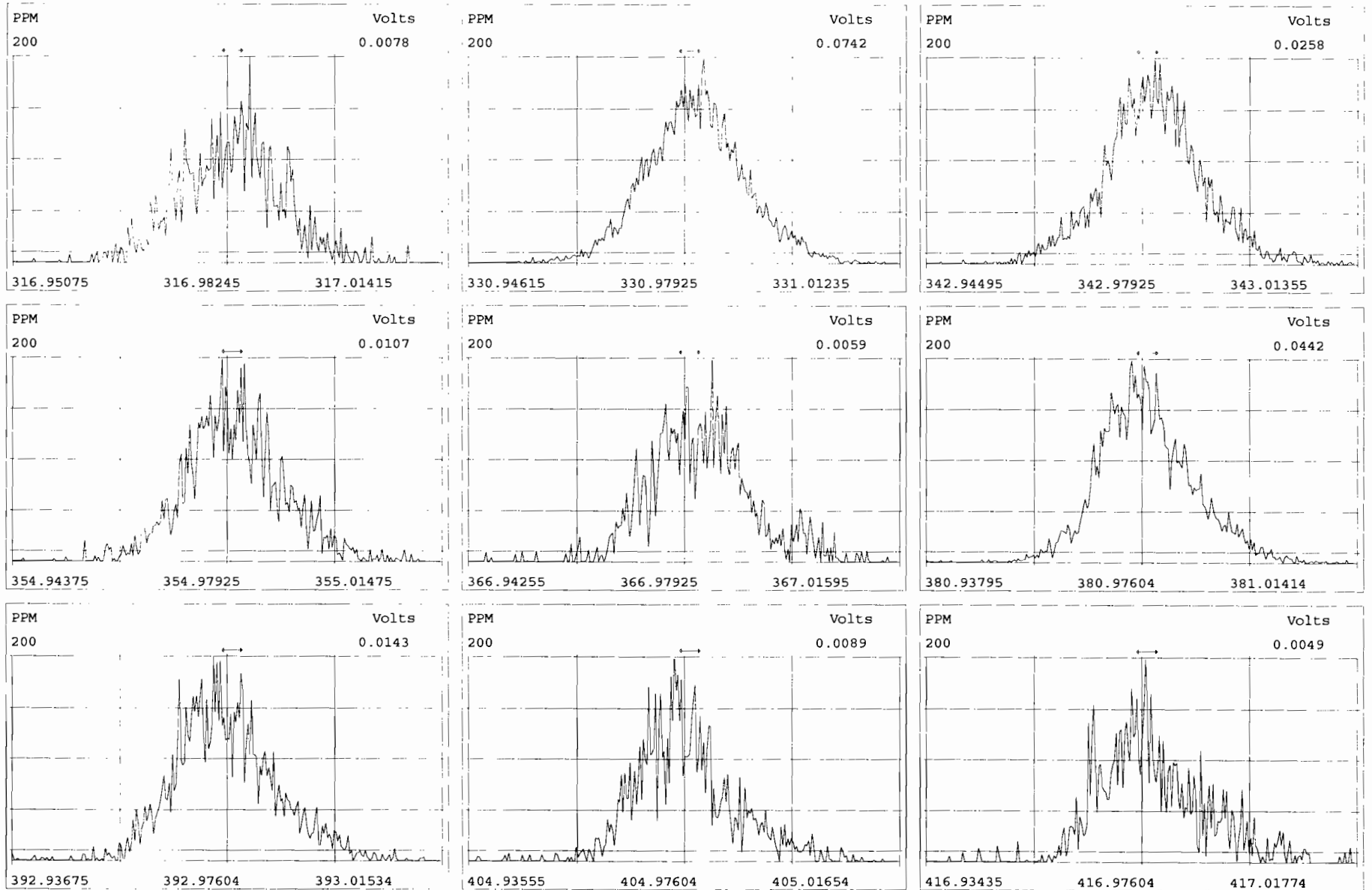
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	9.87e+05	0.79 y	0.91	26:12	10.263		* 2.5		*	Total Tetra-Dioxins	75.3	75.6		*	*
1,2,3,7,8-PeCDD	3.99e+06	0.62 y	0.90	30:42	50.454		* 2.5		*	Total Penta-Dioxins	187	188		*	*
1,2,3,4,7,8-HxCDD	3.93e+06	1.27 y	1.10	34:01	48.376		* 2.5		*	Total Hexa-Dioxins	224	225		*	*
1,2,3,6,7,8-HxCDD	3.92e+06	1.25 y	0.94	34:07	51.315		* 2.5		*	Total Hepta-Dioxins	120	121		*	*
1,2,3,7,8,9-HxCDD	4.19e+06	1.27 y	0.96	34:25	51.789		* 2.5		*	Total Tetra-Furans	37.0	37.8		*	*
1,2,3,4,6,7,8-HpCDD	3.42e+06	1.03 y	0.98	37:52	50.393		* 2.5		*	Total Penta-Furans	223.85	223.93		*	*
OCDD	7.22e+06	0.88 y	0.96	41:09	101.22		* 2.5		*	Total Hexa-Furans	267	268		*	*
										Total Hepta-Furans	95.3	95.9		*	*
2,3,7,8-TCDF	1.35e+06	0.73 y	0.95	25:25	9.5064		* 2.5		*						
1,2,3,7,8-PeCDF	6.19e+06	1.58 y	0.96	29:32	50.681		* 2.5		*						
2,3,4,7,8-PeCDF	6.37e+06	1.59 y	1.01	30:25	50.188		* 2.5		*						
1,2,3,4,7,8-HxCDF	5.52e+06	1.23 y	1.18	33:07	49.632		* 2.5		*						
1,2,3,6,7,8-HxCDF	5.76e+06	1.23 y	1.07	33:14	50.510		* 2.5		*						
2,3,4,6,7,8-HxCDF	5.69e+06	1.25 y	1.11	33:50	51.125		* 2.5		*						
1,2,3,7,8,9-HxCDF	4.69e+06	1.24 y	1.06	34:48	49.678		* 2.5		*						
1,2,3,4,6,7,8-HpCDF	4.45e+06	1.03 y	1.13	36:38	47.481		* 2.5		*						
1,2,3,4,7,8,9-HpCDF	4.31e+06	1.02 y	1.28	38:24	47.029		* 2.5		*						
OCDF	7.93e+06	0.88 y	0.95	41:22	98.114		* 2.5		*						
IS	13C-2,3,7,8-TCDD	1.06e+07	0.79 y	1.10	26:11	101.97				Rec					
IS	13C-1,2,3,7,8-PeCDD	8.76e+06	0.62 y	0.88	30:41	104.46				102					
IS	13C-1,2,3,4,7,8-HxCDD	7.39e+06	1.29 y	0.64	33:60	110.88				104					
IS	13C-1,2,3,6,7,8-HxCDD	8.15e+06	1.29 y	0.86	34:06	91.783				111					
IS	13C-1,2,3,7,8,9-HxCDD	8.42e+06	1.26 y	0.81	34:24	100.67				91.8					
IS	13C-1,2,3,4,6,7,8-HpCDD	6.93e+06	1.08 y	0.65	37:51	102.18				101					
IS	13C-OCDD	1.49e+07	0.89 y	0.58	41:08	247.46				102					
IS	13C-2,3,7,8-TCDF	1.49e+07	0.77 y	1.03	25:24	103.06				124					
IS	13C-1,2,3,7,8-PeCDF	1.27e+07	1.59 y	0.85	29:31	106.38				103					
IS	13C-2,3,4,7,8-PeCDF	1.25e+07	1.59 y	0.85	30:24	105.51				106					
IS	13C-1,2,3,4,7,8-HxCDF	9.45e+06	0.53 y	0.83	33:06	109.54				110					
IS	13C-1,2,3,6,7,8-HxCDF	1.07e+07	0.53 y	1.03	33:14	99.374				99.4					
IS	13C-2,3,4,6,7,8-HxCDF	1.00e+07	0.52 y	0.95	33:49	101.08				101					
IS	13C-1,2,3,7,8,9-HxCDF	8.89e+06	0.51 y	0.83	34:47	103.50				103					
IS	13C-1,2,3,4,6,7,8-HpCDF	8.31e+06	0.45 y	0.76	36:37	105.71				106					
IS	13C-1,2,3,4,7,8,9-HpCDF	7.17e+06	0.45 y	0.58	38:24	118.88				119					
IS	13C-OCDF	1.71e+07	0.87 y	0.69	41:21	238.91				119					
C/Up	37C1-2,3,7,8-TCDD	1.07e+06		1.20	26:12	9.3673				93.7					
RS/RT	13C-1,2,3,4-TCDD	9.51e+06	0.81 y	1.00	25:37	100.00									
RS	13C-1,2,3,4-TCDF	1.40e+07	0.78 y	1.00	24:12	100.00									
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.04e+07	0.52 y	1.00	33:31	100.00									

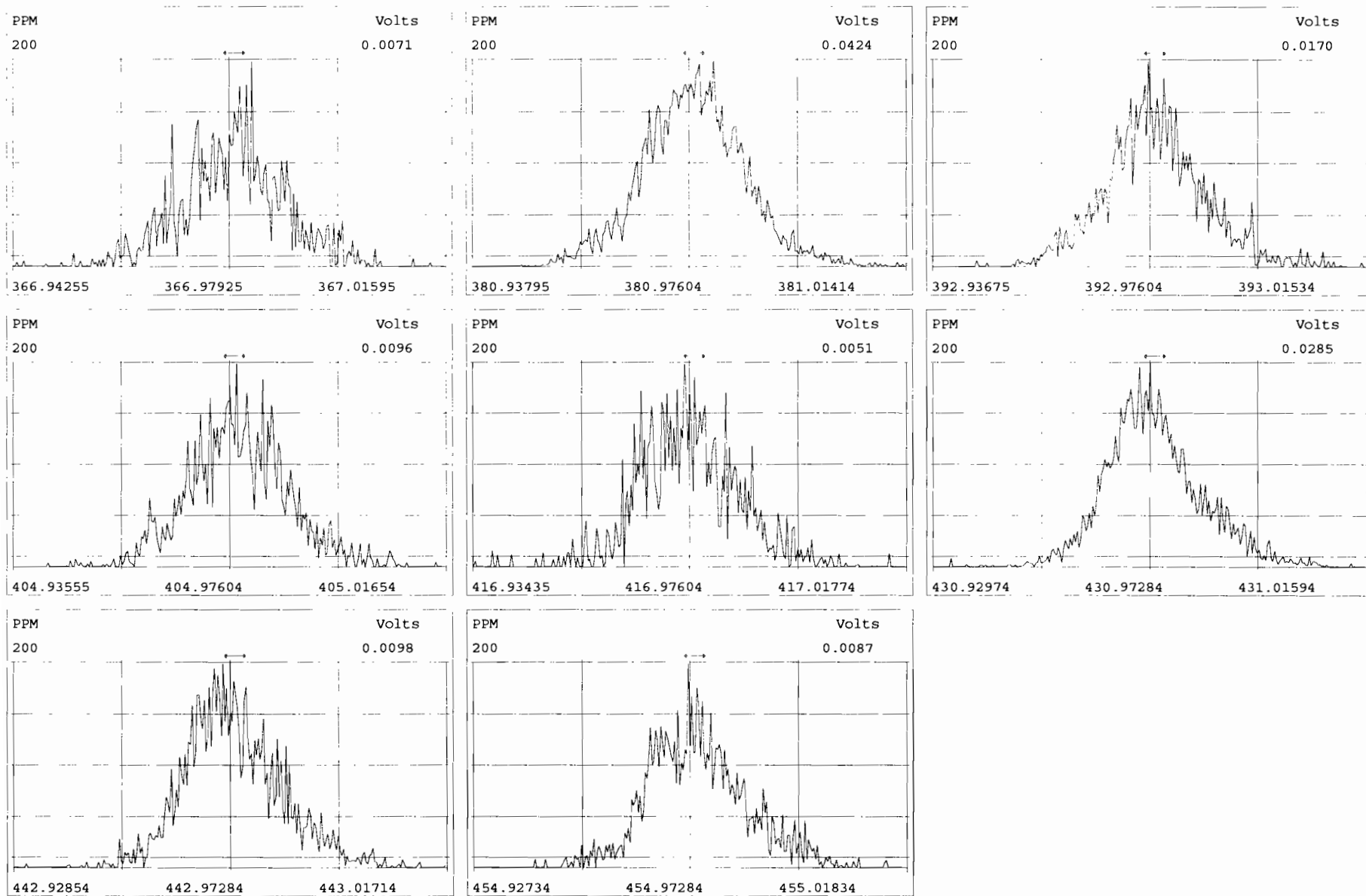
Integrations
by DB
Analyst: DB
Date: 11/26/19
Reviewed
by CT
Analyst: CT
Date: 11/26/19

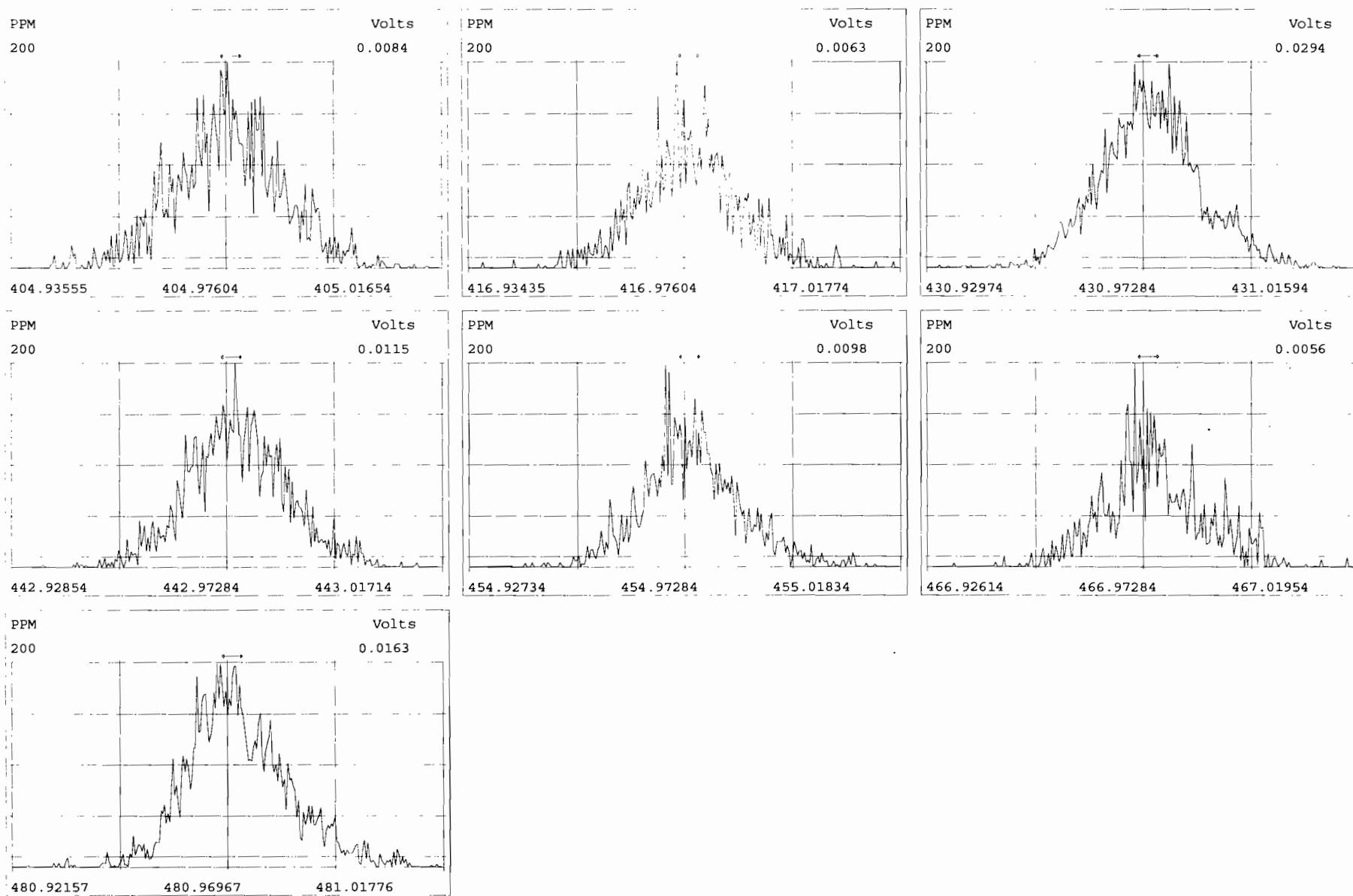
Vista Analytical Laboratory - Injection Log Run file: 191120D2 Instrument ID: VG-7 GC Column ID: ZB-5MS

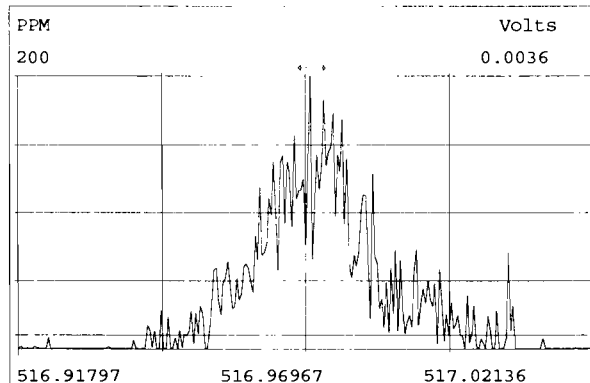
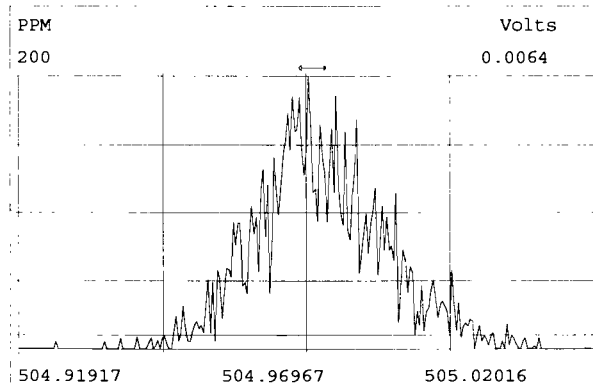
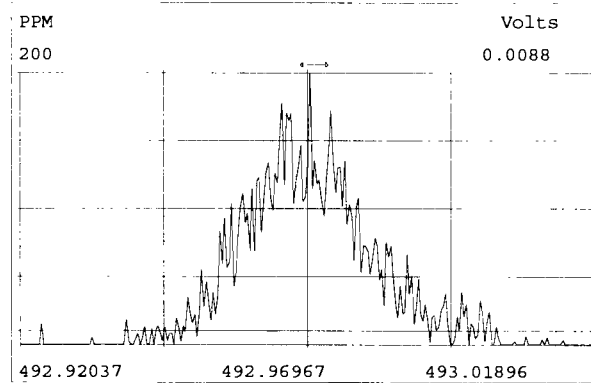
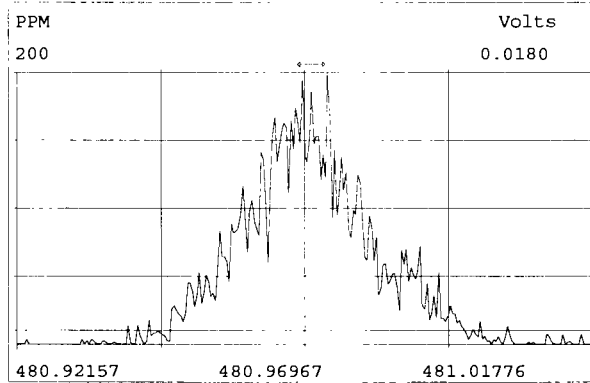
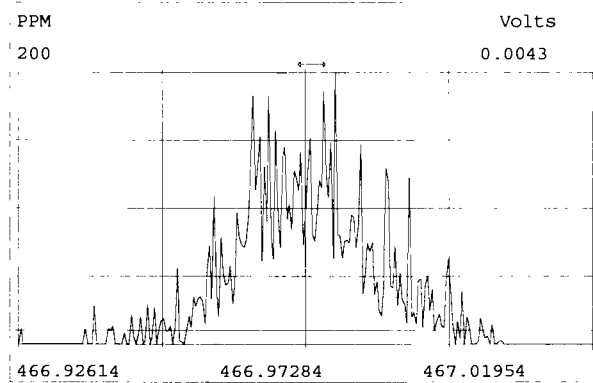
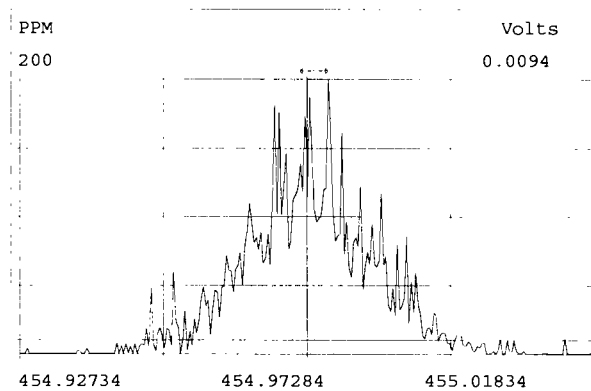
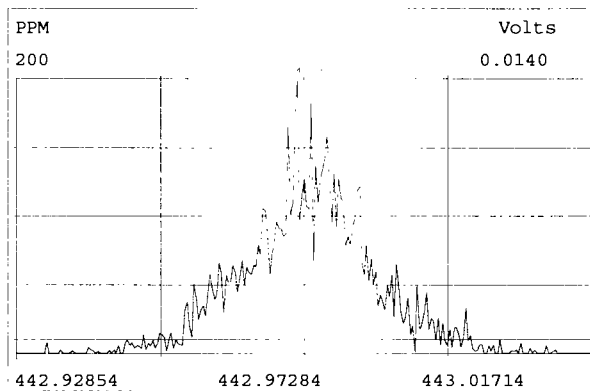
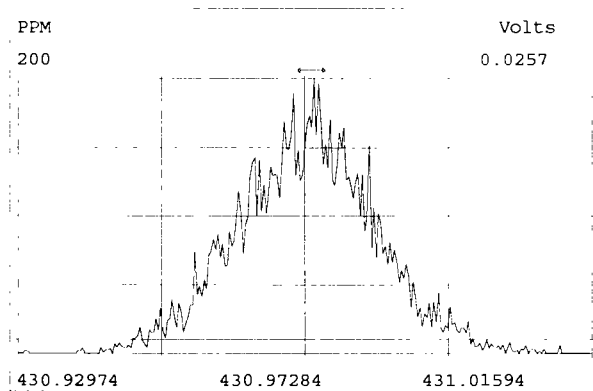
Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
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191120D2	2	SOLVENT BLANK	DB	21-NOV-19	02:59:21	ST191120D2-1	NA
191120D2	3	1903829-01	DB	21-NOV-19	03:47:07	ST191120D2-1	NA
191120D2	4	1903829-02	DB	21-NOV-19	04:34:51	ST191120D2-1	NA
191120D2	5	1903829-03	DB	21-NOV-19	05:22:35	ST191120D2-1	NA
191120D2	6	1903829-04	DB	21-NOV-19	06:10:19	ST191120D2-1	NA
191120D2	7	B9K0068-DUP1	DB	21-NOV-19	06:58:02	ST191120D2-1	NA
191120D2	8	1903653-01RE1	DB	21-NOV-19	07:45:49	ST191120D2-1	NA
191120D2	9	1903653-02RE1	DB	21-NOV-19	08:33:35	ST191120D2-1	NA
191120D2	10	1903653-03RE1	DB	21-NOV-19	09:21:31	ST191120D2-1	NA
191120D2	11	1903651-01RE1	DB	21-NOV-19	10:09:23	ST191120D2-1	NA

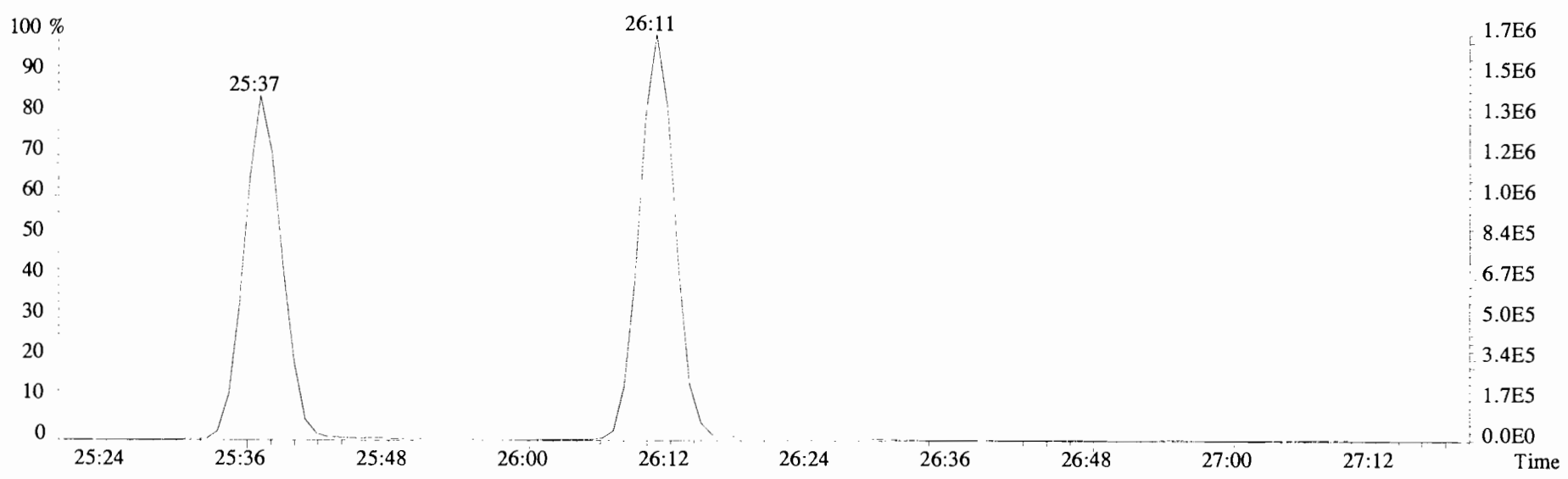
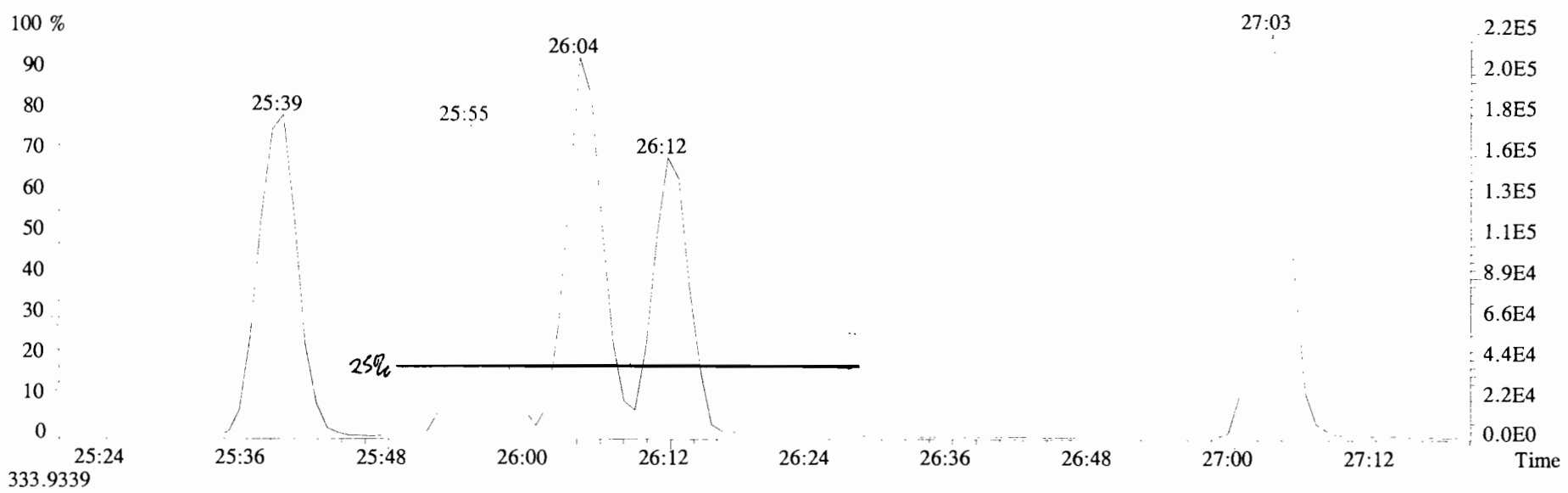




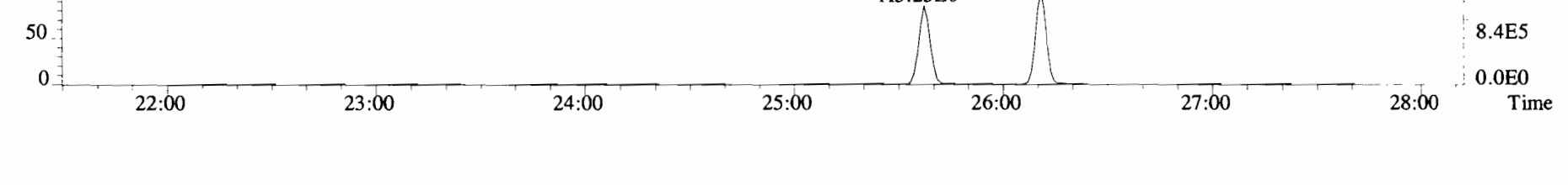
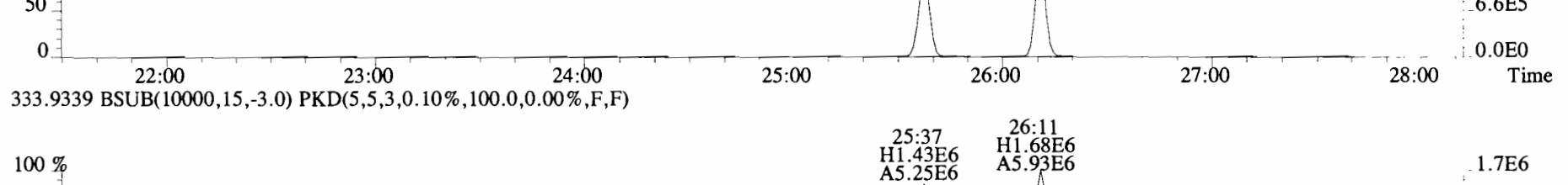
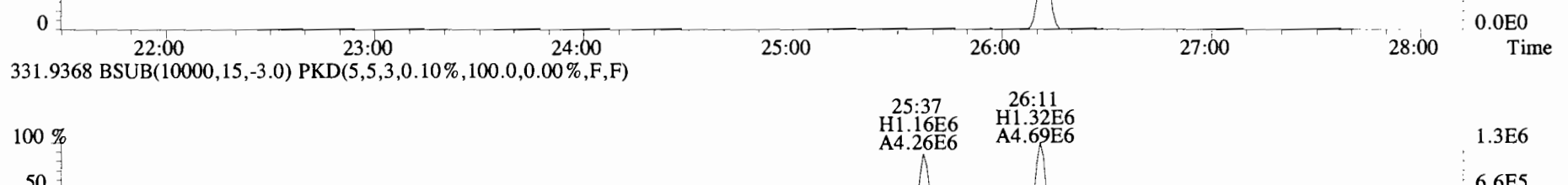
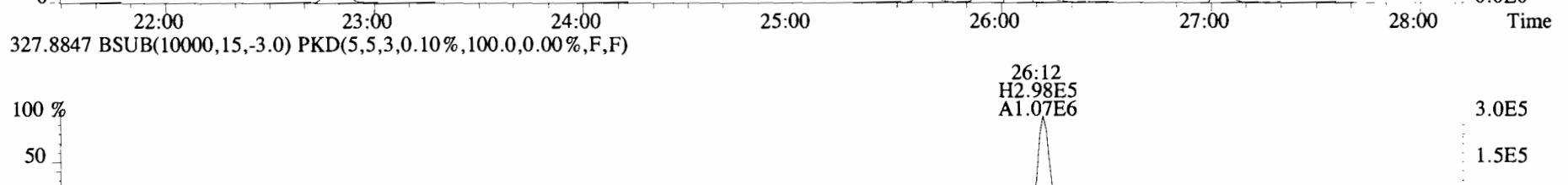
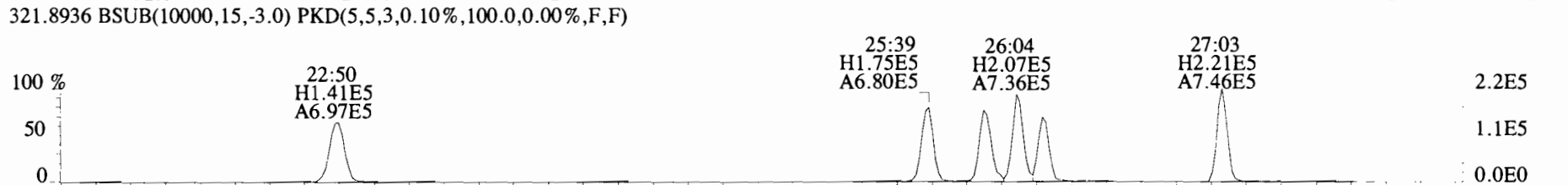
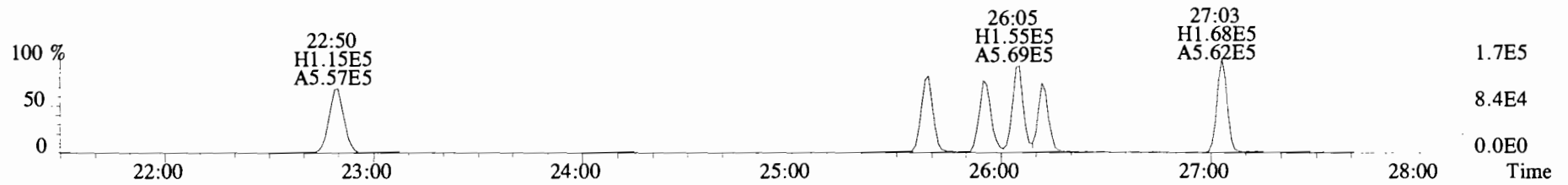




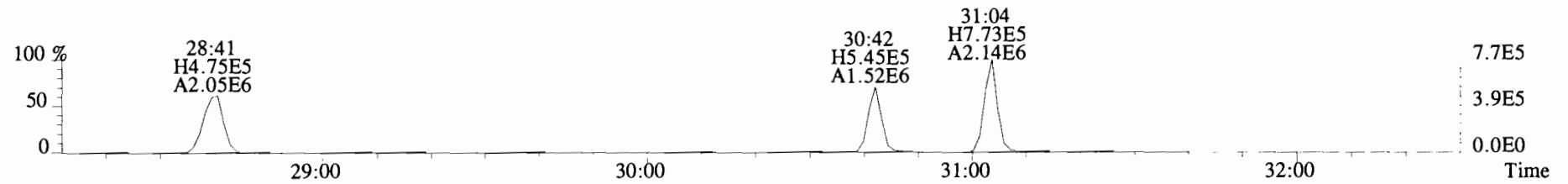




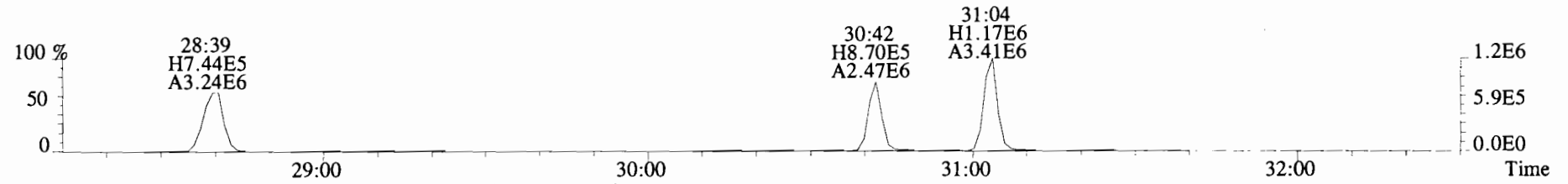
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Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



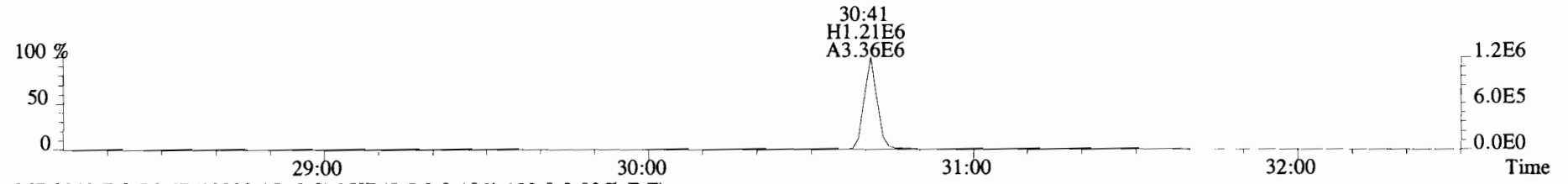
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Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



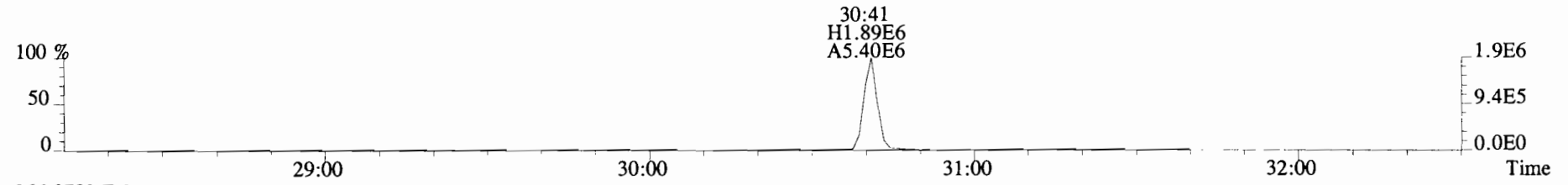
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



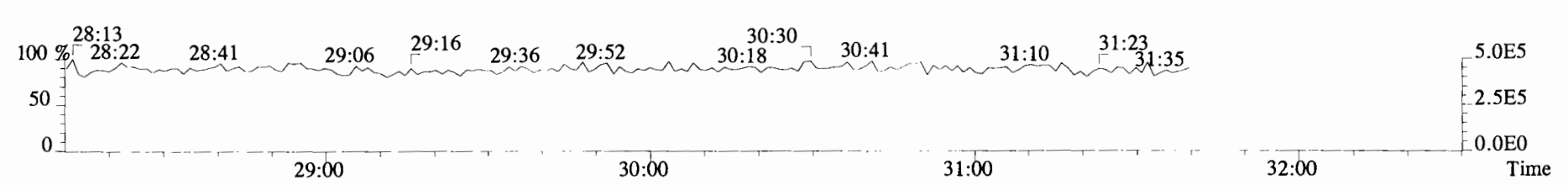
365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



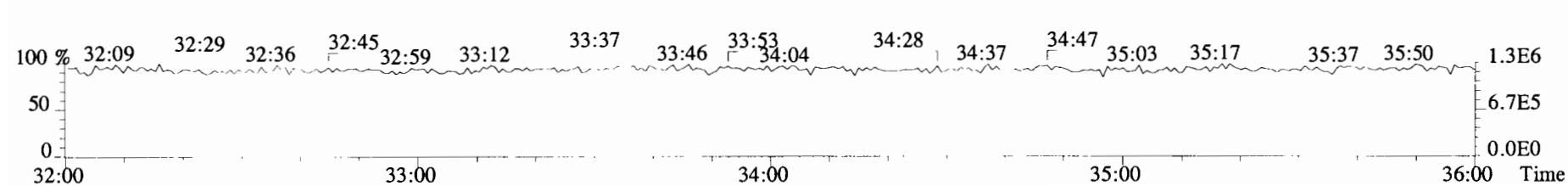
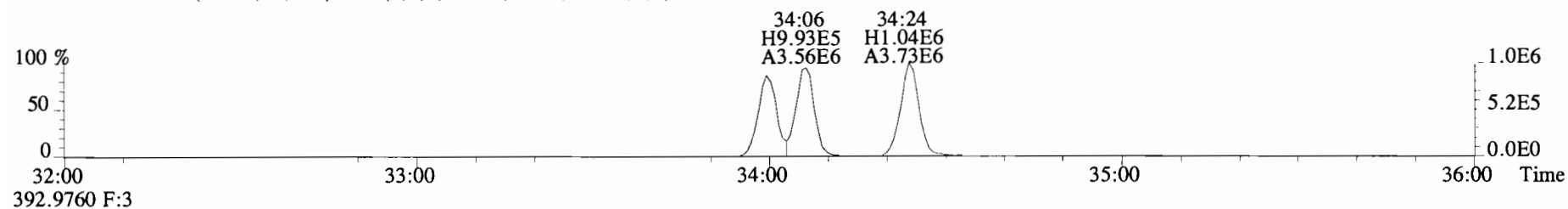
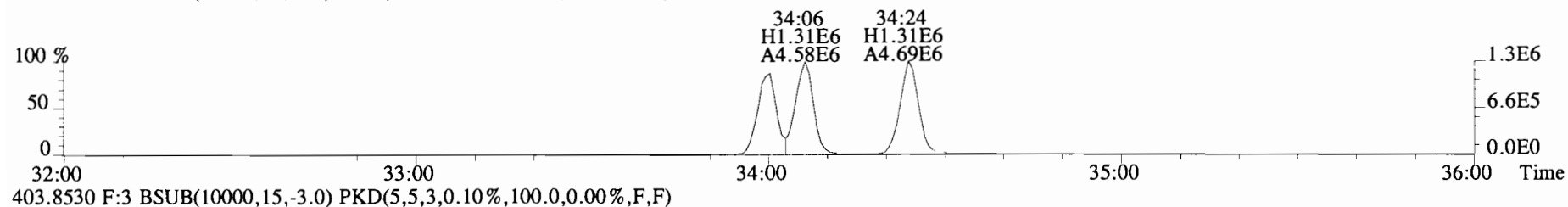
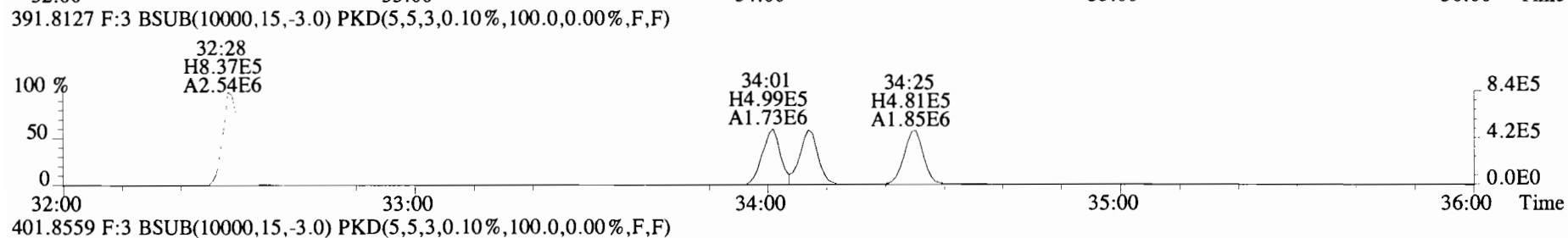
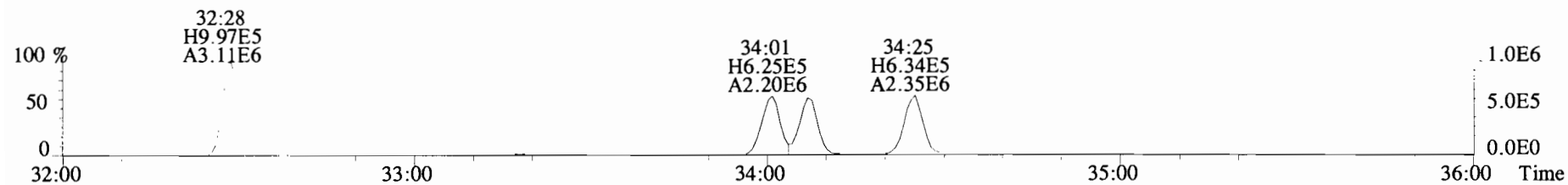
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



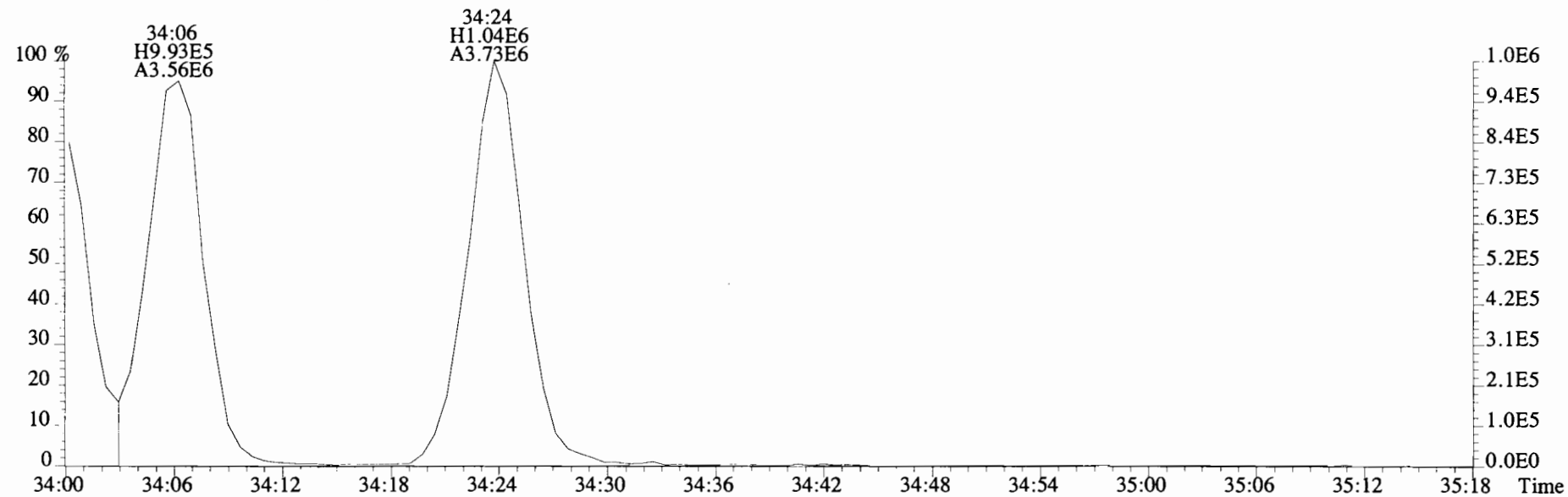
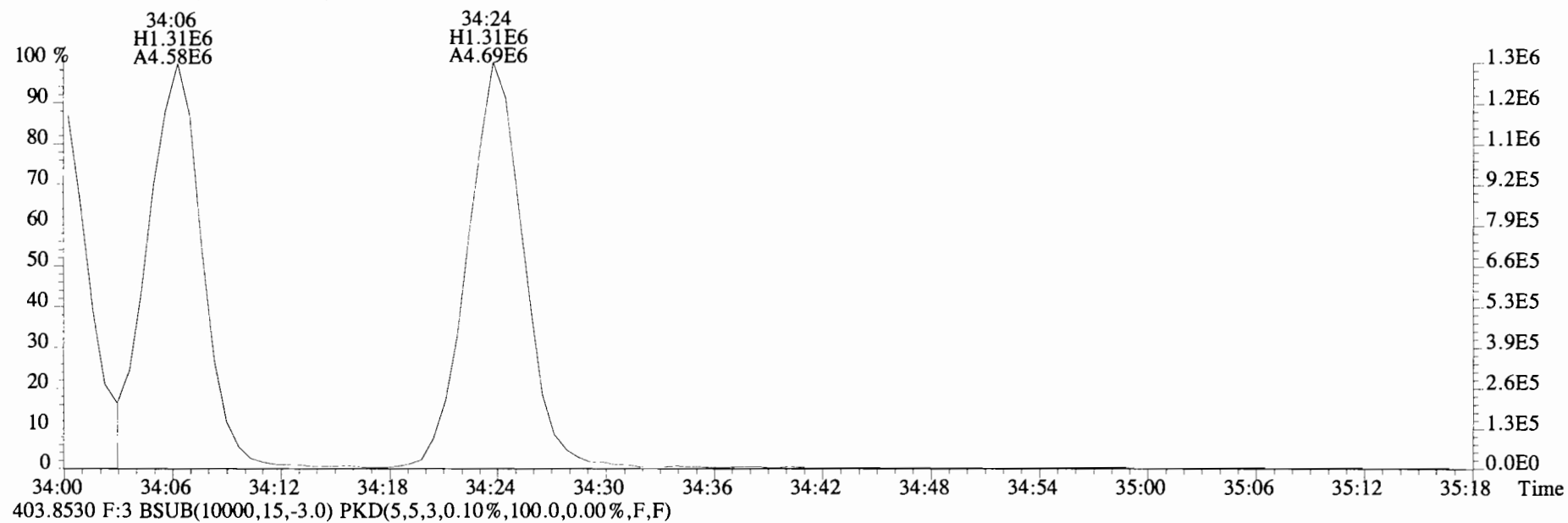
366.9792 F:2



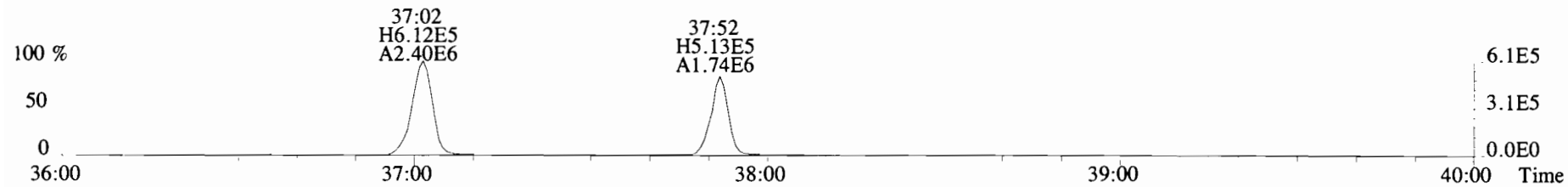
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Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



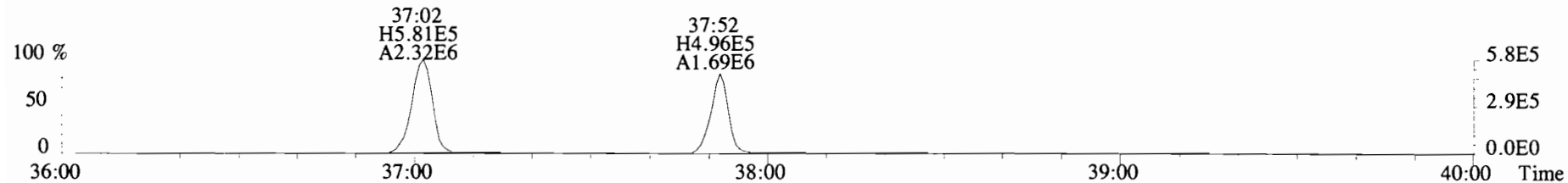
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Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



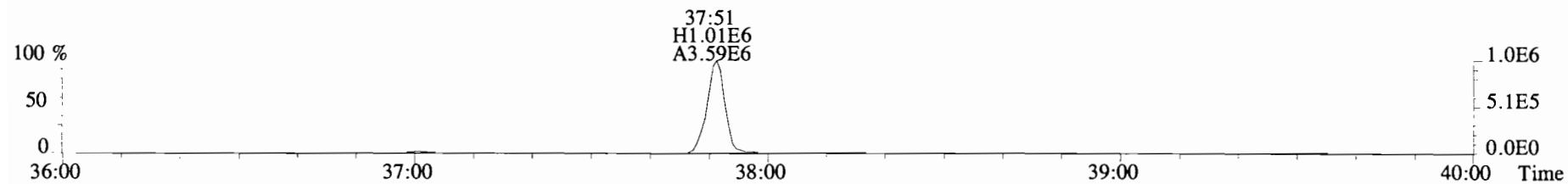
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423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



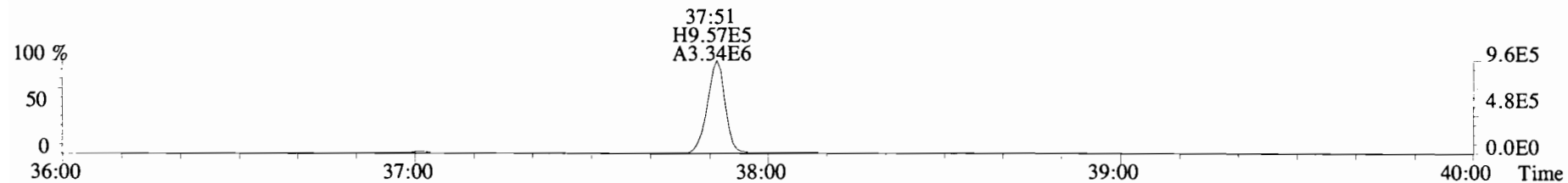
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



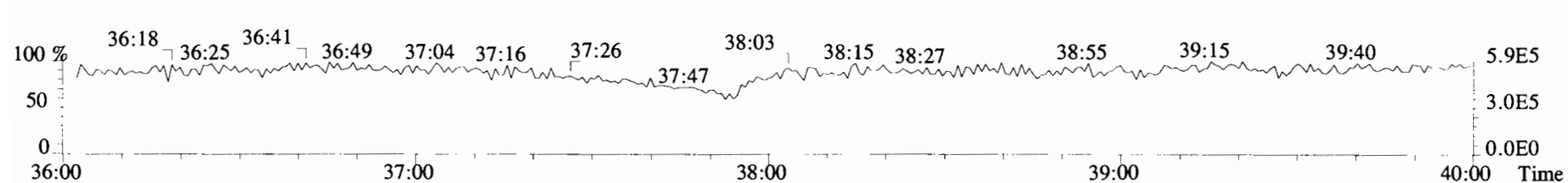
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



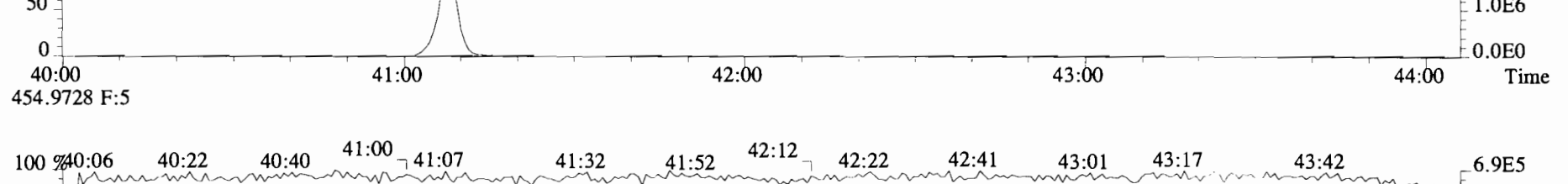
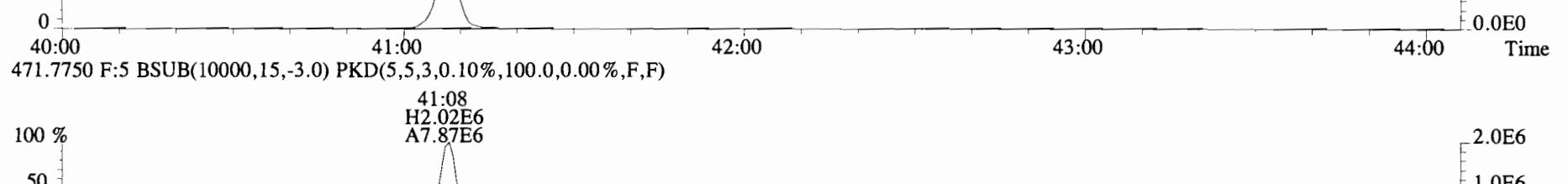
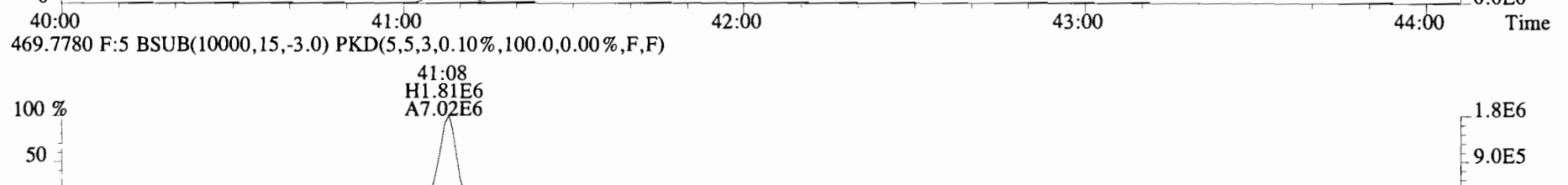
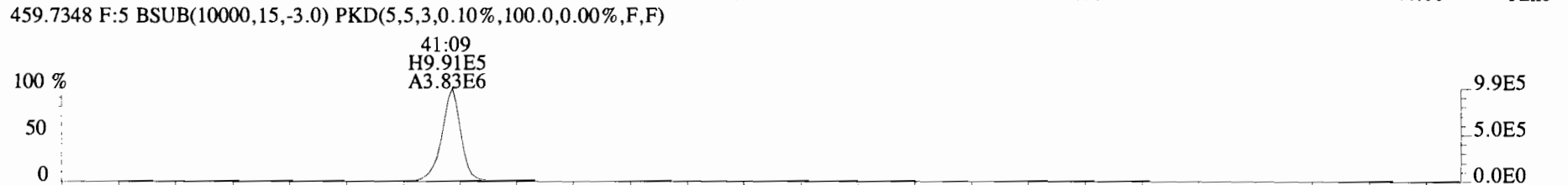
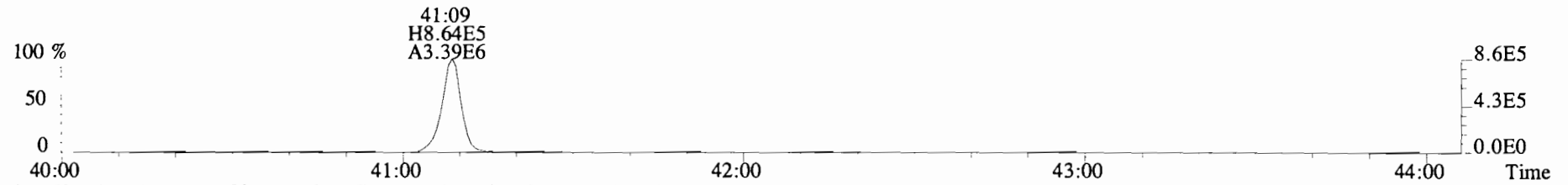
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



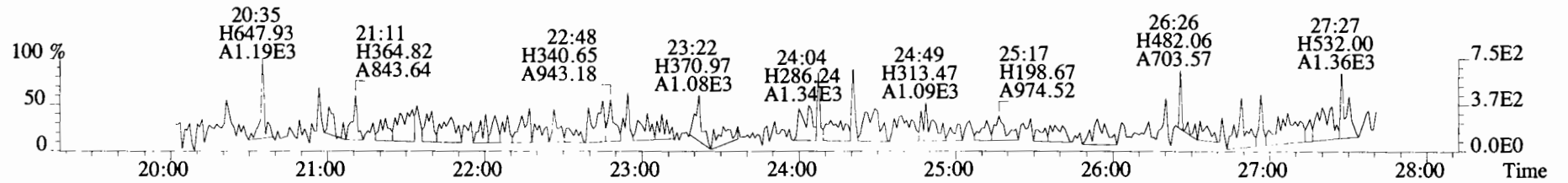
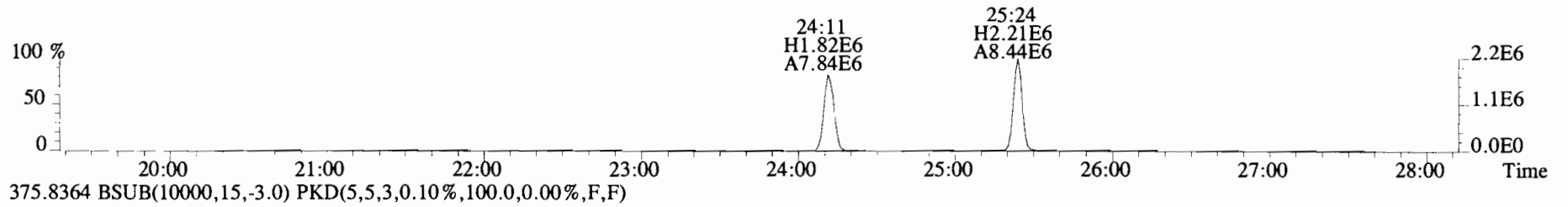
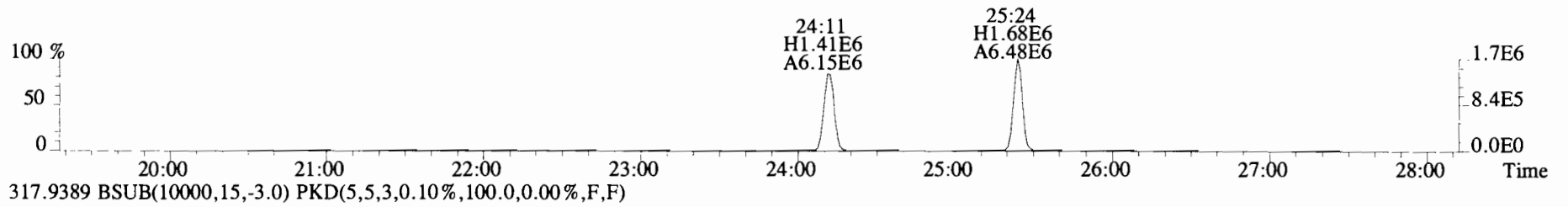
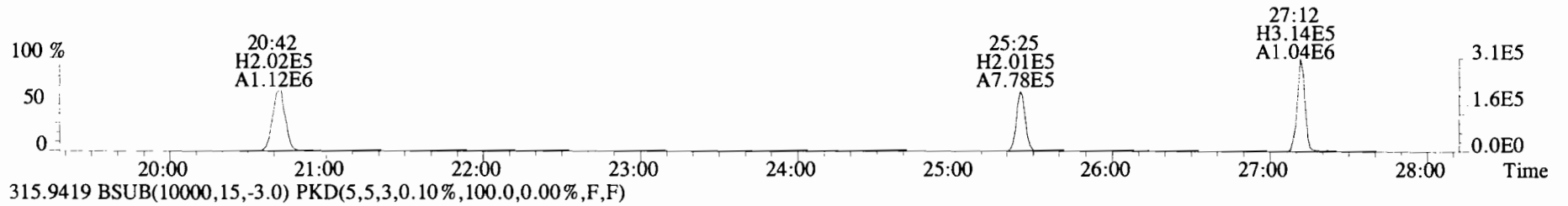
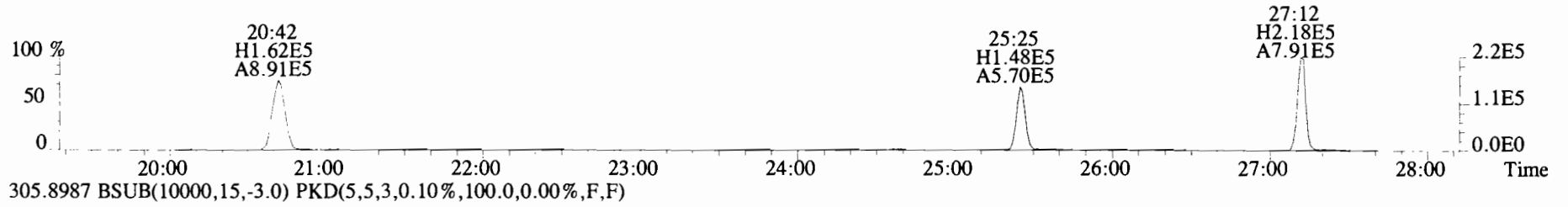
454.9728 F:4



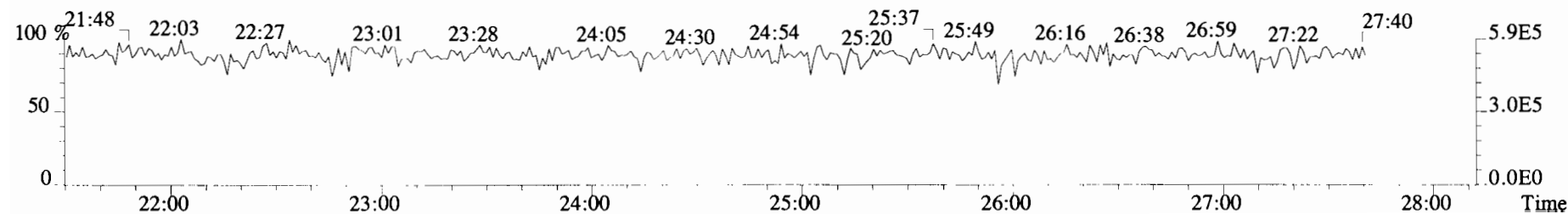
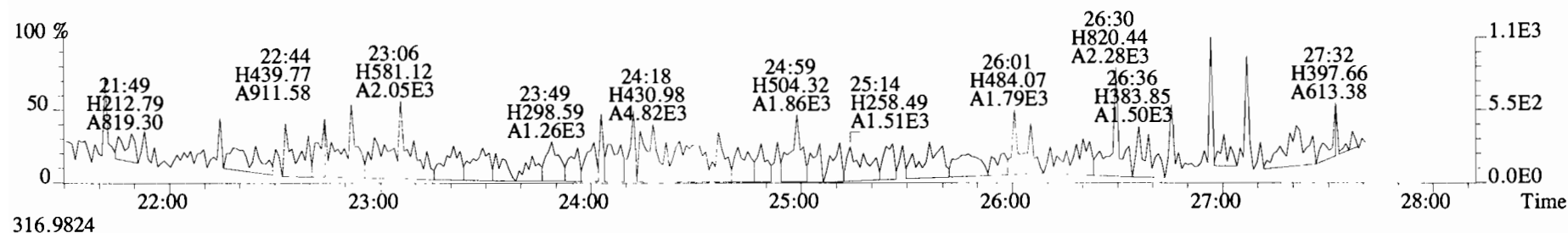
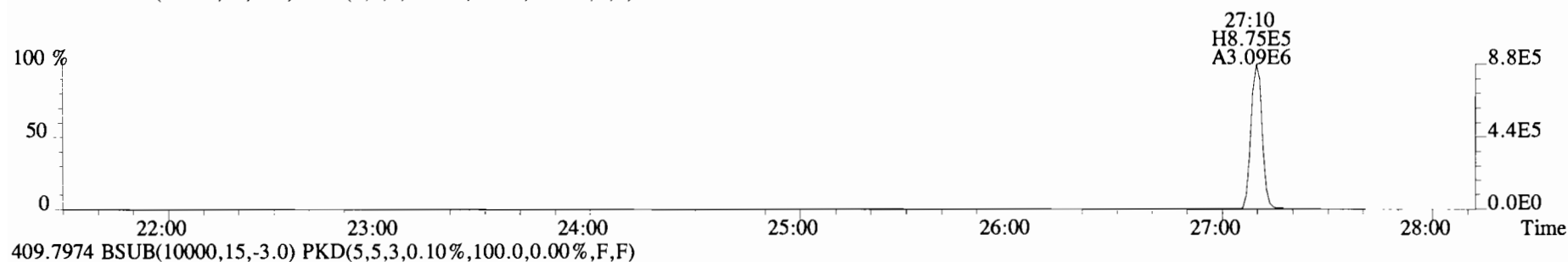
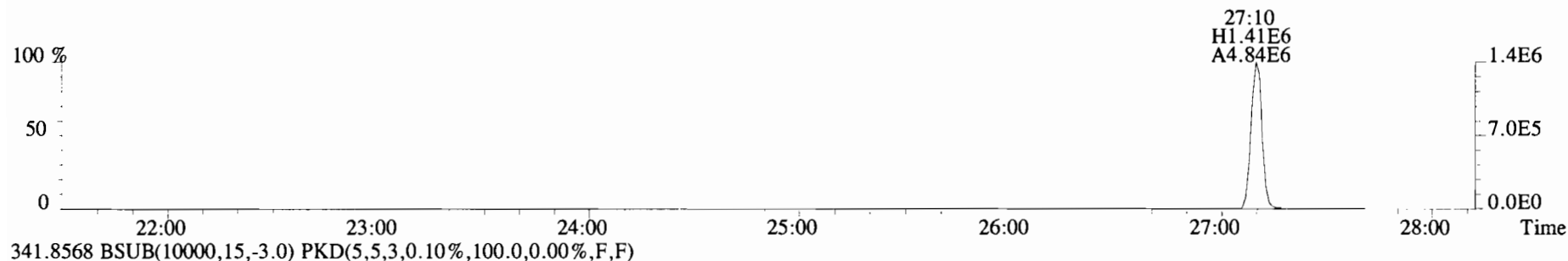
File:191120D2 #1-432 Acq:21-NOV-2019 02:11:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



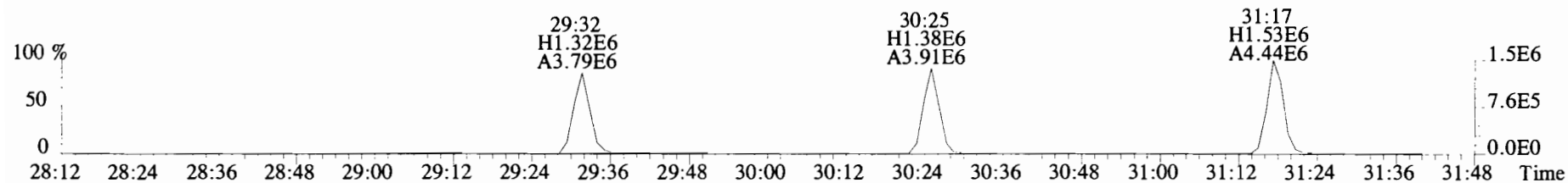
File:191120D2 #1-492 Acq:21-NOV-2019 02:11:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory_VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



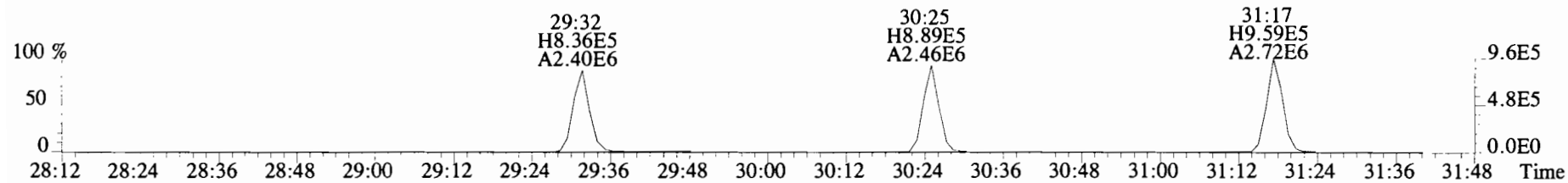
File:191120D2 #1-492 Acq:21-NOV-2019 02:11:41 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



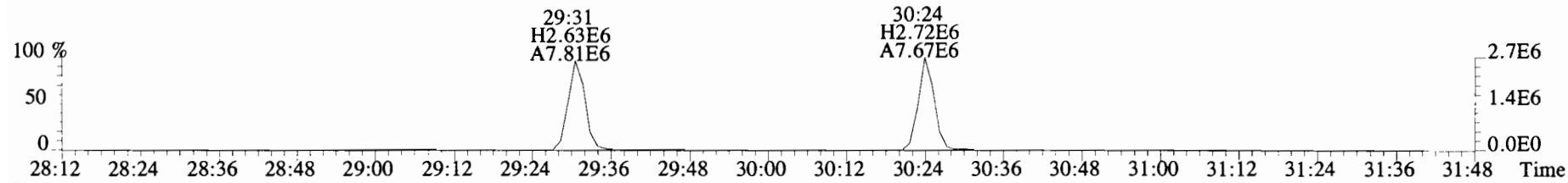
File:191120D2 #1-210 Acq:21-NOV-2019 02:11:41 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



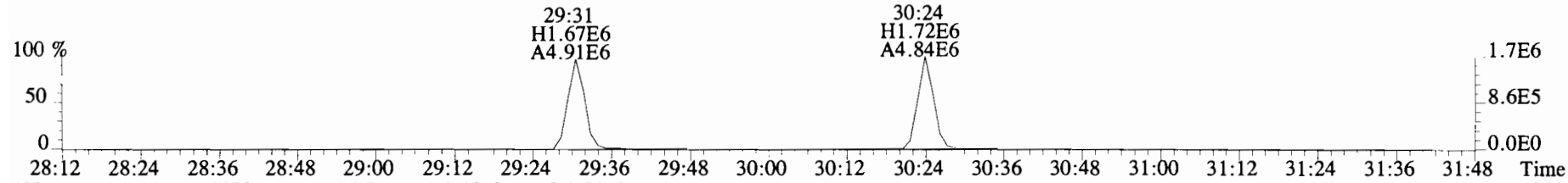
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



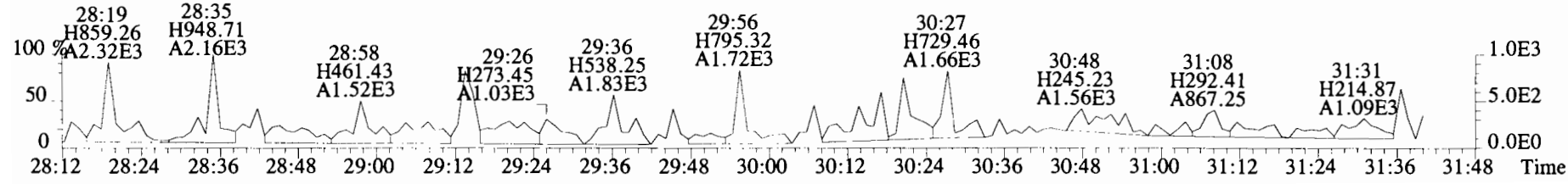
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



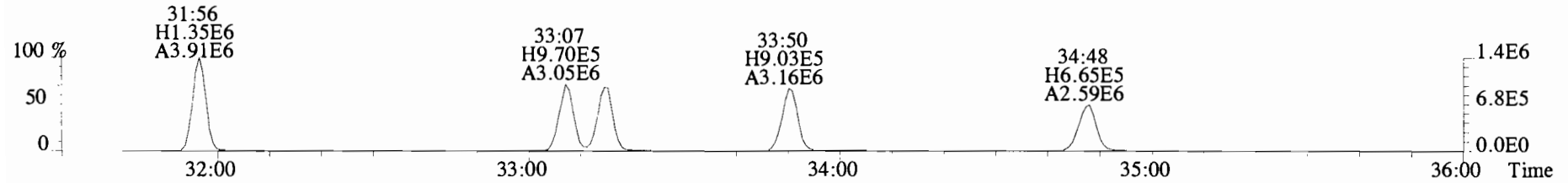
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



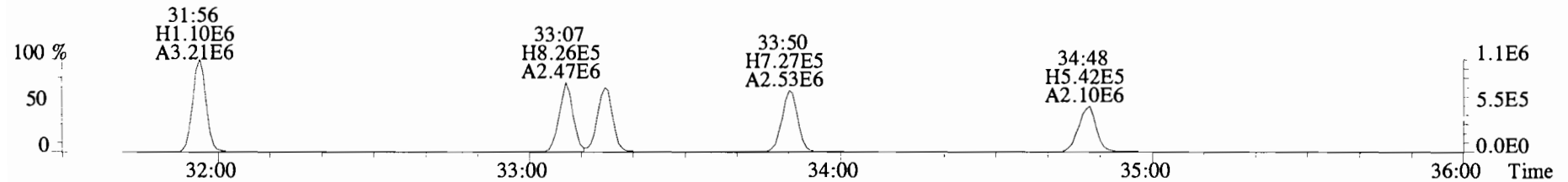
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



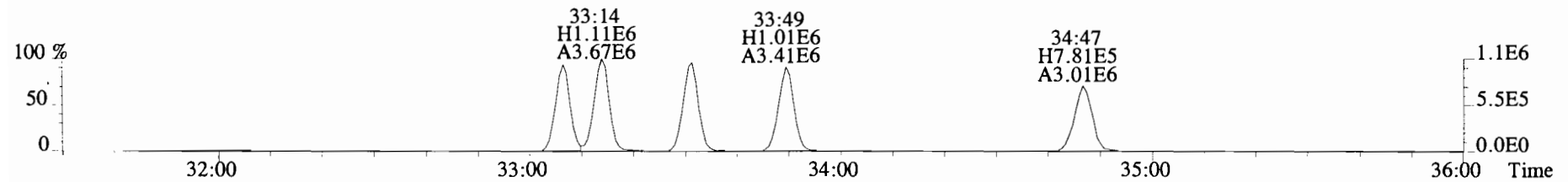
File:191120D2 #1-386 Acq:21-NOV-2019 02:11:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



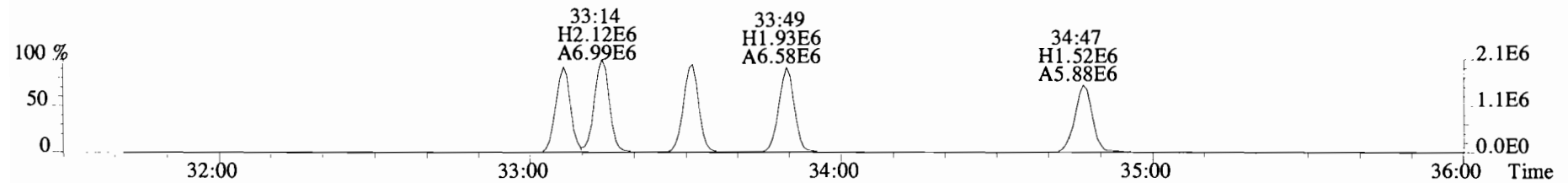
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



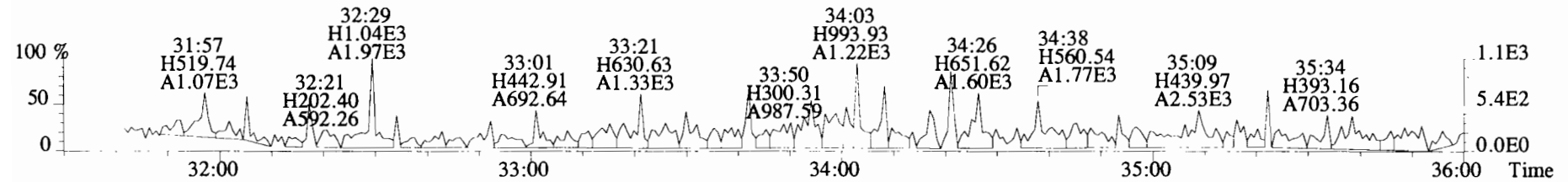
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



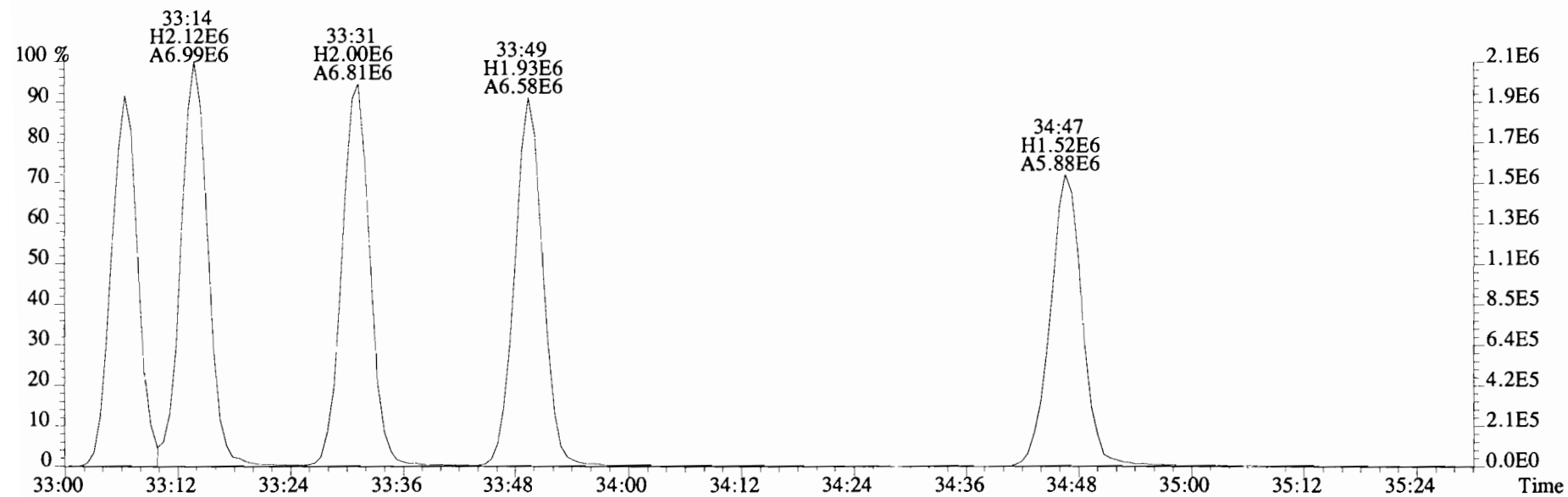
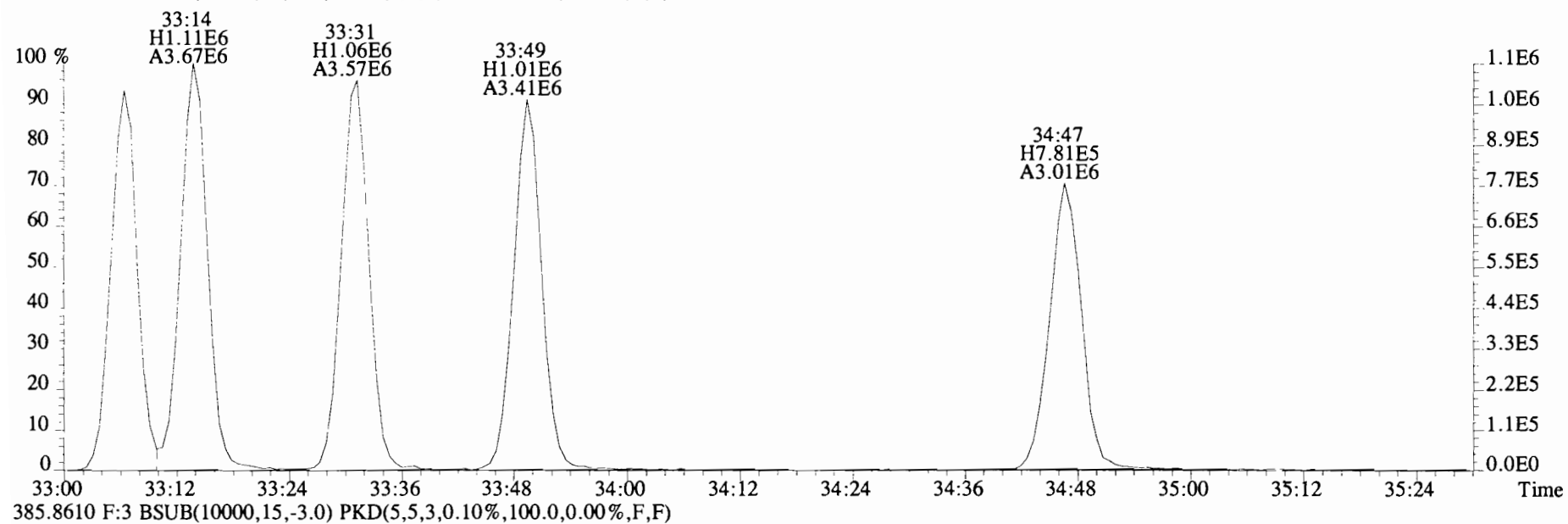
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



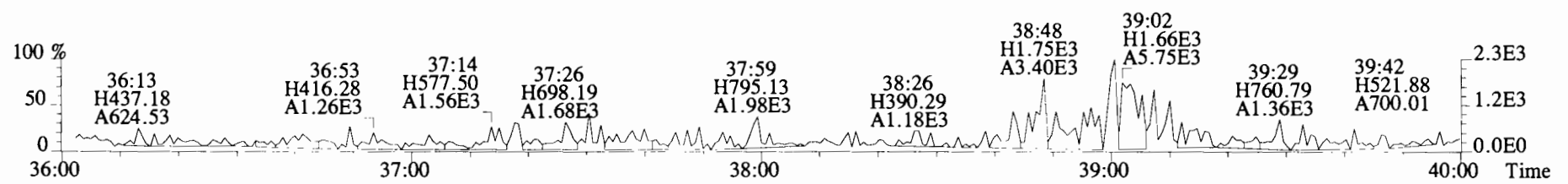
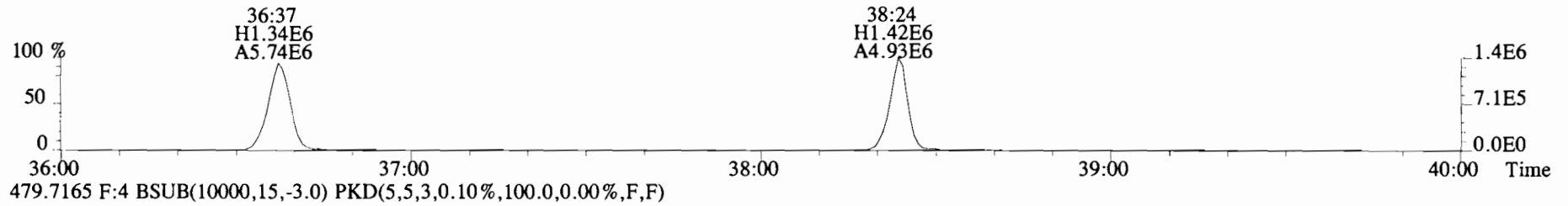
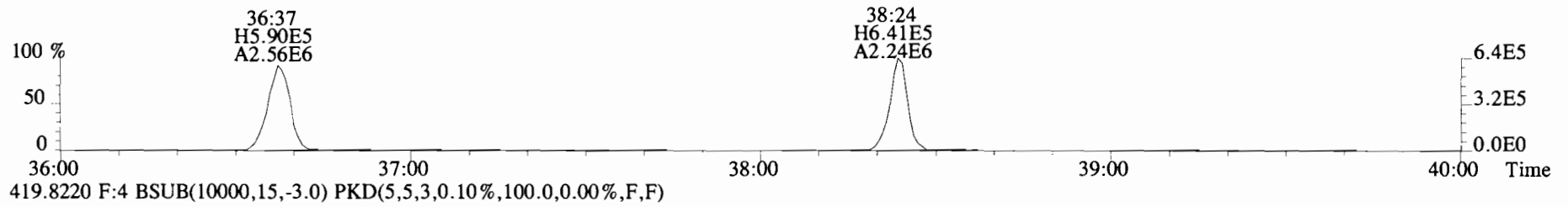
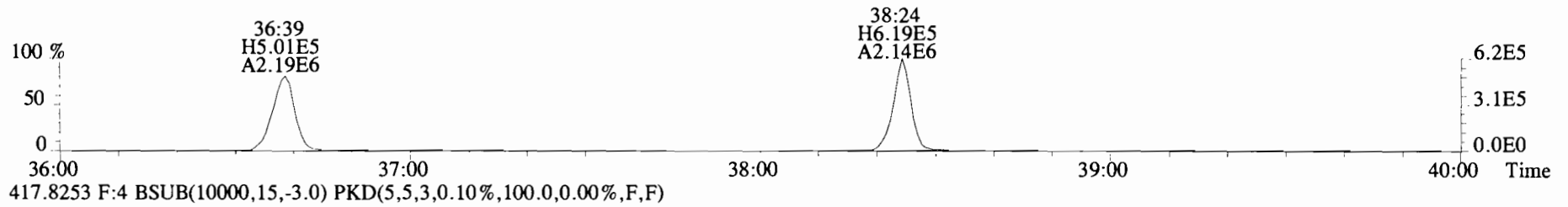
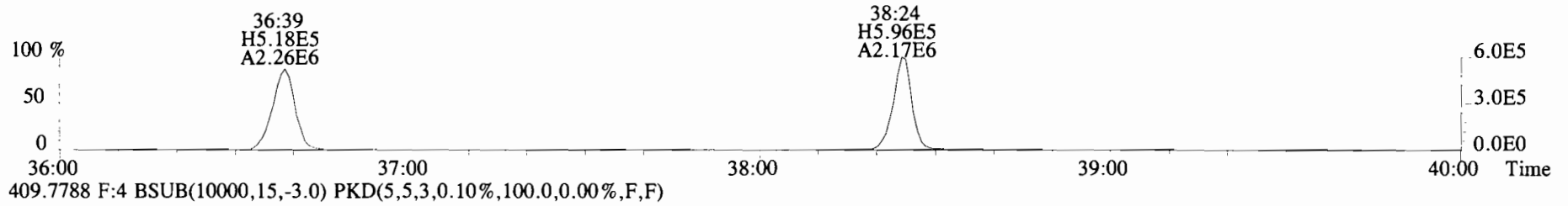
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



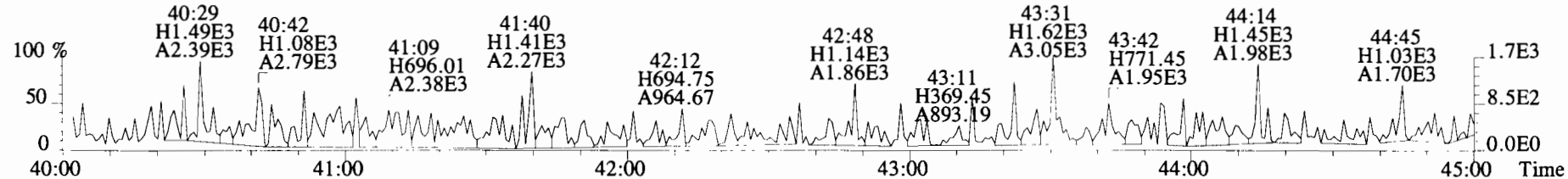
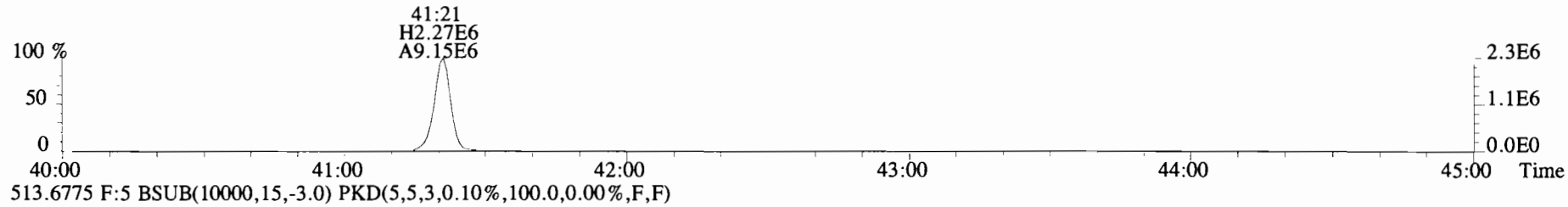
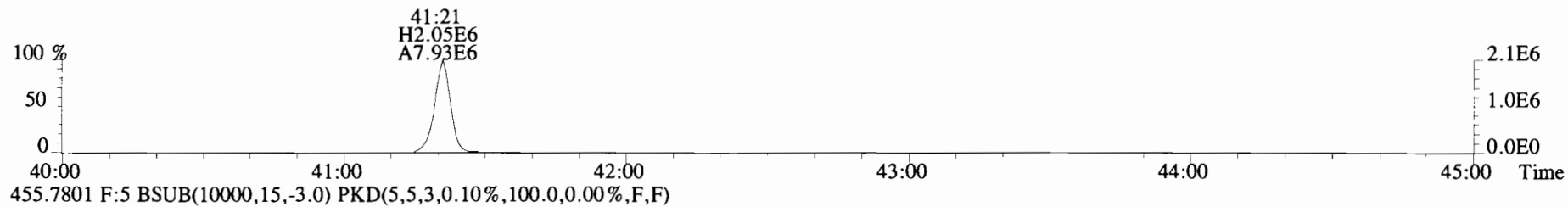
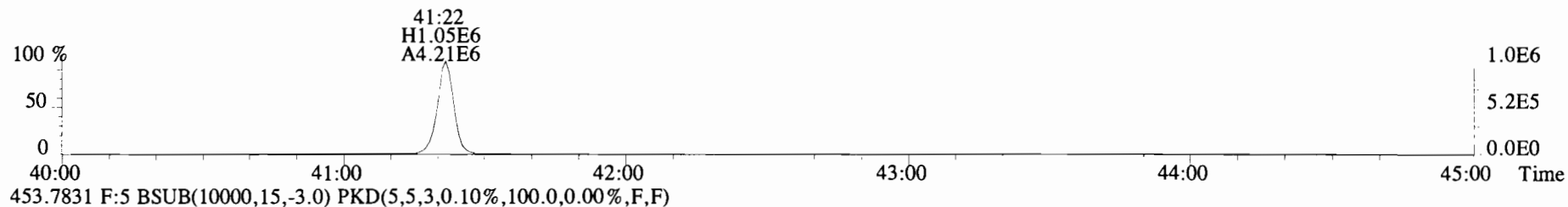
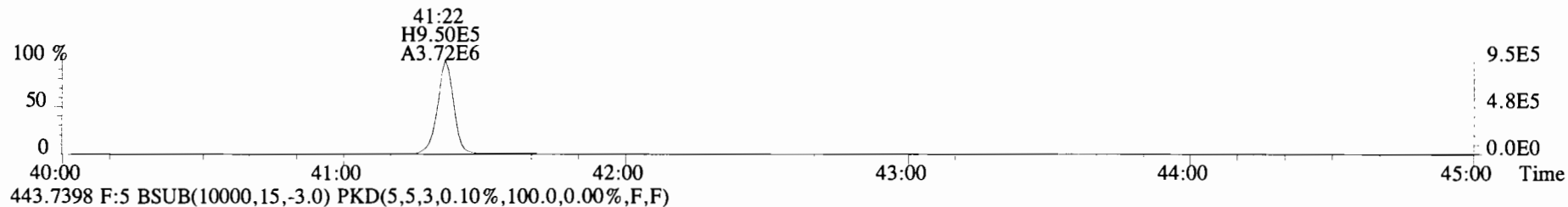
File:191120D2 #1-386 Acq:21-NOV-2019 02:11:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata Analytical Laboratory VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

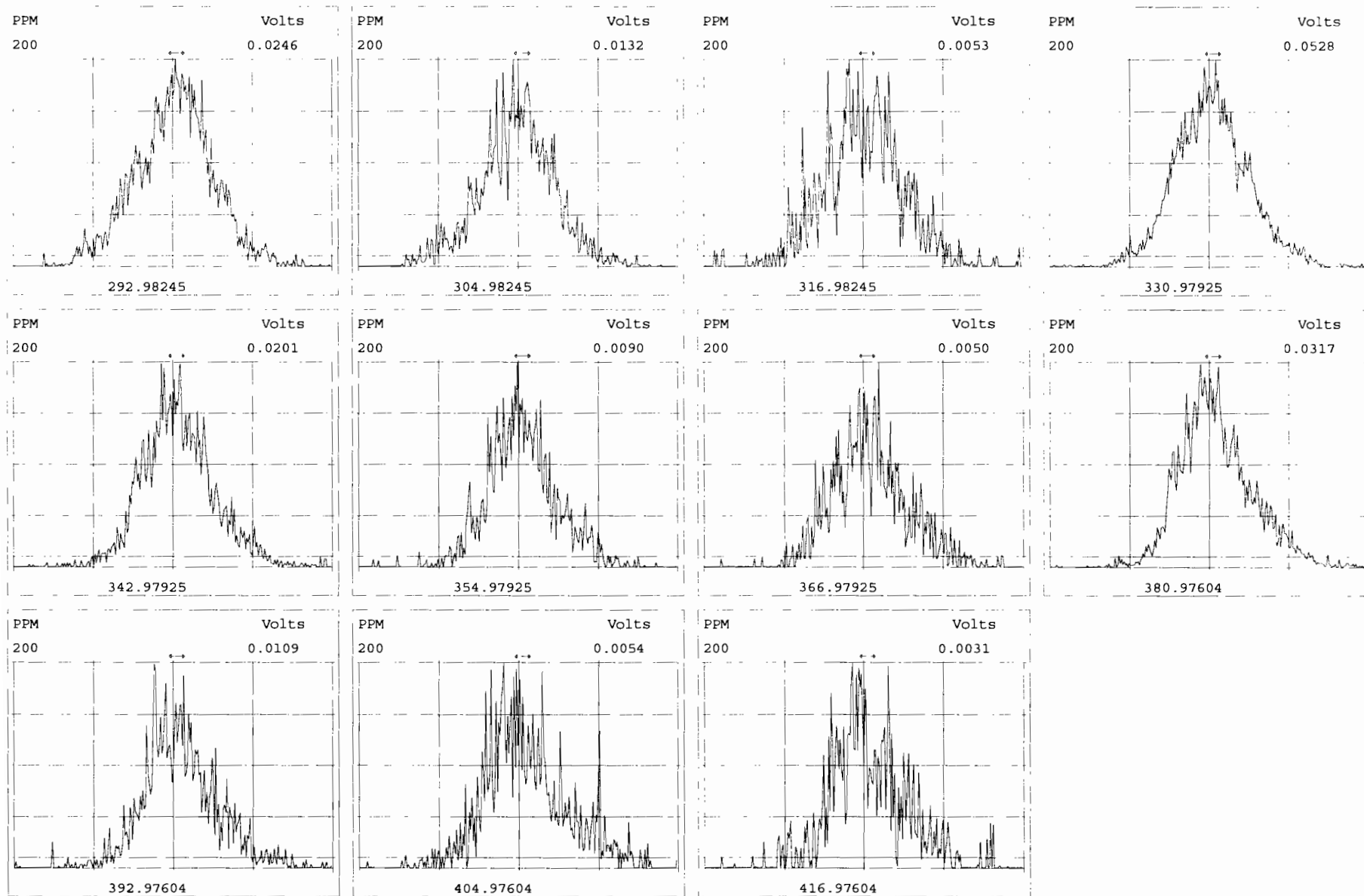


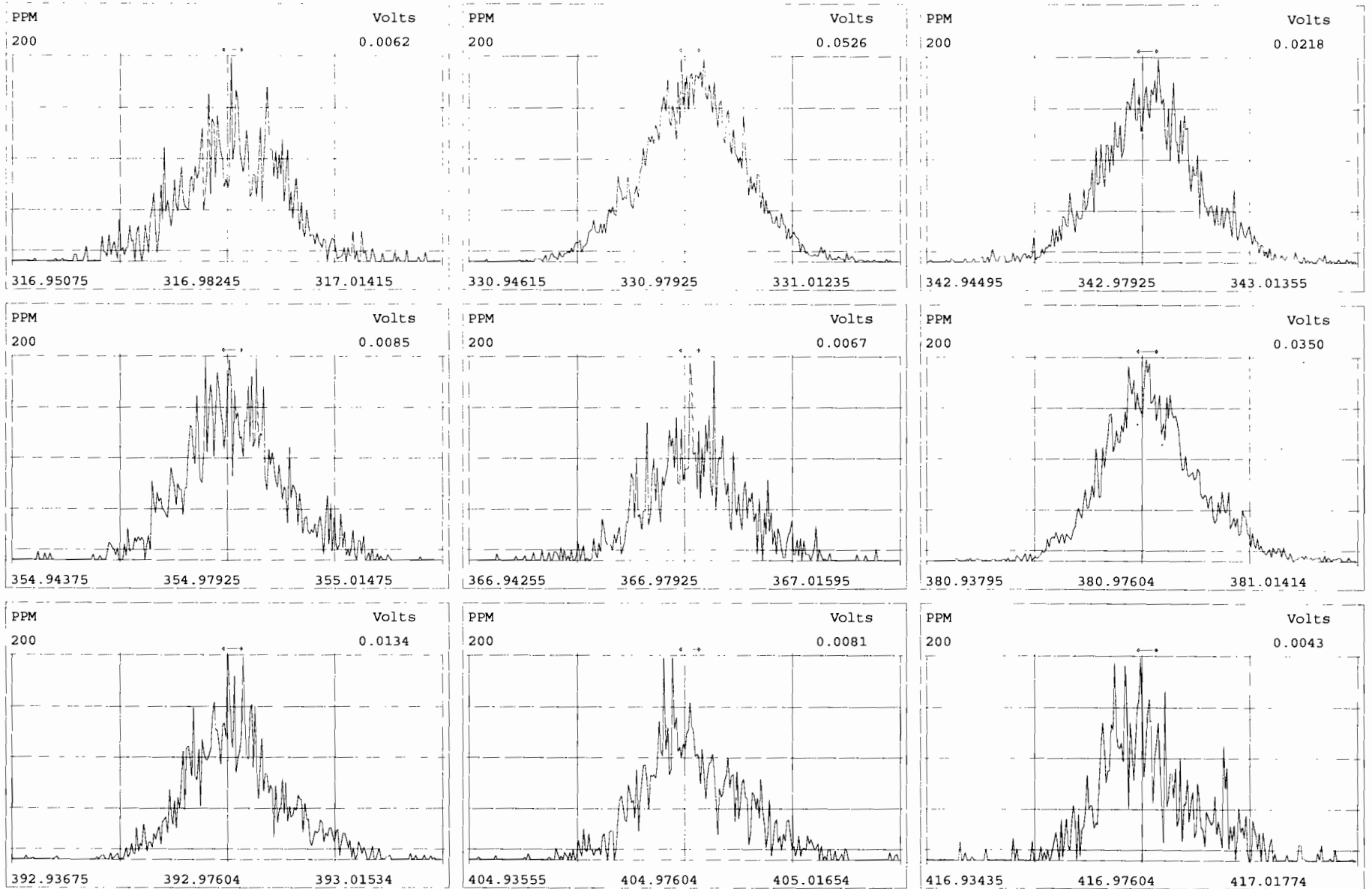
File:191120D2 #1-355 Acq:21-NOV-2019 02:11:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

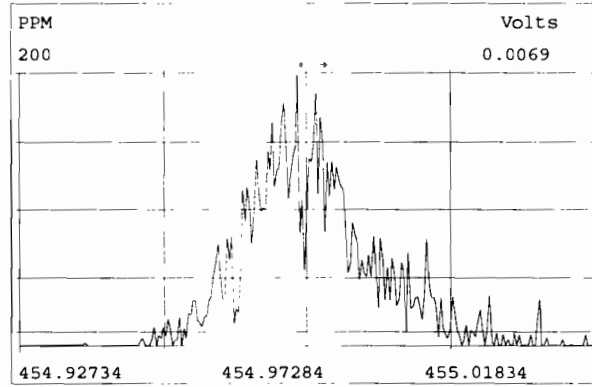
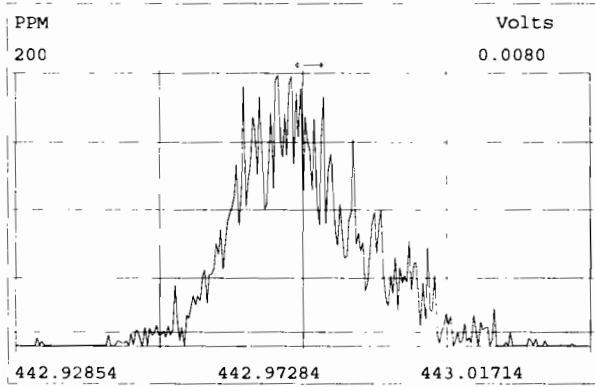
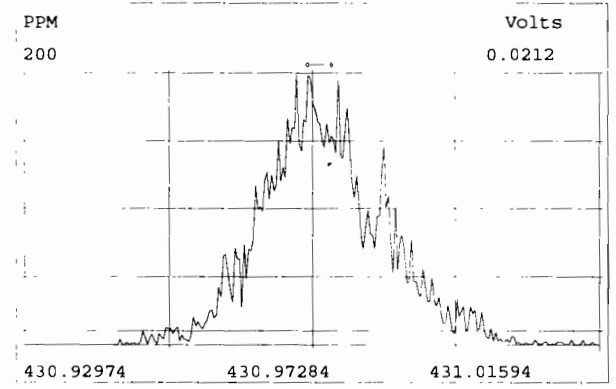
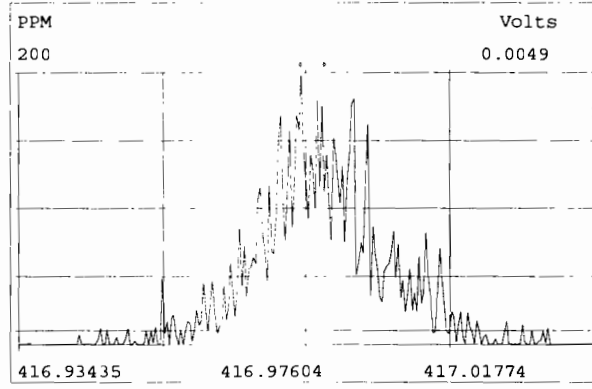
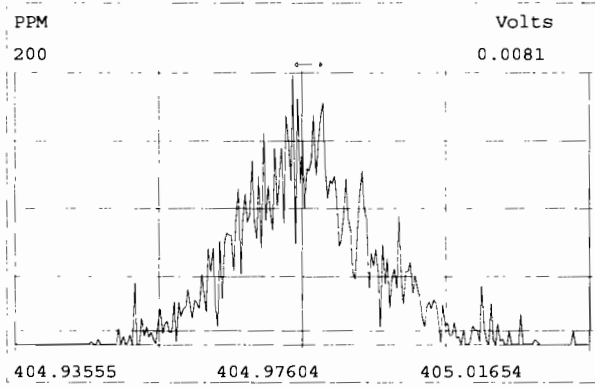
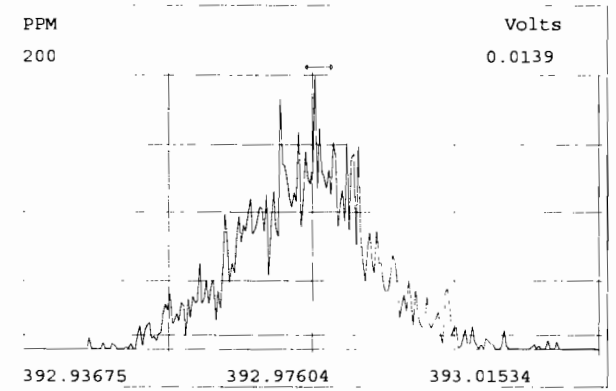
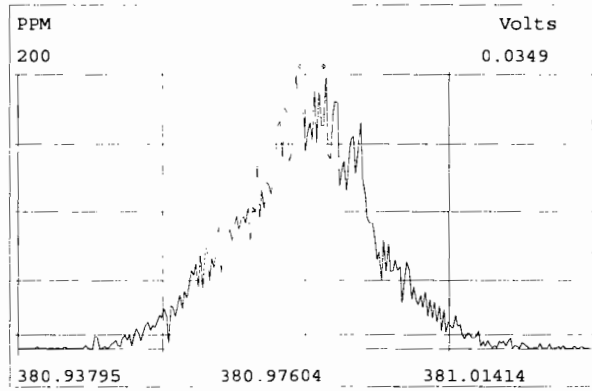
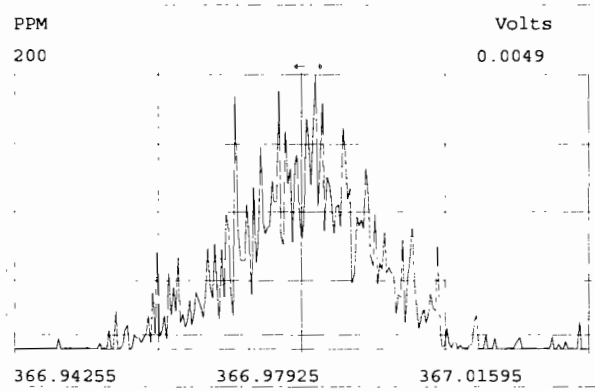


File:191120D2 #1-432 Acq:21-NOV-2019 02:11:41 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191120D2-1 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



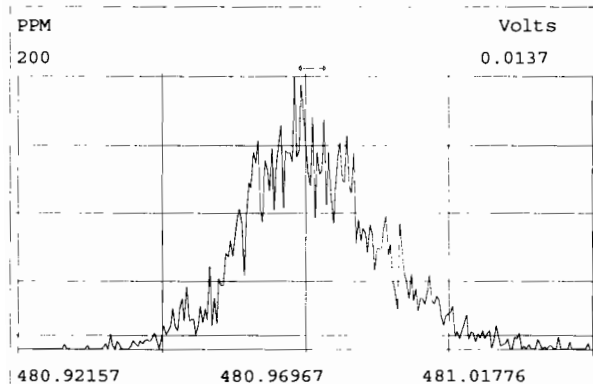
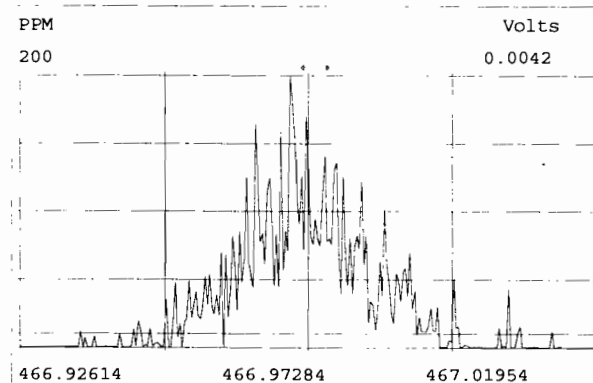
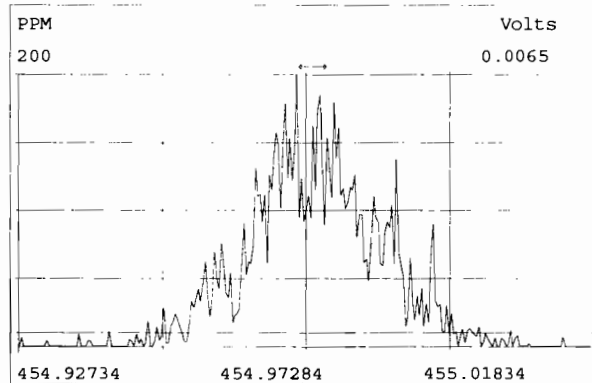
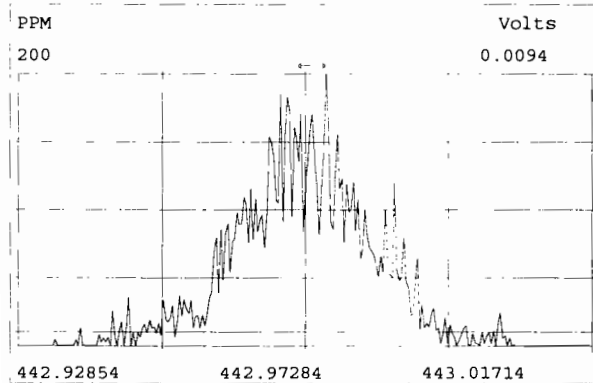
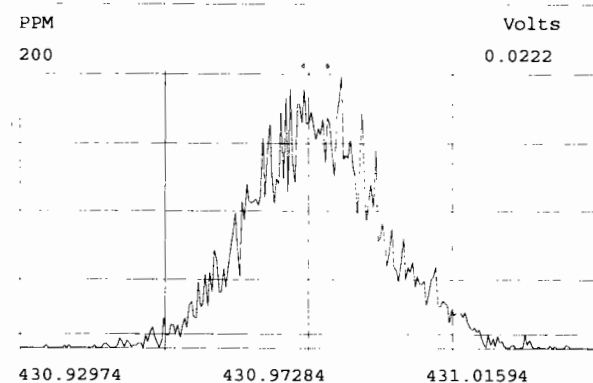
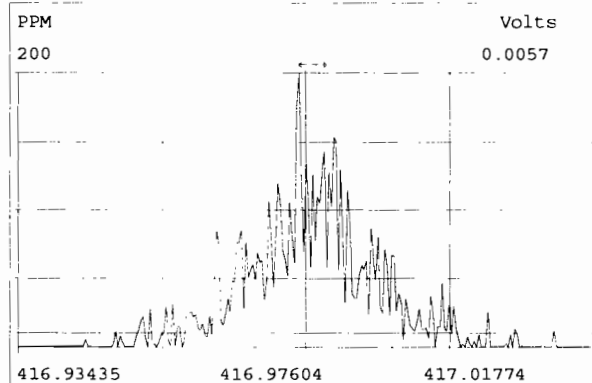
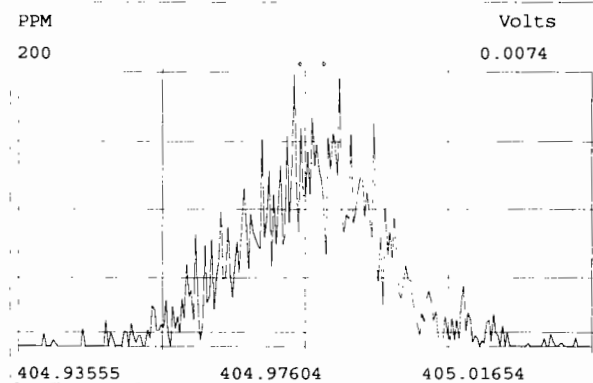


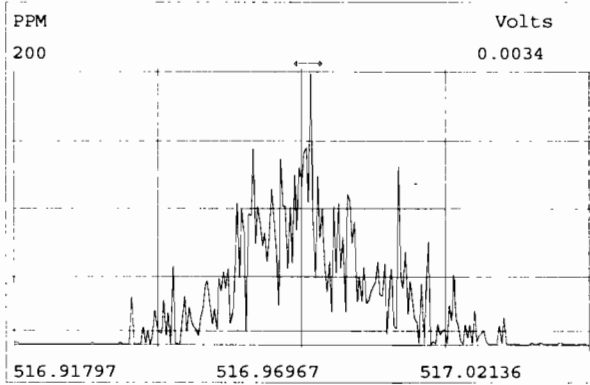
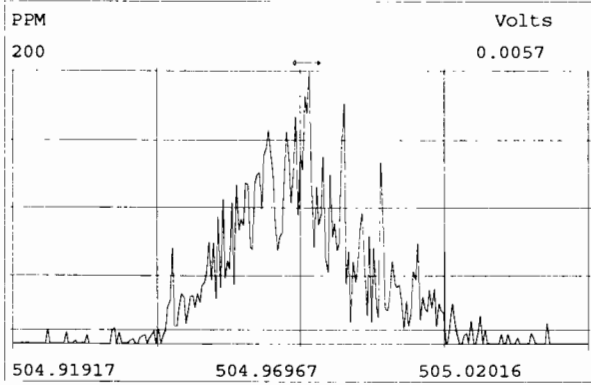
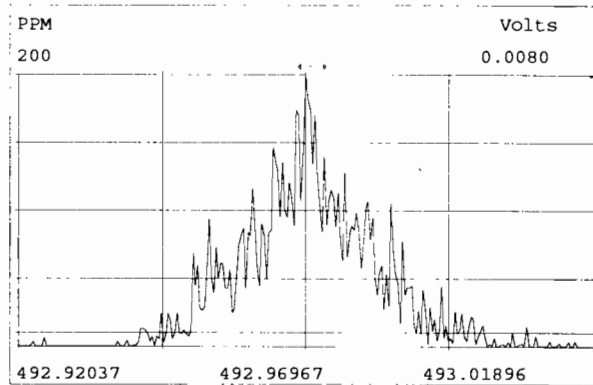
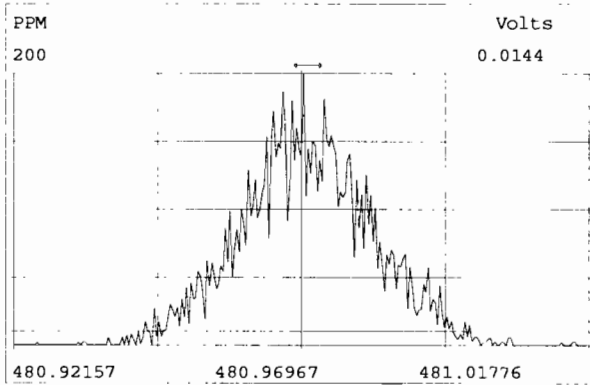
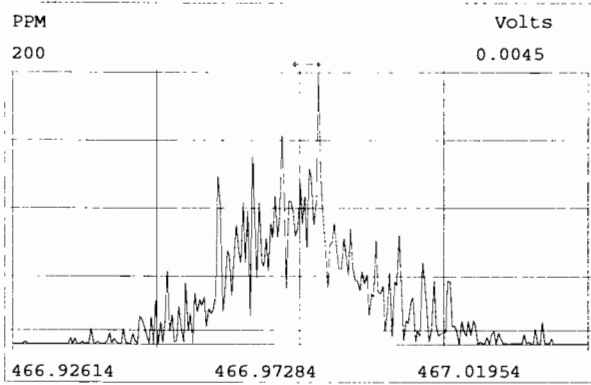
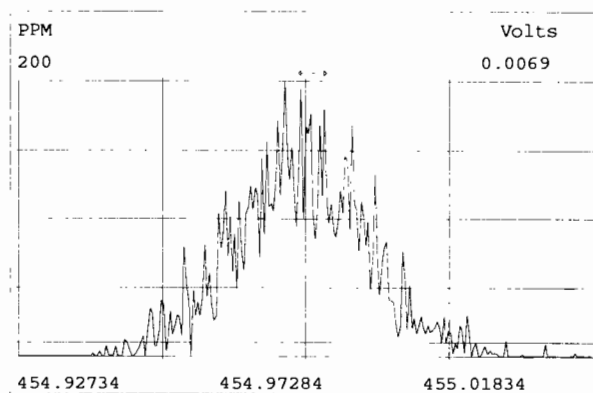
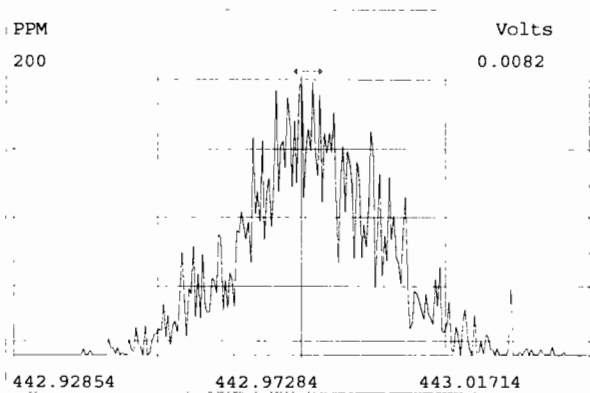
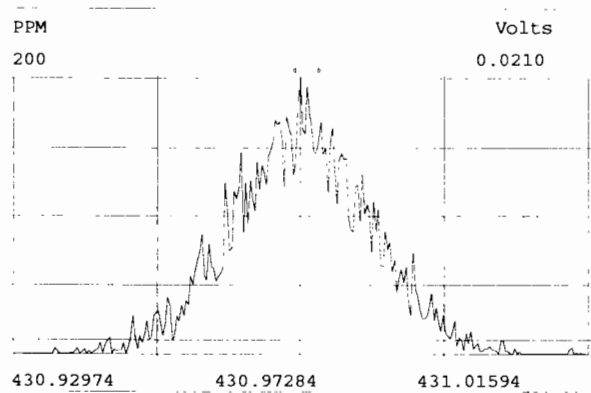




Peak Locate Examination:21-NOV-2019:11:09 File:RES_CHECK

Experiment:OCDD_DB5 Function:4 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

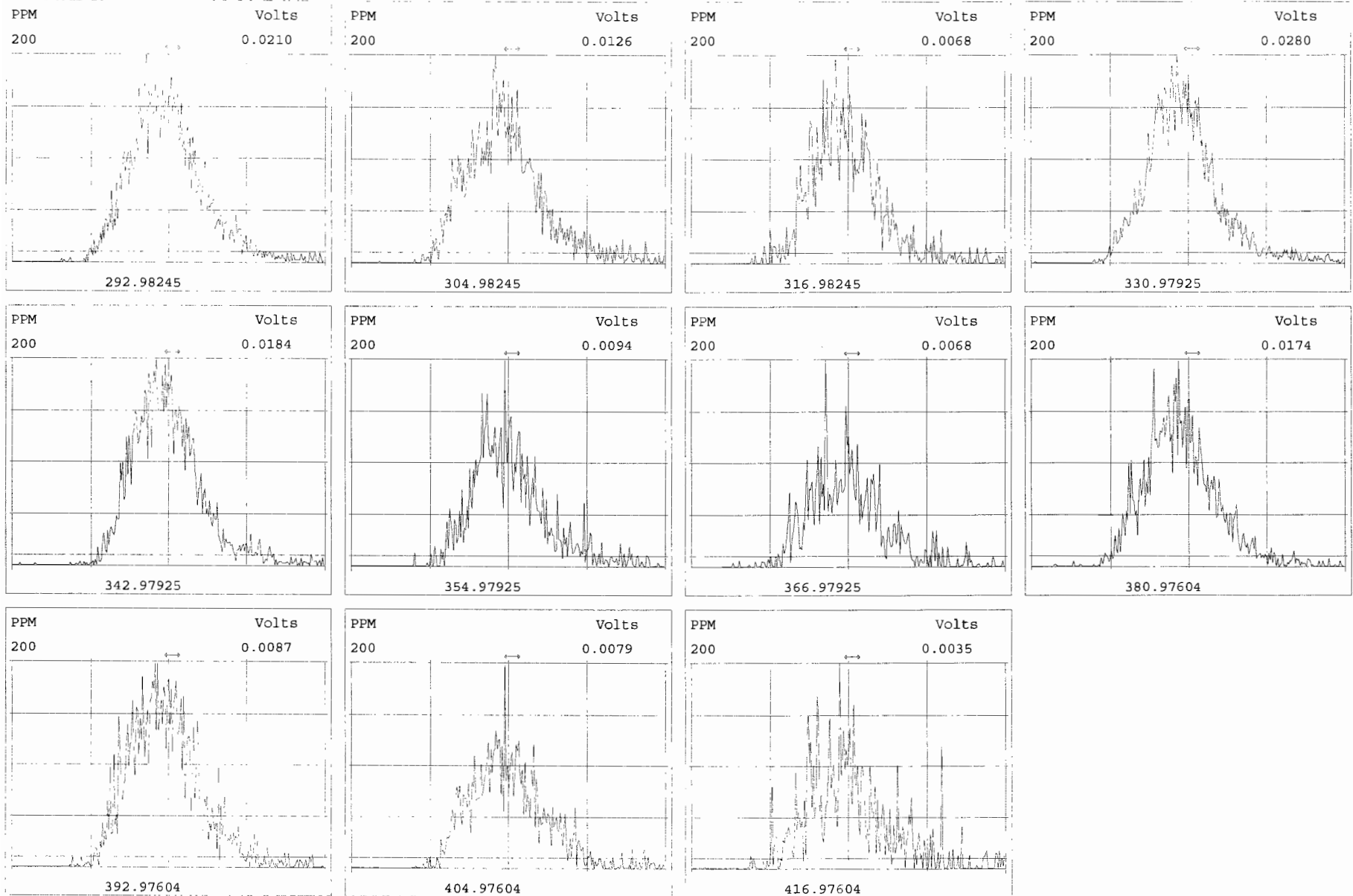
% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

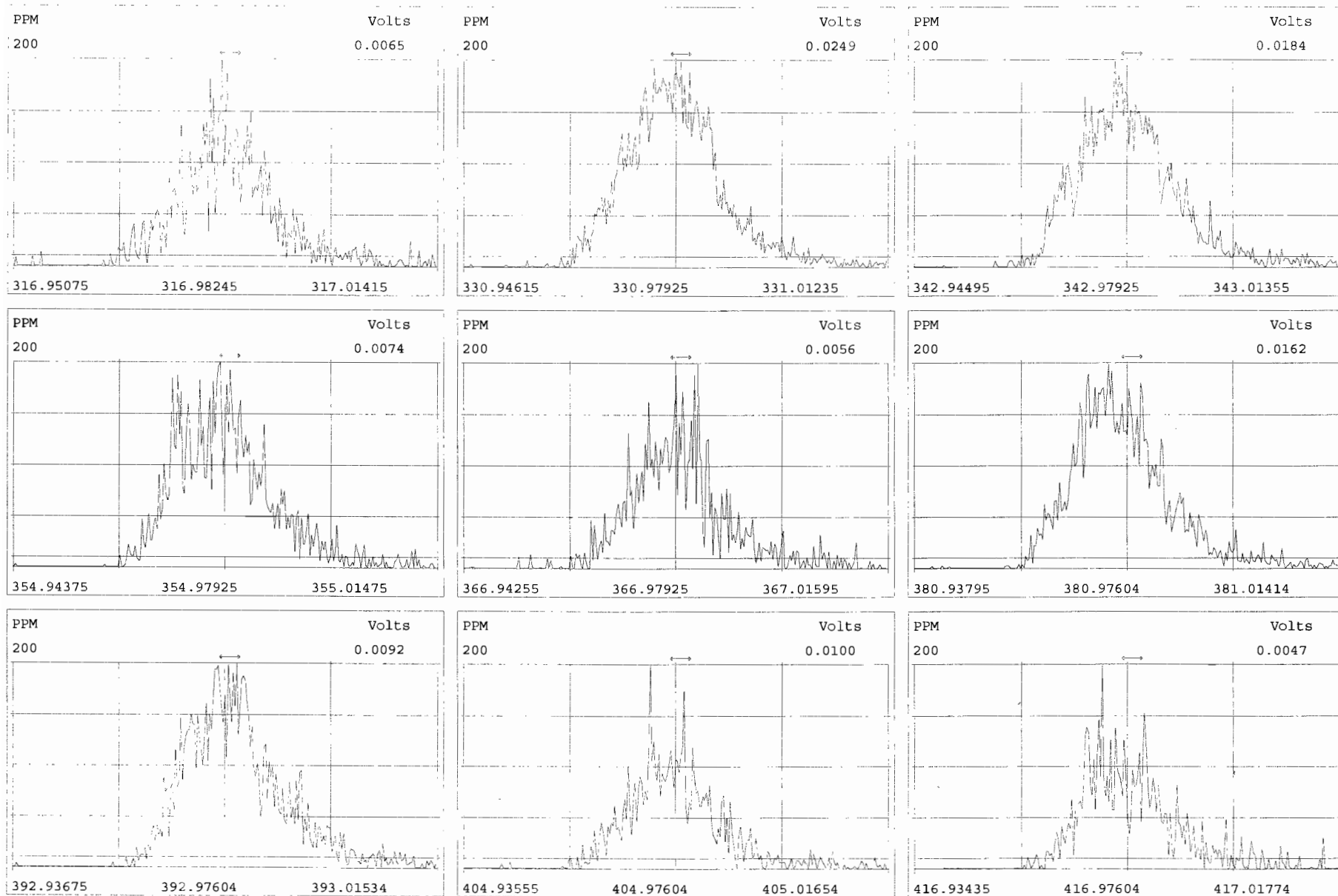
Analyst: DB

Date: 10/10/19



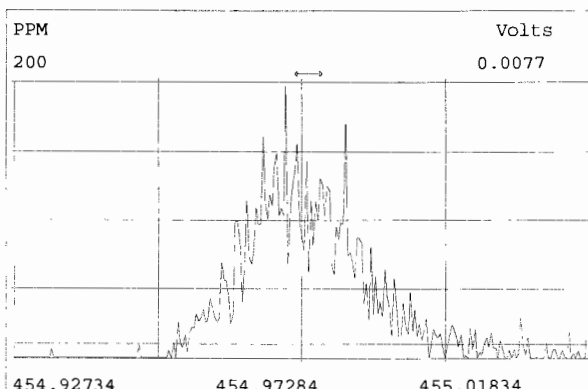
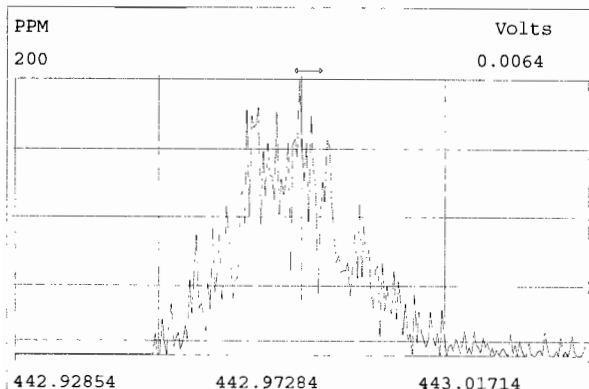
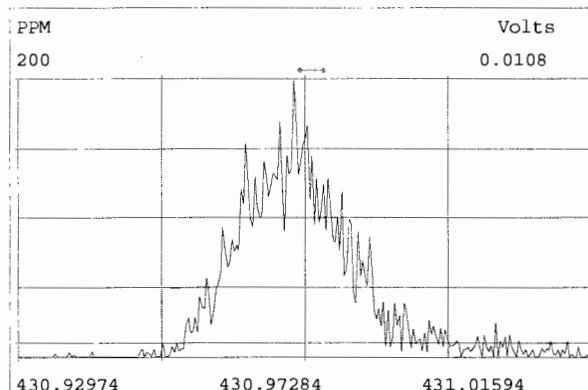
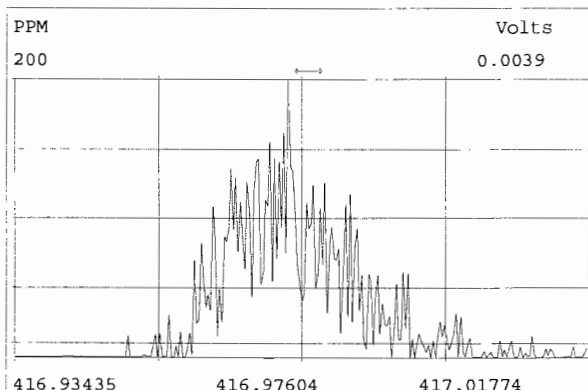
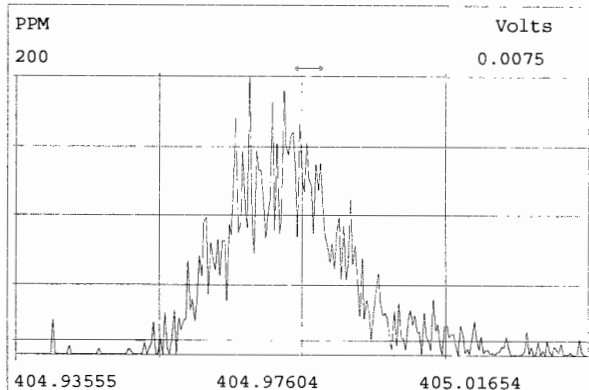
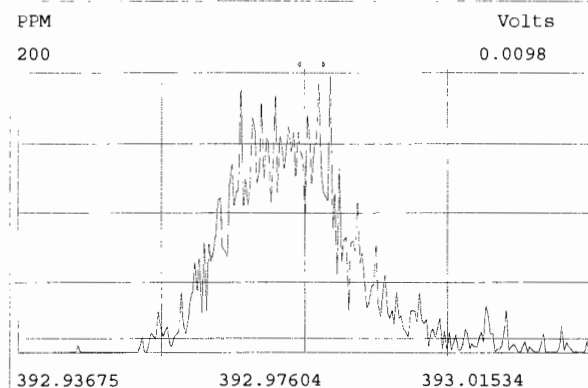
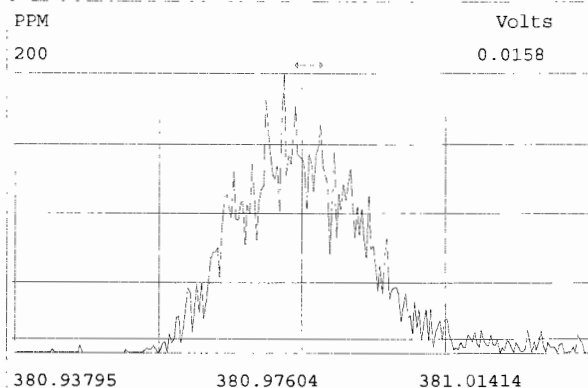
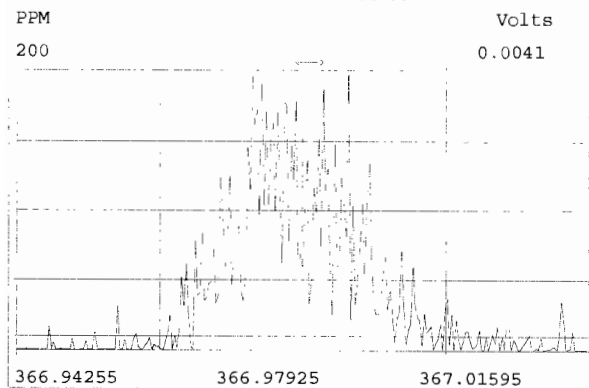
Peak Locate Examination: 9-OCT-2019:16:10 File:191009D1

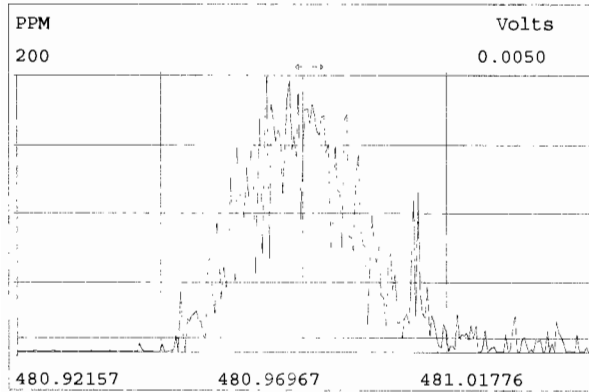
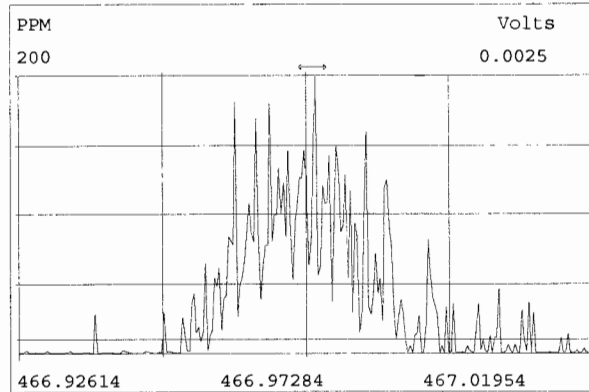
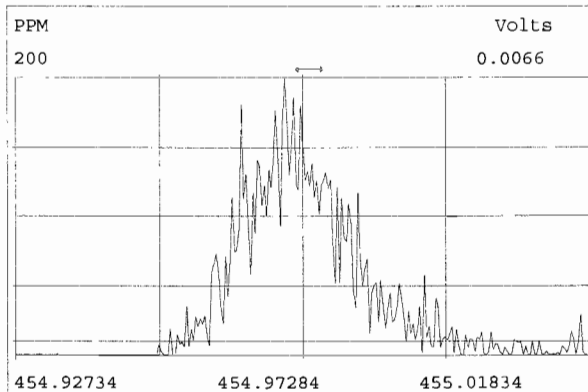
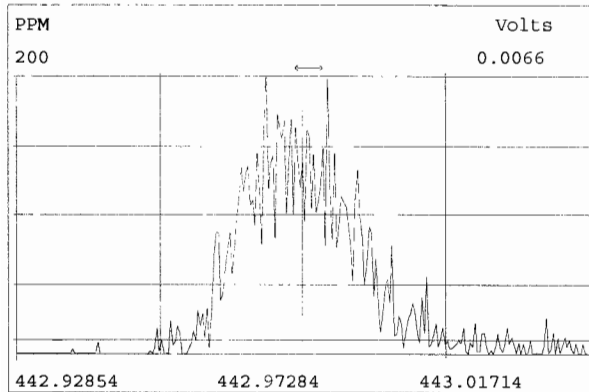
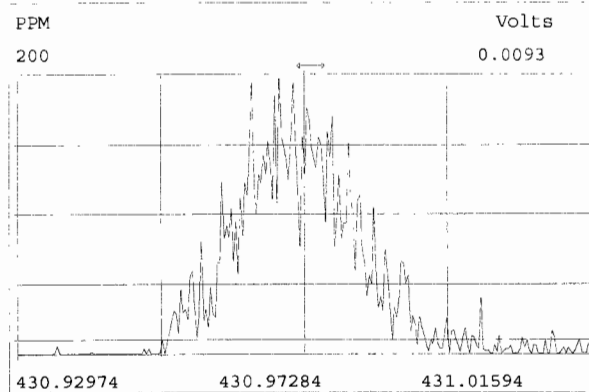
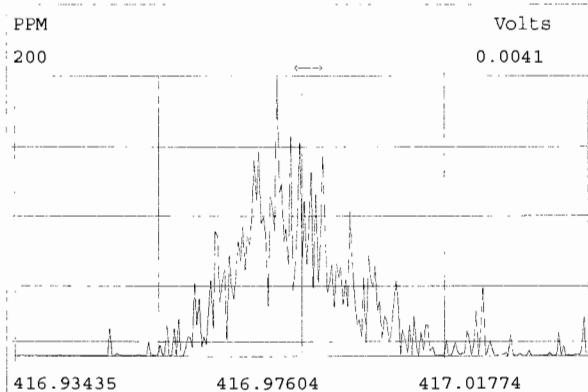
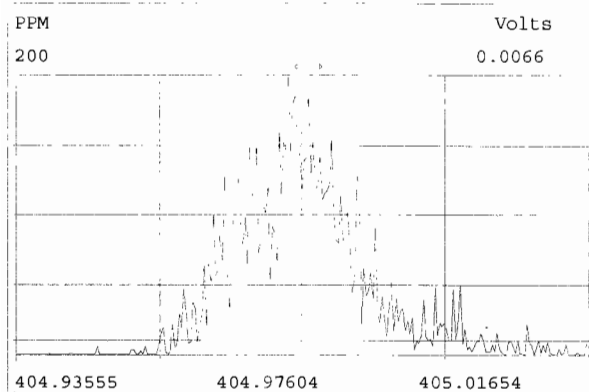
Experiment:OCDD_DB5 Function:2 Reference:PFK

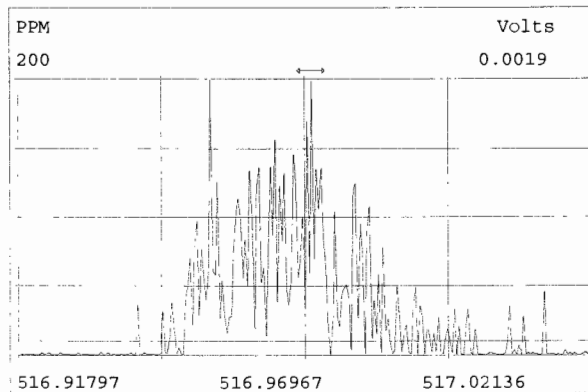
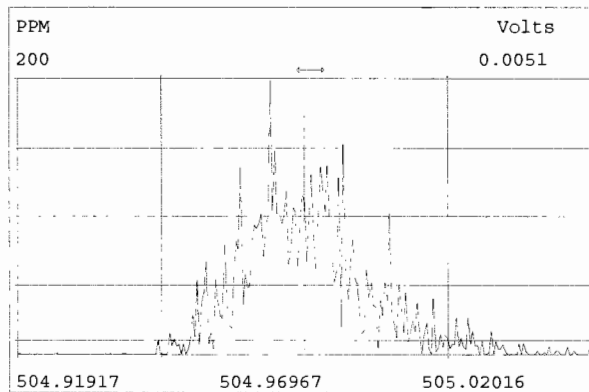
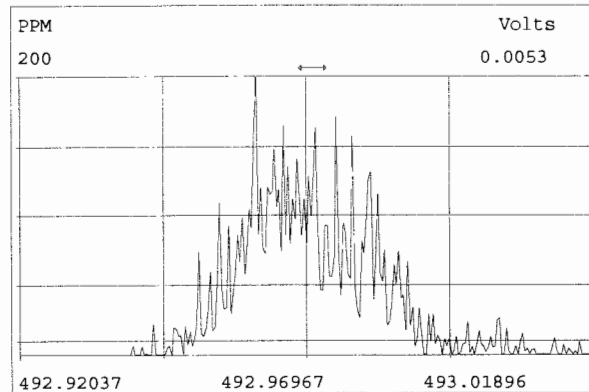
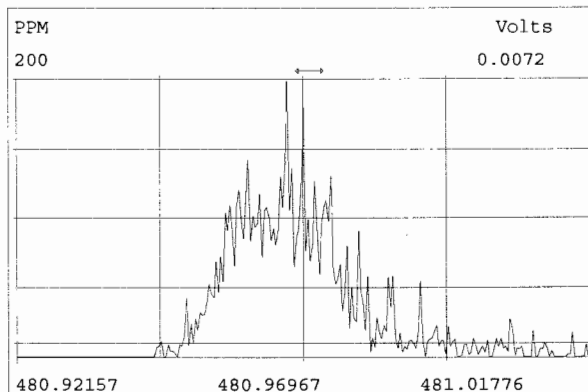
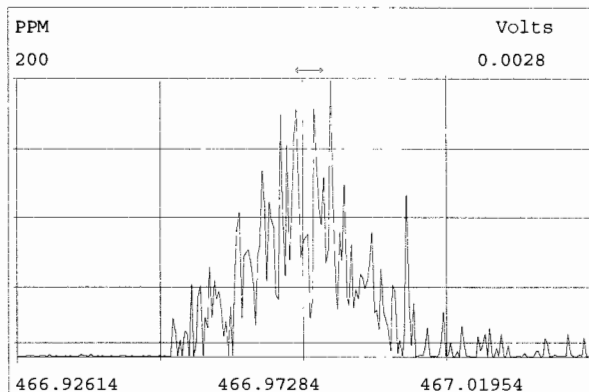
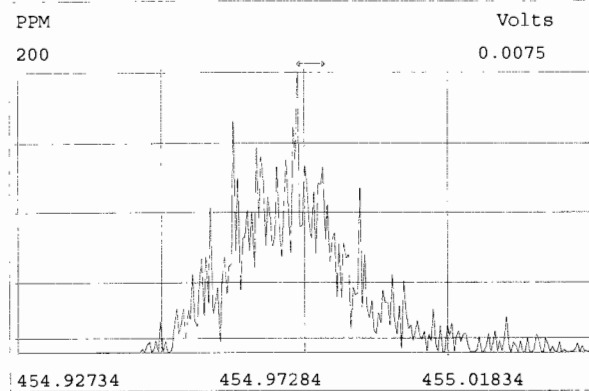
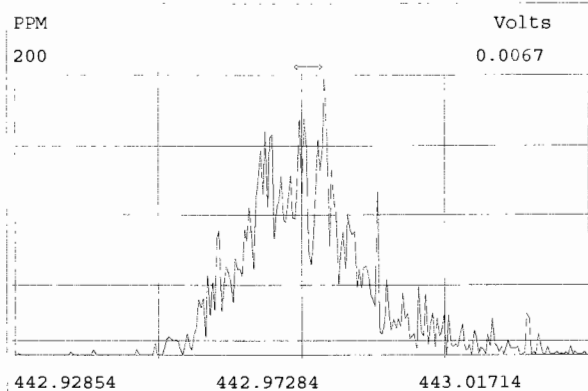
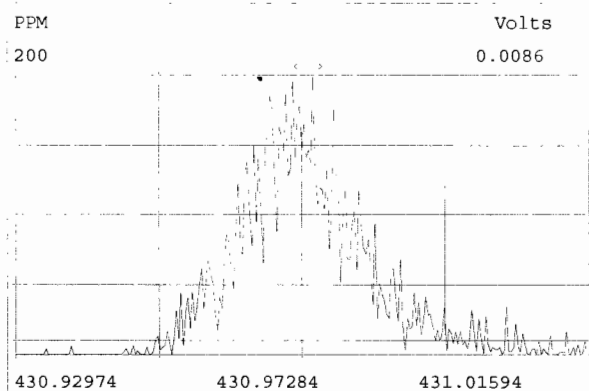


Peak Locate Examination: 9-OCT-2019:16:11 File:191009D1

Experiment:OCDD_DB5 Function:3 Reference:PFK



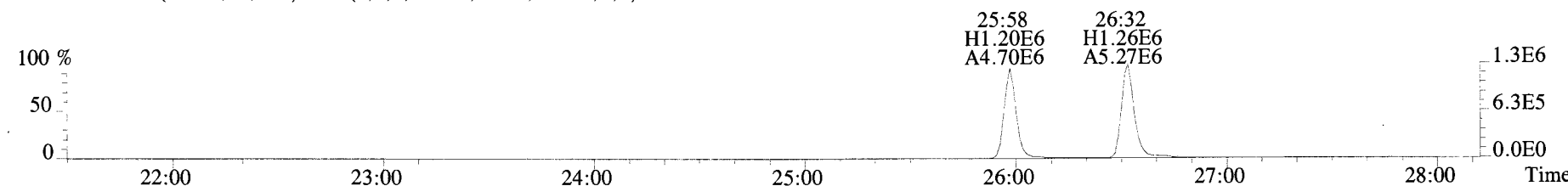
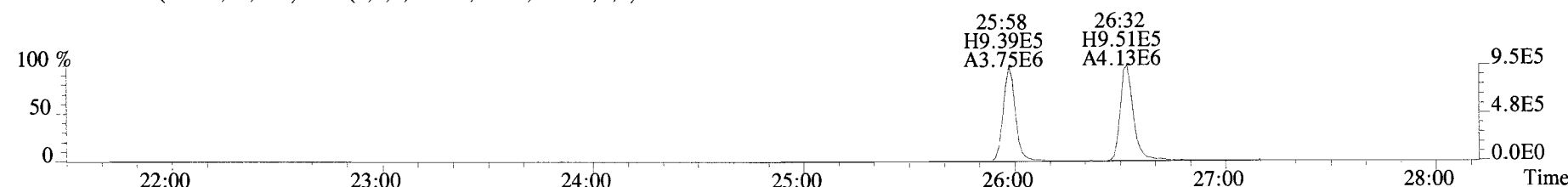
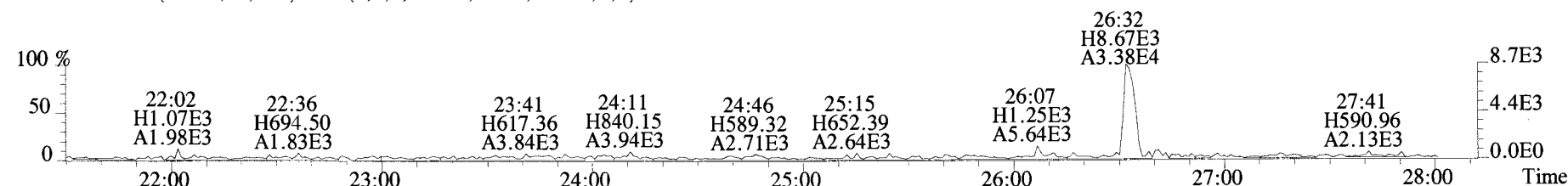
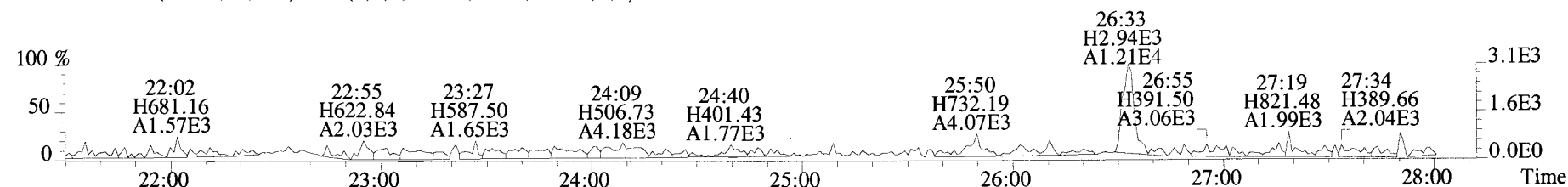
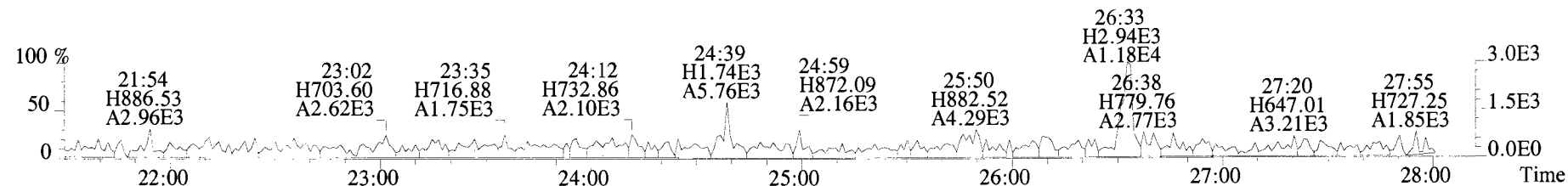




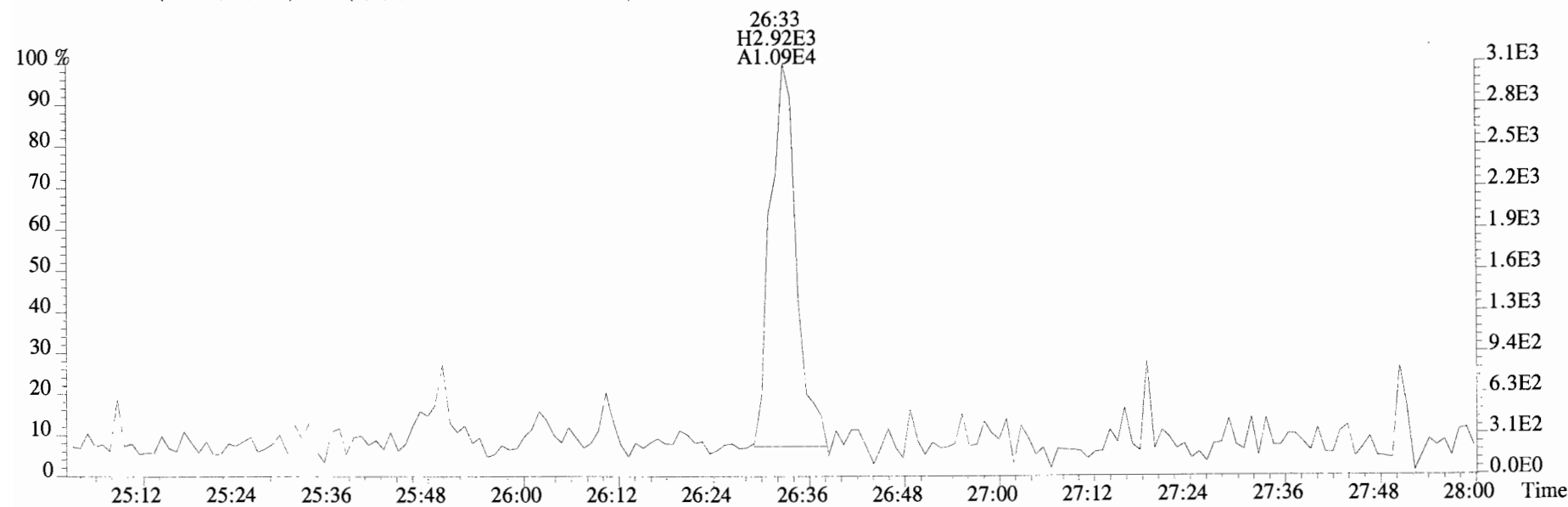
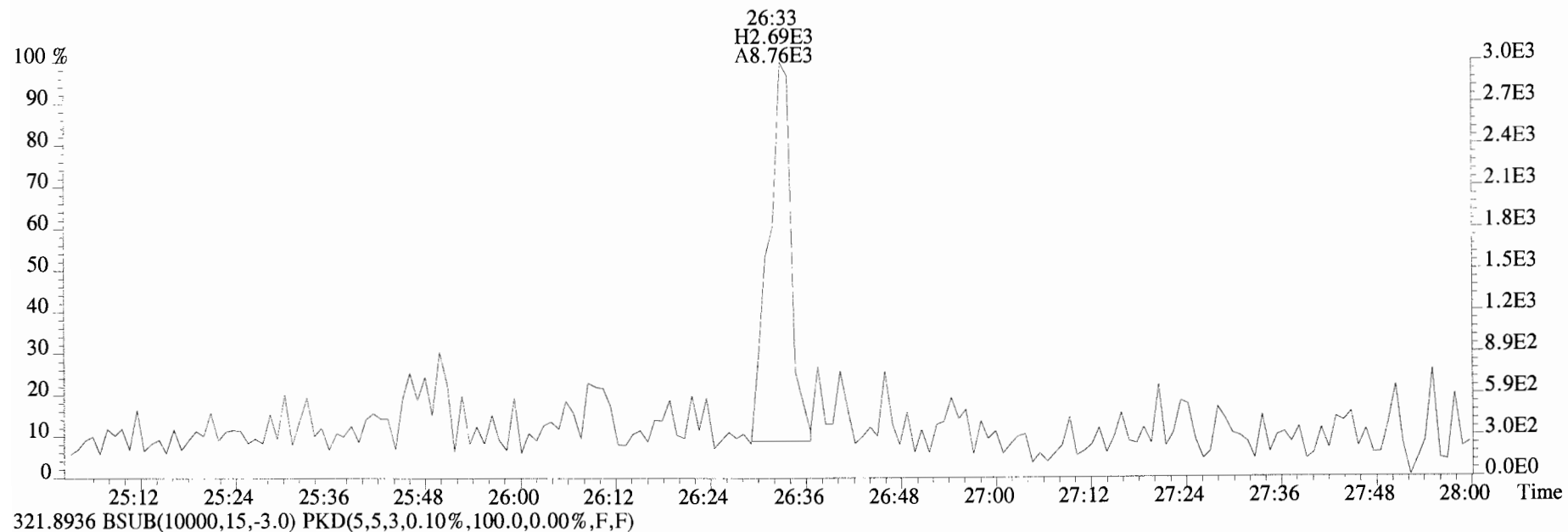
Vista Analytical Laboratory - Injection Log Run file: 191009D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

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

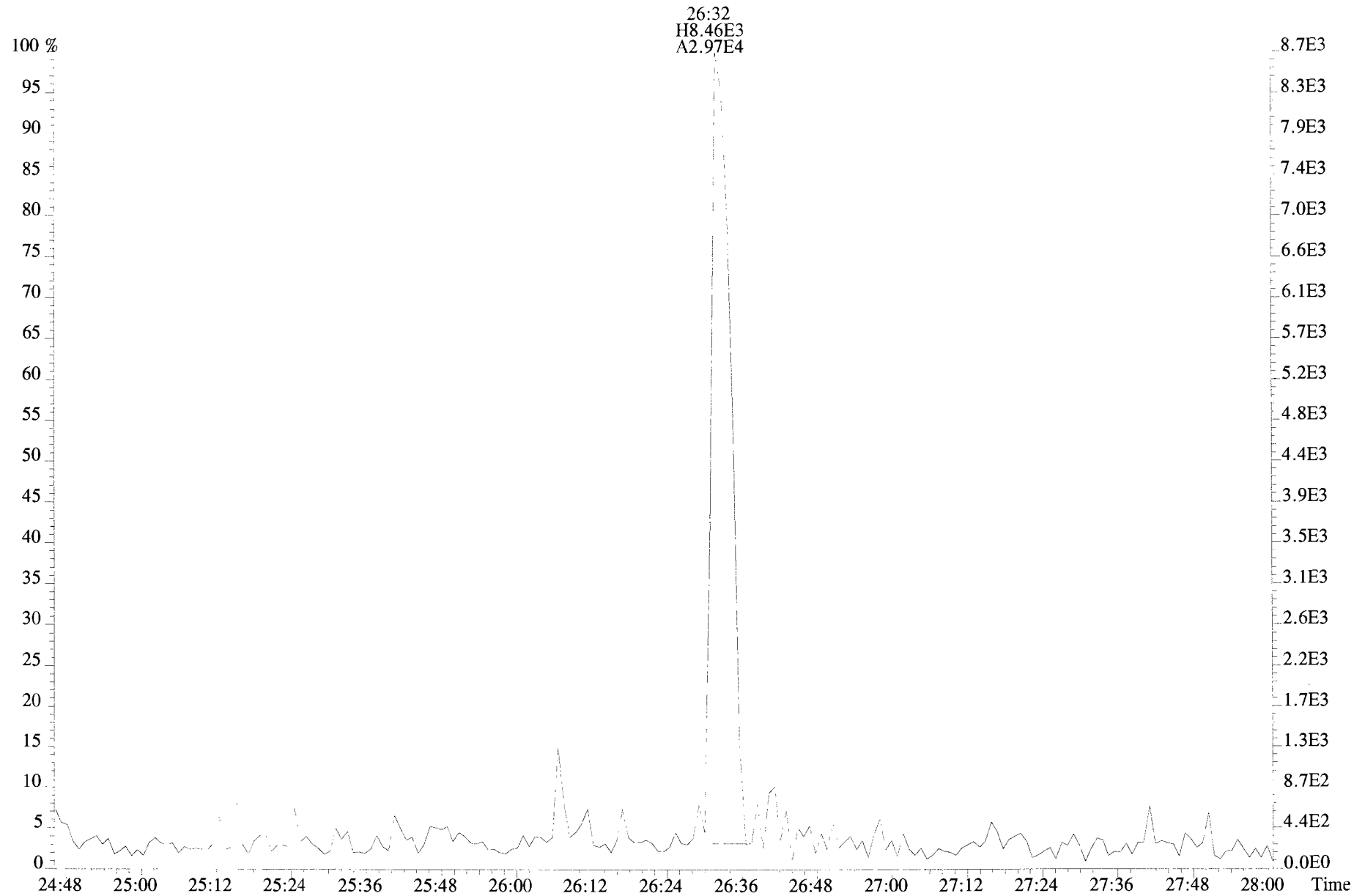
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



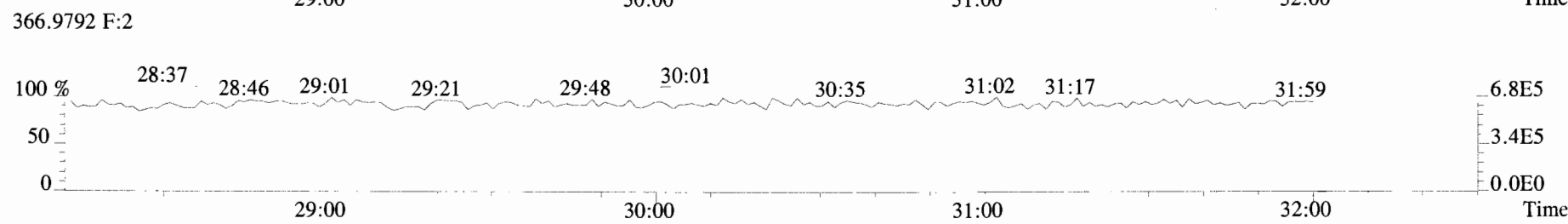
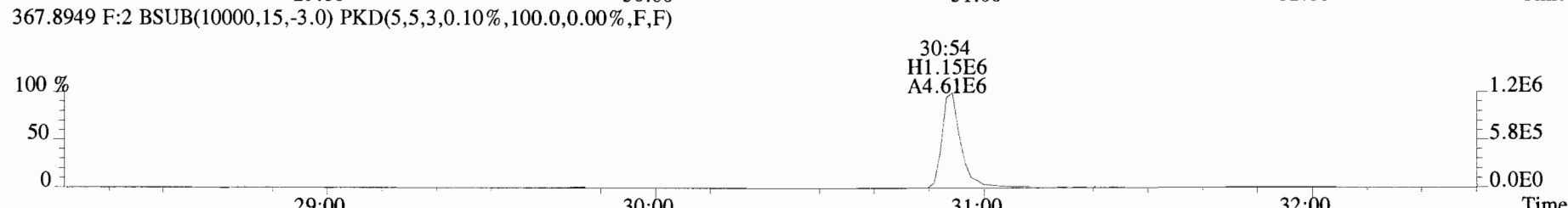
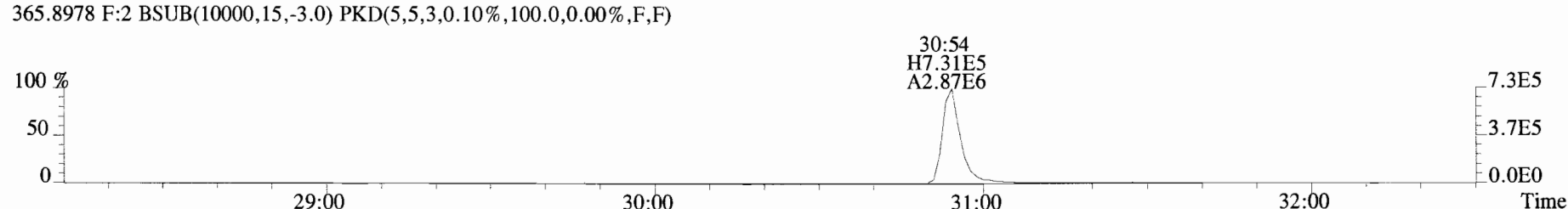
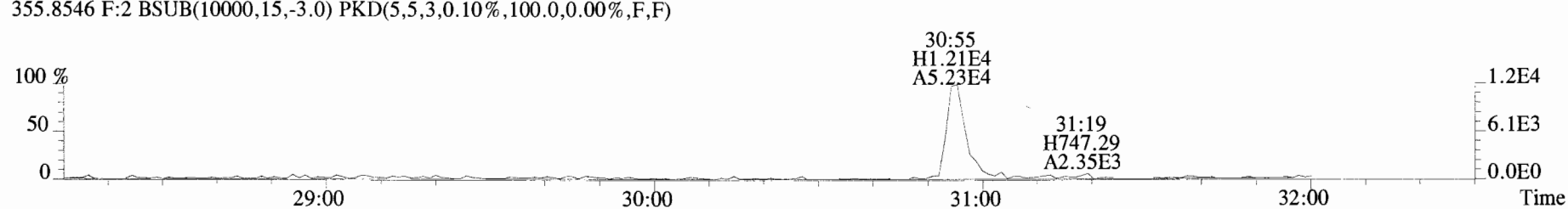
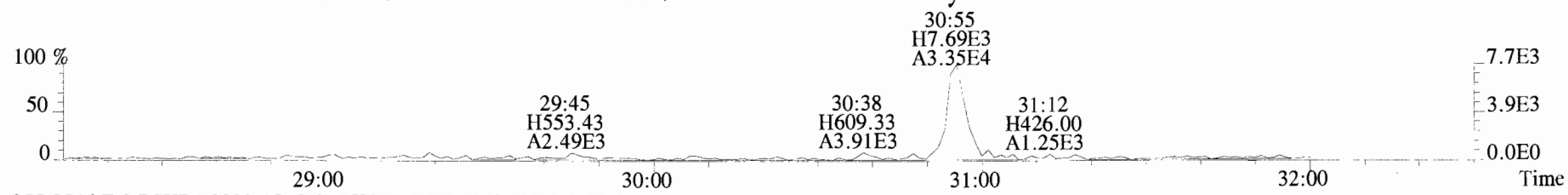
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



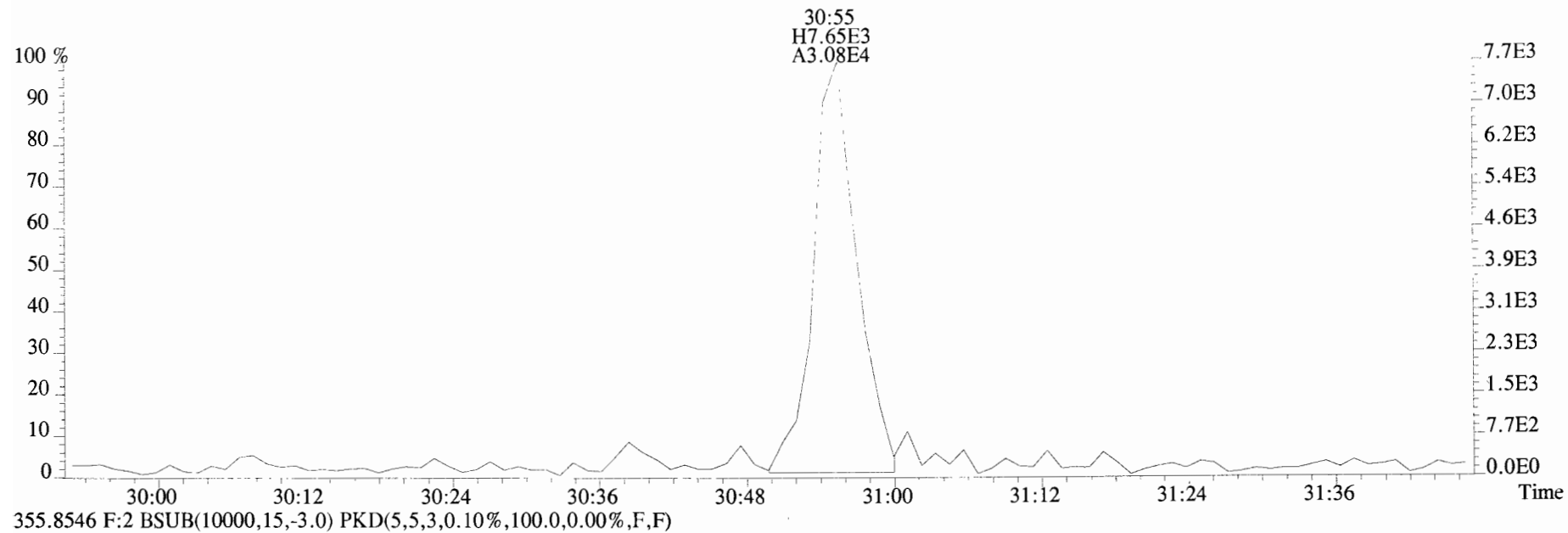
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
327.8847 BSUB(10000,15,-3.0)



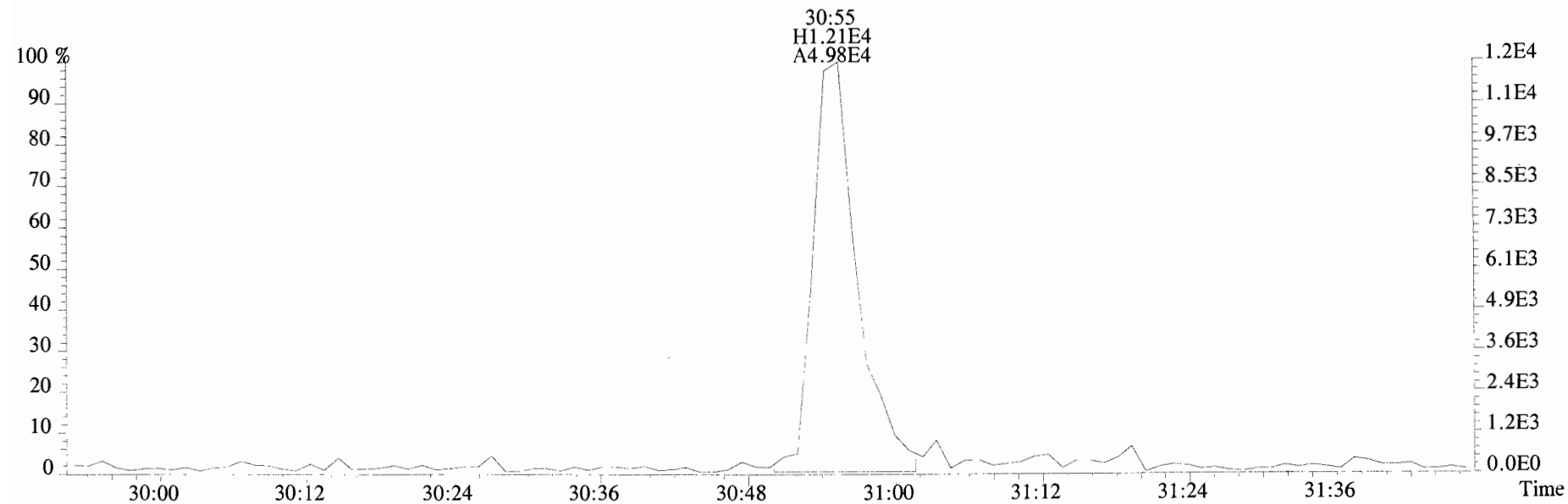
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
 353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



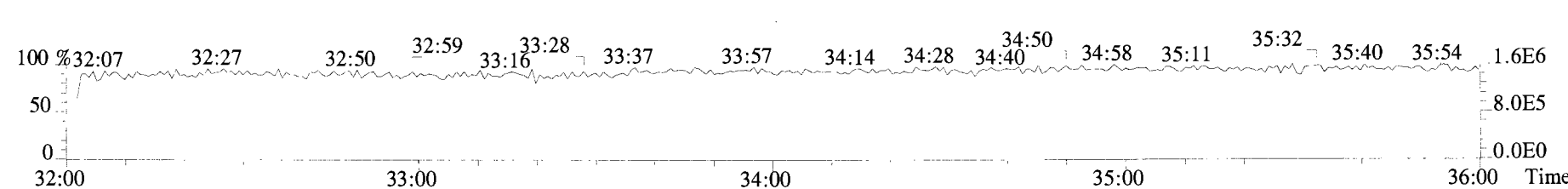
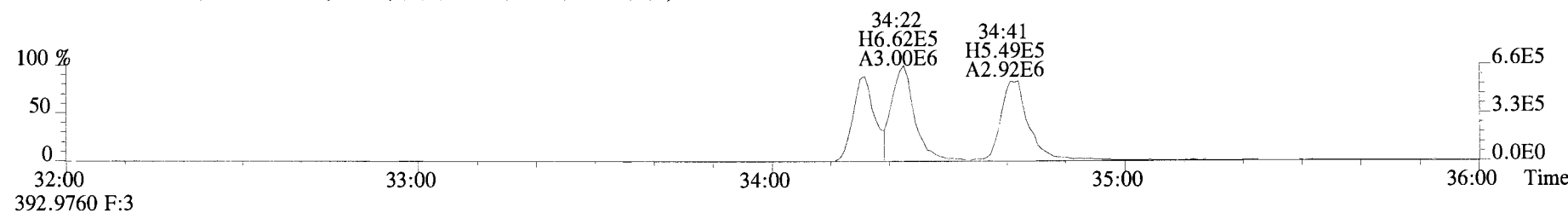
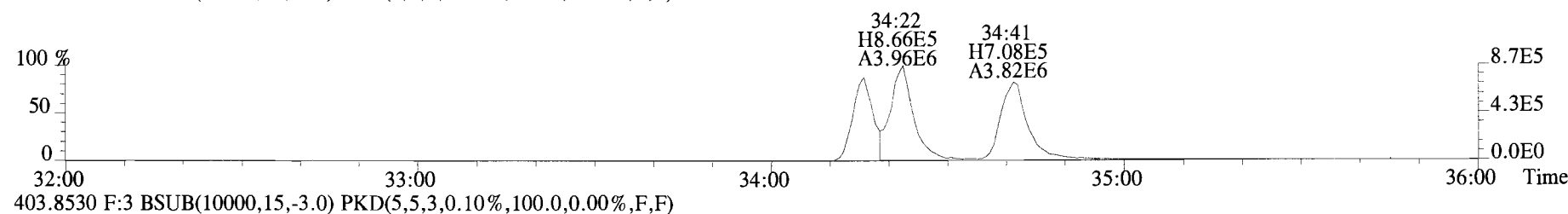
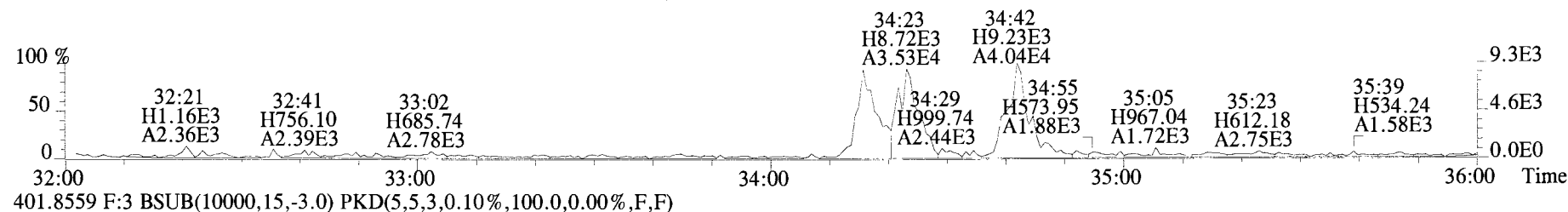
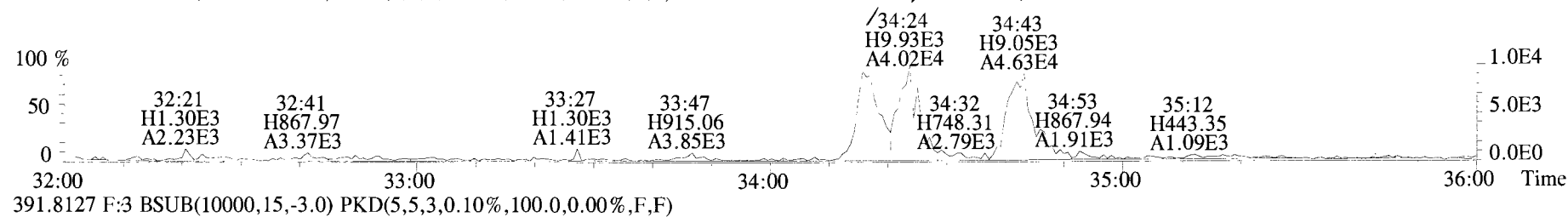
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



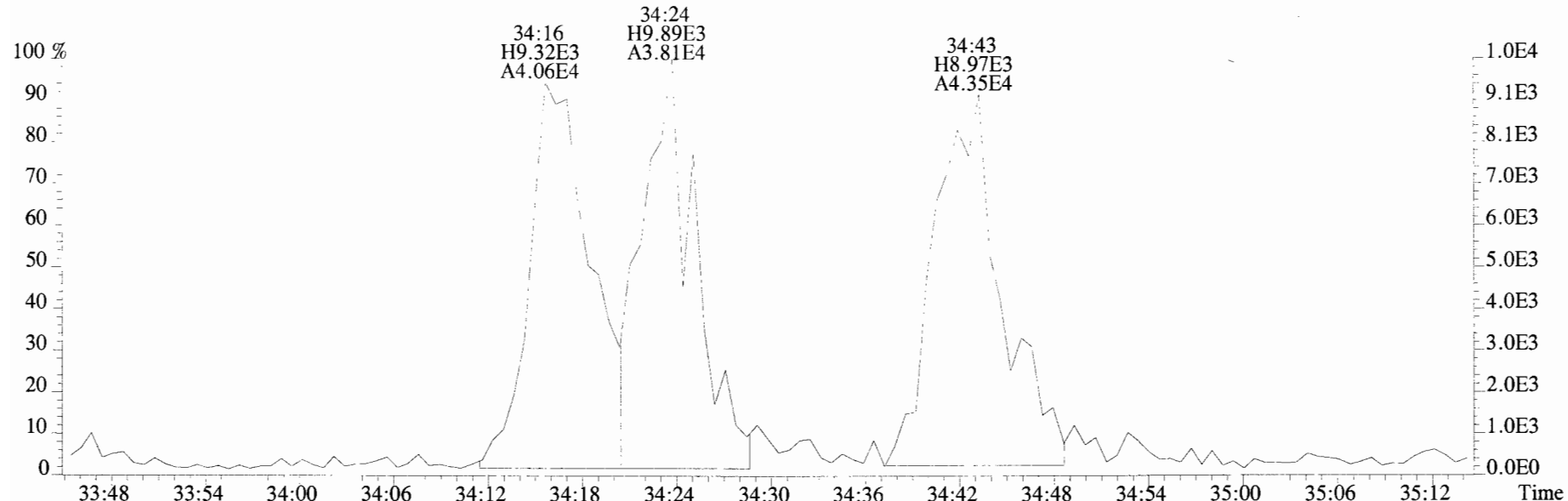
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



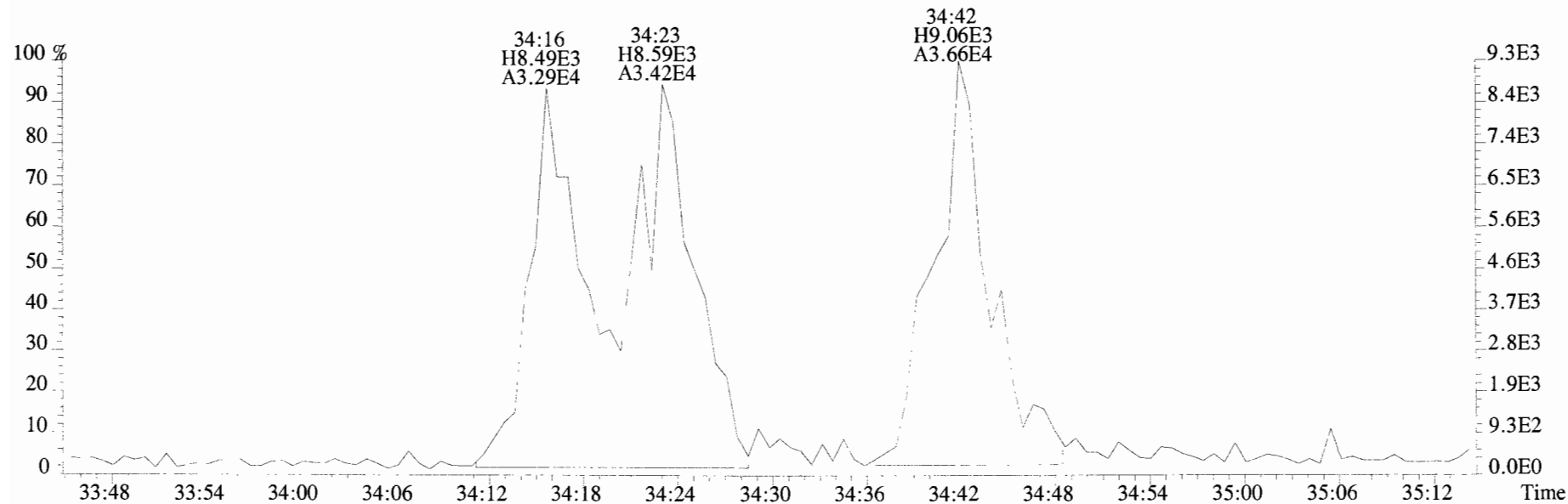
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
 389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



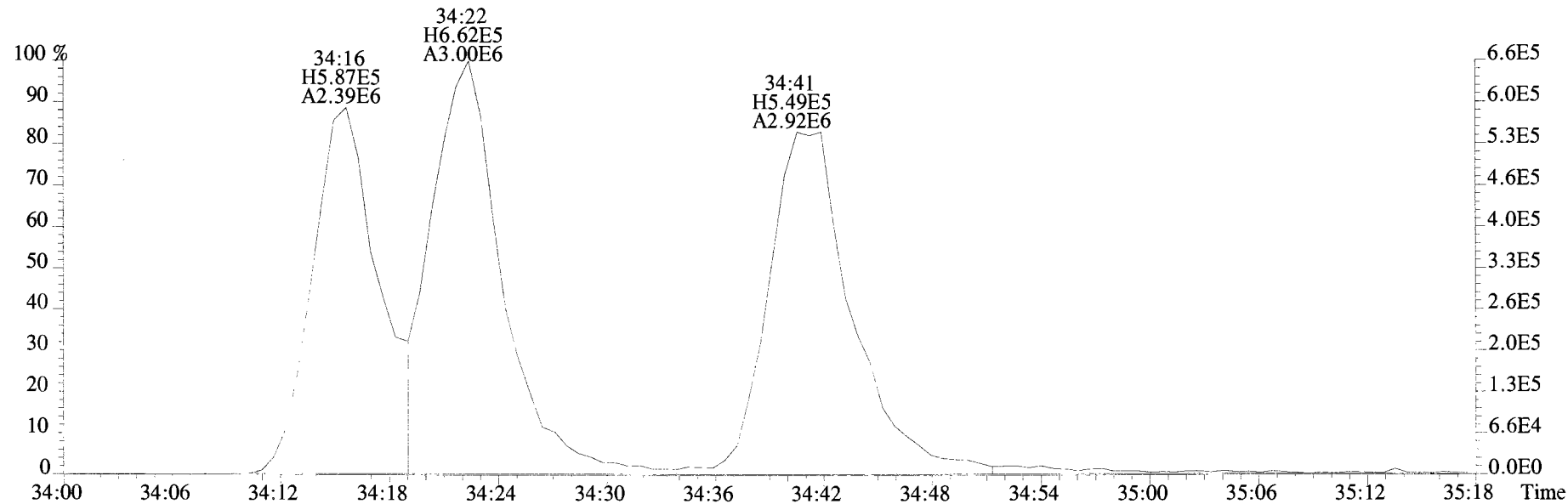
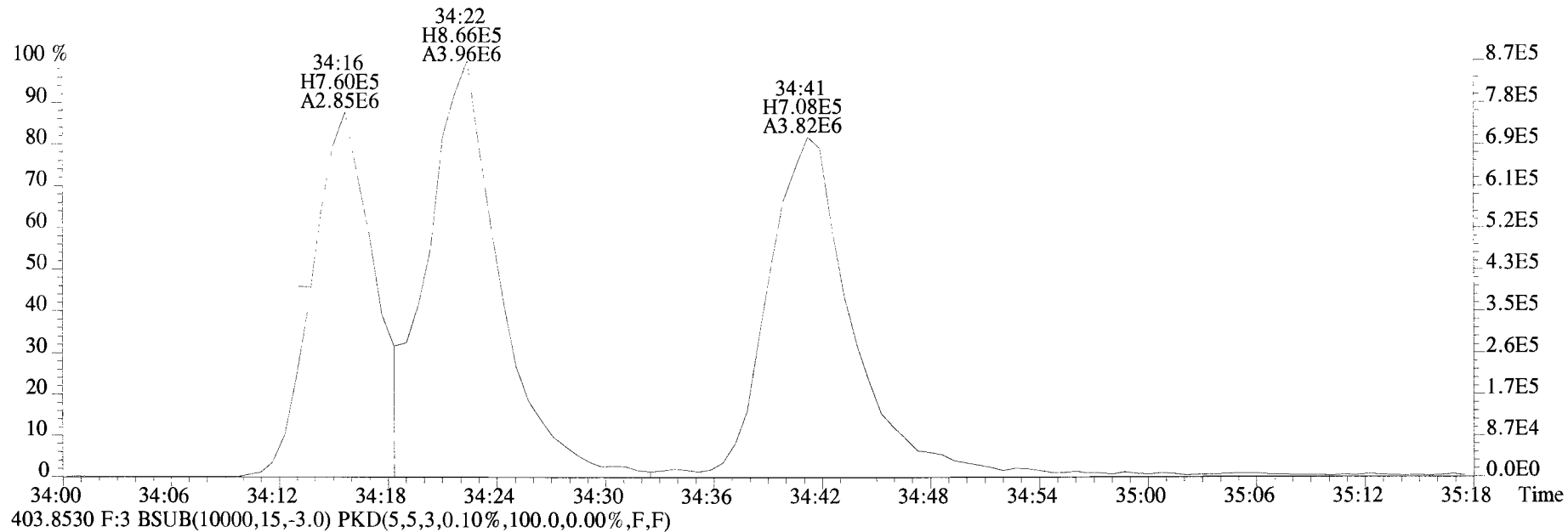
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



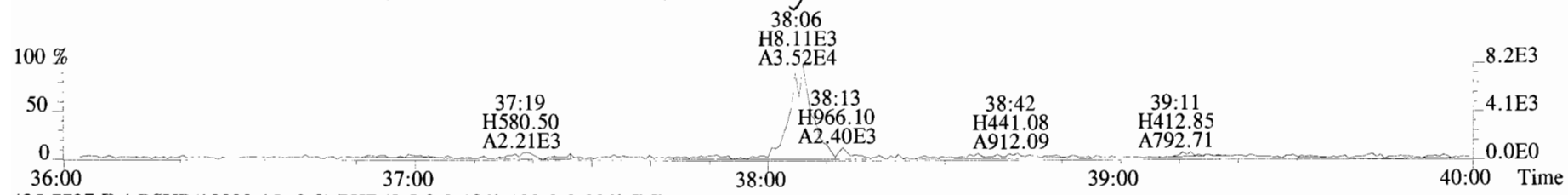
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



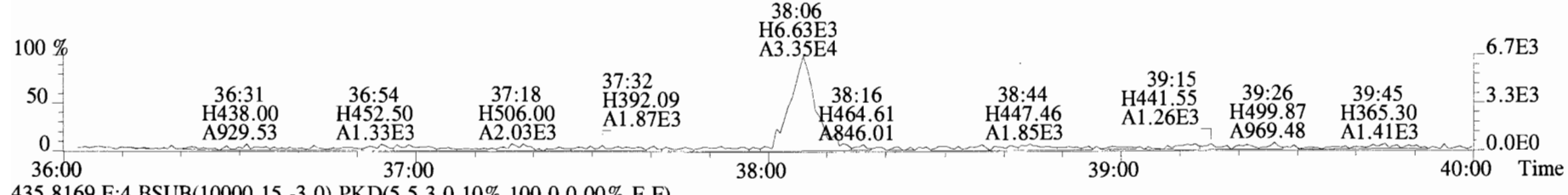
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



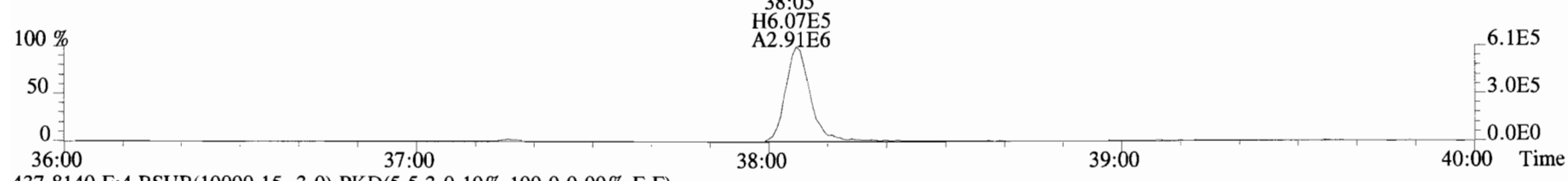
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
 423.7767 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



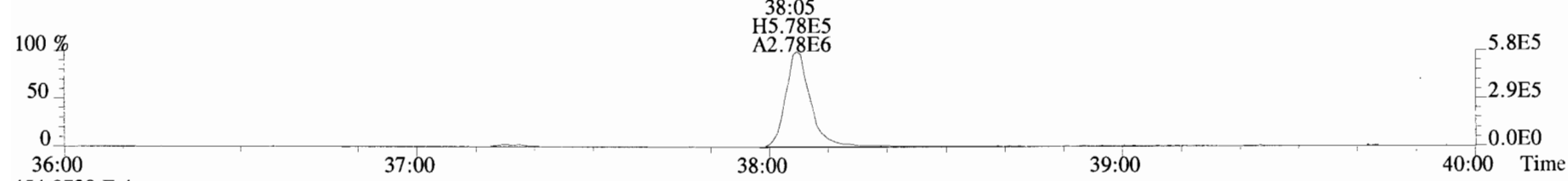
425.7737 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



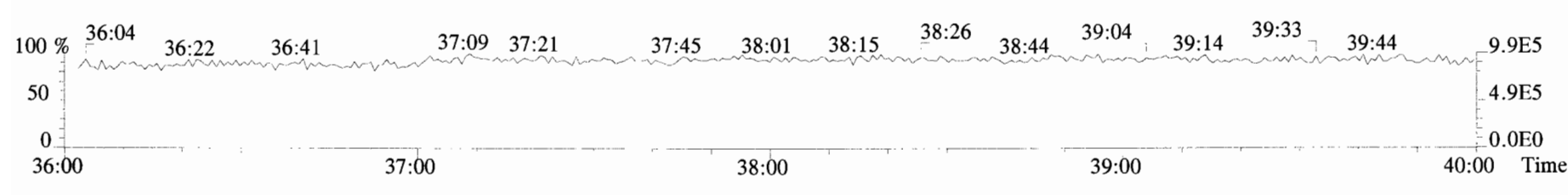
435.8169 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



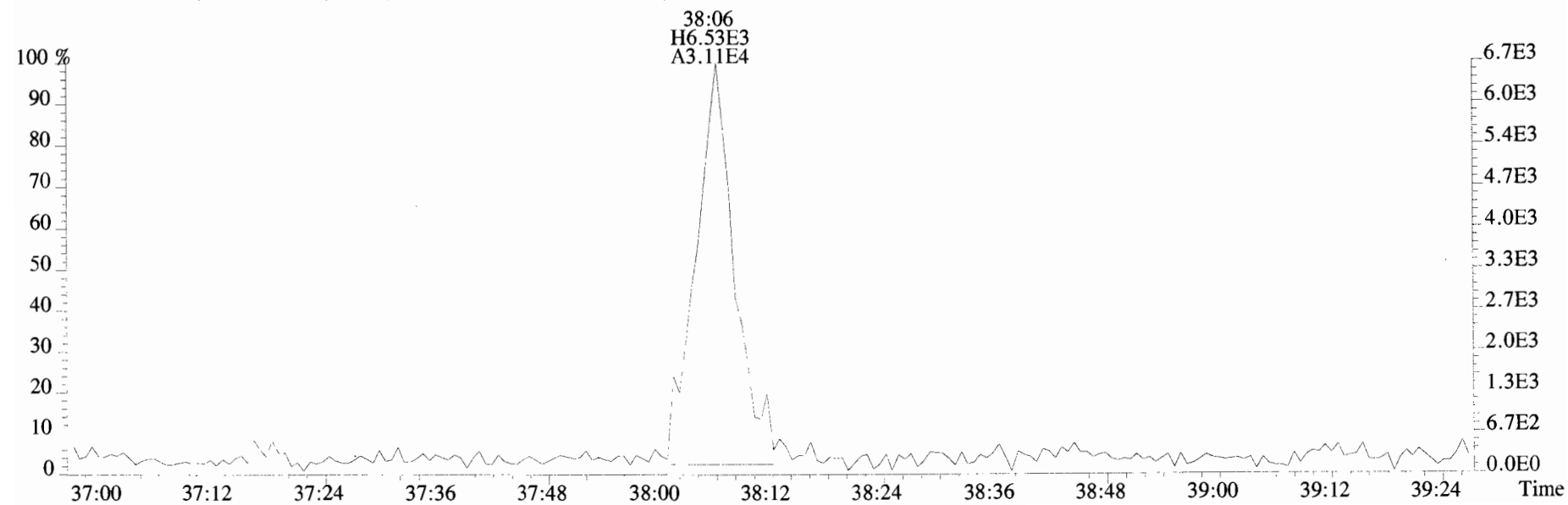
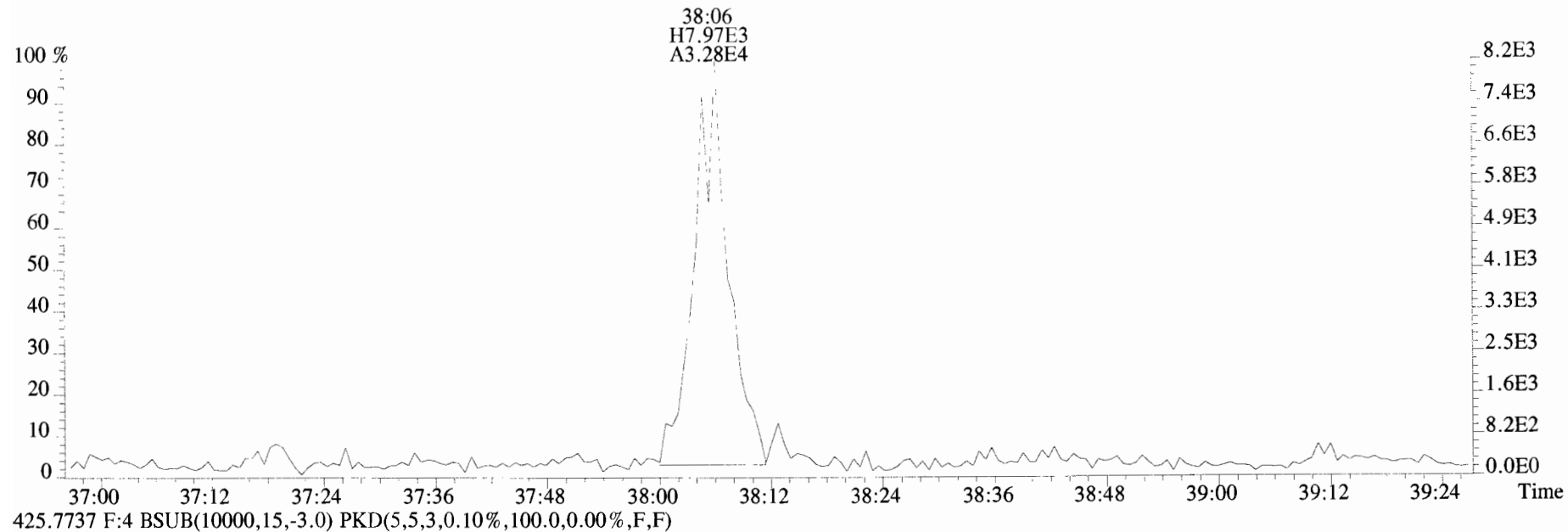
437.8140 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



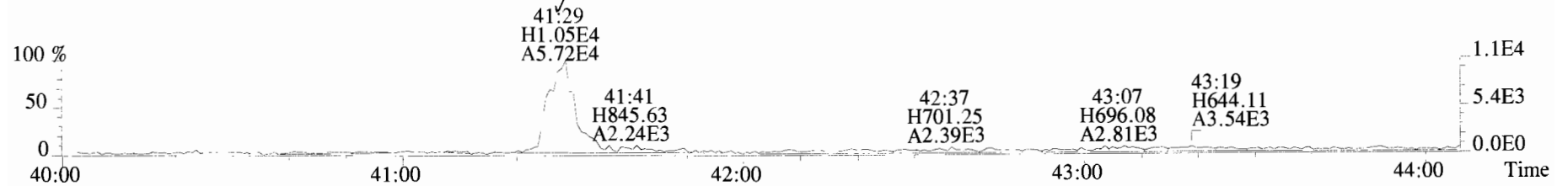
454.9728 F:4



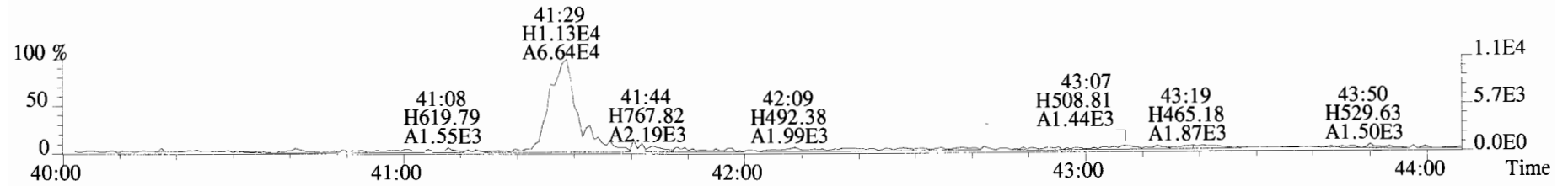
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



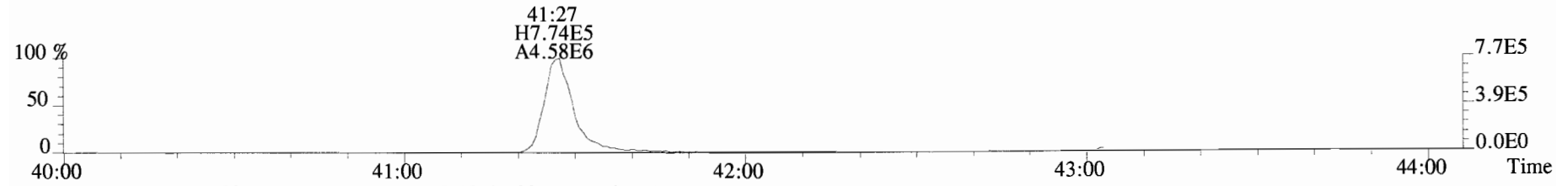
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



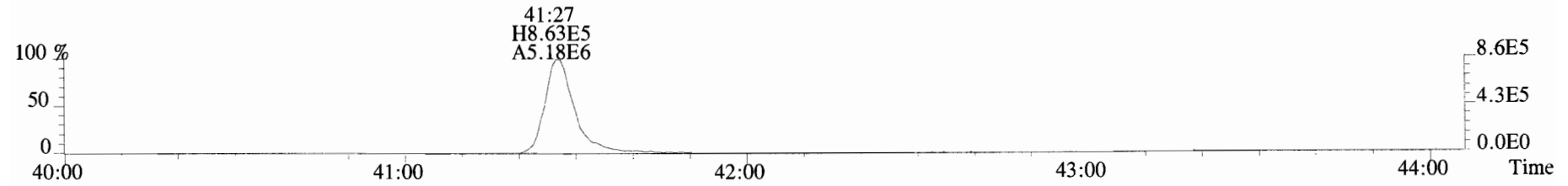
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



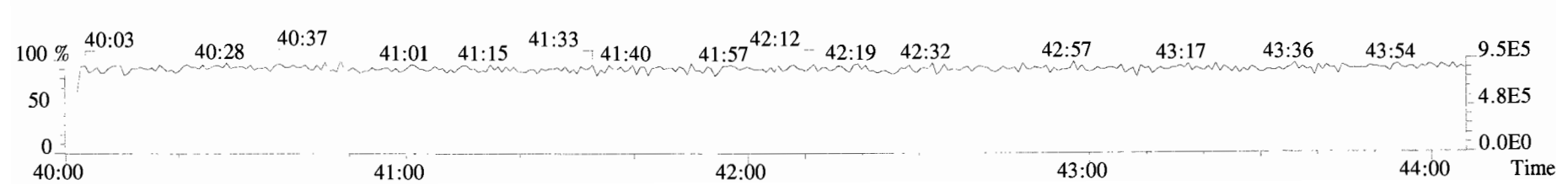
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



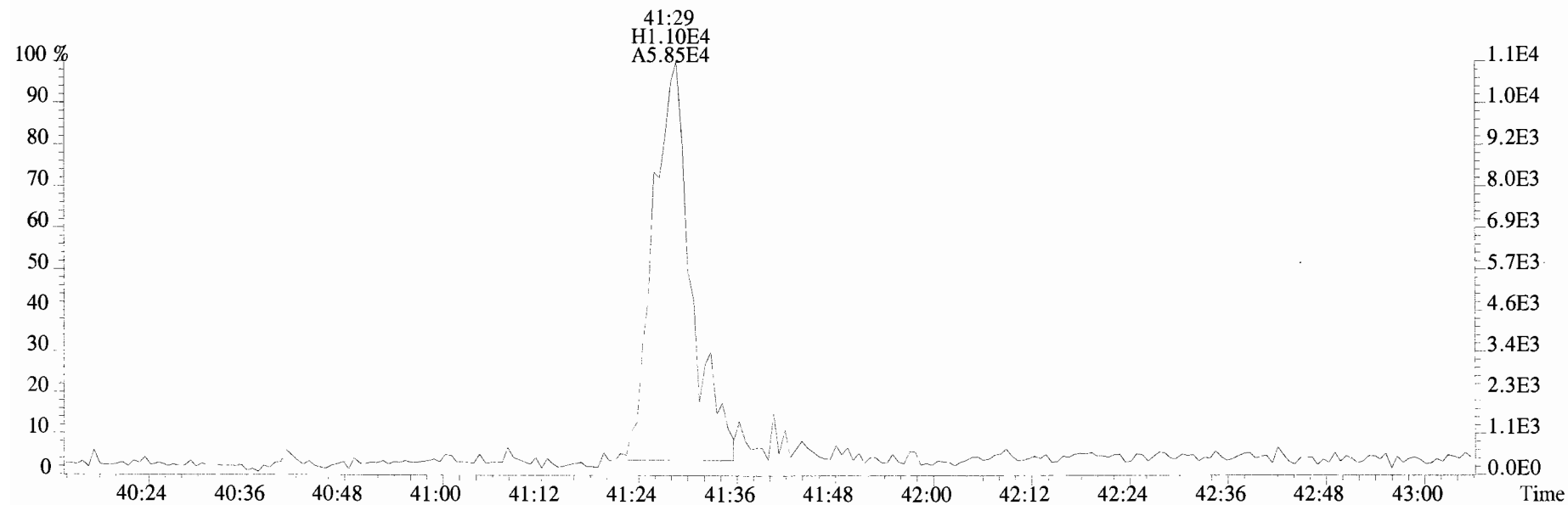
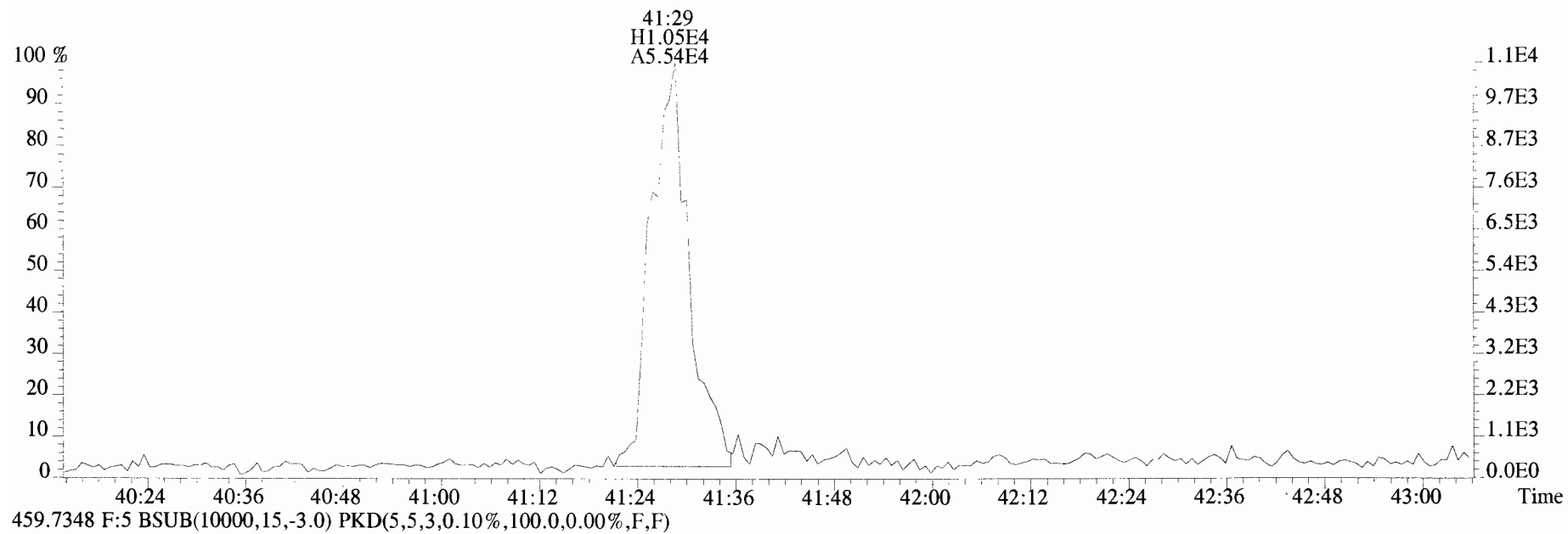
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



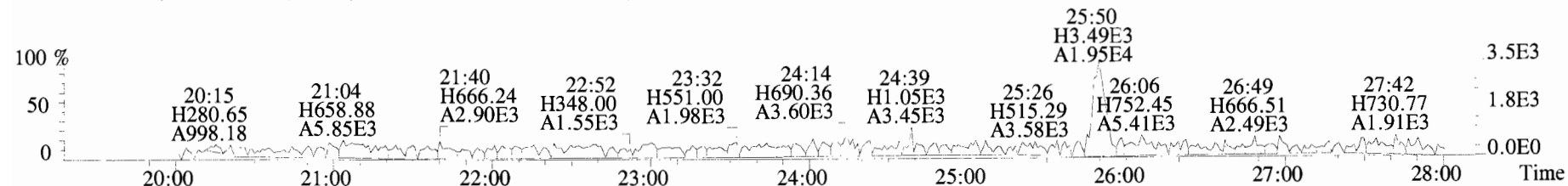
454.9728 F:5



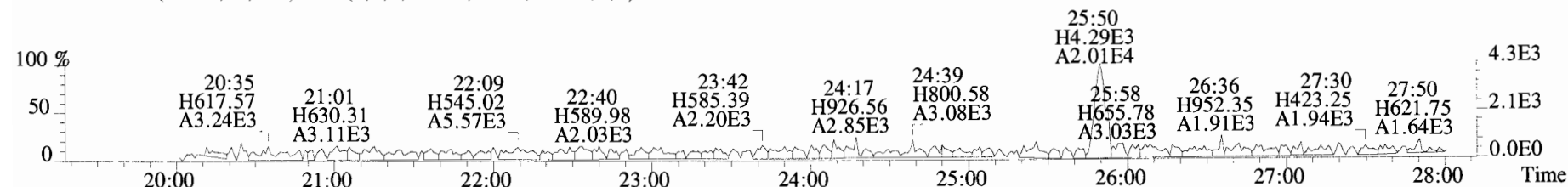
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



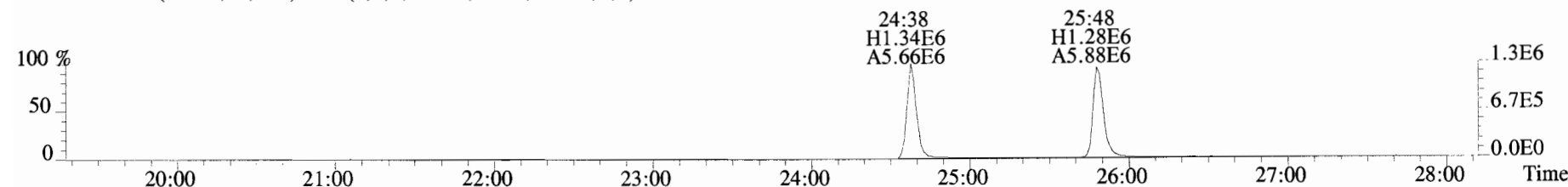
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
 303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



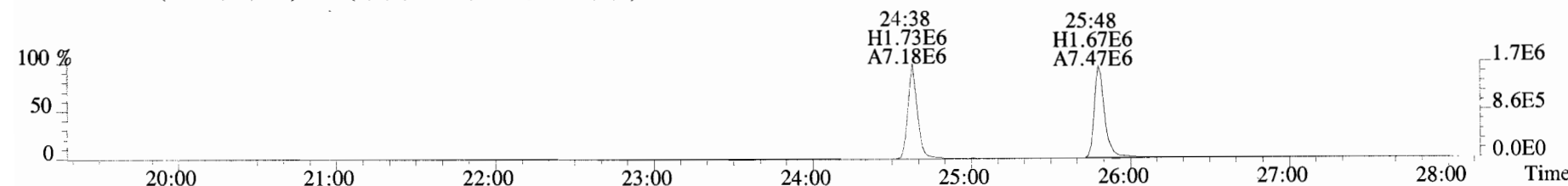
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



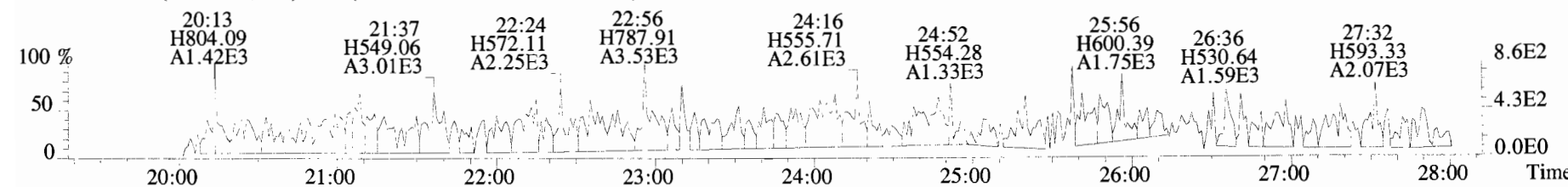
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



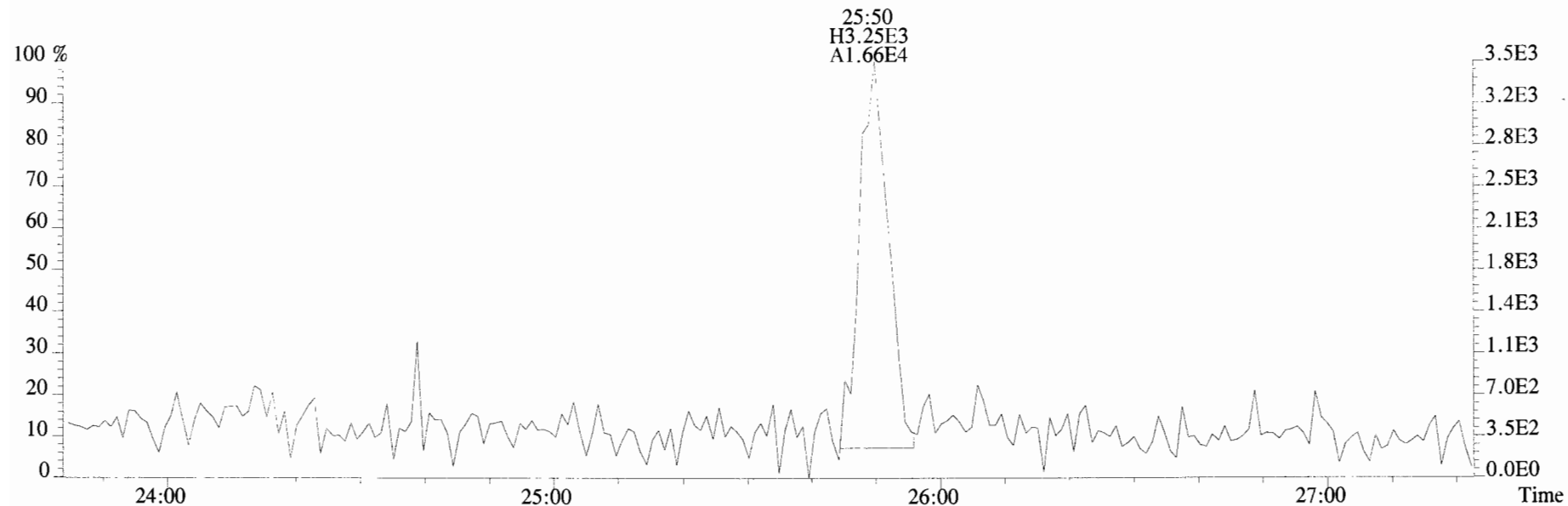
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



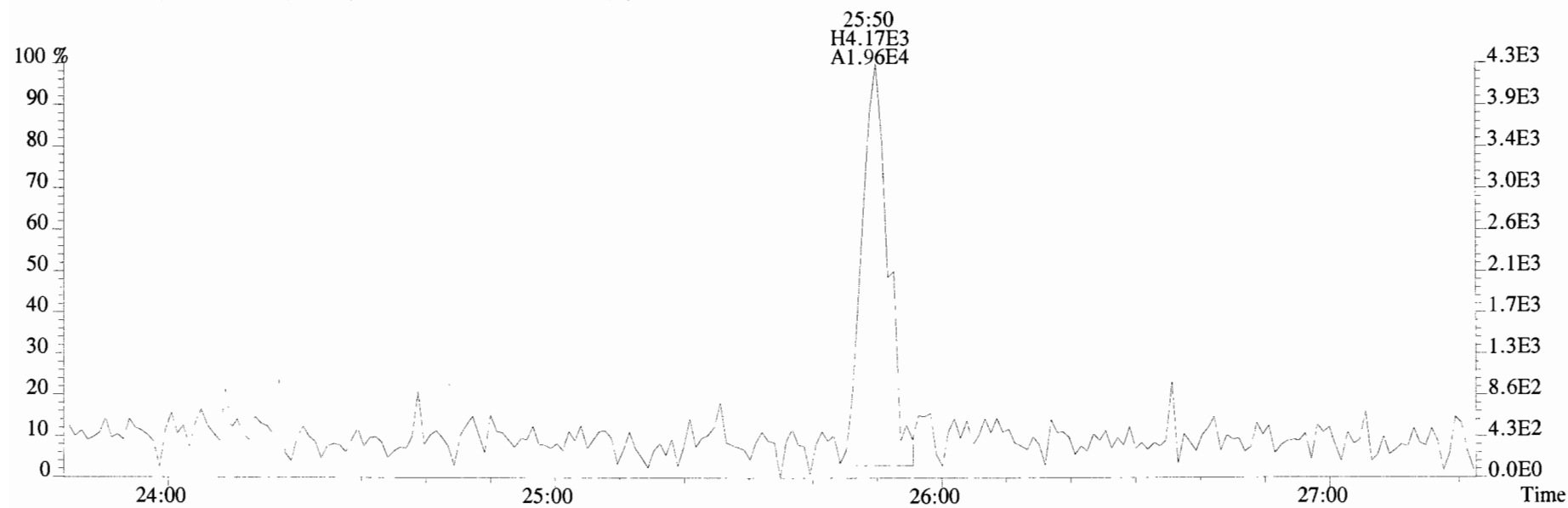
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



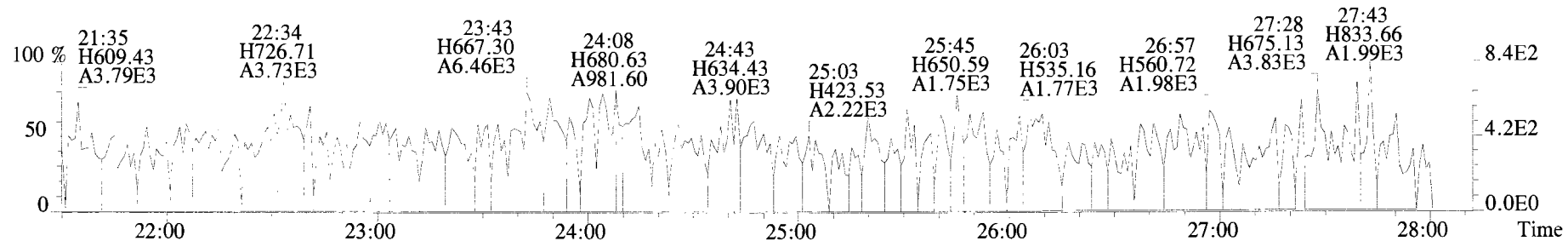
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



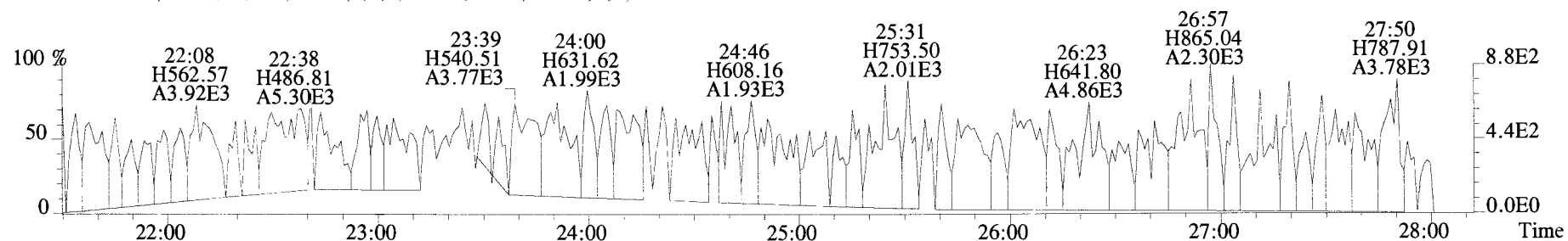
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



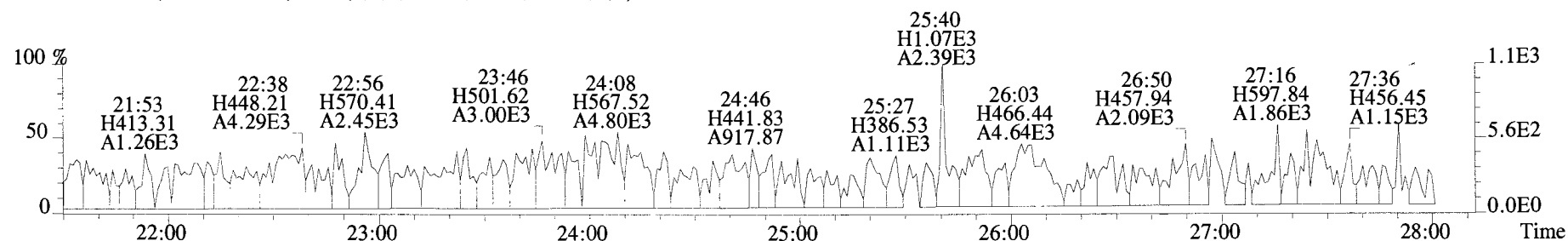
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



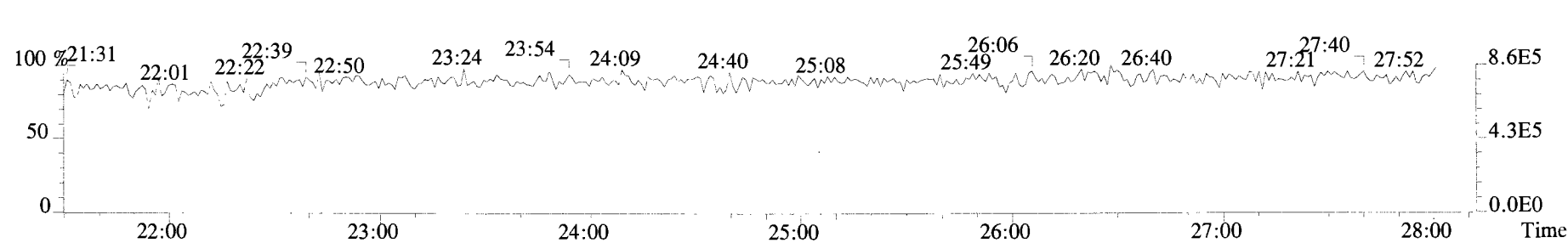
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



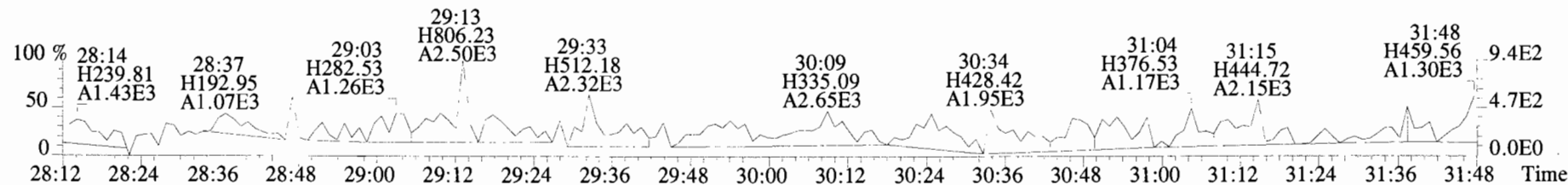
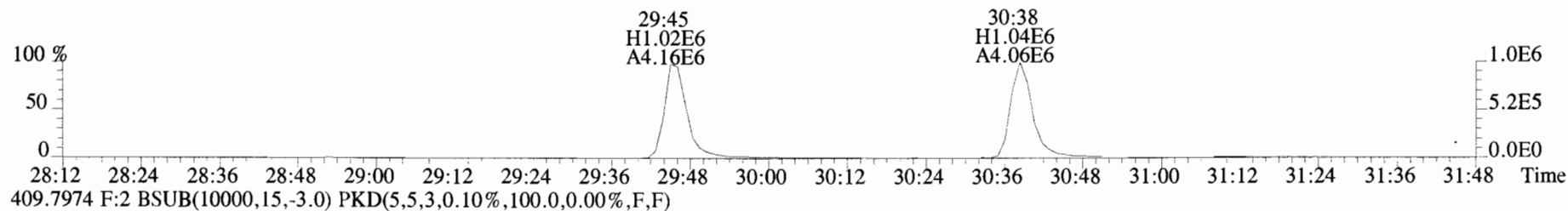
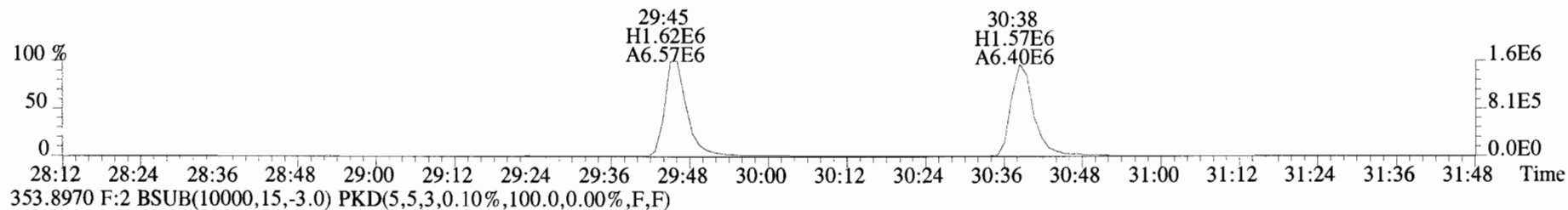
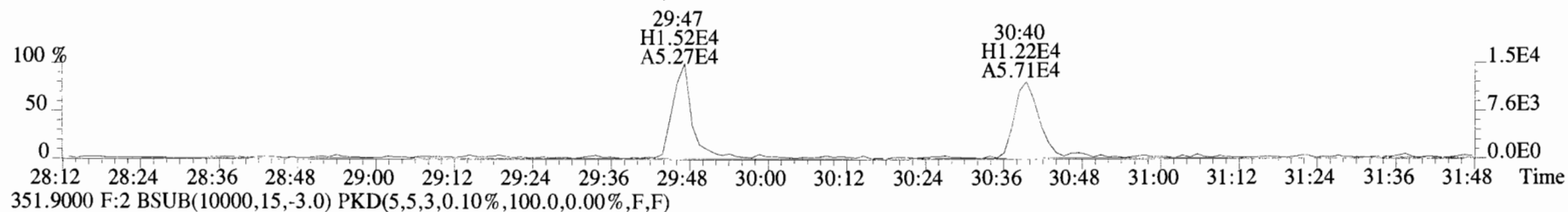
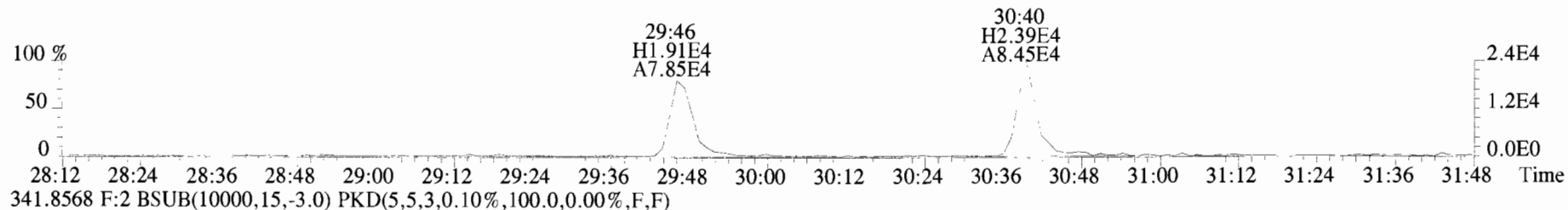
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



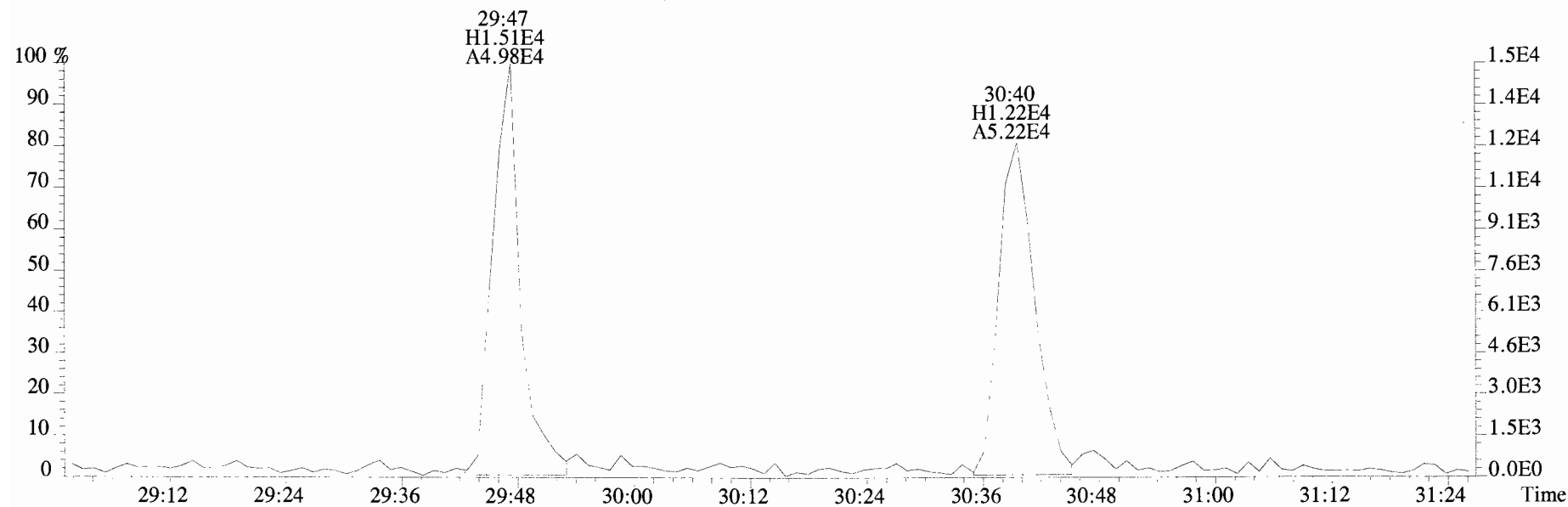
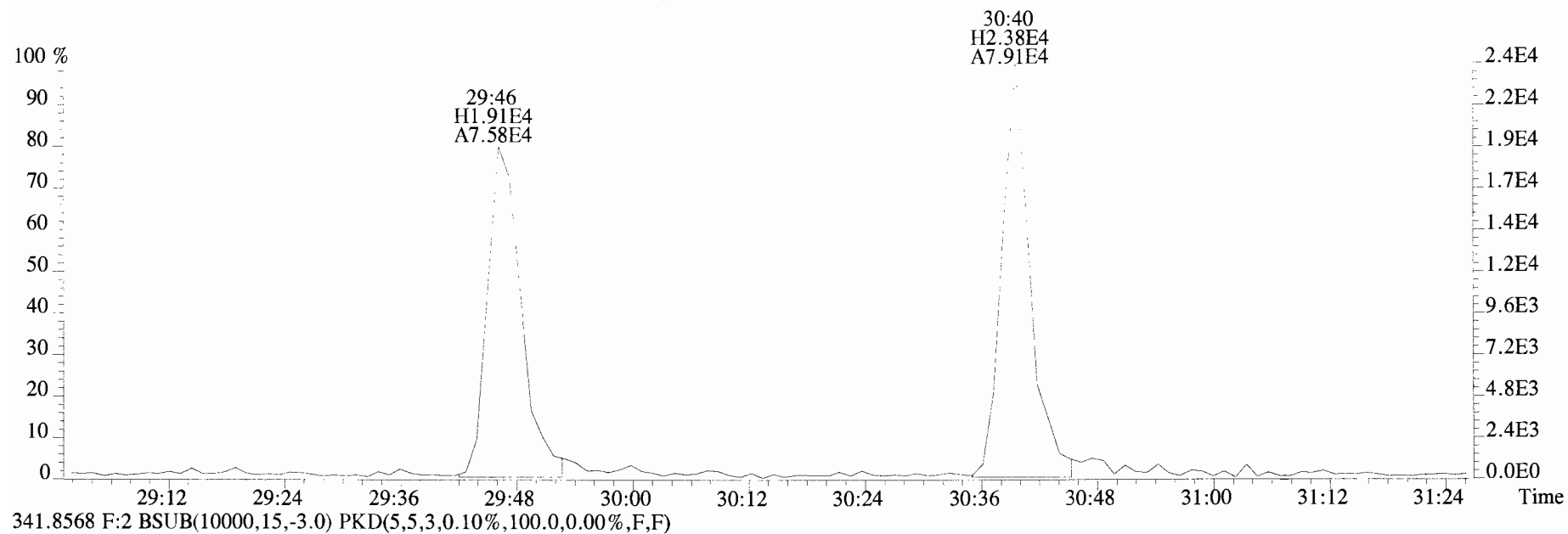
316.9824



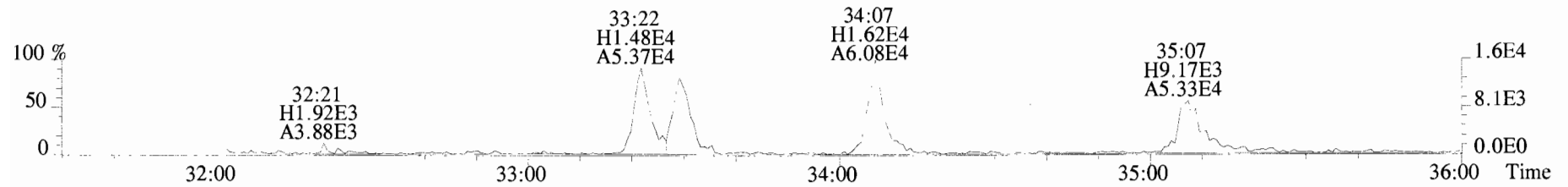
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



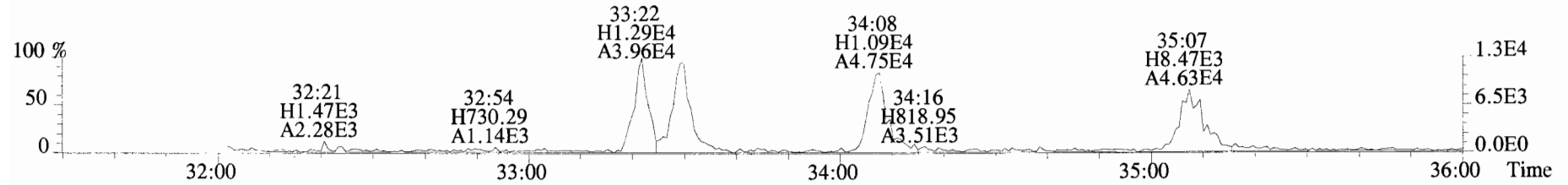
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



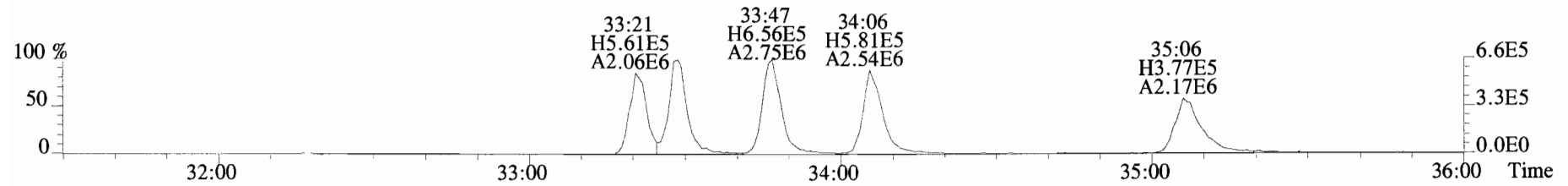
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



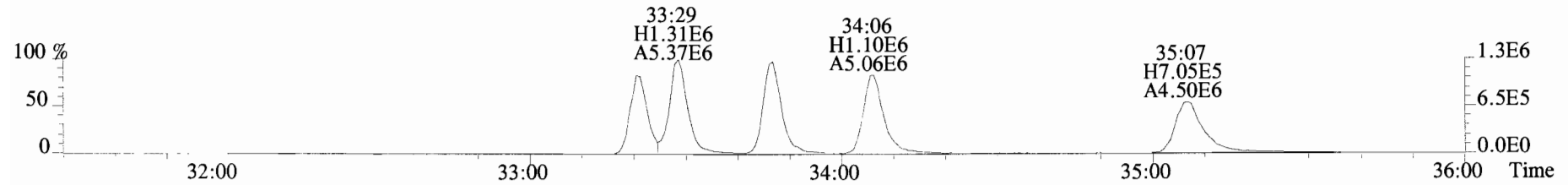
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



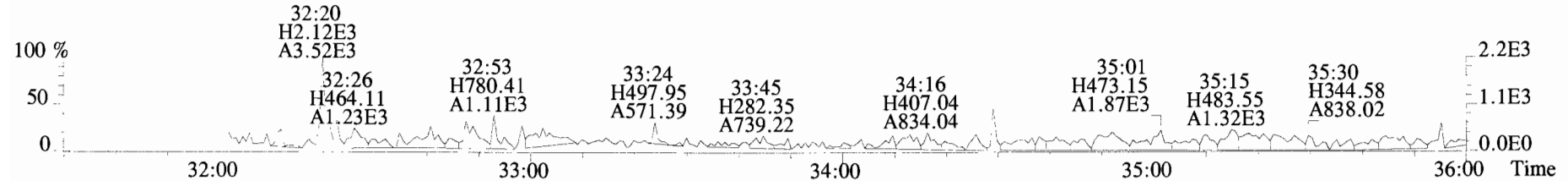
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



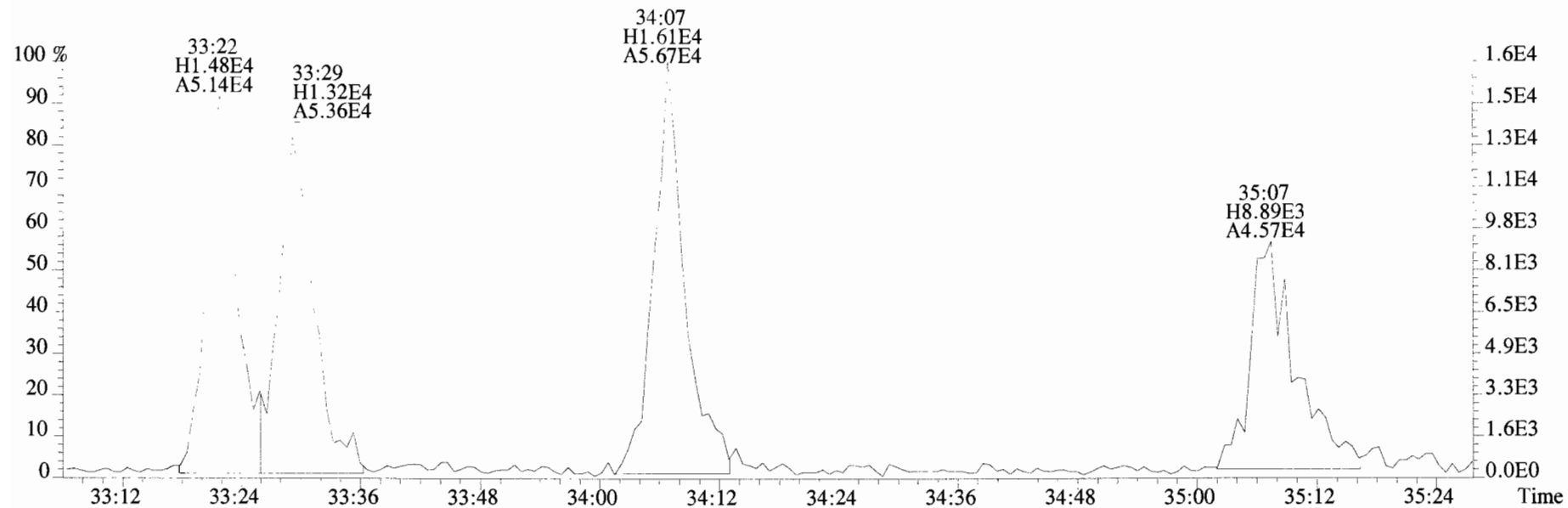
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



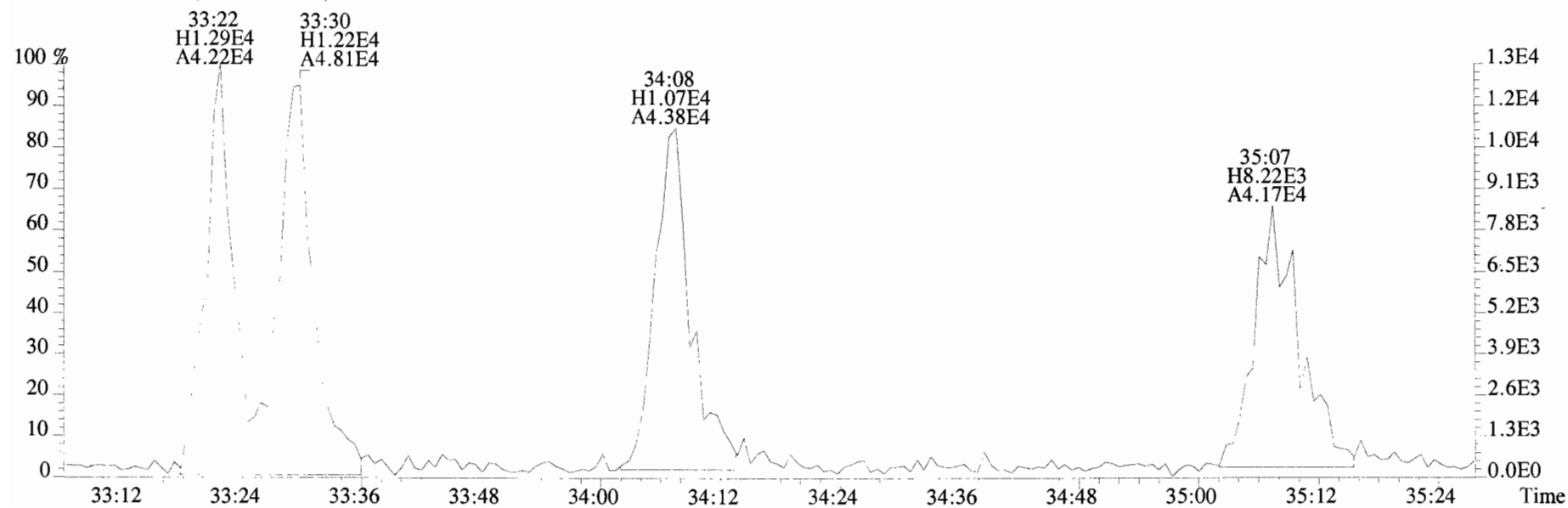
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



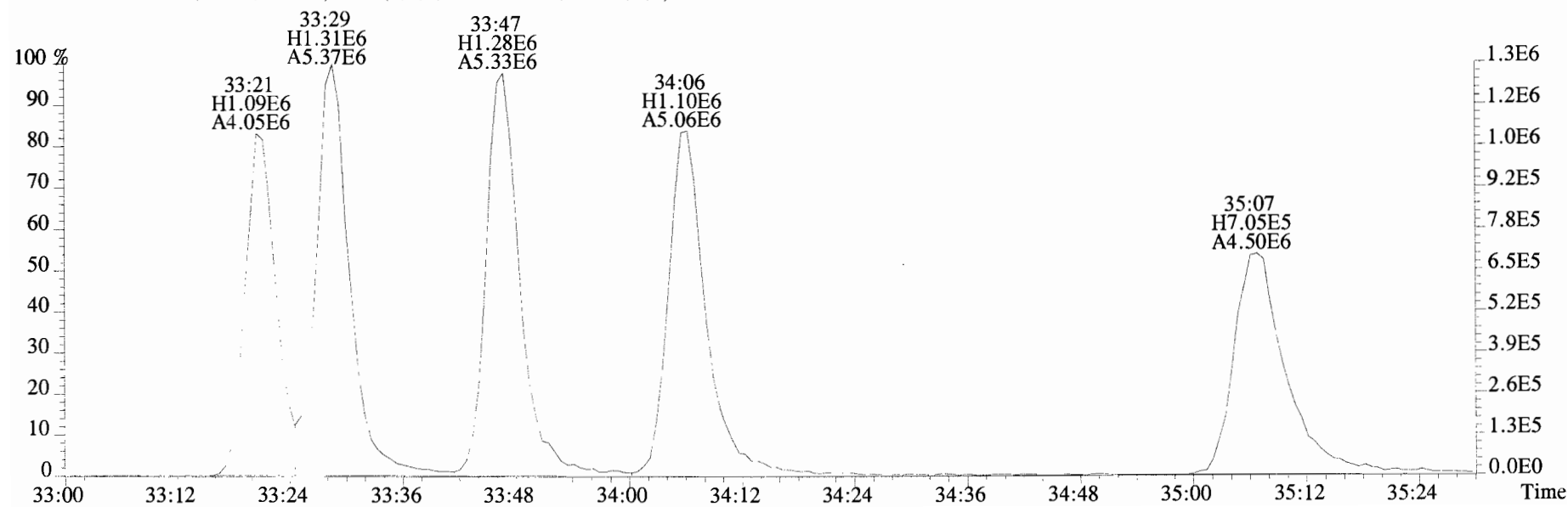
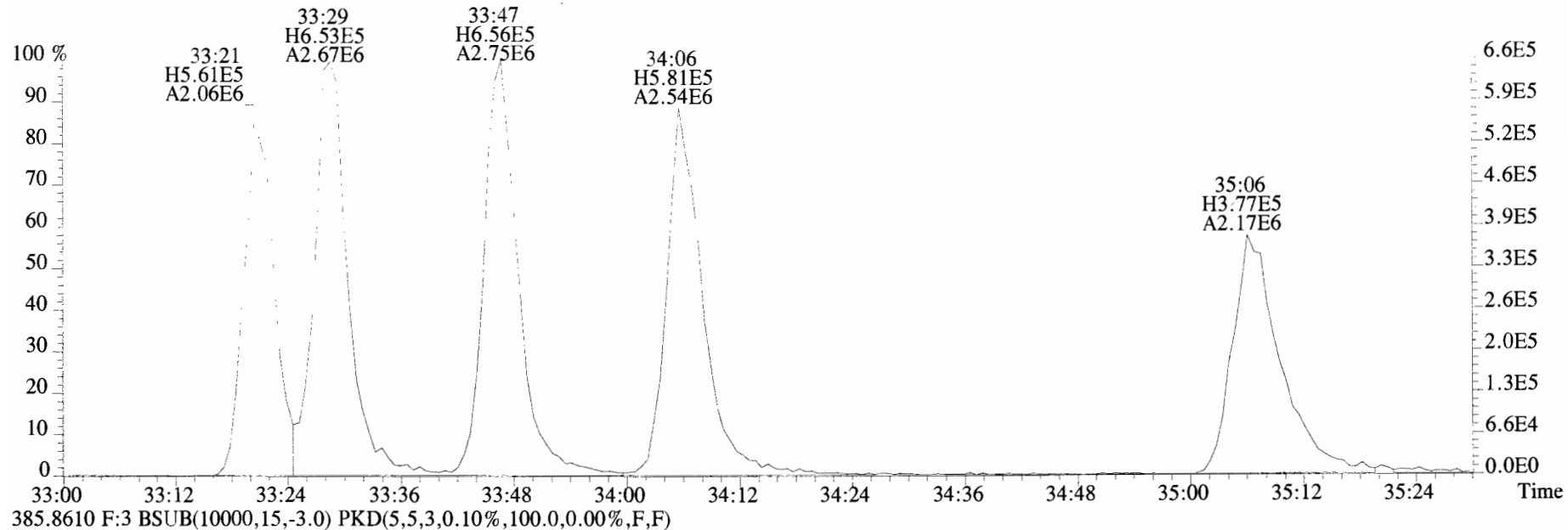
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
373.8207 F:3 BSUB(10000,15,-3.0)



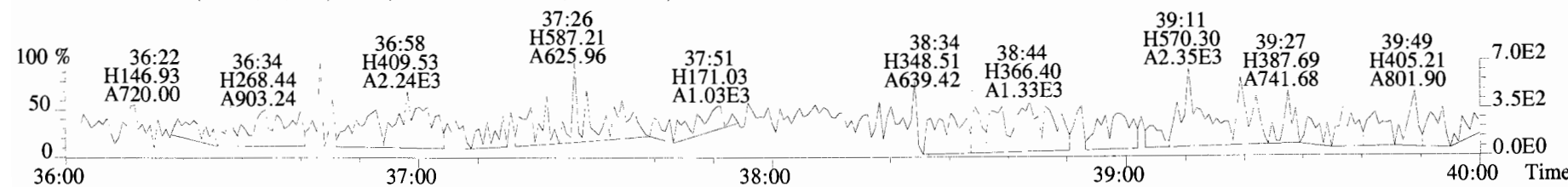
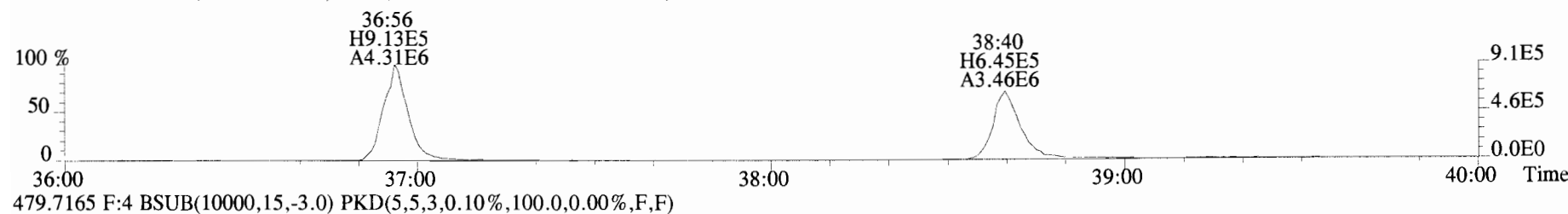
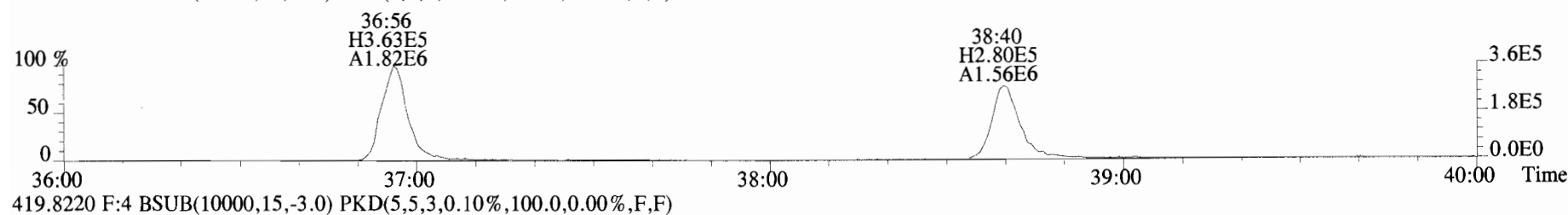
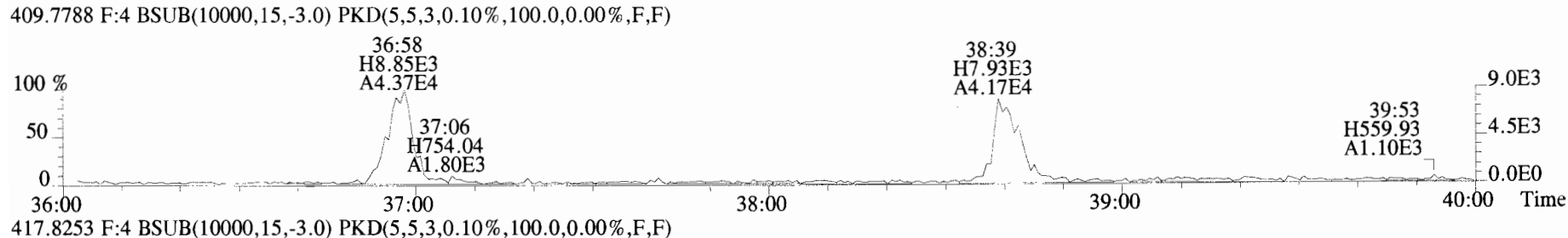
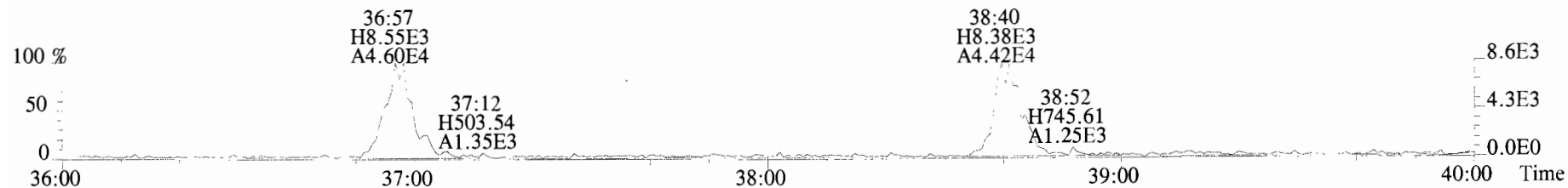
375.8178 F:3 BSUB(10000,15,-3.0)



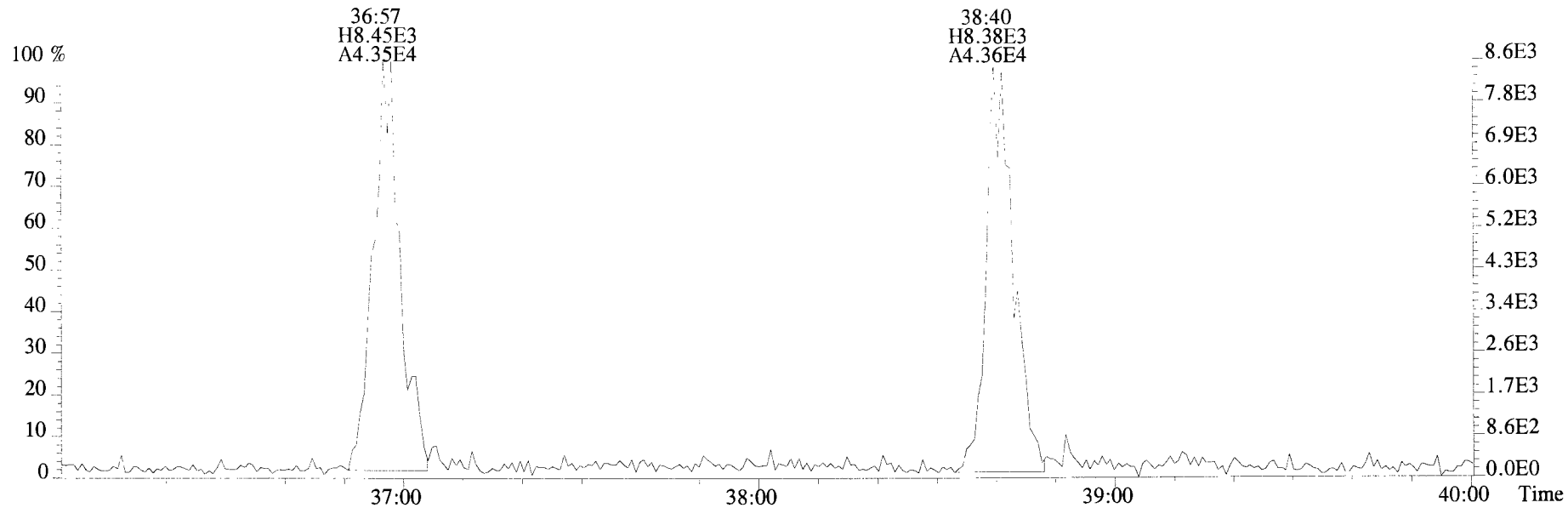
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



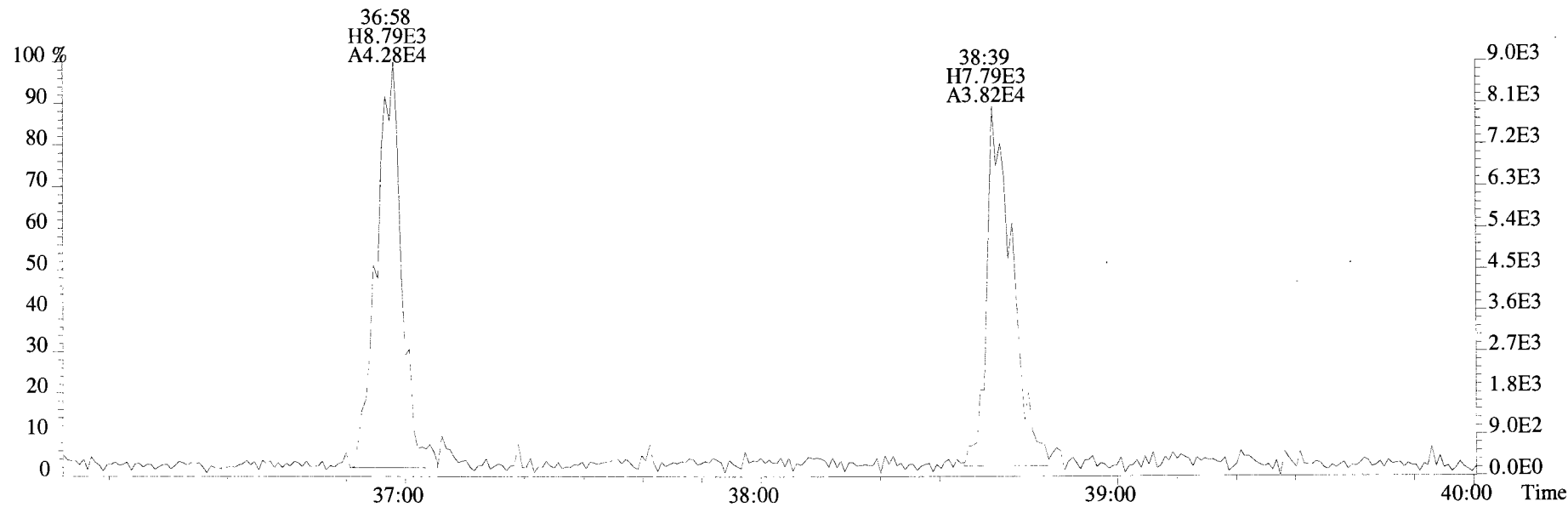
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



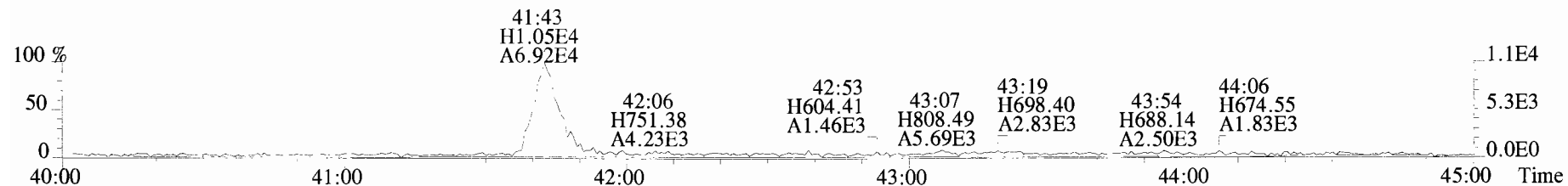
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



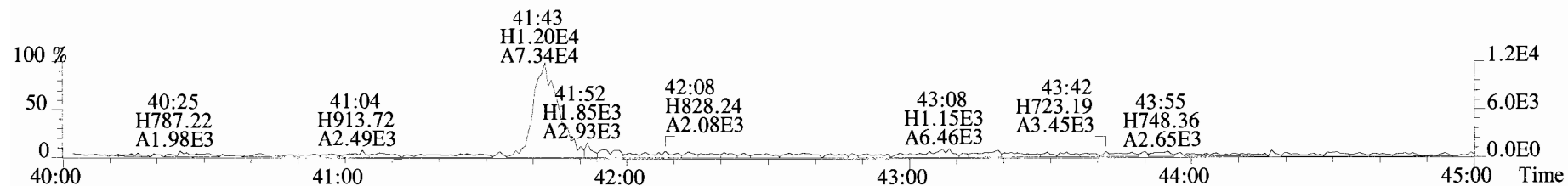
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



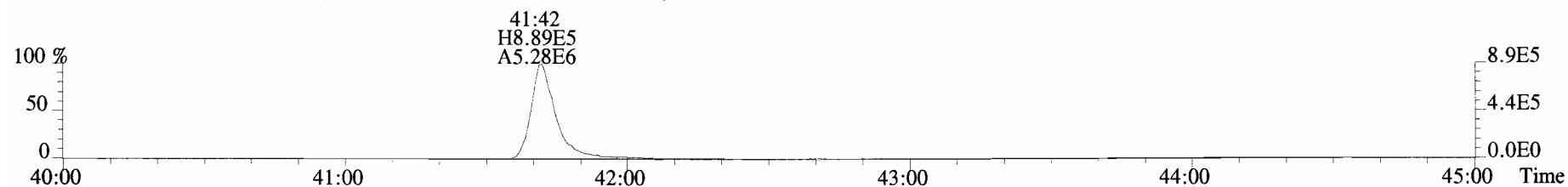
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



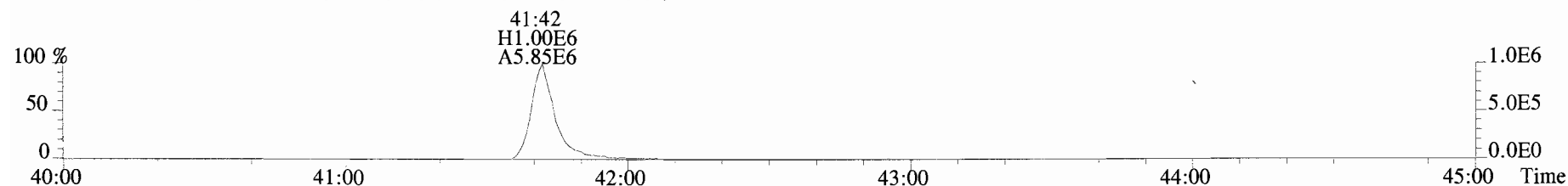
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



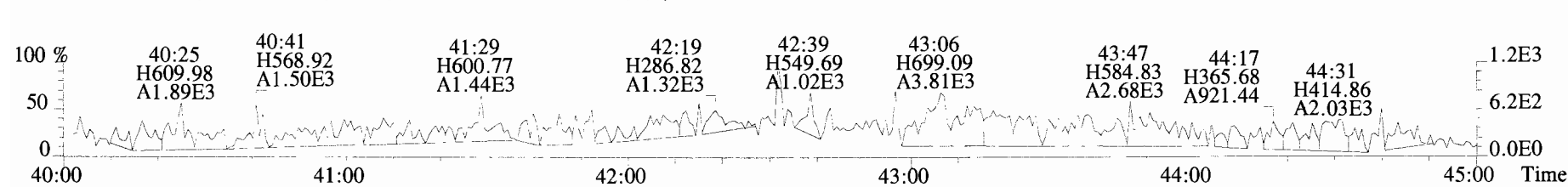
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



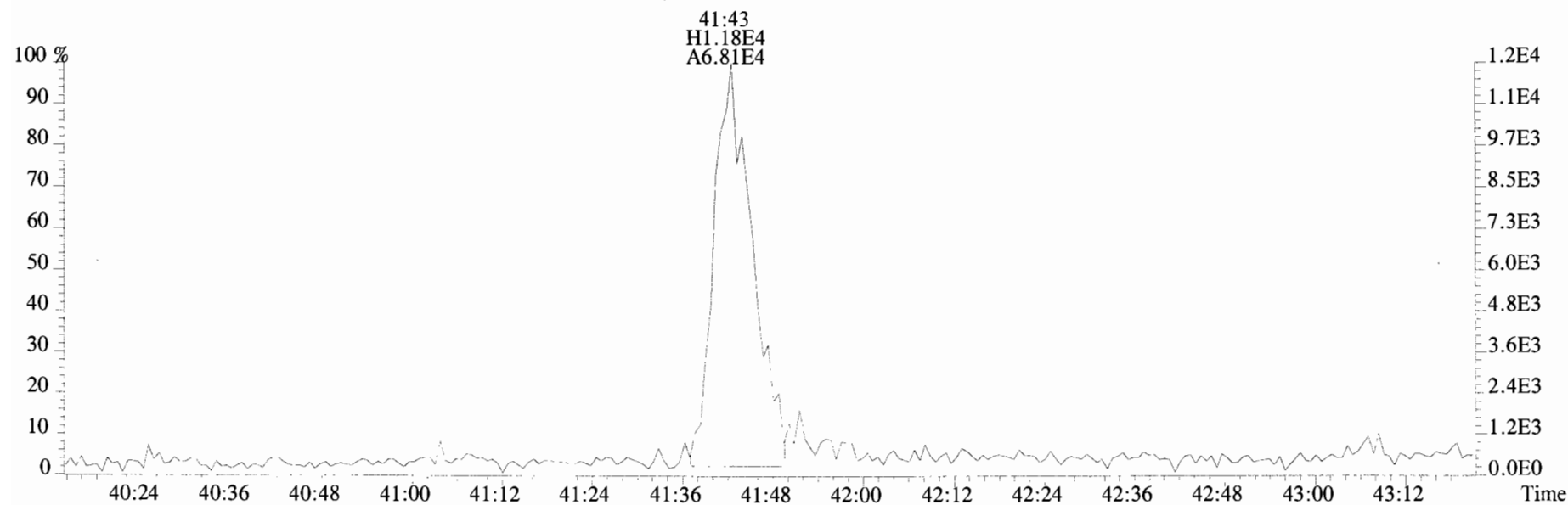
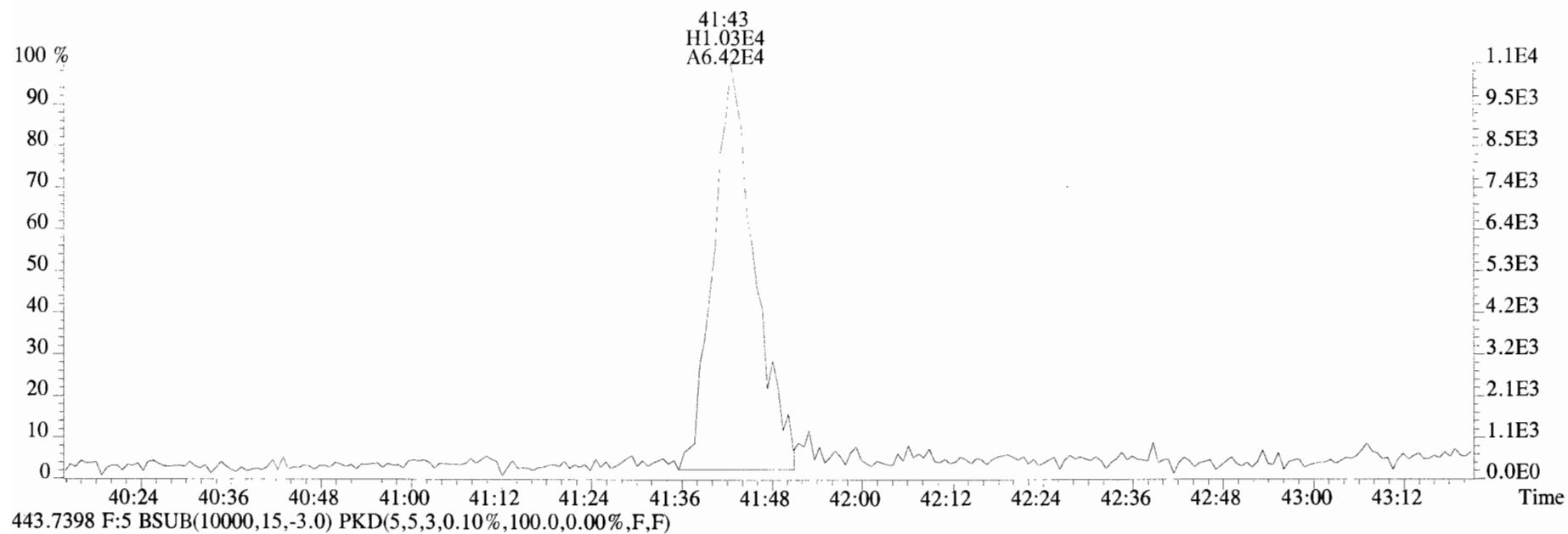
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



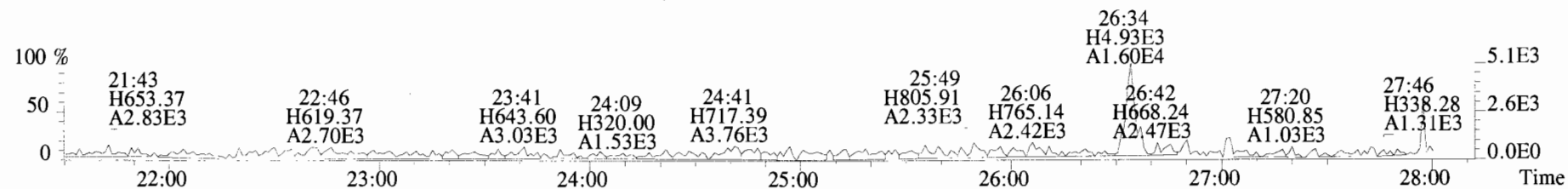
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



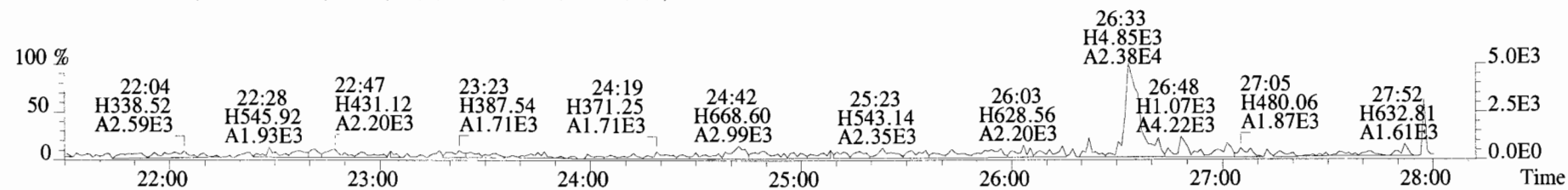
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



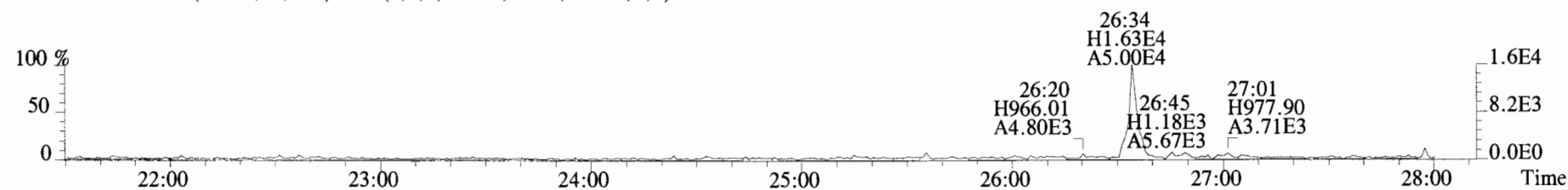
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



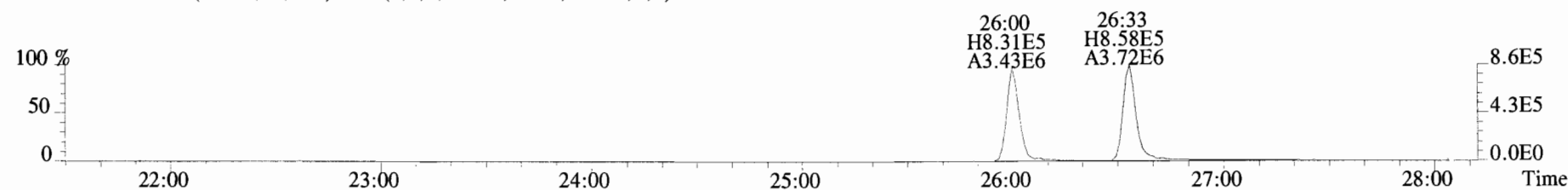
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



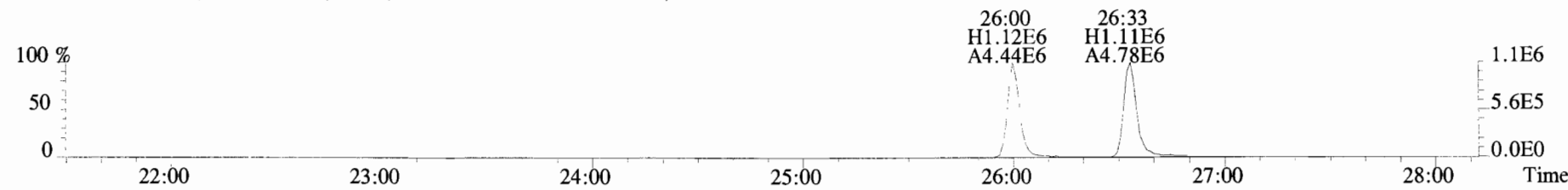
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



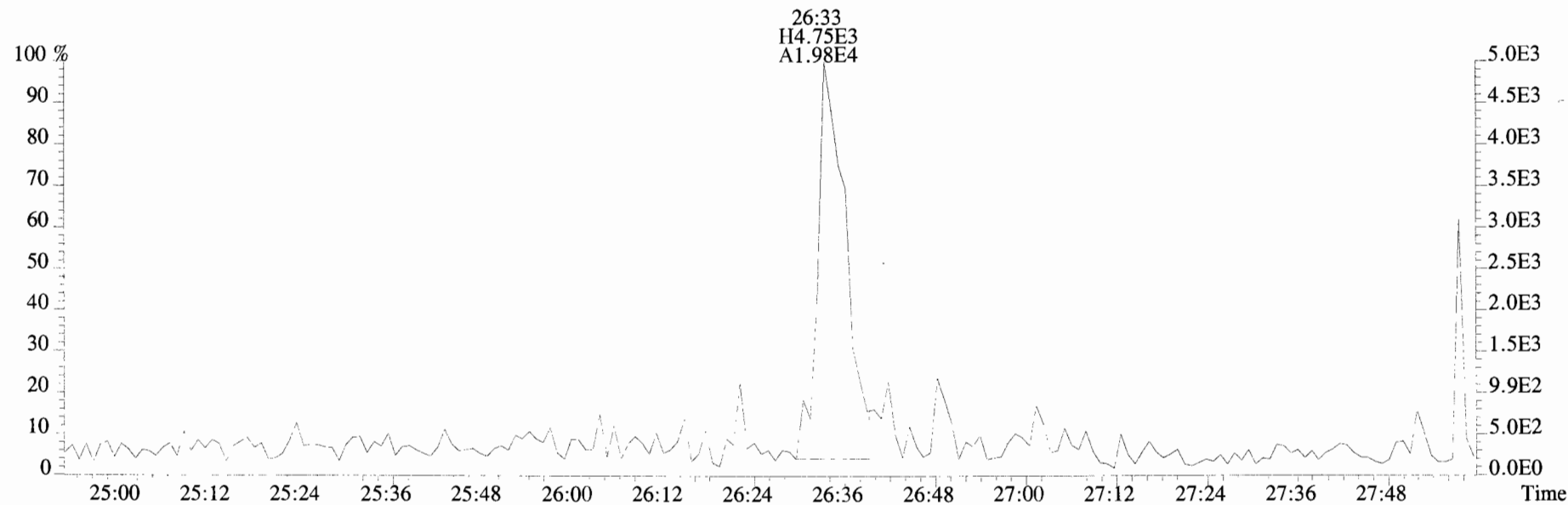
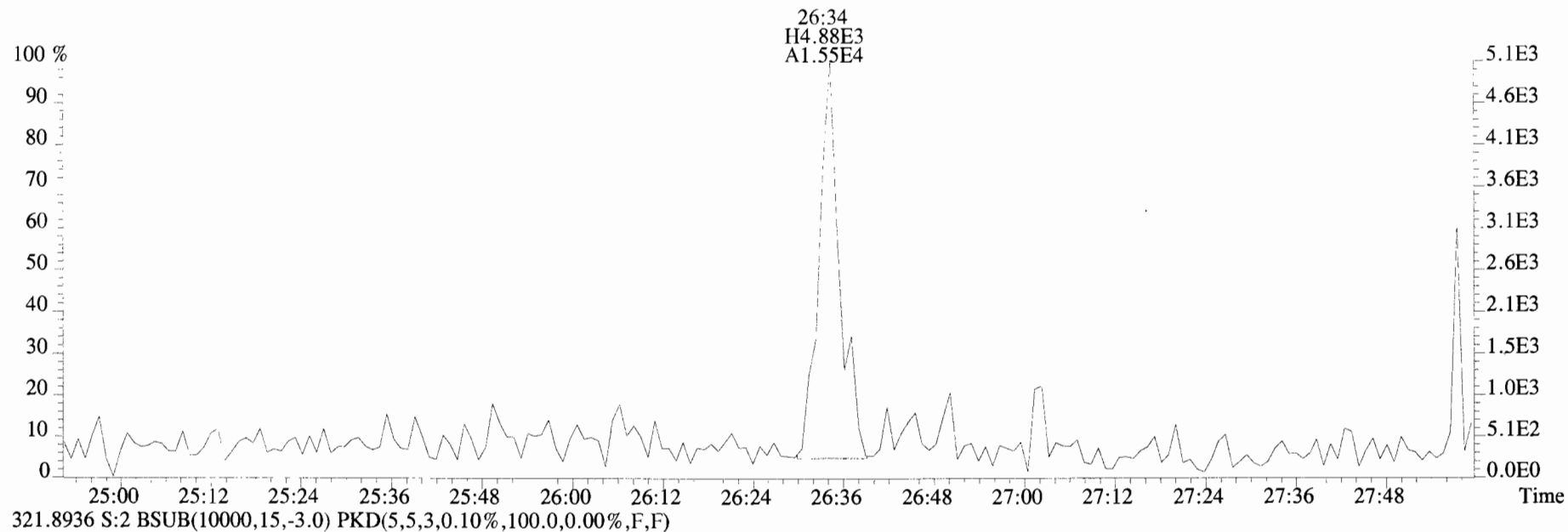
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



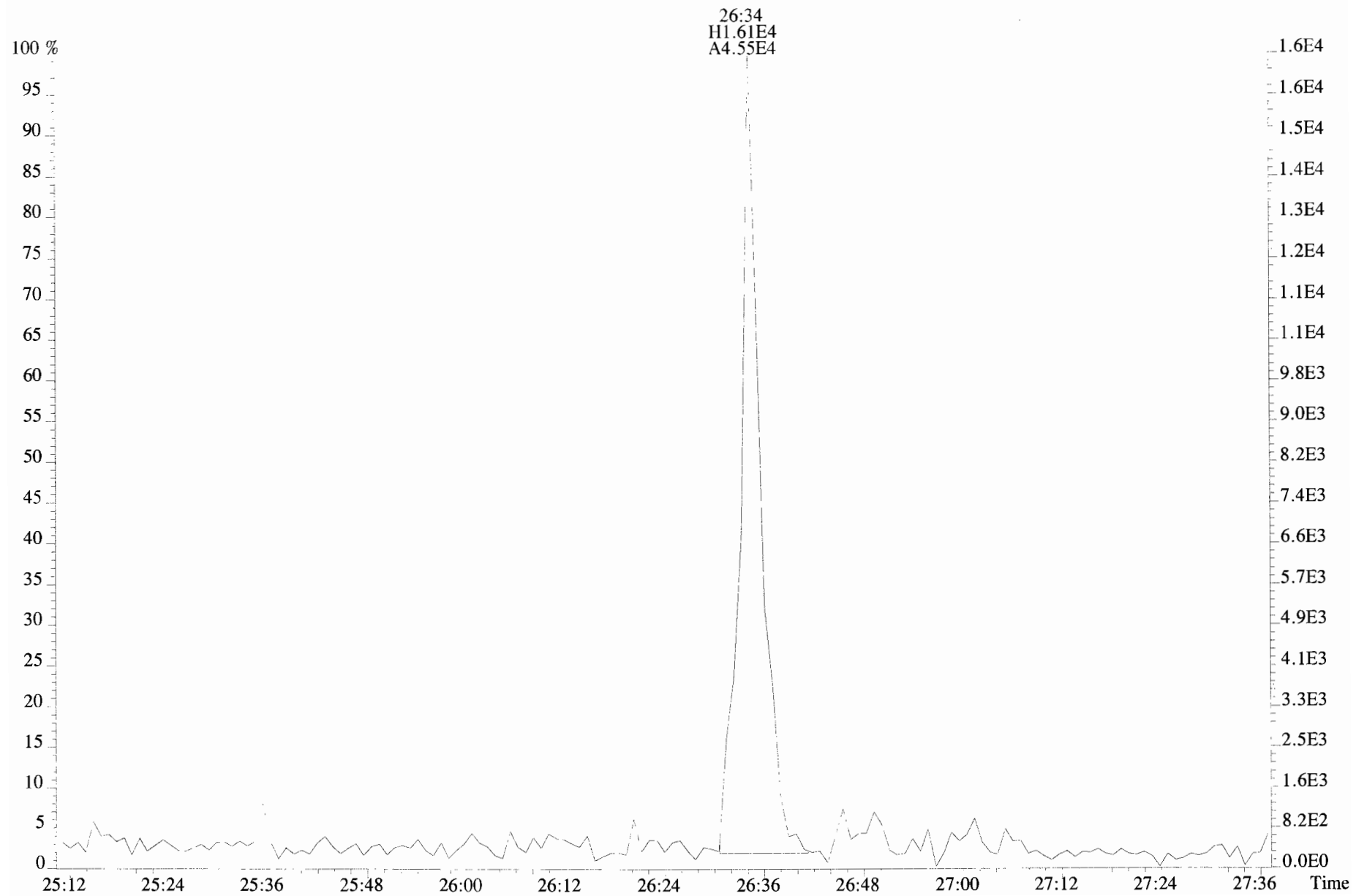
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



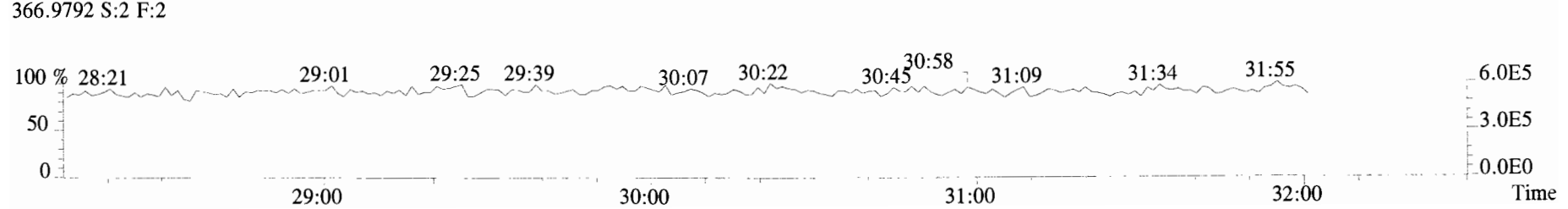
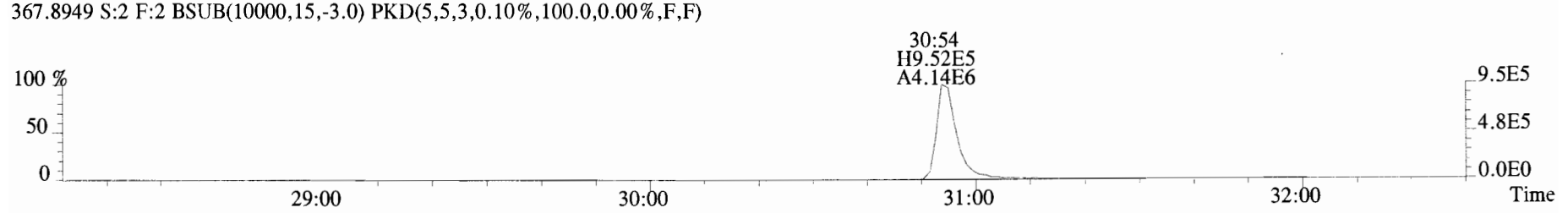
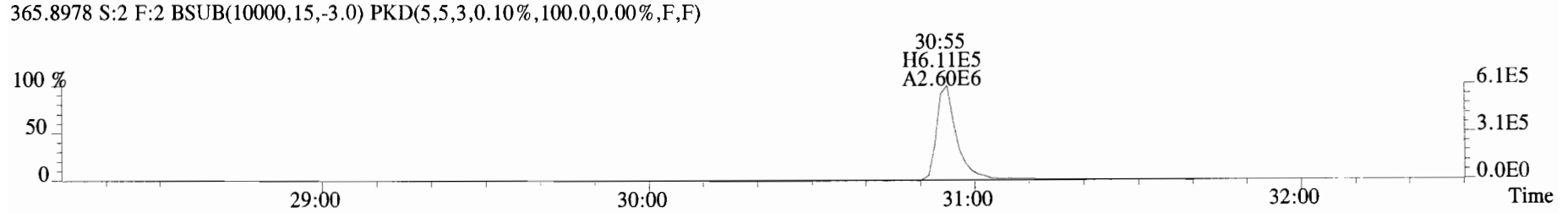
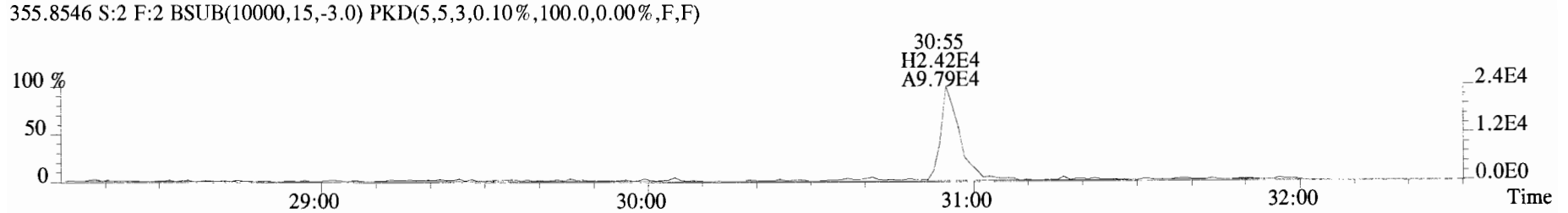
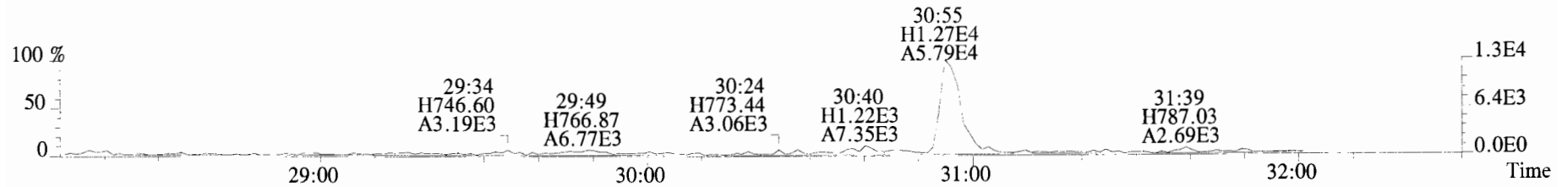
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



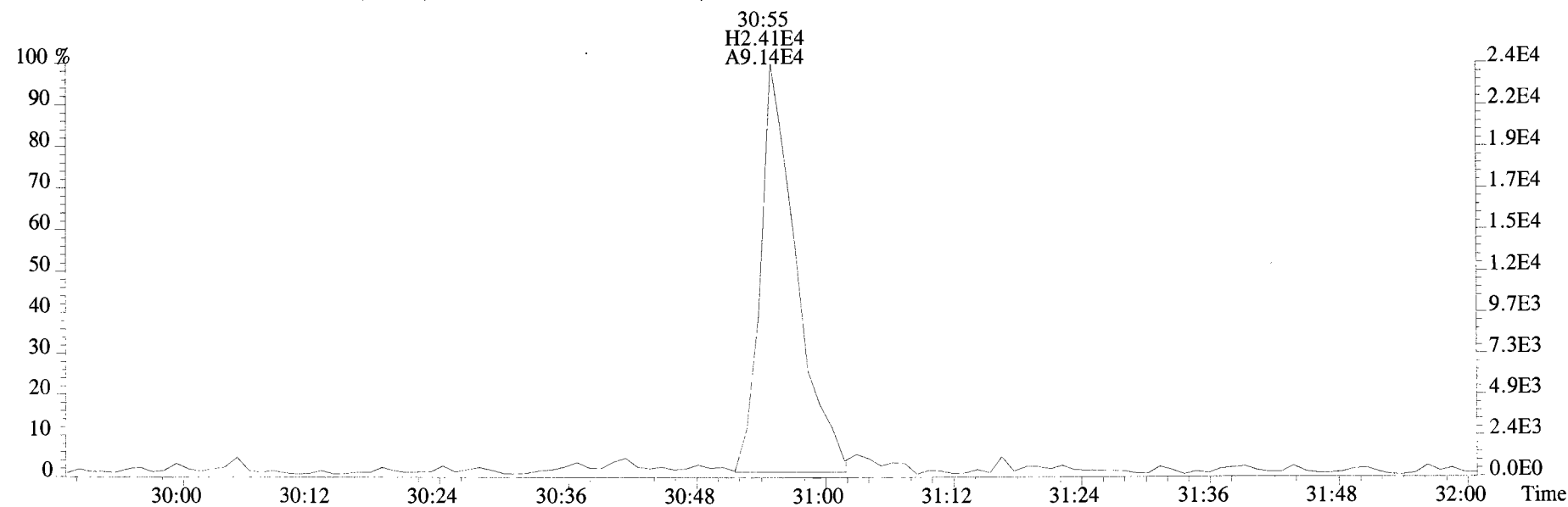
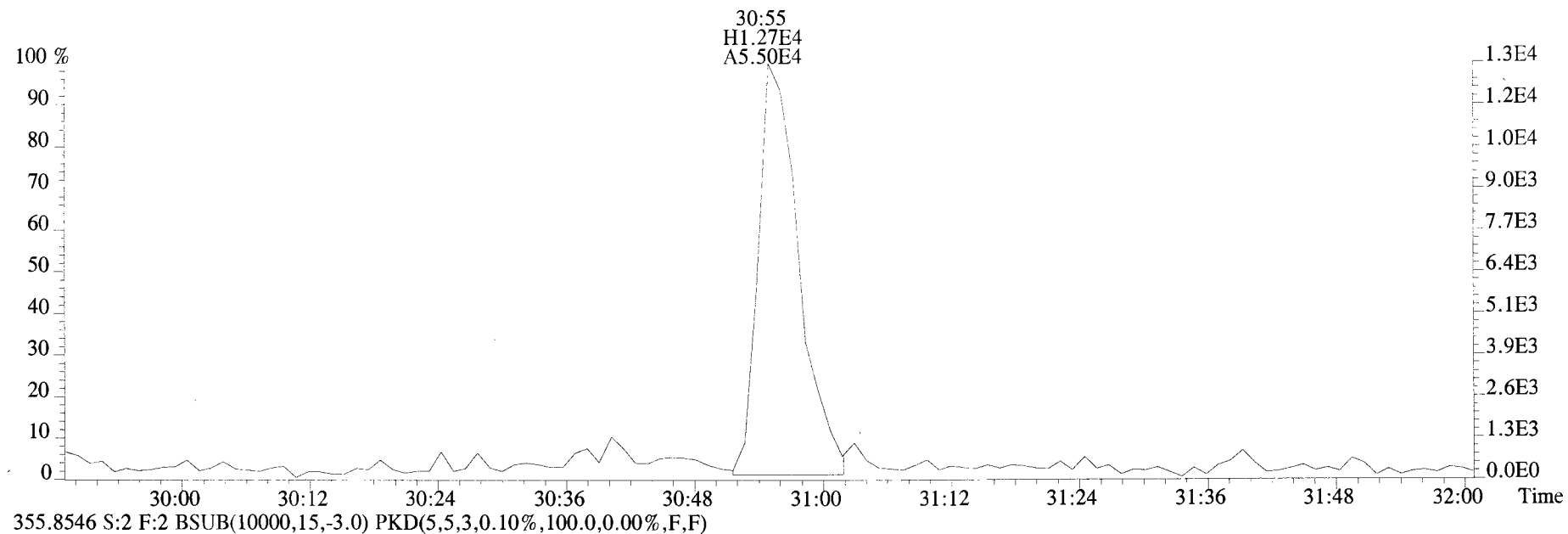
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



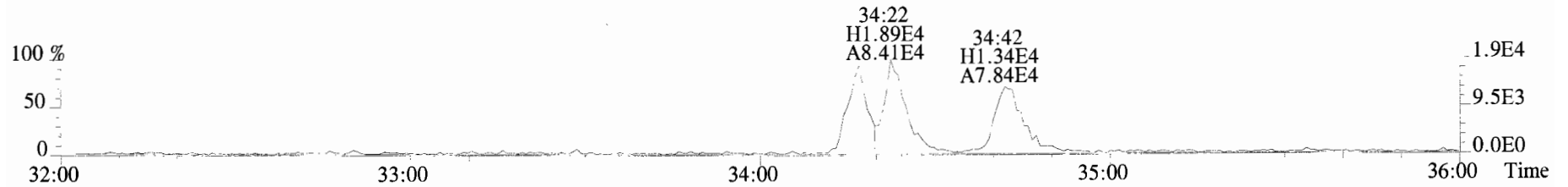
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



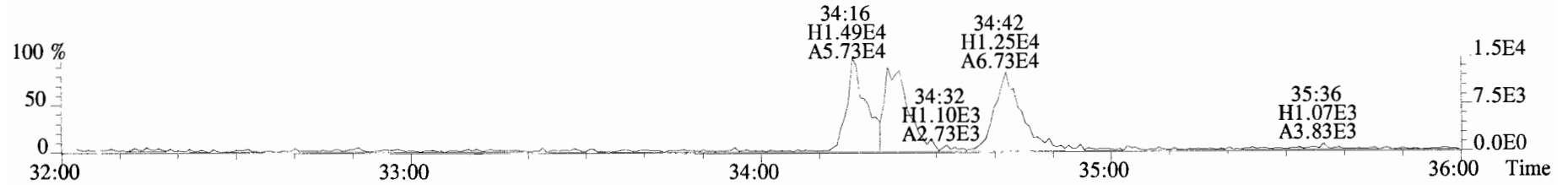
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



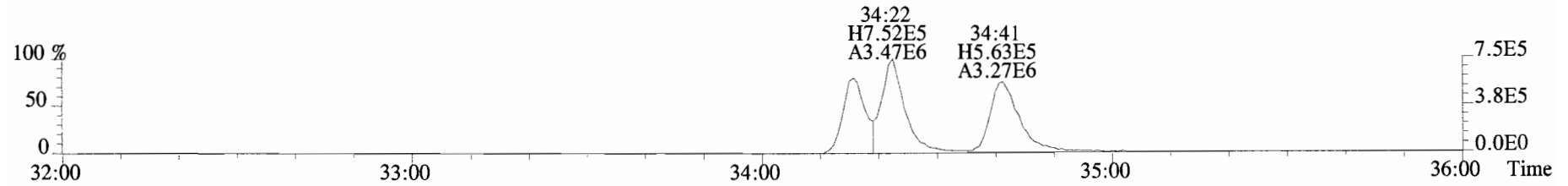
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



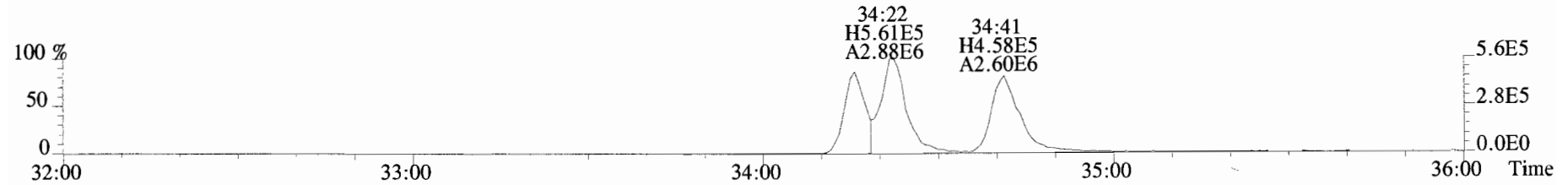
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



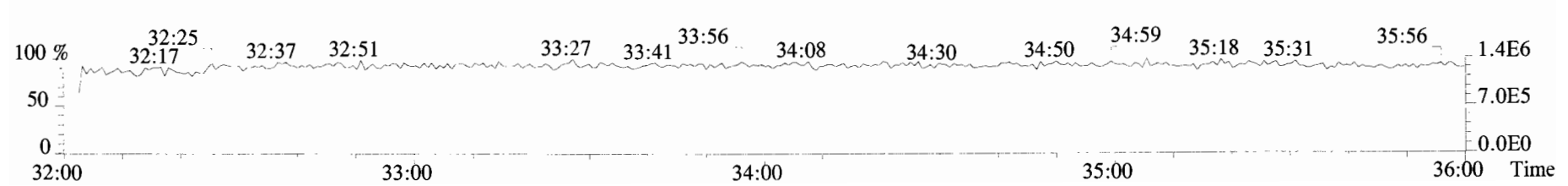
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



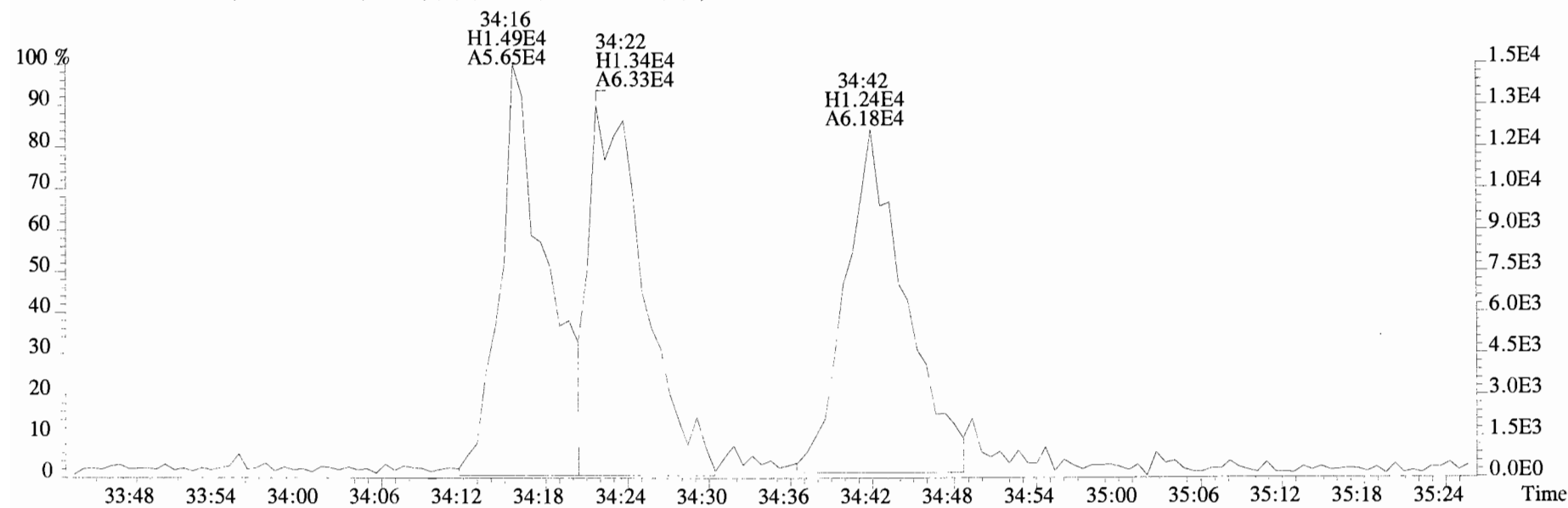
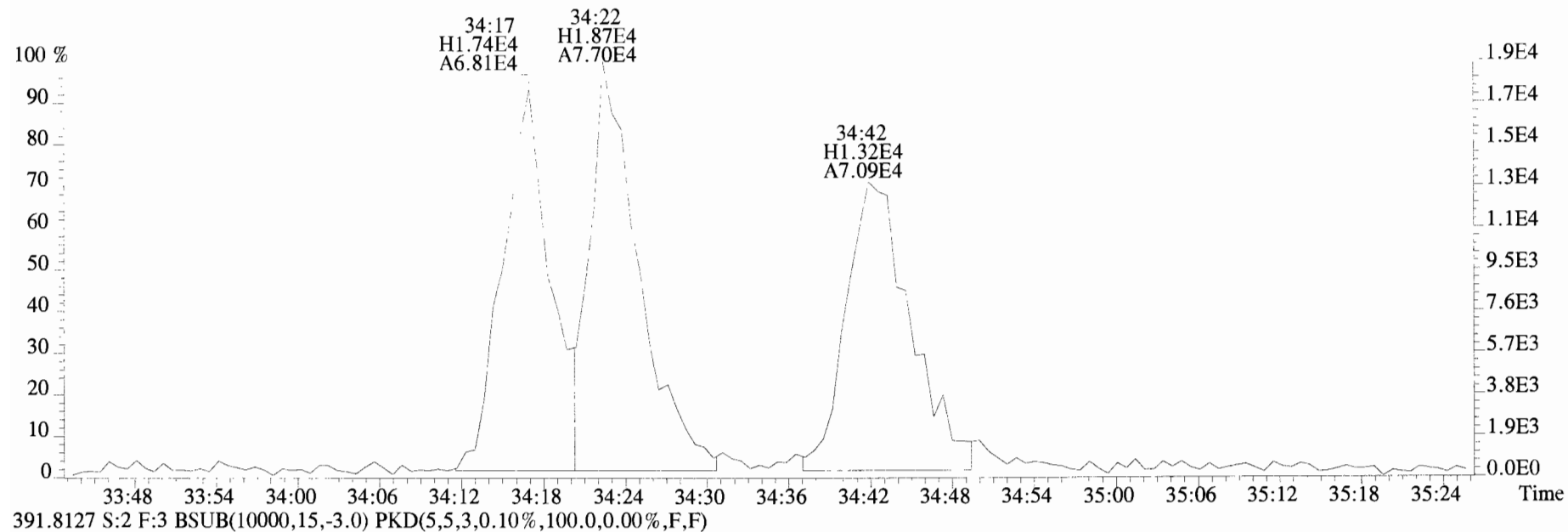
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



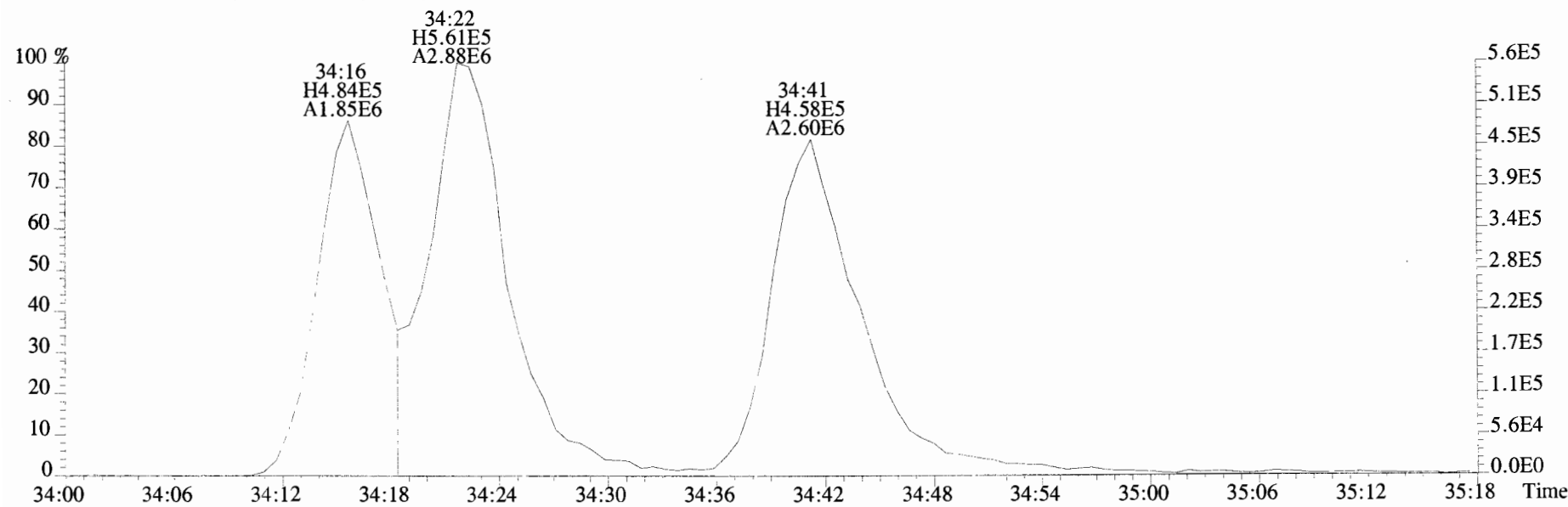
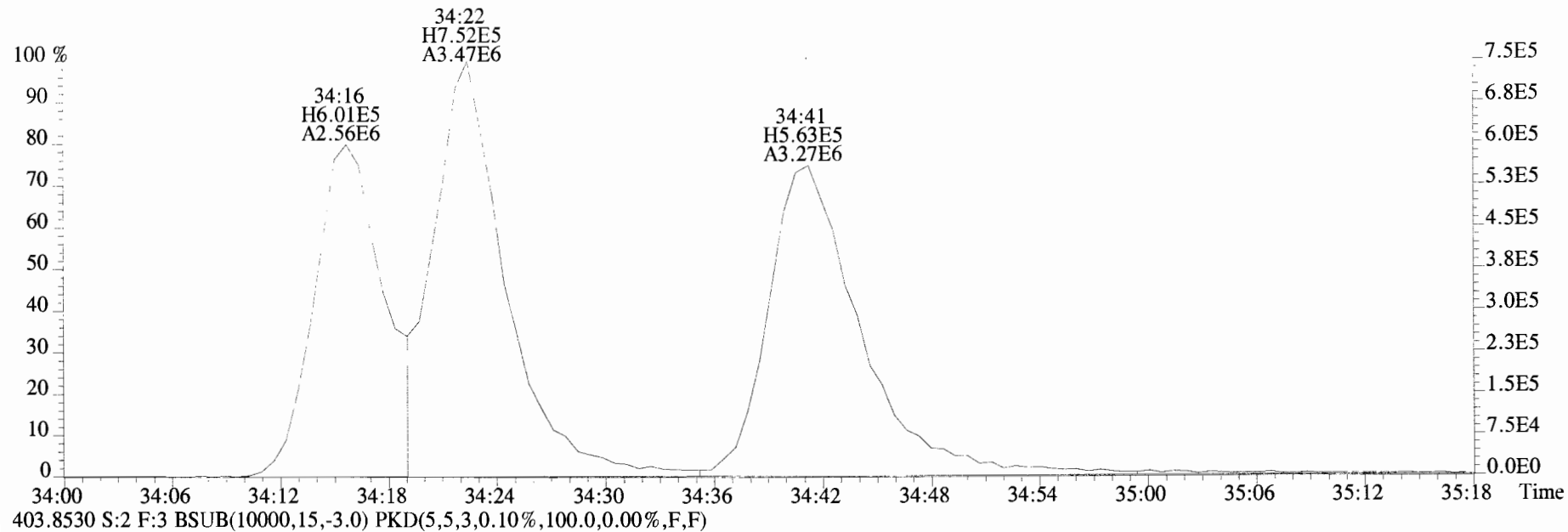
392.9760 S:2 F:3



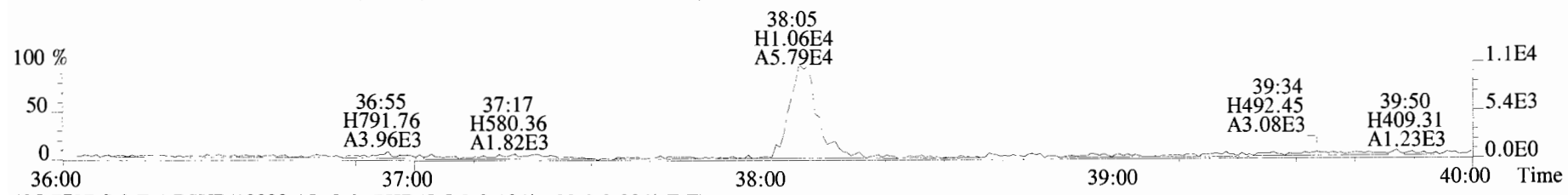
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



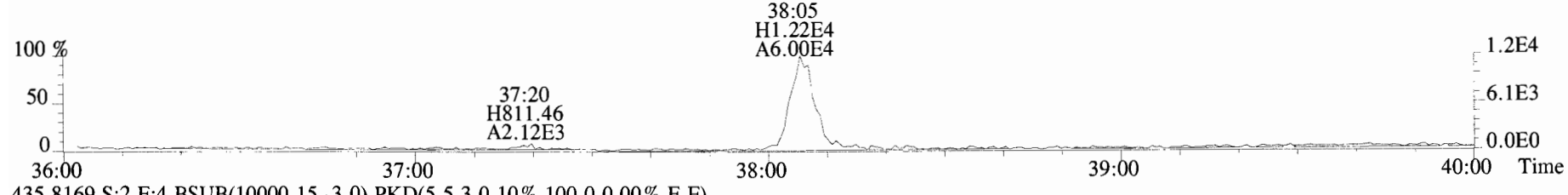
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



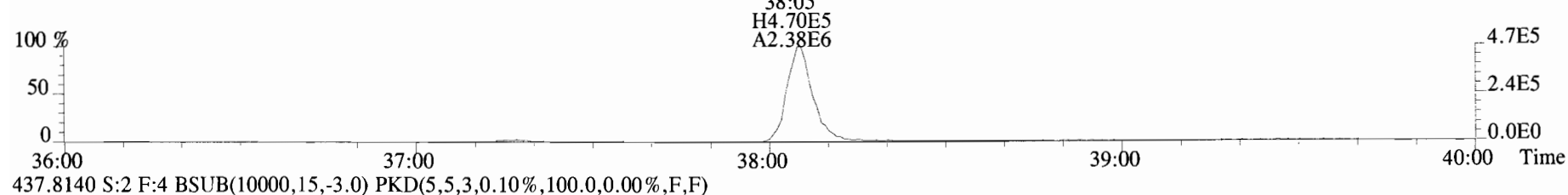
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



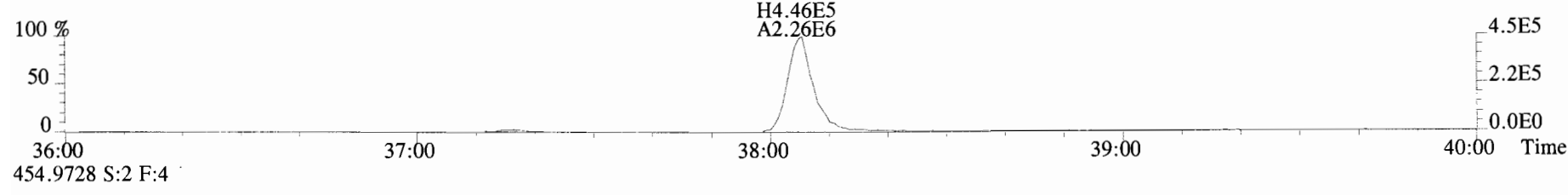
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



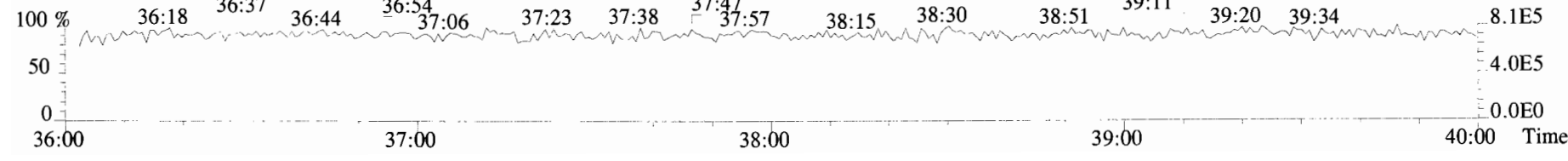
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



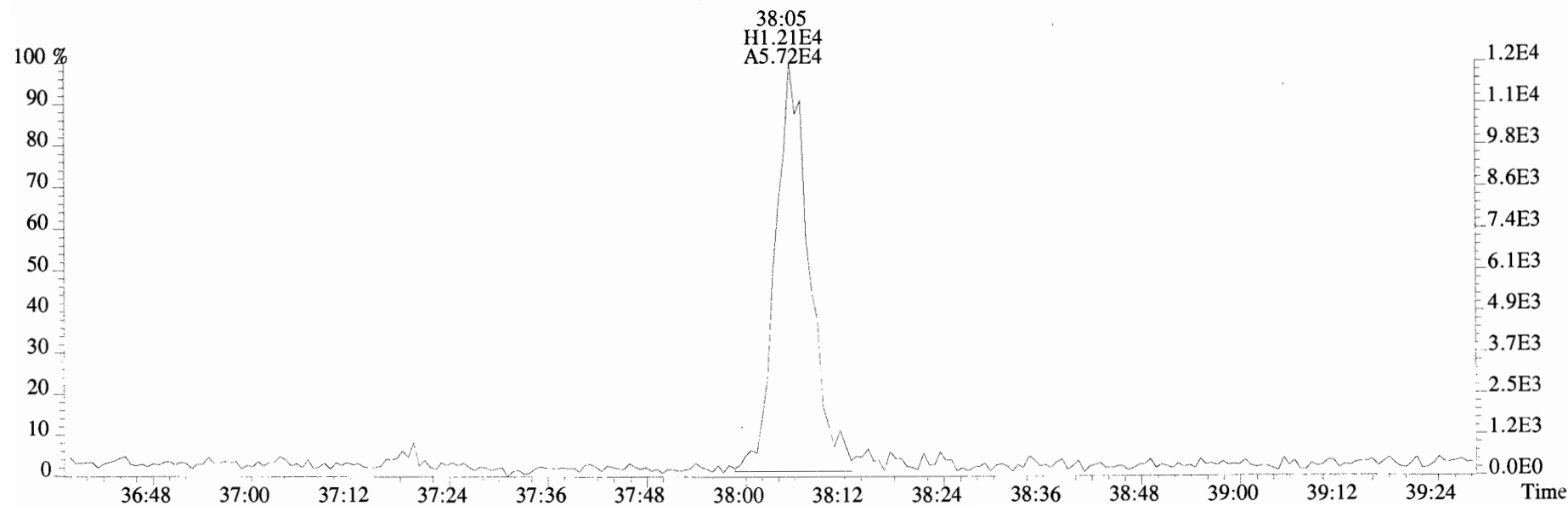
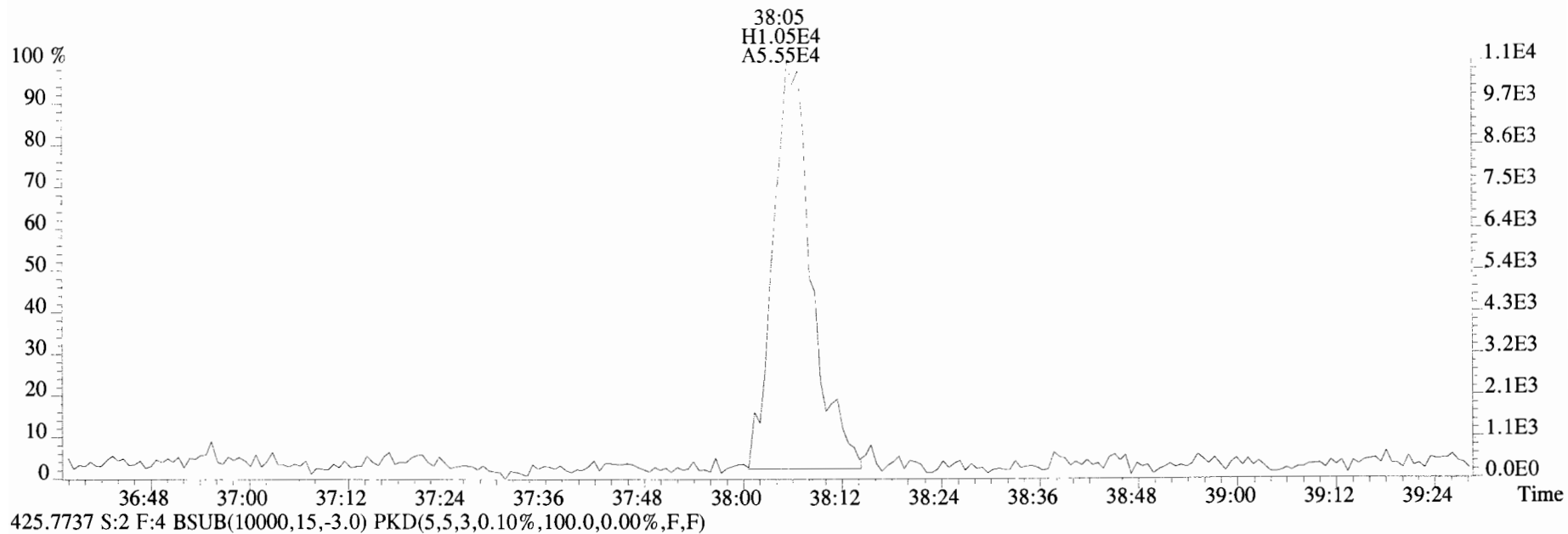
437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



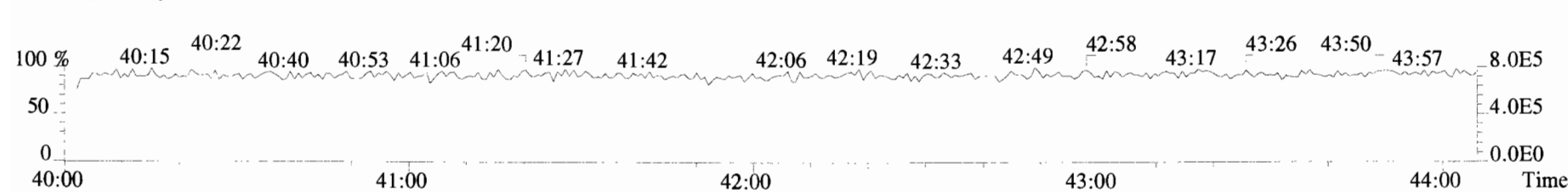
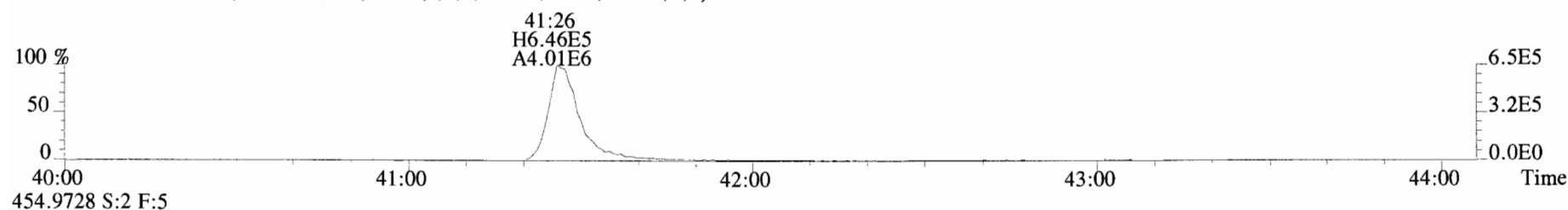
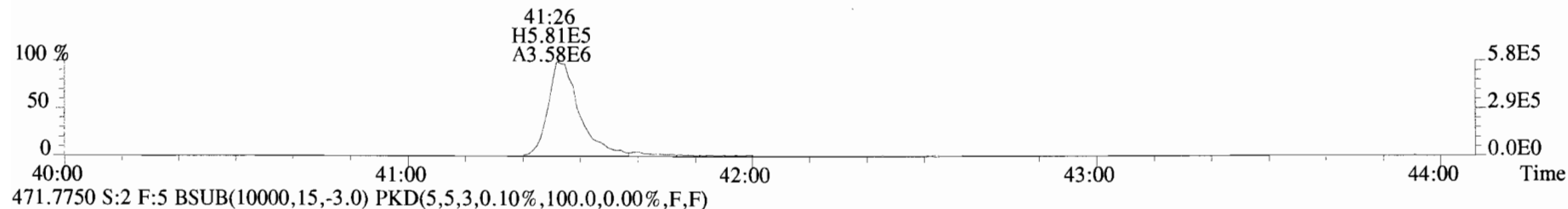
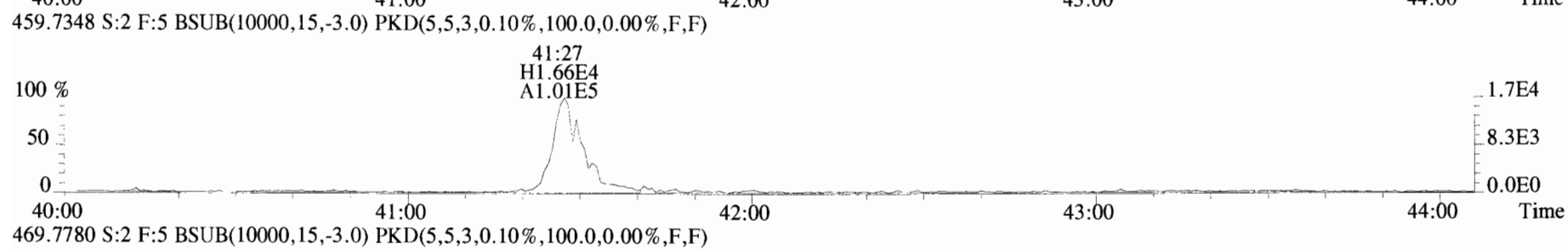
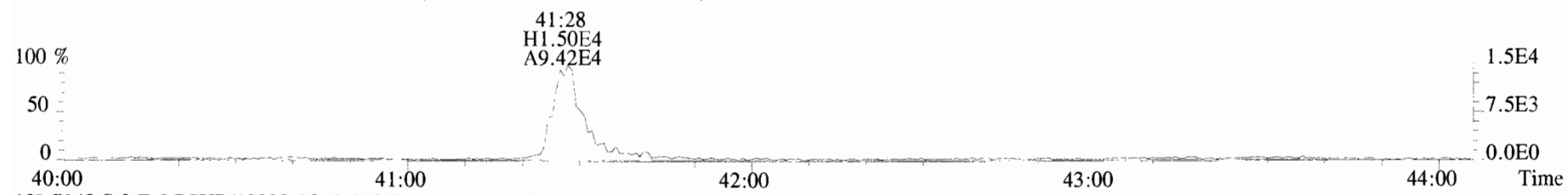
454.9728 S:2 F:4



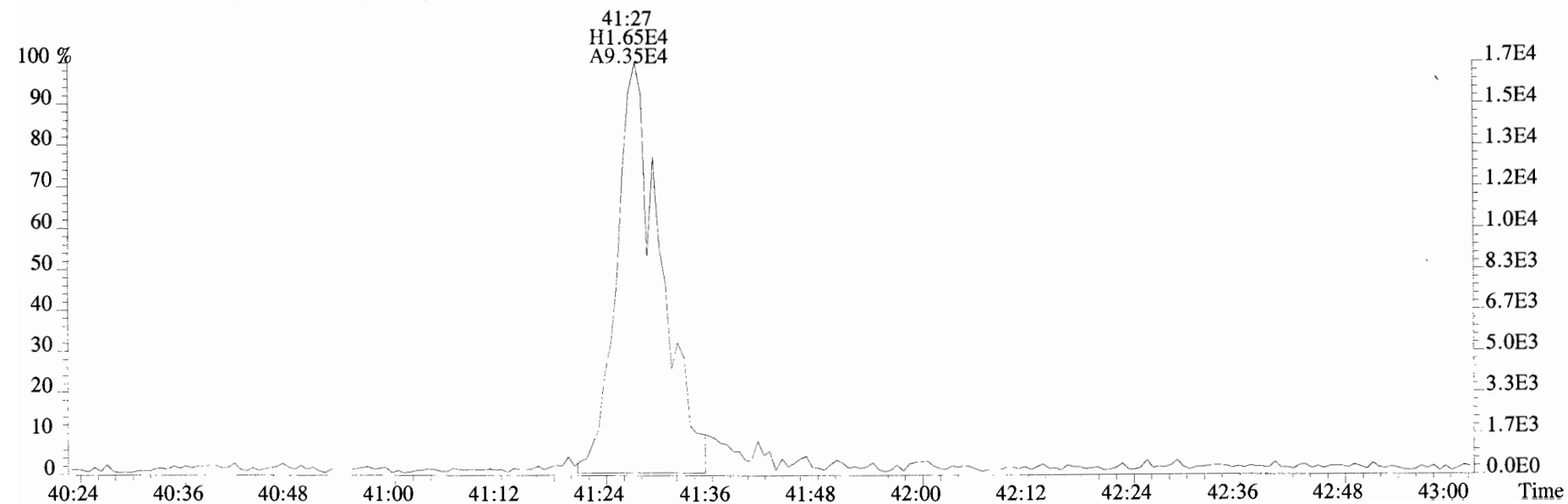
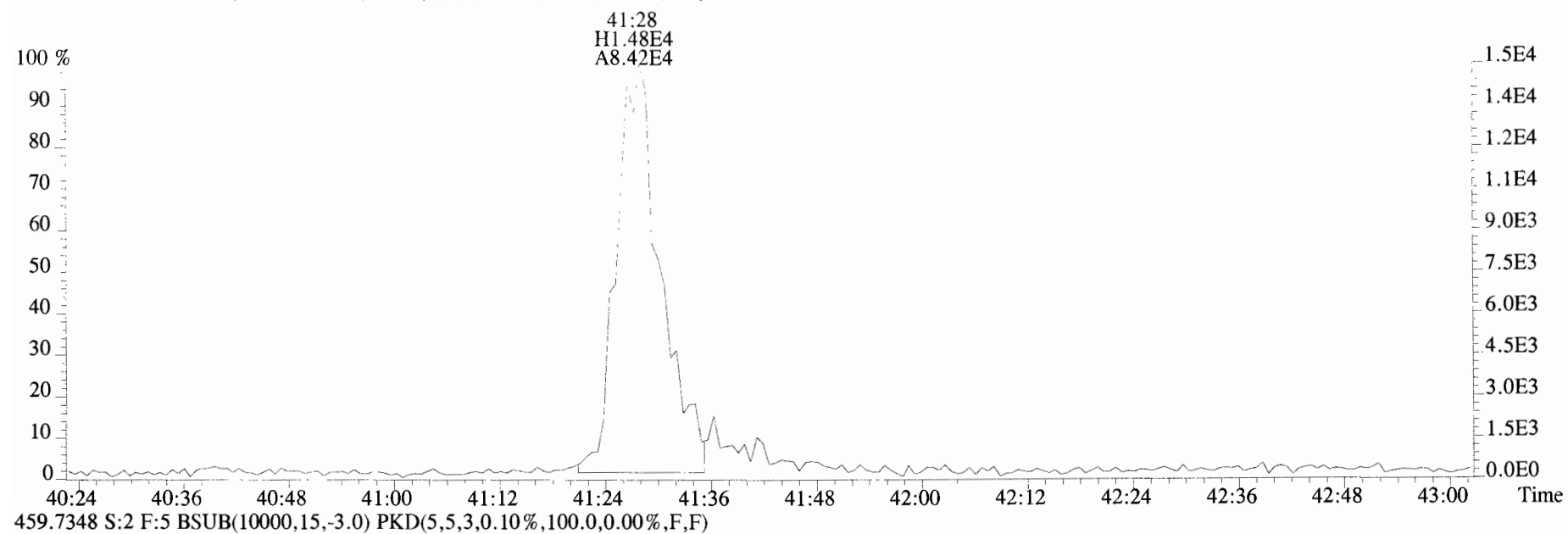
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
423.7767 S:2 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



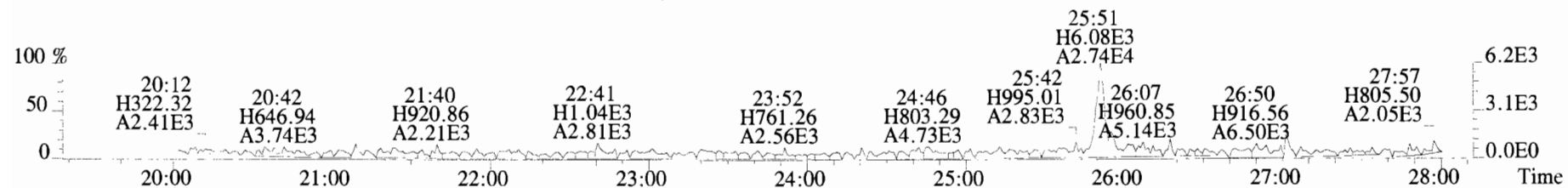
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



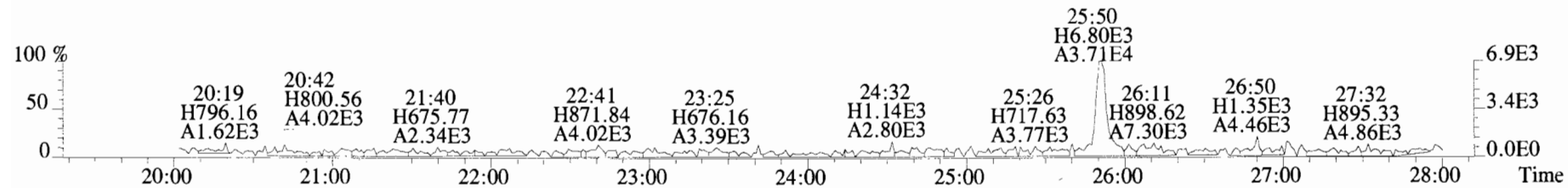
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



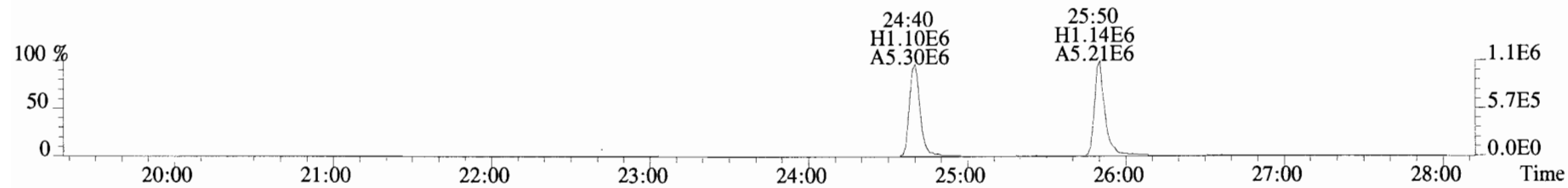
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



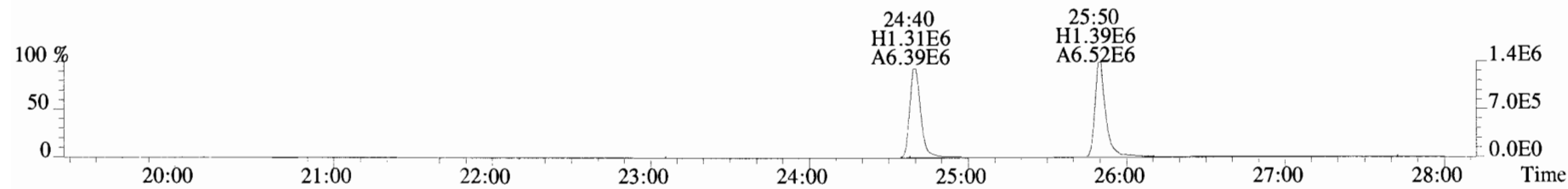
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



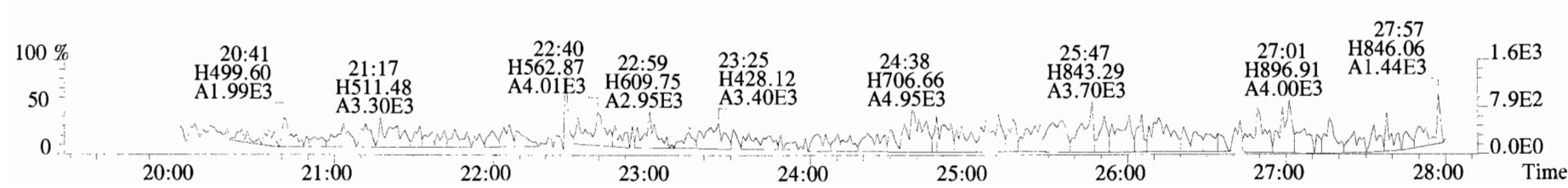
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



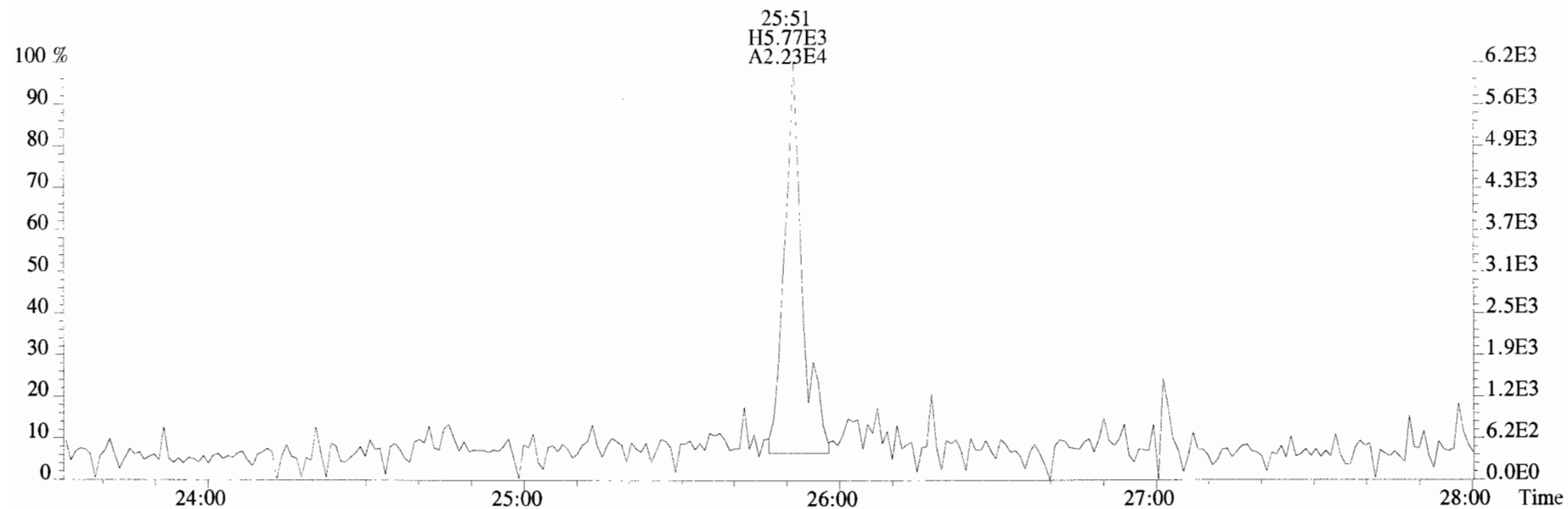
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



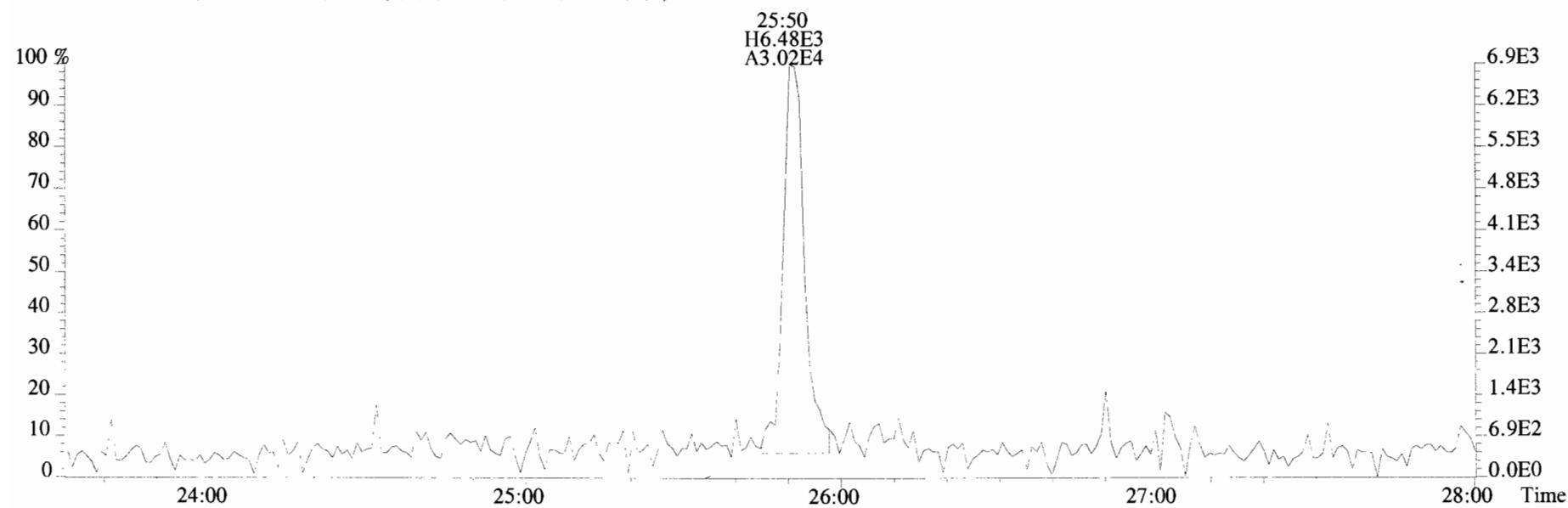
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



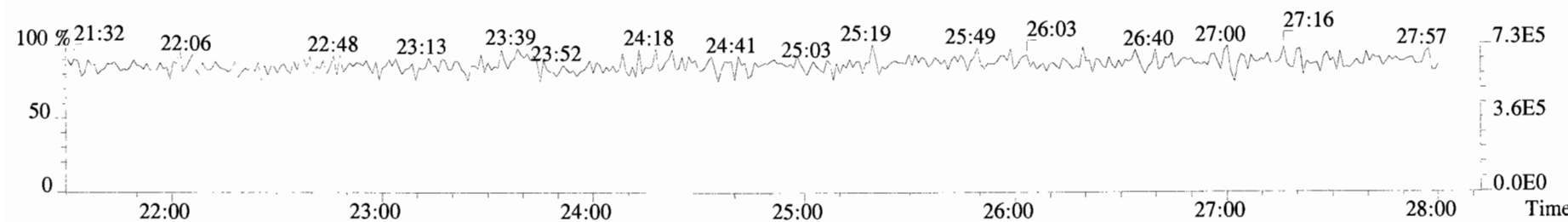
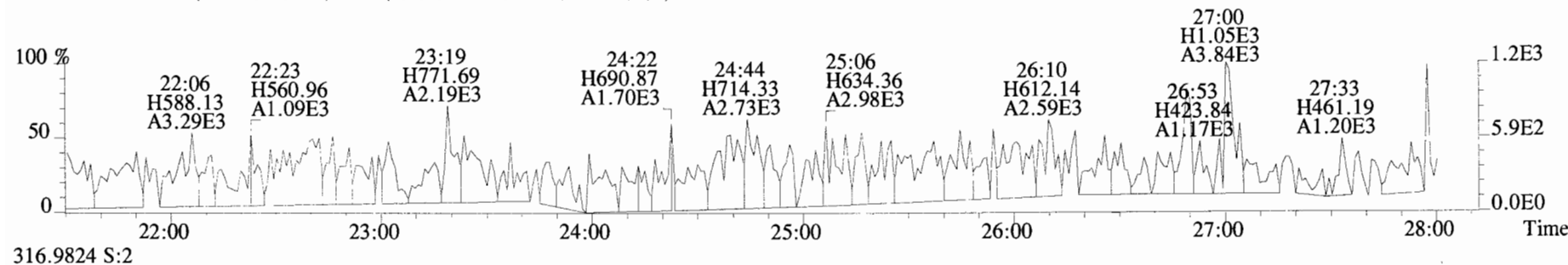
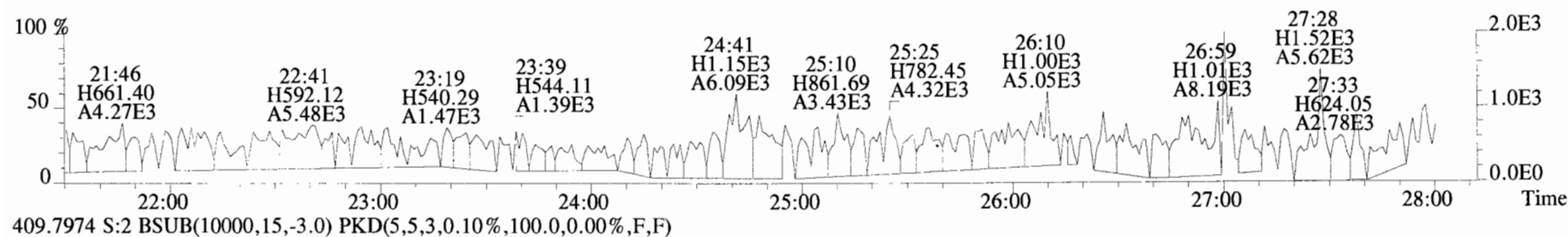
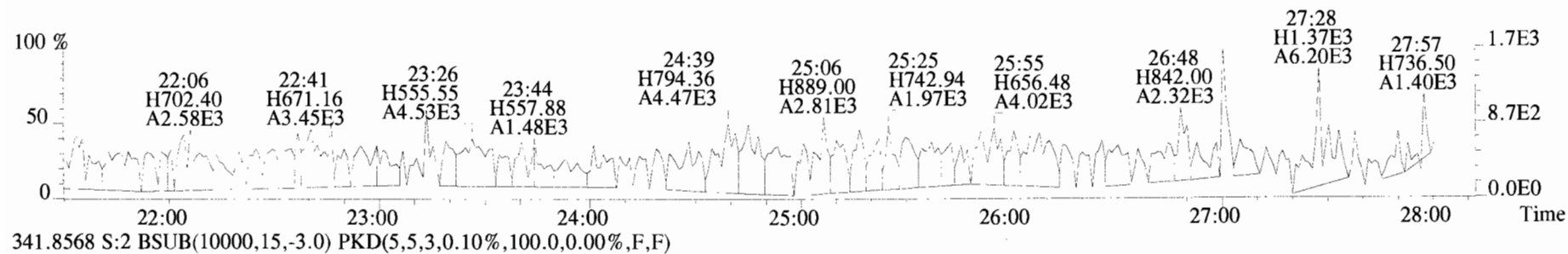
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



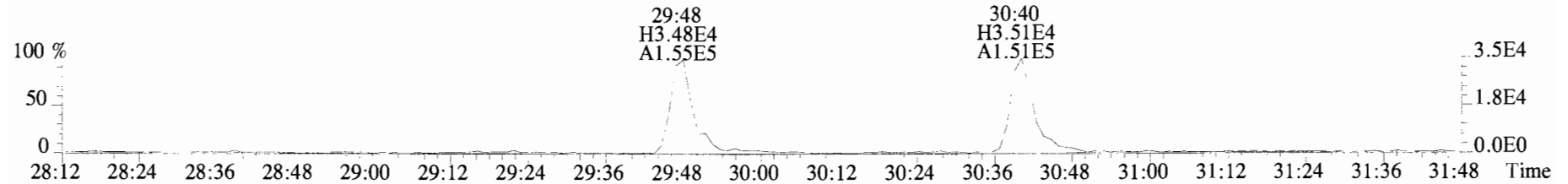
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



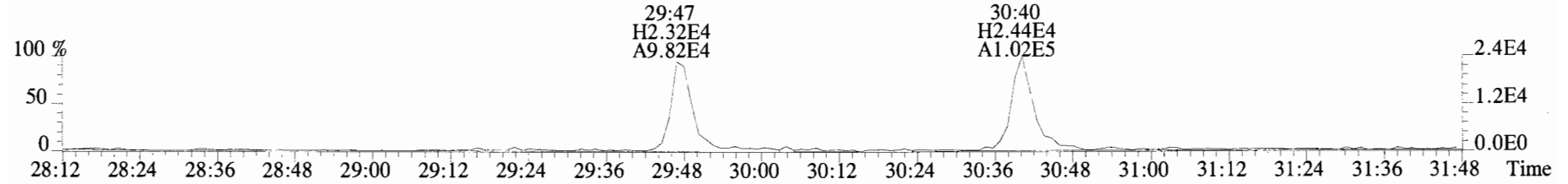
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
 339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



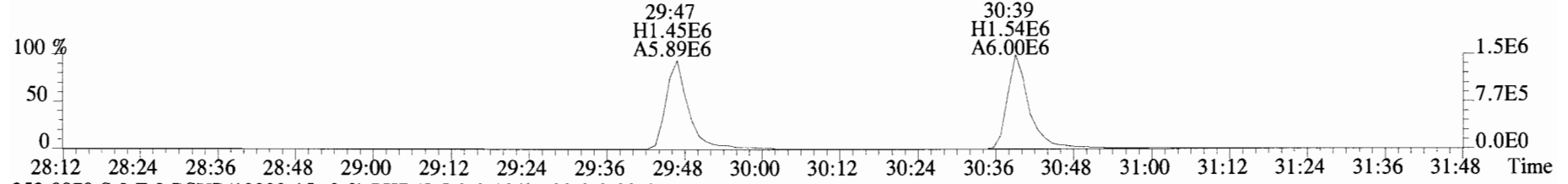
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



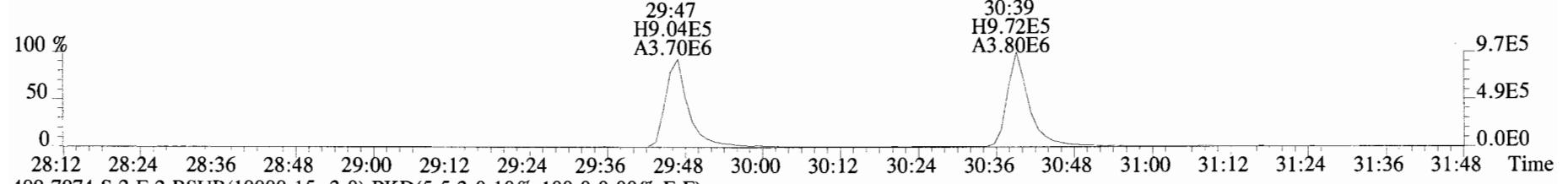
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



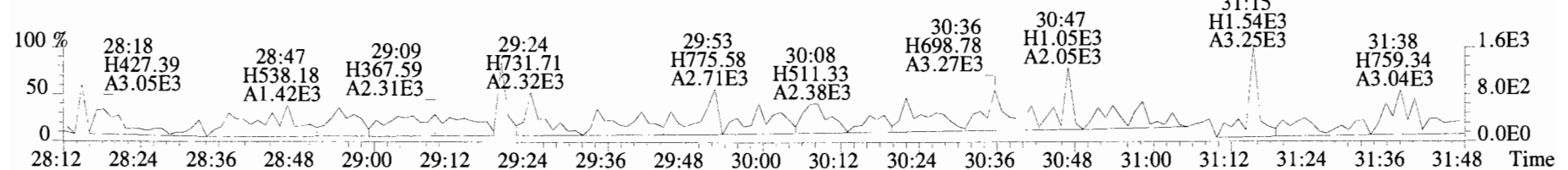
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



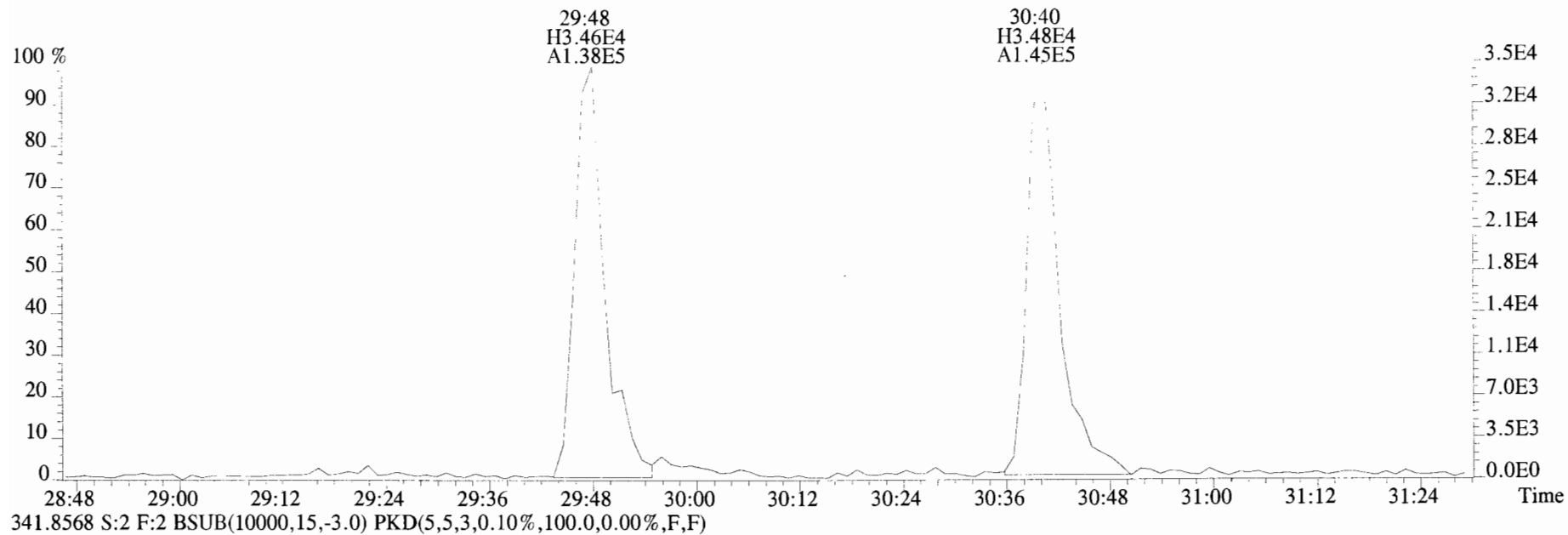
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



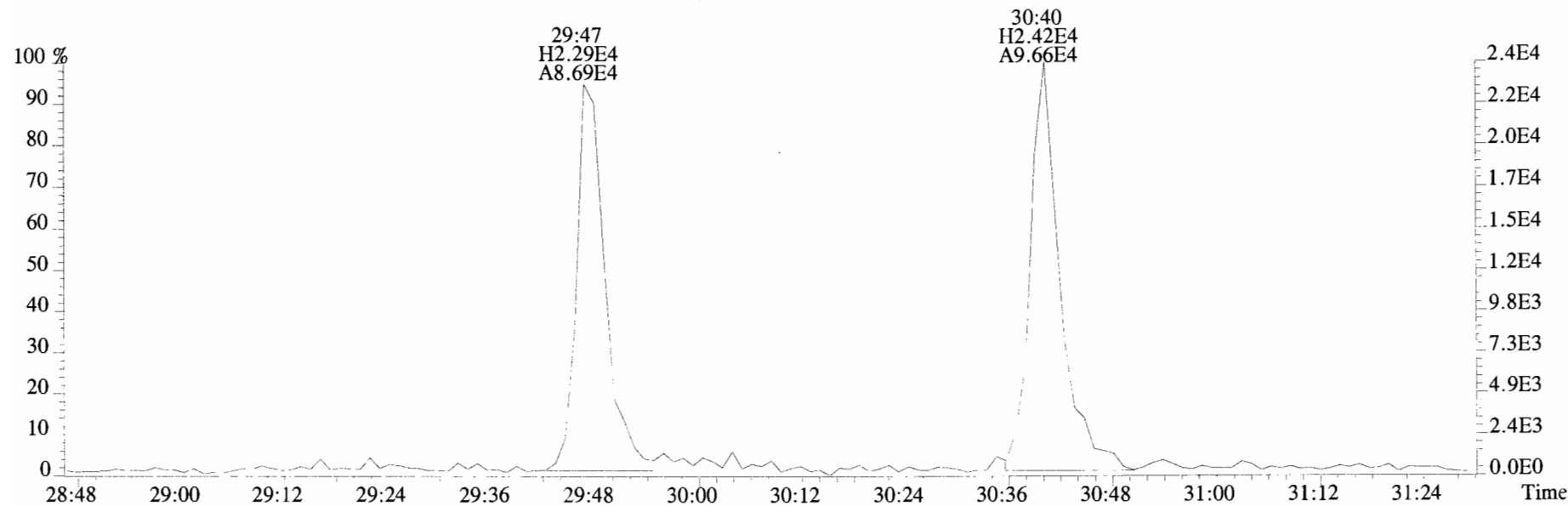
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



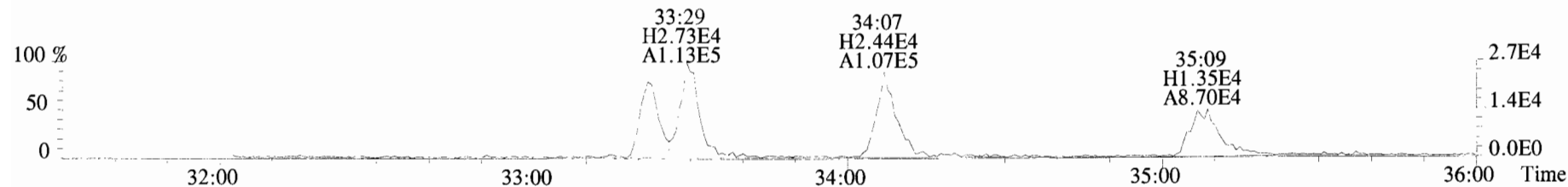
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



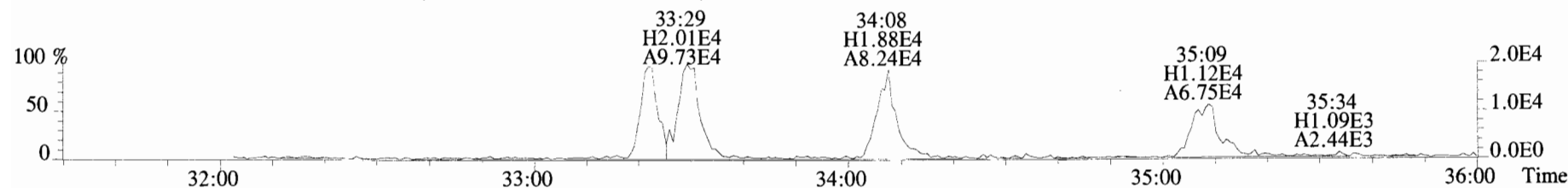
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



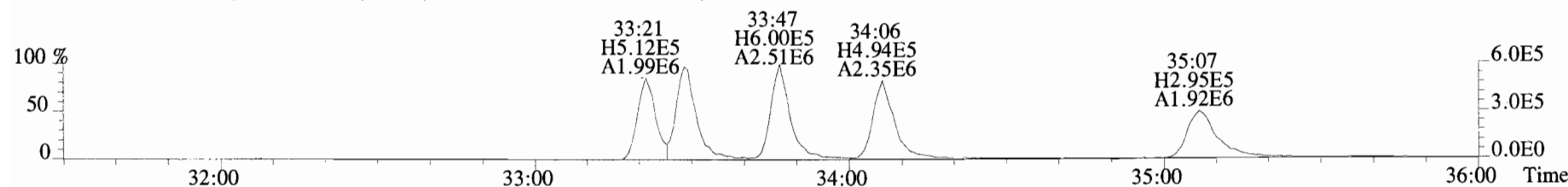
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
 373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



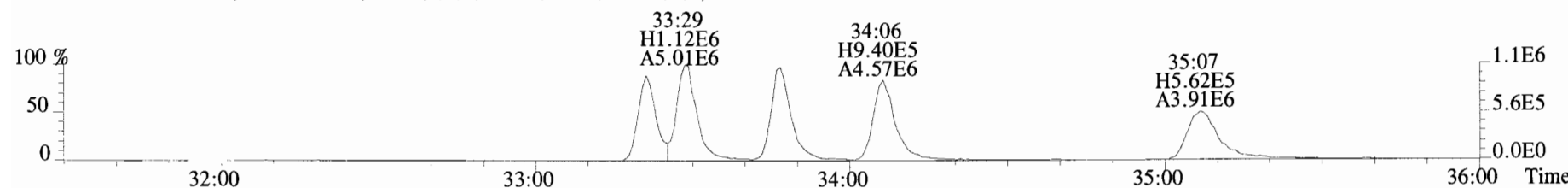
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



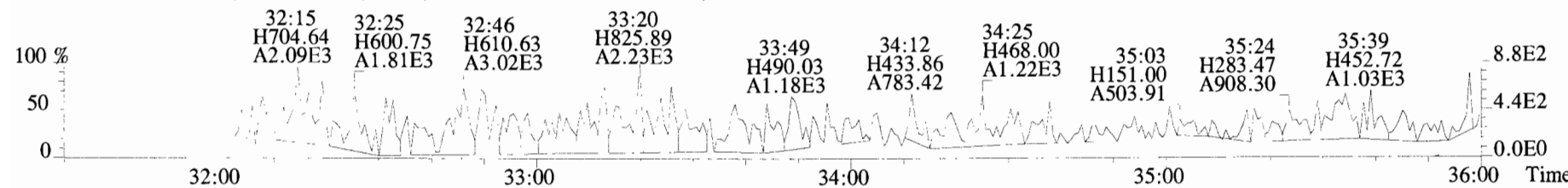
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



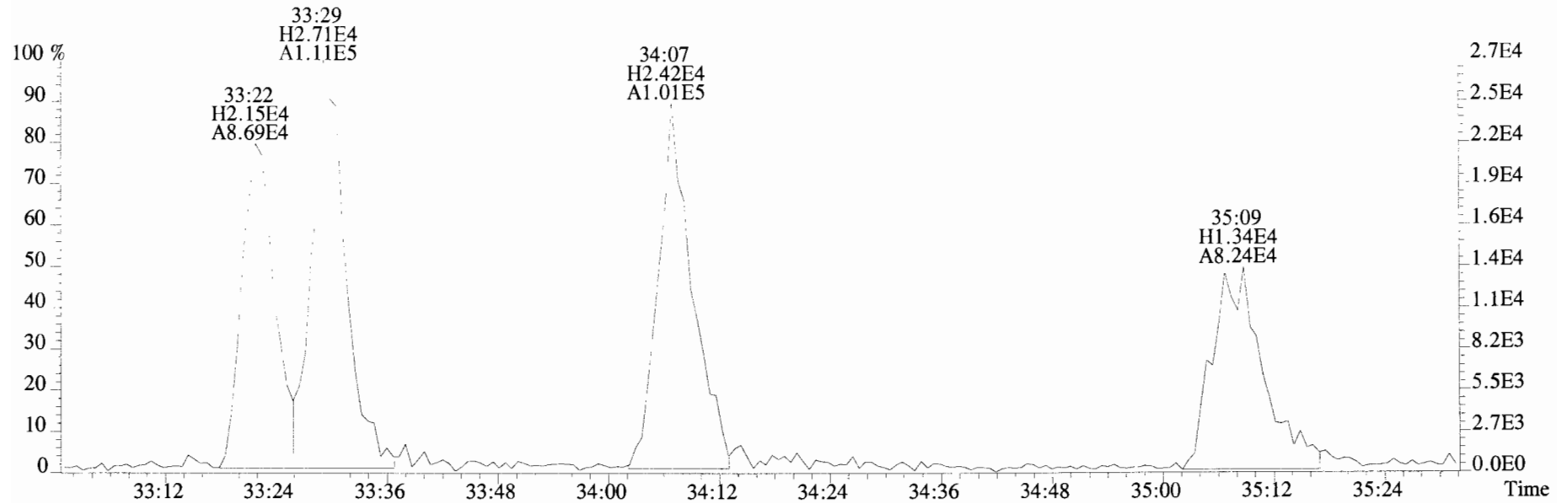
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



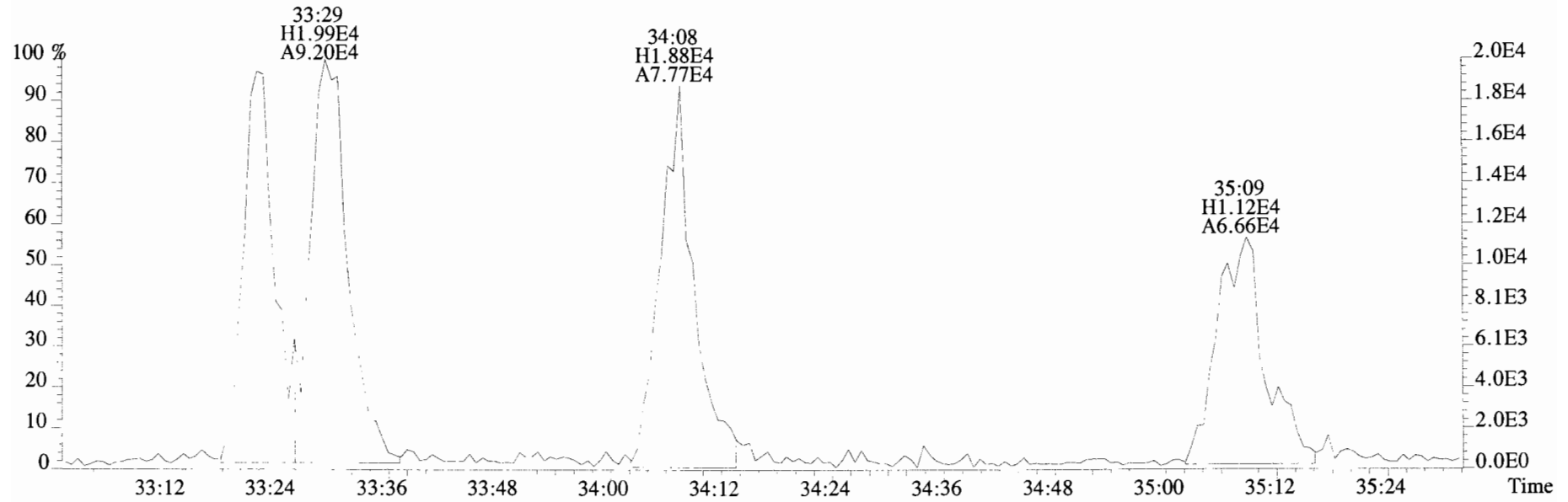
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



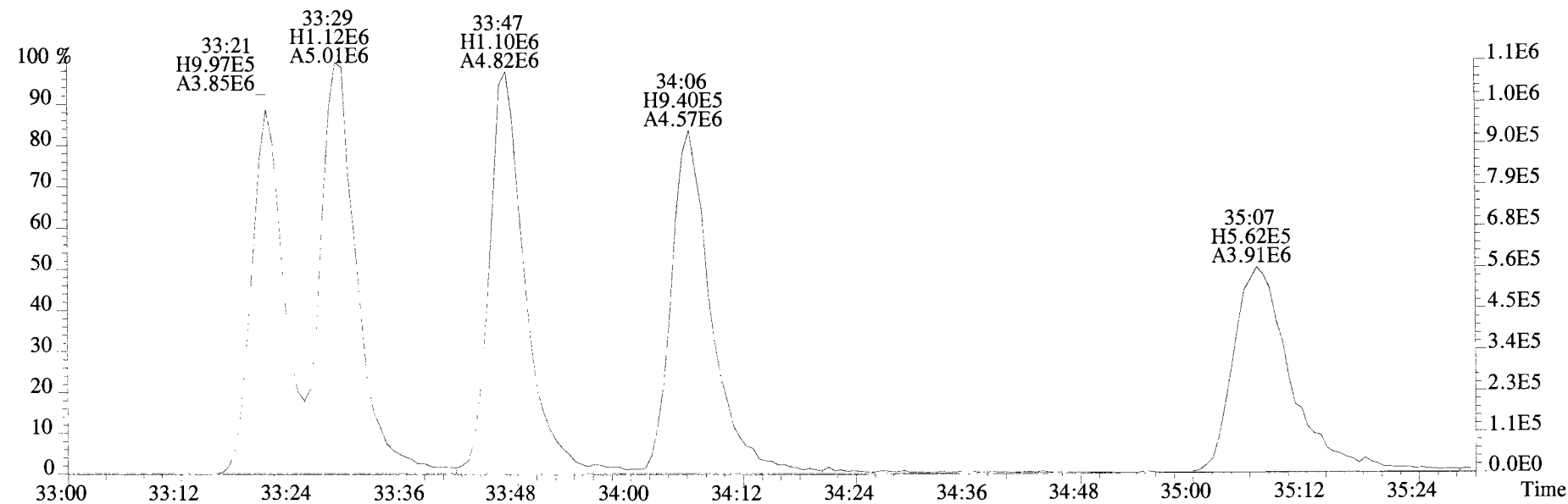
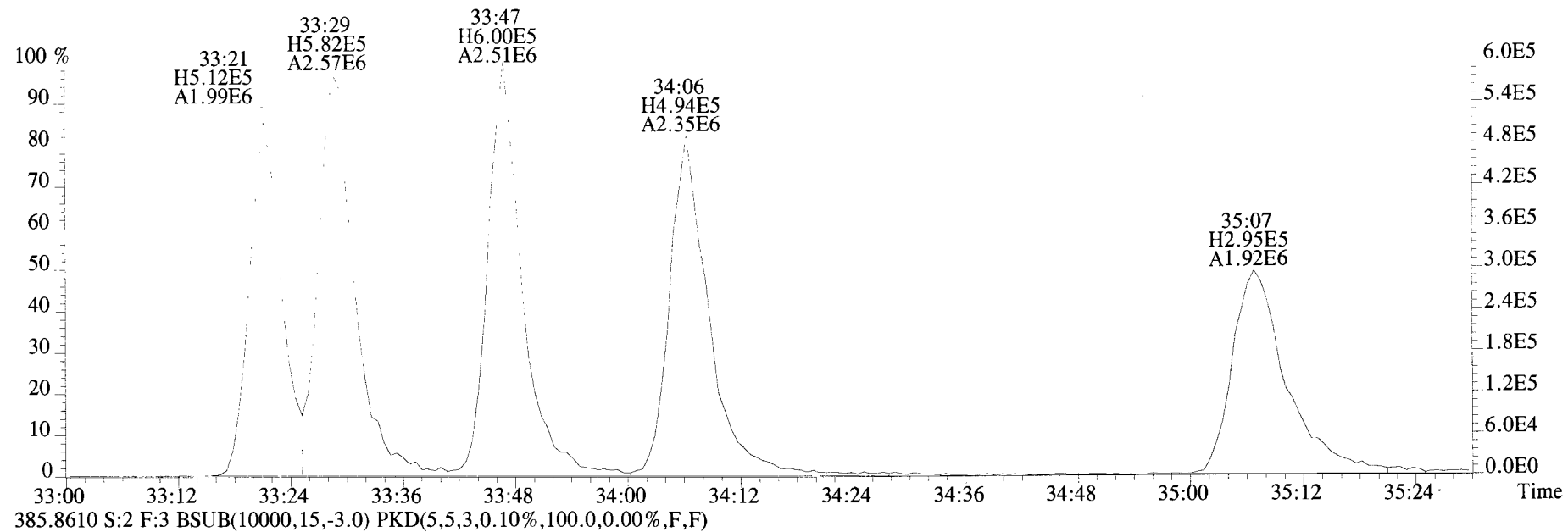
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



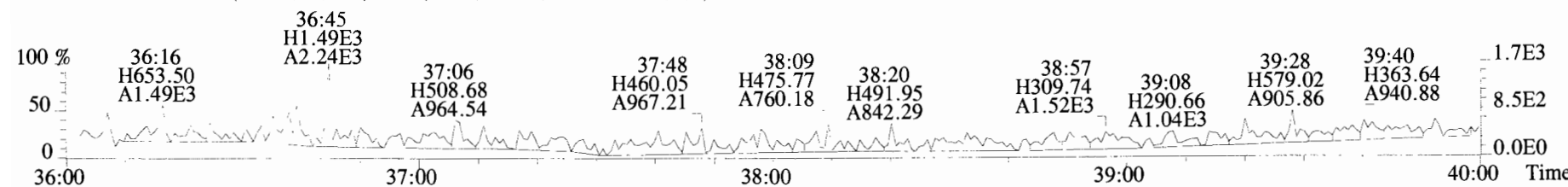
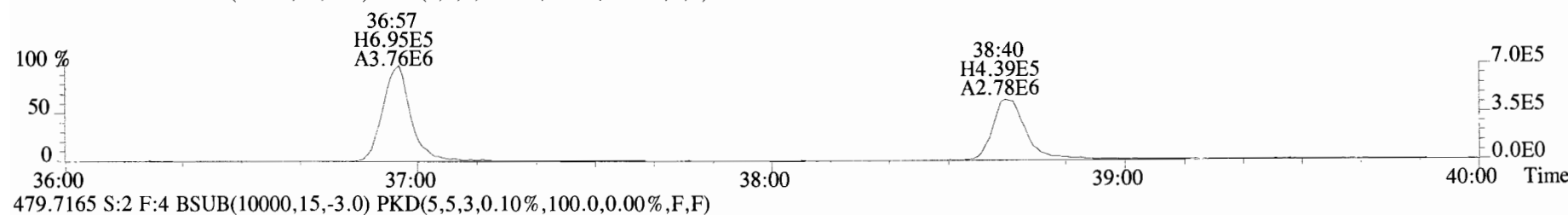
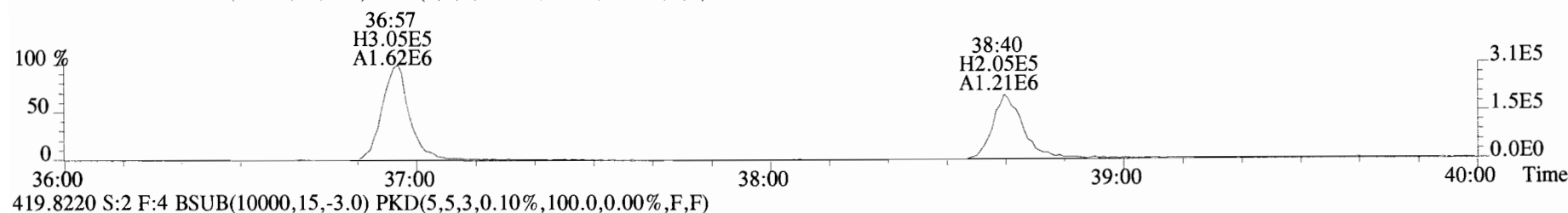
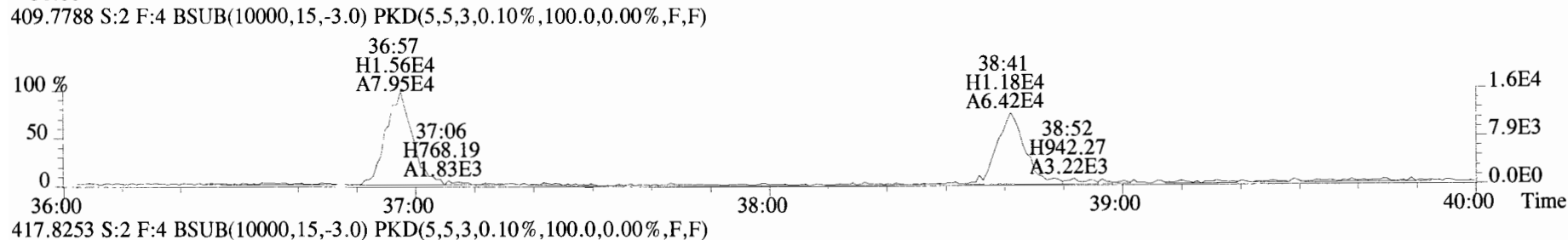
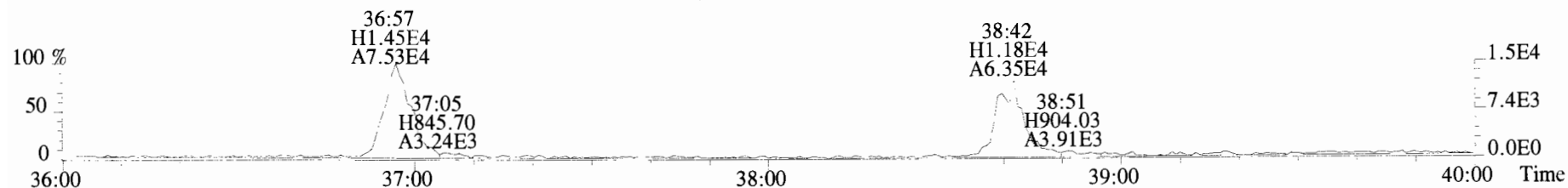
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



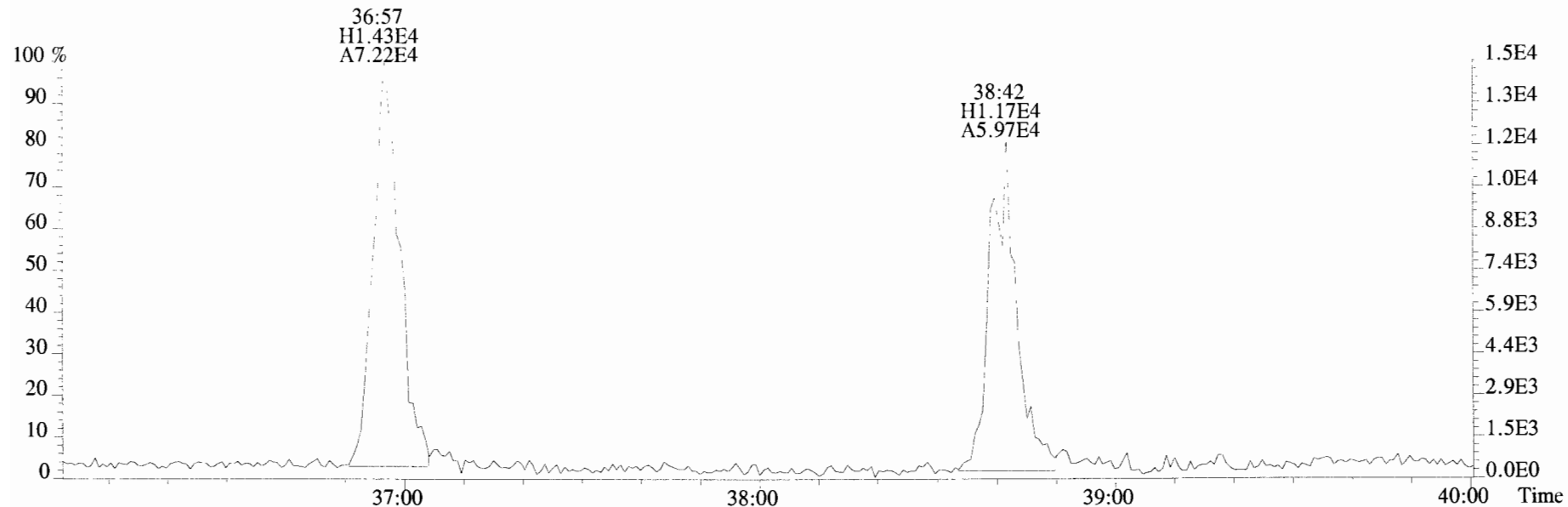
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



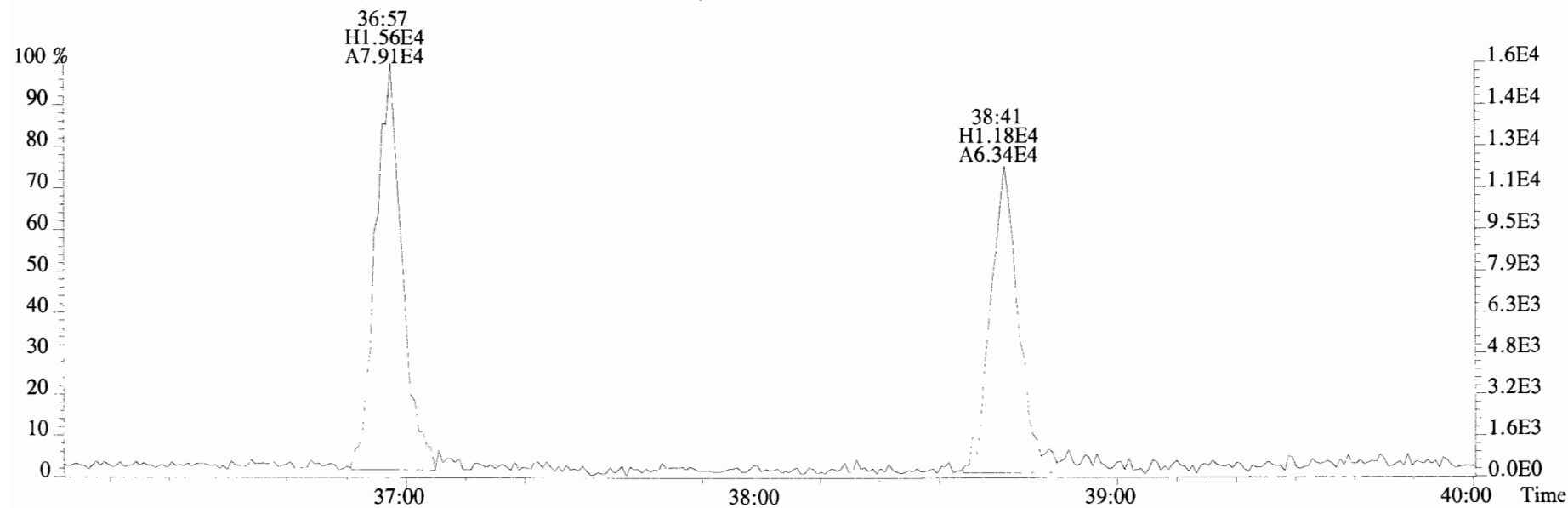
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text: Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
 407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



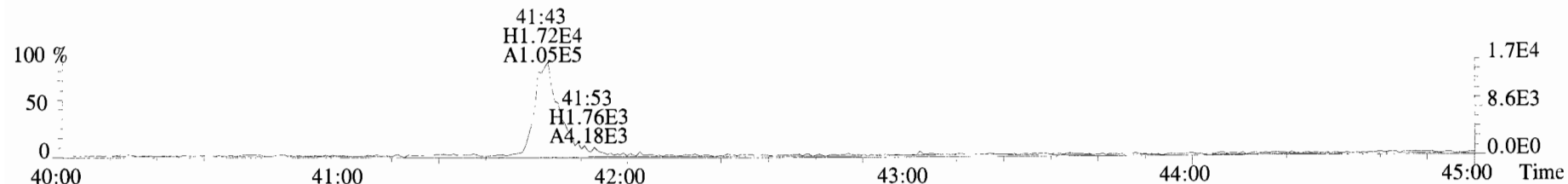
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



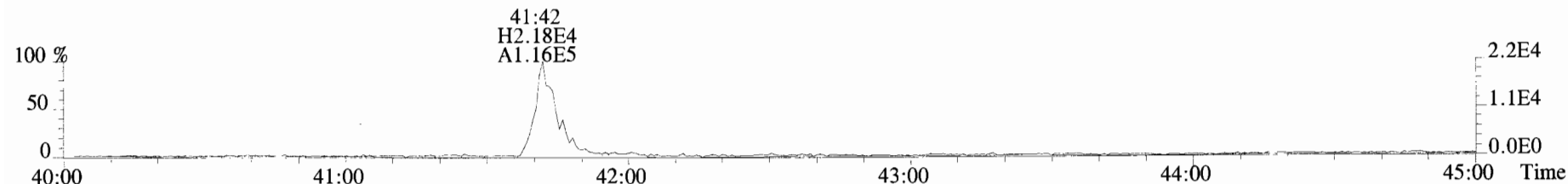
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



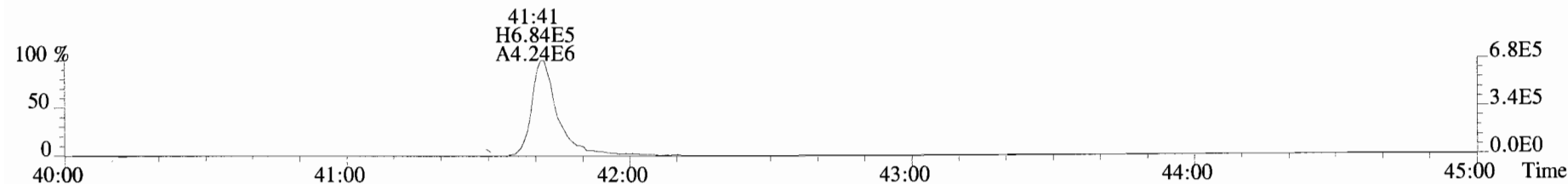
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
 441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



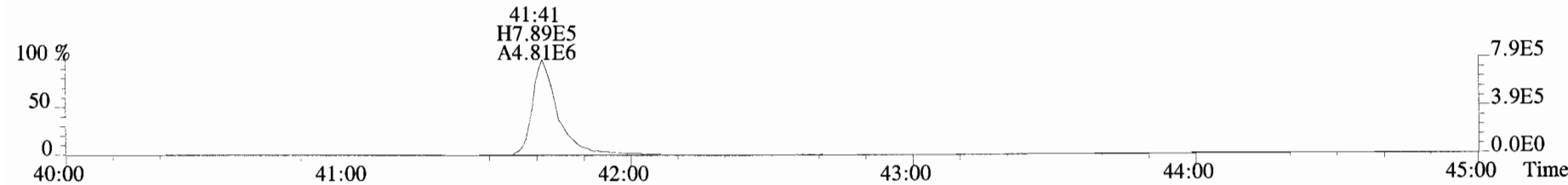
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



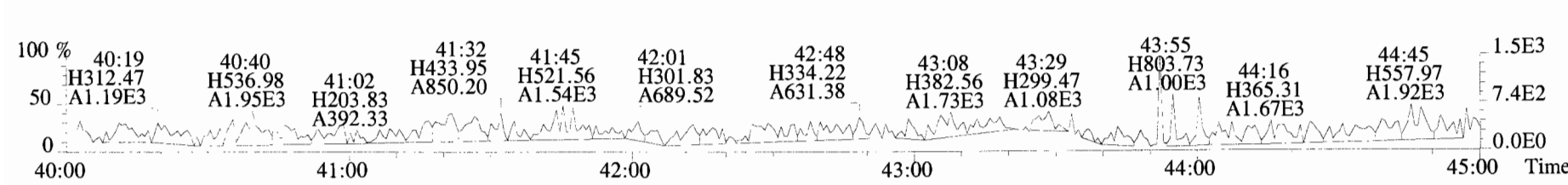
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



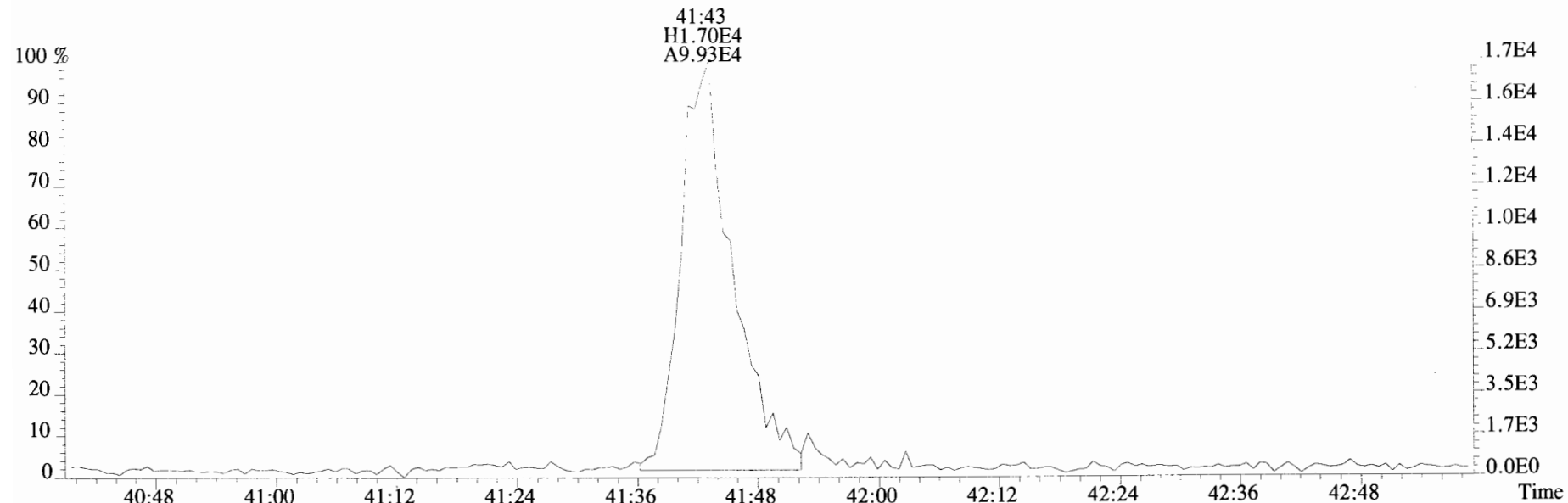
455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



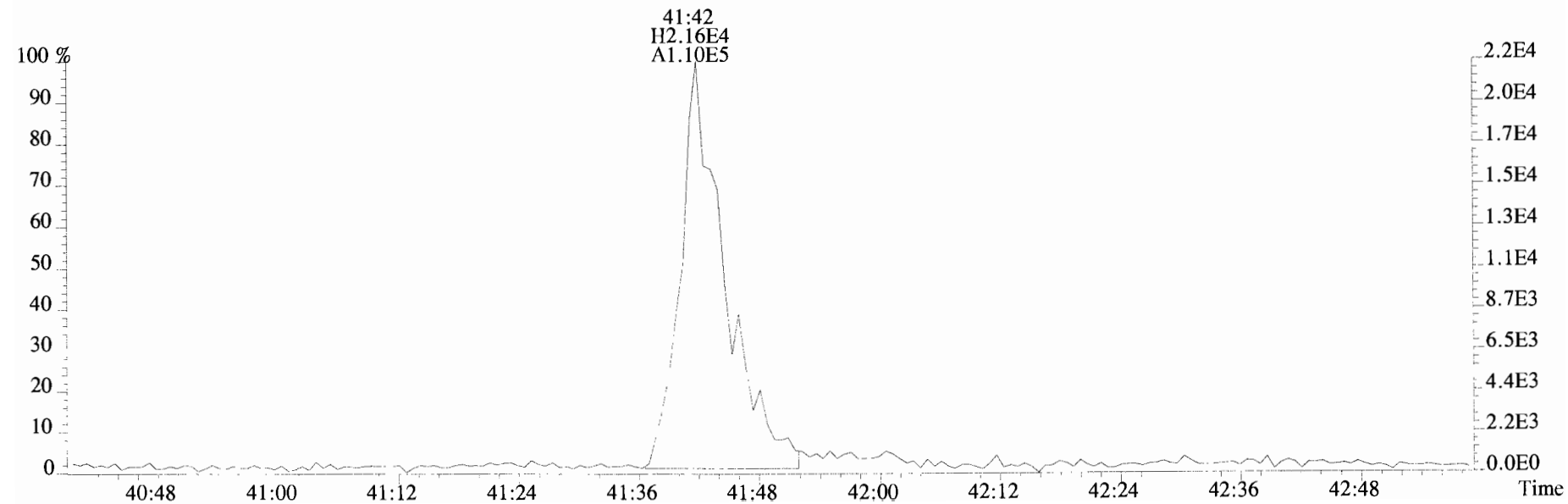
513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



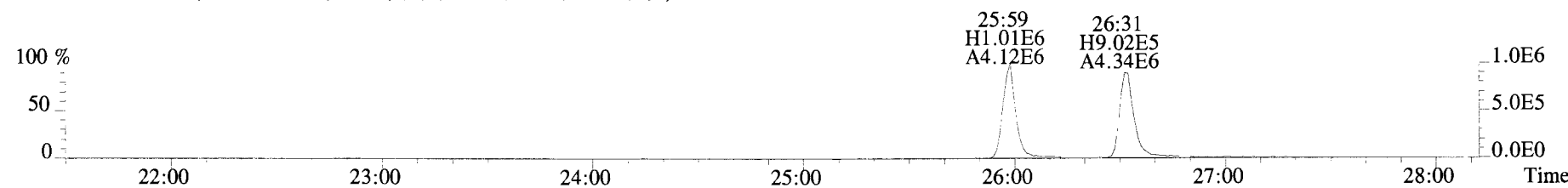
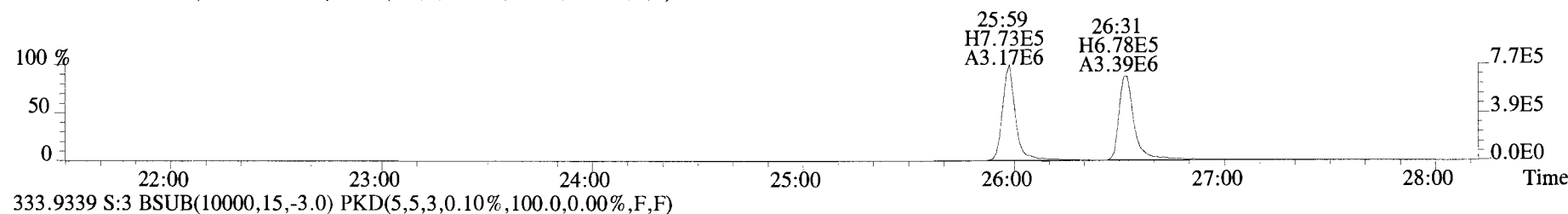
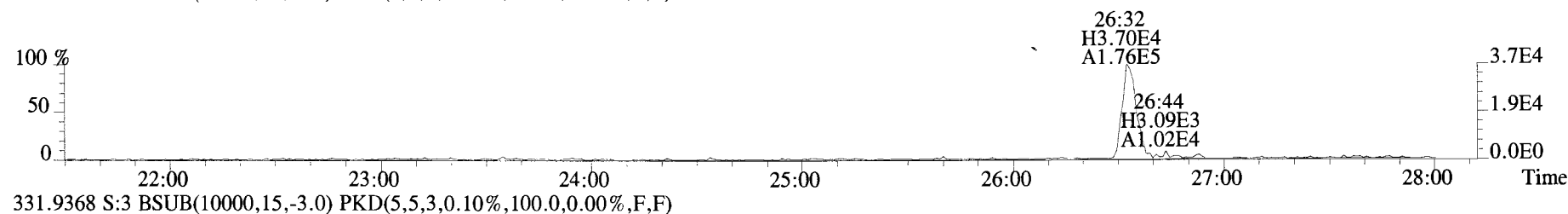
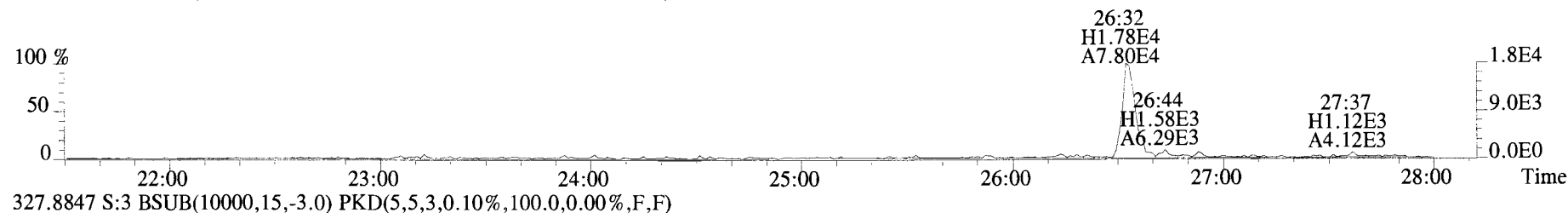
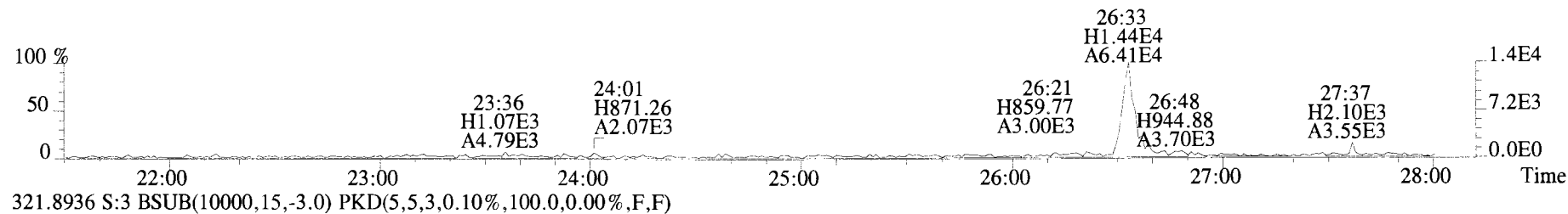
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



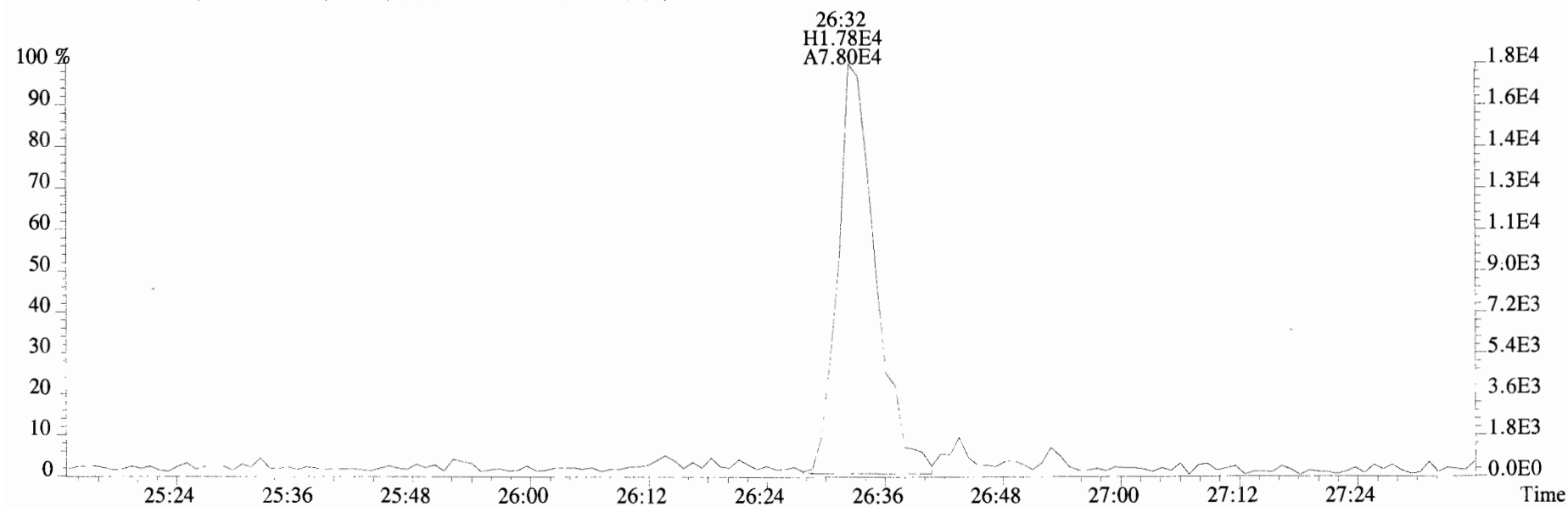
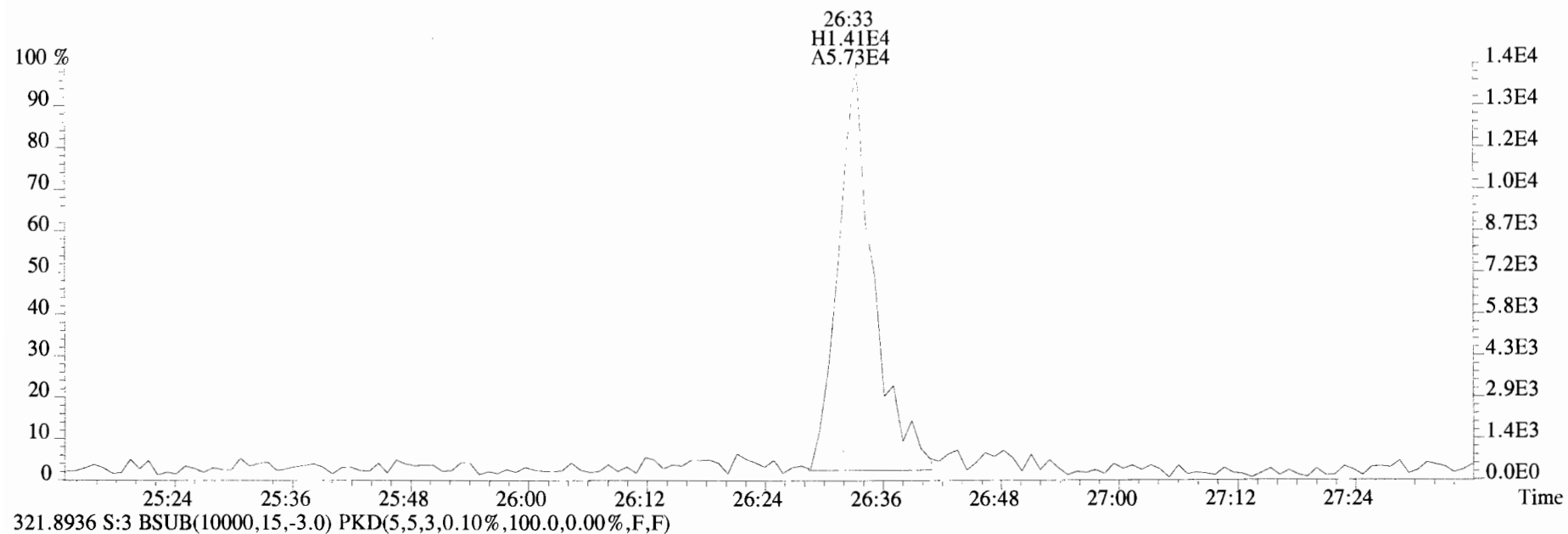
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



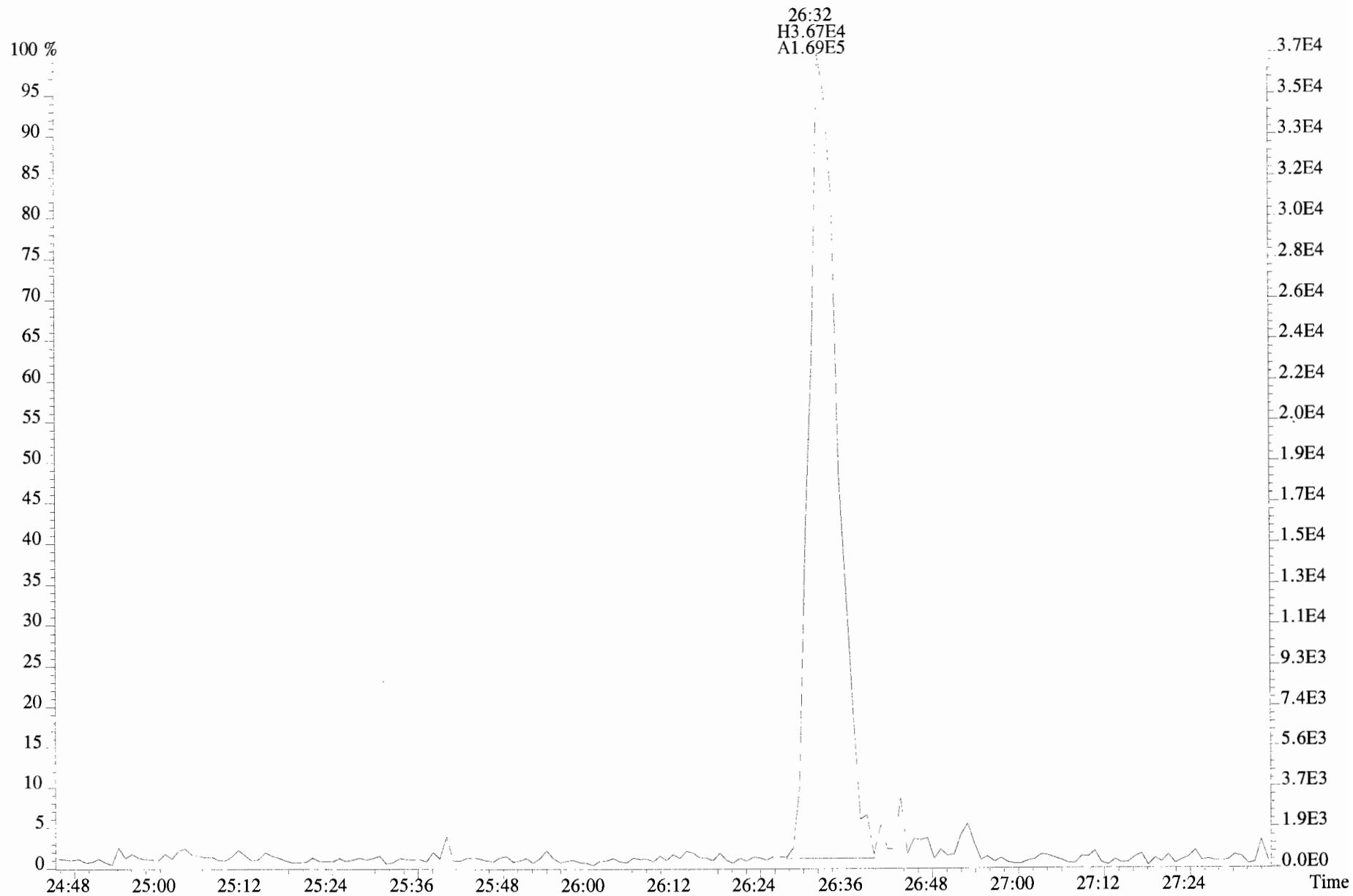
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



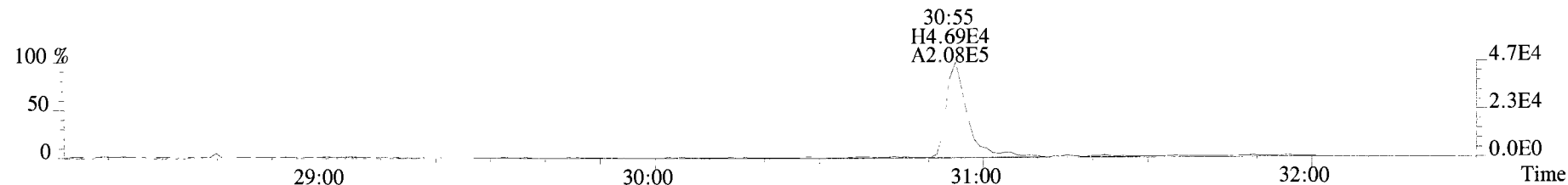
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



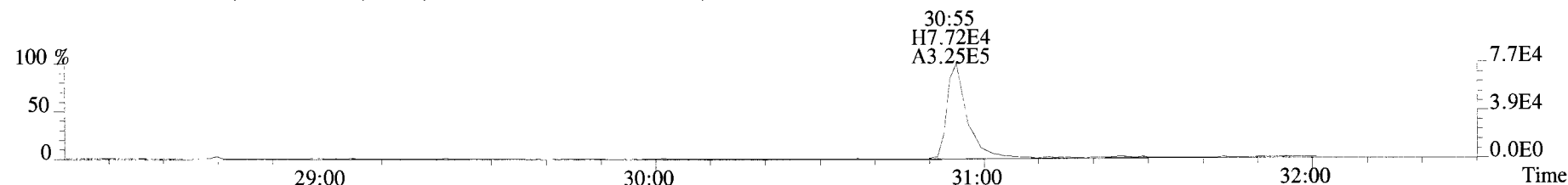
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



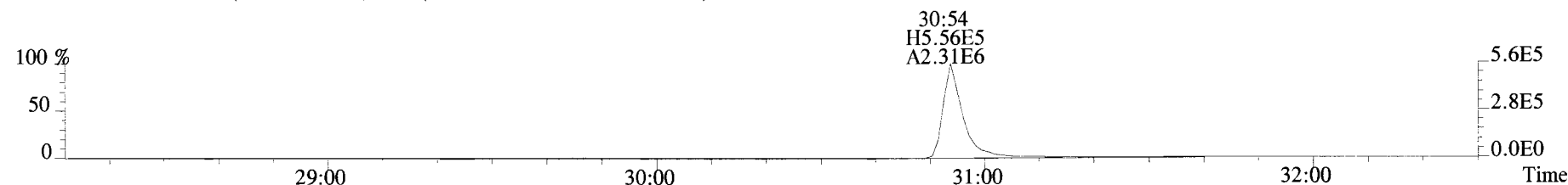
File:191009D1 #1-211 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



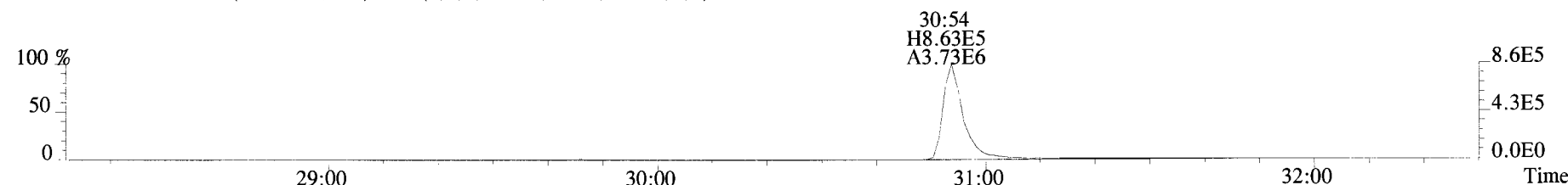
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



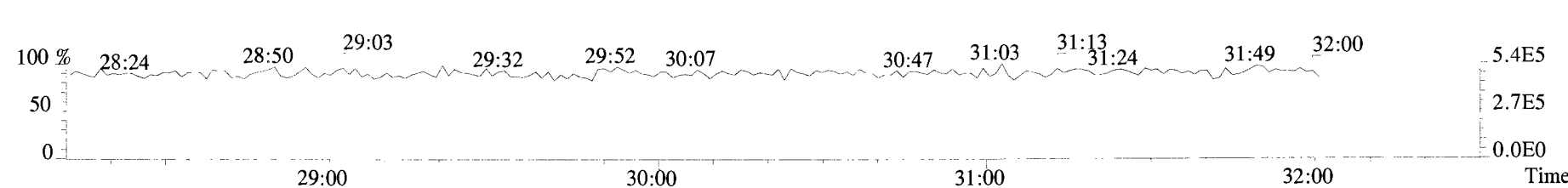
365.8978 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



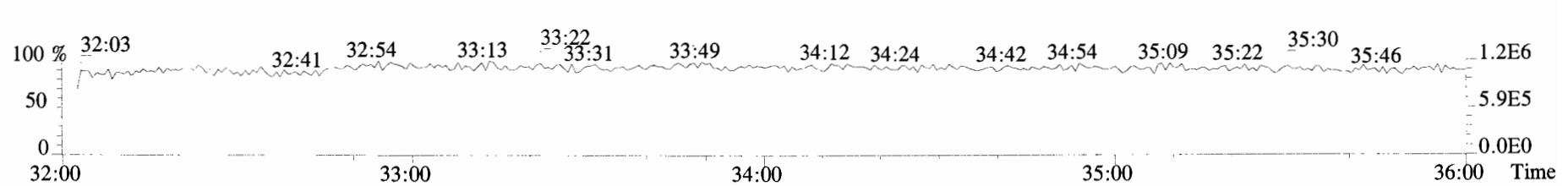
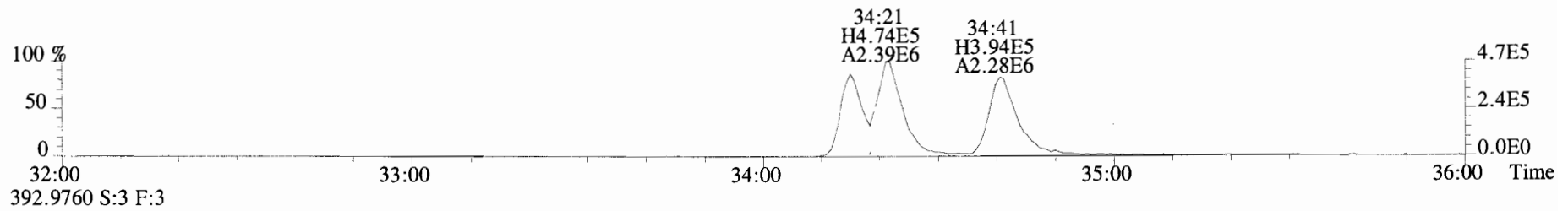
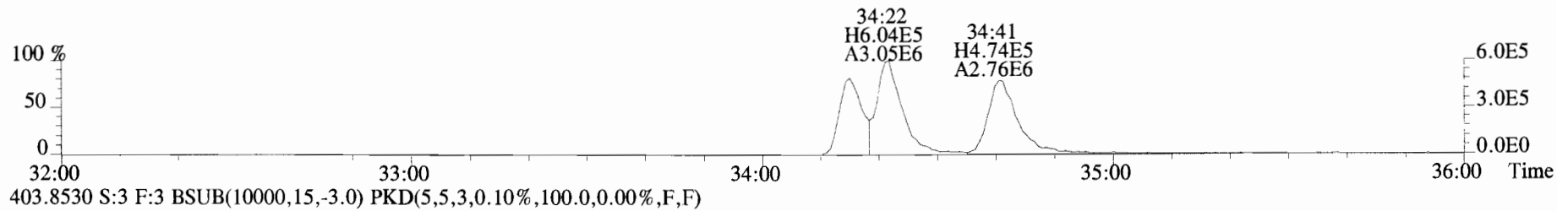
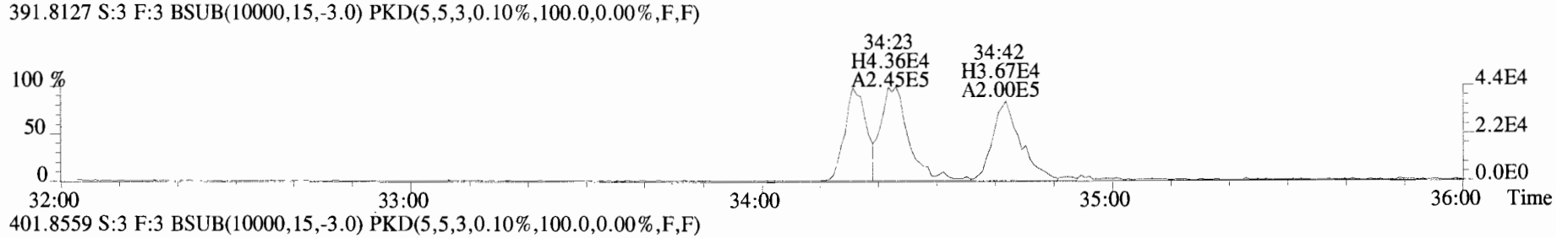
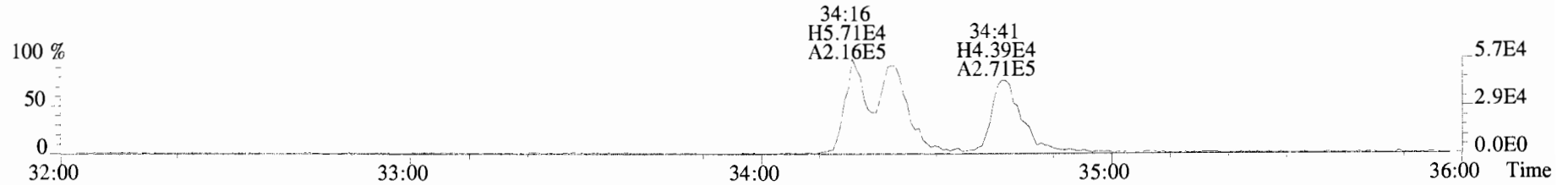
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



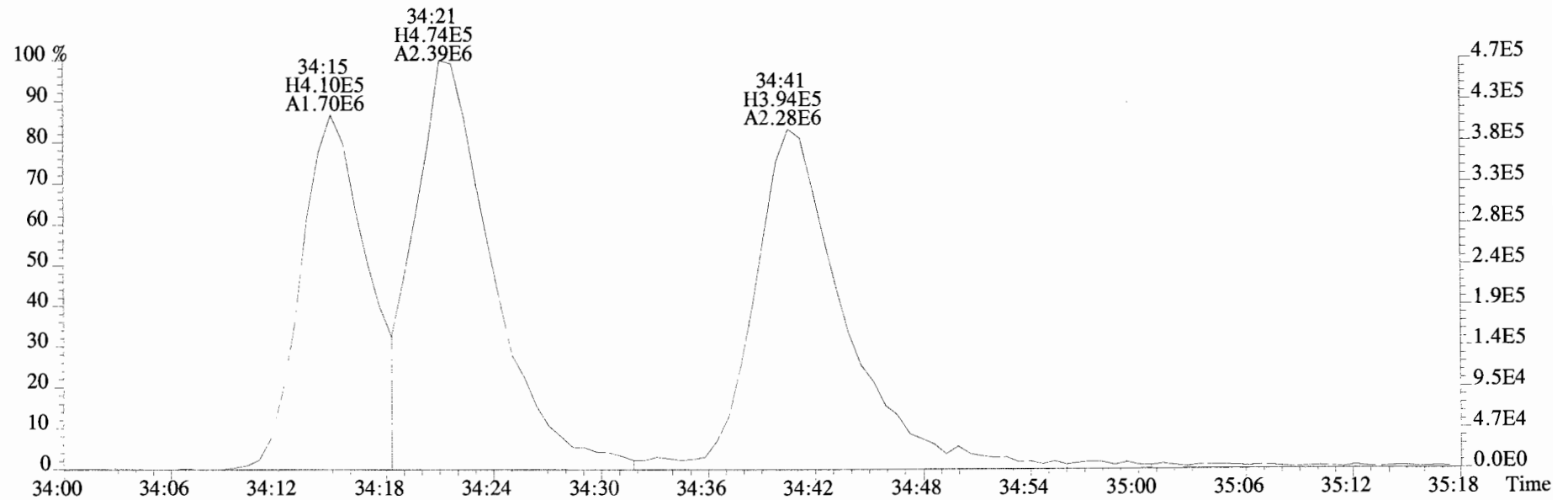
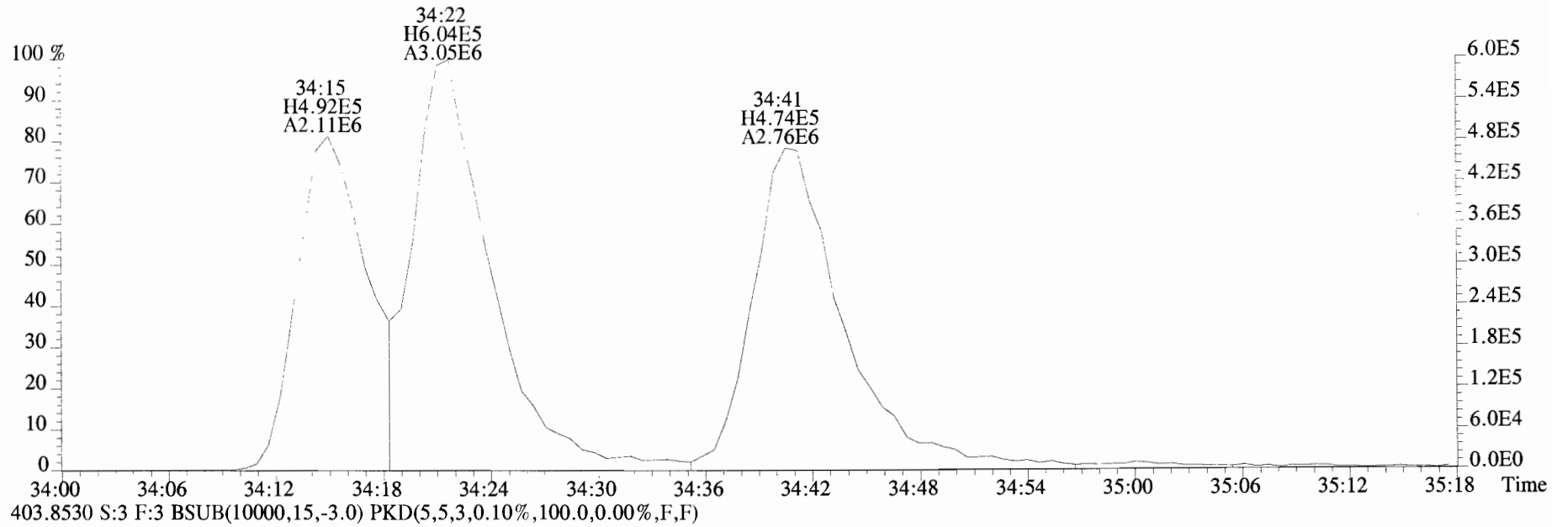
366.9792 S:3 F:2



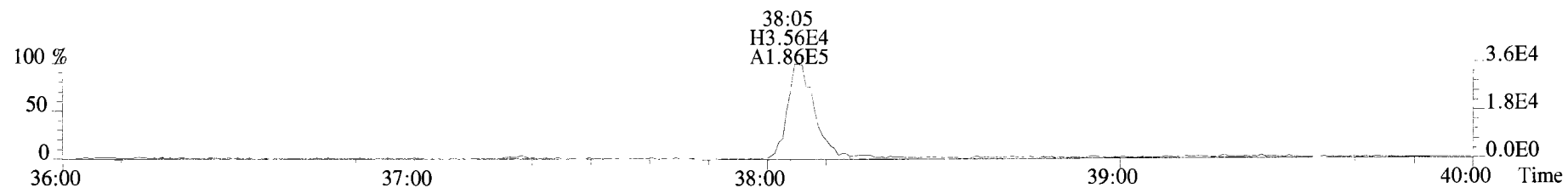
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



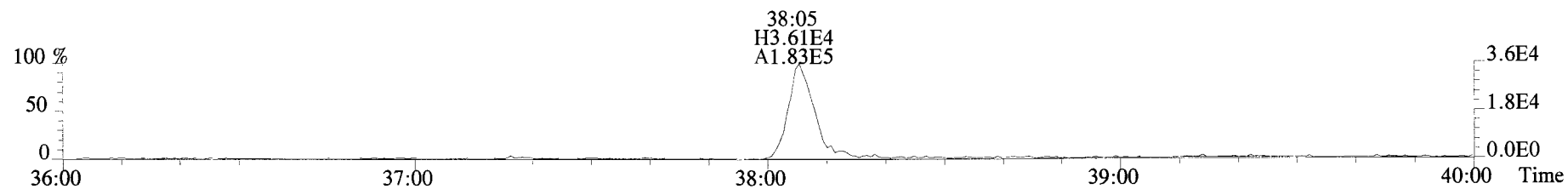
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text: Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



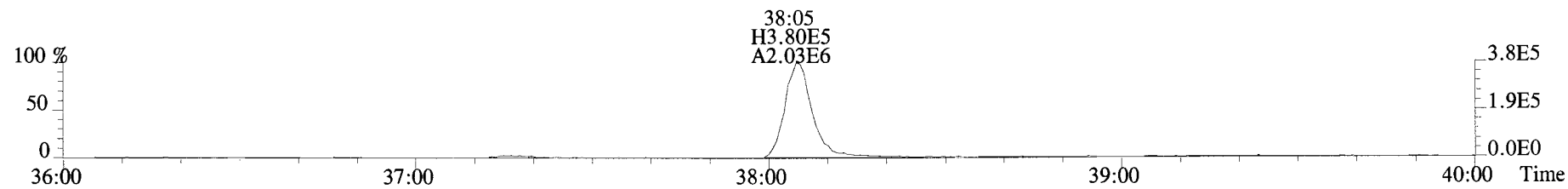
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



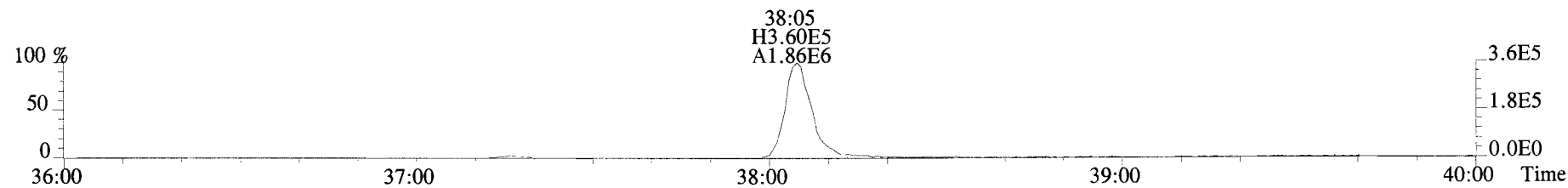
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



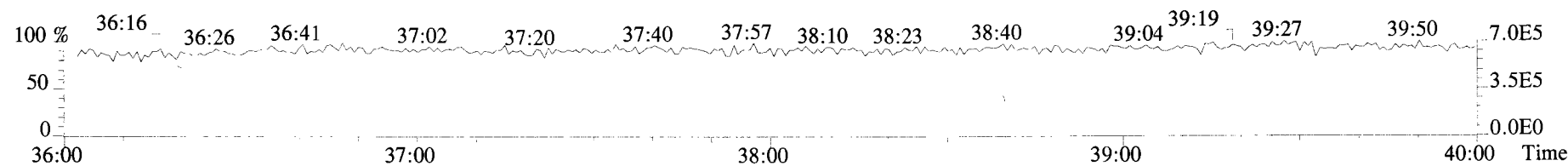
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



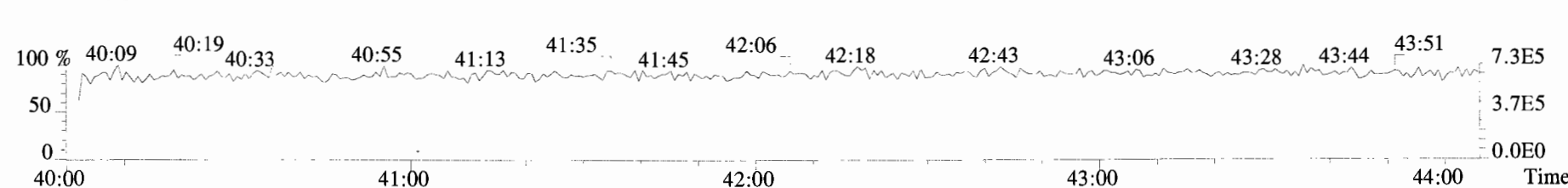
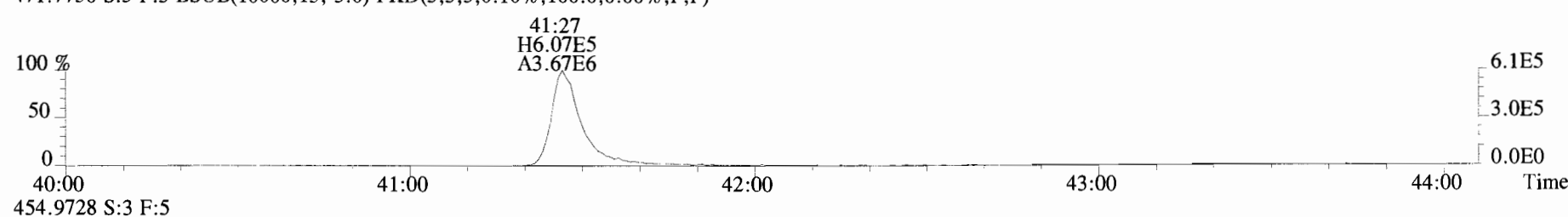
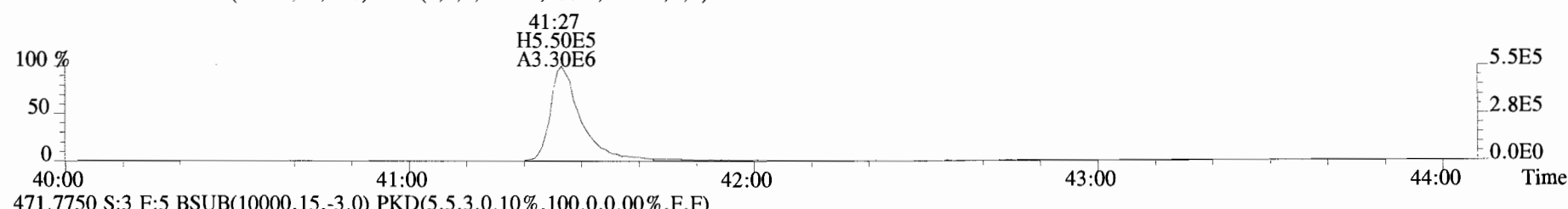
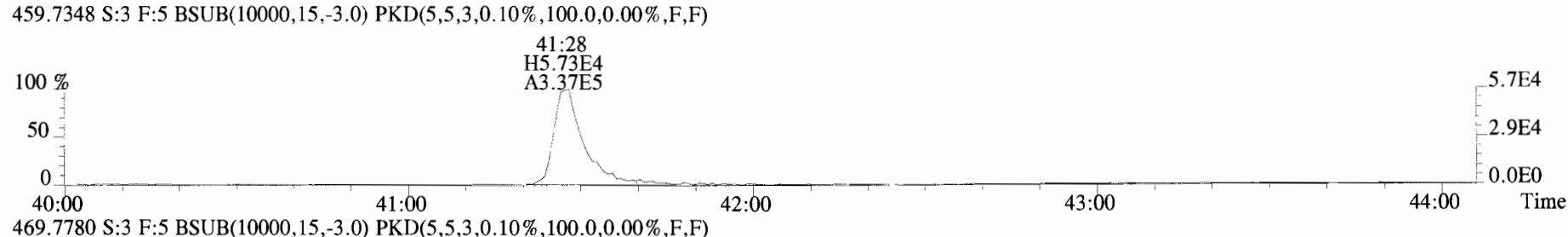
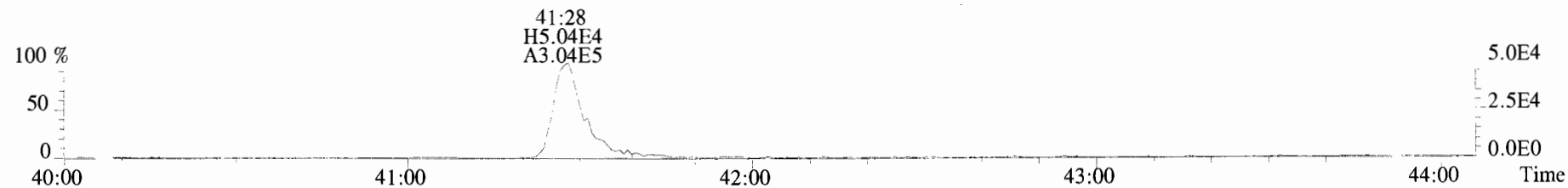
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



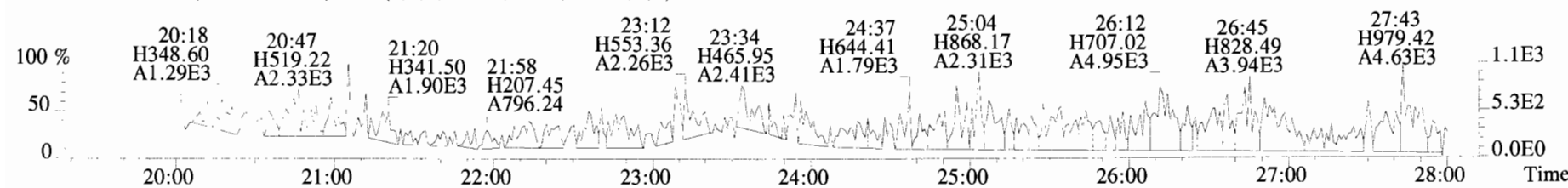
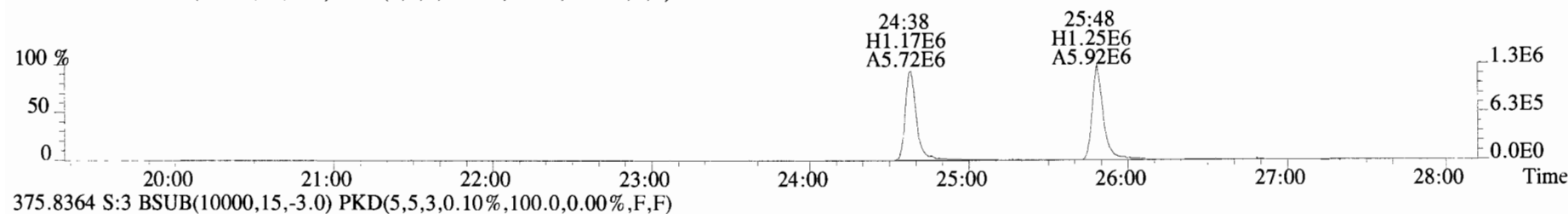
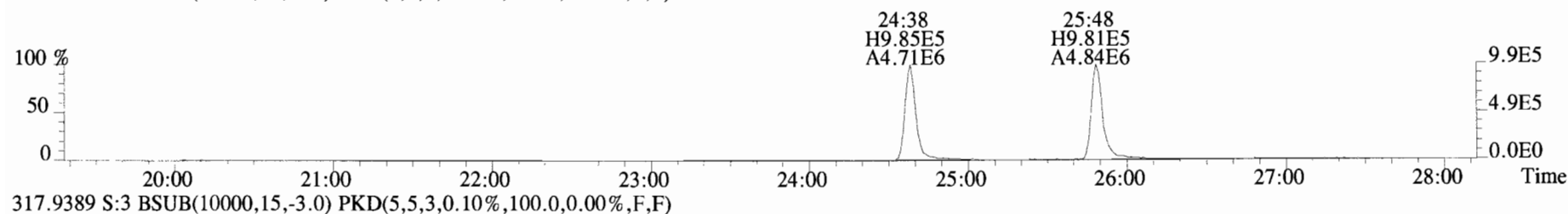
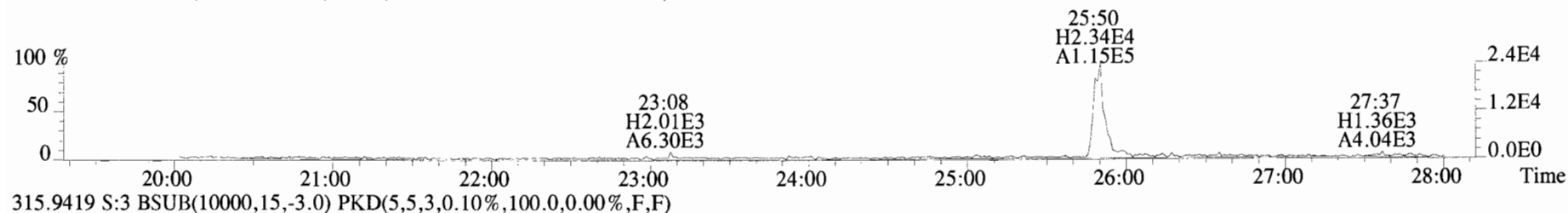
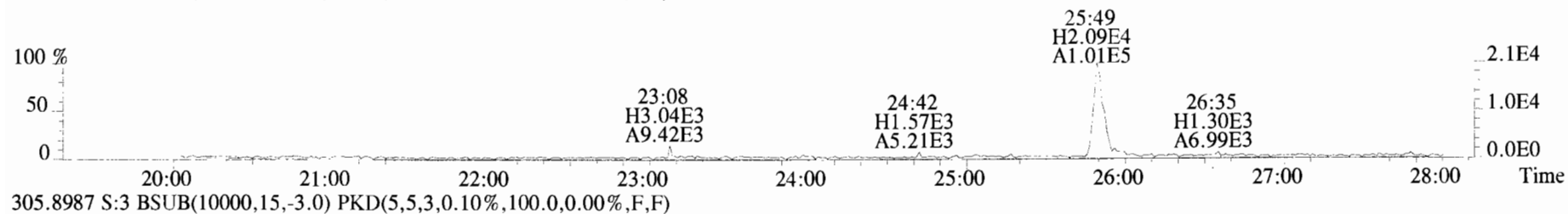
454.9728 S:3 F:4



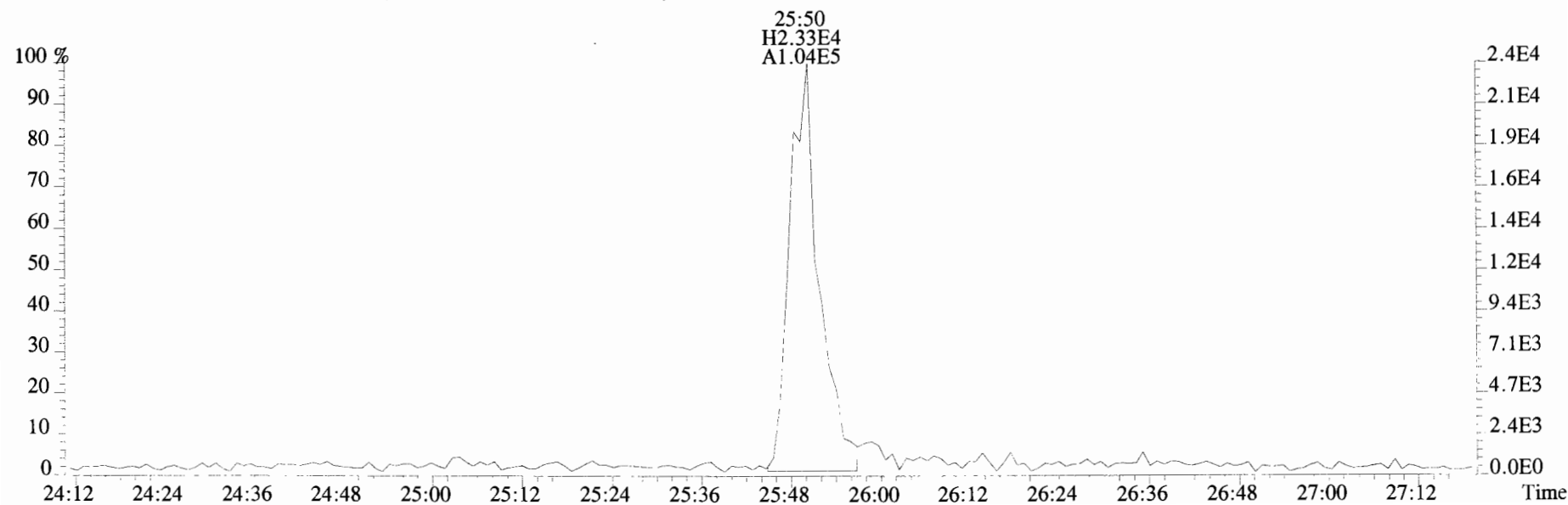
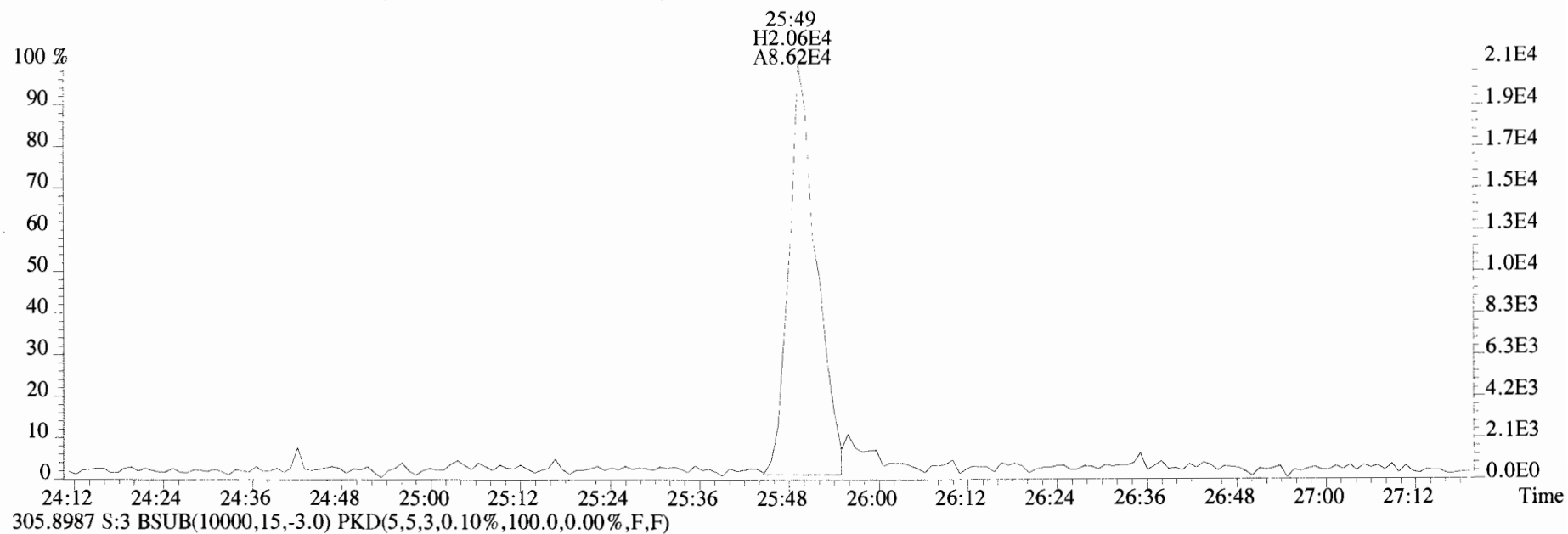
File:191009D1 #1-432 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



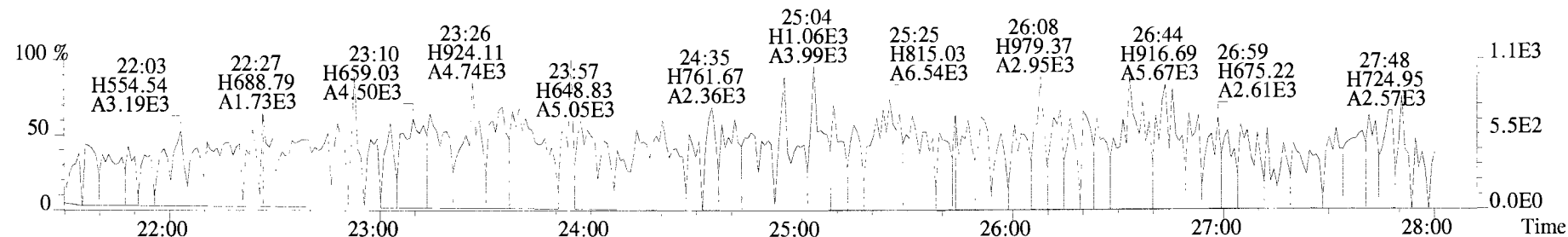
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



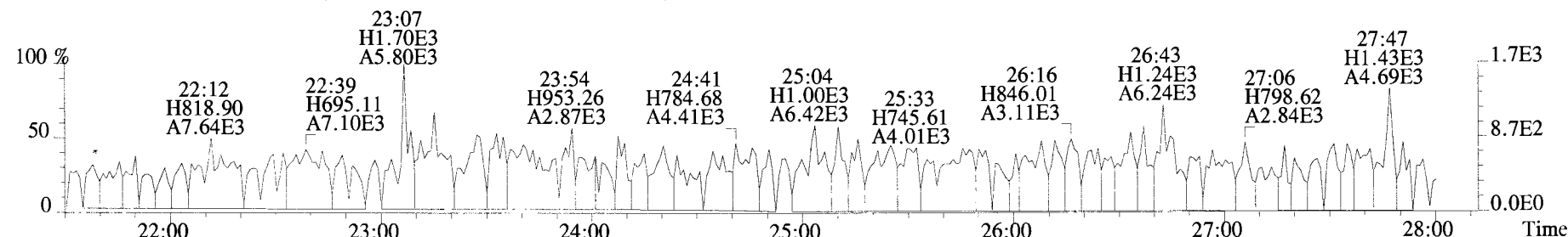
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



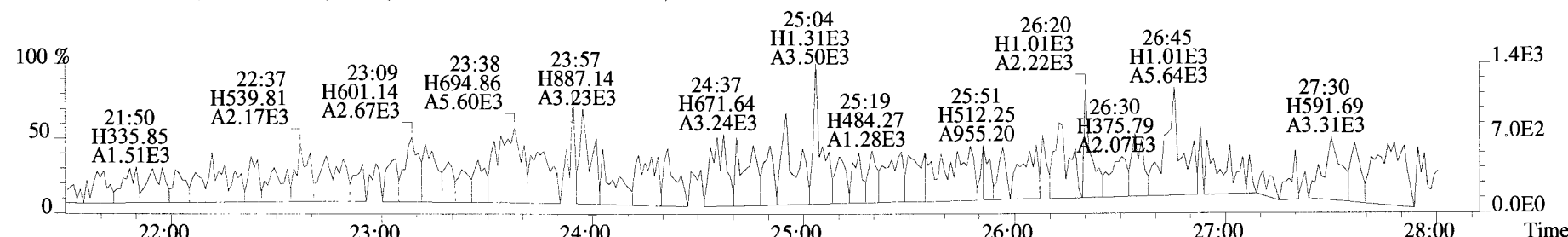
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
 339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



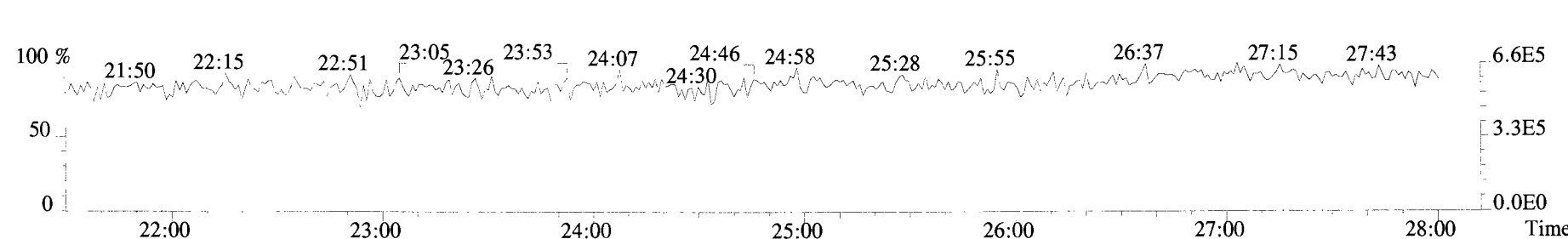
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



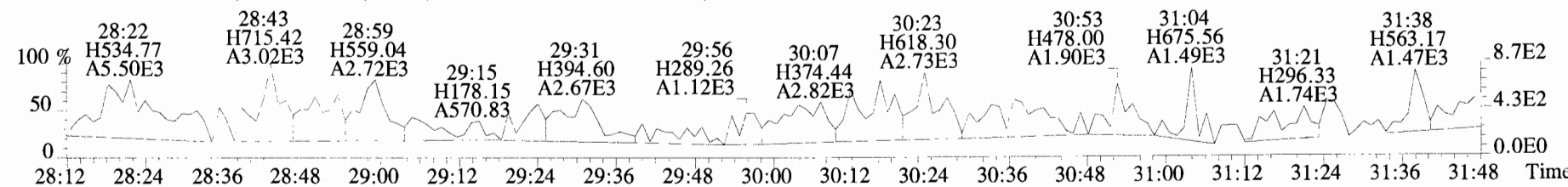
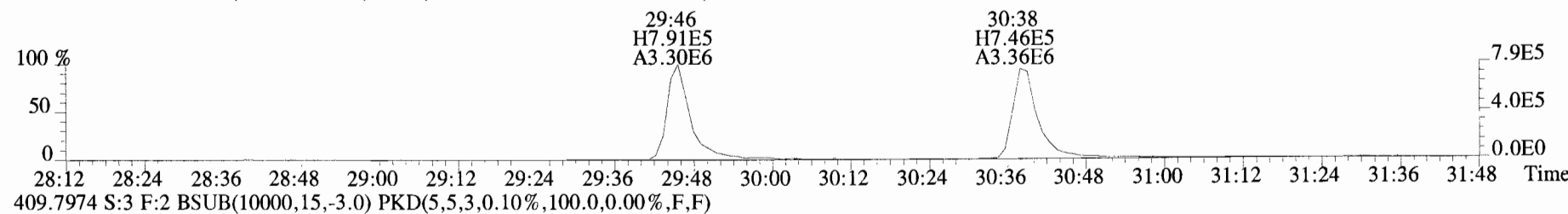
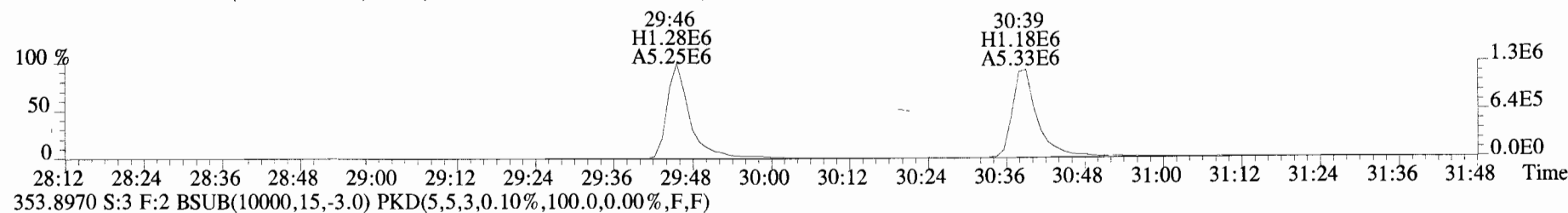
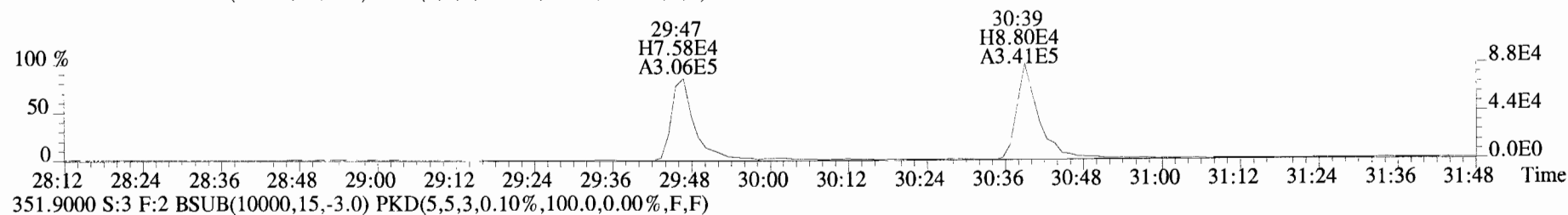
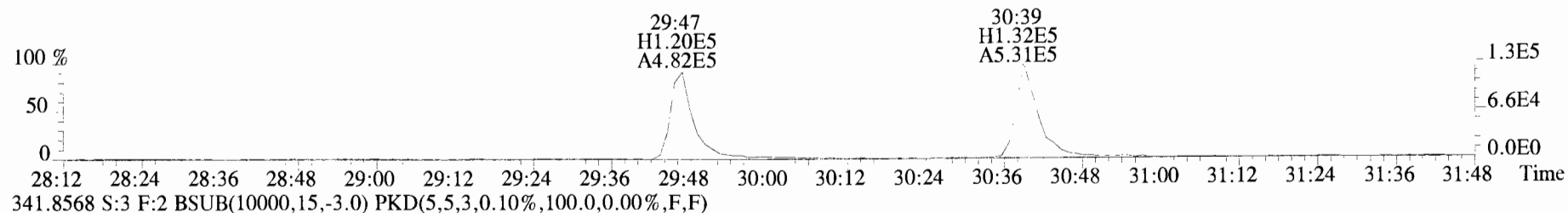
409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



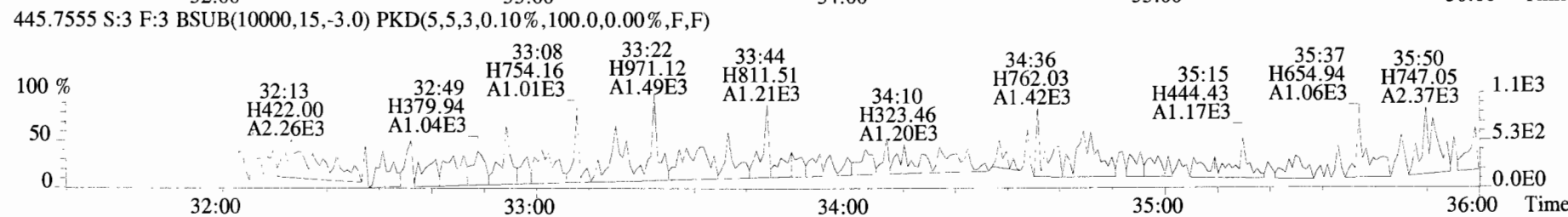
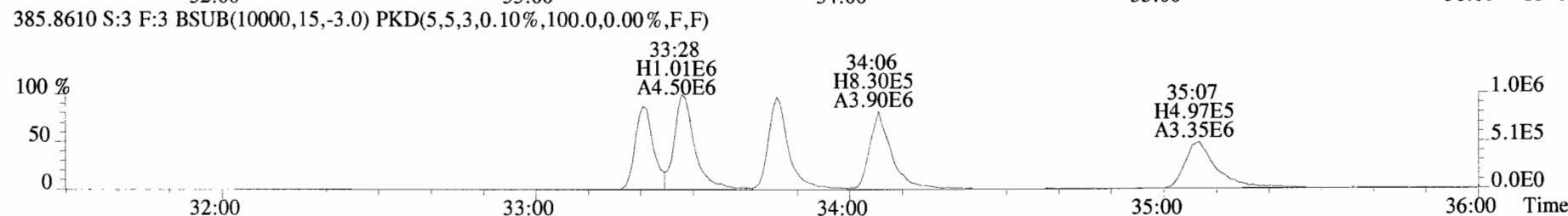
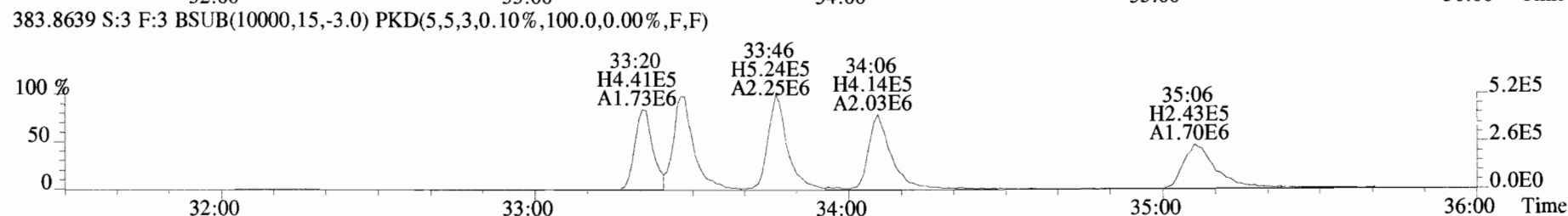
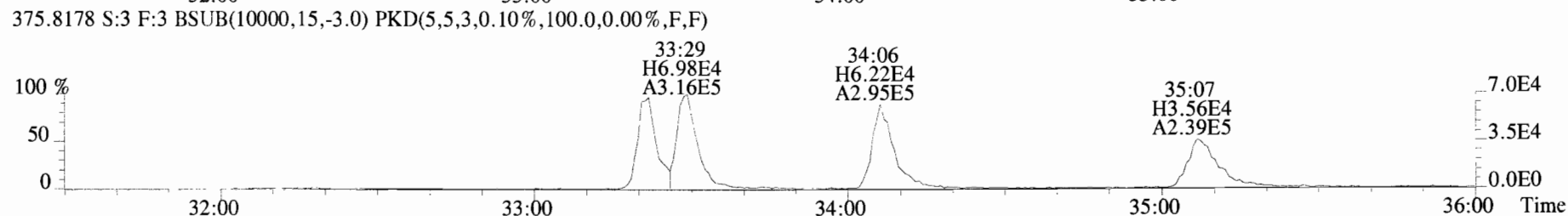
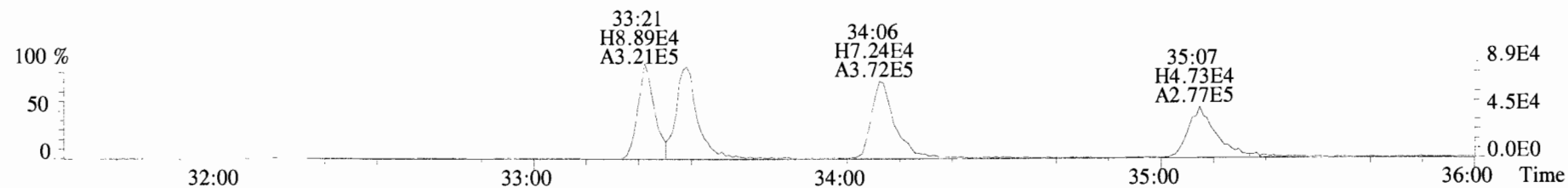
316.9824 S:3



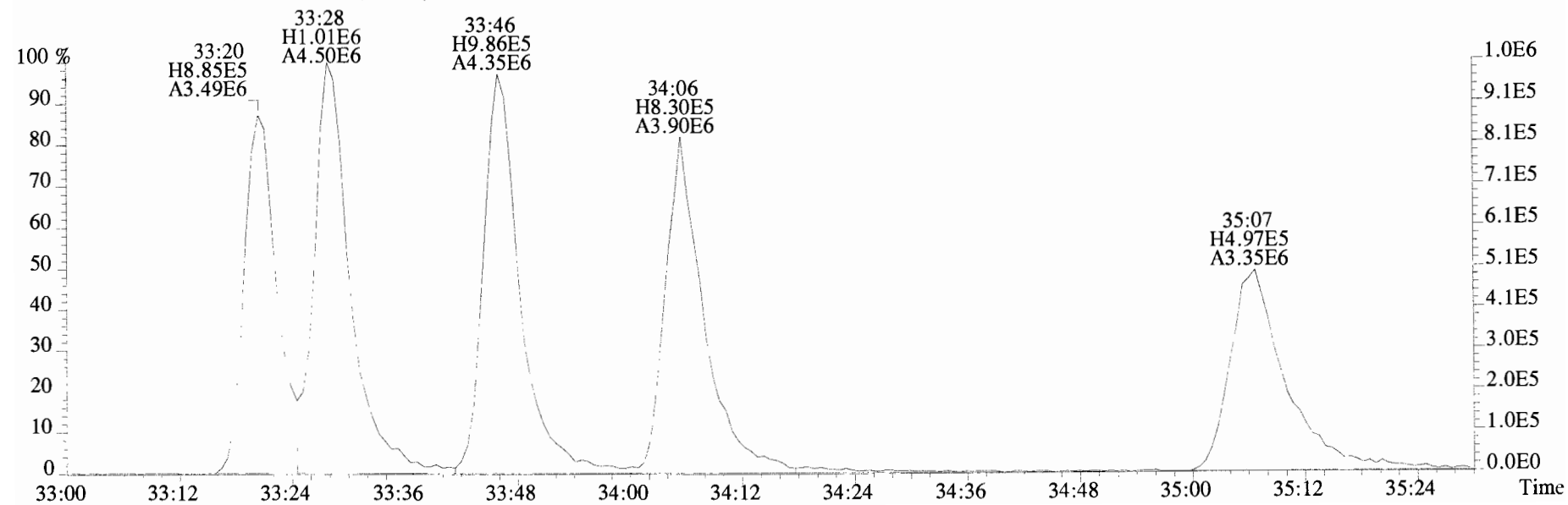
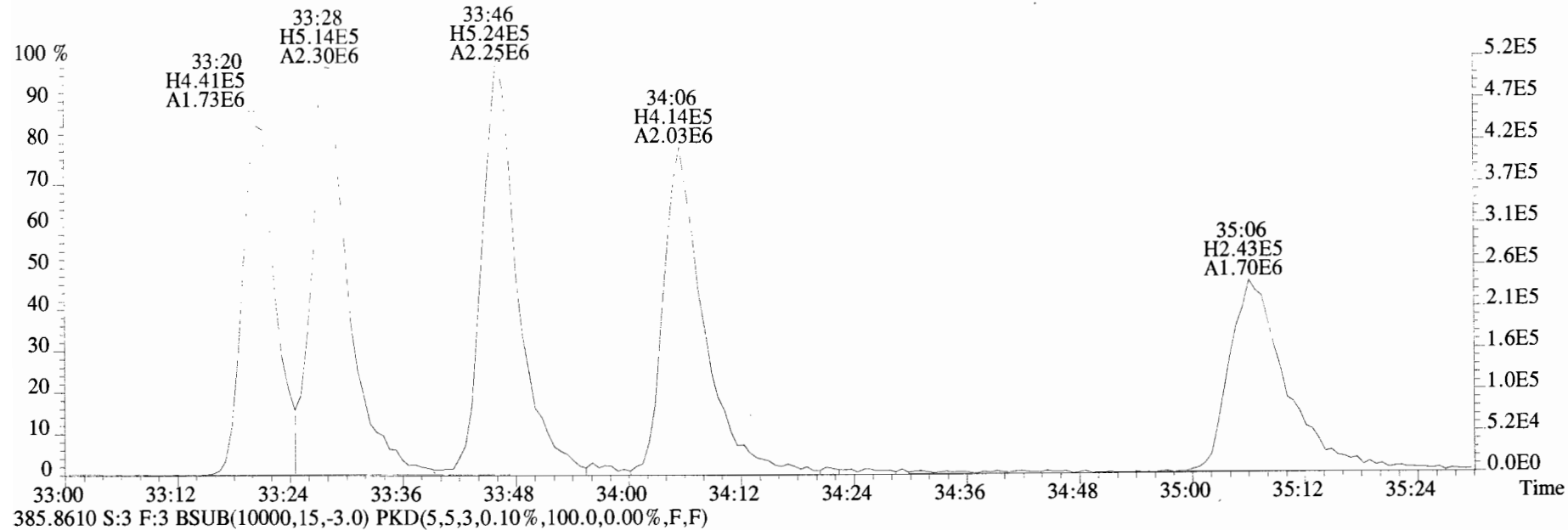
File:191009D1 #1-211 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



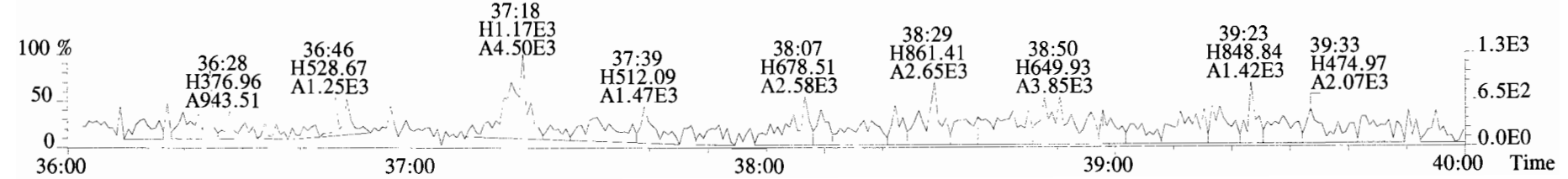
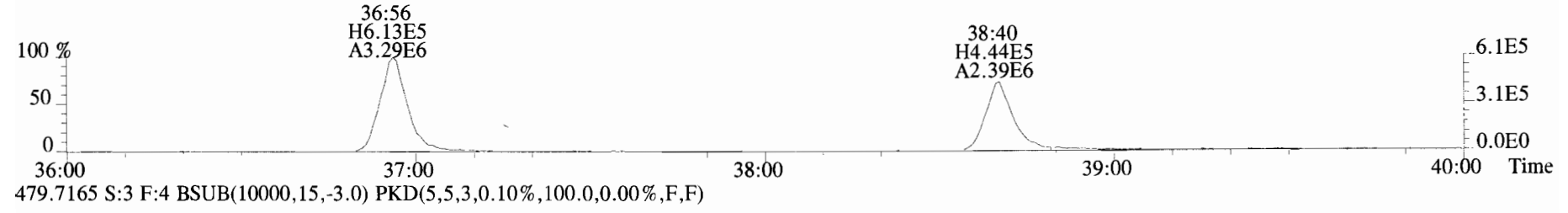
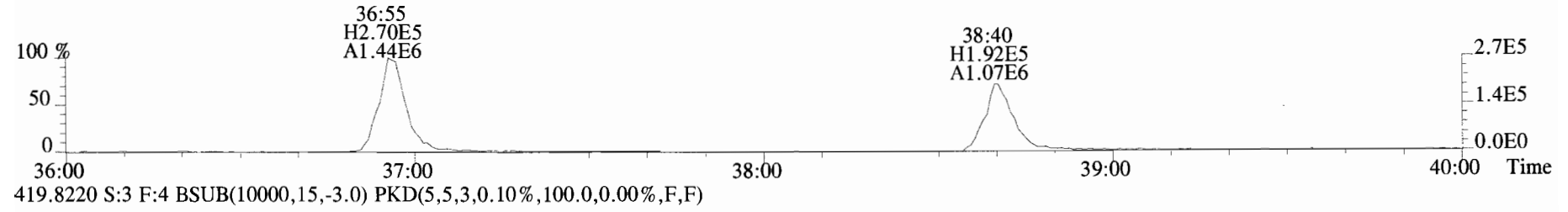
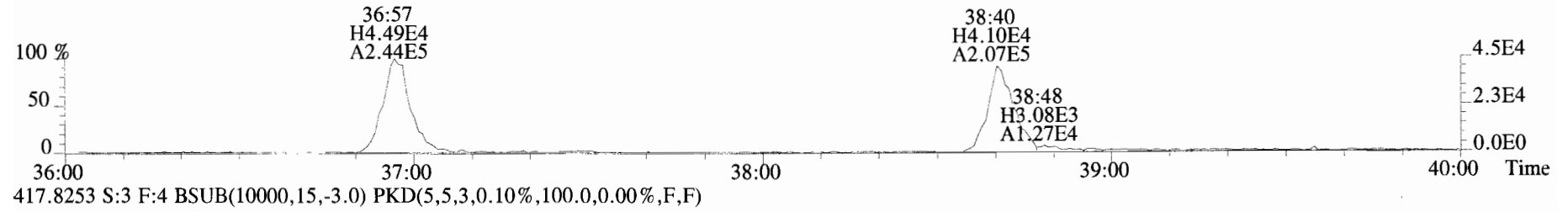
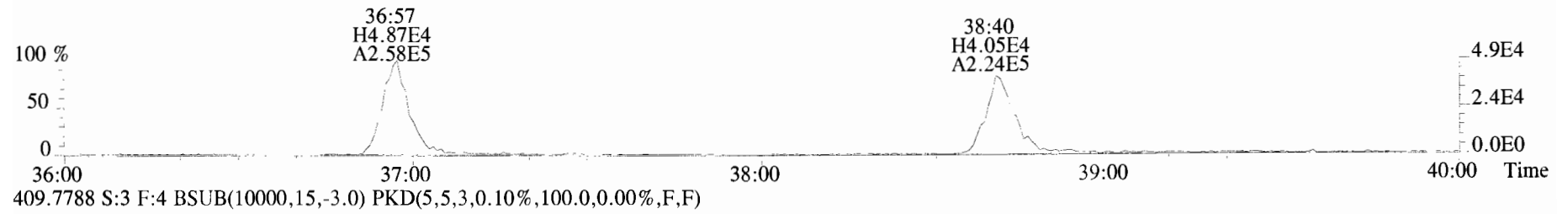
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



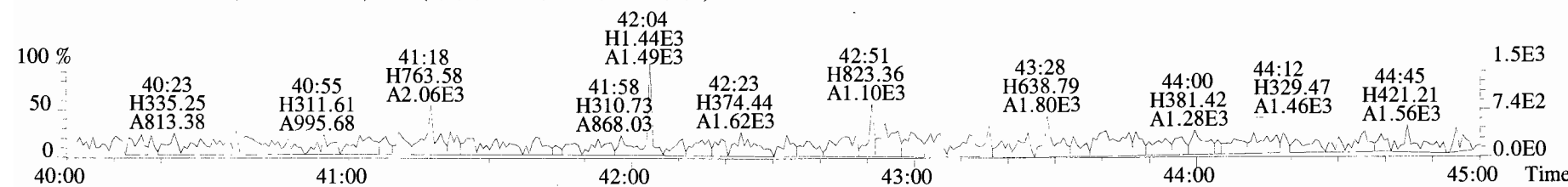
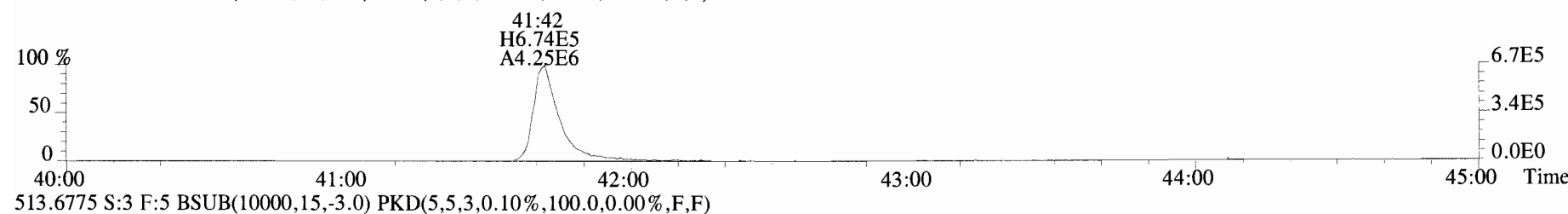
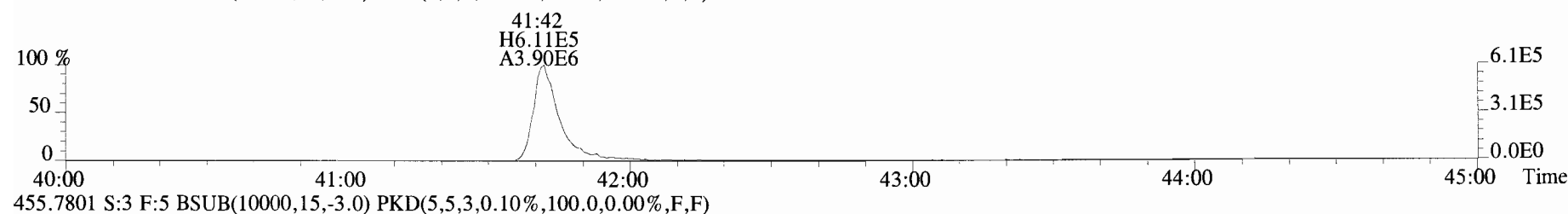
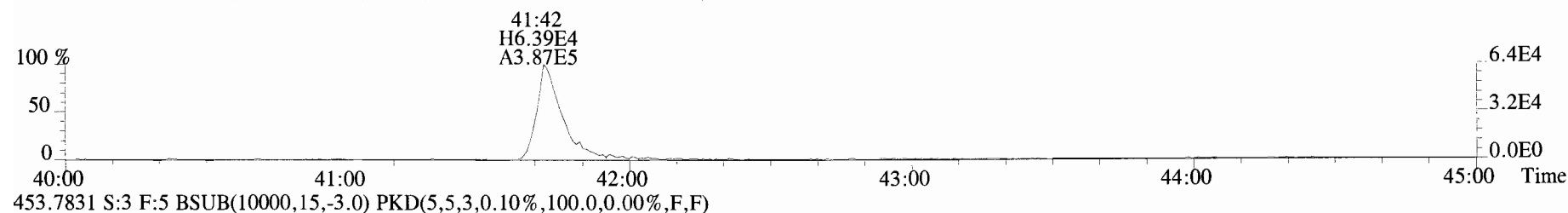
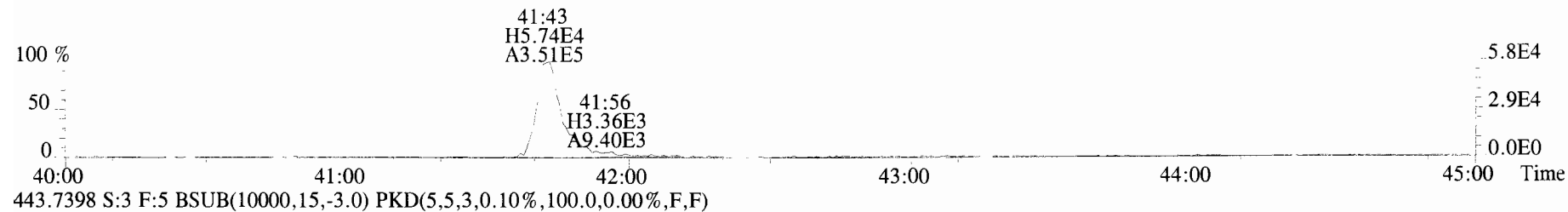
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
 383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



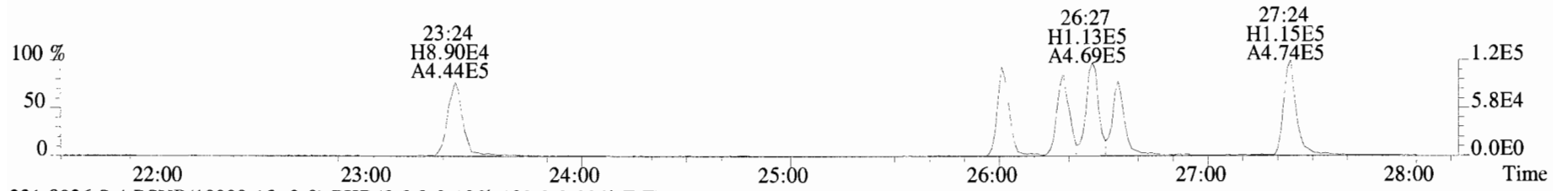
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



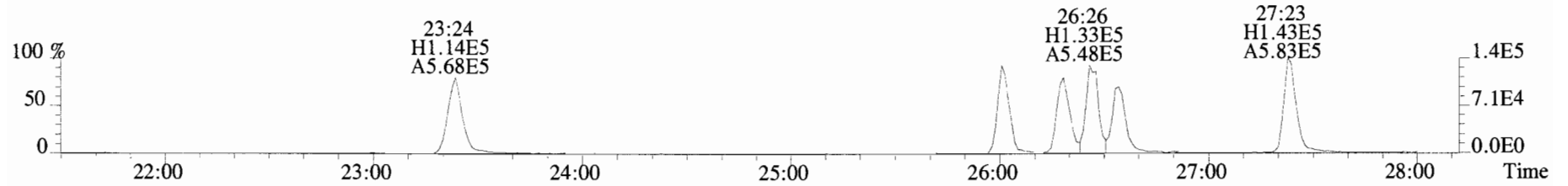
File:191009D1 #1-432 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



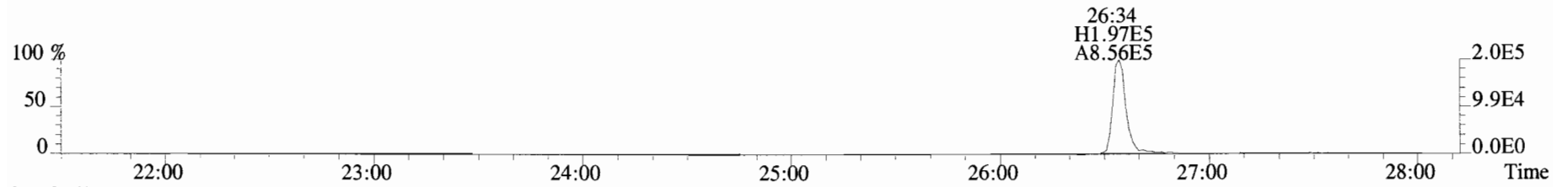
File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



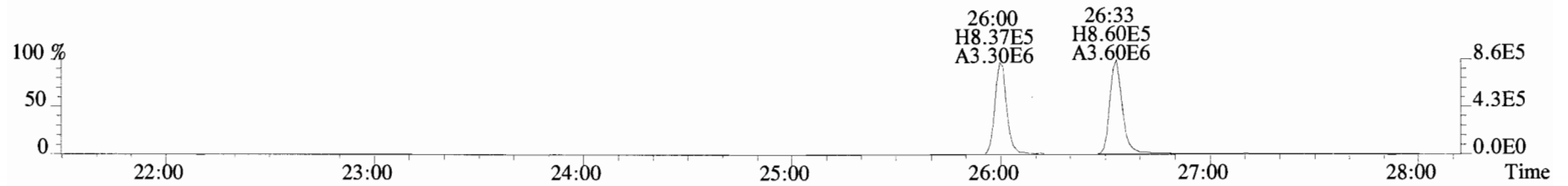
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



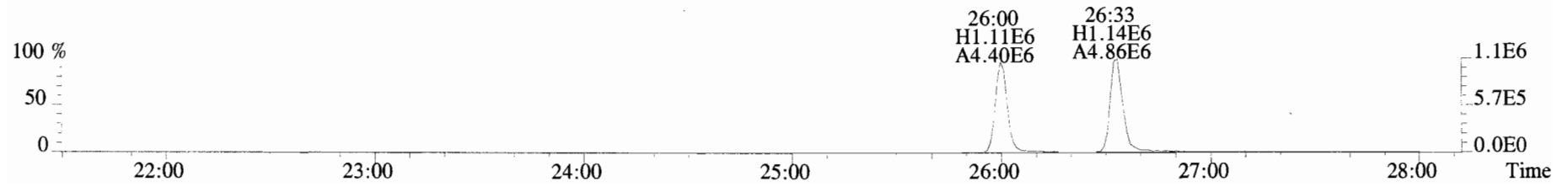
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



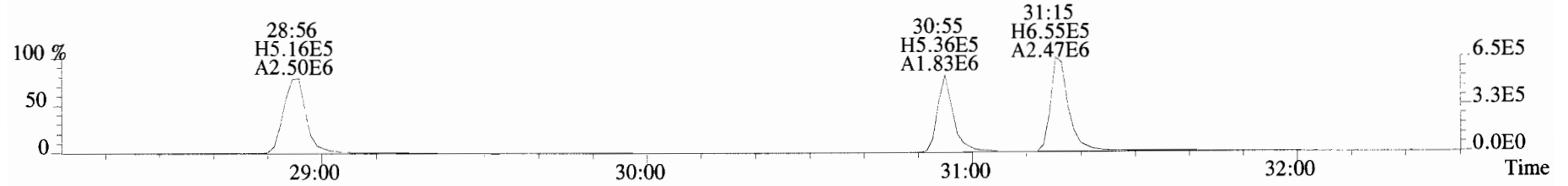
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



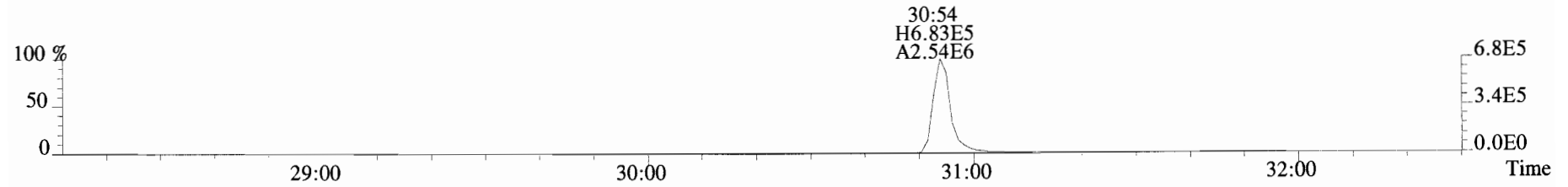
File:191009D1 #1-211 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



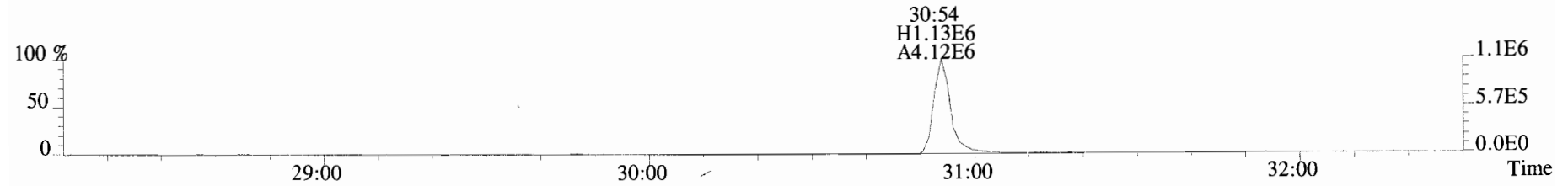
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



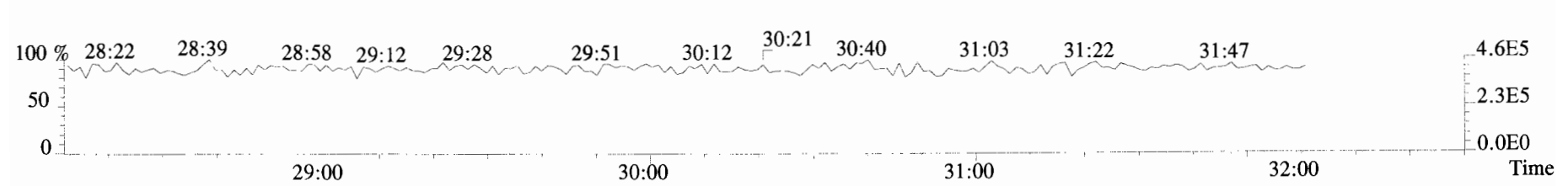
365.8978 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



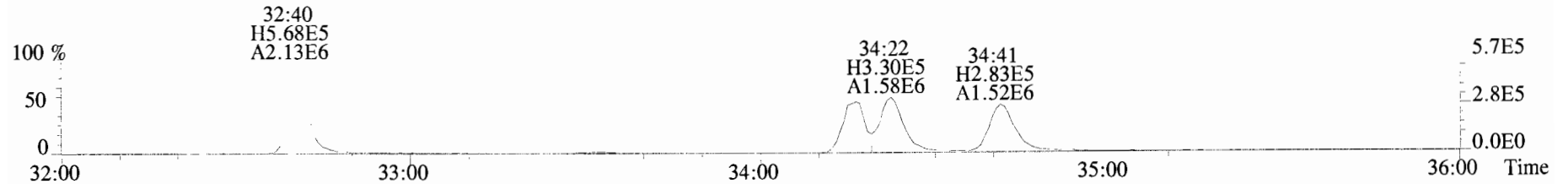
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



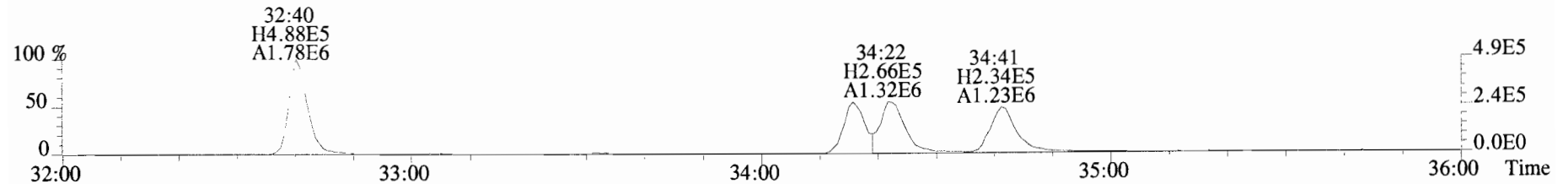
366.9792 S:4 F:2



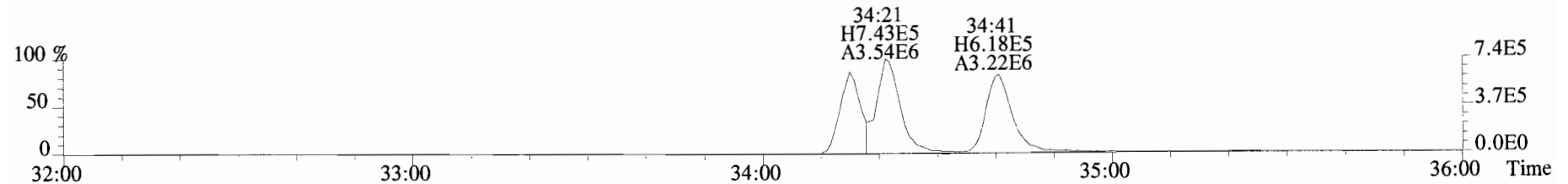
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



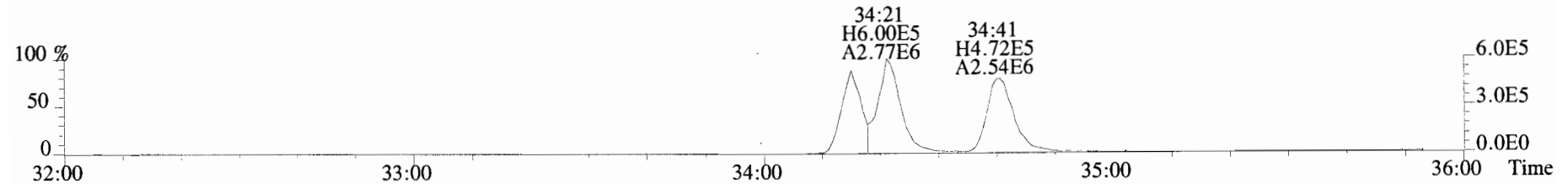
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



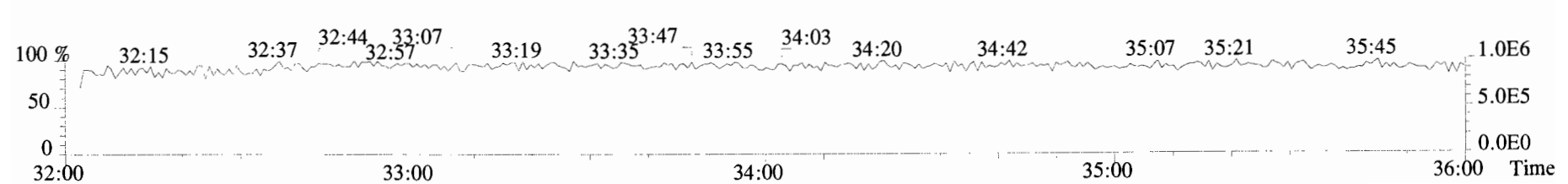
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



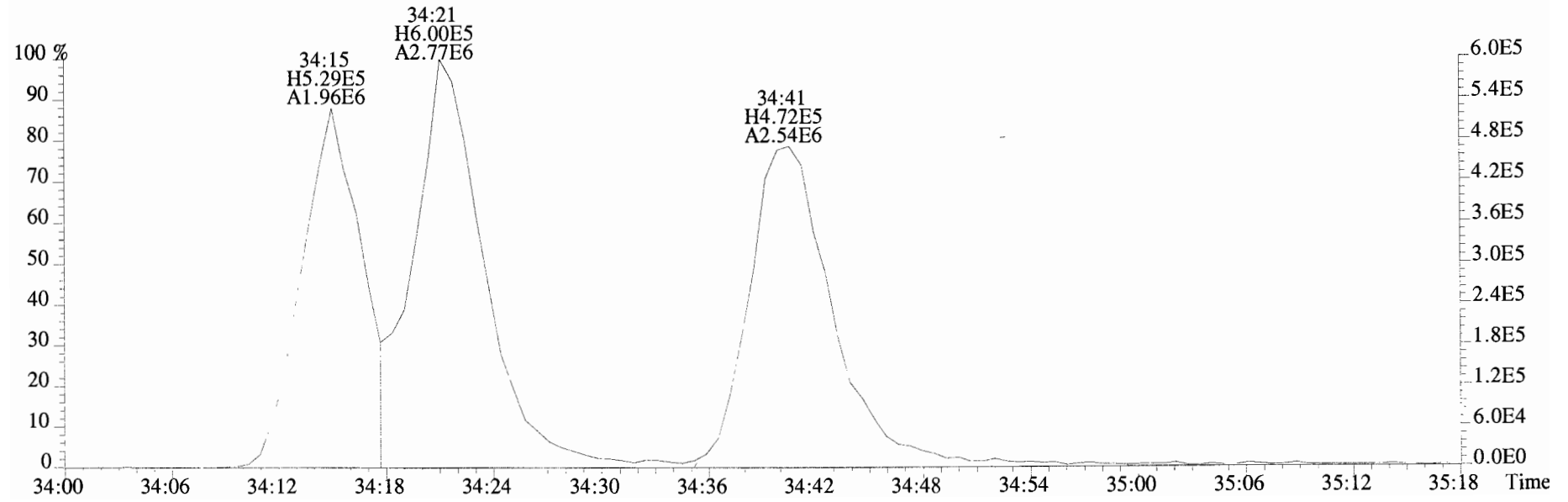
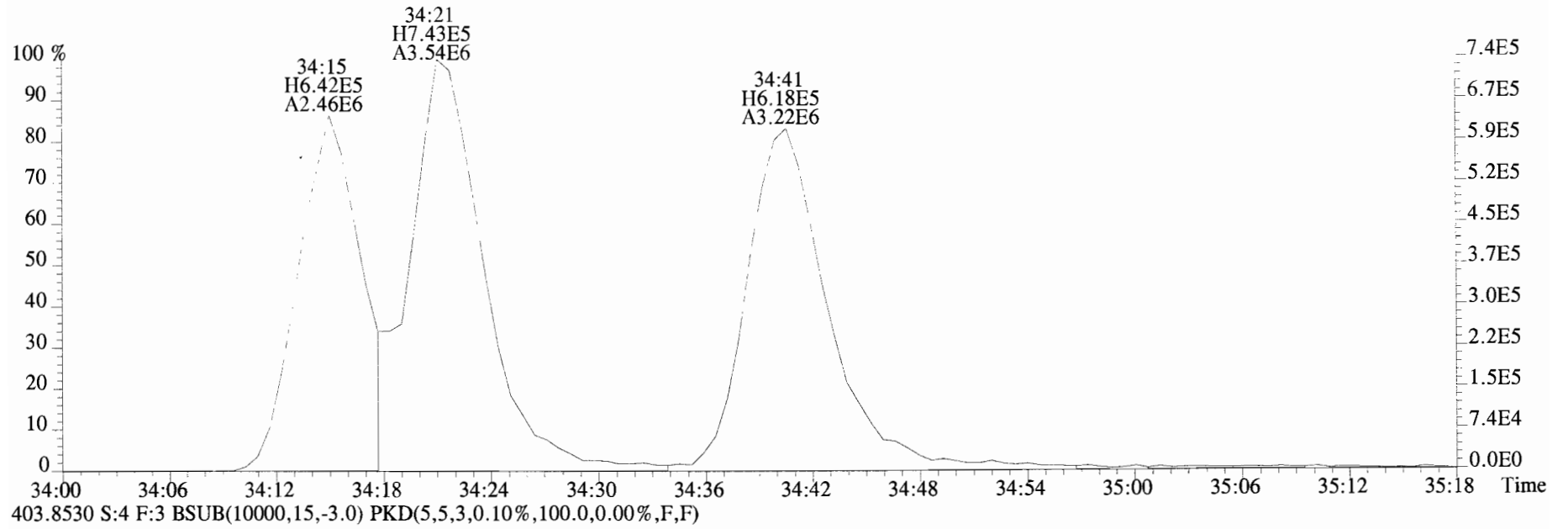
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



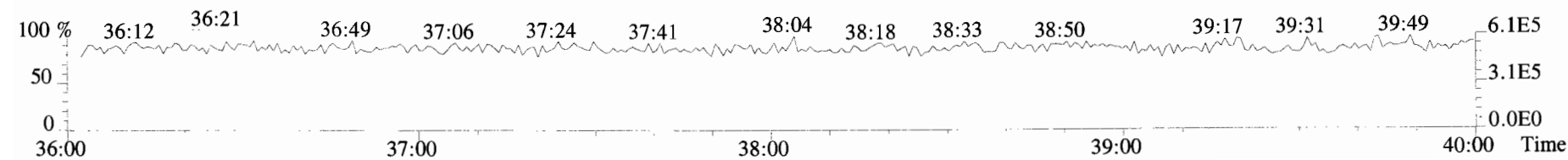
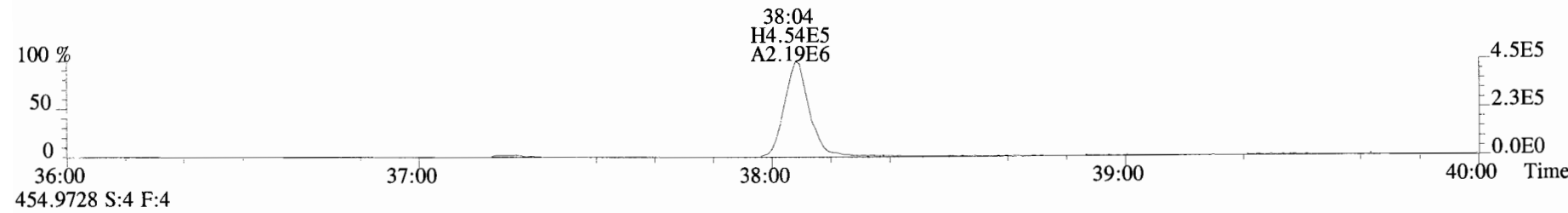
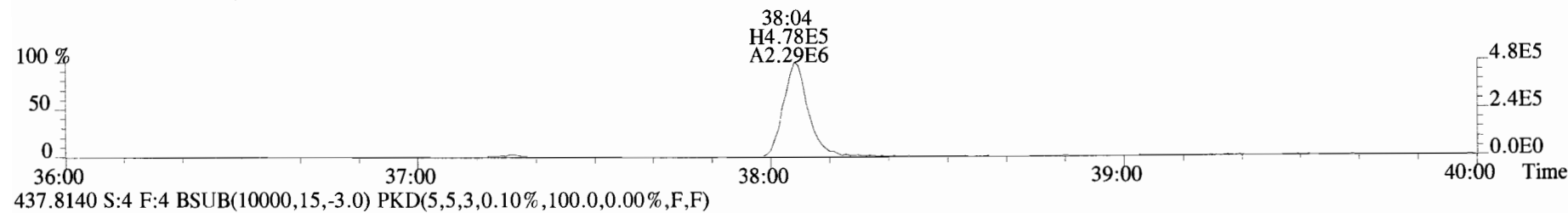
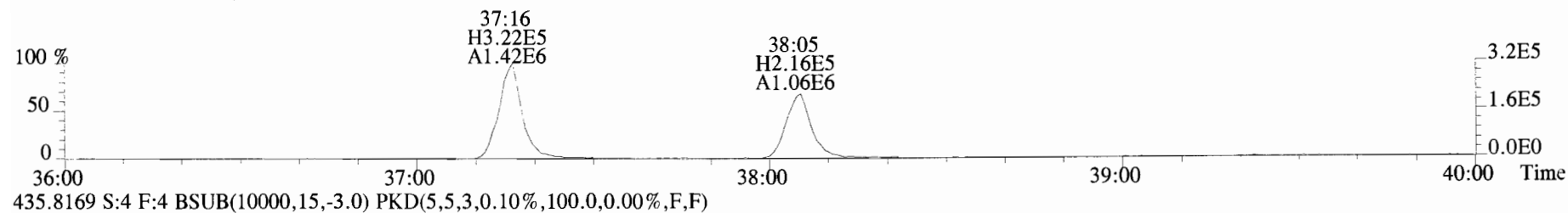
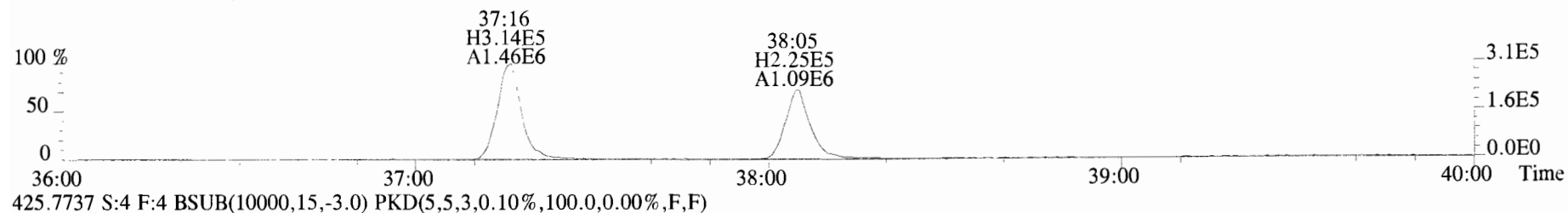
392.9760 S:4 F:3



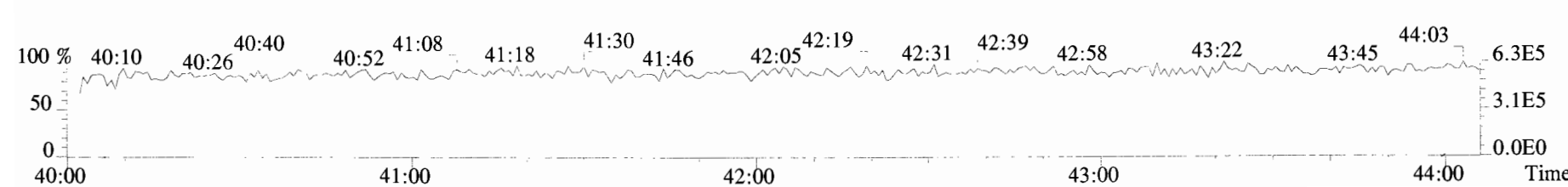
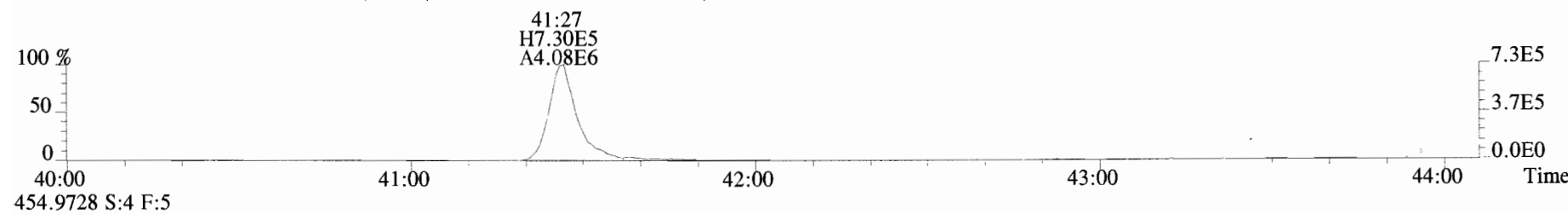
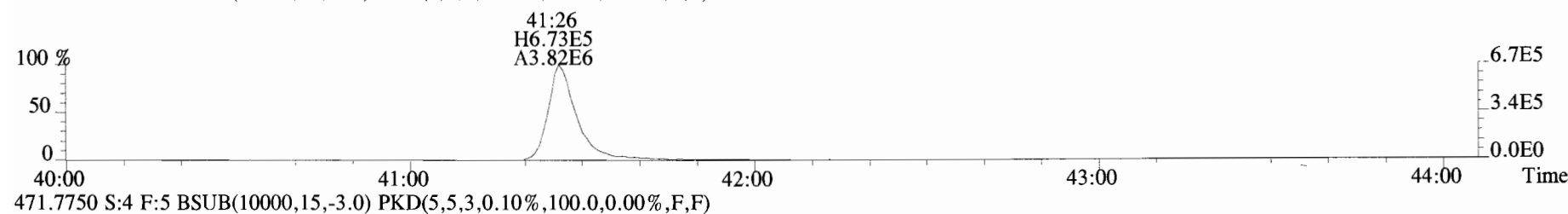
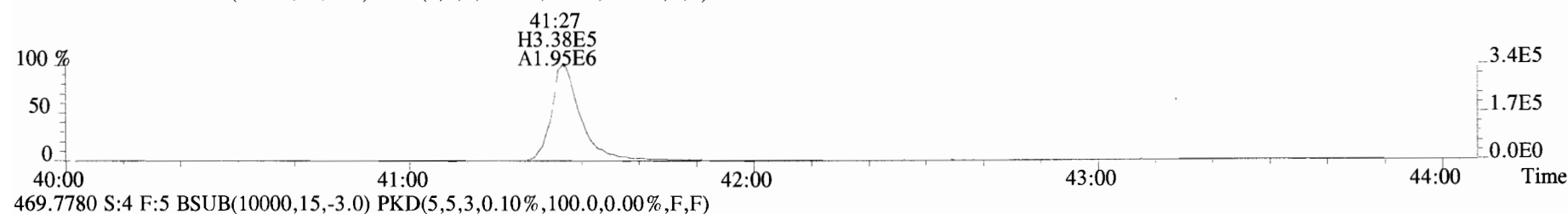
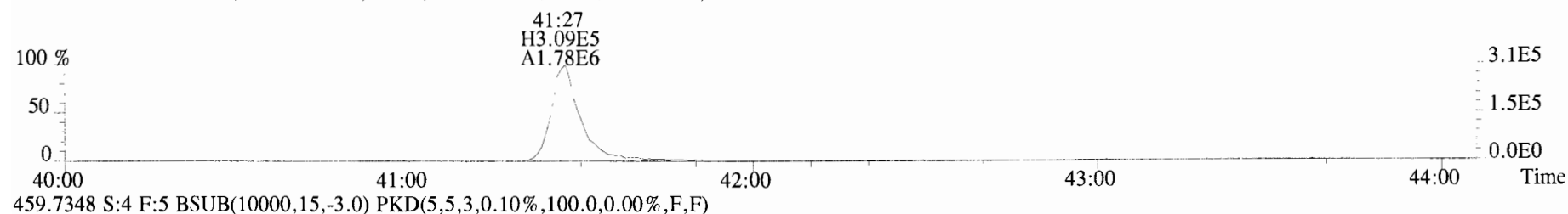
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



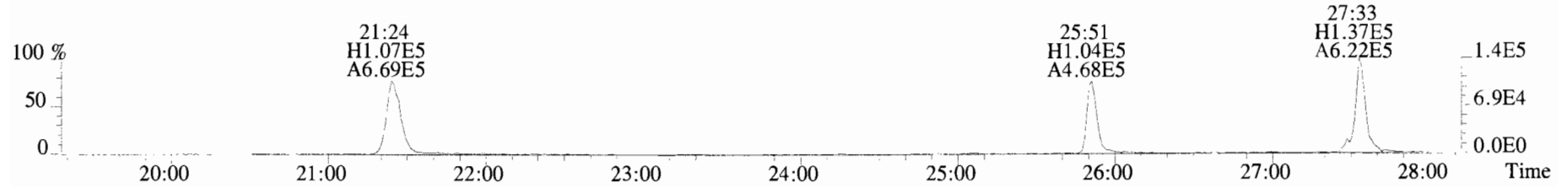
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



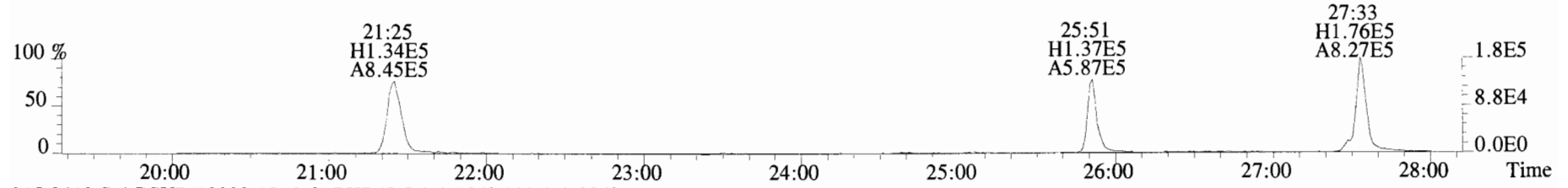
File:191009D1 #1-432 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



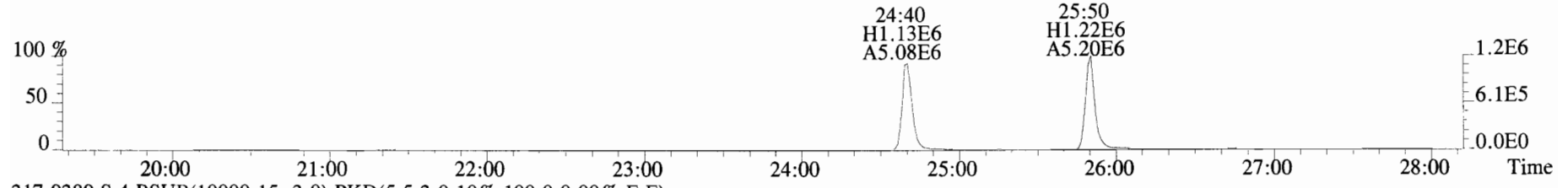
File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



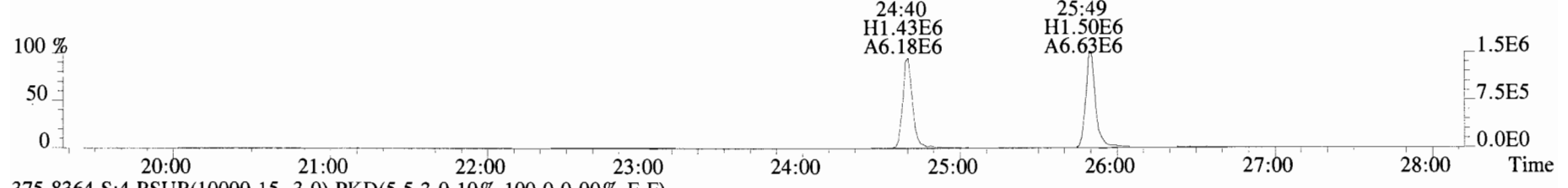
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



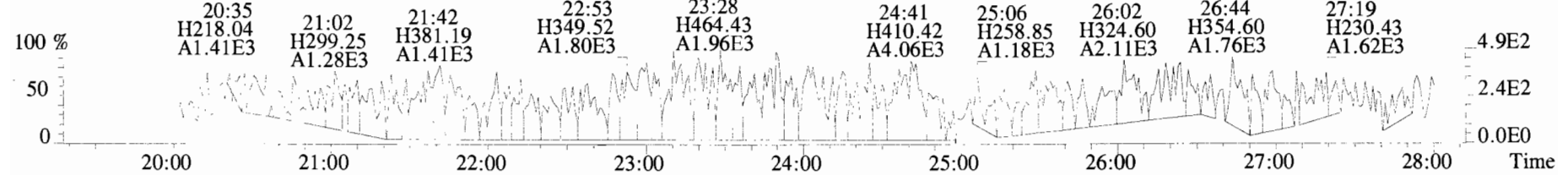
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



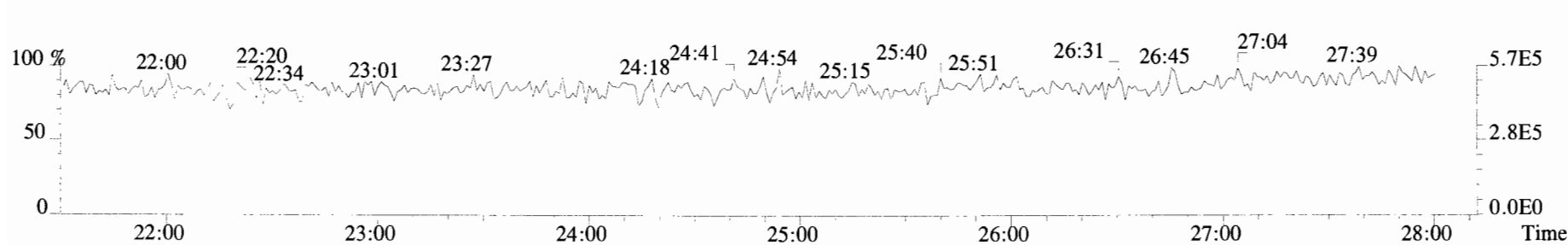
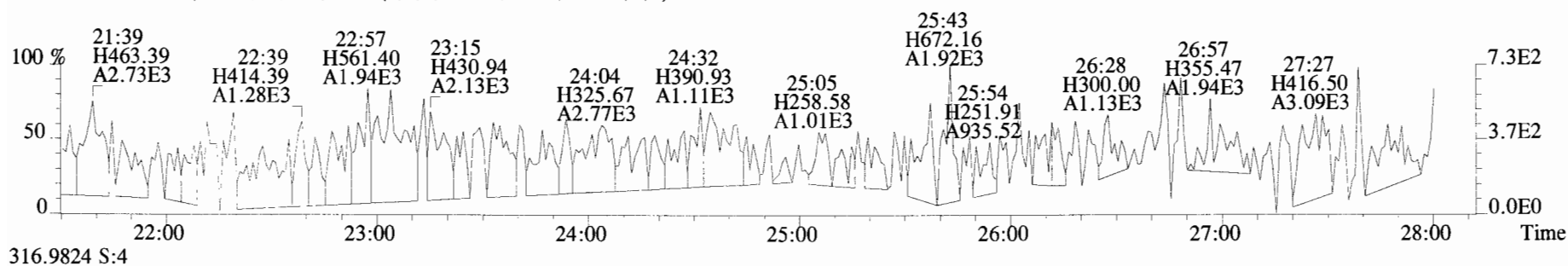
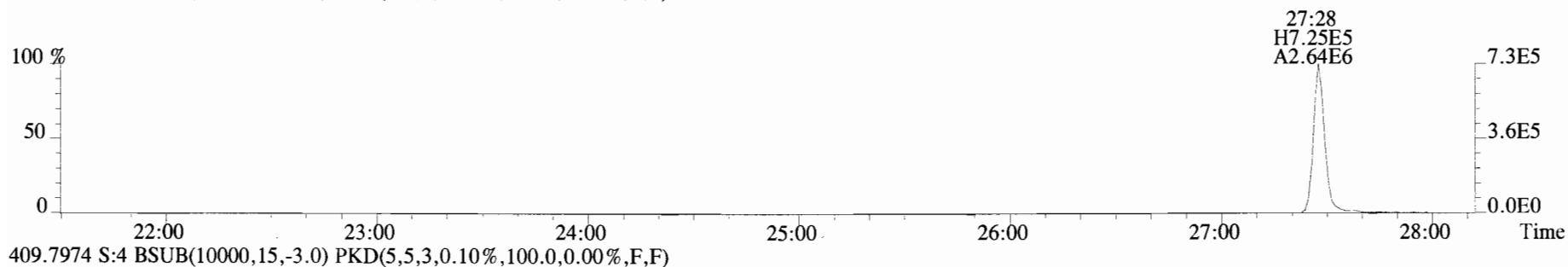
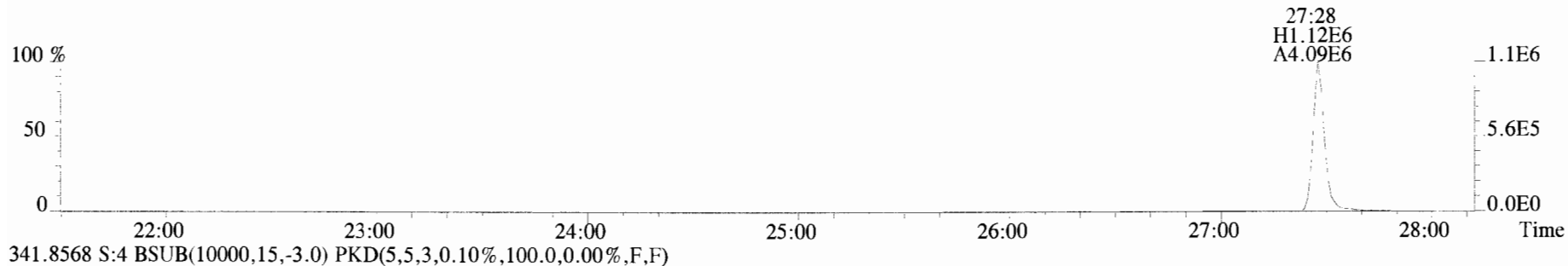
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



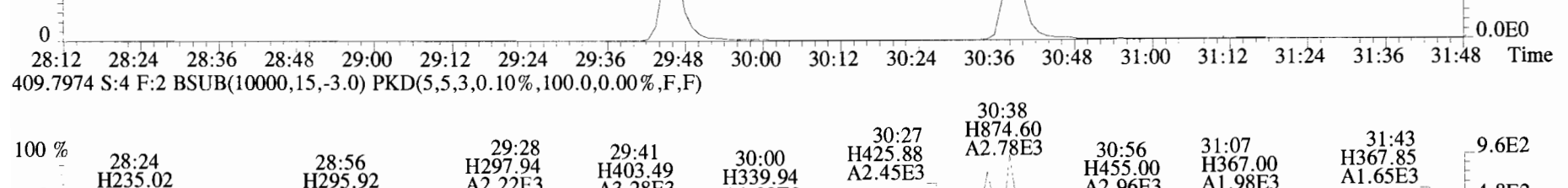
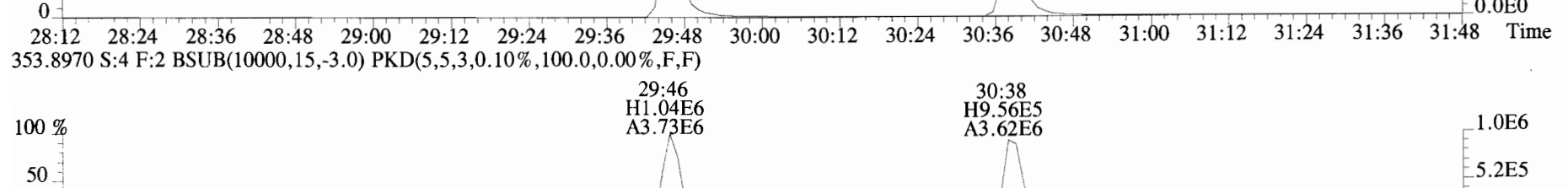
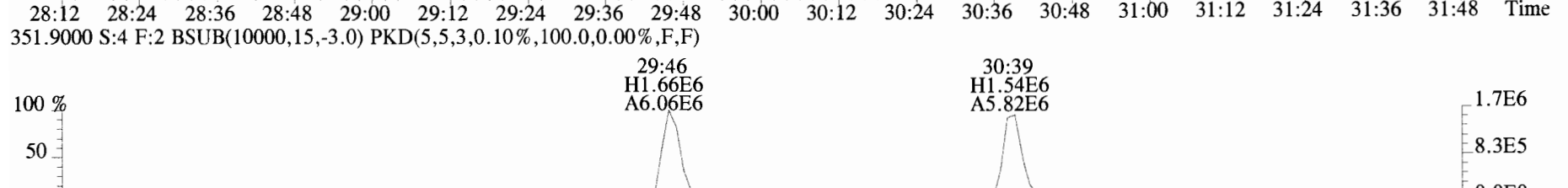
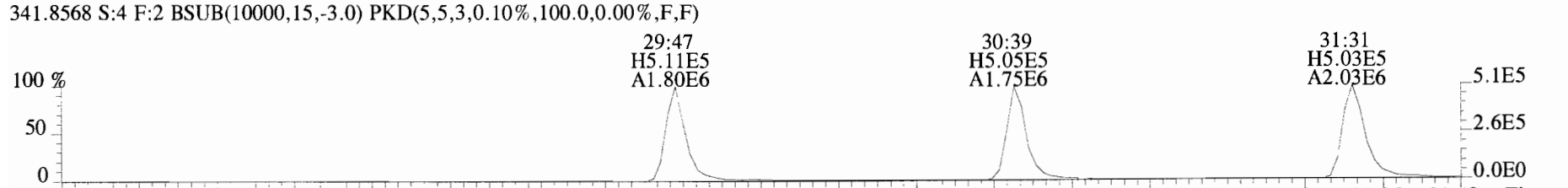
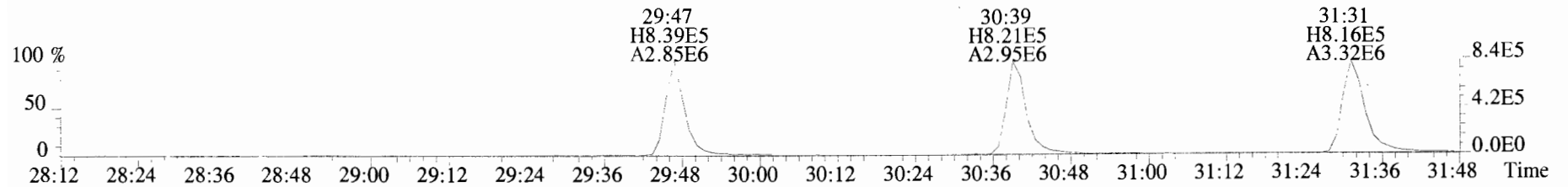
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



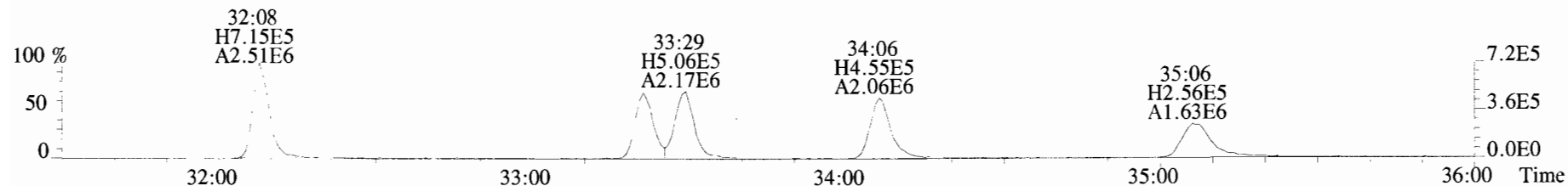
File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



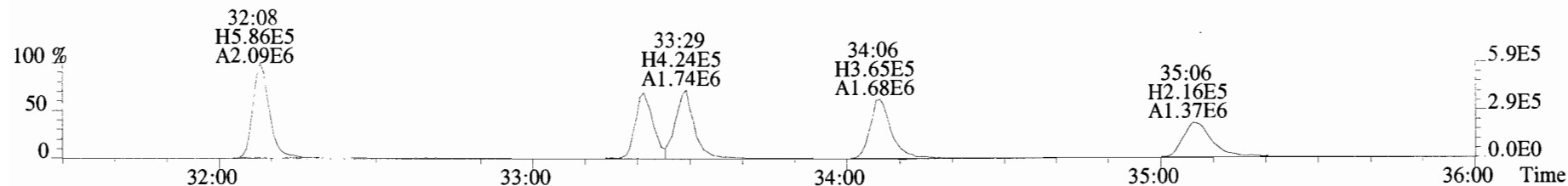
File:191009D1 #1-211 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



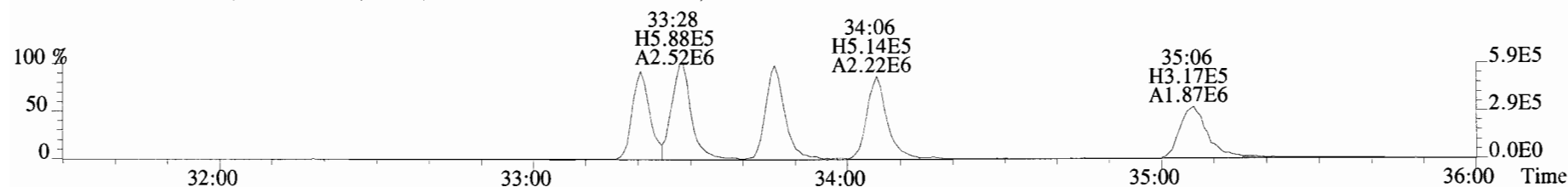
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
 373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



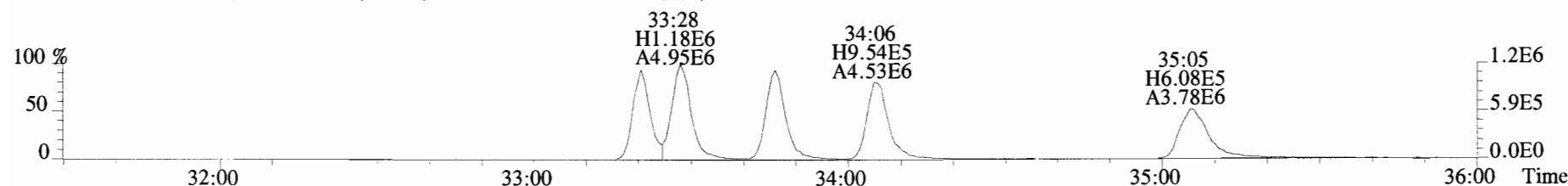
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



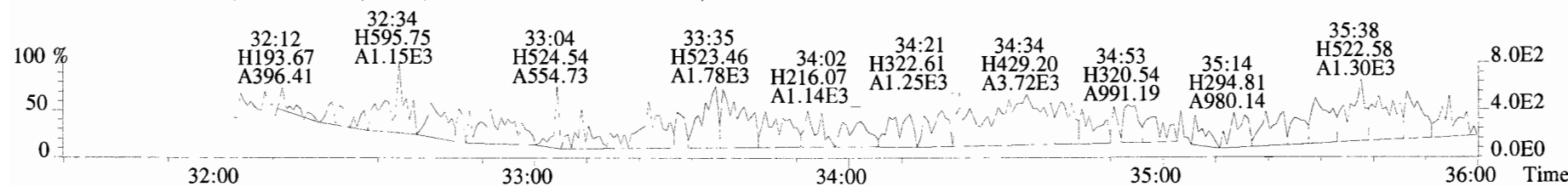
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



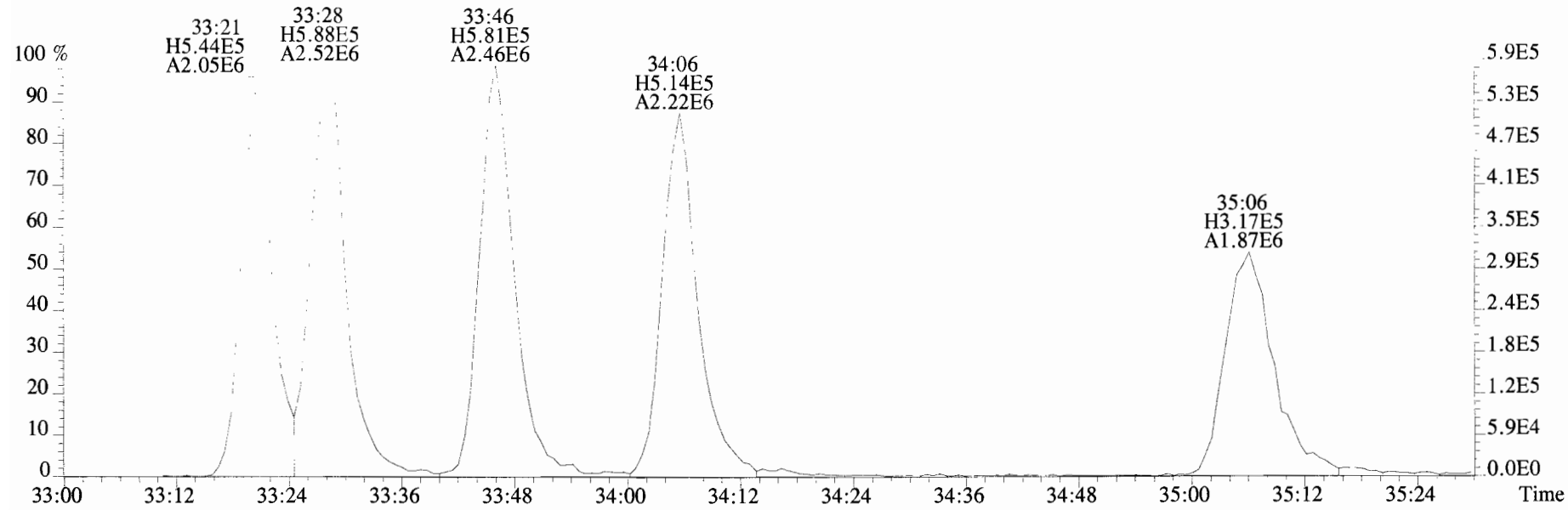
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



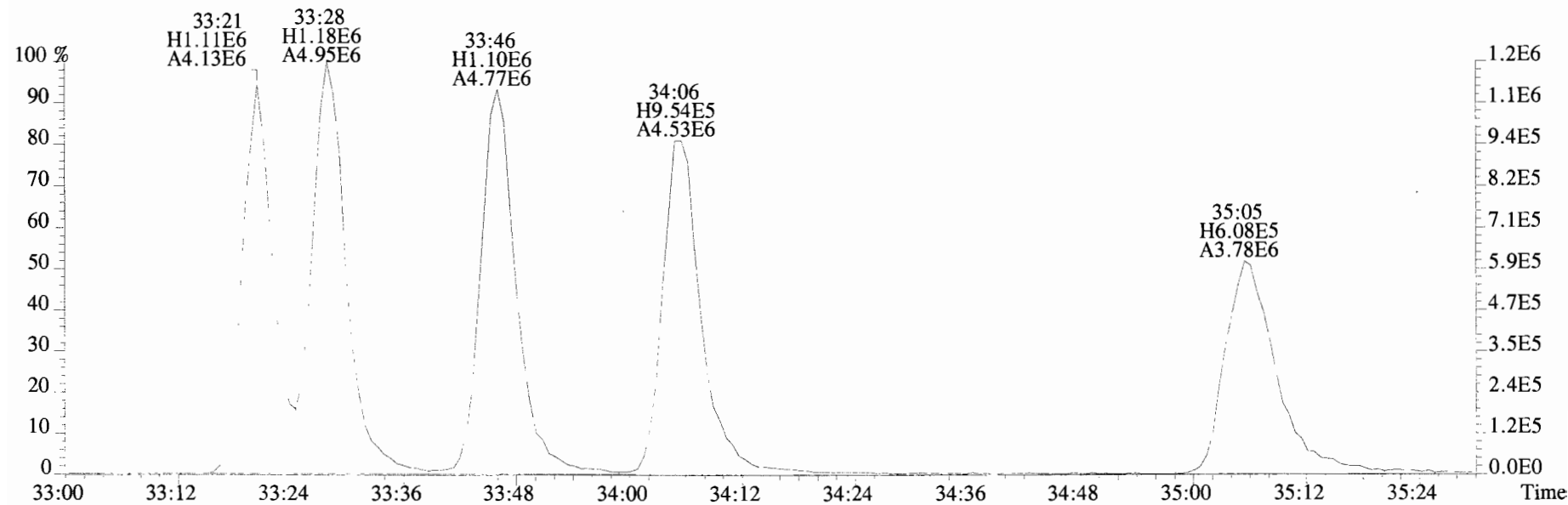
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



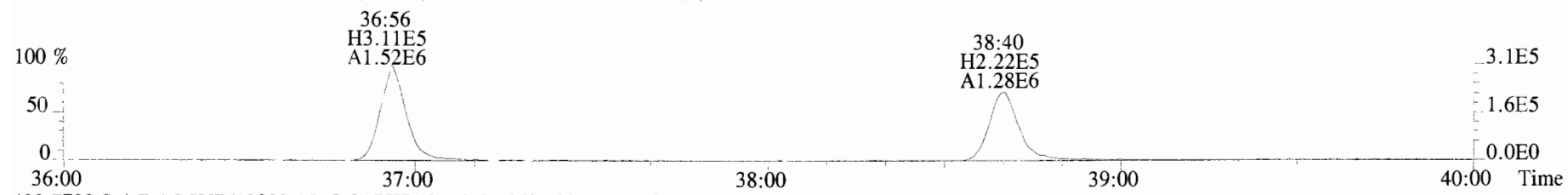
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
 383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



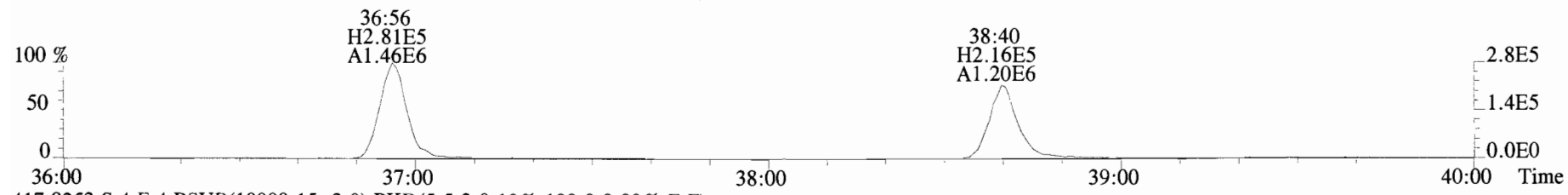
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



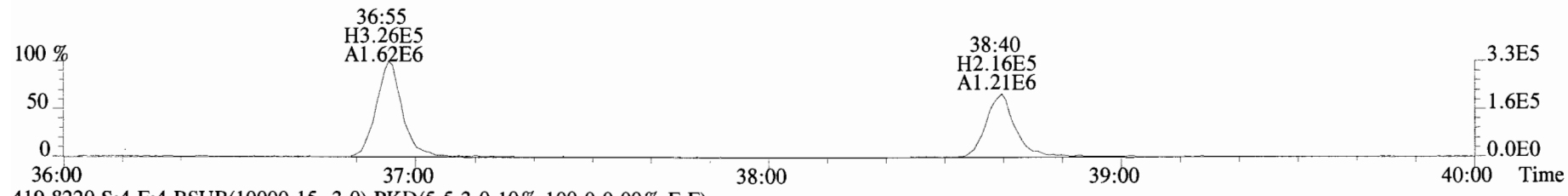
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
 407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



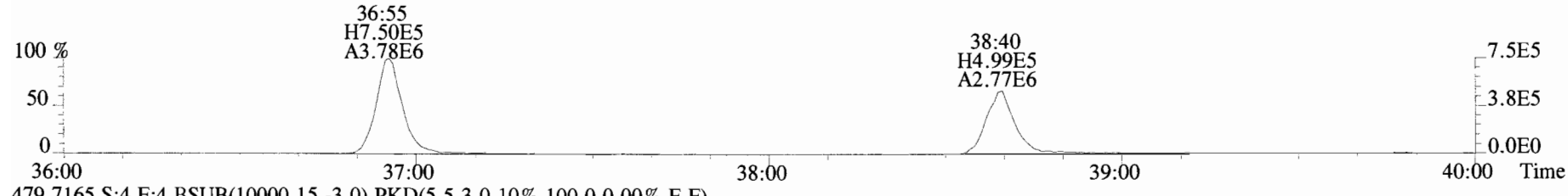
409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



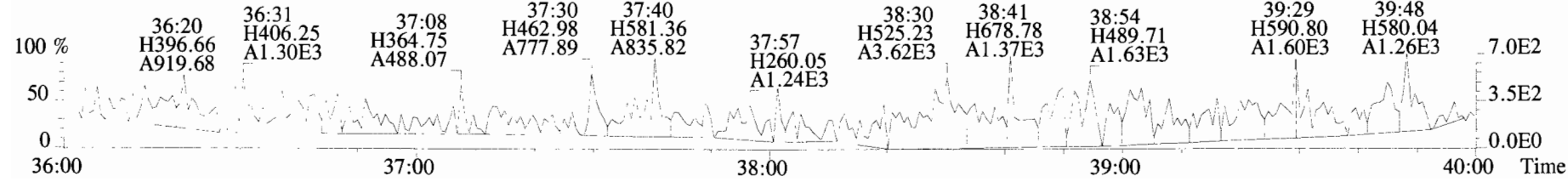
417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



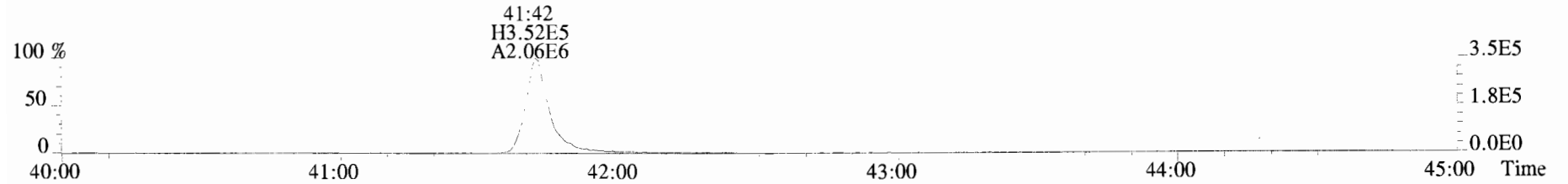
419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



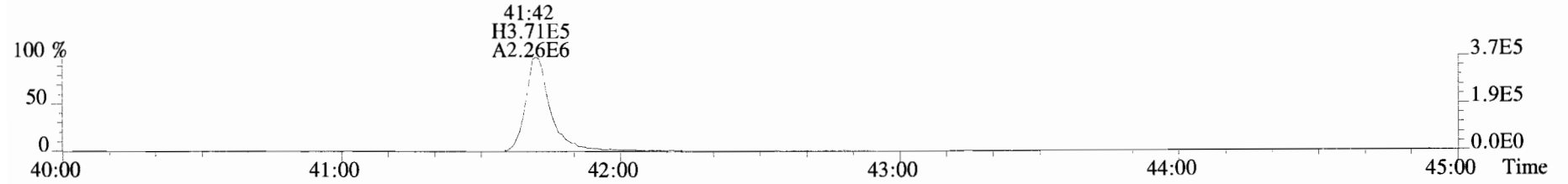
479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



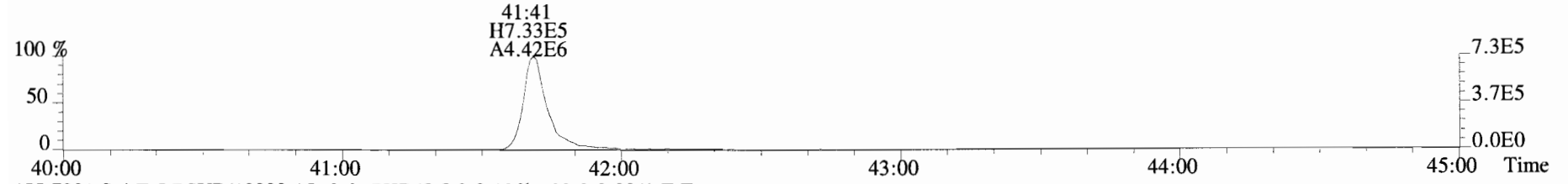
File:191009D1 #1-432 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



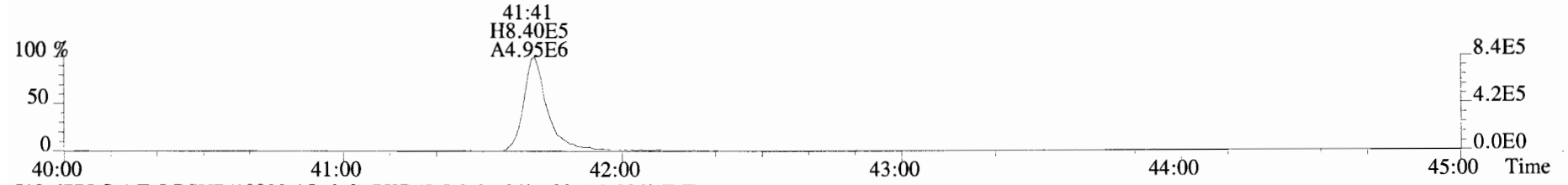
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



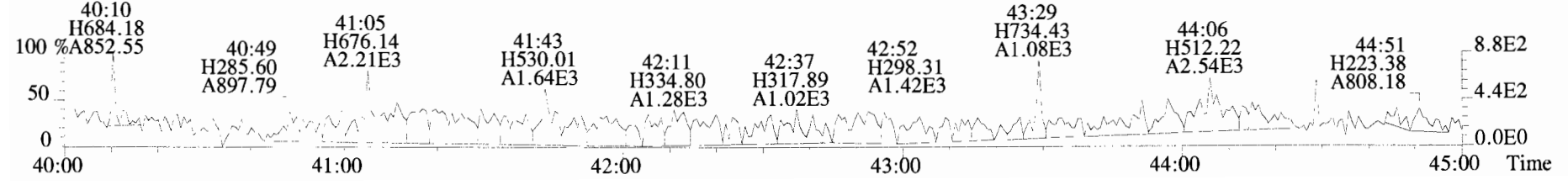
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



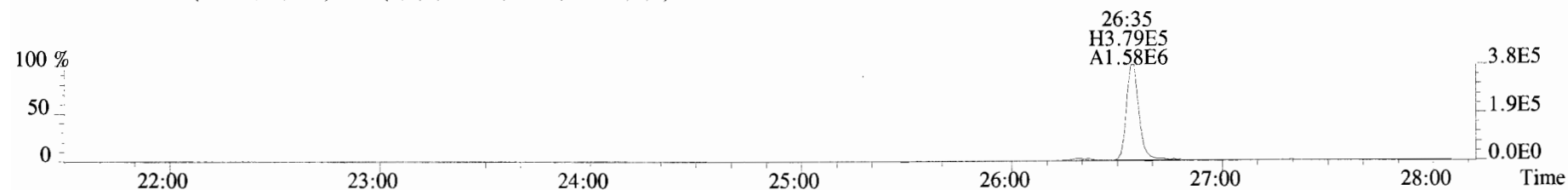
455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



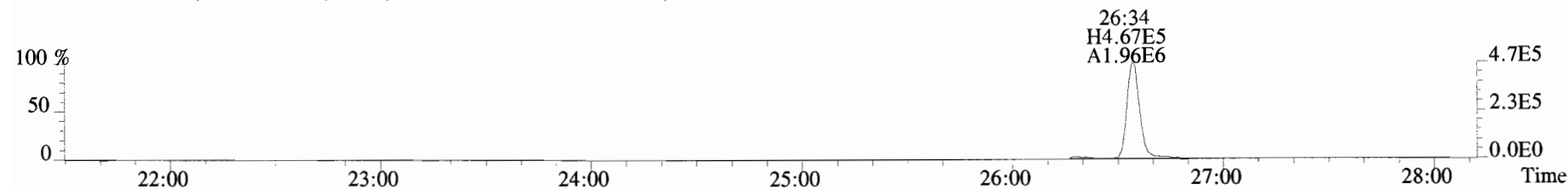
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



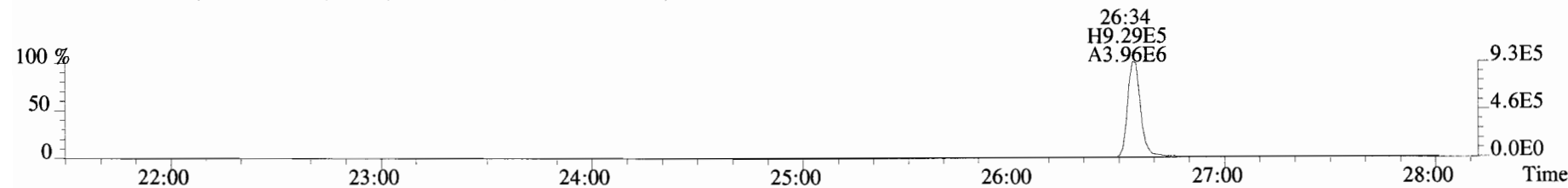
File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



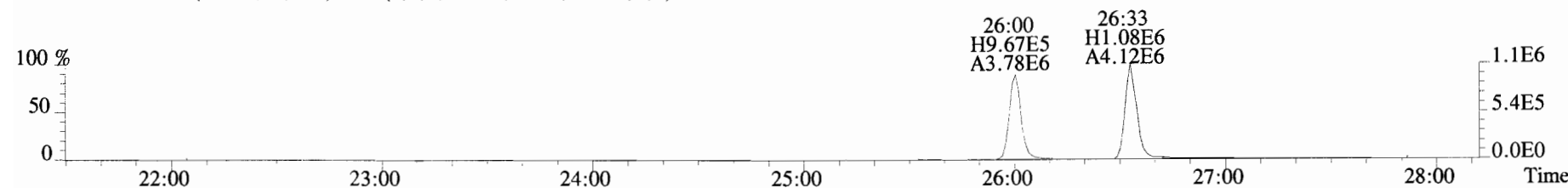
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



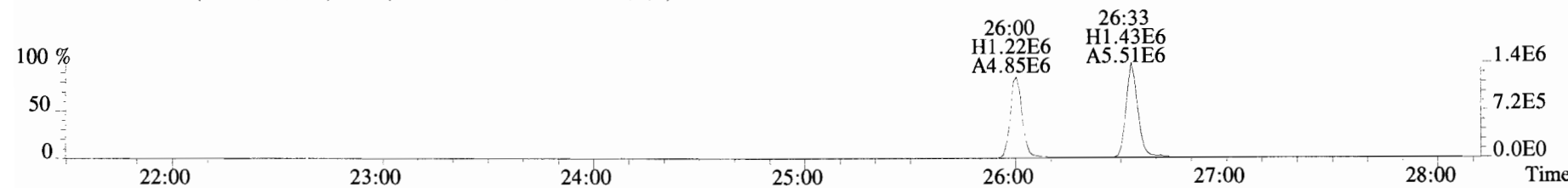
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



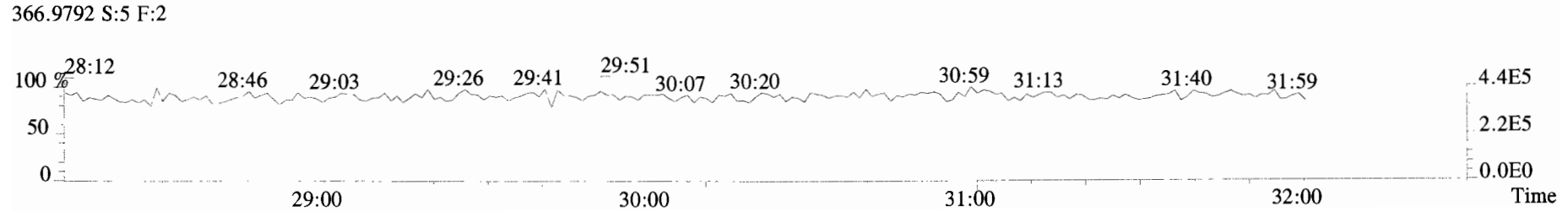
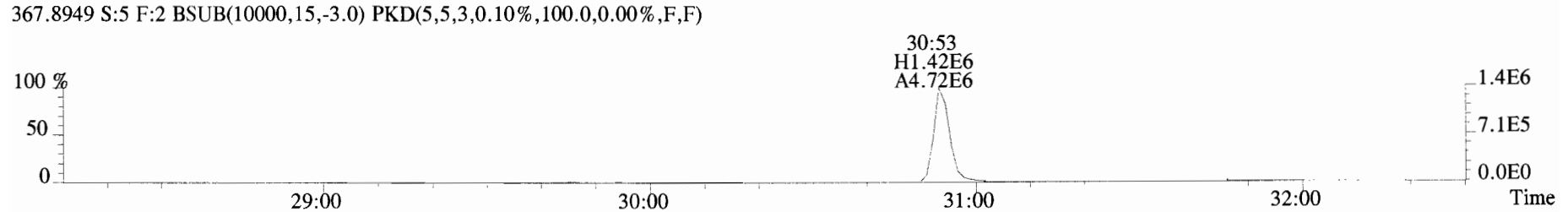
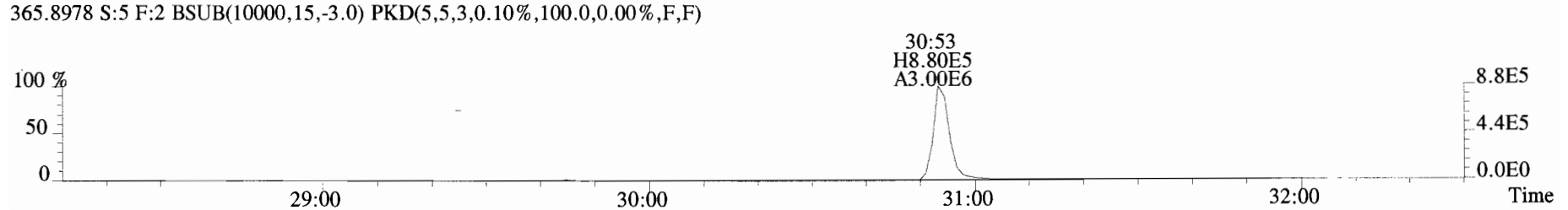
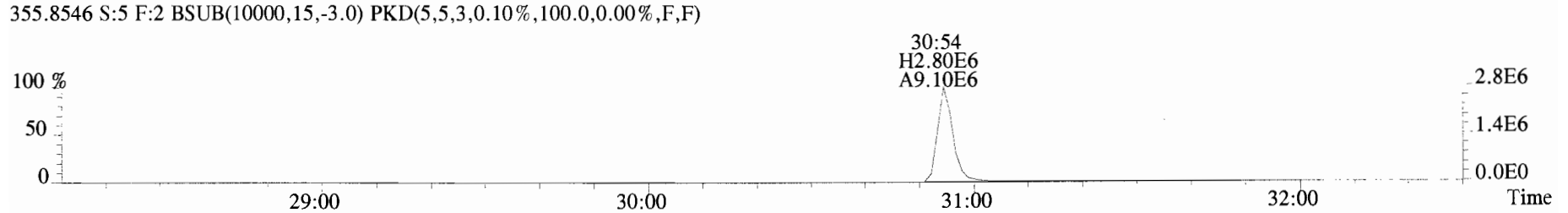
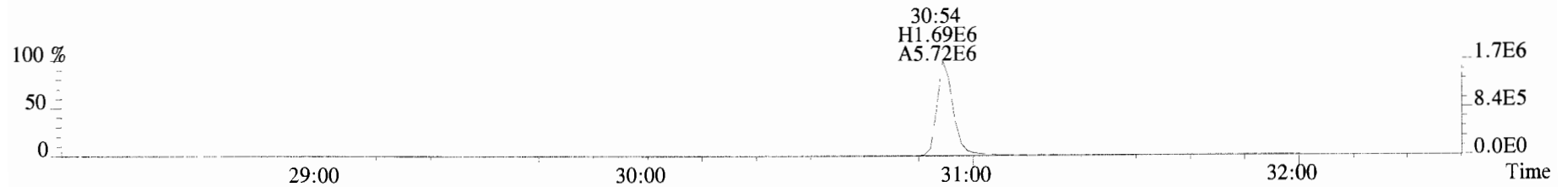
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



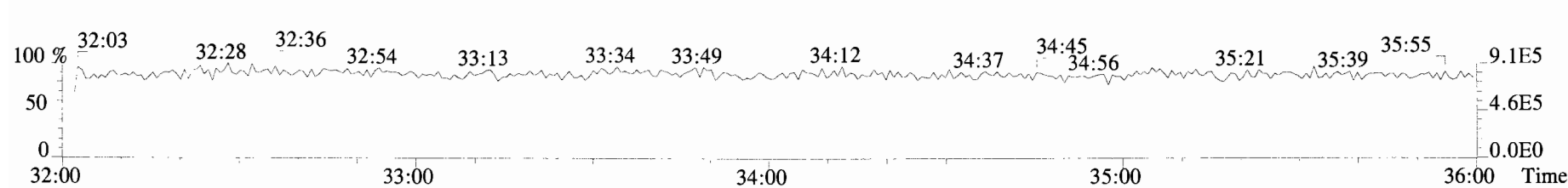
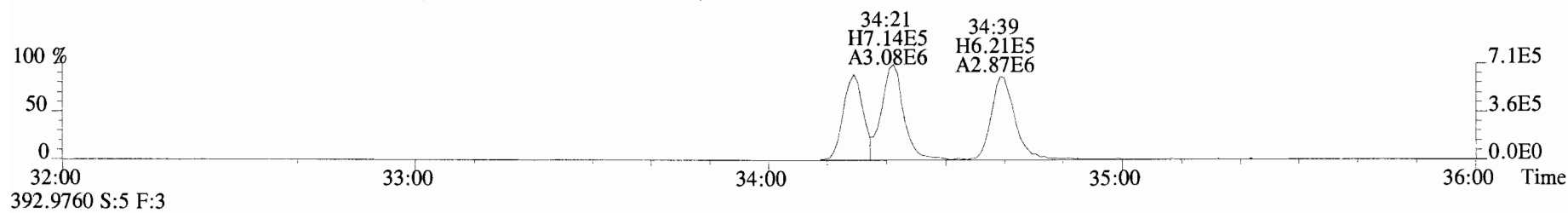
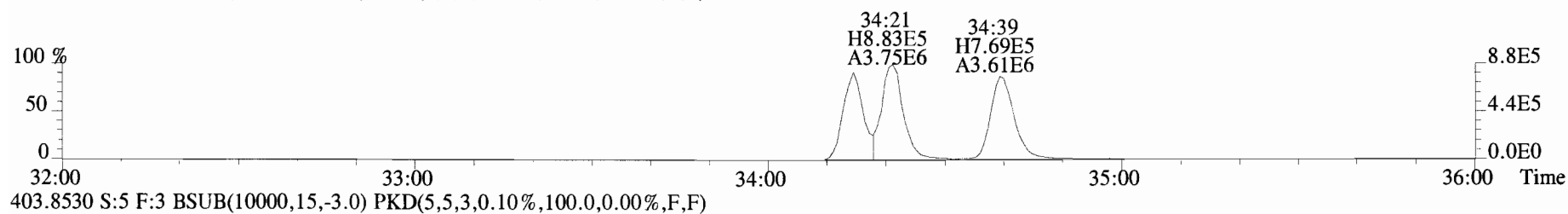
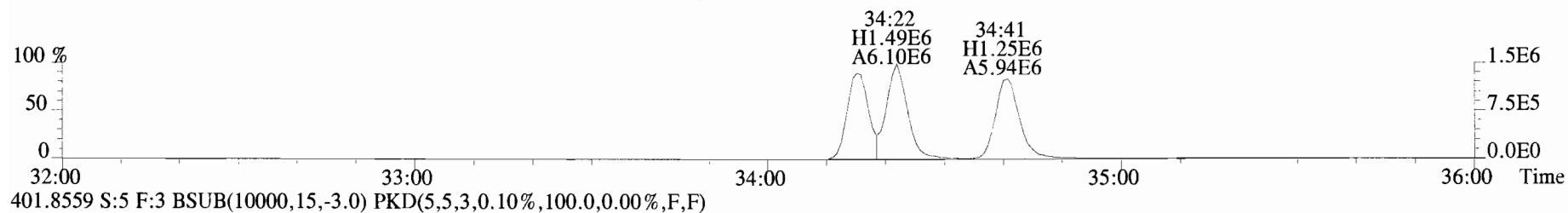
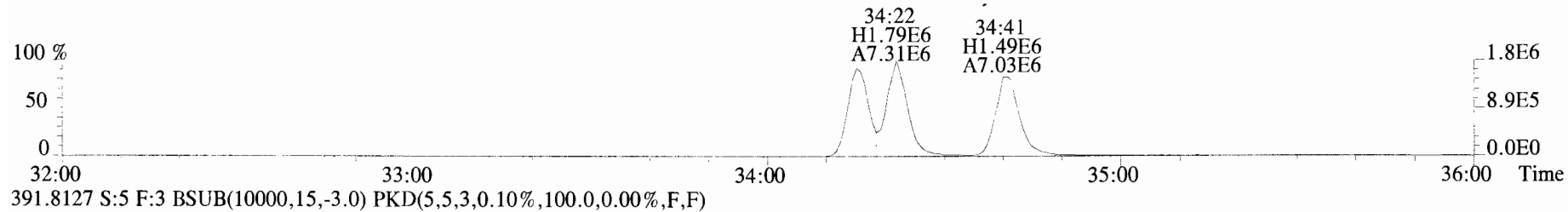
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



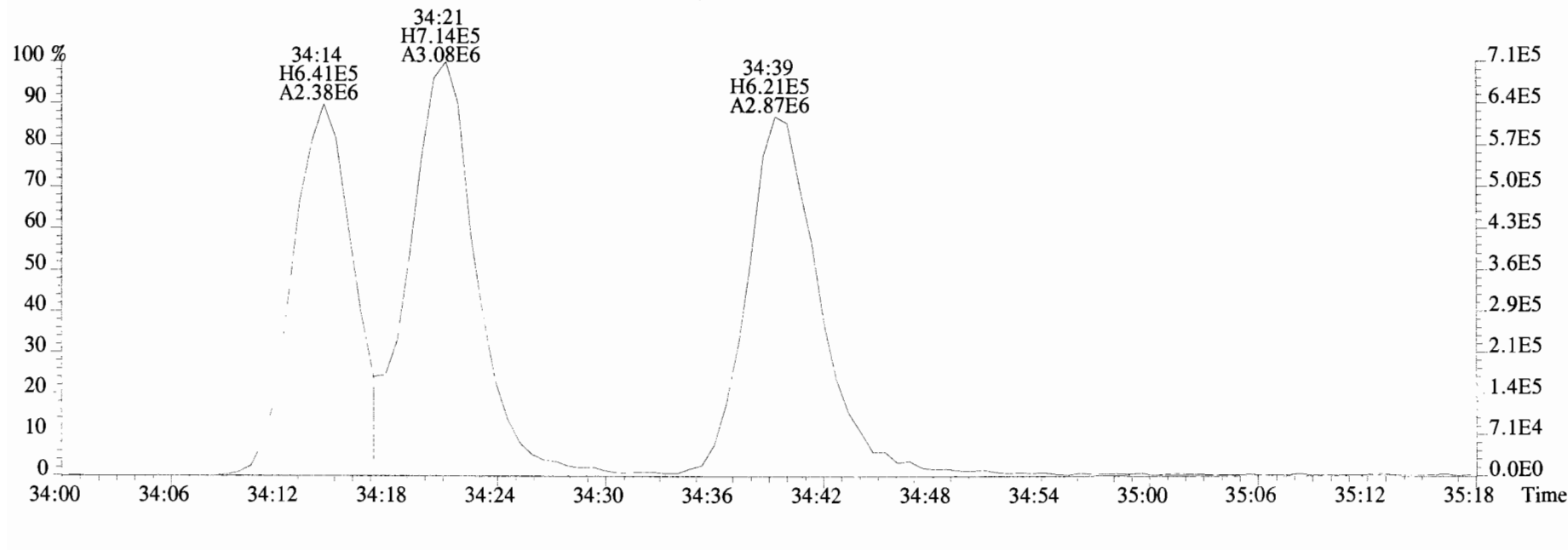
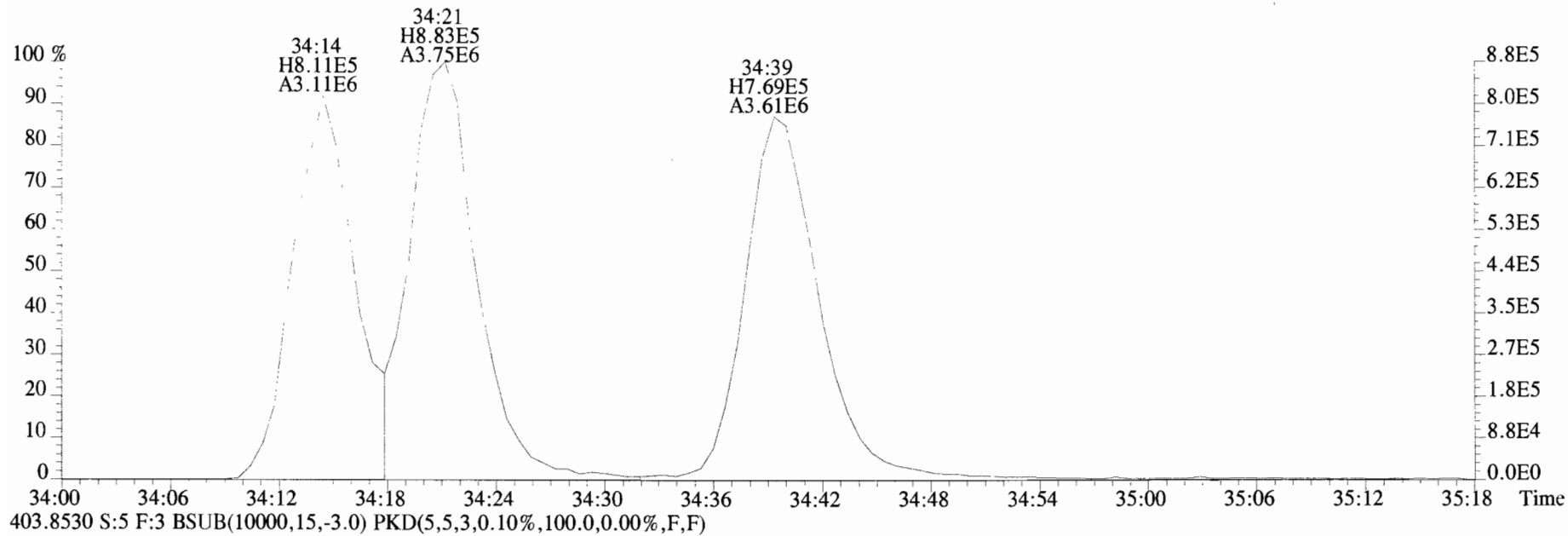
File:191009D1 #1-210 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



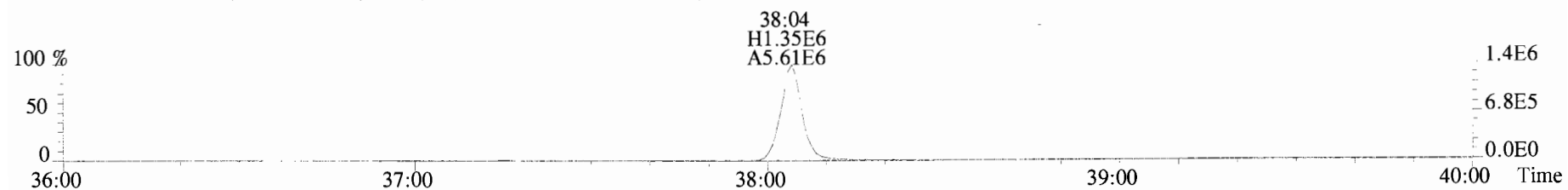
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



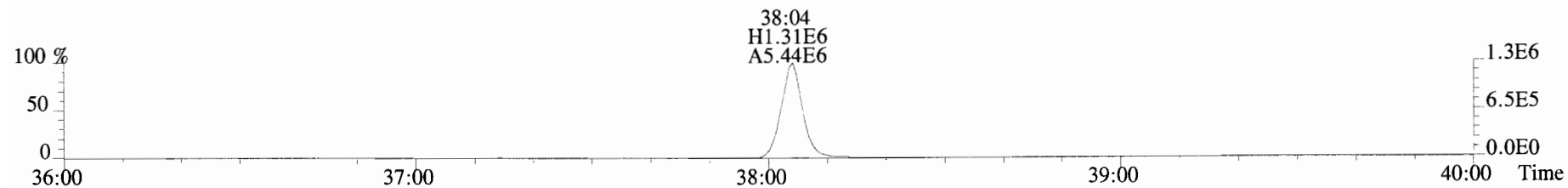
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



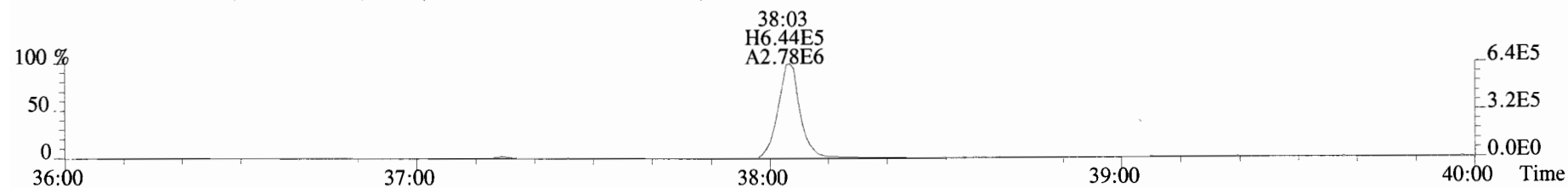
File:191009D1 #1-356 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



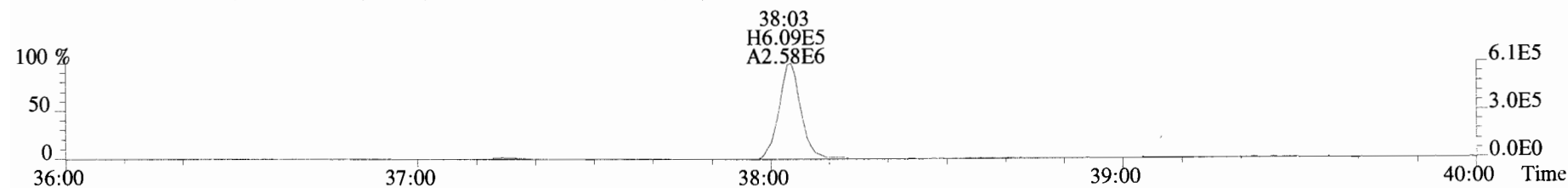
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



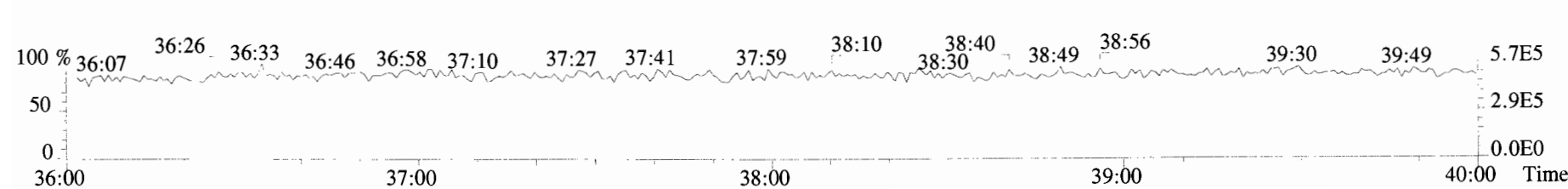
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



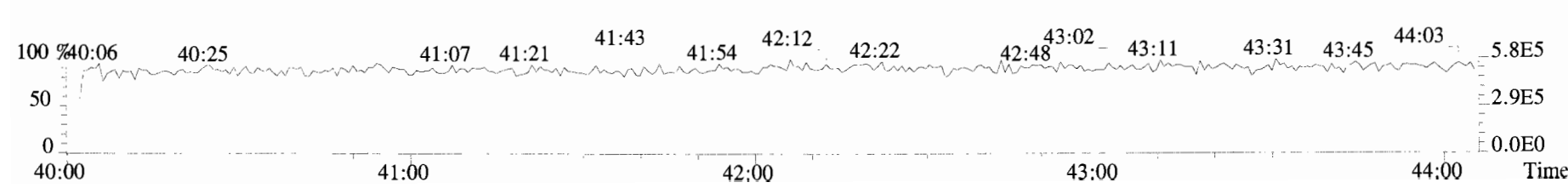
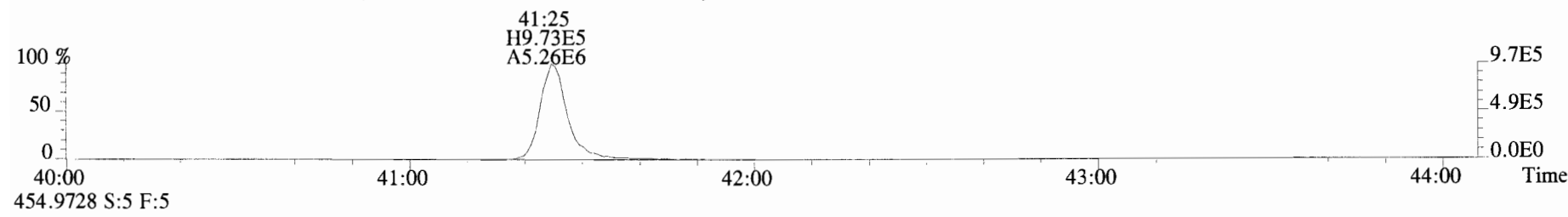
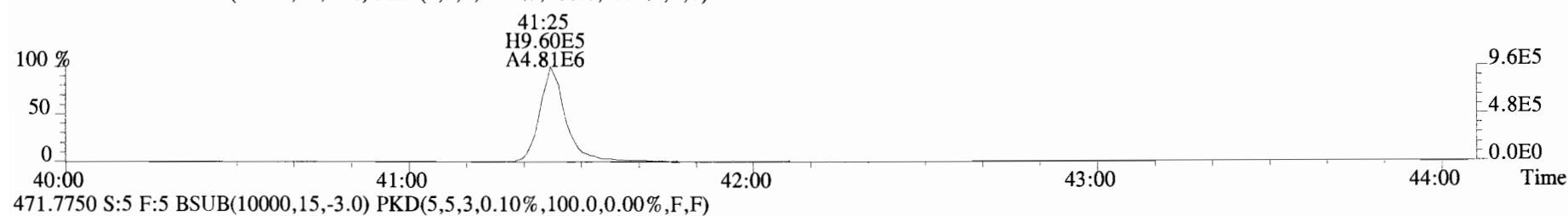
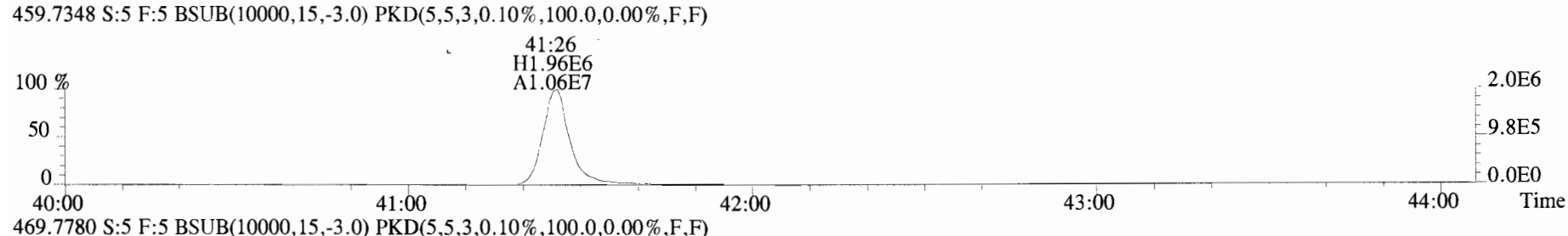
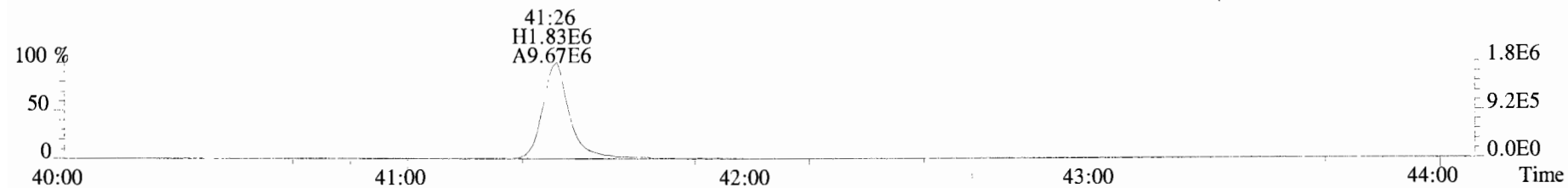
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



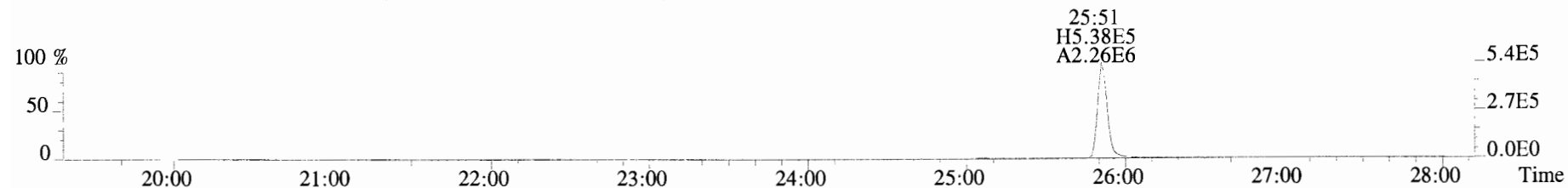
454.9728 S:5 F:4



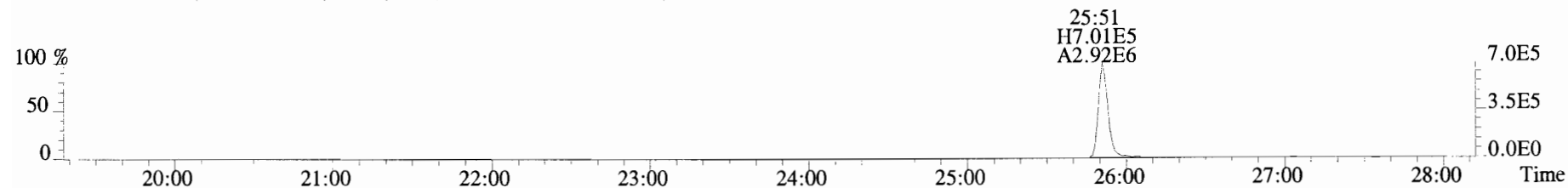
File:191009D1 #1-431 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



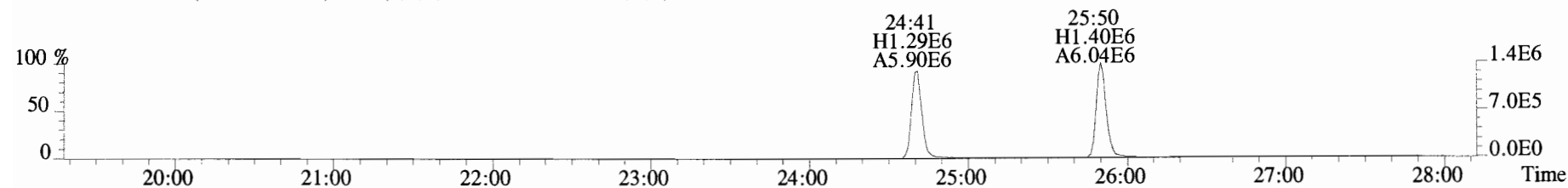
File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



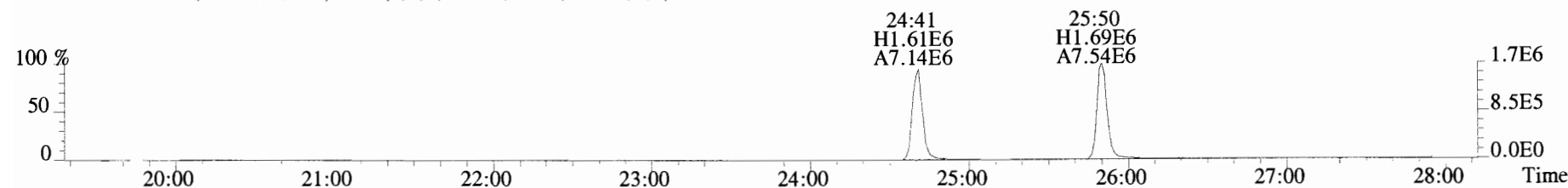
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



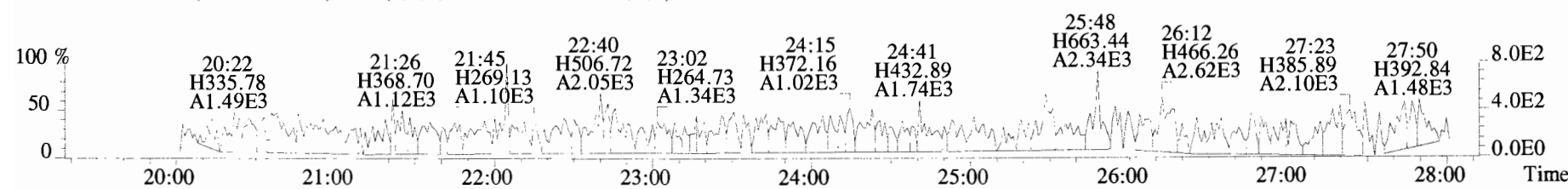
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



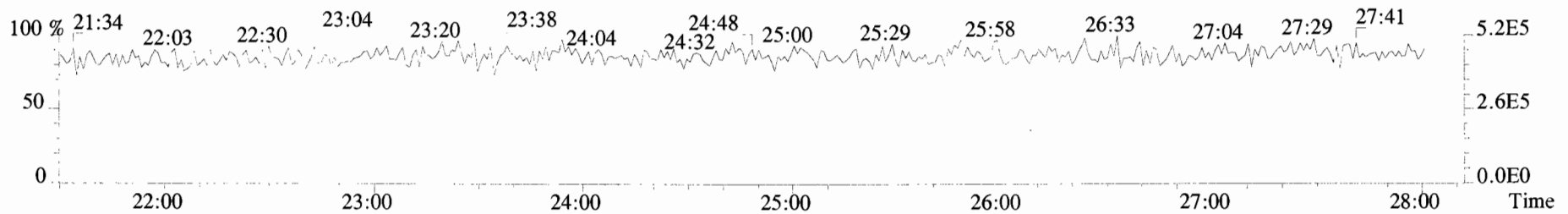
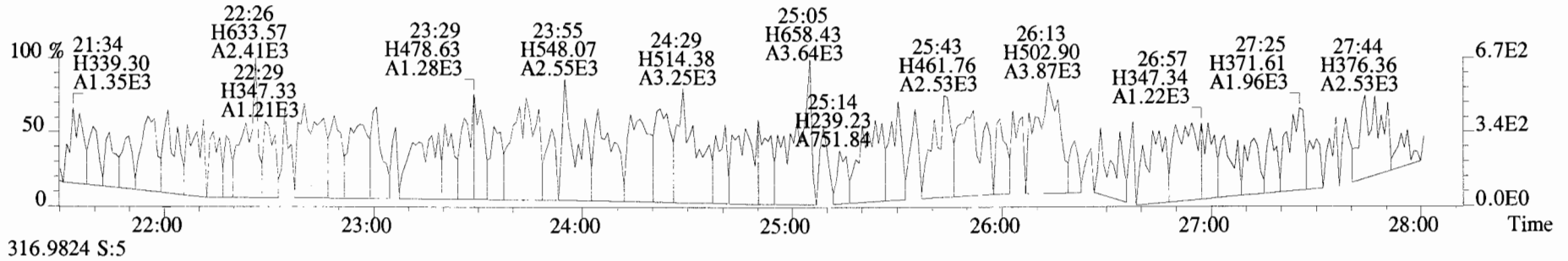
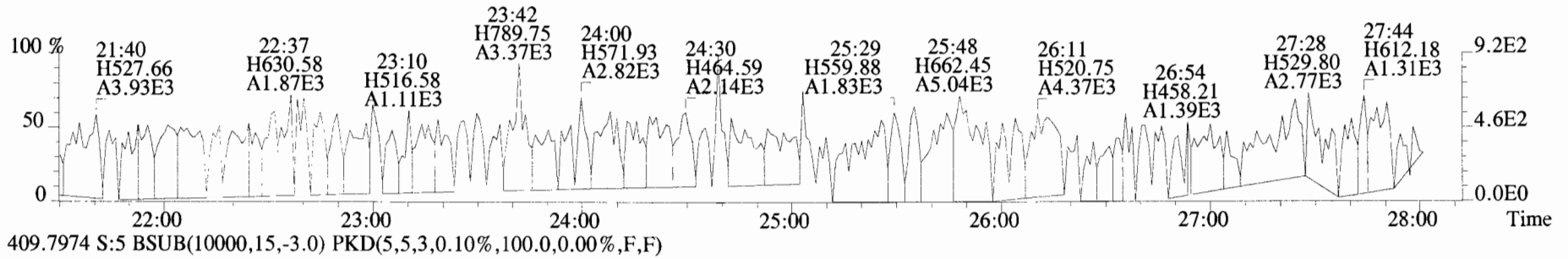
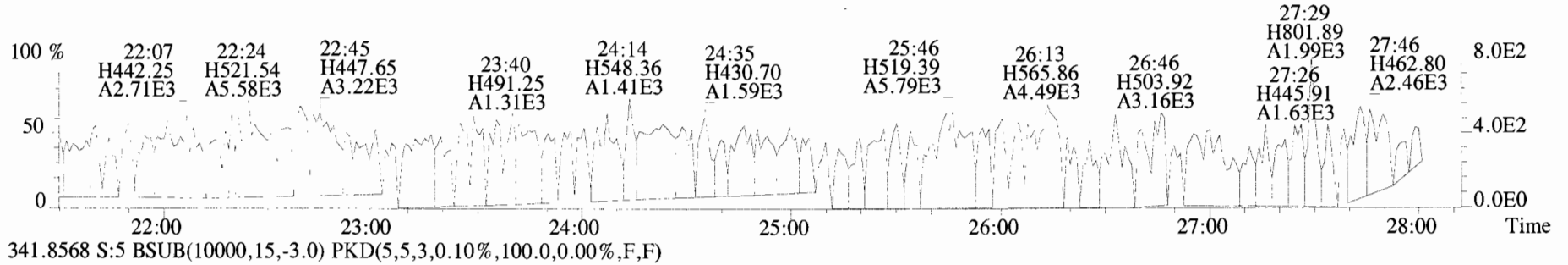
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



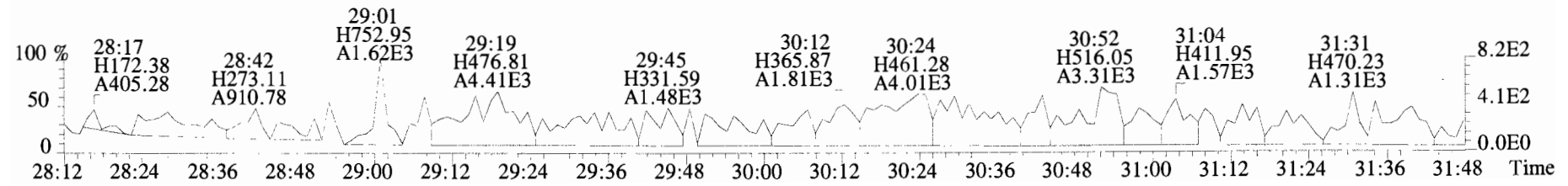
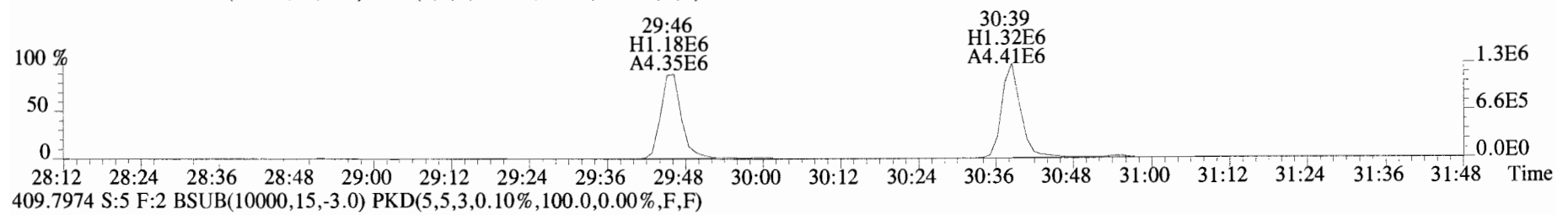
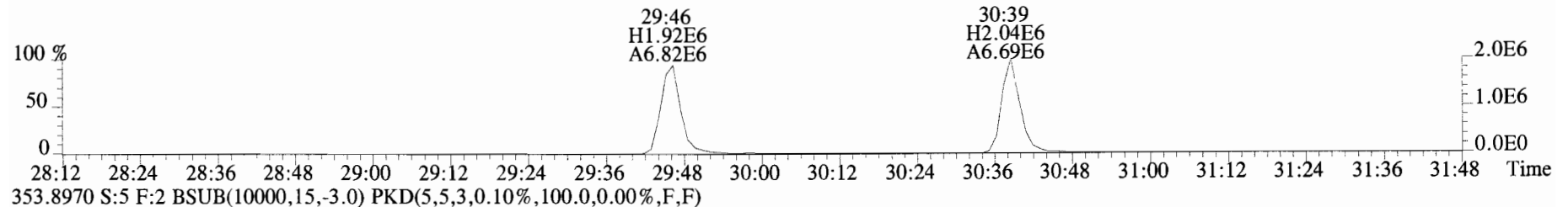
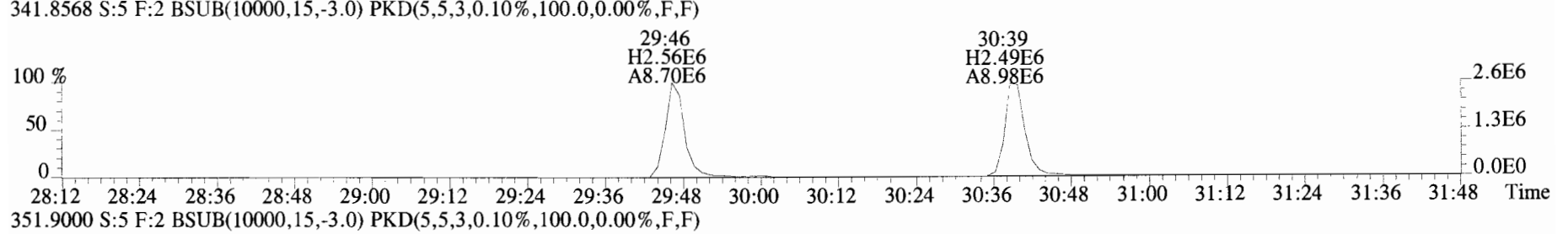
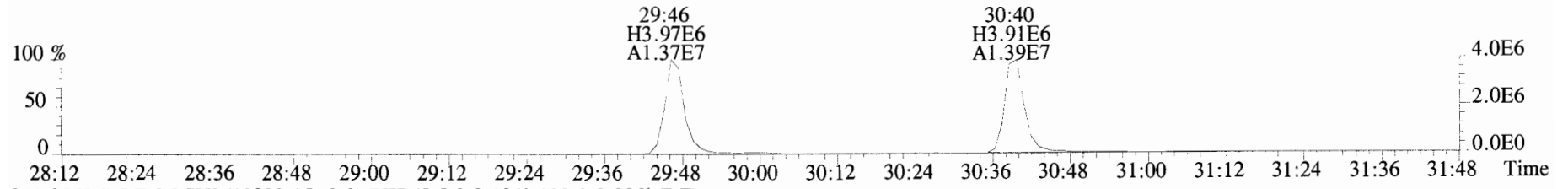
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



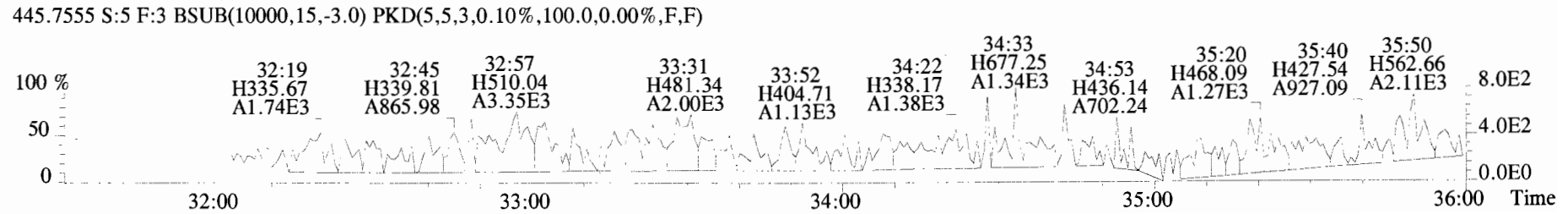
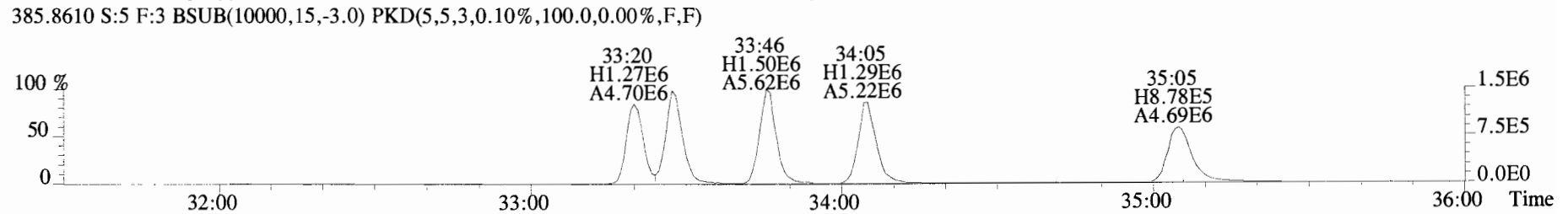
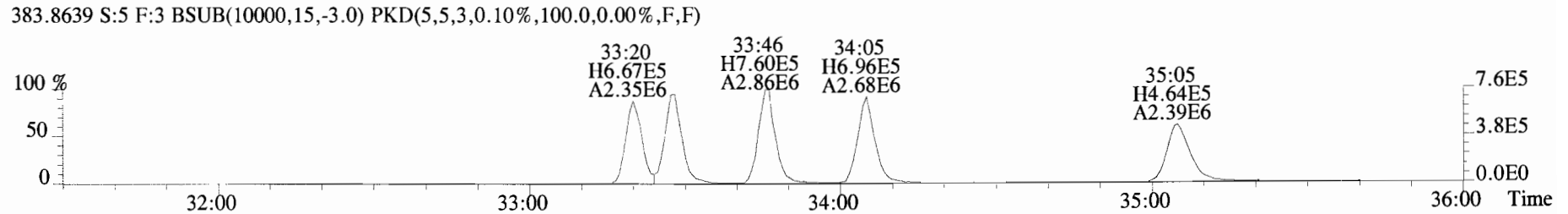
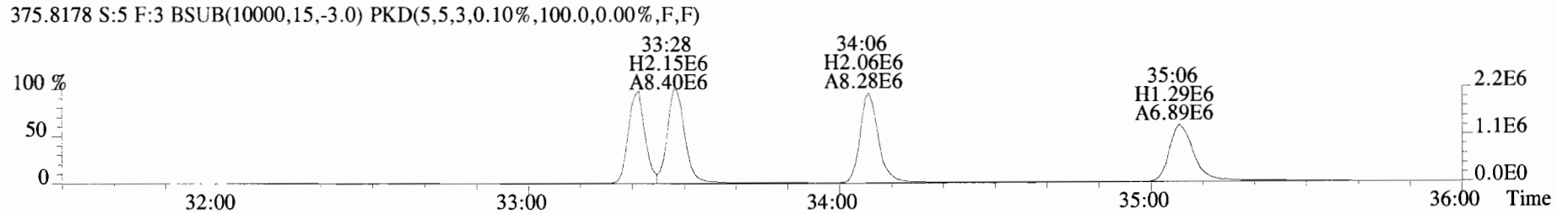
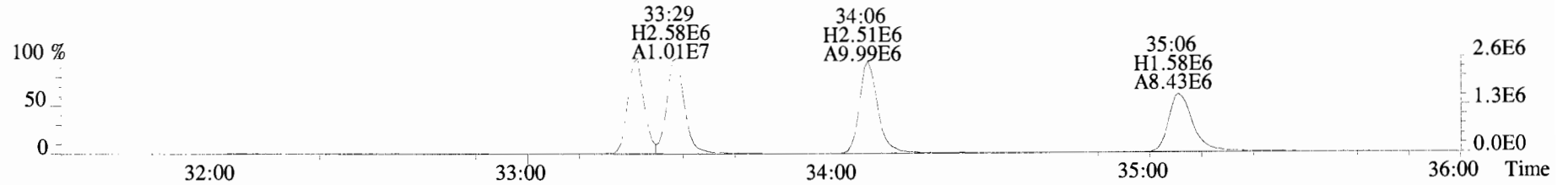
File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
 339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



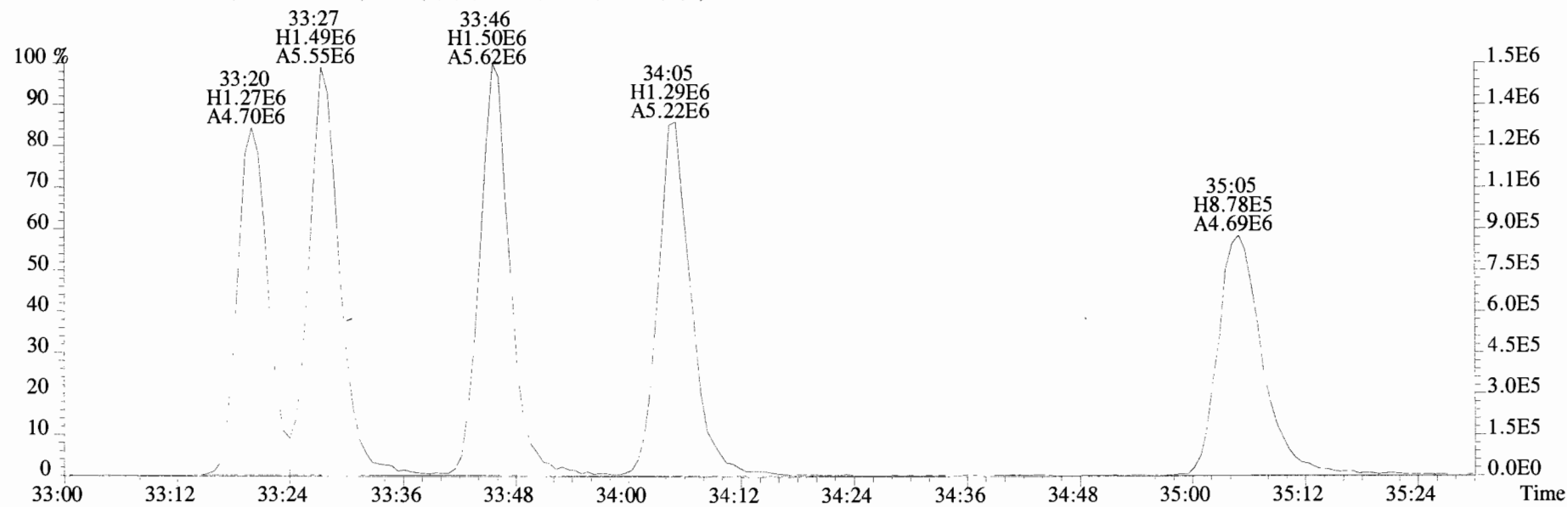
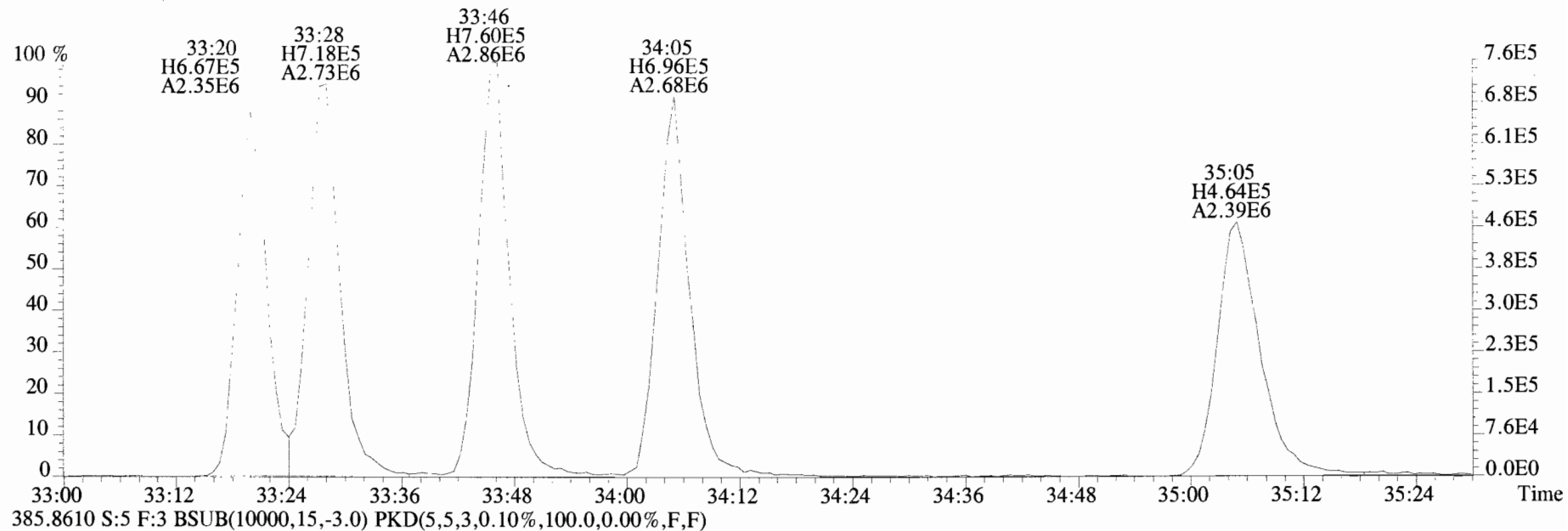
File:191009D1 #1-210 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



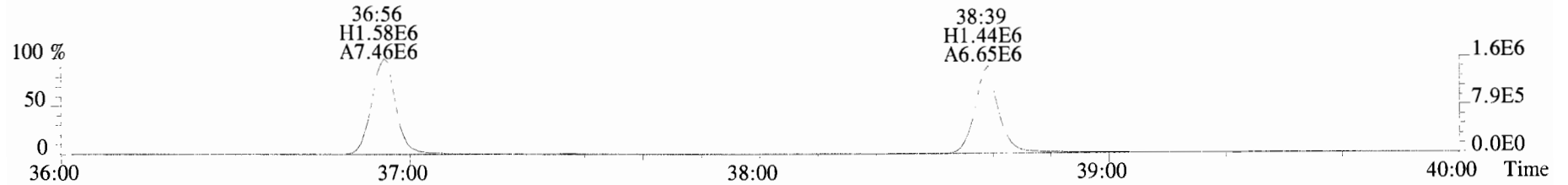
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



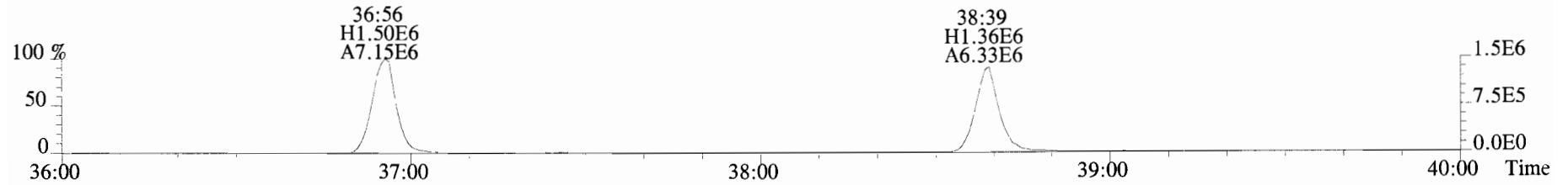
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



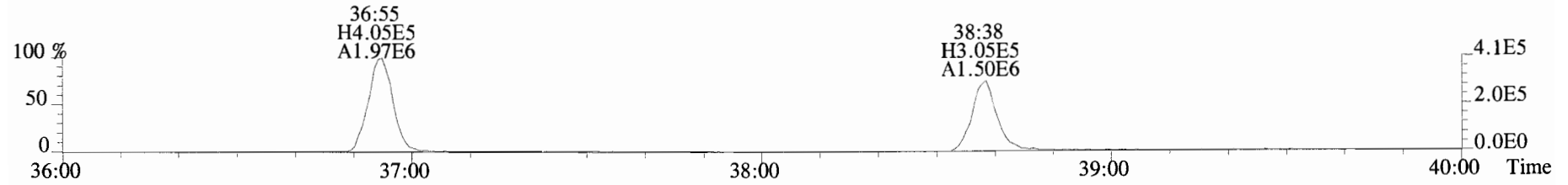
File:191009D1 #1-356 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text: Vista Analytical Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



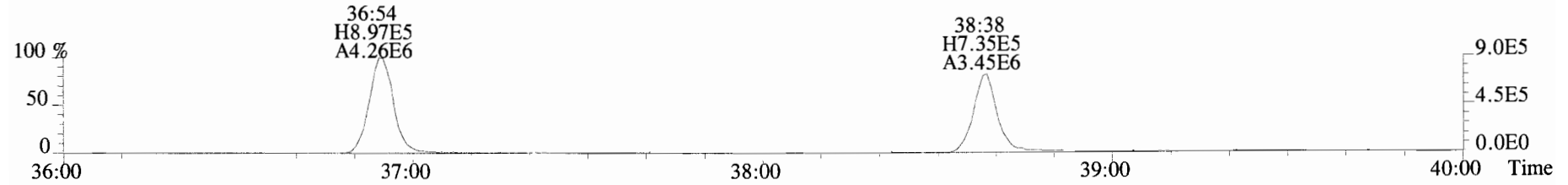
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



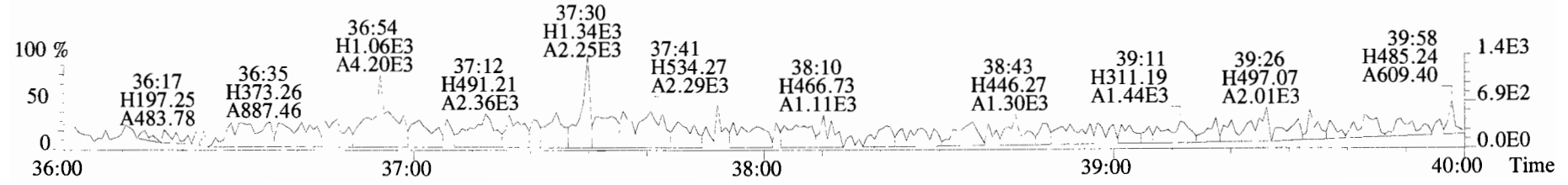
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



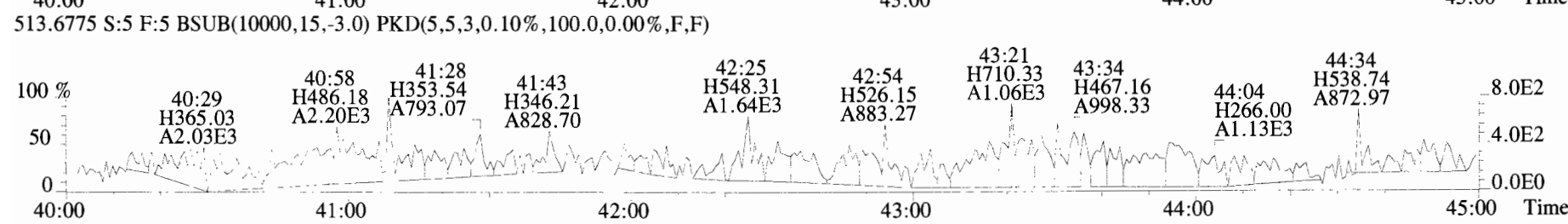
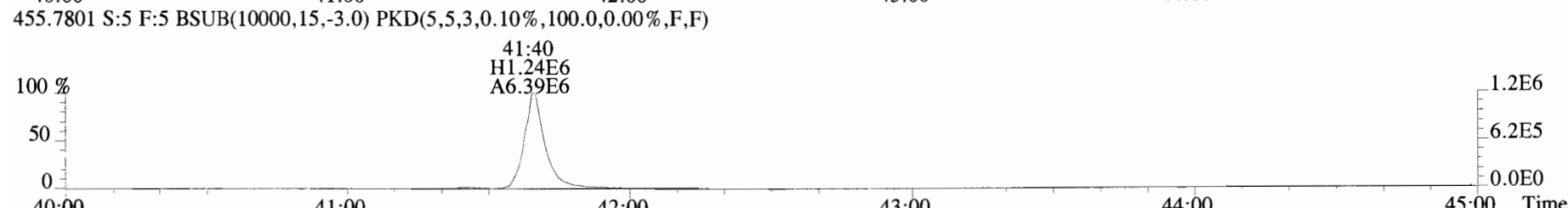
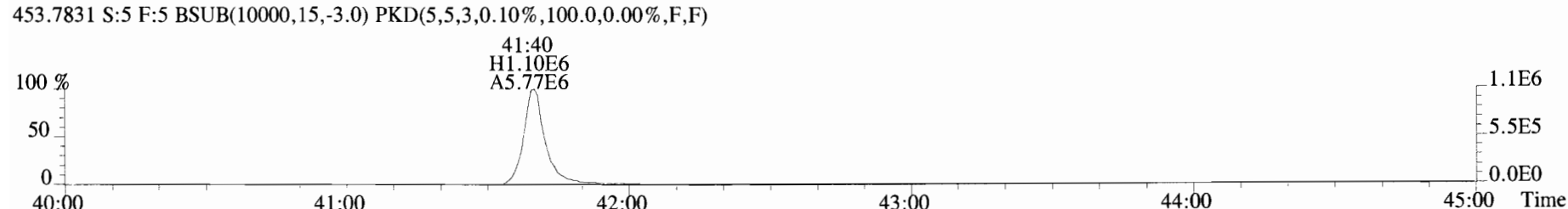
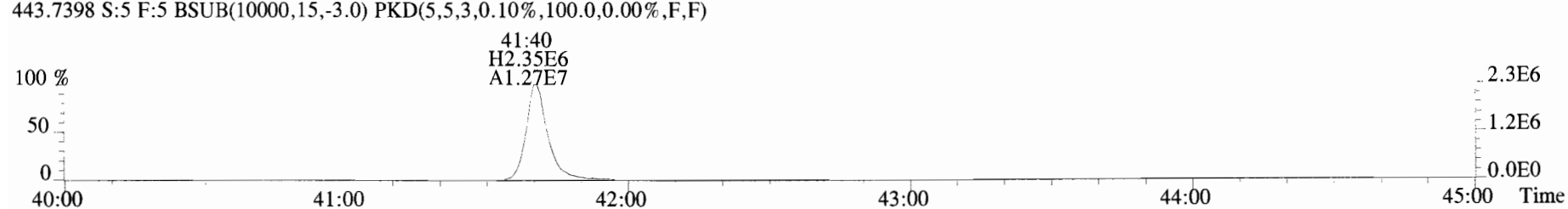
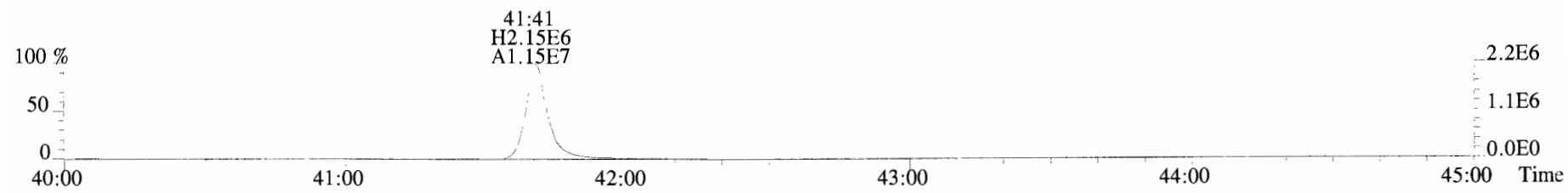
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



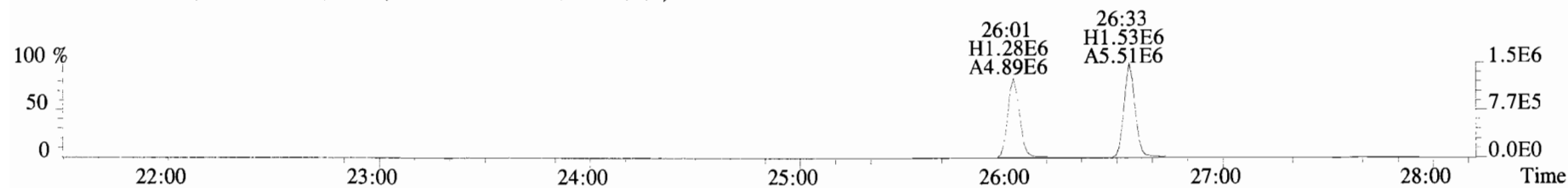
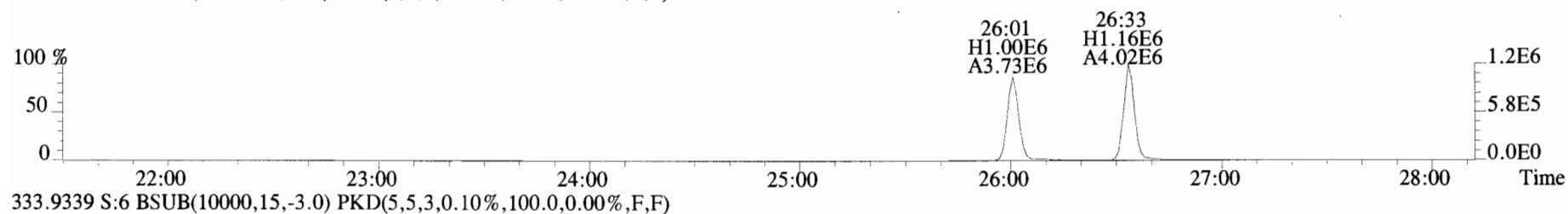
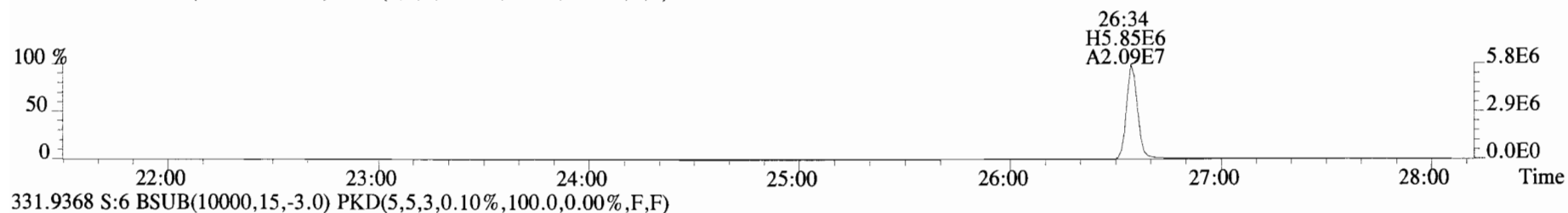
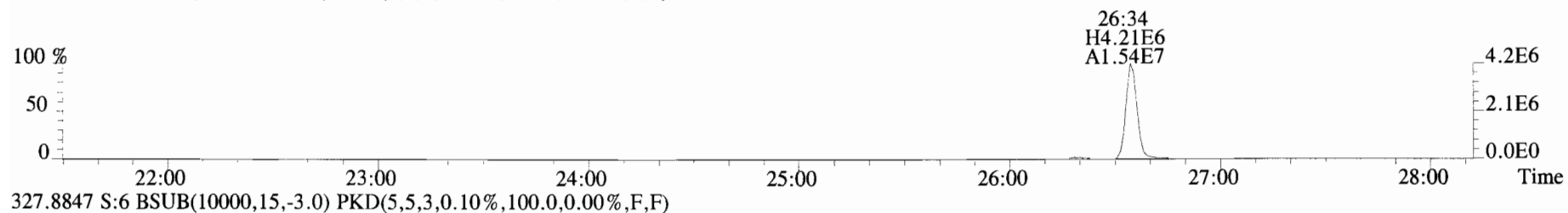
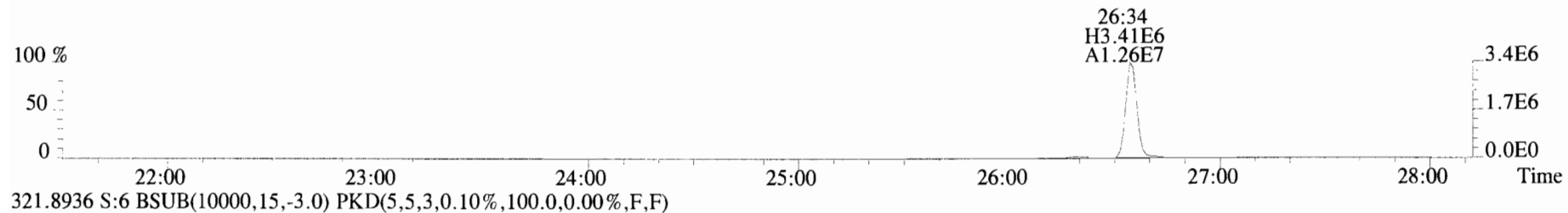
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



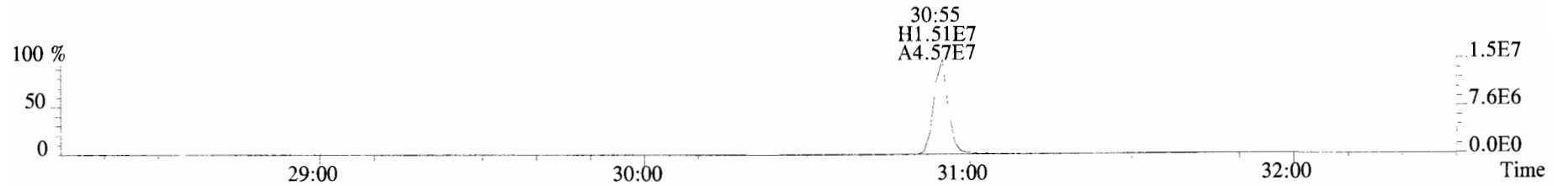
File:191009D1 #1-431 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



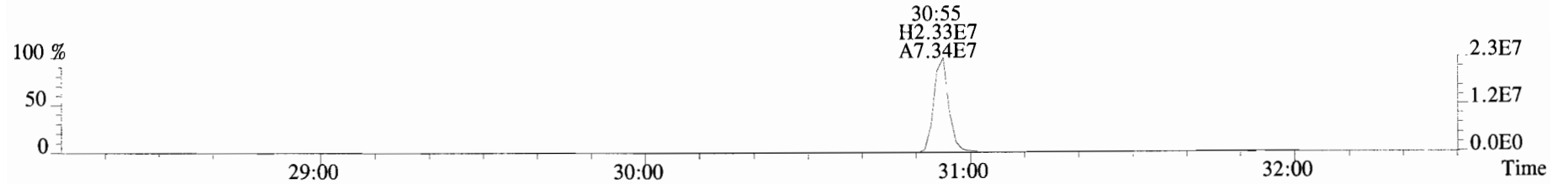
File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



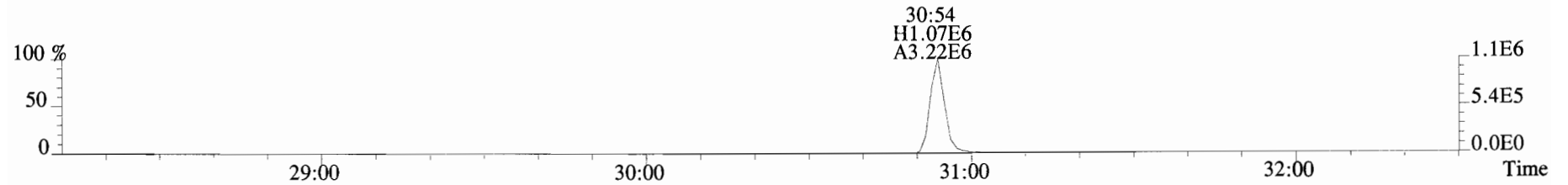
File:191009D1 #1-211 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



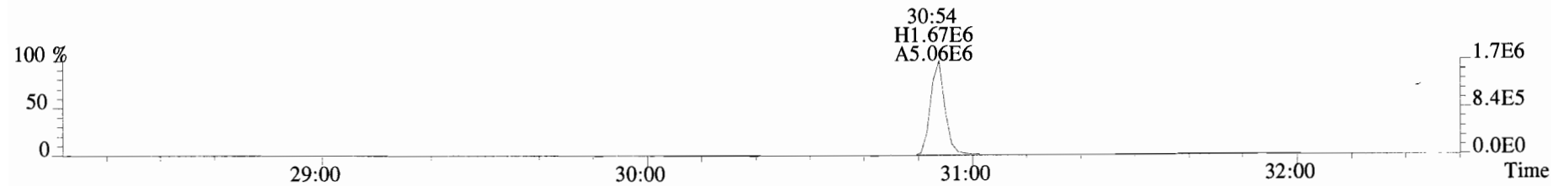
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



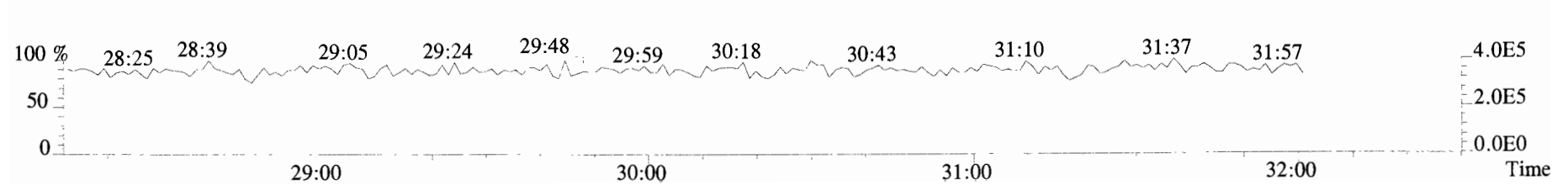
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



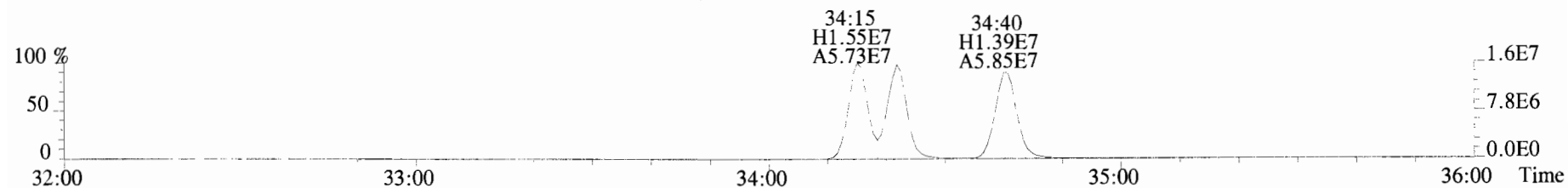
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



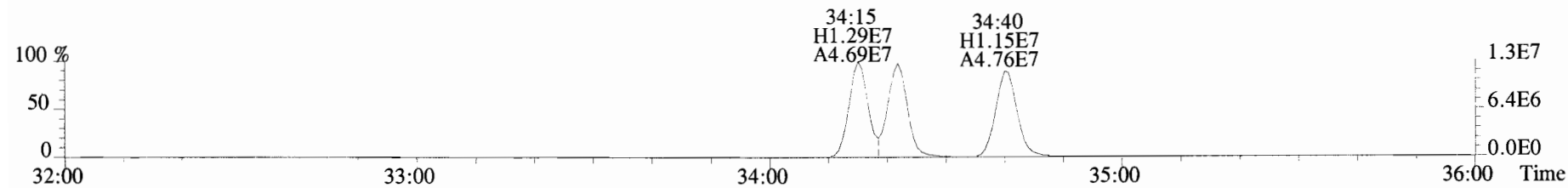
366.9792 S:6 F:2



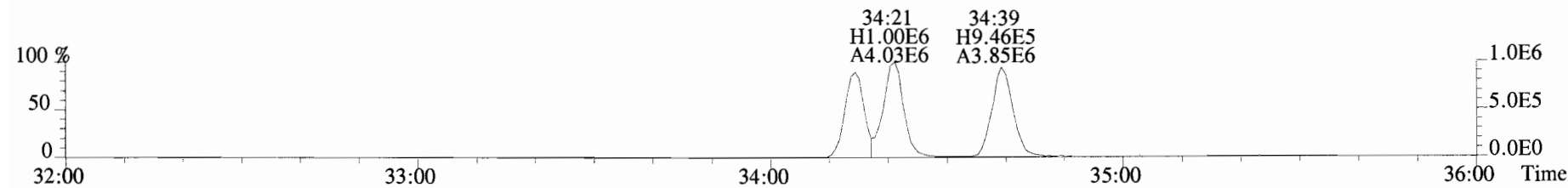
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



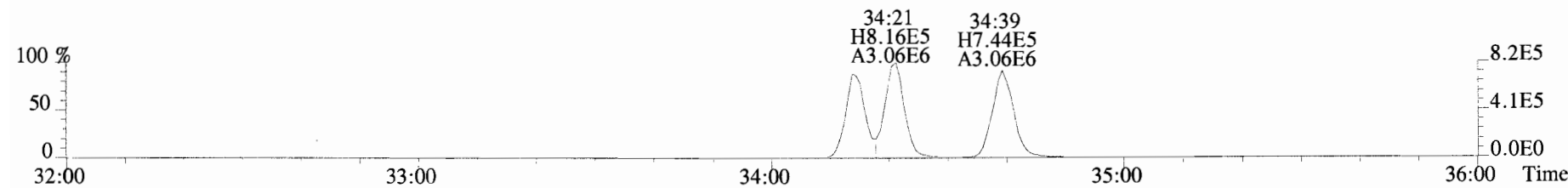
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



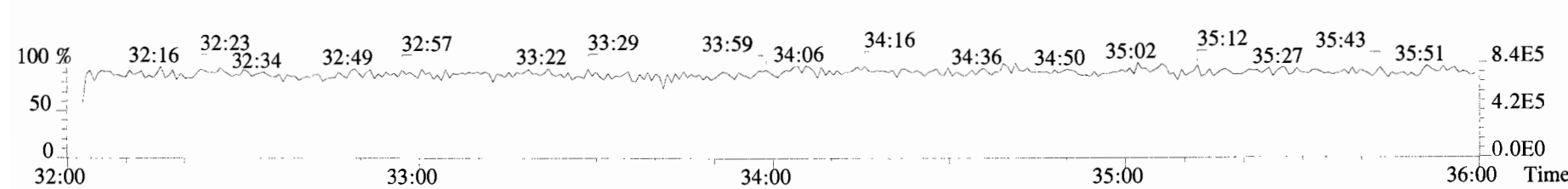
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



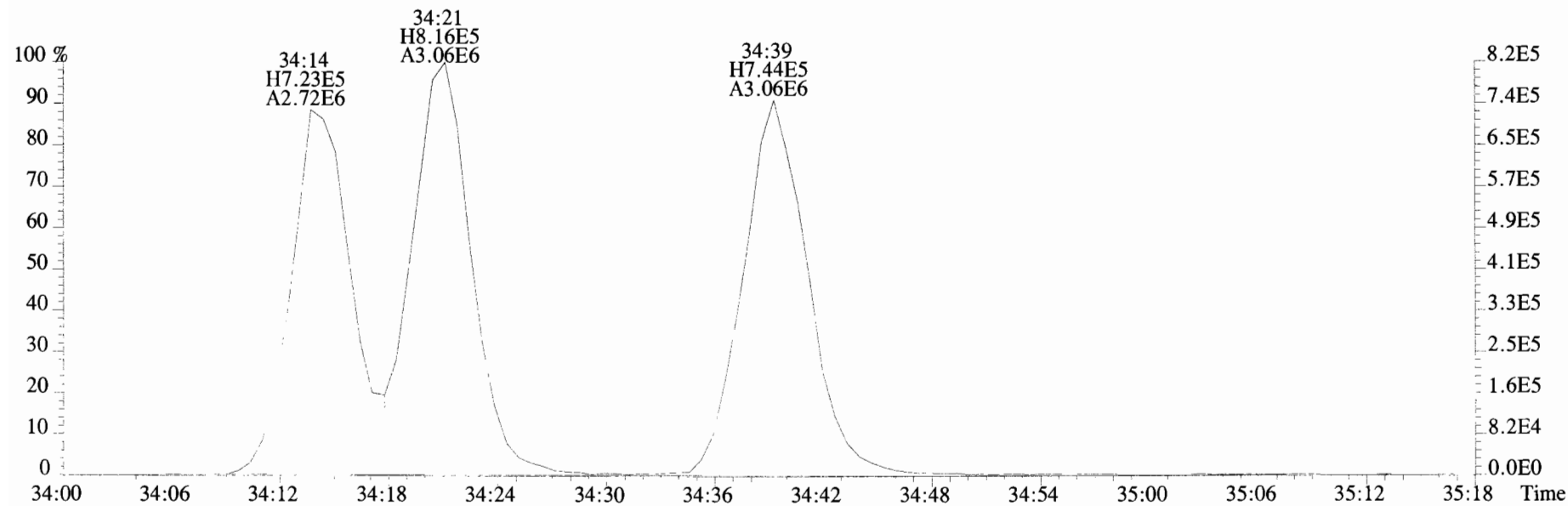
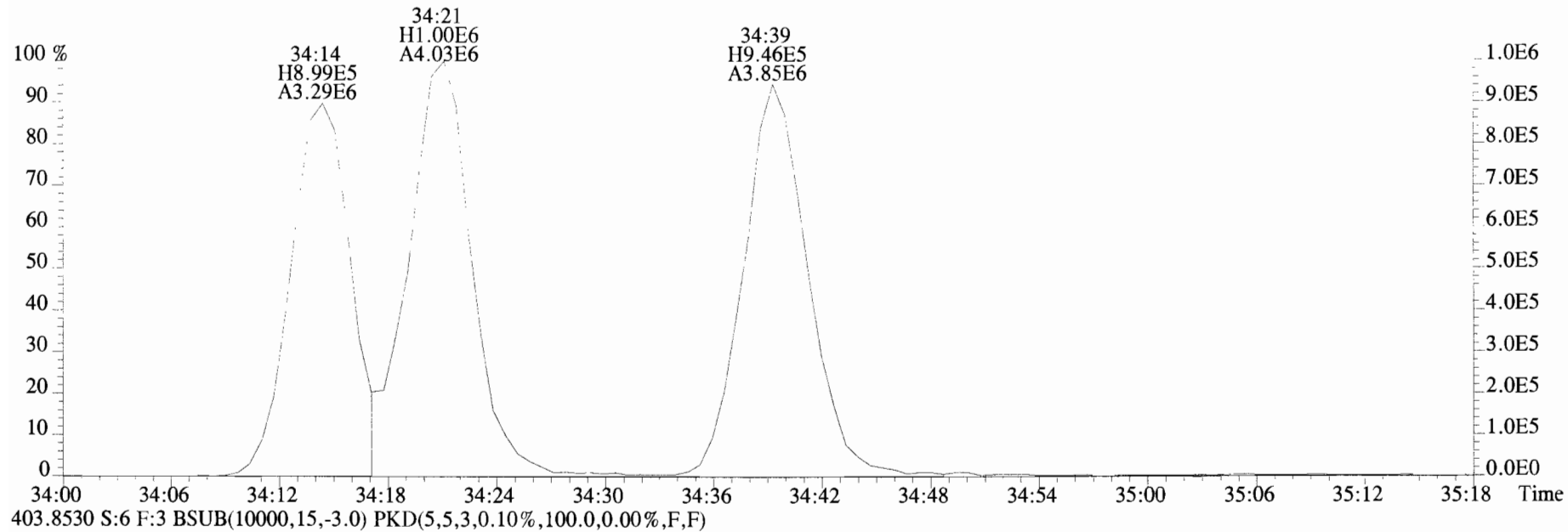
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



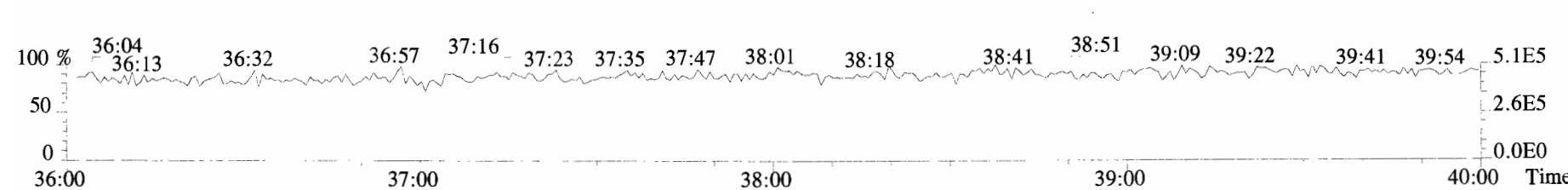
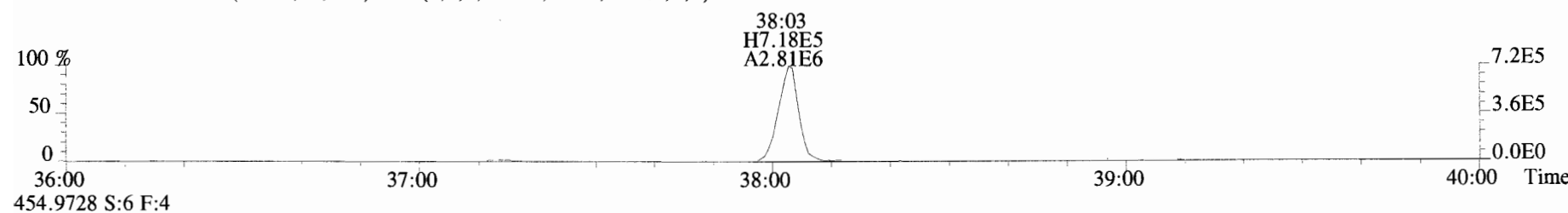
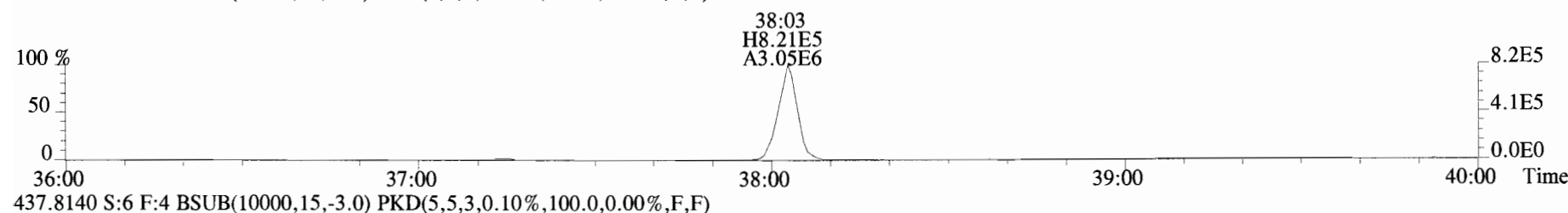
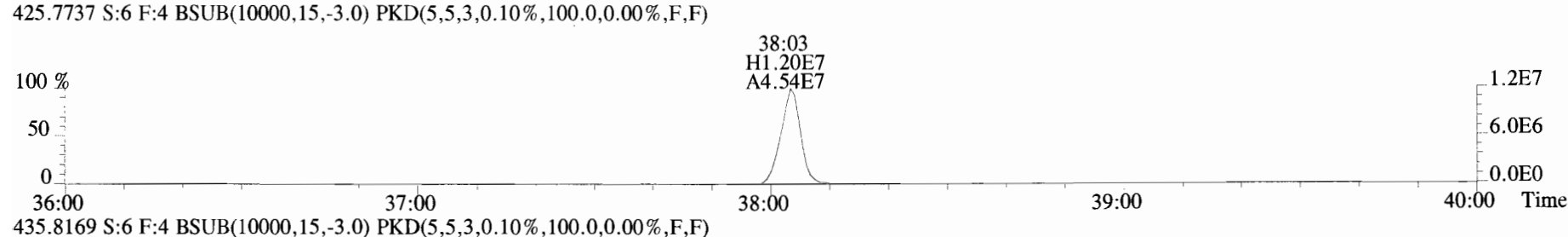
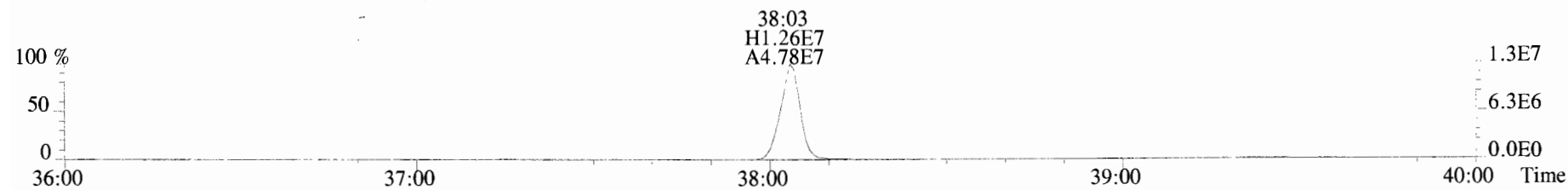
392.9760 S:6 F:3



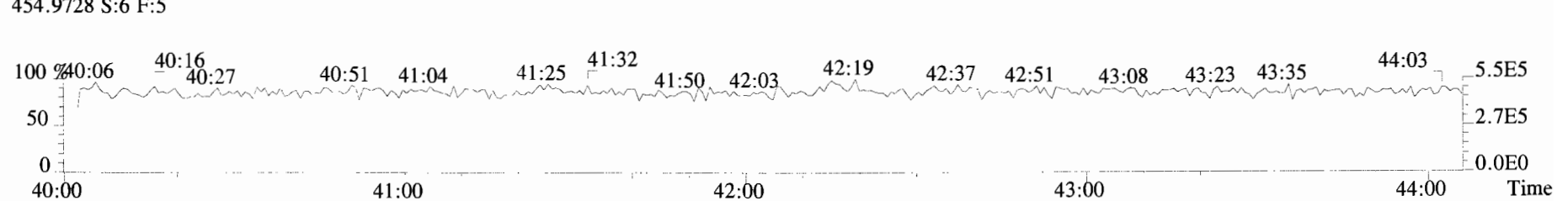
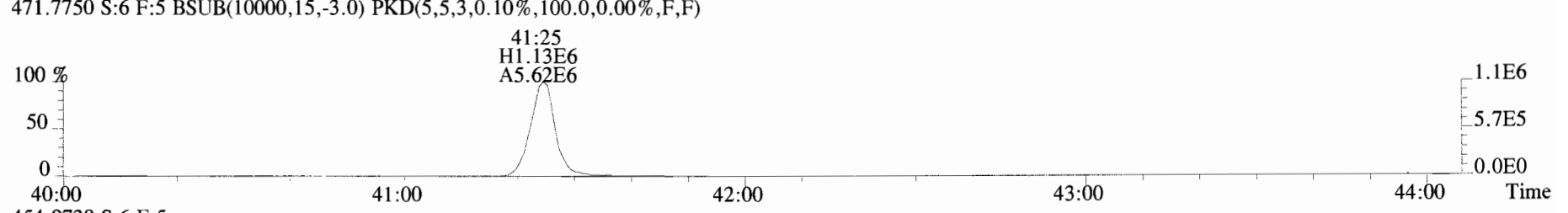
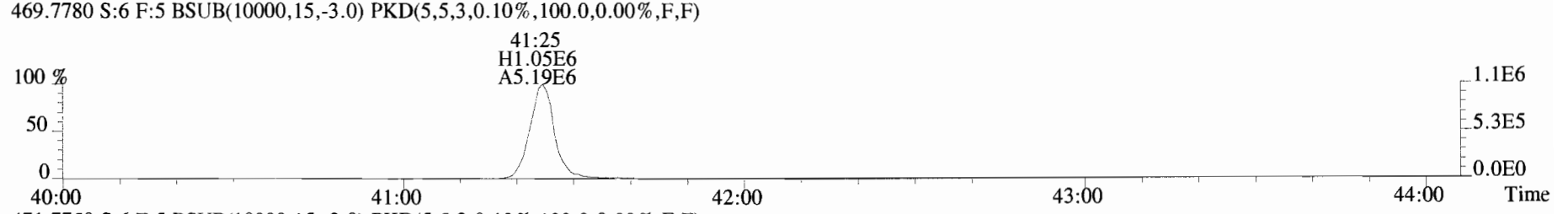
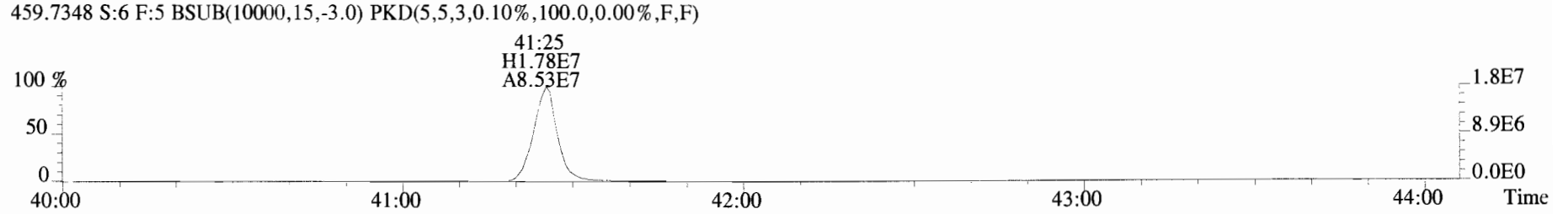
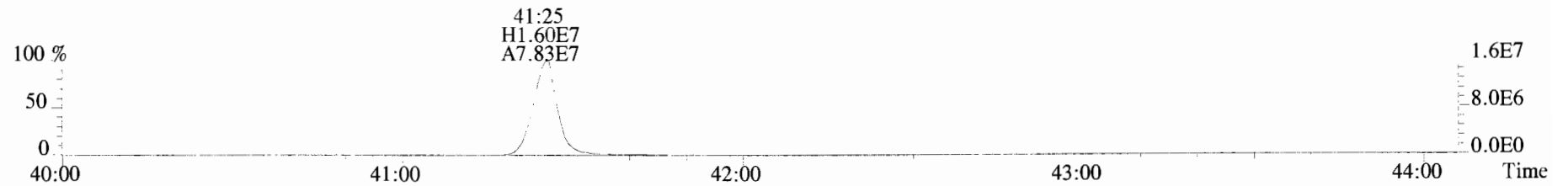
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



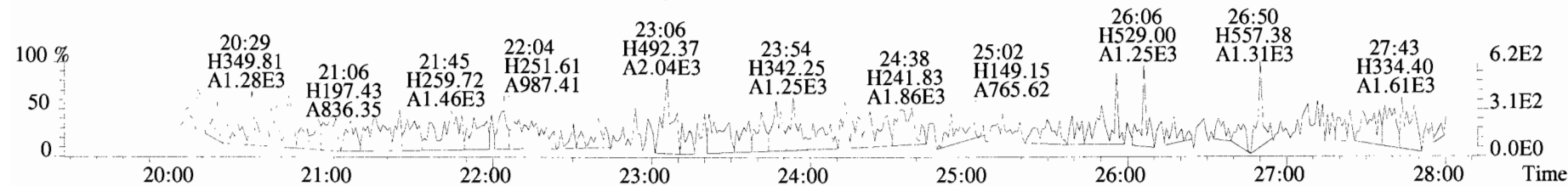
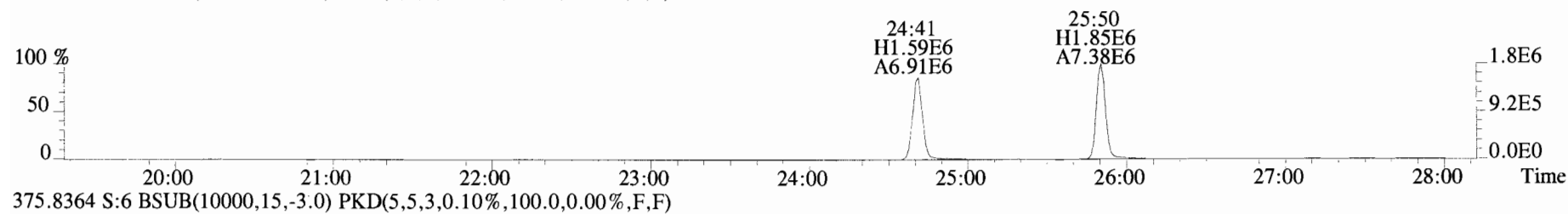
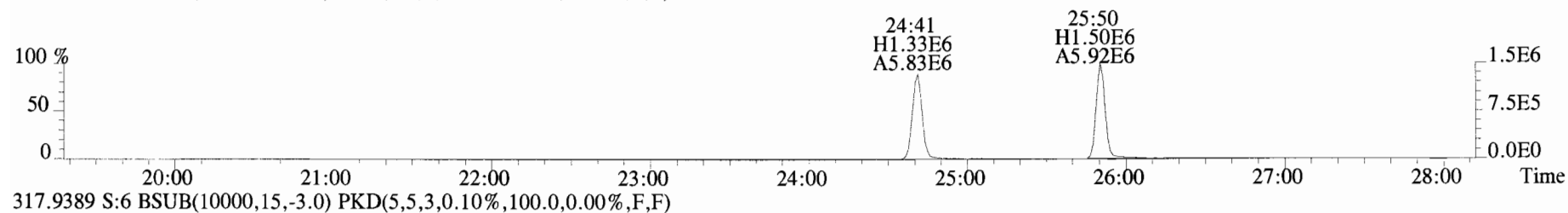
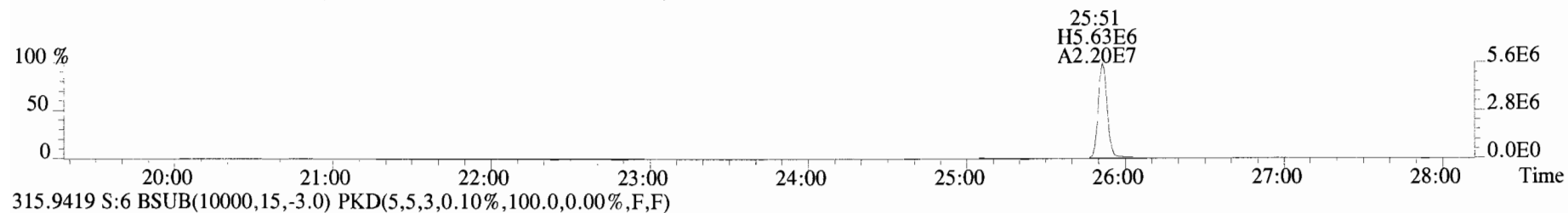
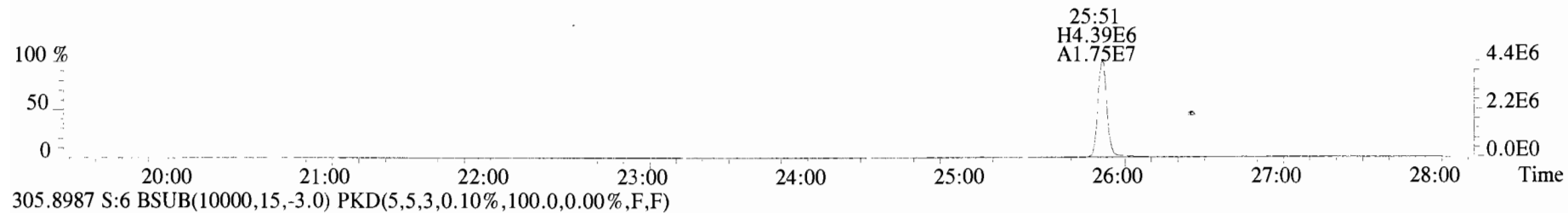
File:191009D1 #1-356 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



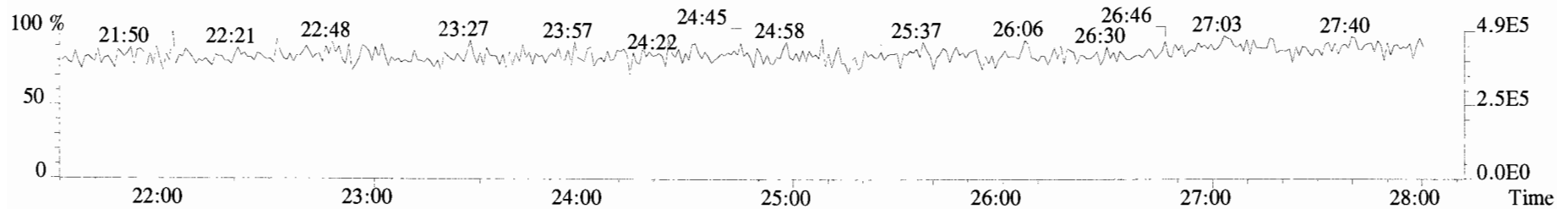
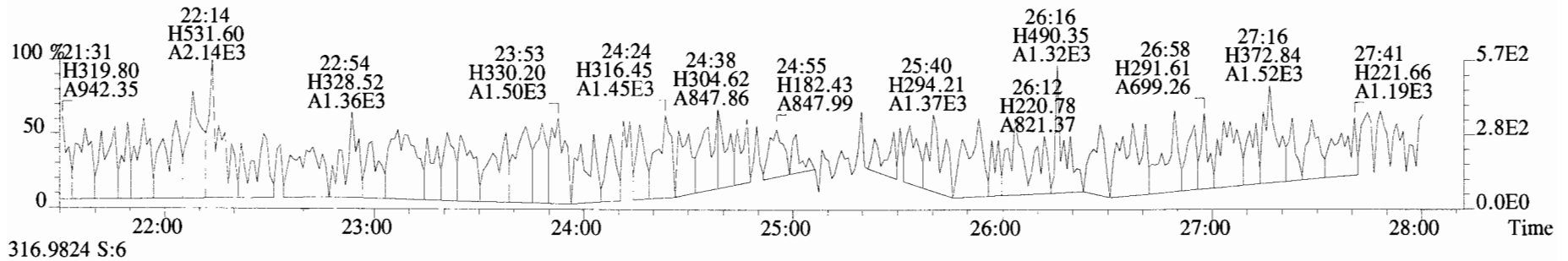
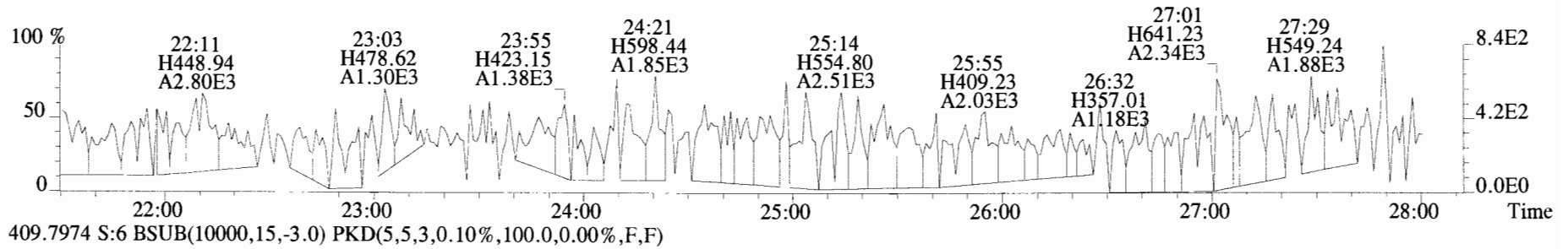
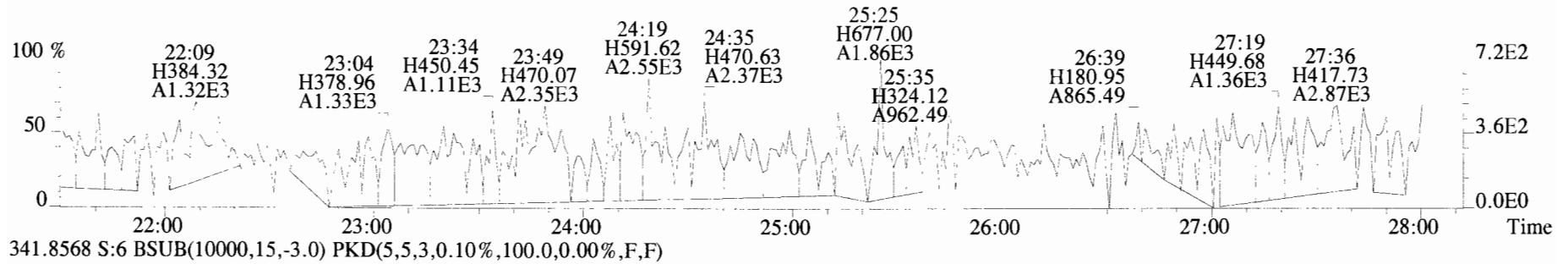
File:191009D1 #1-431 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



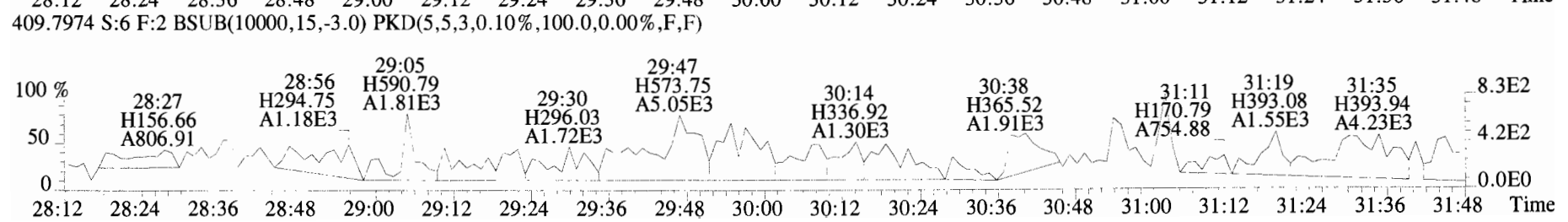
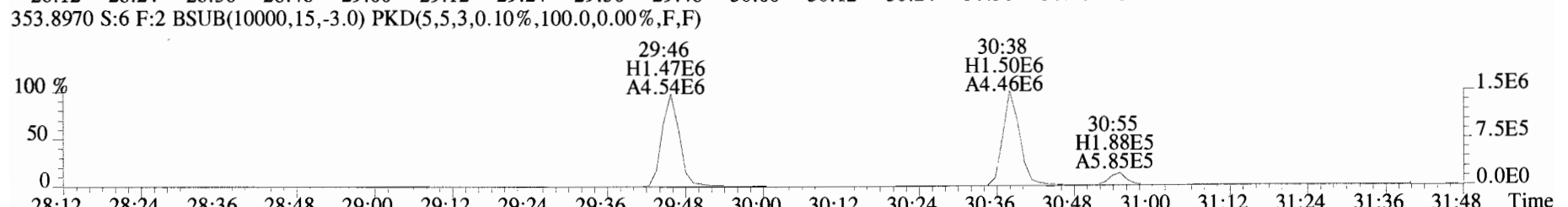
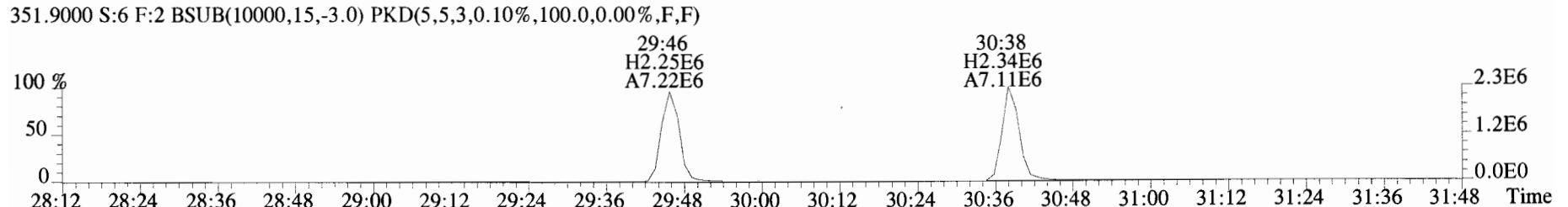
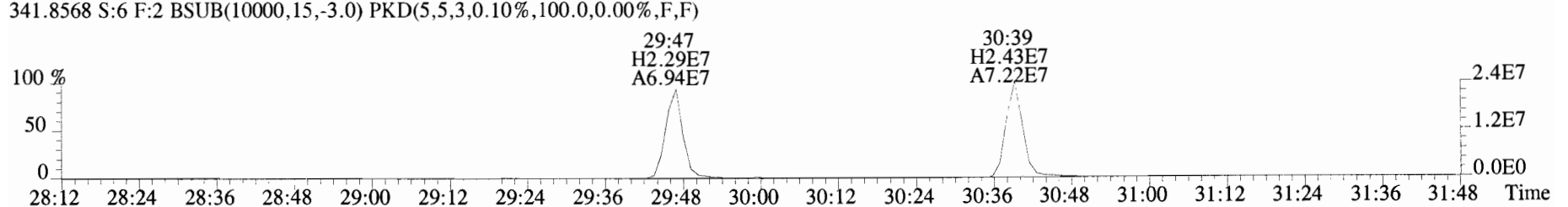
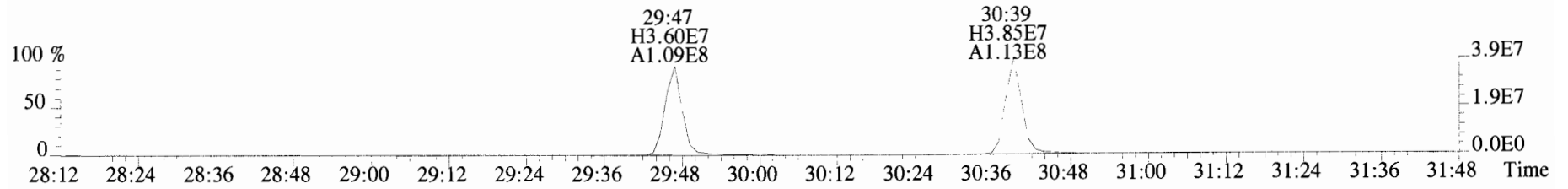
File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



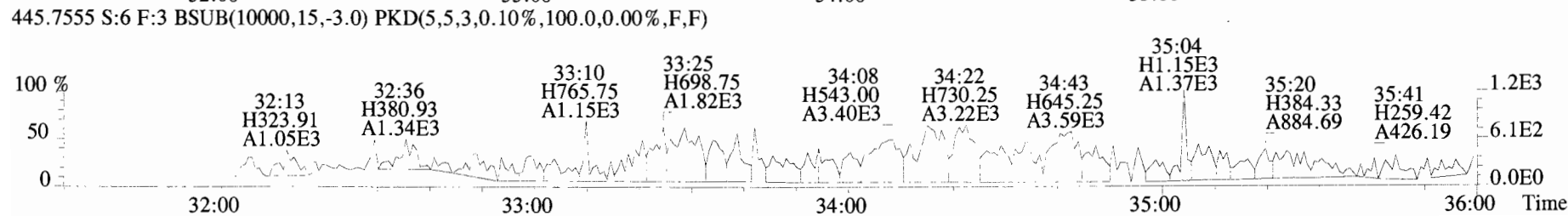
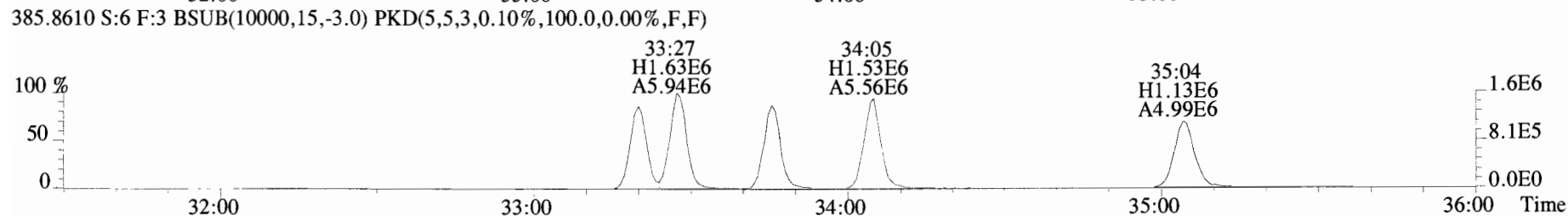
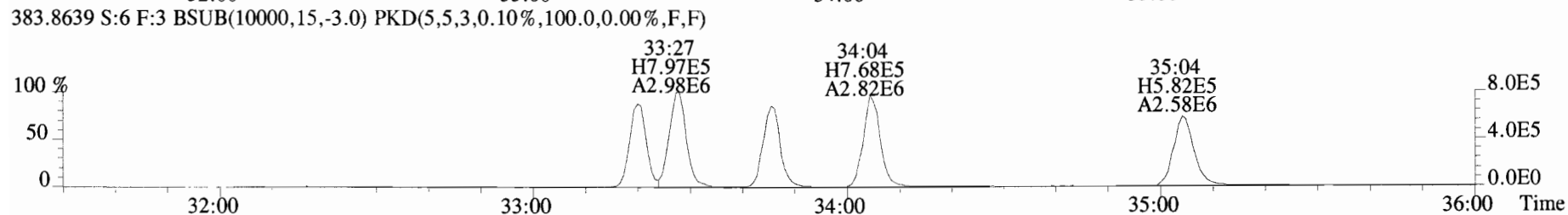
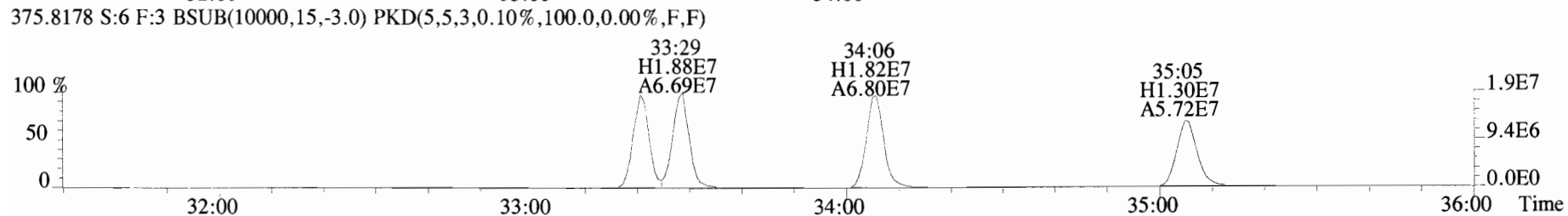
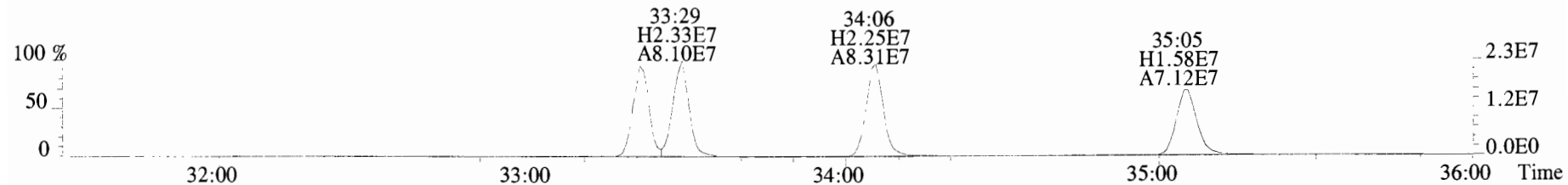
File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
 339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



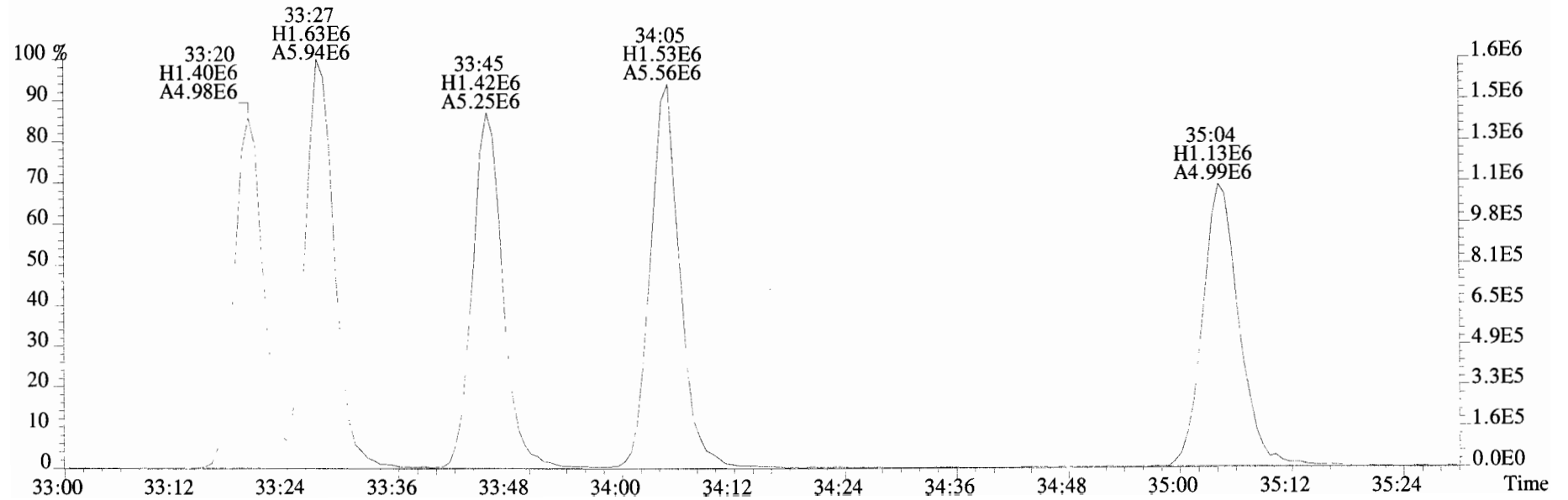
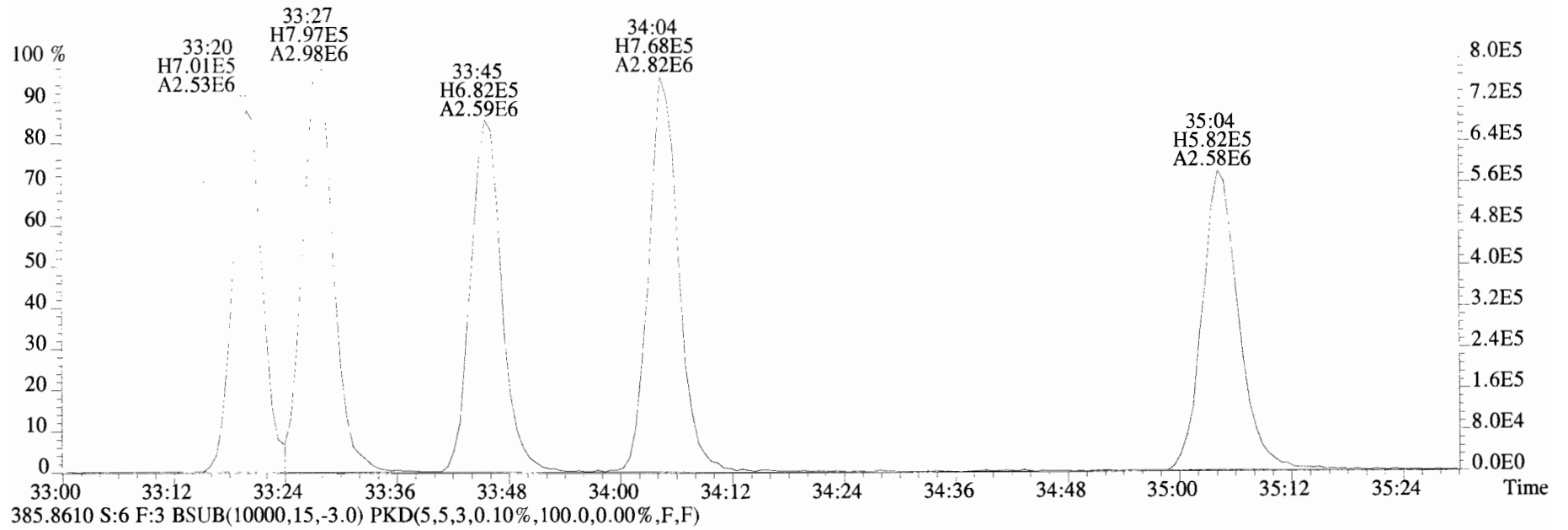
File:191009D1 #1-211 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
 339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



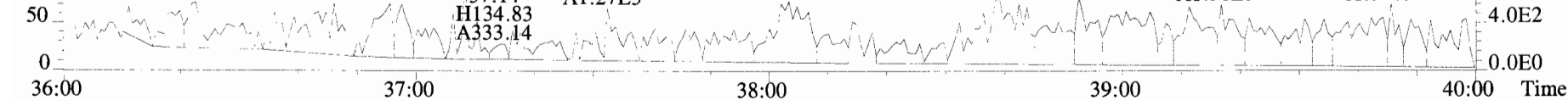
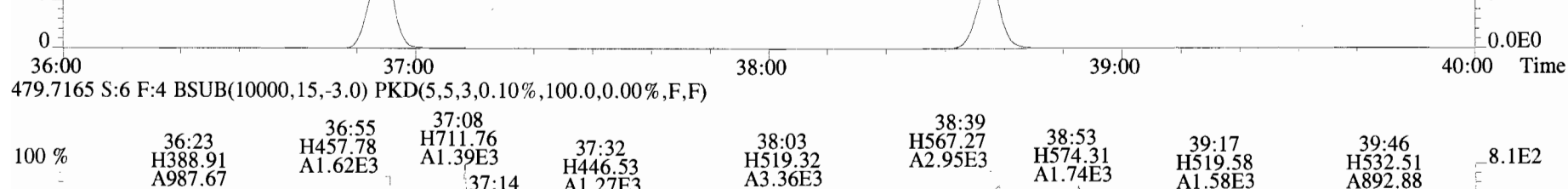
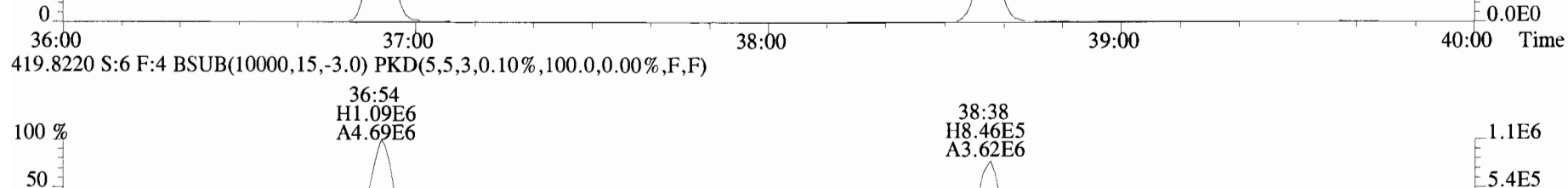
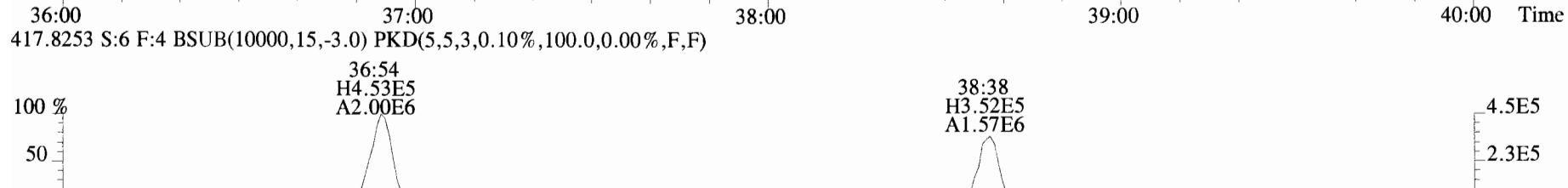
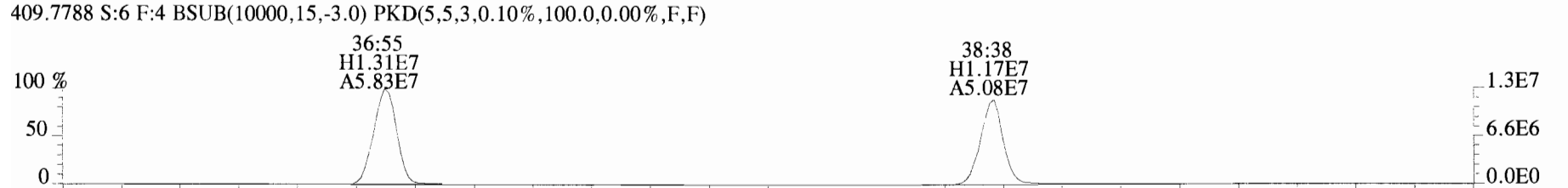
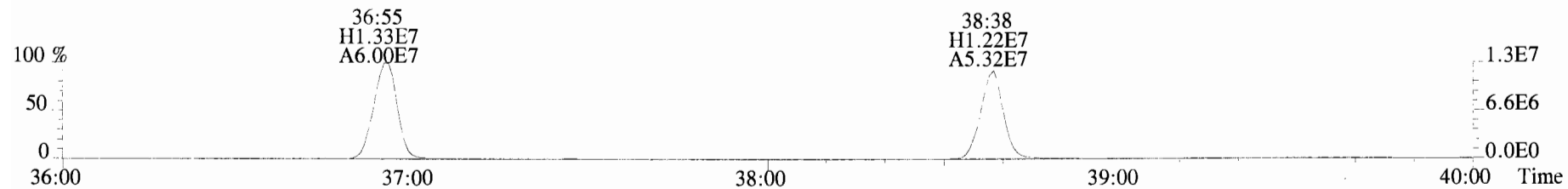
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



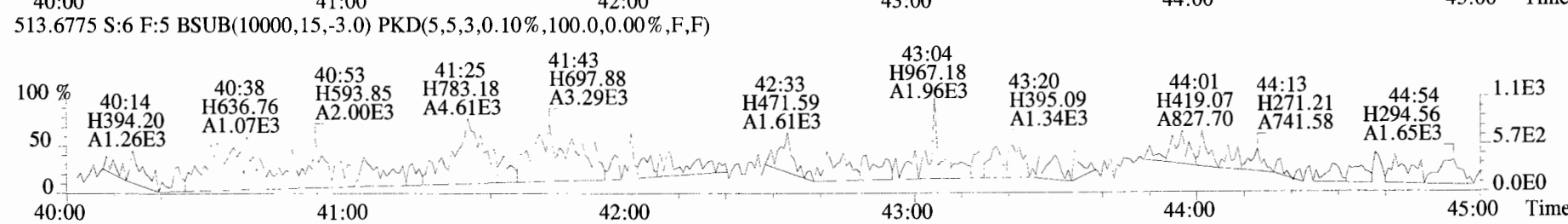
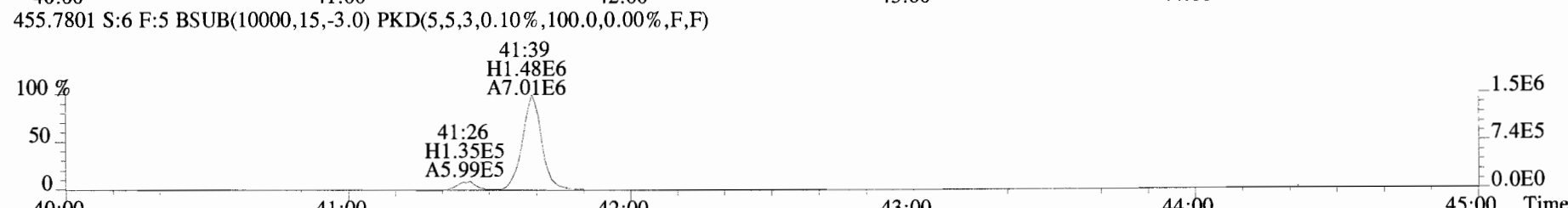
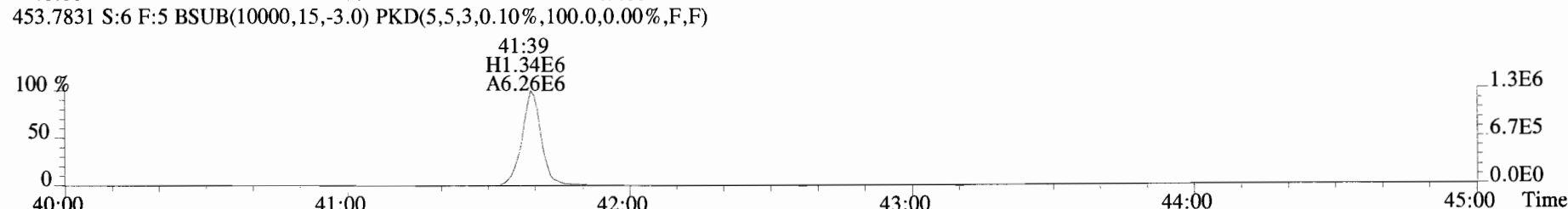
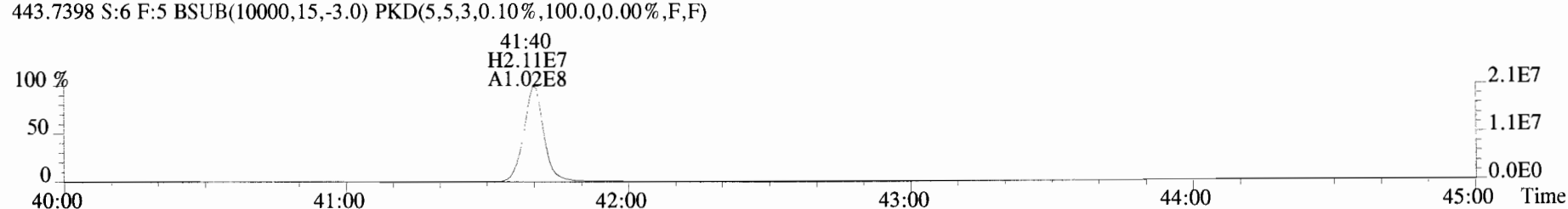
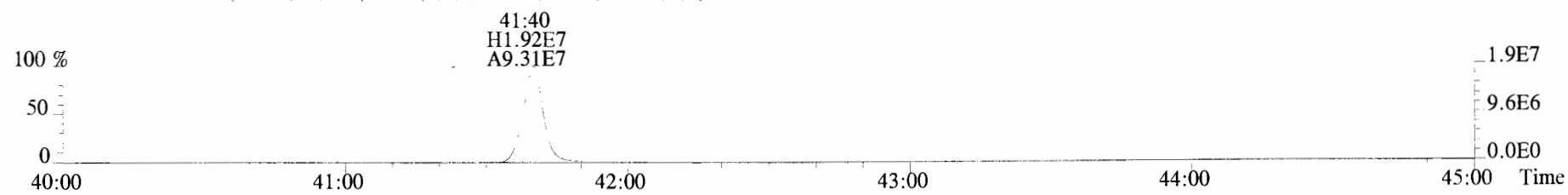
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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)

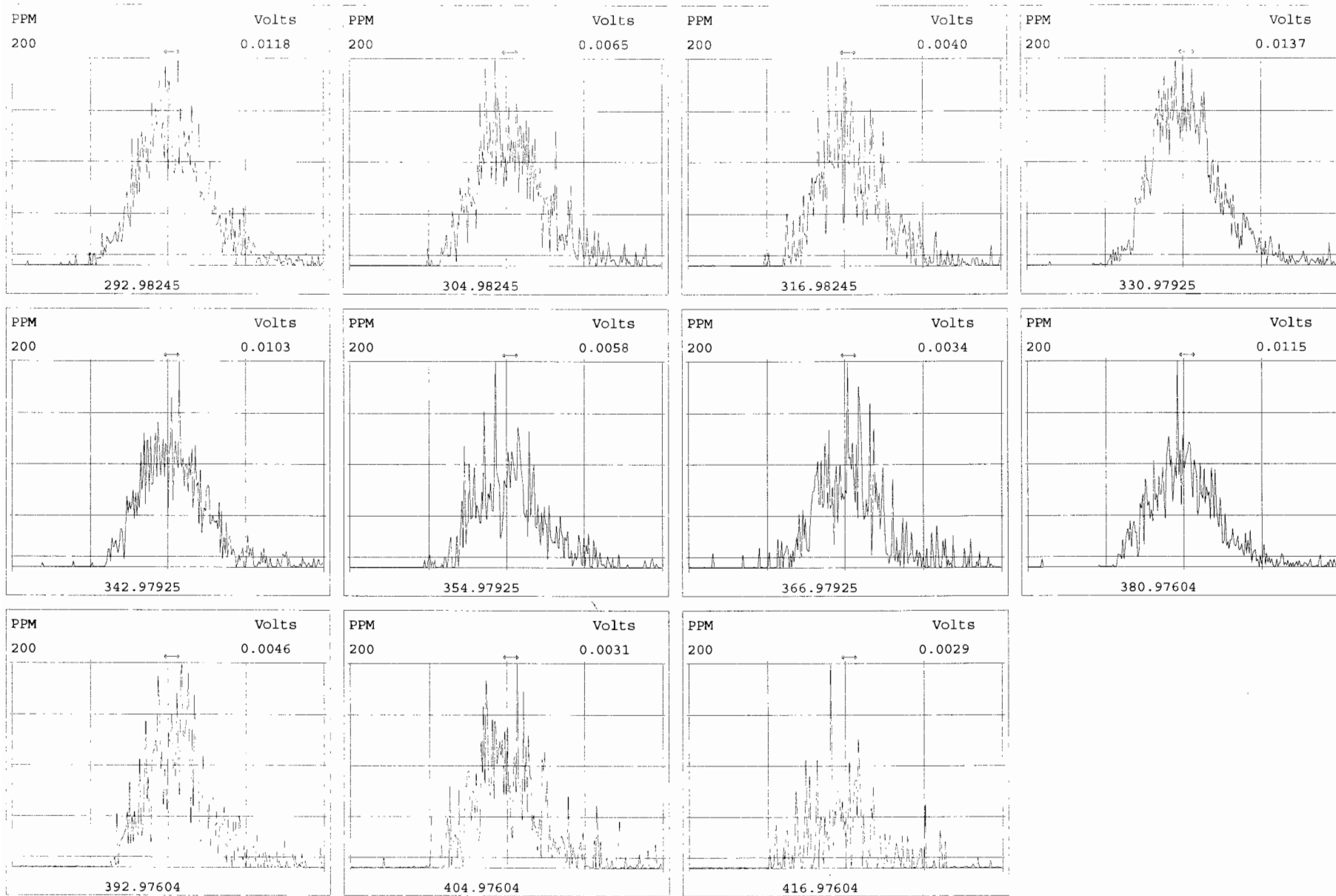


File:191009D1 #1-431 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
 441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



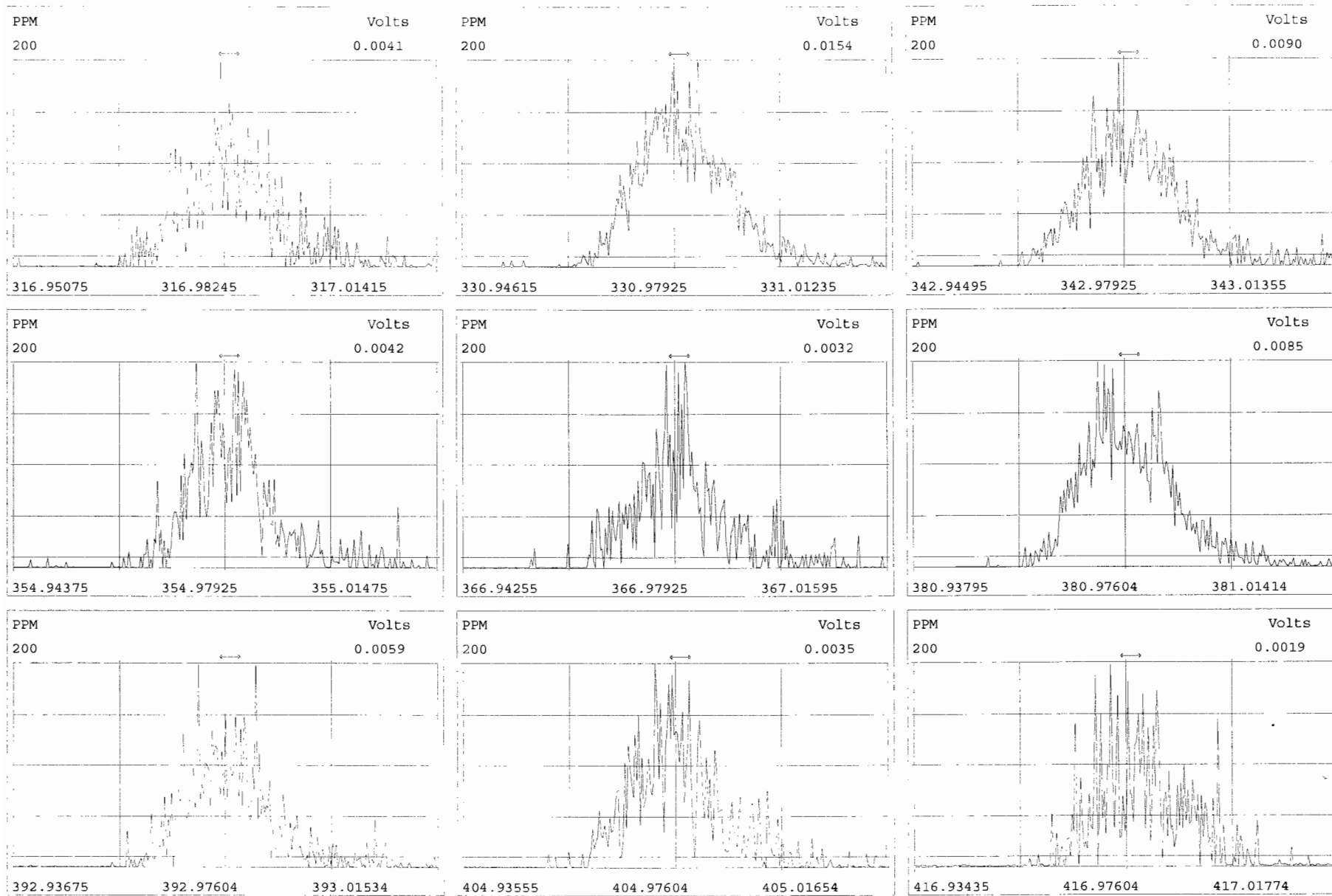
Peak Locate Examination:10-OCT-2019:06:40 File:RES_CHECK

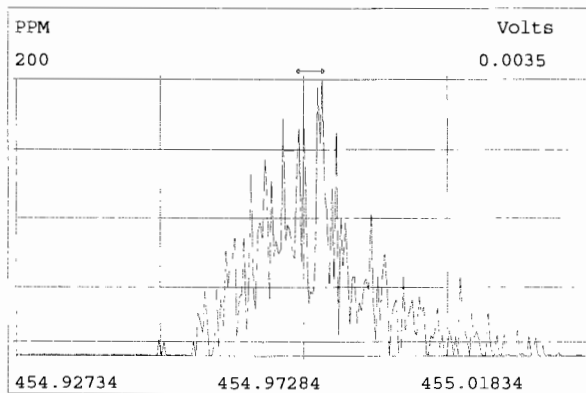
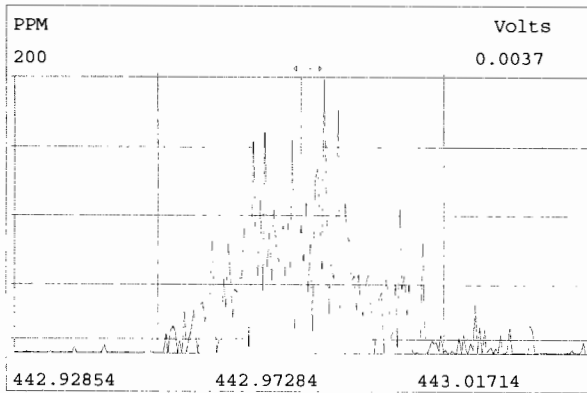
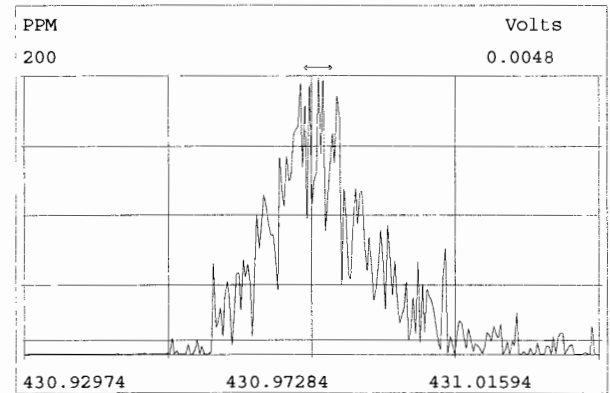
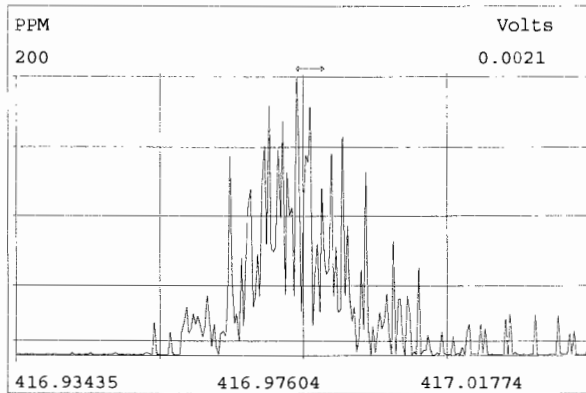
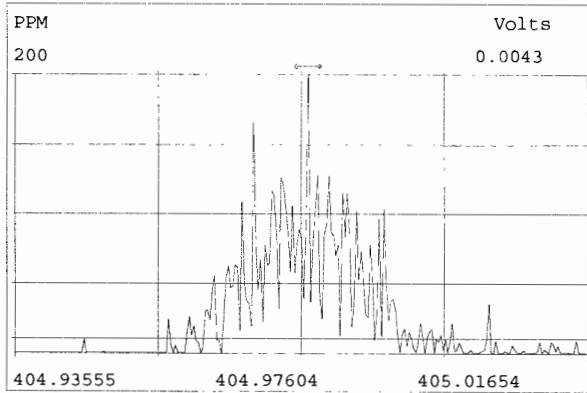
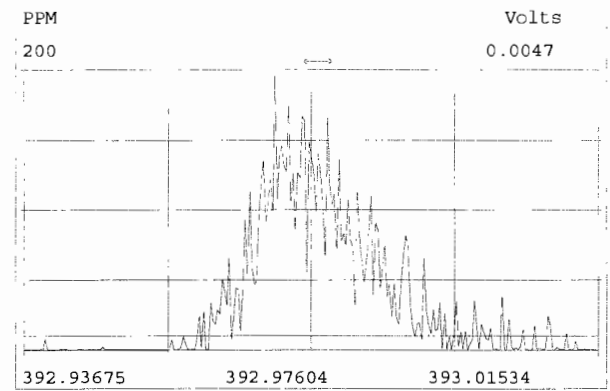
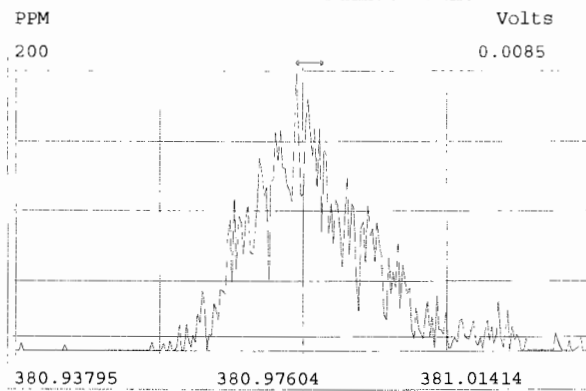
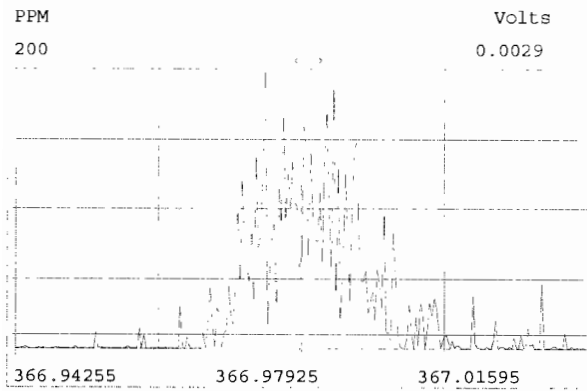
Experiment:OCDD_DB5 Function:1 Reference:PFK

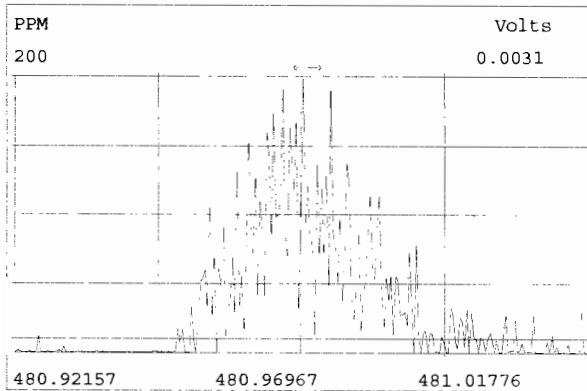
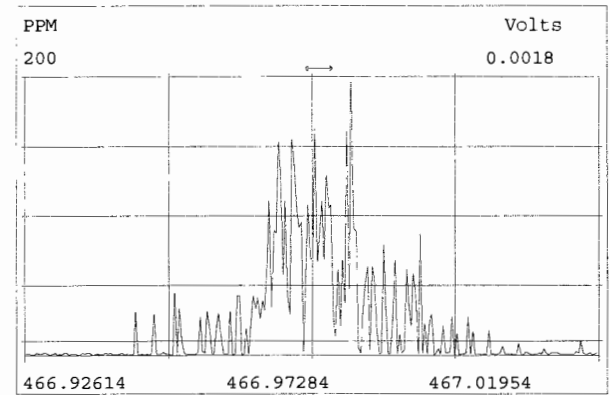
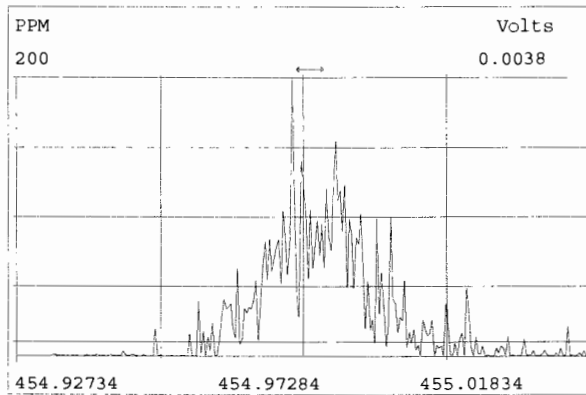
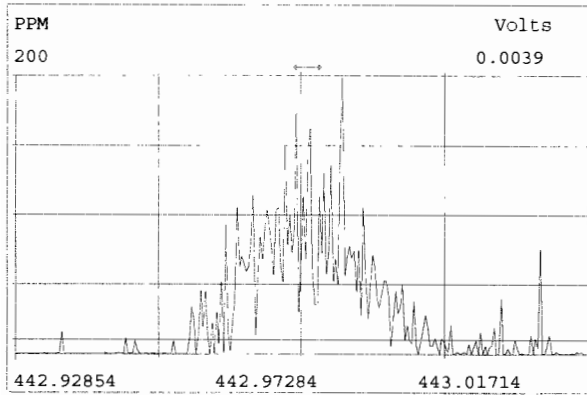
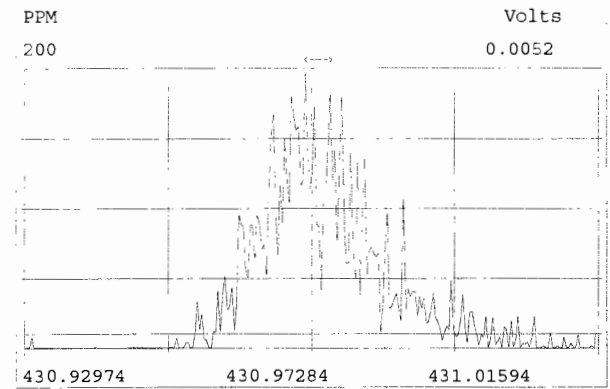
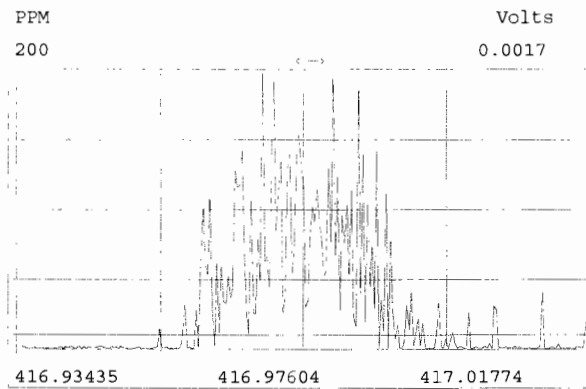
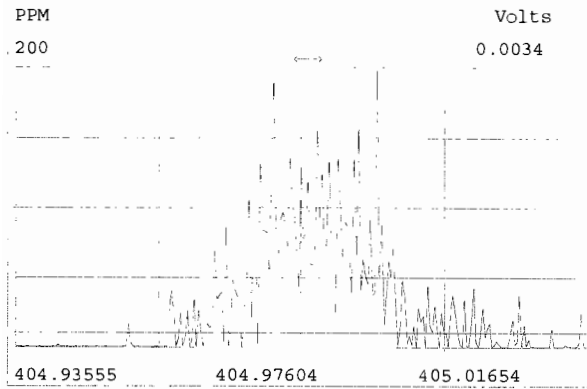


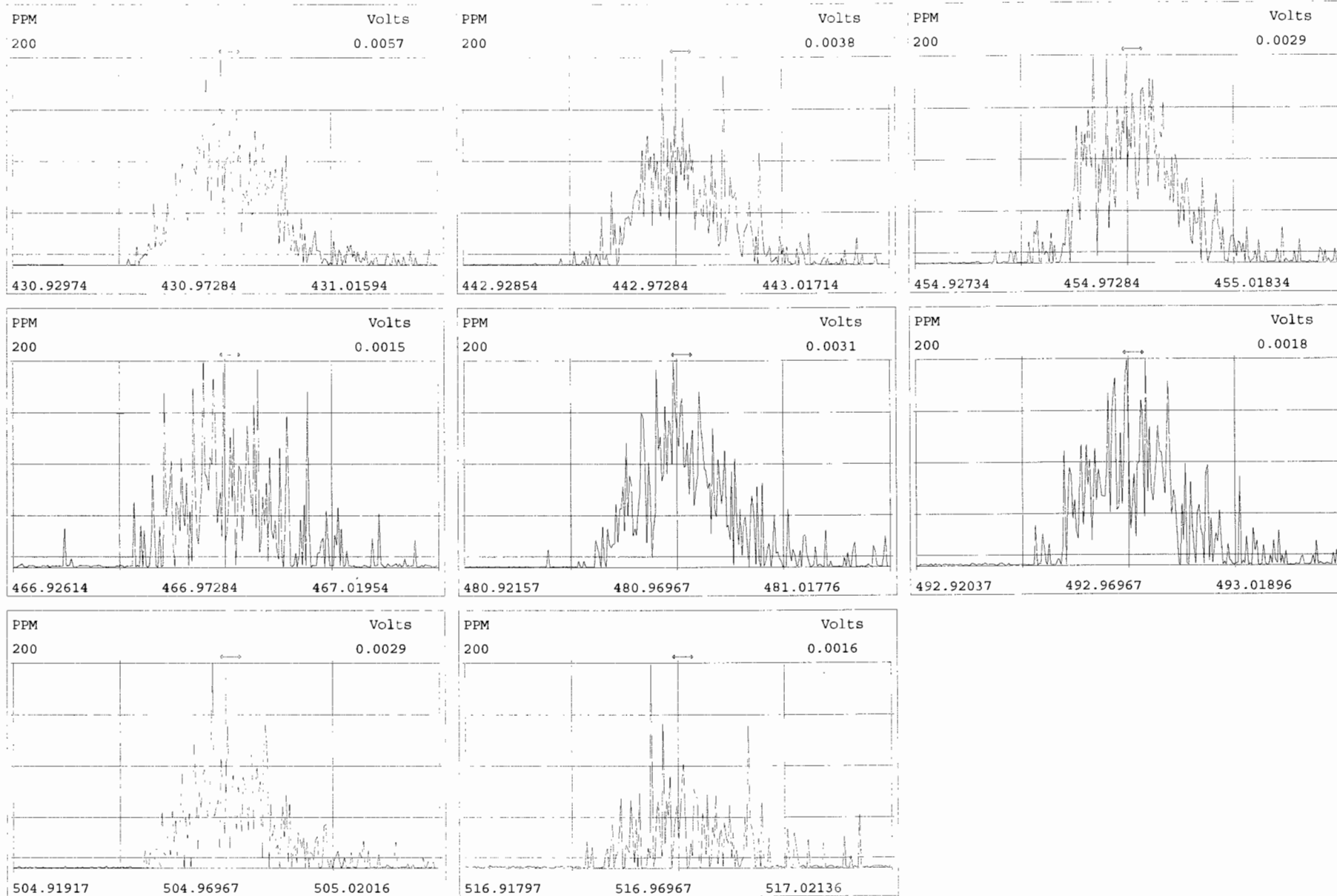
Peak Locate Examination:10-OCT-2019:06:41 File:RES_CHECK

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

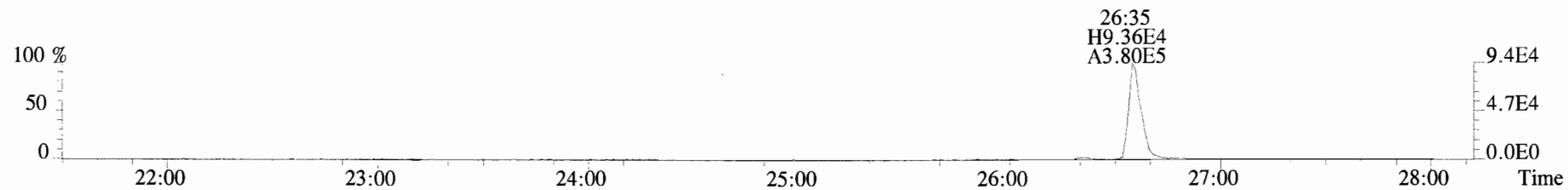
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GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000

ConCal: ST191009D1-4
EndCAL: NA

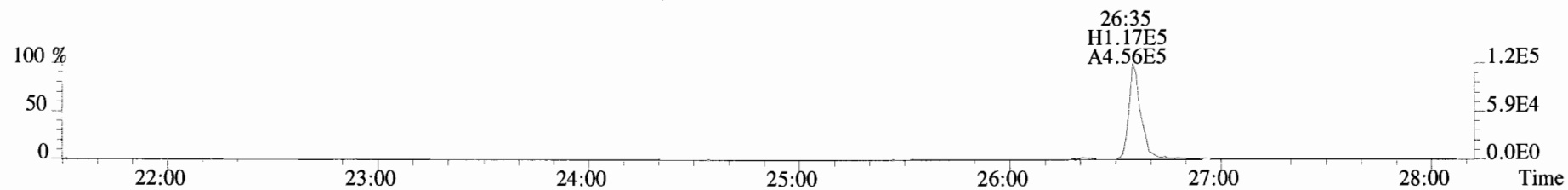
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	8.36e+05	0.83 y	0.91	26:36	10.234		* 2.5		*	Total Tetra-Dioxins	10.4	11.4		*	*
1,2,3,7,8-PeCDD	3.38e+06	0.63 y	0.90	30:57	51.323		* 2.5		*	Total Penta-Dioxins	51.4	51.7		*	*
1,2,3,4,7,8-HxCDD	2.55e+06	1.31 y	1.10	34:18	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

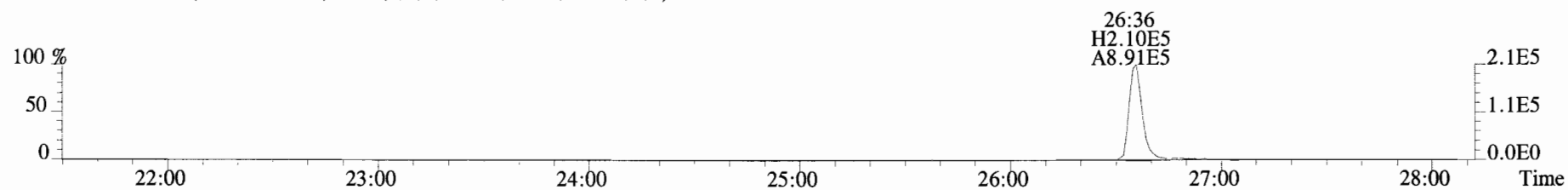
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319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



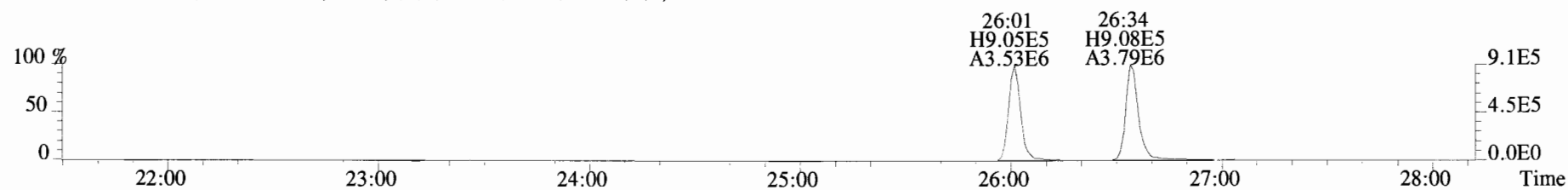
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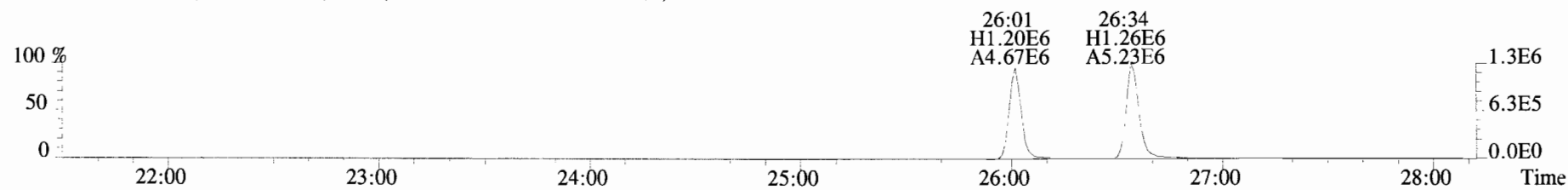
327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



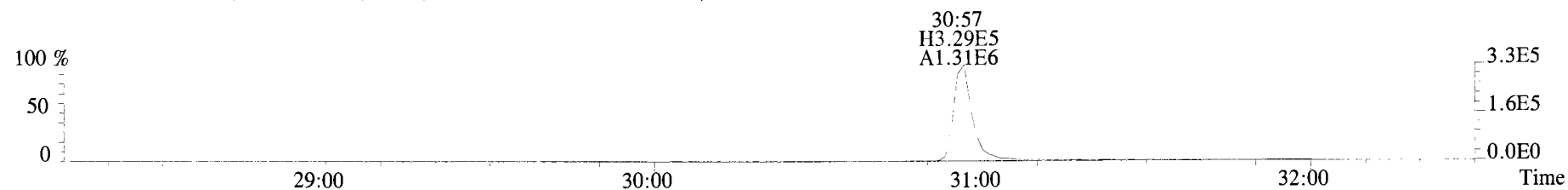
331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



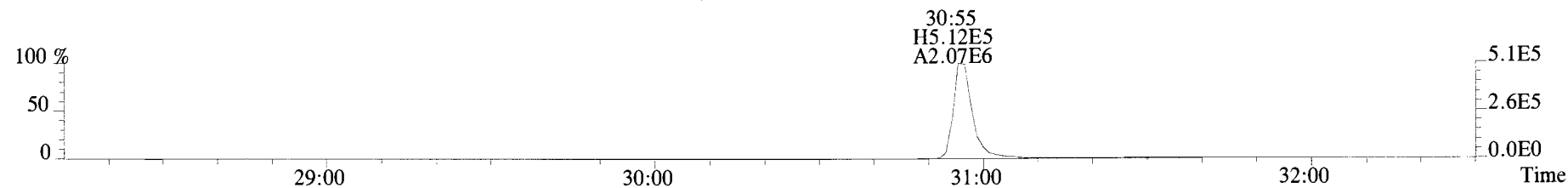
333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



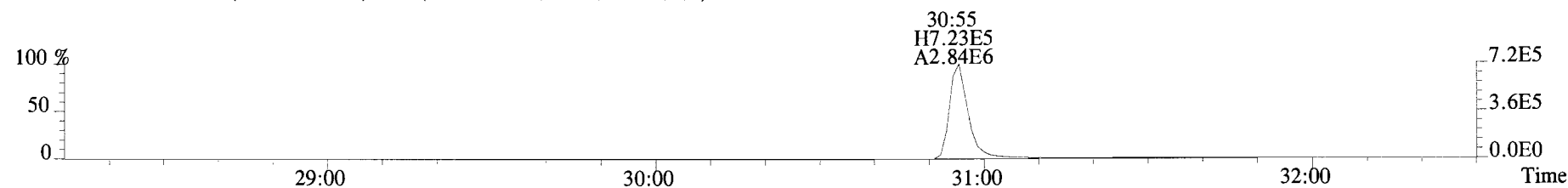
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353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



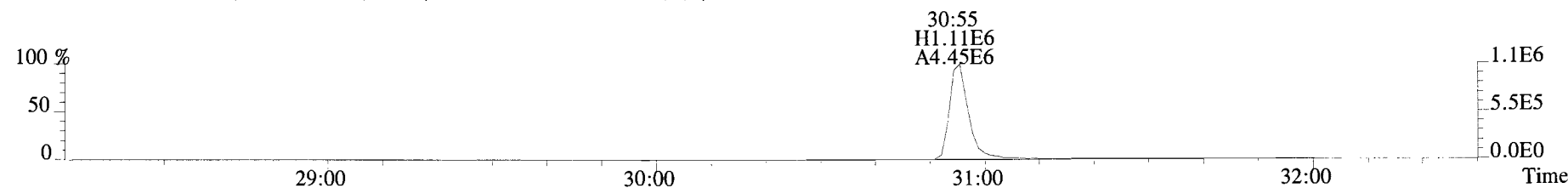
355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



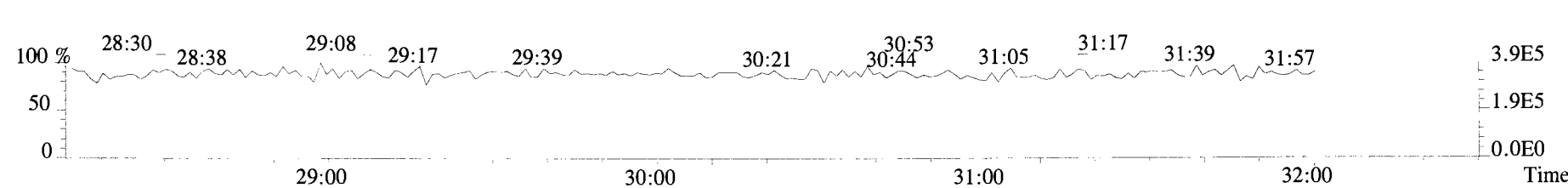
365.8978 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



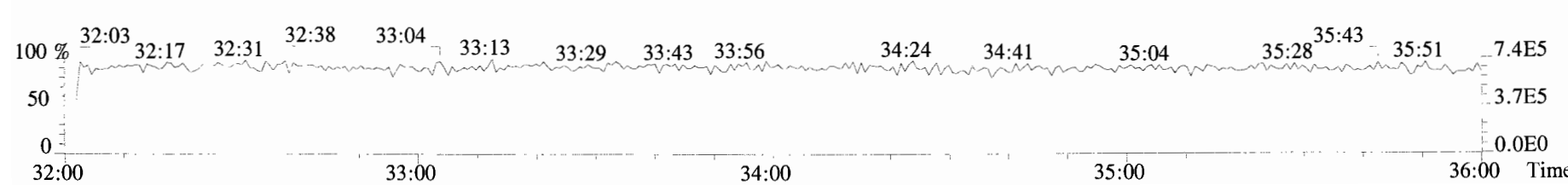
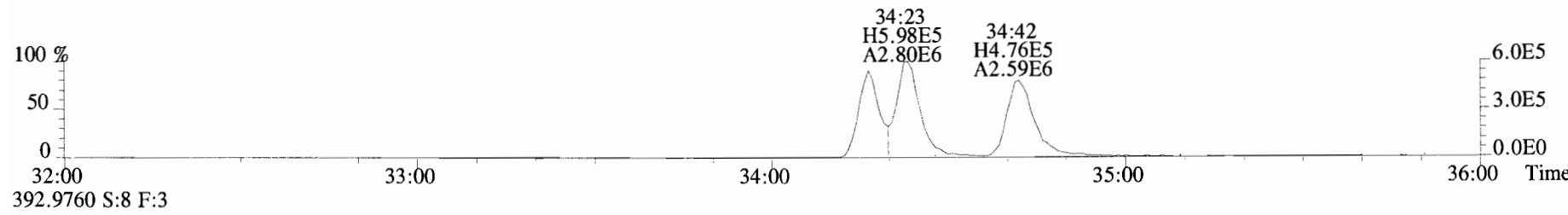
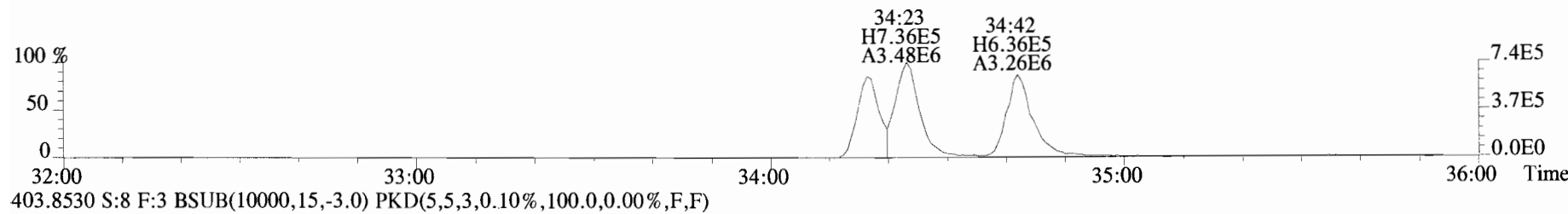
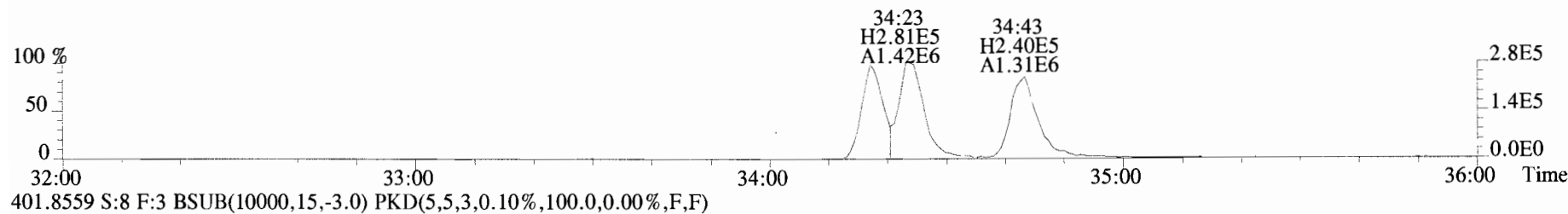
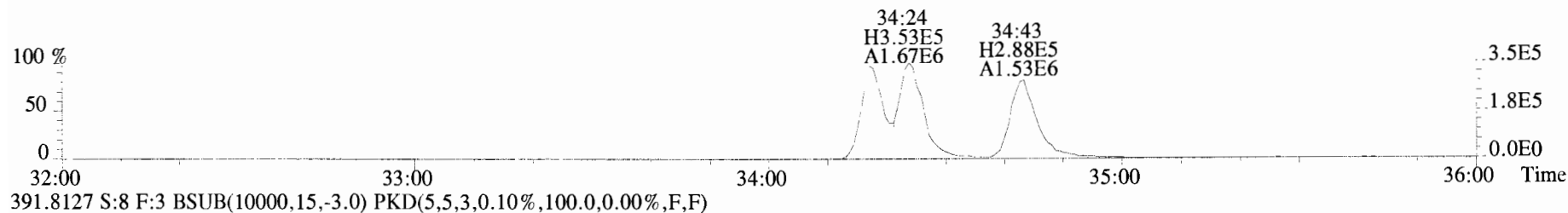
367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



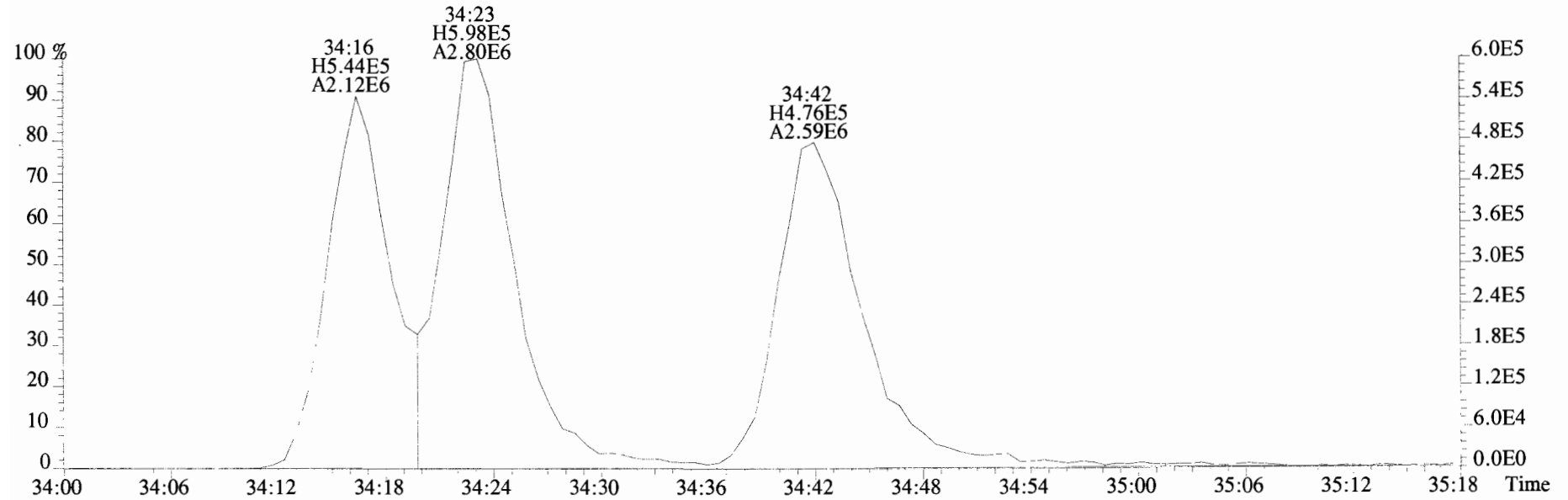
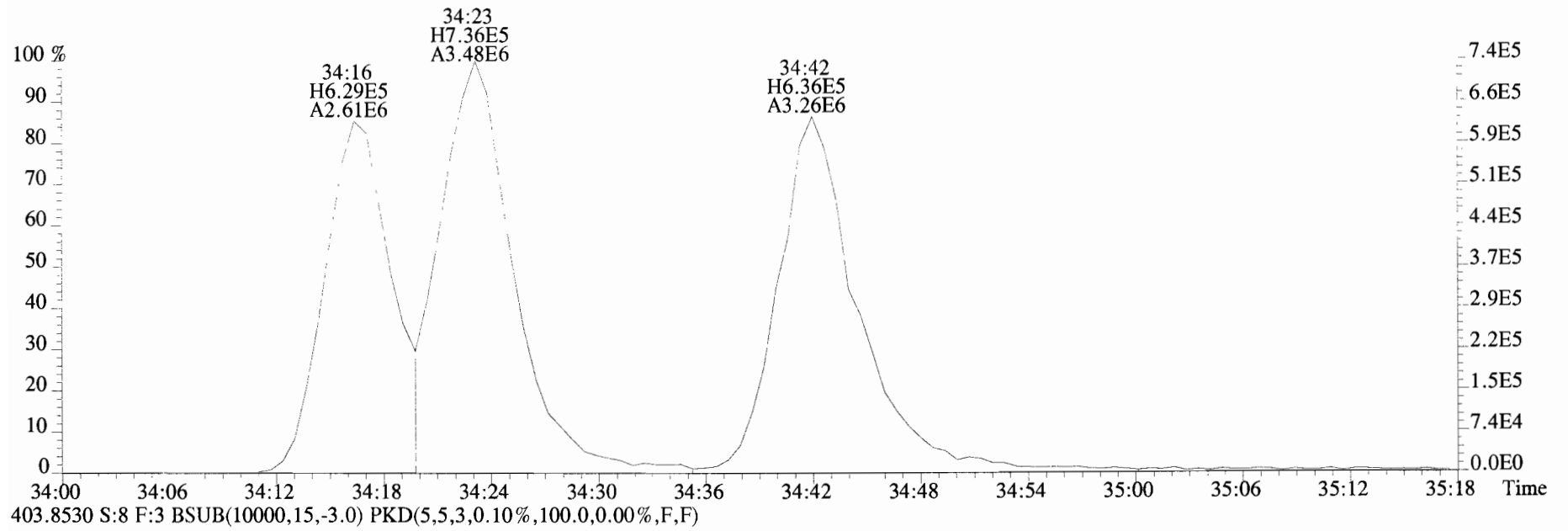
366.9792 S:8 F:2



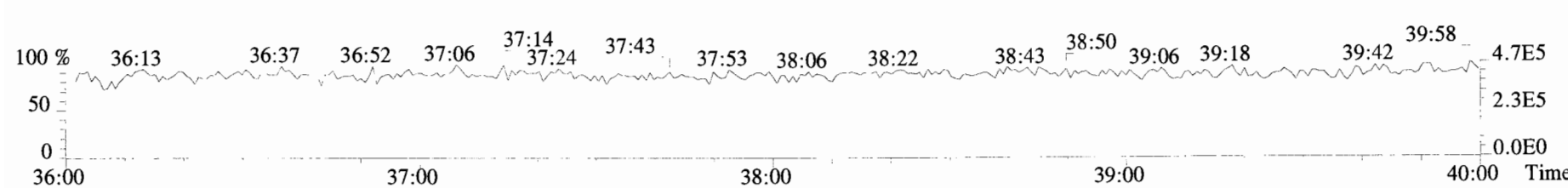
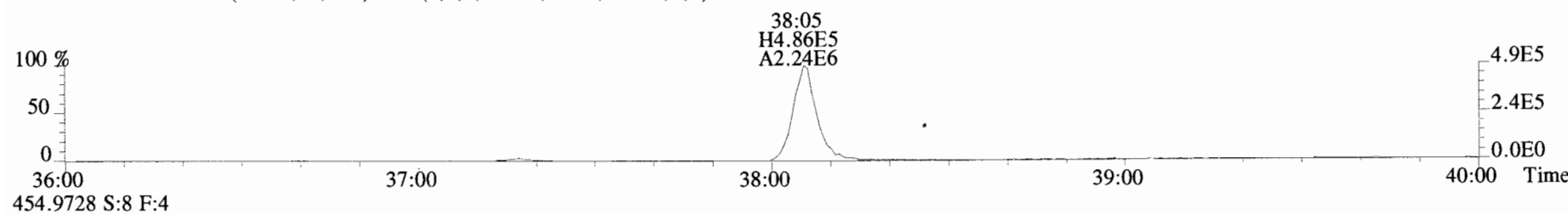
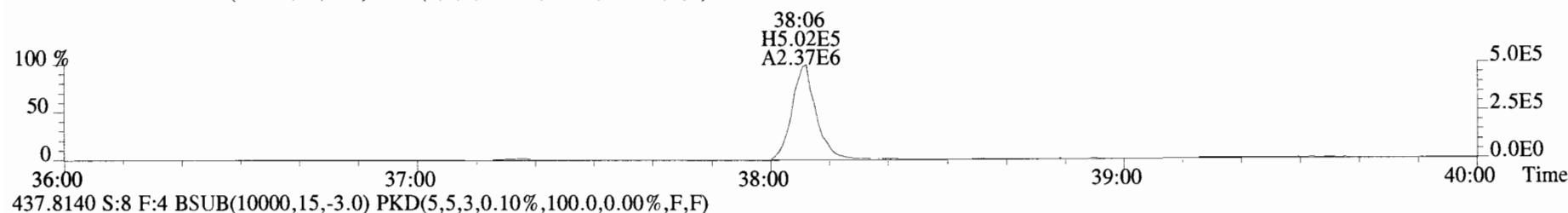
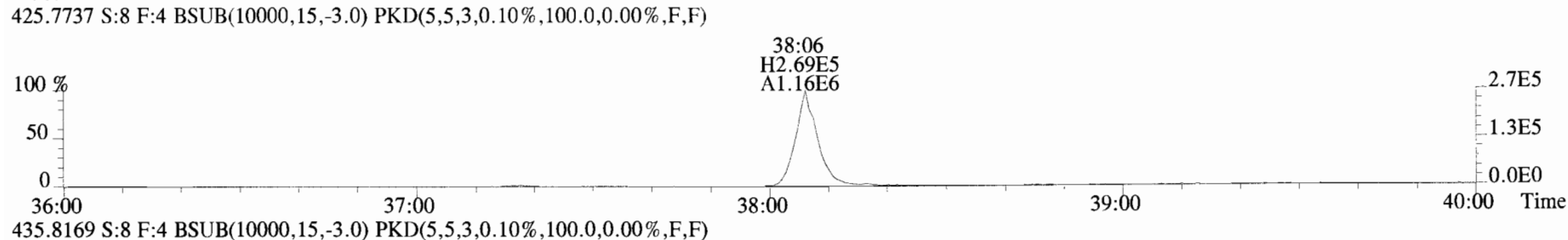
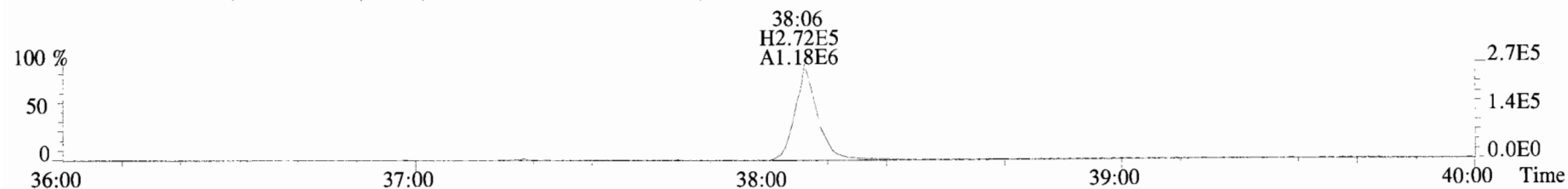
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389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



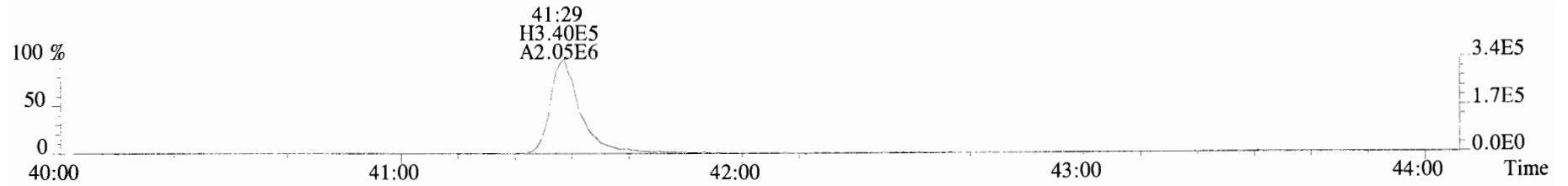
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401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



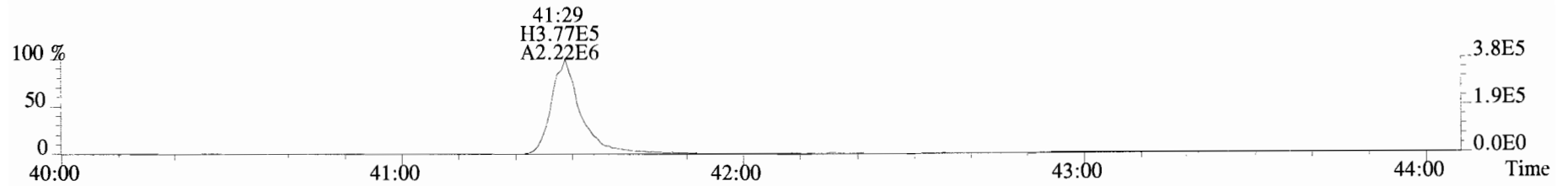
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Sample#8 File Text:Vista Analytical Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



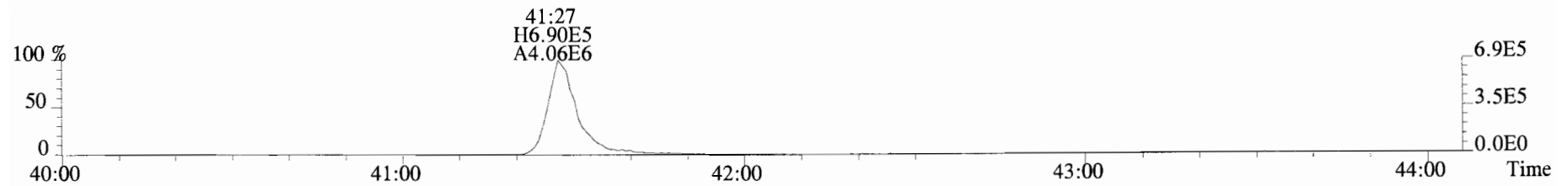
File:191009D1 #1-431 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



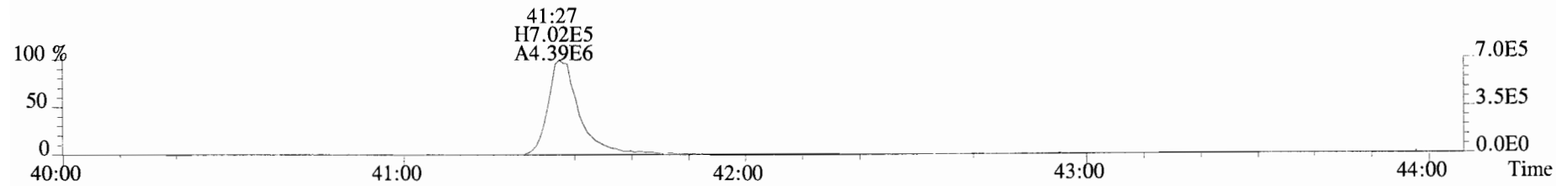
459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



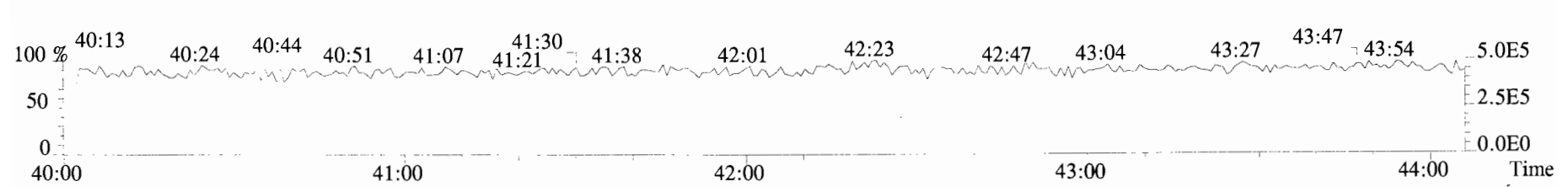
469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



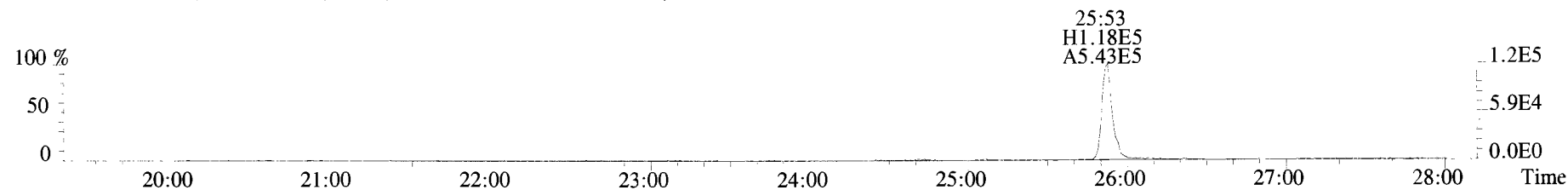
471.7750 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



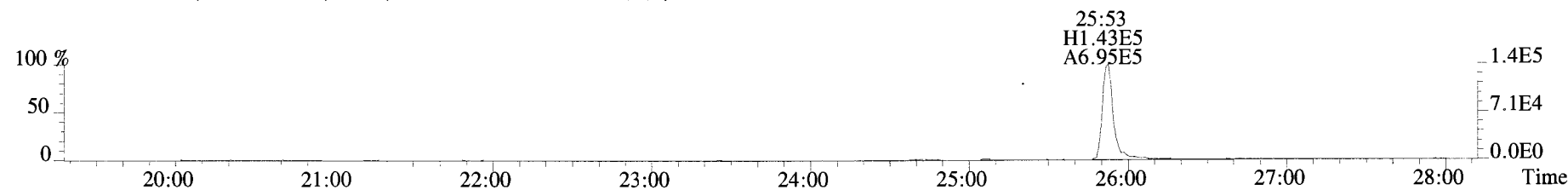
454.9728 S:8 F:5



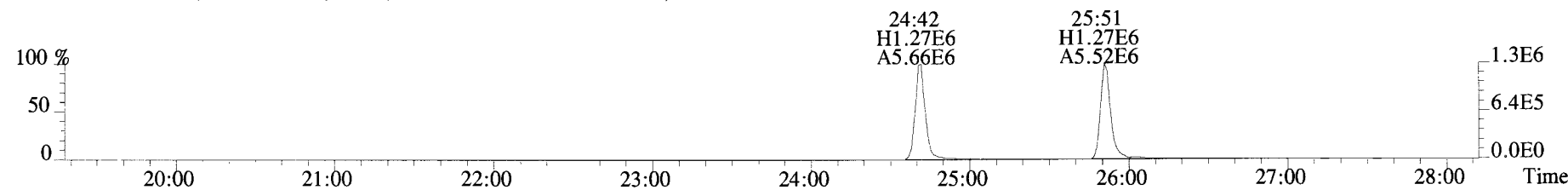
File:191009D1 #1-514 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



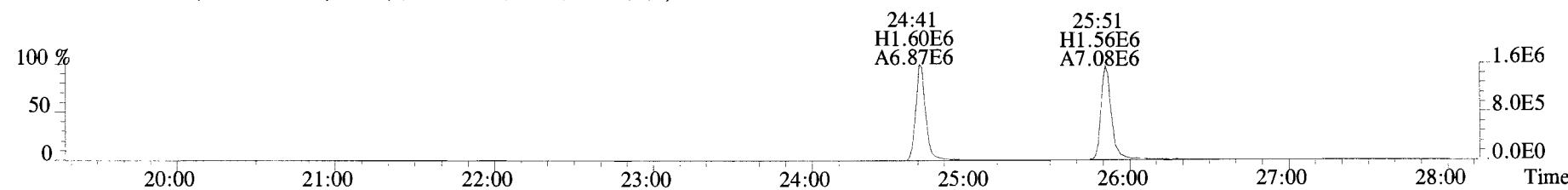
305.8987 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



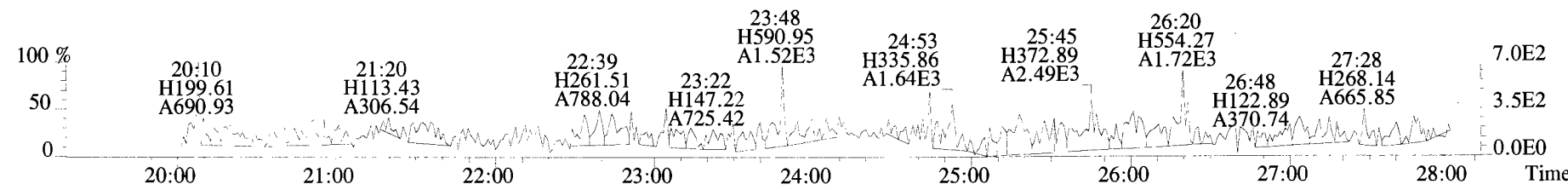
315.9419 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



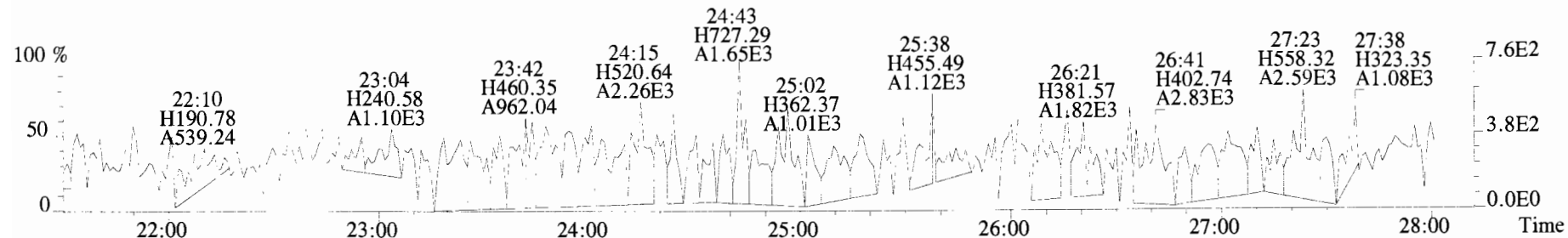
317.9389 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



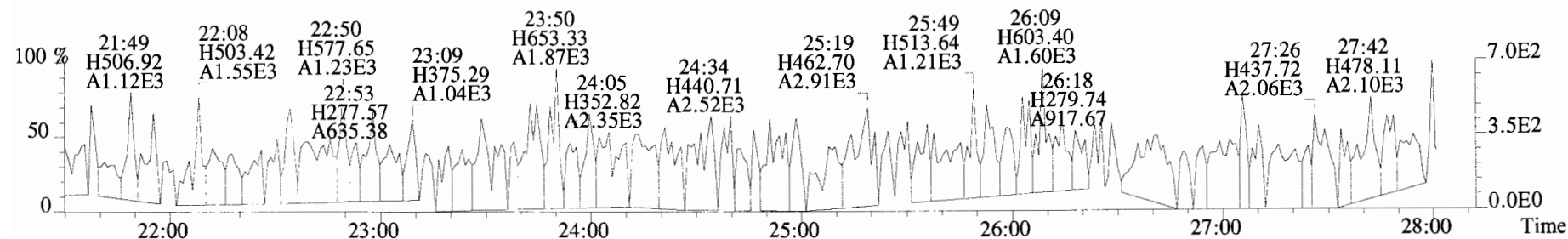
375.8364 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



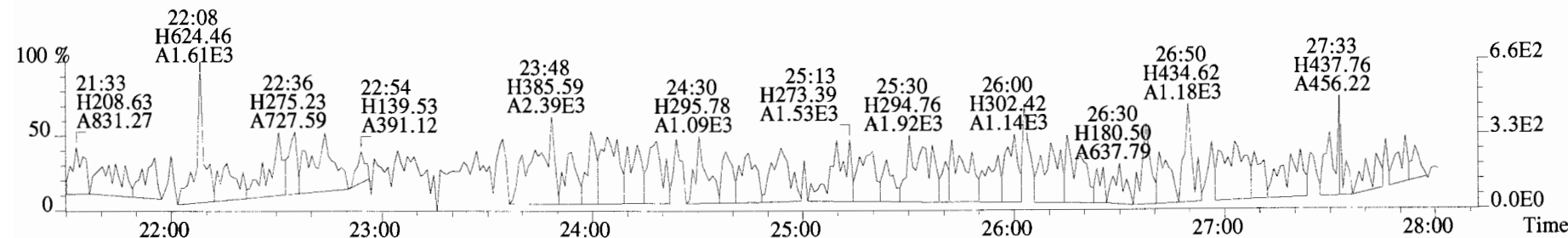
File:191009D1 #1-514 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
 339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



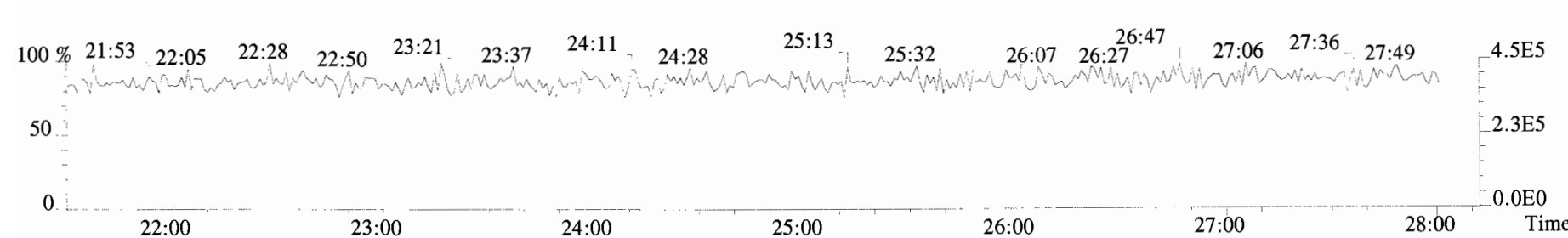
341.8568 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



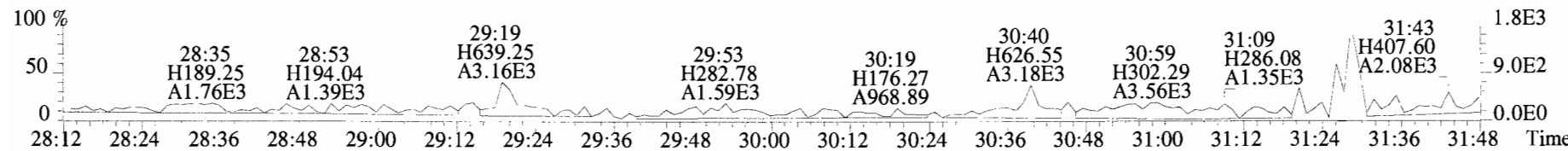
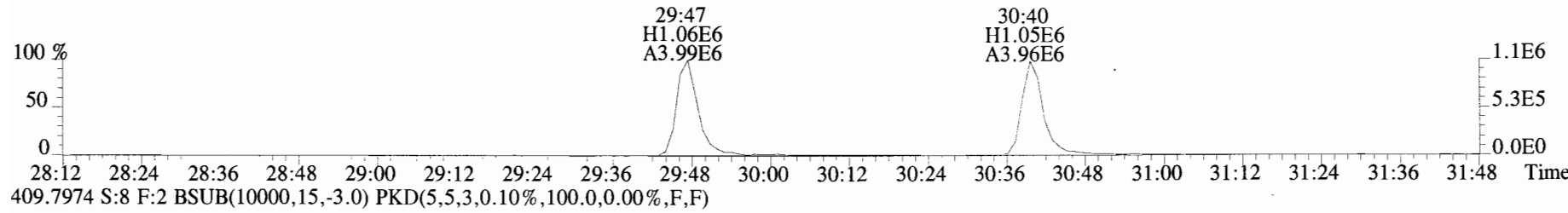
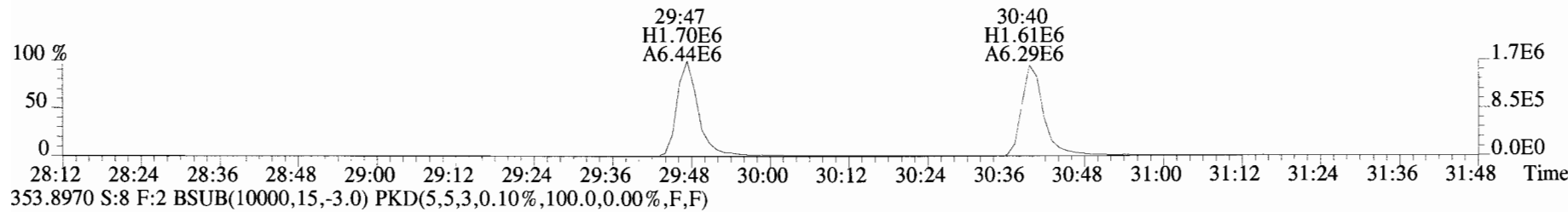
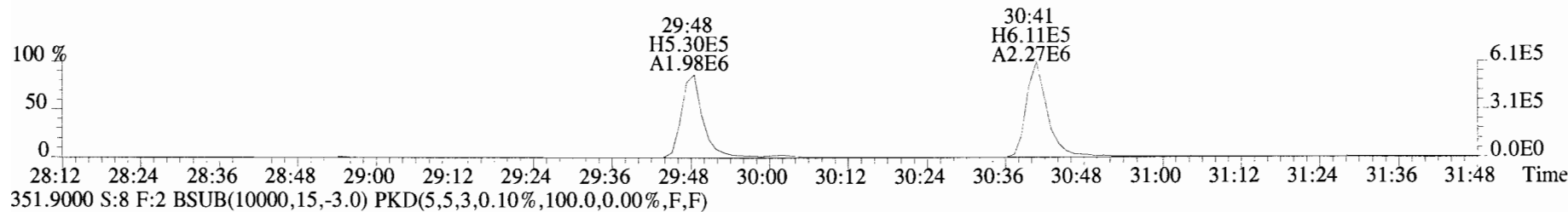
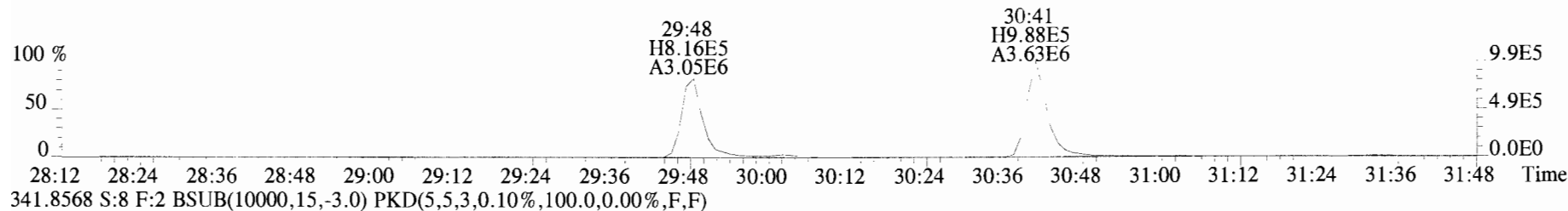
409.7974 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



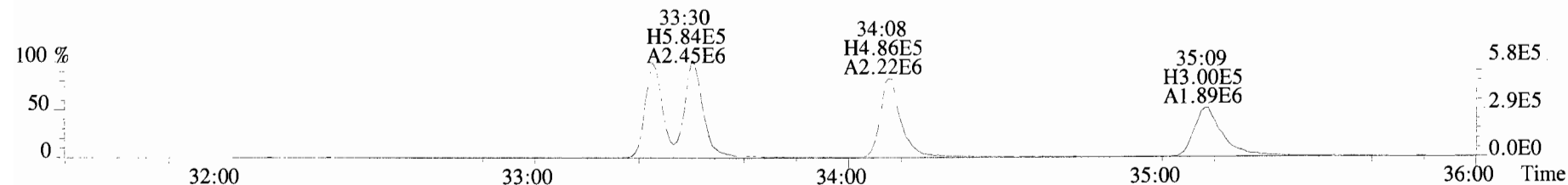
316.9824 S:8



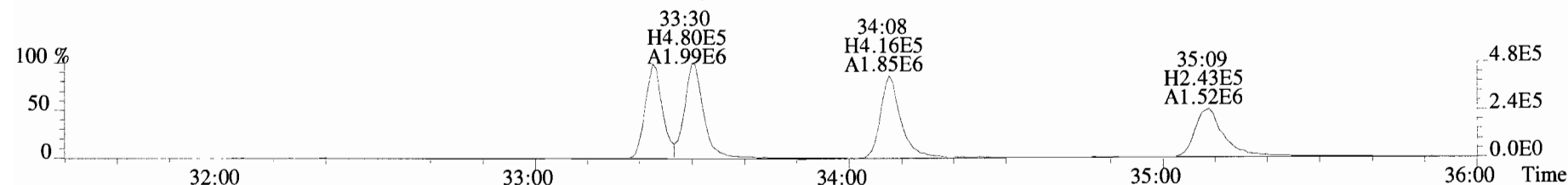
File:191009D1 #1-210 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
 339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



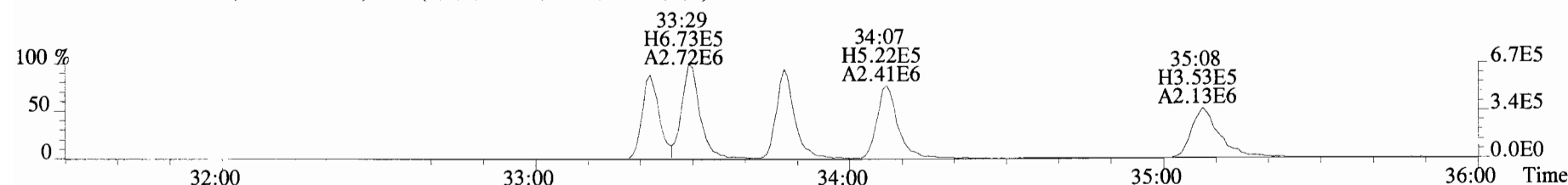
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



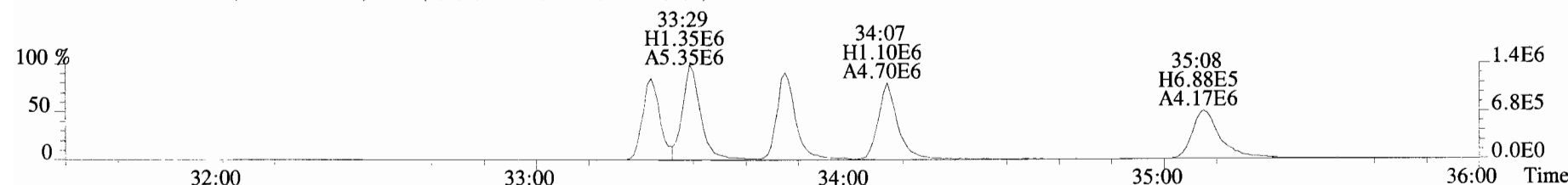
375.8178 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



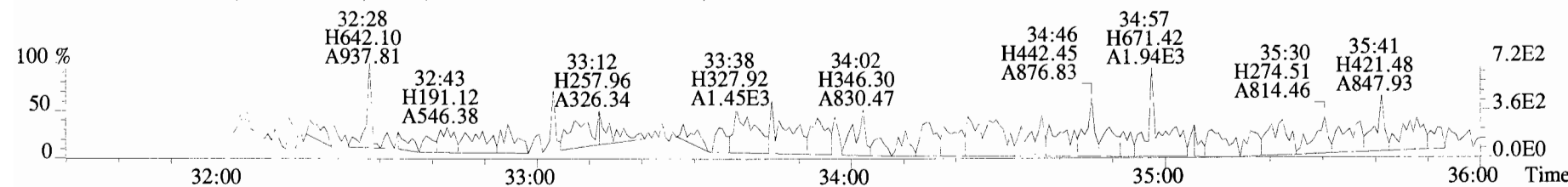
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



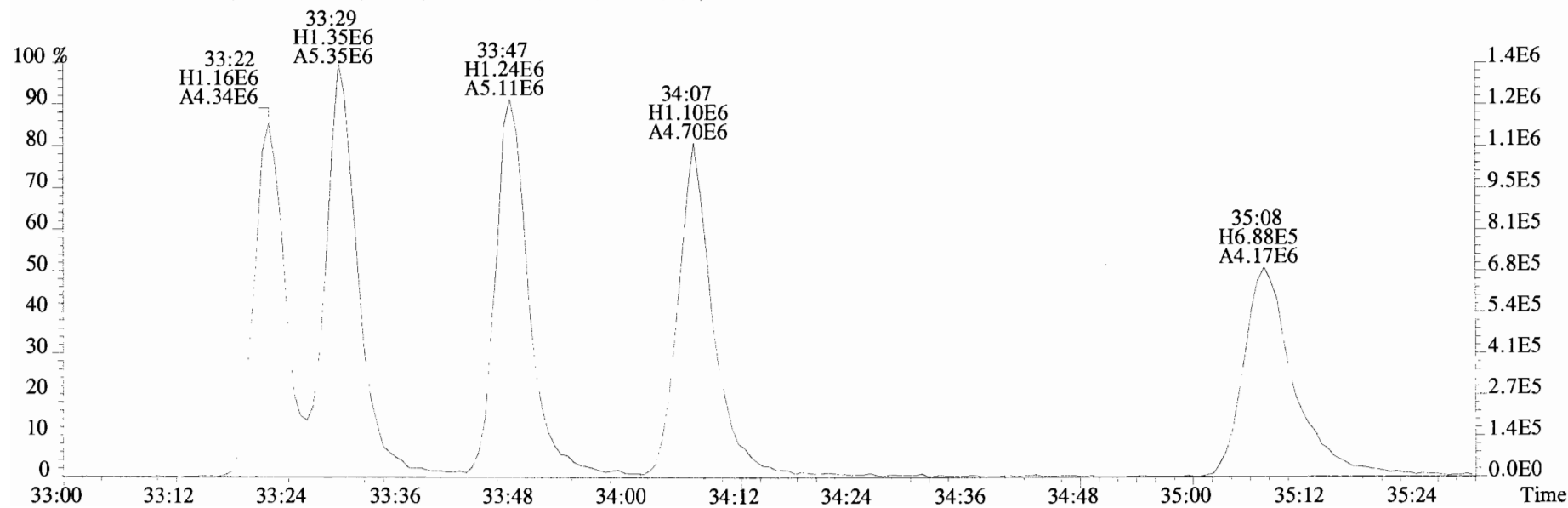
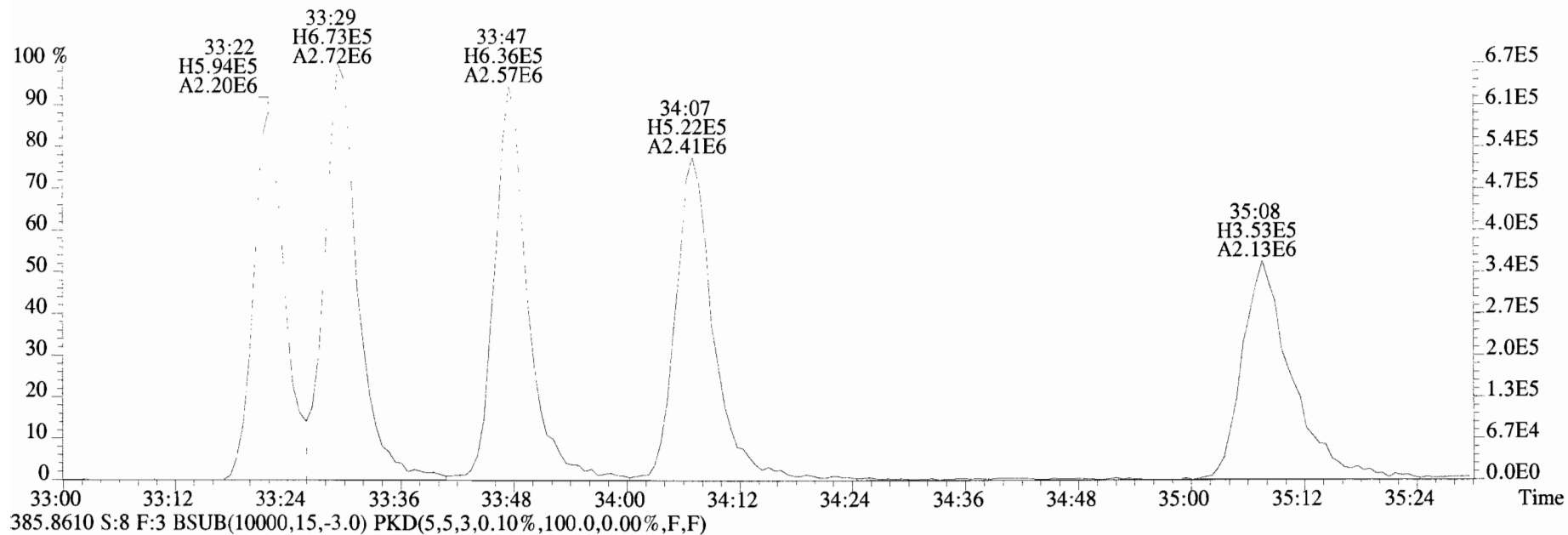
385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



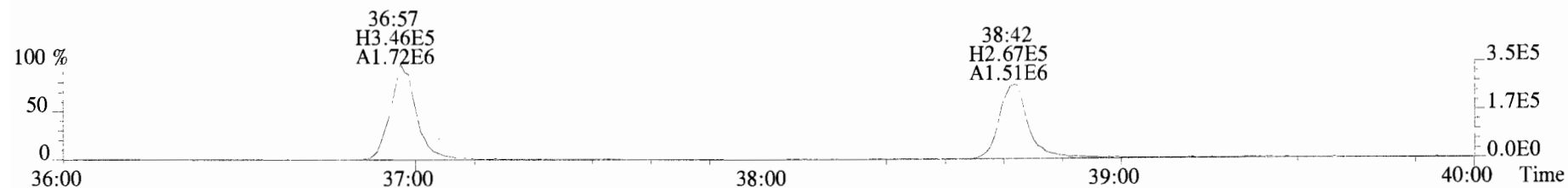
445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



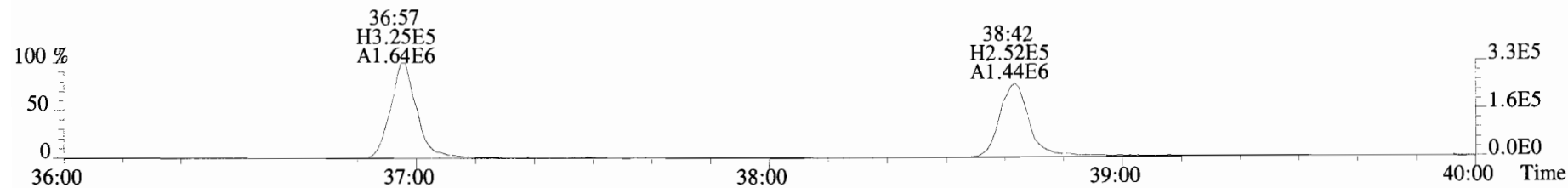
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



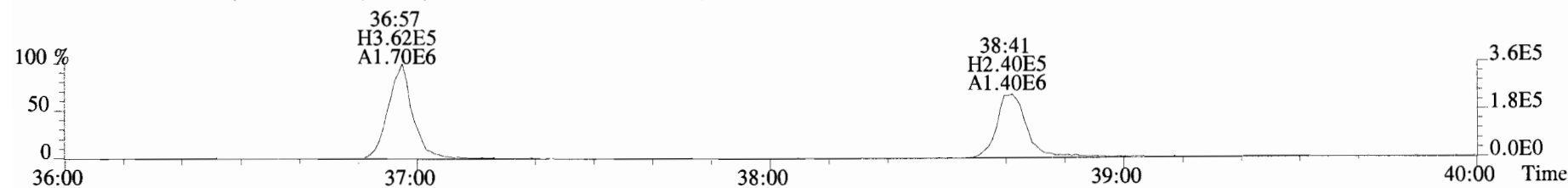
File:191009D1 #1-356 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
 407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



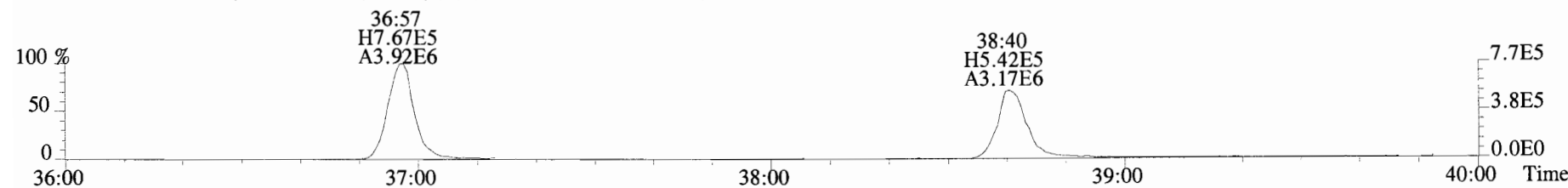
409.7788 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



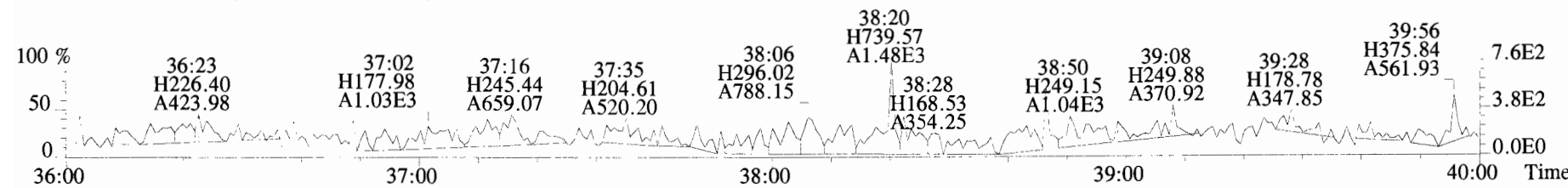
417.8253 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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: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)

