December 17, 2019

Vista Work Order No. 1903430

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 01, 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. 1903430
Case Narrative

Sample Condition on Receipt:

Twelve sediment and two aqueous 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. Two samples, "PDI-021SC-A-13-14-190927" and "PDI-021SC-A-14-15.4-190927", were not received with the original shipment of October 1, 2019. The samples were recieved on October 11, 2019. Sample "PDI-030SC-A-00-01-190929" was received in a clear glass container instead of the amber glass container specified in EPA Method 1613B.

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

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

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1903430-01	PDI-021SC-A-13-14-190927	27-Sep-19 09:17	11-Oct-19 09:15	Amber Glass, 120 mL
1903430-02	PDI-021SC-A-14-15.4-190927	27-Sep-19 09:17	11-Oct-19 09:15	Amber Glass, 120 mL
1903430-03	PDI-024SC-A-10-11-190927	27-Sep-19 12:00	01-Oct-19 09:18	Amber Glass, 120 mL
1903430-04	PDI-024SC-A-11-12.1-190927	27-Sep-19 12:00	01-Oct-19 09:18	Amber Glass, 120 mL
1903430-05	PDI-024SC-B-00-02-190927	27-Sep-19 11:31	01-Oct-19 09:18	Amber Glass, 120 mL
1903430-06	PDI-024SC-B-02-04-190927	27-Sep-19 11:31	01-Oct-19 09:18	Amber Glass, 120 mL
1903430-07	PDI-024SC-B-04-06-190927	27-Sep-19 11:31	01-Oct-19 09:18	Amber Glass, 120 mL
1903430-08	PDI-024SC-B-06-08-190927	27-Sep-19 11:31	01-Oct-19 09:18	Amber Glass, 120 mL
1903430-09	PDI-FB-1909291637	29-Sep-19 16:37	01-Oct-19 09:18	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1903430-10	PDI-RB-1909291555	29-Sep-19 15:55	01-Oct-19 09:18	Amber Glass NM Bottle, 1L
				Amber Glass NM Bottle, 1L
1903430-11	PDI-025SC-A-06-07-190927	27-Sep-19 14:16	01-Oct-19 09:18	Amber Glass, 120 mL
1903430-12	PDI-025SC-A-07-08-190927	27-Sep-19 14:16	01-Oct-19 09:18	Amber Glass, 120 mL
1903430-13	PDI-030SC-A-00-01-190929	29-Sep-19 13:58	01-Oct-19 09:18	Clear Glass Jar, 120mL
1903430-14	PDI-030SC-A-10-11-190929	29-Sep-19 13:58	01-Oct-19 09:18	Amber Glass, 120 mL

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1613B

Matrix: Solid
Sample Size: 10.0 g

QC Batch: B9J0093
Date Extracted: 10-Oct-2019 6:56

Lab Sample: B9J0093-BLK1
Date Analyzed : 16-Oct-19 13:15 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.138		
1,2,3,7,8-PeCDD	ND	0.155		
1,2,3,4,7,8-HxCDD	ND	0.165		
1,2,3,6,7,8-HxCDD	ND	0.181		
1,2,3,7,8,9-HxCDD	ND	0.153		
1,2,3,4,6,7,8-HpCDD	ND	0.194		
OCDD	ND	0.179		
2,3,7,8-TCDF	ND	0.159		
1,2,3,7,8-PeCDF	ND	0.152		
2,3,4,7,8-PeCDF	ND	0.154		
1,2,3,4,7,8-HxCDF	ND	0.0719		
1,2,3,6,7,8-HxCDF	ND	0.0645		
2,3,4,6,7,8-HxCDF	ND	0.0677		
1,2,3,7,8,9-HxCDF	ND	0.0960		
1,2,3,4,6,7,8-HpCDF	ND	0.108		
1,2,3,4,7,8,9-HpCDF	ND	0.0946		
OCDF	ND	0.220		
TOTALS				
Total TCDD	ND	0.138		
Total PeCDD	ND	0.155		
Total HxCDD	ND	0.166		
Total HpCDD	ND	0.194		
Total TCDF	ND	0.159		
Total PeCDF	ND	0.153		
Total HxCDF	ND	0.0739		
Total HpCDF	ND	0.102		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	37.9	25 - 164	
	13C-1,2,3,7,8-PeCDD	50.2	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	71.7	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	63.4	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	71.6	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	70.3	23 - 140	
	13C-OCDD	68.3	17 - 157	
	13C-2,3,7,8-TCDF	34.6	24 - 169	
	13C-1,2,3,7,8-PeCDF	47.4	24 - 185	
	13C-2,3,4,7,8-PeCDF	43.3	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	71.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	70.9	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	72.2	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	68.8	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	67.7	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	75.6	26 - 138	
	13C-OCDF	69.3	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	46.3	35 - 197	

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

TEQMinWHO2005Dioxin	0.00

DL - Sample specifc 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	QC Batch:	B9J0093	Lab Sample:	B9J0093-BS1
Sample Size:	10.0 g	Date Extracted:	10-Oct-2019 6:56	Date Analyzed:	16-Oct-19 11:39 Column: ZB-5MS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	21.4	20.0	107	67 - 158	IS	13C-2,3,7,8-TCDD	53.6	20 - 175
1,2,3,7,8-PeCDD	106	100	106	70 - 142		13C-1,2,3,7,8-PeCDD	66.5	21 - 227
1,2,3,4,7,8-HxCDD	97.7	100	97.7	70 - 164		13C-1,2,3,4,7,8-HxCDD	79.3	21 - 193
1,2,3,6,7,8-HxCDD	107	100	107	76 - 134		13C-1,2,3,6,7,8-HxCDD	69.8	25 - 163
1,2,3,7,8,9-HxCDD	104	100	104	64 - 162		13C-1,2,3,7,8,9-HxCDD	79.0	21 - 193
1,2,3,4,6,7,8-HpCDD	99.4	100	99.4	70 - 140		13C-1,2,3,4,6,7,8-HpCDD	82.0	26 - 166
OCDD	206	200	103	78 - 144		13C-OCDD	76.1	13 - 199
2,3,7,8-TCDF	17.8	20.0	88.8	75 - 158		13C-2,3,7,8-TCDF	53.0	22 - 152
1,2,3,7,8-PeCDF	101	100	101	80 - 134		13C-1,2,3,7,8-PeCDF	68.1	21 - 192
2,3,4,7,8-PeCDF	103	100	103	68 - 160		13C-2,3,4,7,8-PeCDF	63.0	13 - 328
1,2,3,4,7,8-HxCDF	101	100	101	72 - 134		13C-1,2,3,4,7,8-HxCDF	77.4	19 - 202
1,2,3,6,7,8-HxCDF	101	100	101	84 - 130		13C-1,2,3,6,7,8-HxCDF	76.6	21 - 159
2,3,4,6,7,8-HxCDF	102	100	102	70 - 156		13C-2,3,4,6,7,8-HxCDF	79.1	22 - 176
1,2,3,7,8,9-HxCDF	101	100	101	78 - 130		13C-1,2,3,7,8,9-HxCDF	79.1	17 - 205
1,2,3,4,6,7,8-HpCDF	102	100	102	82 - 122		13C-1,2,3,4,6,7,8-HpCDF	75.1	21 - 158
1,2,3,4,7,8,9-HpCDF	101	100	101	78 - 138		13C-1,2,3,4,7,8,9-HpCDF	79.8	20 - 186
OCDF	202	200	101	63 - 170		13C-OCDF	78.8	13 - 199
					CRS	37Cl-2,3,7,8-TCDD	50.5	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: Method Blank

EPA Method 1613B

Matrix: Solid
Sample Size: 10.0 g

QC Batch: B9J0132
Date Extracted: 14-Oct-2019 7:26

Lab Sample: B9J0132-BLK1
Date Analyzed : 24-Oct-19 19:36 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.133		
1,2,3,7,8-PeCDD	ND	0.113		
1,2,3,4,7,8-HxCDD	ND	0.151		
1,2,3,6,7,8-HxCDD	ND	0.169		
1,2,3,7,8,9-HxCDD	ND	0.162		
1,2,3,4,6,7,8-HpCDD	ND	0.113		
OCDD	ND	0.244		
2,3,7,8-TCDF	ND	0.126		
1,2,3,7,8-PeCDF	ND	0.103		
2,3,4,7,8-PeCDF	ND	0.102		
1,2,3,4,7,8-HxCDF	ND	0.0531		
1,2,3,6,7,8-HxCDF	ND	0.0547		
2,3,4,6,7,8-HxCDF	ND	0.0601		
1,2,3,7,8,9-HxCDF	ND	0.0756		
1,2,3,4,6,7,8-HpCDF	ND	0.0571		
1,2,3,4,7,8,9-HpCDF	ND	0.0665		
OCDF	ND	0.261		
TOTALS				
Total TCDD	ND	0.133		
Total PeCDD	ND	0.113		
Total HxCDD	ND	0.161		
Total HpCDD	ND	0.113		
Total TCDF	ND	0.126		
Total PeCDF	ND	0.103		
Total HxCDF	ND	0.0604		
Total HpCDF	ND	0.0606		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	64.3	25 - 164	
	13C-1,2,3,7,8-PeCDD	75.7	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	71.6	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	60.4	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	68.2	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	79.4	23 - 140	
	13C-OCDD	68.6	17 - 157	
	13C-2,3,7,8-TCDF	56.6	24 - 169	
	13C-1,2,3,7,8-PeCDF	68.8	24 - 185	
	13C-2,3,4,7,8-PeCDF	68.2	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	82.4	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	73.8	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	74.2	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	77.1	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	98.8	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	81.6	26 - 138	
	13C-OCDF	61.9	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	80.9	35 - 197	

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

TEQMinWHO2005Dioxin	0.00

DL - Sample specifc 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	QC Batch:	B9J0132	Lab Sample:	B9J0132-BS1
Sample Size:	10.0 g	Date Extracted:	14-Oct-2019 7:26	Date Analyzed:	29-Oct-19 11:03 Column: ZB-5MS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits
2,3,7,8-TCDD	25.6	20.0	128	67 - 158
1,2,3,7,8-PeCDD	133	100	133	70 - 142
1,2,3,4,7,8-HxCDD	125	100	125	70 - 164
1,2,3,6,7,8-HxCDD	134	100	134	76 - 134
1,2,3,7,8,9-HxCDD	130	100	130	64 - 162
1,2,3,4,6,7,8-HpCDD	123	100	123	70 - 140
OCDD	259	200	130	78 - 144
2,3,7,8-TCDF	21.6	20.0	108	75 - 158
1,2,3,7,8-PeCDF	126	100	126	80 - 134
2,3,4,7,8-PeCDF	117	100	117	68 - 160
1,2,3,4,7,8-HxCDF	118	100	118	72 - 134
1,2,3,6,7,8-HxCDF	119	100	119	84 - 130
2,3,4,6,7,8-HxCDF	122	100	122	70 - 156
1,2,3,7,8,9-HxCDF	119	100	119	78 - 130
1,2,3,4,6,7,8-HpCDF	122	100	122	82 - 122
1,2,3,4,7,8,9-HpCDF	117	100	117	78 - 138
OCDF	236	200	118	63 - 170

	Labeled Standard	%R	LCL-UCL
IS	13C-2,3,7,8-TCDD	50.4	20 - 175
	13C-1,2,3,7,8-PeCDD	56.2	21 - 227
	13C-1,2,3,4,7,8-HxCDD	59.3	21 - 193
	13C-1,2,3,6,7,8-HxCDD	51.2	25 - 163
	13C-1,2,3,7,8,9-HxCDD	56.1	21 - 193
	13C-1,2,3,4,6,7,8-HpCDD	61.1	26 - 166
	13C-OCDD	49.2	13 - 199
	13C-2,3,7,8-TCDF	43.5	22 - 152
	13C-1,2,3,7,8-PeCDF	57.3	21 - 192
	13C-2,3,4,7,8-PeCDF	53.0	13 - 328
	13C-1,2,3,4,7,8-HxCDF	64.7	19 - 202
	13C-1,2,3,6,7,8-HxCDF	61.8	21 - 159
	13C-2,3,4,6,7,8-HxCDF	54.6	22 - 176
	13C-1,2,3,7,8,9-HxCDF	56.8	17 - 205
	13C-1,2,3,4,6,7,8-HpCDF	89.1	21 - 158
	13C-1,2,3,4,7,8,9-HpCDF	39.5	20 - 186
	13C-OCDF	17.9	13 - 199
CRS	37Cl-2,3,7,8-TCDD	76.0	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: Method Blank

EPA Method 1613B

Matrix: Solid
Sample Size: 10.0 g

QC Batch: B9L0024
Date Extracted: 02-Dec-2019 13:38

Lab Sample: B9L0024-BLK1
Date Analyzed : 05-Dec-19 20:41 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.0937		
1,2,3,7,8-PeCDD	ND	0.0878		
1,2,3,4,7,8-HxCDD	ND	0.122		
1,2,3,6,7,8-HxCDD	ND	0.128		
1,2,3,7,8,9-HxCDD	ND	0.124		
1,2,3,4,6,7,8-HpCDD	ND	0.142		
OCDD	ND	0.144		
2,3,7,8-TCDF	ND	0.0641		
1,2,3,7,8-PeCDF	ND	0.104		
2,3,4,7,8-PeCDF	ND	0.101		
1,2,3,4,7,8-HxCDF	ND	0.0375		
1,2,3,6,7,8-HxCDF	ND	0.0428		
2,3,4,6,7,8-HxCDF	ND	0.0490		
1,2,3,7,8,9-HxCDF	ND	0.0667		
1,2,3,4,6,7,8-HpCDF	ND	0.0722		
1,2,3,4,7,8,9-HpCDF	ND	0.0611		
OCDF	ND		0.215	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	84.6	25 - 164	
	13C-1,2,3,7,8-PeCDD	91.5	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	81.7	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	68.4	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	74.8	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	81.9	23 - 140	
	13C-OCDD	79.4	17 - 157	
	13C-2,3,7,8-TCDF	78.6	24 - 169	
	13C-1,2,3,7,8-PeCDF	84.2	24 - 185	
	13C-2,3,4,7,8-PeCDF	82.1	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	97.7	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	82.4	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	84.6	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	82.6	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	74.8	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	86.2	26 - 138	
	13C-OCDF	87.2	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	78.7	35 - 197	

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

TEQMinWHO2005Dioxin	0.00

TOTALS

Total TCDD	ND	0.0937
Total PeCDD	ND	0.0878
Total HxCDD	ND	0.125
Total HpCDD	ND	0.142
Total TCDF	ND	0.0641
Total PeCDF	ND	0.103
Total HxCDF	ND	0.0480
Total HpCDF	ND	0.0669

DL - Sample specifc 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	QC Batch:	B9L0024	Lab Sample:	B9L0024-BS1
Sample Size:	10.0 g	Date Extracted:	02-Dec-2019 13:38	Date Analyzed:	05-Dec-19 18:18 Column: ZB-5MS

Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	21.3	20.0	106	67 - 158	IS	13C-2,3,7,8-TCDD	82.5	20 - 175
1,2,3,7,8-PeCDD	100	100	100	70 - 142		13C-1,2,3,7,8-PeCDD	86.4	21 - 227
1,2,3,4,7,8-HxCDD	94.8	100	94.8	70 - 164		13C-1,2,3,4,7,8-HxCDD	80.9	21 - 193
1,2,3,6,7,8-HxCDD	105	100	105	76 - 134		13C-1,2,3,6,7,8-HxCDD	65.2	25 - 163
1,2,3,7,8,9-HxCDD	98.8	100	98.8	64 - 162		13C-1,2,3,7,8,9-HxCDD	73.5	21 - 193
1,2,3,4,6,7,8-HpCDD	98.6	100	98.6	70 - 140		13C-1,2,3,4,6,7,8-HpCDD	78.4	26 - 166
OCDD	197	200	98.6	78 - 144		13C-OCDD	78.0	13 - 199
2,3,7,8-TCDF	18.2	20.0	91.0	75 - 158		13C-2,3,7,8-TCDF	77.8	22 - 152
1,2,3,7,8-PeCDF	98.8	100	98.8	80 - 134		13C-1,2,3,7,8-PeCDF	84.0	21 - 192
2,3,4,7,8-PeCDF	99.6	100	99.6	68 - 160		13C-2,3,4,7,8-PeCDF	78.1	13 - 328
1,2,3,4,7,8-HxCDF	93.0	100	93.0	72 - 134		13C-1,2,3,4,7,8-HxCDF	95.8	19 - 202
1,2,3,6,7,8-HxCDF	94.2	100	94.2	84 - 130		13C-1,2,3,6,7,8-HxCDF	79.4	21 - 159
2,3,4,6,7,8-HxCDF	98.3	100	98.3	70 - 156		13C-2,3,4,6,7,8-HxCDF	82.9	22 - 176
1,2,3,7,8,9-HxCDF	94.7	100	94.7	78 - 130		13C-1,2,3,7,8,9-HxCDF	78.0	17 - 205
1,2,3,4,6,7,8-HpCDF	93.8	100	93.8	82 - 122		13C-1,2,3,4,6,7,8-HpCDF	72.3	21 - 158
1,2,3,4,7,8,9-HpCDF	92.7	100	92.7	78 - 138		13C-1,2,3,4,7,8,9-HpCDF	82.8	20 - 186
OCDF	188	200	94.2	63 - 170		13C-OCDF	87.1	13 - 199
					CRS	37Cl-2,3,7,8-TCDD	80.6	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: PDI-021SC-A-13-14-190927 **EPA Method 1613B**

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 27-Sep-2019 9:17

Sample Data
Matrix: Sediment
Sample Size: 11.3 g
% Solids: 90.7

Laboratory Data
Lab Sample: 1903430-01 Date Received: 11-Oct-2019 9:15
QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Analyzed : 25-Oct-19 01:58 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.148		
1,2,3,7,8-PeCDD	ND	0.217		
1,2,3,4,7,8-HxCDD	ND	0.293		
1,2,3,6,7,8-HxCDD	ND	0.303		
1,2,3,7,8,9-HxCDD	ND	0.288		
1,2,3,4,6,7,8-HpCDD	0.626			J
OCDD	3.84			J
2,3,7,8-TCDF	ND	0.133		
1,2,3,7,8-PeCDF	ND	0.353		
2,3,4,7,8-PeCDF	ND	0.327		
1,2,3,4,7,8-HxCDF	ND	0.100		
1,2,3,6,7,8-HxCDF	ND	0.0999		
2,3,4,6,7,8-HxCDF	ND	0.115		
1,2,3,7,8,9-HxCDF	ND	0.137		
1,2,3,4,6,7,8-HpCDF	ND	0.227		
1,2,3,4,7,8,9-HpCDF	ND	0.221		
OCDF	ND		0.479	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	52.1	25 - 164	
	13C-1,2,3,7,8-PeCDD	48.6	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	47.3	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	40.2	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	43.6	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	50.3	23 - 140	
	13C-OCDD	50.0	17 - 157	
	13C-2,3,7,8-TCDF	53.6	24 - 169	
	13C-1,2,3,7,8-PeCDF	52.2	24 - 185	
	13C-2,3,4,7,8-PeCDF	52.7	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	51.7	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	47.1	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	45.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	51.7	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	55.4	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	57.7	26 - 138	
	13C-OCDF	49.3	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	103	35 - 197	

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

TEQMinWHO2005Dioxin	0.00741

TOTALS

Total TCDD	ND	0.148	
Total PeCDD	ND	0.217	
Total HxCDD	0.416		
Total HpCDD	0.626		1.30
Total TCDF	ND	0.133	
Total PeCDF	ND	0.339	
Total HxCDF	ND	0.112	
Total HpCDF	ND	0.225	

DL - Sample specifc 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-021SC-A-14-15.4-190927

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 27-Sep-2019 9:17

Sample Data
Matrix: Sediment
Sample Size: 12.3 g
% Solids: 83.2

Laboratory Data
Lab Sample: 1903430-02 Date Received: 11-Oct-2019 9:15
QC Batch: B9J0132 Date Extracted: 14-Oct-2019 7:26
Date Analyzed : 25-Oct-19 02:46 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.279		
1,2,3,7,8-PeCDD	ND	0.351		
1,2,3,4,7,8-HxCDD	ND	0.347		
1,2,3,6,7,8-HxCDD	ND	0.352		
1,2,3,7,8,9-HxCDD	ND	0.352		
1,2,3,4,6,7,8-HpCDD	ND	0.256		
OCDD	1.78			J
2,3,7,8-TCDF	ND	0.270		
1,2,3,7,8-PeCDF	ND	0.364		
2,3,4,7,8-PeCDF	ND	0.324		
1,2,3,4,7,8-HxCDF	ND	0.248		
1,2,3,6,7,8-HxCDF	ND	0.229		
2,3,4,6,7,8-HxCDF	ND	0.247		
1,2,3,7,8,9-HxCDF	ND	0.285		
1,2,3,4,6,7,8-HpCDF	ND	0.177		
1,2,3,4,7,8,9-HpCDF	ND	0.149		
OCDF	ND	0.326		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	76.9	25 - 164	
	13C-1,2,3,7,8-PeCDD	97.8	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	94.7	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	78.8	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	85.4	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	94.3	23 - 140	
	13C-OCDD	97.3	17 - 157	
	13C-2,3,7,8-TCDF	66.4	24 - 169	
	13C-1,2,3,7,8-PeCDF	88.5	24 - 185	
	13C-2,3,4,7,8-PeCDF	87.3	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	97.9	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	91.7	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	96.2	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	101	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	104	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	113	26 - 138	
	13C-OCDF	109	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	82.7	35 - 197	

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

TEQMinWHO2005Dioxin	0.000534

TOTALS

Total TCDD	ND	0.279
Total PeCDD	ND	0.351
Total HxCDD	ND	0.352
Total HpCDD	ND	0.256
Total TCDF	ND	0.270
Total PeCDF	ND	0.343
Total HxCDF	ND	0.251
Total HpCDF	ND	0.164

DL - Sample specifc 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-024SC-A-10-11-190927

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 27-Sep-2019 12:00

Sample Data
Matrix: Sediment
Sample Size: 13.8 g
% Solids: 73.0

Laboratory Data
Lab Sample: 1903430-03 Date Received: 01-Oct-2019 9:18
QC Batch: B9J0093 Date Extracted: 10-Oct-2019 6:56
Date Analyzed : 16-Oct-19 14:03 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.0667		
1,2,3,7,8-PeCDD	ND	0.0962		
1,2,3,4,7,8-HxCDD	ND	0.125		
1,2,3,6,7,8-HxCDD	ND	0.135		
1,2,3,7,8,9-HxCDD	0.349			J
1,2,3,4,6,7,8-HpCDD	1.29			J
OCDD	9.71			
2,3,7,8-TCDF	ND	0.0517		
1,2,3,7,8-PeCDF	ND	0.0619		
2,3,4,7,8-PeCDF	ND	0.0583		
1,2,3,4,7,8-HxCDF	ND	0.0621		
1,2,3,6,7,8-HxCDF	ND	0.0623		
2,3,4,6,7,8-HxCDF	ND	0.0660		
1,2,3,7,8,9-HxCDF	ND	0.0867		
1,2,3,4,6,7,8-HpCDF	ND	0.0558		
1,2,3,4,7,8,9-HpCDF	ND	0.0497		
OCDF	ND	0.120		
TOTALS				
Total TCDD	ND		0.159	
Total PeCDD	0.163			
Total HxCDD	2.24			
Total HpCDD	3.45			
Total TCDF	ND	0.0517		
Total PeCDF	ND	0.0601		
Total HxCDF	ND	0.0686		
Total HpCDF	ND	0.0530		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	96.5	25 - 164	
	13C-1,2,3,7,8-PeCDD	102	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	104	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	86.5	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	96.1	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	90.9	23 - 140	
	13C-OCDD	95.7	17 - 157	
	13C-2,3,7,8-TCDF	89.3	24 - 169	
	13C-1,2,3,7,8-PeCDF	99.0	24 - 185	
	13C-2,3,4,7,8-PeCDF	99.5	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	104	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	101	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	96.3	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	101	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	89.7	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	98.9	26 - 138	
	13C-OCDF	93.1	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	88.9	35 - 197	

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

TEQMinWHO2005Dioxin	0.0507

DL - Sample specifc 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-024SC-A-11-12.1-190927

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 27-Sep-2019 12:00

Sample Data
Matrix: Sediment
Sample Size: 14.1 g
% Solids: 72.6

Laboratory Data
Lab Sample: 1903430-04 Date Received: 01-Oct-2019 9:18
QC Batch: B9J0093 Date Extracted: 10-Oct-2019 6:56
Date Analyzed : 16-Oct-19 14:51 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.125		
1,2,3,7,8-PeCDD	ND	0.0984		
1,2,3,4,7,8-HxCDD	ND	0.166		
1,2,3,6,7,8-HxCDD	ND	0.182		
1,2,3,7,8,9-HxCDD	ND	0.167		
1,2,3,4,6,7,8-HpCDD	ND		1.22	
OCDD	10.7			
2,3,7,8-TCDF	ND	0.107		
1,2,3,7,8-PeCDF	ND	0.144		
2,3,4,7,8-PeCDF	ND	0.116		
1,2,3,4,7,8-HxCDF	ND	0.0504		
1,2,3,6,7,8-HxCDF	ND	0.0539		
2,3,4,6,7,8-HxCDF	ND	0.0539		
1,2,3,7,8,9-HxCDF	ND	0.0702		
1,2,3,4,6,7,8-HpCDF	ND	0.0779		
1,2,3,4,7,8,9-HpCDF	ND	0.0685		
OCDF	ND	0.0960		
TOTALS				
Total TCDD	0.710			
Total PeCDD	ND		0.452	
Total HxCDD	0.479		1.36	
Total HpCDD	2.14		3.36	
Total TCDF	ND	0.107		
Total PeCDF	ND	0.130		
Total HxCDF	ND	0.0567		
Total HpCDF	ND	0.0735		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	68.4	25 - 164	
	13C-1,2,3,7,8-PeCDD	86.0	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	103	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	84.7	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	97.0	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	96.3	23 - 140	
	13C-OCDD	98.2	17 - 157	
	13C-2,3,7,8-TCDF	63.7	24 - 169	
	13C-1,2,3,7,8-PeCDF	80.0	24 - 185	
	13C-2,3,4,7,8-PeCDF	82.4	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	102	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	97.0	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	98.3	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	102	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	98.9	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	103	26 - 138	
	13C-OCDF	99.3	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	67.8	35 - 197	

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

TEQMinWHO2005Dioxin	0.00321

DL - Sample specifc 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-024SC-B-00-02-190927

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 27-Sep-2019 11:31

Sample Data
Matrix: Sediment
Sample Size: 14.9 g
% Solids: 69.7

Laboratory Data
Lab Sample: 1903430-05 Date Received: 01-Oct-2019 9:18
QC Batch: B9J0093 Date Extracted: 10-Oct-2019 6:56
Date Analyzed : 16-Oct-19 15:39 Column: ZB-5MS
30-Oct-19 18:45 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND		0.762	
1,2,3,7,8-PeCDD	1.58			J
1,2,3,4,7,8-HxCDD	9.96			
1,2,3,6,7,8-HxCDD	29.5			
1,2,3,7,8,9-HxCDD	14.5			
1,2,3,4,6,7,8-HpCDD	949			
OCDD	3700			
2,3,7,8-TCDF	21.4			
1,2,3,7,8-PeCDF	31.2			
2,3,4,7,8-PeCDF	11.5			
1,2,3,4,7,8-HxCDF	60.3			
1,2,3,6,7,8-HxCDF	14.4			
2,3,4,6,7,8-HxCDF	4.64			
1,2,3,7,8,9-HxCDF	3.33			
1,2,3,4,6,7,8-HpCDF	41.2			
1,2,3,4,7,8,9-HpCDF	11.6			
OCDF	98.7			
TOTALS				
Total TCDD	12.4		13.1	
Total PeCDD	55.2		58.4	
Total HxCDD	625			
Total HpCDD	2360			
Total TCDF	88.2		95.1	
Total PeCDF	96.7			
Total HxCDF	119			
Total HpCDF	118		121	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	30.4	25 - 164	
	13C-1,2,3,7,8-PeCDD	45.7	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	58.8	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	48.5	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	55.5	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	65.5	23 - 140	
	13C-OCDD	65.9	17 - 157	
	13C-2,3,7,8-TCDF	27.6	24 - 169	
	13C-1,2,3,7,8-PeCDF	41.5	24 - 185	
	13C-2,3,4,7,8-PeCDF	42.6	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	55.4	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	54.6	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	55.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	58.3	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	57.2	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	57.2	26 - 138	
	13C-OCDF	44.3	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	60.5	35 - 197	

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

TEQMinWHO2005Dioxin	32.9

DL - Sample specifc 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-024SC-B-02-04-190927

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 27-Sep-2019 11:31

Sample Data
Matrix: Sediment
Sample Size: 14.1 g
% Solids: 73.4

Laboratory Data
Lab Sample: 1903430-06 Date Received: 01-Oct-2019 9:18
QC Batch: B9L0024 Date Extracted: 02-Dec-2019 13:38
Date Analyzed : 06-Dec-19 03:51 Column: ZB-5MS
16-Dec-19 16:42 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND		1.00	
1,2,3,7,8-PeCDD	ND		1.28	
1,2,3,4,7,8-HxCDD	0.785			J
1,2,3,6,7,8-HxCDD	6.21			
1,2,3,7,8,9-HxCDD	2.15			J
1,2,3,4,6,7,8-HpCDD	145			
OCDD	1850			
2,3,7,8-TCDF	23.0			
1,2,3,7,8-PeCDF	31.8			
2,3,4,7,8-PeCDF	11.9			
1,2,3,4,7,8-HxCDF	57.6			
1,2,3,6,7,8-HxCDF	14.5			
2,3,4,6,7,8-HxCDF	4.55			
1,2,3,7,8,9-HxCDF	3.80			
1,2,3,4,6,7,8-HpCDF	43.8			
1,2,3,4,7,8,9-HpCDF	12.0			
OCDF	116			
TOTALS				
Total TCDD	4.85		7.11	
Total PeCDD	1.60		8.43	
Total HxCDD	37.6		40.0	
Total HpCDD	329			
Total TCDF	114			
Total PeCDF	115		116	
Total HxCDF	124		125	
Total HpCDF	124			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	74.9	25 - 164	
	13C-1,2,3,7,8-PeCDD	74.2	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	69.9	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	56.9	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	61.9	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	56.9	23 - 140	
	13C-OCDD	42.9	17 - 157	
	13C-2,3,7,8-TCDF	69.4	24 - 169	
	13C-1,2,3,7,8-PeCDF	76.6	24 - 185	
	13C-2,3,4,7,8-PeCDF	73.3	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	80.5	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	68.2	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	67.7	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	68.2	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	58.7	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	60.7	26 - 138	
	13C-OCDF	53.0	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	75.0	35 - 197	

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

TEQMinWHO2005Dioxin	18.4

DL - Sample specifc 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-024SC-B-04-06-190927

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 27-Sep-2019 11:31

Sample Data
Matrix: Sediment
Sample Size: 12.6 g
% Solids: 82.2

Laboratory Data
Lab Sample: 1903430-07 Date Received: 01-Oct-2019 9:18
QC Batch: B9J0093 Date Extracted: 10-Oct-2019 6:56
Date Analyzed : 16-Oct-19 17:15 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.0752		
1,2,3,7,8-PeCDD	ND	0.0630		
1,2,3,4,7,8-HxCDD	ND	0.0721		
1,2,3,6,7,8-HxCDD	ND	0.0794		
1,2,3,7,8,9-HxCDD	ND	0.0796		
1,2,3,4,6,7,8-HpCDD	0.265			J
OCDD	2.53			J
2,3,7,8-TCDF	ND	0.0537		
1,2,3,7,8-PeCDF	ND	0.0676		
2,3,4,7,8-PeCDF	ND	0.0631		
1,2,3,4,7,8-HxCDF	ND		0.0910	
1,2,3,6,7,8-HxCDF	ND	0.0309		
2,3,4,6,7,8-HxCDF	ND	0.0368		
1,2,3,7,8,9-HxCDF	ND	0.0461		
1,2,3,4,6,7,8-HpCDF	ND	0.0379		
1,2,3,4,7,8,9-HpCDF	ND	0.0345		
OCDF	0.115			J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	82.7	25 - 164	
	13C-1,2,3,7,8-PeCDD	99.0	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	99.8	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	83.7	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	90.0	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	95.8	23 - 140	
	13C-OCDD	93.7	17 - 157	
	13C-2,3,7,8-TCDF	71.5	24 - 169	
	13C-1,2,3,7,8-PeCDF	90.8	24 - 185	
	13C-2,3,4,7,8-PeCDF	88.4	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	103	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	96.9	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	95.7	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	101	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	91.9	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	98.3	26 - 138	
	13C-OCDF	95.6	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	81.8	35 - 197	

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

TEQMinWHO2005Dioxin	0.00344

TOTALS

Total TCDD	ND	0.0752		
Total PeCDD	ND	0.0630		
Total HxCDD	ND		0.112	
Total HpCDD	0.762			
Total TCDF	ND	0.0537		
Total PeCDF	ND	0.0653		
Total HxCDF	ND		0.0910	
Total HpCDF	ND	0.0363		

DL - Sample specifc 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-024SC-B-06-08-190927

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 27-Sep-2019 11:31

Sample Data
Matrix: Sediment
Sample Size: 13.7 g
% Solids: 73.7

Laboratory Data
Lab Sample: 1903430-08 Date Received: 01-Oct-2019 9:18
QC Batch: B9J0093 Date Extracted: 10-Oct-2019 6:56
Date Analyzed : 16-Oct-19 18:02 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.0883		
1,2,3,7,8-PeCDD	ND	0.0755		
1,2,3,4,7,8-HxCDD	ND	0.0841		
1,2,3,6,7,8-HxCDD	ND	0.0895		
1,2,3,7,8,9-HxCDD	ND	0.0871		
1,2,3,4,6,7,8-HpCDD	0.164			J
OCDD	ND		0.979	
2,3,7,8-TCDF	ND	0.0632		
1,2,3,7,8-PeCDF	ND	0.0622		
2,3,4,7,8-PeCDF	ND	0.0597		
1,2,3,4,7,8-HxCDF	ND	0.0443		
1,2,3,6,7,8-HxCDF	ND	0.0405		
2,3,4,6,7,8-HxCDF	ND	0.0485		
1,2,3,7,8,9-HxCDF	ND	0.0588		
1,2,3,4,6,7,8-HpCDF	ND	0.0485		
1,2,3,4,7,8,9-HpCDF	ND	0.0426		
OCDF	ND	0.0900		
TOTALS				
Total TCDD	ND	0.0883		
Total PeCDD	ND	0.0755		
Total HxCDD	ND		0.137	
Total HpCDD	0.386			
Total TCDF	ND	0.0632		
Total PeCDF	ND	0.0609		
Total HxCDF	ND	0.0475		
Total HpCDF	ND	0.0457		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	101	25 - 164	
	13C-1,2,3,7,8-PeCDD	109	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	103	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	87.8	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	93.7	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	102	23 - 140	
	13C-OCDD	99.8	17 - 157	
	13C-2,3,7,8-TCDF	95.1	24 - 169	
	13C-1,2,3,7,8-PeCDF	102	24 - 185	
	13C-2,3,4,7,8-PeCDF	103	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	107	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	105	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	98.1	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	104	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	100	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	106	26 - 138	
	13C-OCDF	111	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	106	35 - 197	

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

TEQMinWHO2005Dioxin	0.00164

DL - Sample specifc 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-025SC-A-06-07-190927

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 27-Sep-2019 14:16

Sample Data
Matrix: Sediment
Sample Size: 13.3 g
% Solids: 76.1

Laboratory Data
Lab Sample: 1903430-11 Date Received: 01-Oct-2019 9:18
QC Batch: B9J0093 Date Extracted: 10-Oct-2019 6:56
Date Analyzed : 16-Oct-19 18:50 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.0817		
1,2,3,7,8-PeCDD	ND	0.0853		
1,2,3,4,7,8-HxCDD	ND	0.0801		
1,2,3,6,7,8-HxCDD	ND	0.0855		
1,2,3,7,8,9-HxCDD	ND	0.0807		
1,2,3,4,6,7,8-HpCDD	ND	0.0758		
OCDD	0.434			J
2,3,7,8-TCDF	ND	0.0569		
1,2,3,7,8-PeCDF	ND	0.0828		
2,3,4,7,8-PeCDF	ND	0.0701		
1,2,3,4,7,8-HxCDF	ND	0.0384		
1,2,3,6,7,8-HxCDF	ND	0.0389		
2,3,4,6,7,8-HxCDF	ND	0.0430		
1,2,3,7,8,9-HxCDF	ND	0.0506		
1,2,3,4,6,7,8-HpCDF	ND	0.0600		
1,2,3,4,7,8,9-HpCDF	ND	0.0541		
OCDF	ND	0.0859		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	94.4	25 - 164	
	13C-1,2,3,7,8-PeCDD	94.2	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	102	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	85.1	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	92.0	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	95.7	23 - 140	
	13C-OCDD	92.8	17 - 157	
	13C-2,3,7,8-TCDF	92.8	24 - 169	
	13C-1,2,3,7,8-PeCDF	95.8	24 - 185	
	13C-2,3,4,7,8-PeCDF	97.3	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	110	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	100	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	100	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	103	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	93.6	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	92.5	26 - 138	
	13C-OCDF	95.9	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	103	35 - 197	

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

TEQMinWHO2005Dioxin	0.000130

TOTALS

Total TCDD	ND	0.0817		
Total PeCDD	ND	0.0853		
Total HxCDD	ND	0.0825		
Total HpCDD	ND		0.176	
Total TCDF	ND	0.0569		
Total PeCDF	ND	0.0763		
Total HxCDF	ND	0.0424		
Total HpCDF	ND	0.0572		

DL - Sample specifc 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-025SC-A-07-08-190927

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 27-Sep-2019 14:16

Sample Data
Matrix: Sediment
Sample Size: 13.4 g
% Solids: 75.0

Laboratory Data
Lab Sample: 1903430-12 Date Received: 01-Oct-2019 9:18
QC Batch: B9J0093 Date Extracted: 10-Oct-2019 6:56
Date Analyzed : 16-Oct-19 19:38 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.0783		
1,2,3,7,8-PeCDD	ND	0.0685		
1,2,3,4,7,8-HxCDD	ND	0.0940		
1,2,3,6,7,8-HxCDD	ND	0.104		
1,2,3,7,8,9-HxCDD	ND	0.103		
1,2,3,4,6,7,8-HpCDD	ND	0.0723		
OCDD	ND		0.146	
2,3,7,8-TCDF	ND	0.0620		
1,2,3,7,8-PeCDF	ND	0.0599		
2,3,4,7,8-PeCDF	ND	0.0524		
1,2,3,4,7,8-HxCDF	ND	0.0384		
1,2,3,6,7,8-HxCDF	ND	0.0372		
2,3,4,6,7,8-HxCDF	ND	0.0408		
1,2,3,7,8,9-HxCDF	ND	0.0486		
1,2,3,4,6,7,8-HpCDF	ND	0.0452		
1,2,3,4,7,8,9-HpCDF	ND	0.0418		
OCDF	ND	0.0751		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	90.2	25 - 164	
	13C-1,2,3,7,8-PeCDD	93.0	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	89.0	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	74.2	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	78.8	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	82.3	23 - 140	
	13C-OCDD	85.9	17 - 157	
	13C-2,3,7,8-TCDF	86.5	24 - 169	
	13C-1,2,3,7,8-PeCDF	91.4	24 - 185	
	13C-2,3,4,7,8-PeCDF	89.0	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	97.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	88.9	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	89.3	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	93.1	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	86.0	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	90.3	26 - 138	
	13C-OCDF	88.3	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	111	35 - 197	

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

TEQMinWHO2005Dioxin	0.00

TOTALS

Total TCDD	ND	0.0783
Total PeCDD	ND	0.0685
Total HxCDD	ND	0.101
Total HpCDD	ND	0.0723
Total TCDF	ND	0.0620
Total PeCDF	ND	0.0562
Total HxCDF	ND	0.0410
Total HpCDF	ND	0.0437

DL - Sample specifc 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-030SC-A-00-01-190929

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 29-Sep-2019 13:58

Sample Data
Matrix: Sediment
Sample Size: 13.0 g
% Solids: 77.3

Laboratory Data
Lab Sample: 1903430-13 Date Received: 01-Oct-2019 9:18
QC Batch: B9J0093 Date Extracted: 10-Oct-2019 6:56
Date Analyzed : 16-Oct-19 20:26 Column: ZB-5MS
30-Oct-19 15:34 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND		0.355	
1,2,3,7,8-PeCDD	ND		0.433	
1,2,3,4,7,8-HxCDD	0.914			J
1,2,3,6,7,8-HxCDD	5.45			
1,2,3,7,8,9-HxCDD	2.17			J
1,2,3,4,6,7,8-HpCDD	233			
OCDD	1920			
2,3,7,8-TCDF	1.36			
1,2,3,7,8-PeCDF	1.67			J
2,3,4,7,8-PeCDF	0.874			J
1,2,3,4,7,8-HxCDF	3.33			
1,2,3,6,7,8-HxCDF	1.68			J
2,3,4,6,7,8-HxCDF	1.15			J
1,2,3,7,8,9-HxCDF	0.306			J
1,2,3,4,6,7,8-HpCDF	16.7			
1,2,3,4,7,8,9-HpCDF	1.60			J
OCDF	63.3			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	68.7	25 - 164	
	13C-1,2,3,7,8-PeCDD	69.4	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	69.6	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	56.6	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	60.2	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	63.2	23 - 140	
	13C-OCDD	67.0	17 - 157	
	13C-2,3,7,8-TCDF	62.8	24 - 169	
	13C-1,2,3,7,8-PeCDF	66.7	24 - 185	
	13C-2,3,4,7,8-PeCDF	70.0	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	74.4	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	70.9	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	68.4	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	69.1	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	66.3	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	68.8	26 - 138	
	13C-OCDF	68.9	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	75.6	35 - 197	

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

TEQMinWHO2005Dioxin	5.06

TOTALS			
Total TCDD	1.91	2.82	
Total PeCDD	4.48	6.08	
Total HxCDD	62.6		
Total HpCDD	524		
Total TCDF	8.07	9.21	
Total PeCDF	11.6	13.0	
Total HxCDF	26.5	26.8	
Total HpCDF	62.4		

DL - Sample specifc 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-030SC-A-10-11-190929

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 29-Sep-2019 13:58

Sample Data
Matrix: Sediment
Sample Size: 13.6 g
% Solids: 73.8

Laboratory Data
Lab Sample: 1903430-14 Date Received: 01-Oct-2019 9:18
QC Batch: B9J0093 Date Extracted: 10-Oct-2019 6:56
Date Analyzed : 16-Oct-19 21:14 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.0734		
1,2,3,7,8-PeCDD	ND	0.0681		
1,2,3,4,7,8-HxCDD	ND	0.116		
1,2,3,6,7,8-HxCDD	ND	0.128		
1,2,3,7,8,9-HxCDD	ND	0.122		
1,2,3,4,6,7,8-HpCDD	ND	0.123		
OCDD	ND		0.936	
2,3,7,8-TCDF	ND	0.0517		
1,2,3,7,8-PeCDF	ND	0.0807		
2,3,4,7,8-PeCDF	ND	0.0772		
1,2,3,4,7,8-HxCDF	ND	0.0455		
1,2,3,6,7,8-HxCDF	ND	0.0462		
2,3,4,6,7,8-HxCDF	ND	0.0506		
1,2,3,7,8,9-HxCDF	ND	0.0649		
1,2,3,4,6,7,8-HpCDF	ND	0.0843		
1,2,3,4,7,8,9-HpCDF	ND	0.0711		
OCDF	ND	0.129		
TOTALS				
Total TCDD	ND	0.0734		
Total PeCDD	ND	0.0681		
Total HxCDD	ND	0.123		
Total HpCDD	0.322			
Total TCDF	0.406		0.720	
Total PeCDF	0.283			
Total HxCDF	ND	0.0512		
Total HpCDF	ND	0.0781		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	91.3	25 - 164	
	13C-1,2,3,7,8-PeCDD	96.3	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	101	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	84.9	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	91.7	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	103	23 - 140	
	13C-OCDD	94.7	17 - 157	
	13C-2,3,7,8-TCDF	97.0	24 - 169	
	13C-1,2,3,7,8-PeCDF	102	24 - 185	
	13C-2,3,4,7,8-PeCDF	94.4	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	109	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	101	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	102	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	103	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	96.0	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	102	26 - 138	
	13C-OCDF	98.8	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	86.6	35 - 197	

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

TEQMinWHO2005Dioxin	0.00

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

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

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

Sample ID: Method Blank

EPA Method 1613B

Matrix: Aqueous
Sample Size: 1.00 L

QC Batch: B9J0092
Date Extracted: 10-Oct-2019 6:53

Lab Sample: B9J0092-BLK1
Date Analyzed : 15-Oct-19 15:27 Column: ZB-5MS

Analyte	Conc. (pg/L)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.627		
1,2,3,7,8-PeCDD	ND	0.603		
1,2,3,4,7,8-HxCDD	ND	0.907		
1,2,3,6,7,8-HxCDD	ND	1.03		
1,2,3,7,8,9-HxCDD	ND	1.05		
1,2,3,4,6,7,8-HpCDD	ND	1.18		
OCDD	ND	1.00		
2,3,7,8-TCDF	ND	0.570		
1,2,3,7,8-PeCDF	ND	0.598		
2,3,4,7,8-PeCDF	ND	0.617		
1,2,3,4,7,8-HxCDF	ND	0.420		
1,2,3,6,7,8-HxCDF	ND	0.439		
2,3,4,6,7,8-HxCDF	ND	0.461		
1,2,3,7,8,9-HxCDF	ND	0.569		
1,2,3,4,6,7,8-HpCDF	ND	0.645		
1,2,3,4,7,8,9-HpCDF	ND	0.580		
OCDF	ND	1.40		
TOTALS				
Total TCDD	ND	0.627		
Total PeCDD	ND	0.603		
Total HxCDD	ND	1.00		
Total HpCDD	ND	1.18		
Total TCDF	ND	0.570		
Total PeCDF	ND	0.607		
Total HxCDF	ND	0.469		
Total HpCDF	ND	0.615		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	92.5	25 - 164	
	13C-1,2,3,7,8-PeCDD	93.9	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	106	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	87.7	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	92.7	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	90.9	23 - 140	
	13C-OCDD	93.1	17 - 157	
	13C-2,3,7,8-TCDF	87.6	24 - 169	
	13C-1,2,3,7,8-PeCDF	102	24 - 185	
	13C-2,3,4,7,8-PeCDF	102	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	106	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	96.4	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	93.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	98.8	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	89.1	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	97.8	26 - 138	
	13C-OCDF	93.8	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	108	35 - 197	

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

TEQMinWHO2005Dioxin	0.00

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

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

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

Matrix:	Aqueous	QC Batch:	B9J0092	Lab Sample:	B9J0092-BS1
Sample Size:	1.00 L	Date Extracted:	10-Oct-2019 6:53	Date Analyzed:	15-Oct-19 13:03 Column: ZB-5MS

Analyte	Amt Found (pg/L)	Spike Amt	%R	Limits
2,3,7,8-TCDD	208	200	104	67 - 158
1,2,3,7,8-PeCDD	1070	1000	107	70 - 142
1,2,3,4,7,8-HxCDD	966	1000	96.6	70 - 164
1,2,3,6,7,8-HxCDD	1040	1000	104	76 - 134
1,2,3,7,8,9-HxCDD	1010	1000	101	64 - 162
1,2,3,4,6,7,8-HpCDD	965	1000	96.5	70 - 140
OCDD	2020	2000	101	78 - 144
2,3,7,8-TCDF	197	200	98.6	75 - 158
1,2,3,7,8-PeCDF	1030	1000	103	80 - 134
2,3,4,7,8-PeCDF	1040	1000	104	68 - 160
1,2,3,4,7,8-HxCDF	969	1000	96.9	72 - 134
1,2,3,6,7,8-HxCDF	956	1000	95.6	84 - 130
2,3,4,6,7,8-HxCDF	982	1000	98.2	70 - 156
1,2,3,7,8,9-HxCDF	954	1000	95.4	78 - 130
1,2,3,4,6,7,8-HpCDF	981	1000	98.1	82 - 122
1,2,3,4,7,8,9-HpCDF	985	1000	98.5	78 - 138
OCDF	2020	2000	101	63 - 170

	Labeled Standard	%R	LCL-UCL
IS	13C-2,3,7,8-TCDD	96.4	20 - 175
	13C-1,2,3,7,8-PeCDD	93.8	21 - 227
	13C-1,2,3,4,7,8-HxCDD	105	21 - 193
	13C-1,2,3,6,7,8-HxCDD	86.2	25 - 163
	13C-1,2,3,7,8,9-HxCDD	91.5	21 - 193
	13C-1,2,3,4,6,7,8-HpCDD	91.2	26 - 166
	13C-OCDD	91.6	13 - 199
	13C-2,3,7,8-TCDF	92.5	22 - 152
	13C-1,2,3,7,8-PeCDF	97.1	21 - 192
	13C-2,3,4,7,8-PeCDF	95.2	13 - 328
	13C-1,2,3,4,7,8-HxCDF	98.1	19 - 202
	13C-1,2,3,6,7,8-HxCDF	88.3	21 - 159
	13C-2,3,4,6,7,8-HxCDF	90.4	22 - 176
	13C-1,2,3,7,8,9-HxCDF	88.8	17 - 205
	13C-1,2,3,4,6,7,8-HpCDF	85.3	21 - 158
	13C-1,2,3,4,7,8,9-HpCDF	90.9	20 - 186
	13C-OCDF	93.5	13 - 199
CRS	37Cl-2,3,7,8-TCDD	113	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: PDI-FB-1909291637

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 29-Sep-2019 16:37

Sample Data
Matrix: Aqueous
Sample Size: 0.987 L

Laboratory Data
Lab Sample: 1903430-09 Date Received: 01-Oct-2019 9:18
QC Batch: B9J0092 Date Extracted: 10-Oct-2019 6:53
Date Analyzed : 15-Oct-19 17:03 Column: ZB-5MS

Analyte	Conc. (pg/L)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	0.561		
1,2,3,7,8-PeCDD	ND	0.562		
1,2,3,4,7,8-HxCDD	ND	0.667		
1,2,3,6,7,8-HxCDD	ND	0.732		
1,2,3,7,8,9-HxCDD	ND	0.711		
1,2,3,4,6,7,8-HpCDD	ND	0.635		
OCDD	ND	1.19		
2,3,7,8-TCDF	ND	0.525		
1,2,3,7,8-PeCDF	ND	0.602		
2,3,4,7,8-PeCDF	ND	0.578		
1,2,3,4,7,8-HxCDF	ND	0.357		
1,2,3,6,7,8-HxCDF	ND	0.342		
2,3,4,6,7,8-HxCDF	ND	0.379		
1,2,3,7,8,9-HxCDF	ND	0.453		
1,2,3,4,6,7,8-HpCDF	ND	0.610		
1,2,3,4,7,8,9-HpCDF	ND	0.517		
OCDF	ND	1.08		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	100	25 - 164	
	13C-1,2,3,7,8-PeCDD	102	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	112	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	91.5	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	98.5	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	101	23 - 140	
	13C-OCDD	103	17 - 157	
	13C-2,3,7,8-TCDF	96.4	24 - 169	
	13C-1,2,3,7,8-PeCDF	106	24 - 185	
	13C-2,3,4,7,8-PeCDF	108	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	104	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	95.9	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	92.9	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	99.2	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	93.1	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	102	26 - 138	
	13C-OCDF	101	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	111	35 - 197	

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

TEQMinWHO2005Dioxin	0.00

TOTALS			
Total TCDD	ND	0.561	
Total PeCDD	ND	0.562	
Total HxCDD	ND	0.707	
Total HpCDD	ND	0.635	
Total TCDF	ND	0.525	
Total PeCDF	ND	0.589	
Total HxCDF	ND	0.380	
Total HpCDF	ND	0.566	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

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

Sample ID: PDI-RB-1909291555

EPA Method 1613B

Client Data
Name: Anchor QEA, LLC
Project: Gasco PDI
Date Collected: 29-Sep-2019 15:55

Sample Data
Matrix: Aqueous
Sample Size: 1.01 L

Laboratory Data
Lab Sample: 1903430-10 Date Received: 01-Oct-2019 9:18
QC Batch: B9J0092 Date Extracted: 10-Oct-2019 6:53
Date Analyzed : 15-Oct-19 17:51 Column: ZB-5MS

Analyte	Conc. (pg/L)	DL	EMPC	Qualifiers
2,3,7,8-TCDD	ND	1.02		
1,2,3,7,8-PeCDD	ND	0.704		
1,2,3,4,7,8-HxCDD	ND	0.740		
1,2,3,6,7,8-HxCDD	ND	0.833		
1,2,3,7,8,9-HxCDD	ND	0.798		
1,2,3,4,6,7,8-HpCDD	ND	0.598		
OCDD	ND	1.17		
2,3,7,8-TCDF	ND	0.882		
1,2,3,7,8-PeCDF	ND	0.874		
2,3,4,7,8-PeCDF	ND	0.781		
1,2,3,4,7,8-HxCDF	ND	0.310		
1,2,3,6,7,8-HxCDF	ND	0.313		
2,3,4,6,7,8-HxCDF	ND	0.341		
1,2,3,7,8,9-HxCDF	ND	0.446		
1,2,3,4,6,7,8-HpCDF	ND	0.484		
1,2,3,4,7,8,9-HpCDF	ND	0.406		
OCDF	ND	0.848		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-2,3,7,8-TCDD	58.7	25 - 164	
	13C-1,2,3,7,8-PeCDD	78.8	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	102	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	85.3	28 - 130	
	13C-1,2,3,7,8,9-HxCDD	97.1	32 - 141	
	13C-1,2,3,4,6,7,8-HpCDD	94.6	23 - 140	
	13C-OCDD	101	17 - 157	
	13C-2,3,7,8-TCDF	54.2	24 - 169	
	13C-1,2,3,7,8-PeCDF	73.7	24 - 185	
	13C-2,3,4,7,8-PeCDF	71.7	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	97.4	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	88.7	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	89.4	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	92.1	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	91.5	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	99.6	26 - 138	
	13C-OCDF	103	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	59.0	35 - 197	

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

TEQMinWHO2005Dioxin	0.00

TOTALS

Total TCDD	ND	1.02
Total PeCDD	ND	0.704
Total HxCDD	ND	0.793
Total HpCDD	ND	0.598
Total TCDF	ND	0.882
Total PeCDF	ND	0.827
Total HxCDF	ND	0.349
Total HpCDF	ND	0.447

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

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

DATA QUALIFIERS & ABBREVIATIONS

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

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

Vista Analytical Laboratory Certifications

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

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

NELAP Accredited Test Methods

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

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

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

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

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

1903430 1.6°C

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number:

Date: 10.10.19
Project Name: Gasco PDI
Project Number: 000029-02.59
Project Manager: Delaney Peterson
Phone Number: 360.715.2707
Shipment Method: FedEx
Samplers: dep

Line	Field Sample ID	Collection Date/Time	Matrix	No. of Containers	Test Parameters: Dioxin/furans (1613B)	Test Parameters: Total solids (SM 2540G)	Comments/Preservation
1	PDI-021SC-A-13-14-190927	9/27/2019 0917	SE	1	X	X	
2	PDI-021SC-A-14-15.4-190927	9/27/2019 0917	SE	1	X	X	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

Relinquished By: Anthony Dalton-Atlas — Company: Anchor QEA, LLC
Signature/Printed Name — Date/Time: 10/10/19 1045

Received By: Aswaeni Prakash — Company: VAL
Signature/Printed Name — Date/Time: 10/11/19 0915

Relinquished By: — Company:
Signature/Printed Name — Date/Time

Received By: — Company:
Signature/Printed Name — Date/Time

ANCHOR QEA
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

1903430 1.4°c

COC ID: VISTA-20190929-181142

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

Project: Gasco PDI
Client: NW Natural

Sample Custodian: dep
Lab: VISTA

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	Containers #	Lab QC*	Test Request	Method	TAT**	Preservative
001	PDI-021SC-A-13-14-190927	N	SE	09/27/2019	9:17	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
002	PDI-021SC-A-14-15.4-190927	N	SE	09/27/2019	9:17	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
003	PDI-024SC-A-10-11-190927	N	SE	09/27/2019	12:00	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
004	PDI-024SC-A-11-12.1-190927	N	SE	09/27/2019	12:00	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
005	PDI-024SC-B-00-02-190927	N	SE	09/27/2019	11:31	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
006	PDI-024SC-B-02-04-190927	N	SE	09/27/2019	11:31	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
007	PDI-024SC-B-04-06-190927	N	SE	09/27/2019	11:31	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
008	PDI-024SC-B-06-08-190927	N	SE	09/27/2019	11:31	1	☐				

Comment:

Relinquished By	Received By	Relinquished By	Received By	Relinquished By	Received By
Signature	Signature	Signature	Signature	Signature	Signature
Print Name D. Peterson	Print Name Hayden Canar	Print Name	Print Name	Print Name	Print Name
Company AQ	Company Vista	Company	Company	Company	Company
Date/Time 9.30.19 1000	Date/Time 10/1/19 09:18	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

Date Printed: 9/29/2019

ANCHOR QEA
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

1903430 14°C

COC ID: VISTA-20190929-181142

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

Project: Gasco PDI
Client: NW Natural

Sample Custodian: dep
Lab: VISTA

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	Containers #	Lab QC*	Test Request	Method	TAT**	Preservative
008	PDI-024SC-B-06-08-190927	N	SE	09/27/2019	11:31	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
009	PDI-FB-1909291637	FB	SQ	09/29/2019	16:37	2	☐				
								Dioxin/Furans	E1613B	30	4°C
								~~Total solids (VISTA)~~ DP	~~SM2540G~~	30	4°C
010	PDI-RB-1909291555	RB	SQ	09/29/2019	15:55	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								~~Total solids (VISTA)~~ DP	~~SM2540G~~	30	4°C
011	PDI-025SC-A-06-07-190927	N	SE	09/27/2019	14:16	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
012	PDI-025SC-A-07-08-190927	N	SE	09/27/2019	14:16	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
013	PDI-030SC-A-00-01-190929	N	SE	09/29/2019	13:58	1	☐				
								Dioxin/Furans	E1613B	30	4°C
								PCB Congeners	E1668A	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
014	PDI-030SC-A-10-11-190929	N	SE	09/29/2019	13:58	1	☐				
								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:	Signature:	Signature:
Print Name: D. Peterson	Print Name: Hayden Canar	Print Name:	Print Name:	Print Name:	Print Name:
Company: AP	Company: Vista	Company:	Company:	Company:	Company:
Date/Time: 9.30.19 1000	Date/Time: 10/1/19 09:18	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

Date Printed: 9/29/2019

Vista Analytical Laboratory

Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 1903430 TAT std

Samples Arrival:	**Date/Time** 10/11/19 0910		**Initials:** AP		**Location:** WR-2 **Shelf/Rack:** NA		
Delivered By:	FedEx	UPS	On Trac	GSO	DHL	Hand Delivered	Other
Preservation:	Ice		Blue Ice		Dry Ice		None
Temp °C: 1.6 (uncorrected)	**Probe used:** Y / (N)				**Thermometer ID:** IR-4		
Temp °C: 1.6 (corrected)							

	YES	NO	NA
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		✓ AP 10/11/19
Airbill — Trk # 7766 7626 7560	✓		
Shipping Documentation Present?	✓		
Shipping Container: (Vista) Client (Retain) Return Dispose			
Chain of Custody / Sample Documentation Present?	✓		
Chain of Custody / Sample Documentation Complete?	✓		
Holding Time Acceptable?	✓		

Logged In:	**Date/Time** 10/02/19 0714	**Initials:** ajm	**Location:** WR-2 **Shelf/Rack:** A-1
COC Anomaly/Sample Acceptance Form completed? *	✓		

Comments:

Received missing samples from first shipment. 10/11/19 ajm

*Per Jade, no need to revise anomaly. ajm 10/11/19

Vista Analytical Laboratory

Sample Log-In Checklist

Vista Work Order #: 1903430 TAT 28 days

Samples Arrival:	**Date/Time** 10/1/19 09:18	**Initials:** HDG	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 10/02/19 0714	**Initials:** ajm	**Location:** WR-2 **Shelf/Rack:** A-1

Delivered By:	(FedEx)	UPS	On Trac	GSO	DHL	Hand Delivered	Other
Preservation:	(Ice)		Blue Ice		Dry Ice		None

Temp °C: 1.4 (uncorrected)	**Probe used:** Y / (N)	**Thermometer ID:** IR-7
Temp °C: 1.4 (corrected)		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill ✓ Trk # 7763 9061 6359			
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		

If Chlorinated or Drinking Water Samples, Acceptable Preservation?							✓
Preservation Documented:	$Na_2S_2O_3$	Trizma	(None)	Other		Yes	No	(NA)
Shipping Container	Vista	(Client)	Retain	(Return)		Dispose		

Comments:

Samples not received:
"PDI-021SC-A-13-14-190927"
"PDI-021SC-A-14-15.4-190927"
ajm 10/02/19

One sample received in clear glass jar.
"PDI-030SC-A-00-01-190929"
Method requires amber glass.
ajm 10/02/19

Chain of Custody Anomaly/Sample Acceptance Form

Vista Analytical Laboratory

Client: Anchor QEA, LLC
Contact: Delaney Peterson
Email: dpeterson@anchorqea.com
Phone:

Workorder Number: 1903430
Date Received: 01-Oct-19 09:18
Documented by/date: A. Mason 02-Oct-19

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

- [ ] Sample Collection Date and/or Time not provided
- [ ] Temperature outside Method Requirement (WI-PHT)
  Temperature _____°C Ice Present? Yes No Melted
- [ ] Sample ID Not Reconcilable
- [ ] Sample Holding Time Missed
- [ ] Insufficient Sample Size
- [ ] All Sample Container(s) Broken
- [ ] Drinking Water Incorrect Container Type
- [ ] Chain-of-Custody not received, illegible or destroyed
- [X] Other: See comments.

Comments/Samples Affected:
Samples not received:
PDI-021SC-A-13-14-190927
PDI-021SC-A-14-15.4-190927

Sample received in clear glass container:
PDI-030SC-A-00-01-190929

Client Authorization

Proceed with Analysis: (YES) NO Signature and Date [signature] 10/11/19

Client Comments/Instructions Missing samples rec'd in second shipment on 10/11/19.

EXTRACTION INFORMATION

Process Sheet

Workorder: 1903430

Prep Expiration: 2020-09-26
Client: Anchor QEA, LLC

Workorder Due: 29-Oct-19 00:00
TAT: 28

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

Prep Batch: B9J0132
Prep Data Entered: [initials] 10/16/19
Date and Initials
Initial Sequence: S9J0064

LabSampleID		Recon	ClientSampleID		Date Received	Location	Comments
1903430-01	A	☑	PDI-021SC-A-13-14-190927	✓	01-Oct-19 09:18	WR-2 A-1	
1903430-02	A	☑	PDI-021SC-A-14-15.4-190927	✓	01-Oct-19 09:18	WR-2 A-1	
[redacted]					01-Oct-19 09:18	WR-2 A-1	
[redacted]					01-Oct-19 09:18	WR-2 A-1	
[redacted]					01-Oct-19 09:18	WR-2 A-1	
[redacted]					01-Oct-19 09:18	WR-2 A-1	
[redacted]					01-Oct-19 09:18	WR-2 A-1	
[redacted]					01-Oct-19 09:18	WR-2 A-1	
[redacted]					01-Oct-19 09:18	WR-2 A-1	
[redacted]					01-Oct-19 09:18	WR-2 A-1	
[redacted]					01-Oct-19 09:18	WR-2 A-1	
[redacted]					01-Oct-19 09:18	WR-2 A-1	

WO Comments: [redacted]
Dioxin - 10g (dry weight)
[redacted]t)

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

Prep Check Out: TL 10/14/19
Prep Check In: TL 10/14/19

Prep Reconciled Initals/Date: TL 10/11/19
Spike Reconciled Initals/Date: [initials] 10/14/19
VialBoxID: Candy Mountain

Page 2 of 2

PREPARATION BENCH SHEET

Matrix: Solid

B9J0132

Chemist: TL

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

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

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
☐	B9J0132-BLK1	NA	(10.00)	TL 10/14/19	AZ 10/15/19	10/15/19	QO 10/15/19	NA*	10/16/19	AZ 10/16/19
☐	B9J0132-BS1	NA	(10.00)							
☐	1903430-01	11.02	11.29			N/A				
☐	1903430-02	12.02	12.25							
☐	1903546-01	14.61	14.83							
☐	1903546-02	12.98	13.16							
☐	1903546-05	11.00	11.27							
☐	1903546-06	12.68	12.84							
☐	1903546-07	12.21	12.36							
☐	1903546-08	13.60	13.69							
☐	1903546-09	13.42	13.47							
☐	1903546-10	12.96	12.97							
☐	1903546-11	13.37	13.40							
☐	1903546-12 (A)	21.40	21.71			10/15/19				
☐	1903546-13 (3)	19.78	19.74							

IS Name (V3)	NS Name (V6)	CRS Name (V1)	RS Name (V7)	Cycle Time	APP: SEFUN SOX (SDS)	Check Out: Chemist/Date: TL 10/14/19
PCDD/F 19C 19OZ 10uL	PCDD/F 18F 19F3 10uL	PCDD/F 18J 1001, 10uL	PCDD/F 19F 1003	Start Date/Time 10/14/19 1424	SOLV: Toluene	Check In: Chemist/Date: TL 10/14/19
PCB	PCB	PCB	PCB	Other NA		
PAH	PAH	PAH	PAH	Stop Date/Time 10/15/19 06:25	Final Volume(s) C14 20uL	Balance ID: HRMS-8

Comments:

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

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

PREPARATION BENCH SHEET

Matrix: Solid

B9J0132

Chemist: TL

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

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

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

(3) 10/15/19

IS Name (V3)	NS Name (V6)	CRS Name (V1)	RS Name (V7)	Cycle Time	APP: SEFUN SOX SDS	Check Out: Chemist/Date: TL 10/14/19
PCDD/F 19C1902, 10uL	PCDD/F 18F1913, 10uL	PCDD/F 18J1001, 10uL	PCDD/F 19I1603	Start Date/Time	SOLV: Toluene	Check In: Chemist/Date: TL 10/14/19
PCB	PCB	PCB	PCB	10/14/19 1424	Other NA	Balance ID: 1HRMS-8
PAH	PAH	PAH	PAH	Stop Date/Time	Final Volume(s) C14 20uL	
				10/15/19 0625		

Comments:

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

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B9J0124

Analyst: TL **Test Code:** %Moist/%Solids

Analyte: **Units:** %

Dried at 110°C+/-5°C

Oven ID: *01* 02

Data Entry Verified by: (Initial and Date) 10/16/19

Inst: HRMS-9

Date/Time IN:	Date/Time OUT
10/11/19 1455	10/14/19 0725

	B	C	D	E	F	G	H	I	K	L	M	N	O	P
				Intial and Date:	TL 10/11/19	TL 10/14/19			TL 10/11/19			NA		TL 10/11/19
Particle Size	SampID		SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	Visual Inspection	Cl-	pH Before	pH After	Acid Added	Sample Homogenized*
	1903430-01	A	Sample	1.2900	5.6100	5.2100	3.9200	90.74	Sand	NA	NA	NA	NA	Y
	1903430-02	A	Sample	1.3000	10.0600	8.5900	7.2900	83.22	Sand	NA	NA	NA	NA	Y

*Sample homogenized in sample container unless otherwise noted.

Percent Moi[redacted]

D2216-90 BATCH ID B9J0124

Analyst: TL | Test Code: %Moist/%Solids | Data Entry Verified by: (Initial and Date) NA

Analyte: | Units: %

Oven ID: Dried at 110°C+/-5°C 01 02

Inst HPMS-9

Date/Time IN: 10/11/19 14:55 | Date/Time OUT: 10/14/19 07[illegible]

	B	C	D	E	F	G	H	I	K	L	M	N	O	P
				Intial and Date:	TL 10/11/19	TL 10/14/19			TL 10/11/19			NA		TL 10/11/19
Particle Size	SampID		SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	Visual Inspection	Cl-	pH Before	pH After	Acid Added	Sample Homogenized*
	1903430-01	A	Sample	1.29	5.61	5.21			Sand	NA	NA	NA	NA	X
	1903430-02	A	Sample	1.30	10.06	8.59			↓	↓	↓	↓	↓	X

*Sample homogenized in sample container unless otherwise noted.

Batch: B9J0132

Matrix: Solid

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

All bolded data on report verified against written benchsheet by (initial/date) 10/16/19

Printed: 10/16/2019 1:14:51PM
Page 1 of 1

PRIORITY

Process Sheet

Workorder: 1903430

22-Oct-19

Prep Expiration: 2020-09-26
Client: Anchor QEA, LLC

Workorder Due: ~~29-Oct-19~~ 00:00

TAT: ~~28~~ 21 (dw 10/08/19

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

Prep Batch: B9J0093

Prep Data Entered: TL 10/8/19
Date and Initials

Initial Sequence: S9J0040

LabSampleID		Recon	ClientSampleID	Date Received	Location	Comments
[redacted]		☐	[redacted]	[redacted]	[redacted]	
[redacted]		☐	[redacted]	[redacted]	[redacted]	AO 10/10/19
1903430-03	A	☑	PDI-024SC-A-10-11-190927	01-Oct-19 09:18	WR-2 A-1	
1903430-04	A	☑	PDI-024SC-A-11-12.1-190927	01-Oct-19 09:18	WR-2 A-1	
1903430-05	A	☑	PDI-024SC-B-00-02-190927	01-Oct-19 09:18	WR-2 A-1	
1903430-06	A	☑	PDI-024SC-B-02-04-190927	01-Oct-19 09:18	WR-2 A-1	
1903430-07	A	☑	PDI-024SC-B-04-06-190927	01-Oct-19 09:18	WR-2 A-1	
1903430-08	A	☑	PDI-024SC-B-06-08-190927	01-Oct-19 09:18	WR-2 A-1	
1903430-11	A	☑	PDI-025SC-A-06-07-190927	01-Oct-19 09:18	WR-2 A-1	
1903430-12	A	☑	PDI-025SC-A-07-08-190927	01-Oct-19 09:18	WR-2 A-1	
1903430-13	A	☑	PDI-030SC-A-00-01-190929	01-Oct-19 09:18	WR-2 A-1	
1903430-14	A	☑	PDI-030SC-A-10-11-190929	01-Oct-19 09:18	WR-2 A-1	

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

Pre-Prep Check Out: TL 10/09/19
Pre-Prep Check In: TL 10/09/19

Prep Check Out: AO 10/10/19
Prep Check In: AO 10/10/19

Prep Reconciled Initals/Date: TL 10/09/19
Spike Reconciled Initals/Date: AO 10/10/19
VialBoxID: emo potato

Page 2 of 2

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B9J0075

Analyst: TL **Test Code:** %Moist/%Solids

Analyte: **Units:** %

Dried at 110°C+/-5°C

Oven ID: 01 02

Data Entry Verified by: (Initial and Date) AO 10/10/19

HRMS-9

Date/Time IN:	Date/Time OUT
10/09/19 0935	10/10/19 546

	B	C	D	E	F	G	H	I	K	L	M	N	O	P
				Intial and Date:	TL 10/09/19	AO 10/10/19			TL 10/09/19			NA		TL 10/09/19
Particle Size	SampID		SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	Visual Inspection	Cl-	pH Before	pH After	Acid Added	Sample Homogenized*
	1903430-03		Sample	1.2600	10.5300	8.0300	6.7700	73.03	Soil	NA	NA	NA	NA	X
	1903430-04		Sample	1.2500	13.4200	10.0800	8.8300	72.56	Soil	NA	NA	NA	NA	X
	1903430-05		Sample	1.2500	15.3600	11.0900	9.8400	69.74	Soil	NA	NA	NA	NA	X
	1903430-06		Sample	1.2200	12.4400	9.4500	8.2300	73.35	Soil	NA	NA	NA	NA	X
	1903430-07		Sample	1.2400	9.9400	8.3900	7.1500	82.18	Soil	NA	NA	NA	NA	X
	1903430-08		Sample	1.2400	11.1700	8.5600	7.3200	73.72	Soil	NA	NA	NA	NA	X
	1903430-11		Sample	1.2500	10.4200	8.2300	6.9800	76.12	Soil	NA	NA	NA	NA	X
	1903430-12		Sample	1.2500	14.4700	11.1700	9.9200	75.04	Soil	NA	NA	NA	NA	X
	1903430-13		Sample	1.2600	7.5700	6.1400	4.8800	77.34	Soil	NA	NA	NA	NA	X
	1903430-14		Sample	1.2700	10.6300	8.1800	6.9100	73.82	Soil	NA	NA	NA	NA	X

*Sample homogenized in sample container unless otherwise noted.

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B9J0075

Analyst: TL	**Test Code:** %Moist/%Solids
Analyte:	**Units:** %
Dried at 110°C+/-5°C	
Oven ID: 01 (02)	

Data Entry Verified by:
(Initial and Date)_____

Inst HRMS-9

Date/Time IN: 10/09/19 09:35 | Date/Time OUT: 10/10/19 5:46

	B	C	D	E	F	G	H	I	K	L	M	N	O	P
				Intial and Date:	TL 10/09/19	QO 10/10/19			TL 10/09/19			NA		TL 10/09/19
Particle Size	SampID		SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	Visual Inspection	Cl-	pH Before	pH After	Acid Added	Sample Homogenized*
	1903430-03	A	Sample	1.26	10.53	8.03			Soil	NA	NA	NA	NA	X
	1903430-04	A	Sample	1.25	13.42	10.08								X
	1903430-05	A	Sample	1.25	15.36	11.09								X
	1903430-06	A	Sample	1.22	12.44	9.45								X
	1903430-07	A	Sample	1.24	9.94	8.39								X
	1903430-08	A	Sample	1.24	11.17	8.56								X
	1903430-11	A	Sample	1.25	10.42	8.23								X
	1903430-12	A	Sample	1.25	14.47	11.17								X
	1903430-13	A	Sample	1.26	7.57	6.14								X
	1903430-14	A	Sample	1.27	10.63	8.18								X

*Sample homogenized in sample container unless otherwise noted.

PREPARATION BENCH SHEET

Matrix: Solid

B9J0093

Chemist: AO

Method: 1613 Full List
Method: 8290 2.3.7.8-TCDD Only

Prepared using: HRMS - Soxhlet

Prep Date/Time: 10-Oct-19 06:56

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
☐	B9J0093-BLK1	NA	(10.00)	AO HN 10/10/19	ℵ TR 10/11/19	ℵ 10/11/19	ℵ 10/14/19	ℵ 10/14/19	ℵ 10/14/19	ℵ DT 10/15/19
☐	B9J0093-BS1	↓	(10.00)	↓	↓	↓	↓	↓	↓	↓
☐	1903430-03	13.69	13.79	↓	↓	NA	↓	↓	↓	↓
☐	1903430-04	13.76	14.11	↓	↓	↓	↓	↓	↓	↓
☐	1903430-05	14.34	14.90	↓	↓	ℵ 10/11/19	↓	↓	↓	↓
☐	1903430-06	13.63	13.89	↓	↓	↓	↓	↓	↓	↓
☐	1903430-07	12.17	12.59	↓	↓	NA	↓	↓	↓	↓
☐	1903430-08	13.57	13.69	↓	↓	↓	↓	↓	↓	↓
☐	1903430-11	13.14	13.29	↓	↓	↓	↓	↓	↓	↓
☐	1903430-12	13.33	13.37	↓	↓	↓	↓	↓	↓	↓
☐	1903430-13	12.93	12.99	↓	↓	ℵ 10/11/19	↓	↓	↓	↓
☐	1903430-14	13.55	13.60	↓	↓	NA	↓	↓	↓	↓
☐	1903462-01	30.40	30.57	↓	↓	ℵ 10/11/19	↓	↓	↓	↓

IS Name (V3)	NS Name (Vp)	CRS Name (V1)	RS Name	Cycle Time	APP: SEFUN SOX 3DS	Check Out: Chemist/Date: AO 10/10/19
PCDD/F 19C1902, 10uL	PCDD/F 18F1913, 10uL	PCDD/F 18J1001, 10uL	PCDD/F 19I1603, 10uL	Start Date/Time 10/10/19 1315	SOLV: Toluene	Check In: Chemist/Date:
PCB	PCB	PCB	PCB	Other NA		
PAH	PAH	PAH	PAH	Stop Date/Time 10/11/19 535	Final Volume(s) C14 20uL	Balance ID: HRMS-8

Comments:

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

Batch: B9J0093

Matrix: Solid

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1903430-03	13.79	73.03128	10.0710	20	10-Oct-19 06:56	AZK			Sediment	1613 Full List
1903430-04	14.11	72.55547	10.2376	20	10-Oct-19 06:56	AZK			Sediment	1613 Full List
1903430-05	14.9	69.73778	10.3909	20	10-Oct-19 06:56	AZK			Sediment	1613 Full List
1903430-06	13.89	73.35116	10.1885	20	10-Oct-19 06:56	AZK			Sediment	1613 Full List
1903430-07	12.59	82.18391	10.3470	20	10-Oct-19 06:56	AZK			Sediment	1613 Full List
1903430-08	13.69	73.71602	10.0917	20	10-Oct-19 06:56	AZK			Sediment	1613 Full List
1903430-11	13.29	76.11777	10.1161	20	10-Oct-19 06:56	AZK			Sediment	1613 Full List
1903430-12	13.37	75.03782	10.0326	20	10-Oct-19 06:56	AZK			Sediment	1613 Full List
1903430-13	12.99	77.33755	10.0461	20	10-Oct-19 06:56	AZK			Sediment	1613 Full List
1903430-14	13.6	73.82479	10.0402	20	10-Oct-19 06:56	AZK			Sediment	1613 Full List
1903462-01	30.57	32.89183	10.0550	20	10-Oct-19 06:56	AZK			Sludge	8290 2,3,7,8-TCDD Only
B9J0093-BLK1	10			20	10-Oct-19 06:56	AZK				QC
B9J0093-BS1	10			20	10-Oct-19 06:56	AZK	18F1913	10		QC

All bolded data on report verified against written benchsheet by (initial/date) JL 10/15/19

Printed: 10/15/2019 1:57:58PM
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Process Sheet

RX 2

Workorder: 1903430

CT 11/27/19

Prep Expiration: 2020-09-26

Client: Anchor QEA, LLC

Workorder Due: 29-Oct-19 00:00

TAT: 28

RUSH!

Method: **1613 Full List**

Matrix: **Solid**

Client Matrix: Sediment

Also run: **Percent Solids**

Prep Batch: B9L0024

Prep Data Entered: AZ 12/05/19 (Date and Initials)

Initial Sequence: S9L0012

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
[redacted]	☐	[redacted]	11-Oct-19 09:15	WR-2 A-1	
[redacted]	☐	[redacted]	11-Oct-19 09:15	WR-2 A-1	
[redacted]	☐	PDI-024SC-A-10-11-190927	01-Oct-19 09:18	WR-2 A-1	
[redacted]	☐	[redacted]	01-Oct-19 09:18	WR-2 A-1	
[redacted]	☐	[redacted]	01-Oct-19 09:18	WR-2 A-1	
1903430-06	☑	PDI-024SC-B-02-04-190927	01-Oct-19 09:18	WR-2 A-1	
[redacted]	☐	[redacted]	01-Oct-19 09:18	WR-2 A-1	
[redacted]	☐	[redacted]	01-Oct-19 09:18	WR-2 A-1	
[redacted]	☐	[redacted]	01-Oct-19 09:18	WR-2 A-1	
[redacted]	☐	[redacted]	01-Oct-19 09:18	WR-2 A-1	
[redacted]	☐	PDI-030SC-A-00-01-190929	01-Oct-19 09:18	WR-2 A-1	
[redacted]	☐	[redacted]	01-Oct-19 09:18	WR-2 A-1	

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

Pre-Prep Check Out: AM

Prep Check Out: 12/02/19

Prep Reconciled Initals/Date: 12/02/19

Pre-Prep Check In: NB

Prep Check In: 12/02/19

Spike Reconciled Initals/Date: HN 12/02/19

VialBoxID: Y2

PREPARATION BENCH SHEET

Matrix: Solid

B9L0024

Chemist: K

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 02-Dec-19 13:38

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
☐	B9L0024-BLK1 (A)	NA	(10.00)	K HN 12/07/19	AO K 12/03/19	AO 12/03/19	AO 12/03/19	AO 12/03/19	BvB 12/04/19	AO 12/05/19
☐	B9L0024-BS1	NA	(10.00)	↓	↓	↓	↓	↓	↓	↓
☐	1903430-06RE2 (B)	13.63	14.12	↓	↓	↓	↓	↓	↓	↓

(A) After Sox extraction, RB wasn't warm. AO 12/03/19

(B) Black after extraction, AO 12/03/19

V6 V6

IS Name (V1)	NS Name (V3)	CRS Name	RS Name	Cycle Time	APP: SEFUN SOX (SDS)	Check Out: Chemist/Date: K 12/07/19
PCDD/F 19C1902, 10mL	PCDD/F 18F1913, 10mL	PCDD/F 19I1602, 10uL	PCDD/F 19I1603, 10uL	Start Date/Time 12/02/19 1635	SOLV: tol	Check In: Chemist/Date: K 12/07/19
PCB	PCB	PCB	PCB		Other NA	
PAH	PAH	PAH	PAH	Stop Date/Time 12/03/19 835	Final Volume(s) C14 20uL	Balance ID: HRMS-8

Comments:

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

Batch: B9L0024

Matrix: Solid

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1903430-06RE2	**14.12** ✓	**73.35116**	**10.3572**	**20** ✓	**02-Dec-19 13:38** ✓	**JJC** ✓			Sediment	1613 Full List
B9L0024-BLK1	**10** ✓			**20**	**02-Dec-19 13:38**	**JJC**				QC
B9L0024-BS1	**10** ✓			**20**	**02-Dec-19 13:38**	**JJC**	**18F1913** ✓	**10** ✓		QC

All bolded data on report verified against written benchsheet by (initial/date) AZ 12/05/19

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PRIORITY

Process Sheet

Workorder: 1903430

22-Oct-19

Prep Expiration: 2020-09-28

Client: Anchor QEA, LLC

Workorder Due: ~~29-Oct-19~~ 00:00

TAT: ~~28~~ 21 (2) 10/08/19

Method: **1613 Full List**

Matrix: **Aqueous**

Client Matrix: Aqueous

Prep Batch: B9J 0092

Prep Data Entered: MD 10/17/19

Date and Initials

Initial Sequence: 59J0036

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1903430-09 A	☒	PDI-FB-1909291637	01-Oct-19 09:18	WR-2 C-3	
1903430-10	☒	PDI-RB-1909291555	01-Oct-19 09:18	WR-2 C-3	

No part. CO 10/03/19

WO Comments: ~~Pest - 1g extraction (dry weight)~~

Dioxin - 10g (dry weight)

~~**PCB - 5g extraction (dry weight)**~~

Pre-Prep Check Out: N/A

Pre-Prep Check In: N/A

Prep Check Out: MD 10/10/19

Prep Check In: N/A

Prep Reconciled Initals/Date: MD 10/10/19

Spike Reconciled Initals/Date: MD 10/10/19

VialBoxID: Rise Against

Matrix: Aqueous

Method: 1613 Full List
Method: 8290 2.3.7.8s Only
Method: 8290 Full List

PREPARATION BENCH SHEET

B9J0092

Chemist: MT

Prep Date/Time: 10-Oct-19

Prepared using: HRMS - Separatory Funnel

VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	- AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
B9J0092-BLK1	N/A	N/A	(1.00)	MT BL 10/10/19	MT LL 10/10/19	NA	LL 10/10/19	LL 10/10/19	MT 10/10/19	MT LL 10/10/19
B9J0092-BS1	↓	↓	(1.00)							
1903385-02 (A)	N/A	N/A	(1.00)							
1903418-01 (7)	1423.19	466.14	0.95705							
1903418-02	1421.51	465.02	0.95649							
1903418-03	1394.16	466.89	0.92727							
1903418-04	1398.37	466.37	0.93200							
1903430-09	1494.12	506.94	0.98718							
1903430-10	1503.36	498.10	1.00526	↓	↓	↓	↓	↓	↓	↓

(A) 1 mL of sample added to 1L of DI water using a 1mL syringe. BL 10/10/19

(7) MT 10/10/19

IS Name (V5)	NS Name (V6)	CRS Name (V)	RS Name (V7)	Cycle Time	APP: SEFUN SOX SDS	Check Out: Chemist/Date:
PCDD/F 19C1902, 10µL	PCDD/F 18F1913, 10µL	PCDD/F 18J1001, 10µL	PCDD/F 19I1603, 10µL	Start Date/Time: N/A	SOLV: DCM	MT 10/10/19
PCB	PCB	PCB	PCB		Other N/A	Check In: Chemist/Date: N/A
PAH	PAH	PAH	PAH	Stop Date/Time: N/A	Final Volume(s) 20µL C14	Balance ID: HRMS-9

Comments: Assume 1 g = 1 mL

1 = Sample approached dryness on rotovap
2 = Sample bumped on rotovap; lost < 5%
3 = Sample poured through Na2SO4 to remove water
4 = Precipitate present at Final Volume
5 = Sample Centrifuged to remove particulate
6 = Added boiling chips to seperatory funnel
7 = Sample emulsed during shakeout

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B9J0096

Analyst: MD **Test Code:** %Moist/%Solids

Analyte: **Units:** %

Dried at 110°C+/-5°C

Oven ID: 01 *02*

Data Entry Verified by: MD 10/17/19
(Initial and Date)

Inst HRMS-9

Date/Time IN:	Date/Time OUT
10/10/19 0755	10/17/19 1147

	B	C	D	E	F	G	H	I	K	L	M	N	O	P
				Intial and Date:	MD 10/10/19	MD 10/17/19			MD 10/10/19			N/A	N/A	MD 10/10/19
Particle Size	SampID		SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	Visual Inspection	Cl-	pH Before	pH After	Acid Added	Sample Homogenized*
	1903418-01	A	Sample	1.2700 ✓	9.4400 ✓	1.2700 ✓	0.0000	0.00	Clear	0	5	N/A	N/A	X
	1903418-02	A	Sample	1.2300 ✓	11.5000 ✓	1.2300 ✓	0.0000	0.00	Clear	0	5	N/A	N/A	X
	1903418-03	A	Sample	1.2200 ✓	7.7900 ✓	1.2300 ✓	0.0100	0.15	Clear	0	5	N/A	N/A	X
	1903418-04	A	Sample	1.2500 ✓	10.0200 ✓	1.2500 ✓	0.0000	0.00	Clear	0	5	N/A	N/A	X
	1903430-09	A	Sample	1.2600 ✓	10.3000 ✓	1.2600 ✓	0.0000	0.00	Clear	0	4	N/A	N/A	X
	1903430-10	A	Sample	1.2500 ✓	12.2200 ✓	1.2500 ✓	0.0000	0.00	Clear	0	4	N/A	N/A	X

*Sample homogenized in sample container unless otherwise noted.

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B9J0096

Analyst: MD	**Test Code:** %Moist/%Solids
Analyte:	**Units:** %
Dried at 110°C+/-5°C	
Oven ID: 01 02	

Data Entry Verified by: (Initial and Date) N/A

Inst HRMS-9

Date/Time IN: 10/10/19 0755 Date/Time OUT 10/17/19 1147

	B	C	D	E	F	G	H	I	K	L	M	N	O	P
				Intial and Date:	MD 10/10/19	MD 10/17/19			MD 10/10/19			N/A		MD 10/10/19
Particle Size	**SampID**		**SampType**	**Pan Tare Wt. (gms)**	**Wet Pan and Sample Weight (g)**	**Dry Pan and Sample Weight (g)**	**Dry Sample Weight (g)**	**%Solids RawVal**	**Visual Inspection**	**Cl-**	**pH Before**	**pH After**	**Acid Added**	**Sample Homogenized***
	1903418-01	A	Sample	1.27	9.44	1.27			Clear	0	5			X
	1903418-02		Sample	1.23	11.50	1.23				0	5			X
	1903418-03		Sample	1.22	7.79	1.23				0	5			X
	1903418-04		Sample	1.25	10.02	1.25		10/10/19		0	5		10/10/19	X
	1903430-09		Sample	1.26	10.30	1.26				0	4		MD	X
	1903430-10		Sample	~~1.24~~ *	12.22	1.25				0	4			X

*Sample homogenized in sample container unless otherwise noted.

* 1.25 MD 10/10/19

Batch: B9J0092

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1903385-02	**1**			**20**	**10-Oct-19 06:53**	**MSD**			Wastewater	8290 Full List
1903418-01	**0.95705** √			**20**	**10-Oct-19 06:53**	**MSD**			Surface Water	8290 2,3,7,8s Only
1903418-02	**0.95649** √			**20**	**10-Oct-19 06:53**	**MSD**			Surface Water	8290 2,3,7,8s Only
1903418-03	**0.92727** √			**20**	**10-Oct-19 06:53**	**MSD**			Surface Water	8290 2,3,7,8s Only
1903418-04	**0.932** √			**20**	**10-Oct-19 06:53**	**MSD**			Surface Water	8290 2,3,7,8s Only
1903430-09	**0.98718** √			**20**	**10-Oct-19 06:53**	**MSD**			Aqueous	1613 Full List
1903430-10	**1.00526** √			**20**	**10-Oct-19 06:53**	**MSD**			Aqueous	1613 Full List
B9J0092-BLK1	**1**			**20**	**10-Oct-19 06:53**	**MSD**				QC
B9J0092-BS1	**1**			**20**	**10-Oct-19 06:53**	**MSD**	**18F1913** √	**10** √		QC

All bolded data on report verified against written benchsheet by (initial/date) MM 10/17/19

Printed: 10/17/2019 11:57:31AM
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SAMPLE DATA – EPA METHOD 1613

Client ID: Method Blank Filename: 191015D1 S:5 Acq:15-OCT-19 15:27:30 ConCal: ST191015D1 1
Lab ID: B9J0092-BLK1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000 EndCAL: ST191015D1-2

	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	0.91	NotF	*		153	2.5	0.627
	1,2,3,7,8-PeCDD	*	*	n	0.90	NotF	*		140	2.5	0.603
	1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF	*		138	2.5	0.907
	1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF	*		138	2.5	1.03
	1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF	*		138	2.5	1.05
	1,2,3,4,6,7,8-HpCDD	*	*	n	0.98	NotF	*		163	2.5	1.18
	OCDD	*	*	n	0.96	NotF	*		107	2.5	1.00
	2,3,7,8-TCDF	*	*	n	0.95	NotF	*		175	2.5	0.570
	1,2,3,7,8-PeCDF	*	*	n	0.96	NotF	*		160	2.5	0.598
	2,3,4,7,8-PeCDF	*	*	n	1.01	NotF	*		160	2.5	0.617
	1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF	*		140	2.5	0.420
	1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF	*		140	2.5	0.439
	2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF	*		140	2.5	0.461
	1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF	*		140	2.5	0.569
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF	*		133	2.5	0.645
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF	*		133	2.5	0.580
	OCDF	*	*	n	0.95	NotF	*		171	2.5	1.40

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		153	0.627
Total Penta-Dioxins	*	*		140	0.603
Total Hexa-Dioxins	*	*		138	1.00
Total Hepta-Dioxins	*	*		163	1.18
Total Tetra-Furans	*	*		175	0.570
Total Penta-Furans	0.0000	0.0000		160	0.607
Total Hexa-Furans	*	*		140	0.469
Total Hepta-Furans	*	*		133	0.615

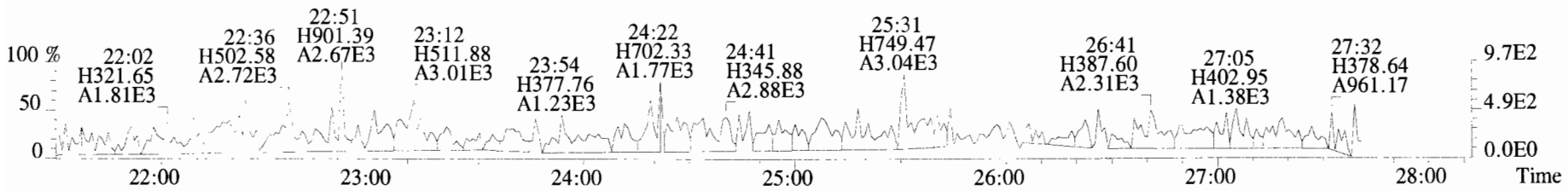
							Rec	Qual
IS	13C-2,3,7,8-TCDD	8.14e+06	0.74	y	1.10	26:19	1849.6	92.5	
IS	13C-1,2,3,7,8-PeCDD	6.65e+06	0.64	y	0.88	30:47	1879.0	93.9	
IS	13C-1,2,3,4,7,8-HxCDD	5.11e+06	1.22	y	0.64	34:05	2121.8	106	
IS	13C-1,2,3,6,7,8-HxCDD	5.63e+06	1.25	y	0.86	34:11	1754.9	87.7	
IS	13C-1,2,3,7,8,9-HxCDD	5.61e+06	1.23	y	0.81	34:29	1855.0	92.7	
IS	13C-1,2,3,4,6,7,8-HpCDD	4.46e+06	1.02	y	0.65	37:55	1818.6	90.9	
IS	13C-OCDD	8.10e+06	0.90	y	0.58	41:12	3724.1	93.1	
IS	13C-2,3,7,8-TCDF	1.12e+07	0.83	y	1.03	25:32	1751.4	87.6	
IS	13C-1,2,3,7,8-PeCDF	1.08e+07	1.57	y	0.85	29:37	2039.6	102	
IS	13C-2,3,4,7,8-PeCDF	1.06e+07	1.62	y	0.85	30:30	2030.2	102	
IS	13C-1,2,3,4,7,8-HxCDF	6.59e+06	0.49	y	0.83	33:11	2113.9	106	
IS	13C-1,2,3,6,7,8-HxCDF	7.48e+06	0.49	y	1.03	33:19	1928.1	96.4	
IS	13C-2,3,4,6,7,8-HxCDF	6.71e+06	0.49	y	0.95	33:54	1876.8	93.8	
IS	13C-1,2,3,7,8,9-HxCDF	6.13e+06	0.48	y	0.83	34:52	1975.1	98.8	
IS	13C-1,2,3,4,6,7,8-HpCDF	5.06e+06	0.40	y	0.76	36:43	1781.9	89.1	
IS	13C-1,2,3,4,7,8,9-HpCDF	4.26e+06	0.41	y	0.58	38:27	1956.3	97.8	
IS	13C-OCDF	9.70e+06	0.91	y	0.69	41:26	3753.0	93.8	
C/Up	37Cl-2,3,7,8-TCDD	4.15e+06			1.20	26:20	862.48	108	
RS/RT	13C-1,2,3,4-TCDD	8.04e+06	0.79	y	1.00	25:46	2000.0		
RS	13C-1,2,3,4-TCDF	1.24e+07	0.81	y	1.00	24:21	2000.0		
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.50e+06	0.49	y	1.00	33:36	2000.0		

Integrations by Analyst: DB Date: 10/16/19

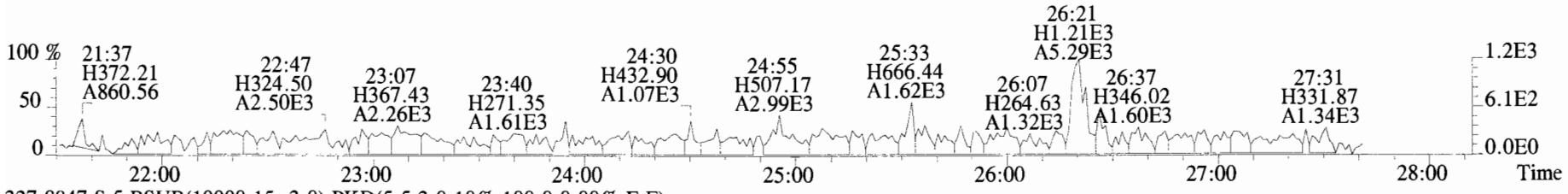
Reviewed by Analyst: [illegible] Date: 10/17/19

File:191015D1 #1-493 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5

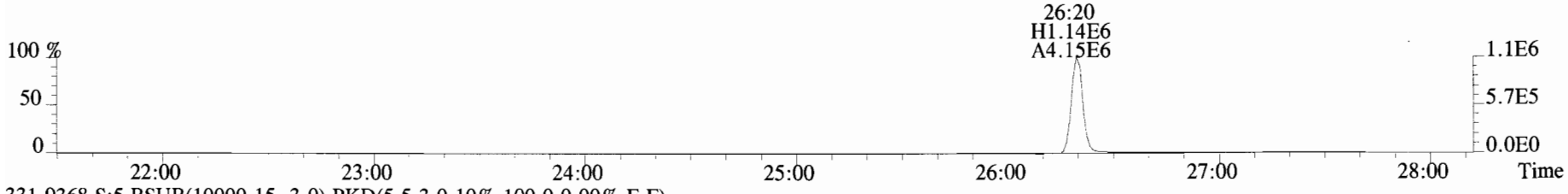
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



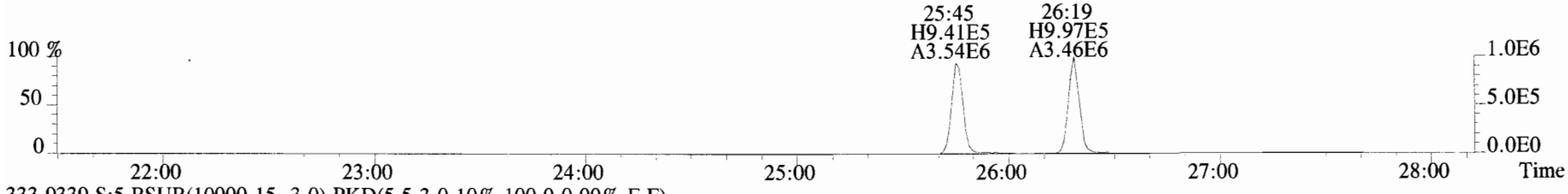
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



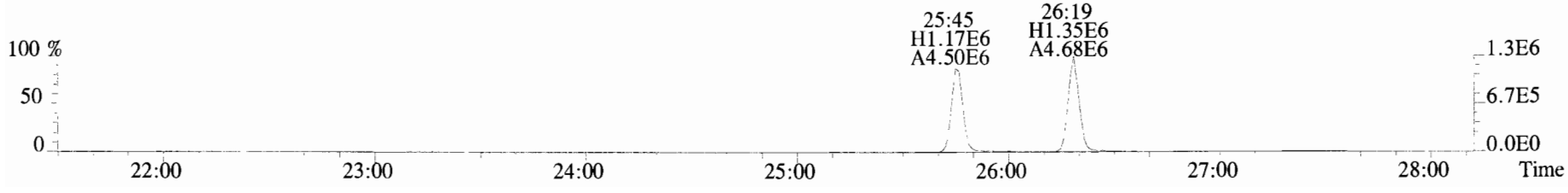
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



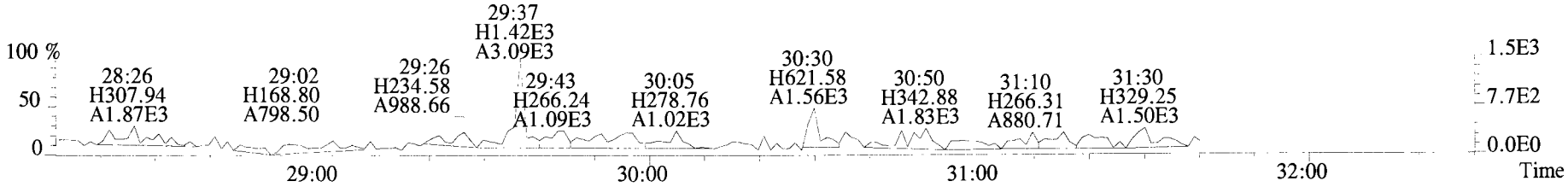
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



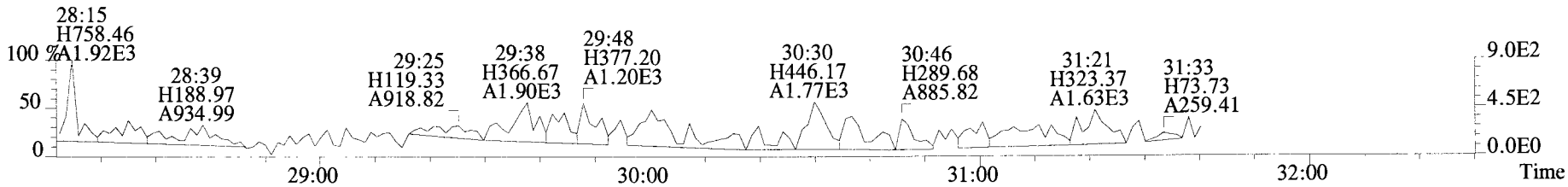
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



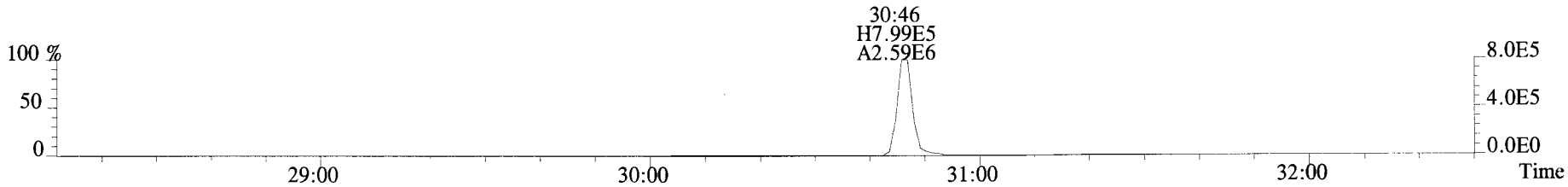
File:191015D1 #1-210 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



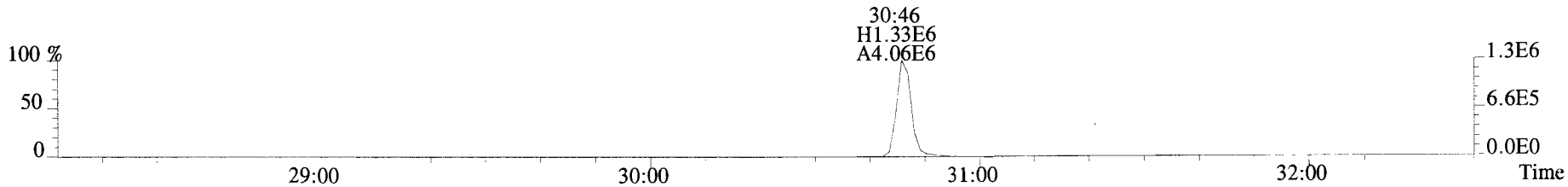
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



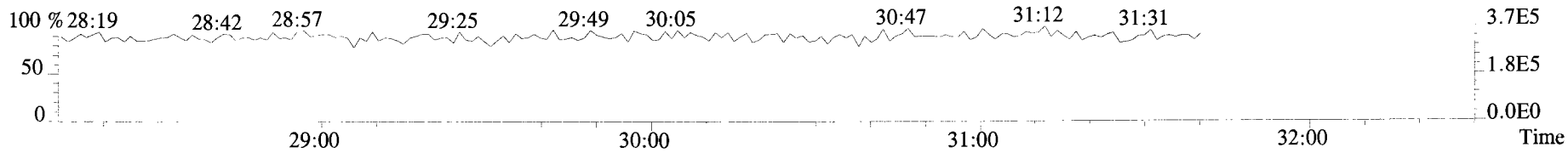
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



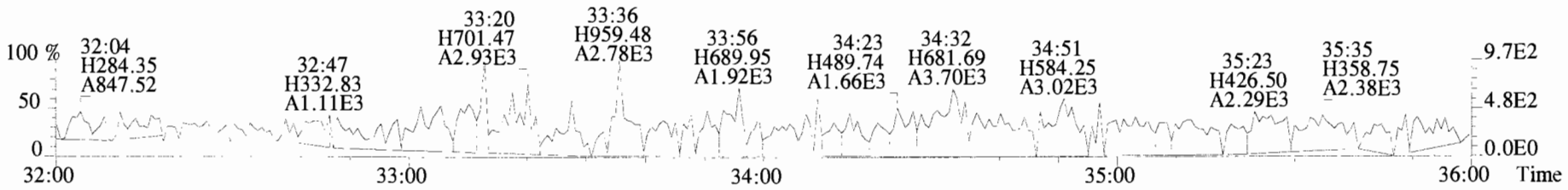
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



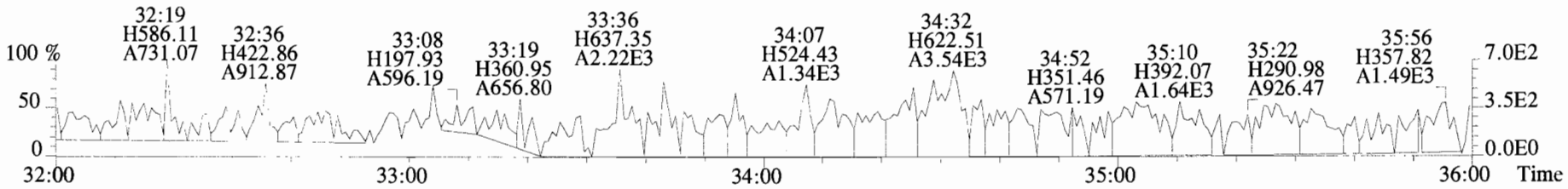
366.9792 S:5 F:2



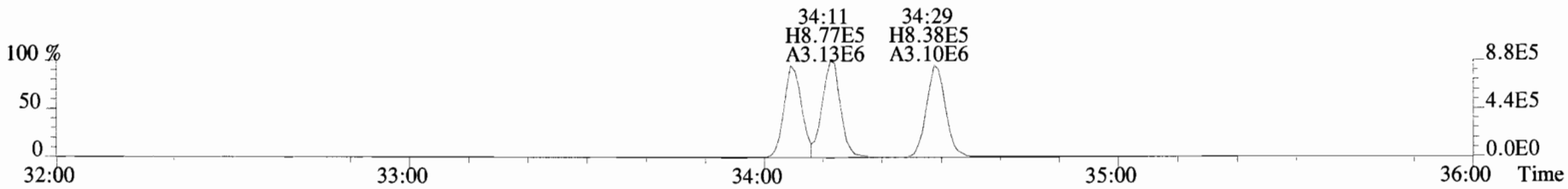
File:191015D1 #1-385 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



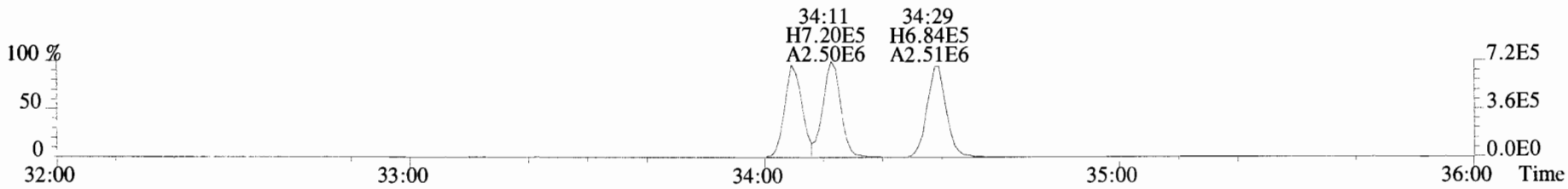
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



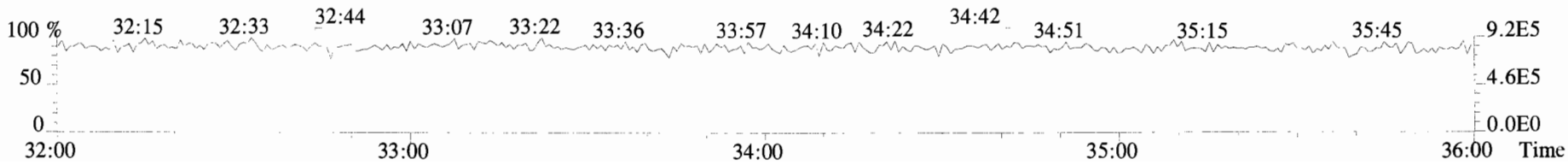
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



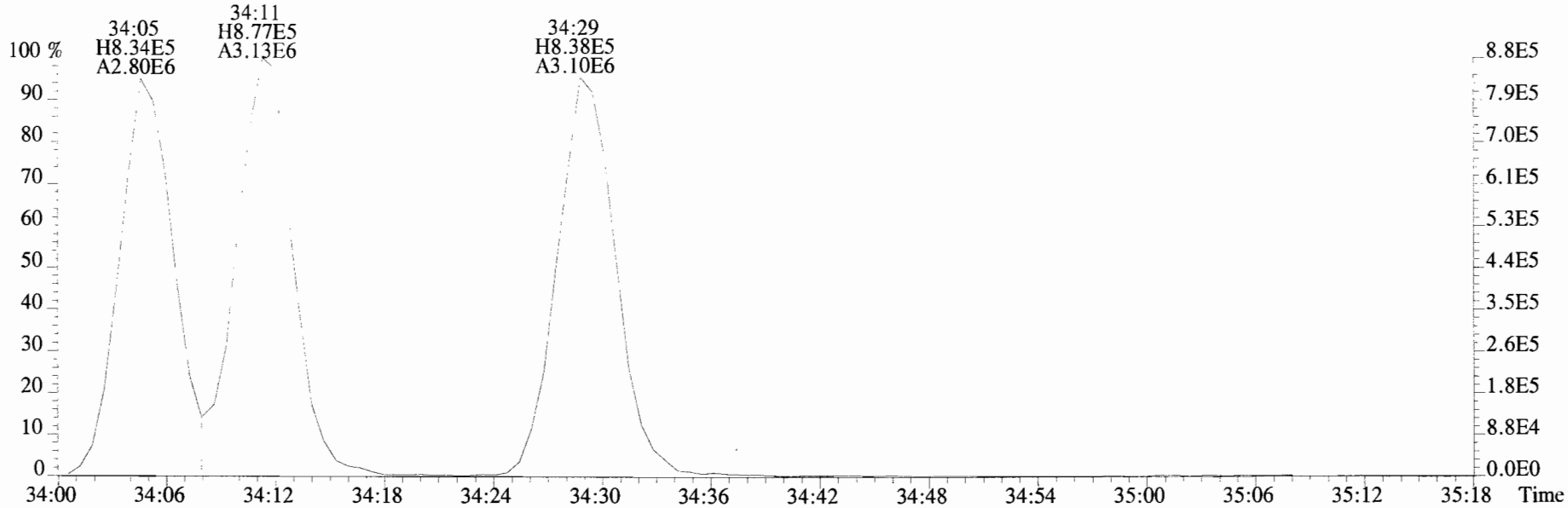
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



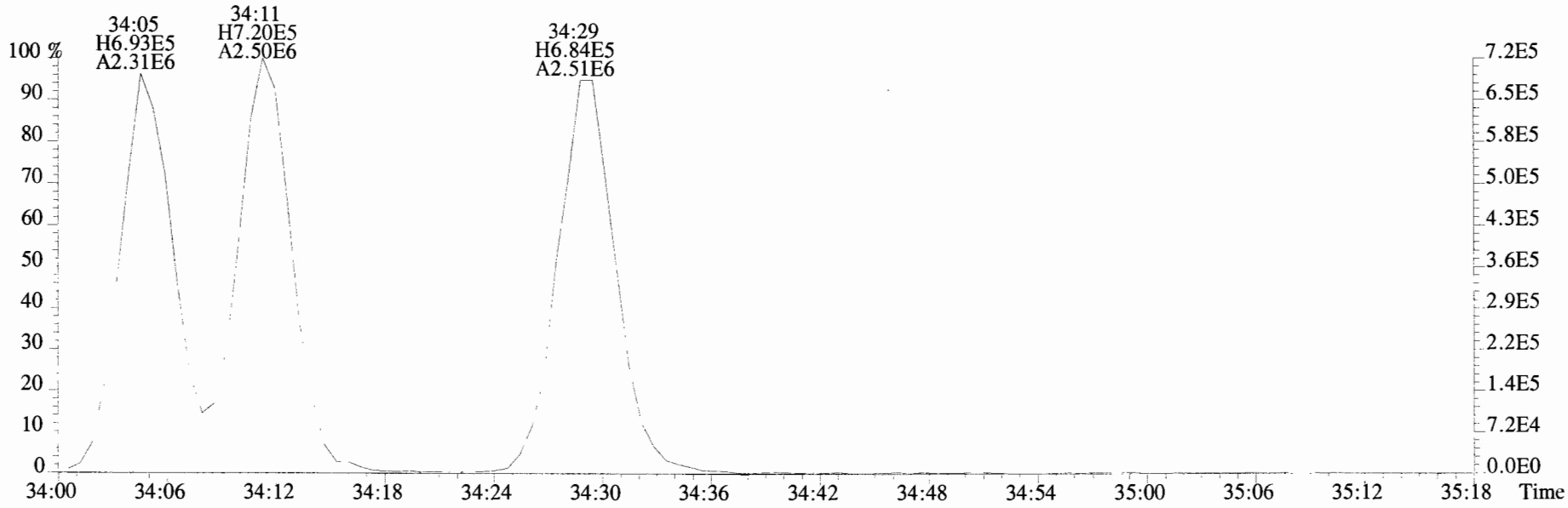
392.9760 S:5 F:3



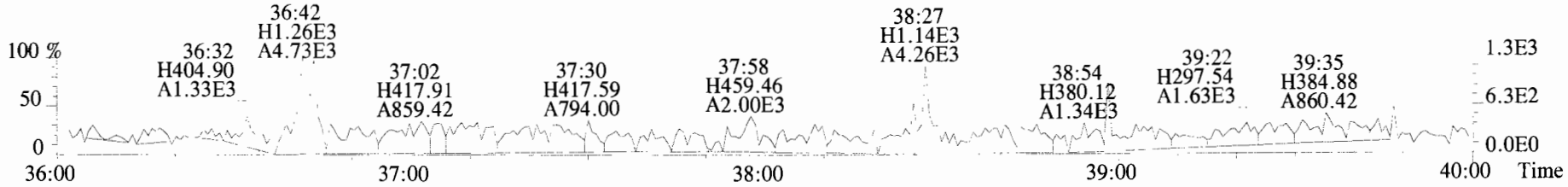
File:191015D1 #1-385 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



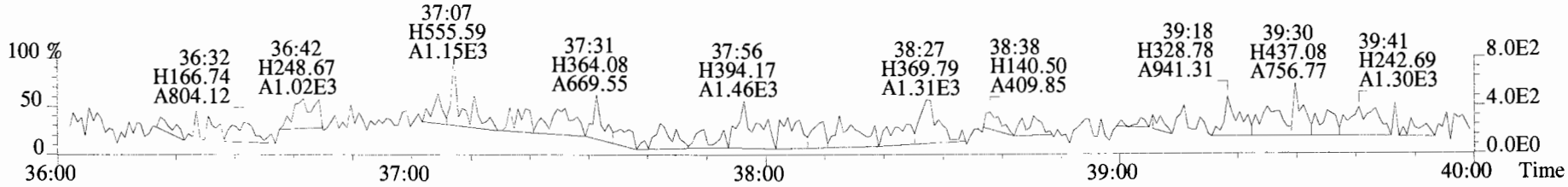
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



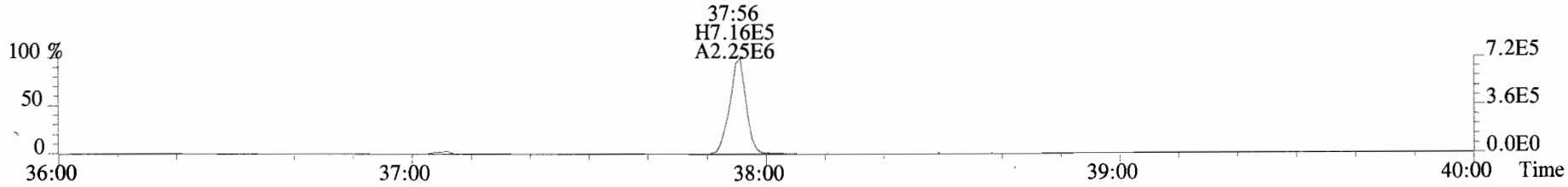
File:191015D1 #1-355 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



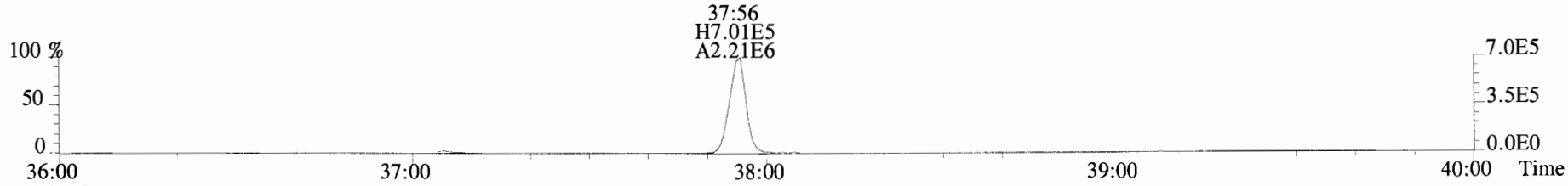
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



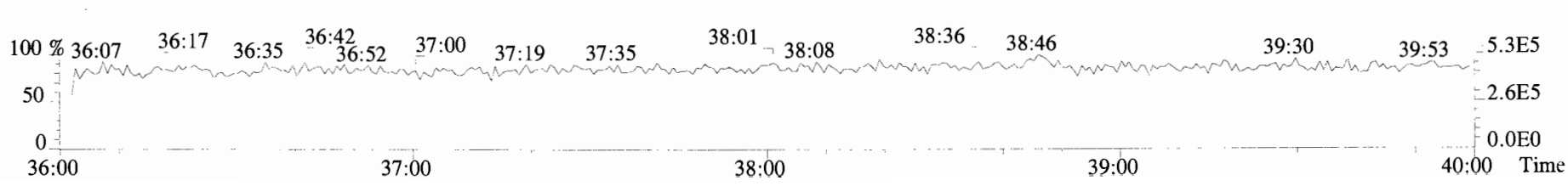
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



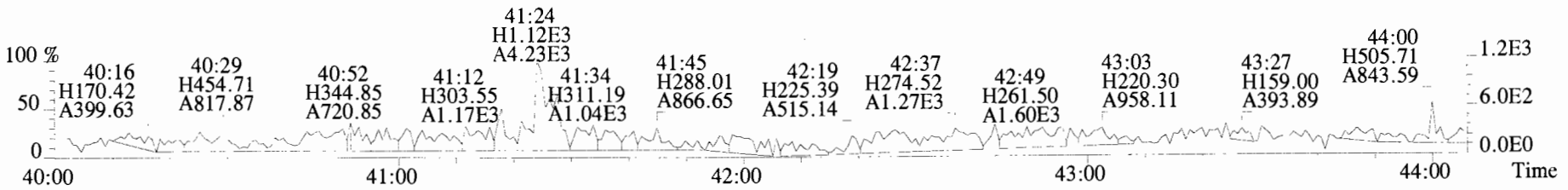
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



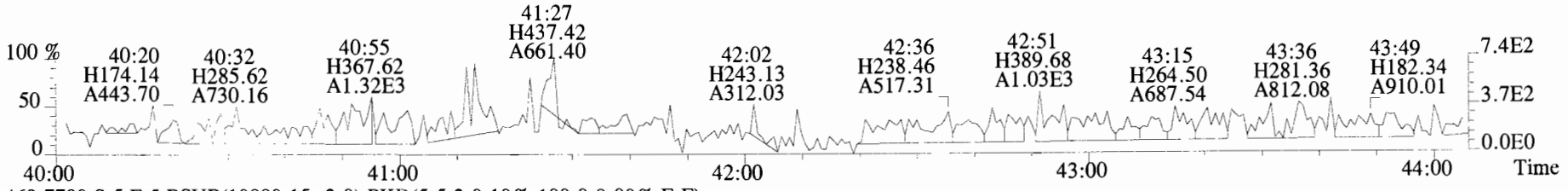
454.9728 S:5 F:4



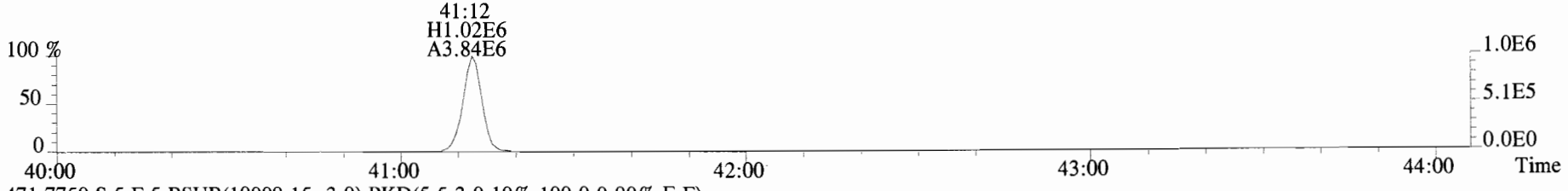
File:191015D1 #1-432 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



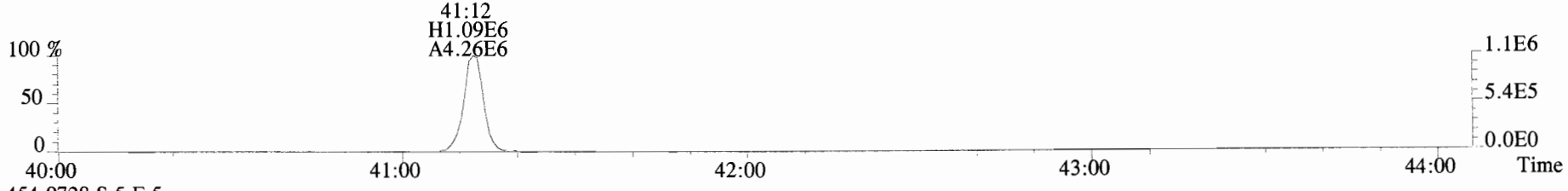
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



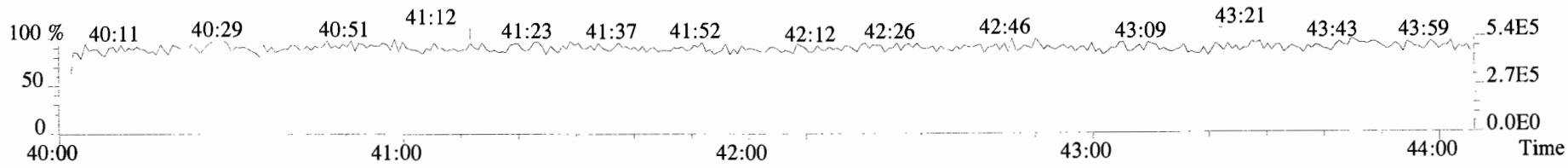
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

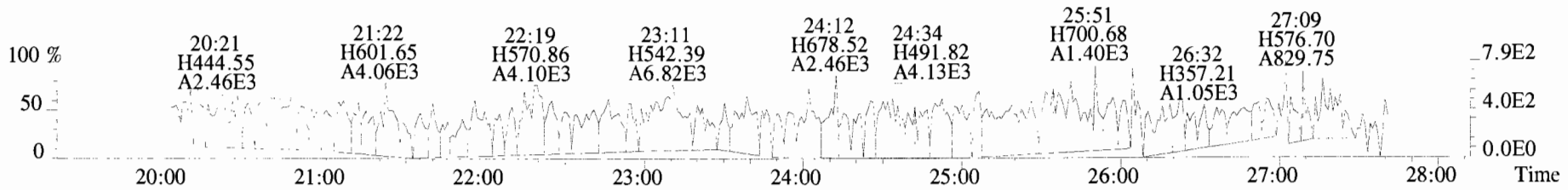


454.9728 S:5 F:5

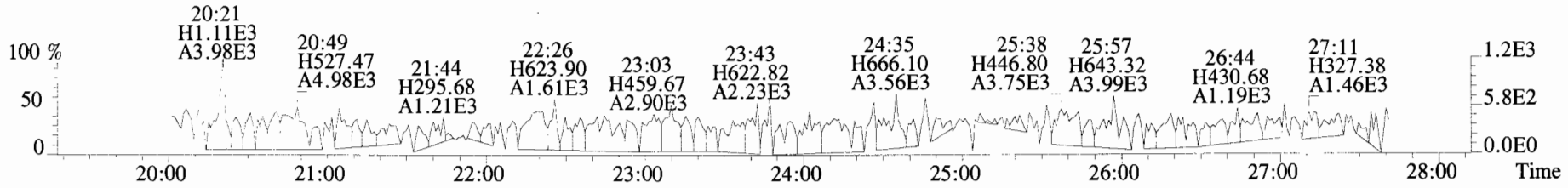


File:191015D1 #1-493 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5

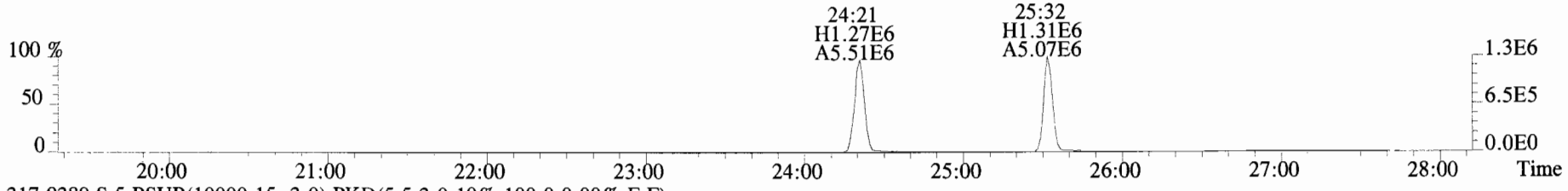
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



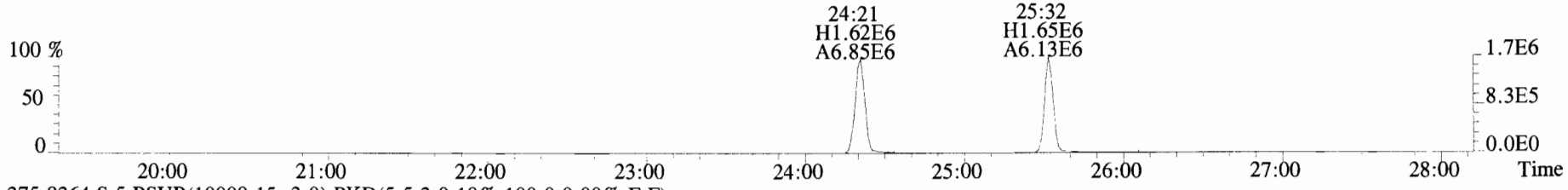
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



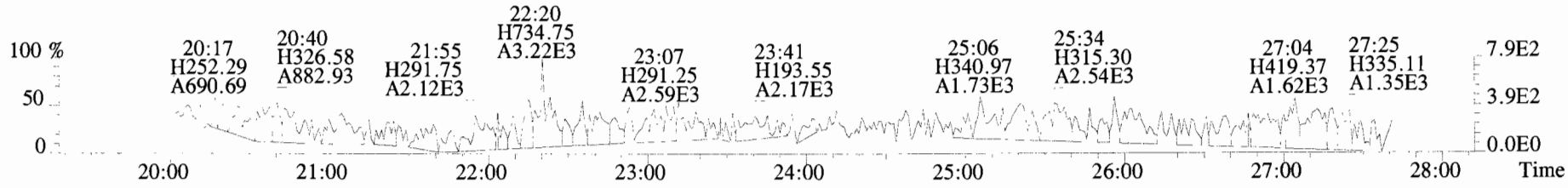
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

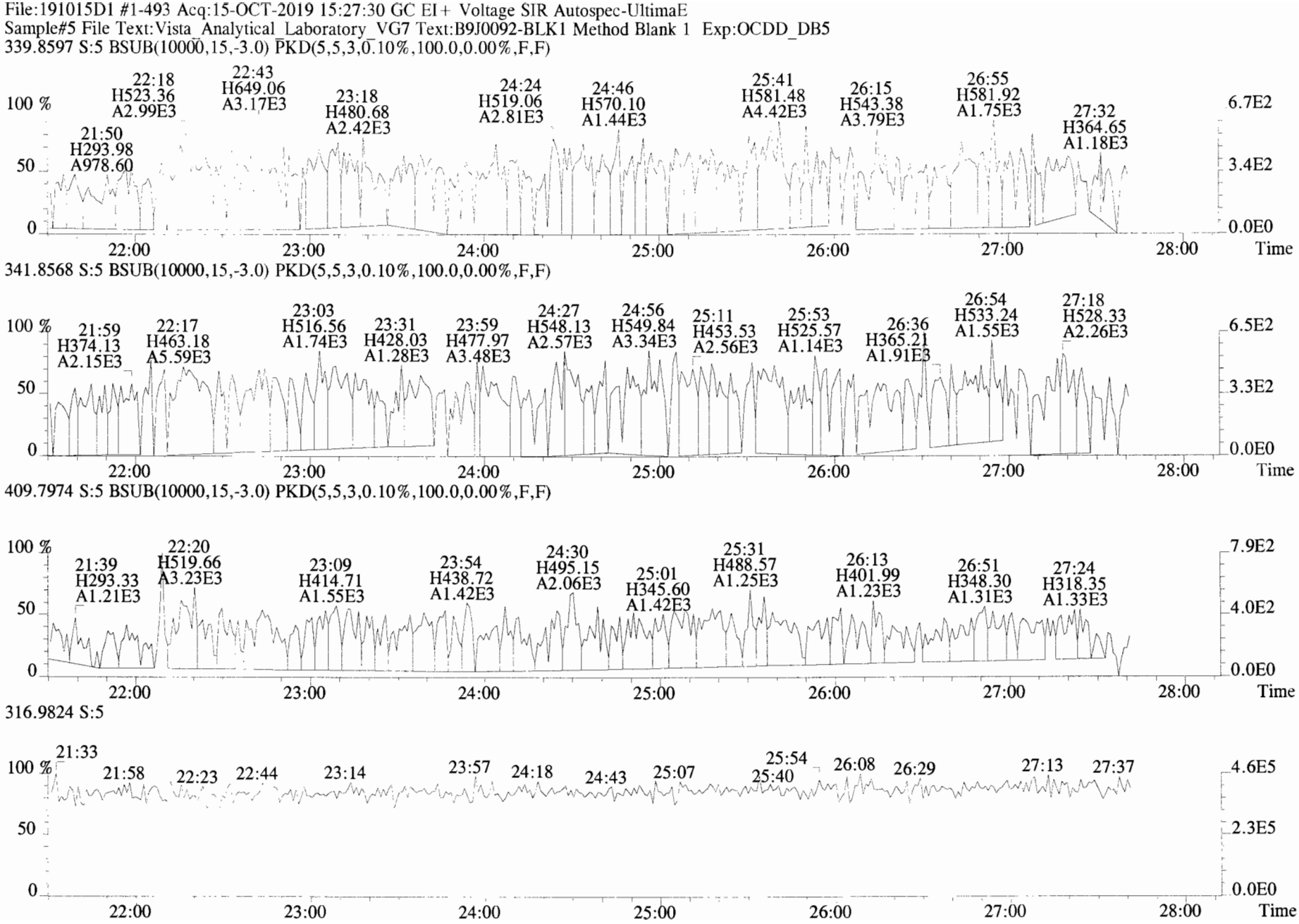


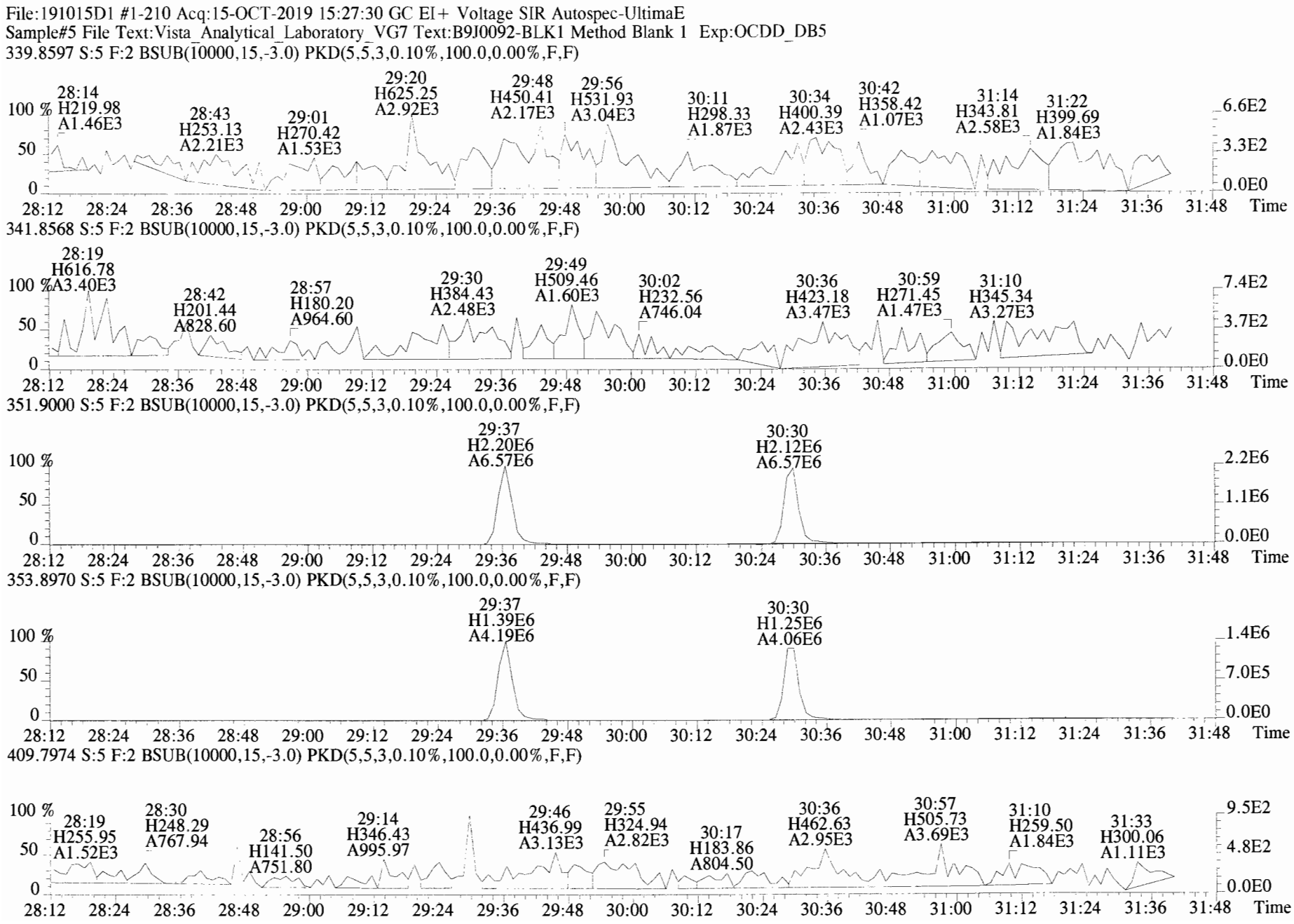
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



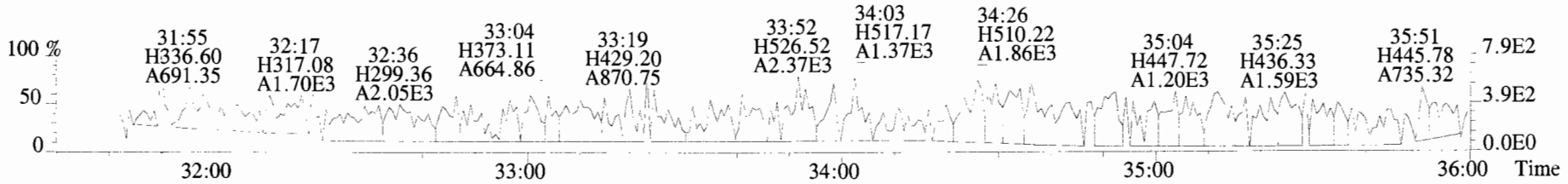
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



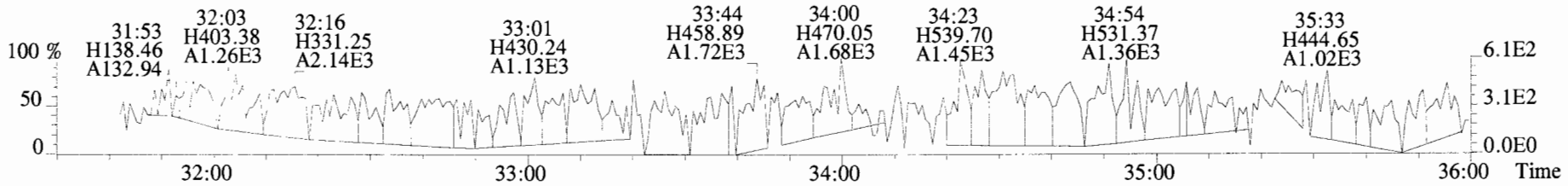

File:191015D1 #1-493 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
21:50 H293.98 A978.60
22:18 H523.36 A2.99E3
22:43 H649.06 A3.17E3
23:18 H480.68 A2.42E3
24:24 H519.06 A2.81E3
24:46 H570.10 A1.44E3
25:41 H581.48 A4.42E3
26:15 H543.38 A3.79E3
26:55 H581.92 A1.75E3
27:32 H364.65 A1.18E3
6.7E2
3.4E2
0.0E0
22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
21:59 H374.13 A2.15E3
22:17 H463.18 A5.59E3
23:03 H516.56 A1.74E3
23:31 H428.03 A1.28E3
23:59 H477.97 A3.48E3
24:27 H548.13 A2.57E3
24:56 H549.84 A3.34E3
25:11 H453.53 A2.56E3
25:53 H525.57 A1.14E3
26:36 H365.21 A1.91E3
26:54 H533.24 A1.55E3
27:18 H528.33 A2.26E3
6.5E2
3.3E2
0.0E0
22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
21:39 H293.33 A1.21E3
22:20 H519.66 A3.23E3
23:09 H414.71 A1.55E3
23:54 H438.72 A1.42E3
24:30 H495.15 A2.06E3
25:01 H345.60 A1.42E3
25:31 H488.57 A1.25E3
26:13 H401.99 A1.23E3
26:51 H348.30 A1.31E3
27:24 H318.35 A1.33E3
7.9E2
4.0E2
0.0E0
22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
316.9824 S:5
100 %
50
0
21:33
21:58
22:23
22:44
23:14
23:57
24:18
24:43
25:07
25:40
25:54
26:08
26:29
27:13
27:37
4.6E5
2.3E5
0.0E0
22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time


File:191015D1 #1-210 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:14 H219.98 A1.46E3
28:43 H253.13 A2.21E3
29:01 H270.42 A1.53E3
29:20 H625.25 A2.92E3
29:48 H450.41 A2.17E3
29:56 H531.93 A3.04E3
30:11 H298.33 A1.87E3
30:34 H400.39 A2.43E3
30:42 H358.42 A1.07E3
31:14 H343.81 A2.58E3
31:22 H399.69 A1.84E3
6.6E2
3.3E2
0.0E0
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:19 H616.78 A3.40E3
28:42 H201.44 A828.60
28:57 H180.20 A964.60
29:30 H384.43 A2.48E3
29:49 H509.46 A1.60E3
30:02 H232.56 A746.04
30:36 H423.18 A3.47E3
30:59 H271.45 A1.47E3
31:10 H345.34 A3.27E3
7.4E2
3.7E2
0.0E0
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:37 H2.20E6 A6.57E6
30:30 H2.12E6 A6.57E6
2.2E6
1.1E6
0.0E0
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:37 H1.39E6 A4.19E6
30:30 H1.25E6 A4.06E6
1.4E6
7.0E5
0.0E0
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:19 H255.95 A1.52E3
28:30 H248.29 A767.94
28:56 H141.50 A751.80
29:14 H346.43 A995.97
29:46 H436.99 A3.13E3
29:55 H324.94 A2.82E3
30:17 H183.86 A804.50
30:36 H462.63 A2.95E3
30:57 H505.73 A3.69E3
31:10 H259.50 A1.84E3
31:33 H300.06 A1.11E3
9.5E2
4.8E2
0.0E0
100 %
50
0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time

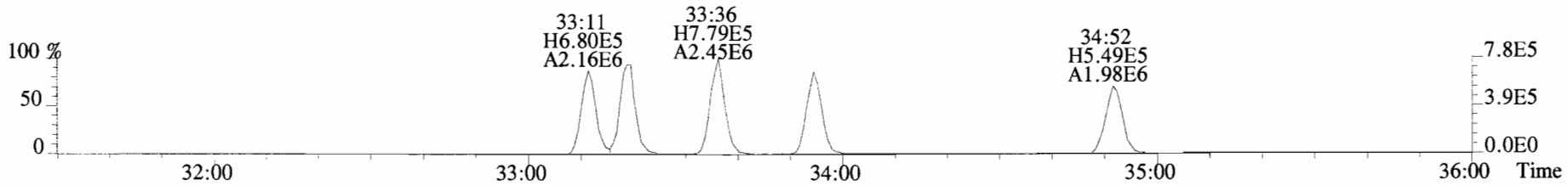
File:191015D1 #1-385 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



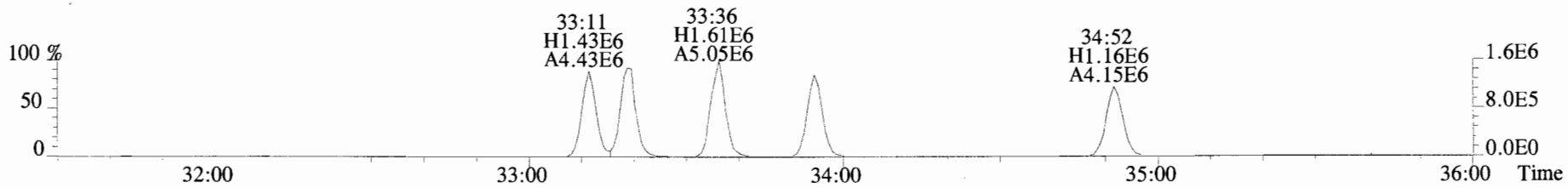
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



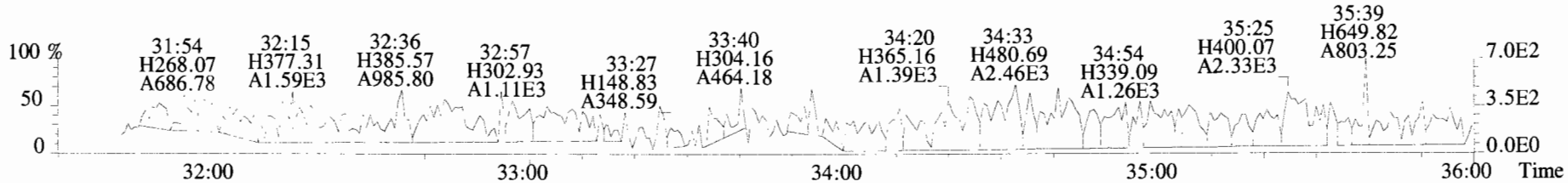
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



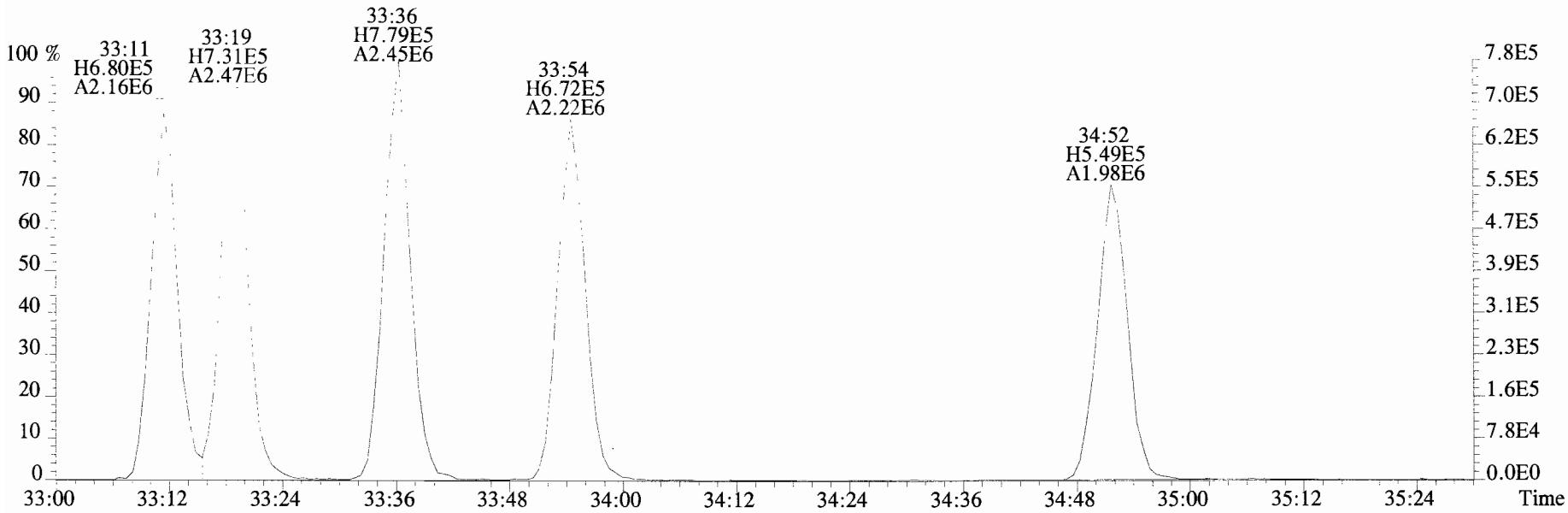
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



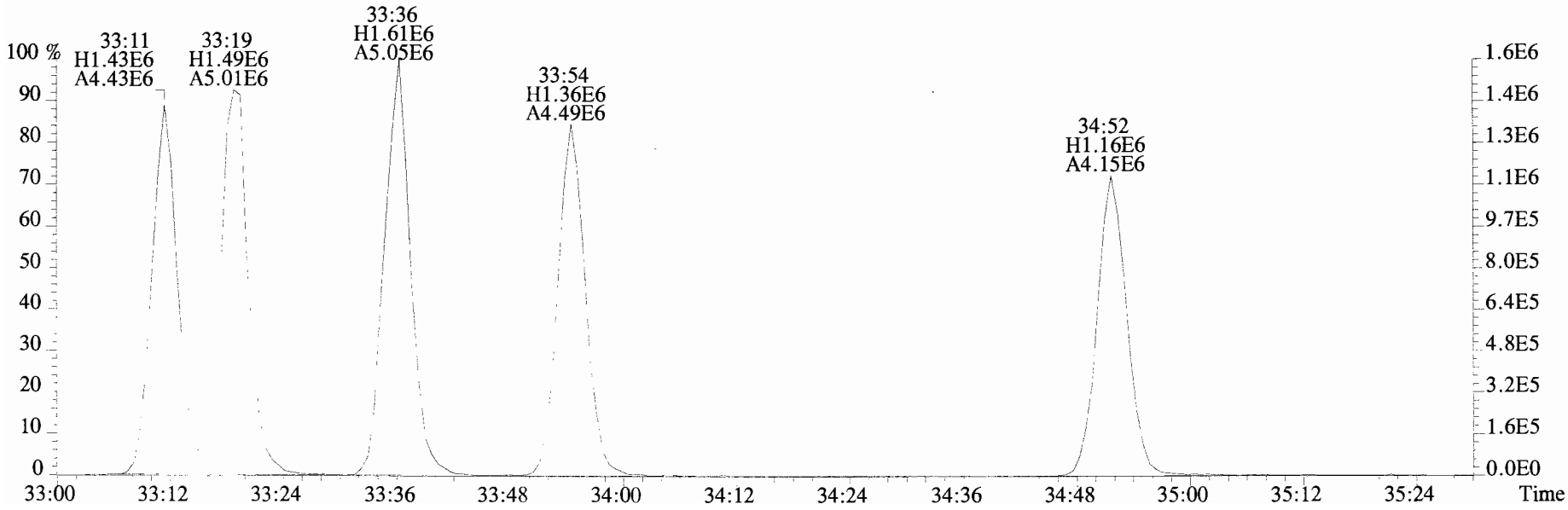
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



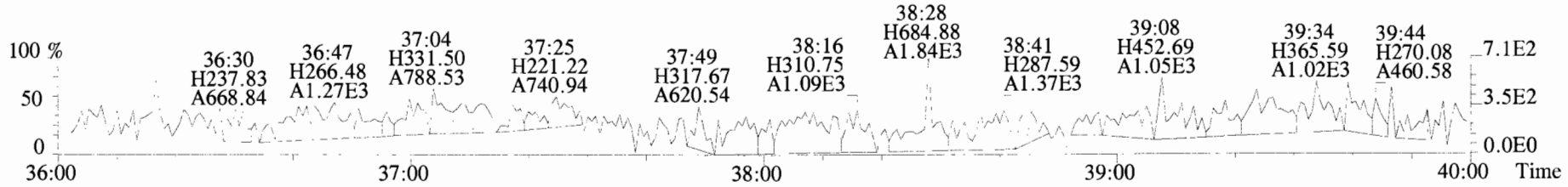
File:191015D1 #1-385 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



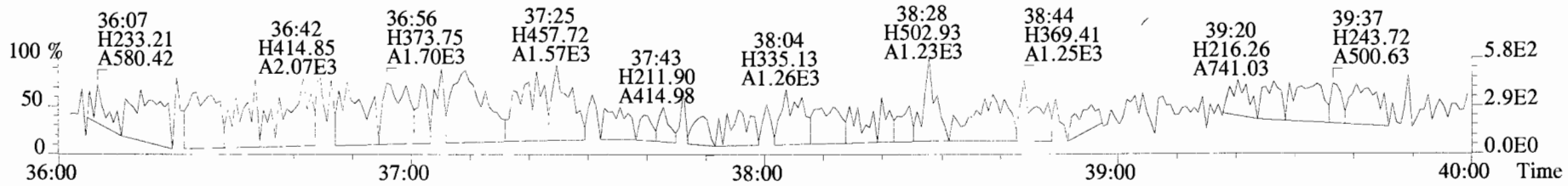
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



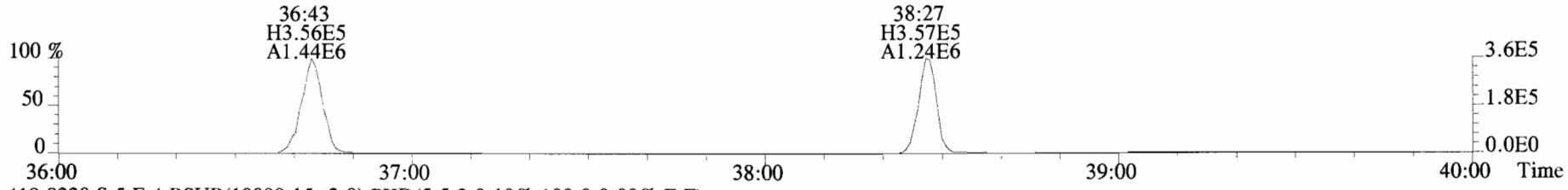
File:191015D1 #1-355 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



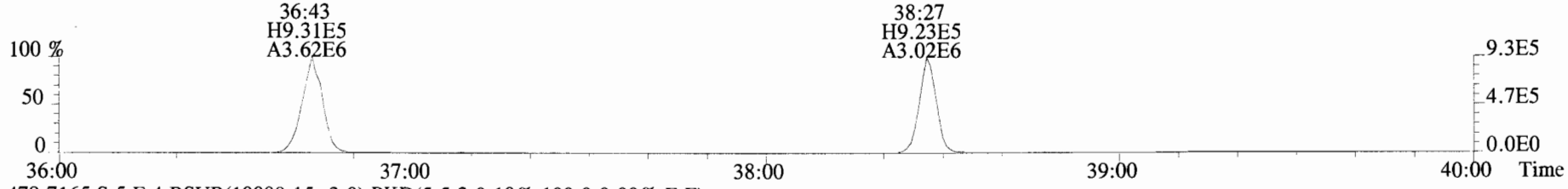
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



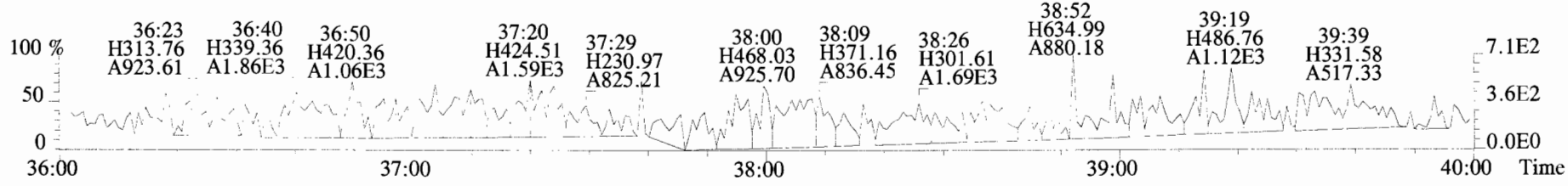
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



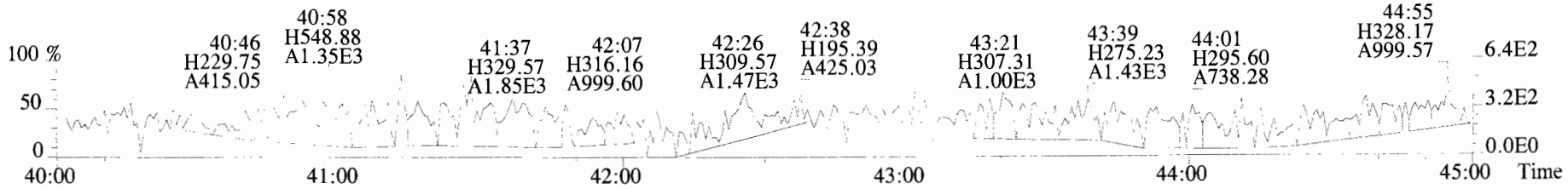
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



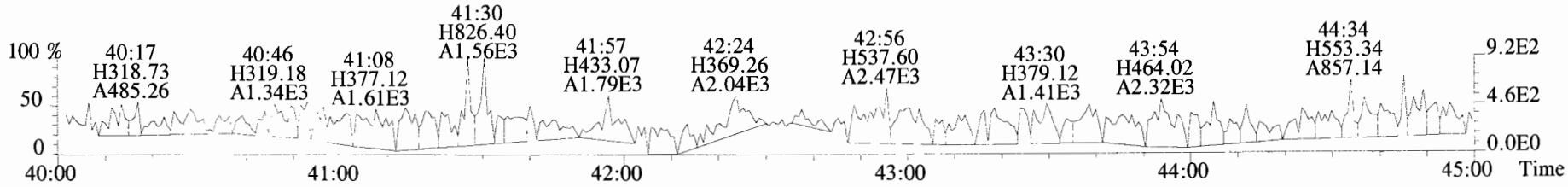
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



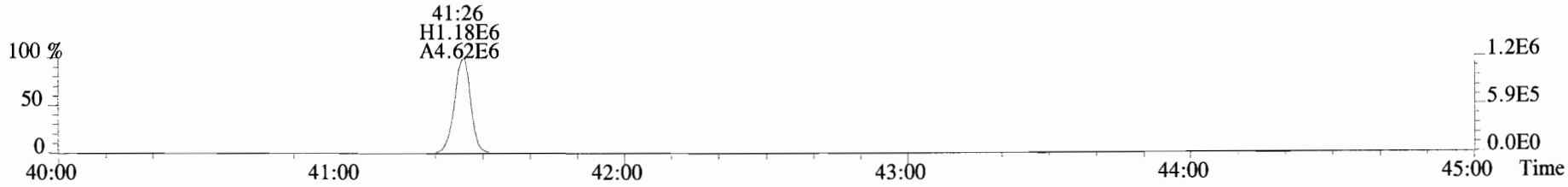
File:191015D1 #1-432 Acq:15-OCT-2019 15:27:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BLK1 Method Blank 1 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



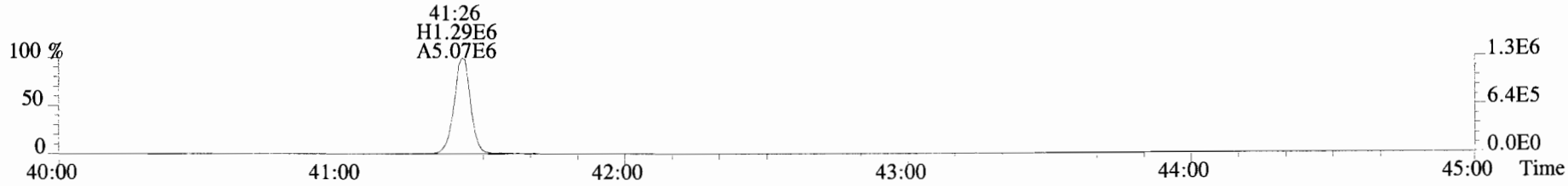
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



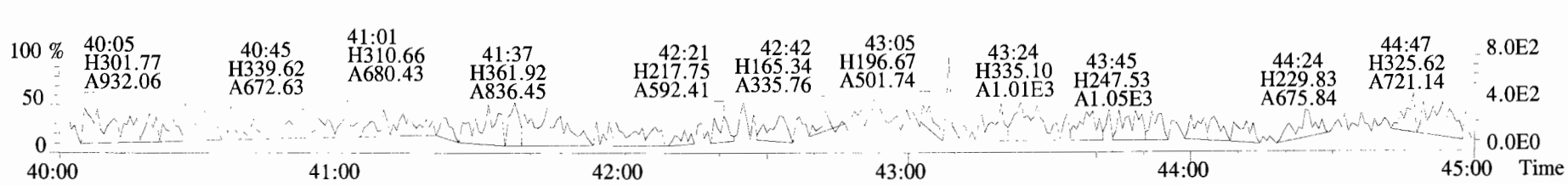
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



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



FORM 8A

PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B9J0092-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 191015D1-2

Ext. Date: Shift: Day Analysis Date: 15-OCT-19 Time: 13:03:43

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	53.6	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	48.3	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	51.9	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	50.6	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	48.2	35.0 - 70.0
OCDD	100	101	78.0 - 144.0
2,3,7,8-TCDF	10	9.86	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	51.4	40.0 - 67.0
2,3,4,7,8-PeCDF	50	52.1	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	47.8	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	49.1	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	47.7	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	49.0	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	49.2	39.0 - 69.0
OCDF	100	101	63.0 - 170.0

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

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

Analyst: DB

Date: 10/16/19

FORM 8B

PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B9J0092-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): AQUEOUS OPR Data Filename: 191015D1-2

Ext. Date: Shift: Day Analysis Date: 15-OCT-19 Time: 13:03:43

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	96.4	20.0 - 175.0
			25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	93.8	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	105	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	86.2	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	91.5	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	91.2	26.0 - 166.0
13C-OCDD	200	183	26.0 - 397.0
13C-2,3,7,8-TCDF	100	92.5	22.0 - 152.0
			26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	97.1	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	95.2	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	98.1	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	88.3	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	90.4	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	88.8	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	85.3	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	90.9	20.0 - 186.0
13C-OCDF	200	187	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	45.0	12.4 - 76.4

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

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

Analyst: DB

Date: 10/16/19

Client ID: OPR File Name: 191015D1 S:2 Acq:15 OCT 19 13:03:43 ConCal: ST191015D1 1
Lab ID: B9J0092-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000 EndCAL: ST191015D1-2

Name	Resp	RA	RRF	RT	Conc	Method QC Limits	Vista Historical Limits: Aqueous Limits	Vista Historical Limits: Solid Limits
2,3,7,8-TCDD	8.38e+05	0.84 y	0.91	26:19	10.4	7.0 - 13	7.73 - 12.4	7.53 - 12.5
1,2,3,7,8-PeCDD	3.37e+06	0.62 y	0.90	30:48	53.6	35 - 65	37.8 - 57.5	40.4 - 65.1
1,2,3,4,7,8-HxCDD	2.98e+06	1.18 y	1.10	34:07	48.3	35 - 65	38.3 - 58.0	41.2 - 63.2
1,2,3,6,7,8-HxCDD	2.98e+06	1.18 y	0.94	34:13	51.9	35 - 65	38.7 - 57.0	40.8 - 65.2
1,2,3,7,8,9-HxCDD	2.97e+06	1.15 y	0.96	34:31	50.6	35 - 65	37.0 - 57.5	41.7 - 65.4
1,2,3,4,6,7,8-HpCDD	2.34e+06	0.98 y	0.98	37:57	48.2	35 - 65	39.0 - 58.5	21.3 - 87.7
OCDD	4.27e+06	0.89 y	0.96	41:14	101	70 - 130	83.2 - 126	0 - 400
2,3,7,8-TCDF	1.19e+06	0.76 y	0.95	25:33	9.86	7.0 - 13	7.65 - 12.4	7.82 - 12.0
1,2,3,7,8-PeCDF	5.43e+06	1.62 y	0.96	29:38	51.4	35 - 65	41.4 - 64.9	39.6 - 65.6
2,3,4,7,8-PeCDF	5.66e+06	1.64 y	1.01	30:31	52.1	35 - 65	36.9 - 56.0	40.2 - 66.5
1,2,3,4,7,8-HxCDF	3.86e+06	1.19 y	1.18	33:13	48.5	35 - 65	33.4 - 59.4	39.4 - 63.9
1,2,3,6,7,8-HxCDF	3.87e+06	1.18 y	1.07	33:21	47.8	35 - 65	38.7 - 59.0	41.1 - 62.9
2,3,4,6,7,8-HxCDF	3.90e+06	1.21 y	1.11	33:56	49.1	35 - 65	39.3 - 58.0	40.9 - 63.3
1,2,3,7,8,9-HxCDF	3.09e+06	1.18 y	1.06	34:54	47.7	35 - 65	38.8 - 58.0	39.5 - 64.9
1,2,3,4,6,7,8-HpCDF	2.96e+06	0.99 y	1.13	36:45	49.0	35 - 65	40.2 - 63.1	31.9 - 74.7
1,2,3,4,7,8,9-HpCDF	2.76e+06	1.00 y	1.28	38:29	49.2	35 - 65	40.5 - 62.2	39.8 - 63.8
OCDF	5.11e+06	0.89 y	0.95	41:28	101	70 - 130	80.0 - 120	69.8 - 136

						% Rec	Method QC Limits	Aqueous Limits	Solid Limits
13C-2,3,7,8-TCDD	8.92e+06	0.79 y	1.10	26:18	96.4	96.4	40 - 135	48.8 - 105	53.0 - 115
13C-1,2,3,7,8-PeCDD	6.97e+06	0.63 y	0.88	30:47	93.8	93.8	40 - 135	49.8 - 109	61.4 - 117
13C-1,2,3,4,7,8-HxCDD	5.60e+06	1.27 y	0.64	34:06	105	105	40 - 135	50.4 - 99.1	54.6 - 121
13C-1,2,3,6,7,8-HxCDD	6.11e+06	1.25 y	0.86	34:12	86.2	86.2	40 - 135	50.4 - 99.1	54.6 - 121
13C-1,2,3,7,8,9-HxCDD	6.12e+06	1.25 y	0.81	34:30	91.5	91.5	40 - 135	50.4 - 99.1	54.6 - 121
13C-1,2,3,4,6,7,8-HpCDD	4.94e+06	1.02 y	0.65	37:56	91.2	91.2	40 - 135	51.2 - 106	67.6 - 117
13C-OCDD	8.80e+06	0.89 y	0.58	41:14	183	91.6	40 - 135	30.8 - 113	14.0 - 147
13C-2,3,7,8-TCDF	1.27e+07	0.79 y	1.03	25:31	92.5	92.5	40 - 135	50.3 - 103	56.0 - 112
13C-1,2,3,7,8-PeCDF	1.10e+07	1.62 y	0.85	29:36	97.1	97.1	40 - 135	49.3 - 105	58.6 - 116
13C-2,3,4,7,8-PeCDF	1.07e+07	1.60 y	0.85	30:30	95.2	95.2	40 - 135	53.3 - 109	62.9 - 118
13C-1,2,3,4,7,8-HxCDF	6.76e+06	0.49 y	0.83	33:12	98.1	98.1	40 - 135	44.5 - 110	55.9 - 118
13C-1,2,3,6,7,8-HxCDF	7.57e+06	0.49 y	1.03	33:20	88.3	88.3	40 - 135	45.8 - 111	58.6 - 118
13C-2,3,4,6,7,8-HxCDF	7.14e+06	0.49 y	0.95	33:55	90.4	90.4	40 - 135	50.8 - 110	63.7 - 115
13C-1,2,3,7,8,9-HxCDF	6.09e+06	0.48 y	0.83	34:53	88.8	88.8	40 - 135	48.6 - 108	63.3 - 112
13C-1,2,3,4,6,7,8-HpCDF	5.35e+06	0.40 y	0.76	36:44	85.3	85.3	40 - 135	45.9 - 104	55.0 - 117
13C-1,2,3,4,7,8,9-HpCDF	4.38e+06	0.40 y	0.58	38:29	90.9	90.9	40 - 135	41.1 - 114	53.2 - 122
13C-OCDF	1.07e+07	0.88 y	0.69	41:27	187	93.5	40 - 135	36.8 - 109	48.3 - 109
37Cl-2,3,7,8-TCDD	4.55e+06		1.20	26:19	45.0	113	40 - 135	51.1 - 117	49.6 - 106
13C-1,2,3,4-TCDD	8.44e+06	0.80 y	1.00	25:45	100				
13C-1,2,3,4-TCDF	1.33e+07	0.81 y	1.00	24:20	100				
13C-1,2,3,4,6,9-HxCDF	8.29e+06	0.50 y	1.00	33:37	100				

Analyst: DB

Date: 10/16/19

Client ID: OPR Filename: 191015D1 S:2 Acq:15 OCT 19 13:03:43 ConCal: ST191015D1-1
Lab ID: B9J0092-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000 EndCAL: ST191015D1-2

	Name	Resp	RA	RRF	RT	Conc	Qual	noise Fac	DL
	2,3,7,8-TCDD	8.38e+05	0.84 y	0.91	26:19	10.383		* 2.5	*
	1,2,3,7,8-PeCDD	3.37e+06	0.62 y	0.90	30:48	53.554		* 2.5	*
	1,2,3,4,7,8-HxCDD	2.98e+06	1.18 y	1.10	34:07	48.317		* 2.5	*
	1,2,3,6,7,8-HxCDD	2.98e+06	1.18 y	0.94	34:13	51.939		* 2.5	*
	1,2,3,7,8,9-HxCDD	2.97e+06	1.15 y	0.96	34:31	50.574		* 2.5	*
	1,2,3,4,6,7,8-HpCDD	2.34e+06	0.98 y	0.98	37:57	48.250		* 2.5	*
	OCDD	4.27e+06	0.89 y	0.96	41:14	101.18		* 2.5	*
	2,3,7,8-TCDF	1.19e+06	0.76 y	0.95	25:33	9.8575		* 2.5	*
	1,2,3,7,8-PeCDF	5.43e+06	1.62 y	0.96	29:38	51.382		* 2.5	*
	2,3,4,7,8-PeCDF	5.66e+06	1.64 y	1.01	30:31	52.143		* 2.5	*
	1,2,3,4,7,8-HxCDF	3.86e+06	1.19 y	1.18	33:13	48.462		* 2.5	*
	1,2,3,6,7,8-HxCDF	3.87e+06	1.18 y	1.07	33:21	47.775		* 2.5	*
	2,3,4,6,7,8-HxCDF	3.90e+06	1.21 y	1.11	33:56	49.104		* 2.5	*
	1,2,3,7,8,9-HxCDF	3.09e+06	1.18 y	1.06	34:54	47.720		* 2.5	*
	1,2,3,4,6,7,8-HpCDF	2.96e+06	0.99 y	1.13	36:45	49.042		* 2.5	*
	1,2,3,4,7,8,9-HpCDF	2.76e+06	1.00 y	1.28	38:29	49.229		* 2.5	*
	OCDF	5.11e+06	0.89 y	0.95	41:28	101.14		* 2.5	*
IS	13C-2,3,7,8-TCDD	8.92e+06	0.79 y	1.10	26:18	96.448			
IS	13C-1,2,3,7,8-PeCDD	6.97e+06	0.63 y	0.88	30:47	93.753			
IS	13C-1,2,3,4,7,8-HxCDD	5.60e+06	1.27 y	0.64	34:06	105.18			
IS	13C-1,2,3,6,7,8-HxCDD	6.11e+06	1.25 y	0.86	34:12	86.194			
IS	13C-1,2,3,7,8,9-HxCDD	6.12e+06	1.25 y	0.81	34:30	91.500			
IS	13C-1,2,3,4,6,7,8-HpCDD	4.94e+06	1.02 y	0.65	37:56	91.223			
IS	13C-OCDD	8.80e+06	0.89 y	0.58	41:14	183.12			
IS	13C-2,3,7,8-TCDF	1.27e+07	0.79 y	1.03	25:31	92.533			
IS	13C-1,2,3,7,8-PeCDF	1.10e+07	1.62 y	0.85	29:36	97.096			
IS	13C-2,3,4,7,8-PeCDF	1.07e+07	1.60 y	0.85	30:30	95.223			
IS	13C-1,2,3,4,7,8-HxCDF	6.76e+06	0.49 y	0.83	33:12	98.105			
IS	13C-1,2,3,6,7,8-HxCDF	7.57e+06	0.49 y	1.03	33:20	88.307			
IS	13C-2,3,4,6,7,8-HxCDF	7.14e+06	0.49 y	0.95	33:55	90.356			
IS	13C-1,2,3,7,8,9-HxCDF	6.09e+06	0.48 y	0.83	34:53	88.841			
IS	13C-1,2,3,4,6,7,8-HpCDF	5.35e+06	0.40 y	0.76	36:44	85.281			
IS	13C-1,2,3,4,7,8,9-HpCDF	4.38e+06	0.40 y	0.58	38:29	90.888			
IS	13C-OCDF	1.07e+07	0.88 y	0.69	41:27	186.99			
C/Up	37Cl-2,3,7,8-TCDD	4.55e+06		1.20	26:19	45.004			
RS/RT	13C-1,2,3,4-TCDD	8.44e+06	0.80 y	1.00	25:45	100.00			
RS	13C-1,2,3,4-TCDF	1.33e+07	0.81 y	1.00	24:20	100.00			
RS/RT	13C-1,2,3,4,6,9-HxCDF	8.29e+06	0.50 y	1.00	33:37	100.00			

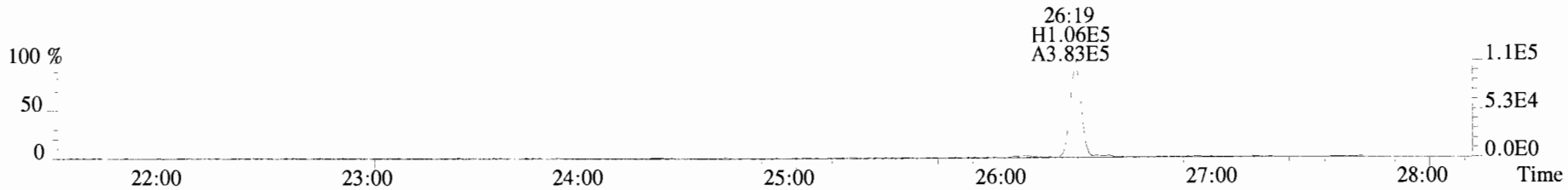
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	10.4	11.3		*	*
Total Penta-Dioxins	53.6	53.6		*	*
Total Hexa-Dioxins	151	151		*	*
Total Hepta-Dioxins	49.0	49.6		*	*
Total Tetra-Furans	9.98	10.7		*	*
Total Penta-Furans	103.79	105.92		*	*
Total Hexa-Furans	193	194		*	*
Total Hepta-Furans	98.3	99.2		*	*

	Rec	Qual
IS	96.4	
IS	93.8	
IS	105	
IS	86.2	
IS	91.5	
IS	91.2	
IS	91.6	
IS	92.5	
IS	97.1	
IS	95.2	
IS	98.1	
IS	88.3	
IS	90.4	
IS	88.8	
IS	85.3	
IS	90.9	
IS	93.5	
C/Up	113	

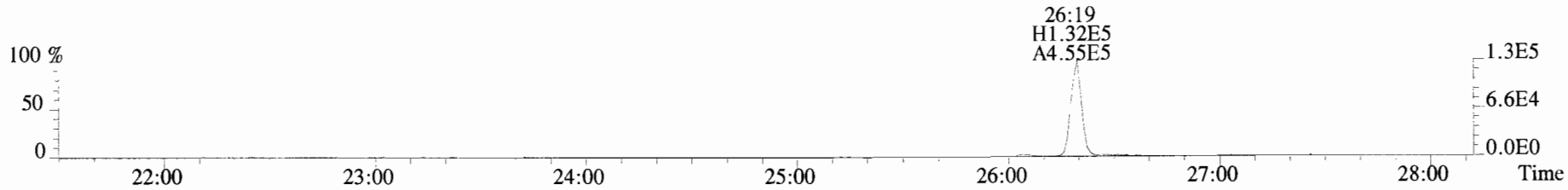
Integrations by Analyst: DB Date: 10/16/19

Reviewed by Analyst: CT Date: 10/17/19

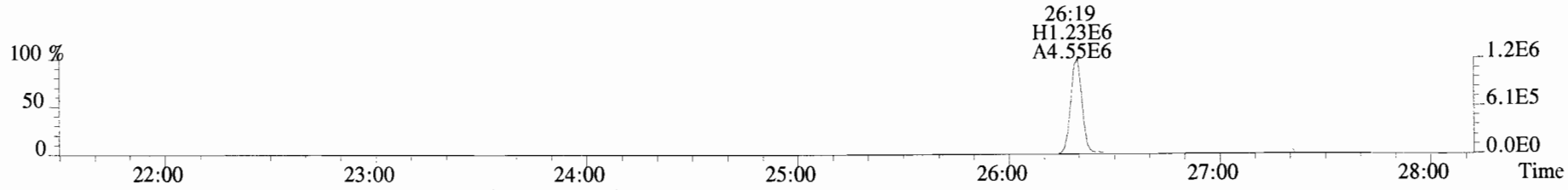
File:191015D1 #1-493 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



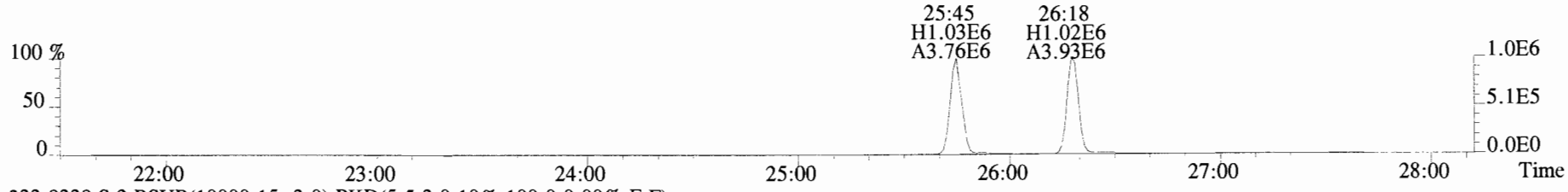
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



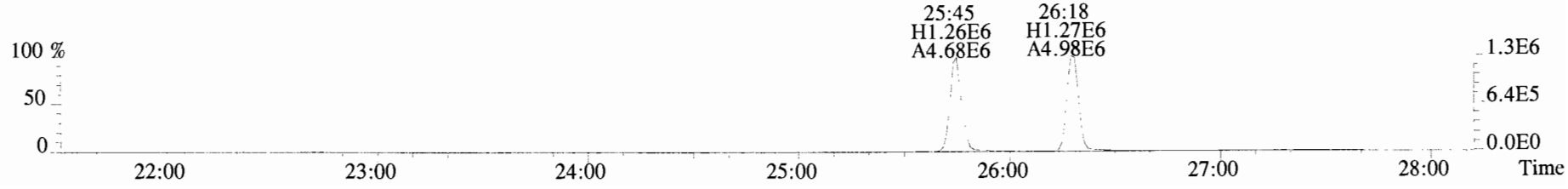
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



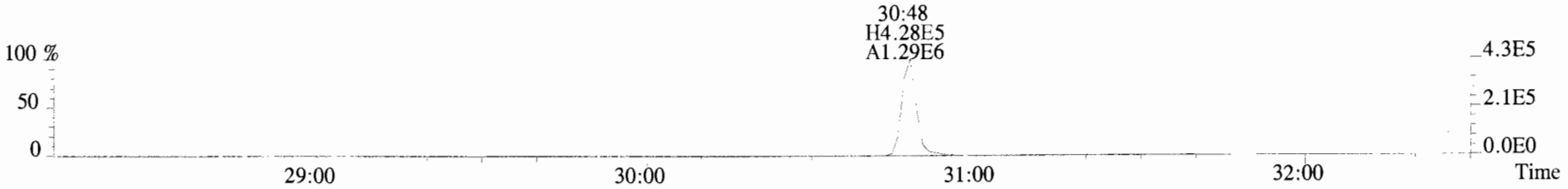
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



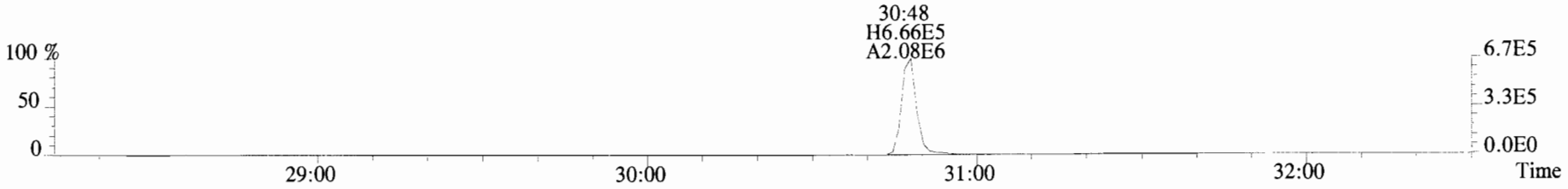
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



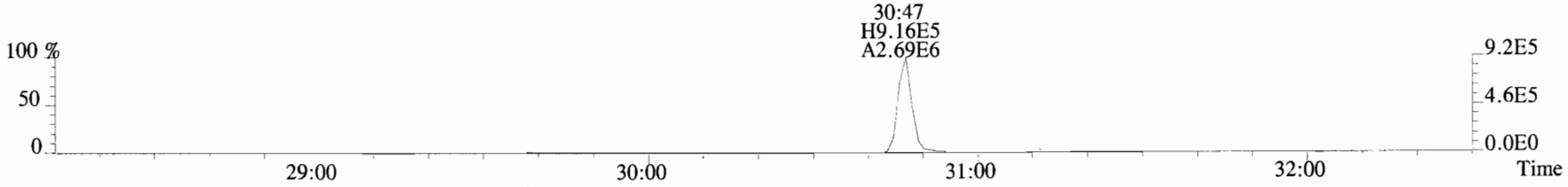
File:191015D1 #1-210 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



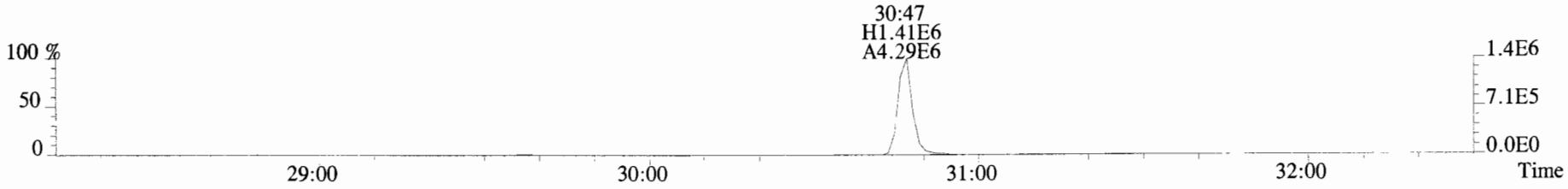
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



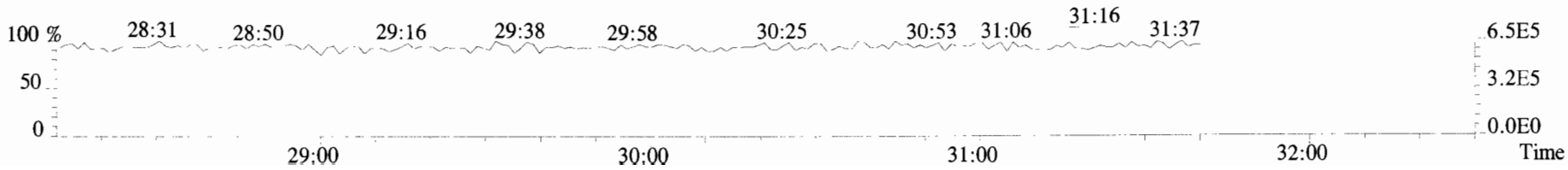
365.8978 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



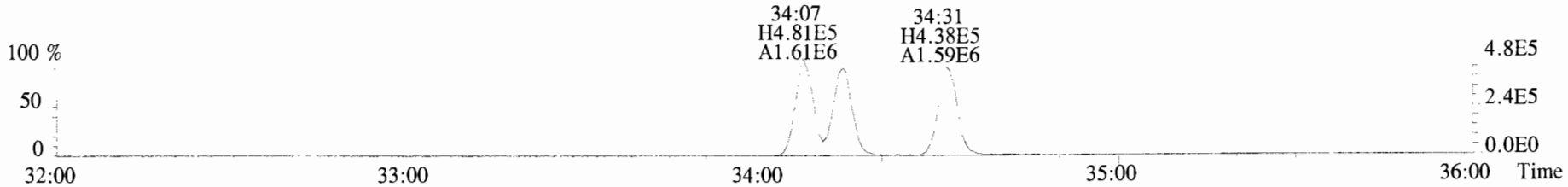
367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



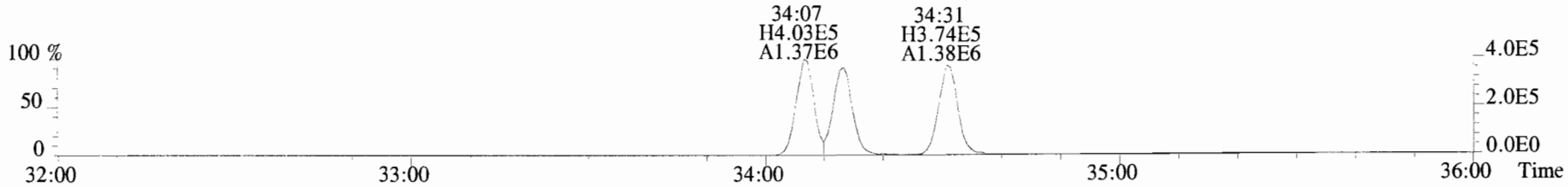
366.9792 S:2 F:2



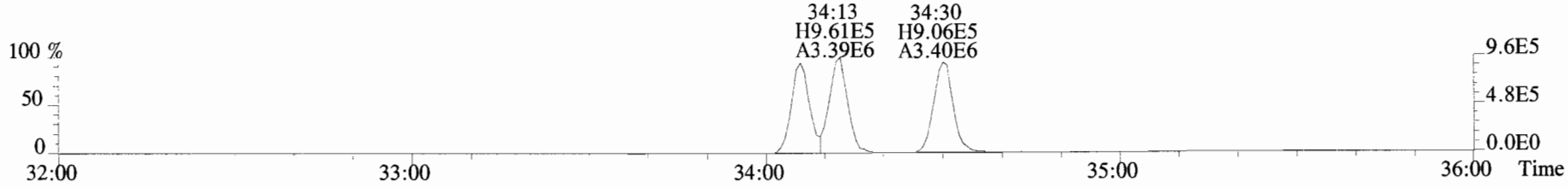
File:191015D1 #1-385 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



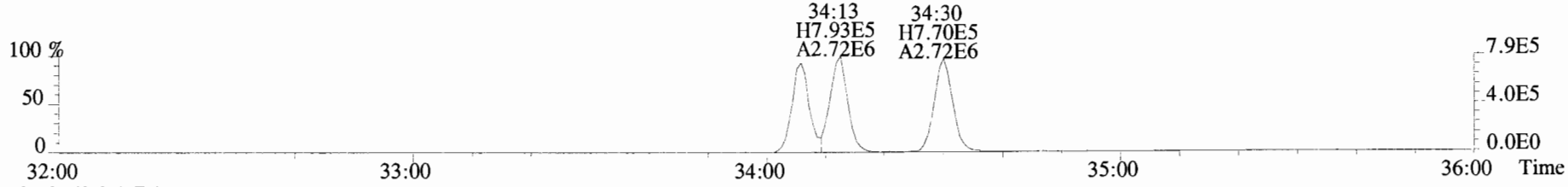
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



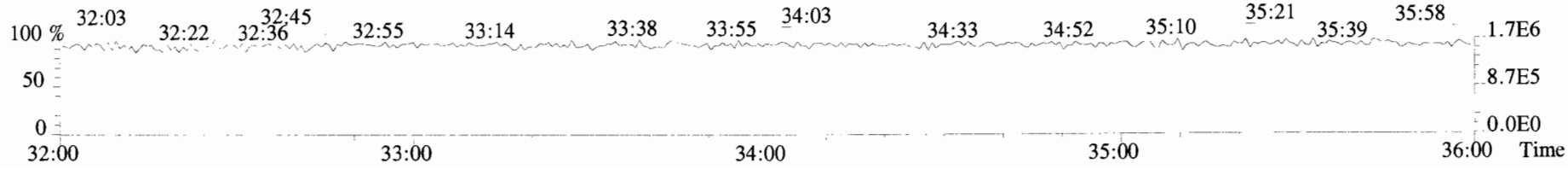
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



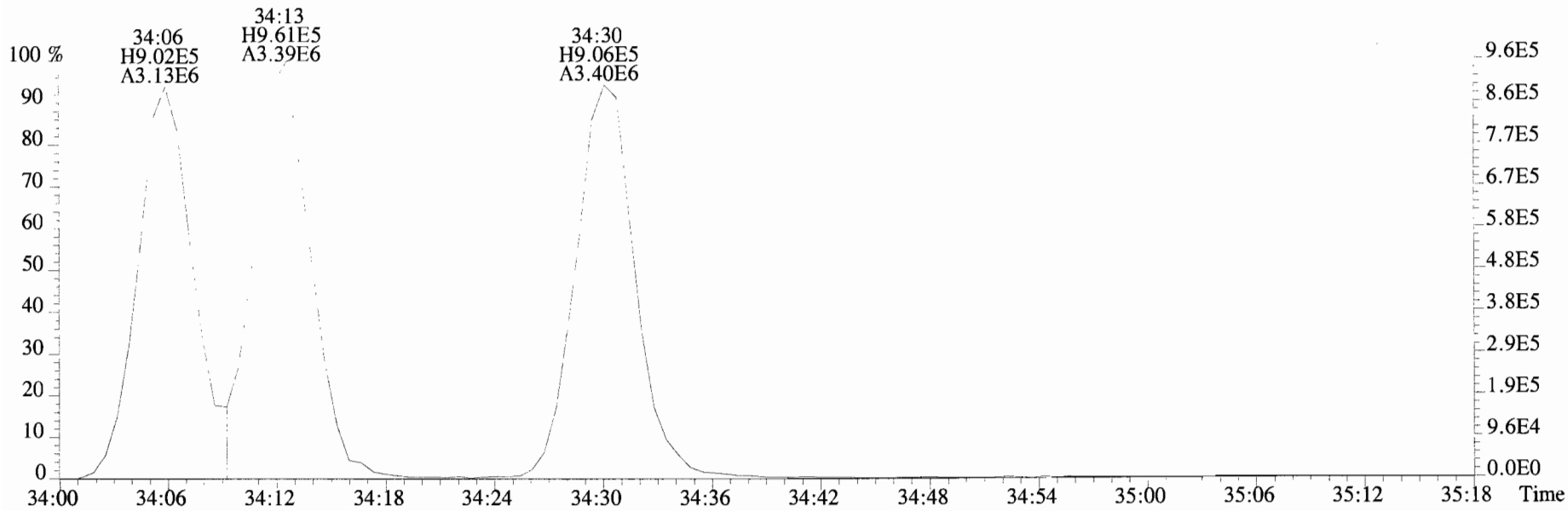
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



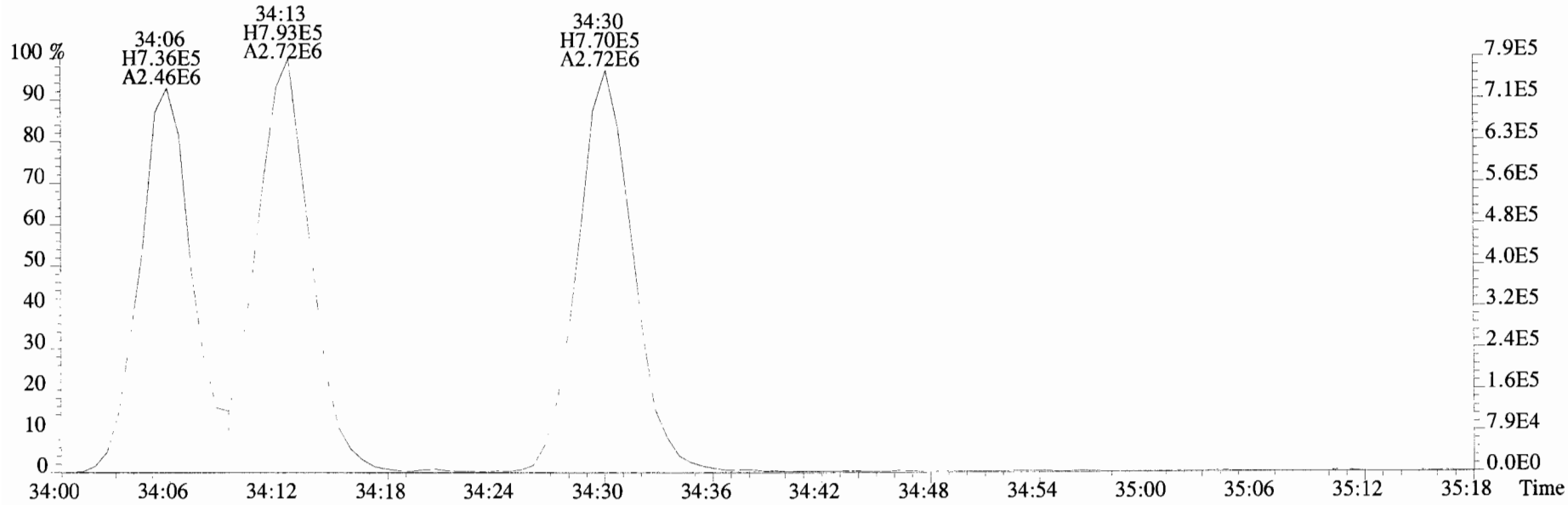
392.9760 S:2 F:3



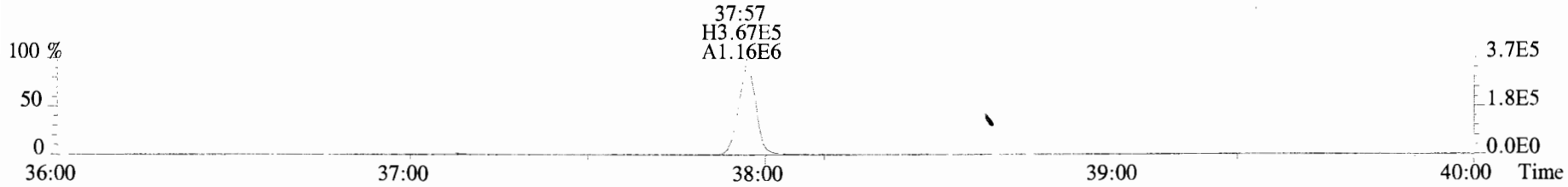
File:191015D1 #1-385 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



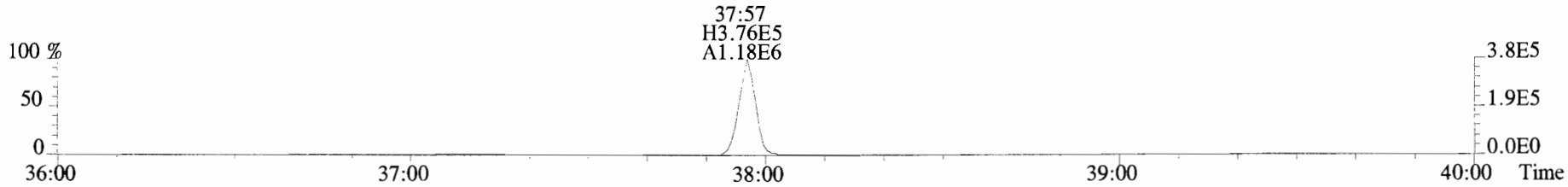
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



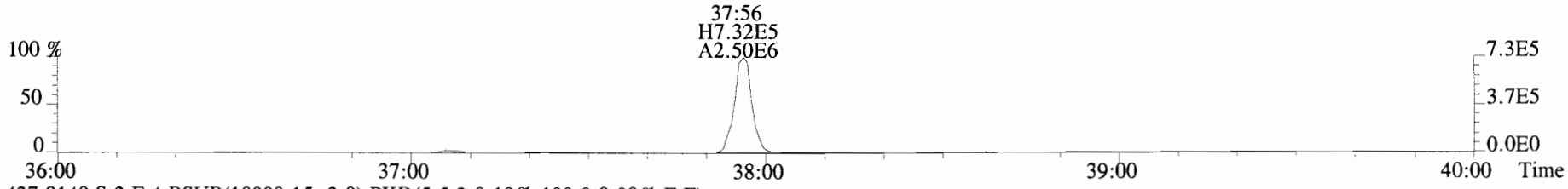
File:191015D1 #1-355 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



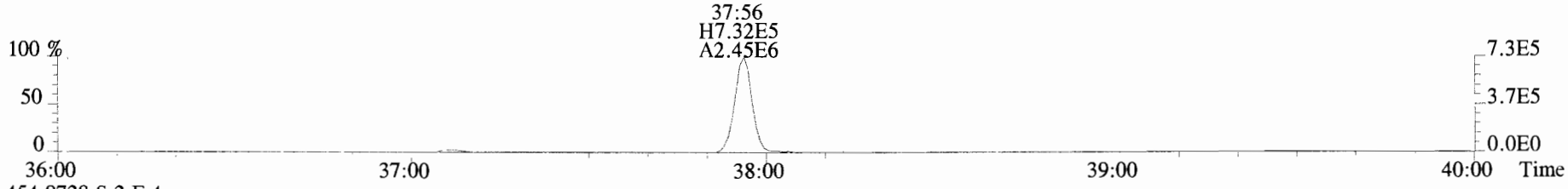
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



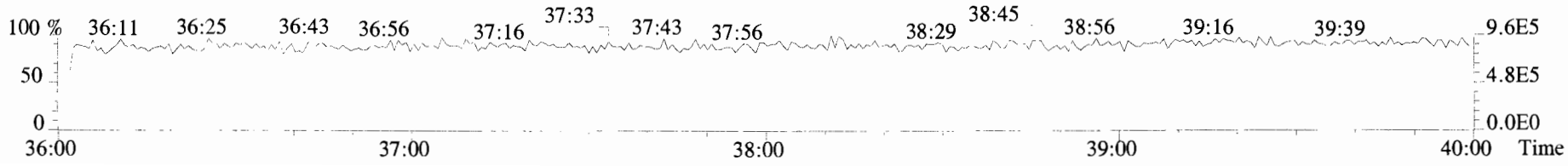
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



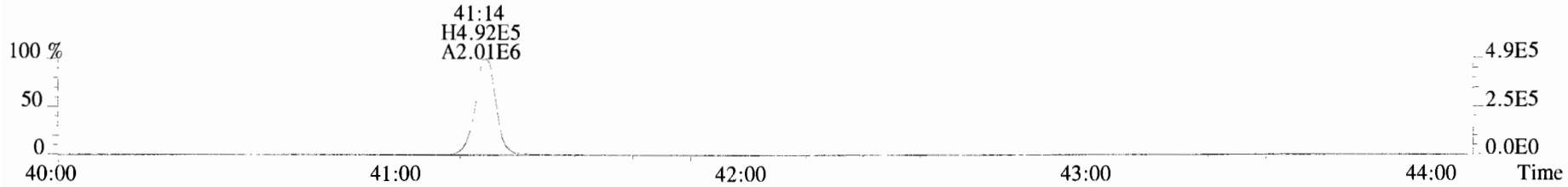
437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



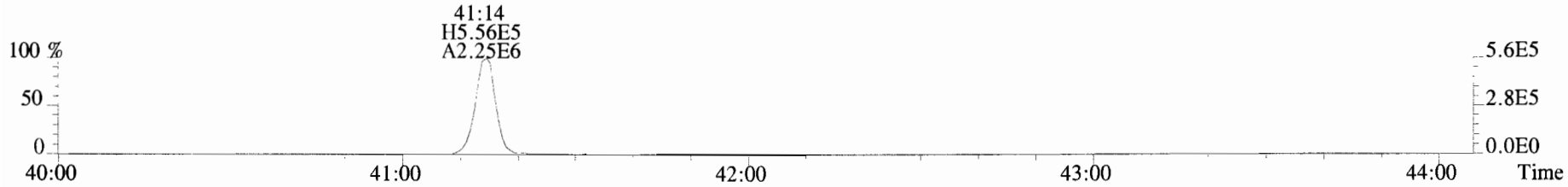
454.9728 S:2 F:4



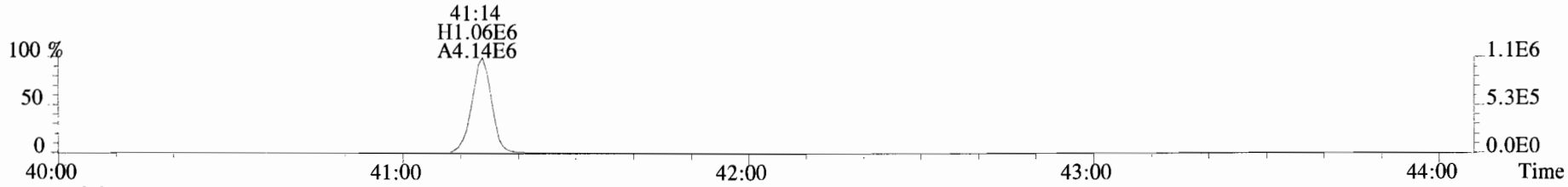
File:191015D1 #1-432 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



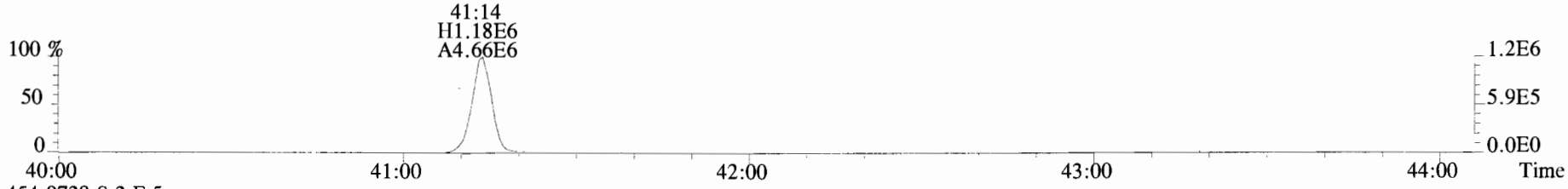
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



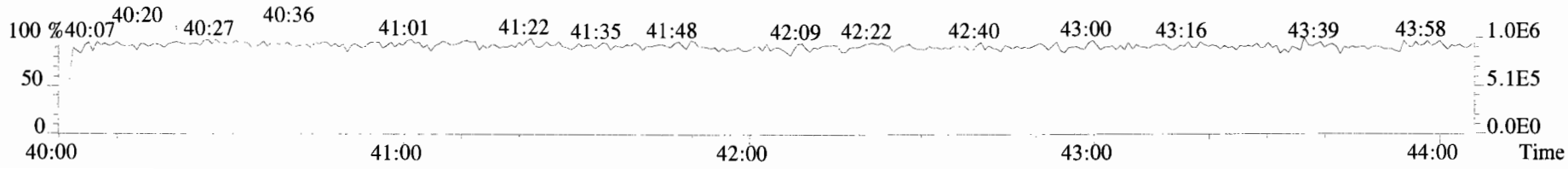
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



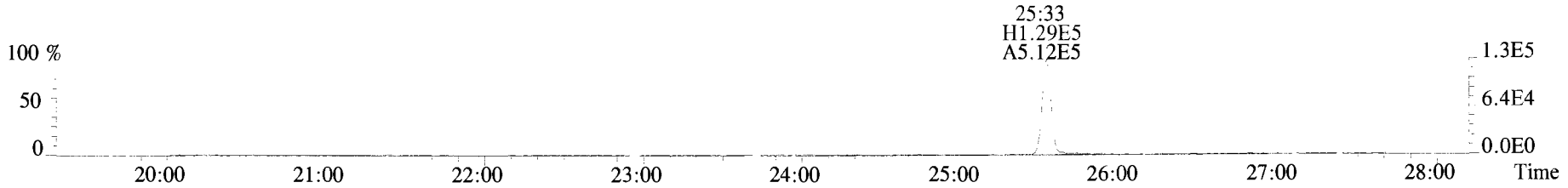
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



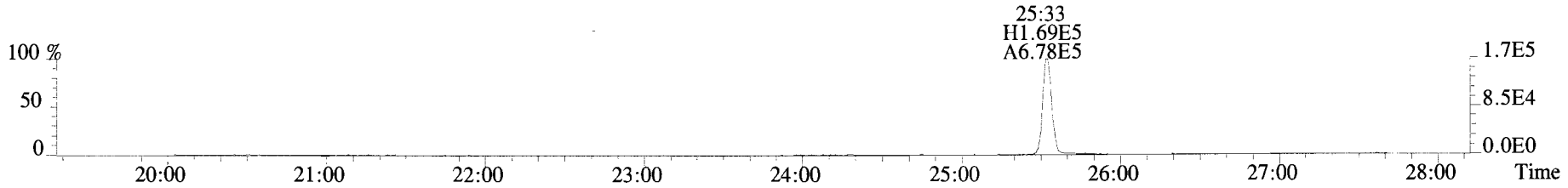
454.9728 S:2 F:5



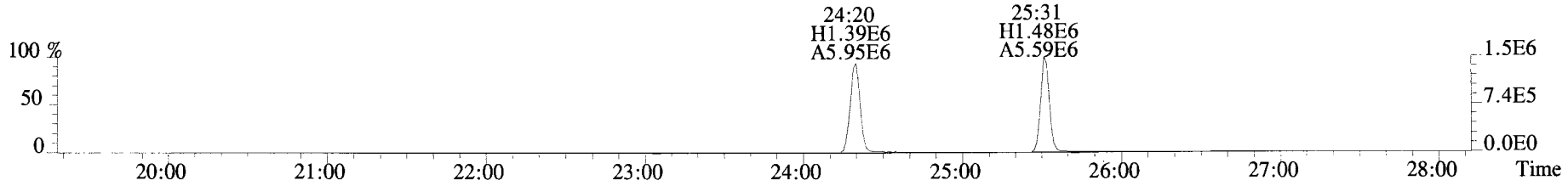
File:191015D1 #1-493 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



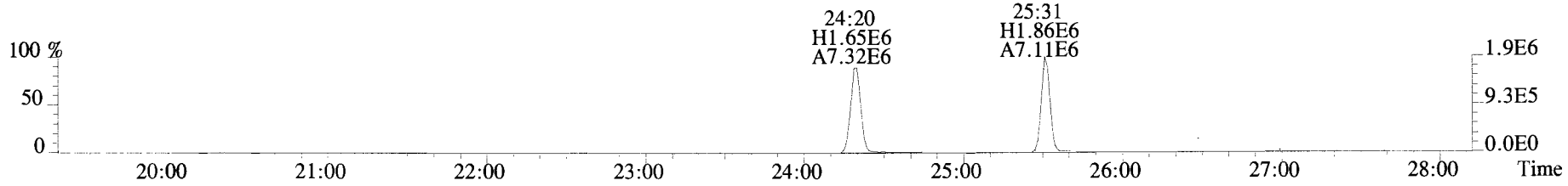
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



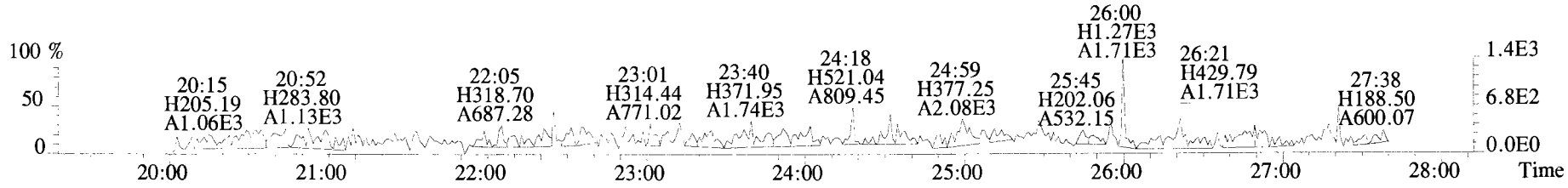
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



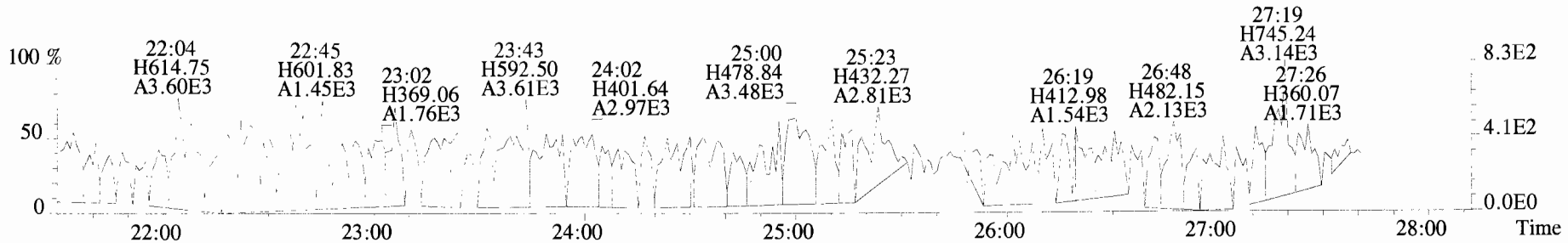
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



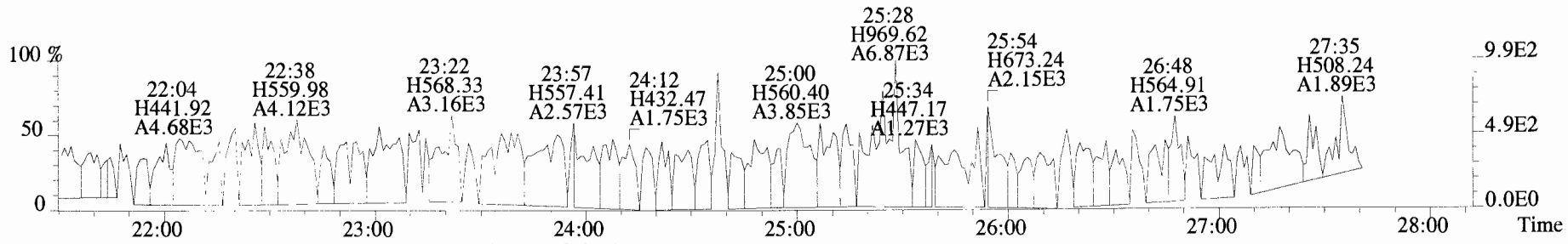
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



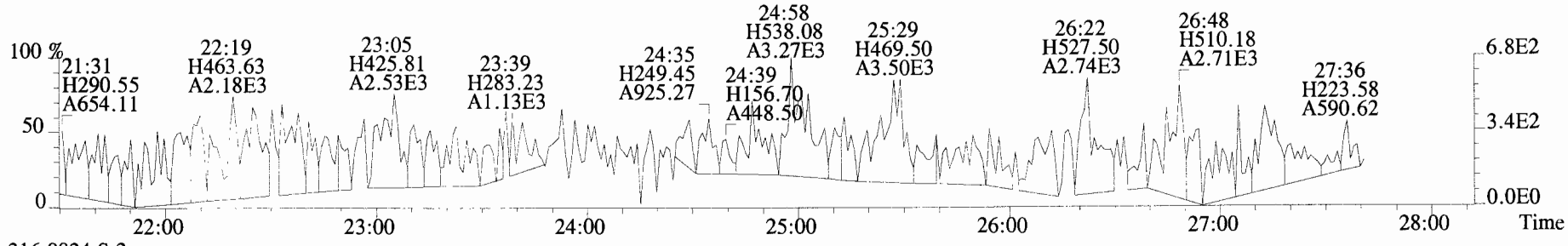
File:191015D1 #1-493 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



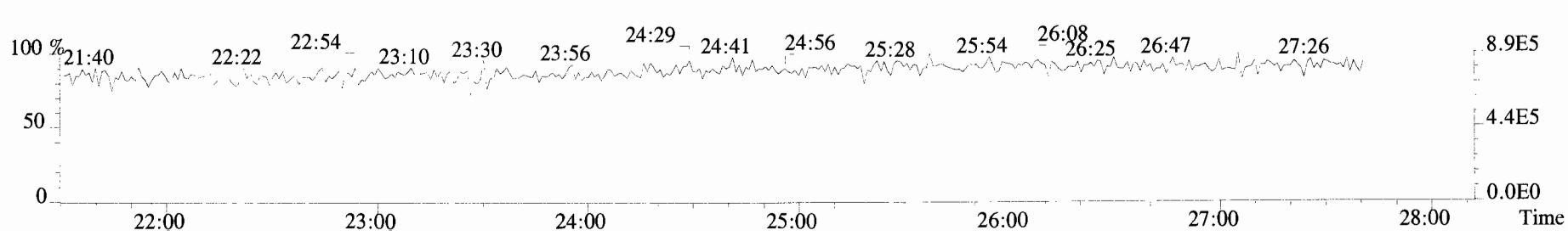
341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

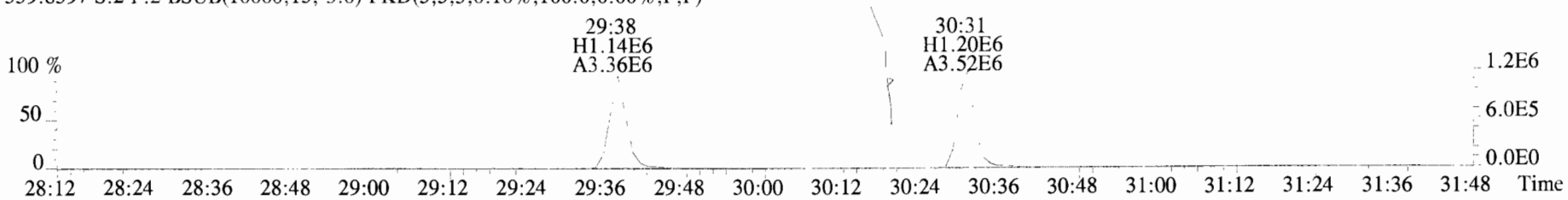


316.9824 S:2

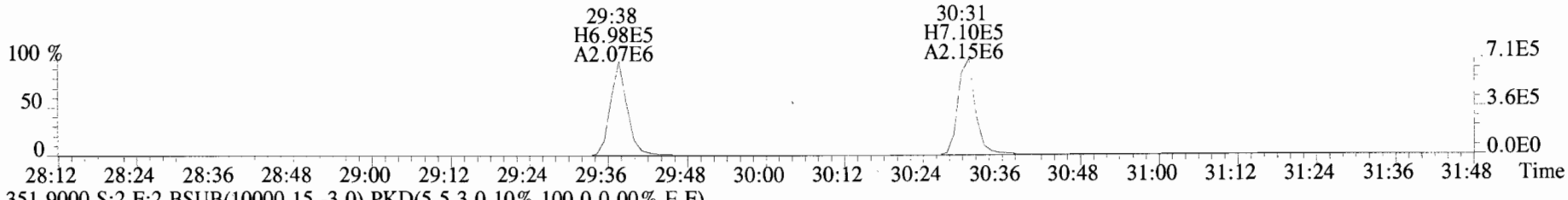


File:191015D1 #1-210 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5

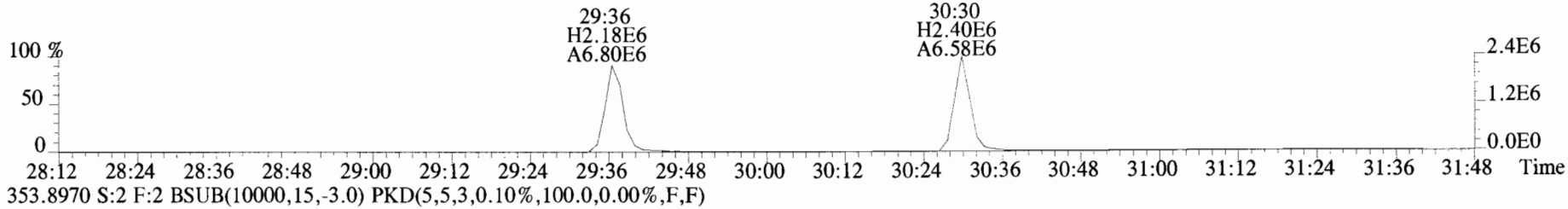
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



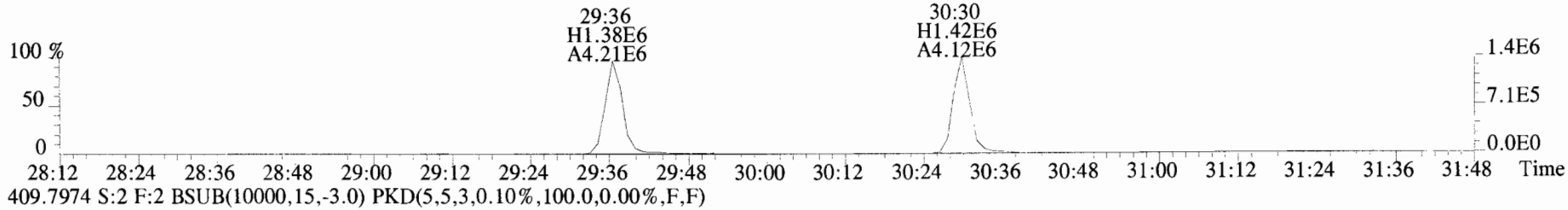
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



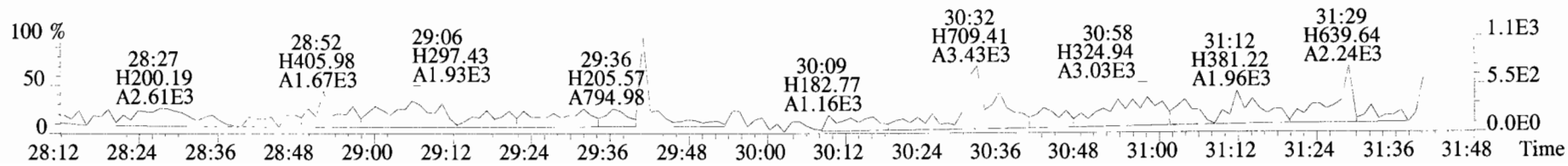
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



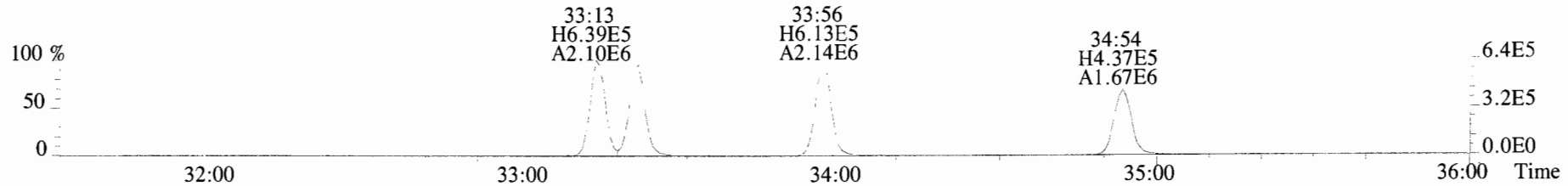
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



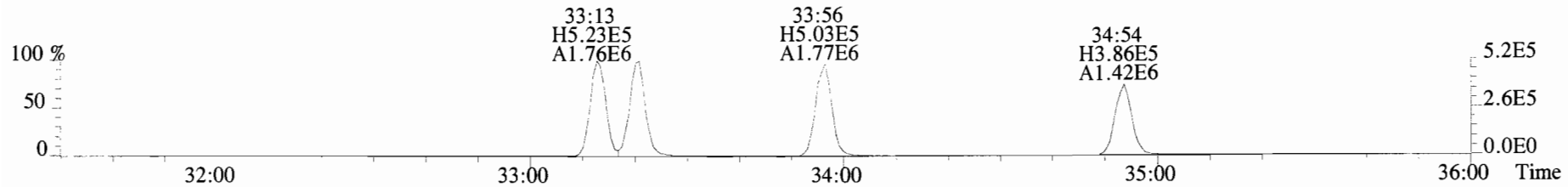
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



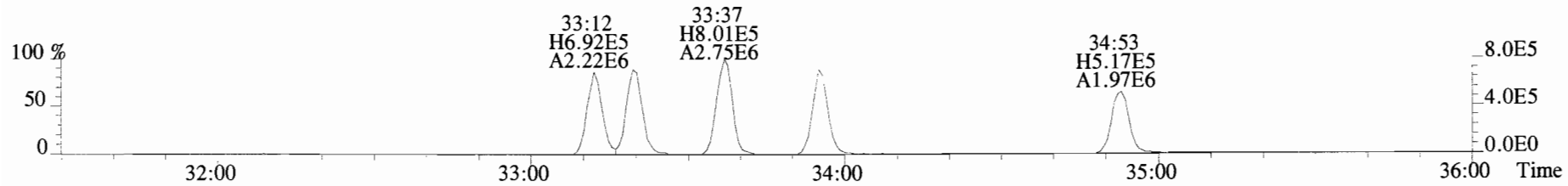
File:191015D1 #1-385 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



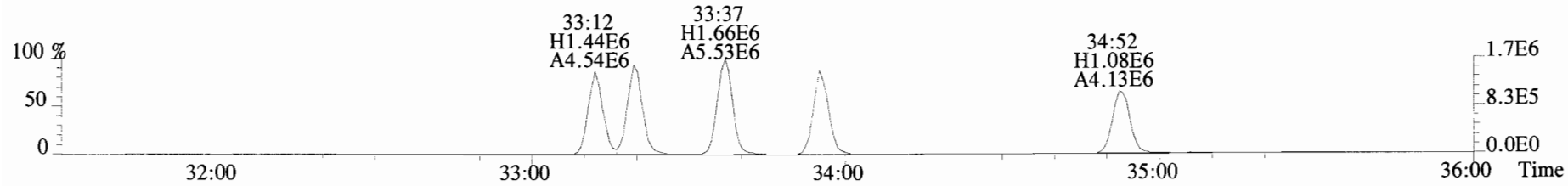
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



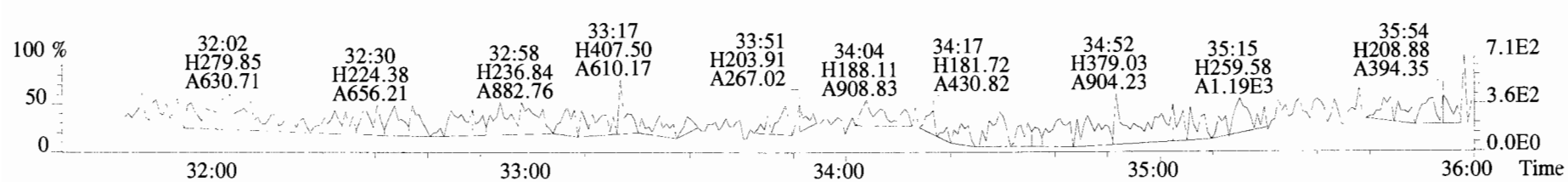
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



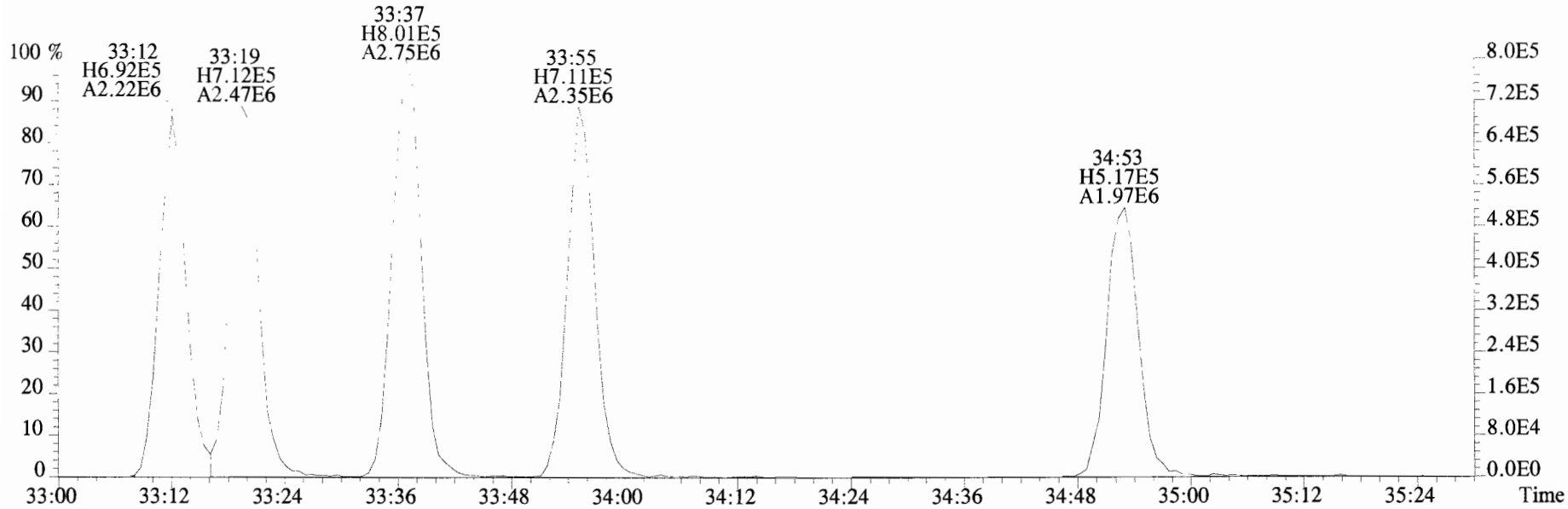
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



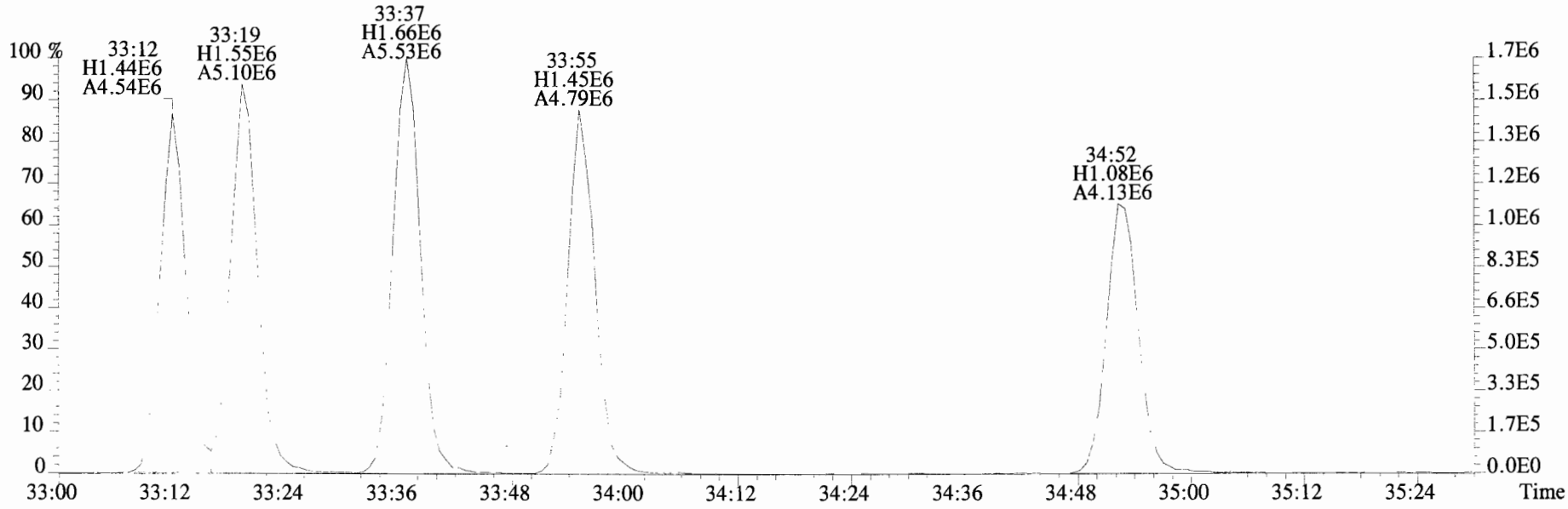
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



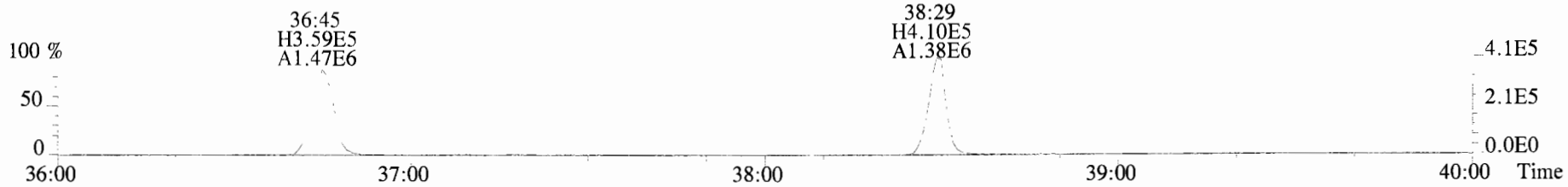
File:191015D1 #1-385 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



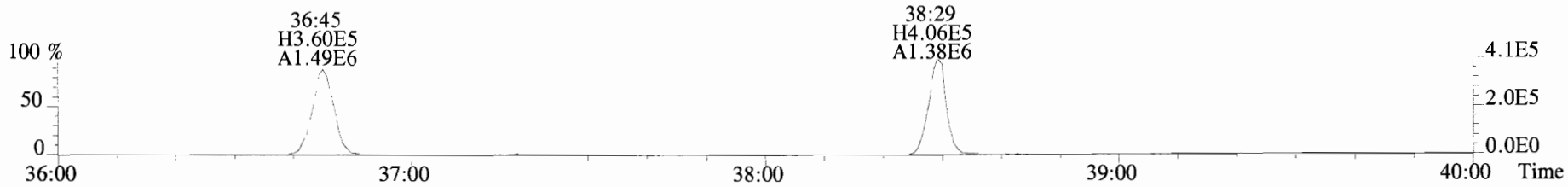
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



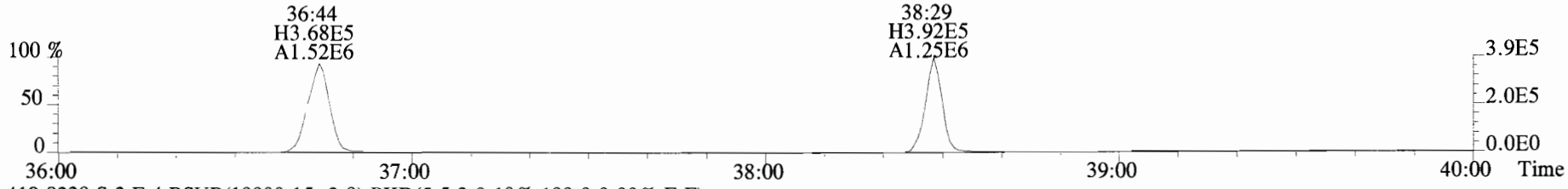
File:191015D1 #1-355 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



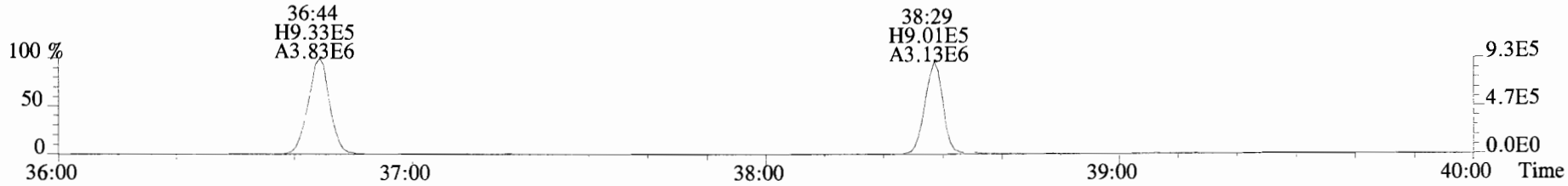
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



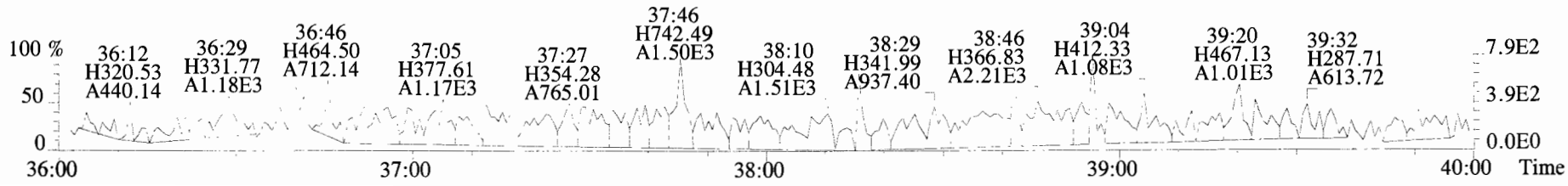
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



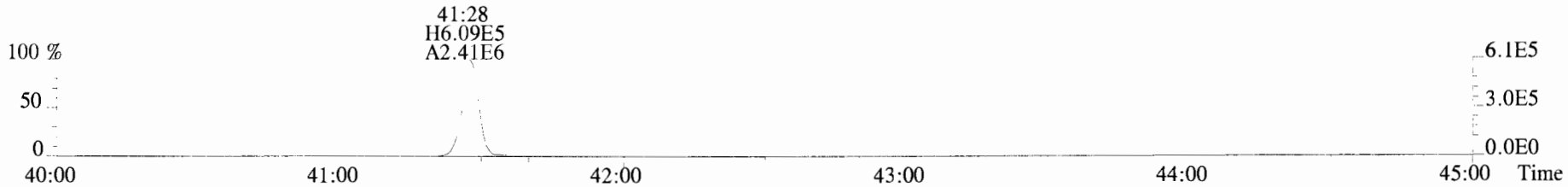
419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



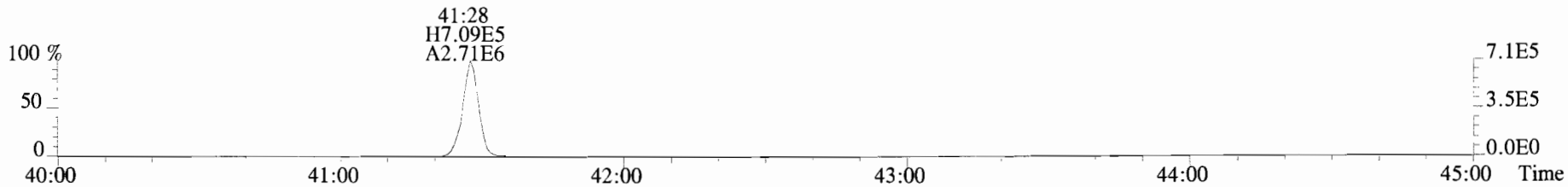
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



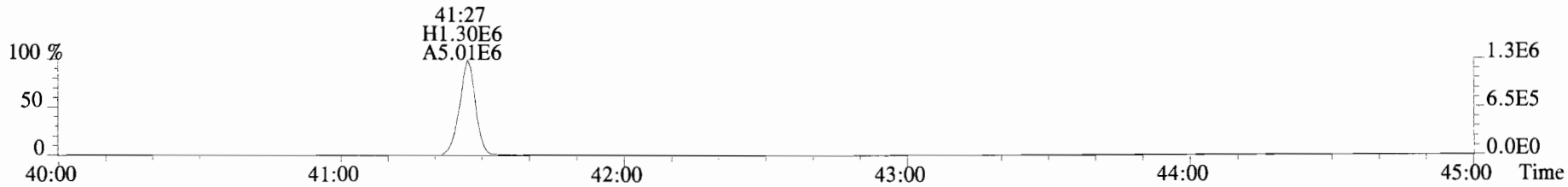
File:191015D1 #1-432 Acq:15-OCT-2019 13:03:43 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0092-BS1 OPR 1 Exp:OCDD_DB5
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



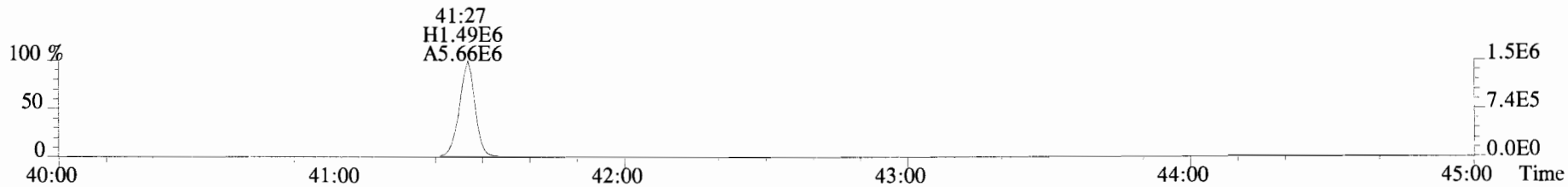
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



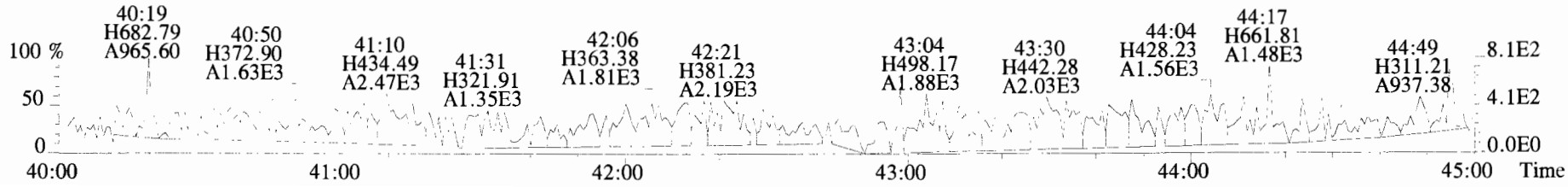
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



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



Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
2,3,7,8 TCDD	*	*	n	0.91	NotF	*		147	2.5	0.561
1,2,3,7,8-PeCDD	*	*	n	0.90	NotF	*		158	2.5	0.562
1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF	*		122	2.5	0.667
1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF	*		122	2.5	0.732
1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF	*		122	2.5	0.711
1,2,3,4,6,7,8-HpCDD	*	*	n	0.98	NotF	*		107	2.5	0.635
OCDD	*	*	n	0.96	NotF	*		162	2.5	1.19
2,3,7,8-TCDF	*	*	n	0.95	NotF	*		190	2.5	0.525
1,2,3,7,8-PeCDF	*	*	n	0.96	NotF	*		163	2.5	0.602
2,3,4,7,8-PeCDF	*	*	n	1.01	NotF	*		163	2.5	0.578
1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF	*		130	2.5	0.357
1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF	*		130	2.5	0.342
2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF	*		130	2.5	0.379
1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF	*		130	2.5	0.453
1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF	*		158	2.5	0.610
1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF	*		158	2.5	0.517
OCDF	*	*	n	0.95	NotF	*		165	2.5	1.08

Name	Conc	EMPC	Qual	noise	DL
Total Tetra Dioxins	*	*		147	0.561
Total Penta-Dioxins	*	*		158	0.562
Total Hexa-Dioxins	*	*		122	0.707
Total Hepta-Dioxins	*	*		107	0.635
Total Tetra-Furans	*	*		190	0.525
Total Penta-Furans	0.0000	0.0000		163	0.589
Total Hexa-Furans	*	*		130	0.380
Total Hepta-Furans	*	*		158	0.566

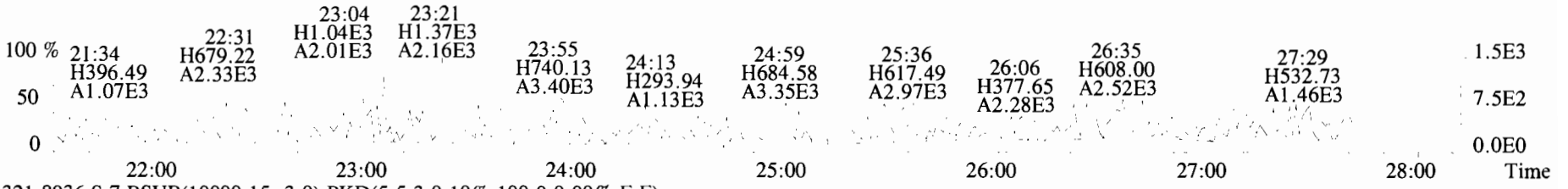
								Rec	Qual
IS	13C-2,3,7,8-TCDD	9.18e+06	0.76	y	1.10	26:18	2028.7	100	
IS	13C-1,2,3,7,8-PeCDD	7.54e+06	0.63	y	0.88	30:46	2070.6	102	
IS	13C-1,2,3,4,7,8-HxCDD	6.26e+06	1.22	y	0.64	34:05	2259.5	112	
IS	13C-1,2,3,6,7,8-HxCDD	6.85e+06	1.26	y	0.86	34:12	1852.9	91.5	
IS	13C-1,2,3,7,8,9-HxCDD	6.95e+06	1.25	y	0.81	34:29	1995.8	98.5	
IS	13C-1,2,3,4,6,7,8-HpCDD	5.78e+06	1.02	y	0.65	37:56	2047.5	101	
IS	13C-OCDD	1.04e+07	0.89	y	0.58	41:13	4173.1	103	
IS	13C-2,3,7,8-TCDF	1.26e+07	0.82	y	1.03	25:31	1953.6	96.4	
IS	13C-1,2,3,7,8-PeCDF	1.15e+07	1.58	y	0.85	29:36	2153.5	106	
IS	13C-2,3,4,7,8-PeCDF	1.15e+07	1.65	y	0.85	30:30	2188.8	108	
IS	13C-1,2,3,4,7,8-HxCDF	7.60e+06	0.49	y	0.83	33:11	2116.8	104	
IS	13C-1,2,3,6,7,8-HxCDF	8.68e+06	0.49	y	1.03	33:19	1942.5	95.9	
IS	13C-2,3,4,6,7,8-HxCDF	7.75e+06	0.48	y	0.95	33:55	1881.5	92.9	
IS	13C-1,2,3,7,8,9-HxCDF	7.18e+06	0.48	y	0.83	34:52	2009.3	99.2	
IS	13C-1,2,3,4,6,7,8-HpCDF	6.17e+06	0.40	y	0.76	36:43	1887.1	93.1	
IS	13C-1,2,3,4,7,8,9-HpCDF	5.17e+06	0.42	y	0.58	38:28	2060.2	102	
IS	13C-OCDF	1.22e+07	0.90	y	0.69	41:26	4101.6	101	
C/Up	37Cl-2,3,7,8-TCDD	4.45e+06			1.20	26:19	898.28	111	
RS/RT	13C-1,2,3,4-TCDD	8.37e+06	0.79	y	1.00	25:45	2026.0		
RS	13C-1,2,3,4 TCDF	1.26e+07	0.82	y	1.00	24:20	2026.0		
RS/RT	13C-1,2,3,4,6,9-HxCDF	8.75e+06	0.48	y	1.00	33:36	2026.0		

Integrations by Analyst: DB Date: 10/16/19

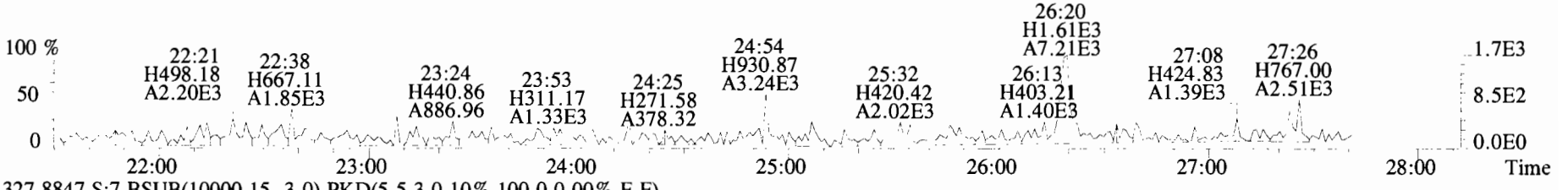
Reviewed by Analyst: CT Date: 10/21/19

File:191015D1 #1-493 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5

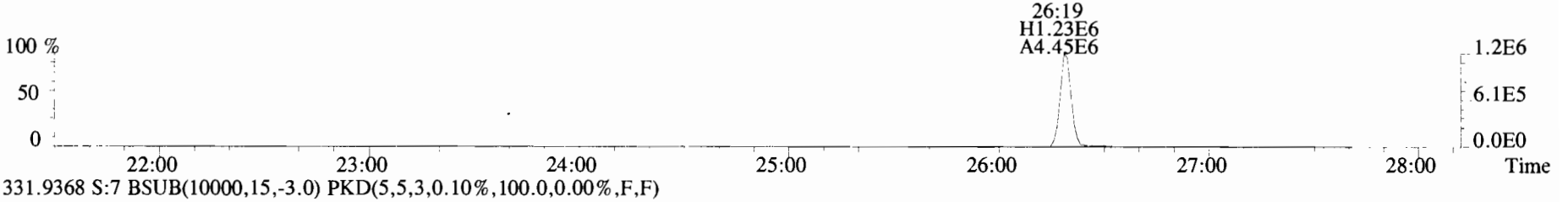
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



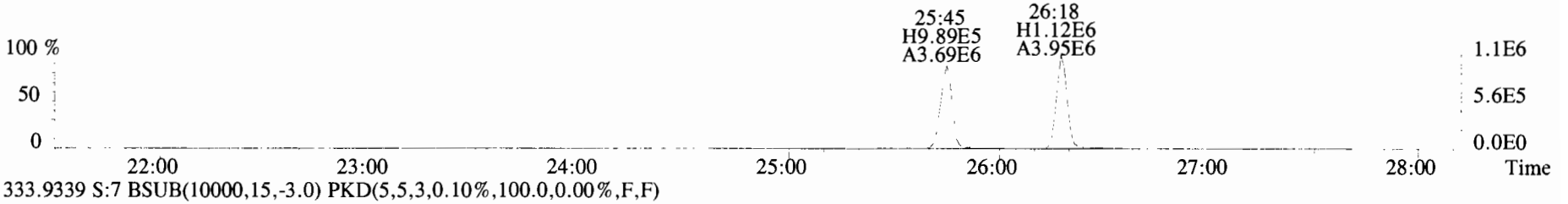
321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



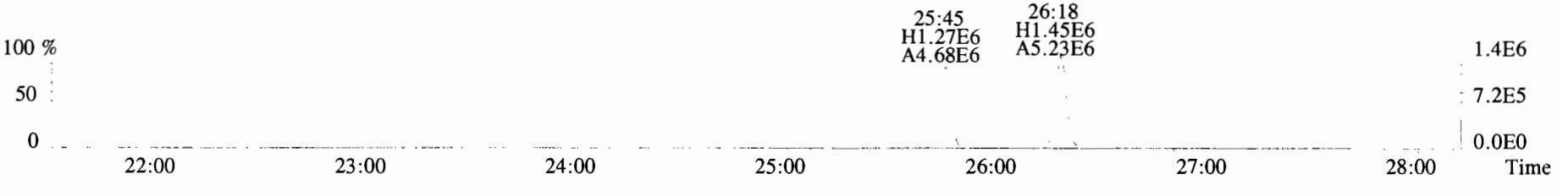
327.8847 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



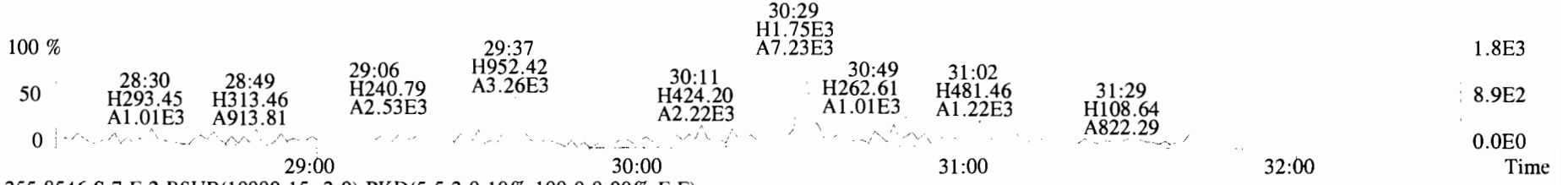
331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



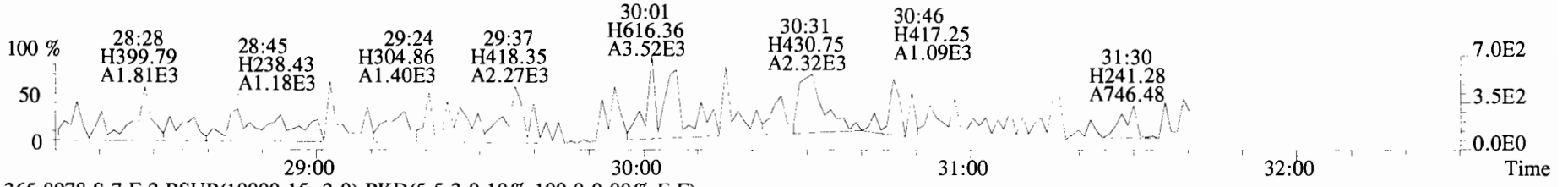
333.9339 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



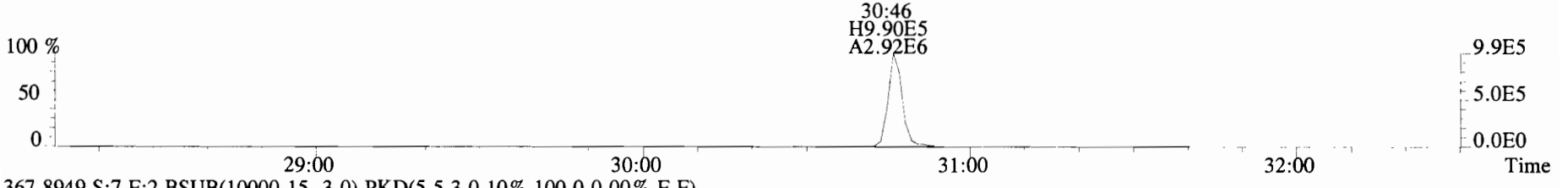
File:191015D1 #1-210 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



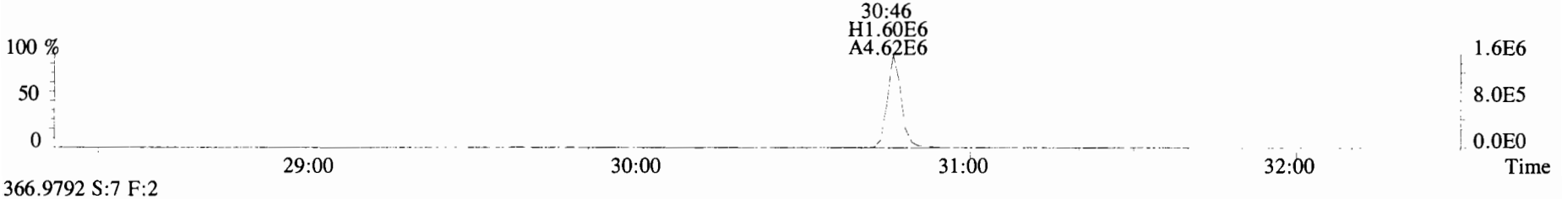
355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



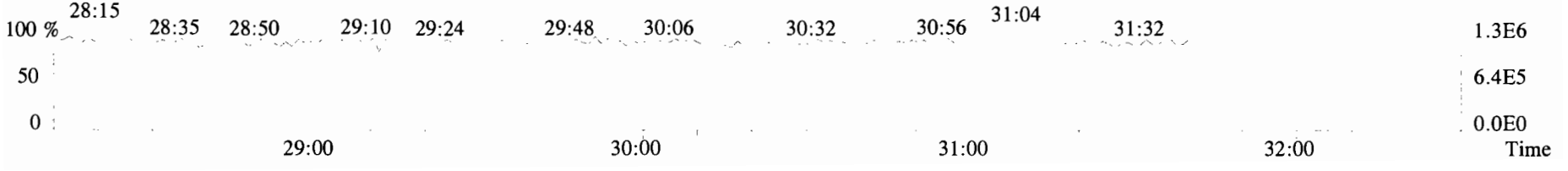
365.8978 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

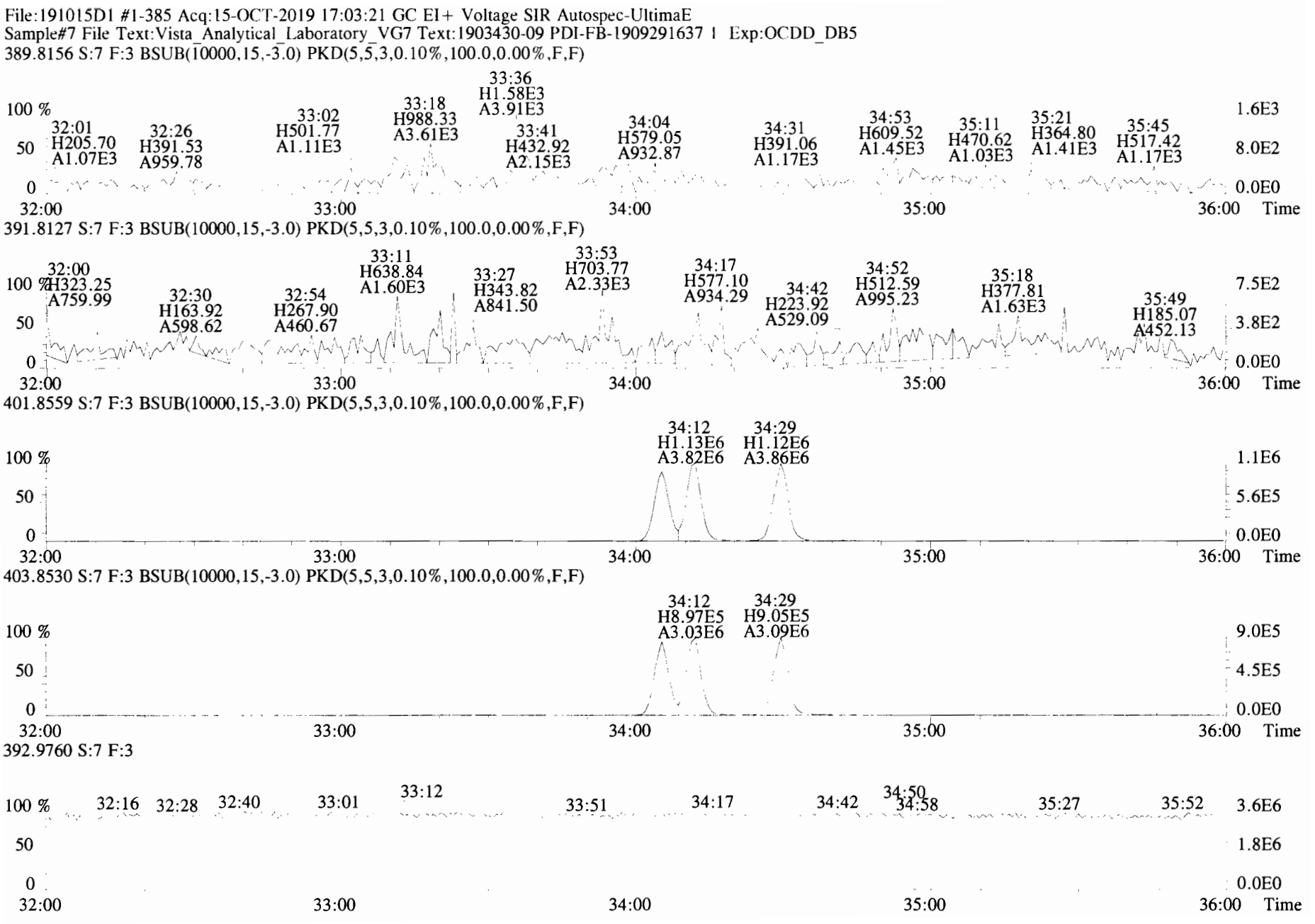


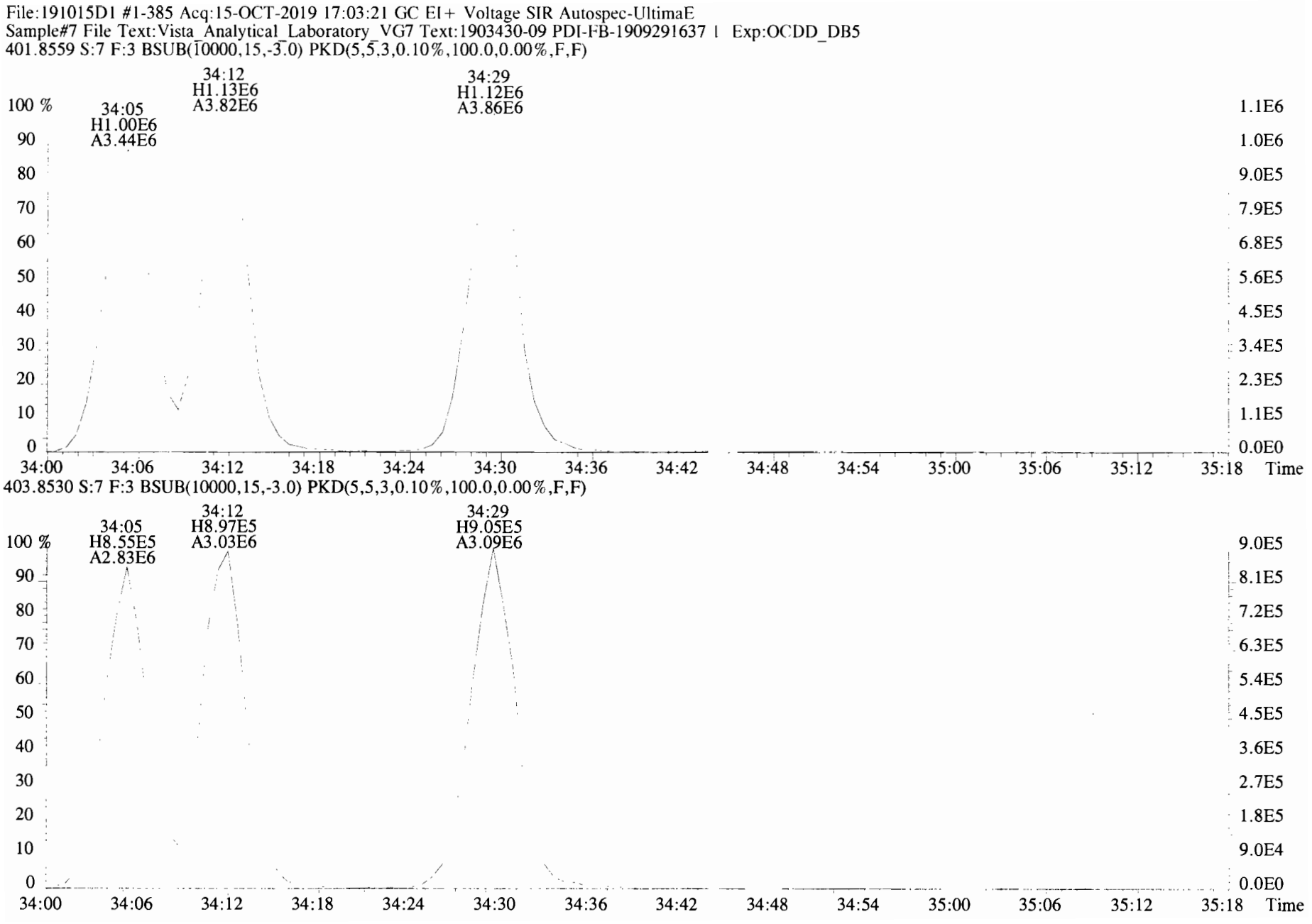
367.8949 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

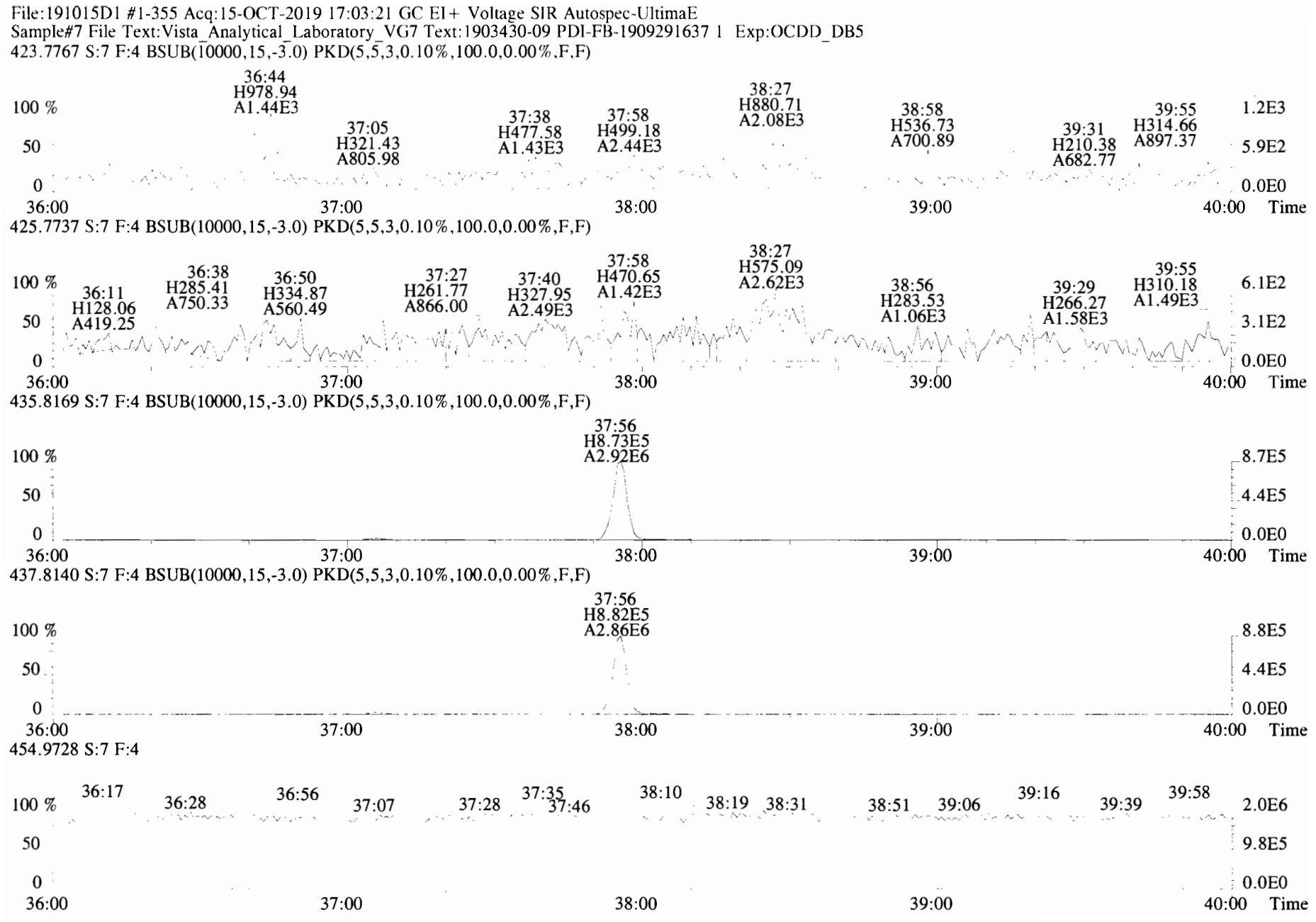


366.9792 S:7 F:2

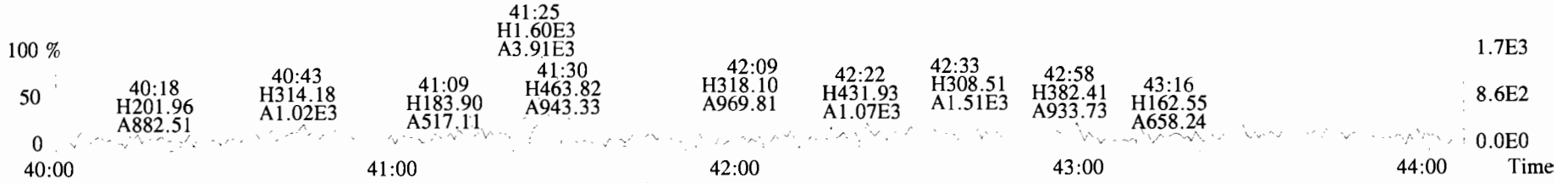



File:191015D1 #1-385 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:01 H205.70 A1.07E3
32:26 H391.53 A959.78
33:02 H501.77 A1.11E3
33:18 H988.33 A3.61E3
33:36 H1.58E3 A3.91E3
33:41 H432.92 A2.15E3
34:04 H579.05 A932.87
34:31 H391.06 A1.17E3
34:53 H609.52 A1.45E3
35:11 H470.62 A1.03E3
35:21 H364.80 A1.41E3
35:45 H517.42 A1.17E3
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:00 H323.25 A759.99
32:30 H163.92 A598.62
32:54 H267.90 A460.67
33:11 H638.84 A1.60E3
33:27 H343.82 A841.50
33:53 H703.77 A2.33E3
34:17 H577.10 A934.29
34:42 H223.92 A529.09
34:52 H512.59 A995.23
35:18 H377.81 A1.63E3
35:49 H185.07 A452.13
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:12 H1.13E6 A3.82E6
34:29 H1.12E6 A3.86E6
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:12 H8.97E5 A3.03E6
34:29 H9.05E5 A3.09E6
392.9760 S:7 F:3
32:16
32:28
32:40
33:01
33:12
33:51
34:17
34:42
34:50
34:58
35:27
35:52
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
1.6E3
8.0E2
0.0E0
7.5E2
3.8E2
1.1E6
5.6E5
9.0E5
4.5E5
3.6E6
1.8E6

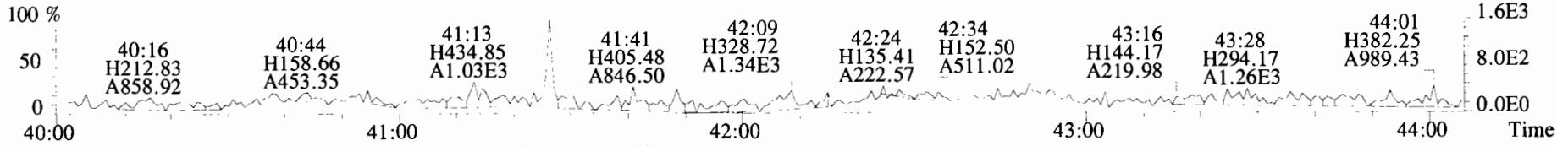

File:191015D1 #1-385 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 I Exp:OCDD_DB5
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:05 H1.00E6 A3.44E6
34:12 H1.13E6 A3.82E6
34:29 H1.12E6 A3.86E6
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:05 H8.55E5 A2.83E6
34:12 H8.97E5 A3.03E6
34:29 H9.05E5 A3.09E6
Time


File:191015D1 #1-355 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:44 H978.94 A1.44E3
37:05 H321.43 A805.98
37:38 H477.58 A1.43E3
37:58 H499.18 A2.44E3
38:27 H880.71 A2.08E3
38:58 H536.73 A700.89
39:31 H210.38 A682.77
39:55 H314.66 A897.37
100 %
50
0
1.2E3
5.9E2
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
425.7737 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:11 H128.06 A419.25
36:38 H285.41 A750.33
36:50 H334.87 A560.49
37:27 H261.77 A866.00
37:40 H327.95 A2.49E3
37:58 H470.65 A1.42E3
38:27 H575.09 A2.62E3
38:56 H283.53 A1.06E3
39:29 H266.27 A1.58E3
39:55 H310.18 A1.49E3
100 %
50
0
6.1E2
3.1E2
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
435.8169 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:56 H8.73E5 A2.92E6
100 %
50
0
8.7E5
4.4E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
437.8140 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:56 H8.82E5 A2.86E6
100 %
50
0
8.8E5
4.4E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
454.9728 S:7 F:4
36:17
36:28
36:56
37:07
37:28
37:35
37:46
38:10
38:19
38:31
38:51
39:06
39:16
39:39
39:58
100 %
50
0
2.0E6
9.8E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time

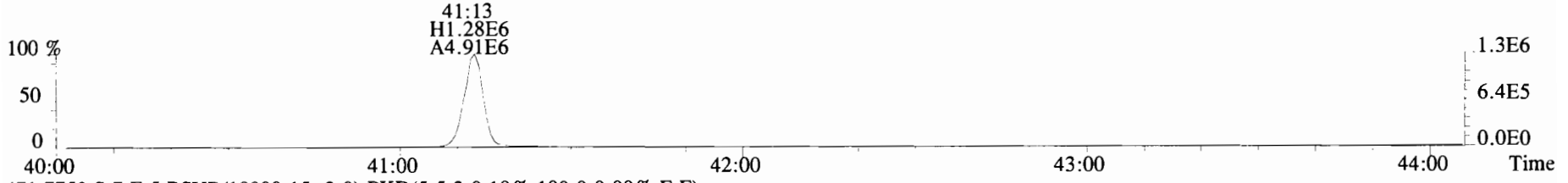
File:191015D1 #1-432 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



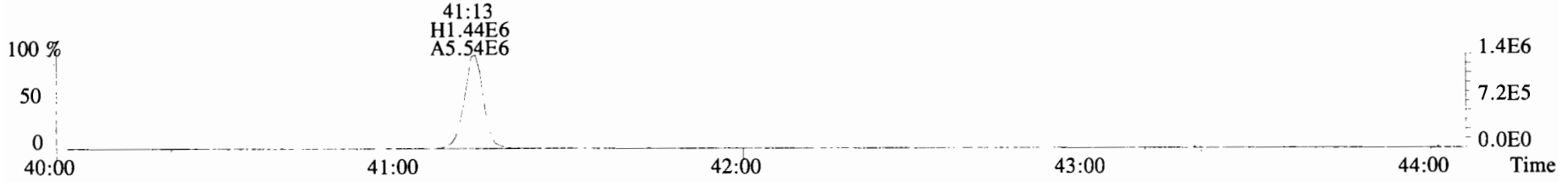
459.7348 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



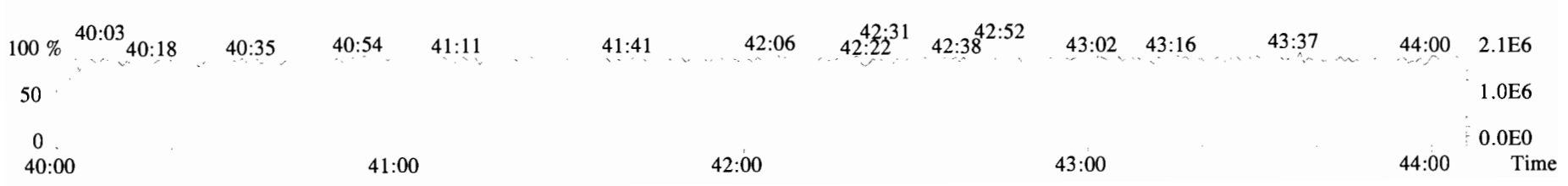
469.7780 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

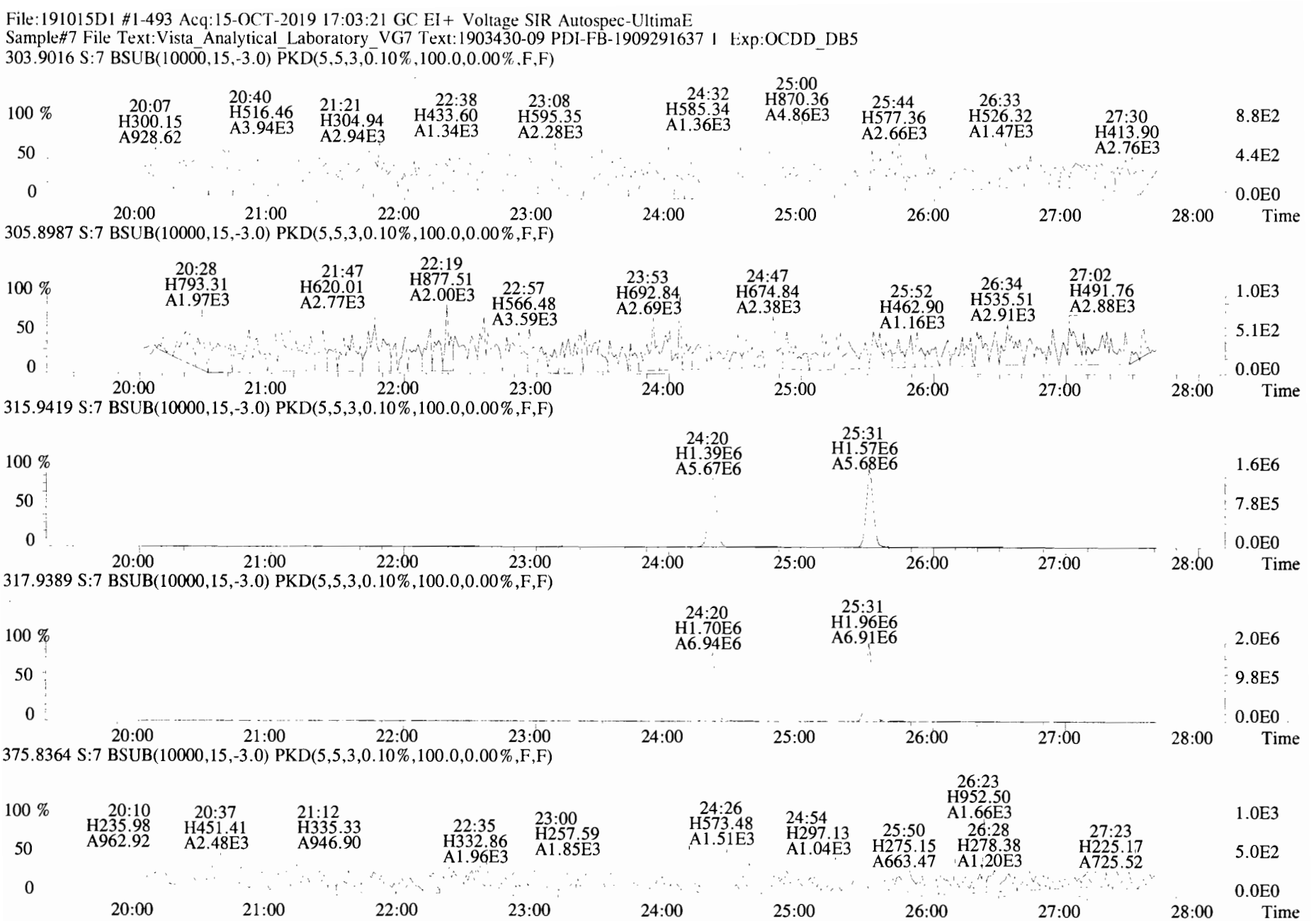


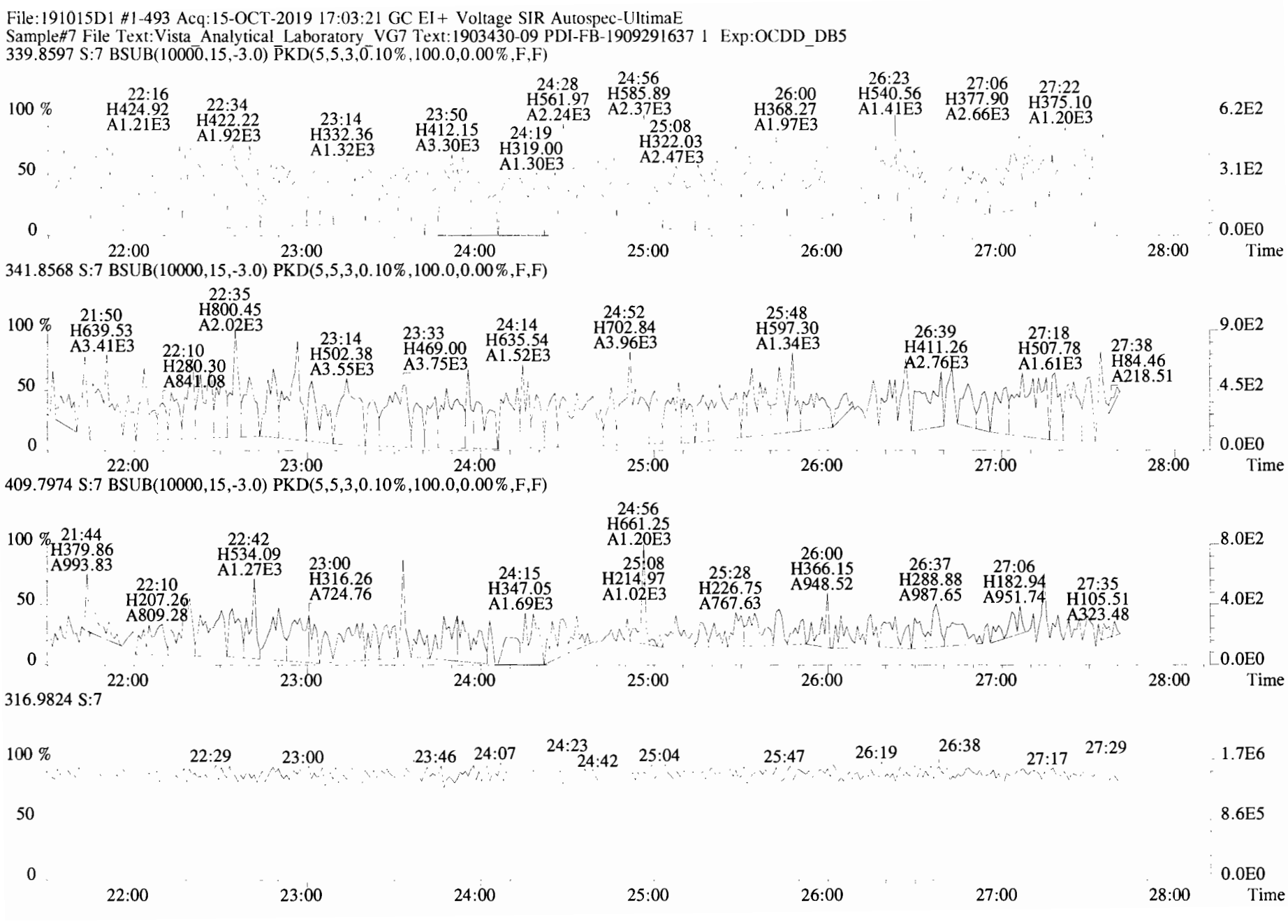
471.7750 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

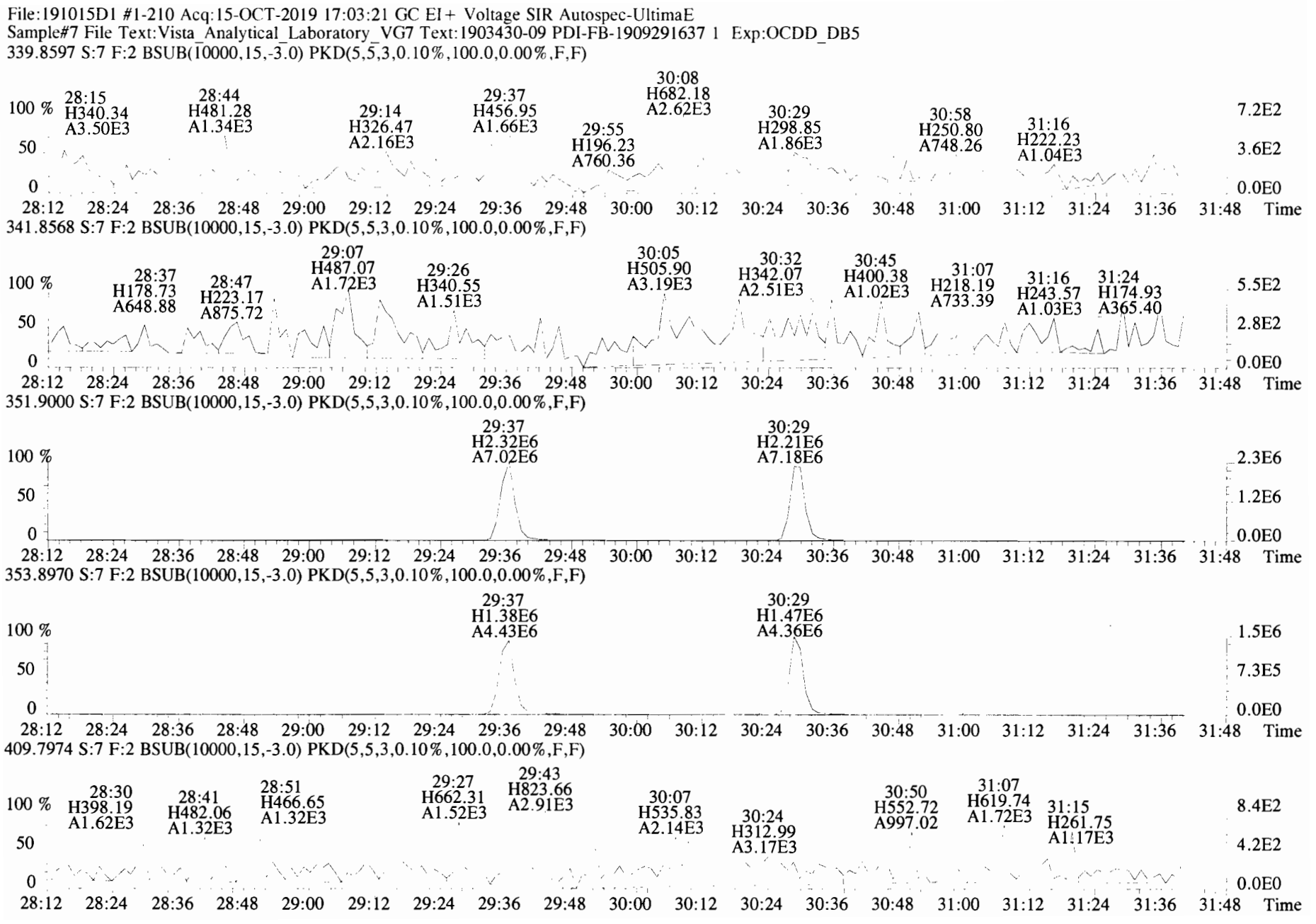


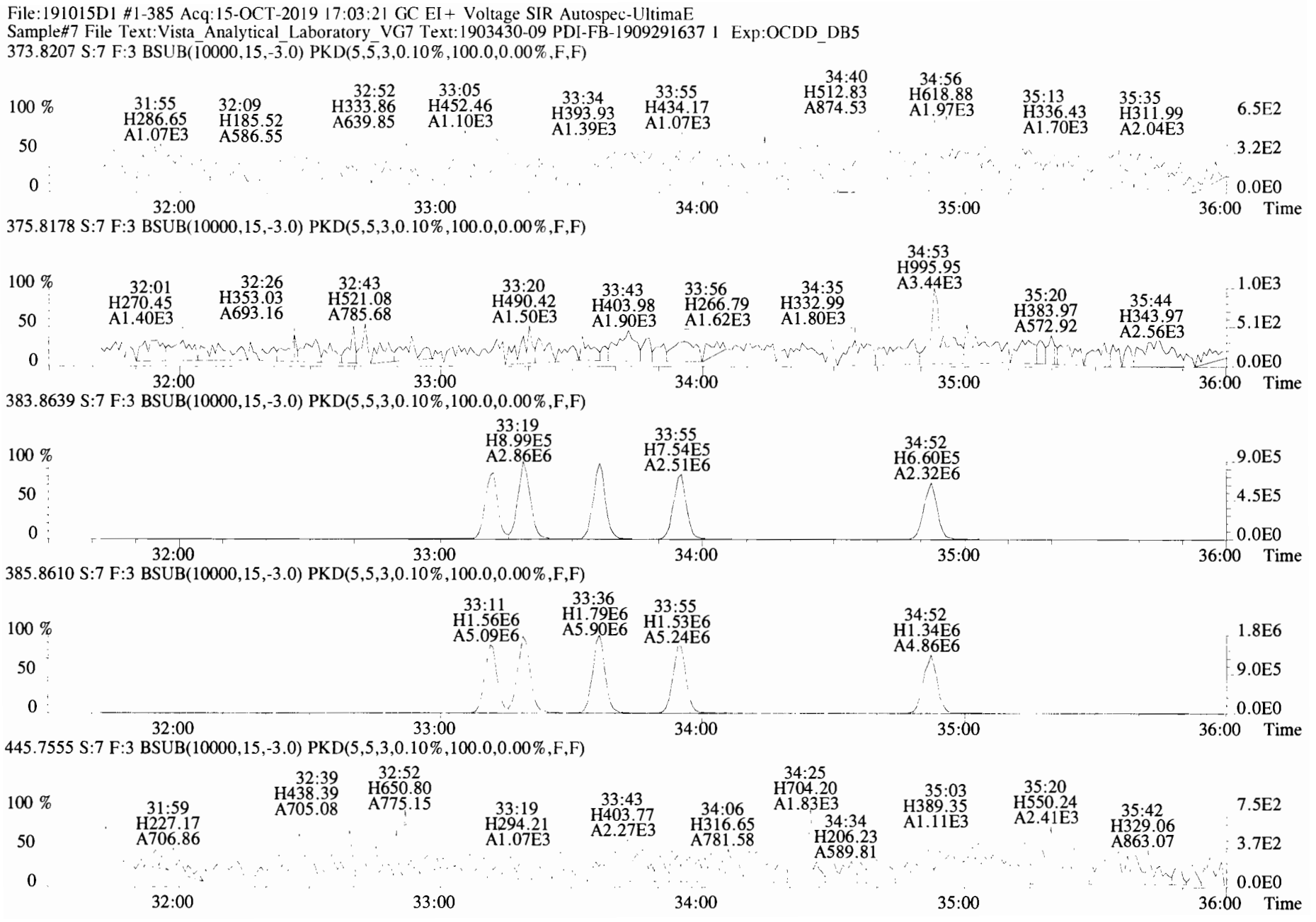
454.9728 S:7 F:5

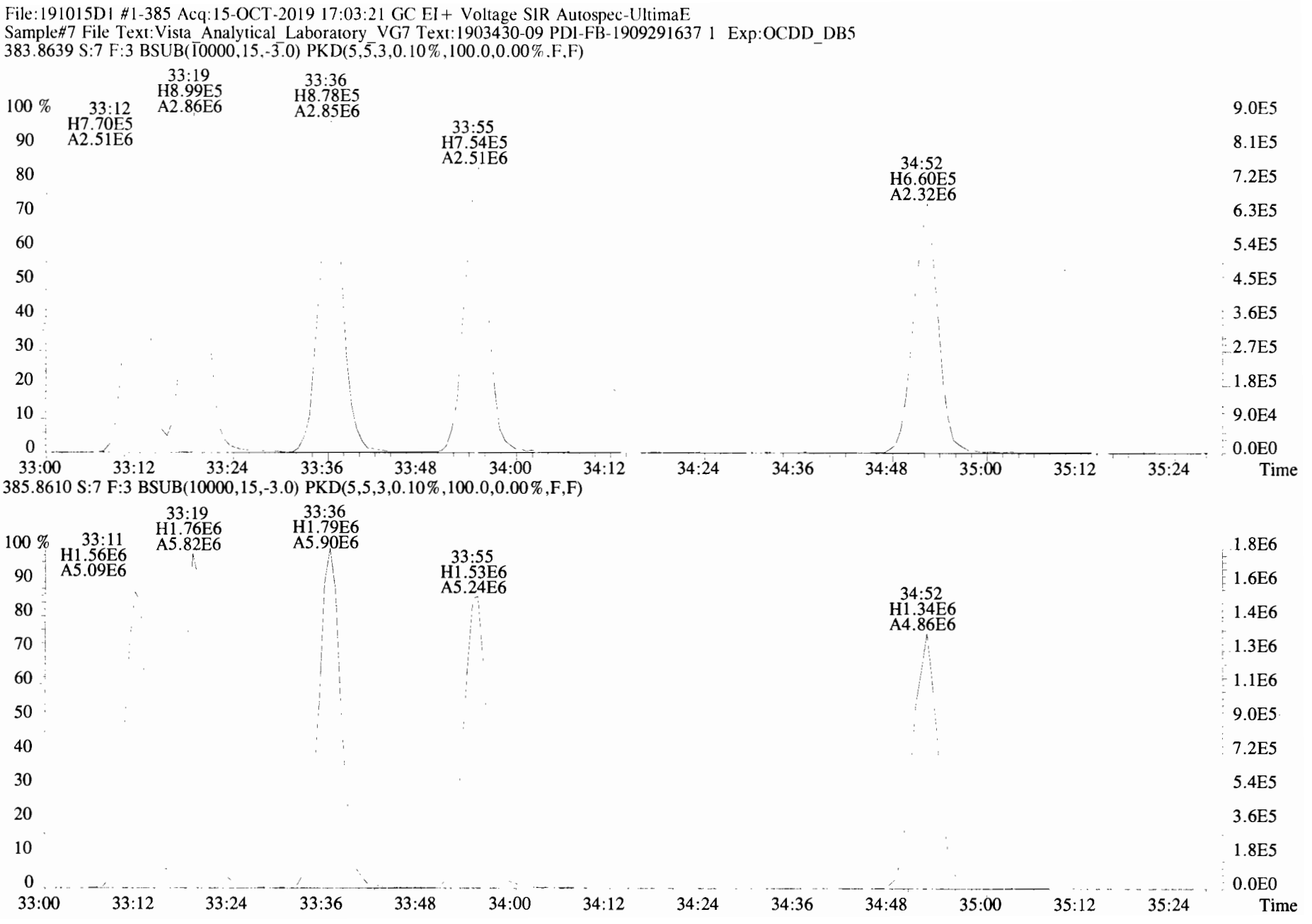



File:191015D1 #1-493 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:07 H300.15 A928.62
20:40 H516.46 A3.94E3
21:21 H304.94 A2.94E3
22:38 H433.60 A1.34E3
23:08 H595.35 A2.28E3
24:32 H585.34 A1.36E3
25:00 H870.36 A4.86E3
25:44 H577.36 A2.66E3
26:33 H526.32 A1.47E3
27:30 H413.90 A2.76E3
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:28 H793.31 A1.97E3
21:47 H620.01 A2.77E3
22:19 H877.51 A2.00E3
22:57 H566.48 A3.59E3
23:53 H692.84 A2.69E3
24:47 H674.84 A2.38E3
25:52 H462.90 A1.16E3
26:34 H535.51 A2.91E3
27:02 H491.76 A2.88E3
315.9419 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:20 H1.39E6 A5.67E6
25:31 H1.57E6 A5.68E6
317.9389 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:20 H1.70E6 A6.94E6
25:31 H1.96E6 A6.91E6
375.8364 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:10 H235.98 A962.92
20:37 H451.41 A2.48E3
21:12 H335.33 A946.90
22:35 H332.86 A1.96E3
23:00 H257.59 A1.85E3
24:26 H573.48 A1.51E3
24:54 H297.13 A1.04E3
25:50 H275.15 A663.47
26:23 H952.50 A1.66E3
26:28 H278.38 A1,20E3
27:23 H225.17 A725.52
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
8.8E2
4.4E2
0.0E0
1.0E3
5.1E2
1.6E6
7.8E5
2.0E6
9.8E5
5.0E2

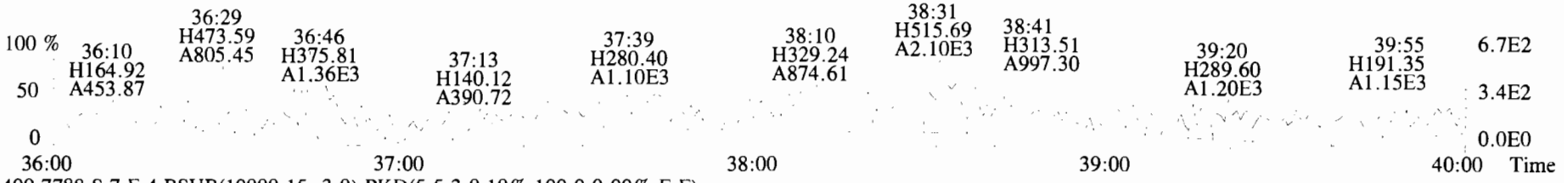

File:191015D1 #1-493 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:16 H424.92 A1.21E3
22:34 H422.22 A1.92E3
23:14 H332.36 A1.32E3
23:50 H412.15 A3.30E3
24:19 H319.00 A1.30E3
24:28 H561.97 A2.24E3
24:56 H585.89 A2.37E3
25:08 H322.03 A2.47E3
26:00 H368.27 A1.97E3
26:23 H540.56 A1.41E3
27:06 H377.90 A2.66E3
27:22 H375.10 A1.20E3
100 %
50
0
6.2E2
3.1E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
341.8568 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:50 H639.53 A3.41E3
22:10 H280.30 A841.08
22:35 H800.45 A2.02E3
23:14 H502.38 A3.55E3
23:33 H469.00 A3.75E3
24:14 H635.54 A1.52E3
24:52 H702.84 A3.96E3
25:48 H597.30 A1.34E3
26:39 H411.26 A2.76E3
27:18 H507.78 A1.61E3
27:38 H84.46 A218.51
100 %
50
0
9.0E2
4.5E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
409.7974 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:44 H379.86 A993.83
22:10 H207.26 A809.28
22:42 H534.09 A1.27E3
23:00 H316.26 A724.76
24:15 H347.05 A1.69E3
24:56 H661.25 A1.20E3
25:08 H214.97 A1.02E3
25:28 H226.75 A767.63
26:00 H366.15 A948.52
26:37 H288.88 A987.65
27:06 H182.94 A951.74
27:35 H105.51 A323.48
100 %
50
0
8.0E2
4.0E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
316.9824 S:7
22:29
23:00
23:46
24:07
24:23
24:42
25:04
25:47
26:19
26:38
27:17
27:29
100 %
50
0
1.7E6
8.6E5
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time


File:191015D1 #1-210 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:15 H340.34 A3.50E3
28:44 H481.28 A1.34E3
29:14 H326.47 A2.16E3
29:37 H456.95 A1.66E3
29:55 H196.23 A760.36
30:08 H682.18 A2.62E3
30:29 H298.85 A1.86E3
30:58 H250.80 A748.26
31:16 H222.23 A1.04E3
341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:37 H178.73 A648.88
28:47 H223.17 A875.72
29:07 H487.07 A1.72E3
29:26 H340.55 A1.51E3
30:05 H505.90 A3.19E3
30:32 H342.07 A2.51E3
30:45 H400.38 A1.02E3
31:07 H218.19 A733.39
31:16 H243.57 A1.03E3
31:24 H174.93 A365.40
351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:37 H2.32E6 A7.02E6
30:29 H2.21E6 A7.18E6
353.8970 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:37 H1.38E6 A4.43E6
30:29 H1.47E6 A4.36E6
409.7974 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:30 H398.19 A1.62E3
28:41 H482.06 A1.32E3
28:51 H466.65 A1.32E3
29:27 H662.31 A1.52E3
29:43 H823.66 A2.91E3
30:07 H535.83 A2.14E3
30:24 H312.99 A3.17E3
30:50 H552.72 A997.02
31:07 H619.74 A1.72E3
31:15 H261.75 A1.17E3
100 %
50
0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time
7.2E2
3.6E2
0.0E0
5.5E2
2.8E2
2.3E6
1.2E6
1.5E6
7.3E5
8.4E2
4.2E2

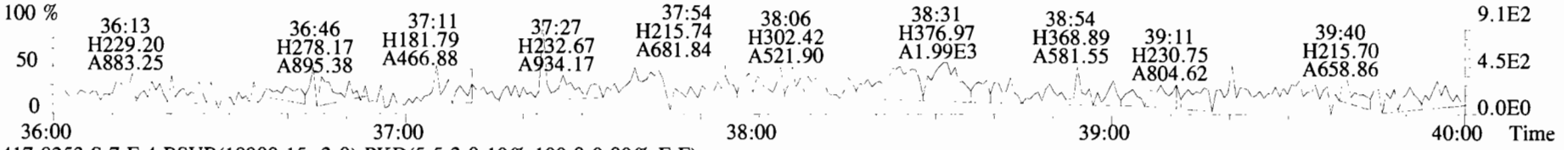

File:191015D1 #1-385 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:55 H286.65 A1.07E3
32:09 H185.52 A586.55
32:52 H333.86 A639.85
33:05 H452.46 A1.10E3
33:34 H393.93 A1.39E3
33:55 H434.17 A1.07E3
34:40 H512.83 A874.53
34:56 H618.88 A1.97E3
35:13 H336.43 A1.70E3
35:35 H311.99 A2.04E3
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:01 H270.45 A1.40E3
32:26 H353.03 A693.16
32:43 H521.08 A785.68
33:20 H490.42 A1.50E3
33:43 H403.98 A1.90E3
33:56 H266.79 A1.62E3
34:35 H332.99 A1.80E3
34:53 H995.95 A3.44E3
35:20 H383.97 A572.92
35:44 H343.97 A2.56E3
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:19 H8.99E5 A2.86E6
33:55 H7.54E5 A2.51E6
34:52 H6.60E5 A2.32E6
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:11 H1.56E6 A5.09E6
33:36 H1.79E6 A5.90E6
33:55 H1.53E6 A5.24E6
34:52 H1.34E6 A4.86E6
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:59 H227.17 A706.86
32:39 H438.39 A705.08
32:52 H650.80 A775.15
33:19 H294.21 A1.07E3
33:43 H403.77 A2.27E3
34:06 H316.65 A781.58
34:25 H704.20 A1.83E3
34:34 H206.23 A589.81
35:03 H389.35 A1.11E3
35:20 H550.24 A2.41E3
35:42 H329.06 A863.07
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
6.5E2
3.2E2
0.0E0
1.0E3
5.1E2
9.0E5
4.5E5
1.8E6
9.0E5
7.5E2
3.7E2


File:191015D1 #1-385 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:12 H7.70E5 A2.51E6
33:19 H8.99E5 A2.86E6
33:36 H8.78E5 A2.85E6
33:55 H7.54E5 A2.51E6
34:52 H6.60E5 A2.32E6
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:11 H1.56E6 A5.09E6
33:19 H1.76E6 A5.82E6
33:36 H1.79E6 A5.90E6
33:55 H1.53E6 A5.24E6
34:52 H1.34E6 A4.86E6
100 %
90
80
70
60
50
40
30
20
10
0
9.0E5
8.1E5
7.2E5
6.3E5
5.4E5
4.5E5
3.6E5
2.7E5
1.8E5
9.0E4
0.0E0
1.8E6
1.6E6
1.4E6
1.3E6
1.1E6
9.0E5
7.2E5
5.4E5
3.6E5
1.8E5
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time

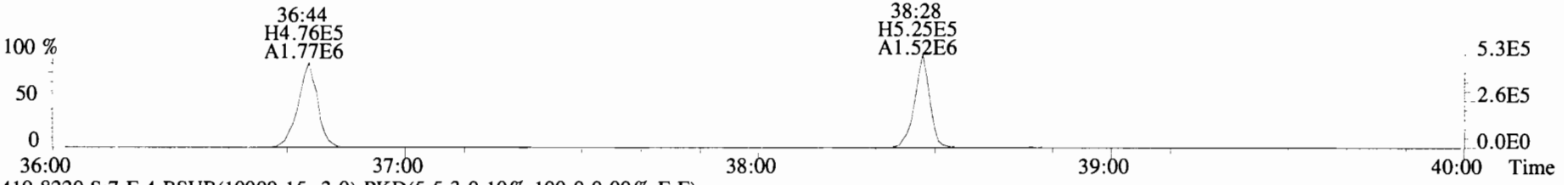
File:191015D1 #1-355 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

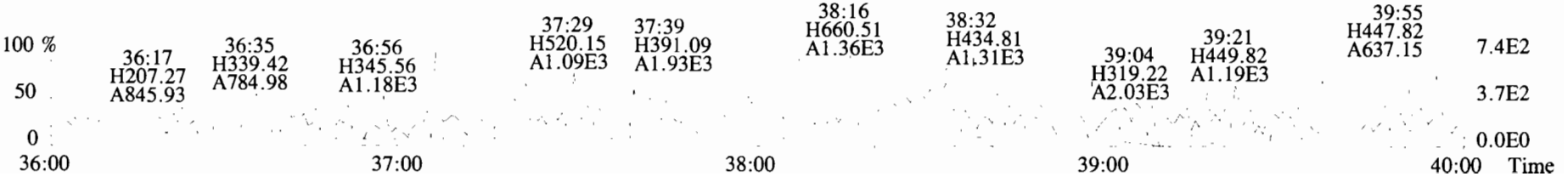


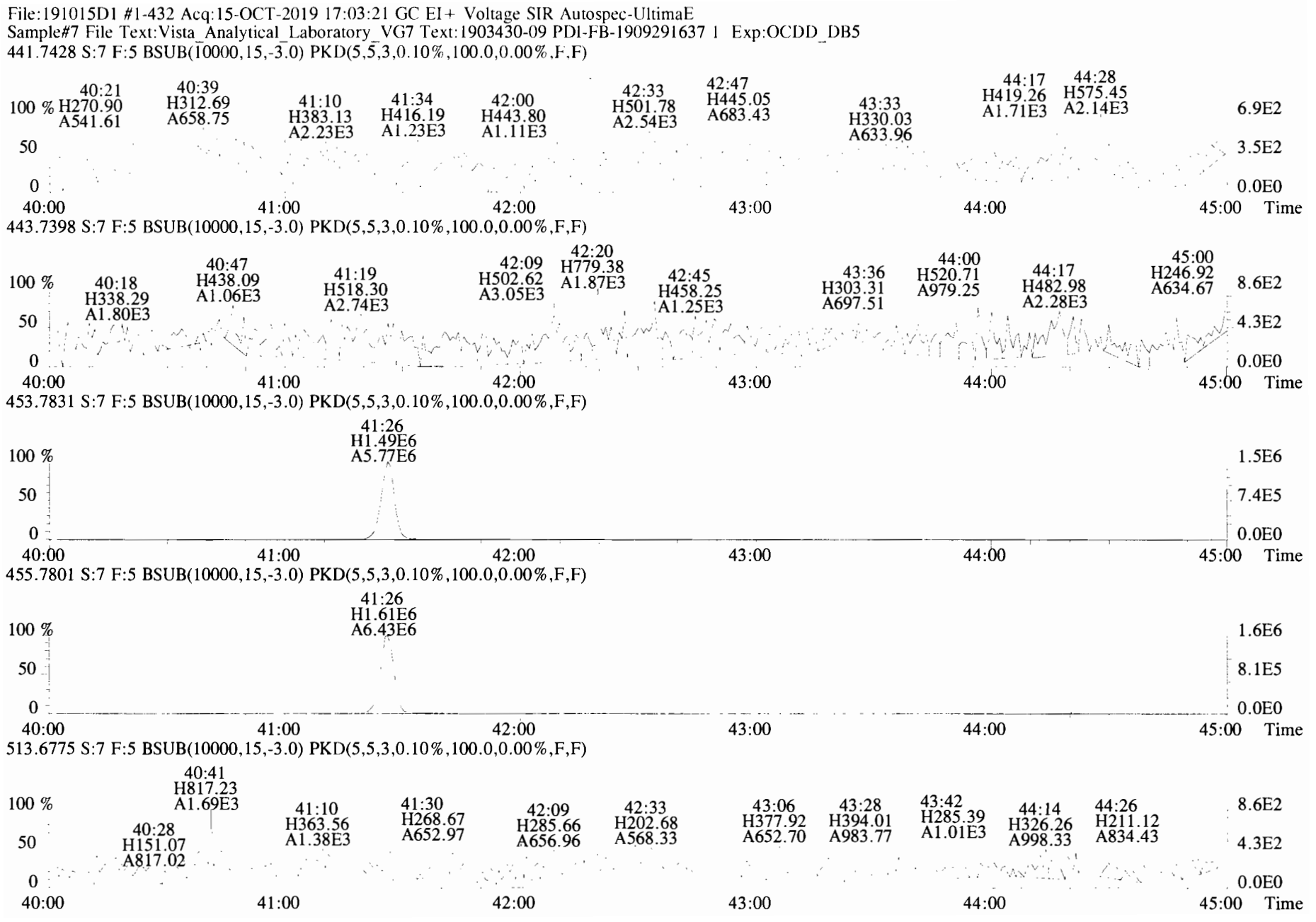
417.8253 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

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




File:191015D1 #1-432 Acq:15-OCT-2019 17:03:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-09 PDI-FB-1909291637 1 Exp:OCDD_DB5
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:21 H270.90 A541.61
40:39 H312.69 A658.75
41:10 H383.13 A2.23E3
41:34 H416.19 A1.23E3
42:00 H443.80 A1.11E3
42:33 H501.78 A2.54E3
42:47 H445.05 A683.43
43:33 H330.03 A633.96
44:17 H419.26 A1.71E3
44:28 H575.45 A2.14E3
6.9E2
3.5E2
0.0E0
443.7398 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:18 H338.29 A1.80E3
40:47 H438.09 A1.06E3
41:19 H518.30 A2.74E3
42:09 H502.62 A3.05E3
42:20 H779.38 A1.87E3
42:45 H458.25 A1.25E3
43:36 H303.31 A697.51
44:00 H520.71 A979.25
44:17 H482.98 A2.28E3
45:00 H246.92 A634.67
8.6E2
4.3E2
0.0E0
453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26 H1.49E6 A5.77E6
1.5E6
7.4E5
0.0E0
455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26 H1.61E6 A6.43E6
1.6E6
8.1E5
0.0E0
513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:28 H151.07 A817.02
40:41 H817.23 A1.69E3
41:10 H363.56 A1.38E3
41:30 H268.67 A652.97
42:09 H285.66 A656.96
42:33 H202.68 A568.33
43:06 H377.92 A652.70
43:28 H394.01 A983.77
43:42 H285.39 A1.01E3
44:14 H326.26 A998.33
44:26 H211.12 A834.43
8.6E2
4.3E2
0.0E0
100 %
50
0
40:00
41:00
42:00
43:00
44:00
45:00
Time

Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
2,3,7,8-TCDD	*	*	n	0.91	NotF	*		169	2.5	1.02
1,2,3,7,8 PeCDD	*	*	n	0.90	NotF	*		172	2.5	0.704
1,2,3,4,7,8 HxCDD	*	*	n	1.10	NotF	*		135	2.5	0.740
1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF	*		135	2.5	0.833
1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF	*		135	2.5	0.798
1,2,3,4,6,7,8-HpCDD	*	*	n	0.98	NotF	*		107	2.5	0.598
OCDD	*	*	n	0.96	NotF	*		164	2.5	1.17
2,3,7,8-TCDF	*	*	n	0.95	NotF	*		196	2.5	0.882
1,2,3,7,8-PeCDF	*	*	n	0.96	NotF	*		174	2.5	0.874
2,3,4,7,8-PeCDF	*	*	n	1.01	NotF	*		174	2.5	0.781
1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF	*		114	2.5	0.310
1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF	*		114	2.5	0.313
2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF	*		114	2.5	0.341
1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF	*		114	2.5	0.446
1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF	*		122	2.5	0.484
1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF	*		122	2.5	0.406
OCDF	*	*	n	0.95	NotF	*		144	2.5	0.848

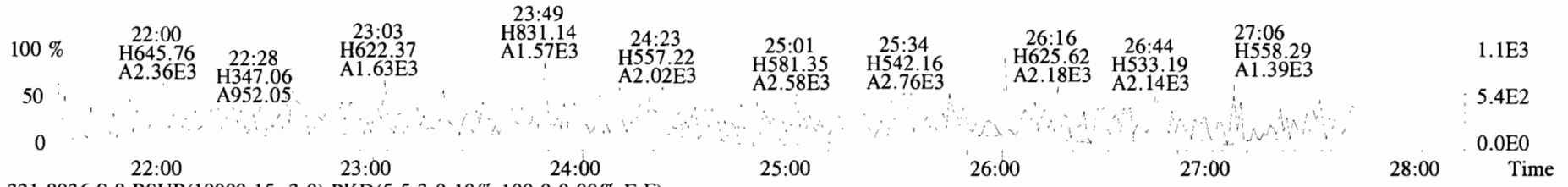
Name	Conc	EMPC	Qual	noise	DL
Total Tetra Dioxins	*	*		169	1.02
Total Penta Dioxins	*	*		172	0.704
Total Hexa-Dioxins	*	*		135	0.793
Total Hepta-Dioxins	*	*		107	0.598
Total Tetra-Furans	*	*		196	0.882
Total Penta-Furans	0.0000	0.0000		174	0.827
Total Hexa-Furans	*	*		114	0.349
Total Hepta-Furans	*	*		122	0.447

								Rec	Qual
IS	13C-2,3,7,8-TCDD	5.79e+06	0.77	y	1.10	26:18	1167.5	58.7	
IS	13C-1,2,3,7,8-PeCDD	6.25e+06	0.63	y	0.88	30:46	1566.9	78.8	
IS	13C-1,2,3,4,7,8-HxCDD	6.05e+06	1.25	y	0.64	34:05	2027.8	102	
IS	13C-1,2,3,6,7,8-HxCDD	6.75e+06	1.24	y	0.86	34:11	1697.0	85.3	
IS	13C-1,2,3,7,8,9-HxCDD	7.25e+06	1.23	y	0.81	34:29	1932.4	97.1	
IS	13C-1,2,3,4,6,7,8-HpCDD	5.72e+06	1.03	y	0.65	37:55	1881.4	94.6	
IS	13C-OCDD	1.08e+07	0.90	y	0.58	41:13	4023.3	101	
IS	13C-2,3,7,8-TCDF	7.85e+06	0.79	y	1.03	25:31	1078.5	54.2	
IS	13C-1,2,3,7,8-PeCDF	8.82e+06	1.59	y	0.85	29:36	1467.2	73.7	
IS	13C-2,3,4,7,8-PeCDF	8.50e+06	1.63	y	0.85	30:29	1426.5	71.7	
IS	13C-1,2,3,4,7,8-HxCDF	7.49e+06	0.48	y	0.83	33:11	1937.6	97.4	
IS	13C-1,2,3,6,7,8-HxCDF	8.49e+06	0.48	y	1.03	33:19	1764.6	88.7	
IS	13C-2,3,4,6,7,8-HxCDF	7.89e+06	0.47	y	0.95	33:54	1779.5	89.4	
IS	13C-1,2,3,7,8,9-HxCDF	7.05e+06	0.48	y	0.83	34:52	1833.1	92.1	
IS	13C-1,2,3,4,6,7,8-HpCDF	6.41e+06	0.40	y	0.76	36:43	1821.1	91.5	
IS	13C-1,2,3,4,7,8,9-HpCDF	5.35e+06	0.38	y	0.58	38:28	1981.3	99.6	
IS	13C OCDF	1.31e+07	0.91	y	0.69	41:26	4093.1	103	
C/Up	37Cl-2,3,7,8-TCDD	2.55e+06			1.20	26:19	469.34	59.0	
RS/RT	13C-1,2,3,4-TCDD	9.01e+06	0.79	y	1.00	25:45	1989.5		
RS	13C-1,2,3,4-TCDF	1.40e+07	0.81	y	1.00	24:20	1989.5		
RS/RT	13C-1,2,3,4,6,9-HxCDF	9.25e+06	0.49	y	1.00	33:36	1989.5		

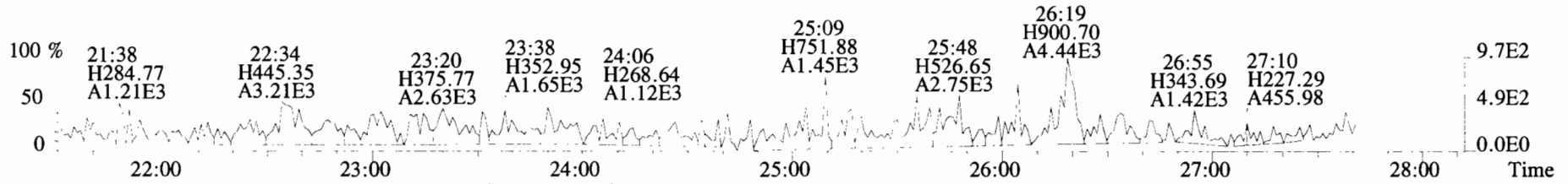
Integrations by Analyst: DB Date: 10/16/19

Reviewed by Analyst: CT Date: 10/21/19

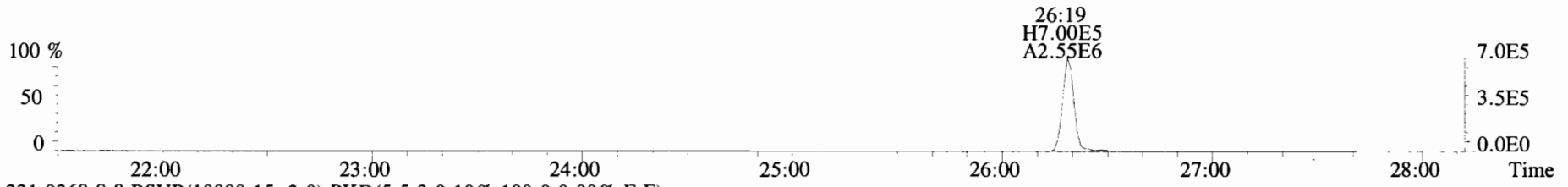
File:191015D1 #1-493 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5
319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



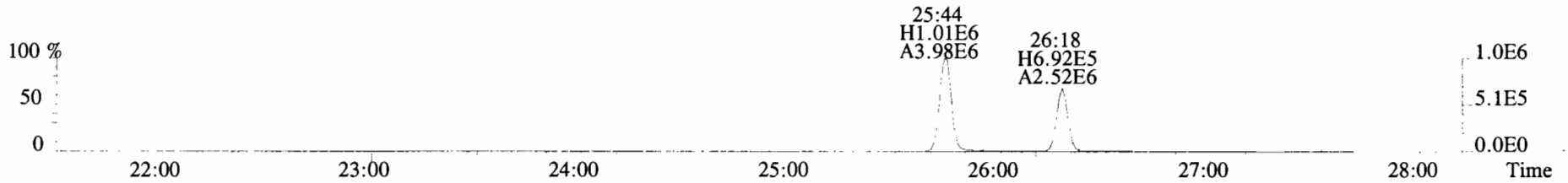
321.8936 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



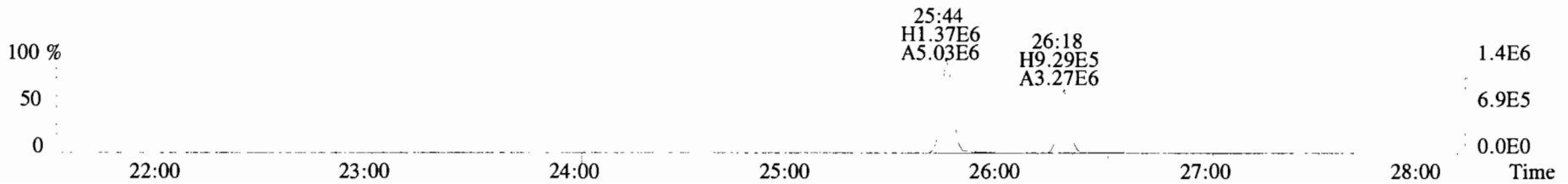
327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



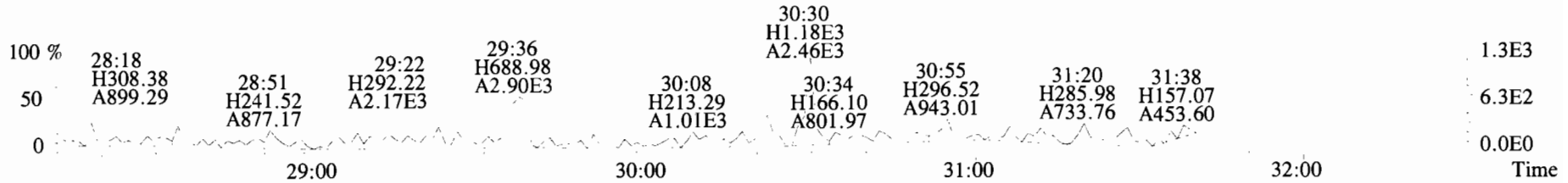
331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



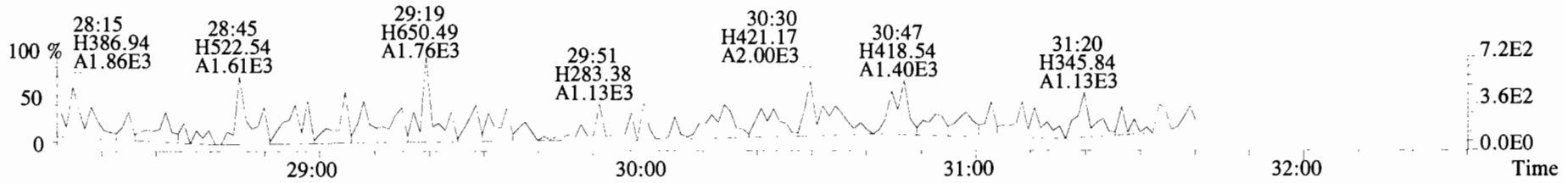
333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



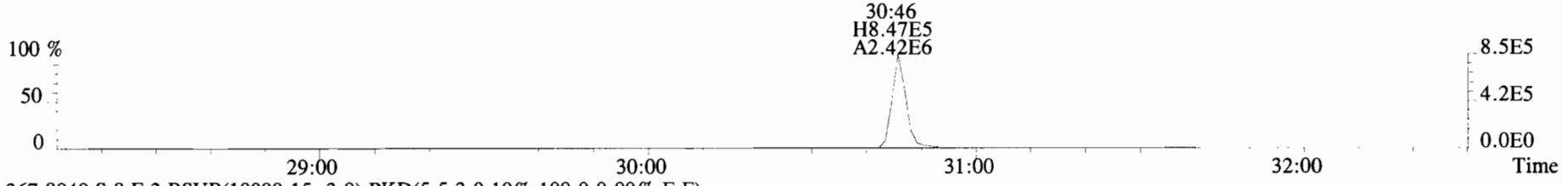
File:191015D1 #1-210 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5
353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



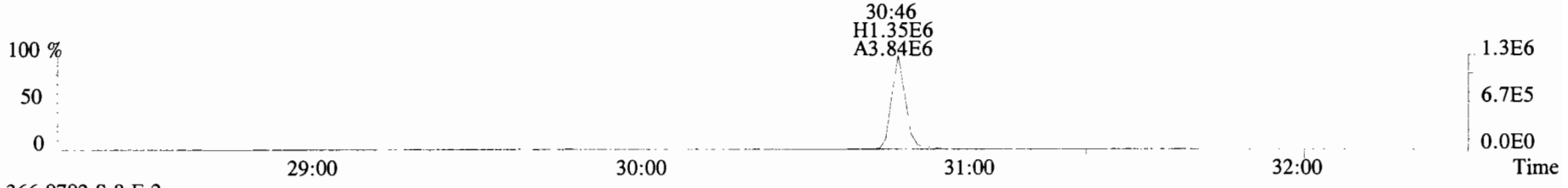
355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



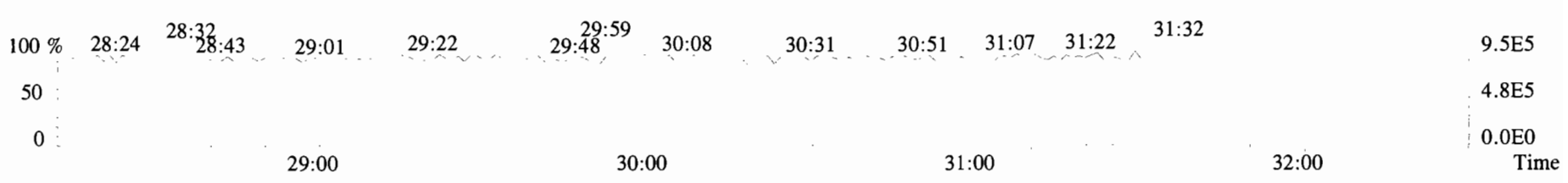
365.8978 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



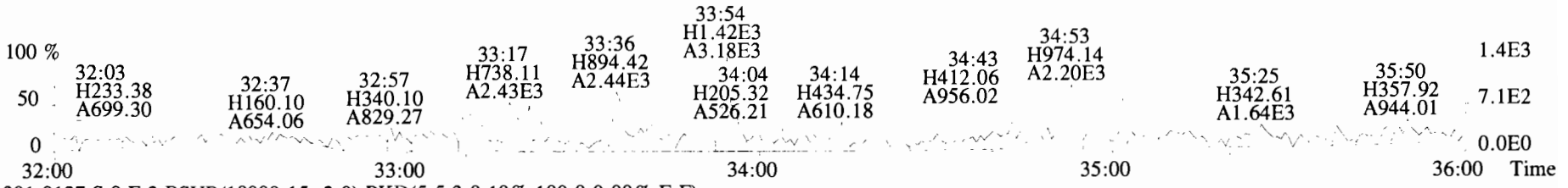
367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



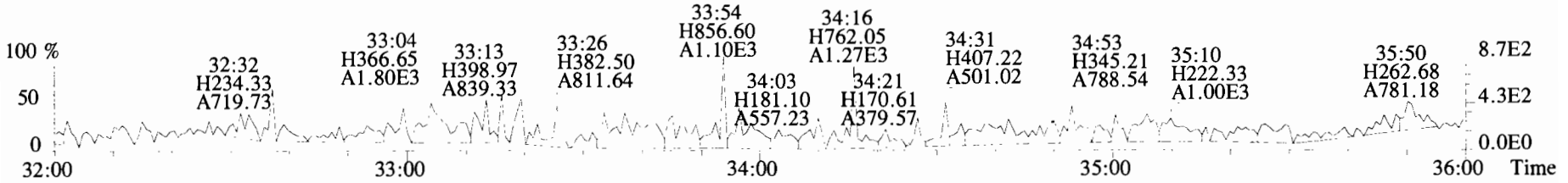
366.9792 S:8 F:2



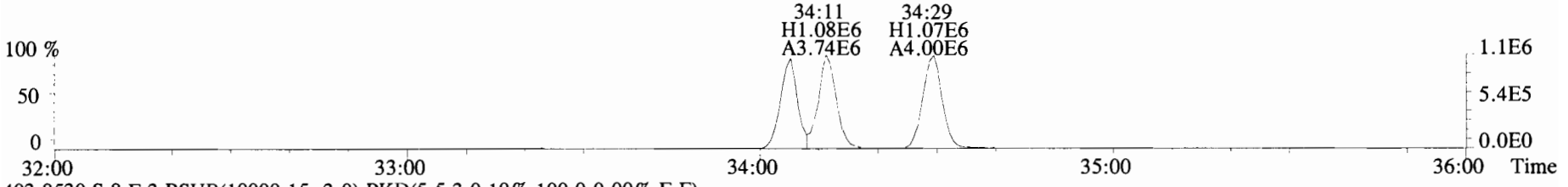
File:191015D1 #1-385 Acq:15-OCT-2019 17:51:17 GC E1+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5
389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



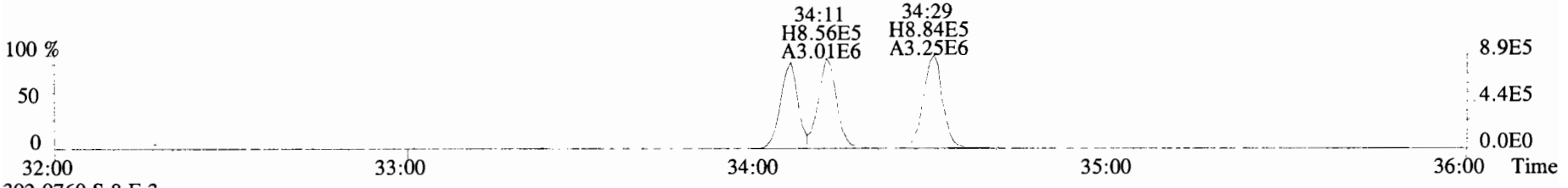
391.8127 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



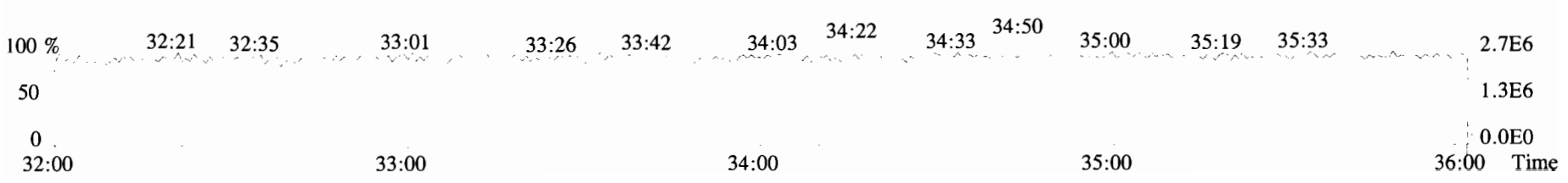
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



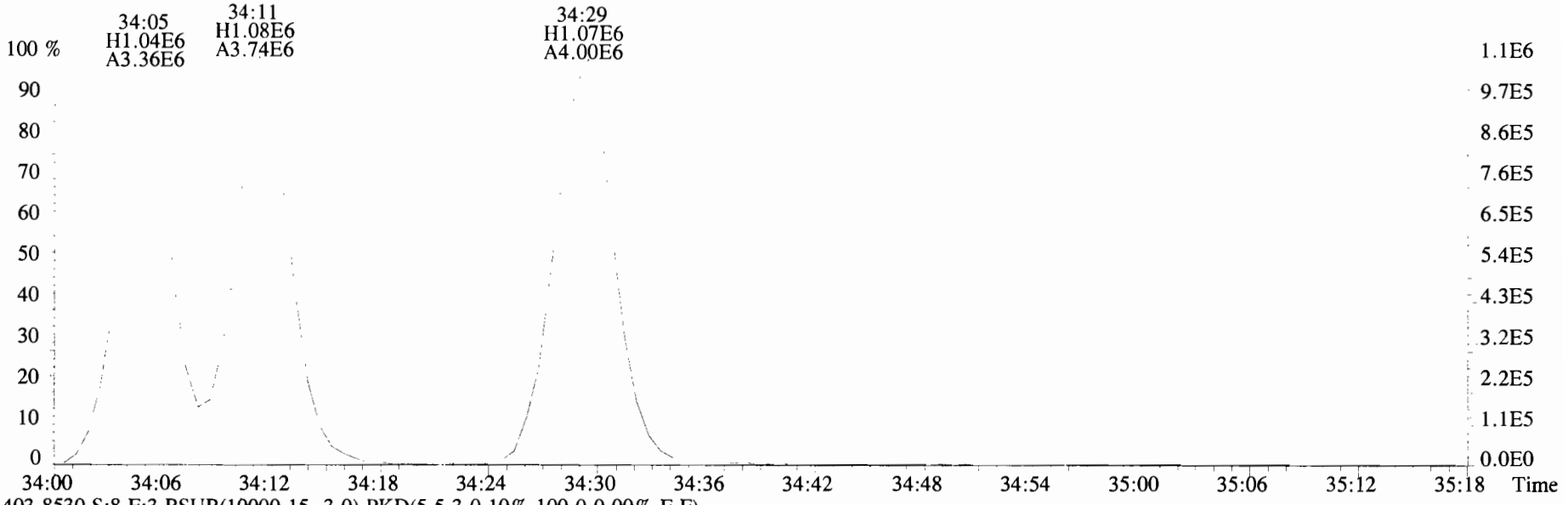
403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



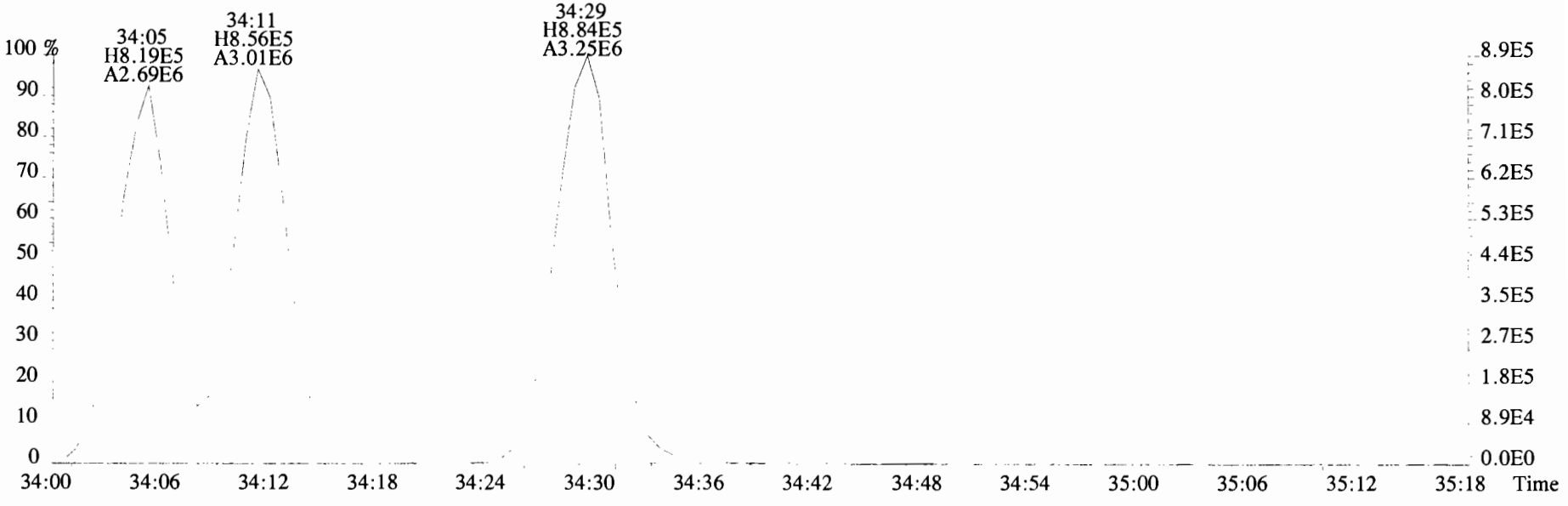
392.9760 S:8 F:3



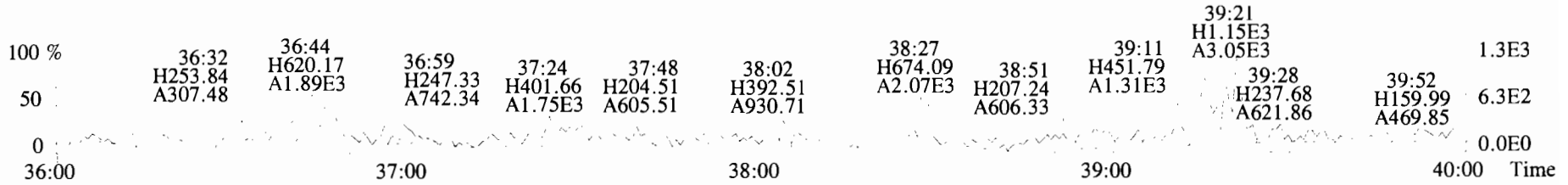
File:191015D1 #1-385 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



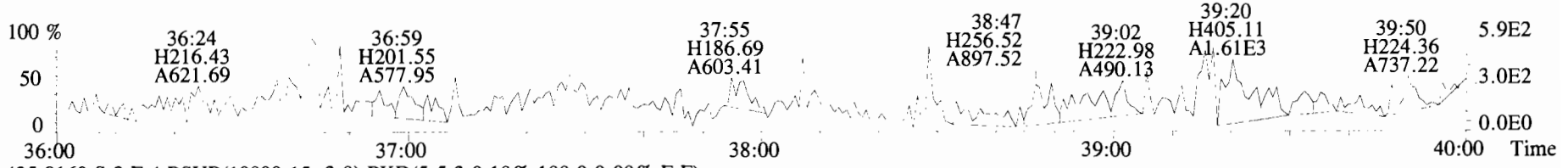
403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



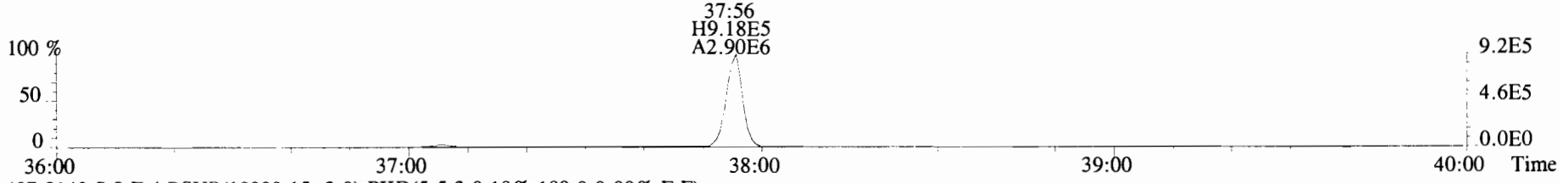
File:191015D1 #1-355 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



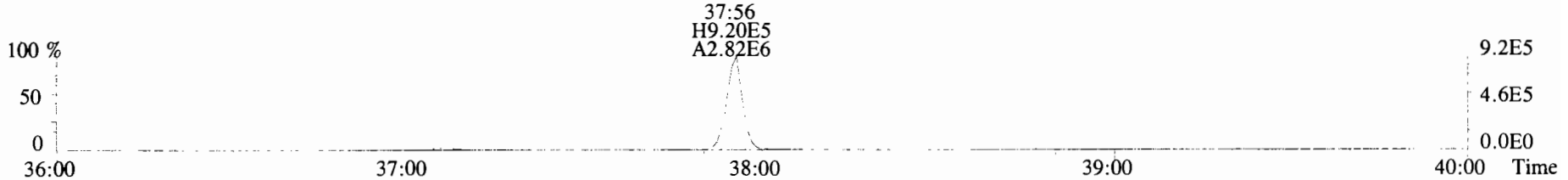
425.7737 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



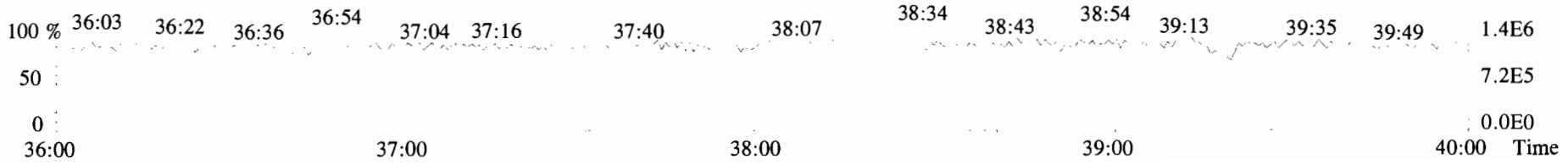
435.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



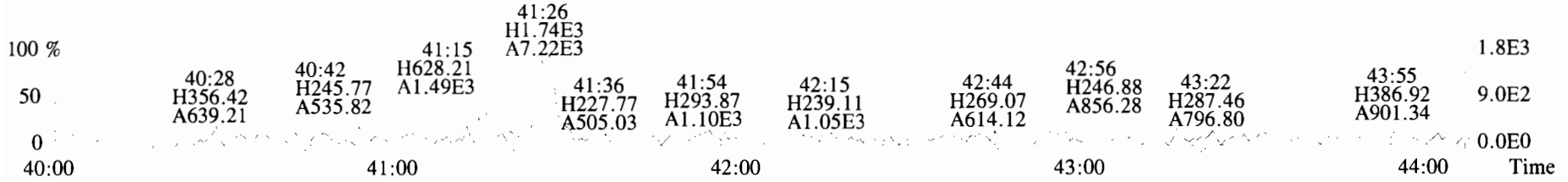
437.8140 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



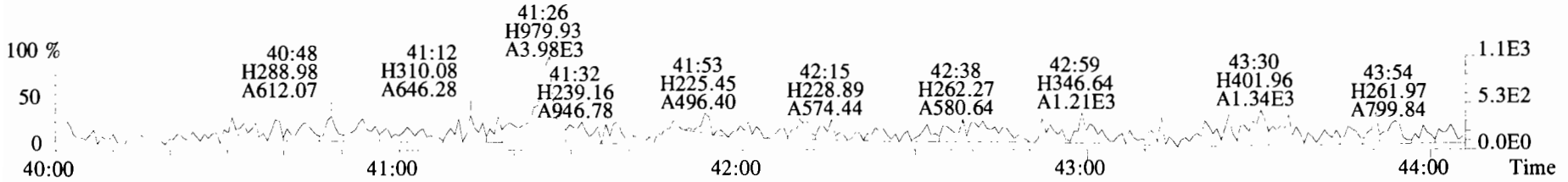
454.9728 S:8 F:4



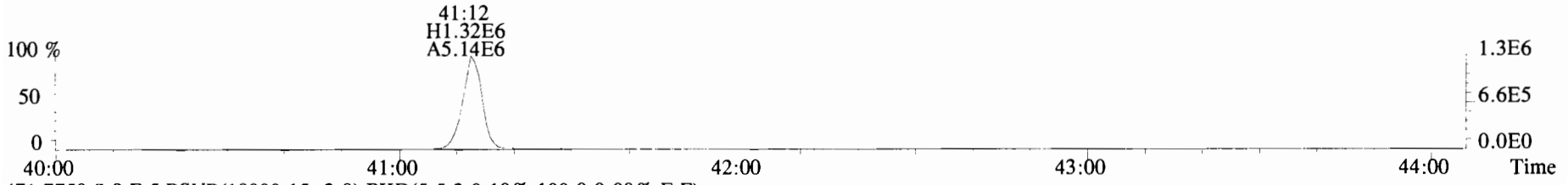
File:191015D1 #1-432 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

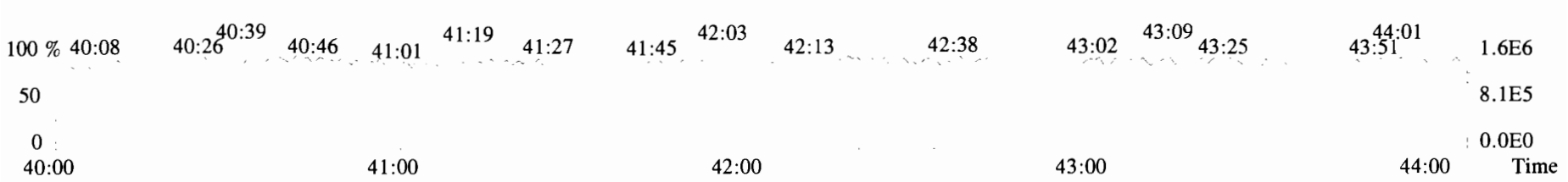


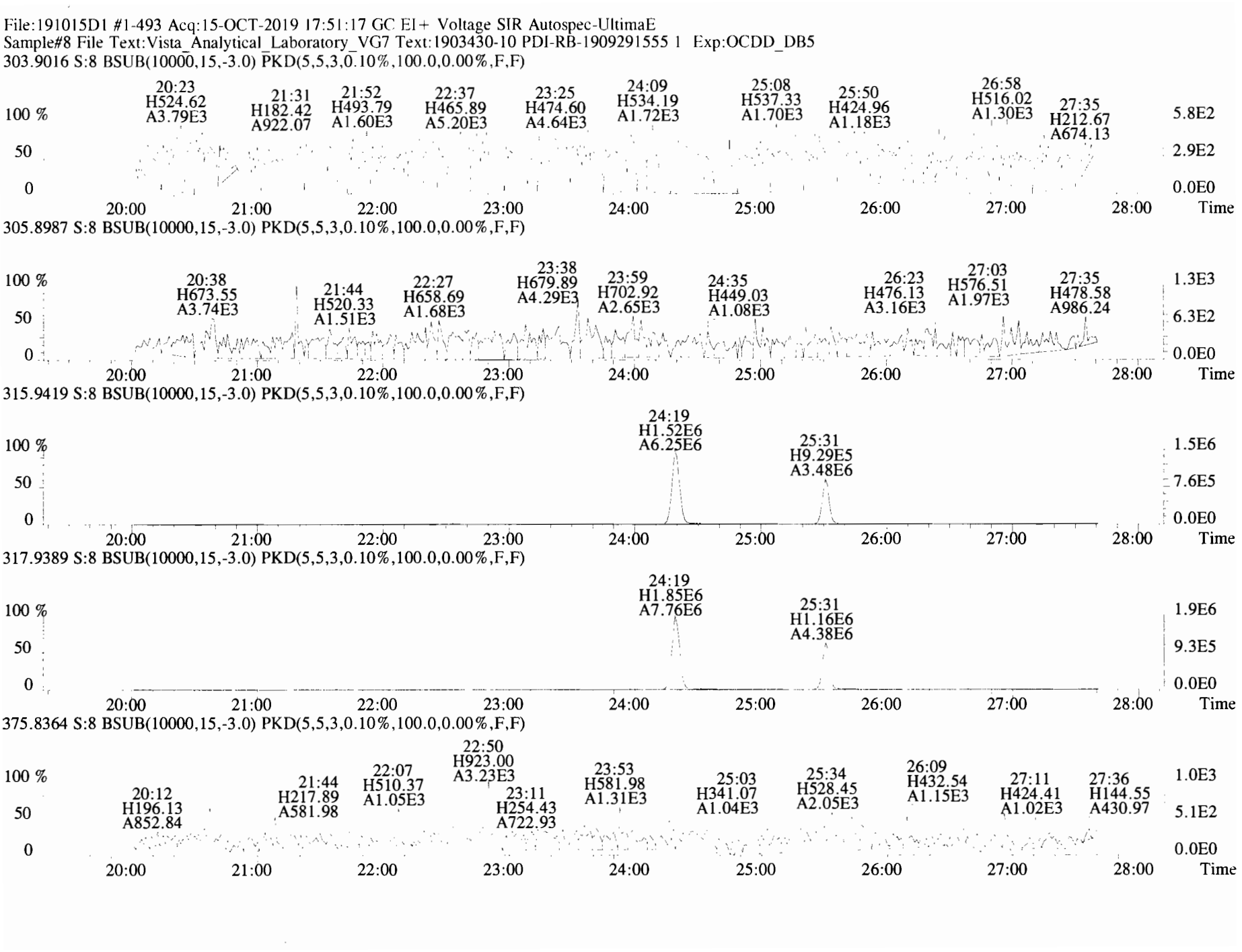
469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

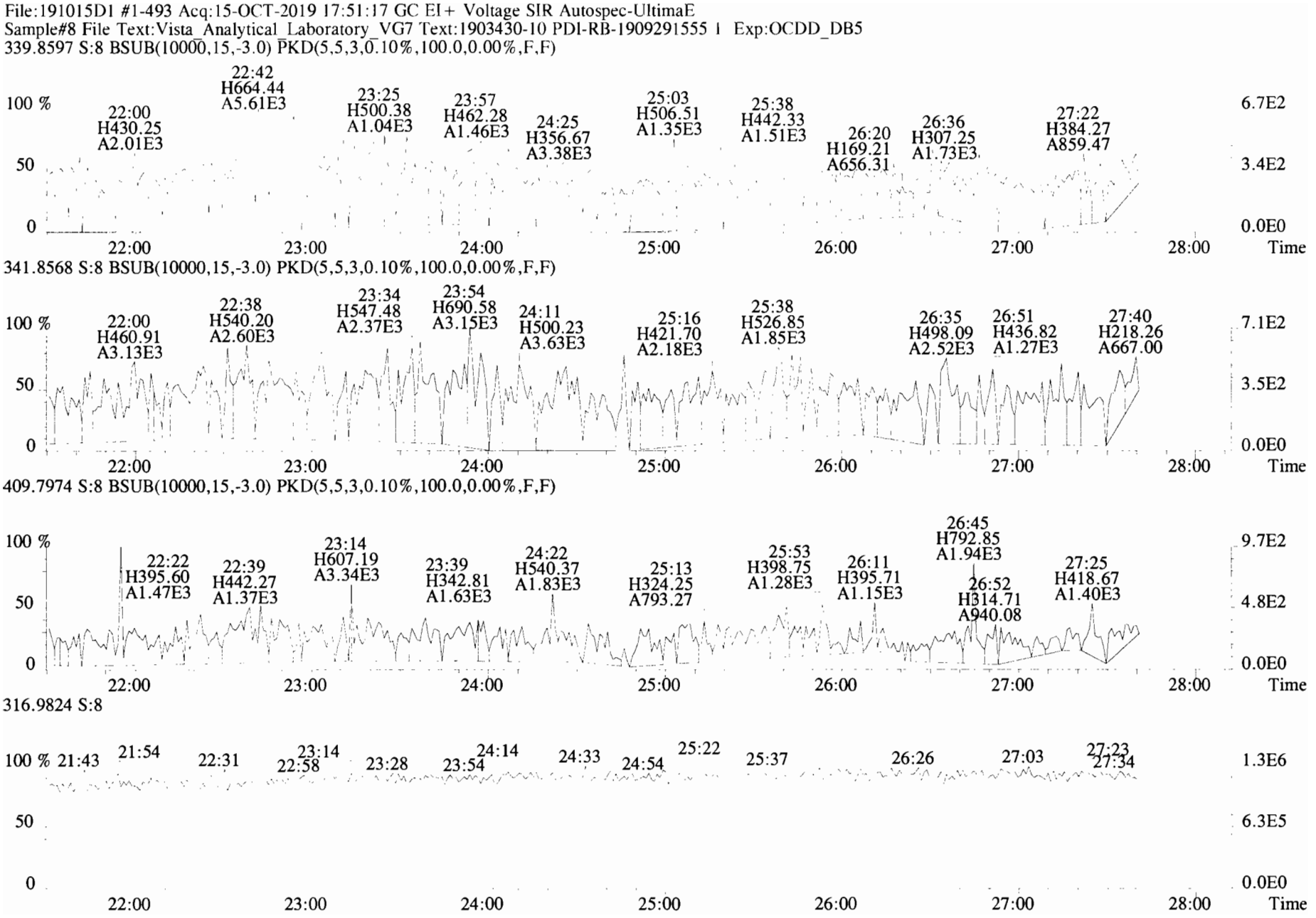


471.7750 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

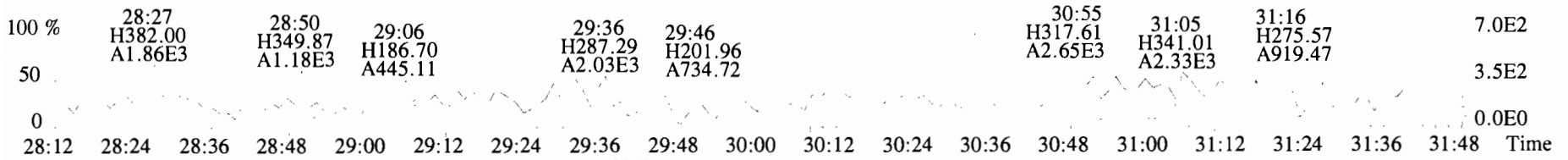
454.9728 S:8 F:5



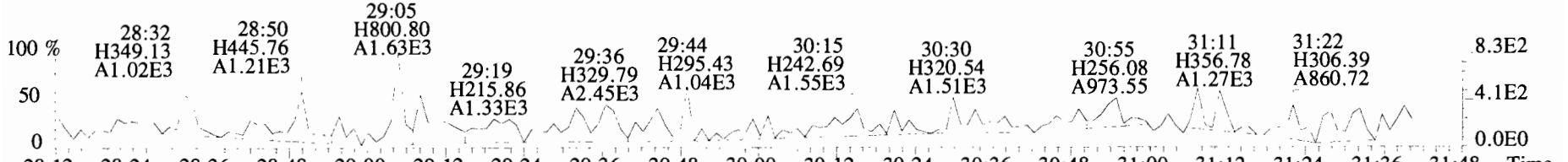

File:191015D1 #1-493 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:23 H524.62 A3.79E3
21:31 H182.42 A922.07
21:52 H493.79 A1.60E3
22:37 H465.89 A5.20E3
23:25 H474.60 A4.64E3
24:09 H534.19 A1.72E3
25:08 H537.33 A1.70E3
25:50 H424.96 A1.18E3
26:58 H516.02 A1.30E3
27:35 H212.67 A674.13
100 %
50
0
5.8E2
2.9E2
0.0E0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
305.8987 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:38 H673.55 A3.74E3
21:44 H520.33 A1.51E3
22:27 H658.69 A1.68E3
23:38 H679.89 A4.29E3
23:59 H702.92 A2.65E3
24:35 H449.03 A1.08E3
26:23 H476.13 A3.16E3
27:03 H576.51 A1.97E3
27:35 H478.58 A986.24
100 %
50
0
1.3E3
6.3E2
0.0E0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
315.9419 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:19 H1.52E6 A6.25E6
25:31 H9.29E5 A3.48E6
100 %
50
0
1.5E6
7.6E5
0.0E0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
317.9389 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:19 H1.85E6 A7.76E6
25:31 H1.16E6 A4.38E6
100 %
50
0
1.9E6
9.3E5
0.0E0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
375.8364 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:12 H196.13 A852.84
21:44 H217.89 A581.98
22:07 H510.37 A1.05E3
22:50 H923.00 A3.23E3
23:11 H254.43 A722.93
23:53 H581.98 A1.31E3
25:03 H341.07 A1.04E3
25:34 H528.45 A2.05E3
26:09 H432.54 A1.15E3
27:11 H424.41 A1.02E3
27:36 H144.55 A430.97
100 %
50
0
1.0E3
5.1E2
0.0E0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time


File:191015D1 #1-493 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5
339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
22:00 H430.25 A2.01E3
22:42 H664.44 A5.61E3
23:25 H500.38 A1.04E3
23:57 H462.28 A1.46E3
24:25 H356.67 A3.38E3
25:03 H506.51 A1.35E3
25:38 H442.33 A1.51E3
26:20 H169.21 A656.31
26:36 H307.25 A1.73E3
27:22 H384.27 A859.47
6.7E2
3.4E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
341.8568 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
22:00 H460.91 A3.13E3
22:38 H540.20 A2.60E3
23:34 H547.48 A2.37E3
23:54 H690.58 A3.15E3
24:11 H500.23 A3.63E3
25:16 H421.70 A2.18E3
25:38 H526.85 A1.85E3
26:35 H498.09 A2.52E3
26:51 H436.82 A1.27E3
27:40 H218.26 A667.00
7.1E2
3.5E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
409.7974 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
22:22 H395.60 A1.47E3
22:39 H442.27 A1.37E3
23:14 H607.19 A3.34E3
23:39 H342.81 A1.63E3
24:22 H540.37 A1.83E3
25:13 H324.25 A793.27
25:53 H398.75 A1.28E3
26:11 H395.71 A1.15E3
26:45 H792.85 A1.94E3
26:52 H314.71 A940.08
27:25 H418.67 A1.40E3
9.7E2
4.8E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
316.9824 S:8
100 %
50
0
21:43
21:54
22:31
22:58
23:14
23:28
23:54
24:14
24:33
24:54
25:22
25:37
26:26
27:03
27:23
27:34
1.3E6
6.3E5
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time

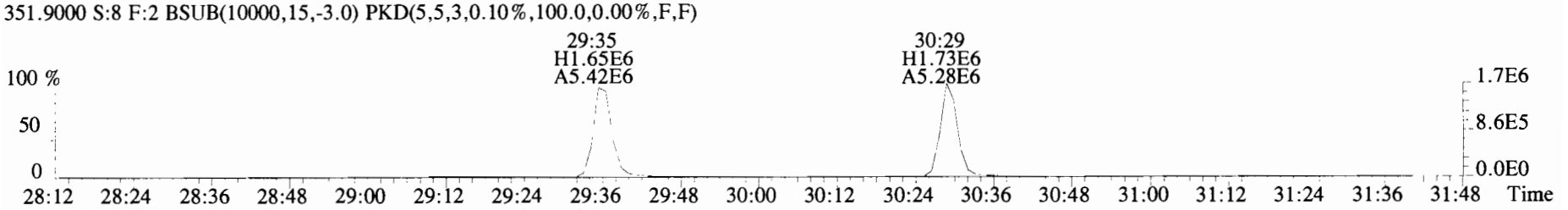
File:191015D1 #1-210 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%.F,F)



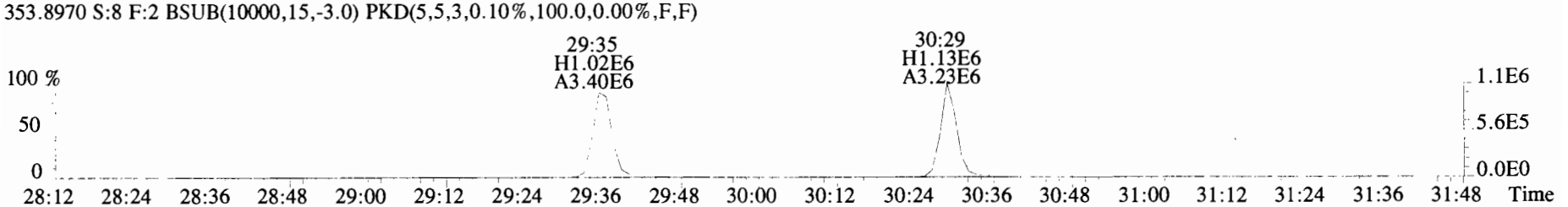
341.8568 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



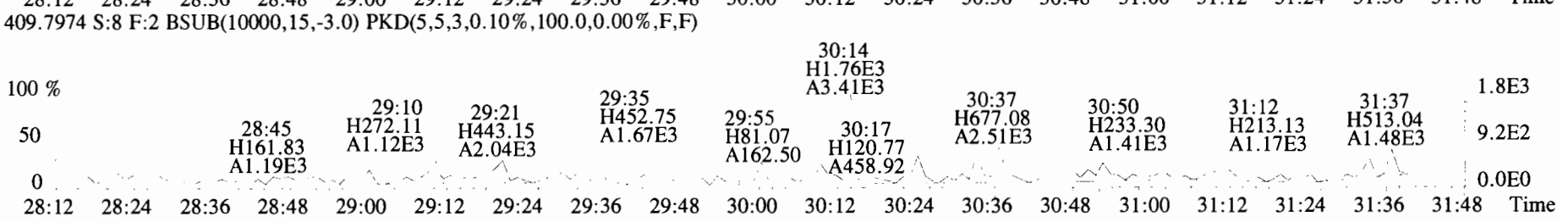
351.9000 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

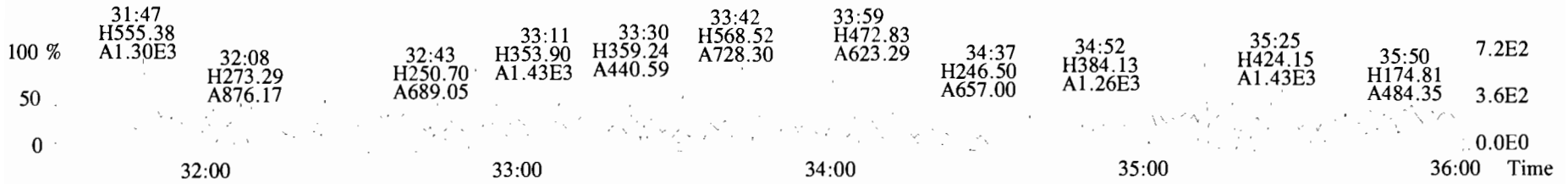


409.7974 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

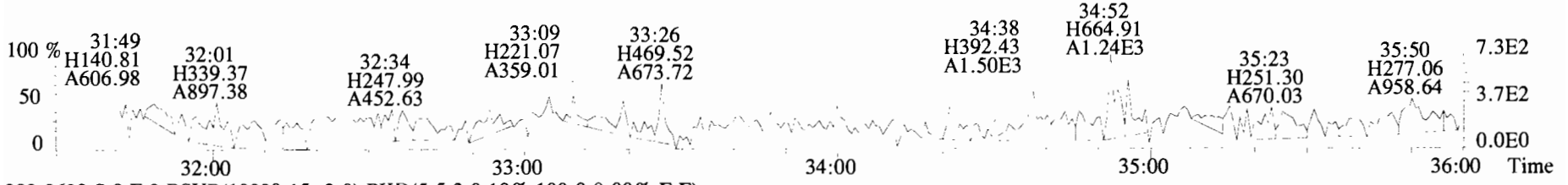


File:191015D1 #1-385 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5

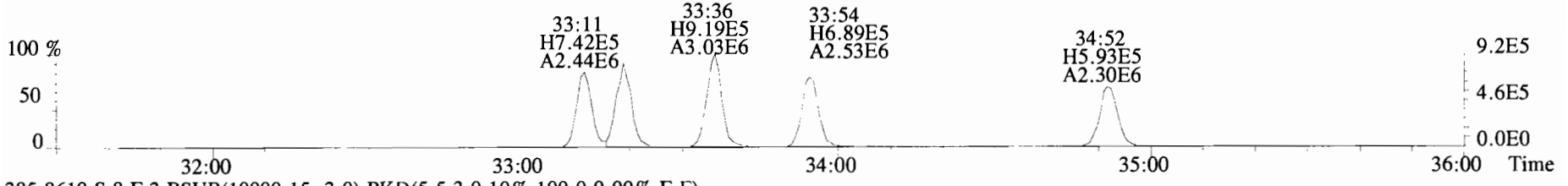
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



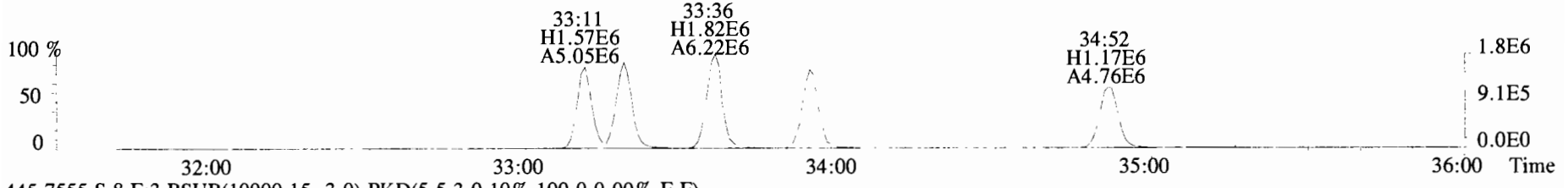
375.8178 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



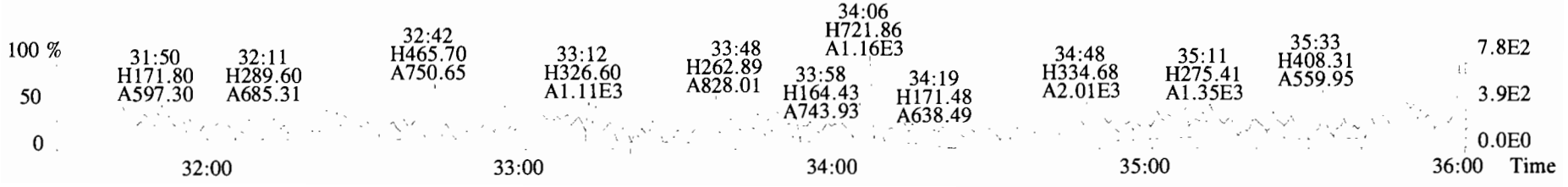
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



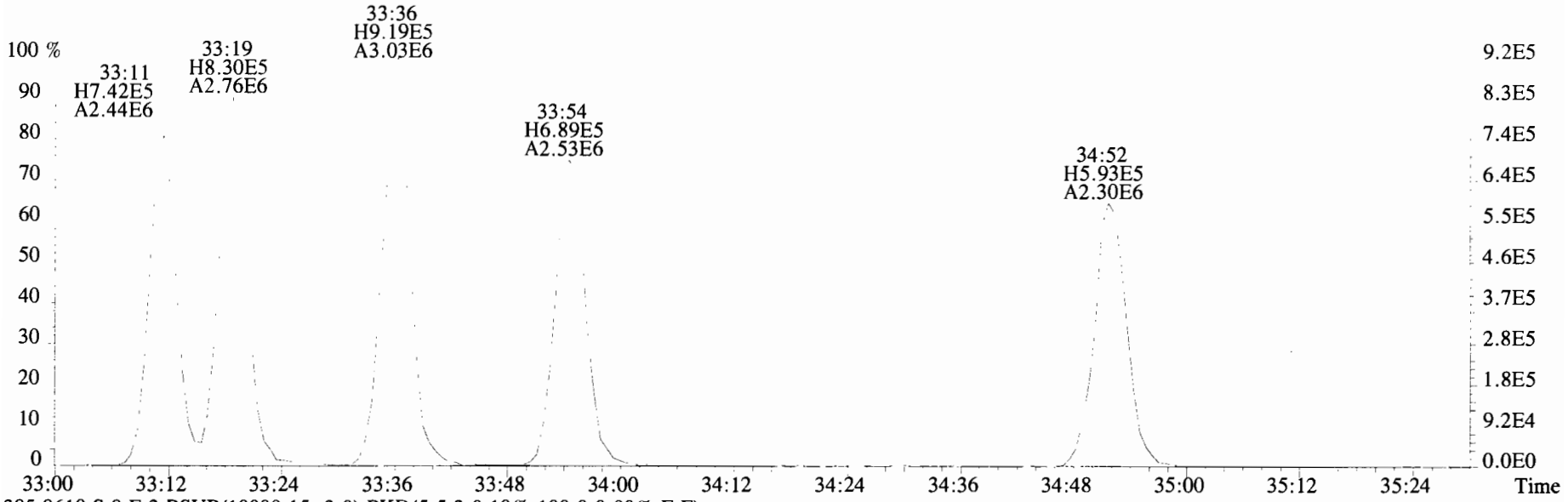
385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



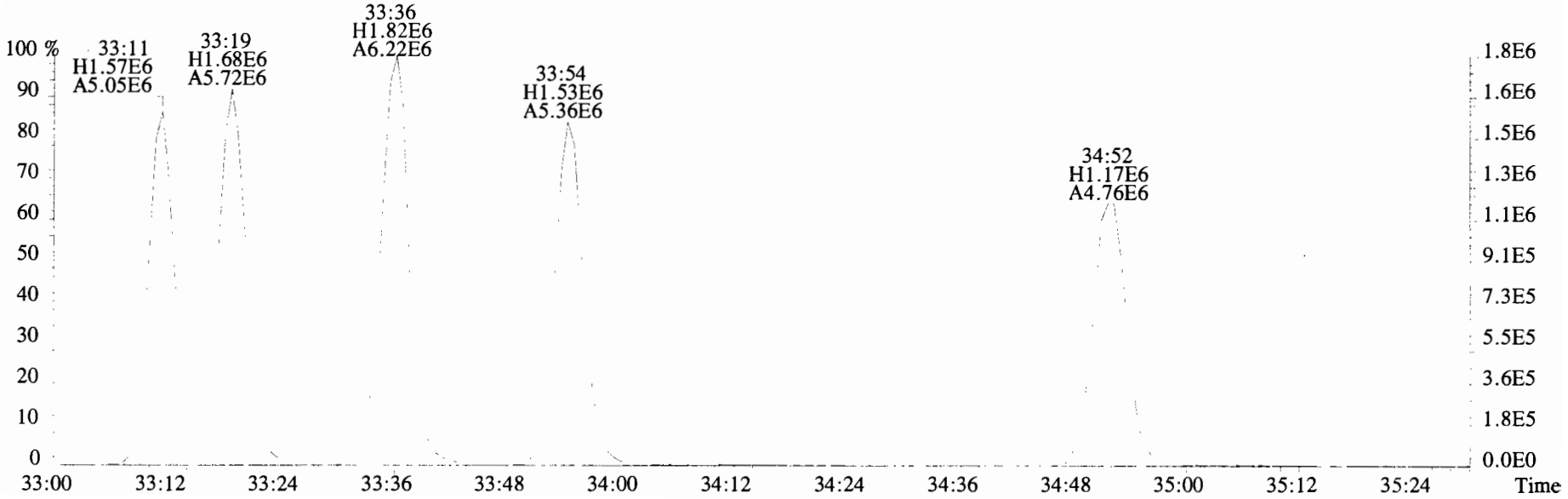
445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



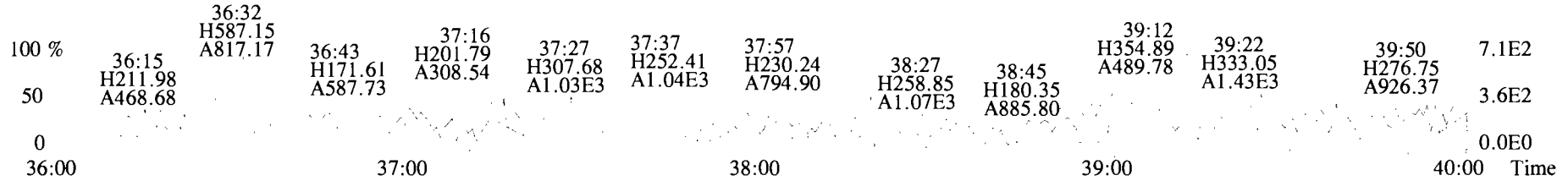
File:191015D1 #1-385 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



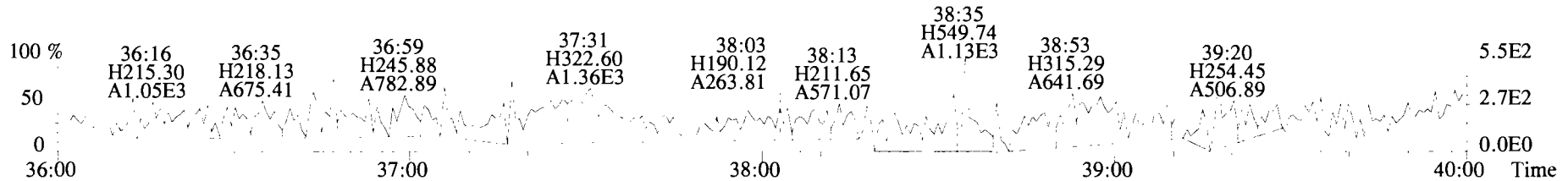
385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



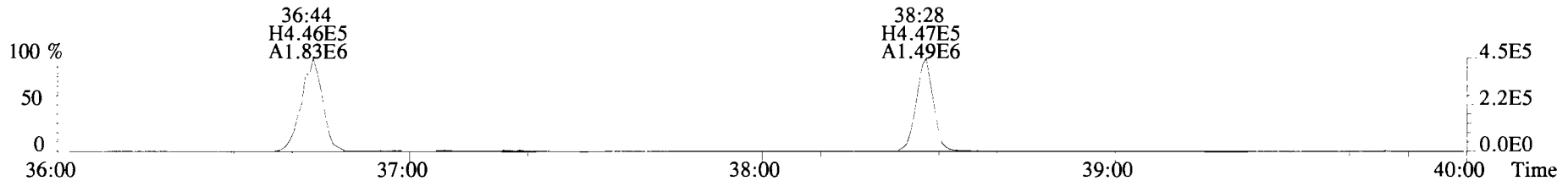
File:191015D1 #1-355 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 Exp:OCDD_DB5
407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



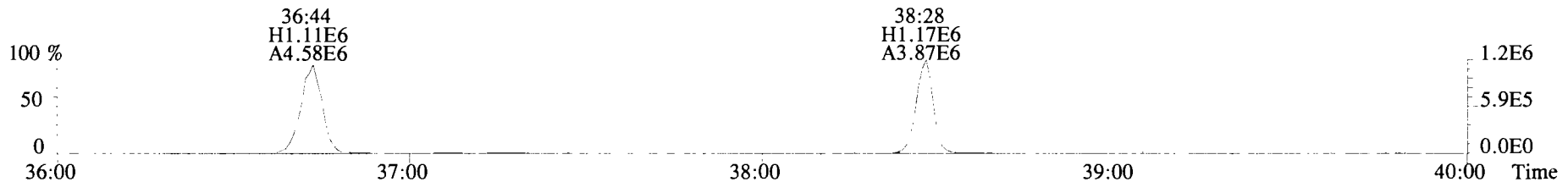
409.7788 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



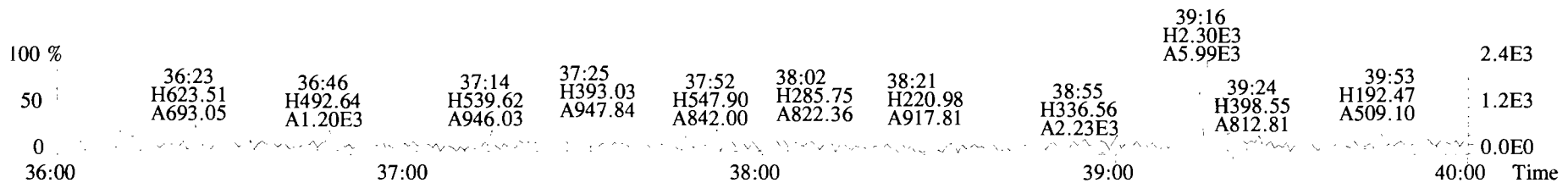
417.8253 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

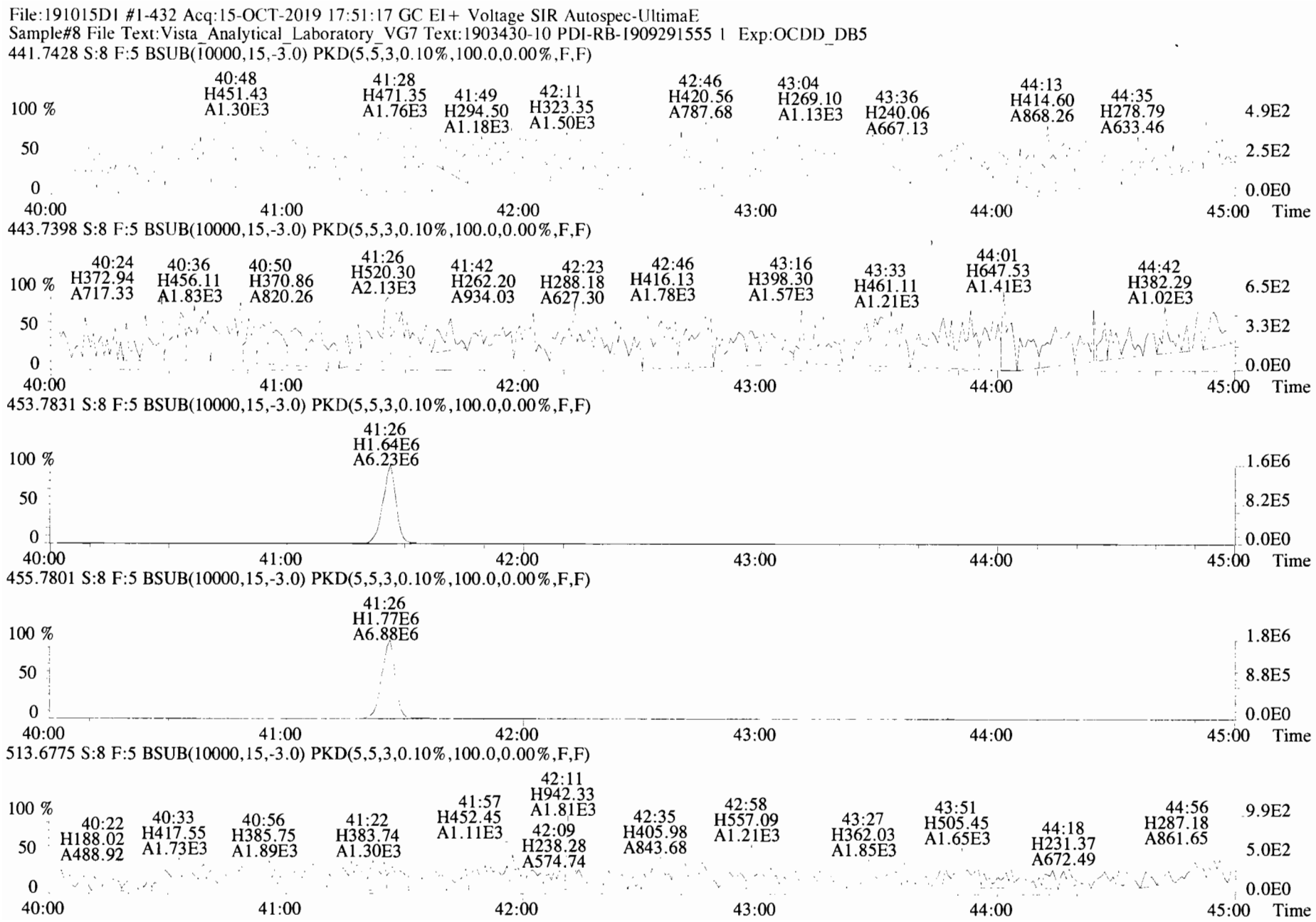


419.8220 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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




File:191015D1 #1-432 Acq:15-OCT-2019 17:51:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-10 PDI-RB-1909291555 1 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)
40:48 H451.43 A1.30E3
41:28 H471.35 A1.76E3
41:49 H294.50 A1.18E3
42:11 H323.35 A1.50E3
42:46 H420.56 A787.68
43:04 H269.10 A1.13E3
43:36 H240.06 A667.13
44:13 H414.60 A868.26
44:35 H278.79 A633.46
100 %
50
0
4.9E2
2.5E2
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
443.7398 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:24 H372.94 A717.33
40:36 H456.11 A1.83E3
40:50 H370.86 A820.26
41:26 H520.30 A2.13E3
41:42 H262.20 A934.03
42:23 H288.18 A627.30
42:46 H416.13 A1.78E3
43:16 H398.30 A1.57E3
43:33 H461.11 A1.21E3
44:01 H647.53 A1.41E3
44:42 H382.29 A1.02E3
100 %
50
0
6.5E2
3.3E2
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
453.7831 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26 H1.64E6 A6.23E6
100 %
50
0
1.6E6
8.2E5
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
455.7801 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26 H1.77E6 A6.88E6
100 %
50
0
1.8E6
8.8E5
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
513.6775 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:22 H188.02 A488.92
40:33 H417.55 A1.73E3
40:56 H385.75 A1.89E3
41:22 H383.74 A1.30E3
41:57 H452.45 A1.11E3
42:11 H942.33 A1.81E3
42:09 H238.28 A574.74
42:35 H405.98 A843.68
42:58 H557.09 A1.21E3
43:27 H362.03 A1.85E3
43:51 H505.45 A1.65E3
44:18 H231.37 A672.49
44:56 H287.18 A861.65
100 %
50
0
9.9E2
5.0E2
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time

Client ID: Method Blank Filename: 191016D1 S:4 Acq:16-OCT-19 13:15:33 ConCal: ST191016D1-1
Lab ID: B9J0093-BLK1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.000 EndCAL: ST191016D1-2

Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
2,3,7,8-TCDD	*	*	n	0.91	NotF	*		140	2.5	0.138
1,2,3,7,8-PeCDD	*	*	n	0.90	NotF	*		227	2.5	0.155
1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF	*		189	2.5	0.165
1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF	*		189	2.5	0.181
1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF	*		189	2.5	0.153
1,2,3,4,6,7,8-HpCDD	*	*	n	0.98	NotF	*		236	2.5	0.194
OCDD	*	*	n	0.96	NotF	*		149	2.5	0.179
2,3,7,8-TCDF	*	*	n	0.95	NotF	*		217	2.5	0.159
1,2,3,7,8-PeCDF	*	*	n	0.96	NotF	*		189	2.5	0.152
2,3,4,7,8-PeCDF	*	*	n	1.01	NotF	*		189	2.5	0.154
1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF	*		175	2.5	0.0719
1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF	*		175	2.5	0.0645
2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF	*		175	2.5	0.0677
1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF	*		175	2.5	0.0960
1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF	*		186	2.5	0.108
1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF	*		186	2.5	0.0946
OCDF	*	*	n	0.95	NotF	*		227	2.5	0.220

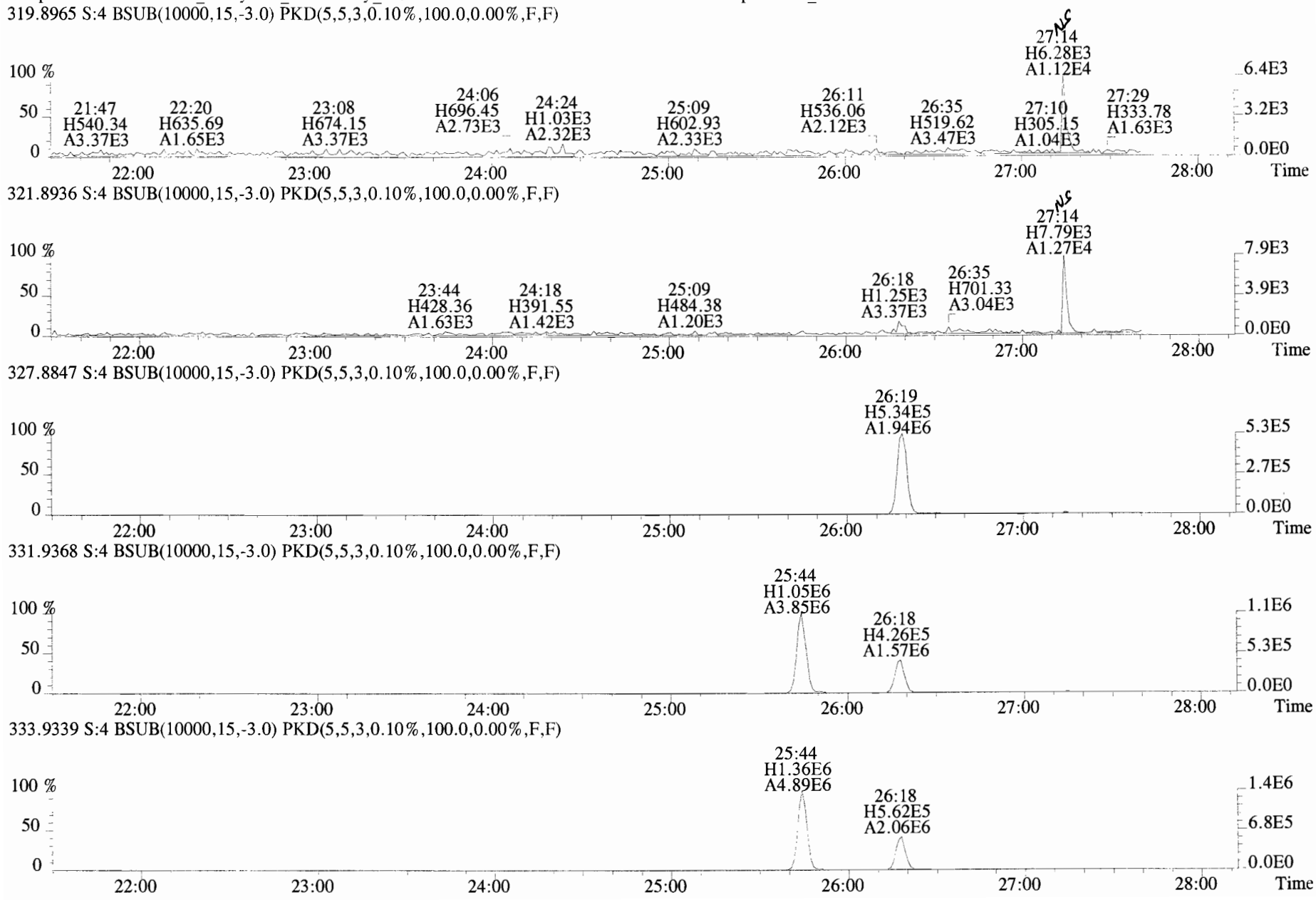
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		140	0.138
Total Penta-Dioxins	*	*		227	0.155
Total Hexa-Dioxins	*	*		189	0.166
Total Hepta-Dioxins	*	*		236	0.194
Total Tetra-Furans	*	*		217	0.159
Total Penta-Furans	0.0000	0.0000		189	0.153
Total Hexa-Furans	*	*		175	0.0739
Total Hepta-Furans	*	*		186	0.102

	Name				RRF	RT	Conc	Rec	Qual
IS	13C-2,3,7,8-TCDD	3.63e+06	0.76	y	1.10	26:18	75.863	37.9	
IS	13C-1,2,3,7,8-PeCDD	3.87e+06	0.64	y	0.88	30:46	100.43	50.2	
IS	13C-1,2,3,4,7,8-HxCDD	3.97e+06	1.26	y	0.64	34:04	143.48	71.7	
IS	13C-1,2,3,6,7,8-HxCDD	4.67e+06	1.27	y	0.86	34:11	126.76	63.4	
IS	13C-1,2,3,7,8,9-HxCDD	4.98e+06	1.25	y	0.81	34:29	143.18	71.6	
IS	13C-1,2,3,4,6,7,8-HpCDD	3.96e+06	0.99	y	0.65	37:55	140.63	70.3	
IS	13C-OCDD	6.82e+06	0.91	y	0.58	41:12	273.01	68.3	
IS	13C-2,3,7,8-TCDF	4.95e+06	0.77	y	1.03	25:31	69.268	34.6	
IS	13C-1,2,3,7,8-PeCDF	5.59e+06	1.65	y	0.85	29:36	94.702	47.4	
IS	13C-2,3,4,7,8-PeCDF	5.07e+06	1.63	y	0.85	30:29	86.604	43.3	
IS	13C-1,2,3,4,7,8-HxCDF	5.13e+06	0.53	y	0.83	33:11	143.10	71.6	
IS	13C-1,2,3,6,7,8-HxCDF	6.33e+06	0.51	y	1.03	33:18	141.90	70.9	
IS	13C-2,3,4,6,7,8-HxCDF	5.93e+06	0.50	y	0.95	33:54	144.35	72.2	
IS	13C-1,2,3,7,8,9-HxCDF	4.91e+06	0.50	y	0.83	34:51	137.64	68.8	
IS	13C-1,2,3,4,6,7,8-HpCDF	4.42e+06	0.41	y	0.76	36:42	135.33	67.7	
IS	13C-1,2,3,4,7,8,9-HpCDF	3.79e+06	0.41	y	0.58	38:27	151.14	75.6	
IS	13C-OCDF	8.23e+06	0.92	y	0.69	41:25	277.33	69.3	
C/Up	37Cl-2,3,7,8-TCDD	1.94e+06			1.20	26:19	37.049	46.3	
RS/RT	13C-1,2,3,4-TCDD	8.74e+06	0.79	y	1.00	25:44	200.00		
RS	13C-1,2,3,4-TCDF	1.38e+07	0.82	y	1.00	24:20	200.00		
RS/RT	13C-1,2,3,4,6,9-HxCDF	8.62e+06	0.51	y	1.00	33:36	200.00		

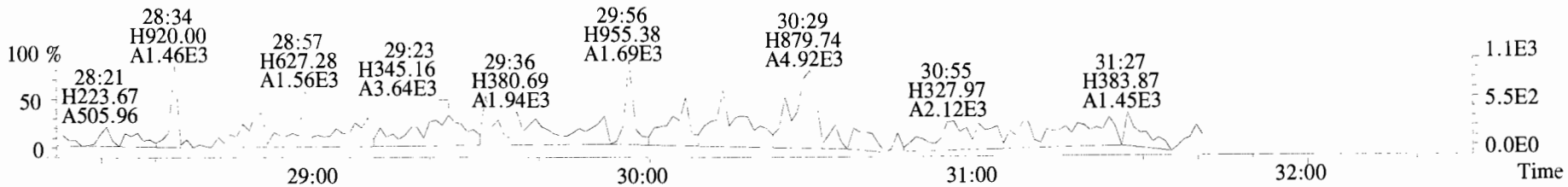
Integrations by Analyst: DB Date: 10/16/19

Reviewed by Analyst: CT Date: 10/17/19

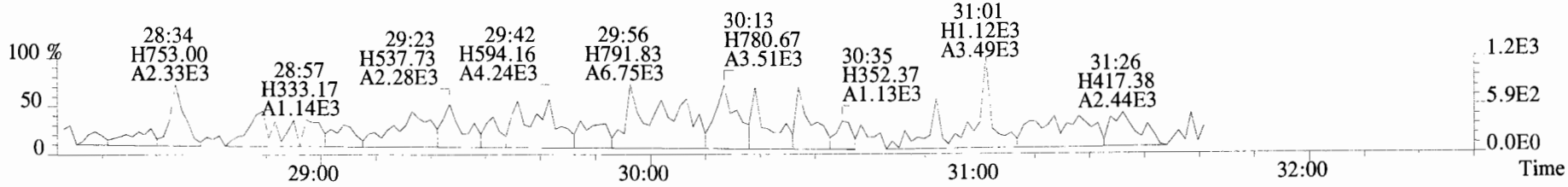
File:191016D1 #1-492 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5



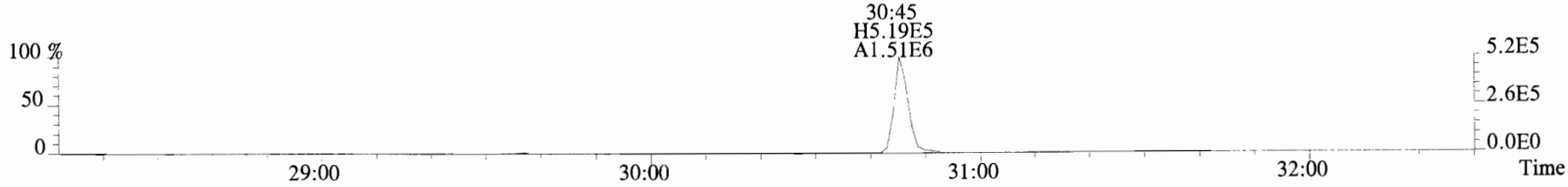
File:191016D1 #1-211 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5
353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



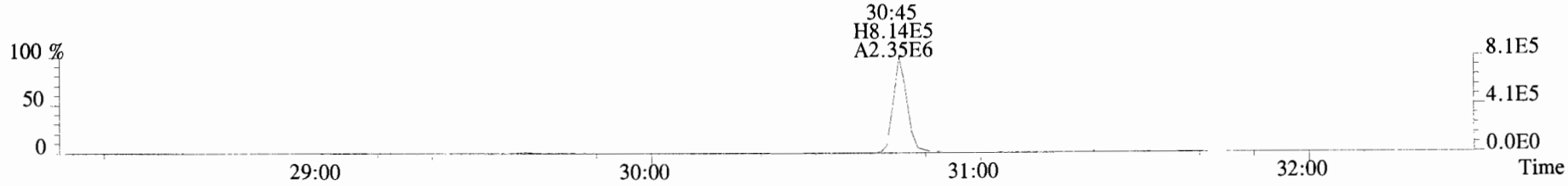
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



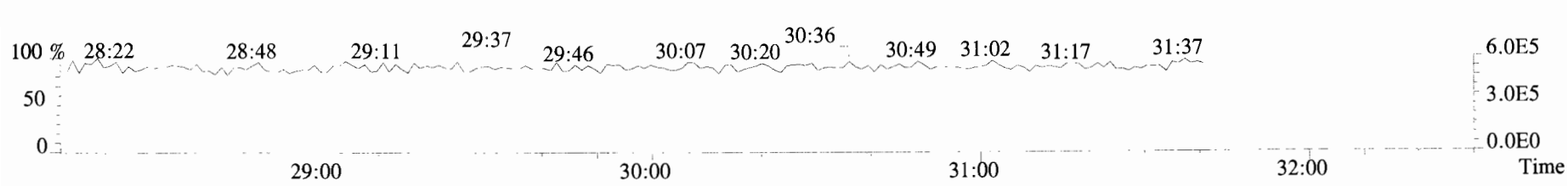
365.8978 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



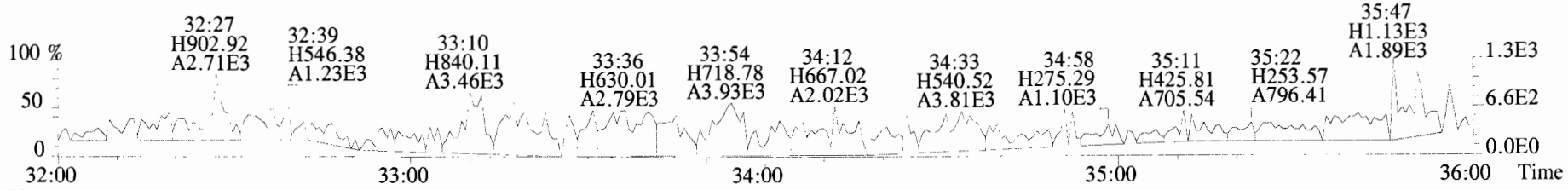
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



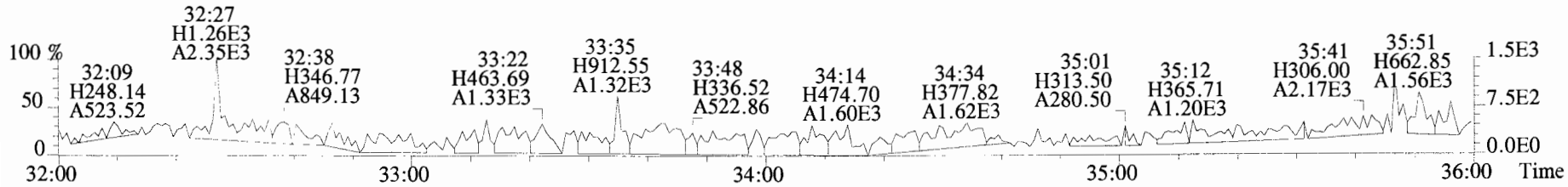
366.9792 S:4 F:2



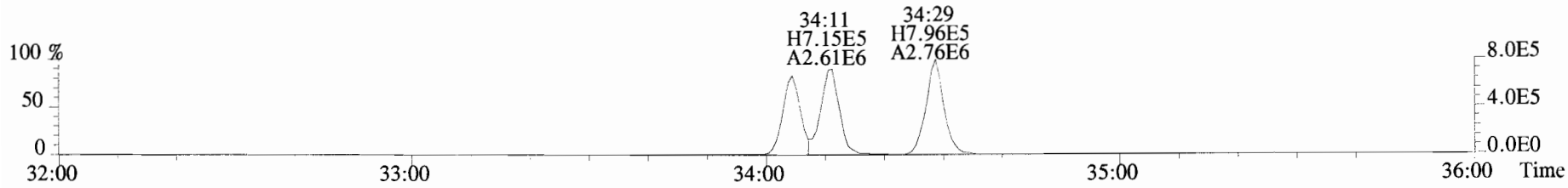
File:191016D1 #1-384 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



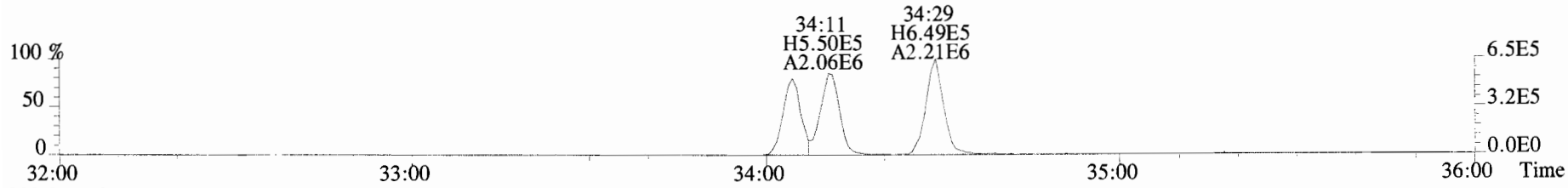
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



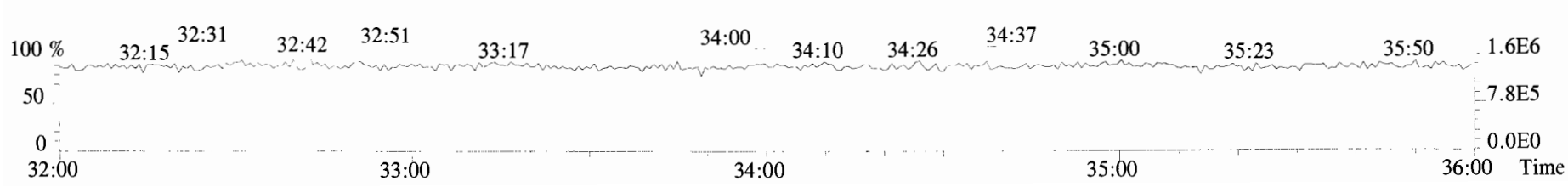
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



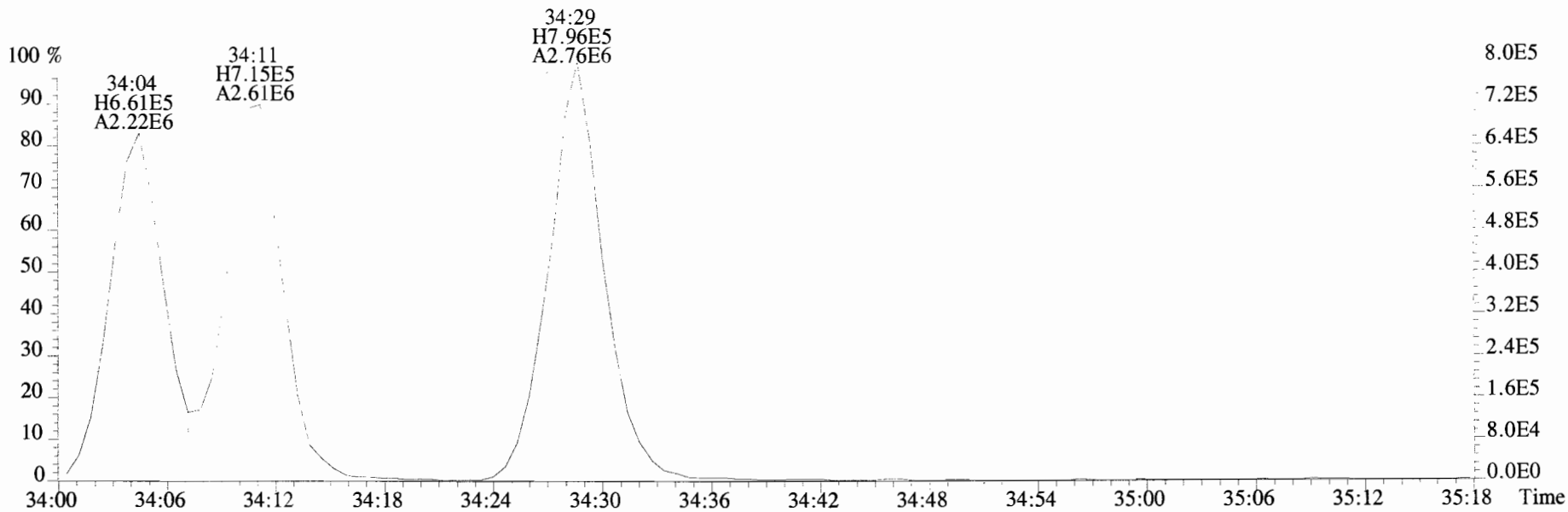
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



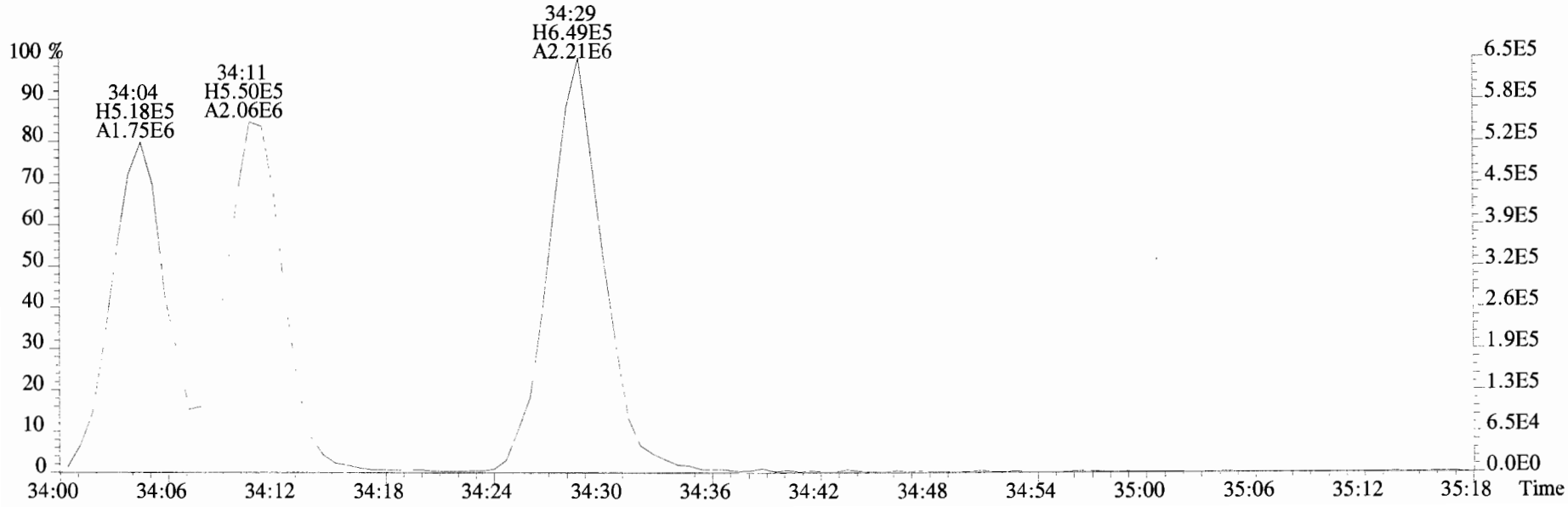
392.9760 S:4 F:3



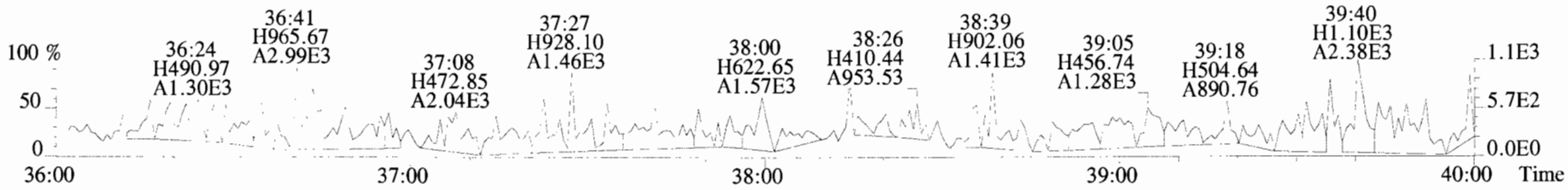
File:191016D1 #1-384 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



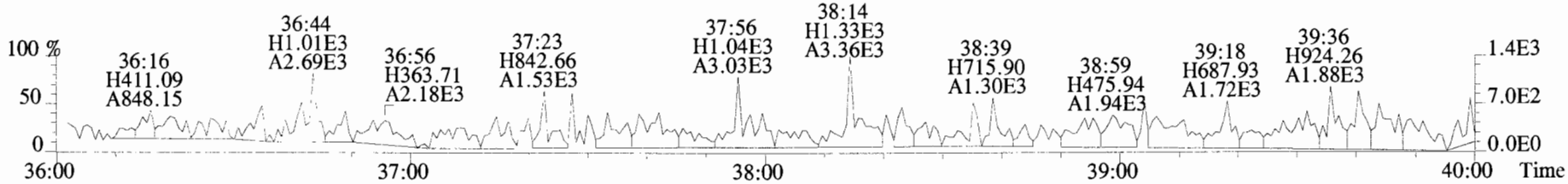
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



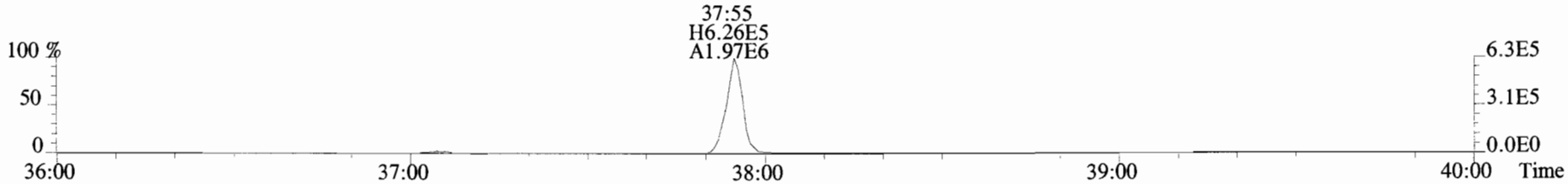
File:191016D1 #1-356 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



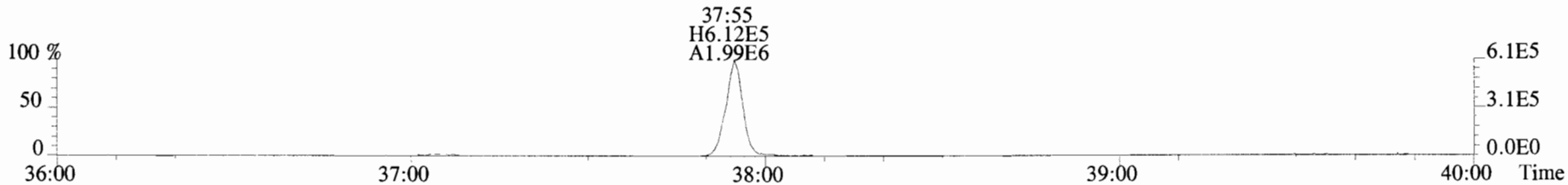
425.7737 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



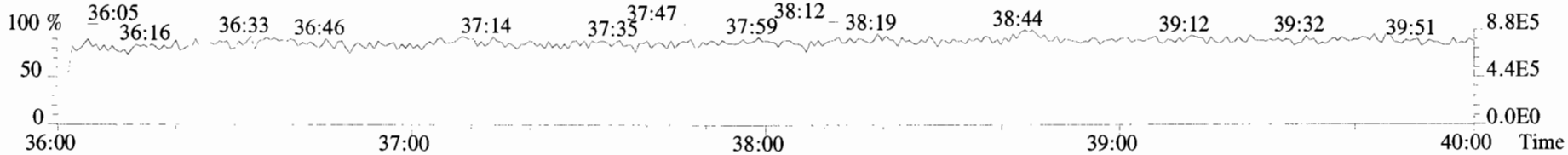
435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

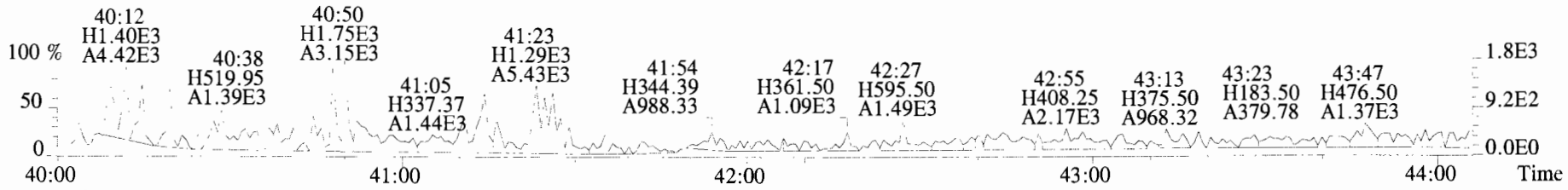


454.9728 S:4 F:4

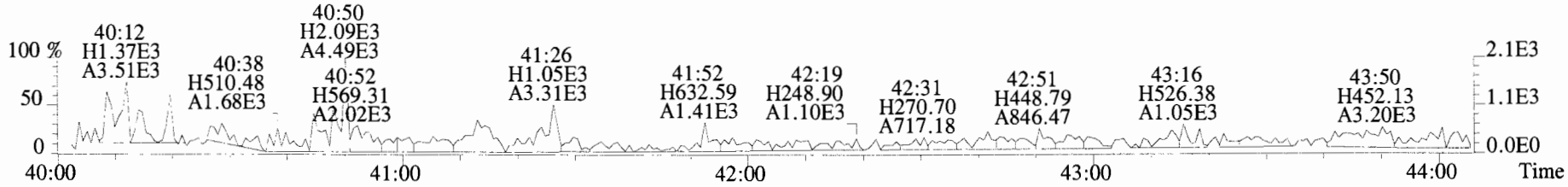


File:191016D1 #1-431 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5

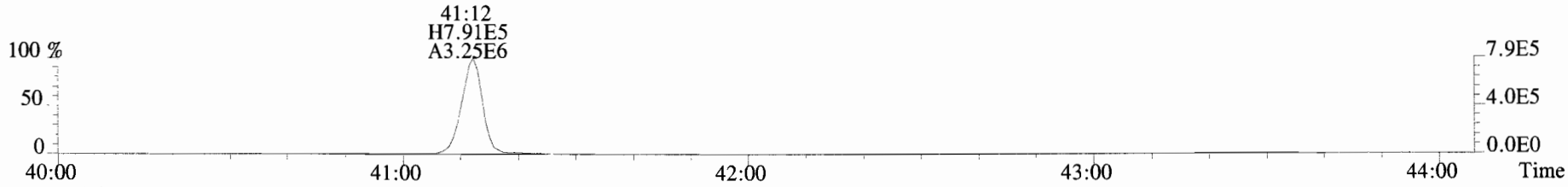
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



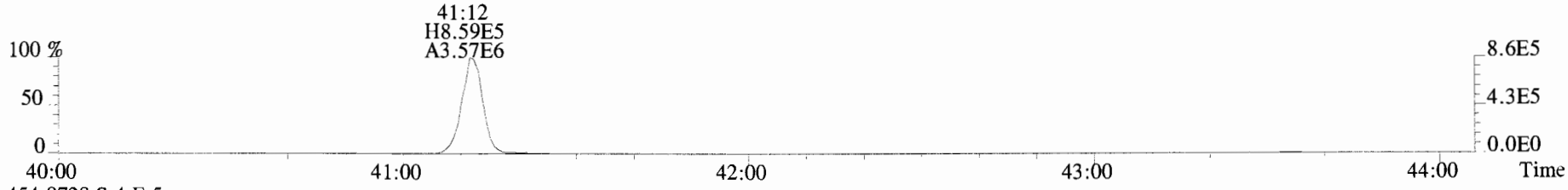
459.7348 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



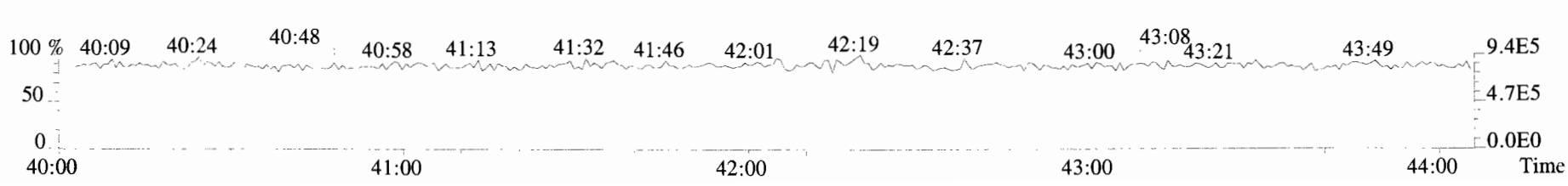
469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

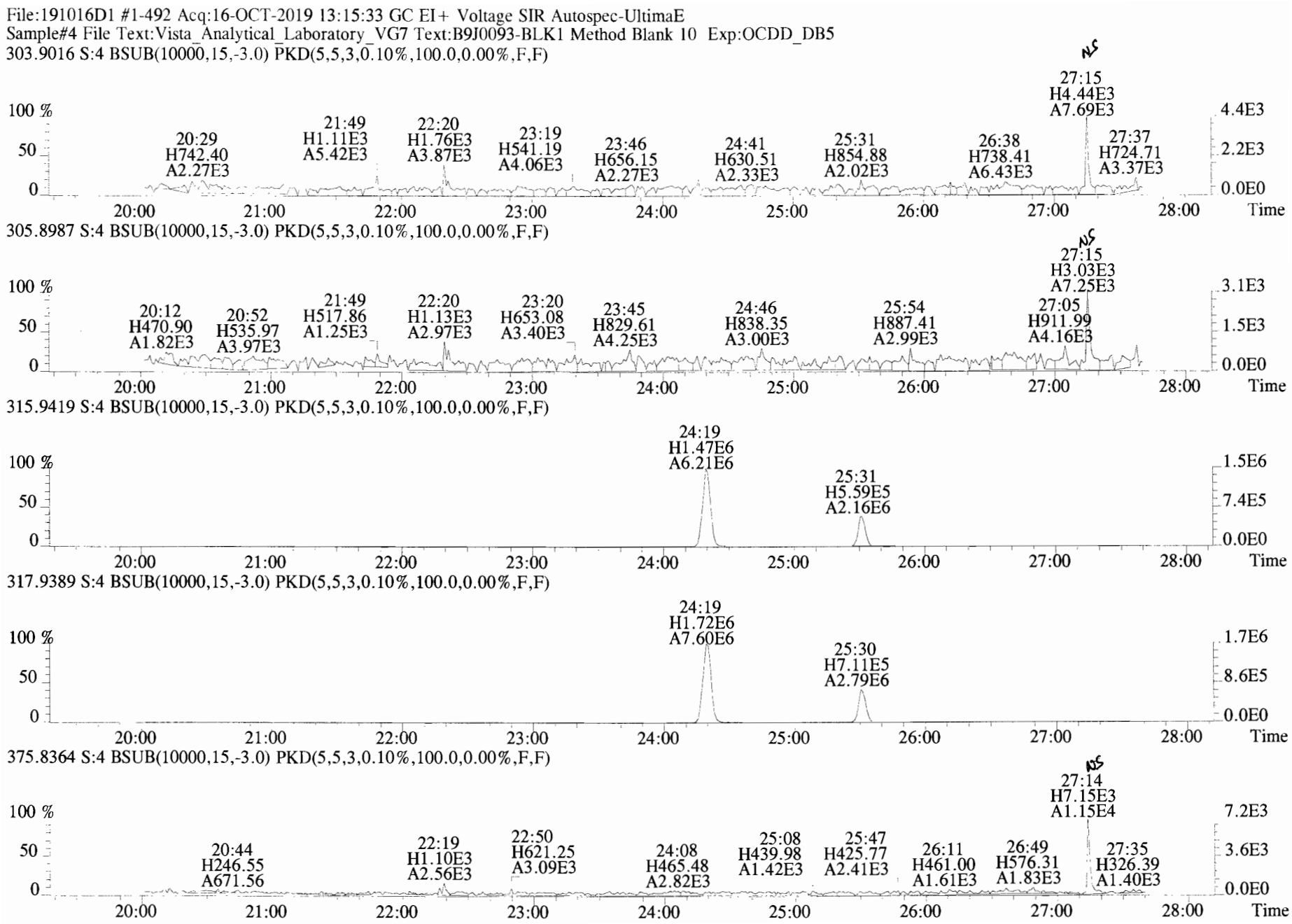


471.7750 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

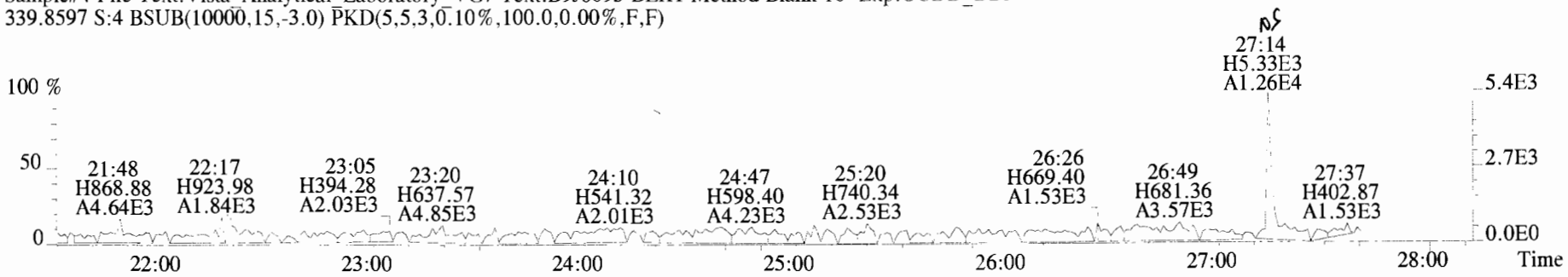


454.9728 S:4 F:5

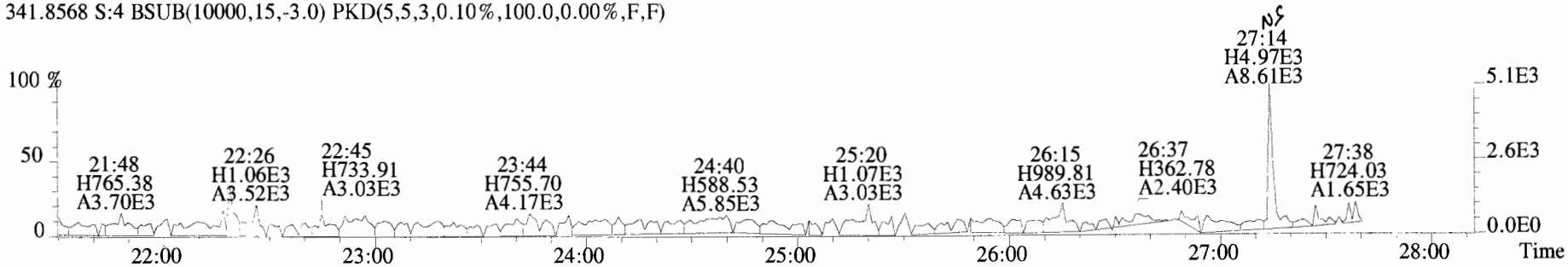



File:191016D1 #1-492 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:15 H4.44E3 A7.69E3
20:29 H742.40 A2.27E3
21:49 H1.11E3 A5.42E3
22:20 H1.76E3 A3.87E3
23:19 H541.19 A4.06E3
23:46 H656.15 A2.27E3
24:41 H630.51 A2.33E3
25:31 H854.88 A2.02E3
26:38 H738.41 A6.43E3
27:37 H724.71 A3.37E3
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:15 H3.03E3 A7.25E3
20:12 H470.90 A1.82E3
20:52 H535.97 A3.97E3
21:49 H517.86 A1.25E3
22:20 H1.13E3 A2.97E3
23:20 H653.08 A3.40E3
23:45 H829.61 A4.25E3
24:46 H838.35 A3.00E3
25:54 H887.41 A2.99E3
27:05 H911.99 A4.16E3
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:19 H1.47E6 A6.21E6
25:31 H5.59E5 A2.16E6
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:19 H1.72E6 A7.60E6
25:30 H7.11E5 A2.79E6
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:14 H7.15E3 A1.15E4
20:44 H246.55 A671.56
22:19 H1.10E3 A2.56E3
22:50 H621.25 A3.09E3
24:08 H465.48 A2.82E3
25:08 H439.98 A1.42E3
25:47 H425.77 A2.41E3
26:11 H461.00 A1.61E3
26:49 H576.31 A1.83E3
27:35 H326.39 A1.40E3
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
4.4E3
2.2E3
0.0E0
3.1E3
1.5E3
1.5E6
7.4E5
1.7E6
8.6E5
7.2E3
3.6E3

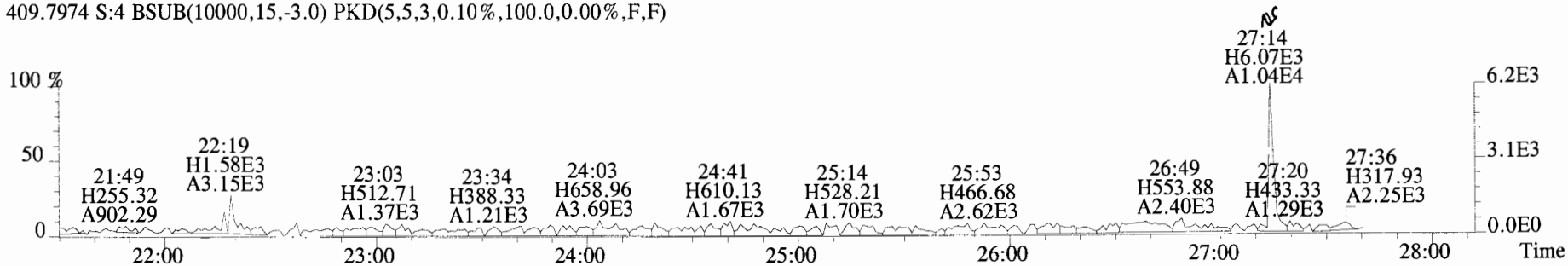
File:191016D1 #1-492 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



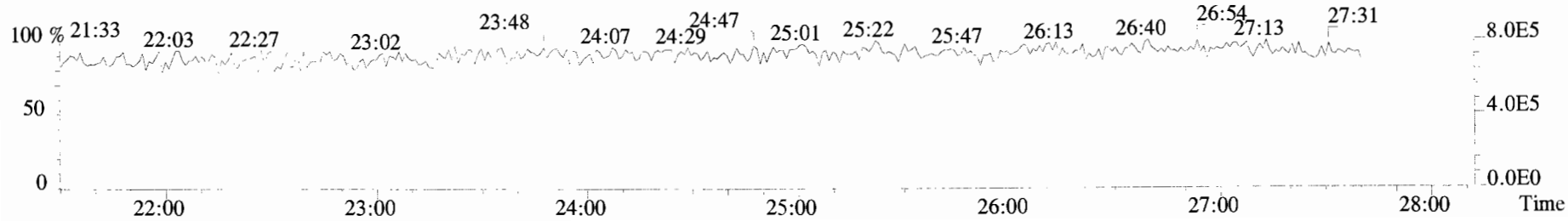
341.8568 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



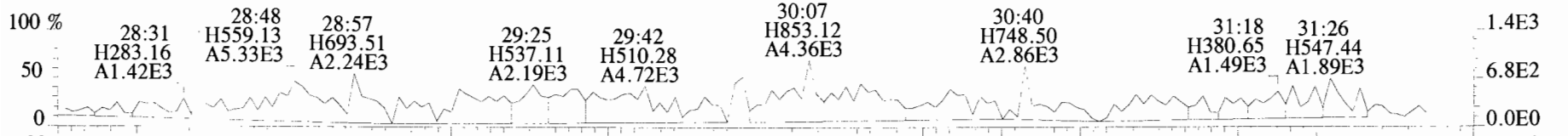
409.7974 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



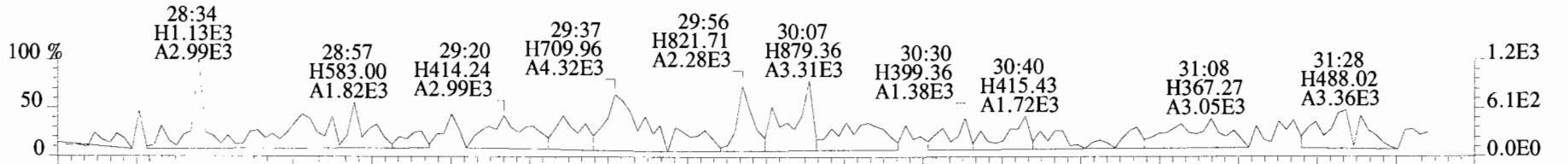
316.9824 S:4



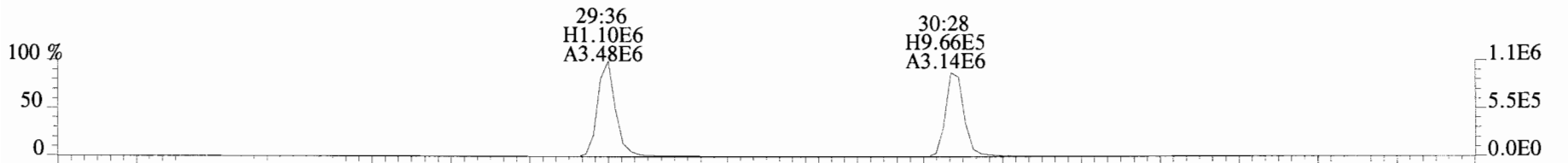
File:191016D1 #1-211 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



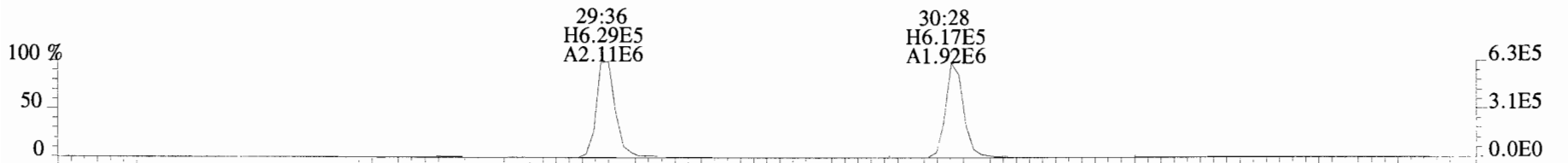
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



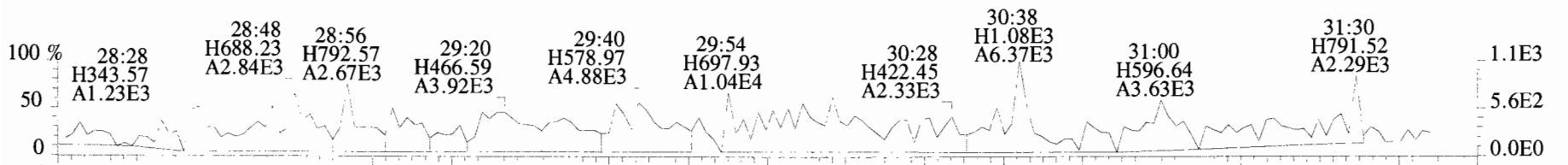
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

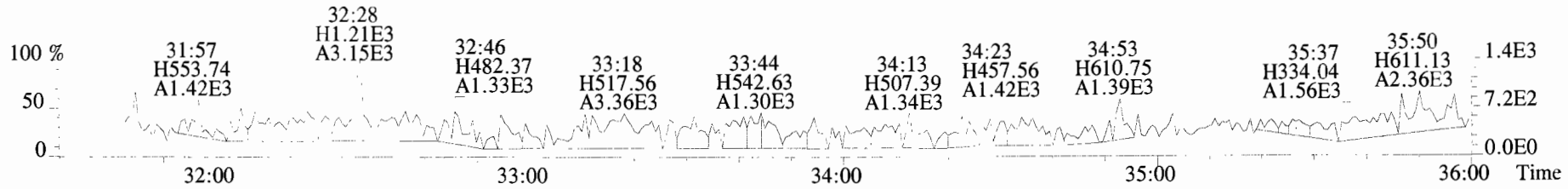


409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

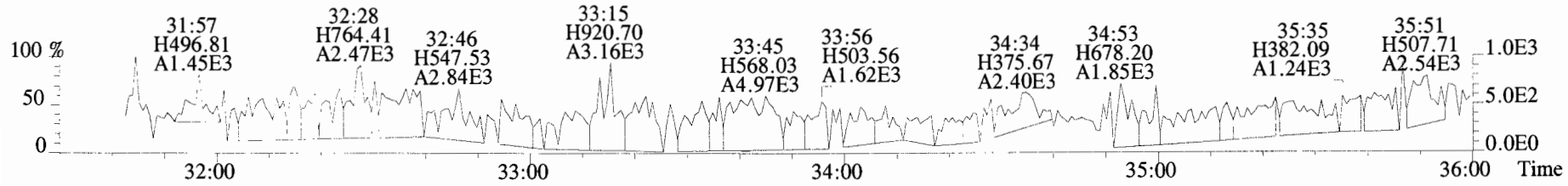


File:191016D1 #1-384 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5

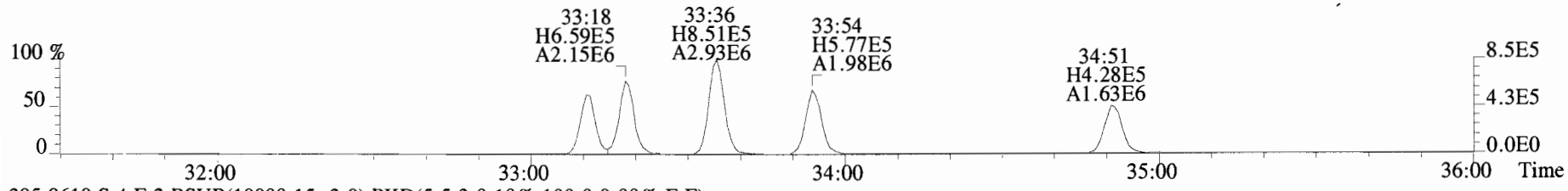
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



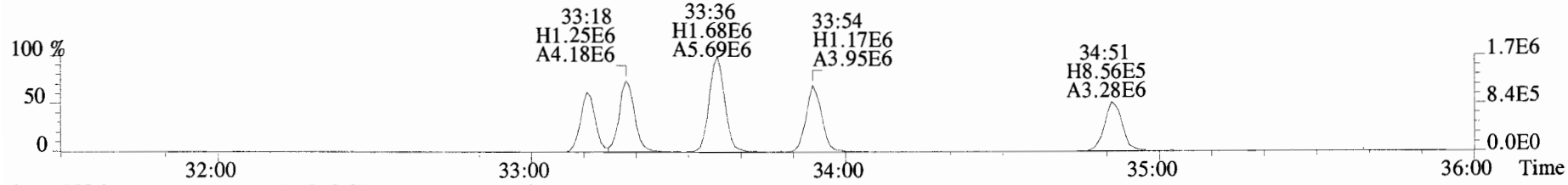
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



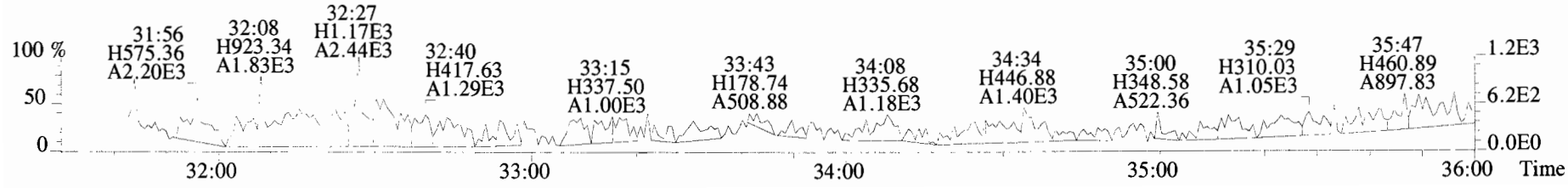
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

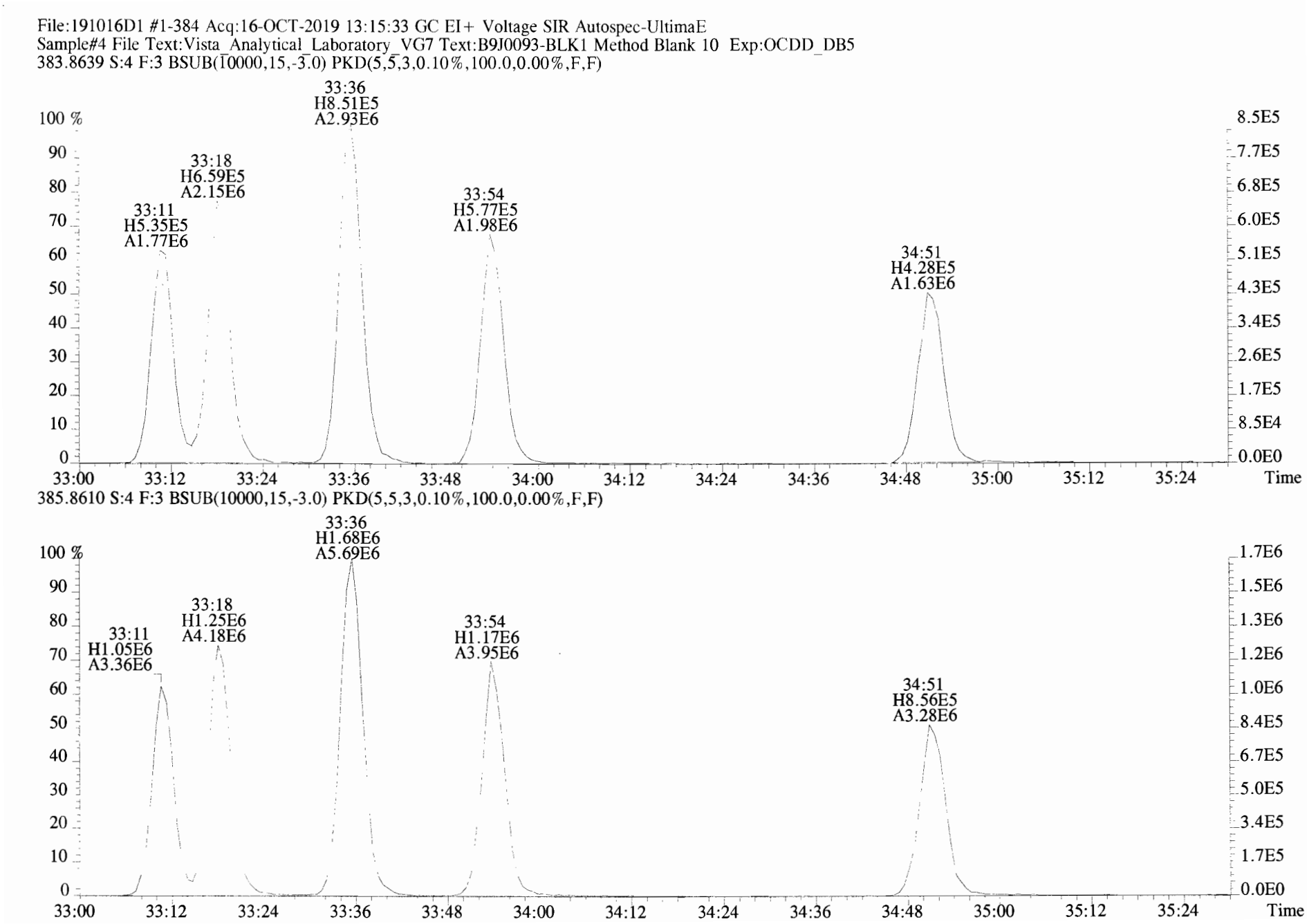


385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

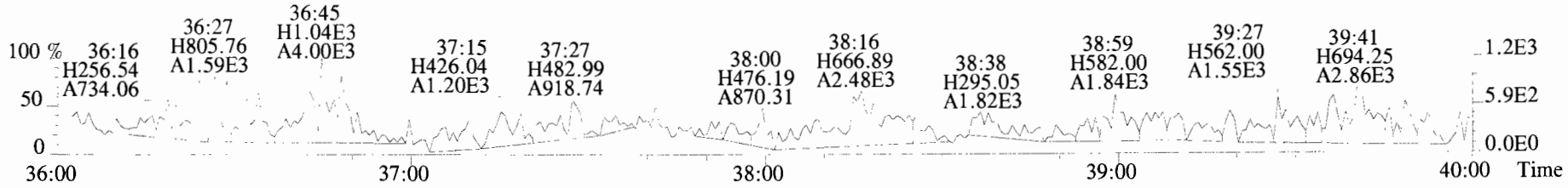


445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

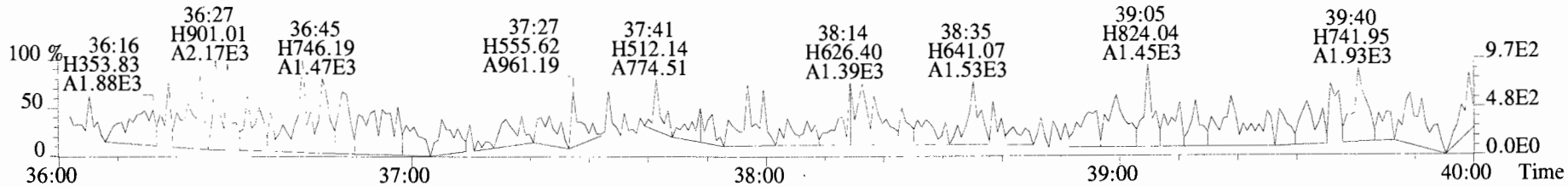



File:191016D1 #1-384 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:36 H8.51E5 A2.93E6
33:18 H6.59E5 A2.15E6
33:11 H5.35E5 A1.77E6
33:54 H5.77E5 A1.98E6
34:51 H4.28E5 A1.63E6
100 %
90
80
70
60
50
40
30
20
10
0
8.5E5
7.7E5
6.8E5
6.0E5
5.1E5
4.3E5
3.4E5
2.6E5
1.7E5
8.5E4
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:36 H1.68E6 A5.69E6
33:18 H1.25E6 A4.18E6
33:11 H1.05E6 A3.36E6
33:54 H1.17E6 A3.95E6
34:51 H8.56E5 A3.28E6
100 %
90
80
70
60
50
40
30
20
10
0
1.7E6
1.5E6
1.3E6
1.2E6
1.0E6
8.4E5
6.7E5
5.0E5
3.4E5
1.7E5
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time

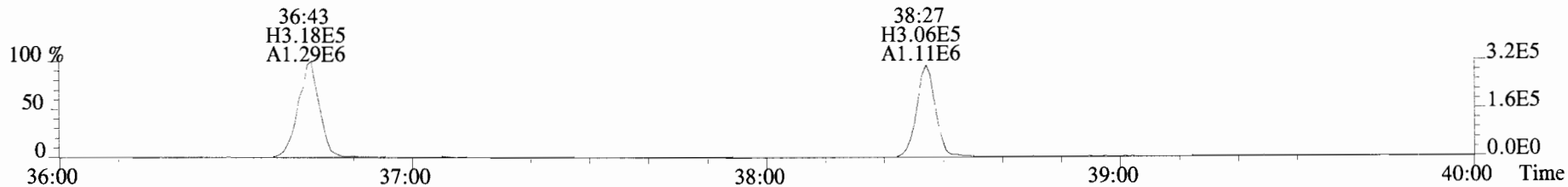
File:191016D1 #1-356 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5
407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



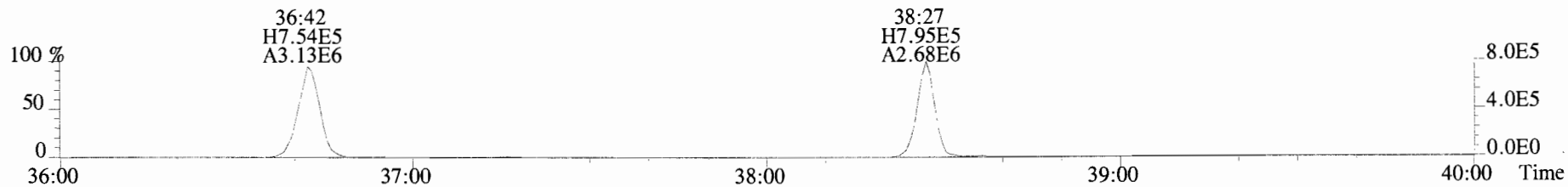
409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



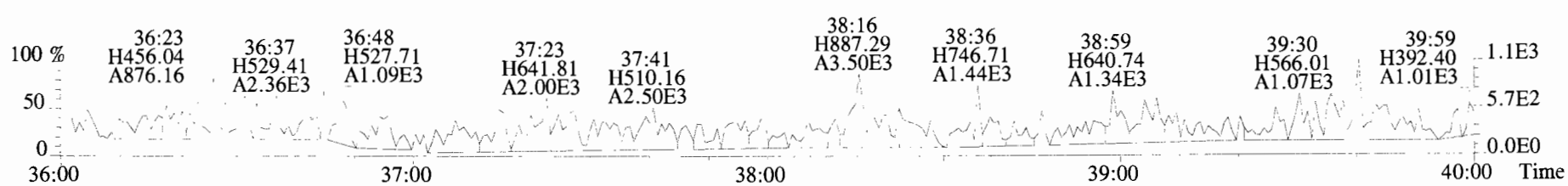
417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



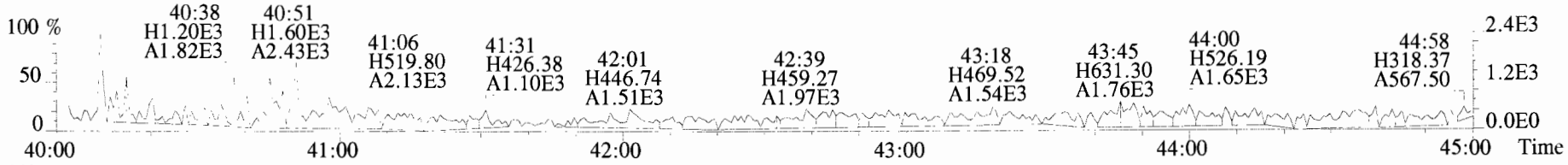
419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



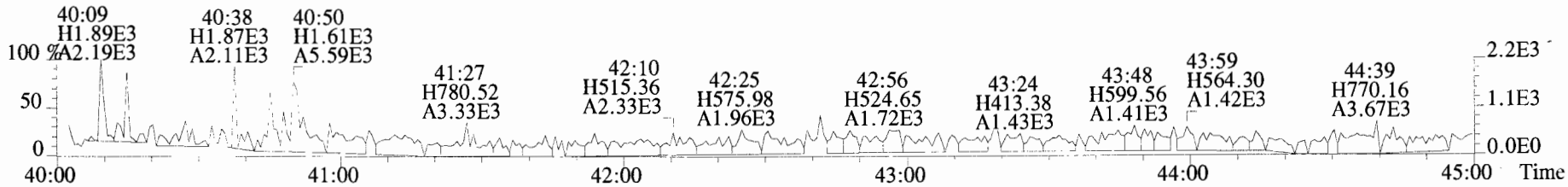
479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



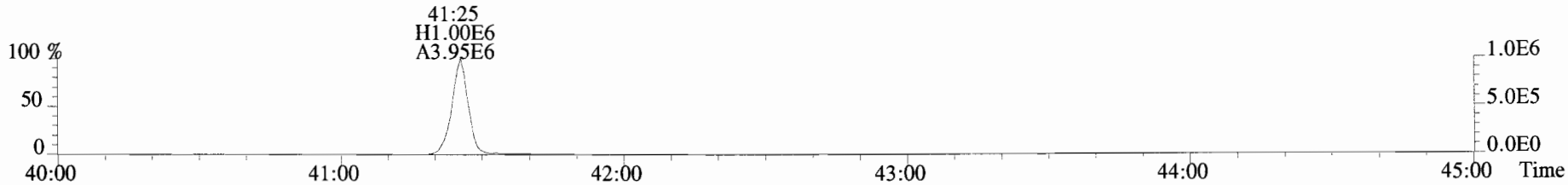
File:191016D1 #1-431 Acq:16-OCT-2019 13:15:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BLK1 Method Blank 10 Exp:OCDD_DB5
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



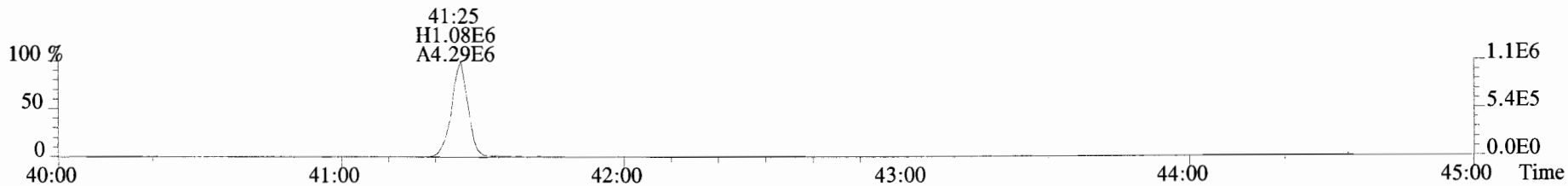
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



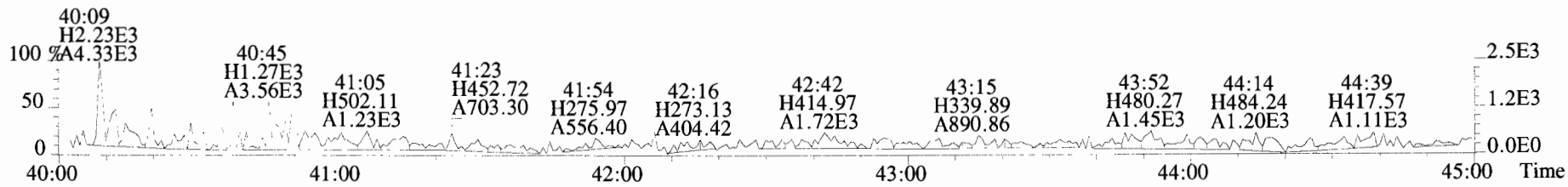
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



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



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

Lab Name: Vista Analytical Laboratory Extraction Batch: B9J0093-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 191016D1-2

Ext. Date: Shift: Day Analysis Date: 16-OCT-19 Time: 11:39:37

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	10.7	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	53.2	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	48.9	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	53.5	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	52.1	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	49.7	35.0 - 70.0
OCDD	100	103	78.0 - 144.0
2,3,7,8-TCDF	10	8.88	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	50.7	40.0 - 67.0
2,3,4,7,8-PeCDF	50	51.3	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	50.4	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	50.3	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	51.2	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	50.4	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	50.8	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	50.7	39.0 - 69.0
OCDF	100	101	63.0 - 170.0

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

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

Analyst: DB

Date: 10/16/19

FORM 8B

PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B9J0093-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 191016D1-2

Ext. Date: Shift: Day Analysis Date: 16-OCT-19 Time: 11:39:37

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	53.6	20.0 - 175.0
			25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	66.5	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	79.3	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	69.8	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	79.0	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	82.0	26.0 - 166.0
13C-OCDD	200	152	26.0 - 397.0
13C-2,3,7,8-TCDF	100	53.0	22.0 - 152.0
			26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	68.1	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	63.0	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	77.4	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	76.6	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	79.1	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	79.1	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	75.1	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	79.8	20.0 - 186.0
13C-OCDF	200	158	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	20.2	12.4 - 76.4

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

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

Analyst: DB

Date: 10/17/19

Name	Resp	RA	RRF	RT	Conc	Method QC Limits	Vista Historical Limits Aqueous Limits	Solid Limits
2,3,7,8-TCDD	4.96e+05	0.80 y	0.91	26:20	10.7	7.0 - 13	7.73 - 12.4	7.53 - 12.5
1,2,3,7,8-PeCDD	2.45e+06	0.64 y	0.90	30:47	53.2	35 - 65	37.8 - 57.5	40.4 - 65.1
1,2,3,4,7,8-HxCDD	2.60e+06	1.21 y	1.10	34:06	48.9	35 - 65	38.3 - 58.0	41.2 - 63.2
1,2,3,6,7,8-HxCDD	2.84e+06	1.25 y	0.94	34:13	53.5	35 - 65	38.7 - 57.0	40.8 - 65.2
1,2,3,7,8,9-HxCDD	3.02e+06	1.23 y	0.96	34:31	52.1	35 - 65	37.0 - 57.5	41.7 - 65.4
1,2,3,4,6,7,8-HpCDD	2.47e+06	1.02 y	0.98	37:56	49.7	35 - 65	39.0 - 58.5	21.3 - 87.7
OCDD	4.13e+06	0.89 y	0.96	41:13	103	70 - 130	83.2 - 126	0 - 400
2,3,7,8-TCDF	6.18e+05	0.82 y	0.95	25:33	8.88	7.0 - 13	7.65 - 12.4	7.82 - 12.0
1,2,3,7,8-PeCDF	3.78e+06	1.66 y	0.96	29:38	50.7	35 - 65	41.4 - 64.9	39.6 - 65.6
2,3,4,7,8-PeCDF	3.71e+06	1.67 y	1.01	30:30	51.3	35 - 65	36.9 - 56.0	40.2 - 66.5
1,2,3,4,7,8-HxCDF	3.62e+06	1.23 y	1.18	33:12	50.4	35 - 65	33.4 - 59.4	39.4 - 63.9
1,2,3,6,7,8-HxCDF	4.04e+06	1.23 y	1.07	33:20	50.3	35 - 65	38.7 - 59.0	41.1 - 62.9
2,3,4,6,7,8-HxCDF	4.07e+06	1.23 y	1.11	33:56	51.2	35 - 65	39.3 - 58.0	40.9 - 63.3
1,2,3,7,8,9-HxCDF	3.32e+06	1.21 y	1.06	34:53	50.4	35 - 65	38.8 - 58.0	39.5 - 64.9
1,2,3,4,6,7,8-HpCDF	3.09e+06	1.00 y	1.13	36:44	50.8	35 - 65	40.2 - 63.1	31.9 - 74.7
1,2,3,4,7,8,9-HpCDF	2.85e+06	0.99 y	1.28	38:28	50.7	35 - 65	40.5 - 62.2	39.8 - 63.8
OCDF	4.94e+06	0.91 y	0.95	41:27	101	70 - 130	80.0 - 120	69.8 - 136

						% Rec	Method QC Limits	Aqueous Limits	Solid Limits
13C-2,3,7,8-TCDD	5.13e+06	0.75 y	1.10	26:19	53.6	53.6	40 - 135	48.8 - 105	53.0 - 115
13C-1,2,3,7,8-PeCDD	5.11e+06	0.62 y	0.88	30:46	66.5	66.5	40 - 135	49.8 - 109	61.4 - 117
13C-1,2,3,4,7,8-HxCDD	4.82e+06	1.21 y	0.64	34:05	79.3	79.3	40 - 135	50.4 - 99.1	54.6 - 121
13C-1,2,3,6,7,8-HxCDD	5.66e+06	1.24 y	0.86	34:12	69.8	69.8	40 - 135	50.4 - 99.1	54.6 - 121
13C-1,2,3,7,8,9-HxCDD	6.04e+06	1.24 y	0.81	34:29	79.0	79.0	40 - 135	50.4 - 99.1	54.6 - 121
13C-1,2,3,4,6,7,8-HpCDD	5.08e+06	1.03 y	0.65	37:55	82.0	82.0	40 - 135	51.2 - 106	67.6 - 117
13C-OCDD	8.37e+06	0.93 y	0.58	41:13	152	76.1	40 - 135	30.8 - 113	14.0 - 147
13C-2,3,7,8-TCDF	7.33e+06	0.81 y	1.03	25:32	53.0	53.0	40 - 135	50.3 - 103	56.0 - 112
13C-1,2,3,7,8-PeCDF	7.77e+06	1.55 y	0.85	29:37	68.1	68.1	40 - 135	49.3 - 105	58.6 - 116
13C-2,3,4,7,8-PeCDF	7.13e+06	1.56 y	0.85	30:30	63.0	63.0	40 - 135	53.3 - 109	62.9 - 118
13C-1,2,3,4,7,8-HxCDF	6.10e+06	0.51 y	0.83	33:12	77.4	77.4	40 - 135	44.5 - 110	55.9 - 118
13C-1,2,3,6,7,8-HxCDF	7.51e+06	0.51 y	1.03	33:19	76.6	76.6	40 - 135	45.8 - 111	58.6 - 118
13C-2,3,4,6,7,8-HxCDF	7.14e+06	0.51 y	0.95	33:55	79.1	79.1	40 - 135	50.8 - 110	63.7 - 115
13C-1,2,3,7,8,9-HxCDF	6.21e+06	0.49 y	0.83	34:52	79.1	79.1	40 - 135	48.6 - 108	63.3 - 112
13C-1,2,3,4,6,7,8-HpCDF	5.39e+06	0.41 y	0.76	36:43	75.1	75.1	40 - 135	45.9 - 104	55.0 - 117
13C-1,2,3,4,7,8,9-HpCDF	4.39e+06	0.41 y	0.58	38:28	79.8	79.8	40 - 135	41.1 - 114	53.2 - 122
13C-OCDF	1.03e+07	0.90 y	0.69	41:26	158	78.8	40 - 135	36.8 - 109	48.3 - 109
37Cl-2,3,7,8-TCDD	2.11e+06		1.20	26:20	20.2	50.5	40 - 135	51.1 - 117	49.6 - 106
13C-1,2,3,4-TCDD	8.73e+06	0.78 y	1.00	25:45	100				
13C-1,2,3,4-TCDF	1.34e+07	0.81 y	1.00	24:20	100				
13C-1,2,3,4,6,9-HxCDF	9.48e+06	0.50 y	1.00	33:36	100				

Analyst: DB

Date: 10/16/19

Client ID: OPR Filename: 191016D1 S:2 Acq:16-OCT-19 11:39:37 ConCal: ST191016D1-1
Lab ID: B9J0093-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000 EndCAL: ST191016D1-2

	Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	4.96e+05	0.80 y	0.91	26:20	10.690			* 2.5	*
	1,2,3,7,8-PeCDD	2.45e+06	0.64 y	0.90	30:47	53.171			* 2.5	*
	1,2,3,4,7,8-HxCDD	2.60e+06	1.21 y	1.10	34:06	48.864			* 2.5	*
	1,2,3,6,7,8-HxCDD	2.84e+06	1.25 y	0.94	34:13	53.508			* 2.5	*
	1,2,3,7,8,9-HxCDD	3.02e+06	1.23 y	0.96	34:31	52.097			* 2.5	*
	1,2,3,4,6,7,8-HpCDD	2.47e+06	1.02 y	0.98	37:56	49.721			* 2.5	*
	OCDD	4.13e+06	0.89 y	0.96	41:13	102.90			* 2.5	*
	2,3,7,8-TCDF	6.18e+05	0.82 y	0.95	25:33	8.8796			* 2.5	*
	1,2,3,7,8-PeCDF	3.78e+06	1.66 y	0.96	29:38	50.673			* 2.5	*
	2,3,4,7,8-PeCDF	3.71e+06	1.67 y	1.01	30:30	51.265			* 2.5	*
	1,2,3,4,7,8-HxCDF	3.62e+06	1.23 y	1.18	33:12	50.422			* 2.5	*
	1,2,3,6,7,8-HxCDF	4.04e+06	1.23 y	1.07	33:20	50.335			* 2.5	*
	2,3,4,6,7,8-HxCDF	4.07e+06	1.23 y	1.11	33:56	51.210			* 2.5	*
	1,2,3,7,8,9-HxCDF	3.32e+06	1.21 y	1.06	34:53	50.408			* 2.5	*
	1,2,3,4,6,7,8-HpCDF	3.09e+06	1.00 y	1.13	36:44	50.803			* 2.5	*
	1,2,3,4,7,8,9-HpCDF	2.85e+06	0.99 y	1.28	38:28	50.678			* 2.5	*
	OCDF	4.94e+06	0.91 y	0.95	41:27	101.20			* 2.5	*
IS	13C-2,3,7,8-TCDD	5.13e+06	0.75 y	1.10	26:19	53.639				
IS	13C-1,2,3,7,8-PeCDD	5.11e+06	0.62 y	0.88	30:46	66.454				
IS	13C-1,2,3,4,7,8-HxCDD	4.82e+06	1.21 y	0.64	34:05	79.277				
IS	13C-1,2,3,6,7,8-HxCDD	5.66e+06	1.24 y	0.86	34:12	69.808				
IS	13C-1,2,3,7,8,9-HxCDD	6.04e+06	1.24 y	0.81	34:29	78.998				
IS	13C-1,2,3,4,6,7,8-HpCDD	5.08e+06	1.03 y	0.65	37:55	81.988				
IS	13C-OCDD	8.37e+06	0.93 y	0.58	41:13	152.25				
IS	13C-2,3,7,8-TCDF	7.33e+06	0.81 y	1.03	25:32	53.018				
IS	13C-1,2,3,7,8-PeCDF	7.77e+06	1.55 y	0.85	29:37	68.079				
IS	13C-2,3,4,7,8-PeCDF	7.13e+06	1.56 y	0.85	30:30	63.046				
IS	13C-1,2,3,4,7,8-HxCDF	6.10e+06	0.51 y	0.83	33:12	77.397				
IS	13C-1,2,3,6,7,8-HxCDF	7.51e+06	0.51 y	1.03	33:19	76.592				
IS	13C-2,3,4,6,7,8-HxCDF	7.14e+06	0.51 y	0.95	33:55	79.051				
IS	13C-1,2,3,7,8,9-HxCDF	6.21e+06	0.49 y	0.83	34:52	79.104				
IS	13C-1,2,3,4,6,7,8-HpCDF	5.39e+06	0.41 y	0.76	36:43	75.135				
IS	13C-1,2,3,4,7,8,9-HpCDF	4.39e+06	0.41 y	0.58	38:28	79.776				
IS	13C-OCDF	1.03e+07	0.90 y	0.69	41:26	157.69				
C/Up	37Cl-2,3,7,8-TCDD	2.11e+06		1.20	26:20	20.187				
RS/RT	13C-1,2,3,4-TCDD	8.73e+06	0.78 y	1.00	25:45	100.00				
RS	13C-1,2,3,4-TCDF	1.34e+07	0.81 y	1.00	24:20	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	9.48e+06	0.50 y	1.00	33:36	100.00				

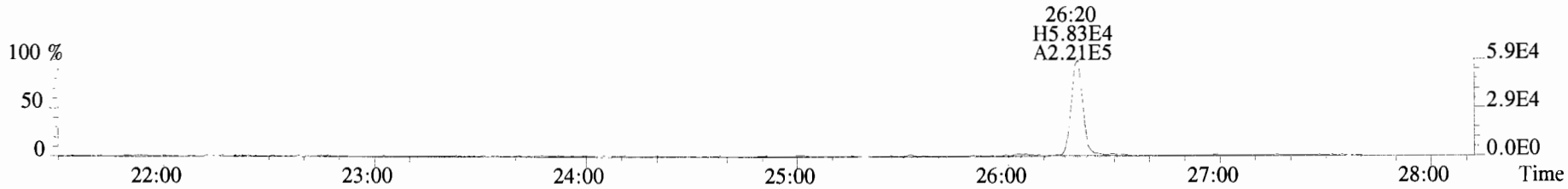
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	10.9	12.8		*	*
Total Penta-Dioxins	53.3	53.3		*	*
Total Hexa-Dioxins	154	155		*	*
Total Hepta-Dioxins	50.5	51.0		*	*
Total Tetra-Furans	9.26	11.4		*	*
Total Penta-Furans	102.97	105.39		*	*
Total Hexa-Furans	203	203		*	*
Total Hepta-Furans	102	103		*	*

	Rec	Qual
IS	53.6	
IS	66.5	
IS	79.3	
IS	69.8	
IS	79.0	
IS	82.0	
IS	76.1	
IS	53.0	
IS	68.1	
IS	63.0	
IS	77.4	
IS	76.6	
IS	79.1	
IS	79.1	
IS	75.1	
IS	79.8	
IS	78.8	
C/Up	50.5	

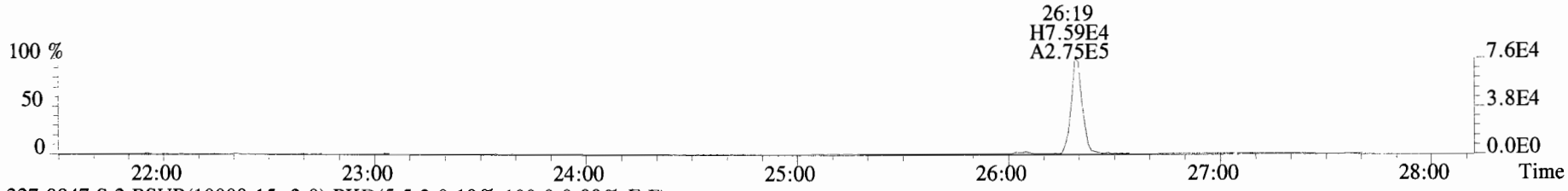
Integrations by Analyst: DB Date: 10/16/19

Reviewed by Analyst: CT Date: 10/17/19

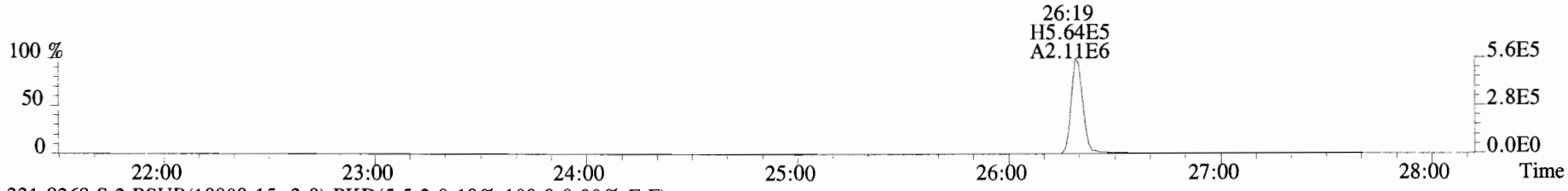
File:191016D1 #1-492 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



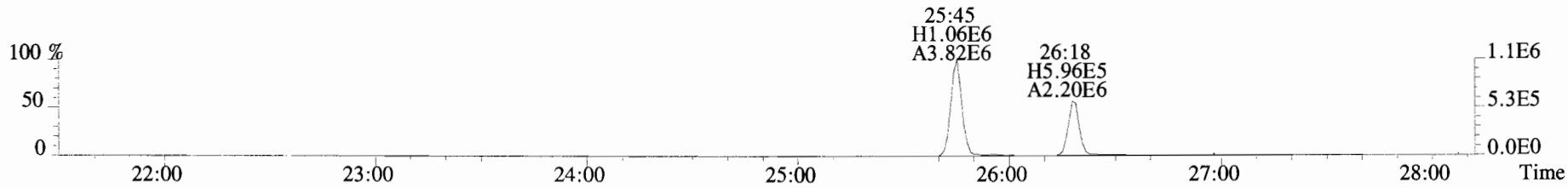
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



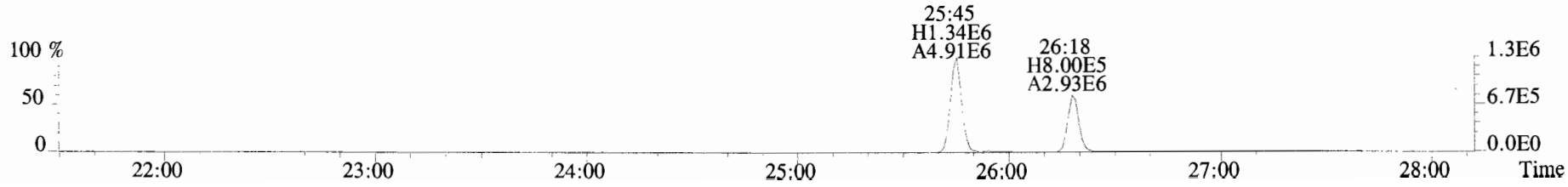
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



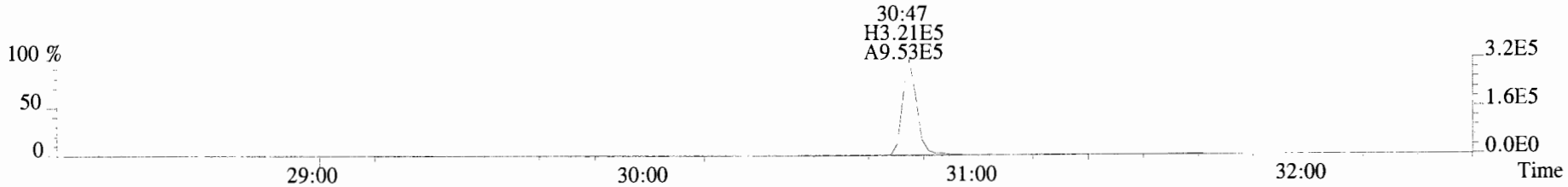
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



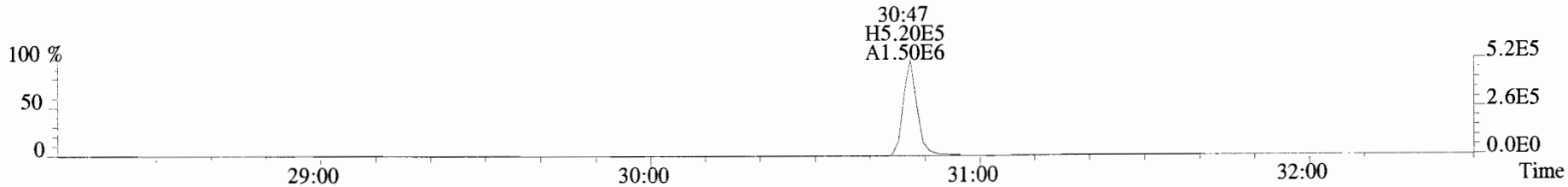
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



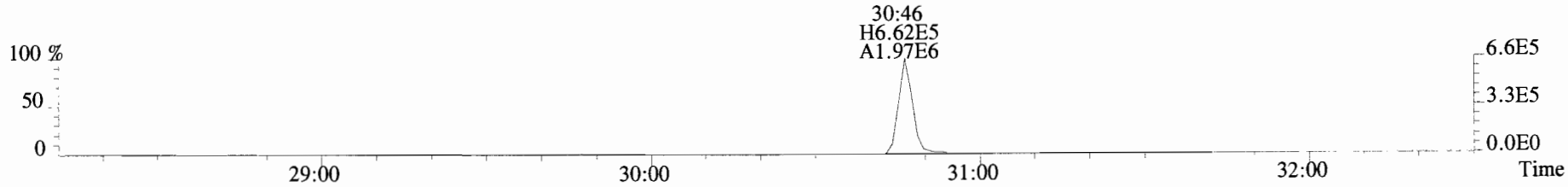
File:191016D1 #1-211 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



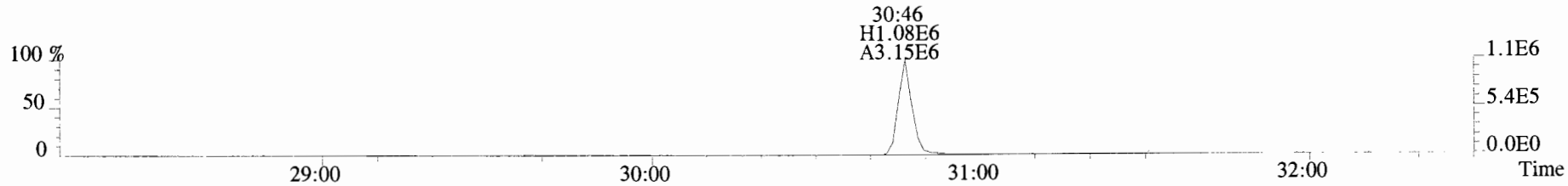
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



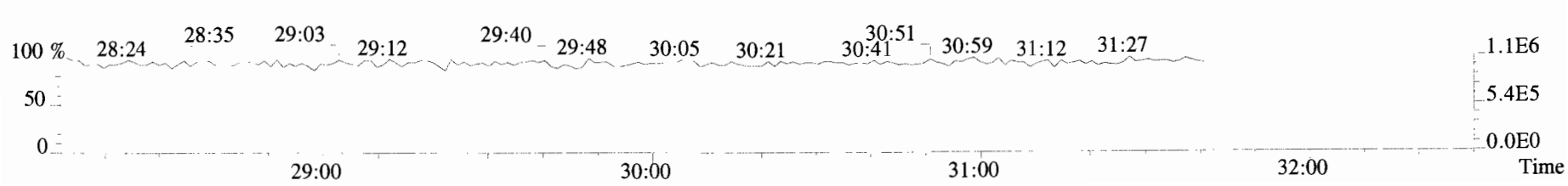
365.8978 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



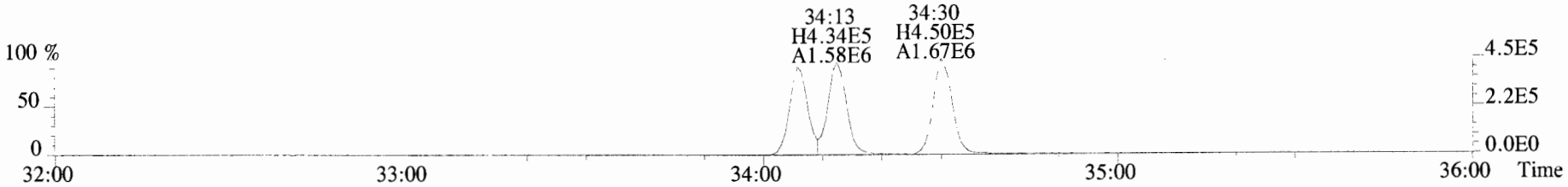
367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



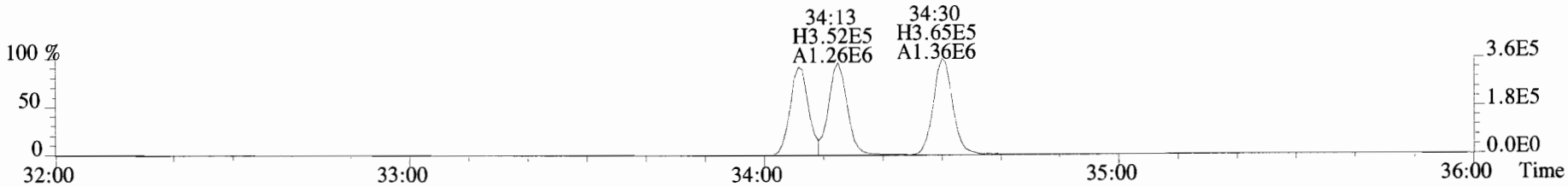
366.9792 S:2 F:2



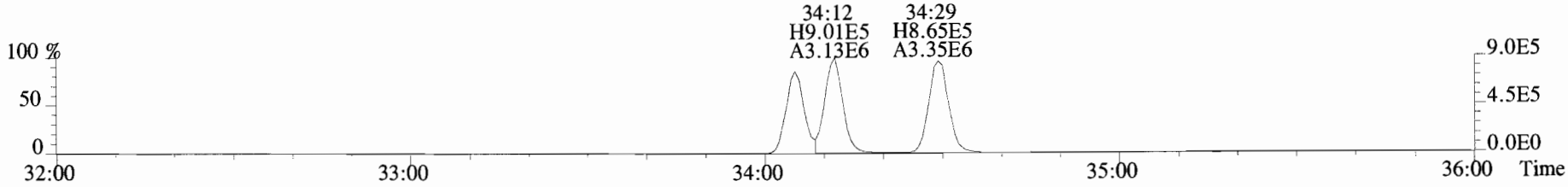
File:191016D1 #1-384 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



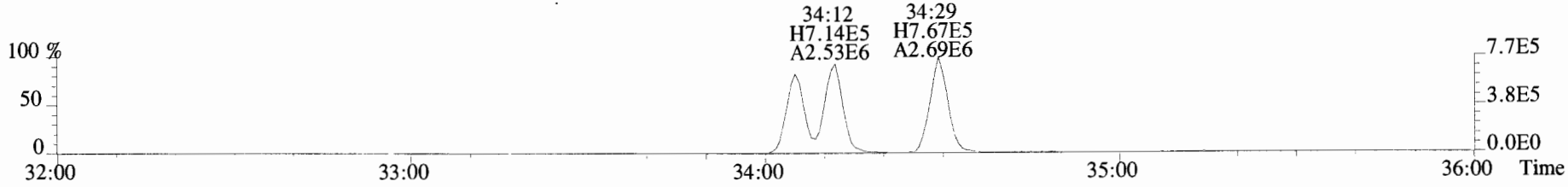
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



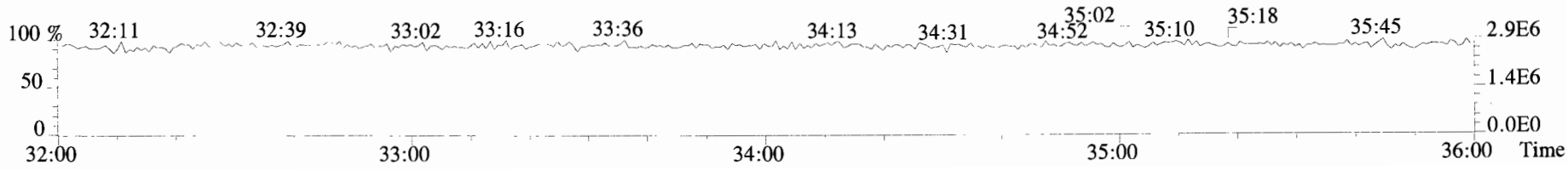
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



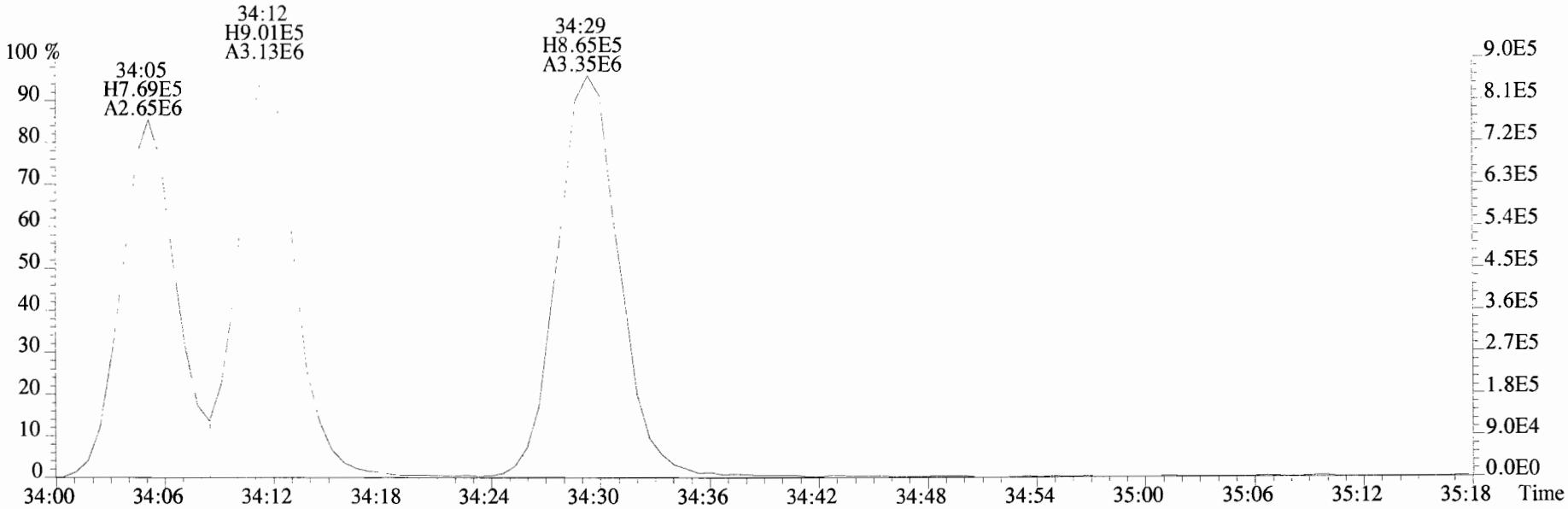
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



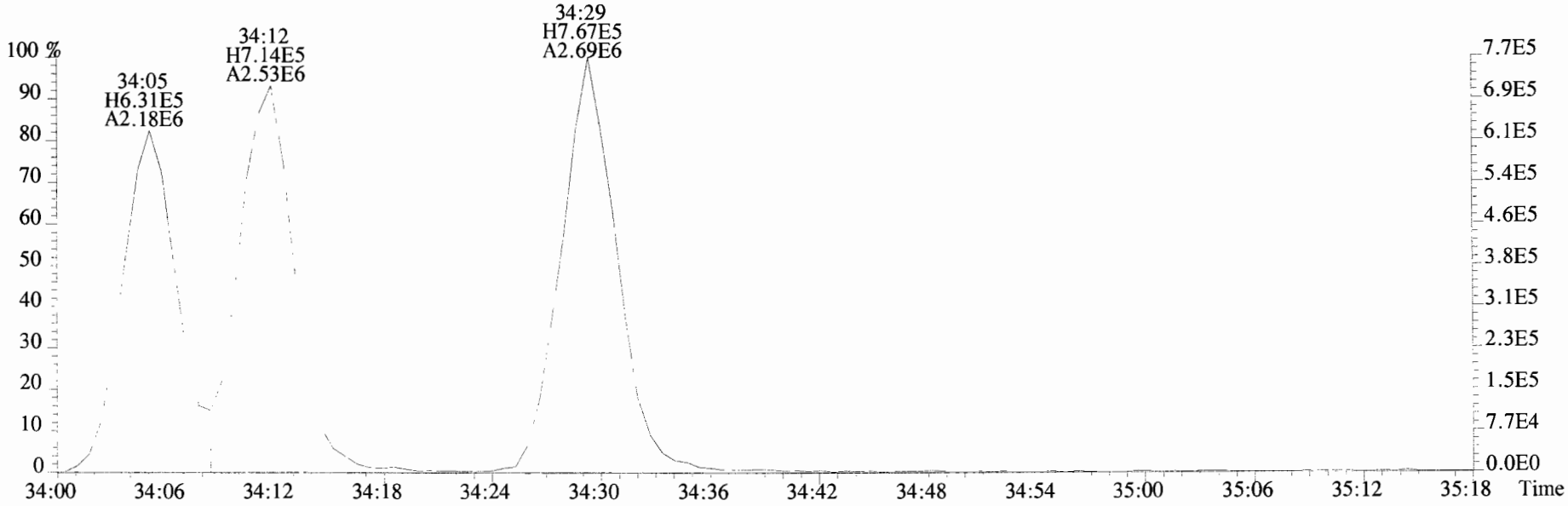
392.9760 S:2 F:3



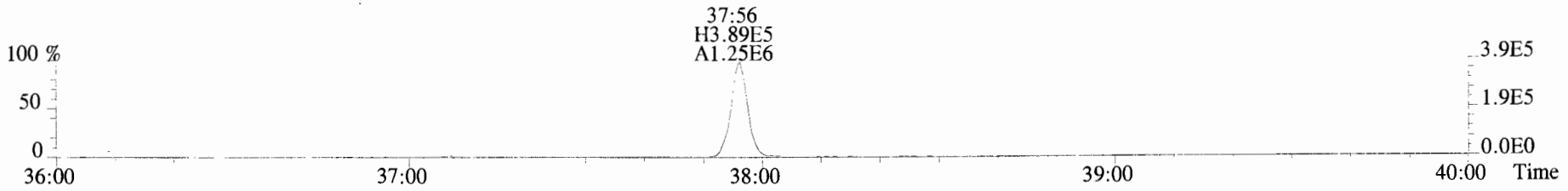
File:191016D1 #1-384 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



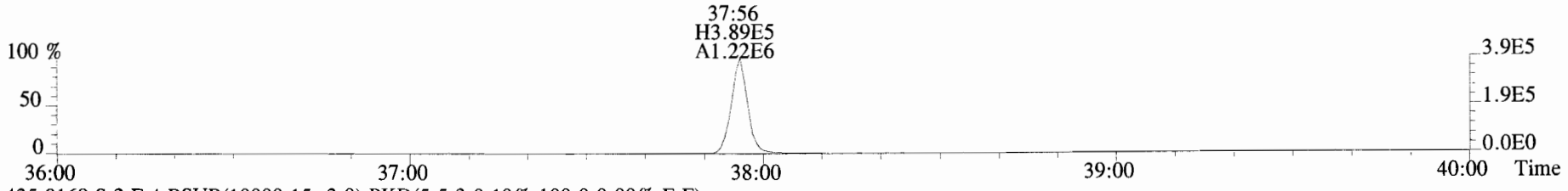
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



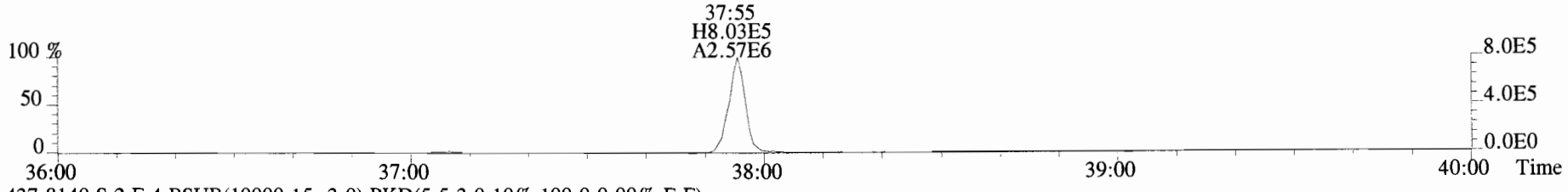
File:191016D1 #1-356 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



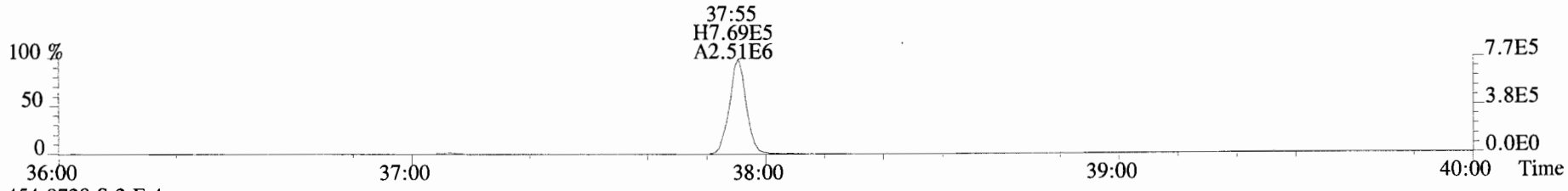
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



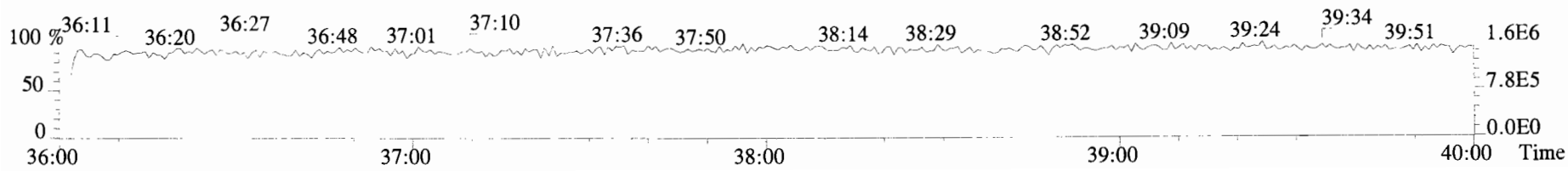
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

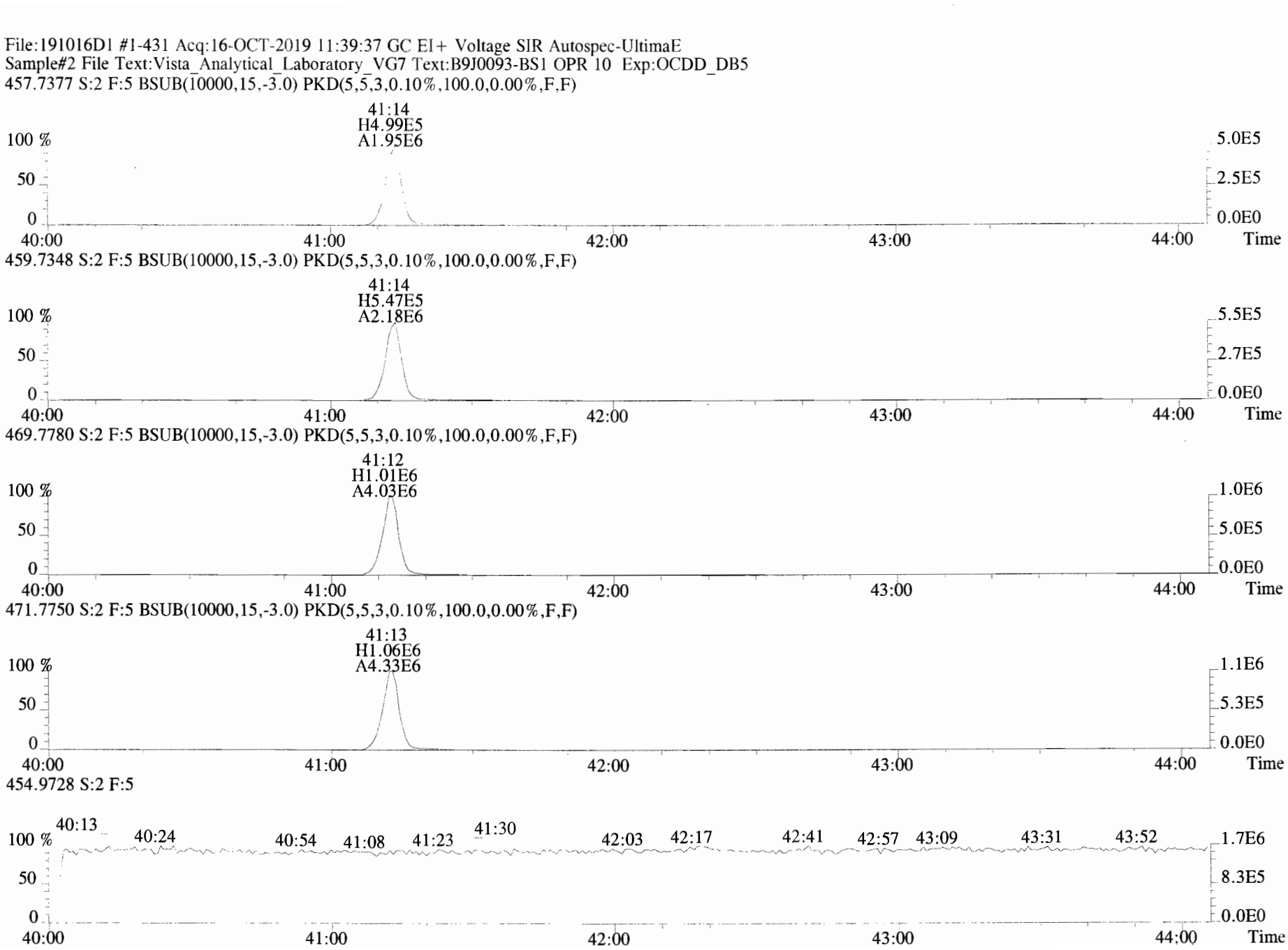


437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

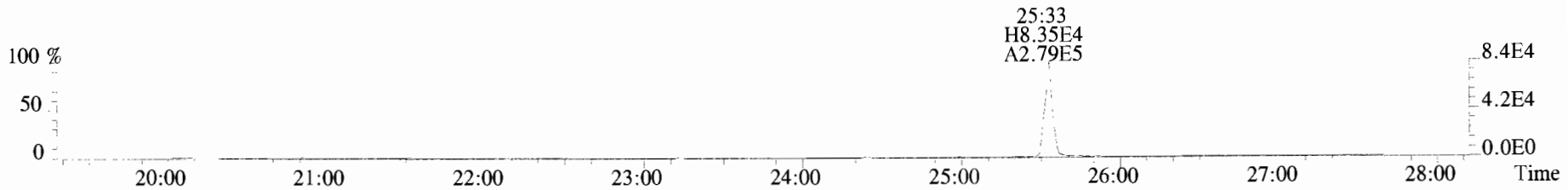


454.9728 S:2 F:4

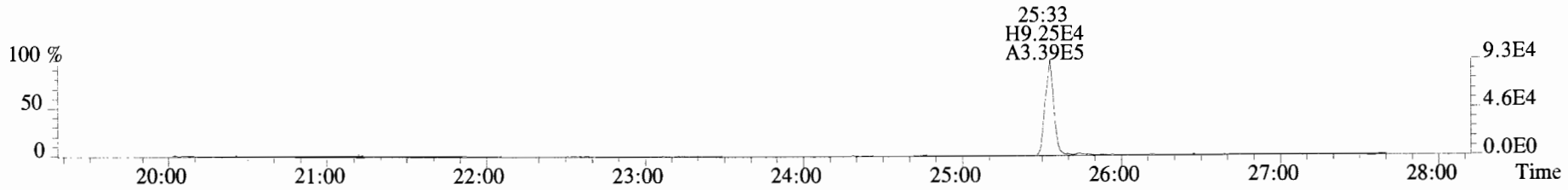



File:191016D1 #1-431 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:14
H4.99E5
A1.95E6
100 %
50
0
5.0E5
2.5E5
0.0E0
40:00
41:00
42:00
43:00
44:00
Time
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:14
H5.47E5
A2.18E6
5.5E5
2.7E5
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12
H1.01E6
A4.03E6
1.0E6
5.0E5
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:13
H1.06E6
A4.33E6
1.1E6
5.3E5
454.9728 S:2 F:5
40:13
40:24
40:54
41:08
41:23
41:30
42:03
42:17
42:41
42:57
43:09
43:31
43:52
1.7E6
8.3E5

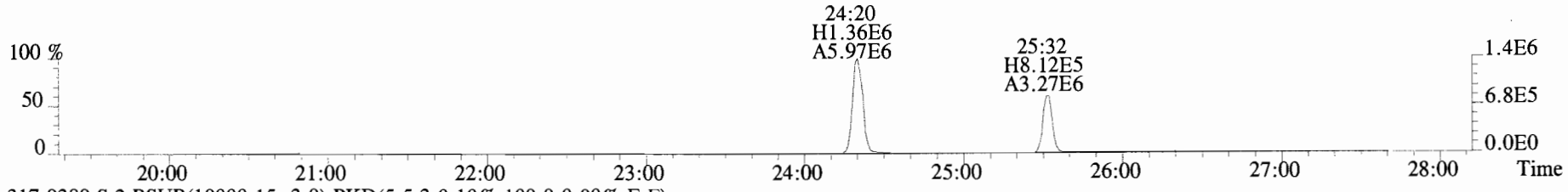
File:191016D1 #1-492 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



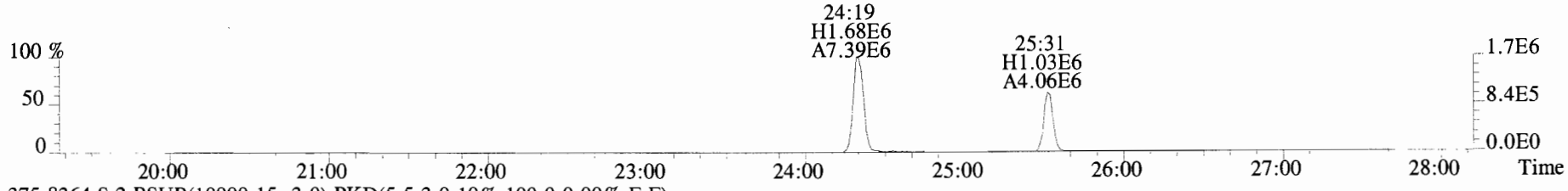
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



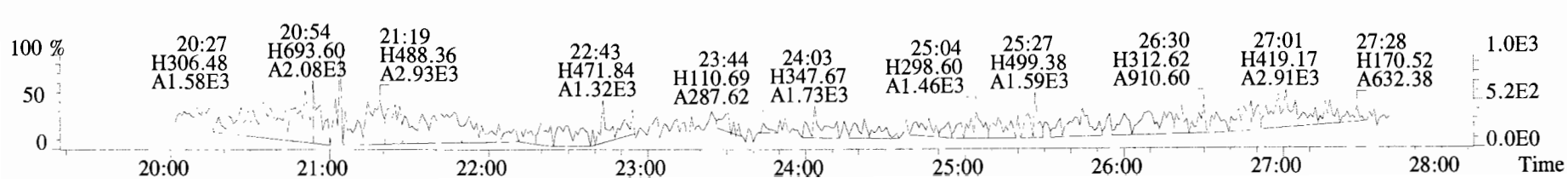
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



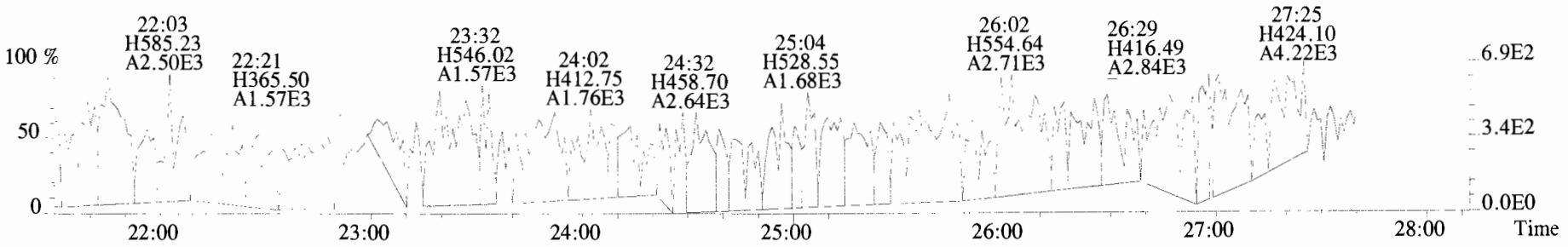
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



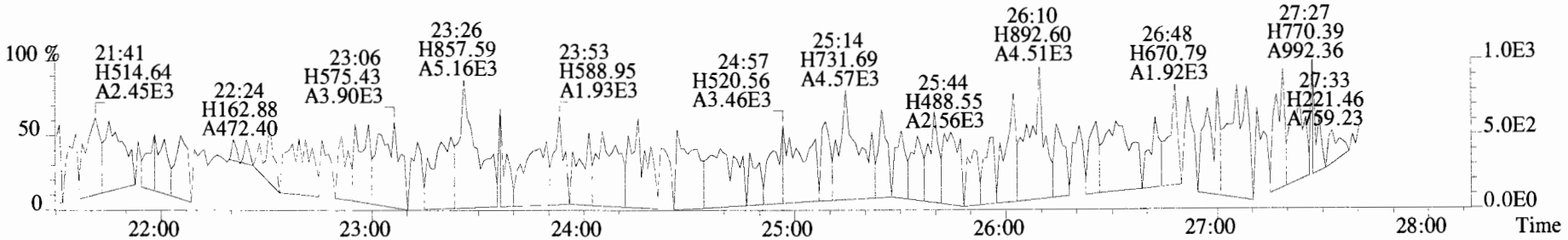
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



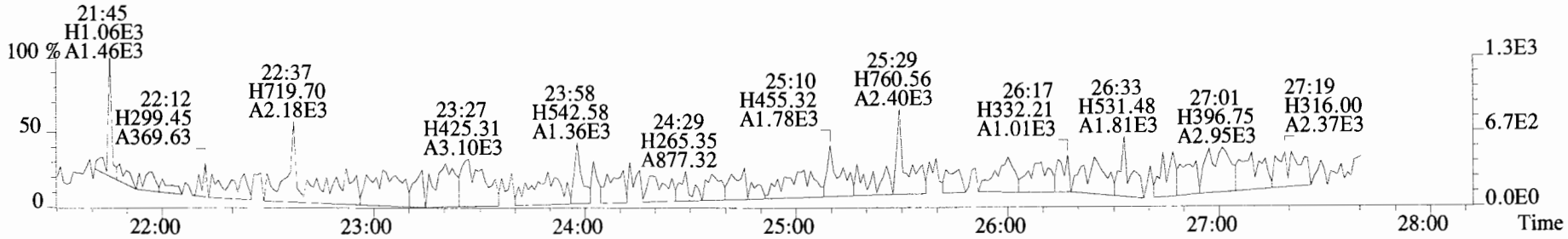
File:191016D1 #1-492 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



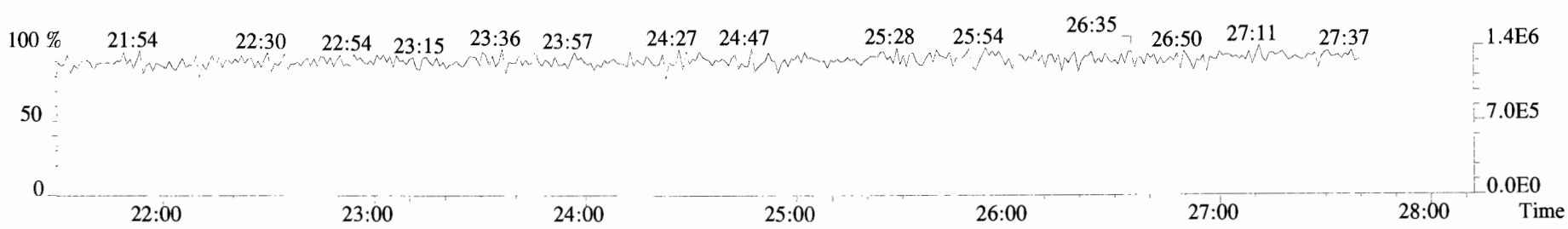
341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



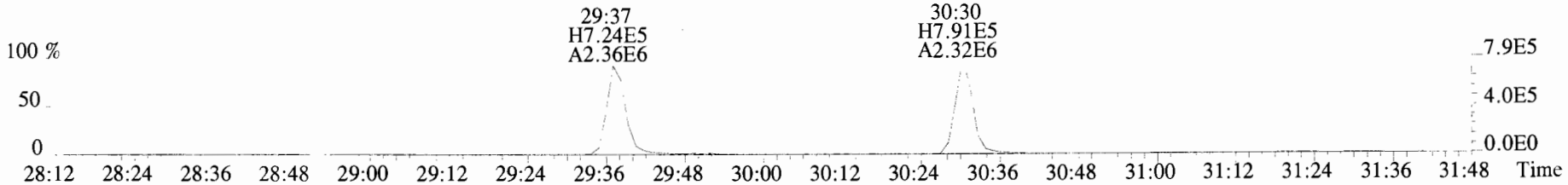
409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



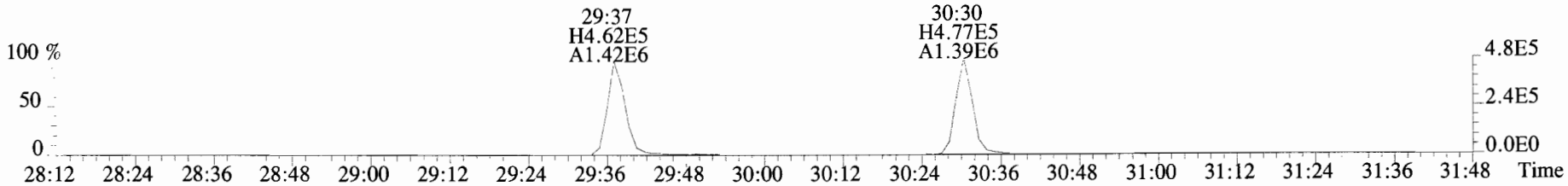
316.9824 S:2



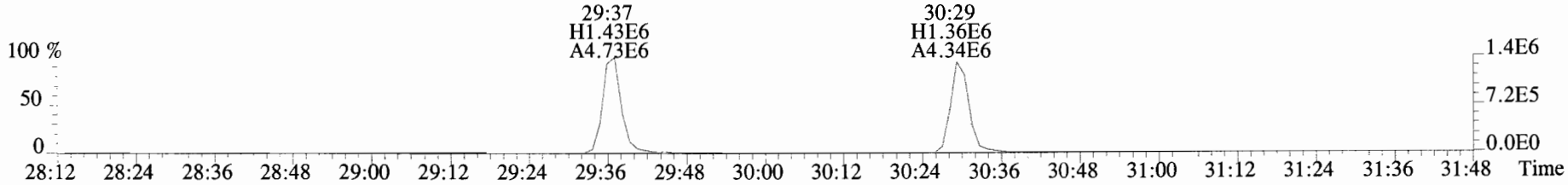
File:191016D1 #1-211 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



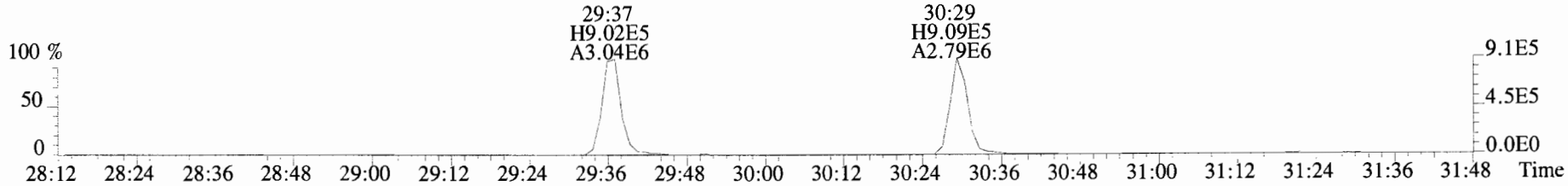
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



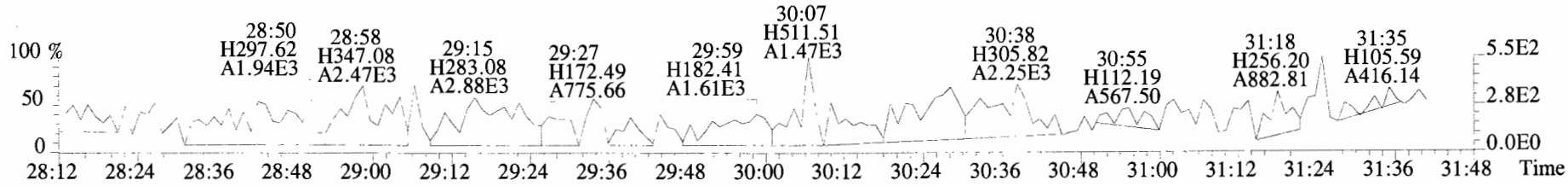
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

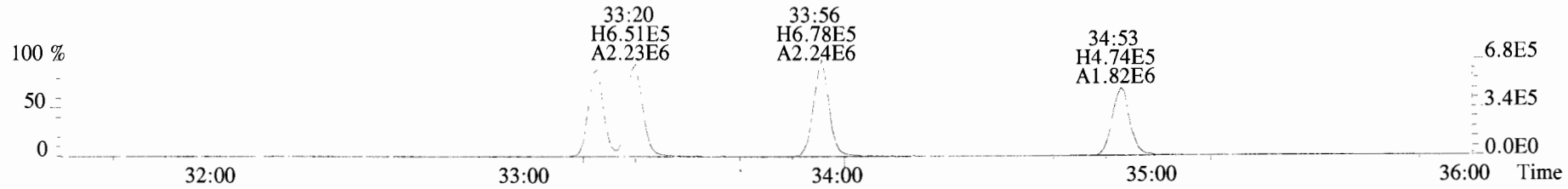


409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

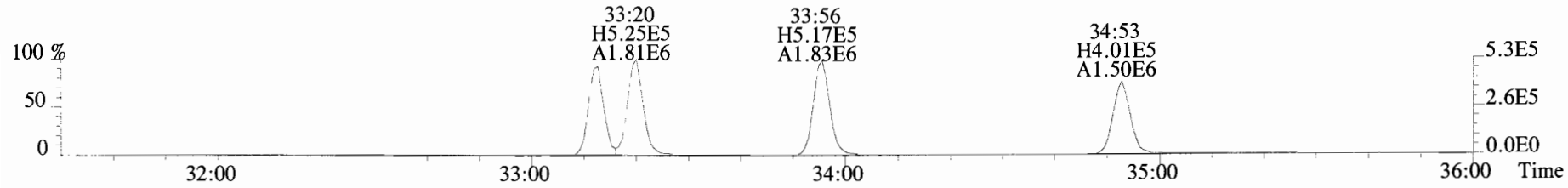


File:191016D1 #1-384 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5

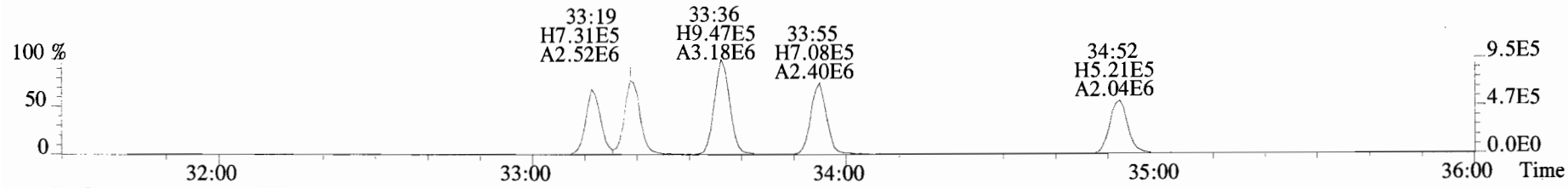
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



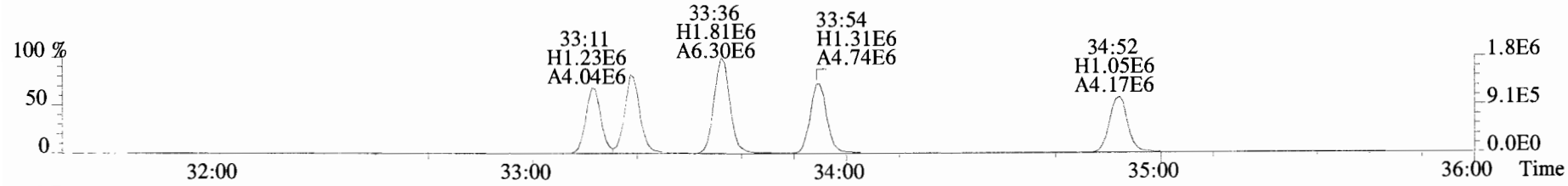
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



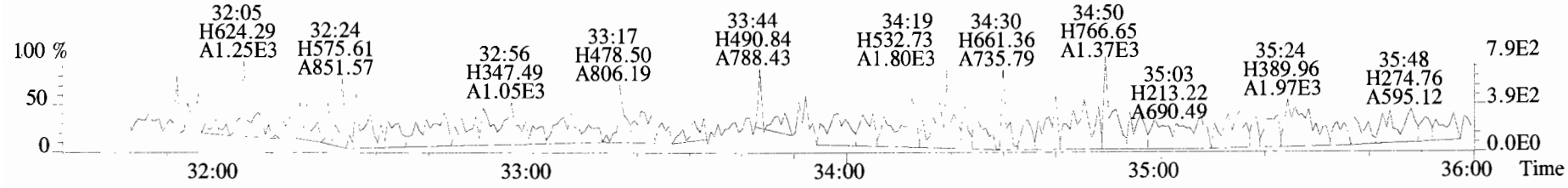
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



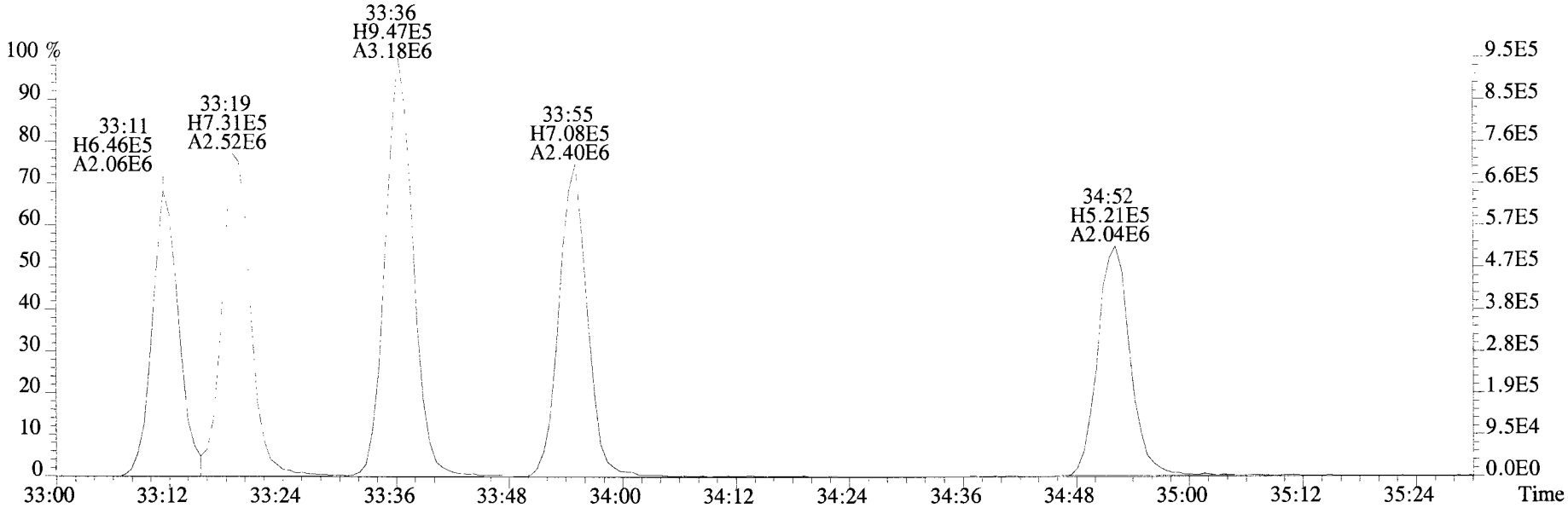
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



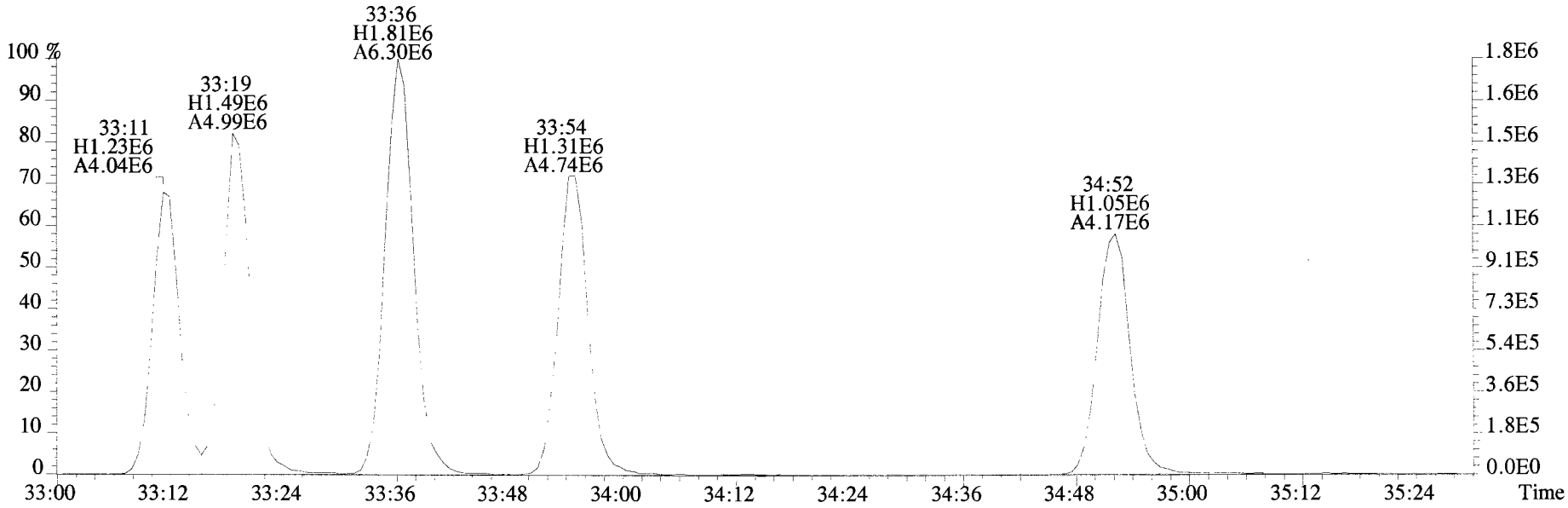
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



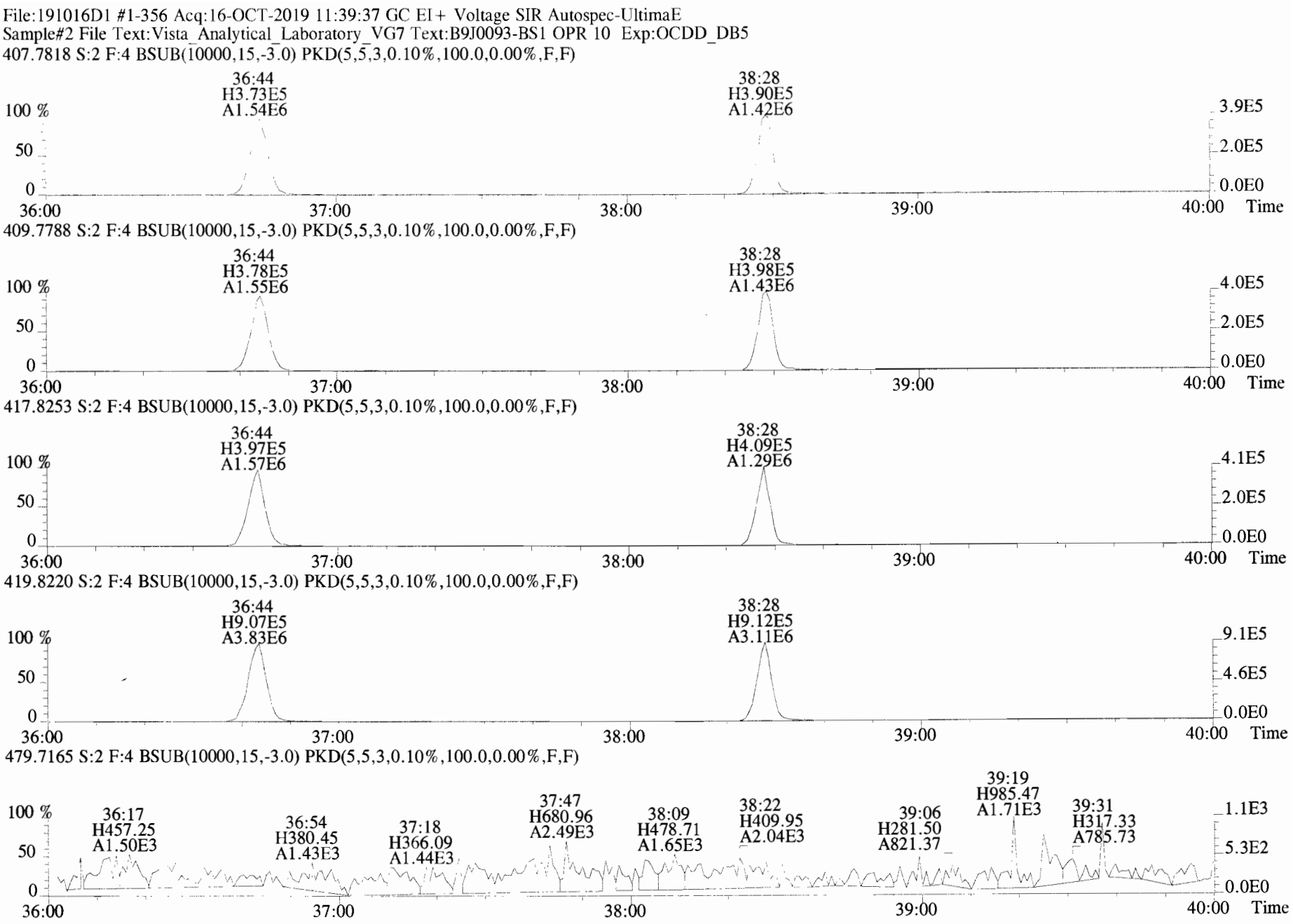
File:191016D1 #1-384 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



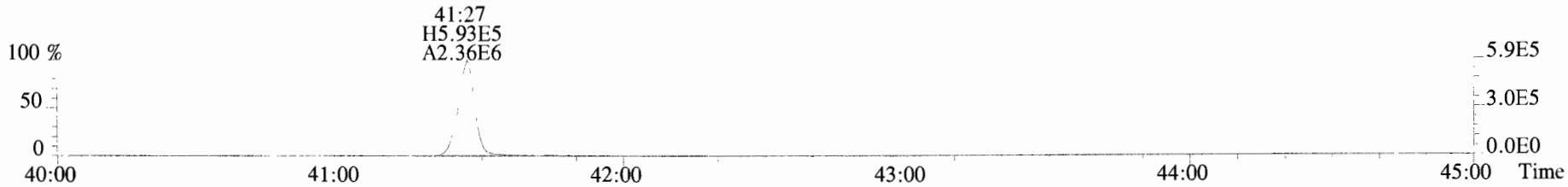
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



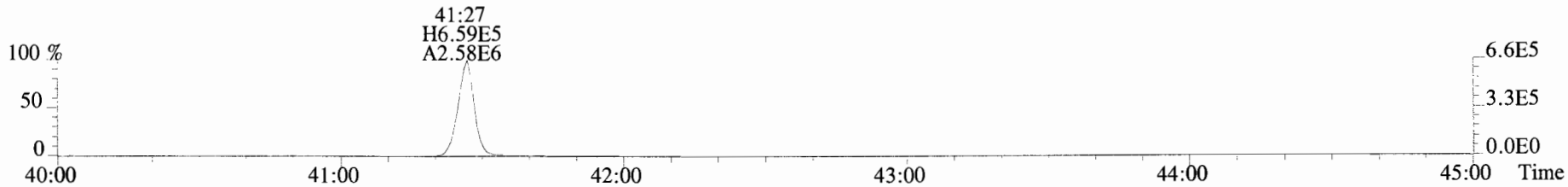
File:191016D1 #1-356 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5



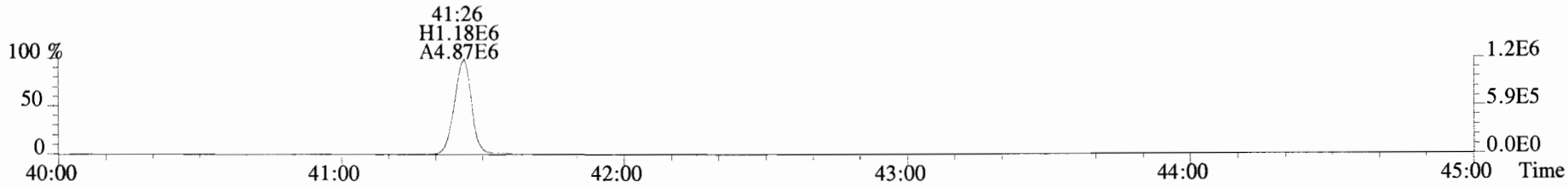
File:191016D1 #1-431 Acq:16-OCT-2019 11:39:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0093-BS1 OPR 10 Exp:OCDD_DB5
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



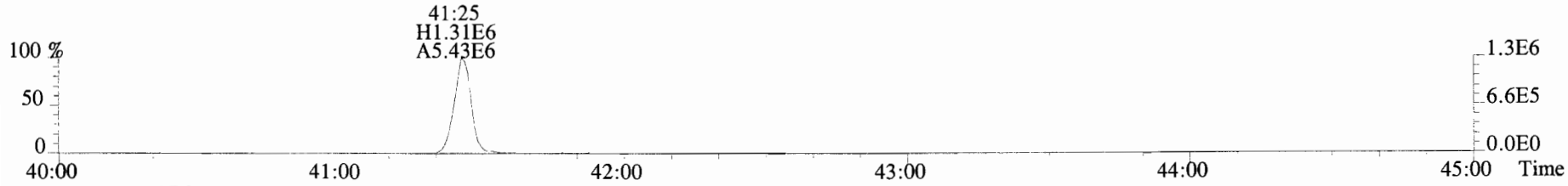
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



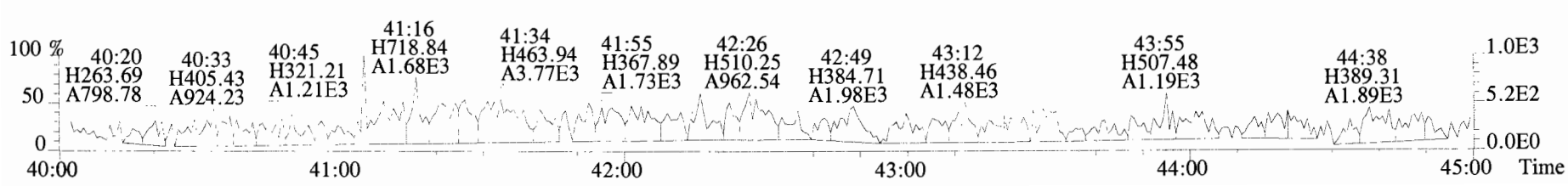
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



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



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

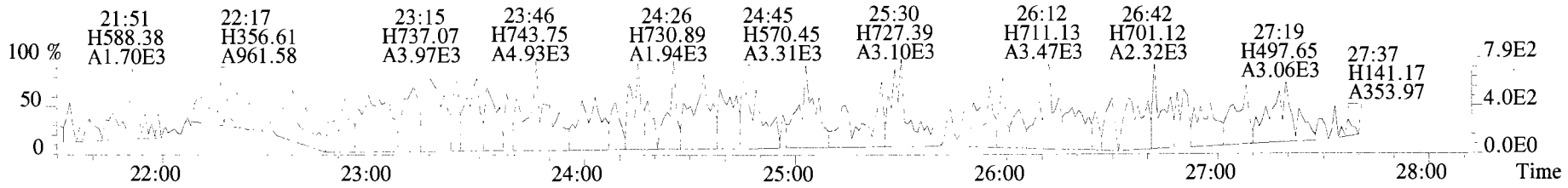
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		142	0.133
Total Penta-Dioxins	*	*		156	0.113
Total Hexa-Dioxins	*	*		137	0.161
Total Hepta-Dioxins	*	*		105	0.113
Total Tetra-Furans	*	*		189	0.126
Total Penta-Furans	0.0000	0.0000		137	0.103
Total Hexa-Furans	*	*		124	0.0604
Total Hepta-Furans	*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

	Name			RRF	RT		Qual	Rec	Qual
IS	13C-2,3,7,8-TCDD	3.92e+06	0.80 y	1.10	26:14	128.65		64.3	
IS	13C-1,2,3,7,8-PeCDD	3.71e+06	0.63 y	0.88	30:44	151.38		75.7	
IS	13C-1,2,3,4,7,8-HxCDD	3.23e+06	1.24 y	0.64	34:04	143.25		71.6	
IS	13C-1,2,3,6,7,8-HxCDD	3.63e+06	1.26 y	0.86	34:11	120.86		60.4	
IS	13C-1,2,3,7,8,9-HxCDD	3.87e+06	1.24 y	0.81	34:29	136.38		68.2	
IS	13C-1,2,3,4,6,7,8-HpCDD	3.65e+06	1.06 y	0.65	37:57	158.79		79.4	
IS	13C-OCDD	5.59e+06	0.87 y	0.58	41:17	274.60		68.6	
IS	13C-2,3,7,8-TCDF	5.44e+06	0.82 y	1.03	25:27	113.29		56.6	
IS	13C-1,2,3,7,8-PeCDF	5.46e+06	1.58 y	0.85	29:34	137.56		68.8	
IS	13C-2,3,4,7,8-PeCDF	5.36e+06	1.61 y	0.85	30:27	136.43		68.2	
IS	13C-1,2,3,4,7,8-HxCDF	4.81e+06	0.51 y	0.83	33:10	164.74		82.4	
IS	13C-1,2,3,6,7,8-HxCDF	5.36e+06	0.51 y	1.03	33:18	147.59		73.8	
IS	13C-2,3,4,6,7,8-HxCDF	4.97e+06	0.51 y	0.95	33:54	148.40		74.2	
IS	13C-1,2,3,7,8,9-HxCDF	4.48e+06	0.51 y	0.83	34:51	154.21		77.1	
IS	13C-1,2,3,4,6,7,8-HpCDF	5.26e+06	0.43 y	0.76	36:43	197.58		98.8	
IS	13C-1,2,3,4,7,8,9-HpCDF	3.33e+06	0.44 y	0.58	38:30	163.19		81.6	
IS	13C-OCDF	6.00e+06	0.92 y	0.69	41:30	247.80		61.9	
C/Up	37Cl-2,3,7,8-TCDD	2.15e+06		1.20	26:15	64.693		80.9	
RS/RT	13C-1,2,3,4-TCDD	5.56e+06	0.78 y	1.00	25:41	200.00			
RS	13C-1,2,3,4-TCDF	9.28e+06	0.80 y	1.00	24:15	200.00			
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.03e+06	0.51 y	1.00	33:35	200.00			

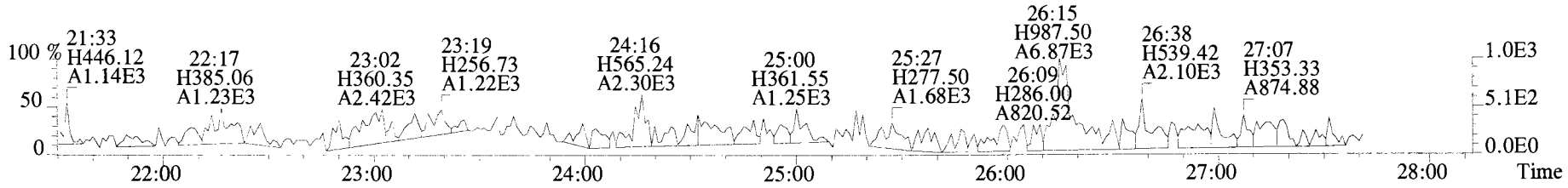
Integrations by Analyst: DB Date: 11/4/19

Reviewed by Analyst: CT Date: 11/05/19

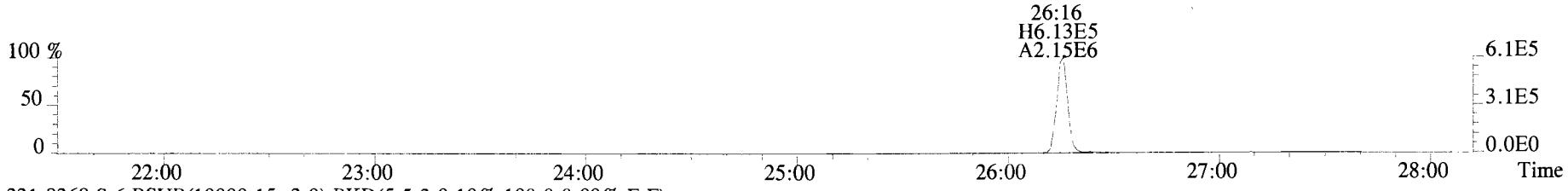
File:191024D1 #1-493 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



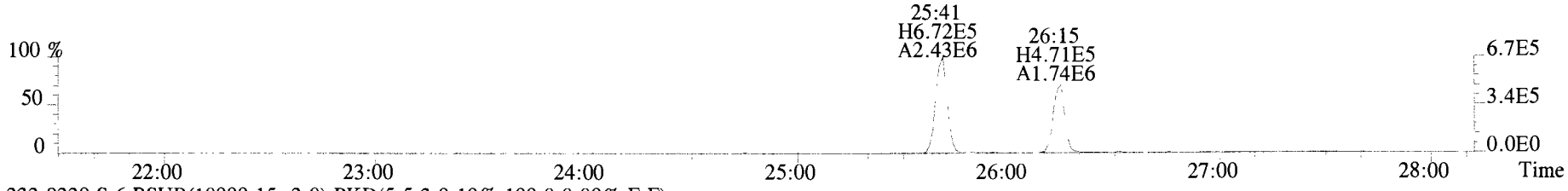
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



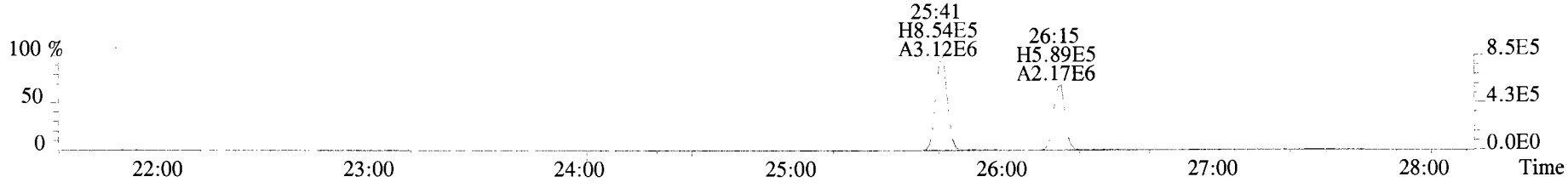
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

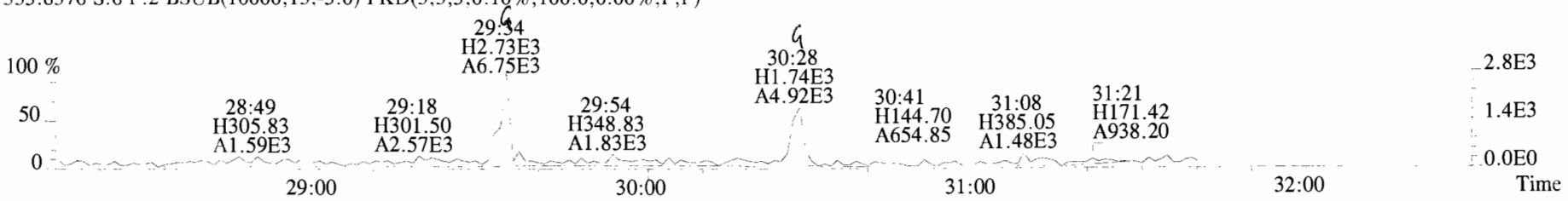


333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

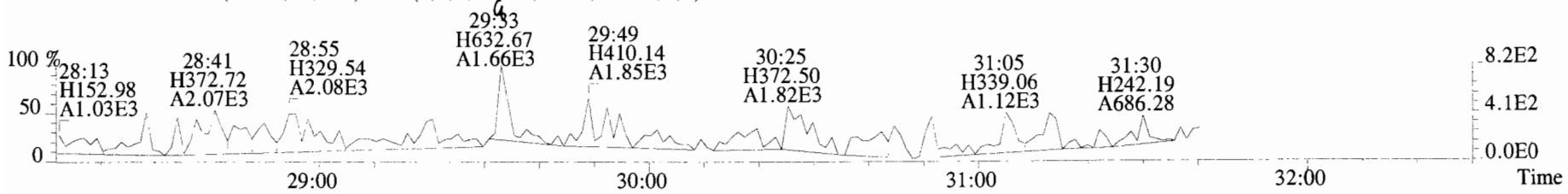


File:191024D1 #1-210 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5

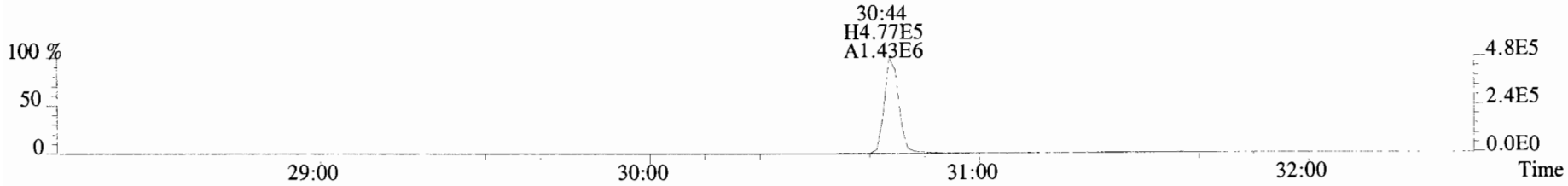
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



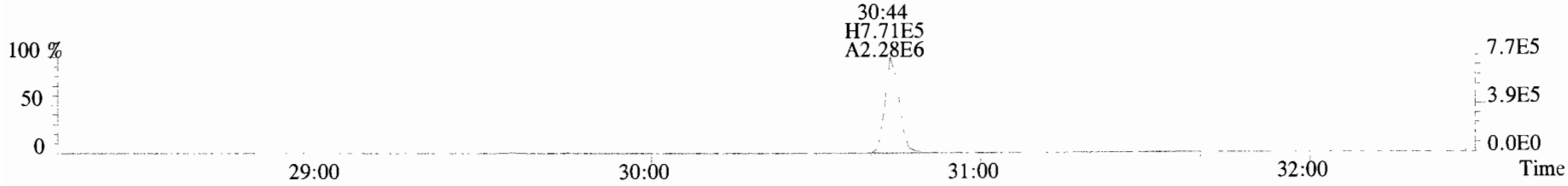
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



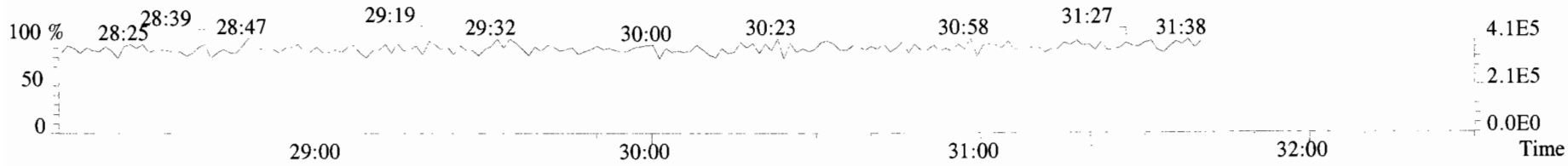
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

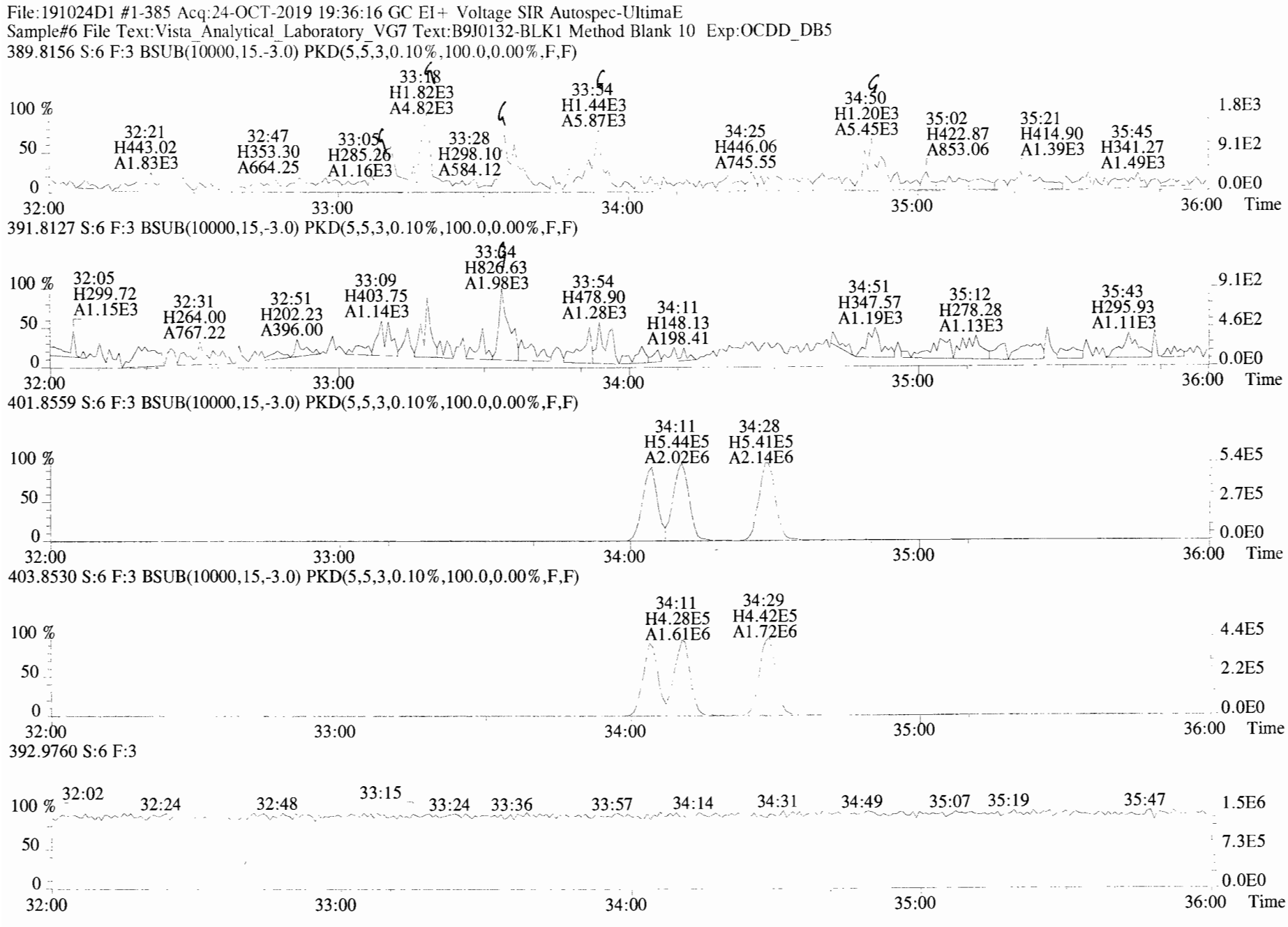


367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

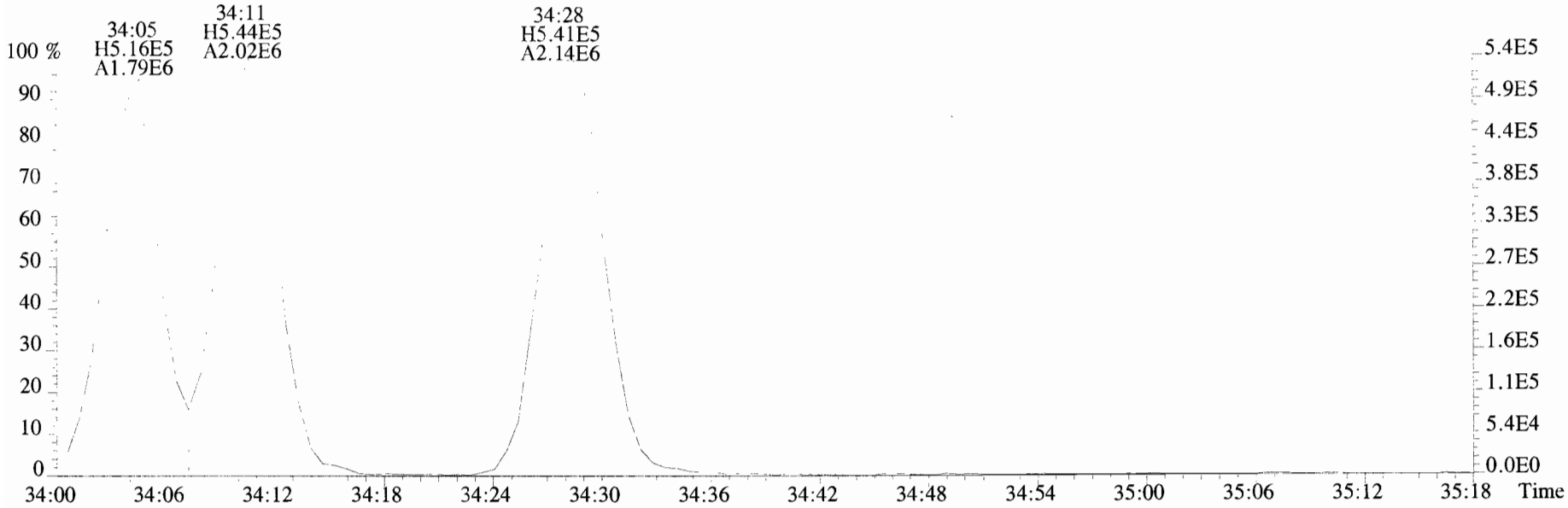


366.9792 S:6 F:2

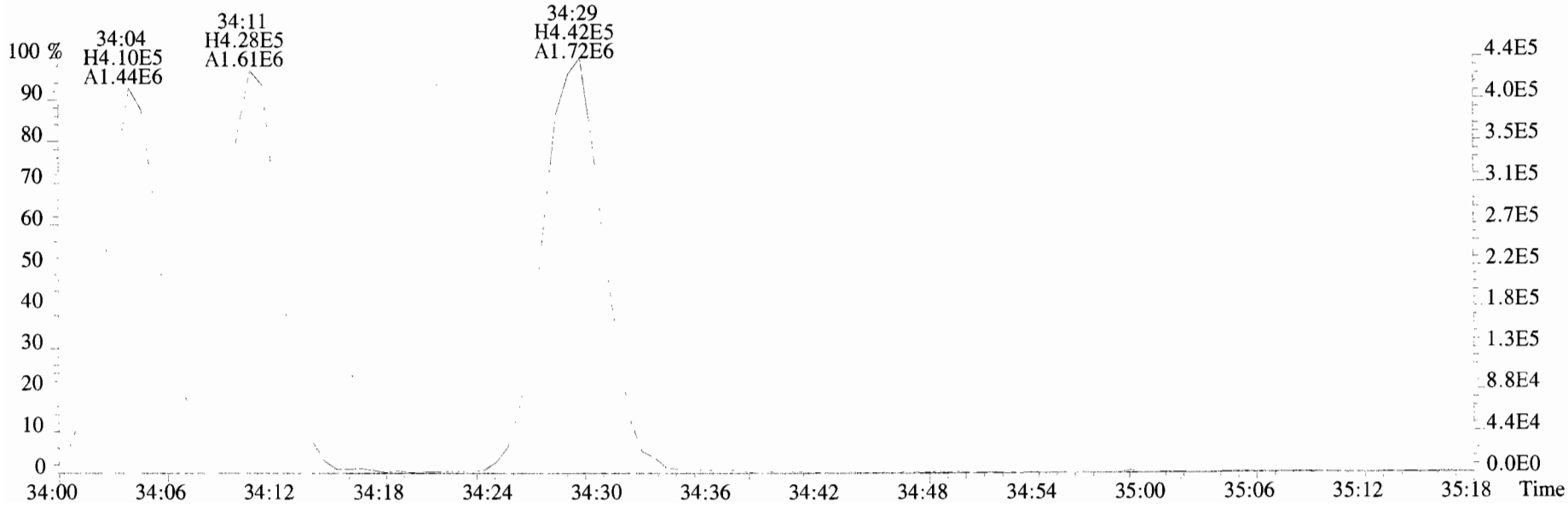


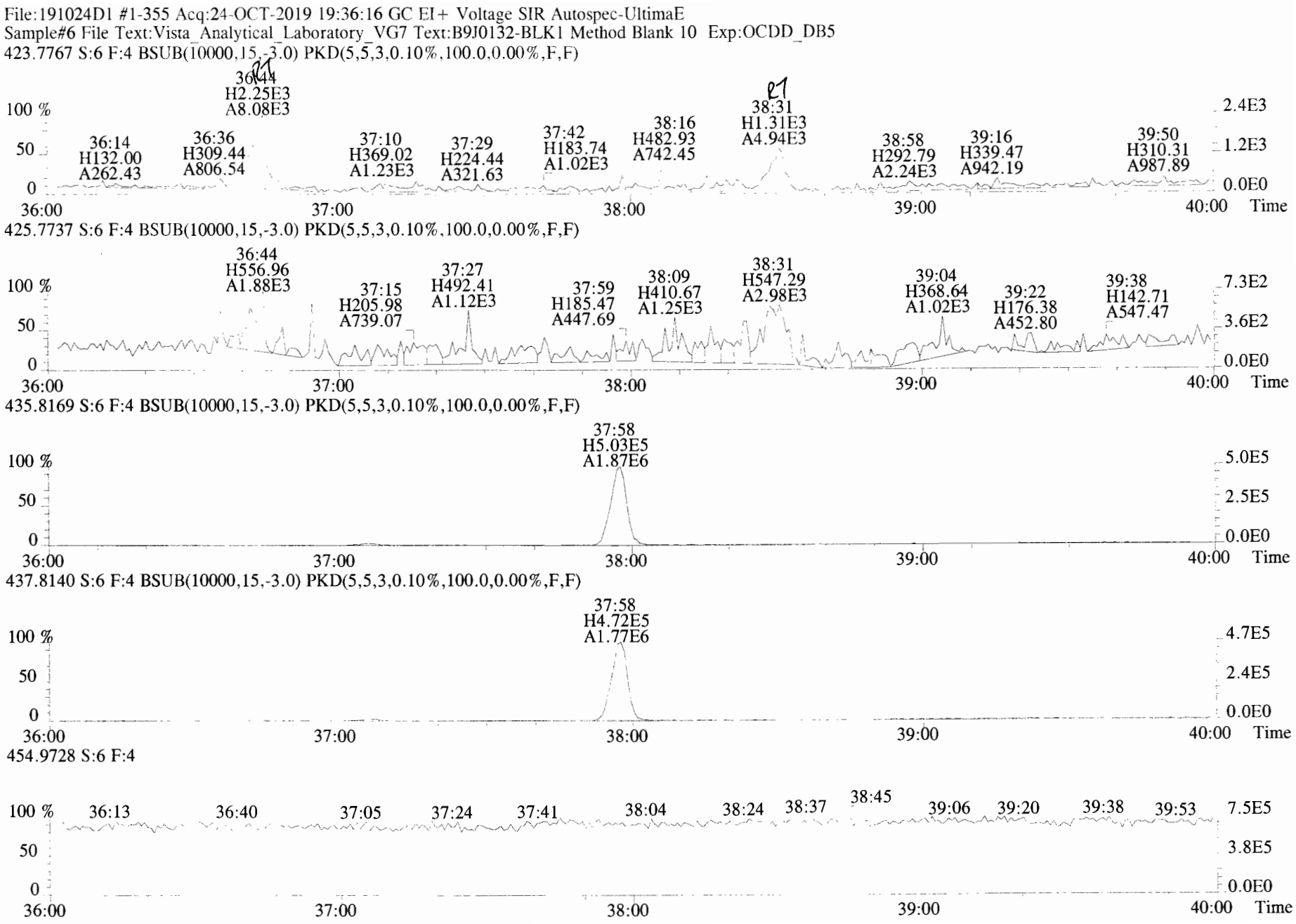

File:191024D1 #1-385 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:21 H443.02 A1.83E3
32:47 H353.30 A664.25
33:05 H285.26 A1.16E3
33:18 H1.82E3 A4.82E3
33:28 H298.10 A584.12
33:54 H1.44E3 A5.87E3
34:25 H446.06 A745.55
34:50 H1.20E3 A5.45E3
35:02 H422.87 A853.06
35:21 H414.90 A1.39E3
35:45 H341.27 A1.49E3
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:05 H299.72 A1.15E3
32:31 H264.00 A767.22
32:51 H202.23 A396.00
33:09 H403.75 A1.14E3
33:34 H820.63 A1.98E3
33:54 H478.90 A1.28E3
34:11 H148.13 A198.41
34:51 H347.57 A1.19E3
35:12 H278.28 A1.13E3
35:43 H295.93 A1.11E3
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H5.44E5 A2.02E6
34:28 H5.41E5 A2.14E6
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H4.28E5 A1.61E6
34:29 H4.42E5 A1.72E6
392.9760 S:6 F:3
32:02
32:24
32:48
33:15
33:24
33:36
33:57
34:14
34:31
34:49
35:07
35:19
35:47
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
1.8E3
9.1E2
0.0E0
4.6E2
5.4E5
2.7E5
4.4E5
2.2E5
1.5E6
7.3E5

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

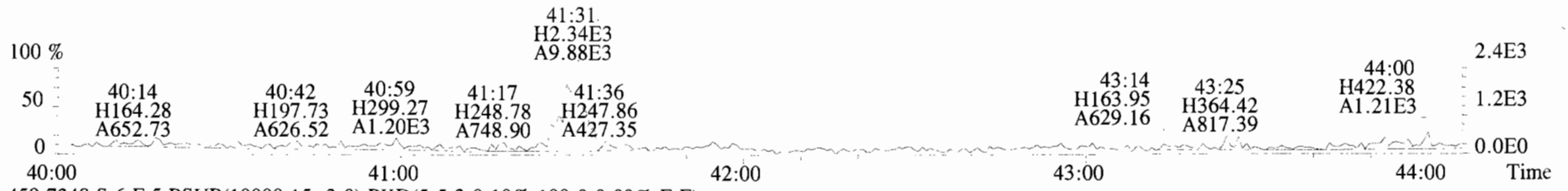


403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

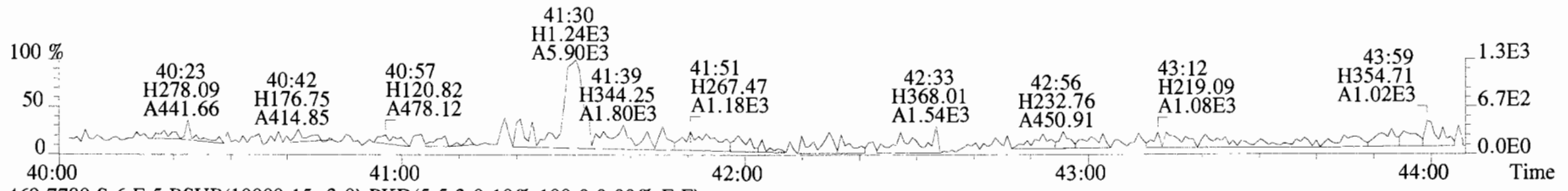



File:191024D1 #1-355 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:44 H2.25E3 A8.08E3
36:14 H132.00 A262.43
36:36 H309.44 A806.54
37:10 H369.02 A1.23E3
37:29 H224.44 A321.63
37:42 H183.74 A1.02E3
38:16 H482.93 A742.45
38:31 H1.31E3 A4.94E3
38:58 H292.79 A2.24E3
39:16 H339.47 A942.19
39:50 H310.31 A987.89
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:44 H556.96 A1.88E3
37:15 H205.98 A739.07
37:27 H492.41 A1.12E3
37:59 H185.47 A447.69
38:09 H410.67 A1.25E3
38:31 H547.29 A2.98E3
39:04 H368.64 A1.02E3
39:22 H176.38 A452.80
39:38 H142.71 A547.47
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:58 H5.03E5 A1.87E6
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:58 H4.72E5 A1.77E6
454.9728 S:6 F:4
36:13
36:40
37:05
37:24
37:41
38:04
38:24
38:37
38:45
39:06
39:20
39:38
39:53
100 %
50
0
36:00
37:00
38:00
39:00
40:00
Time
2.4E3
1.2E3
0.0E0
7.3E2
3.6E2
5.0E5
2.5E5
4.7E5
2.4E5
7.5E5
3.8E5

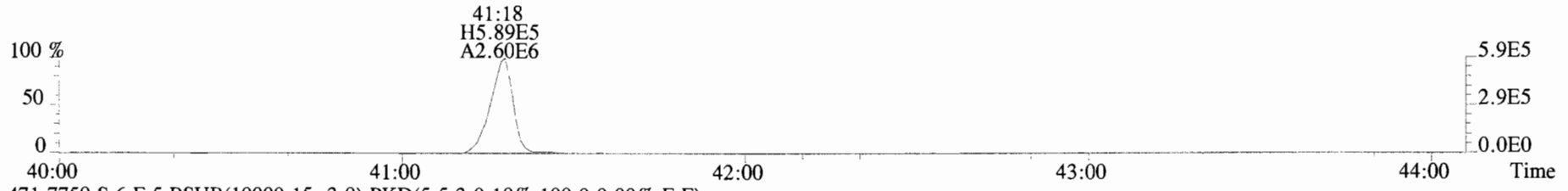
File:191024D1 #1-432 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

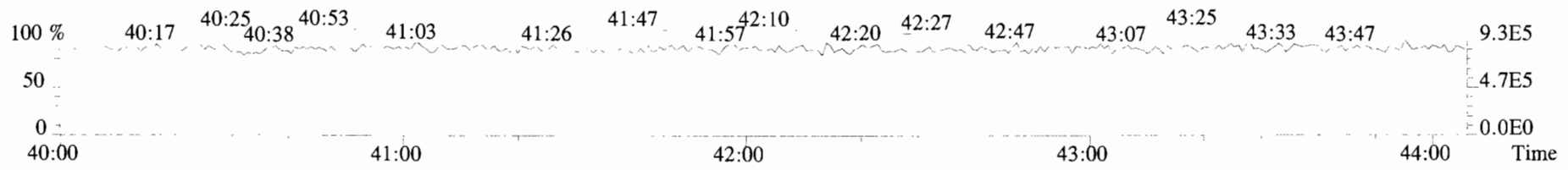


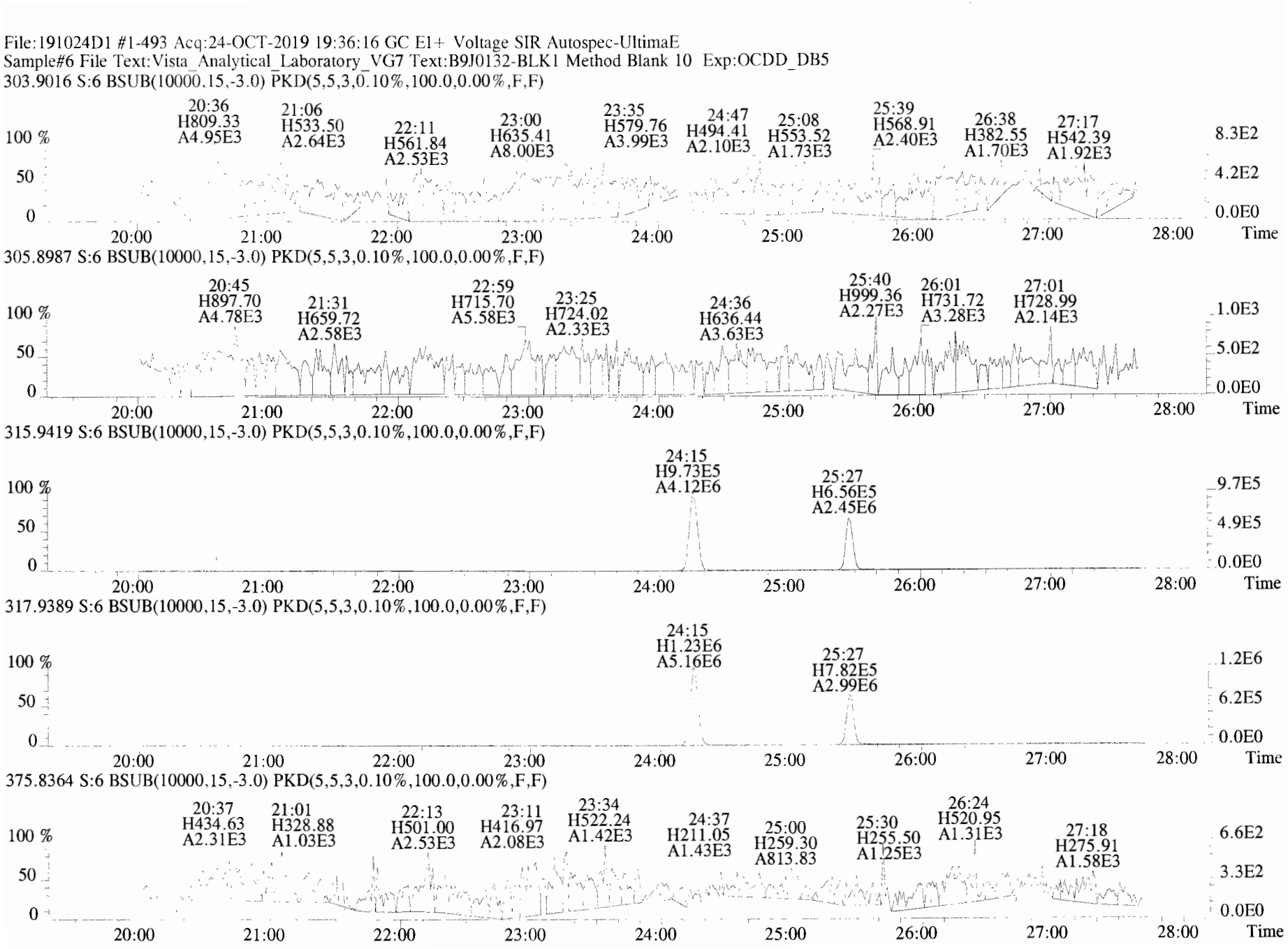
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



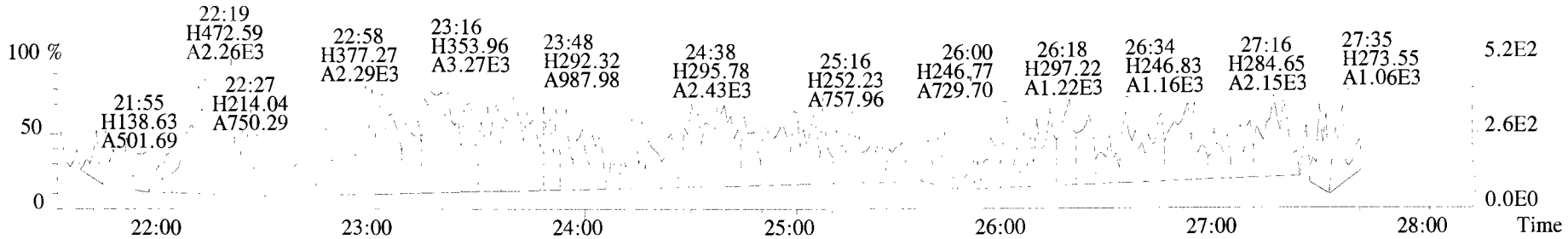
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

454.9728 S:6 F:5

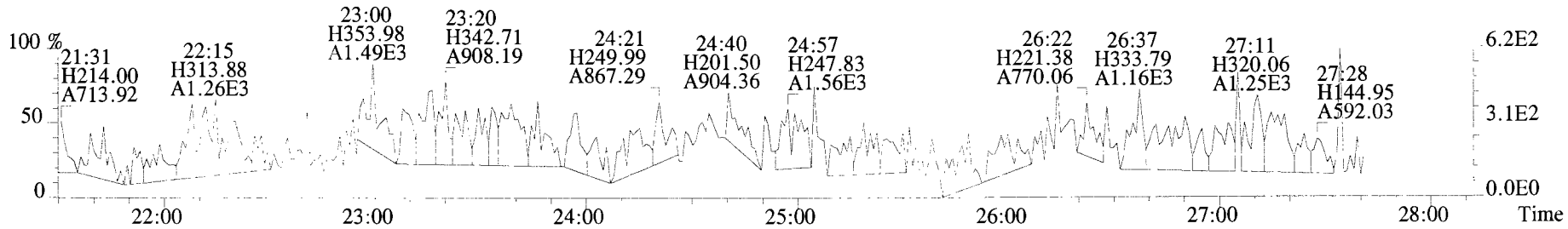



File:191024D1 #1-493 Acq:24-OCT-2019 19:36:16 GC E1+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:36 H809.33 A4.95E3
21:06 H533.50 A2.64E3
22:11 H561.84 A2.53E3
23:00 H635.41 A8.00E3
23:35 H579.76 A3.99E3
24:47 H494.41 A2.10E3
25:08 H553.52 A1.73E3
25:39 H568.91 A2.40E3
26:38 H382.55 A1.70E3
27:17 H542.39 A1.92E3
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:45 H897.70 A4.78E3
21:31 H659.72 A2.58E3
22:59 H715.70 A5.58E3
23:25 H724.02 A2.33E3
24:36 H636.44 A3.63E3
25:40 H999.36 A2.27E3
26:01 H731.72 A3.28E3
27:01 H728.99 A2.14E3
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:15 H9.73E5 A4.12E6
25:27 H6.56E5 A2.45E6
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:15 H1.23E6 A5.16E6
25:27 H7.82E5 A2.99E6
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:37 H434.63 A2.31E3
21:01 H328.88 A1.03E3
22:13 H501.00 A2.53E3
23:11 H416.97 A2.08E3
23:34 H522.24 A1.42E3
24:37 H211.05 A1.43E3
25:00 H259.30 A813.83
25:30 H255.50 A1.25E3
26:24 H520.95 A1.31E3
27:18 H275.91 A1.58E3
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
8.3E2
4.2E2
0.0E0
1.0E3
5.0E2
9.7E5
4.9E5
1.2E6
6.2E5
6.6E2
3.3E2

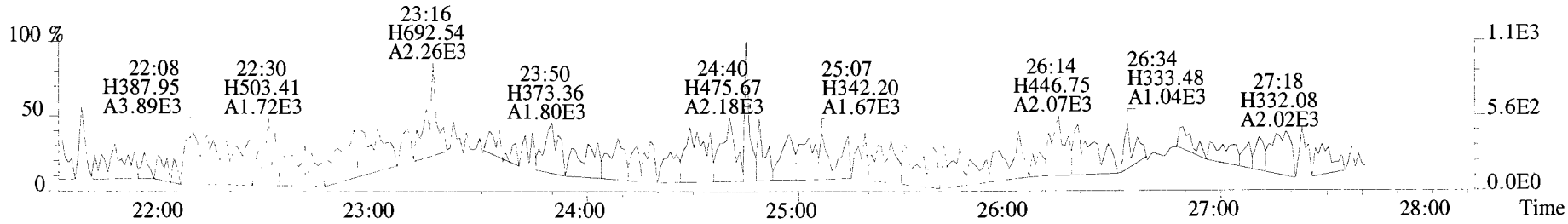
File:191024D1 #1-493 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



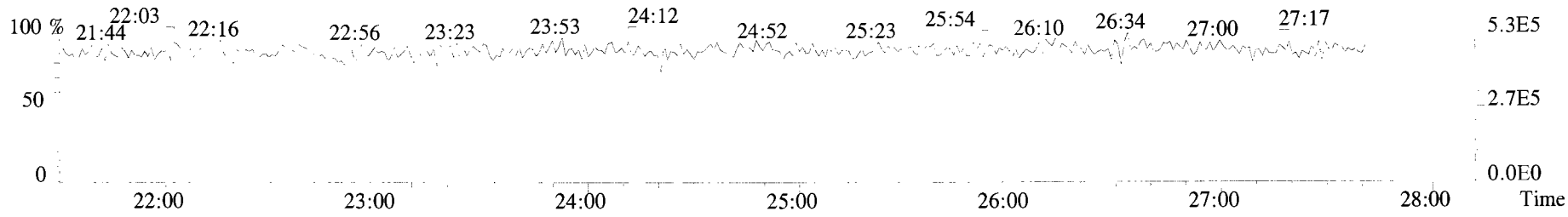
341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



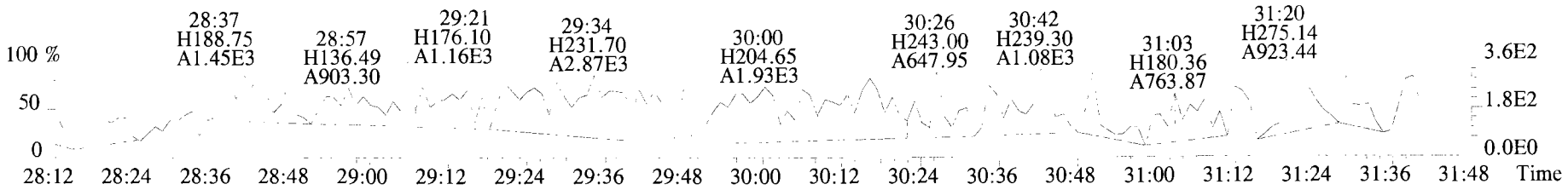
409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



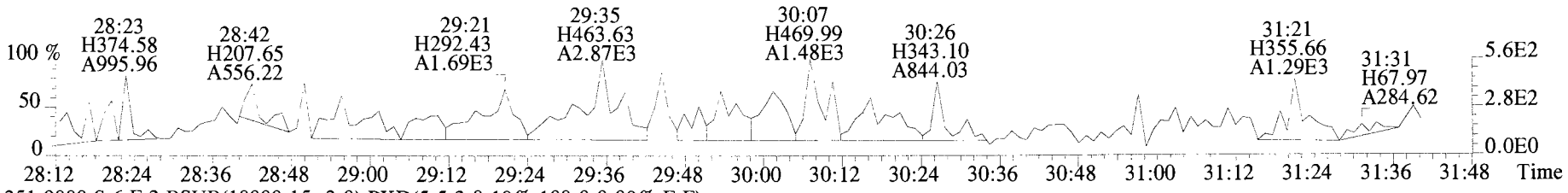
316.9824 S:6



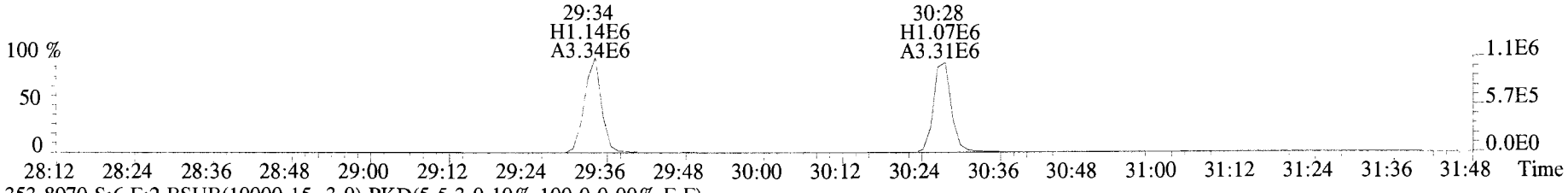
File:191024D1 #1-210 Acq:24-OCT-2019 19:36:16 GC E1+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



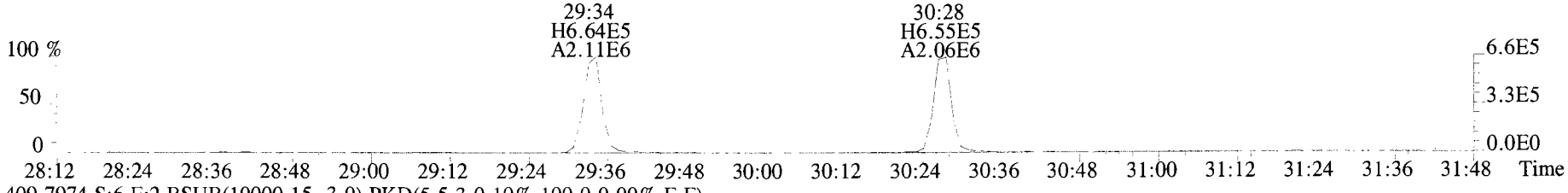
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



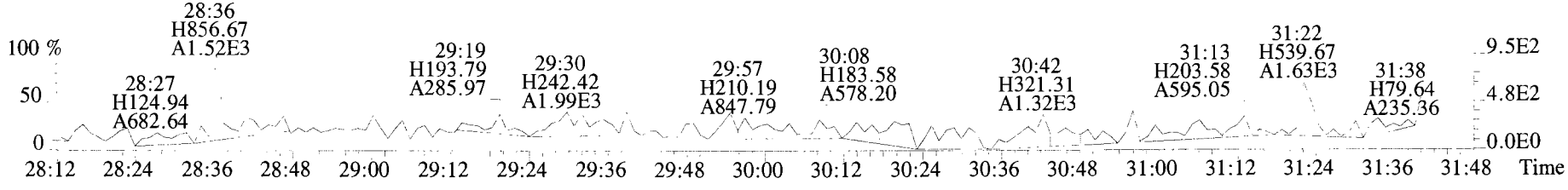
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



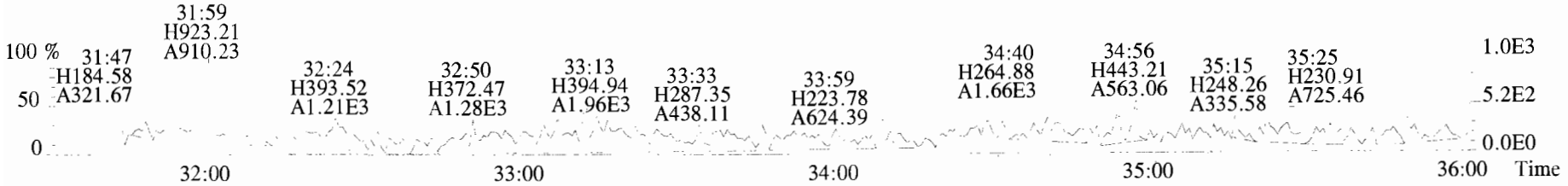
353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



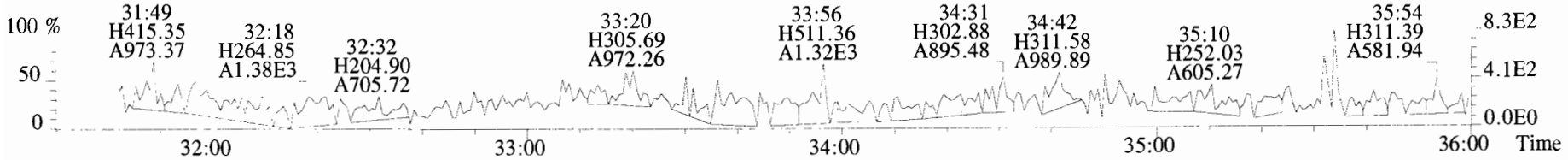
409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



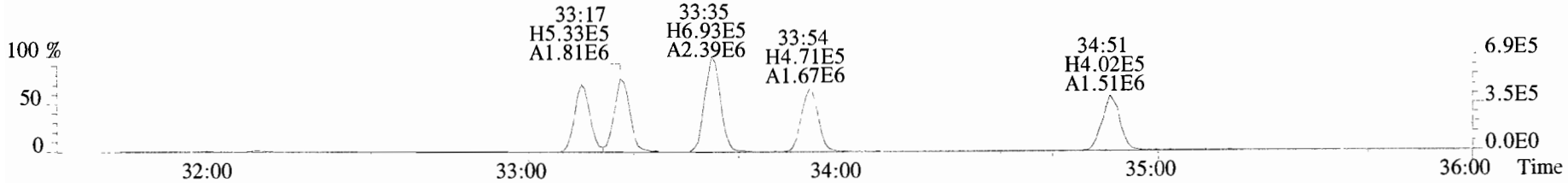
File:191024D1 #1-385 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



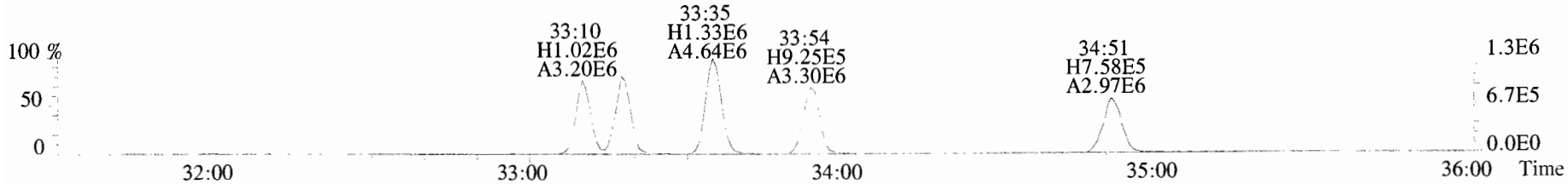
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



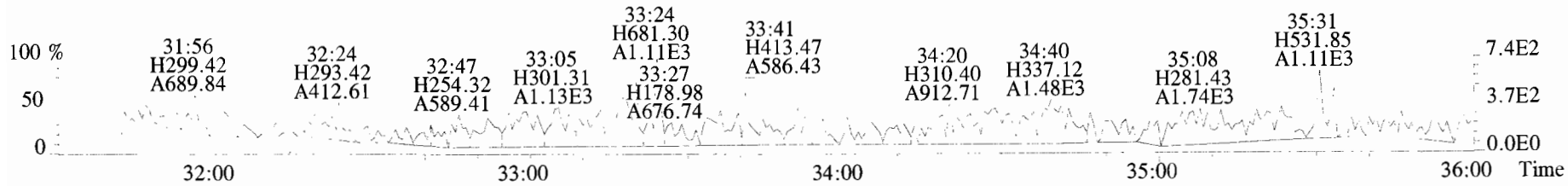
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



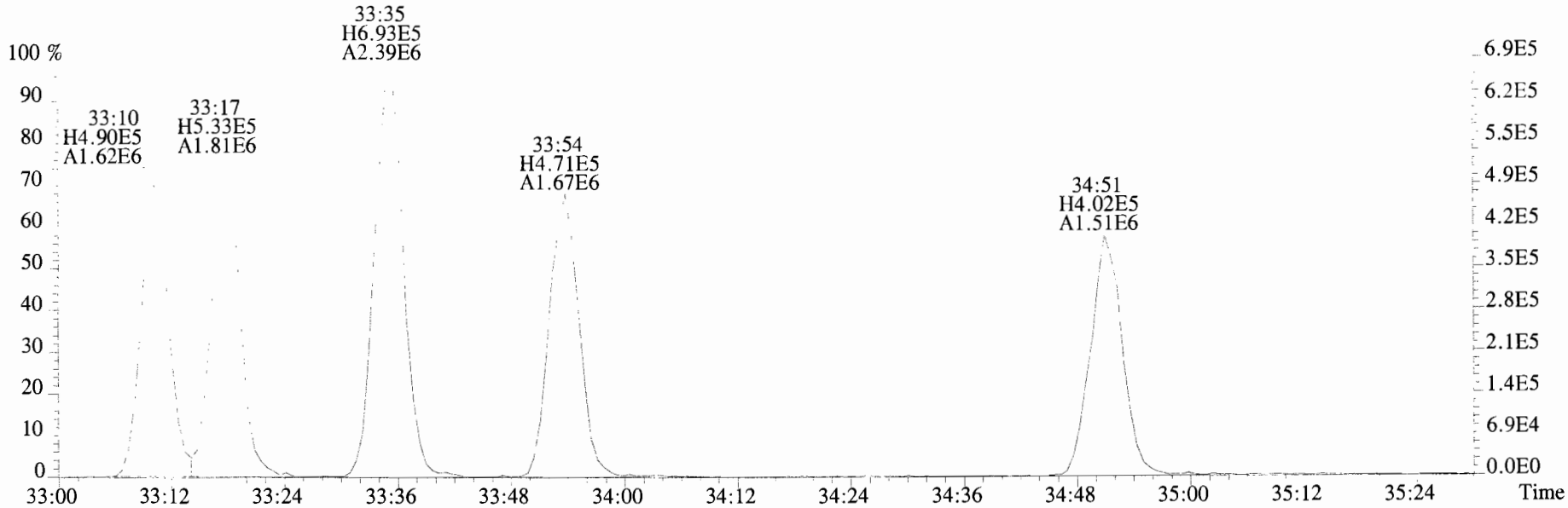
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



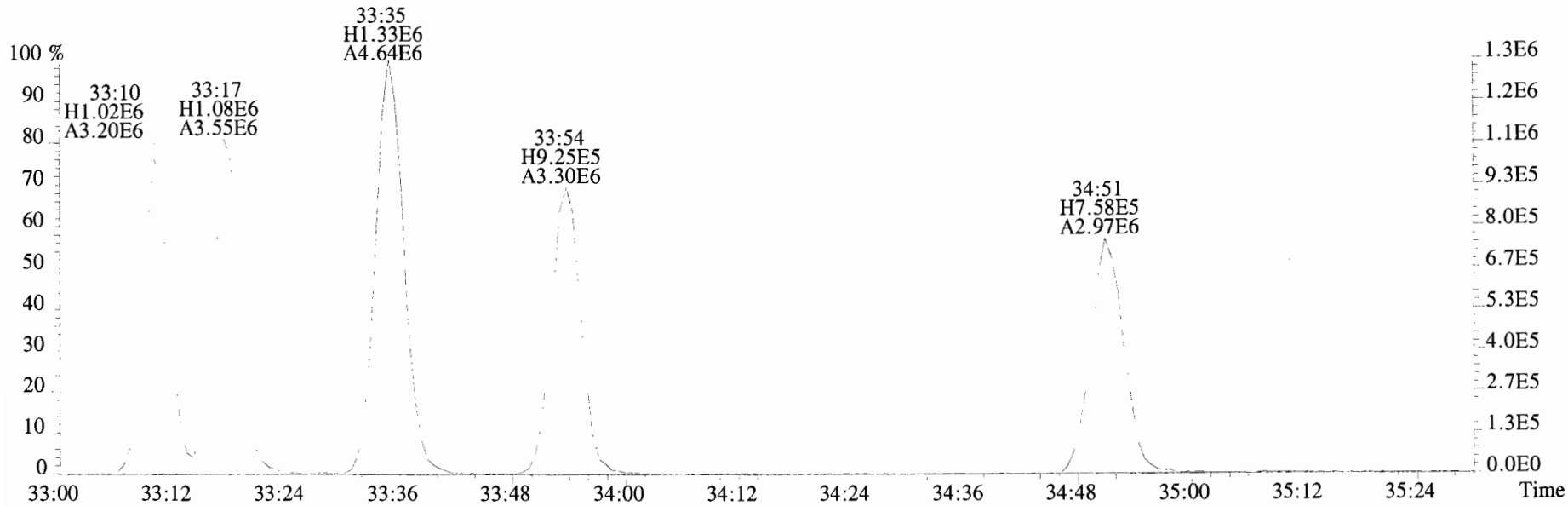
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



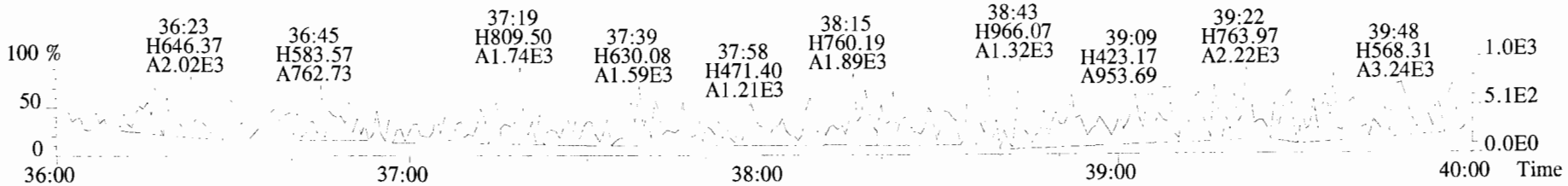
File:191024D1 #1-385 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



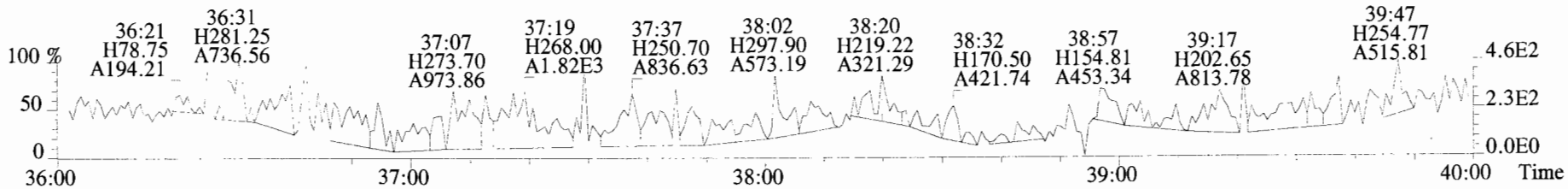
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



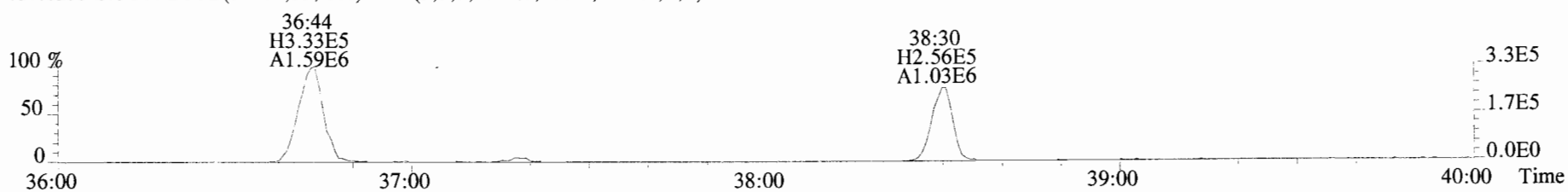
File:191024D1 #1-355 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



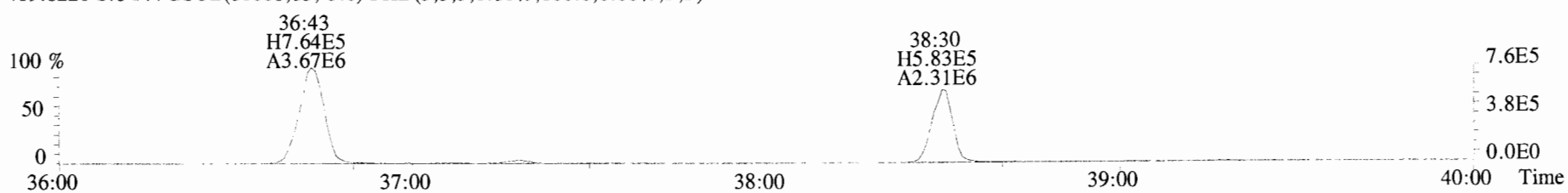
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



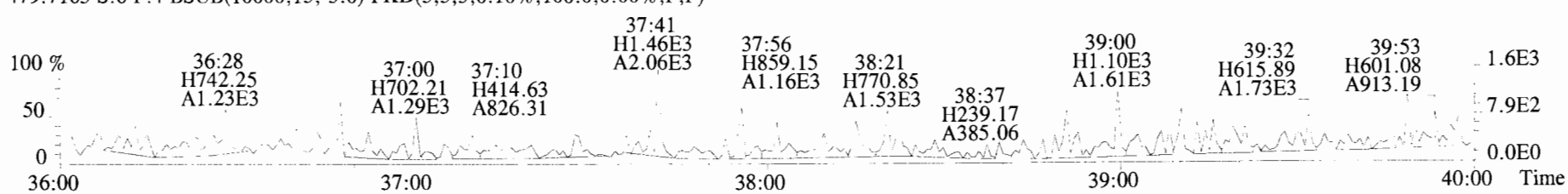
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

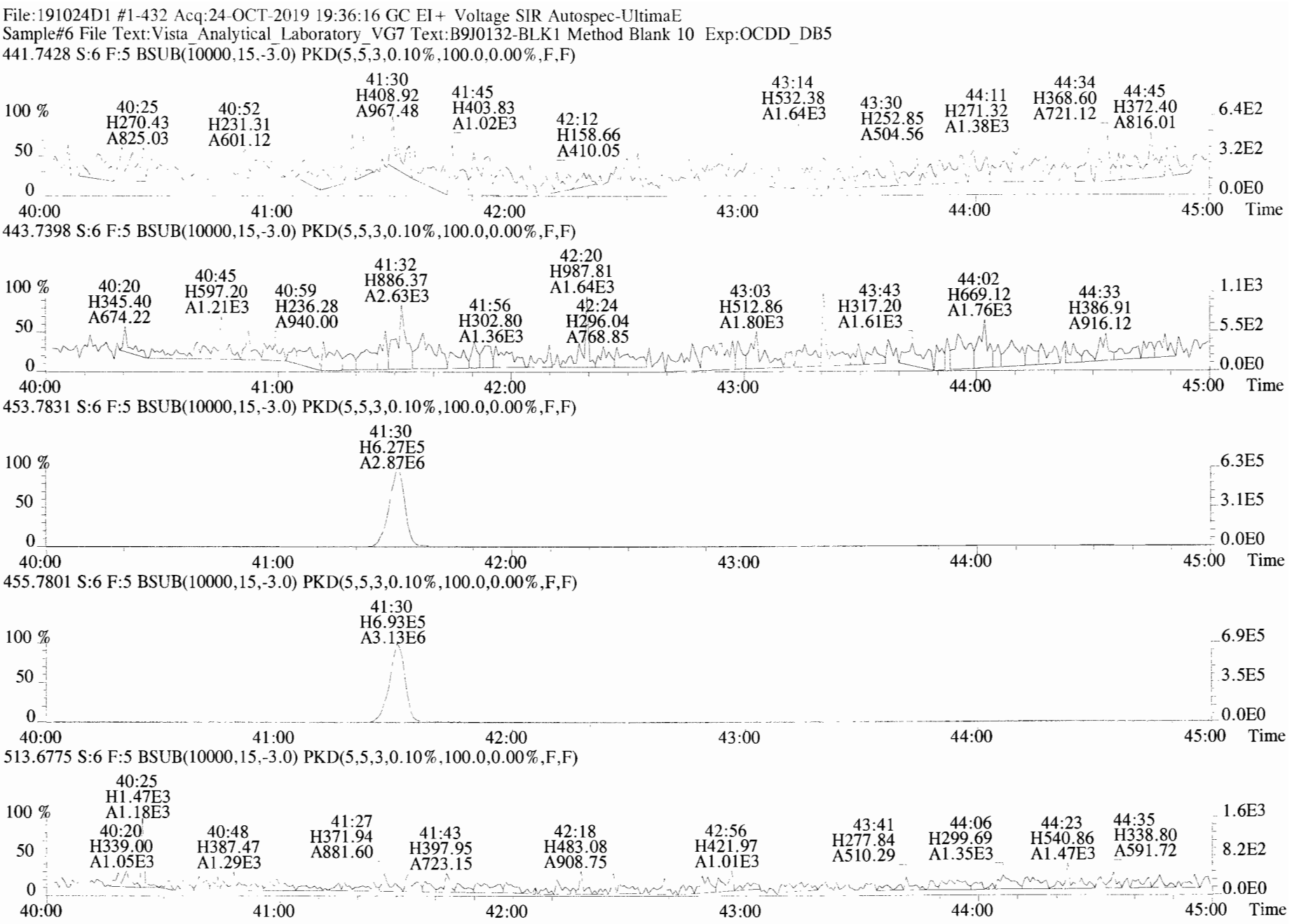


419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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




File:191024D1 #1-432 Acq:24-OCT-2019 19:36:16 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9J0132-BLK1 Method Blank 10 Exp:OCDD_DB5
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:25 H270.43 A825.03
40:52 H231.31 A601.12
41:30 H408.92 A967.48
41:45 H403.83 A1.02E3
42:12 H158.66 A410.05
43:14 H532.38 A1.64E3
43:30 H252.85 A504.56
44:11 H271.32 A1.38E3
44:34 H368.60 A721.12
44:45 H372.40 A816.01
100 %
50
0
6.4E2
3.2E2
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:20 H345.40 A674.22
40:45 H597.20 A1.21E3
40:59 H236.28 A940.00
41:32 H886.37 A2.63E3
41:56 H302.80 A1.36E3
42:20 H987.81 A1.64E3
42:24 H296.04 A768.85
43:03 H512.86 A1.80E3
43:43 H317.20 A1.61E3
44:02 H669.12 A1.76E3
44:33 H386.91 A916.12
100 %
50
0
1.1E3
5.5E2
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:30 H6.27E5 A2.87E6
100 %
50
0
6.3E5
3.1E5
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:30 H6.93E5 A3.13E6
100 %
50
0
6.9E5
3.5E5
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:25 H1.47E3 A1.18E3
40:20 H339.00 A1.05E3
40:48 H387.47 A1.29E3
41:27 H371.94 A881.60
41:43 H397.95 A723.15
42:18 H483.08 A908.75
42:56 H421.97 A1.01E3
43:41 H277.84 A510.29
44:06 H299.69 A1.35E3
44:23 H540.86 A1.47E3
44:35 H338.80 A591.72
100 %
50
0
1.6E3
8.2E2
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time

FORM 8A

PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

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

Contract No.: SAS No.:

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

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

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	12.8	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	66.6	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	62.5	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	67.0	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	65.2	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	61.3	35.0 - 70.0
OCDD	100	130	78.0 - 144.0
2,3,7,8-TCDF	10	10.8	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	63.0	40.0 - 67.0
2,3,4,7,8-PeCDF	50	58.4	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	59.1	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	59.6	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	60.9	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	59.7	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	61.0	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	58.6	39.0 - 69.0
OCDF	100	118	63.0 - 170.0

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

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

Analyst: DB

Date: 10/29/19

FORM 8B

PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

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

Contract No.: SAS No.:

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

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

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	50.4	20.0 - 175.0
			25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	56.2	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	59.3	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	51.2	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	56.1	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	61.1	26.0 - 166.0
13C-OCDD	200	98.4	26.0 - 397.0
13C-2,3,7,8-TCDF	100	43.5	22.0 - 152.0
			26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	57.3	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	53.0	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	64.7	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	61.8	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	54.6	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	56.8	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	89.1	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	39.5	20.0 - 186.0
13C-OCDF	200	35.9	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	30.4	12.4 - 76.4

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

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

Analyst: DB

Date: 10/29/19

Client ID: OPR Filename: 191029D1 S:2 Acq:29-OCT 19 11:03:33 ConCal: ST191029D1 1
Lab ID: B9J0132-BS1 GC Column ID: ZB 5MS ICal: 1613VG7 10-9-19 wt/vol: 1.000 EndCAL: NA

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

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	13.3	16.4		*	*
Total Penta-Dioxins	66.7	67.8		*	*
Total Hexa-Dioxins	195	195		*	*
Total Hepta-Dioxins	64.4	65.4		*	*
Total Tetra-Furans	12.0	15.0		*	*
Total Penta-Furans	124.53	127.20		*	*
Total Hexa-Furans	249	249		*	*
Total Hepta-Furans	120	120		*	*

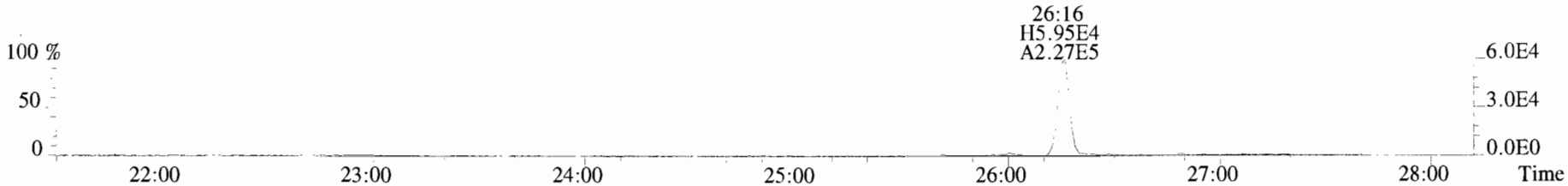
	Rec	Qual
IS	50.4	
IS	56.2	
IS	59.3	
IS	51.2	
IS	56.1	
IS	61.1	
IS	49.2	
IS	43.5	
IS	57.3	
IS	53.0	
IS	64.7	
IS	61.8	
IS	54.6	
IS	56.8	
IS	89.1	
IS	39.5	
IS	17.9	
C/Up	76.0	

Integrations by Analyst: JB Date: 10/29/19

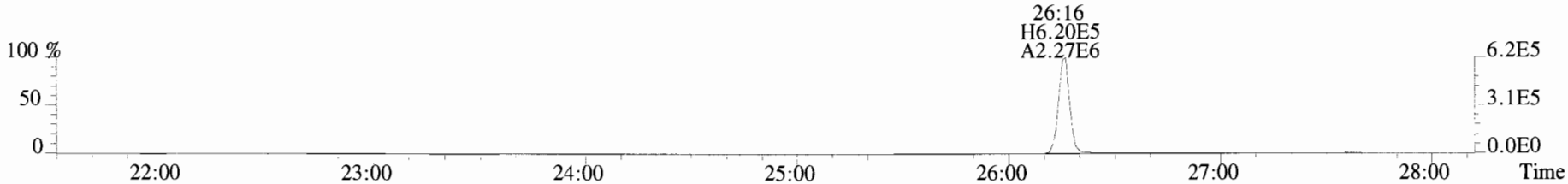
Reviewed by Analyst: CT Date: 11/05/19

File:191029D1 #1-493 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

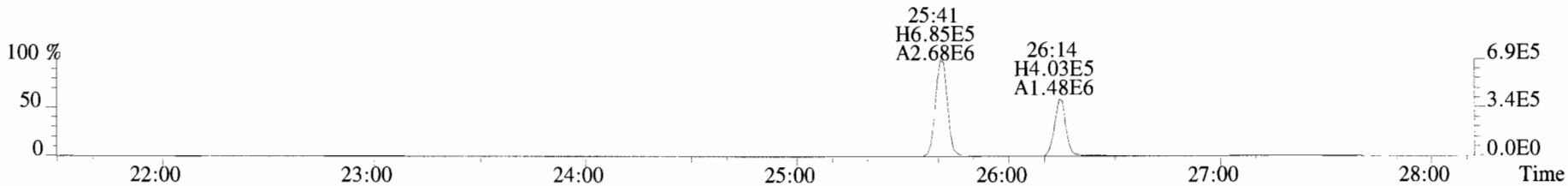
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



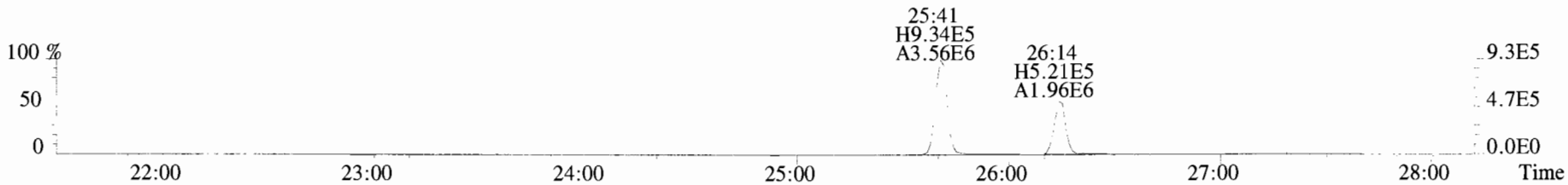
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



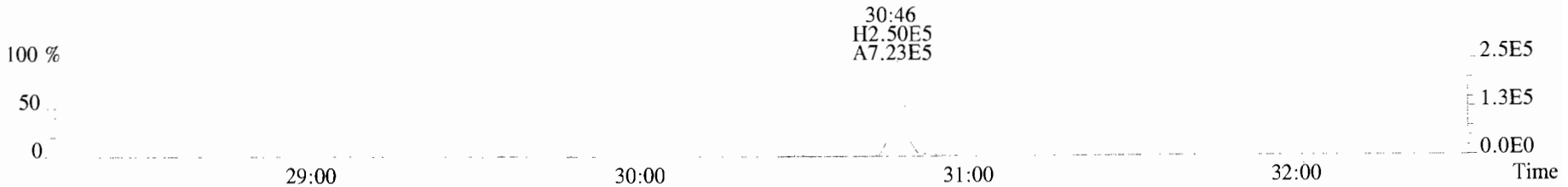
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



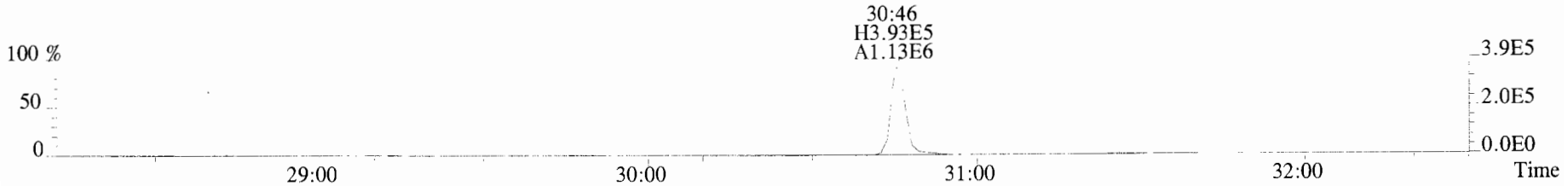
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



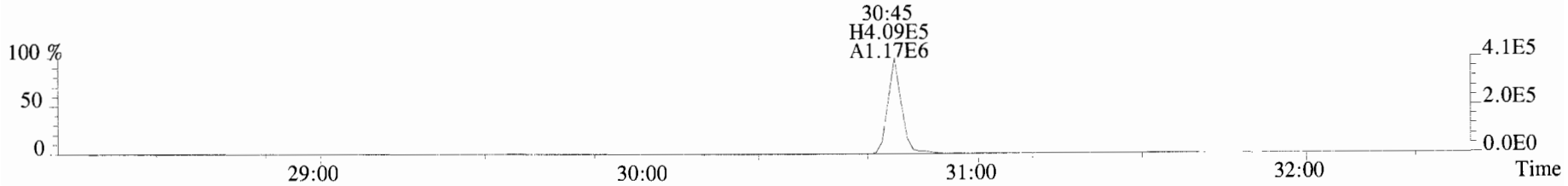
File:191029D1 #1-211 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



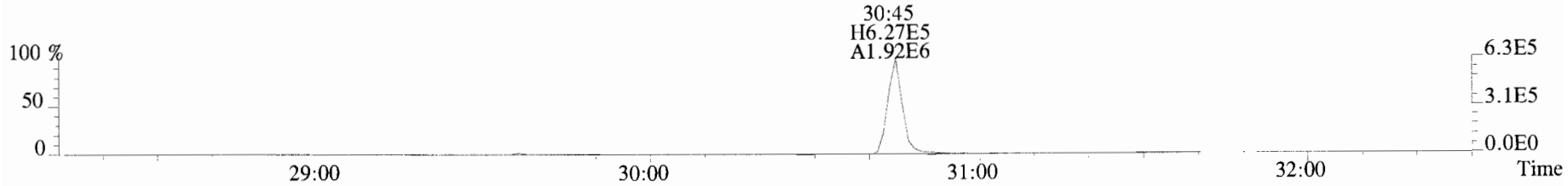
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



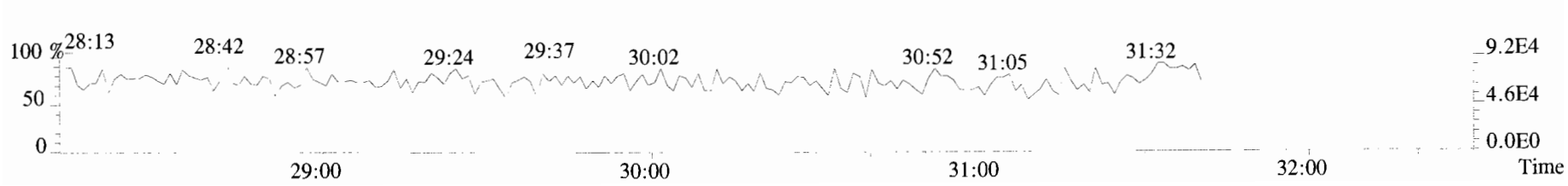
365.8978 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

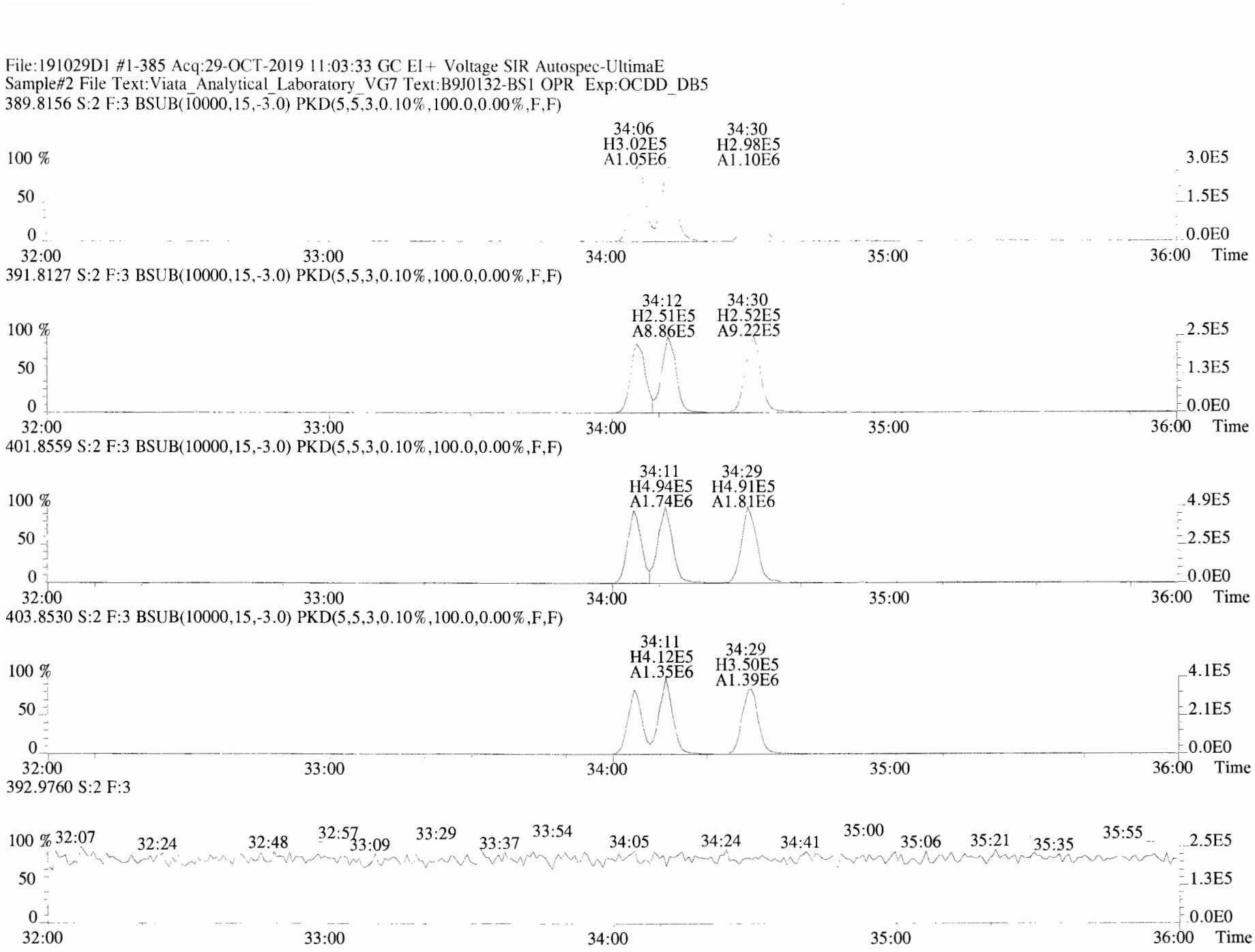


367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

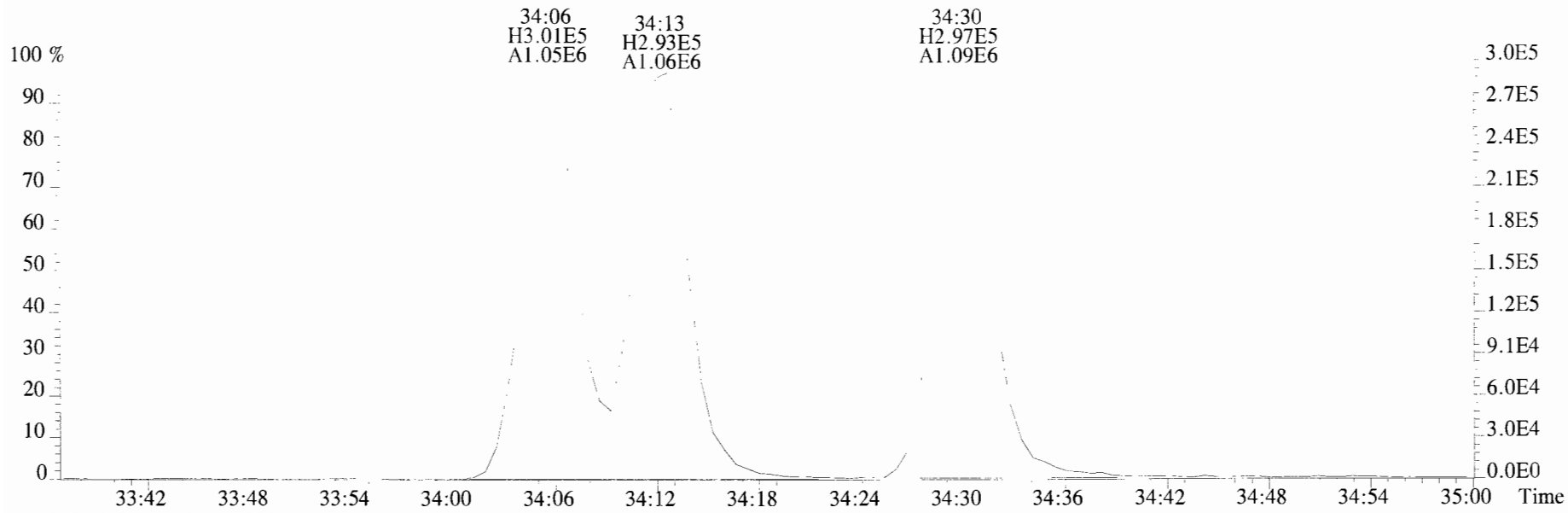


366.9792 S:2 F:2

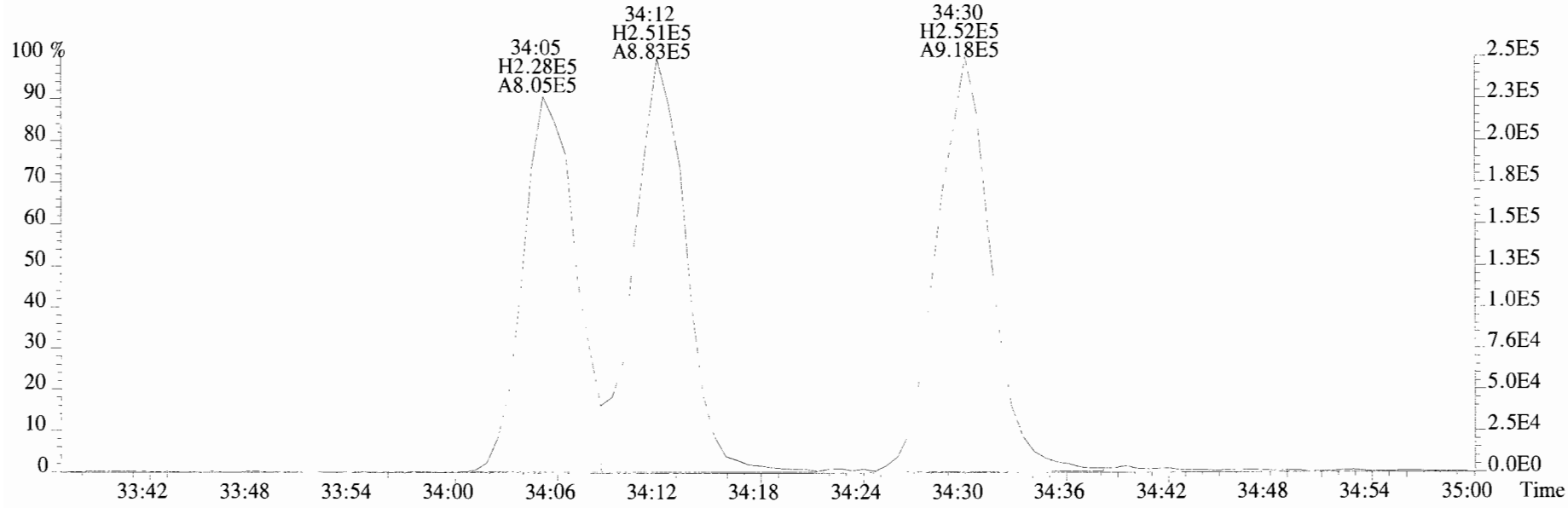



File:191029D1 #1-385 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:06 H3.02E5 A1.05E6
34:30 H2.98E5 A1.10E6
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:12 H2.51E5 A8.86E5
34:30 H2.52E5 A9.22E5
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H4.94E5 A1.74E6
34:29 H4.91E5 A1.81E6
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H4.12E5 A1.35E6
34:29 H3.50E5 A1.39E6
392.9760 S:2 F:3
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time

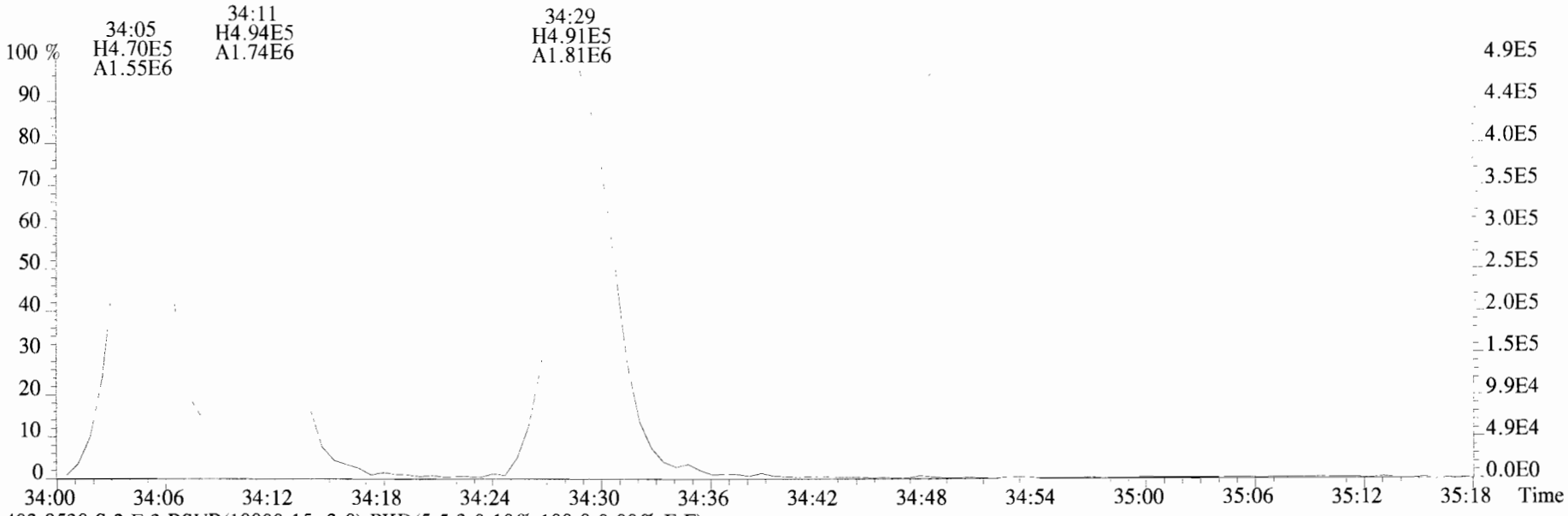
File:191029D1 #1-385 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000.15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



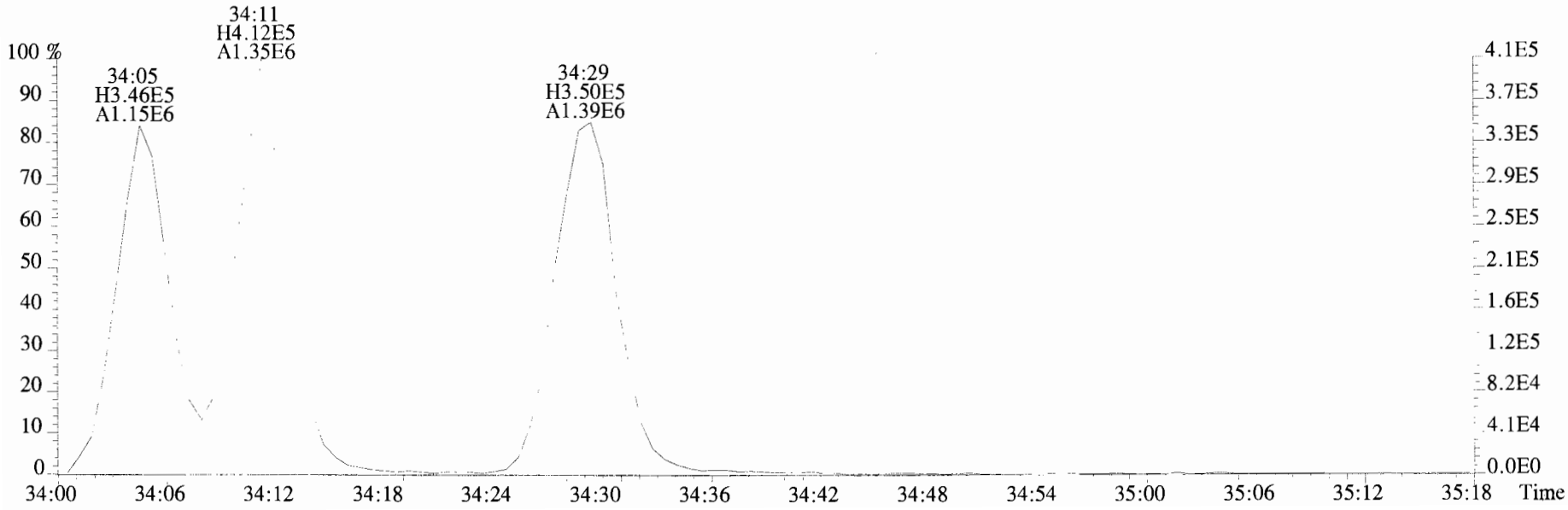
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191029D1 #1-385 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

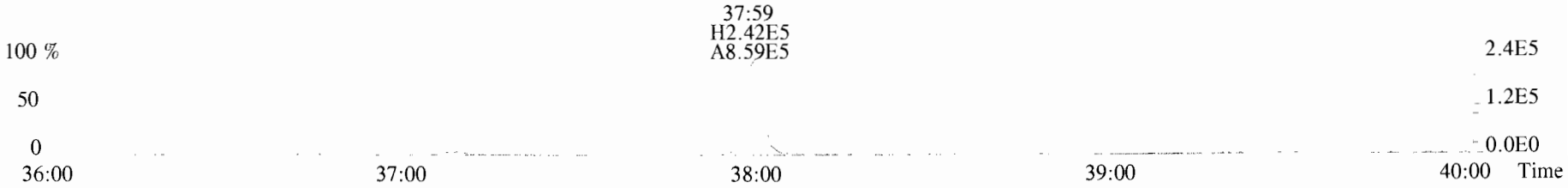


403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

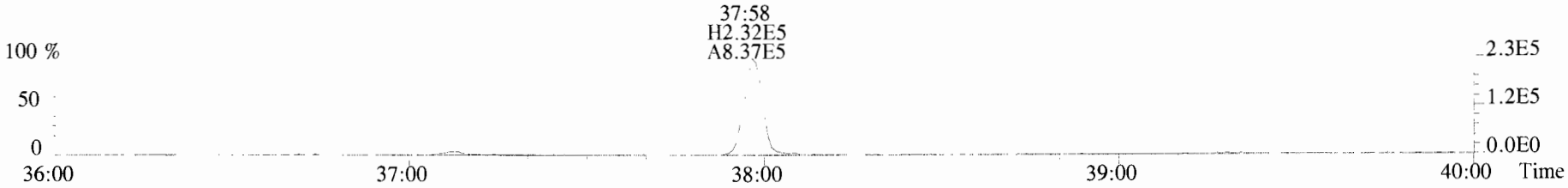


File:191029D1 #1-356 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5

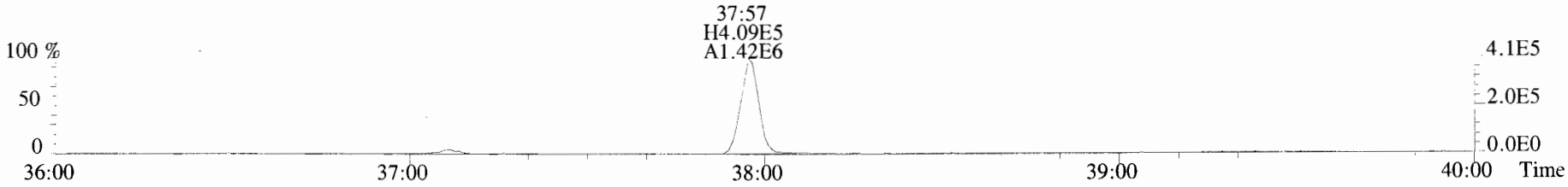
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



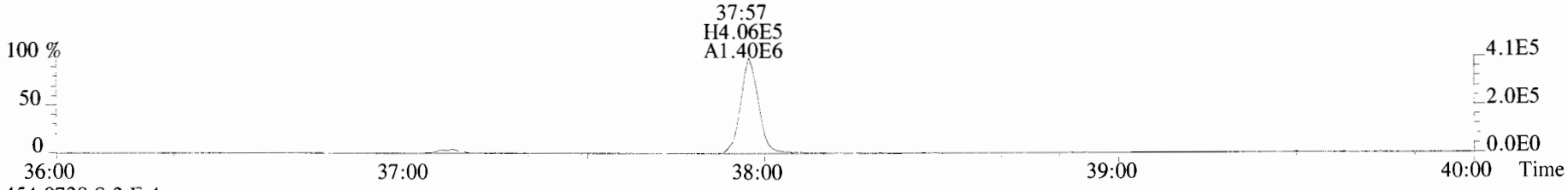
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



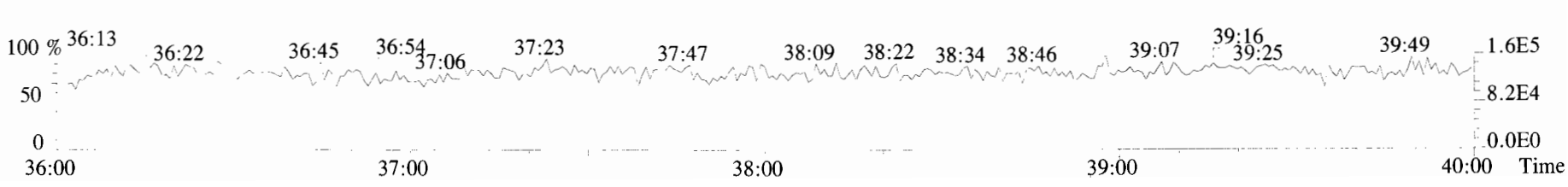
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

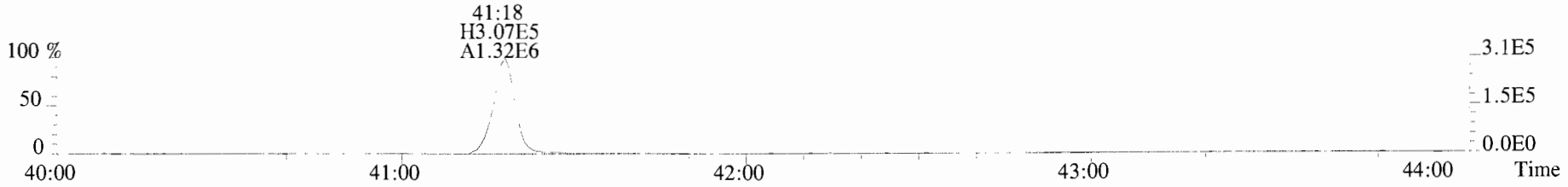


454.9728 S:2 F:4

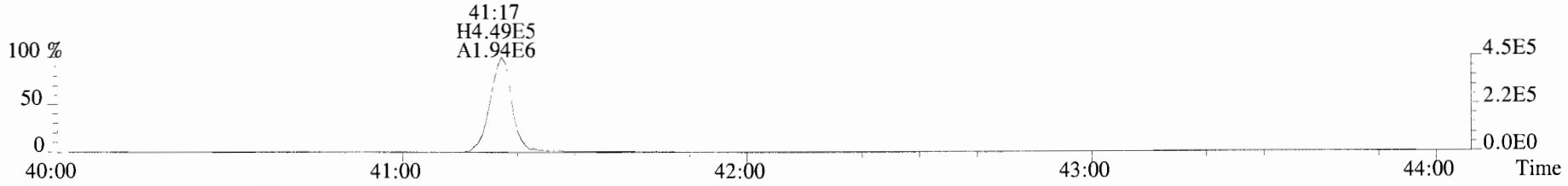


File:191029D1 #1-432 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

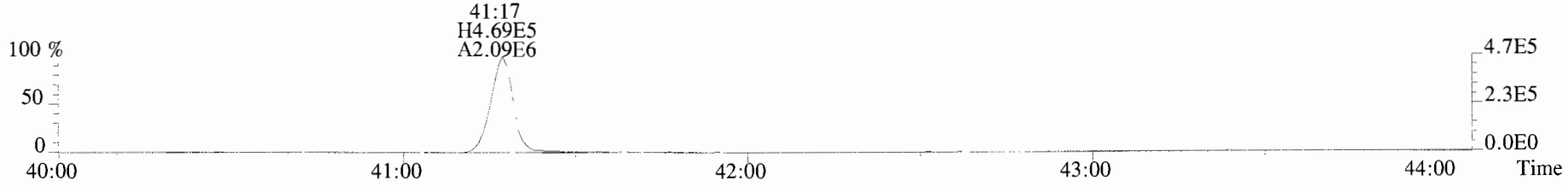
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



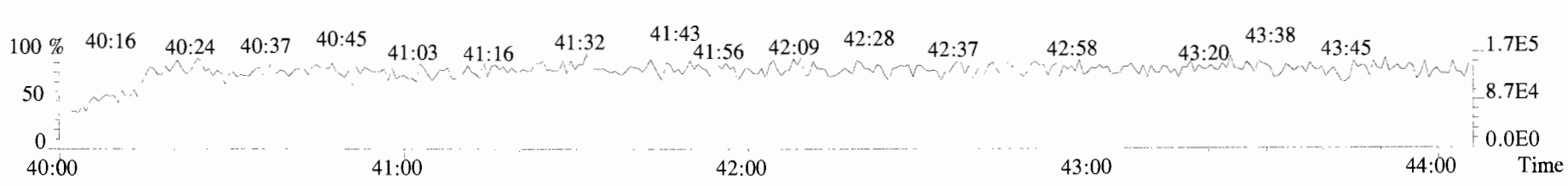
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

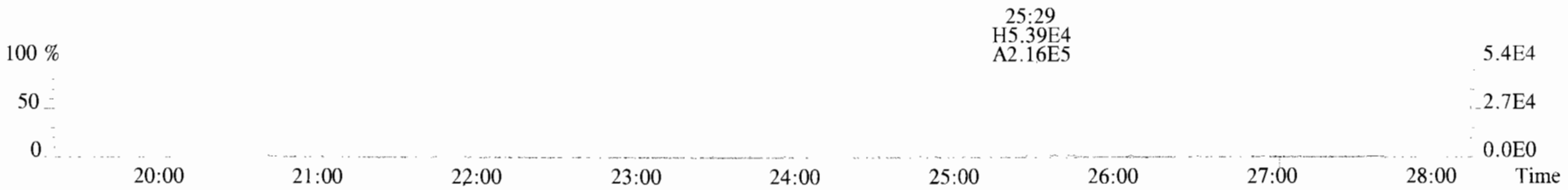


454.9728 S:2 F:5

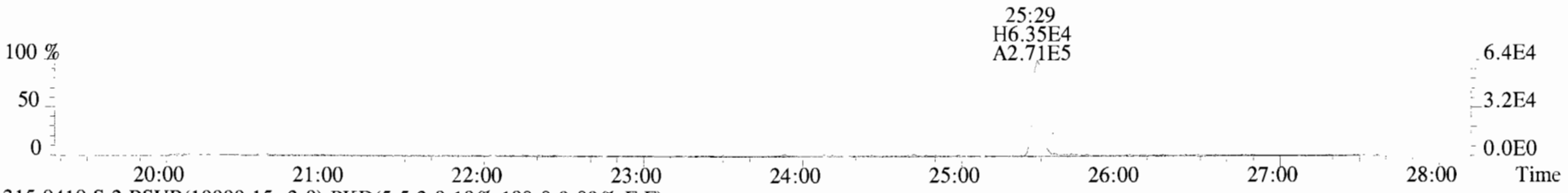


File:191029D1 #1-493 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5

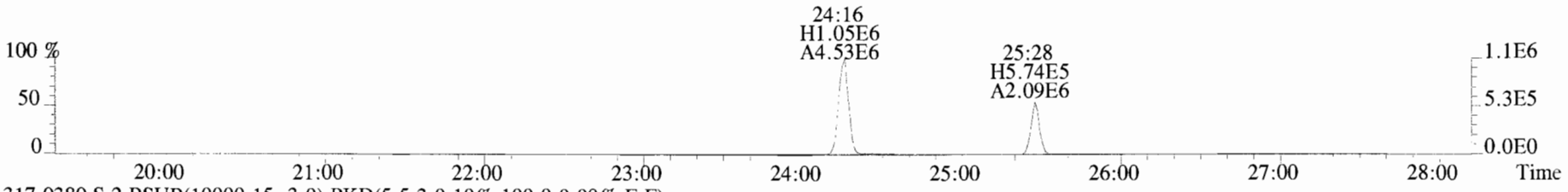
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



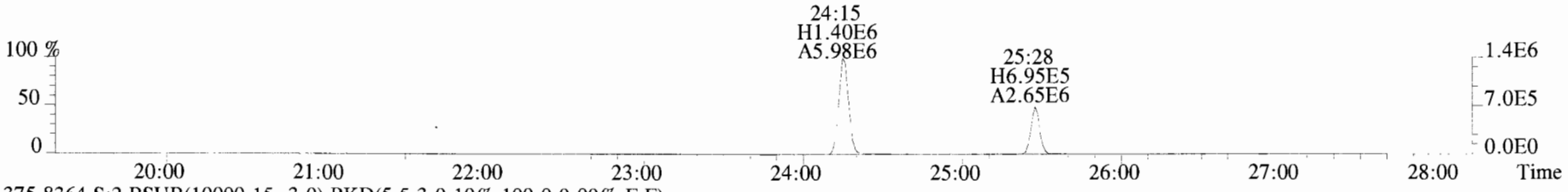
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



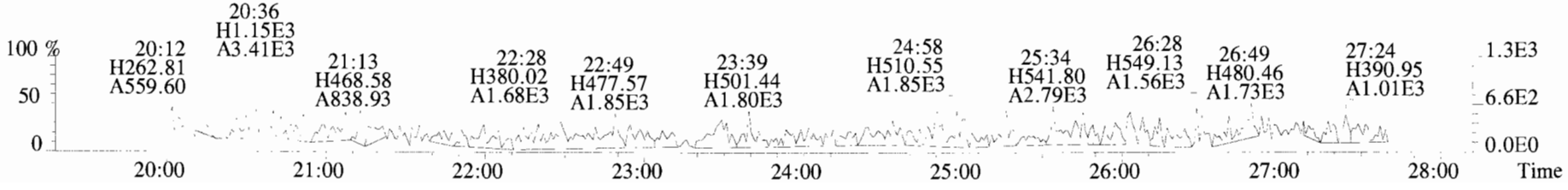
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



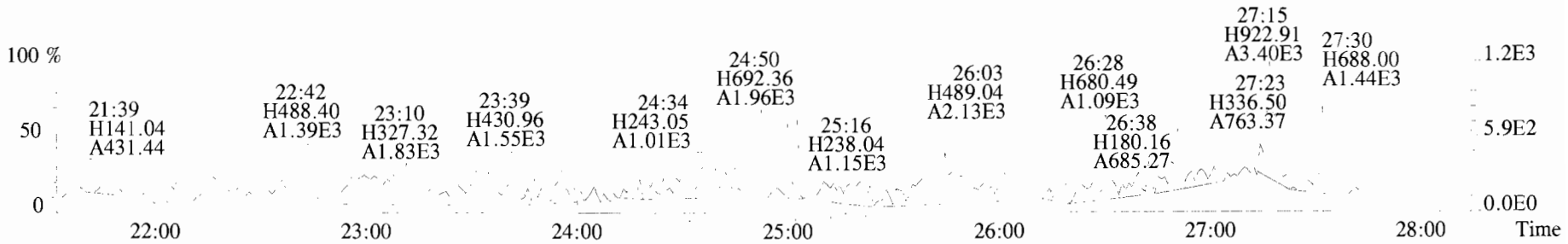
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



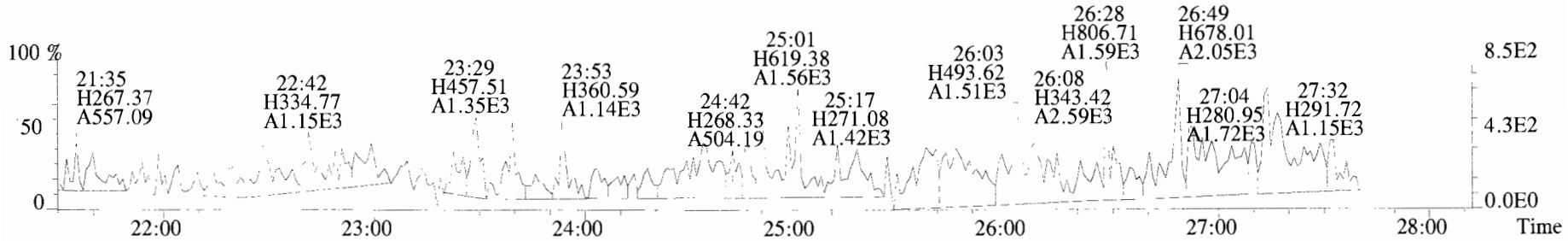
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



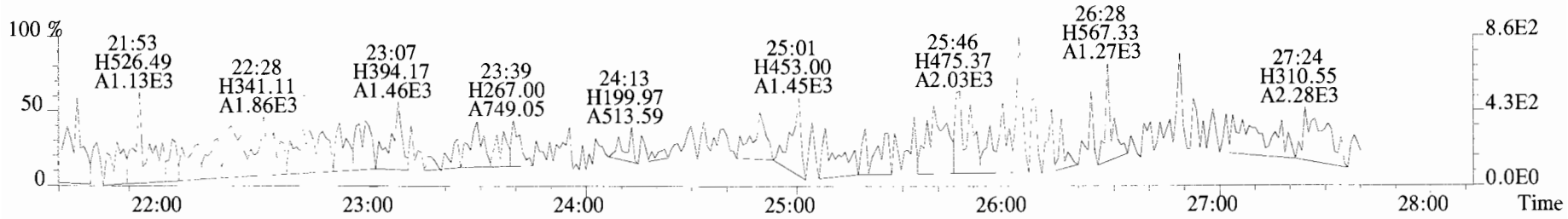
File:191029D1 #1-493 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



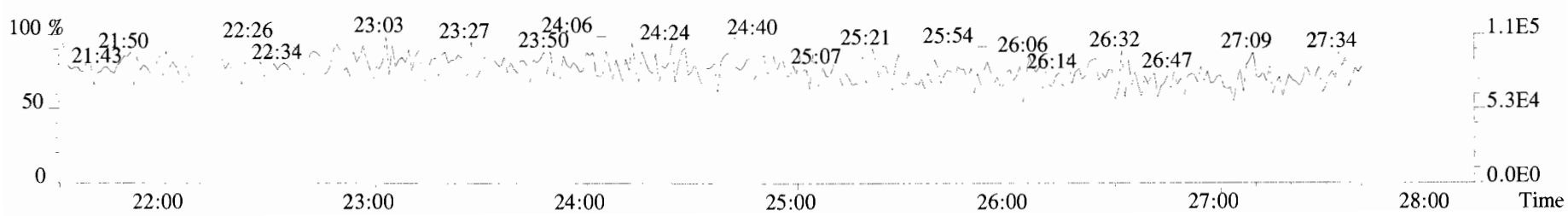
341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

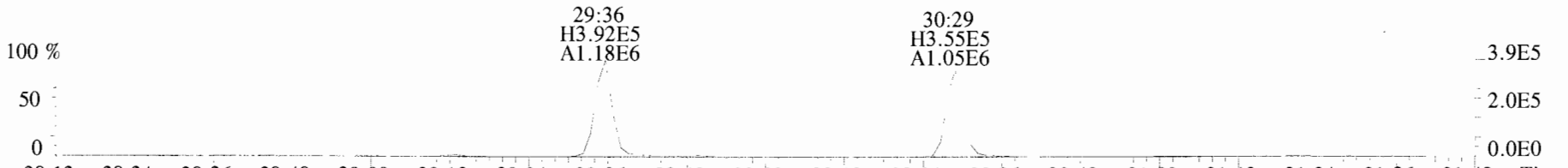


316.9824 S:2

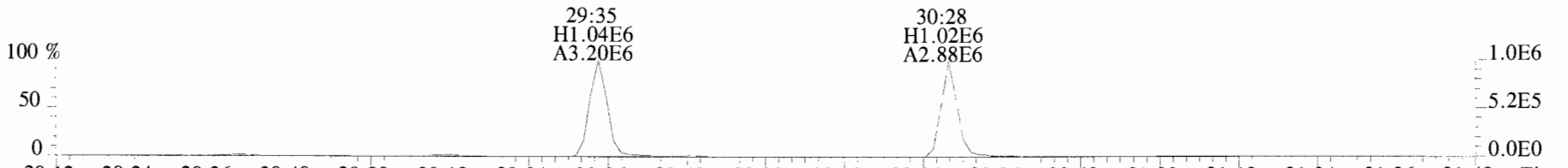


File:191029D1 #1-211 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

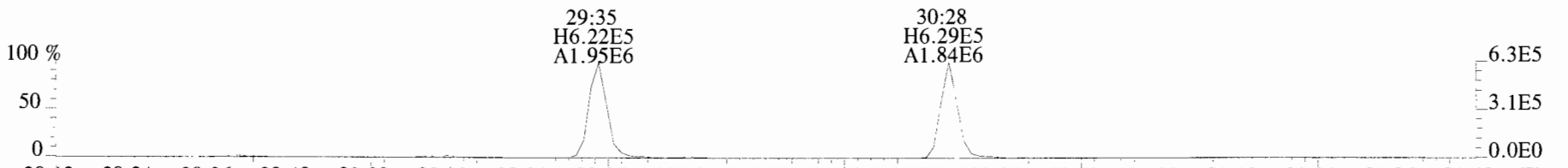
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



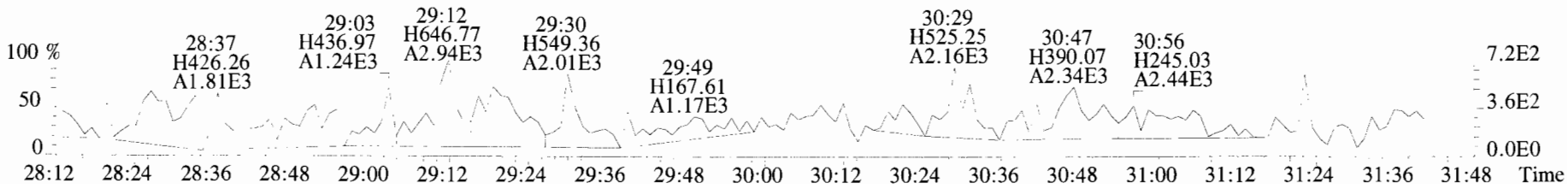
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



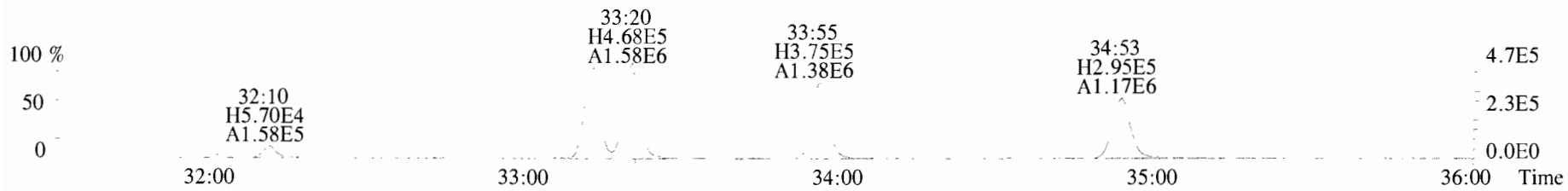
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



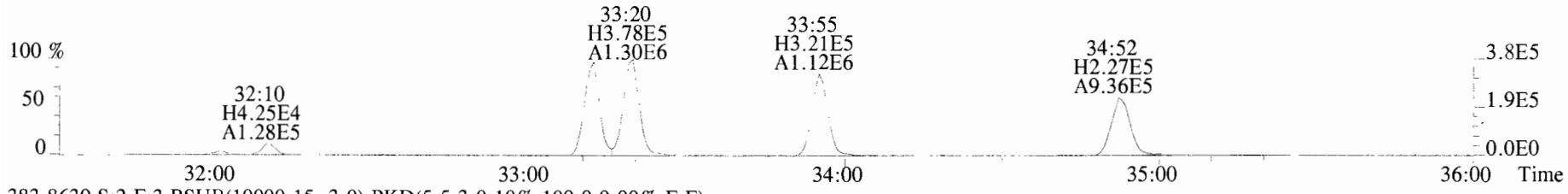
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



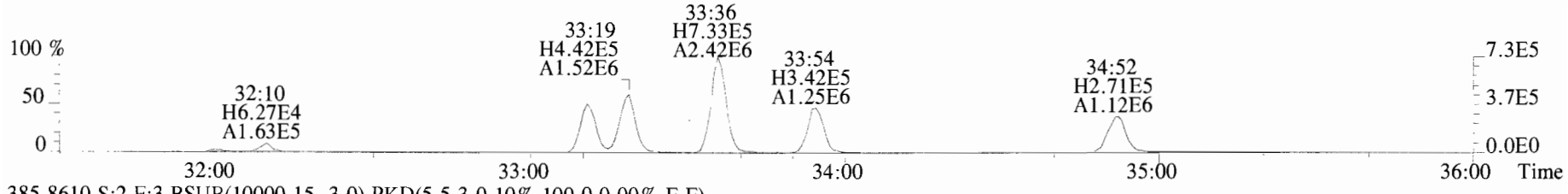
File:191029D1 #1-385 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



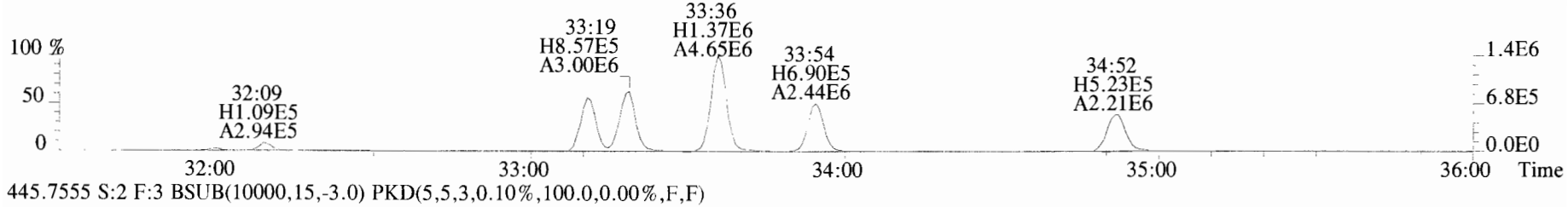
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



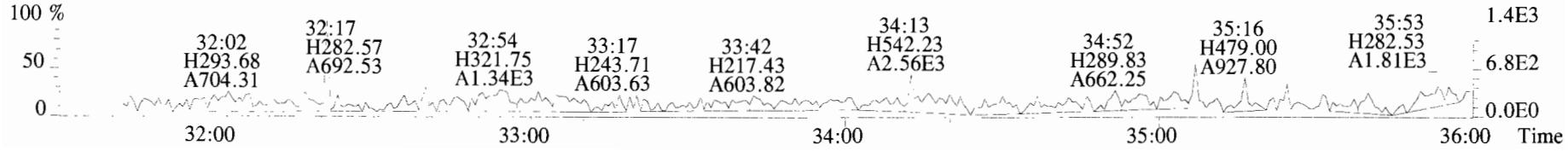
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



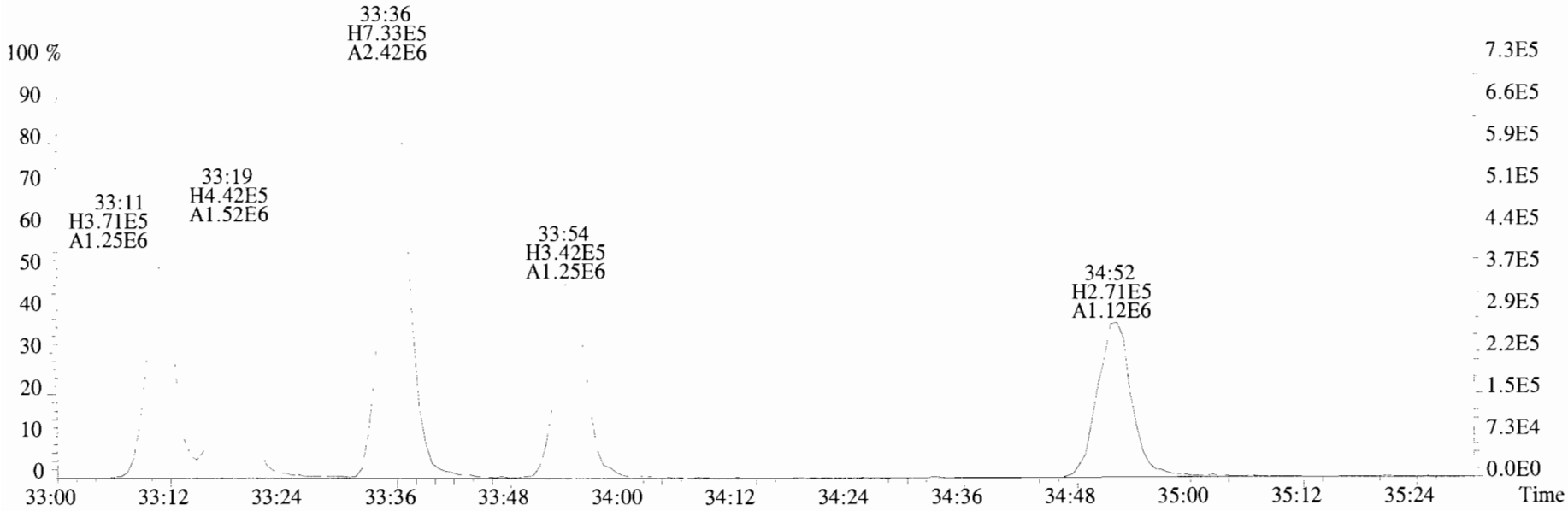
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



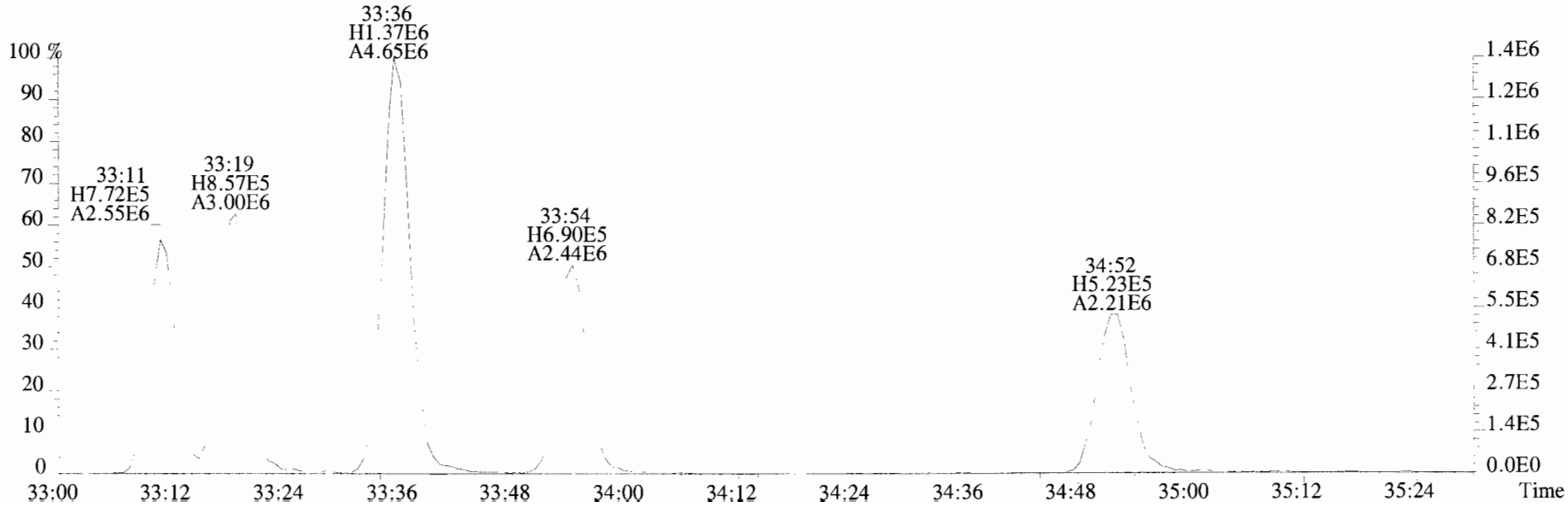
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



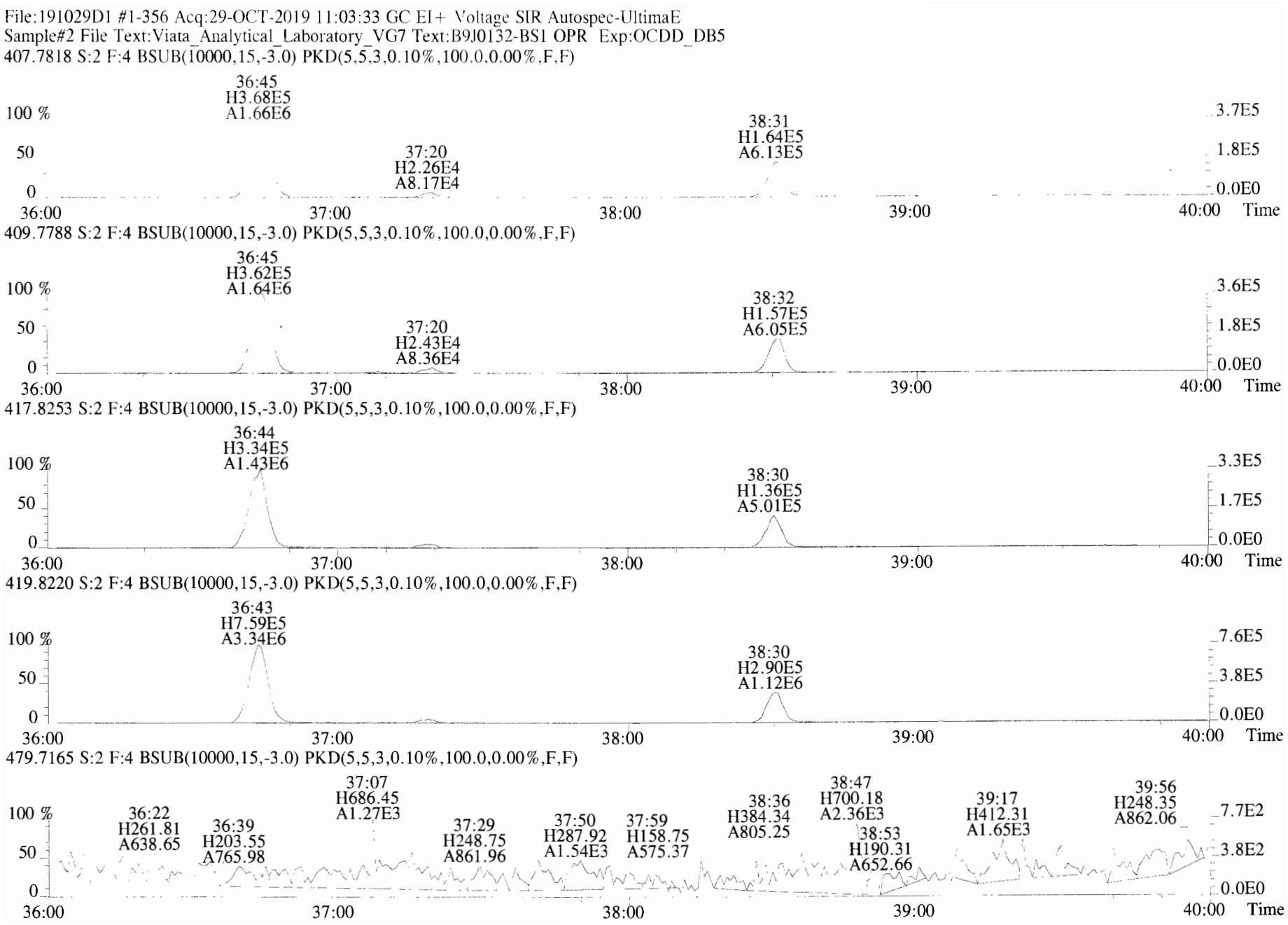
File:191029D1 #1-385 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

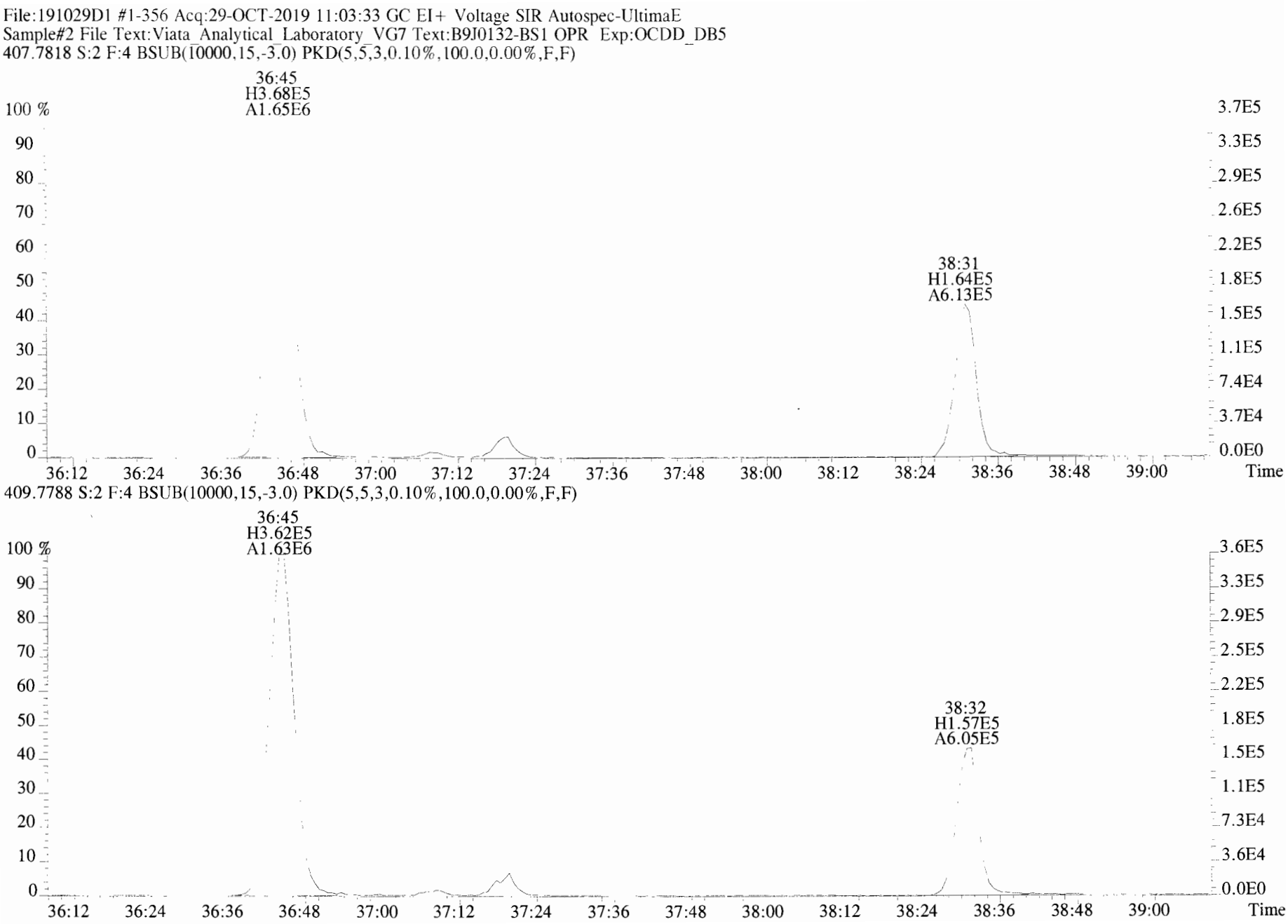


385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

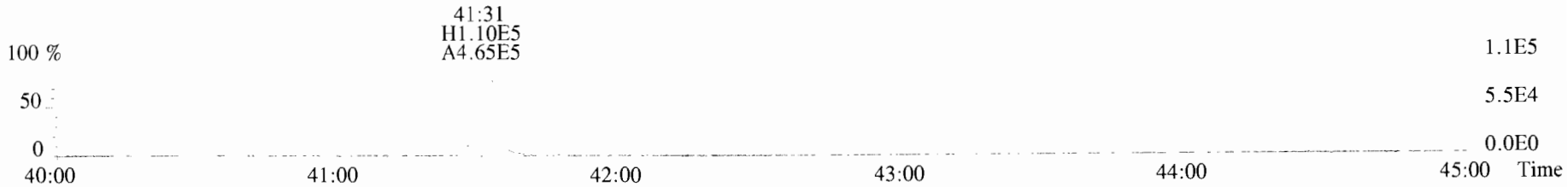


File:191029D1 #1-356 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5

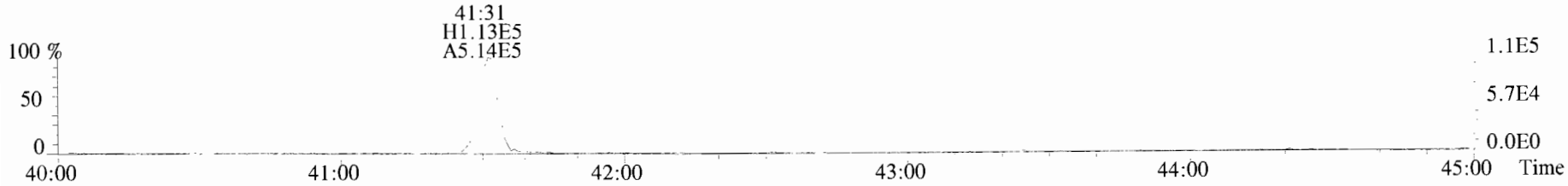



File:191029D1 #1-356 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:45
H3.68E5
A1.65E6
38:31
H1.64E5
A6.13E5
100 %
90
80
70
60
50
40
30
20
10
0
3.7E5
3.3E5
2.9E5
2.6E5
2.2E5
1.8E5
1.5E5
1.1E5
7.4E4
3.7E4
0.0E0
36:12
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
38:12
38:24
38:36
38:48
39:00
Time
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:45
H3.62E5
A1.63E6
38:32
H1.57E5
A6.05E5
100 %
90
80
70
60
50
40
30
20
10
0
3.6E5
3.3E5
2.9E5
2.5E5
2.2E5
1.8E5
1.5E5
1.1E5
7.3E4
3.6E4
0.0E0
36:12
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
38:12
38:24
38:36
38:48
39:00
Time

File:191029D1 #1-432 Acq:29-OCT-2019 11:03:33 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:B9J0132-BS1 OPR Exp:OCDD_DB5
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



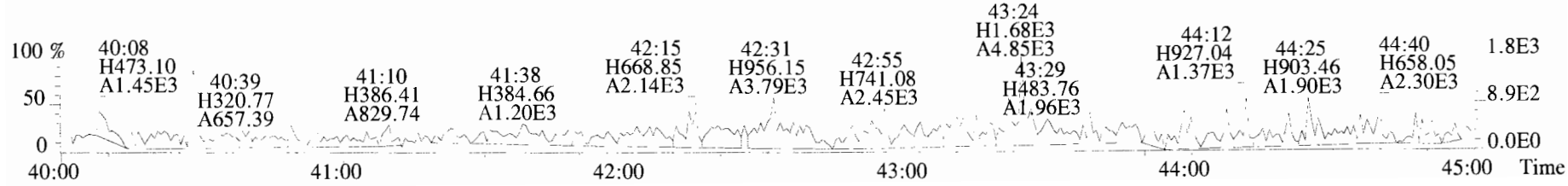
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

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

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



Client ID: Method Blank Filename: 191205D1 S:6 Acq:5-DEC-19 20:41:26 ConCal: ST191205D1-1
Lab ID: B9L0024-BLK1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.000 EndCAL: NA

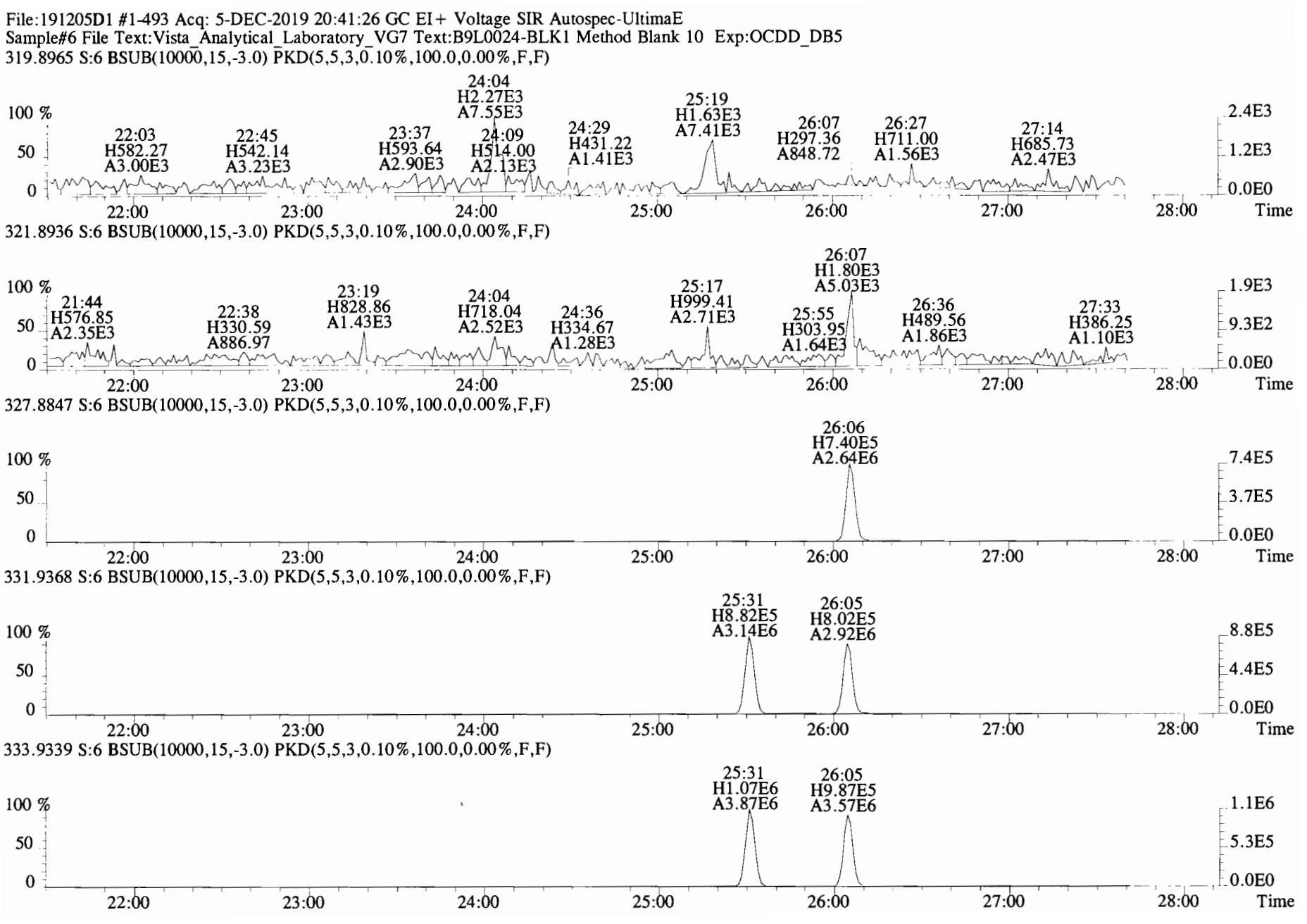
	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	0.91	NotF	*		167	2.5	0.0937
	1,2,3,7,8-PeCDD	*	*	n	0.90	NotF	*		188	2.5	0.0878
	1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF	*		132	2.5	0.122
	1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF	*		132	2.5	0.128
	1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF	*		132	2.5	0.124
	1,2,3,4,6,7,8-HpCDD	*	*	n	0.98	NotF	*		156	2.5	0.142
	OCDD	*	*	n	0.96	NotF	*		118	2.5	0.144
	2,3,7,8-TCDF	*	*	n	0.95	NotF	*		182	2.5	0.0641
	1,2,3,7,8-PeCDF	*	*	n	0.96	NotF	*		219	2.5	0.104
	2,3,4,7,8-PeCDF	*	*	n	1.01	NotF	*		219	2.5	0.101
	1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF	*		121	2.5	0.0375
	1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF	*		121	2.5	0.0428
	2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF	*		121	2.5	0.0490
	1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF	*		121	2.5	0.0667
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF	*		106	2.5	0.0722
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF	*		106	2.5	0.0611
	OCDF	4.98e+03	1.29	n	0.95	41:13	0.21513		*	2.5	*
IS	13C-2,3,7,8-TCDD	6.49e+06	0.82	y	1.10	26:05	169.12				
IS	13C-1,2,3,7,8-PeCDD	5.65e+06	0.65	y	0.88	30:36	182.91				
IS	13C-1,2,3,4,7,8-HxCDD	4.26e+06	1.26	y	0.64	33:54	163.32				
IS	13C-1,2,3,6,7,8-HxCDD	4.76e+06	1.26	y	0.86	34:00	136.79				
IS	13C-1,2,3,7,8,9-HxCDD	4.91e+06	1.27	y	0.81	34:18	149.64				
IS	13C-1,2,3,4,6,7,8-HpCDD	4.36e+06	1.05	y	0.65	37:46	163.83				
IS	13C-OCDD	7.49e+06	0.89	y	0.58	41:01	317.65				
IS	13C-2,3,7,8-TCDF	1.00e+07	0.77	y	1.03	25:18	157.18				
IS	13C-1,2,3,7,8-PeCDF	8.89e+06	1.54	y	0.85	29:25	168.47				
IS	13C-2,3,4,7,8-PeCDF	8.59e+06	1.58	y	0.85	30:19	164.19				
IS	13C-1,2,3,4,7,8-HxCDF	6.61e+06	0.51	y	0.83	33:01	195.33				
IS	13C-1,2,3,6,7,8-HxCDF	6.93e+06	0.52	y	1.03	33:08	164.84				
IS	13C-2,3,4,6,7,8-HxCDF	6.56e+06	0.51	y	0.95	33:44	169.18				
IS	13C-1,2,3,7,8,9-HxCDF	5.56e+06	0.52	y	0.83	34:40	165.29				
IS	13C-1,2,3,4,6,7,8-HpCDF	4.61e+06	0.45	y	0.76	36:30	149.57				
IS	13C-1,2,3,4,7,8,9-HpCDF	4.08e+06	0.44	y	0.58	38:18	172.41				
IS	13C-OCDF	9.77e+06	0.90	y	0.69	41:14	348.78				
C/Up	37Cl-2,3,7,8-TCDD	2.64e+06			1.20	26:06	62.938				
RS/RT	13C-1,2,3,4-TCDD	7.01e+06	0.81	y	1.00	25:31	200.00				
RS	13C-1,2,3,4-TCDF	1.23e+07	0.79	y	1.00	24:05	200.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	8.13e+06	0.51	y	1.00	33:25	200.00				

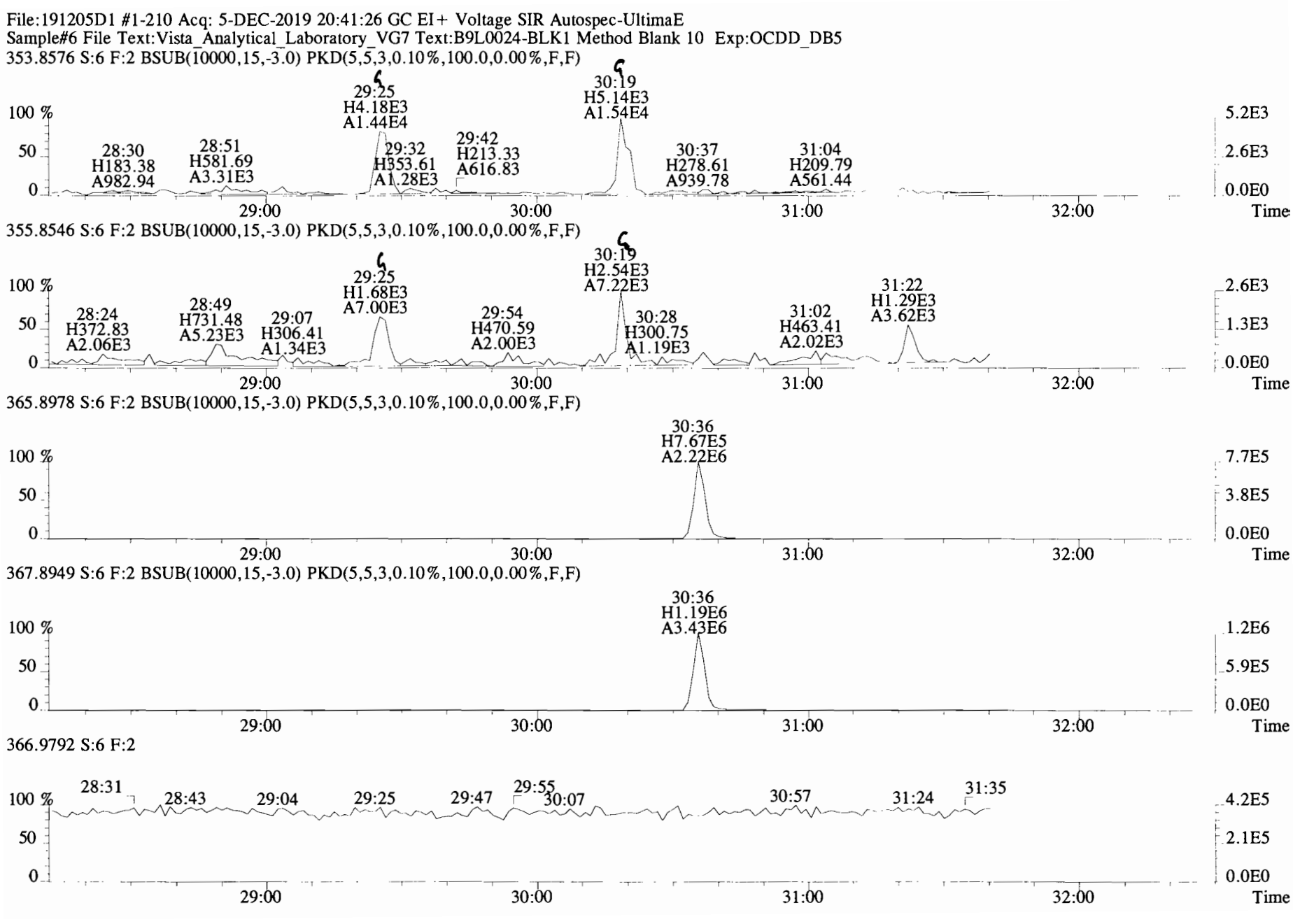
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		167	0.0937
Total Penta-Dioxins	*	*		188	0.0878
Total Hexa-Dioxins	*	*		132	0.125
Total Hepta-Dioxins	*	*		156	0.142
Total Tetra-Furans	*	*		182	0.0641
Total Penta-Furans	0.0000	0.0000		219	0.103
Total Hexa-Furans	*	*		121	0.0480
Total Hepta-Furans	*	*		106	0.0669

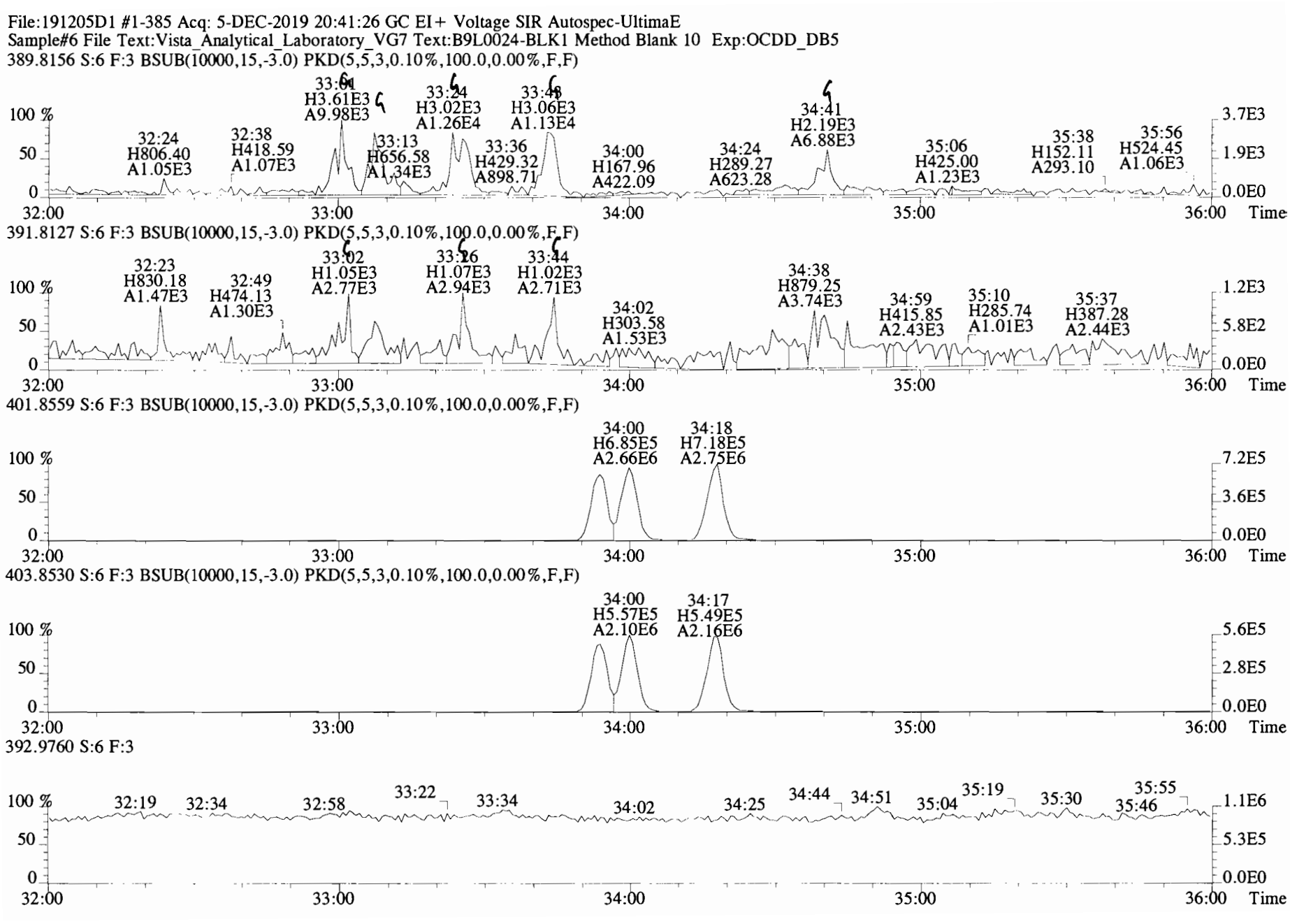
	Rec	Qual
IS	84.6	
IS	91.5	
IS	81.7	
IS	68.4	
IS	74.8	
IS	81.9	
IS	79.4	
IS	78.6	
IS	84.2	
IS	82.1	
IS	97.7	
IS	82.4	
IS	84.6	
IS	82.6	
IS	74.8	
IS	86.2	
IS	87.2	
C/Up	78.7	

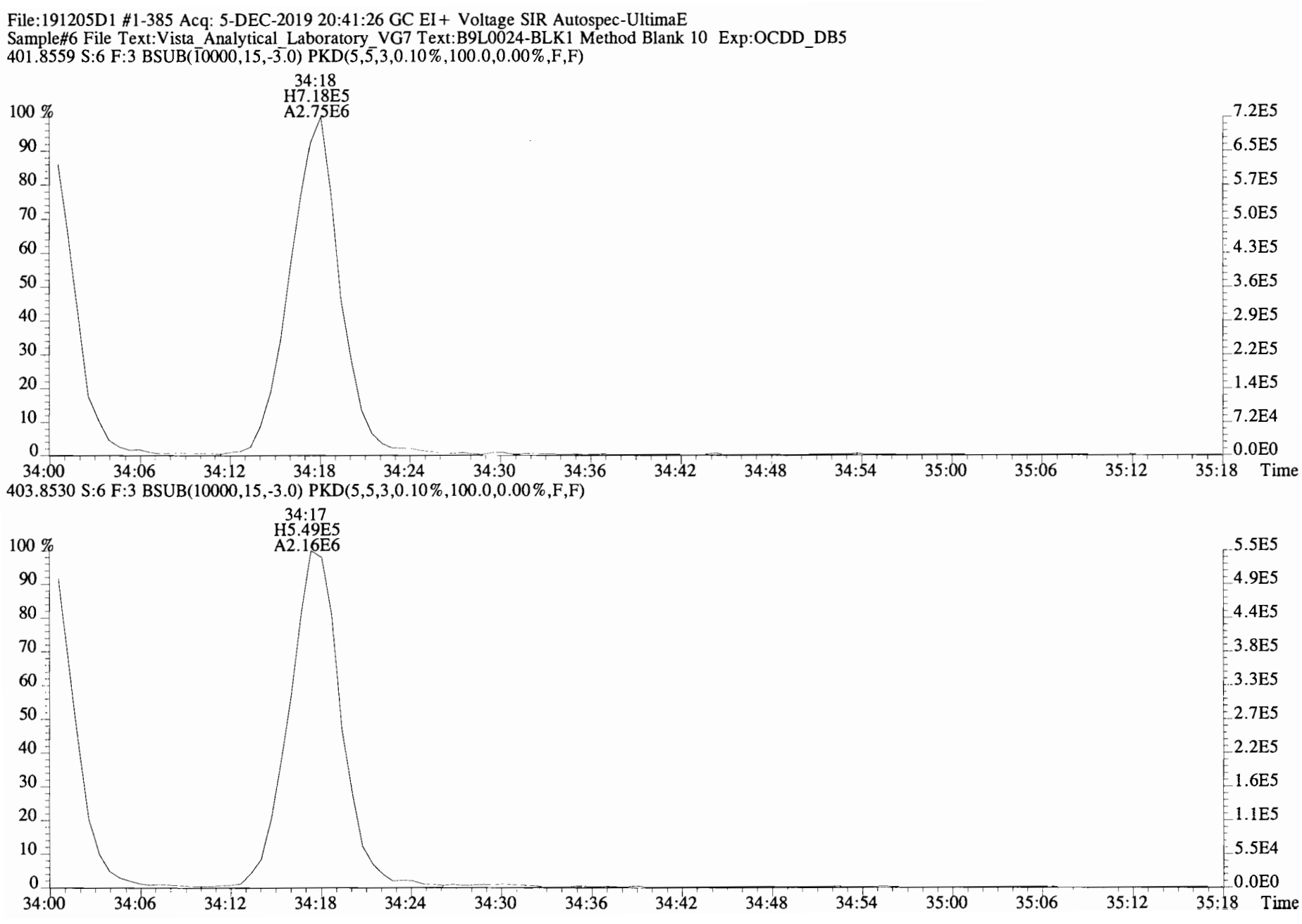
Integrations by Analyst: DB Date: 12/10/19

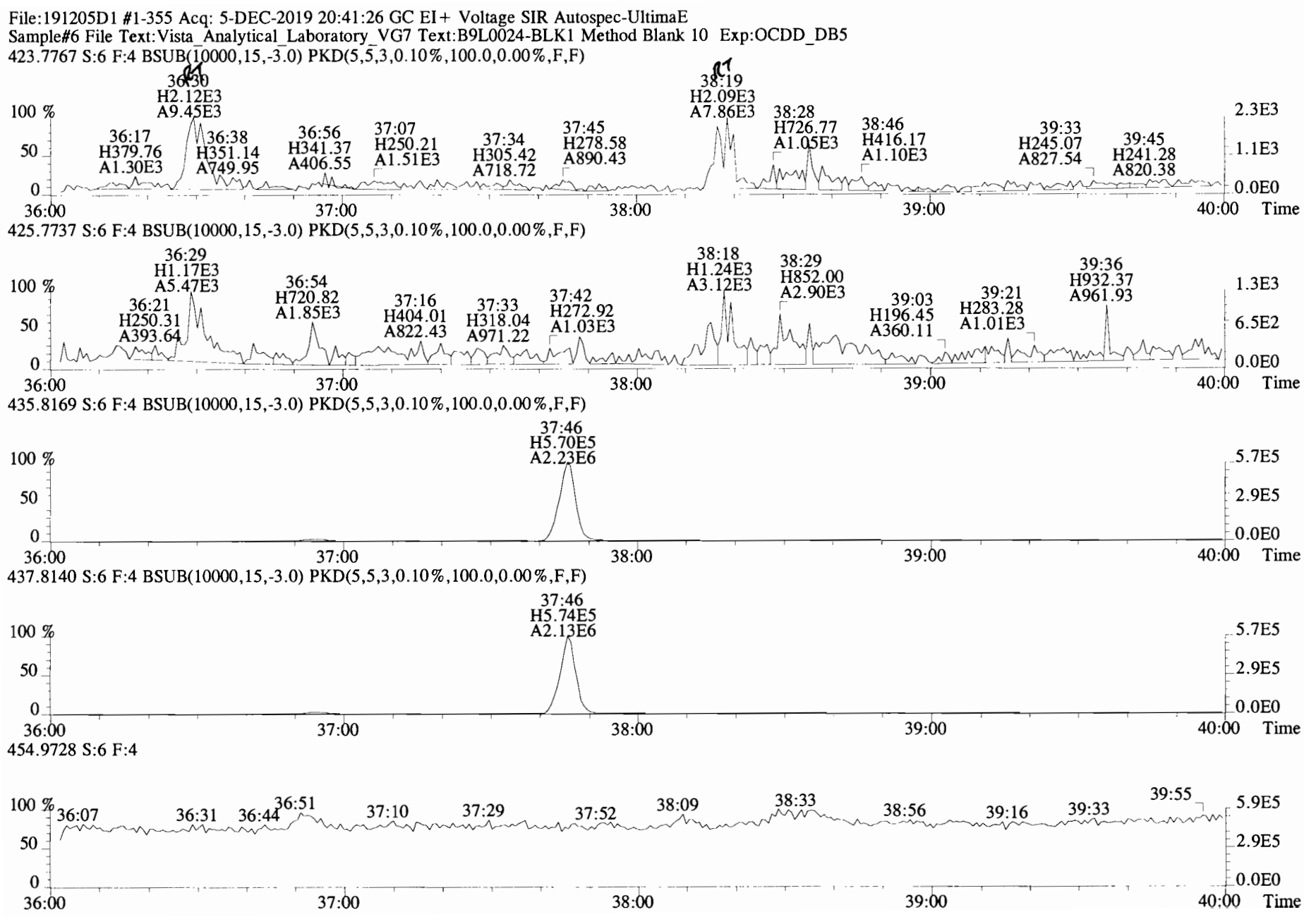
Reviewed by Analyst: CT Date: 12/11/19


File:191205D1 #1-493 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:03 H582.27 A3.00E3
22:45 H542.14 A3.23E3
23:37 H593.64 A2.90E3
24:04 H2.27E3 A7.55E3
24:09 H514.00 A2.13E3
24:29 H431.22 A1.41E3
25:19 H1.63E3 A7.41E3
26:07 H297.36 A848.72
26:27 H711.00 A1.56E3
27:14 H685.73 A2.47E3
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:44 H576.85 A2.35E3
22:38 H330.59 A886.97
23:19 H828.86 A1.43E3
24:04 H718.04 A2.52E3
24:36 H334.67 A1.28E3
25:17 H999.41 A2.71E3
25:55 H303.95 A1.64E3
26:07 H1.80E3 A5.03E3
26:36 H489.56 A1.86E3
27:33 H386.25 A1.10E3
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:06 H7.40E5 A2.64E6
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:31 H8.82E5 A3.14E6
26:05 H8.02E5 A2.92E6
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:31 H1.07E6 A3.87E6
26:05 H9.87E5 A3.57E6
100 %
50
0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
2.4E3
1.2E3
0.0E0
1.9E3
9.3E2
7.4E5
3.7E5
8.8E5
4.4E5
1.1E6
5.3E5

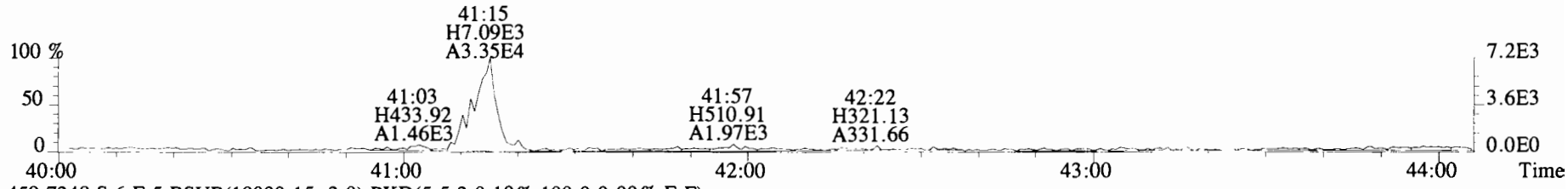

File:191205D1 #1-210 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:25 H4.18E3 A1.44E4
30:19 H5.14E3 A1.54E4
28:30 H183.38 A982.94
28:51 H581.69 A3.31E3
29:32 H353.61 A1.28E3
29:42 H213.33 A616.83
30:37 H278.61 A939.78
31:04 H209.79 A561.44
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:19 H2.54E3 A7.22E3
29:25 H1.68E3 A7.00E3
28:24 H372.83 A2.06E3
28:49 H731.48 A5.23E3
29:07 H306.41 A1.34E3
29:54 H470.59 A2.00E3
30:28 H300.75 A1.19E3
31:02 H463.41 A2.02E3
31:22 H1.29E3 A3.62E3
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:36 H7.67E5 A2.22E6
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:36 H1.19E6 A3.43E6
366.9792 S:6 F:2
28:31
28:43
29:04
29:25
29:47
29:55
30:07
30:57
31:24
31:35
100 %
50
0
29:00
30:00
31:00
32:00
Time
5.2E3
2.6E3
0.0E0
1.3E3
7.7E5
3.8E5
1.2E6
5.9E5
4.2E5
2.1E5


File:191205D1 #1-385 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:01 H3.61E3 A9.98E3
33:24 H3.02E3 A1.26E4
33:48 H3.06E3 A1.13E4
32:24 H806.40 A1.05E3
32:38 H418.59 A1.07E3
33:13 H656.58 A1.34E3
33:36 H429.32 A898.71
34:00 H167.96 A422.09
34:24 H289.27 A623.28
34:41 H2.19E3 A6.88E3
35:06 H425.00 A1.23E3
35:38 H152.11 A293.10
35:56 H524.45 A1.06E3
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:02 H1.05E3 A2.77E3
33:26 H1.07E3 A2.94E3
33:44 H1.02E3 A2.71E3
32:23 H830.18 A1.47E3
32:49 H474.13 A1.30E3
34:02 H303.58 A1.53E3
34:38 H879.25 A3.74E3
34:59 H415.85 A2.43E3
35:10 H285.74 A1.01E3
35:37 H387.28 A2.44E3
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:00 H6.85E5 A2.66E6
34:18 H7.18E5 A2.75E6
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:00 H5.57E5 A2.10E6
34:17 H5.49E5 A2.16E6
392.9760 S:6 F:3
32:19
32:34
32:58
33:22
33:34
34:02
34:25
34:44
34:51
35:04
35:19
35:30
35:46
35:55
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
3.7E3
1.9E3
0.0E0
1.2E3
5.8E2
7.2E5
3.6E5
5.6E5
2.8E5
1.1E6
5.3E5

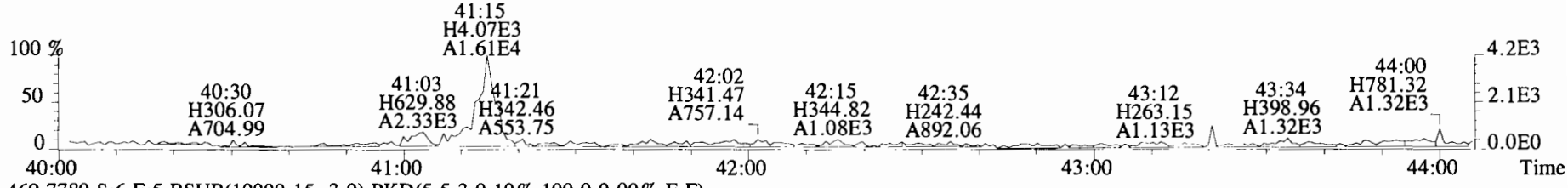

File:191205D1 #1-385 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:18
H7.18E5
A2.75E6
100 %
90
80
70
60
50
40
30
20
10
0
7.2E5
6.5E5
5.7E5
5.0E5
4.3E5
3.6E5
2.9E5
2.2E5
1.4E5
7.2E4
0.0E0
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
35:06
35:12
35:18
Time
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:17
H5.49E5
A2.16E6
100 %
90
80
70
60
50
40
30
20
10
0
5.5E5
4.9E5
4.4E5
3.8E5
3.3E5
2.7E5
2.2E5
1.6E5
1.1E5
5.5E4
0.0E0
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
35:06
35:12
35:18
Time


File:191205D1 #1-355 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:30 H2.12E3 A9.45E3
38:19 H2.09E3 A7.86E3
36:17 H379.76 A1.30E3
36:38 H351.14 A749.95
36:56 H341.37 A406.55
37:07 H250.21 A1.51E3
37:34 H305.42 A718.72
37:45 H278.58 A890.43
38:28 H726.77 A1.05E3
38:46 H416.17 A1.10E3
39:33 H245.07 A827.54
39:45 H241.28 A820.38
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:29 H1.17E3 A5.47E3
36:21 H250.31 A393.64
36:54 H720.82 A1.85E3
37:16 H404.01 A822.43
37:33 H318.04 A971.22
37:42 H272.92 A1.03E3
38:18 H1.24E3 A3.12E3
38:29 H852.00 A2.90E3
39:03 H196.45 A360.11
39:21 H283.28 A1.01E3
39:36 H932.37 A961.93
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:46 H5.70E5 A2.23E6
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:46 H5.74E5 A2.13E6
454.9728 S:6 F:4
36:07
36:31
36:44
36:51
37:10
37:29
37:52
38:09
38:33
38:56
39:16
39:33
39:55
100 %
50
0
36:00
37:00
38:00
39:00
40:00
Time
2.3E3
1.1E3
0.0E0
1.3E3
6.5E2
5.7E5
2.9E5
5.9E5

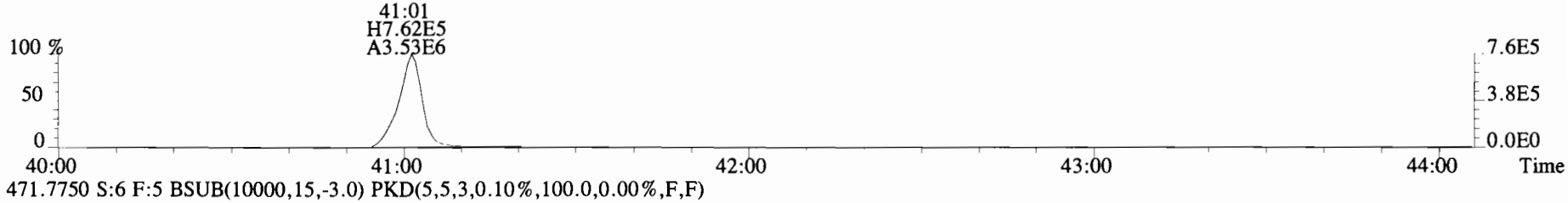
File:191205D1 #1-432 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



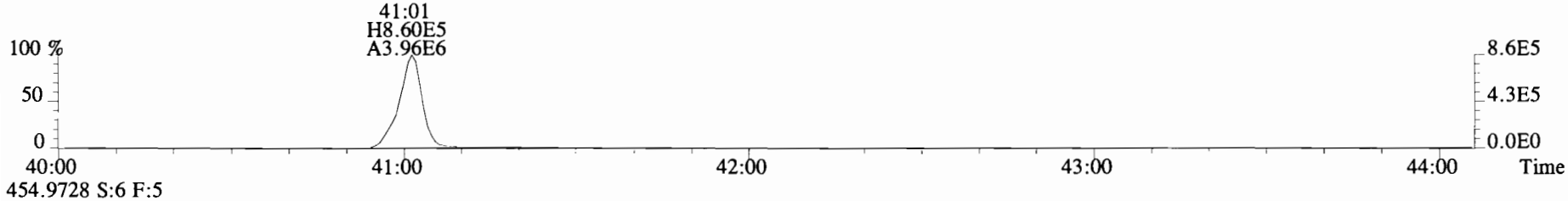
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



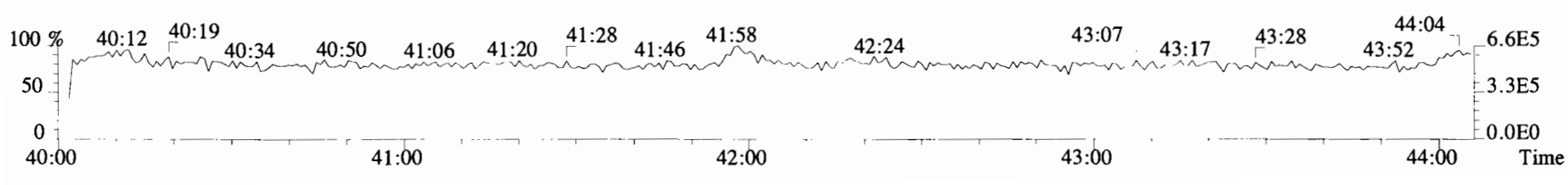
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

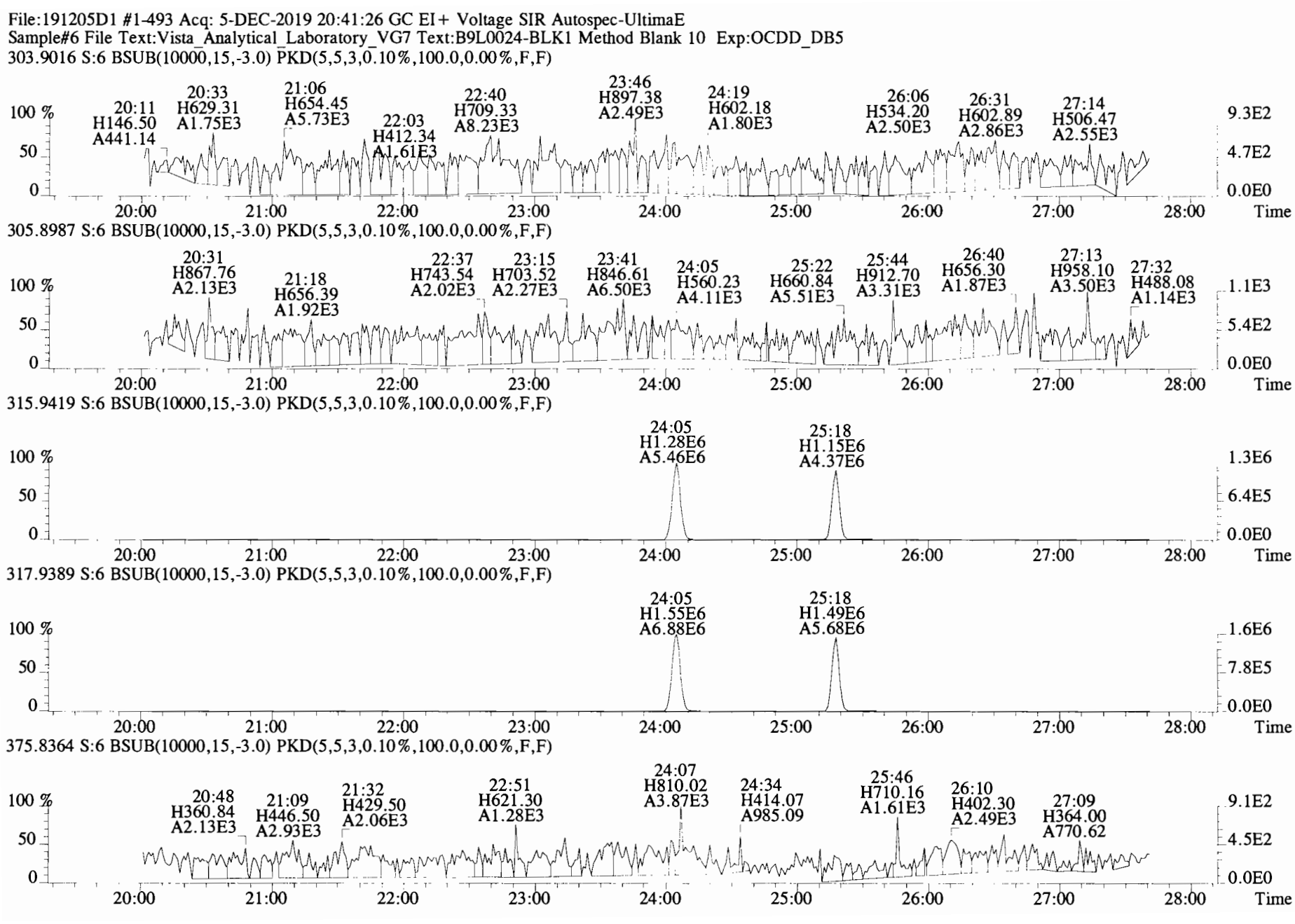


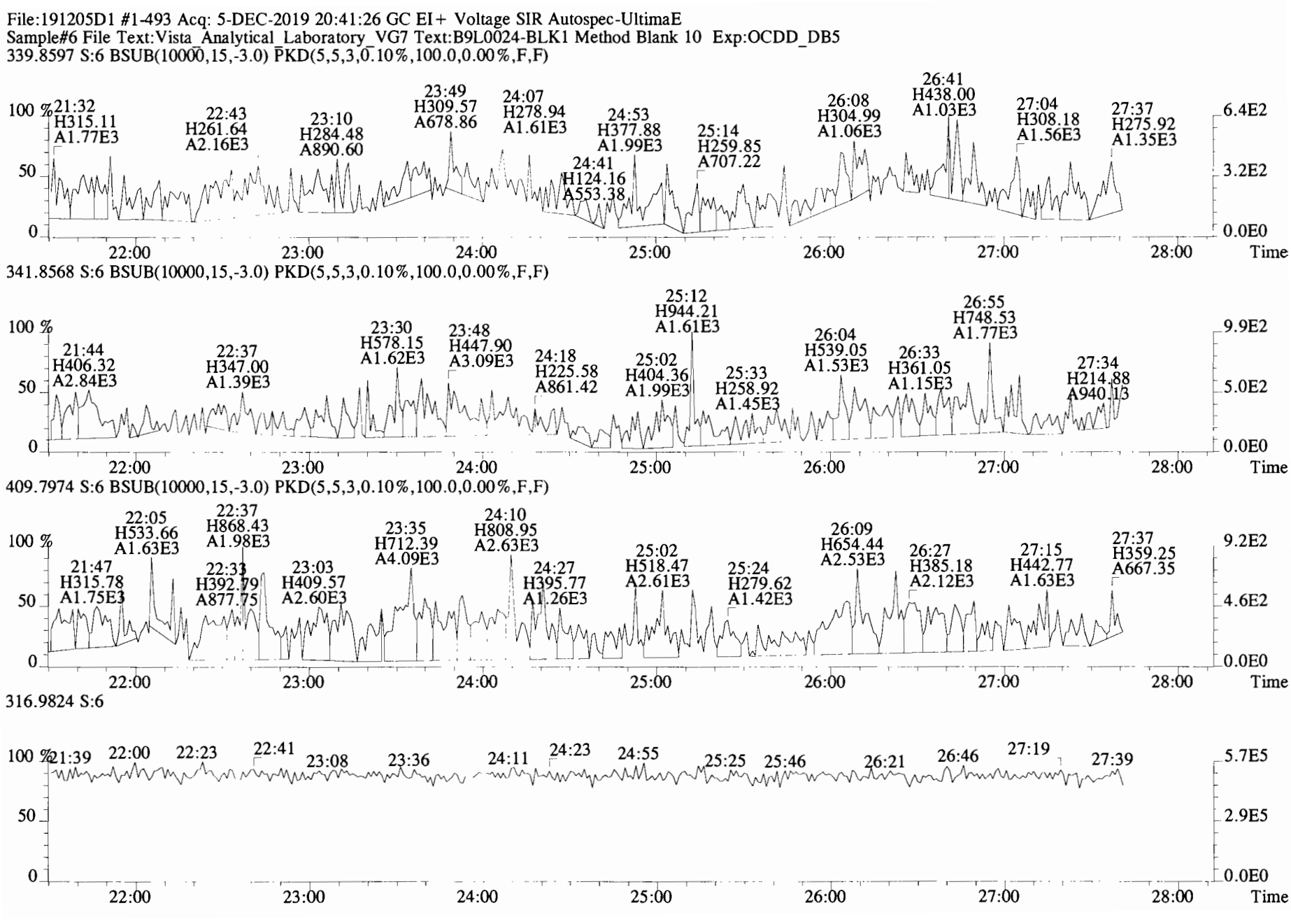
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

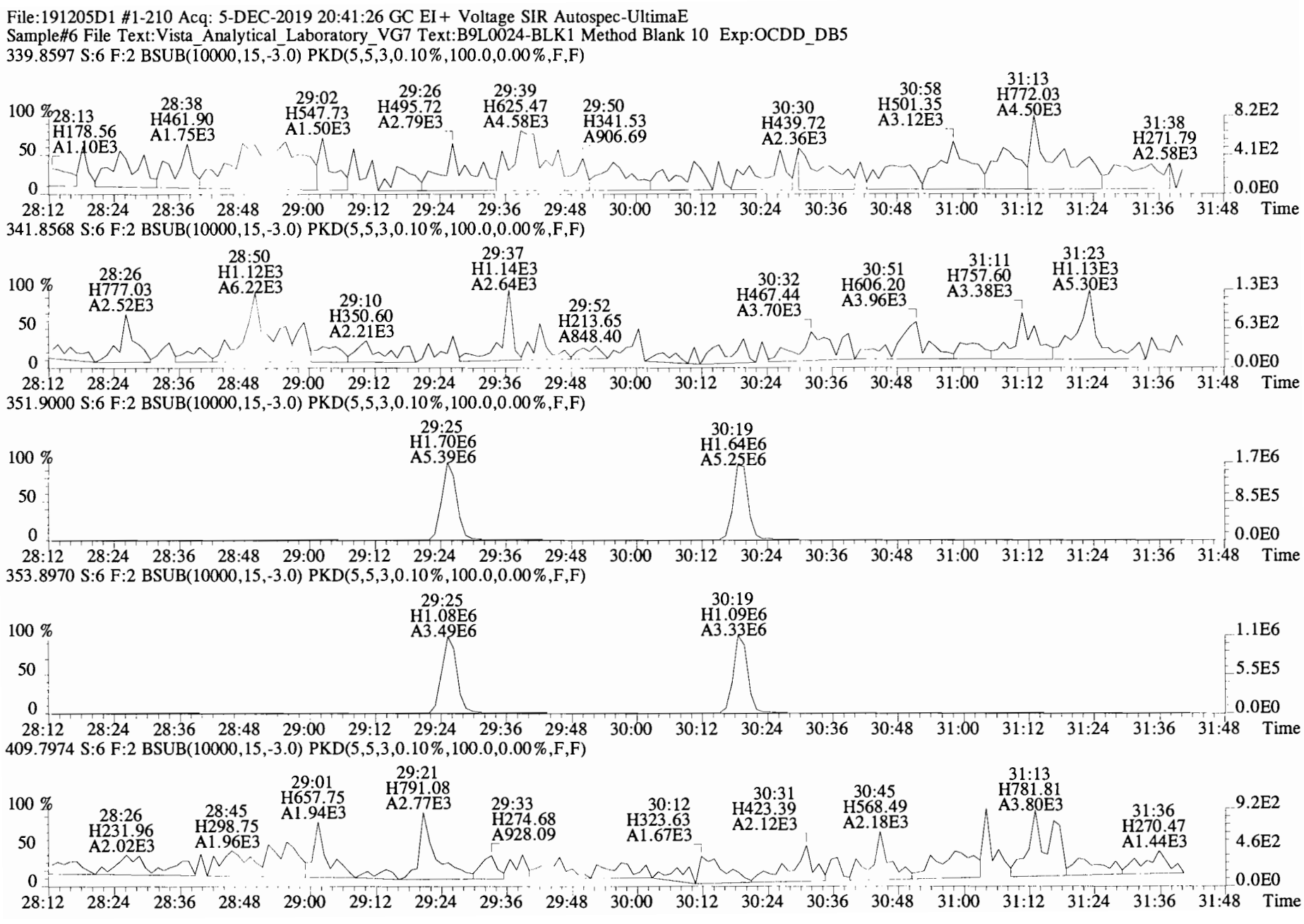


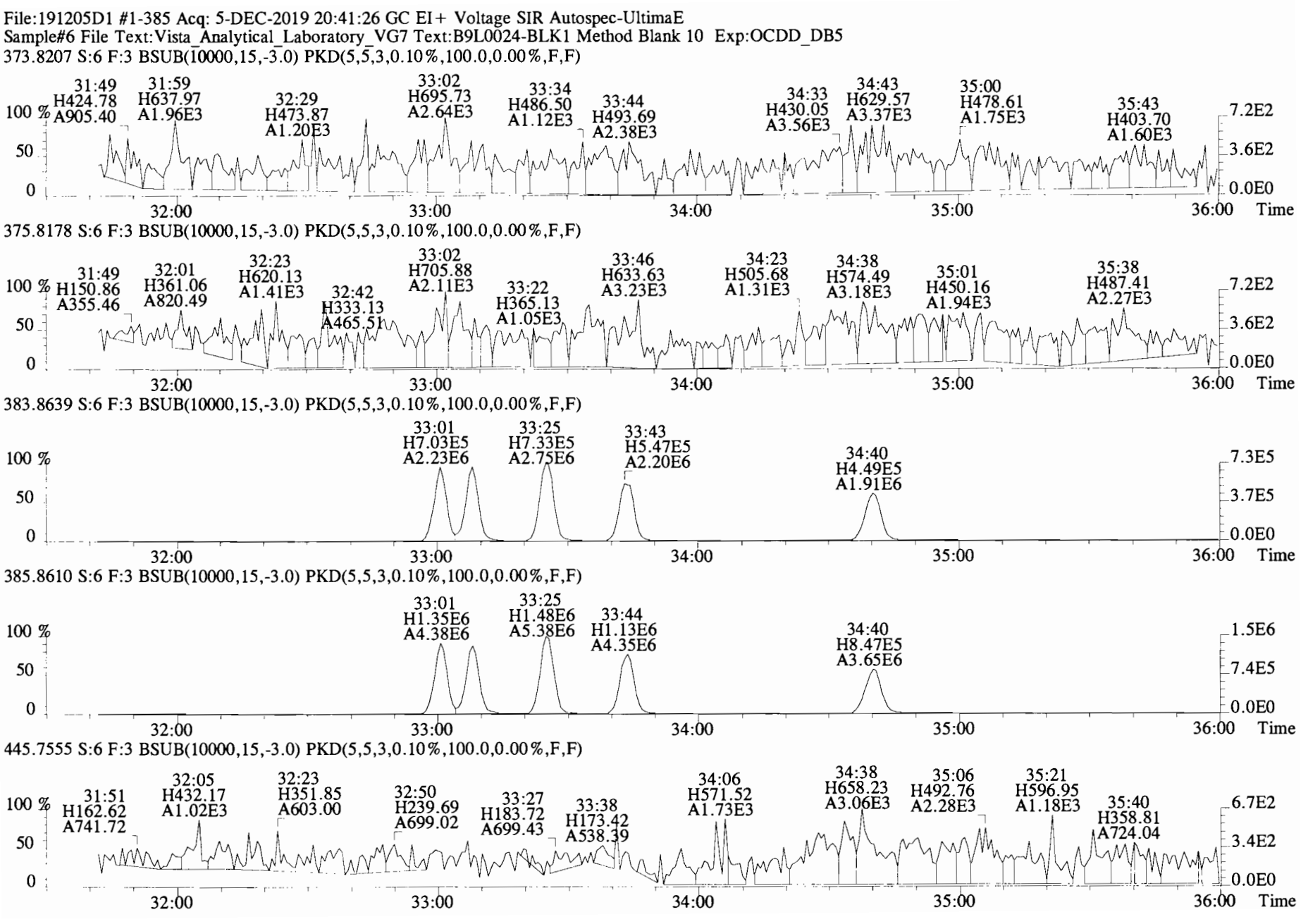
454.9728 S:6 F:5

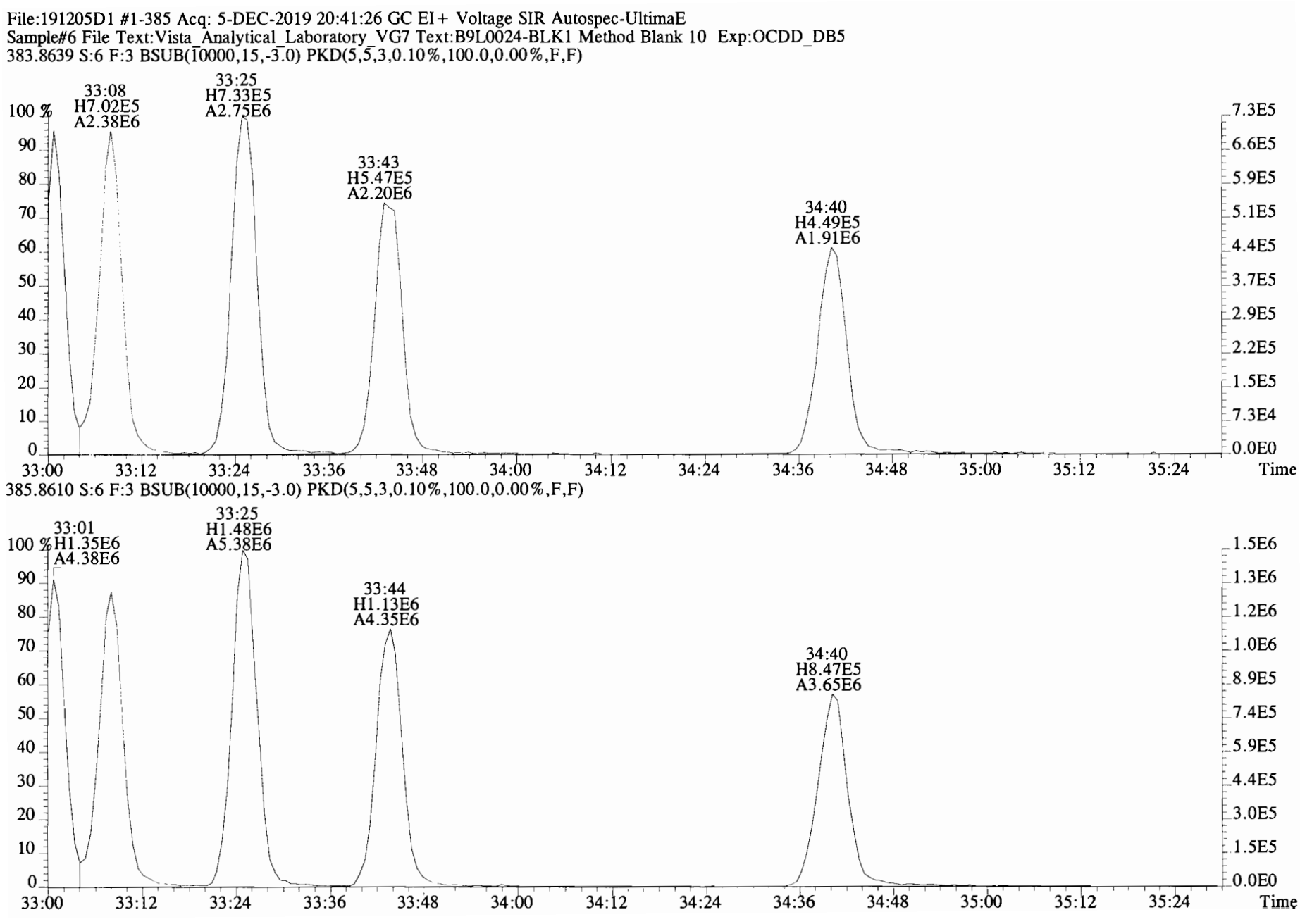


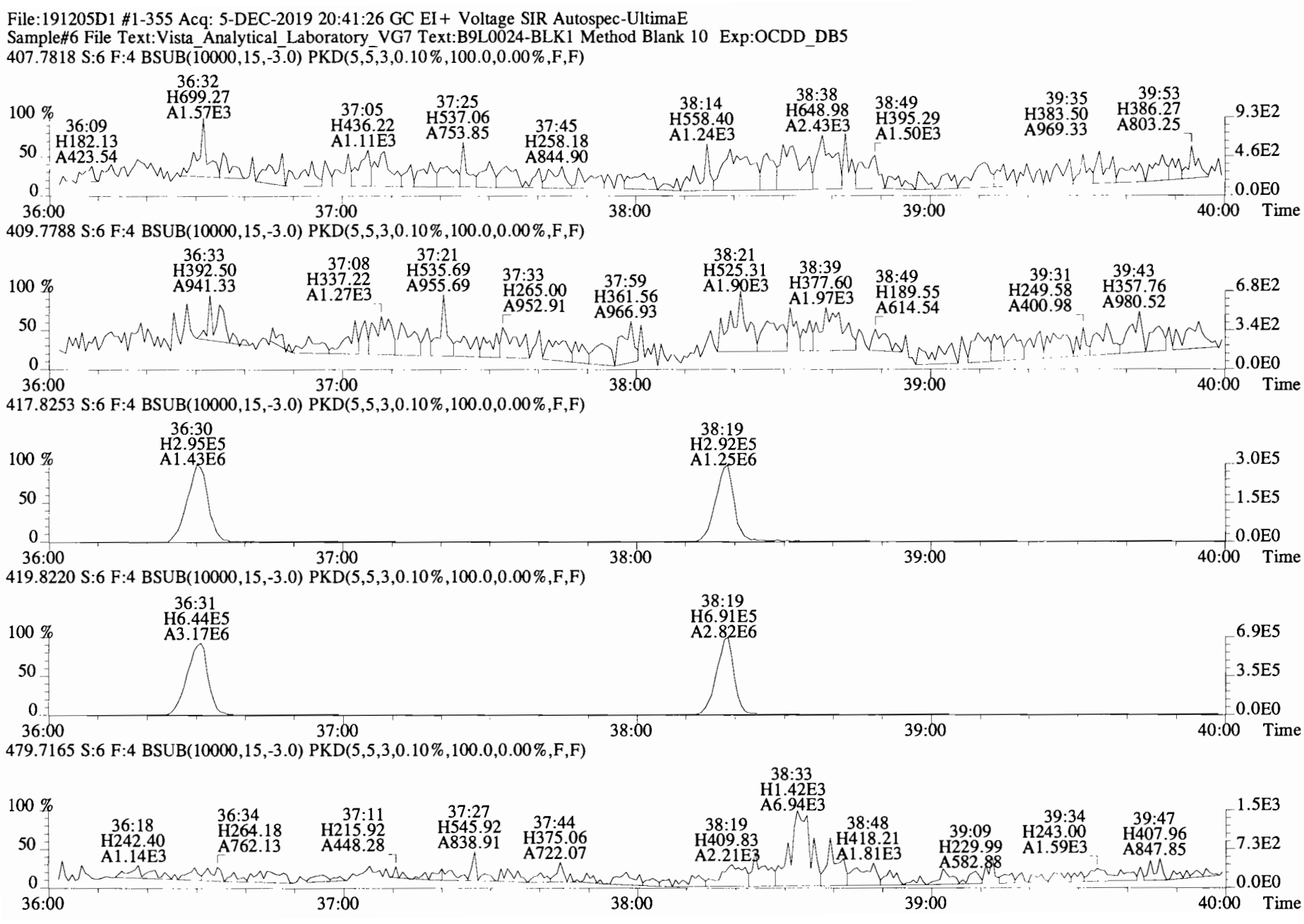

File:191205D1 #1-493 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:11 H146.50 A441.14
20:33 H629.31 A1.75E3
21:06 H654.45 A5.73E3
22:03 H412.34 A1.61E3
22:40 H709.33 A8.23E3
23:46 H897.38 A2.49E3
24:19 H602.18 A1.80E3
26:06 H534.20 A2.50E3
26:31 H602.89 A2.86E3
27:14 H506.47 A2.55E3
9.3E2
4.7E2
0.0E0
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:31 H867.76 A2.13E3
21:18 H656.39 A1.92E3
22:37 H743.54 A2.02E3
23:15 H703.52 A2.27E3
23:41 H846.61 A6.50E3
24:05 H560.23 A4.11E3
25:22 H660.84 A5.51E3
25:44 H912.70 A3.31E3
26:40 H656.30 A1.87E3
27:13 H958.10 A3.50E3
27:32 H488.08 A1.14E3
1.1E3
5.4E2
0.0E0
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:05 H1.28E6 A5.46E6
25:18 H1.15E6 A4.37E6
1.3E6
6.4E5
0.0E0
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:05 H1.55E6 A6.88E6
25:18 H1.49E6 A5.68E6
1.6E6
7.8E5
0.0E0
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:48 H360.84 A2.13E3
21:09 H446.50 A2.93E3
21:32 H429.50 A2.06E3
22:51 H621.30 A1.28E3
24:07 H810.02 A3.87E3
24:34 H414.07 A985.09
25:46 H710.16 A1.61E3
26:10 H402.30 A2.49E3
27:09 H364.00 A770.62
9.1E2
4.5E2
0.0E0
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time


File:191205D1 #1-493 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:32 H315.11 A1.77E3
22:43 H261.64 A2.16E3
23:10 H284.48 A890.60
23:49 H309.57 A678.86
24:07 H278.94 A1.61E3
24:41 H124.16 A553.38
24:53 H377.88 A1.99E3
25:14 H259.85 A707.22
26:08 H304.99 A1.06E3
26:41 H438.00 A1.03E3
27:04 H308.18 A1.56E3
27:37 H275.92 A1.35E3
341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:44 H406.32 A2.84E3
22:37 H347.00 A1.39E3
23:30 H578.15 A1.62E3
23:48 H447.90 A3.09E3
24:18 H225.58 A861.42
25:02 H404.36 A1.99E3
25:12 H944.21 A1.61E3
25:33 H258.92 A1.45E3
26:04 H539.05 A1.53E3
26:33 H361.05 A1.15E3
26:55 H748.53 A1.77E3
27:34 H214.88 A940.13
409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:47 H315.78 A1.75E3
22:05 H533.66 A1.63E3
22:33 H392.79 A877.75
22:37 H868.43 A1.98E3
23:03 H409.57 A2.60E3
23:35 H712.39 A4.09E3
24:10 H808.95 A2.63E3
24:27 H395.77 A1.26E3
25:02 H518.47 A2.61E3
25:24 H279.62 A1.42E3
26:09 H654.44 A2.53E3
26:27 H385.18 A2.12E3
27:15 H442.77 A1.63E3
27:37 H359.25 A667.35
316.9824 S:6
21:39 22:00 22:23 22:41 23:08 23:36 24:11 24:23 24:55 25:25 25:46 26:21 26:46 27:19 27:39
100 %
50
0
22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
6.4E2 3.2E2 0.0E0
9.9E2 5.0E2 0.0E0
9.2E2 4.6E2 0.0E0
5.7E5 2.9E5 0.0E0


File:191205D1 #1-210 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:13 H178.56 A1.10E3
28:38 H461.90 A1.75E3
29:02 H547.73 A1.50E3
29:26 H495.72 A2.79E3
29:39 H625.47 A4.58E3
29:50 H341.53 A906.69
30:30 H439.72 A2.36E3
30:58 H501.35 A3.12E3
31:13 H772.03 A4.50E3
31:38 H271.79 A2.58E3
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:26 H777.03 A2.52E3
28:50 H1.12E3 A6.22E3
29:10 H350.60 A2.21E3
29:37 H1.14E3 A2.64E3
29:52 H213.65 A848.40
30:32 H467.44 A3.70E3
30:51 H606.20 A3.96E3
31:11 H757.60 A3.38E3
31:23 H1.13E3 A5.30E3
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:25 H1.70E6 A5.39E6
30:19 H1.64E6 A5.25E6
353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:25 H1.08E6 A3.49E6
30:19 H1.09E6 A3.33E6
409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:26 H231.96 A2.02E3
28:45 H298.75 A1.96E3
29:01 H657.75 A1.94E3
29:21 H791.08 A2.77E3
29:33 H274.68 A928.09
30:12 H323.63 A1.67E3
30:31 H423.39 A2.12E3
30:45 H568.49 A2.18E3
31:13 H781.81 A3.80E3
31:36 H270.47 A1.44E3
100 %
50
0
8.2E2
4.1E2
0.0E0
1.3E3
6.3E2
1.7E6
8.5E5
1.1E6
5.5E5
9.2E2
4.6E2
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time

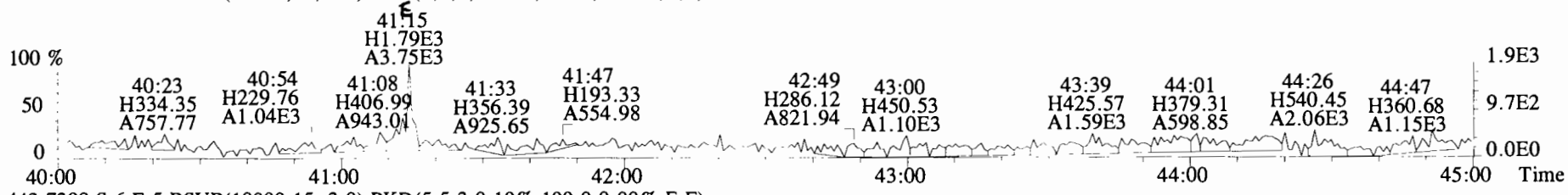

File:191205D1 #1-385 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:49 H424.78 A905.40
31:59 H637.97 A1.96E3
32:29 H473.87 A1.20E3
33:02 H695.73 A2.64E3
33:34 H486.50 A1.12E3
33:44 H493.69 A2.38E3
34:33 H430.05 A3.56E3
34:43 H629.57 A3.37E3
35:00 H478.61 A1.75E3
35:43 H403.70 A1.60E3
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:49 H150.86 A355.46
32:01 H361.06 A820.49
32:23 H620.13 A1.41E3
32:42 H333.13 A465.51
33:02 H705.88 A2.11E3
33:22 H365.13 A1.05E3
33:46 H633.63 A3.23E3
34:23 H505.68 A1.31E3
34:38 H574.49 A3.18E3
35:01 H450.16 A1.94E3
35:38 H487.41 A2.27E3
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:01 H7.03E5 A2.23E6
33:25 H7.33E5 A2.75E6
33:43 H5.47E5 A2.20E6
34:40 H4.49E5 A1.91E6
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:01 H1.35E6 A4.38E6
33:25 H1.48E6 A5.38E6
33:44 H1.13E6 A4.35E6
34:40 H8.47E5 A3.65E6
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:51 H162.62 A741.72
32:05 H432.17 A1.02E3
32:23 H351.85 A603.00
32:50 H239.69 A699.02
33:27 H183.72 A699.43
33:38 H173.42 A538.39
34:06 H571.52 A1.73E3
34:38 H658.23 A3.06E3
35:06 H492.76 A2.28E3
35:21 H596.95 A1.18E3
35:40 H358.81 A724.04
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
7.2E2
3.6E2
0.0E0
7.3E5
3.7E5
1.5E6
7.4E5
6.7E2
3.4E2


File:191205D1 #1-385 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 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)
33:08 H7.02E5 A2.38E6
33:25 H7.33E5 A2.75E6
33:43 H5.47E5 A2.20E6
34:40 H4.49E5 A1.91E6
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:01 H1.35E6 A4.38E6
33:25 H1.48E6 A5.38E6
33:44 H1.13E6 A4.35E6
34:40 H8.47E5 A3.65E6
Time

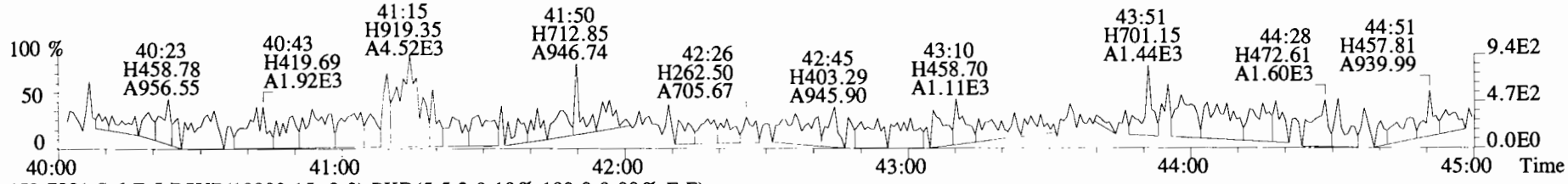

File:191205D1 #1-355 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:09 H182.13 A423.54
36:32 H699.27 A1.57E3
37:05 H436.22 A1.11E3
37:25 H537.06 A753.85
37:45 H258.18 A844.90
38:14 H558.40 A1.24E3
38:38 H648.98 A2.43E3
38:49 H395.29 A1.50E3
39:35 H383.50 A969.33
39:53 H386.27 A803.25
9.3E2
4.6E2
0.0E0
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:33 H392.50 A941.33
37:08 H337.22 A1.27E3
37:21 H535.69 A955.69
37:33 H265.00 A952.91
37:59 H361.56 A966.93
38:21 H525.31 A1.90E3
38:39 H377.60 A1.97E3
38:49 H189.55 A614.54
39:31 H249.58 A400.98
39:43 H357.76 A980.52
6.8E2
3.4E2
0.0E0
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:30 H2.95E5 A1.43E6
38:19 H2.92E5 A1.25E6
3.0E5
1.5E5
0.0E0
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:31 H6.44E5 A3.17E6
38:19 H6.91E5 A2.82E6
6.9E5
3.5E5
0.0E0
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:18 H242.40 A1.14E3
36:34 H264.18 A762.13
37:11 H215.92 A448.28
37:27 H545.92 A838.91
37:44 H375.06 A722.07
38:19 H409.83 A2.21E3
38:33 H1.42E3 A6.94E3
38:48 H418.21 A1.81E3
39:09 H229.99 A582.88
39:34 H243.00 A1.59E3
39:47 H407.96 A847.85
1.5E3
7.3E2
0.0E0
100 %
50
0
36:00
37:00
38:00
39:00
40:00
Time

File:191205D1 #1-432 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 Exp:OCDD_DB5

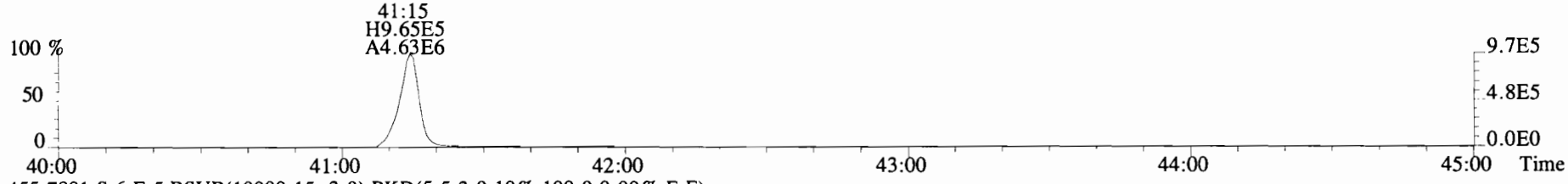
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



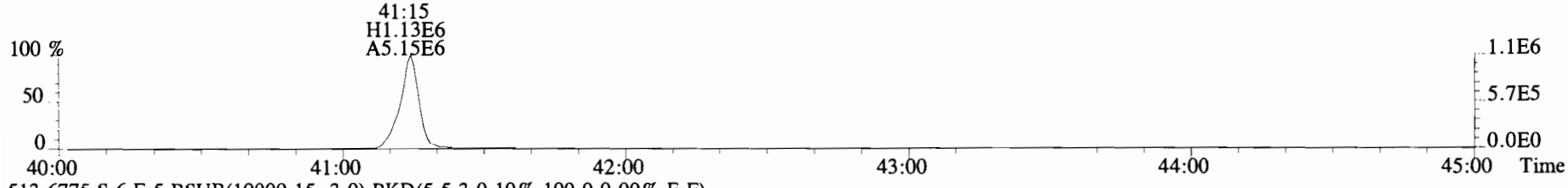
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



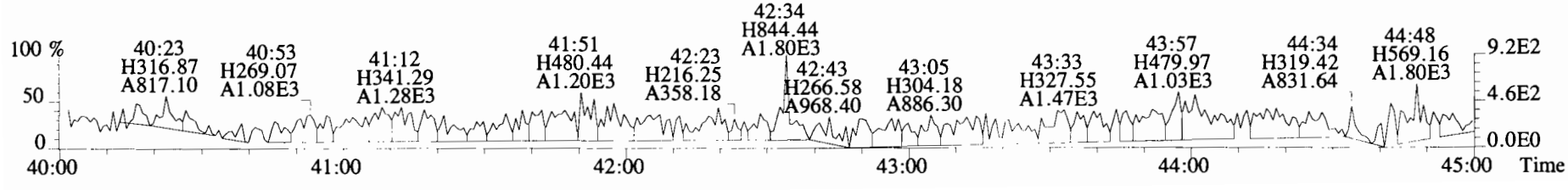
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



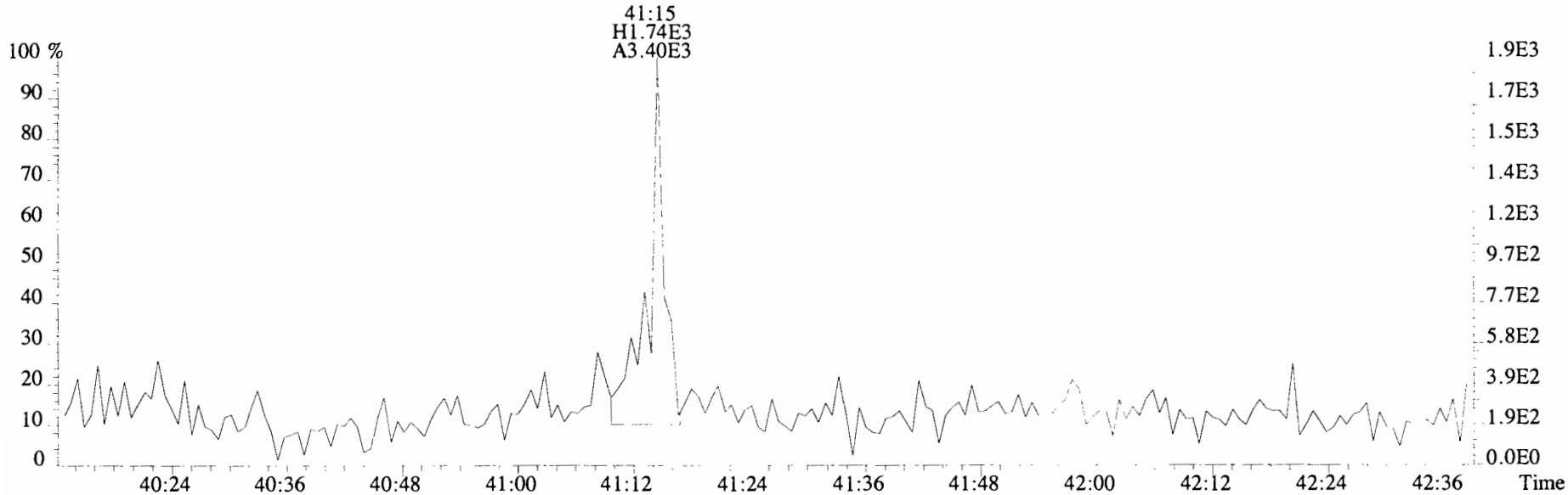
455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



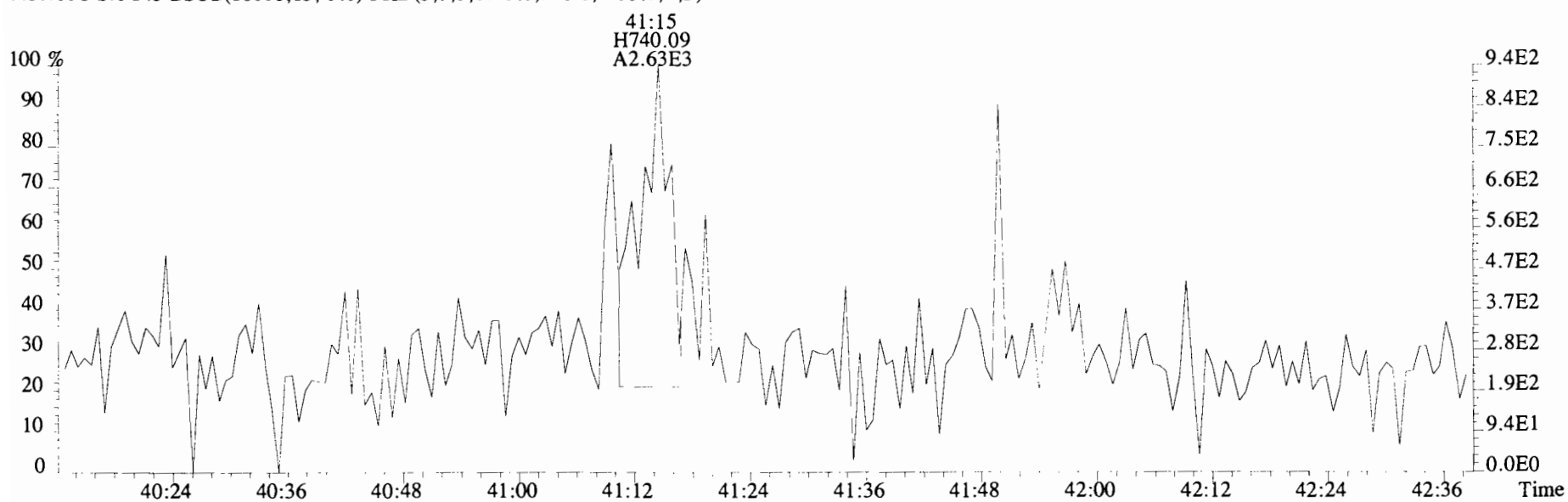
513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191205D1 #1-432 Acq: 5-DEC-2019 20:41:26 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BLK1 Method Blank 10 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)



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

Lab Name: Vista Analytical Laboratory Extraction Batch: B9L0024-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 191205D1-3

Ext. Date: Shift: Day Analysis Date: 5-DEC-19 Time: 18:18:00

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	10.6	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	50.0	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	47.4	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	52.7	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	49.4	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	49.3	35.0 - 70.0
OCDD	100	98.6	78.0 - 144.0
2,3,7,8-TCDF	10	9.10	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	49.4	40.0 - 67.0
2,3,4,7,8-PeCDF	50	49.8	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	46.5	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	47.1	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	49.1	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	47.3	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	46.9	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	46.4	39.0 - 69.0
OCDF	100	94.2	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: 12/10/19

FORM 8B

PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B9L0024-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 191205D1-3

Ext. Date: Shift: Day Analysis Date: 5-DEC-19 Time: 18:18:00

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	82.5	20.0 - 175.0
			25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	86.4	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	80.9	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	65.2	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	73.5	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	78.4	26.0 - 166.0
13C-OCDD	200	156	26.0 - 397.0
13C-2,3,7,8-TCDF	100	77.8	22.0 - 152.0
			26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	84.0	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	78.1	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	95.8	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	79.4	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	82.9	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	78.0	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	72.3	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	82.8	20.0 - 186.0
13C-OCDF	200	174	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	32.2	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: 12/10/19

Client ID: OPR Filename: 191205D1 S:3 Acq:5-DEC-19 18:18:00 ConCal: ST191205D1-1
Lab ID: B9L0024-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000 EndCAL: NA

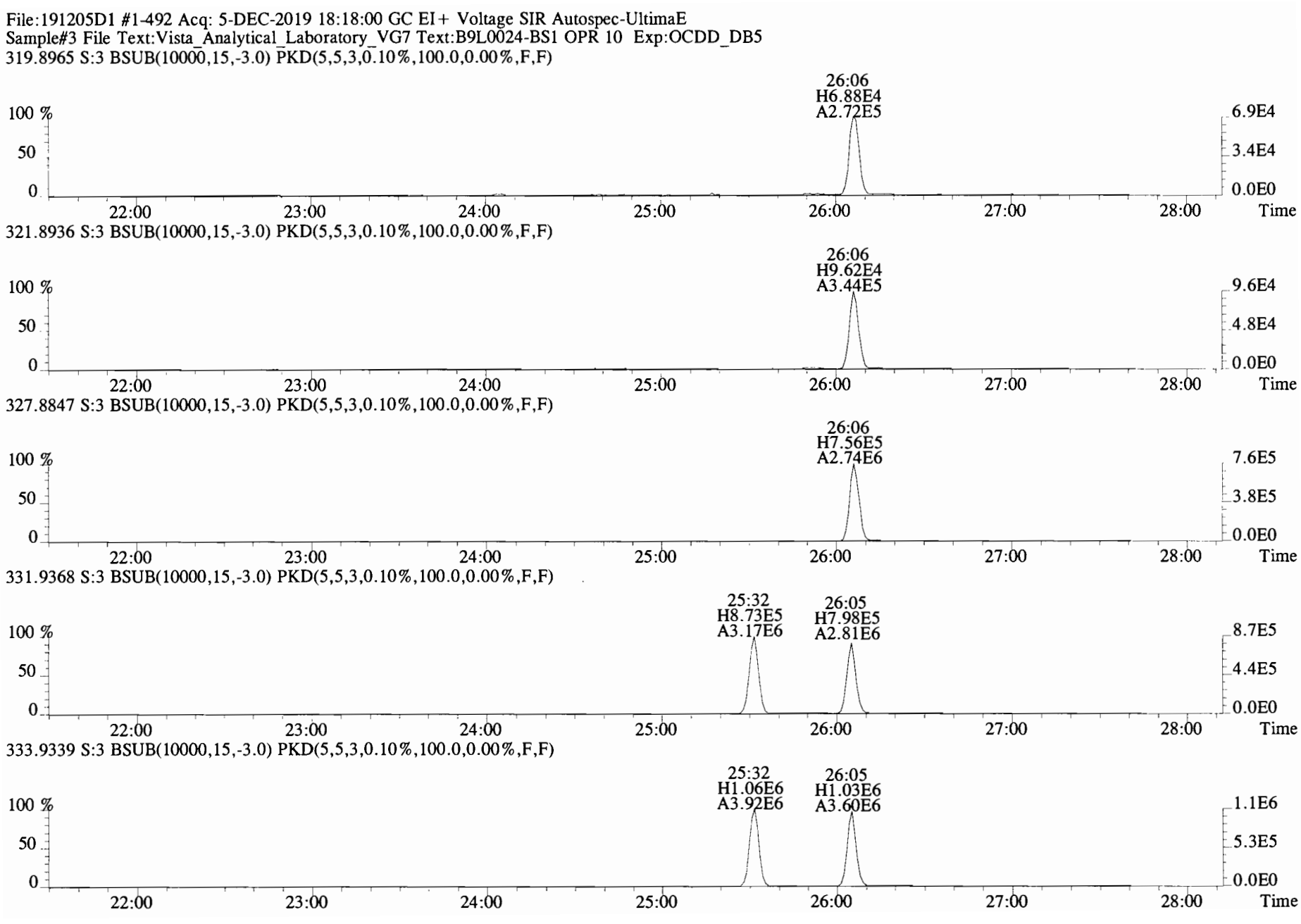
	Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	6.17e+05	0.79 y	0.91	26:06	10.635			* 2.5	*
	1,2,3,7,8-PeCDD	2.44e+06	0.63 y	0.90	30:37	50.009			* 2.5	*
	1,2,3,4,7,8-HxCDD	2.17e+06	1.25 y	1.10	33:55	47.394			* 2.5	*
	1,2,3,6,7,8-HxCDD	2.21e+06	1.31 y	0.94	34:01	52.735			* 2.5	*
	1,2,3,7,8,9-HxCDD	2.25e+06	1.22 y	0.96	34:19	49.387			* 2.5	*
	1,2,3,4,6,7,8-HpCDD	1.98e+06	1.08 y	0.98	37:46	49.281			* 2.5	*
	OCDD	3.42e+06	0.89 y	0.96	41:02	98.636			* 2.5	*
	2,3,7,8-TCDF	8.62e+05	0.74 y	0.95	25:19	9.1009			* 2.5	*
	1,2,3,7,8-PeCDF	4.22e+06	1.57 y	0.96	29:27	49.391			* 2.5	*
	2,3,4,7,8-PeCDF	4.14e+06	1.60 y	1.01	30:20	49.815			* 2.5	*
	1,2,3,4,7,8-HxCDF	3.49e+06	1.21 y	1.18	33:02	46.501			* 2.5	*
	1,2,3,6,7,8-HxCDF	3.31e+06	1.22 y	1.07	33:09	47.106			* 2.5	*
	2,3,4,6,7,8-HxCDF	3.46e+06	1.26 y	1.11	33:45	49.137			* 2.5	*
	1,2,3,7,8,9-HxCDF	2.60e+06	1.20 y	1.06	34:42	47.326			* 2.5	*
	1,2,3,4,6,7,8-HpCDF	2.32e+06	1.04 y	1.13	36:31	46.898			* 2.5	*
	1,2,3,4,7,8,9-HpCDF	2.29e+06	1.06 y	1.28	38:19	46.357			* 2.5	*
	OCDF	4.29e+06	0.89 y	0.95	41:15	94.183			* 2.5	*
IS	13C-2,3,7,8-TCDD	6.40e+06	0.78 y	1.10	26:05	82.487				
IS	13C-1,2,3,7,8-PeCDD	5.40e+06	0.64 y	0.88	30:36	86.368				
IS	13C-1,2,3,4,7,8-HxCDD	4.16e+06	1.30 y	0.64	33:54	80.916				
IS	13C-1,2,3,6,7,8-HxCDD	4.47e+06	1.25 y	0.86	34:00	65.184				
IS	13C-1,2,3,7,8,9-HxCDD	4.75e+06	1.24 y	0.81	34:18	73.532				
IS	13C-1,2,3,4,6,7,8-HpCDD	4.11e+06	1.07 y	0.65	37:46	78.412				
IS	13C-OCDD	7.24e+06	0.89 y	0.58	41:01	156.03				
IS	13C-2,3,7,8-TCDF	9.97e+06	0.79 y	1.03	25:18	77.792				
IS	13C-1,2,3,7,8-PeCDF	8.89e+06	1.60 y	0.85	29:26	83.987				
IS	13C-2,3,4,7,8-PeCDF	8.20e+06	1.59 y	0.85	30:19	78.138				
IS	13C-1,2,3,4,7,8-HxCDF	6.38e+06	0.51 y	0.83	33:01	95.837				
IS	13C-1,2,3,6,7,8-HxCDF	6.57e+06	0.52 y	1.03	33:09	79.360				
IS	13C-2,3,4,6,7,8-HxCDF	6.33e+06	0.52 y	0.95	33:44	82.912				
IS	13C-1,2,3,7,8,9-HxCDF	5.17e+06	0.52 y	0.83	34:41	77.993				
IS	13C-1,2,3,4,6,7,8-HpCDF	4.39e+06	0.46 y	0.76	36:30	72.309				
IS	13C-1,2,3,4,7,8,9-HpCDF	3.85e+06	0.45 y	0.58	38:18	82.800				
IS	13C-OCDF	9.61e+06	0.87 y	0.69	41:14	174.25				
C/Up	37Cl-2,3,7,8-TCDD	2.74e+06		1.20	26:06	32.249				
RS/RT	13C-1,2,3,4-TCDD	7.09e+06	0.81 y	1.00	25:31	100.00				
RS	13C-1,2,3,4-TCDF	1.24e+07	0.82 y	1.00	24:05	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	8.01e+06	0.51 y	1.00	33:26	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	11.6	13.4		*	*
Total Penta-Dioxins	50.0	50.8		*	*
Total Hexa-Dioxins	150	151		*	*
Total Hepta-Dioxins	49.6	51.7		*	*
Total Tetra-Furans	9.93	12.0		*	*
Total Penta-Furans	99.476	101.60		*	*
Total Hexa-Furans	190	191		*	*
Total Hepta-Furans	93.8	95.3		*	*

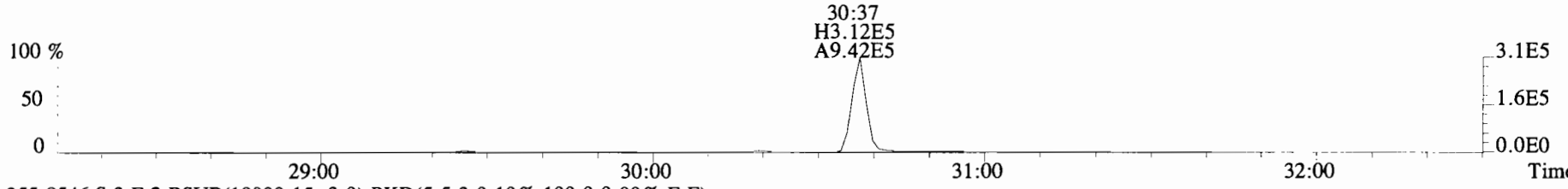
	Rec	Qual
IS	82.5	
IS	86.4	
IS	80.9	
IS	65.2	
IS	73.5	
IS	78.4	
IS	78.0	
IS	77.8	
IS	84.0	
IS	78.1	
IS	95.8	
IS	79.4	
IS	82.9	
IS	78.0	
IS	72.3	
IS	82.8	
IS	87.1	
C/Up	80.6	

Integrations by Analyst: DB Date: 12/10/19

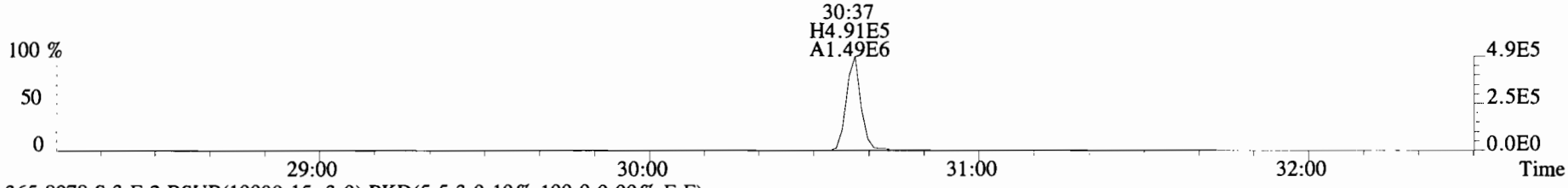
Reviewed by Analyst: CT Date: 12/11/19


File:191205D1 #1-492 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:06
H6.88E4
A2.72E5
100 %
50
0
6.9E4
3.4E4
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:06
H9.62E4
A3.44E5
9.6E4
4.8E4
0.0E0
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:06
H7.56E5
A2.74E6
7.6E5
3.8E5
0.0E0
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:32
H8.73E5
A3.17E6
26:05
H7.98E5
A2.81E6
8.7E5
4.4E5
0.0E0
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:32
H1.06E6
A3.92E6
26:05
H1.03E6
A3.60E6
1.1E6
5.3E5
0.0E0

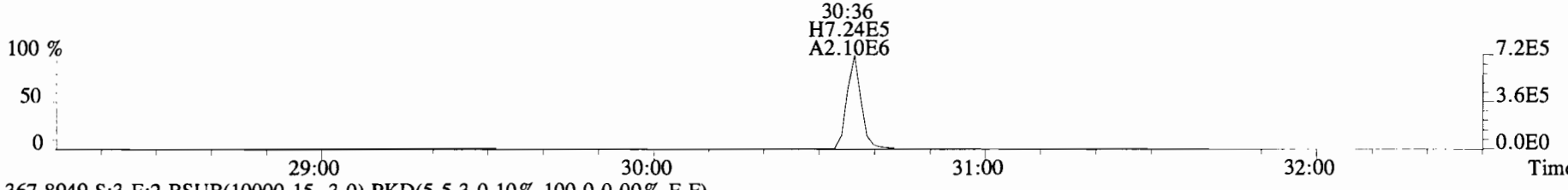
File:191205D1 #1-211 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



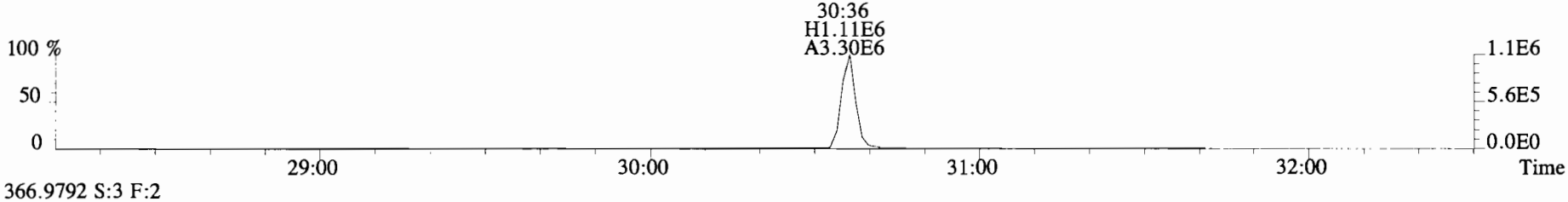
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



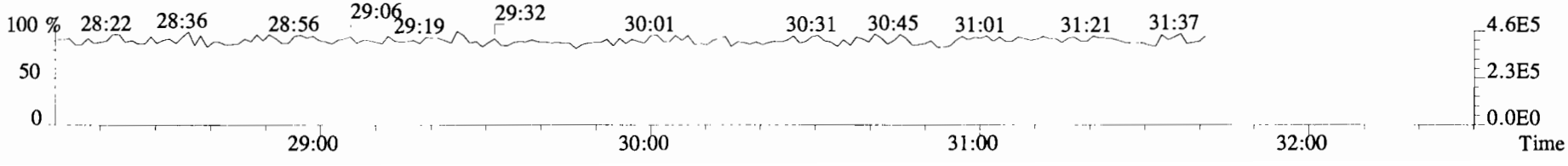
365.8978 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

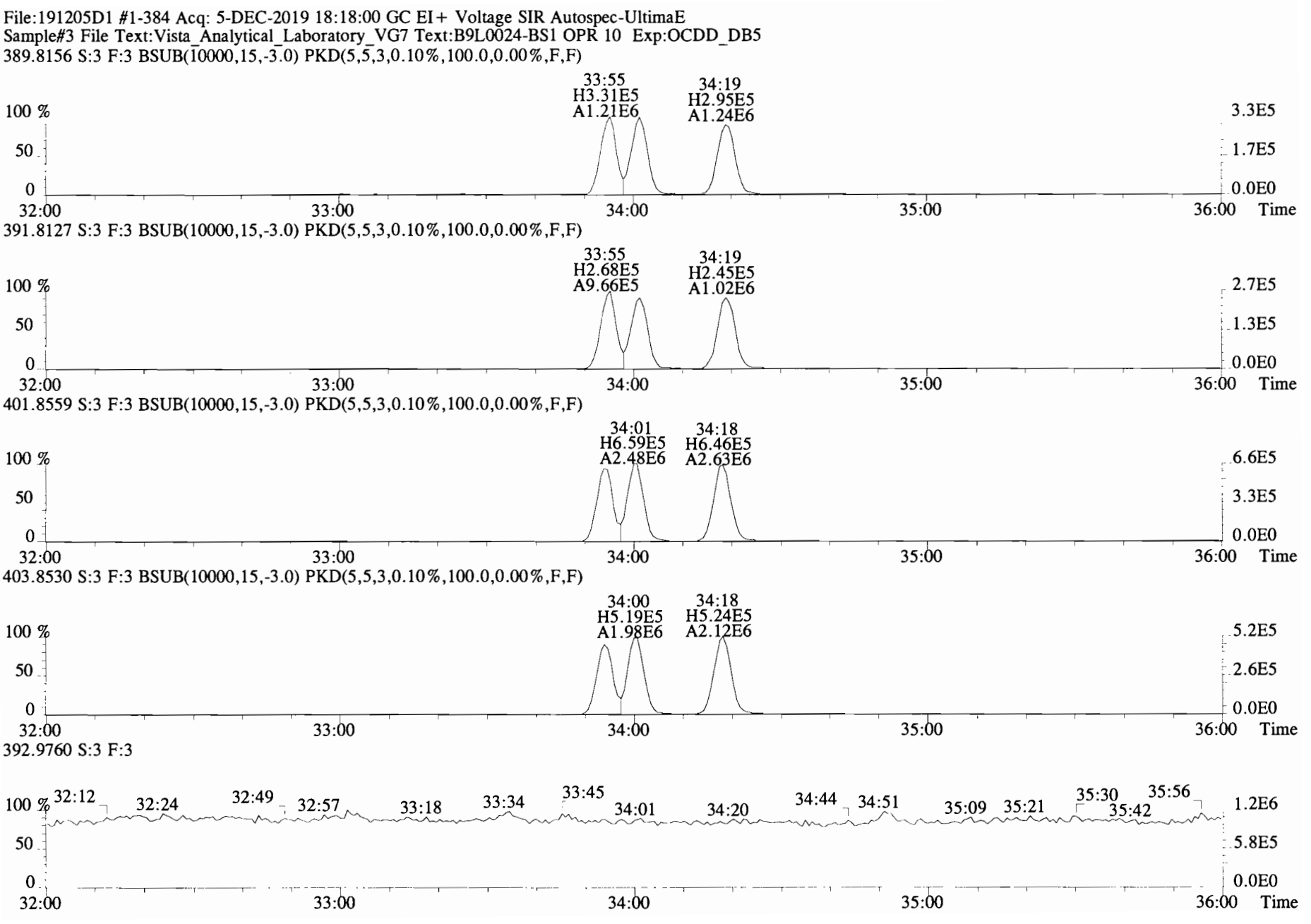


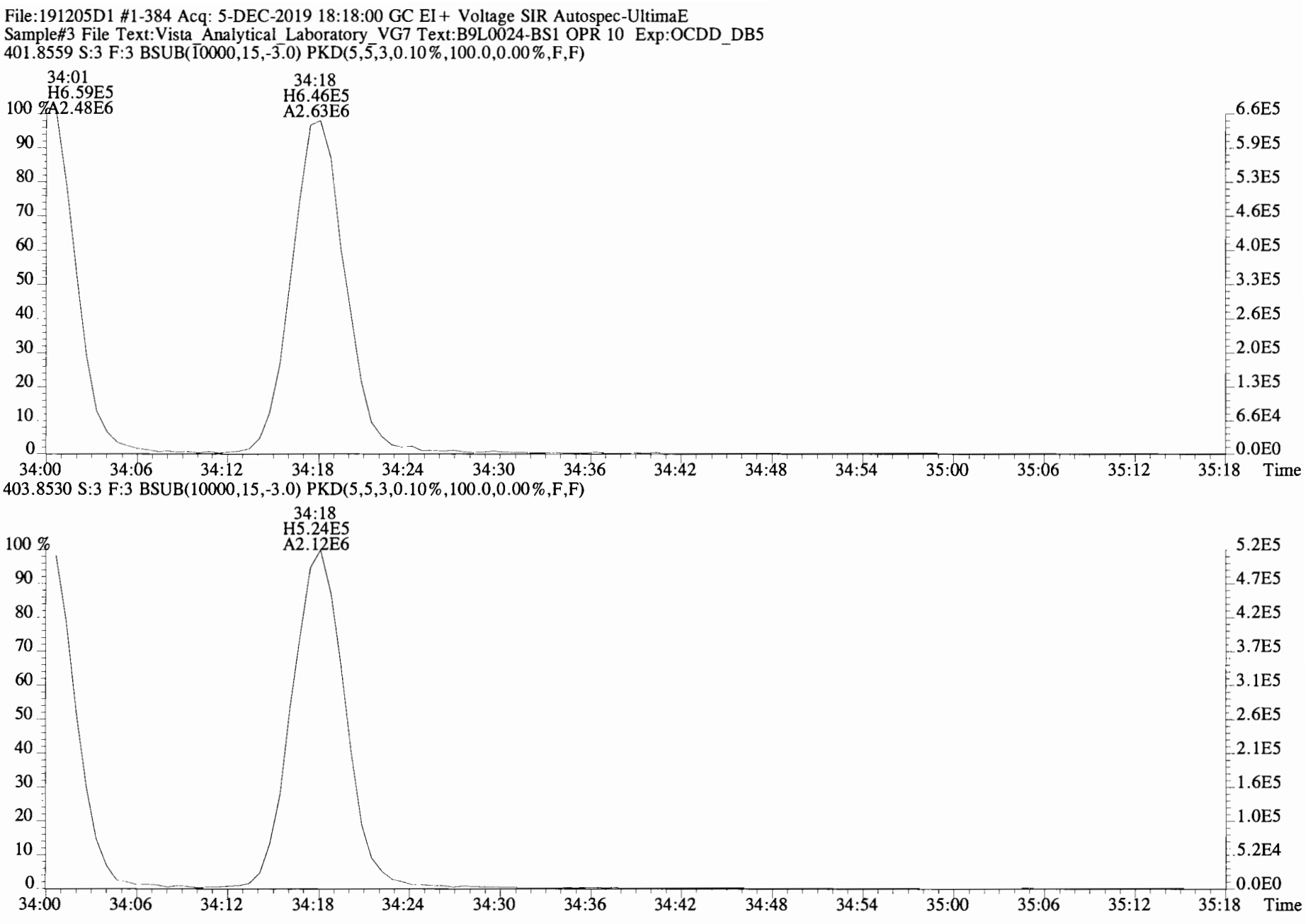
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



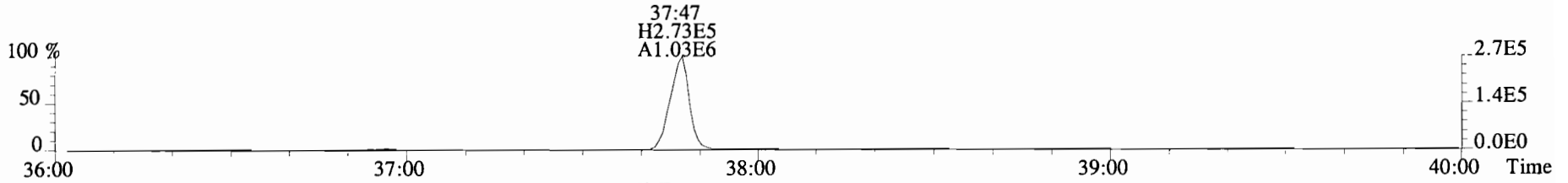
366.9792 S:3 F:2



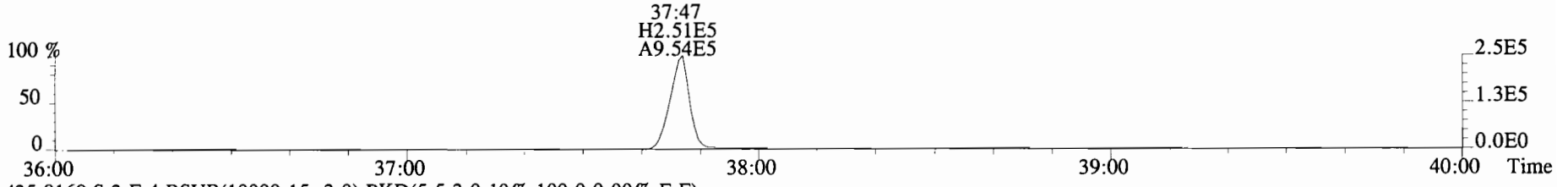

File:191205D1 #1-384 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:55 H3.31E5 A1.21E6
34:19 H2.95E5 A1.24E6
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:55 H2.68E5 A9.66E5
34:19 H2.45E5 A1.02E6
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:01 H6.59E5 A2.48E6
34:18 H6.46E5 A2.63E6
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:00 H5.19E5 A1.98E6
34:18 H5.24E5 A2.12E6
392.9760 S:3 F:3
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
3.3E5
1.7E5
0.0E0
2.7E5
1.3E5
6.6E5
3.3E5
5.2E5
2.6E5
1.2E6
5.8E5
32:12
32:24
32:49
32:57
33:18
33:34
33:45
34:01
34:20
34:44
34:51
35:09
35:21
35:30
35:42
35:56


File:191205D1 #1-384 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:01
H6.59E5
A2.48E6
34:18
H6.46E5
A2.63E6
100 %
90
80
70
60
50
40
30
20
10
0
6.6E5
5.9E5
5.3E5
4.6E5
4.0E5
3.3E5
2.6E5
2.0E5
1.3E5
6.6E4
0.0E0
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
35:06
35:12
35:18
Time
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:18
H5.24E5
A2.12E6
100 %
90
80
70
60
50
40
30
20
10
0
5.2E5
4.7E5
4.2E5
3.7E5
3.1E5
2.6E5
2.1E5
1.6E5
1.0E5
5.2E4
0.0E0
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
35:06
35:12
35:18
Time

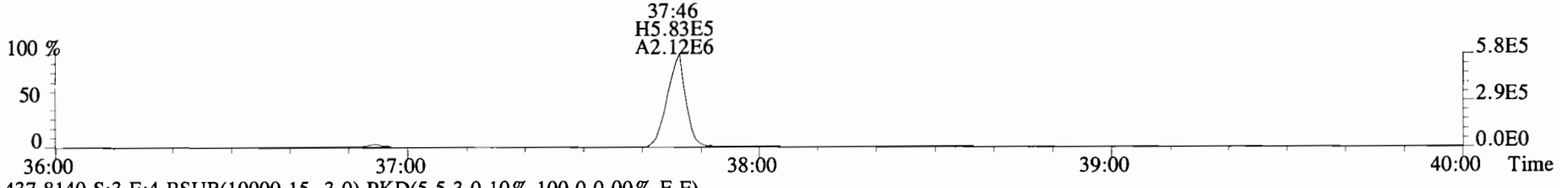
File:191205D1 #1-355 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



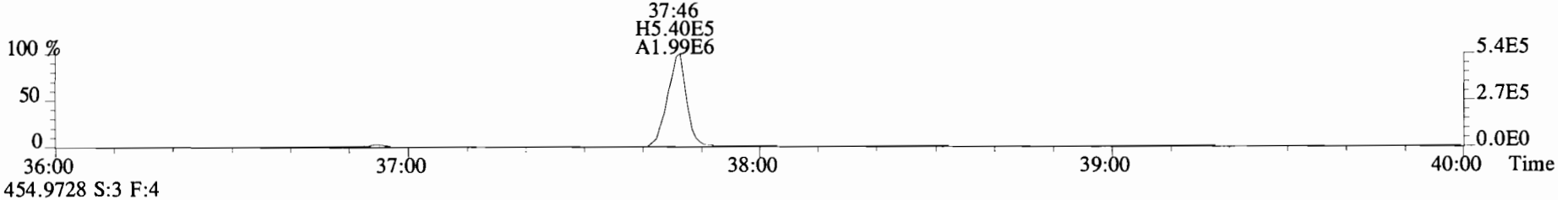
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



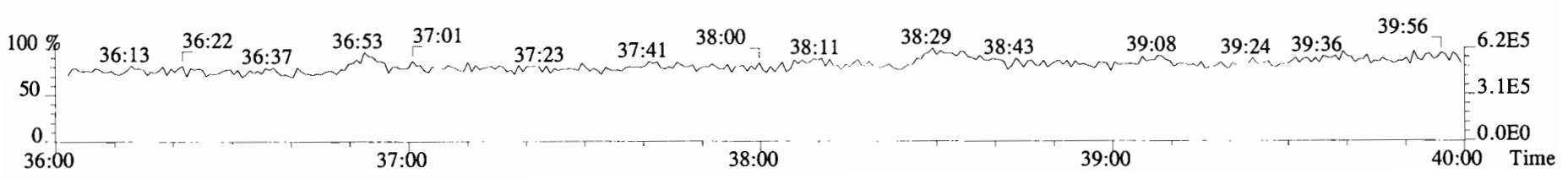
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



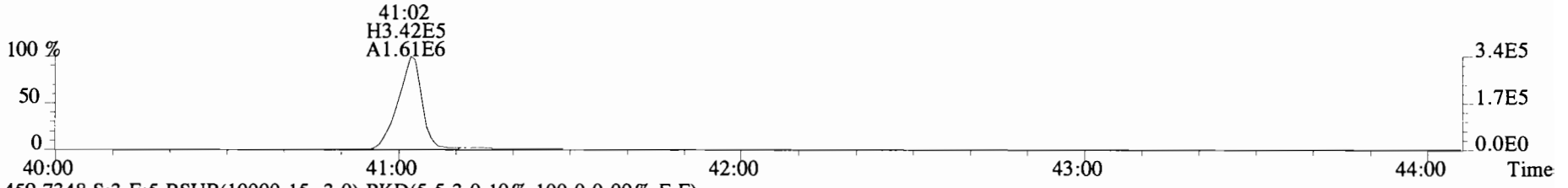
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



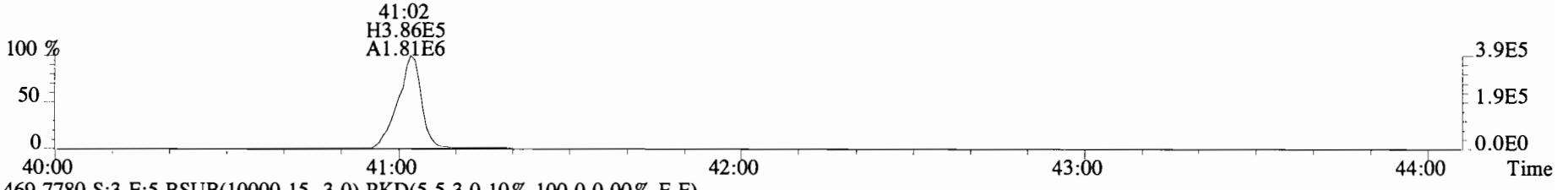
454.9728 S:3 F:4



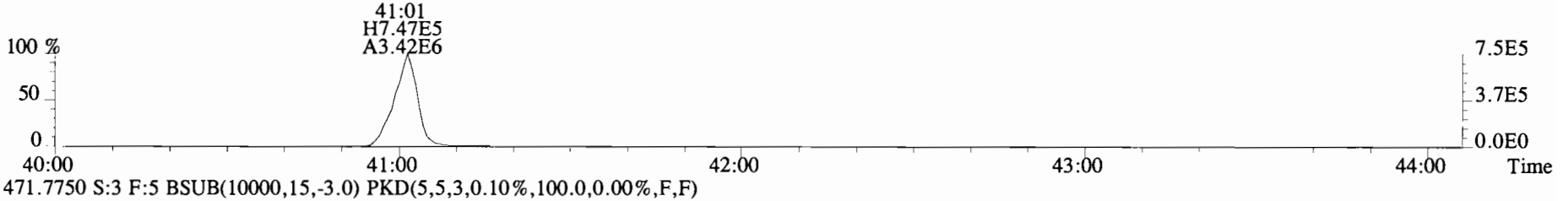
File:191205D1 #1-432 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



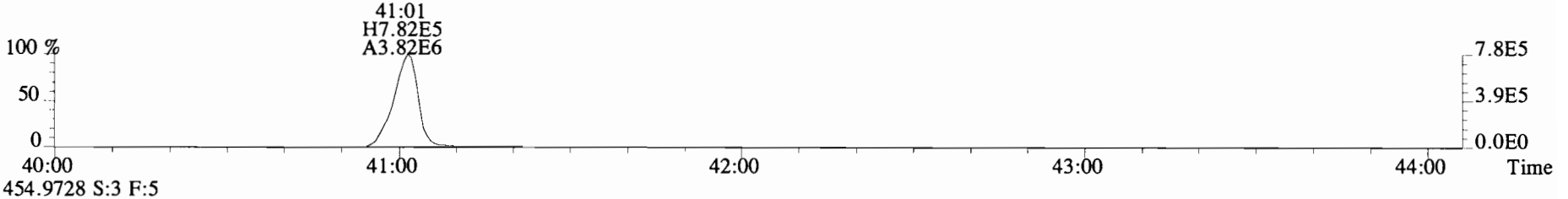
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



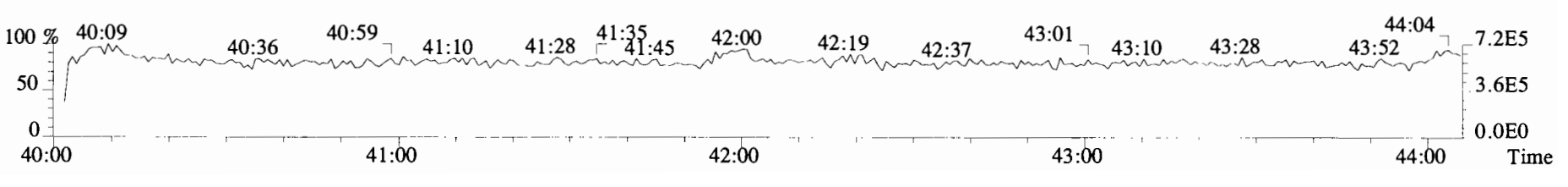
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

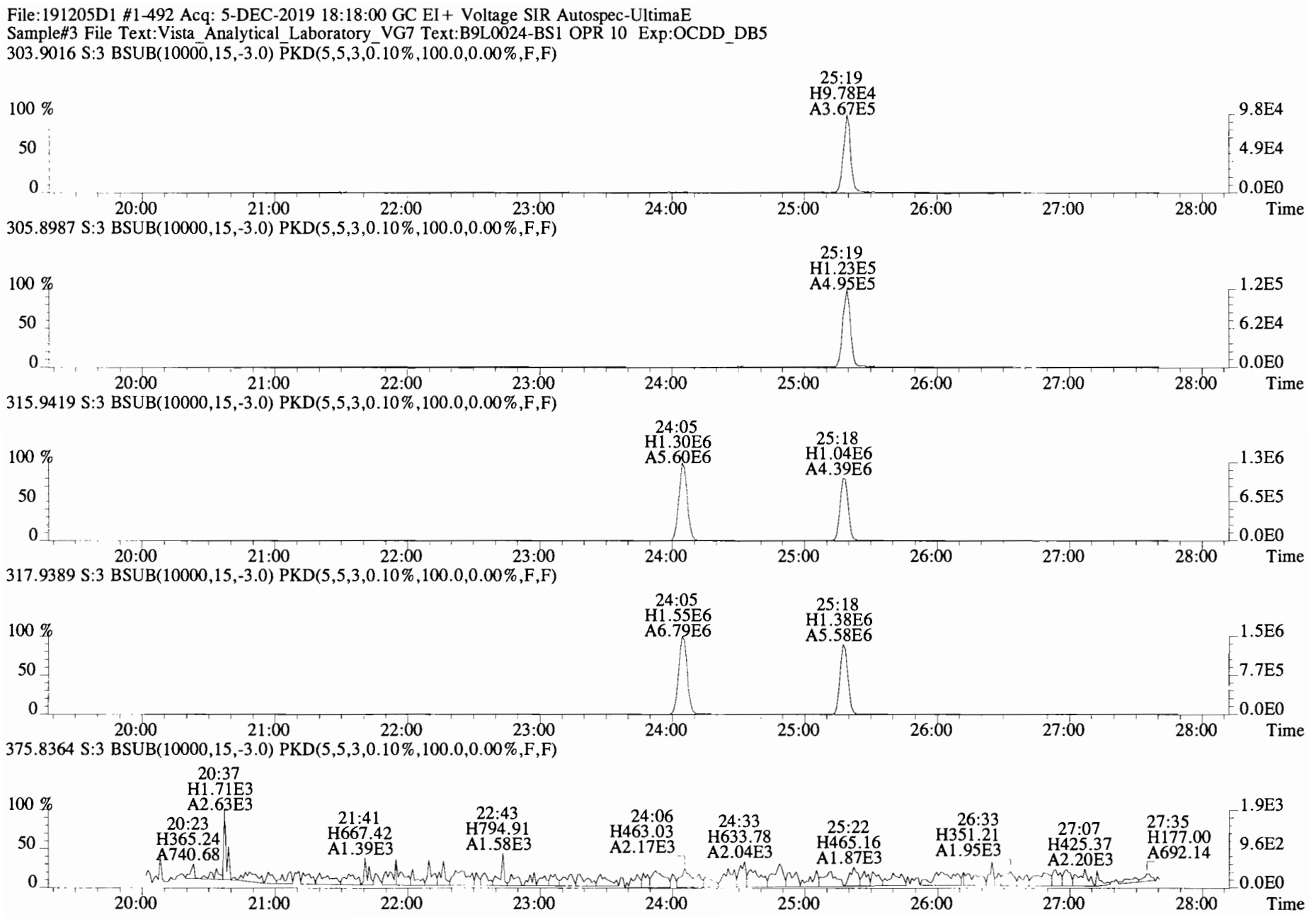


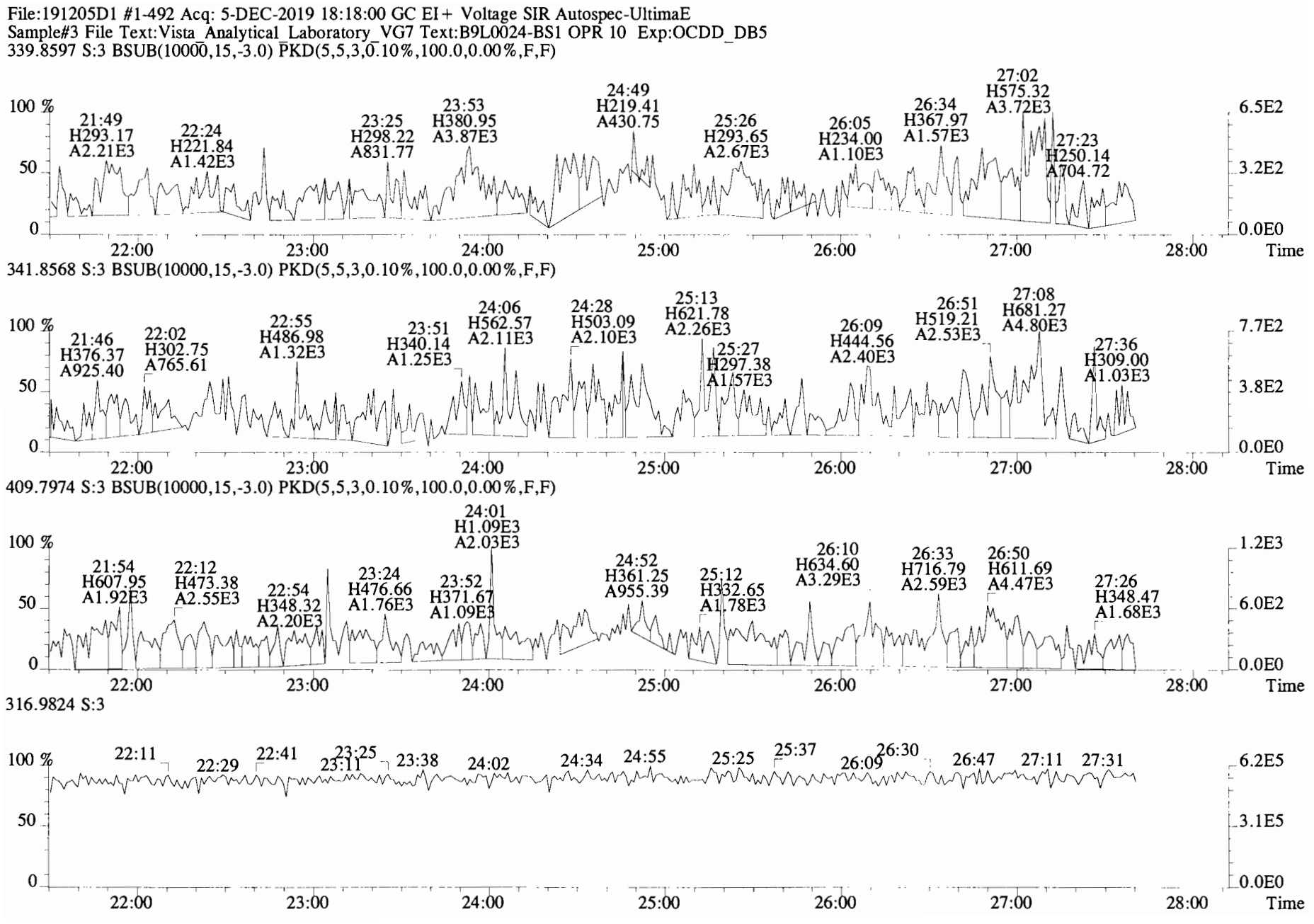
471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



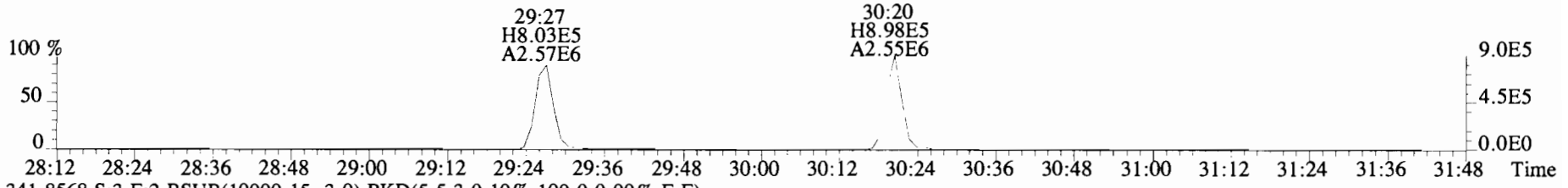
454.9728 S:3 F:5



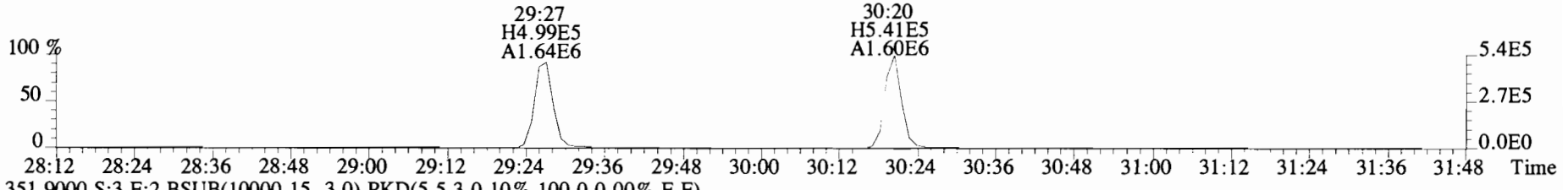

File:191205D1 #1-492 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:19
H9.78E4
A3.67E5
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:19
H1.23E5
A4.95E5
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:05
H1.30E6
A5.60E6
25:18
H1.04E6
A4.39E6
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:05
H1.55E6
A6.79E6
25:18
H1.38E6
A5.58E6
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:37
H1.71E3
A2.63E3
20:23
H365.24
A740.68
21:41
H667.42
A1.39E3
22:43
H794.91
A1.58E3
24:06
H463.03
A2.17E3
24:33
H633.78
A2.04E3
25:22
H465.16
A1.87E3
26:33
H351.21
A1.95E3
27:07
H425.37
A2.20E3
27:35
H177.00
A692.14
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
9.8E4
4.9E4
0.0E0
1.2E5
6.2E4
1.3E6
6.5E5
1.5E6
7.7E5
1.9E3
9.6E2


File:191205D1 #1-492 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:49 H293.17 A2.21E3
22:24 H221.84 A1.42E3
23:25 H298.22 A831.77
23:53 H380.95 A3.87E3
24:49 H219.41 A430.75
25:26 H293.65 A2.67E3
26:05 H234.00 A1.10E3
26:34 H367.97 A1.57E3
27:02 H575.32 A3.72E3
27:23 H250.14 A704.72
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:46 H376.37 A925.40
22:02 H302.75 A765.61
22:55 H486.98 A1.32E3
23:51 H340.14 A1.25E3
24:06 H562.57 A2.11E3
24:28 H503.09 A2.10E3
25:13 H621.78 A2.26E3
25:27 H297.38 A1.57E3
26:09 H444.56 A2.40E3
26:51 H519.21 A2.53E3
27:08 H681.27 A4.80E3
27:36 H309.00 A1.03E3
409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:54 H607.95 A1.92E3
22:12 H473.38 A2.55E3
22:54 H348.32 A2.20E3
23:24 H476.66 A1.76E3
23:52 H371.67 A1.09E3
24:01 H1.09E3 A2.03E3
24:52 H361.25 A955.39
25:12 H332.65 A1.78E3
26:10 H634.60 A3.29E3
26:33 H716.79 A2.59E3
26:50 H611.69 A4.47E3
27:26 H348.47 A1.68E3
316.9824 S:3
22:11
22:29
22:41
23:11
23:25
23:38
24:02
24:34
24:55
25:25
25:37
26:09
26:30
26:47
27:11
27:31
100 %
50
0
6.5E2
3.2E2
0.0E0
7.7E2
3.8E2
1.2E3
6.0E2
6.2E5
3.1E5
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time

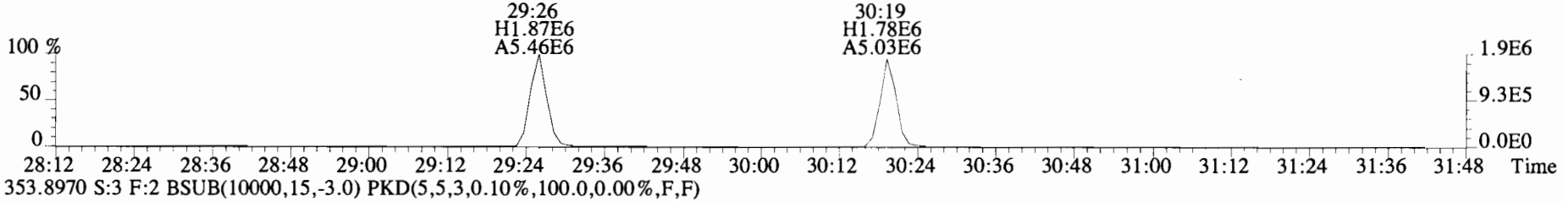
File:191205D1 #1-211 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



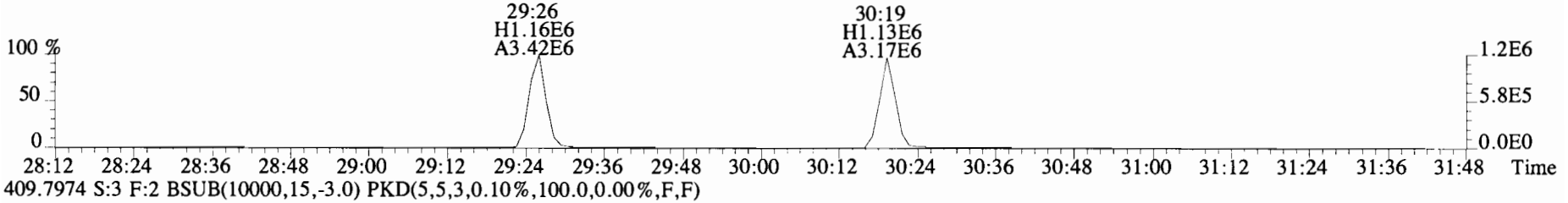
341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



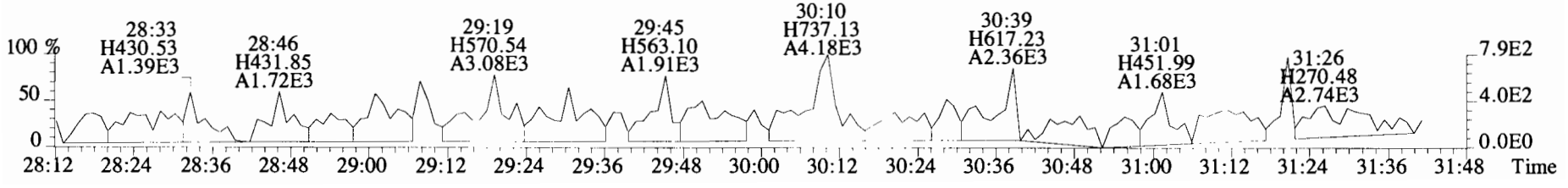
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

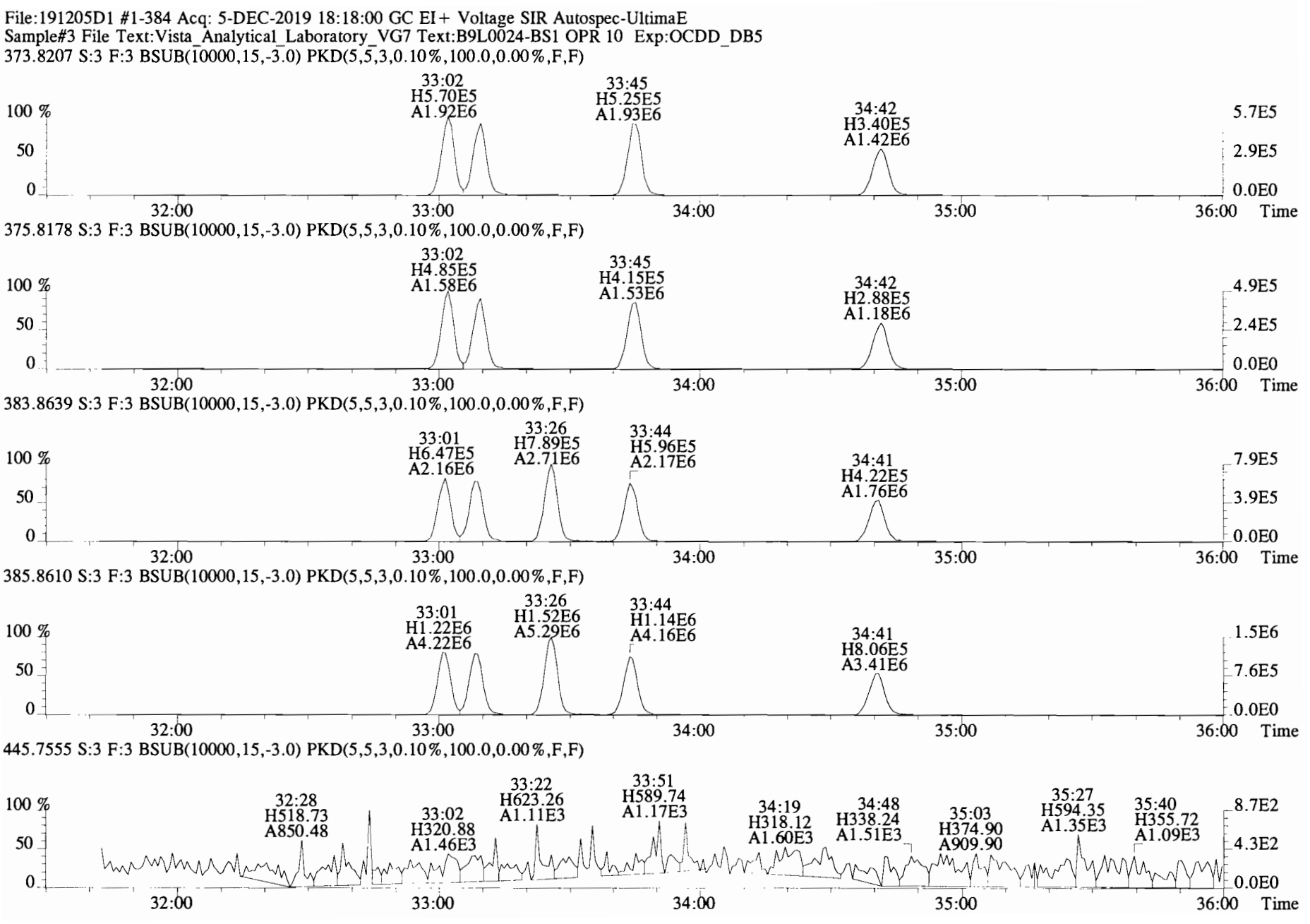


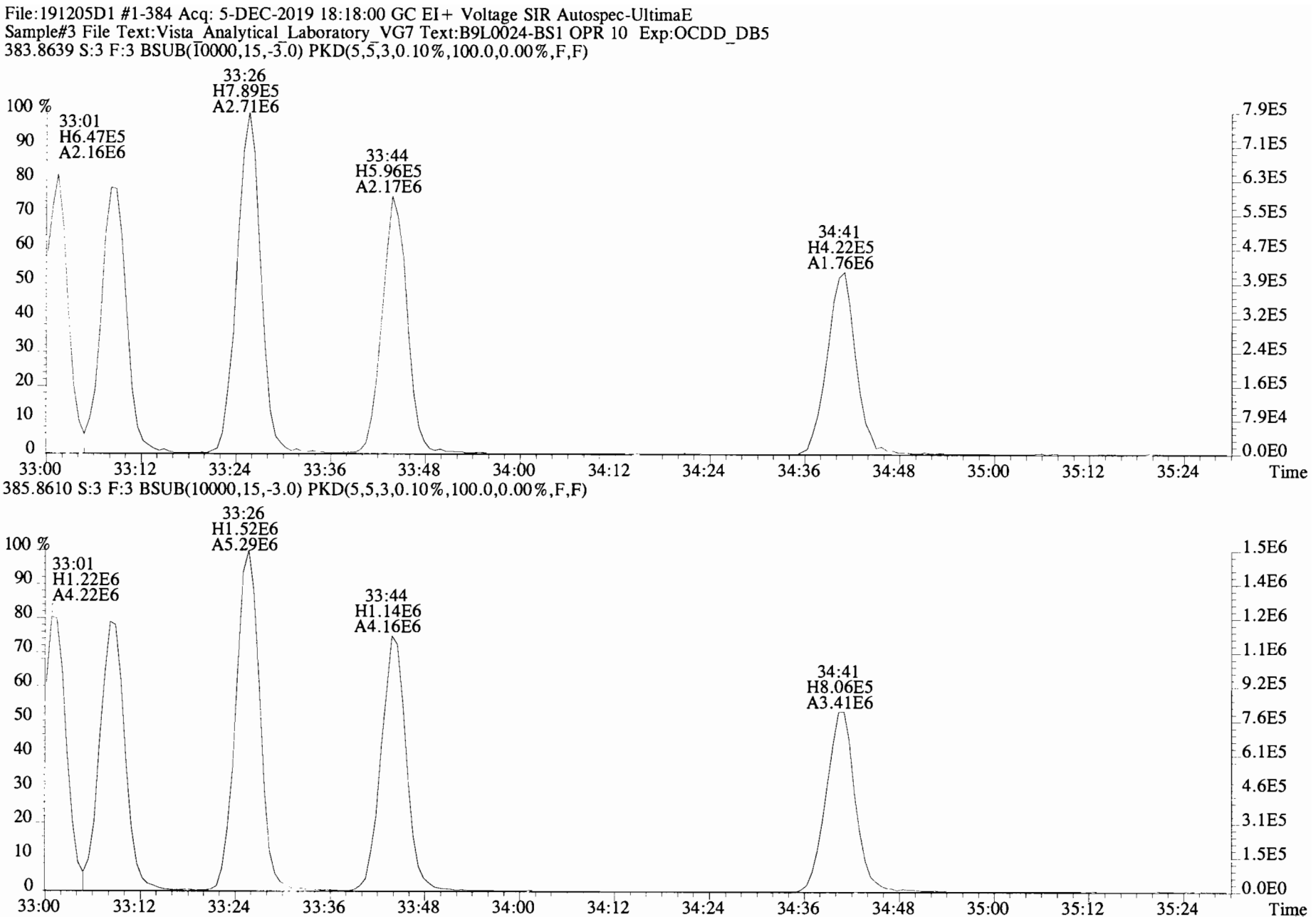
353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



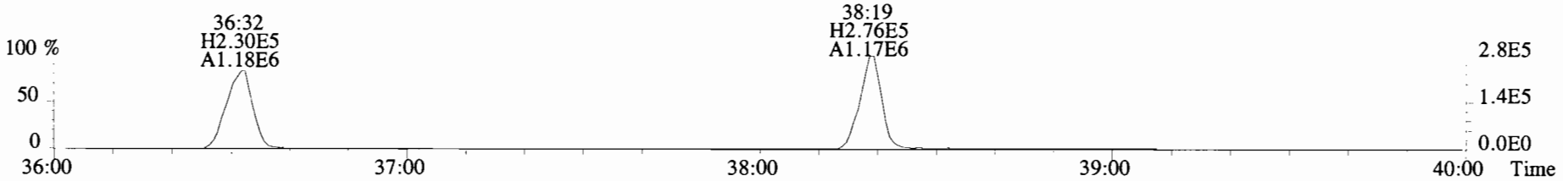
409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



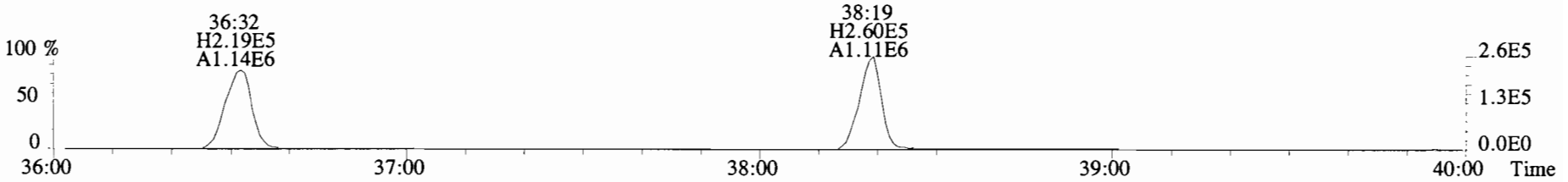

File:191205D1 #1-384 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:02 H5.70E5 A1.92E6
33:45 H5.25E5 A1.93E6
34:42 H3.40E5 A1.42E6
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:02 H4.85E5 A1.58E6
33:45 H4.15E5 A1.53E6
34:42 H2.88E5 A1.18E6
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:01 H6.47E5 A2.16E6
33:26 H7.89E5 A2.71E6
33:44 H5.96E5 A2.17E6
34:41 H4.22E5 A1.76E6
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:01 H1.22E6 A4.22E6
33:26 H1.52E6 A5.29E6
33:44 H1.14E6 A4.16E6
34:41 H8.06E5 A3.41E6
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:28 H518.73 A850.48
33:02 H320.88 A1.46E3
33:22 H623.26 A1.11E3
33:51 H589.74 A1.17E3
34:19 H318.12 A1.60E3
34:48 H338.24 A1.51E3
35:03 H374.90 A909.90
35:27 H594.35 A1.35E3
35:40 H355.72 A1.09E3
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
5.7E5
2.9E5
0.0E0
4.9E5
2.4E5
0.0E0
7.9E5
3.9E5
0.0E0
1.5E6
7.6E5
0.0E0
8.7E2
4.3E2
0.0E0


File:191205D1 #1-384 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:26
H7.89E5
A2.71E6
33:01
H6.47E5
A2.16E6
33:44
H5.96E5
A2.17E6
34:41
H4.22E5
A1.76E6
100 %
90
80
70
60
50
40
30
20
10
0
7.9E5
7.1E5
6.3E5
5.5E5
4.7E5
3.9E5
3.2E5
2.4E5
1.6E5
7.9E4
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:26
H1.52E6
A5.29E6
33:01
H1.22E6
A4.22E6
33:44
H1.14E6
A4.16E6
34:41
H8.06E5
A3.41E6
100 %
90
80
70
60
50
40
30
20
10
0
1.5E6
1.4E6
1.2E6
1.1E6
9.2E5
7.6E5
6.1E5
4.6E5
3.1E5
1.5E5
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time

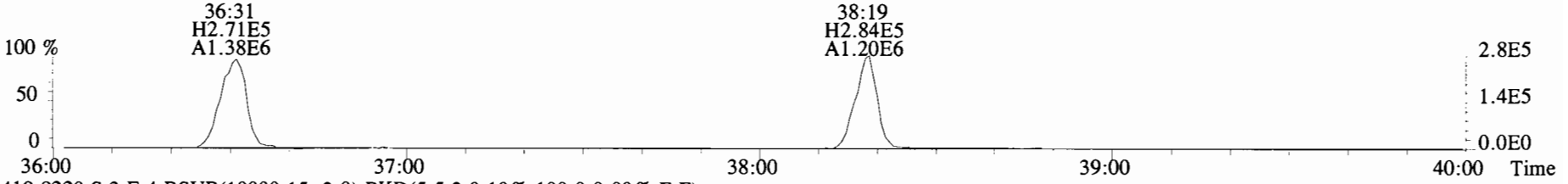
File:191205D1 #1-355 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



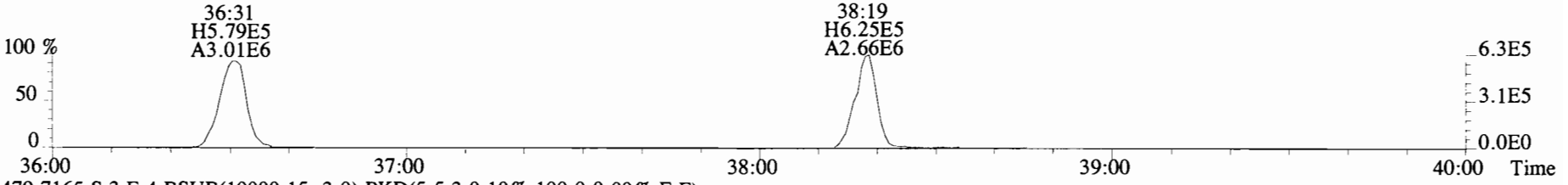
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



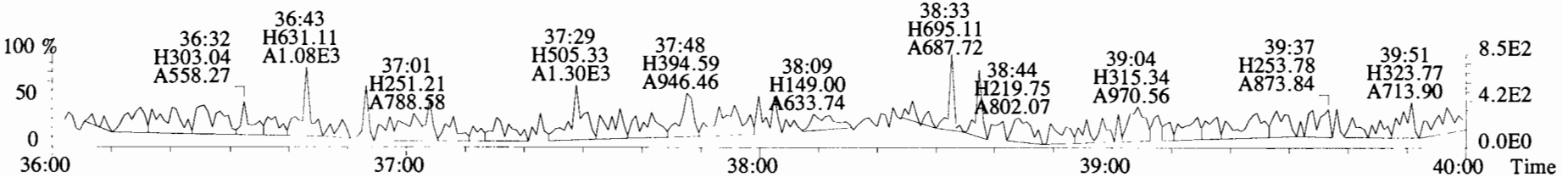
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

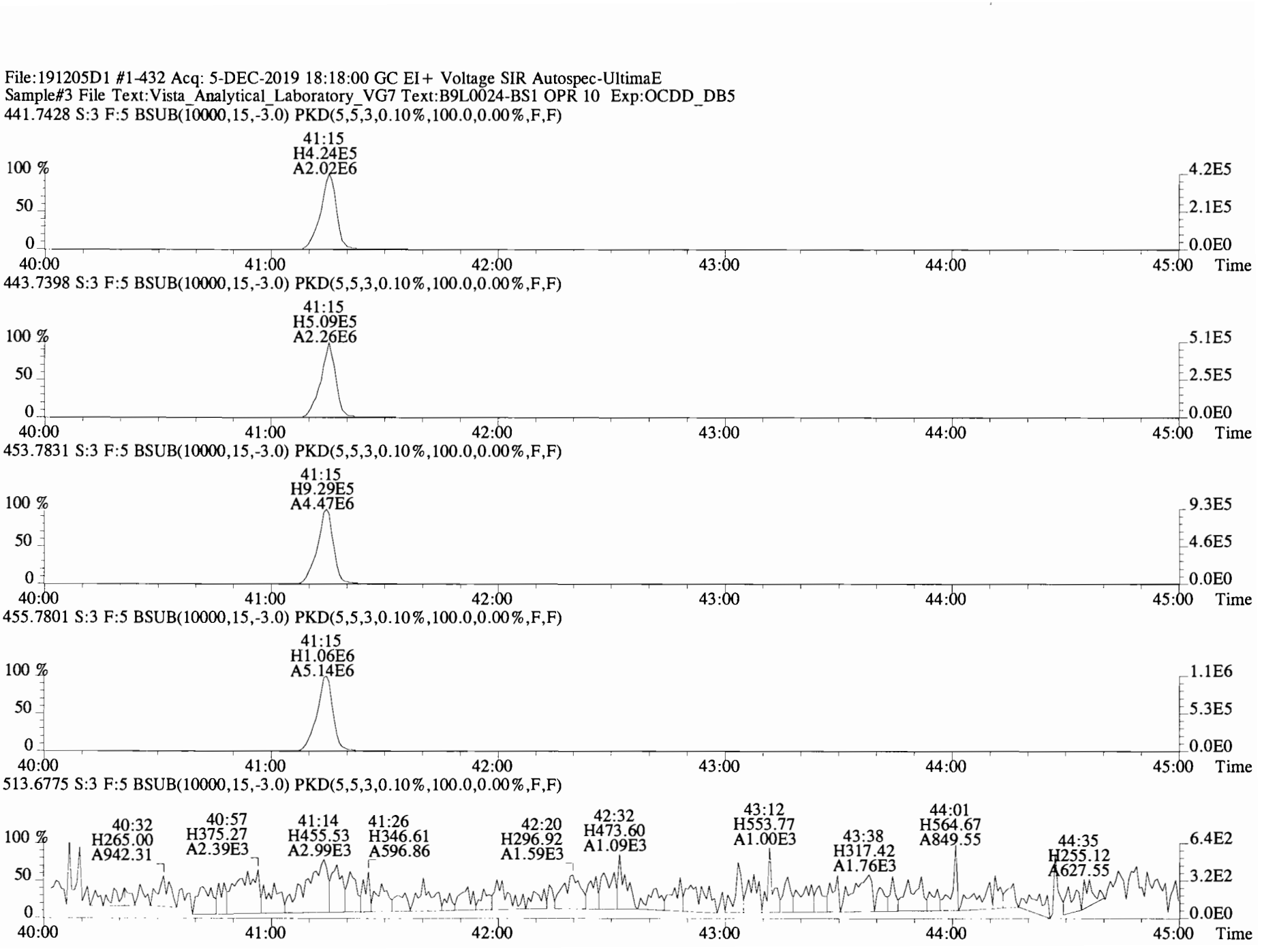


419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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




File:191205D1 #1-432 Acq: 5-DEC-2019 18:18:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:B9L0024-BS1 OPR 10 Exp:OCDD_DB5
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:15
H4.24E5
A2.02E6
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:15
H5.09E5
A2.26E6
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:15
H9.29E5
A4.47E6
455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:15
H1.06E6
A5.14E6
513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:32
H265.00
A942.31
40:57
H375.27
A2.39E3
41:14
H455.53
A2.99E3
41:26
H346.61
A596.86
42:20
H296.92
A1.59E3
42:32
H473.60
A1.09E3
43:12
H553.77
A1.00E3
43:38
H317.42
A1.76E3
44:01
H564.67
A849.55
44:35
H255.12
A627.55
100 %
50
0
40:00
41:00
42:00
43:00
44:00
45:00
Time
4.2E5
2.1E5
0.0E0
5.1E5
2.5E5
9.3E5
4.6E5
1.1E6
5.3E5
6.4E2
3.2E2

Client ID: PDI-021SC-A-13-14-1909 Filename: 191024D1 S:14 Acq:25-OCT-19 01:58:52 ConCal: ST191024D1-1
Lab ID: 1903430-01 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.245 EndCAL: NA

	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	0.91	NotF	*		151	2.5	0.148
	1,2,3,7,8-PeCDD	*	*	n	0.90	NotF	*		221	2.5	0.217
	1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF	*		196	2.5	0.293
	1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF	*		196	2.5	0.303
	1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF	*		196	2.5	0.288
	1,2,3,4,6,7,8-HpCDD	8.13e+03	1.07	y	0.98	37:58	0.62563		*	2.5	*
	OCDD	4.31e+04	0.90	y	0.96	41:19	3.8436		*	2.5	*
	2,3,7,8-TCDF	*	*	n	0.95	NotF	*		204	2.5	0.133
	1,2,3,7,8-PeCDF	*	*	n	0.96	NotF	*		365	2.5	0.353
	2,3,4,7,8-PeCDF	*	*	n	1.01	NotF	*		365	2.5	0.327
	1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF	*		170	2.5	0.100
	1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF	*		170	2.5	0.0999
	2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF	*		170	2.5	0.115
	1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF	*		170	2.5	0.137
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF	*		280	2.5	0.227
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF	*		280	2.5	0.221
	OCDF	6.22e+03	0.54	n	0.95	41:33	0.47929		*	2.5	*
IS	13C-2,3,7,8-TCDD	3.48e+06	0.77	y	1.10	26:16	101.75				
IS	13C-1,2,3,7,8-PeCDD	2.61e+06	0.62	y	0.88	30:45	94.910				
IS	13C-1,2,3,4,7,8-HxCDD	2.39e+06	1.27	y	0.64	34:05	92.250				
IS	13C-1,2,3,6,7,8-HxCDD	2.71e+06	1.26	y	0.86	34:12	78.400				
IS	13C-1,2,3,7,8,9-HxCDD	2.77e+06	1.22	y	0.81	34:30	85.043				
IS	13C-1,2,3,4,6,7,8-HpCDD	2.59e+06	1.02	y	0.65	37:58	98.239				
IS	13C-OCDD	4.57e+06	0.90	y	0.58	41:18	195.40				
IS	13C-2,3,7,8-TCDF	5.24e+06	0.80	y	1.03	25:30	104.55				
IS	13C-1,2,3,7,8-PeCDF	4.21e+06	1.57	y	0.85	29:36	101.82				
IS	13C-2,3,4,7,8-PeCDF	4.22e+06	1.60	y	0.85	30:29	102.93				
IS	13C-1,2,3,4,7,8-HxCDF	3.39e+06	0.52	y	0.83	33:12	100.93				
IS	13C-1,2,3,6,7,8-HxCDF	3.83e+06	0.53	y	1.03	33:19	91.870				
IS	13C-2,3,4,6,7,8-HxCDF	3.44e+06	0.52	y	0.95	33:55	89.394				
IS	13C-1,2,3,7,8,9-HxCDF	3.37e+06	0.53	y	0.83	34:53	100.93				
IS	13C-1,2,3,4,6,7,8-HpCDF	3.30e+06	0.42	y	0.76	36:44	108.09				
IS	13C-1,2,3,4,7,8,9-HpCDF	2.64e+06	0.42	y	0.58	38:30	112.60				
IS	13C-OCDF	5.35e+06	0.91	y	0.69	41:32	192.61				
C/Up	37Cl-2,3,7,8-TCDD	2.99e+06			1.20	26:17	80.076				
RS/RT	13C-1,2,3,4-TCDD	6.10e+06	0.79	y	1.00	25:43	195.22				
RS	13C-1,2,3,4-TCDF	9.46e+06	0.82	y	1.00	24:18	195.22				
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.87e+06	0.51	y	1.00	33:37	195.22				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		151	0.148
Total Penta-Dioxins	*	*		221	0.217
Total Hexa-Dioxins	0.416	0.416		*	*
Total Hepta-Dioxins	0.626	1.30		*	*
Total Tetra-Furans	*	*		204	0.133
Total Penta-Furans	0.0000	0.0000		365	0.339
Total Hexa-Furans	*	*		170	0.112
Total Hepta-Furans	*	*		280	0.225

	Rec	Qual
IS	52.1	
IS	48.6	
IS	47.3	
IS	40.2	
IS	43.6	
IS	50.3	
IS	50.0	
IS	53.6	
IS	52.2	
IS	52.7	
IS	51.7	
IS	47.1	
IS	45.8	
IS	51.7	
IS	55.4	
IS	57.7	
IS	49.3	
C/Up	103	

Integrations by Analyst: DB Date: 11/4/19

Reviewed by Analyst: CT Date: 11/05/19

Totals class: HxCDD EMPC Entry #: 23

Run: 19 File: 191024D1 S: 14 I: 1 F: 3
Acquired: 25-OCT-19 01:58:52 Processed: 28-OCT-19 09:42:30

Total Concentration: 0.41552 Unnamed Concentration: 0.416

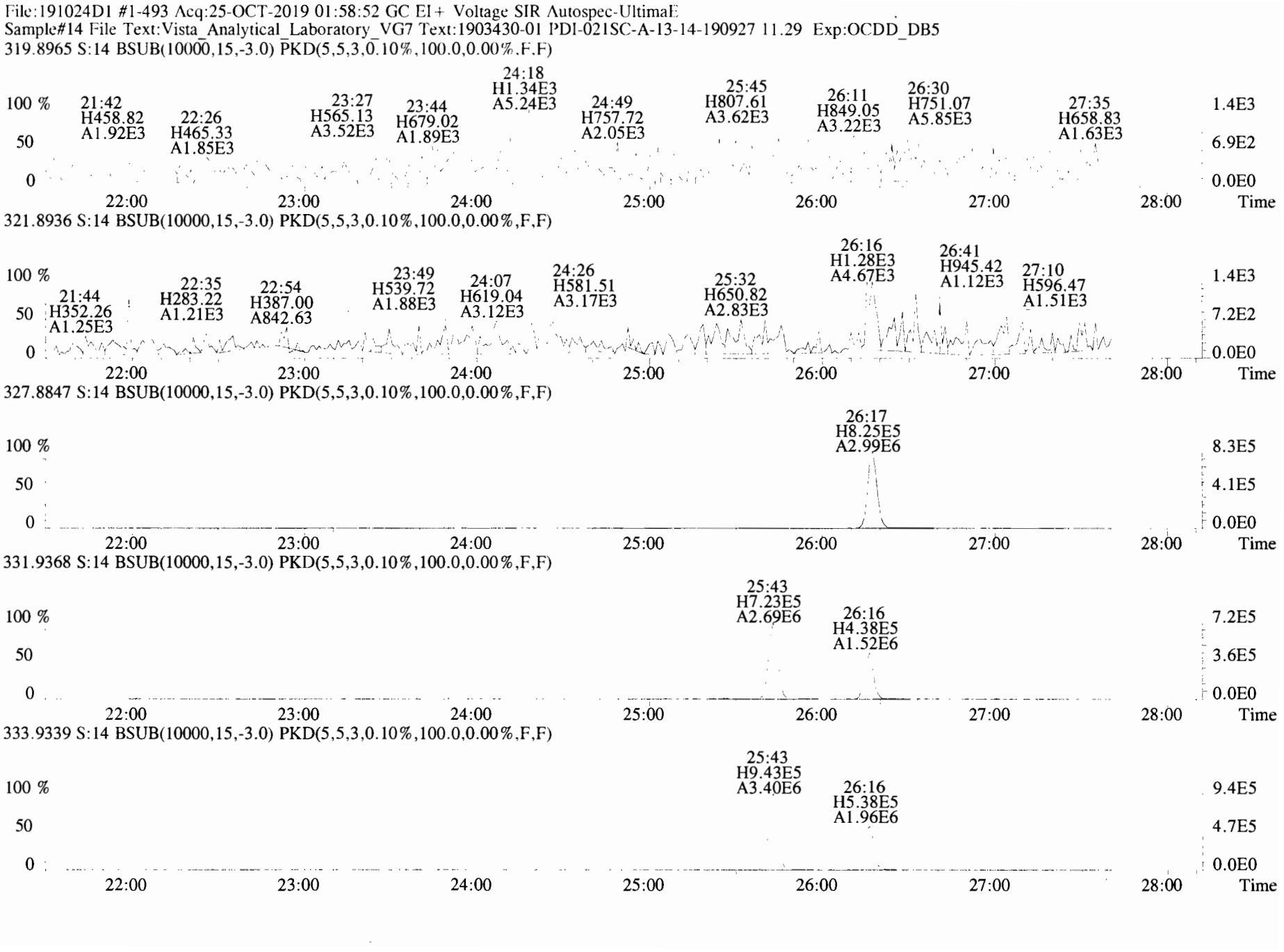
RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
32:33	2.927e+03	2.603e+03	1.12 y	5.531e+03	0.41552	

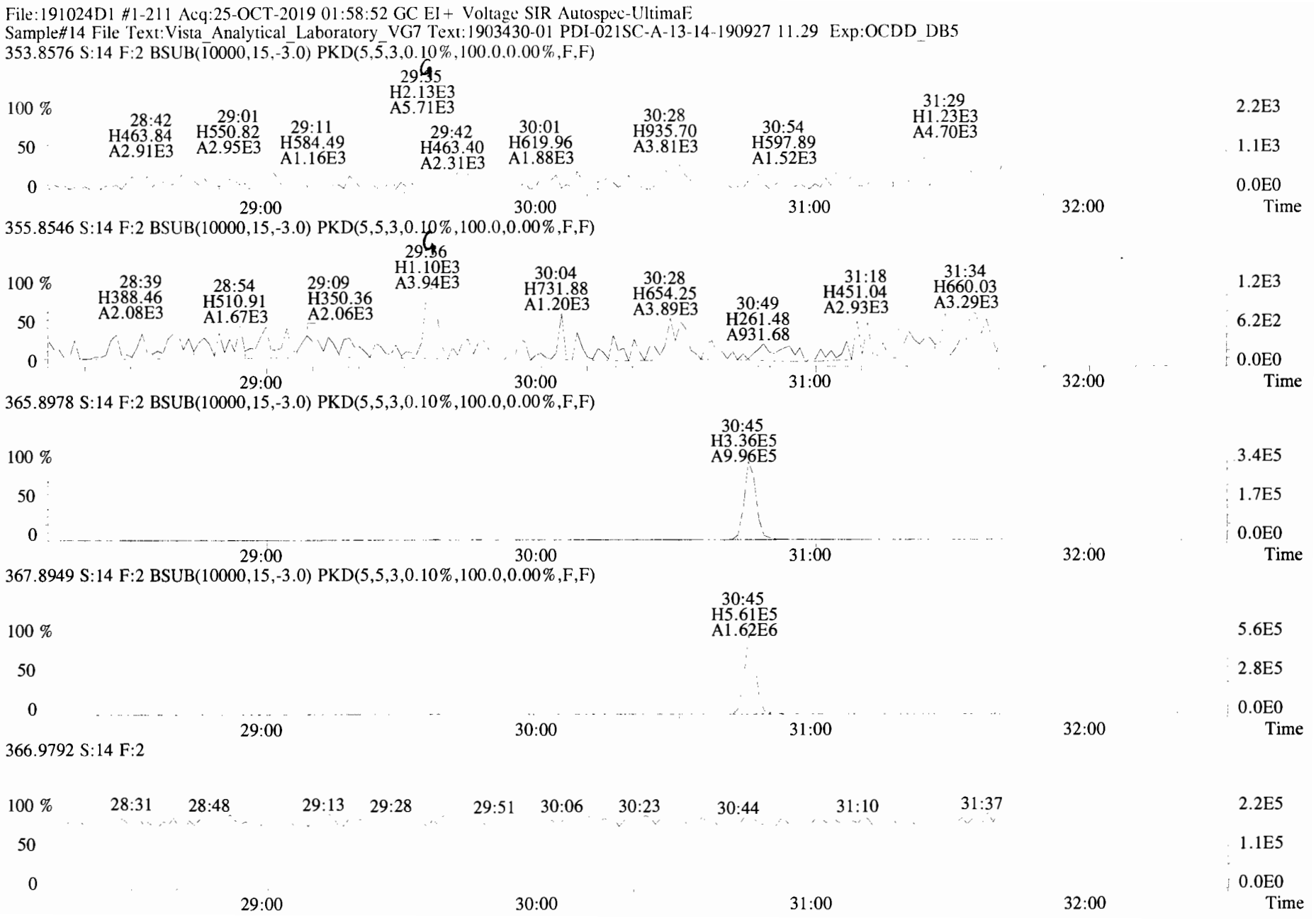
Totals class: HpCDD EMPC Entry #: 25

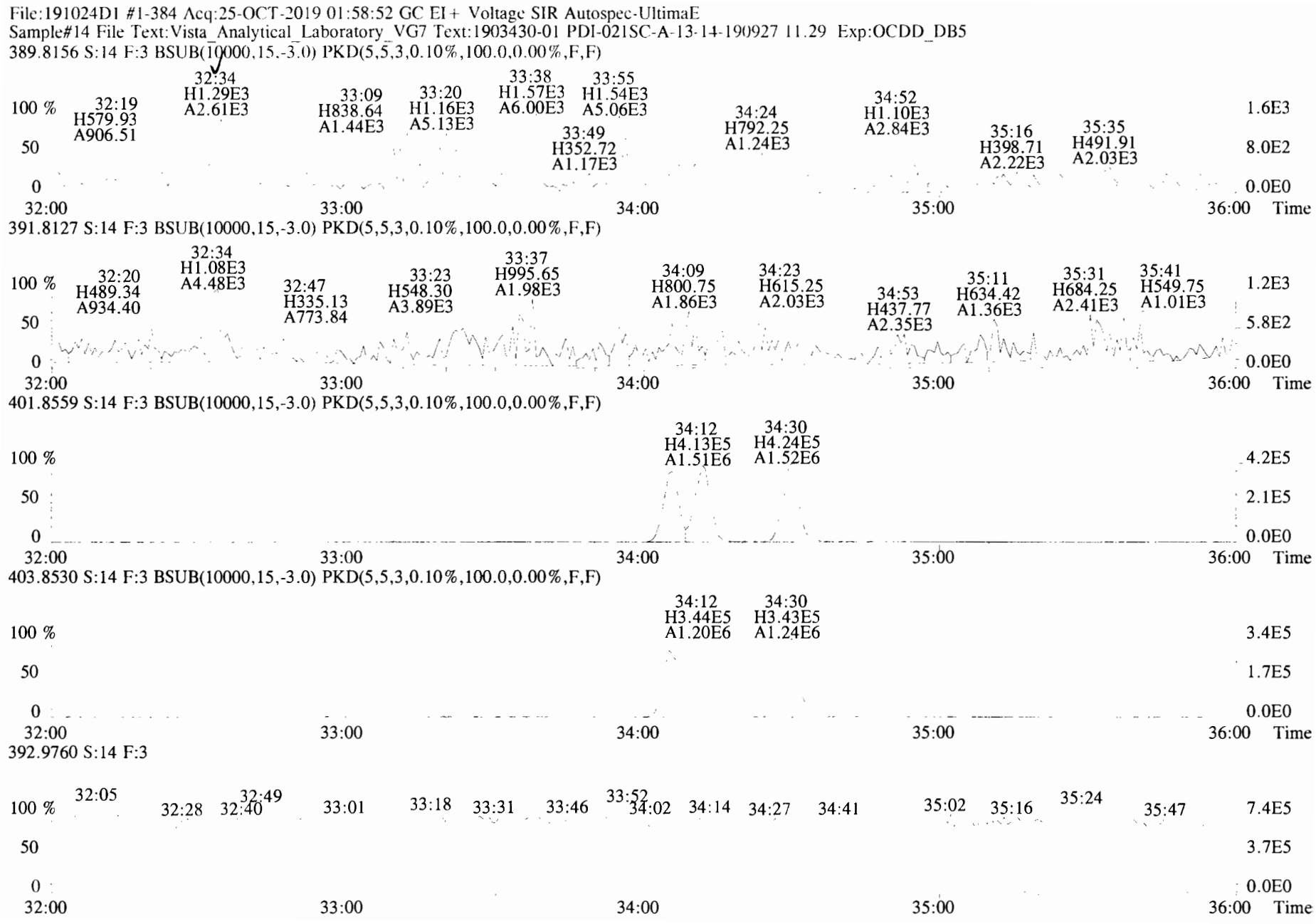
Run: 19 File: 191024D1 S: 14 I: 1 F: 4
Acquired: 25-OCT-19 01:58:52 Processed: 28-OCT-19 09:42:30

Total Concentration: 1.3041 Unnamed Concentration: 0.678

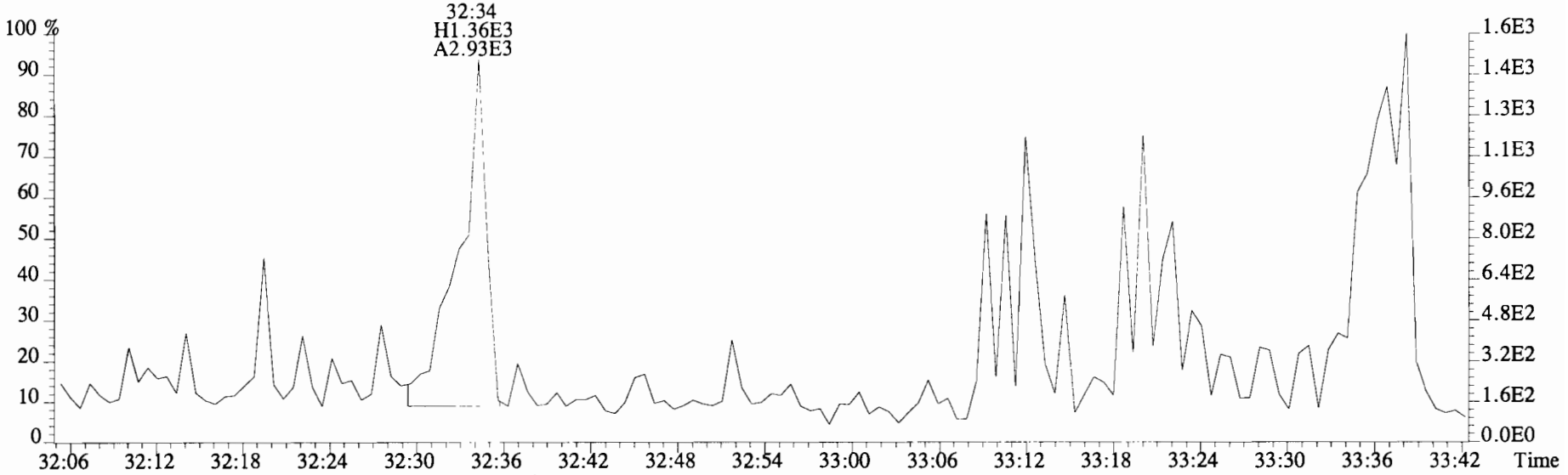
RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:08	5.645e+03	4.323e+03	1.31	n	8.819e+03	0.67846	
37:58	4.212e+03	3.920e+03	1.07	y	8.132e+03	0.62563	1,2,3,4,6,7,8-HpCDD


File:191024D1 #1-493 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
319.8965 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:42 H458.82 A1.92E3
22:26 H465.33 A1.85E3
23:27 H565.13 A3.52E3
23:44 H679.02 A1.89E3
24:18 H1.34E3 A5.24E3
24:49 H757.72 A2.05E3
25:45 H807.61 A3.62E3
26:11 H849.05 A3.22E3
26:30 H751.07 A5.85E3
27:35 H658.83 A1.63E3
321.8936 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:44 H352.26 A1.25E3
22:35 H283.22 A1.21E3
22:54 H387.00 A842.63
23:49 H539.72 A1.88E3
24:07 H619.04 A3.12E3
24:26 H581.51 A3.17E3
25:32 H650.82 A2.83E3
26:16 H1.28E3 A4.67E3
26:41 H945.42 A1.12E3
27:10 H596.47 A1.51E3
327.8847 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:17 H8.25E5 A2.99E6
331.9368 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:43 H7.23E5 A2.69E6
26:16 H4.38E5 A1.52E6
333.9339 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:43 H9.43E5 A3.40E6
26:16 H5.38E5 A1.96E6
100 %
50
0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
1.4E3
6.9E2
0.0E0
7.2E2
8.3E5
4.1E5
7.2E5
3.6E5
9.4E5
4.7E5

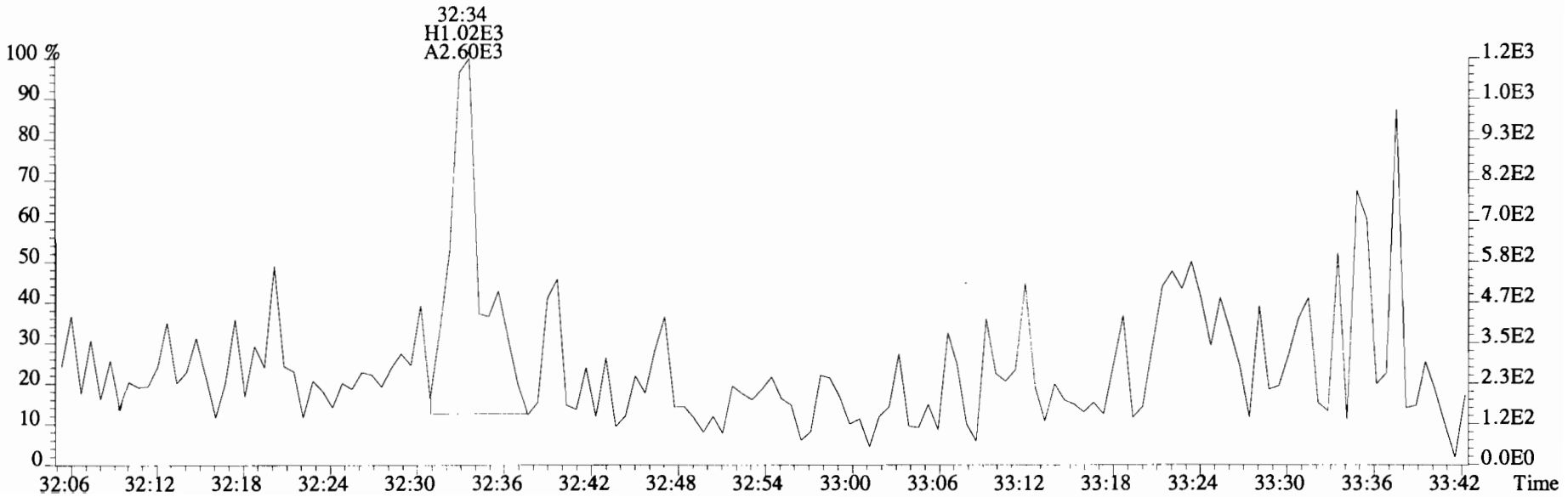

File:191024D1 #1-211 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
353.8576 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:35 H2.13E3 A5.71E3
28:42 H463.84 A2.91E3
29:01 H550.82 A2.95E3
29:11 H584.49 A1.16E3
29:42 H463.40 A2.31E3
30:01 H619.96 A1.88E3
30:28 H935.70 A3.81E3
30:54 H597.89 A1.52E3
31:29 H1.23E3 A4.70E3
100 %
50
0
2.2E3
1.1E3
0.0E0
29:00
30:00
31:00
32:00
Time
355.8546 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:36 H1.10E3 A3.94E3
28:39 H388.46 A2.08E3
28:54 H510.91 A1.67E3
29:09 H350.36 A2.06E3
30:04 H731.88 A1.20E3
30:28 H654.25 A3.89E3
30:49 H261.48 A931.68
31:18 H451.04 A2.93E3
31:34 H660.03 A3.29E3
100 %
50
0
1.2E3
6.2E2
0.0E0
29:00
30:00
31:00
32:00
Time
365.8978 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:45 H3.36E5 A9.96E5
100 %
50
0
3.4E5
1.7E5
0.0E0
29:00
30:00
31:00
32:00
Time
367.8949 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:45 H5.61E5 A1.62E6
100 %
50
0
5.6E5
2.8E5
0.0E0
29:00
30:00
31:00
32:00
Time
366.9792 S:14 F:2
100 %
28:31
28:48
29:13
29:28
29:51
30:06
30:23
30:44
31:10
31:37
50
0
2.2E5
1.1E5
0.0E0
29:00
30:00
31:00
32:00
Time


File:191024D1 #1-384 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
389.8156 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:19 H579.93 A906.51
32:34 H1.29E3 A2.61E3
33:09 H838.64 A1.44E3
33:20 H1.16E3 A5.13E3
33:38 H1.57E3 A6.00E3
33:49 H352.72 A1.17E3
33:55 H1.54E3 A5.06E3
34:24 H792.25 A1.24E3
34:52 H1.10E3 A2.84E3
35:16 H398.71 A2.22E3
35:35 H491.91 A2.03E3
100 %
50
0
1.6E3
8.0E2
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
391.8127 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:20 H489.34 A934.40
32:34 H1.08E3 A4.48E3
32:47 H335.13 A773.84
33:23 H548.30 A3.89E3
33:37 H995.65 A1.98E3
34:09 H800.75 A1.86E3
34:23 H615.25 A2.03E3
34:53 H437.77 A2.35E3
35:11 H634.42 A1.36E3
35:31 H684.25 A2.41E3
35:41 H549.75 A1.01E3
100 %
50
0
1.2E3
5.8E2
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
401.8559 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:12 H4.13E5 A1.51E6
34:30 H4.24E5 A1.52E6
100 %
50
0
4.2E5
2.1E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
403.8530 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:12 H3.44E5 A1.20E6
34:30 H3.43E5 A1.24E6
100 %
50
0
3.4E5
1.7E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
392.9760 S:14 F:3
32:05
32:28
32:40
32:49
33:01
33:18
33:31
33:46
33:52
34:02
34:14
34:27
34:41
35:02
35:16
35:24
35:47
100 %
50
0
7.4E5
3.7E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time

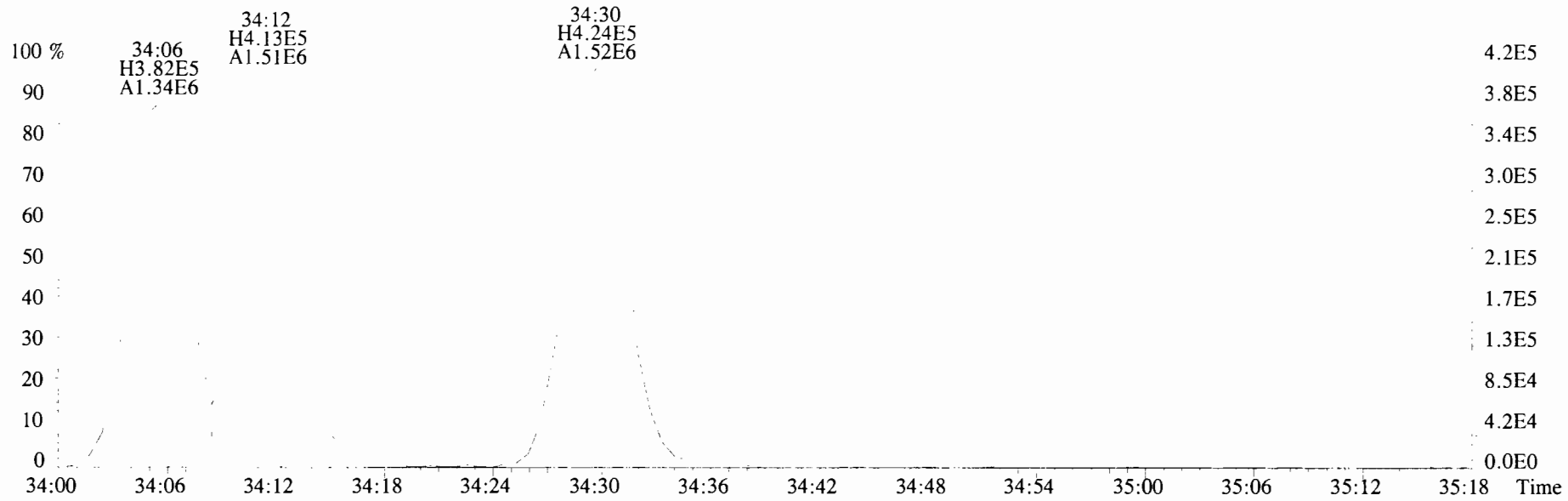
File:191024D1 #1-384 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
389.8156 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



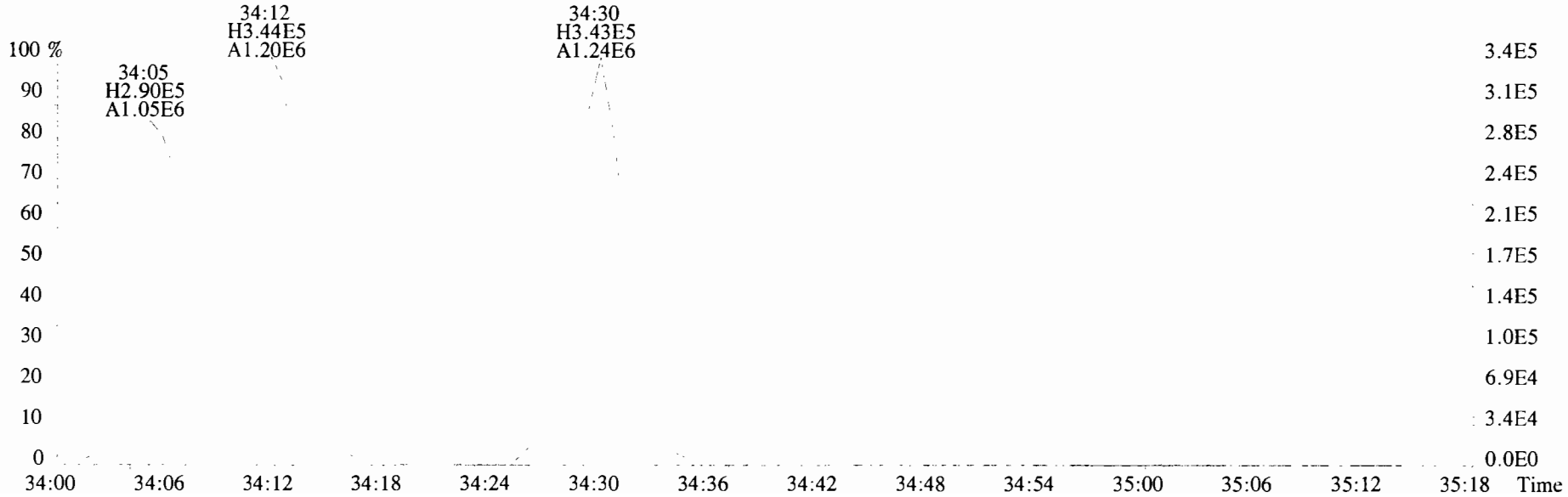
391.8127 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

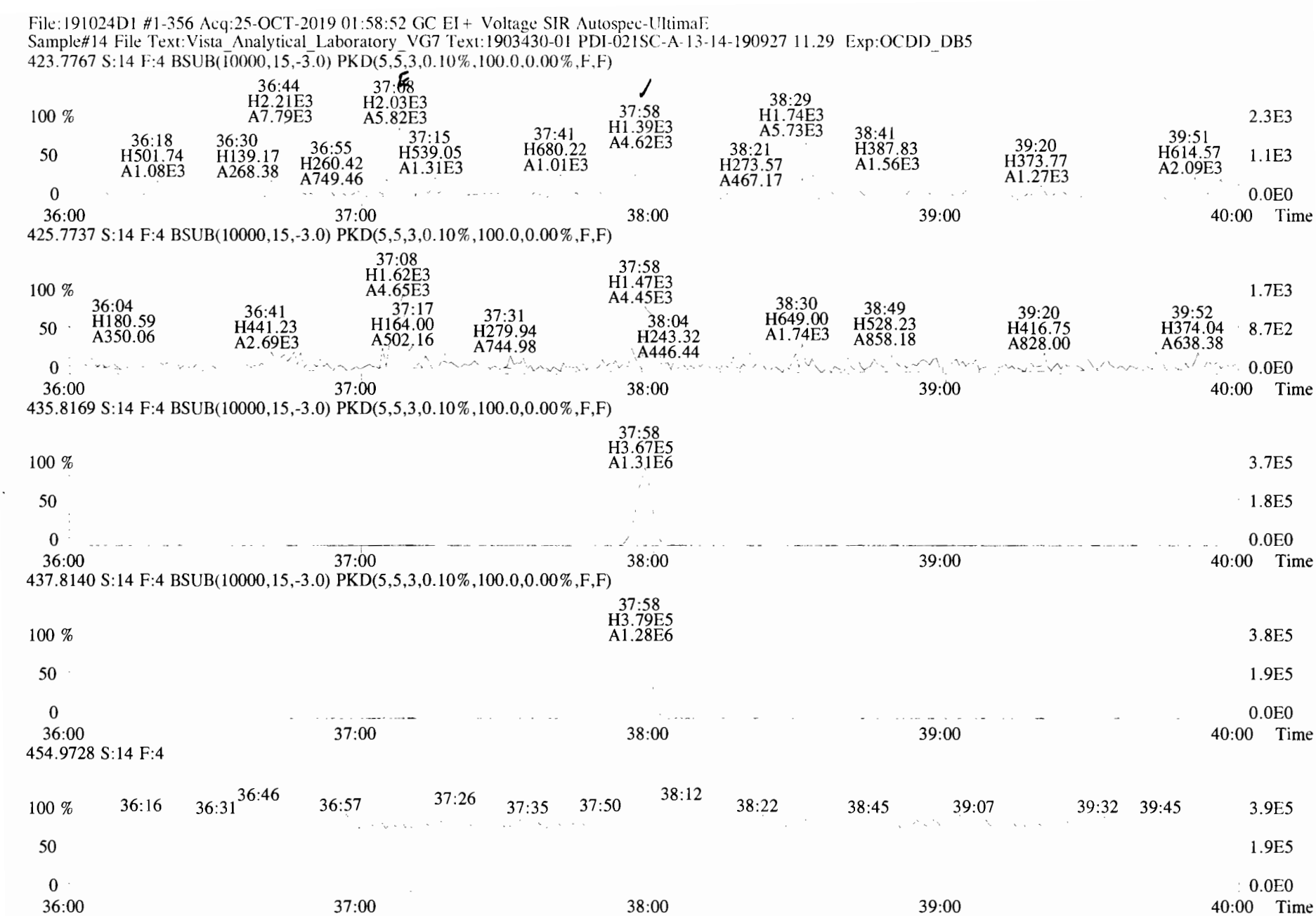


File:191024D1 #1-384 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
401.8559 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

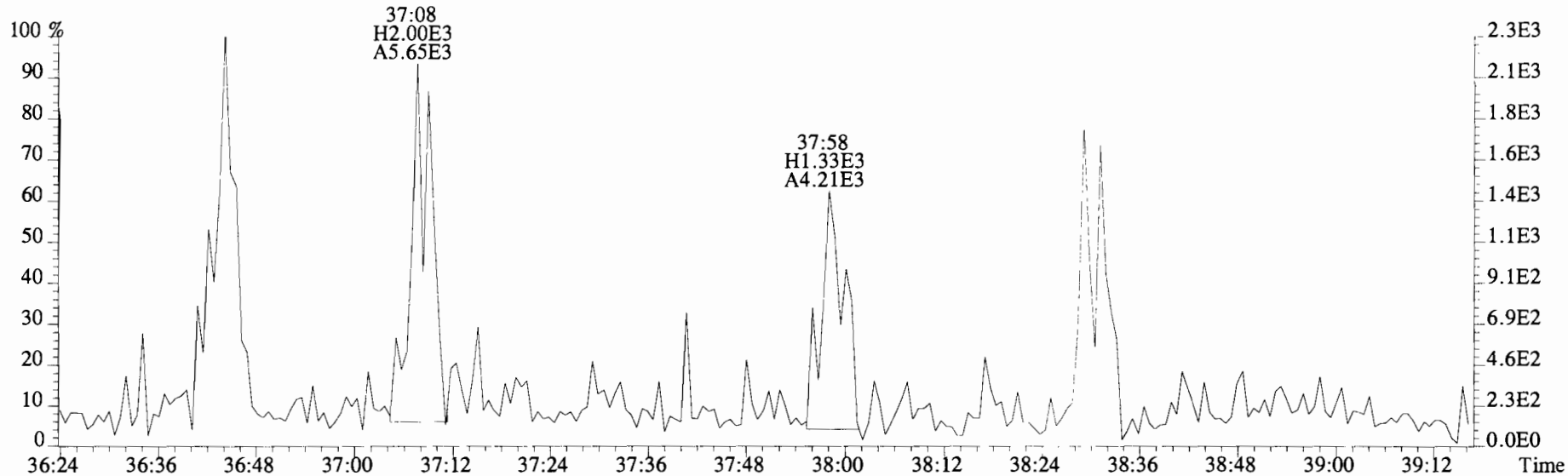


403.8530 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

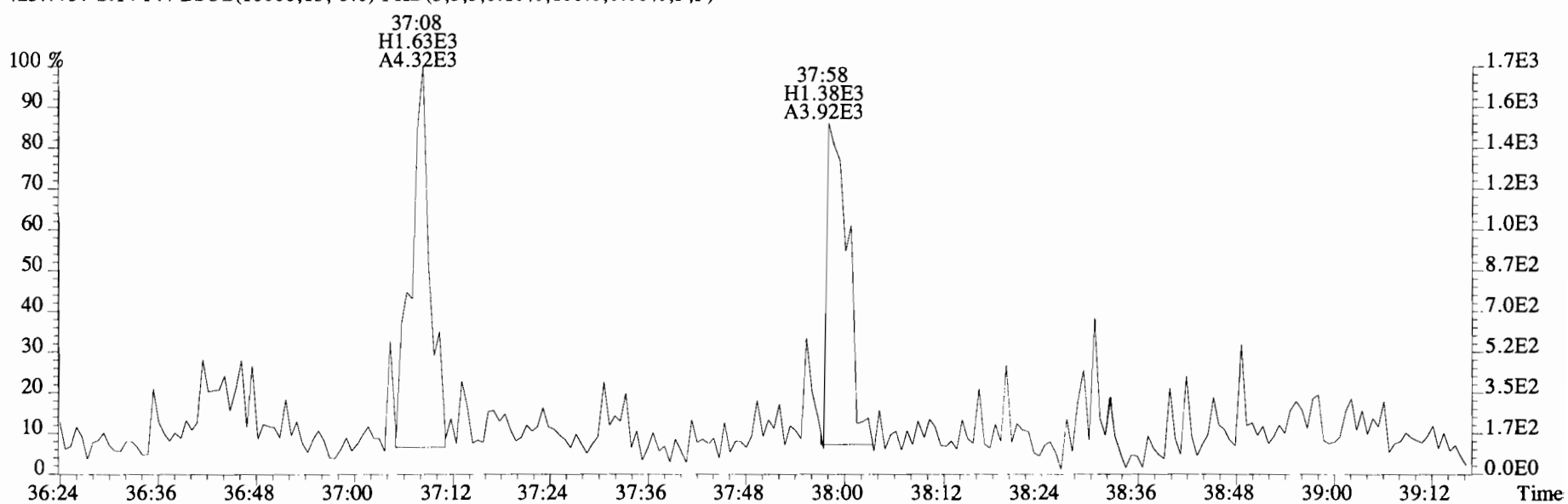


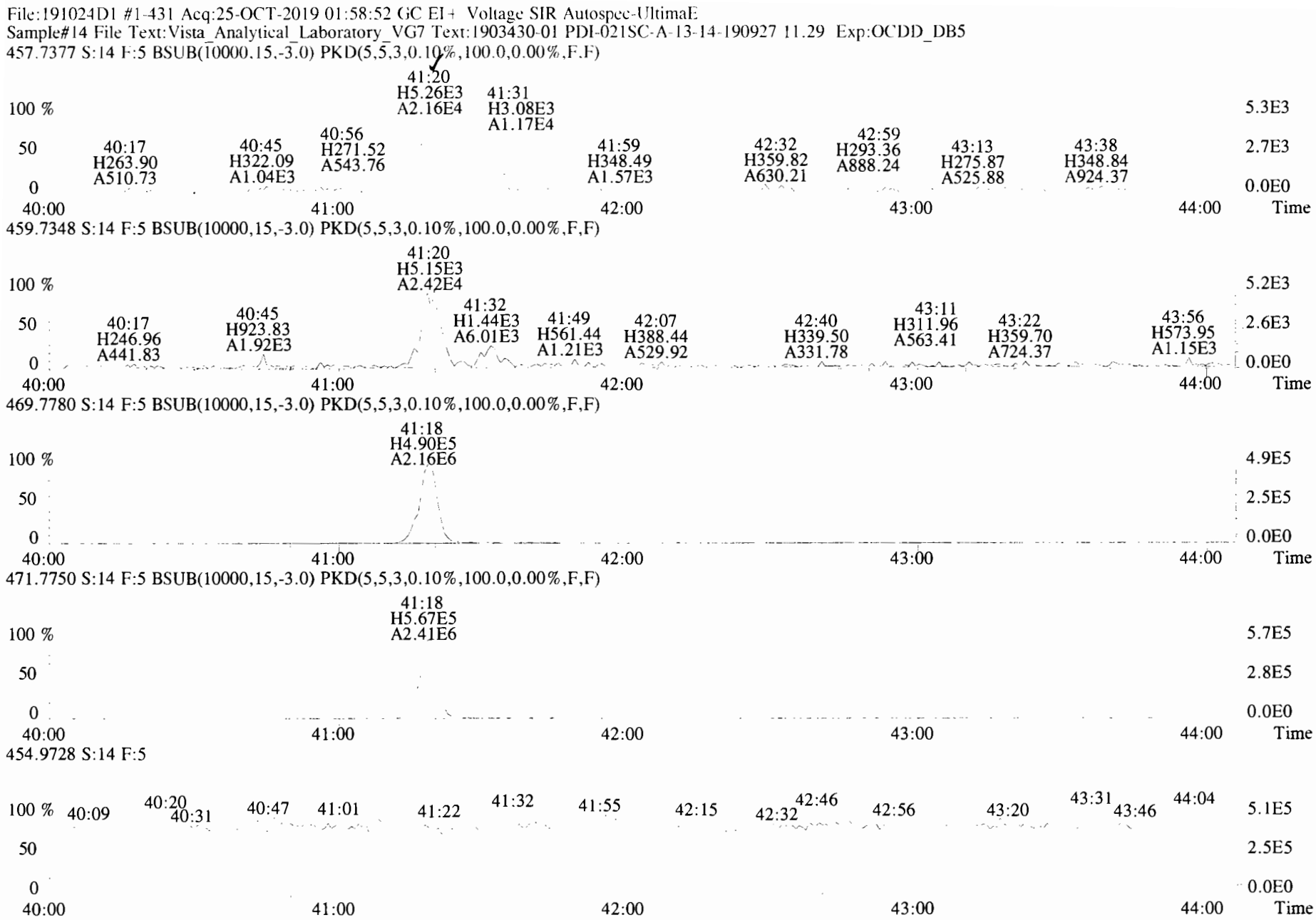

File:191024D1 #1-356 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
423.7767 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:44 H2.21E3 A7.79E3
37:08 H2.03E3 A5.82E3
37:58 H1.39E3 A4.62E3
38:29 H1.74E3 A5.73E3
36:18 H501.74 A1.08E3
36:30 H139.17 A268.38
36:55 H260.42 A749.46
37:15 H539.05 A1.31E3
37:41 H680.22 A1.01E3
38:21 H273.57 A467.17
38:41 H387.83 A1.56E3
39:20 H373.77 A1.27E3
39:51 H614.57 A2.09E3
100 %
50
0
2.3E3
1.1E3
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
425.7737 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:08 H1.62E3 A4.65E3
37:58 H1.47E3 A4.45E3
36:04 H180.59 A350.06
36:41 H441.23 A2.69E3
37:17 H164.00 A502.16
37:31 H279.94 A744.98
38:04 H243.32 A446.44
38:30 H649.00 A1.74E3
38:49 H528.23 A858.18
39:20 H416.75 A828.00
39:52 H374.04 A638.38
100 %
50
0
1.7E3
8.7E2
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
435.8169 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:58 H3.67E5 A1.31E6
100 %
50
0
3.7E5
1.8E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
437.8140 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:58 H3.79E5 A1.28E6
100 %
50
0
3.8E5
1.9E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
454.9728 S:14 F:4
36:16
36:31
36:46
36:57
37:26
37:35
37:50
38:12
38:22
38:45
39:07
39:32
39:45
100 %
50
0
3.9E5
1.9E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time

File:191024D1 #1-356 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
423.7767 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

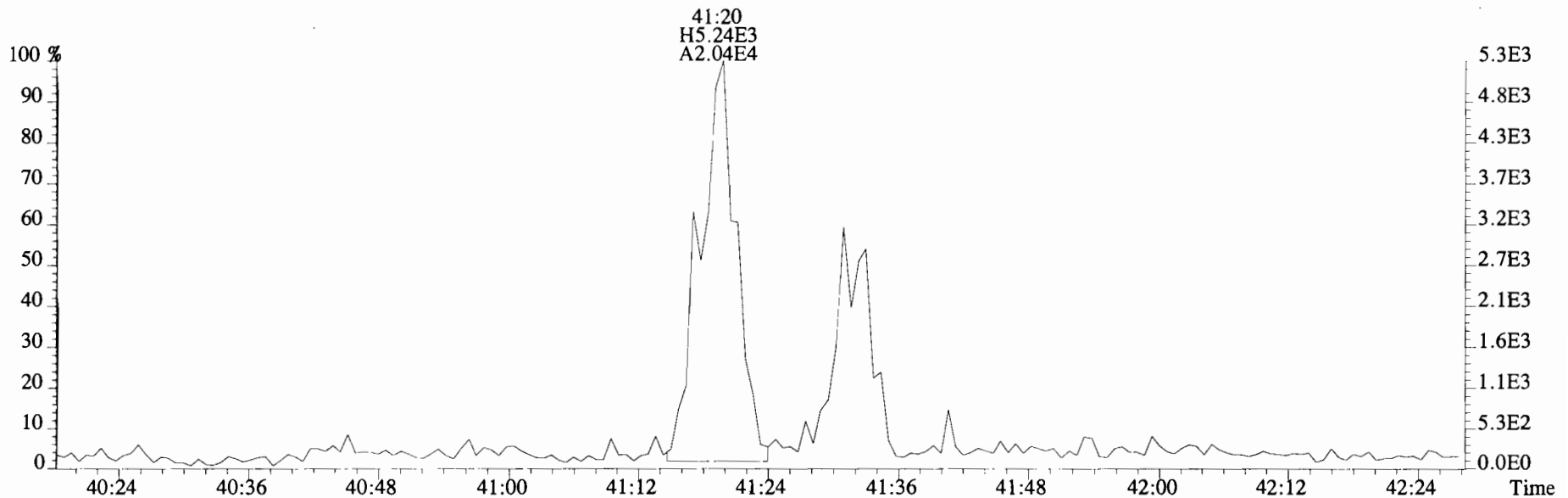


425.7737 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

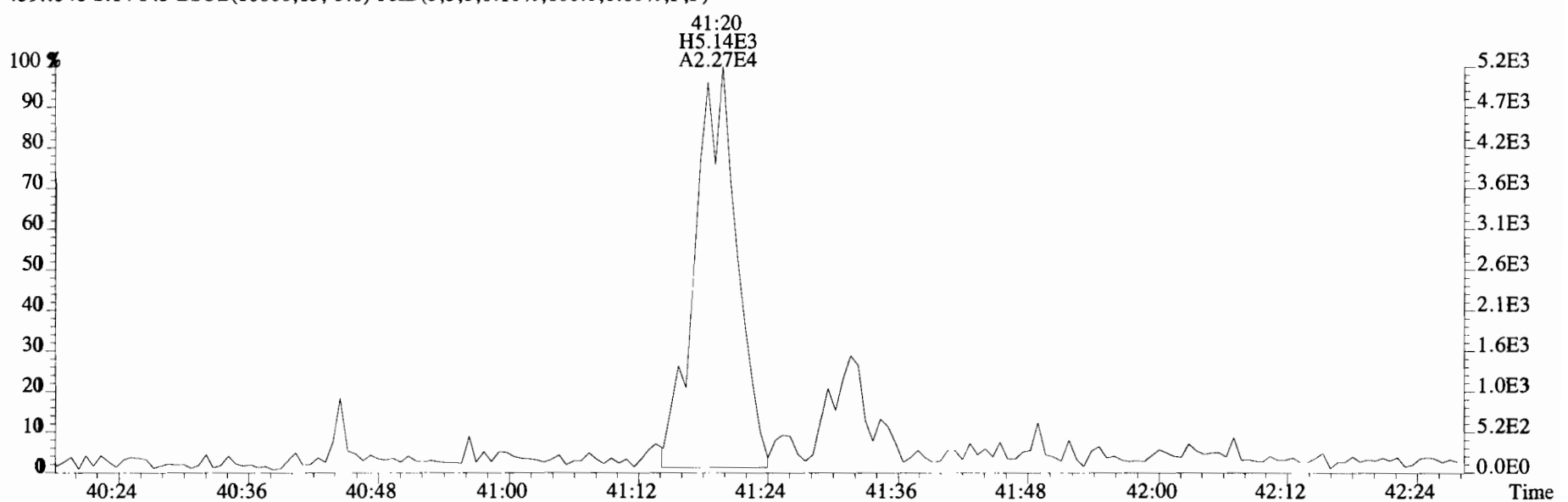



File:191024D1 #1-431 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
457.7377 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:20 H5.26E3 A2.16E4
41:31 H3.08E3 A1.17E4
40:17 H263.90 A510.73
40:45 H322.09 A1.04E3
40:56 H271.52 A543.76
41:59 H348.49 A1.57E3
42:32 H359.82 A630.21
42:59 H293.36 A888.24
43:13 H275.87 A525.88
43:38 H348.84 A924.37
100 %
50
0
5.3E3
2.7E3
0.0E0
40:00
41:00
42:00
43:00
44:00
Time
459.7348 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:20 H5.15E3 A2.42E4
41:32 H1.44E3 A6.01E3
40:17 H246.96 A441.83
40:45 H923.83 A1.92E3
41:49 H561.44 A1.21E3
42:07 H388.44 A529.92
42:40 H339.50 A331.78
43:11 H311.96 A563.41
43:22 H359.70 A724.37
43:56 H573.95 A1.15E3
100 %
50
0
5.2E3
2.6E3
0.0E0
40:00
41:00
42:00
43:00
44:00
Time
469.7780 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:18 H4.90E5 A2.16E6
100 %
50
0
4.9E5
2.5E5
0.0E0
40:00
41:00
42:00
43:00
44:00
Time
471.7750 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:18 H5.67E5 A2.41E6
100 %
50
0
5.7E5
2.8E5
0.0E0
40:00
41:00
42:00
43:00
44:00
Time
454.9728 S:14 F:5
40:09
40:20
40:31
40:47
41:01
41:22
41:32
41:55
42:15
42:32
42:46
42:56
43:20
43:31
43:46
44:04
100 %
50
0
5.1E5
2.5E5
0.0E0
40:00
41:00
42:00
43:00
44:00
Time

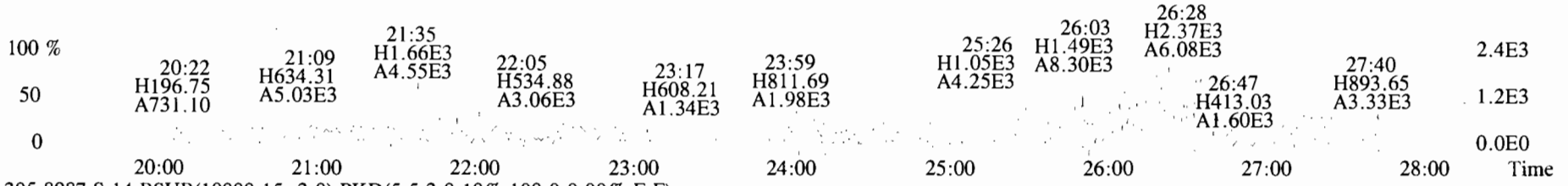
File:191024D1 #1-431 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
457.7377 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



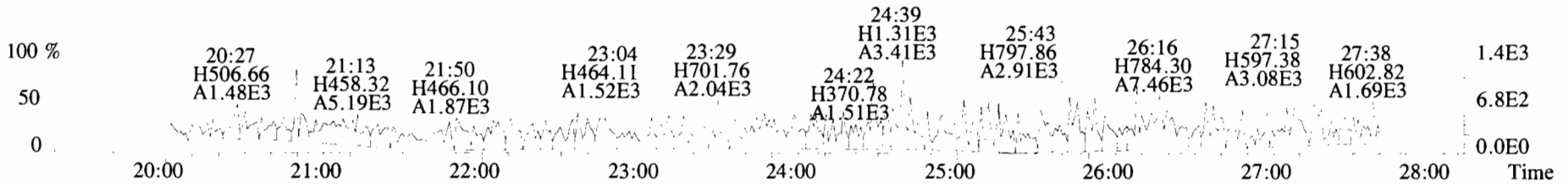
459.7348 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



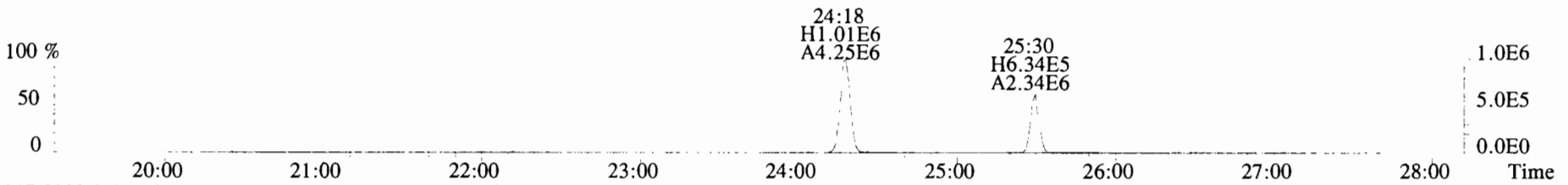
File:191024D1 #1-493 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
303.9016 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



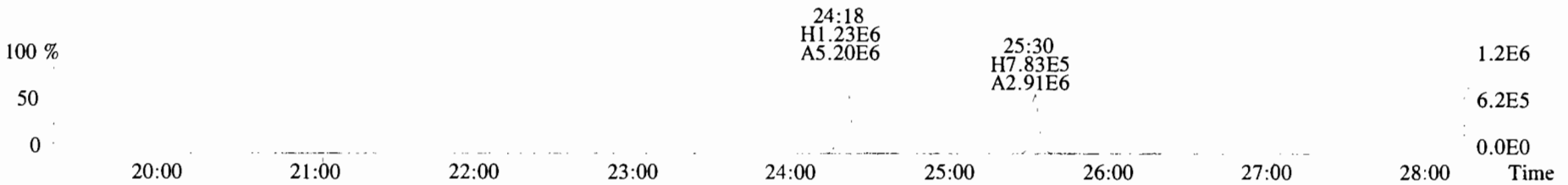
305.8987 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



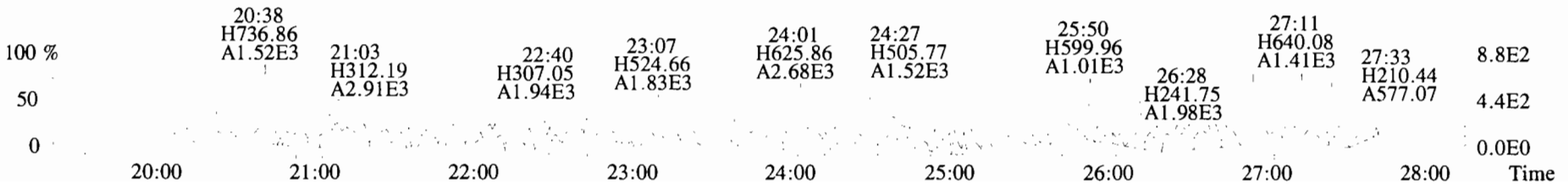
315.9419 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



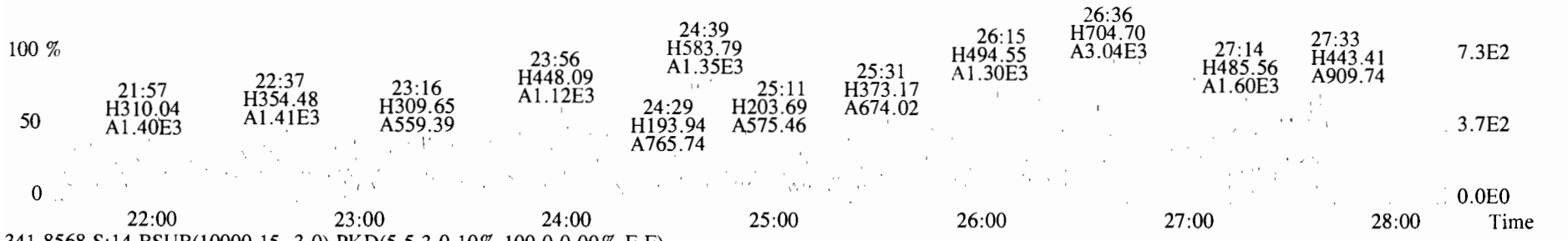
317.9389 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



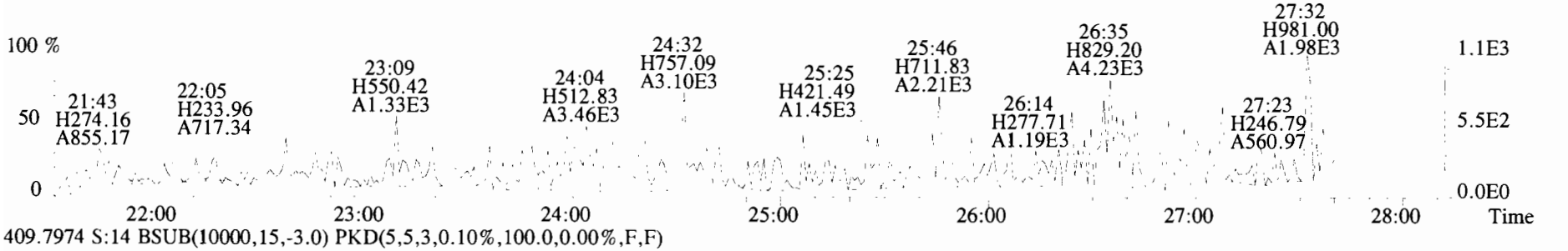
375.8364 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



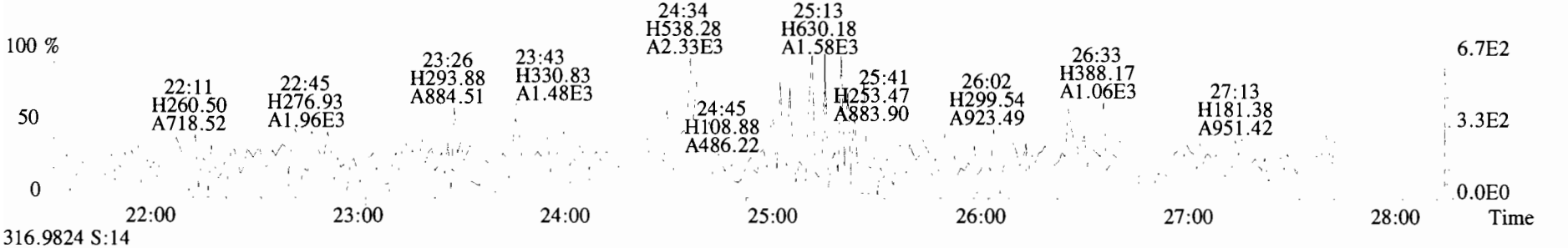
File:191024D1 #1-493 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaF
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
339.8597 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



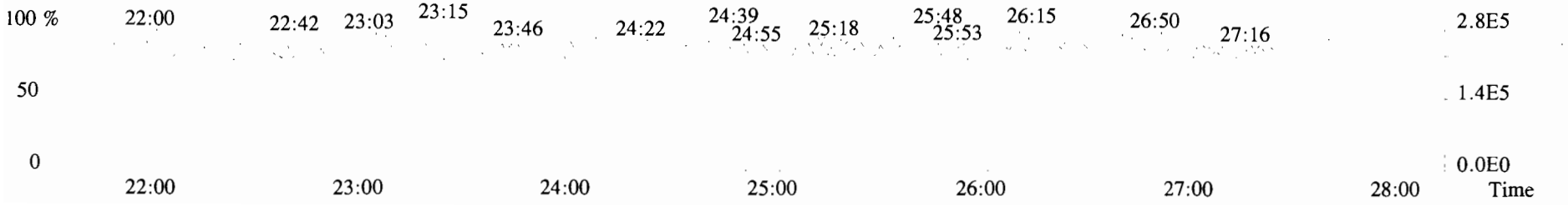
341.8568 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



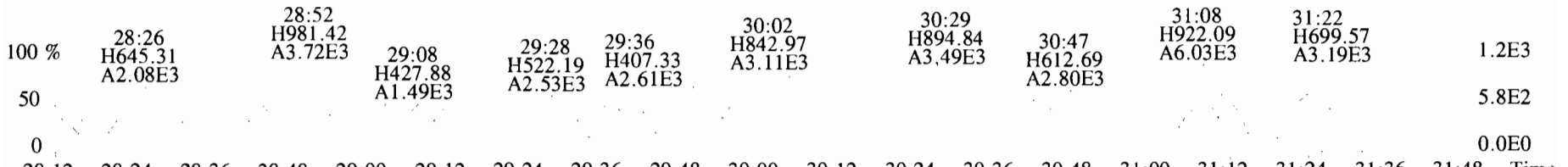
409.7974 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



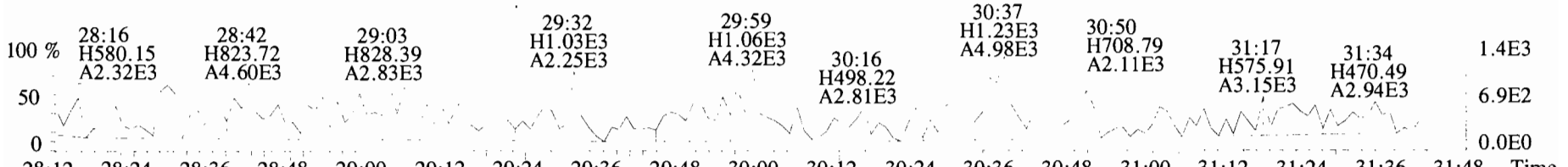
316.9824 S:14



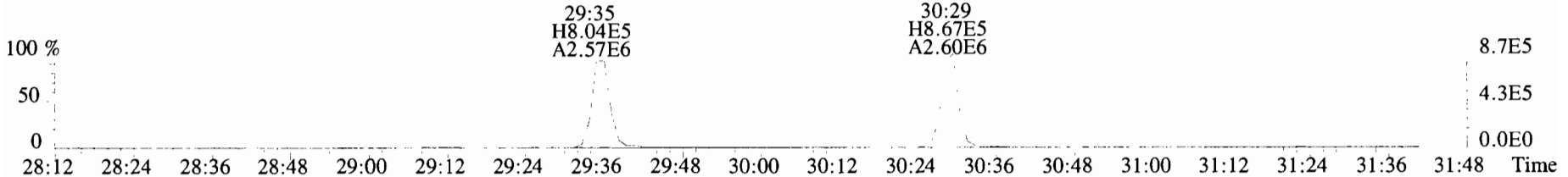
File:191024D1 #1-211 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
339.8597 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



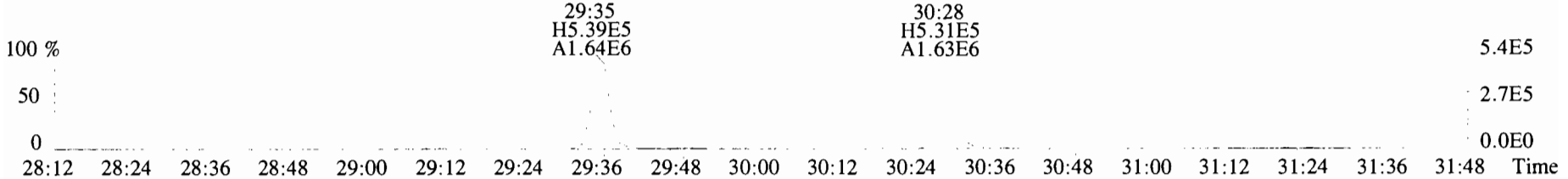
341.8568 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



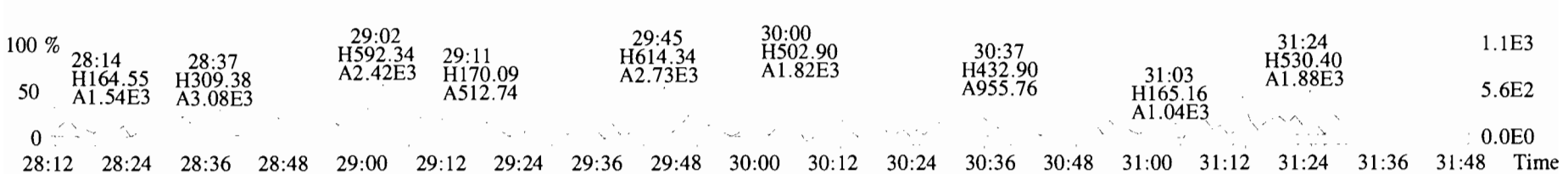
351.9000 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



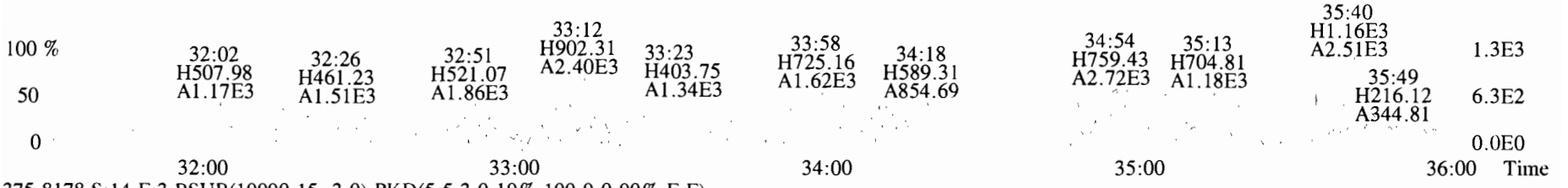
353.8970 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



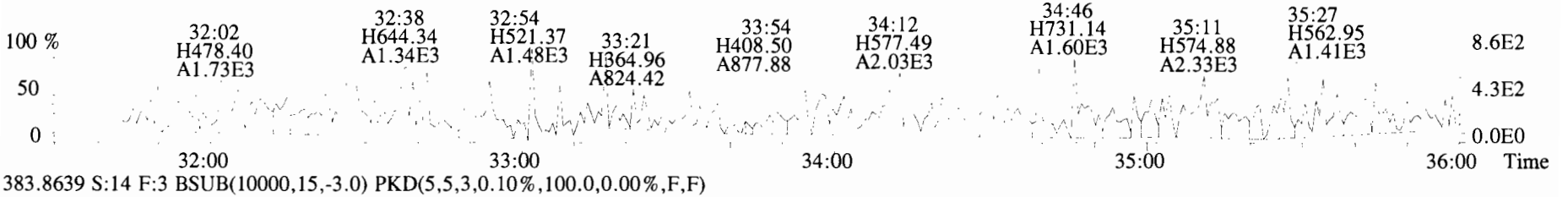
409.7974 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



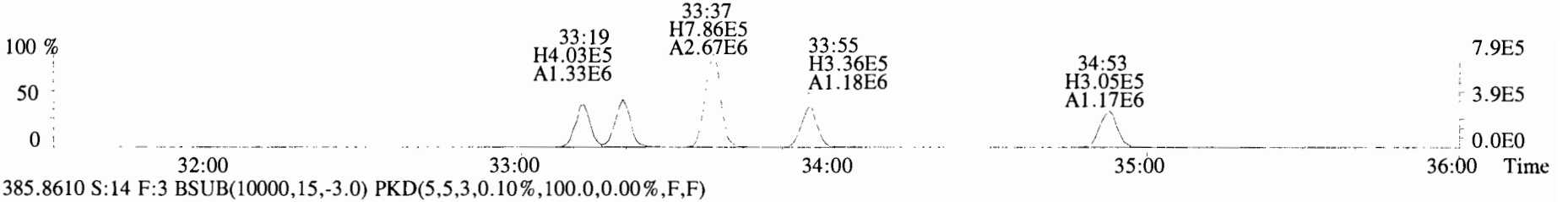
File:191024D1 #1-384 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
373.8207 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



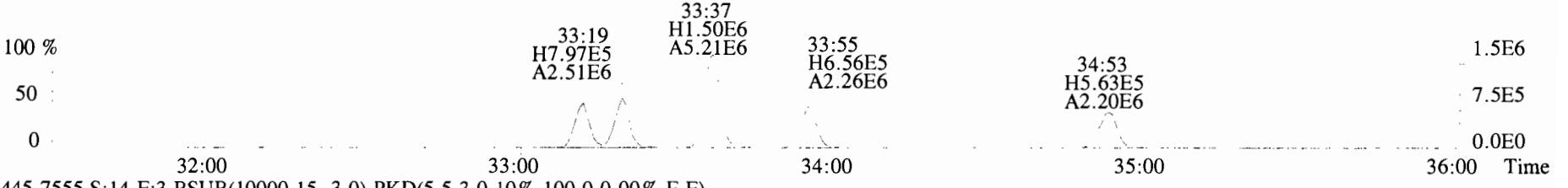
375.8178 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



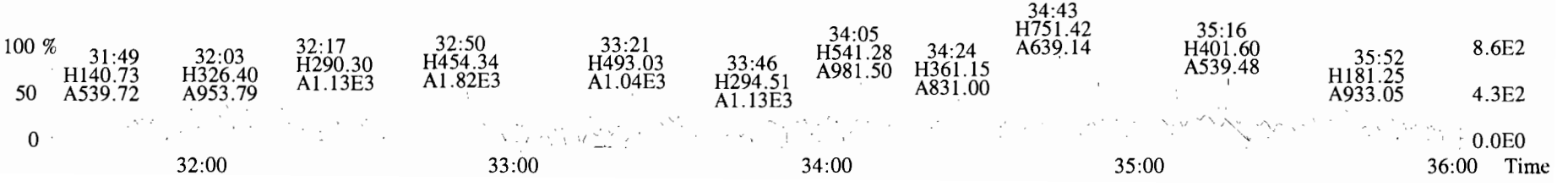
383.8639 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

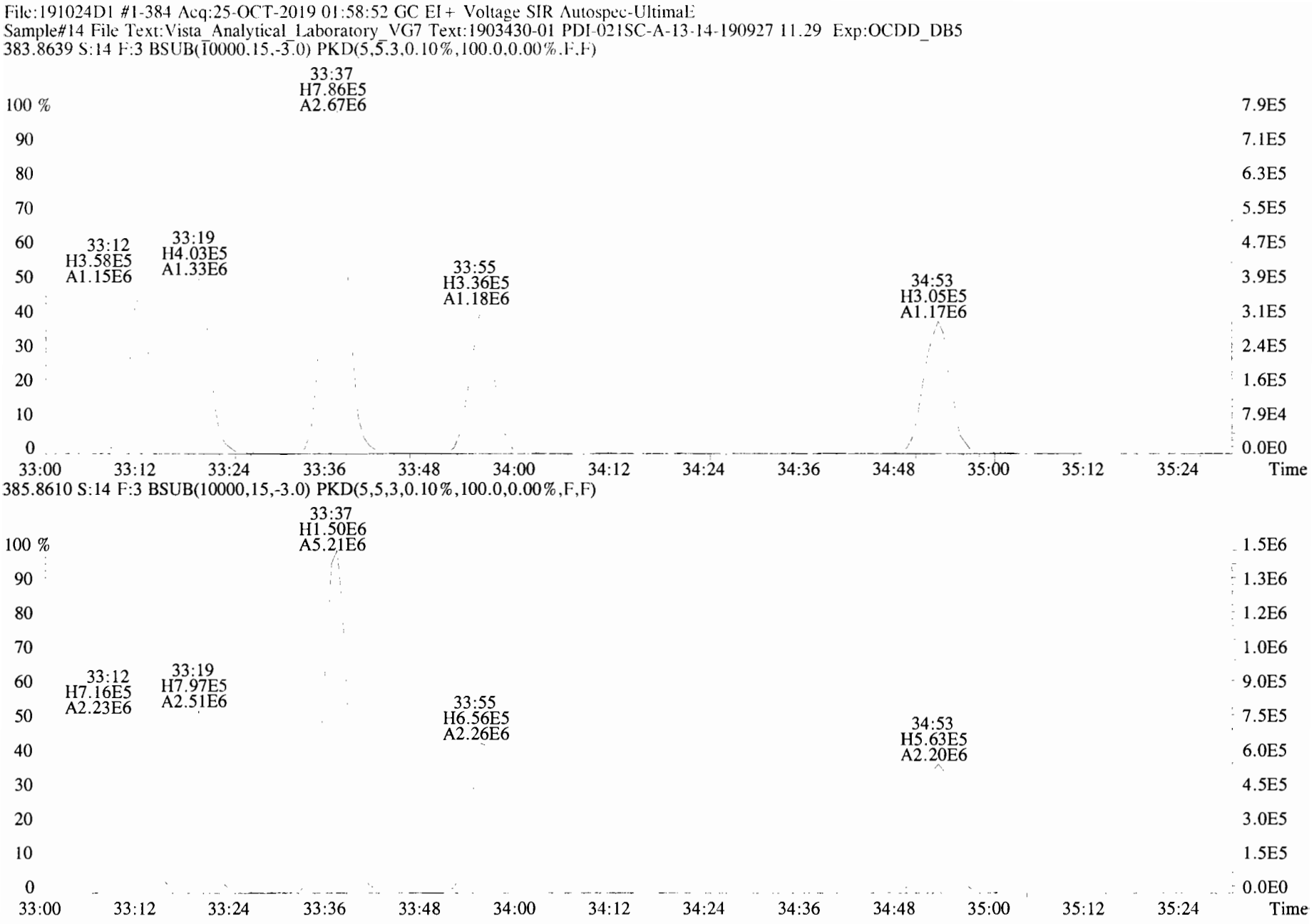


385.8610 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

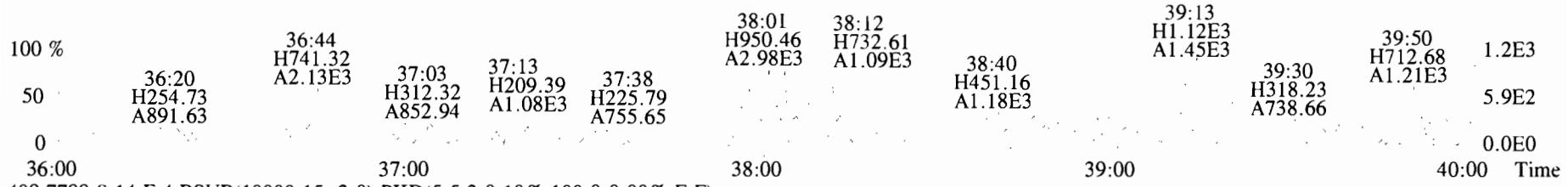


445.7555 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

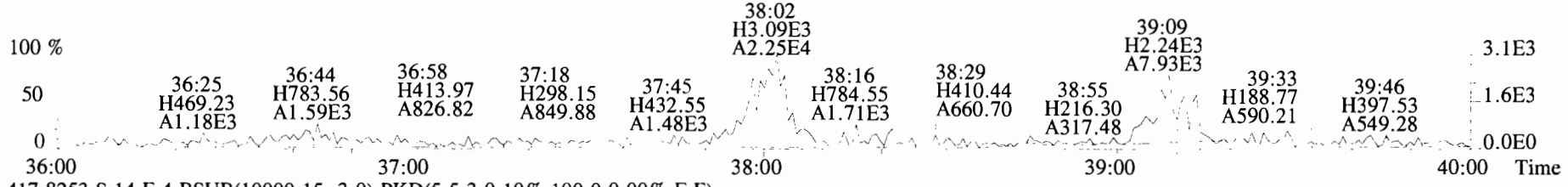



File:191024D1 #1-384 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
383.8639 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:37
H7.86E5
A2.67E6
33:12
H3.58E5
A1.15E6
33:19
H4.03E5
A1.33E6
33:55
H3.36E5
A1.18E6
34:53
H3.05E5
A1.17E6
100 %
90
80
70
60
50
40
30
20
10
0
7.9E5
7.1E5
6.3E5
5.5E5
4.7E5
3.9E5
3.1E5
2.4E5
1.6E5
7.9E4
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time
385.8610 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:37
H1.50E6
A5.21E6
33:12
H7.16E5
A2.23E6
33:19
H7.97E5
A2.51E6
33:55
H6.56E5
A2.26E6
34:53
H5.63E5
A2.20E6
100 %
90
80
70
60
50
40
30
20
10
0
1.5E6
1.3E6
1.2E6
1.0E6
9.0E5
7.5E5
6.0E5
4.5E5
3.0E5
1.5E5
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time

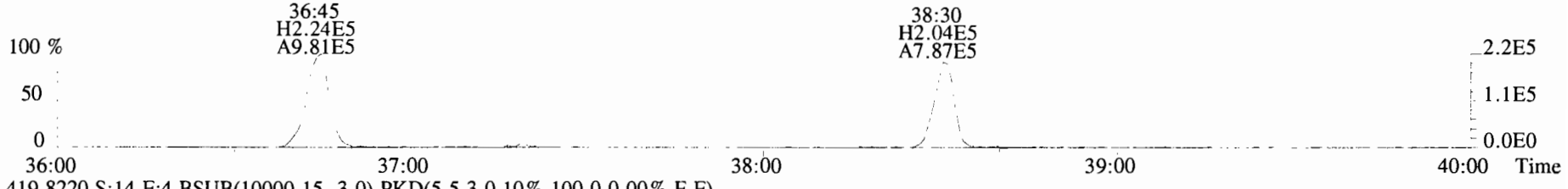
File:191024D1 #1-356 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
407.7818 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



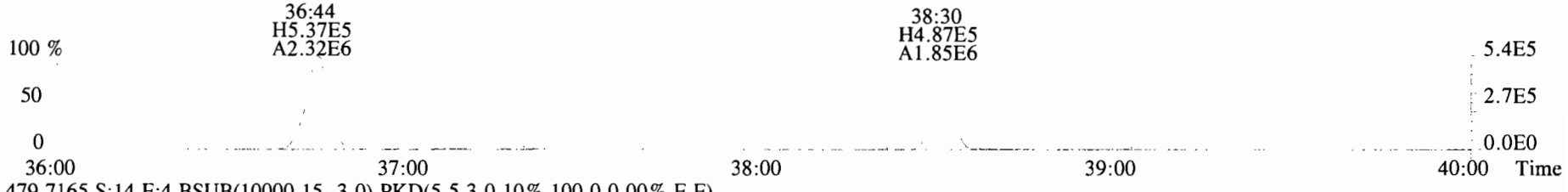
409.7788 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



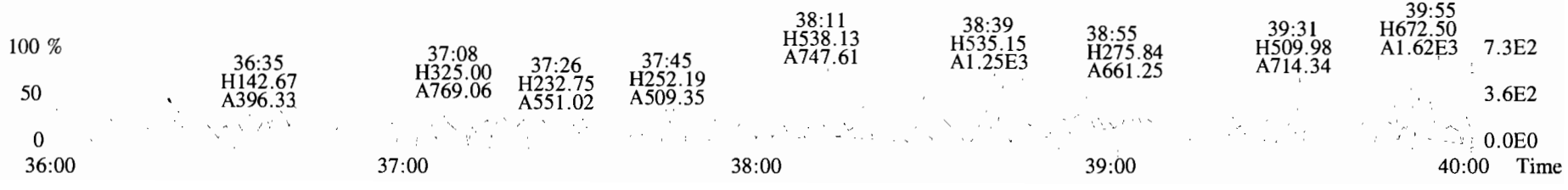
417.8253 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

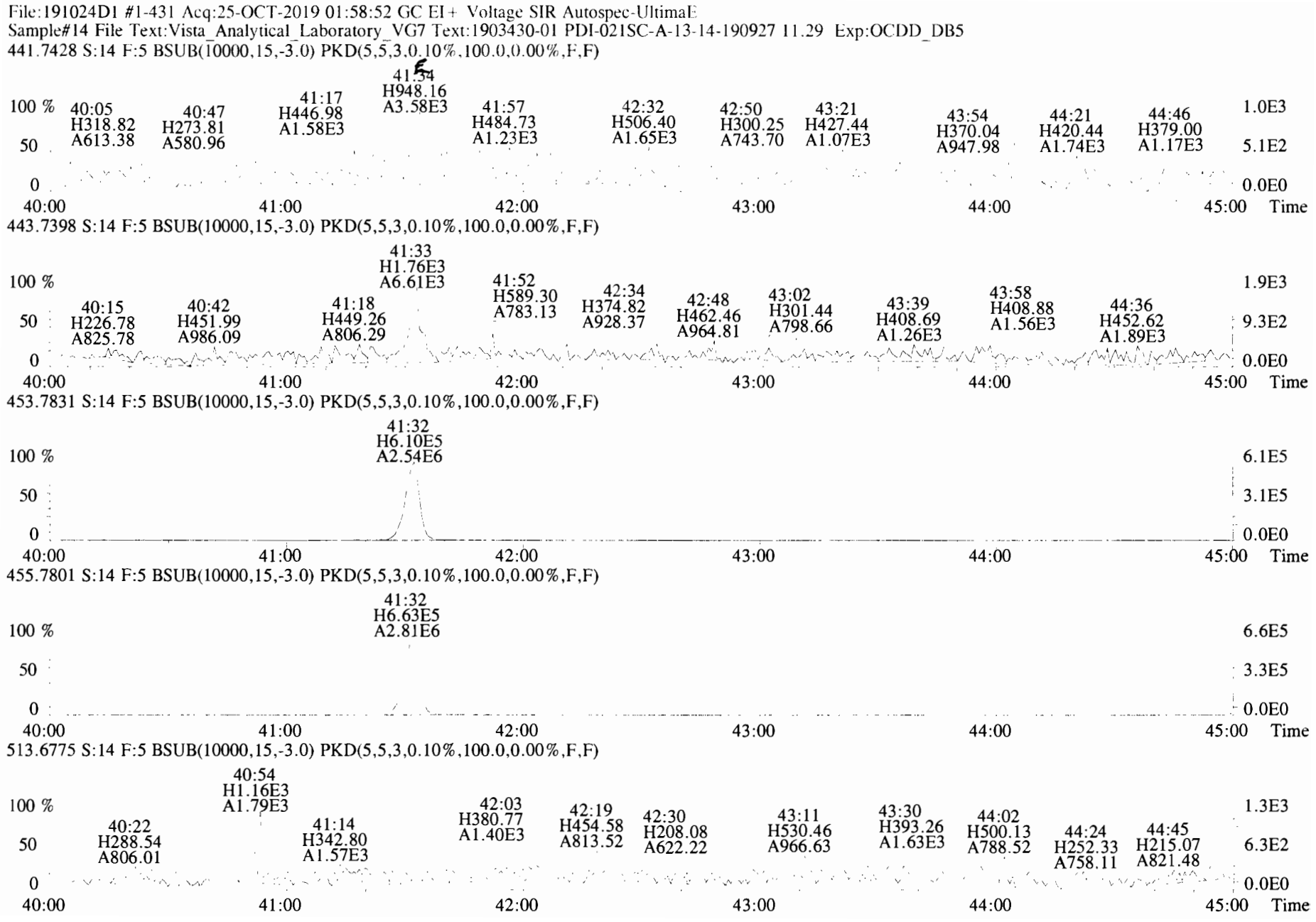


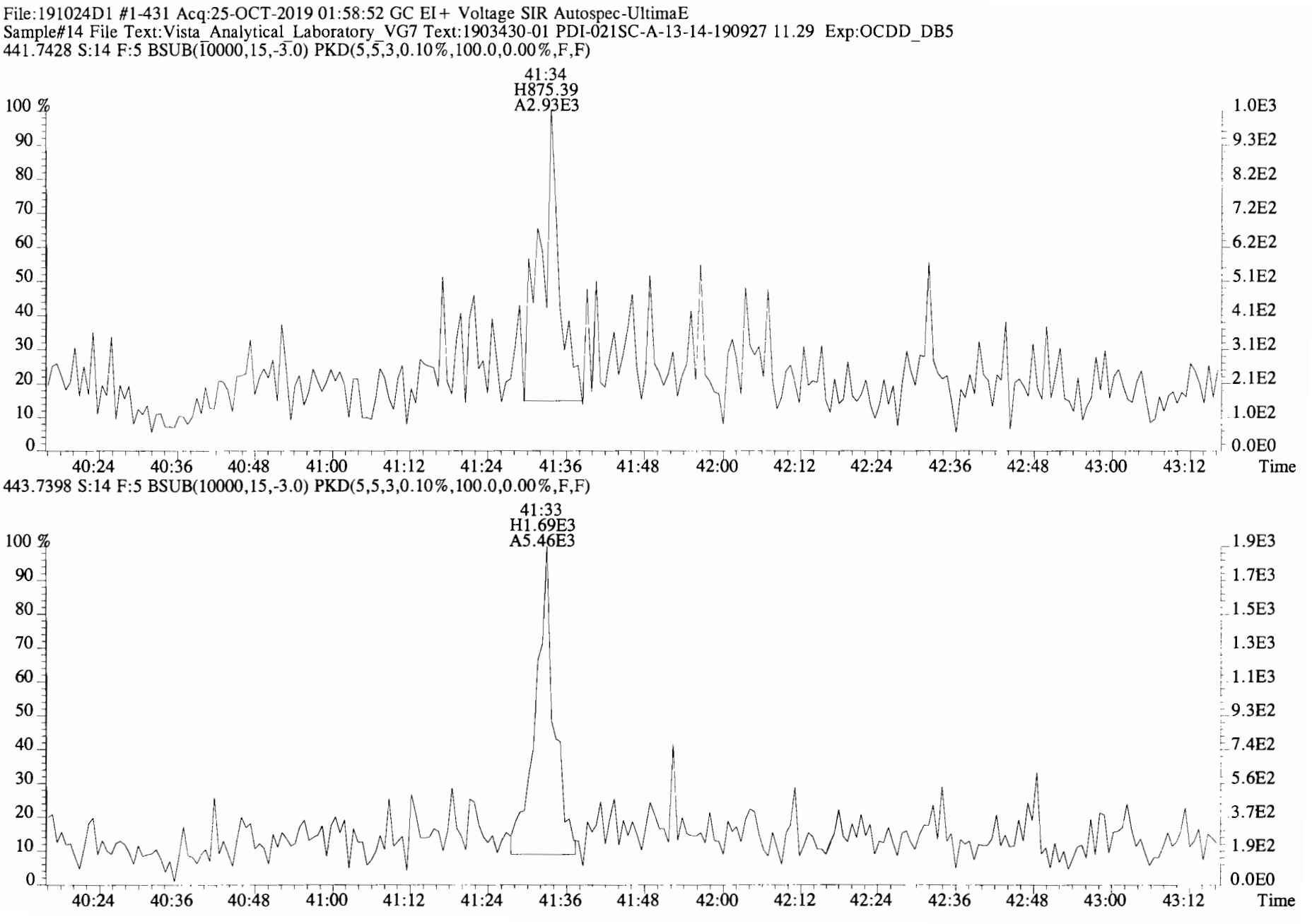
419.8220 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



479.7165 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)




File:191024D1 #1-431 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
441.7428 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:54 H948.16 A3.58E3
40:05 H318.82 A613.38
40:47 H273.81 A580.96
41:17 H446.98 A1.58E3
41:57 H484.73 A1.23E3
42:32 H506.40 A1.65E3
42:50 H300.25 A743.70
43:21 H427.44 A1.07E3
43:54 H370.04 A947.98
44:21 H420.44 A1.74E3
44:46 H379.00 A1.17E3
100 %
50
0
1.0E3
5.1E2
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
443.7398 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:33 H1.76E3 A6.61E3
40:15 H226.78 A825.78
40:42 H451.99 A986.09
41:18 H449.26 A806.29
41:52 H589.30 A783.13
42:34 H374.82 A928.37
42:48 H462.46 A964.81
43:02 H301.44 A798.66
43:39 H408.69 A1.26E3
43:58 H408.88 A1.56E3
44:36 H452.62 A1.89E3
100 %
50
0
1.9E3
9.3E2
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
453.7831 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:32 H6.10E5 A2.54E6
100 %
50
0
6.1E5
3.1E5
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
455.7801 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:32 H6.63E5 A2.81E6
100 %
50
0
6.6E5
3.3E5
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
513.6775 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:54 H1.16E3 A1.79E3
40:22 H288.54 A806.01
41:14 H342.80 A1.57E3
42:03 H380.77 A1.40E3
42:19 H454.58 A813.52
42:30 H208.08 A622.22
43:11 H530.46 A966.63
43:30 H393.26 A1.63E3
44:02 H500.13 A788.52
44:24 H252.33 A758.11
44:45 H215.07 A821.48
100 %
50
0
1.3E3
6.3E2
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time


File:191024D1 #1-431 Acq:25-OCT-2019 01:58:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-01 PDI-021SC-A-13-14-190927 11.29 Exp:OCDD_DB5
441.7428 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:34
H875.39
A2.93E3
100 %
90
80
70
60
50
40
30
20
10
0
1.0E3
9.3E2
8.2E2
7.2E2
6.2E2
5.1E2
4.1E2
3.1E2
2.1E2
1.0E2
0.0E0
40:24
40:36
40:48
41:00
41:12
41:24
41:36
41:48
42:00
42:12
42:24
42:36
42:48
43:00
43:12
Time
443.7398 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:33
H1.69E3
A5.46E3
100 %
90
80
70
60
50
40
30
20
10
0
1.9E3
1.7E3
1.5E3
1.3E3
1.1E3
9.3E2
7.4E2
5.6E2
3.7E2
1.9E2
0.0E0
40:24
40:36
40:48
41:00
41:12
41:24
41:36
41:48
42:00
42:12
42:24
42:36
42:48
43:00
43:12
Time

Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
2,3,7,8-TCDD	*	*	n	0.91	NotF	*		102	2.5	0.279
1,2,3,7,8-PeCDD	*	*	n	0.90	NotF	*		178	2.5	0.351
1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF	*		138	2.5	0.347
1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF	*		138	2.5	0.352
1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF	*		138	2.5	0.352
1,2,3,4,6,7,8-HpCDD	*	*	n	0.98	NotF	*		110	2.5	0.256
OCDD	1.00e+04	0.78	y	0.96	41:19	1.7809		*	2.5	*
2,3,7,8-TCDF	*	*	n	0.95	NotF	*		122	2.5	0.270
1,2,3,7,8-PeCDF	*	*	n	0.96	NotF	*		171	2.5	0.364
2,3,4,7,8-PeCDF	*	*	n	1.01	NotF	*		171	2.5	0.324
1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF	*		224	2.5	0.248
1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF	*		224	2.5	0.229
2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF	*		224	2.5	0.247
1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF	*		224	2.5	0.285
1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF	*		120	2.5	0.177
1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF	*		120	2.5	0.149
OCDF	*	*	n	0.95	NotF	*		137	2.5	0.326

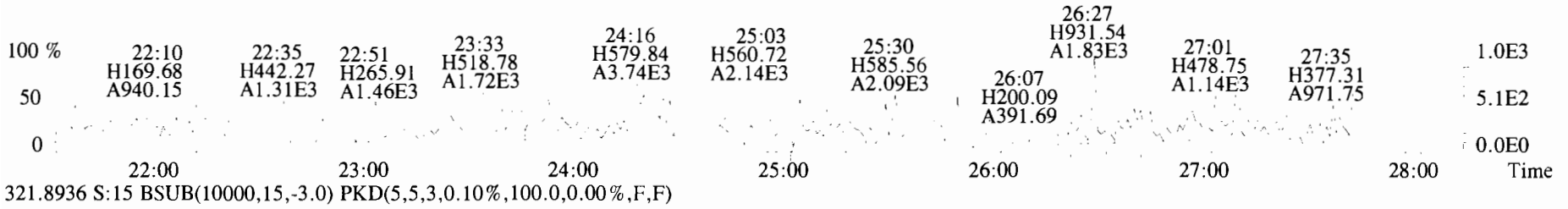
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		102	0.279
Total Penta-Dioxins	*	*		178	0.351
Total Hexa-Dioxins	*	*		138	0.352
Total Hepta-Dioxins	*	*		110	0.256
Total Tetra-Furans	*	*		122	0.270
Total Penta-Furans	0.0000	0.0000		171	0.343
Total Hexa-Furans	*	*		224	0.251
Total Hepta-Furans	*	*		120	0.164

								Rec	Qual
IS	13C-2,3,7,8-TCDD	1.26e+06	0.81	y	1.10	26:16	150.94	76.9	
IS	13C-1,2,3,7,8-PeCDD	1.28e+06	0.61	y	0.88	30:46	191.91	97.8	
IS	13C-1,2,3,4,7,8-HxCDD	1.24e+06	1.35	y	0.64	34:06	185.83	94.7	
IS	13C-1,2,3,6,7,8-HxCDD	1.37e+06	1.25	y	0.86	34:13	154.66	78.8	
IS	13C-1,2,3,7,8,9-HxCDD	1.40e+06	1.25	y	0.81	34:31	167.51	85.4	
IS	13C-1,2,3,4,6,7,8-HpCDD	1.26e+06	1.01	y	0.65	37:59	185.04	94.3	
IS	13C-OCDD	2.30e+06	0.90	y	0.58	41:19	381.81	97.3	
IS	13C-2,3,7,8-TCDF	1.70e+06	0.83	y	1.03	25:30	130.18	66.4	
IS	13C-1,2,3,7,8-PeCDF	1.87e+06	1.61	y	0.85	29:36	173.54	88.5	
IS	13C-2,3,4,7,8-PeCDF	1.83e+06	1.57	y	0.85	30:29	171.21	87.3	
IS	13C-1,2,3,4,7,8-HxCDF	1.66e+06	0.51	y	0.83	33:12	192.13	97.9	
IS	13C-1,2,3,6,7,8-HxCDF	1.93e+06	0.52	y	1.03	33:20	179.83	91.7	
IS	13C-2,3,4,6,7,8-HxCDF	1.87e+06	0.50	y	0.95	33:56	188.72	96.2	
IS	13C-1,2,3,7,8,9-HxCDF	1.71e+06	0.53	y	0.83	34:53	199.03	101	
IS	13C-1,2,3,4,6,7,8-HpCDF	1.61e+06	0.44	y	0.76	36:45	204.07	104	
IS	13C-1,2,3,4,7,8,9-HpCDF	1.34e+06	0.43	y	0.58	38:32	222.67	113	
IS	13C-OCDF	3.06e+06	0.91	y	0.69	41:32	427.36	109	
C/Up	37Cl-2,3,7,8-TCDD	5.90e+05			1.20	26:17	64.930	82.7	
RS/RT	13C-1,2,3,4-TCDD	1.49e+06	0.72	y	1.00	25:43	196.19		
RS	13C-1,2,3,4-TCDF	2.48e+06	0.81	y	1.00	24:17	196.19		
RS/RT	13C-1,2,3,4,6,9-HxCDF	2.04e+06	0.51	y	1.00	33:37	196.19		

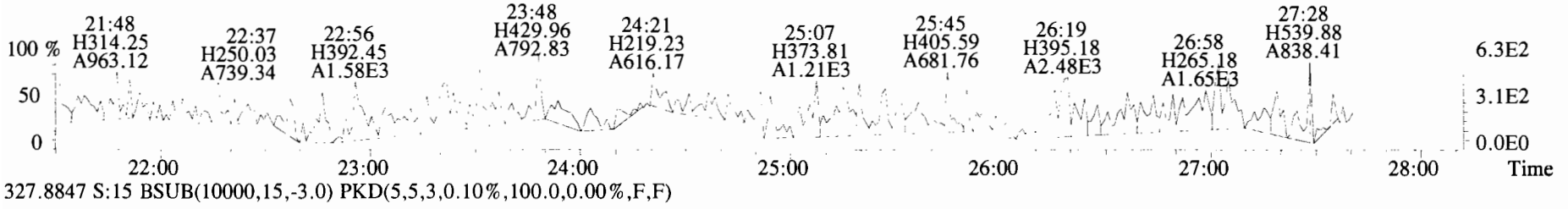
Integrations by Analyst: DB Date: 11/4/19

Reviewed by Analyst: CT Date: 11/05/19

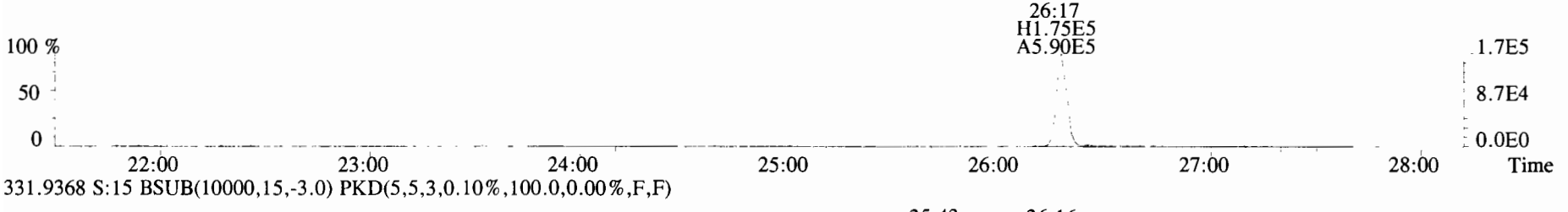
File:191024D1 #1-493 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



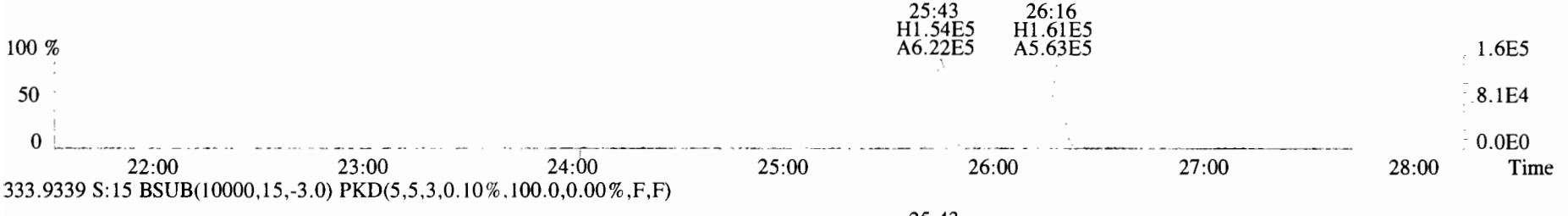
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



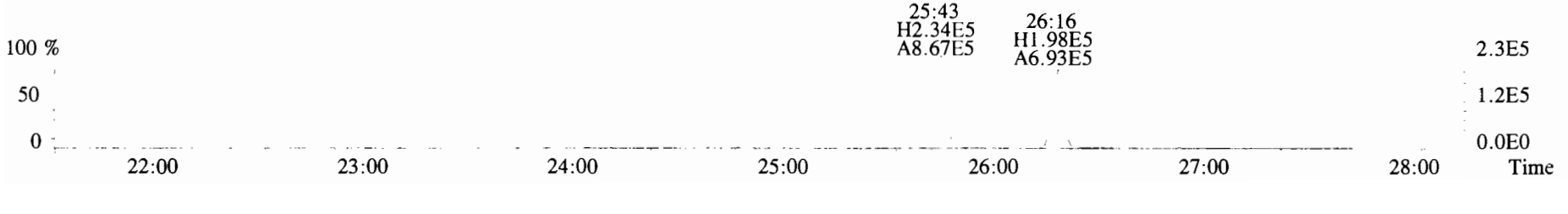
327.8847 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



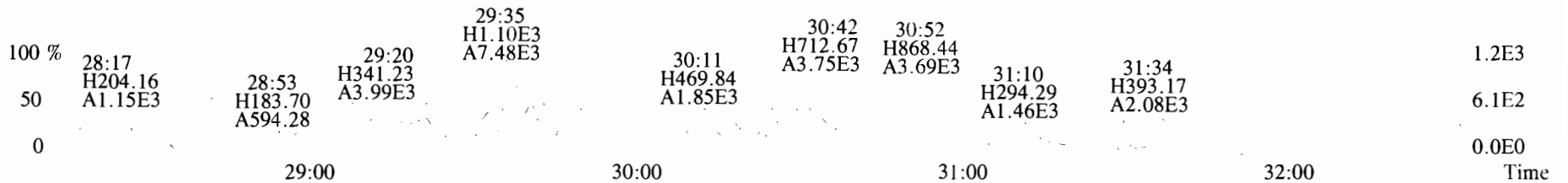
331.9368 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



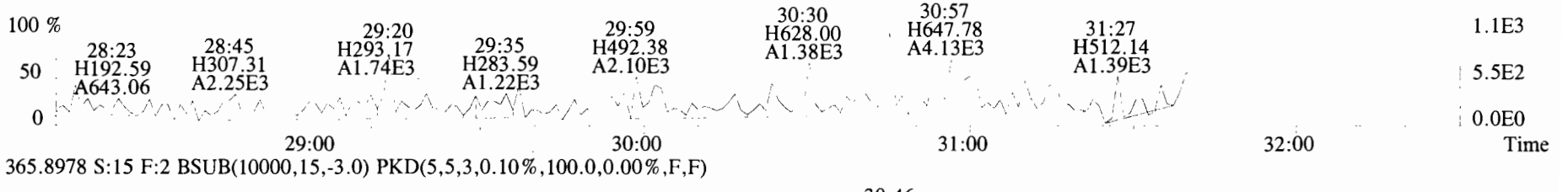
333.9339 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



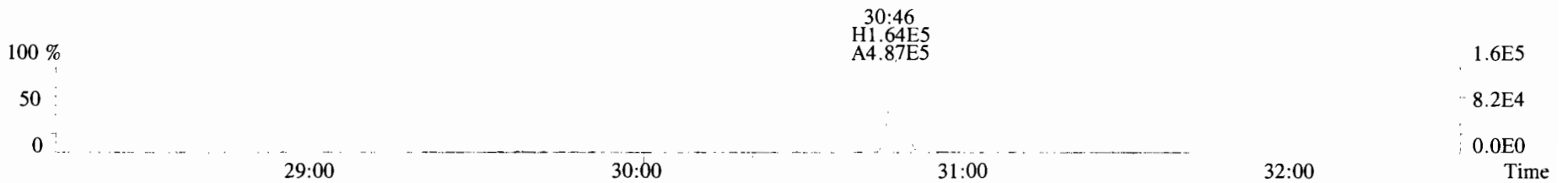
File:191024D1 #1-211 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
353.8576 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



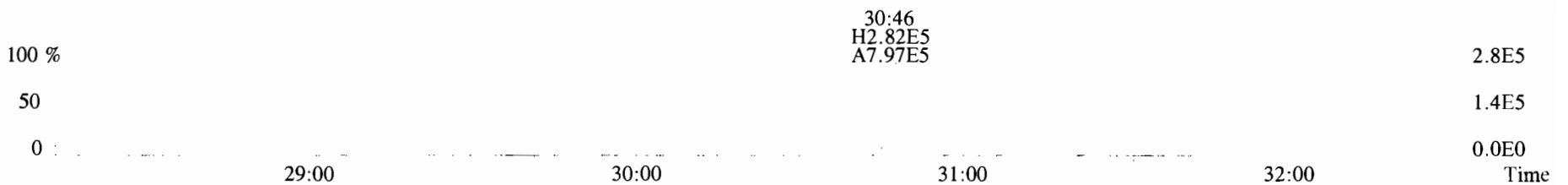
355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



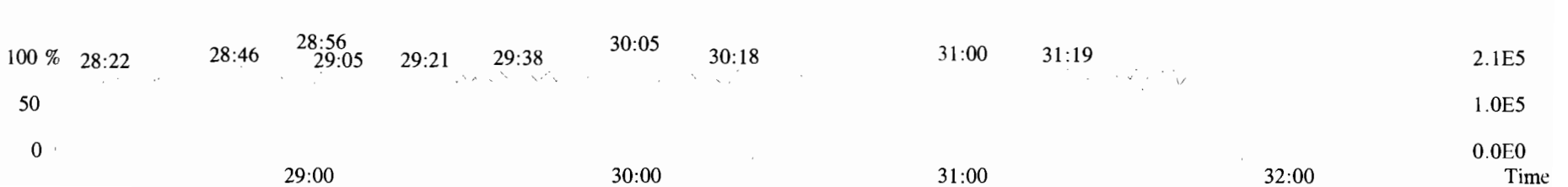
365.8978 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



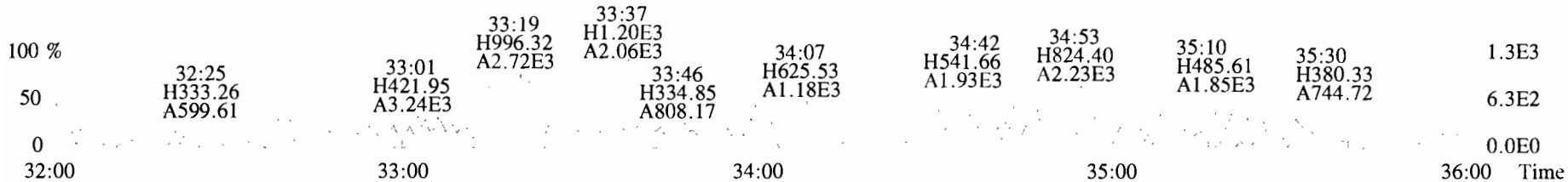
367.8949 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



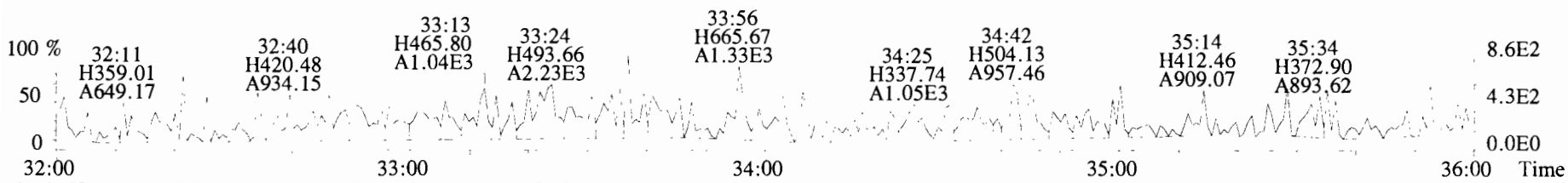
366.9792 S:15 F:2



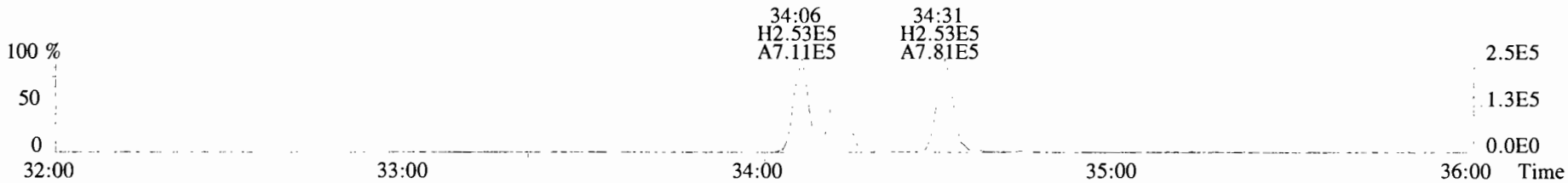
File:191024D1 #I-384 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



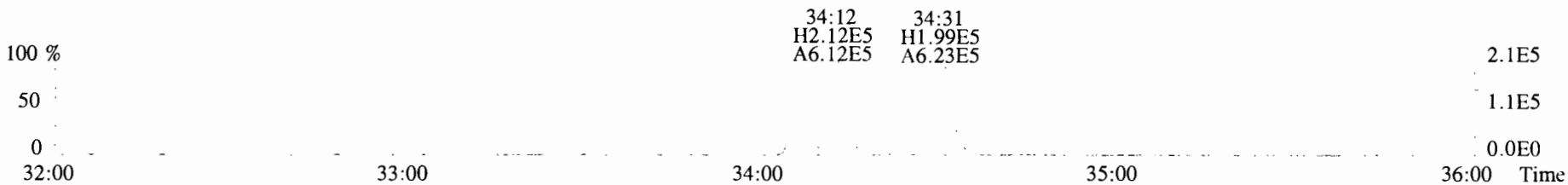
391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



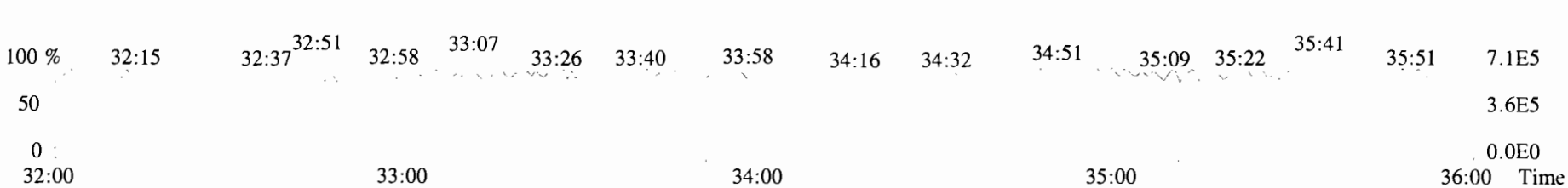
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



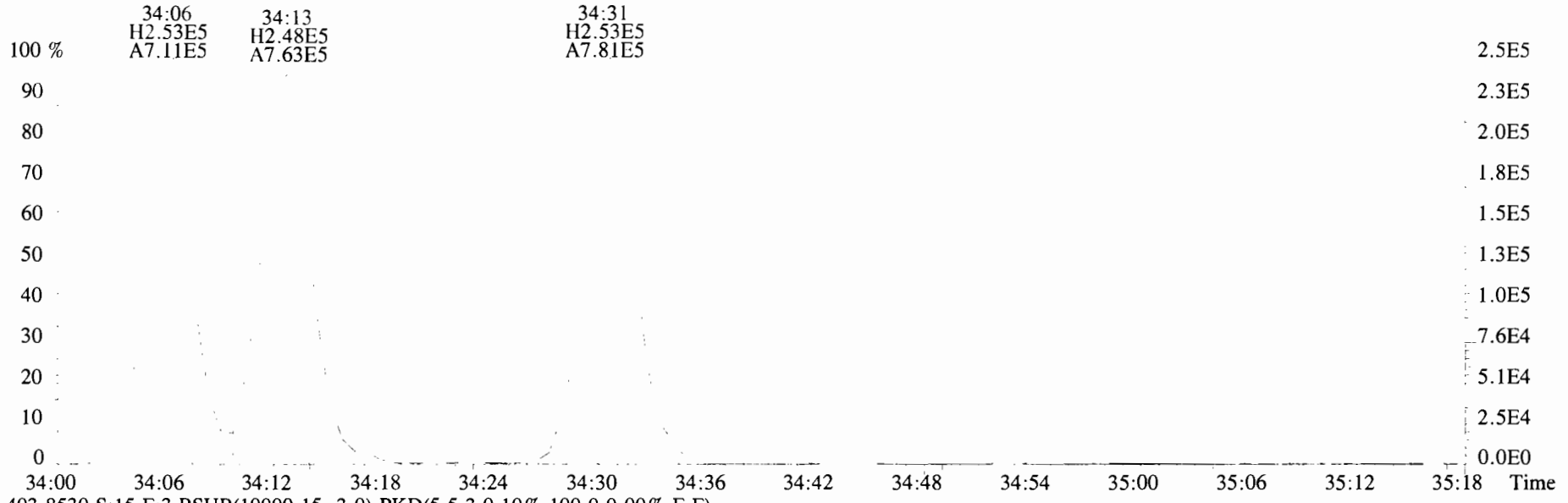
403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



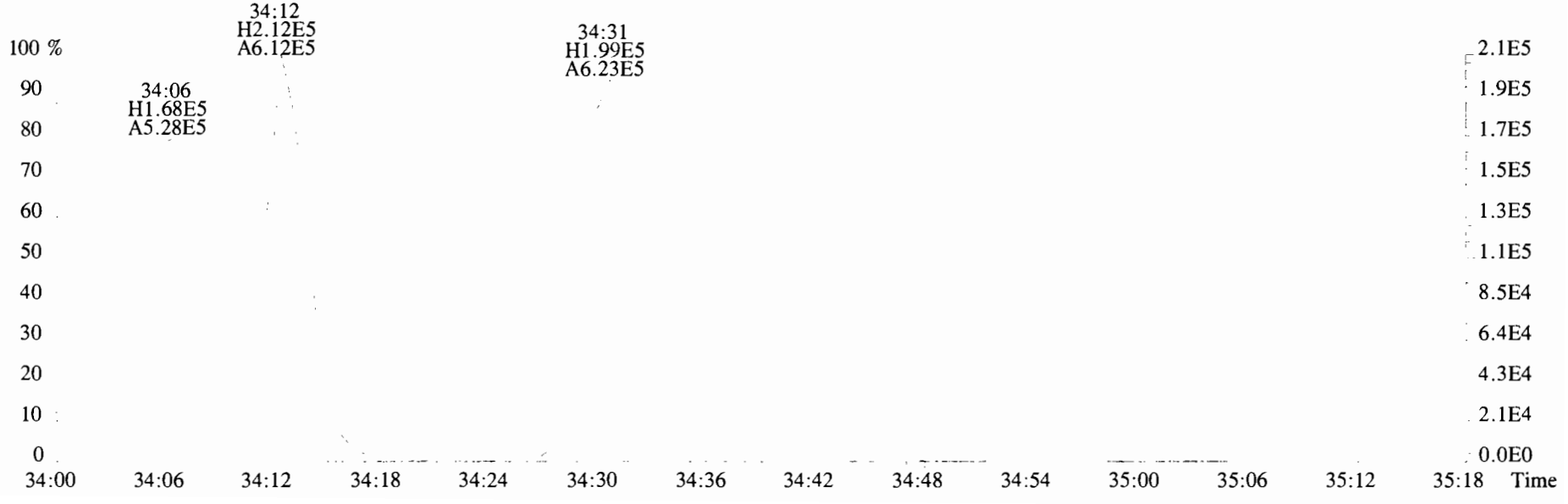
392.9760 S:15 F:3

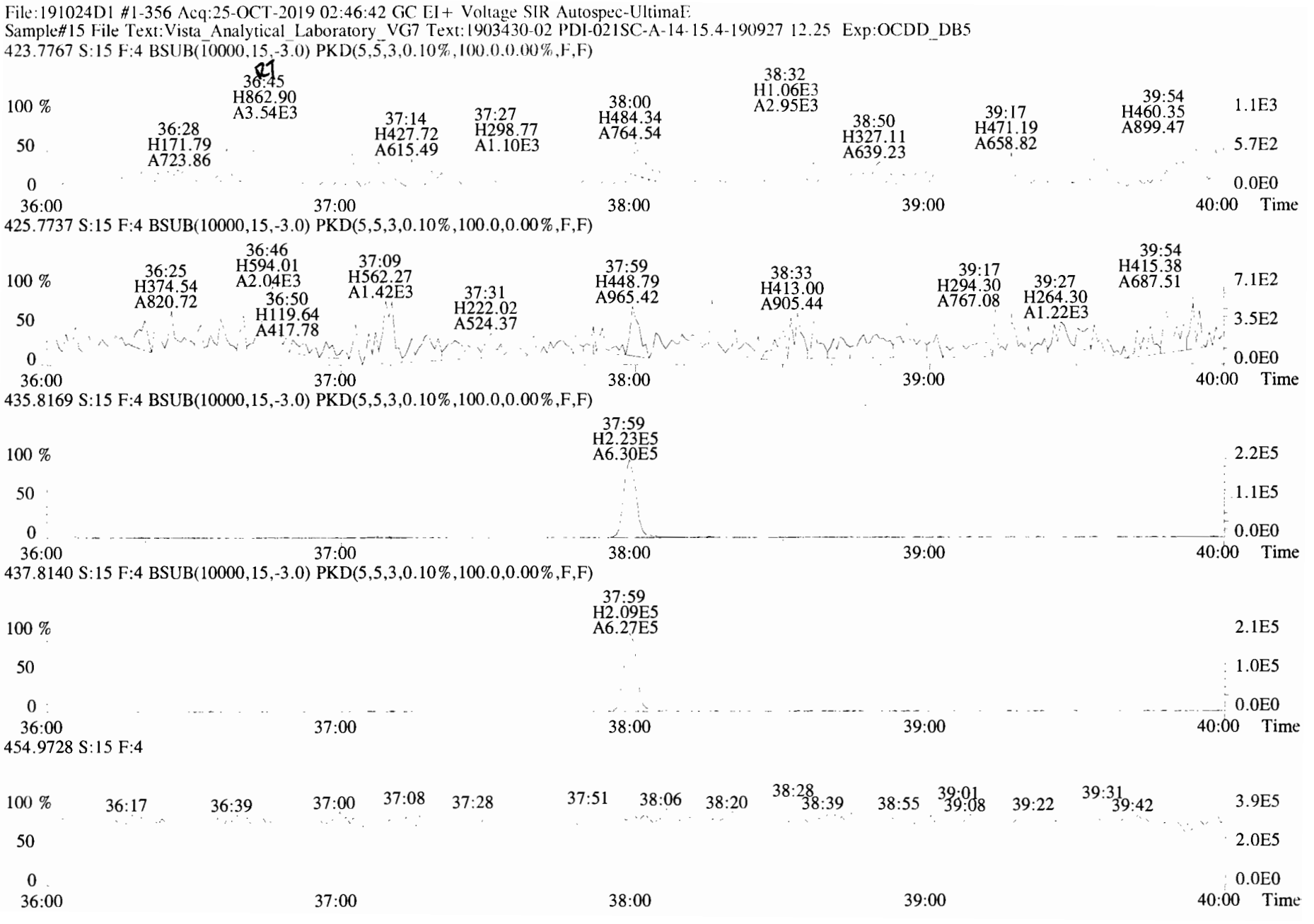


File:191024D1 #1-384 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

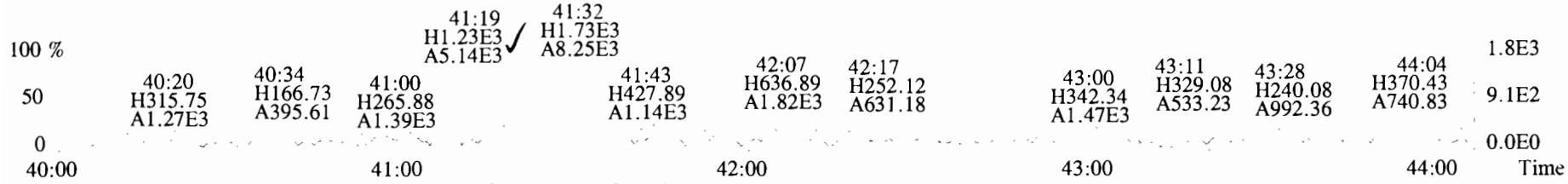


403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

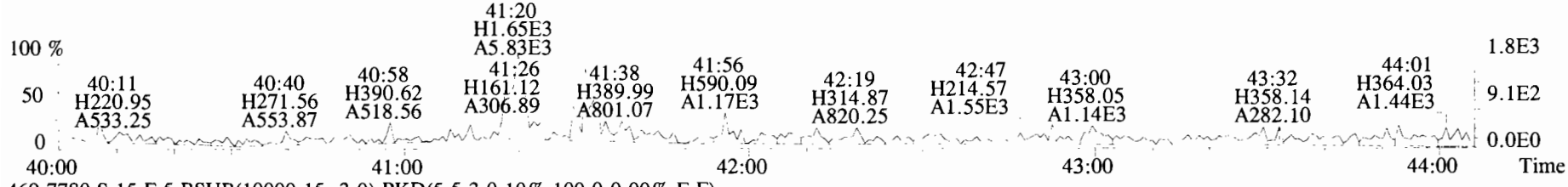



File:191024D1 #1-356 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:45 H862.90 A3.54E3
36:28 H171.79 A723.86
37:14 H427.72 A615.49
37:27 H298.77 A1.10E3
38:00 H484.34 A764.54
38:32 H1.06E3 A2.95E3
38:50 H327.11 A639.23
39:17 H471.19 A658.82
39:54 H460.35 A899.47
425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:46 H594.01 A2.04E3
36:25 H374.54 A820.72
36:50 H119.64 A417.78
37:09 H562.27 A1.42E3
37:31 H222.02 A524.37
37:59 H448.79 A965.42
38:33 H413.00 A905.44
39:17 H294.30 A767.08
39:27 H264.30 A1.22E3
39:54 H415.38 A687.51
435.8169 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:59 H2.23E5 A6.30E5
437.8140 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:59 H2.09E5 A6.27E5
454.9728 S:15 F:4
36:17
36:39
37:00
37:08
37:28
37:51
38:06
38:20
38:28
38:39
38:55
39:01
39:08
39:22
39:31
39:42
100 %
50
0
36:00
37:00
38:00
39:00
40:00
Time
1.1E3
5.7E2
0.0E0
7.1E2
3.5E2
2.2E5
1.1E5
2.1E5
1.0E5
3.9E5
2.0E5

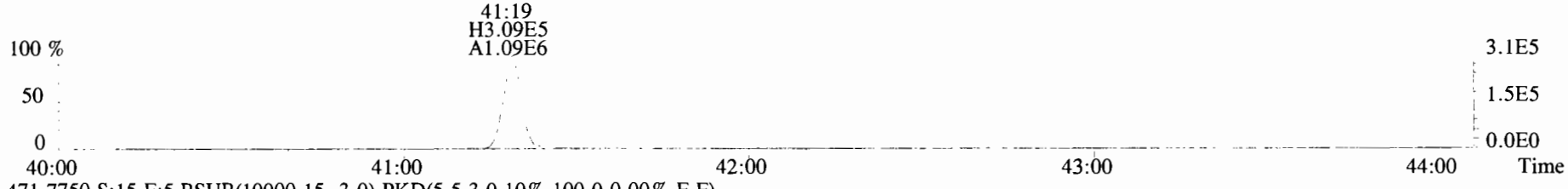
File:191024D1 #1-431 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
457.7377 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

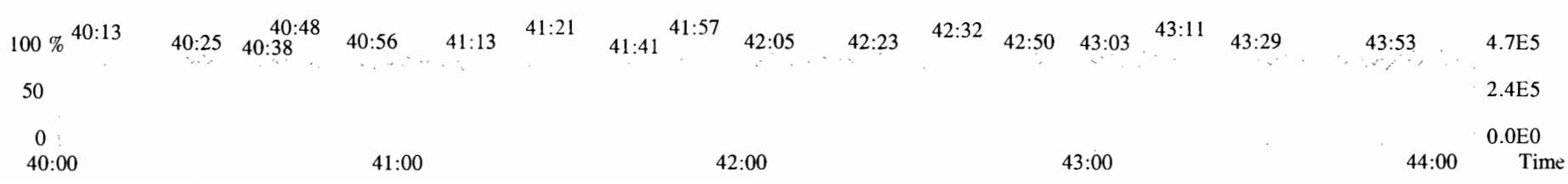


469.7780 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

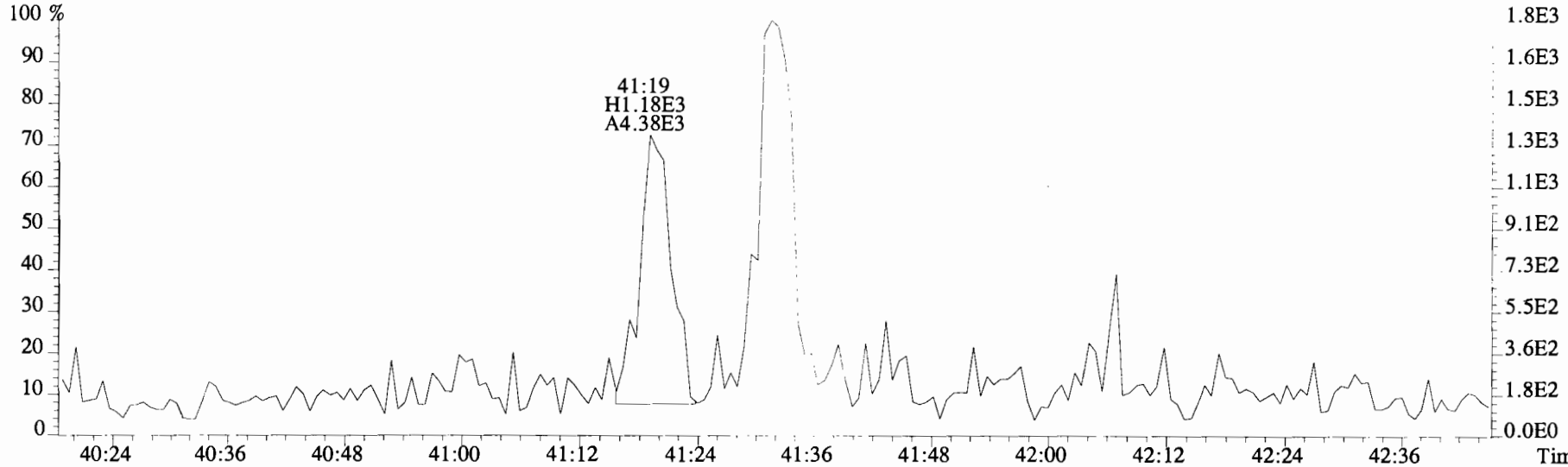


471.7750 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

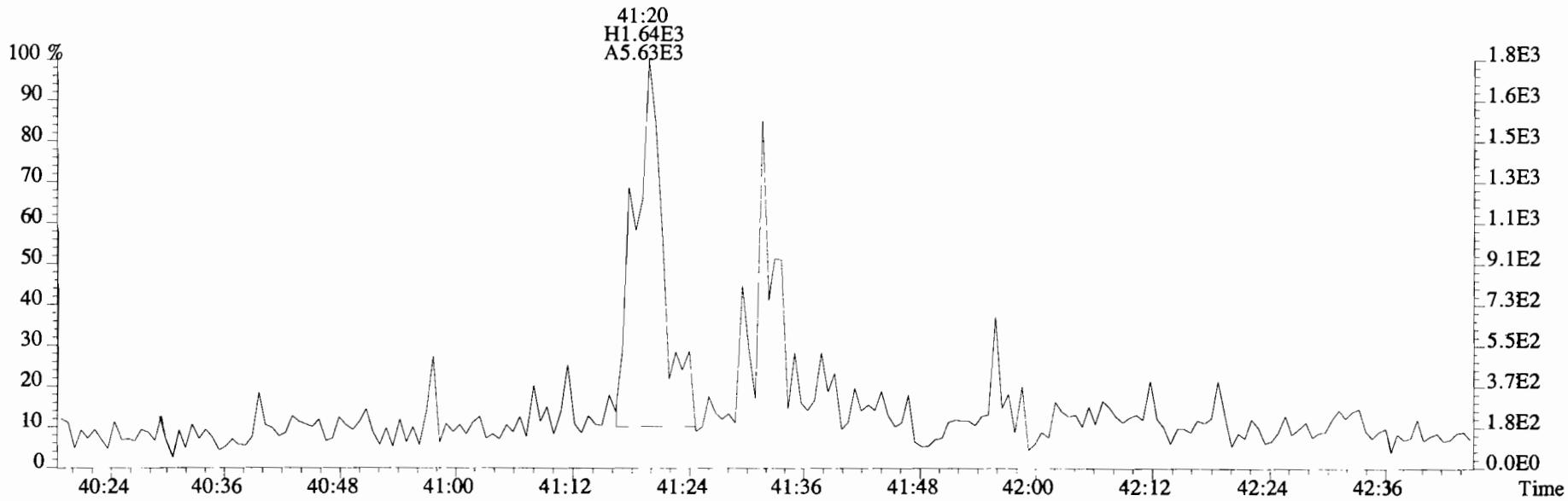
454.9728 S:15 F:5



File:191024D1 #1-431 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
457.7377 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

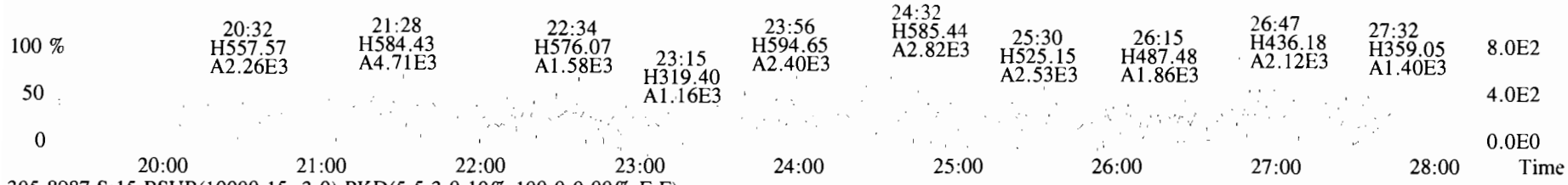


459.7348 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

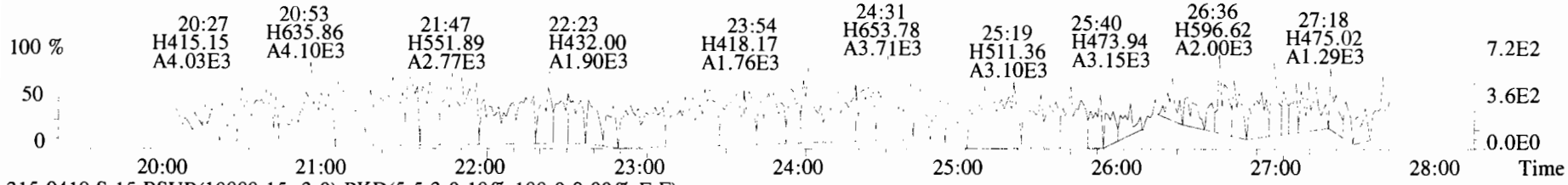


File:191024D1 #1-493 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5

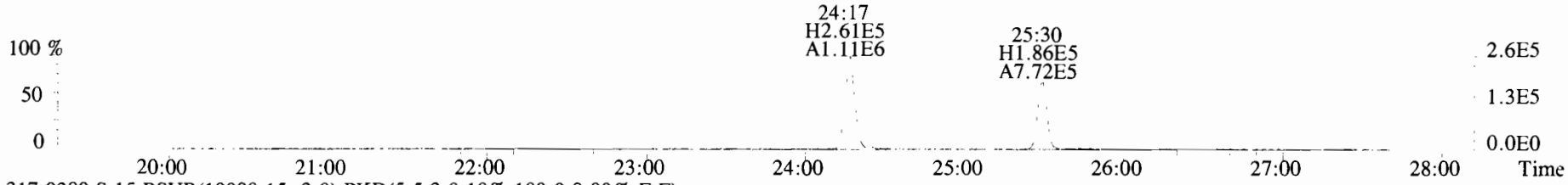
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



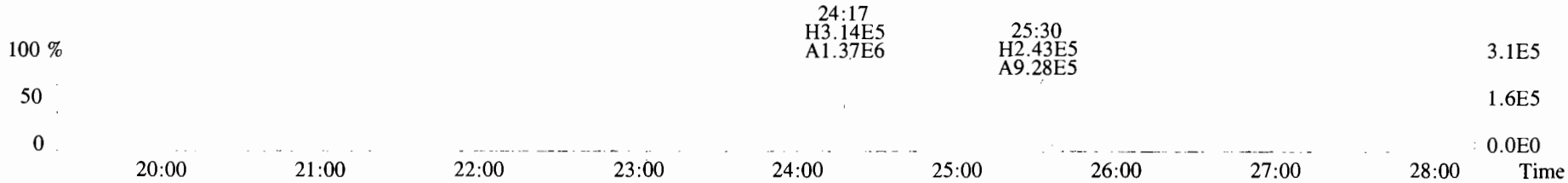
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



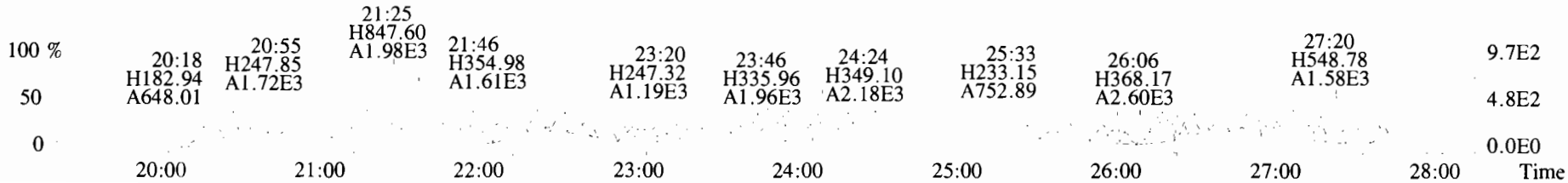
315.9419 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



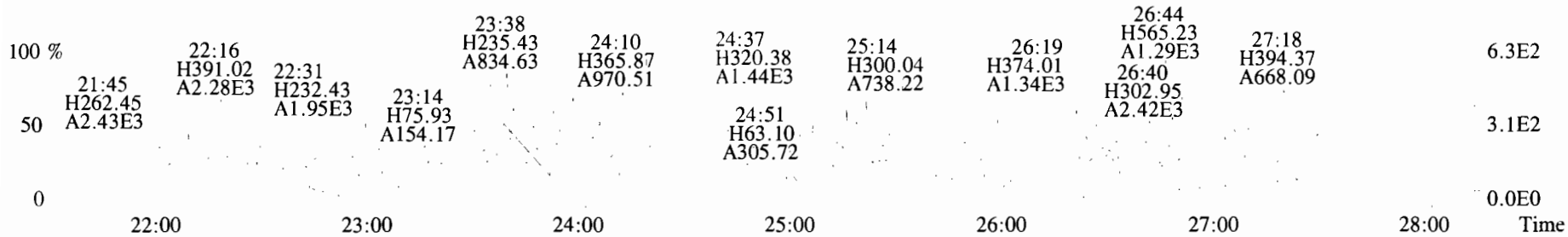
317.9389 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



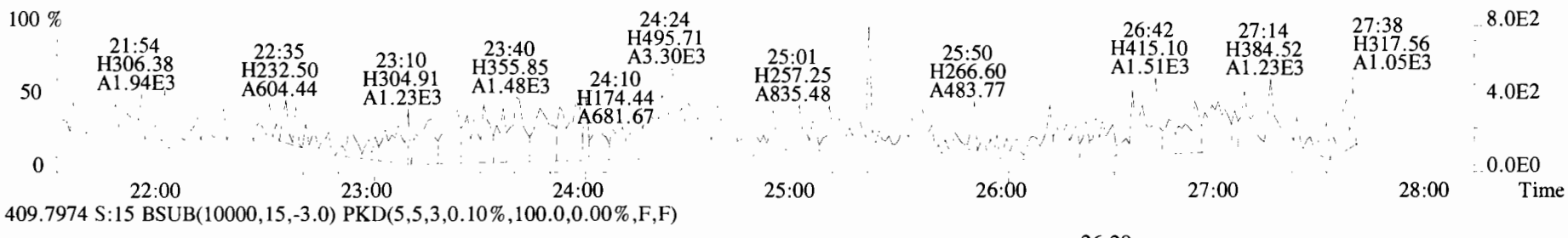
375.8364 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



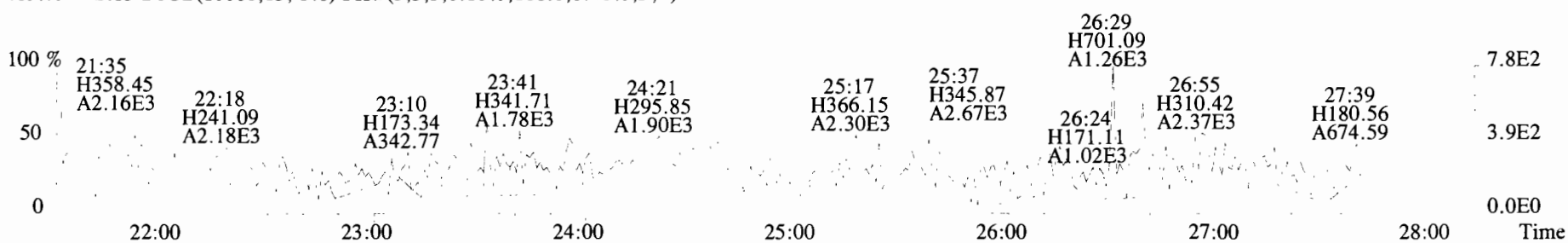
File:191024D1 #1-493 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
339.8597 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



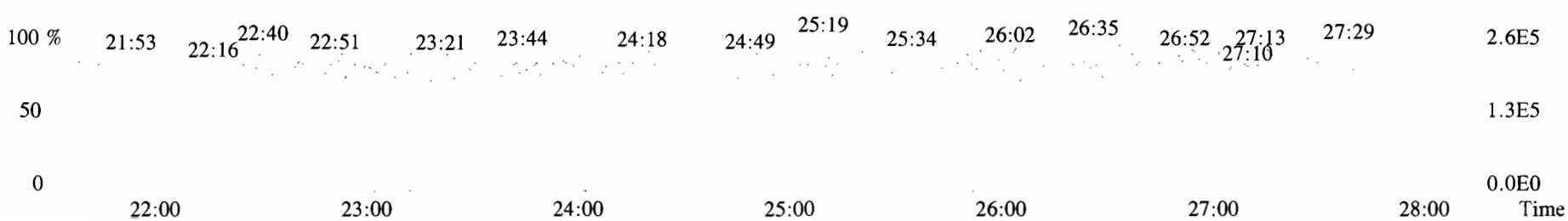
341.8568 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



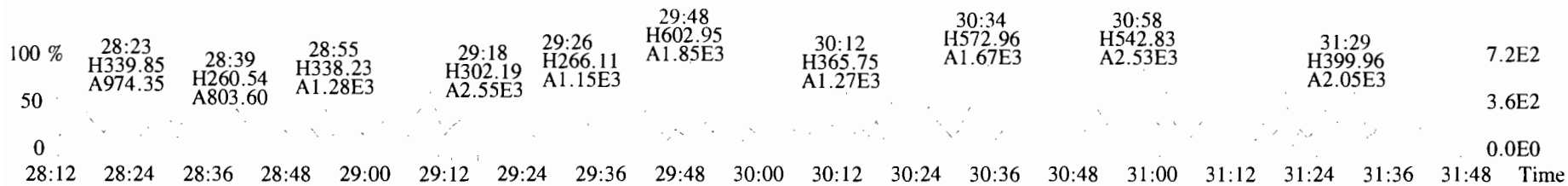
409.7974 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



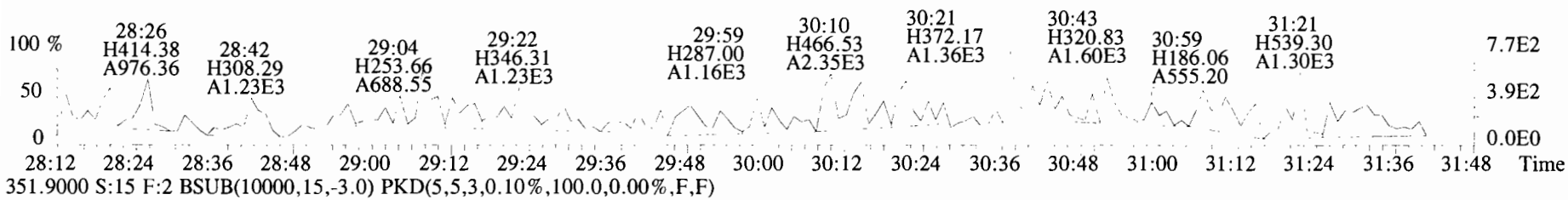
316.9824 S:15



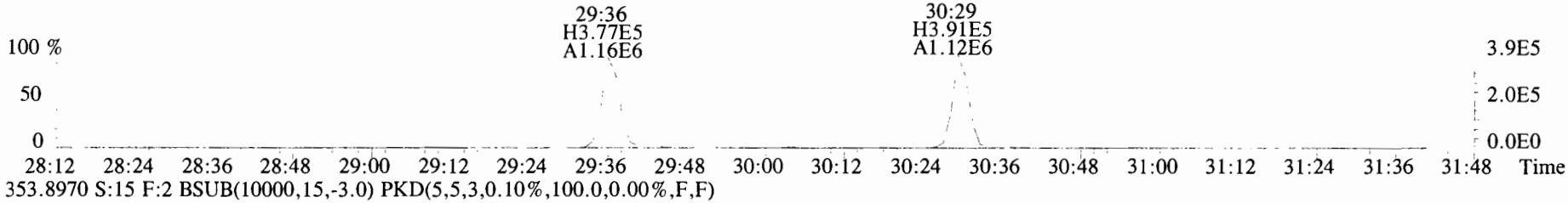
File:191024D1 #1-211 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



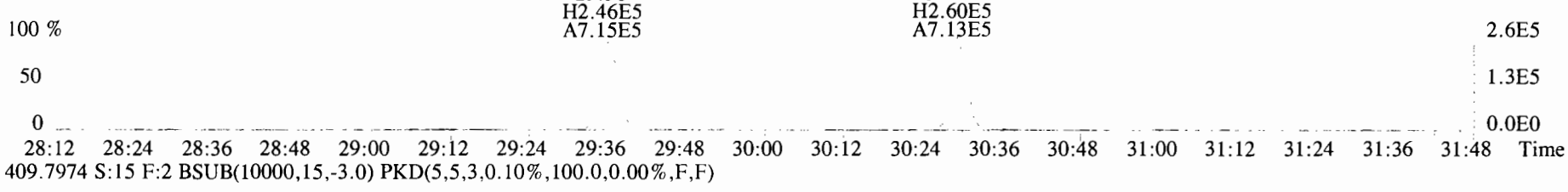
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



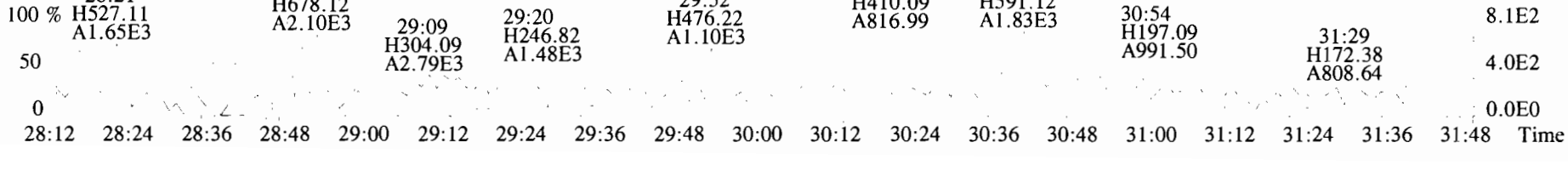
351.9000 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

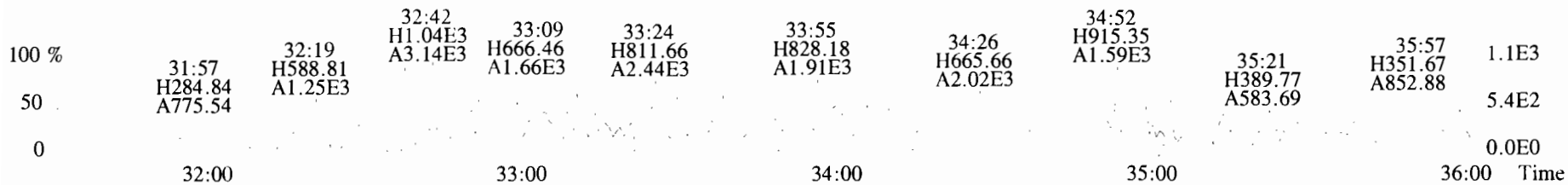


409.7974 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

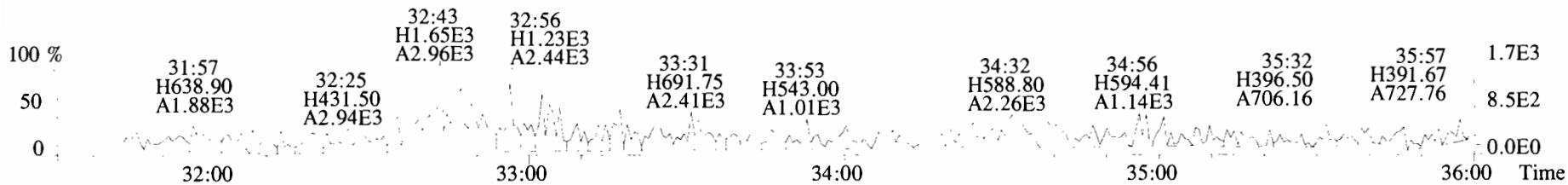


File:191024D1 #1-384 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5

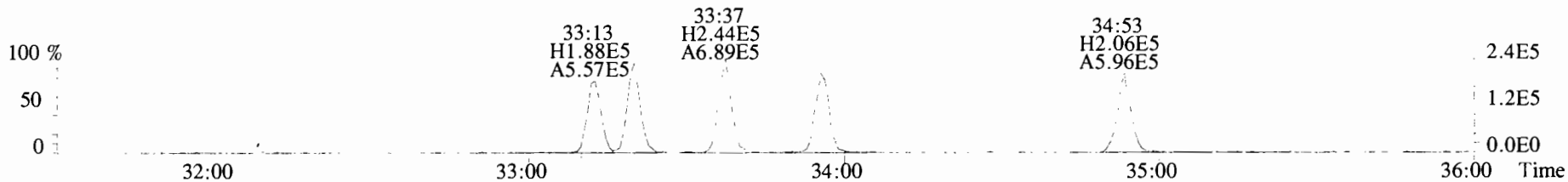
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



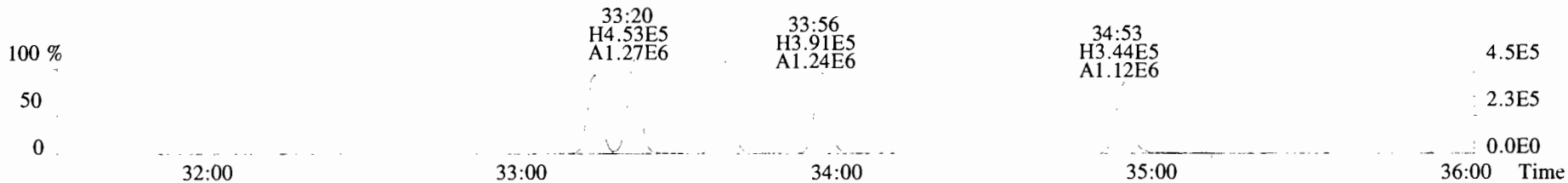
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



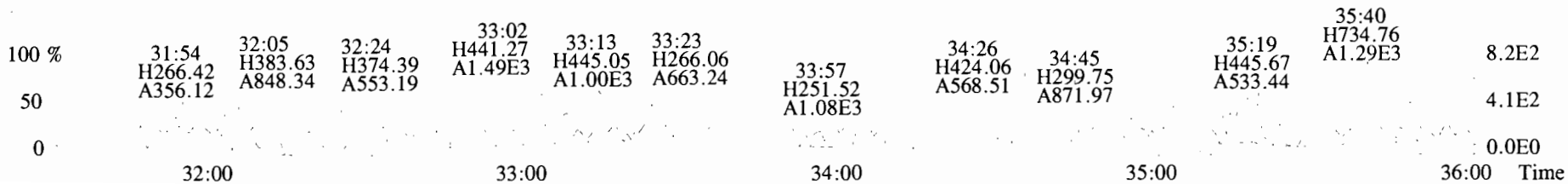
383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

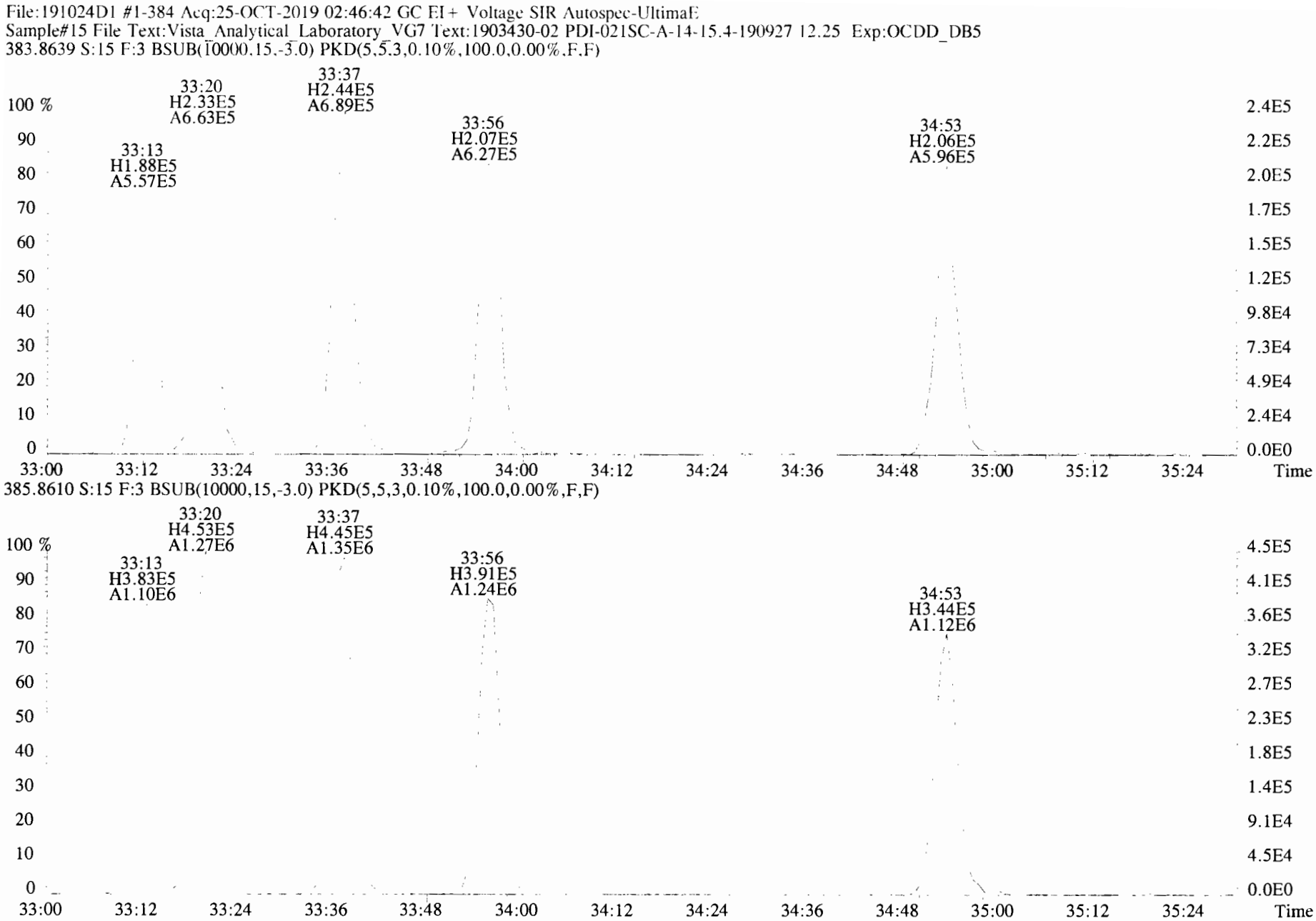


385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

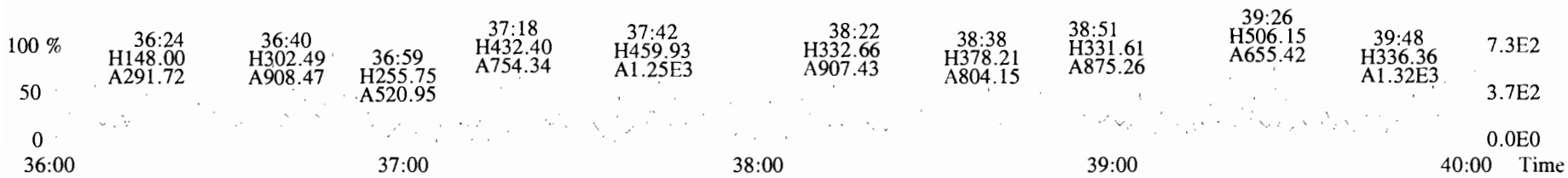


445.7555 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

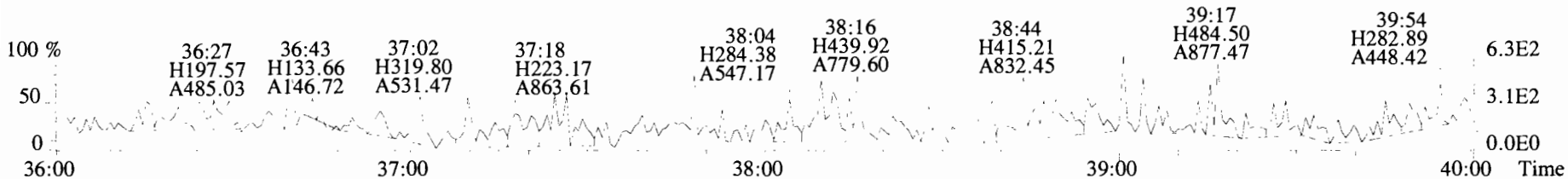



File:191024D1 #1-384 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:13 H1.88E5 A5.57E5
33:20 H2.33E5 A6.63E5
33:37 H2.44E5 A6.89E5
33:56 H2.07E5 A6.27E5
34:53 H2.06E5 A5.96E5
385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:13 H3.83E5 A1.10E6
33:20 H4.53E5 A1.27E6
33:37 H4.45E5 A1.35E6
33:56 H3.91E5 A1.24E6
34:53 H3.44E5 A1.12E6
100 %
90
80
70
60
50
40
30
20
10
0
2.4E5
2.2E5
2.0E5
1.7E5
1.5E5
1.2E5
9.8E4
7.3E4
4.9E4
2.4E4
0.0E0
4.5E5
4.1E5
3.6E5
3.2E5
2.7E5
2.3E5
1.8E5
1.4E5
9.1E4
4.5E4
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time

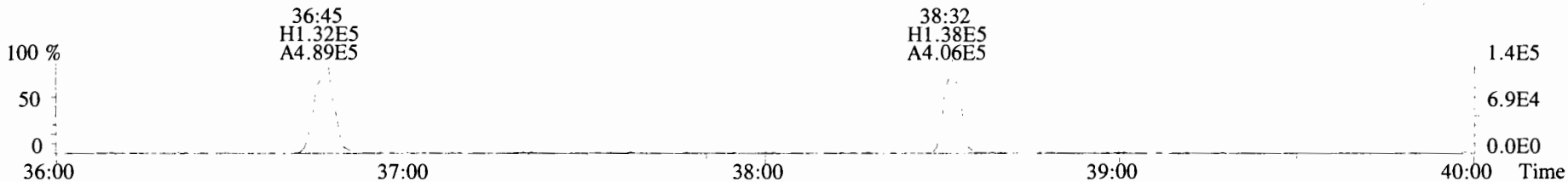
File:191024D1 #1-356 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



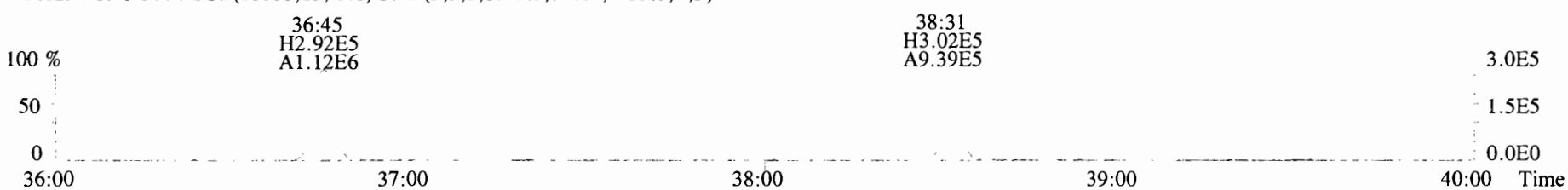
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



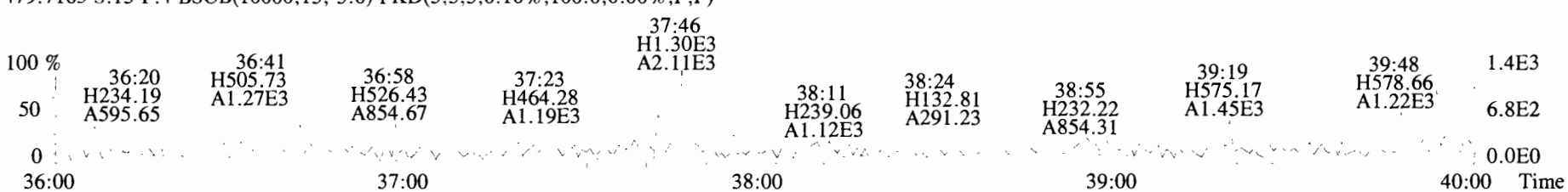
417.8253 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



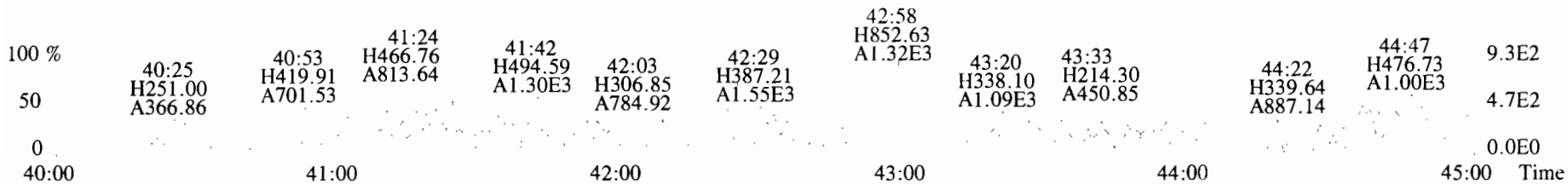
419.8220 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



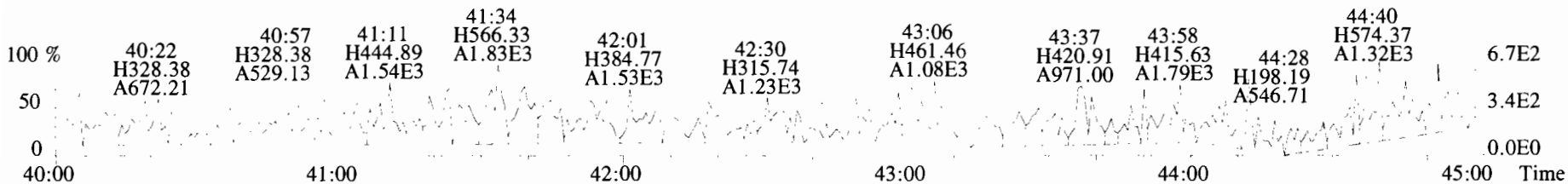
479.7165 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



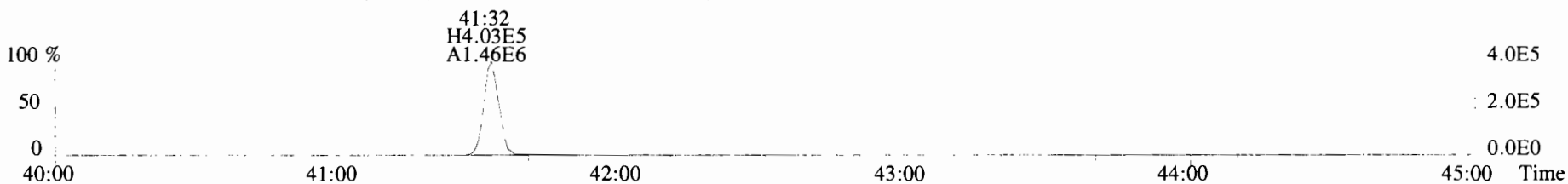
File:191024D1 #1-431 Acq:25-OCT-2019 02:46:42 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-02 PDI-021SC-A-14-15.4-190927 12.25 Exp:OCDD_DB5
441.7428 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

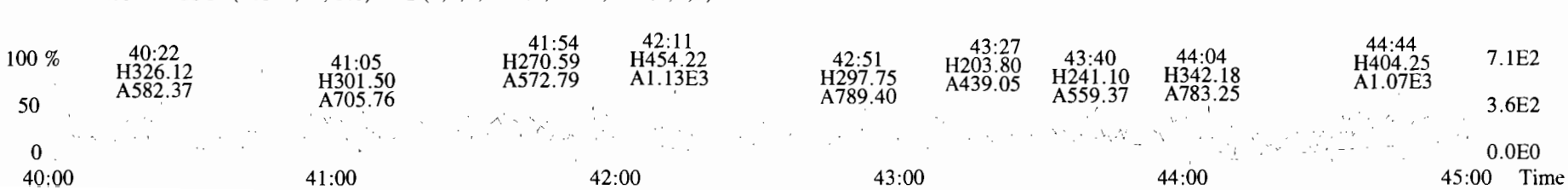


453.7831 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

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



Client ID: PDI-024SC-A-10-11-1909 Filename: 191016D1 S:5 Acq:16-OCT-19 14:03:28 ✓ ConCal: ST191016D1-1

Lab ID: 1903430-03 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.071 EndCAL: NA

	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	0.91	NotF	*		156	2.5	0.0667
	1,2,3,7,8-PeCDD	*	*	n	0.90	NotF	*		243	2.5	0.0962
	1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF	*		194	2.5	0.125
	1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF	*		194	2.5	0.135
	1,2,3,7,8,9-HxCDD	1.12e+04	1.16	y	0.96	34:29	0.34874		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	3.25e+04	1.00	y	0.98	37:56	1.2912		*	2.5	*
	OCDD	2.23e+05	0.92	y	0.96	41:13	9.7093		*	2.5	*
	2,3,7,8-TCDF	*	*	n	0.95	NotF	*		180	2.5	0.0517
	1,2,3,7,8-PeCDF	*	*	n	0.96	NotF	*		165	2.5	0.0619
	2,3,4,7,8-PeCDF	*	*	n	1.01	NotF	*		165	2.5	0.0583
	1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF	*		219	2.5	0.0621
	1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF	*		219	2.5	0.0623
	2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF	*		219	2.5	0.0660
	1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF	*		219	2.5	0.0867
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF	*		124	2.5	0.0558
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF	*		124	2.5	0.0497
	OCDF	*	*	n	0.95	NotF	*		156	2.5	0.120
IS	13C-2,3,7,8-TCDD	8.17e+06	0.73	y	1.10	26:18	191.73				
IS	13C-1,2,3,7,8-PeCDD	6.95e+06	0.63	y	0.88	30:46	202.80				
IS	13C-1,2,3,4,7,8-HxCDD	5.72e+06	1.23	y	0.64	34:05	206.23				
IS	13C-1,2,3,6,7,8-HxCDD	6.35e+06	1.21	y	0.86	34:11	171.78				
IS	13C-1,2,3,7,8,9-HxCDD	6.65e+06	1.21	y	0.81	34:29	190.85				
IS	13C-1,2,3,4,6,7,8-HpCDD	5.10e+06	1.02	y	0.65	37:55	180.57				
IS	13C-OCDD	9.52e+06	0.91	y	0.58	41:12	380.14				
IS	13C-2,3,7,8-TCDF	1.21e+07	0.77	y	1.03	25:31	177.30				
IS	13C-1,2,3,7,8-PeCDF	1.11e+07	1.59	y	0.85	29:35	196.60				
IS	13C-2,3,4,7,8-PeCDF	1.10e+07	1.64	y	0.85	30:29	197.55				
IS	13C-1,2,3,4,7,8-HxCDF	7.41e+06	0.49	y	0.83	33:11	206.19				
IS	13C-1,2,3,6,7,8-HxCDF	8.96e+06	0.52	y	1.03	33:19	200.43				
IS	13C-2,3,4,6,7,8-HxCDF	7.88e+06	0.51	y	0.95	33:54	191.28				
IS	13C-1,2,3,7,8,9-HxCDF	7.15e+06	0.51	y	0.83	34:52	199.79				
IS	13C-1,2,3,4,6,7,8-HpCDF	5.83e+06	0.41	y	0.76	36:43	178.20				
IS	13C-1,2,3,4,7,8,9-HpCDF	4.93e+06	0.43	y	0.58	38:27	196.38				
IS	13C-OCDF	1.10e+07	0.90	y	0.69	41:26	369.84				
C/Up	37Cl-2,3,7,8-TCDD	3.29e+06			1.20	26:19	70.626				
RS/RT	13C-1,2,3,4-TCDD	7.72e+06	0.76	y	1.00	25:44	198.59				
RS	13C-1,2,3,4-TCDF	1.31e+07	0.80	y	1.00	24:20	198.59				
RS/RT	13C-1,2,3,4,6,9-HxCDF	8.58e+06	0.52	y	1.00	33:36	198.59				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	0.159		*	*
Total Penta-Dioxins	0.163	0.163		*	*
Total Hexa-Dioxins	2.24	2.24		*	*
Total Hepta-Dioxins	3.45	3.45		*	*
Total Tetra-Furans	*	*		180	0.0517
Total Penta-Furans	0.0000	0.0000		165	0.0601
Total Hexa-Furans	*	*		219	0.0686
Total Hepta-Furans	*	*		124	0.0530

	Rec	Qual
IS	96.5	
IS	102	
IS	104	
IS	86.5	
IS	96.1	
IS	90.9	
IS	95.7	
IS	89.3	
IS	99.0	
IS	99.5	
IS	104	
IS	101	
IS	96.3	
IS	101	
IS	89.7	
IS	98.9	
IS	93.1	
C/Up	88.9	

Integrations by Analyst: DB Date: 10/31/19

Reviewed by Analyst: CT Date: 11/04/19

Totals class: TCDD EMPC Entry #: 19

Run: 10 File: 191016D1 S: 5 I: 1 F: 1
Acquired: 16-OCT-19 14:03:28 Processed: 17-OCT-19 09:18:53

Total Concentration: 0.15853 Unnamed Concentration: 0.159

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
24:27	4.207e+03	3.334e+03	1.26	n	5.901e+03	0.15853	

Totals class: PeCDD EMPC Entry #: 21

Run: 10 File: 191016D1 S: 5 I: 1 F: 2
Acquired: 16-OCT-19 14:03:28 Processed: 17-OCT-19 09:18:53

Total Concentration: 0.16339 Unnamed Concentration: 0.163

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
29:10	2.097e+03	3.065e+03	0.68	y	5.162e+03	0.16339	

Totals class: HxCDD EMPC Entry #: 23

Run: 10 File: 191016D1 S: 5 I: 1 F: 3
Acquired: 16-OCT-19 14:03:28 Processed: 17-OCT-19 09:18:53

Total Concentration: 2.2412 Unnamed Concentration: 1.892

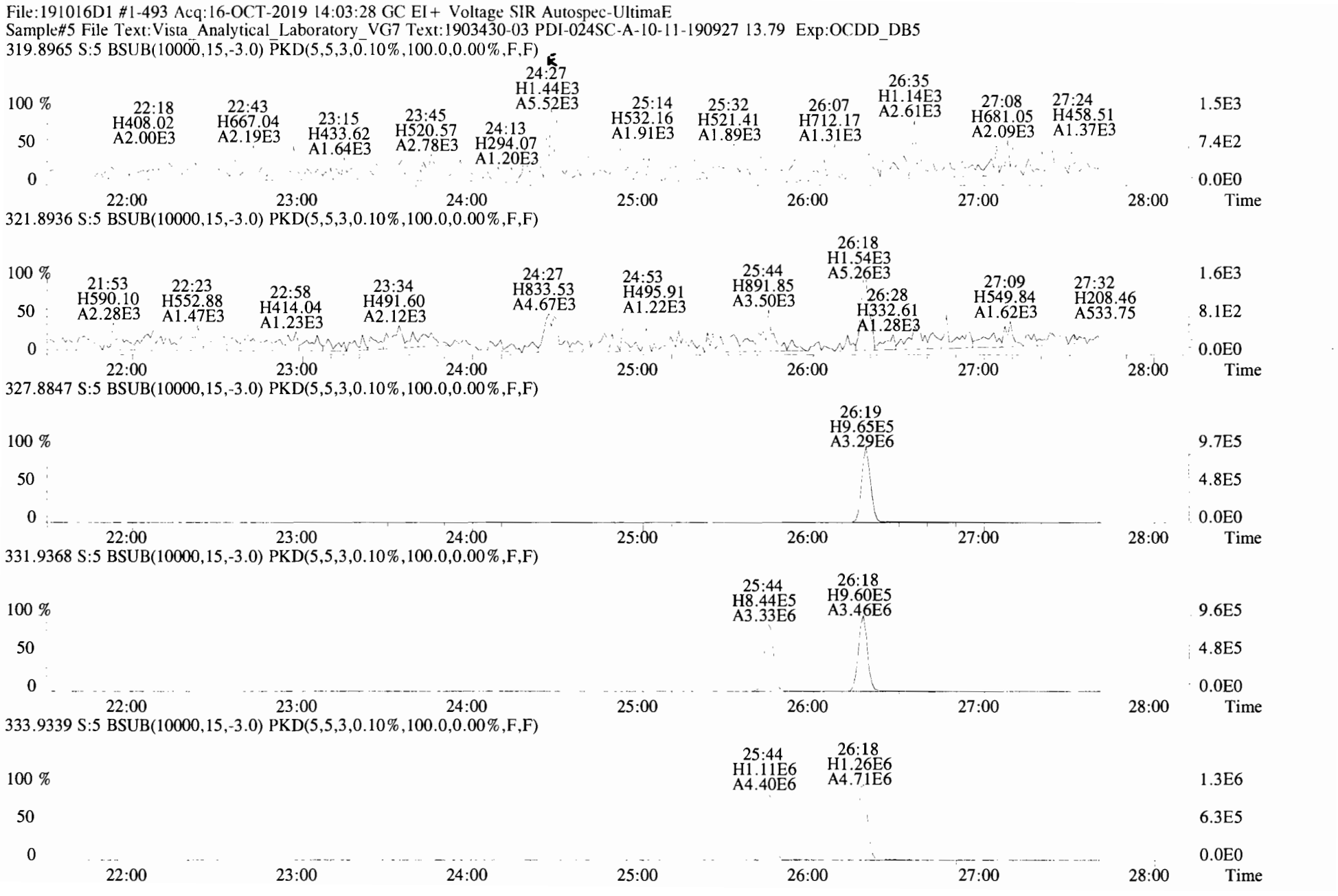
RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
32:33	1.847e+04	1.565e+04	1.18 y	3.412e+04	1.0945	
33:22	1.399e+04	1.088e+04	1.29 y	2.488e+04	0.79800	
34:29	6.032e+03	5.199e+03	1.16 y	1.123e+04	0.34874	1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Entry #: 25

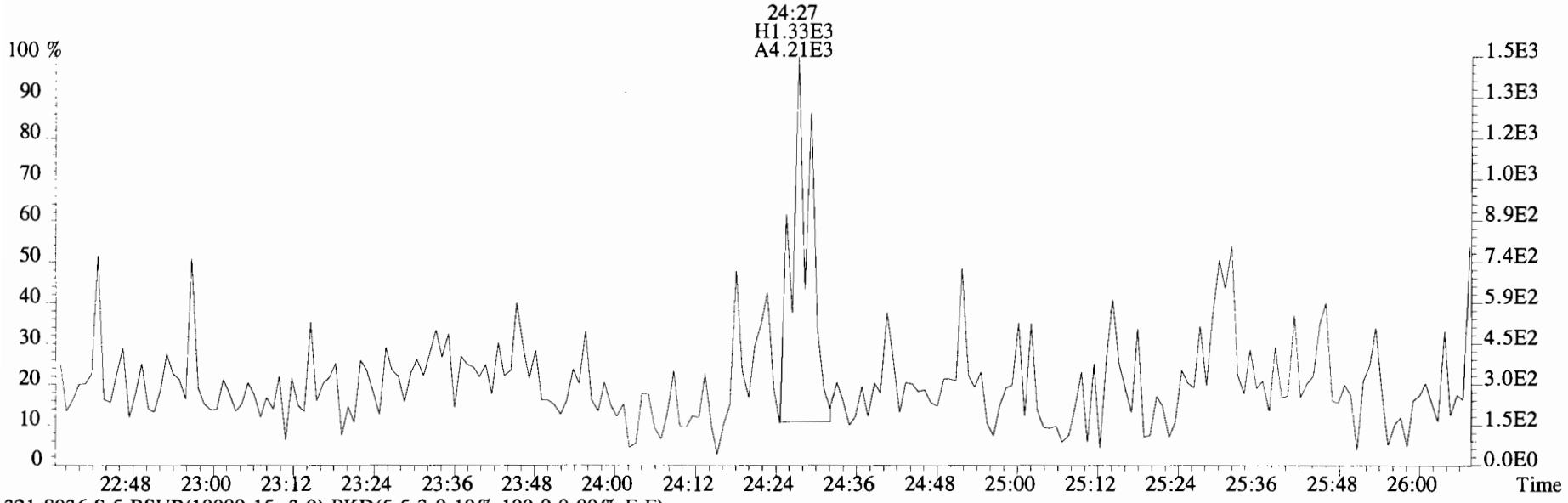
Run: 10 File: 191016D1 S: 5 I: 1 F: 4
Acquired: 16-OCT-19 14:03:28 Processed: 17-OCT-19 09:18:53

Total Concentration: 3.4466 Unnamed Concentration: 2.155

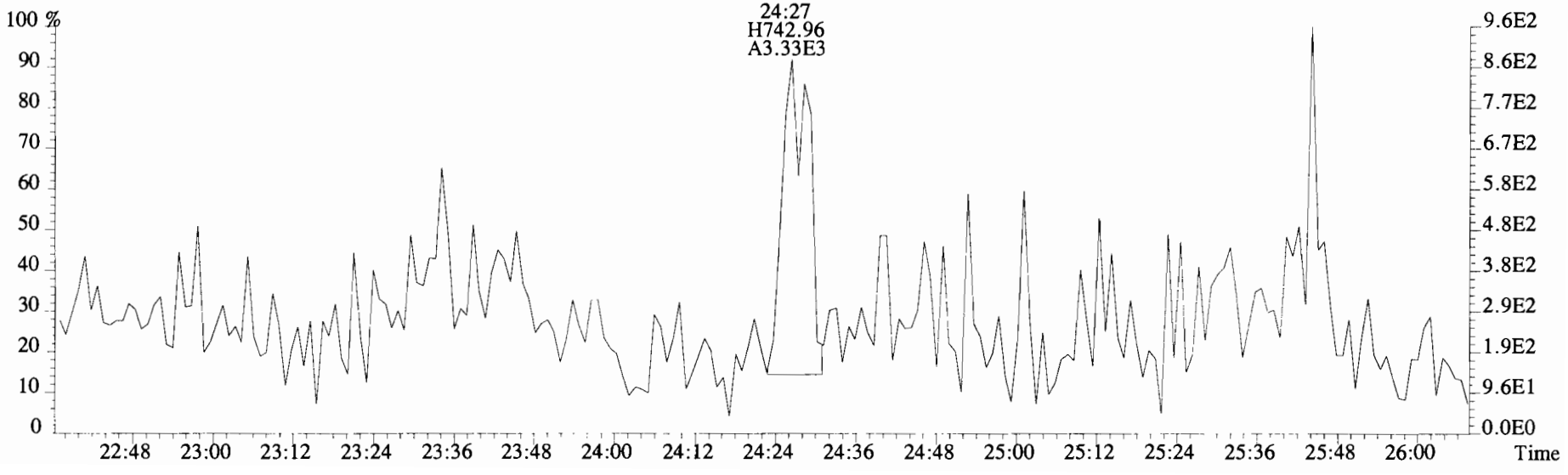
RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:06	2.845e+04	2.580e+04	1.10	y	5.424e+04	2.1555	
37:56	1.627e+04	1.623e+04	1.00	y	3.249e+04	1.2912	1,2,3,4,6,7,8-HpCDD

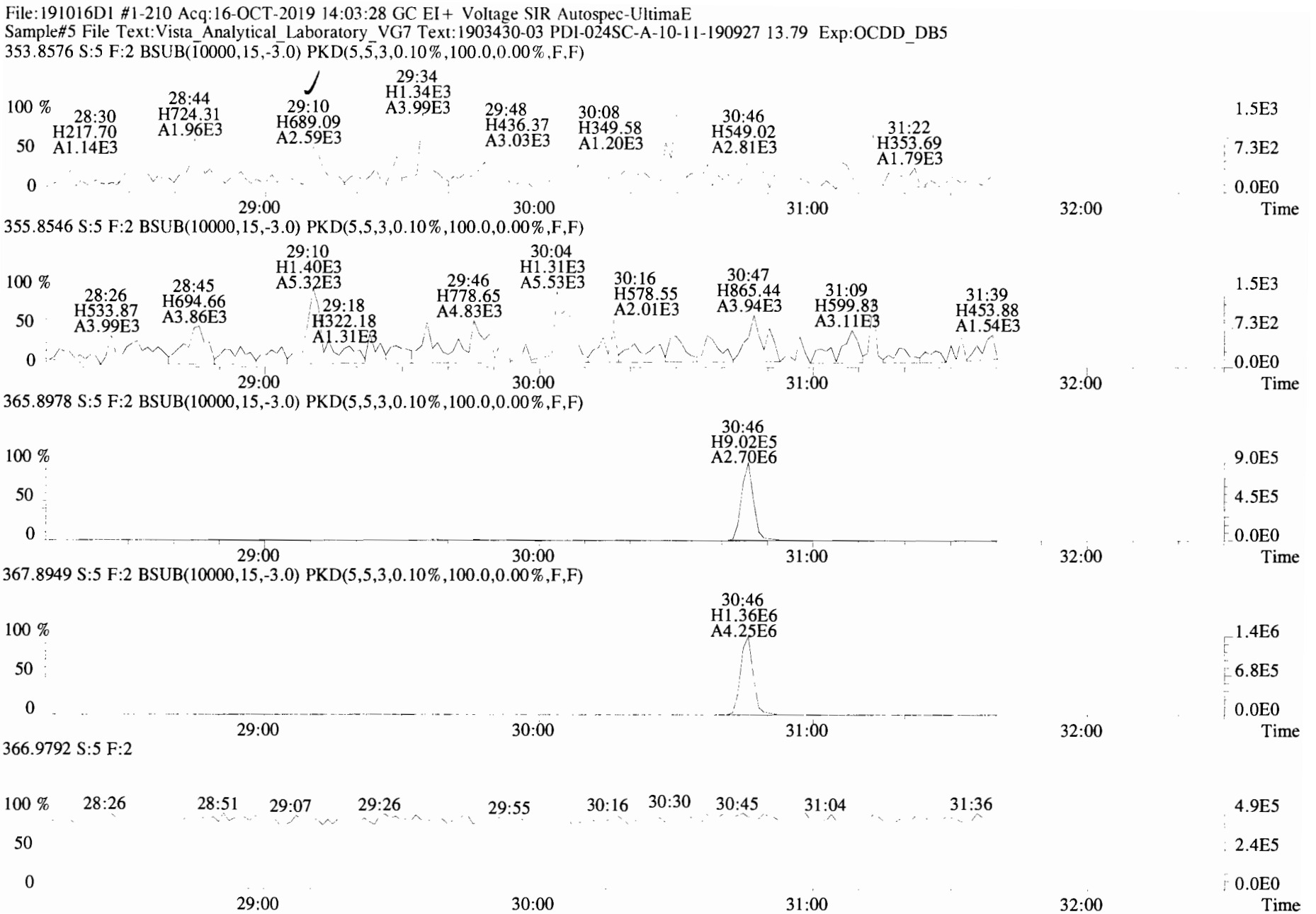

File:191016D1 #1-493 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:18 H408.02 A2.00E3
22:43 H667.04 A2.19E3
23:15 H433.62 A1.64E3
23:45 H520.57 A2.78E3
24:13 H294.07 A1.20E3
24:27 H1.44E3 A5.52E3
25:14 H532.16 A1.91E3
25:32 H521.41 A1.89E3
26:07 H712.17 A1.31E3
26:35 H1.14E3 A2.61E3
27:08 H681.05 A2.09E3
27:24 H458.51 A1.37E3
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:53 H590.10 A2.28E3
22:23 H552.88 A1.47E3
22:58 H414.04 A1.23E3
23:34 H491.60 A2.12E3
24:27 H833.53 A4.67E3
24:53 H495.91 A1.22E3
25:44 H891.85 A3.50E3
26:18 H1.54E3 A5.26E3
26:28 H332.61 A1.28E3
27:09 H549.84 A1.62E3
27:32 H208.46 A533.75
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:19 H9.65E5 A3.29E6
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:44 H8.44E5 A3.33E6
26:18 H9.60E5 A3.46E6
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:44 H1.11E6 A4.40E6
26:18 H1.26E6 A4.71E6
100 %
50
0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
1.5E3
7.4E2
0.0E0
1.6E3
8.1E2
0.0E0
9.7E5
4.8E5
0.0E0
9.6E5
4.8E5
0.0E0
1.3E6
6.3E5
0.0E0

File:191016D1 #1-493 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

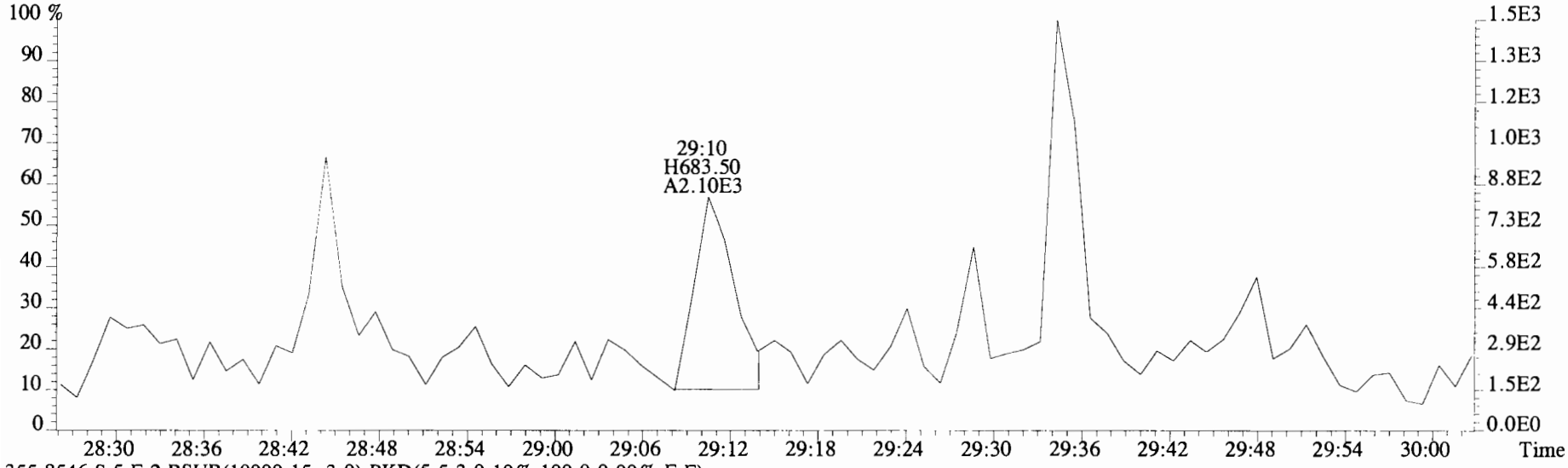


321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

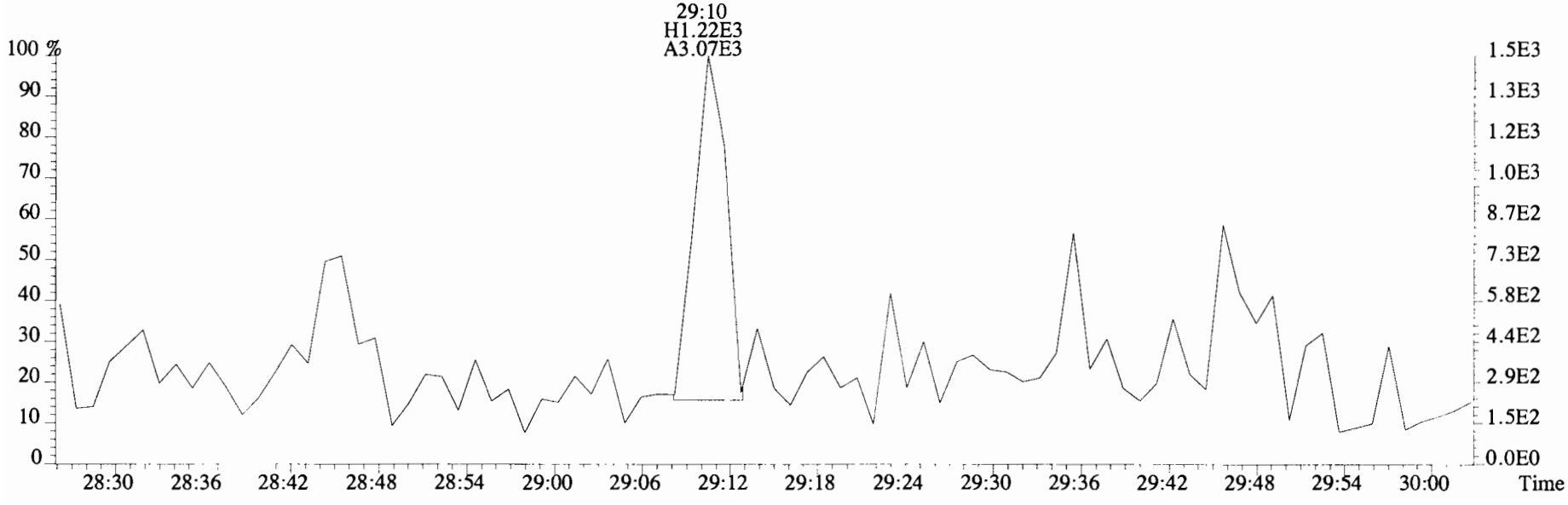


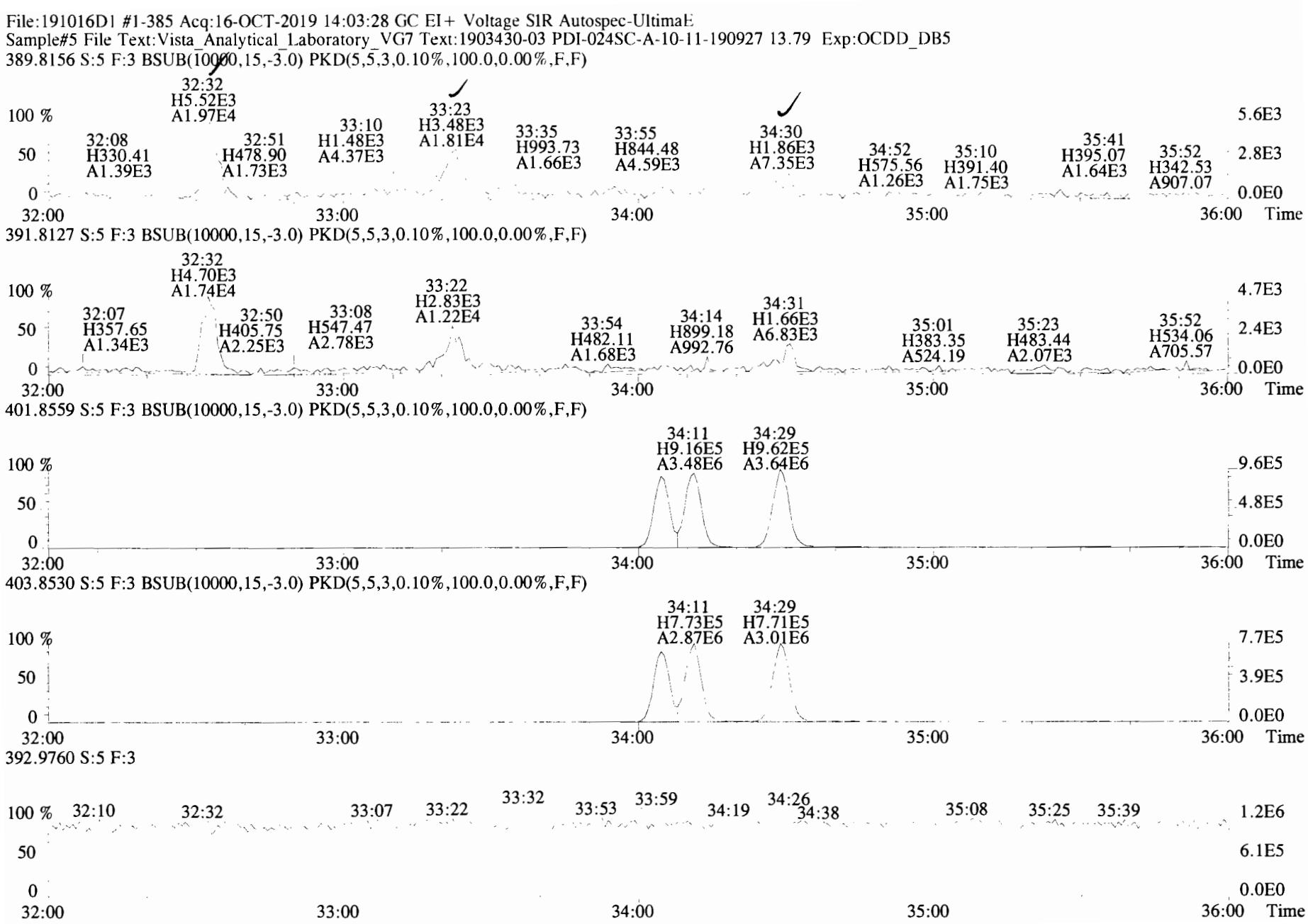

File:191016D1 #1-210 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:30 H217.70 A1.14E3
28:44 H724.31 A1.96E3
29:10 H689.09 A2.59E3
29:34 H1.34E3 A3.99E3
29:48 H436.37 A3.03E3
30:08 H349.58 A1.20E3
30:46 H549.02 A2.81E3
31:22 H353.69 A1.79E3
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:26 H533.87 A3.99E3
28:45 H694.66 A3.86E3
29:10 H1.40E3 A5.32E3
29:18 H322.18 A1.31E3
29:46 H778.65 A4.83E3
30:04 H1.31E3 A5.53E3
30:16 H578.55 A2.01E3
30:47 H865.44 A3.94E3
31:09 H599.83 A3.11E3
31:39 H453.88 A1.54E3
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:46 H9.02E5 A2.70E6
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:46 H1.36E6 A4.25E6
366.9792 S:5 F:2
28:26
28:51
29:07
29:26
29:55
30:16
30:30
30:45
31:04
31:36
100 %
50
0
29:00
30:00
31:00
32:00
Time
1.5E3
7.3E2
0.0E0
9.0E5
4.5E5
1.4E6
6.8E5
4.9E5
2.4E5

File:191016D1 #1-210 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 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)

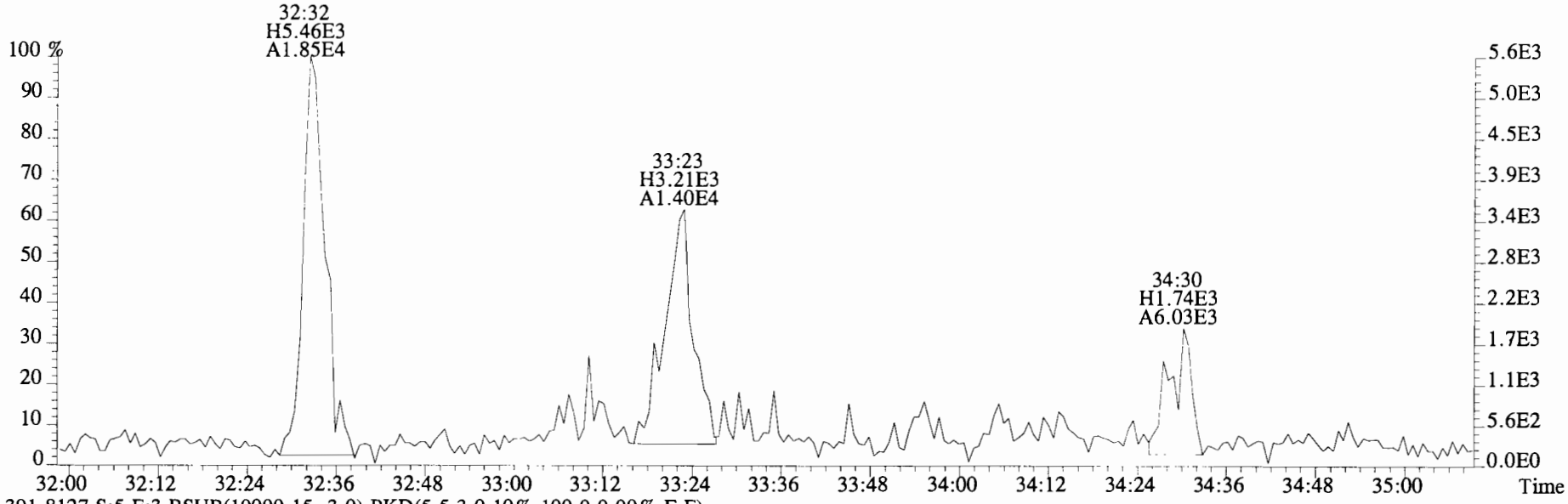


355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

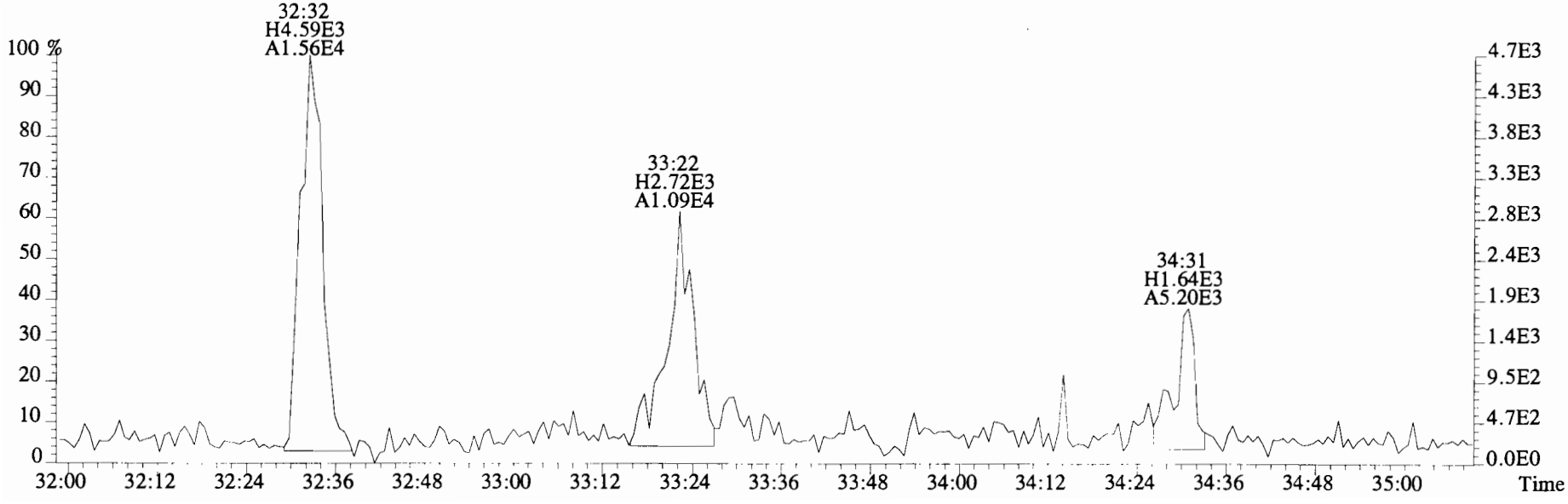



File:191016D1 #1-385 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:32 H5.52E3 A1.97E4
33:23 H3.48E3 A1.81E4
32:08 H330.41 A1.39E3
32:51 H478.90 A1.73E3
33:10 H1.48E3 A4.37E3
33:35 H993.73 A1.66E3
33:55 H844.48 A4.59E3
34:30 H1.86E3 A7.35E3
34:52 H575.56 A1.26E3
35:10 H391.40 A1.75E3
35:41 H395.07 A1.64E3
35:52 H342.53 A907.07
100 %
50
0
5.6E3
2.8E3
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:32 H4.70E3 A1.74E4
33:22 H2.83E3 A1.22E4
32:07 H357.65 A1.34E3
32:50 H405.75 A2.25E3
33:08 H547.47 A2.78E3
33:54 H482.11 A1.68E3
34:14 H899.18 A992.76
34:31 H1.66E3 A6.83E3
35:01 H383.35 A524.19
35:23 H483.44 A2.07E3
35:52 H534.06 A705.57
100 %
50
0
4.7E3
2.4E3
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H9.16E5 A3.48E6
34:29 H9.62E5 A3.64E6
100 %
50
0
9.6E5
4.8E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H7.73E5 A2.87E6
34:29 H7.71E5 A3.01E6
100 %
50
0
7.7E5
3.9E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
392.9760 S:5 F:3
32:10
32:32
33:07
33:22
33:32
33:53
33:59
34:19
34:26
34:38
35:08
35:25
35:39
100 %
50
0
1.2E6
6.1E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time

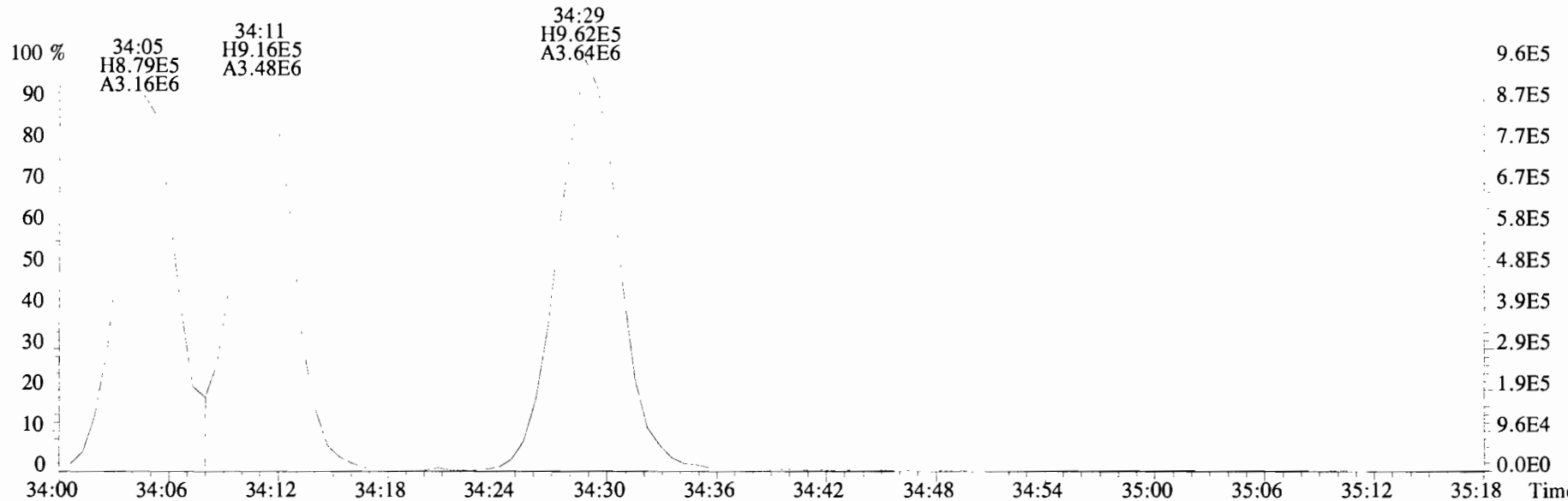
File:191016D1 #1-385 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



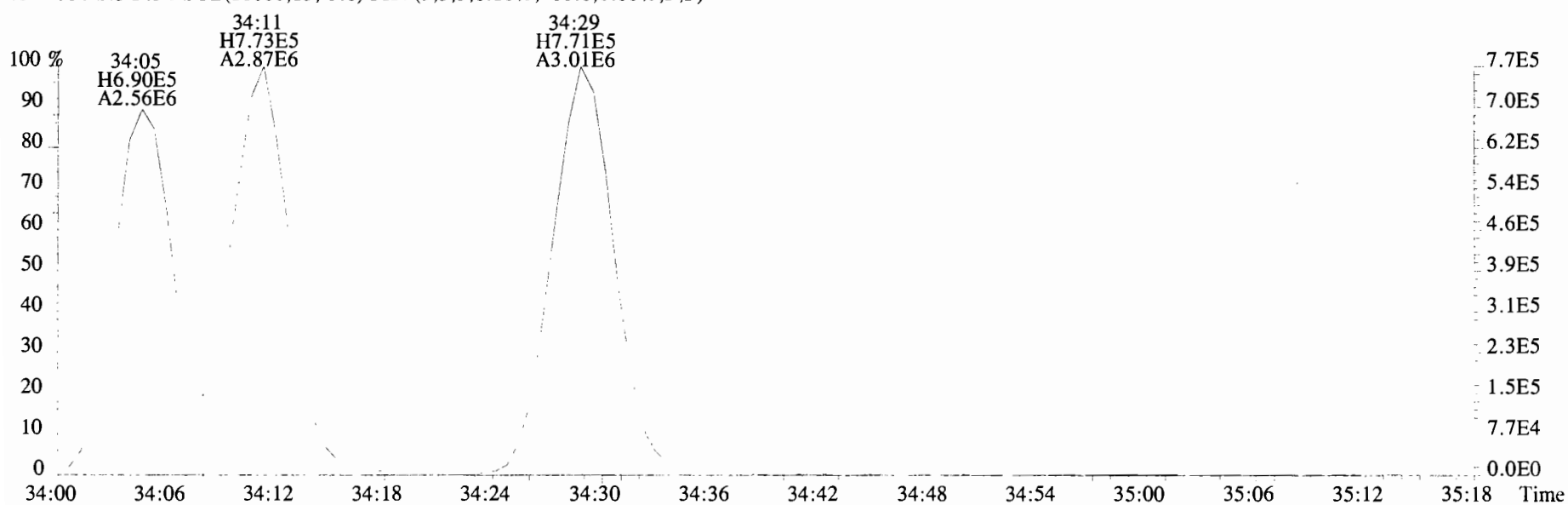
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

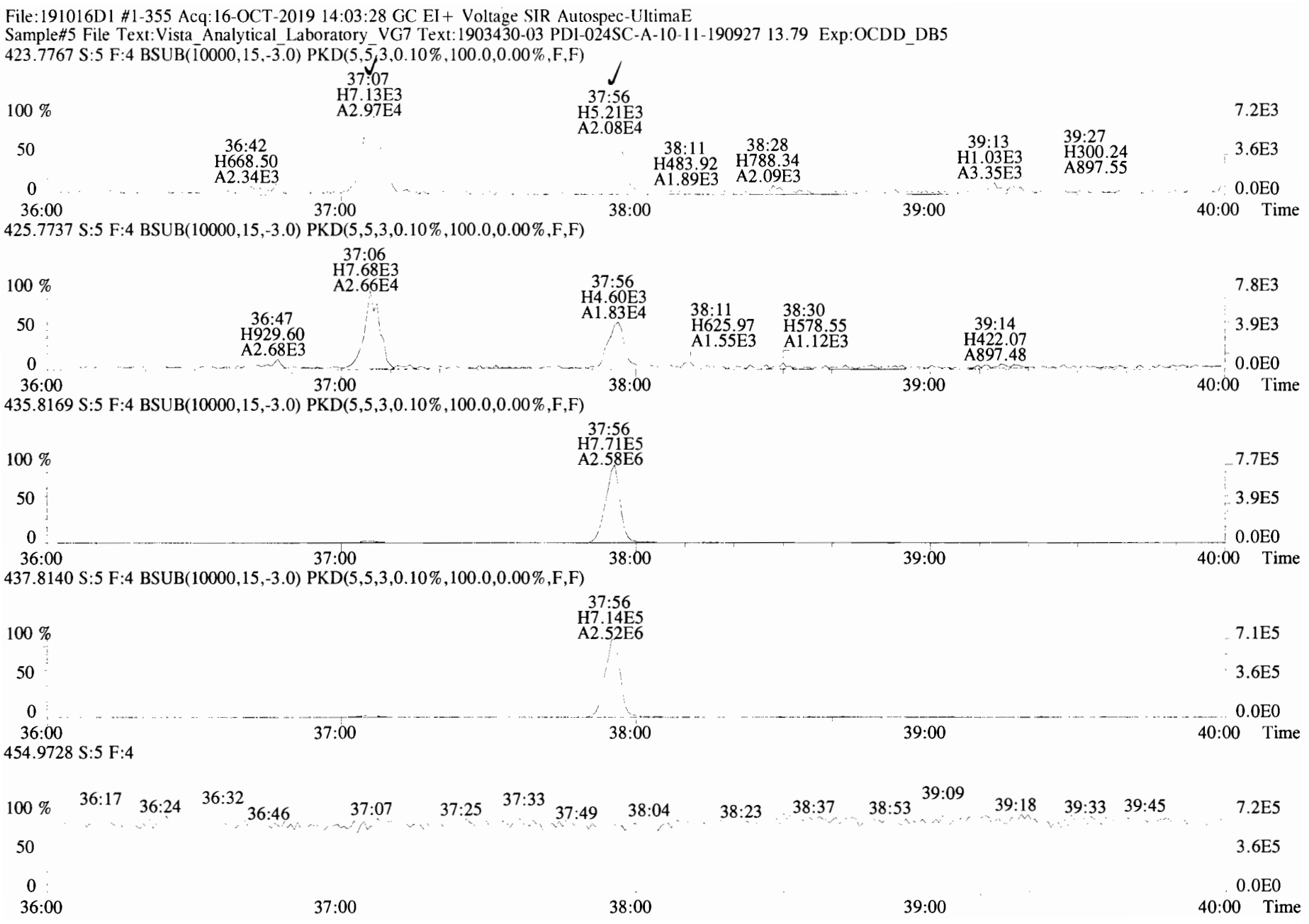


File:191016D1 #1-385 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

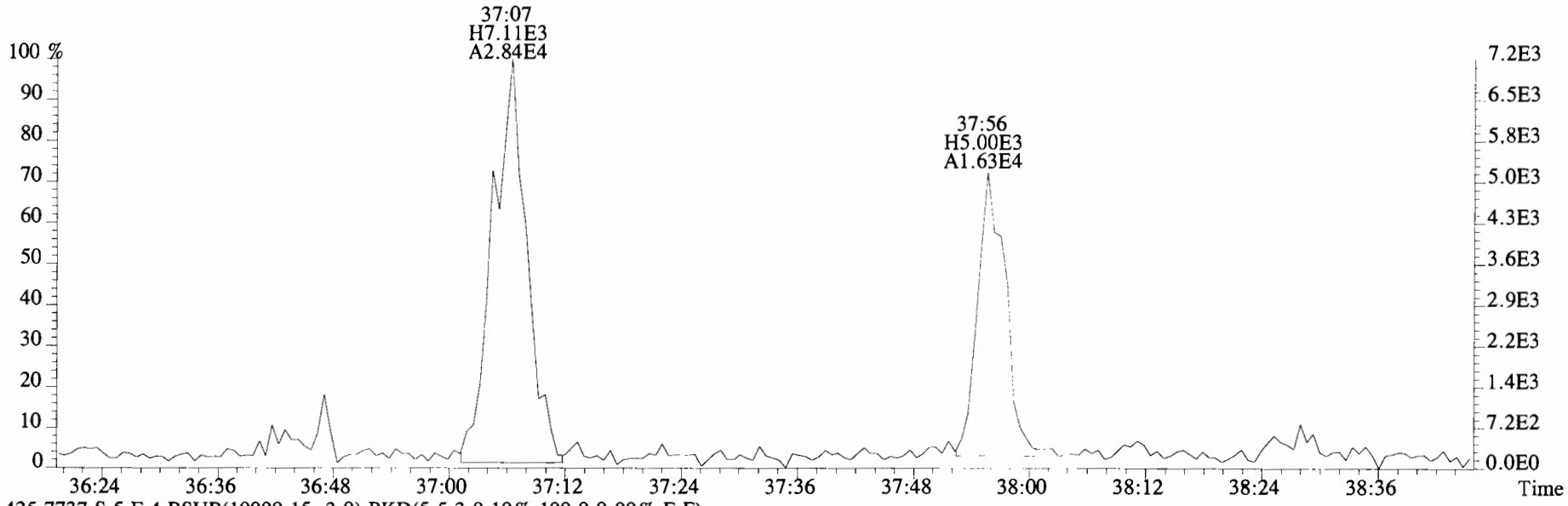


403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

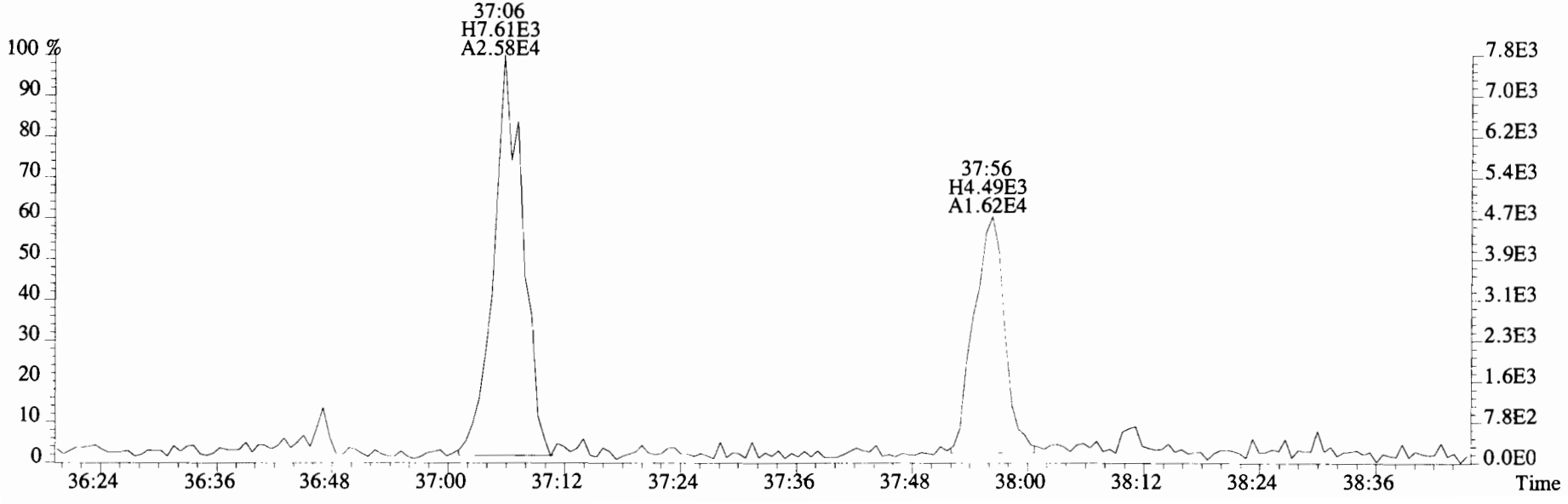


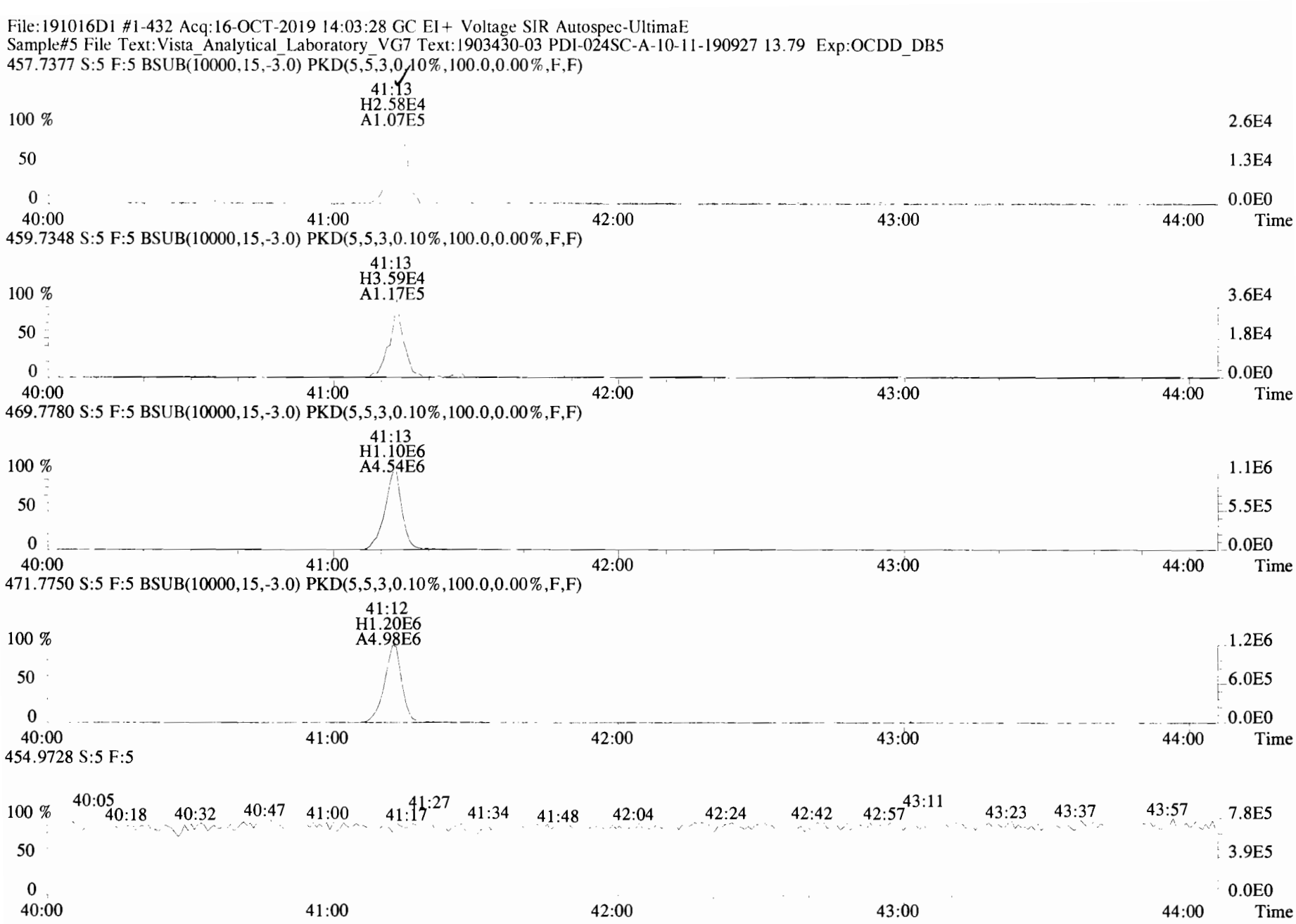

File:191016D1 #1-355 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:07 H7.13E3 A2.97E4
37:56 H5.21E3 A2.08E4
36:42 H668.50 A2.34E3
38:11 H483.92 A1.89E3
38:28 H788.34 A2.09E3
39:13 H1.03E3 A3.35E3
39:27 H300.24 A897.55
100 %
50
0
7.2E3
3.6E3
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:06 H7.68E3 A2.66E4
37:56 H4.60E3 A1.83E4
36:47 H929.60 A2.68E3
38:11 H625.97 A1.55E3
38:30 H578.55 A1.12E3
39:14 H422.07 A897.48
100 %
50
0
7.8E3
3.9E3
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:56 H7.71E5 A2.58E6
100 %
50
0
7.7E5
3.9E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:56 H7.14E5 A2.52E6
100 %
50
0
7.1E5
3.6E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
454.9728 S:5 F:4
100 %
50
0
36:17
36:24
36:32
36:46
37:07
37:25
37:33
37:49
38:04
38:23
38:37
38:53
39:09
39:18
39:33
39:45
7.2E5
3.6E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time

File:191016D1 #1-355 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 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)

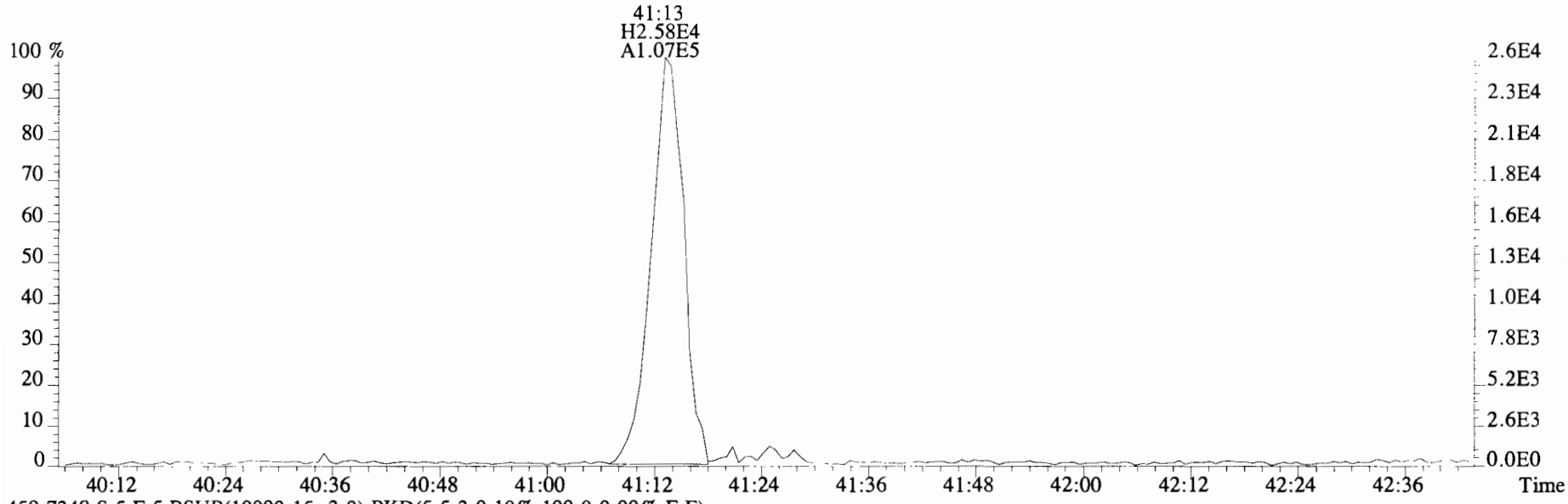


425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

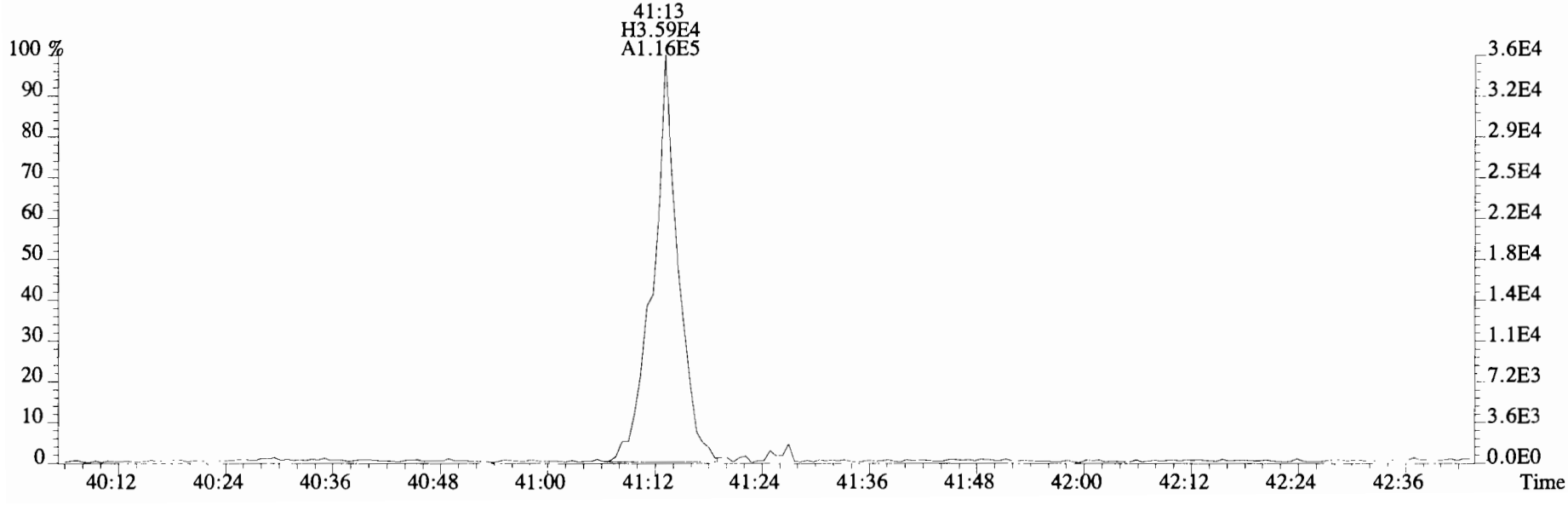


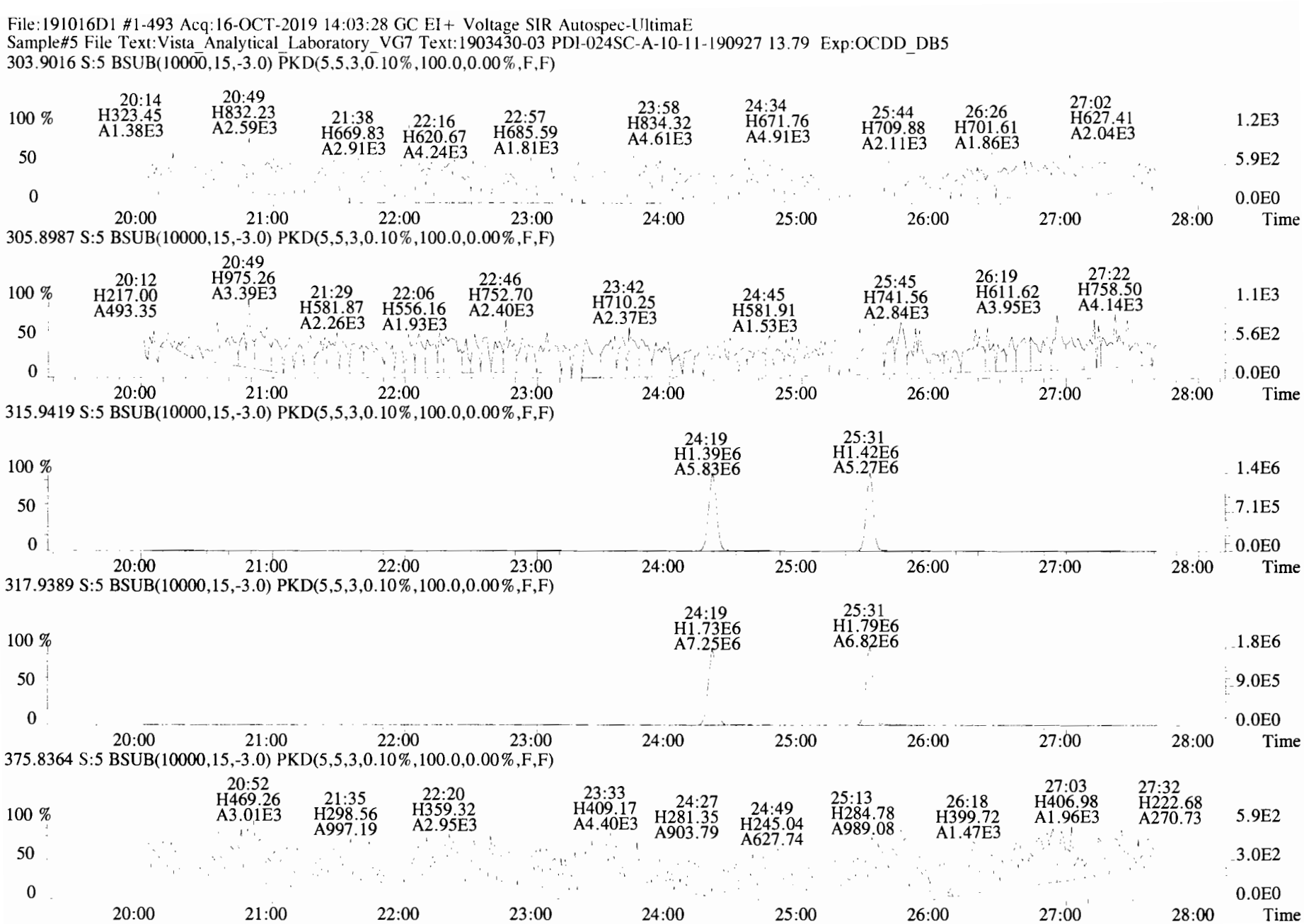

File:191016D1 #1-432 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:13
H2.58E4
A1.07E5
100 %
50
0
2.6E4
1.3E4
0.0E0
40:00
41:00
42:00
43:00
44:00
Time
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:13
H3.59E4
A1.17E5
3.6E4
1.8E4
0.0E0
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:13
H1.10E6
A4.54E6
1.1E6
5.5E5
0.0E0
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12
H1.20E6
A4.98E6
1.2E6
6.0E5
0.0E0
454.9728 S:5 F:5
40:05
40:18
40:32
40:47
41:00
41:17
41:27
41:34
41:48
42:04
42:24
42:42
42:57
43:11
43:23
43:37
43:57
7.8E5
3.9E5
0.0E0

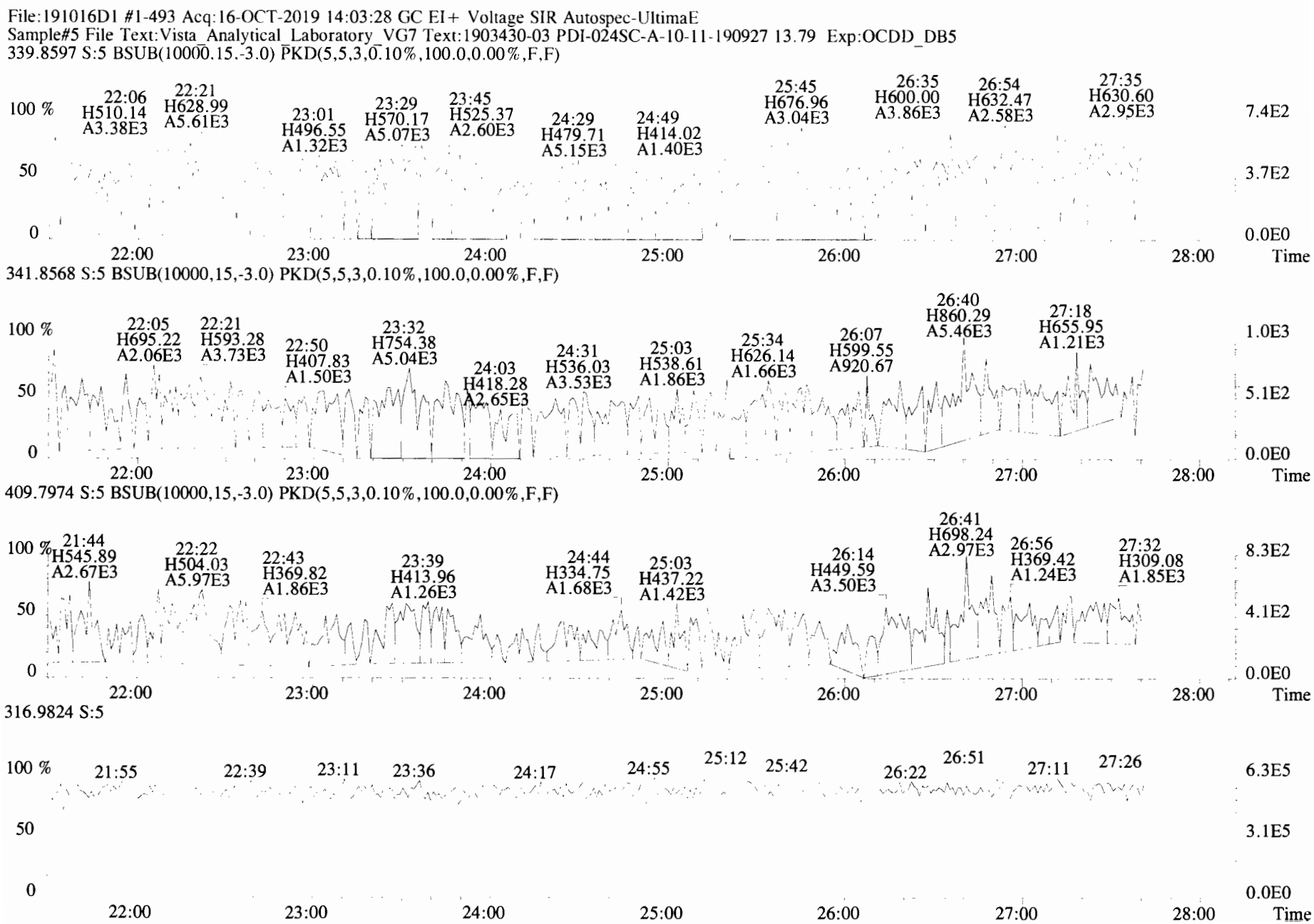
File:191016D1 #1-432 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

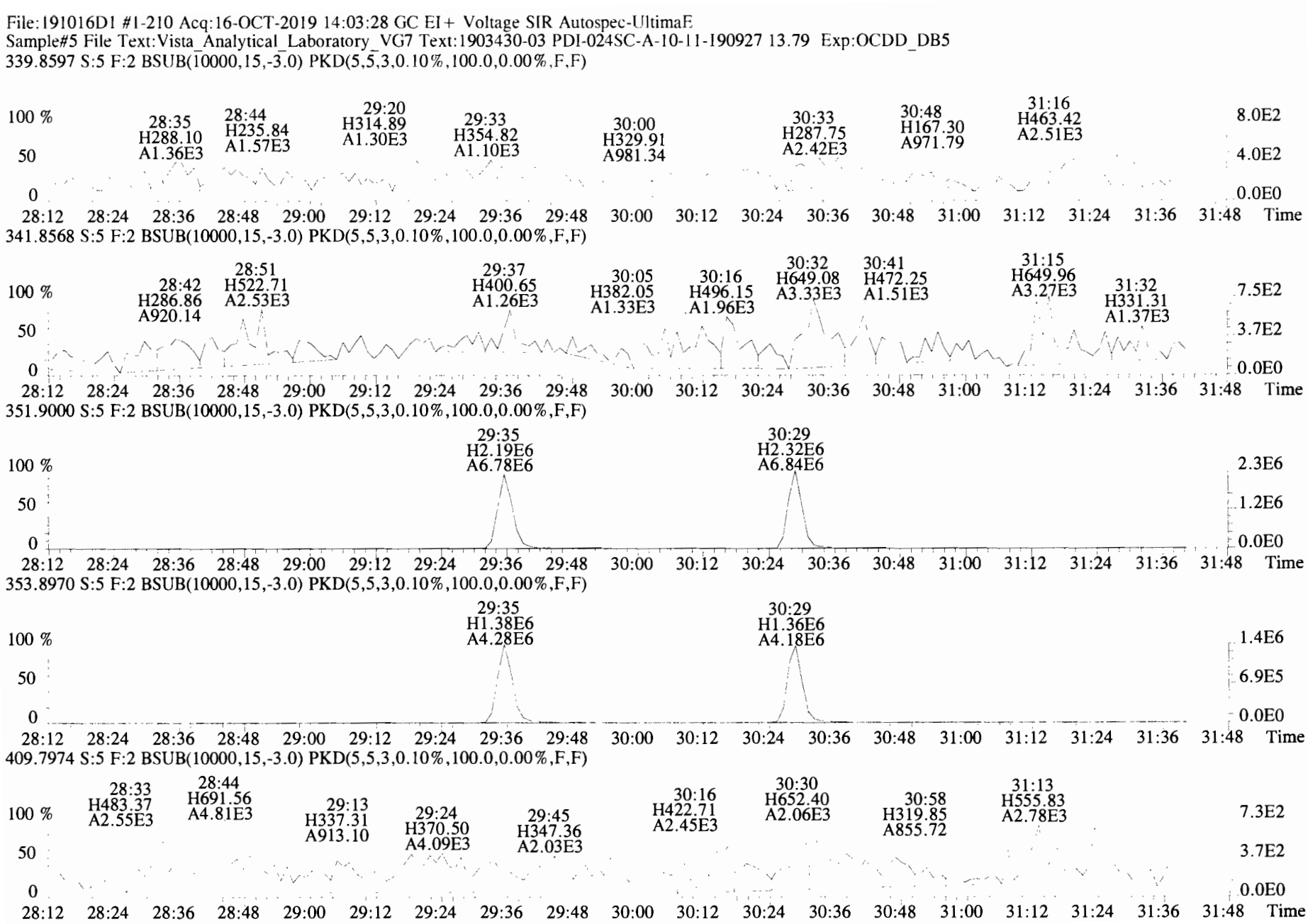


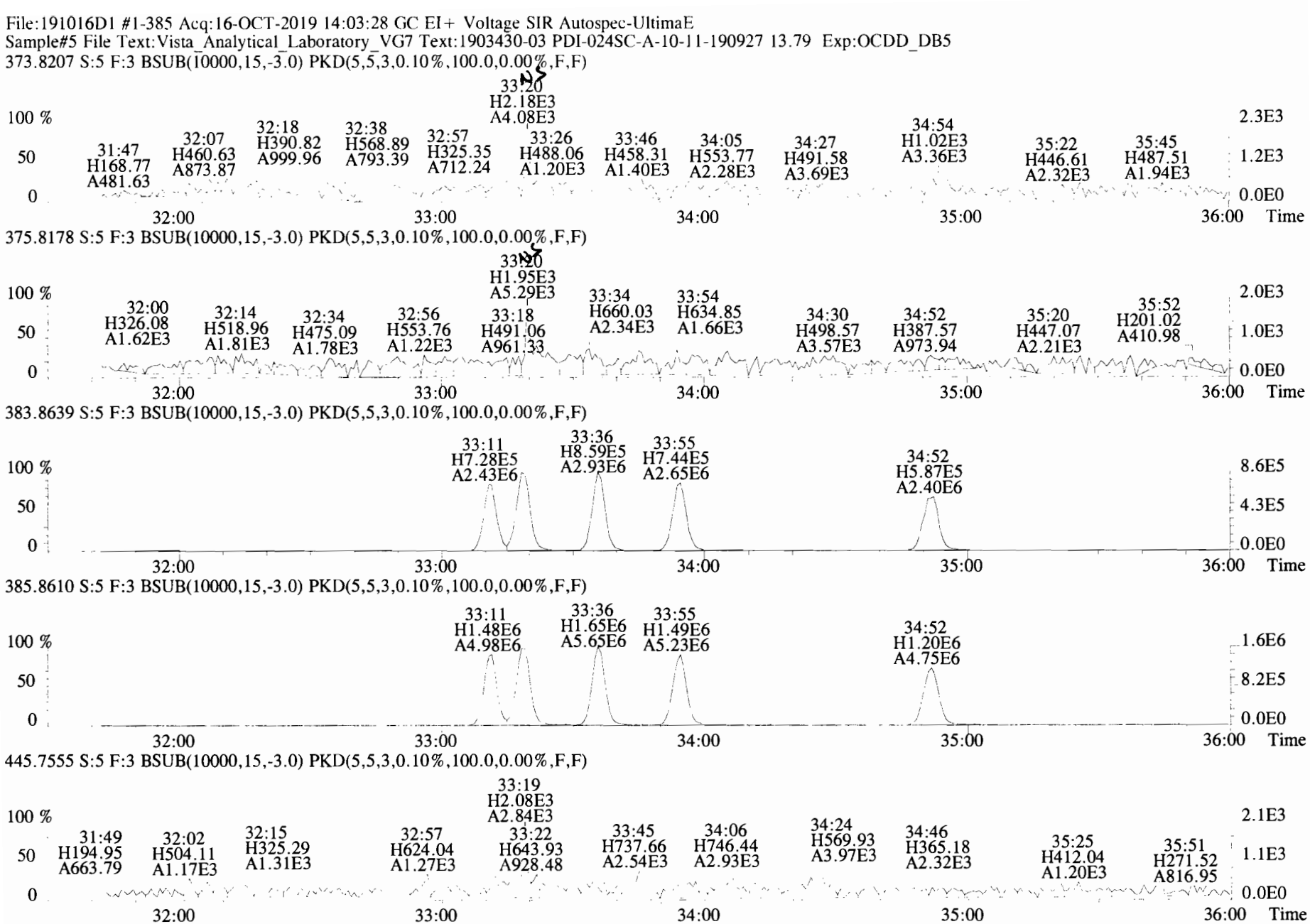
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

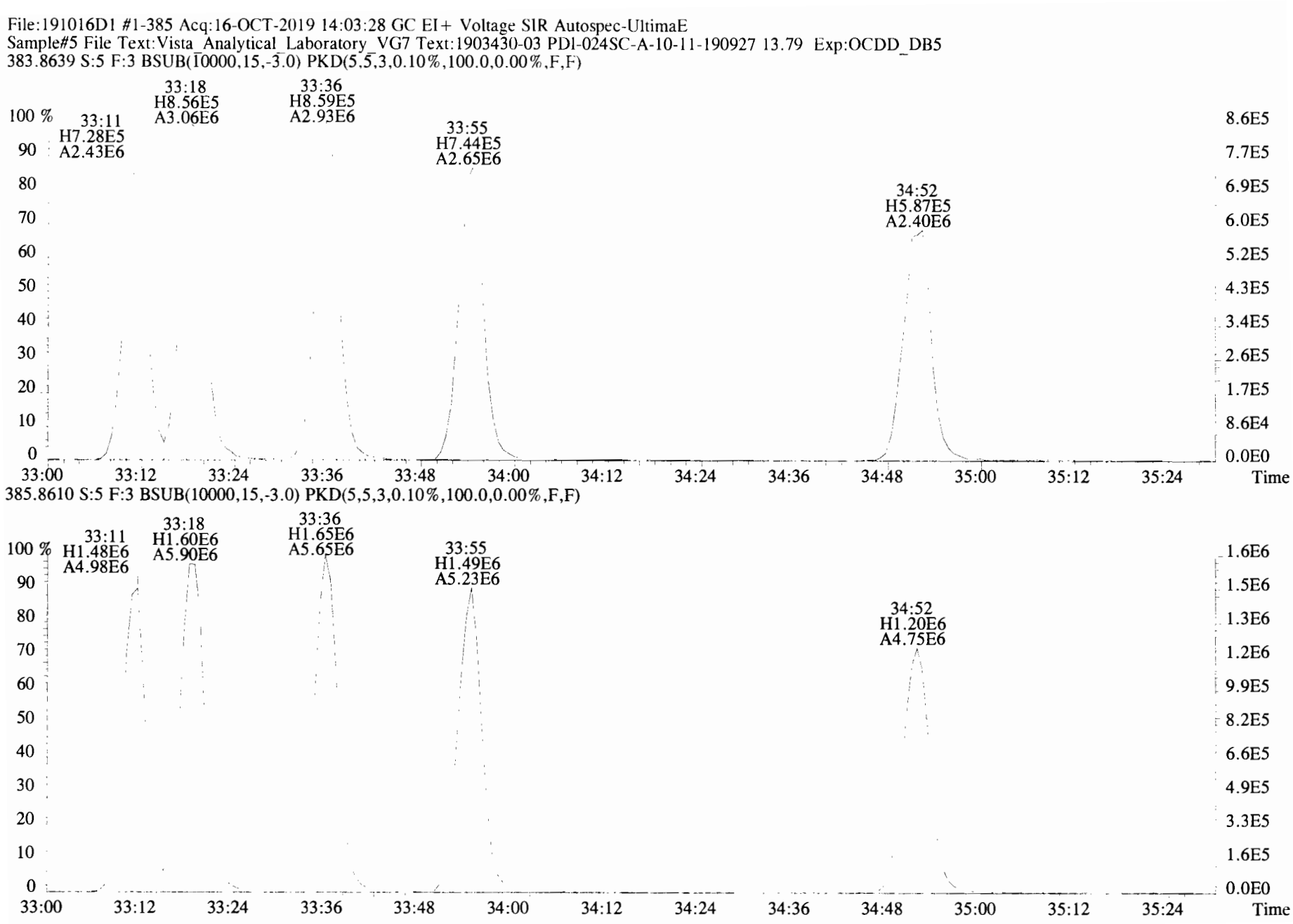


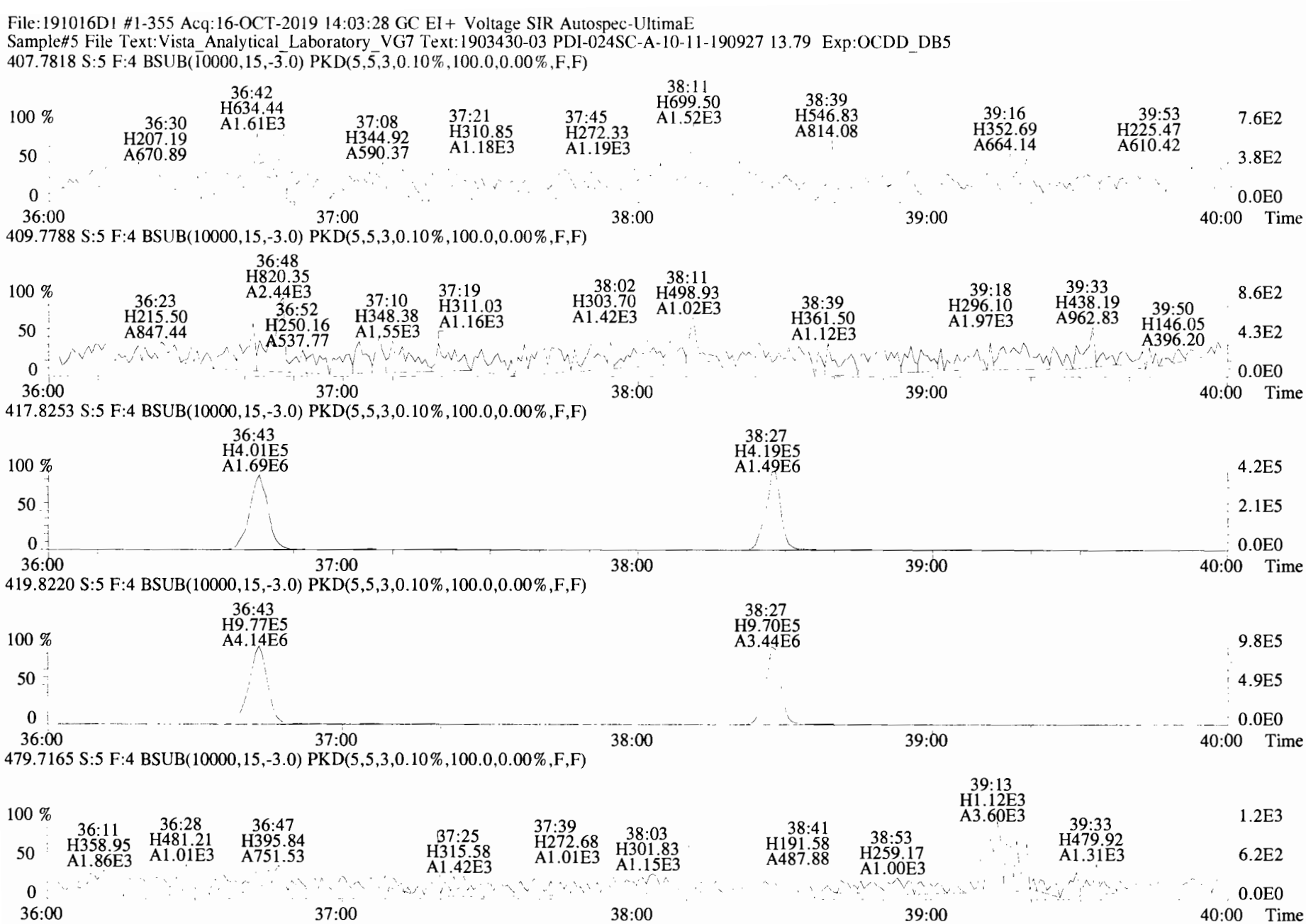

File:191016D1 #1-493 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:14 H323.45 A1.38E3
20:49 H832.23 A2.59E3
21:38 H669.83 A2.91E3
22:16 H620.67 A4.24E3
22:57 H685.59 A1.81E3
23:58 H834.32 A4.61E3
24:34 H671.76 A4.91E3
25:44 H709.88 A2.11E3
26:26 H701.61 A1.86E3
27:02 H627.41 A2.04E3
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:12 H217.00 A493.35
20:49 H975.26 A3.39E3
21:29 H581.87 A2.26E3
22:06 H556.16 A1.93E3
22:46 H752.70 A2.40E3
23:42 H710.25 A2.37E3
24:45 H581.91 A1.53E3
25:45 H741.56 A2.84E3
26:19 H611.62 A3.95E3
27:22 H758.50 A4.14E3
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:19 H1.39E6 A5.83E6
25:31 H1.42E6 A5.27E6
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:19 H1.73E6 A7.25E6
25:31 H1.79E6 A6.82E6
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:52 H469.26 A3.01E3
21:35 H298.56 A997.19
22:20 H359.32 A2.95E3
23:33 H409.17 A4.40E3
24:27 H281.35 A903.79
24:49 H245.04 A627.74
25:13 H284.78 A989.08
26:18 H399.72 A1.47E3
27:03 H406.98 A1.96E3
27:32 H222.68 A270.73
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
1.2E3
5.9E2
0.0E0
1.1E3
5.6E2
1.4E6
7.1E5
1.8E6
9.0E5
5.9E2
3.0E2

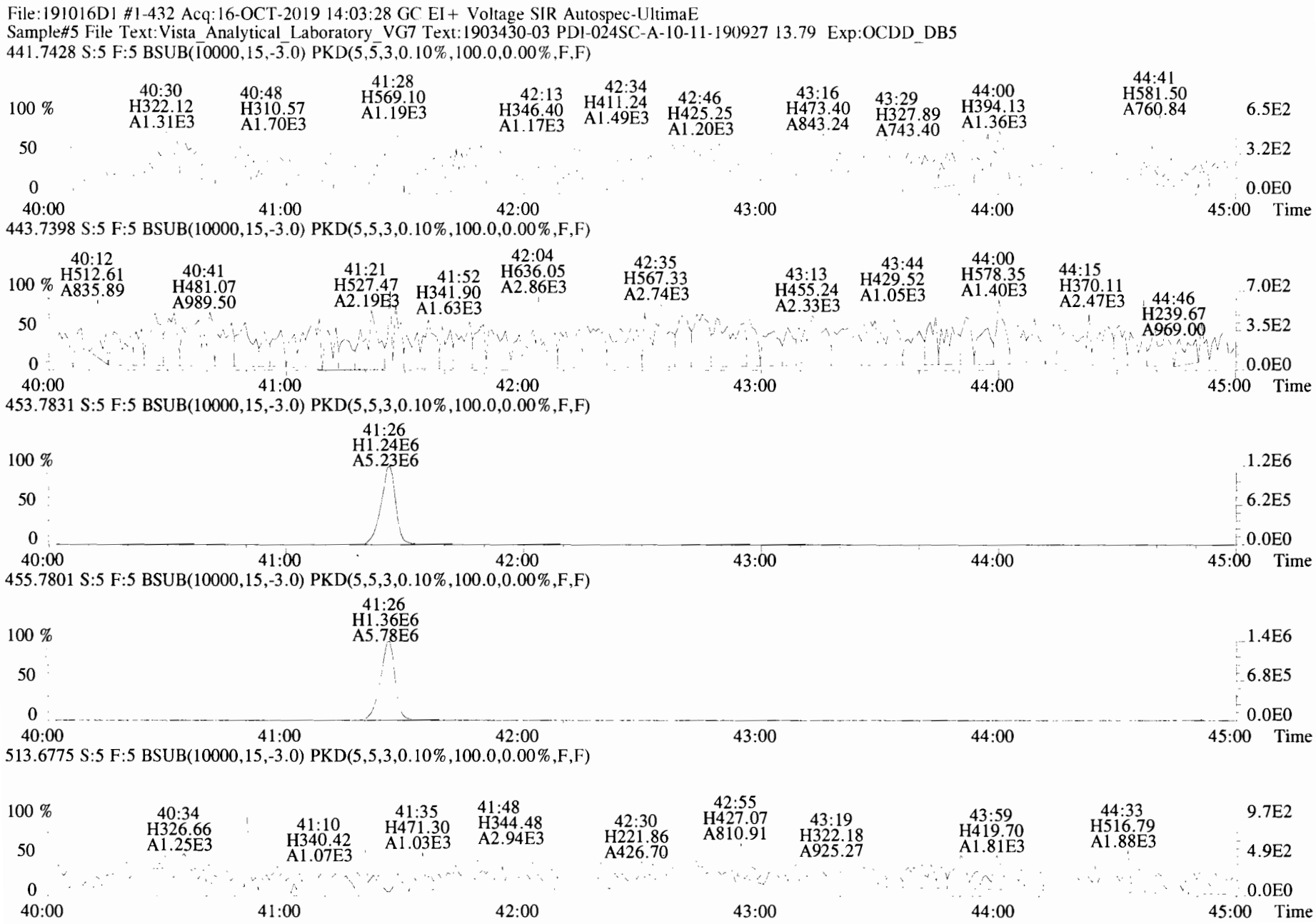

File:191016D1 #1-493 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:06 H510.14 A3.38E3
22:21 H628.99 A5.61E3
23:01 H496.55 A1.32E3
23:29 H570.17 A5.07E3
23:45 H525.37 A2.60E3
24:29 H479.71 A5.15E3
24:49 H414.02 A1.40E3
25:45 H676.96 A3.04E3
26:35 H600.00 A3.86E3
26:54 H632.47 A2.58E3
27:35 H630.60 A2.95E3
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:05 H695.22 A2.06E3
22:21 H593.28 A3.73E3
22:50 H407.83 A1.50E3
23:32 H754.38 A5.04E3
24:03 H418.28 A2.65E3
24:31 H536.03 A3.53E3
25:03 H538.61 A1.86E3
25:34 H626.14 A1.66E3
26:07 H599.55 A920.67
26:40 H860.29 A5.46E3
27:18 H655.95 A1.21E3
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:44 H545.89 A2.67E3
22:22 H504.03 A5.97E3
22:43 H369.82 A1.86E3
23:39 H413.96 A1.26E3
24:44 H334.75 A1.68E3
25:03 H437.22 A1.42E3
26:14 H449.59 A3.50E3
26:41 H698.24 A2.97E3
26:56 H369.42 A1.24E3
27:32 H309.08 A1.85E3
316.9824 S:5
21:55
22:39
23:11
23:36
24:17
24:55
25:12
25:42
26:22
26:51
27:11
27:26
100 %
50
0
7.4E2
3.7E2
0.0E0
1.0E3
5.1E2
8.3E2
4.1E2
6.3E5
3.1E5
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time


File:191016D1 #1-210 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 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)
28:35 H288.10 A1.36E3
28:44 H235.84 A1.57E3
29:20 H314.89 A1.30E3
29:33 H354.82 A1.10E3
30:00 H329.91 A981.34
30:33 H287.75 A2.42E3
30:48 H167.30 A971.79
31:16 H463.42 A2.51E3
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:42 H286.86 A920.14
28:51 H522.71 A2.53E3
29:37 H400.65 A1.26E3
30:05 H382.05 A1.33E3
30:16 H496.15 A1.96E3
30:32 H649.08 A3.33E3
30:41 H472.25 A1.51E3
31:15 H649.96 A3.27E3
31:32 H331.31 A1.37E3
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:35 H2.19E6 A6.78E6
30:29 H2.32E6 A6.84E6
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:35 H1.38E6 A4.28E6
30:29 H1.36E6 A4.18E6
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:33 H483.37 A2.55E3
28:44 H691.56 A4.81E3
29:13 H337.31 A913.10
29:24 H370.50 A4.09E3
29:45 H347.36 A2.03E3
30:16 H422.71 A2.45E3
30:30 H652.40 A2.06E3
30:58 H319.85 A855.72
31:13 H555.83 A2.78E3
100 %
50
0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time
8.0E2
4.0E2
0.0E0
7.5E2
3.7E2
2.3E6
1.2E6
1.4E6
6.9E5
7.3E2


File:191016D1 #1-385 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 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)
33:20 H2.18E3 A4.08E3
31:47 H168.77 A481.63
32:07 H460.63 A873.87
32:18 H390.82 A999.96
32:38 H568.89 A793.39
32:57 H325.35 A712.24
33:26 H488.06 A1.20E3
33:46 H458.31 A1.40E3
34:05 H553.77 A2.28E3
34:27 H491.58 A3.69E3
34:54 H1.02E3 A3.36E3
35:22 H446.61 A2.32E3
35:45 H487.51 A1.94E3
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:20 H1.95E3 A5.29E3
32:00 H326.08 A1.62E3
32:14 H518.96 A1.81E3
32:34 H475.09 A1.78E3
32:56 H553.76 A1.22E3
33:18 H491.06 A961.33
33:34 H660.03 A2.34E3
33:54 H634.85 A1.66E3
34:30 H498.57 A3.57E3
34:52 H387.57 A973.94
35:20 H447.07 A2.21E3
35:52 H201.02 A410.98
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:11 H7.28E5 A2.43E6
33:36 H8.59E5 A2.93E6
33:55 H7.44E5 A2.65E6
34:52 H5.87E5 A2.40E6
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:11 H1.48E6 A4.98E6
33:36 H1.65E6 A5.65E6
33:55 H1.49E6 A5.23E6
34:52 H1.20E6 A4.75E6
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:19 H2.08E3 A2.84E3
31:49 H194.95 A663.79
32:02 H504.11 A1.17E3
32:15 H325.29 A1.31E3
32:57 H624.04 A1.27E3
33:22 H643.93 A928.48
33:45 H737.66 A2.54E3
34:06 H746.44 A2.93E3
34:24 H569.93 A3.97E3
34:46 H365.18 A2.32E3
35:25 H412.04 A1.20E3
35:51 H271.52 A816.95
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
2.3E3
1.2E3
0.0E0
2.0E3
1.0E3
8.6E5
4.3E5
1.6E6
8.2E5
2.1E3
1.1E3


File:191016D1 #1-385 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 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)
33:11 H7.28E5 A2.43E6
33:18 H8.56E5 A3.06E6
33:36 H8.59E5 A2.93E6
33:55 H7.44E5 A2.65E6
34:52 H5.87E5 A2.40E6
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:11 H1.48E6 A4.98E6
33:18 H1.60E6 A5.90E6
33:36 H1.65E6 A5.65E6
33:55 H1.49E6 A5.23E6
34:52 H1.20E6 A4.75E6
100 %
90
80
70
60
50
40
30
20
10
0
8.6E5
7.7E5
6.9E5
6.0E5
5.2E5
4.3E5
3.4E5
2.6E5
1.7E5
8.6E4
0.0E0
1.6E6
1.5E6
1.3E6
1.2E6
9.9E5
8.2E5
6.6E5
4.9E5
3.3E5
1.6E5
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time


File:191016D1 #1-355 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 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)
36:30 H207.19 A670.89
36:42 H634.44 A1.61E3
37:08 H344.92 A590.37
37:21 H310.85 A1.18E3
37:45 H272.33 A1.19E3
38:11 H699.50 A1.52E3
38:39 H546.83 A814.08
39:16 H352.69 A664.14
39:53 H225.47 A610.42
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:23 H215.50 A847.44
36:48 H820.35 A2.44E3
36:52 H250.16 A537.77
37:10 H348.38 A1,55E3
37:19 H311.03 A1.16E3
38:02 H303.70 A1.42E3
38:11 H498.93 A1.02E3
38:39 H361.50 A1.12E3
39:18 H296.10 A1.97E3
39:33 H438.19 A962.83
39:50 H146.05 A396.20
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:43 H4.01E5 A1.69E6
38:27 H4.19E5 A1.49E6
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:43 H9.77E5 A4.14E6
38:27 H9.70E5 A3.44E6
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:11 H358.95 A1.86E3
36:28 H481.21 A1.01E3
36:47 H395.84 A751.53
37:25 H315.58 A1.42E3
37:39 H272.68 A1.01E3
38:03 H301.83 A1.15E3
38:41 H191.58 A487.88
38:53 H259.17 A1.00E3
39:13 H1.12E3 A3.60E3
39:33 H479.92 A1.31E3
100 %
50
0
36:00
37:00
38:00
39:00
40:00
Time
7.6E2
3.8E2
0.0E0
8.6E2
4.3E2
4.2E5
2.1E5
9.8E5
4.9E5
1.2E3
6.2E2


File:191016D1 #1-432 Acq:16-OCT-2019 14:03:28 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-03 PDI-024SC-A-10-11-190927 13.79 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)
40:30 H322.12 A1.31E3
40:48 H310.57 A1.70E3
41:28 H569.10 A1.19E3
42:13 H346.40 A1.17E3
42:34 H411.24 A1.49E3
42:46 H425.25 A1.20E3
43:16 H473.40 A843.24
43:29 H327.89 A743.40
44:00 H394.13 A1.36E3
44:41 H581.50 A760.84
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:12 H512.61 A835.89
40:41 H481.07 A989.50
41:21 H527.47 A2.19E3
41:52 H341.90 A1.63E3
42:04 H636.05 A2.86E3
42:35 H567.33 A2.74E3
43:13 H455.24 A2.33E3
43:44 H429.52 A1.05E3
44:00 H578.35 A1.40E3
44:15 H370.11 A2.47E3
44:46 H239.67 A969.00
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26 H1.24E6 A5.23E6
455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26 H1.36E6 A5.78E6
513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:34 H326.66 A1.25E3
41:10 H340.42 A1.07E3
41:35 H471.30 A1.03E3
41:48 H344.48 A2.94E3
42:30 H221.86 A426.70
42:55 H427.07 A810.91
43:19 H322.18 A925.27
43:59 H419.70 A1.81E3
44:33 H516.79 A1.88E3
100 %
50
0
6.5E2
3.2E2
0.0E0
7.0E2
3.5E2
1.2E6
6.2E5
1.4E6
6.8E5
9.7E2
4.9E2
40:00
41:00
42:00
43:00
44:00
45:00
Time

Client ID: PDI-024SC-A-11-12.1-19╗ Filename: 191016D1 S:6 Acq:16-OCT-19 14:51:24 ConCal: ST191016D1-1

Lab ID: 1903430-04 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.238 EndCAL: NA

	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	0.91	NotF╗	*		189	2.5	0.125
	1,2,3,7,8-PeCDD	*	*	n	0.90	NotF╗	*		207	2.5	0.0984
	1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF╗	*		237	2.5	0.166
	1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF╗	*		237	2.5	0.182
	1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF╗	*		237	2.5	0.167
	1,2,3,4,6,7,8-HpCDD	2.90e+04	0.84	n	0.98	37:56	1.2213		*	2.5	*
	OCDD	2.26e+05	0.90	y	0.96	41:12	10.739		*	2.5	*
	2,3,7,8-TCDF	*	*	n	0.95	NotF╗	*		219	2.5	0.107
	1,2,3,7,8-PeCDF	*	*	n	0.96	NotF╗	*		253	2.5	0.144
	2,3,4,7,8-PeCDF	*	*	n	1.01	NotF╗	*		253	2.5	0.116
	1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF╗	*		170	2.5	0.0504
	1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF╗	*		170	2.5	0.0539
	2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF╗	*		170	2.5	0.0539
	1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF╗	*		170	2.5	0.0702
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF╗	*		177	2.5	0.0779
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF╗	*		177	2.5	0.0685
	OCDF	*	*	n	0.95	NotF╗	*		142	2.5	0.0960

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	0.710	0.710		*	*
Total Penta-Dioxins	*	0.452		*	*
Total Hexa-Dioxins	0.479	1.36		*	*
Total Hepta-Dioxins	2.14	3.36		*	*
Total Tetra-Furans	*	*		219	0.107
Total Penta-Furans	0.0000	0.0000		253	0.130
Total Hexa-Furans	*	*		170	0.0567
Total Hepta-Furans	*	*		177	0.0735

								Rec	Qual
IS	13C-2,3,7,8-TCDD	5.38e+06	0.75	y	1.10	26:18	133.54	68.4	
IS	13C-1,2,3,7,8-PeCDD	5.45e+06	0.66	y	0.88	30:46	168.02	86.0	
IS	13C-1,2,3,4,7,8-HxCDD	4.98e+06	1.24	y	0.64	34:05	201.15	103	
IS	13C-1,2,3,6,7,8-HxCDD	5.46e+06	1.27	y	0.86	34:11	165.44	84.7	
IS	13C-1,2,3,7,8,9-HxCDD	5.89e+06	1.23	y	0.81	34:29	189.48	97.0	
IS	13C-1,2,3,4,6,7,8-HpCDD	4.74e+06	1.03	y	0.65	37:55	188.05	96.3	
IS	13C-OCDD	8.58e+06	0.93	y	0.58	41:12	383.83	98.2	
IS	13C-2,3,7,8-TCDF	7.35e+06	0.82	y	1.03	25:32	124.54	63.7	
IS	13C-1,2,3,7,8-PeCDF	7.62e+06	1.57	y	0.85	29:36	156.26	80.0	
IS	13C-2,3,4,7,8-PeCDF	7.78e+06	1.68	y	0.85	30:29	161.06	82.4	
IS	13C-1,2,3,4,7,8-HxCDF	6.41e+06	0.50	y	0.83	33:11	199.92	102	
IS	13C-1,2,3,6,7,8-HxCDF	7.56e+06	0.51	y	1.03	33:19	189.53	97.0	
IS	13C-2,3,4,6,7,8-HxCDF	7.06e+06	0.51	y	0.95	33:54	192.11	98.3	
IS	13C-1,2,3,7,8,9-HxCDF	6.39e+06	0.52	y	0.83	34:52	200.21	102	
IS	13C-1,2,3,4,6,7,8-HpCDF	5.64e+06	0.41	y	0.76	36:42	193.22	98.9	
IS	13C-1,2,3,4,7,8,9-HpCDF	4.52e+06	0.41	y	0.58	38:27	201.60	103	
IS	13C-OCDF	1.03e+07	0.90	y	0.69	41:25	387.97	99.3	
C/Up	37Cl-2,3,7,8-TCDD	2.33e+06			1.20	26:19	52.978	67.8	
RS/RT	13C-1,2,3,4-TCDD	7.19e+06	0.78	y	1.00	25:45	195.36		
RS	13C-1,2,3,4-TCDF	1.11e+07	0.82	y	1.00	24:20	195.36		
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.53e+06	0.51	y	1.00	33:36	195.36		

Integrations by Analyst: DB Date: 10/31/19

Reviewed by Analyst: CT Date: 11/04/19

Totals class: TCDD EMPC Entry #: 19

Run: 11 File: 191016D1 S: 6 I: 1 F: 1
Acquired: 16-OCT-19 14:51:24 Processed: 17-OCT-19 09:18:54

Total Concentration: 0.70981 Unnamed Concentration: 0.710

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
24:27	7.365e+03	1.033e+04	0.71	y	1.770e+04	0.70981	

Totals class: PeCDD EMPC Entry #: 21

Run: 11 File: 191016D1 S: 6 I: 1 F: 2
Acquired: 16-OCT-19 14:51:24 Processed: 17-OCT-19 09:18:54

Total Concentration: 0.45217 Unnamed Concentration: 0.452

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
29:10	2.745e+03	3.508e+03	0.78	n	5.718e+03	0.22712	
30:06	4.209e+03	3.476e+03	1.21	n	5.665e+03	0.22505	

Totals class: HxCDD EMPC Entry #: 23

Run: 11 File: 191016D1 S: 6 I: 1 F: 3
Acquired: 16-OCT-19 14:51:24 Processed: 17-OCT-19 09:18:54

Total Concentration: 1.3627 Unnamed Concentration: 1.363

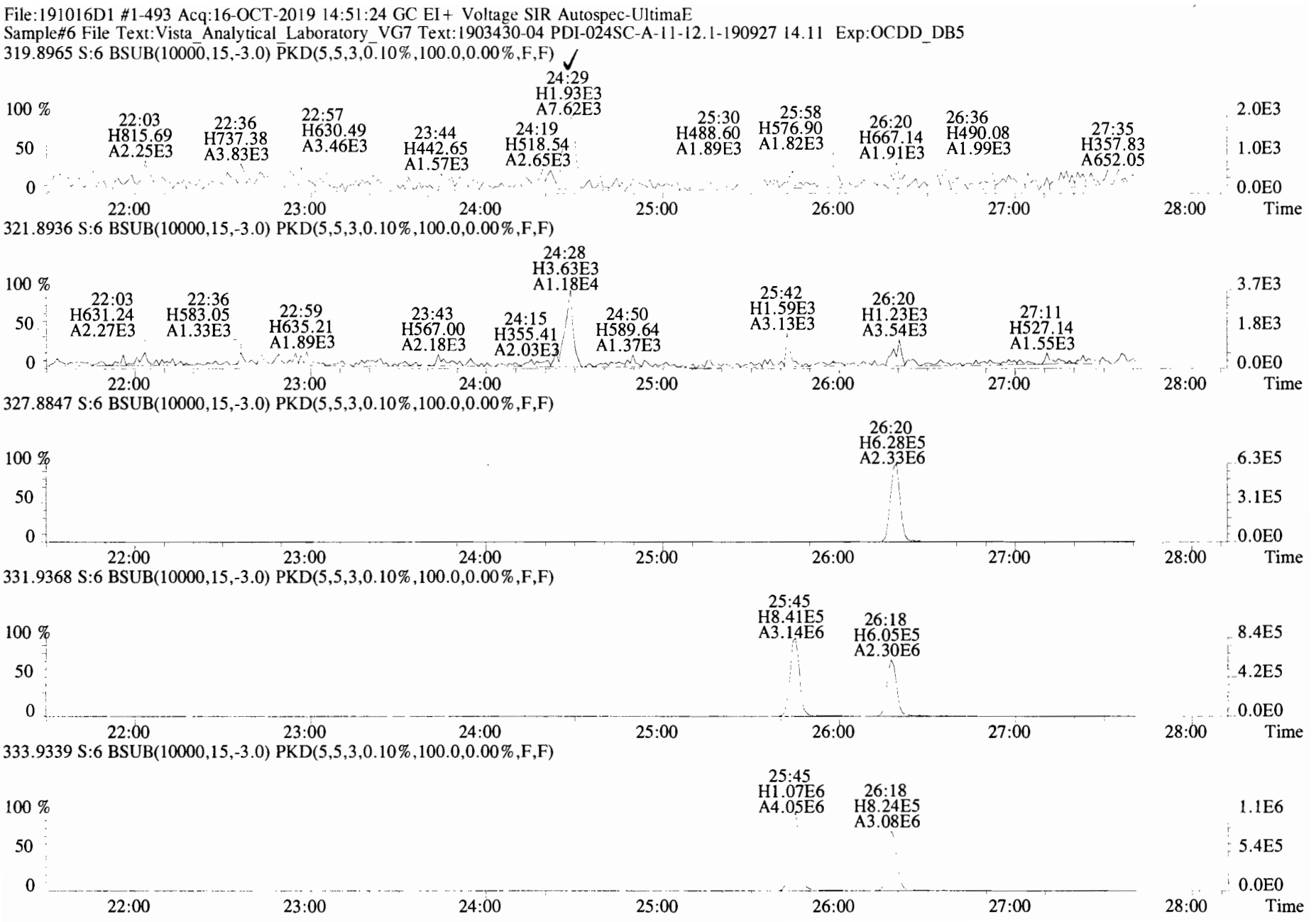
RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
32:32	1.704e+04	1.090e+04	1.56	n	2.441e+04	0.88360	
33:23	6.858e+03	6.380e+03	1.07	y	1.324e+04	0.47912	

Totals class: HpCDD EMPC Entry #: 25

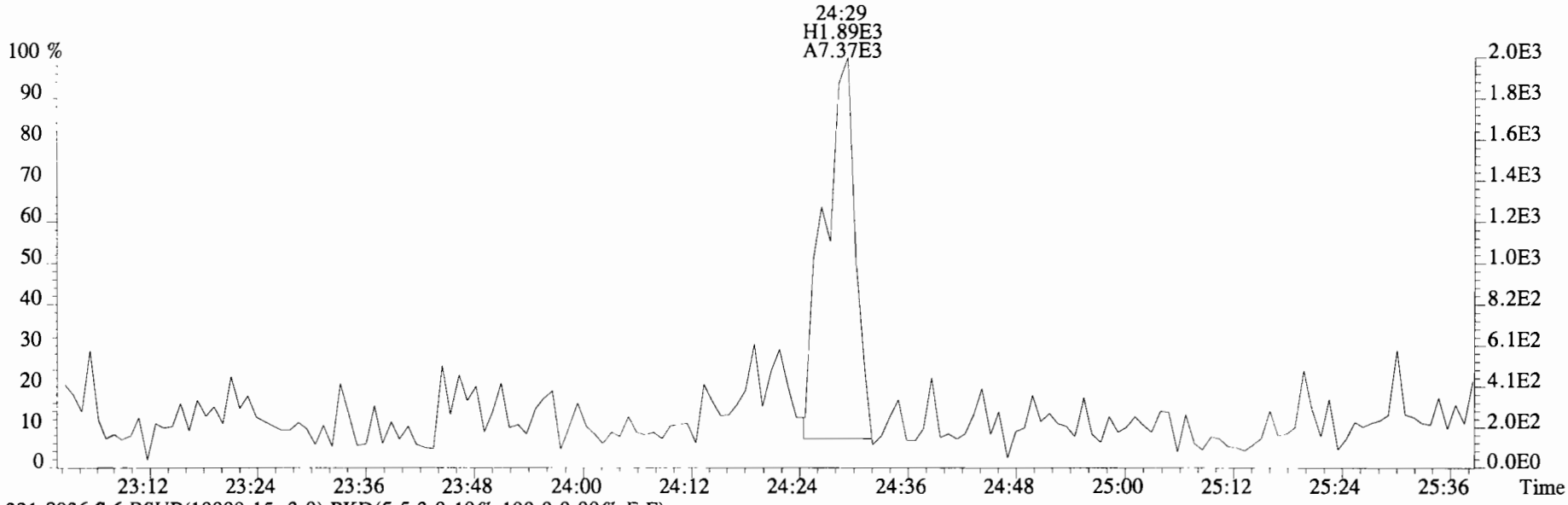
Run: 11 File: 191016D1 S: 6 I: 1 F: 4
Acquired: 16-OCT-19 14:51:24 Processed: 17-OCT-19 09:18:54

Total Concentration: 3.3610 Unnamed Concentration: 2.140

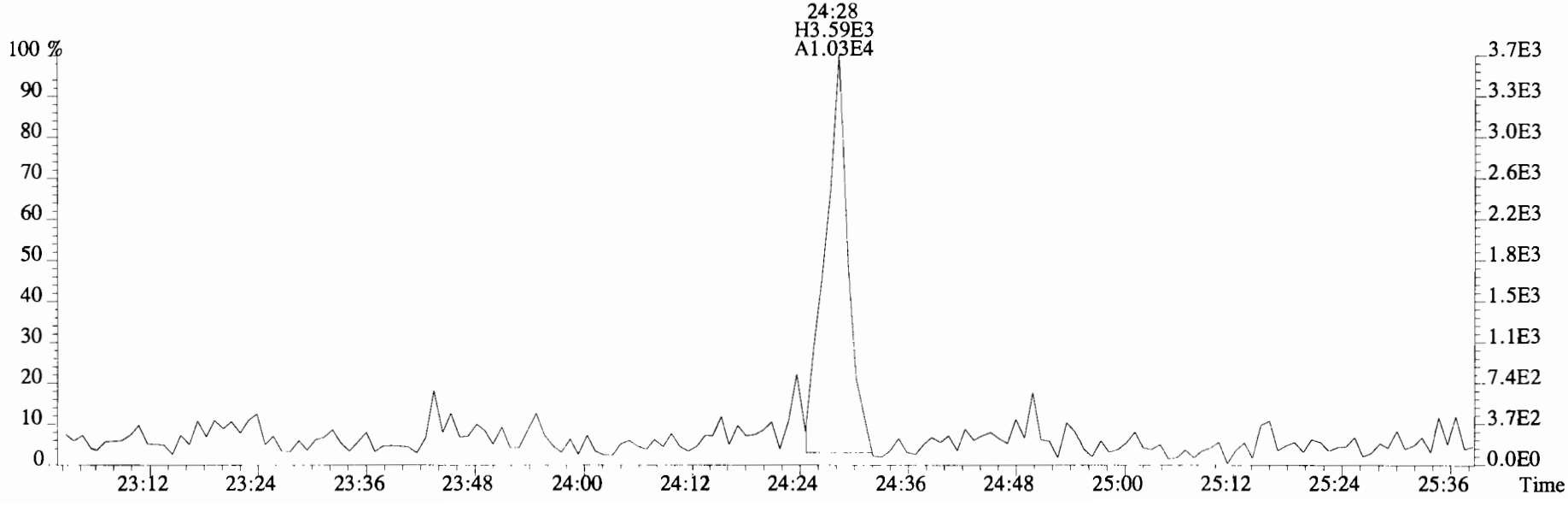
RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:06	2.624e+04	2.462e+04	1.07	y	5.085e+04	2.1396	
37:56	1.480e+04	1.768e+04	0.84	n	2.903e+04	1.2213	1,2,3,4,6,7,8-HpCDD


File:191016D1 #1-493 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:29 H1.93E3 A7.62E3
22:03 H815.69 A2.25E3
22:36 H737.38 A3.83E3
22:57 H630.49 A3.46E3
23:44 H442.65 A1.57E3
24:19 H518.54 A2.65E3
25:30 H488.60 A1.89E3
25:58 H576.90 A1.82E3
26:20 H667.14 A1.91E3
26:36 H490.08 A1.99E3
27:35 H357.83 A652.05
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:28 H3.63E3 A1.18E4
22:03 H631.24 A2.27E3
22:36 H583.05 A1.33E3
22:59 H635.21 A1.89E3
23:43 H567.00 A2.18E3
24:15 H355.41 A2.03E3
24:50 H589.64 A1.37E3
25:42 H1.59E3 A3.13E3
26:20 H1.23E3 A3.54E3
27:11 H527.14 A1.55E3
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:20 H6.28E5 A2.33E6
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:45 H8.41E5 A3.14E6
26:18 H6.05E5 A2.30E6
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:45 H1.07E6 A4.05E6
26:18 H8.24E5 A3.08E6
100 %
50
0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
2.0E3
1.0E3
0.0E0
3.7E3
1.8E3
6.3E5
3.1E5
8.4E5
4.2E5
1.1E6
5.4E5

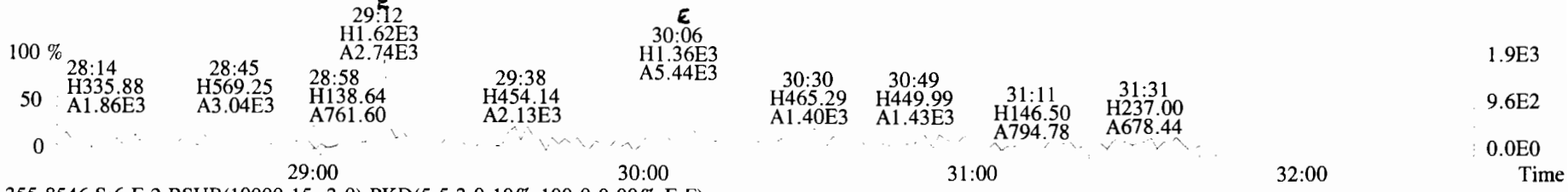
File:191016D1 #1-493 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



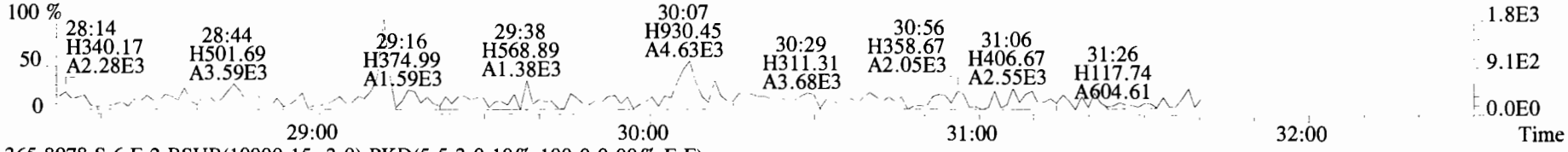
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



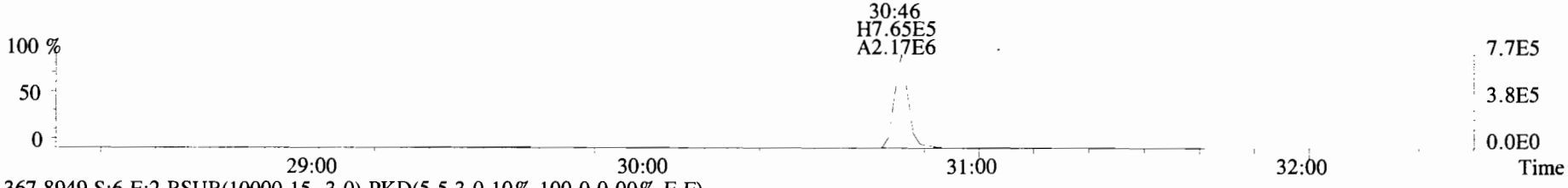
File:191016D1 #1-210 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



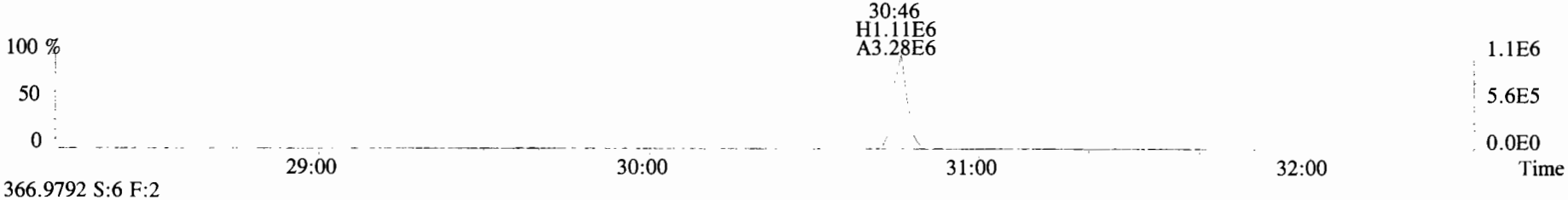
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



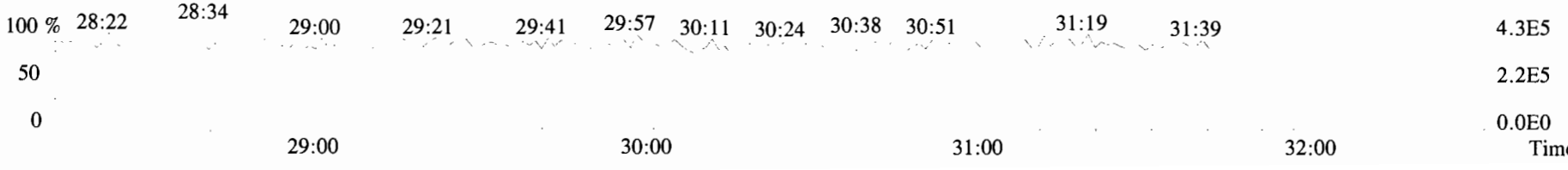
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



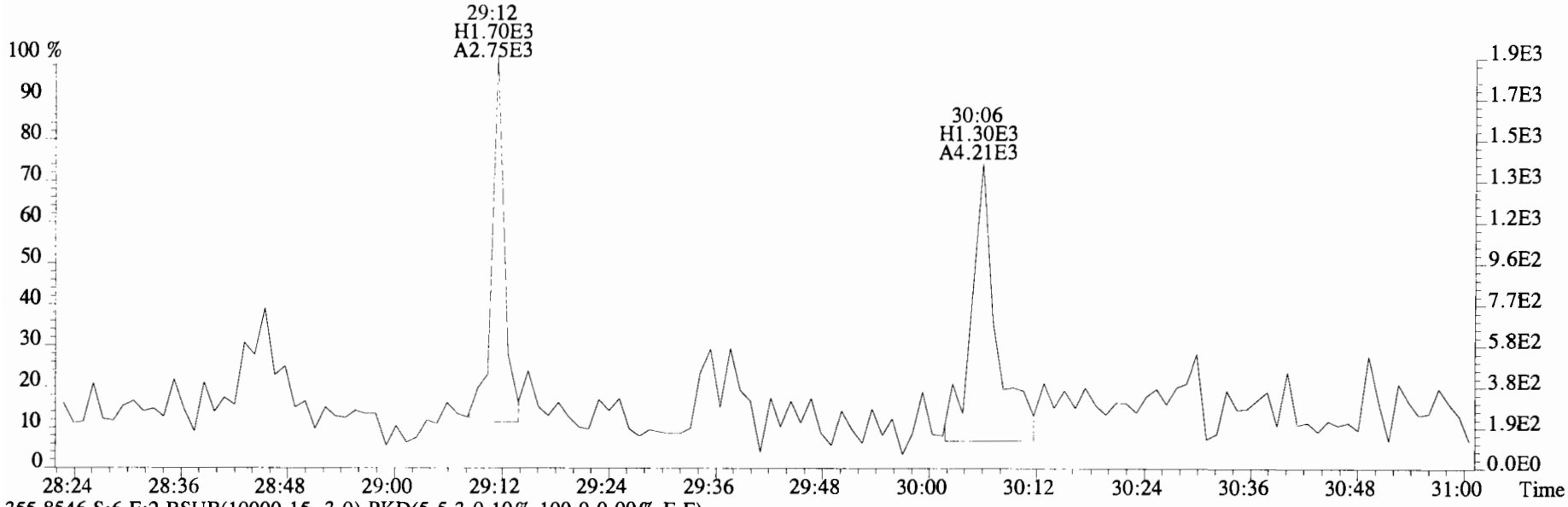
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



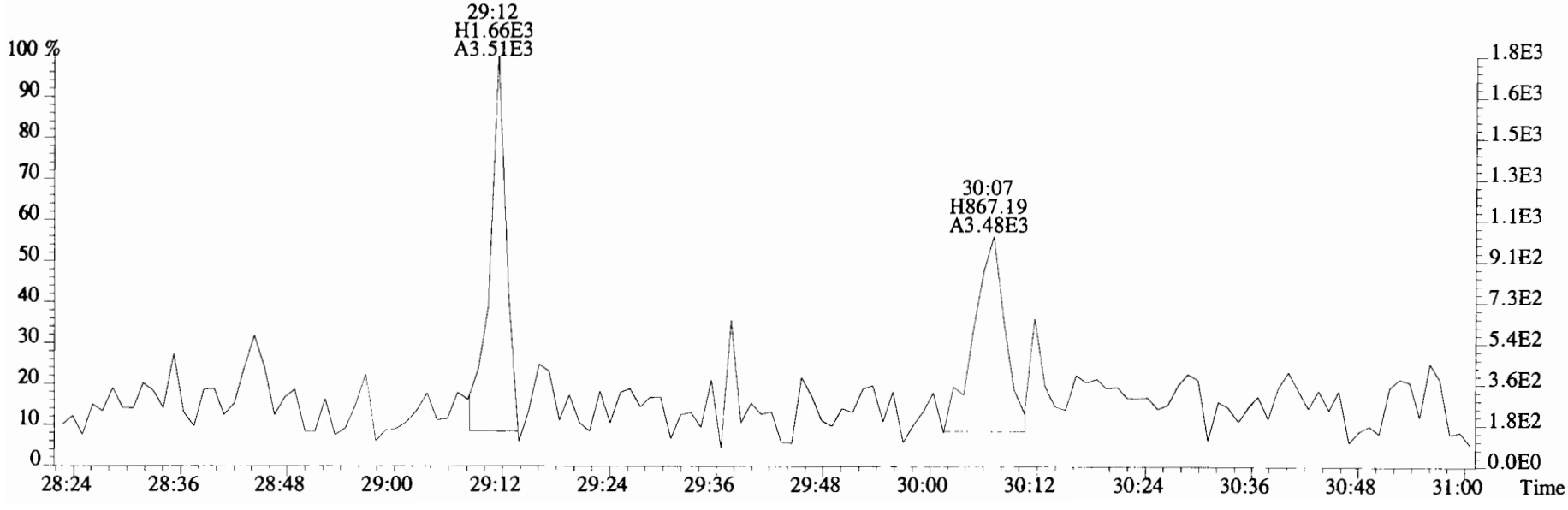
366.9792 S:6 F:2

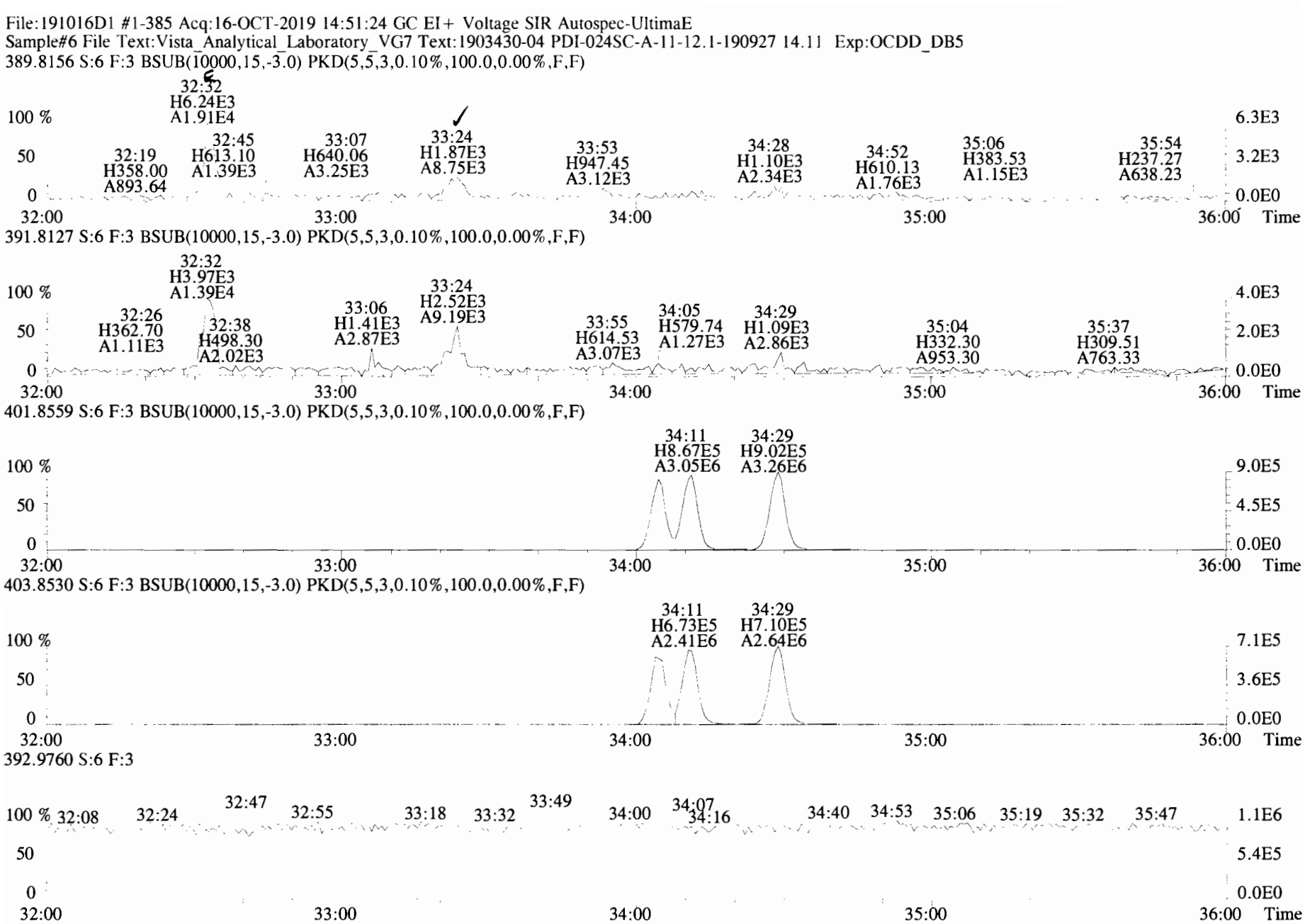


File:191016D1 #1-210 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

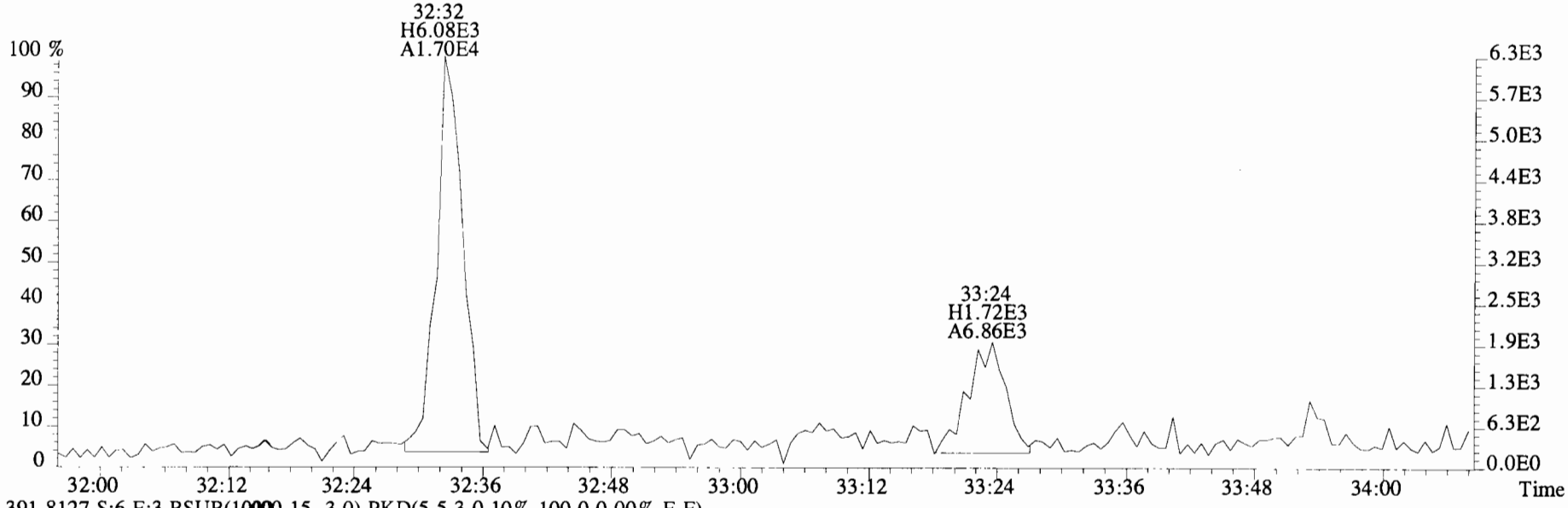


355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

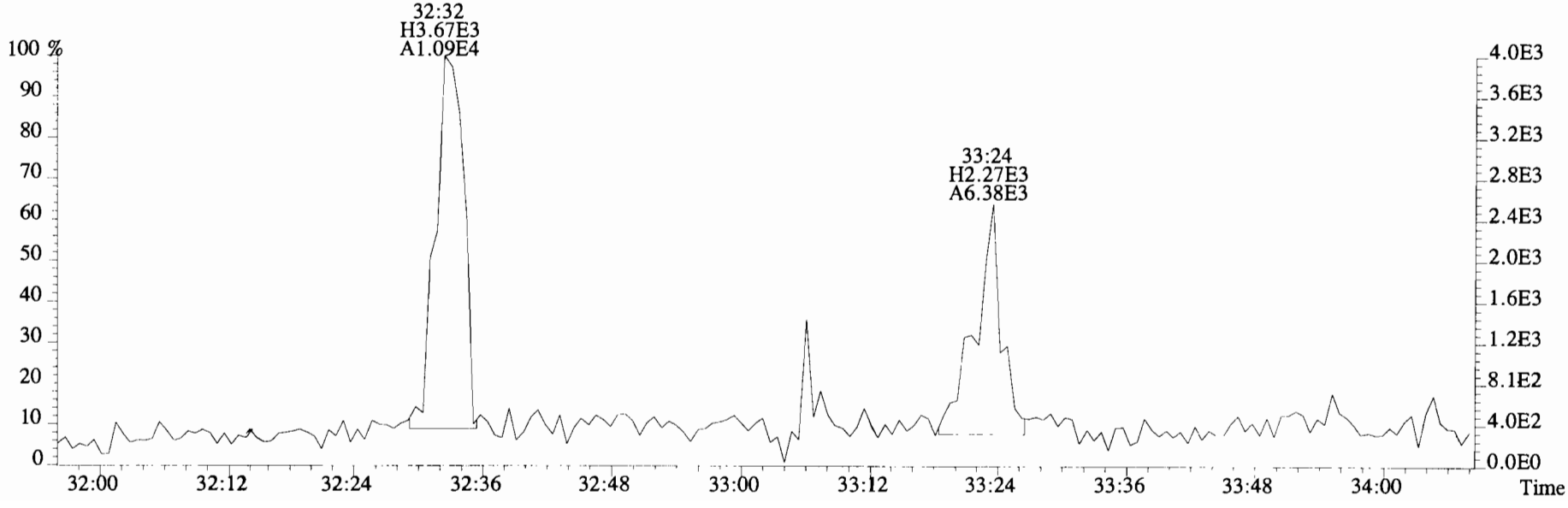


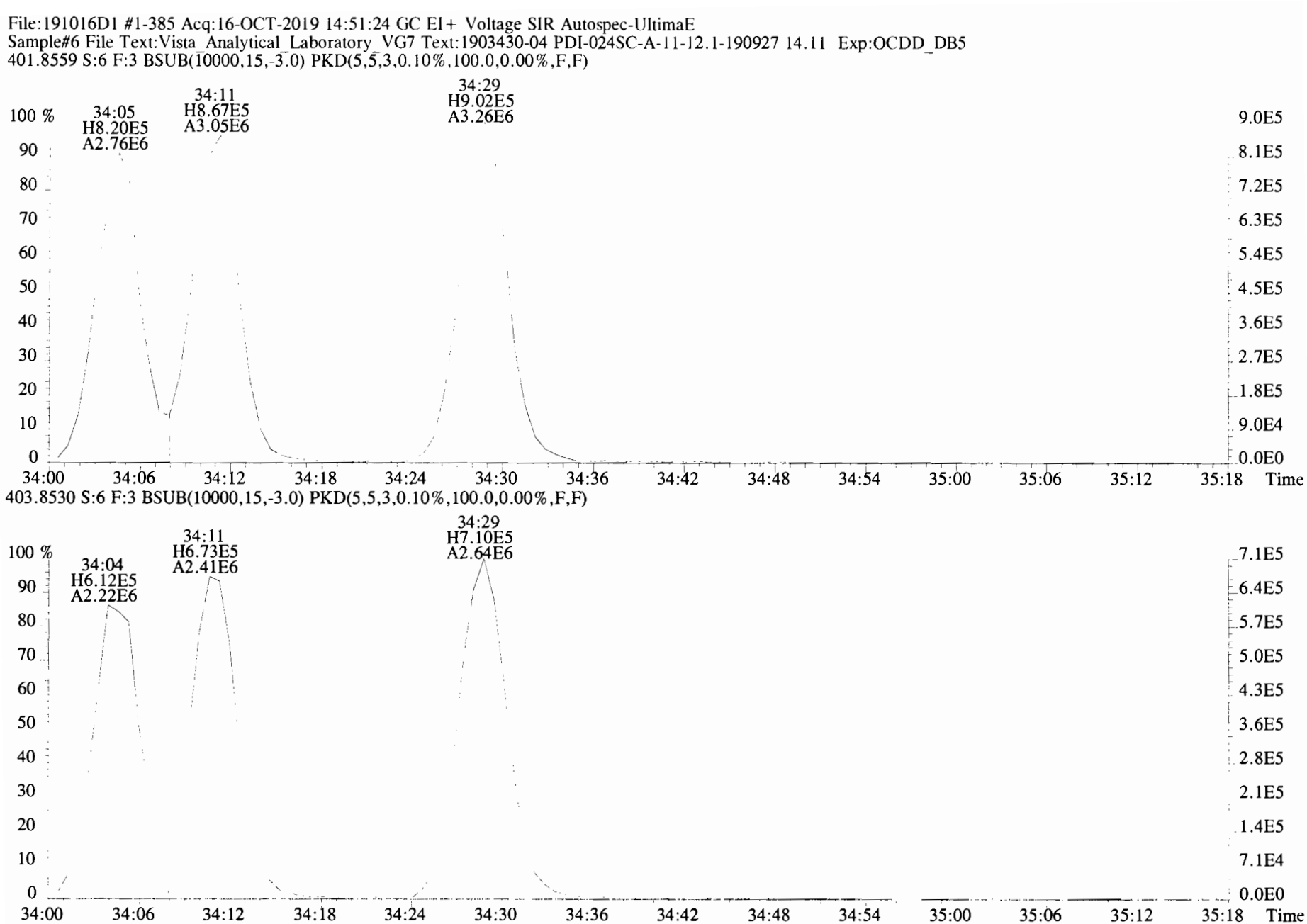

File:191016D1 #1-385 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:32 H6.24E3 A1.91E4
32:19 H358.00 A893.64
32:45 H613.10 A1.39E3
33:07 H640.06 A3.25E3
33:24 H1.87E3 A8.75E3
33:53 H947.45 A3.12E3
34:28 H1.10E3 A2.34E3
34:52 H610.13 A1.76E3
35:06 H383.53 A1.15E3
35:54 H237.27 A638.23
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:32 H3.97E3 A1.39E4
32:26 H362.70 A1.11E3
32:38 H498.30 A2.02E3
33:06 H1.41E3 A2.87E3
33:24 H2.52E3 A9.19E3
33:55 H614.53 A3.07E3
34:05 H579.74 A1.27E3
34:29 H1.09E3 A2.86E3
35:04 H332.30 A953.30
35:37 H309.51 A763.33
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H8.67E5 A3.05E6
34:29 H9.02E5 A3.26E6
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H6.73E5 A2.41E6
34:29 H7.10E5 A2.64E6
392.9760 S:6 F:3
32:08
32:24
32:47
32:55
33:18
33:32
33:49
34:00
34:07
34:16
34:40
34:53
35:06
35:19
35:32
35:47
100 %
50
0
6.3E3
3.2E3
0.0E0
4.0E3
2.0E3
9.0E5
4.5E5
7.1E5
3.6E5
1.1E6
5.4E5
32:00
33:00
34:00
35:00
36:00
Time

File:191016D1 #1-385 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 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)

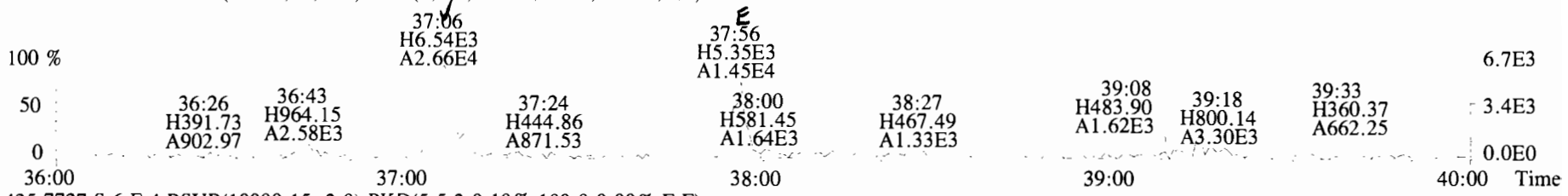


391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

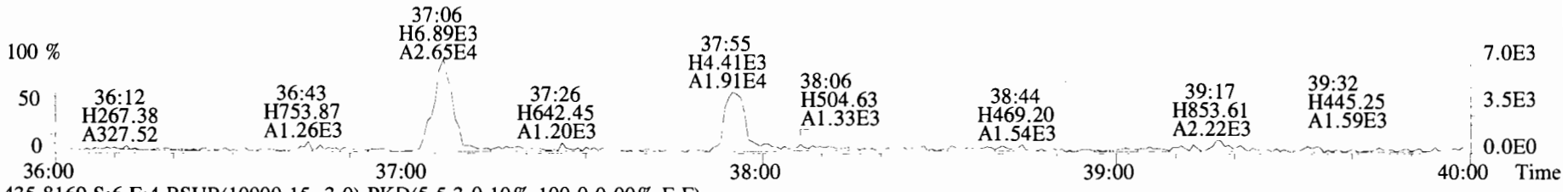



File:191016D1 #1-385 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:05 H8.20E5 A2.76E6
34:11 H8.67E5 A3.05E6
34:29 H9.02E5 A3.26E6
100 %
90
80
70
60
50
40
30
20
10
0
9.0E5
8.1E5
7.2E5
6.3E5
5.4E5
4.5E5
3.6E5
2.7E5
1.8E5
9.0E4
0.0E0
34:00 34:06 34:12 34:18 34:24 34:30 34:36 34:42 34:48 34:54 35:00 35:06 35:12 35:18 Time
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:04 H6.12E5 A2.22E6
34:11 H6.73E5 A2.41E6
34:29 H7.10E5 A2.64E6
100 %
90
80
70
60
50
40
30
20
10
0
7.1E5
6.4E5
5.7E5
5.0E5
4.3E5
3.6E5
2.8E5
2.1E5
1.4E5
7.1E4
0.0E0
34:00 34:06 34:12 34:18 34:24 34:30 34:36 34:42 34:48 34:54 35:00 35:06 35:12 35:18 Time

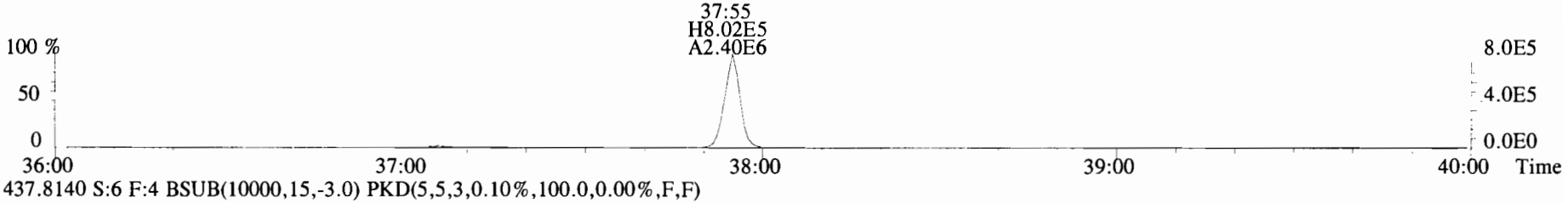
File:191016D1 #1-355 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



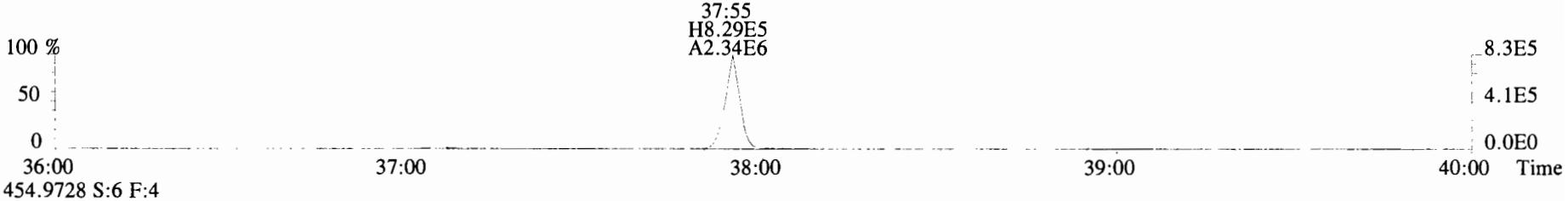
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



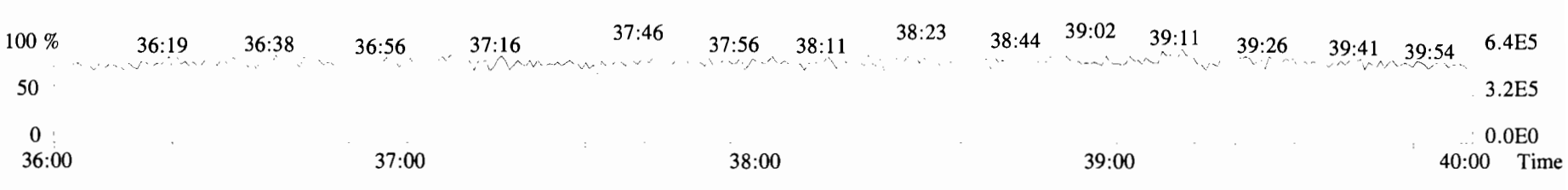
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



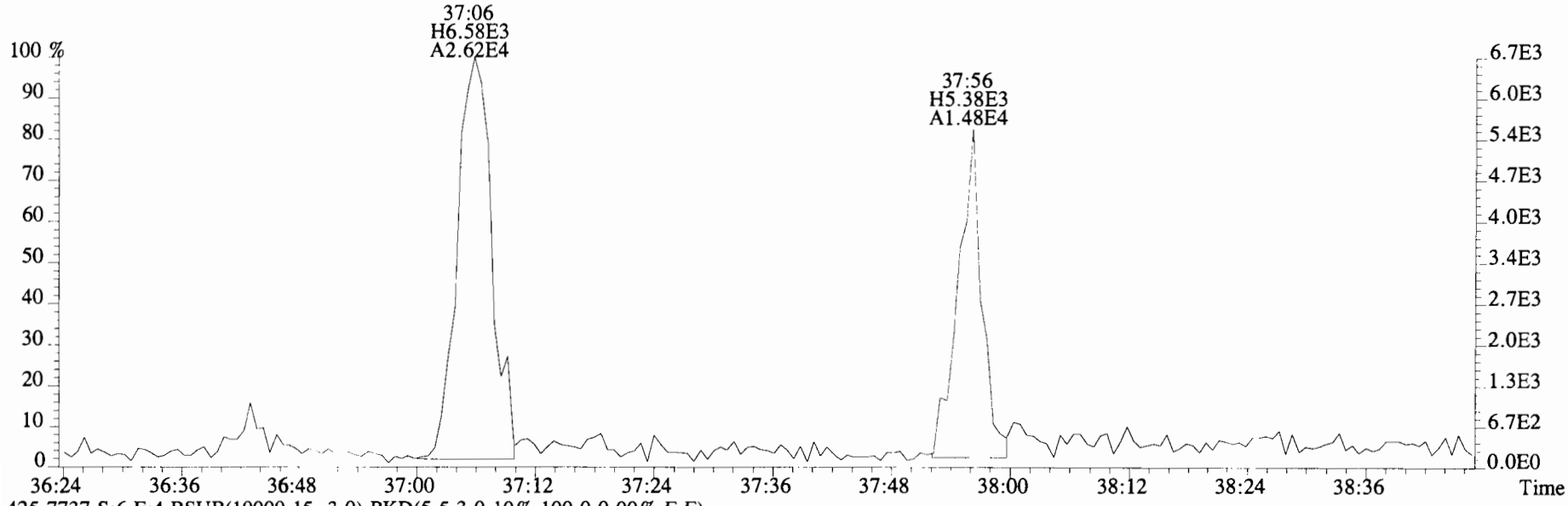
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



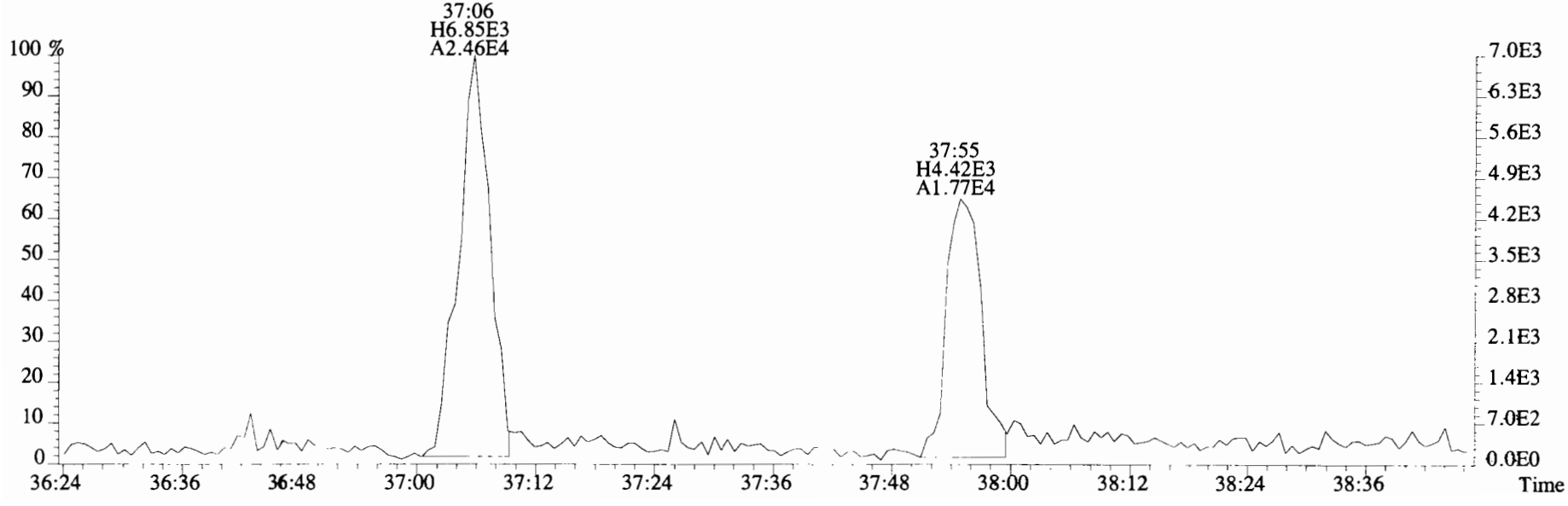
454.9728 S:6 F:4

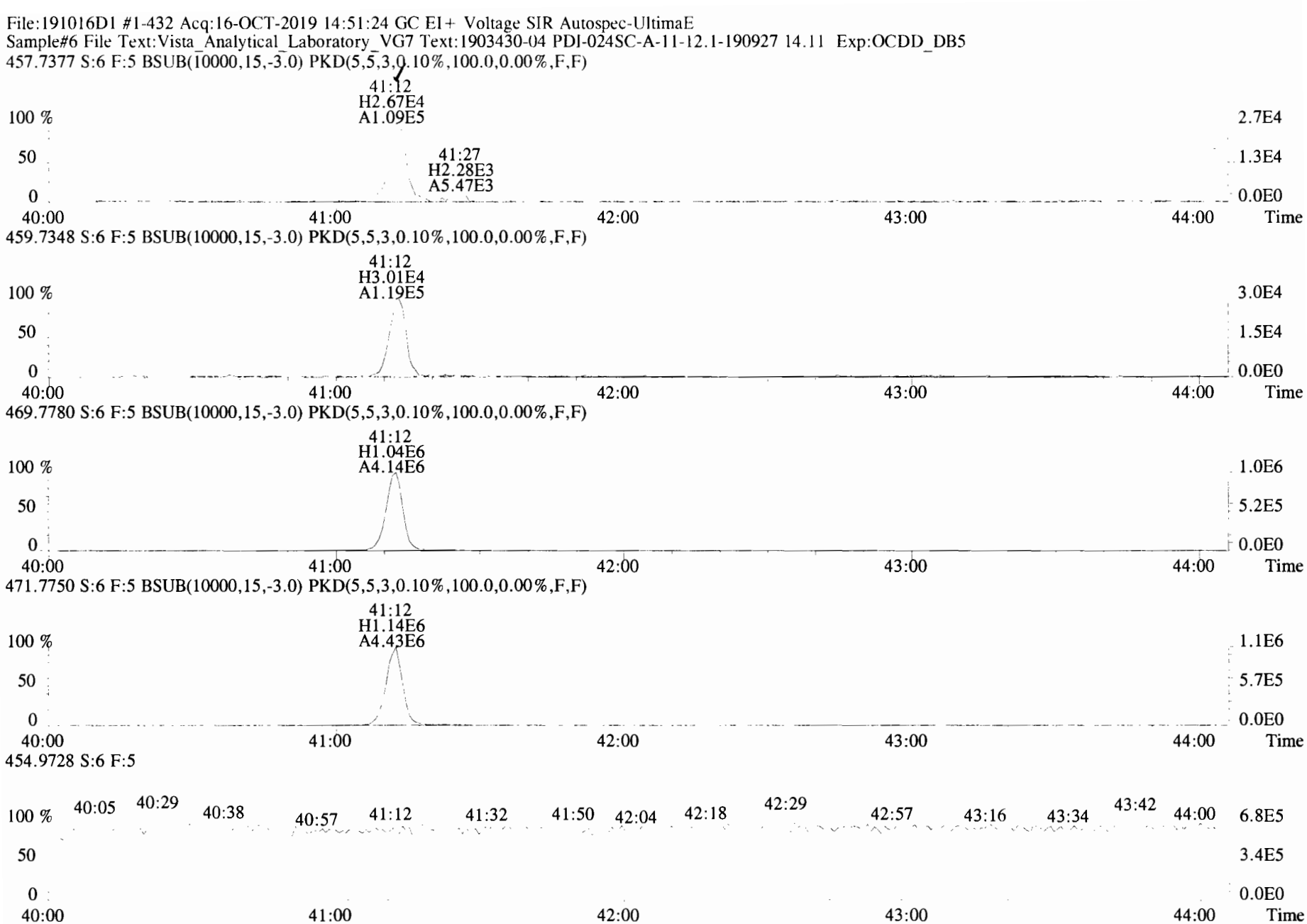


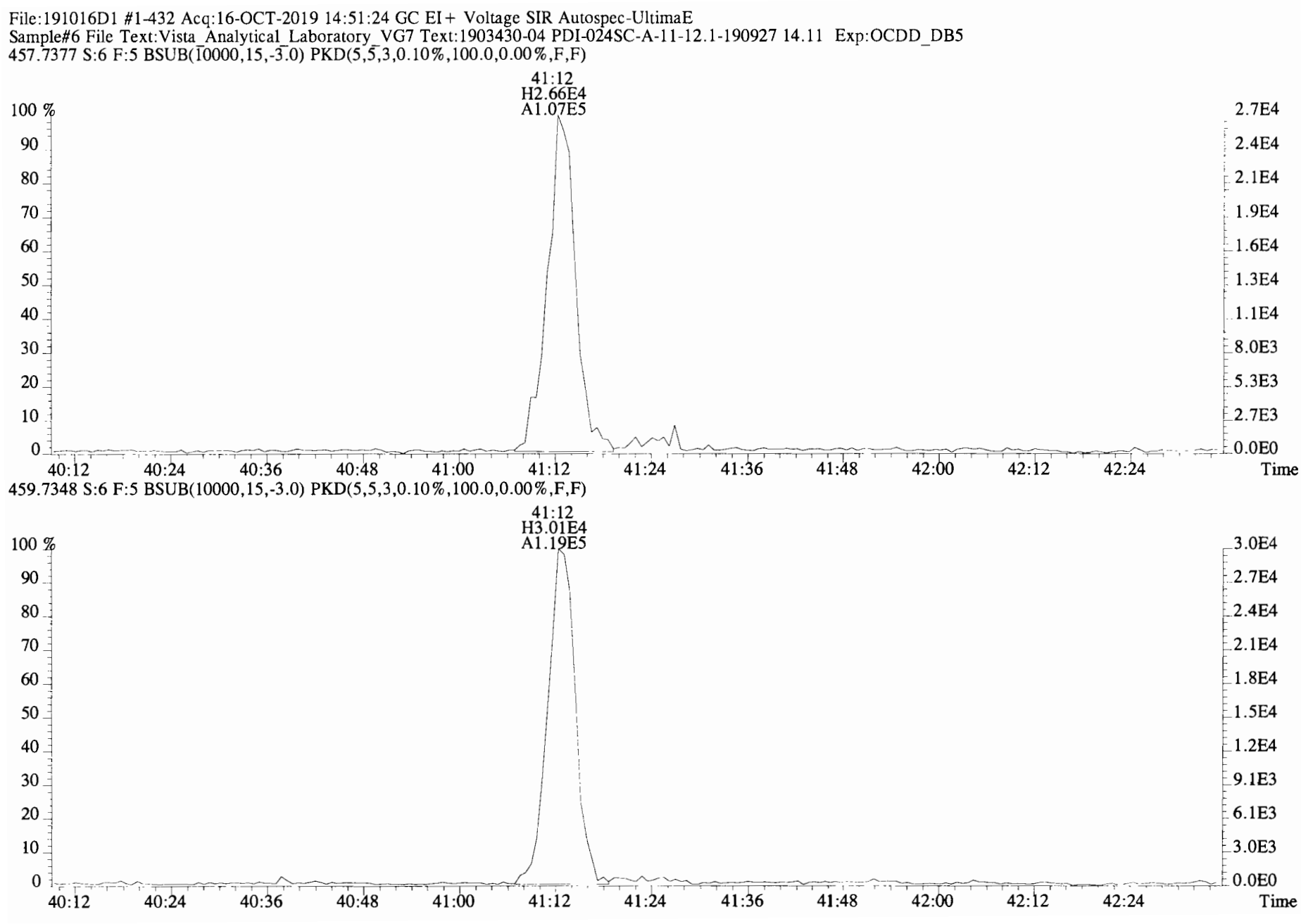
File:191016D1 #1-355 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

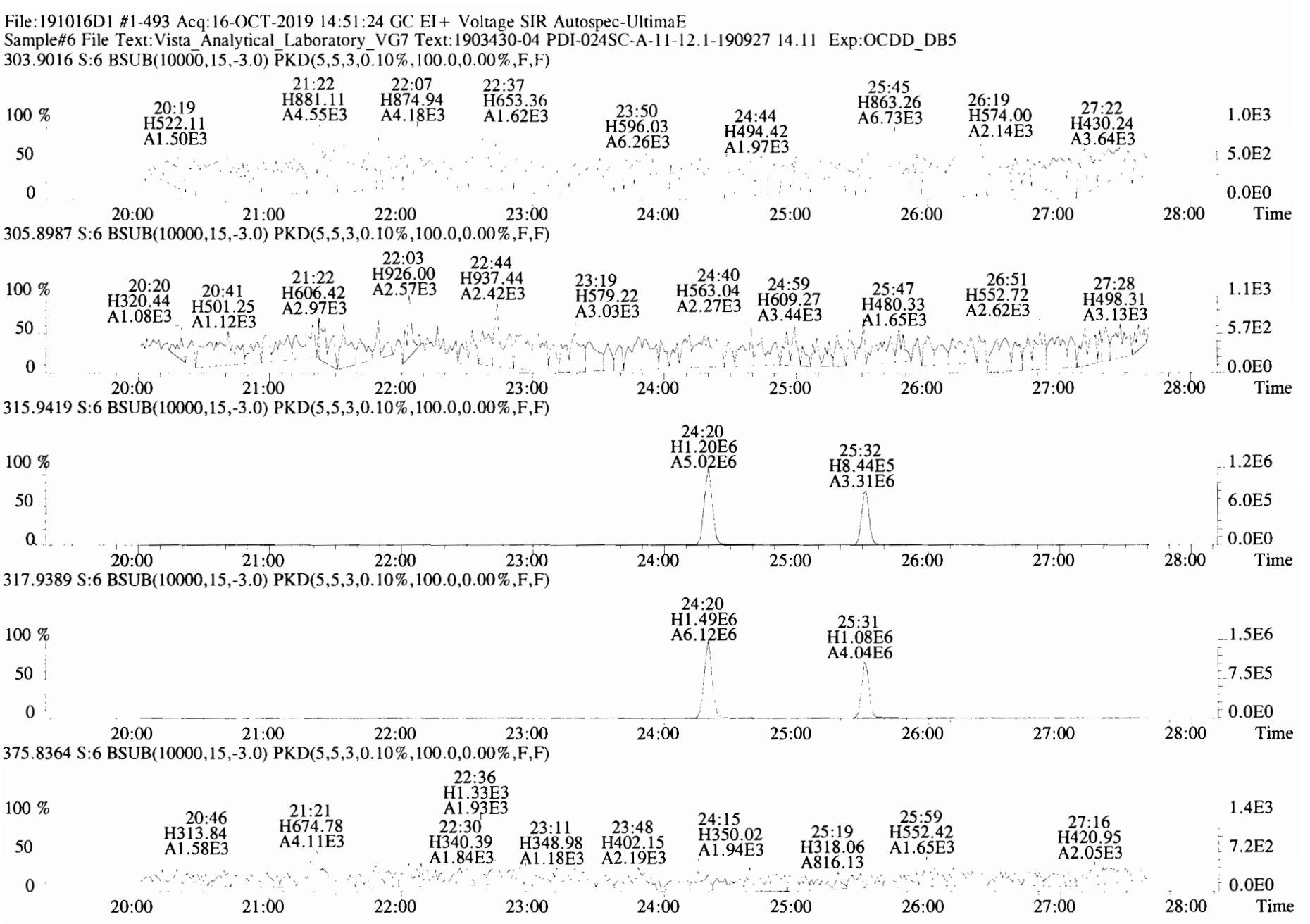


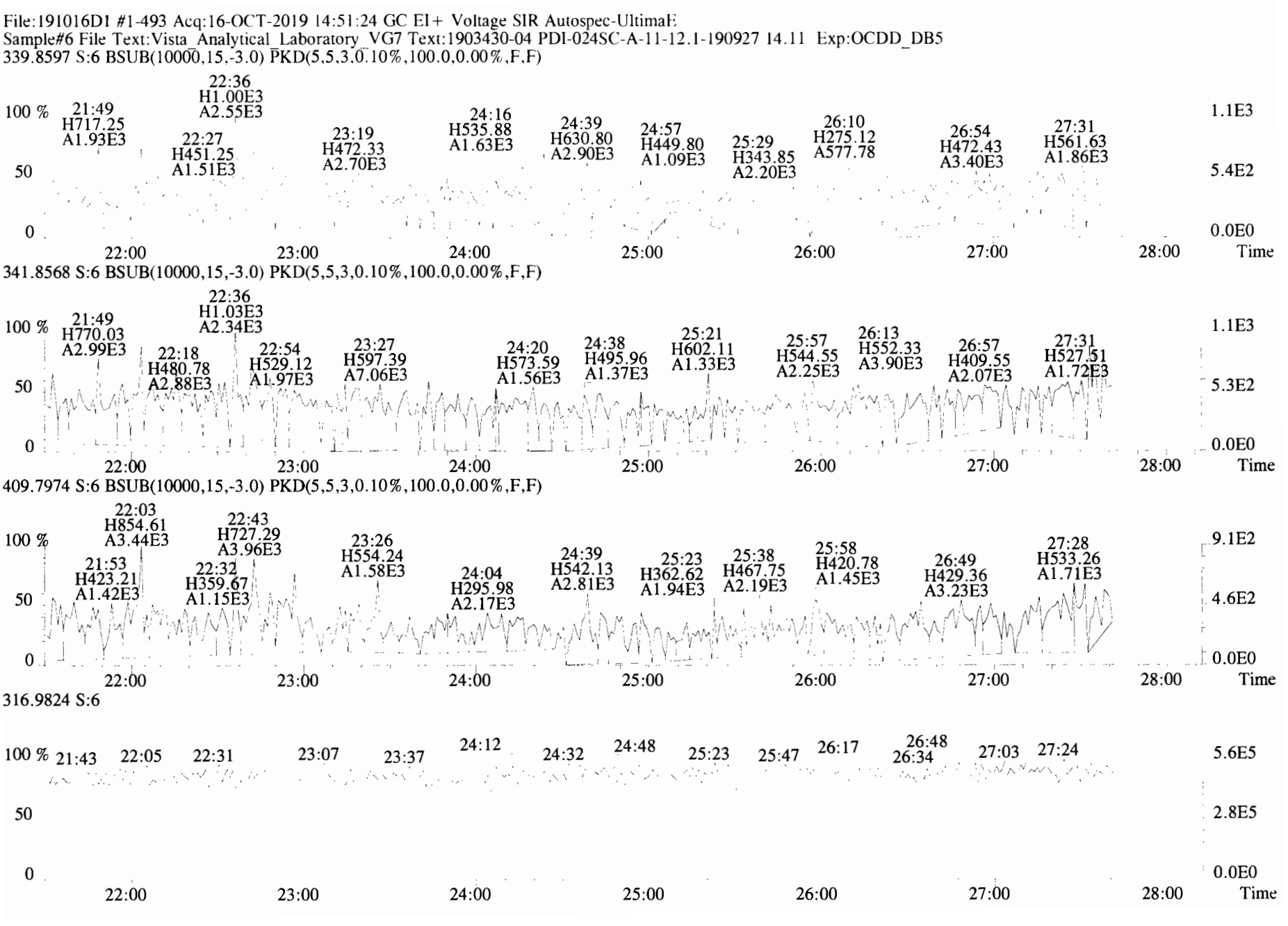
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

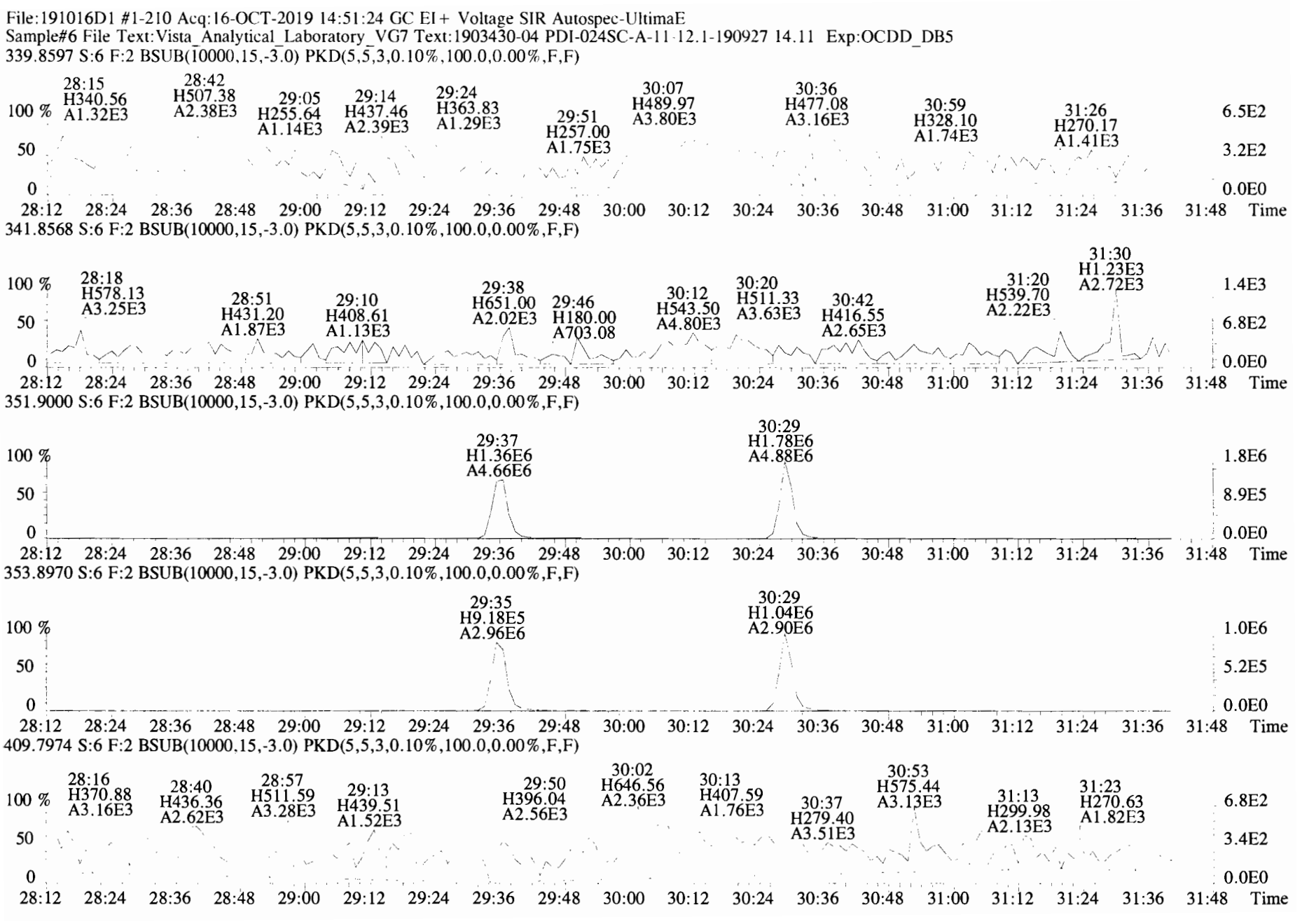



File:191016D1 #1-432 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12
H2.67E4
A1.09E5
41:27
H2.28E3
A5.47E3
100 %
50
0
2.7E4
1.3E4
0.0E0
40:00
41:00
42:00
43:00
44:00
Time
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12
H3.01E4
A1.19E5
3.0E4
1.5E4
0.0E0
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12
H1.04E6
A4.14E6
1.0E6
5.2E5
0.0E0
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12
H1.14E6
A4.43E6
1.1E6
5.7E5
0.0E0
454.9728 S:6 F:5
40:05
40:29
40:38
40:57
41:12
41:32
41:50
42:04
42:18
42:29
42:57
43:16
43:34
43:42
6.8E5
3.4E5
0.0E0

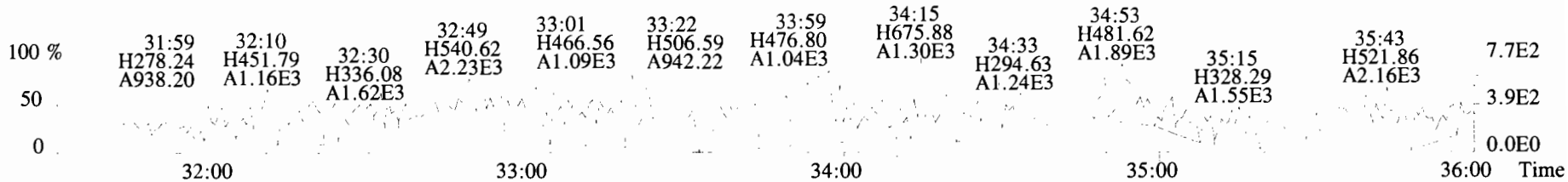

File:191016D1 #1-432 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12
H2.66E4
A1.07E5
100 %
90
80
70
60
50
40
30
20
10
0
2.7E4
2.4E4
2.1E4
1.9E4
1.6E4
1.3E4
1.1E4
8.0E3
5.3E3
2.7E3
0.0E0
40:12
40:24
40:36
40:48
41:00
41:12
41:24
41:36
41:48
42:00
42:12
42:24
Time
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12
H3.01E4
A1.19E5
100 %
90
80
70
60
50
40
30
20
10
0
3.0E4
2.7E4
2.4E4
2.1E4
1.8E4
1.5E4
1.2E4
9.1E3
6.1E3
3.0E3
0.0E0
40:12
40:24
40:36
40:48
41:00
41:12
41:24
41:36
41:48
42:00
42:12
42:24
Time


File:191016D1 #1-493 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:19 H522.11 A1.50E3
21:22 H881.11 A4.55E3
22:07 H874.94 A4.18E3
22:37 H653.36 A1.62E3
23:50 H596.03 A6.26E3
24:44 H494.42 A1.97E3
25:45 H863.26 A6.73E3
26:19 H574.00 A2.14E3
27:22 H430.24 A3.64E3
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:20 H320.44 A1.08E3
20:41 H501.25 A1.12E3
21:22 H606.42 A2.97E3
22:03 H926.00 A2.57E3
22:44 H937.44 A2.42E3
23:19 H579.22 A3.03E3
24:40 H563.04 A2.27E3
24:59 H609.27 A3.44E3
25:47 H480.33 A1.65E3
26:51 H552.72 A2.62E3
27:28 H498.31 A3.13E3
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:20 H1.20E6 A5.02E6
25:32 H8.44E5 A3.31E6
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:20 H1.49E6 A6.12E6
25:31 H1.08E6 A4.04E6
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:46 H313.84 A1.58E3
21:21 H674.78 A4.11E3
22:30 H340.39 A1.84E3
22:36 H1.33E3 A1.93E3
23:11 H348.98 A1.18E3
23:48 H402.15 A2.19E3
24:15 H350.02 A1.94E3
25:19 H318.06 A816.13
25:59 H552.42 A1.65E3
27:16 H420.95 A2.05E3
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
1.0E3
5.0E2
0.0E0
1.1E3
5.7E2
1.2E6
6.0E5
1.5E6
7.5E5
1.4E3
7.2E2

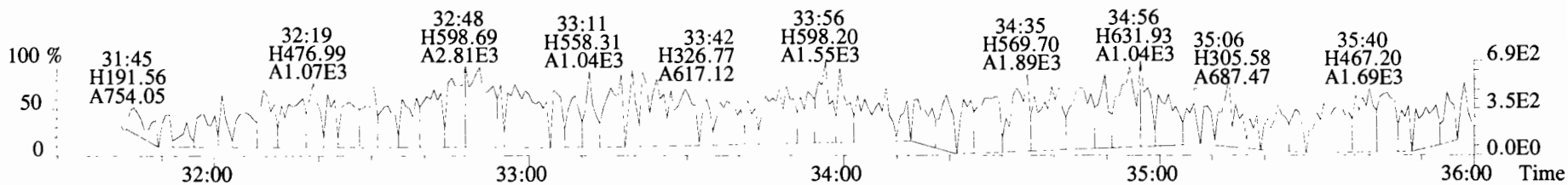

File:191016D1 #1-493 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
21:49 H717.25 A1.93E3
22:27 H451.25 A1.51E3
22:36 H1.00E3 A2.55E3
23:19 H472.33 A2.70E3
24:16 H535.88 A1.63E3
24:39 H630.80 A2.90E3
24:57 H449.80 A1.09E3
25:29 H343.85 A2.20E3
26:10 H275.12 A577.78
26:54 H472.43 A3.40E3
27:31 H561.63 A1.86E3
1.1E3
5.4E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
21:49 H770.03 A2.99E3
22:18 H480.78 A2.88E3
22:36 H1.03E3 A2.34E3
22:54 H529.12 A1.97E3
23:27 H597.39 A7.06E3
24:20 H573.59 A1.56E3
24:38 H495.96 A1.37E3
25:21 H602.11 A1.33E3
25:57 H544.55 A2.25E3
26:13 H552.33 A3.90E3
26:57 H409.55 A2.07E3
27:31 H527.51 A1.72E3
1.1E3
5.3E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
21:53 H423.21 A1.42E3
22:03 H854.61 A3.44E3
22:32 H359.67 A1.15E3
22:43 H727.29 A3.96E3
23:26 H554.24 A1.58E3
24:04 H295.98 A2.17E3
24:39 H542.13 A2.81E3
25:23 H362.62 A1.94E3
25:38 H467.75 A2.19E3
25:58 H420.78 A1.45E3
26:49 H429.36 A3.23E3
27:28 H533.26 A1.71E3
9.1E2
4.6E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
316.9824 S:6
100 %
50
0
21:43
22:05
22:31
23:07
23:37
24:12
24:32
24:48
25:23
25:47
26:17
26:34
26:48
27:03
27:24
5.6E5
2.8E5
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time


File:191016D1 #1-210 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 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)
28:15 H340.56 A1.32E3
28:42 H507.38 A2.38E3
29:05 H255.64 A1.14E3
29:14 H437.46 A2.39E3
29:24 H363.83 A1.29E3
29:51 H257.00 A1.75E3
30:07 H489.97 A3.80E3
30:36 H477.08 A3.16E3
30:59 H328.10 A1.74E3
31:26 H270.17 A1.41E3
6.5E2
3.2E2
0.0E0
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:18 H578.13 A3.25E3
28:51 H431.20 A1.87E3
29:10 H408.61 A1.13E3
29:38 H651.00 A2.02E3
29:46 H180.00 A703.08
30:12 H543.50 A4.80E3
30:20 H511.33 A3.63E3
30:42 H416.55 A2.65E3
31:20 H539.70 A2.22E3
31:30 H1.23E3 A2.72E3
1.4E3
6.8E2
0.0E0
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:37 H1.36E6 A4.66E6
30:29 H1.78E6 A4.88E6
1.8E6
8.9E5
0.0E0
353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:35 H9.18E5 A2.96E6
30:29 H1.04E6 A2.90E6
1.0E6
5.2E5
0.0E0
409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:16 H370.88 A3.16E3
28:40 H436.36 A2.62E3
28:57 H511.59 A3.28E3
29:13 H439.51 A1.52E3
29:50 H396.04 A2.56E3
30:02 H646.56 A2.36E3
30:13 H407.59 A1.76E3
30:37 H279.40 A3.51E3
30:53 H575.44 A3.13E3
31:13 H299.98 A2.13E3
31:23 H270.63 A1.82E3
6.8E2
3.4E2
0.0E0
100 %
50
0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time

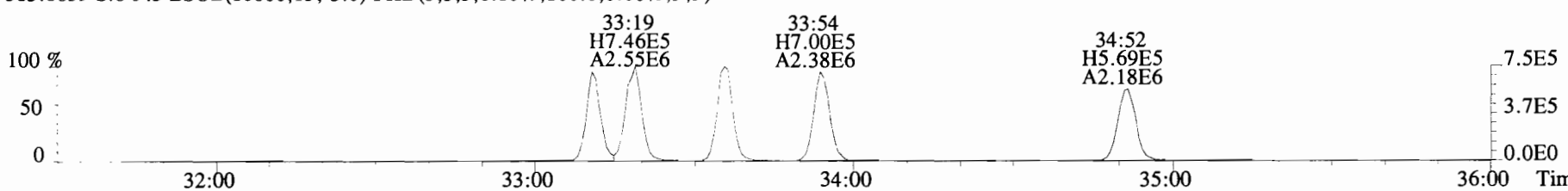
File:191016D1 #1-385 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 Exp:OCDD_DB5
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



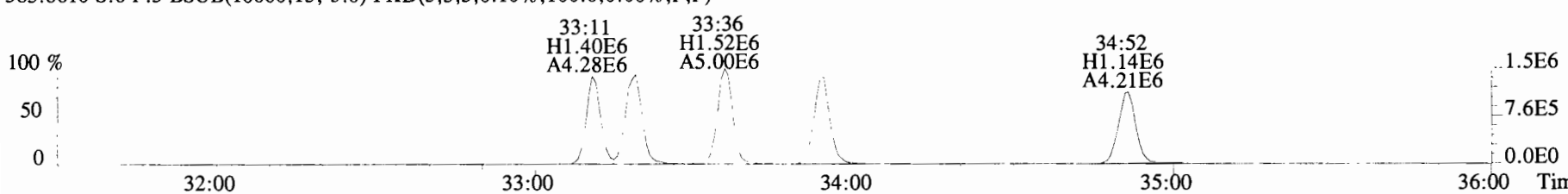
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



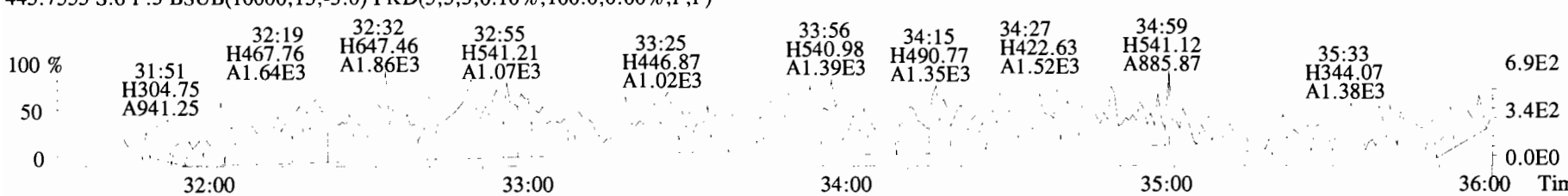
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

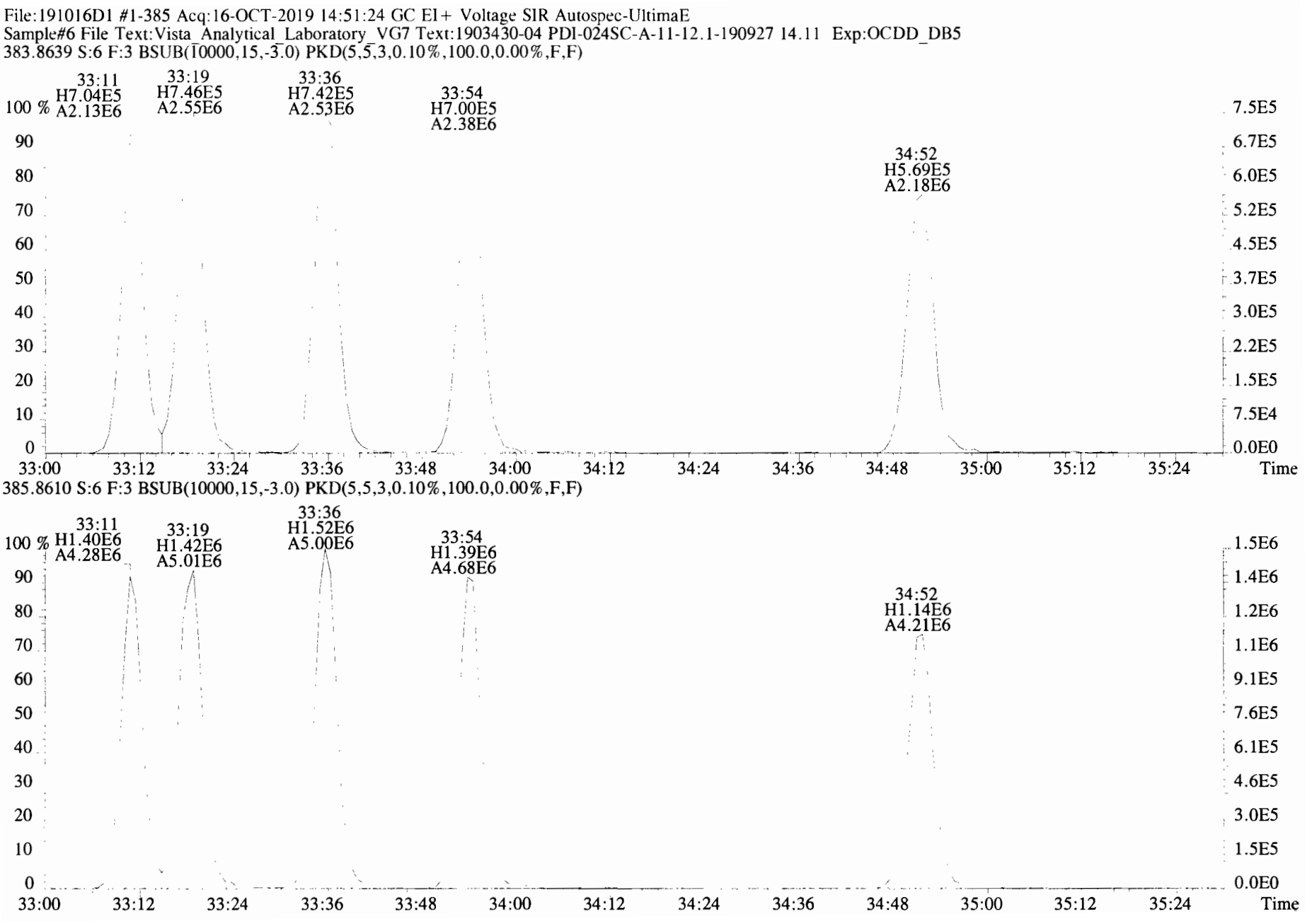


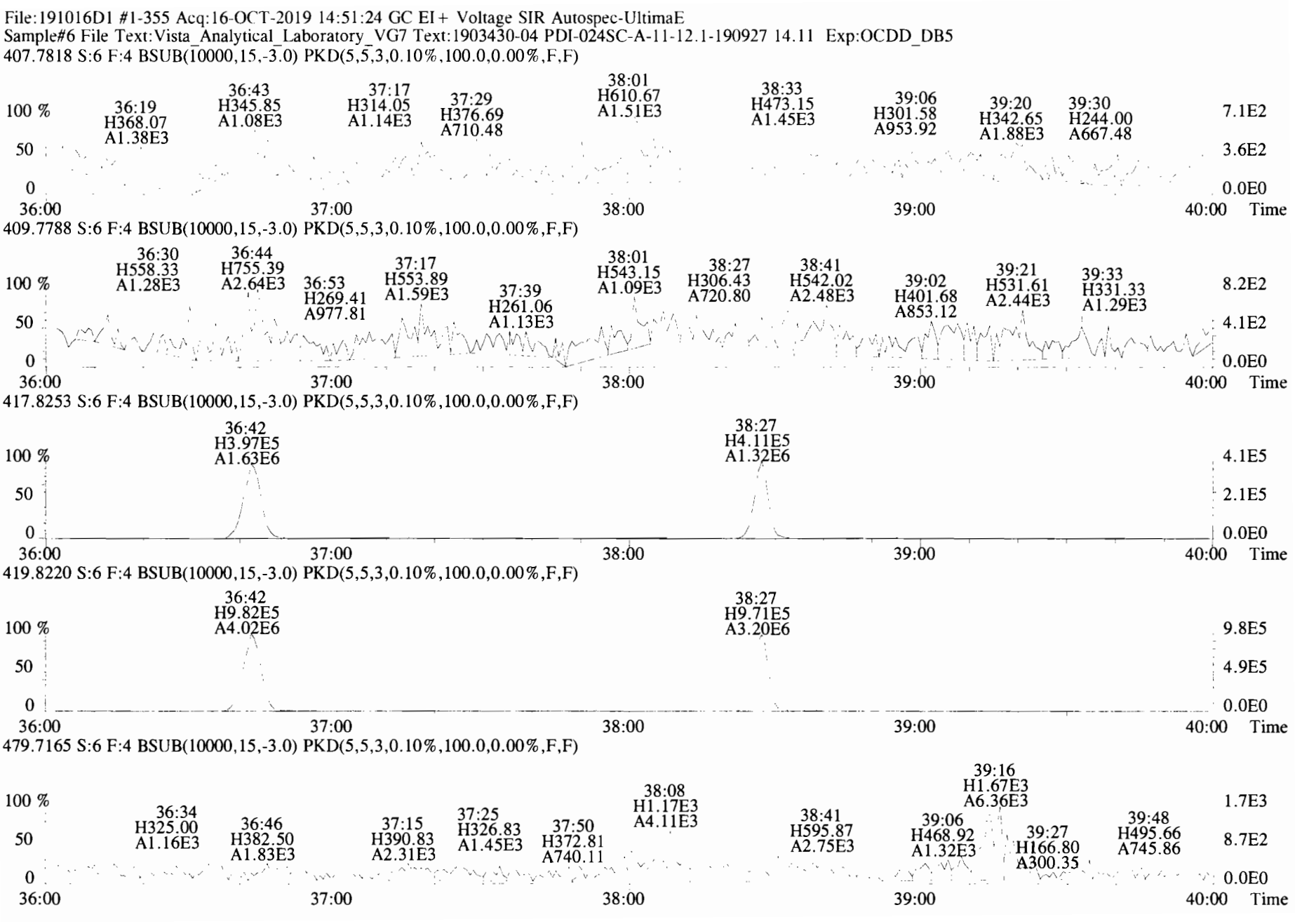
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

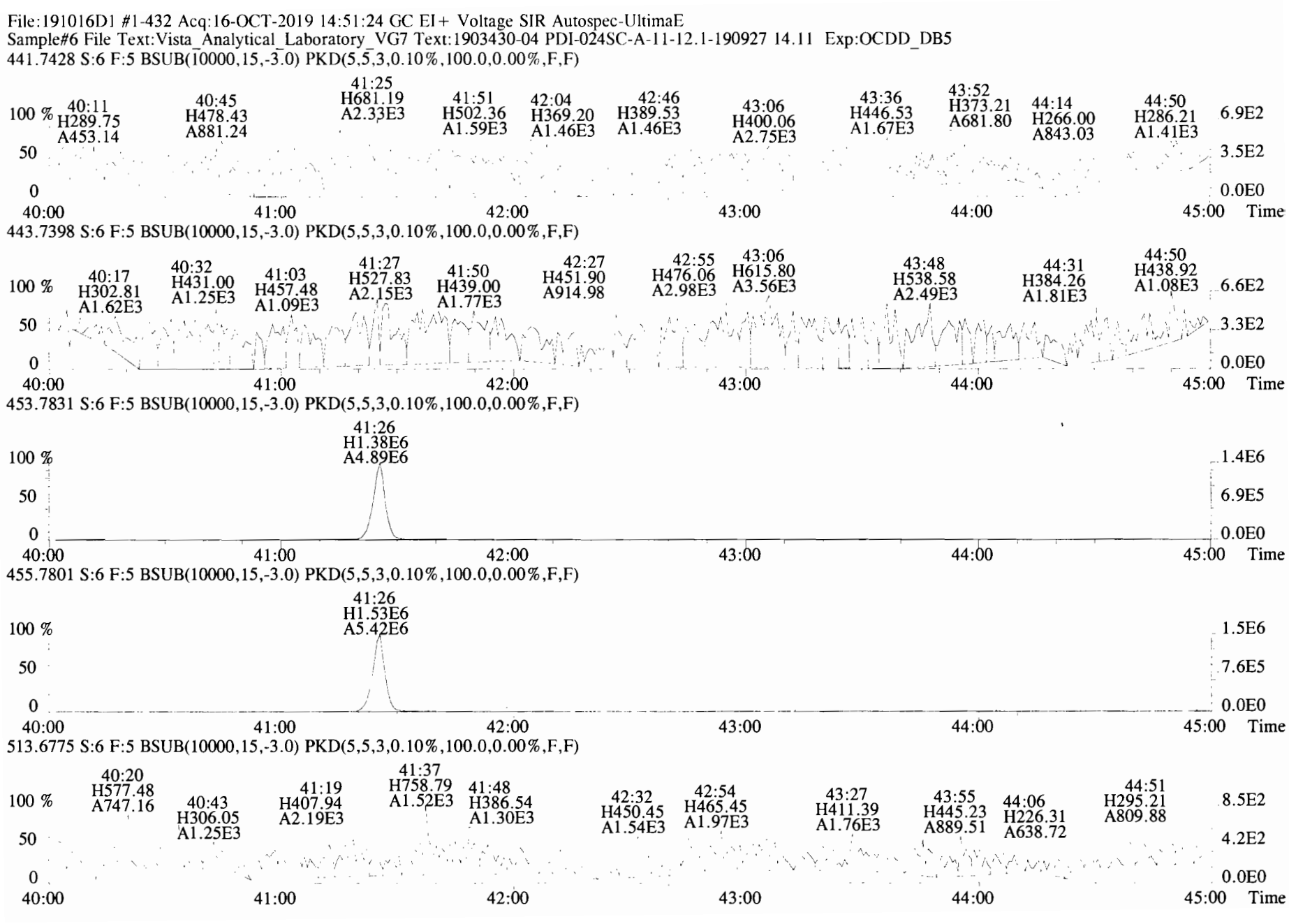


445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)




File:191016D1 #1-385 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 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)
33:11 H7.04E5 A2.13E6
33:19 H7.46E5 A2.55E6
33:36 H7.42E5 A2.53E6
33:54 H7.00E5 A2.38E6
34:52 H5.69E5 A2.18E6
100 %
90
80
70
60
50
40
30
20
10
0
7.5E5
6.7E5
6.0E5
5.2E5
4.5E5
3.7E5
3.0E5
2.2E5
1.5E5
7.5E4
0.0E0
33:00 33:12 33:24 33:36 33:48 34:00 34:12 34:24 34:36 34:48 35:00 35:12 35:24 Time
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:11 H1.40E6 A4.28E6
33:19 H1.42E6 A5.01E6
33:36 H1.52E6 A5.00E6
33:54 H1.39E6 A4.68E6
34:52 H1.14E6 A4.21E6
100 %
90
80
70
60
50
40
30
20
10
0
1.5E6
1.4E6
1.2E6
1.1E6
9.1E5
7.6E5
6.1E5
4.6E5
3.0E5
1.5E5
0.0E0
33:00 33:12 33:24 33:36 33:48 34:00 34:12 34:24 34:36 34:48 35:00 35:12 35:24 Time


File:191016D1 #1-355 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 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)
36:19 H368.07 A1.38E3
36:43 H345.85 A1.08E3
37:17 H314.05 A1.14E3
37:29 H376.69 A710.48
38:01 H610.67 A1.51E3
38:33 H473.15 A1.45E3
39:06 H301.58 A953.92
39:20 H342.65 A1.88E3
39:30 H244.00 A667.48
7.1E2
3.6E2
0.0E0
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:30 H558.33 A1.28E3
36:44 H755.39 A2.64E3
36:53 H269.41 A977.81
37:17 H553.89 A1.59E3
37:39 H261.06 A1.13E3
38:01 H543.15 A1.09E3
38:27 H306.43 A720.80
38:41 H542.02 A2.48E3
39:02 H401.68 A853.12
39:21 H531.61 A2.44E3
39:33 H331.33 A1.29E3
8.2E2
4.1E2
0.0E0
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:42 H3.97E5 A1.63E6
38:27 H4.11E5 A1.32E6
4.1E5
2.1E5
0.0E0
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:42 H9.82E5 A4.02E6
38:27 H9.71E5 A3.20E6
9.8E5
4.9E5
0.0E0
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:34 H325.00 A1.16E3
36:46 H382.50 A1.83E3
37:15 H390.83 A2.31E3
37:25 H326.83 A1.45E3
37:50 H372.81 A740.11
38:08 H1.17E3 A4.11E3
38:41 H595.87 A2.75E3
39:06 H468.92 A1.32E3
39:16 H1.67E3 A6.36E3
39:27 H166.80 A300.35
39:48 H495.66 A745.86
1.7E3
8.7E2
0.0E0
100 %
50
0
36:00
37:00
38:00
39:00
40:00
Time


File:191016D1 #1-432 Acq:16-OCT-2019 14:51:24 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-04 PDI-024SC-A-11-12.1-190927 14.11 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)
40:11 H289.75 A453.14
40:45 H478.43 A881.24
41:25 H681.19 A2.33E3
41:51 H502.36 A1.59E3
42:04 H369.20 A1.46E3
42:46 H389.53 A1.46E3
43:06 H400.06 A2.75E3
43:36 H446.53 A1.67E3
43:52 H373.21 A681.80
44:14 H266.00 A843.03
44:50 H286.21 A1.41E3
6.9E2
3.5E2
0.0E0
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:17 H302.81 A1.62E3
40:32 H431.00 A1.25E3
41:03 H457.48 A1.09E3
41:27 H527.83 A2.15E3
41:50 H439.00 A1.77E3
42:27 H451.90 A914.98
42:55 H476.06 A2.98E3
43:06 H615.80 A3.56E3
43:48 H538.58 A2.49E3
44:31 H384.26 A1.81E3
44:50 H438.92 A1.08E3
6.6E2
3.3E2
0.0E0
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26 H1.38E6 A4.89E6
1.4E6
6.9E5
0.0E0
455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26 H1.53E6 A5.42E6
1.5E6
7.6E5
0.0E0
513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:20 H577.48 A747.16
40:43 H306.05 A1.25E3
41:19 H407.94 A2.19E3
41:37 H758.79 A1.52E3
41:48 H386.54 A1.30E3
42:32 H450.45 A1.54E3
42:54 H465.45 A1.97E3
43:27 H411.39 A1.76E3
43:55 H445.23 A889.51
44:06 H226.31 A638.72
44:51 H295.21 A809.88
8.5E2
4.2E2
0.0E0
100 %
50
0
40:00
41:00
42:00
43:00
44:00
45:00
Time

Client ID: PDI-024SC-B-00-02-1909ŋ Filename: 191016D1 S:7 Acq:16-OCT-19 15:39:14 ConCal: ST191016D1-1

Lab ID: 1903430-05 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.391 EndCAL: NA

	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	1.01e+04	0.48	n	0.91	26:18	0.76227			* 2.5	*
	1,2,3,7,8-PeCDD	2.54e+04	0.57	y	0.90	30:45	1.5843			* 2.5	*
	1,2,3,4,7,8-HxCDD	1.97e+05	1.28	y	1.10	34:05	9.9643			* 2.5	*
	1,2,3,6,7,8-HxCDD	5.47e+05	1.17	y	0.94	34:11	29.510			* 2.5	*
	1,2,3,7,8,9-HxCDD	2.98e+05	1.27	y	0.96	34:29	14.529			* 2.5	*
	1,2,3,4,6,7,8-HpCDD	1.89e+07	1.01	y	0.98	37:56	949.08			* 2.5	*
	OCDD	6.45e+07	0.91	y	0.96	41:13	3700.3			* 2.5	*
	2,3,7,8-TCDF	4.05e+05	0.86	y	0.95	25:31	21.410	ok		* 2.5	*
	1,2,3,7,8-PeCDF	7.41e+05	1.71	y	0.96	29:36	31.237			* 2.5	*
	2,3,4,7,8-PeCDF	2.94e+05	1.75	y	1.01	30:28	11.537			* 2.5	*
	1,2,3,4,7,8-HxCDF	1.56e+06	1.21	y	1.18	33:11	60.293			* 2.5	*
	1,2,3,6,7,8-HxCDF	4.15e+05	1.17	y	1.07	33:19	14.438			* 2.5	*
	2,3,4,6,7,8-HxCDF	1.31e+05	1.14	y	1.11	33:54	4.6445			* 2.5	*
	1,2,3,7,8,9-HxCDF	8.12e+04	1.08	y	1.06	34:52	3.3271			* 2.5	*
	1,2,3,4,6,7,8-HpCDF	9.58e+05	1.01	y	1.13	36:44	41.200			* 2.5	*
	1,2,3,4,7,8,9-HpCDF	2.35e+05	0.98	y	1.28	38:28	11.596			* 2.5	*
	OCDF	1.36e+06	0.91	y	0.95	41:26	98.716			* 2.5	*
IS	13C-2,3,7,8-TCDD	2.82e+06	0.76	y	1.10	26:17	58.526				
IS	13C-1,2,3,7,8-PeCDD	3.41e+06	0.62	y	0.88	30:45	87.974				
IS	13C-1,2,3,4,7,8-HxCDD	3.46e+06	1.34	y	0.64	34:04	113.17				
IS	13C-1,2,3,6,7,8-HxCDD	3.80e+06	1.24	y	0.86	34:11	93.411				
IS	13C-1,2,3,7,8,9-HxCDD	4.11e+06	1.24	y	0.81	34:29	106.89				
IS	13C-1,2,3,4,6,7,8-HpCDD	3.92e+06	1.04	y	0.65	37:55	126.02				
IS	13C-OCDD	7.00e+06	0.90	y	0.58	41:12	253.75				
IS	13C-2,3,7,8-TCDF	3.83e+06	0.79	y	1.03	25:30	53.177				
IS	13C-1,2,3,7,8-PeCDF	4.76e+06	1.56	y	0.85	29:35	79.940				
IS	13C-2,3,4,7,8-PeCDF	4.83e+06	1.56	y	0.85	30:28	81.932				
IS	13C-1,2,3,4,7,8-HxCDF	4.23e+06	0.50	y	0.83	33:11	106.71				
IS	13C-1,2,3,6,7,8-HxCDF	5.18e+06	0.51	y	1.03	33:18	105.10				
IS	13C-2,3,4,6,7,8-HxCDF	4.88e+06	0.52	y	0.95	33:54	107.46				
IS	13C-1,2,3,7,8,9-HxCDF	4.42e+06	0.53	y	0.83	34:51	112.26				
IS	13C-1,2,3,4,6,7,8-HpCDF	3.97e+06	0.42	y	0.76	36:43	110.06				
IS	13C-1,2,3,4,7,8,9-HpCDF	3.05e+06	0.41	y	0.58	38:27	110.10				
IS	13C-OCDF	5.59e+06	0.92	y	0.69	41:26	170.41				
C/Up	37Cl-2,3,7,8-TCDD	2.46e+06			1.20	26:18	46.606				
RS/RT	13C-1,2,3,4-TCDD	8.47e+06	0.76	y	1.00	25:44	192.48				
RS	13C-1,2,3,4-TCDF	1.34e+07	0.82	y	1.00	24:19	192.48				
RS/RT	13C-1,2,3,4,6,9-HxCDF	9.16e+06	0.51	y	1.00	33:35	192.48				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	12.4	13.1		*	*
Total Penta-Dioxins	55.2	58.4		*	*
Total Hexa-Dioxins	625	625		*	*
Total Hepta-Dioxins	2360	2360		*	*
Total Tetra-Furans	88.2	95.1		*	*
Total Penta-Furans	96.669	96.669		*	*
Total Hexa-Furans	119	119		*	*
Total Hepta-Furans	118	121		*	*

	Rec	Qual
IS	30.4	
IS	45.7	
IS	58.8	
IS	48.5	
IS	55.5	
IS	65.5	
IS	65.9	
IS	27.6	
IS	41.5	
IS	42.6	
IS	55.4	
IS	54.6	
IS	55.8	
IS	58.3	
IS	57.2	
IS	57.2	
IS	44.3	
C/Up	60.5	

Integrations by Analyst: DB Date: 10/31/19

Reviewed by Analyst: CT Date: 11/04/19

Totals class: TCDD EMPC Entry #: 19

Run: 12 File: 191016D1 S: 7 I: 1 F: 1
Acquired: 16-OCT-19 15:39:14 Processed: 17-OCT-19 09:18:55

Total Concentration: 13.140 Unnamed Concentration: 12.378

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
22:58	3.503e+04	3.963e+04	0.88	y	7.465e+04	5.6263	
23:19	1.699e+04	2.405e+04	0.71	y	4.104e+04	3.0933	
23:43	4.747e+03	5.602e+03	0.85	y	1.035e+04	0.77991	
24:40	5.604e+03	6.769e+03	0.83	y	1.237e+04	0.93253	
24:50	6.074e+03	7.593e+03	0.80	y	1.367e+04	1.0301	
26:03	5.534e+03	6.621e+03	0.84	y	1.216e+04	0.91608	
26:18	4.400e+03	9.084e+03	0.48	n	1.011e+04	0.76227	2,3,7,8-TCDD

Totals class: PeCDD EMPC Entry #: 21

Run: 12 File: 191016D1 S: 7 I: 1 F: 2
Acquired: 16-OCT-19 15:39:14 Processed: 17-OCT-19 09:18:55

Total Concentration: 58.438 Unnamed Concentration: 56.853

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
28:44	1.601e+05	2.656e+05	0.60	y	4.257e+05	26.598	
29:10	3.661e+04	5.686e+04	0.64	y	9.346e+04	5.8401	
29:37	5.355e+04	7.993e+04	0.67	y	1.335e+05	8.3409	
29:46	1.041e+04	2.217e+04	0.47	n	2.694e+04	1.6835	
29:52	3.034e+04	5.393e+04	0.56	y	8.427e+04	5.2657	
30:04	3.996e+04	6.001e+04	0.67	y	9.997e+04	6.2466	
30:23	5.342e+03	7.241e+03	0.74	n	1.180e+04	0.73750	
30:45	9.173e+03	1.618e+04	0.57	y	2.535e+04	1.5843	1,2,3,7,8-PeCDD
30:51	8.483e+03	1.266e+04	0.67	y	2.115e+04	1.3213	
31:07	5.956e+03	8.047e+03	0.74	n	1.312e+04	0.81963	

Totals class: HxCDD EMPC Entry #: 23

Run: 12 File: 191016D1 S: 7 I: 1 F: 3
Acquired: 16-OCT-19 15:39:14 Processed: 17-OCT-19 09:18:55

Total Concentration: 624.99 Unnamed Concentration: 570.990

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
32:32	3.249e+06	2.645e+06	1.23	y	5.894e+06	301.83	
33:07	4.139e+05	3.455e+05	1.20	y	7.595e+05	38.893	
33:22	2.080e+06	1.719e+06	1.21	y	3.799e+06	194.54	
33:30	1.507e+05	1.264e+05	1.19	y	2.771e+05	14.190	
34:05	1.107e+05	8.652e+04	1.28	y	1.972e+05	9.9643	1,2,3,4,7,8-HxCDD
34:11	2.952e+05	2.522e+05	1.17	y	5.475e+05	29.510	1,2,3,6,7,8-HxCDD
34:23	2.319e+05	1.886e+05	1.23	y	4.205e+05	21.535	
34:29	1.669e+05	1.310e+05	1.27	y	2.979e+05	14.529	1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Entry #: 25

Run: 12 File: 191016D1 S: 7 I: 1 F: 4
Acquired: 16-OCT-19 15:39:14 Processed: 17-OCT-19 09:18:55

Total Concentration: 2361.6 Unnamed Concentration: 1412.503

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:06	1.411e+07	1.409e+07	1.00 y	2.820e+07	1412.5	
37:56	9.506e+06	9.441e+06	1.01 y	1.895e+07	949.08	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Entry #: 27

Run: 12 File: 191016D1 S: 7 I: 1 F: 1
Acquired: 16-OCT-19 15:39:14 Processed: 17-OCT-19 09:18:55

Total Concentration: 95.137 Unnamed Concentration: 73.728

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
20:51	5.793e+03	5.057e+03	1.15	n	8.950e+03	0.47309	
21:26	9.061e+03	1.048e+04	0.86	y	1.954e+04	1.0330	
22:03	2.105e+05	2.632e+05	0.80	y	4.737e+05	25.040	
22:34	1.671e+04	1.818e+04	0.92	n	3.218e+04	1.7007	
22:56	4.642e+04	5.386e+04	0.86	y	1.003e+05	5.3008	
23:20	1.387e+04	1.748e+04	0.79	y	3.136e+04	1.6576	
23:29	5.659e+03	4.105e+03	1.38	n	7.266e+03	0.38408	
23:37	1.261e+04	1.130e+04	1.12	n	2.001e+04	1.0576	
24:05	8.148e+03	1.156e+04	0.70	y	1.971e+04	1.0416	
24:19	6.951e+04	8.403e+04	0.83	y	1.535e+05	8.1156	
24:45	1.375e+05	1.751e+05	0.79	y	3.126e+05	16.525	
24:59	9.605e+03	1.163e+04	0.83	y	2.124e+04	1.1224	
25:09	6.762e+03	9.858e+03	0.69	y	1.662e+04	0.87849	
25:25	3.826e+04	4.924e+04	0.78	y	8.751e+04	4.6253	
25:31	1.870e+05	2.181e+05	0.86	y	4.050e+05	21.410	2,3,7,8-TCDF
25:51	1.181e+04	1.622e+04	0.73	y	2.803e+04	1.4817	
26:03	5.514e+03	5.699e+03	0.97	n	1.009e+04	0.53314	
27:16	3.173e+04	2.947e+04	1.08	n	5.217e+04	2.7573	

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

Run: 12 File: 191016D1 S: 7 I: 1 F: 1
Acquired: 16-OCT-19 15:39:14 Processed: 17-OCT-19 09:18:55

Total Concentration: 7.2878 Unnamed Concentration: 7.288

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
27:16	1.058e+05	7.344e+04	1.44	y	1.793e+05	7.2878	

Totals class: PeCDF EMPC Entry #: 31

Run: 12 File: 191016D1 S: 7 I: 1 F: 2
Acquired: 16-OCT-19 15:39:14 Processed: 17-OCT-19 09:18:55

Total Concentration: 89.381 Unnamed Concentration: 46.608

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
28:42	2.787e+05	1.657e+05	1.68	y	4.444e+05	18.067	
29:13	1.322e+05	8.161e+04	1.62	y	2.138e+05	8.6930	
29:26	4.923e+04	3.071e+04	1.60	y	7.994e+04	3.2499	
29:36	4.673e+05	2.739e+05	1.71	y	7.412e+05	31.237	1,2,3,7,8-PeCDF
29:50	1.437e+05	8.767e+04	1.64	y	2.314e+05	9.4077	
30:24	9.573e+03	6.499e+03	1.47	y	1.607e+04	0.65340	
30:28	1.871e+05	1.069e+05	1.75	y	2.940e+05	11.537	2,3,4,7,8-PeCDF
30:32	8.537e+04	4.964e+04	1.72	y	1.350e+05	5.4886	
31:22	1.612e+04	9.669e+03	1.67	y	2.579e+04	1.0485	

Totals class: HxCDF EMPC Entry #: 33

Run: 12 File: 191016D1 S: 7 I: 1 F: 3
Acquired: 16-OCT-19 15:39:14 Processed: 17-OCT-19 09:18:55

Total Concentration: 119.19 Unnamed Concentration: 36.492

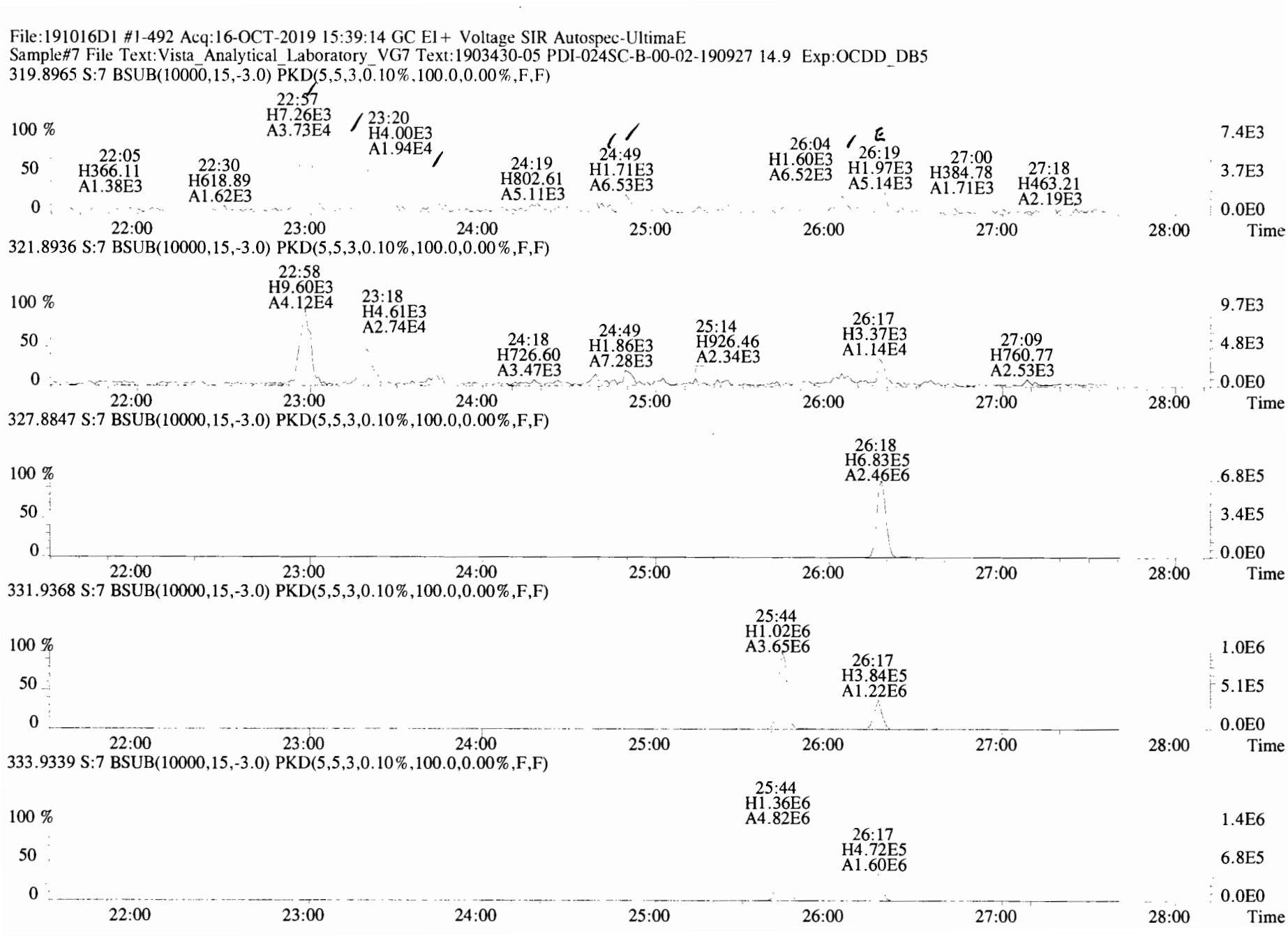
RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
32:00	5.638e+04	4.706e+04	1.20 y	1.034e+05	3.8598	
32:10	1.922e+05	1.635e+05	1.18 y	3.557e+05	13.273	
32:32	9.641e+03	9.067e+03	1.06 y	1.871e+04	0.69805	
32:42	2.277e+05	1.805e+05	1.26 y	4.082e+05	15.232	
33:11	8.523e+05	7.052e+05	1.21 y	1.558e+06	60.293	1,2,3,4,7,8-HxCDF
33:19	2.242e+05	1.908e+05	1.17 y	4.150e+05	14.438	1,2,3,6,7,8-HxCDF
33:36	5.514e+03	4.584e+03	1.20 y	1.010e+04	0.37676	
33:54	6.970e+04	6.134e+04	1.14 y	1.310e+05	4.6445	2,3,4,6,7,8-HxCDF
34:52	4.222e+04	3.896e+04	1.08 y	8.118e+04	3.3271	1,2,3,7,8,9-HxCDF
34:56	4.582e+04	3.600e+04	1.27 y	8.182e+04	3.0529	

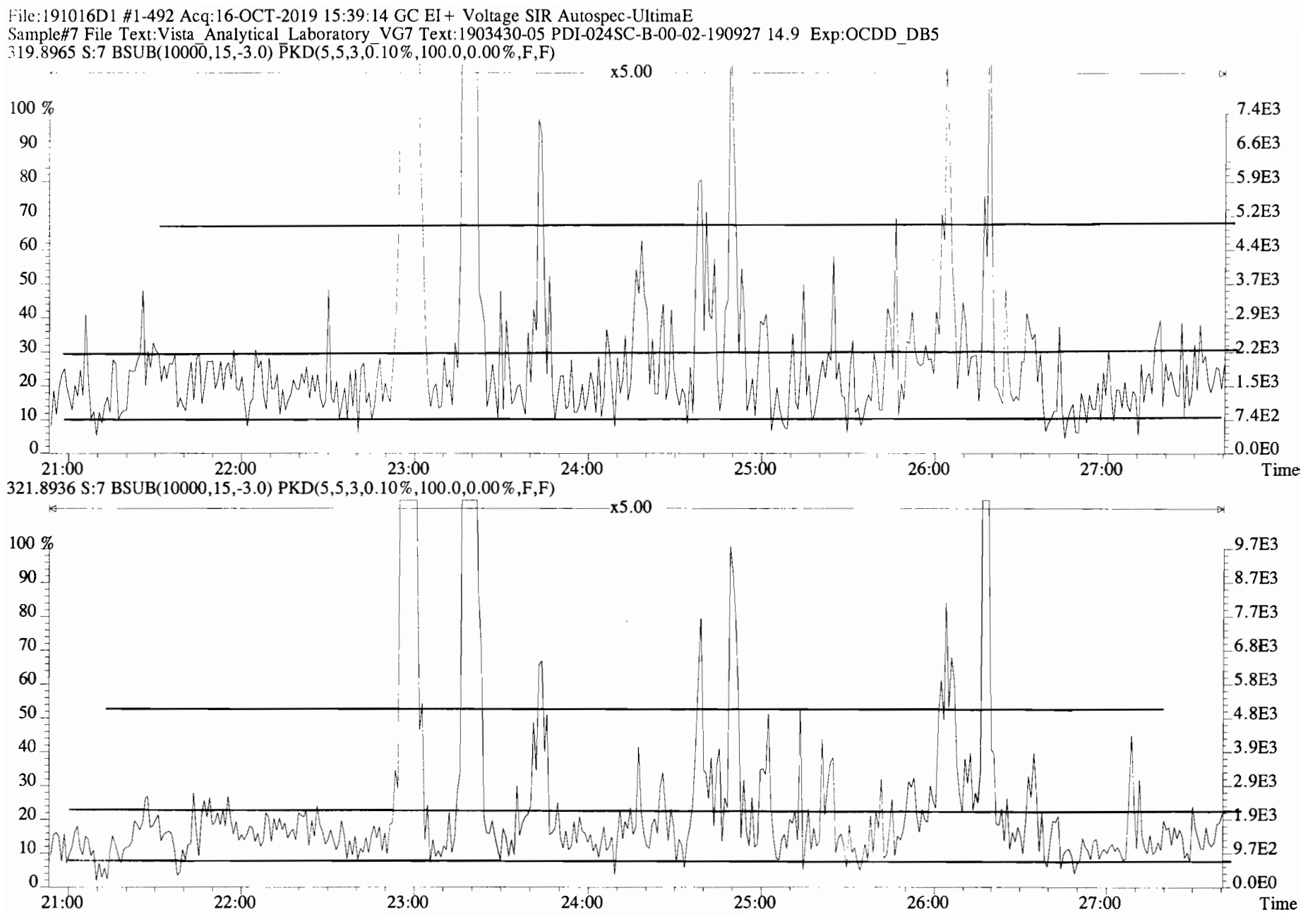
Totals class: HpCDF EMPC Entry #: 35

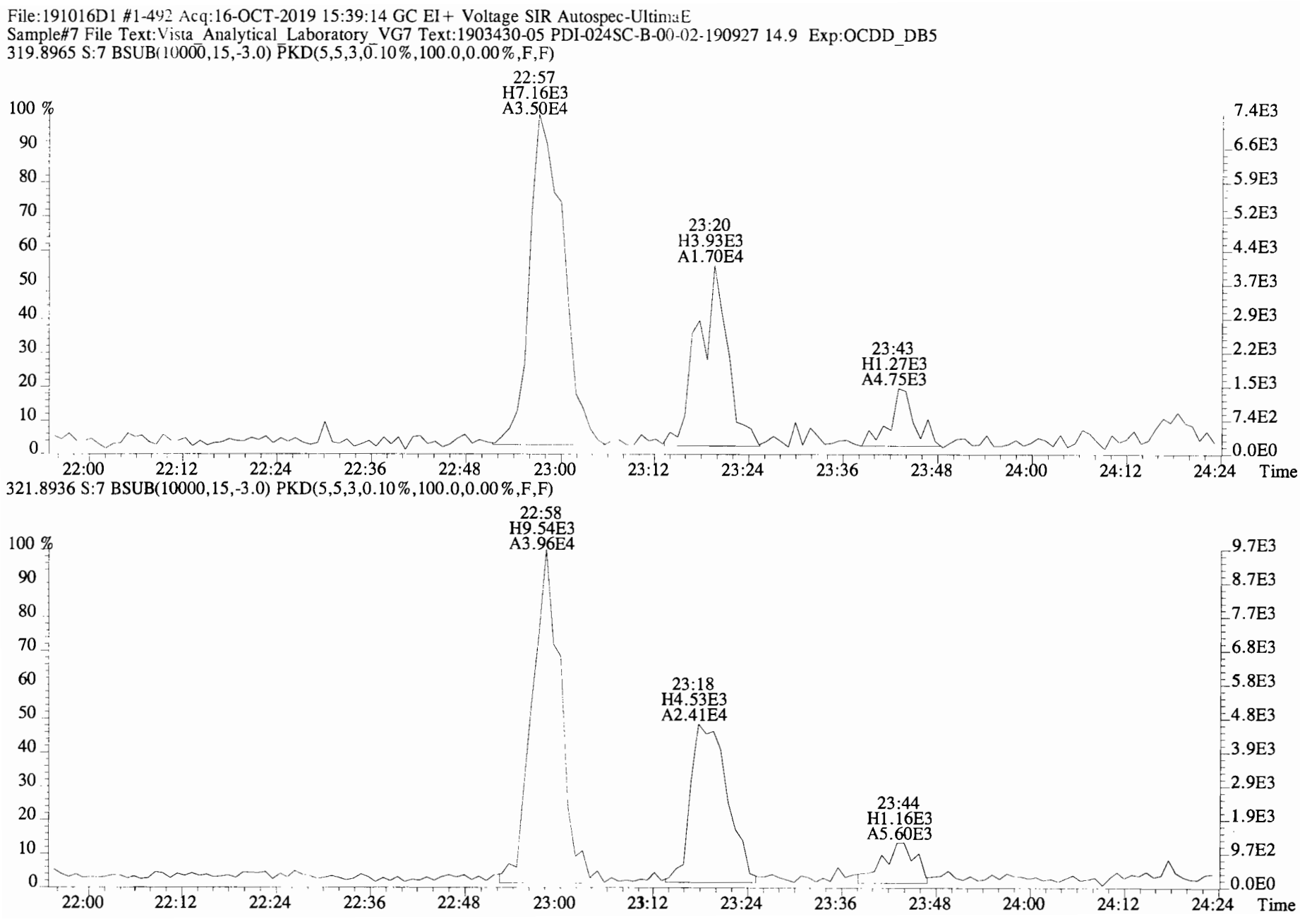
Run: 12 File: 191016D1 S: 7 I: 1 F: 4
Acquired: 16-OCT-19 15:39:14 Processed: 17-OCT-19 09:18:55

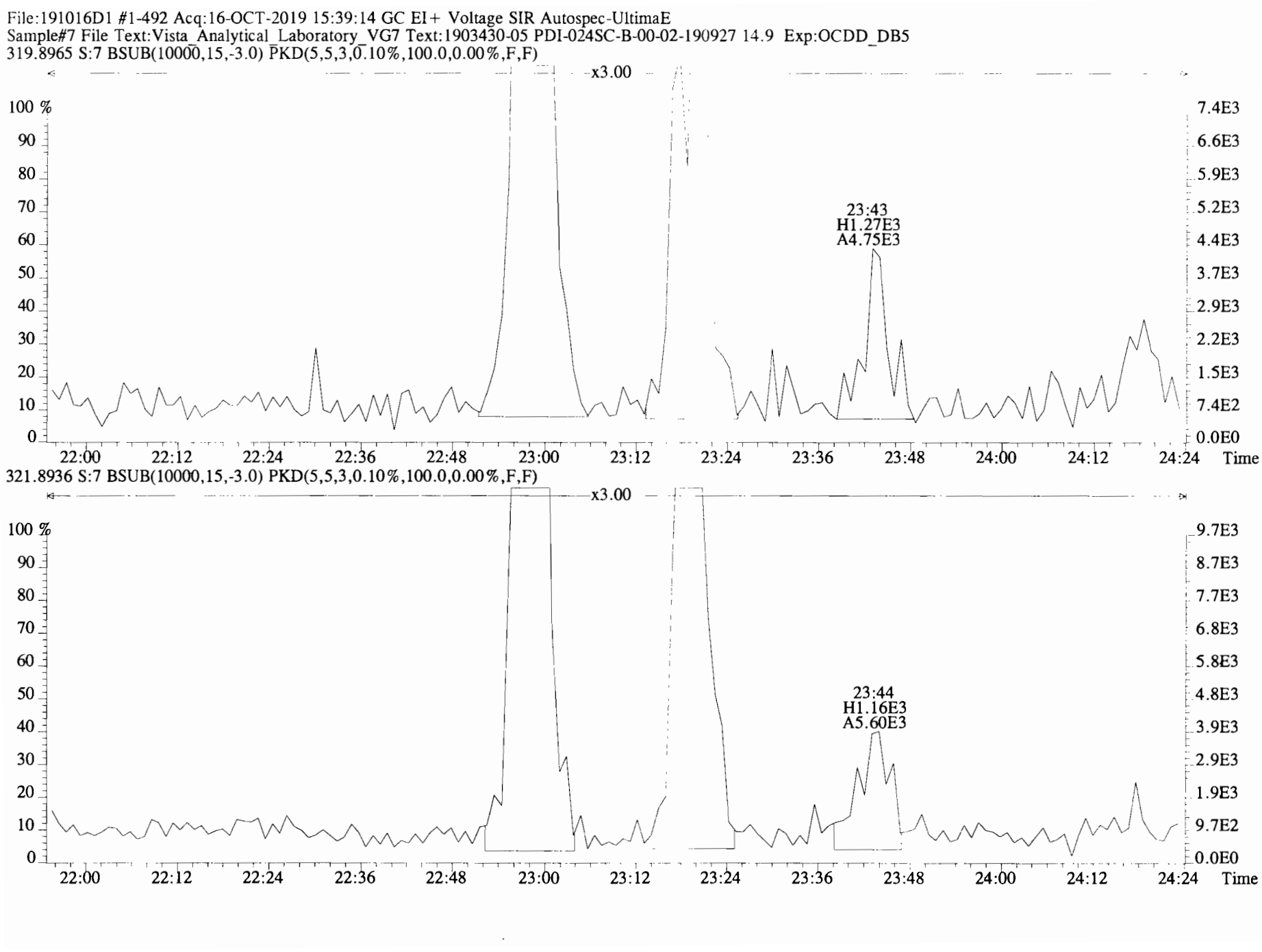
Total Concentration: 120.55 Unnamed Concentration: 67.755

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
36:44	4.811e+05	4.768e+05	1.01	y	9.580e+05	41.200	1,2,3,4,6,7,8-HpCDF
37:06	2.305e+04	2.715e+04	0.85	n	4.522e+04	2.0784	
37:17	7.136e+05	7.152e+05	1.00	y	1.429e+06	65.676	
38:28	1.161e+05	1.188e+05	0.98	y	2.349e+05	11.596	1,2,3,4,7,8,9-HpCDF

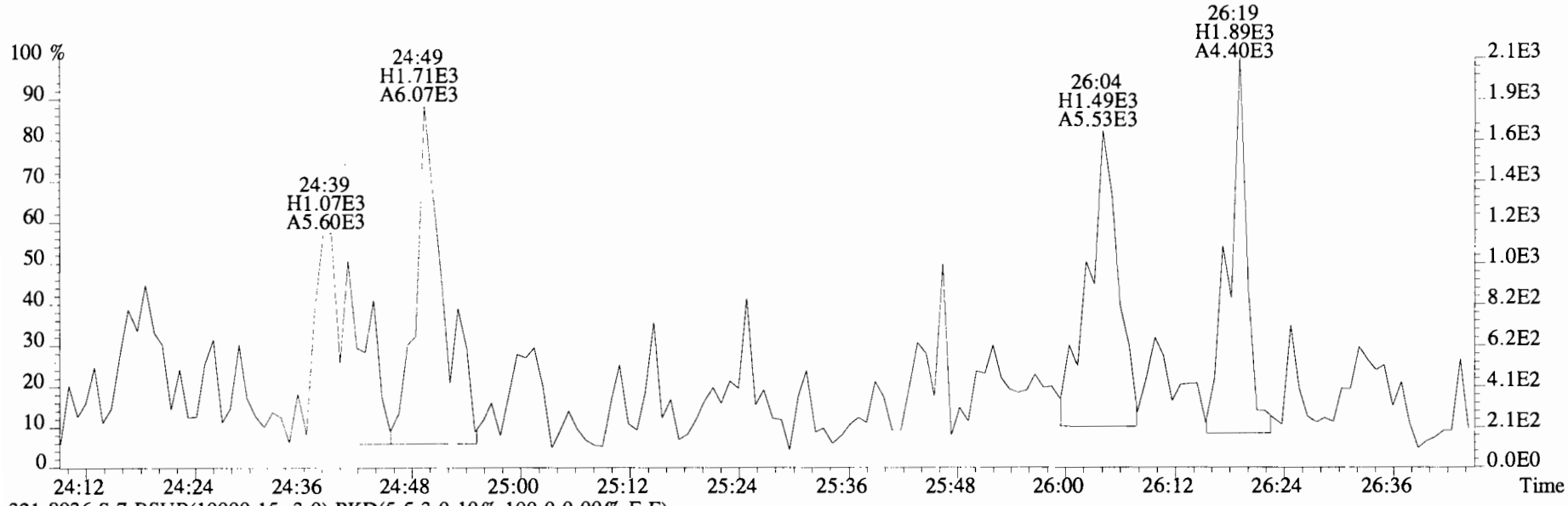

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:57 H7.26E3 A3.73E4
23:20 H4.00E3 A1.94E4
22:05 H366.11 A1.38E3
22:30 H618.89 A1.62E3
24:19 H802.61 A5.11E3
24:49 H1.71E3 A6.53E3
26:04 H1.60E3 A6.52E3
26:19 H1.97E3 A5.14E3
27:00 H384.78 A1.71E3
27:18 H463.21 A2.19E3
321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:58 H9.60E3 A4.12E4
23:18 H4.61E3 A2.74E4
24:18 H726.60 A3.47E3
24:49 H1.86E3 A7.28E3
25:14 H926.46 A2.34E3
26:17 H3.37E3 A1.14E4
27:09 H760.77 A2.53E3
327.8847 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:18 H6.83E5 A2.46E6
331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:44 H1.02E6 A3.65E6
26:17 H3.84E5 A1.22E6
333.9339 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:44 H1.36E6 A4.82E6
26:17 H4.72E5 A1.60E6
100 %
50
0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
7.4E3
3.7E3
0.0E0
9.7E3
4.8E3
6.8E5
3.4E5
1.0E6
5.1E5
1.4E6
6.8E5


File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
7.4E3
6.6E3
5.9E3
5.2E3
4.4E3
3.7E3
2.9E3
2.2E3
1.5E3
7.4E2
0.0E0
21:00
22:00
23:00
24:00
25:00
26:00
27:00
Time
321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
100 %
90
80
70
60
50
40
30
20
10
0
9.7E3
8.7E3
7.7E3
6.8E3
5.8E3
4.8E3
3.9E3
2.9E3
1.9E3
9.7E2
0.0E0
21:00
22:00
23:00
24:00
25:00
26:00
27:00
Time

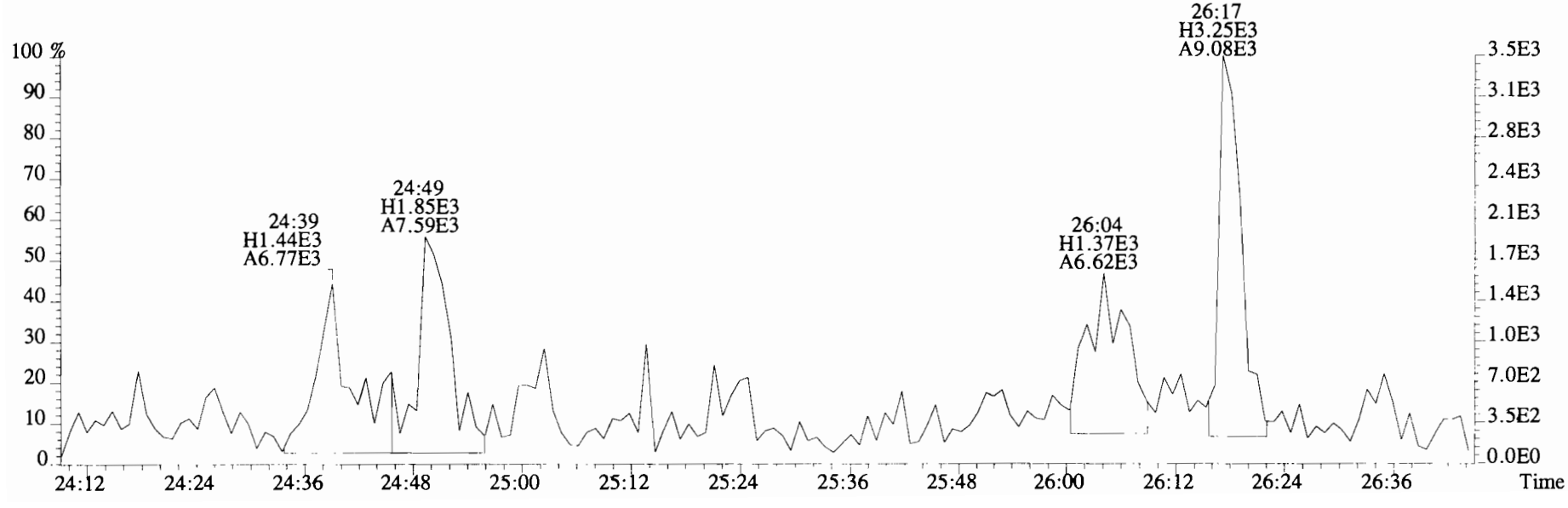

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:57
H7.16E3
A3.50E4
23:20
H3.93E3
A1.70E4
23:43
H1.27E3
A4.75E3
100 %
90
80
70
60
50
40
30
20
10
0
7.4E3
6.6E3
5.9E3
5.2E3
4.4E3
3.7E3
2.9E3
2.2E3
1.5E3
7.4E2
0.0E0
22:00
22:12
22:24
22:36
22:48
23:00
23:12
23:24
23:36
23:48
24:00
24:12
24:24
Time
321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:58
H9.54E3
A3.96E4
23:18
H4.53E3
A2.41E4
23:44
H1.16E3
A5.60E3
100 %
90
80
70
60
50
40
30
20
10
0
9.7E3
8.7E3
7.7E3
6.8E3
5.8E3
4.8E3
3.9E3
2.9E3
1.9E3
9.7E2
0.0E0
22:00
22:12
22:24
22:36
22:48
23:00
23:12
23:24
23:36
23:48
24:00
24:12
24:24
Time

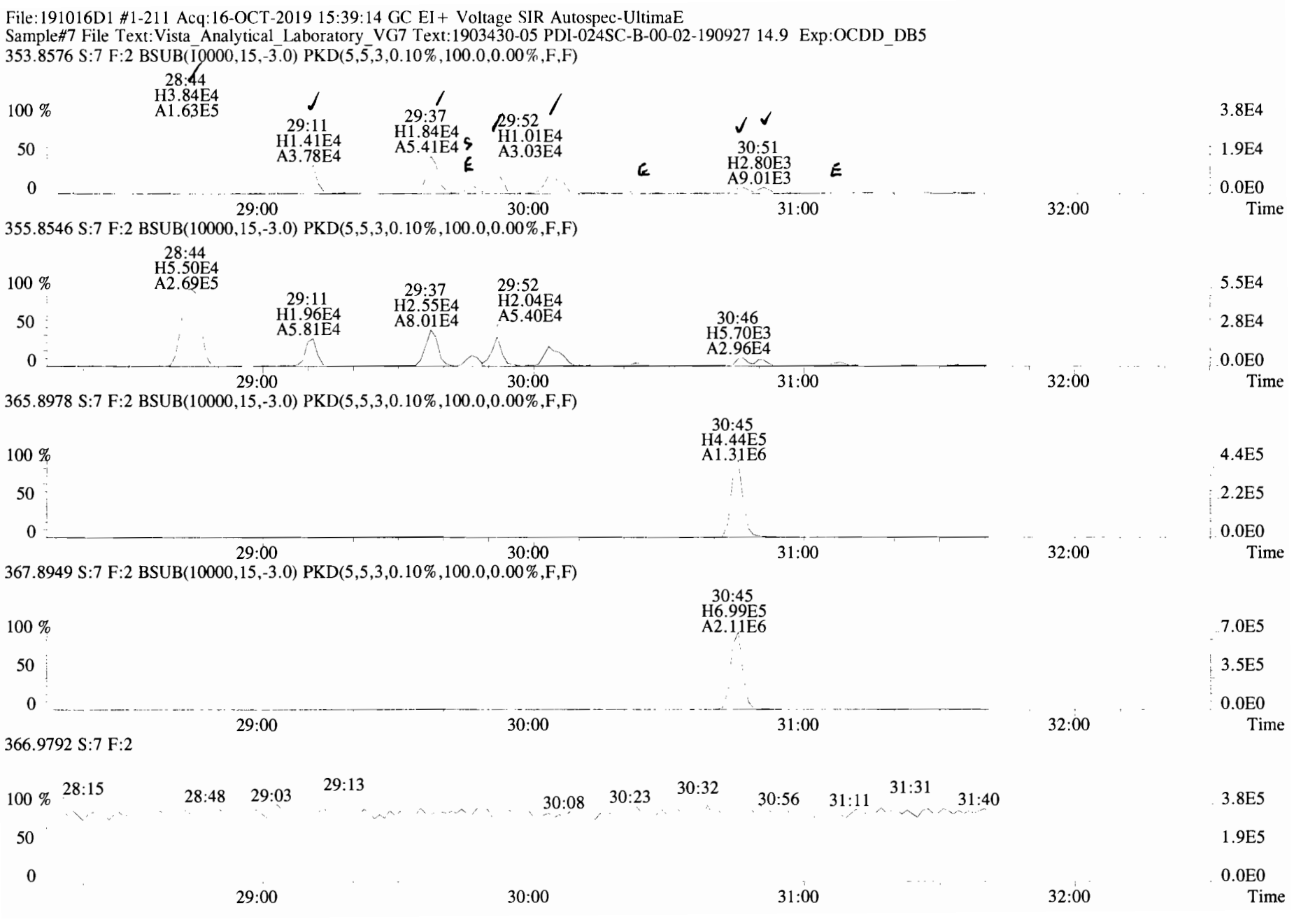

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x3.00
23:43
H1.27E3
A4.75E3
321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x3.00
23:44
H1.16E3
A5.60E3
Time

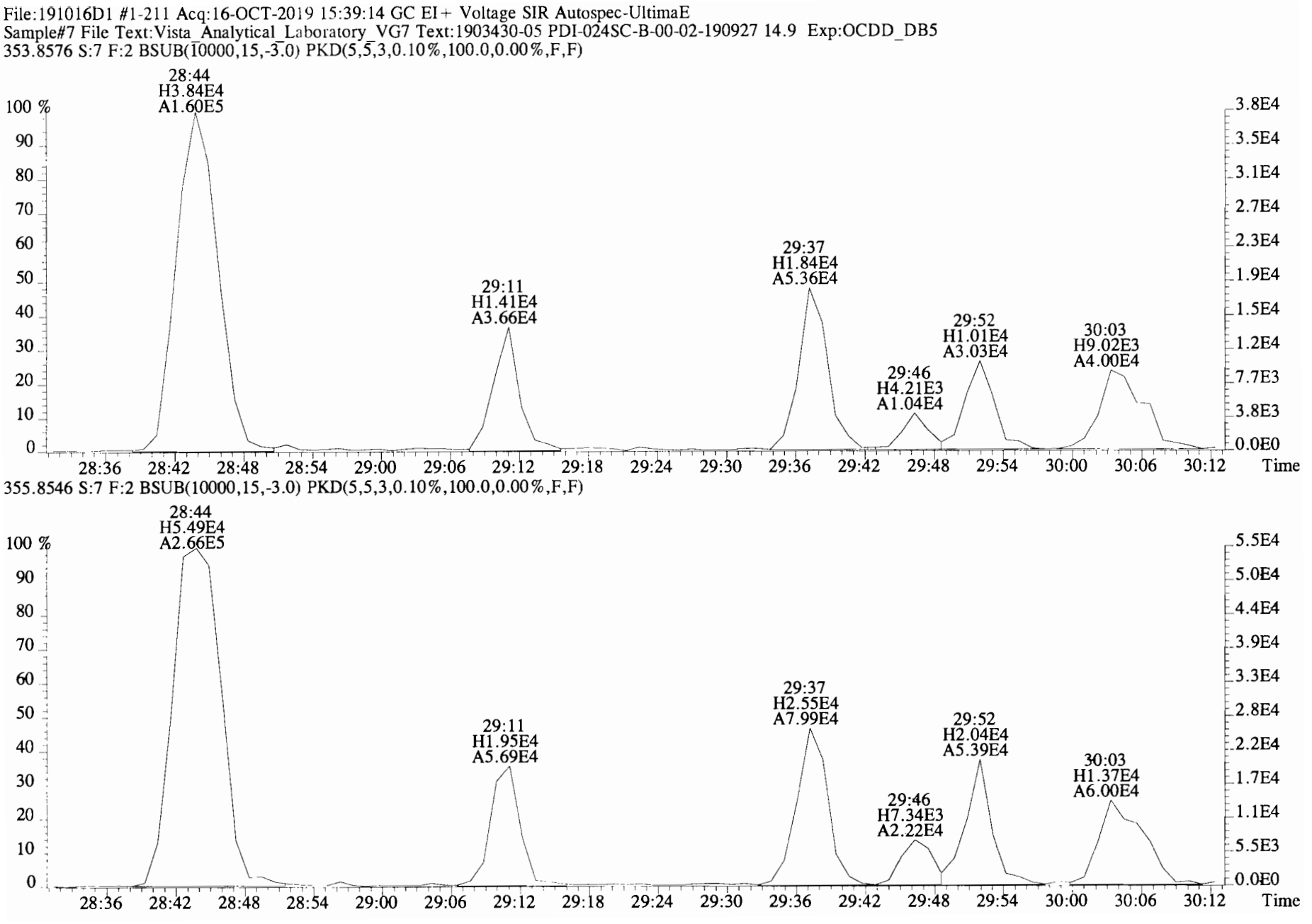
File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



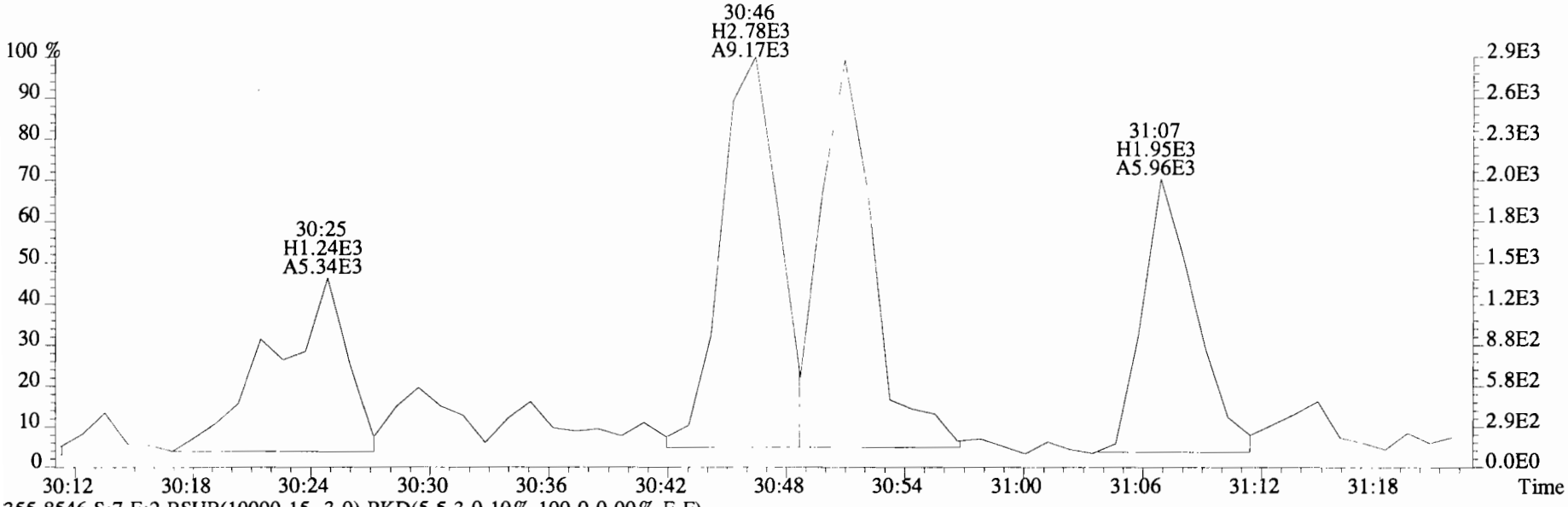
321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



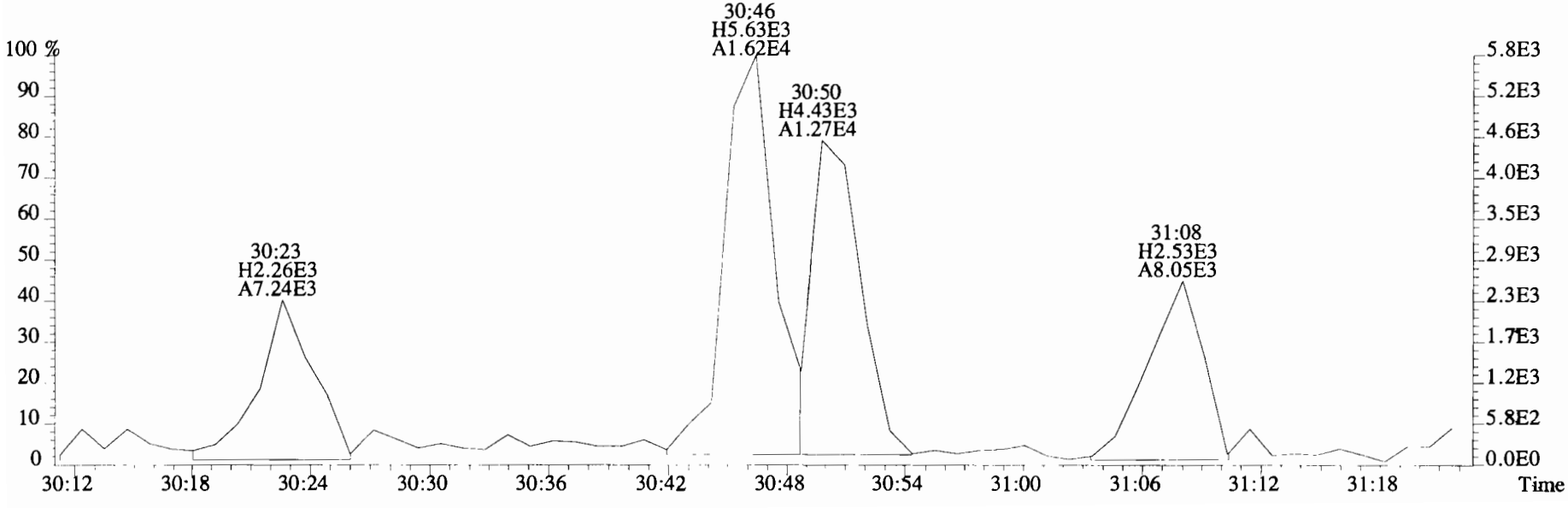

File:191016D1 #1-211 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:44
H3.84E4
A1.63E5
29:11
H1.41E4
A3.78E4
29:37
H1.84E4
A5.41E4
29:52
H1.01E4
A3.03E4
30:51
H2.80E3
A9.01E3
100 %
50
0
3.8E4
1.9E4
0.0E0
29:00
30:00
31:00
32:00
Time
355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:44
H5.50E4
A2.69E5
29:11
H1.96E4
A5.81E4
29:37
H2.55E4
A8.01E4
29:52
H2.04E4
A5.40E4
30:46
H5.70E3
A2.96E4
100 %
50
0
5.5E4
2.8E4
0.0E0
29:00
30:00
31:00
32:00
Time
365.8978 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:45
H4.44E5
A1.31E6
100 %
50
0
4.4E5
2.2E5
0.0E0
29:00
30:00
31:00
32:00
Time
367.8949 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:45
H6.99E5
A2.11E6
100 %
50
0
7.0E5
3.5E5
0.0E0
29:00
30:00
31:00
32:00
Time
366.9792 S:7 F:2
28:15
28:48
29:03
29:13
30:08
30:23
30:32
30:56
31:11
31:31
31:40
100 %
50
0
3.8E5
1.9E5
0.0E0
29:00
30:00
31:00
32:00
Time

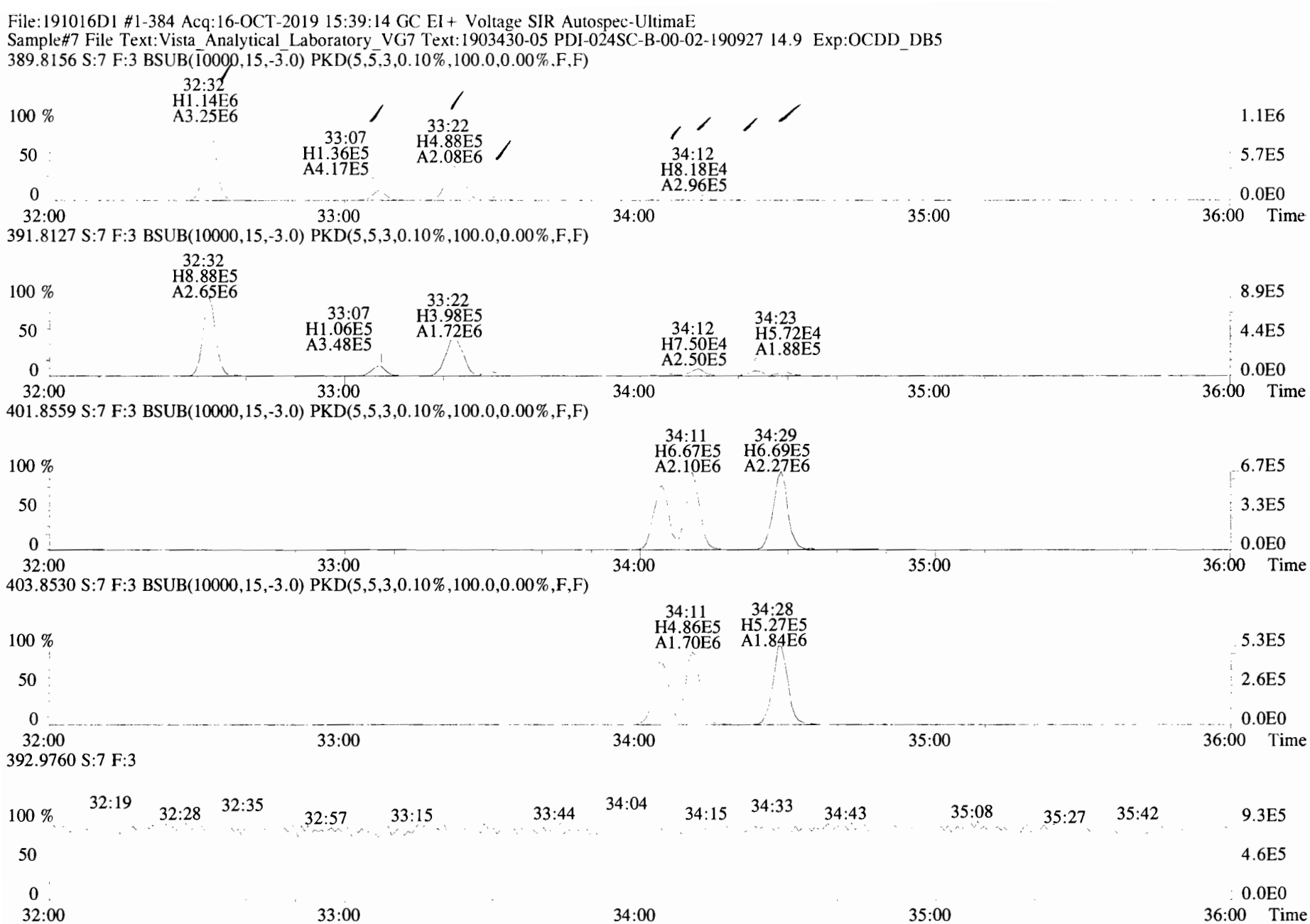

File:191016D1 #1-211 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:44
H3.84E4
A1.60E5
29:11
H1.41E4
A3.66E4
29:37
H1.84E4
A5.36E4
29:46
H4.21E3
A1.04E4
29:52
H1.01E4
A3.03E4
30:03
H9.02E3
A4.00E4
100 %
90
80
70
60
50
40
30
20
10
0
3.8E4
3.5E4
3.1E4
2.7E4
2.3E4
1.9E4
1.5E4
1.2E4
7.7E3
3.8E3
0.0E0
28:36
28:42
28:48
28:54
29:00
29:06
29:12
29:18
29:24
29:30
29:36
29:42
29:48
29:54
30:00
30:06
30:12
Time
355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:44
H5.49E4
A2.66E5
29:11
H1.95E4
A5.69E4
29:37
H2.55E4
A7.99E4
29:46
H7.34E3
A2.22E4
29:52
H2.04E4
A5.39E4
30:03
H1.37E4
A6.00E4
100 %
90
80
70
60
50
40
30
20
10
0
5.5E4
5.0E4
4.4E4
3.9E4
3.3E4
2.8E4
2.2E4
1.7E4
1.1E4
5.5E3
0.0E0
28:36
28:42
28:48
28:54
29:00
29:06
29:12
29:18
29:24
29:30
29:36
29:42
29:48
29:54
30:00
30:06
30:12
Time

File:191016D1 #1-211 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

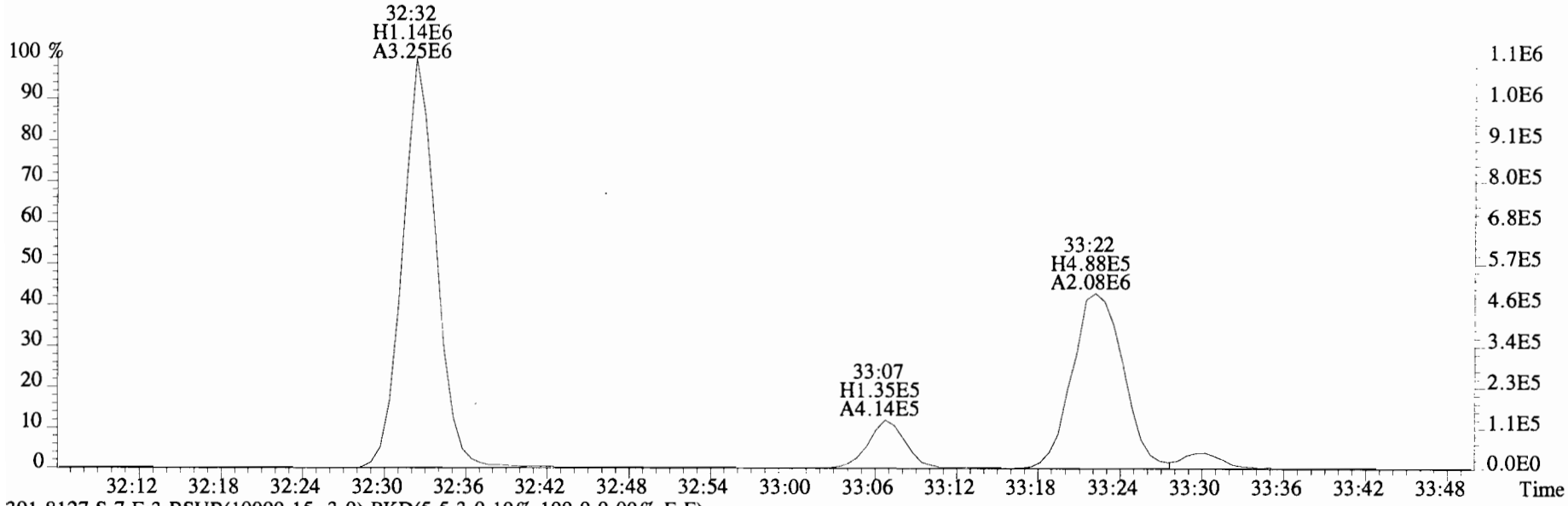


355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

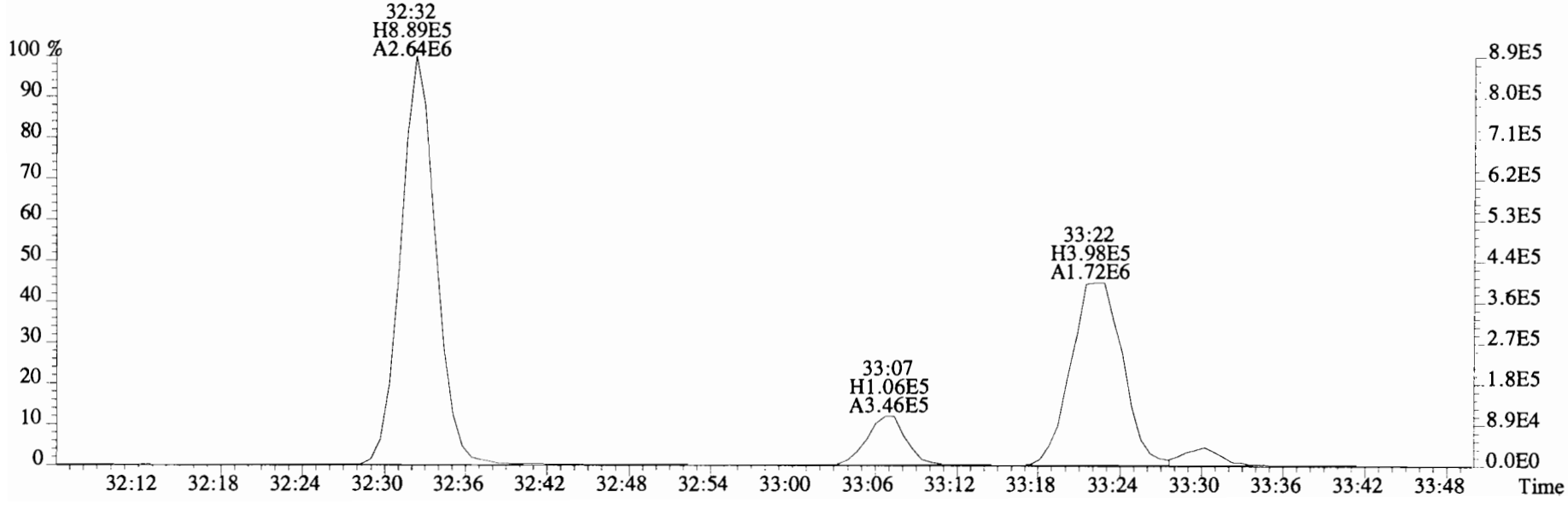


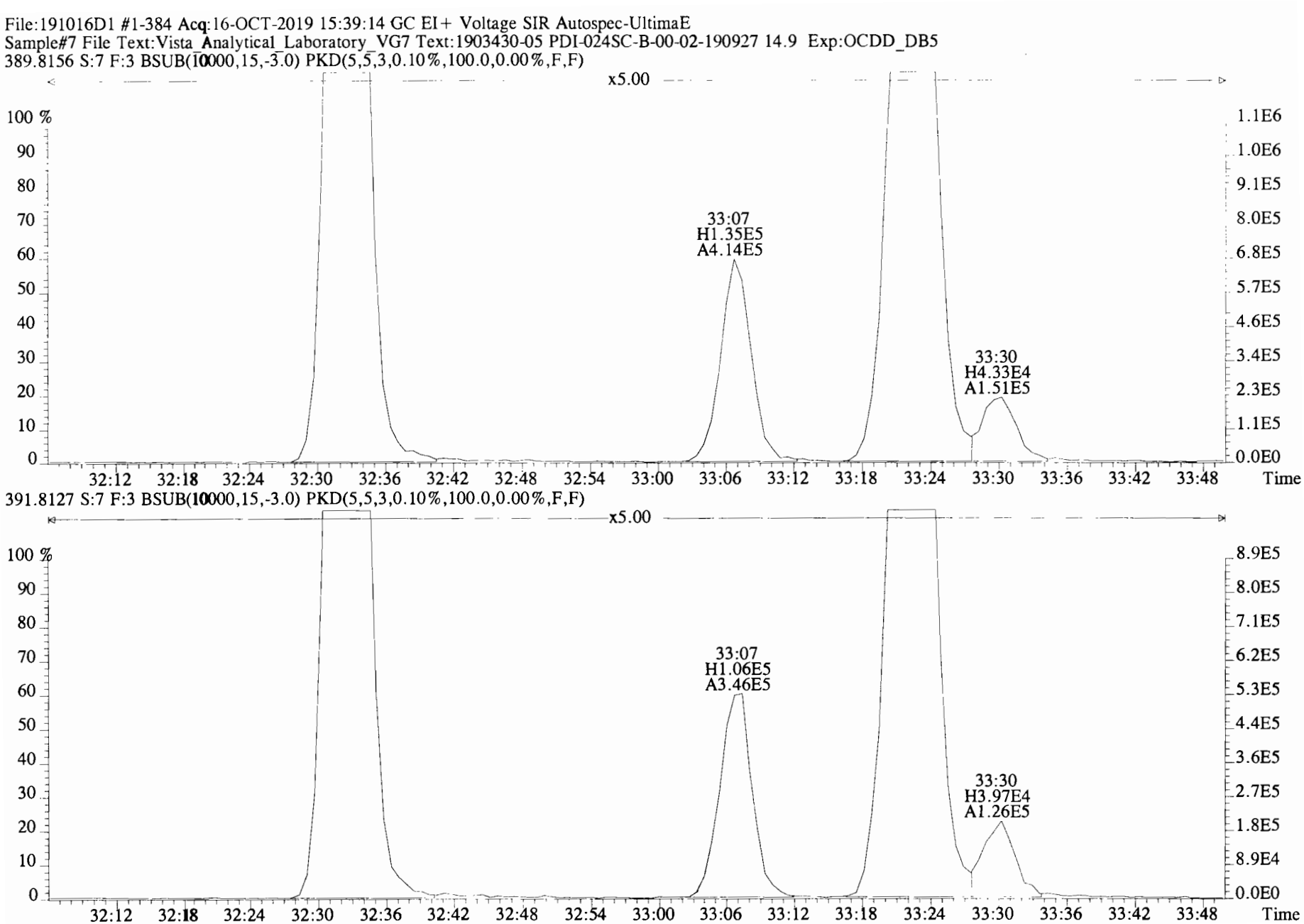

File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:32 H1.14E6 A3.25E6
33:07 H1.36E5 A4.17E5
33:22 H4.88E5 A2.08E6
34:12 H8.18E4 A2.96E5
100 %
50
0
1.1E6
5.7E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:32 H8.88E5 A2.65E6
33:07 H1.06E5 A3.48E5
33:22 H3.98E5 A1.72E6
34:12 H7.50E4 A2.50E5
34:23 H5.72E4 A1.88E5
100 %
50
0
8.9E5
4.4E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H6.67E5 A2.10E6
34:29 H6.69E5 A2.27E6
100 %
50
0
6.7E5
3.3E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H4.86E5 A1.70E6
34:28 H5.27E5 A1.84E6
100 %
50
0
5.3E5
2.6E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
392.9760 S:7 F:3
32:19
32:28
32:35
32:57
33:15
33:44
34:04
34:15
34:33
34:43
35:08
35:27
35:42
100 %
50
0
9.3E5
4.6E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time

File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

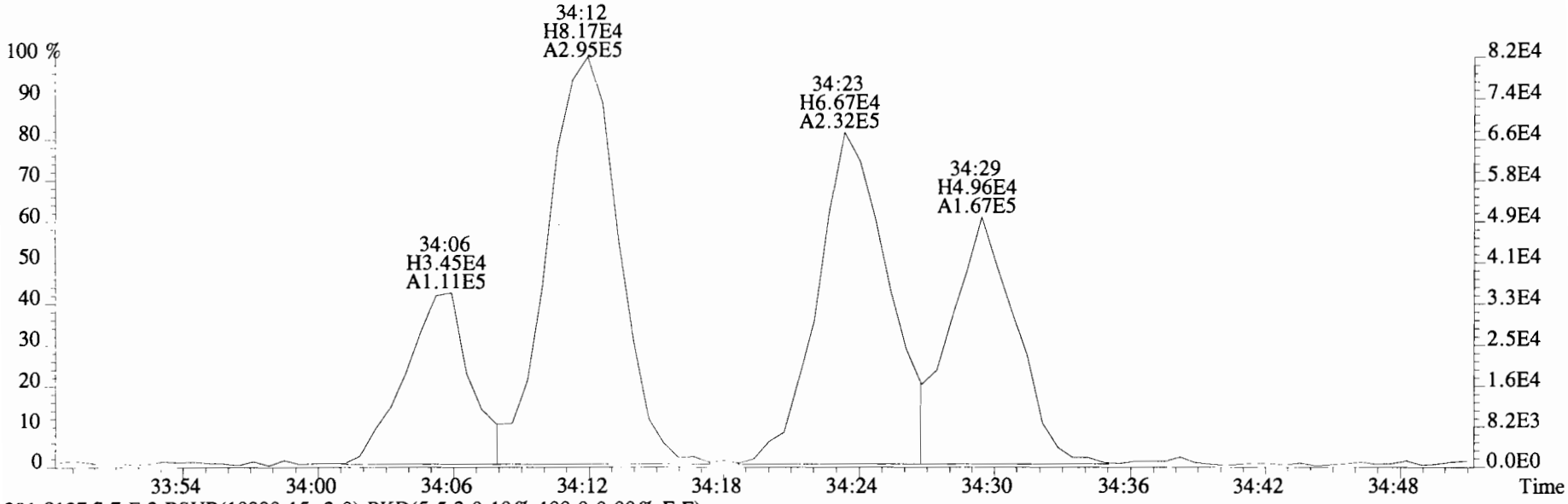


391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

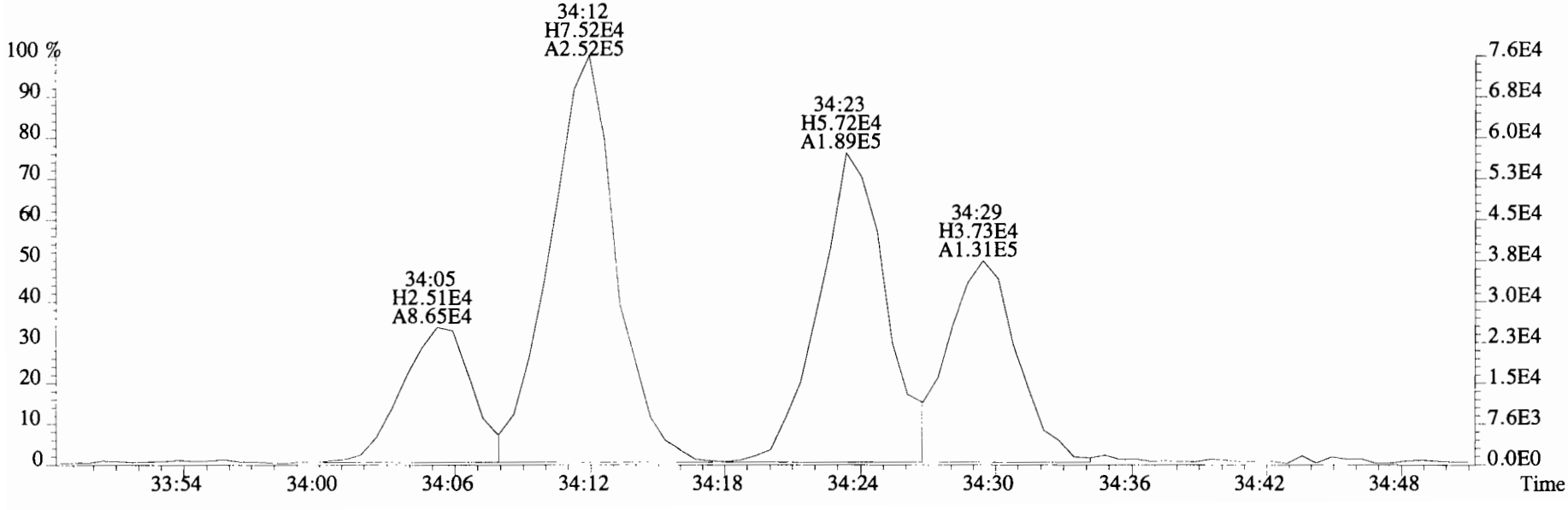


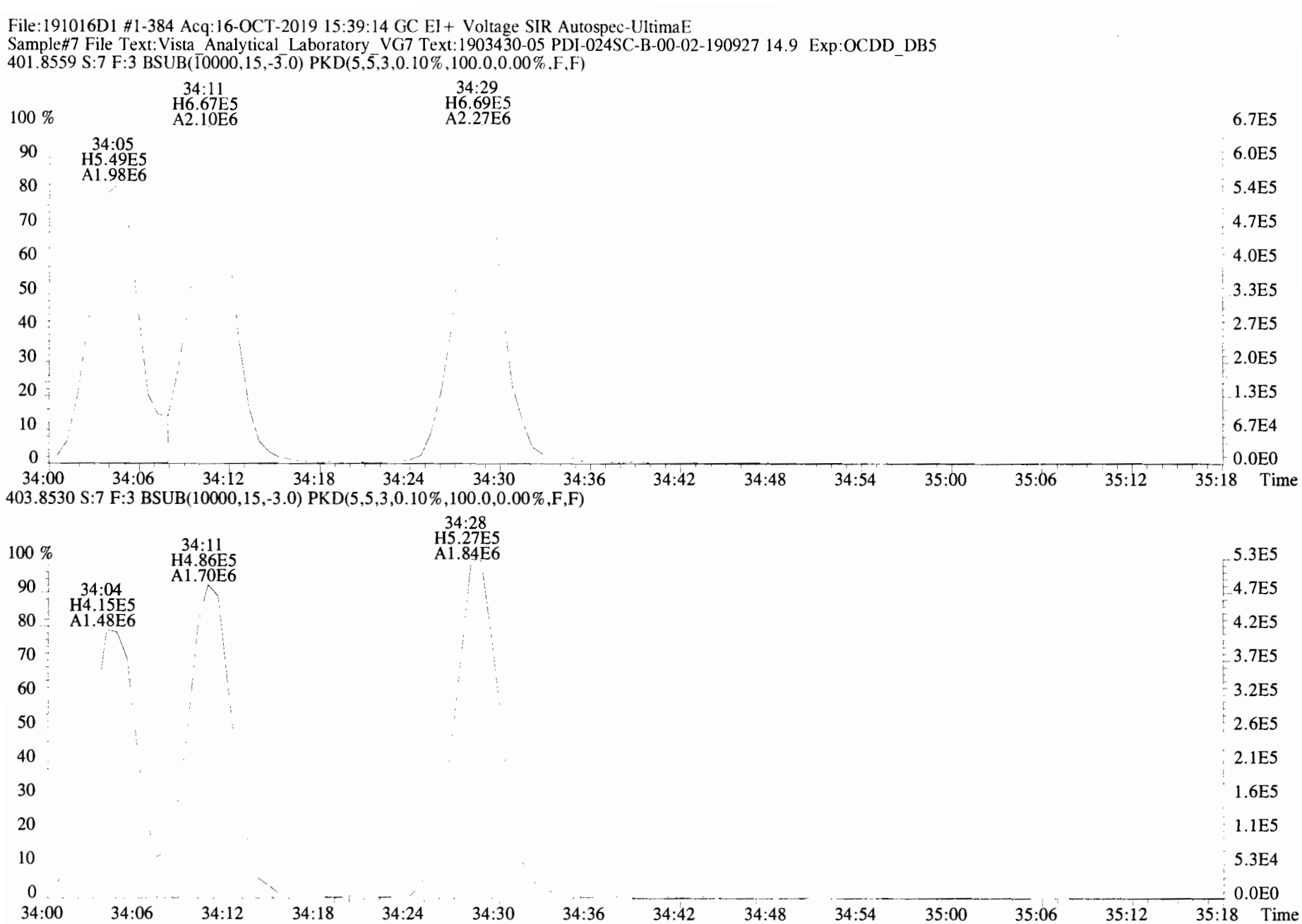

File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
33:07
H1.35E5
A4.14E5
33:30
H4.33E4
A1.51E5
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
33:07
H1.06E5
A3.46E5
33:30
H3.97E4
A1.26E5
Time

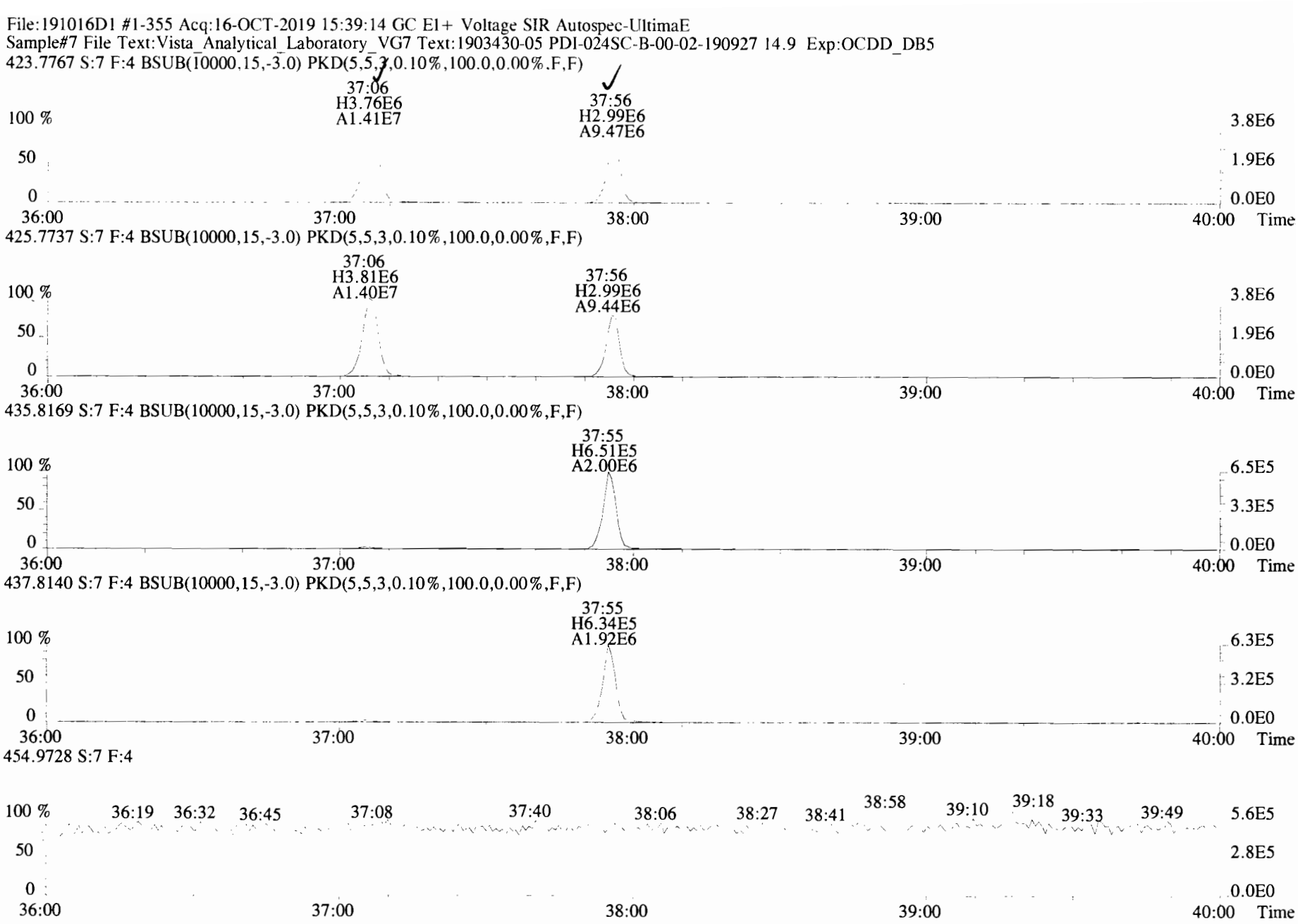
File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

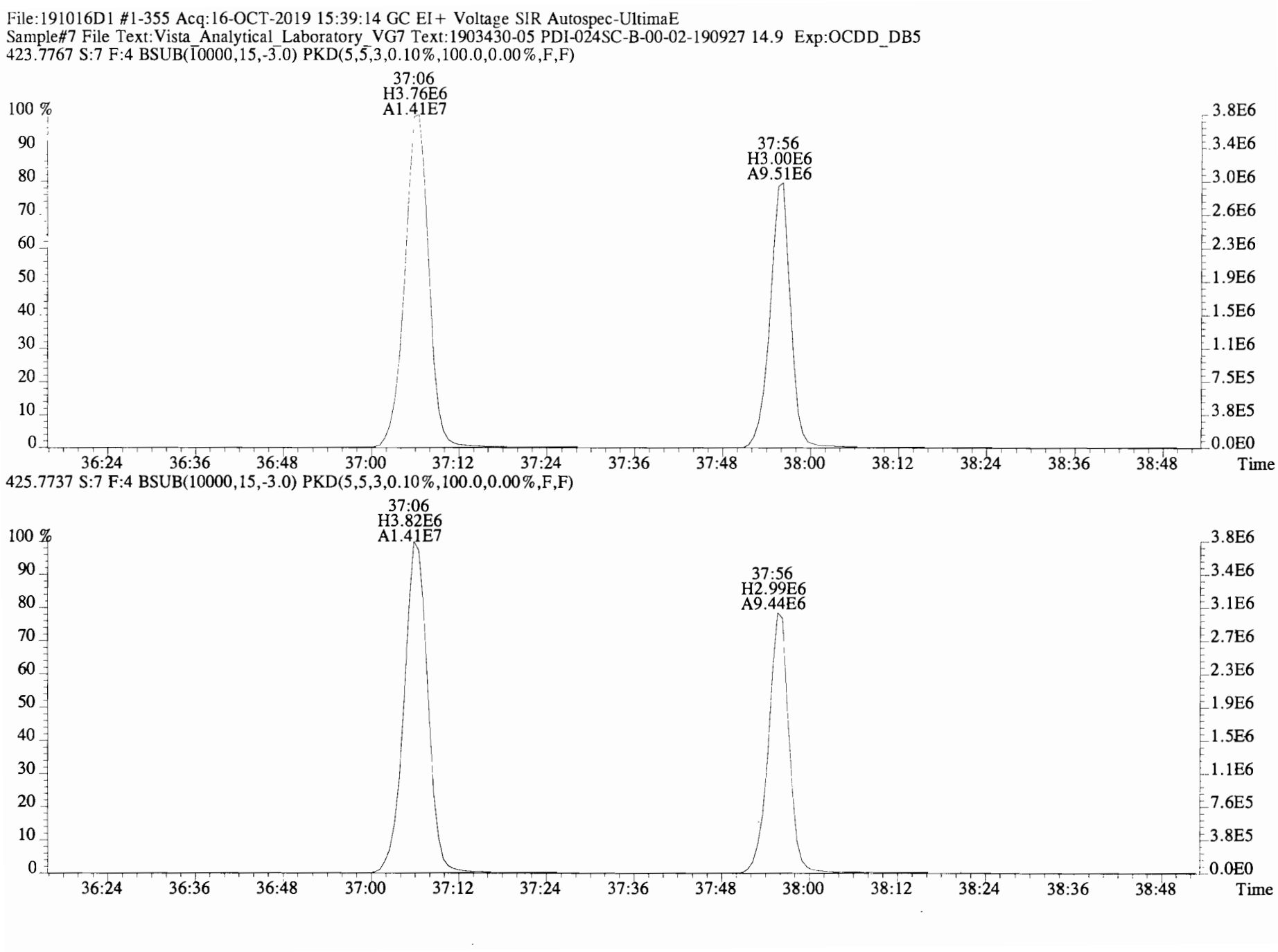


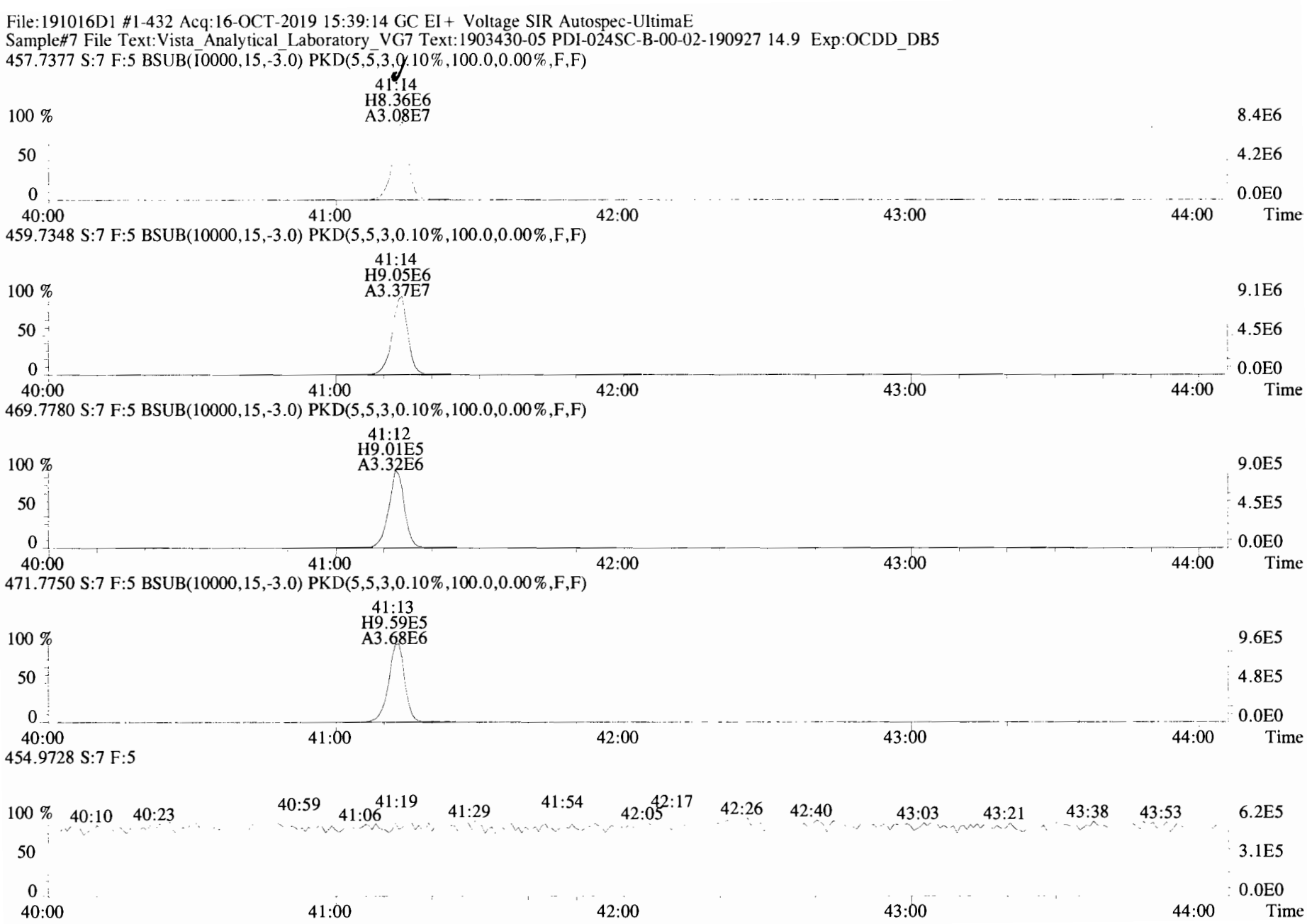
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

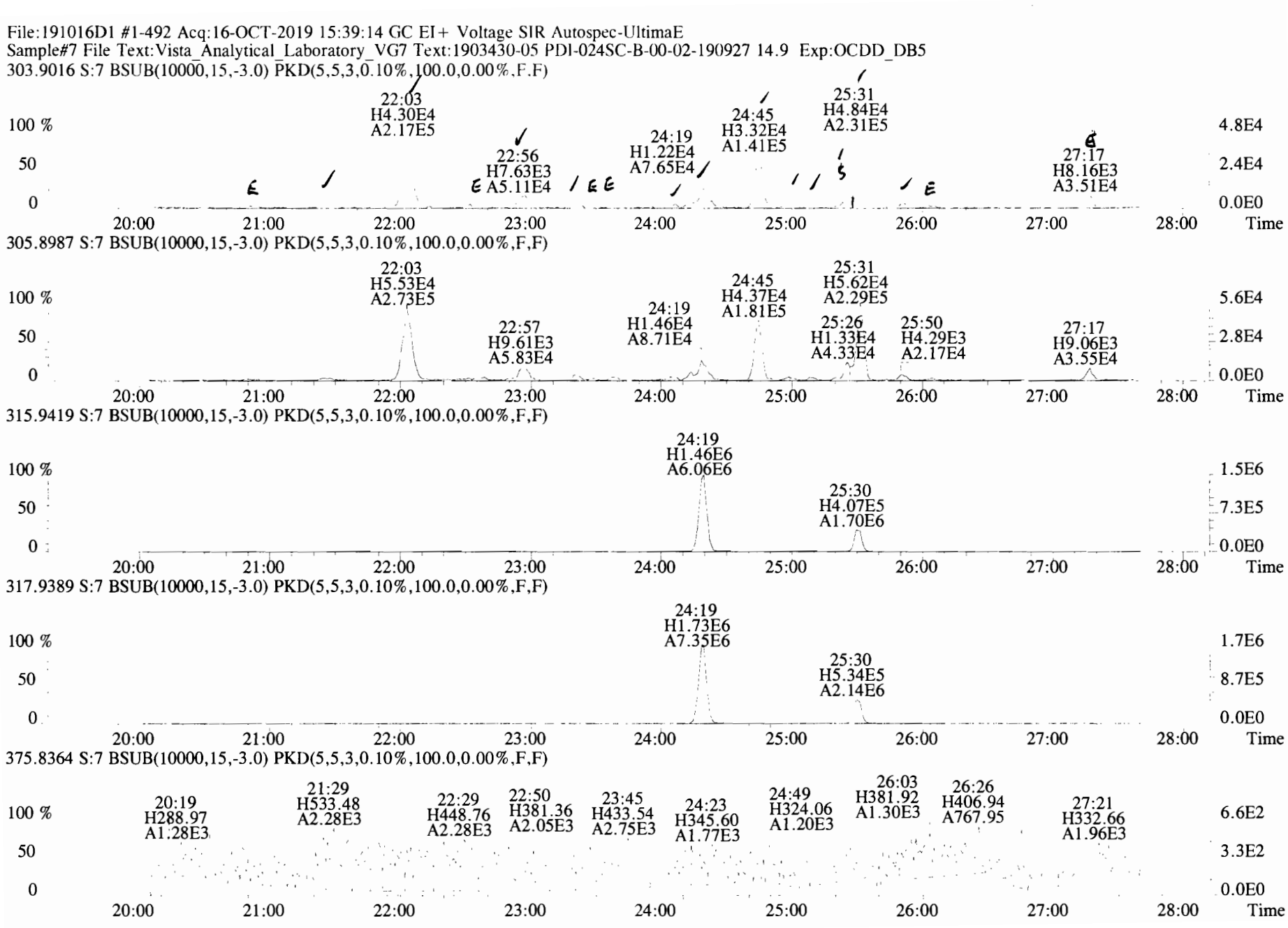


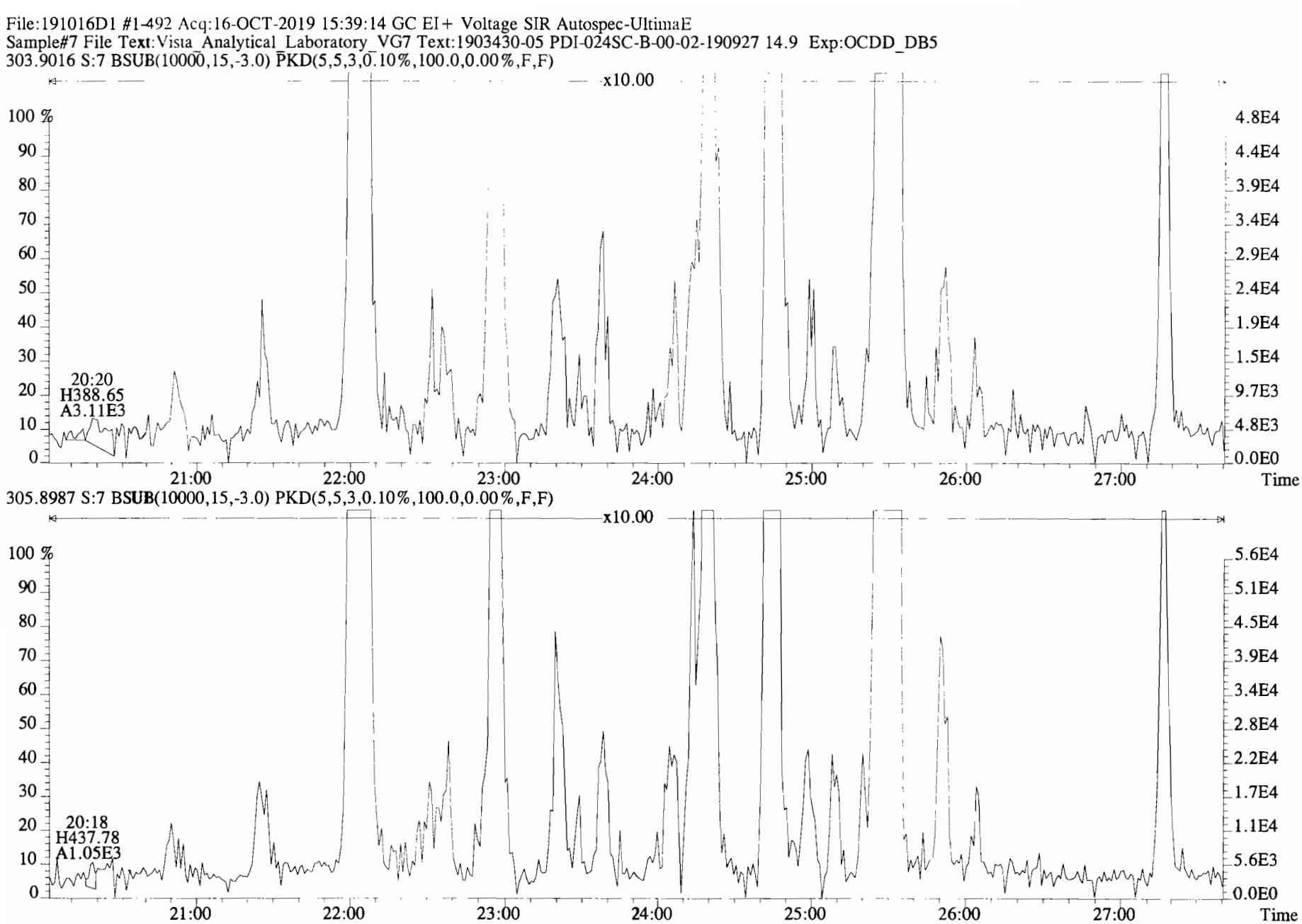

File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11
H6.67E5
A2.10E6
34:29
H6.69E5
A2.27E6
34:05
H5.49E5
A1.98E6
100 %
90
80
70
60
50
40
30
20
10
0
6.7E5
6.0E5
5.4E5
4.7E5
4.0E5
3.3E5
2.7E5
2.0E5
1.3E5
6.7E4
0.0E0
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
35:06
35:12
35:18
Time
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:28
H5.27E5
A1.84E6
34:11
H4.86E5
A1.70E6
34:04
H4.15E5
A1.48E6
100 %
90
80
70
60
50
40
30
20
10
0
5.3E5
4.7E5
4.2E5
3.7E5
3.2E5
2.6E5
2.1E5
1.6E5
1.1E5
5.3E4
0.0E0
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
35:06
35:12
35:18
Time


File:191016D1 #1-355 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:06
H3.76E6
A1.41E7
37:56
H2.99E6
A9.47E6
425.7737 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:06
H3.81E6
A1.40E7
37:56
H2.99E6
A9.44E6
435.8169 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:55
H6.51E5
A2.00E6
437.8140 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:55
H6.34E5
A1.92E6
454.9728 S:7 F:4
100 %
50
0
3.8E6
1.9E6
0.0E0
6.5E5
3.3E5
6.3E5
3.2E5
5.6E5
2.8E5
36:00
37:00
38:00
39:00
40:00
Time
36:19
36:32
36:45
37:08
37:40
38:06
38:27
38:41
38:58
39:10
39:18
39:33
39:49

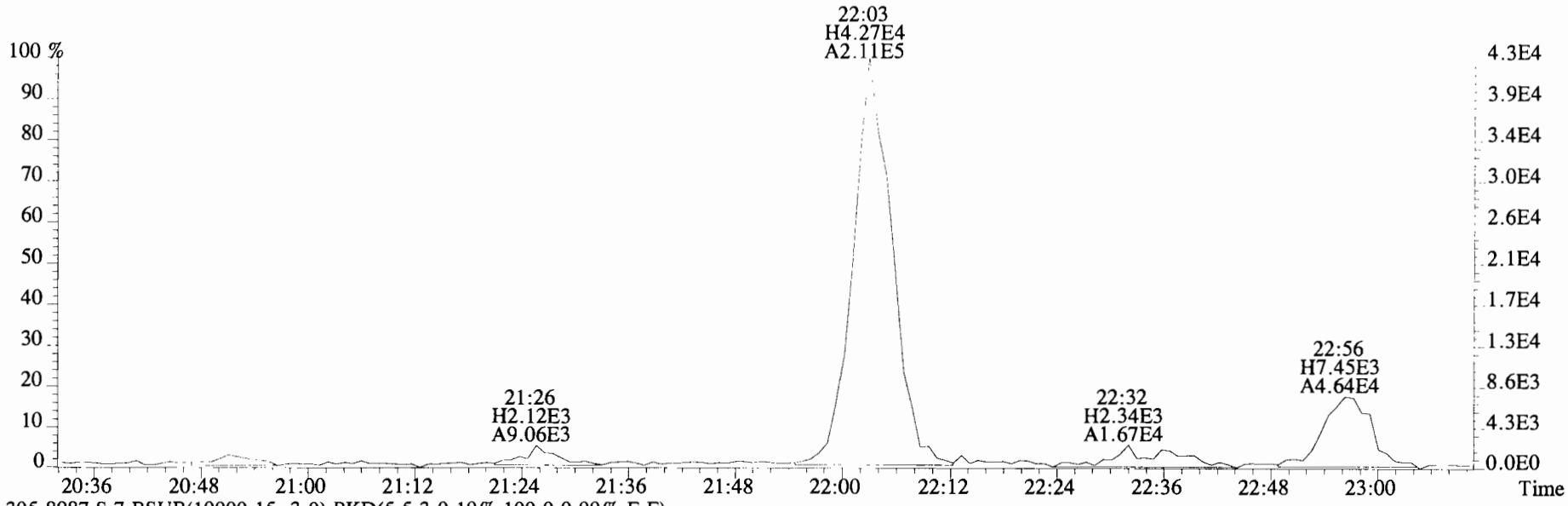

File:191016D1 #1-355 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:06
H3.76E6
A1.41E7
37:56
H3.00E6
A9.51E6
100 %
90
80
70
60
50
40
30
20
10
0
3.8E6
3.4E6
3.0E6
2.6E6
2.3E6
1.9E6
1.5E6
1.1E6
7.5E5
3.8E5
0.0E0
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
38:12
38:24
38:36
38:48
Time
425.7737 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:06
H3.82E6
A1.41E7
37:56
H2.99E6
A9.44E6
100 %
90
80
70
60
50
40
30
20
10
0
3.8E6
3.4E6
3.1E6
2.7E6
2.3E6
1.9E6
1.5E6
1.1E6
7.6E5
3.8E5
0.0E0
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
38:12
38:24
38:36
38:48
Time


File:191016D1 #1-432 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:14
H8.36E6
A3.08E7
459.7348 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:14
H9.05E6
A3.37E7
469.7780 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12
H9.01E5
A3.32E6
471.7750 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:13
H9.59E5
A3.68E6
454.9728 S:7 F:5
100 %
50
0
40:00
41:00
42:00
43:00
44:00
Time
8.4E6
4.2E6
0.0E0
9.1E6
4.5E6
0.0E0
9.0E5
4.5E5
0.0E0
9.6E5
4.8E5
0.0E0
6.2E5
3.1E5
0.0E0
40:10
40:23
40:59
41:06
41:19
41:29
41:54
42:05
42:17
42:26
42:40
43:03
43:21
43:38
43:53

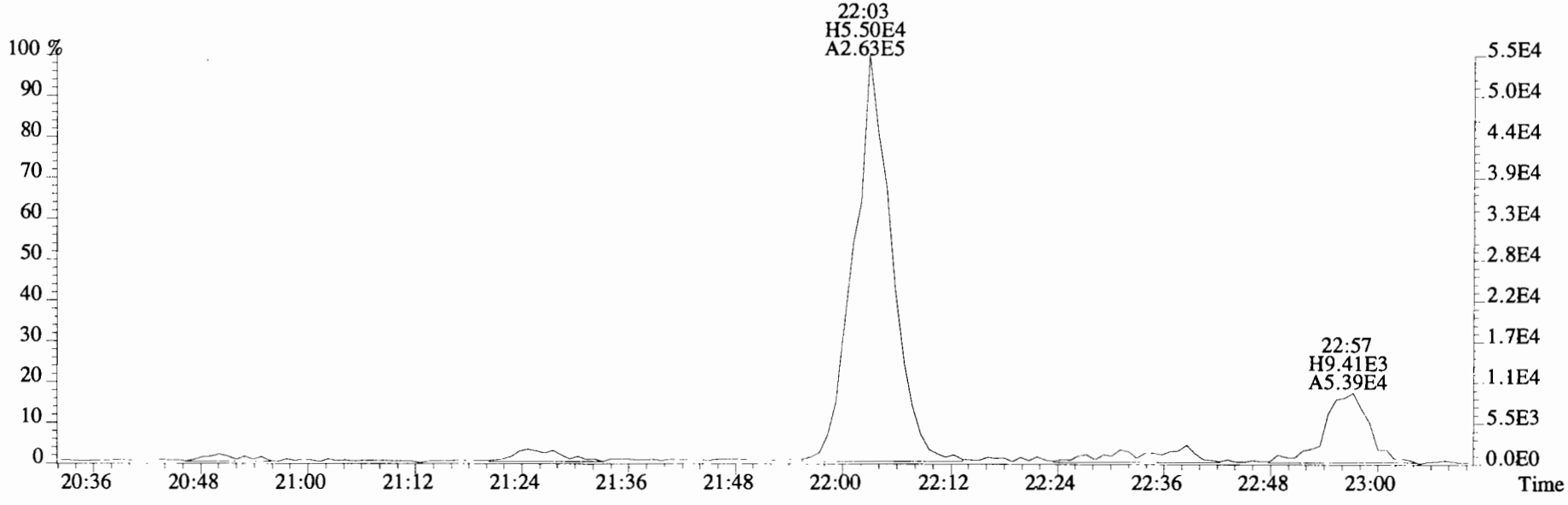

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:03 H4.30E4 A2.17E5
22:56 H7.63E3 A5.11E4
24:19 H1.22E4 A7.65E4
24:45 H3.32E4 A1.41E5
25:31 H4.84E4 A2.31E5
27:17 H8.16E3 A3.51E4
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:03 H5.53E4 A2.73E5
22:57 H9.61E3 A5.83E4
24:19 H1.46E4 A8.71E4
24:45 H4.37E4 A1.81E5
25:26 H1.33E4 A4.33E4
25:31 H5.62E4 A2.29E5
25:50 H4.29E3 A2.17E4
27:17 H9.06E3 A3.55E4
315.9419 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:19 H1.46E6 A6.06E6
25:30 H4.07E5 A1.70E6
317.9389 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:19 H1.73E6 A7.35E6
25:30 H5.34E5 A2.14E6
375.8364 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:19 H288.97 A1.28E3
21:29 H533.48 A2.28E3
22:29 H448.76 A2.28E3
22:50 H381.36 A2.05E3
23:45 H433.54 A2.75E3
24:23 H345.60 A1.77E3
24:49 H324.06 A1.20E3
26:03 H381.92 A1.30E3
26:26 H406.94 A767.95
27:21 H332.66 A1.96E3
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
4.8E4
2.4E4
0.0E0
5.6E4
2.8E4
1.5E6
7.3E5
1.7E6
8.7E5
6.6E2
3.3E2

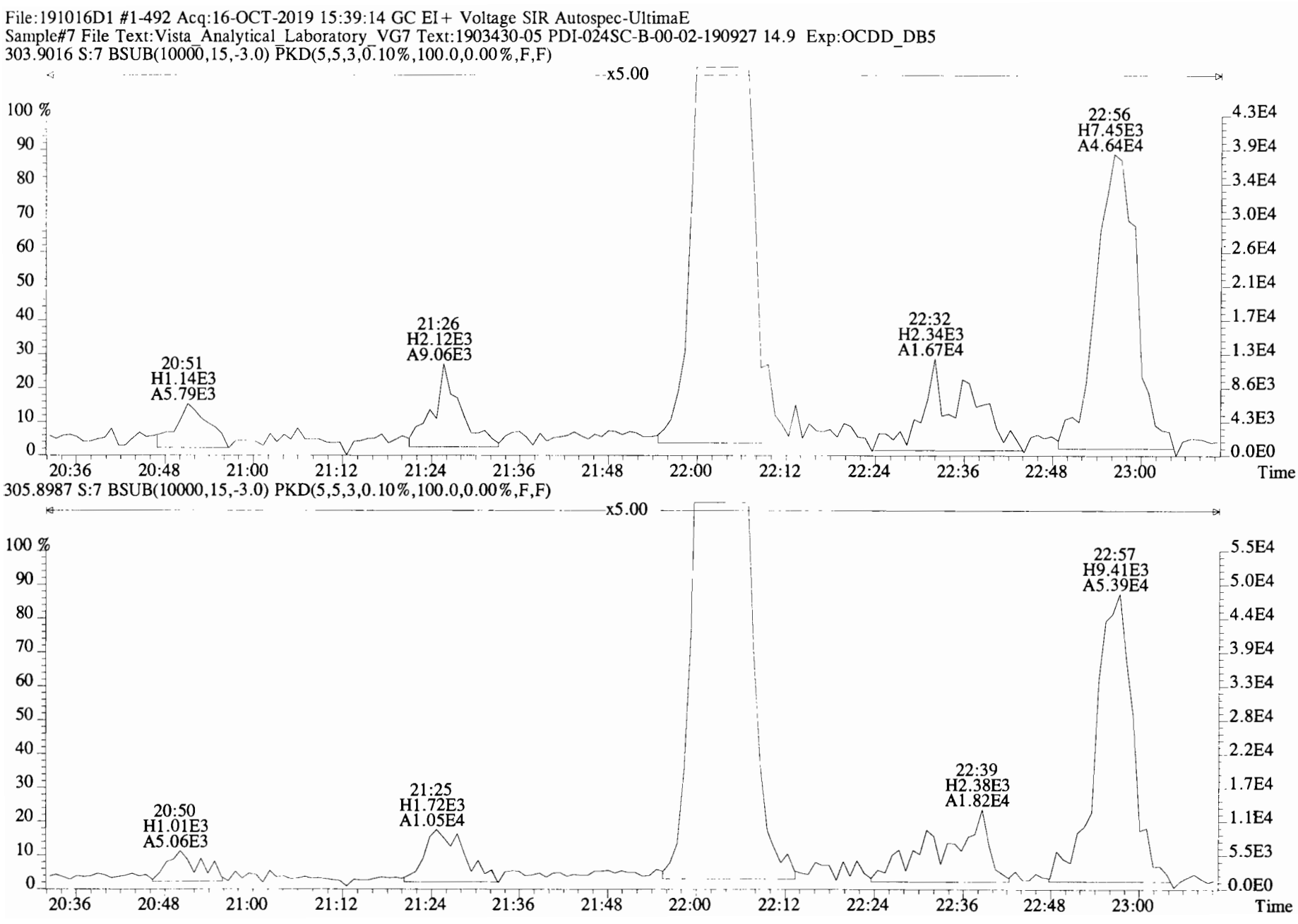

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x10.00
100 %
90
80
70
60
50
40
30
20
10
0
20:20
H388.65
A3.11E3
4.8E4
4.4E4
3.9E4
3.4E4
2.9E4
2.4E4
1.9E4
1.5E4
9.7E3
4.8E3
0.0E0
21:00
22:00
23:00
24:00
25:00
26:00
27:00
Time
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x10.00
100 %
90
80
70
60
50
40
30
20
10
0
20:18
H437.78
A1.05E3
5.6E4
5.1E4
4.5E4
3.9E4
3.4E4
2.8E4
2.2E4
1.7E4
1.1E4
5.6E3
0.0E0
21:00
22:00
23:00
24:00
25:00
26:00
27:00
Time

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

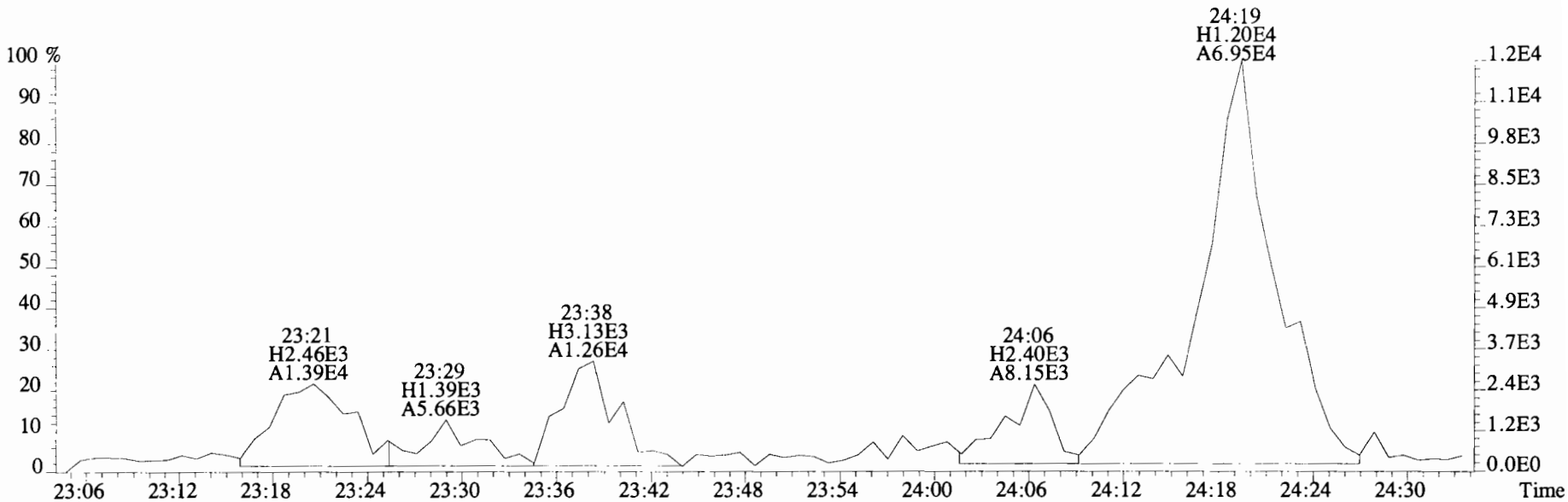


305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

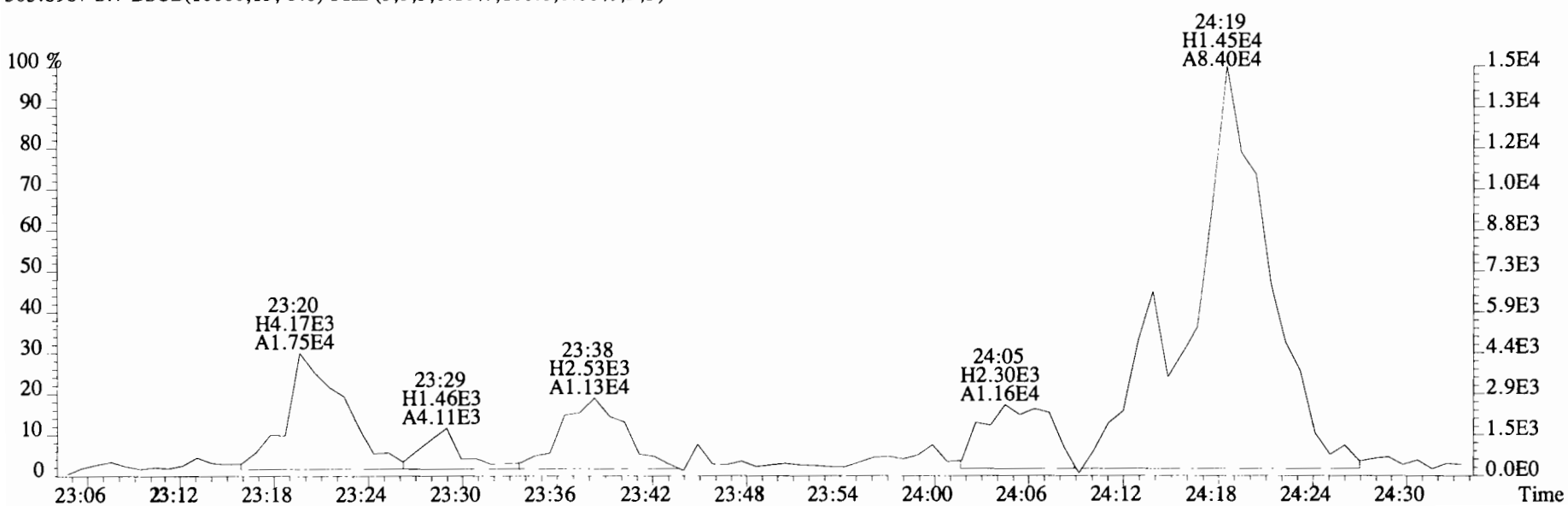


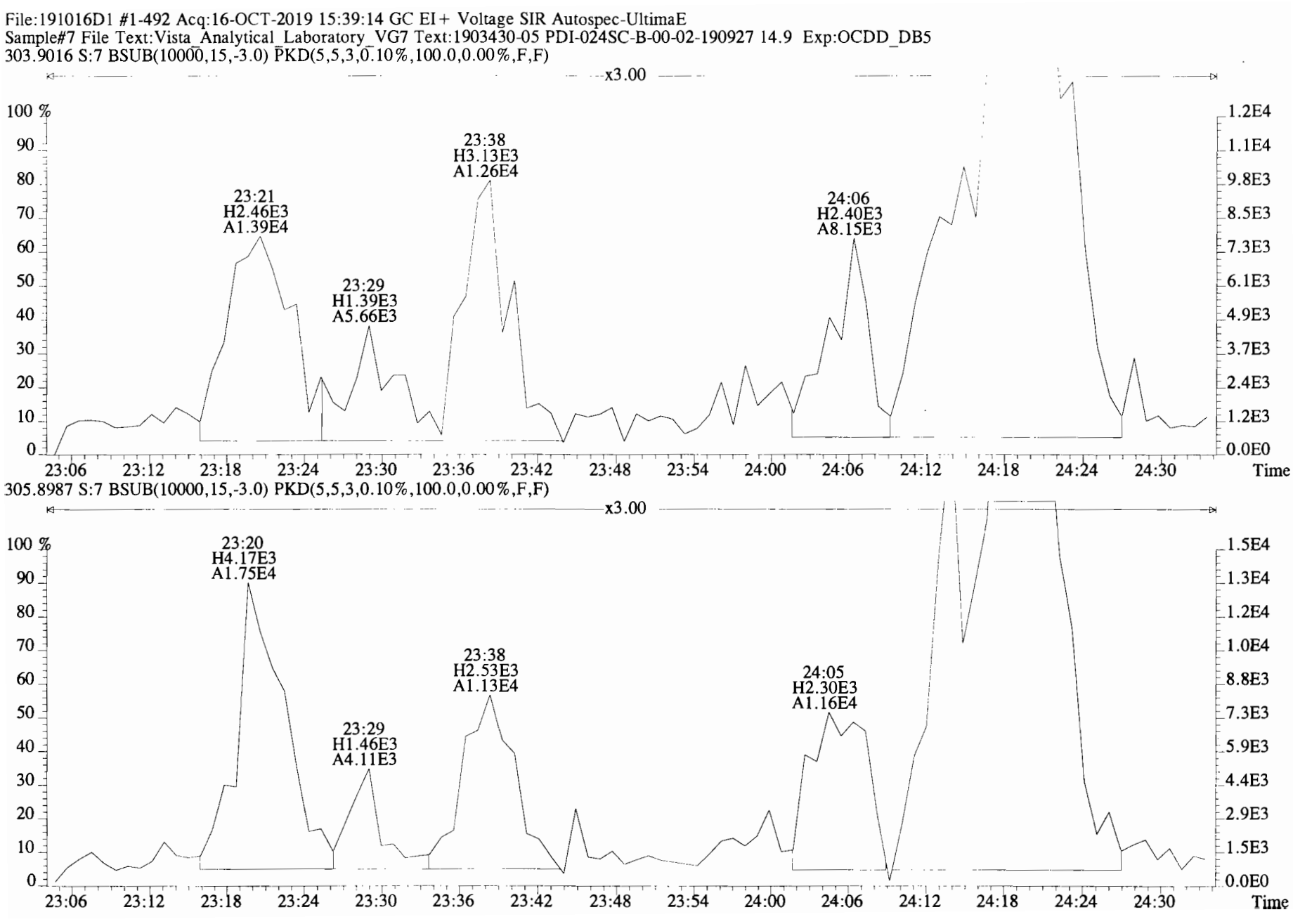

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
20:51
H1.14E3
A5.79E3
21:26
H2.12E3
A9.06E3
22:32
H2.34E3
A1.67E4
22:56
H7.45E3
A4.64E4
Time
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
20:50
H1.01E3
A5.06E3
21:25
H1.72E3
A1.05E4
22:39
H2.38E3
A1.82E4
22:57
H9.41E3
A5.39E4
Time

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

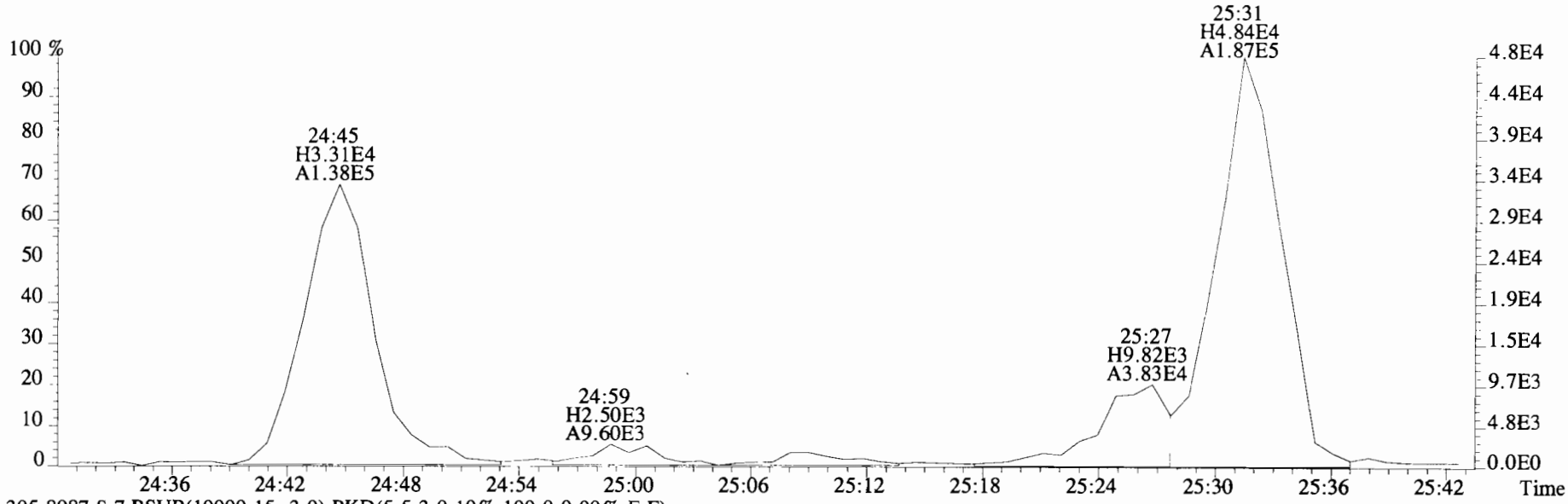


305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

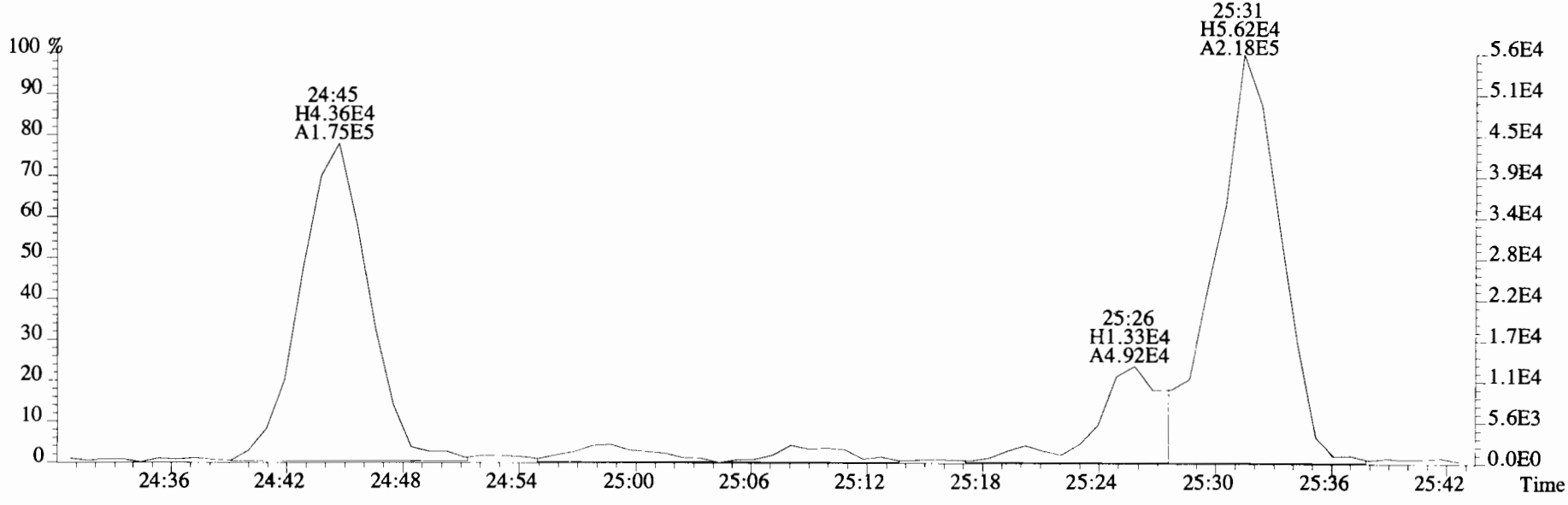


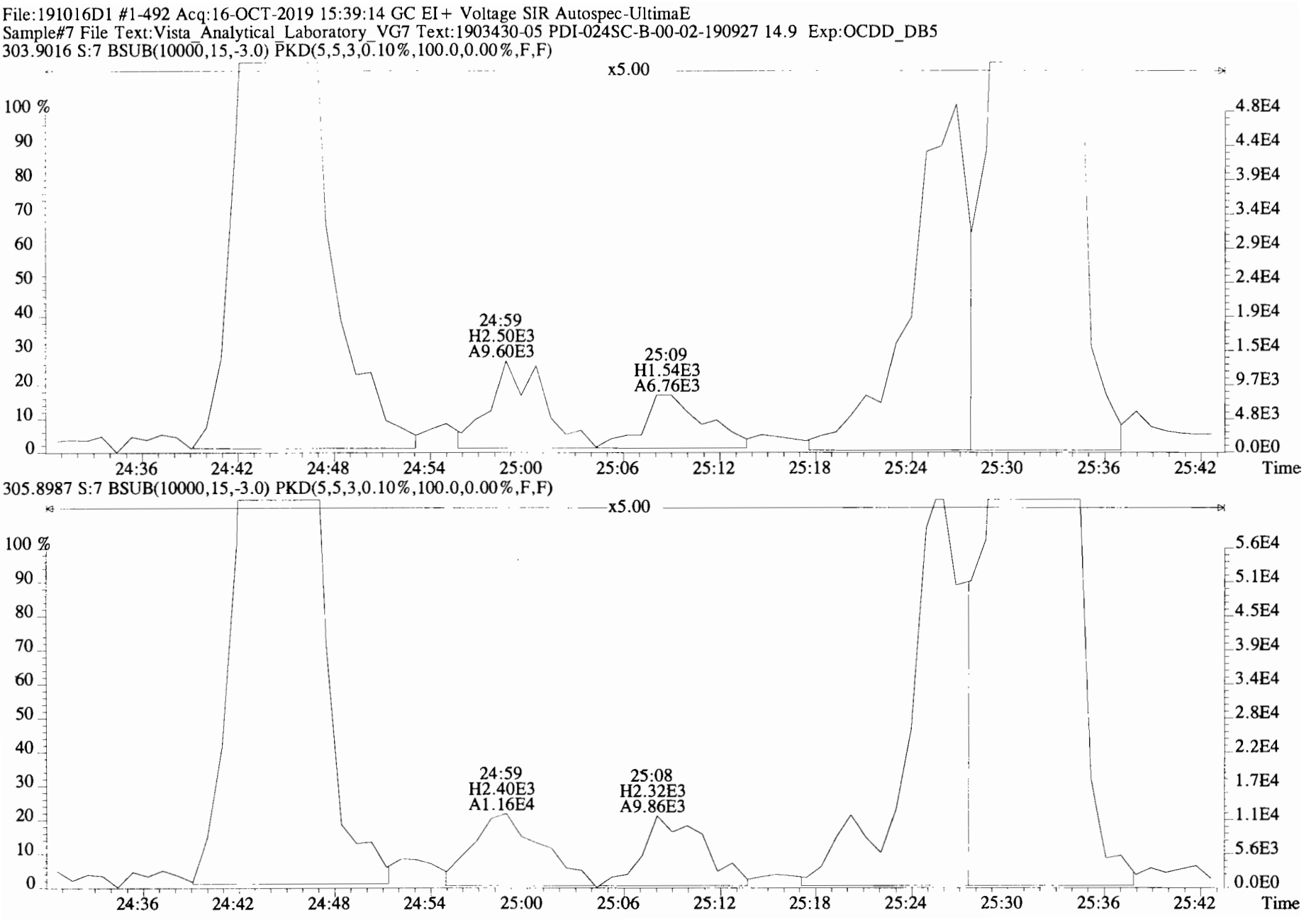

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x3.00
23:21
H2.46E3
A1.39E4
23:29
H1.39E3
A5.66E3
23:38
H3.13E3
A1.26E4
24:06
H2.40E3
A8.15E3
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x3.00
23:20
H4.17E3
A1.75E4
23:29
H1.46E3
A4.11E3
23:38
H2.53E3
A1.13E4
24:05
H2.30E3
A1.16E4
Time

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

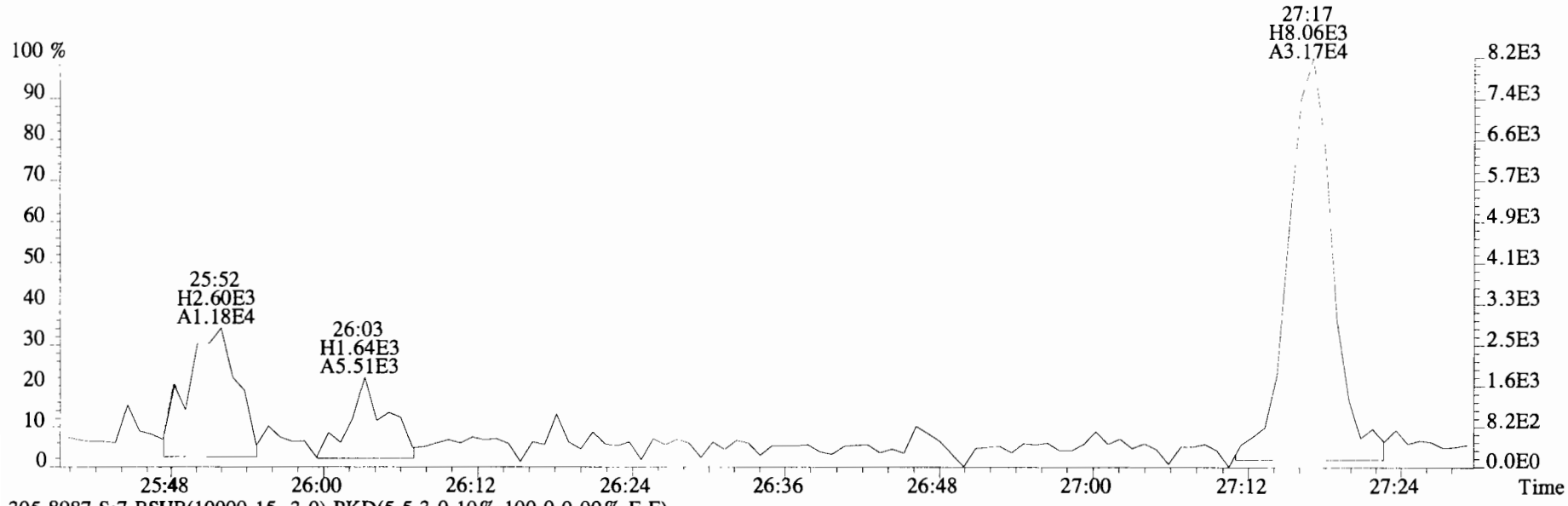


305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

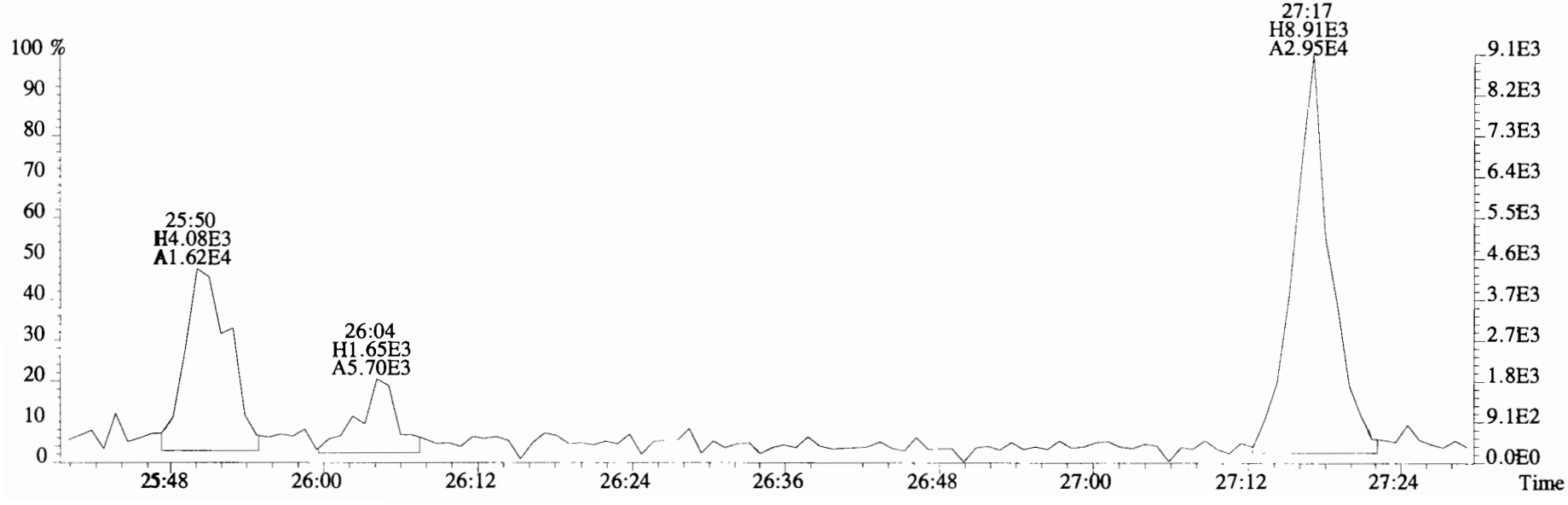


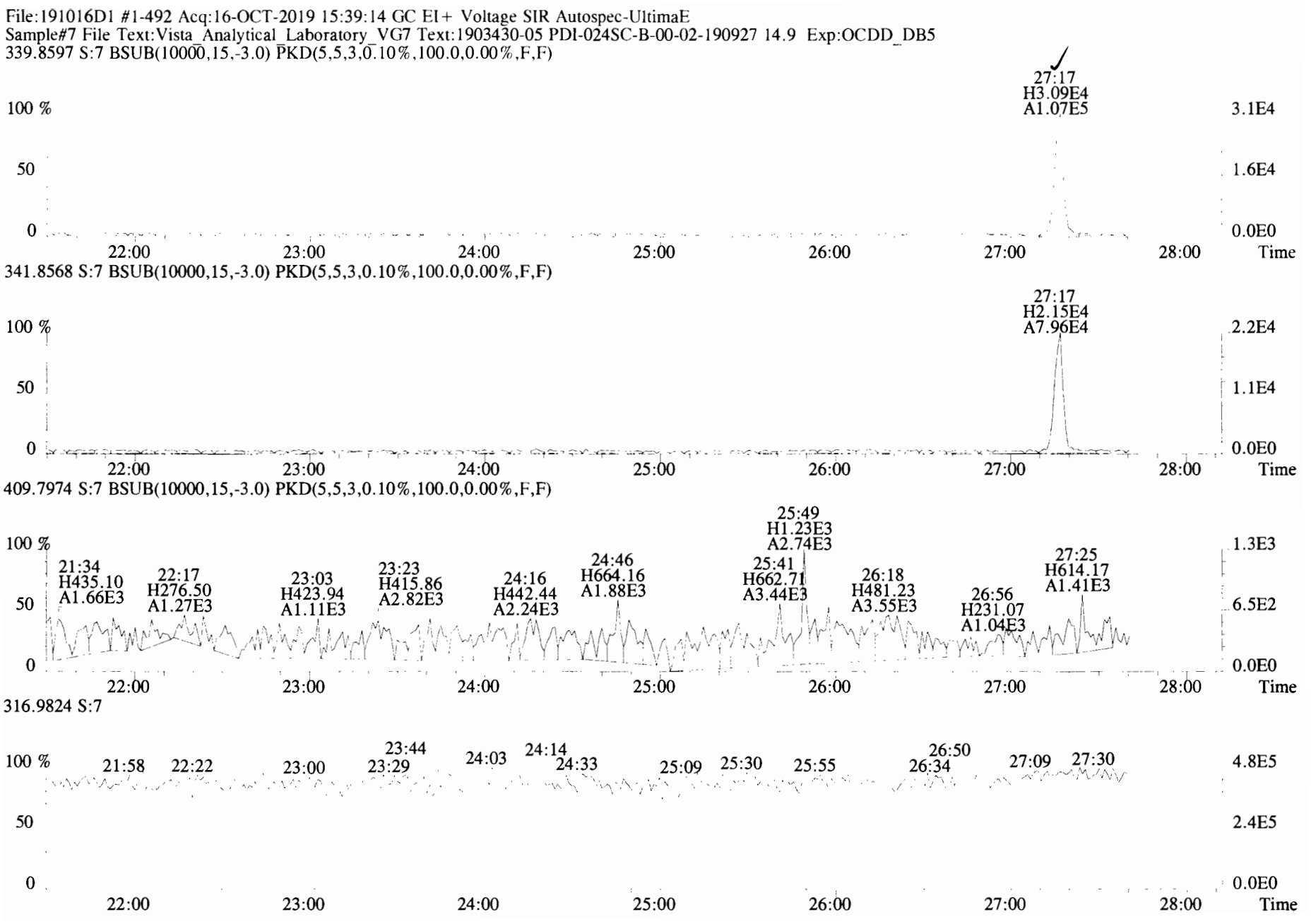

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
24:59
H2.50E3
A9.60E3
25:09
H1.54E3
A6.76E3
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
24:59
H2.40E3
A1.16E4
25:08
H2.32E3
A9.86E3
Time

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

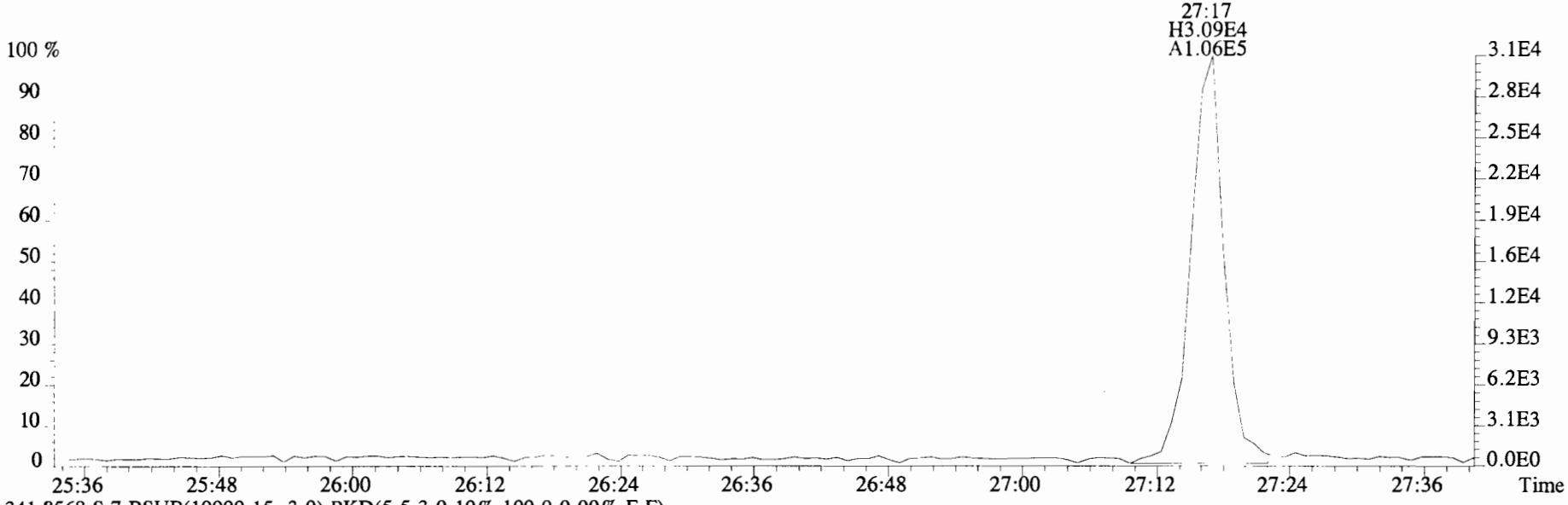


305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

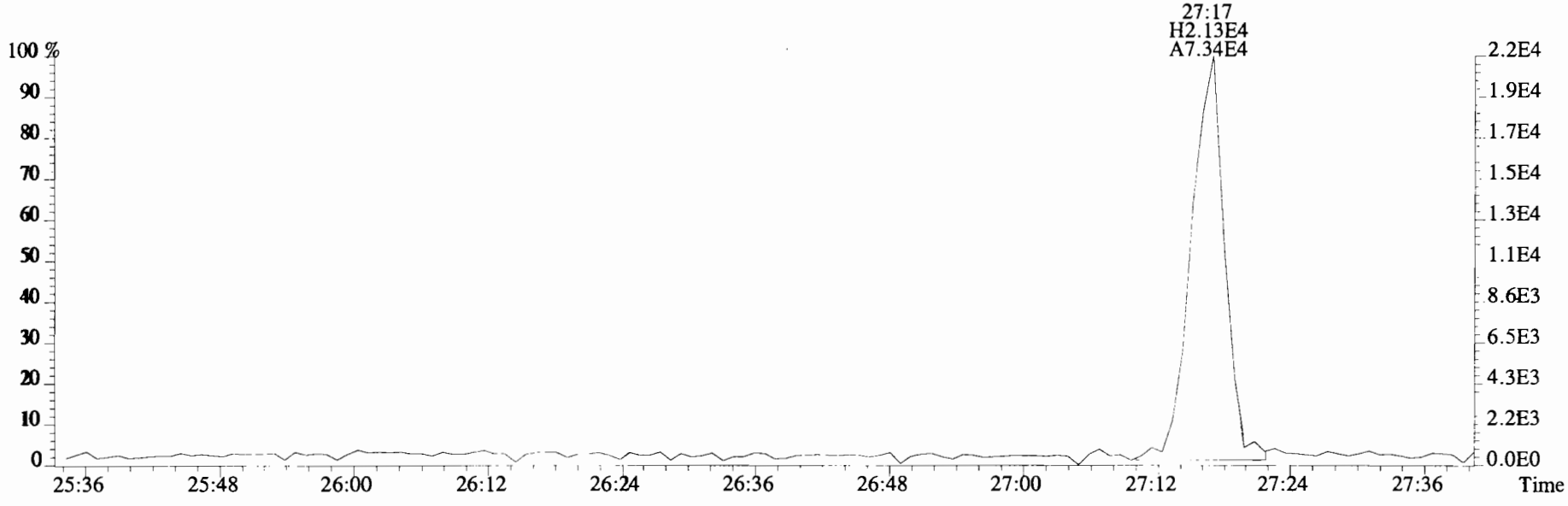


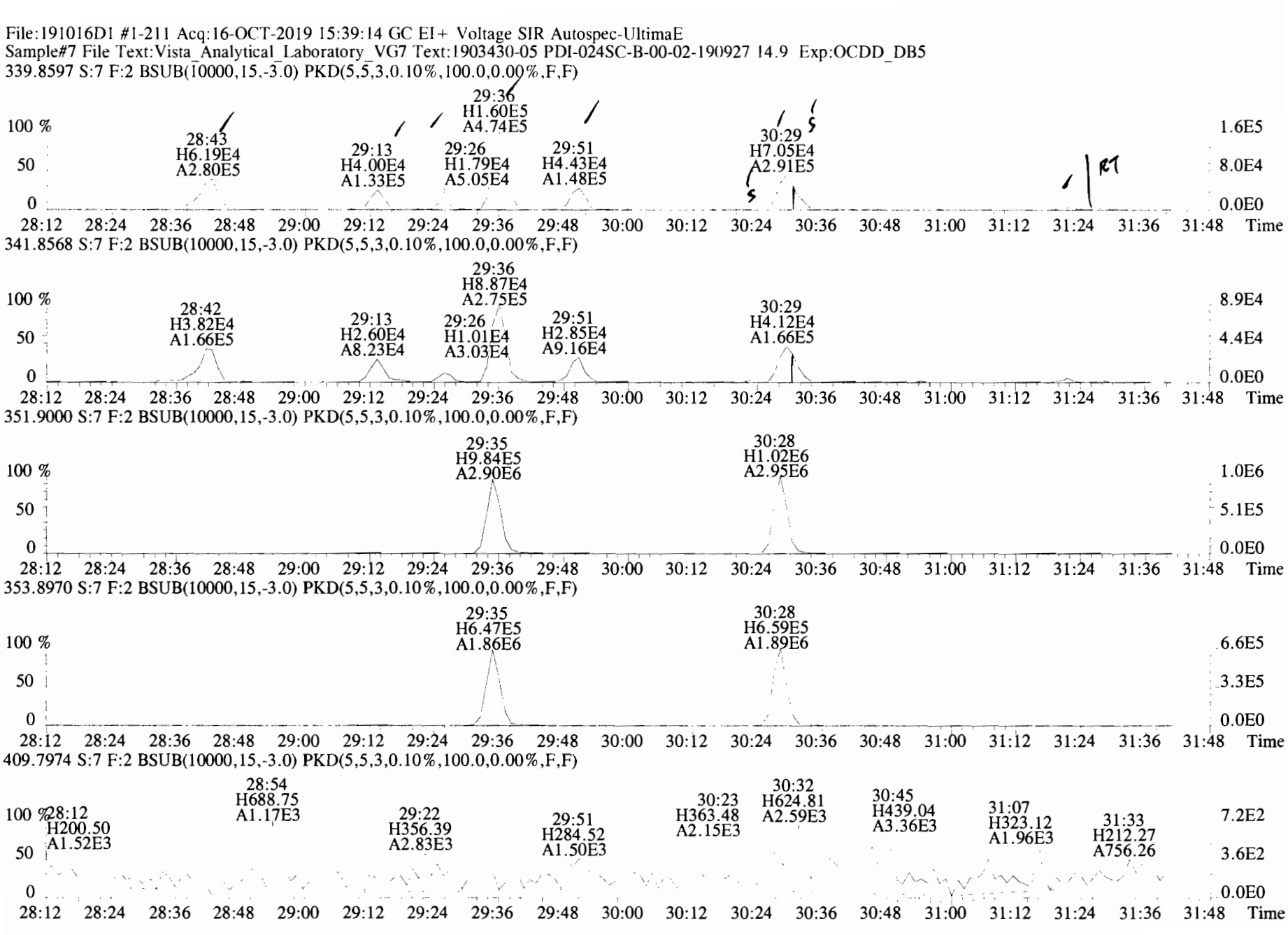

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:17
H3.09E4
A1.07E5
100 %
50
0
3.1E4
1.6E4
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
341.8568 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:17
H2.15E4
A7.96E4
100 %
50
0
2.2E4
1.1E4
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
409.7974 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:49
H1.23E3
A2.74E3
21:34
H435.10
A1.66E3
22:17
H276.50
A1.27E3
23:03
H423.94
A1.11E3
23:23
H415.86
A2.82E3
24:16
H442.44
A2.24E3
24:46
H664.16
A1.88E3
25:41
H662.71
A3.44E3
26:18
H481.23
A3.55E3
26:56
H231.07
A1.04E3
27:25
H614.17
A1.41E3
100 %
50
0
1.3E3
6.5E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
316.9824 S:7
100 %
50
0
4.8E5
2.4E5
0.0E0
21:58
22:22
23:00
23:29
23:44
24:03
24:14
24:33
25:09
25:30
25:55
26:34
26:50
27:09
27:30
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time

File:191016D1 #1-492 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

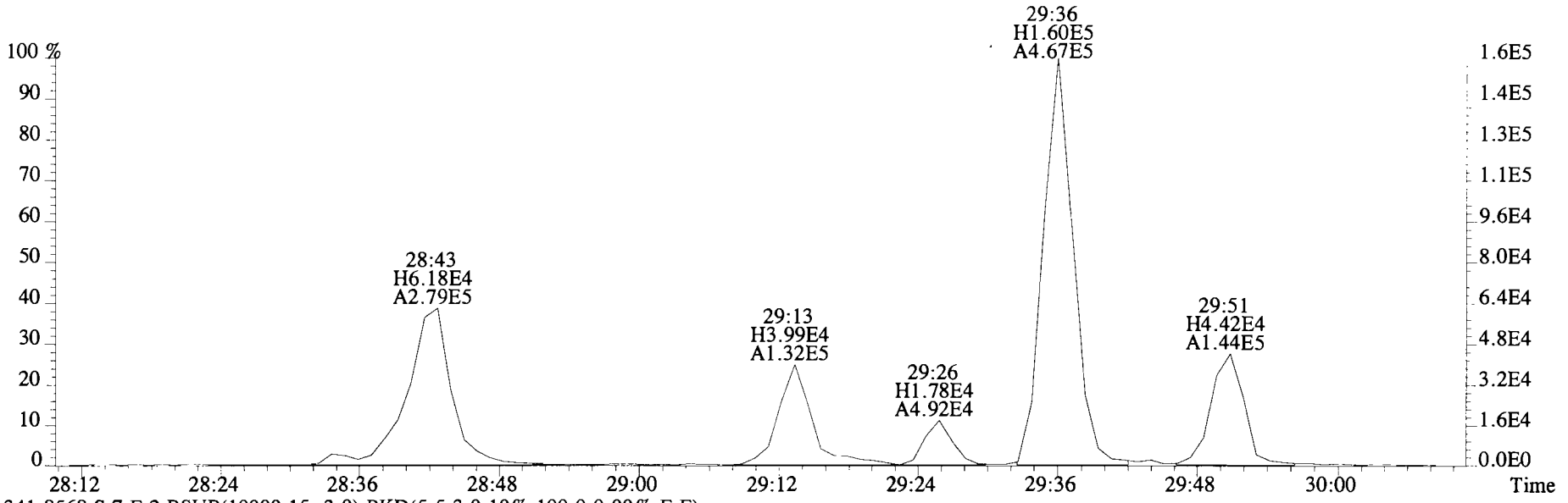


341.8568 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

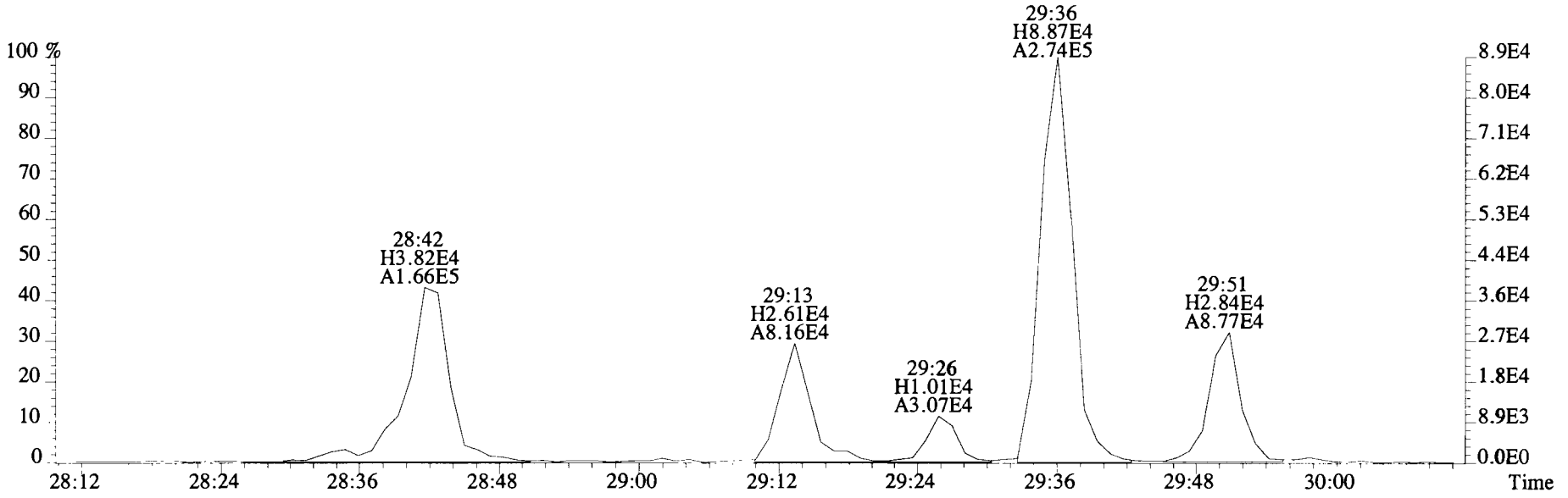



File:191016D1 #1-211 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:43 H6.19E4 A2.80E5
29:13 H4.00E4 A1.33E5
29:26 H1.79E4 A5.05E4
29:36 H1.60E5 A4.74E5
29:51 H4.43E4 A1.48E5
30:29 H7.05E4 A2.91E5
341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:42 H3.82E4 A1.66E5
29:13 H2.60E4 A8.23E4
29:26 H1.01E4 A3.03E4
29:36 H8.87E4 A2.75E5
29:51 H2.85E4 A9.16E4
30:29 H4.12E4 A1.66E5
351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:35 H9.84E5 A2.90E6
30:28 H1.02E6 A2.95E6
353.8970 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:35 H6.47E5 A1.86E6
30:28 H6.59E5 A1.89E6
409.7974 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:12 H200.50 A1.52E3
28:54 H688.75 A1.17E3
29:22 H356.39 A2.83E3
29:51 H284.52 A1.50E3
30:23 H363.48 A2.15E3
30:32 H624.81 A2.59E3
30:45 H439.04 A3.36E3
31:07 H323.12 A1.96E3
31:33 H212.27 A756.26
100 %
50
0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time
1.6E5
8.0E4
0.0E0
8.9E4
4.4E4
1.0E6
5.1E5
6.6E5
3.3E5
7.2E2
3.6E2

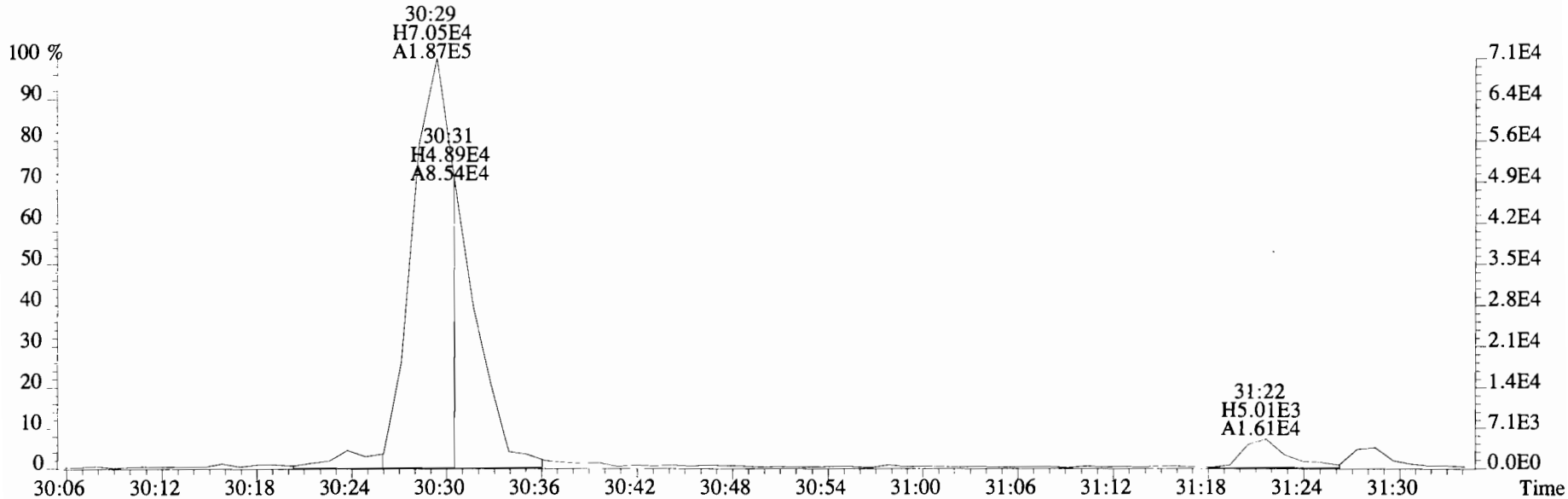
File:191016D1 #1-211 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



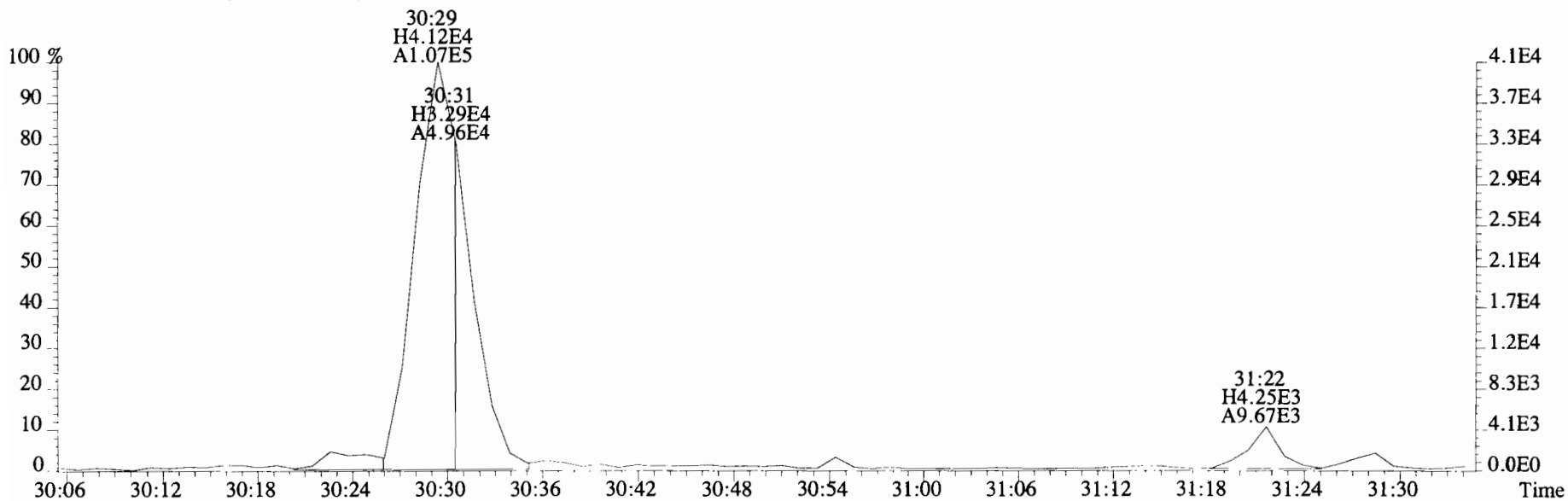
341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

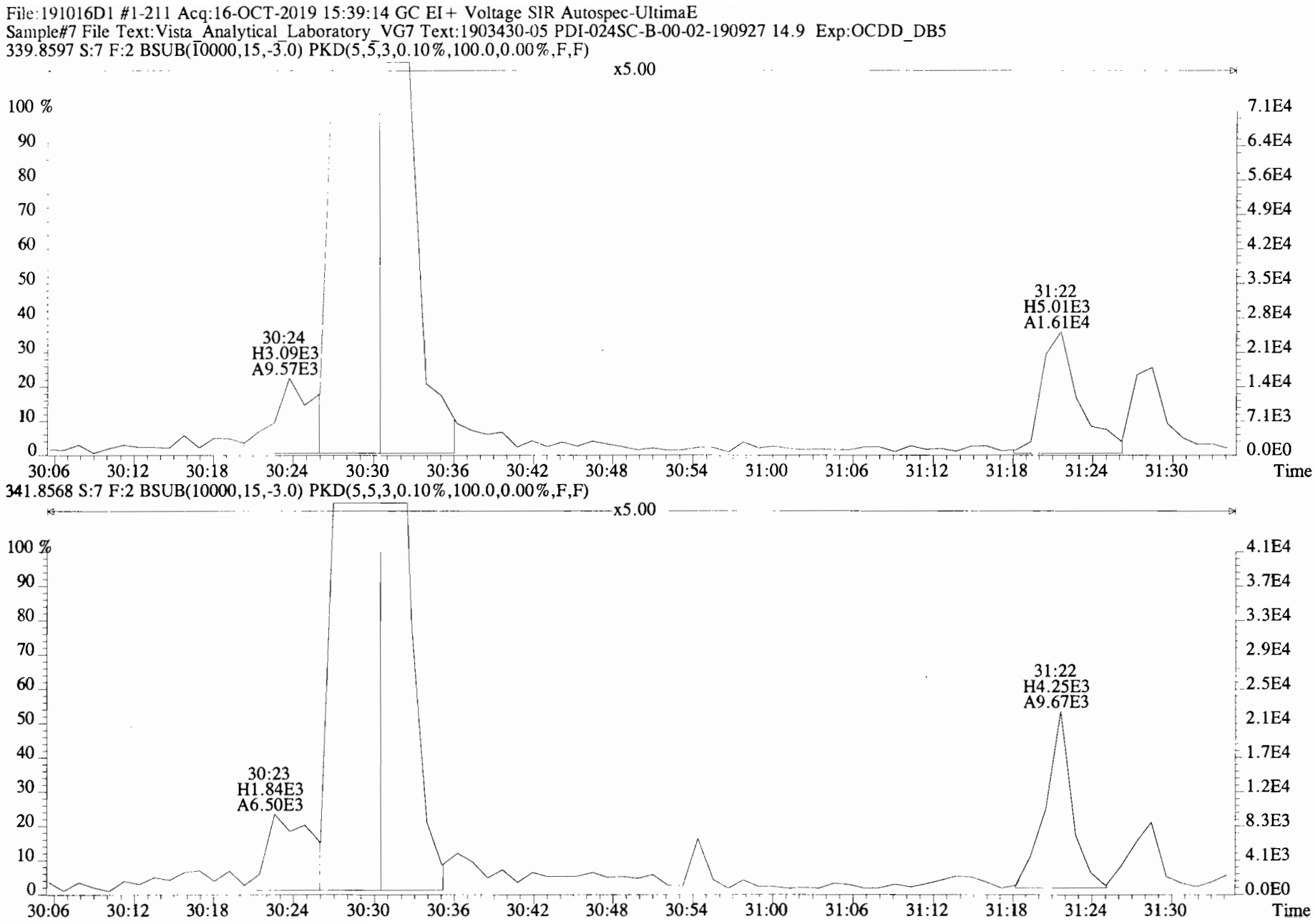


File:191016D1 #1-211 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

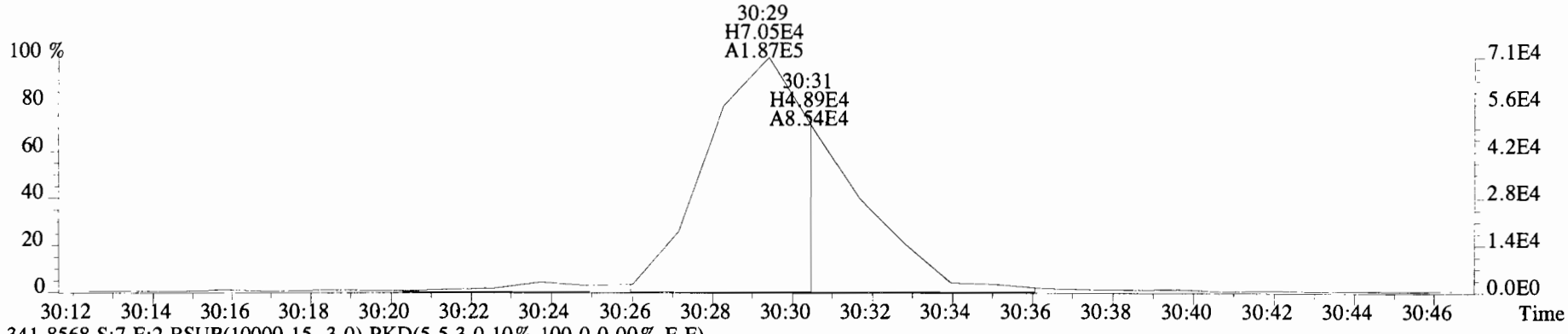


341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

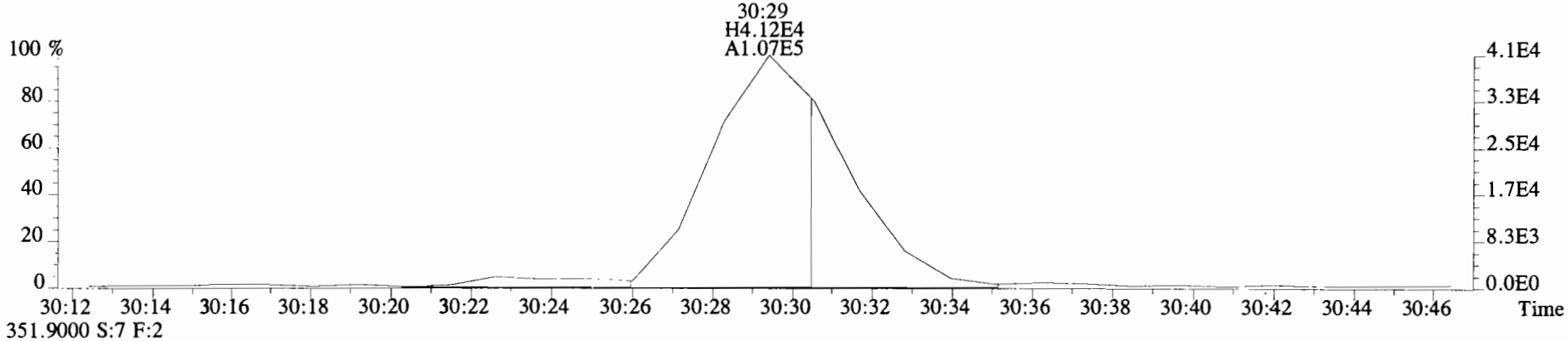



File:191016D1 #1-211 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
30:24
H3.09E3
A9.57E3
31:22
H5.01E3
A1.61E4
341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
30:23
H1.84E3
A6.50E3
31:22
H4.25E3
A9.67E3
Time

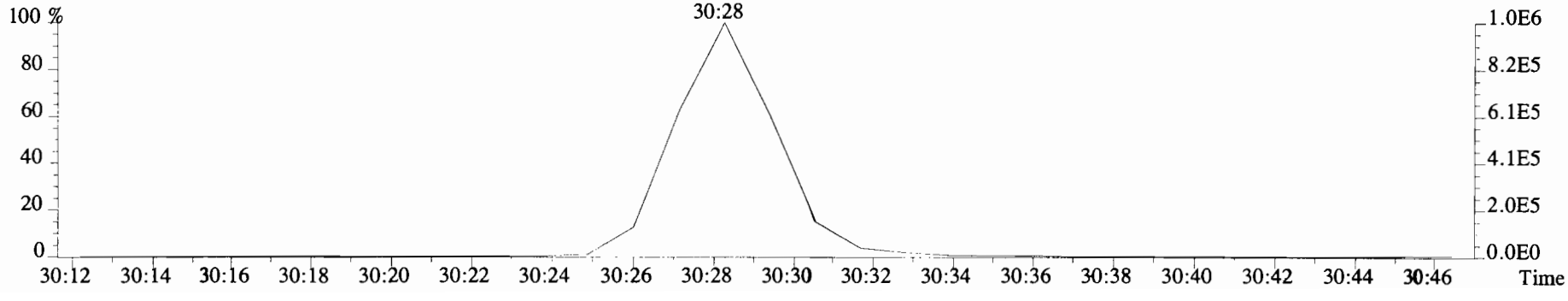
File:191016D1 #1-211 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

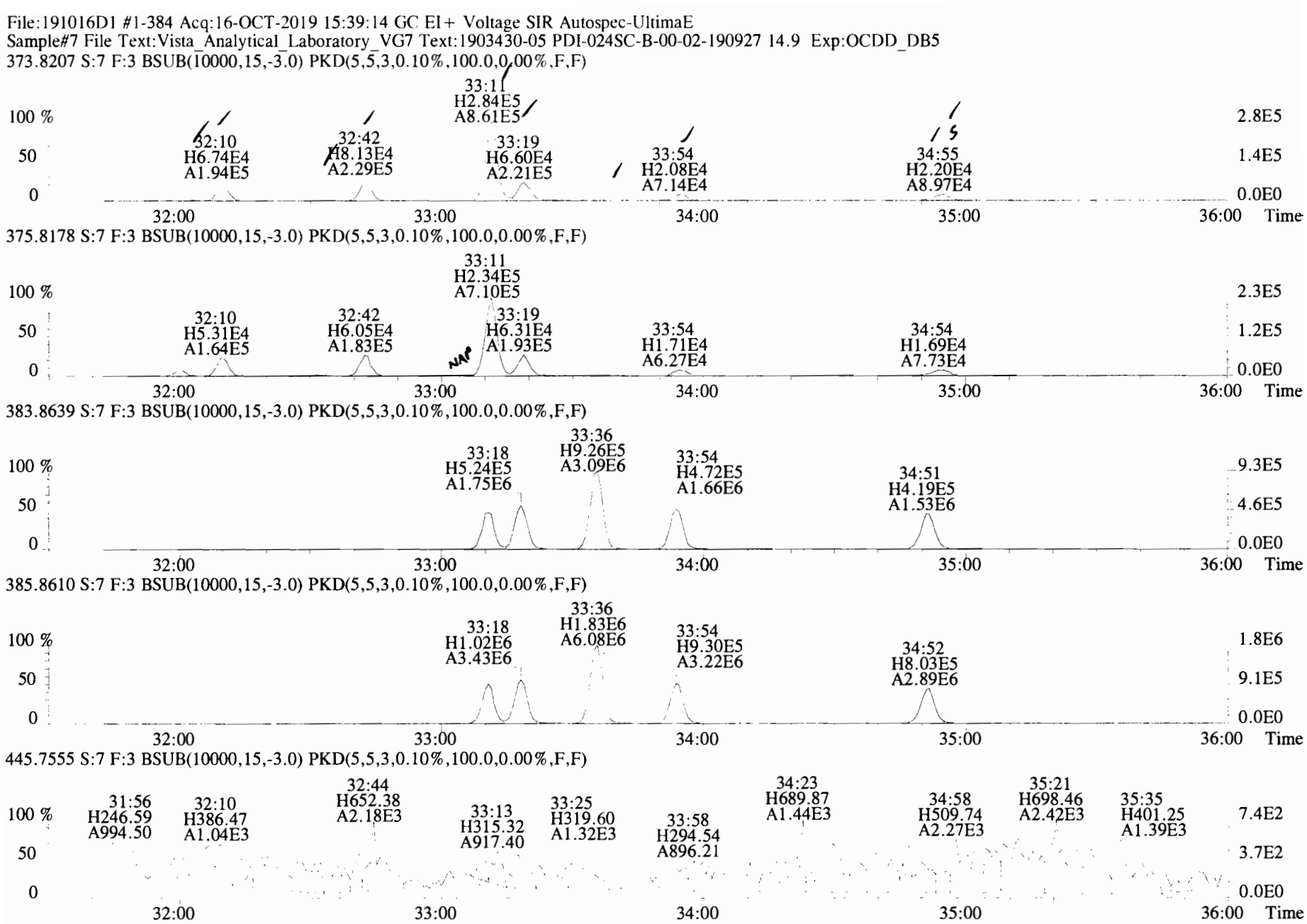


341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

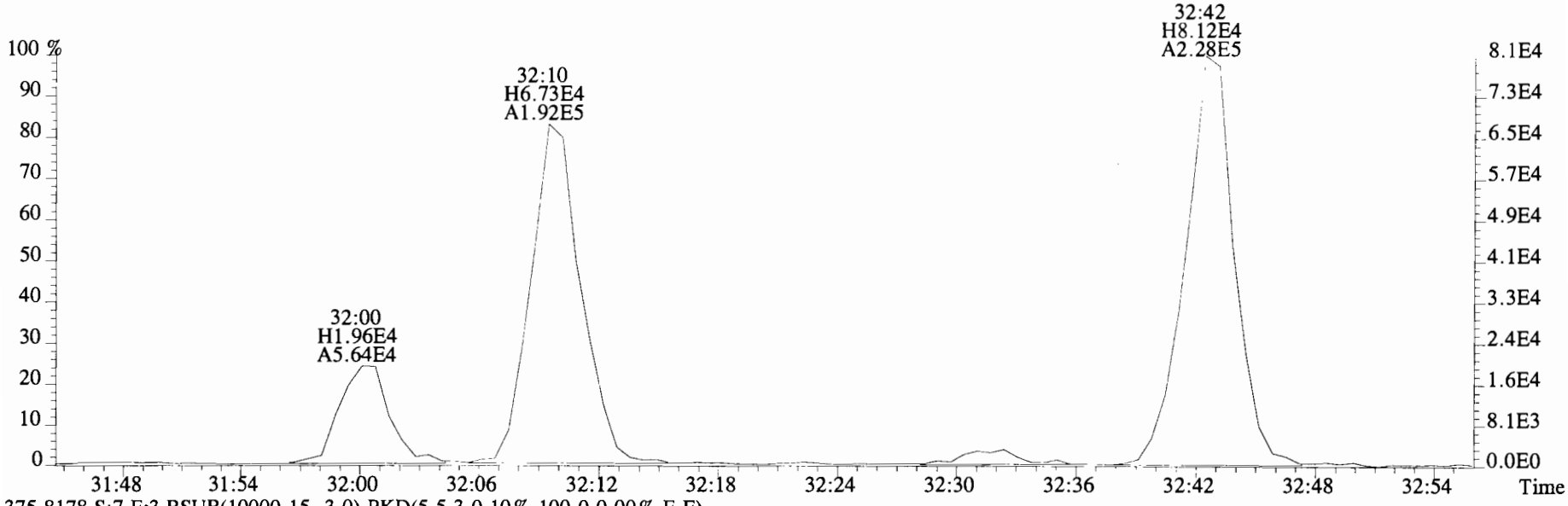


351.9000 S:7 F:2

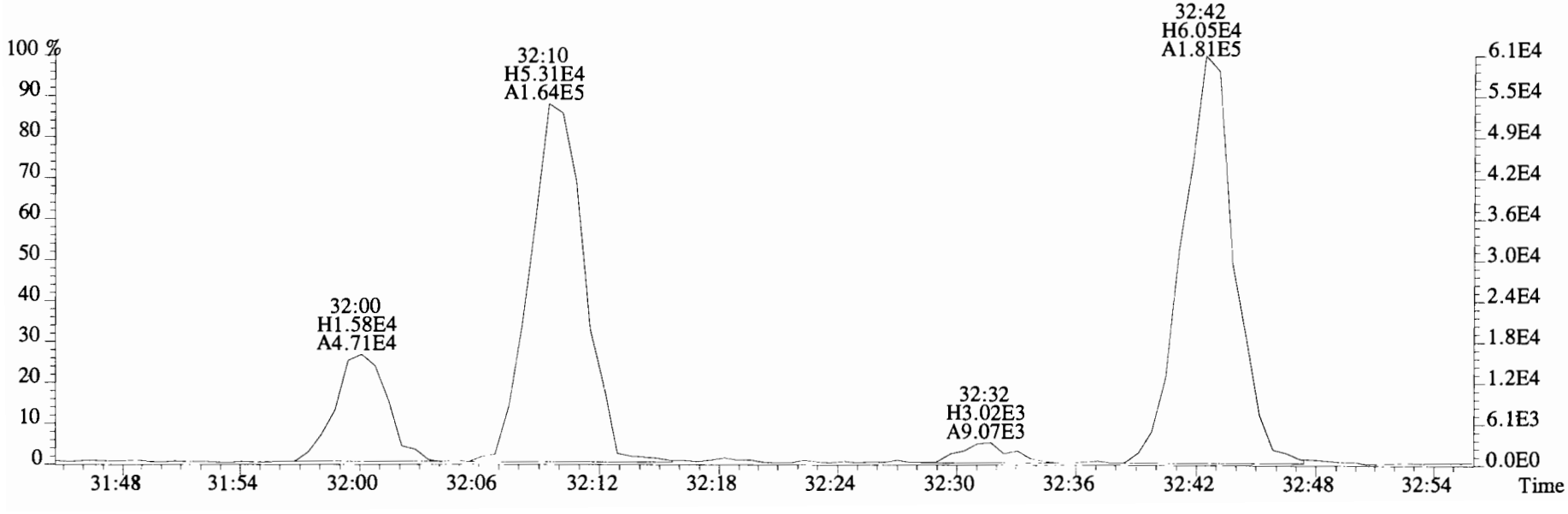


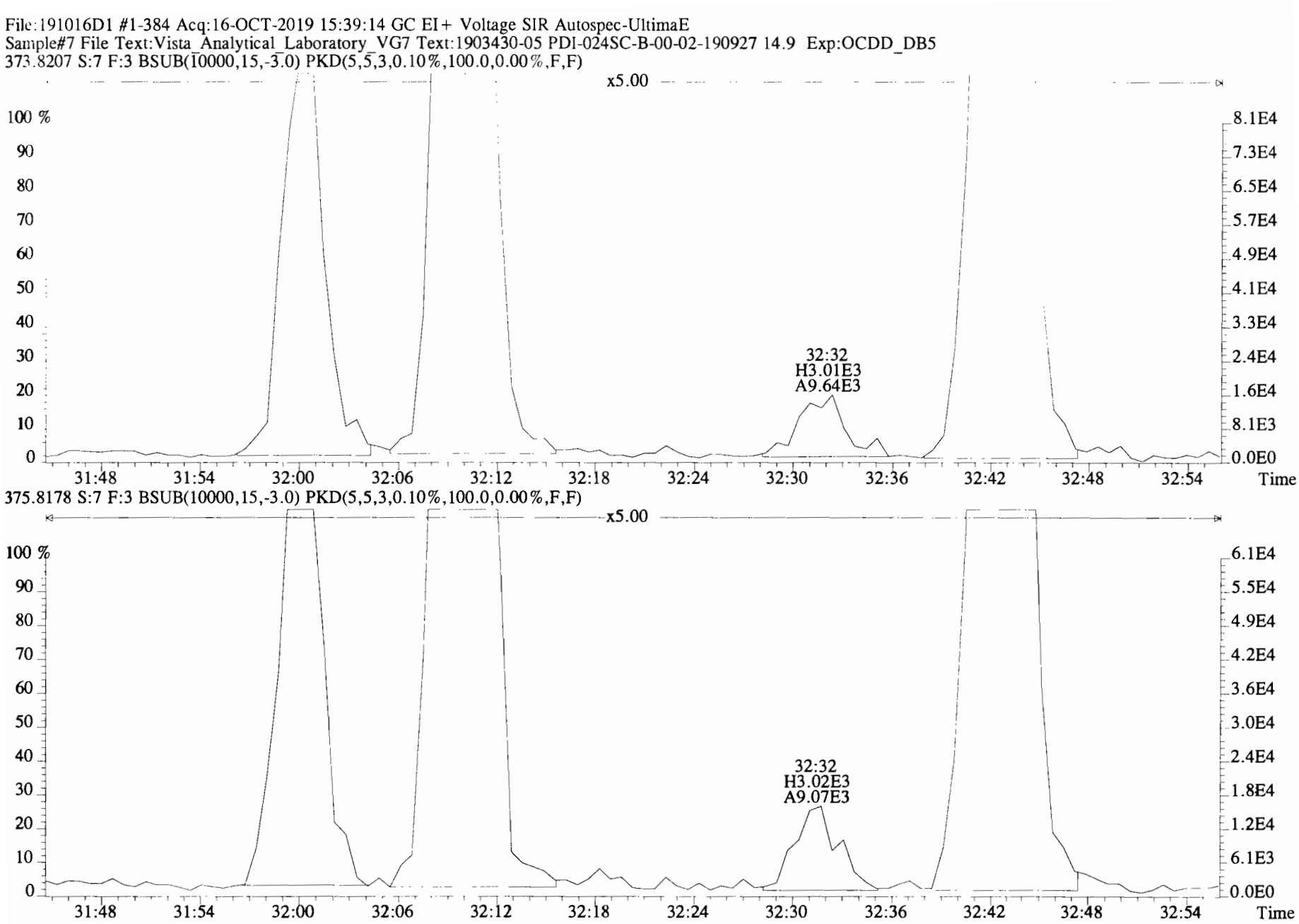

File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:11 H2.84E5 A8.61E5
32:10 H6.74E4 A1.94E5
32:42 H8.13E4 A2.29E5
33:19 H6.60E4 A2.21E5
33:54 H2.08E4 A7.14E4
34:55 H2.20E4 A8.97E4
100 %
50
0
2.8E5
1.4E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:11 H2.34E5 A7.10E5
32:10 H5.31E4 A1.64E5
32:42 H6.05E4 A1.83E5
33:19 H6.31E4 A1.93E5
33:54 H1.71E4 A6.27E4
34:54 H1.69E4 A7.73E4
NAP
100 %
50
0
2.3E5
1.2E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:18 H5.24E5 A1.75E6
33:36 H9.26E5 A3.09E6
33:54 H4.72E5 A1.66E6
34:51 H4.19E5 A1.53E6
100 %
50
0
9.3E5
4.6E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:18 H1.02E6 A3.43E6
33:36 H1.83E6 A6.08E6
33:54 H9.30E5 A3.22E6
34:52 H8.03E5 A2.89E6
100 %
50
0
1.8E6
9.1E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:56 H246.59 A994.50
32:10 H386.47 A1.04E3
32:44 H652.38 A2.18E3
33:13 H315.32 A917.40
33:25 H319.60 A1.32E3
33:58 H294.54 A896.21
34:23 H689.87 A1.44E3
34:58 H509.74 A2.27E3
35:21 H698.46 A2.42E3
35:35 H401.25 A1.39E3
100 %
50
0
7.4E2
3.7E2
0.0E0
32:00
33:00
34:00
35:00
36:00
Time

File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

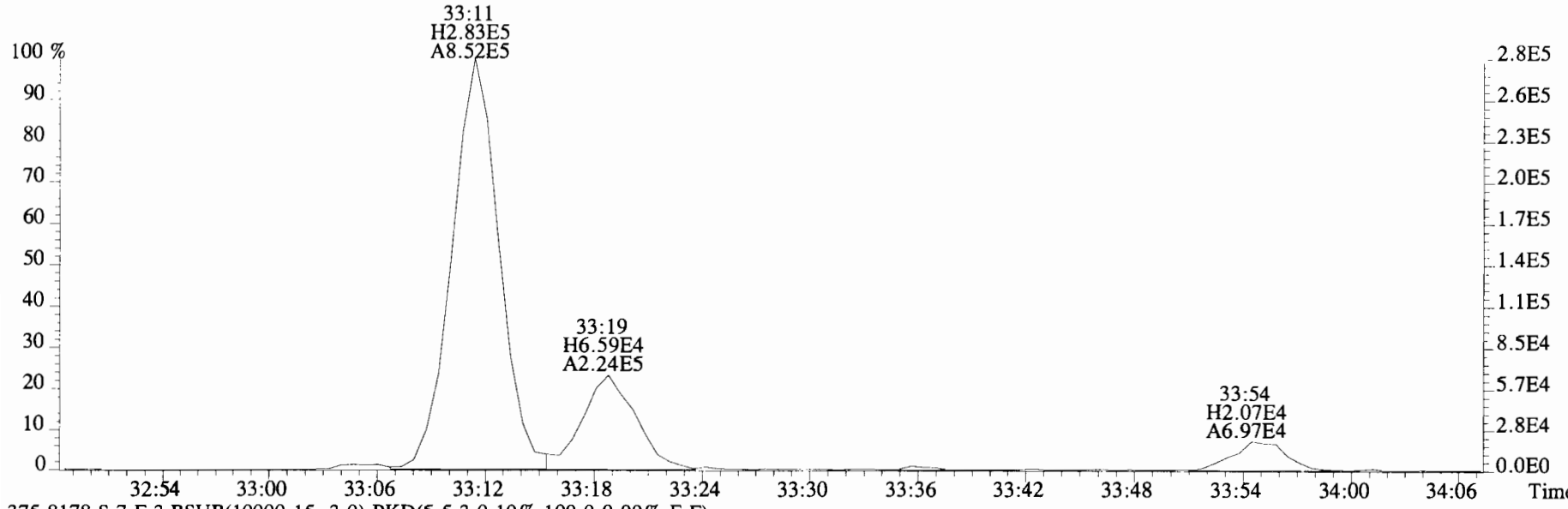


375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

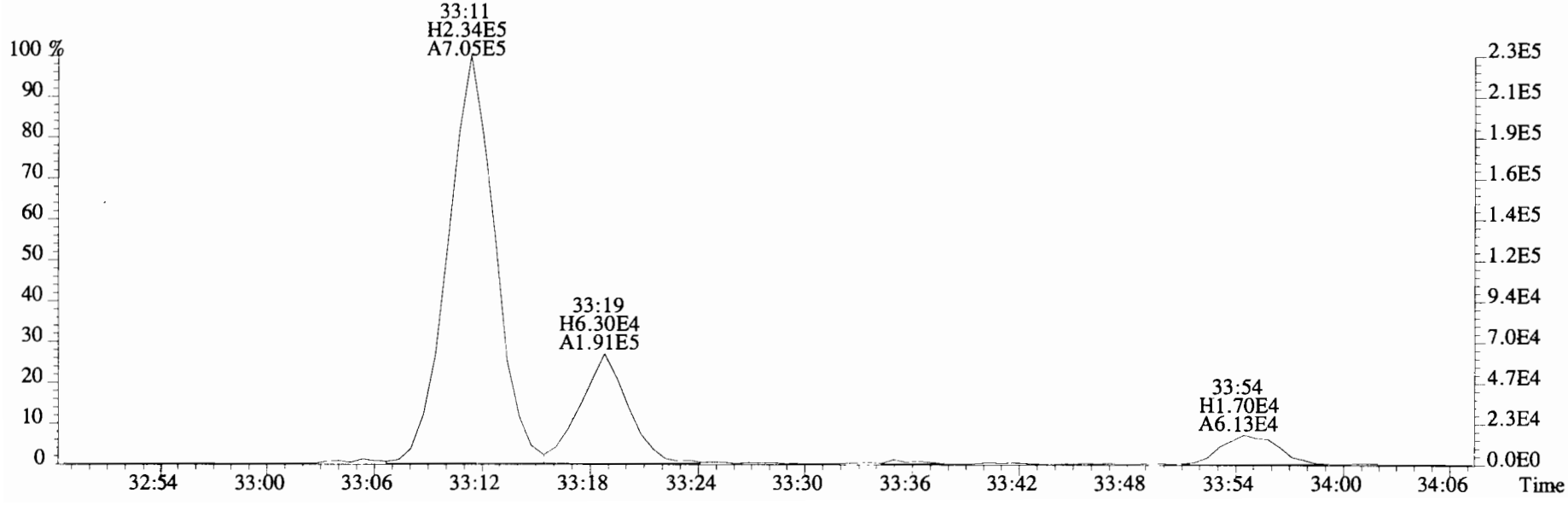


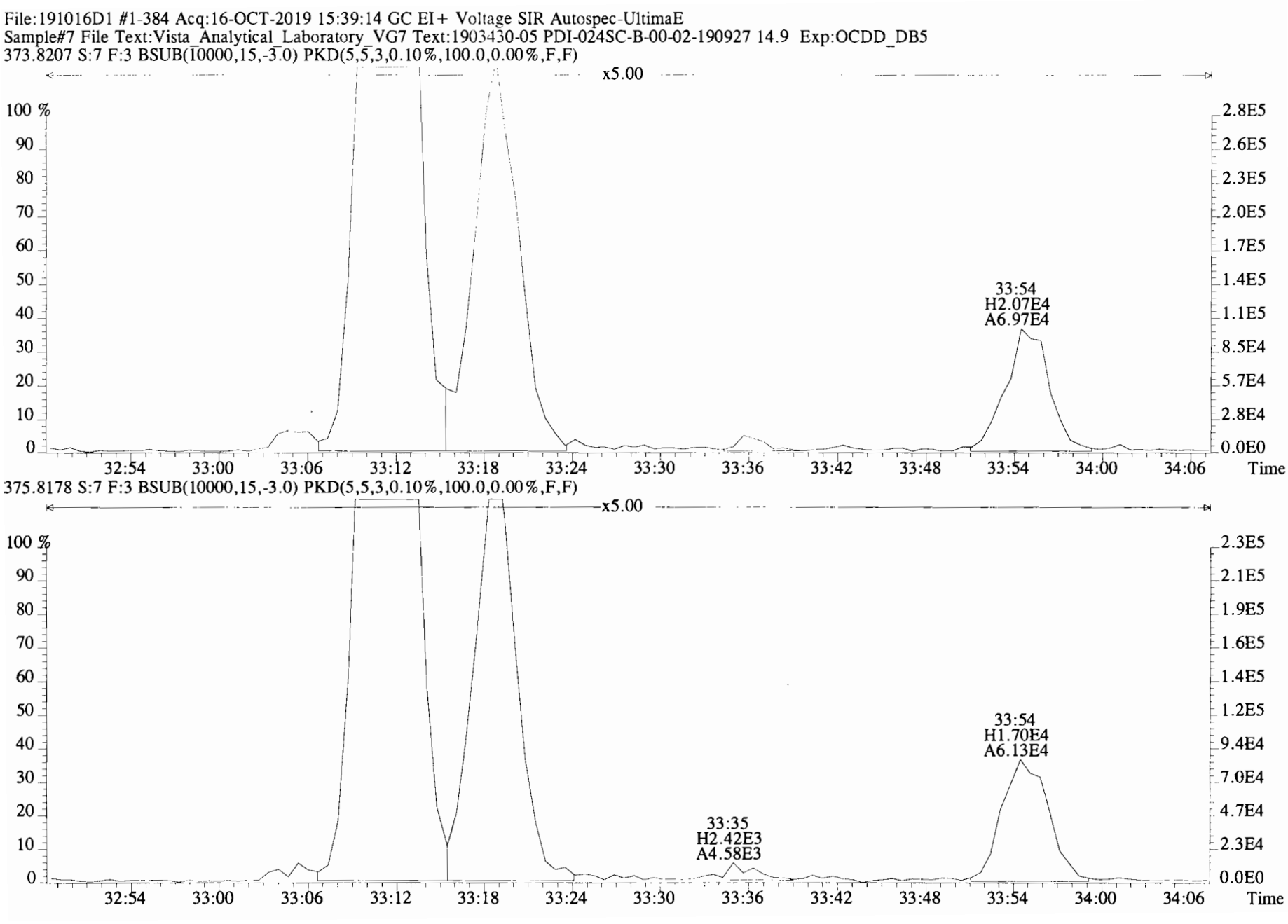

File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
32:32
H3.01E3
A9.64E3
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
32:32
H3.02E3
A9.07E3
Time

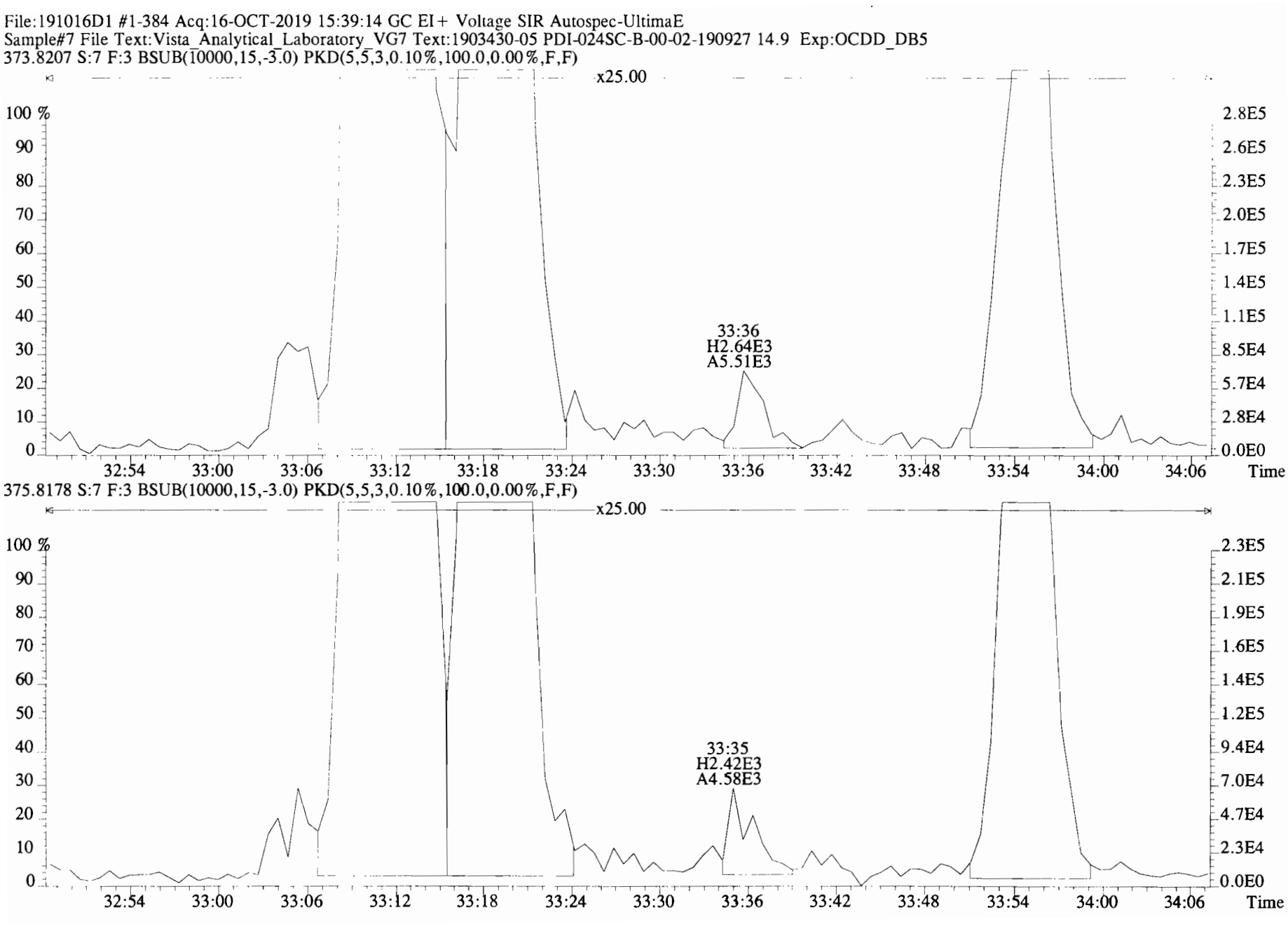
File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



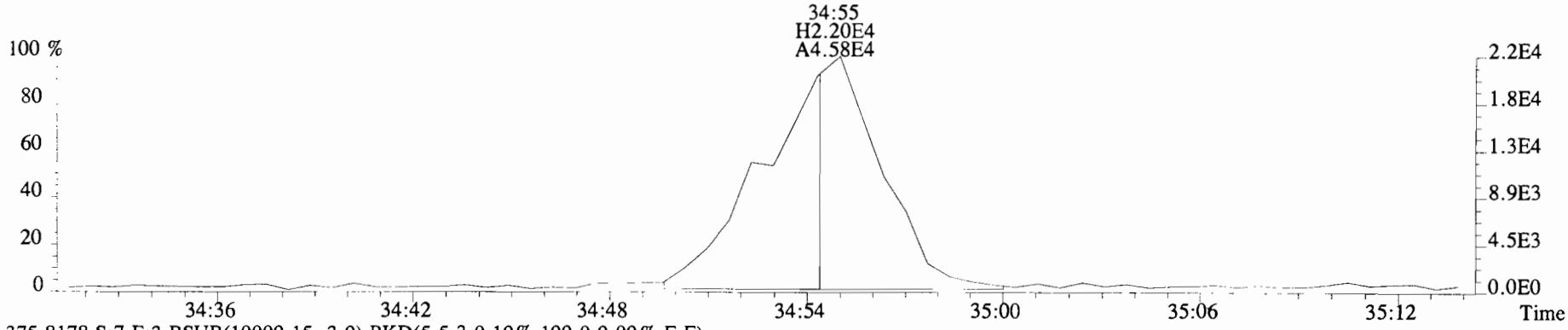
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



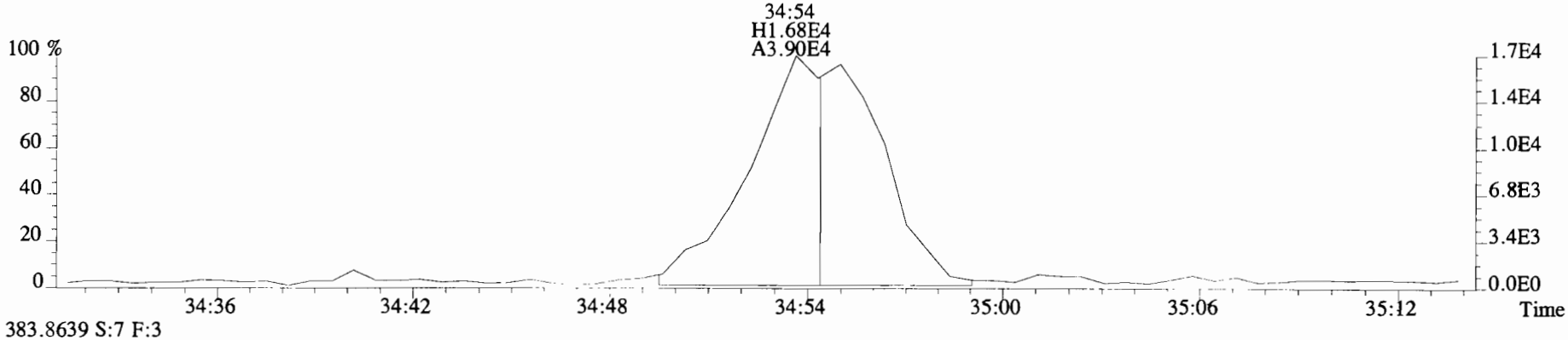

File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
33:54
H2.07E4
A6.97E4
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
33:54
H1.70E4
A6.13E4
33:35
H2.42E3
A4.58E3
Time


File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x25.00
33:36
H2.64E3
A5.51E3
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x25.00
33:35
H2.42E3
A4.58E3
Time

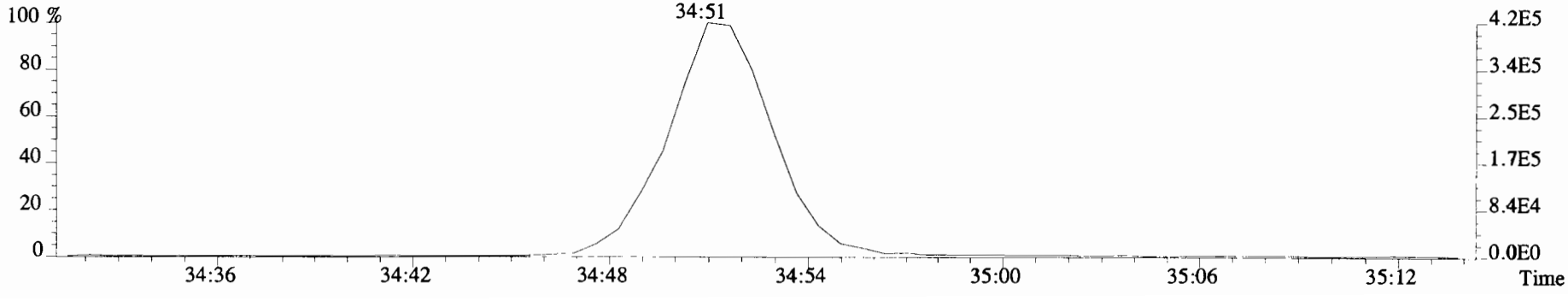
File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

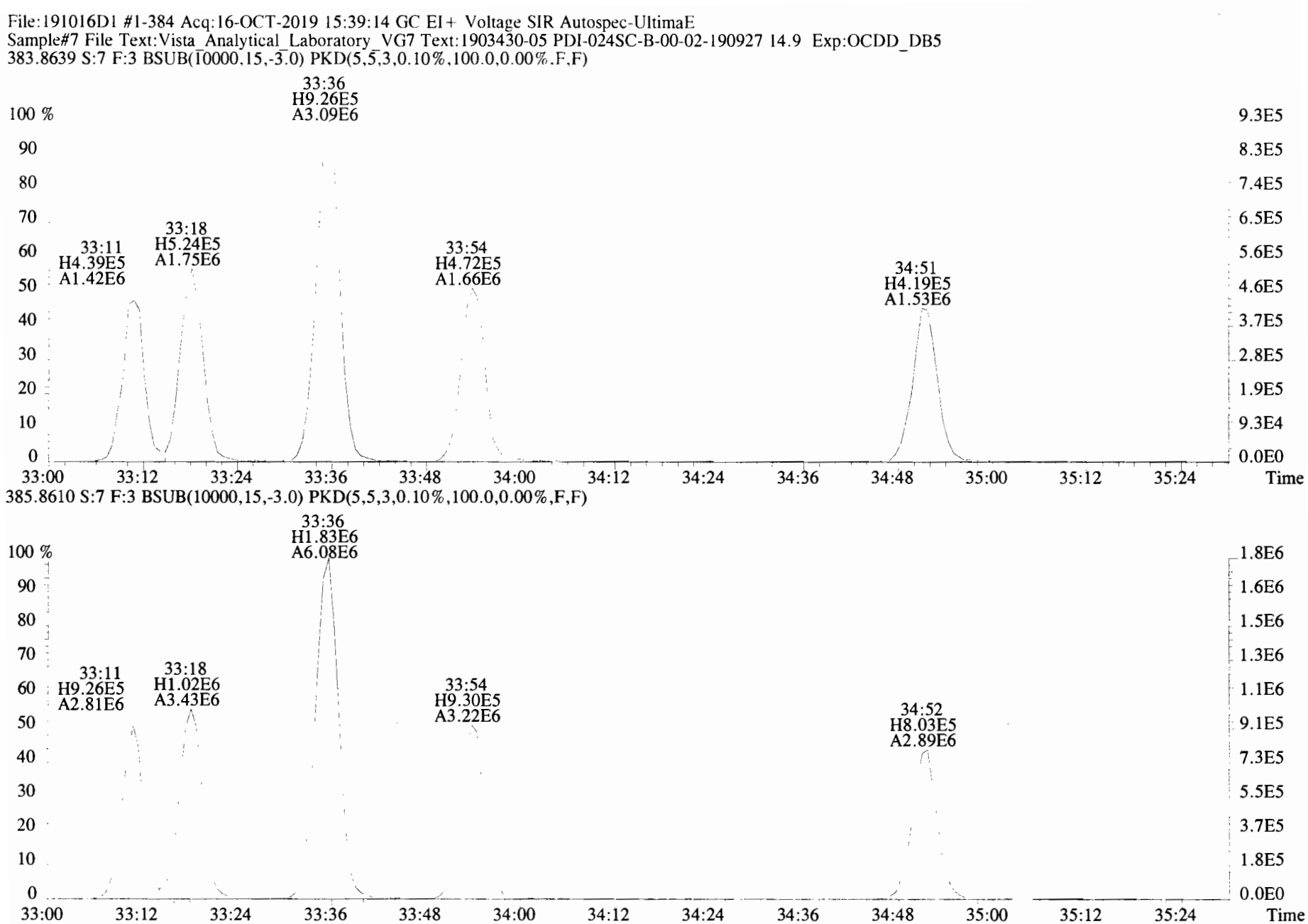


375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

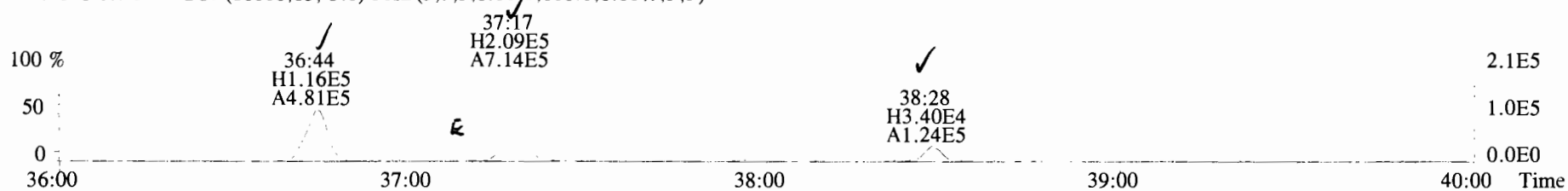


383.8639 S:7 F:3

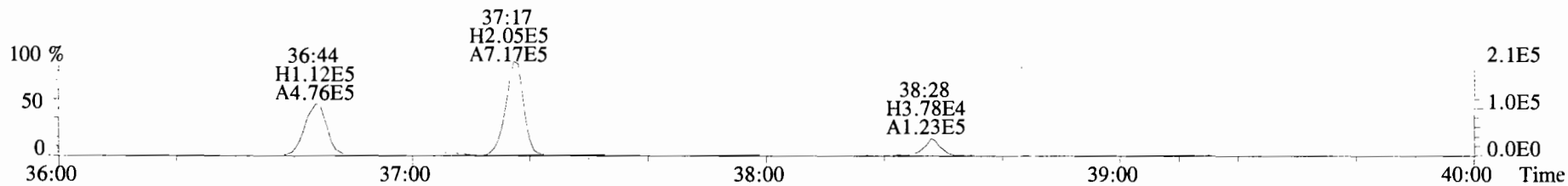



File:191016D1 #1-384 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:36
H9.26E5
A3.09E6
33:11
H4.39E5
A1.42E6
33:18
H5.24E5
A1.75E6
33:54
H4.72E5
A1.66E6
34:51
H4.19E5
A1.53E6
100 %
90
80
70
60
50
40
30
20
10
0
9.3E5
8.3E5
7.4E5
6.5E5
5.6E5
4.6E5
3.7E5
2.8E5
1.9E5
9.3E4
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:36
H1.83E6
A6.08E6
33:11
H9.26E5
A2.81E6
33:18
H1.02E6
A3.43E6
33:54
H9.30E5
A3.22E6
34:52
H8.03E5
A2.89E6
100 %
90
80
70
60
50
40
30
20
10
0
1.8E6
1.6E6
1.5E6
1.3E6
1.1E6
9.1E5
7.3E5
5.5E5
3.7E5
1.8E5
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time

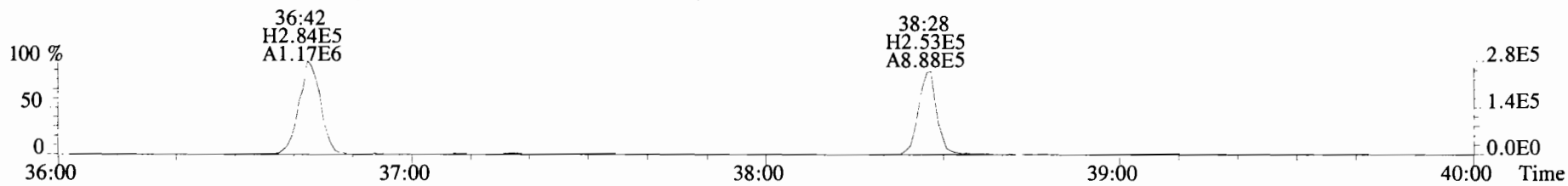
File:191016D1 #1-355 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



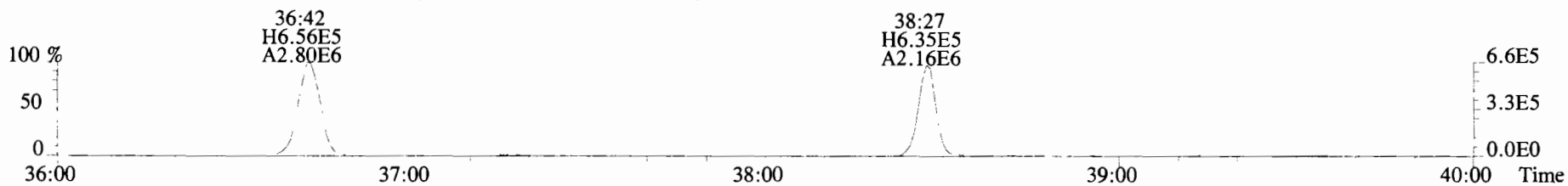
409.7788 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



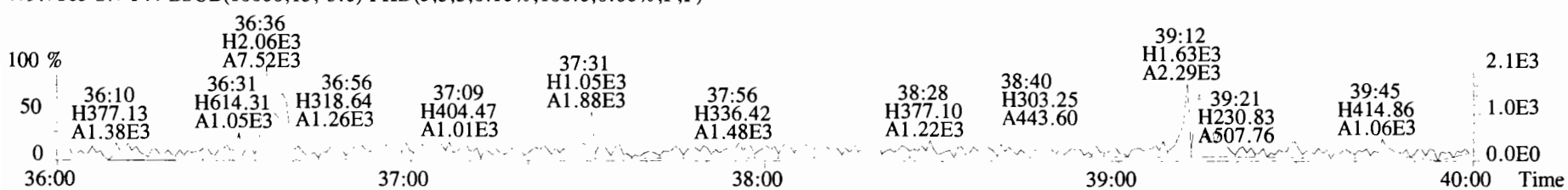
417.8253 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



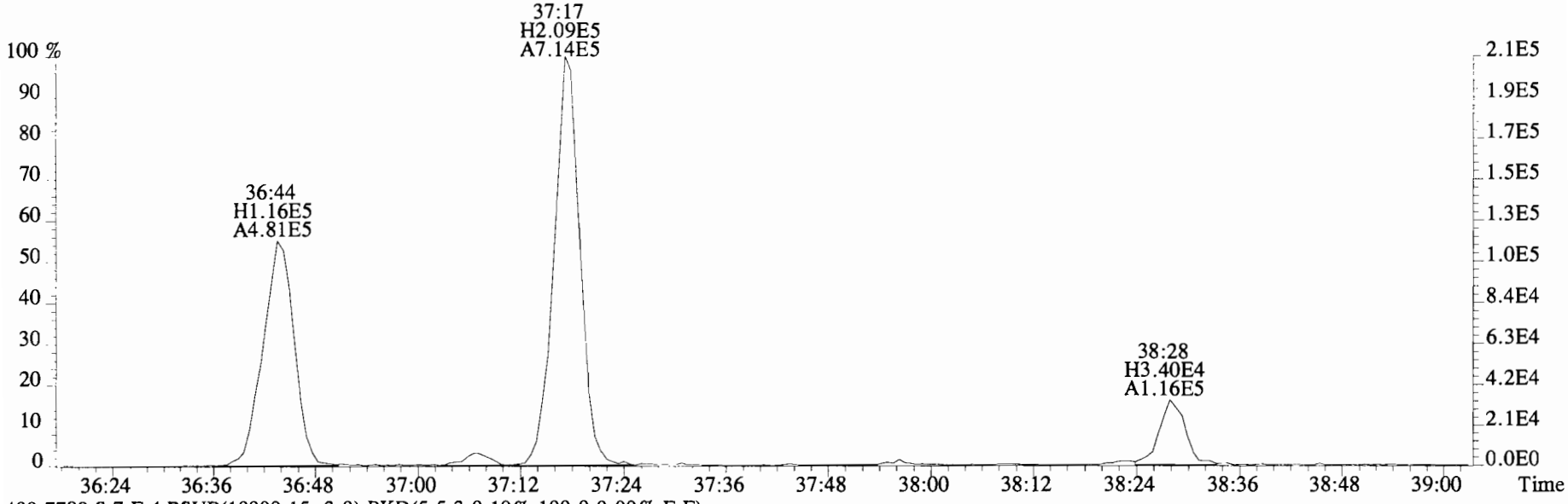
419.8220 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



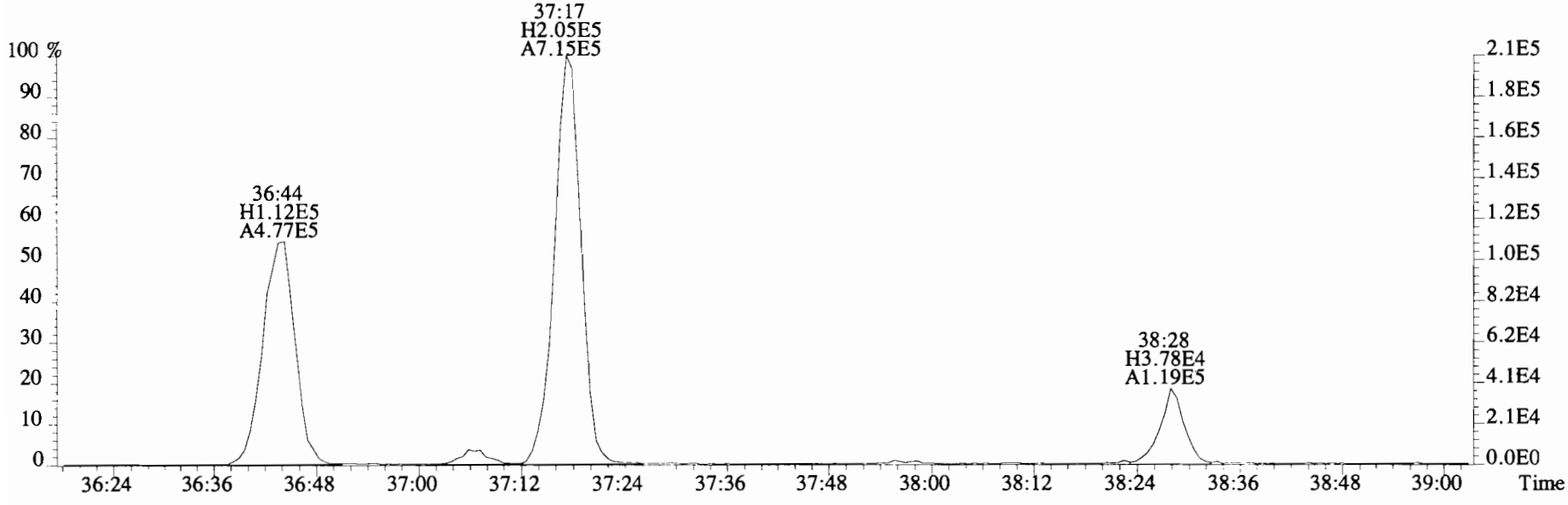
479.7165 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

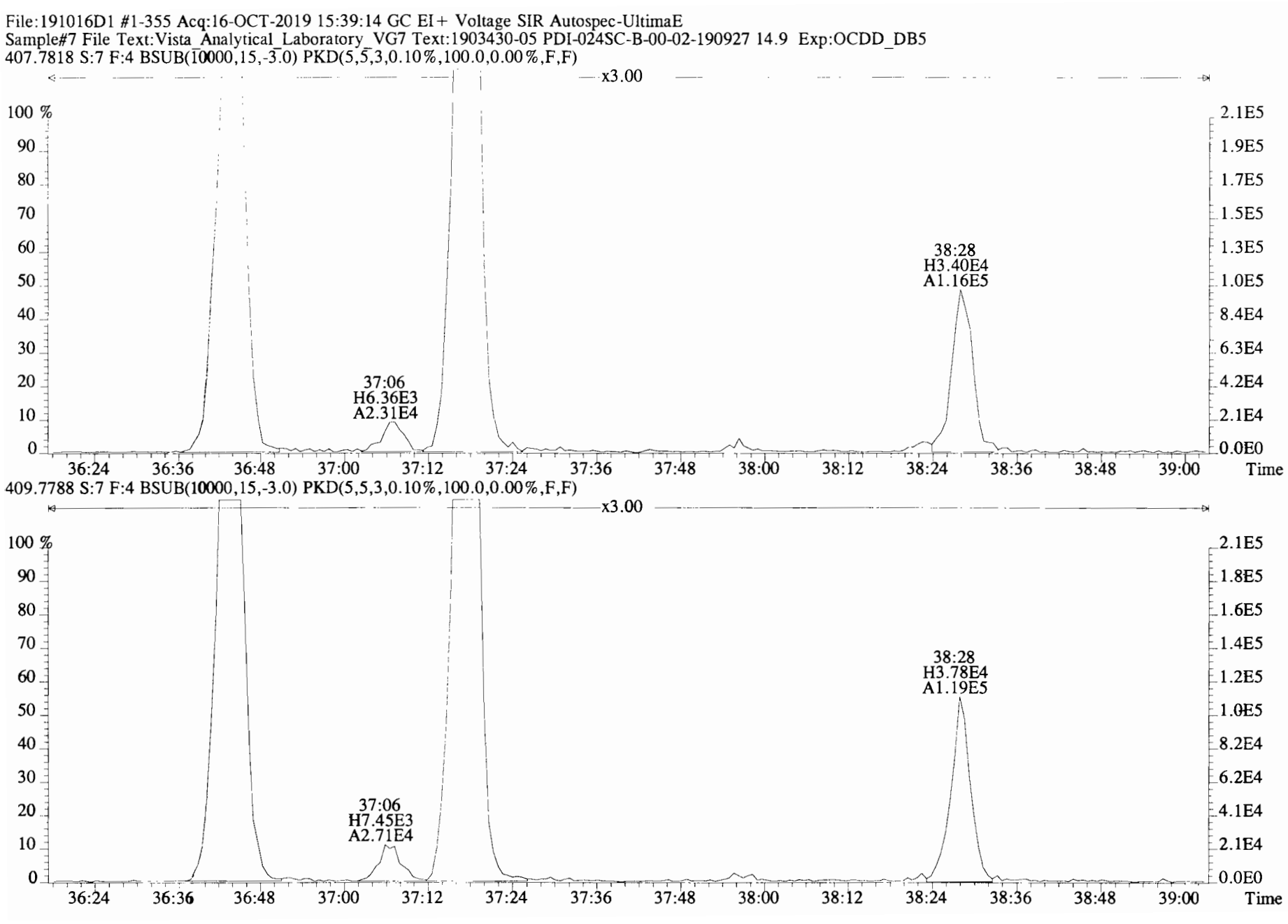


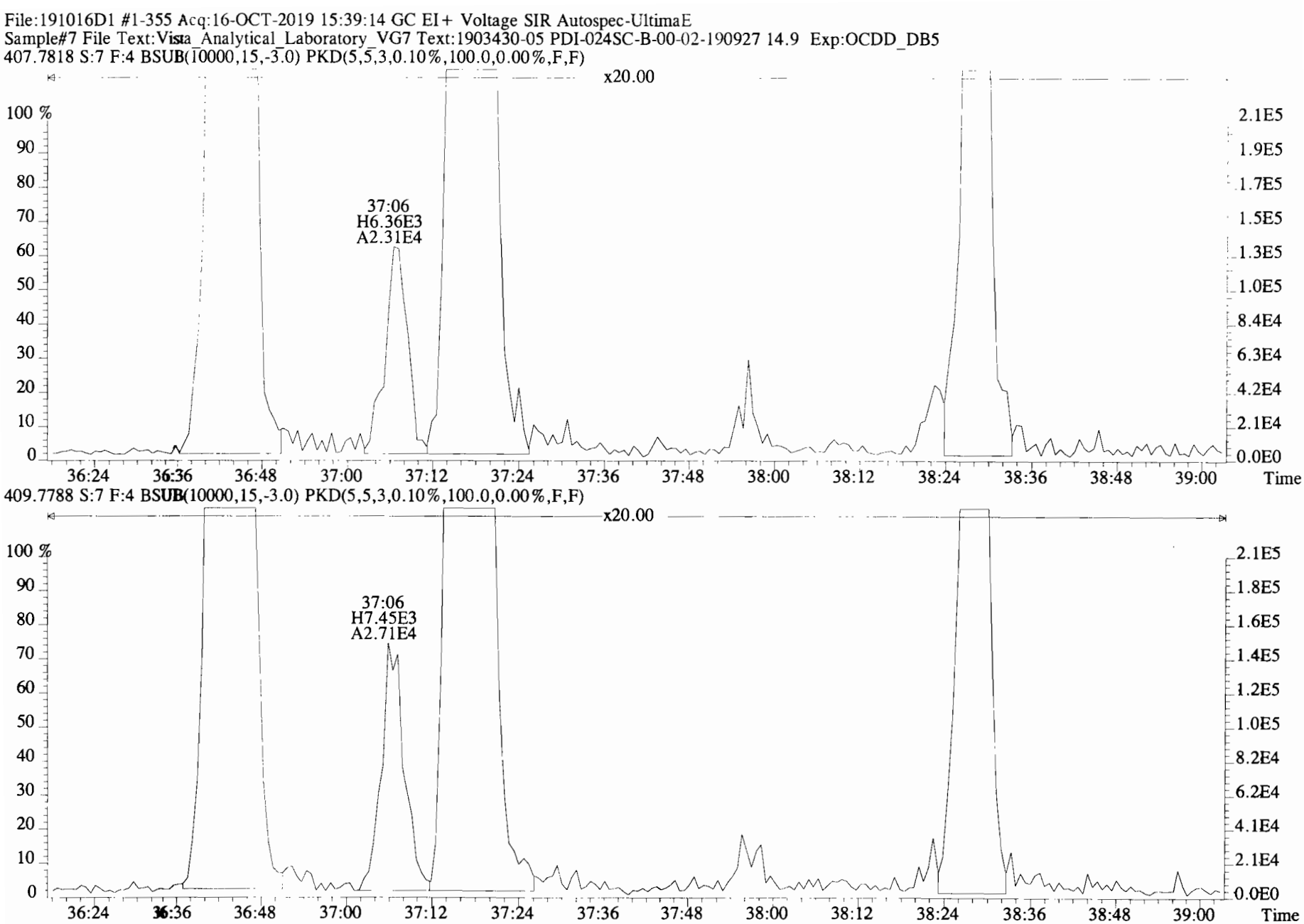
File:191016D1 #1-355 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

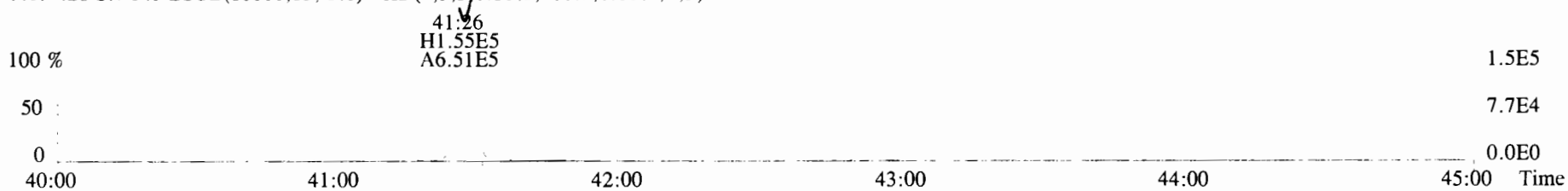



File:191016D1 #1-355 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x3.00
100 %
90
80
70
60
50
40
30
20
10
0
2.1E5
1.9E5
1.7E5
1.5E5
1.3E5
1.0E5
8.4E4
6.3E4
4.2E4
2.1E4
0.0E0
37:06
H6.36E3
A2.31E4
38:28
H3.40E4
A1.16E5
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
38:12
38:24
38:36
38:48
39:00
Time
409.7788 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x3.00
100 %
90
80
70
60
50
40
30
20
10
0
2.1E5
1.8E5
1.6E5
1.4E5
1.2E5
1.0E5
8.2E4
6.2E4
4.1E4
2.1E4
0.0E0
37:06
H7.45E3
A2.71E4
38:28
H3.78E4
A1.19E5
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
38:12
38:24
38:36
38:48
39:00
Time

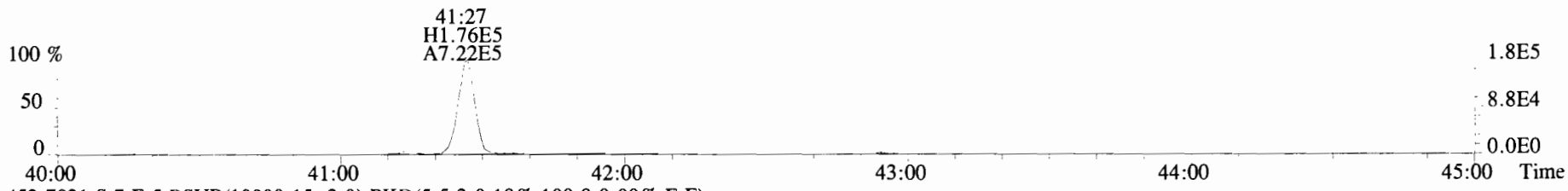

File:191016D1 #1-355 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x20.00
37:06
H6.36E3
A2.31E4
409.7788 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x20.00
37:06
H7.45E3
A2.71E4
Time

File:191016D1 #1-432 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5

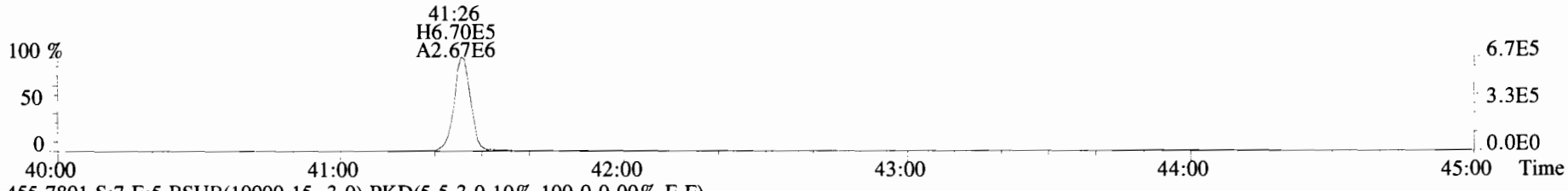
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



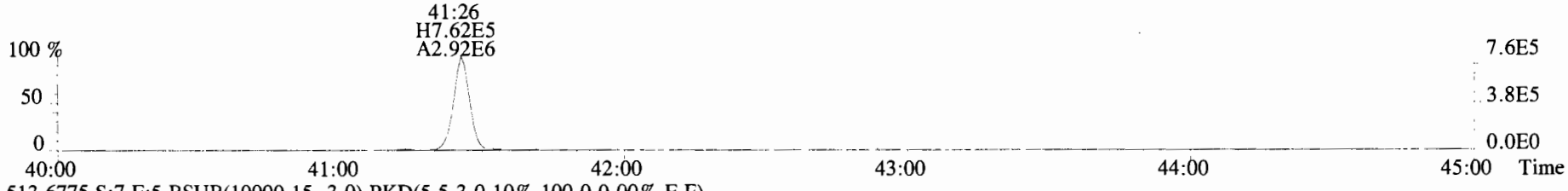
443.7398 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



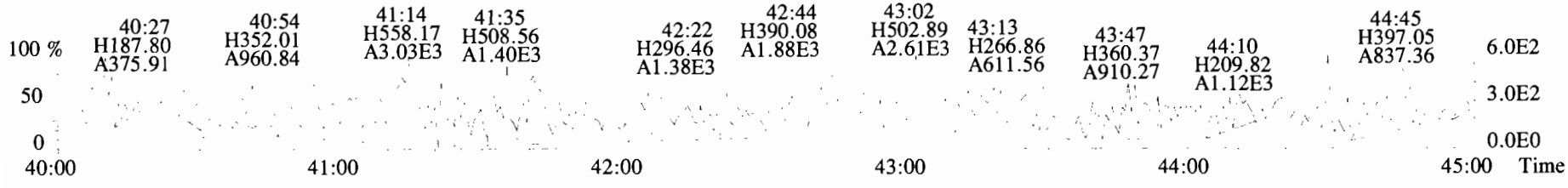
453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



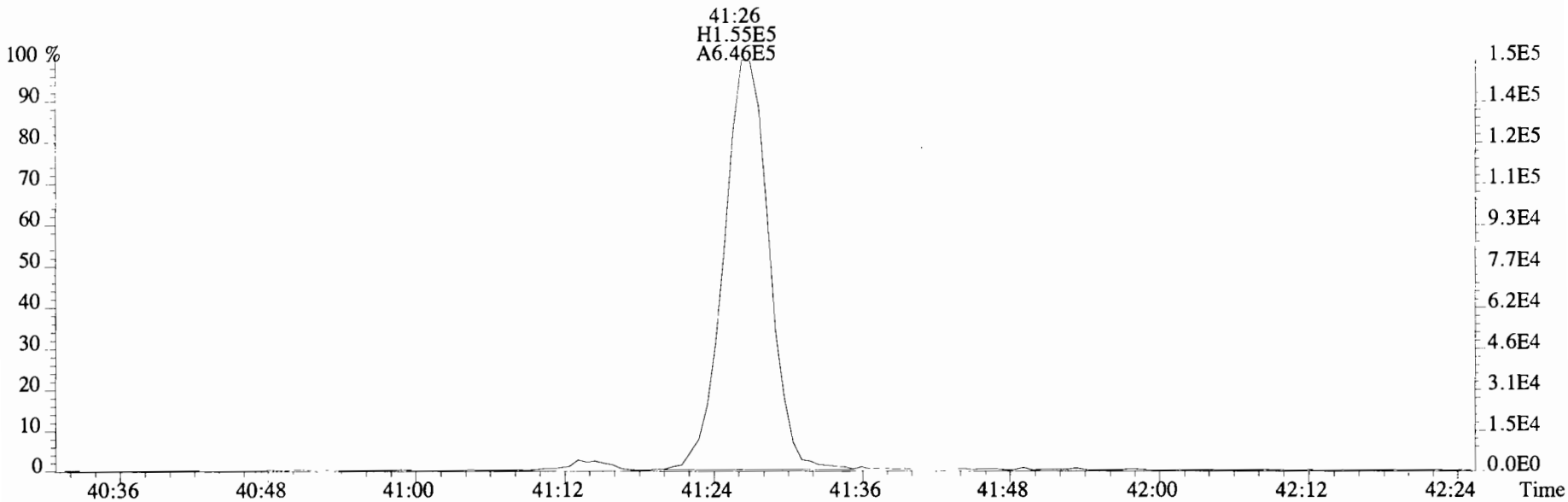
455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



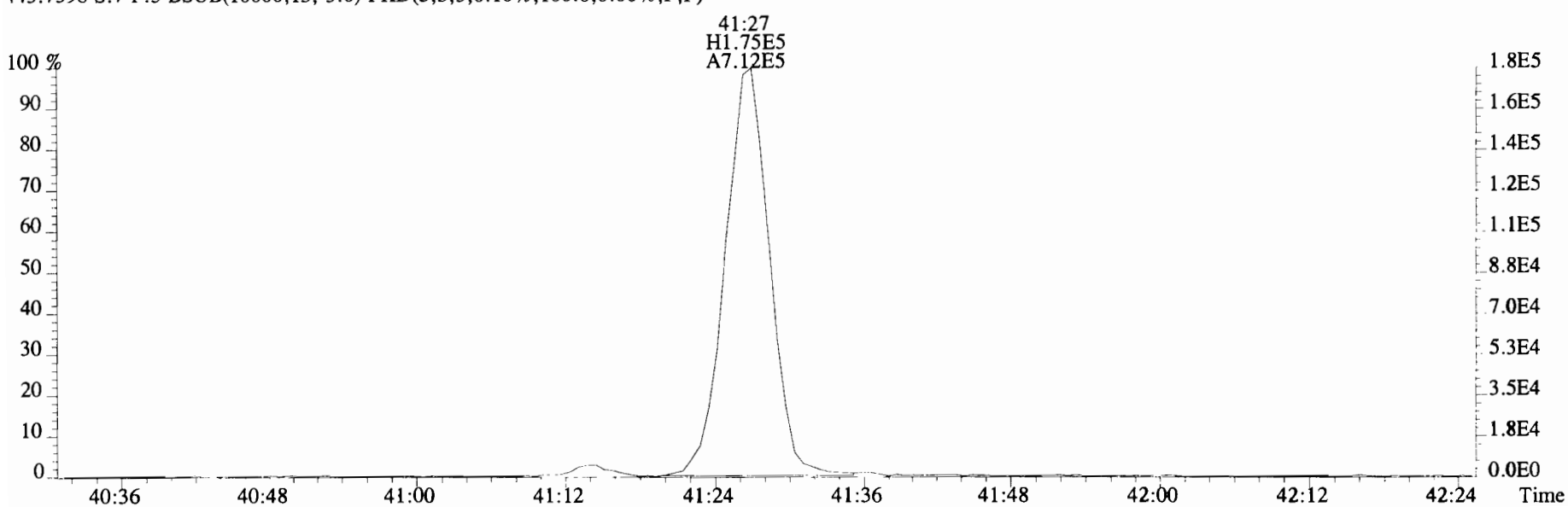
513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191016D1 #1-432 Acq:16-OCT-2019 15:39:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-05 PDI-024SC-B-00-02-190927 14.9 Exp:OCDD_DB5
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



Client ID: PDI-024SC-B-02-04-1909 Filename: 191205D1 S:15 Acq:6-DEC-19 03:51:56 ConCal: ST191205D1-1
Lab ID: 1903430-06RE2 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.357 EndCAL: NA

	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	2.72e+04	0.51	n	0.91	26:06	1.0041		*	2.5	*
	1,2,3,7,8-PeCDD	2.76e+04	0.74	n	0.90	30:37	1.2776		*	2.5	*
	1,2,3,4,7,8-HxCDD	1.51e+04	1.06	y	1.10	33:54	0.78488		*	2.5	*
	1,2,3,6,7,8-HxCDD	1.11e+05	1.10	y	0.94	34:01	6.2144		*	2.5	*
	1,2,3,7,8,9-HxCDD	4.03e+04	1.22	y	0.96	34:18	2.1526		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	2.07e+06	1.06	y	0.98	37:46	145.38		*	2.5	*
	OCDD	1.72e+07	0.88	y	0.96	41:01	1850.1		*	2.5	*
	2,3,7,8-TCDF	9.50e+05	0.77	y	0.95	25:19	22.965	OK	*	2.5	*
	1,2,3,7,8-PeCDF	1.21e+06	1.54	y	0.96	29:26	31.848		*	2.5	*
	2,3,4,7,8-PeCDF	4.57e+05	1.60	y	1.01	30:19	11.942		*	2.5	*
	1,2,3,4,7,8-HxCDF	1.77e+06	1.21	y	1.18	33:01	57.647		*	2.5	*
	1,2,3,6,7,8-HxCDF	4.26e+05	1.18	y	1.07	33:08	14.484		*	2.5	*
	2,3,4,6,7,8-HxCDF	1.27e+05	1.24	y	1.11	33:45	4.5457		*	2.5	*
	1,2,3,7,8,9-HxCDF	8.88e+04	1.07	y	1.06	34:41	3.7988		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	8.57e+05	1.04	y	1.13	36:31	43.850		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	2.12e+05	1.04	y	1.28	38:18	12.040		*	2.5	*
	OCDF	1.57e+06	0.87	y	0.95	41:14	116.41		*	2.5	*
IS	13C-2,3,7,8-TCDD	5.79e+06	0.78	y	1.10	26:05	144.56				74.9
IS	13C-1,2,3,7,8-PeCDD	4.61e+06	0.65	y	0.88	30:36	143.24				74.2
IS	13C-1,2,3,4,7,8-HxCDD	3.38e+06	1.24	y	0.64	33:54	134.99				69.9
IS	13C-1,2,3,6,7,8-HxCDD	3.67e+06	1.30	y	0.86	34:00	109.94				56.9
IS	13C-1,2,3,7,8,9-HxCDD	3.76e+06	1.24	y	0.81	34:18	119.53				61.9
IS	13C-1,2,3,4,6,7,8-HpCDD	2.81e+06	1.08	y	0.65	37:46	109.97				56.9
IS	13C-OCDD	3.75e+06	0.90	y	0.58	41:01	165.80				42.9
IS	13C-2,3,7,8-TCDF	8.41e+06	0.77	y	1.03	25:18	133.93				69.4
IS	13C-1,2,3,7,8-PeCDF	7.67e+06	1.64	y	0.85	29:26	148.00				76.6
IS	13C-2,3,4,7,8-PeCDF	7.28e+06	1.57	y	0.85	30:19	141.62				73.3
IS	13C-1,2,3,4,7,8-HxCDF	5.04e+06	0.51	y	0.83	33:01	155.48				80.5
IS	13C-1,2,3,6,7,8-HxCDF	5.31e+06	0.52	y	1.03	33:08	131.64				68.2
IS	13C-2,3,4,6,7,8-HxCDF	4.86e+06	0.51	y	0.95	33:44	130.75				67.7
IS	13C-1,2,3,7,8,9-HxCDF	4.25e+06	0.52	y	0.83	34:41	131.70				68.2
IS	13C-1,2,3,4,6,7,8-HpCDF	3.35e+06	0.45	y	0.76	36:30	113.32				58.7
IS	13C-1,2,3,4,7,8,9-HpCDF	2.66e+06	0.46	y	0.58	38:18	117.21				60.7
IS	13C-OCDF	5.50e+06	0.91	y	0.69	41:14	204.58				53.0
C/Up	37Cl-2,3,7,8-TCDD	2.54e+06			1.20	26:06	57.962				75.0
RS/RT	13C-1,2,3,4-TCDD	7.06e+06	0.79	y	1.00	25:31	193.10				
RS	13C-1,2,3,4-TCDF	1.17e+07	0.79	y	1.00	24:05	193.10				
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.53e+06	0.51	y	1.00	33:25	193.10				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	4.85	7.11		*	*
Total Penta-Dioxins	1.60	8.43		*	*
Total Hexa-Dioxins	37.6	40.0		*	*
Total Hepta-Dioxins	329	329		*	*
Total Tetra-Furans	114	114		*	*
Total Penta-Furans	114.99	116.21		*	*
Total Hexa-Furans	124	125		*	*
Total Hepta-Furans	124	124		*	*

Integrations by Analyst: DB Date: 12/10/19

Reviewed by Analyst: CT Date: 12/11/19

Totals class: TCDD EMPC Entry #: 19

Run: 20 File: 191205D1 S: 15 I: 1 F: 1
Acquired: 6-DEC-19 03:51:56 Processed: 10-DEC-19 09:31:21

Total Concentration: 7.1069 Unnamed Concentration: 6.103

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
22:41	3.197e+04	3.877e+04	0.82	y	7.074e+04	2.6069	
23:03	9.972e+03	1.014e+04	0.98	n	1.795e+04	0.66169	
24:14	5.585e+03	6.918e+03	0.81	y	1.250e+04	0.46078	
24:27	7.527e+03	9.367e+03	0.80	y	1.689e+04	0.62259	
24:37	8.973e+03	9.078e+03	0.99	n	1.607e+04	0.59216	
25:51	9.601e+03	1.386e+04	0.69	y	2.346e+04	0.86454	
26:06	1.185e+04	2.330e+04	0.51	n	2.724e+04	1.0041	2,3,7,8-TCDD
26:23	3.659e+03	4.322e+03	0.85	y	7.982e+03	0.29415	

Totals class: PeCDD EMPC Entry #: 21

Run: 20 File: 191205D1 S: 15 I: 1 F: 2
Acquired: 6-DEC-19 03:51:56 Processed: 10-DEC-19 09:31:21

Total Concentration: 8.4270 Unnamed Concentration: 7.149

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
28:33	1.565e+04	3.205e+04	0.49	n	4.049e+04	1.8769	
29:00	4.959e+03	8.298e+03	0.60	y	1.326e+04	0.61446	
29:26	2.719e+04	2.027e+04	1.34	n	3.304e+04	1.5312	
29:37	5.935e+03	6.572e+03	0.90	n	1.071e+04	0.49656	
29:43	5.142e+03	5.913e+03	0.87	n	9.639e+03	0.44676	
29:55	7.769e+03	1.347e+04	0.58	y	2.124e+04	0.98432	
30:12	4.005e+03	3.863e+03	1.04	n	6.297e+03	0.29189	
30:19	1.354e+04	5.838e+03	2.32	n	9.515e+03	0.44105	
30:37	1.257e+04	1.691e+04	0.74	n	2.756e+04	1.2776	1,2,3,7,8-PeCDD
30:41	1.647e+03	3.213e+03	0.51	n	4.261e+03	0.19751	
30:58	3.406e+03	3.557e+03	0.96	n	5.799e+03	0.26877	

Totals class: HxCDD EMPC Entry #: 23

Run: 20 File: 191205D1 S: 15 I: 1 F: 3
Acquired: 6-DEC-19 03:51:56 Processed: 10-DEC-19 09:31:21

Total Concentration: 39.977 Unnamed Concentration: 30.825

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
32:23	1.300e+05	9.653e+04	1.35	y	2.266e+05	12.241	
32:58	2.905e+04	1.935e+04	1.50	n	4.335e+04	2.3419	
33:13	1.494e+05	1.191e+05	1.25	y	2.685e+05	14.506	
33:19	9.040e+03	7.059e+03	1.28	y	1.610e+04	0.86974	
33:54	7.789e+03	7.347e+03	1.06	y	1.514e+04	0.78488	1,2,3,4,7,8-HxCDD
34:01	5.798e+04	5.284e+04	1.10	y	1.108e+05	6.2144	1,2,3,6,7,8-HxCDD
34:13	9.086e+03	6.964e+03	1.30	y	1.605e+04	0.86715	
34:18	2.216e+04	1.815e+04	1.22	y	4.031e+04	2.1526	1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Entry #: 25

Run: 20 File: 191205D1 S: 15 I: 1 F: 4
Acquired: 6-DEC-19 03:51:56 Processed: 10-DEC-19 09:31:21

Total Concentration: 329.30 Unnamed Concentration: 183.915

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
36:54	1.339e+06	1.277e+06	1.05 y	2.617e+06	183.92	
37:46	1.066e+06	1.003e+06	1.06 y	2.069e+06	145.38	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Entry #: 27

Run: 20 File: 191205D1 S: 15 I: 1 F: 1
Acquired: 6-DEC-19 03:51:56 Processed: 10-DEC-19 09:31:21

Total Concentration: 113.87 Unnamed Concentration: 90.908

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
20:33	2.811e+04	3.673e+04	0.77 y	6.484e+04	1.5669	
21:07	2.207e+04	2.909e+04	0.76 y	5.116e+04	1.2363	
21:45	1.619e+05	2.103e+05	0.77 y	3.722e+05	8.9945	
22:18	5.690e+04	7.687e+04	0.74 y	1.338e+05	3.2326	
22:40	2.035e+05	2.636e+05	0.77 y	4.671e+05	11.288	
23:04	6.205e+04	7.446e+04	0.83 y	1.365e+05	3.2989	
23:13	8.201e+03	1.185e+04	0.69 y	2.005e+04	0.48461	
23:22	3.228e+04	4.130e+04	0.78 y	7.359e+04	1.7783	
23:45	8.211e+03	1.007e+04	0.82 y	1.828e+04	0.44183	
23:51	1.200e+04	1.558e+04	0.77 y	2.758e+04	0.66649	
23:58	5.263e+04	7.143e+04	0.74 y	1.241e+05	2.9982	
24:05	3.096e+05	3.962e+05	0.78 y	7.058e+05	17.058	
24:30	3.691e+05	4.964e+05	0.74 y	8.654e+05	20.914	
24:45	1.943e+04	2.892e+04	0.67 y	4.835e+04	1.1684	
24:56	1.781e+04	2.688e+04	0.66 y	4.468e+04	1.0799	
25:07	9.724e+03	1.348e+04	0.72 y	2.321e+04	0.56080	
25:13	1.651e+05	2.190e+05	0.75 y	3.841e+05	9.2825	
25:19	4.138e+05	5.365e+05	0.77 y	9.503e+05	22.965	2,3,7,8-TCDF
25:39	2.752e+04	3.976e+04	0.69 y	6.728e+04	1.6260	
25:52	8.052e+03	1.206e+04	0.67 y	2.012e+04	0.48611	
27:06	5.083e+04	6.281e+04	0.81 y	1.136e+05	2.7462	

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

Run: 20 File: 191205D1 S: 15 I: 1 F: 1
Acquired: 6-DEC-19 03:51:56 Processed: 10-DEC-19 09:31:21

Total Concentration: 8.8348 Unnamed Concentration: 8.835

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
27:06	2.053e+05	1.324e+05	1.55	y	3.377e+05	8.8348	

Totals class: PeCDF EMPC Entry #: 31

Run: 20 File: 191205D1 S: 15 I: 1 F: 2
Acquired: 6-DEC-19 03:51:56 Processed: 10-DEC-19 09:31:21

Total Concentration: 107.38 Unnamed Concentration: 63.587

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
28:31	6.984e+05	4.400e+05	1.59	y	1.138e+06	29.783	
29:04	2.722e+05	1.909e+05	1.43	y	4.631e+05	12.116	
29:15	1.189e+05	7.040e+04	1.69	y	1.893e+05	4.9524	
29:26	7.360e+05	4.790e+05	1.54	y	1.215e+06	31.848	1,2,3,7,8-PeCDF
29:40	2.110e+05	1.438e+05	1.47	y	3.547e+05	9.2804	
30:13	7.532e+03	3.722e+03	2.02	n	9.492e+03	0.24832	
30:19	2.811e+05	1.757e+05	1.60	y	4.568e+05	11.942	2,3,4,7,8-PeCDF
30:22	1.478e+05	9.057e+04	1.63	y	2.384e+05	6.2369	
31:12	2.255e+04	1.865e+04	1.21	n	3.710e+04	0.97059	

Totals class: HxCDF EMPC Entry #: 33

Run: 20 File: 191205D1 S: 15 I: 1 F: 3
Acquired: 6-DEC-19 03:51:56 Processed: 10-DEC-19 09:31:21

Total Concentration: 125.20 Unnamed Concentration: 44.728

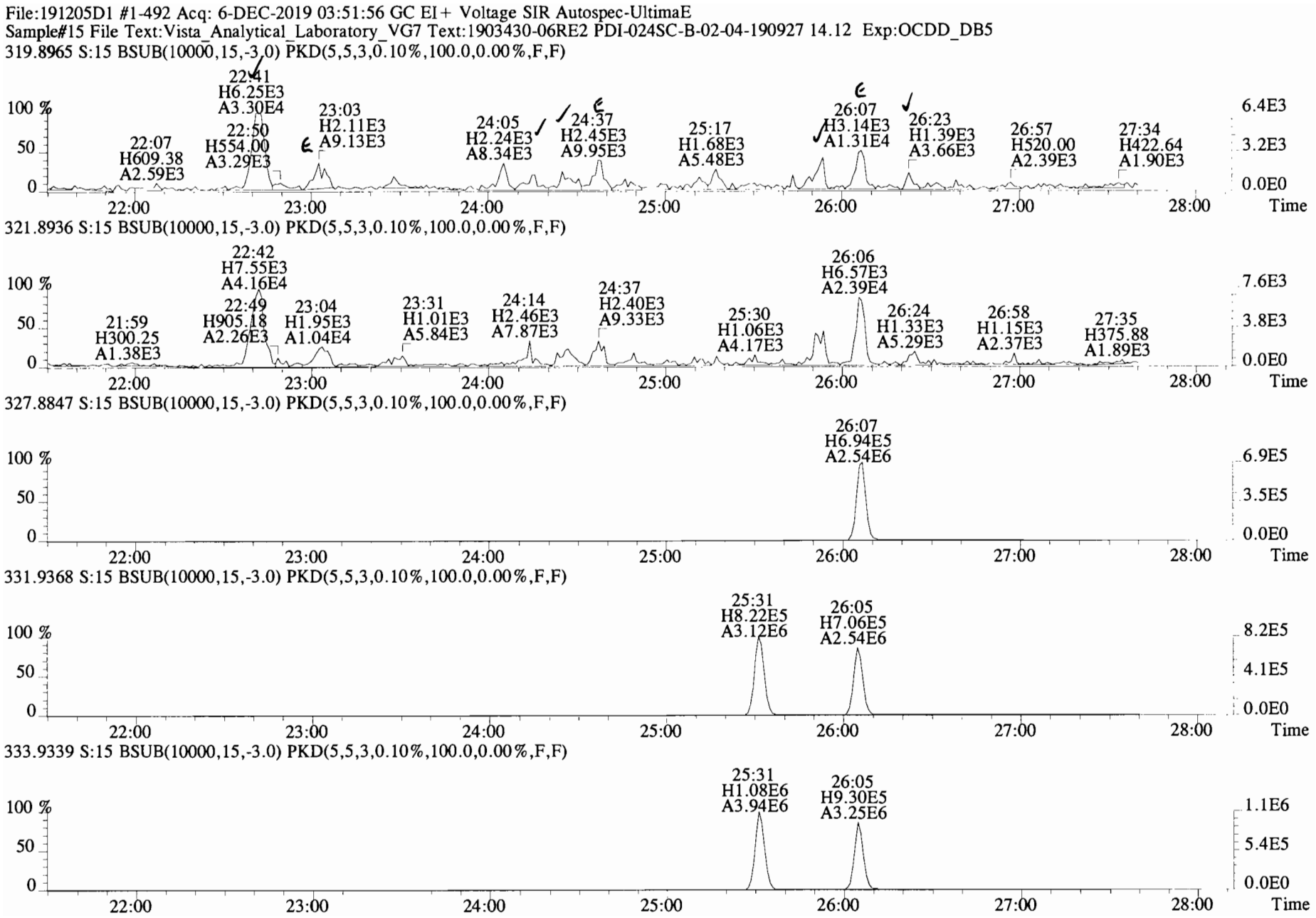
RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
31:51	8.037e+04	6.557e+04	1.23	y	1.459e+05	5.2470	
32:01	2.311e+05	1.851e+05	1.25	y	4.161e+05	14.962	
32:21	6.352e+03	5.180e+03	1.23	y	1.153e+04	0.41463	
32:33	3.132e+05	2.482e+05	1.26	y	5.614e+05	20.183	
32:55	7.242e+03	7.817e+03	0.93	n	1.308e+04	0.47038	
33:01	9.691e+05	8.031e+05	1.21	y	1.772e+06	57.647	1,2,3,4,7,8-HxCDF
33:08	2.304e+05	1.955e+05	1.18	y	4.259e+05	14.484	1,2,3,6,7,8-HxCDF
33:25	7.051e+03	6.393e+03	1.10	y	1.344e+04	0.48336	
33:35	5.429e+03	5.631e+03	0.96	n	9.808e+03	0.35263	
33:45	7.051e+04	5.695e+04	1.24	y	1.275e+05	4.5457	2,3,4,6,7,8-HxCDF
34:41	4.592e+04	4.289e+04	1.07	y	8.881e+04	3.7988	1,2,3,7,8,9-HxCDF
34:45	3.943e+04	3.329e+04	1.18	y	7.272e+04	2.6147	

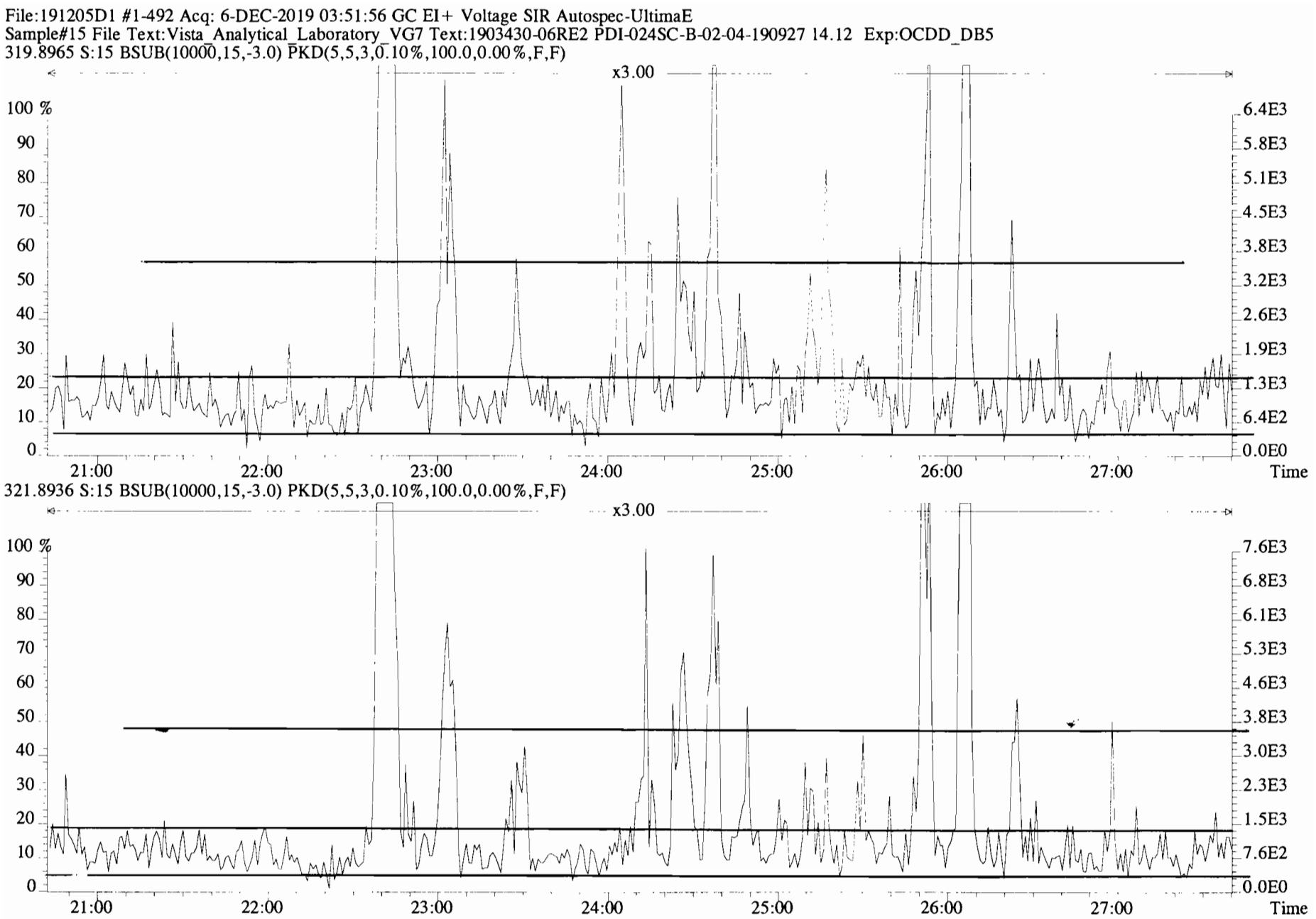
Totals class: HpCDF EMPC Entry #: 35

Run: 20 File: 191205D1 S: 15 I: 1 F: 4
Acquired: 6-DEC-19 03:51:56 Processed: 10-DEC-19 09:31:21

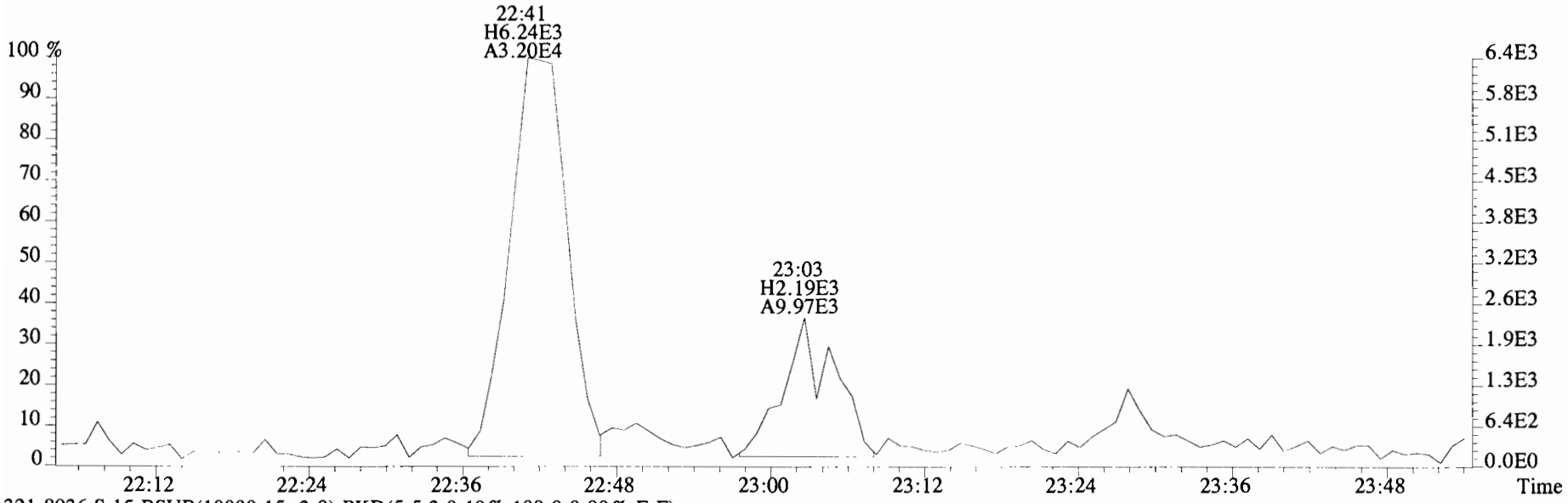
Total Concentration: 124.38 Unnamed Concentration: 68.487

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
36:31	4.365e+05	4.208e+05	1.04	y	8.574e+05	43.850	1,2,3,4,6,7,8-HpCDF
36:55	1.223e+04	1.308e+04	0.94	y	2.531e+04	1.3633	
37:06	6.335e+05	6.125e+05	1.03	y	1.246e+06	67.124	
38:18	1.082e+05	1.039e+05	1.04	y	2.121e+05	12.040	1,2,3,4,7,8,9-HpCDF

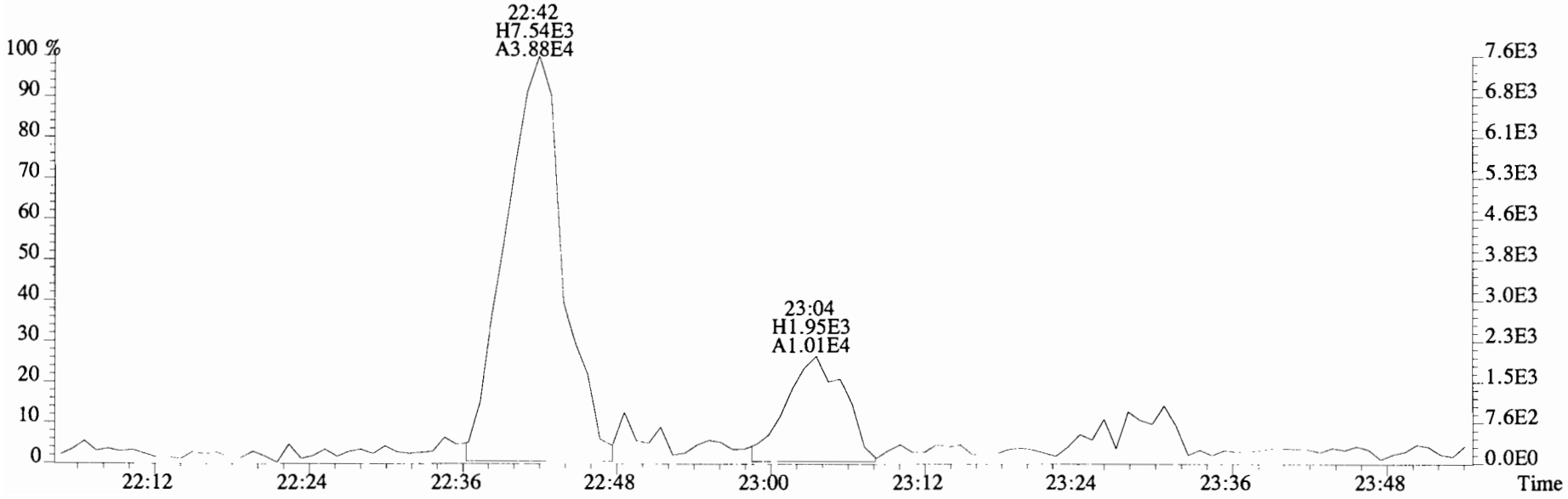

File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:41 H6.25E3 A3.30E4
22:07 H609.38 A2.59E3
22:50 H554.00 A3.29E3
23:03 H2.11E3 A9.13E3
24:05 H2.24E3 A8.34E3
24:37 H2.45E3 A9.95E3
25:17 H1.68E3 A5.48E3
26:07 H3.14E3 A1.31E4
26:23 H1.39E3 A3.66E3
26:57 H520.00 A2.39E3
27:34 H422.64 A1.90E3
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:42 H7.55E3 A4.16E4
21:59 H300.25 A1.38E3
22:49 H905.18 A2.26E3
23:04 H1.95E3 A1.04E4
23:31 H1.01E3 A5.84E3
24:14 H2.46E3 A7.87E3
24:37 H2.40E3 A9.33E3
25:30 H1.06E3 A4.17E3
26:06 H6.57E3 A2.39E4
26:24 H1.33E3 A5.29E3
26:58 H1.15E3 A2.37E3
27:35 H375.88 A1.89E3
327.8847 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:07 H6.94E5 A2.54E6
331.9368 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:31 H8.22E5 A3.12E6
26:05 H7.06E5 A2.54E6
333.9339 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:31 H1.08E6 A3.94E6
26:05 H9.30E5 A3.25E6
100 %
50
0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
6.4E3
3.2E3
0.0E0
7.6E3
3.8E3
6.9E5
3.5E5
8.2E5
4.1E5
1.1E6
5.4E5

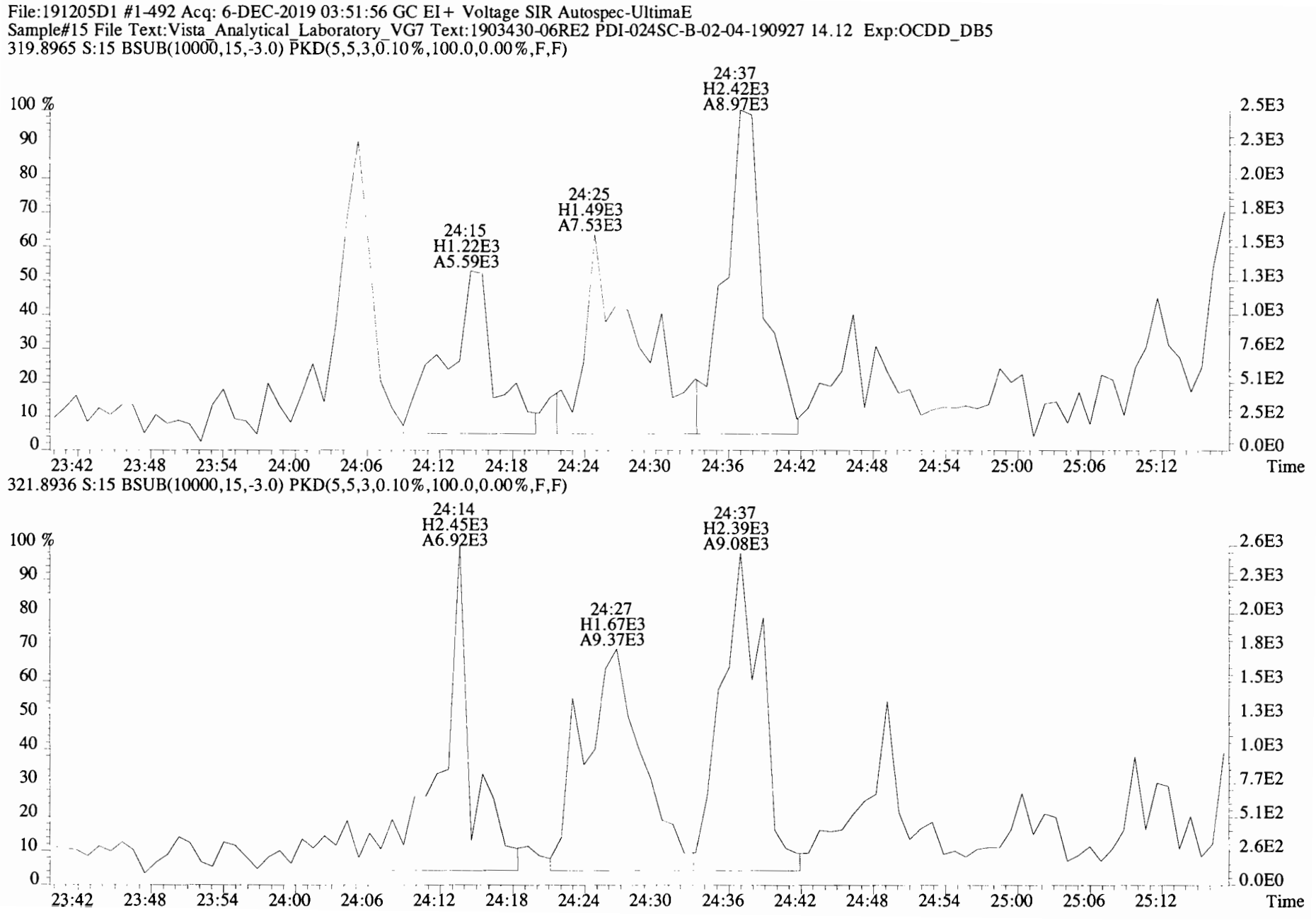

File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x3.00
100 %
90
80
70
60
50
40
30
20
10
0
6.4E3
5.8E3
5.1E3
4.5E3
3.8E3
3.2E3
2.6E3
1.9E3
1.3E3
6.4E2
0.0E0
21:00
22:00
23:00
24:00
25:00
26:00
27:00
Time
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x3.00
100 %
90
80
70
60
50
40
30
20
10
0
7.6E3
6.8E3
6.1E3
5.3E3
4.6E3
3.8E3
3.0E3
2.3E3
1.5E3
7.6E2
0.0E0
21:00
22:00
23:00
24:00
25:00
26:00
27:00
Time

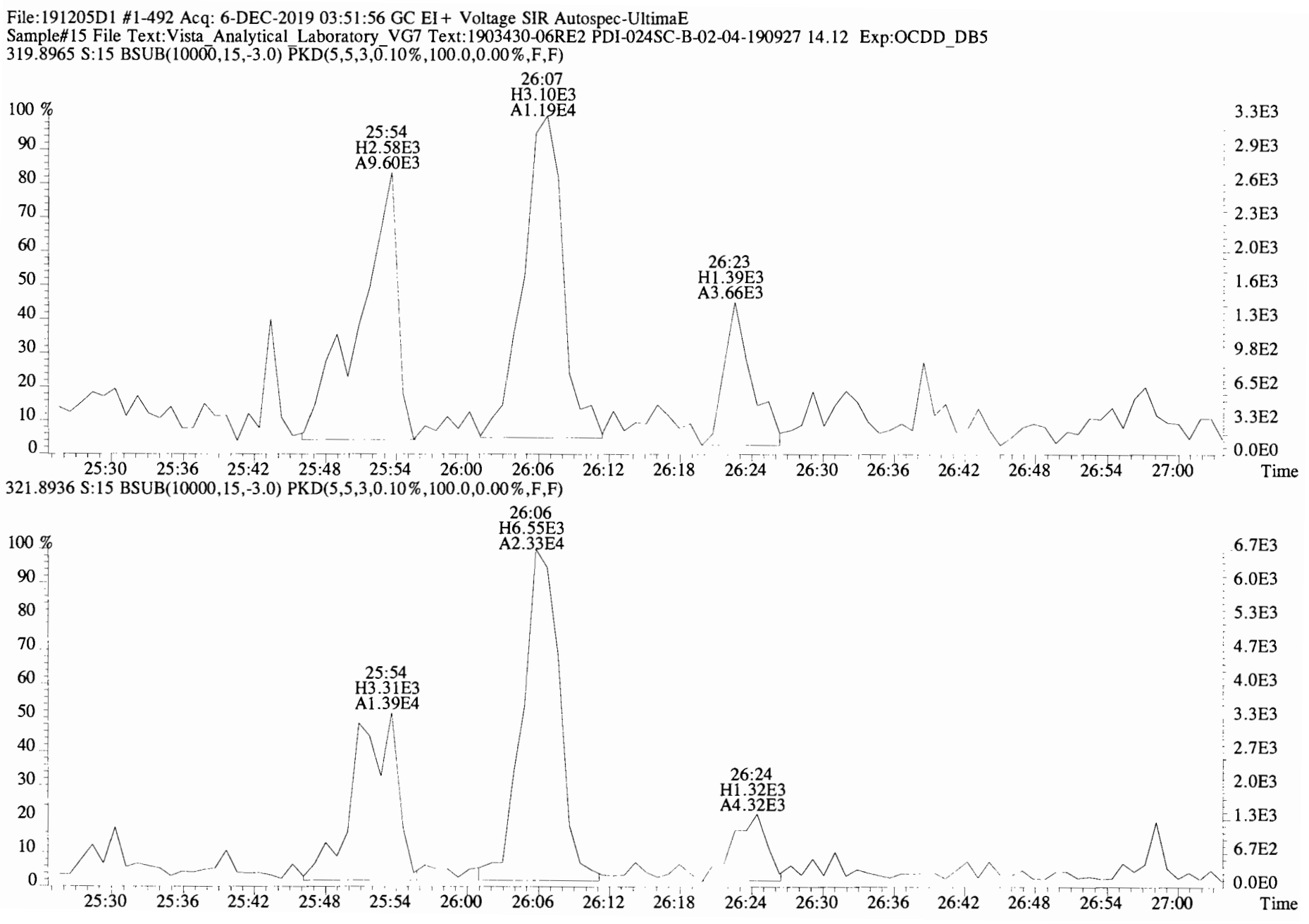
File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

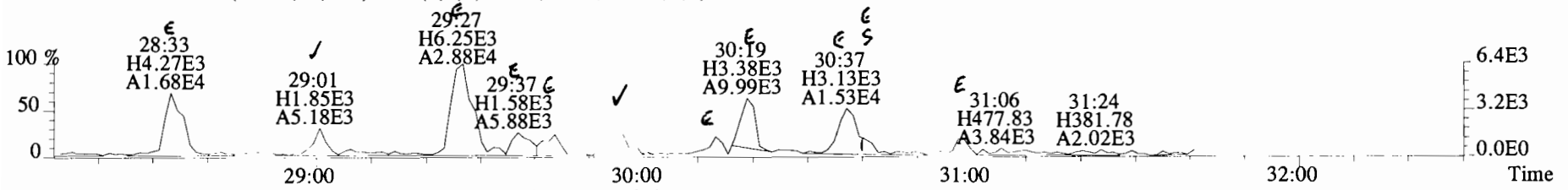



File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:37
H2.42E3
A8.97E3
24:25
H1.49E3
A7.53E3
24:15
H1.22E3
A5.59E3
100 %
90
80
70
60
50
40
30
20
10
0
2.5E3
2.3E3
2.0E3
1.8E3
1.5E3
1.3E3
1.0E3
7.6E2
5.1E2
2.5E2
0.0E0
23:42
23:48
23:54
24:00
24:06
24:12
24:18
24:24
24:30
24:36
24:42
24:48
24:54
25:00
25:06
25:12
Time
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:14
H2.45E3
A6.92E3
24:37
H2.39E3
A9.08E3
24:27
H1.67E3
A9.37E3
100 %
90
80
70
60
50
40
30
20
10
0
2.6E3
2.3E3
2.0E3
1.8E3
1.5E3
1.3E3
1.0E3
7.7E2
5.1E2
2.6E2
0.0E0
23:42
23:48
23:54
24:00
24:06
24:12
24:18
24:24
24:30
24:36
24:42
24:48
24:54
25:00
25:06
25:12
Time

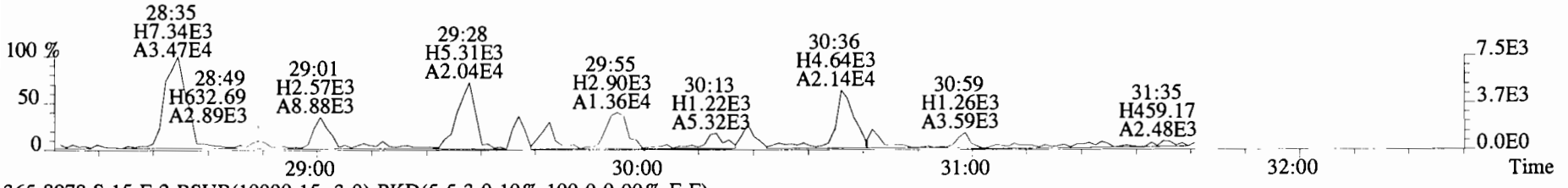

File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:07
H3.10E3
A1.19E4
25:54
H2.58E3
A9.60E3
26:23
H1.39E3
A3.66E3
100 %
90
80
70
60
50
40
30
20
10
0
3.3E3
2.9E3
2.6E3
2.3E3
2.0E3
1.6E3
1.3E3
9.8E2
6.5E2
3.3E2
0.0E0
25:30
25:36
25:42
25:48
25:54
26:00
26:06
26:12
26:18
26:24
26:30
26:36
26:42
26:48
26:54
27:00
Time
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:06
H6.55E3
A2.33E4
25:54
H3.31E3
A1.39E4
26:24
H1.32E3
A4.32E3
100 %
90
80
70
60
50
40
30
20
10
0
6.7E3
6.0E3
5.3E3
4.7E3
4.0E3
3.3E3
2.7E3
2.0E3
1.3E3
6.7E2
0.0E0
25:30
25:36
25:42
25:48
25:54
26:00
26:06
26:12
26:18
26:24
26:30
26:36
26:42
26:48
26:54
27:00
Time

File:191205D1 #1-211 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5

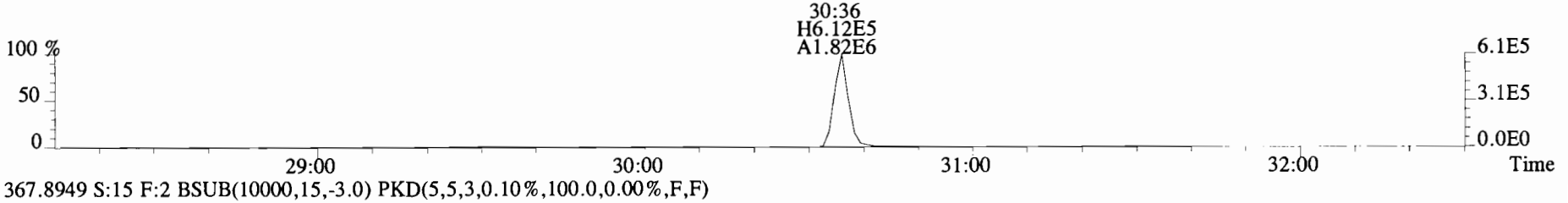
353.8576 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



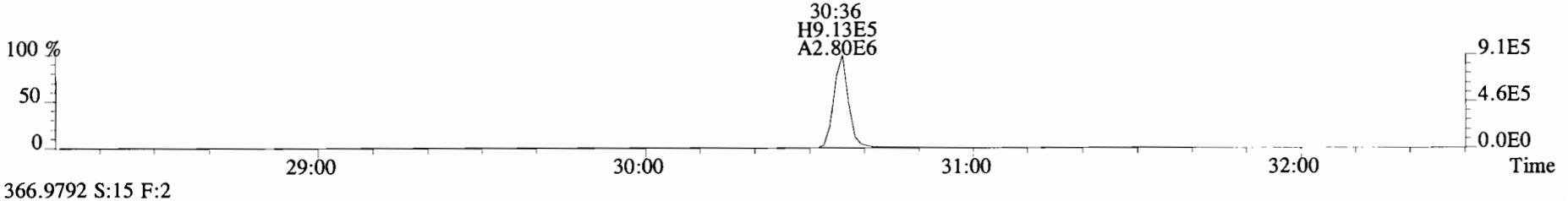
355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



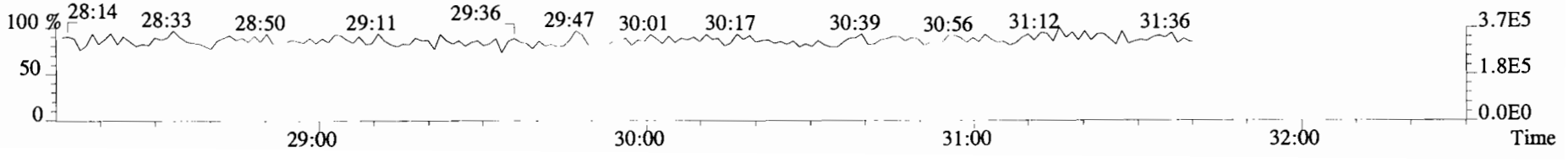
365.8978 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



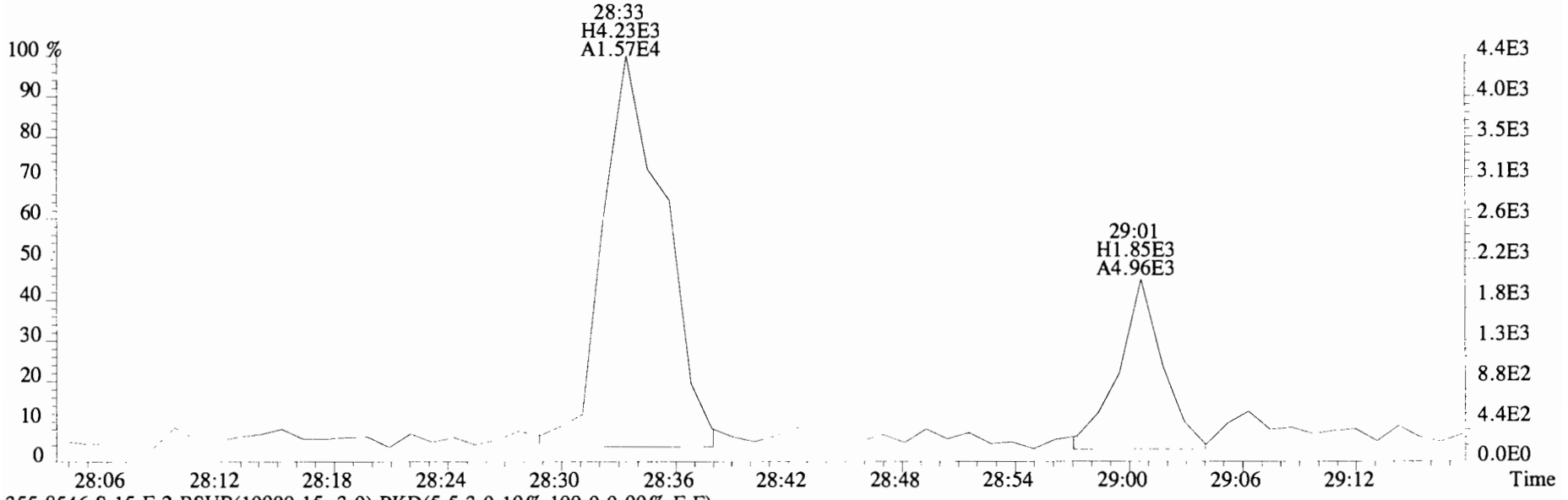
367.8949 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



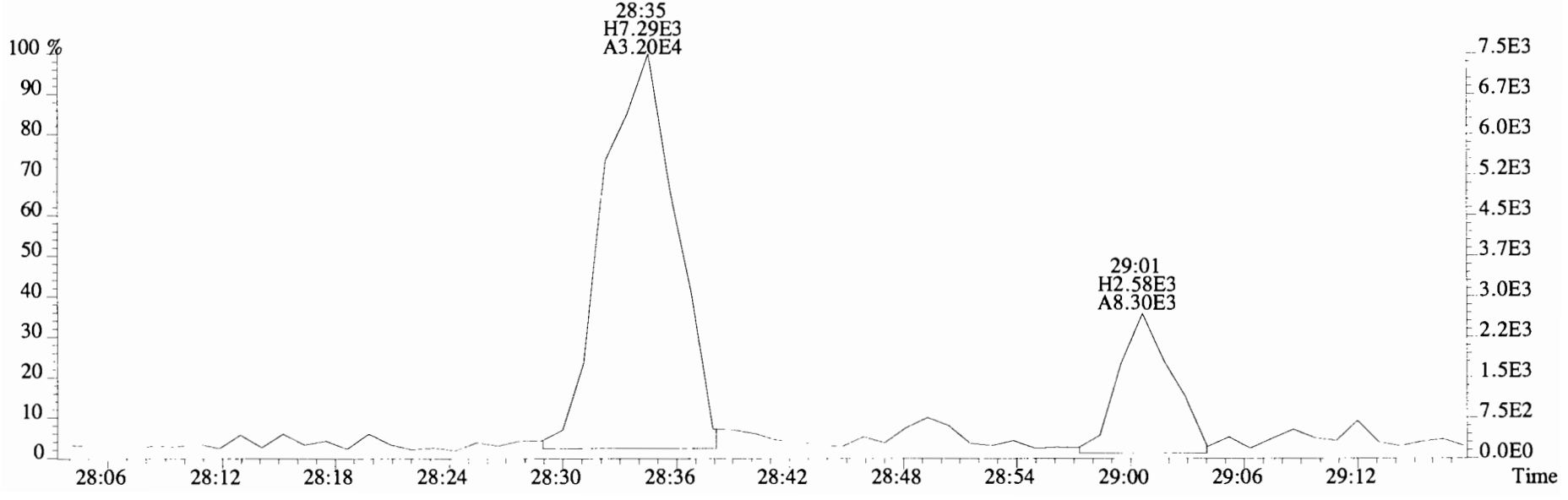
366.9792 S:15 F:2



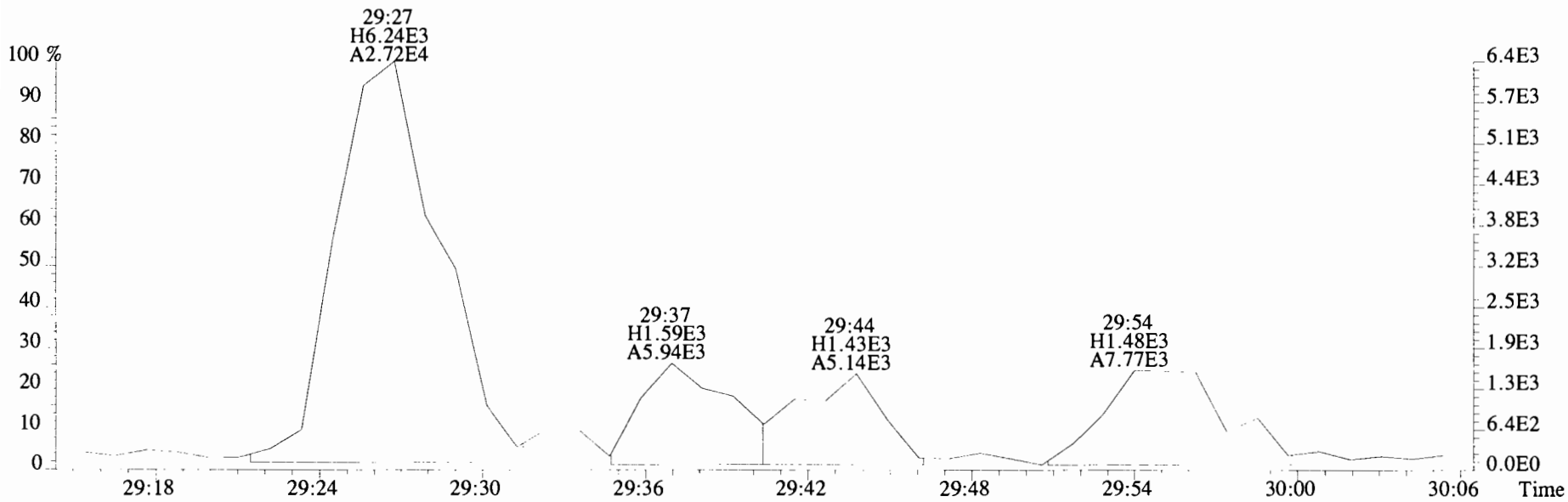
File:191205D1 #1-211 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
353.8576 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



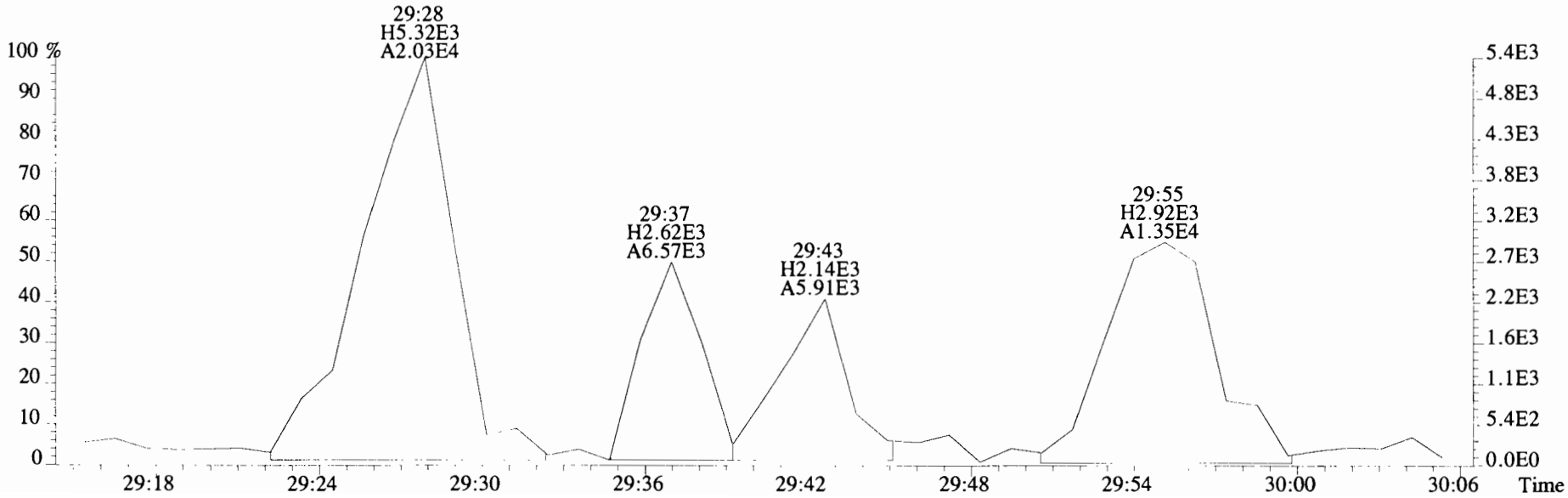
355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



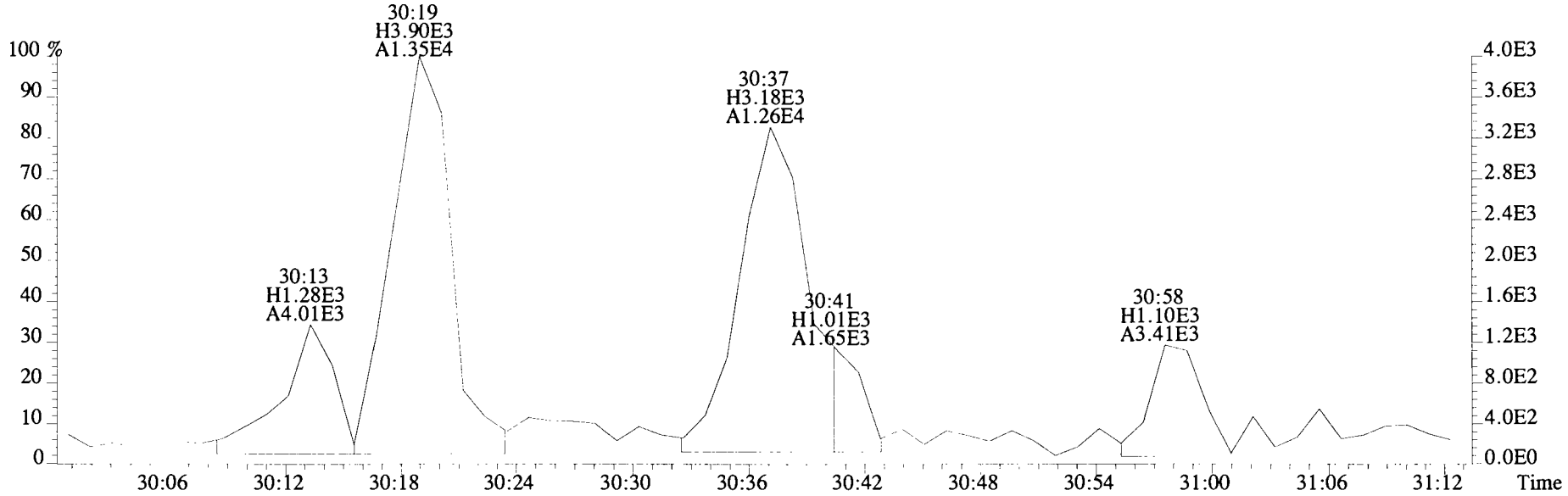
File:191205D1 #1-211 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
353.8576 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



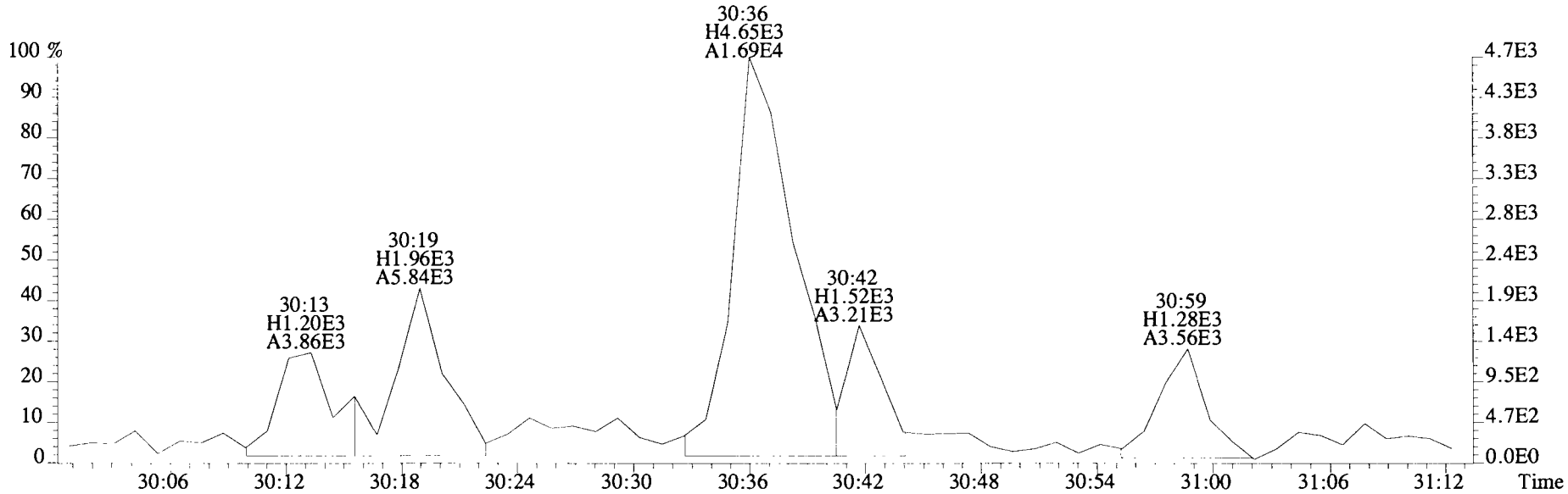
355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

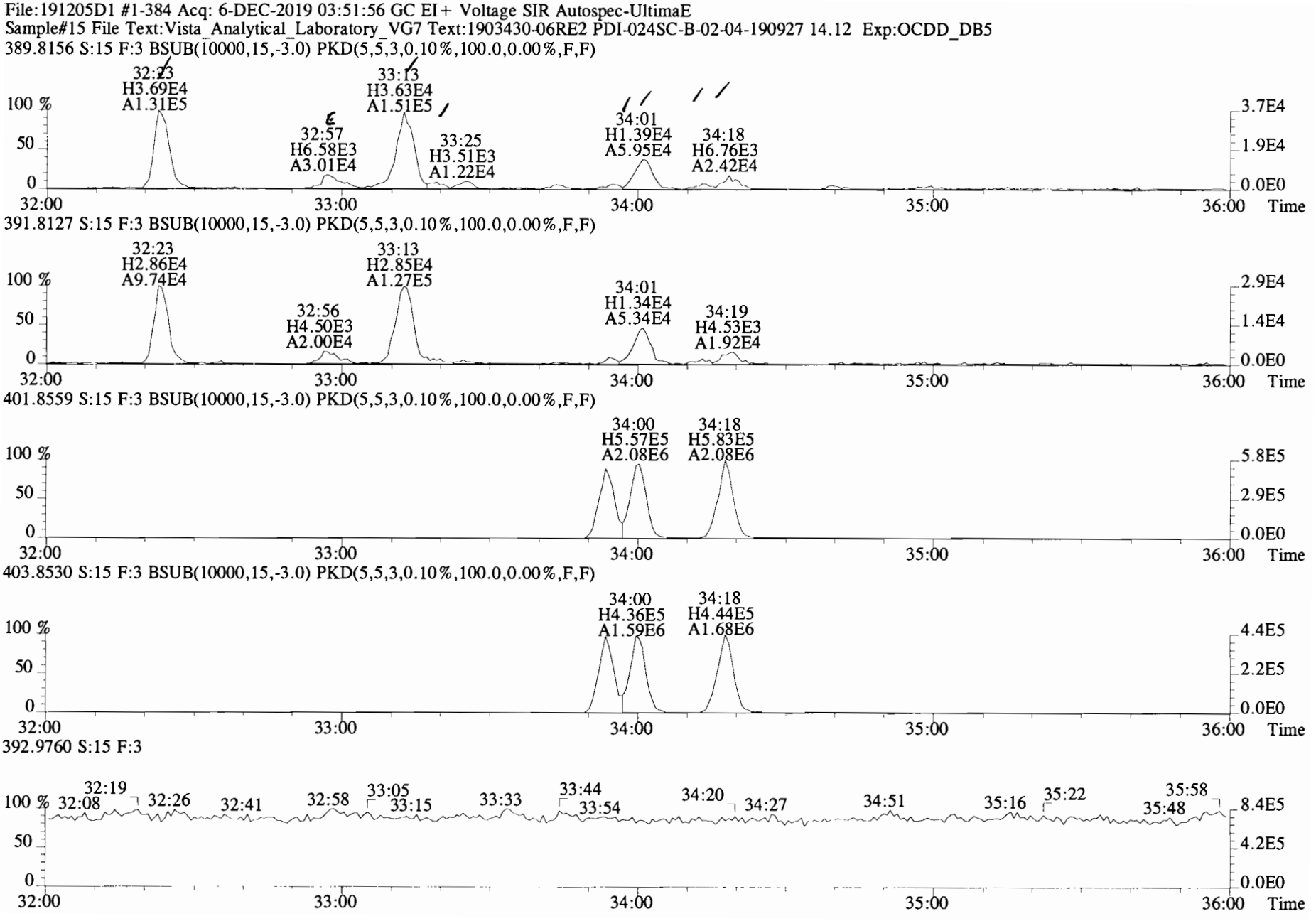


File:191205D1 #1-211 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
353.8576 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

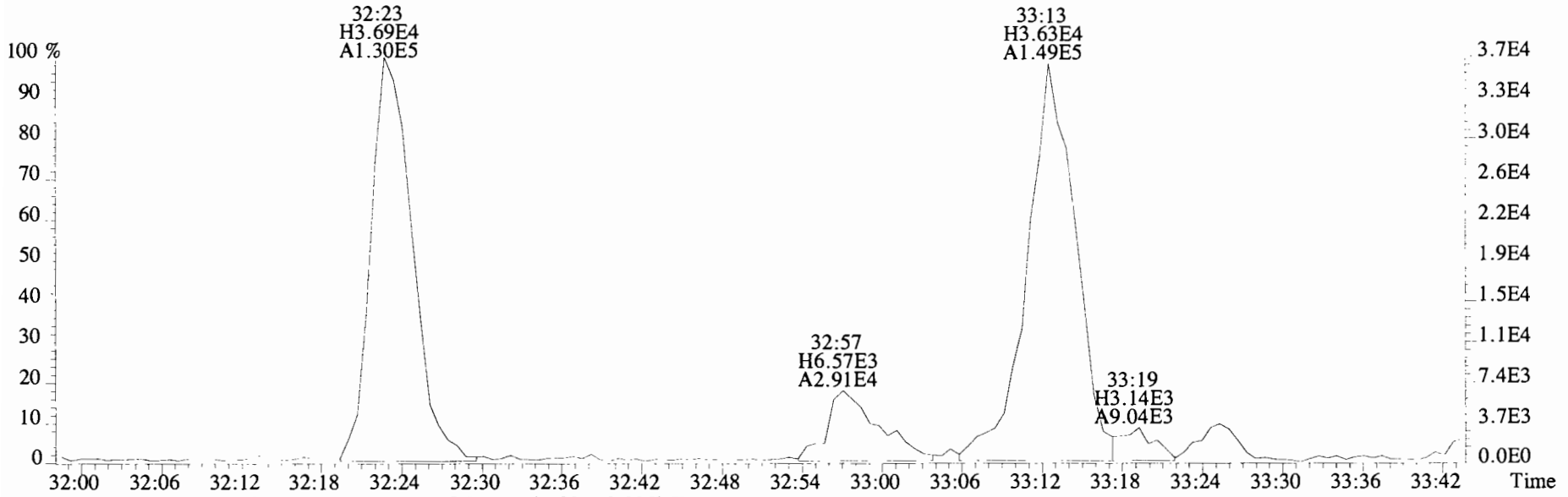


355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

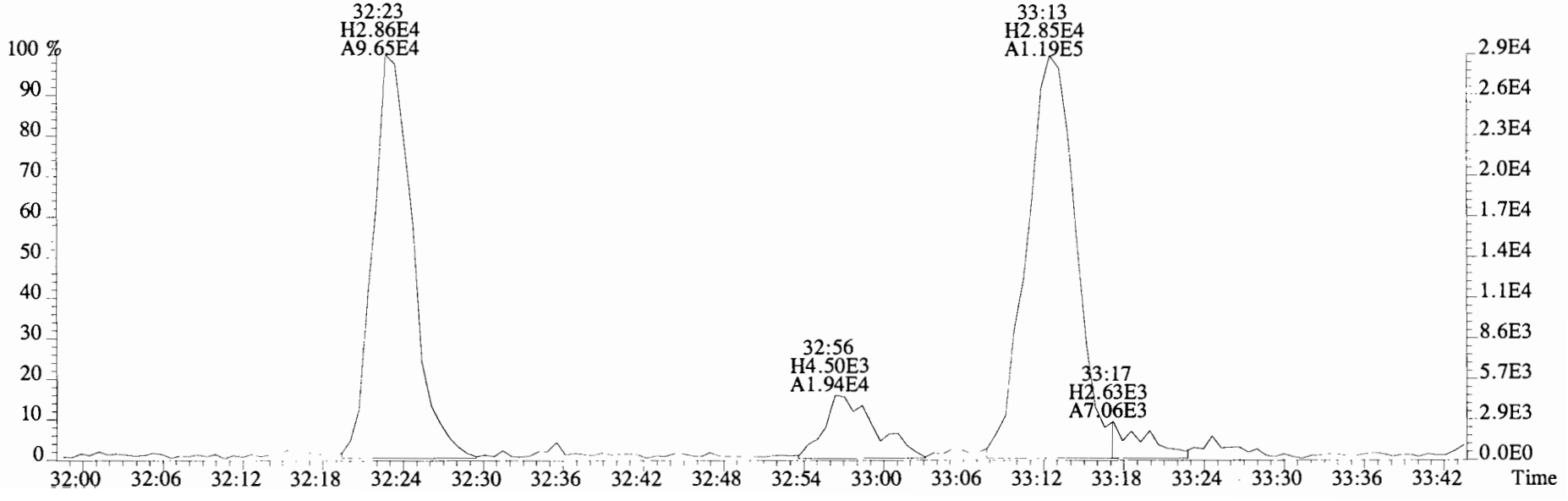



File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:23 H3.69E4 A1.31E5
32:57 H6.58E3 A3.01E4
33:13 H3.63E4 A1.51E5
33:25 H3.51E3 A1.22E4
34:01 H1.39E4 A5.95E4
34:18 H6.76E3 A2.42E4
391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:23 H2.86E4 A9.74E4
32:56 H4.50E3 A2.00E4
33:13 H2.85E4 A1.27E5
34:01 H1.34E4 A5.34E4
34:19 H4.53E3 A1.92E4
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:00 H5.57E5 A2.08E6
34:18 H5.83E5 A2.08E6
403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:00 H4.36E5 A1.59E6
34:18 H4.44E5 A1.68E6
392.9760 S:15 F:3
32:08
32:19
32:26
32:41
32:58
33:05
33:15
33:33
33:44
33:54
34:20
34:27
34:51
35:16
35:22
35:48
35:58
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
3.7E4
1.9E4
0.0E0
2.9E4
1.4E4
5.8E5
2.9E5
4.4E5
2.2E5
8.4E5
4.2E5

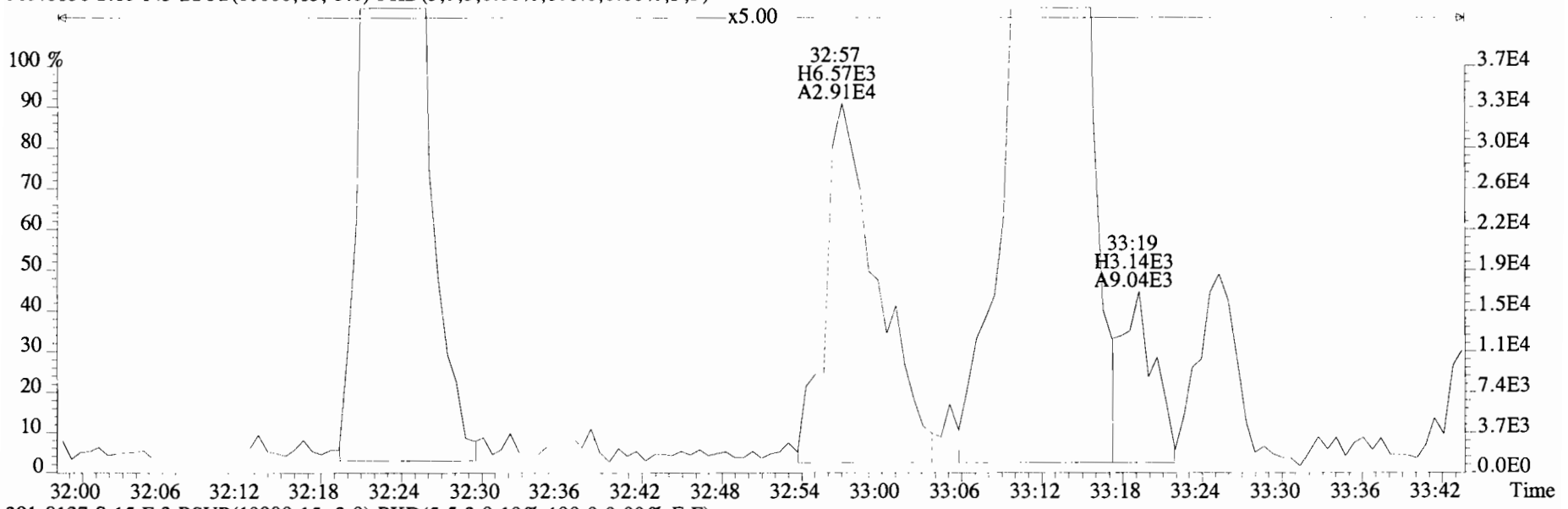
File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



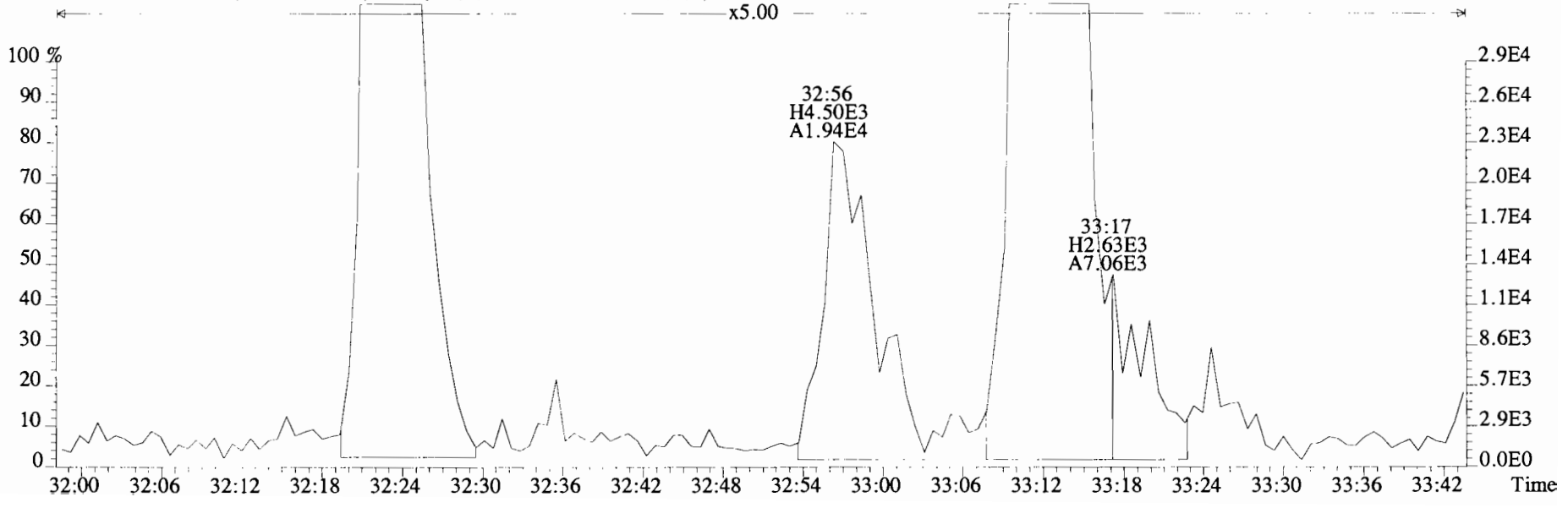
391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

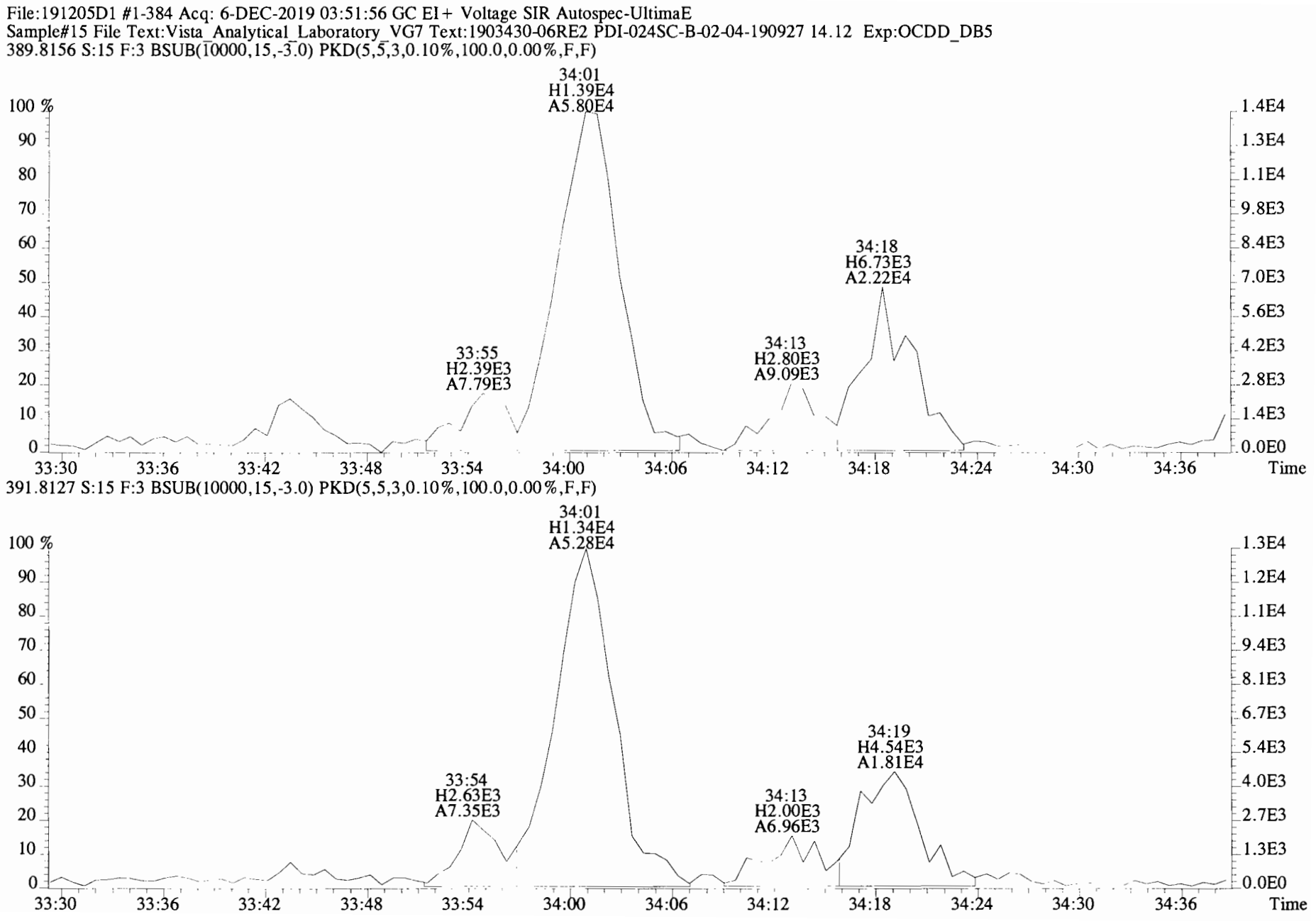


File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

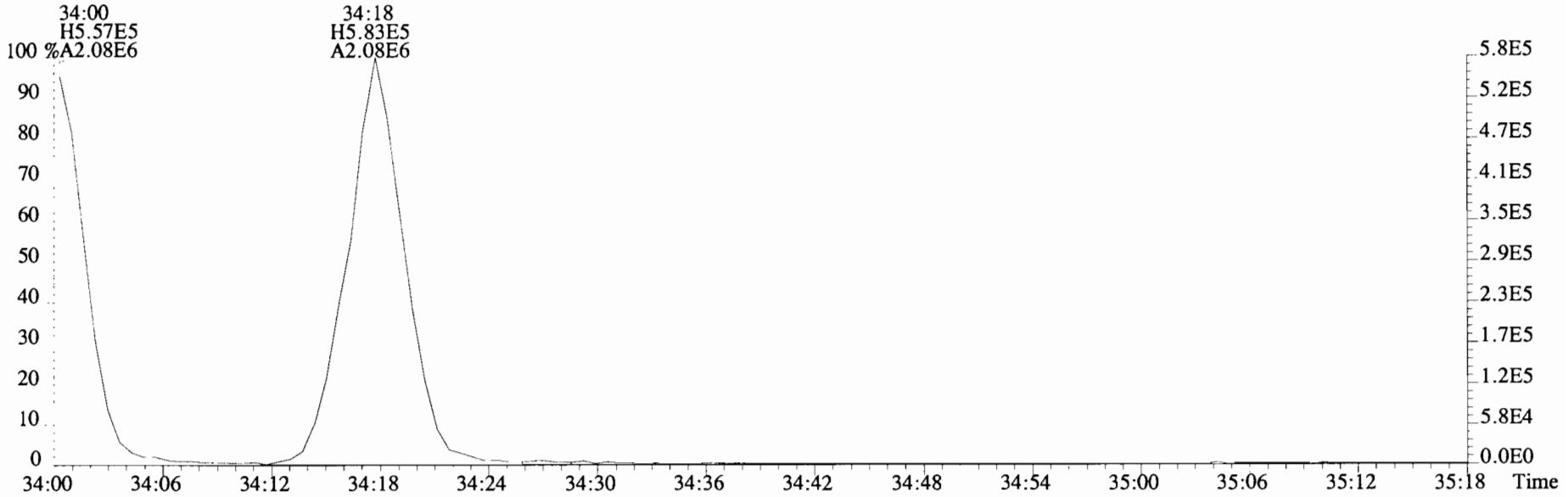


391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

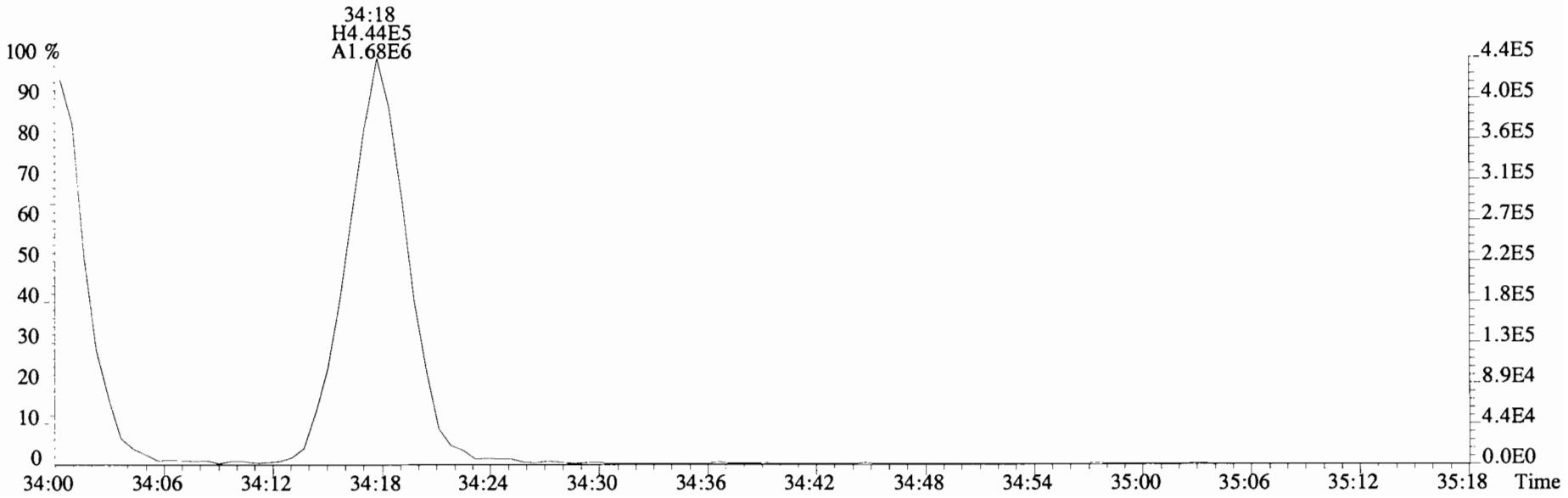


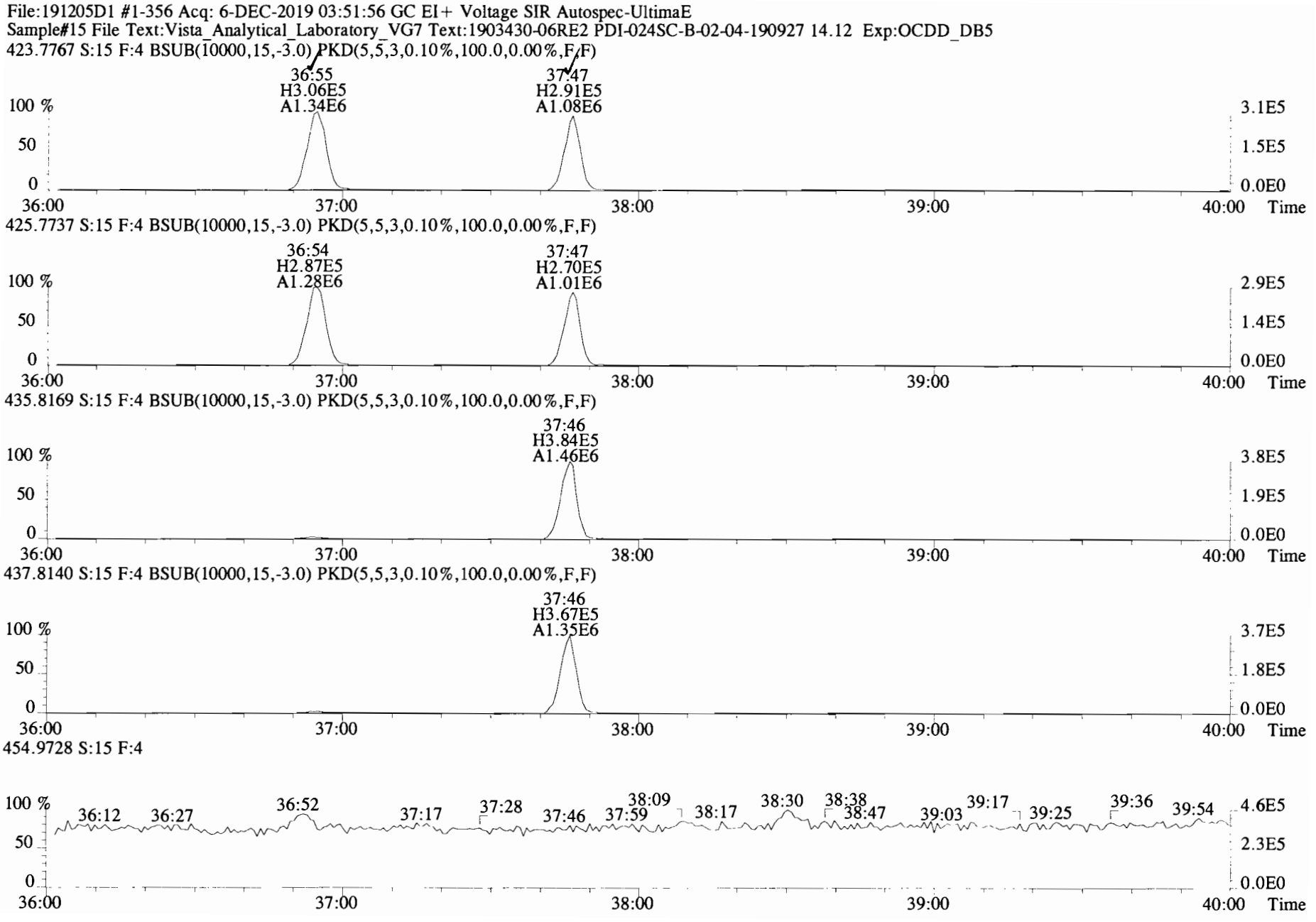

File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:01
H1.39E4
A5.80E4
33:55
H2.39E3
A7.79E3
34:13
H2.80E3
A9.09E3
34:18
H6.73E3
A2.22E4
100 %
90
80
70
60
50
40
30
20
10
0
1.4E4
1.3E4
1.1E4
9.8E3
8.4E3
7.0E3
5.6E3
4.2E3
2.8E3
1.4E3
0.0E0
33:30
33:36
33:42
33:48
33:54
34:00
34:06
34:12
34:18
34:24
34:30
34:36
Time
391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:01
H1.34E4
A5.28E4
33:54
H2.63E3
A7.35E3
34:13
H2.00E3
A6.96E3
34:19
H4.54E3
A1.81E4
100 %
90
80
70
60
50
40
30
20
10
0
1.3E4
1.2E4
1.1E4
9.4E3
8.1E3
6.7E3
5.4E3
4.0E3
2.7E3
1.3E3
0.0E0
33:30
33:36
33:42
33:48
33:54
34:00
34:06
34:12
34:18
34:24
34:30
34:36
Time

File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

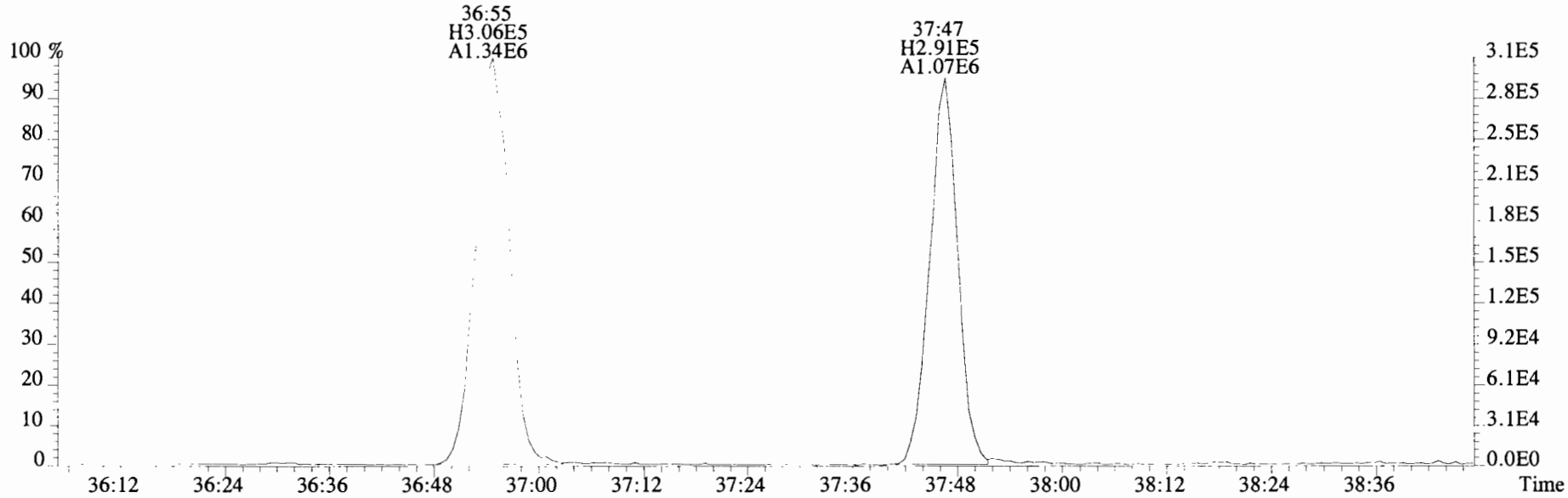


403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

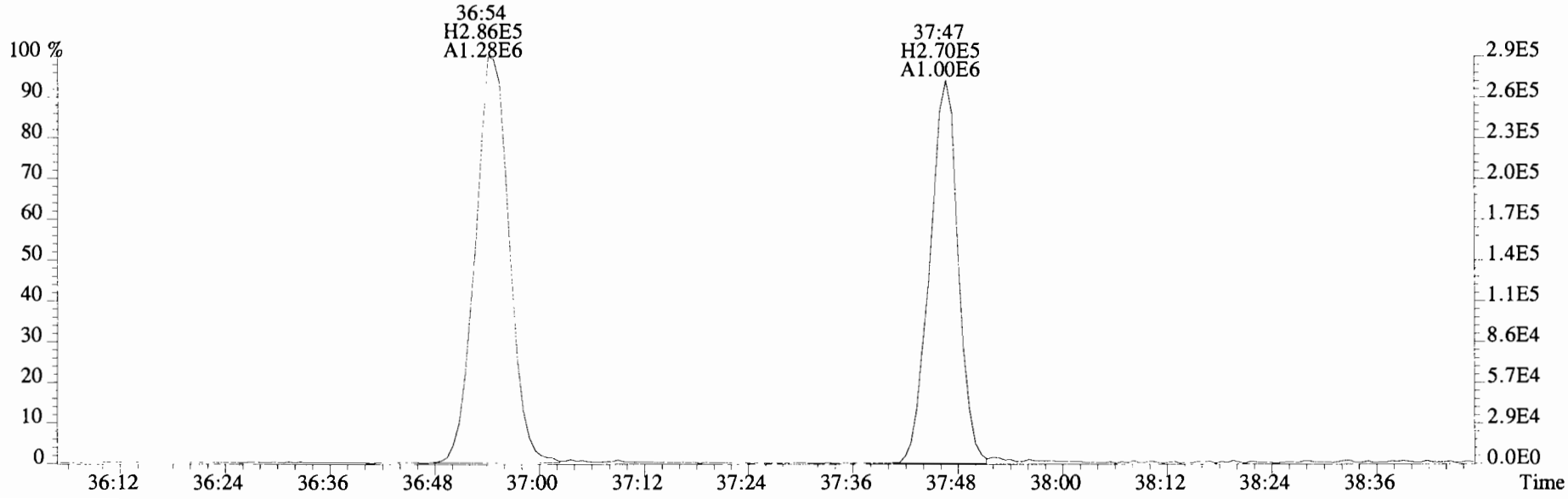



File:191205D1 #1-356 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:55
H3.06E5
A1.34E6
37:47
H2.91E5
A1.08E6
100 %
50
0
3.1E5
1.5E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:54
H2.87E5
A1.28E6
37:47
H2.70E5
A1.01E6
2.9E5
1.4E5
435.8169 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:46
H3.84E5
A1.46E6
3.8E5
1.9E5
437.8140 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:46
H3.67E5
A1.35E6
3.7E5
1.8E5
454.9728 S:15 F:4
36:12
36:27
36:52
37:17
37:28
37:46
37:59
38:09
38:17
38:30
38:38
38:47
39:03
39:17
39:25
39:36
39:54
4.6E5
2.3E5

File:191205D1 #1-356 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

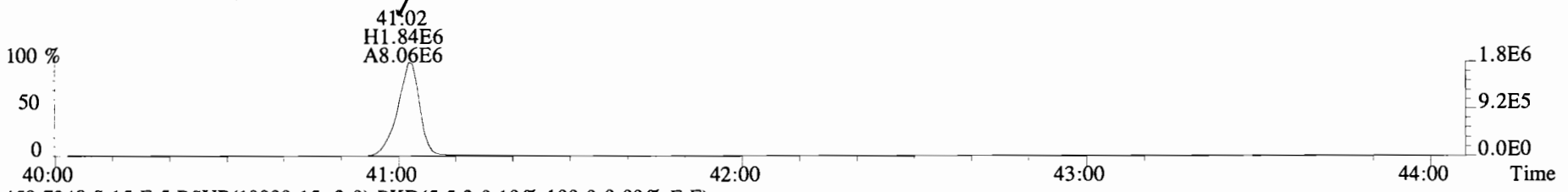


425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

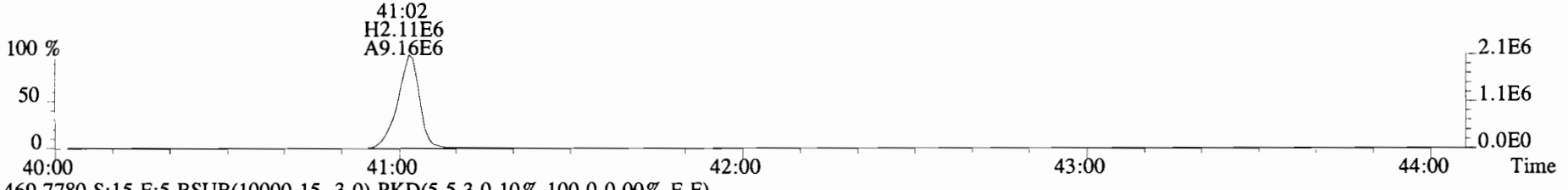


File:191205D1 #1-431 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5

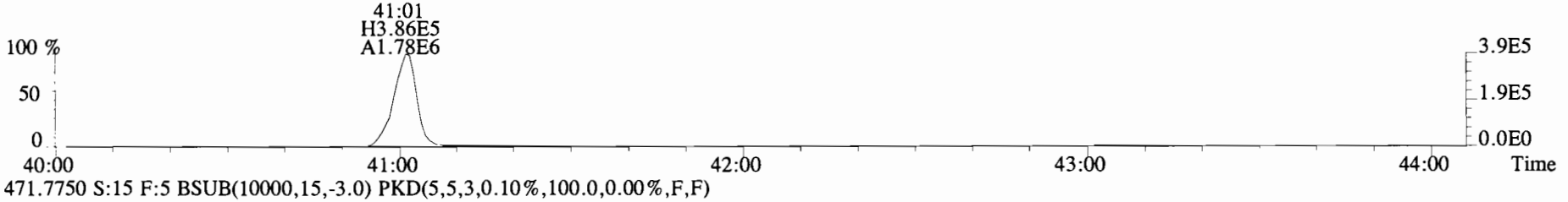
457.7377 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



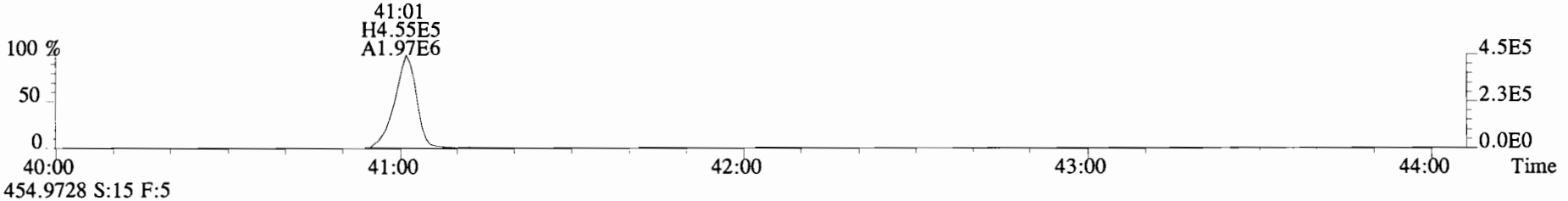
459.7348 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



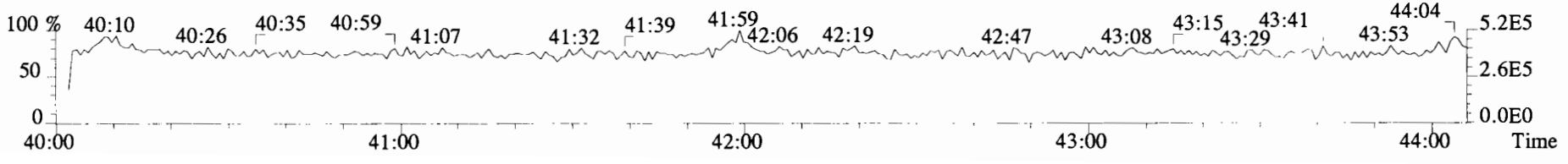
469.7780 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

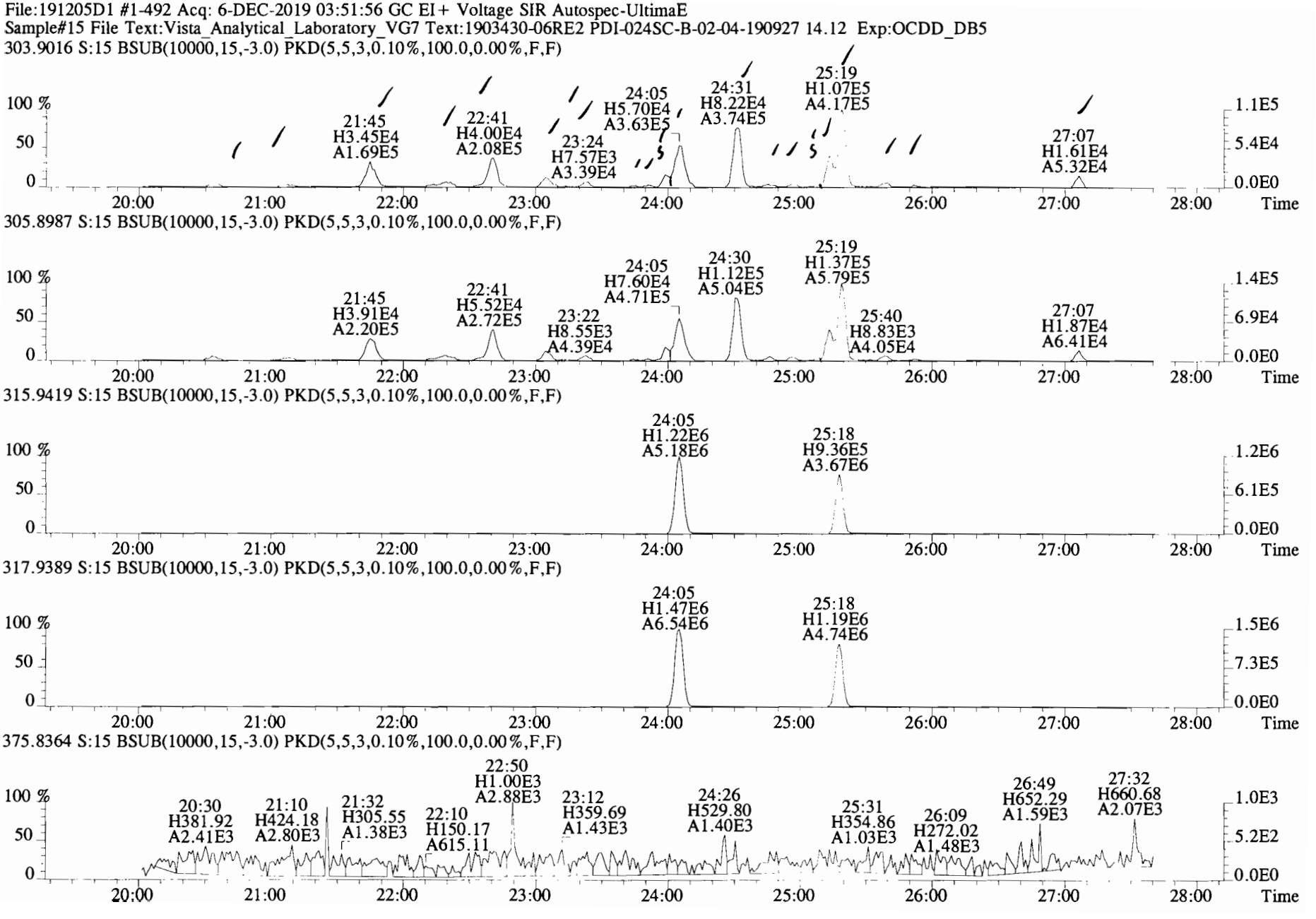


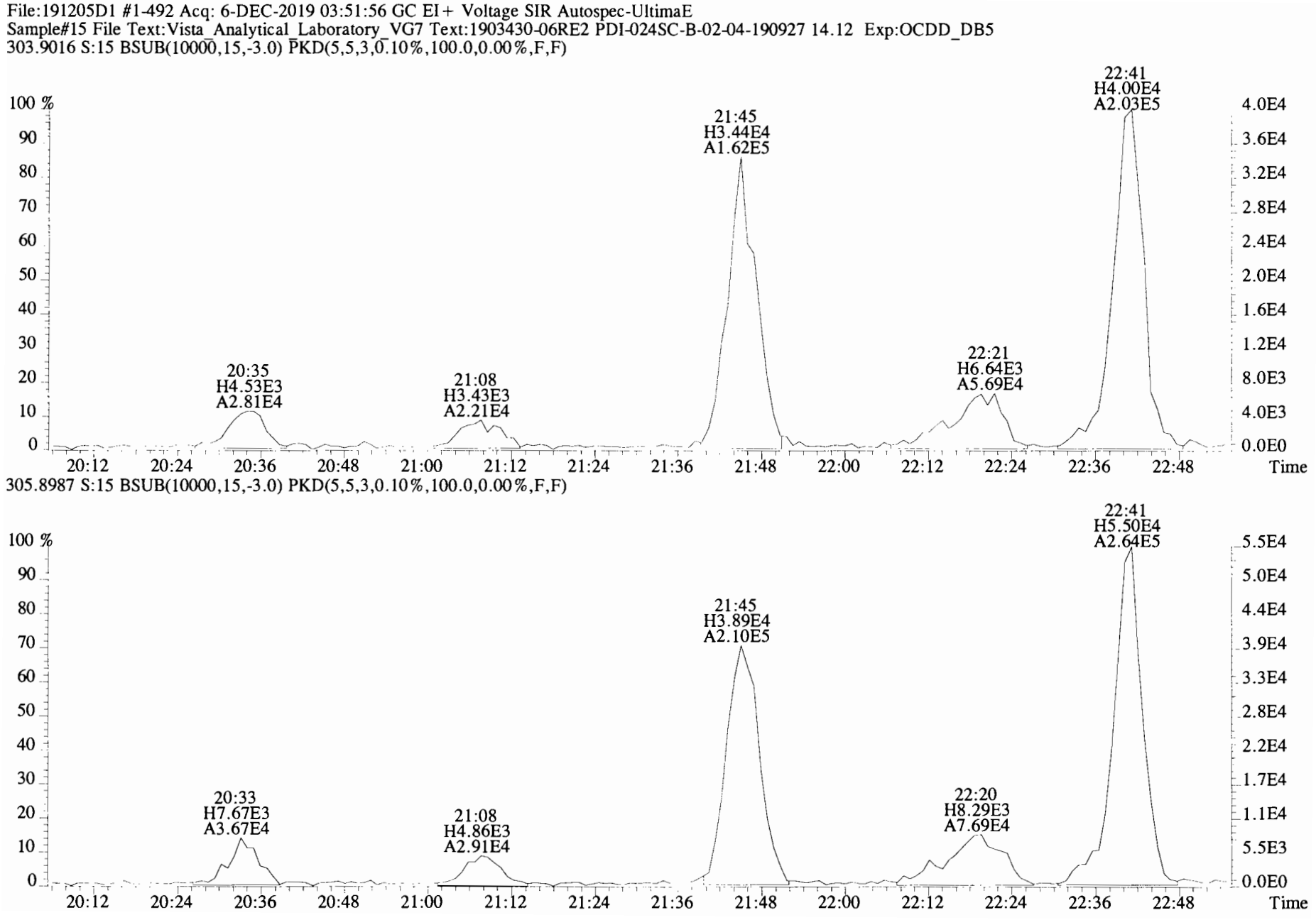
471.7750 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



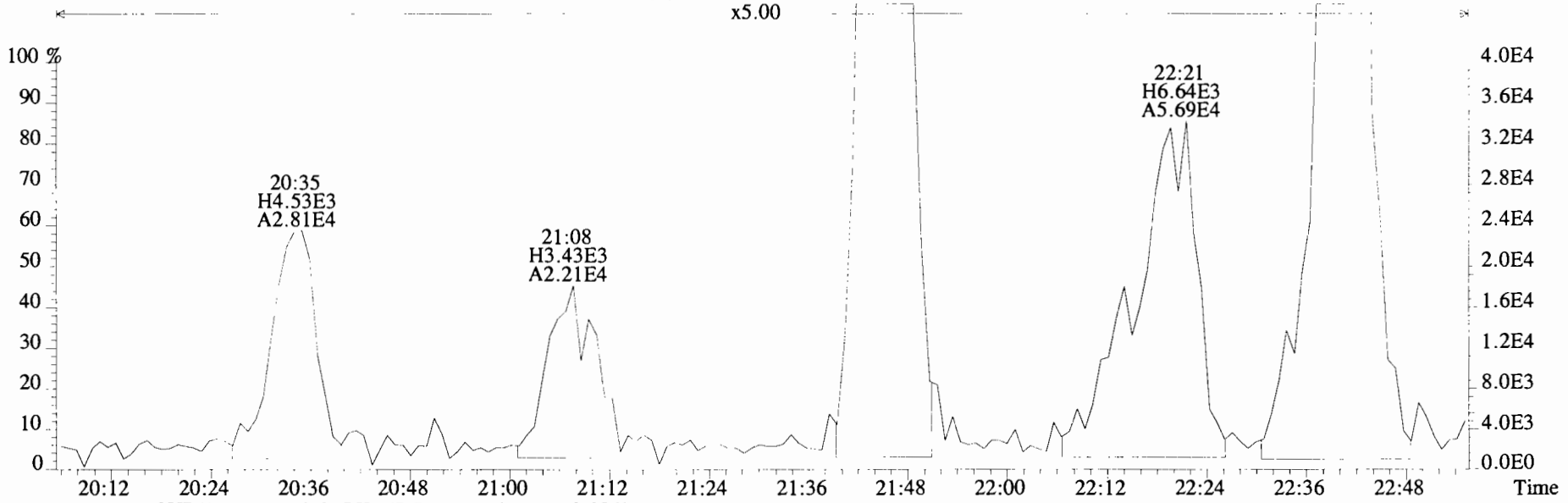
454.9728 S:15 F:5



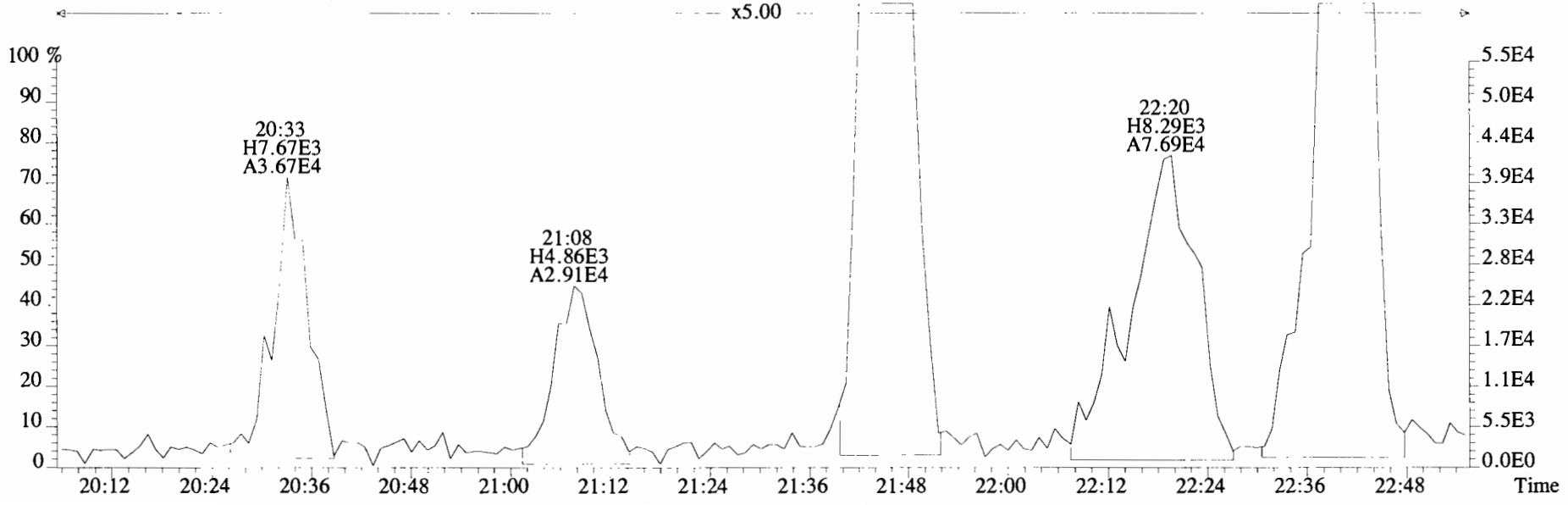

File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:45 H3.45E4 A1.69E5
22:41 H4.00E4 A2.08E5
23:24 H7.57E3 A3.39E4
24:05 H5.70E4 A3.63E5
24:31 H8.22E4 A3.74E5
25:19 H1.07E5 A4.17E5
27:07 H1.61E4 A5.32E4
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
21:45 H3.91E4 A2.20E5
22:41 H5.52E4 A2.72E5
23:22 H8.55E3 A4.39E4
24:05 H7.60E4 A4.71E5
24:30 H1.12E5 A5.04E5
25:19 H1.37E5 A5.79E5
25:40 H8.83E3 A4.05E4
27:07 H1.87E4 A6.41E4
315.9419 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:05 H1.22E6 A5.18E6
25:18 H9.36E5 A3.67E6
317.9389 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:05 H1.47E6 A6.54E6
25:18 H1.19E6 A4.74E6
375.8364 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:30 H381.92 A2.41E3
21:10 H424.18 A2.80E3
21:32 H305.55 A1.38E3
22:10 H150.17 A615.11
22:50 H1.00E3 A2.88E3
23:12 H359.69 A1.43E3
24:26 H529.80 A1.40E3
25:31 H354.86 A1.03E3
26:09 H272.02 A1.48E3
26:49 H652.29 A1.59E3
27:32 H660.68 A2.07E3
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
1.1E5
5.4E4
0.0E0
1.4E5
6.9E4
1.2E6
6.1E5
1.5E6
7.3E5
1.0E3
5.2E2


File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:35 H4.53E3 A2.81E4
21:08 H3.43E3 A2.21E4
21:45 H3.44E4 A1.62E5
22:21 H6.64E3 A5.69E4
22:41 H4.00E4 A2.03E5
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:33 H7.67E3 A3.67E4
21:08 H4.86E3 A2.91E4
21:45 H3.89E4 A2.10E5
22:20 H8.29E3 A7.69E4
22:41 H5.50E4 A2.64E5
Time

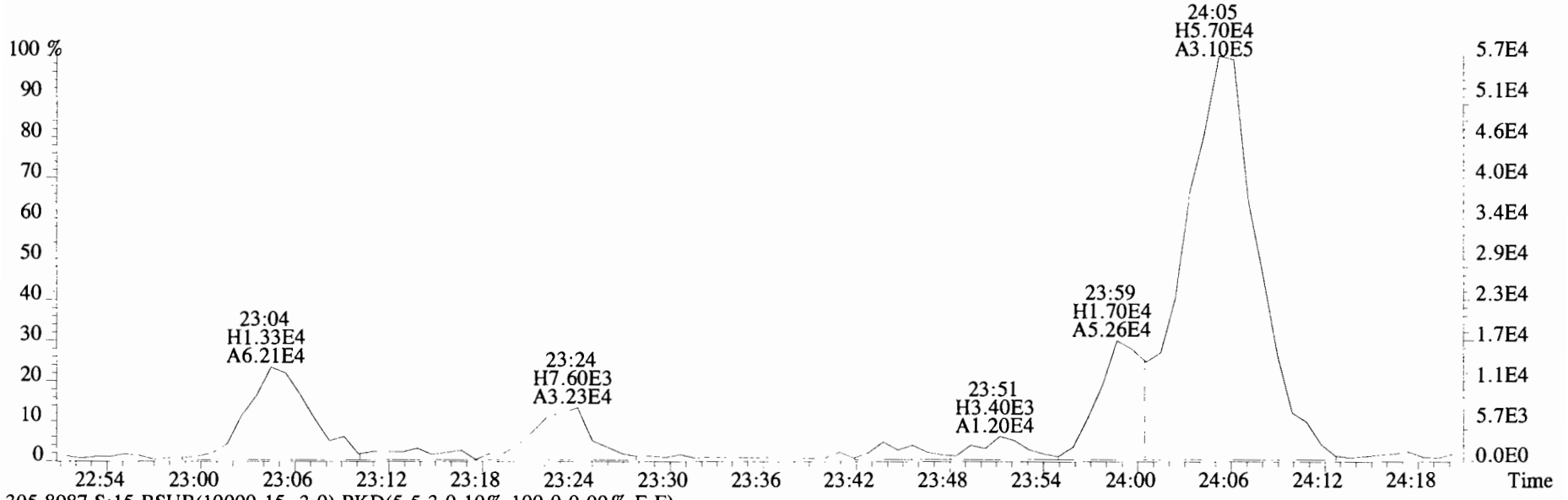
File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



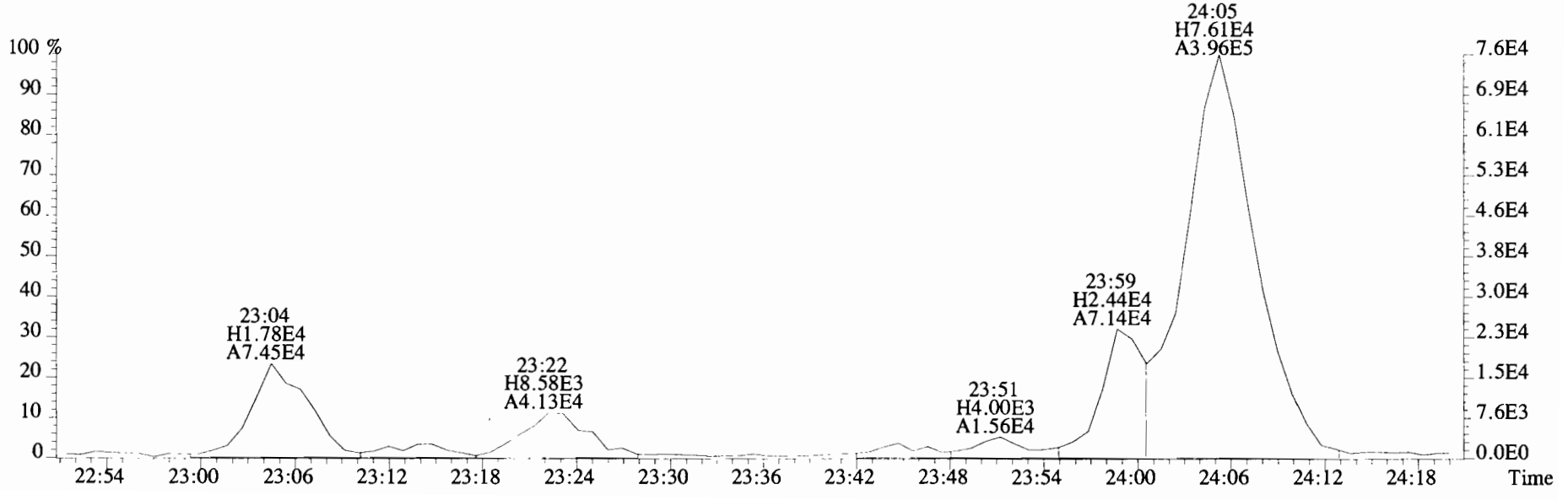
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

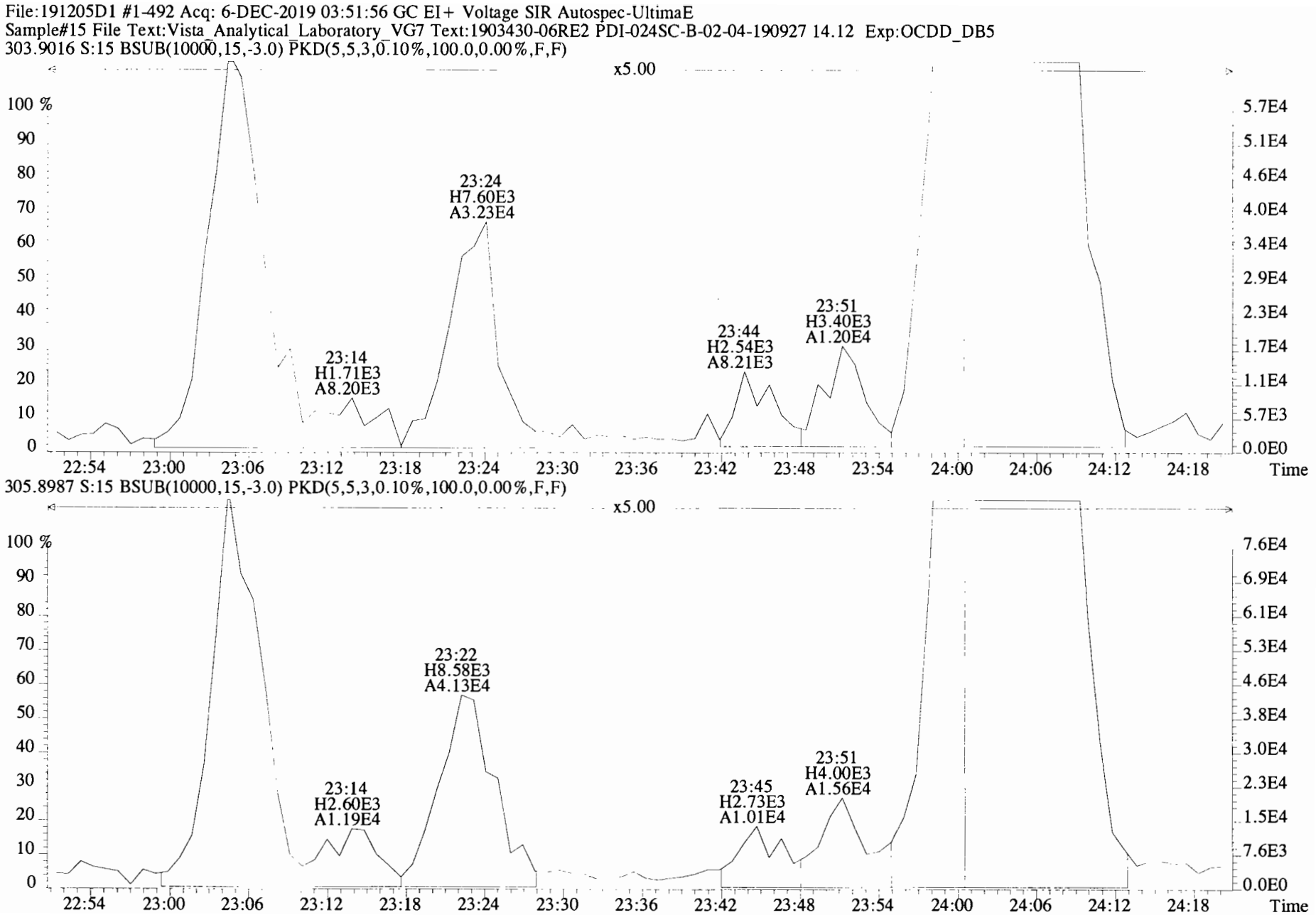


File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

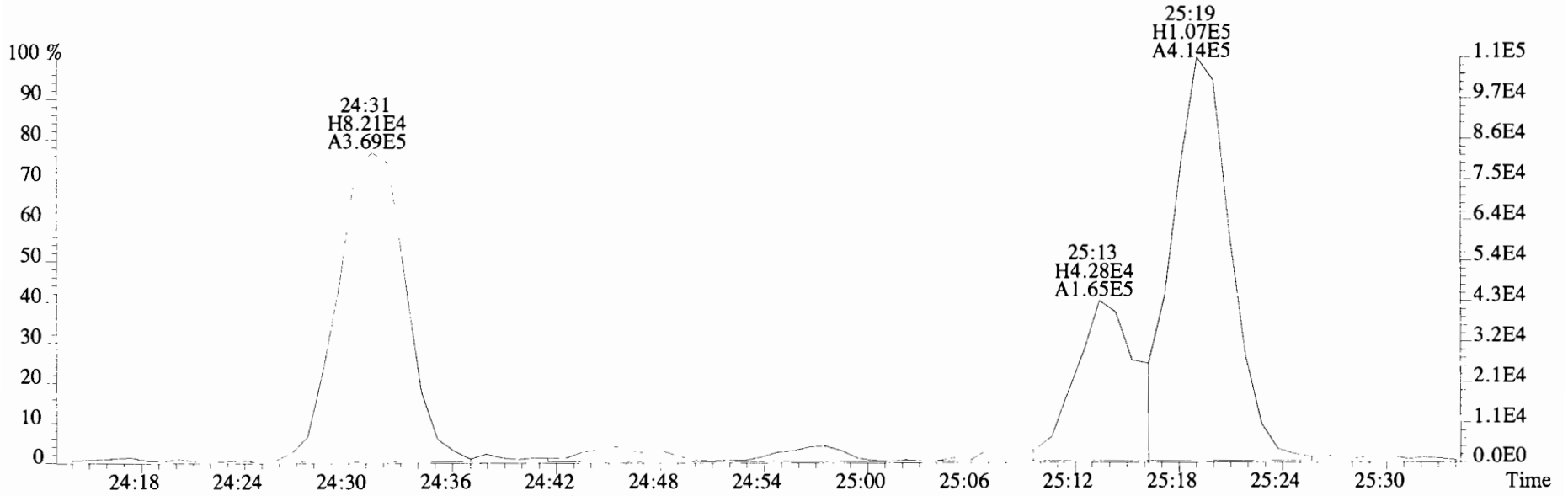


305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

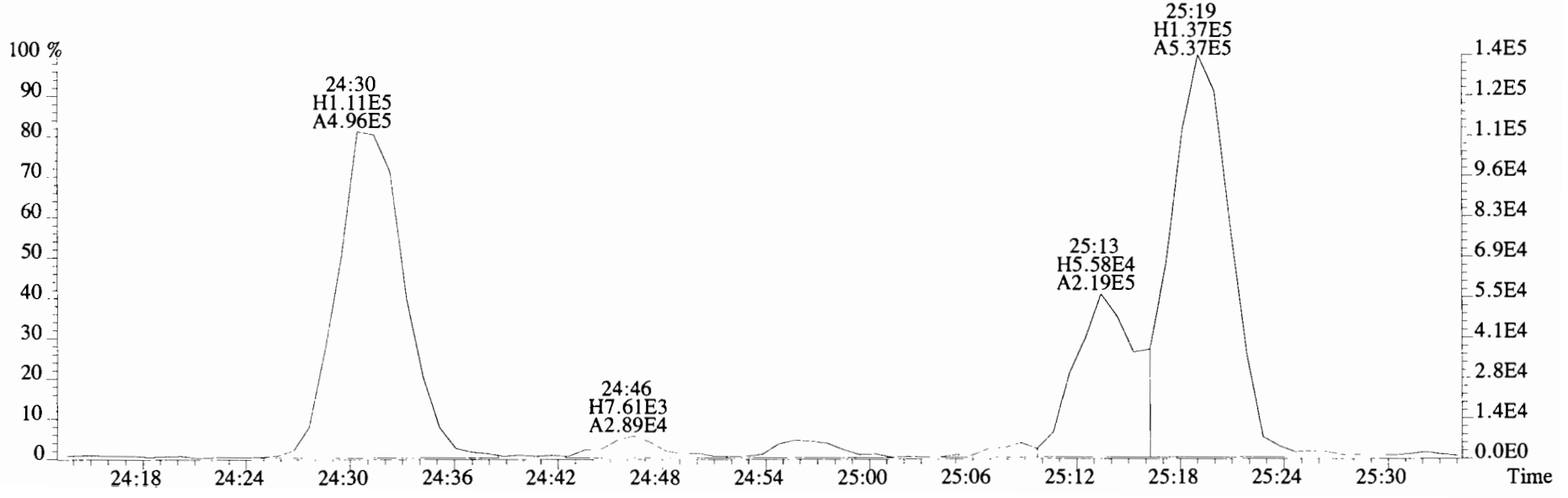


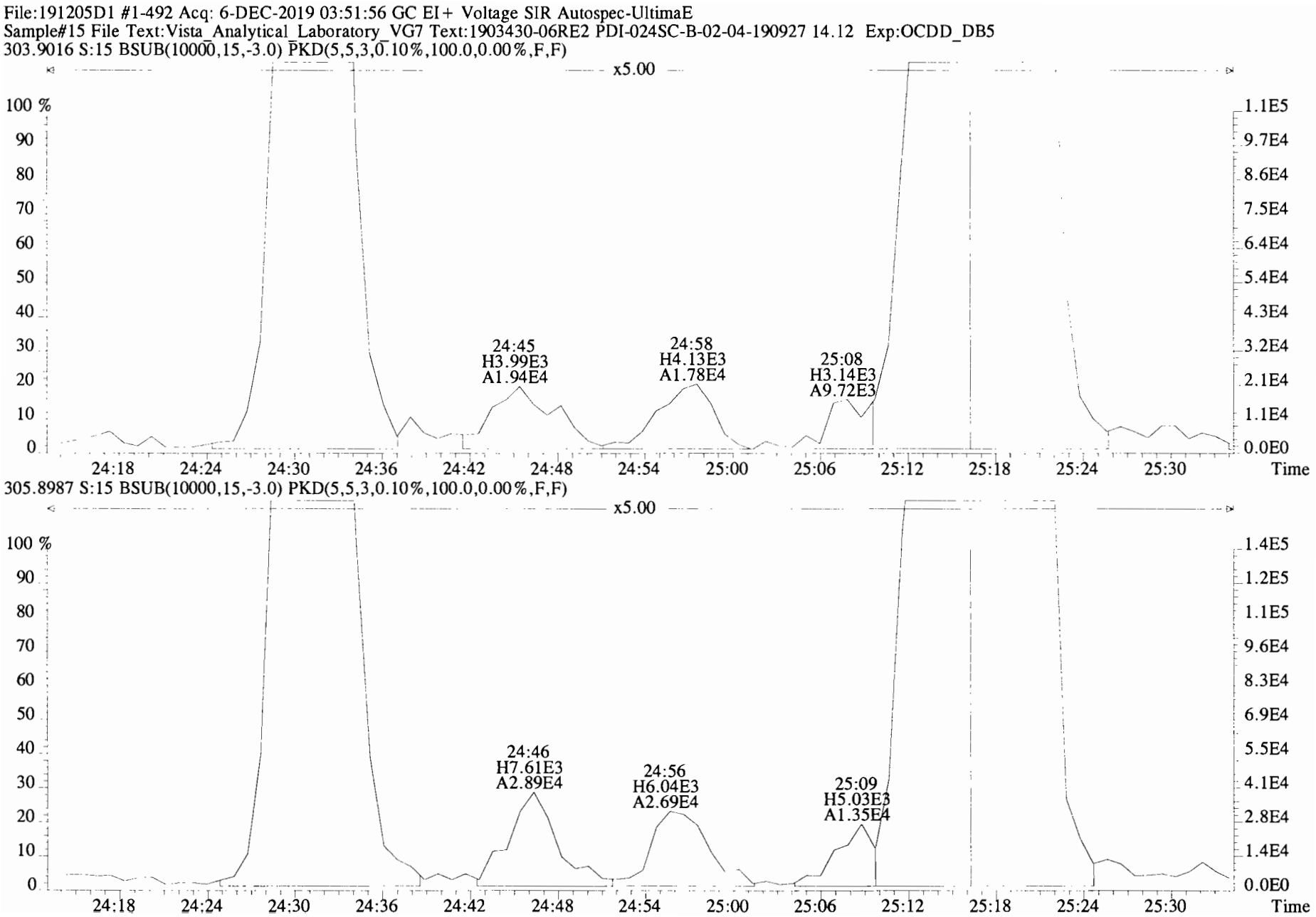

File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
23:14 H1.71E3 A8.20E3
23:24 H7.60E3 A3.23E4
23:44 H2.54E3 A8.21E3
23:51 H3.40E3 A1.20E4
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
23:14 H2.60E3 A1.19E4
23:22 H8.58E3 A4.13E4
23:45 H2.73E3 A1.01E4
23:51 H4.00E3 A1.56E4
Time

File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

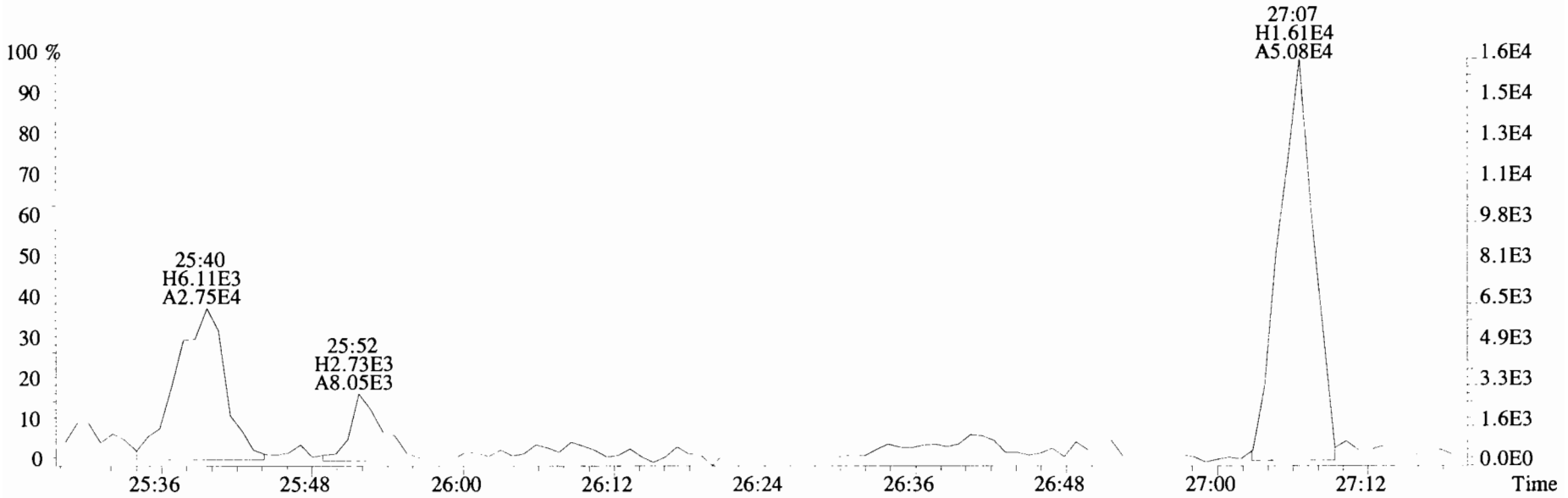


305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

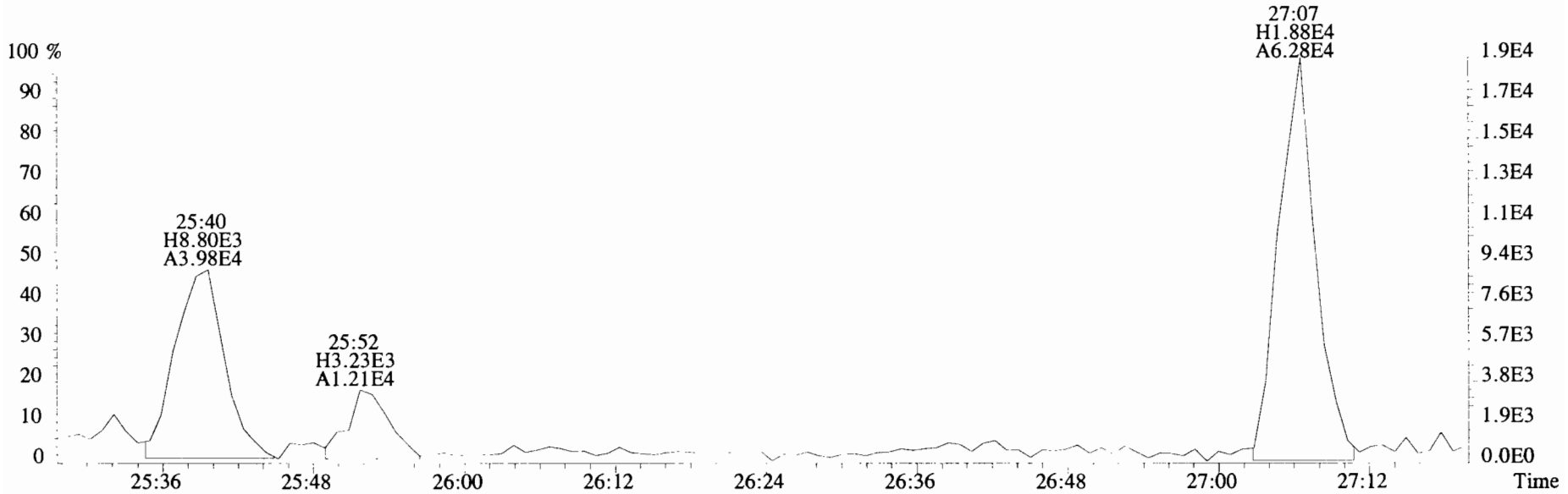


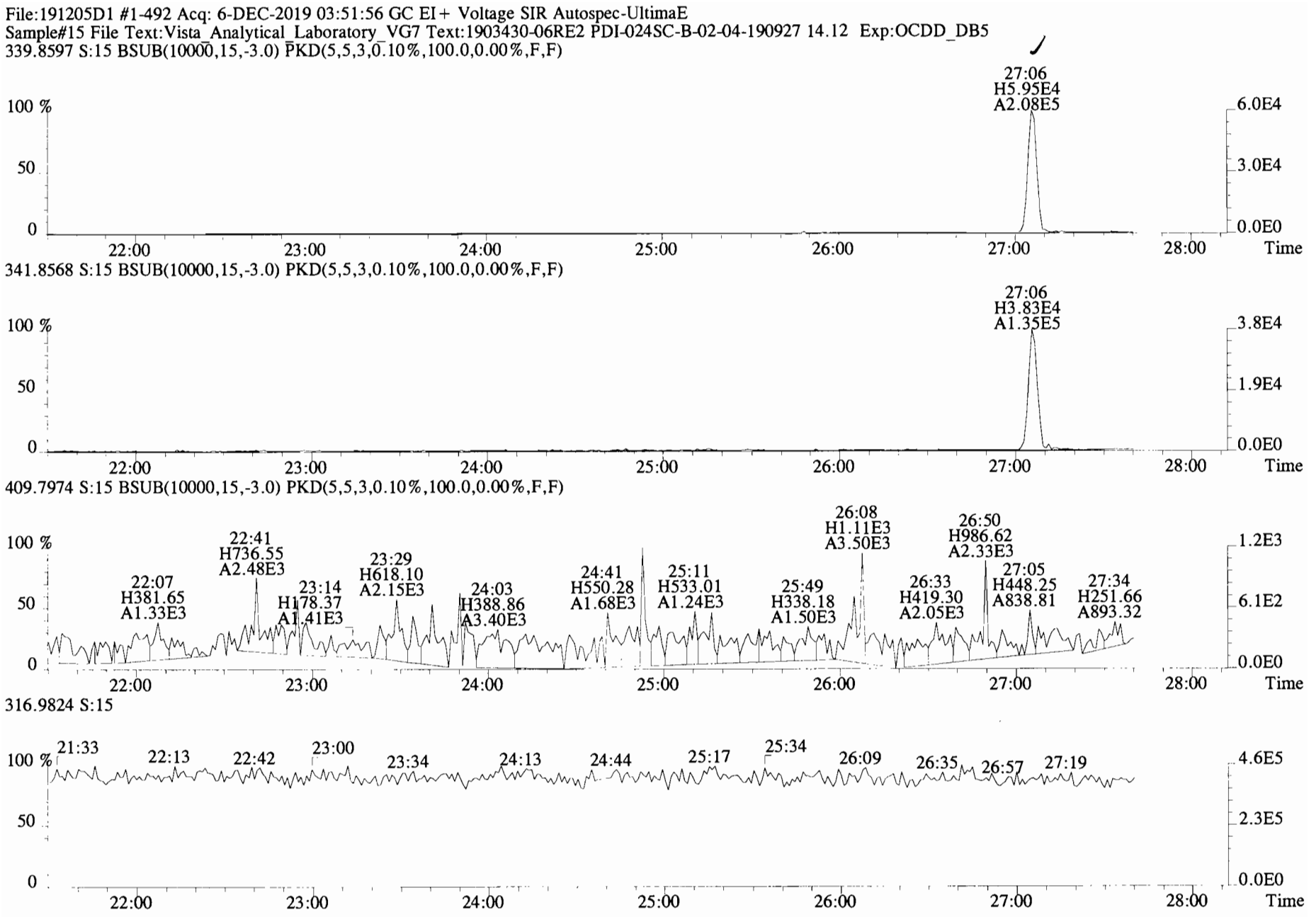

File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
24:45
H3.99E3
A1.94E4
24:58
H4.13E3
A1.78E4
25:08
H3.14E3
A9.72E3
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
24:46
H7.61E3
A2.89E4
24:56
H6.04E3
A2.69E4
25:09
H5.03E3
A1.35E4
Time

File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

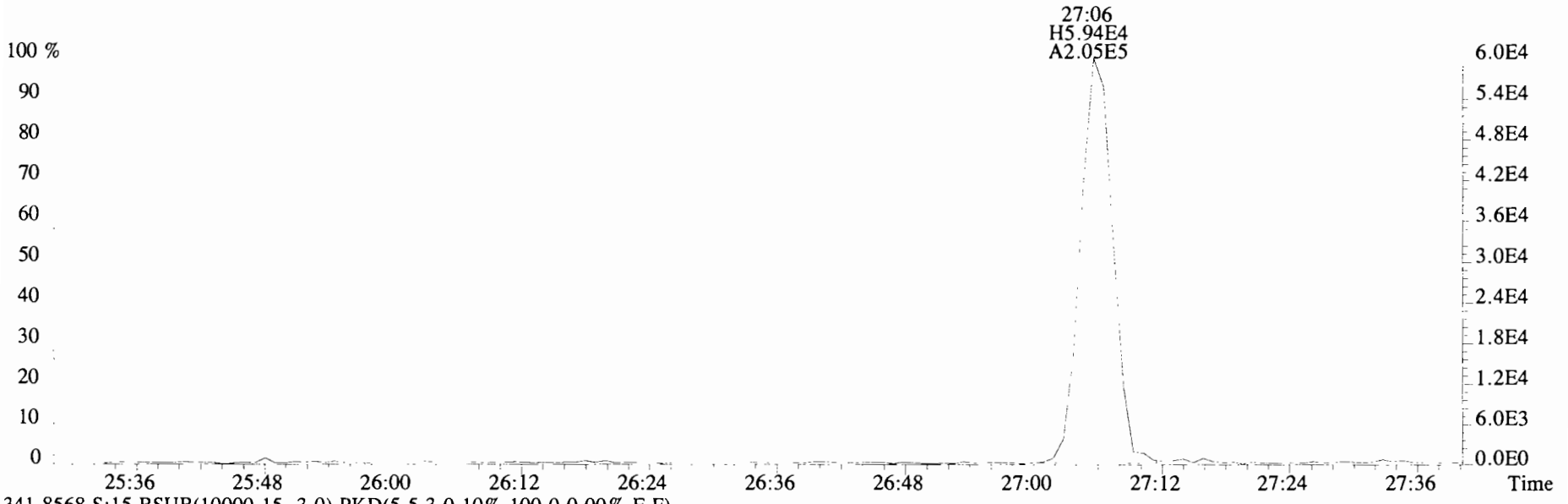


305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

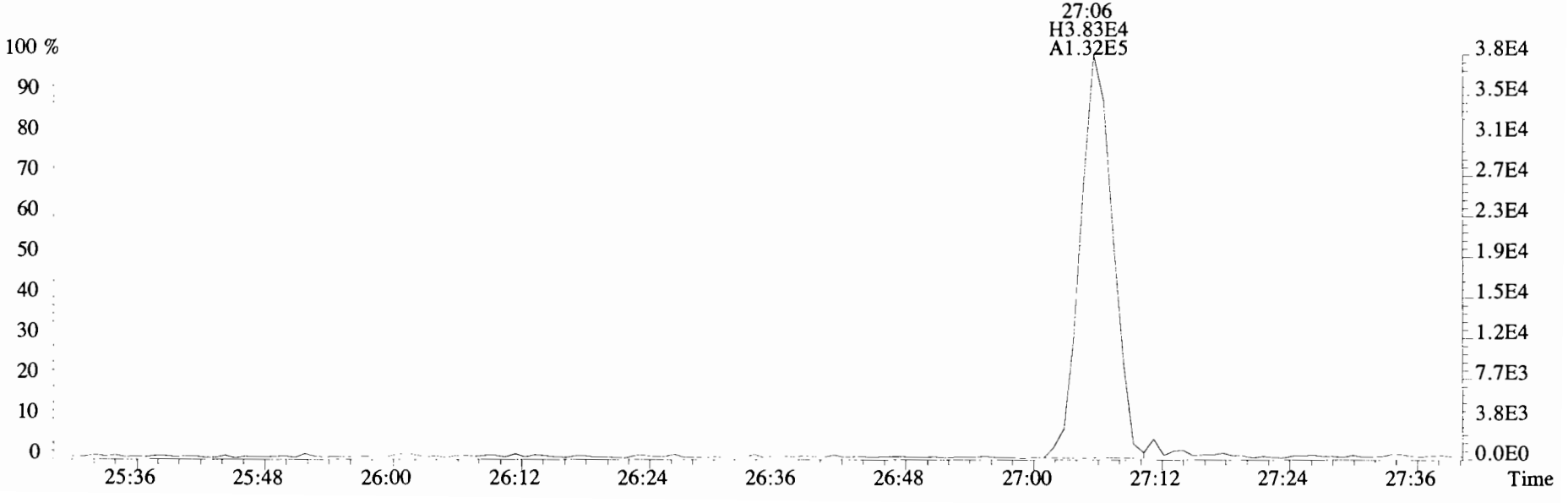



File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
339.8597 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:06
H5.95E4
A2.08E5
100 %
50
0
6.0E4
3.0E4
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
341.8568 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:06
H3.83E4
A1.35E5
100 %
50
0
3.8E4
1.9E4
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
409.7974 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:07
H381.65
A1.33E3
22:41
H736.55
A2.48E3
23:14
H178.37
A1.41E3
23:29
H618.10
A2.15E3
24:03
H388.86
A3.40E3
24:41
H550.28
A1.68E3
25:11
H533.01
A1.24E3
25:49
H338.18
A1.50E3
26:08
H1.11E3
A3.50E3
26:33
H419.30
A2.05E3
26:50
H986.62
A2.33E3
27:05
H448.25
A838.81
27:34
H251.66
A893.32
100 %
50
0
1.2E3
6.1E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
316.9824 S:15
21:33
22:13
22:42
23:00
23:34
24:13
24:44
25:17
25:34
26:09
26:35
26:57
27:19
100 %
50
0
4.6E5
2.3E5
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time

File:191205D1 #1-492 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
339.8597 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

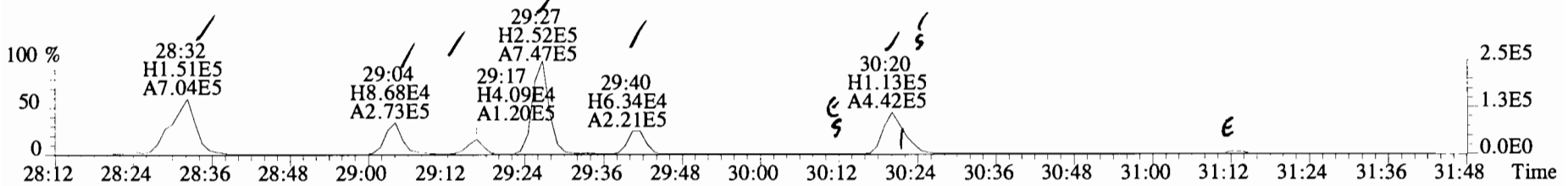


341.8568 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

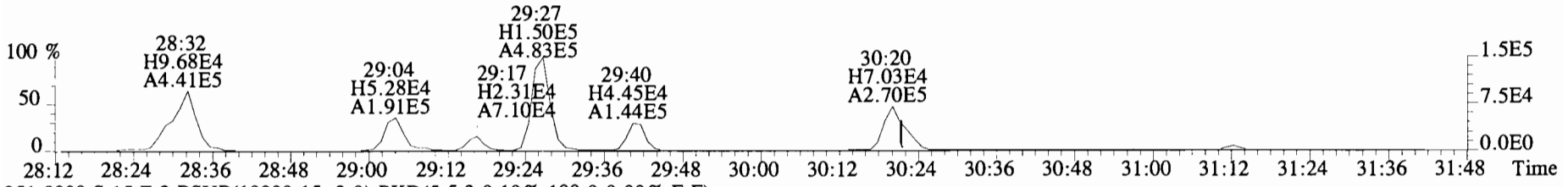


File:191205D1 #1-211 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5

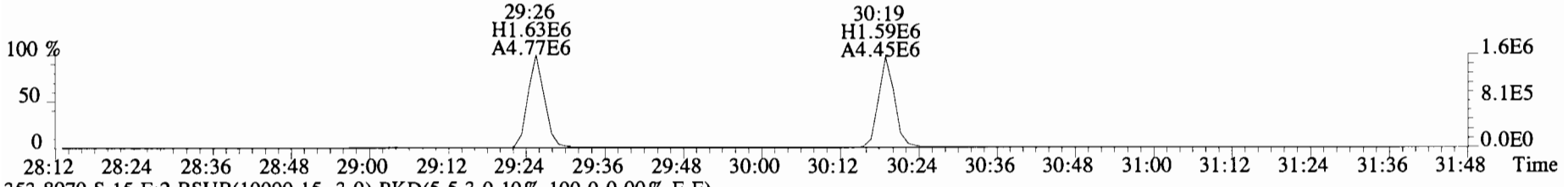
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



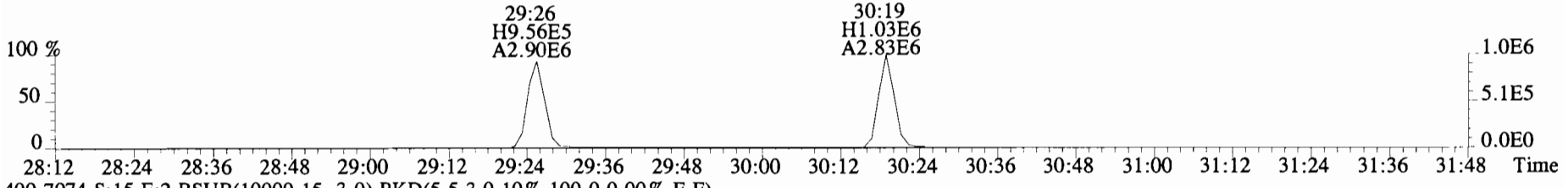
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



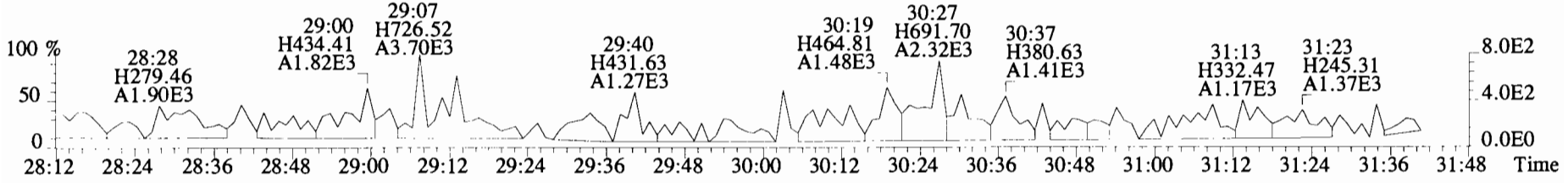
351.9000 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



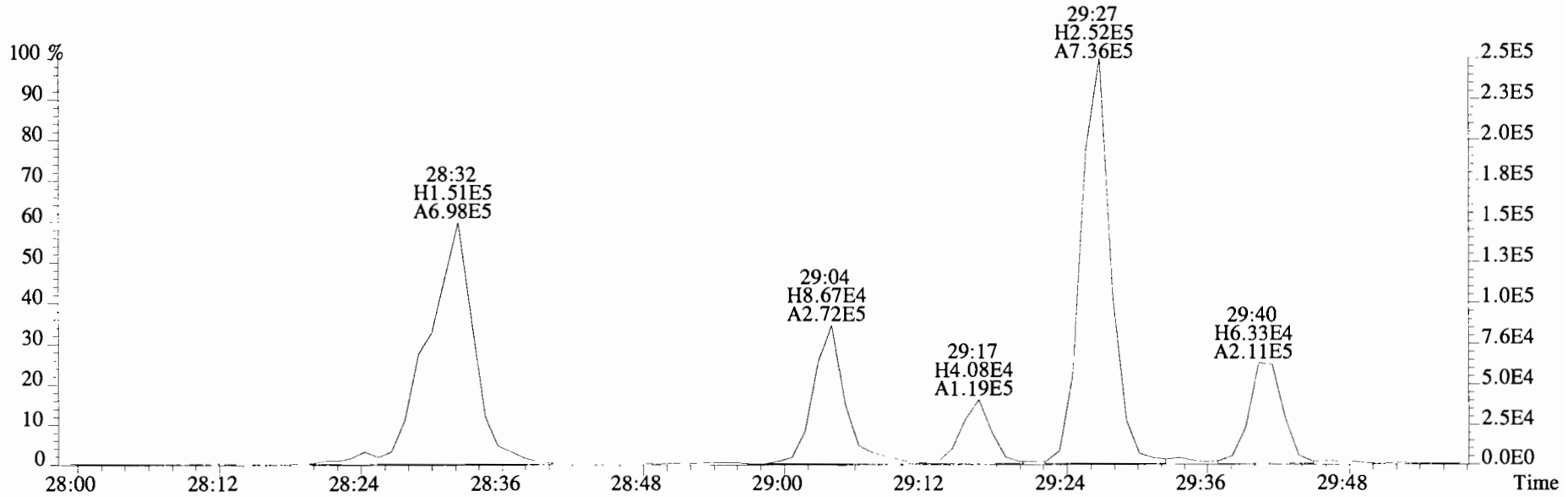
353.8970 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



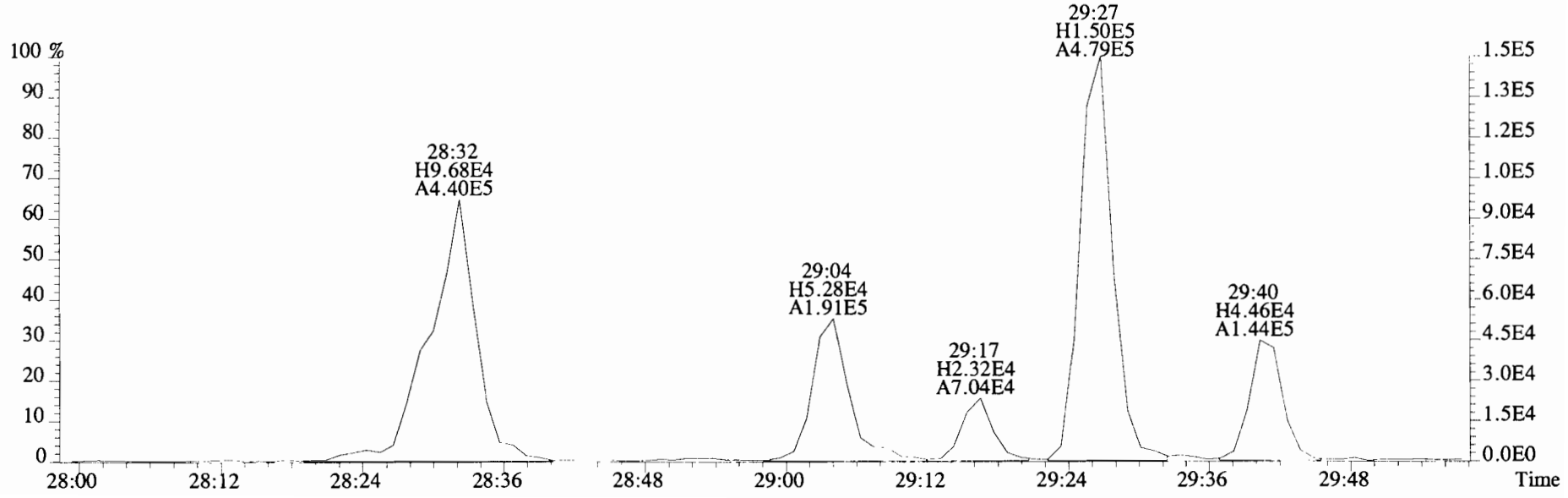
409.7974 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



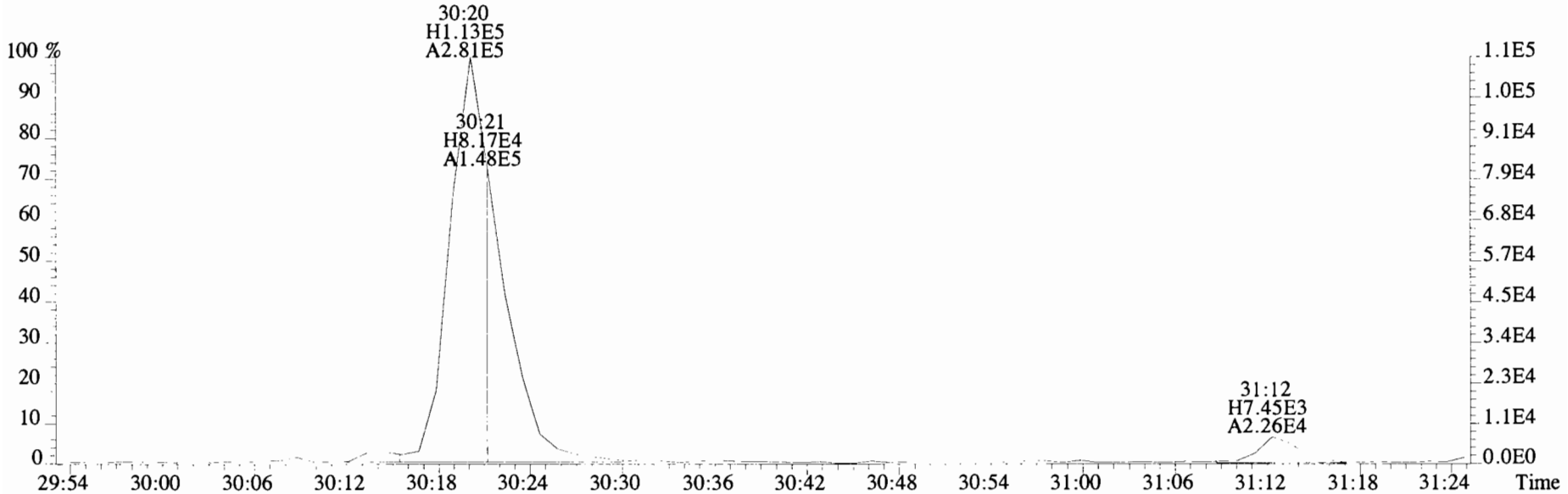
File:191205D1 #1-211 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



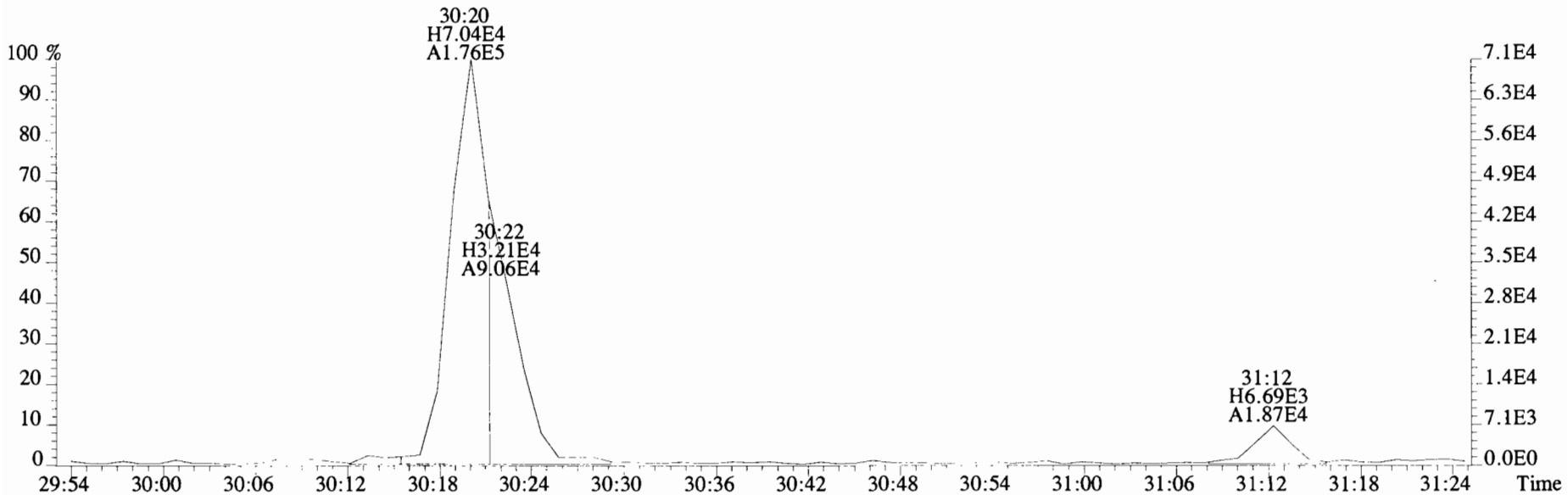
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



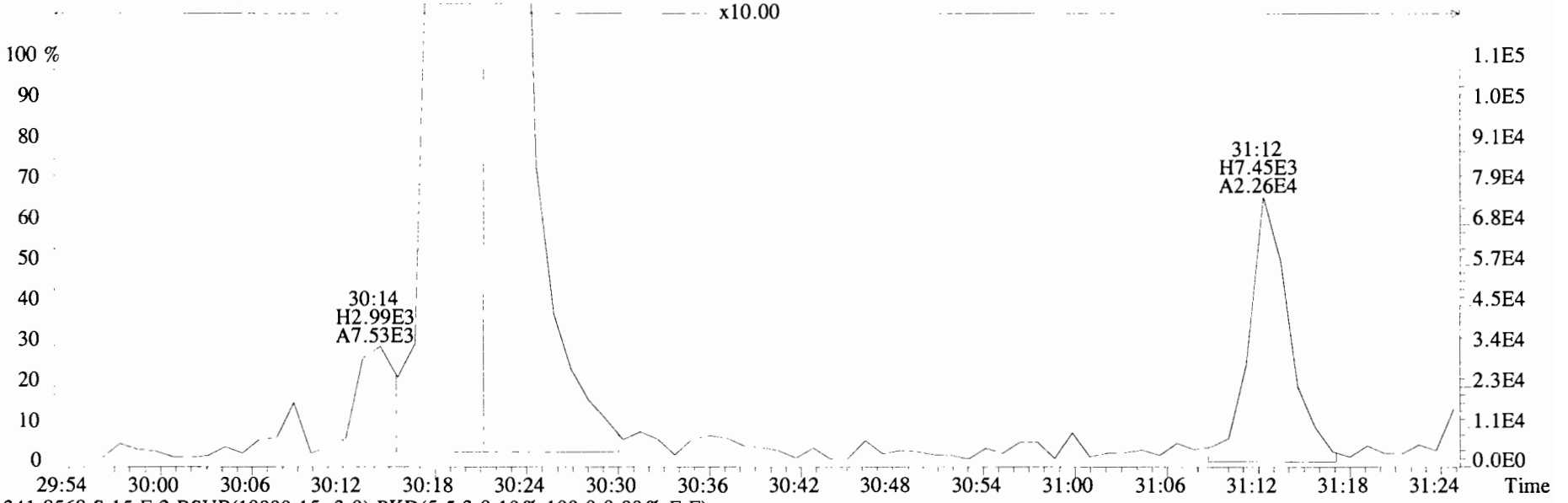
File:191205D1 #1-211 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



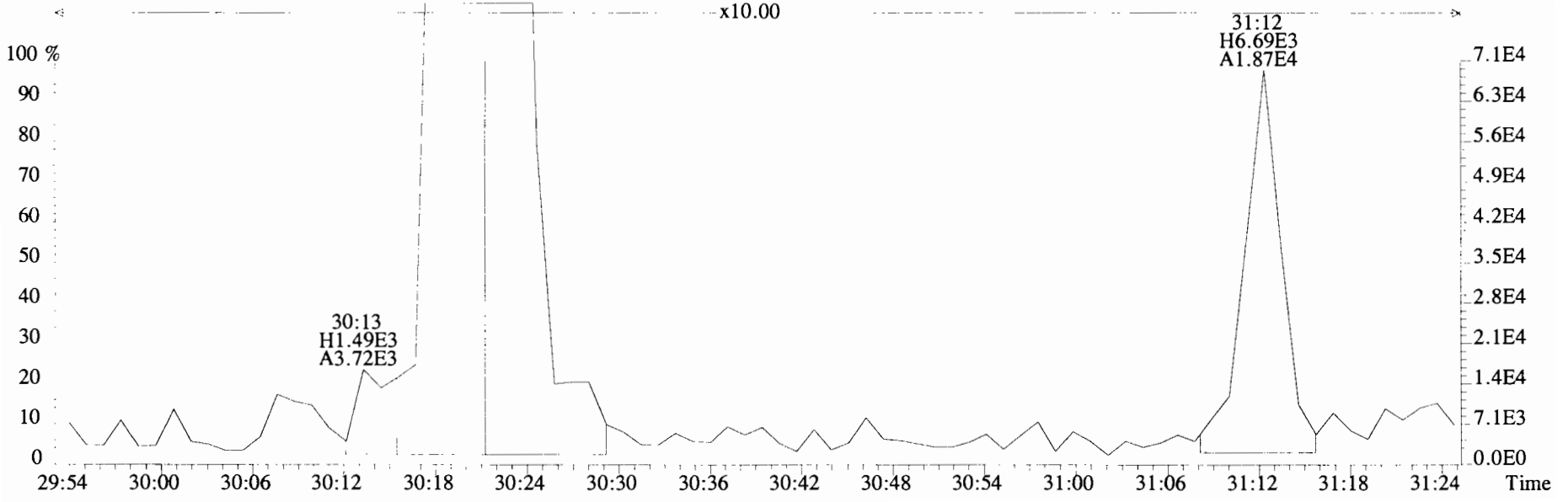
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



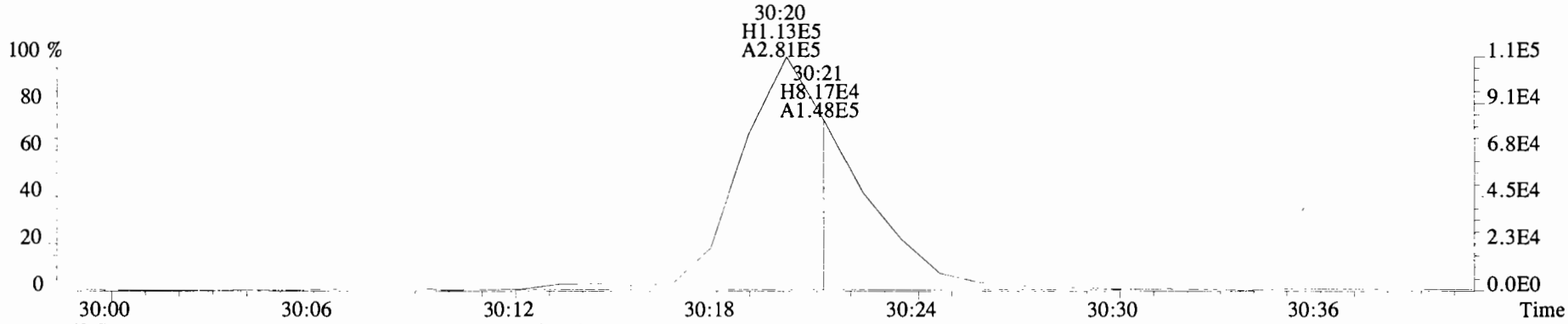
File:191205D1 #1-211 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



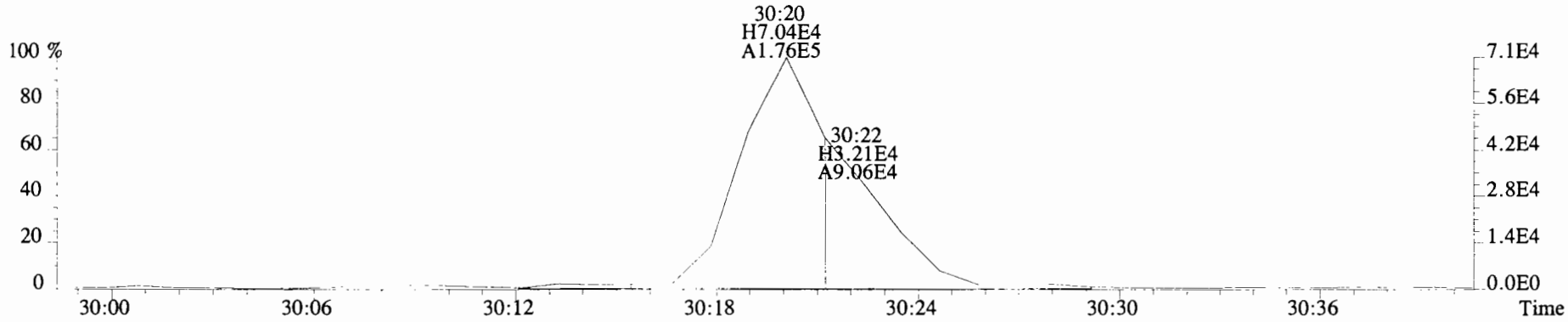
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



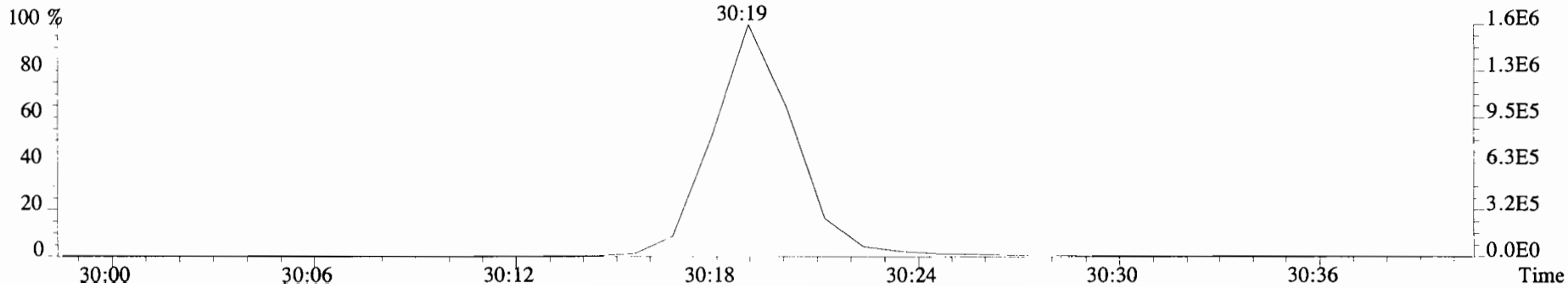
File:191205D1 #1-211 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

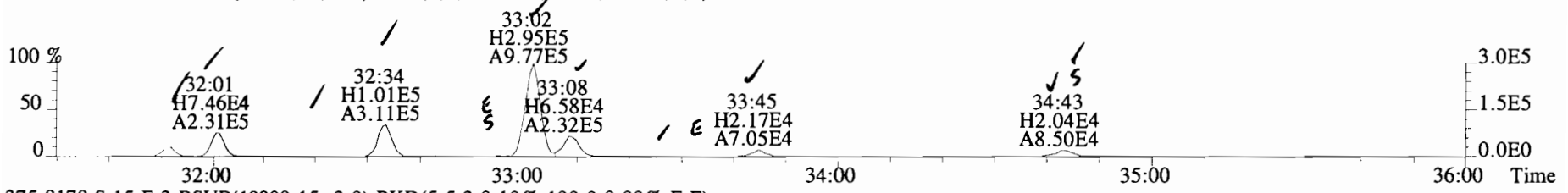


351.9000 S:15 F:2

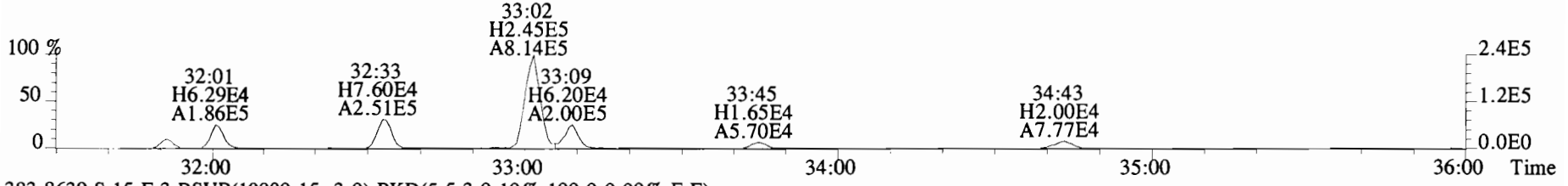


File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5

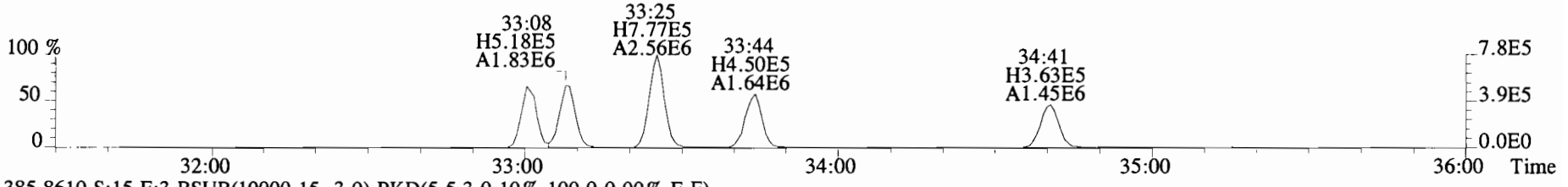
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



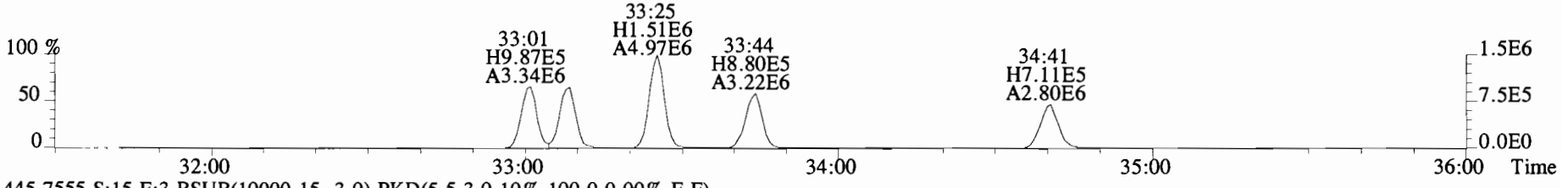
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



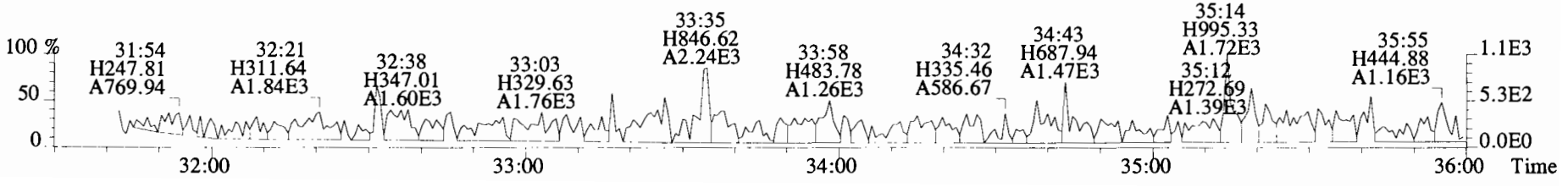
383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



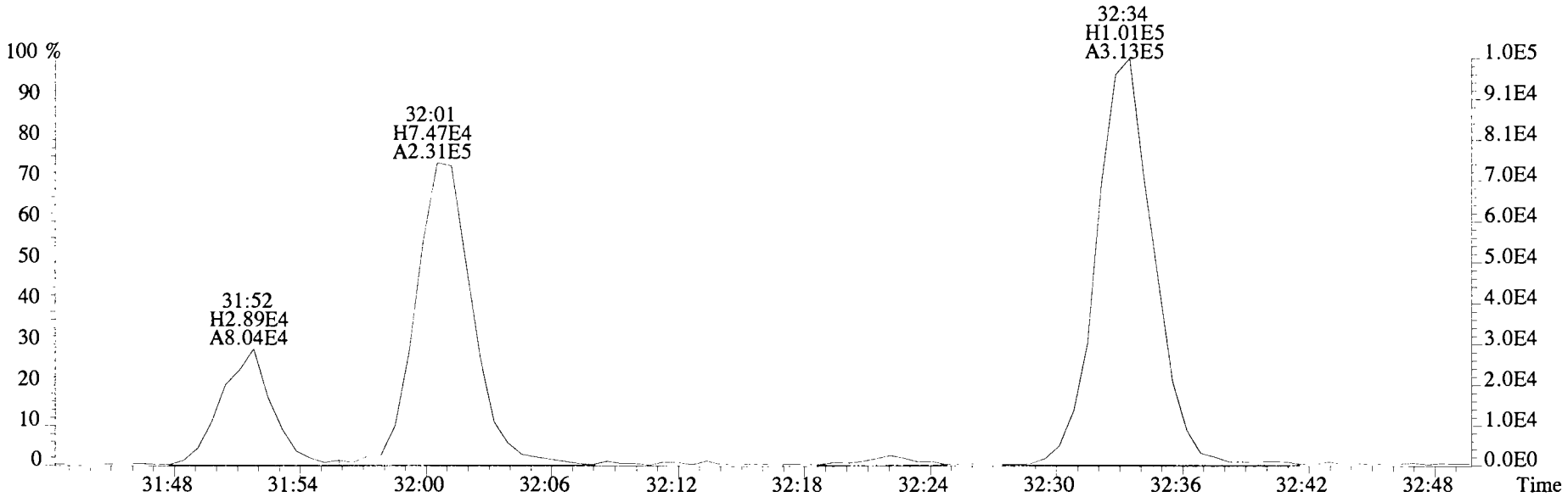
385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



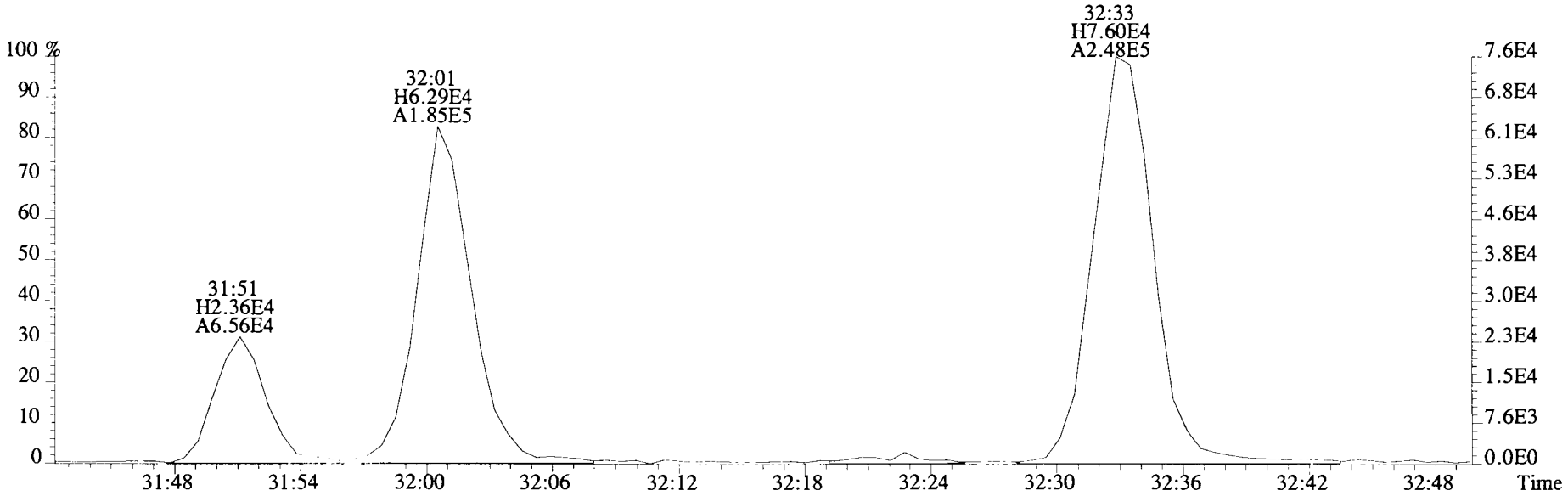
445.7555 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

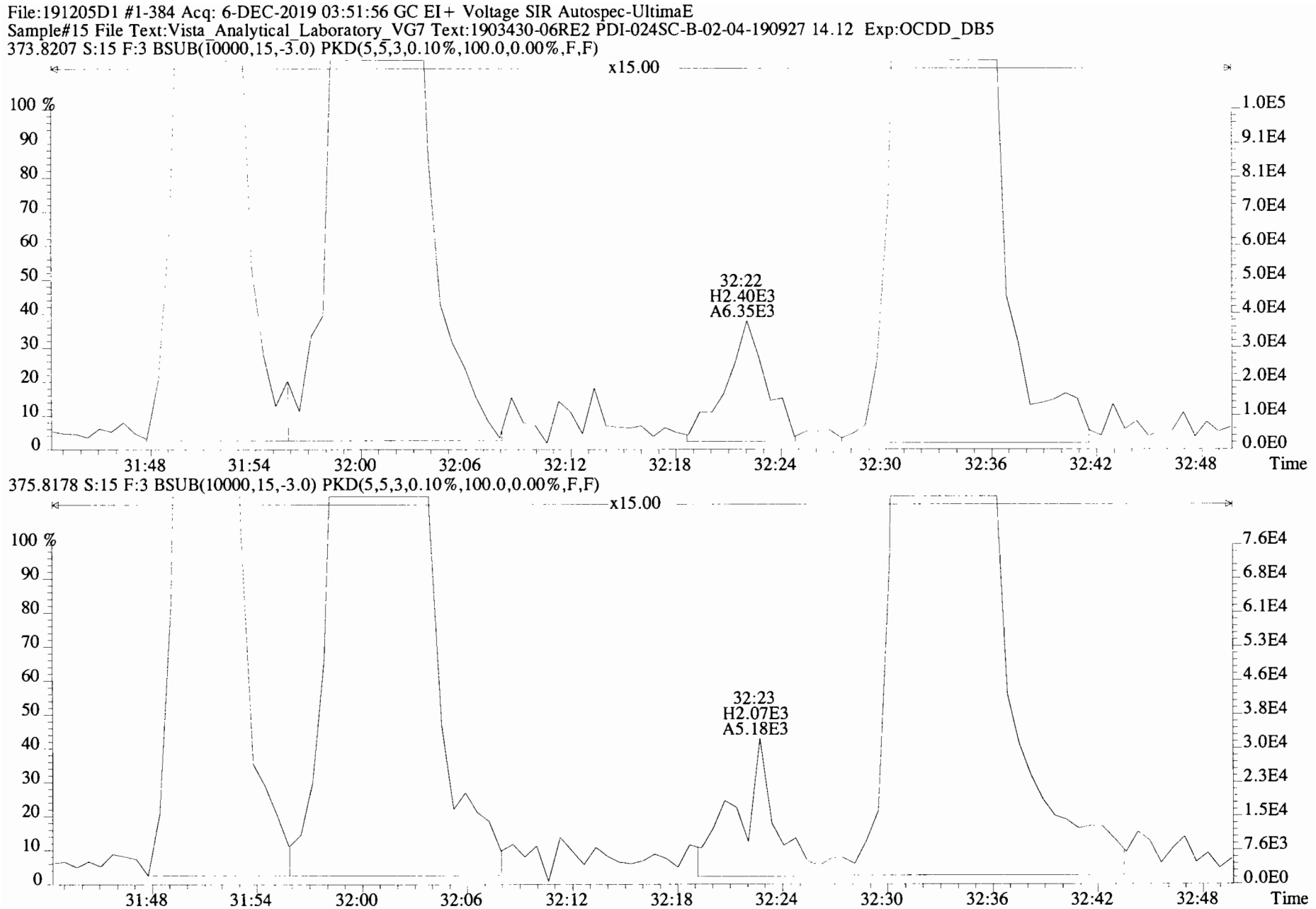


File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

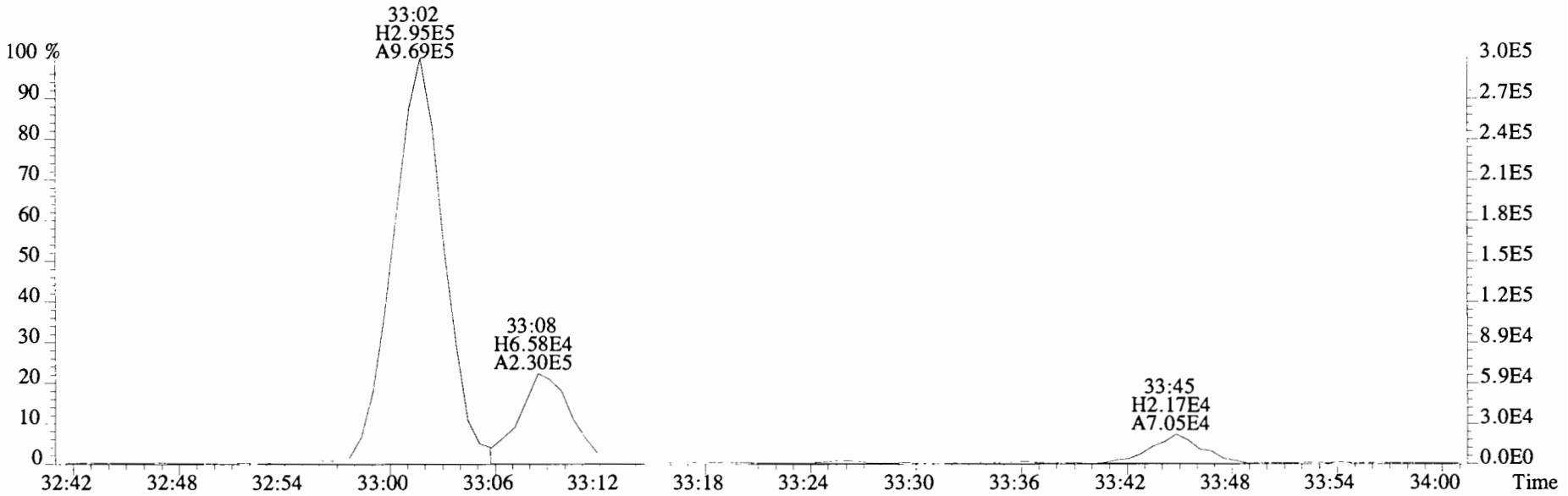


375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

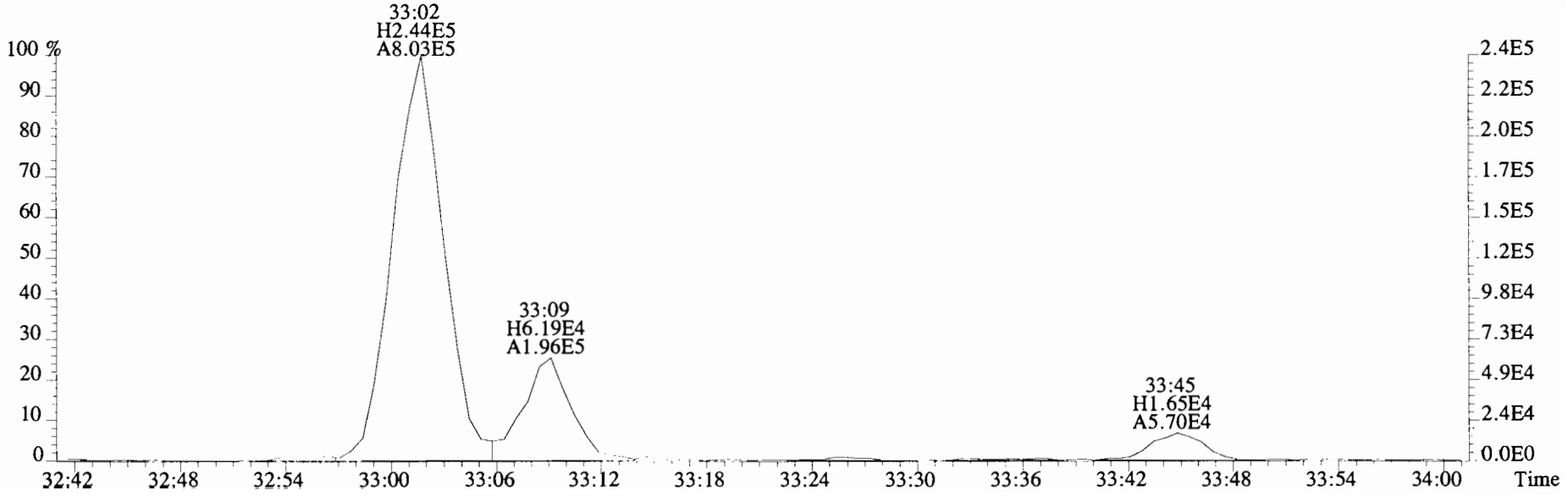


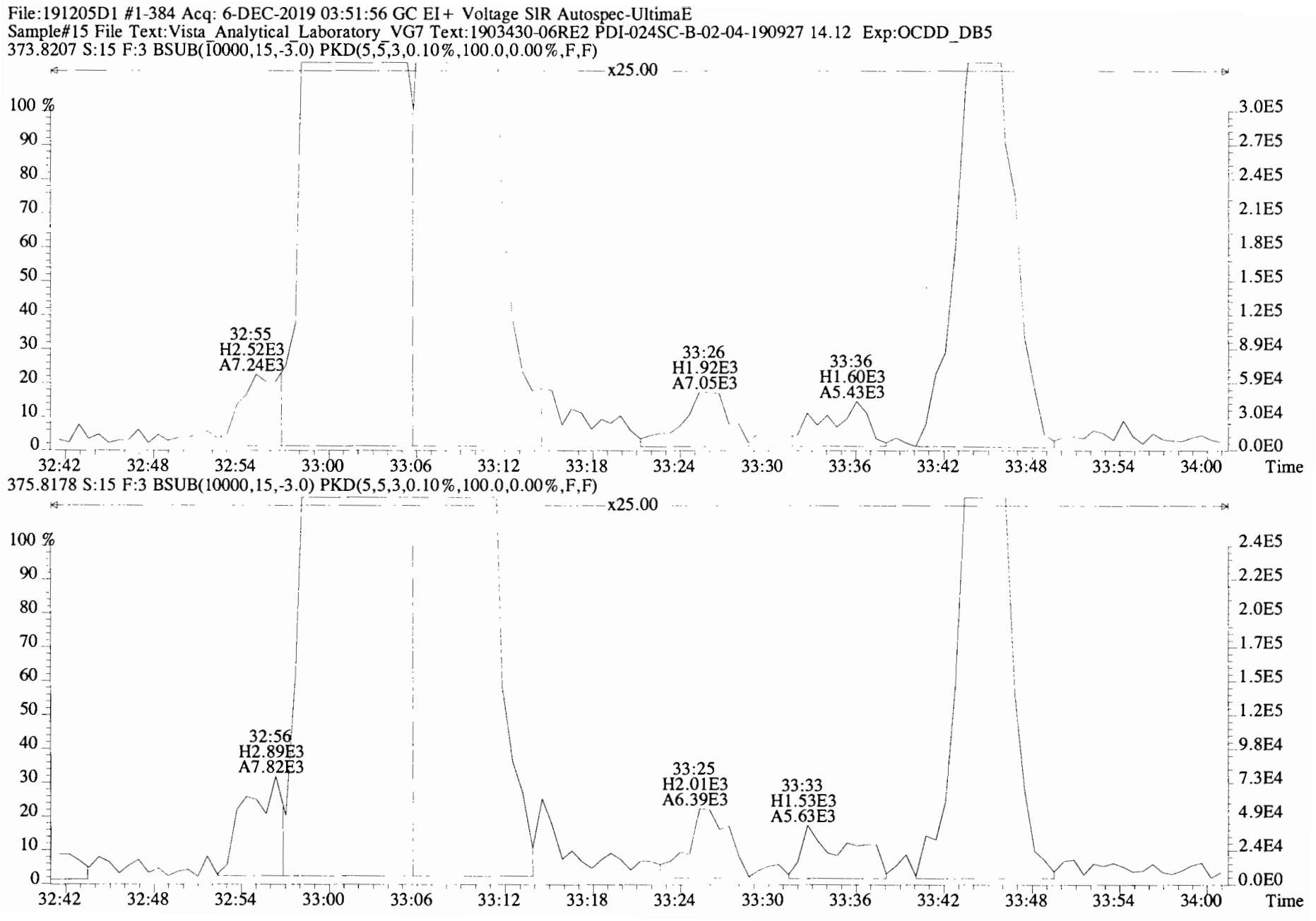

File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x15.00
32:22
H2.40E3
A6.35E3
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x15.00
32:23
H2.07E3
A5.18E3
100 %
90
80
70
60
50
40
30
20
10
0
1.0E5
9.1E4
8.1E4
7.0E4
6.0E4
5.0E4
4.0E4
3.0E4
2.0E4
1.0E4
0.0E0
7.6E4
6.8E4
6.1E4
5.3E4
4.6E4
3.8E4
3.0E4
2.3E4
1.5E4
7.6E3
31:48
31:54
32:00
32:06
32:12
32:18
32:24
32:30
32:36
32:42
32:48
Time

File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

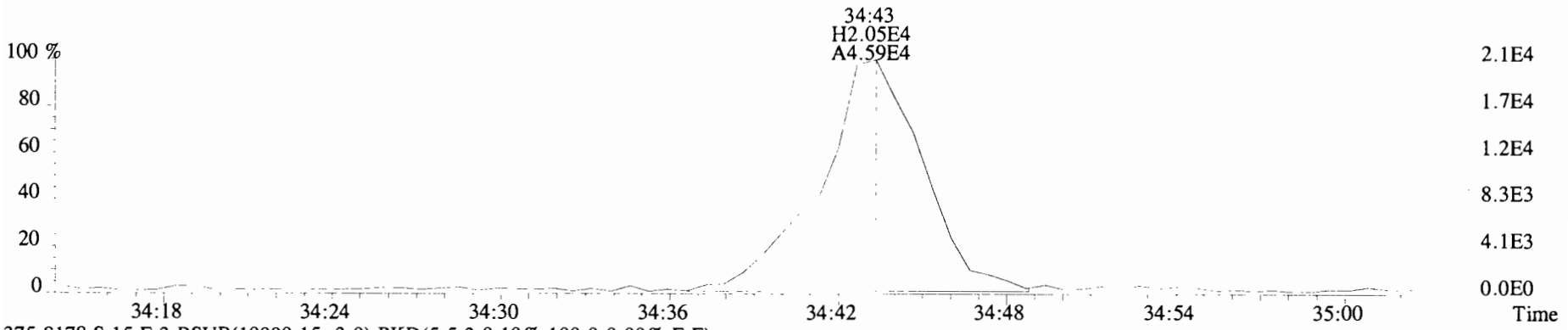


375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

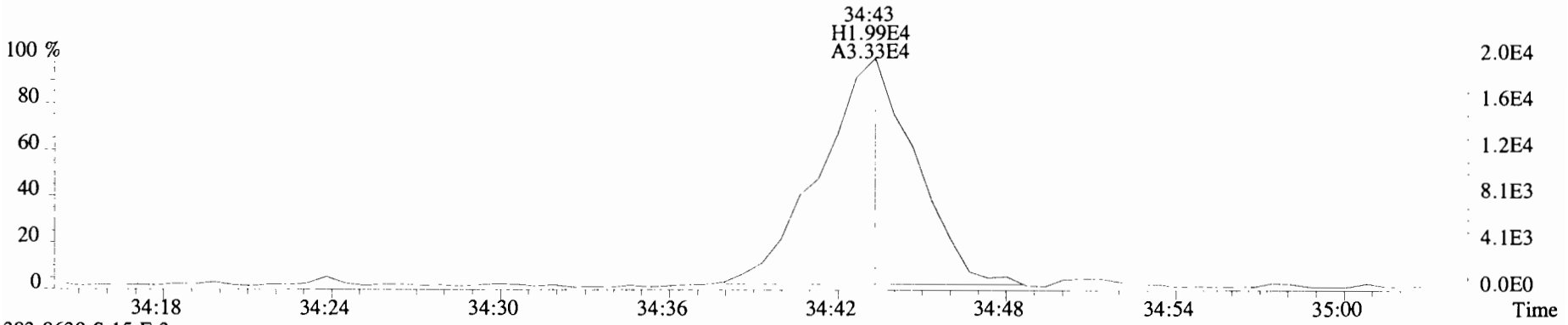



File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x25.00
32:55
H2.52E3
A7.24E3
33:26
H1.92E3
A7.05E3
33:36
H1.60E3
A5.43E3
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x25.00
32:56
H2.89E3
A7.82E3
33:25
H2.01E3
A6.39E3
33:33
H1.53E3
A5.63E3
Time

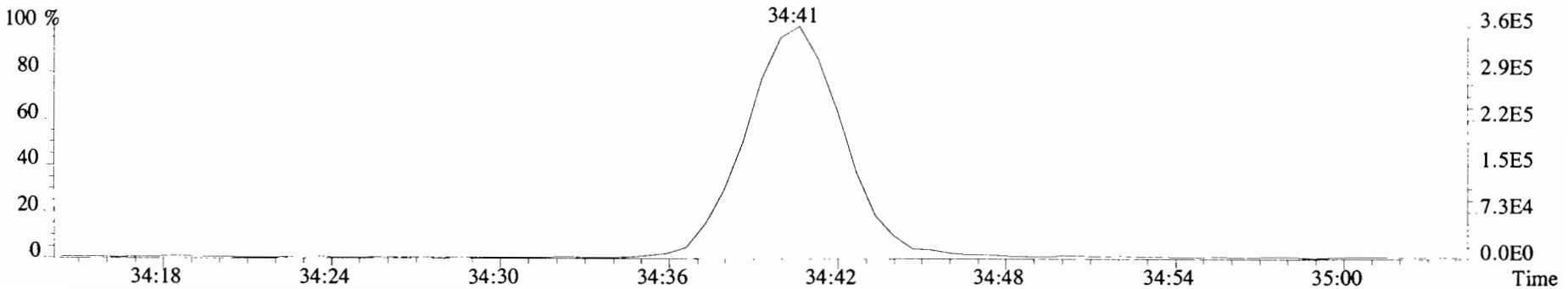
File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

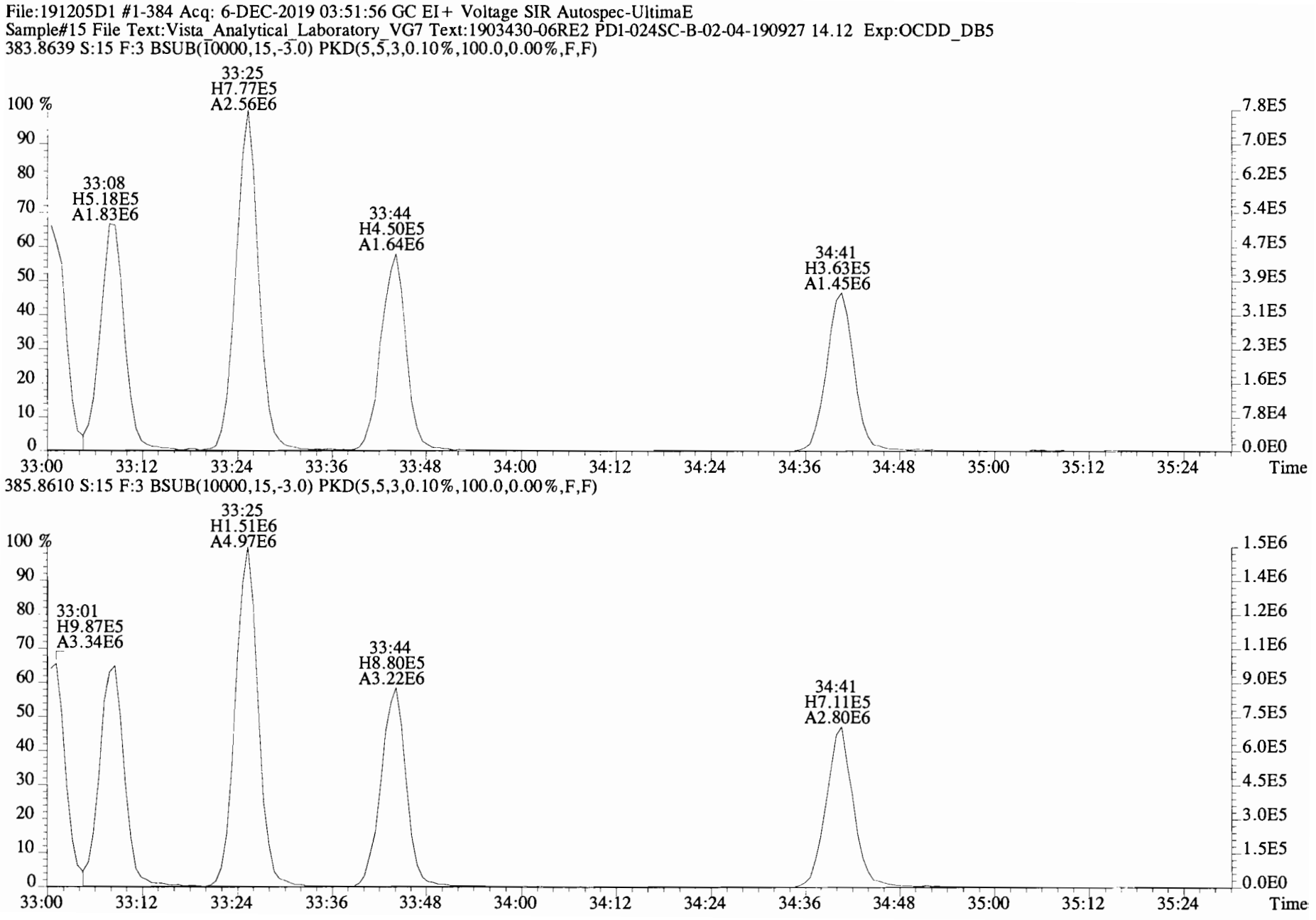


375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



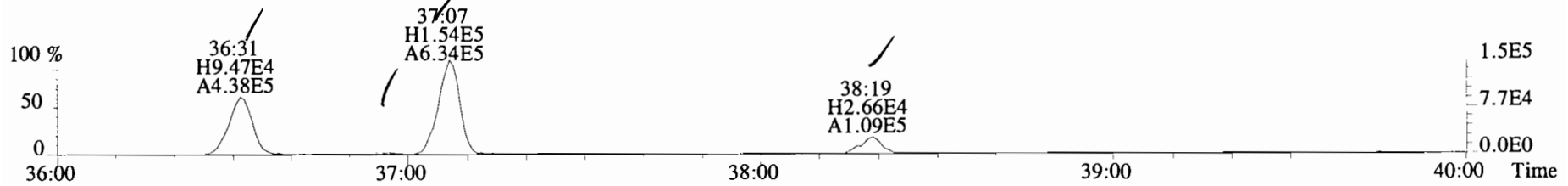
383.8639 S:15 F:3



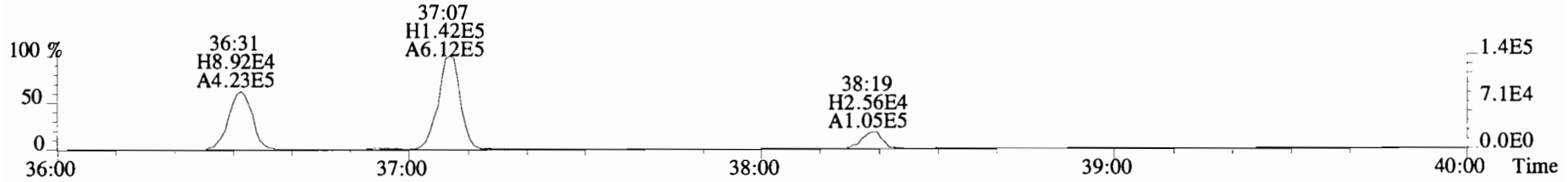

File:191205D1 #1-384 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PD1-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:25
H7.77E5
A2.56E6
33:08
H5.18E5
A1.83E6
33:44
H4.50E5
A1.64E6
34:41
H3.63E5
A1.45E6
100 %
90
80
70
60
50
40
30
20
10
0
7.8E5
7.0E5
6.2E5
5.4E5
4.7E5
3.9E5
3.1E5
2.3E5
1.6E5
7.8E4
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time
385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:25
H1.51E6
A4.97E6
33:01
H9.87E5
A3.34E6
33:44
H8.80E5
A3.22E6
34:41
H7.11E5
A2.80E6
100 %
90
80
70
60
50
40
30
20
10
0
1.5E6
1.4E6
1.2E6
1.1E6
9.0E5
7.5E5
6.0E5
4.5E5
3.0E5
1.5E5
0.0E0
33:00
33:12
33:24
33:36
33:48
34:00
34:12
34:24
34:36
34:48
35:00
35:12
35:24
Time

File:191205D1 #1-356 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5

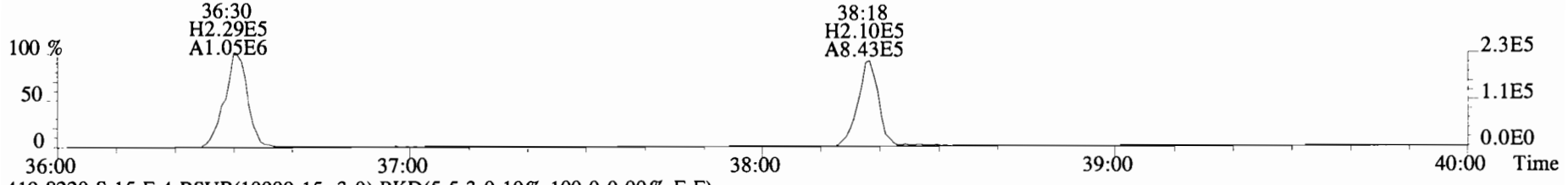
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



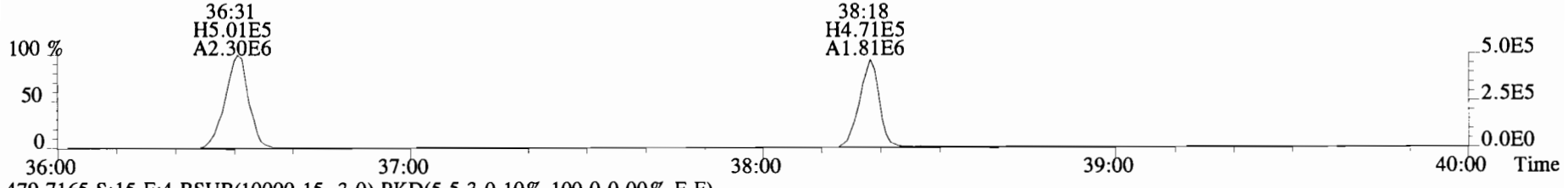
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



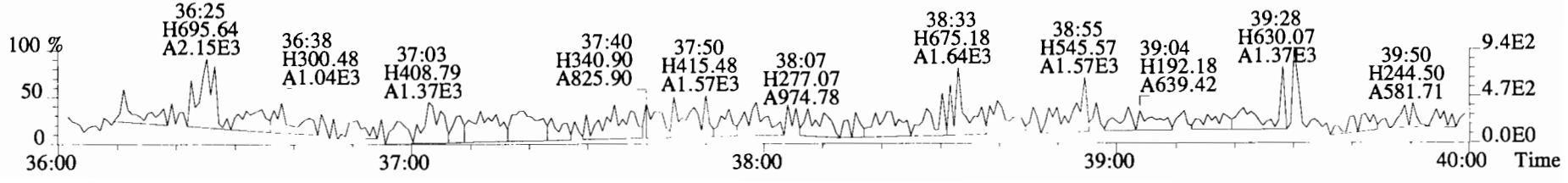
417.8253 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



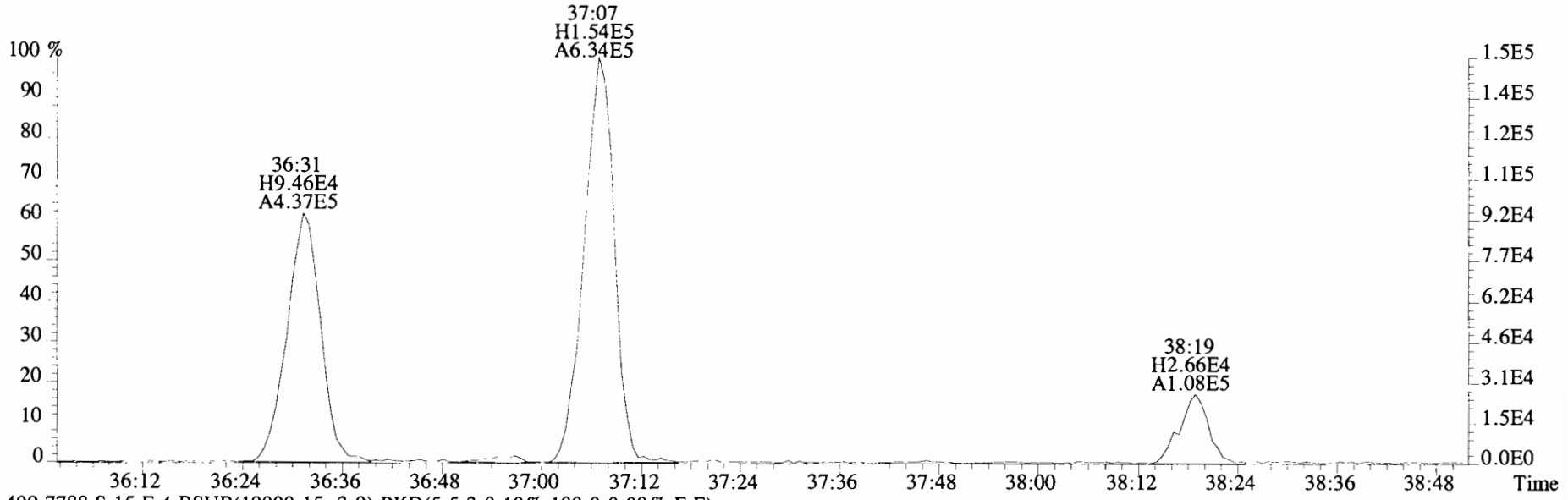
419.8220 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



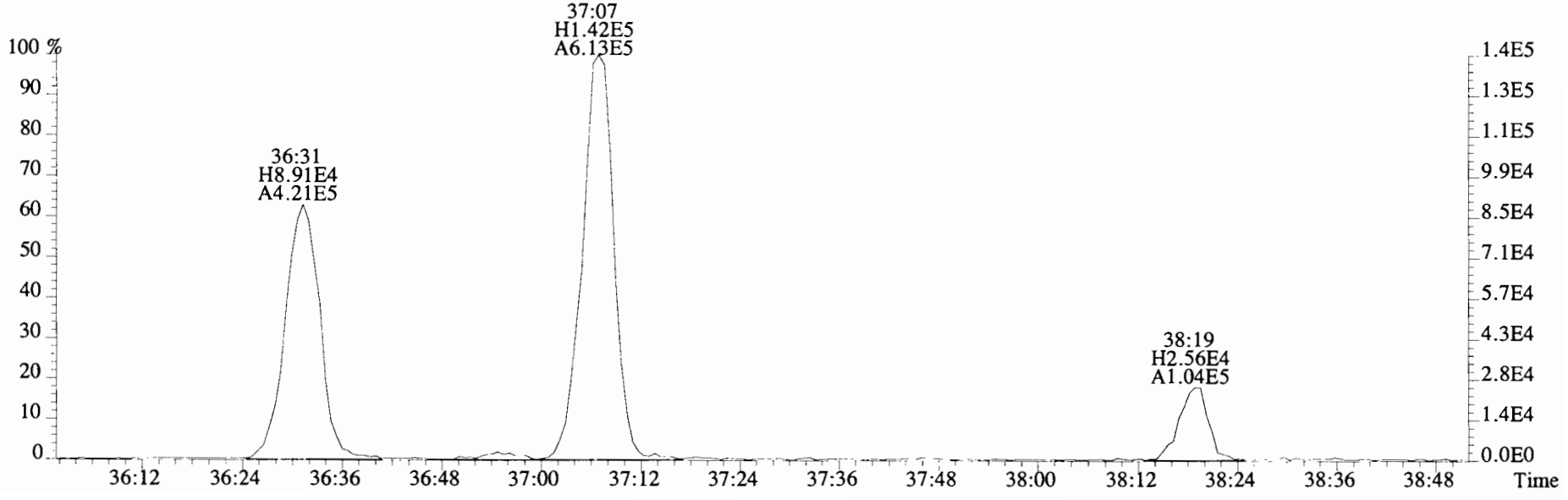
479.7165 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



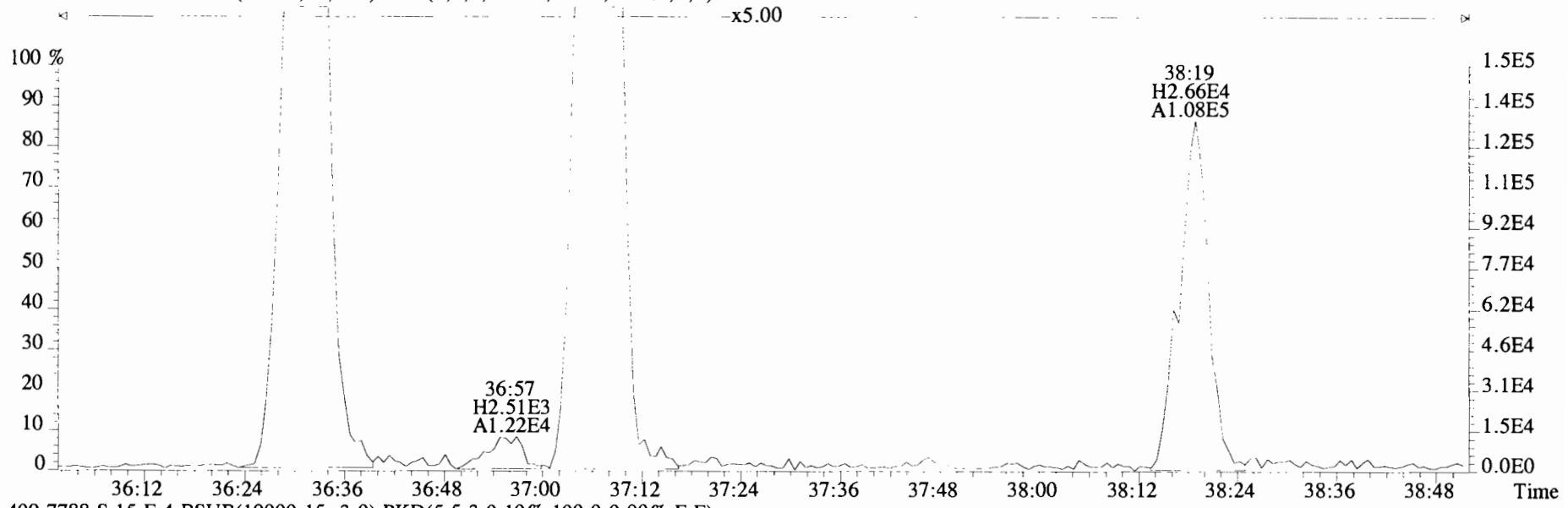
File:191205D1 #1-356 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



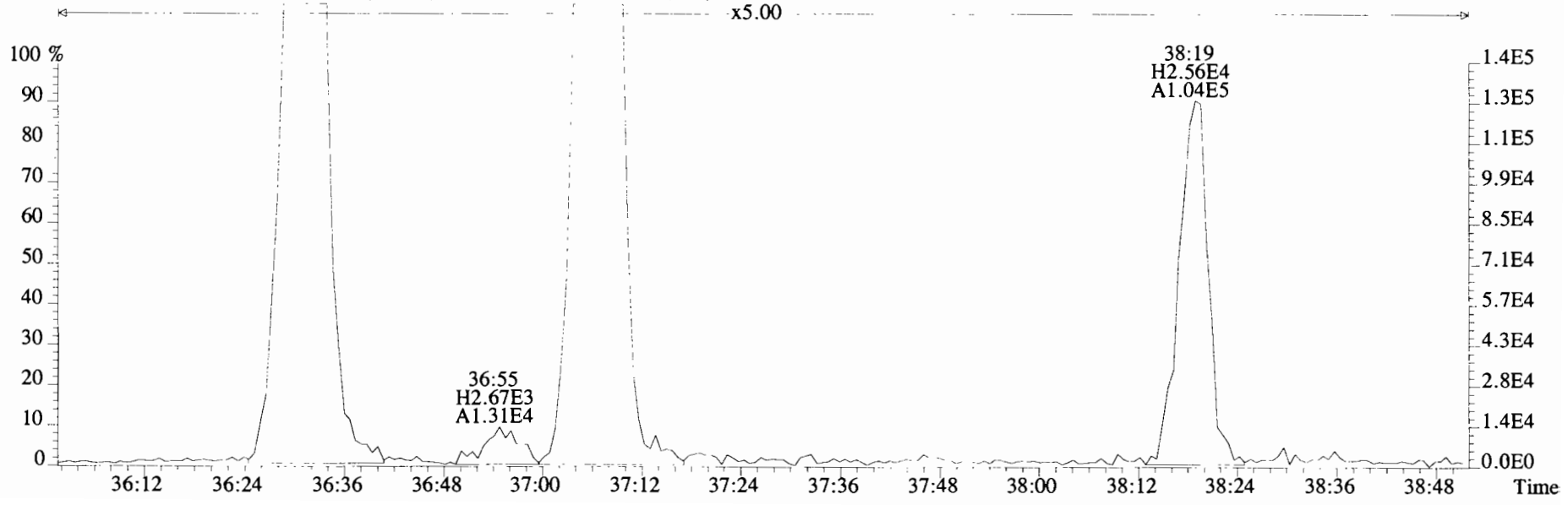
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

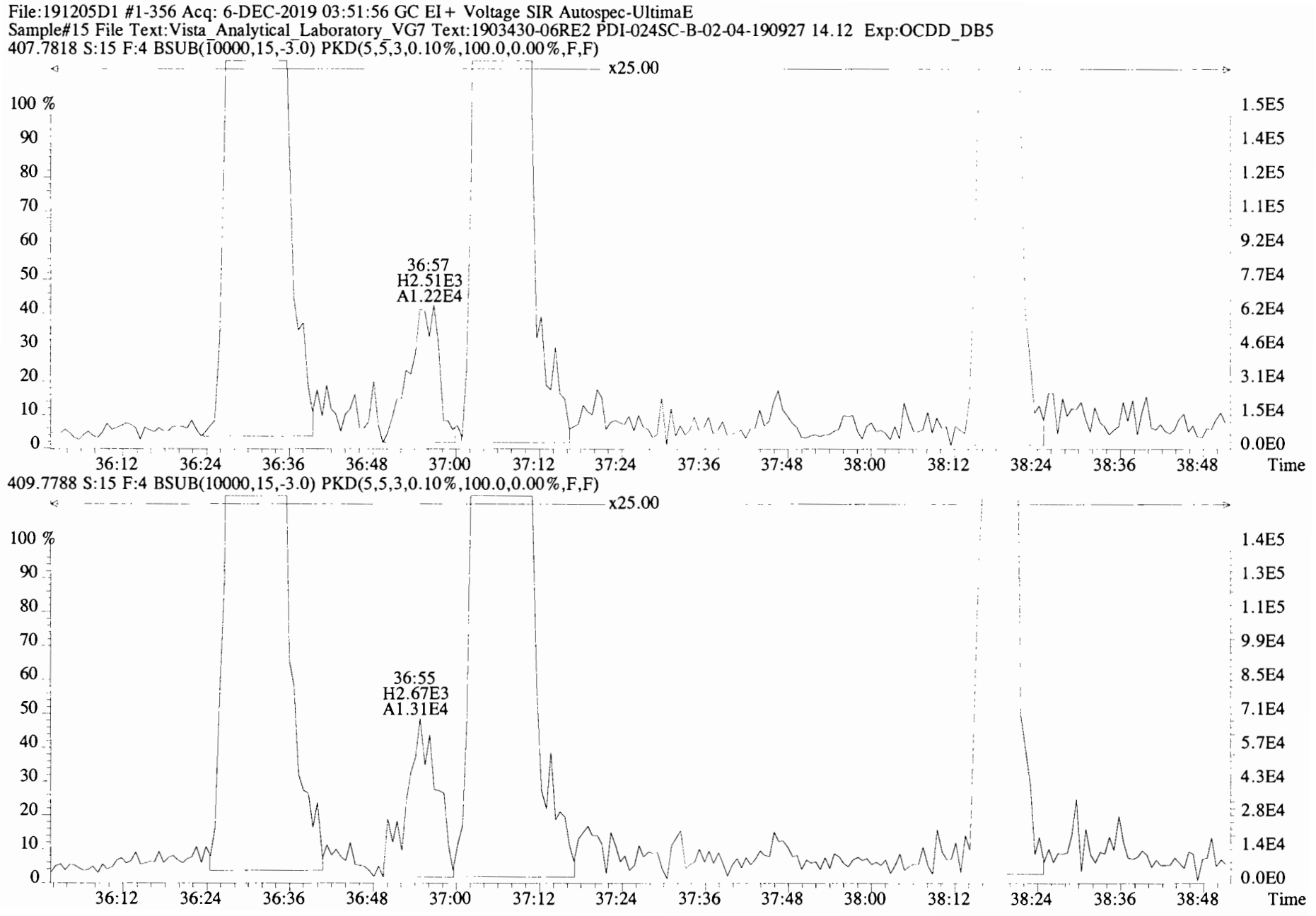


File:191205D1 #1-356 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



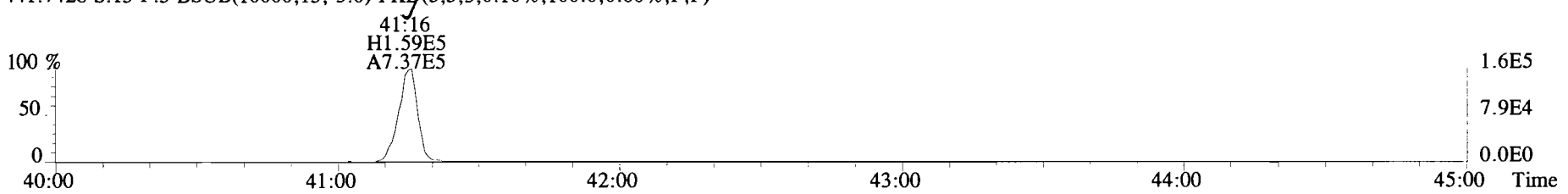
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



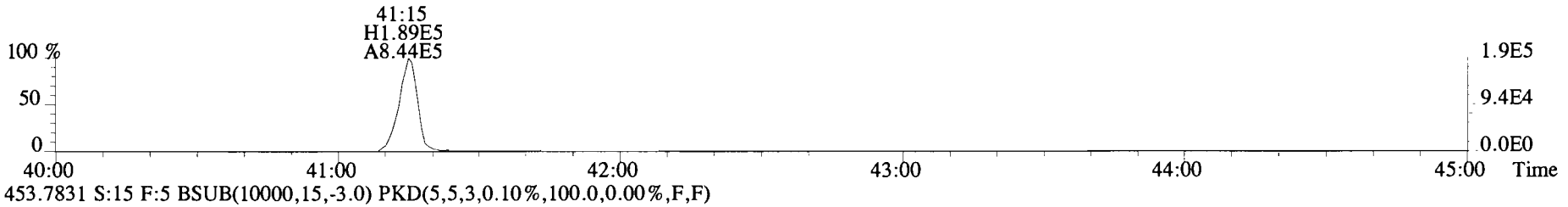

File:191205D1 #1-356 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x25.00
36:57
H2.51E3
A1.22E4
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x25.00
36:55
H2.67E3
A1.31E4
Time

File:191205D1 #1-431 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5

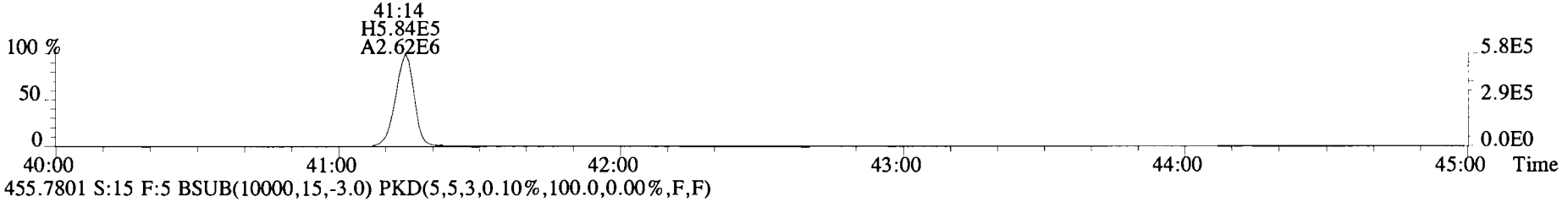
441.7428 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



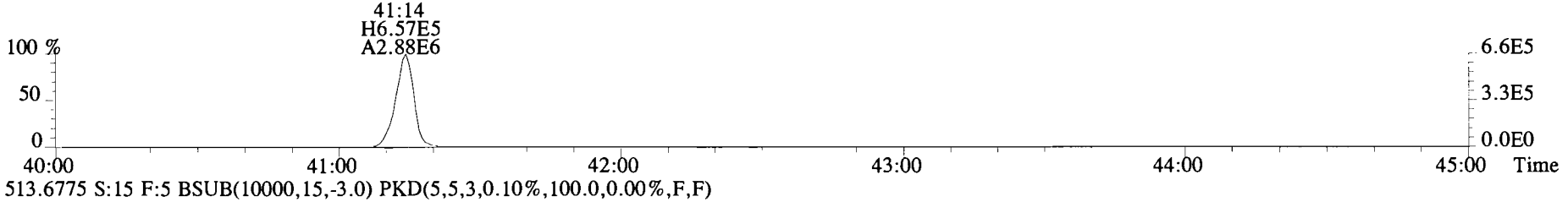
443.7398 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



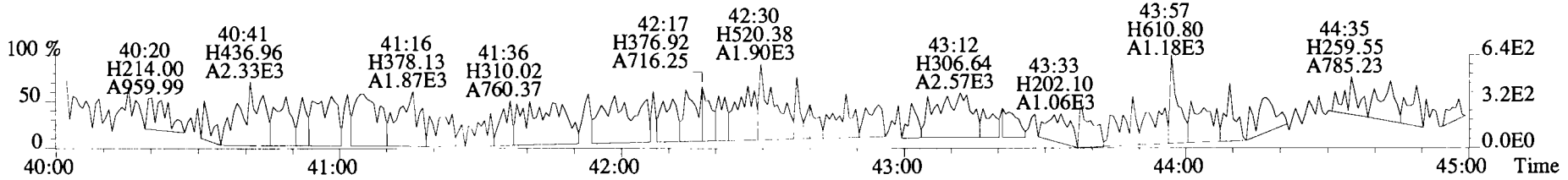
453.7831 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



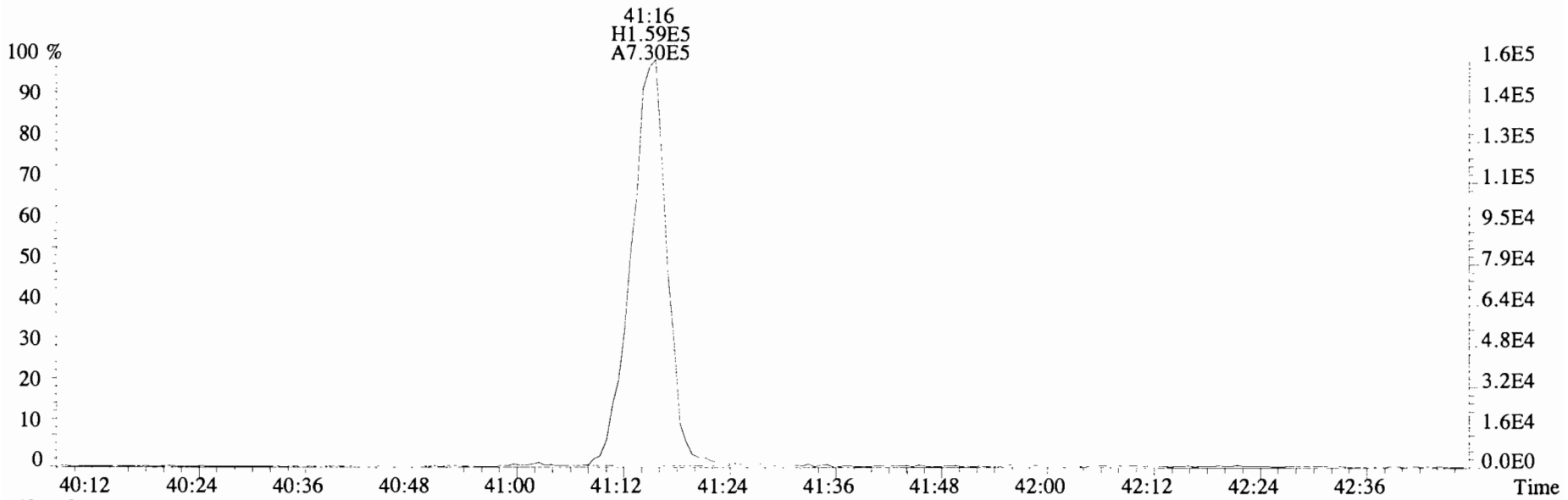
455.7801 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



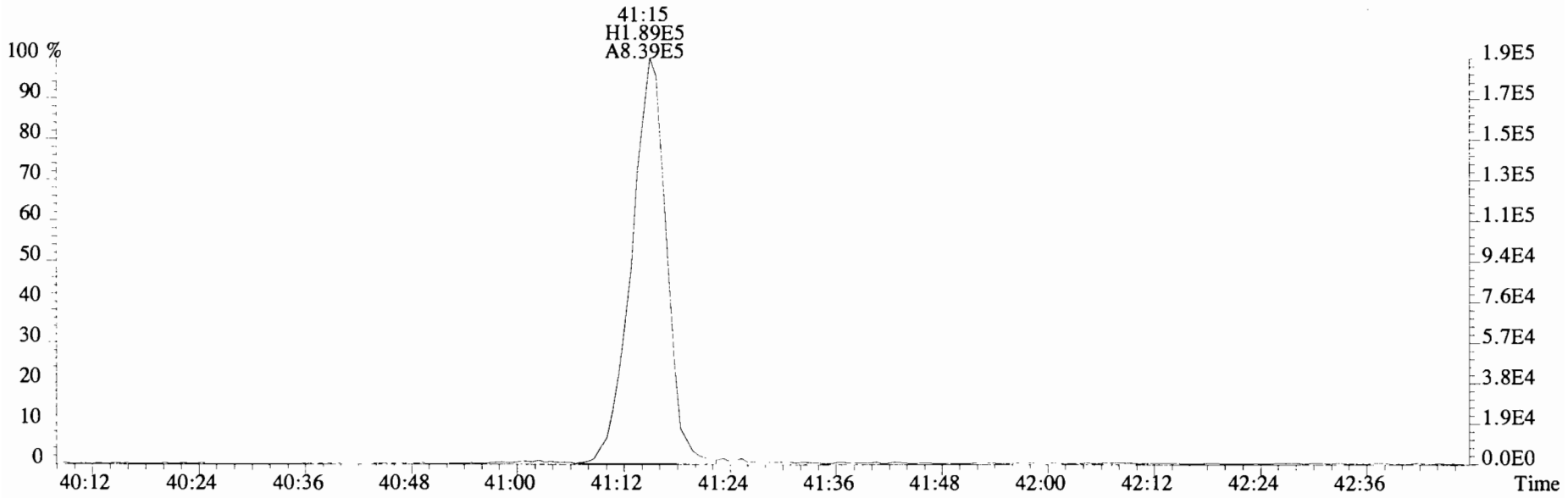
513.6775 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191205D1 #1-431 Acq: 6-DEC-2019 03:51:56 GC EI+ Voltage SIR Autospec-UltimaE
Sample#15 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE2 PDI-024SC-B-02-04-190927 14.12 Exp:OCDD_DB5
441.7428 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



Client ID: EDI-024SC-B-04-06-1909╗ Filename: 191016D1 S:9 Acq:16-OCT-19 17:15:05 ConCal: ST191016D1-1
Lab ID: 1903430-07 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.347 ✓ EndCAL: NA

	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	0.91	NotF╗	*		181	2.5	0.0752
	1,2,3,7,8-PeCDD	*	*	n	0.90	NotF╗	*		195	2.5	0.0630
	1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF╗	*		170	2.5	0.0721
	1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF╗	*		170	2.5	0.0794
	1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF╗	*		170	2.5	0.0796
	1,2,3,4,6,7,8-HpCDD	9.35e+03	1.10	y	0.98	37:56	0.26520		*	2.5	*
	OCDD	7.56e+04	0.78	y	0.96	41:13	2.5259		*	2.5	*
	2,3,7,8-TCDF	*	*	n	0.95	NotF╗	*		175	2.5	0.0537
	1,2,3,7,8-PeCDF	*	*	n	0.96	NotF╗	*		215	2.5	0.0676
	2,3,4,7,8-PeCDF	*	*	n	1.01	NotF╗	*		215	2.5	0.0631
	1,2,3,4,7,8-HxCDF	5.28e+03	0.83	n	1.18	33:11	0.091035		*	2.5	*
	1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF╗	*		176	2.5	0.0309
	2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF╗	*		176	2.5	0.0368
	1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF╗	*		176	2.5	0.0461
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF╗	*		131	2.5	0.0379
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF╗	*		131	2.5	0.0345
	OCDF	4.14e+03	0.77	y	0.95	41:27	0.11543		*	2.5	*
IS	13C-2,3,7,8-TCDD	8.34e+06	0.76	y	1.10	26:18	159.81				
IS	13C-1,2,3,7,8-PeCDD	8.03e+06	0.62	y	0.88	30:46	191.33				
IS	13C-1,2,3,4,7,8-HxCDD	7.12e+06	1.25	y	0.64	34:05	192.87				
IS	13C-1,2,3,6,7,8-HxCDD	7.95e+06	1.24	y	0.86	34:11	161.72				
IS	13C-1,2,3,7,8,9-HxCDD	8.06e+06	1.25	y	0.81	34:29	173.90				
IS	13C-1,2,3,4,6,7,8-HpCDD	6.96e+06	1.03	y	0.65	37:55	185.15				
IS	13C-OCDD	1.21e+07	0.91	y	0.58	41:13	362.15				
IS	13C-2,3,7,8-TCDF	1.16e+07	0.82	y	1.03	25:31	138.13				
IS	13C-1,2,3,7,8-PeCDF	1.21e+07	1.61	y	0.85	29:36	175.52				
IS	13C-2,3,4,7,8-PeCDF	1.17e+07	1.58	y	0.85	30:29	170.93				
IS	13C-1,2,3,4,7,8-HxCDF	9.53e+06	0.51	y	0.83	33:11	199.27				
IS	13C-1,2,3,6,7,8-HxCDF	1.11e+07	0.51	y	1.03	33:18	187.39				
IS	13C-2,3,4,6,7,8-HxCDF	1.01e+07	0.51	y	0.95	33:54	185.05				
IS	13C-1,2,3,7,8,9-HxCDF	9.24e+06	0.51	y	0.83	34:51	194.27				
IS	13C-1,2,3,4,6,7,8-HpCDF	7.73e+06	0.41	y	0.76	36:43	177.57				
IS	13C-1,2,3,4,7,8,9-HpCDF	6.35e+06	0.41	y	0.58	38:28	189.97				
IS	13C-OCDF	1.46e+07	0.89	y	0.69	41:26	369.75				
C/Up	37Cl-2,3,7,8-TCDD	3.61e+06			1.20	26:19	63.211				
RS/RT	13C-1,2,3,4-TCDD	9.21e+06	0.75	y	1.00	25:44	193.29				
RS	13C-1,2,3,4-TCDF	1.57e+07	0.82	y	1.00	24:20	193.29				
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.11e+07	0.53	y	1.00	33:36	193.29				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		181	0.0752
Total Penta-Dioxins	*	*		195	0.0630
Total Hexa-Dioxins	*	0.112		*	*
Total Hepta-Dioxins	0.762	0.762		*	*
Total Tetra-Furans	*	*		175	0.0537
Total Penta-Furans	0.0000	0.0000		215	0.0653
Total Hexa-Furans	*	0.0910		*	*
Total Hepta-Furans	*	*		131	0.0363

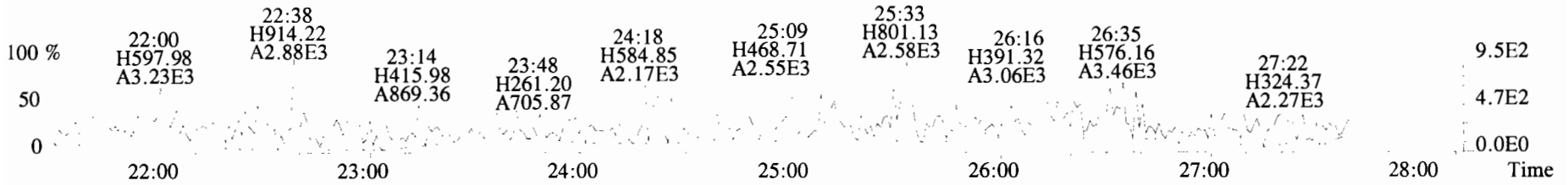
	Rec	Qual
IS	82.7	
IS	99.0	
IS	99.8	
IS	83.7	
IS	90.0	
IS	95.8	
IS	93.7	
IS	71.5	
IS	90.8	
IS	88.4	
IS	103	
IS	96.9	
IS	95.7	
IS	101	
IS	91.9	
IS	98.3	
IS	95.6	
C/Up	81.8	

Integrations by Analyst: DB
Date: 11/1/19

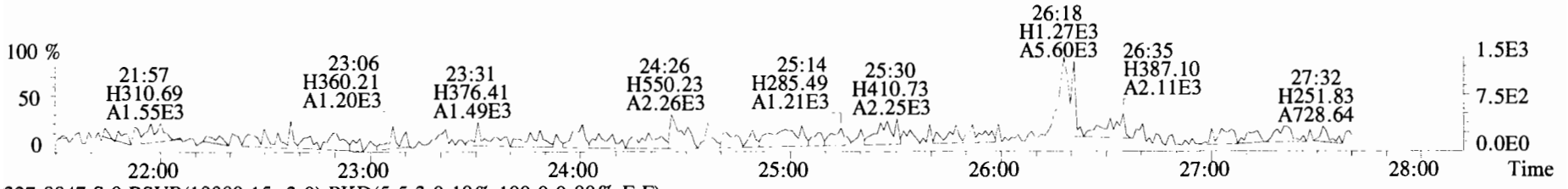
Reviewed by Analyst: CT
Date: 11/04/19

File:191016D1 #1-492 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5

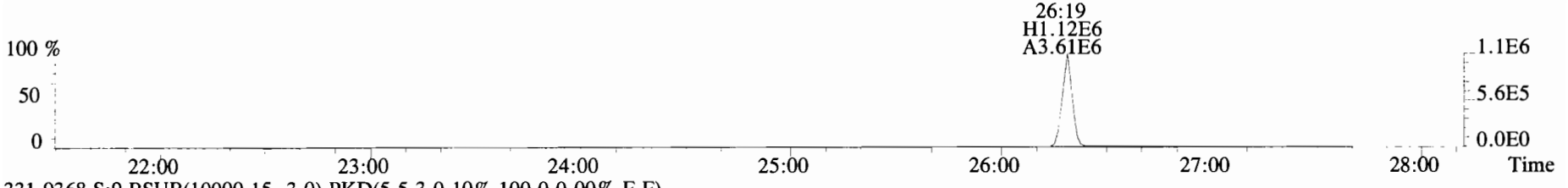
319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



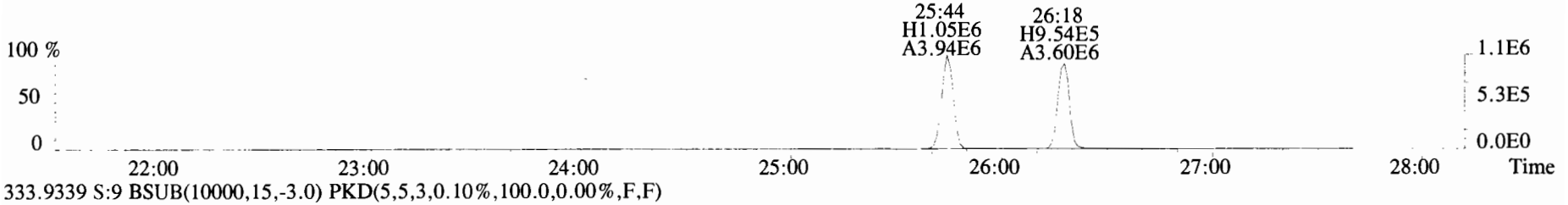
321.8936 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



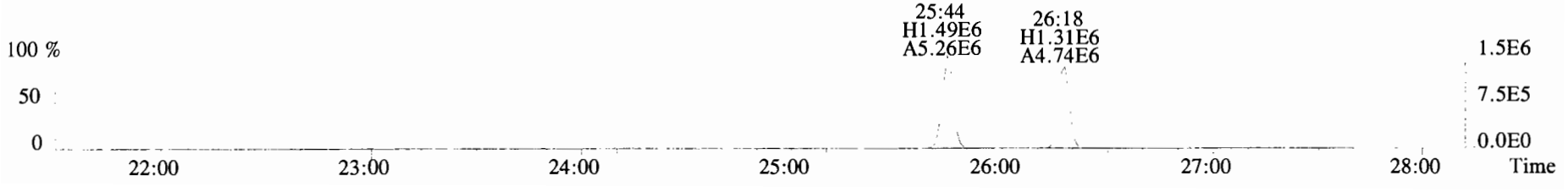
327.8847 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



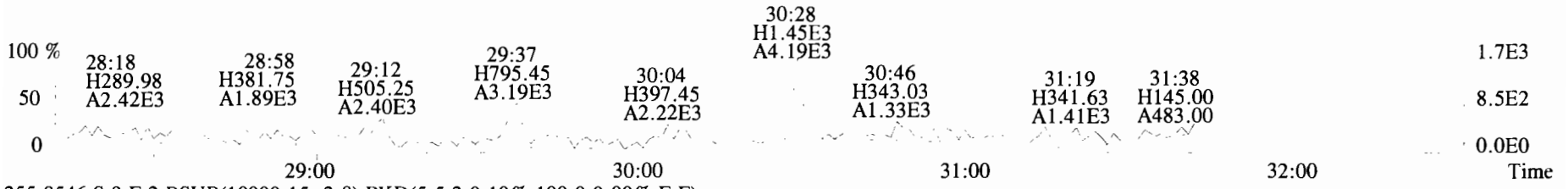
331.9368 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



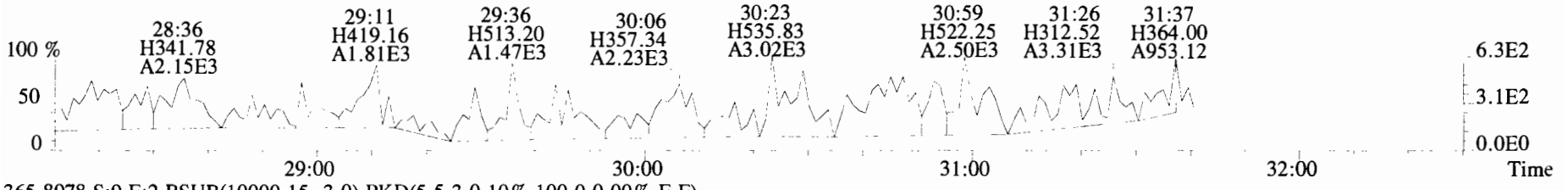
333.9339 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



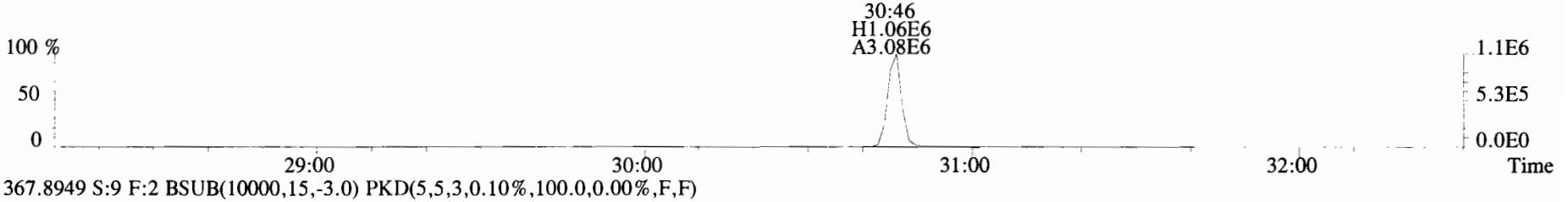
File:191016D1 #1-211 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
353.8576 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



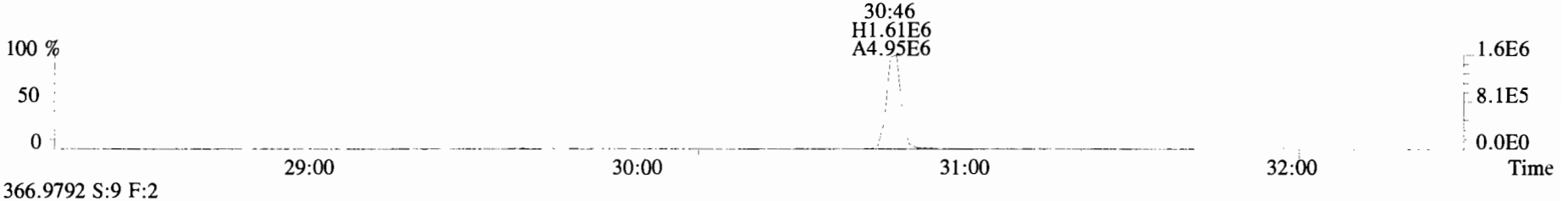
355.8546 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



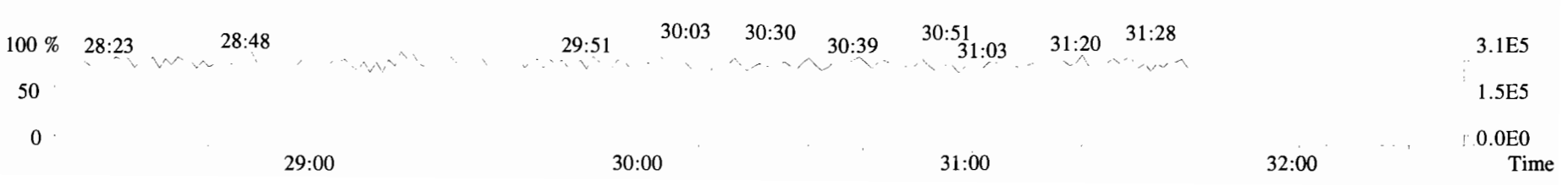
365.8978 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

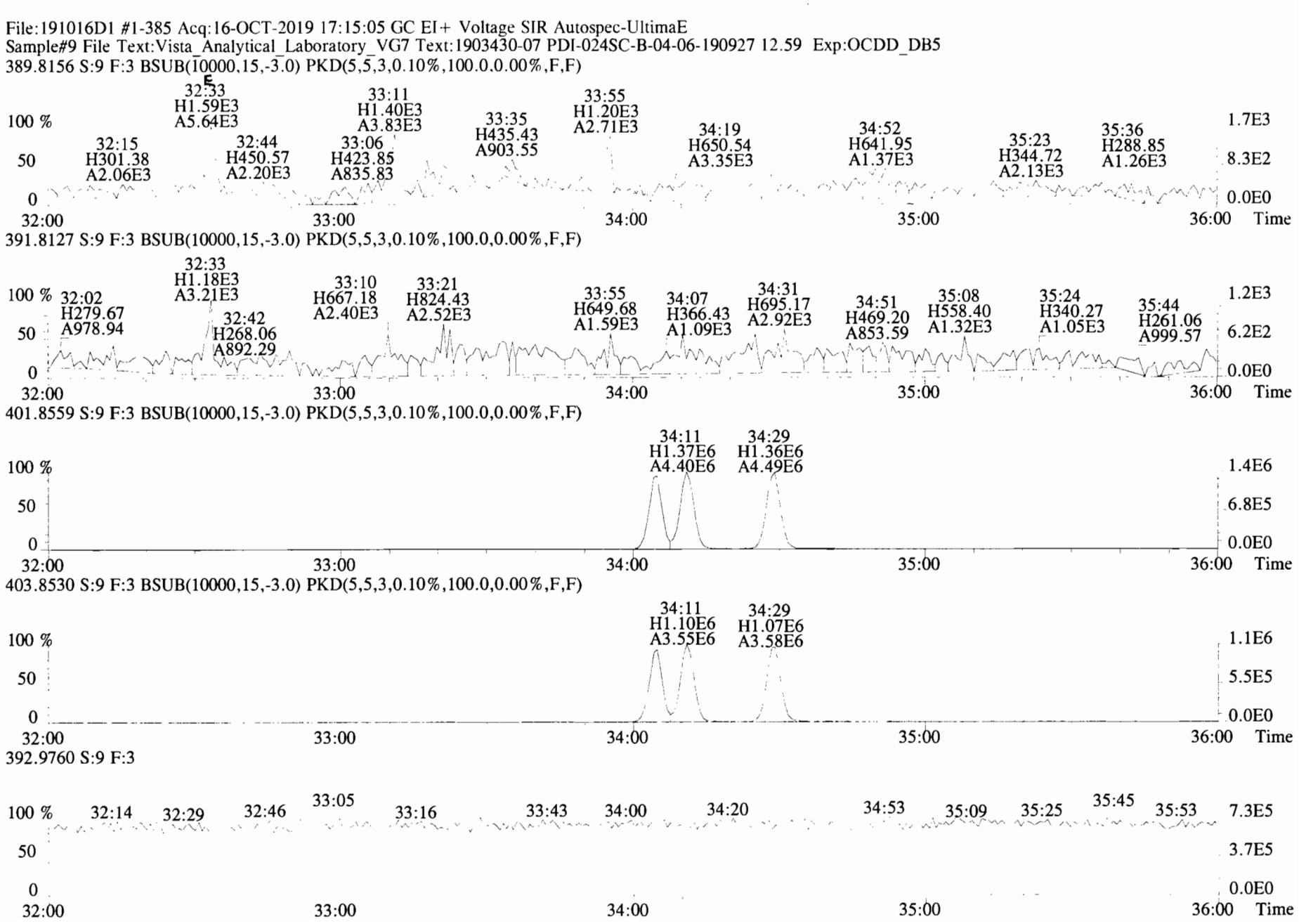


367.8949 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

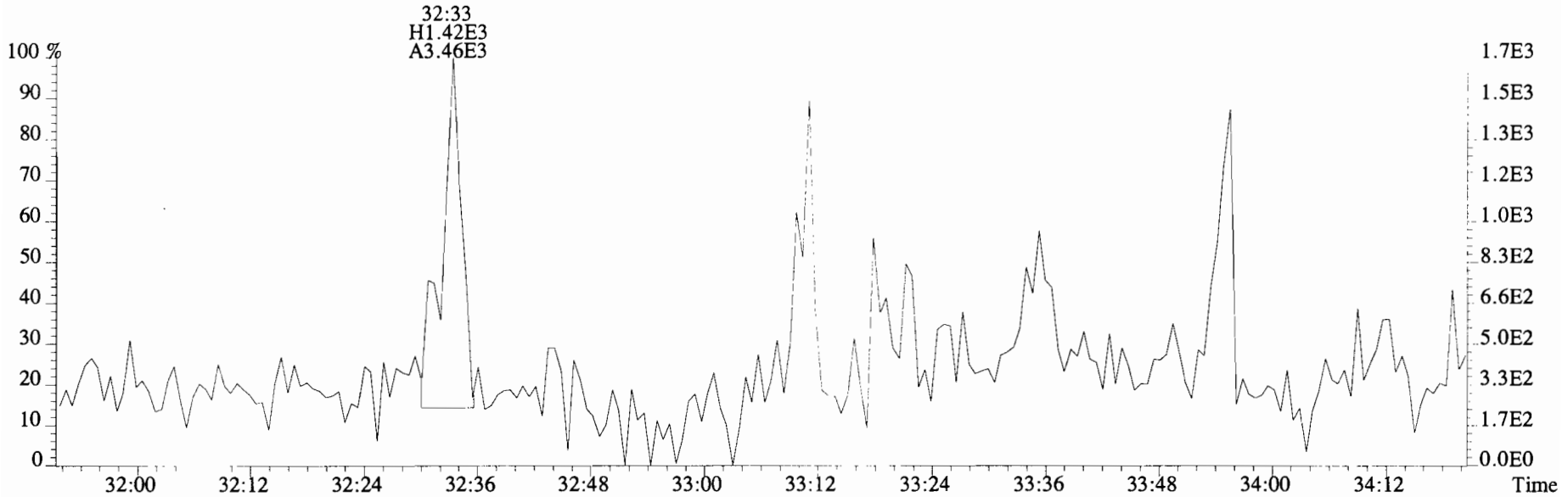


366.9792 S:9 F:2

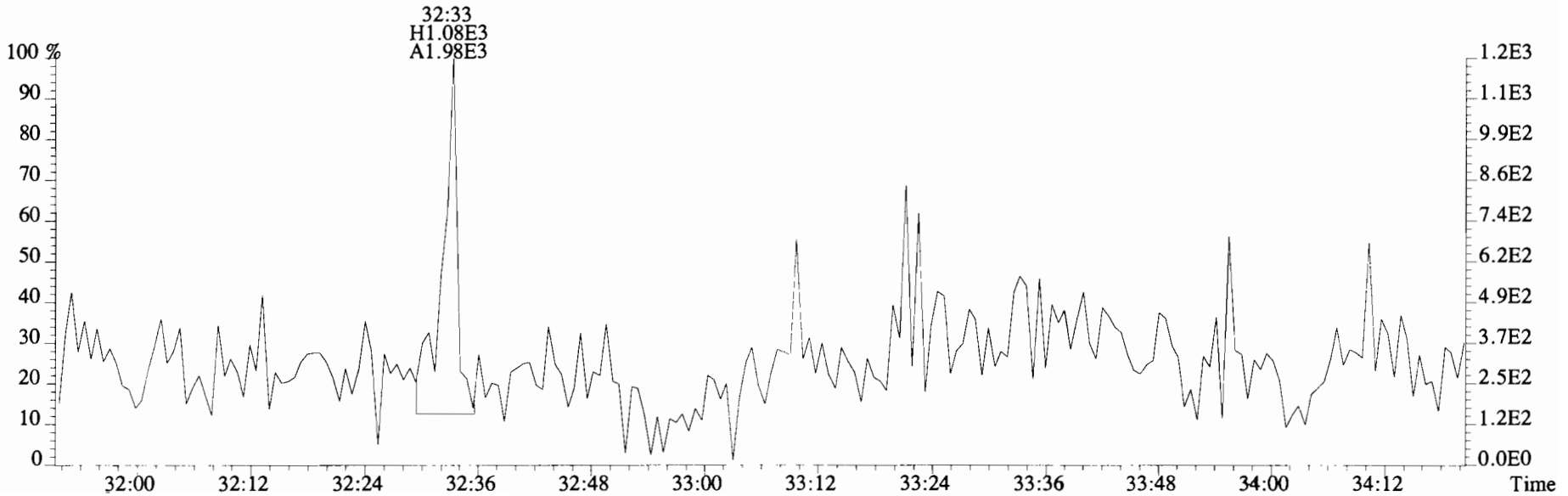



File:191016D1 #1-385 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:33 H1.59E3 A5.64E3
33:11 H1.40E3 A3.83E3
33:55 H1.20E3 A2.71E3
32:15 H301.38 A2.06E3
32:44 H450.57 A2.20E3
33:06 H423.85 A835.83
33:35 H435.43 A903.55
34:19 H650.54 A3.35E3
34:52 H641.95 A1.37E3
35:23 H344.72 A2.13E3
35:36 H288.85 A1.26E3
100 %
50
0
1.7E3
8.3E2
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
391.8127 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:33 H1.18E3 A3.21E3
33:10 H667.18 A2.40E3
33:21 H824.43 A2.52E3
32:02 H279.67 A978.94
32:42 H268.06 A892.29
33:55 H649.68 A1.59E3
34:07 H366.43 A1.09E3
34:31 H695.17 A2.92E3
34:51 H469.20 A853.59
35:08 H558.40 A1.32E3
35:24 H340.27 A1.05E3
35:44 H261.06 A999.57
100 %
50
0
1.2E3
6.2E2
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H1.37E6 A4.40E6
34:29 H1.36E6 A4.49E6
100 %
50
0
1.4E6
6.8E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
403.8530 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H1.10E6 A3.55E6
34:29 H1.07E6 A3.58E6
100 %
50
0
1.1E6
5.5E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
392.9760 S:9 F:3
32:14
32:29
32:46
33:05
33:16
33:43
34:00
34:20
34:53
35:09
35:25
35:45
35:53
100 %
50
0
7.3E5
3.7E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time

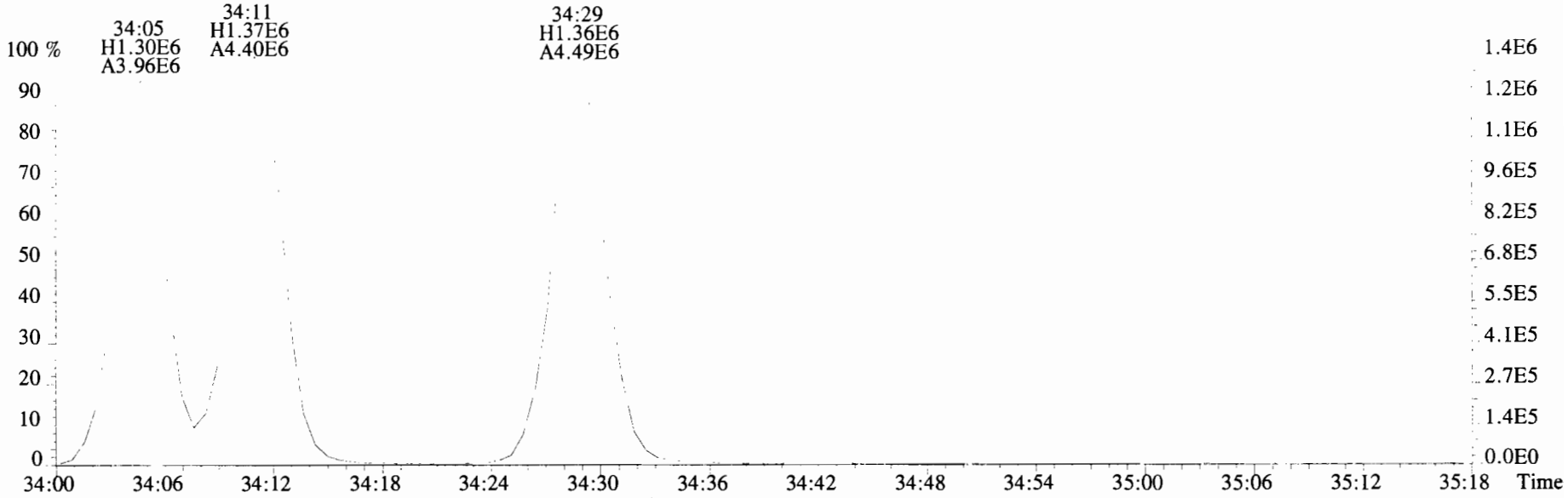
File:191016D1 #1-385 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



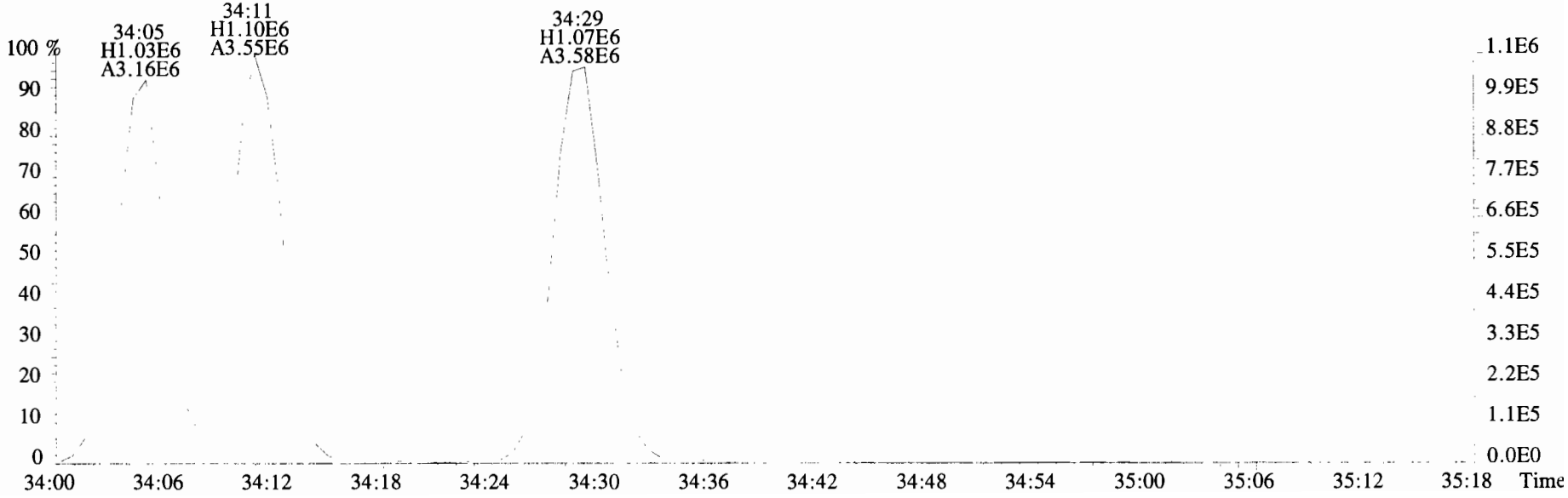
391.8127 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

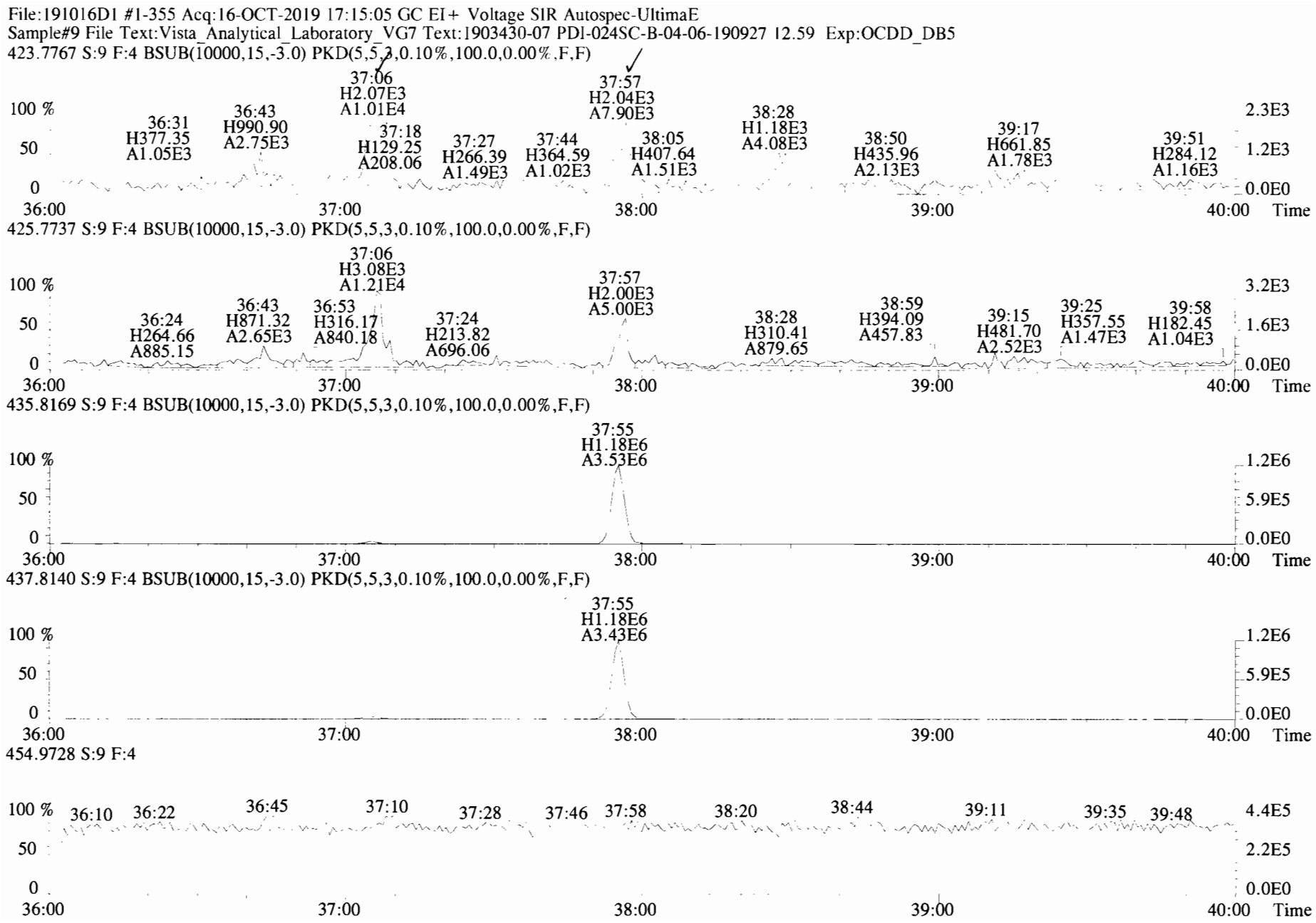


File:191016D1 #1-385 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

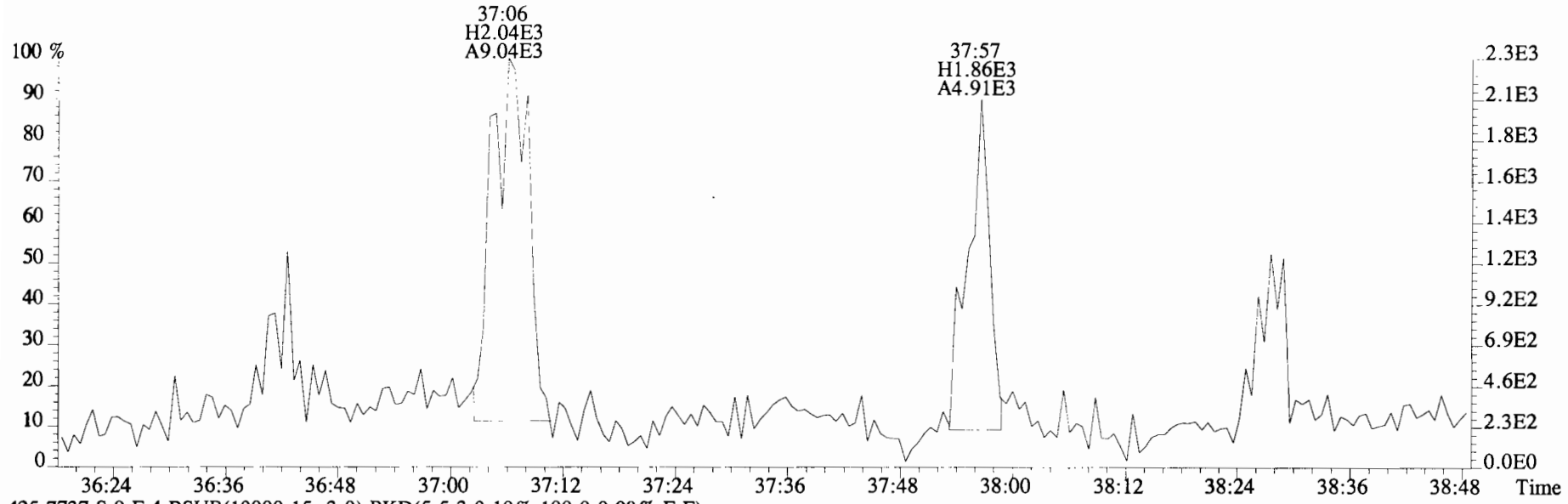


403.8530 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

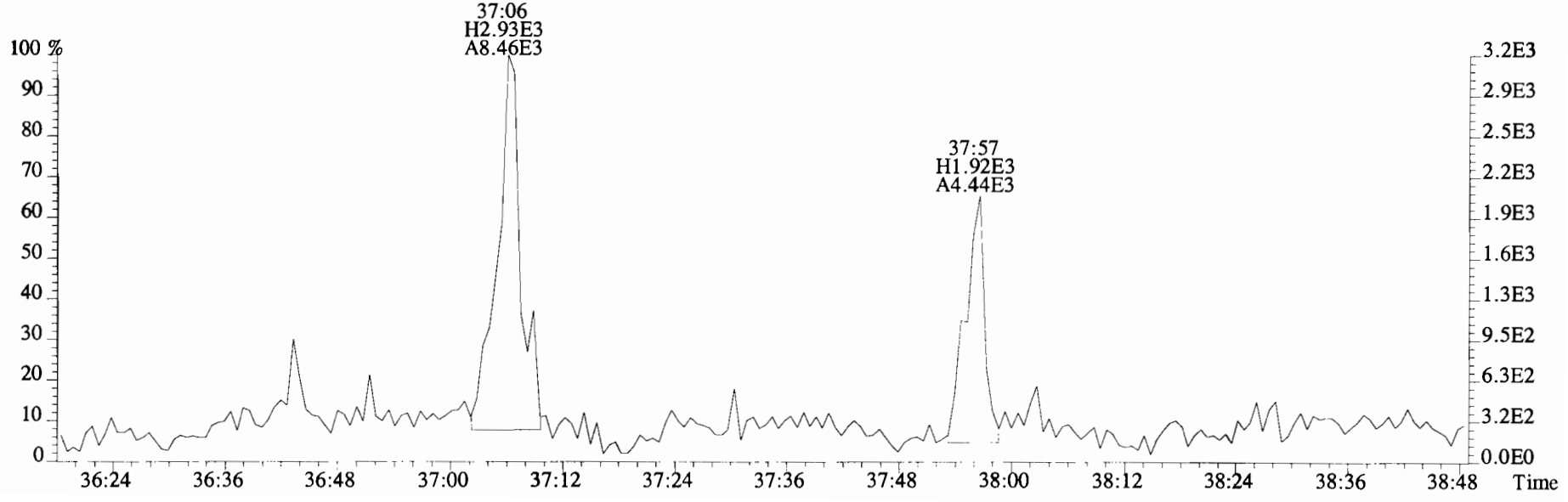


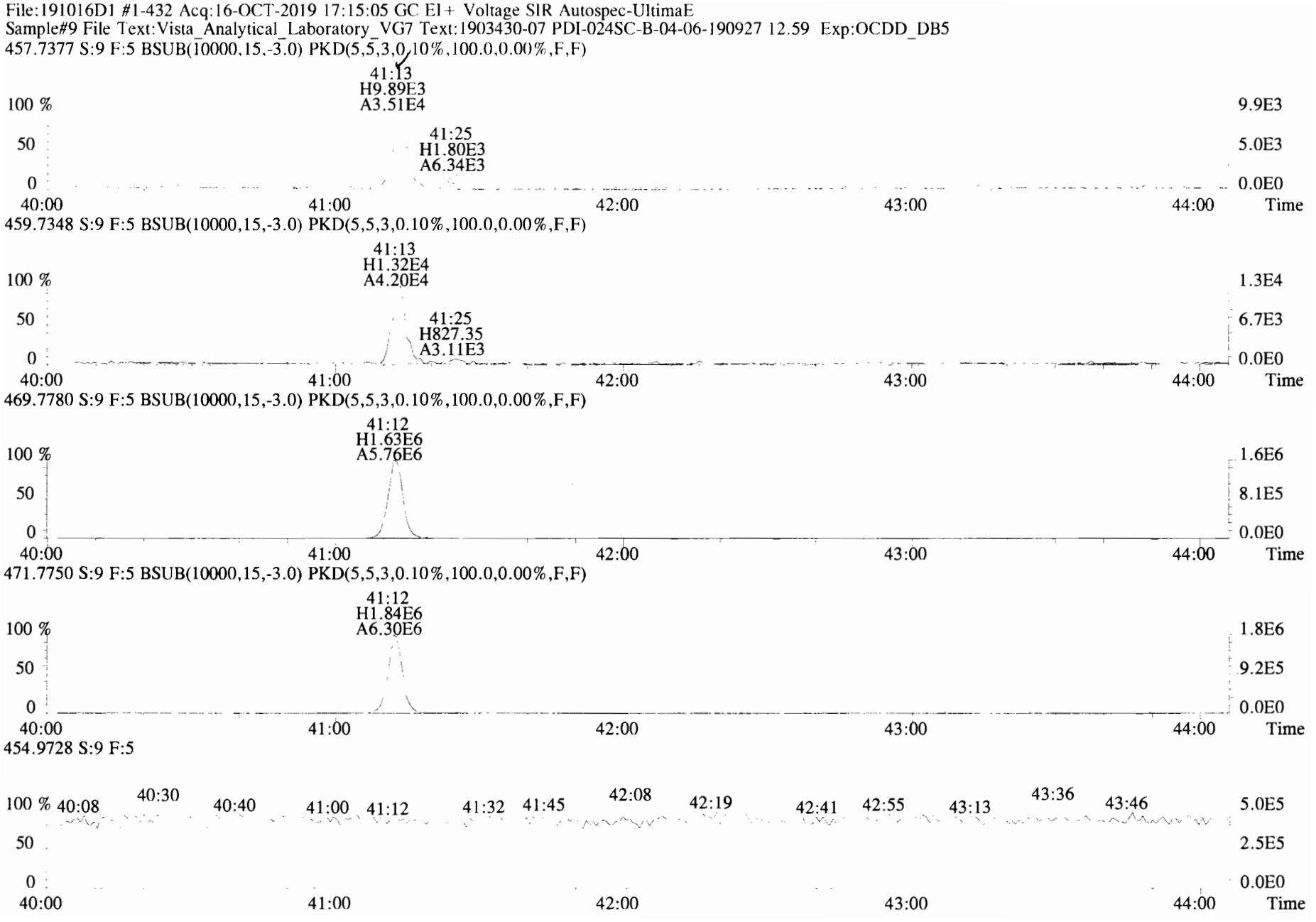

File:191016D1 #1-355 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
423.7767 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:06 H2.07E3 A1.01E4
37:57 H2.04E3 A7.90E3
36:31 H377.35 A1.05E3
36:43 H990.90 A2.75E3
37:18 H129.25 A208.06
37:27 H266.39 A1.49E3
37:44 H364.59 A1.02E3
38:05 H407.64 A1.51E3
38:28 H1.18E3 A4.08E3
38:50 H435.96 A2.13E3
39:17 H661.85 A1.78E3
39:51 H284.12 A1.16E3
425.7737 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:06 H3.08E3 A1.21E4
37:57 H2.00E3 A5.00E3
36:24 H264.66 A885.15
36:43 H871.32 A2.65E3
36:53 H316.17 A840.18
37:24 H213.82 A696.06
38:28 H310.41 A879.65
38:59 H394.09 A457.83
39:15 H481.70 A2.52E3
39:25 H357.55 A1.47E3
39:58 H182.45 A1.04E3
435.8169 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:55 H1.18E6 A3.53E6
437.8140 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:55 H1.18E6 A3.43E6
454.9728 S:9 F:4
36:10 36:22 36:45 37:10 37:28 37:46 37:58 38:20 38:44 39:11 39:35 39:48
100 %
50
0
36:00 37:00 38:00 39:00 40:00 Time
2.3E3 1.2E3 0.0E0
3.2E3 1.6E3 0.0E0
1.2E6 5.9E5 0.0E0
4.4E5 2.2E5 0.0E0

File:191016D1 #1-355 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
423.7767 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

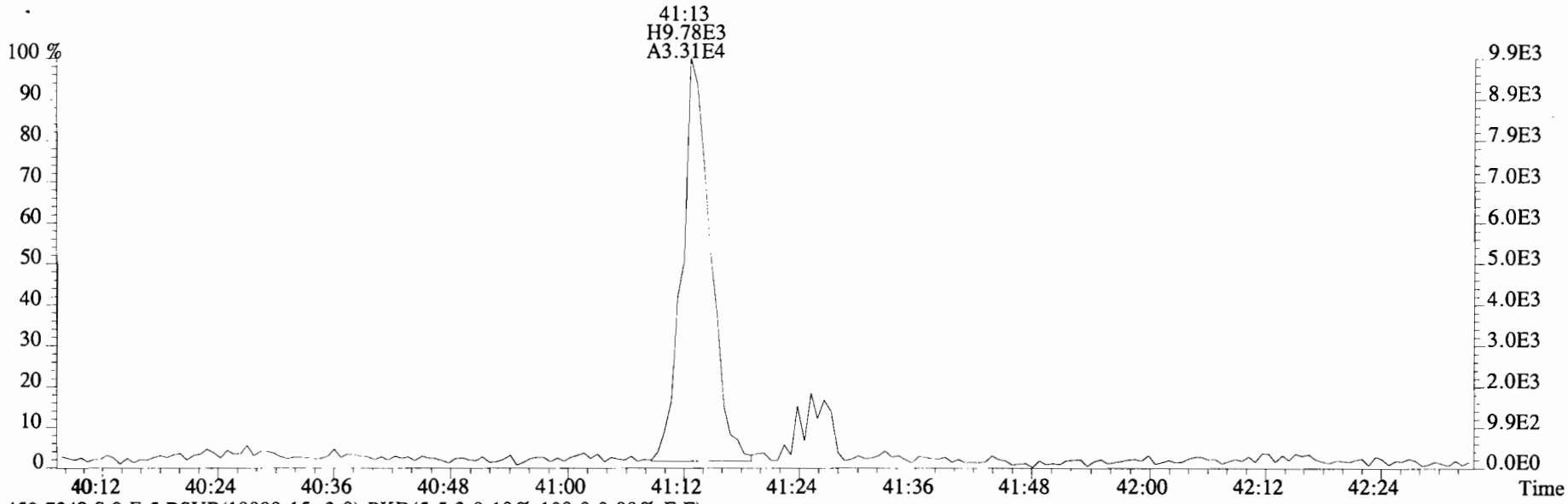


425.7737 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

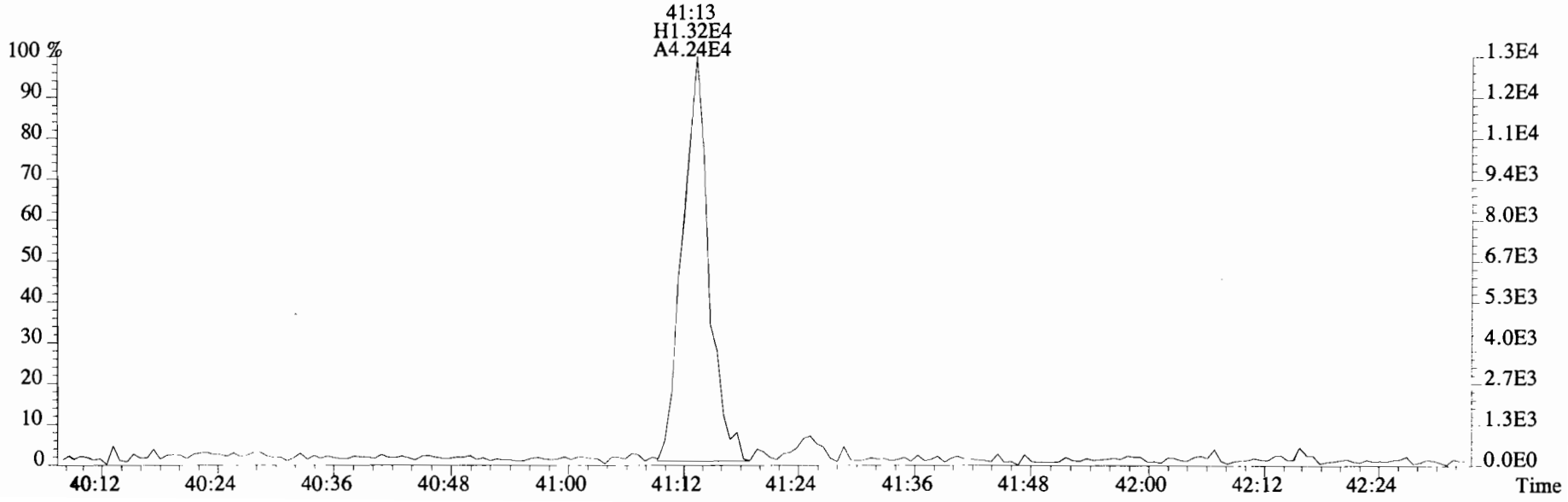



File:191016D1 #1-432 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
457.7377 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:13
H9.89E3
A3.51E4
41:25
H1.80E3
A6.34E3
459.7348 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:13
H1.32E4
A4.20E4
41:25
H827.35
A3.11E3
469.7780 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12
H1.63E6
A5.76E6
471.7750 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12
H1.84E6
A6.30E6
454.9728 S:9 F:5
100 %
50
0
40:00
41:00
42:00
43:00
44:00
Time
9.9E3
5.0E3
0.0E0
1.3E4
6.7E3
1.6E6
8.1E5
1.8E6
9.2E5
40:08
40:30
40:40
41:12
41:32
41:45
42:08
42:19
42:41
42:55
43:13
43:36
43:46
5.0E5
2.5E5

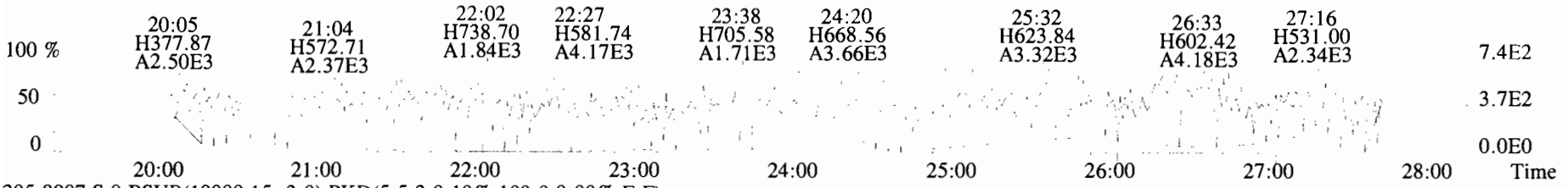
File:191016D1 #1-432 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
457.7377 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



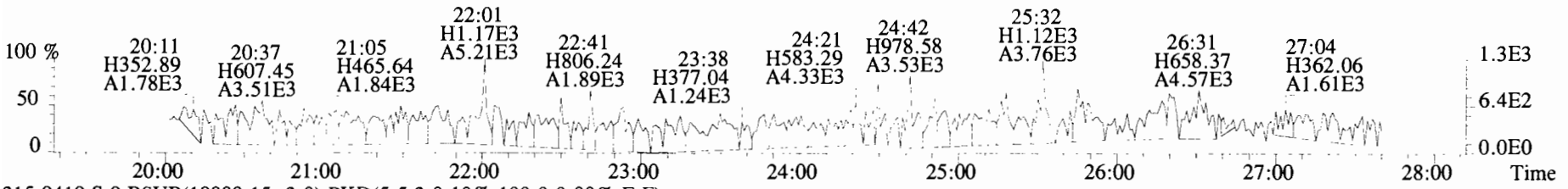
459.7348 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



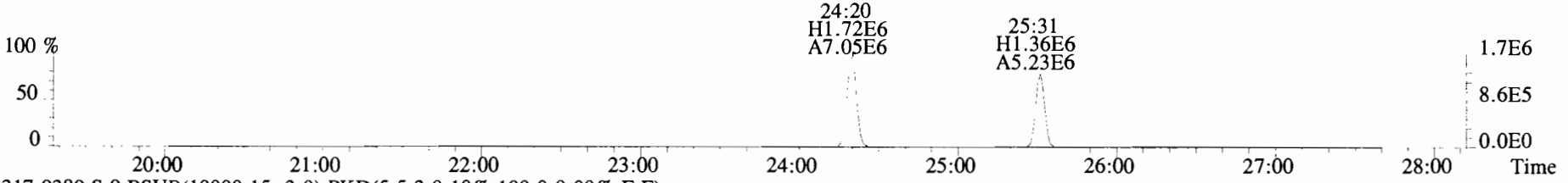
File:191016D1 #1-492 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



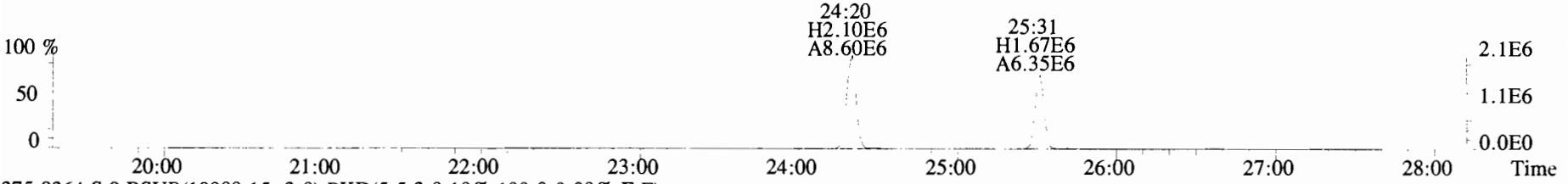
305.8987 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



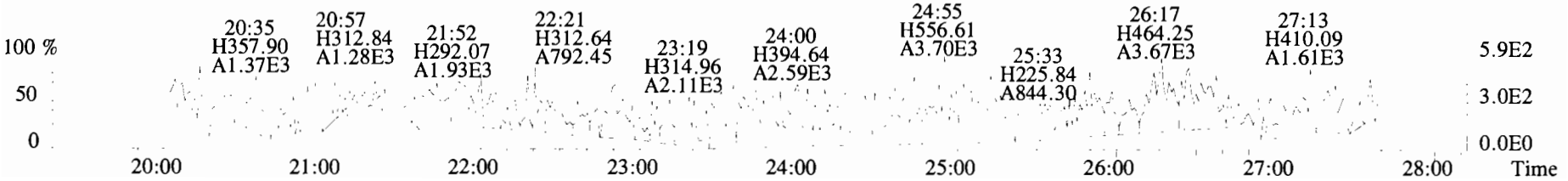
315.9419 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



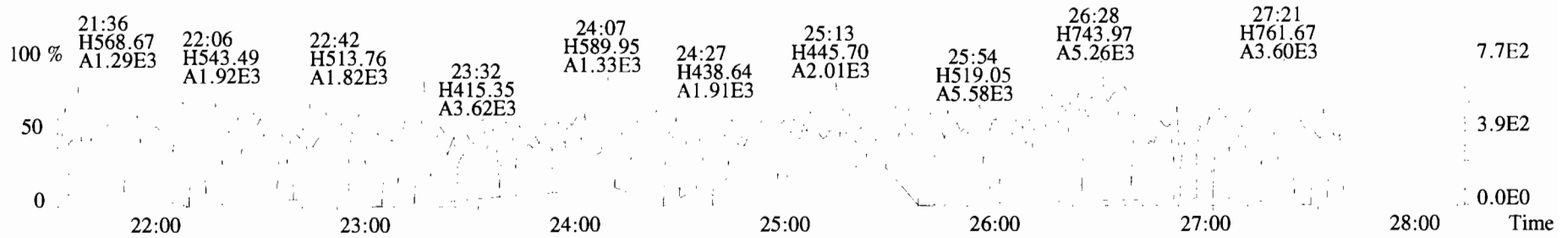
317.9389 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



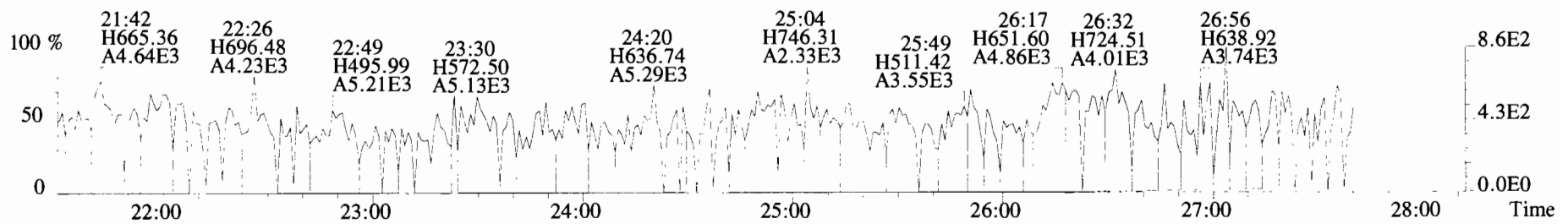
375.8364 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



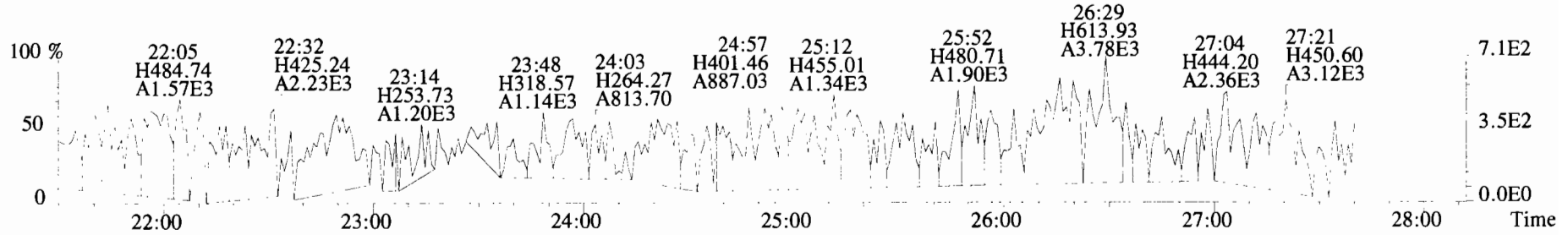
File:191016D1 #1-492 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
339.8597 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



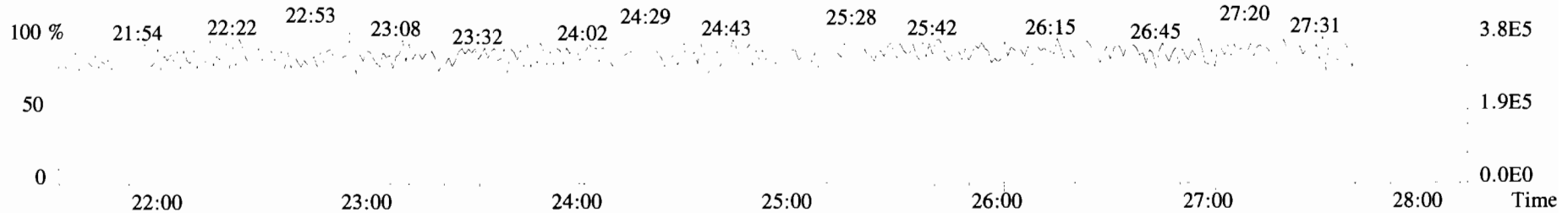
341.8568 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

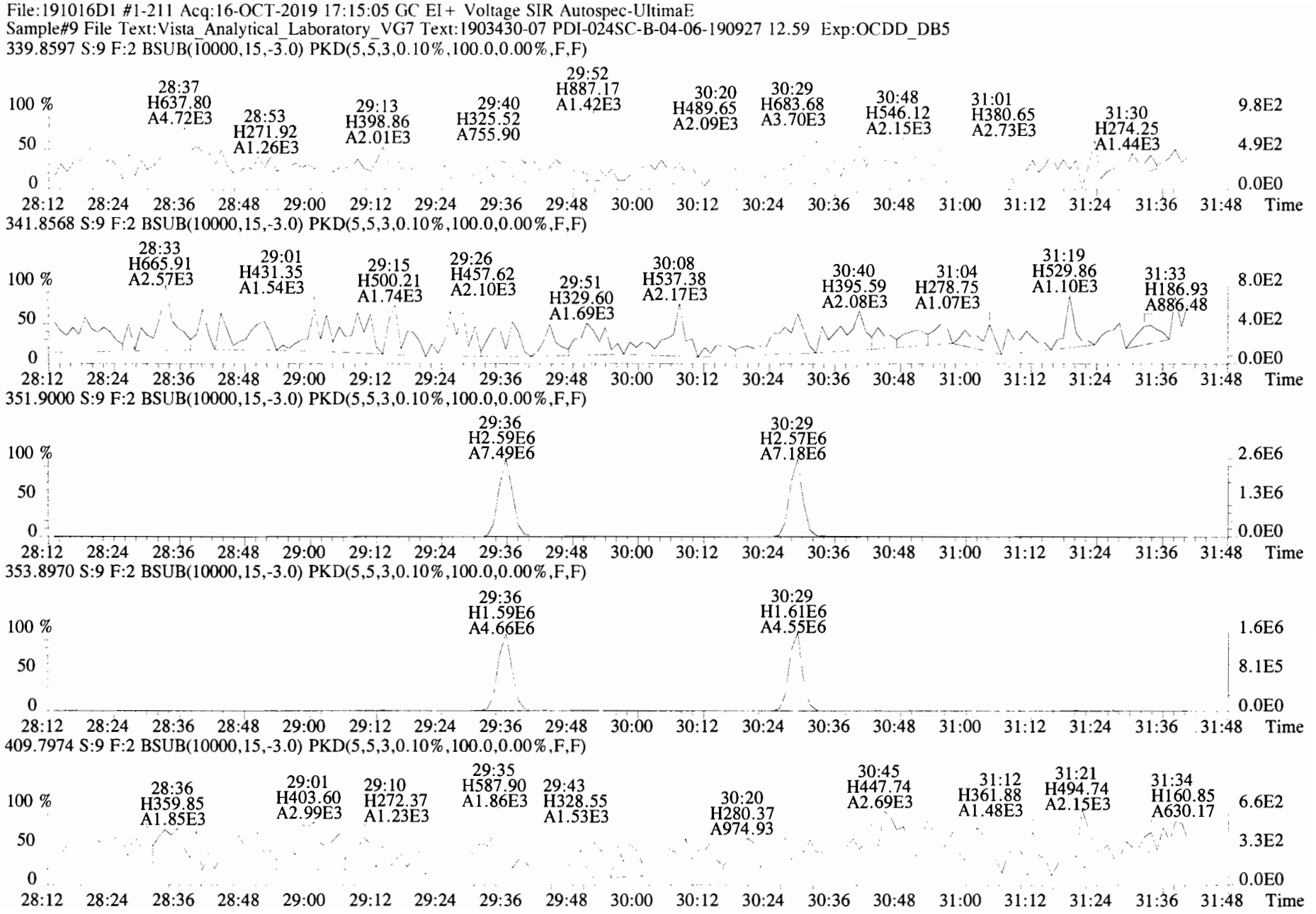


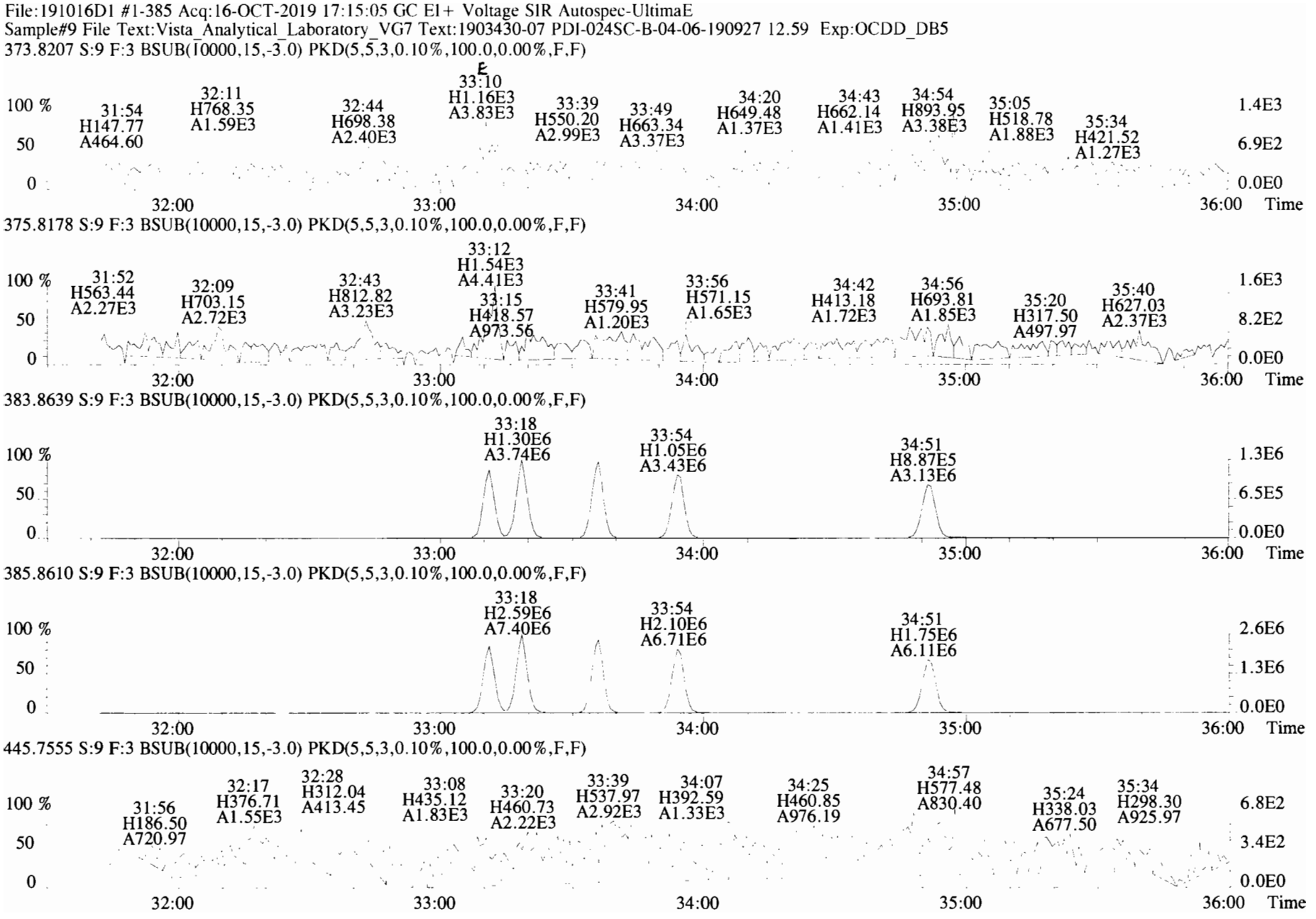
409.7974 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



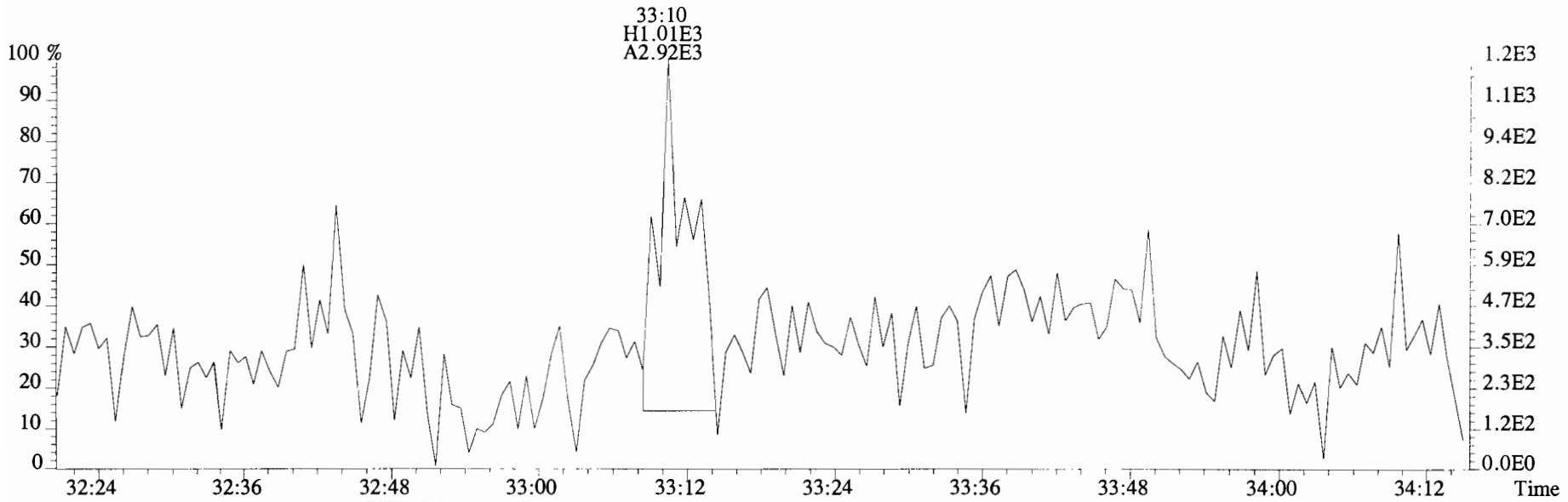
316.9824 S:9



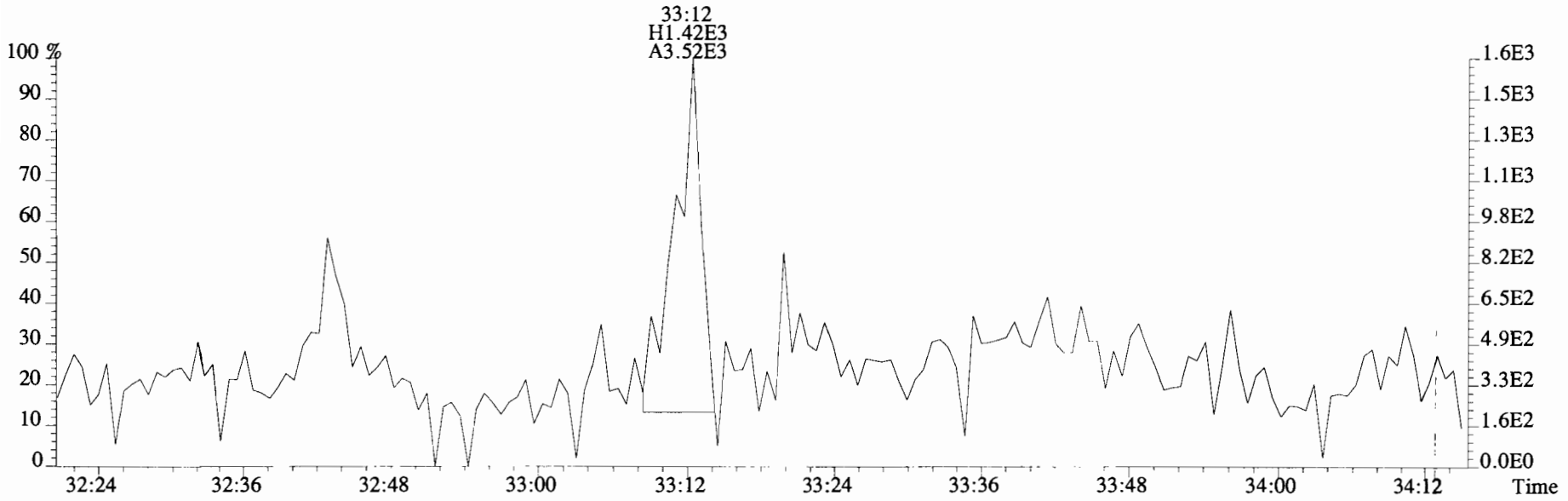

File:191016D1 #1-211 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:37 H637.80 A4.72E3
28:53 H271.92 A1.26E3
29:13 H398.86 A2.01E3
29:40 H325.52 A755.90
29:52 H887.17 A1.42E3
30:20 H489.65 A2.09E3
30:29 H683.68 A3.70E3
30:48 H546.12 A2.15E3
31:01 H380.65 A2.73E3
31:30 H274.25 A1.44E3
9.8E2
4.9E2
0.0E0
341.8568 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:33 H665.91 A2.57E3
29:01 H431.35 A1.54E3
29:15 H500.21 A1.74E3
29:26 H457.62 A2.10E3
29:51 H329.60 A1.69E3
30:08 H537.38 A2.17E3
30:40 H395.59 A2.08E3
31:04 H278.75 A1.07E3
31:19 H529.86 A1.10E3
31:33 H186.93 A886.48
8.0E2
4.0E2
0.0E0
351.9000 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:36 H2.59E6 A7.49E6
30:29 H2.57E6 A7.18E6
2.6E6
1.3E6
0.0E0
353.8970 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:36 H1.59E6 A4.66E6
30:29 H1.61E6 A4.55E6
1.6E6
8.1E5
0.0E0
409.7974 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:36 H359.85 A1.85E3
29:01 H403.60 A2.99E3
29:10 H272.37 A1.23E3
29:35 H587.90 A1.86E3
29:43 H328.55 A1.53E3
30:20 H280.37 A974.93
30:45 H447.74 A2.69E3
31:12 H361.88 A1.48E3
31:21 H494.74 A2.15E3
31:34 H160.85 A630.17
6.6E2
3.3E2
0.0E0
100 %
50
0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time


File:191016D1 #1-385 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
E
33:10 H1.16E3 A3.83E3
31:54 H147.77 A464.60
32:11 H768.35 A1.59E3
32:44 H698.38 A2.40E3
33:39 H550.20 A2.99E3
33:49 H663.34 A3.37E3
34:20 H649.48 A1.37E3
34:43 H662.14 A1.41E3
34:54 H893.95 A3.38E3
35:05 H518.78 A1.88E3
35:34 H421.52 A1.27E3
100 %
50
0
1.4E3
6.9E2
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:12 H1.54E3 A4.41E3
31:52 H563.44 A2.27E3
32:09 H703.15 A2.72E3
32:43 H812.82 A3.23E3
33:15 H418.57 A973.56
33:41 H579.95 A1.20E3
33:56 H571.15 A1.65E3
34:42 H413.18 A1.72E3
34:56 H693.81 A1.85E3
35:20 H317.50 A497.97
35:40 H627.03 A2.37E3
100 %
50
0
1.6E3
8.2E2
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
383.8639 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:18 H1.30E6 A3.74E6
33:54 H1.05E6 A3.43E6
34:51 H8.87E5 A3.13E6
100 %
50
0
1.3E6
6.5E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
385.8610 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:18 H2.59E6 A7.40E6
33:54 H2.10E6 A6.71E6
34:51 H1.75E6 A6.11E6
100 %
50
0
2.6E6
1.3E6
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
445.7555 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:56 H186.50 A720.97
32:17 H376.71 A1.55E3
32:28 H312.04 A413.45
33:08 H435.12 A1.83E3
33:20 H460.73 A2.22E3
33:39 H537.97 A2.92E3
34:07 H392.59 A1.33E3
34:25 H460.85 A976.19
34:57 H577.48 A830.40
35:24 H338.03 A677.50
35:34 H298.30 A925.97
100 %
50
0
6.8E2
3.4E2
0.0E0
32:00
33:00
34:00
35:00
36:00
Time

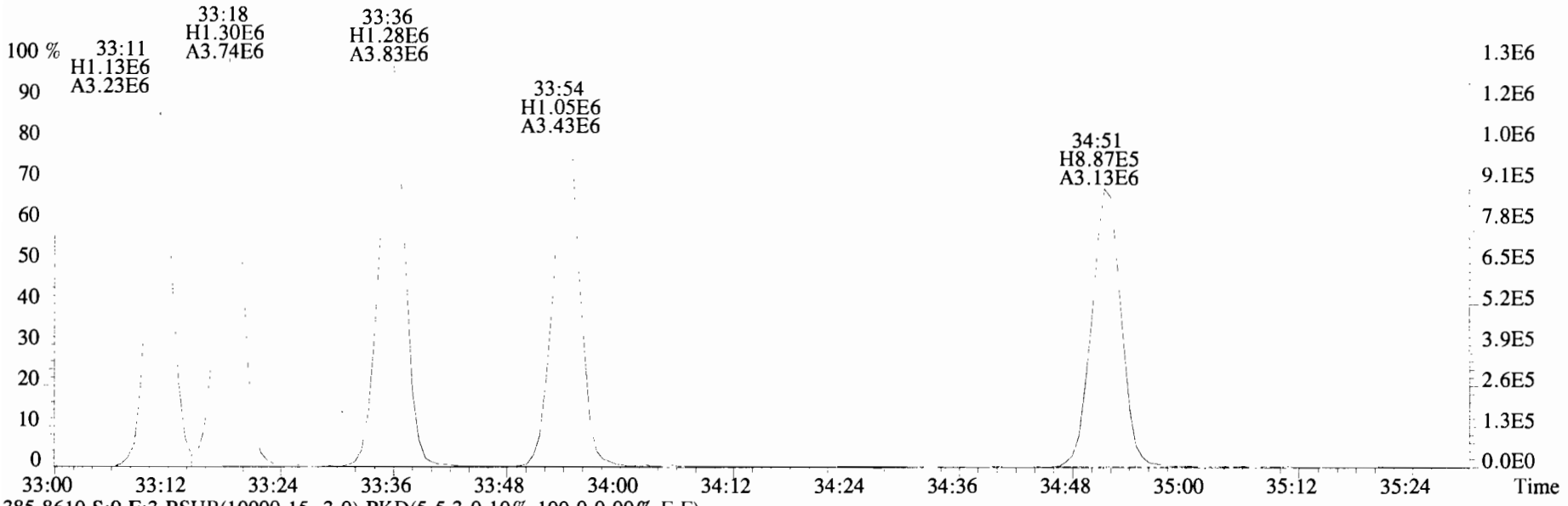
File:191016D1 #1-385 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



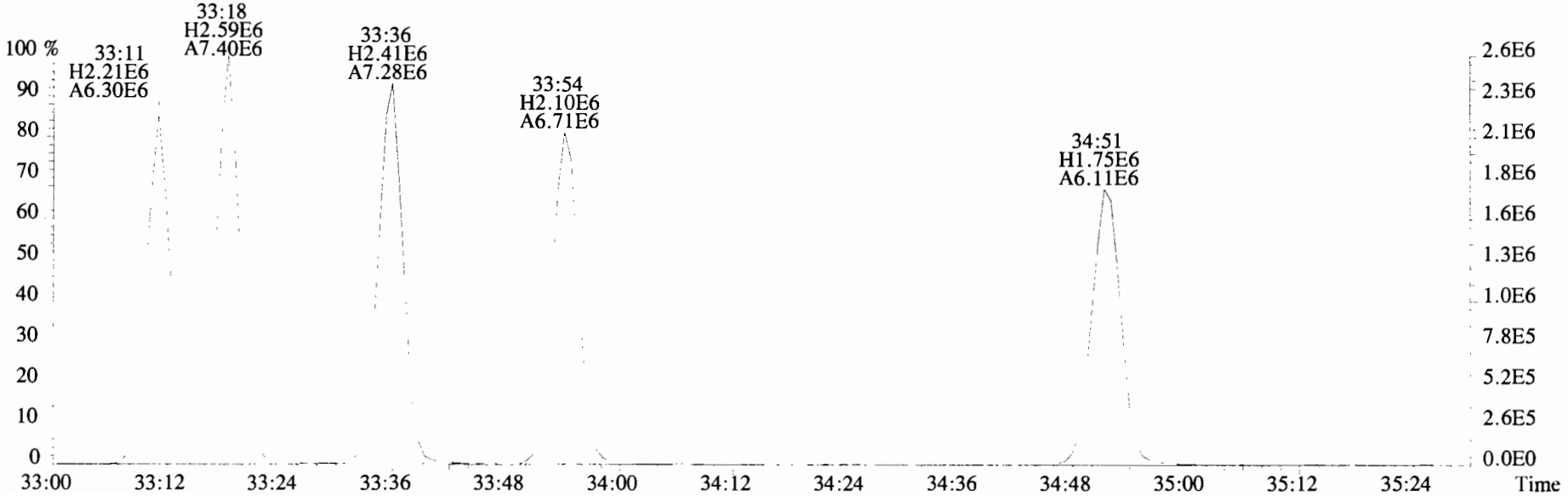
375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191016D1 #1-385 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
383.8639 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



385.8610 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Totals class: HxCDD EMPC Entry #: 23

Run: 14 File: 191016D1 S: 9 I: 1 F: 3
Acquired: 16-OCT-19 17:15:05 Processed: 17-OCT-19 09:18:57

Total Concentration: 0.11221 Unnamed Concentration: 0.112

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
32:33	3.458e+03	1.982e+03	1.74	n	4.440e+03	0.11221	

Totals class: HpCDD EMPC Entry #: 25

Run: 14 File: 191016D1 S: 9 I: 1 F: 4
Acquired: 16-OCT-19 17:15:05 Processed: 17-OCT-19 09:18:57

Total Concentration: 0.76159 Unnamed Concentration: 0.496

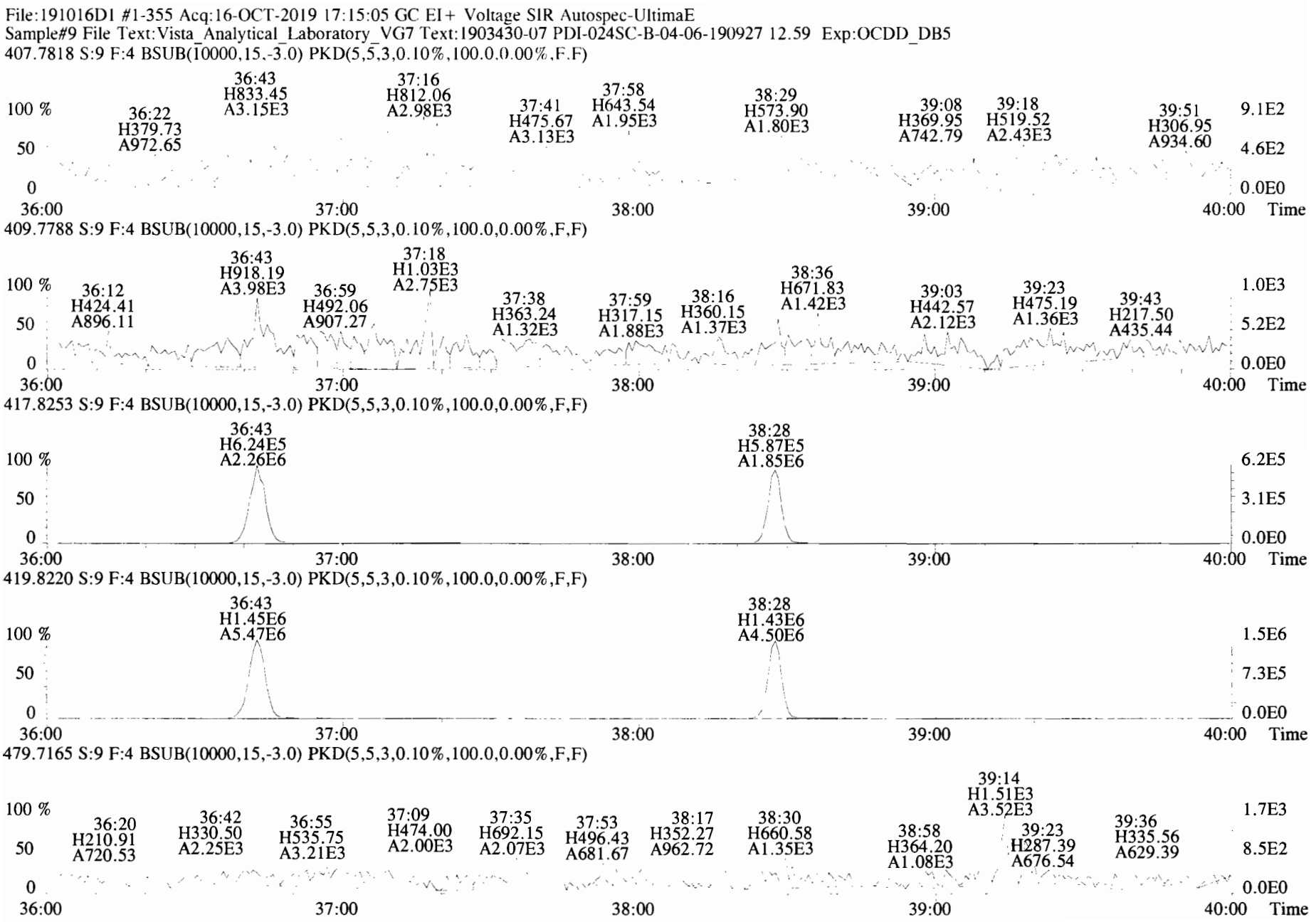
RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:06	9.044e+03	8.460e+03	1.07	y	1.750e+04	0.49640	
37:56	4.909e+03	4.443e+03	1.10	y	9.352e+03	0.26520	1,2,3,4,6,7,8-HpCDD

Totals class: HxCDF EMPC Entry #: 33

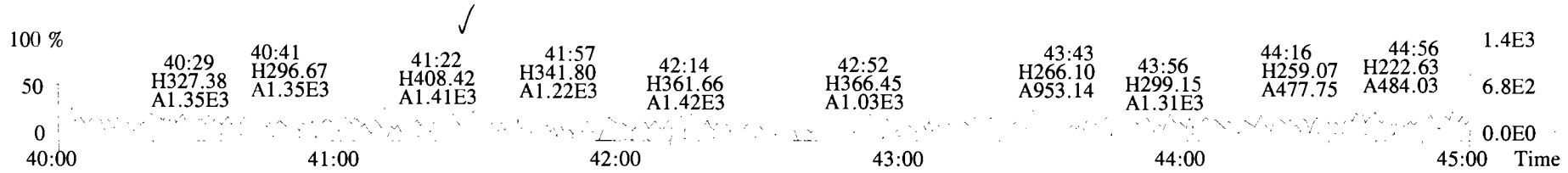
Run: 14 File: 191016D1 S: 9 I: 1 F: 3
Acquired: 16-OCT-19 17:15:05 Processed: 17-OCT-19 09:18:57

Total Concentration: 0.091035 Unnamed Concentration: *

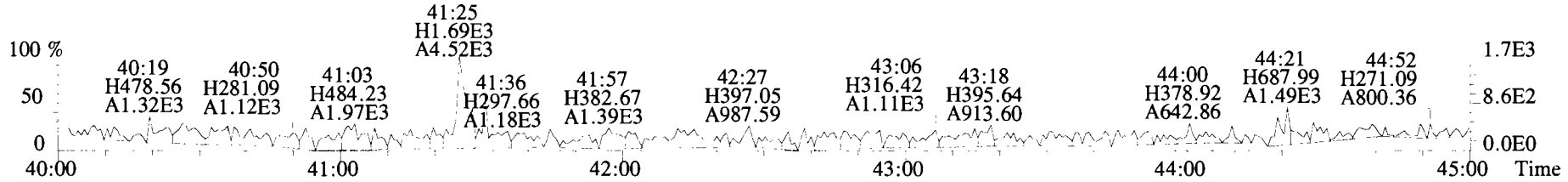
RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
33:11	2.923e+03	3.516e+03	0.83	n	5.280e+03	0.091035	1,2,3,4,7,8-HxCDF


File:191016D1 #1-355 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:43 H833.45 A3.15E3
37:16 H812.06 A2.98E3
36:22 H379.73 A972.65
37:41 H475.67 A3.13E3
37:58 H643.54 A1.95E3
38:29 H573.90 A1.80E3
39:08 H369.95 A742.79
39:18 H519.52 A2.43E3
39:51 H306.95 A934.60
100 %
50
0
9.1E2
4.6E2
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
409.7788 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:43 H918.19 A3.98E3
37:18 H1.03E3 A2.75E3
36:12 H424.41 A896.11
36:59 H492.06 A907.27
37:38 H363.24 A1.32E3
37:59 H317.15 A1.88E3
38:16 H360.15 A1.37E3
38:36 H671.83 A1.42E3
39:03 H442.57 A2.12E3
39:23 H475.19 A1.36E3
39:43 H217.50 A435.44
100 %
50
0
1.0E3
5.2E2
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
417.8253 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:43 H6.24E5 A2.26E6
38:28 H5.87E5 A1.85E6
100 %
50
0
6.2E5
3.1E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
419.8220 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:43 H1.45E6 A5.47E6
38:28 H1.43E6 A4.50E6
100 %
50
0
1.5E6
7.3E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
479.7165 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
39:14 H1.51E3 A3.52E3
36:20 H210.91 A720.53
36:42 H330.50 A2.25E3
36:55 H535.75 A3.21E3
37:09 H474.00 A2.00E3
37:35 H692.15 A2.07E3
37:53 H496.43 A681.67
38:17 H352.27 A962.72
38:30 H660.58 A1.35E3
38:58 H364.20 A1.08E3
39:23 H287.39 A676.54
39:36 H335.56 A629.39
100 %
50
0
1.7E3
8.5E2
0.0E0
36:00
37:00
38:00
39:00
40:00
Time

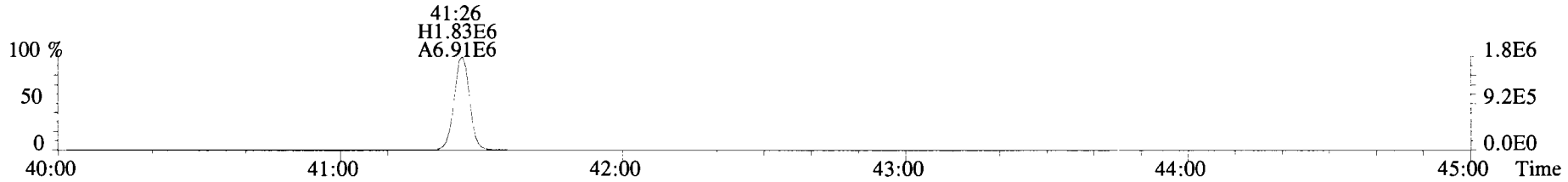
File:191016D1 #1-432 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
441.7428 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



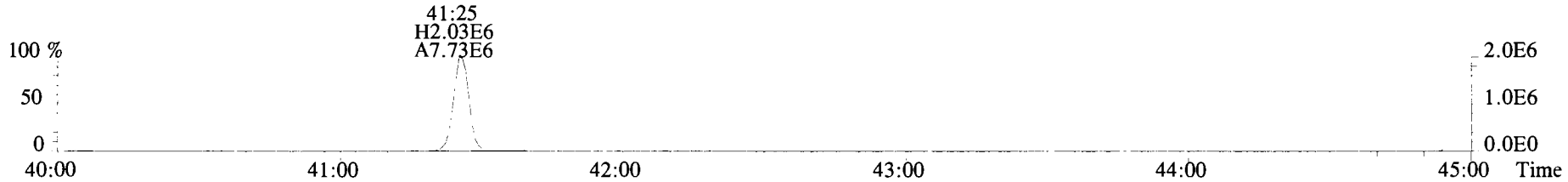
443.7398 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



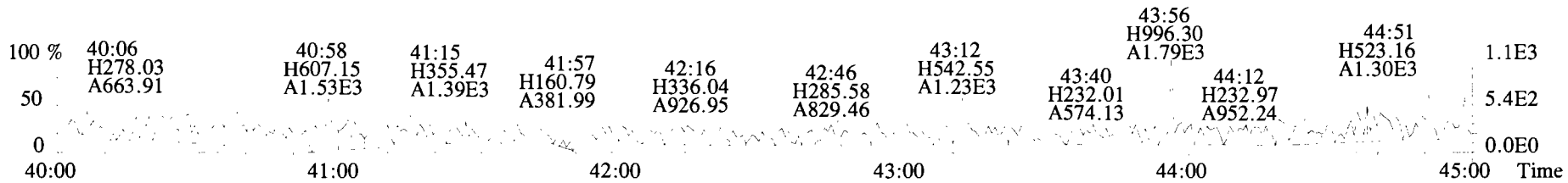
453.7831 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



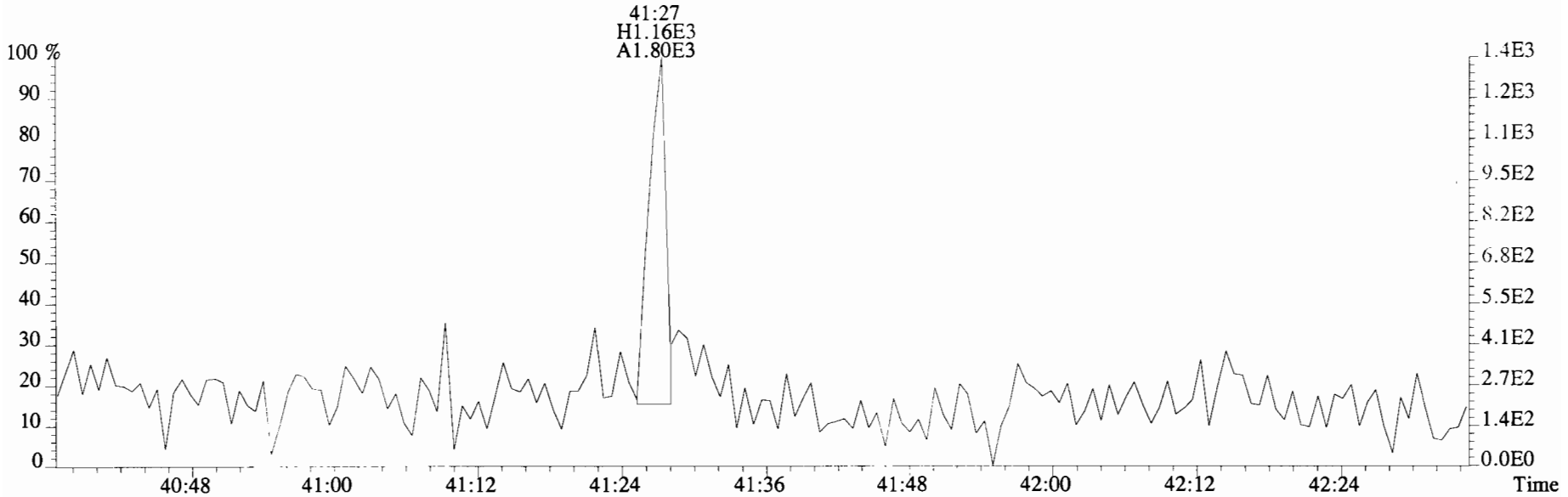
455.7801 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



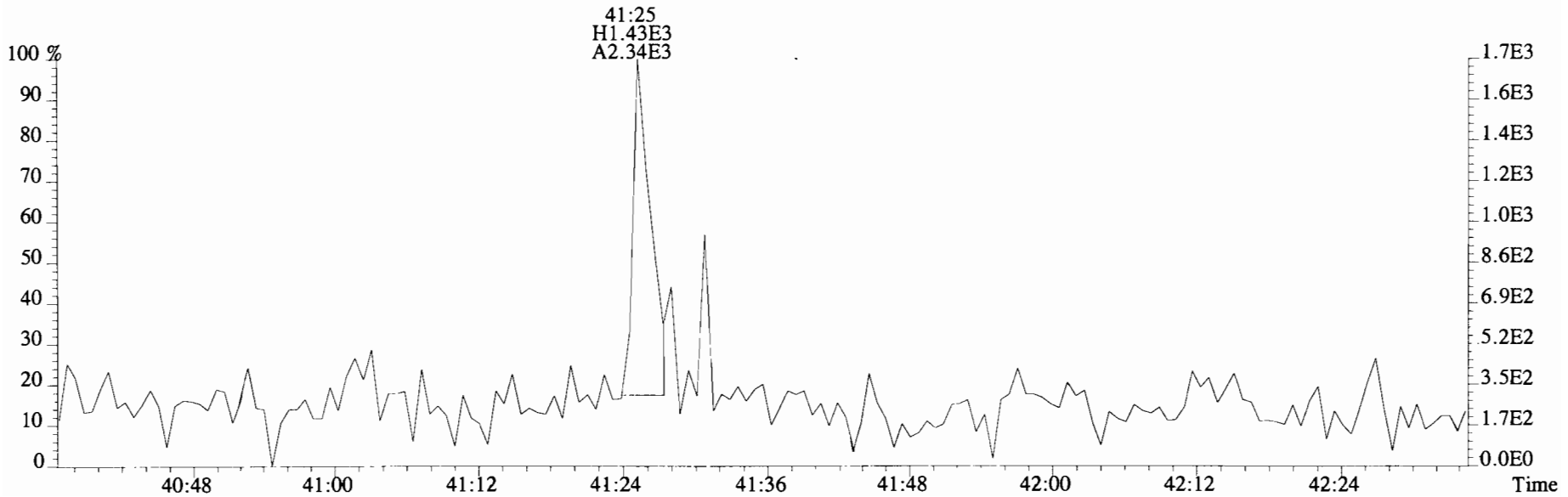
513.6775 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191016D1 #1-432 Acq:16-OCT-2019 17:15:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-07 PDI-024SC-B-04-06-190927 12.59 Exp:OCDD_DB5
441.7428 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



443.7398 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: PDI-024SC-B-06-08-1909 Filename: 191016D1 S:10 Acq:16-OCT-19 18:02:59 ConCal: ST191016D1-1
Lab ID: 1903430-08 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.092 ✓ EndCAL: NA

	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	0.91	NotF	*		204	2.5	0.0883
	1,2,3,7,8-PeCDD	*	*	n	0.90	NotF	*		196	2.5	0.0755
	1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF	*		137	2.5	0.0841
	1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF	*		137	2.5	0.0895
	1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF	*		137	2.5	0.0871
	1,2,3,4,6,7,8-HpCDD	4.52e+03	1.17	y	0.98	37:56	0.16420		*	2.5	*
	OCDD	2.28e+04	1.13	n	0.96	41:13	0.97941		*	2.5	*
	2,3,7,8-TCDF	*	*	n	0.95	NotF	*		191	2.5	0.0632
	1,2,3,7,8-PeCDF	*	*	n	0.96	NotF	*		157	2.5	0.0622
	2,3,4,7,8-PeCDF	*	*	n	1.01	NotF	*		157	2.5	0.0597
	1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF	*		161	2.5	0.0443
	1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF	*		161	2.5	0.0405
	2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF	*		161	2.5	0.0485
	1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF	*		161	2.5	0.0588
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF	*		123	2.5	0.0485
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF	*		123	2.5	0.0426
	OCDF	*	*	n	0.95	NotF	*		151	2.5	0.0900

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		204	0.0883
Total Penta-Dioxins	*	*		196	0.0755
Total Hexa-Dioxins	*	0.137		*	*
Total Hepta-Dioxins	0.386	0.386		*	*
Total Tetra-Furans	*	*		191	0.0632
Total Penta-Furans	0.0000	0.0000		157	0.0609
Total Hexa-Furans	*	*		161	0.0475
Total Hepta-Furans	*	*		123	0.0457

								Rec	Qual
IS	13C-2,3,7,8-TCDD	7.94e+06	0.73	y	1.10	26:18	200.21	101	
IS	13C-1,2,3,7,8-PeCDD	6.89e+06	0.63	y	0.88	30:46	215.97	109	
IS	13C-1,2,3,4,7,8-HxCDD	5.53e+06	1.28	y	0.64	34:05	204.78	103	
IS	13C-1,2,3,6,7,8-HxCDD	6.26e+06	1.21	y	0.86	34:11	173.96	87.8	
IS	13C-1,2,3,7,8,9-HxCDD	6.30e+06	1.24	y	0.81	34:29	185.65	93.7	
IS	13C-1,2,3,4,6,7,8-HpCDD	5.57e+06	1.03	y	0.65	37:55	202.73	102	
IS	13C-OCDD	9.64e+06	0.94	y	0.58	41:12	395.40	99.8	
IS	13C-2,3,7,8-TCDF	1.18e+07	0.81	y	1.03	25:31	188.41	95.1	
IS	13C-1,2,3,7,8-PeCDF	1.04e+07	1.63	y	0.85	29:36	201.97	102	
IS	13C-2,3,4,7,8-PeCDF	1.04e+07	1.63	y	0.85	30:29	203.77	103	
IS	13C-1,2,3,4,7,8-HxCDF	7.44e+06	0.51	y	0.83	33:11	212.77	107	
IS	13C-1,2,3,6,7,8-HxCDF	9.02e+06	0.51	y	1.03	33:19	207.39	105	
IS	13C-2,3,4,6,7,8-HxCDF	7.79e+06	0.51	y	0.95	33:54	194.37	98.1	
IS	13C-1,2,3,7,8,9-HxCDF	7.18e+06	0.50	y	0.83	34:52	206.21	104	
IS	13C-1,2,3,4,6,7,8-HpCDF	6.33e+06	0.41	y	0.76	36:43	198.92	100	
IS	13C-1,2,3,4,7,8,9-HpCDF	5.16e+06	0.42	y	0.58	38:27	211.00	106	
IS	13C-OCDF	1.28e+07	0.90	y	0.69	41:26	440.36	111	
C/Up	37Cl-2,3,7,8-TCDD	3.64e+06			1.20	26:19	83.978	106	
RS/RT	13C-1,2,3,4-TCDD	7.17e+06	0.79	y	1.00	25:44	198.18		
RS	13C-1,2,3,4-TCDF	1.20e+07	0.85	y	1.00	24:20	198.18		
RS/RT	13C-1,2,3,4,6,9-HxCDF	8.33e+06	0.51	y	1.00	33:36	198.18		

Integrations by Analyst: DB Date: 11/1/19

Reviewed by Analyst: CT Date: 11/04/19

Totals class: HxCDD EMPC Entry #: 23

Run: 15 File: 191016D1 S: 10 I: 1 F: 3
Acquired: 16-OCT-19 18:02:59 Processed: 17-OCT-19 09:18:58

Total Concentration: 0.13729 Unnamed Concentration: 0.137

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
32:33	2.292e+03	2.251e+03	1.02	n	4.140e+03	0.13729	

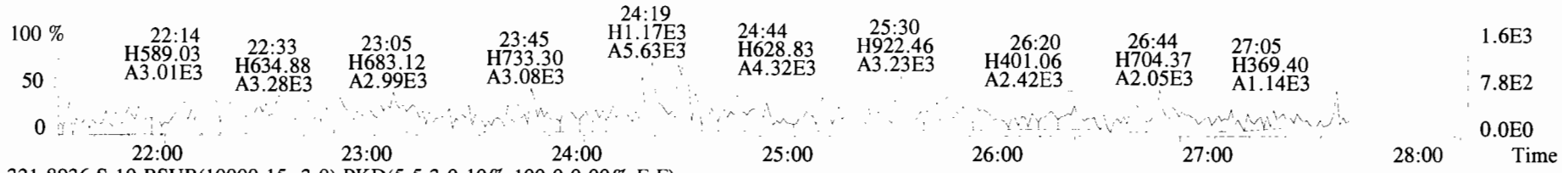
Totals class: HpCDD EMPC Entry #: 25

Run: 15 File: 191016D1 S: 10 I: 1 F: 4
Acquired: 16-OCT-19 18:02:59 Processed: 17-OCT-19 09:18:58

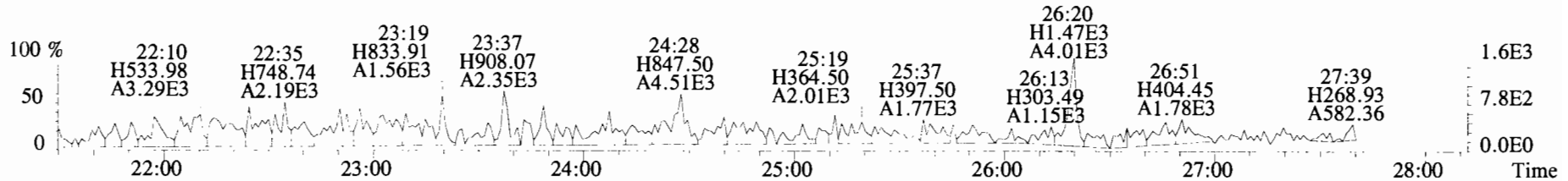
Total Concentration: 0.38568 Unnamed Concentration: 0.221

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:06	3.223e+03	2.877e+03	1.12	y	6.100e+03	0.22148	
37:56	2.434e+03	2.089e+03	1.17	y	4.522e+03	0.16420	1,2,3,4,6,7,8-HpCDD

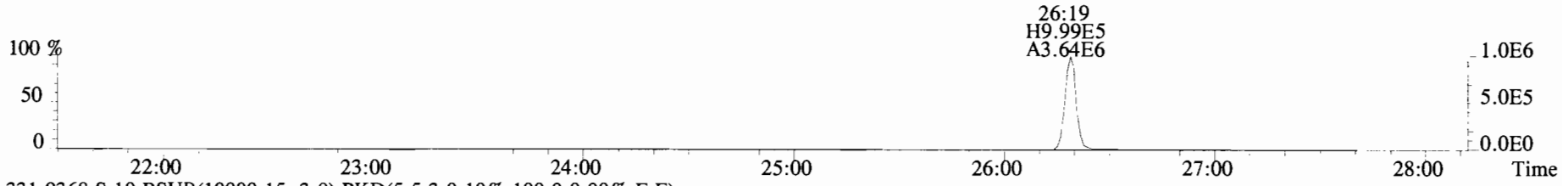
File:191016D1 #1-492 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
319.8965 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



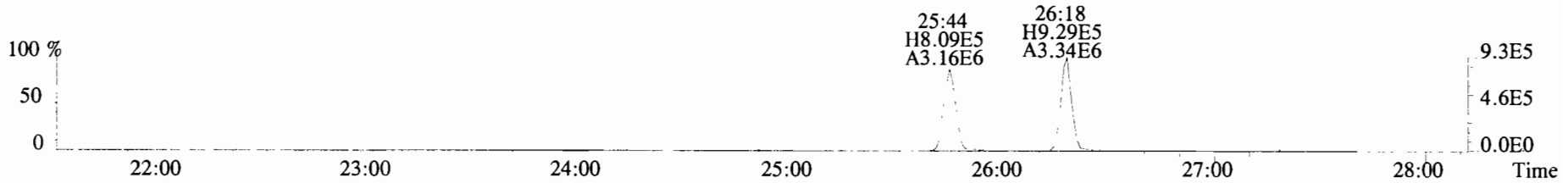
321.8936 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



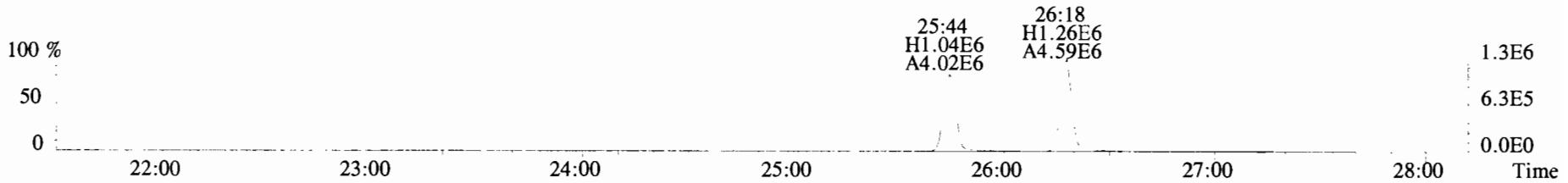
327.8847 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



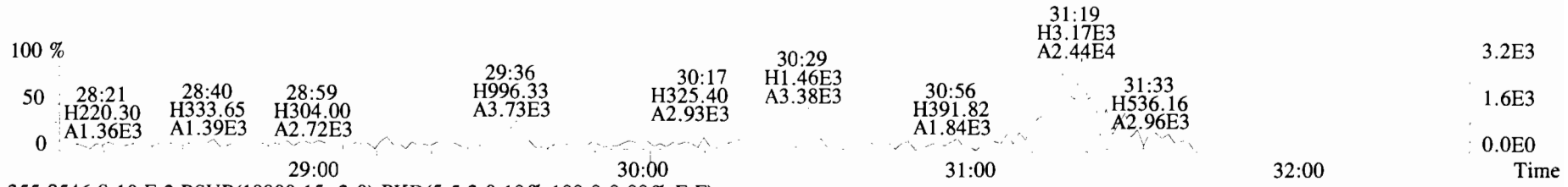
331.9368 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



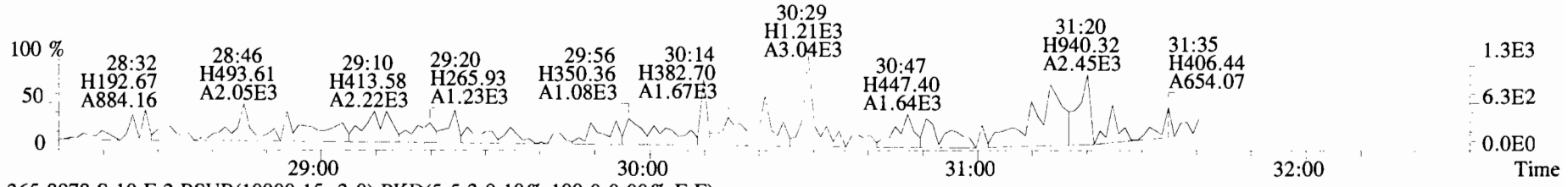
333.9339 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



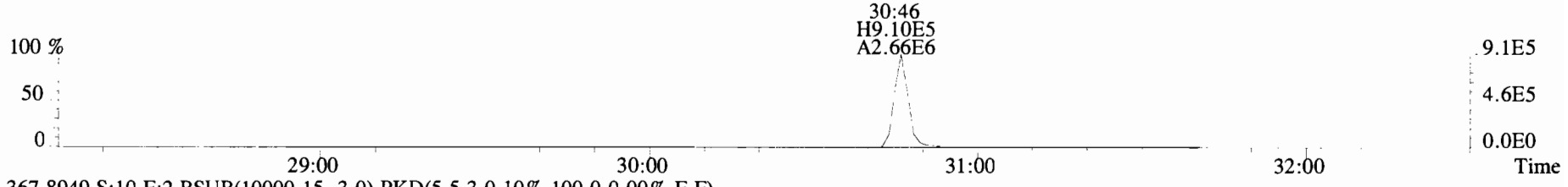
File:191016D1 #1-211 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
353.8576 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



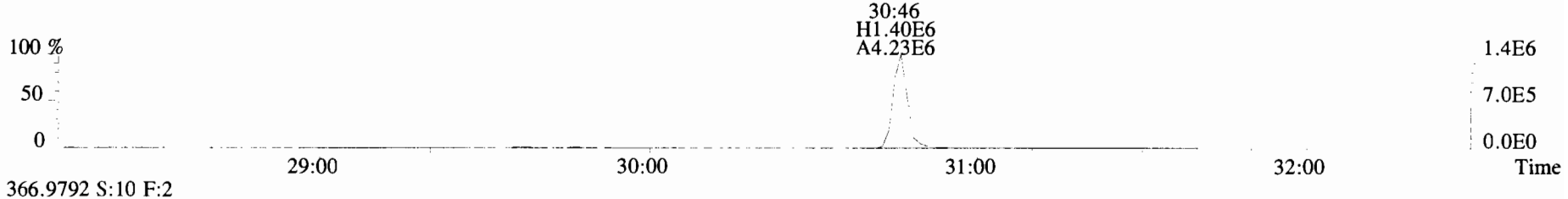
355.8546 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



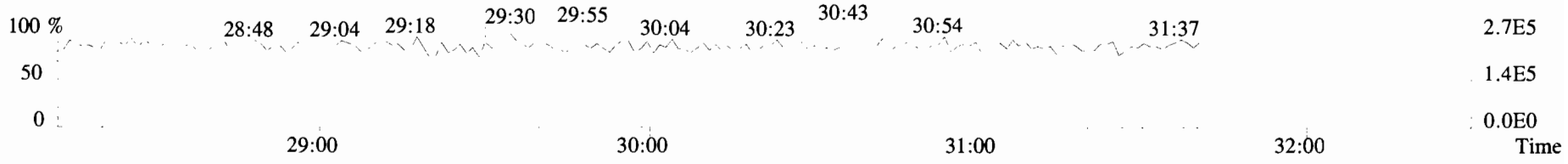
365.8978 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



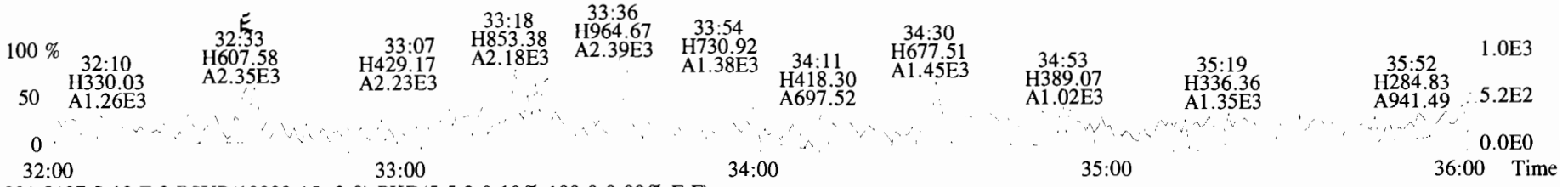
367.8949 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



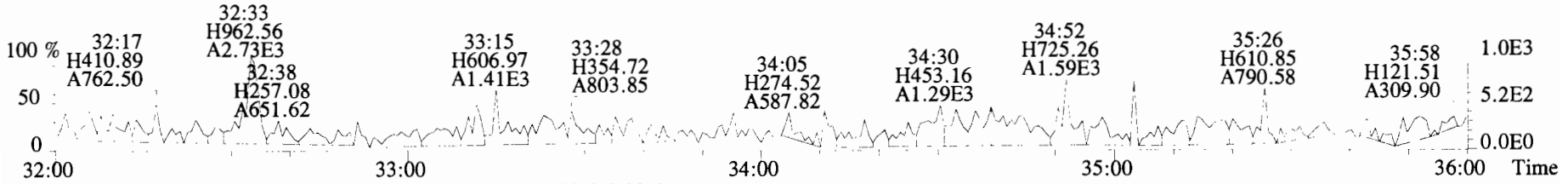
366.9792 S:10 F:2



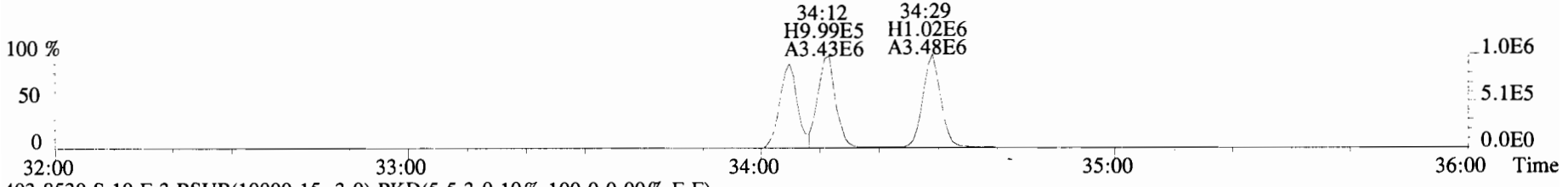
File:191016D1 #1-385 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
389.8156 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



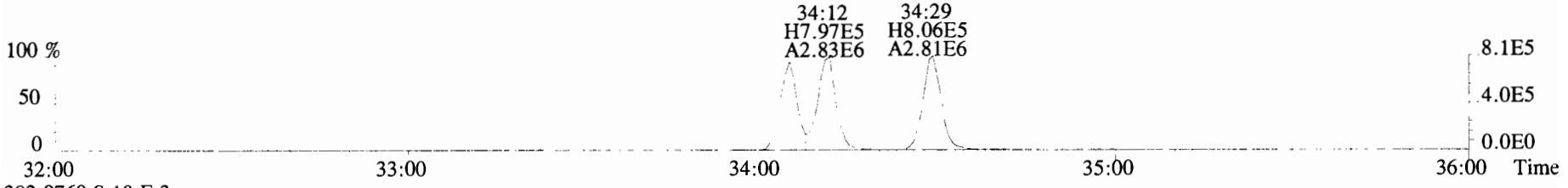
391.8127 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



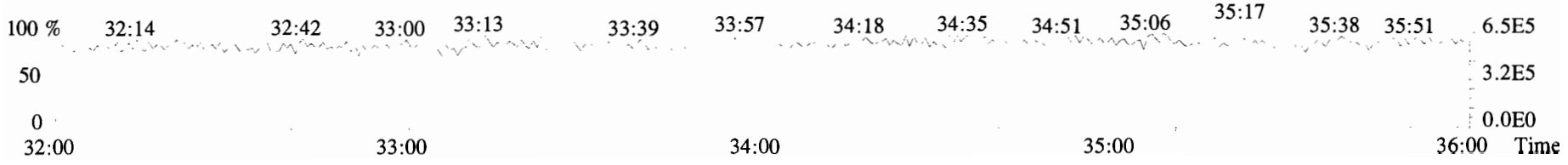
401.8559 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



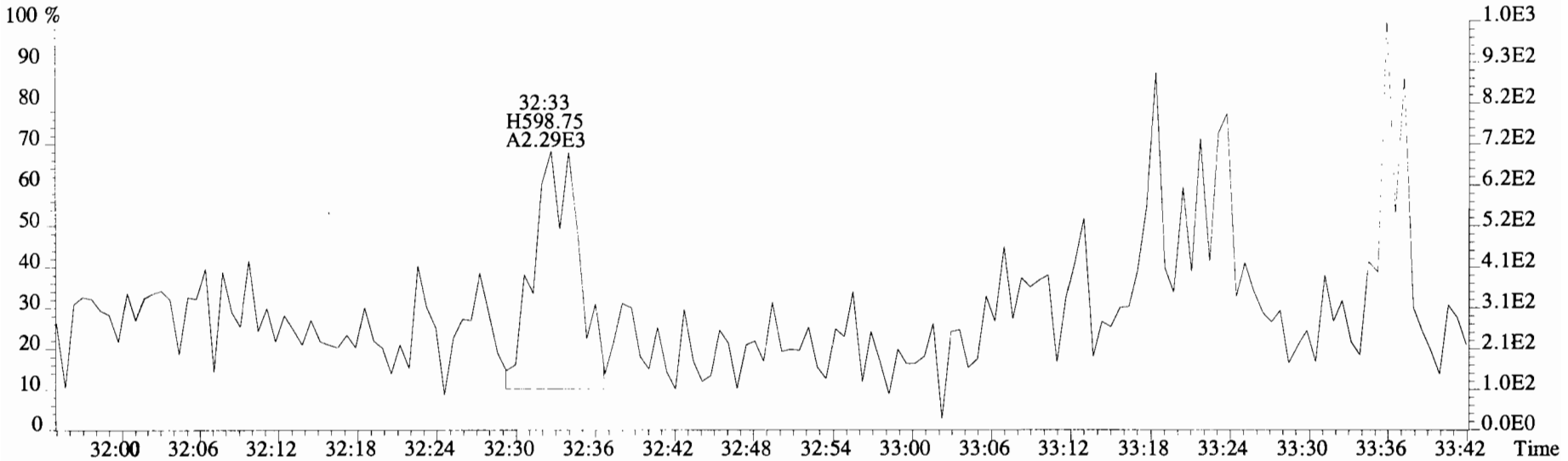
403.8530 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



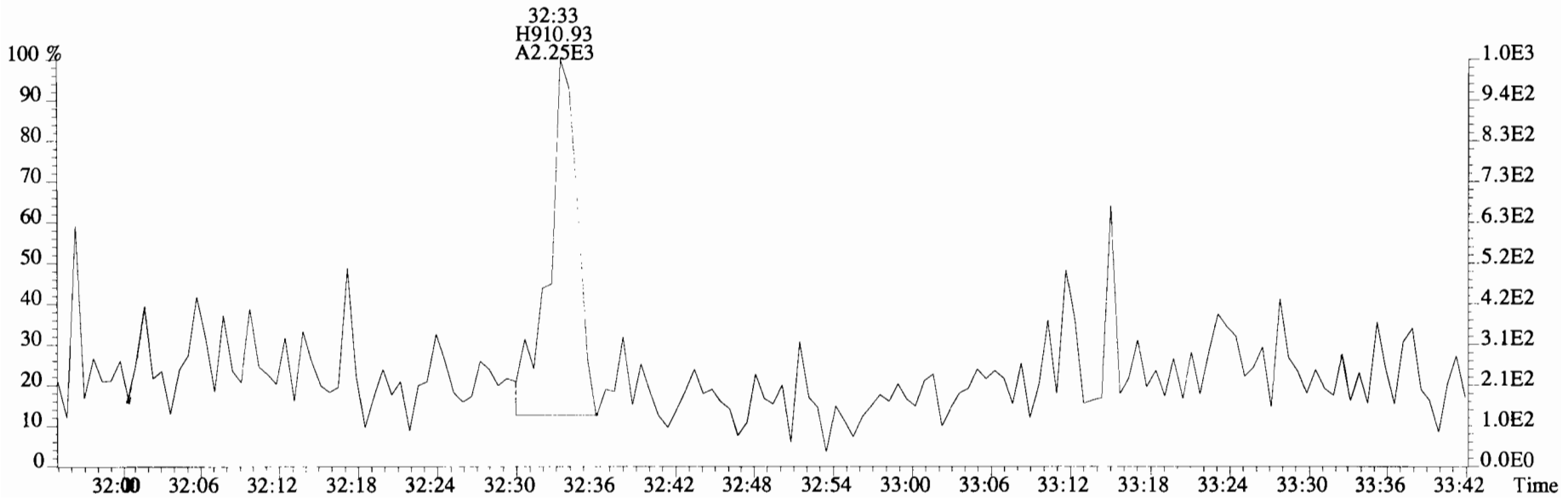
392.9760 S:10 F:3



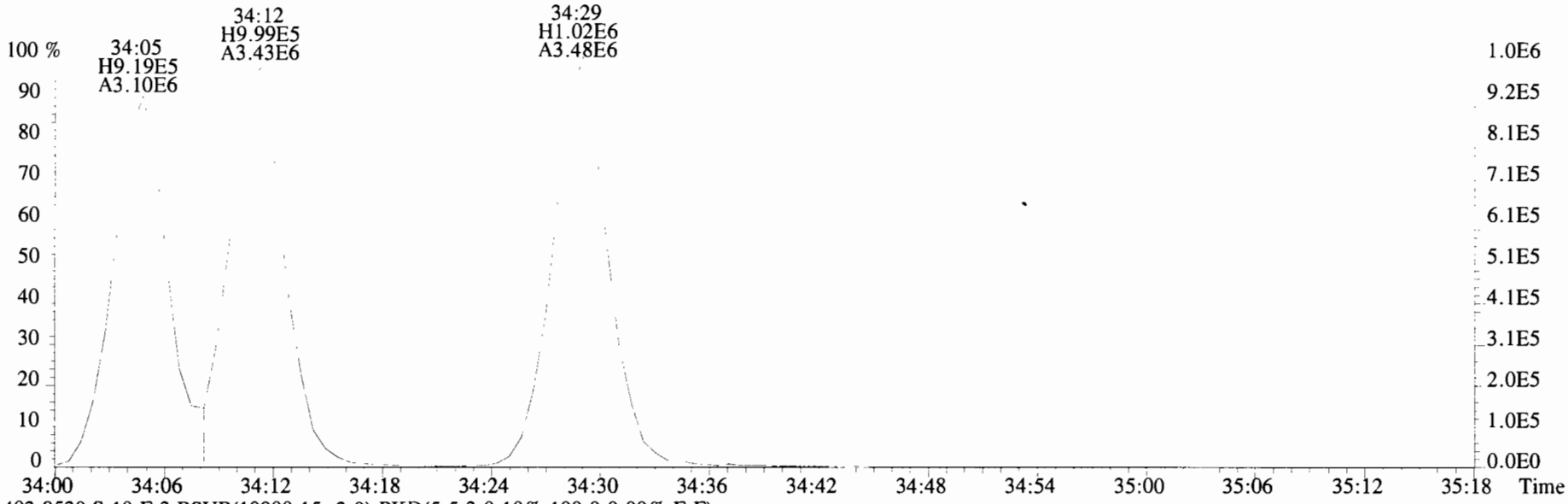
File:191016D1 #1-385 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
389.8156 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



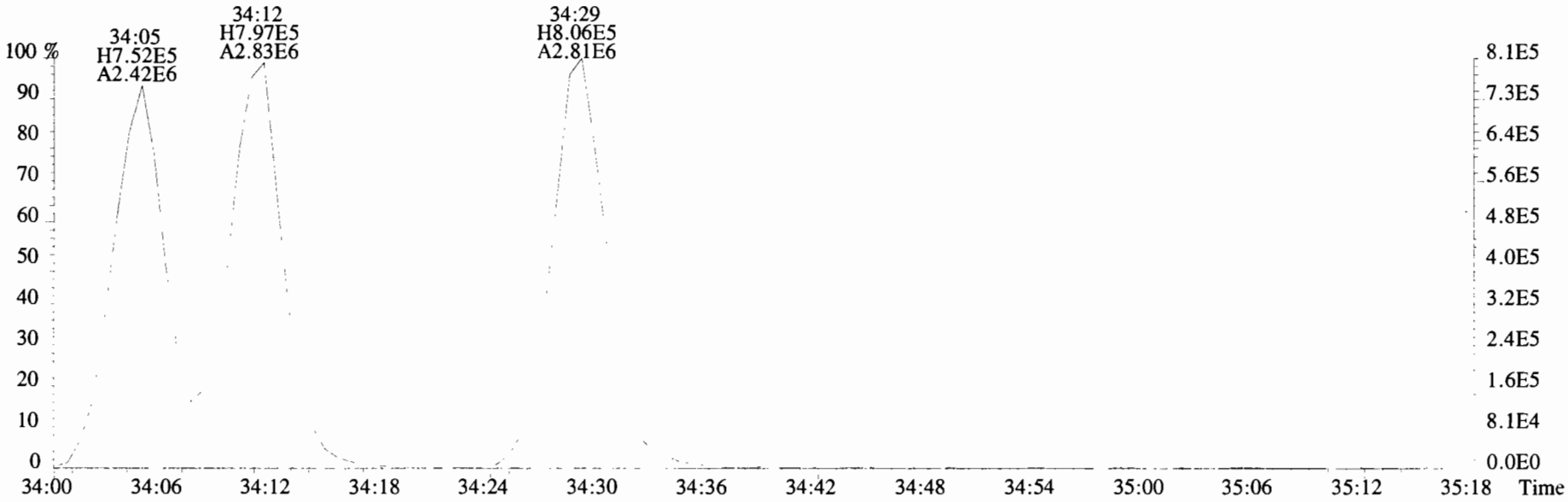
391.8127 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

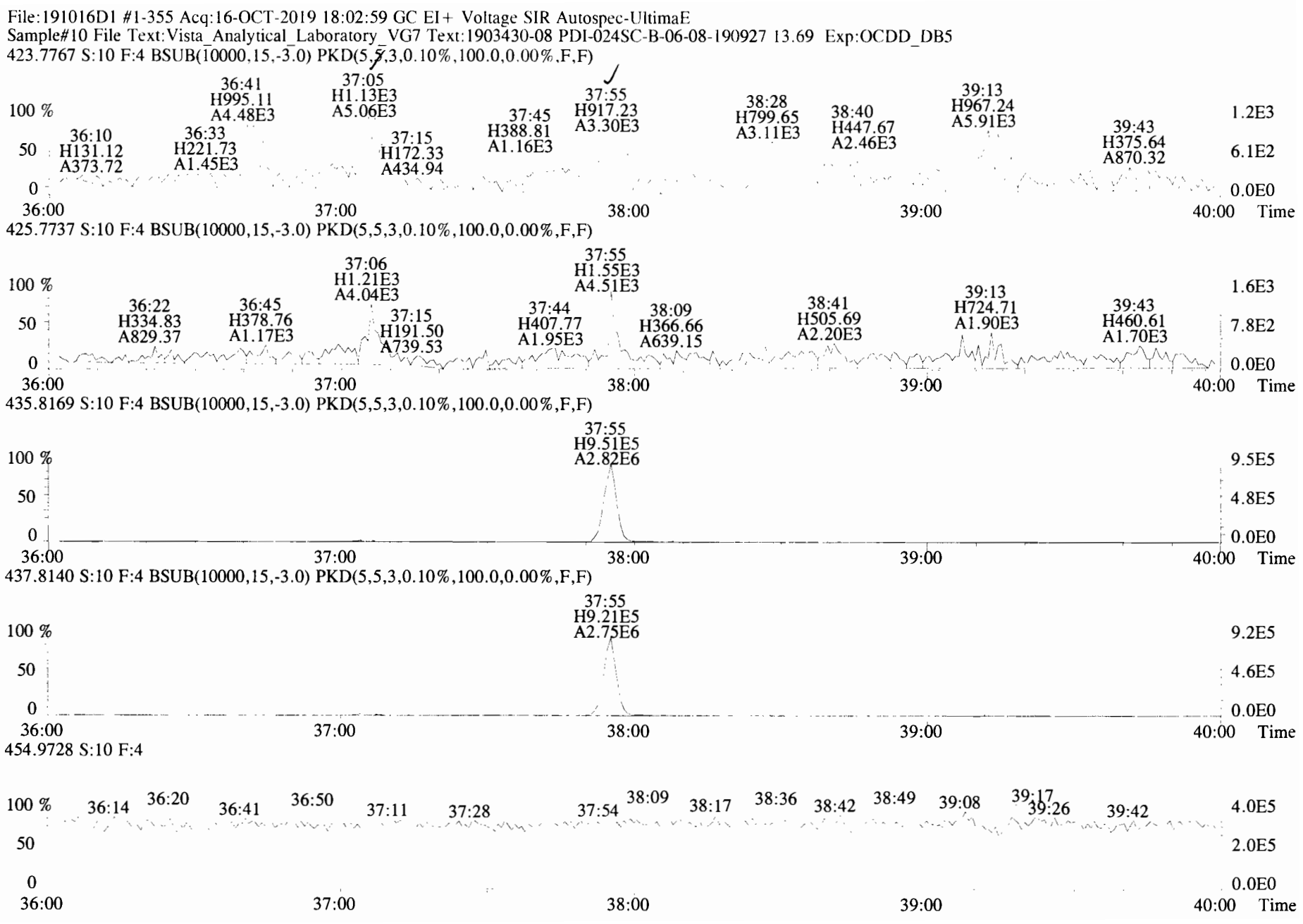


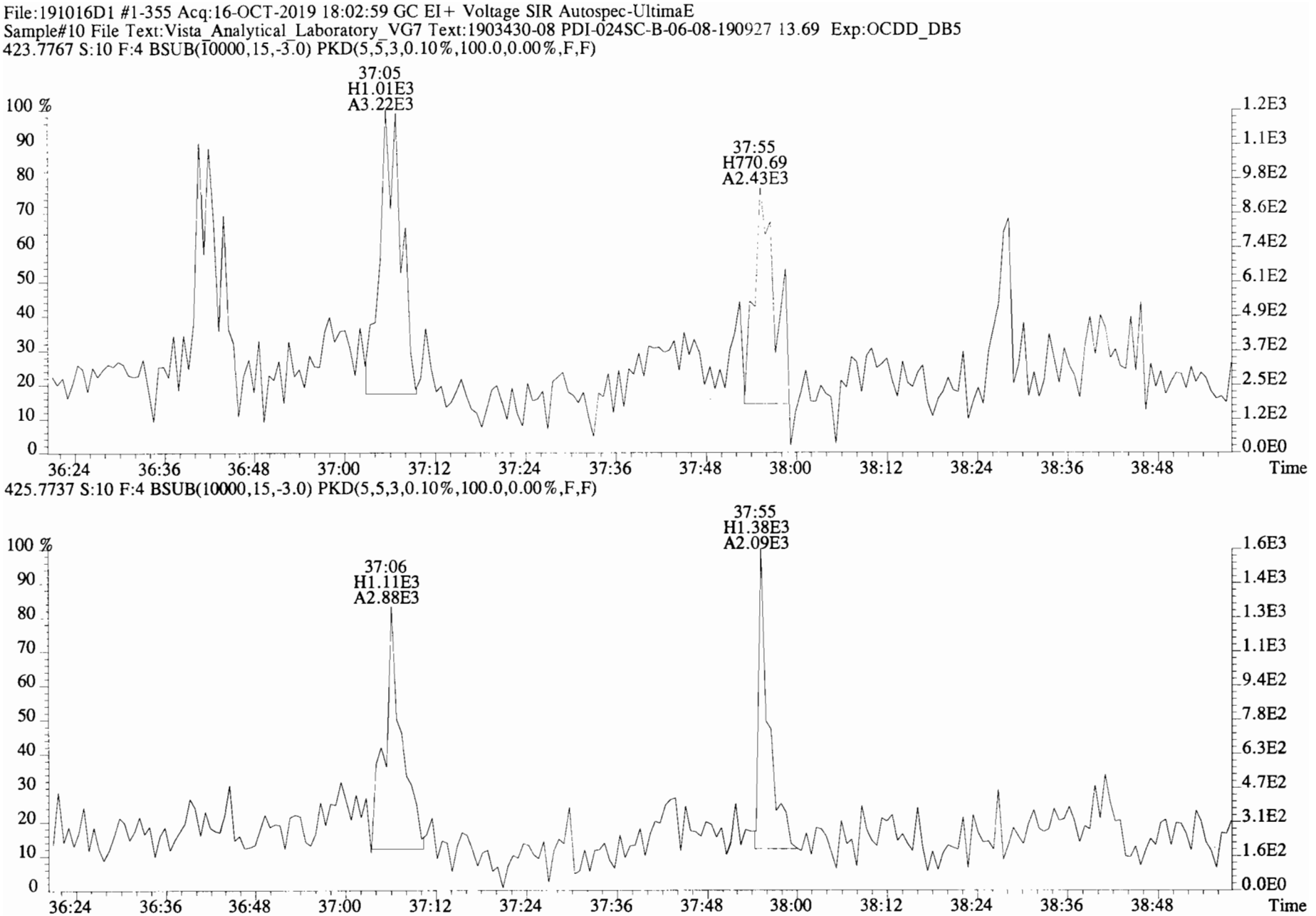
File:191016D1 #1-385 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
401.8559 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

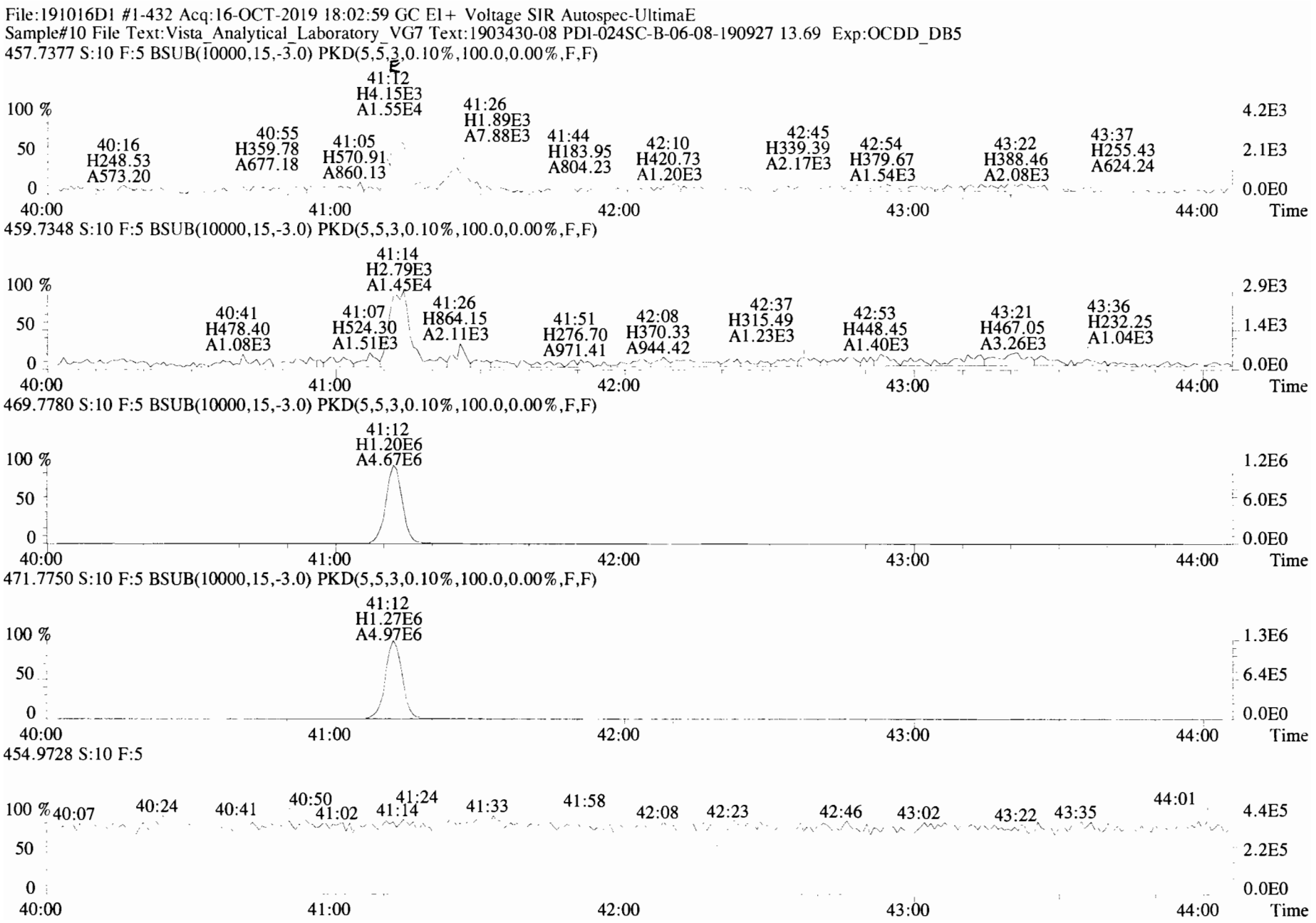


403.8530 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

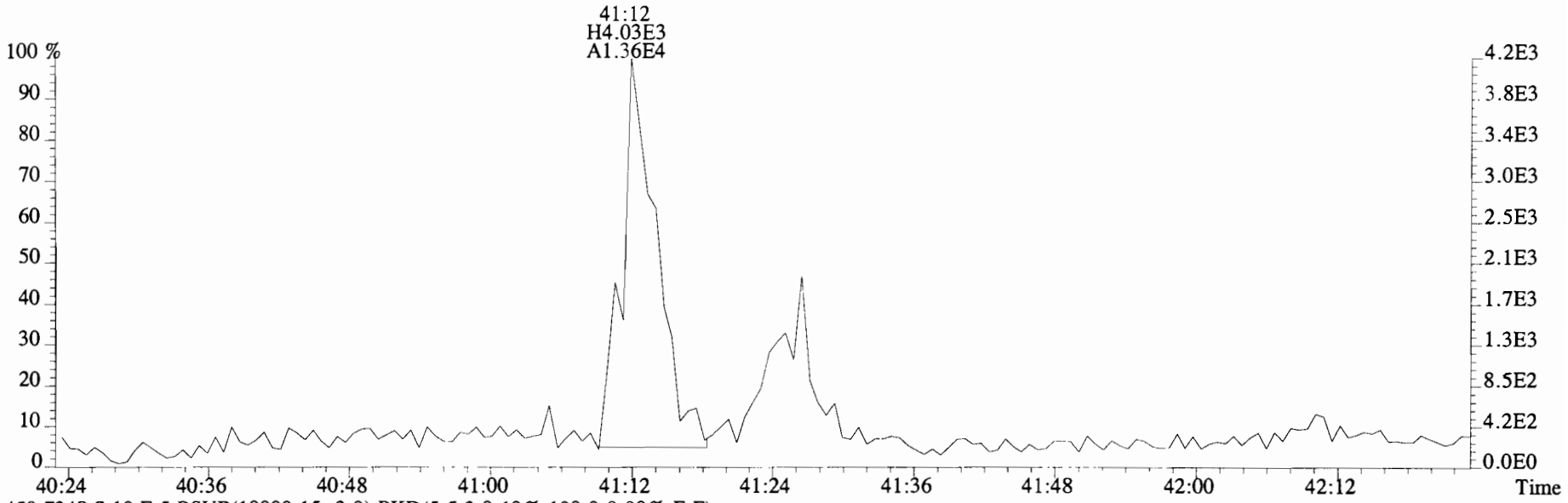



File:191016D1 #1-355 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
423.7767 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:10 H131.12 A373.72
36:33 H221.73 A1.45E3
36:41 H995.11 A4.48E3
37:05 H1.13E3 A5.06E3
37:15 H172.33 A434.94
37:45 H388.81 A1.16E3
37:55 H917.23 A3.30E3
38:28 H799.65 A3.11E3
38:40 H447.67 A2.46E3
39:13 H967.24 A5.91E3
39:43 H375.64 A870.32
425.7737 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:22 H334.83 A829.37
36:45 H378.76 A1.17E3
37:06 H1.21E3 A4.04E3
37:15 H191.50 A739.53
37:44 H407.77 A1.95E3
37:55 H1.55E3 A4.51E3
38:09 H366.66 A639.15
38:41 H505.69 A2.20E3
39:13 H724.71 A1.90E3
39:43 H460.61 A1.70E3
435.8169 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:55 H9.51E5 A2.82E6
437.8140 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:55 H9.21E5 A2.75E6
454.9728 S:10 F:4
100 %
50
0
36:00
37:00
38:00
39:00
40:00
Time
1.2E3
6.1E2
0.0E0
1.6E3
7.8E2
9.5E5
4.8E5
9.2E5
4.6E5
4.0E5
2.0E5

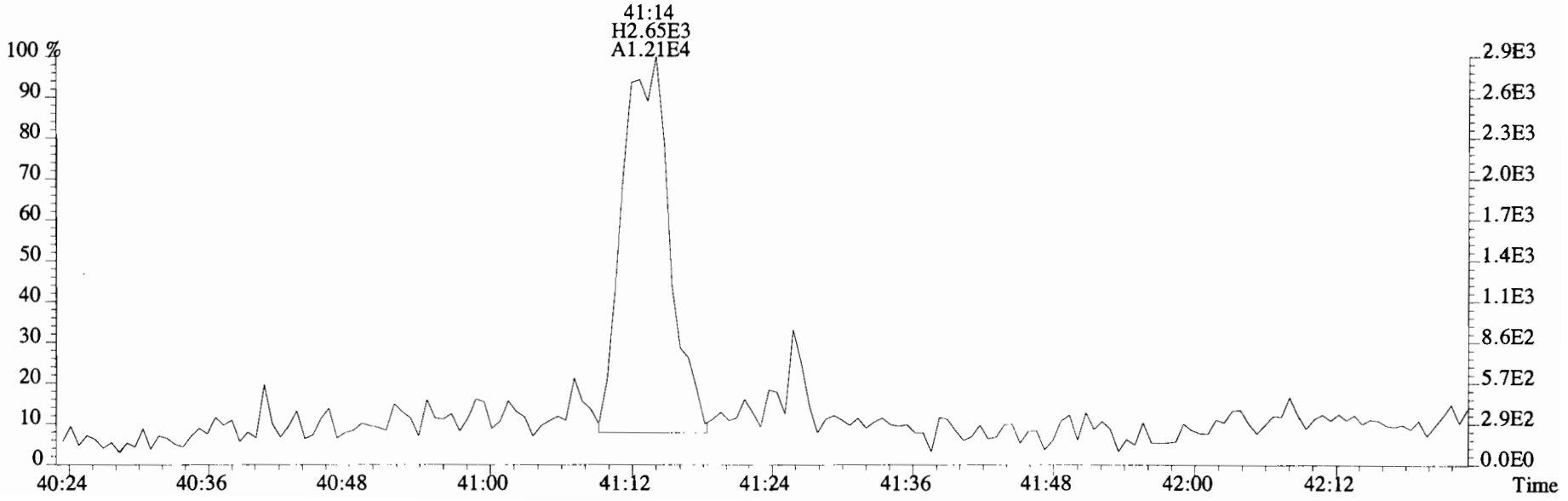

File:191016D1 #1-355 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
423.7767 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:05
H1.01E3
A3.22E3
37:55
H770.69
A2.43E3
100 %
90
80
70
60
50
40
30
20
10
0
1.2E3
1.1E3
9.8E2
8.6E2
7.4E2
6.1E2
4.9E2
3.7E2
2.5E2
1.2E2
0.0E0
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
38:12
38:24
38:36
38:48
Time
425.7737 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:55
H1.38E3
A2.09E3
37:06
H1.11E3
A2.88E3
100 %
90
80
70
60
50
40
30
20
10
0
1.6E3
1.4E3
1.3E3
1.1E3
9.4E2
7.8E2
6.3E2
4.7E2
3.1E2
1.6E2
0.0E0
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
38:12
38:24
38:36
38:48
Time


File:191016D1 #1-432 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 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)
41:12 H4.15E3 A1.55E4
41:26 H1.89E3 A7.88E3
40:16 H248.53 A573.20
40:55 H359.78 A677.18
41:05 H570.91 A860.13
41:44 H183.95 A804.23
42:10 H420.73 A1.20E3
42:45 H339.39 A2.17E3
42:54 H379.67 A1.54E3
43:22 H388.46 A2.08E3
43:37 H255.43 A624.24
459.7348 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:14 H2.79E3 A1.45E4
41:26 H864.15 A2.11E3
40:41 H478.40 A1.08E3
41:07 H524.30 A1.51E3
41:51 H276.70 A971.41
42:08 H370.33 A944.42
42:37 H315.49 A1.23E3
42:53 H448.45 A1.40E3
43:21 H467.05 A3.26E3
43:36 H232.25 A1.04E3
469.7780 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12 H1.20E6 A4.67E6
471.7750 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:12 H1.27E6 A4.97E6
454.9728 S:10 F:5
40:07
40:24
40:41
40:50
41:02
41:14
41:24
41:33
41:58
42:08
42:23
42:46
43:02
43:22
43:35
44:01
100 %
50
0
40:00
41:00
42:00
43:00
44:00
Time
4.2E3
2.1E3
0.0E0
2.9E3
1.4E3
1.2E6
6.0E5
1.3E6
6.4E5
4.4E5
2.2E5

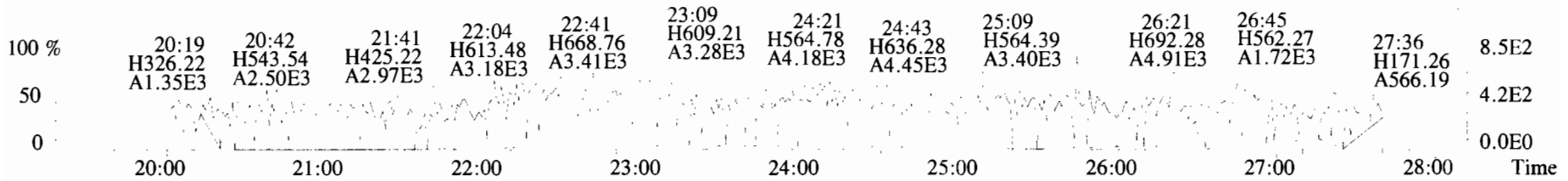
File:191016D1 #1-432 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
457.7377 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



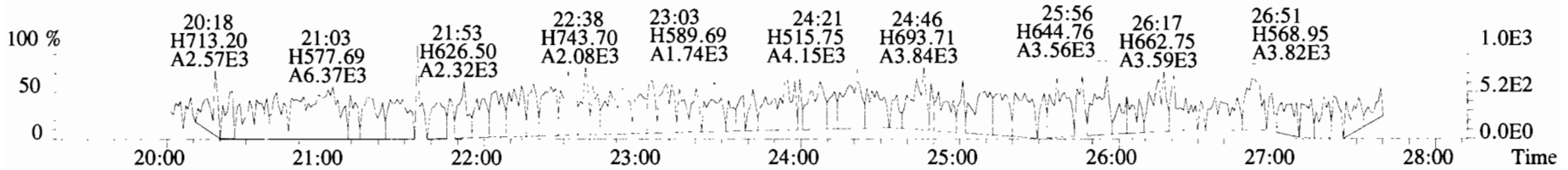
459.7348 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



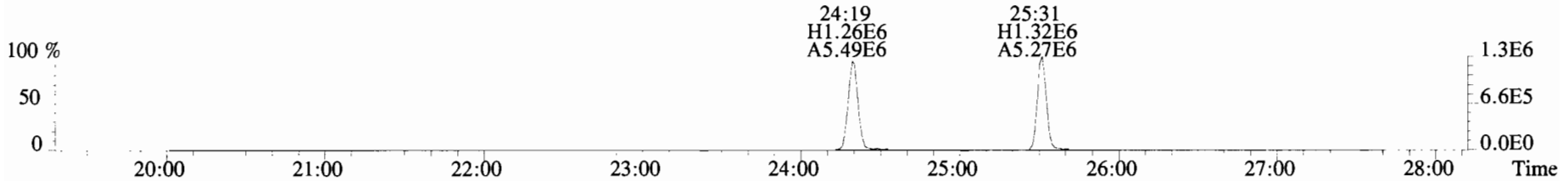
File:191016D1 #1-492 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
303.9016 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



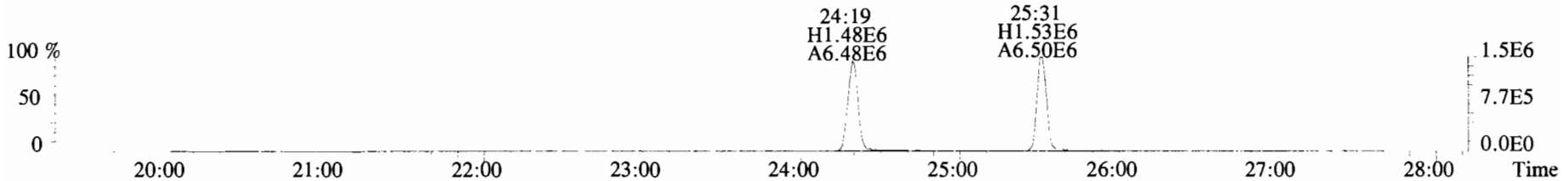
305.8987 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



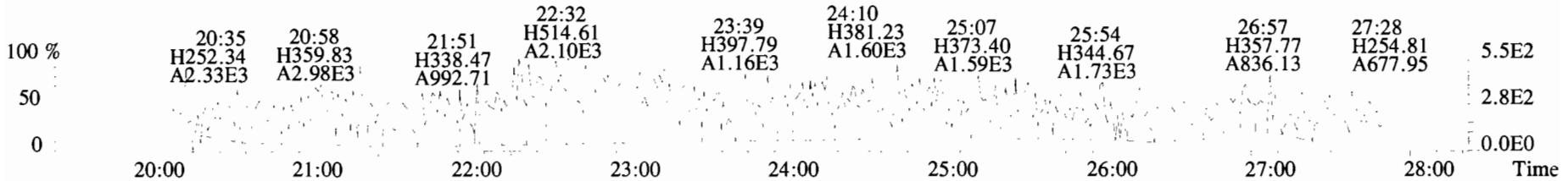
315.9419 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



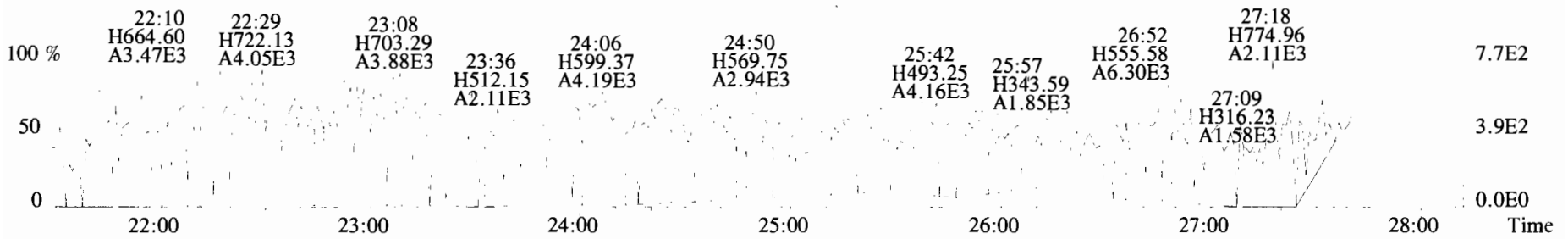
317.9389 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



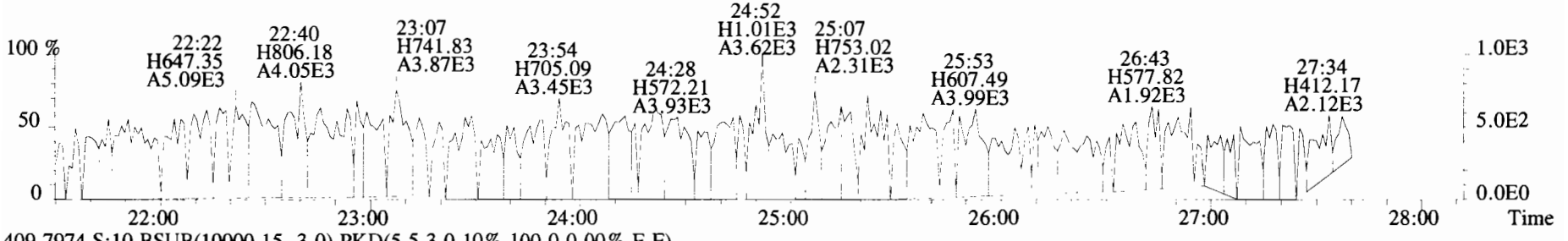
375.8364 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



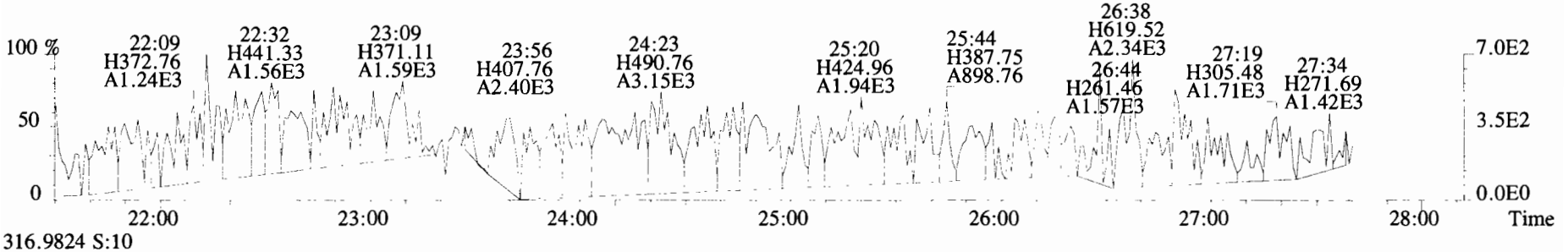
File:191016D1 #1-492 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
339.8597 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



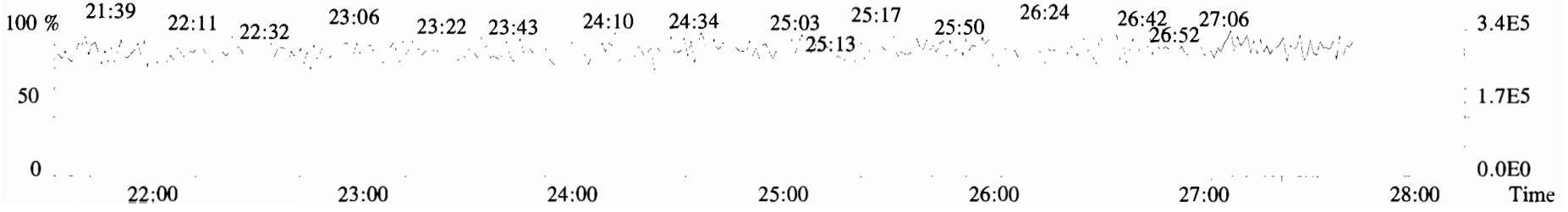
341.8568 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



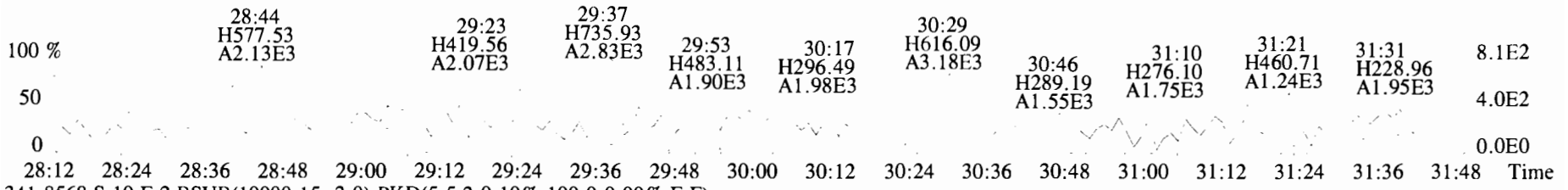
409.7974 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



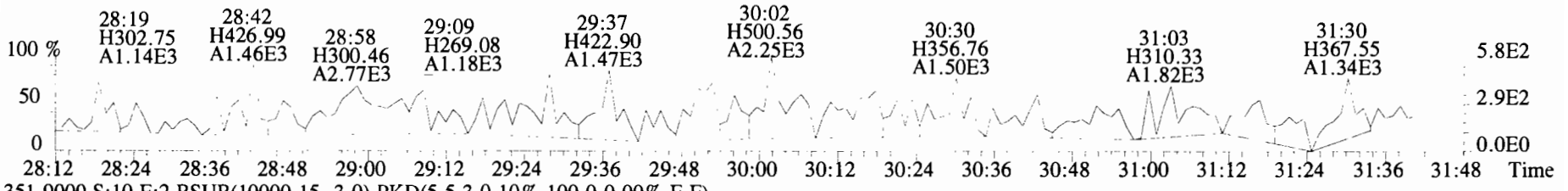
316.9824 S:10



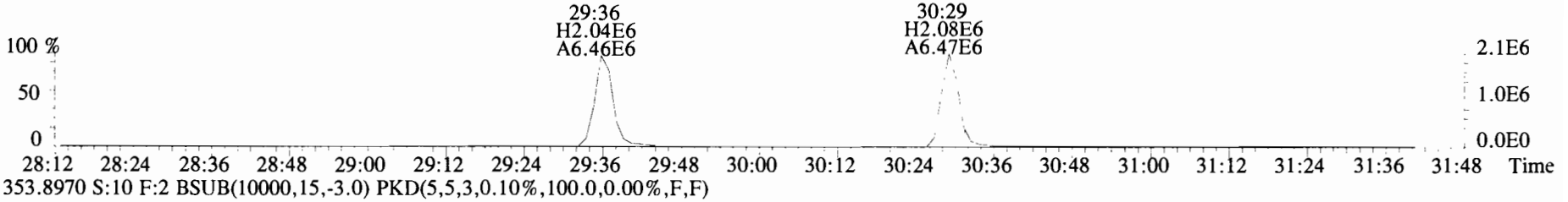
File:191016D1 #1-211 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
339.8597 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



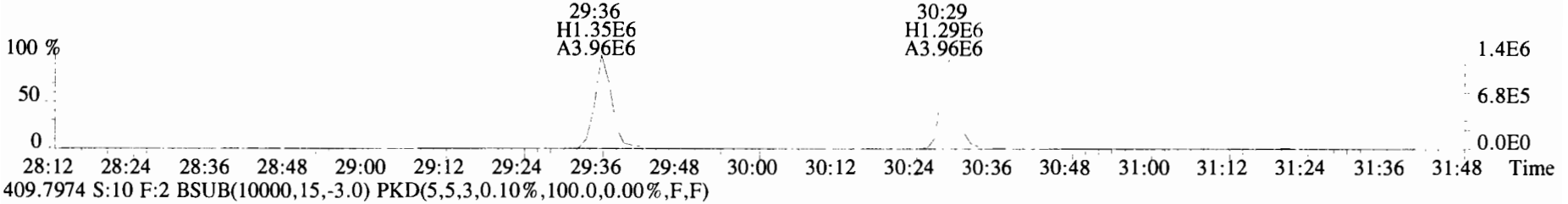
341.8568 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



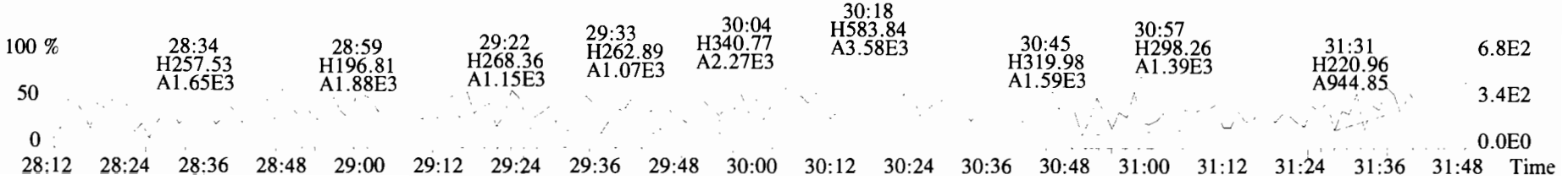
351.9000 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



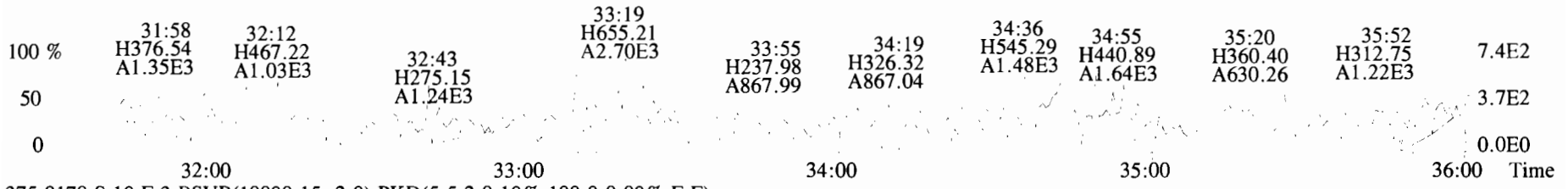
353.8970 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



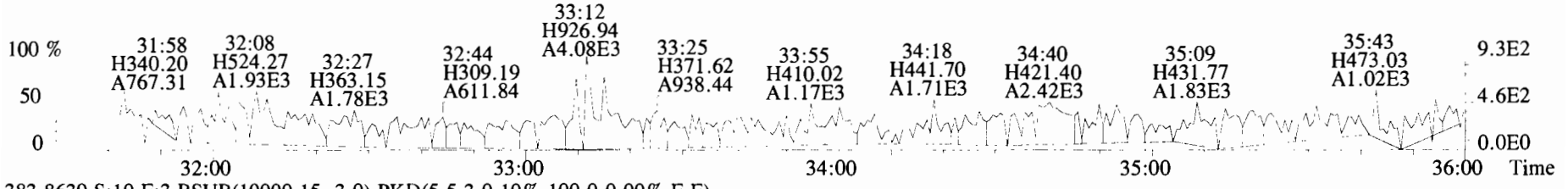
409.7974 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



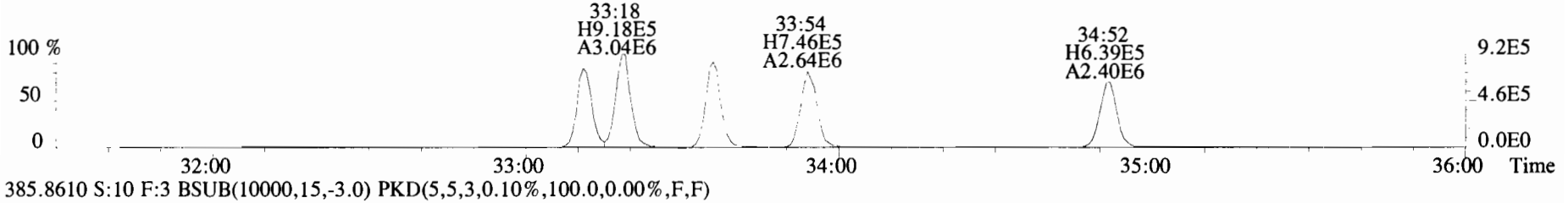
File:191016D1 #1-385 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
373.8207 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



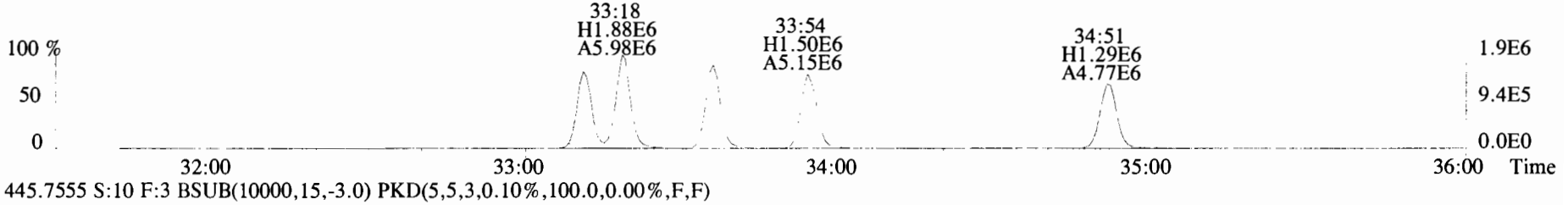
375.8178 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



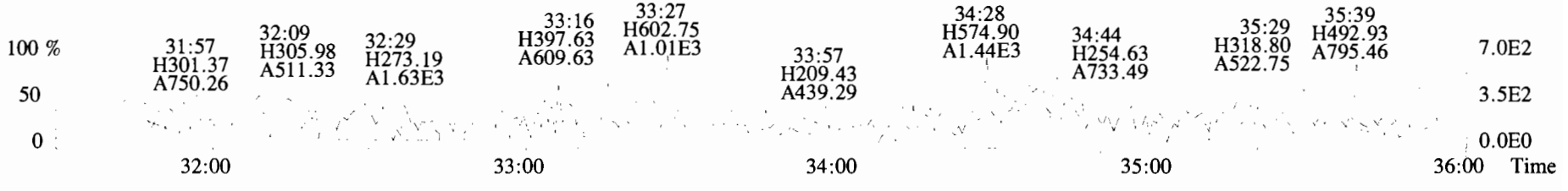
383.8639 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



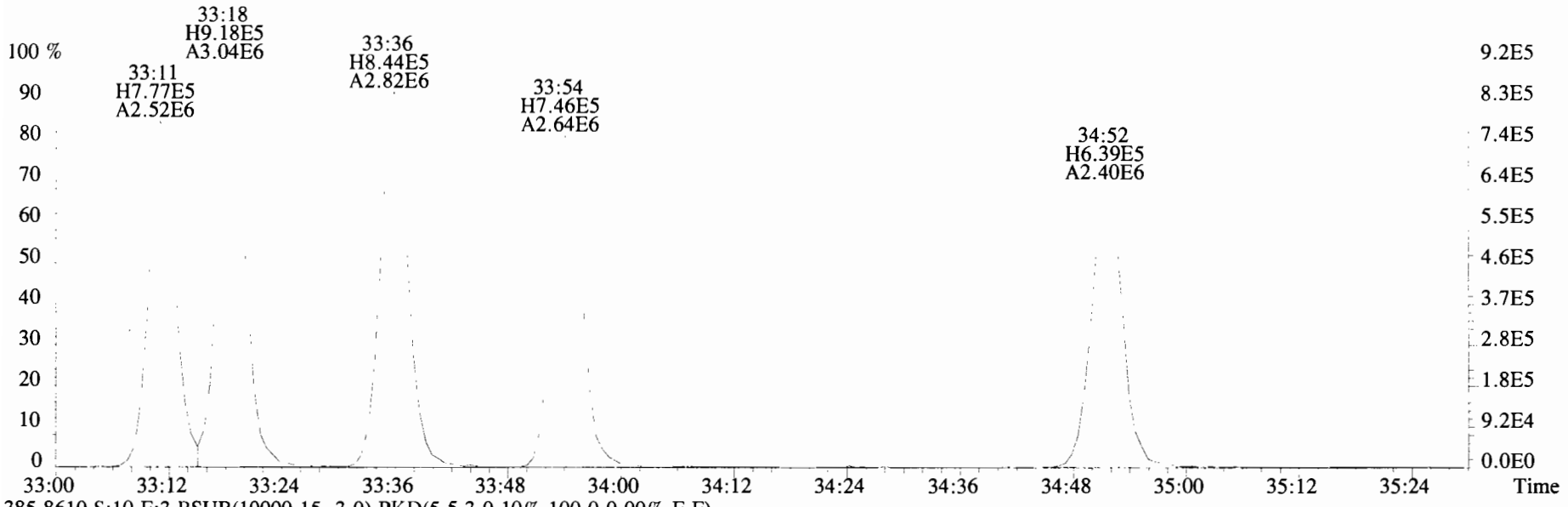
385.8610 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



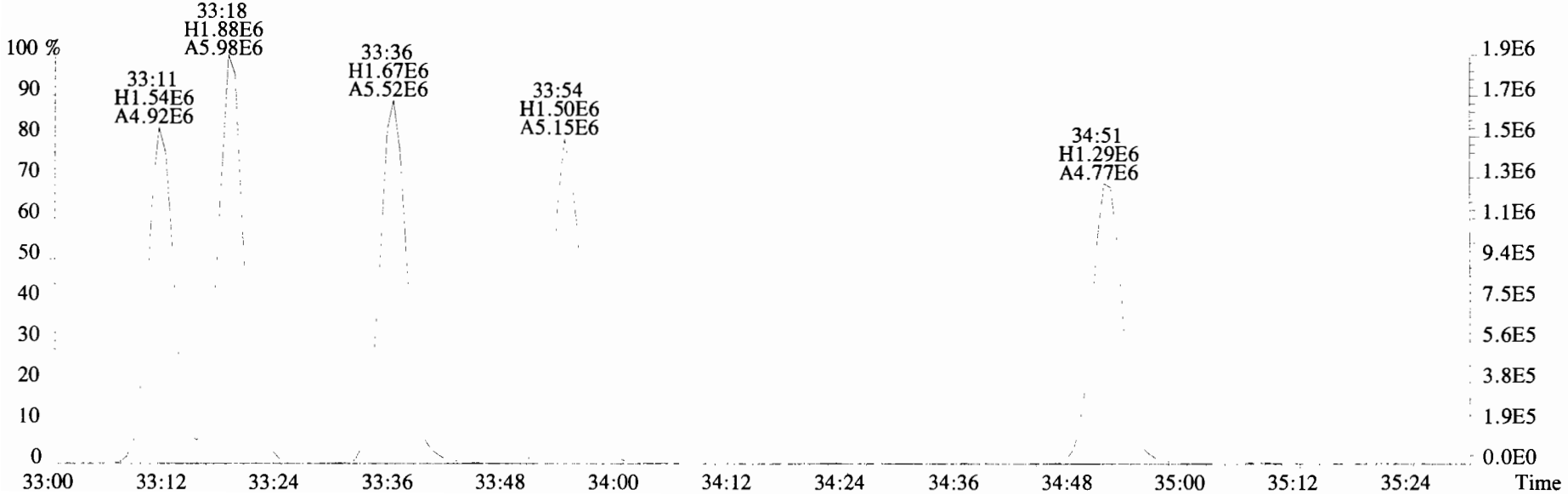
445.7555 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



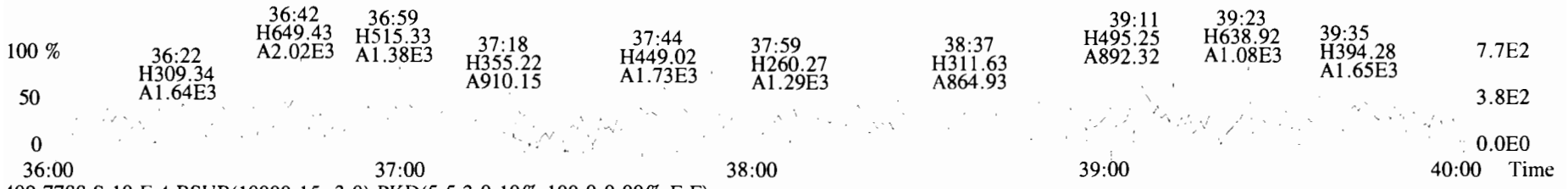
File:191016D1 #1-385 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
383.8639 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



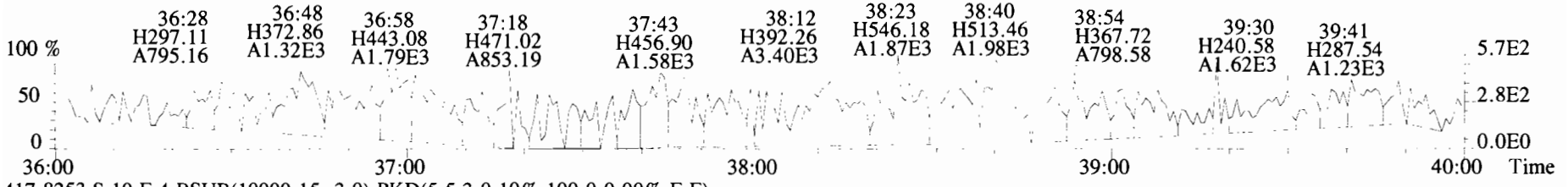
385.8610 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



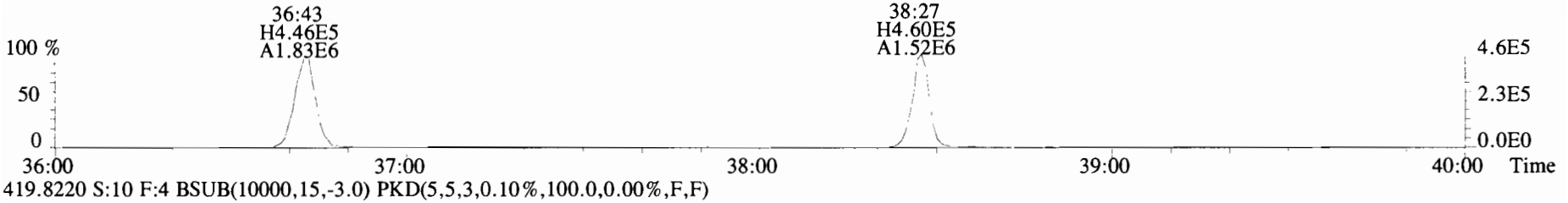
File:191016D1 #1-355 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
407.7818 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



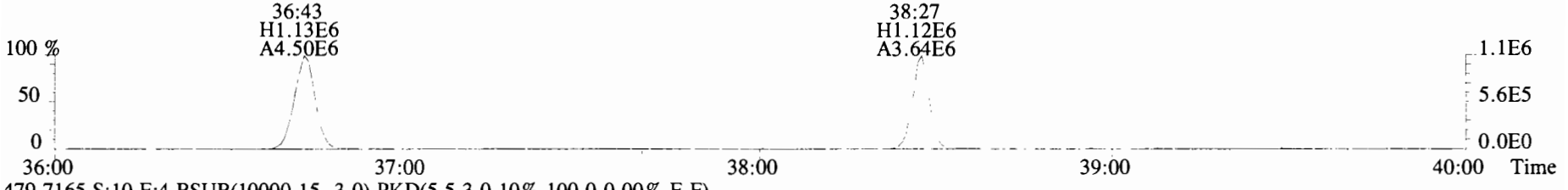
409.7788 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



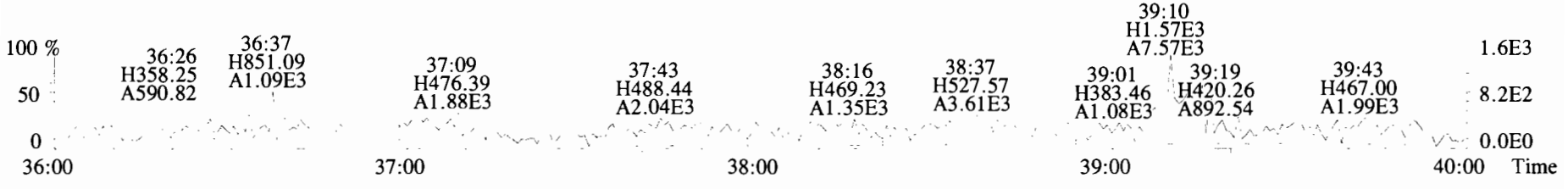
417.8253 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



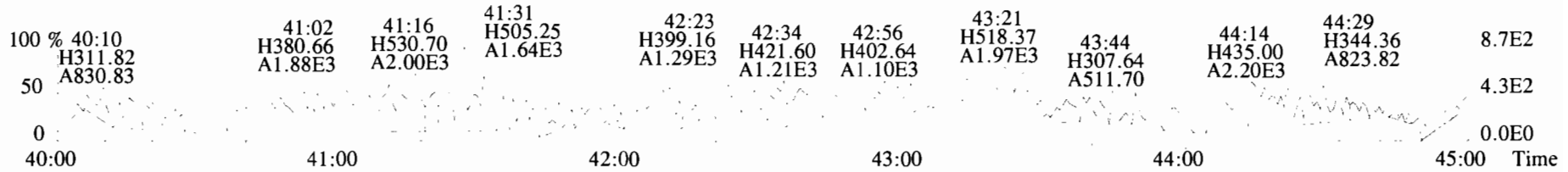
419.8220 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



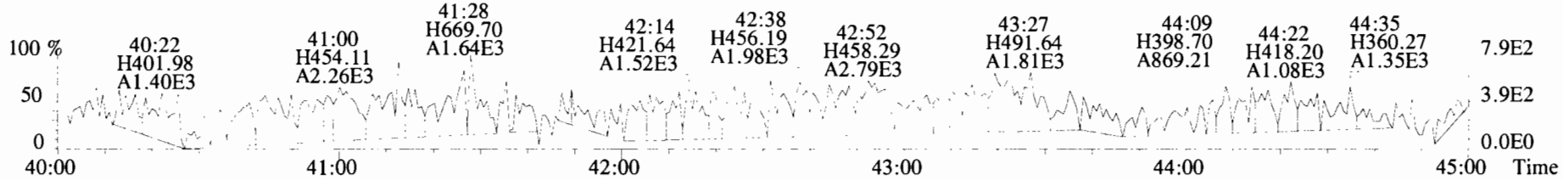
479.7165 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



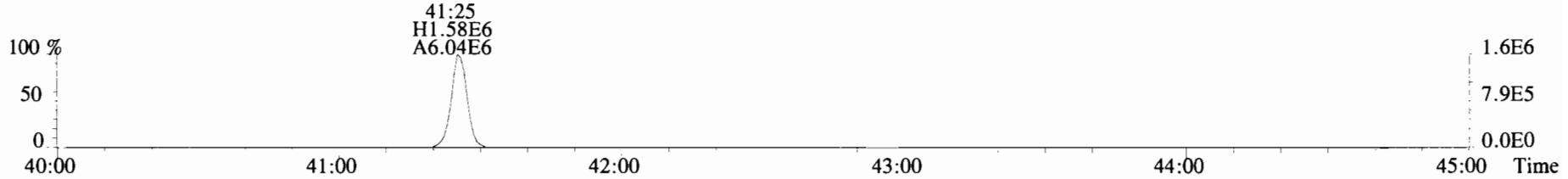
File:191016D1 #1-432 Acq:16-OCT-2019 18:02:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-08 PDI-024SC-B-06-08-190927 13.69 Exp:OCDD_DB5
441.7428 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



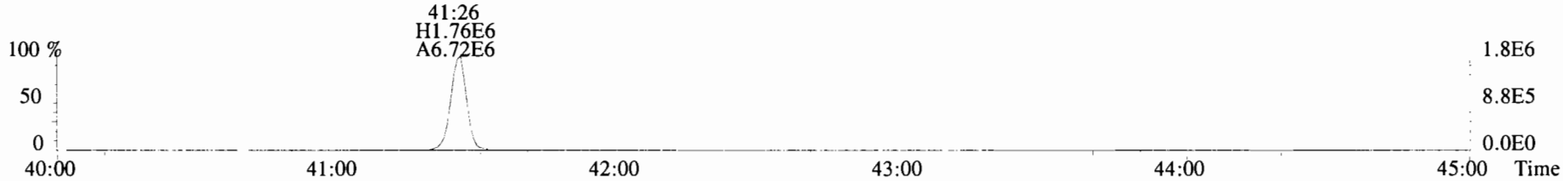
443.7398 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



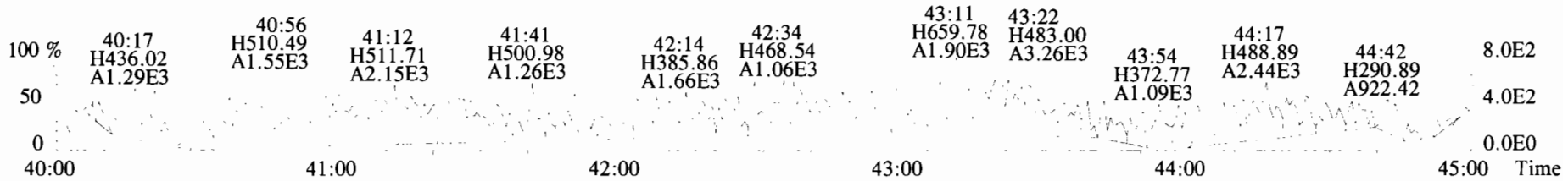
453.7831 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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)



Client ID: PDI-025SC-A-[illegible]-1909 Filename: 191016D1 S:11 Acq:16-OCT-19 18:50:53 ConCal: ST191016D1-1

Lab ID: 1903430-11 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.116 ✓ EndCAL: NA

	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	0.91	NotF	*		174	2.5	0.0817
	1,2,3,7,8-PeCDD	*	*	n	0.90	NotF	*		182	2.5	0.0853
	1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF	*		113	2.5	0.0801
	1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF	*		113	2.5	0.0855
	1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF	*		113	2.5	0.0807
	1,2,3,4,6,7,8-HpCDD	*	*	n	0.98	NotF	*		110	2.5	0.0758
	OCDD	8.63e+03	0.95	y	0.96	41:15	0.43406		*	2.5	*
	2,3,7,8-TCDF	*	*	n	0.95	NotF	*		171	2.5	0.0569
	1,2,3,7,8-PeCDF	*	*	n	0.96	NotF	*		184	2.5	0.0828
	2,3,4,7,8-PeCDF	*	*	n	1.01	NotF	*		184	2.5	0.0701
	1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF	*		133	2.5	0.0384
	1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF	*		133	2.5	0.0389
	2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF	*		133	2.5	0.0430
	1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF	*		133	2.5	0.0506
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF	*		125	2.5	0.0600
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF	*		125	2.5	0.0541
	OCDF	*	*	n	0.95	NotF	*		110	2.5	0.0859
IS	13C-2,3,7,8-TCDD	7.26e+06	0.76	y	1.10	26:17	186.63				
IS	13C-1,2,3,7,8-PeCDD	5.83e+06	0.63	y	0.88	30:46	186.20				
IS	13C-1,2,3,4,7,8-HxCDD	5.00e+06	1.27	y	0.64	34:05	201.90				
IS	13C-1,2,3,6,7,8-HxCDD	5.55e+06	1.27	y	0.86	34:12	168.16				
IS	13C-1,2,3,7,8,9-HxCDD	5.66e+06	1.25	y	0.81	34:29	181.89				
IS	13C-1,2,3,4,6,7,8-HpCDD	4.77e+06	1.02	y	0.65	37:56	189.24				
IS	13C-OCDD	8.20e+06	0.91	y	0.58	41:13	366.76				
IS	13C-2,3,7,8-TCDF	1.12e+07	0.80	y	1.03	25:31	183.49				
IS	13C-1,2,3,7,8-PeCDF	9.52e+06	1.55	y	0.85	29:36	189.46				
IS	13C-2,3,4,7,8-PeCDF	9.58e+06	1.61	y	0.85	30:29	192.37				
IS	13C-1,2,3,4,7,8-HxCDF	7.00e+06	0.50	y	0.83	33:11	218.17				
IS	13C-1,2,3,6,7,8-HxCDF	7.90e+06	0.51	y	1.03	33:19	198.11				
IS	13C-2,3,4,6,7,8-HxCDF	7.30e+06	0.51	y	0.95	33:55	198.56				
IS	13C-1,2,3,7,8,9-HxCDF	6.51e+06	0.51	y	0.83	34:52	204.03				
IS	13C-1,2,3,4,6,7,8-HpCDF	5.40e+06	0.40	y	0.76	36:43	184.96				
IS	13C-1,2,3,4,7,8,9-HpCDF	4.10e+06	0.39	y	0.58	38:28	182.96				
IS	13C-OCDF	1.01e+07	0.90	y	0.69	41:27	379.32				
C/Up	37Cl-2,3,7,8-TCDD	3.48e+06			1.20	26:19	81.710				
RS/RT	13C-1,2,3,4-TCDD	7.03e+06	0.76	y	1.00	25:44	197.71				
RS	13C-1,2,3,4-TCDF	1.16e+07	0.82	y	1.00	24:19	197.71				
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.63e+06	0.50	y	1.00	33:36	197.71				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		174	0.0817
Total Penta-Dioxins	*	*		182	0.0853
Total Hexa-Dioxins	*	*		113	0.0825
Total Hepta-Dioxins	*	0.176		*	*
Total Tetra-Furans	*	*		171	0.0569
Total Penta-Furans	0.0000	0.0000		184	0.0763
Total Hexa-Furans	*	*		133	0.0424
Total Hepta-Furans	*	*		125	0.0572

	Name	Rec	Qual
IS	13C-2,3,7,8-TCDD	94.4	
IS	13C-1,2,3,7,8-PeCDD	94.2	
IS	13C-1,2,3,4,7,8-HxCDD	102	
IS	13C-1,2,3,6,7,8-HxCDD	85.1	
IS	13C-1,2,3,7,8,9-HxCDD	92.0	
IS	13C-1,2,3,4,6,7,8-HpCDD	95.7	
IS	13C-OCDD	92.8	
IS	13C-2,3,7,8-TCDF	92.8	
IS	13C-1,2,3,7,8-PeCDF	95.8	
IS	13C-2,3,4,7,8-PeCDF	97.3	
IS	13C-1,2,3,4,7,8-HxCDF	110	
IS	13C-1,2,3,6,7,8-HxCDF	100	
IS	13C-2,3,4,6,7,8-HxCDF	100	
IS	13C-1,2,3,7,8,9-HxCDF	103	
IS	13C-1,2,3,4,6,7,8-HpCDF	93.6	
IS	13C-1,2,3,4,7,8,9-HpCDF	92.5	
IS	13C-OCDF	95.9	
C/Up	37Cl-2,3,7,8-TCDD	103	
RS/RT	13C-1,2,3,4-TCDD		
RS	13C-1,2,3,4-TCDF		
RS/RT	13C-1,2,3,4,6,9-HxCDF		

Integrations by Analyst: DB Date: 11/1/19

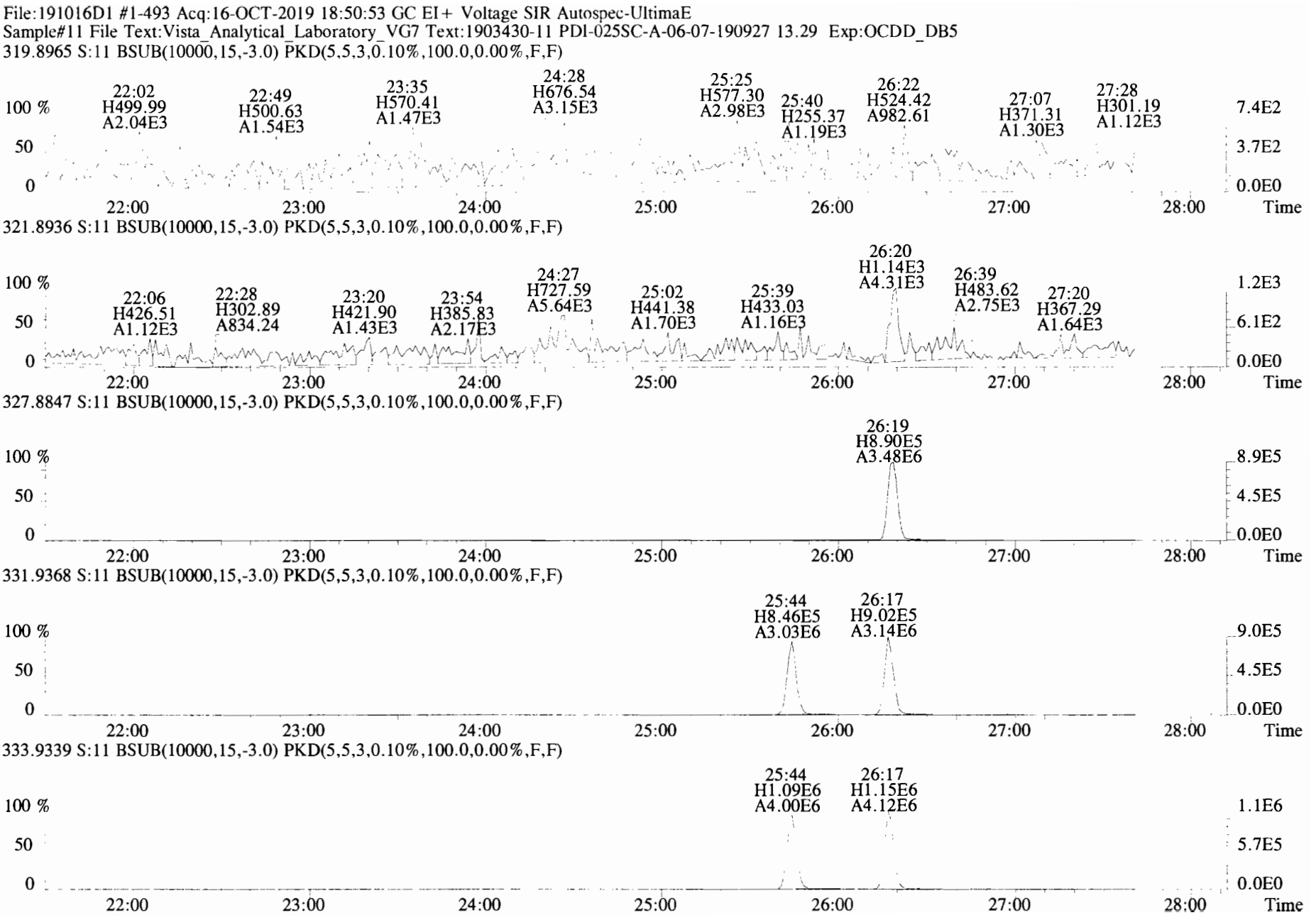
Reviewed by Analyst: CT Date: 11/04/19

Totals class: HpCDD EMPC Entry #: 25

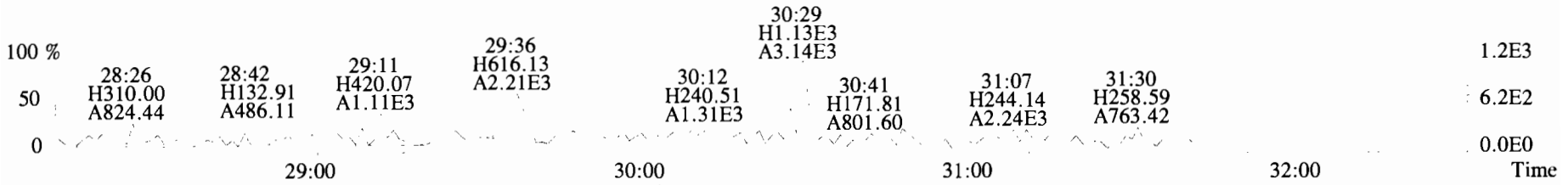
Run: 16 File: 191016D1 S: 11 I: 1 F: 4
Acquired: 16-OCT-19 18:50:53 Processed: 17-OCT-19 09:18:59

Total Concentration: 0.17571 Unnamed Concentration: 0.176

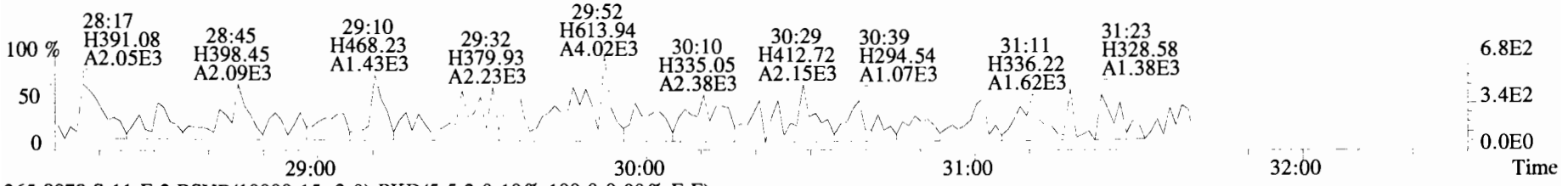
RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37.06	3.386e+03	2.037e+03	1.66	n	4.155e+03	0.17571	


File:191016D1 #1-493 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:02 H499.99 A2.04E3
22:49 H500.63 A1.54E3
23:35 H570.41 A1.47E3
24:28 H676.54 A3.15E3
25:25 H577.30 A2.98E3
25:40 H255.37 A1.19E3
26:22 H524.42 A982.61
27:07 H371.31 A1.30E3
27:28 H301.19 A1.12E3
7.4E2
3.7E2
0.0E0
321.8936 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:06 H426.51 A1.12E3
22:28 H302.89 A834.24
23:20 H421.90 A1.43E3
23:54 H385.83 A2.17E3
24:27 H727.59 A5.64E3
25:02 H441.38 A1.70E3
25:39 H433.03 A1.16E3
26:20 H1.14E3 A4.31E3
26:39 H483.62 A2.75E3
27:20 H367.29 A1.64E3
1.2E3
6.1E2
0.0E0
327.8847 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:19 H8.90E5 A3.48E6
8.9E5
4.5E5
0.0E0
331.9368 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:44 H8.46E5 A3.03E6
26:17 H9.02E5 A3.14E6
9.0E5
4.5E5
0.0E0
333.9339 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:44 H1.09E6 A4.00E6
26:17 H1.15E6 A4.12E6
1.1E6
5.7E5
0.0E0
100 %
50
0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time

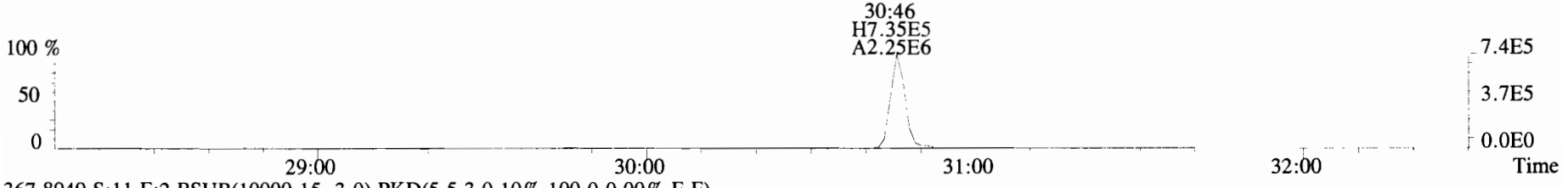
File:191016D1 #1-210 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
353.8576 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



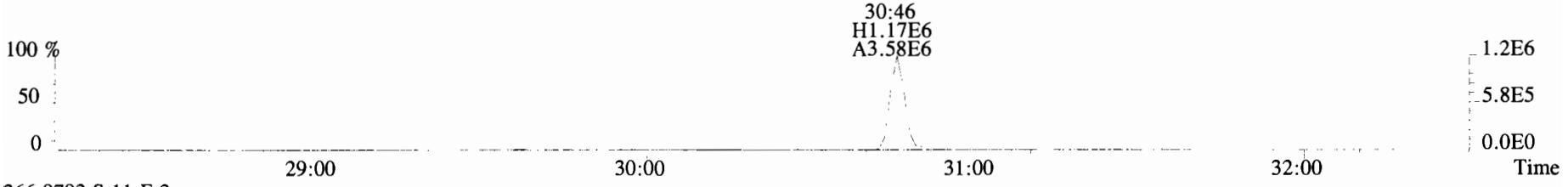
355.8546 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



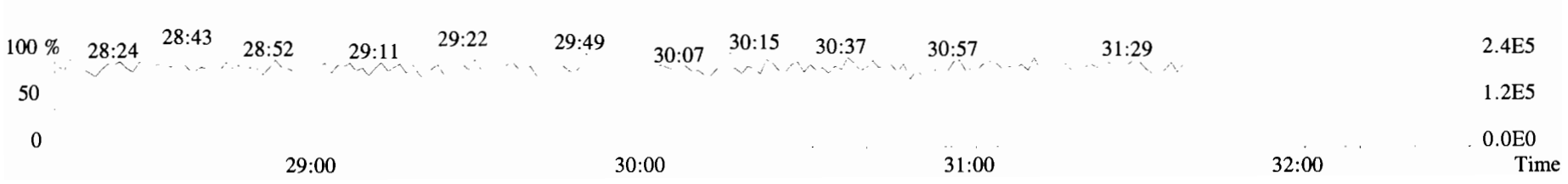
365.8978 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



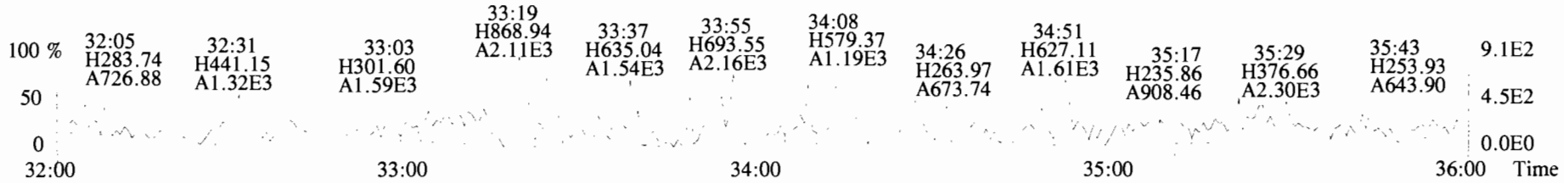
367.8949 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



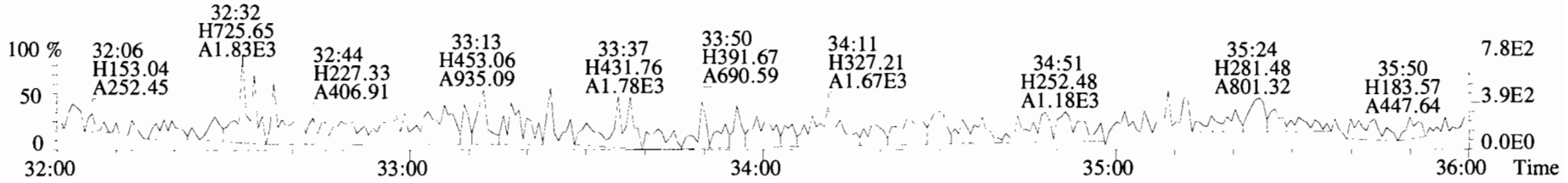
366.9792 S:11 F:2



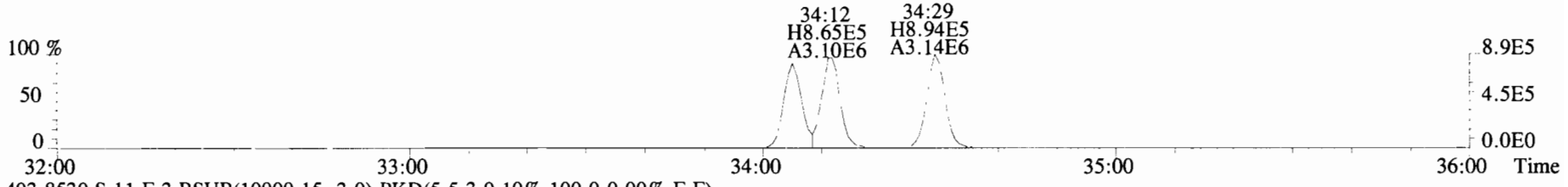
File:191016D1 #1-385 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



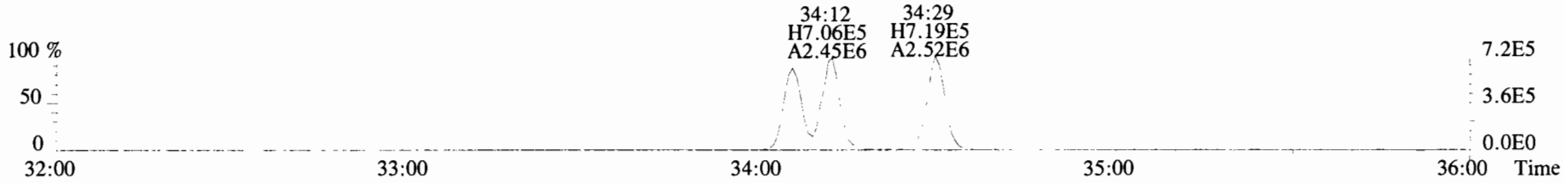
391.8127 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



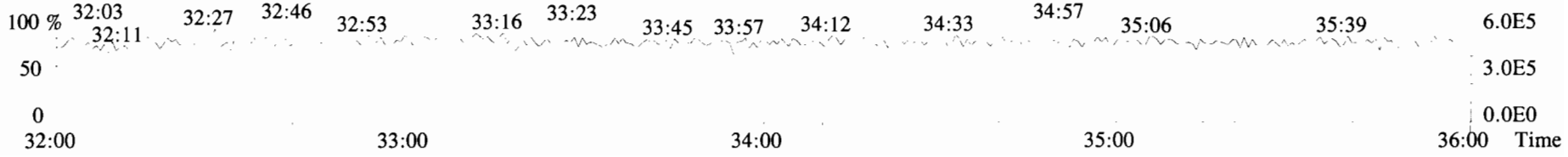
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

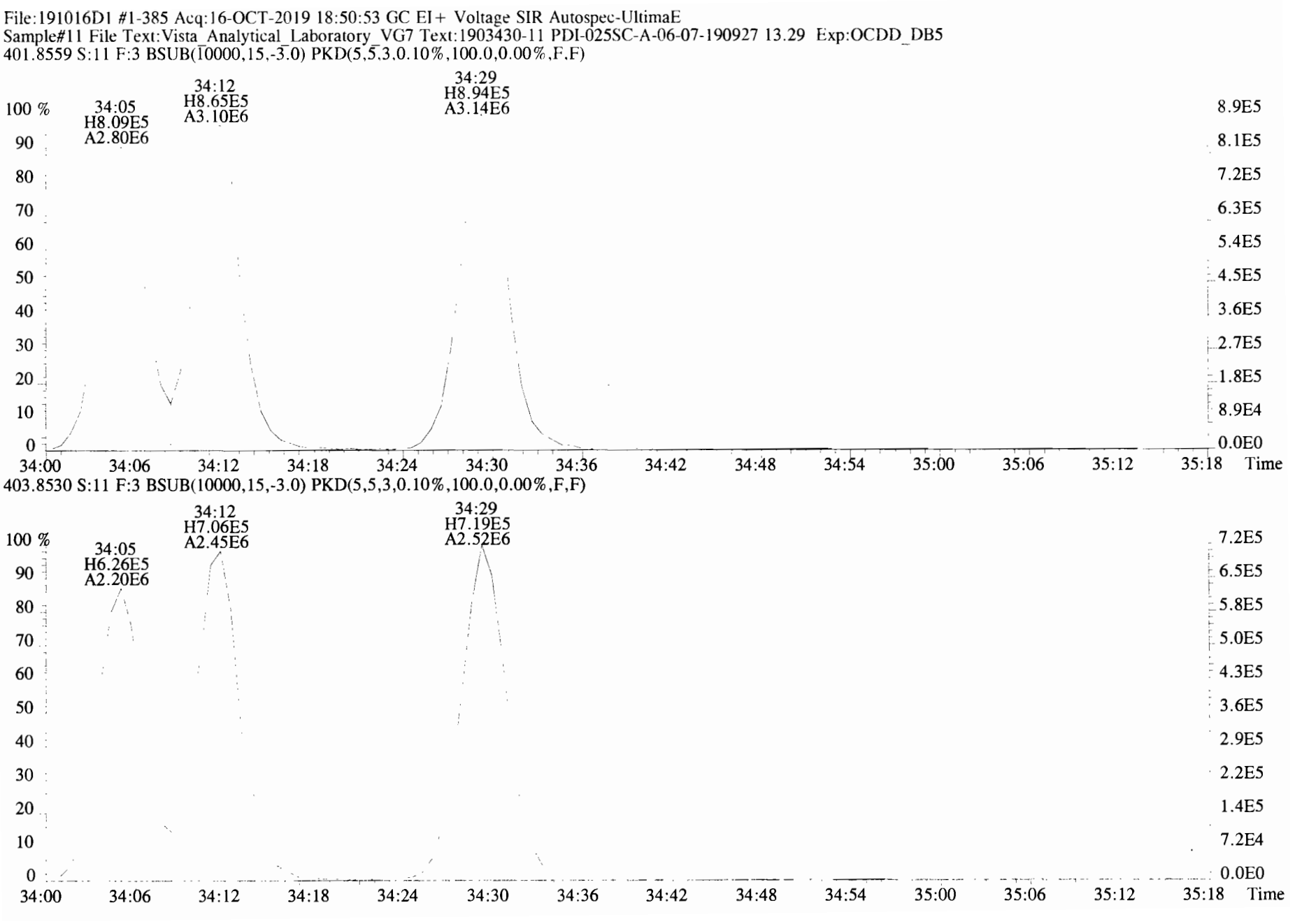


403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

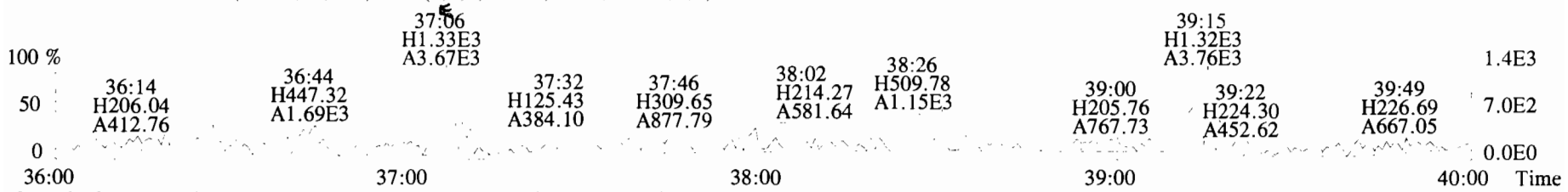


392.9760 S:11 F:3

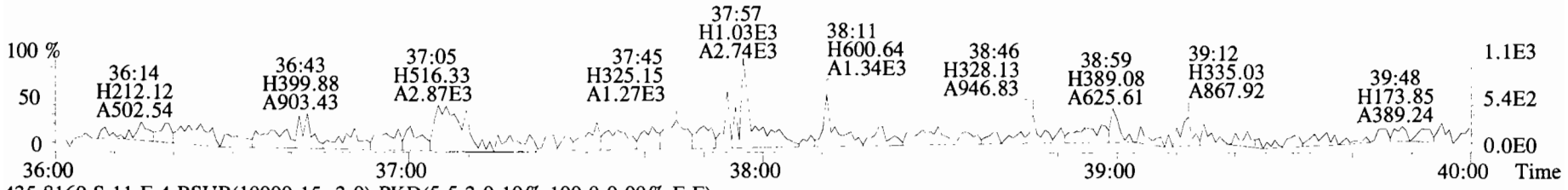



File:191016D1 #1-385 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:05 H8.09E5 A2.80E6
34:12 H8.65E5 A3.10E6
34:29 H8.94E5 A3.14E6
100 %
90
80
70
60
50
40
30
20
10
0
8.9E5
8.1E5
7.2E5
6.3E5
5.4E5
4.5E5
3.6E5
2.7E5
1.8E5
8.9E4
0.0E0
34:00 34:06 34:12 34:18 34:24 34:30 34:36 34:42 34:48 34:54 35:00 35:06 35:12 35:18 Time
403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:05 H6.26E5 A2.20E6
34:12 H7.06E5 A2.45E6
34:29 H7.19E5 A2.52E6
100 %
90
80
70
60
50
40
30
20
10
0
7.2E5
6.5E5
5.8E5
5.0E5
4.3E5
3.6E5
2.9E5
2.2E5
1.4E5
7.2E4
0.0E0
34:00 34:06 34:12 34:18 34:24 34:30 34:36 34:42 34:48 34:54 35:00 35:06 35:12 35:18 Time

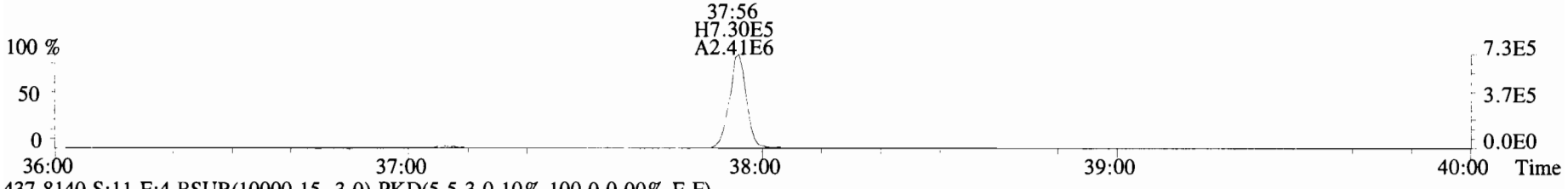
File:191016D1 #1-356 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



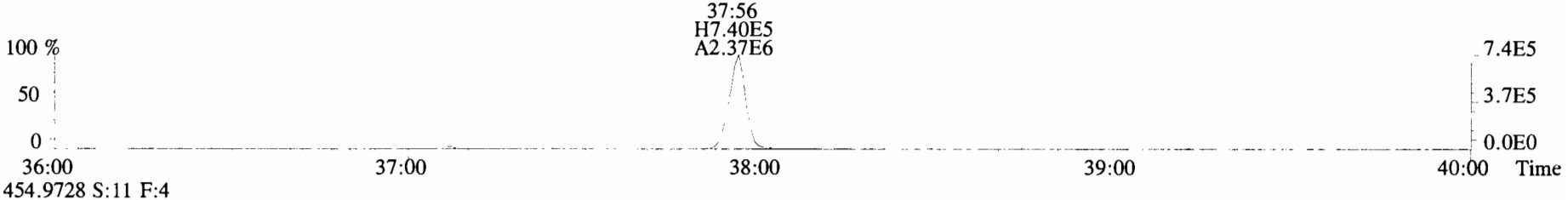
425.7737 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



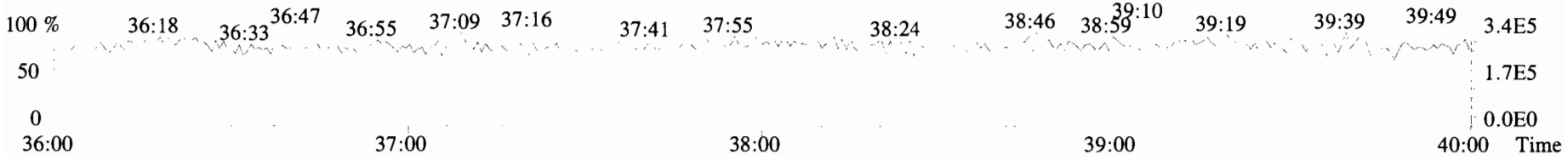
435.8169 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



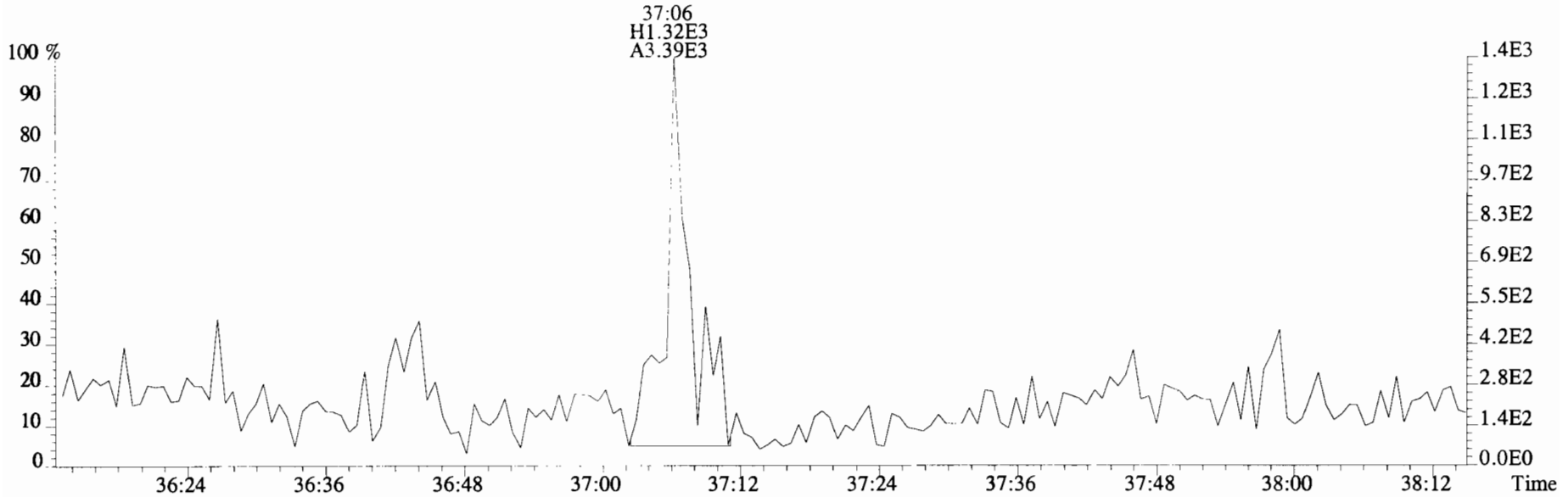
437.8140 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



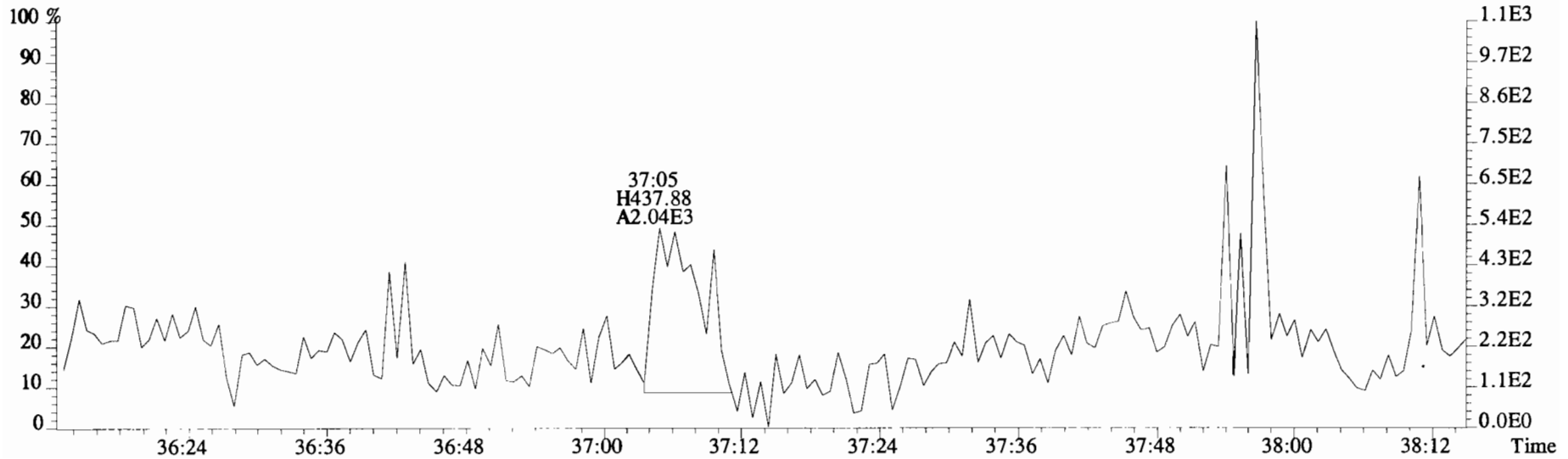
454.9728 S:11 F:4

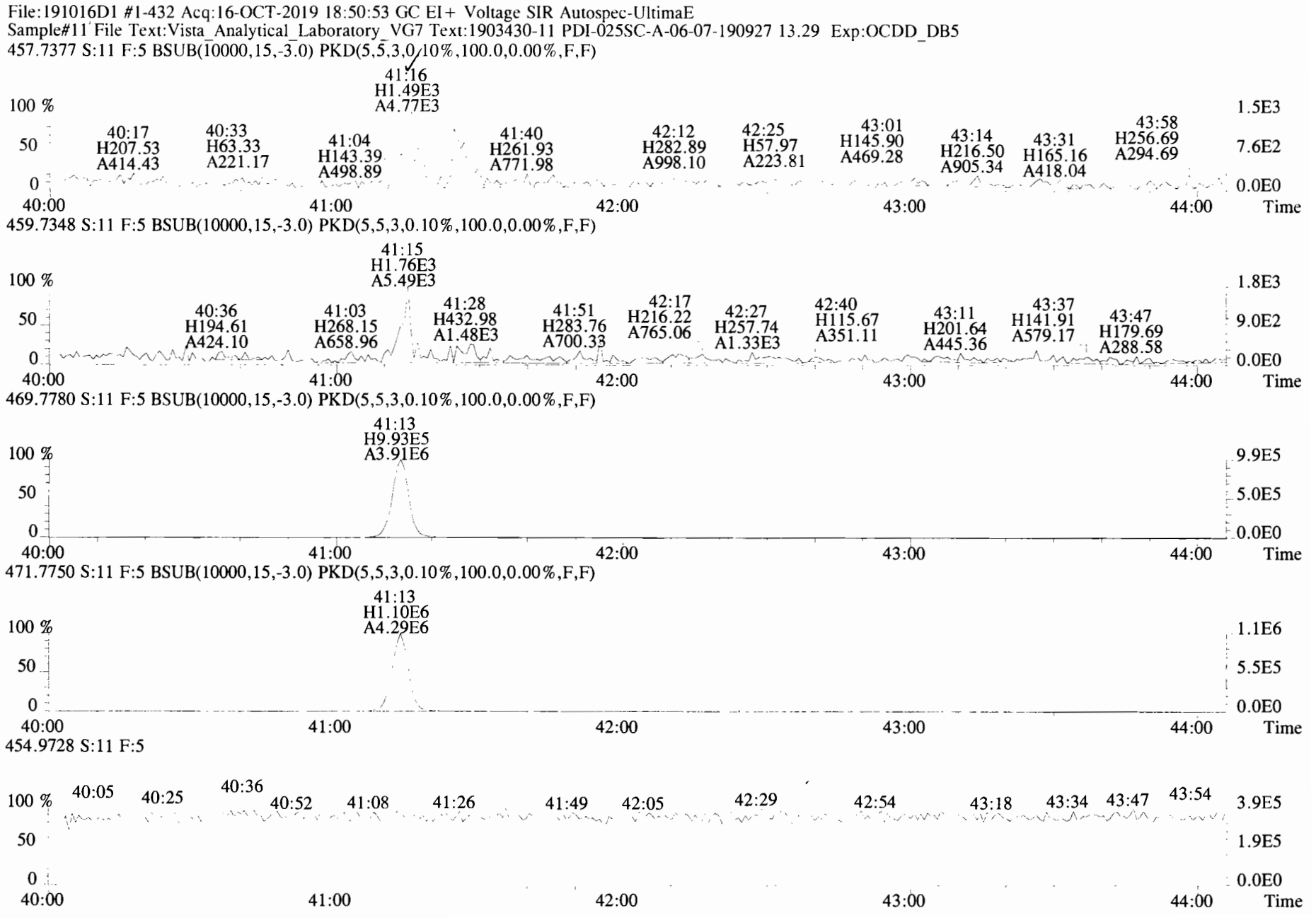


File:191016D1 #1-356 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

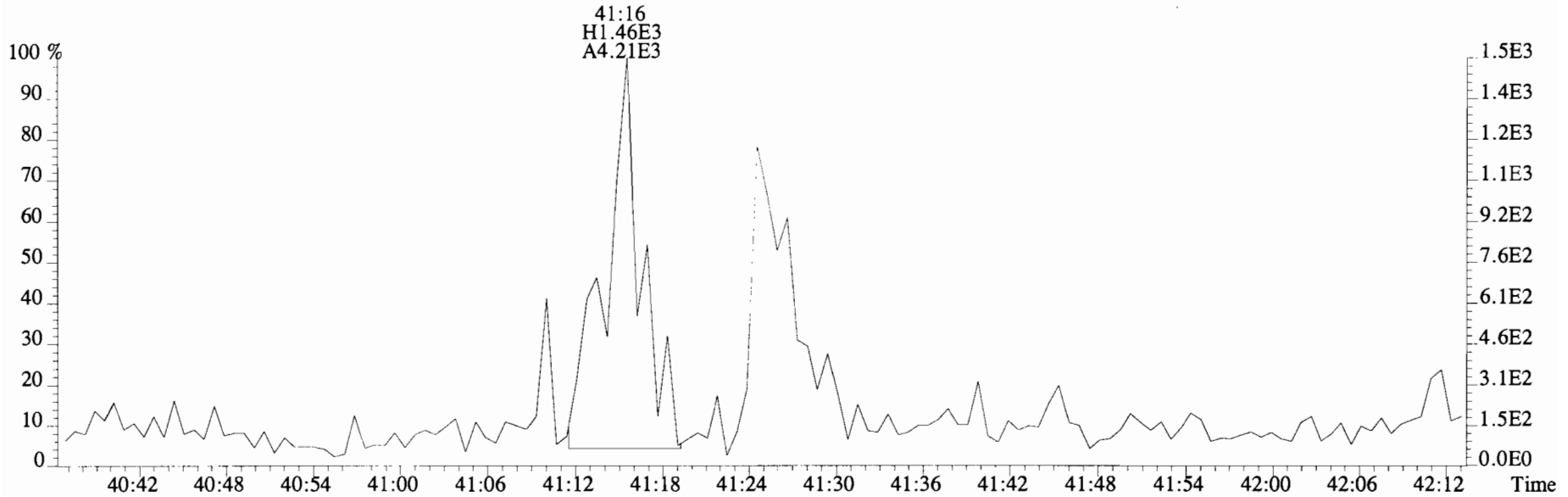


425.7737 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

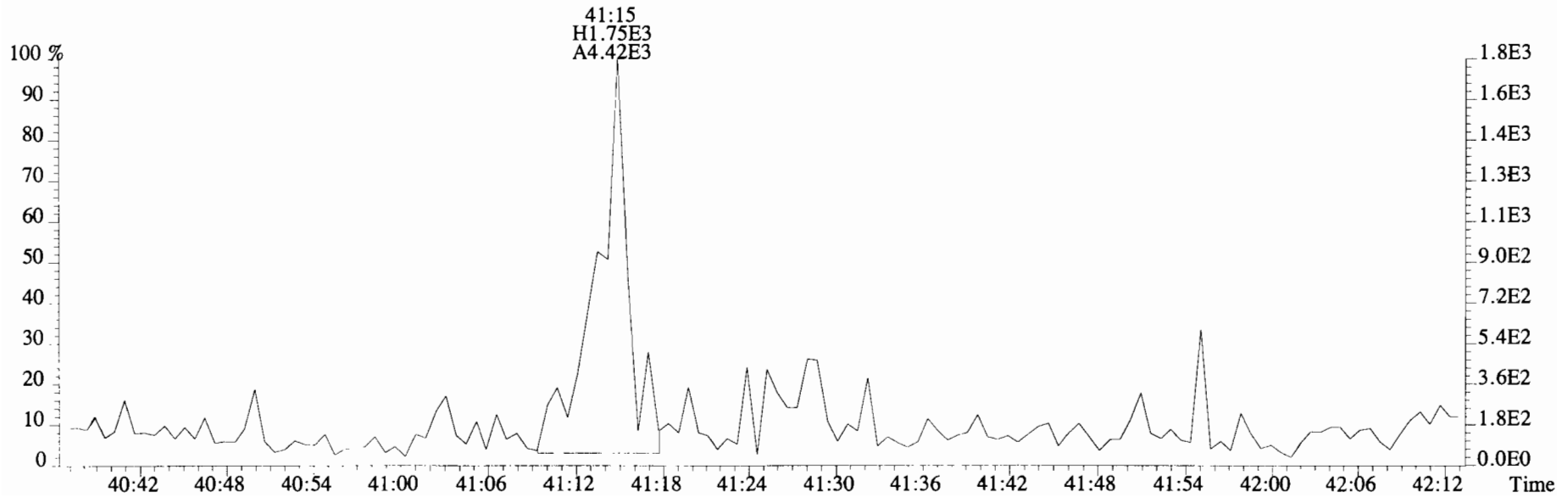


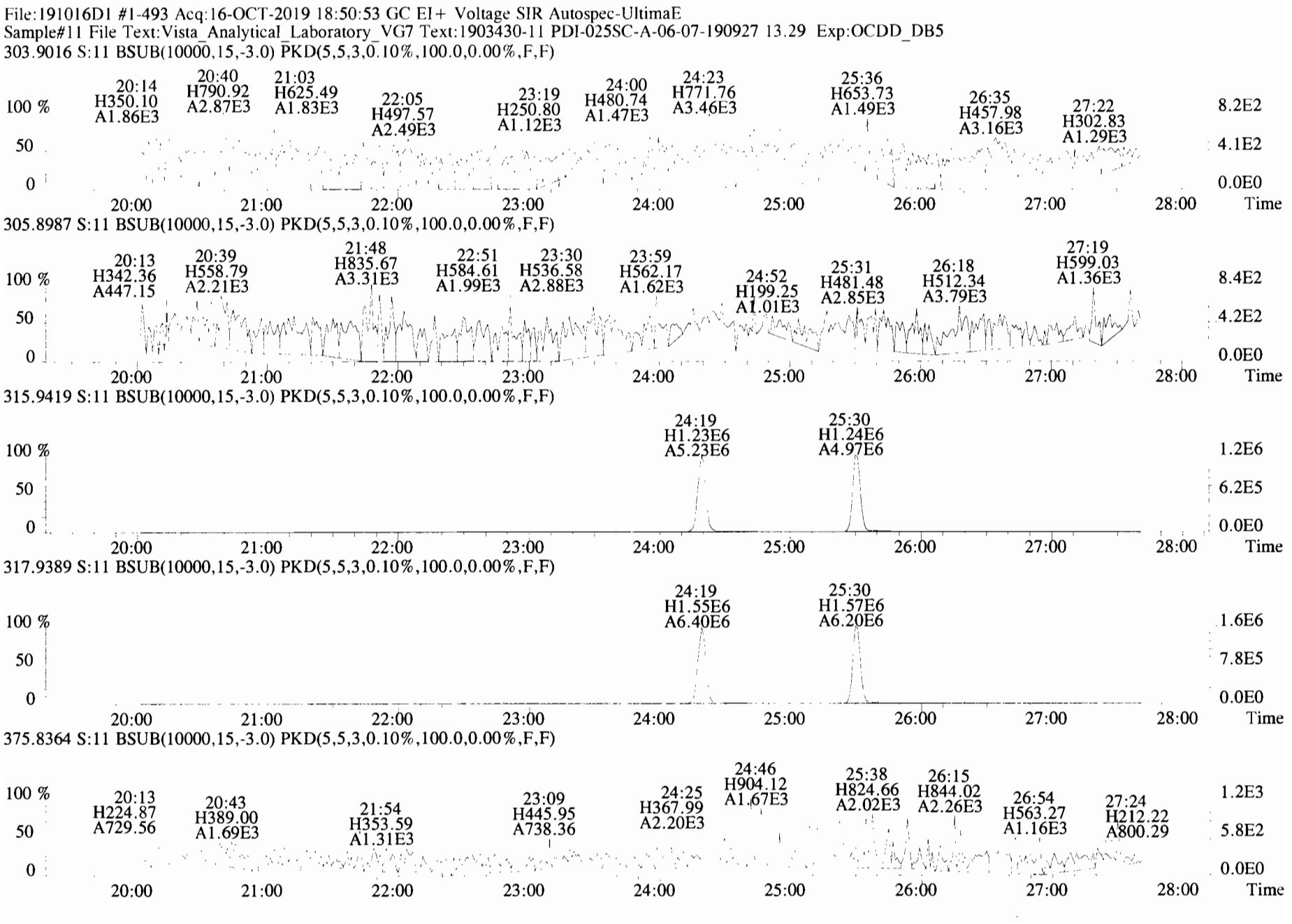

File:191016D1 #1-432 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:16 H1.49E3 A4.77E3
40:17 H207.53 A414.43
40:33 H63.33 A221.17
41:04 H143.39 A498.89
41:40 H261.93 A771.98
42:12 H282.89 A998.10
42:25 H57.97 A223.81
43:01 H145.90 A469.28
43:14 H216.50 A905.34
43:31 H165.16 A418.04
43:58 H256.69 A294.69
459.7348 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:15 H1.76E3 A5.49E3
40:36 H194.61 A424.10
41:03 H268.15 A658.96
41:28 H432.98 A1.48E3
41:51 H283.76 A700.33
42:17 H216.22 A765.06
42:27 H257.74 A1.33E3
42:40 H115.67 A351.11
43:11 H201.64 A445.36
43:37 H141.91 A579.17
43:47 H179.69 A288.58
469.7780 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:13 H9.93E5 A3.91E6
471.7750 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:13 H1.10E6 A4.29E6
454.9728 S:11 F:5
40:05
40:25
40:36
40:52
41:08
41:26
41:49
42:05
42:29
42:54
43:18
43:34
43:47
43:54
100 %
50
0
1.5E3
7.6E2
0.0E0
1.8E3
9.0E2
0.0E0
9.9E5
5.0E5
0.0E0
1.1E6
5.5E5
0.0E0
3.9E5
1.9E5
0.0E0
40:00
41:00
42:00
43:00
44:00
Time

File:191016D1 #1-432 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

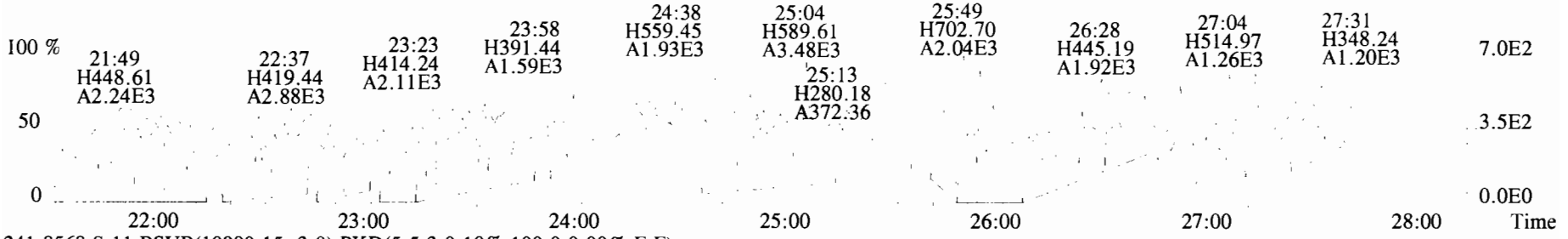


459.7348 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

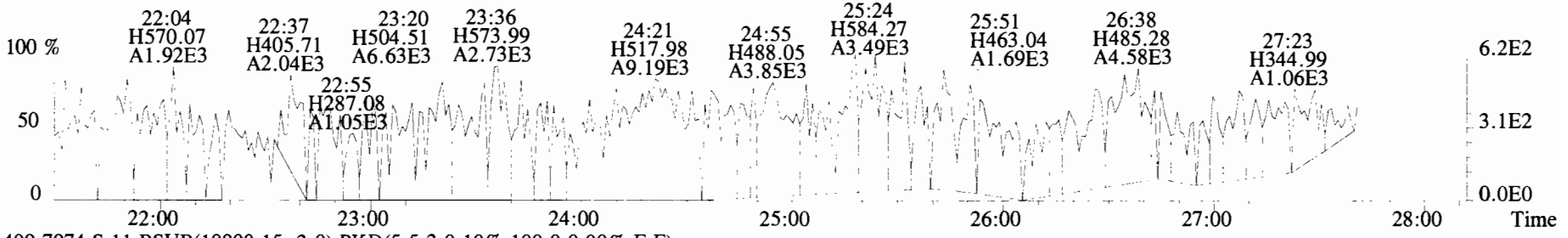



File:191016D1 #1-493 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:14 H350.10 A1.86E3
20:40 H790.92 A2.87E3
21:03 H625.49 A1.83E3
22:05 H497.57 A2.49E3
23:19 H250.80 A1.12E3
24:00 H480.74 A1.47E3
24:23 H771.76 A3.46E3
25:36 H653.73 A1.49E3
26:35 H457.98 A3.16E3
27:22 H302.83 A1.29E3
100 %
50
0
8.2E2
4.1E2
0.0E0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:13 H342.36 A447.15
20:39 H558.79 A2.21E3
21:48 H835.67 A3.31E3
22:51 H584.61 A1.99E3
23:30 H536.58 A2.88E3
23:59 H562.17 A1.62E3
24:52 H199.25 A1.01E3
25:31 H481.48 A2.85E3
26:18 H512.34 A3.79E3
27:19 H599.03 A1.36E3
100 %
50
0
8.4E2
4.2E2
0.0E0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
315.9419 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:19 H1.23E6 A5.23E6
25:30 H1.24E6 A4.97E6
100 %
50
0
1.2E6
6.2E5
0.0E0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
317.9389 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:19 H1.55E6 A6.40E6
25:30 H1.57E6 A6.20E6
100 %
50
0
1.6E6
7.8E5
0.0E0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time
375.8364 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:13 H224.87 A729.56
20:43 H389.00 A1.69E3
21:54 H353.59 A1.31E3
23:09 H445.95 A738.36
24:25 H367.99 A2.20E3
24:46 H904.12 A1.67E3
25:38 H824.66 A2.02E3
26:15 H844.02 A2.26E3
26:54 H563.27 A1.16E3
27:24 H212.22 A800.29
100 %
50
0
1.2E3
5.8E2
0.0E0
20:00 21:00 22:00 23:00 24:00 25:00 26:00 27:00 28:00 Time

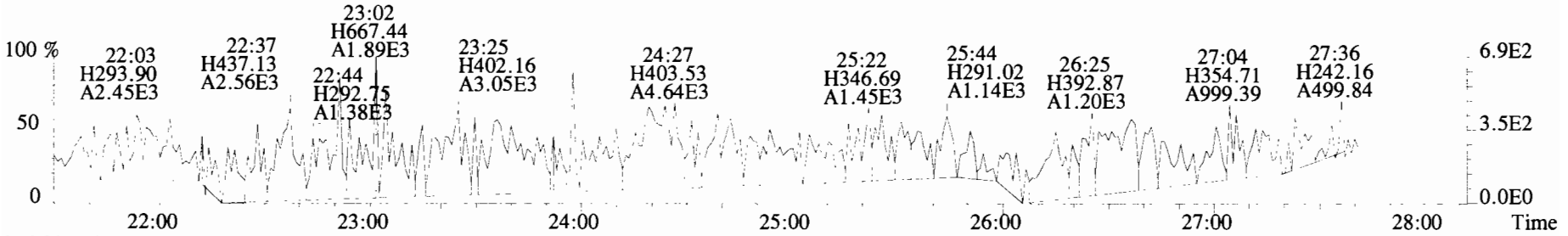
File:191016D1 #1-493 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



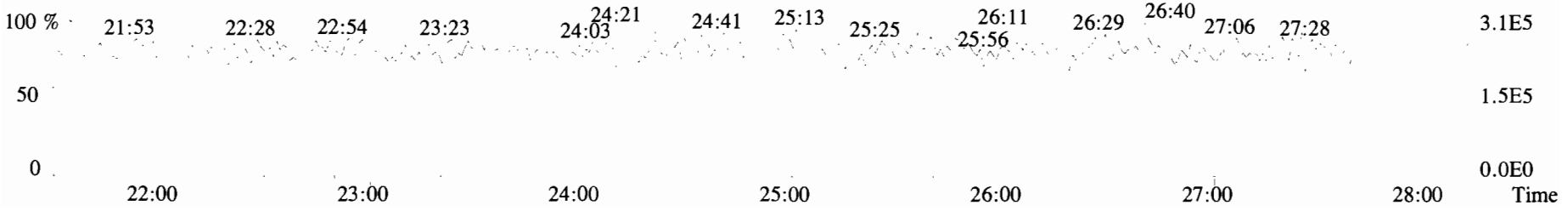
341.8568 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



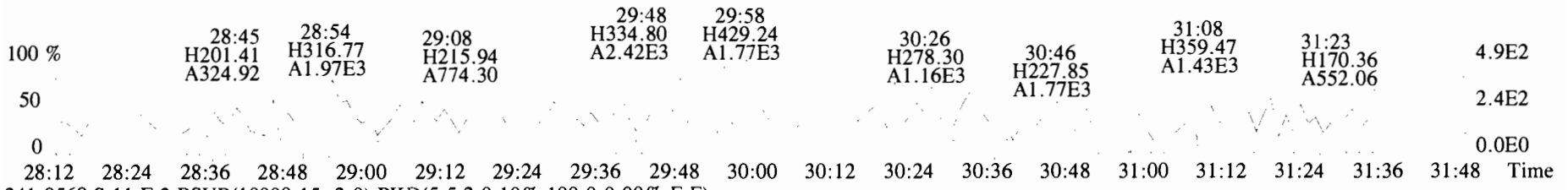
409.7974 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



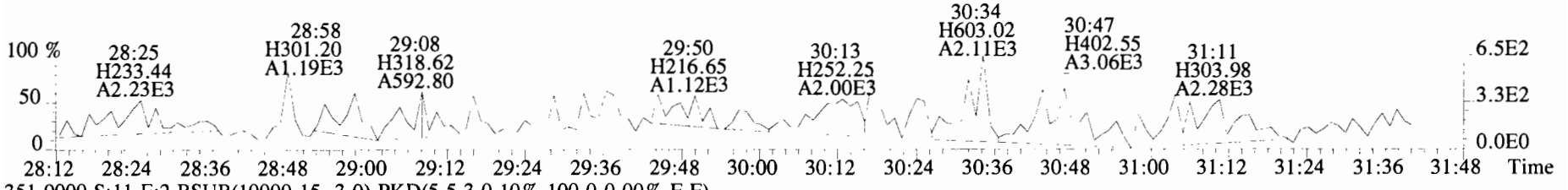
316.9824 S:11



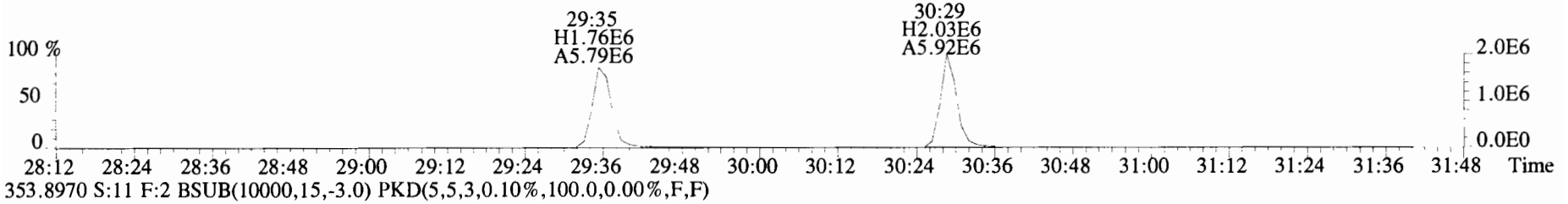
File:191016D1 #1-210 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



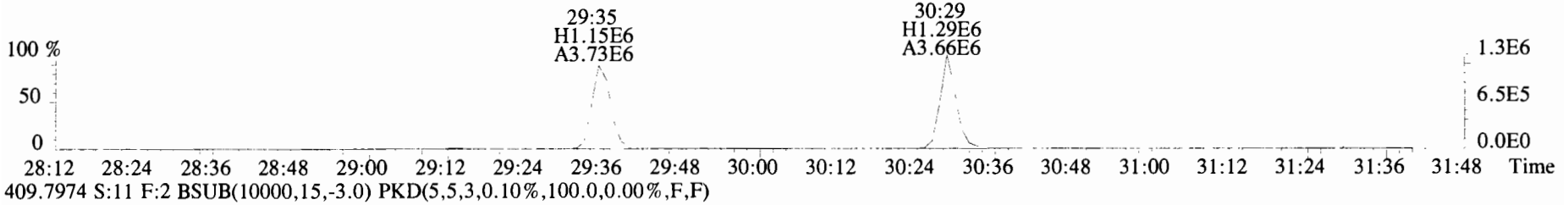
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



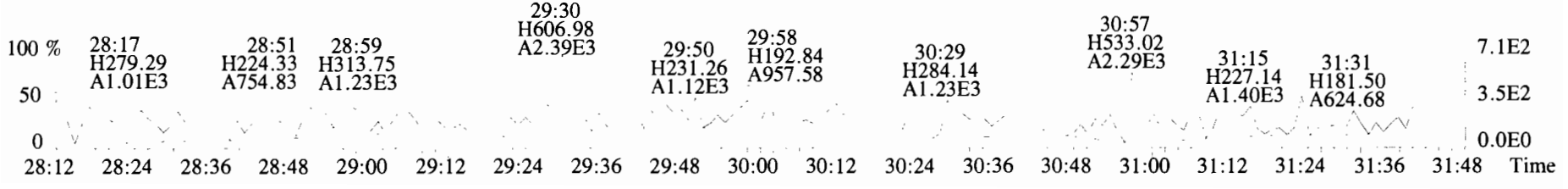
351.9000 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



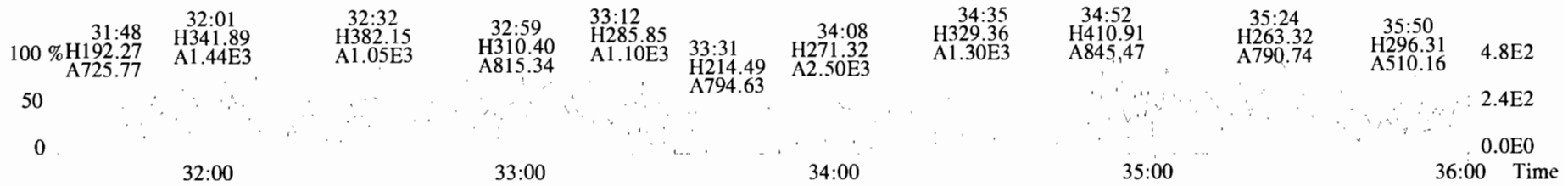
353.8970 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



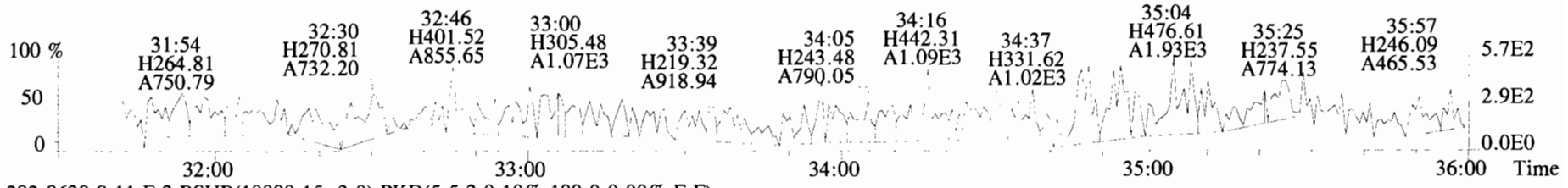
409.7974 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



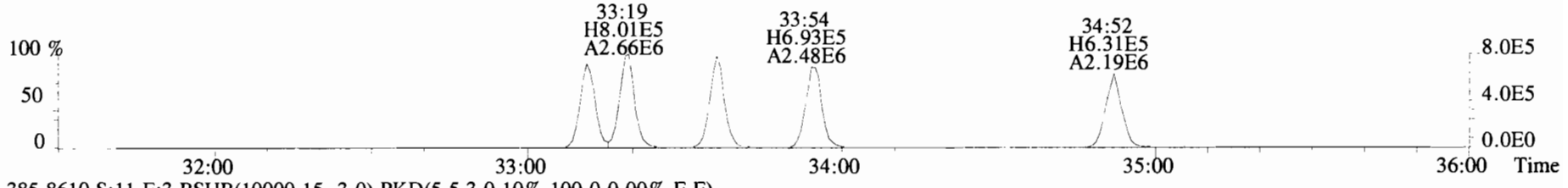
File:191016D1 #1-385 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



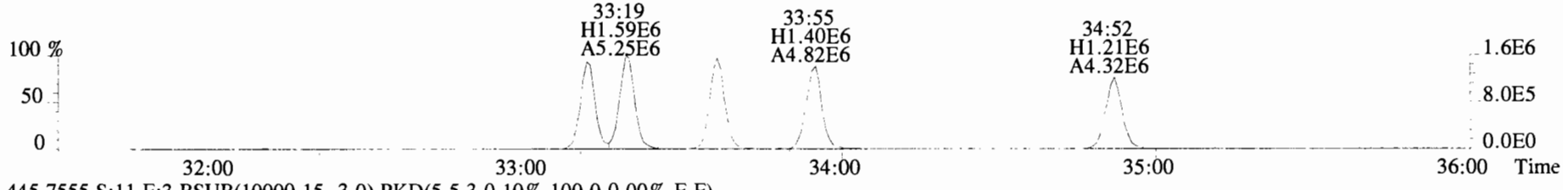
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



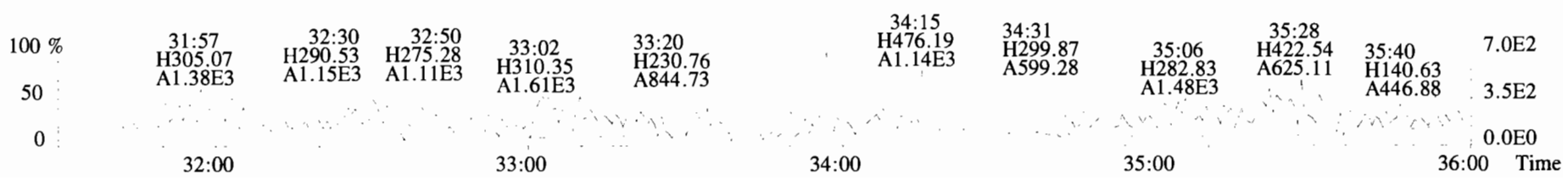
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



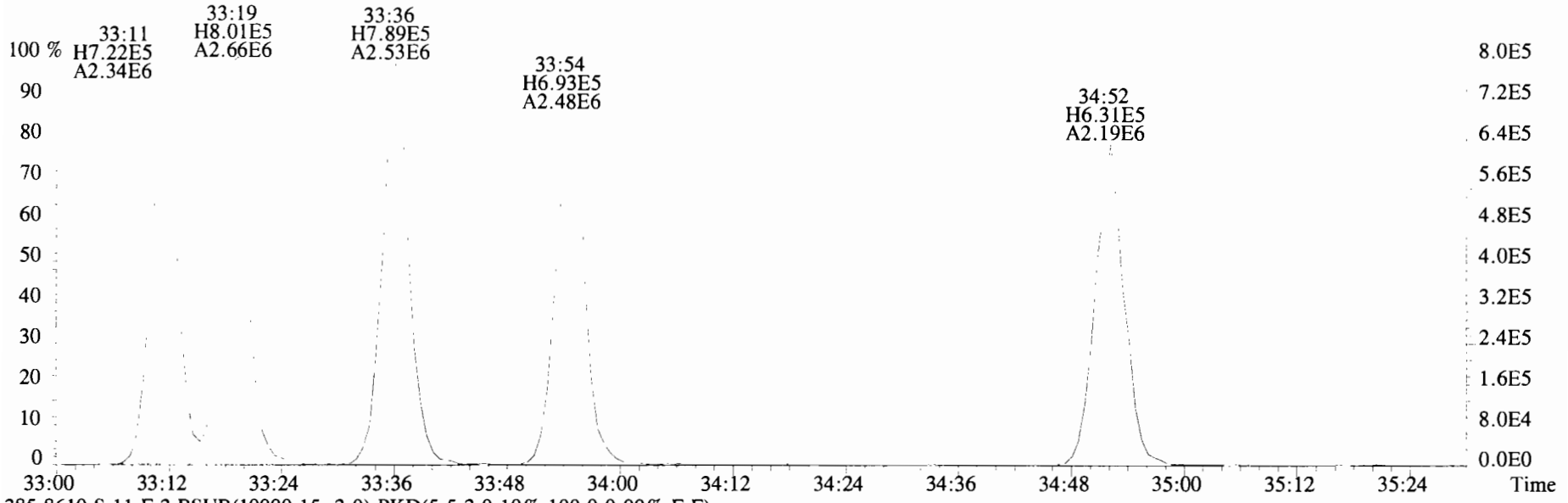
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



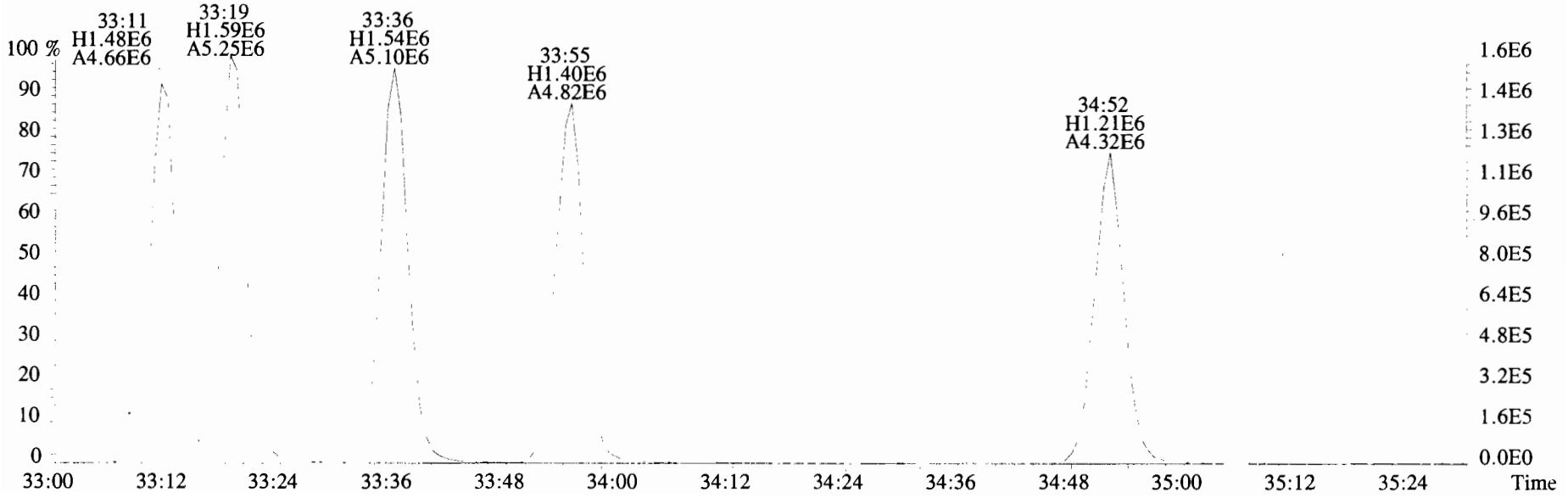
445.7555 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



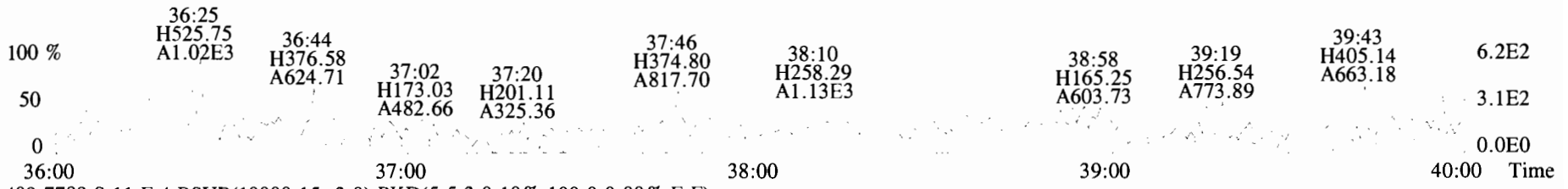
File:191016D1 #1-385 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



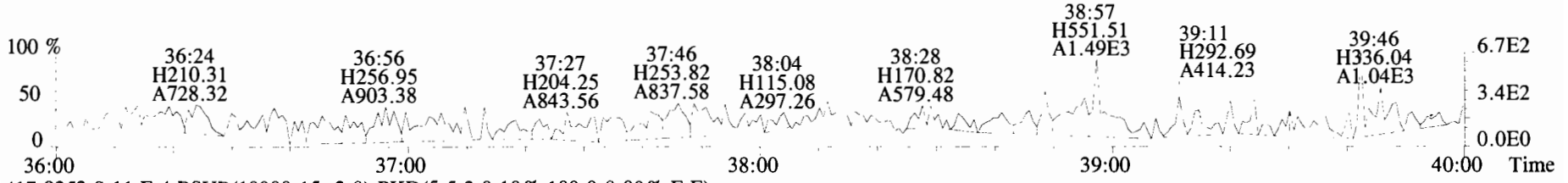
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



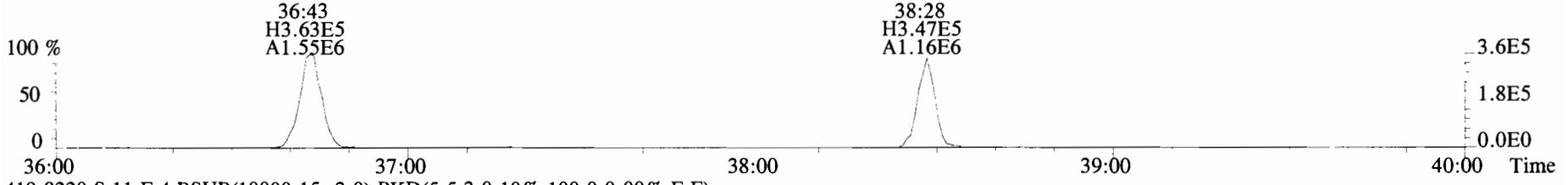
File:191016D1 #1-356 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



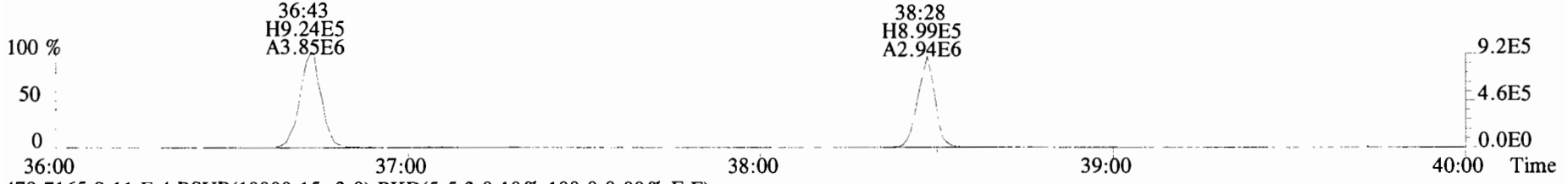
409.7788 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



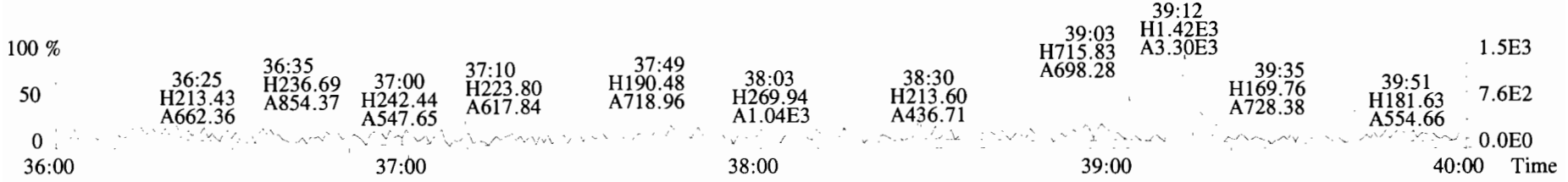
417.8253 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

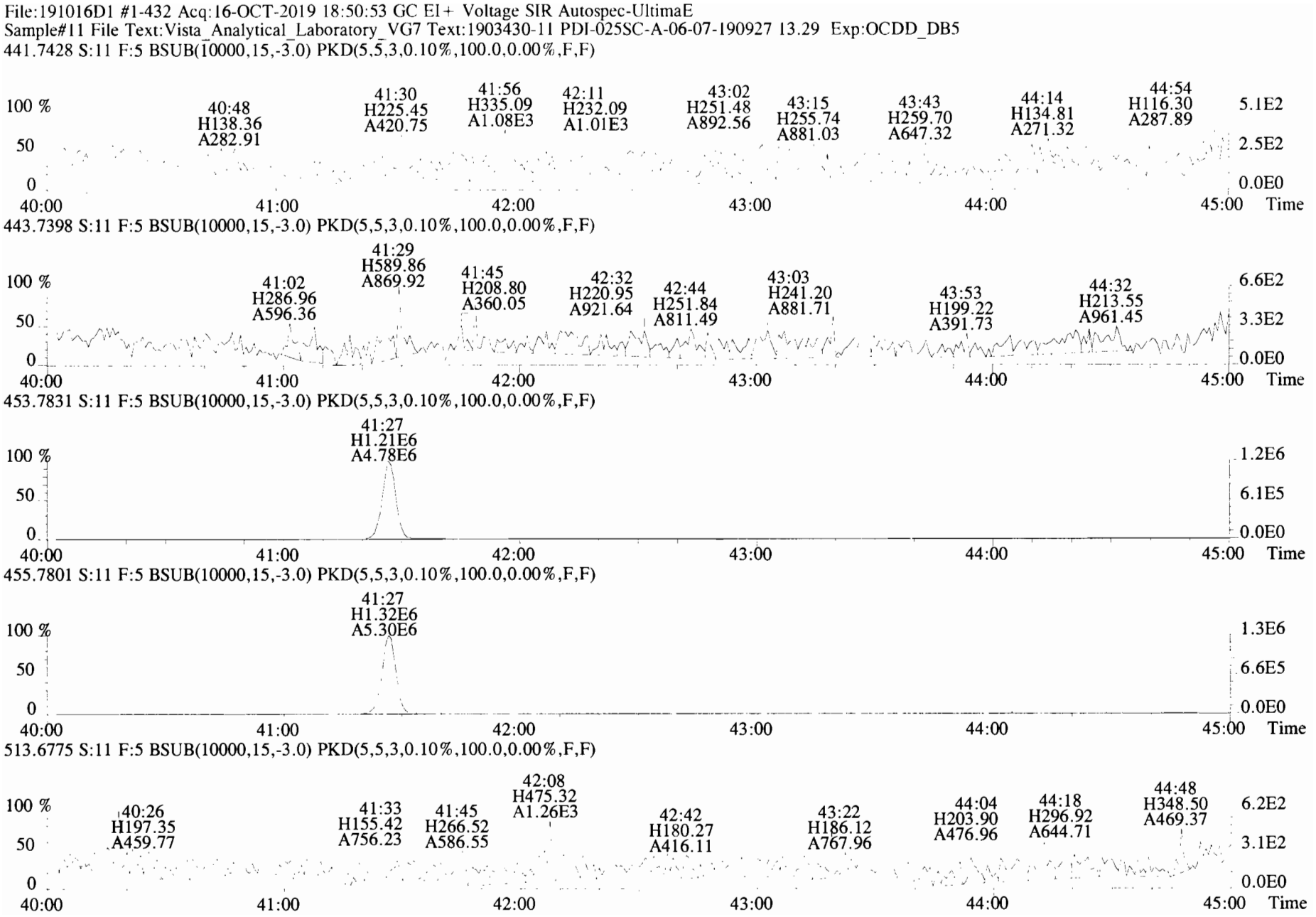


419.8220 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



479.7165 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)




File:191016D1 #1-432 Acq:16-OCT-2019 18:50:53 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-11 PDI-025SC-A-06-07-190927 13.29 Exp:OCDD_DB5
441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:48 H138.36 A282.91
41:30 H225.45 A420.75
41:56 H335.09 A1.08E3
42:11 H232.09 A1.01E3
43:02 H251.48 A892.56
43:15 H255.74 A881.03
43:43 H259.70 A647.32
44:14 H134.81 A271.32
44:54 H116.30 A287.89
5.1E2
2.5E2
0.0E0
443.7398 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:02 H286.96 A596.36
41:29 H589.86 A869.92
41:45 H208.80 A360.05
42:32 H220.95 A921.64
42:44 H251.84 A811.49
43:03 H241.20 A881.71
43:53 H199.22 A391.73
44:32 H213.55 A961.45
6.6E2
3.3E2
0.0E0
453.7831 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:27 H1.21E6 A4.78E6
1.2E6
6.1E5
0.0E0
455.7801 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:27 H1.32E6 A5.30E6
1.3E6
6.6E5
0.0E0
513.6775 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:26 H197.35 A459.77
41:33 H155.42 A756.23
41:45 H266.52 A586.55
42:08 H475.32 A1.26E3
42:42 H180.27 A416.11
43:22 H186.12 A767.96
44:04 H203.90 A476.96
44:18 H296.92 A644.71
44:48 H348.50 A469.37
6.2E2
3.1E2
0.0E0
100 %
50
0
40:00
41:00
42:00
43:00
44:00
45:00
Time

Client D: PDI-025SC-A-07-08-1909 Filename: 191016D1 S:12 Acq:16-OCT-19 19:38:38 ConCal: ST191016D1-1

Lab ID: 1903430-12 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.033 EndCAL: NA

	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	0.91	NotF	*		168	2.5	0.0783
	1,2,3,7,8-PeCDD	*	*	n	0.90	NotF	*		179	2.5	0.0685
	1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF	*		152	2.5	0.0940
	1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF	*		152	2.5	0.104
	1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF	*		152	2.5	0.103
	1,2,3,4,6,7,8-HpCDD	*	*	n	0.98	NotF	*		115	2.5	0.0723
	OCDD	3.34e+03	0.56	n	0.96	41:12	0.14630		*	2.5	*
	2,3,7,8-TCDF	*	*	n	0.95	NotF	*		199	2.5	0.0620
	1,2,3,7,8-PeCDF	*	*	n	0.96	NotF	*		140	2.5	0.0599
	2,3,4,7,8-PeCDF	*	*	n	1.01	NotF	*		140	2.5	0.0524
	1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF	*		146	2.5	0.0384
	1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF	*		146	2.5	0.0372
	2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF	*		146	2.5	0.0408
	1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF	*		146	2.5	0.0486
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF	*		112	2.5	0.0452
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF	*		112	2.5	0.0418
	OCDF	*	*	n	0.95	NotF	*		113	2.5	0.0751

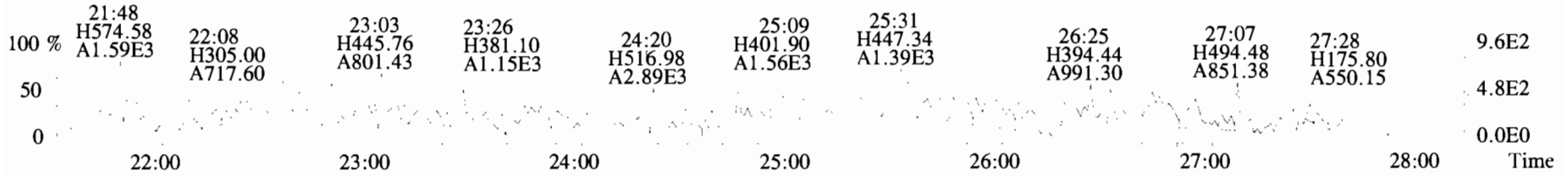
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		168	0.0783
Total Penta-Dioxins	*	*		179	0.0685
Total Hexa-Dioxins	*	*		152	0.101
Total Hepta-Dioxins	*	*		115	0.0723
Total Tetra-Furans	*	*		199	0.0620
Total Penta-Furans	0.0000	0.0000		140	0.0562
Total Hexa-Furans	*	*		146	0.0410
Total Hepta-Furans	*	*		112	0.0437

								Rec	Qual
IS	13C-2,3,7,8-TCDD	7.60e+06	0.75	y	1.10	26:18	179.81	90.2	
IS	13C-1,2,3,7,8-PeCDD	6.31e+06	0.62	y	0.88	30:46	185.47	93.0	
IS	13C-1,2,3,4,7,8-HxCDD	5.46e+06	1.26	y	0.64	34:04	177.42	89.0	
IS	13C-1,2,3,6,7,8-HxCDD	6.07e+06	1.23	y	0.86	34:11	148.00	74.2	
IS	13C-1,2,3,7,8,9-HxCDD	6.07e+06	1.23	y	0.81	34:29	157.18	78.8	
IS	13C-1,2,3,4,6,7,8-HpCDD	5.14e+06	0.98	y	0.65	37:55	164.15	82.3	
IS	13C-OCDD	9.51e+06	0.91	y	0.58	41:13	342.37	85.9	
IS	13C-2,3,7,8-TCDF	1.15e+07	0.80	y	1.03	25:32	172.35	86.5	
IS	13C-1,2,3,7,8-PeCDF	1.01e+07	1.63	y	0.85	29:36	182.29	91.4	
IS	13C-2,3,4,7,8-PeCDF	9.73e+06	1.62	y	0.85	30:29	177.47	89.0	
IS	13C-1,2,3,4,7,8-HxCDF	7.75e+06	0.53	y	0.83	33:11	194.56	97.6	
IS	13C-1,2,3,6,7,8-HxCDF	8.78e+06	0.51	y	1.03	33:19	177.20	88.9	
IS	13C-2,3,4,6,7,8-HxCDF	8.13e+06	0.52	y	0.95	33:54	177.97	89.3	
IS	13C-1,2,3,7,8,9-HxCDF	7.36e+06	0.51	y	0.83	34:52	185.62	93.1	
IS	13C-1,2,3,4,6,7,8-HpCDF	6.22e+06	0.42	y	0.76	36:43	171.44	86.0	
IS	13C-1,2,3,4,7,8,9-HpCDF	5.01e+06	0.41	y	0.58	38:28	180.08	90.3	
IS	13C-OCDF	1.16e+07	0.91	y	0.69	41:26	352.11	88.3	
C/Up	37Cl-2,3,7,8-TCDD	4.07e+06			1.20	26:19	88.145	111	
RS/RT	13C-1,2,3,4-TCDD	7.69e+06	0.77	y	1.00	25:45	199.35		
RS	13C-1,2,3,4-TCDF	1.29e+07	0.83	y	1.00	24:20	199.35		
RS/RT	13C-1,2,3,4,6,9-HxCDF	9.55e+06	0.51	y	1.00	33:36	199.35		

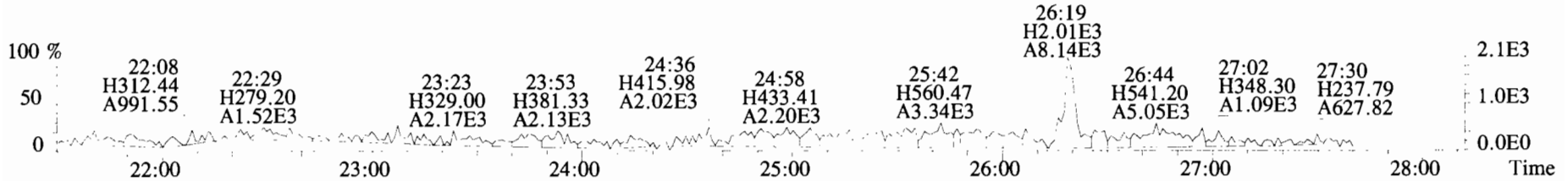
Integrations by Analyst: DB Date: 11/1/19

Reviewed by Analyst: CT Date: 11/04/19

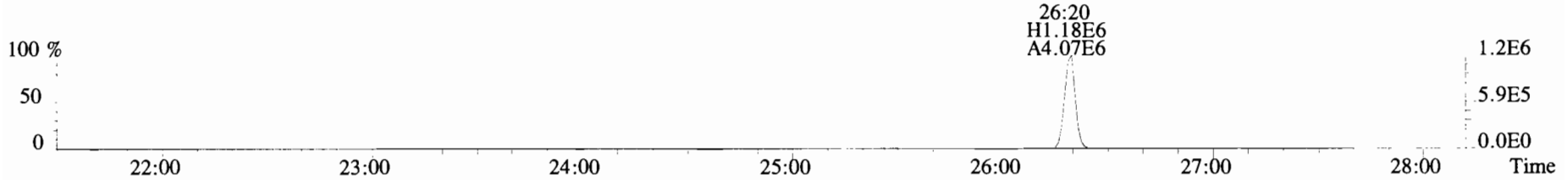
File:191016D1 #1-492 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



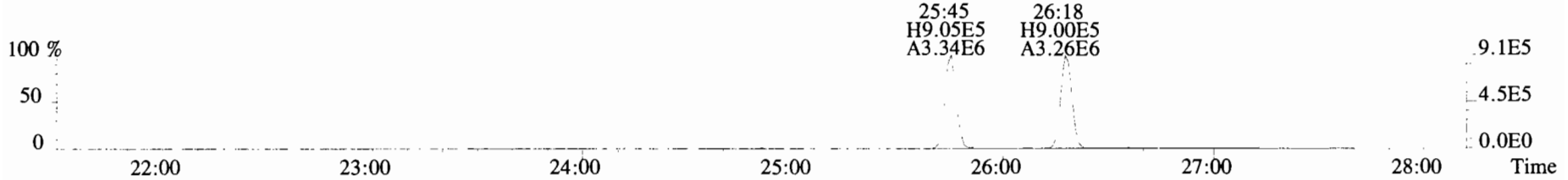
321.8936 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



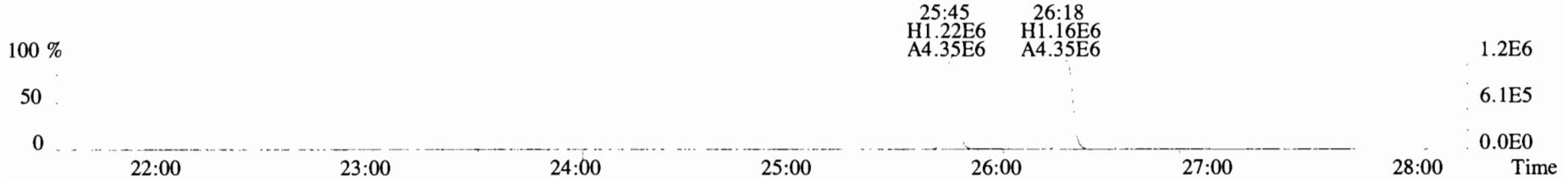
327.8847 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



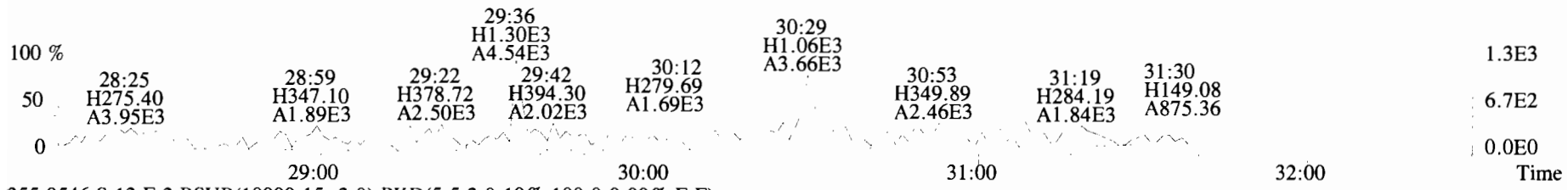
331.9368 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



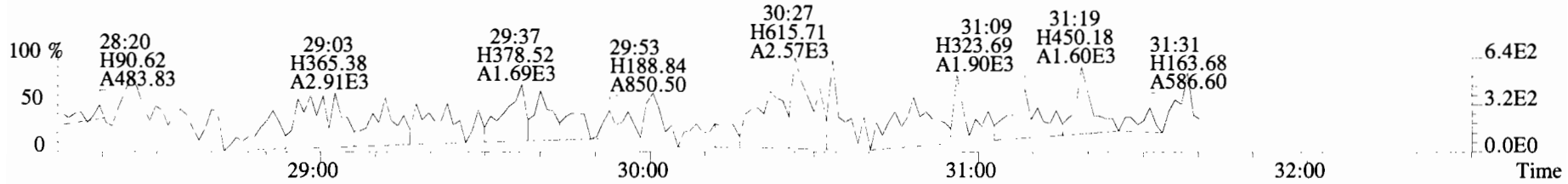
333.9339 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



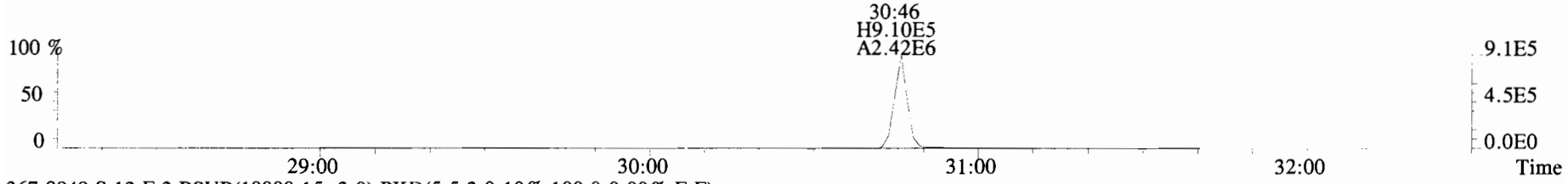
File:191016D1 #1-211 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
353.8576 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



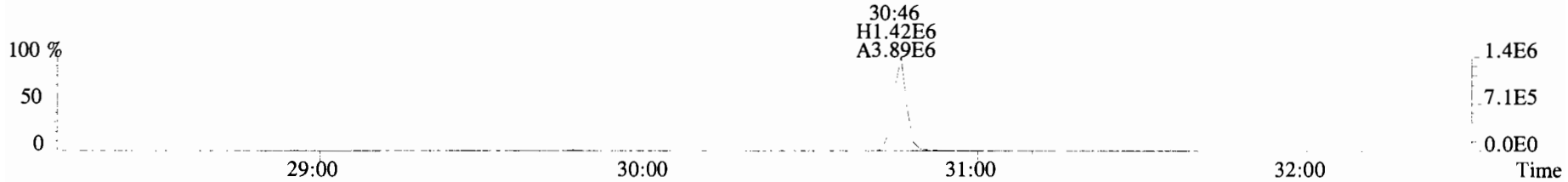
355.8546 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



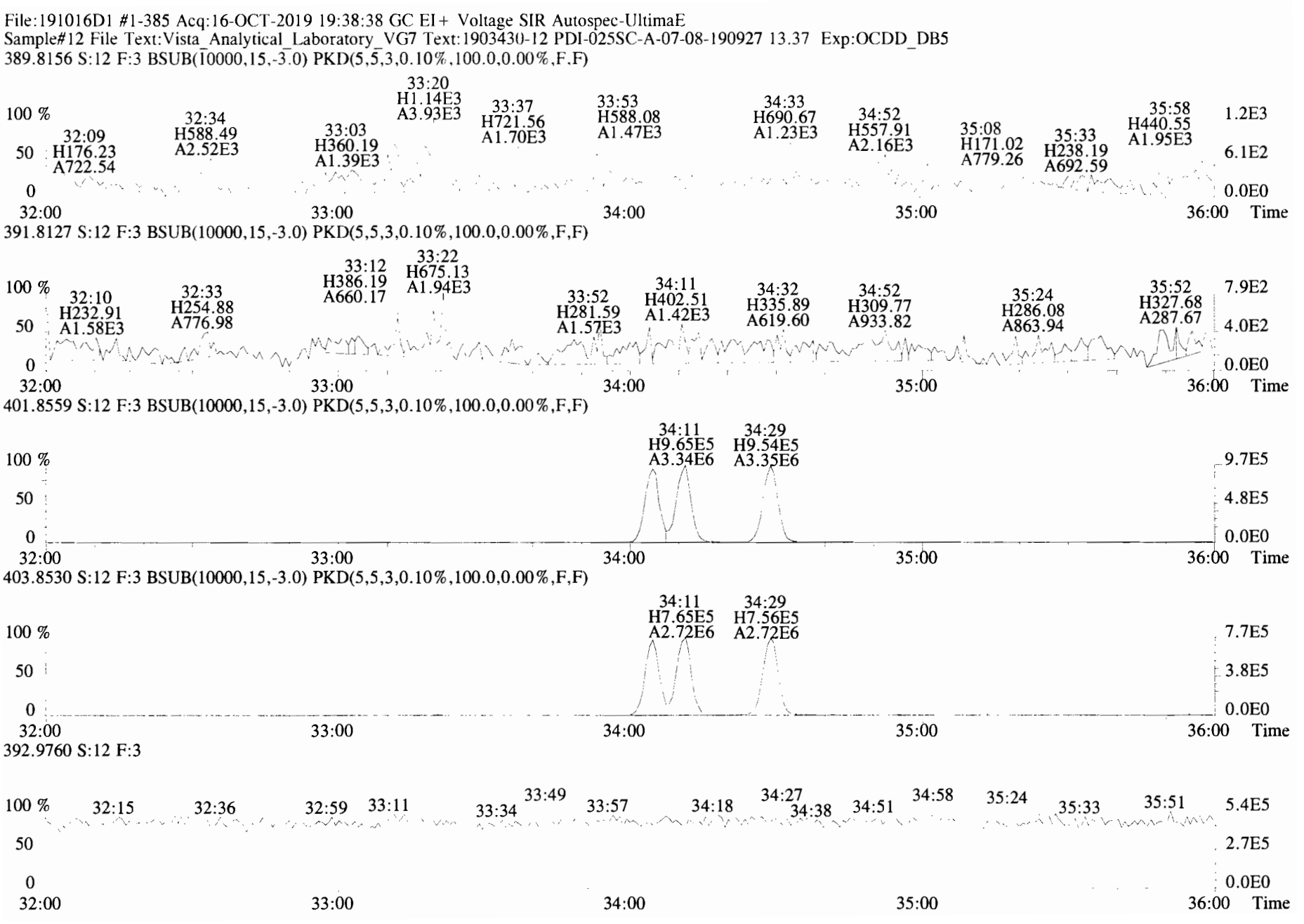
365.8978 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



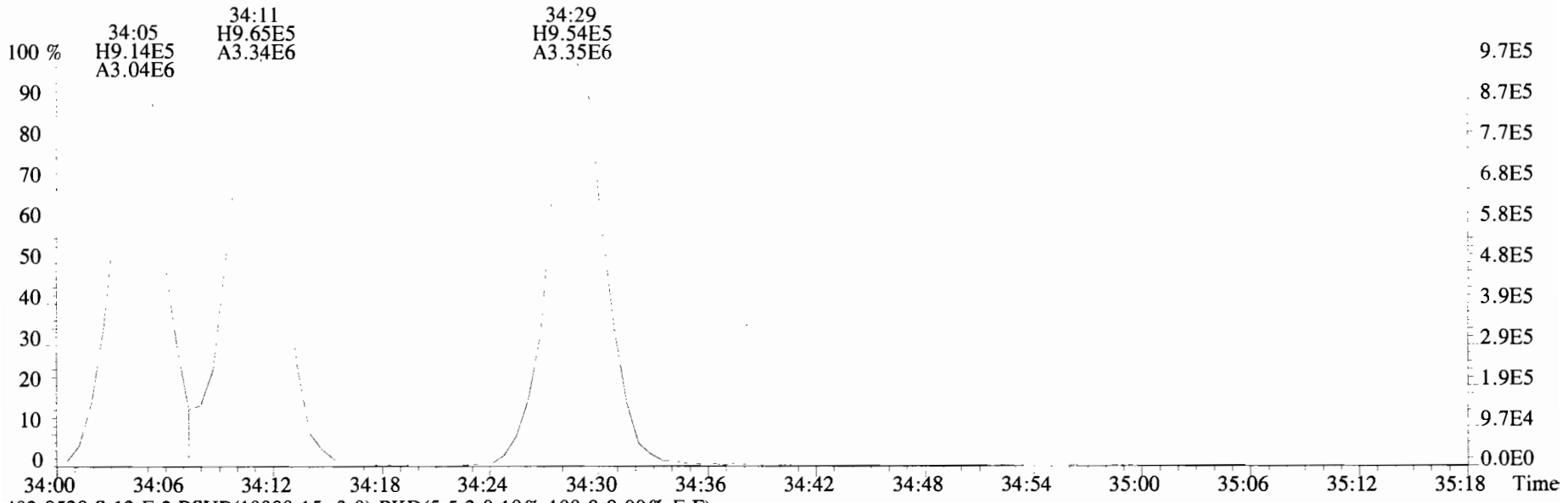
367.8949 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



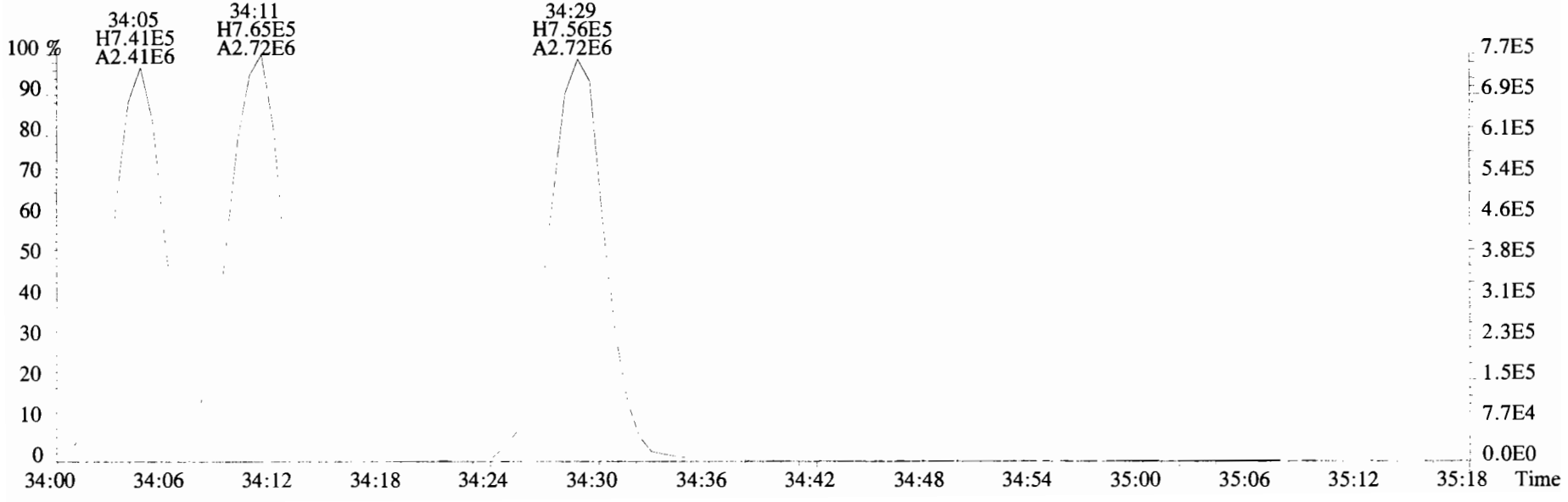
366.9792 S:12 F:2


File:191016D1 #1-385 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:09 H176.23 A722.54
32:34 H588.49 A2.52E3
33:03 H360.19 A1.39E3
33:20 H1.14E3 A3.93E3
33:37 H721.56 A1.70E3
33:53 H588.08 A1.47E3
34:33 H690.67 A1.23E3
34:52 H557.91 A2.16E3
35:08 H171.02 A779.26
35:33 H238.19 A692.59
35:58 H440.55 A1.95E3
391.8127 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:10 H232.91 A1.58E3
32:33 H254.88 A776.98
33:12 H386.19 A660.17
33:22 H675.13 A1.94E3
33:52 H281.59 A1.57E3
34:11 H402.51 A1.42E3
34:32 H335.89 A619.60
34:52 H309.77 A933.82
35:24 H286.08 A863.94
35:52 H327.68 A287.67
401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H9.65E5 A3.34E6
34:29 H9.54E5 A3.35E6
403.8530 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H7.65E5 A2.72E6
34:29 H7.56E5 A2.72E6
392.9760 S:12 F:3
32:15
32:36
32:59
33:11
33:34
33:49
33:57
34:18
34:27
34:38
34:51
34:58
35:24
35:33
35:51
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
1.2E3
6.1E2
0.0E0
7.9E2
4.0E2
9.7E5
4.8E5
7.7E5
3.8E5
5.4E5
2.7E5

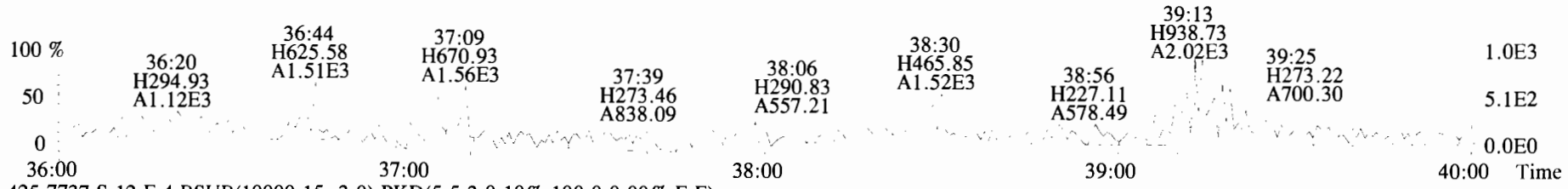
File:191016D1 #1-385 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



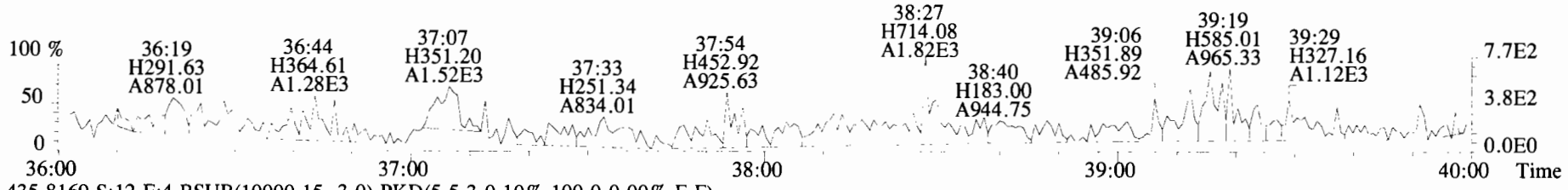
403.8530 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



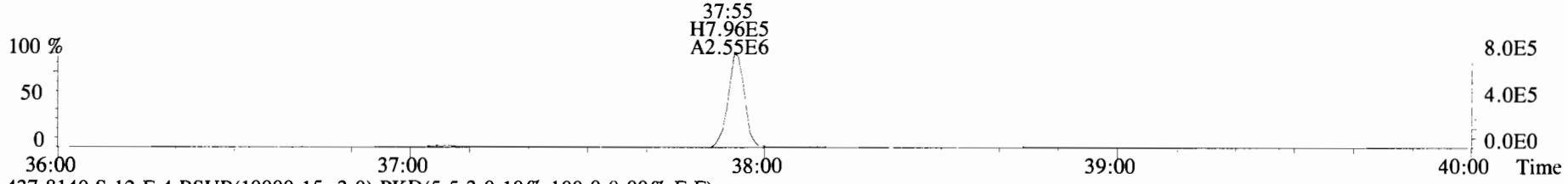
File:191016D1 #1-355 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



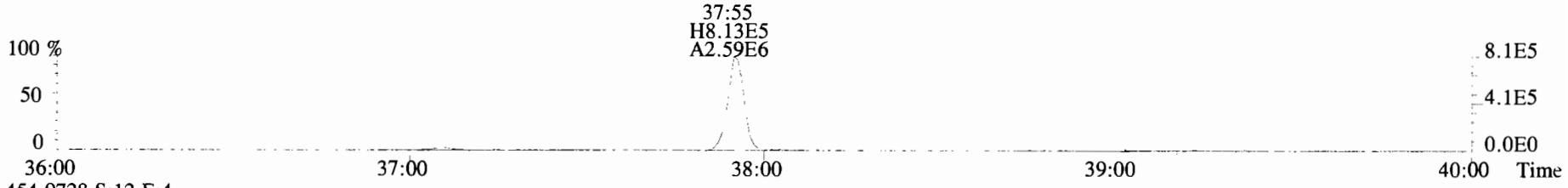
425.7737 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



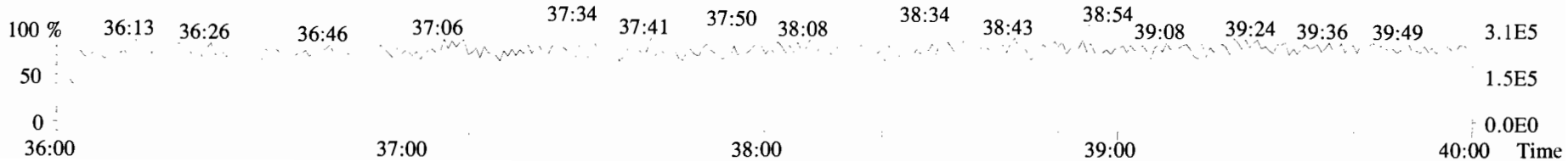
435.8169 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



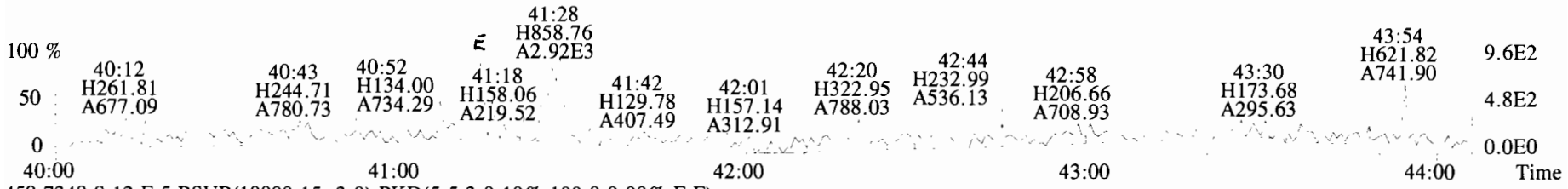
437.8140 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



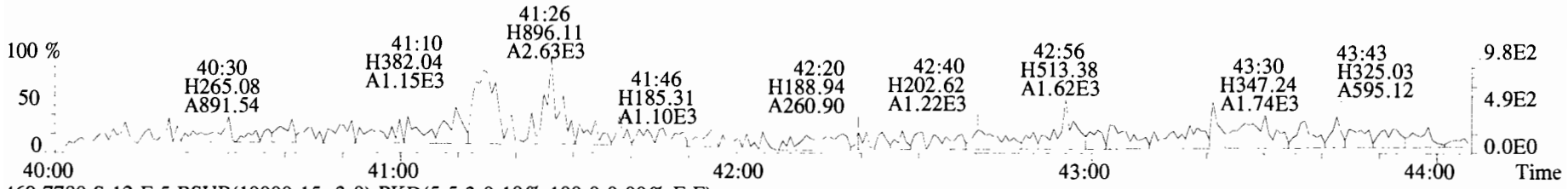
454.9728 S:12 F:4



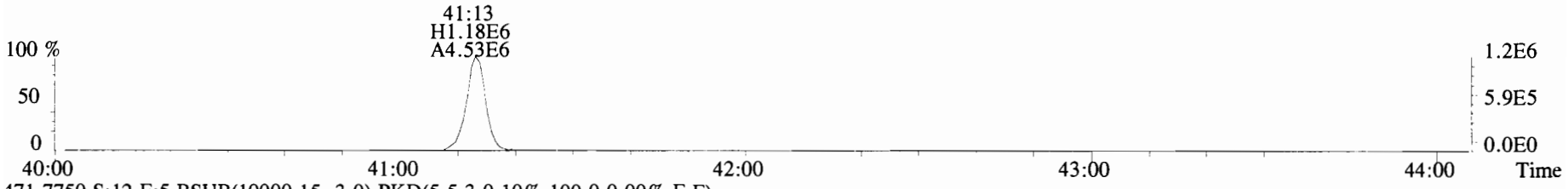
File:191016D1 #1-432 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
457.7377 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



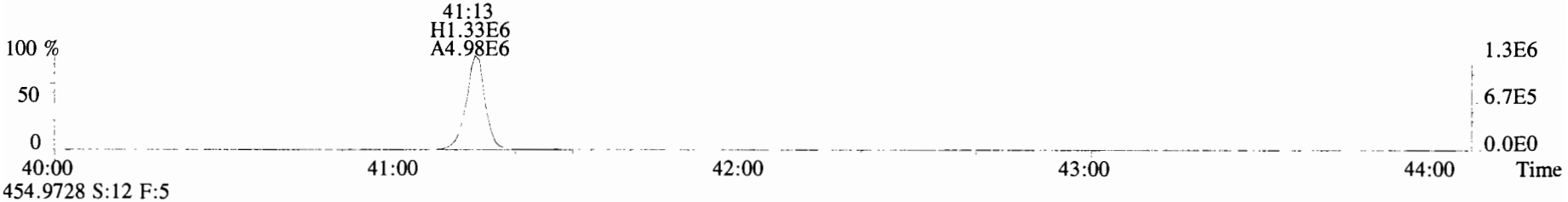
459.7348 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



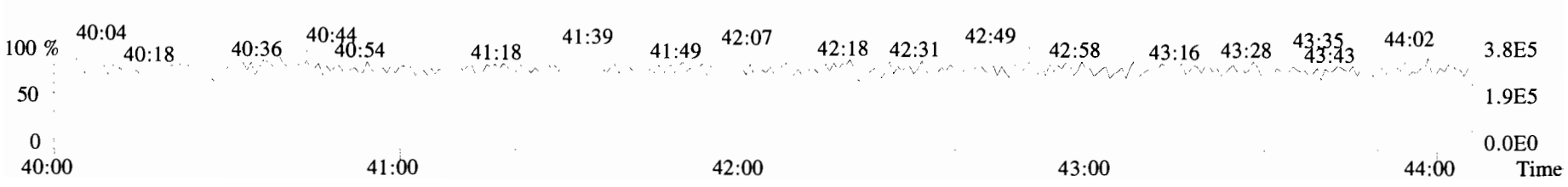
469.7780 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



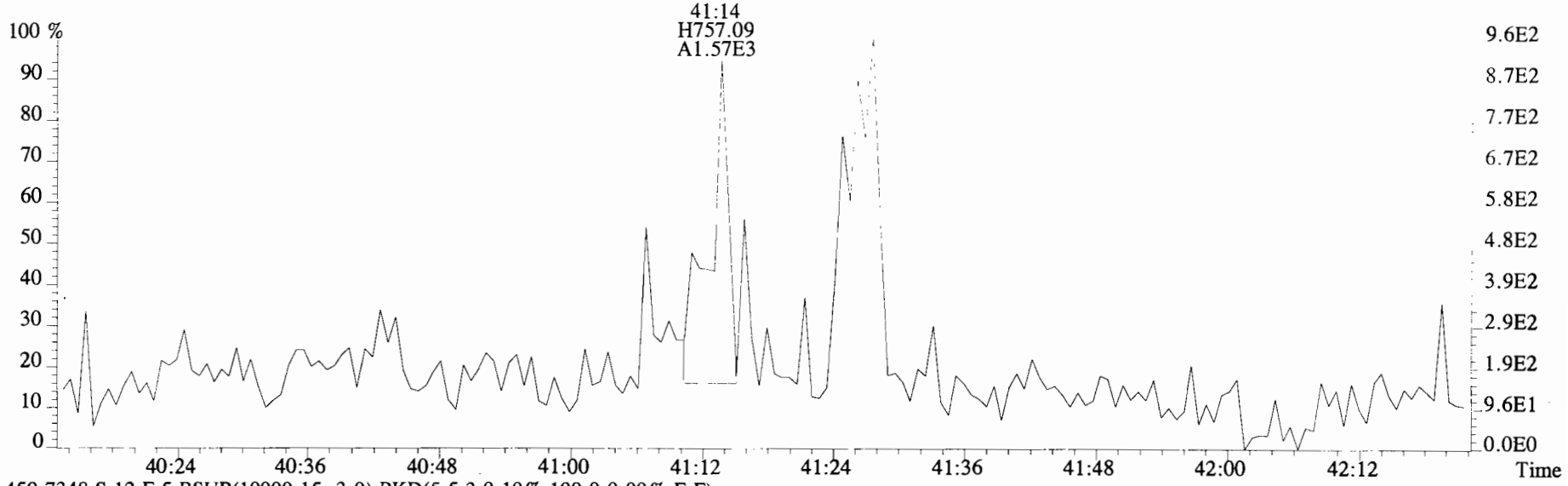
471.7750 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



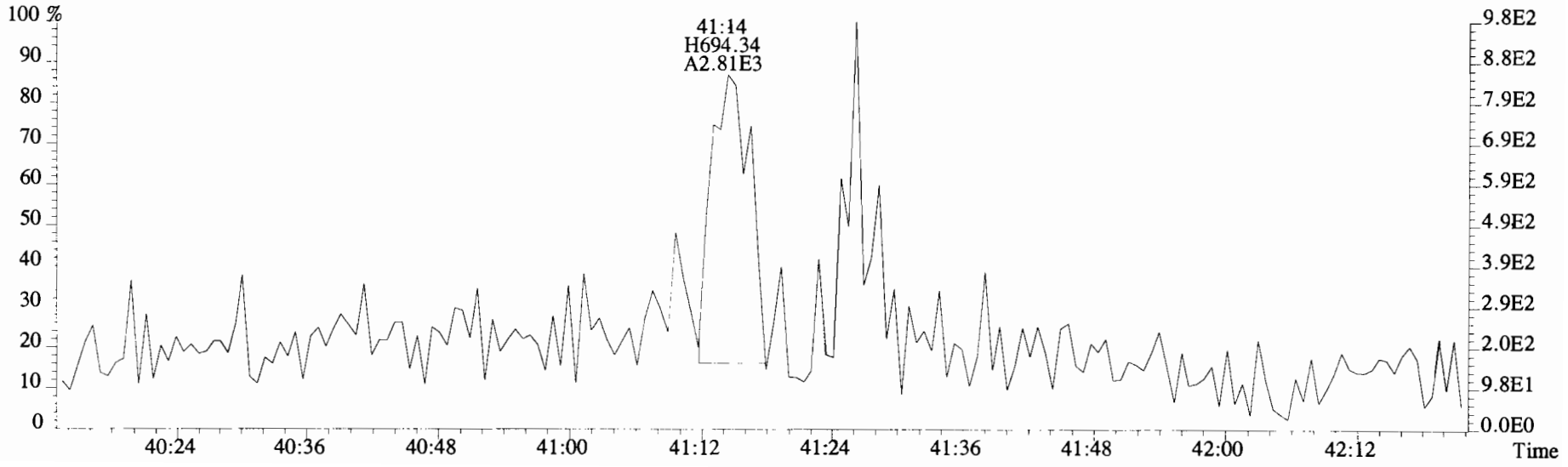
454.9728 S:12 F:5



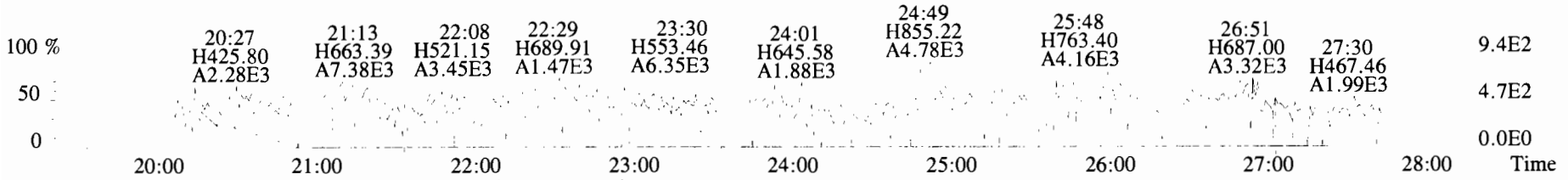
File:191016D1 #1-432 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
457.7377 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



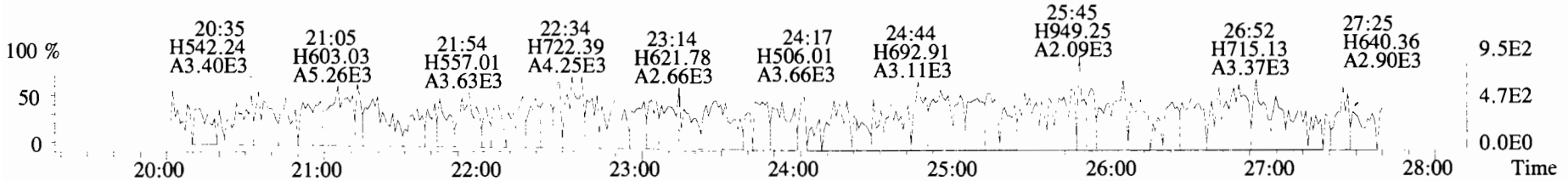
459.7348 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



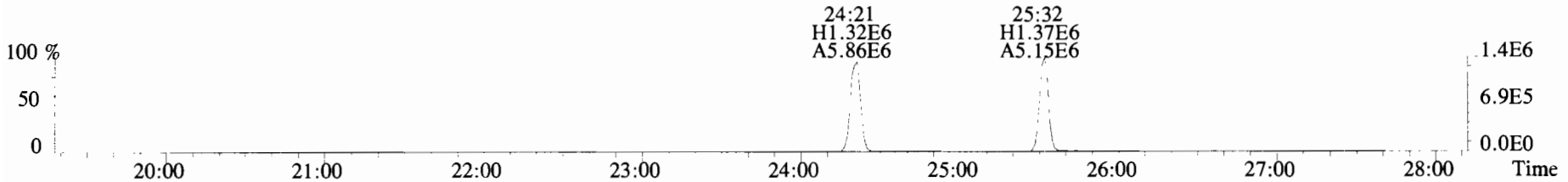
File:191016D1 #1-492 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



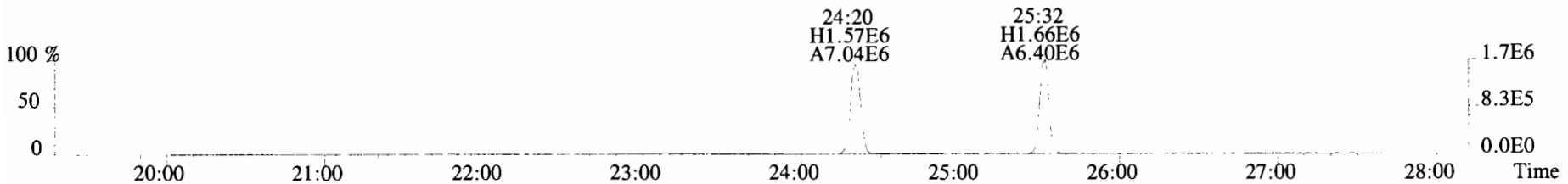
305.8987 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



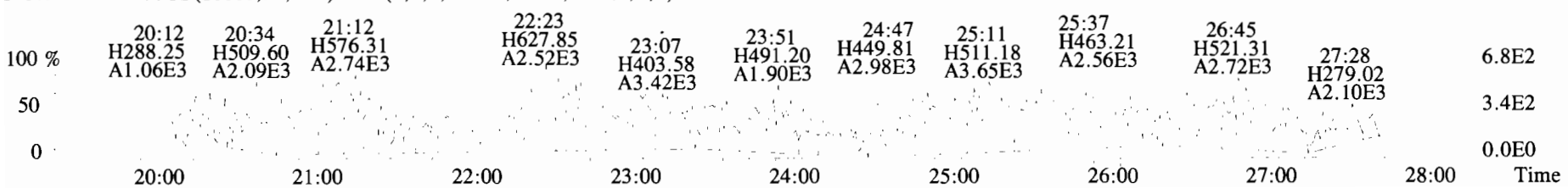
315.9419 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

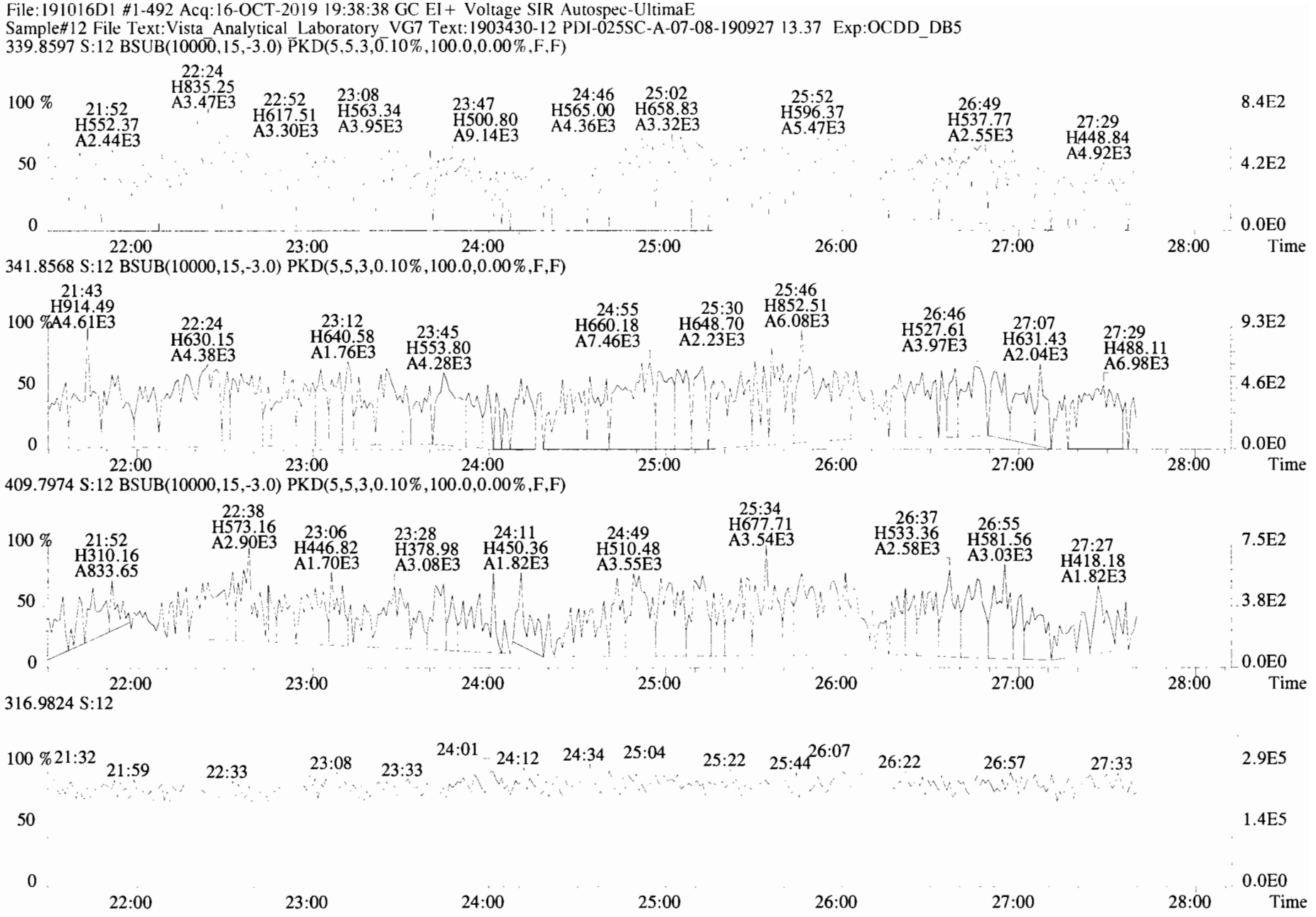


317.9389 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

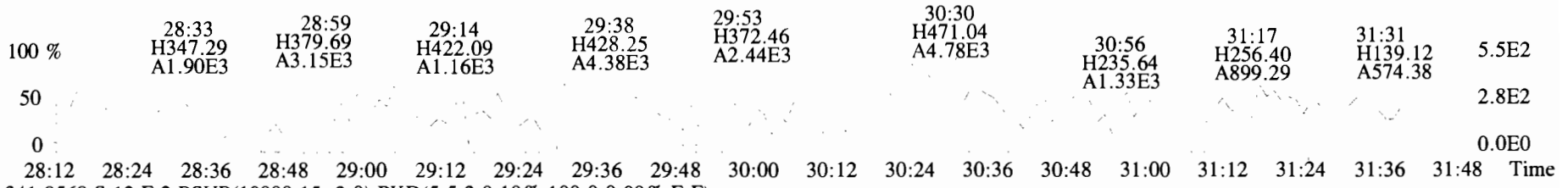


375.8364 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

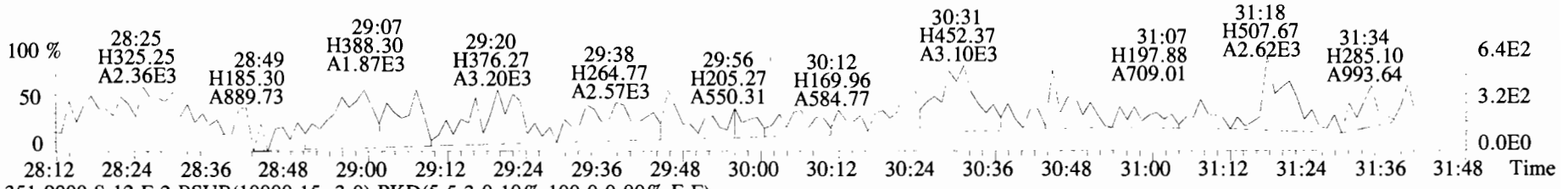



File:191016D1 #1-492 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
339.8597 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
21:52 H552.37 A2.44E3
22:24 H835.25 A3.47E3
22:52 H617.51 A3.30E3
23:08 H563.34 A3.95E3
23:47 H500.80 A9.14E3
24:46 H565.00 A4.36E3
25:02 H658.83 A3.32E3
25:52 H596.37 A5.47E3
26:49 H537.77 A2.55E3
27:29 H448.84 A4.92E3
8.4E2
4.2E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
341.8568 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
21:43 H914.49 A4.61E3
22:24 H630.15 A4.38E3
23:12 H640.58 A1.76E3
23:45 H553.80 A4.28E3
24:55 H660.18 A7.46E3
25:30 H648.70 A2.23E3
25:46 H852.51 A6.08E3
26:46 H527.61 A3.97E3
27:07 H631.43 A2.04E3
27:29 H488.11 A6.98E3
9.3E2
4.6E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
409.7974 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
100 %
50
0
21:52 H310.16 A833.65
22:38 H573.16 A2.90E3
23:06 H446.82 A1.70E3
23:28 H378.98 A3.08E3
24:11 H450.36 A1.82E3
24:49 H510.48 A3.55E3
25:34 H677.71 A3.54E3
26:37 H533.36 A2.58E3
26:55 H581.56 A3.03E3
27:27 H418.18 A1.82E3
7.5E2
3.8E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
316.9824 S:12
100 %
50
0
21:32
21:59
22:33
23:08
23:33
24:01
24:12
24:34
25:04
25:22
25:44
26:07
26:22
26:57
27:33
2.9E5
1.4E5
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time

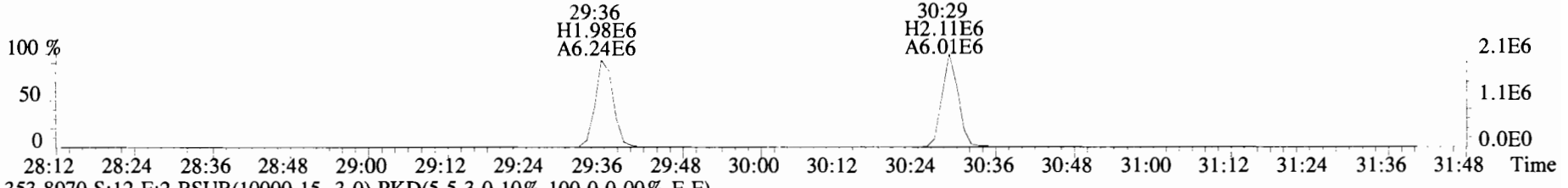
File:191016D1 #1-211 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



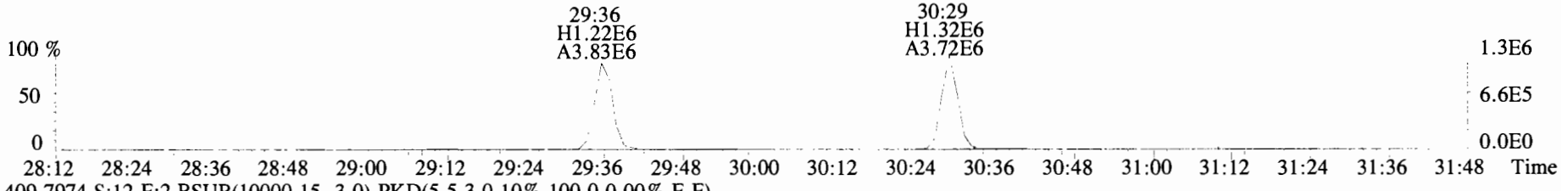
341.8568 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



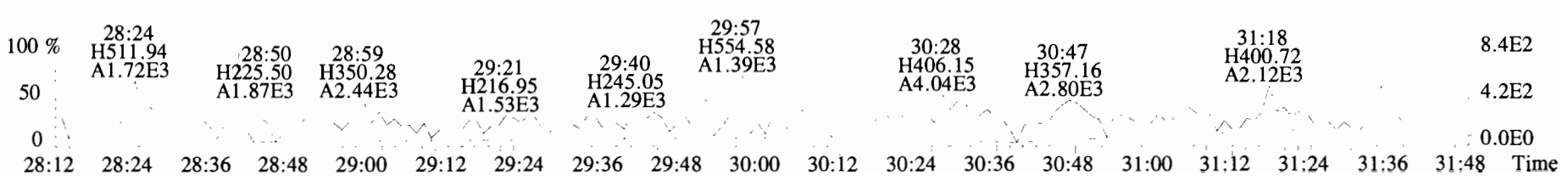
351.9000 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



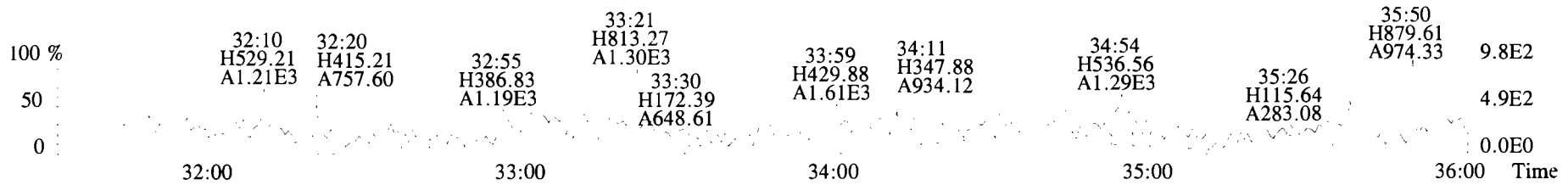
353.8970 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



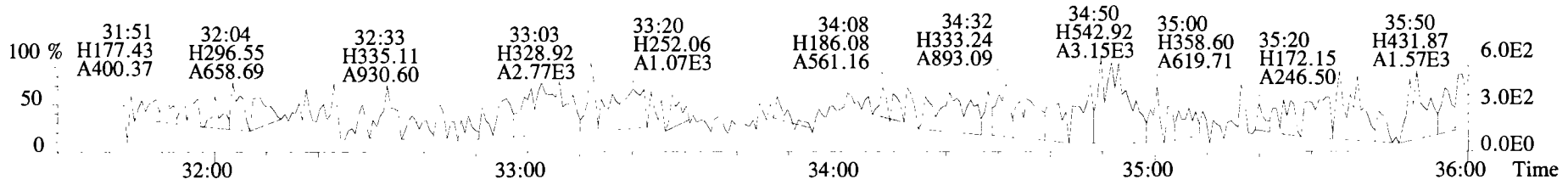
409.7974 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



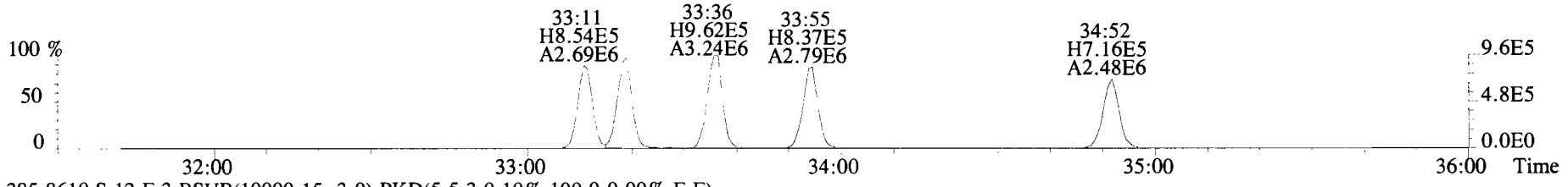
File:191016D1 #1-385 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



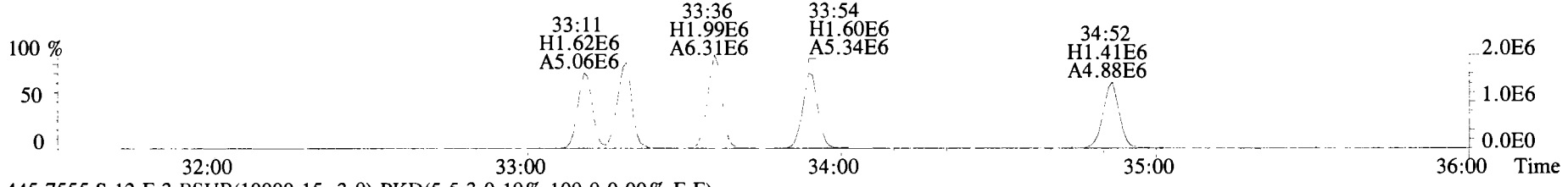
375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



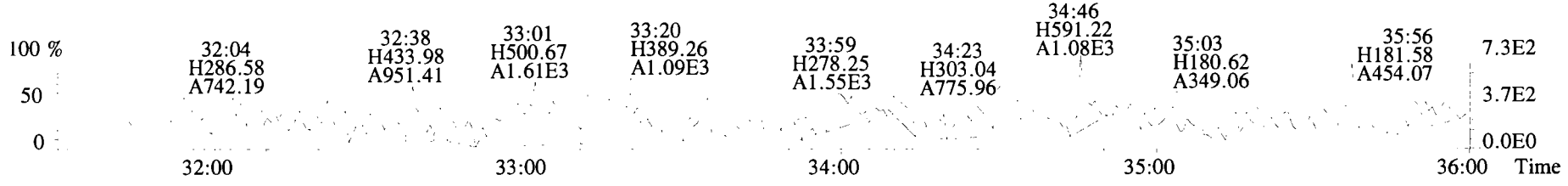
383.8639 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



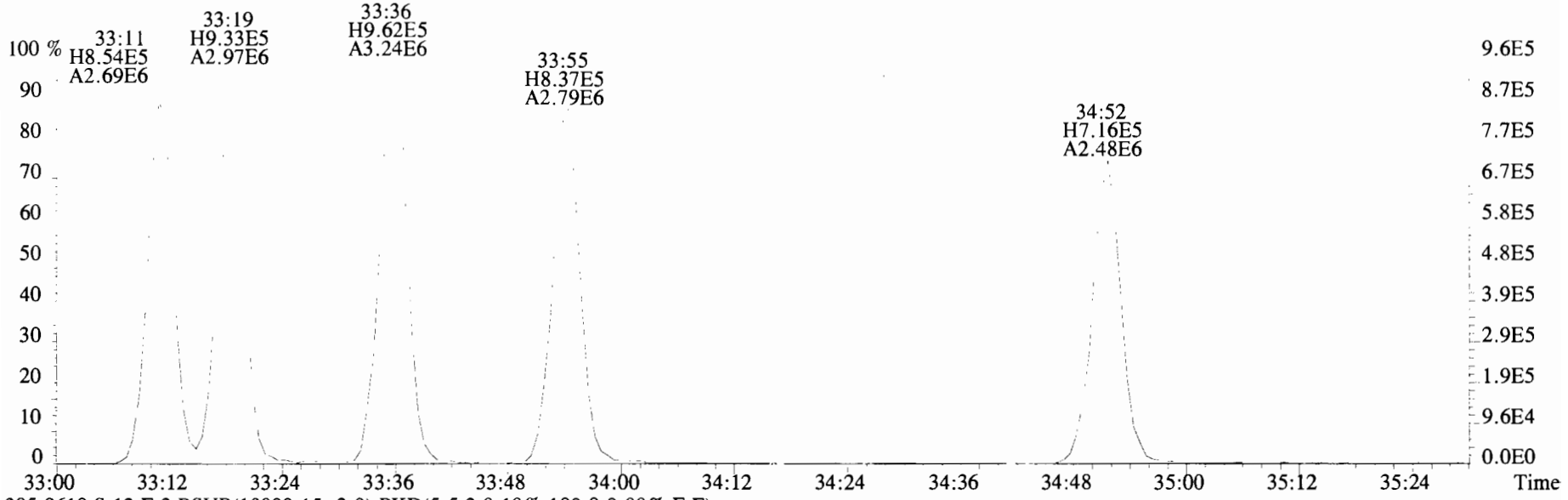
385.8610 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



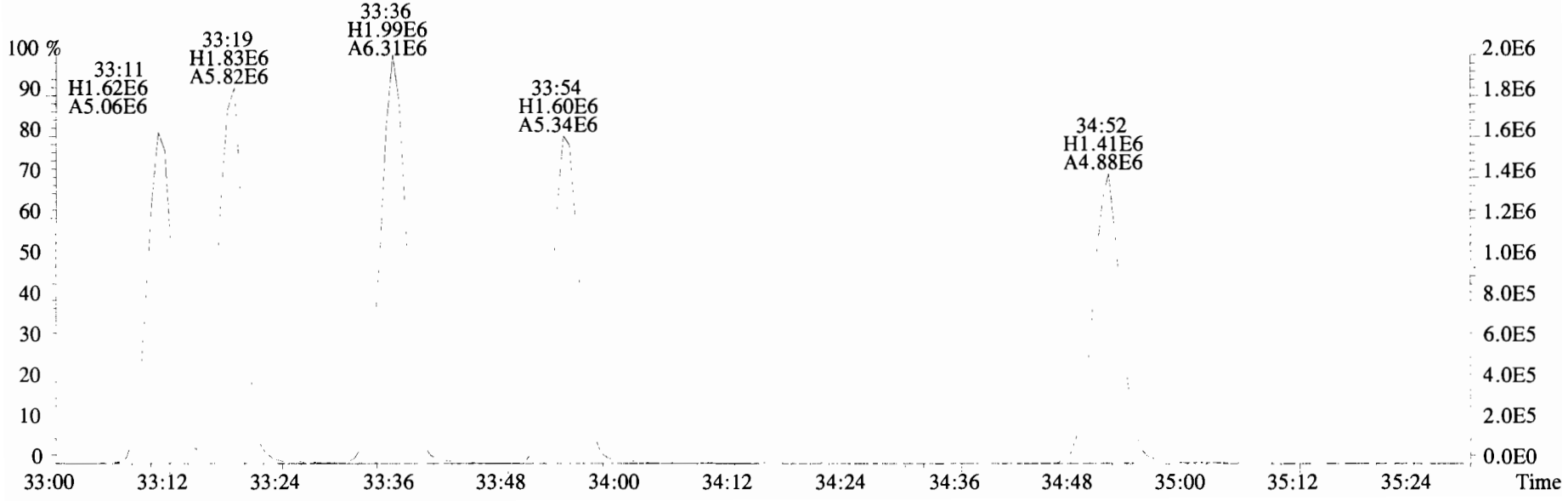
445.7555 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



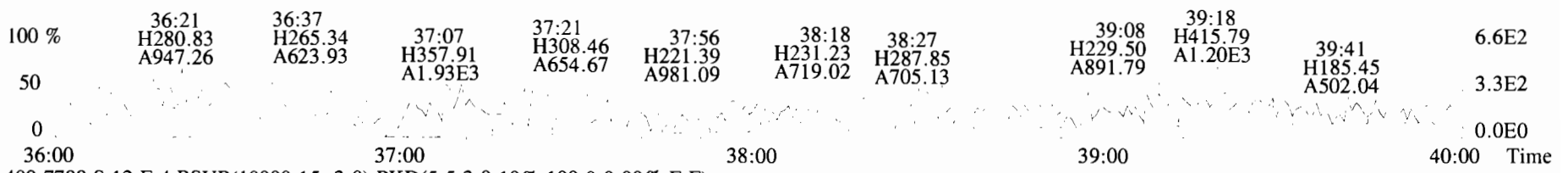
File:191016D1 #1-385 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
383.8639 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



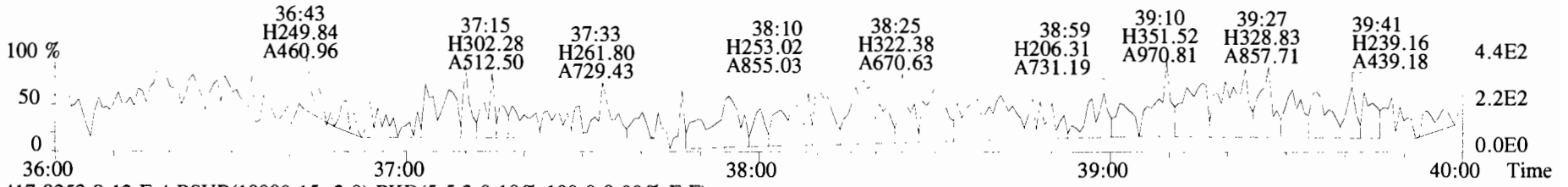
385.8610 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



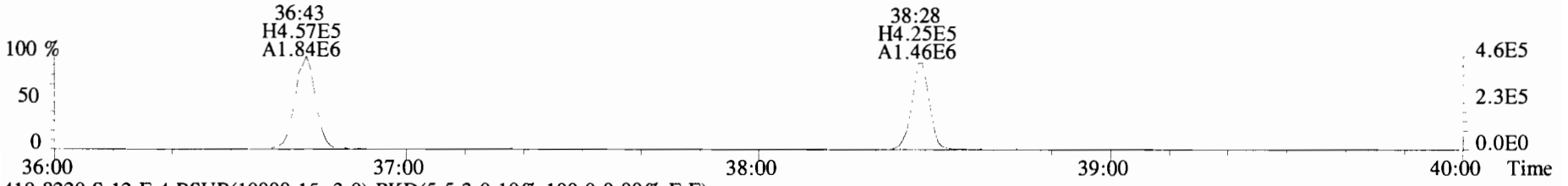
File:191016D1 #1-355 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
407.7818 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



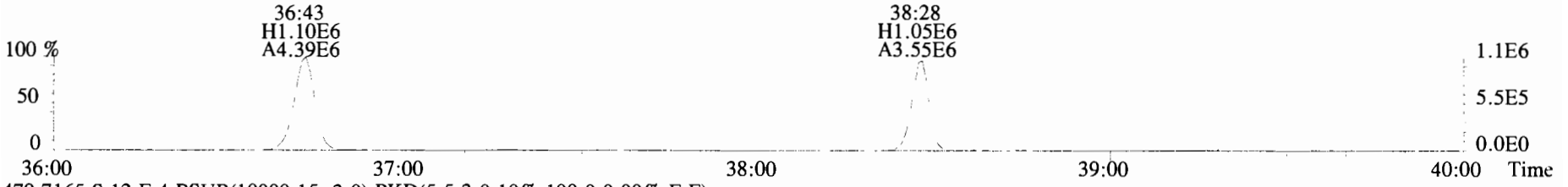
409.7788 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



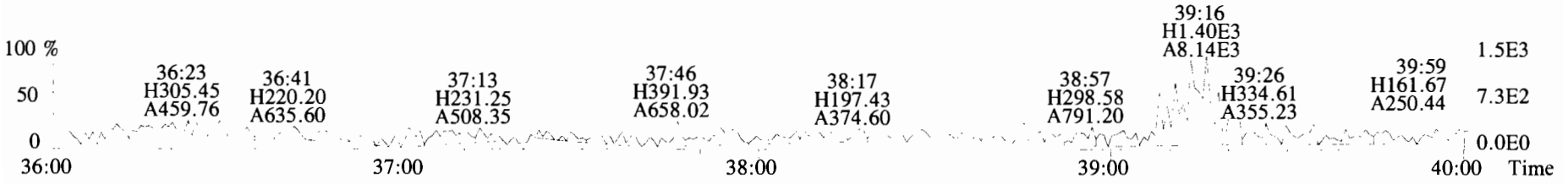
417.8253 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



419.8220 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

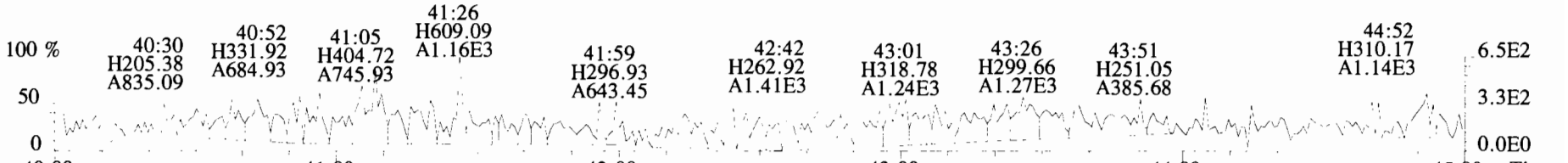


479.7165 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

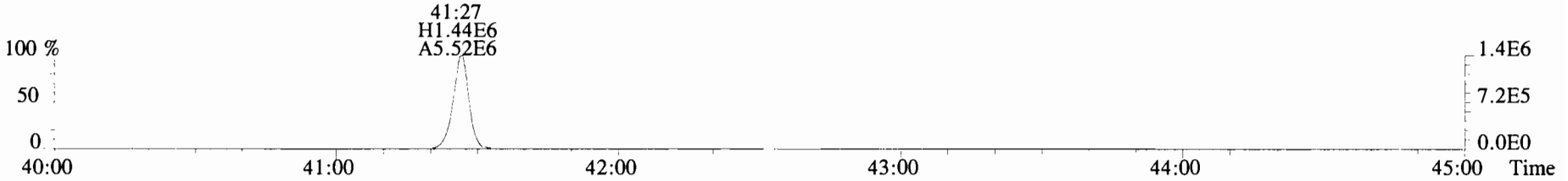


File:191016D1 #1-432 Acq:16-OCT-2019 19:38:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-12 PDI-025SC-A-07-08-190927 13.37 Exp:OCDD_DB5
441.7428 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

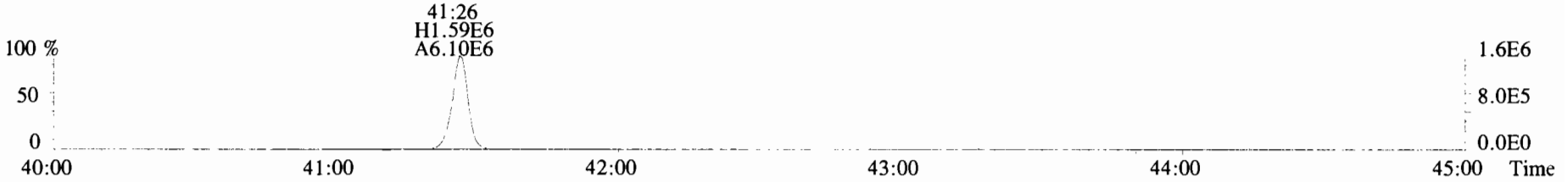
443.7398 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



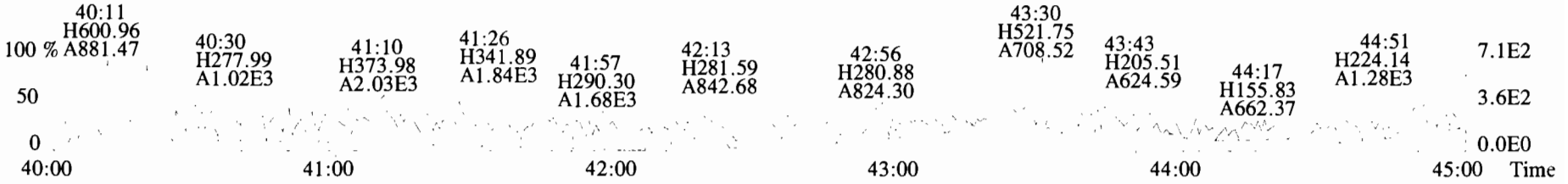
453.7831 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



	Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	8.81e+03	0.49 n	0.91	26:20	0.35459			* 2.5	*
	1,2,3,7,8-PeCDD	8.71e+03	0.49 n	0.90	30:47	0.43271			* 2.5	*
	1,2,3,4,7,8-HxCDD	1.98e+04	1.41 y	1.10	34:05	0.91449			* 2.5	*
	1,2,3,6,7,8-HxCDD	1.09e+05	1.28 y	0.94	34:12	5.4455			* 2.5	*
	1,2,3,7,8,9-HxCDD	4.44e+04	1.29 y	0.96	34:30	2.1661			* 2.5	*
	1,2,3,4,6,7,8-HpCDD	4.15e+06	1.00 y	0.98	37:56	233.28			* 2.5	*
	OCDD	3.15e+07	0.92 y	0.96	41:13	1923.5			* 2.5	*
	2,3,7,8-TCDF	5.10e+04	0.76 y	0.95	25:33	1.3627	0		* 2.5	*
	1,2,3,7,8-PeCDF	5.53e+04	1.65 y	0.96	29:36	1.6667			* 2.5	*
	2,3,4,7,8-PeCDF	3.19e+04	1.41 y	1.01	30:30	0.87392			* 2.5	*
	1,2,3,4,7,8-HxCDF	1.07e+05	1.26 y	1.18	33:12	3.3280			* 2.5	*
	1,2,3,6,7,8-HxCDF	5.78e+04	1.18 y	1.07	33:19	1.6780			* 2.5	*
	2,3,4,6,7,8-HxCDF	3.67e+04	1.28 y	1.11	33:55	1.1501			* 2.5	*
	1,2,3,7,8,9-HxCDF	8.16e+03	1.38 y	1.06	34:52	0.30596			* 2.5	*
	1,2,3,4,6,7,8-HpCDF	4.14e+05	1.00 y	1.13	36:43	16.668			* 2.5	*
	1,2,3,4,7,8,9-HpCDF	3.60e+04	1.01 y	1.28	38:28	1.6015			* 2.5	*
	OCDF	1.25e+06	0.89 y	0.95	41:26	63.339			* 2.5	*
IS	13C-2,3,7,8-TCDD	5.46e+06	0.78 y	1.10	26:19	136.82				
IS	13C-1,2,3,7,8-PeCDD	4.44e+06	0.60 y	0.88	30:46	138.24				
IS	13C-1,2,3,4,7,8-HxCDD	3.91e+06	1.27 y	0.64	34:05	138.60				
IS	13C-1,2,3,6,7,8-HxCDD	4.23e+06	1.23 y	0.86	34:11	112.60				
IS	13C-1,2,3,7,8,9-HxCDD	4.24e+06	1.25 y	0.81	34:29	119.75				
IS	13C-1,2,3,4,6,7,8-HpCDD	3.61e+06	1.02 y	0.65	37:55	125.72				
IS	13C-OCDD	6.80e+06	0.92 y	0.58	41:12	266.92				
IS	13C-2,3,7,8-TCDF	7.85e+06	0.81 y	1.03	25:33	125.00				
IS	13C-1,2,3,7,8-PeCDF	6.88e+06	1.54 y	0.85	29:36	132.73				
IS	13C-2,3,4,7,8-PeCDF	7.16e+06	1.53 y	0.85	30:30	139.40				
IS	13C-1,2,3,4,7,8-HxCDF	5.41e+06	0.51 y	0.83	33:11	148.19				
IS	13C-1,2,3,6,7,8-HxCDF	6.41e+06	0.51 y	1.03	33:19	141.13				
IS	13C-2,3,4,6,7,8-HxCDF	5.70e+06	0.50 y	0.95	33:54	136.15				
IS	13C-1,2,3,7,8,9-HxCDF	5.00e+06	0.52 y	0.83	34:52	137.58				
IS	13C-1,2,3,4,6,7,8-HpCDF	4.39e+06	0.41 y	0.76	36:43	131.94				
IS	13C-1,2,3,4,7,8,9-HpCDF	3.50e+06	0.41 y	0.58	38:27	137.05				
IS	13C-OCDF	8.31e+06	0.93 y	0.69	41:26	274.47				
C/Up	37Cl-2,3,7,8-TCDD	2.63e+06		1.20	26:20	60.220				
RS/RT	13C-1,2,3,4-TCDD	7.26e+06	0.75 y	1.00	25:46	199.08				
RS	13C-1,2,3,4-TCDF	1.21e+07	0.82 y	1.00	24:22	199.08				
RS/RT	13C-1,2,3,4,6,9-HxCDF	8.75e+06	0.52 y	1.00	33:36	199.08				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	1.91	2.82		*	*
Total Penta-Dioxins	4.48	6.08		*	*
Total Hexa-Dioxins	62.6	62.6		*	*
Total Hepta-Dioxins	524	524		*	*
Total Tetra-Furans	8.07	9.21		*	*
Total Penta-Furans	11.597	13.044		*	*
Total Hexa-Furans	26.5	26.8		*	*
Total Hepta-Furans	62.4	62.4		*	*

	Rec	Qual
IS	68.7	
IS	69.4	
IS	69.6	
IS	56.6	
IS	60.2	
IS	63.2	
IS	67.0	
IS	62.8	
IS	66.7	
IS	70.0	
IS	74.4	
IS	70.9	
IS	68.4	
IS	69.1	
IS	66.3	
IS	68.8	
IS	68.9	
C/Up	75.6	

Integrations by Analyst: DB Date: 11/1/19

Reviewed by Analyst: CT Date: 11/04/19

Totals class: TCDD EMPC Entry #: 19

Run: 18 File: 191016D1 S: 13 I: 1 F: 1
Acquired: 16-OCT-19 20:26:21 Processed: 17-OCT-19 09:19:02

Total Concentration: 2.8226 Unnamed Concentration: 2.468

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
23:01	6.562e+03	9.359e+03	0.70	y	1.592e+04	0.64105	
23:23	1.963e+03	2.865e+03	0.69	y	4.828e+03	0.19441	
23:45	5.547e+03	7.170e+03	0.77	y	1.272e+04	0.51208	
24:29	3.210e+03	4.213e+03	0.76	y	7.423e+03	0.29887	
24:53	2.958e+03	3.545e+03	0.83	y	6.504e+03	0.26186	
25:16	4.172e+03	2.404e+03	1.74	n	4.255e+03	0.17133	
26:06	6.143e+03	5.450e+03	1.13	n	9.647e+03	0.38845	
26:20	3.831e+03	7.830e+03	0.49	n	8.807e+03	0.35459	2,3,7,8-TCDD

Totals class: PeCDD EMPC Entry #: 21

Run: 18 File: 191016D1 S: 13 I: 1 F: 2
Acquired: 16-OCT-19 20:26:21 Processed: 17-OCT-19 09:19:02

Total Concentration: 6.0813 Unnamed Concentration: 5.649

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
28:45	1.532e+04	2.680e+04	0.57	y	4.212e+04	2.0917	
29:11	7.361e+03	8.841e+03	0.83	n	1.441e+04	0.71568	
29:37	9.309e+03	1.320e+04	0.71	y	2.251e+04	1.1179	
29:47	3.512e+03	7.981e+03	0.44	n	9.085e+03	0.45120	
30:06	9.220e+03	1.639e+04	0.56	y	2.561e+04	1.2720	
30:47	3.368e+03	6.845e+03	0.49	n	8.713e+03	0.43271	1,2,3,7,8-PeCDD

Totals class: HxCDD EMPC Entry #: 23

Run: 18 File: 191016D1 S: 13 I: 1 F: 3
Acquired: 16-OCT-19 20:26:21 Processed: 17-OCT-19 09:19:02

Total Concentration: 62.629 Unnamed Concentration: 54.103

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
32:33	3.050e+05	2.441e+05	1.25 y	5.491e+05	26.697	
33:07	2.670e+04	2.428e+04	1.10 y	5.097e+04	2.4784	
33:23	2.512e+05	2.045e+05	1.23 y	4.556e+05	22.154	
33:30	1.553e+04	1.374e+04	1.13 y	2.928e+04	1.4234	
34:05	1.159e+04	8.194e+03	1.41 y	1.978e+04	0.91449	1,2,3,4,7,8-HxCDD
34:12	6.096e+04	4.769e+04	1.28 y	1.087e+05	5.4455	1,2,3,6,7,8-HxCDD
34:24	1.522e+04	1.255e+04	1.21 y	2.777e+04	1.3504	
34:30	2.502e+04	1.937e+04	1.29 y	4.439e+04	2.1661	1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Entry #: 25

Run: 18 File: 191016D1 S: 13 I: 1 F: 4
Acquired: 16-OCT-19 20:26:21 Processed: 17-OCT-19 09:19:02

Total Concentration: 523.82 Unnamed Concentration: 290.536

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
37:06	2.596e+06	2.567e+06	1.01 y	5.163e+06	290.54	
37:56	2.069e+06	2.076e+06	1.00 y	4.145e+06	233.28	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Entry #: 27

Run: 18 File: 191016D1 S: 13 I: 1 F: 1
Acquired: 16-OCT-19 20:26:21 Processed: 17-OCT-19 09:19:02

Total Concentration: 9.2119 Unnamed Concentration: 7.849

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
21:28	7.930e+03	9.147e+03	0.87	y	1.708e+04	0.45584	
22:07	1.750e+04	2.527e+04	0.69	y	4.277e+04	1.1418	
22:37	1.185e+04	1.421e+04	0.83	y	2.605e+04	0.69549	
23:00	1.745e+04	1.690e+04	1.03	n	2.991e+04	0.79841	
23:23	1.128e+04	1.331e+04	0.85	y	2.459e+04	0.65643	
23:31	8.459e+03	7.325e+03	1.15	n	1.297e+04	0.34608	
23:40	8.029e+03	9.691e+03	0.83	y	1.772e+04	0.47302	
24:18	1.759e+04	2.281e+04	0.77	y	4.040e+04	1.0784	
24:47	2.145e+04	2.855e+04	0.75	y	5.000e+04	1.3348	
25:33	2.206e+04	2.899e+04	0.76	y	5.105e+04	1.3627	2,3,7,8-TCDF
25:53	9.522e+03	1.102e+04	0.86	y	2.054e+04	0.54822	
27:18	5.418e+03	6.596e+03	0.82	y	1.201e+04	0.32071	

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

Run: 18 File: 191016D1 S: 13 I: 1 F: 1
Acquired: 16-OCT-19 20:26:21 Processed: 17-OCT-19 09:19:02

Total Concentration: 4.5078 Unnamed Concentration: 4.508

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
27:17	9.221e+04	6.481e+04	1.42 y	1.570e+05	4.5078	

Totals class: PeCDF EXPC Entry #: 31

Run: 18 File: 191016D1 S: 13 I: 1 F: 2
Acquired: 16-OCT-19 20:26:21 Processed: 17-OCT-19 09:19:02

Total Concentration: 8.5360 Unnamed Concentration: 5.995

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
28:42	7.475e+04	4.556e+04	1.64	y	1.203e+05	3.4539	
29:15	2.364e+04	1.451e+04	1.63	y	3.815e+04	1.0952	
29:27	5.161e+03	4.978e+03	1.04	n	8.491e+03	0.24376	
29:36	3.442e+04	2.089e+04	1.65	y	5.531e+04	1.6667	1,2,3,7,8-PeCDF
29:51	1.417e+04	1.164e+04	1.22	n	2.332e+04	0.66941	
30:30	1.866e+04	1.326e+04	1.41	y	3.192e+04	0.87392	2,3,4,7,8-PeCDF
30:33	1.335e+04	7.282e+03	1.83	n	1.857e+04	0.53312	

Totals class: HxCDF [illegible] Entry #: [illegible]

Run: 18 File: 191016D1 S: [illegible] I: 1 F: 3
Acquired: 16-OCT-[illegible] 20:26:21 Processed: 17-OCT-19 09:19:02

Total Concentration: 20.794 Unnamed Concentration: 20.332

RT	m1 Resp	m2 Resp	RA		Resp Concentration		Name
32:01	3.891e+04	3.562e+04	1.09	y	7.453e+04	2.3873	
32:10	1.038e+05	9.353e+04	1.11	y	1.973e+05	6.3192	
32:43	1.838e+05	1.615e+05	1.14	y	3.453e+05	11.061	
33:05	4.814e+03	4.168e+03	1.16	y	8.982e+03	0.28770	
33:12	5.928e+04	4.724e+04	1.26	y	1.065e+05	3.3280	1,2,3,4,7,8-HxCDF
33:19	3.131e+04	2.647e+04	1.18	y	5.779e+04	1.6780	1,2,3,6,7,8-HxCDF
33:55	2.061e+04	1.607e+04	1.28	y	3.668e+04	1.1501	2,3,4,6,7,8-HxCDF
34:52	4.739e+03	3.423e+03	1.38	y	8.162e+03	0.30596	1,2,3,7,8,9-HxCDF
34:55	4.790e+03	5.313e+03	0.90	n	8.654e+03	0.27718	

Totals class: HpCDF EMPC Entry #: 35

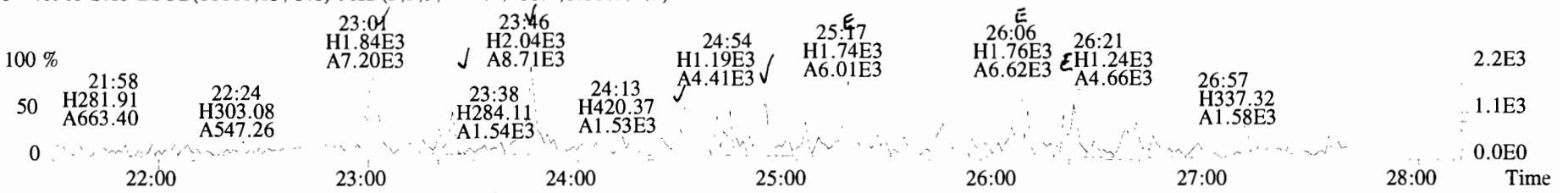
Run: 18 File: 191016D1 S: 13 I: 1 F: 4
Acquired: 16-OCT-19 20:26:21 Processed: 17-OCT-19 09:19:02

Total Concentration: 62.406 Unnamed Concentration: 44.137

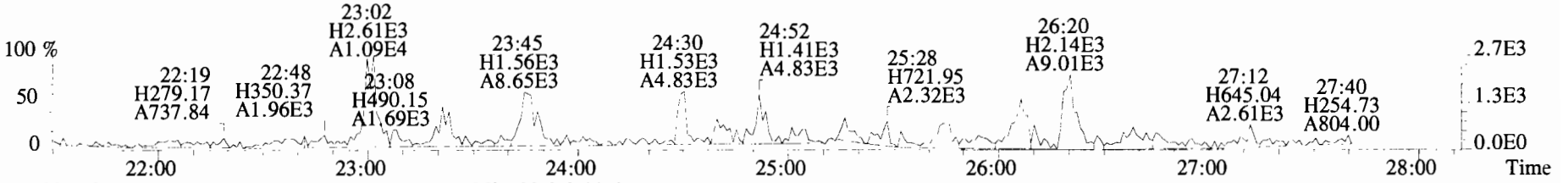
RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
36:43	2.072e+05	2.073e+05	1.00 y	4.145e+05	16.668	1,2,3,4,6,7,8-HpCDF
37:06	7.124e+03	8.008e+03	0.89 y	1.513e+04	0.63972	
37:17	5.158e+05	5.131e+05	1.01 y	1.029e+06	43.497	
38:28	1.813e+04	1.790e+04	1.01 y	3.603e+04	1.6015	1,2,3,4,7,8,9-HpCDF

File:191016D1 #1-493 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5

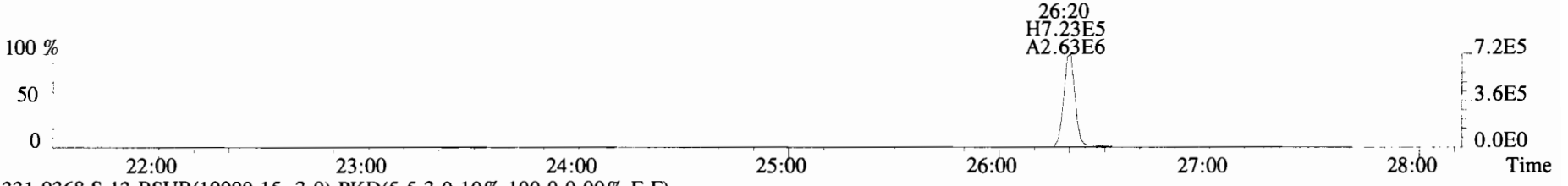
319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



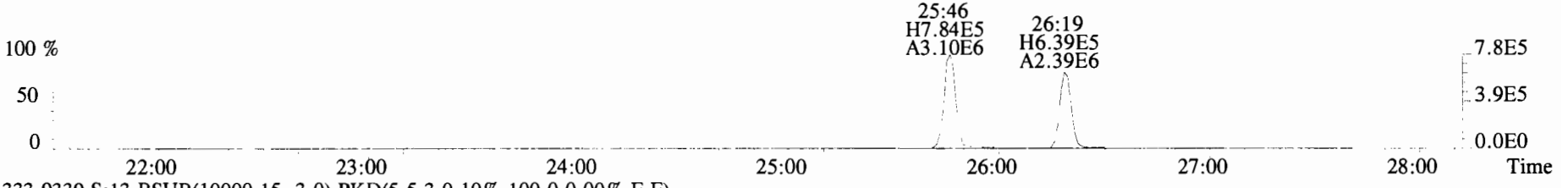
321.8936 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



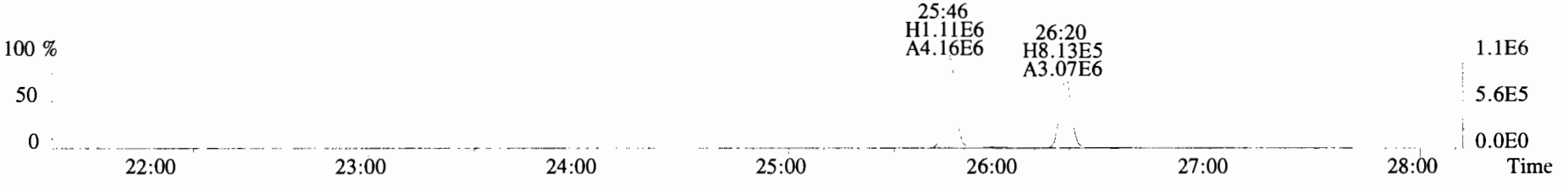
327.8847 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



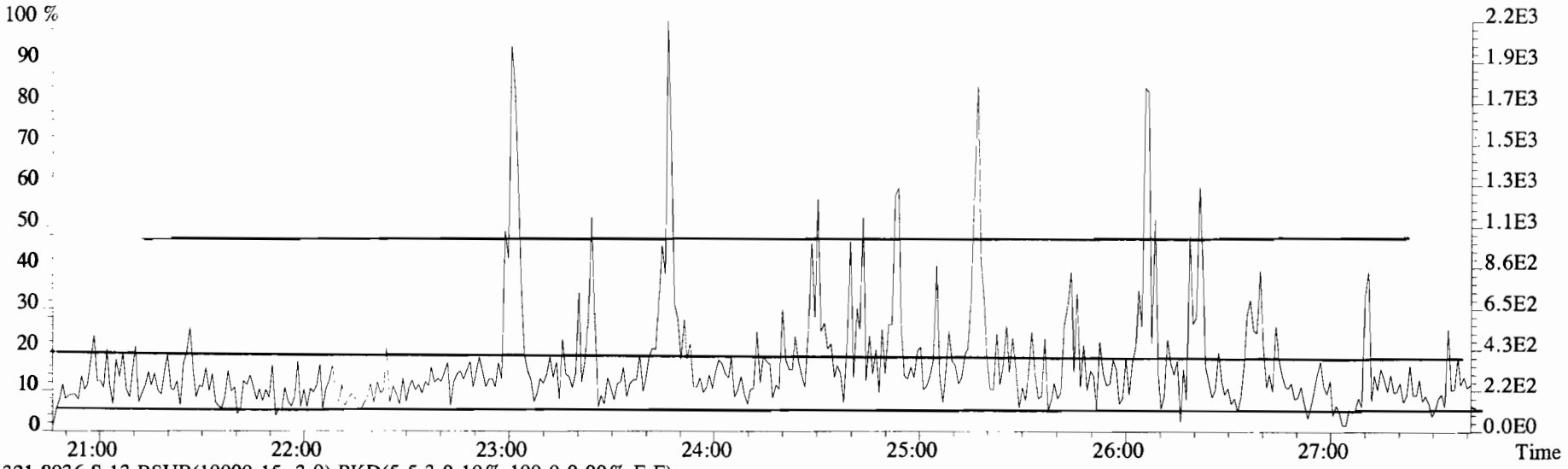
331.9368 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



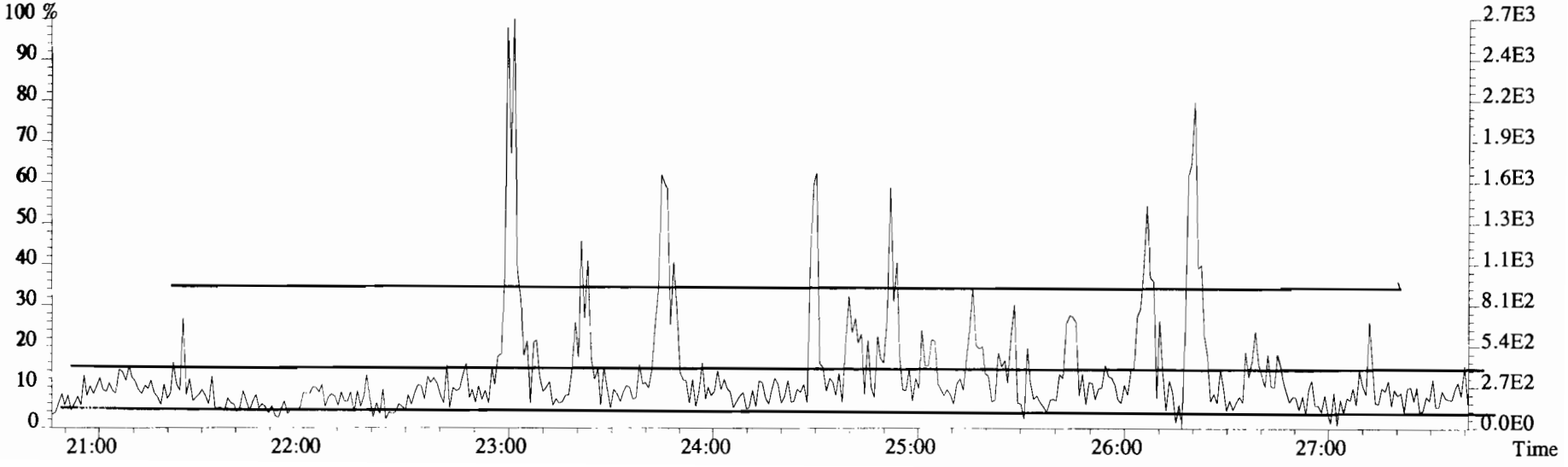
333.9339 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



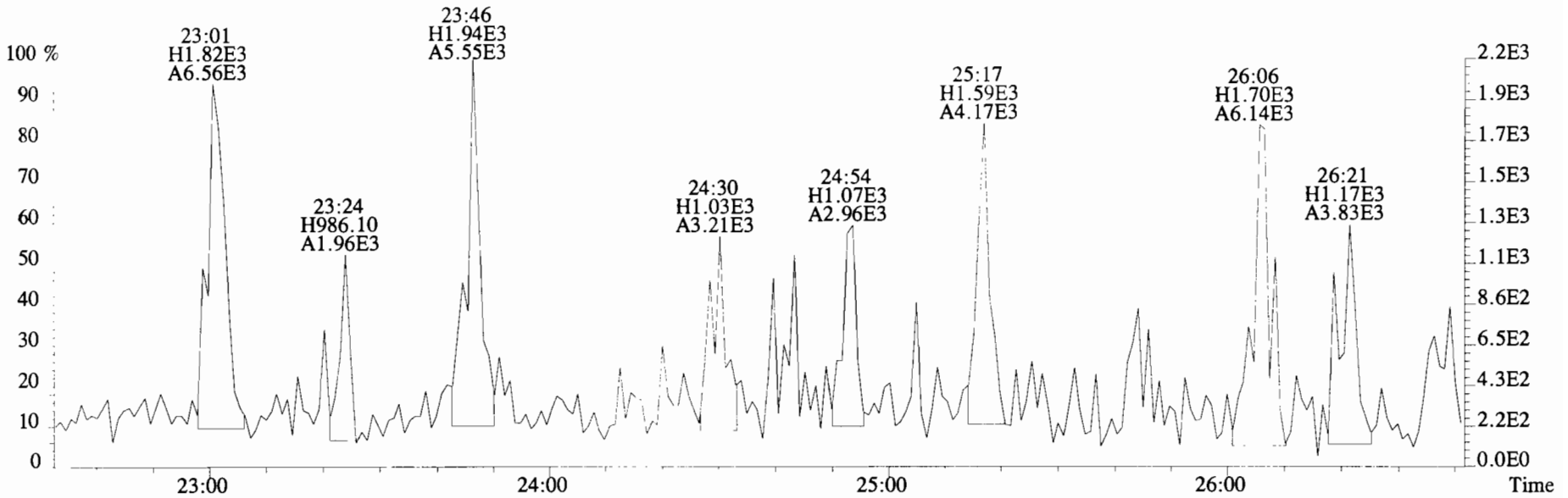
File:191016D1 #1-493 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



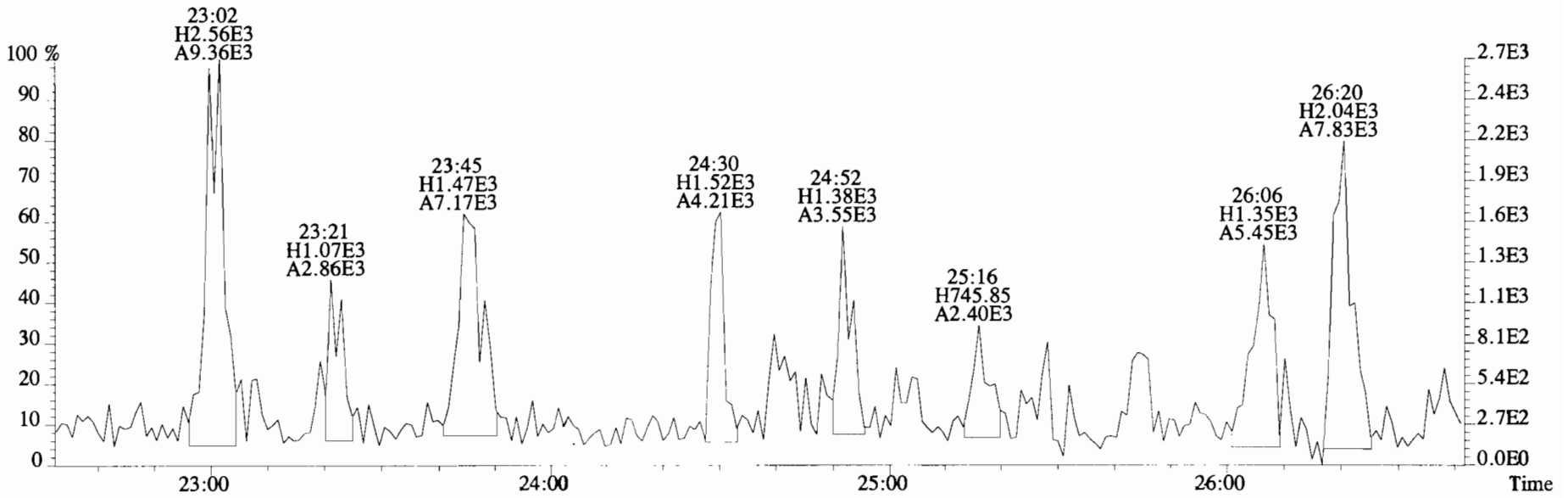
321.8936 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



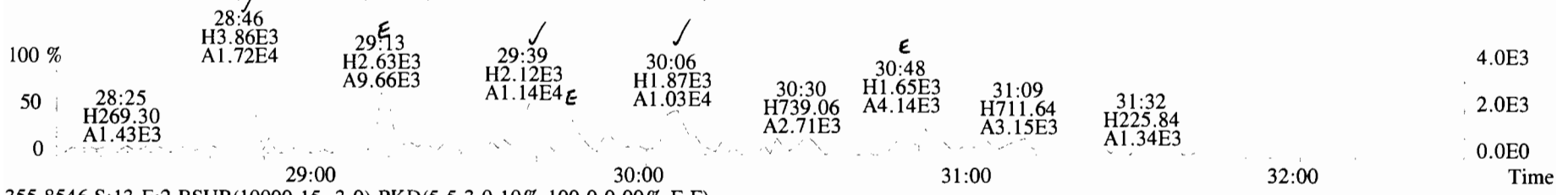
File:191016D1 #1-493 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



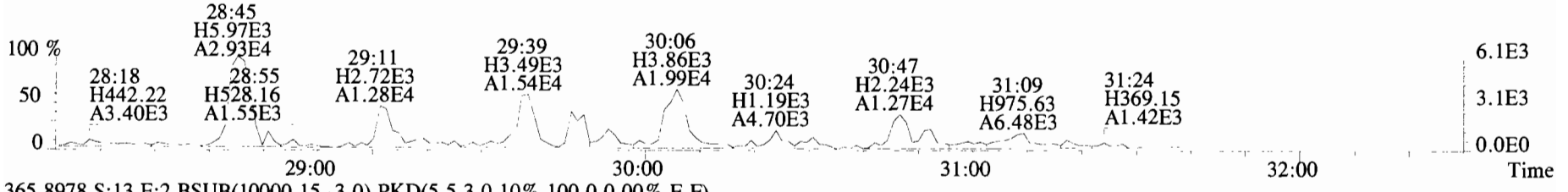
321.8936 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



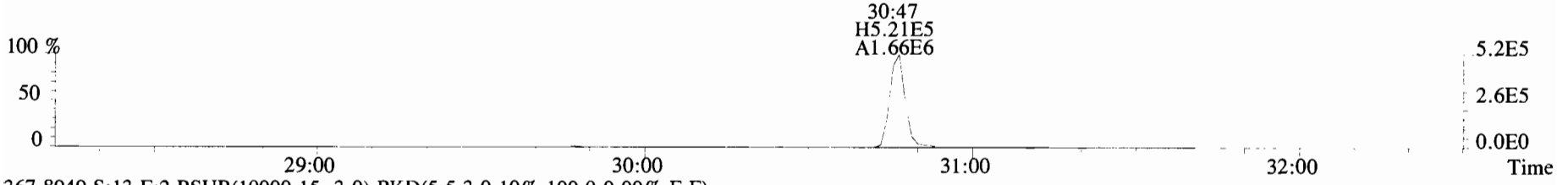
File:191016D1 #1-211 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
353.8576 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



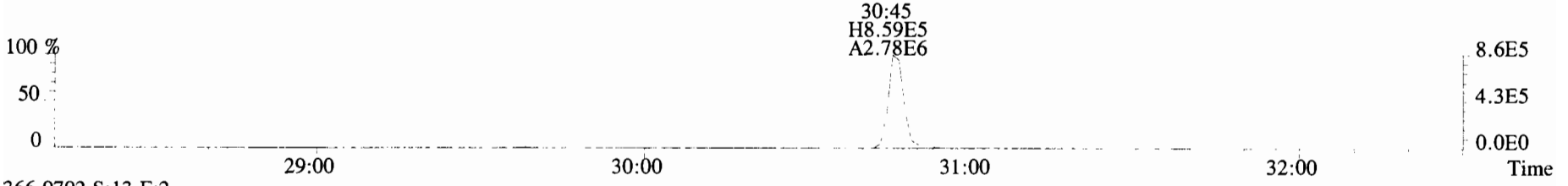
355.8546 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



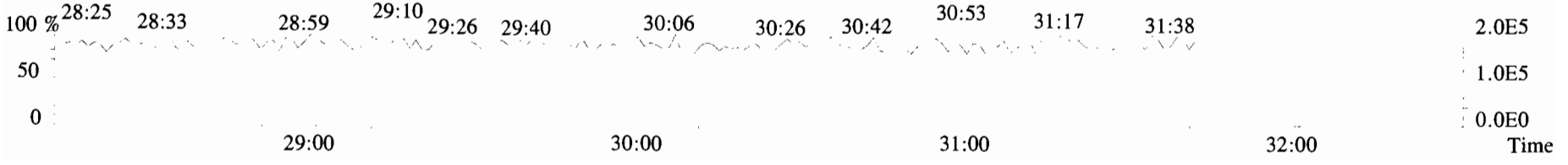
365.8978 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



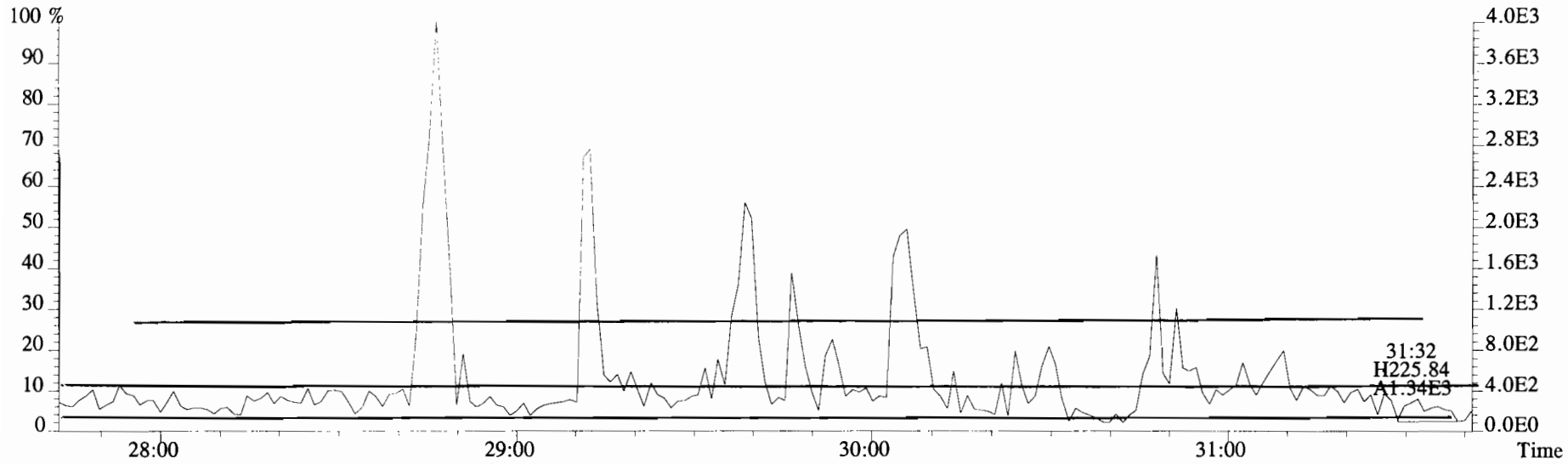
367.8949 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



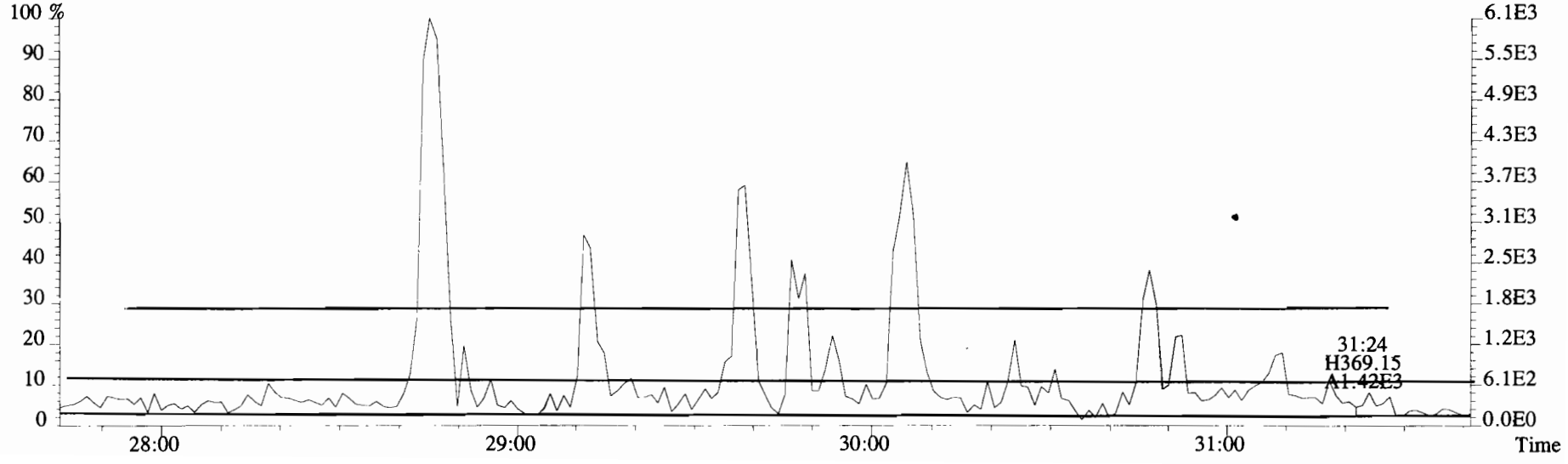
366.9792 S:13 F:2

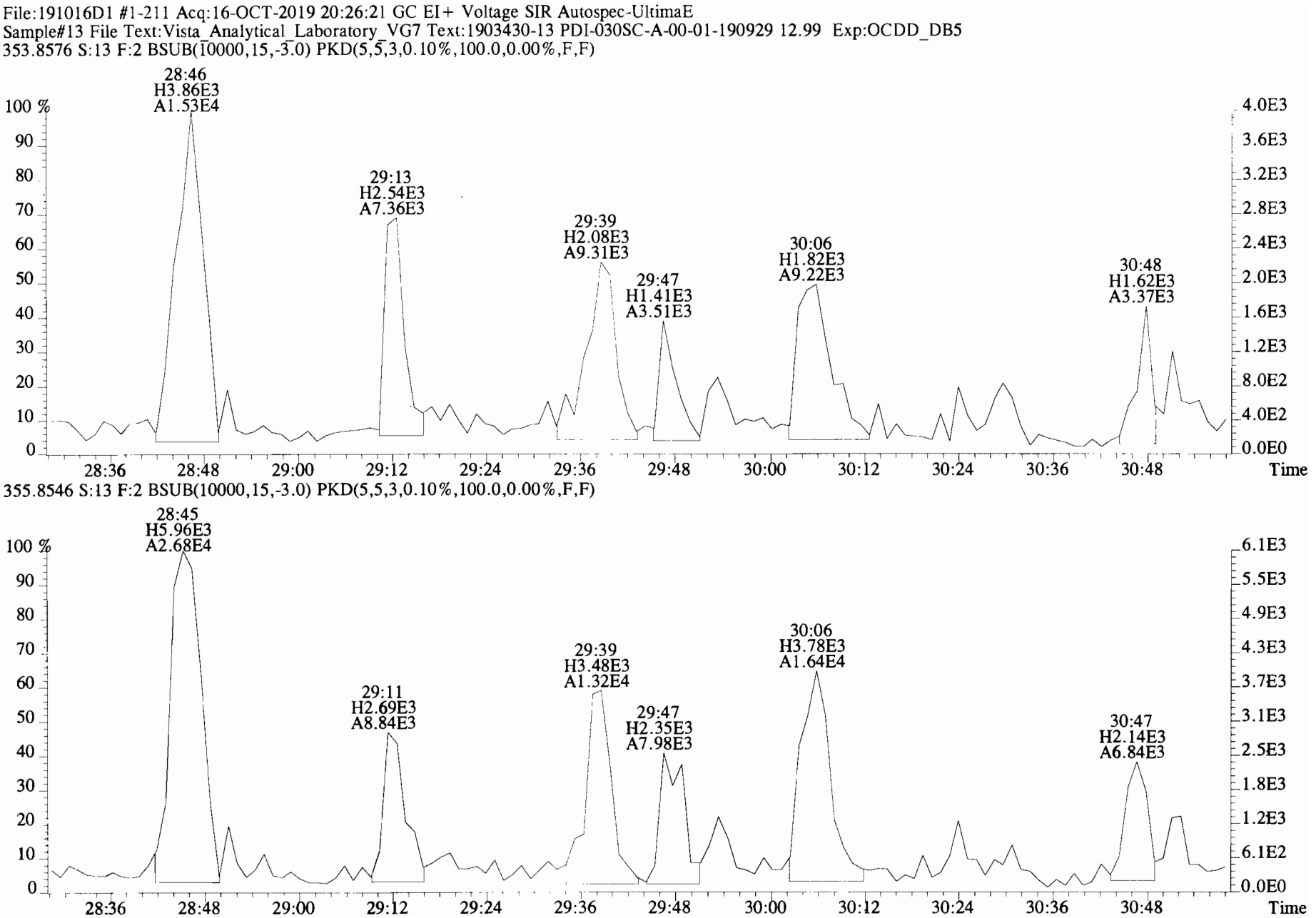


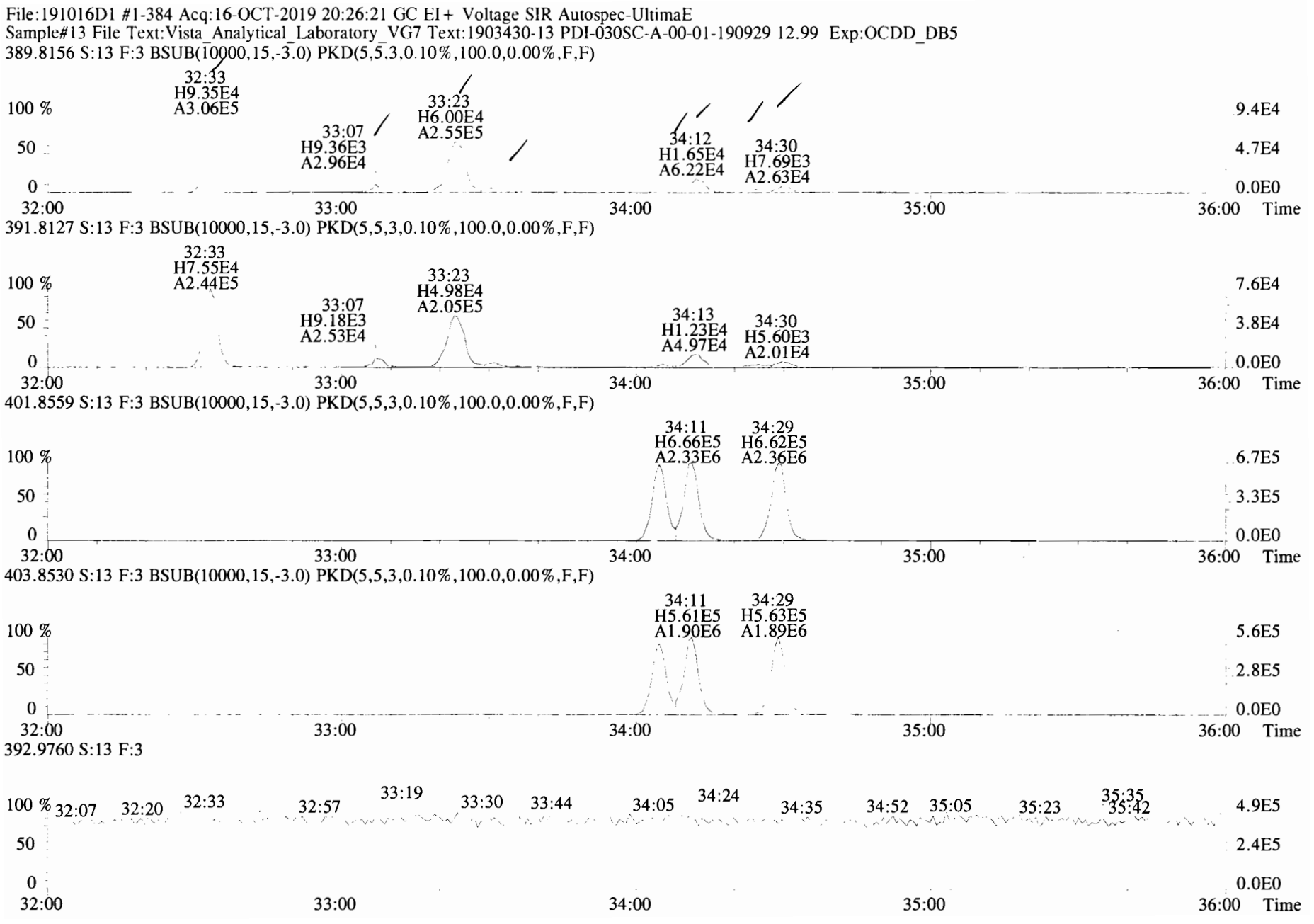
File:191016D1 #1-211 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
353.8576 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



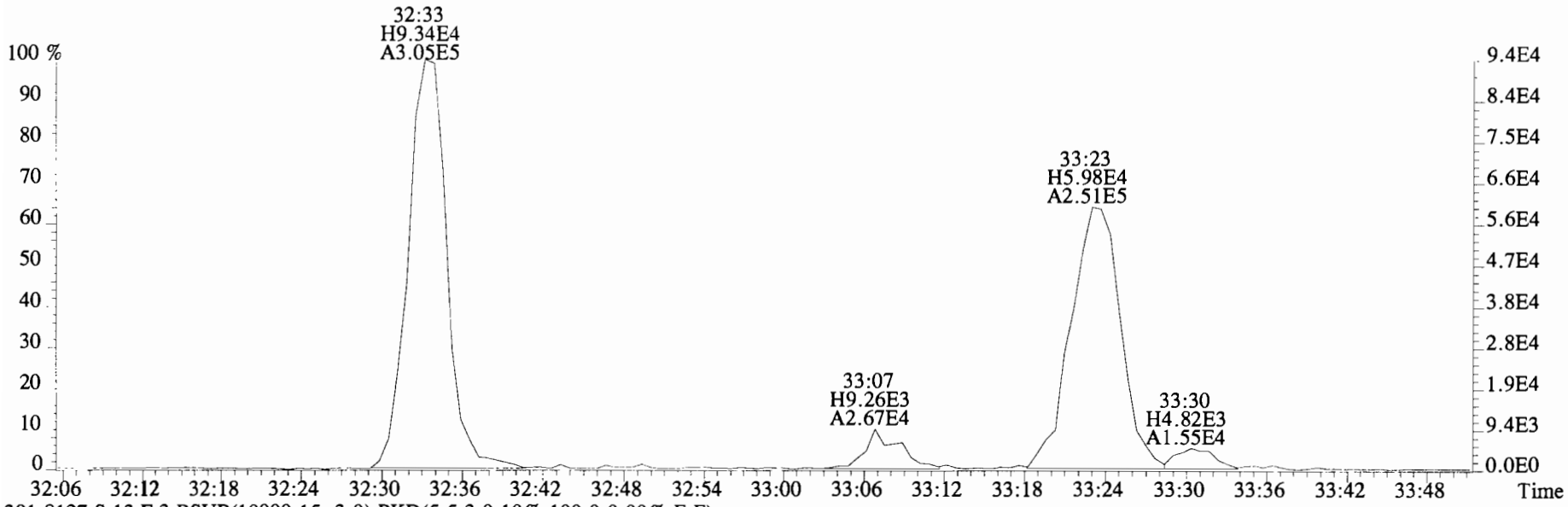
355.8546 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



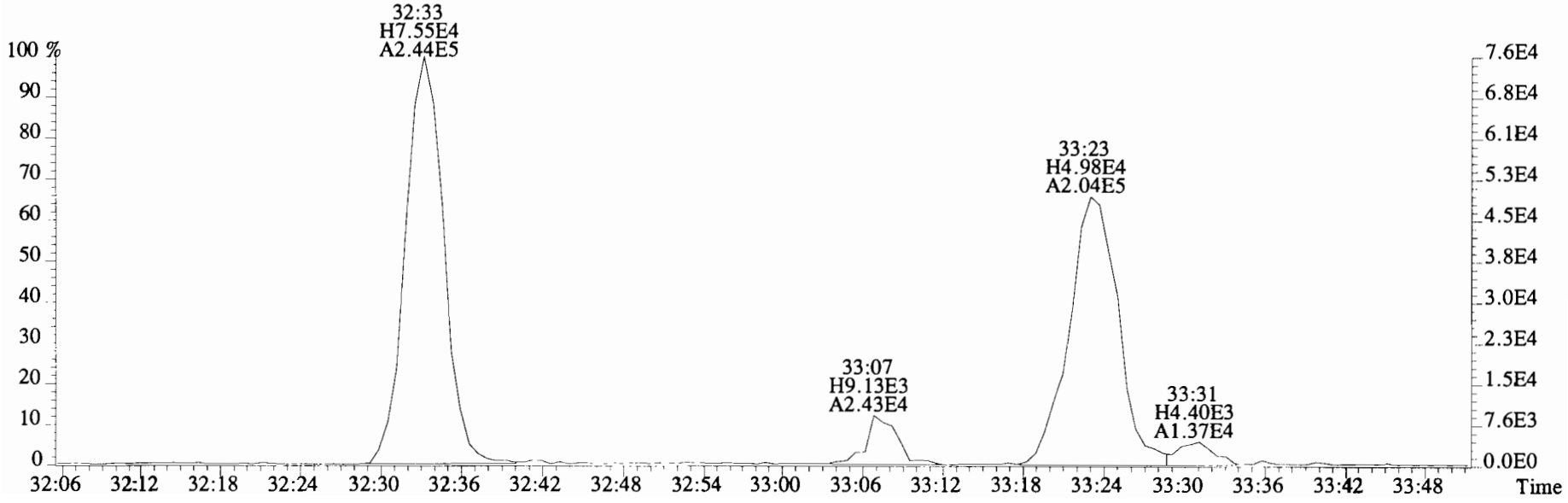

File:191016D1 #1-211 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
353.8576 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:46
H3.86E3
A1.53E4
29:13
H2.54E3
A7.36E3
29:39
H2.08E3
A9.31E3
29:47
H1.41E3
A3.51E3
30:06
H1.82E3
A9.22E3
30:48
H1.62E3
A3.37E3
100 %
90
80
70
60
50
40
30
20
10
0
4.0E3
3.6E3
3.2E3
2.8E3
2.4E3
2.0E3
1.6E3
1.2E3
8.0E2
4.0E2
0.0E0
28:36
28:48
29:00
29:12
29:24
29:36
29:48
30:00
30:12
30:24
30:36
30:48
Time
355.8546 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:45
H5.96E3
A2.68E4
29:11
H2.69E3
A8.84E3
29:39
H3.48E3
A1.32E4
29:47
H2.35E3
A7.98E3
30:06
H3.78E3
A1.64E4
30:47
H2.14E3
A6.84E3
100 %
90
80
70
60
50
40
30
20
10
0
6.1E3
5.5E3
4.9E3
4.3E3
3.7E3
3.1E3
2.5E3
1.8E3
1.2E3
6.1E2
0.0E0
28:36
28:48
29:00
29:12
29:24
29:36
29:48
30:00
30:12
30:24
30:36
30:48
Time


File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:33 H9.35E4 A3.06E5
33:07 H9.36E3 A2.96E4
33:23 H6.00E4 A2.55E5
34:12 H1.65E4 A6.22E4
34:30 H7.69E3 A2.63E4
100 %
50
0
9.4E4
4.7E4
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
391.8127 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:33 H7.55E4 A2.44E5
33:07 H9.18E3 A2.53E4
33:23 H4.98E4 A2.05E5
34:13 H1.23E4 A4.97E4
34:30 H5.60E3 A2.01E4
100 %
50
0
7.6E4
3.8E4
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
401.8559 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H6.66E5 A2.33E6
34:29 H6.62E5 A2.36E6
100 %
50
0
6.7E5
3.3E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
403.8530 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H5.61E5 A1.90E6
34:29 H5.63E5 A1.89E6
100 %
50
0
5.6E5
2.8E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time
392.9760 S:13 F:3
32:07
32:20
32:33
32:57
33:19
33:30
33:44
34:05
34:24
34:35
34:52
35:05
35:23
35:35
35:42
100 %
50
0
4.9E5
2.4E5
0.0E0
32:00
33:00
34:00
35:00
36:00
Time

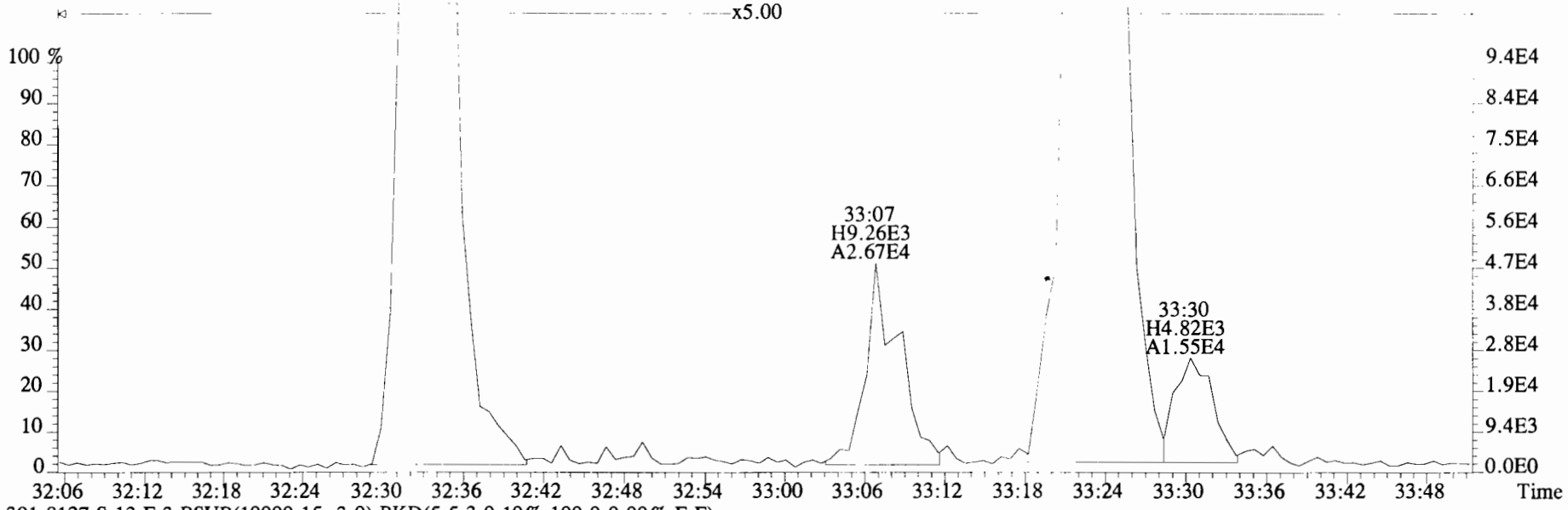
File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



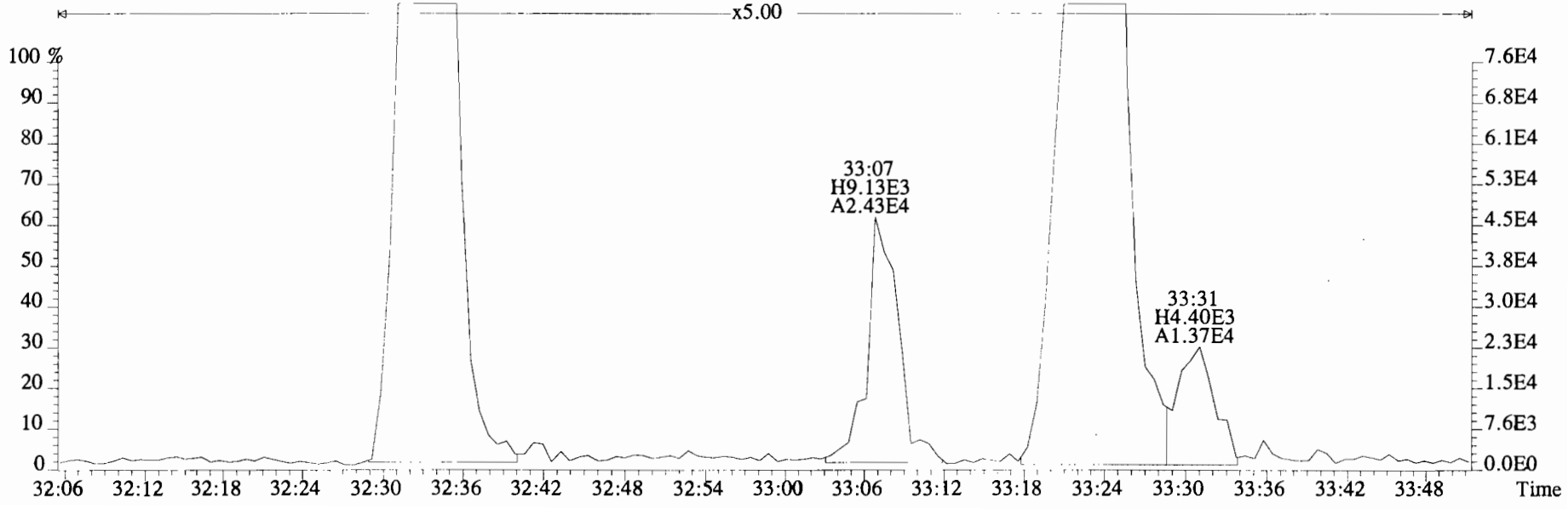
391.8127 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



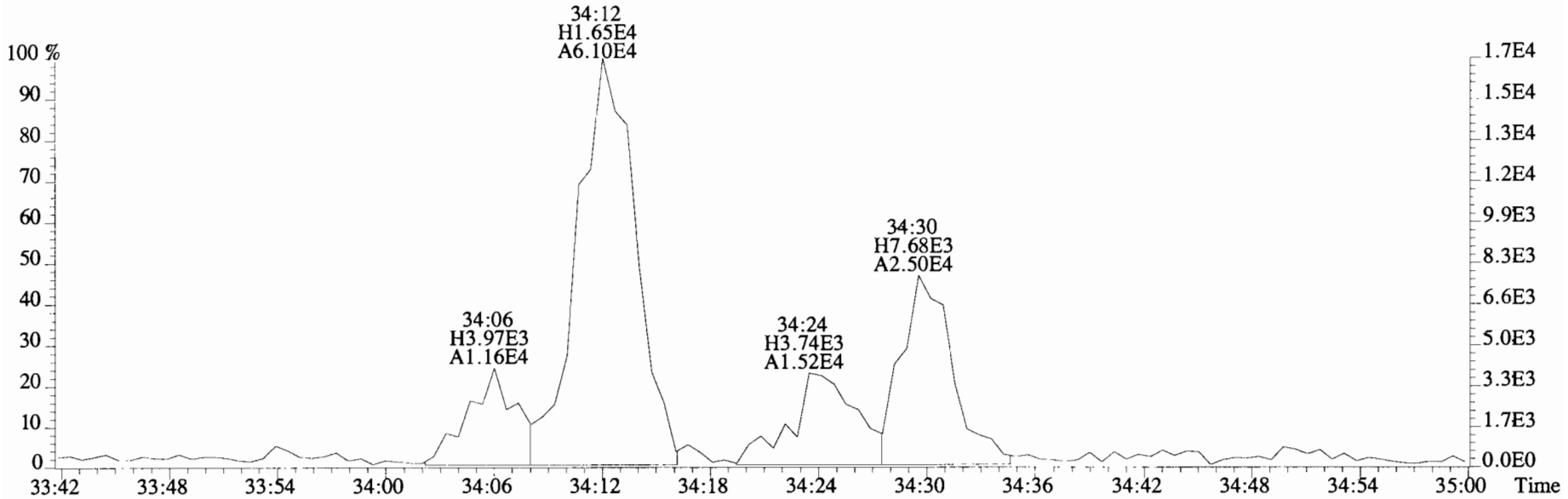
File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



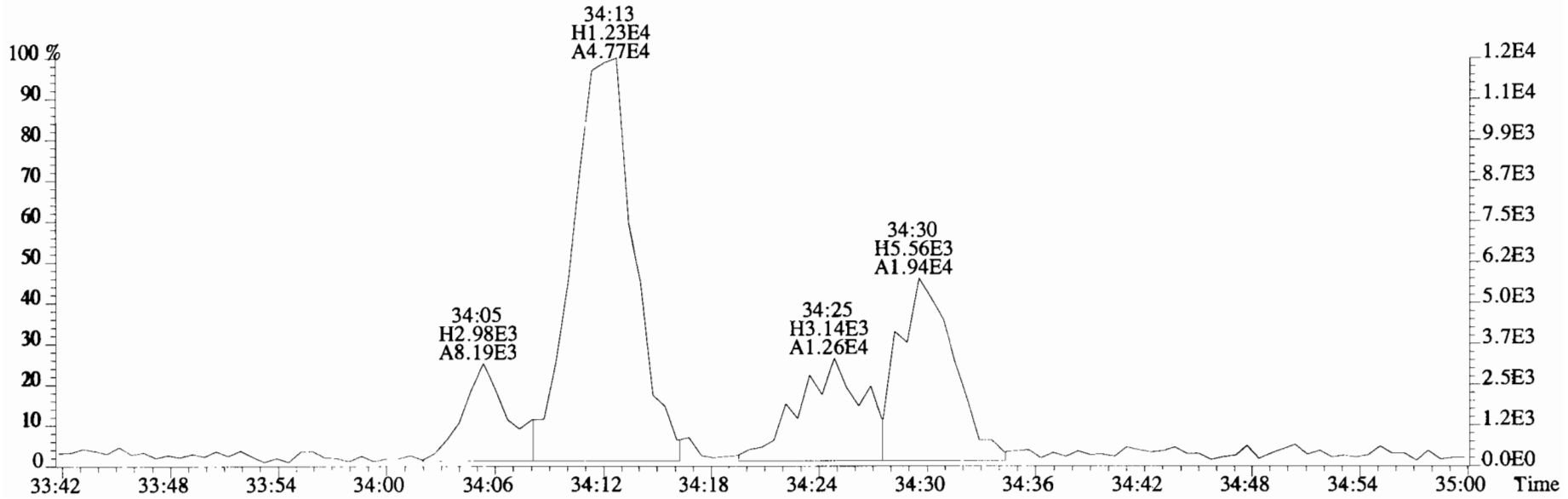
391.8127 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



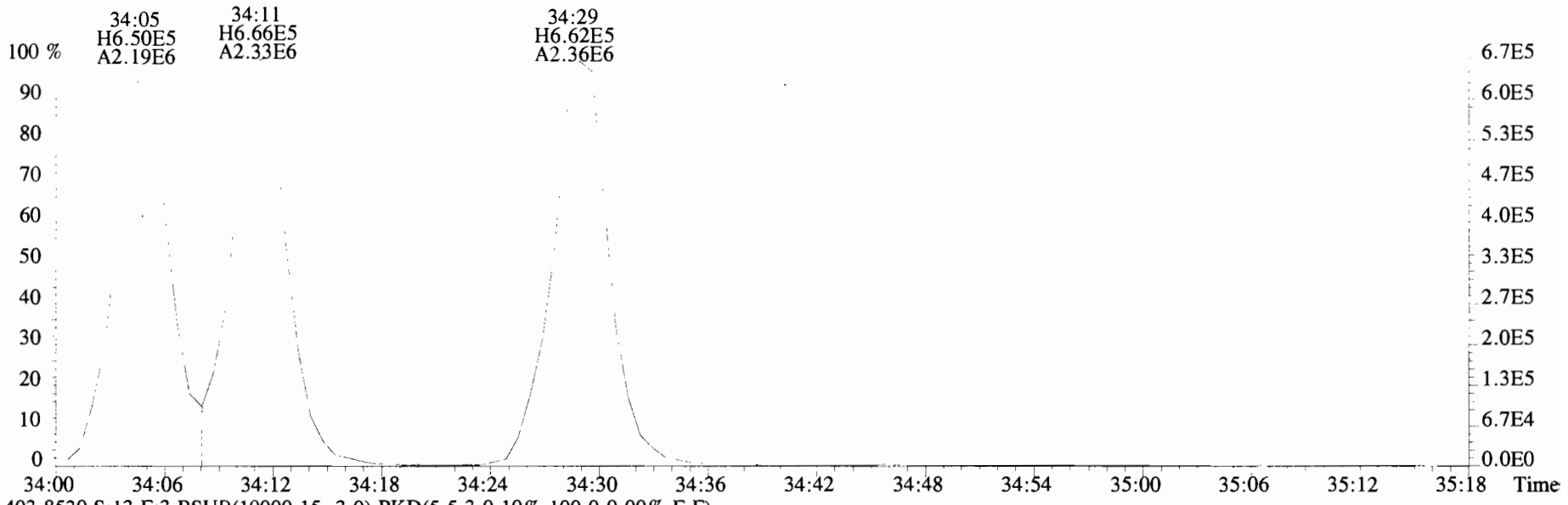
File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



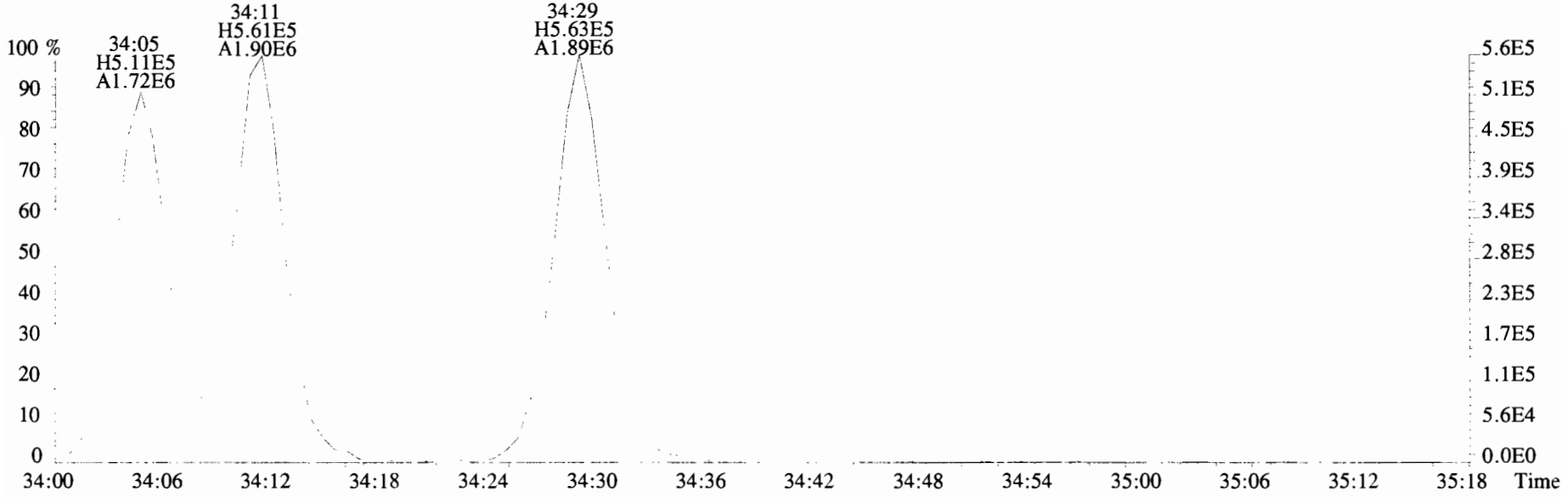
391.8127 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

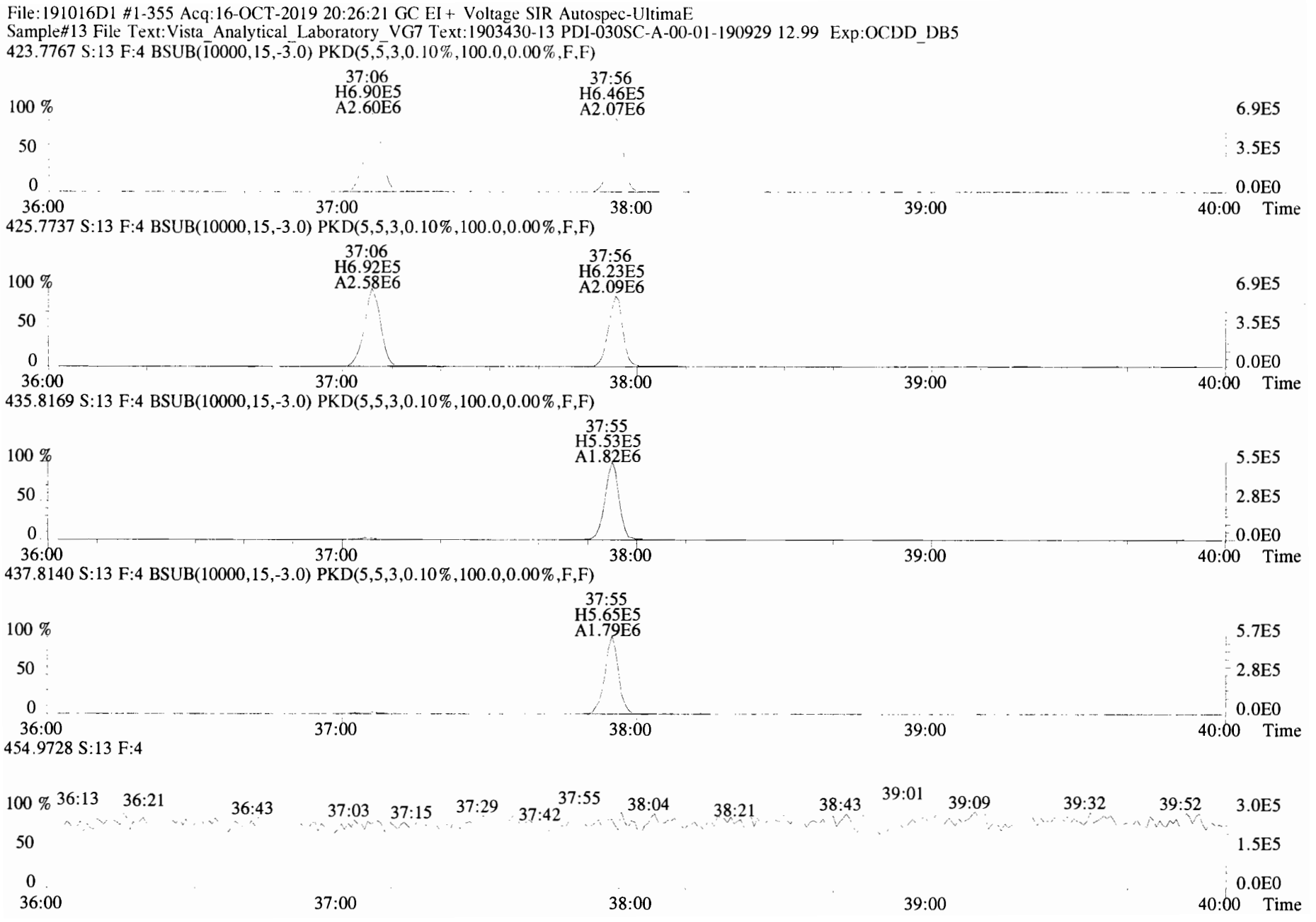


File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
401.8559 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

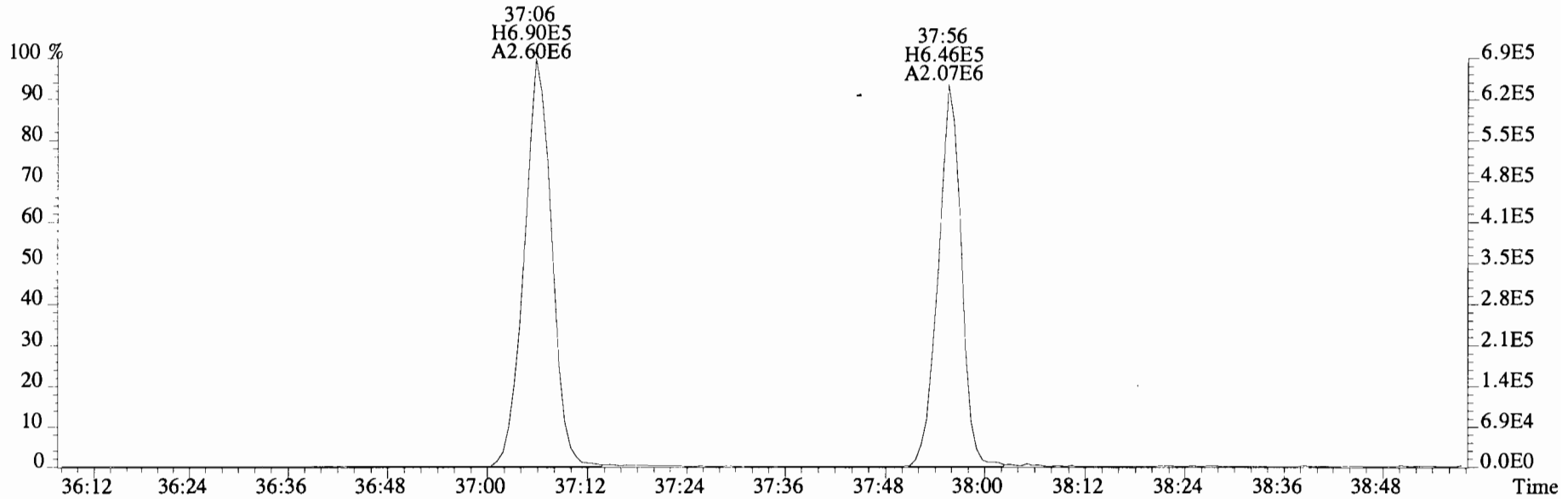


403.8530 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

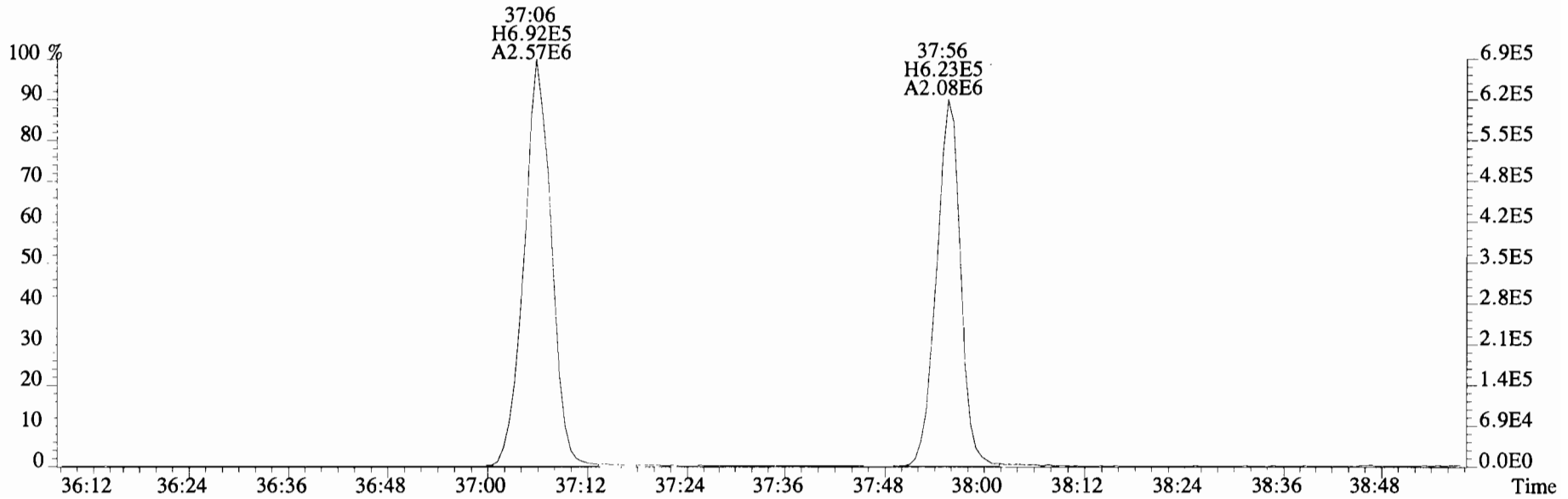



File:191016D1 #1-355 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
423.7767 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:06
H6.90E5
A2.60E6
37:56
H6.46E5
A2.07E6
425.7737 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:06
H6.92E5
A2.58E6
37:56
H6.23E5
A2.09E6
435.8169 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:55
H5.53E5
A1.82E6
437.8140 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:55
H5.65E5
A1.79E6
454.9728 S:13 F:4
100 %
50
0
36:00
37:00
38:00
39:00
40:00
Time
6.9E5
3.5E5
0.0E0
5.5E5
2.8E5
5.7E5
3.0E5
1.5E5
36:13
36:21
36:43
37:03
37:15
37:29
37:42
37:55
38:04
38:21
38:43
39:01
39:09
39:32
39:52

File:191016D1 #1-355 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
423.7767 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

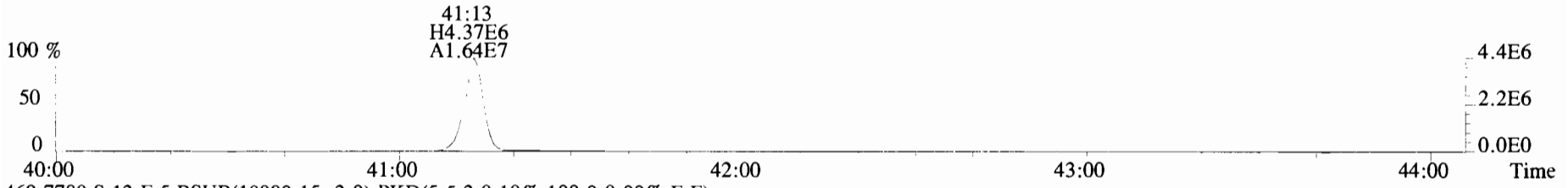


425.7737 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

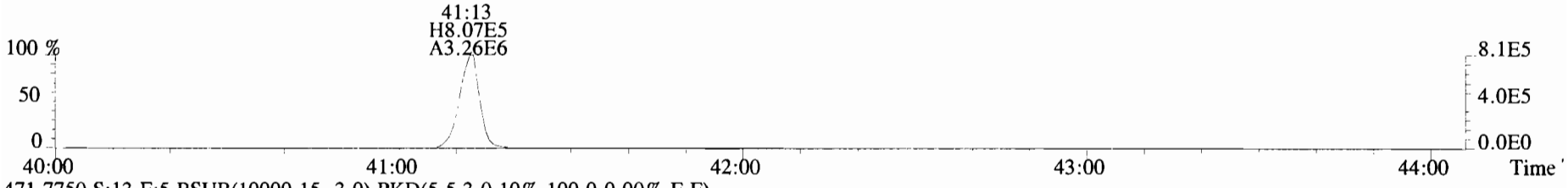


File:191016D1 #1-432 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
457.7377 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

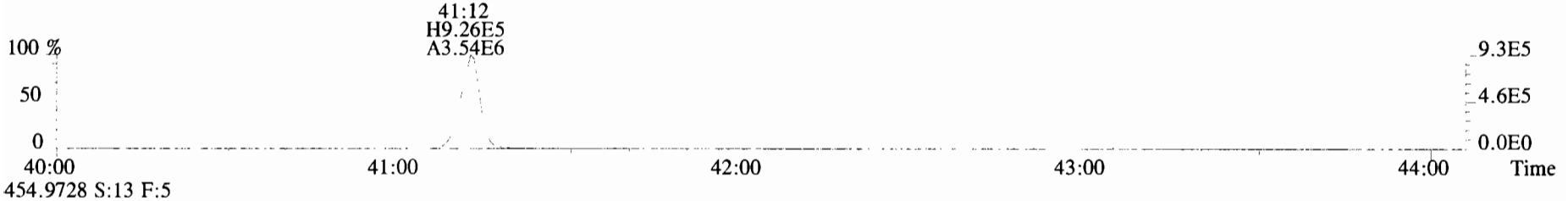
459.7348 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



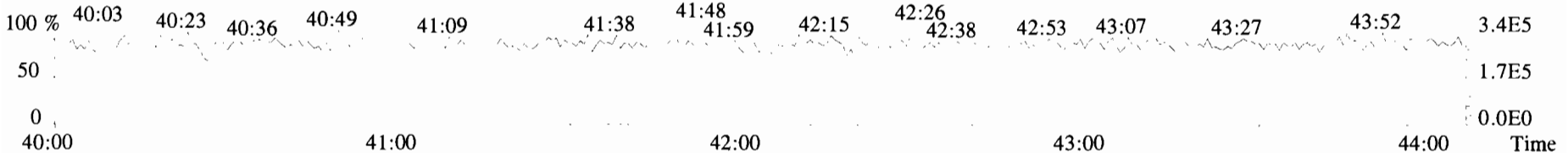
469.7780 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



471.7750 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

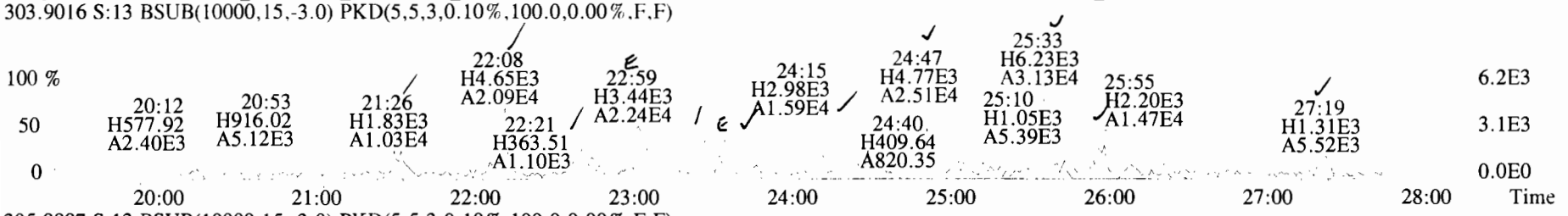


454.9728 S:13 F:5

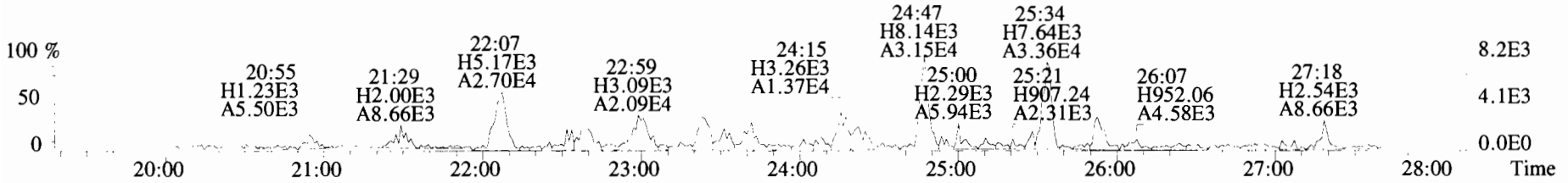


File:191016D1 #1-493 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5

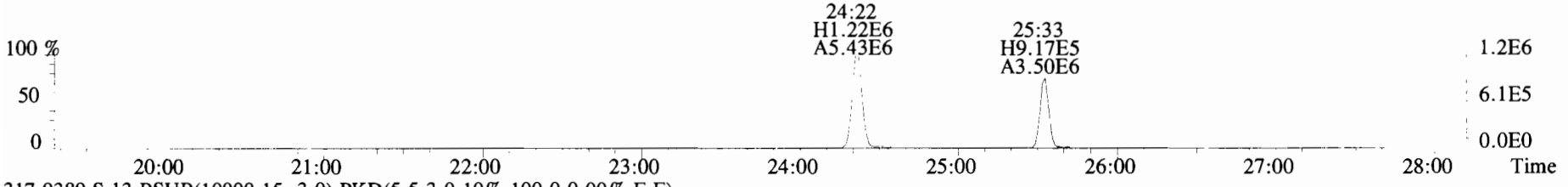
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



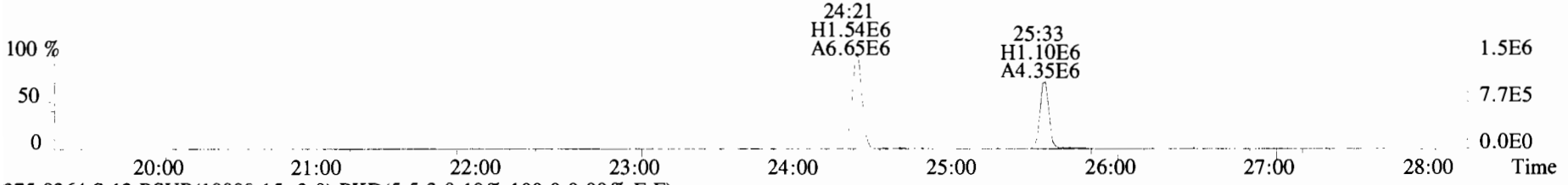
305.8987 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



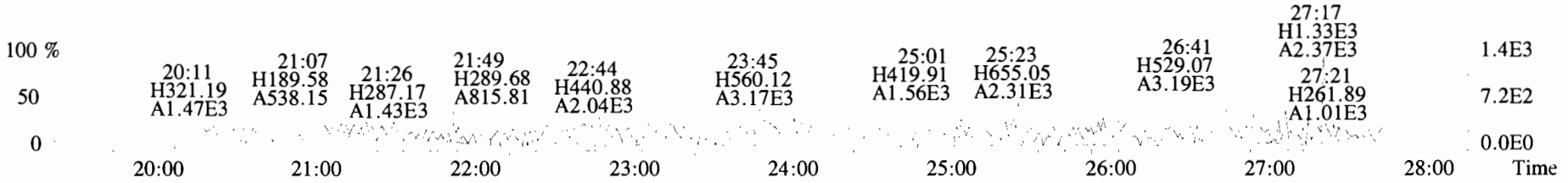
315.9419 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

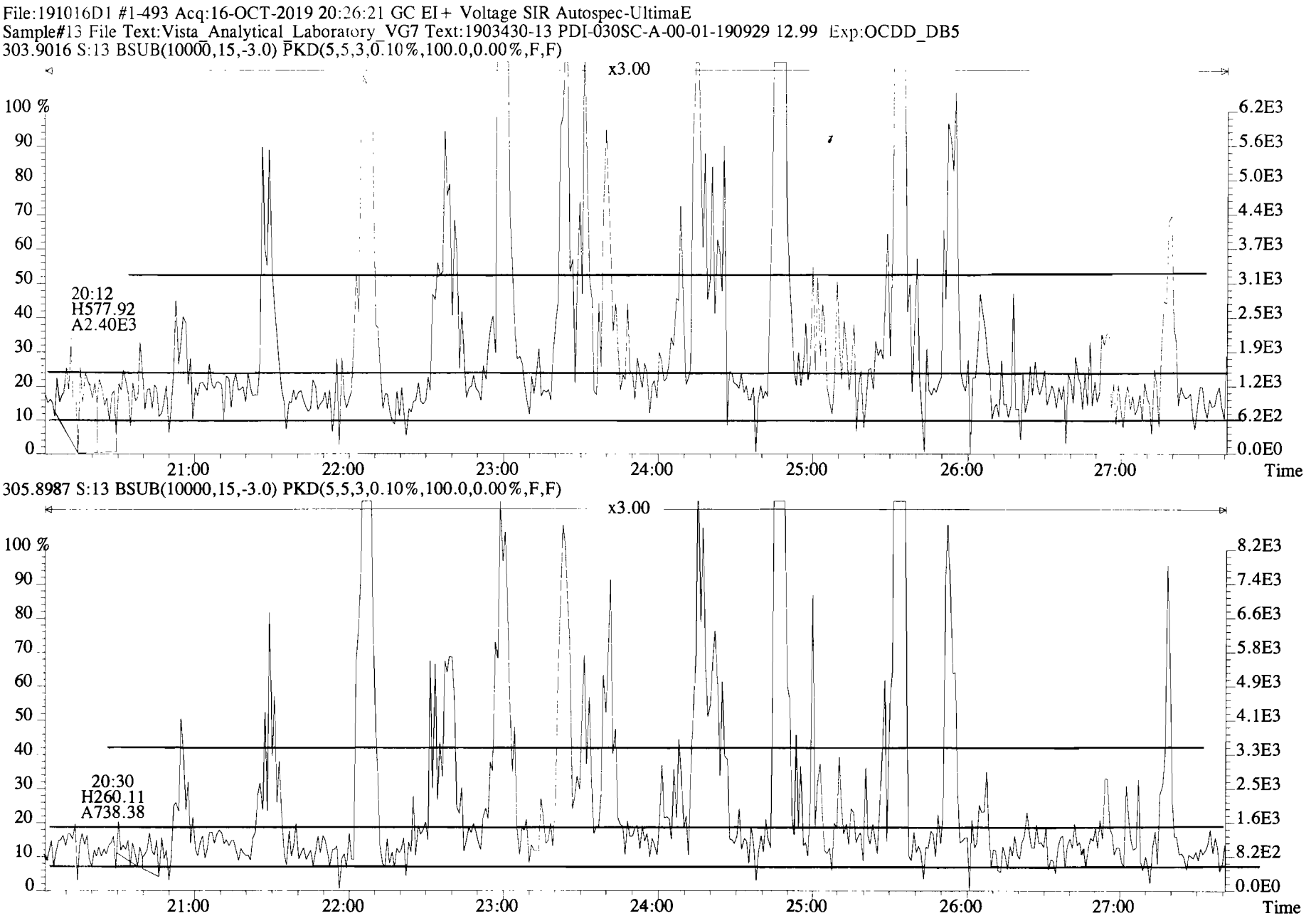


317.9389 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

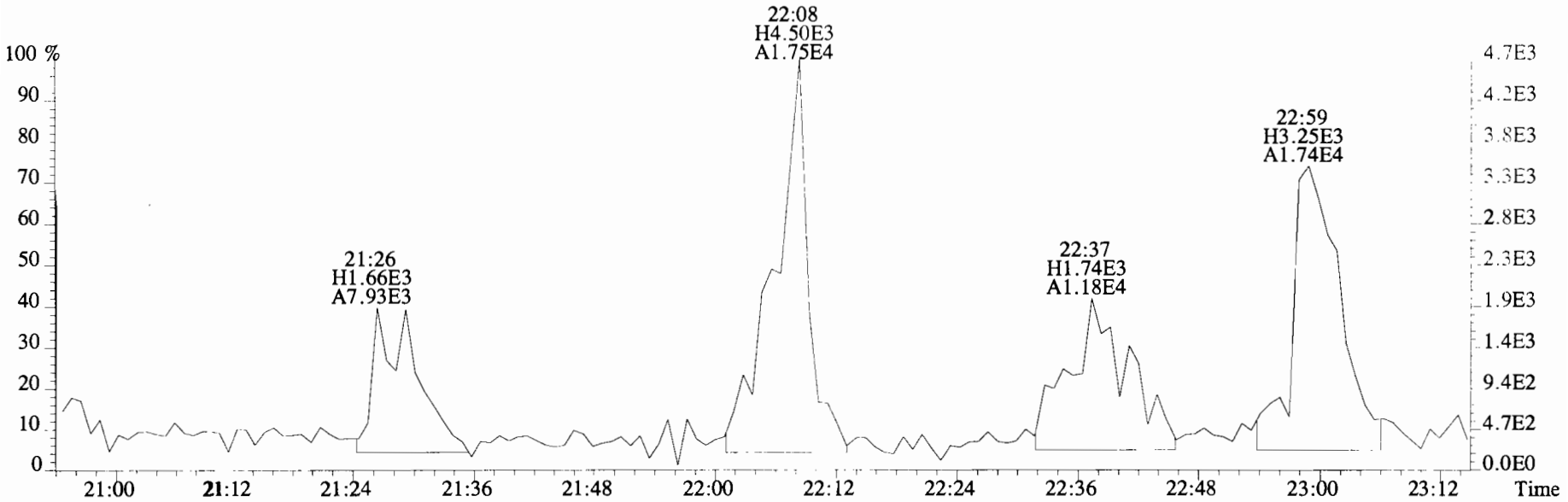


375.8364 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

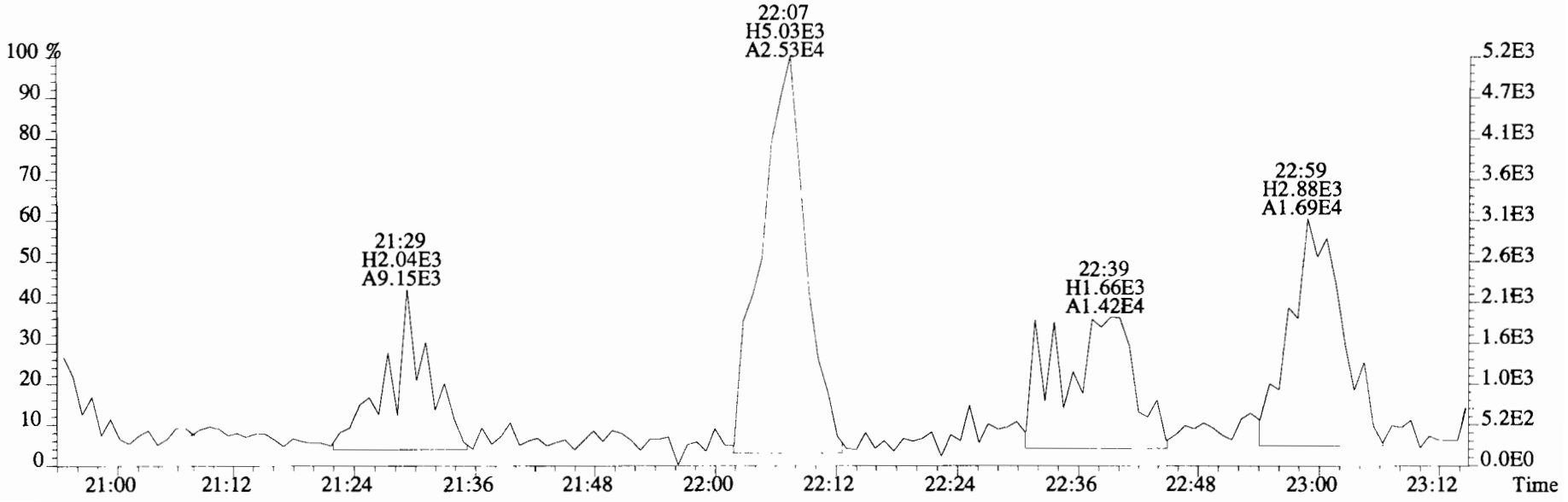


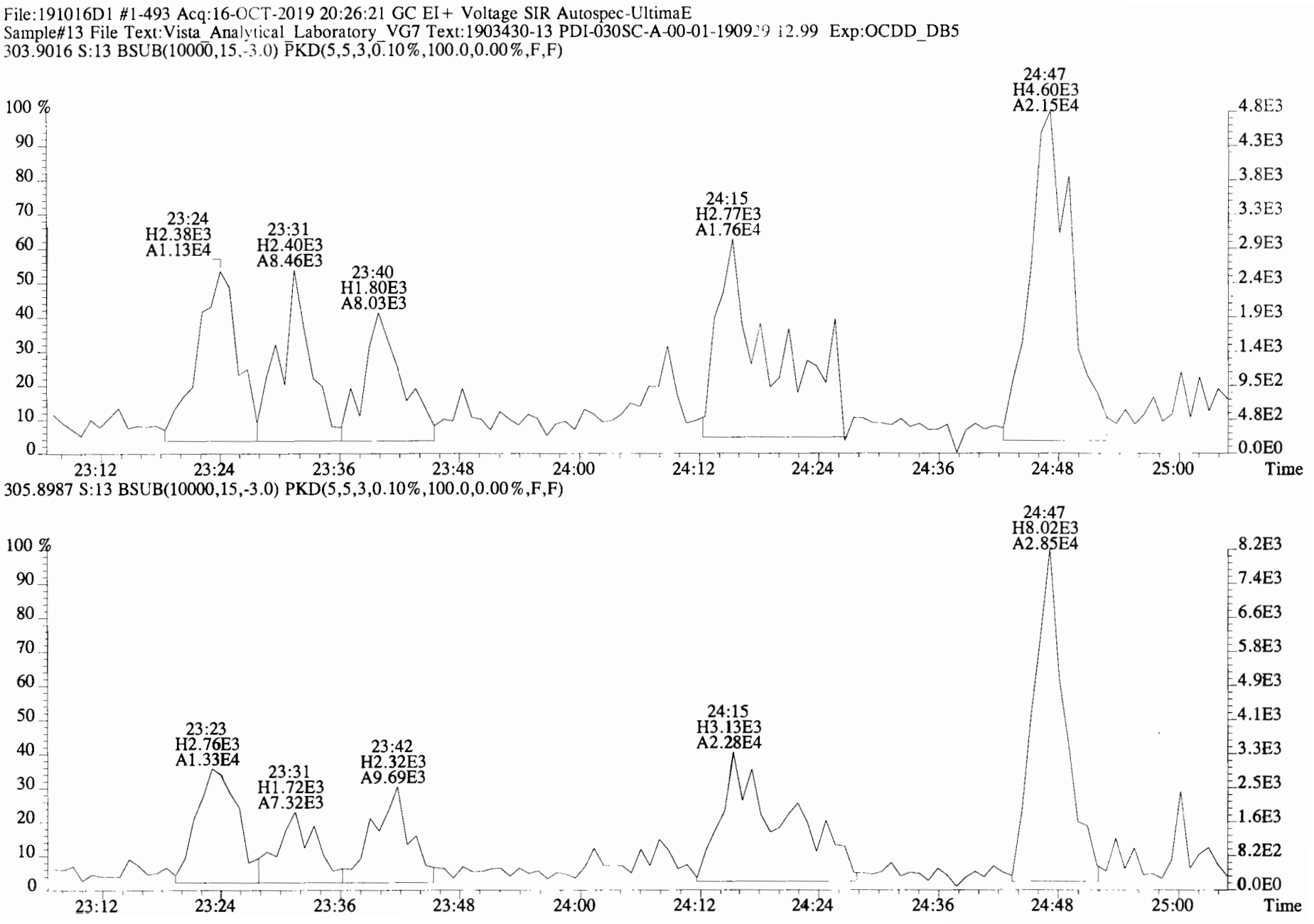

File:191016D1 #1-493 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x3.00
20:12
H577.92
A2.40E3
305.8987 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x3.00
20:30
H260.11
A738.38
Time

File:191016D1 #1-493 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

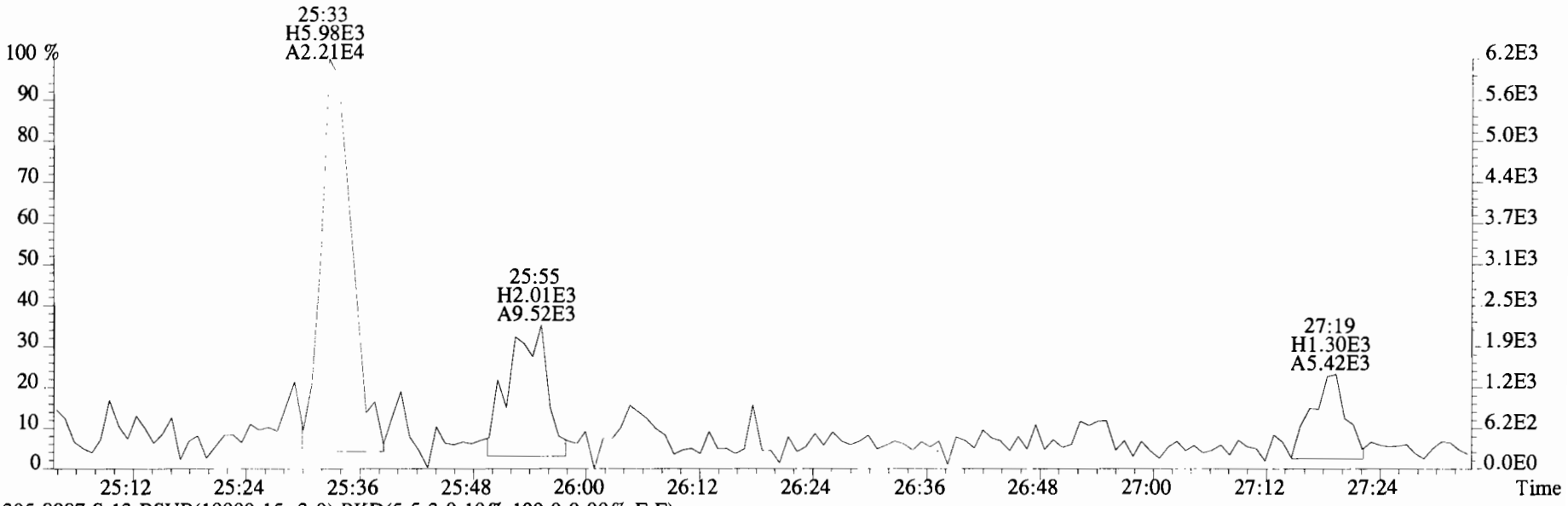


305.8987 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

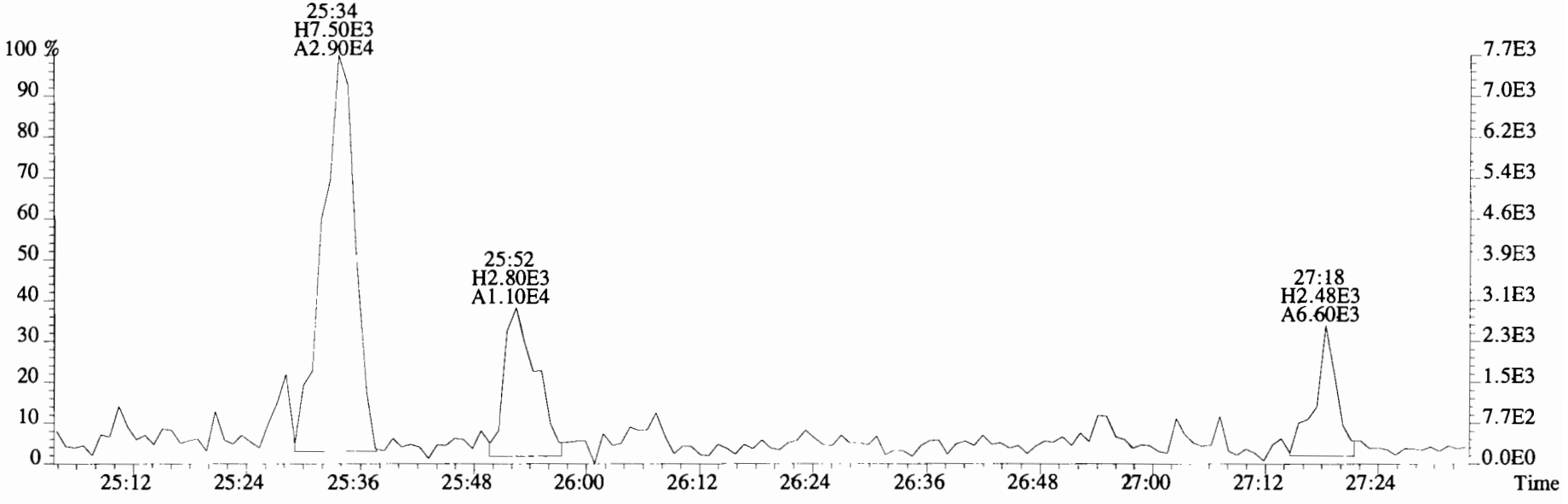


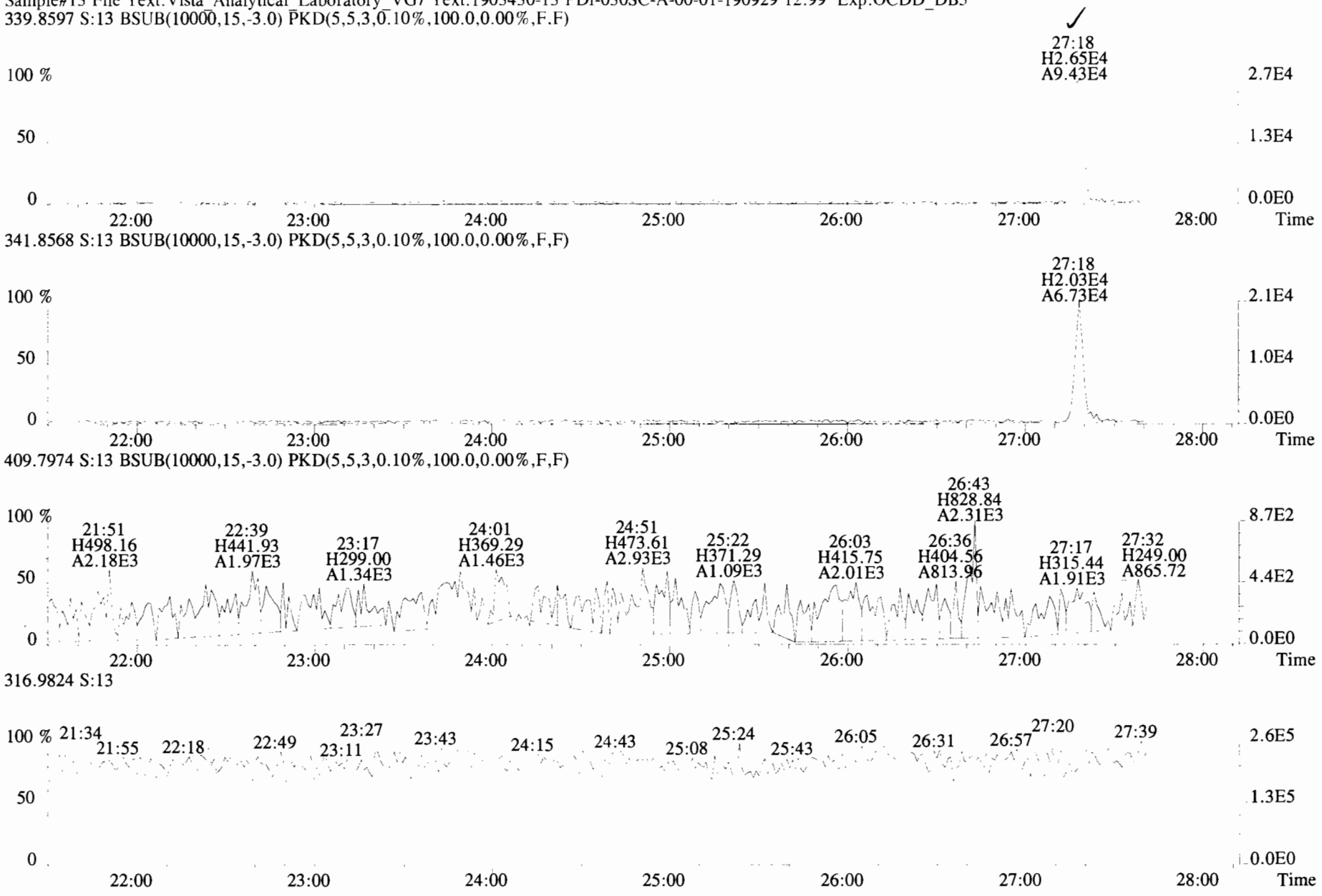

File:191016D1 #1-493 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-1909?9 12.99 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:47
H4.60E3
A2.15E4
23:24
H2.38E3
A1.13E4
23:31
H2.40E3
A8.46E3
23:40
H1.80E3
A8.03E3
24:15
H2.77E3
A1.76E4
100 %
90
80
70
60
50
40
30
20
10
0
4.8E3
4.3E3
3.8E3
3.3E3
2.9E3
2.4E3
1.9E3
1.4E3
9.5E2
4.8E2
0.0E0
23:12
23:24
23:36
23:48
24:00
24:12
24:24
24:36
24:48
25:00
Time
305.8987 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:47
H8.02E3
A2.85E4
23:23
H2.76E3
A1.33E4
23:31
H1.72E3
A7.32E3
23:42
H2.32E3
A9.69E3
24:15
H3.13E3
A2.28E4
100 %
90
80
70
60
50
40
30
20
10
0
8.2E3
7.4E3
6.6E3
5.8E3
4.9E3
4.1E3
3.3E3
2.5E3
1.6E3
8.2E2
0.0E0
23:12
23:24
23:36
23:48
24:00
24:12
24:24
24:36
24:48
25:00
Time

File:191016D1 #1-493 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

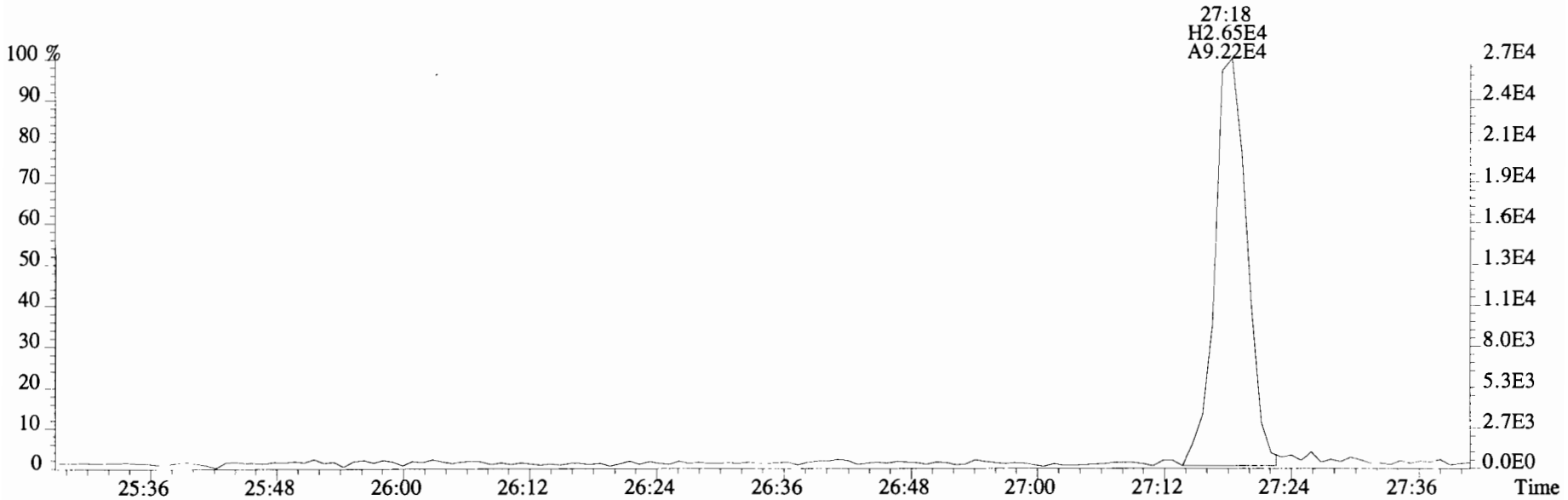


305.8987 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

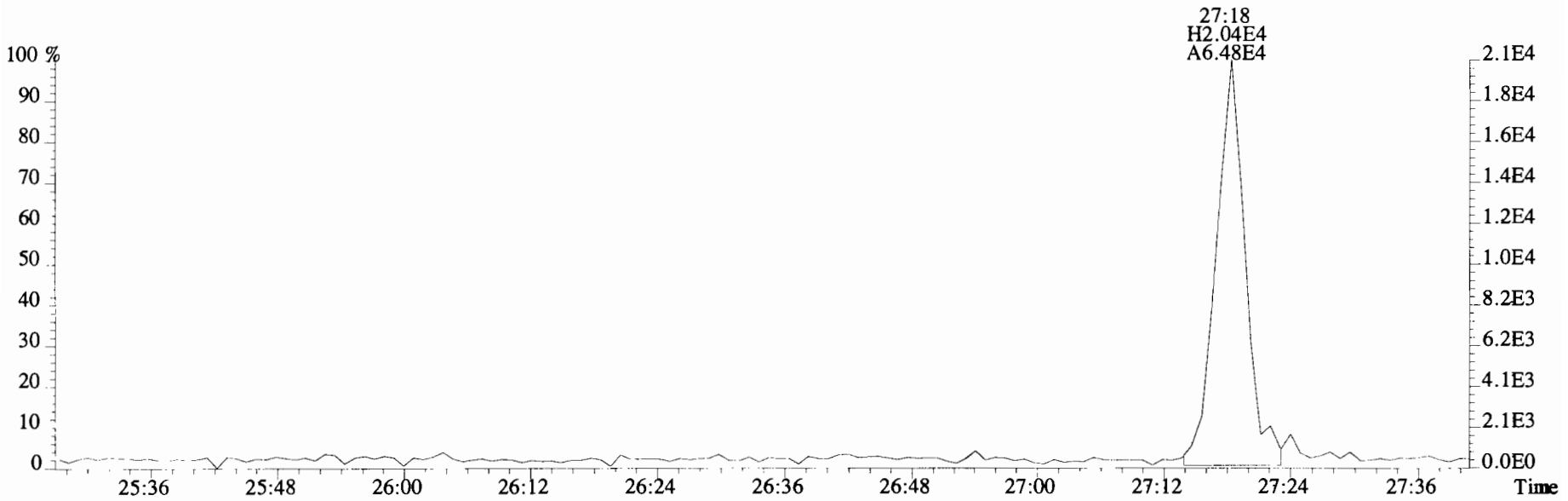


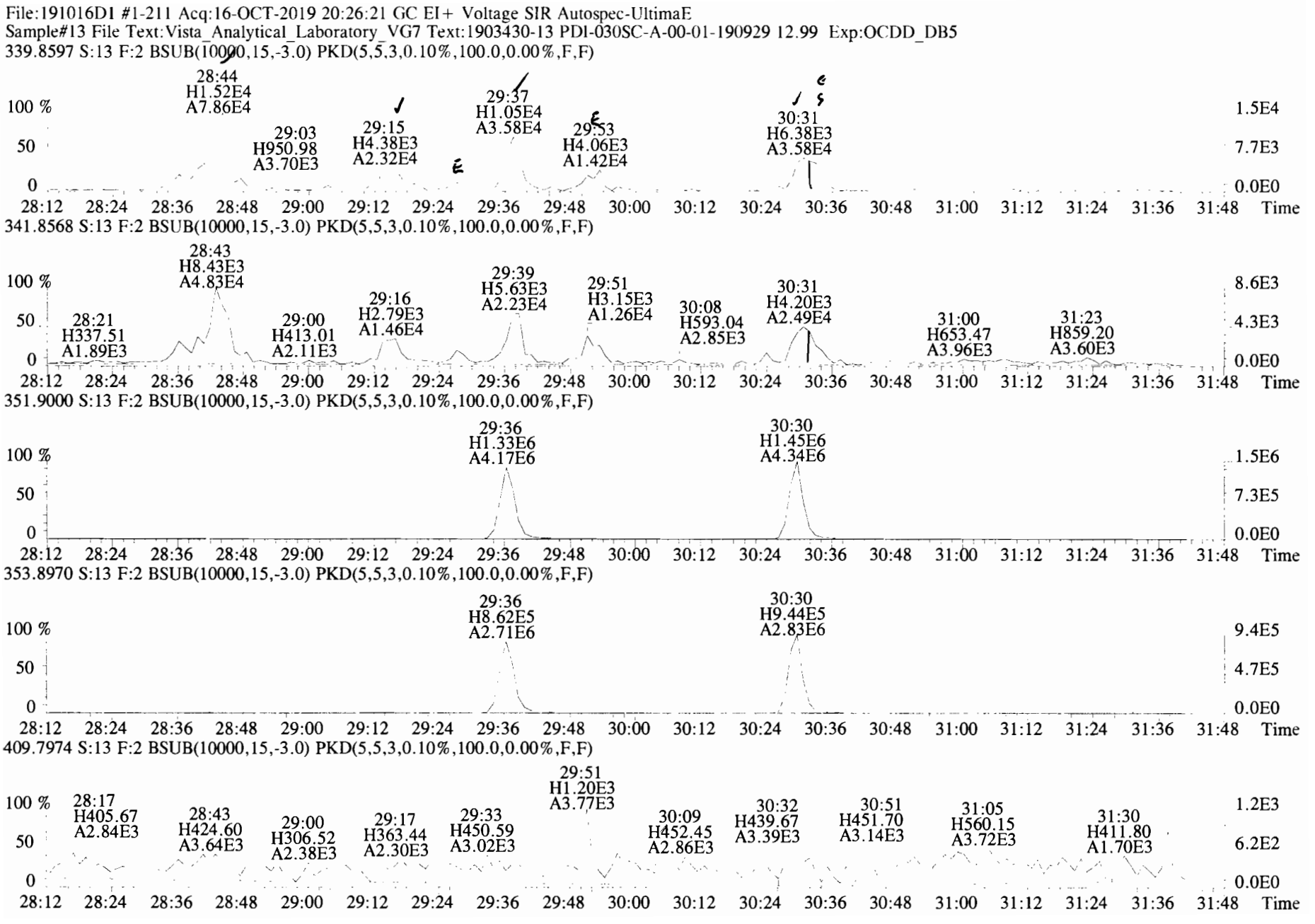

File:191016D1 #1-493 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
339.8597 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:18
H2.65E4
A9.43E4
100 %
50
0
2.7E4
1.3E4
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
341.8568 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:18
H2.03E4
A6.73E4
2.1E4
1.0E4
409.7974 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:43
H828.84
A2.31E3
21:51
H498.16
A2.18E3
22:39
H441.93
A1.97E3
23:17
H299.00
A1.34E3
24:01
H369.29
A1.46E3
24:51
H473.61
A2.93E3
25:22
H371.29
A1.09E3
26:03
H415.75
A2.01E3
26:36
H404.56
A813.96
27:17
H315.44
A1.91E3
27:32
H249.00
A865.72
8.7E2
4.4E2
316.9824 S:13
21:34
21:55
22:18
22:49
23:27
23:11
23:43
24:15
24:43
25:08
25:24
25:43
26:05
26:31
26:57
27:20
27:39
2.6E5
1.3E5

File:191016D1 #1-493 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
339.8597 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

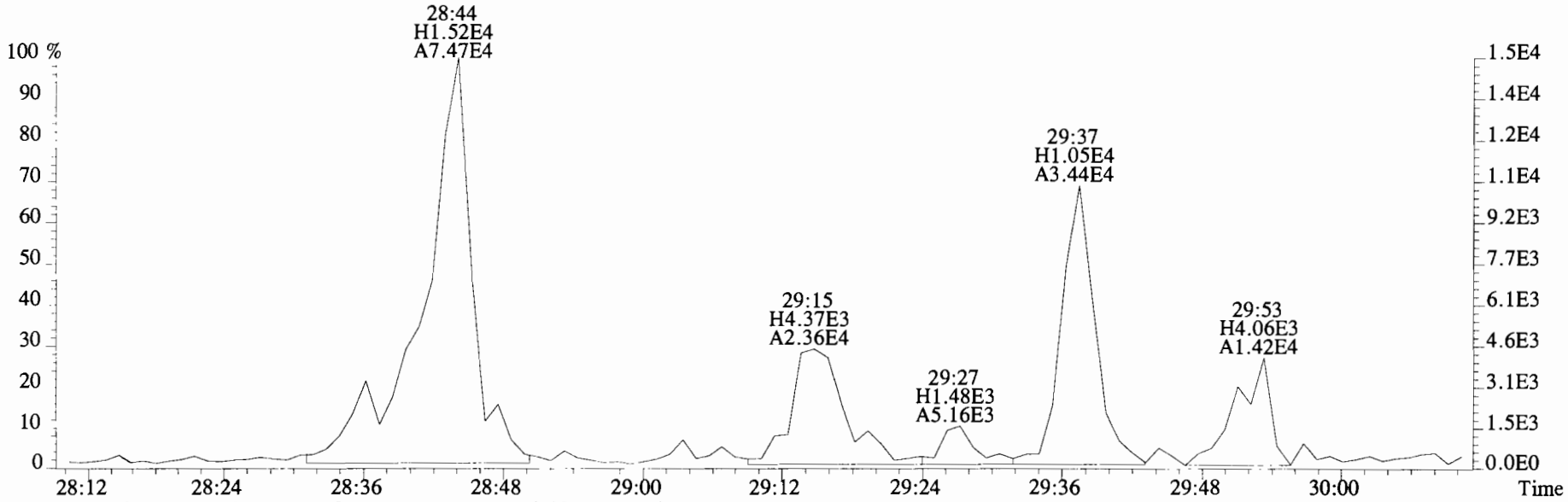


341.8568 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

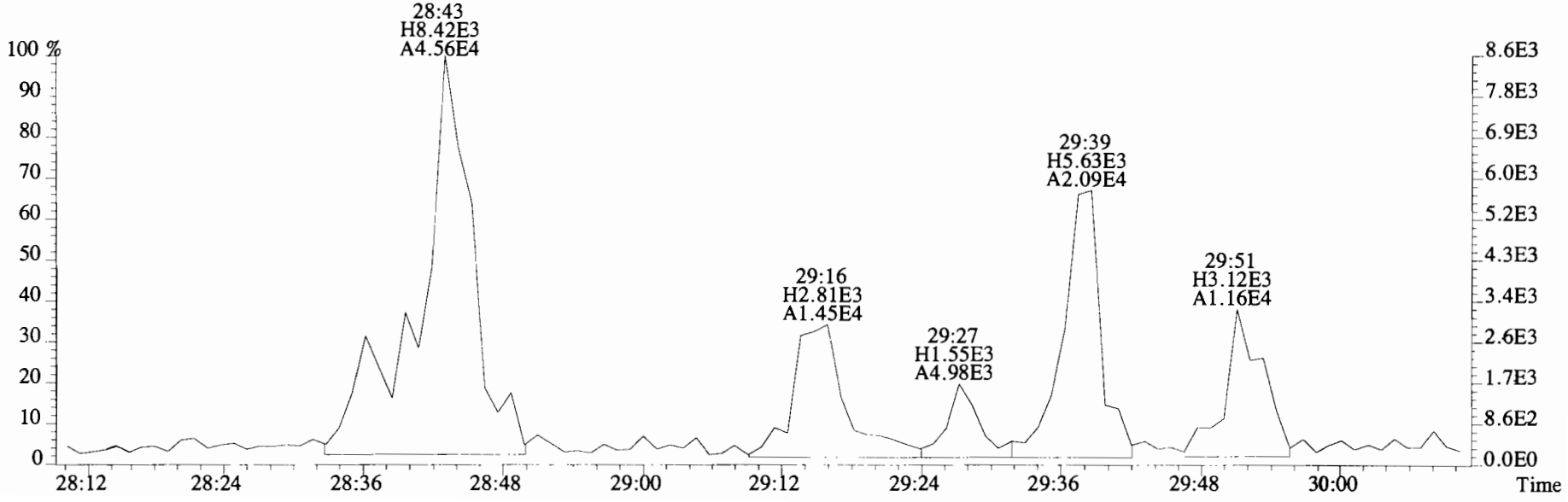


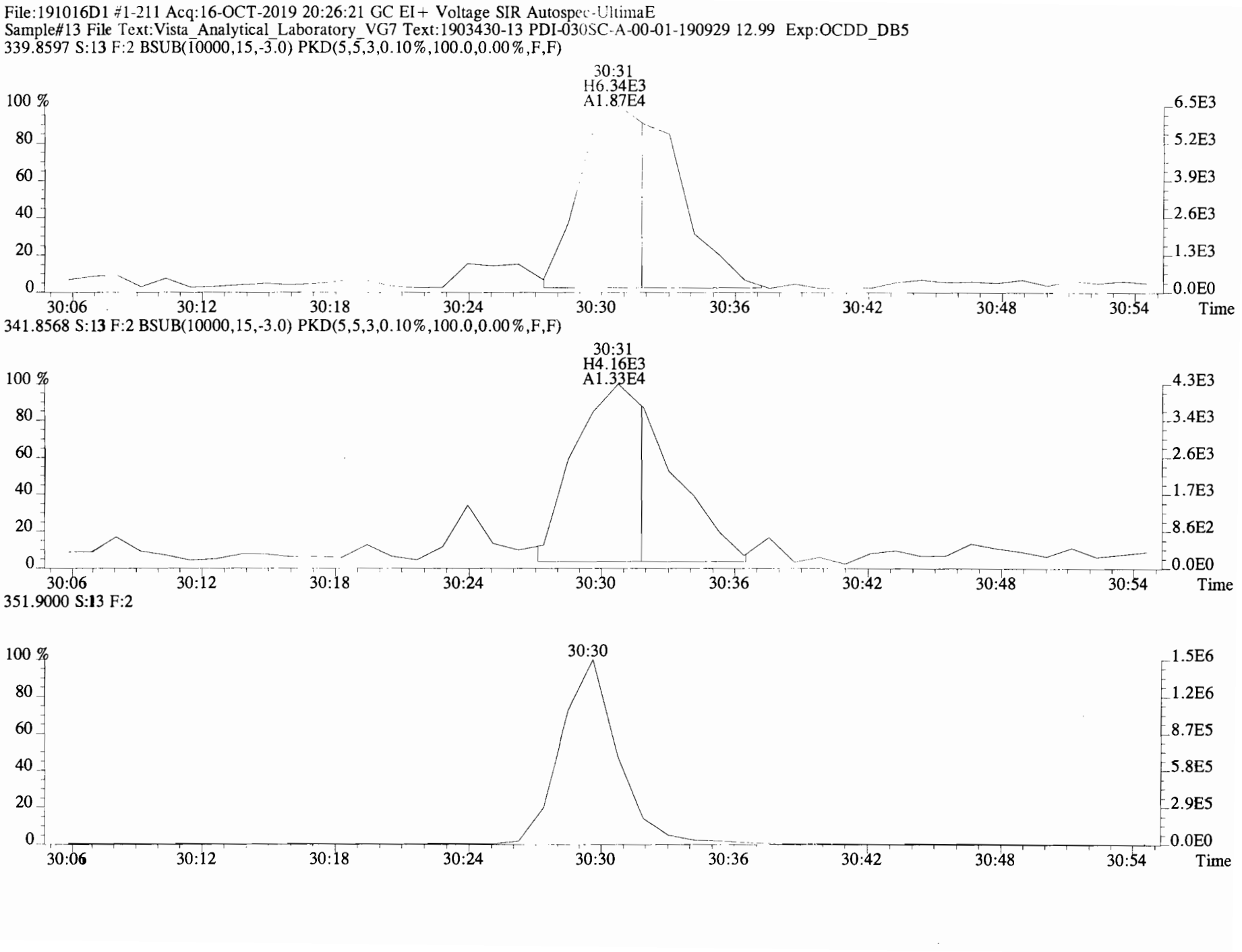

File:191016D1 #1-211 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:44 H1.52E4 A7.86E4
29:03 H950.98 A3.70E3
29:15 H4.38E3 A2.32E4
29:37 H1.05E4 A3.58E4
29:53 H4.06E3 A1.42E4
30:31 H6.38E3 A3.58E4
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:43 H8.43E3 A4.83E4
28:21 H337.51 A1.89E3
29:00 H413.01 A2.11E3
29:16 H2.79E3 A1.46E4
29:39 H5.63E3 A2.23E4
29:51 H3.15E3 A1.26E4
30:08 H593.04 A2.85E3
30:31 H4.20E3 A2.49E4
31:00 H653.47 A3.96E3
31:23 H859.20 A3.60E3
351.9000 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:36 H1.33E6 A4.17E6
30:30 H1.45E6 A4.34E6
353.8970 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:36 H8.62E5 A2.71E6
30:30 H9.44E5 A2.83E6
409.7974 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:17 H405.67 A2.84E3
28:43 H424.60 A3.64E3
29:00 H306.52 A2.38E3
29:17 H363.44 A2.30E3
29:33 H450.59 A3.02E3
29:51 H1.20E3 A3.77E3
30:09 H452.45 A2.86E3
30:32 H439.67 A3.39E3
30:51 H451.70 A3.14E3
31:05 H560.15 A3.72E3
31:30 H411.80 A1.70E3
100 %
50
0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time
1.5E4
7.7E3
0.0E0
8.6E3
4.3E3
1.5E6
7.3E5
9.4E5
4.7E5
1.2E3
6.2E2

File:191016D1 #1-211 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



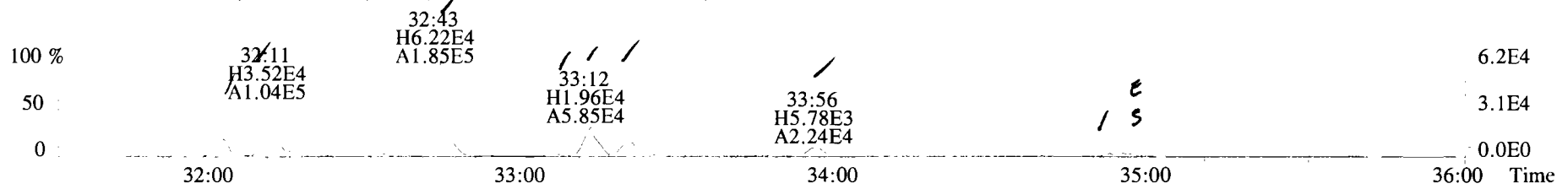
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



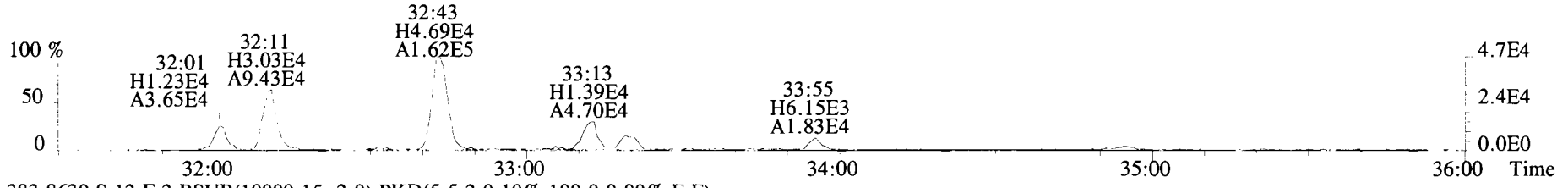

File:191016D1 #1-211 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:31
H6.34E3
A1.87E4
100 %
80
60
40
20
0
6.5E3
5.2E3
3.9E3
2.6E3
1.3E3
0.0E0
30:06
30:12
30:18
30:24
30:30
30:36
30:42
30:48
30:54
Time
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:31
H4.16E3
A1.33E4
100 %
80
60
40
20
0
4.3E3
3.4E3
2.6E3
1.7E3
8.6E2
0.0E0
30:06
30:12
30:18
30:24
30:30
30:36
30:42
30:48
30:54
Time
351.9000 S:13 F:2
30:30
100 %
80
60
40
20
0
1.5E6
1.2E6
8.7E5
5.8E5
2.9E5
0.0E0
30:06
30:12
30:18
30:24
30:30
30:36
30:42
30:48
30:54
Time

File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5

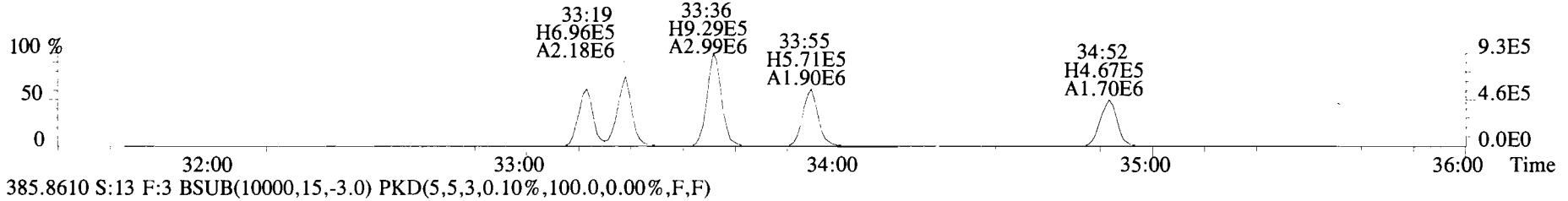
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



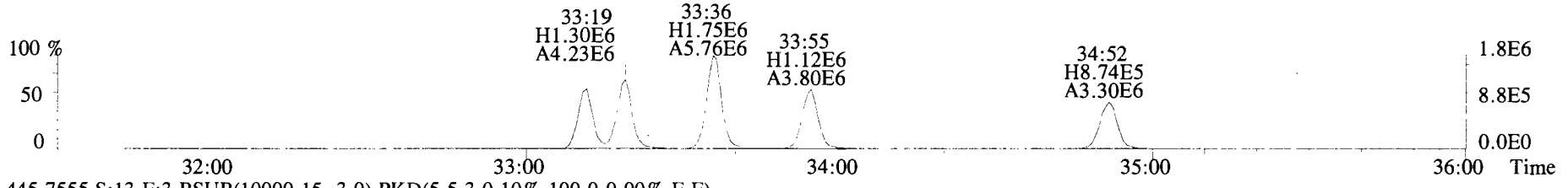
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



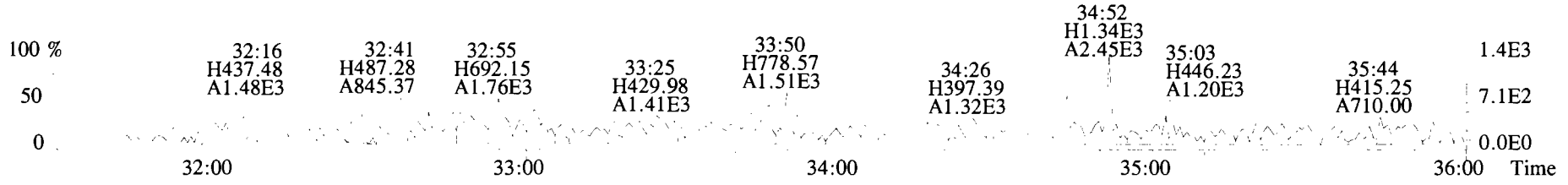
383.8639 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

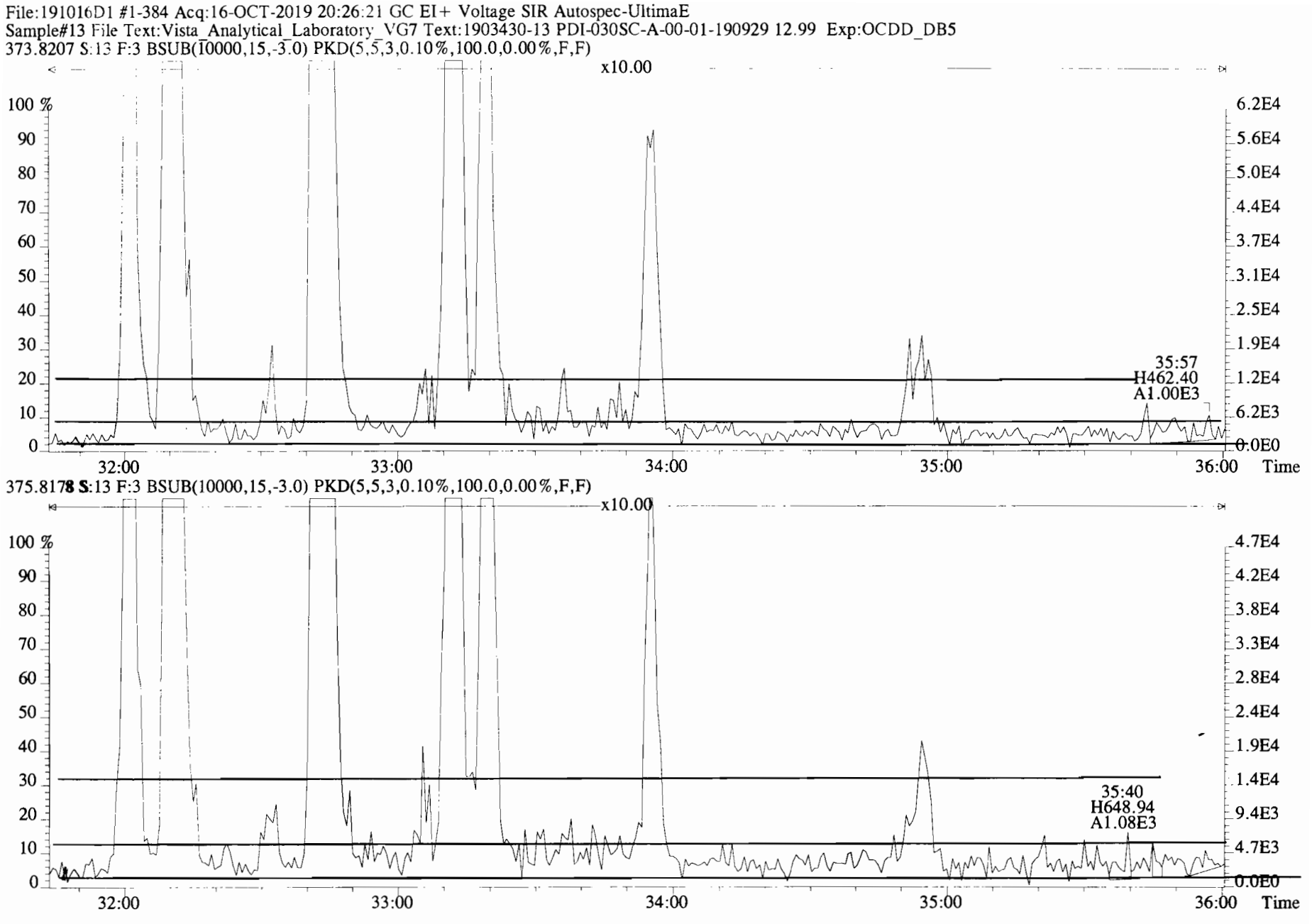


385.8610 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

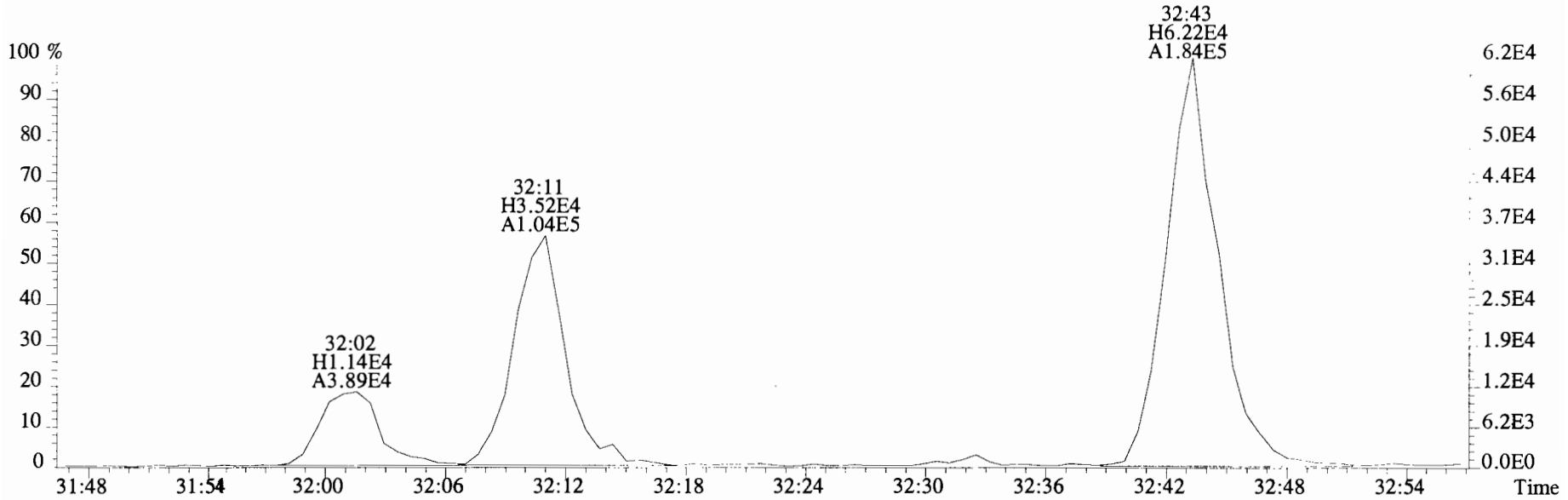


445.7555 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

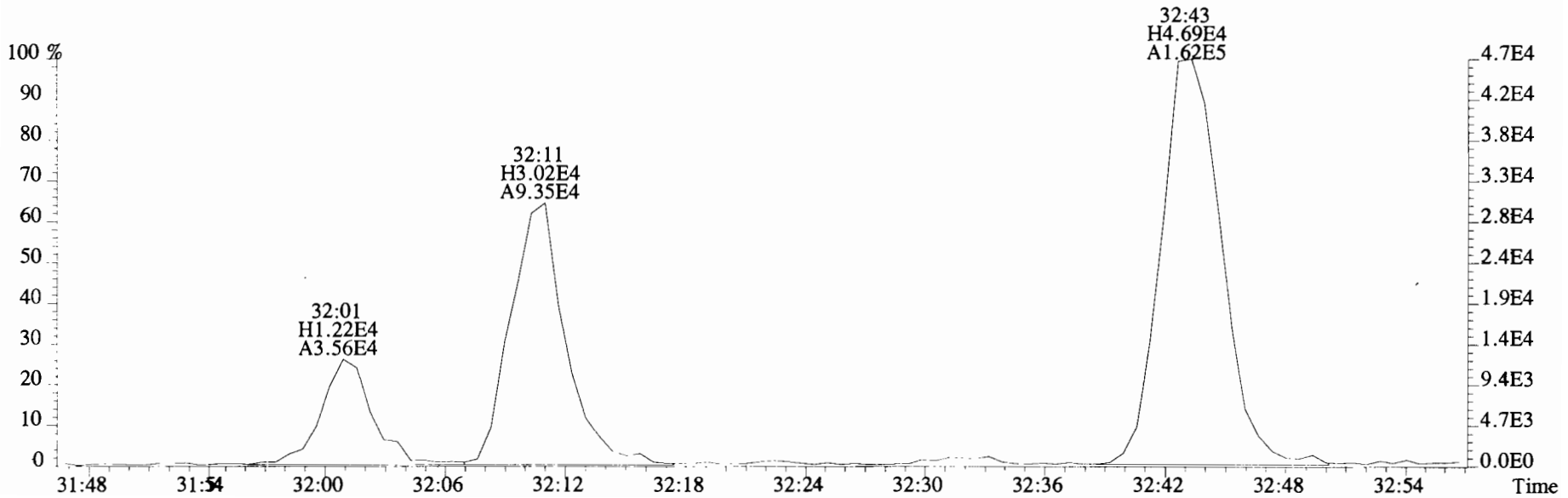


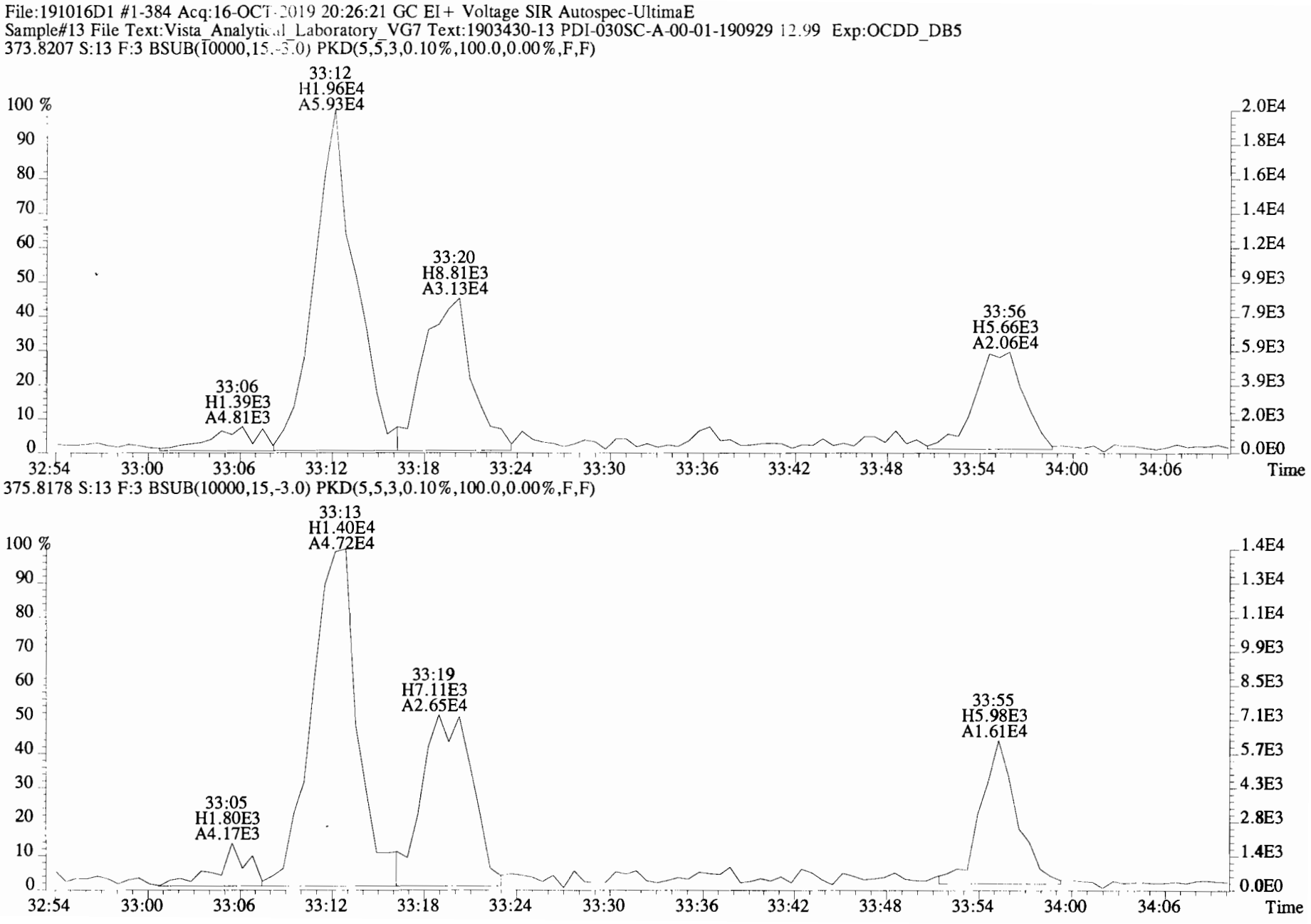

File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x10.00
100 %
90
80
70
60
50
40
30
20
10
0
6.2E4
5.6E4
5.0E4
4.4E4
3.7E4
3.1E4
2.5E4
1.9E4
1.2E4
6.2E3
0.0E0
35:57
H462.40
A1.00E3
32:00
33:00
34:00
35:00
36:00
Time
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x10.00
100 %
90
80
70
60
50
40
30
20
10
0
4.7E4
4.2E4
3.8E4
3.3E4
2.8E4
2.4E4
1.9E4
1.4E4
9.4E3
4.7E3
0.0E0
35:40
H648.94
A1.08E3
32:00
33:00
34:00
35:00
36:00
Time

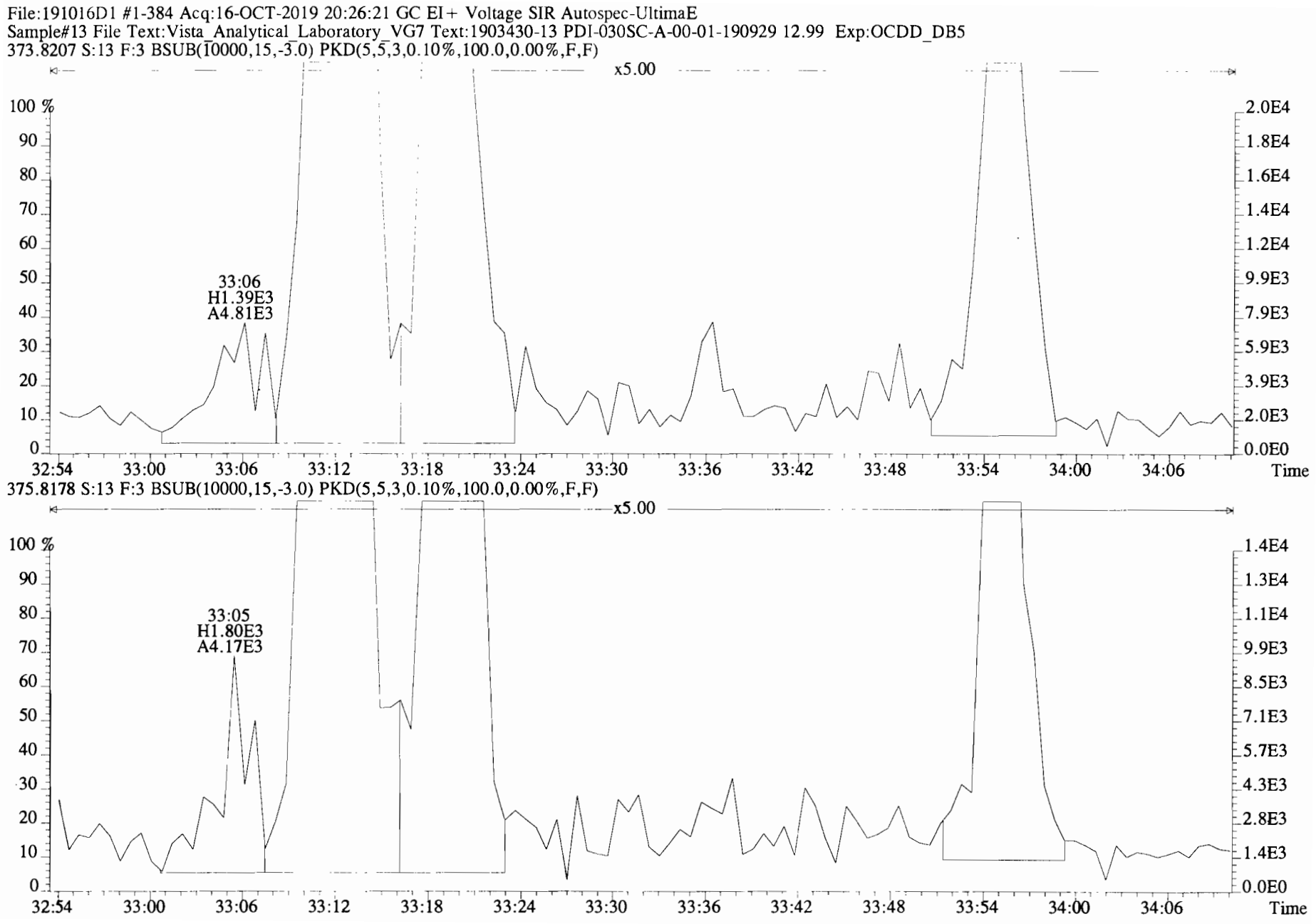
File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



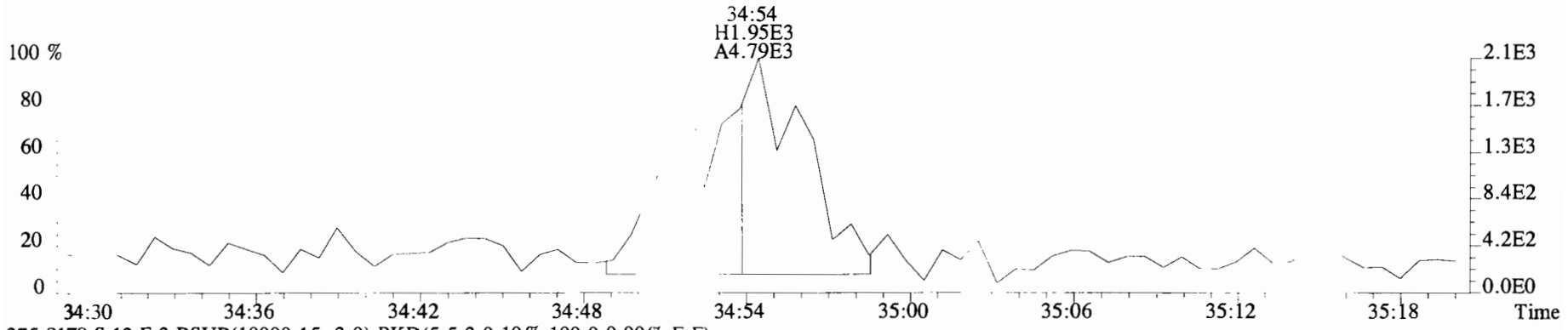
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



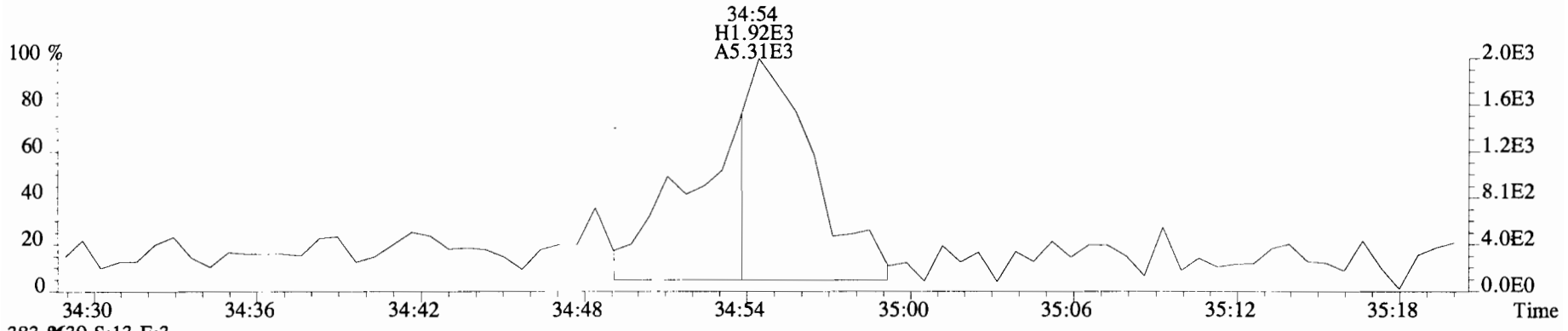

File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:12
H1.96E4
A5.93E4
33:20
H8.81E3
A3.13E4
33:56
H5.66E3
A2.06E4
33:06
H1.39E3
A4.81E3
100 %
90
80
70
60
50
40
30
20
10
0
2.0E4
1.8E4
1.6E4
1.4E4
1.2E4
9.9E3
7.9E3
5.9E3
3.9E3
2.0E3
0.0E0
32:54
33:00
33:06
33:12
33:18
33:24
33:30
33:36
33:42
33:48
33:54
34:00
34:06
Time
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:13
H1.40E4
A4.72E4
33:19
H7.11E3
A2.65E4
33:55
H5.98E3
A1.61E4
33:05
H1.80E3
A4.17E3
100 %
90
80
70
60
50
40
30
20
10
0
1.4E4
1.3E4
1.1E4
9.9E3
8.5E3
7.1E3
5.7E3
4.3E3
2.8E3
1.4E3
0.0E0
32:54
33:00
33:06
33:12
33:18
33:24
33:30
33:36
33:42
33:48
33:54
34:00
34:06
Time


File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
33:06
H1.39E3
A4.81E3
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x5.00
33:05
H1.80E3
A4.17E3
Time

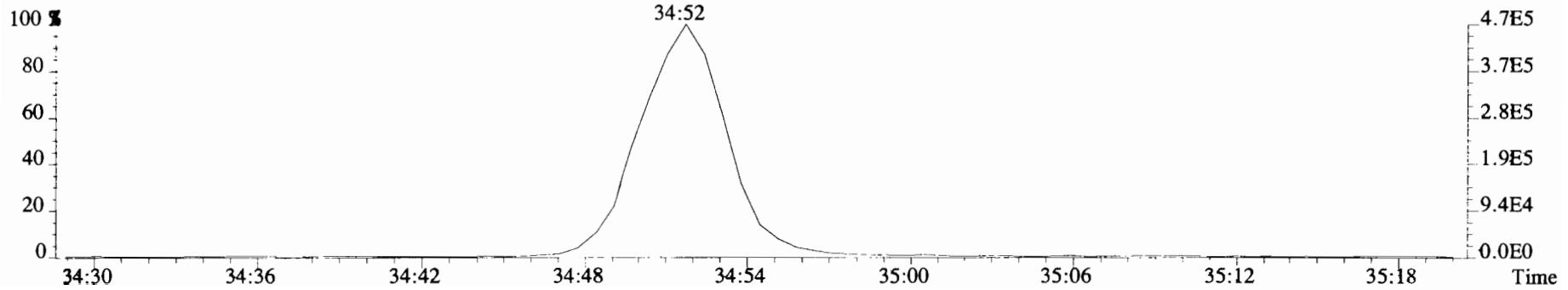
File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



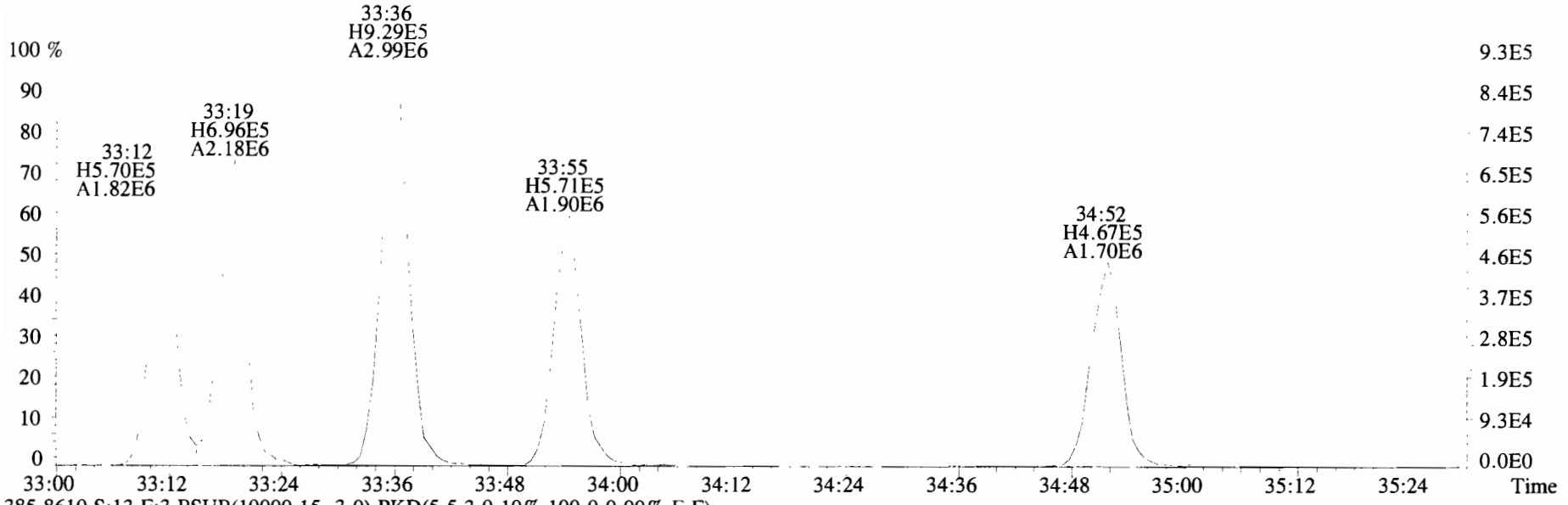
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



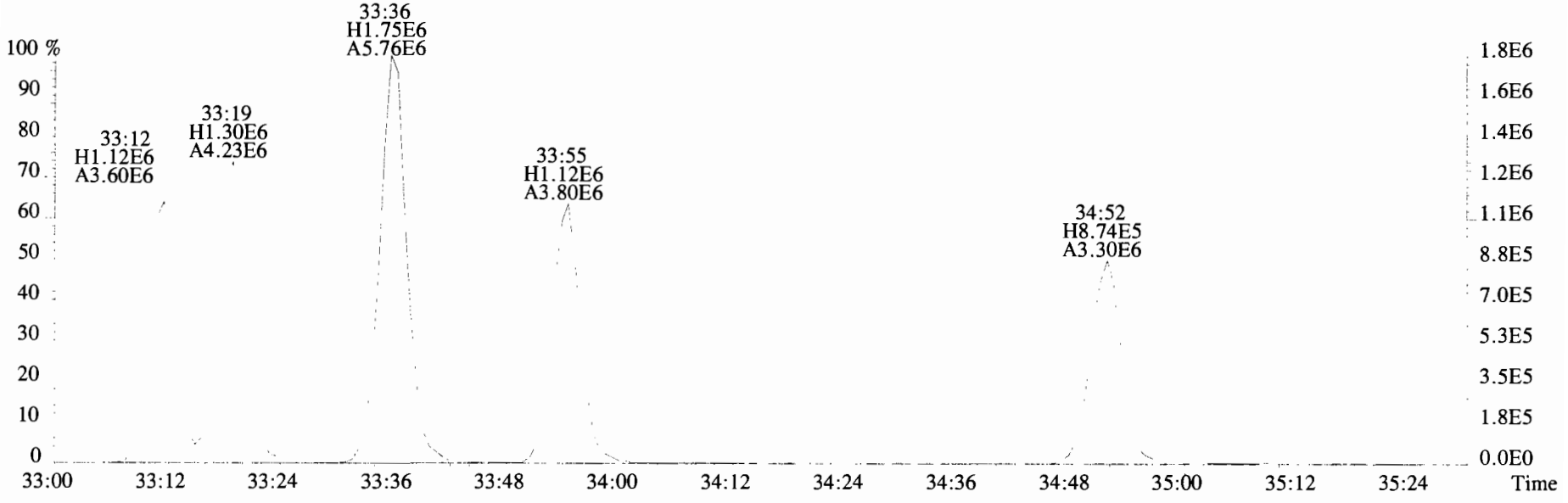
383.8639 S:13 F:3

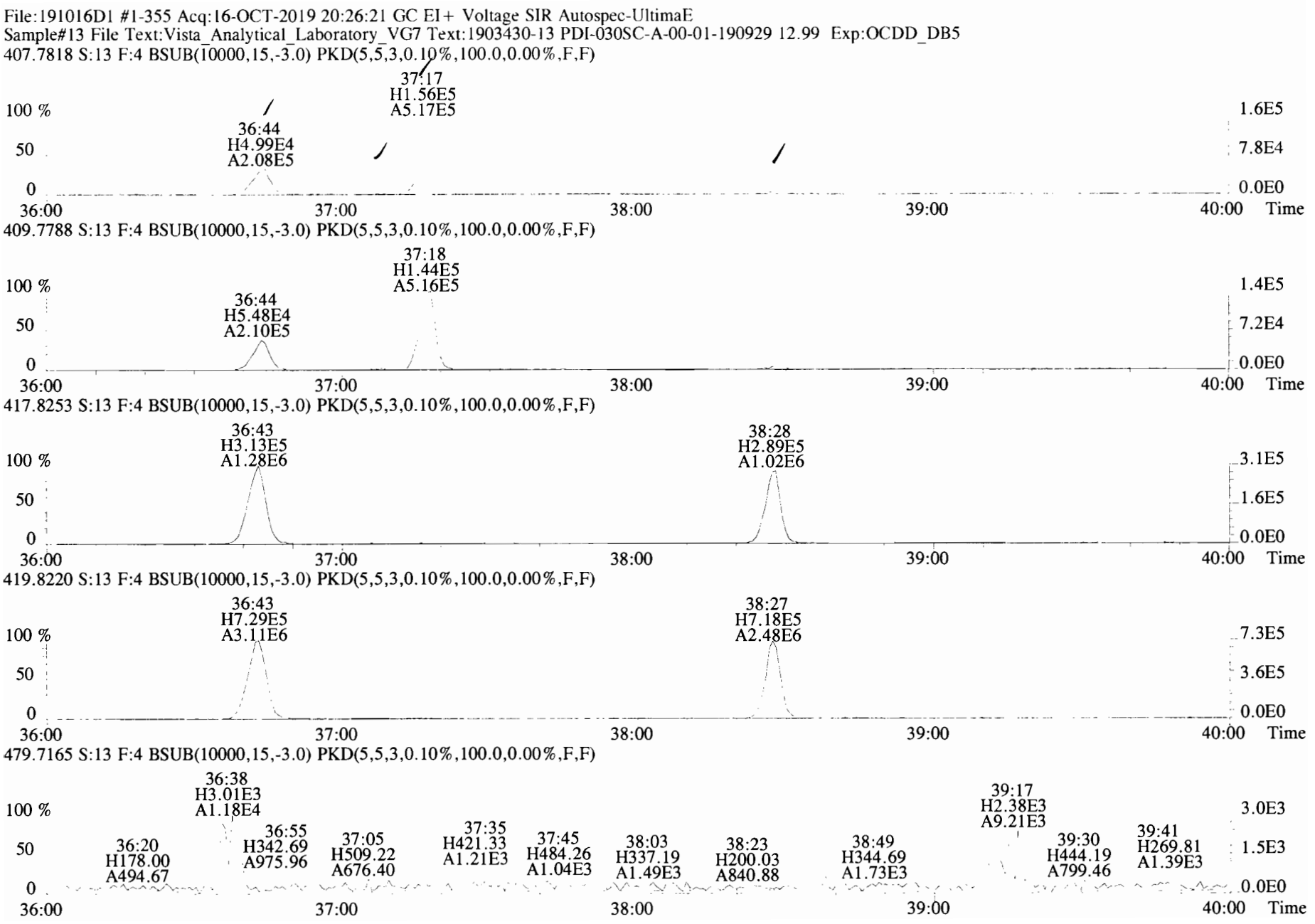


File:191016D1 #1-384 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
383.8639 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

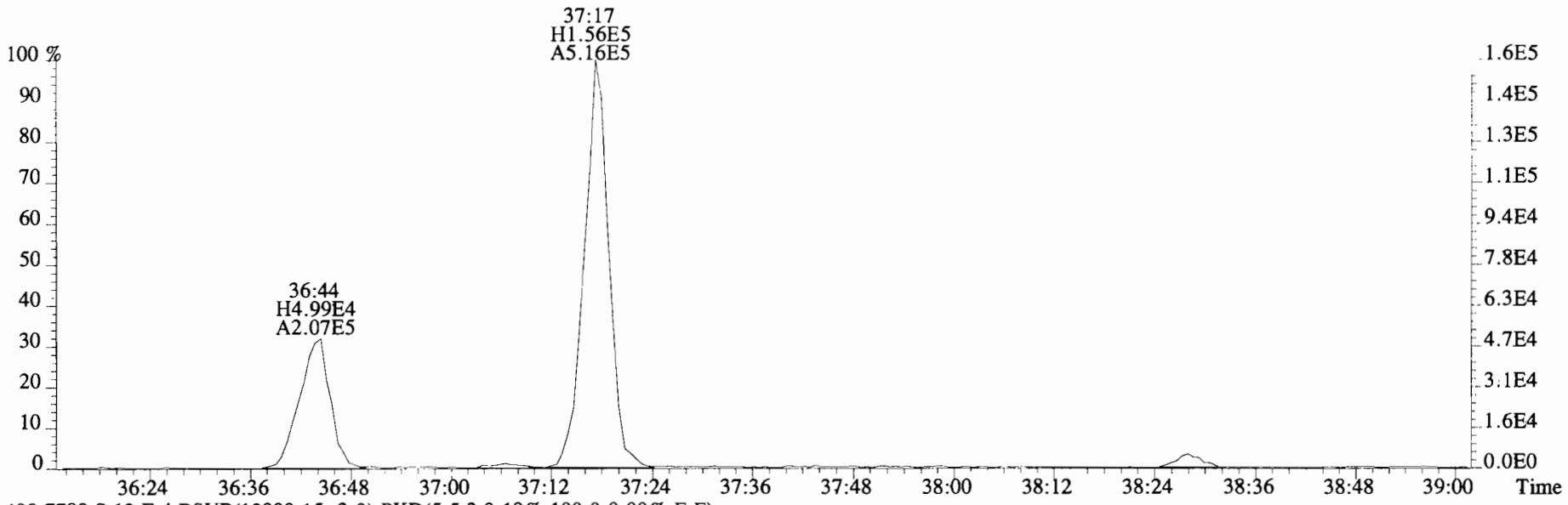


385.8610 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

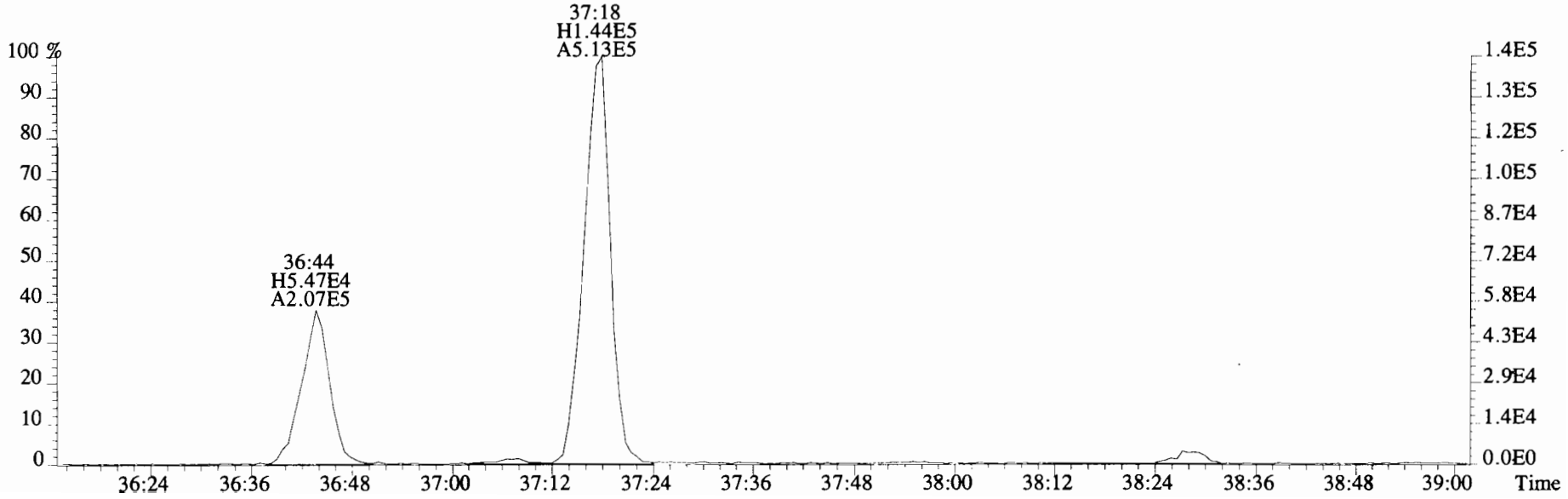


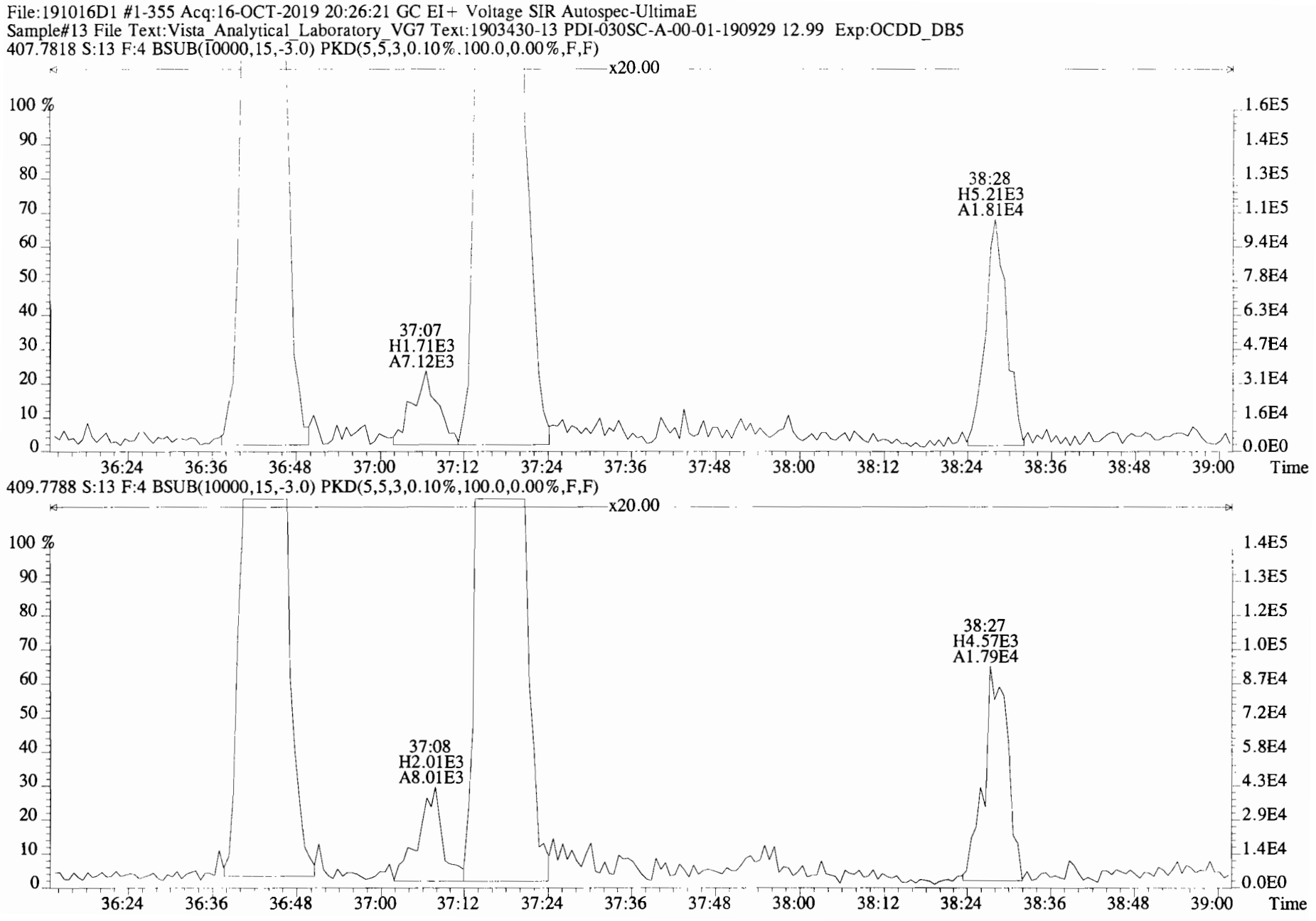

File:191016D1 #1-355 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:17 H1.56E5 A5.17E5
36:44 H4.99E4 A2.08E5
100 %
50
0
1.6E5
7.8E4
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
409.7788 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:18 H1.44E5 A5.16E5
36:44 H5.48E4 A2.10E5
100 %
50
0
1.4E5
7.2E4
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
417.8253 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:43 H3.13E5 A1.28E6
38:28 H2.89E5 A1.02E6
100 %
50
0
3.1E5
1.6E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
419.8220 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:43 H7.29E5 A3.11E6
38:27 H7.18E5 A2.48E6
100 %
50
0
7.3E5
3.6E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
479.7165 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:38 H3.01E3 A1.18E4
39:17 H2.38E3 A9.21E3
36:20 H178.00 A494.67
36:55 H342.69 A975.96
37:05 H509.22 A676.40
37:35 H421.33 A1.21E3
37:45 H484.26 A1.04E3
38:03 H337.19 A1.49E3
38:23 H200.03 A840.88
38:49 H344.69 A1.73E3
39:30 H444.19 A799.46
39:41 H269.81 A1.39E3
100 %
50
0
3.0E3
1.5E3
0.0E0
36:00
37:00
38:00
39:00
40:00
Time

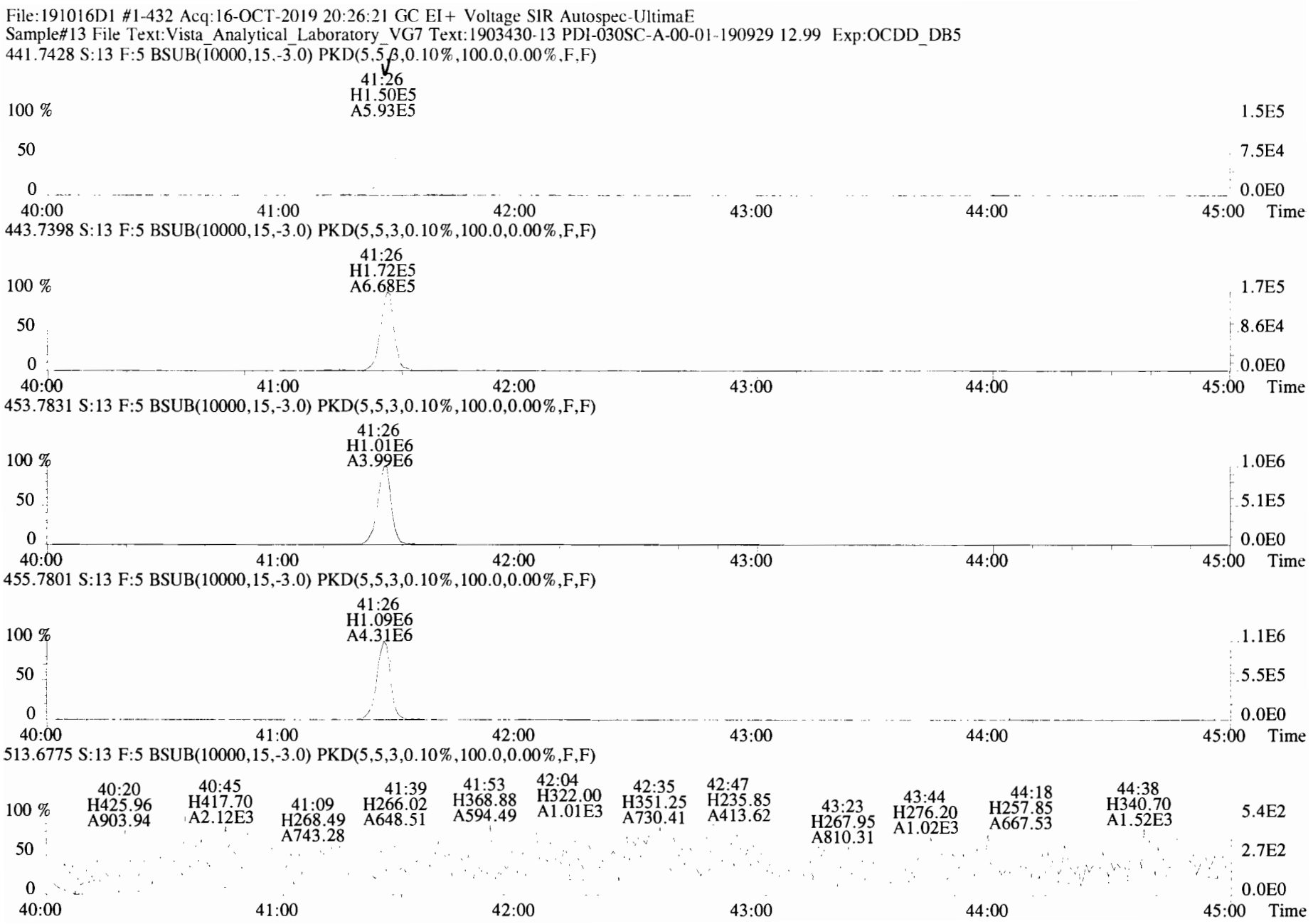
File:191016D1 #1-355 Acq:16-OCT-2019 20:26:21 GC El+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



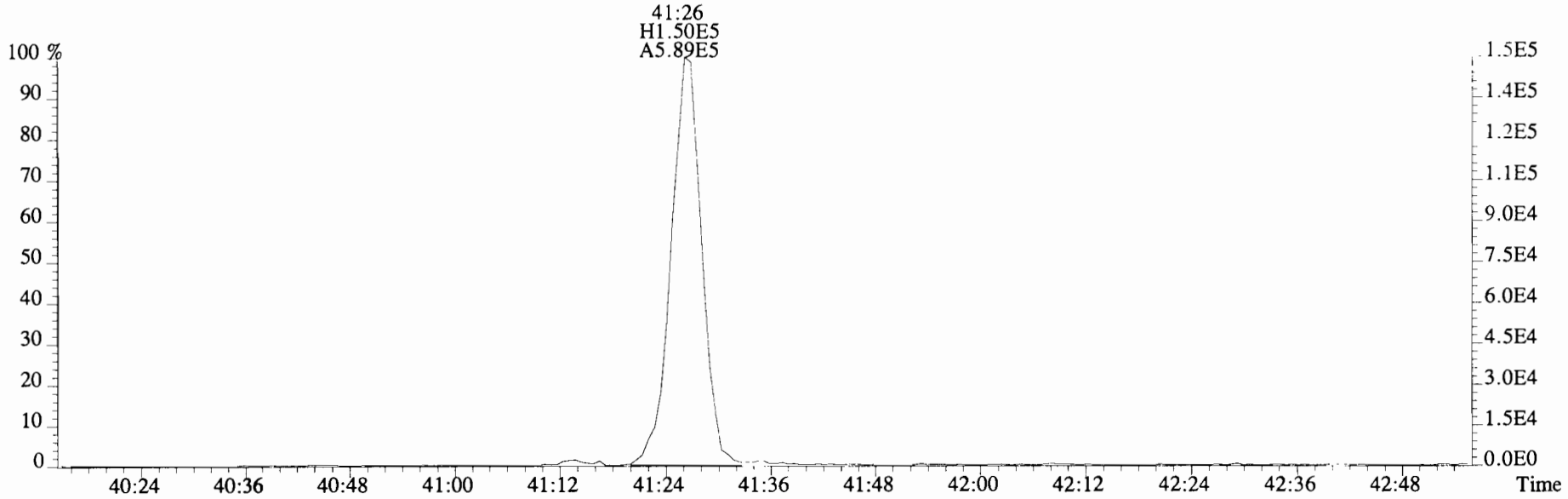
409.7788 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



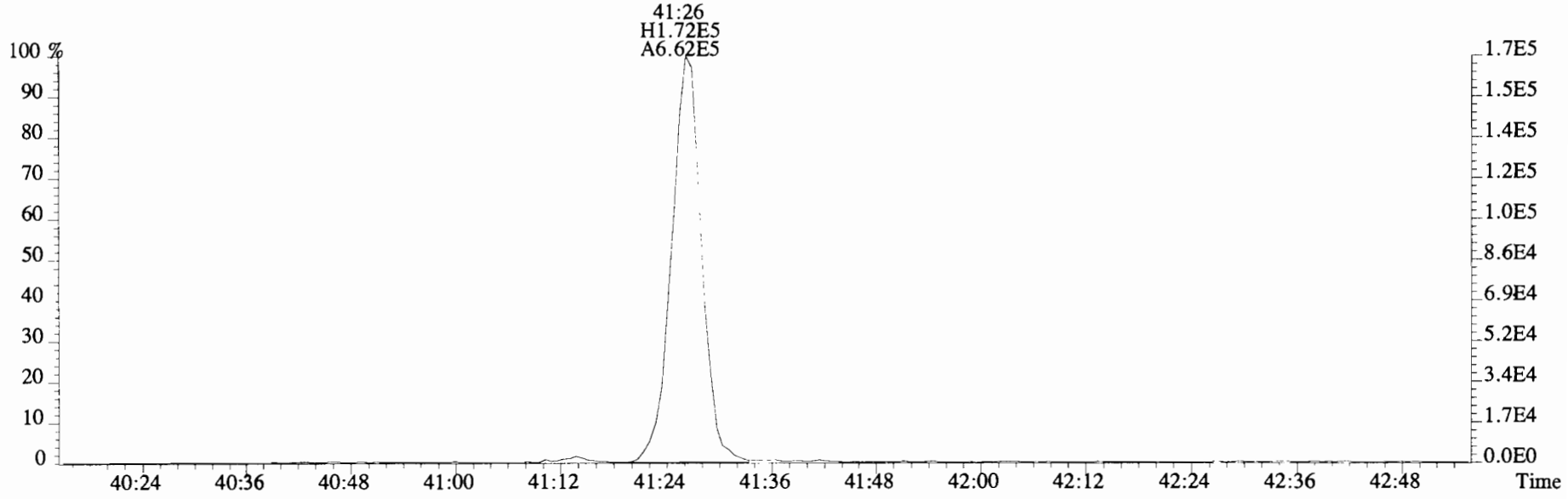

File:191016D1 #1-355 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x20.00
37:07
H1.71E3
A7.12E3
38:28
H5.21E3
A1.81E4
409.7788 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
x20.00
37:08
H2.01E3
A8.01E3
38:27
H4.57E3
A1.79E4
Time


File:191016D1 #1-432 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
441.7428 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26
H1.50E5
A5.93E5
100 %
50
0
1.5E5
7.5E4
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
443.7398 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26
H1.72E5
A6.68E5
100 %
50
0
1.7E5
8.6E4
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
453.7831 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26
H1.01E6
A3.99E6
100 %
50
0
1.0E6
5.1E5
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
455.7801 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26
H1.09E6
A4.31E6
100 %
50
0
1.1E6
5.5E5
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time
513.6775 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:20
H425.96
A903.94
40:45
H417.70
A2.12E3
41:09
H268.49
A743.28
41:39
H266.02
A648.51
41:53
H368.88
A594.49
42:04
H322.00
A1.01E3
42:35
H351.25
A730.41
42:47
H235.85
A413.62
43:23
H267.95
A810.31
43:44
H276.20
A1.02E3
44:18
H257.85
A667.53
44:38
H340.70
A1.52E3
100 %
50
0
5.4E2
2.7E2
0.0E0
40:00
41:00
42:00
43:00
44:00
45:00
Time

File:191016D1 #1-432 Acq:16-OCT-2019 20:26:21 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-13 PDI-030SC-A-00-01-190929 12.99 Exp:OCDD_DB5
441.7428 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



443.7398 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: PDI-030SC-A-10-11-1909¶ Filename: 191016D1 S:14 Acq:16-OCT-19 21:14:05 ConCal: ST191016D1-1
Lab ID: 1903430-14 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol:10.040 ✓ EndCAL: NA

	Name	Resp	RA		RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	*	*	n	0.91	NotF¶	*		147	2.5	0.0734
	1,2,3,7,8-PeCDD	*	*	n	0.90	NotF¶	*		155	2.5	0.0681
	1,2,3,4,7,8-HxCDD	*	*	n	1.10	NotF¶	*		169	2.5	0.116
	1,2,3,6,7,8-HxCDD	*	*	n	0.94	NotF¶	*		169	2.5	0.128
	1,2,3,7,8,9-HxCDD	*	*	n	0.96	NotF¶	*		169	2.5	0.122
	1,2,3,4,6,7,8-HpCDD	*	*	n	0.98	NotF¶	*		196	2.5	0.123
	OCDD	1.96e+04	1.13	n	0.96	41:12	0.93631		*	2.5	*
	2,3,7,8-TCDF	*	*	n	0.95	NotF¶	*		161	2.5	0.0517
	1,2,3,7,8-PeCDF	*	*	n	0.96	NotF¶	*		179	2.5	0.0807
	2,3,4,7,8-PeCDF	*	*	n	1.01	NotF¶	*		179	2.5	0.0772
	1,2,3,4,7,8-HxCDF	*	*	n	1.18	NotF¶	*		166	2.5	0.0455
	1,2,3,6,7,8-HxCDF	*	*	n	1.07	NotF¶	*		166	2.5	0.0462
	2,3,4,6,7,8-HxCDF	*	*	n	1.11	NotF¶	*		166	2.5	0.0506
	1,2,3,7,8,9-HxCDF	*	*	n	1.06	NotF¶	*		166	2.5	0.0649
	1,2,3,4,6,7,8-HpCDF	*	*	n	1.13	NotF¶	*		187	2.5	0.0843
	1,2,3,4,7,8,9-HpCDF	*	*	n	1.28	NotF¶	*		187	2.5	0.0711
	OCDF	*	*	n	0.95	NotF¶	*		185	2.5	0.129

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	*	*		147	0.0734
Total Penta-Dioxins	*	*		155	0.0681
Total Hexa-Dioxins	*	*		169	0.123
Total Hepta-Dioxins	0.322	0.322		*	*
Total Tetra-Furans	0.406	0.720		*	*
Total Penta-Furans	0.28346	0.28346		*	*
Total Hexa-Furans	*	*		166	0.0512
Total Hepta-Furans	*	*		187	0.0781

								Rec	Qual
IS	13C-2,3,7,8-TCDD	6.79e+06	0.73	y	1.10	26:19	181.95	91.3	
IS	13C-1,2,3,7,8-PeCDD	5.76e+06	0.62	y	0.88	30:47	191.90	96.3	
IS	13C-1,2,3,4,7,8-HxCDD	5.16e+06	1.28	y	0.64	34:05	201.87	101	
IS	13C-1,2,3,6,7,8-HxCDD	5.76e+06	1.27	y	0.86	34:11	169.14	84.9	
IS	13C-1,2,3,7,8,9-HxCDD	5.86e+06	1.24	y	0.81	34:29	182.60	91.7	
IS	13C-1,2,3,4,6,7,8-HpCDD	5.33e+06	1.04	y	0.65	37:55	204.60	103	
IS	13C-OCDD	8.71e+06	0.92	y	0.58	41:12	377.22	94.7	
IS	13C-2,3,7,8-TCDF	1.09e+07	0.79	y	1.03	25:33	193.25	97.0	
IS	13C-1,2,3,7,8-PeCDF	9.43e+06	1.59	y	0.85	29:37	203.19	102	
IS	13C-2,3,4,7,8-PeCDF	8.65e+06	1.62	y	0.85	30:30	187.98	94.4	
IS	13C-1,2,3,4,7,8-HxCDF	7.22e+06	0.50	y	0.83	33:11	218.11	109	
IS	13C-1,2,3,6,7,8-HxCDF	8.29e+06	0.51	y	1.03	33:19	201.19	101	
IS	13C-2,3,4,6,7,8-HxCDF	7.68e+06	0.52	y	0.95	33:54	202.49	102	
IS	13C-1,2,3,7,8,9-HxCDF	6.73e+06	0.51	y	0.83	34:52	204.35	103	
IS	13C-1,2,3,4,6,7,8-HpCDF	5.77e+06	0.42	y	0.76	36:43	191.25	96.0	
IS	13C-1,2,3,4,7,8,9-HpCDF	4.68e+06	0.42	y	0.58	38:27	202.47	102	
IS	13C-OCDF	1.08e+07	0.92	y	0.69	41:25	393.57	98.8	
C/Up	37Cl-2,3,7,8-TCDD	2.81e+06			1.20	26:20	69.002	86.6	
RS/RT	13C-1,2,3,4-TCDD	6.78e+06	0.77	y	1.00	25:47	199.20		
RS	13C-1,2,3,4-TCDF	1.08e+07	0.84	y	1.00	24:22	199.20		
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.93e+06	0.52	y	1.00	33:36	199.20		

Integrations by Analyst: DB Date: 11/1/19

Reviewed by Analyst: CT Date: 11/04/19

Totals class: HpCDD EMPC Entry #: 25

Run: 19 File: 191016D1 S: 14 I: 1 F: 4
Acquired: 16-OCT-19 21:14:05 Processed: 17-OCT-19 09:19:03

Total Concentration: 0.32208 Unnamed Concentration: 0.322

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
37:06	4.384e+03	4.051e+03	1.08	y	8.434e+03	0.32208	

Totals class: TCDF EMPC Entry #: 27

Run: 19 File: 191016D1 S: 14 I: 1 F: 1
Acquired: 16-OCT-19 21:14:05 Processed: 17-OCT-19 09:19:03

Total Concentration: 0.71985 Unnamed Concentration: 0.720

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
26:53	8.402e+03	1.265e+04	0.66	y	2.106e+04	0.40622	
27:03	7.072e+03	1.129e+04	0.63	n	1.626e+04	0.31363	

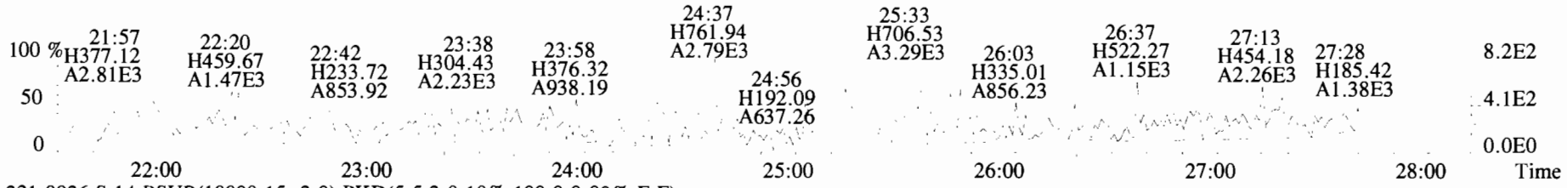
Totals class: PeCDF EMPC Entry #: 31

Run: 19 File: 191016D1 S: 14 I: 1 F: 2
Acquired: 16-OCT-19 21:14:05 Processed: 17-OCT-19 09:19:03

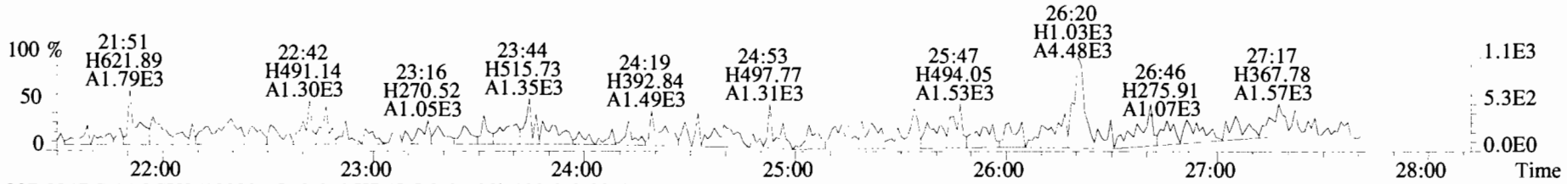
Total Concentration: 0.28346 Unnamed Concentration: 0.283

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
29:53	7.490e+03	5.215e+03	1.44	y	1.270e+04	0.28346

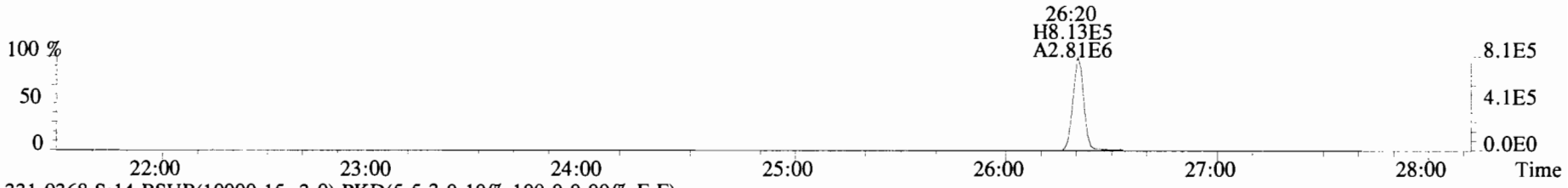
File:191016D1 #1-493 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
319.8965 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



321.8936 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



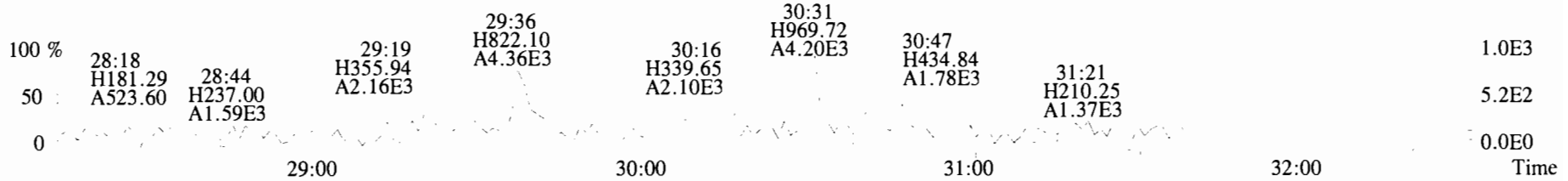
327.8847 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



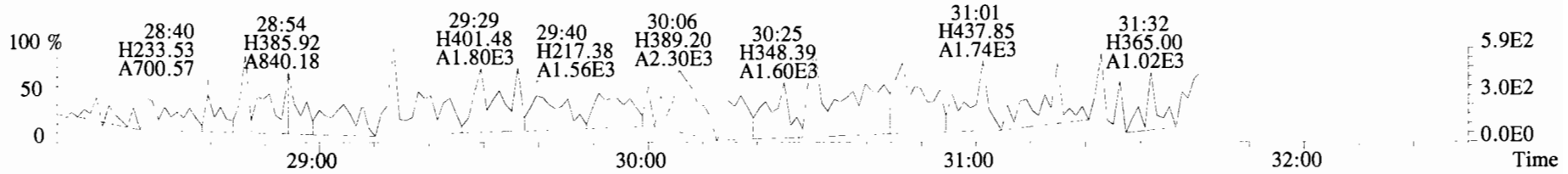
331.9368 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

333.9339 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

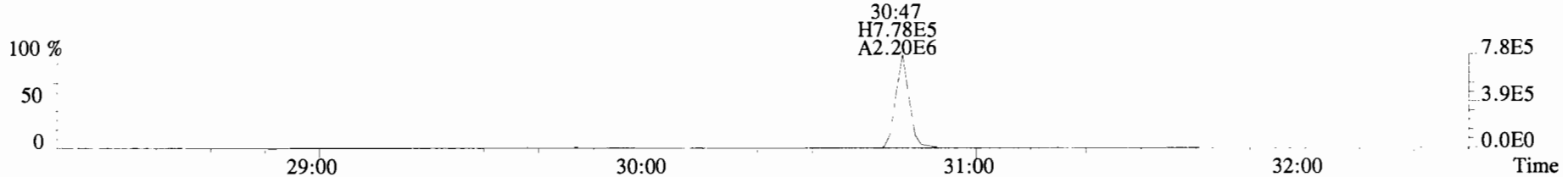
File:191016D1 #1-211 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
353.8576 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3.0.10%,100.0,0.00%,F,F)



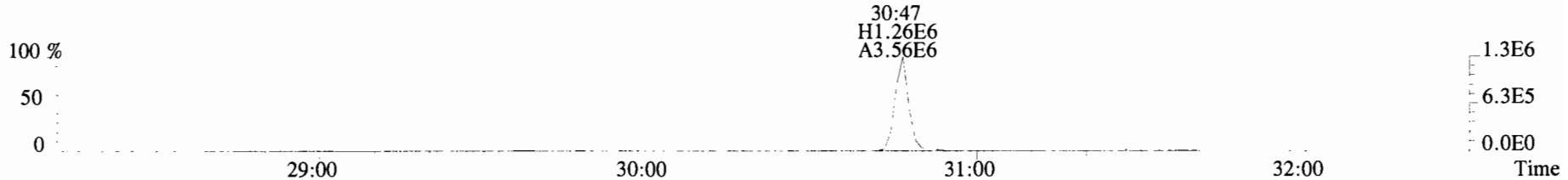
355.8546 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



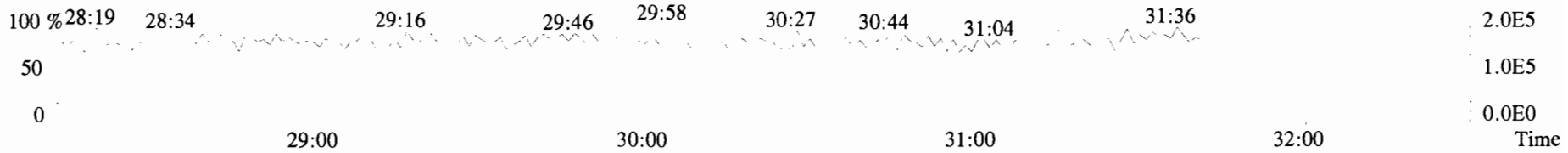
365.8978 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

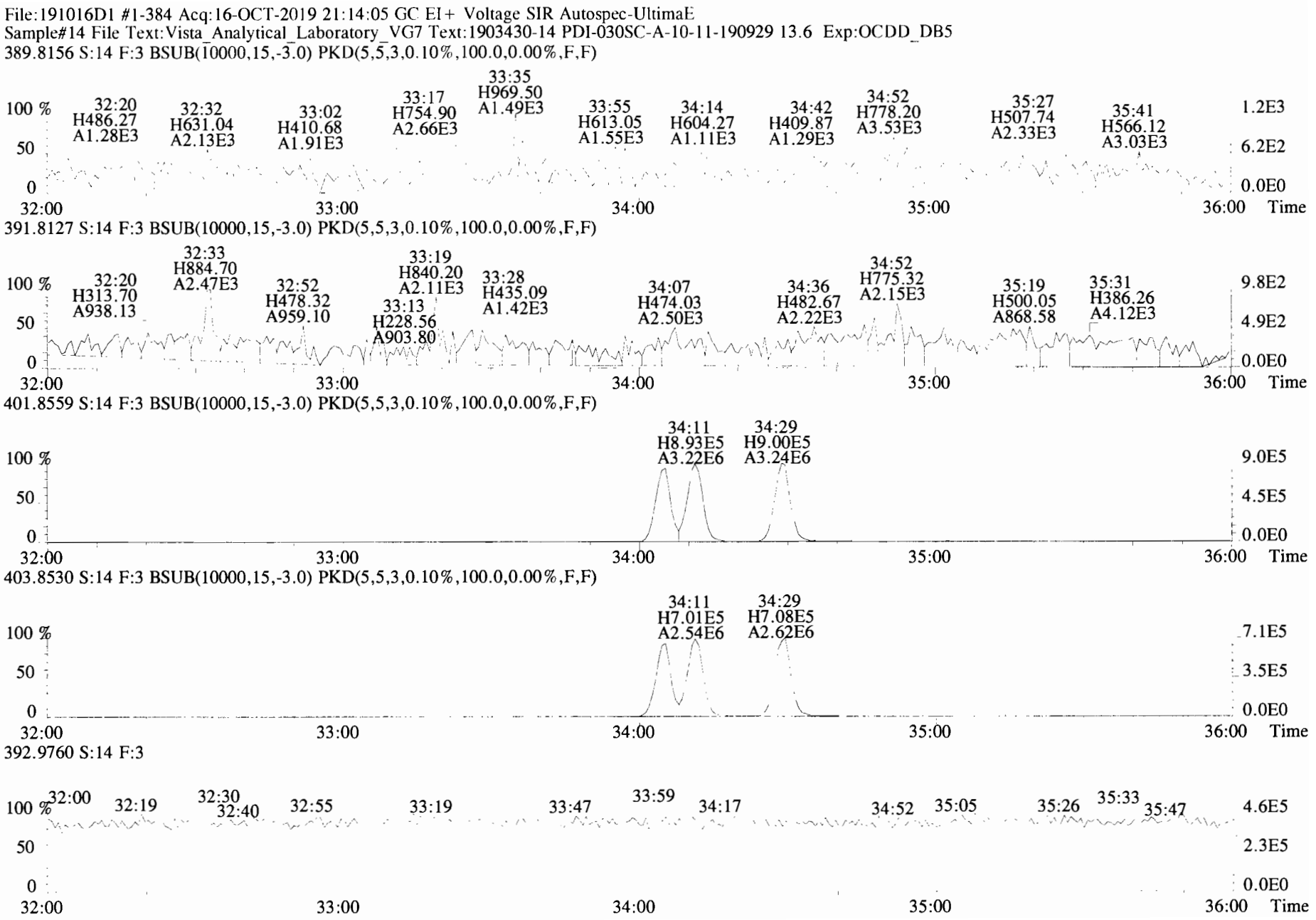


367.8949 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

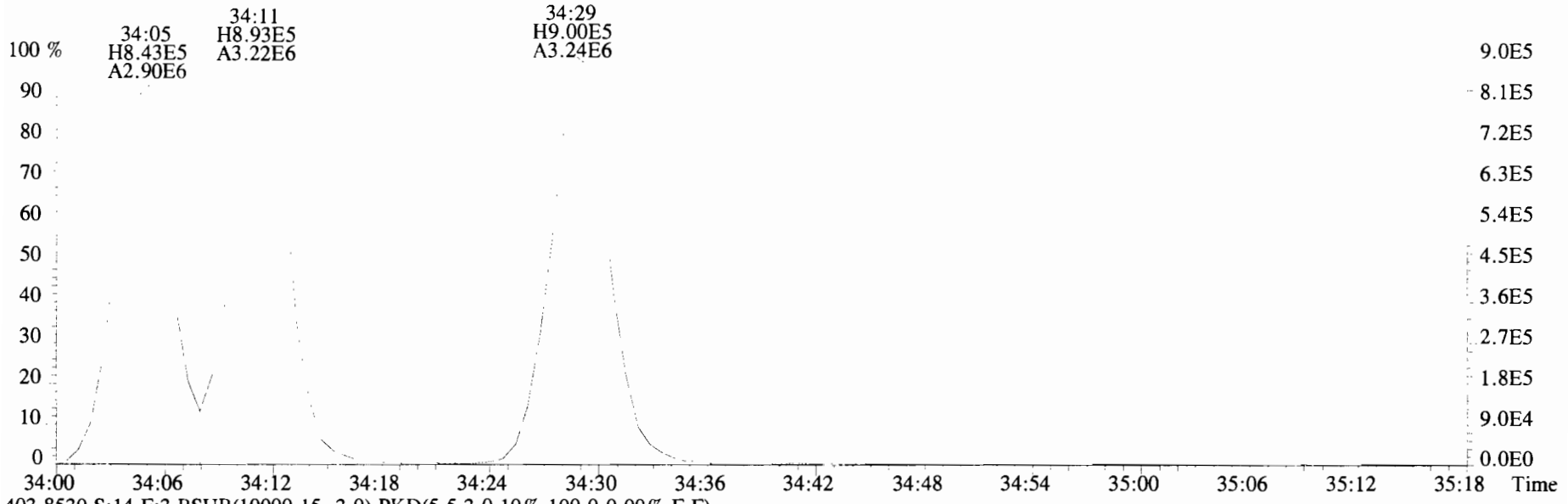


366.9792 S:14 F:2

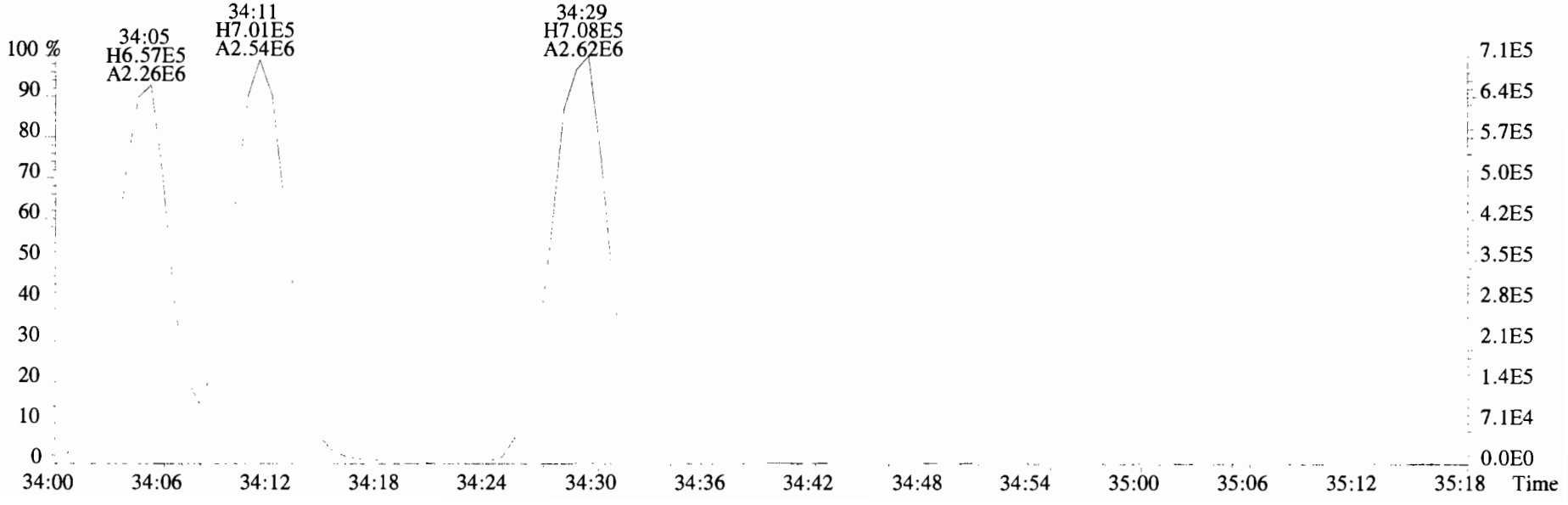



File:191016D1 #1-384 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
389.8156 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:20 H486.27 A1.28E3
32:32 H631.04 A2.13E3
33:02 H410.68 A1.91E3
33:17 H754.90 A2.66E3
33:35 H969.50 A1.49E3
33:55 H613.05 A1.55E3
34:14 H604.27 A1.11E3
34:42 H409.87 A1.29E3
34:52 H778.20 A3.53E3
35:27 H507.74 A2.33E3
35:41 H566.12 A3.03E3
391.8127 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:20 H313.70 A938.13
32:33 H884.70 A2.47E3
32:52 H478.32 A959.10
33:13 H228.56 A903.80
33:19 H840.20 A2.11E3
33:28 H435.09 A1.42E3
34:07 H474.03 A2.50E3
34:36 H482.67 A2.22E3
34:52 H775.32 A2.15E3
35:19 H500.05 A868.58
35:31 H386.26 A4.12E3
401.8559 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H8.93E5 A3.22E6
34:29 H9.00E5 A3.24E6
403.8530 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:11 H7.01E5 A2.54E6
34:29 H7.08E5 A2.62E6
392.9760 S:14 F:3
32:00 32:19 32:30 32:40 32:55 33:19 33:47 33:59 34:17 34:52 35:05 35:26 35:33 35:47
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
1.2E3
6.2E2
0.0E0
9.8E2
4.9E2
9.0E5
4.5E5
7.1E5
3.5E5
4.6E5
2.3E5

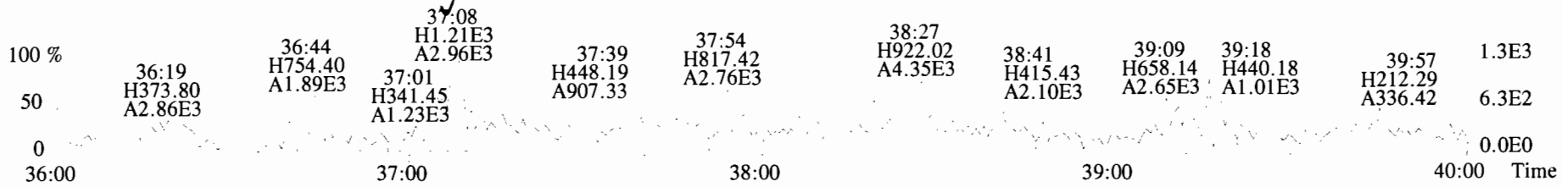
File:191016D1 #1-384 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
401.8559 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



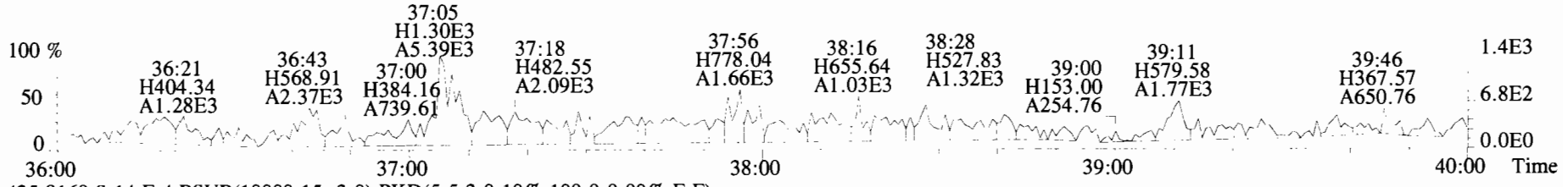
403.8530 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



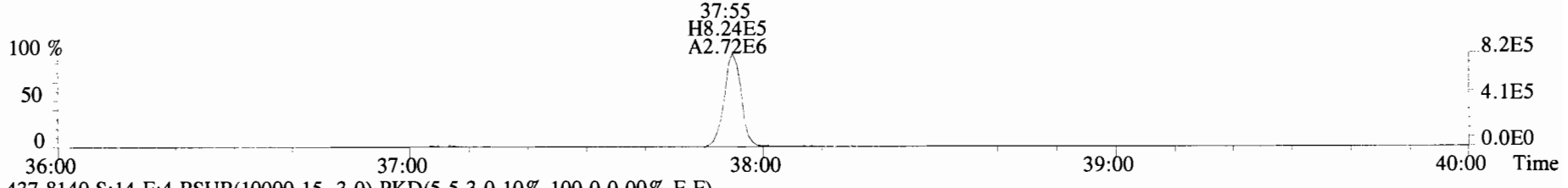
File:191016D1 #1-356 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
423.7767 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



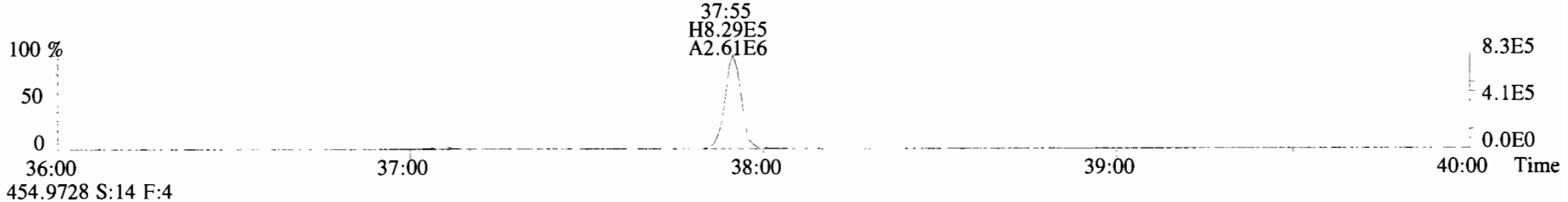
425.7737 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



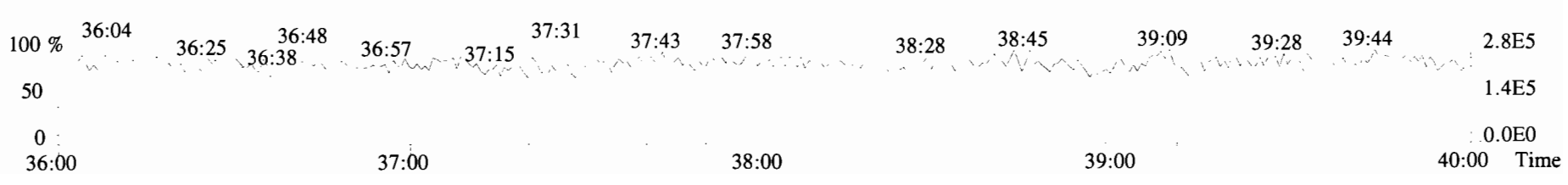
435.8169 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

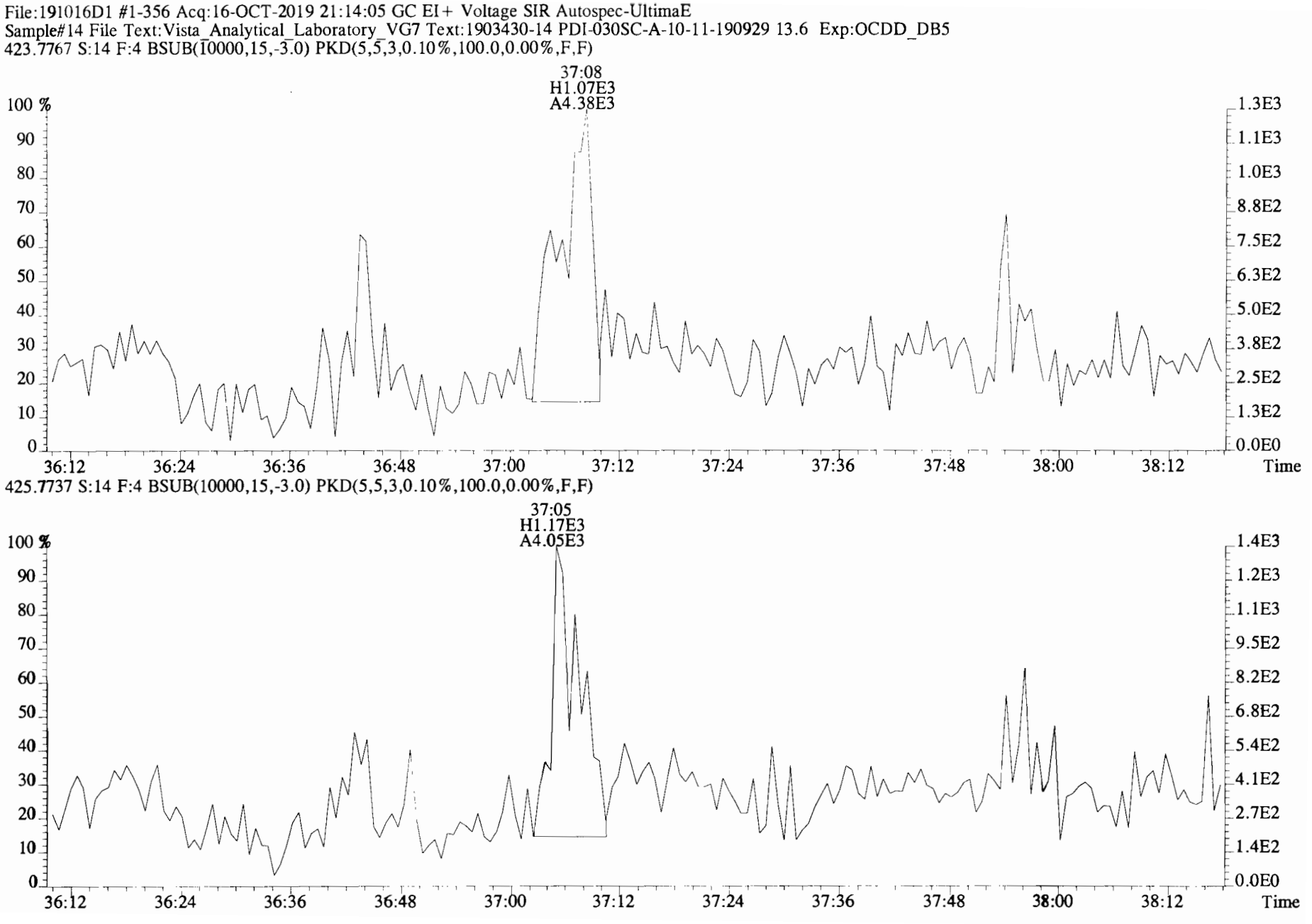


437.8140 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

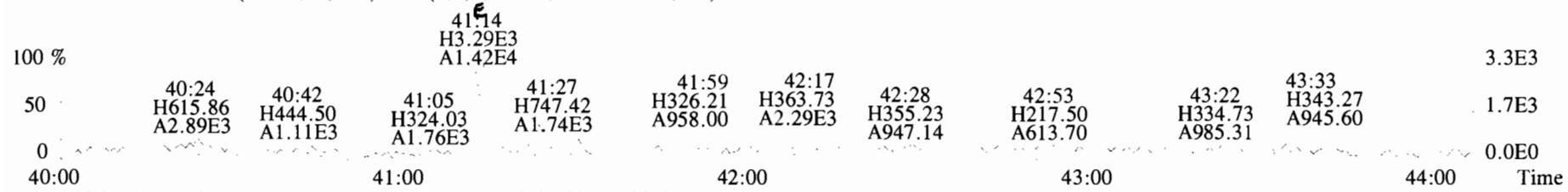


454.9728 S:14 F:4

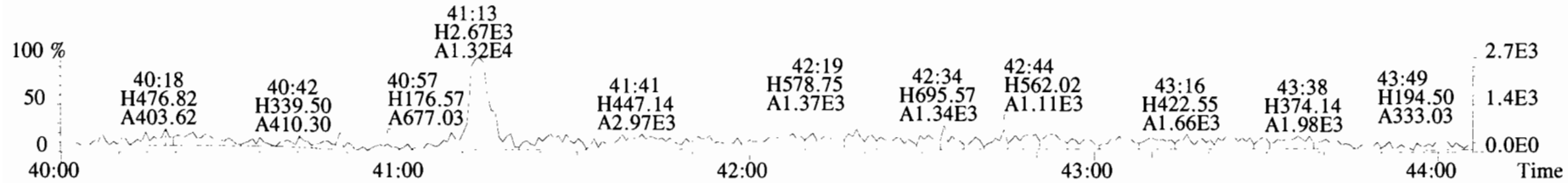



File:191016D1 #1-356 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
423.7767 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:08
H1.07E3
A4.38E3
100 %
90
80
70
60
50
40
30
20
10
0
1.3E3
1.1E3
1.0E3
8.8E2
7.5E2
6.3E2
5.0E2
3.8E2
2.5E2
1.3E2
0.0E0
36:12
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
38:12
Time
425.7737 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:05
H1.17E3
A4.05E3
100 %
90
80
70
60
50
40
30
20
10
0
1.4E3
1.2E3
1.1E3
9.5E2
8.2E2
6.8E2
5.4E2
4.1E2
2.7E2
1.4E2
0.0E0
36:12
36:24
36:36
36:48
37:00
37:12
37:24
37:36
37:48
38:00
38:12
Time

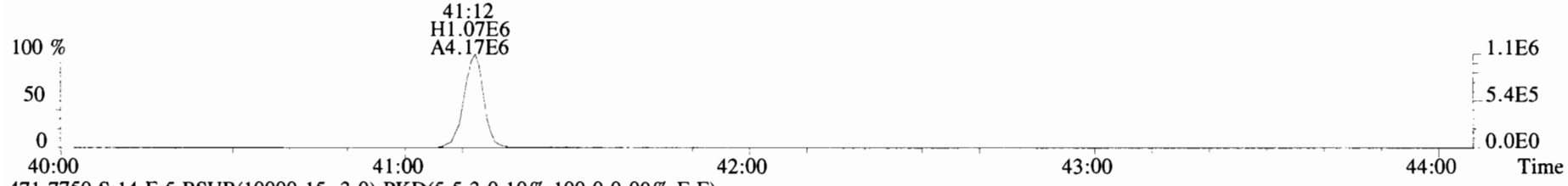
File:191016D1 #1-432 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
457.7377 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



459.7348 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

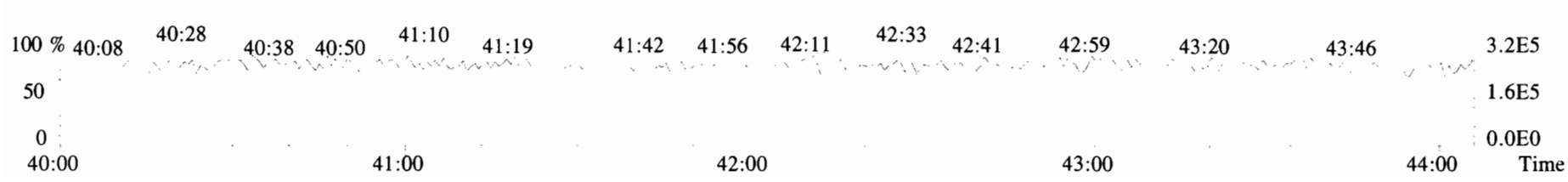


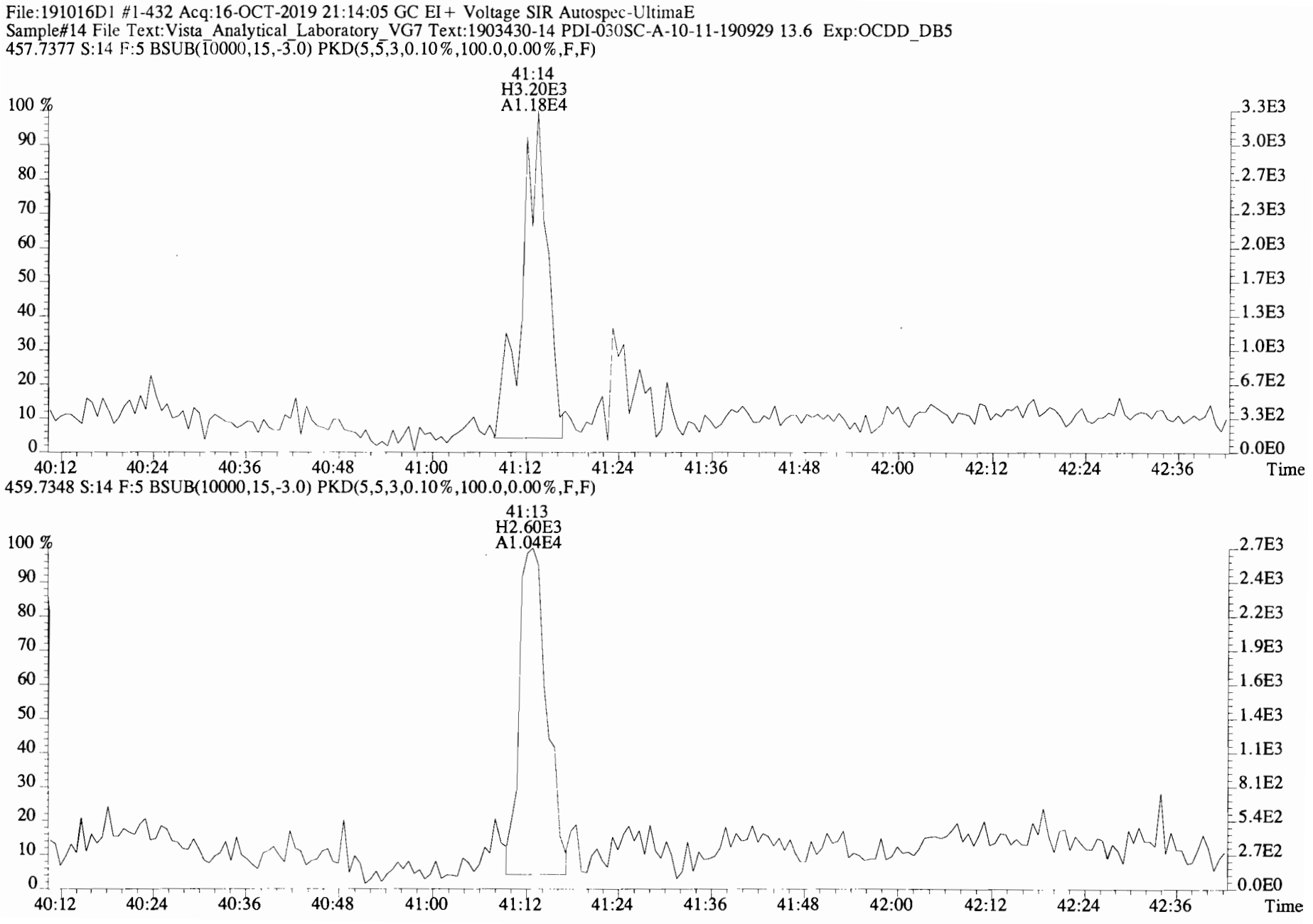
469.7780 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



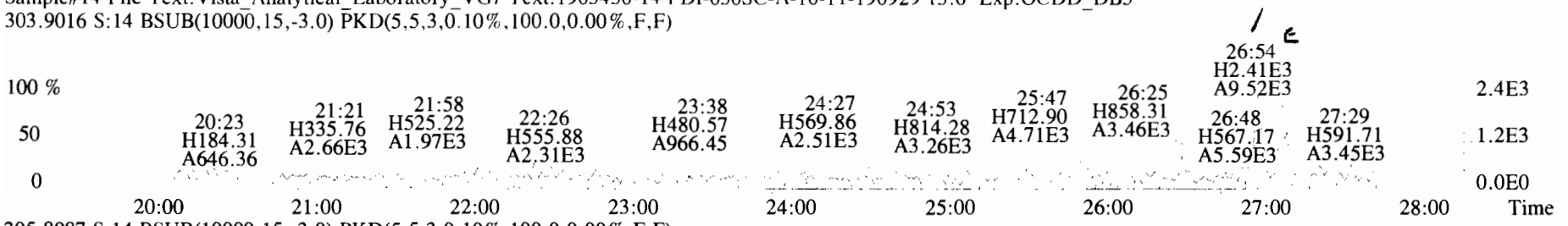
471.7750 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

454.9728 S:14 F:5

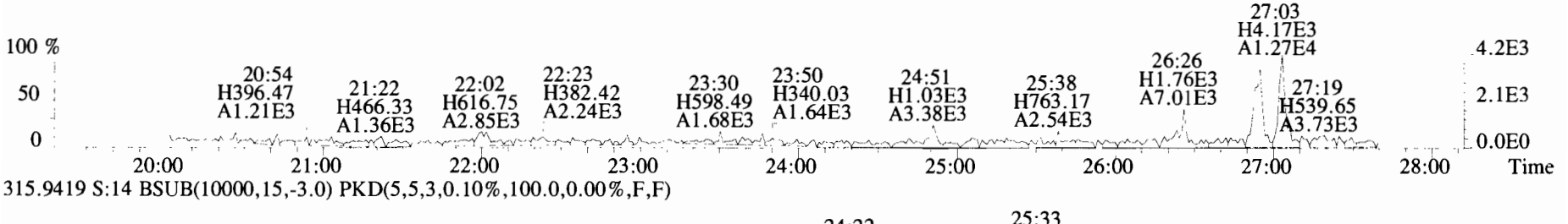



File:191016D1 #1-432 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
457.7377 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:14
H3.20E3
A1.18E4
100 %
90
80
70
60
50
40
30
20
10
0
3.3E3
3.0E3
2.7E3
2.3E3
2.0E3
1.7E3
1.3E3
1.0E3
6.7E2
3.3E2
0.0E0
40:12
40:24
40:36
40:48
41:00
41:12
41:24
41:36
41:48
42:00
42:12
42:24
42:36
Time
459.7348 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:13
H2.60E3
A1.04E4
100 %
90
80
70
60
50
40
30
20
10
0
2.7E3
2.4E3
2.2E3
1.9E3
1.6E3
1.4E3
1.1E3
8.1E2
5.4E2
2.7E2
0.0E0
40:12
40:24
40:36
40:48
41:00
41:12
41:24
41:36
41:48
42:00
42:12
42:24
42:36
Time

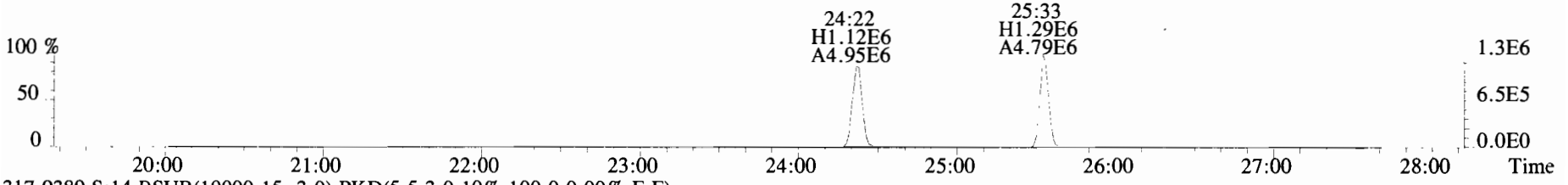
File:191016D1 #1-493 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
303.9016 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



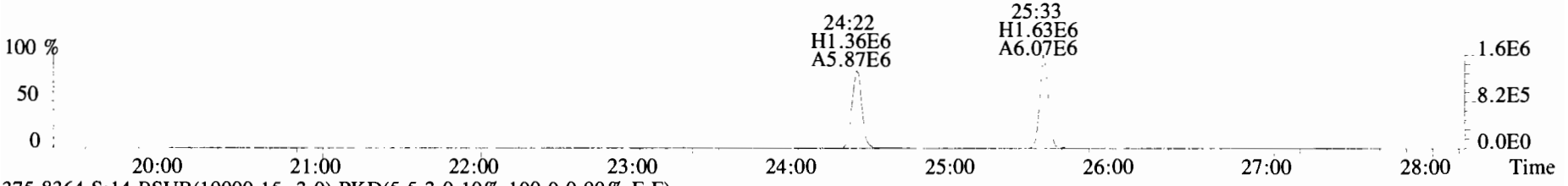
305.8987 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



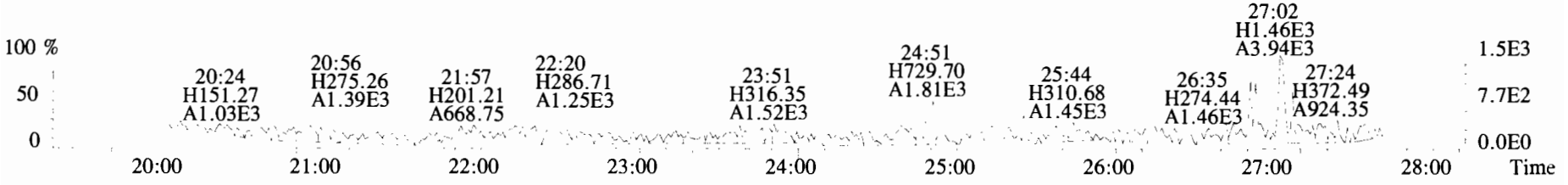
315.9419 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



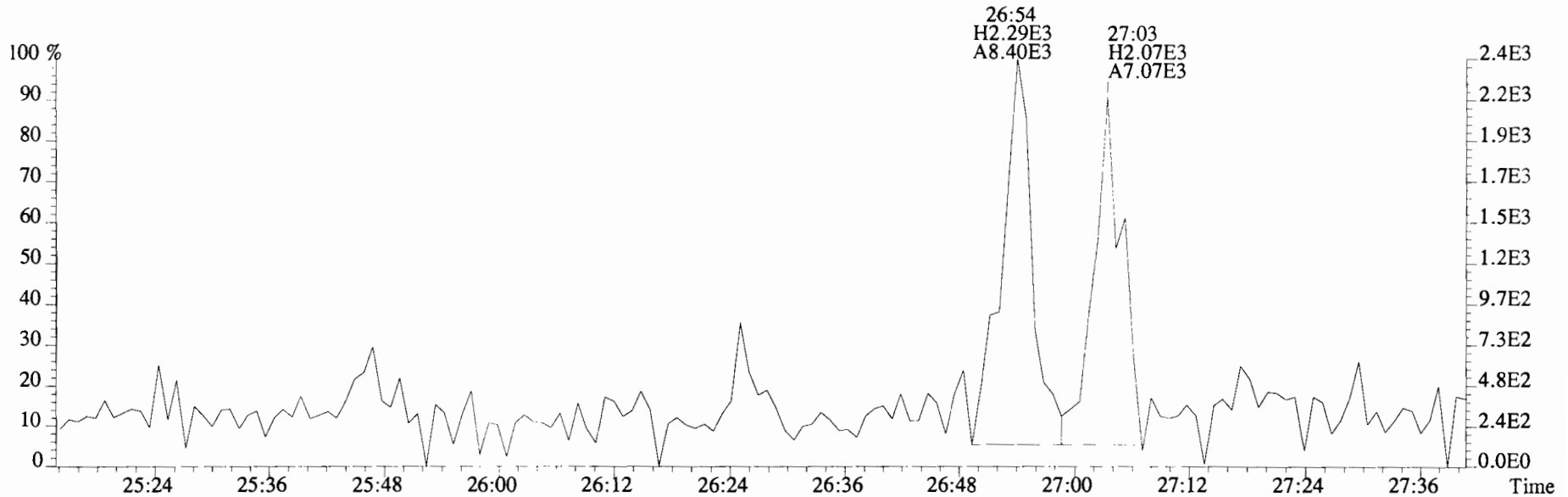
317.9389 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



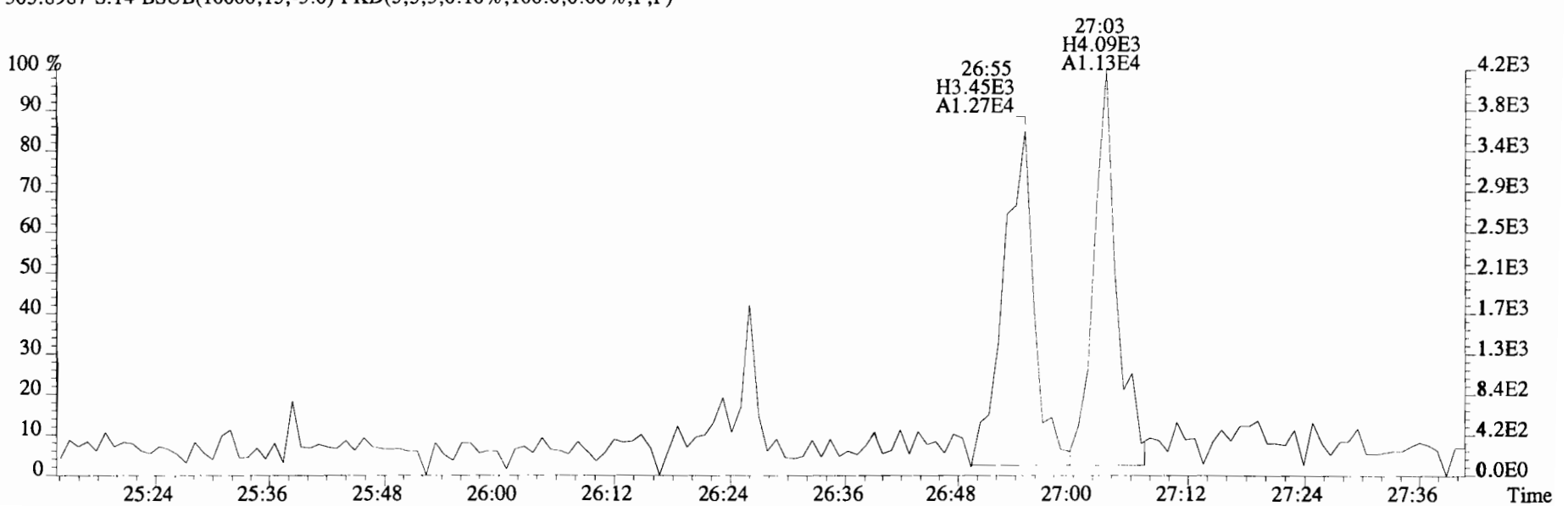
375.8364 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



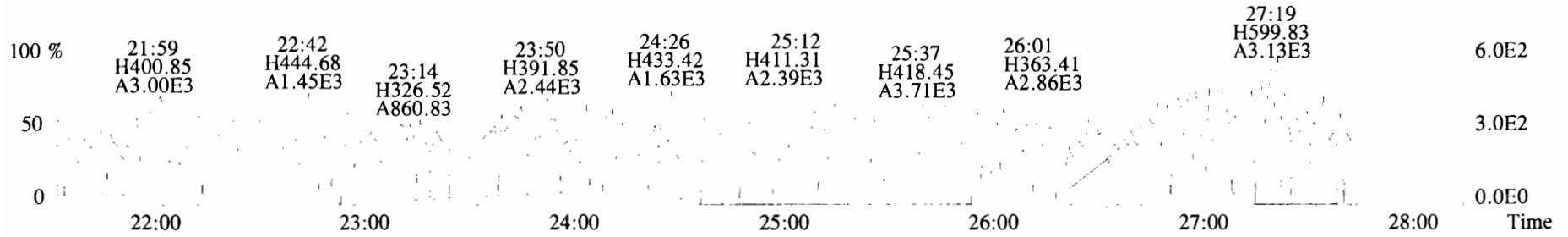
File:191016D1 #1-493 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
303.9016 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



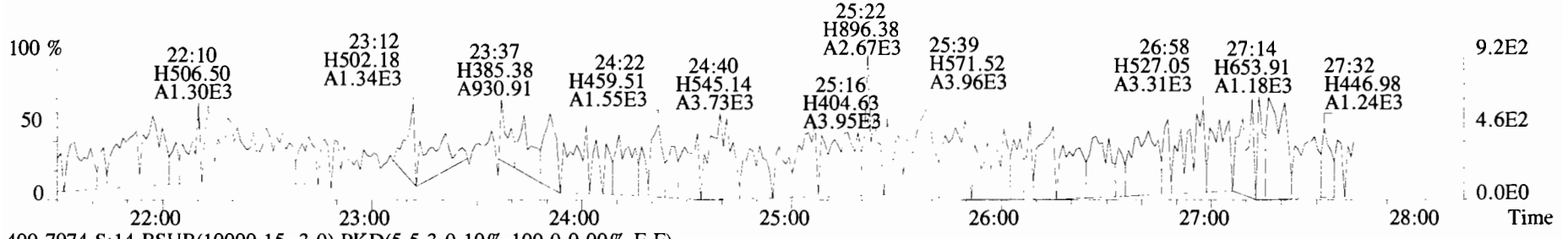
305.8987 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



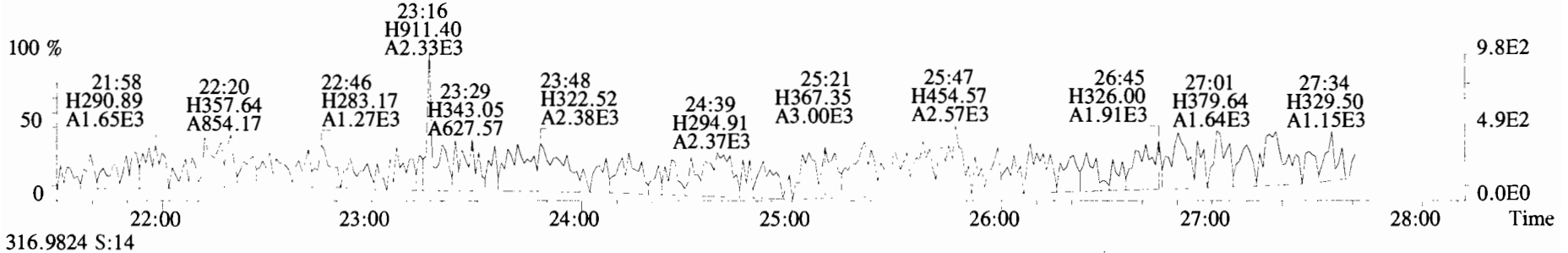
File:191016D1 #1-493 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
339.8597 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



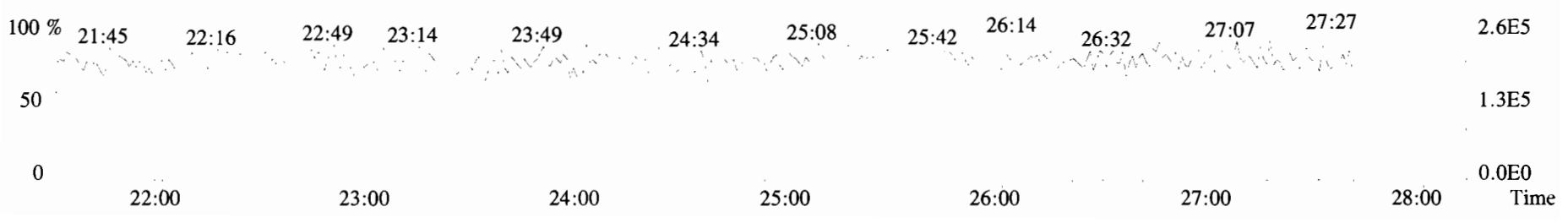
341.8568 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

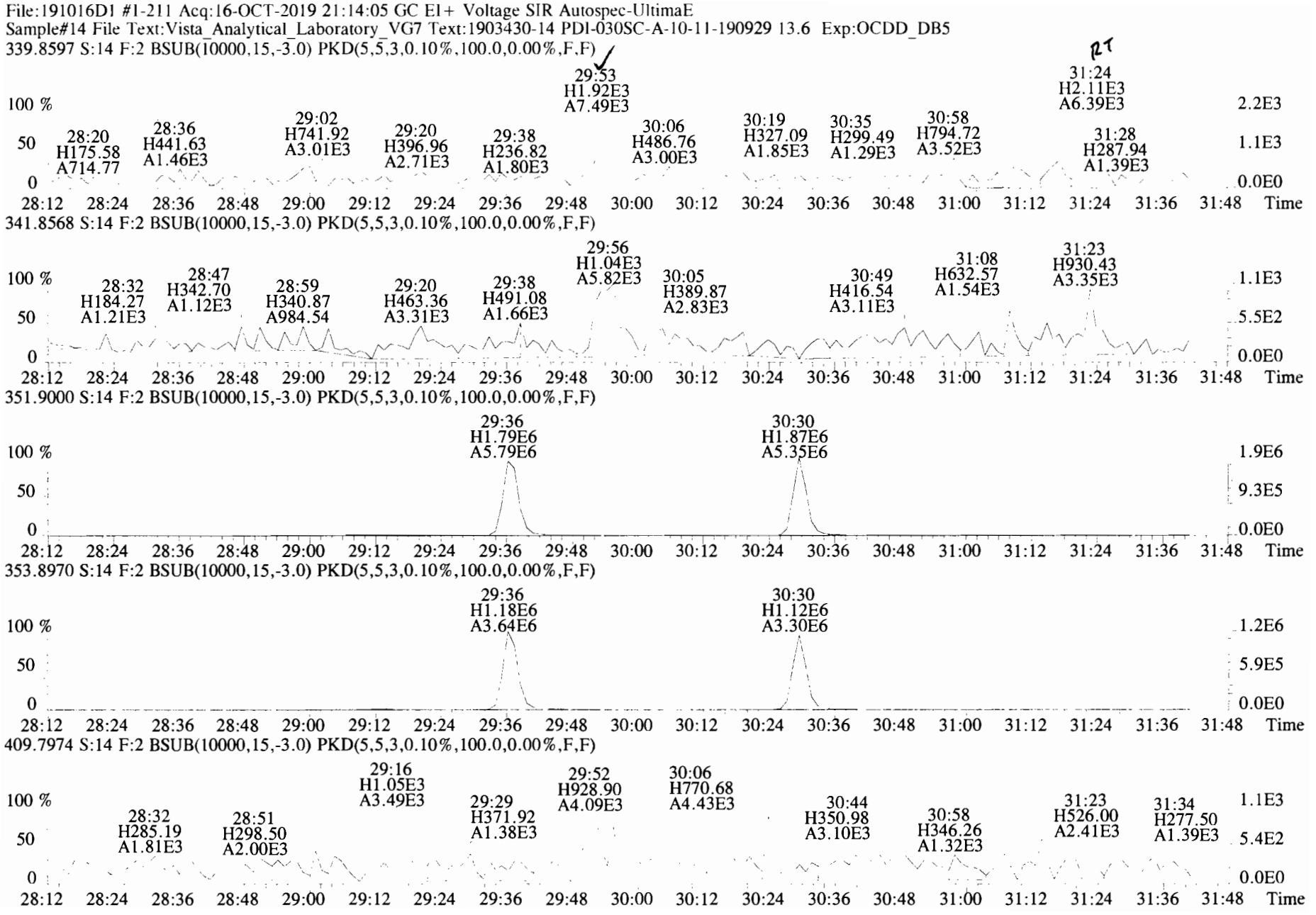


409.7974 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

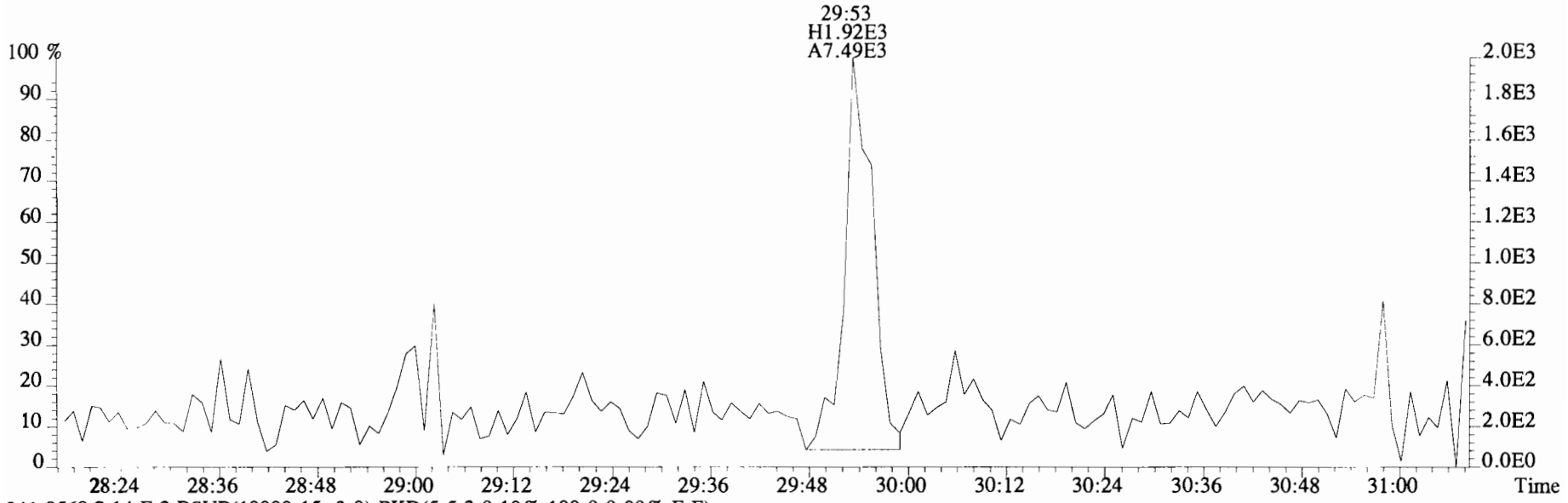


316.9824 S:14

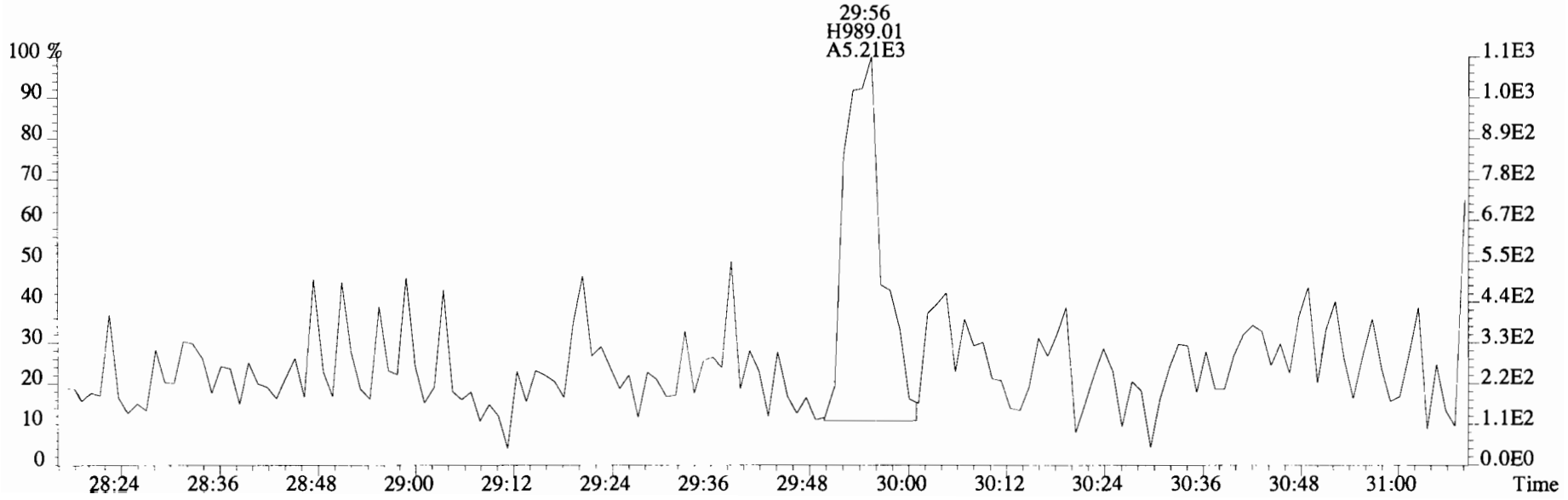


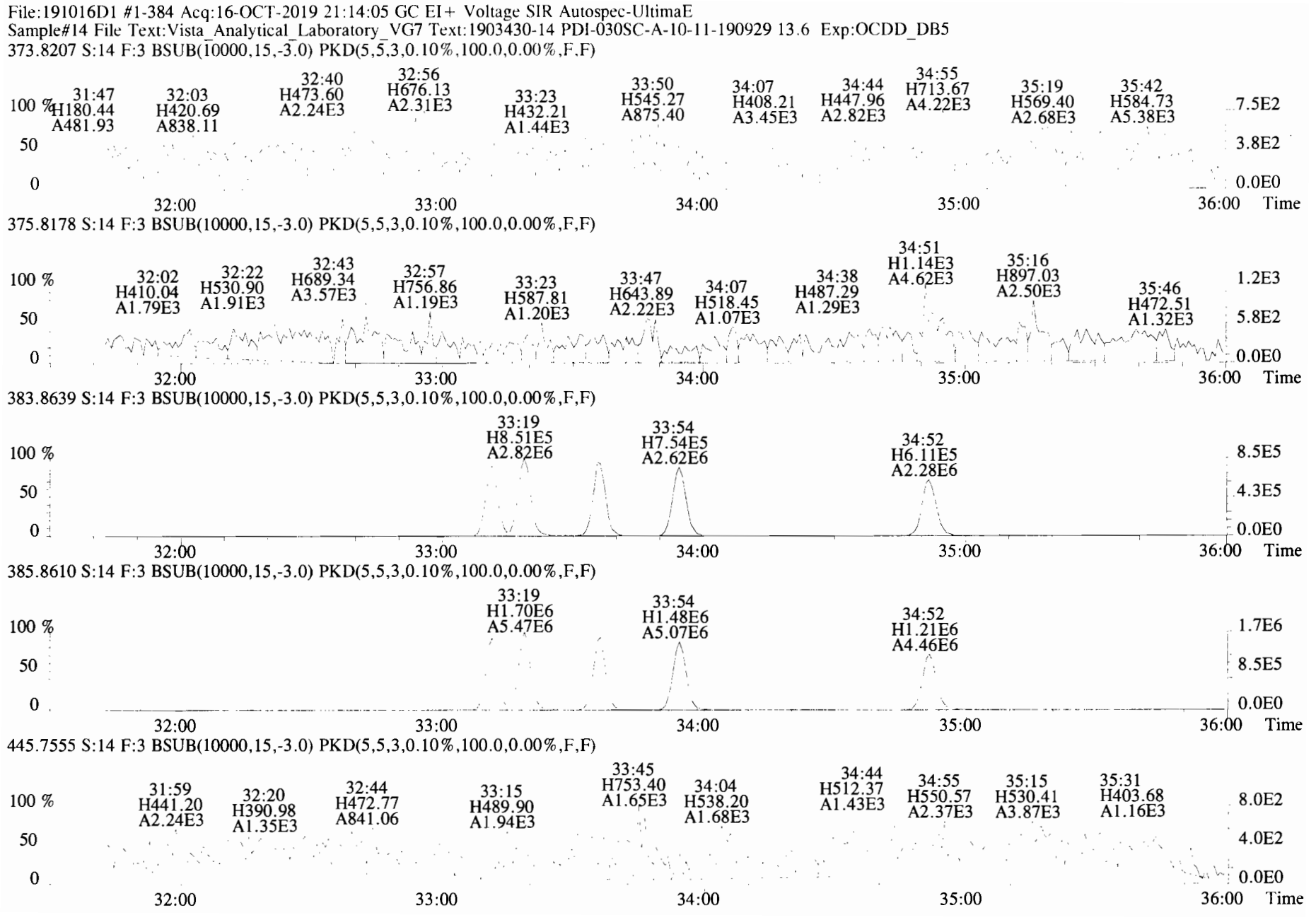

File:191016D1 #1-211 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
339.8597 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:53 H1.92E3 A7.49E3
31:24 H2.11E3 A6.39E3
28:20 H175.58 A714.77
28:36 H441.63 A1.46E3
29:02 H741.92 A3.01E3
29:20 H396.96 A2.71E3
29:38 H236.82 A1.80E3
30:06 H486.76 A3.00E3
30:19 H327.09 A1.85E3
30:35 H299.49 A1.29E3
30:58 H794.72 A3.52E3
31:28 H287.94 A1.39E3
100 %
50
0
2.2E3
1.1E3
0.0E0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time
341.8568 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:56 H1.04E3 A5.82E3
31:23 H930.43 A3.35E3
28:32 H184.27 A1.21E3
28:47 H342.70 A1.12E3
28:59 H340.87 A984.54
29:20 H463.36 A3.31E3
29:38 H491.08 A1.66E3
30:05 H389.87 A2.83E3
30:49 H416.54 A3.11E3
31:08 H632.57 A1.54E3
100 %
50
0
1.1E3
5.5E2
0.0E0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time
351.9000 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:36 H1.79E6 A5.79E6
30:30 H1.87E6 A5.35E6
100 %
50
0
1.9E6
9.3E5
0.0E0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time
353.8970 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:36 H1.18E6 A3.64E6
30:30 H1.12E6 A3.30E6
100 %
50
0
1.2E6
5.9E5
0.0E0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time
409.7974 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:16 H1.05E3 A3.49E3
29:52 H928.90 A4.09E3
30:06 H770.68 A4.43E3
28:32 H285.19 A1.81E3
28:51 H298.50 A2.00E3
29:29 H371.92 A1.38E3
30:44 H350.98 A3.10E3
30:58 H346.26 A1.32E3
31:23 H526.00 A2.41E3
31:34 H277.50 A1.39E3
100 %
50
0
1.1E3
5.4E2
0.0E0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time

File:191016D1 #1-211 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
339.8597 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

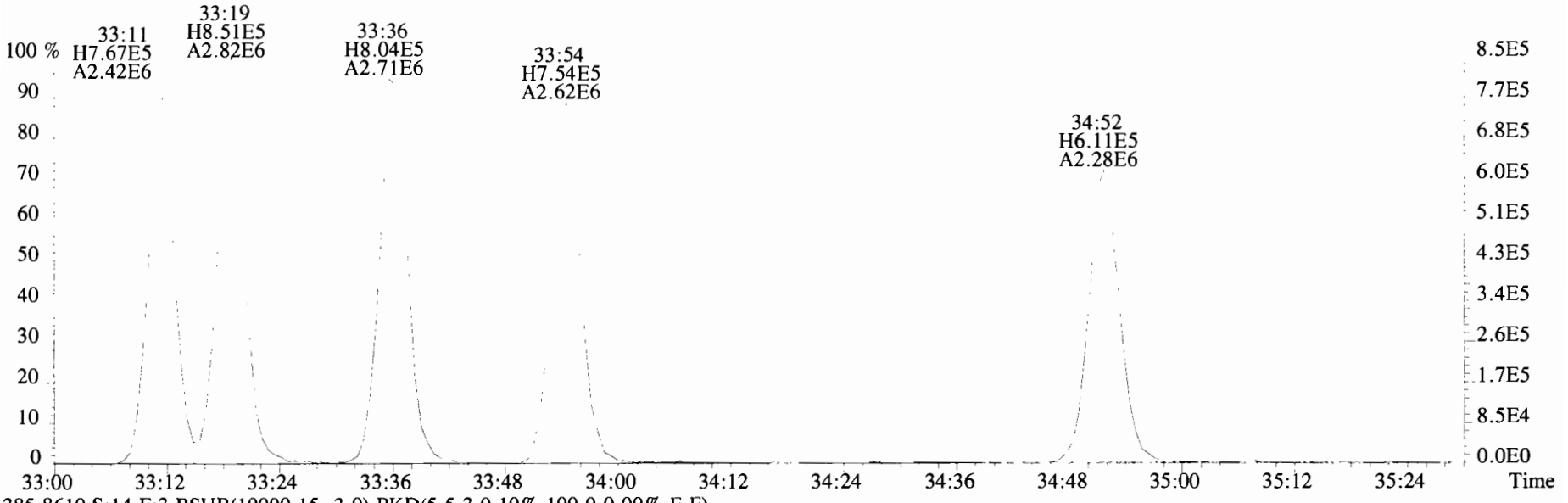


341.8568 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

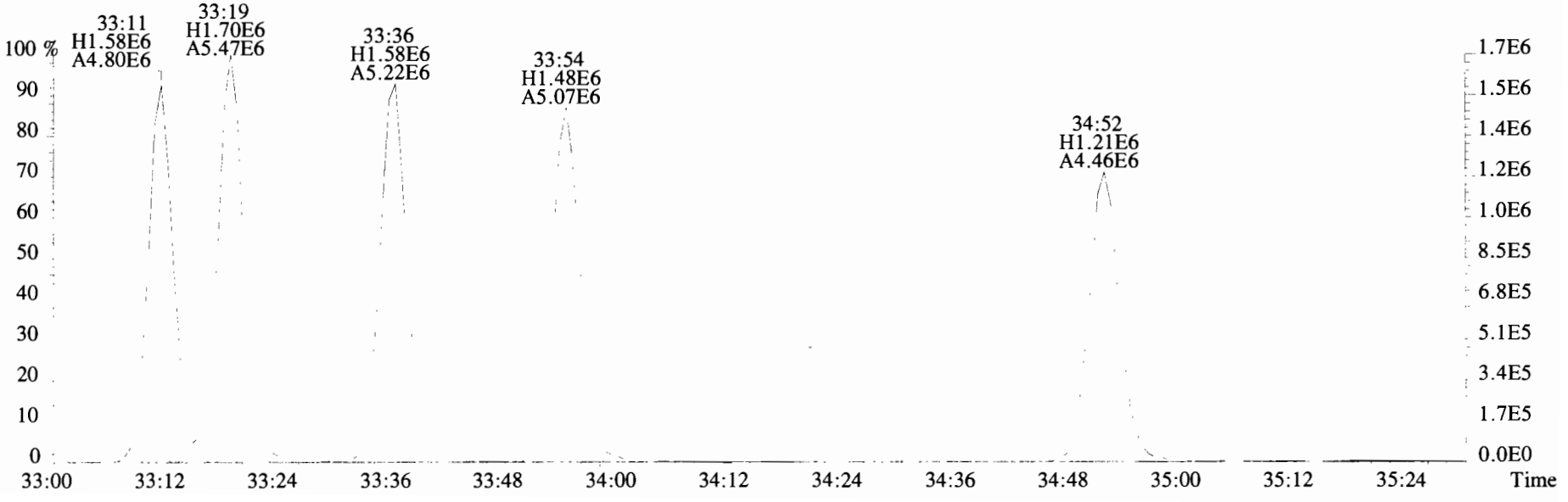



File:191016D1 #1-384 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
373.8207 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:47 H180.44 A481.93
32:03 H420.69 A838.11
32:40 H473.60 A2.24E3
32:56 H676.13 A2.31E3
33:23 H432.21 A1.44E3
33:50 H545.27 A875.40
34:07 H408.21 A3.45E3
34:44 H447.96 A2.82E3
34:55 H713.67 A4.22E3
35:19 H569.40 A2.68E3
35:42 H584.73 A5.38E3
7.5E2
3.8E2
0.0E0
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
375.8178 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:02 H410.04 A1.79E3
32:22 H530.90 A1.91E3
32:43 H689.34 A3.57E3
32:57 H756.86 A1.19E3
33:23 H587.81 A1.20E3
33:47 H643.89 A2.22E3
34:07 H518.45 A1.07E3
34:38 H487.29 A1.29E3
34:51 H1.14E3 A4.62E3
35:16 H897.03 A2.50E3
35:46 H472.51 A1.32E3
1.2E3
5.8E2
0.0E0
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
383.8639 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:19 H8.51E5 A2.82E6
33:54 H7.54E5 A2.62E6
34:52 H6.11E5 A2.28E6
8.5E5
4.3E5
0.0E0
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
385.8610 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:19 H1.70E6 A5.47E6
33:54 H1.48E6 A5.07E6
34:52 H1.21E6 A4.46E6
1.7E6
8.5E5
0.0E0
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
445.7555 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:59 H441.20 A2.24E3
32:20 H390.98 A1.35E3
32:44 H472.77 A841.06
33:15 H489.90 A1.94E3
33:45 H753.40 A1.65E3
34:04 H538.20 A1.68E3
34:44 H512.37 A1.43E3
34:55 H550.57 A2.37E3
35:15 H530.41 A3.87E3
35:31 H403.68 A1.16E3
8.0E2
4.0E2
0.0E0
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time

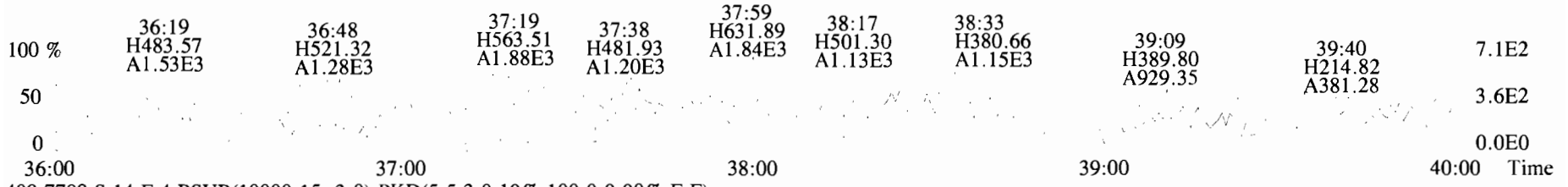
File:191016D1 #1-384 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
383.8639 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



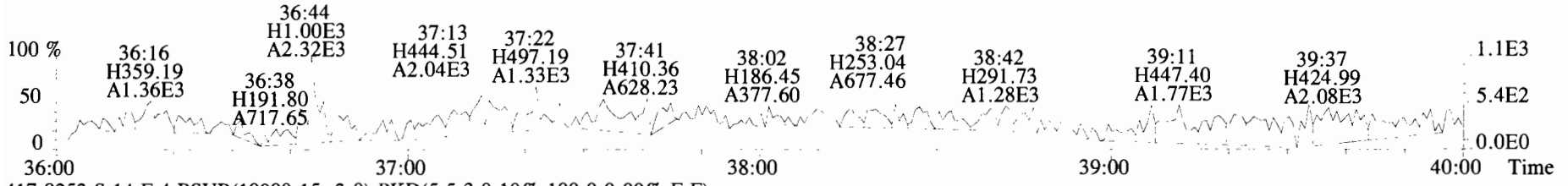
385.8610 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



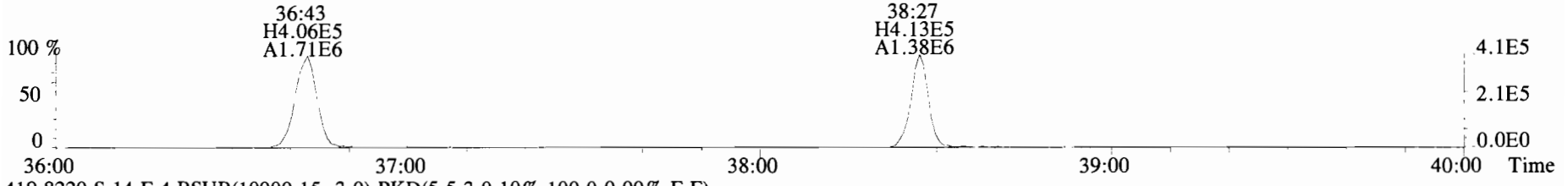
File:191016D1 #1-356 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
407.7818 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



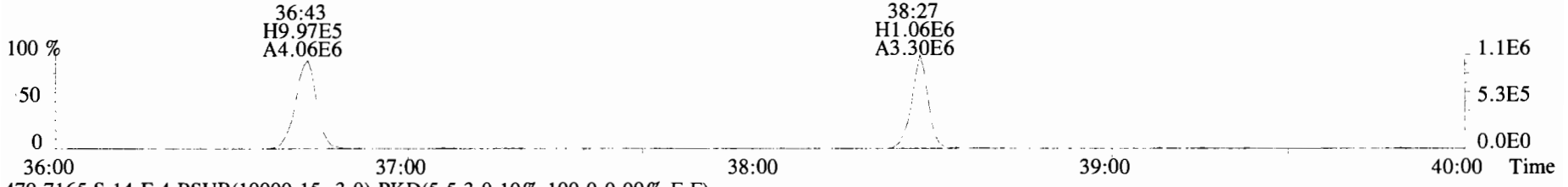
409.7788 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



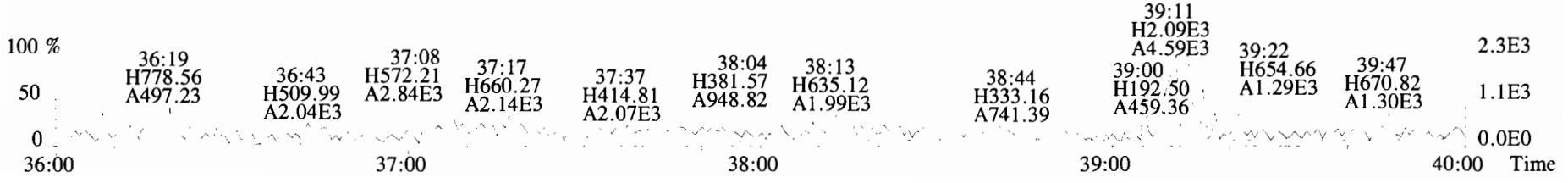
417.8253 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



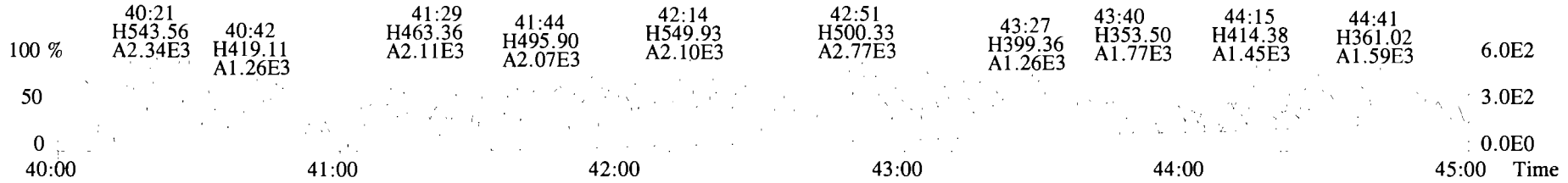
419.8220 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



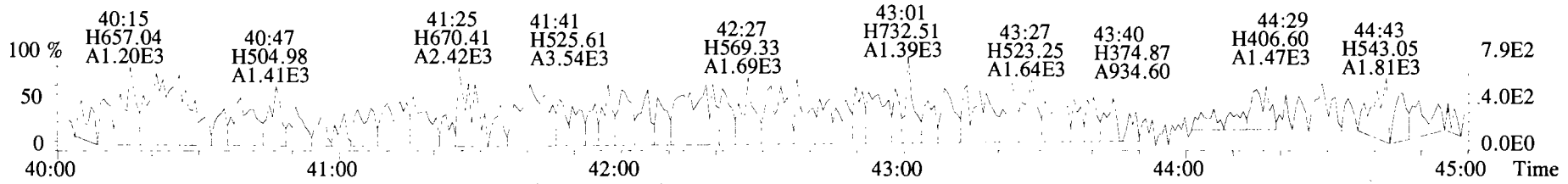
479.7165 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



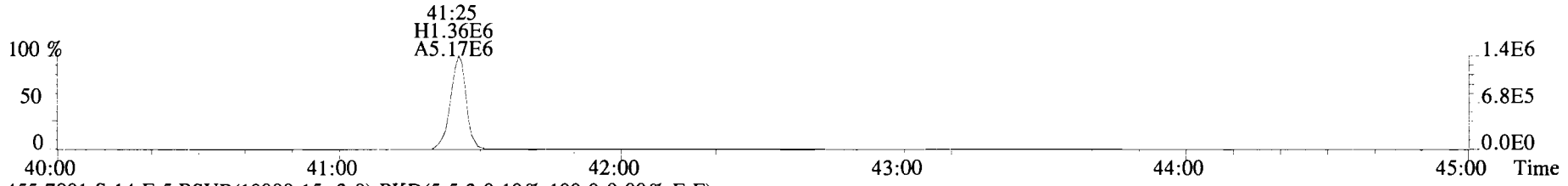
File:191016D1 #1-432 Acq:16-OCT-2019 21:14:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#14 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-14 PDI-030SC-A-10-11-190929 13.6 Exp:OCDD_DB5
441.7428 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



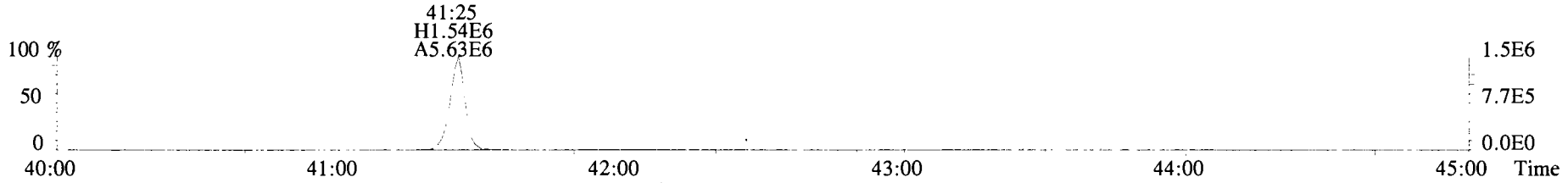
443.7398 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



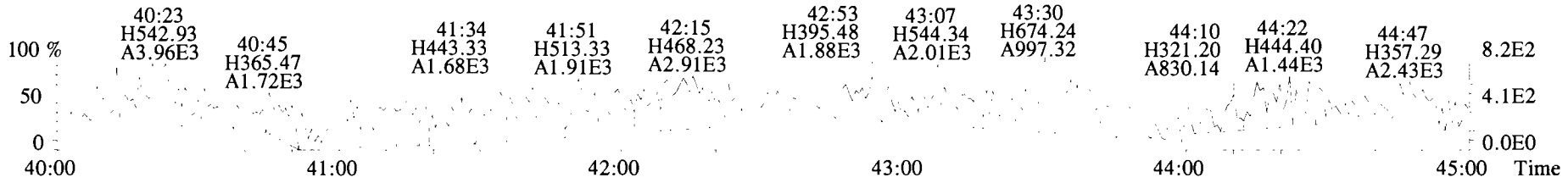
453.7831 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

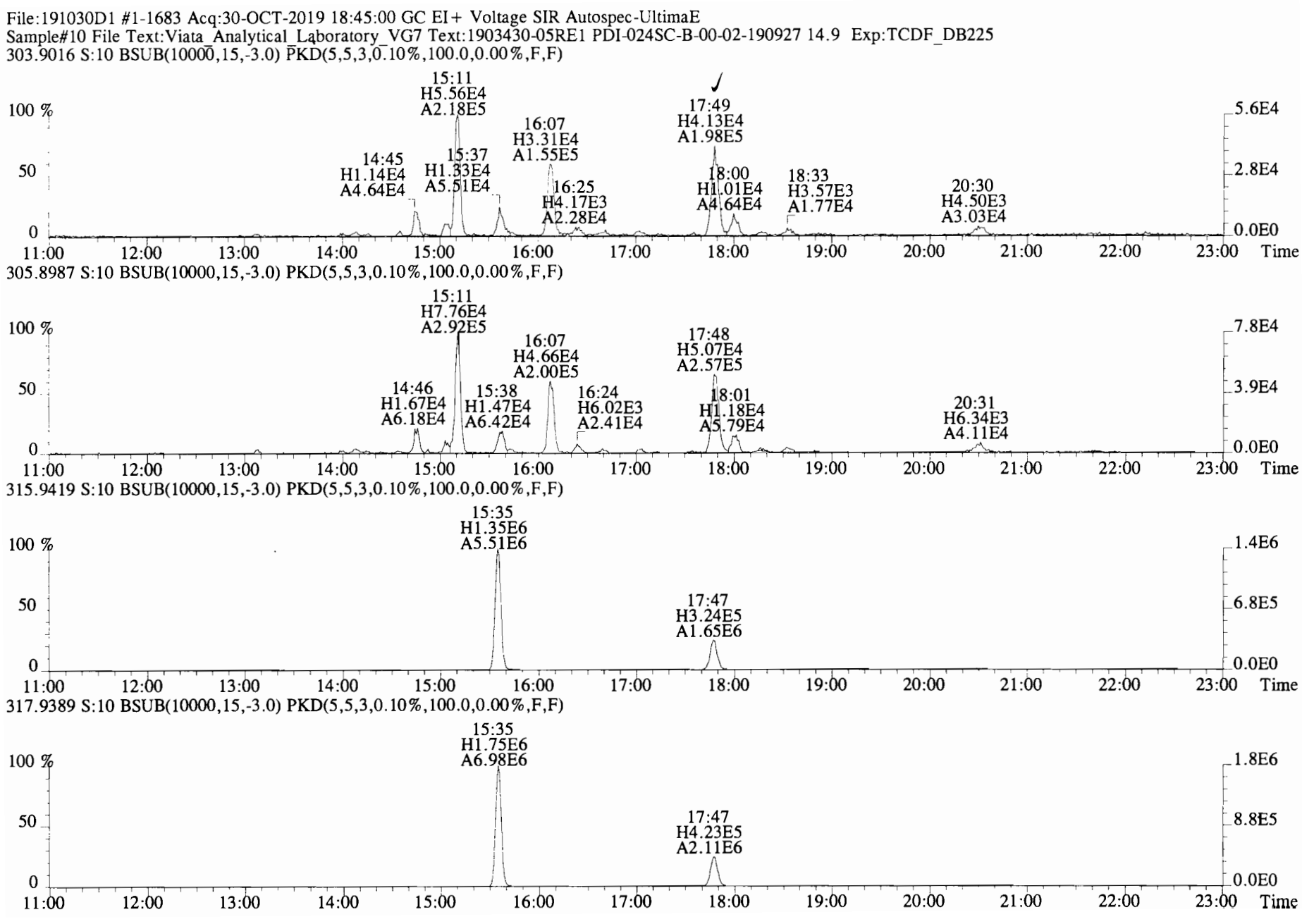


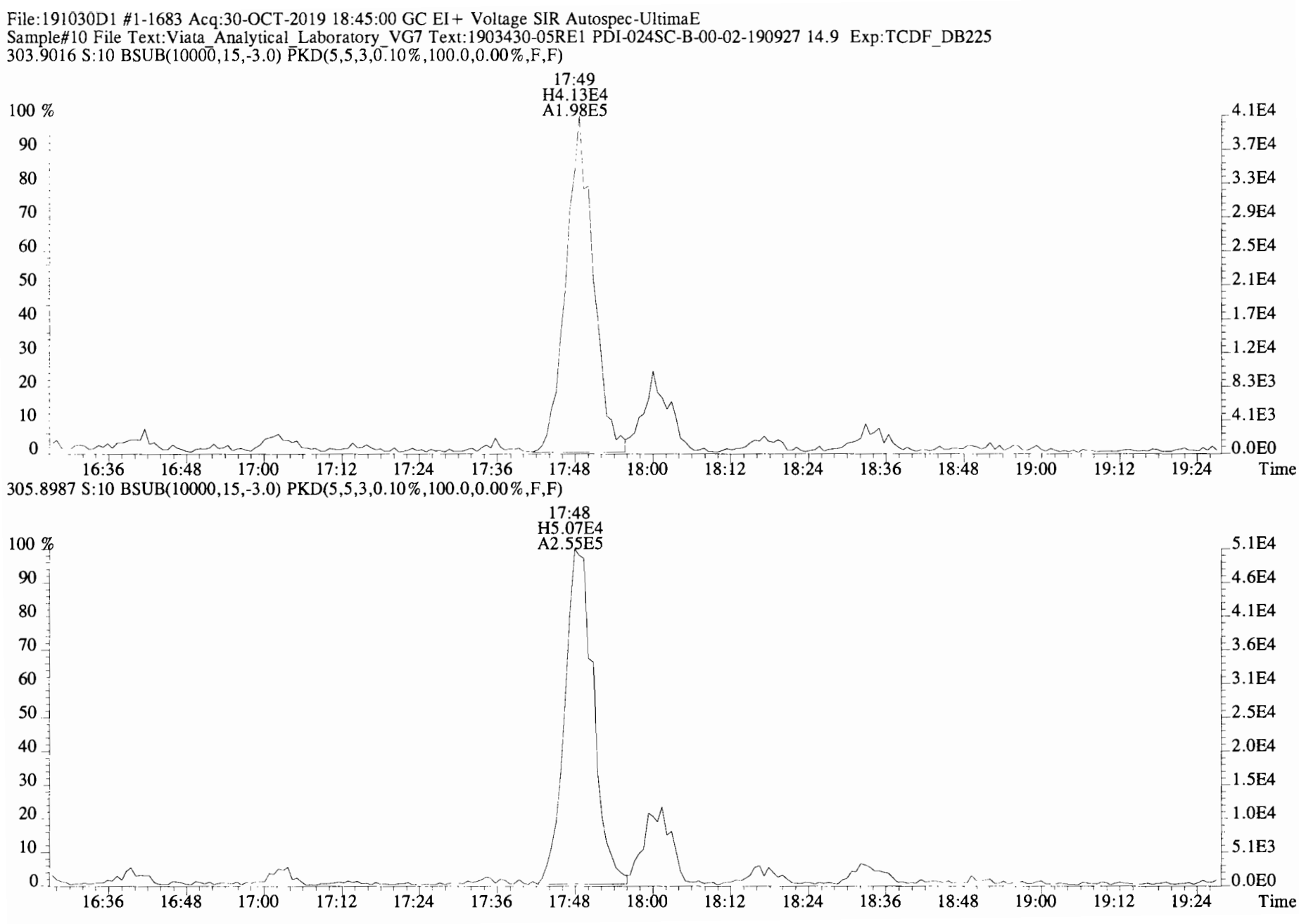
CONFIRMATION

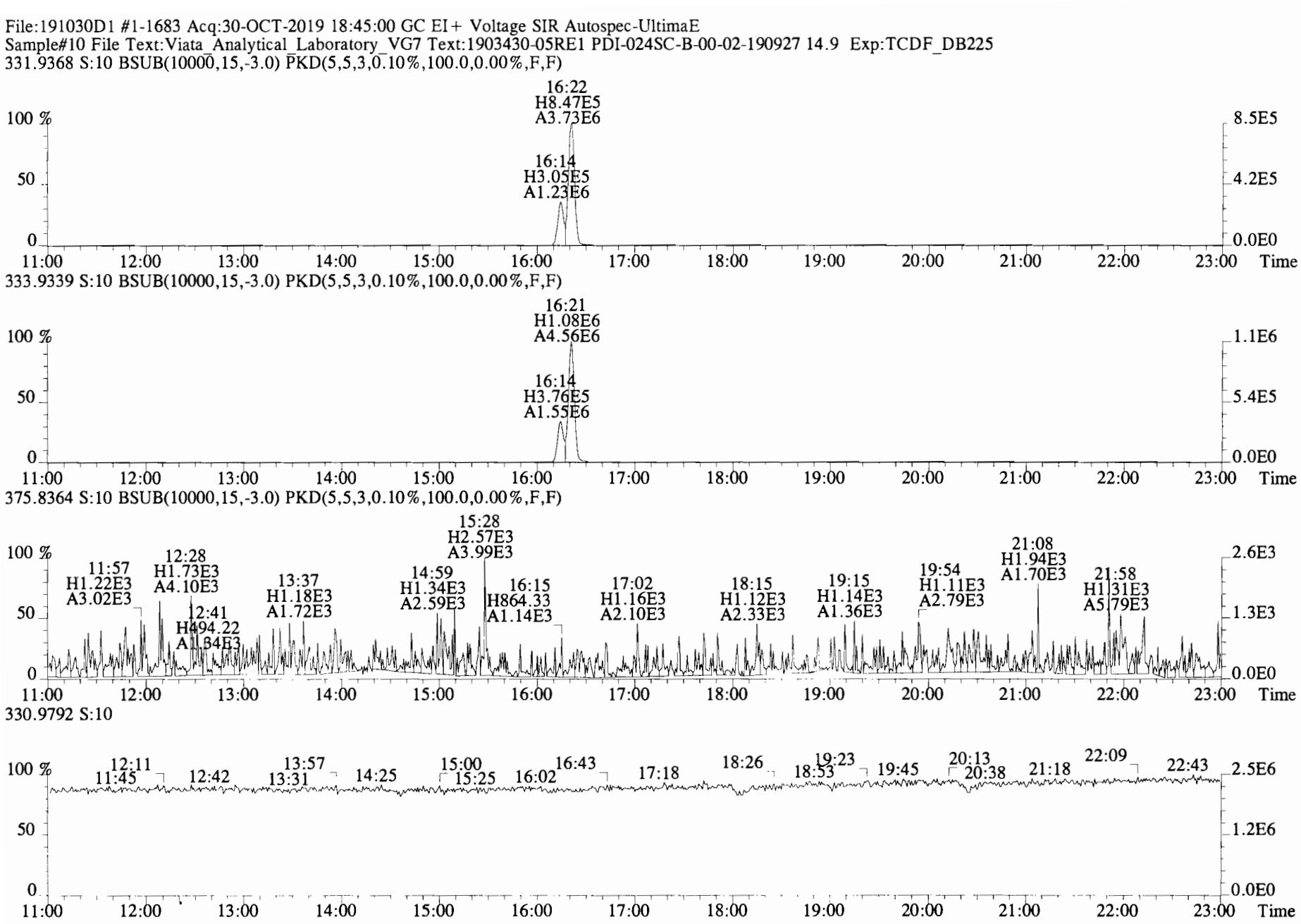
Name	Resp	RA		RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.25e+07	0.79	y	15:35	1.00	192.5	-
13C-2,3,7,8-TCDF	3.76e+06	0.78	y	17:48	1.02	56.74	29.5
2,3,7,8-TCDF	4.53e+05	0.78	y	17:49	0.95	24.48	

Integrations by Analyst: DB
Date: 10/31/19

Reviewed by Analyst: CT
Date: 11/04/19


File:191030D1 #1-1683 Acq:30-OCT-2019 18:45:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata_Analytical_Laboratory_VG7 Text:1903430-05RE1 PDI-024SC-B-00-02-190927 14.9 Exp:TCDF_DB225
303.9016 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:11 H5.56E4 A2.18E5
14:45 H1.14E4 A4.64E4
15:37 H1.33E4 A5.51E4
16:07 H3.31E4 A1.55E5
16:25 H4.17E3 A2.28E4
17:49 H4.13E4 A1.98E5
18:00 H1.01E4 A4.64E4
18:33 H3.57E3 A1.77E4
20:30 H4.50E3 A3.03E4
305.8987 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:11 H7.76E4 A2.92E5
14:46 H1.67E4 A6.18E4
15:38 H1.47E4 A6.42E4
16:07 H4.66E4 A2.00E5
16:24 H6.02E3 A2.41E4
17:48 H5.07E4 A2.57E5
18:01 H1.18E4 A5.79E4
20:31 H6.34E3 A4.11E4
315.9419 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:35 H1.35E6 A5.51E6
17:47 H3.24E5 A1.65E6
317.9389 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:35 H1.75E6 A6.98E6
17:47 H4.23E5 A2.11E6
100 %
50
0
5.6E4
2.8E4
0.0E0
7.8E4
3.9E4
1.4E6
6.8E5
1.8E6
8.8E5
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time


File:191030D1 #1-1683 Acq:30-OCT-2019 18:45:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata_Analytical_Laboratory_VG7 Text:1903430-05RE1 PDI-024SC-B-00-02-190927 14.9 Exp:TCDF_DB225
303.9016 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
17:49
H4.13E4
A1.98E5
100 %
90
80
70
60
50
40
30
20
10
0
4.1E4
3.7E4
3.3E4
2.9E4
2.5E4
2.1E4
1.7E4
1.2E4
8.3E3
4.1E3
0.0E0
16:36
16:48
17:00
17:12
17:24
17:36
17:48
18:00
18:12
18:24
18:36
18:48
19:00
19:12
19:24
Time
305.8987 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
17:48
H5.07E4
A2.55E5
100 %
90
80
70
60
50
40
30
20
10
0
5.1E4
4.6E4
4.1E4
3.6E4
3.1E4
2.5E4
2.0E4
1.5E4
1.0E4
5.1E3
0.0E0
16:36
16:48
17:00
17:12
17:24
17:36
17:48
18:00
18:12
18:24
18:36
18:48
19:00
19:12
19:24
Time

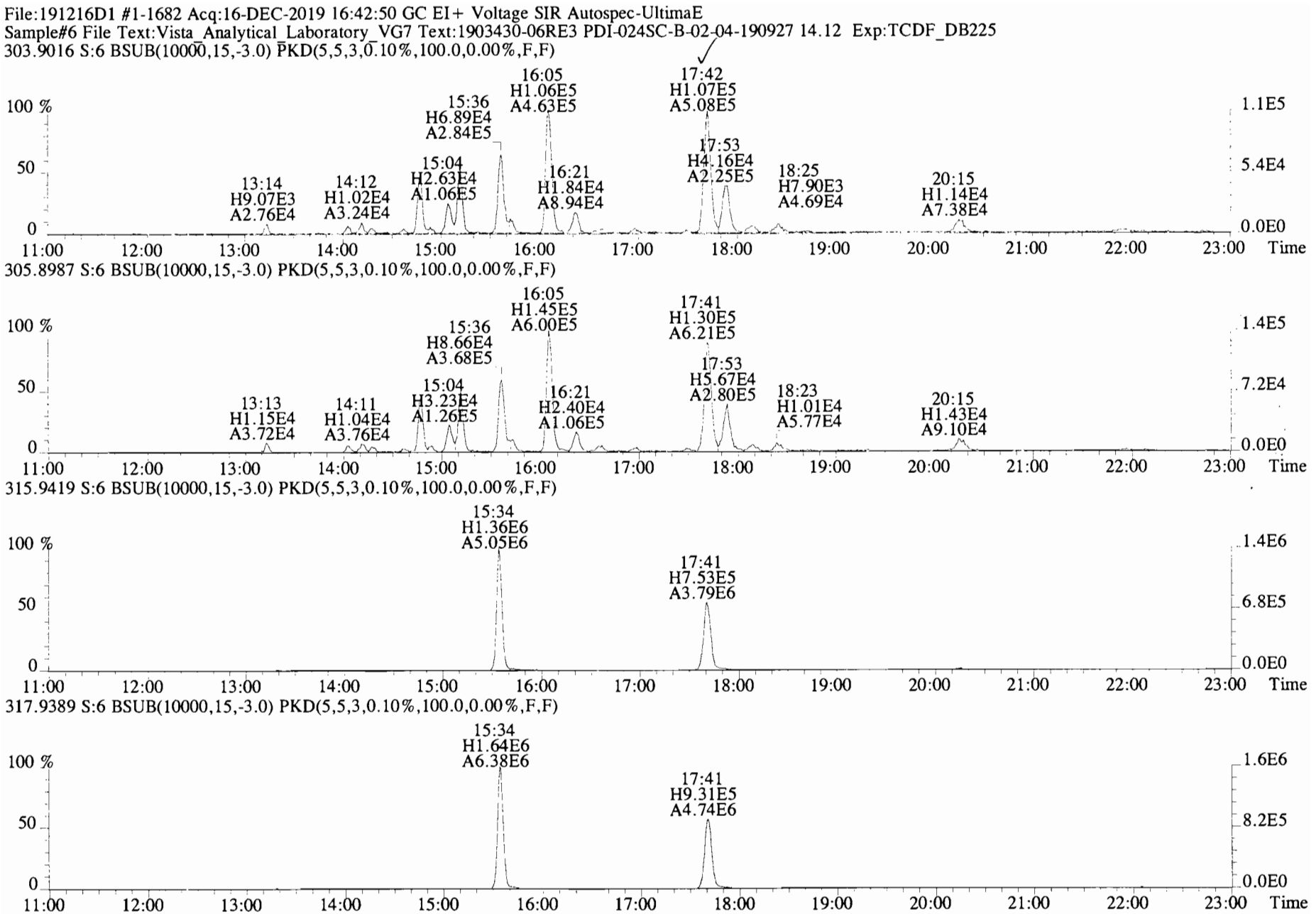

File:191030D1 #1-1683 Acq:30-OCT-2019 18:45:00 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Viata_Analytical_Laboratory_VG7 Text:1903430-05RE1 PDI-024SC-B-00-02-190927 14.9 Exp:TCDF_DB225
331.9368 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:22
H8.47E5
A3.73E6
16:14
H3.05E5
A1.23E6
100 %
50
0
8.5E5
4.2E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
333.9339 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:21
H1.08E6
A4.56E6
16:14
H3.76E5
A1.55E6
100 %
50
0
1.1E6
5.4E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
375.8364 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:28
H2.57E3
A3.99E3
11:57
H1.22E3
A3.02E3
12:28
H1.73E3
A4.10E3
12:41
H494.22
A1.84E3
13:37
H1.18E3
A1.72E3
14:59
H1.34E3
A2.59E3
16:15
H864.33
A1.14E3
17:02
H1.16E3
A2.10E3
18:15
H1.12E3
A2.33E3
19:15
H1.14E3
A1.36E3
19:54
H1.11E3
A2.79E3
21:08
H1.94E3
A1.70E3
21:58
H1.31E3
A5.79E3
100 %
50
0
2.6E3
1.3E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
330.9792 S:10
12:11
11:45
12:42
13:57
13:31
14:25
15:00
15:25
16:02
16:43
17:18
18:26
18:53
19:23
19:45
20:13
20:38
21:18
22:09
22:43
100 %
50
0
2.5E6
1.2E6
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time

Client ID: PDI-024SC-B-02-04-1909¶ Filename: 191216D1 S:6 Acq:16-DEC-19 16:42:50 ConCal: ST191216D1-1
Lab ID: 1903430-06RE3 GC Column ID: DB-225 ICal: 1613TCDFVG7-5-30-19 wt/vol:10.357 EndCAL: NA

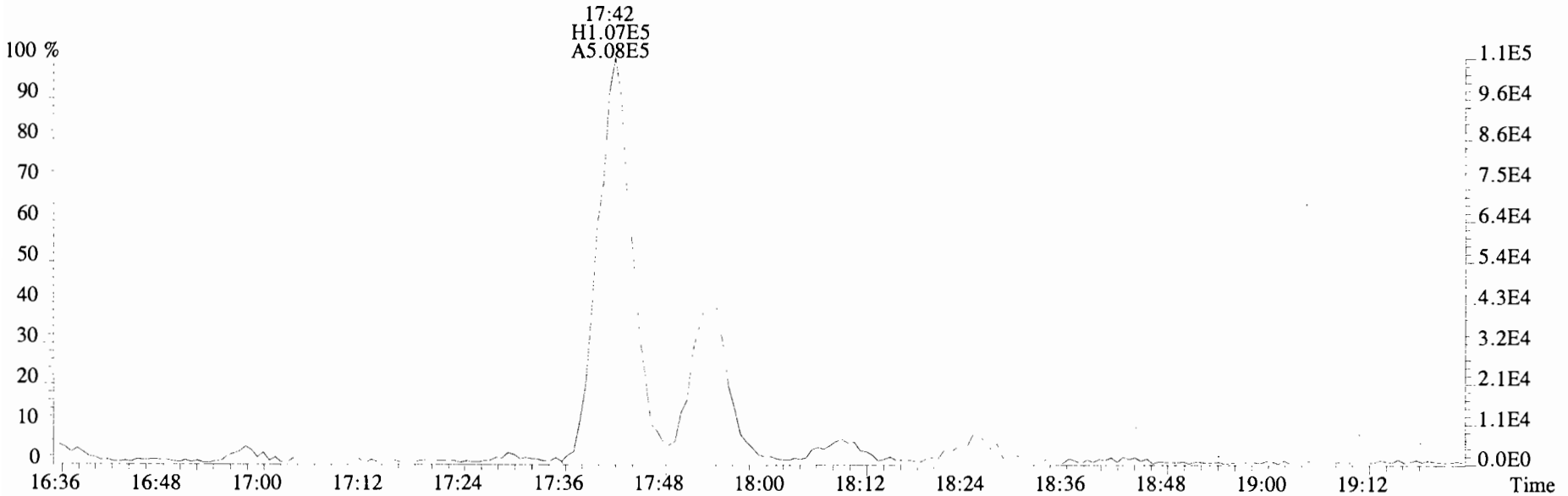
Name	Resp	RA	RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.14e+07	0.79 y	15:34	1.00	193.1	-
13C-2,3,7,8-TCDF	8.53e+06	0.80 y	17:41	1.02	141.1	73.1
2,3,7,8-TCDF	1.13e+06	0.82 y	17:42	0.95	26.97	

Integrations by Analyst: DB
Date: 12/16/19

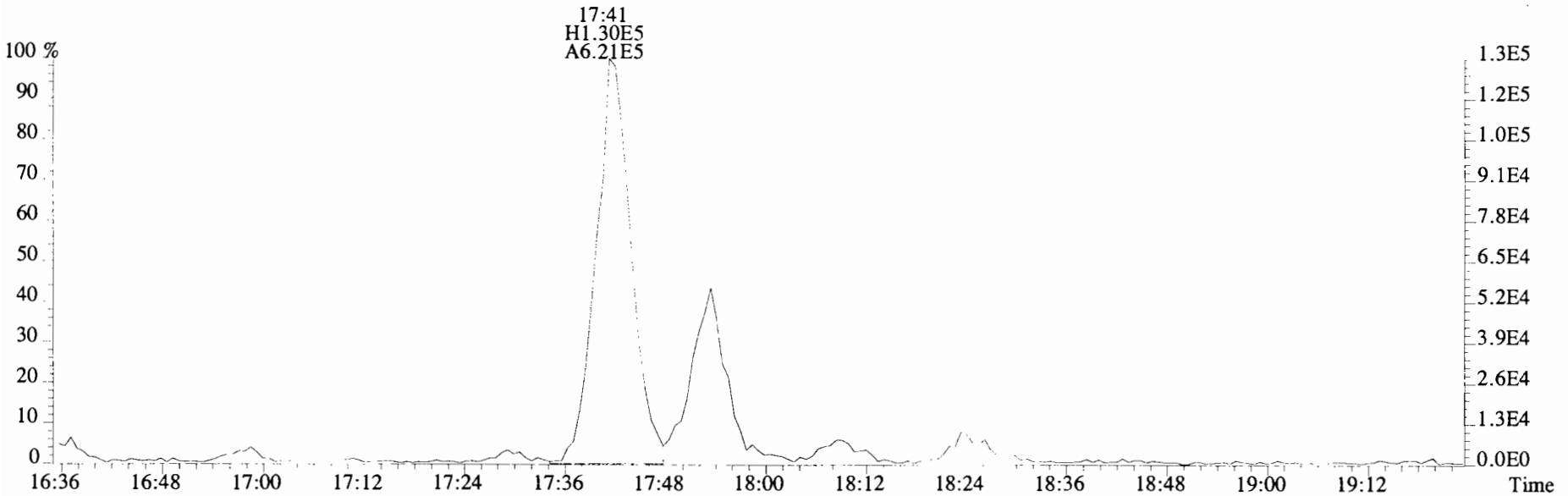
Reviewed by Analyst: CT
Date: 12/17/19

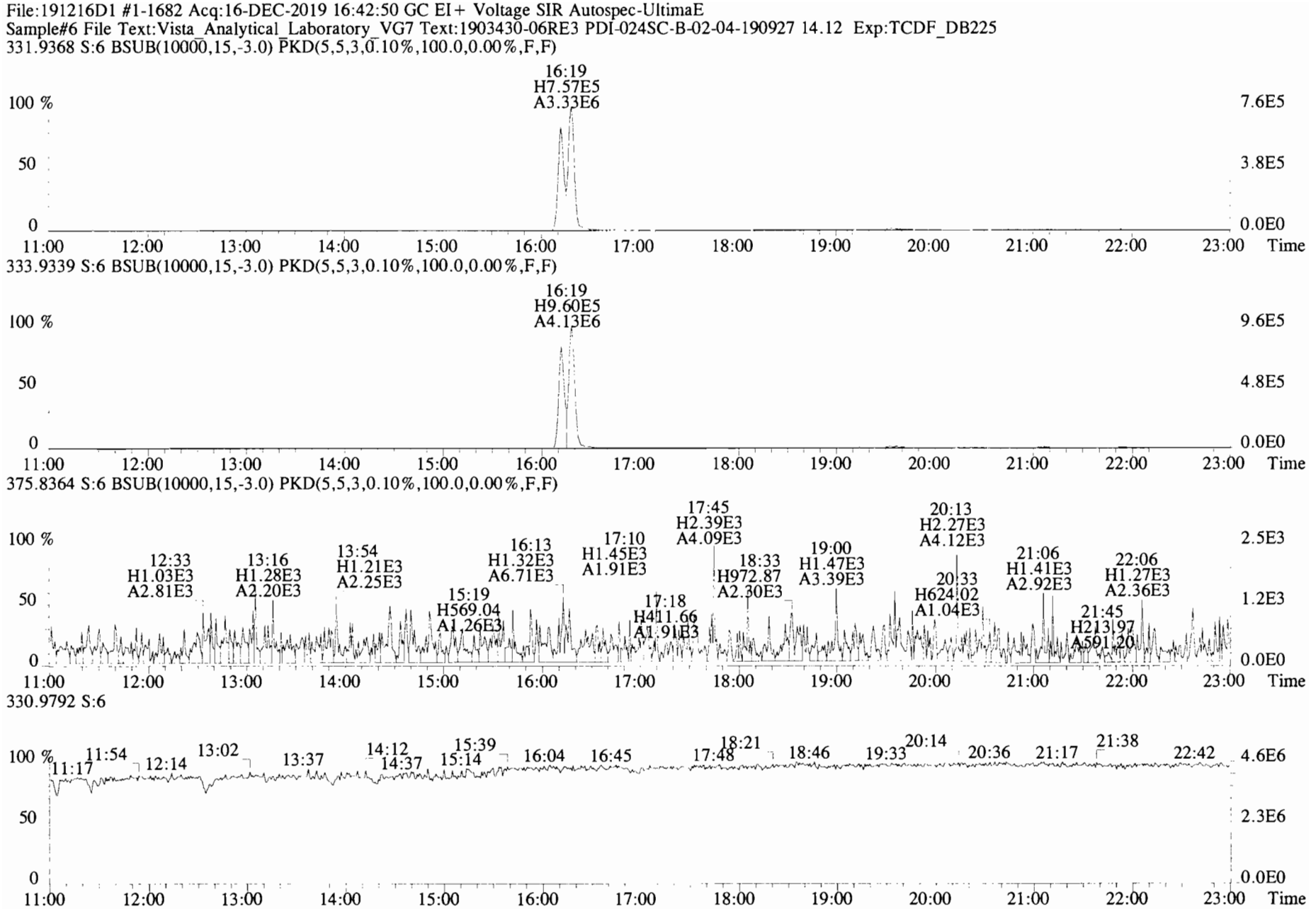

File:191216D1 #1-1682 Acq:16-DEC-2019 16:42:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE3 PDI-024SC-B-02-04-190927 14.12 Exp:TCDF_DB225
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
13:14 H9.07E3 A2.76E4
14:12 H1.02E4 A3.24E4
15:04 H2.63E4 A1.06E5
15:36 H6.89E4 A2.84E5
16:05 H1.06E5 A4.63E5
16:21 H1.84E4 A8.94E4
17:42 H1.07E5 A5.08E5
17:53 H4.16E4 A2.25E5
18:25 H7.90E3 A4.69E4
20:15 H1.14E4 A7.38E4
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
13:13 H1.15E4 A3.72E4
14:11 H1.04E4 A3.76E4
15:04 H3.23E4 A1.26E5
15:36 H8.66E4 A3.68E5
16:05 H1.45E5 A6.00E5
16:21 H2.40E4 A1.06E5
17:41 H1.30E5 A6.21E5
17:53 H5.67E4 A2.80E5
18:23 H1.01E4 A5.77E4
20:15 H1.43E4 A9.10E4
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:34 H1.36E6 A5.05E6
17:41 H7.53E5 A3.79E6
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:34 H1.64E6 A6.38E6
17:41 H9.31E5 A4.74E6
100 %
50
0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
1.1E5
5.4E4
0.0E0
1.4E5
7.2E4
0.0E0
1.4E6
6.8E5
0.0E0
1.6E6
8.2E5
0.0E0

File:191216D1 #1-1682 Acq:16-DEC-2019 16:42:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE3 PDI-024SC-B-02-04-190927 14.12 Exp:TCDF_DB225
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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




File:191216D1 #1-1682 Acq:16-DEC-2019 16:42:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:1903430-06RE3 PDI-024SC-B-02-04-190927 14.12 Exp:TCDF_DB225
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:19
H7.57E5
A3.33E6
100 %
50
0
7.6E5
3.8E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:19
H9.60E5
A4.13E6
100 %
50
0
9.6E5
4.8E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
12:33
H1.03E3
A2.81E3
13:16
H1.28E3
A2.20E3
13:54
H1.21E3
A2.25E3
15:19
H569.04
A1.26E3
16:13
H1.32E3
A6.71E3
17:10
H1.45E3
A1.91E3
17:18
H411.66
A1.91E3
17:45
H2.39E3
A4.09E3
18:33
H972.87
A2.30E3
19:00
H1.47E3
A3.39E3
20:13
H2.27E3
A4.12E3
20:33
H624.02
A1.04E3
21:06
H1.41E3
A2.92E3
21:45
H213.97
A591.20
22:06
H1.27E3
A2.36E3
100 %
50
0
2.5E3
1.2E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
330.9792 S:6
11:17
11:54
12:14
13:02
13:37
14:12
14:37
15:14
15:39
16:04
16:45
17:48
18:21
18:46
19:33
20:14
20:36
21:17
21:38
22:42
100 %
50
0
4.6E6
2.3E6
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time

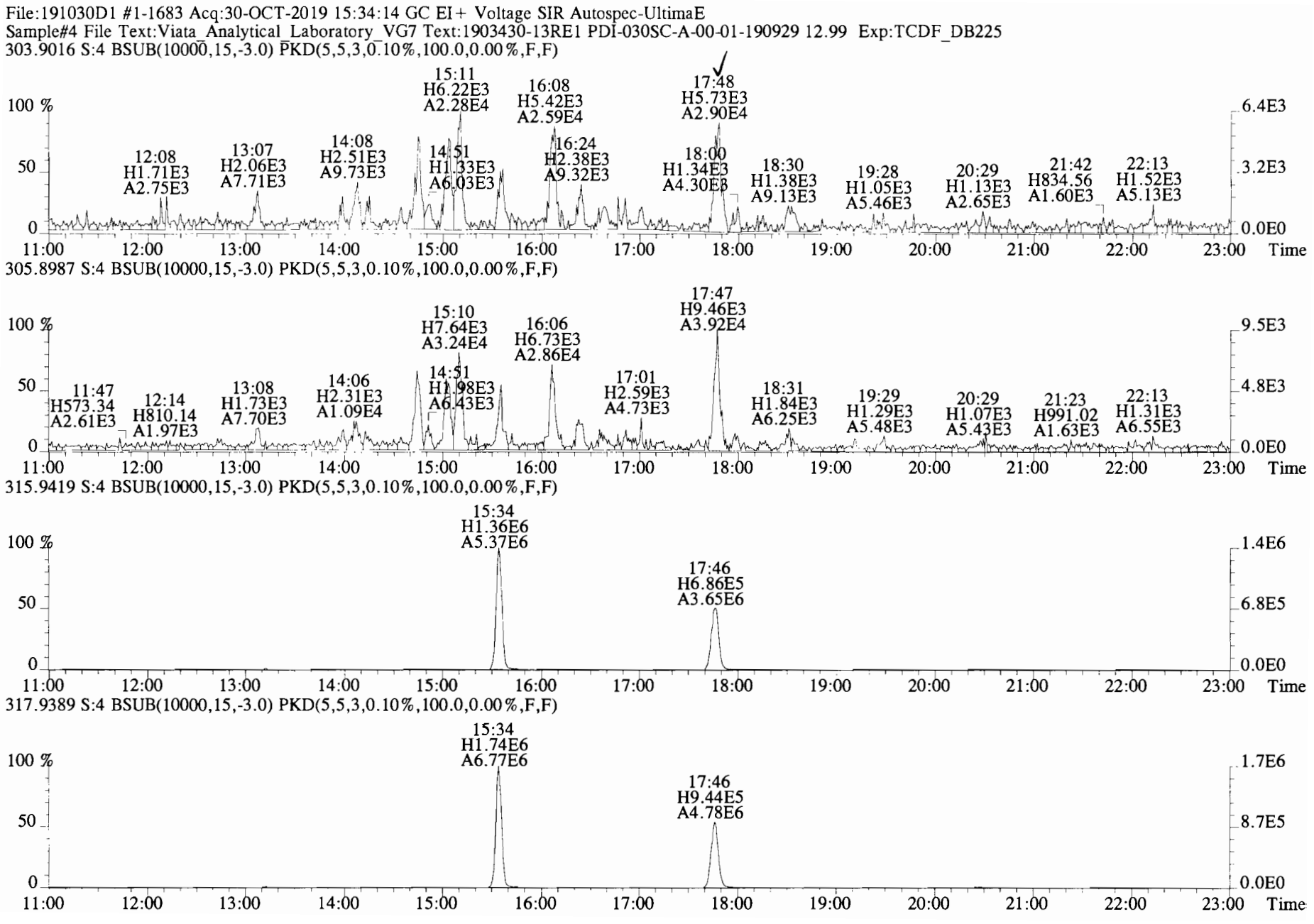
Name	Resp	RA		RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.21e+07	0.79	y	15:34	1.00	199.1	-
13C-2,3,7,8-TCDF	8.43e+06	0.76	y	17:46	1.02	135.3	68.0
2,3,7,8-TCDF	6.50e+04	0.74	y	17:47	0.95	1.621	

Integrations by Analyst: DB

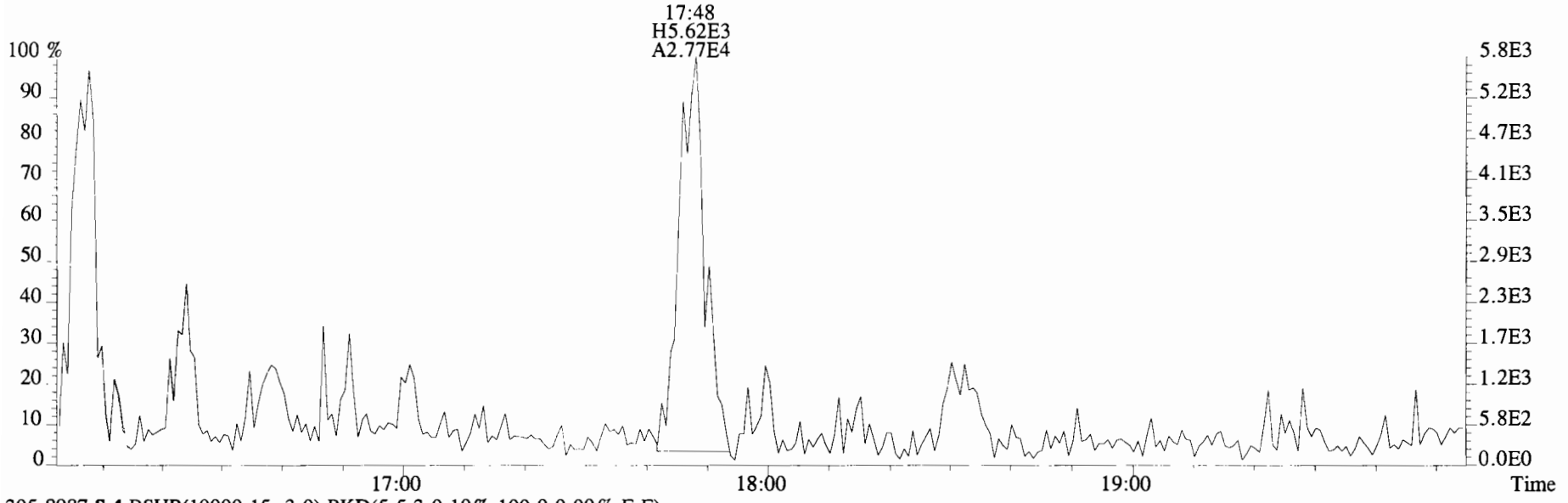
Date: 10/30/19

Reviewed by Analyst: CT

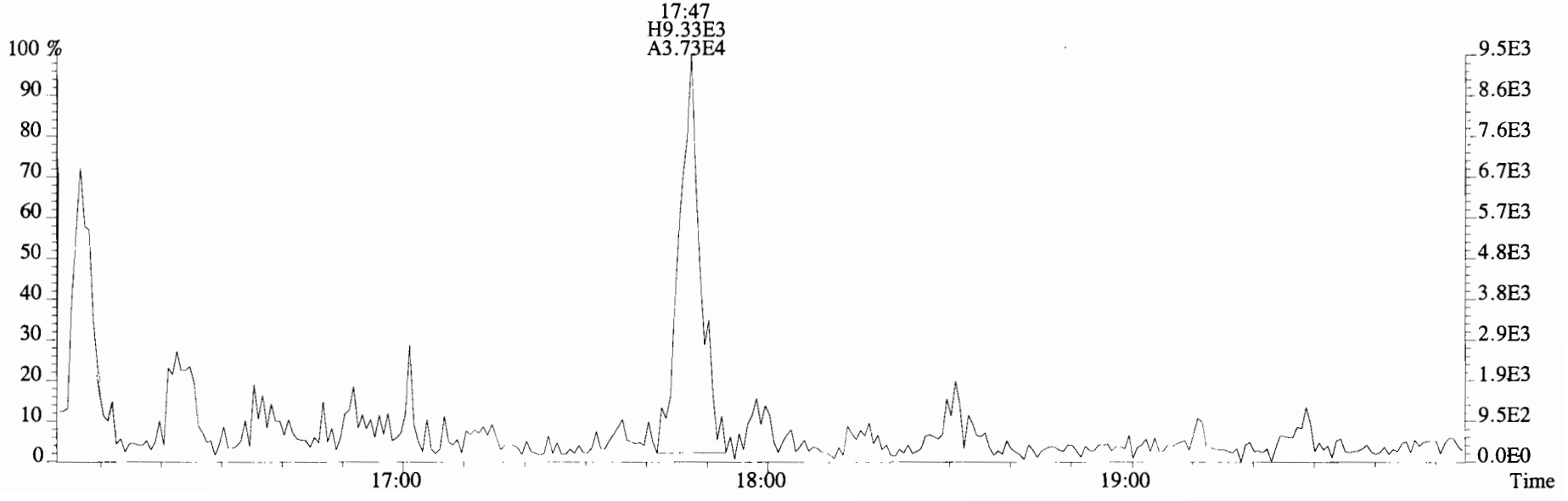
Date: 11/04/19


File:191030D1 #1-1683 Acq:30-OCT-2019 15:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata_Analytical_Laboratory_VG7 Text:1903430-13RE1 PDI-030SC-A-00-01-190929 12.99 Exp:TCDF_DB225
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:11 H6.22E3 A2.28E4
16:08 H5.42E3 A2.59E4
17:48 H5.73E3 A2.90E4
12:08 H1.71E3 A2.75E3
13:07 H2.06E3 A7.71E3
14:08 H2.51E3 A9.73E3
14:51 H1.33E3 A6.03E3
16:24 H2.38E3 A9.32E3
18:00 H1.34E3 A4.30E3
18:30 H1.38E3 A9.13E3
19:28 H1.05E3 A5.46E3
20:29 H1.13E3 A2.65E3
21:42 H834.56 A1.60E3
22:13 H1.52E3 A5.13E3
100 %
50
0
6.4E3
3.2E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:10 H7.64E3 A3.24E4
16:06 H6.73E3 A2.86E4
17:47 H9.46E3 A3.92E4
11:47 H573.34 A2.61E3
12:14 H810.14 A1.97E3
13:08 H1.73E3 A7.70E3
14:06 H2.31E3 A1.09E4
14:51 H1.98E3 A6.43E3
17:01 H2.59E3 A4.73E3
18:31 H1.84E3 A6.25E3
19:29 H1.29E3 A5.48E3
20:29 H1.07E3 A5.43E3
21:23 H991.02 A1.63E3
22:13 H1.31E3 A6.55E3
100 %
50
0
9.5E3
4.8E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:34 H1.36E6 A5.37E6
17:46 H6.86E5 A3.65E6
100 %
50
0
1.4E6
6.8E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:34 H1.74E6 A6.77E6
17:46 H9.44E5 A4.78E6
100 %
50
0
1.7E6
8.7E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time

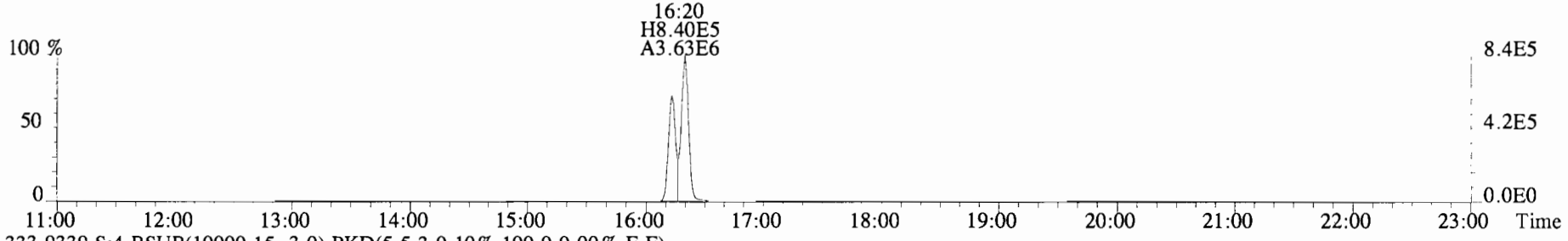
File:191030D1 #1-1683 Acq:30-OCT-2019 15:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata_Analytical_Laboratory_VG7 Text:1903430-13RE1 PDI-030SC-A-00-01-190929 12.99 Exp:TCDF_DB225
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



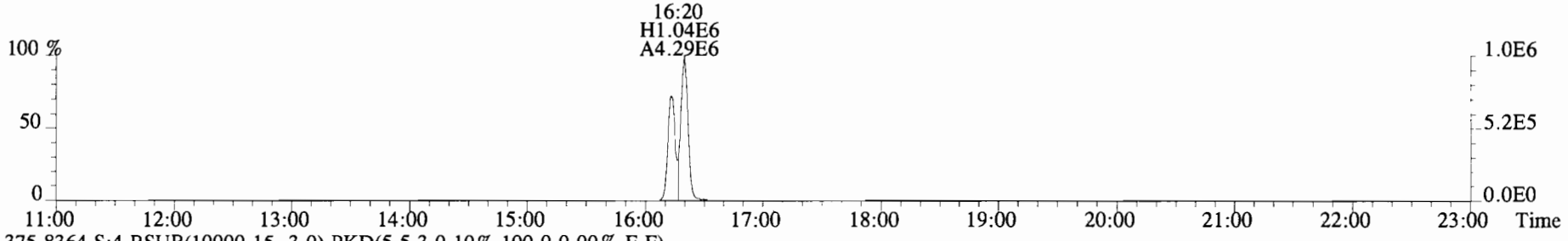
305.8987 **S:4** BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



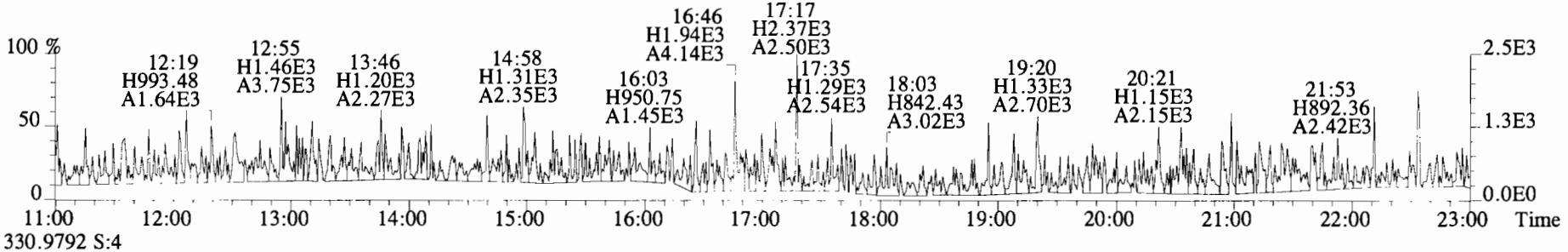
File:191030D1 #1-1683 Acq:30-OCT-2019 15:34:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Viata_Analytical_Laboratory_VG7 Text:1903430-13RE1 PDI-030SC-A-00-01-190929 12.99 Exp:TCDF_DB225
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



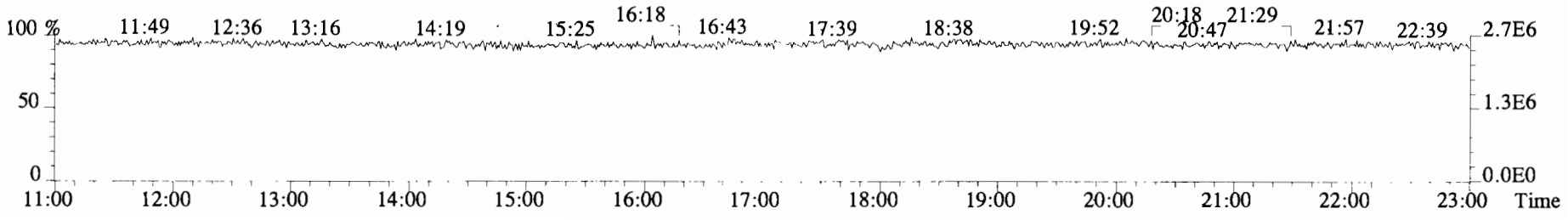
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



330.9792 S:4



CONTINUING CALIBRATION

HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST191015D1-1

End Calibration ID: ST191015D1-2

Reviewed By: CT 10/17/19
Initials & Date

	Beg.	End
Ion abundance within QC limits?	☑	☑
Concentrations within criteria?	☑	☑
TCDD/TCDF Valleys <25%	☑	☑
First and last eluters present?	☑	☑
Retention Times within criteria?	☑	☑
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	☑	☑
Forms signed and dated?	☑	☑
Correct ICAL referenced?	DB	DB

Run Log:

- Correct instrument listed?	☑	☑
- Samples within 12 hour clock?	(Y)	N
- Bottle position verfied?	DB	

	Beg.	End
Mass resolution ≥	☑	☑

☐ 5k ☐ 6-8K ☐ 8K ☑ 10K

1614 1699 429 1613/1668/8280

Intergrated peaks display correctly?	☑	☑

GC Break <20% NA

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours NA

Comments:

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST191015D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191015D1 S#1 Analysis Date: 15-OCT-19 Time: 12:15:49

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	10.4	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	52.6	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	48.6	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.14	1.05-1.43	y	51.2	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.19	1.05-1.43	y	50.5	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.00	0.88-1.20	y	47.8	43.0 - 58.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	98.9	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.53	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	52.2	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	49.3	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.18	1.05-1.43	y	46.4	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.15	1.05-1.43	y	46.2	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.18	1.05-1.43	y	48.3	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.18	1.05-1.43	y	46.7	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.98	0.88-1.20	y	47.4	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.96	0.88-1.20	y	47.2	43.0 - 58.0
OCDF	M+2/M+4	0.90	0.76-1.02	y	96.6	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 10/15/19

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: 191015D1 S#1 Analysis Date: 15-OCT-19 Time: 12:15:49

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	106	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	102	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	117	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	108	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	108	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	115	72.0 - 138.0
13C-OCDD	M/M+2	0.89	0.76-1.02	y	242	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.80	0.65-0.89	y	106	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	109	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	109	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.48	0.43-0.59	y	107	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	101	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.48	0.43-0.59	y	102	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.49	0.43-0.59	y	112	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.40	0.37-0.51	y	104	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.39	0.37-0.51	y	107	77.0 - 129.0
13C-OCDF	M+2/M+4	0.90	0.76-1.02	y	242	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.90	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: 10/15/19

EPA METHOD 8290

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST191015D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191015D1 S#1 Analysis Date: 15-OCT-19 Time: 12:15:49

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	10.4	8.00 - 12.0
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	52.6	40.0 - 60.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	48.6	40.0 - 60.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.14	1.05-1.43	y	51.2	40.0 - 60.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.19	1.05-1.43	y	50.5	40.0 - 60.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.00	0.88-1.20	y	47.8	40.0 - 60.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	98.9	80.0 - 120
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	9.53	8.00 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	52.2	40.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	49.3	40.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.18	1.05-1.43	y	46.4	40.0 - 60.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.15	1.05-1.43	y	46.2	40.0 - 60.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.18	1.05-1.43	y	48.3	40.0 - 60.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.18	1.05-1.43	y	46.7	40.0 - 60.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.98	0.88-1.20	y	47.4	40.0 - 60.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.96	0.88-1.20	y	47.2	40.0 - 60.0
OCDF	M+2/M+4	0.90	0.76-1.02	y	96.6	80.0 - 120

Analyst: DB

Date: 10/15/19

EPA METHOD 8290

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: 191015D1 S#1 Analysis Date: 15-OCT-19 Time: 12:15:49

LABELED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	106	70.0 - 130
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	102	70.0 - 130
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	117	70.0 - 130
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	108	70.0 - 130
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	108	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	115	70.0 - 130
13C-OCDD	M+2/M+4	0.89	0.76-1.02	y	242	140 - 260
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	106	70.0 - 130
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	109	70.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	109	70.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.48	0.43-0.59	y	107	70.0 - 130
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	101	70.0 - 130
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.48	0.43-0.59	y	102	70.0 - 130
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.49	0.43-0.59	y	112	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.40	0.37-0.51	y	104	70.0 - 130
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.39	0.37-0.51	y	107	70.0 - 130
13C-OCDF	M+2/M+4	0.90	0.76-1.02	y	242	140 - 260
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD					9.90	7.00 - 13.0

Analyst: DB

Date: 10/15/19

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: 191015D1 S#1 Analysis Date: 15-OCT-19 Time: 12:15:49

ZB-5MS IS Data Filename: 191015D1 S#1 Analysis Date: 15-OCT-19 Time: 12:15:49

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	22:57	1,3,6,8-TCDF (F)	20:50
1,2,8,9-TCDD (L)	27:08	1,2,8,9-TCDF (L)	27:16
1,2,4,7,9-PeCDD (F)	28:44	1,3,4,6,8-PeCDF (F)	27:14
1,2,3,8,9-PeCDD (L)	31:07	1,2,3,8,9-PeCDF (L)	31:20
1,2,4,6,7,9-HxCDD (F)	32:32	1,2,3,4,6,8-HxCDF (F)	31:60
1,2,3,7,8,9-HxCDD (L)	34:29	1,2,3,7,8,9-HxCDF (L)	34:51
1,2,3,4,6,7,9-HpCDD (F)	37:05	1,2,3,4,6,7,8-HpCDF (F)	36:43
1,2,3,4,6,7,8-HpCDD (L)	37:55	1,2,3,4,7,8,9-HpCDF (L)	38:28

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<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: 10/15/19

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: 191015D1 S#1 Analysis Date: 15-OCT-19 Time: 12:15:49

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.021	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.196	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.150	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.185	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: DB

Date: 10/15/19

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: 191015D1 S#1 Analysis Date: 15-OCT-19 Time: 12:15:49

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
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	1.018	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.026	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.093	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.145	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.129	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.227	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.234	1.091-1.371

Analyst: DB

Date: 10/15/19

Client ID: 1613 CS3 19C2204 Filename: 191015D1 S:1 Acq:15-OCT-19 12:15:49 ConCal: ST191015D1-1

Lab ID: ST191015D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000 EndCAL: ST191015D1-2

	Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	1.35e+06	0.78 y	0.91	26:18	10.364		*	2.5	*
	1,2,3,7,8-PeCDD	5.28e+06	0.62 y	0.90	30:45	52.583		*	2.5	*
	1,2,3,4,7,8-HxCDD	4.96e+06	1.23 y	1.10	34:04	48.617		*	2.5	*
	1,2,3,6,7,8-HxCDD	5.46e+06	1.14 y	0.94	34:11	51.152		*	2.5	*
	1,2,3,7,8,9-HxCDD	5.25e+06	1.19 y	0.96	34:29	50.472		*	2.5	*
	1,2,3,4,6,7,8-HpCDD	4.34e+06	1.00 y	0.98	37:55	47.847		*	2.5	*
	OCDD	8.23e+06	0.90 y	0.96	41:13	98.862		*	2.5	*
	2,3,7,8-TCDF	1.81e+06	0.80 y	0.95	25:30	9.5280		*	2.5	*
	1,2,3,7,8-PeCDF	8.53e+06	1.58 y	0.96	29:35	52.171		*	2.5	*
	2,3,4,7,8-PeCDF	8.47e+06	1.60 y	1.01	30:28	49.288		*	2.5	*
	1,2,3,4,7,8-HxCDF	6.01e+06	1.18 y	1.18	33:11	46.390		*	2.5	*
	1,2,3,6,7,8-HxCDF	6.41e+06	1.15 y	1.07	33:18	46.222		*	2.5	*
	2,3,4,6,7,8-HxCDF	6.47e+06	1.18 y	1.11	33:54	48.306		*	2.5	*
	1,2,3,7,8,9-HxCDF	5.67e+06	1.18 y	1.06	34:51	46.712		*	2.5	*
	1,2,3,4,6,7,8-HpCDF	5.19e+06	0.98 y	1.13	36:43	47.427		*	2.5	*
	1,2,3,4,7,8,9-HpCDF	4.65e+06	0.96 y	1.28	38:28	47.202		*	2.5	*
	OCDF	9.45e+06	0.90 y	0.95	41:26	96.642		*	2.5	*
IS	13C-2,3,7,8-TCDD	1.44e+07	0.79 y	1.10	26:16	106.39				
IS	13C-1,2,3,7,8-PeCDD	1.11e+07	0.63 y	0.88	30:45	102.21				
IS	13C-1,2,3,4,7,8-HxCDD	9.27e+06	1.28 y	0.64	34:03	116.73				
IS	13C-1,2,3,6,7,8-HxCDD	1.14e+07	1.26 y	0.86	34:10	107.50				
IS	13C-1,2,3,7,8,9-HxCDD	1.08e+07	1.24 y	0.81	34:28	108.41				
IS	13C-1,2,3,4,6,7,8-HpCDD	9.26e+06	1.03 y	0.65	37:55	114.55				
IS	13C-OCDD	1.74e+07	0.89 y	0.58	41:12	242.23				
IS	13C-2,3,7,8-TCDF	2.00e+07	0.80 y	1.03	25:29	105.86				
IS	13C-1,2,3,7,8-PeCDF	1.70e+07	1.58 y	0.85	29:35	108.93				
IS	13C-2,3,4,7,8-PeCDF	1.69e+07	1.58 y	0.85	30:28	109.30				
IS	13C-1,2,3,4,7,8-HxCDF	1.10e+07	0.48 y	0.83	33:10	107.04				
IS	13C-1,2,3,6,7,8-HxCDF	1.30e+07	0.50 y	1.03	33:17	101.39				
IS	13C-2,3,4,6,7,8-HxCDF	1.20e+07	0.48 y	0.95	33:53	102.00				
IS	13C-1,2,3,7,8,9-HxCDF	1.14e+07	0.49 y	0.83	34:50	111.78				
IS	13C-1,2,3,4,6,7,8-HpCDF	9.70e+06	0.40 y	0.76	36:41	103.59				
IS	13C-1,2,3,4,7,8,9-HpCDF	7.70e+06	0.39 y	0.58	38:27	107.20				
IS	13C-OCDF	2.06e+07	0.90 y	0.69	41:25	242.38				
C/Up	37Cl-2,3,7,8-TCDD	1.46e+06		1.20	26:17	9.9015				
RS/RT	13C-1,2,3,4-TCDD	1.24e+07	0.78 y	1.00	25:43	100.00				
RS	13C-1,2,3,4-TCDF	1.83e+07	0.81 y	1.00	24:18	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.24e+07	0.48 y	1.00	33:35	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	74.6	75.1		*	*
Total Penta-Dioxins	194	194		*	*
Total Hexa-Dioxins	218	219		*	*
Total Hepta-Dioxins	109	109		*	*
Total Tetra-Furans	35.7	36.2		*	*
Total Penta-Furans	225.76	226.27		*	*
Total Hexa-Furans	248	248		*	*
Total Hepta-Furans	95.6	96.1		*	*

Rec	Qual
106	
102	
117	
108	
108	
115	
121	
106	
109	
109	
107	
101	
102	
112	
104	
107	
121	
99.0	

Integrations by Analyst: DB Date: 10/15/19

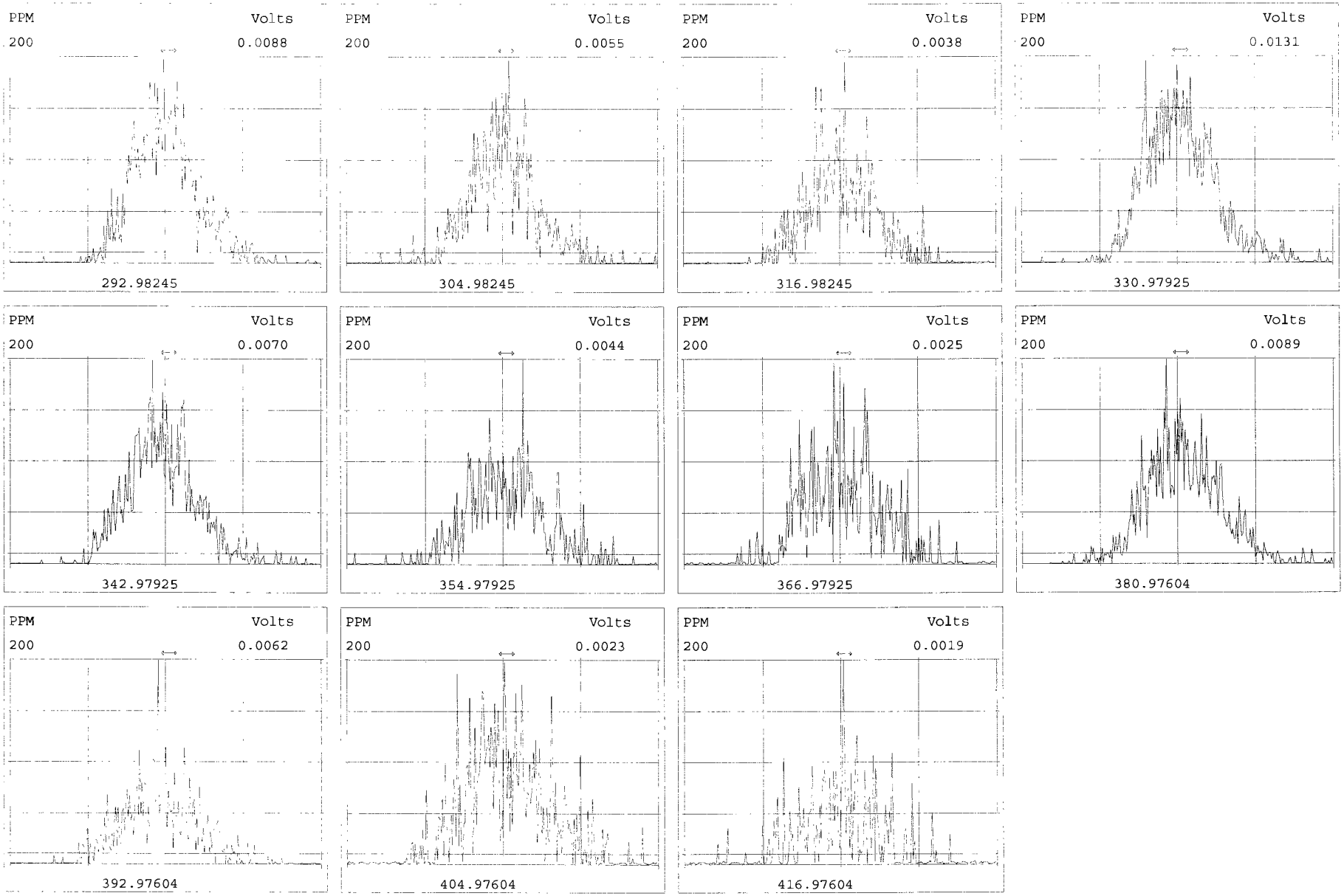
Reviewed by Analyst: CT Date: 10/17/19

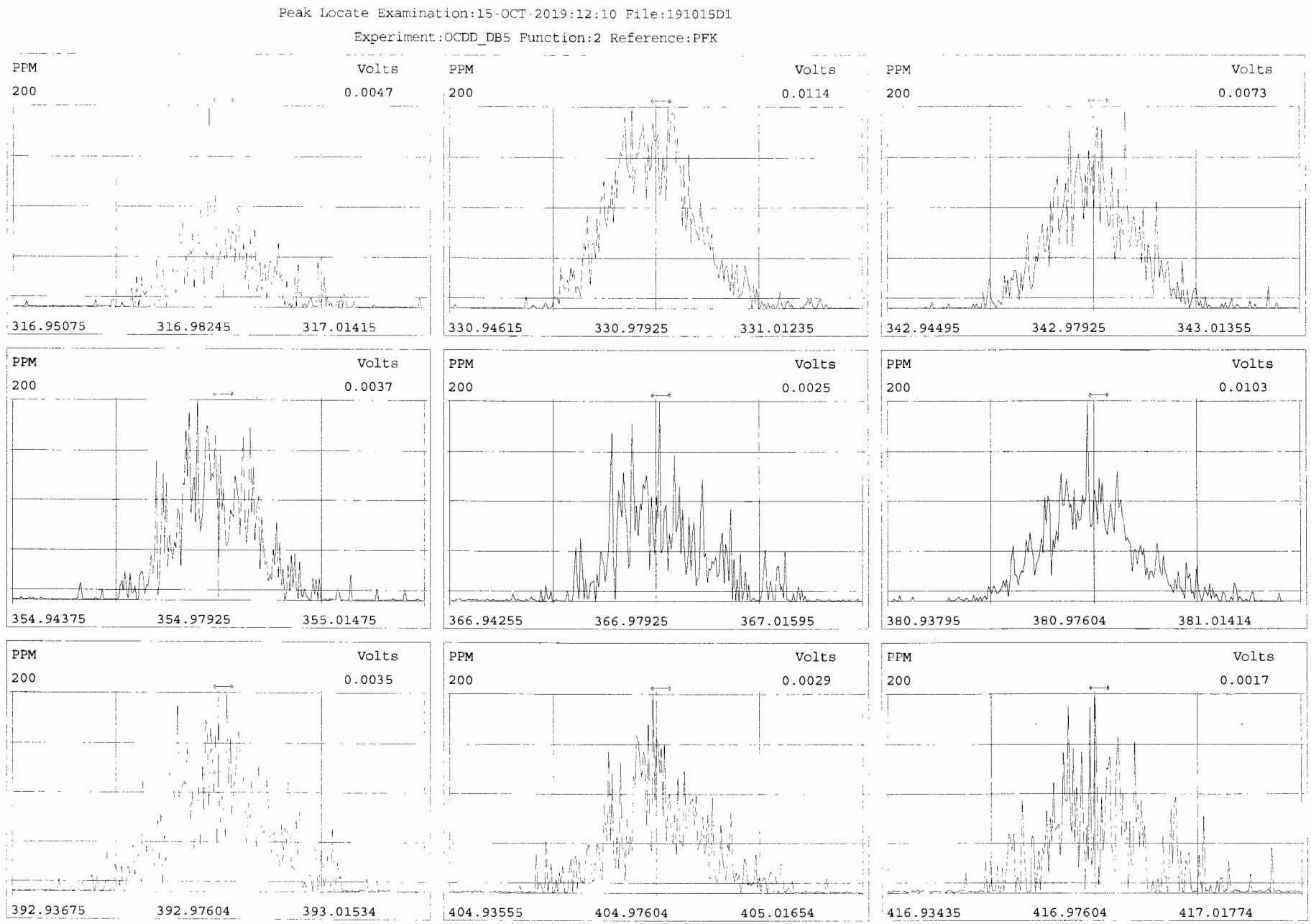
Vista Analytical Laboratory - Injection Log Run file: 191015D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191015D1	1	ST191015D1-1	DB	15-OCT-19	12:15:49	ST191015D1-1	ST191015D1-2
191015D1	2	B9J0092-BS1	DB	15-OCT-19	13:03:43	ST191015D1-1	ST191015D1-2
191015D1	3	B9J0128-BS1	DB	15-OCT-19	13:51:39	ST191015D1-1	NA
191015D1	4	SOLVENT BLANK	DB	15-OCT-19	14:39:34	NA	NA
191015D1	5	B9J0092-BLK1	DB	15-OCT-19	15:27:30	ST191015D1-1	ST191015D1-2
191015D1	6	B9J0128-BLK1	DB	15-OCT-19	16:15:26	ST191015D1-1	NA
191015D1	7	1903430-09	DB	15-OCT-19	17:03:21	ST191015D1-1	NA
191015D1	8	1903430-10	DB	15-OCT-19	17:51:17	ST191015D1-1	NA
191015D1	9	1903418-01	DB	15-OCT-19	18:39:11	ST191015D1-1	ST191015D1-2
191015D1	10	1903418-02	DB	15-OCT-19	19:27:05	ST191015D1-1	ST191015D1-2
191015D1	11	1903418-03	DB	15-OCT-19	20:14:59	ST191015D1-1	ST191015D1-2
191015D1	12	1903418-04	DB	15-OCT-19	21:02:44	ST191015D1-1	ST191015D1-2
191015D1	13	1903480-01	DB	15-OCT-19	21:50:32	ST191015D1-1	NA
191015D1	14	1903446-01	DB	15-OCT-19	22:38:21	ST191015D1-1	NA
191015D1	15	1903385-02	DB	15-OCT-19	23:26:06	ST191015D1-1	ST191015D1-2
191015D1	16	SOLVENT BLANK	DB	16-OCT-19	00:13:56	NA	NA
191015D1	17	ST191015D1-2	DB	16-OCT-19	01:01:41	ST191015D1-1	ST191015D1-2

Peak Locate Examination:15-OCT-2019:12:09 File:191015D1

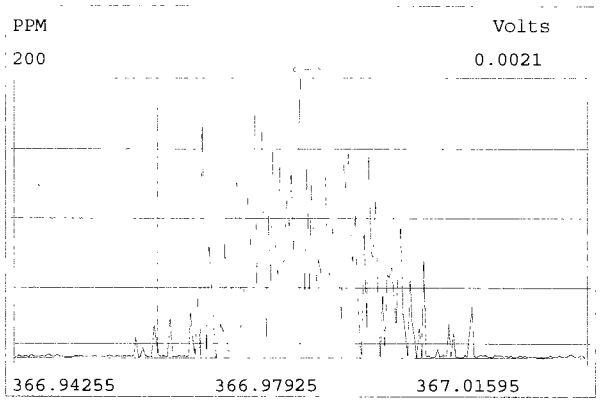
Experiment:OCDD_DB5 Function:1 Reference:PFK

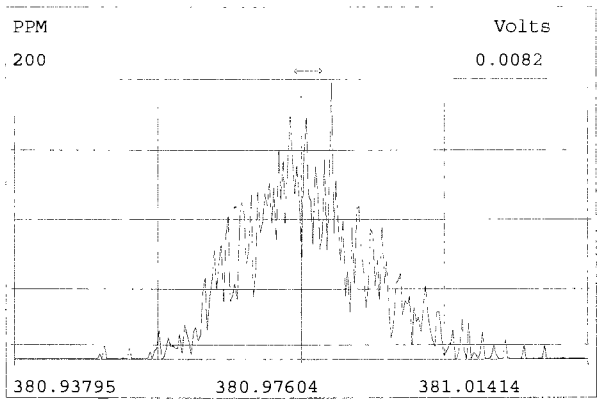


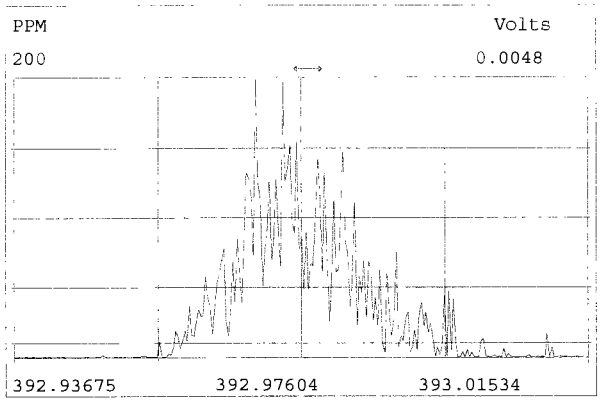

Peak Locate Examination:15-OCT-2019:12:10 File:191015D1
Experiment:OCDD_DB5 Function:2 Reference:PFK
PPM
Volts
200
0.0047
316.95075
316.98245
317.01415
PPM
Volts
200
0.0114
330.94615
330.97925
331.01235
PPM
Volts
200
0.0073
342.94495
342.97925
343.01355
PPM
Volts
200
0.0037
354.94375
354.97925
355.01475
PPM
Volts
200
0.0025
366.94255
366.97925
367.01595
PPM
Volts
200
0.0103
380.93795
380.97604
381.01414
PPM
Volts
200
0.0035
392.93675
392.97604
393.01534
PPM
Volts
200
0.0029
404.93555
404.97604
405.01654
PPM
Volts
200
0.0017
416.93435
416.97604
417.01774

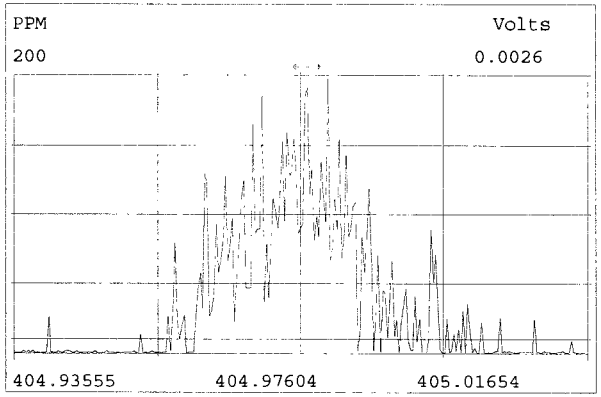
Peak Locate Examination:15-OCT-2019:12:11 File:191015D1

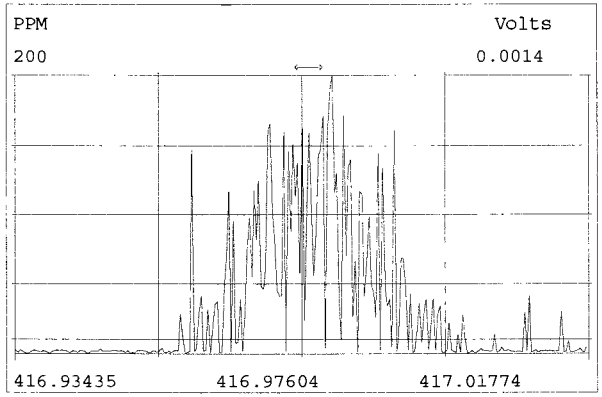
Experiment:OCDD_DB5 Function:3 Reference:PFK

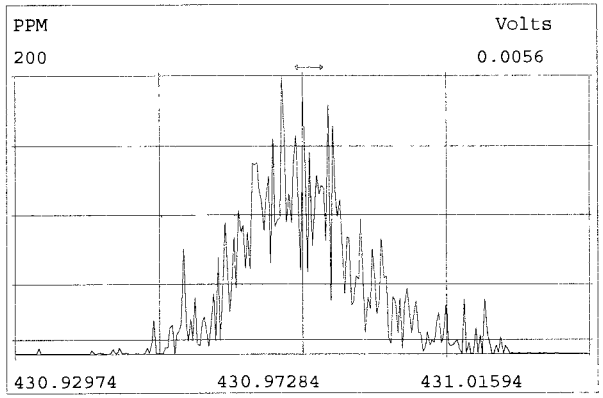


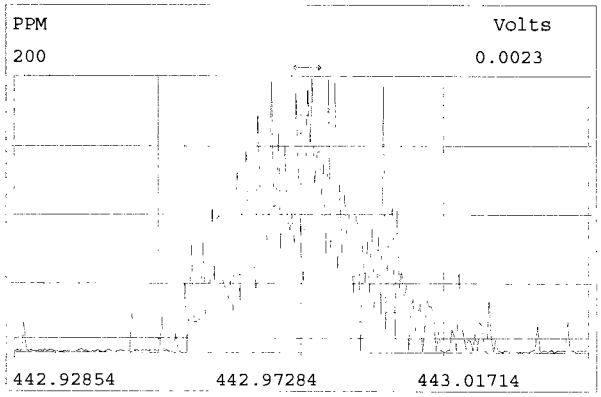


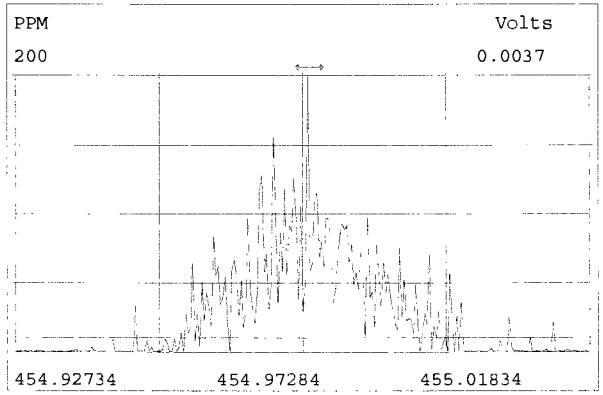






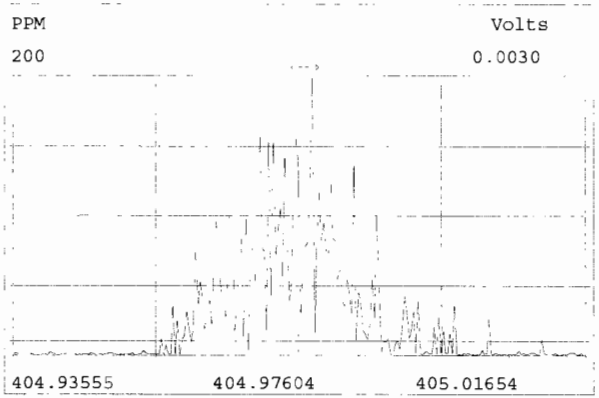


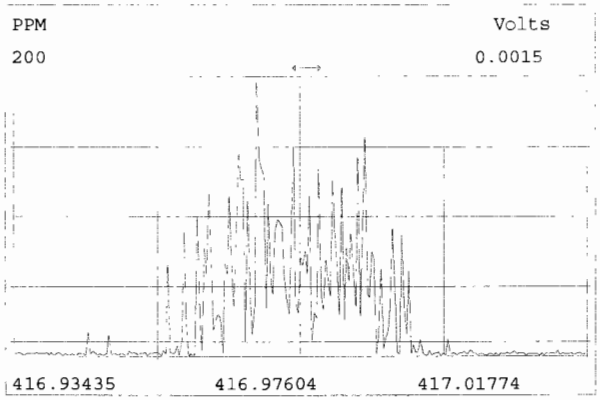


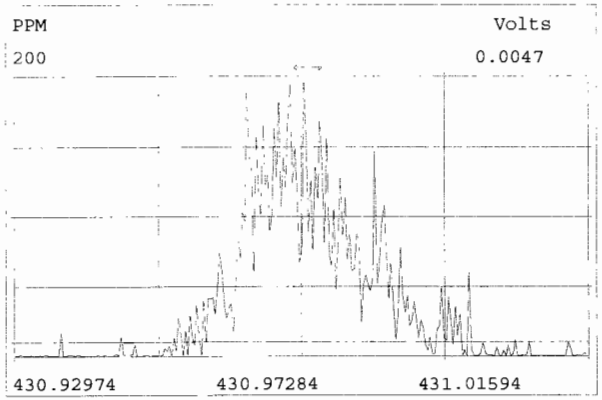


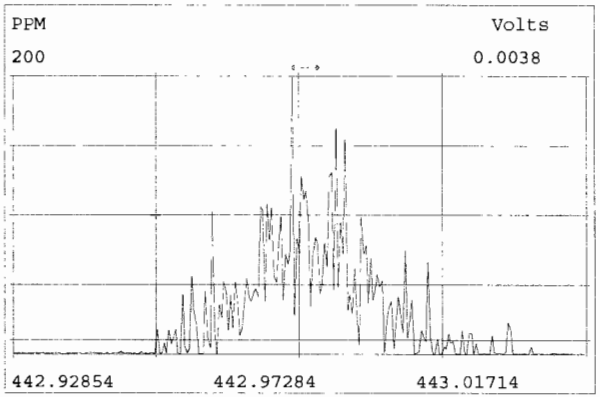
Peak Locate Examination:15-OCT-2019:12:12 File:191015D1

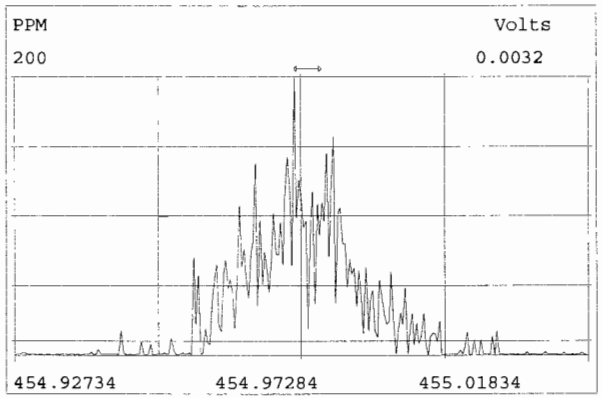
Experiment:OCDD_DB5 Function:4 Reference:PFK

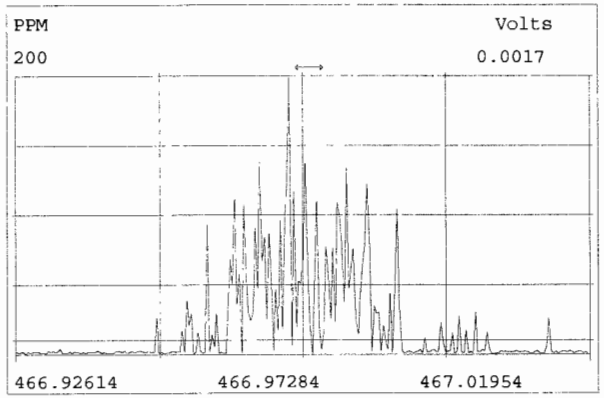


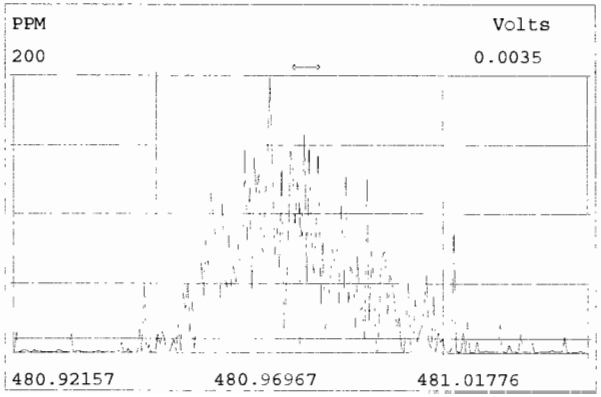






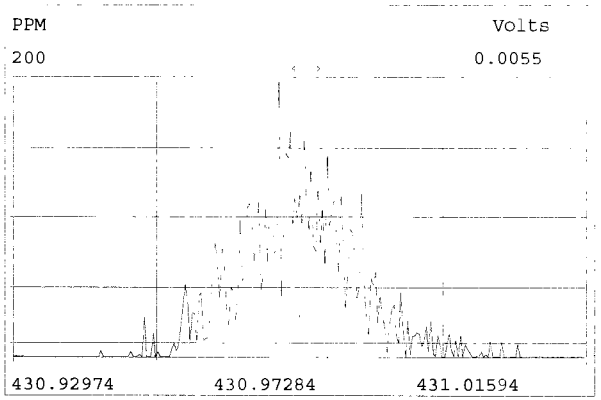


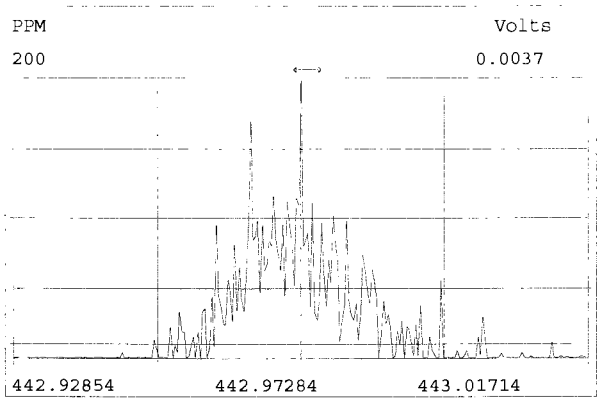


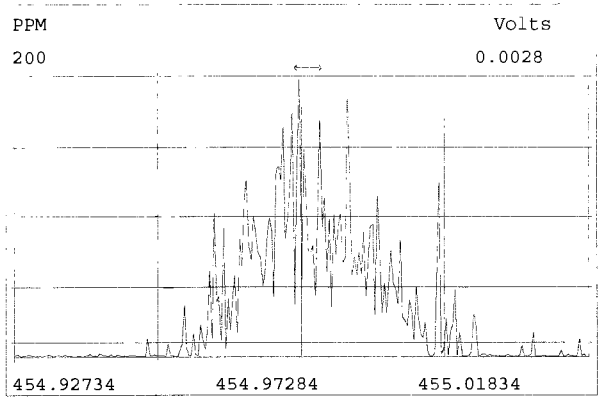


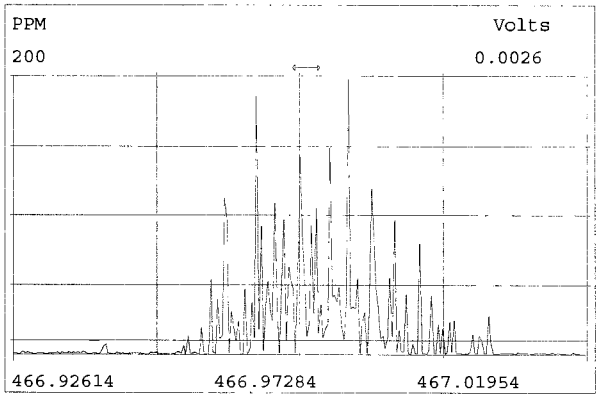
Peak Locate Examination:15-OCT-2019:12:13 File:191015D1

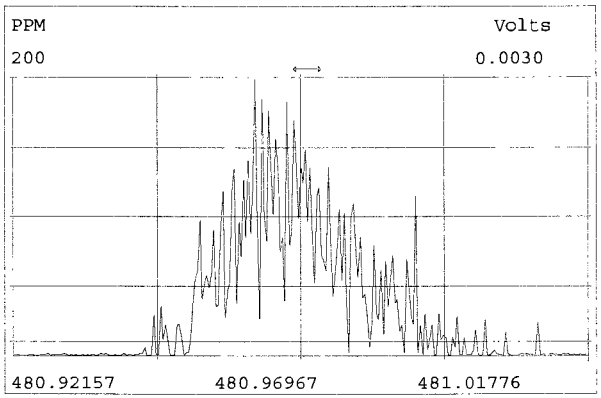
Experiment:OCDD_DB5 Function:5 Reference:PFK

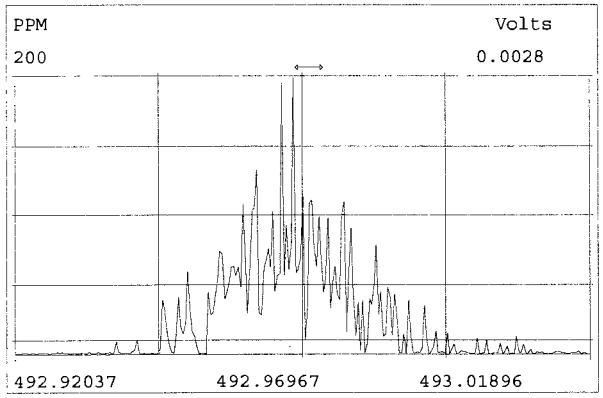


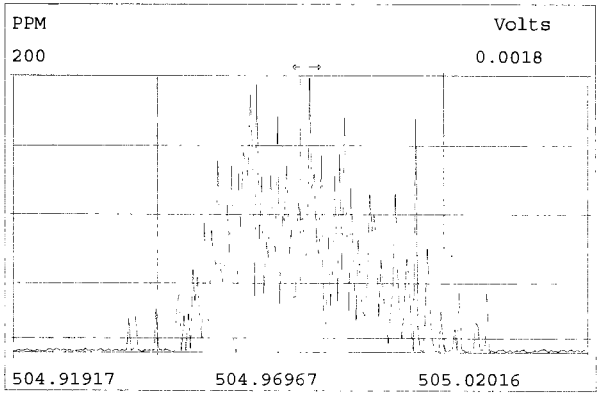


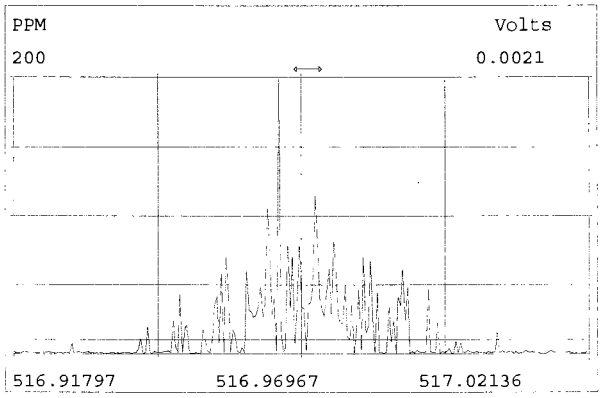




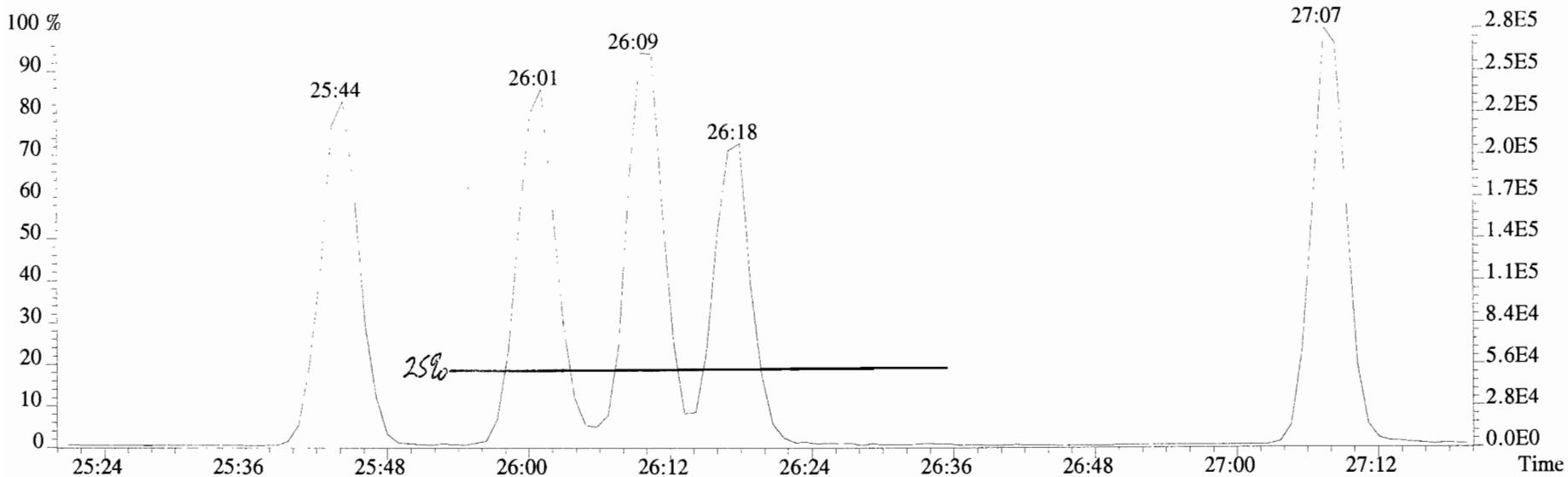




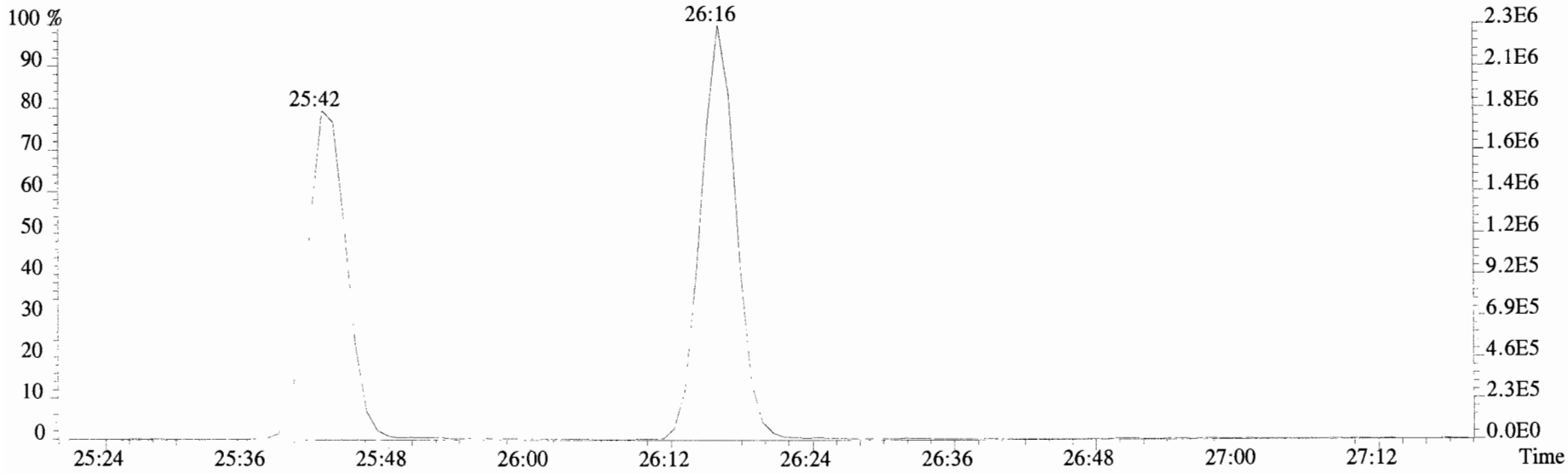


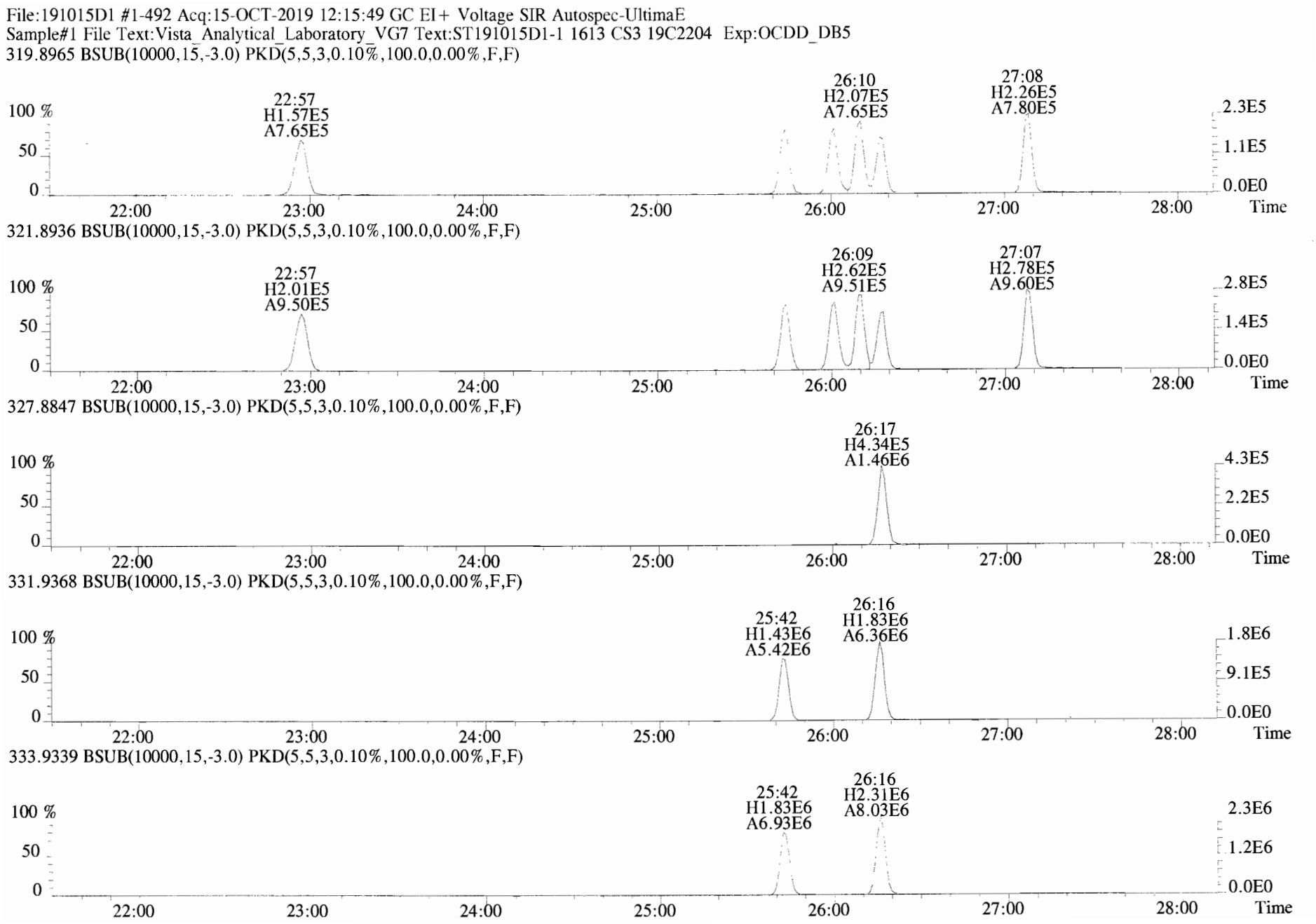


File:191015D1 #1-492 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
321.8936



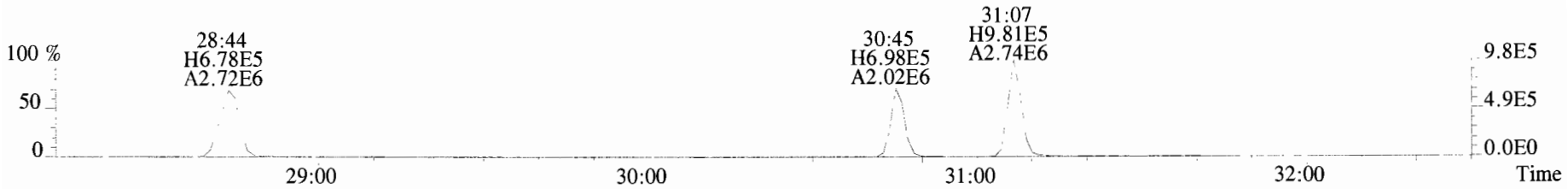
333.9339



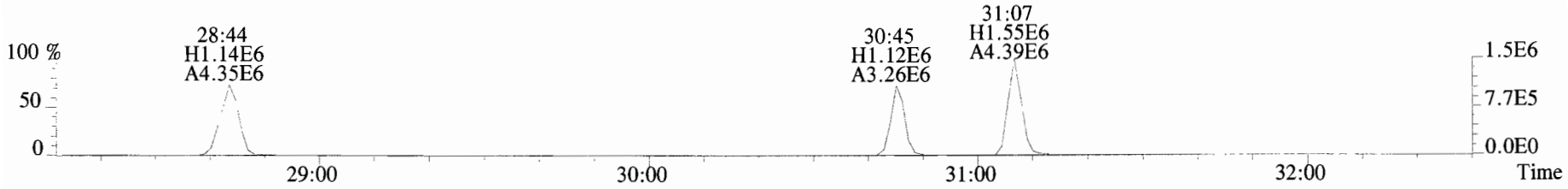

File:191015D1 #1-492 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:57 H1.57E5 A7.65E5
26:10 H2.07E5 A7.65E5
27:08 H2.26E5 A7.80E5
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:57 H2.01E5 A9.50E5
26:09 H2.62E5 A9.51E5
27:07 H2.78E5 A9.60E5
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:17 H4.34E5 A1.46E6
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:42 H1.43E6 A5.42E6
26:16 H1.83E6 A6.36E6
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:42 H1.83E6 A6.93E6
26:16 H2.31E6 A8.03E6
100 %
50
0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time

File:191015D1 #1-211 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5

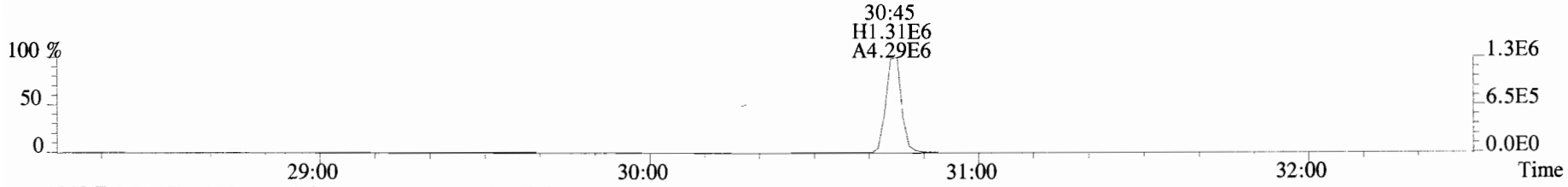
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



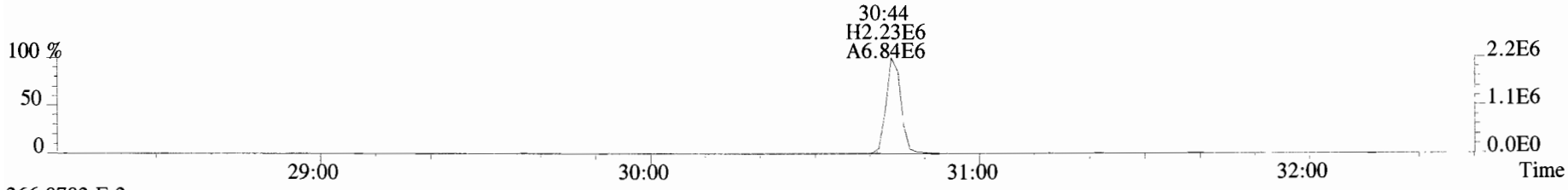
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



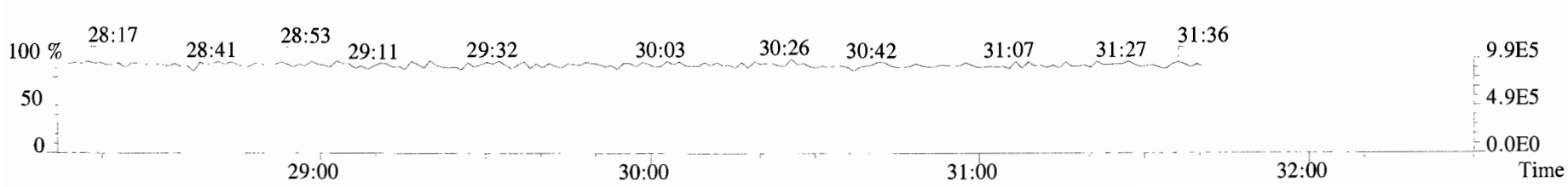
365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



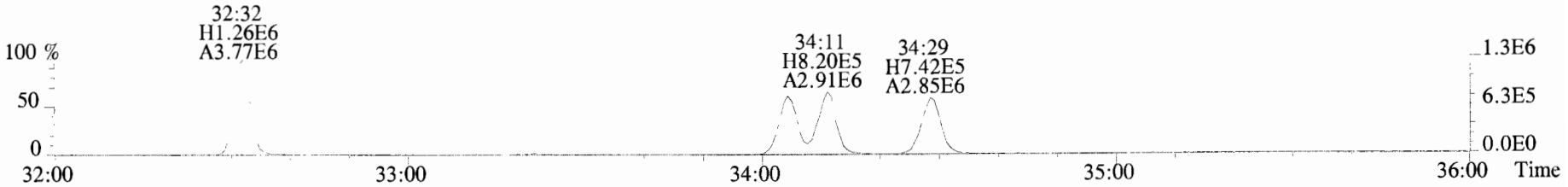
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



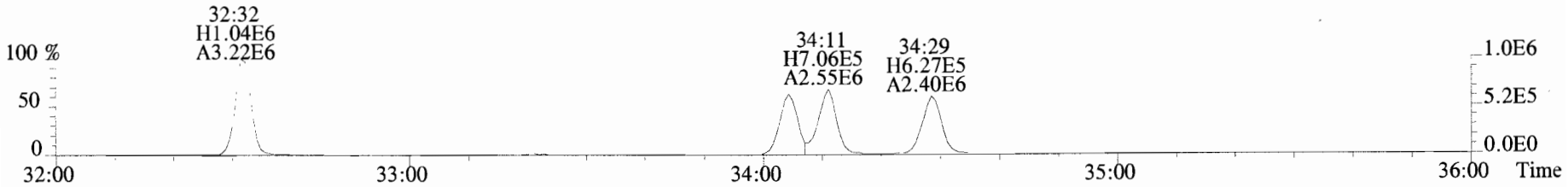
366.9792 F:2



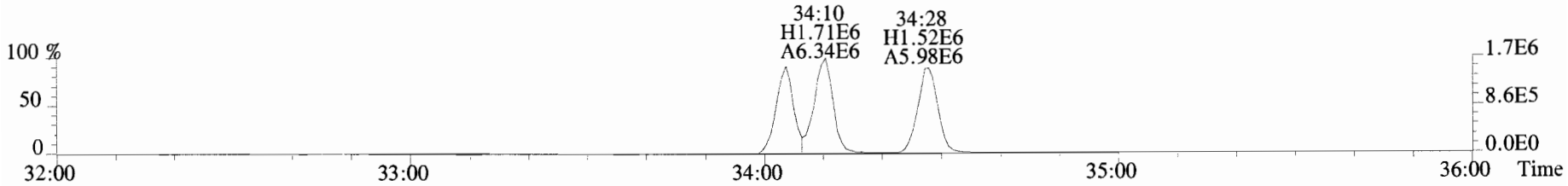
File:191015D1 #1-384 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



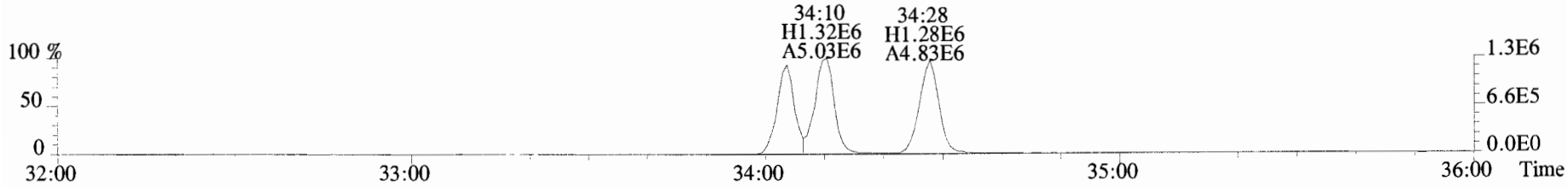
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



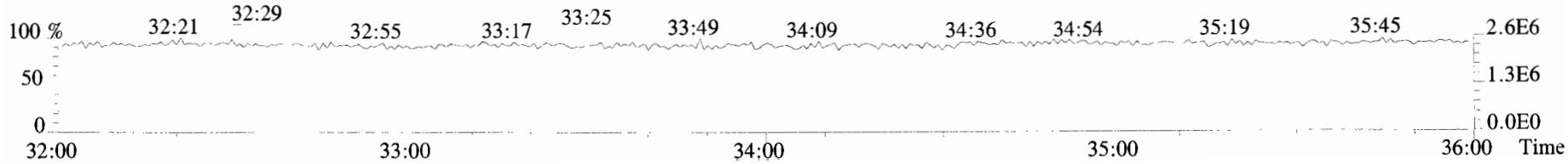
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



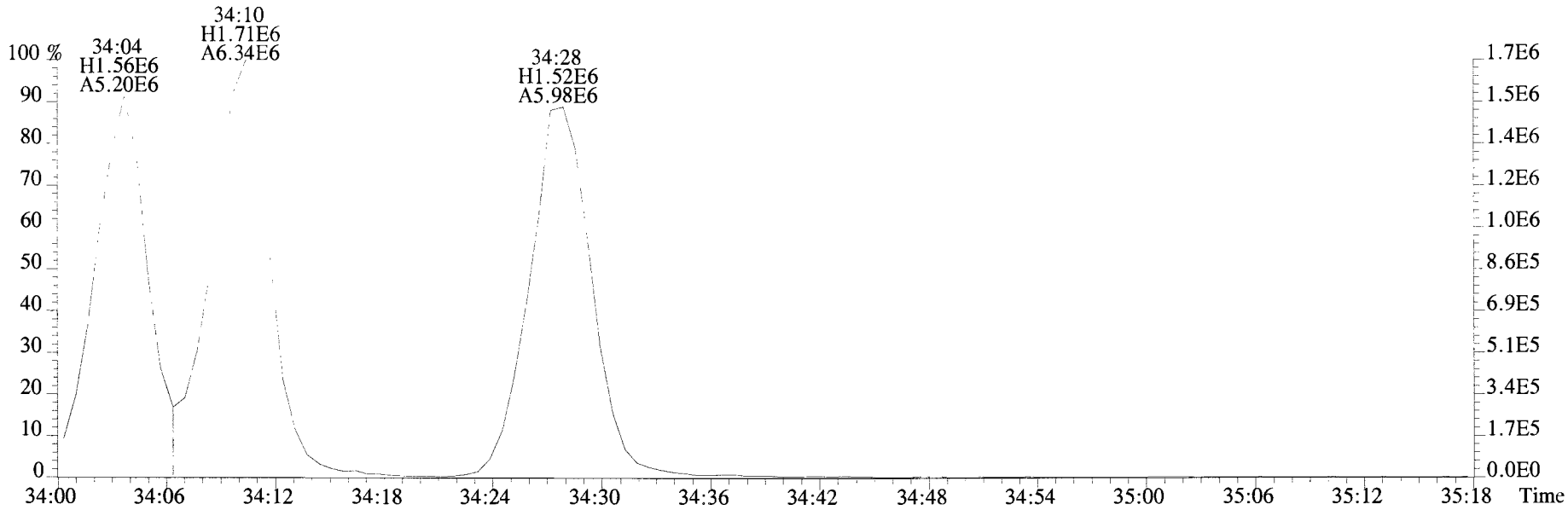
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



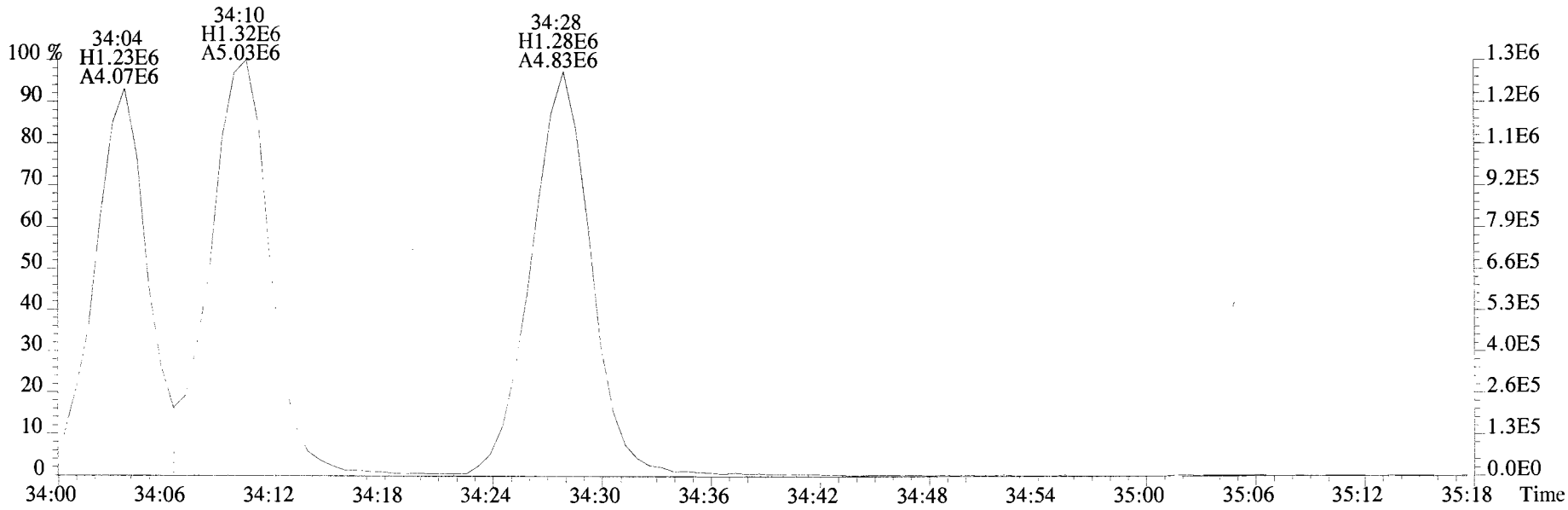
392.9760 F:3

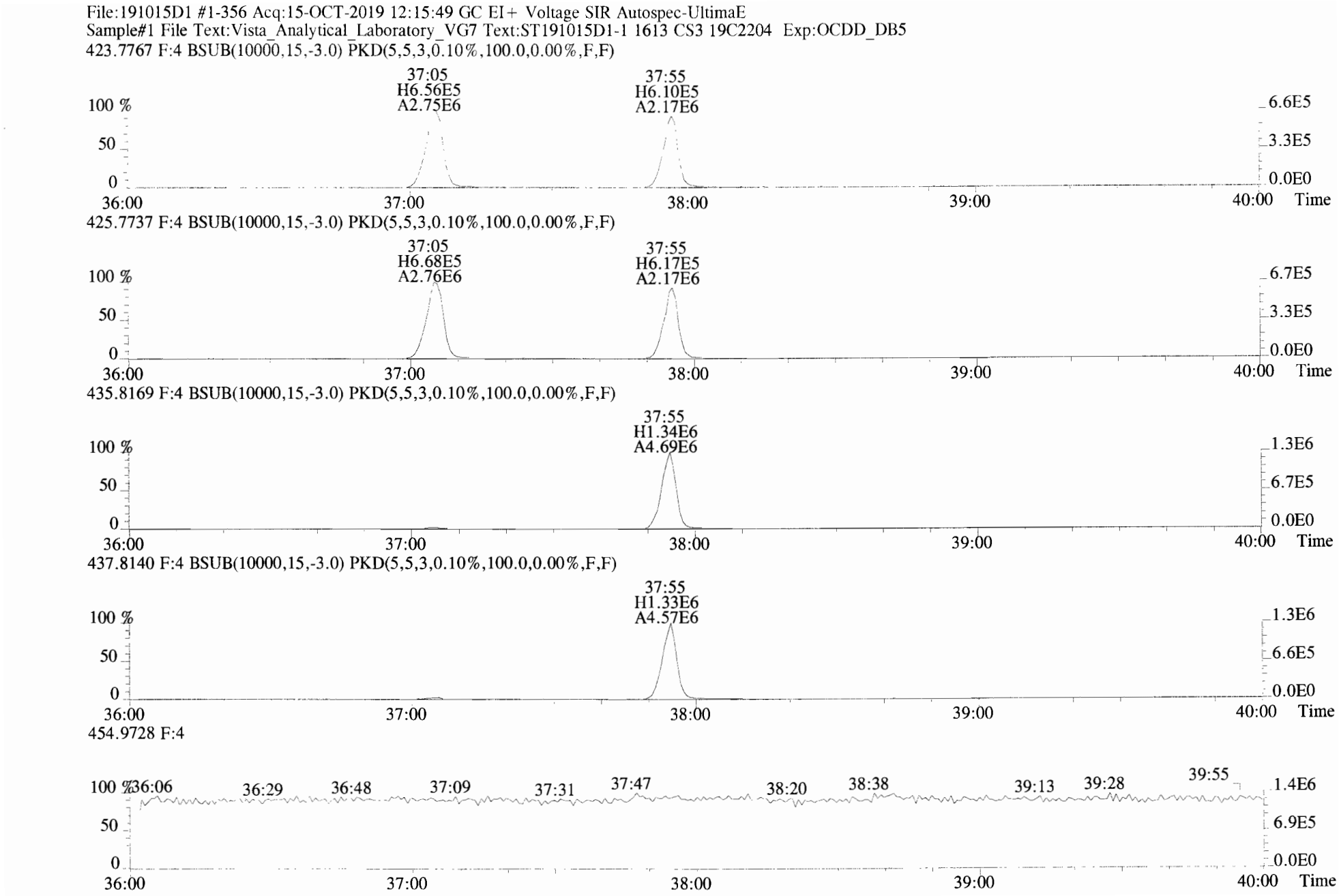


File:191015D1 #1-384 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

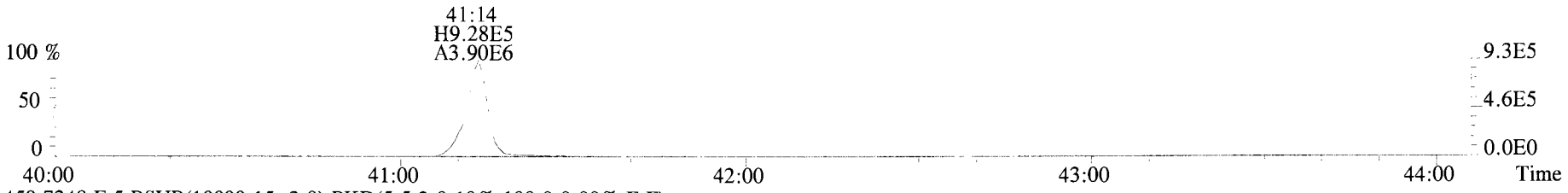


403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

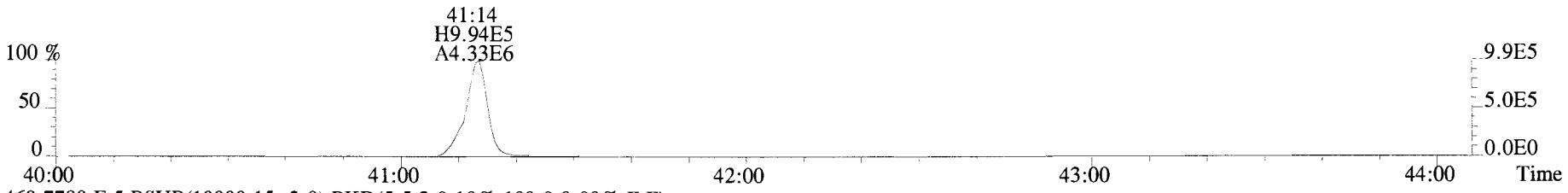



File:191015D1 #1-356 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:05
H6.56E5
A2.75E6
37:55
H6.10E5
A2.17E6
100 %
50
0
6.6E5
3.3E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:05
H6.68E5
A2.76E6
37:55
H6.17E5
A2.17E6
6.7E5
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:55
H1.34E6
A4.69E6
1.3E6
6.7E5
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:55
H1.33E6
A4.57E6
1.3E6
6.6E5
454.9728 F:4
36:06
36:29
36:48
37:09
37:31
37:47
38:20
38:38
39:13
39:28
39:55
1.4E6
6.9E5

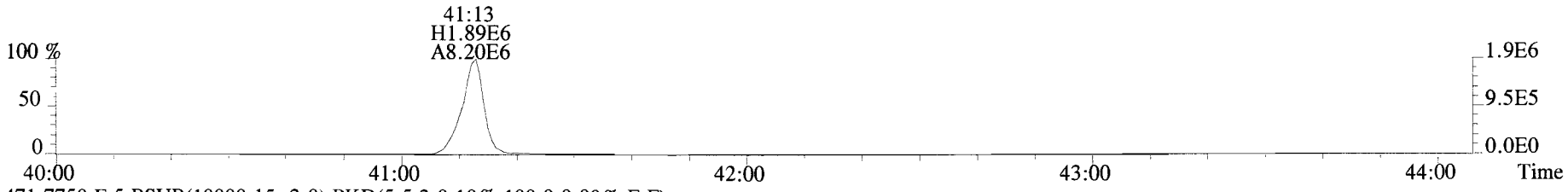
File:191015D1 #1-431 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



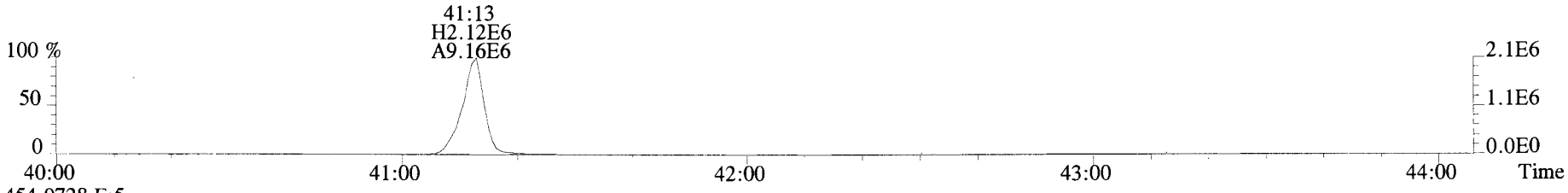
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



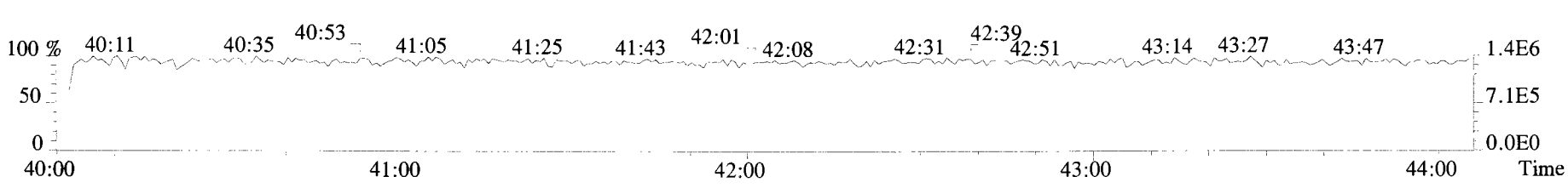
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



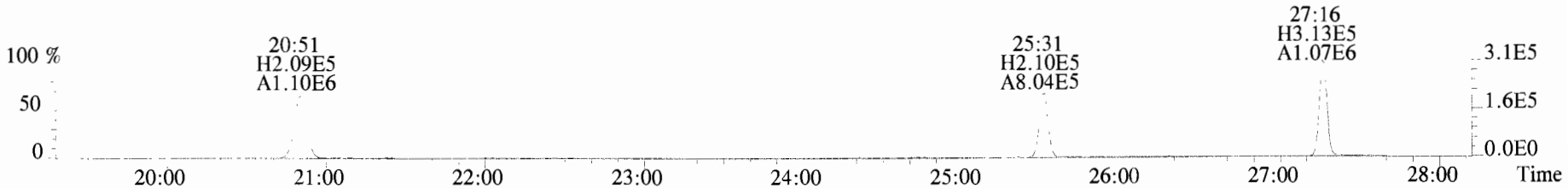
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



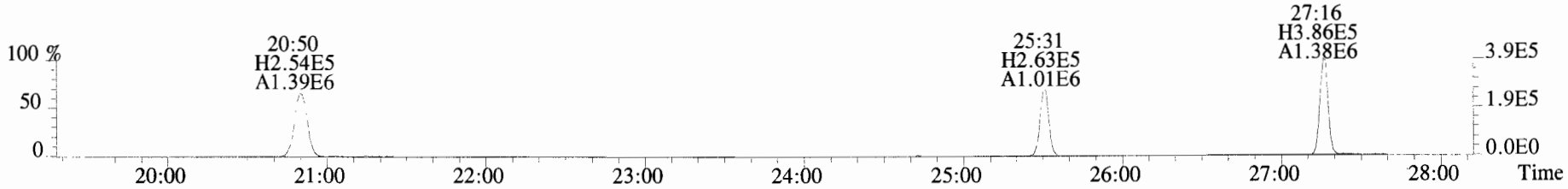
454.9728 F:5



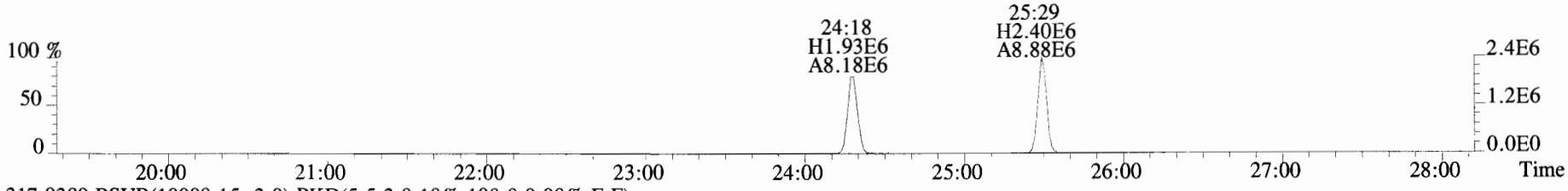
File:191015D1 #1-492 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



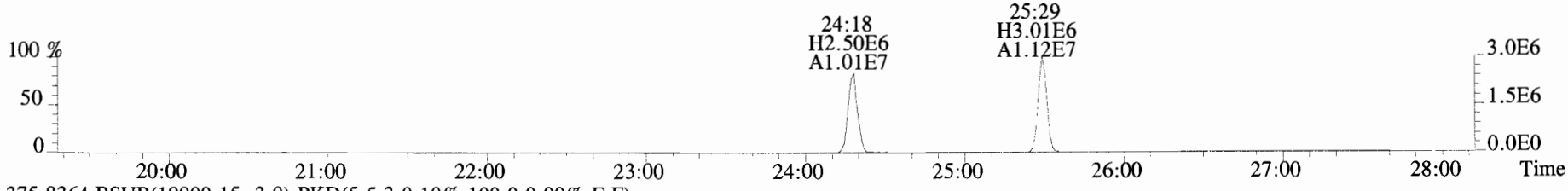
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



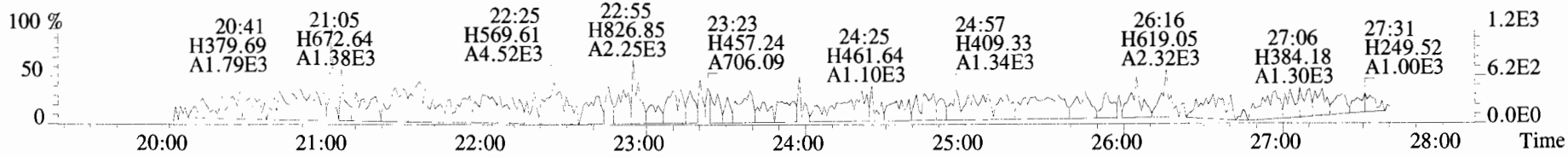
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

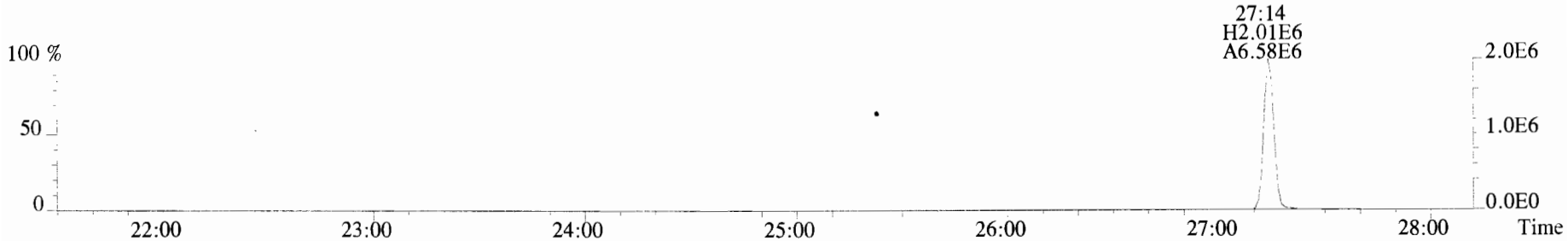


375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

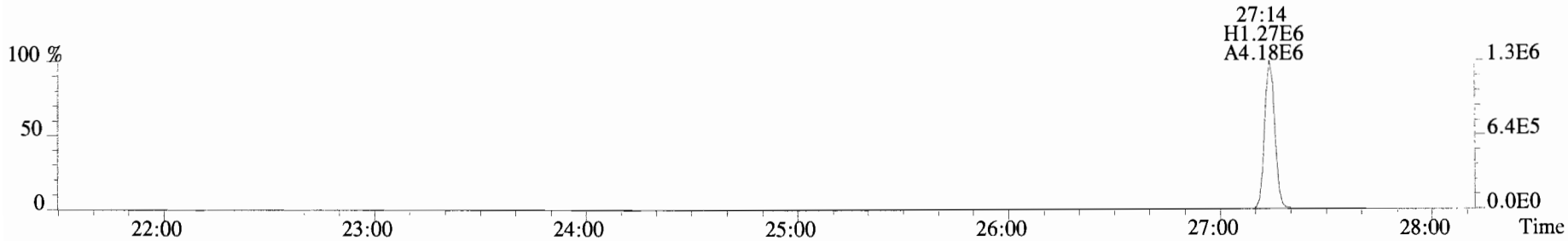


File:191015D1 #1-492 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5

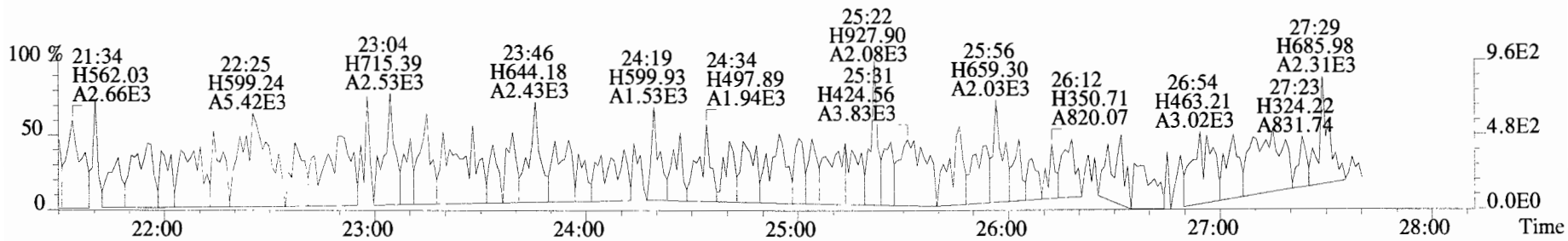
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



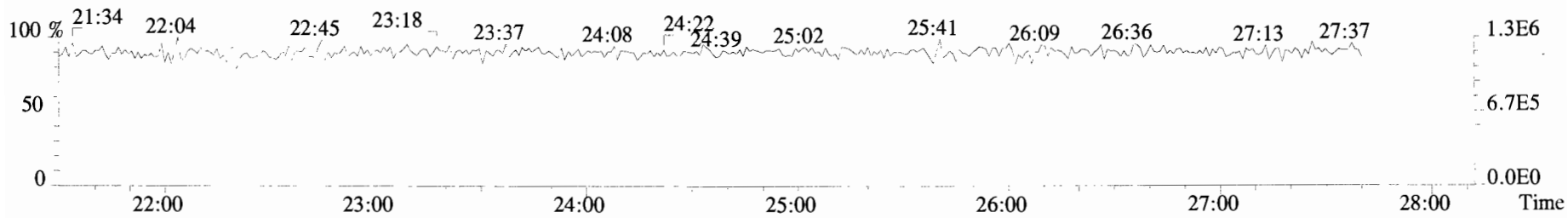
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

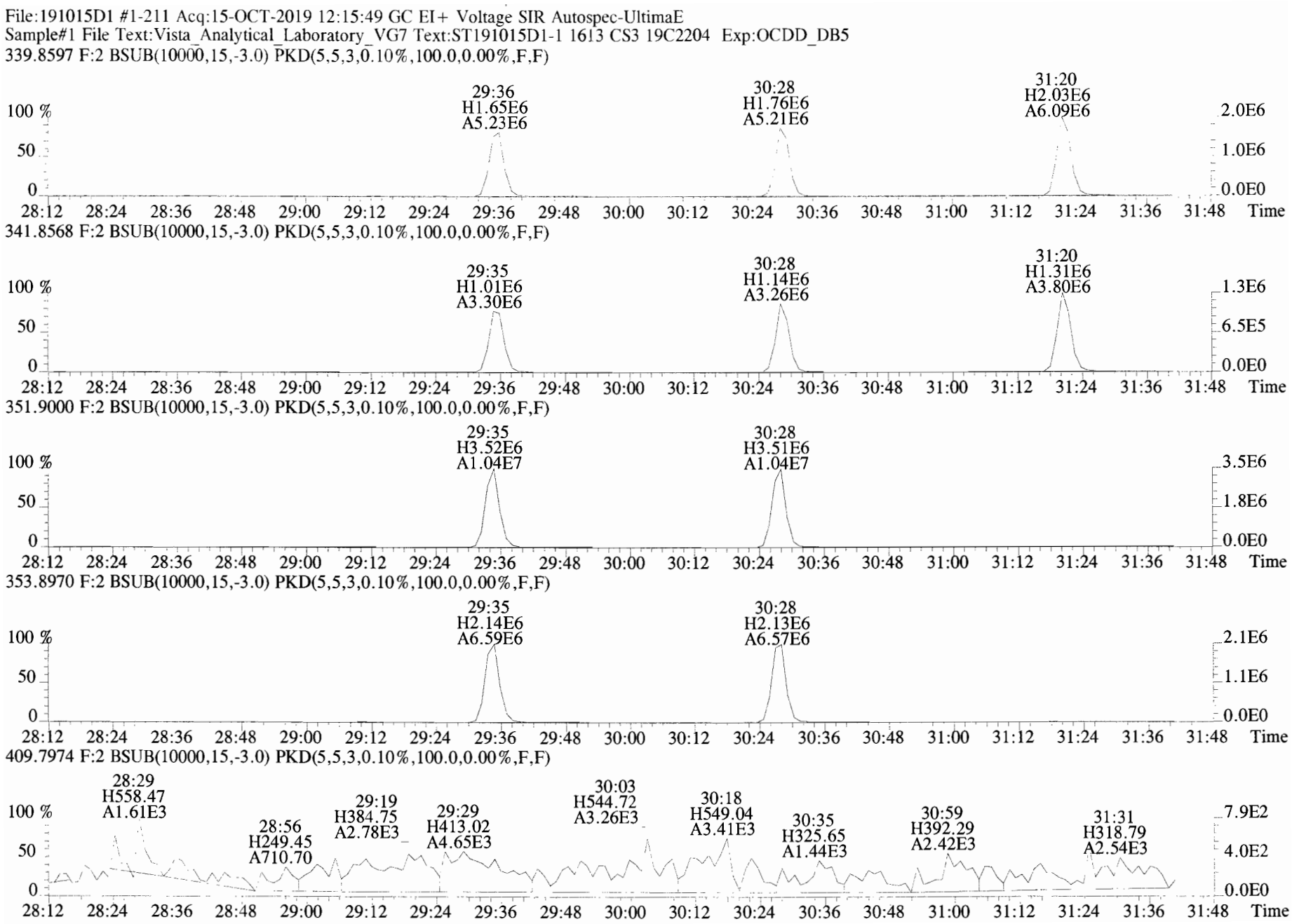


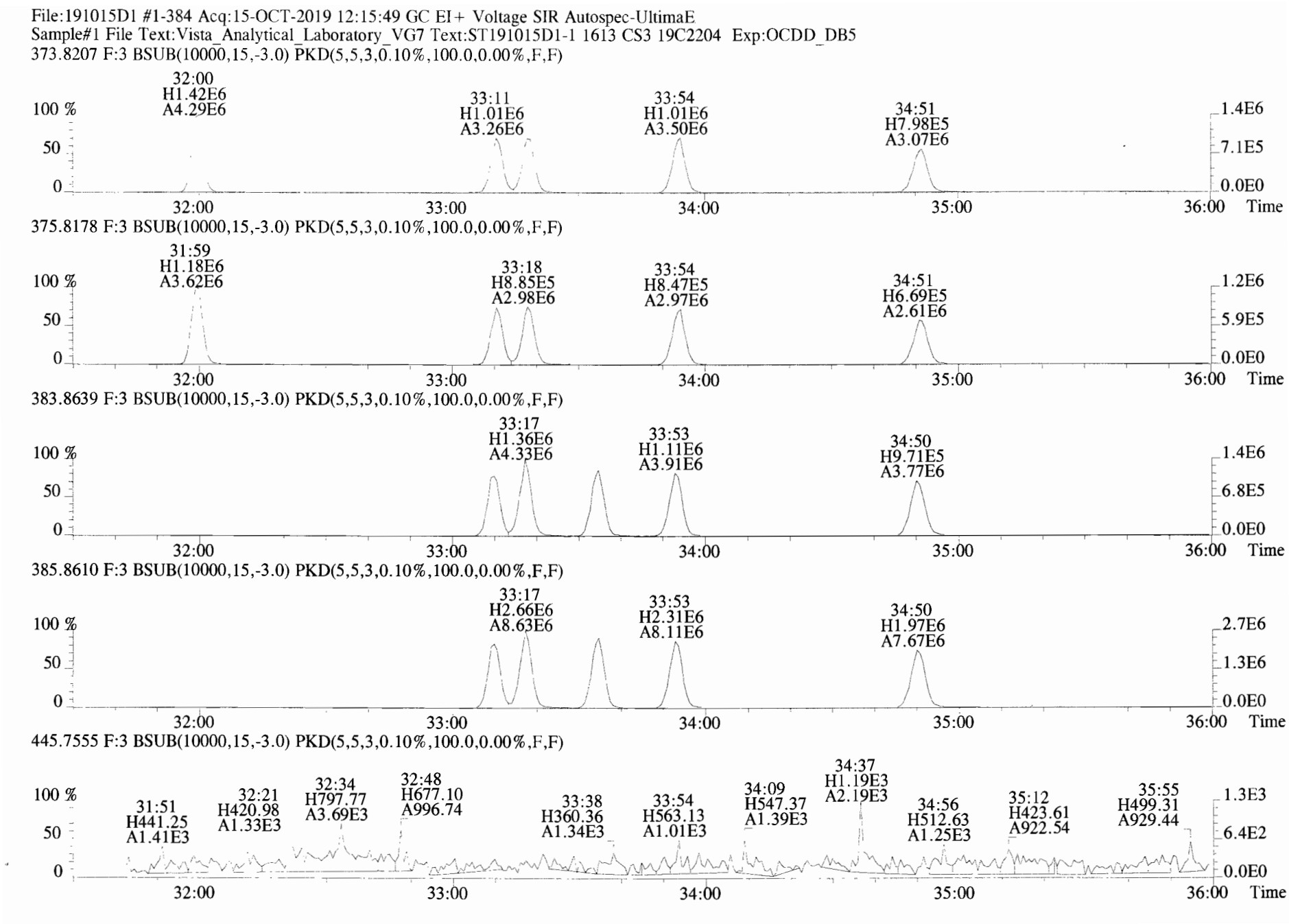
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



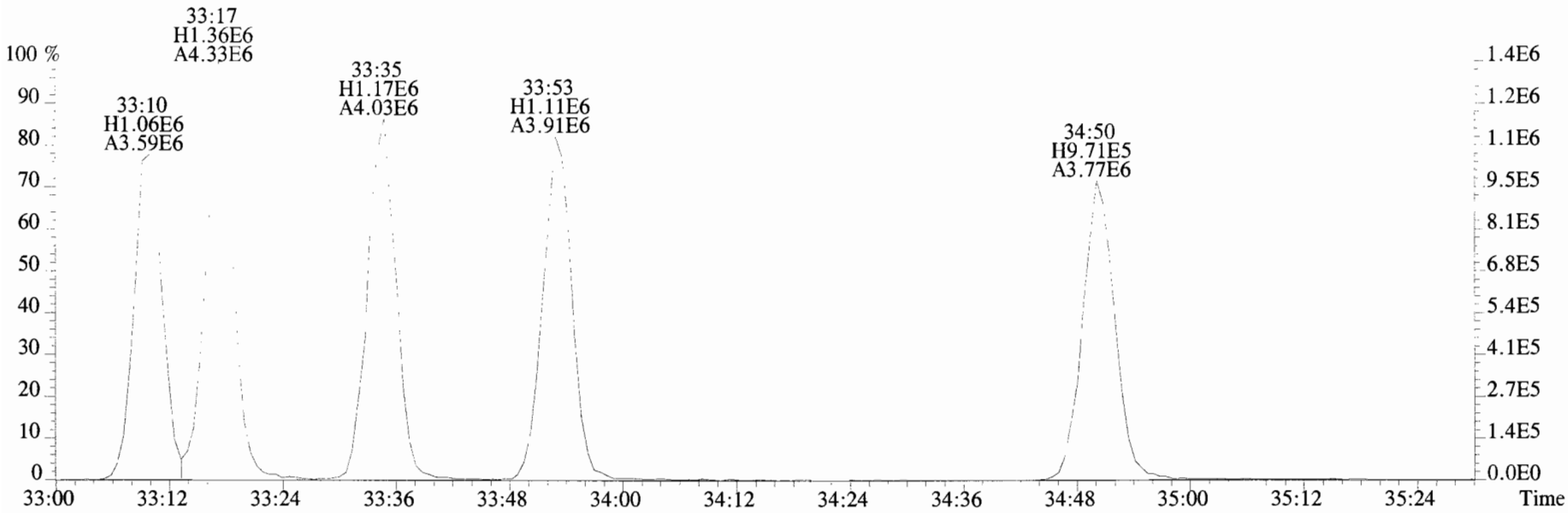
316.9824



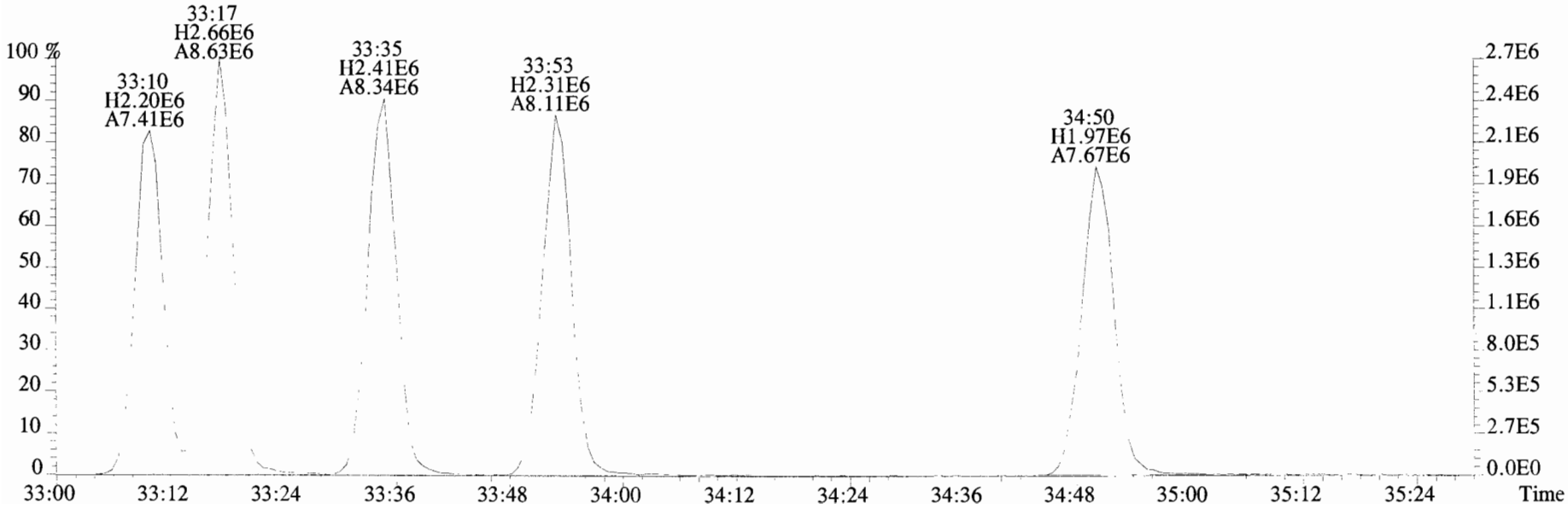

File:191015D1 #1-211 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:36 H1.65E6 A5.23E6
30:28 H1.76E6 A5.21E6
31:20 H2.03E6 A6.09E6
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:35 H1.01E6 A3.30E6
30:28 H1.14E6 A3.26E6
31:20 H1.31E6 A3.80E6
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:35 H3.52E6 A1.04E7
30:28 H3.51E6 A1.04E7
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:35 H2.14E6 A6.59E6
30:28 H2.13E6 A6.57E6
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:29 H558.47 A1.61E3
28:56 H249.45 A710.70
29:19 H384.75 A2.78E3
29:29 H413.02 A4.65E3
30:03 H544.72 A3.26E3
30:18 H549.04 A3.41E3
30:35 H325.65 A1.44E3
30:59 H392.29 A2.42E3
31:31 H318.79 A2.54E3
100 %
50
0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time
2.0E6
1.0E6
0.0E0
1.3E6
6.5E5
3.5E6
1.8E6
2.1E6
1.1E6
7.9E2
4.0E2

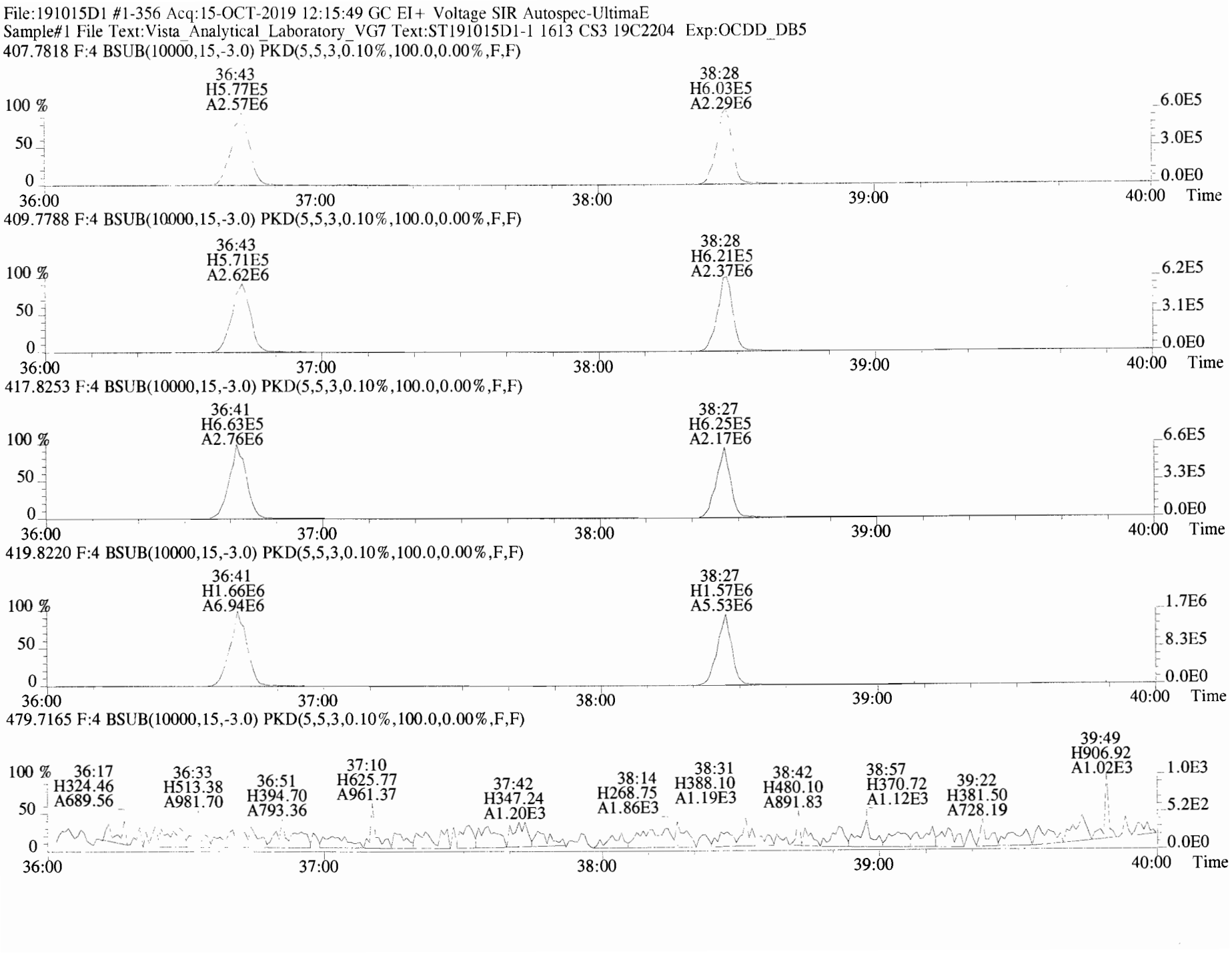

File:191015D1 #1-384 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:00 H1.42E6 A4.29E6
33:11 H1.01E6 A3.26E6
33:54 H1.01E6 A3.50E6
34:51 H7.98E5 A3.07E6
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:59 H1.18E6 A3.62E6
33:18 H8.85E5 A2.98E6
33:54 H8.47E5 A2.97E6
34:51 H6.69E5 A2.61E6
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:17 H1.36E6 A4.33E6
33:53 H1.11E6 A3.91E6
34:50 H9.71E5 A3.77E6
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:17 H2.66E6 A8.63E6
33:53 H2.31E6 A8.11E6
34:50 H1.97E6 A7.67E6
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:51 H441.25 A1.41E3
32:21 H420.98 A1.33E3
32:34 H797.77 A3.69E3
32:48 H677.10 A996.74
33:38 H360.36 A1.34E3
33:54 H563.13 A1.01E3
34:09 H547.37 A1.39E3
34:37 H1.19E3 A2.19E3
34:56 H512.63 A1.25E3
35:12 H423.61 A922.54
35:55 H499.31 A929.44
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
1.4E6
7.1E5
0.0E0
1.2E6
5.9E5
2.7E6
1.3E6
1.3E3
6.4E2

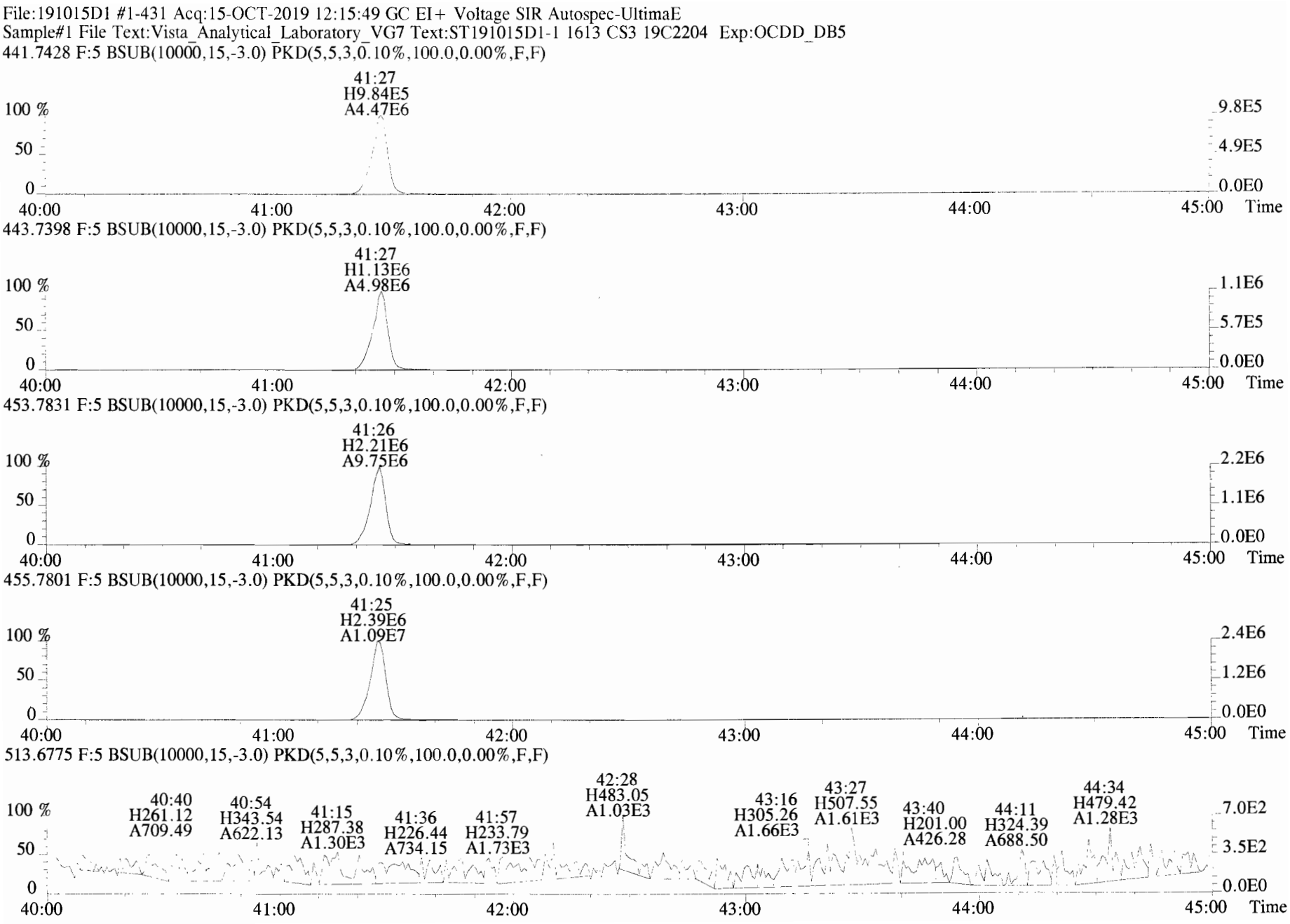
File:191015D1 #1-384 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

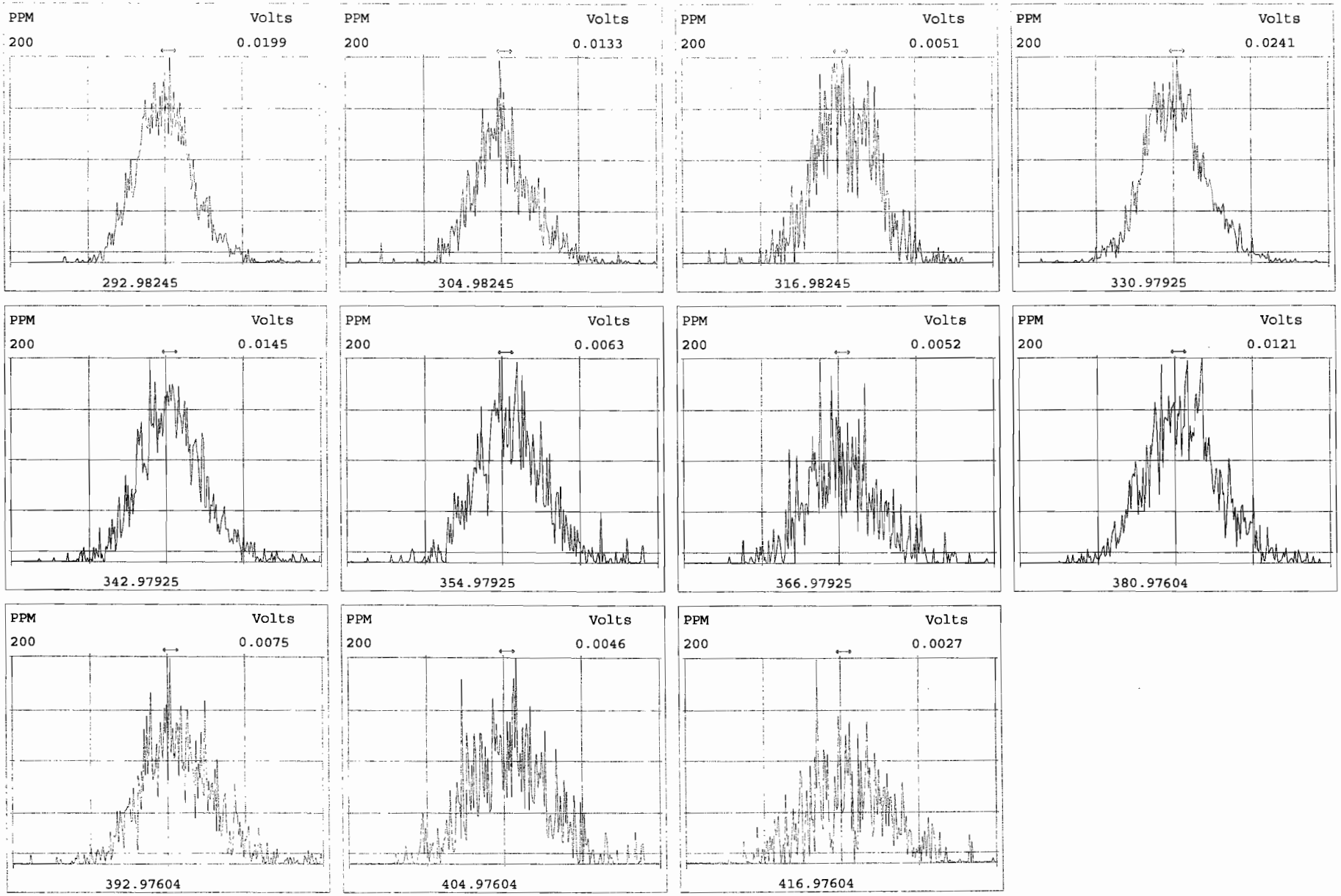


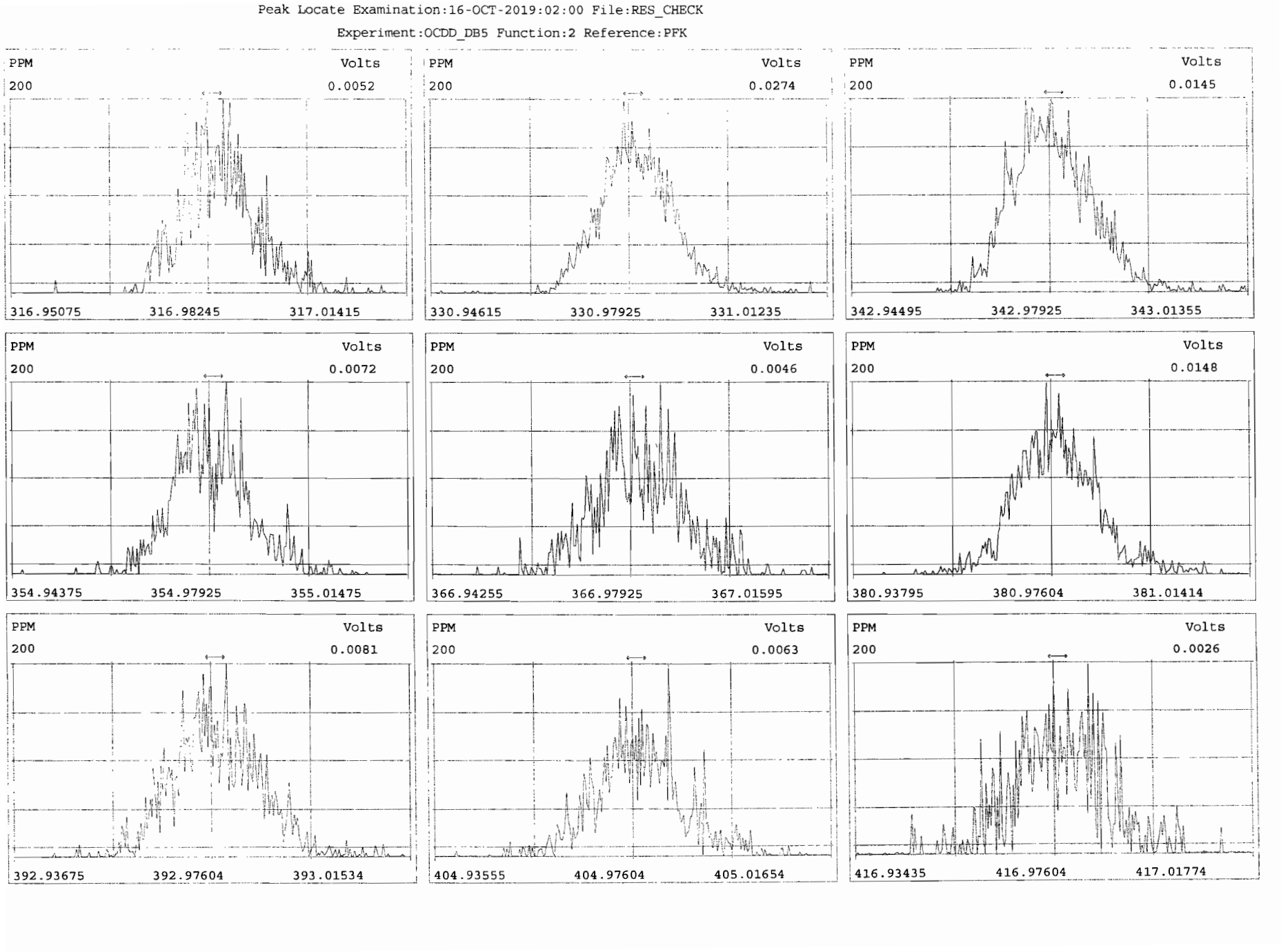

File:191015D1 #1-356 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:43 H5.77E5 A2.57E6
38:28 H6.03E5 A2.29E6
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:43 H5.71E5 A2.62E6
38:28 H6.21E5 A2.37E6
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:41 H6.63E5 A2.76E6
38:27 H6.25E5 A2.17E6
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:41 H1.66E6 A6.94E6
38:27 H1.57E6 A5.53E6
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:17 H324.46 A689.56
36:33 H513.38 A981.70
36:51 H394.70 A793.36
37:10 H625.77 A961.37
37:42 H347.24 A1.20E3
38:14 H268.75 A1.86E3
38:31 H388.10 A1.19E3
38:42 H480.10 A891.83
38:57 H370.72 A1.12E3
39:22 H381.50 A728.19
39:49 H906.92 A1.02E3
100 %
50
0
36:00
37:00
38:00
39:00
40:00
Time
6.0E5
3.0E5
0.0E0
6.2E5
3.1E5
0.0E0
6.6E5
3.3E5
0.0E0
1.7E6
8.3E5
0.0E0
1.0E3
5.2E2
0.0E0


File:191015D1 #1-431 Acq:15-OCT-2019 12:15:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191015D1-1 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)
41:27
H9.84E5
A4.47E6
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:27
H1.13E6
A4.98E6
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:26
H2.21E6
A9.75E6
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:25
H2.39E6
A1.09E7
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
40:40
H261.12
A709.49
40:54
H343.54
A622.13
41:15
H287.38
A1.30E3
41:36
H226.44
A734.15
41:57
H233.79
A1.73E3
42:28
H483.05
A1.03E3
43:16
H305.26
A1.66E3
43:27
H507.55
A1.61E3
43:40
H201.00
A426.28
44:11
H324.39
A688.50
44:34
H479.42
A1.28E3
100 %
50
0
40:00
41:00
42:00
43:00
44:00
45:00
Time
9.8E5
4.9E5
0.0E0
1.1E6
5.7E5
2.2E6
1.1E6
2.4E6
1.2E6
7.0E2
3.5E2

Peak Locate Examination:16-OCT-2019:01:59 File:RES_CHECK

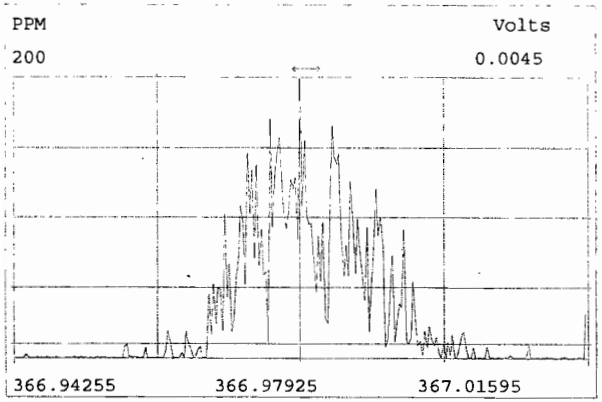
Experiment:OCDD_DB5 Function:1 Reference:PFK

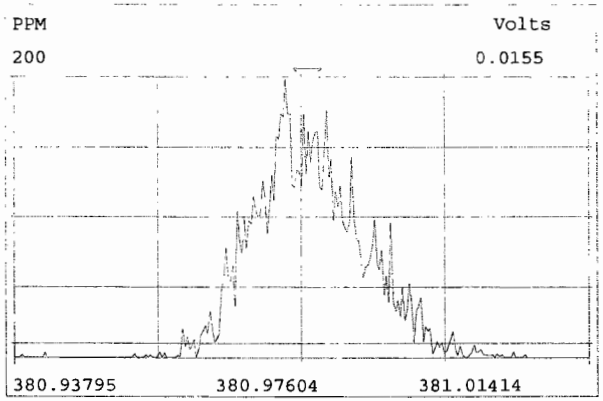


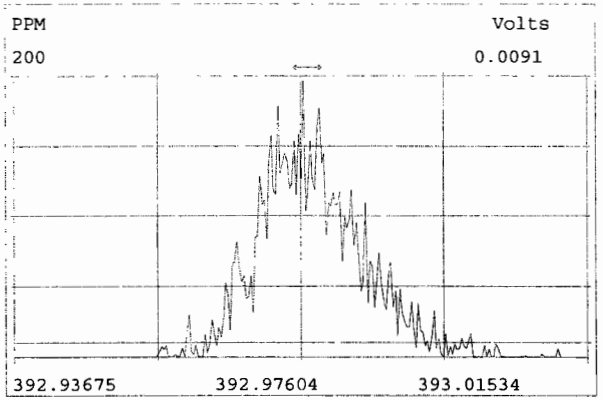

Peak Locate Examination:16-OCT-2019:02:00 File:RES_CHECK
Experiment:OCDD_DB5 Function:2 Reference:PFK
PPM
Volts
200
0.0052
316.95075
316.98245
317.01415
PPM
Volts
200
0.0274
330.94615
330.97925
331.01235
PPM
Volts
200
0.0145
342.94495
342.97925
343.01355
PPM
Volts
200
0.0072
354.94375
354.97925
355.01475
PPM
Volts
200
0.0046
366.94255
366.97925
367.01595
PPM
Volts
200
0.0148
380.93795
380.97604
381.01414
PPM
Volts
200
0.0081
392.93675
392.97604
393.01534
PPM
Volts
200
0.0063
404.93555
404.97604
405.01654
PPM
Volts
200
0.0026
416.93435
416.97604
417.01774

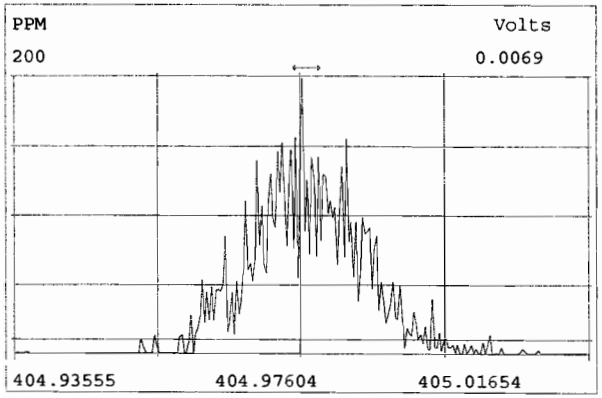
Peak Locate Examination:16-OCT-2019:02:01 File:RES_CHECK

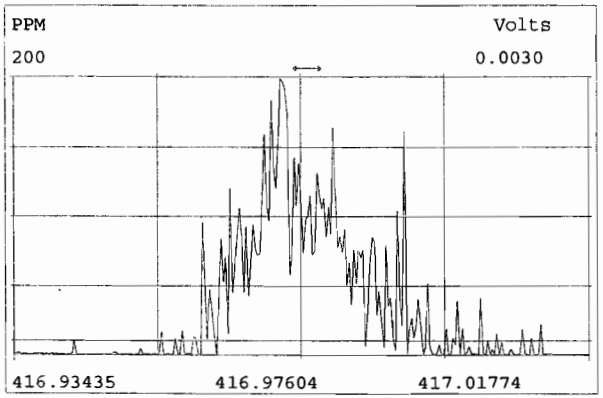
Experiment:OCDD_DB5 Function:3 Reference:PFK

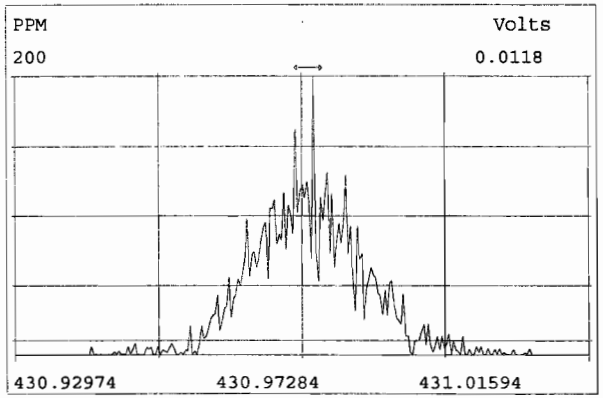


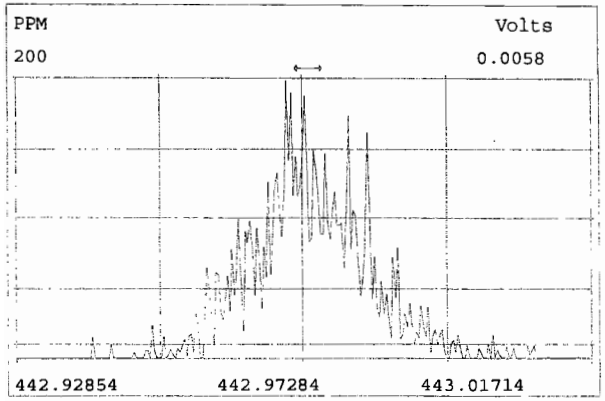


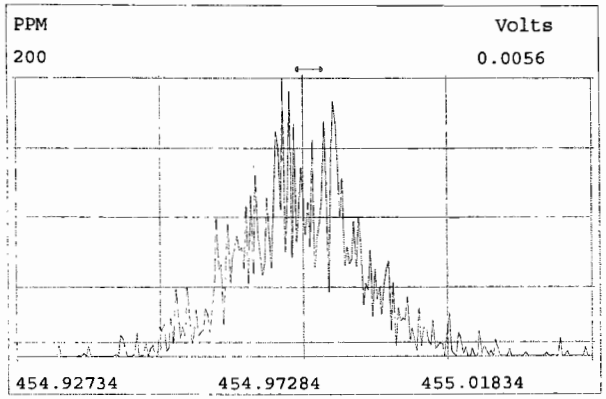






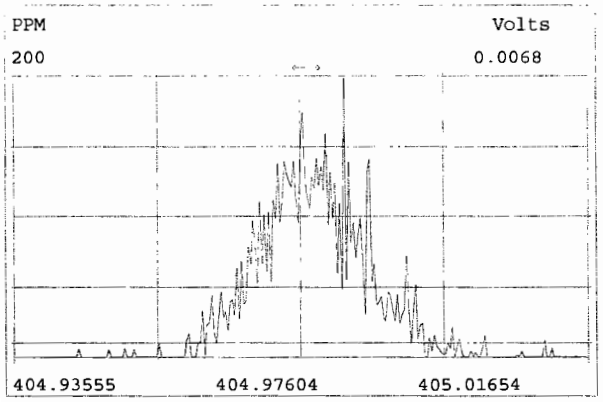


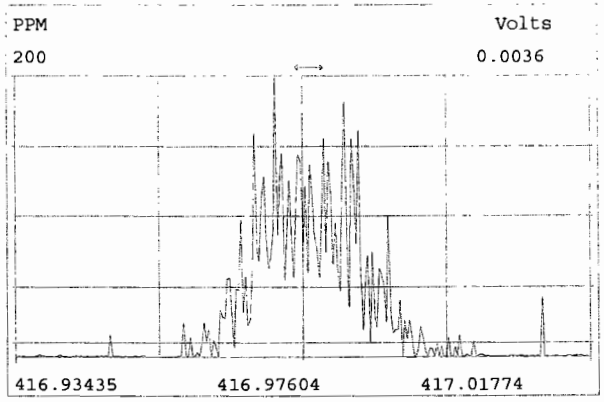


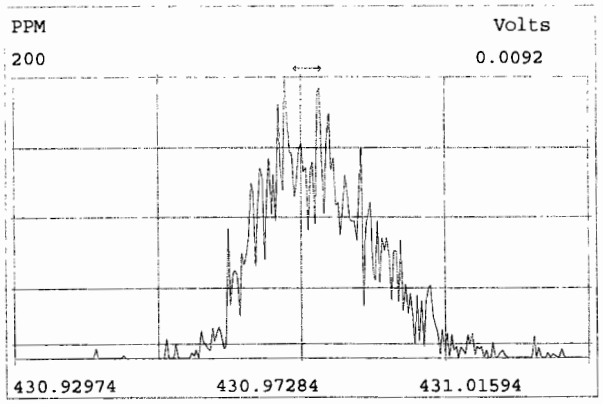


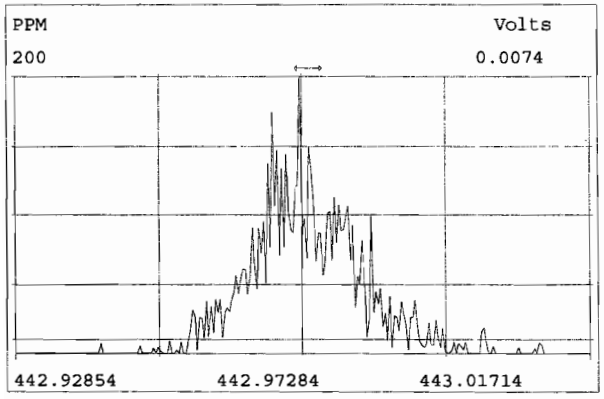
Peak Locate Examination:16-OCT-2019:02:02 File:RES_CHECK

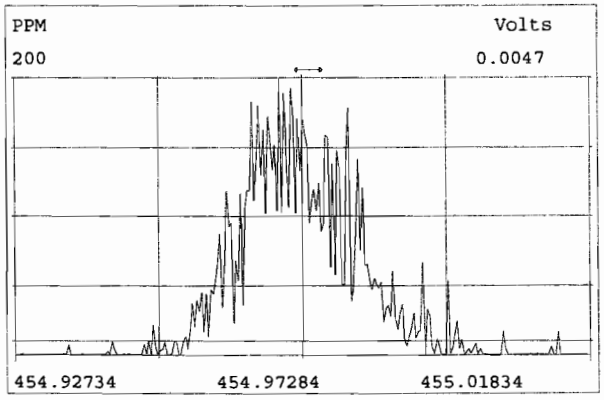
Experiment:OCDD_DB5 Function:4 Reference:PFK

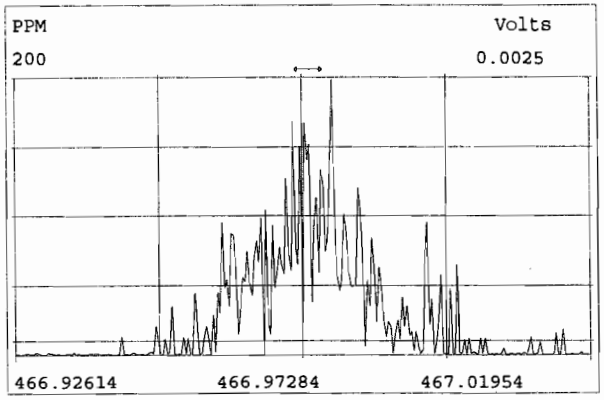


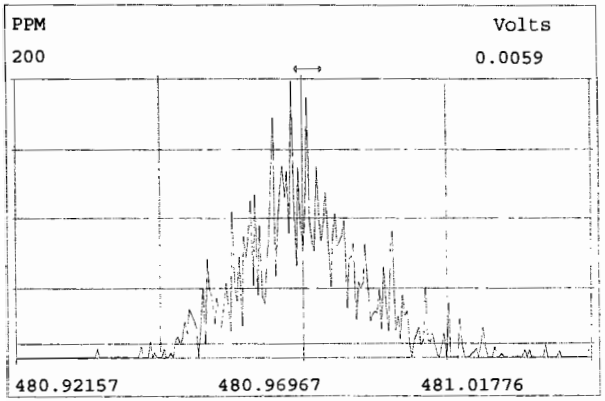






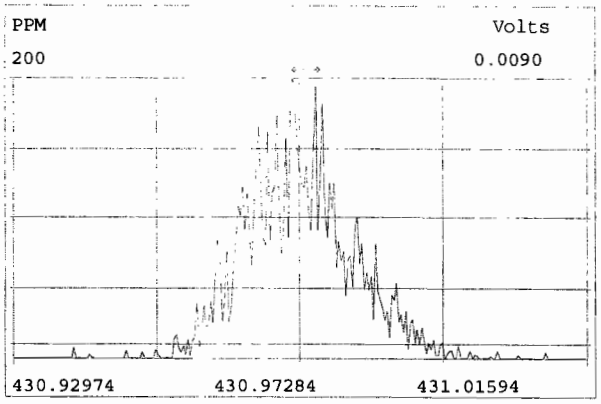


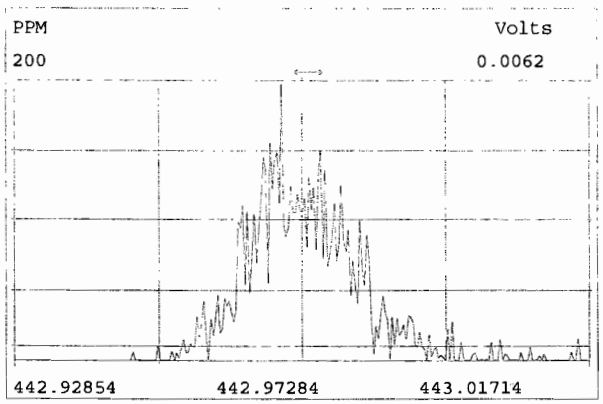


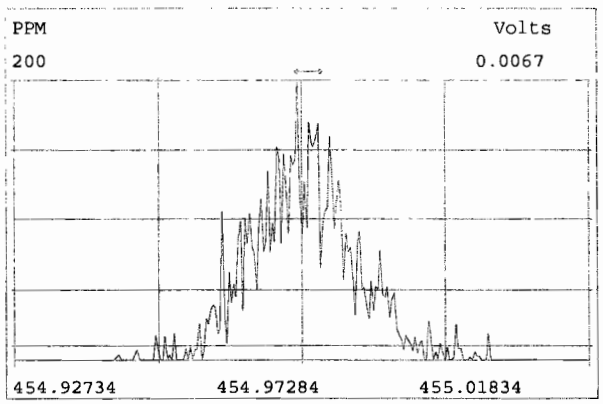


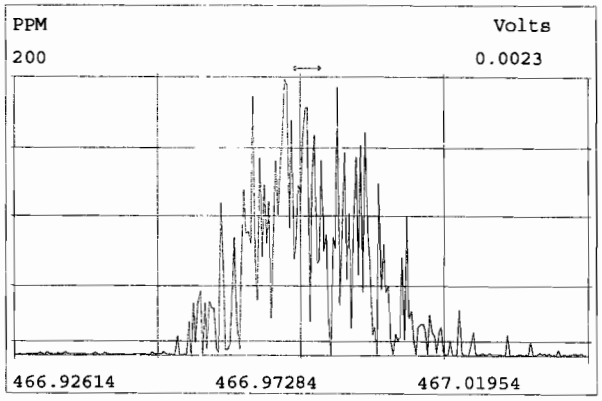
Peak Locate Examination:16-OCT-2019:02:03 File:RES_CHECK

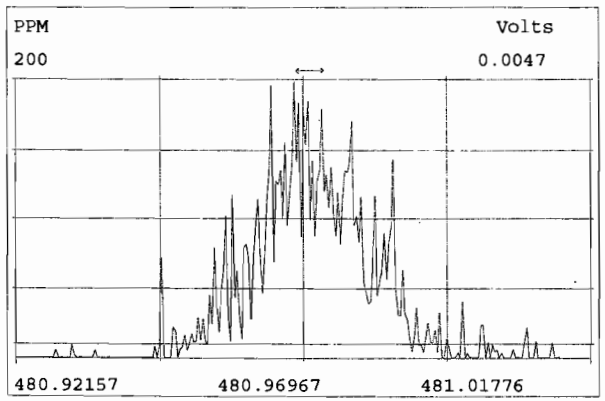
Experiment:OCDD_DB5 Function:5 Reference:PFK

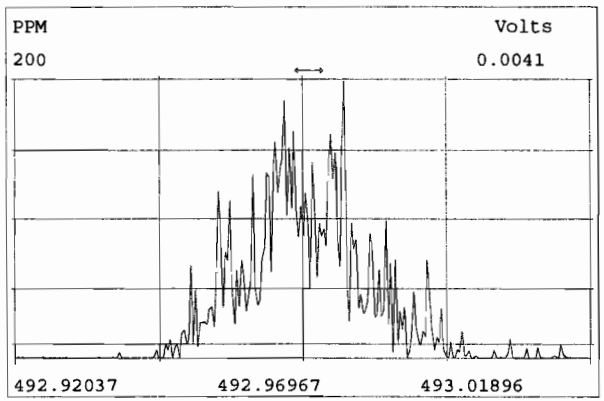


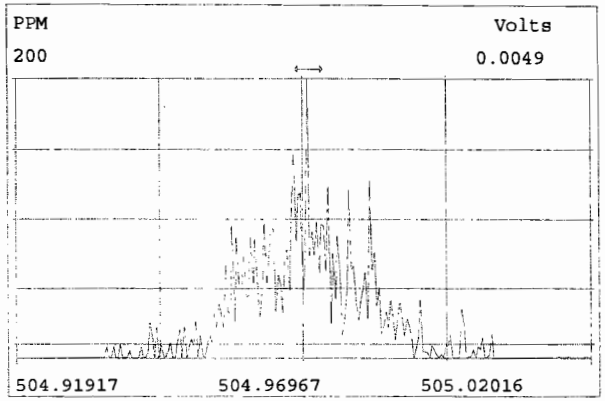


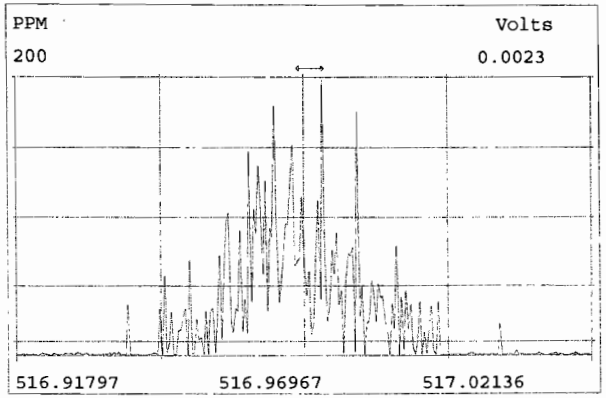












HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST191016D1-1

End Calibration ID: ST191016D1-2

Reviewed By: JH 10.17.19

Initials & Date

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentrations within criteria?	✓	✓
TCDD/TCDF Valleys <25%	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	DB	DB

	Beg.	End
Mass resolution ≥	✓	✓
Intergrated peaks display correctly?	✓	✓

☐ 5k ☐ 6-8K ☐ 8K ☑ 10K

1614 1699 429 1613/1668/8280

GC Break <20% NA

Run Log:

- Correct instrument listed? ✓ ✓
- Samples within 12 hour clock? (Y) N
- Bottle position verfied? DB

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours NA

Comments:

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST191016D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191016D1 S#1 Analysis Date: 16-OCT-19 Time: 10:51:37

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.82	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	0.63	0.54-0.72	y	50.3	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	48.1	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	52.1	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.20	1.05-1.43	y	50.1	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.01	0.88-1.20	y	48.4	43.0 - 58.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	98.1	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.83	0.65-0.89	y	8.87	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.64	1.32-1.78	y	49.7	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	49.2	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	48.0	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	48.1	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	49.8	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	y	49.2	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88-1.20	y	48.7	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.03	0.88-1.20	y	47.8	43.0 - 58.0
OCDF	M+2/M+4	0.90	0.76-1.02	y	95.4	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 10/16/19

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: 191016D1 S#1 Analysis Date: 16-OCT-19 Time: 10:51:37

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	0.75	0.65-0.89	y	108	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	108	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	107	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	91.6	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.22	1.05-1.43	y	98.8	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	99.5	72.0 - 138.0
13C-OCDD	M/M+2	0.91	0.76-1.02	y	214	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.81	0.65-0.89	y	102	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	109	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	109	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	105	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	100	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	99.8	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	106	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.41	0.37-0.51	y	95.4	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.41	0.37-0.51	y	102	77.0 - 129.0
13C-OCDF	M+2/M+4	0.89	0.76-1.02	y	212	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.58	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: 10/16/19

EPA METHOD 8290

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST191016D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191016D1 S#1 Analysis Date: 16-OCT-19 Time: 10:51:37

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	y	10.3	8.00 - 12.0
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	50.3	40.0 - 60.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	48.1	40.0 - 60.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	52.1	40.0 - 60.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.20	1.05-1.43	y	50.1	40.0 - 60.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.01	0.88-1.20	y	48.4	40.0 - 60.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	98.1	80.0 - 120
2,3,7,8-TCDF	M/M+2	0.83	0.65-0.89	y	8.87	8.00 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.64	1.32-1.78	y	49.7	40.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	49.2	40.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	48.0	40.0 - 60.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	48.1	40.0 - 60.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	49.8	40.0 - 60.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	y	49.2	40.0 - 60.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88-1.20	y	48.7	40.0 - 60.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.03	0.88-1.20	y	47.8	40.0 - 60.0
OCDF	M+2/M+4	0.90	0.76-1.02	y	95.4	80.0 - 120

Analyst: DB

Date: 10/16/19

EPA METHOD 8290

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: 191016D1 S#1 Analysis Date: 16-OCT-19 Time: 10:51:37

LABELED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.75	0.65-0.89	y	108	70.0 - 130
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	108	70.0 - 130
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	107	70.0 - 130
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	91.6	70.0 - 130
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.22	1.05-1.43	y	98.8	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	99.5	70.0 - 130
13C-OCDD	M+2/M+4	0.91	0.76-1.02	y	214	140 - 260
13C-2,3,7,8-TCDF	M/M+2	0.81	0.65-0.89	y	102	70.0 - 130
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	109	70.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	109	70.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	105	70.0 - 130
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	100	70.0 - 130
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	99.8	70.0 - 130
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	106	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.41	0.37-0.51	y	95.4	70.0 - 130
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.41	0.37-0.51	y	102	70.0 - 130
13C-OCDF	M+2/M+4	0.89	0.76-1.02	y	212	140 - 260
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD					9.58	7.00 - 13.0

Analyst: DB

Date: 10/16/19

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: 191016D1 S#1 Analysis Date: 16-OCT-19 Time: 10:51:37

ZB-5MS IS Data Filename: 191016D1 S#1 Analysis Date: 16-OCT-19 Time: 10:51:37

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)	22:56	1,3,6,8-TCDF (F)	20:49
1,2,8,9-TCDD (L)	27:08	1,2,8,9-TCDF (L)	27:16
1,2,4,7,9-PeCDD (F)	28:44	1,3,4,6,8-PeCDF (F)	27:14
1,2,3,8,9-PeCDD (L)	31:07	1,2,3,8,9-PeCDF (L)	31:21
1,2,4,6,7,9-HxCDD (F)	32:32	1,2,3,4,6,8-HxCDF (F)	31:60
1,2,3,7,8,9-HxCDD (L)	34:29	1,2,3,7,8,9-HxCDF (L)	34:51
1,2,3,4,6,7,9-HpCDD (F)	37:05	1,2,3,4,6,7,8-HpCDF (F)	36:42
1,2,3,4,6,7,8-HpCDD (L)	37:55	1,2,3,4,7,8,9-HpCDF (L)	38:27

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<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: 10/16/19

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: 191016D1 S#1 Analysis Date: 16-OCT-19 Time: 10:51:37

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
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	1.196	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.151	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.185	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: DB

Date: 10/16/19

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: 191016D1 S#1 Analysis Date: 16-OCT-19 Time: 10:51:37

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
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	1.018	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.026	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.093	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.145	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.129	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.227	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.234	1.091-1.371

Analyst: DB

Date: 10/16/19

Client ID: 1613 CS3 19C2204 Filename: 191016D1 S:1 Acq:16-OCT-19 10:51:37 ConCal: ST191016D1-1

Lab ID: ST191016D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000 EndCAL: ST191016D1-2

	Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	1.16e+06	0.82 y	0.91	26:17	10.340			* 2.5	*
	1,2,3,7,8-PeCDD	4.53e+06	0.63 y	0.90	30:45	50.298			* 2.5	*
	1,2,3,4,7,8-HxCDD	4.31e+06	1.22 y	1.10	34:04	48.119			* 2.5	*
	1,2,3,6,7,8-HxCDD	4.54e+06	1.23 y	0.94	34:11	52.067			* 2.5	*
	1,2,3,7,8,9-HxCDD	4.54e+06	1.20 y	0.96	34:29	50.062			* 2.5	*
	1,2,3,4,6,7,8-HpCDD	3.65e+06	1.01 y	0.98	37:55	48.444			* 2.5	*
	OCDD	6.91e+06	0.90 y	0.96	41:12	98.089			* 2.5	*
	2,3,7,8-TCDF	1.41e+06	0.83 y	0.95	25:30	8.8732			* 2.5	*
	1,2,3,7,8-PeCDF	7.03e+06	1.64 y	0.96	29:36	49.700			* 2.5	*
	2,3,4,7,8-PeCDF	7.34e+06	1.61 y	1.01	30:28	49.156			* 2.5	*
	1,2,3,4,7,8-HxCDF	5.85e+06	1.22 y	1.18	33:11	47.954			* 2.5	*
	1,2,3,6,7,8-HxCDF	6.31e+06	1.22 y	1.07	33:18	48.146			* 2.5	*
	2,3,4,6,7,8-HxCDF	6.25e+06	1.24 y	1.11	33:54	49.841			* 2.5	*
	1,2,3,7,8,9-HxCDF	5.41e+06	1.23 y	1.06	34:51	49.176			* 2.5	*
	1,2,3,4,6,7,8-HpCDF	4.70e+06	1.01 y	1.13	36:42	48.669			* 2.5	*
	1,2,3,4,7,8,9-HpCDF	4.31e+06	1.03 y	1.28	38:27	47.750			* 2.5	*
	OCDF	7.80e+06	0.90 y	0.95	41:26	95.436			* 2.5	*
IS	13C-2,3,7,8-TCDD	1.24e+07	0.75 y	1.10	26:16	107.62				108
IS	13C-1,2,3,7,8-PeCDD	9.98e+06	0.63 y	0.88	30:45	107.97				108
IS	13C-1,2,3,4,7,8-HxCDD	8.14e+06	1.25 y	0.64	34:03	107.04				107
IS	13C-1,2,3,6,7,8-HxCDD	9.28e+06	1.26 y	0.86	34:10	91.609				91.6
IS	13C-1,2,3,7,8,9-HxCDD	9.44e+06	1.22 y	0.81	34:28	98.791				98.8
IS	13C-1,2,3,4,6,7,8-HpCDD	7.70e+06	1.03 y	0.65	37:54	99.478				99.5
IS	13C-OCDD	1.47e+07	0.91 y	0.58	41:12	214.21				107
IS	13C-2,3,7,8-TCDF	1.67e+07	0.81 y	1.03	25:29	101.64				102
IS	13C-1,2,3,7,8-PeCDF	1.47e+07	1.59 y	0.85	29:35	108.67				109
IS	13C-2,3,4,7,8-PeCDF	1.47e+07	1.59 y	0.85	30:28	109.47				109
IS	13C-1,2,3,4,7,8-HxCDF	1.04e+07	0.50 y	0.83	33:10	105.31				105
IS	13C-1,2,3,6,7,8-HxCDF	1.23e+07	0.51 y	1.03	33:17	100.08				100
IS	13C-2,3,4,6,7,8-HxCDF	1.13e+07	0.52 y	0.95	33:53	99.806				99.8
IS	13C-1,2,3,7,8,9-HxCDF	1.04e+07	0.52 y	0.83	34:50	105.76				106
IS	13C-1,2,3,4,6,7,8-HpCDF	8.56e+06	0.41 y	0.76	36:42	95.423				95.4
IS	13C-1,2,3,4,7,8,9-HpCDF	7.04e+06	0.41 y	0.58	38:26	102.36				102
IS	13C-OCDF	1.73e+07	0.89 y	0.69	41:25	211.64				106
C/Up	37Cl-2,3,7,8-TCDD	1.20e+06		1.20	26:17	9.5835				95.8
RS/RT	13C-1,2,3,4-TCDD	1.05e+07	0.76 y	1.00	25:42	100.00				
RS	13C-1,2,3,4-TCDF	1.59e+07	0.79 y	1.00	24:17	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.18e+07	0.52 y	1.00	33:35	100.00				

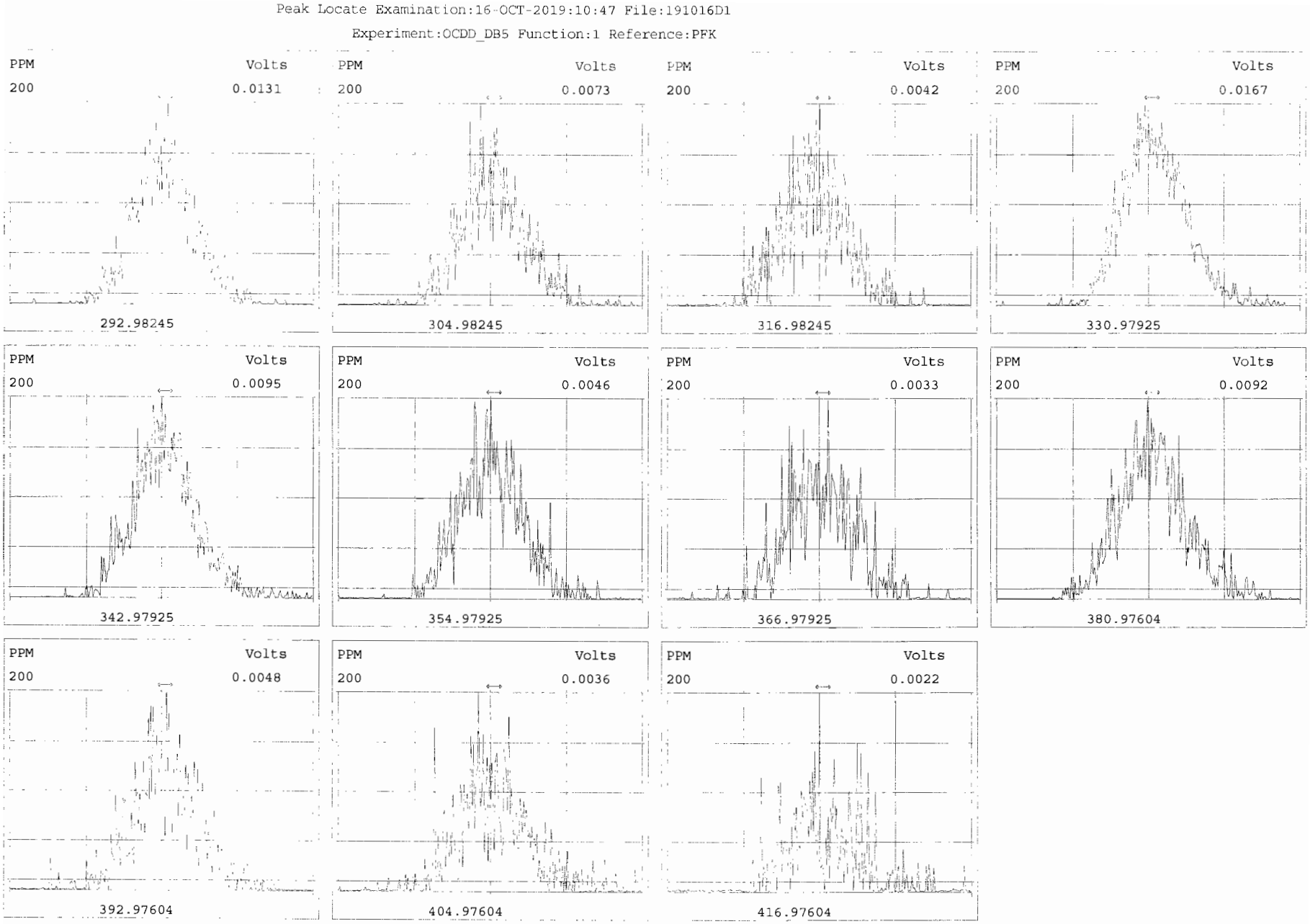
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	73.5	74.2		*	*
Total Penta-Dioxins	187	187		*	*
Total Hexa-Dioxins	224	225		*	*
Total Hepta-Dioxins	112	113		*	*
Total Tetra-Furans	34.3	35.4		*	*
Total Penta-Furans	219.36	219.99		*	*
Total Hexa-Furans	261	262		*	*
Total Hepta-Furans	97.0	98.0		*	*

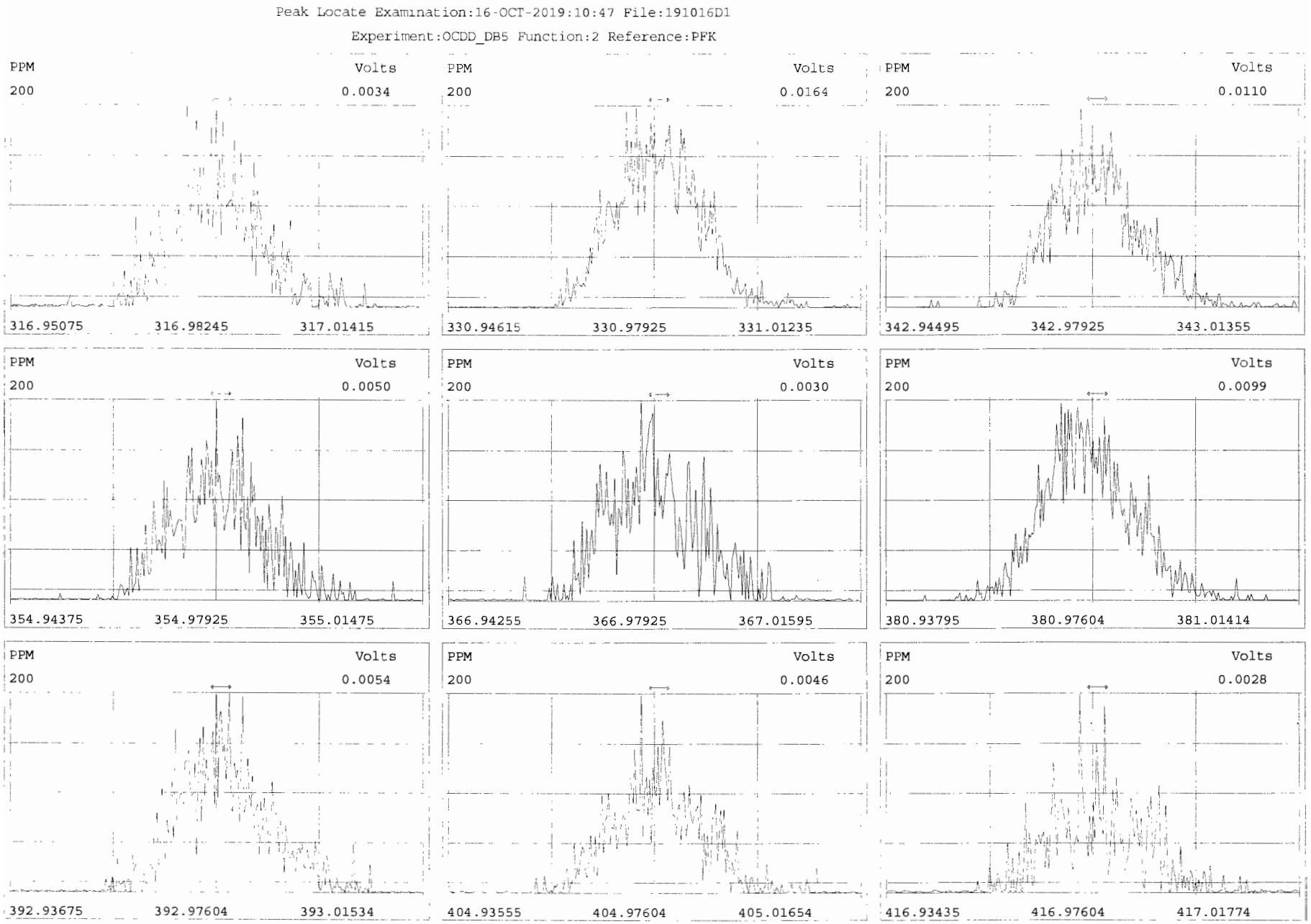
Integrations by Analyst: DB Date: 10/16/19

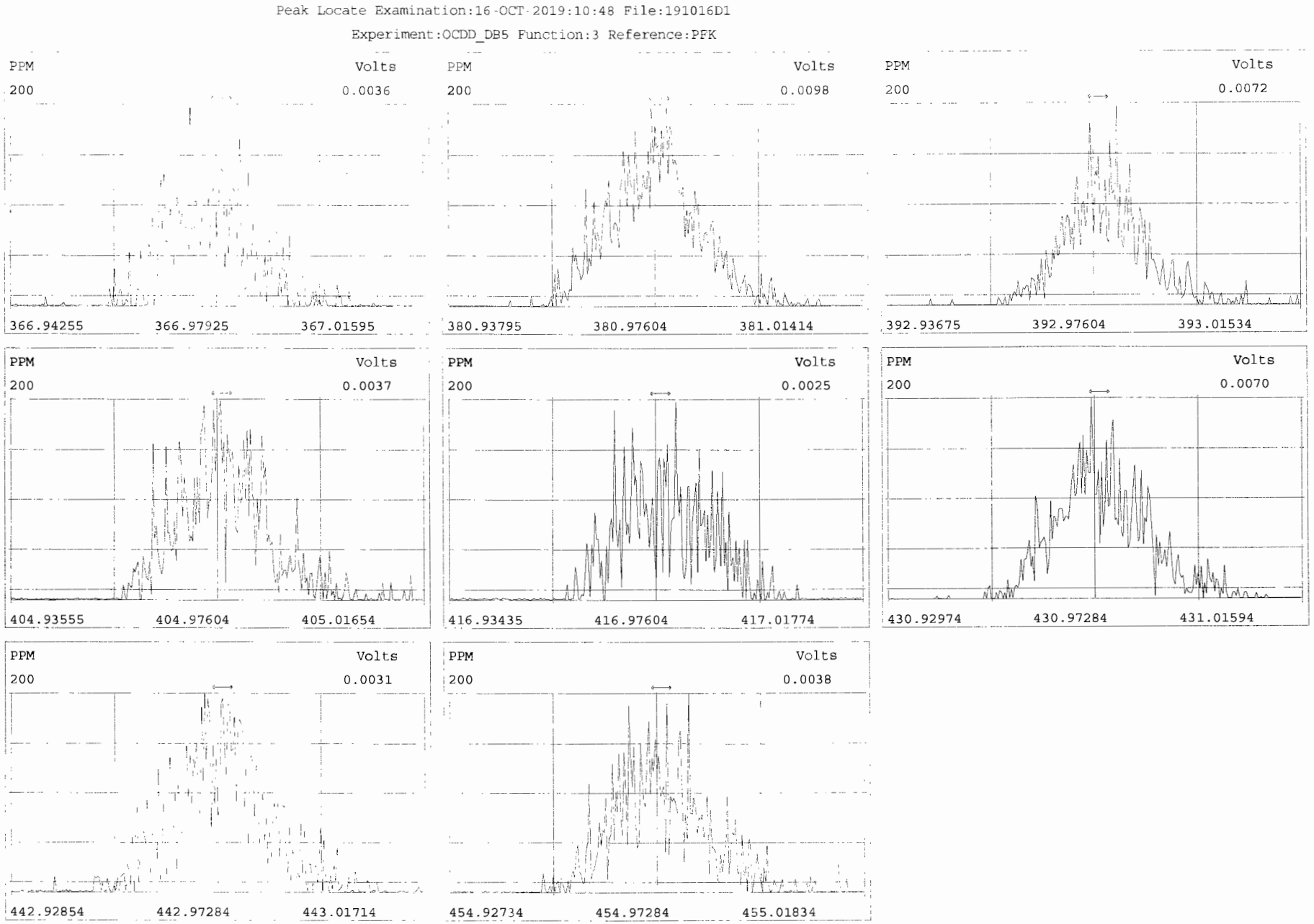
Reviewed by Analyst: AL Date: 10-17-19

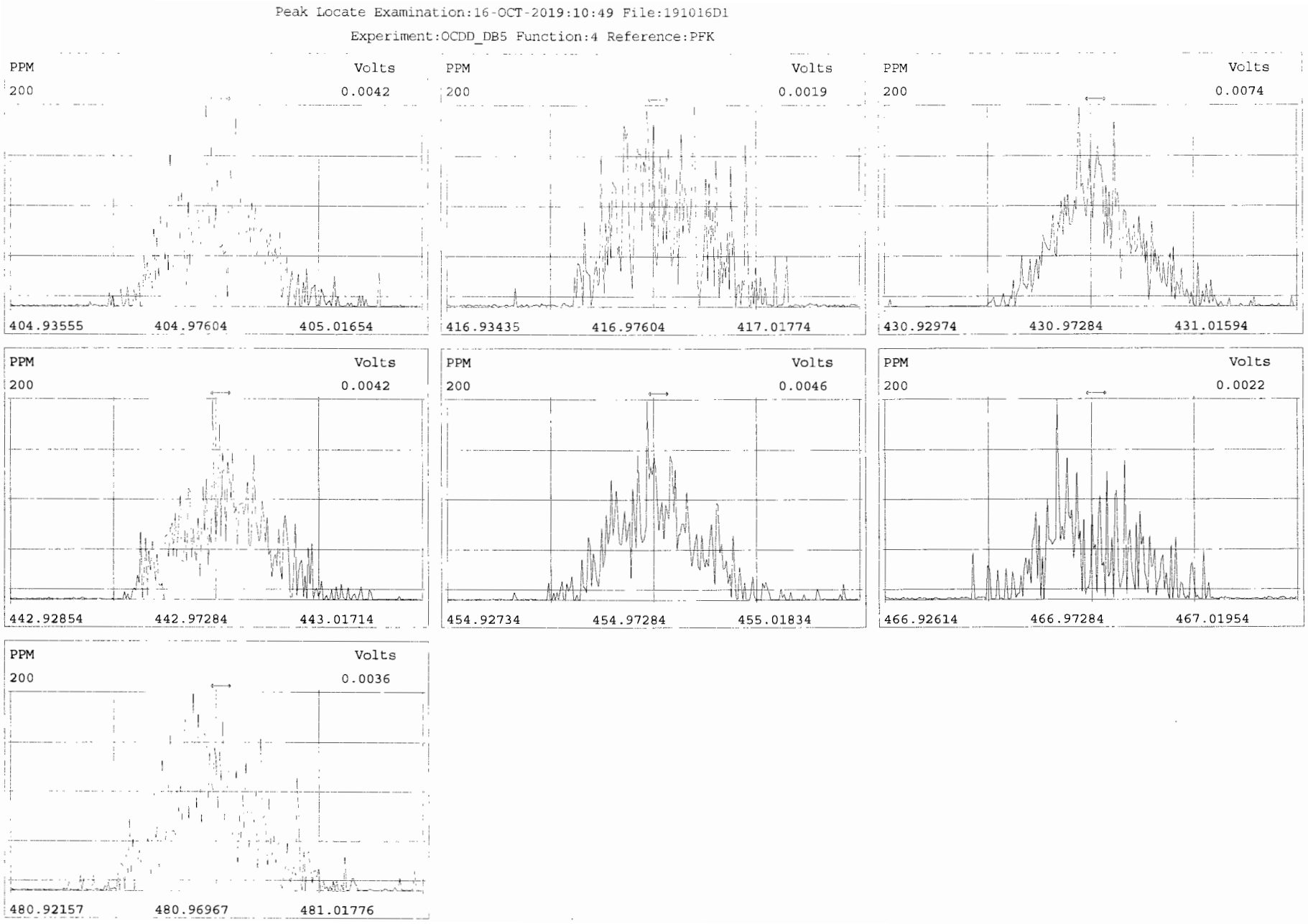
Vista Analytical Laboratory - Injection Log Run file: 191016D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191016D1	1	ST191016D1-1	DB	16-OCT-19	10:51:37	ST191016D1-1	ST191016D1-2
191016D1	2	B9J0093-BS1	DB	16-OCT-19	11:39:37	ST191016D1-1	ST191016D1-2
191016D1	3	SOLVENT BLANK	DB	16-OCT-19	12:27:33	NA	NA
191016D1	4	B9J0093-BLK1	DB	16-OCT-19	13:15:33	ST191016D1-1	ST191016D1-2
191016D1	5	1903430-03	DB	16-OCT-19	14:03:28	ST191016D1-1	NA
191016D1	6	1903430-04	DB	16-OCT-19	14:51:24	ST191016D1-1	NA
191016D1	7	1903430-05	DB	16-OCT-19	15:39:14	ST191016D1-1	NA
191016D1	8	1903430-06	DB	16-OCT-19	16:27:10	ST191016D1-1	NA
191016D1	9	1903430-07	DB	16-OCT-19	17:15:05	ST191016D1-1	NA
191016D1	10	1903430-08	DB	16-OCT-19	18:02:59	ST191016D1-1	NA
191016D1	11	1903430-11	DB	16-OCT-19	18:50:53	ST191016D1-1	NA
191016D1	12	1903430-12	DB	16-OCT-19	19:38:38	ST191016D1-1	NA
191016D1	13	1903430-13	DB	16-OCT-19	20:26:21	ST191016D1-1	NA
191016D1	14	1903430-14	DB	16-OCT-19	21:14:05	ST191016D1-1	NA
191016D1	15	1903462-01	DB	16-OCT-19	22:01:55	ST191016D1-1	ST191016D1-2
191016D1	16	SOLVENT BLANK	DB	16-OCT-19	22:49:40	NA	NA
191016D1	17	ST191016D1-2	DB	16-OCT-19	23:37:36	ST191016D1-1	ST191016D1-2


Peak Locate Examination:16-OCT-2019:10:47 File:191016D1
Experiment:OCDD_DB5 Function:1 Reference:PFK
PPM
Volts
200
0.0131
292.98245
PPM
Volts
200
0.0073
304.98245
PPM
Volts
200
0.0042
316.98245
PPM
Volts
200
0.0167
330.97925
PPM
Volts
200
0.0095
342.97925
PPM
Volts
200
0.0046
354.97925
PPM
Volts
200
0.0033
366.97925
PPM
Volts
200
0.0092
380.97604
PPM
Volts
200
0.0048
392.97604
PPM
Volts
200
0.0036
404.97604
PPM
Volts
200
0.0022
416.97604

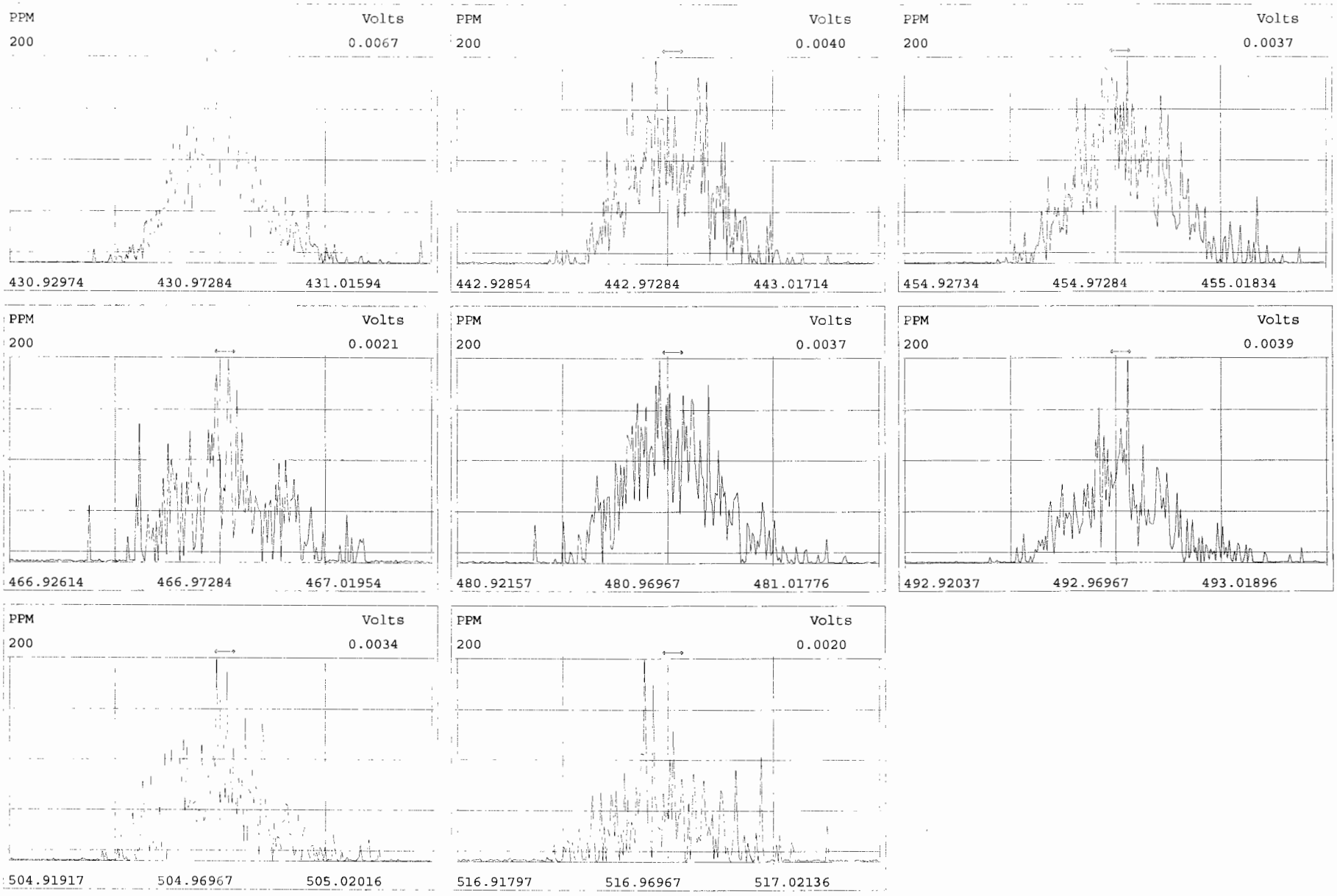

Peak Locate Examination:16-OCT-2019:10:47 File:191016D1
Experiment:OCDD_DB5 Function:2 Reference:PFK
PPM
Volts
200
0.0034
316.95075
316.98245
317.01415
PPM
Volts
200
0.0164
330.94615
330.97925
331.01235
PPM
Volts
200
0.0110
342.94495
342.97925
343.01355
PPM
Volts
200
0.0050
354.94375
354.97925
355.01475
PPM
Volts
200
0.0030
366.94255
366.97925
367.01595
PPM
Volts
200
0.0099
380.93795
380.97604
381.01414
PPM
Volts
200
0.0054
392.93675
392.97604
393.01534
PPM
Volts
200
0.0046
404.93555
404.97604
405.01654
PPM
Volts
200
0.0028
416.93435
416.97604
417.01774


Peak Locate Examination:16-OCT-2019:10:48 File:191016D1
Experiment:OCDD_DB5 Function:3 Reference:PFK
PPM
Volts
200
0.0036
366.94255
366.97925
367.01595
PPM
Volts
200
0.0098
380.93795
380.97604
381.01414
PPM
Volts
200
0.0072
392.93675
392.97604
393.01534
PPM
Volts
200
0.0037
404.93555
404.97604
405.01654
PPM
Volts
200
0.0025
416.93435
416.97604
417.01774
PPM
Volts
200
0.0070
430.92974
430.97284
431.01594
PPM
Volts
200
0.0031
442.92854
442.97284
443.01714
PPM
Volts
200
0.0038
454.92734
454.97284
455.01834

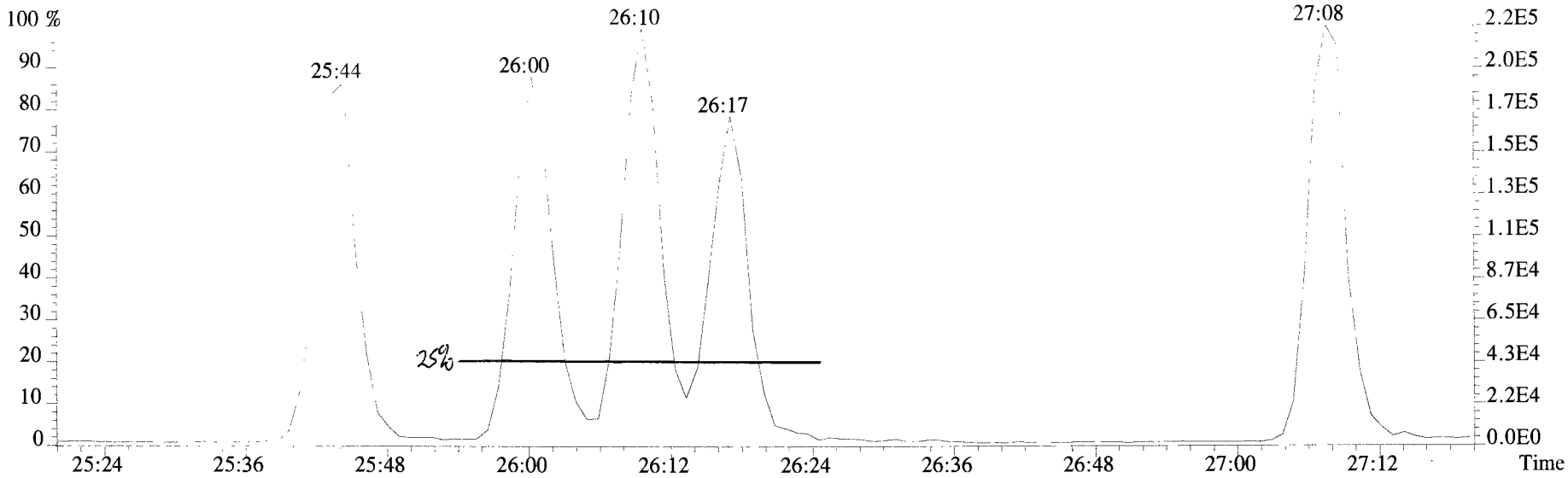

Peak Locate Examination:16-OCT-2019:10:49 File:191016D1
Experiment:OCDD_DB5 Function:4 Reference:PFK
PPM
Volts
200
0.0042
404.93555
404.97604
405.01654
PPM
Volts
200
0.0019
416.93435
416.97604
417.01774
PPM
Volts
200
0.0074
430.92974
430.97284
431.01594
PPM
Volts
200
0.0042
442.92854
442.97284
443.01714
PPM
Volts
200
0.0046
454.92734
454.97284
455.01834
PPM
Volts
200
0.0022
466.92614
466.97284
467.01954
PPM
Volts
200
0.0036
480.92157
480.96967
481.01776

Peak Locate Examination:16-OCT-2019:10:50 File:191016D1

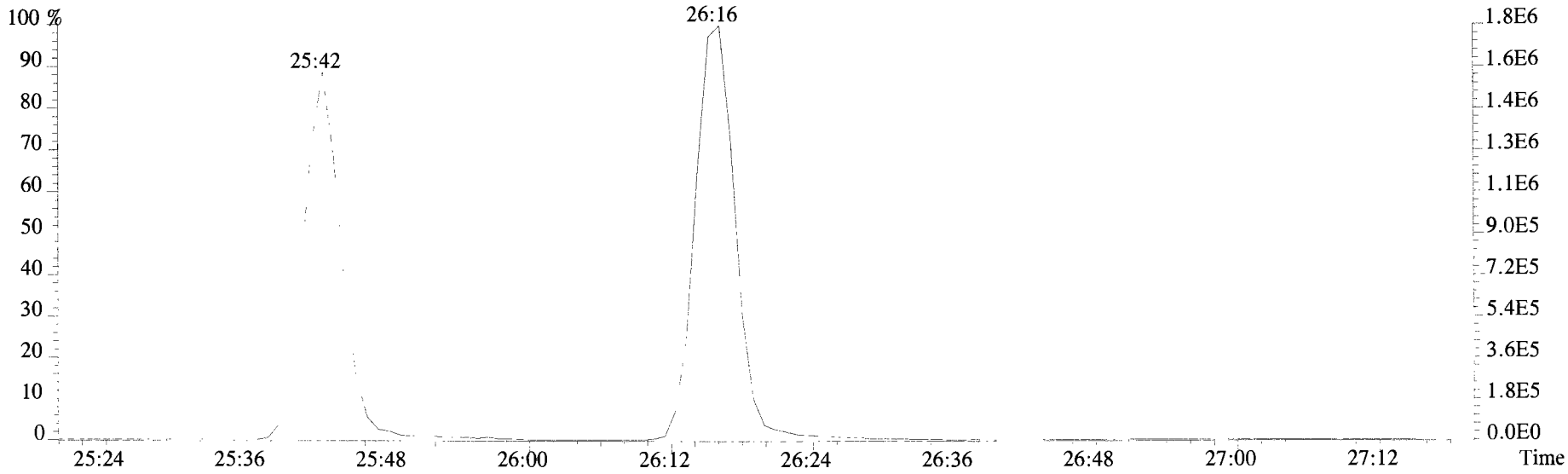
Experiment:OCDD_DB5 Function:5 Reference:PFK



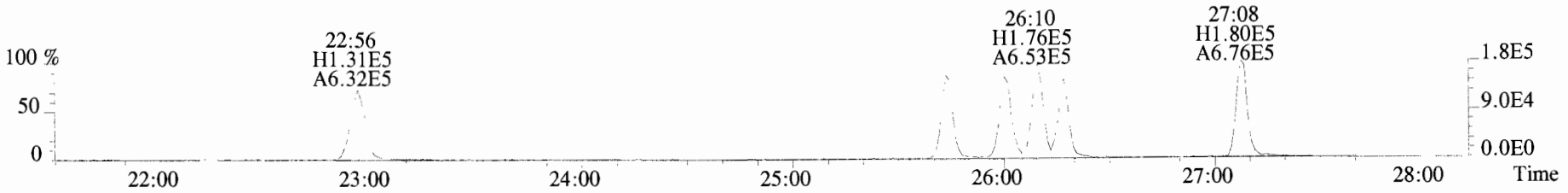
File:191016D1 #1-492 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
321.8936



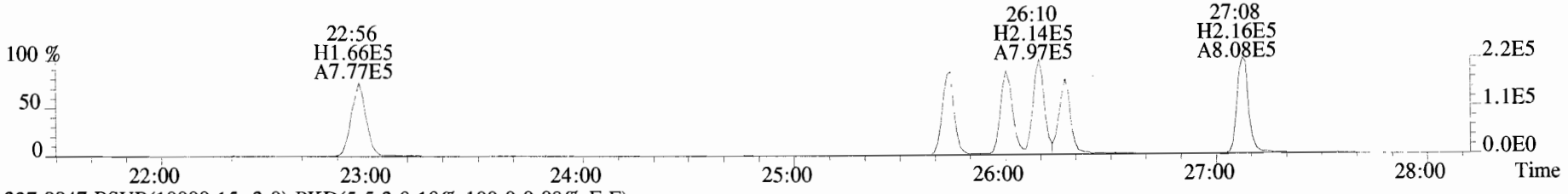
333.9339



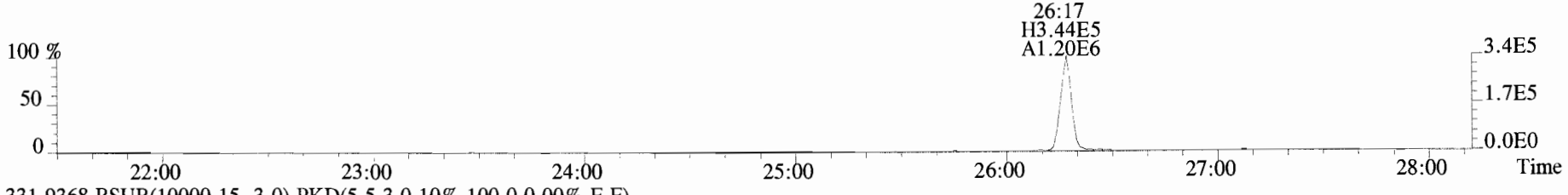
File:191016D1 #1-492 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



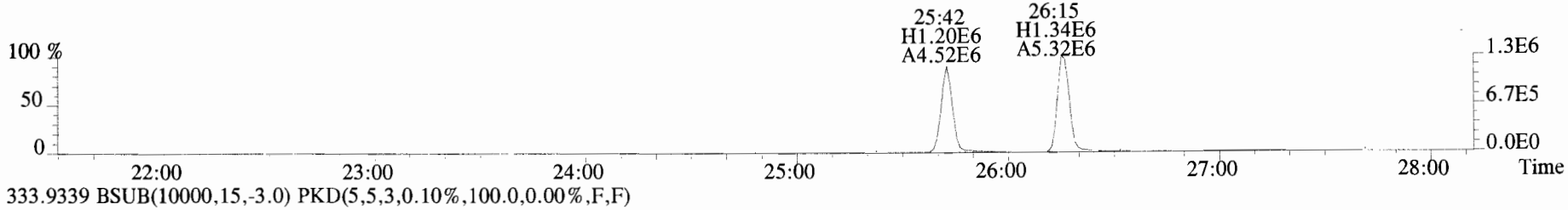
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



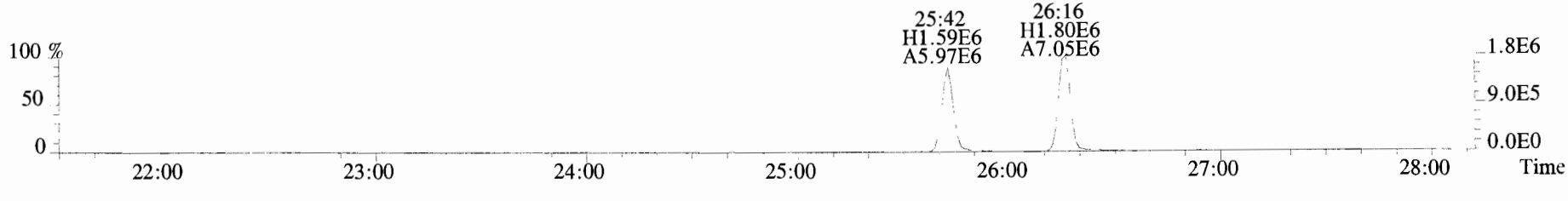
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



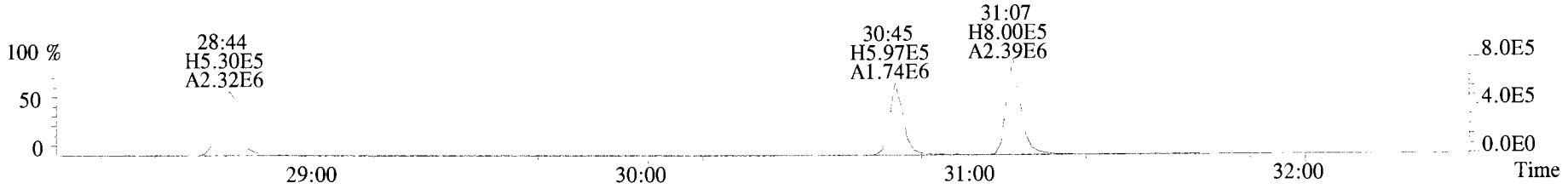
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



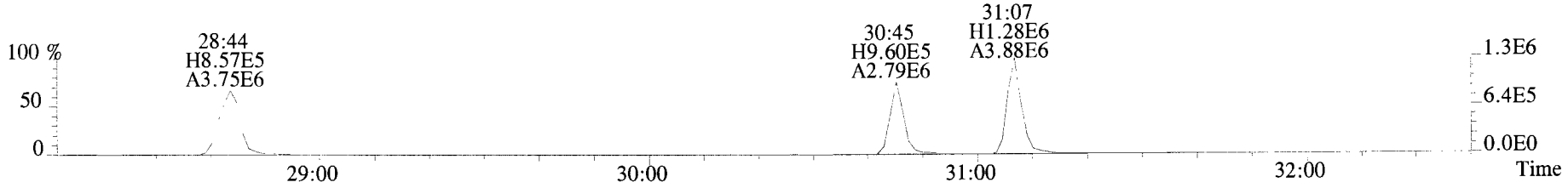
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



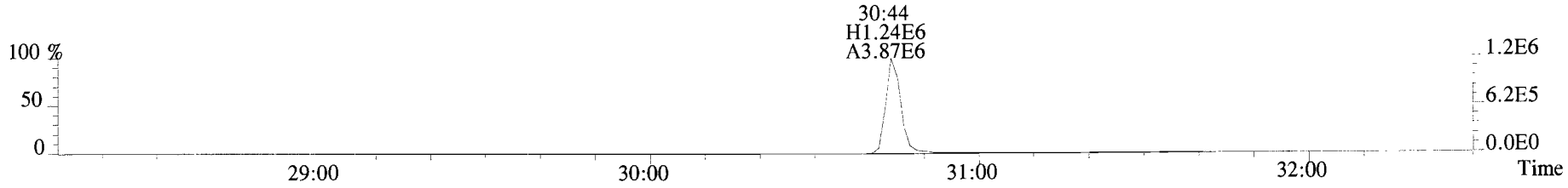
File:191016D1 #1-211 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



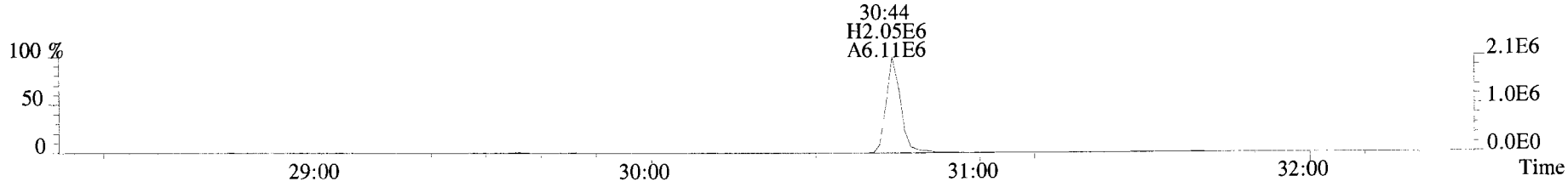
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



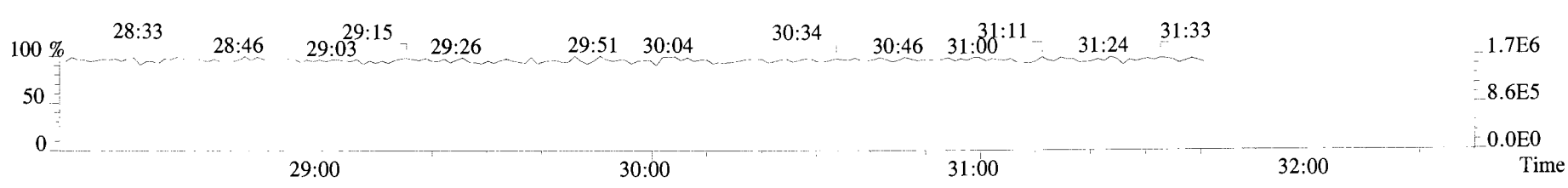
365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



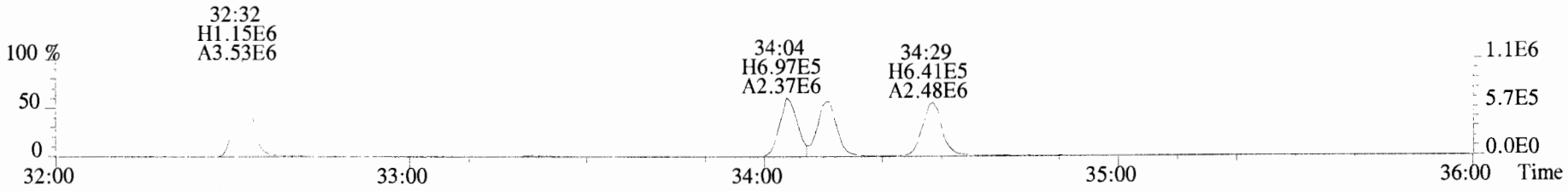
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



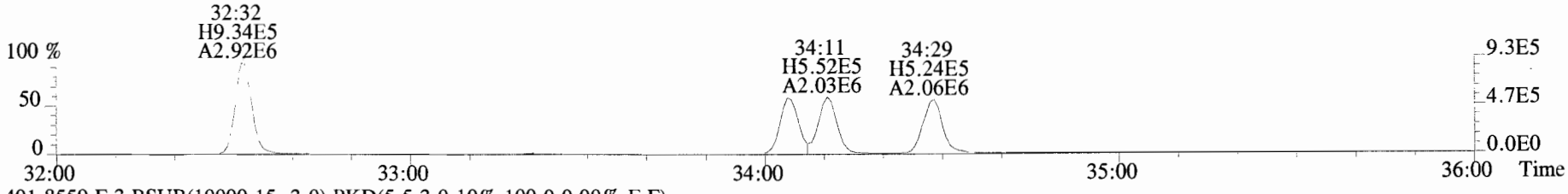
366.9792 F:2



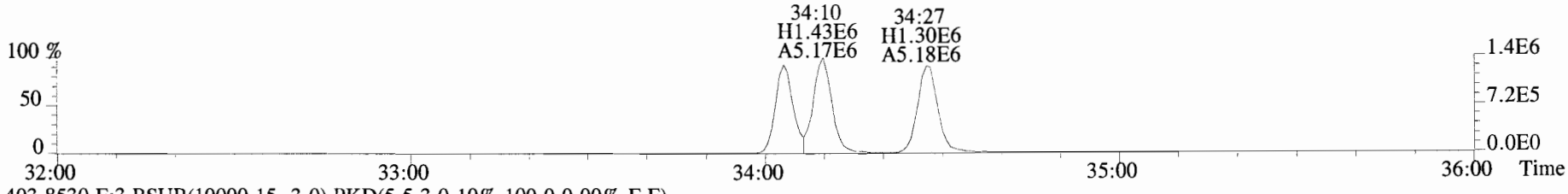
File:191016D1 #1-384 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



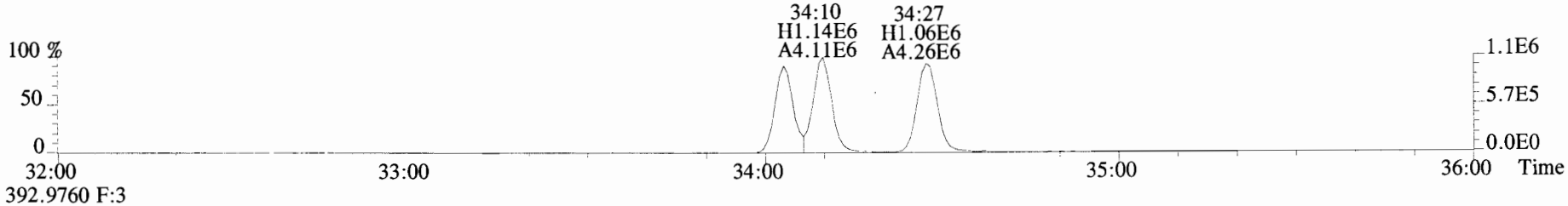
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



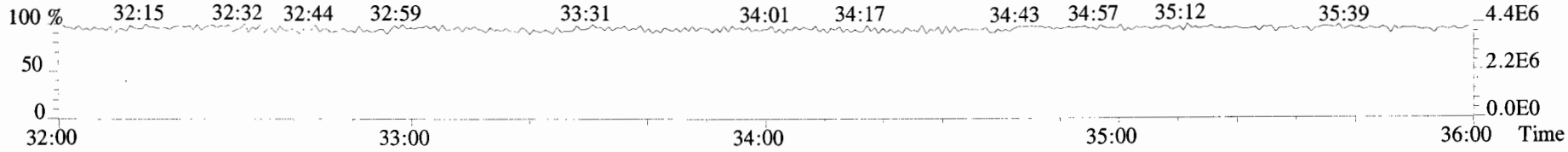
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



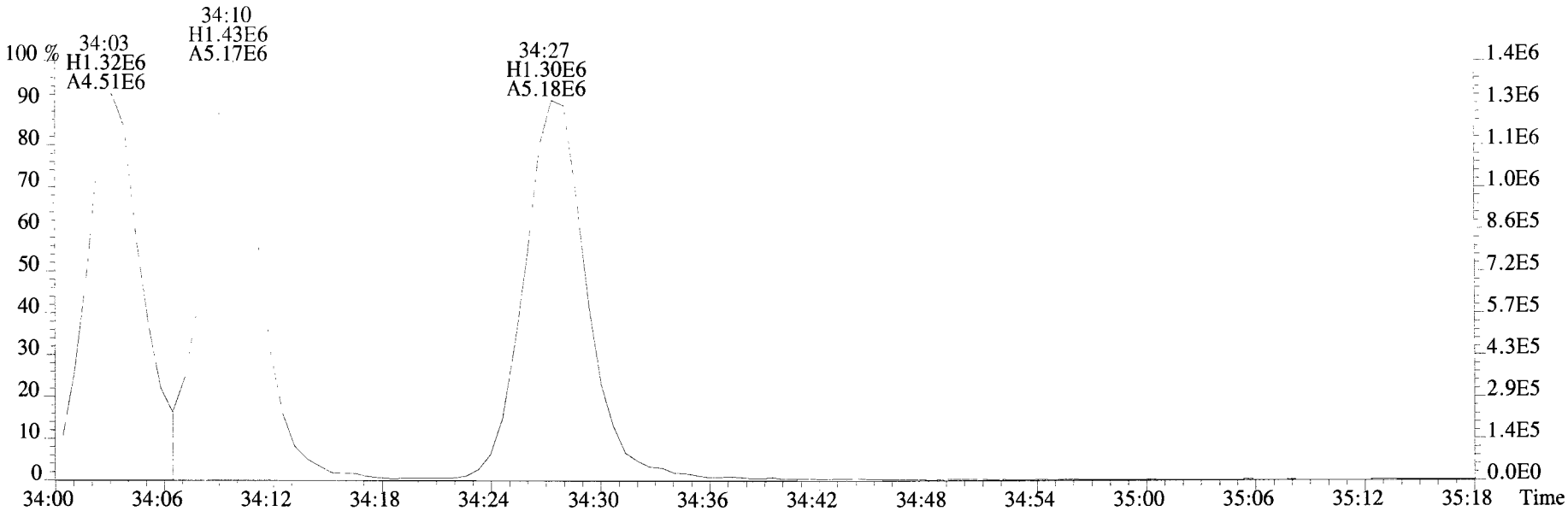
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



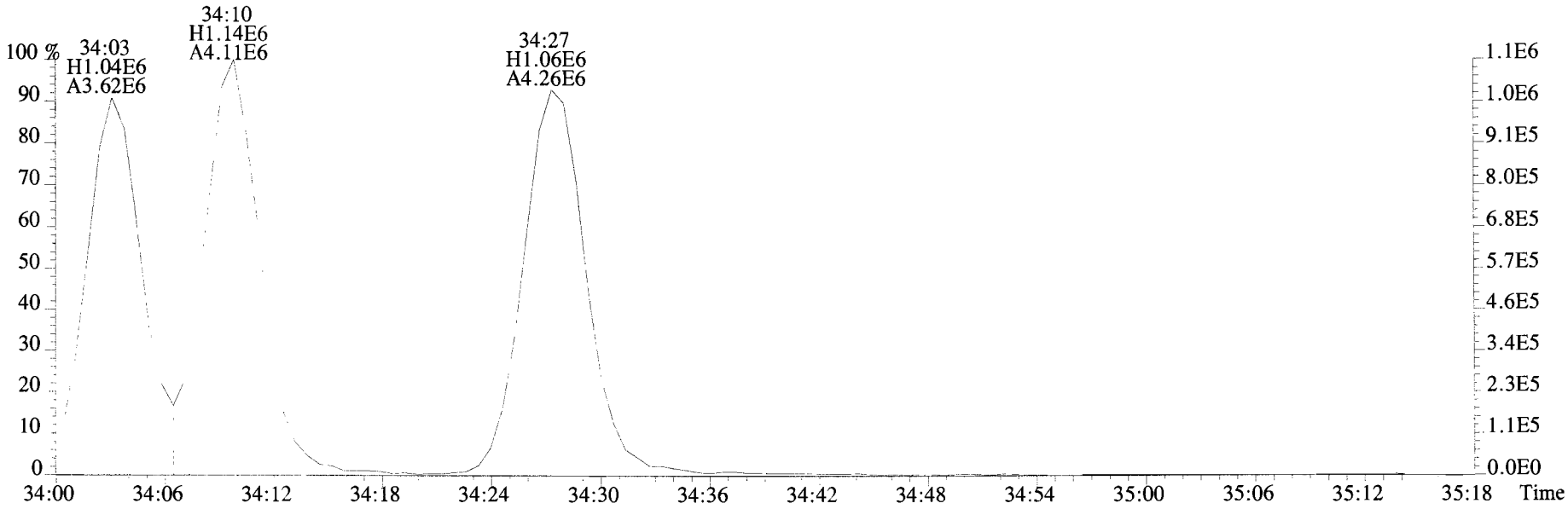
392.9760 F:3



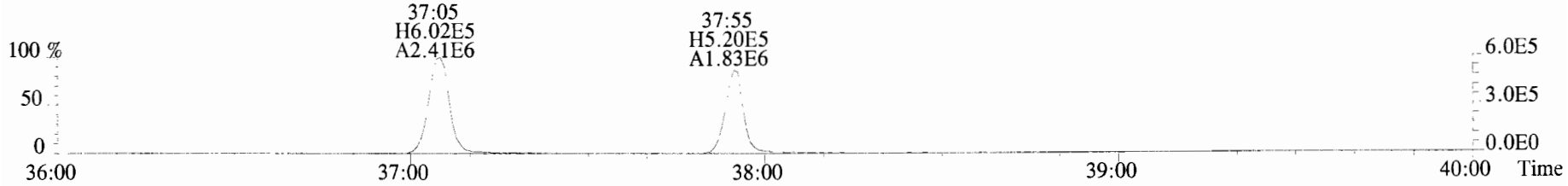
File:191016D1 #1-384 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



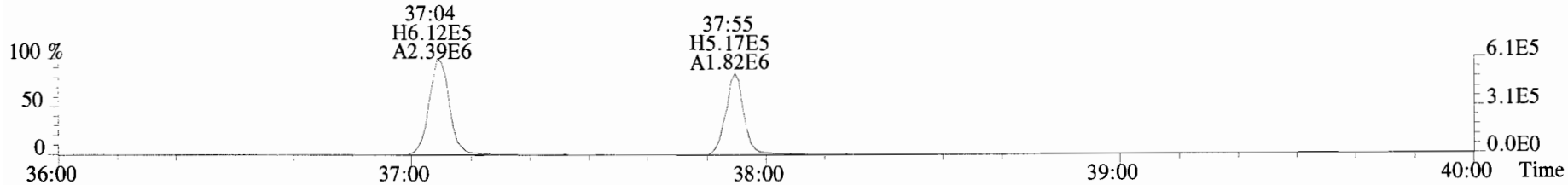
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



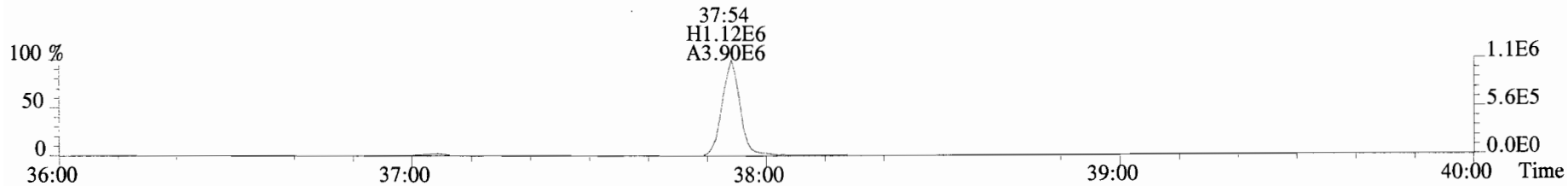
File:191016D1 #1-356 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



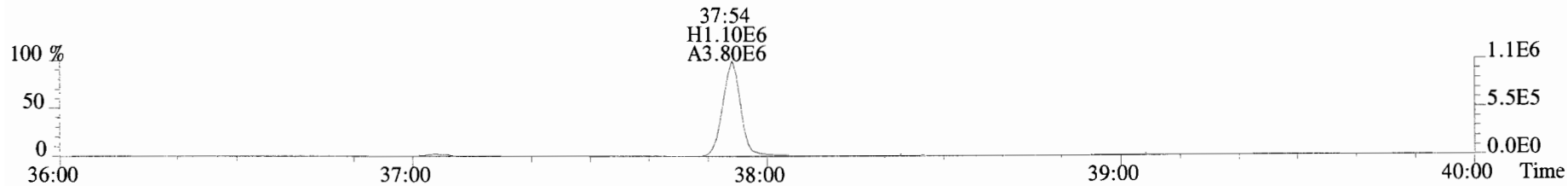
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



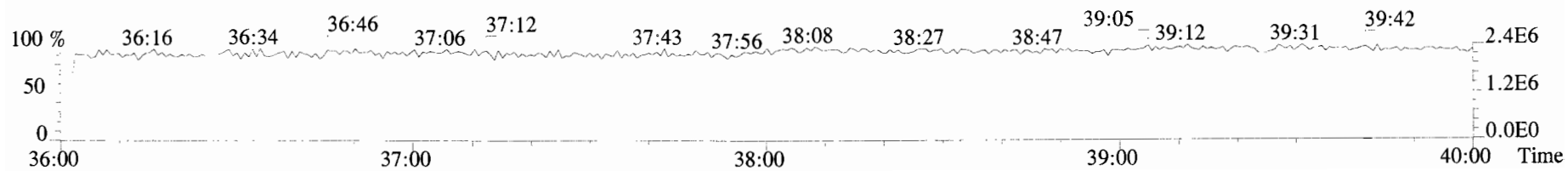
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



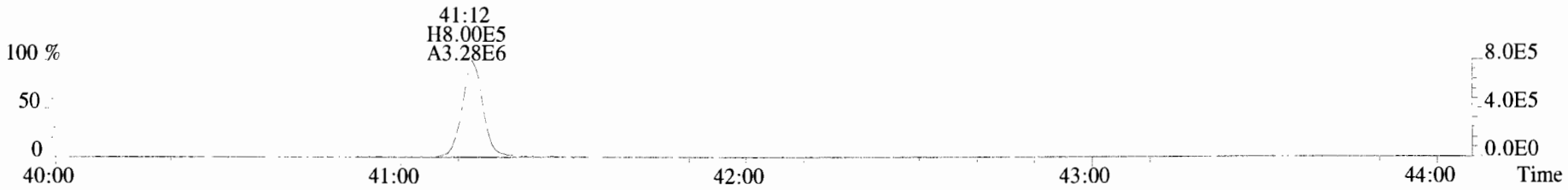
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



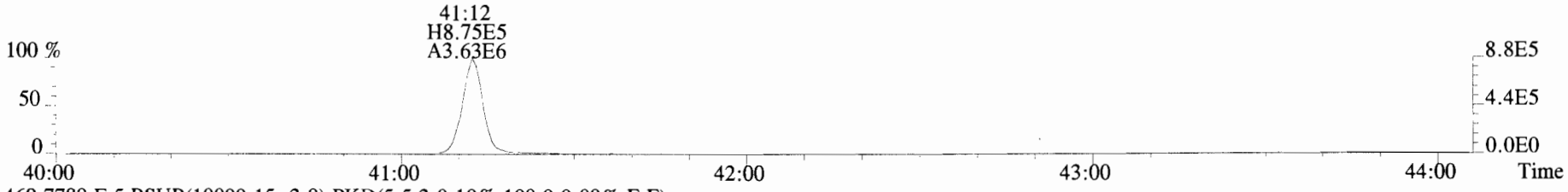
454.9728 F:4



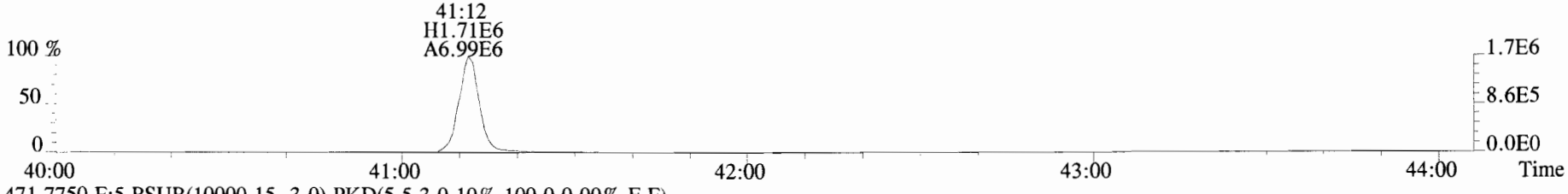
File:191016D1 #1-431 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



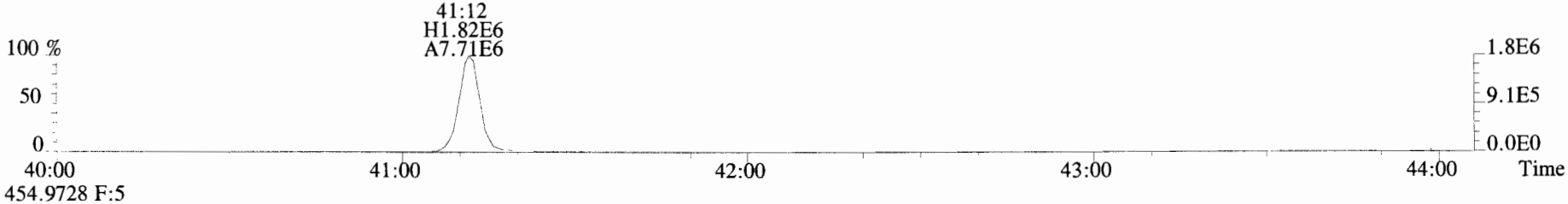
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



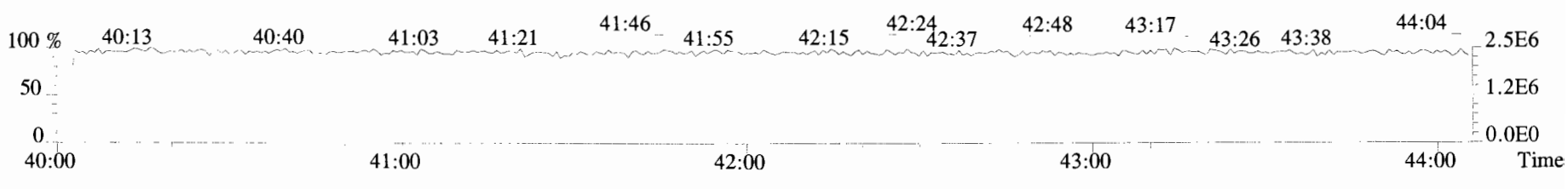
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

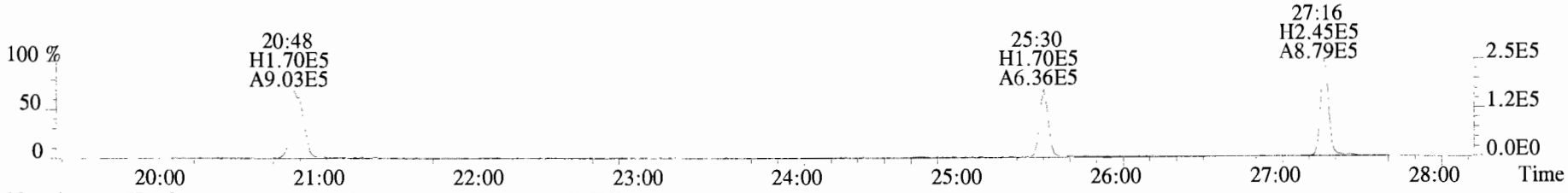


454.9728 F:5

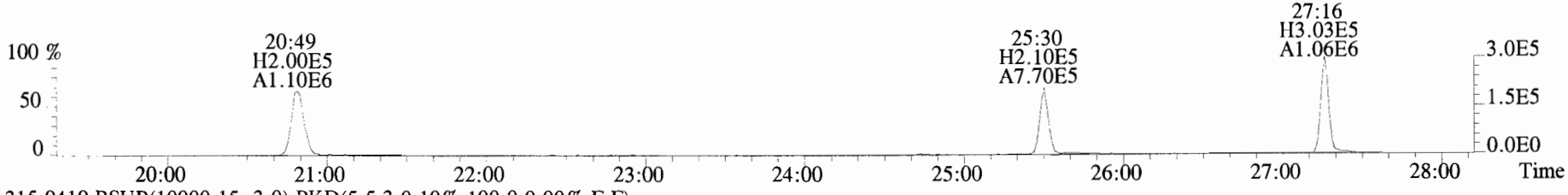


File:191016D1 #1-492 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5

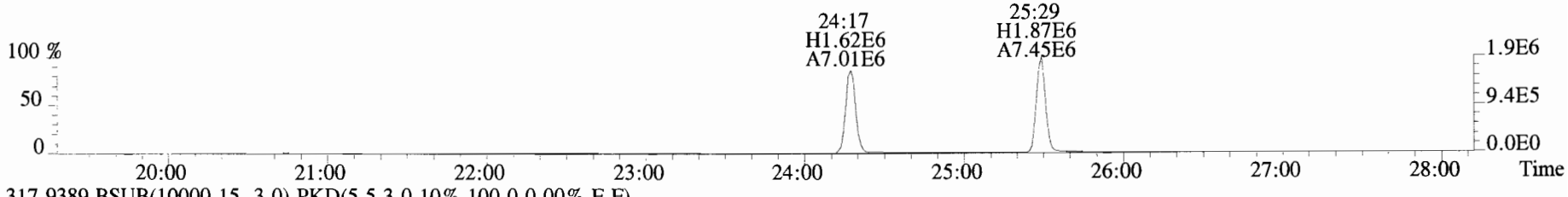
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



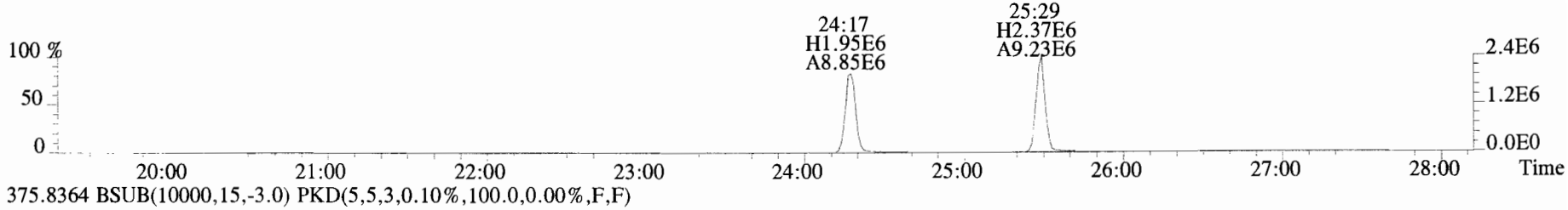
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



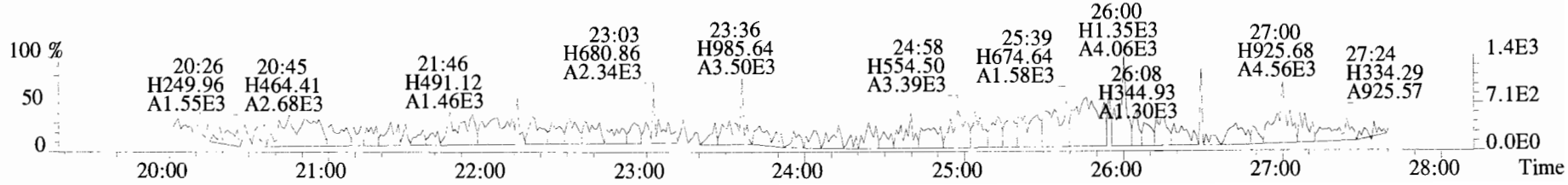
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

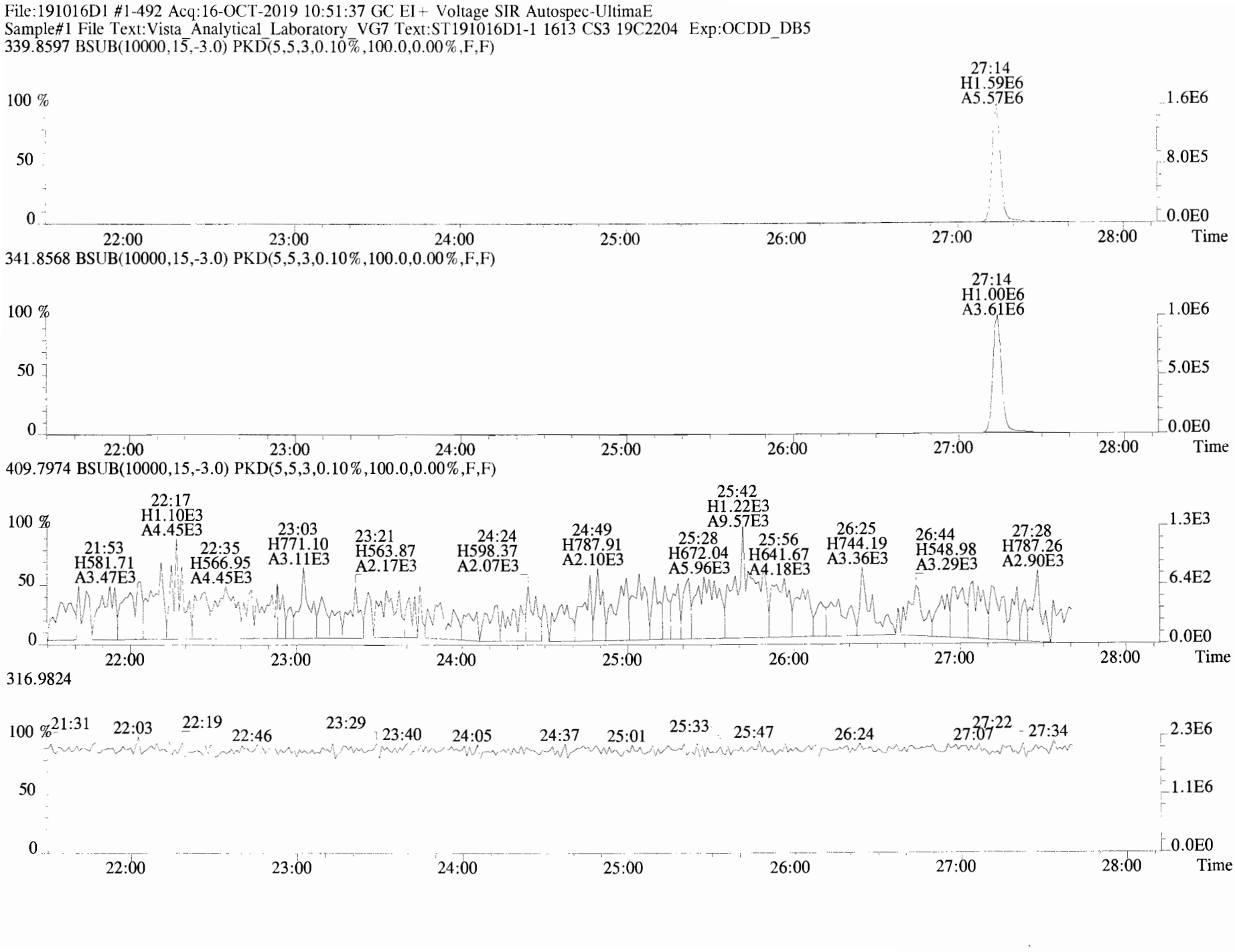


317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

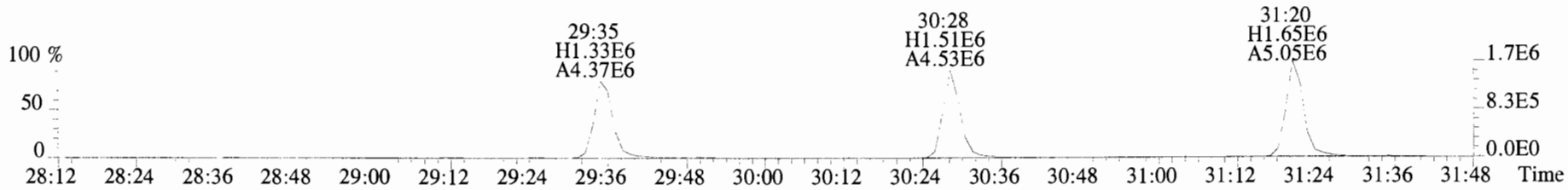


375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

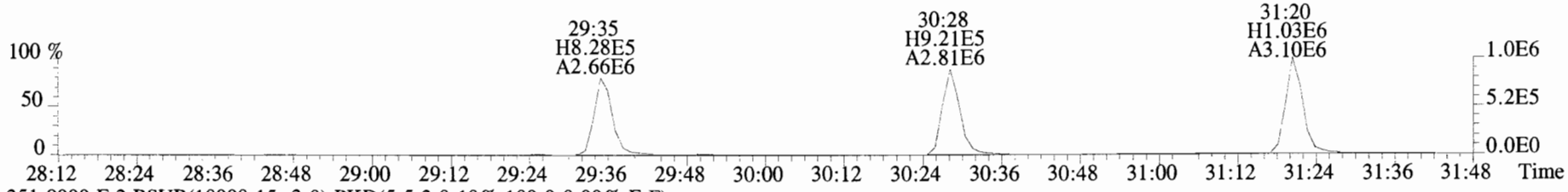



File:191016D1 #1-492 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:14
H1.59E6
A5.57E6
100 %
50
0
1.6E6
8.0E5
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:14
H1.00E6
A3.61E6
100 %
50
0
1.0E6
5.0E5
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:17
H1.10E3
A4.45E3
25:42
H1.22E3
A9.57E3
21:53
H581.71
A3.47E3
22:35
H566.95
A4.45E3
23:03
H771.10
A3.11E3
23:21
H563.87
A2.17E3
24:24
H598.37
A2.07E3
24:49
H787.91
A2.10E3
25:28
H672.04
A5.96E3
25:56
H641.67
A4.18E3
26:25
H744.19
A3.36E3
26:44
H548.98
A3.29E3
27:28
H787.26
A2.90E3
100 %
50
0
1.3E3
6.4E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
316.9824
21:31
22:03
22:19
22:46
23:29
23:40
24:05
24:37
25:01
25:33
25:47
26:24
27:07
27:22
27:34
100 %
50
0
2.3E6
1.1E6
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time

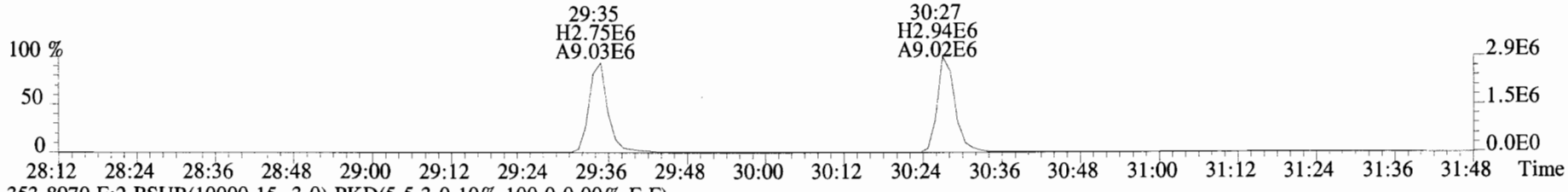
File:191016D1 #1-211 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



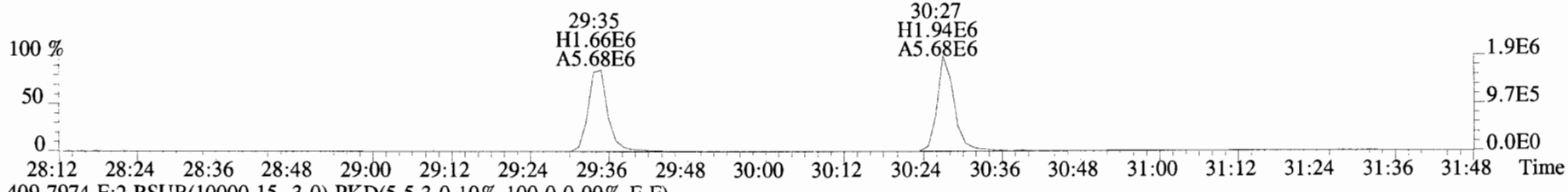
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



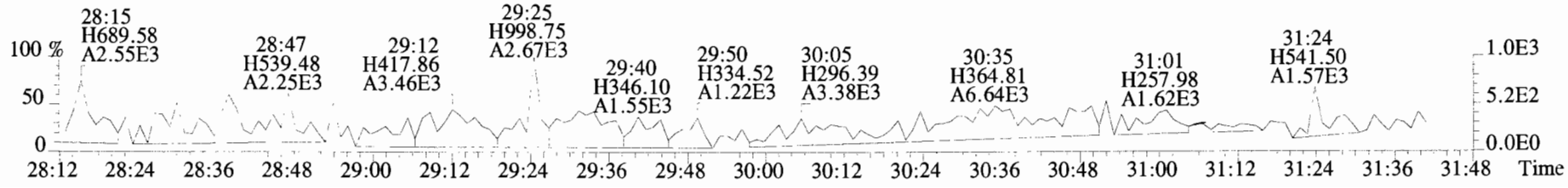
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

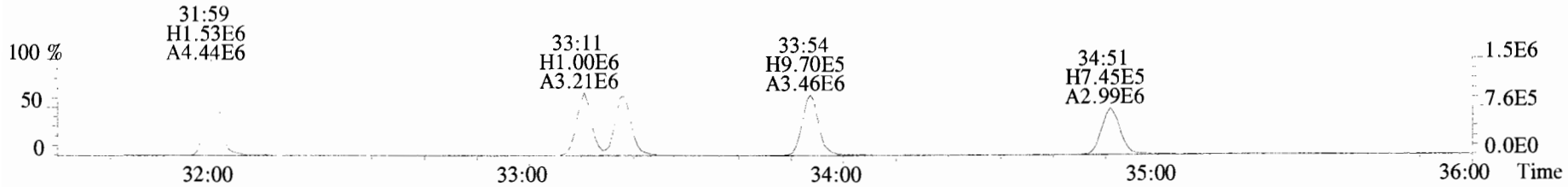


409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

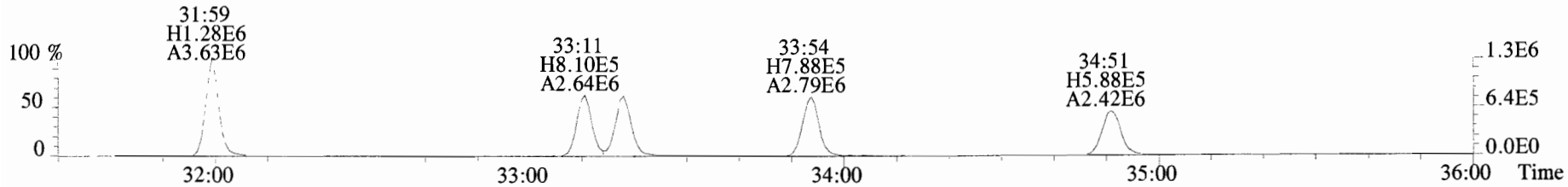


File:191016D1 #1-384 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5

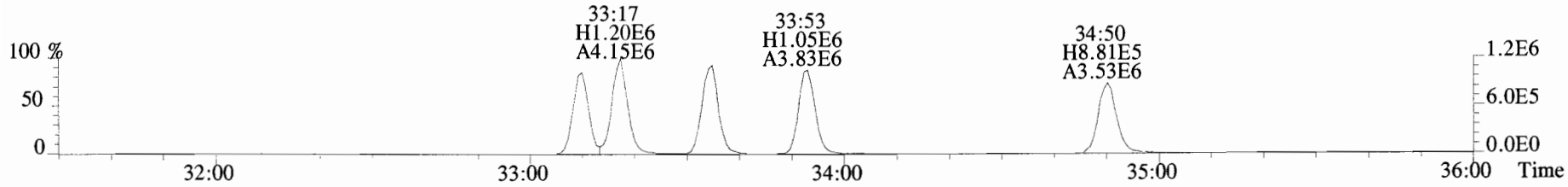
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



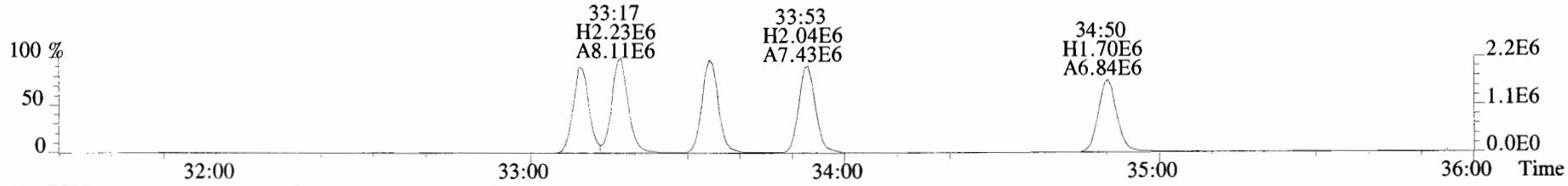
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



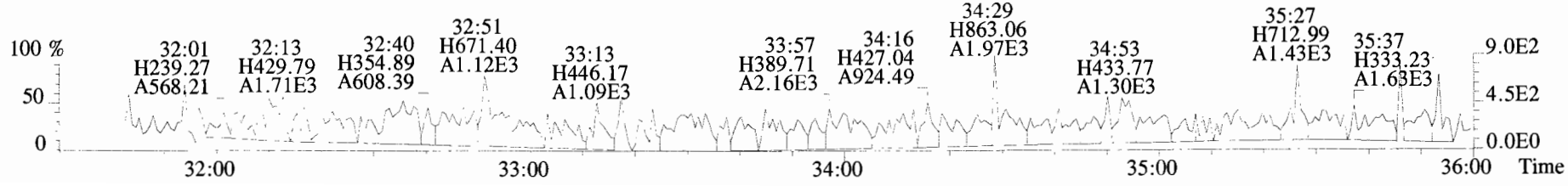
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



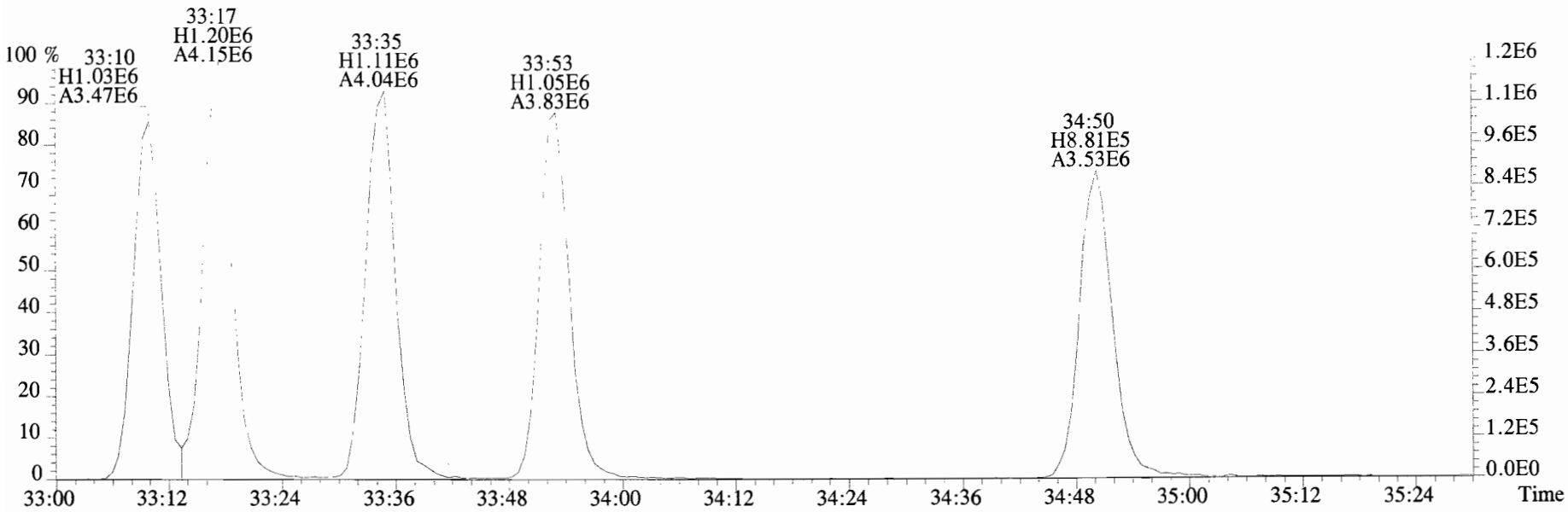
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



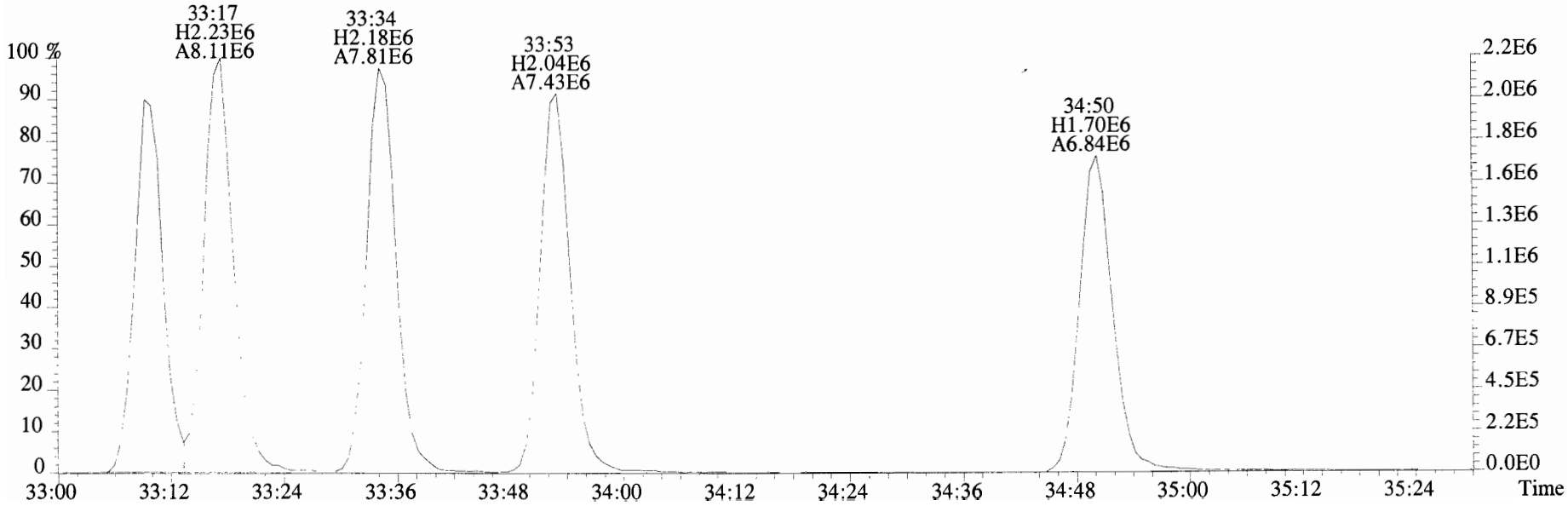
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



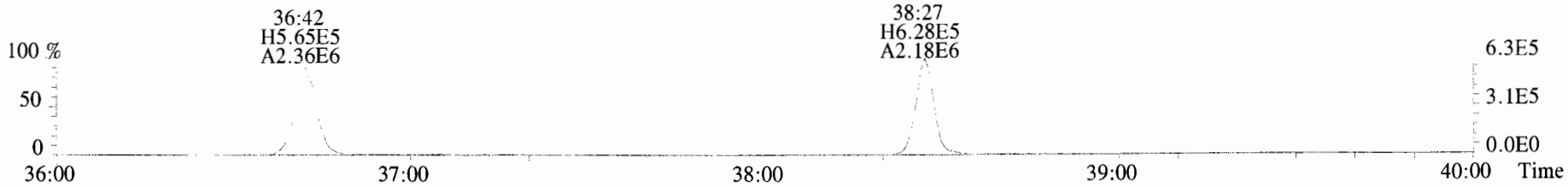
File:191016D1 #1-384 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



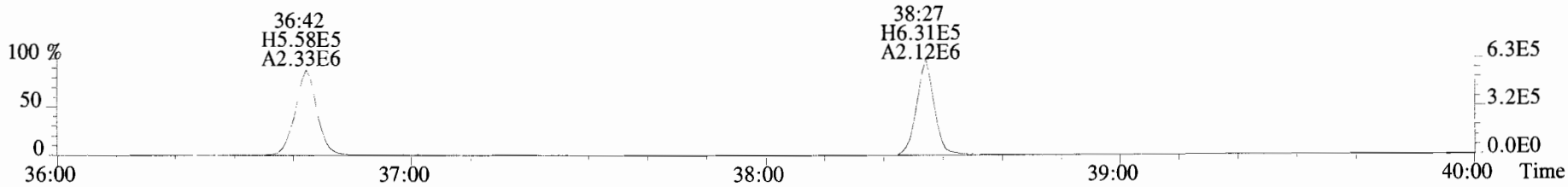
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



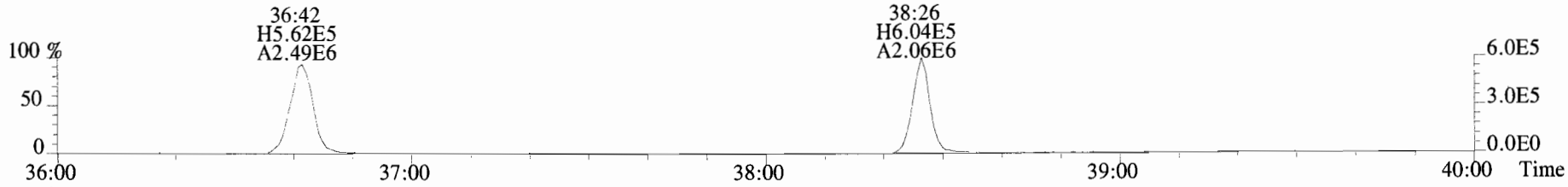
File:191016D1 #1-356 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



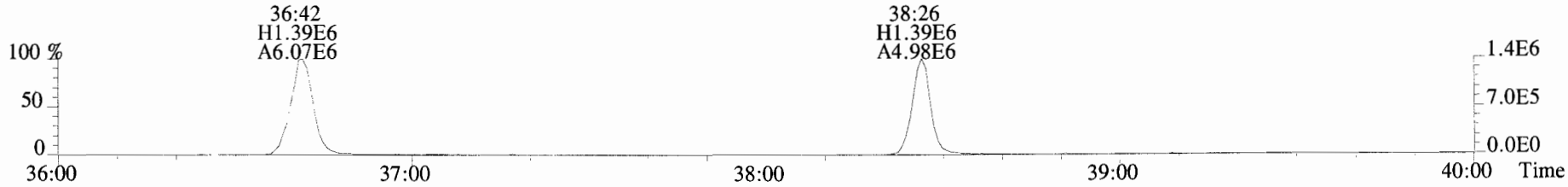
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



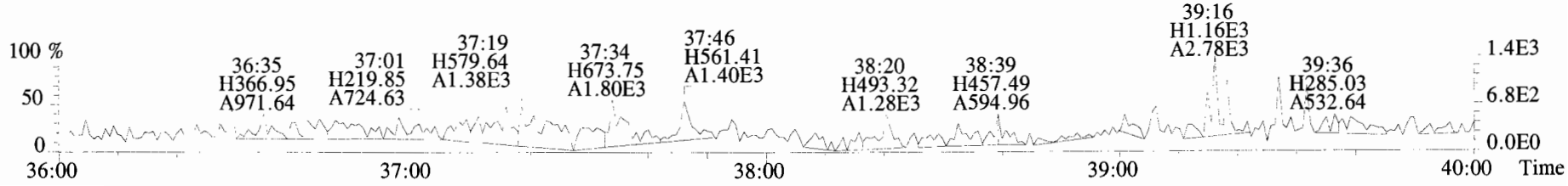
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



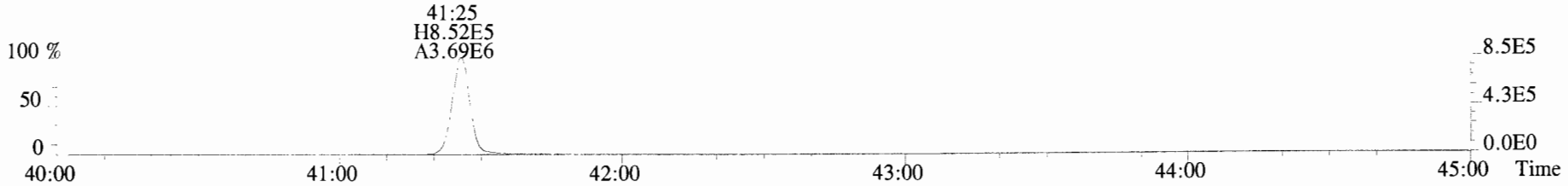
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



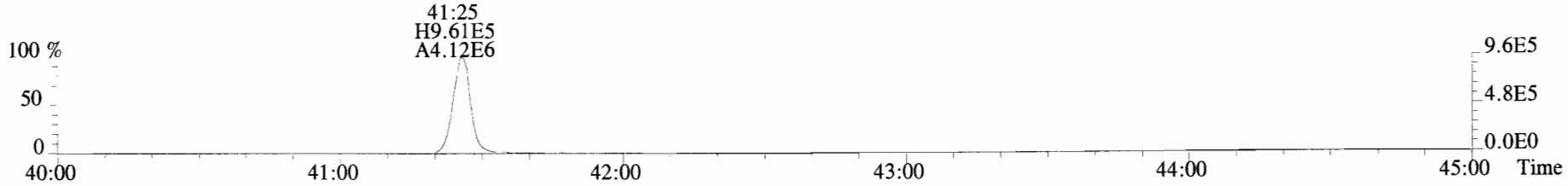
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



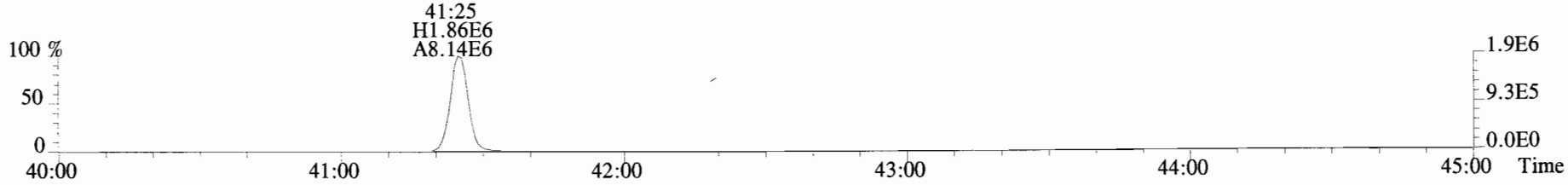
File:191016D1 #1-431 Acq:16-OCT-2019 10:51:37 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191016D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



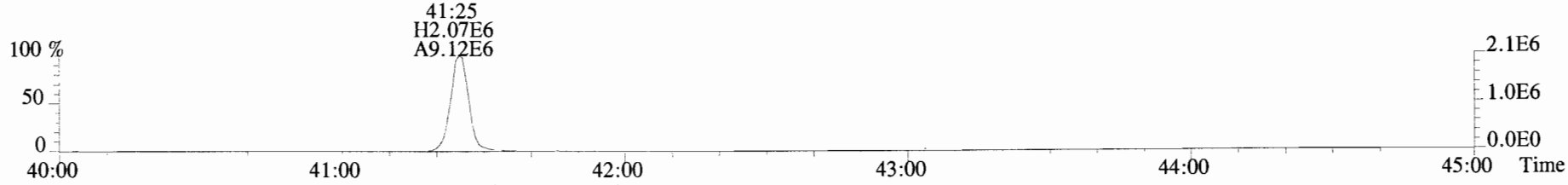
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



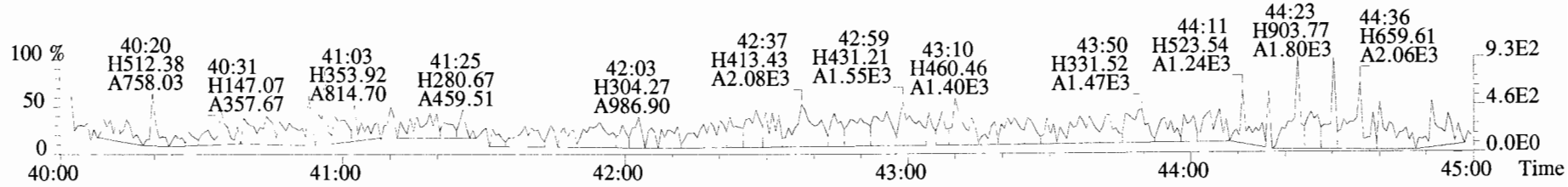
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

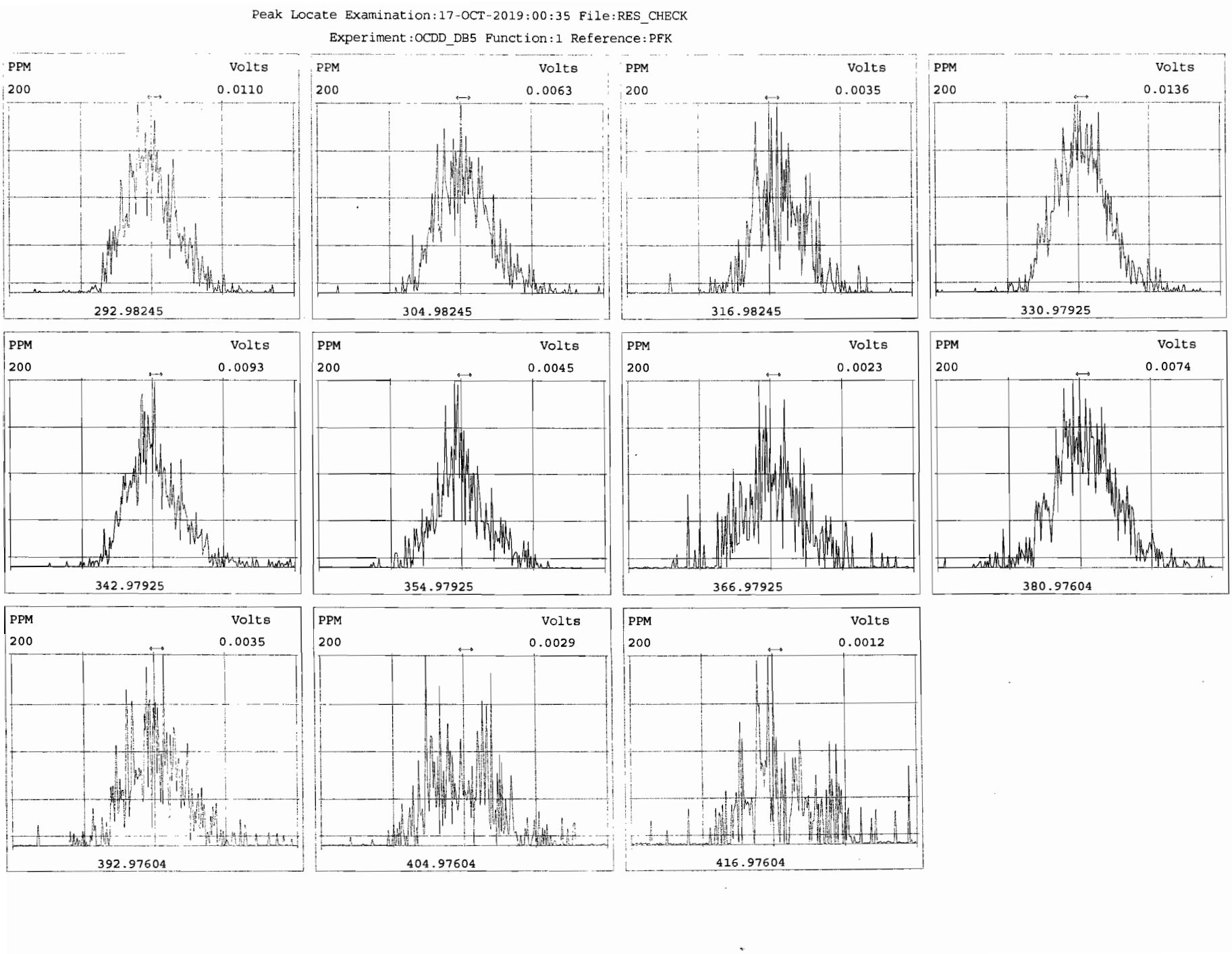


455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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




Peak Locate Examination:17-OCT-2019:00:35 File:RES_CHECK
Experiment:OCDD_DB5 Function:1 Reference:PFK
PPM
Volts
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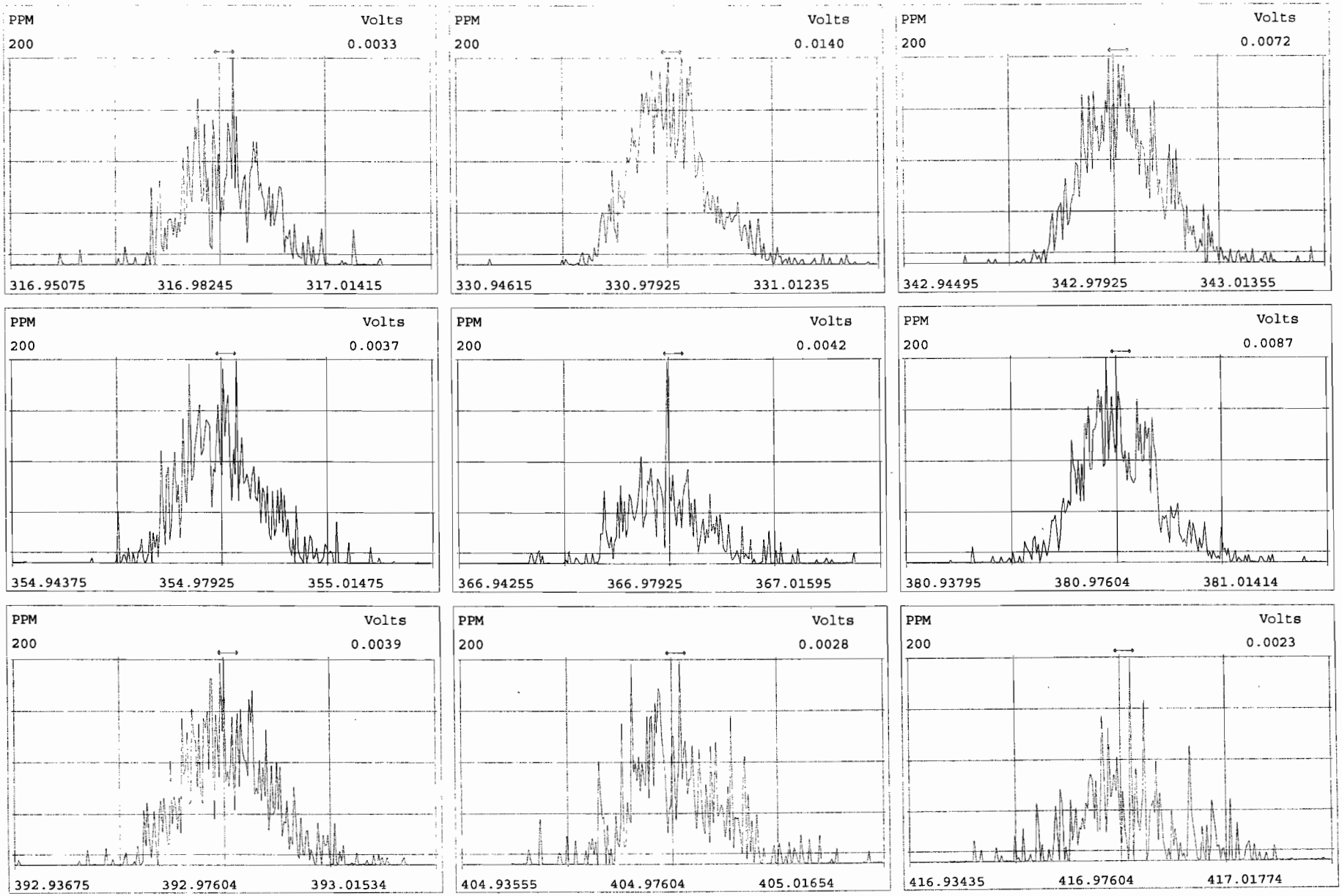
292.98245
PPM
Volts
200
0.0063
304.98245
PPM
Volts
200
0.0035
316.98245
PPM
Volts
200
0.0136
330.97925
PPM
Volts
200
0.0093
342.97925
PPM
Volts
200
0.0045
354.97925
PPM
Volts
200
0.0023
366.97925
PPM
Volts
200
0.0074
380.97604
PPM
Volts
200
0.0035
392.97604
PPM
Volts
200
0.0029
404.97604
PPM
Volts
200
0.0012
416.97604

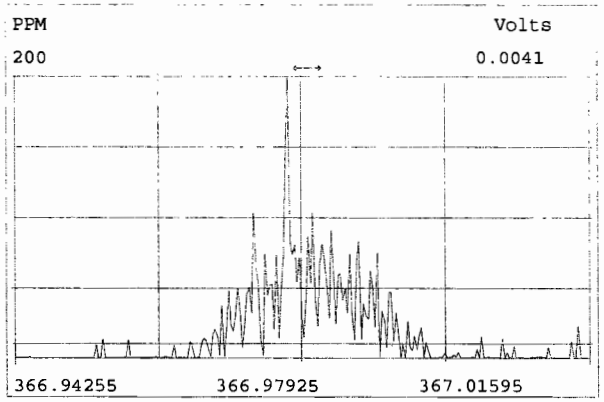
Peak Locate Examination:17-OCT-2019:00:36 File:RES_CHECK

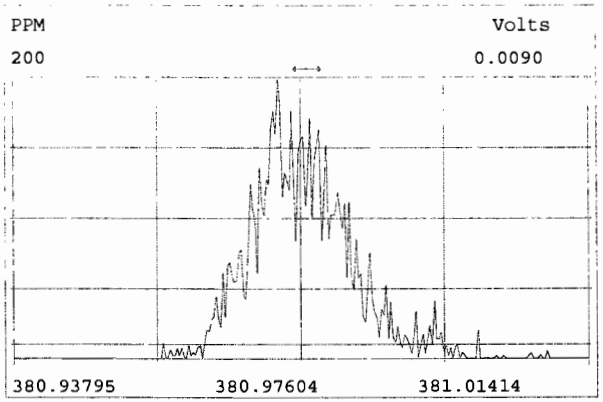
Experiment:OCDD_DB5 Function:2 Reference:PFK

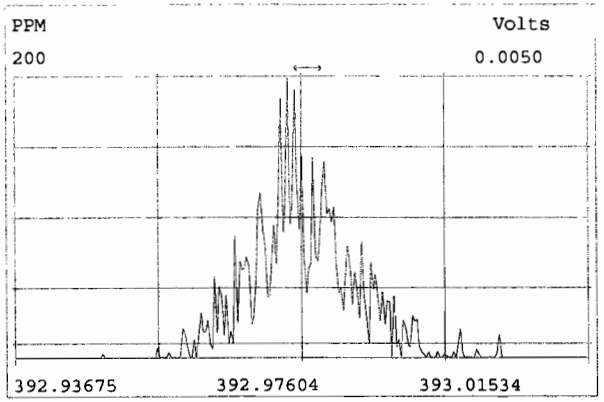


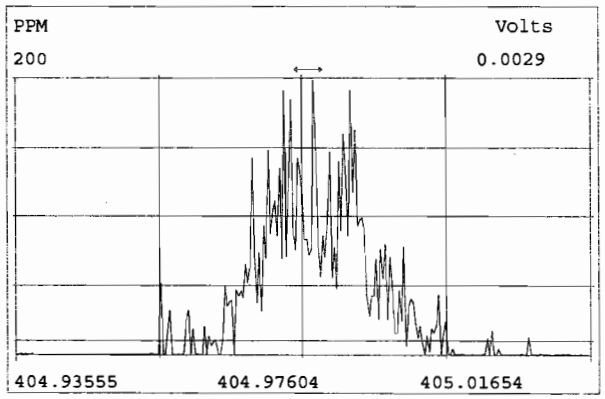
Peak Locate Examination:17-OCT-2019:00:37 File:RES_CHECK

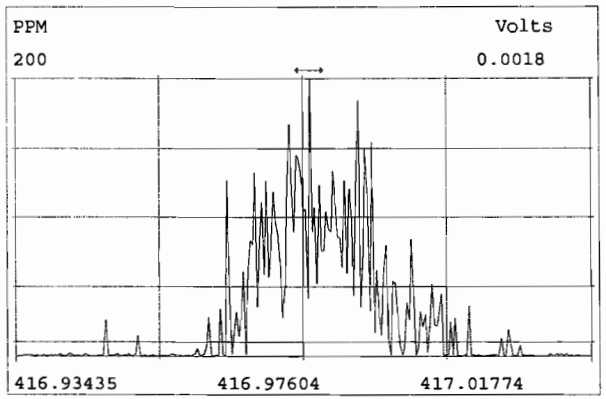
Experiment:OCDD_DB5 Function:3 Reference:PFK

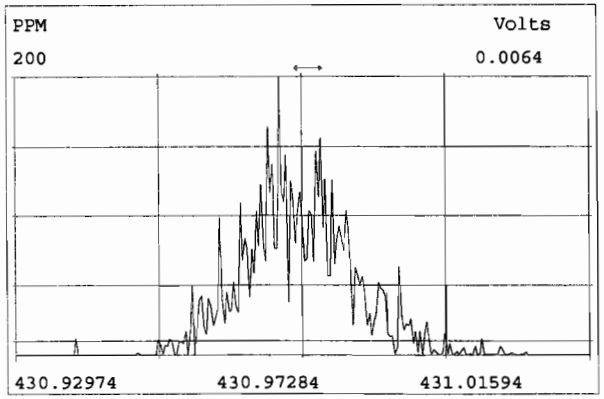


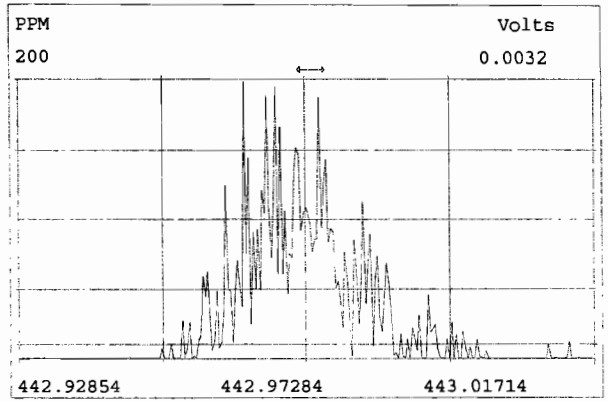


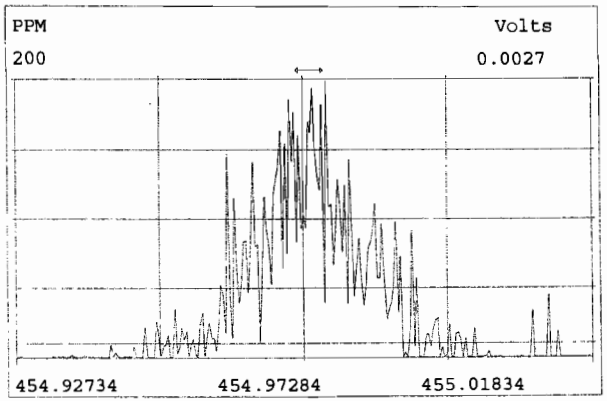






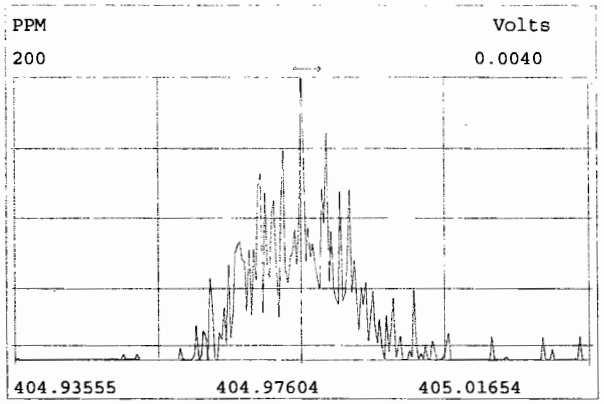


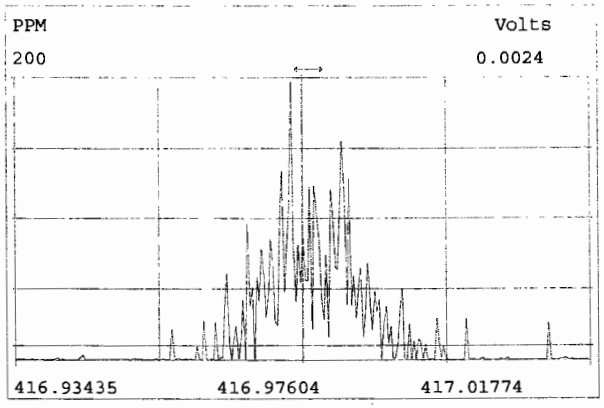


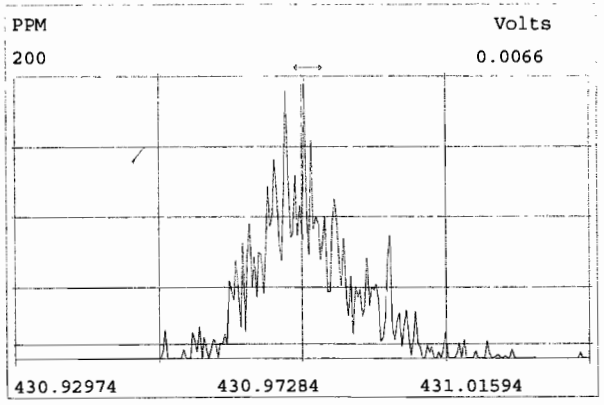


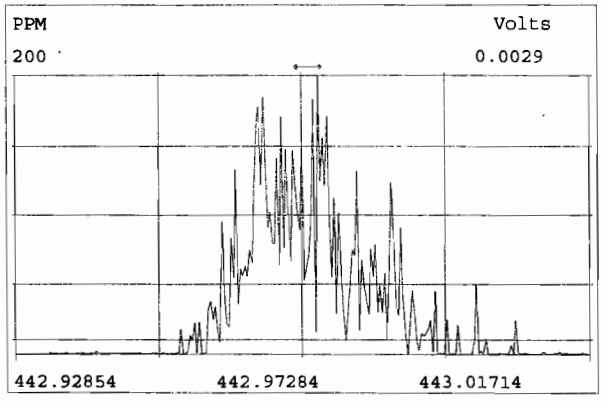
Peak Locate Examination:17-OCT-2019:00:38 File:RES_CHECK

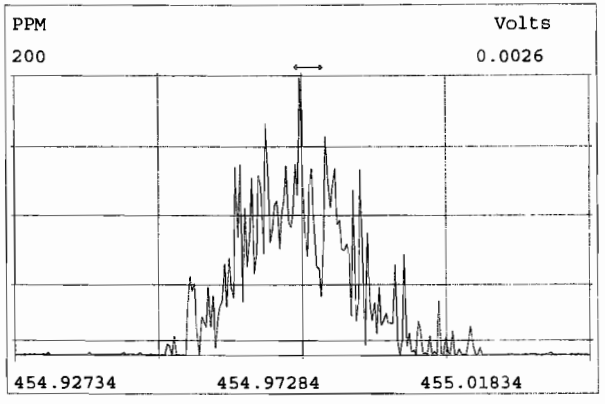
Experiment:OCDD_DB5 Function:4 Reference:PFK

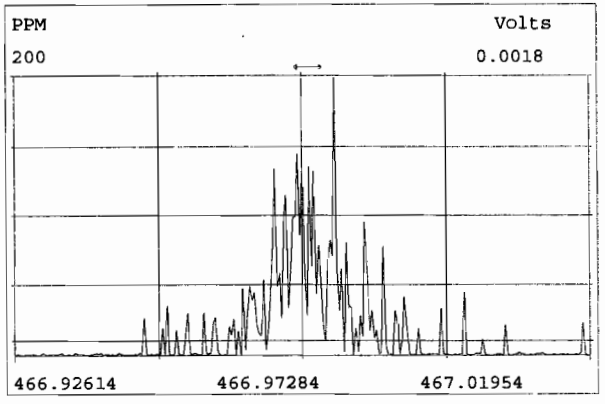


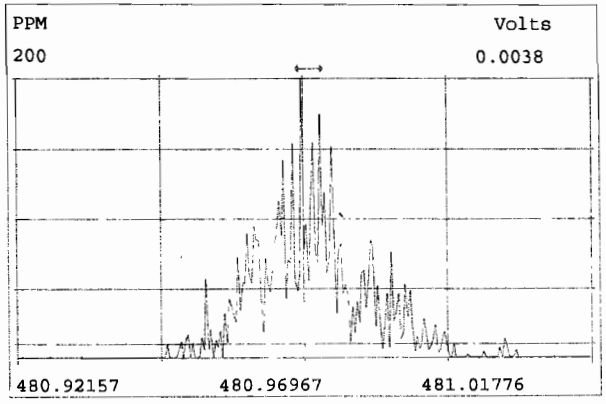






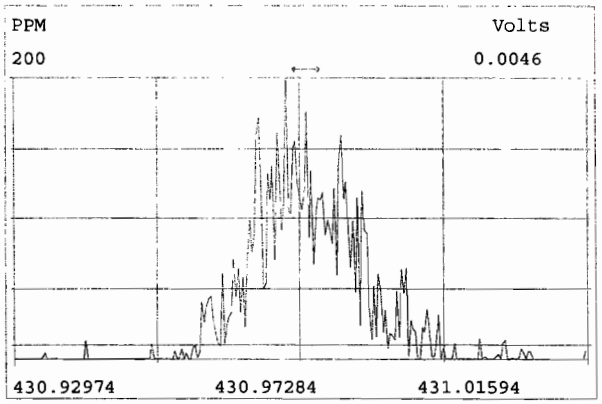


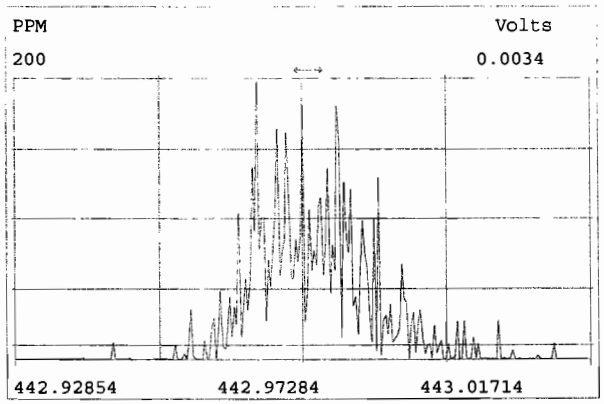


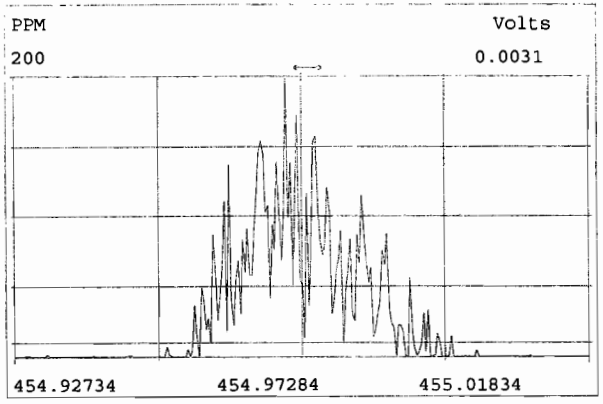


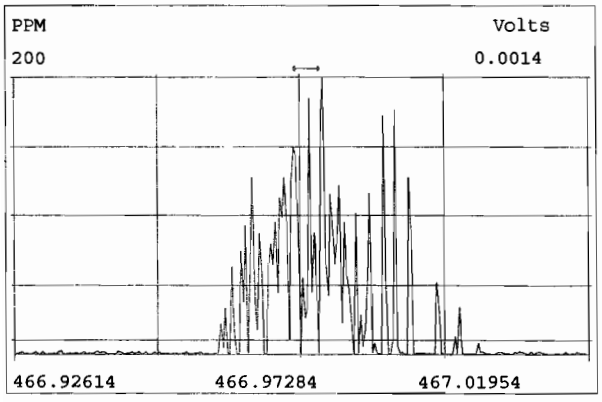
Peak Locate Examination:17-OCT-2019:00:39 File:RES_CHECK

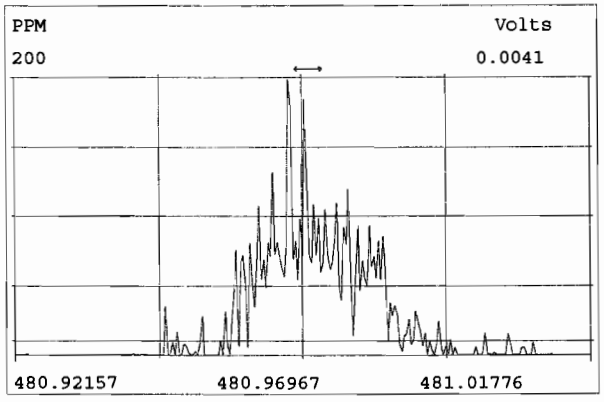
Experiment:OCDD_DB5 Function:5 Reference:PFK

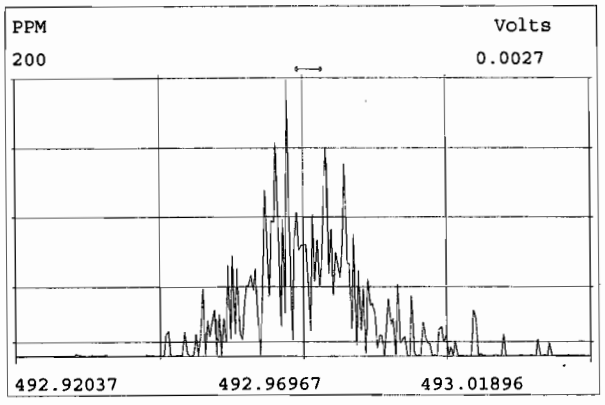


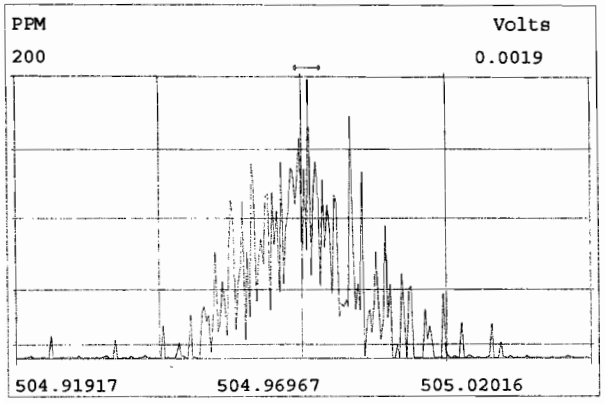


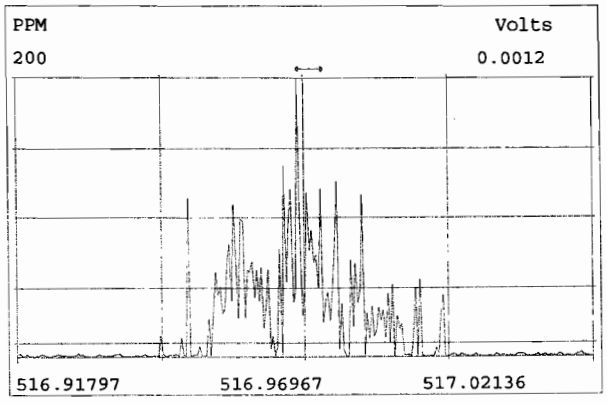












HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST(910241)1-1 **Reviewed By:** DT 10/29/19

Initials & Date

End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentrations within criteria?	✓	
TCDD/TCDF Valleys <25%	✓	
First and last eluters present?	✓	
Retention Times within criteria?	✓	
Verification Std. named correctly?	✓	
(ST-Year-Month-Day-VG ID)		
Forms signed and dated?	✓	
Correct ICAL referenced?	DB	

Run Log:

- Correct instrument listed?	✓	✓
- Samples within 12 hour clock?	(Y)	N
- Bottle position verfied?	DB	

	Beg.	End
Mass resolution ≥	✓	✓

☐ 5k ☐ 6-8K ☐ 8K ☑ 10K

1614 1699 429 1613/1668/8280

Intergrated peaks display correctly?	✓	NA
GC Break <20%	NA	

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours	NA

Comments:

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST191024D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.84	0.65-0.89	y	11.4	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	54.8	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	51.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	54.4	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.20	1.05-1.43	y	52.8	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	49.8	43.0 - 58.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	103	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	y	10.1	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	52.4	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	52.7	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	50.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	51.4	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	y	52.0	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	y	50.5	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.02	0.88-1.20	y	49.9	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.88-1.20	y	48.5	43.0 - 58.0
OCDF	M+2/M+4	0.90	0.76-1.02	y	101	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 10/24/19

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

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	0.77	0.65-0.89	y	102	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	106	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	102	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	87.5	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	96.0	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	105	72.0 - 138.0
13C-OCDD	M/M+2	0.88	0.76-1.02	y	211	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.79	0.65-0.89	y	101	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	99.9	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	101	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	104	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	97.5	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	99.8	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	106	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.45	0.37-0.51	y	104	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.43	0.37-0.51	y	112	77.0 - 129.0
13C-OCDF	M+2/M+4	0.89	0.76-1.02	y	216	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.2	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: DB

Date: 10/24/19

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 10-9-19

RT Window Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

ZB-5MS IS Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	22:54	1,3,6,8-TCDF (F)	20:46
1,2,8,9-TCDD (L)	27:07	1,2,8,9-TCDF (L)	27:15
1,2,4,7,9-PeCDD (F)	28:43	1,3,4,6,8-PeCDF (F)	27:13
1,2,3,8,9-PeCDD (L)	31:07	1,2,3,8,9-PeCDF (L)	31:21
1,2,4,6,7,9-HxCDD (F)	32:32	1,2,3,4,6,8-HxCDF (F)	32:00
1,2,3,7,8,9-HxCDD (L)	34:29	1,2,3,7,8,9-HxCDF (L)	34:52
1,2,3,4,6,7,9-HpCDD (F)	37:07	1,2,3,4,6,7,8-HpCDF (F)	36:44
1,2,3,4,6,7,8-HpCDD (L)	37:58	1,2,3,4,7,8,9-HpCDF (L)	38:31

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<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: 10/24/19

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.197	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.151	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.186	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052

Analyst: DB

Date: 10/24/19

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191024D1 S#1 Analysis Date: 24-OCT-19 Time: 15:36:32

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.001	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.038	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.018	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.026	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.093	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.146	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.130	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.229	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.236	1.091-1.371

Analyst: DB

Date: 10/24/19

Client ID: 1613 CS3 19C2204 Filename: 191024D1 S:1 Acq:24 OCT-19 15:36:22 ConCal: ST191024D1 1
Lab ID: ST191024D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	5.89e+05	0.84 y	0.91	26:16	11.414			* 2.5	*
	1,2,3,7,8-PeCDD	2.34e+06	0.62 y	0.90	30:46	54.821			* 2.5	*
	1,2,3,4,7,8-HxCDD	2.48e+06	1.21 y	1.10	34:05	51.917			* 2.5	*
	1,2,3,6,7,8-HxCDD	2.52e+06	1.22 y	0.94	34:11	54.417			* 2.5	*
	1,2,3,7,8,9-HxCDD	2.59e+06	1.20 y	0.96	34:29	52.775			* 2.5	*
	1,2,3,4,6,7,8-HpCDD	2.20e+06	1.05 y	0.98	37:58	49.789			* 2.5	*
	OCDD	4.00e+06	0.89 y	0.96	41:18	103.15			* 2.5	*
	2,3,7,8-TCDF	8.41e+05	0.77 y	0.95	25:28	10.096			* 2.5	*
	1,2,3,7,8-PeCDF	3.60e+06	1.61 y	0.96	29:35	52.373			* 2.5	*
	2,3,4,7,8-PeCDF	3.84e+06	1.62 y	1.01	30:29	52.722			* 2.5	*
	1,2,3,4,7,8-HxCDF	3.36e+06	1.25 y	1.18	33:11	50.073			* 2.5	*
	1,2,3,6,7,8-HxCDF	3.66e+06	1.23 y	1.07	33:19	51.379			* 2.5	*
	2,3,4,6,7,8-HxCDF	3.64e+06	1.20 y	1.11	33:55	51.981			* 2.5	*
	1,2,3,7,8,9-HxCDF	3.10e+06	1.25 y	1.06	34:52	50.470			* 2.5	*
	1,2,3,4,6,7,8-HpCDF	2.92e+06	1.02 y	1.13	36:44	49.893			* 2.5	*
	1,2,3,4,7,8,9-HpCDF	2.66e+06	1.01 y	1.28	38:31	48.540			* 2.5	*
	OCDF	4.67e+06	0.90 y	0.95	41:31	100.61			* 2.5	*
IS	13C-2,3,7,8-TCDD	5.70e+06	0.77 y	1.10	26:15	102.41				
IS	13C-1,2,3,7,8-PeCDD	4.74e+06	0.63 y	0.88	30:44	105.79				
IS	13C-1,2,3,4,7,8-HxCDD	4.33e+06	1.27 y	0.64	34:04	102.19				
IS	13C-1,2,3,6,7,8-HxCDD	4.94e+06	1.28 y	0.86	34:11	87.500				
IS	13C-1,2,3,7,8,9-HxCDD	5.11e+06	1.26 y	0.81	34:28	96.009				
IS	13C-1,2,3,4,6,7,8-HpCDD	4.52e+06	1.02 y	0.65	37:57	104.75				
IS	13C-OCDD	8.09e+06	0.88 y	0.58	41:17	211.49				
IS	13C-2,3,7,8-TCDF	8.76e+06	0.79 y	1.03	25:28	100.90				
IS	13C-1,2,3,7,8-PeCDF	7.17e+06	1.63 y	0.85	29:34	99.949				
IS	13C-2,3,4,7,8-PeCDF	7.19e+06	1.62 y	0.85	30:27	101.08				
IS	13C-1,2,3,4,7,8-HxCDF	5.71e+06	0.51 y	0.83	33:10	103.95				
IS	13C-1,2,3,6,7,8-HxCDF	6.66e+06	0.51 y	1.03	33:18	97.518				
IS	13C-2,3,4,6,7,8-HxCDF	6.28e+06	0.51 y	0.95	33:54	99.835				
IS	13C-1,2,3,7,8,9-HxCDF	5.78e+06	0.52 y	0.83	34:51	105.89				
IS	13C-1,2,3,4,6,7,8-HpCDF	5.19e+06	0.45 y	0.76	36:43	103.76				
IS	13C-1,2,3,4,7,8,9-HpCDF	4.28e+06	0.43 y	0.58	38:30	111.62				
IS	13C-OCDF	9.80e+06	0.89 y	0.69	41:31	215.56				
C/Up	37Cl-2,3,7,8-TCDD	6.19e+05		1.20	26:16	10.166				
RS/RT	13C-1,2,3,4-TCDD	5.08e+06	0.80 y	1.00	25:41	100.00				
RS	13C-1,2,3,4-TCDF	8.39e+06	0.80 y	1.00	24:15	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	6.60e+06	0.52 y	1.00	33:35	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	82.8	84.7		*	*
Total Penta-Dioxins	196	196		*	*
Total Hexa-Dioxins	235	237		*	*
Total Hepta-Dioxins	114	115		*	*
Total Tetra-Furans	39.1	41.5		*	*
Total Penta-Furans	225.00	225.52		*	*
Total Hexa-Furans	273	273		*	*
Total Hepta-Furans	98.6	99.4		*	*

	Rec	Qual
IS	102	
IS	106	
IS	102	
IS	87.5	
IS	96.0	
IS	105	
IS	106	
IS	101	
IS	99.9	
IS	101	
IS	104	
IS	97.5	
IS	99.8	
IS	106	
IS	104	
IS	112	
IS	108	
C/Up	102	

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

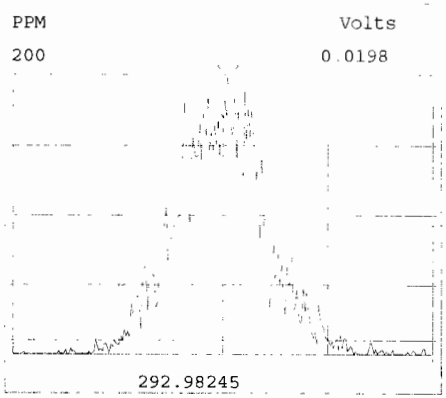
Reviewed by Analyst: CT Date: 10/29/19

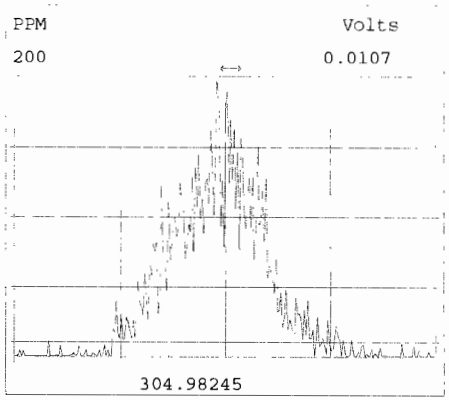
Vista Analytical Laboratory Injection Log Run file: 191024D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

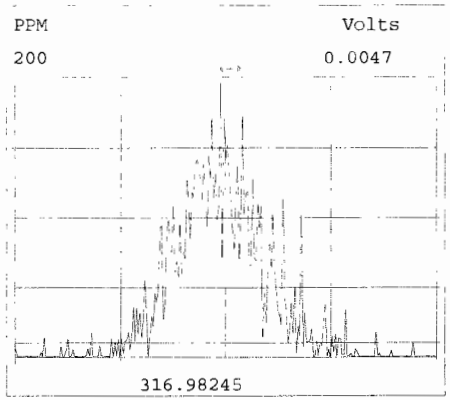
Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191024D1	1	ST191024D1-1	DB	24-OCT-19	15:36:32	ST191024D1-1	NA
191024D1	2	B9J0214-BS1	DB	24-OCT-19	16:24:28	ST191024D1-1	NA
191024D1	3	B9J0132-BS1	DB	24-OCT-19	17:12:25	ST191024D1-1	NA
191024D1	4	SOLVENT BLANK	DB	24-OCT-19	18:00:25	ST191024D1-1	NA
191024D1	5	B9J0214-BLK1	DB	24-OCT-19	18:48:20	ST191024D1-1	NA
191024D1	6	B9J0132-BLK1	DB	24-OCT-19	19:36:16	ST191024D1-1	NA
191024D1	7	QC191024D1-1	DB	24-OCT-19	20:24:01	ST191024D1-1	NA
191024D1	8	1903543-02	DB	24-OCT-19	21:11:47	ST191024D1-1	NA
191024D1	9	1903626-01	DB	24-OCT-19	21:59:42	ST191024D1-1	NA
191024D1	10	1903626-02	DB	24-OCT-19	22:47:35	ST191024D1-1	NA
191024D1	11	1903641-01	DB	24-OCT-19	23:35:24	ST191024D1-1	NA
191024D1	12	1903420-10	DB	25-OCT-19	00:23:09	ST191024D1-1	NA
191024D1	13	1903420-11	DB	25-OCT-19	01:11:03	ST191024D1-1	NA
191024D1	14	1903430-01	DB	25-OCT-19	01:58:52	ST191024D1-1	NA
191024D1	15	1903430-02	DB	25-OCT-19	02:46:42	ST191024D1-1	NA

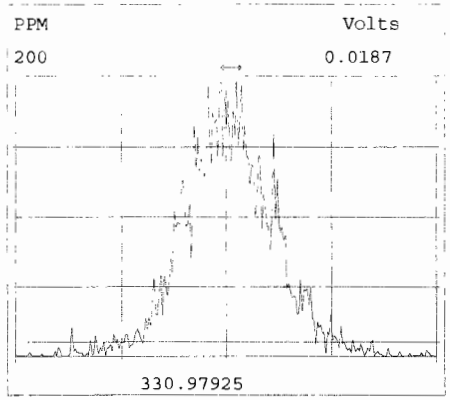
Peak Locate Examination:24-OCT-2019:15:33 File:191024D1

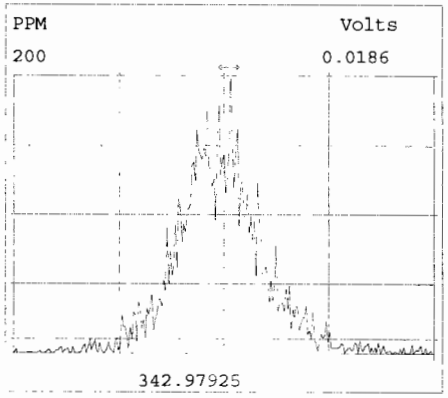
Experiment:OCDD_DB5 Function:1 Reference:PFK

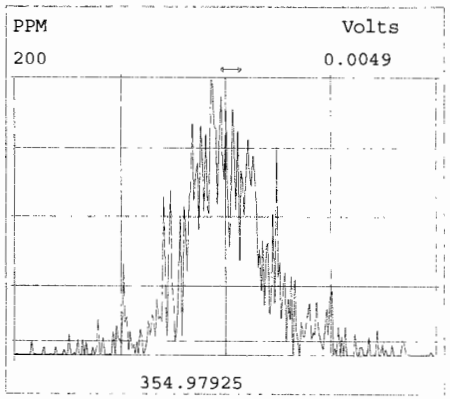


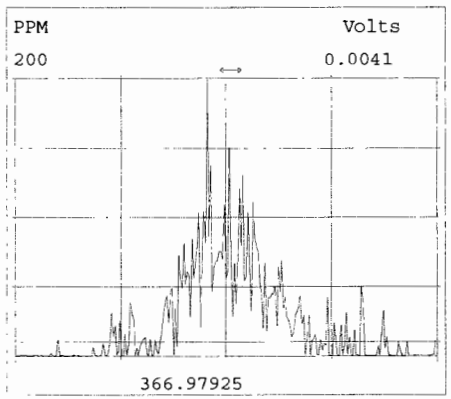


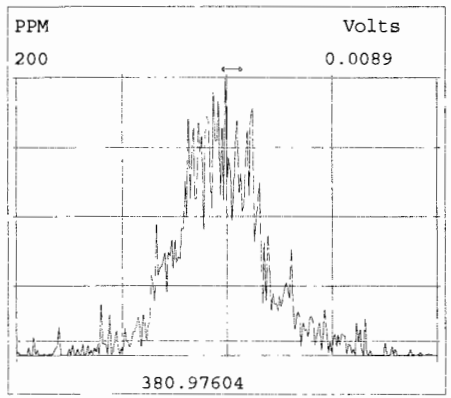


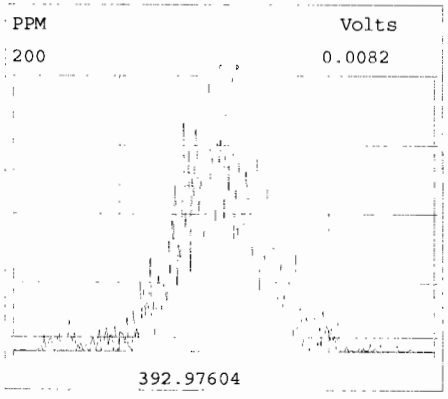


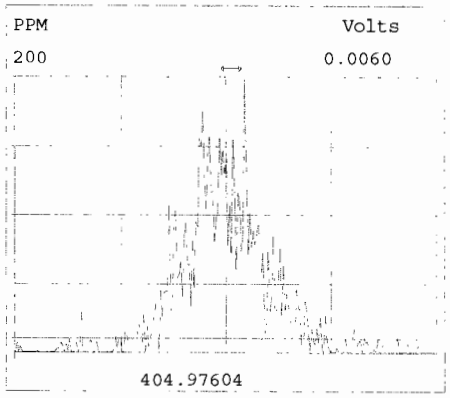


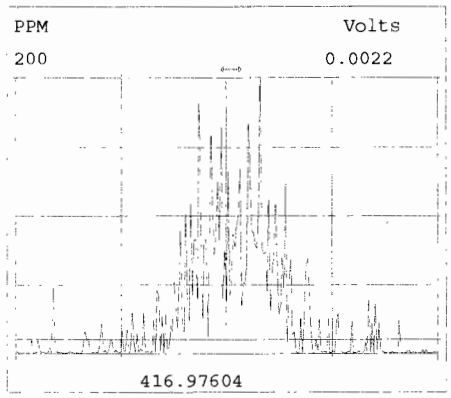


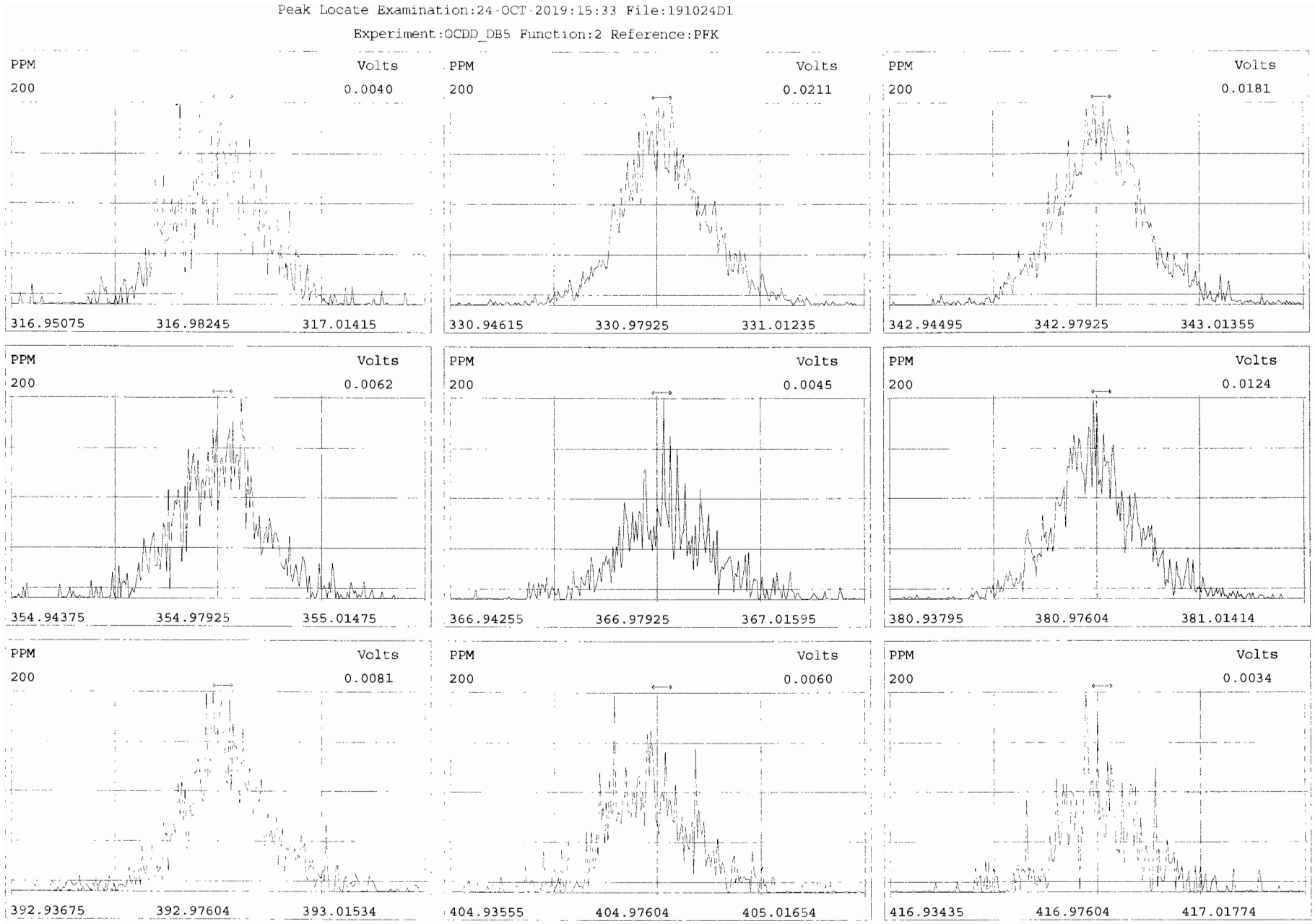






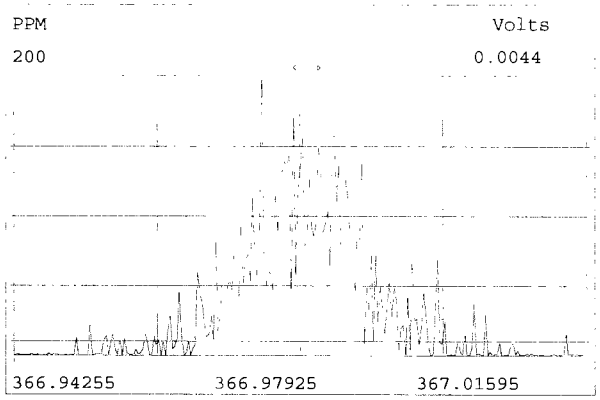


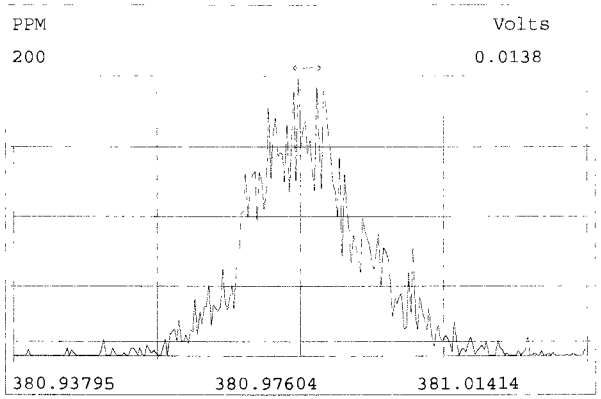


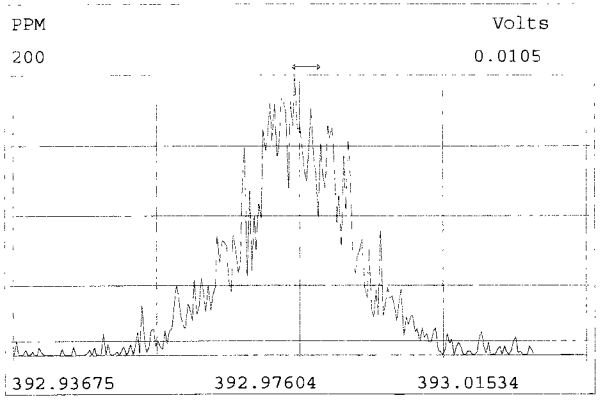

Peak Locate Examination:24-OCT-2019:15:33 File:191024D1
Experiment:OCDD_DB5 Function:2 Reference:PFK
PPM
Volts
200
0.0040
316.95075
316.98245
317.01415
PPM
Volts
200
0.0211
330.94615
330.97925
331.01235
PPM
Volts
200
0.0181
342.94495
342.97925
343.01355
PPM
Volts
200
0.0062
354.94375
354.97925
355.01475
PPM
Volts
200
0.0045
366.94255
366.97925
367.01595
PPM
Volts
200
0.0124
380.93795
380.97604
381.01414
PPM
Volts
200
0.0081
392.93675
392.97604
393.01534
PPM
Volts
200
0.0060
404.93555
404.97604
405.01654
PPM
Volts
200
0.0034
416.93435
416.97604
417.01774

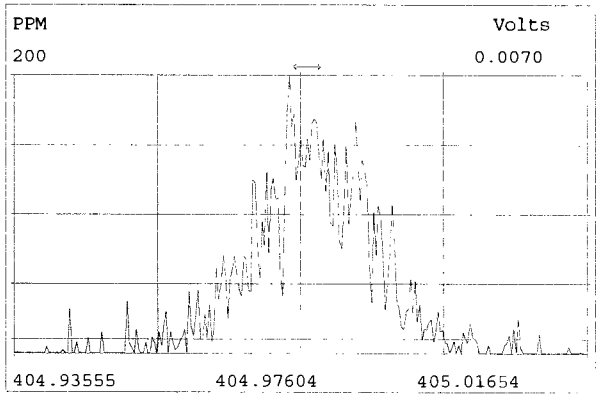
Peak Locate Examination:24-OCT-2019:15:34 File:191024D1

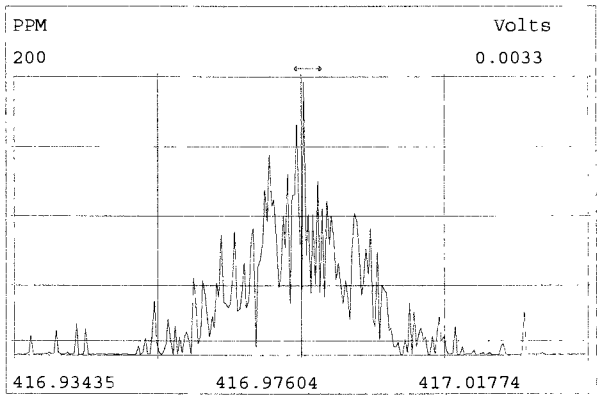
Experiment:OCDD_DB5 Function:3 Reference:PFK

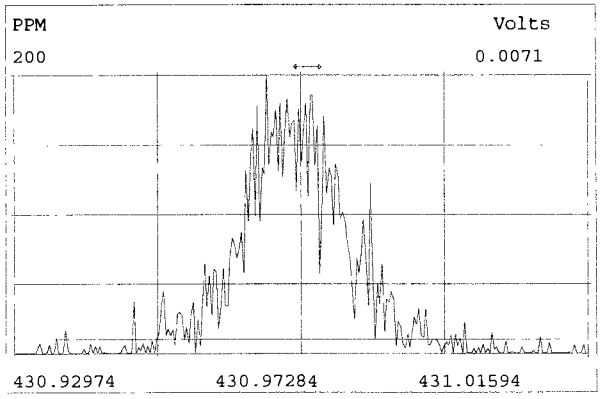


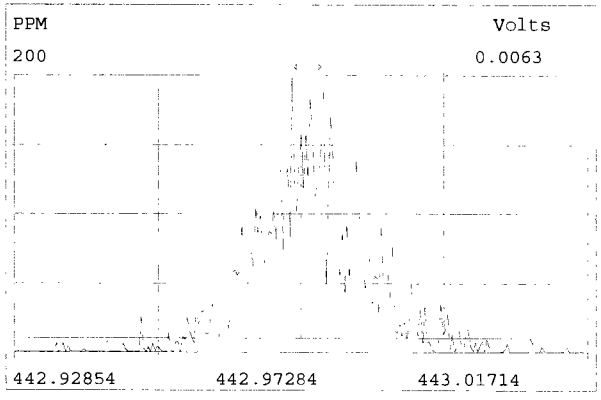


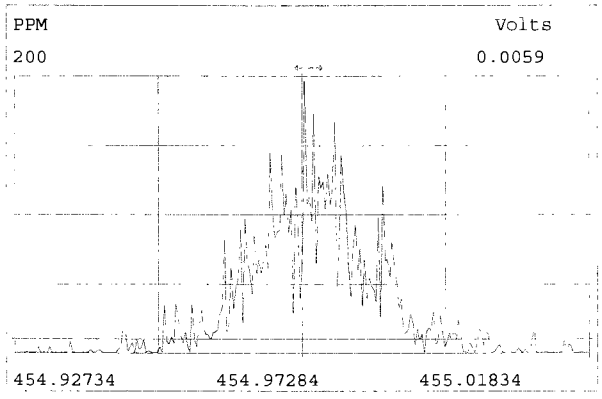


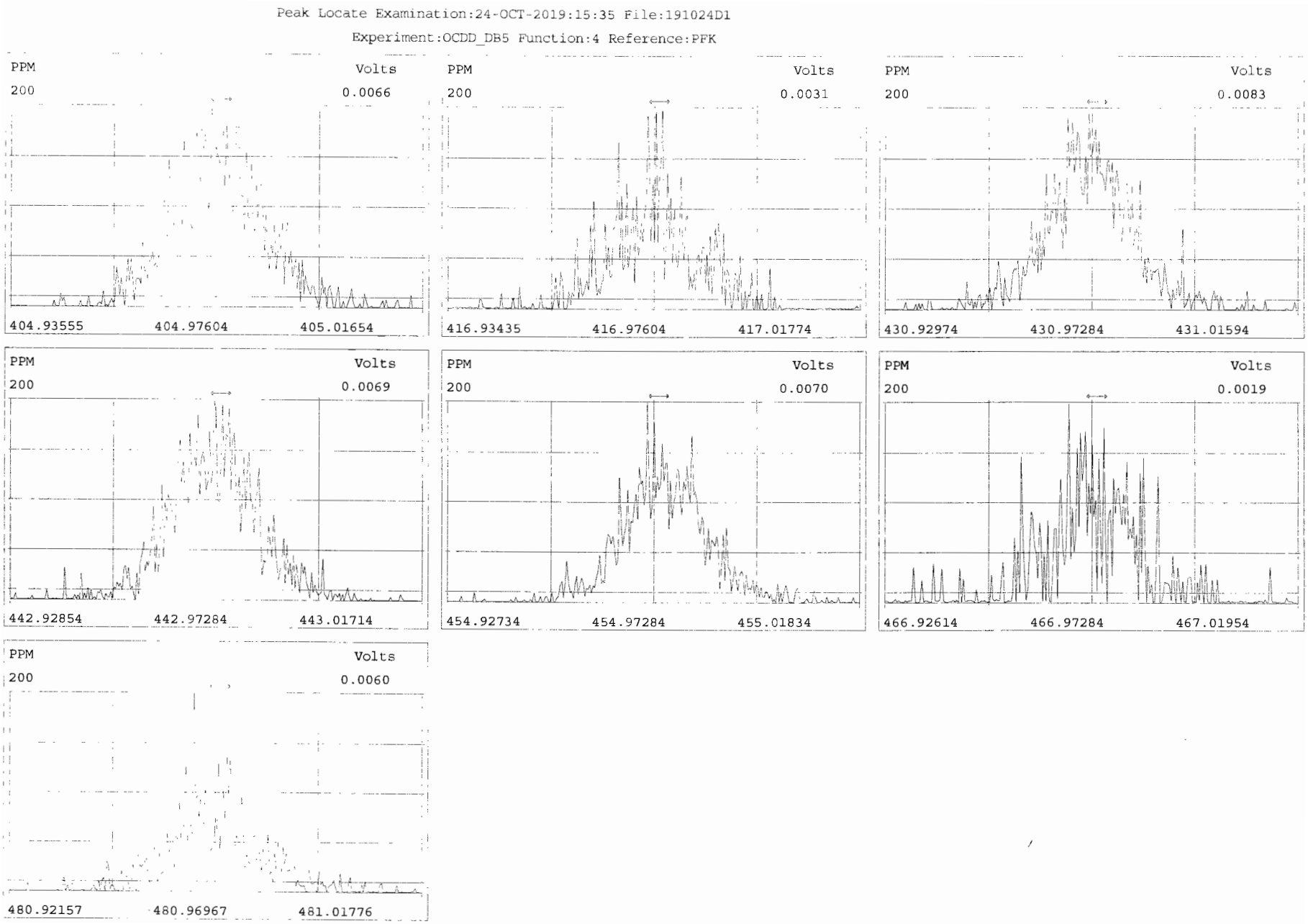


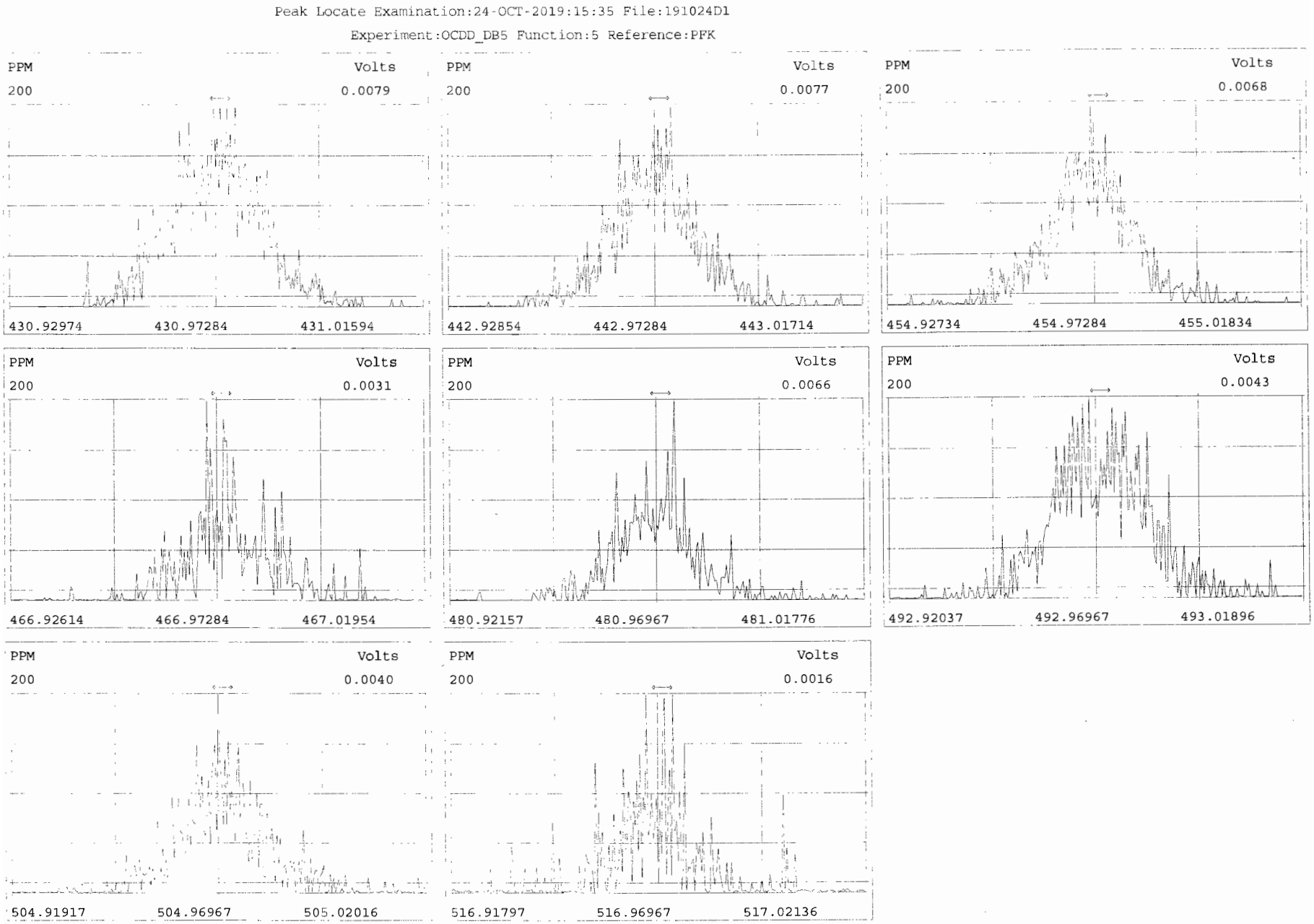




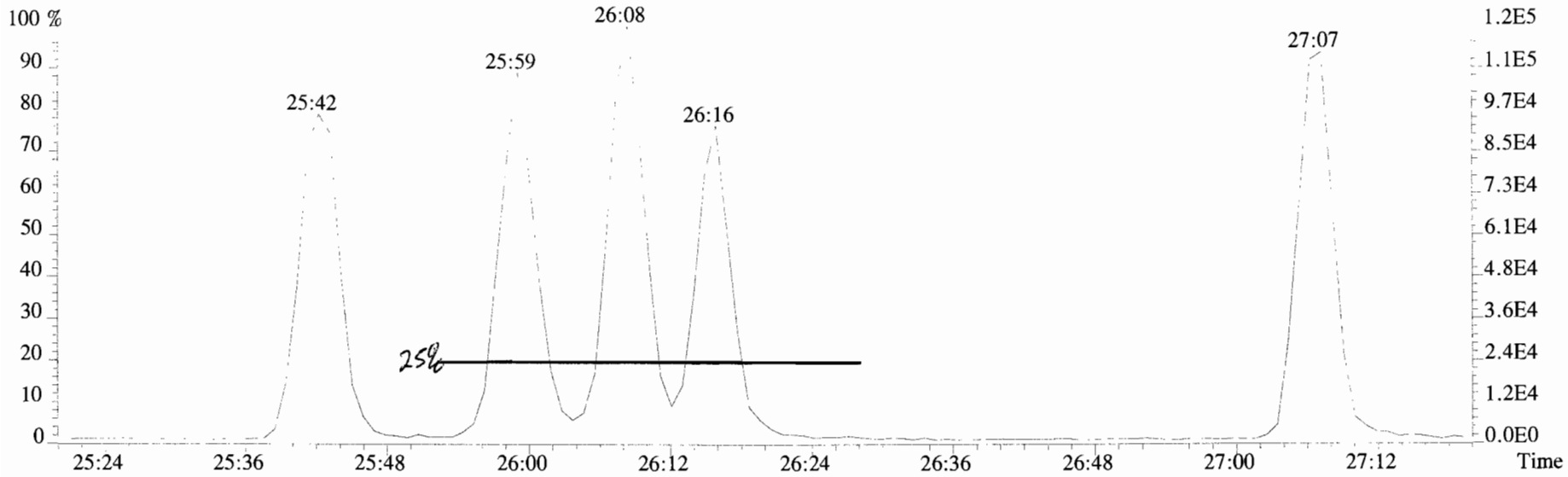




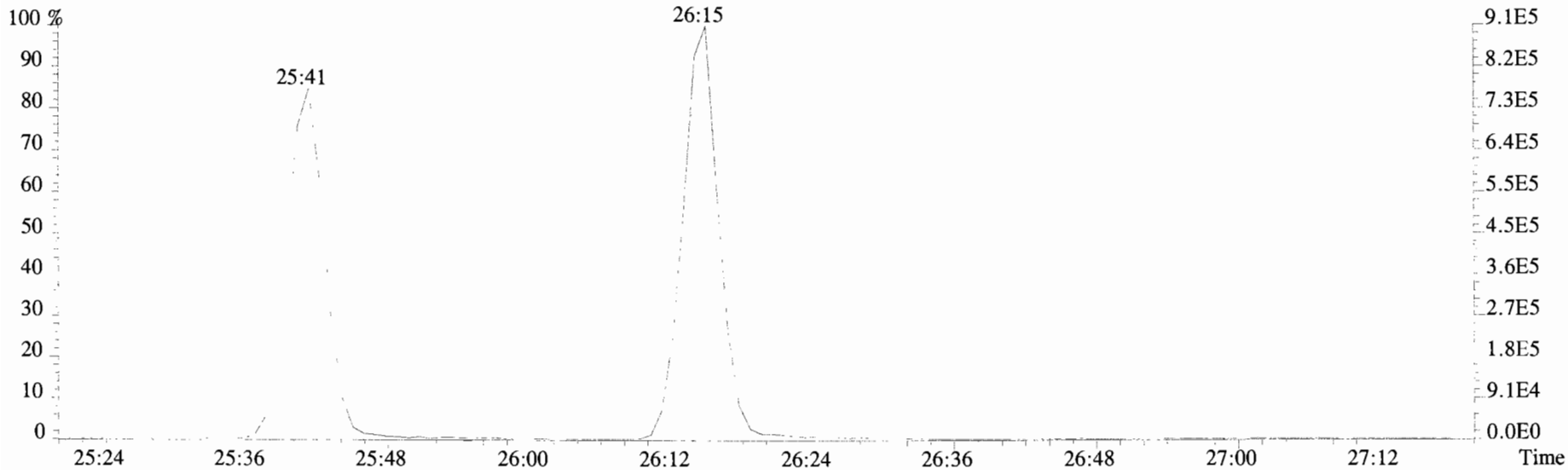

Peak Locate Examination:24-OCT-2019:15:35 File:191024D1
Experiment:OCDD_DB5 Function:4 Reference:PFK
PPM
Volts
200
0.0066
404.93555
404.97604
405.01654
PPM
Volts
200
0.0031
416.93435
416.97604
417.01774
PPM
Volts
200
0.0083
430.92974
430.97284
431.01594
PPM
Volts
200
0.0069
442.92854
442.97284
443.01714
PPM
Volts
200
0.0070
454.92734
454.97284
455.01834
PPM
Volts
200
0.0019
466.92614
466.97284
467.01954
PPM
Volts
200
0.0060
480.92157
480.96967
481.01776


Peak Locate Examination:24-OCT-2019:15:35 File:191024D1
Experiment:OCDD_DB5 Function:5 Reference:PFK
PPM
Volts
200
0.0079
430.92974
430.97284
431.01594
PPM
Volts
200
0.0077
442.92854
442.97284
443.01714
PPM
Volts
200
0.0068
454.92734
454.97284
455.01834
PPM
Volts
200
0.0031
466.92614
466.97284
467.01954
PPM
Volts
200
0.0066
480.92157
480.96967
481.01776
PPM
Volts
200
0.0043
492.92037
492.96967
493.01896
PPM
Volts
200
0.0040
504.91917
504.96967
505.02016
PPM
Volts
200
0.0016
516.91797
516.96967
517.02136

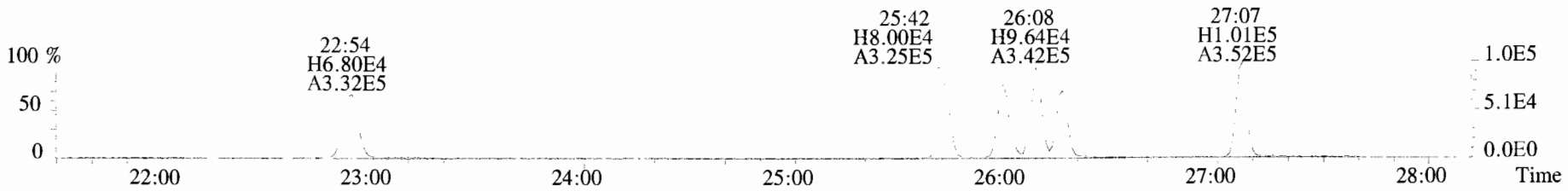
File:191024D1 #1-493 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
321.8936



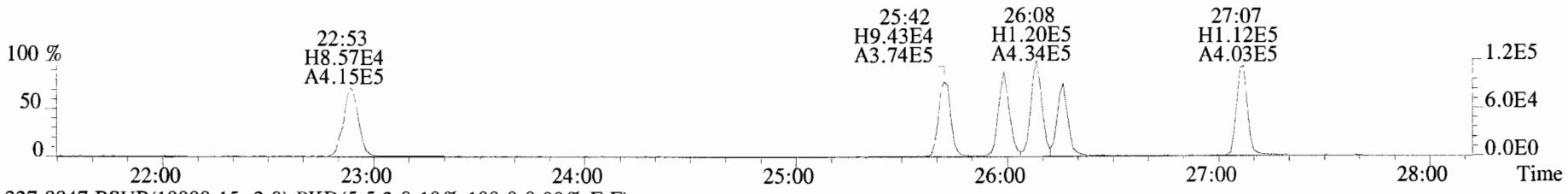
333.9339



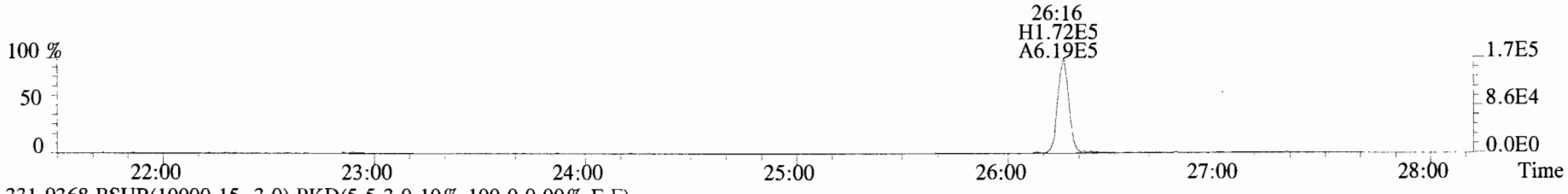
File:191024D1 #1-493 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



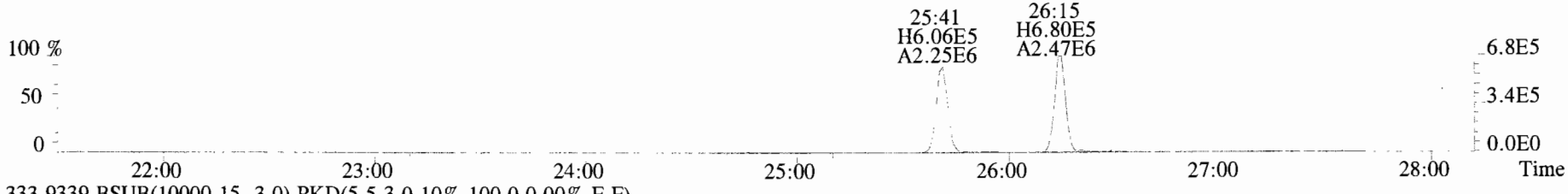
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



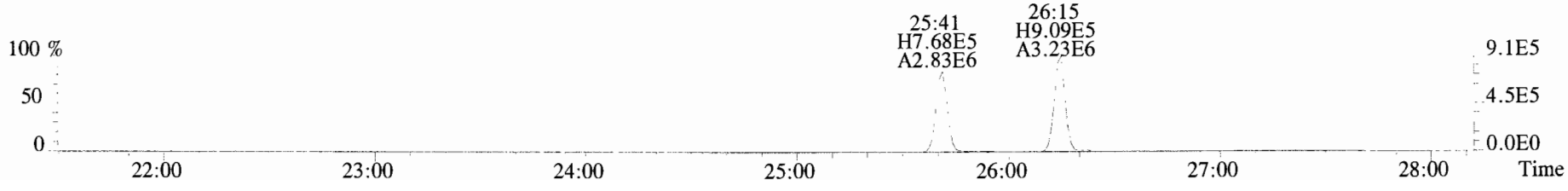
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

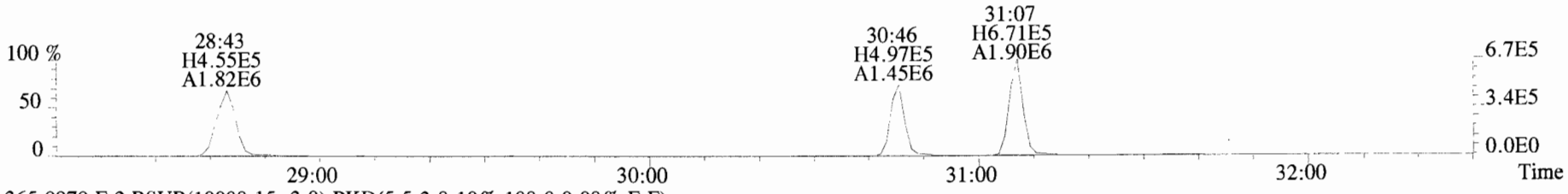


333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

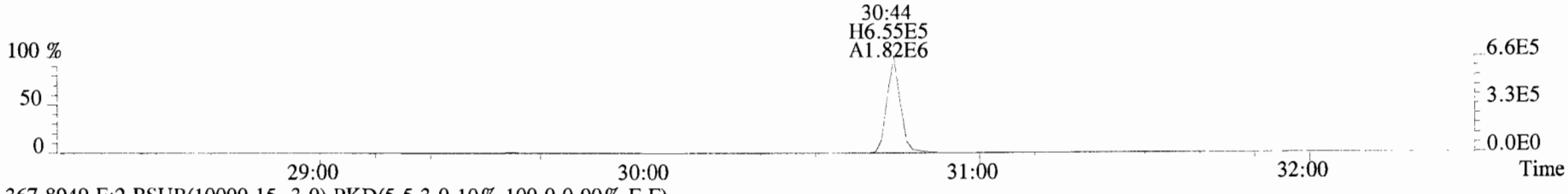


File:191024D1 #1-211 Acq:24-OCT-2019 15:36:32 GC El+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

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

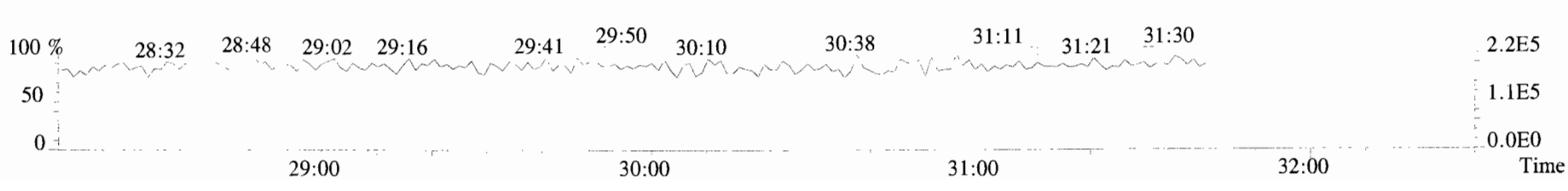


365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

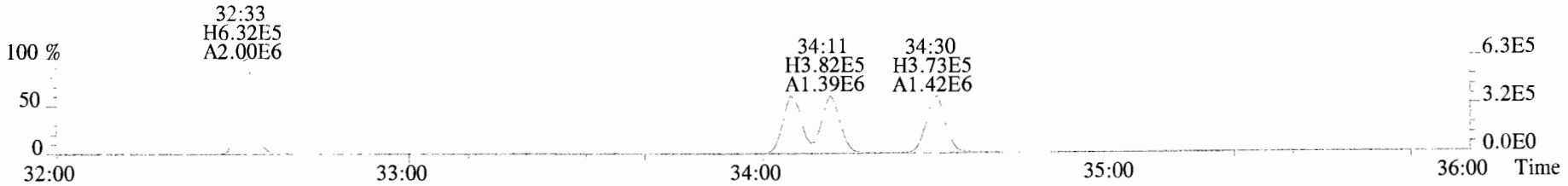


367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

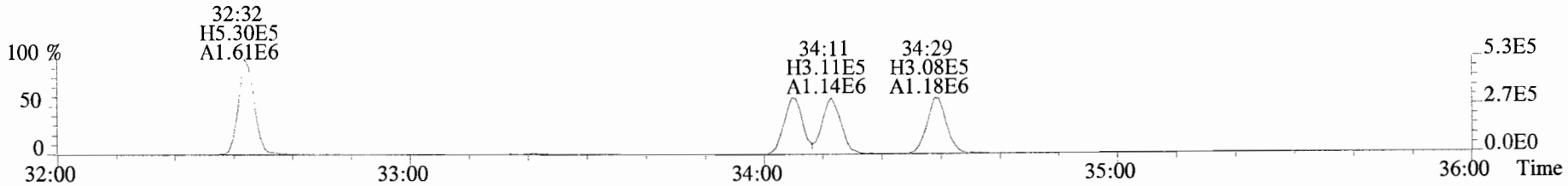
366.9792 F:2



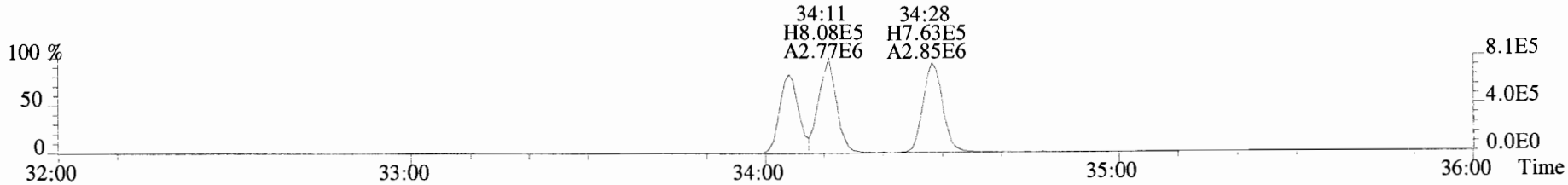
File:191024D1 #1-384 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



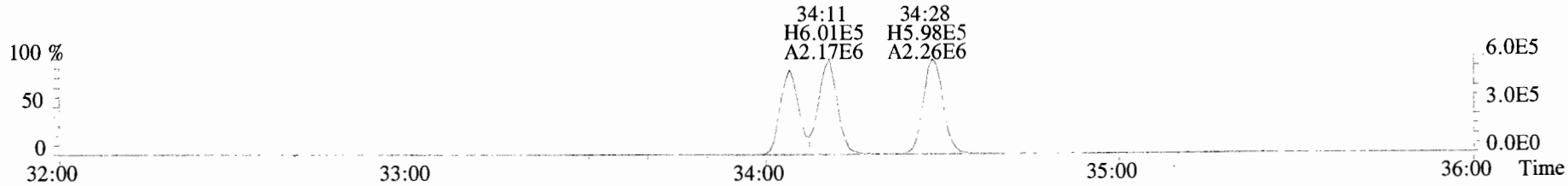
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



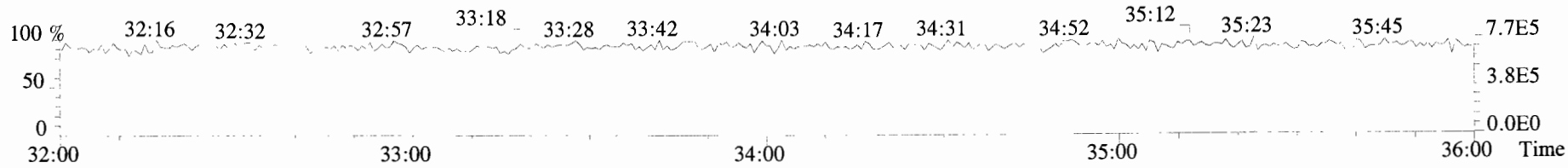
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



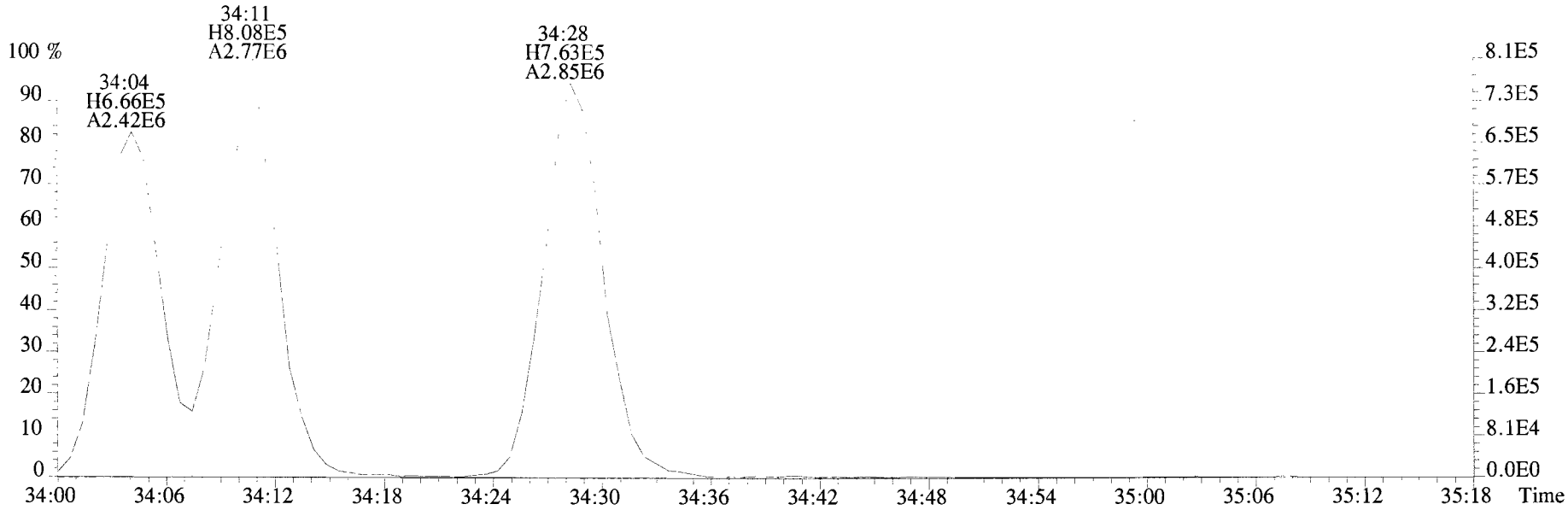
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



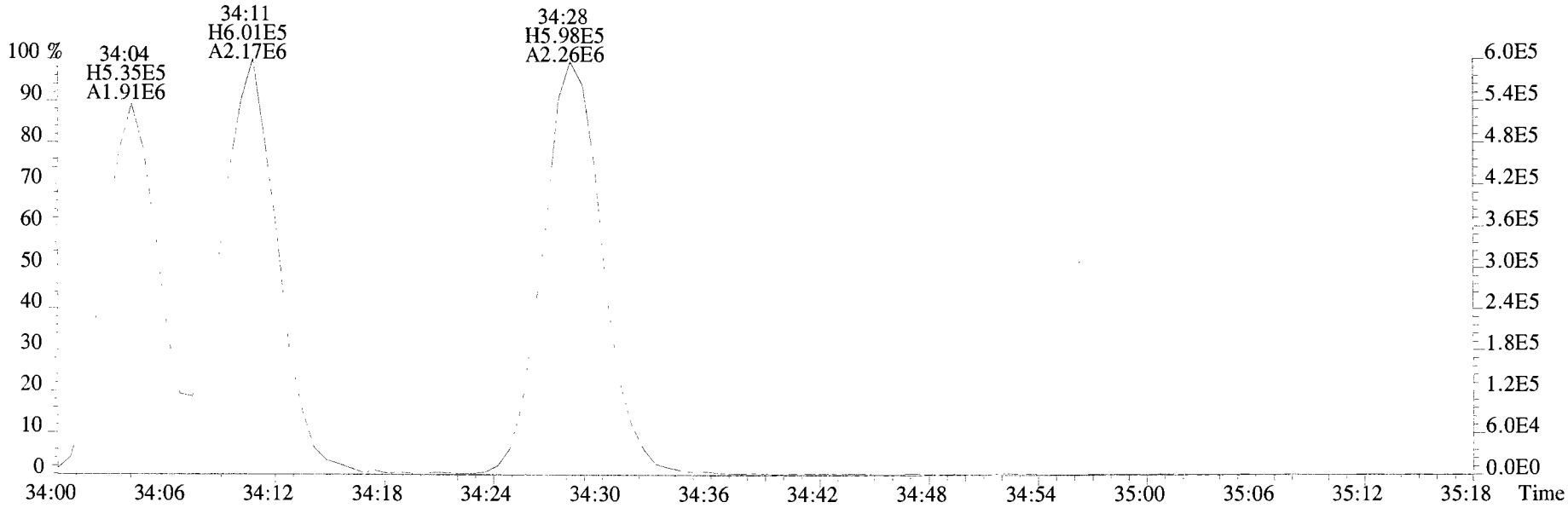
392.9760 F:3



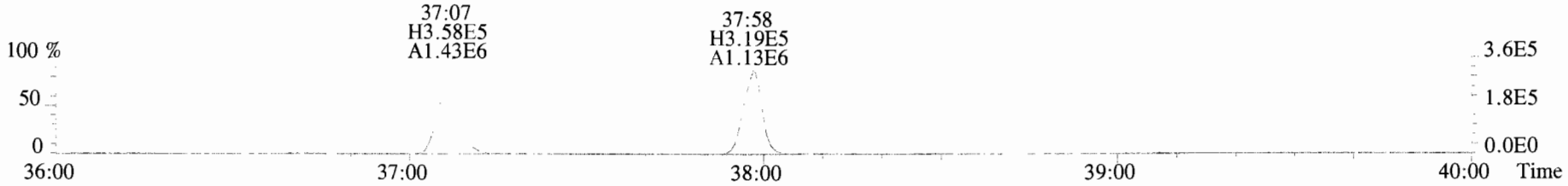
File:191024D1 #1-384 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



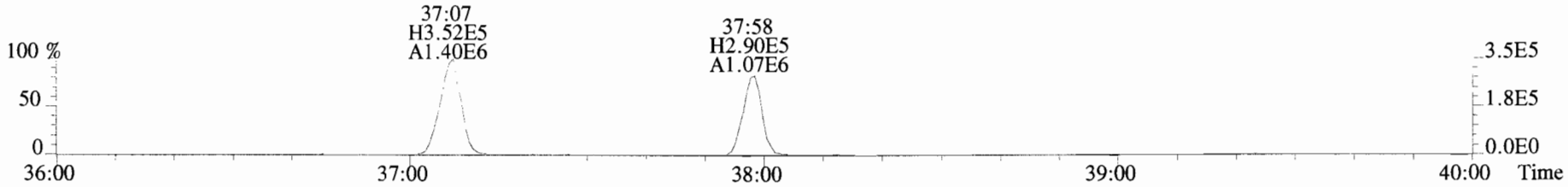
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



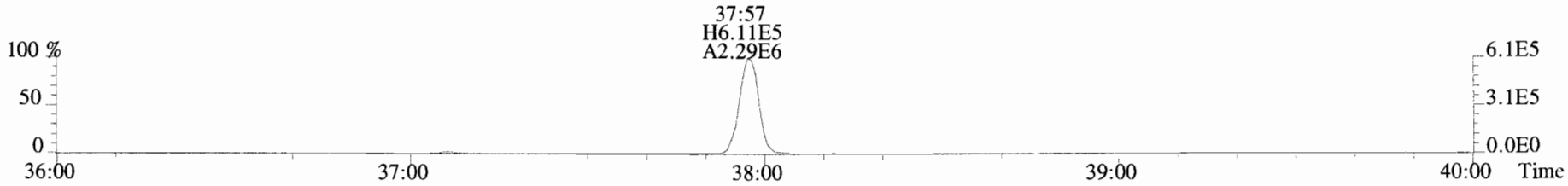
File:191024D1 #1-355 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



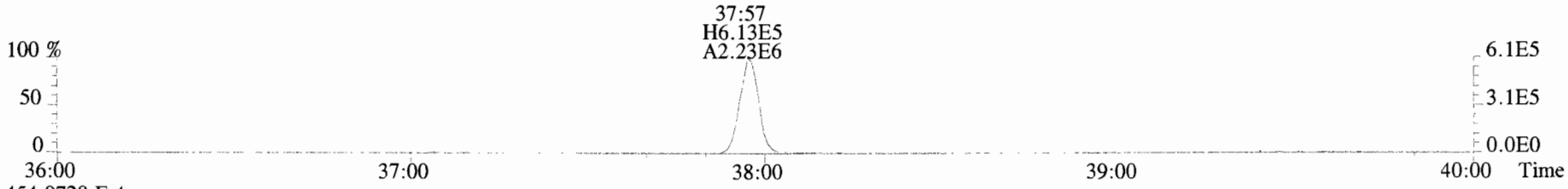
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



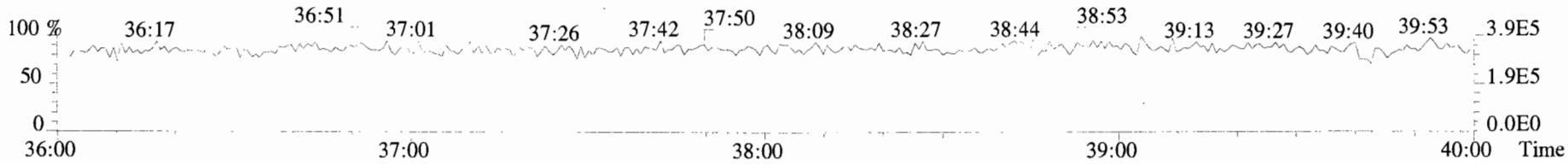
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



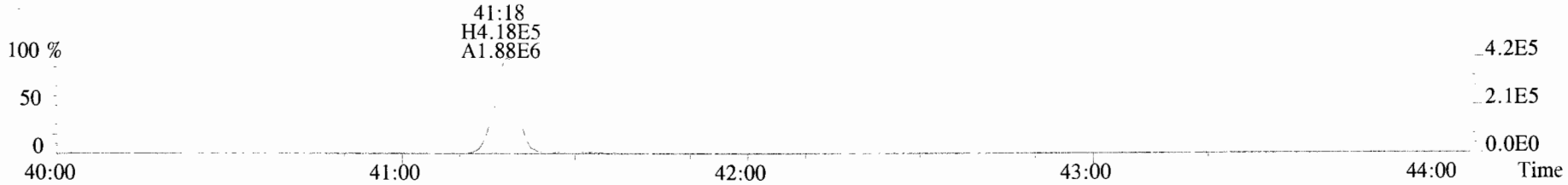
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



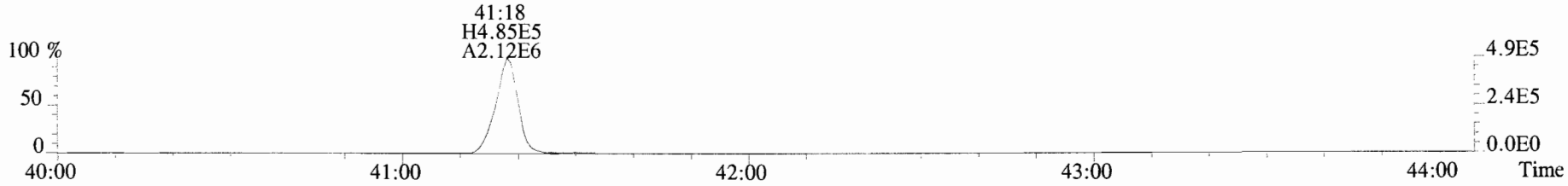
454.9728 F:4



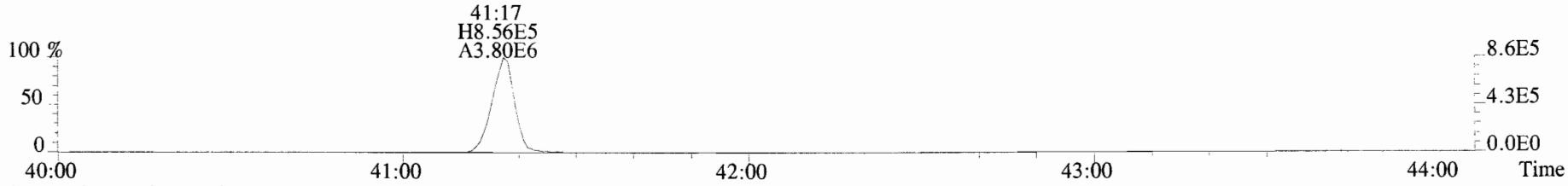
File:191024D1 #1-432 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



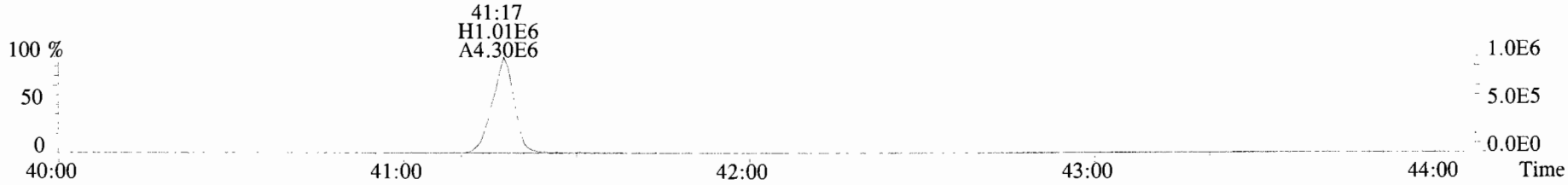
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



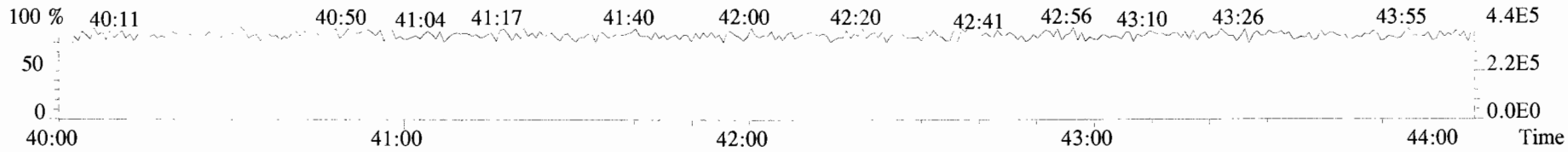
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



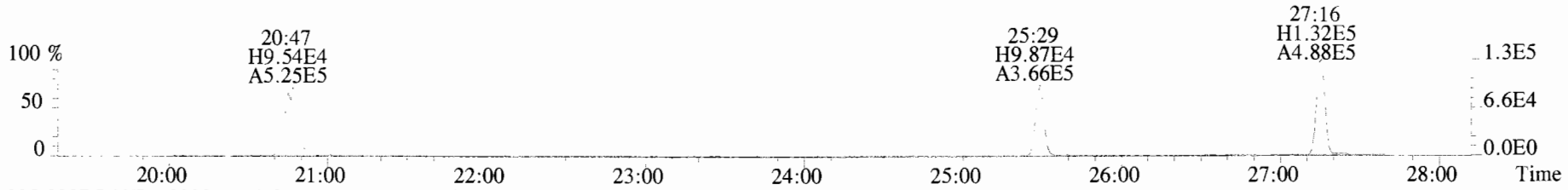
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



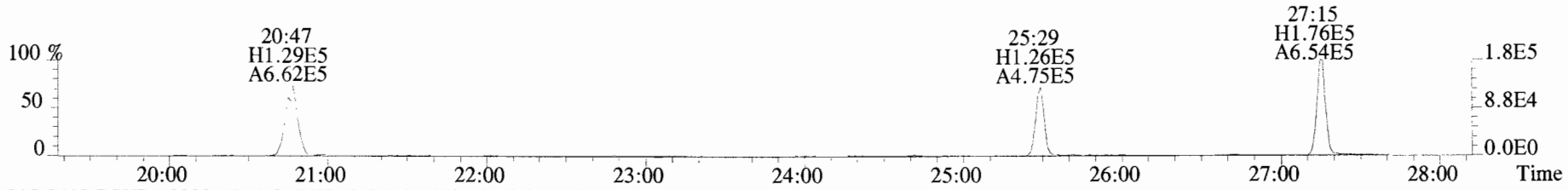
454.9728 F:5



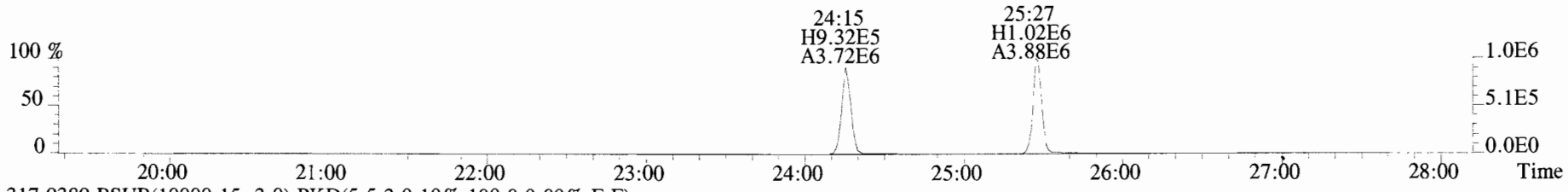
File:191024D1 #1-493 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



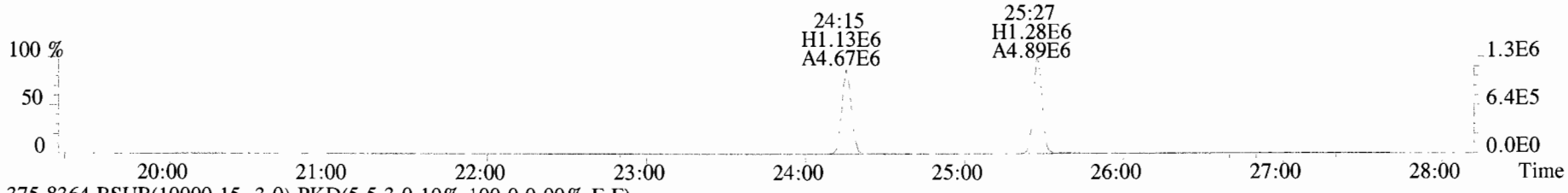
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



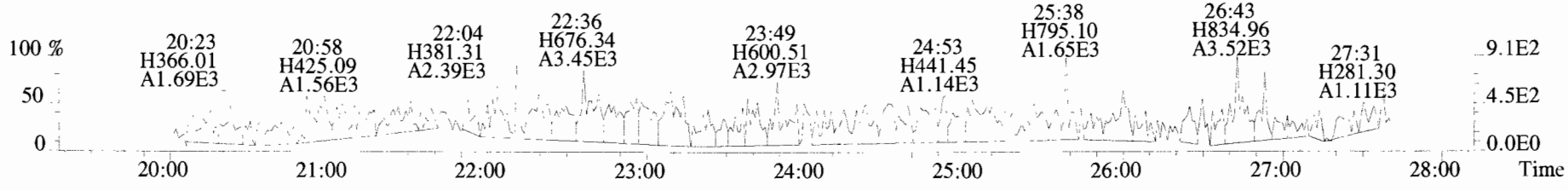
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



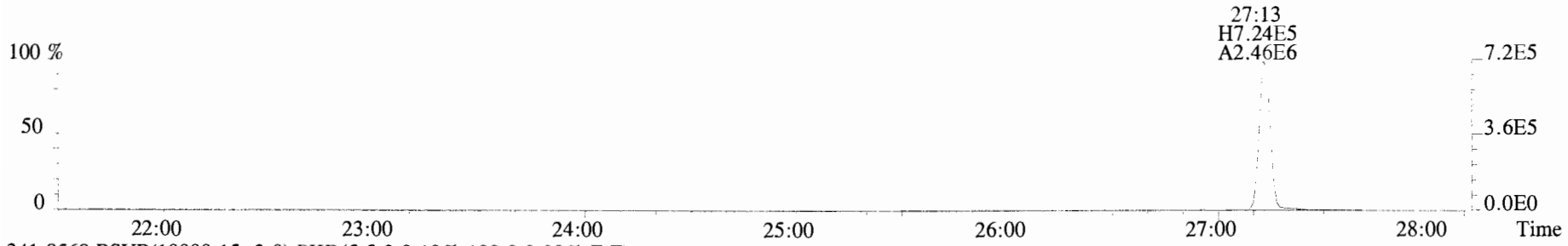
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



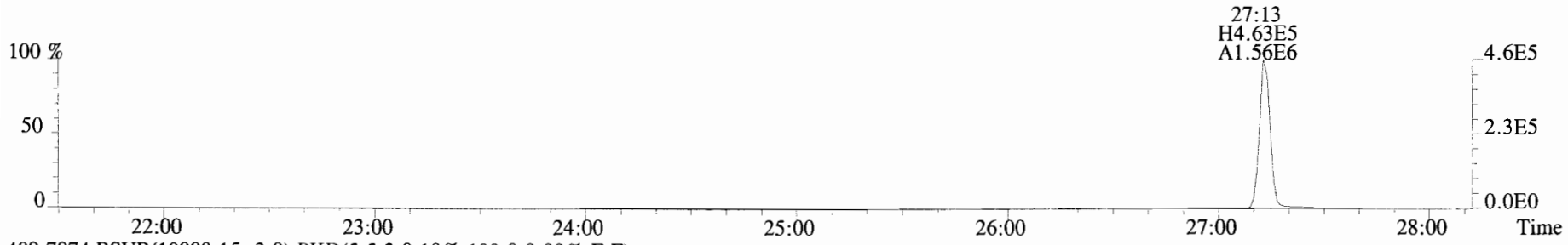
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



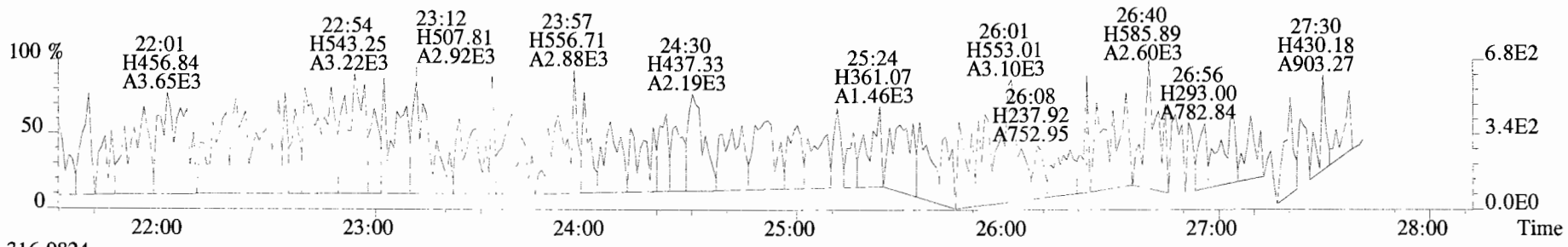
File:191024D1 #1-493 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



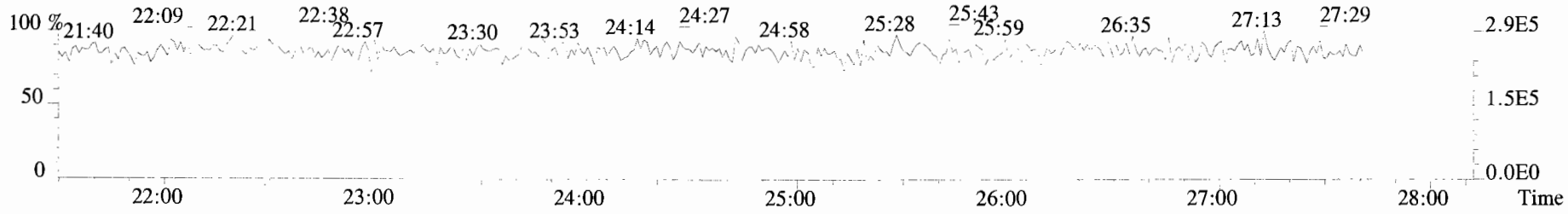
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

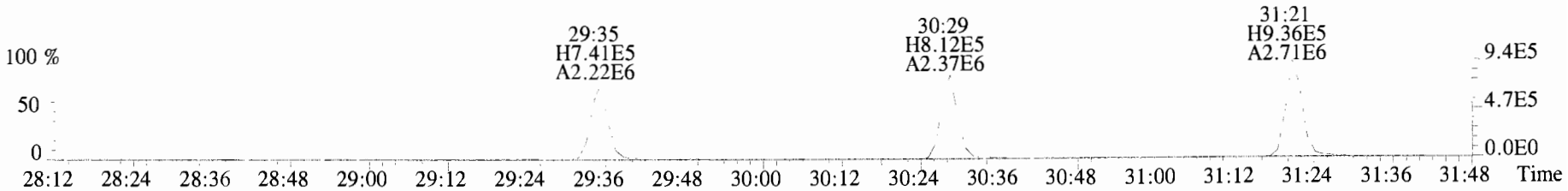


316.9824

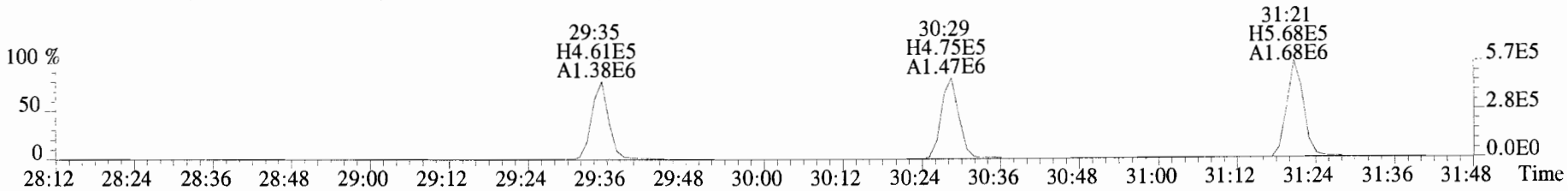


File:191024D1 #1-211 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5

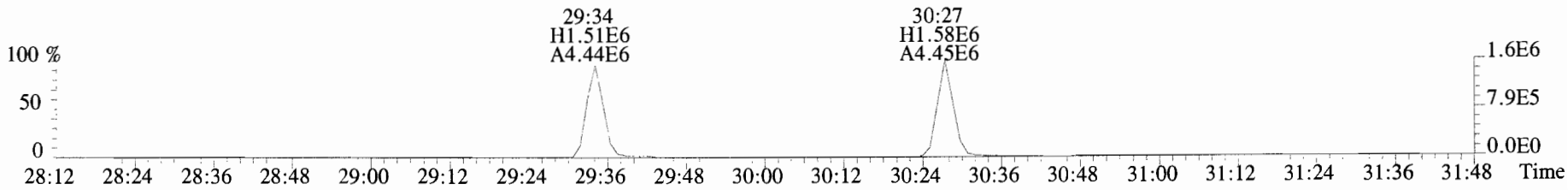
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



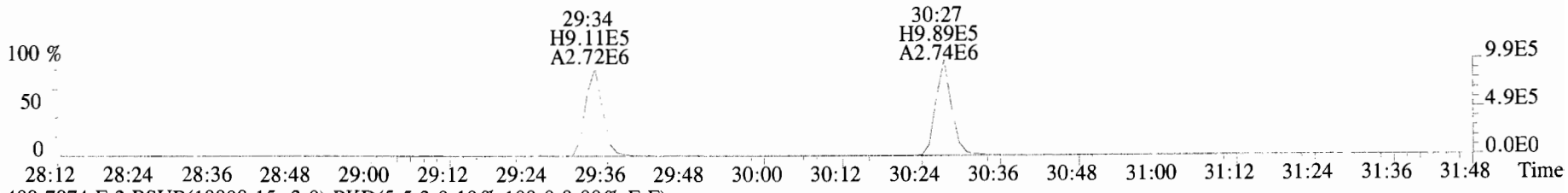
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



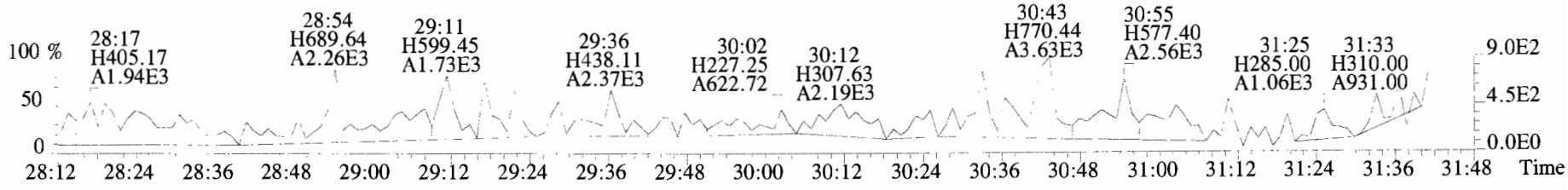
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

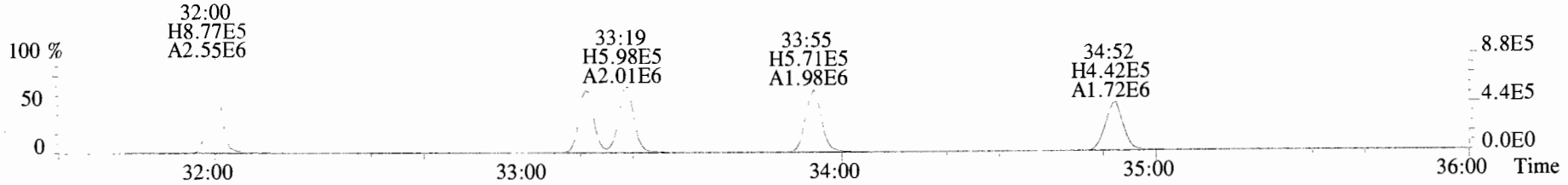


409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

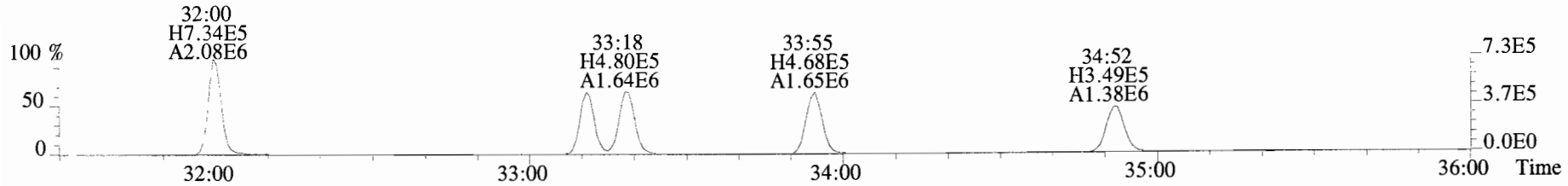


File:191024D1 #1-384 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5

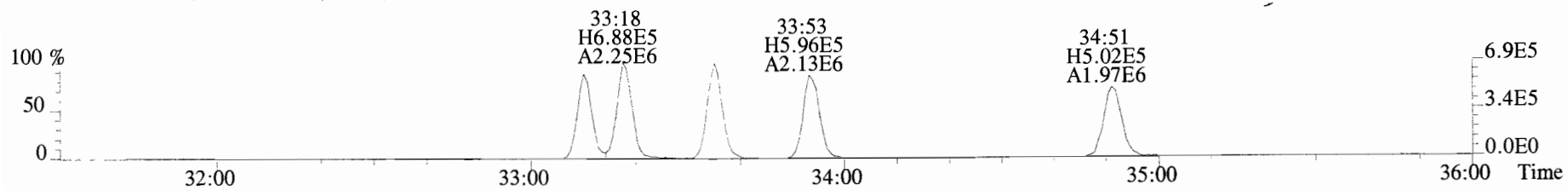
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



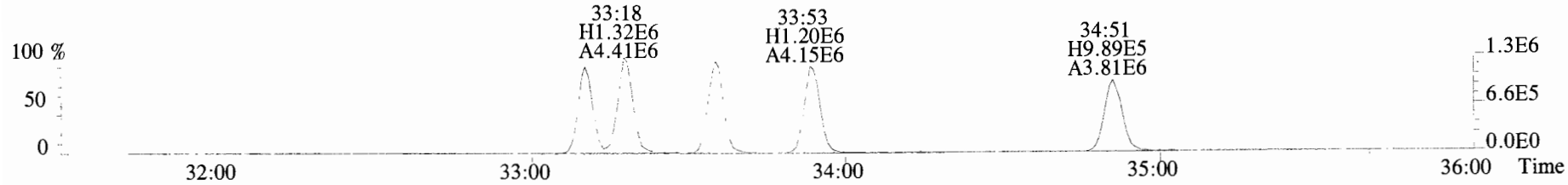
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



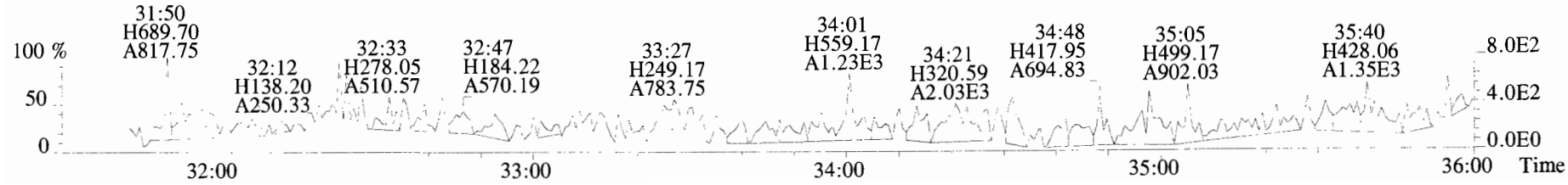
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



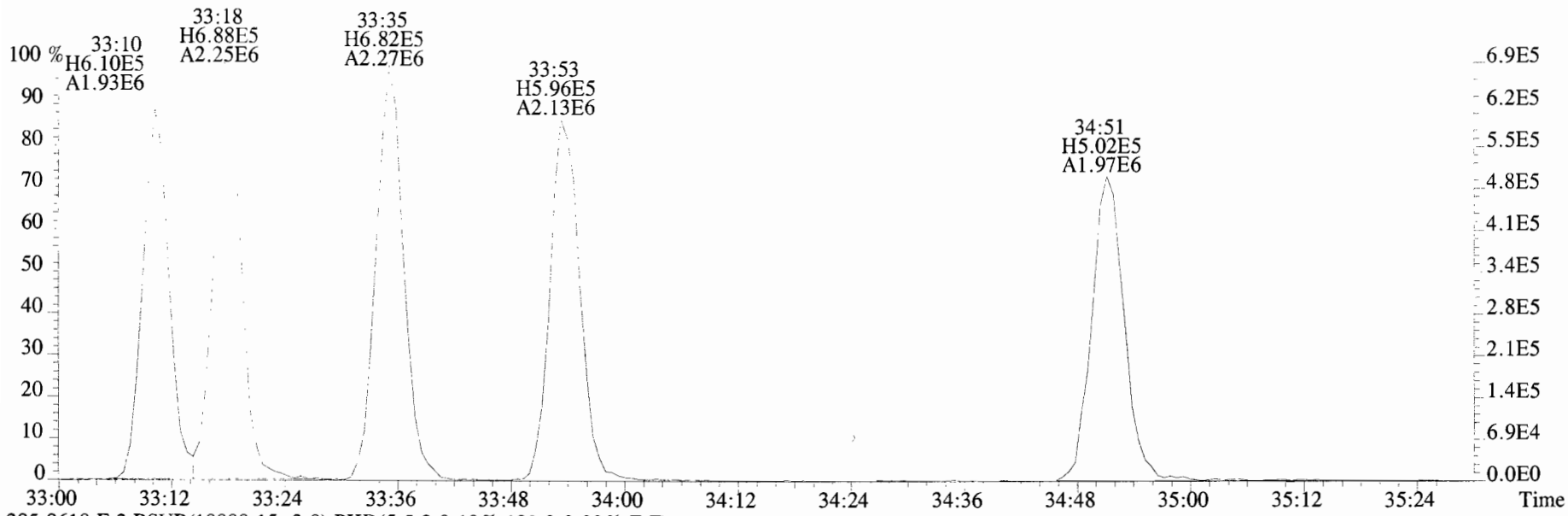
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



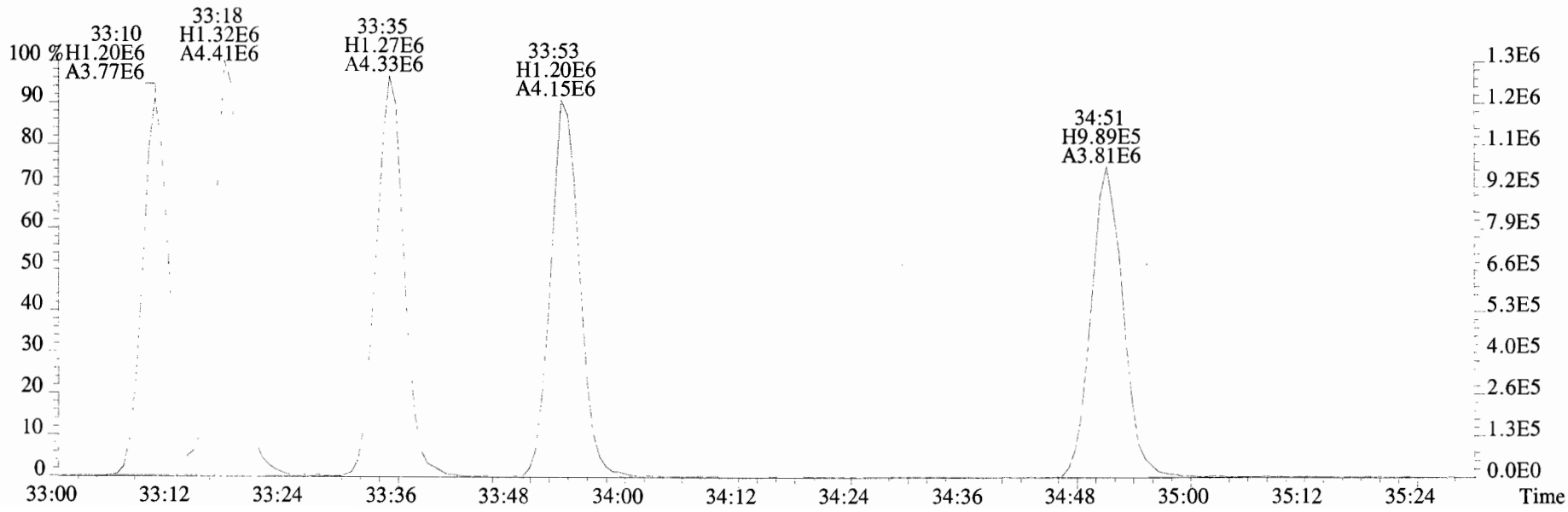
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



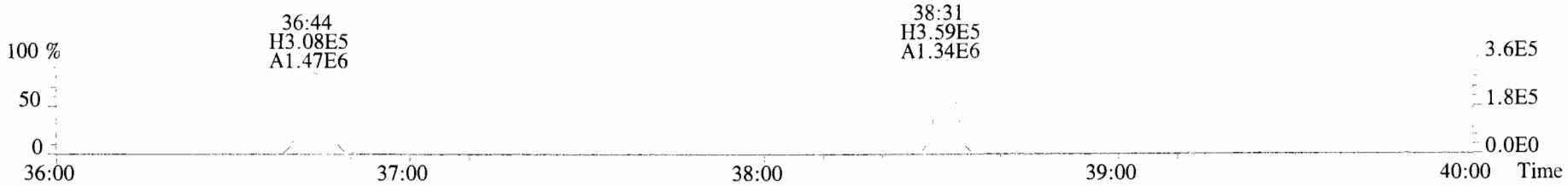
File:191024D1 #1-384 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



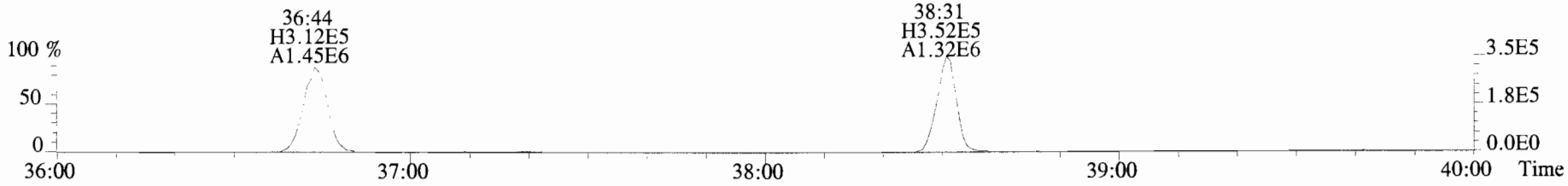
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



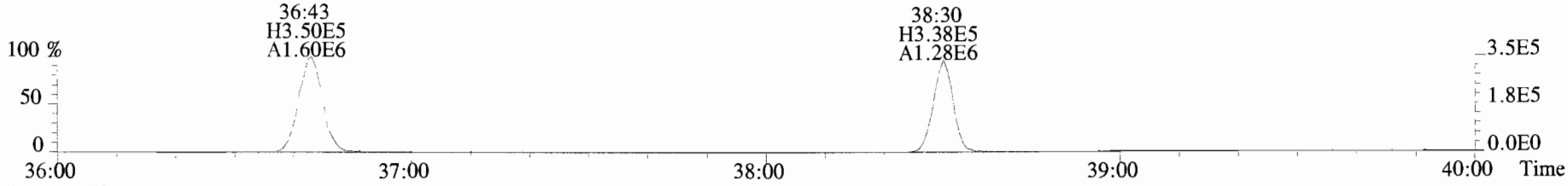
File:191024D1 #1-355 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



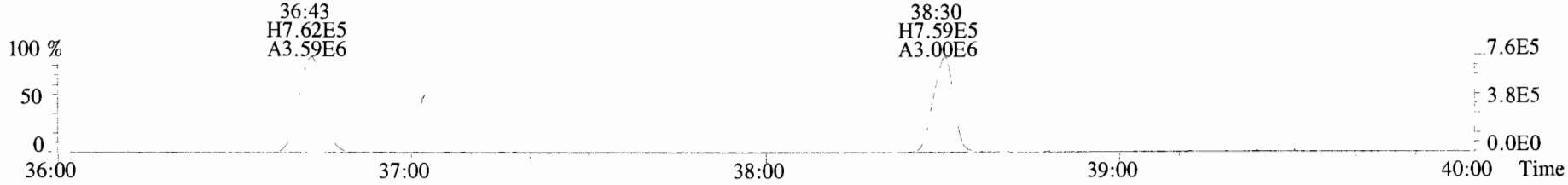
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



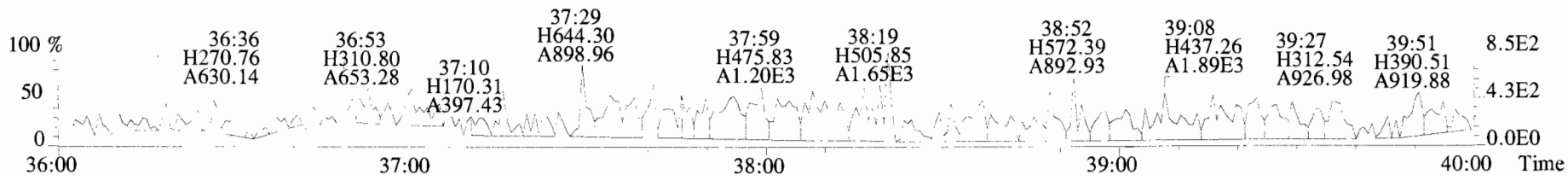
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



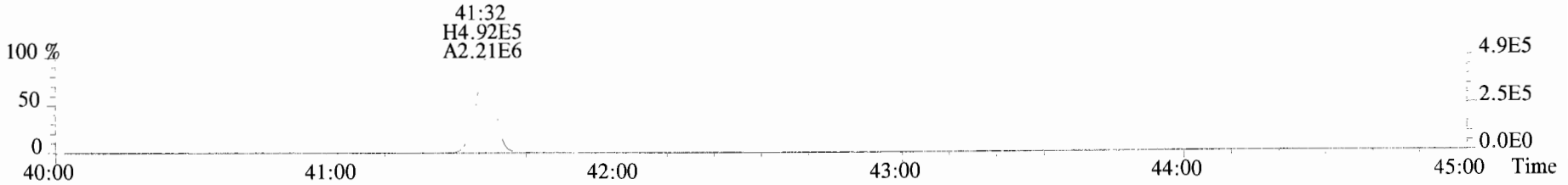
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



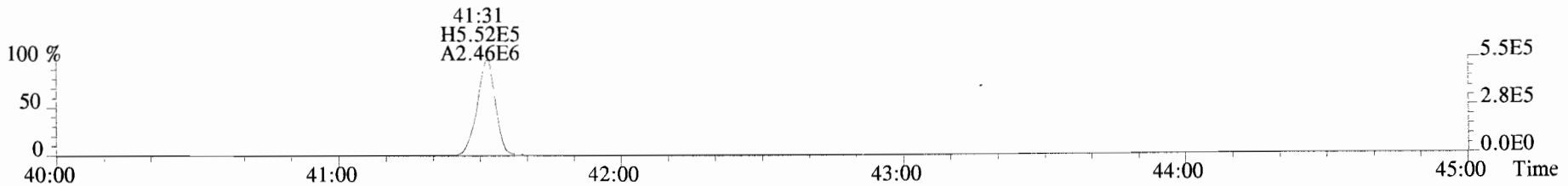
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



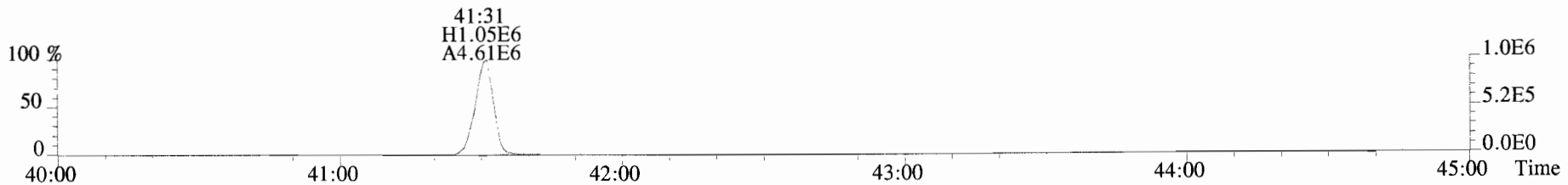
File:191024D1 #1-432 Acq:24-OCT-2019 15:36:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191024D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



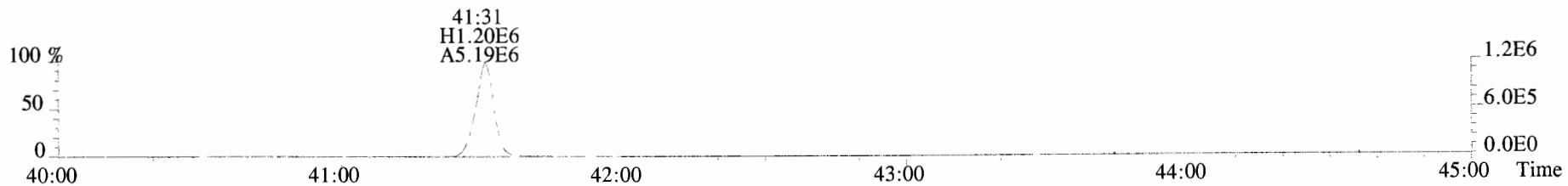
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



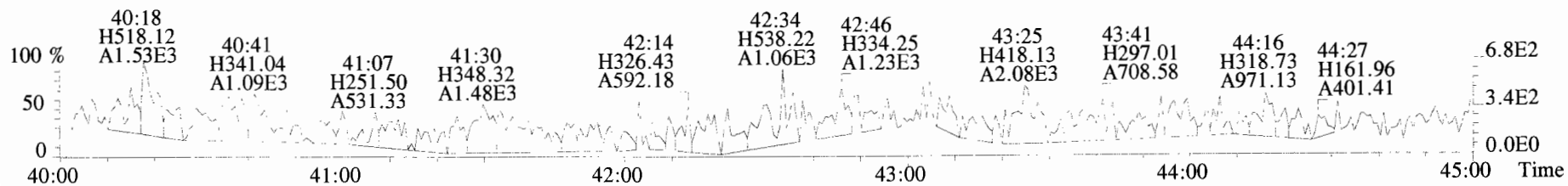
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

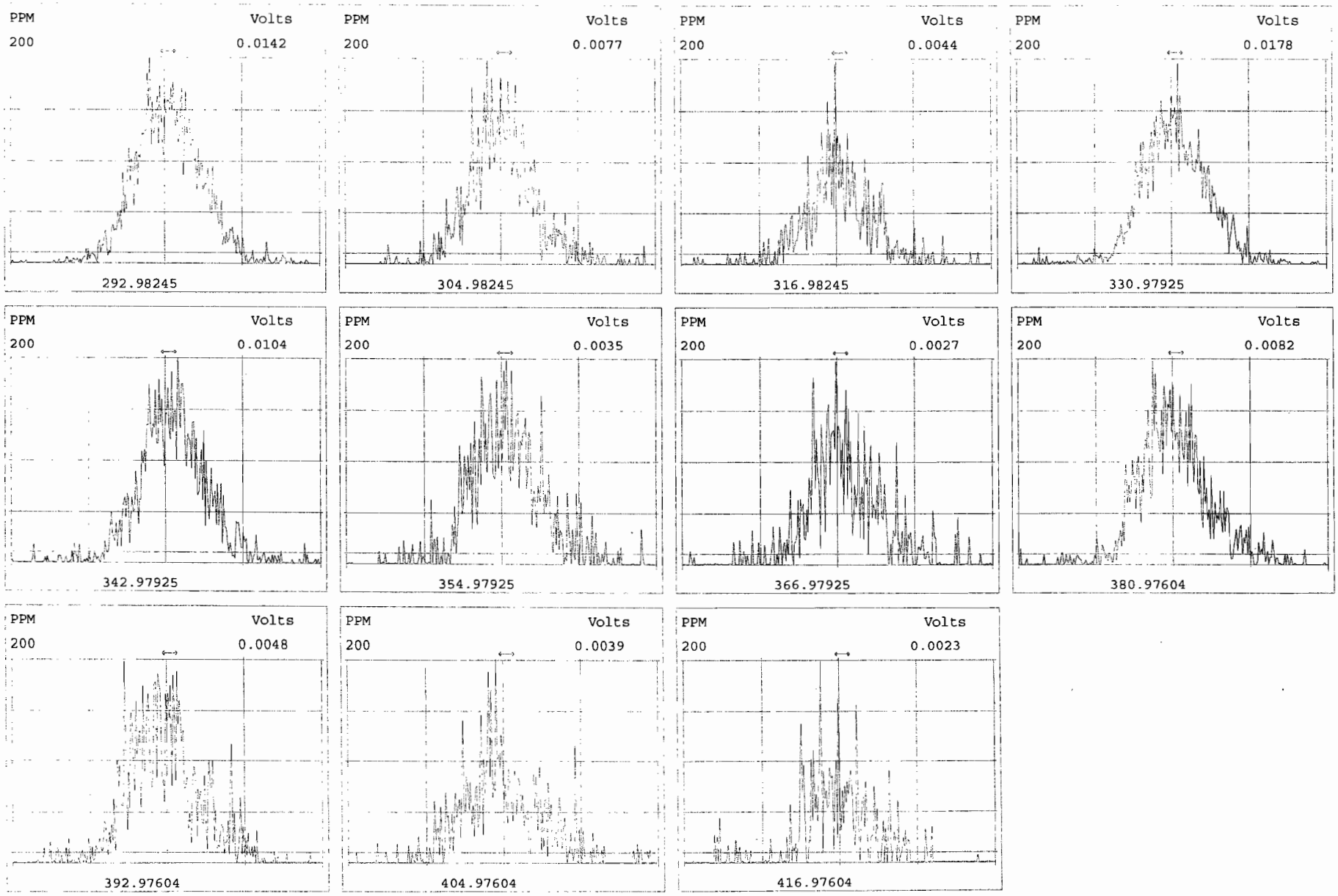


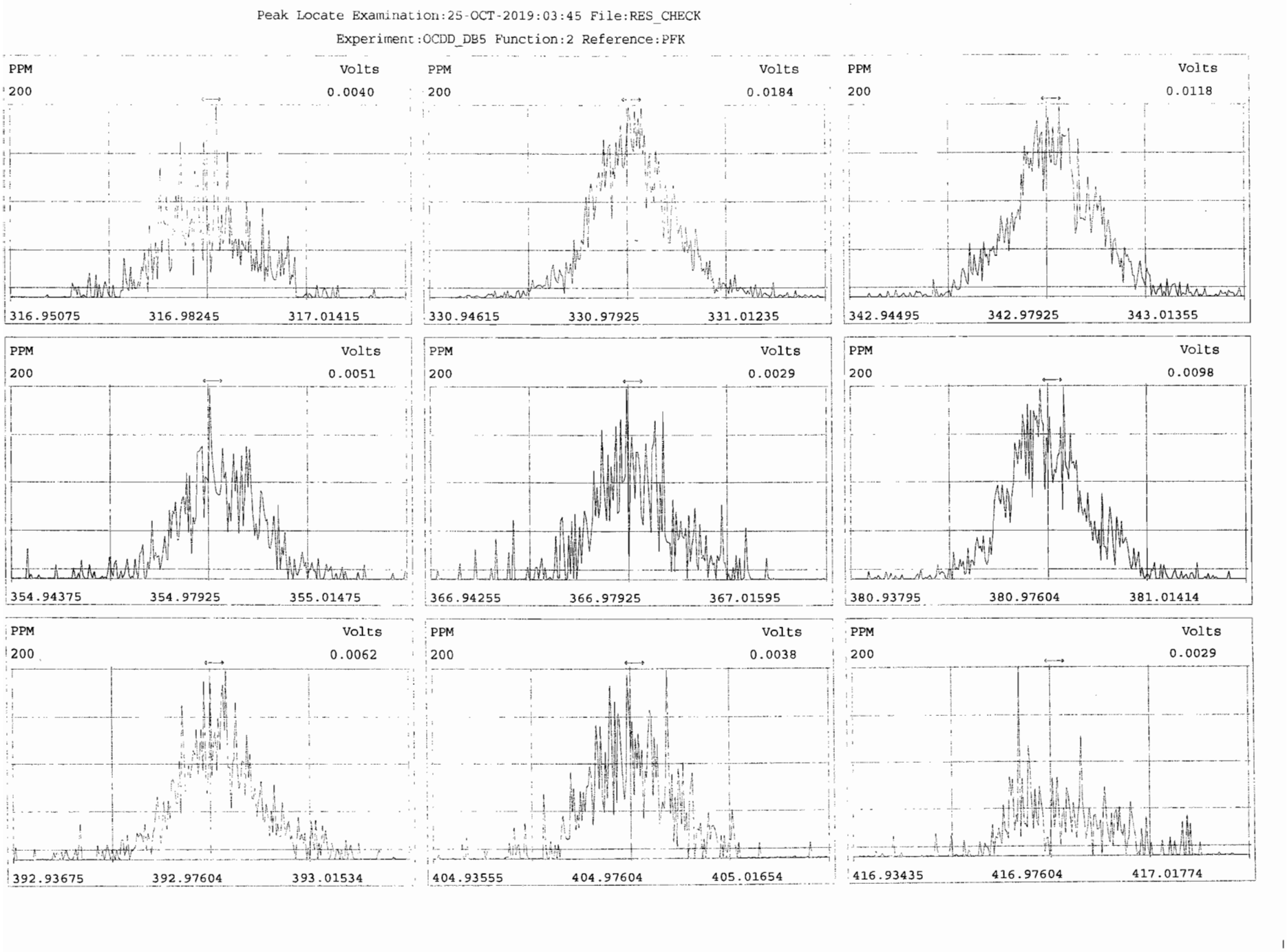
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

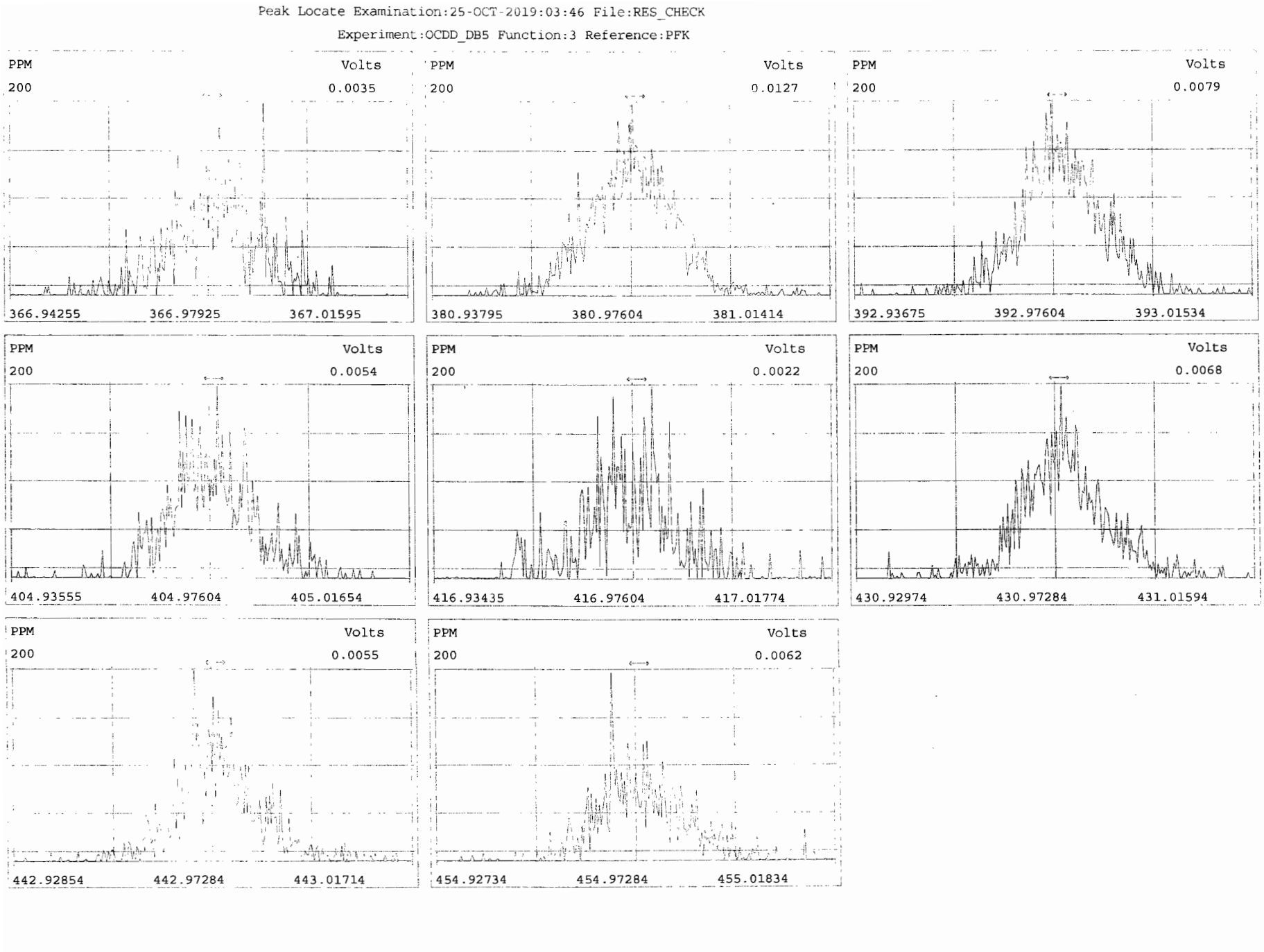


Peak Locate Examination:25-OCT-2019:03:44 File:RES_CHECK

Experiment:OCDD_DB5 Function:1 Reference:PFK

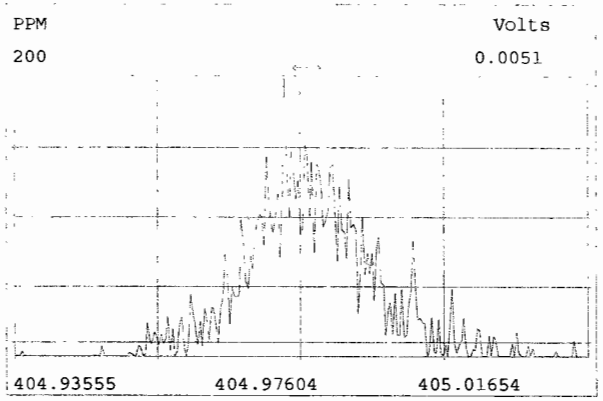


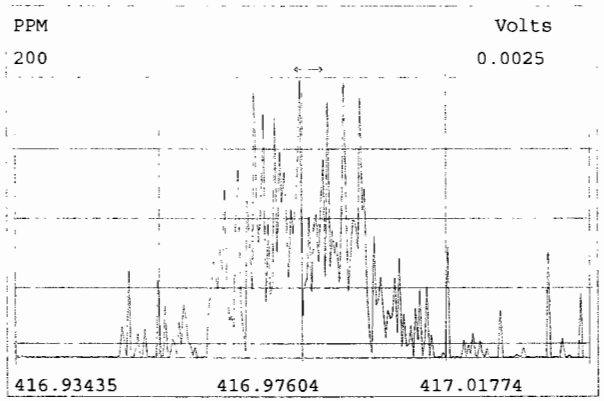

Peak Locate Examination:25-OCT-2019:03:45 File:RES_CHECK
Experiment:OCDD_DB5 Function:2 Reference:PFK
PPM
Volts
200
0.0040
316.95075
316.98245
317.01415
PPM
Volts
200
0.0184
330.94615
330.97925
331.01235
PPM
Volts
200
0.0118
342.94495
342.97925
343.01355
PPM
Volts
200
0.0051
354.94375
354.97925
355.01475
PPM
Volts
200
0.0029
366.94255
366.97925
367.01595
PPM
Volts
200
0.0098
380.93795
380.97604
381.01414
PPM
Volts
200
0.0062
392.93675
392.97604
393.01534
PPM
Volts
200
0.0038
404.93555
404.97604
405.01654
PPM
Volts
200
0.0029
416.93435
416.97604
417.01774

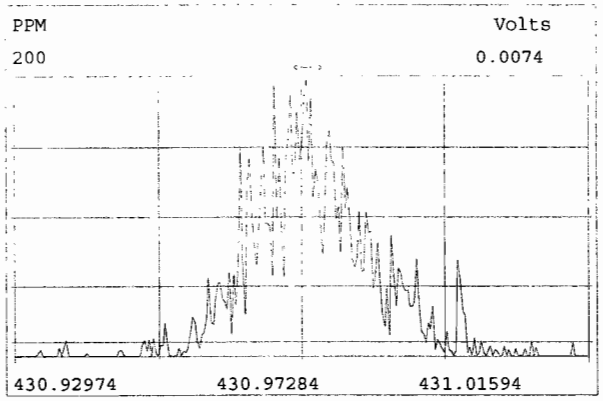

Peak Locate Examination:25-OCT-2019:03:46 File:RES_CHECK
Experiment:OCDD_DB5 Function:3 Reference:PFK
PPM
Volts
200
0.0035
366.94255
366.97925
367.01595
PPM
Volts
200
0.0127
380.93795
380.97604
381.01414
PPM
Volts
200
0.0079
392.93675
392.97604
393.01534
PPM
Volts
200
0.0054
404.93555
404.97604
405.01654
PPM
Volts
200
0.0022
416.93435
416.97604
417.01774
PPM
Volts
200
0.0068
430.92974
430.97284
431.01594
PPM
Volts
200
0.0055
442.92854
442.97284
443.01714
PPM
Volts
200
0.0062
454.92734
454.97284
455.01834

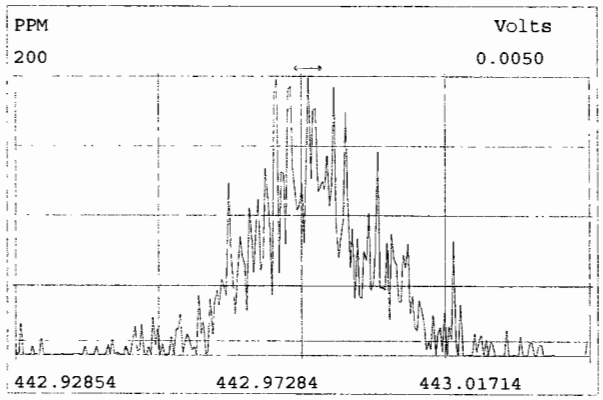
Peak Locate Examination:25-OCT-2019:03:47 File:RES_CHECK

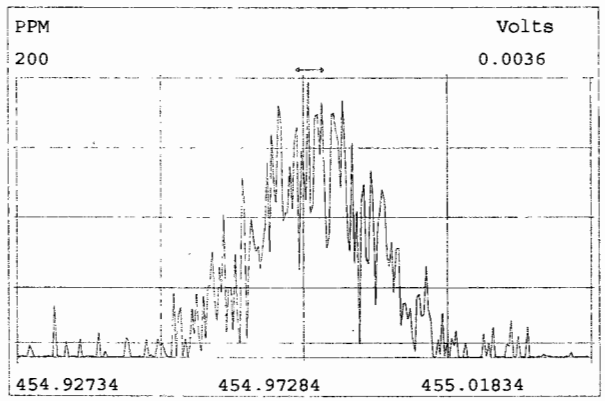
Experiment:OCDD_DB5 Function:4 Reference:PFK

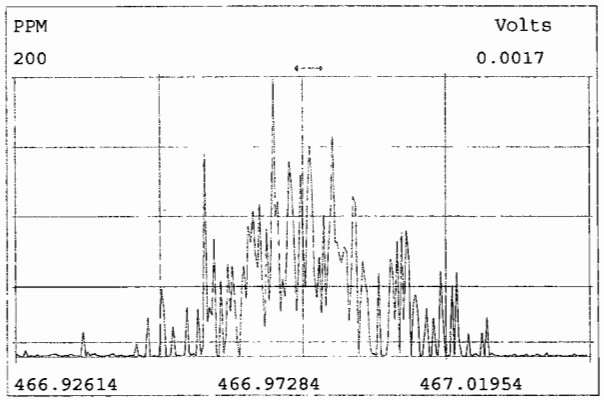


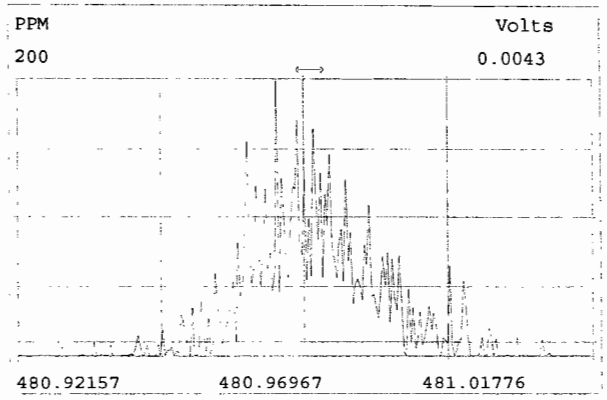


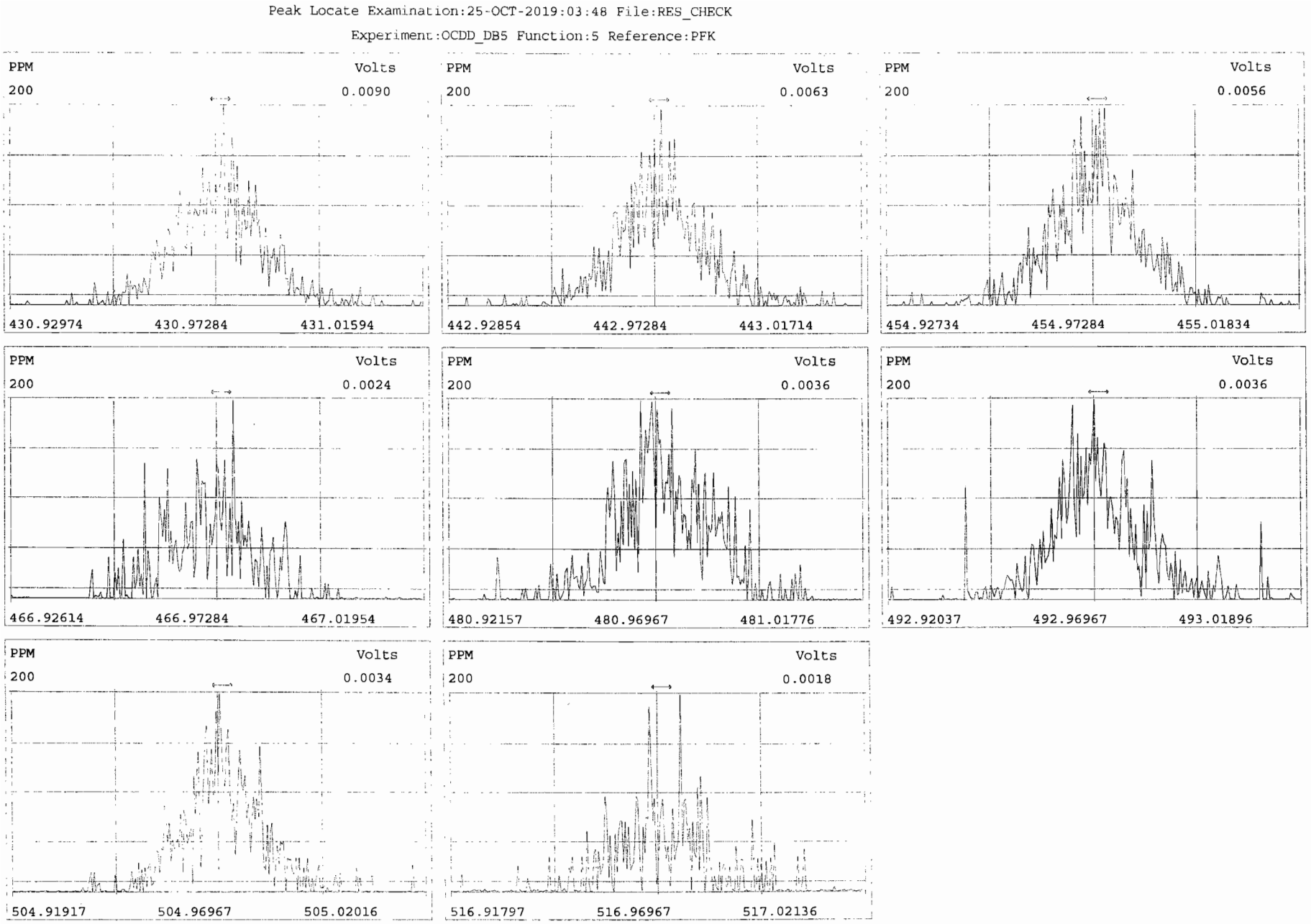











Peak Locate Examination:25-OCT-2019:03:48 File:RES_CHECK
Experiment:OCDD_DB5 Function:5 Reference:PFK
PPM
Volts
200
0.0090
430.92974
430.97284
431.01594
PPM
Volts
200
0.0063
442.92854
442.97284
443.01714
PPM
Volts
200
0.0056
454.92734
454.97284
455.01834
PPM
Volts
200
0.0024
466.92614
466.97284
467.01954
PPM
Volts
200
0.0036
480.92157
480.96967
481.01776
PPM
Volts
200
0.0036
492.92037
492.96967
493.01896
PPM
Volts
200
0.0034
504.91917
504.96967
505.02016
PPM
Volts
200
0.0018
516.91797
516.96967
517.02136

HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST191029D1-1 **Reviewed By:** QT 10/30/19

Initials & Date

End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentrations within criteria?	✓	
TCDD/TCDF Valleys <25%	✓	
First and last eluters present?	✓	
Retention Times within criteria?	✓	
Verification Std. named correctly?	✓	
(ST-Year-Month-Day-VG ID)		
Forms signed and dated?	✓	
Correct ICAL referenced?	DB	

Run Log:

- Correct instrument listed?	✓	✓
- Samples within 12 hour clock?	(Y)	N
- Bottle position verfied?	DB	

	Beg.	End
Mass resolution ≥	✓	✓

☐ 5k ☐ 6-8K ☐ 8K ☑ 10K

1614 1699 429 1613/1668/8280

Intergrated peaks display correctly?	✓	NA
GC Break <20%	NA	

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours: NA

Comments:

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST191029D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	10.8	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	51.0	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	50.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	50.3	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.20	1.05-1.43	y	51.5	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	48.5	43.0 - 58.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	103	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	y	9.21	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	52.2	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	50.9	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	47.9	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	47.2	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	48.9	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.22	1.05-1.43	y	48.4	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.99	0.88-1.20	y	46.7	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	y	46.4	43.0 - 58.0
OCDF	M+2/M+4	0.90	0.76-1.02	y	94.9	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 10/29/19

FORM 4B

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

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	112	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	103	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	110	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	98.2	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	y	99.8	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	110	72.0 - 138.0
13C-OCDD	M/M+2	0.90	0.76-1.02	y	218	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.82	0.65-0.89	y	103	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	106	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	106	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	106	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	101	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	103	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	104	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.44	0.37-0.51	y	103	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	110	77.0 - 129.0
13C-OCDF	M+2/M+4	0.87	0.76-1.02	y	223	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					10.2	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: DB

Date: 10/29/19

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	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	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.198	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.152	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.187	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: DB

Date: 10/29/19

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.038	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.018	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.027	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.093	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.146	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.130	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.229	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.236	1.091-1.371

Analyst: DB

Date: 10/29/19

Client ID: 1613 CS3 19C2204 Filename: 191029D1 S:1 Acq:29-OCT-19 10:15:38 ConCal: ST191029D1-1

Lab ID: ST191029D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	8.83e+05	0.76 y	0.91	26:14	10.833			* 2.5	*
	1,2,3,7,8-PeCDD	3.04e+06	0.61 y	0.90	30:45	50.988			* 2.5	*
	1,2,3,4,7,8-HxCDD	3.04e+06	1.21 y	1.10	34:04	50.856			* 2.5	*
	1,2,3,6,7,8-HxCDD	3.04e+06	1.21 y	0.94	34:11	50.256			* 2.5	*
	1,2,3,7,8,9-HxCDD	3.06e+06	1.20 y	0.96	34:28	51.544			* 2.5	*
	1,2,3,4,6,7,8-HpCDD	2.61e+06	1.05 y	0.98	37:57	48.519			* 2.5	*
	OCDD	4.78e+06	0.90 y	0.96	41:16	102.73			* 2.5	*
	2,3,7,8-TCDF	9.94e+05	0.79 y	0.95	25:27	9.2148			* 2.5	*
	1,2,3,7,8-PeCDF	4.83e+06	1.58 y	0.96	29:34	52.152			* 2.5	*
	2,3,4,7,8-PeCDF	4.94e+06	1.56 y	1.01	30:28	50.886			* 2.5	*
	1,2,3,4,7,8-HxCDF	3.81e+06	1.23 y	1.18	33:10	47.883			* 2.5	*
	1,2,3,6,7,8-HxCDF	4.06e+06	1.26 y	1.07	33:18	47.222			* 2.5	*
	2,3,4,6,7,8-HxCDF	4.10e+06	1.23 y	1.11	33:54	48.936			* 2.5	*
	1,2,3,7,8,9-HxCDF	3.41e+06	1.22 y	1.06	34:51	48.406			* 2.5	*
	1,2,3,4,6,7,8-HpCDF	3.15e+06	0.99 y	1.13	36:42	46.665			* 2.5	*
	1,2,3,4,7,8,9-HpCDF	2.90e+06	1.02 y	1.28	38:30	46.357			* 2.5	*
	OCDF	5.29e+06	0.90 y	0.95	41:30	94.854			* 2.5	*
IS	13C-2,3,7,8-TCDD	9.01e+06	0.78 y	1.10	26:13	112.45				
IS	13C-1,2,3,7,8-PeCDD	6.61e+06	0.61 y	0.88	30:44	102.57				
IS	13C-1,2,3,4,7,8-HxCDD	5.43e+06	1.31 y	0.64	34:03	110.27				
IS	13C-1,2,3,6,7,8-HxCDD	6.44e+06	1.31 y	0.86	34:10	98.225				
IS	13C-1,2,3,7,8,9-HxCDD	6.17e+06	1.27 y	0.81	34:28	99.839				
IS	13C-1,2,3,4,6,7,8-HpCDD	5.50e+06	1.07 y	0.65	37:56	109.71				
IS	13C-OCDD	9.71e+06	0.90 y	0.58	41:16	218.37				
IS	13C-2,3,7,8-TCDF	1.14e+07	0.82 y	1.03	25:26	103.27				
IS	13C-1,2,3,7,8-PeCDF	9.65e+06	1.57 y	0.85	29:33	106.34				
IS	13C-2,3,4,7,8-PeCDF	9.56e+06	1.56 y	0.85	30:27	106.27				
IS	13C-1,2,3,4,7,8-HxCDF	6.76e+06	0.50 y	0.83	33:09	106.08				
IS	13C-1,2,3,6,7,8-HxCDF	8.04e+06	0.51 y	1.03	33:17	101.38				
IS	13C-2,3,4,6,7,8-HxCDF	7.52e+06	0.51 y	0.95	33:53	102.86				
IS	13C-1,2,3,7,8,9-HxCDF	6.63e+06	0.51 y	0.83	34:50	104.48				
IS	13C-1,2,3,4,6,7,8-HpCDF	6.00e+06	0.44 y	0.76	36:42	103.24				
IS	13C-1,2,3,4,7,8,9-HpCDF	4.88e+06	0.45 y	0.58	38:29	109.51				
IS	13C-OCDF	1.18e+07	0.87 y	0.69	41:29	222.81				
C/Up	37Cl-2,3,7,8-TCDD	8.97e+05		1.20	26:14	10.243				
RS/RT	13C-1,2,3,4-TCDD	7.31e+06	0.77 y	1.00	25:39	100.00				
RS	13C-1,2,3,4-TCDF	1.06e+07	0.81 y	1.00	24:13	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.67e+06	0.52 y	1.00	33:34	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	73.5	74.3		*	*
Total Penta-Dioxins	193	194		*	*
Total Hexa-Dioxins	227	227		*	*
Total Hepta-Dioxins	115	116		*	*
Total Tetra-Furans	34.7	35.8		*	*
Total Penta-Furans	229.18	229.26		*	*
Total Hexa-Furans	256	256		*	*
Total Hepta-Furans	93.9	95.5		*	*

	Rec	Qual
IS	112	
IS	103	
IS	110	
IS	98.2	
IS	99.8	
IS	110	
IS	109	
IS	103	
IS	106	
IS	106	
IS	106	
IS	101	
IS	103	
IS	104	
IS	103	
IS	110	
IS	111	
C/Up	102	

Integrations by Analyst: DB Date: 10/29/19

Reviewed by Analyst: CT Date: 10/30/19

Vista Analytical Laboratory - Injection Log Run file: 191029D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191029D1	1	ST191029D1-1	DB	29-OCT-19	10:15:38	ST191029D1-1	NA
191029D1	2	B9J0132-BS1	DB	29-OCT-19	11:03:33	ST191029D1-1	NA
191029D1	3	B9J0286-BS1	DB	29-OCT-19	11:51:28	ST191029D1-1	NA
191029D1	4	B9J0253-BS1	DB	29-OCT-19	12:39:19	ST191029D1-1	NA
191029D1	5	SOLVENT BLANK	DB	29-OCT-19	13:27:14	ST191029D1-1	NA
191029D1	6	B9J0286-BLK1	DB	29-OCT-19	14:15:00	ST191029D1-1	NA
191029D1	7	B9J0253-BLK1	DB	29-OCT-19	15:02:56	ST191029D1-1	NA
191029D1	8	1903259-01RE1	DB	29-OCT-19	15:50:41	ST191029D1-1	NA
191029D1	9	1903259-03RE1	DB	29-OCT-19	16:38:36	ST191029D1-1	NA
191029D1	10	1903566-01RE1	DB	29-OCT-19	17:26:30	ST191029D1-1	NA
191029D1	11	1903285-01@5X	DB	29-OCT-19	18:14:19	ST191029D1-1	NA
191029D1	12	1903285-02@5X	DB	29-OCT-19	19:02:03	ST191029D1-1	NA
191029D1	13	1903285-03@5X	DB	29-OCT-19	19:49:46	ST191029D1-1	NA
191029D1	14	1903420-11	DB	29-OCT-19	20:37:30	ST191029D1-1	NA
191029D1	15	1903460-08RE1	DB	29-OCT-19	21:25:15	ST191029D1-1	NA

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 10-9-19

RT Window Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

ZB-5MS IS Data Filename: 191029D1 S#1 Analysis Date: 29-OCT-19 Time: 10:15:38

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	22:51	1,3,6,8-TCDF (F)	20:43
1,2,8,9-TCDD (L)	27:05	1,2,8,9-TCDF (L)	27:14
1,2,4,7,9-PeCDD (F)	28:42	1,3,4,6,8-PeCDF (F)	27:12
1,2,3,8,9-PeCDD (L)	31:06	1,2,3,8,9-PeCDF (L)	31:20
1,2,4,6,7,9-HxCDD (F)	32:31	1,2,3,4,6,8-HxCDF (F)	31:59
1,2,3,7,8,9-HxCDD (L)	34:28	1,2,3,7,8,9-HxCDF (L)	34:51
1,2,3,4,6,7,9-HpCDD (F)	37:06	1,2,3,4,6,7,8-HpCDF (F)	36:42
1,2,3,4,6,7,8-HpCDD (L)	37:57	1,2,3,4,7,8,9-HpCDF (L)	38:30

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

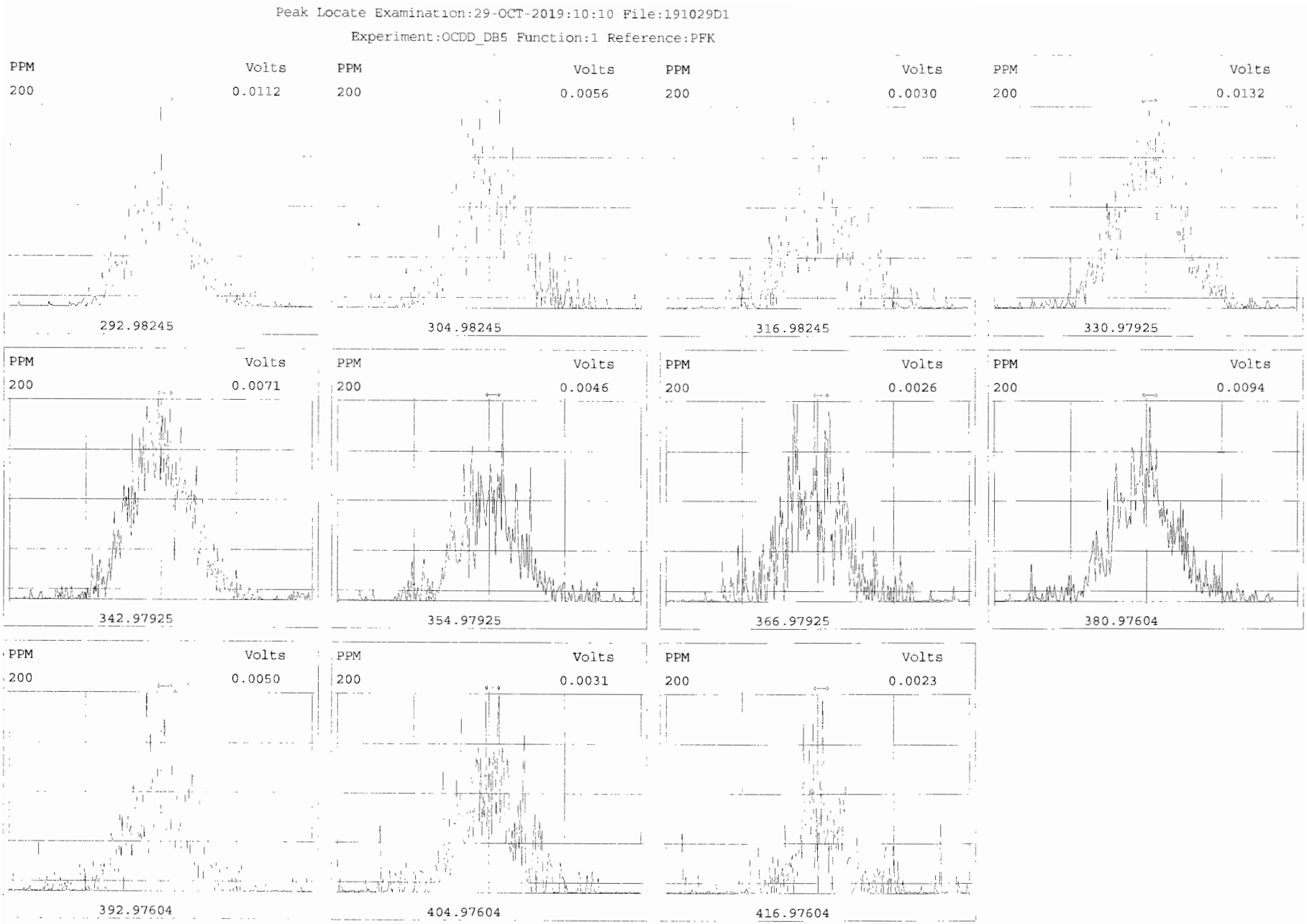
ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

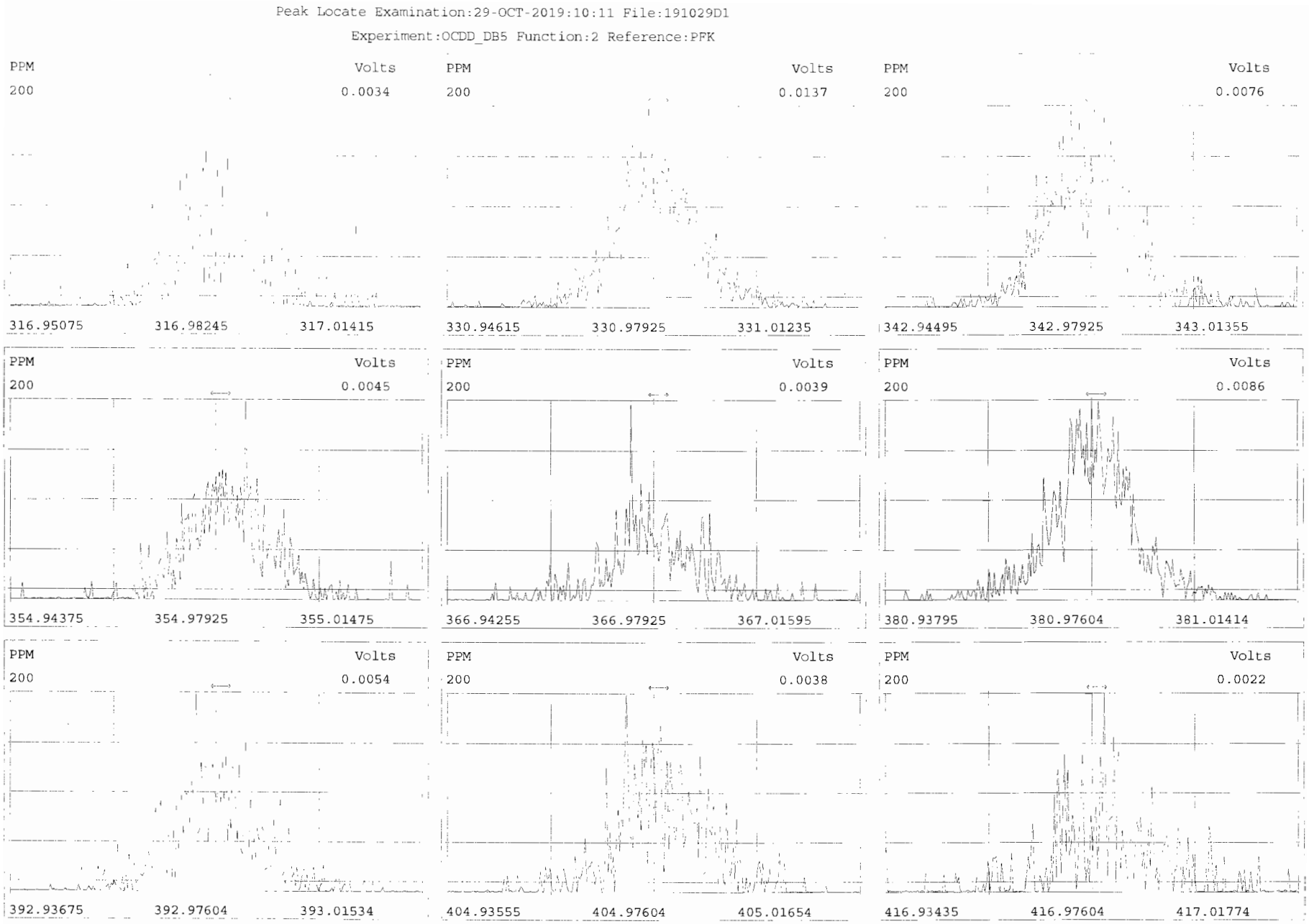
COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

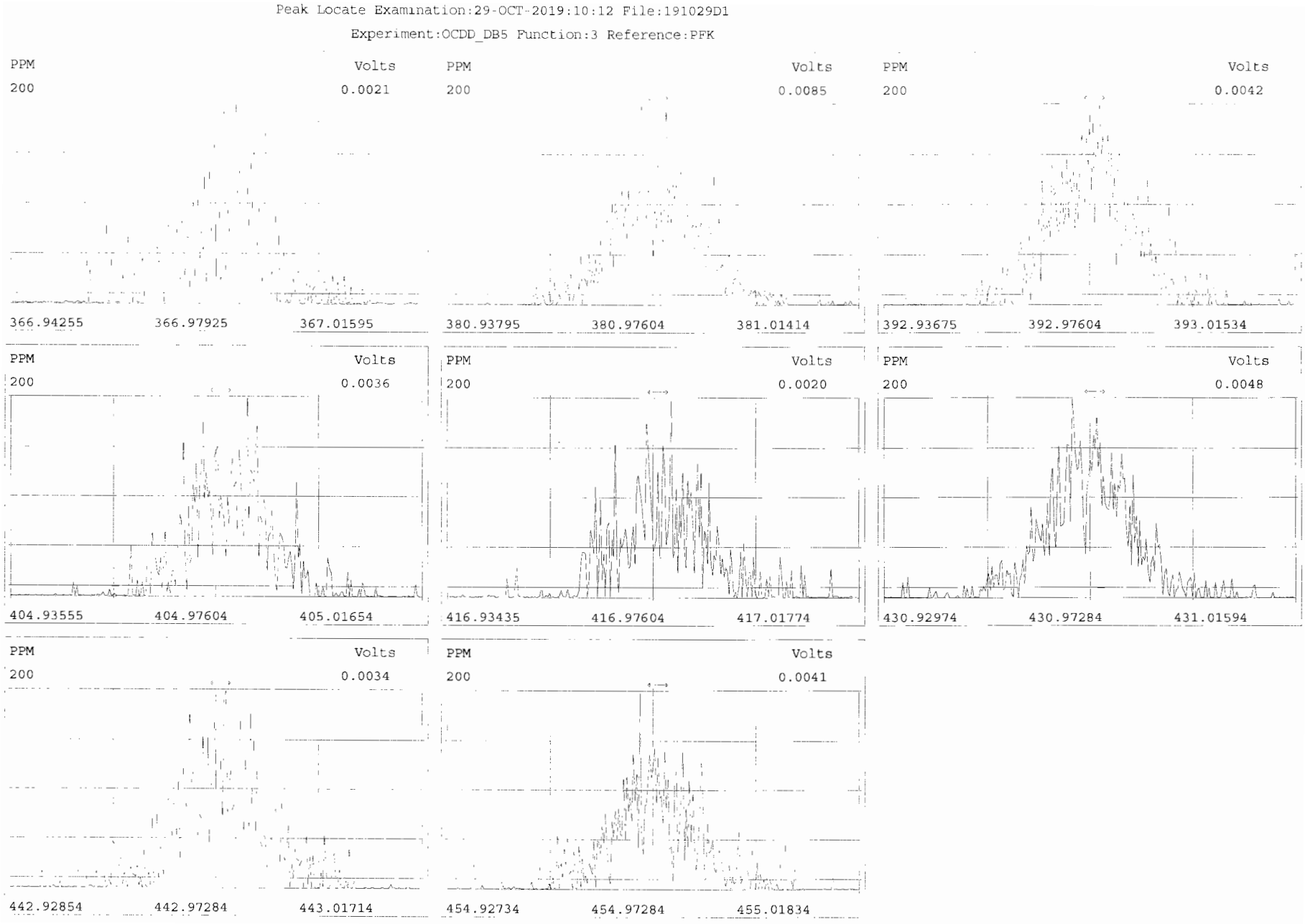
(1) To meet contract requirements, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

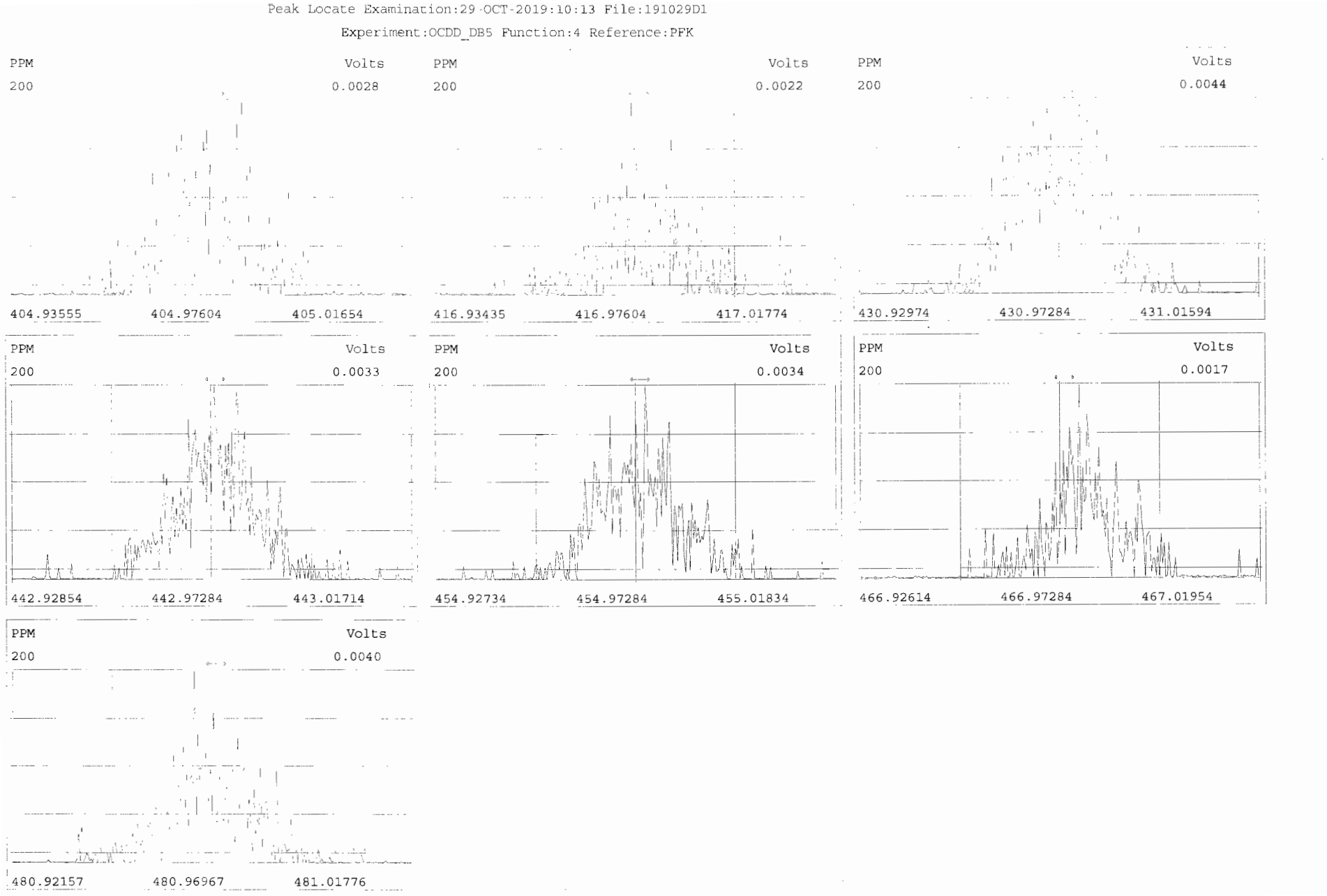
Analyst: DB

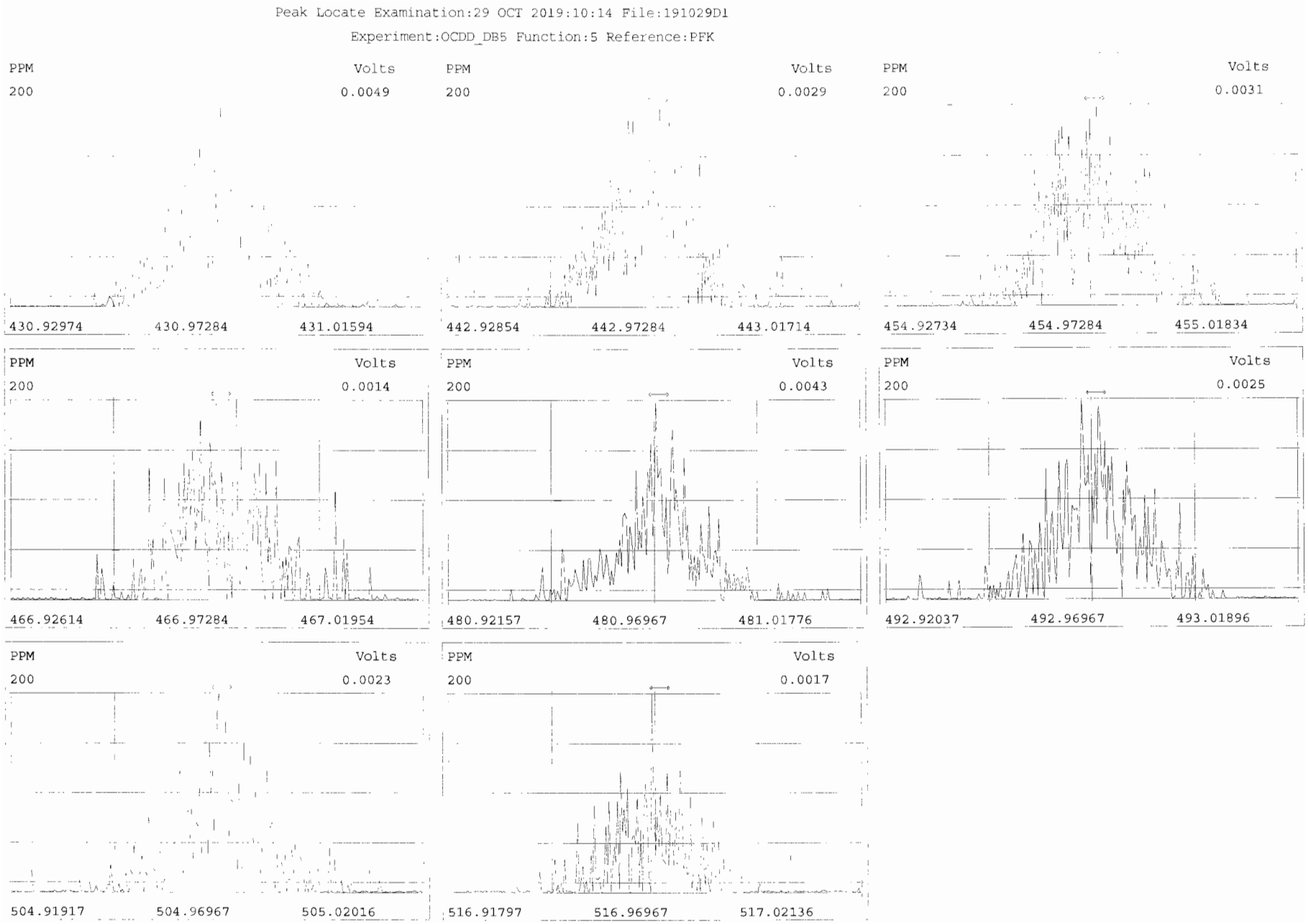
Date: 10/29/19


Peak Locate Examination:29-OCT-2019:10:10 File:191029D1
Experiment:OCDD_DB5 Function:1 Reference:PFK
PPM
Volts
200
0.0112
292.98245
PPM
Volts
200
0.0056
304.98245
PPM
Volts
200
0.0030
316.98245
PPM
Volts
200
0.0132
330.97925
PPM
Volts
200
0.0071
342.97925
PPM
Volts
200
0.0046
354.97925
PPM
Volts
200
0.0026
366.97925
PPM
Volts
200
0.0094
380.97604
PPM
Volts
200
0.0050
392.97604
PPM
Volts
200
0.0031
404.97604
PPM
Volts
200
0.0023
416.97604

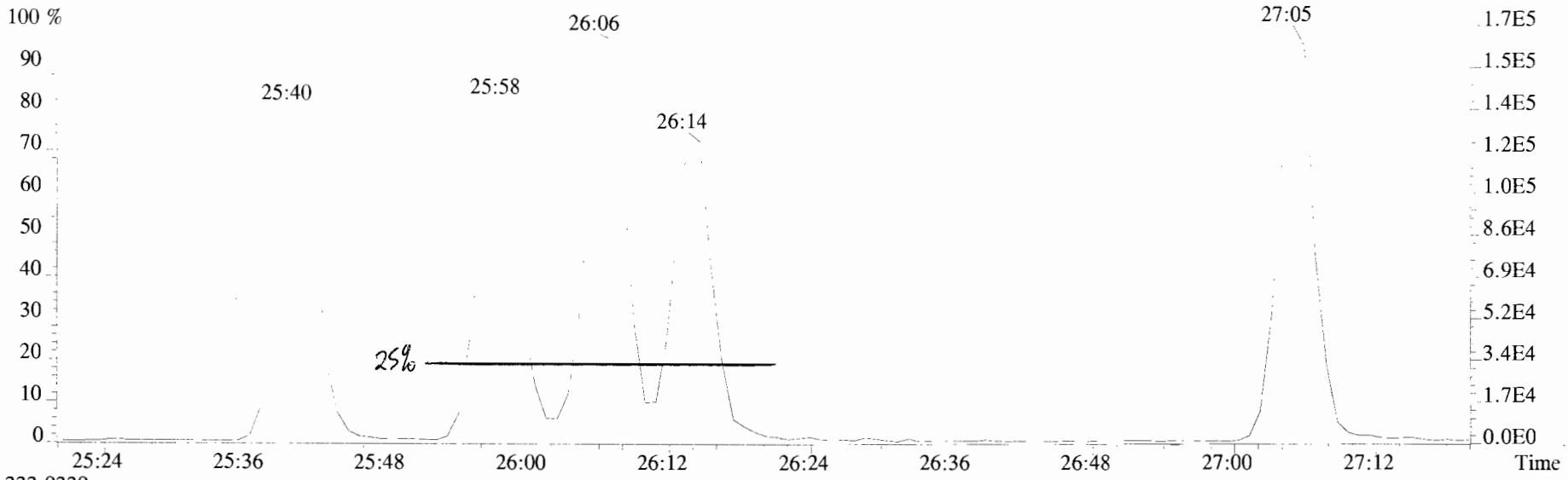

Peak Locate Examination:29-OCT-2019:10:11 File:191029D1
Experiment:OCDD_DB5 Function:2 Reference:PFK
PPM
Volts
200
0.0034
316.95075
316.98245
317.01415
PPM
Volts
200
0.0137
330.94615
330.97925
331.01235
PPM
Volts
200
0.0076
342.94495
342.97925
343.01355
PPM
Volts
200
0.0045
354.94375
354.97925
355.01475
PPM
Volts
200
0.0039
366.94255
366.97925
367.01595
PPM
Volts
200
0.0086
380.93795
380.97604
381.01414
PPM
Volts
200
0.0054
392.93675
392.97604
393.01534
PPM
Volts
200
0.0038
404.93555
404.97604
405.01654
PPM
Volts
200
0.0022
416.93435
416.97604
417.01774


Peak Locate Examination:29-OCT-2019:10:12 File:191029D1
Experiment:OCDD_DB5 Function:3 Reference:PFK
PPM
Volts
200
0.0021
366.94255
366.97925
367.01595
PPM
Volts
200
0.0085
380.93795
380.97604
381.01414
PPM
Volts
200
0.0042
392.93675
392.97604
393.01534
PPM
Volts
200
0.0036
404.93555
404.97604
405.01654
PPM
Volts
200
0.0020
416.93435
416.97604
417.01774
PPM
Volts
200
0.0048
430.92974
430.97284
431.01594
PPM
Volts
200
0.0034
442.92854
442.97284
443.01714
PPM
Volts
200
0.0041
454.92734
454.97284
455.01834

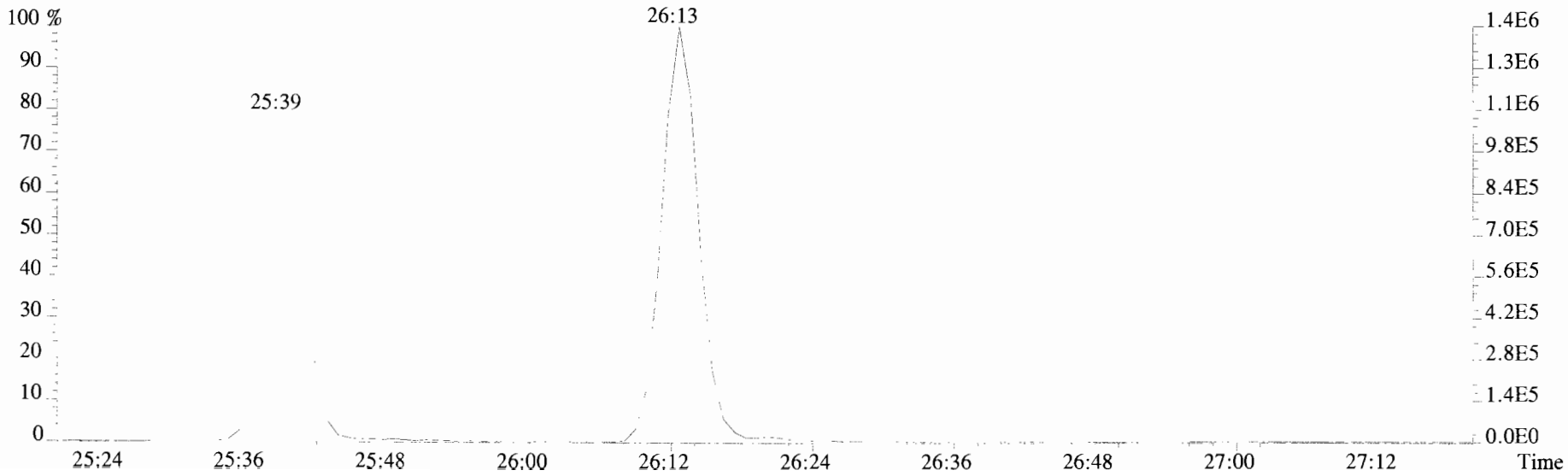

Peak Locate Examination:29-OCT-2019:10:13 File:191029D1
Experiment:OCDD_DB5 Function:4 Reference:PFK
PPM
Volts
200
0.0028
404.93555
404.97604
405.01654
PPM
Volts
200
0.0022
416.93435
416.97604
417.01774
PPM
Volts
200
0.0044
430.92974
430.97284
431.01594
PPM
Volts
200
0.0033
442.92854
442.97284
443.01714
PPM
Volts
200
0.0034
454.92734
454.97284
455.01834
PPM
Volts
200
0.0017
466.92614
466.97284
467.01954
PPM
Volts
200
0.0040
480.92157
480.96967
481.01776

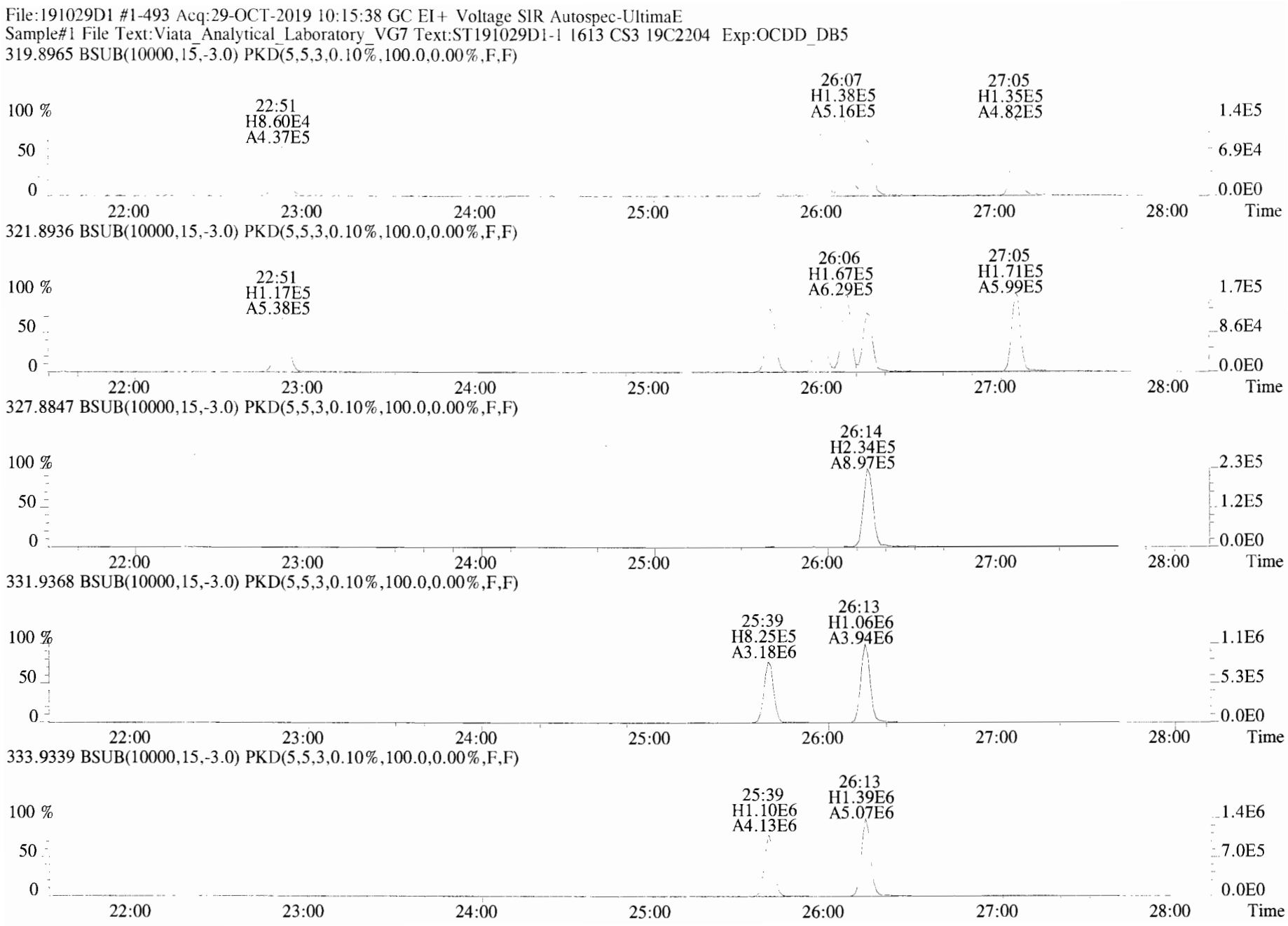

Peak Locate Examination:29 OCT 2019:10:14 File:191029D1
Experiment:OCDD_DB5 Function:5 Reference:PFK
PPM
Volts
200
0.0049
430.92974
430.97284
431.01594
PPM
Volts
200
0.0029
442.92854
442.97284
443.01714
PPM
Volts
200
0.0031
454.92734
454.97284
455.01834
PPM
Volts
200
0.0014
466.92614
466.97284
467.01954
PPM
Volts
200
0.0043
480.92157
480.96967
481.01776
PPM
Volts
200
0.0025
492.92037
492.96967
493.01896
PPM
Volts
200
0.0023
504.91917
504.96967
505.02016
PPM
Volts
200
0.0017
516.91797
516.96967
517.02136

File:191029D1 #1-493 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
321.8936



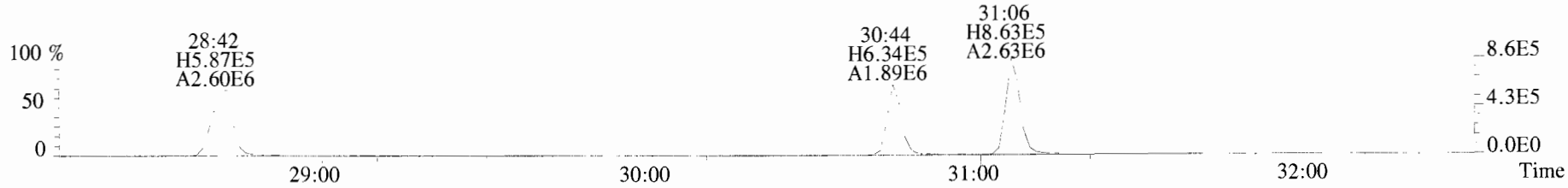
333.9339



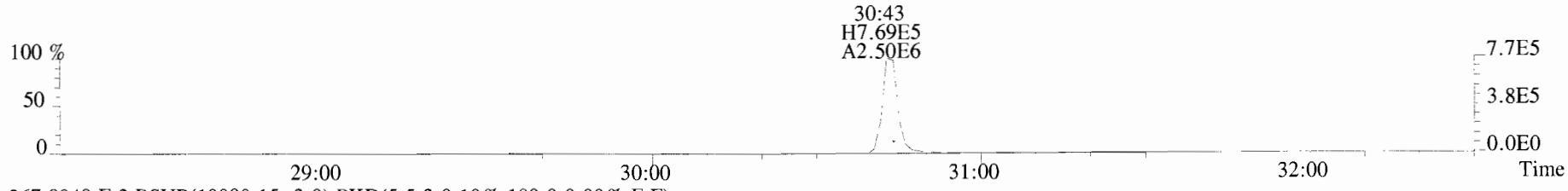

File:191029D1 #1-493 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:51 H8.60E4 A4.37E5
26:07 H1.38E5 A5.16E5
27:05 H1.35E5 A4.82E5
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:51 H1.17E5 A5.38E5
26:06 H1.67E5 A6.29E5
27:05 H1.71E5 A5.99E5
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:14 H2.34E5 A8.97E5
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:39 H8.25E5 A3.18E6
26:13 H1.06E6 A3.94E6
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:39 H1.10E6 A4.13E6
26:13 H1.39E6 A5.07E6
100 %
50
0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
1.4E5
6.9E4
0.0E0
1.7E5
8.6E4
2.3E5
1.2E5
1.1E6
5.3E5
1.4E6
7.0E5

File:191029D1 #1-211 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

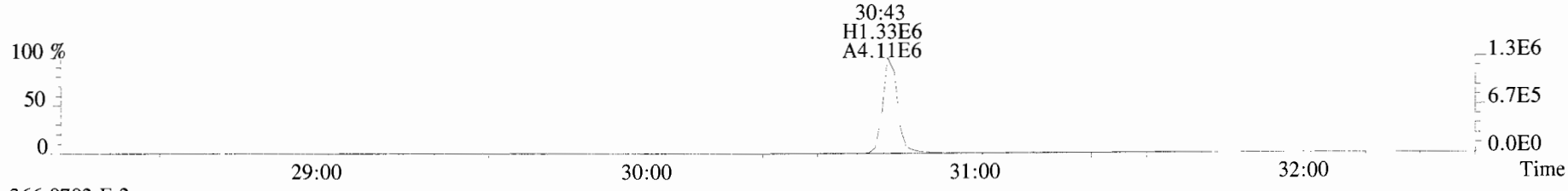
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



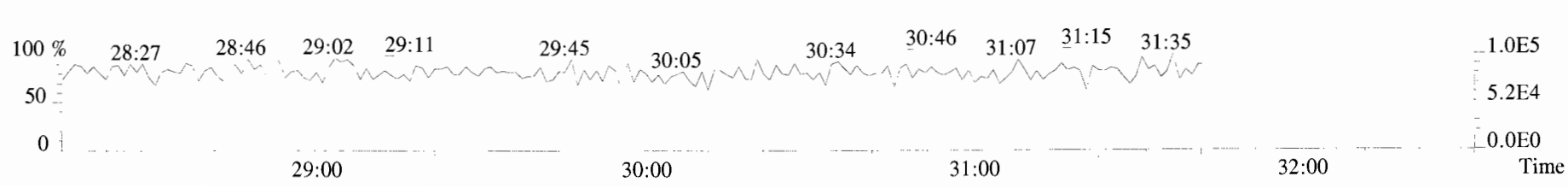
365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

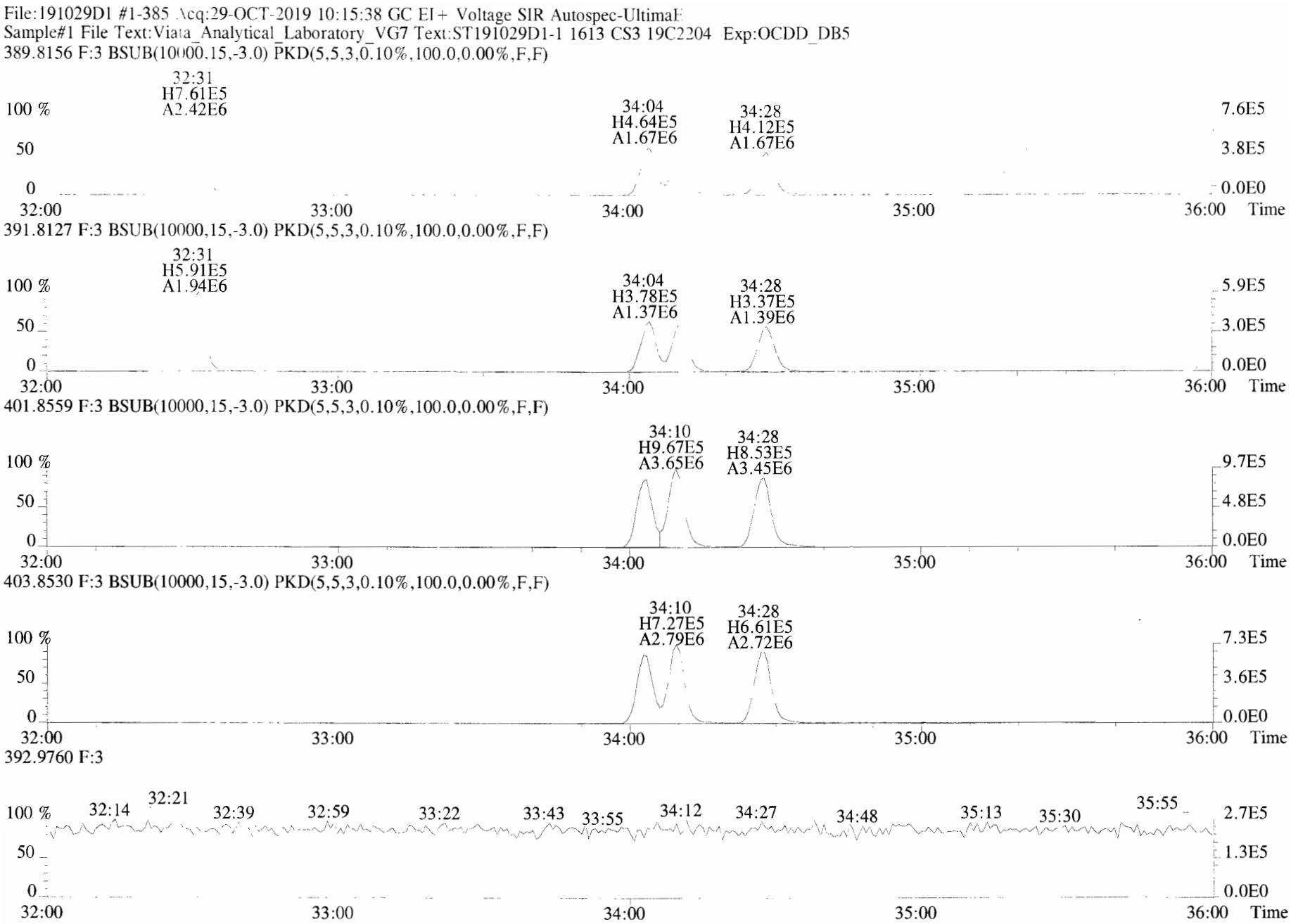


367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

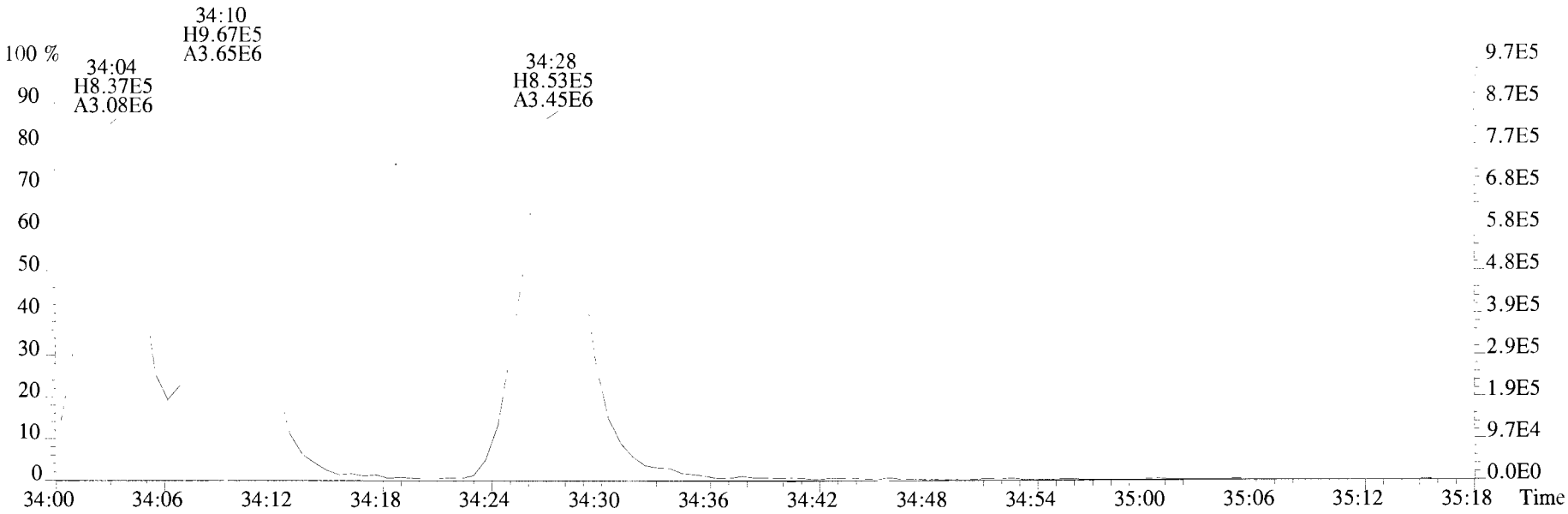


366.9792 F:2

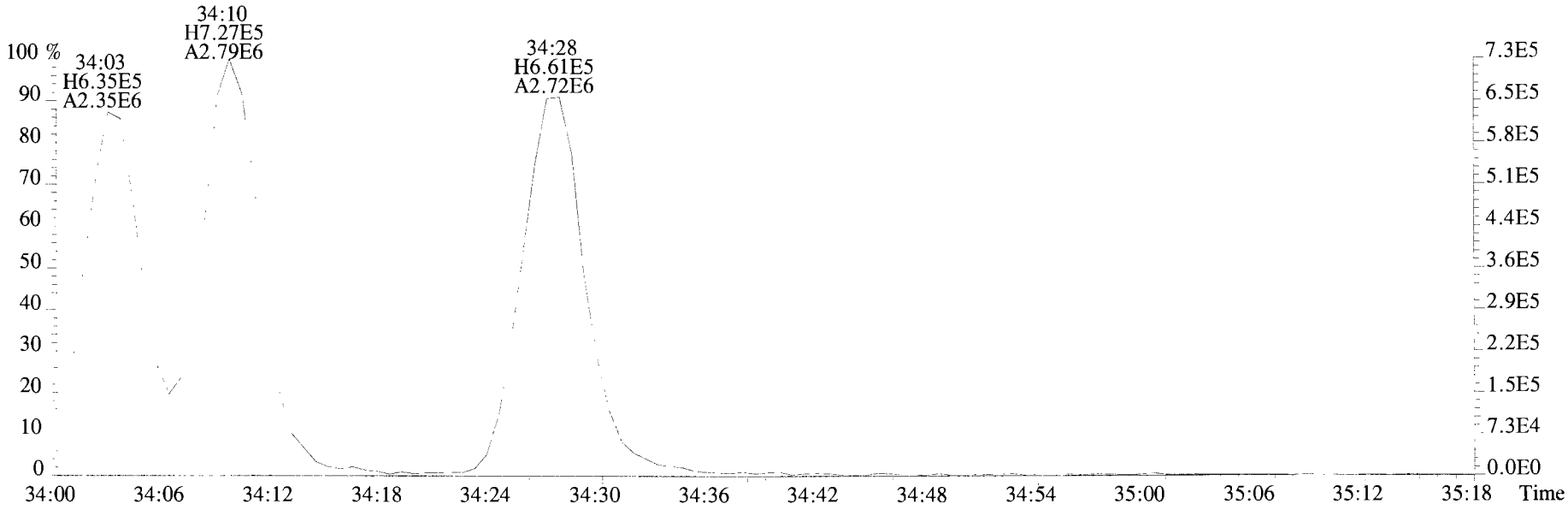



File:191029D1 #1-385 .\cq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:31 H7.61E5 A2.42E6
34:04 H4.64E5 A1.67E6
34:28 H4.12E5 A1.67E6
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
32:31 H5.91E5 A1.94E6
34:04 H3.78E5 A1.37E6
34:28 H3.37E5 A1.39E6
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:10 H9.67E5 A3.65E6
34:28 H8.53E5 A3.45E6
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:10 H7.27E5 A2.79E6
34:28 H6.61E5 A2.72E6
392.9760 F:3
32:14 32:21 32:39 32:59 33:22 33:43 33:55 34:12 34:27 34:48 35:13 35:30 35:55
100 %
50
0
32:00 33:00 34:00 35:00 36:00 Time
7.6E5 3.8E5 0.0E0
5.9E5 3.0E5 0.0E0
9.7E5 4.8E5 0.0E0
7.3E5 3.6E5 0.0E0
2.7E5 1.3E5 0.0E0

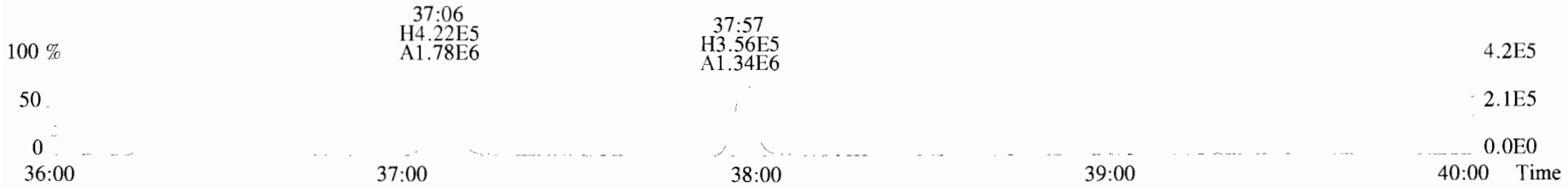
File:191029D1 #1-385 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



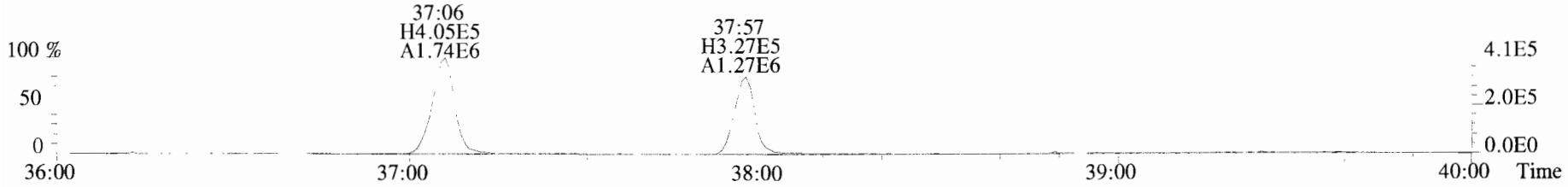
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



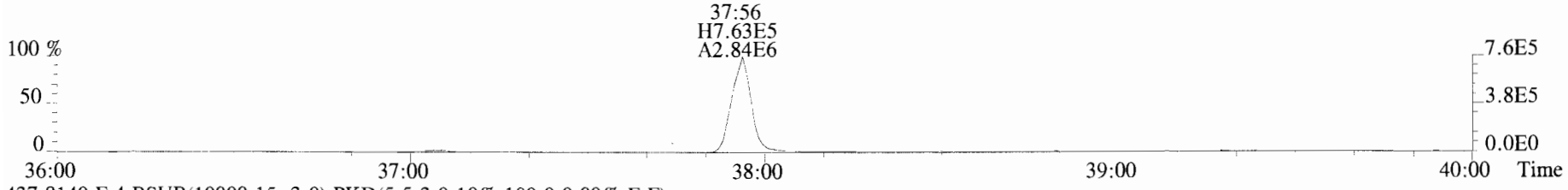
File:191029D1 #1-356 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



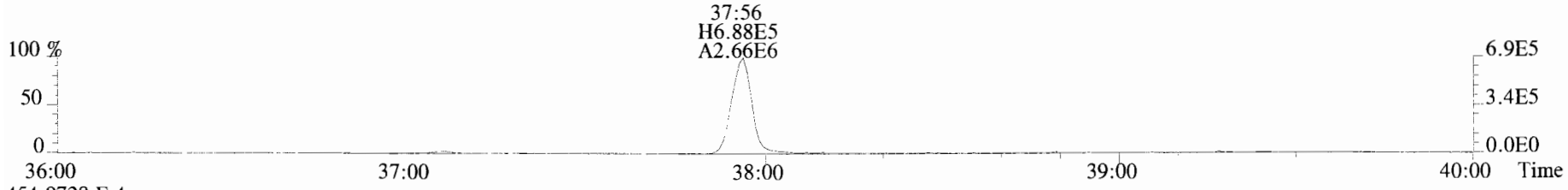
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



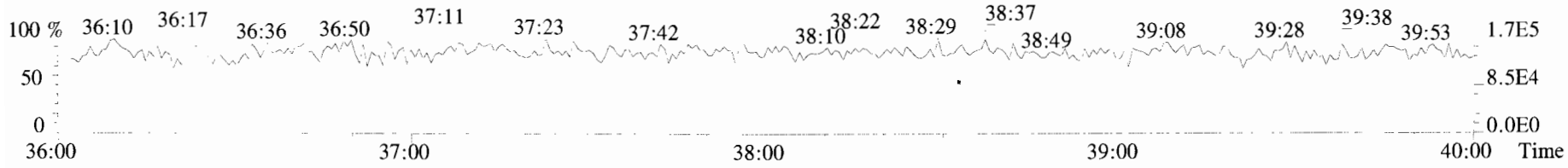
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

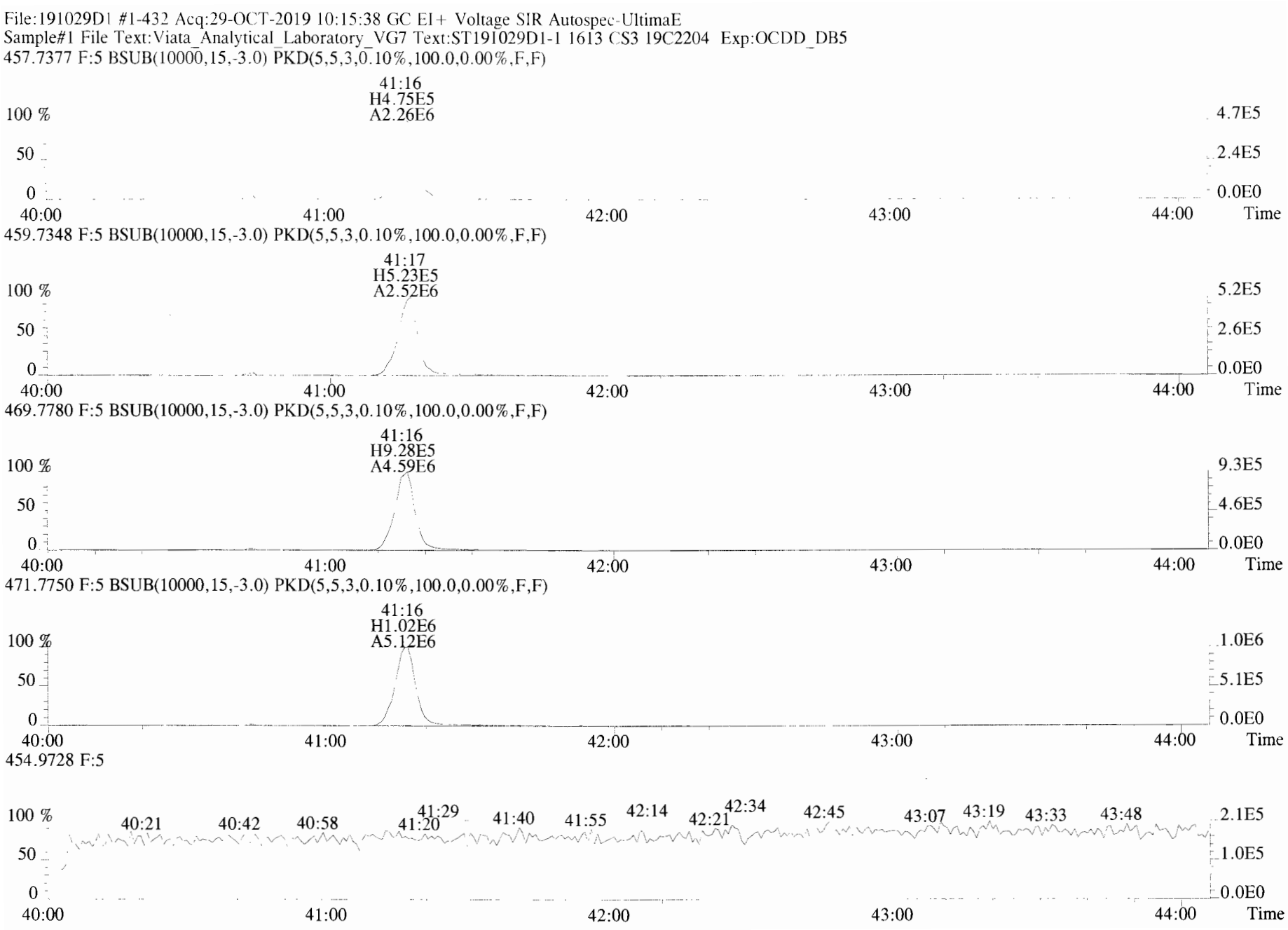


437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



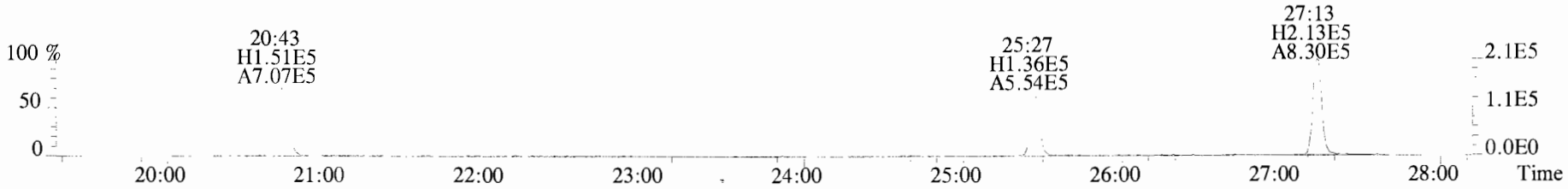
454.9728 F:4



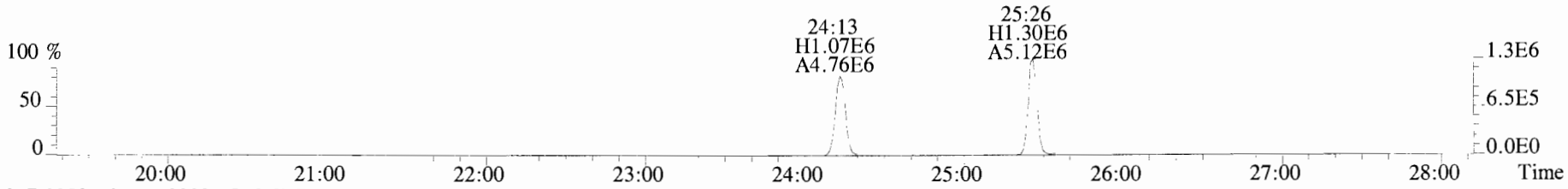

File:191029D1 #1-432 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:16
H4.75E5
A2.26E6
100 %
50
0
4.7E5
2.4E5
0.0E0
40:00
41:00
42:00
43:00
44:00
Time
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:17
H5.23E5
A2.52E6
100 %
50
0
5.2E5
2.6E5
0.0E0
40:00
41:00
42:00
43:00
44:00
Time
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:16
H9.28E5
A4.59E6
100 %
50
0
9.3E5
4.6E5
0.0E0
40:00
41:00
42:00
43:00
44:00
Time
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
41:16
H1.02E6
A5.12E6
100 %
50
0
1.0E6
5.1E5
0.0E0
40:00
41:00
42:00
43:00
44:00
Time
454.9728 F:5
100 %
50
0
40:21
40:42
40:58
41:20
41:29
41:40
41:55
42:14
42:21
42:34
42:45
43:07
43:19
43:33
43:48
2.1E5
1.0E5
0.0E0
40:00
41:00
42:00
43:00
44:00
Time

File:191029D1 #1-493 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

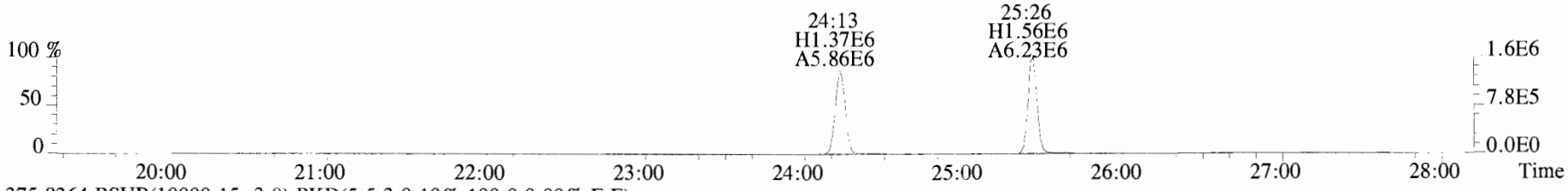
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



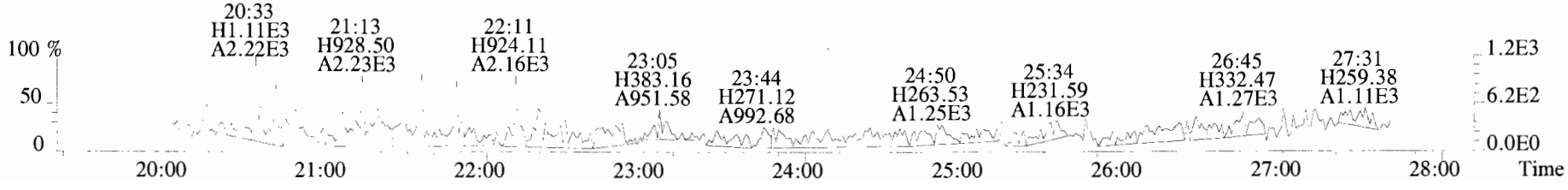
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



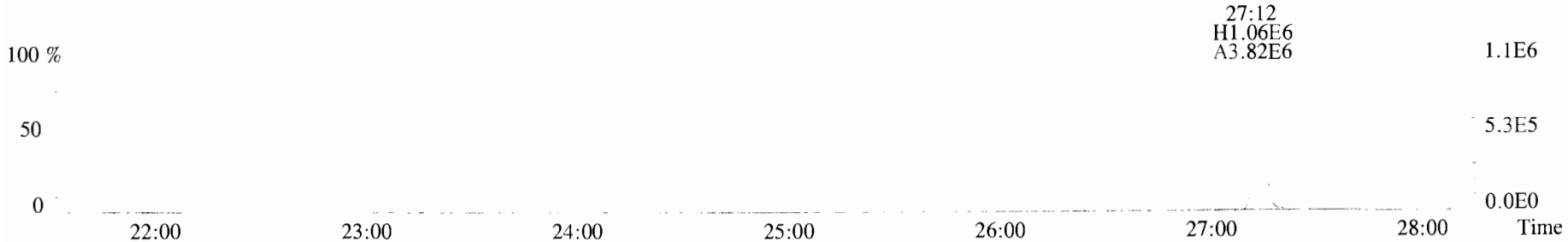
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



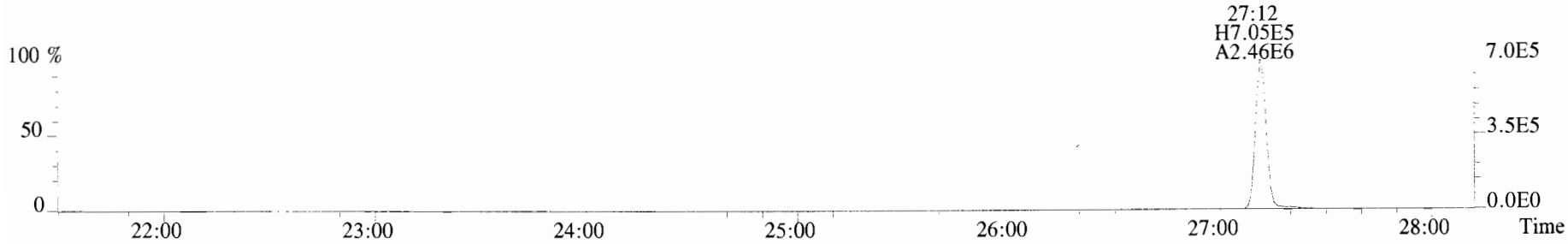
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



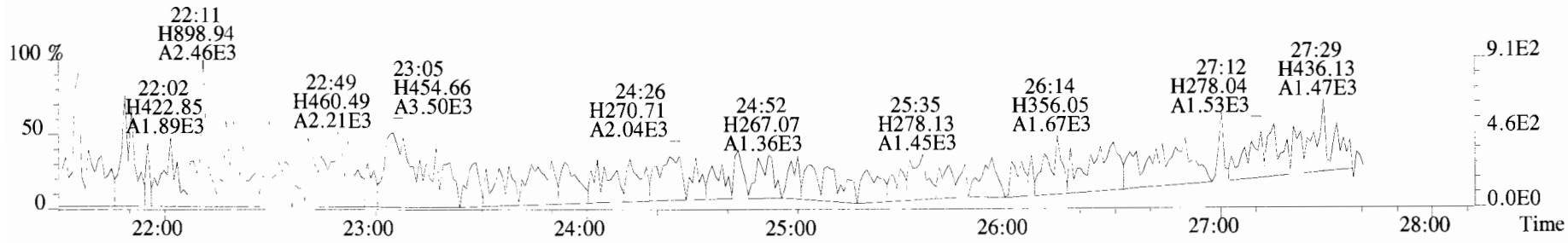
File:191029D1 #1-493 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



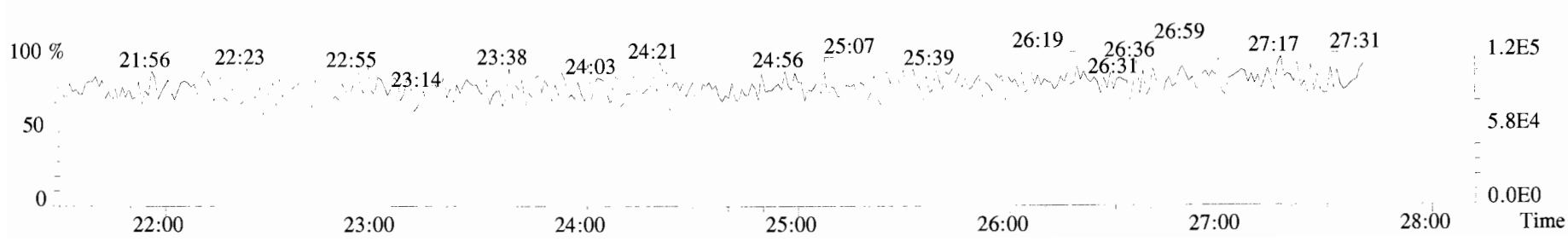
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



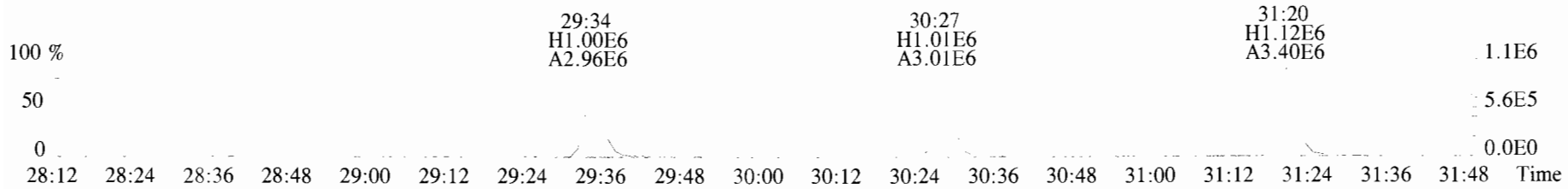
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



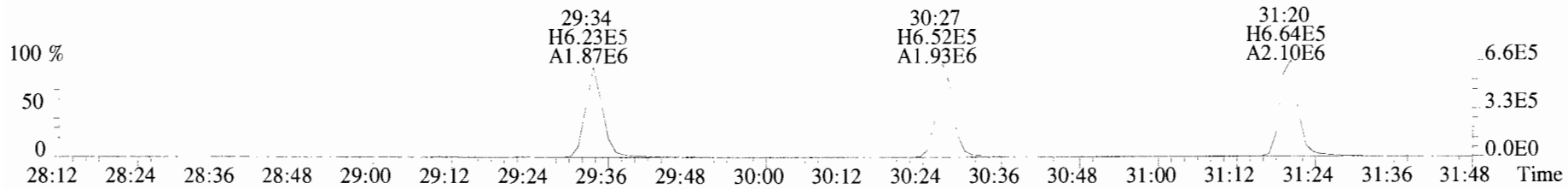
316.9824



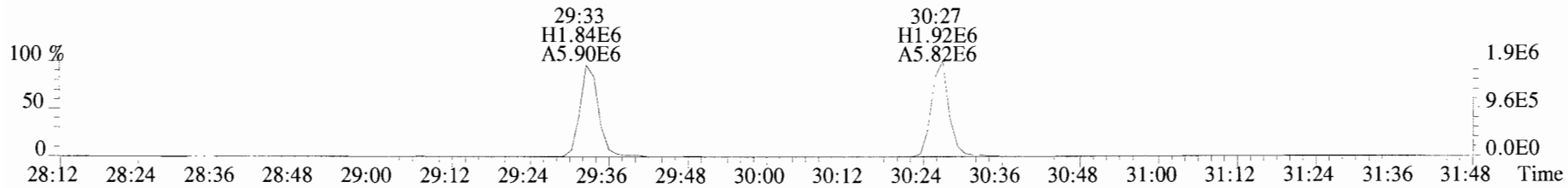
File:191029D1 #1-211 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



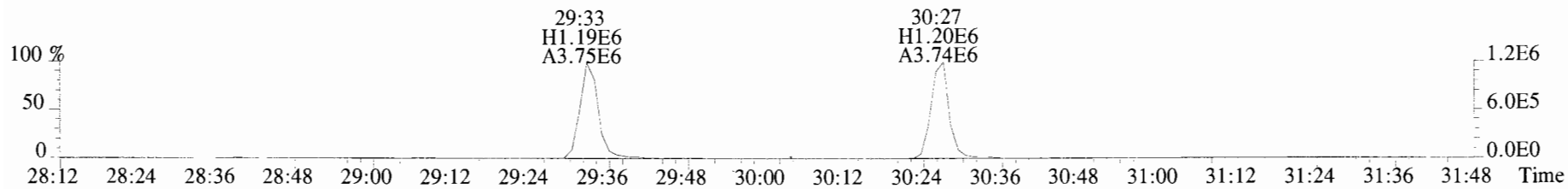
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



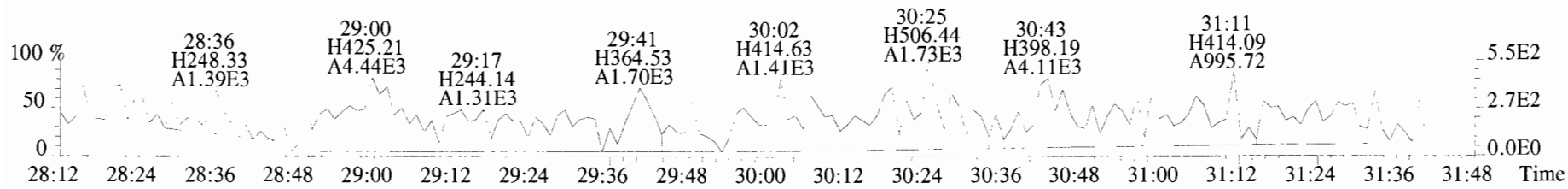
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

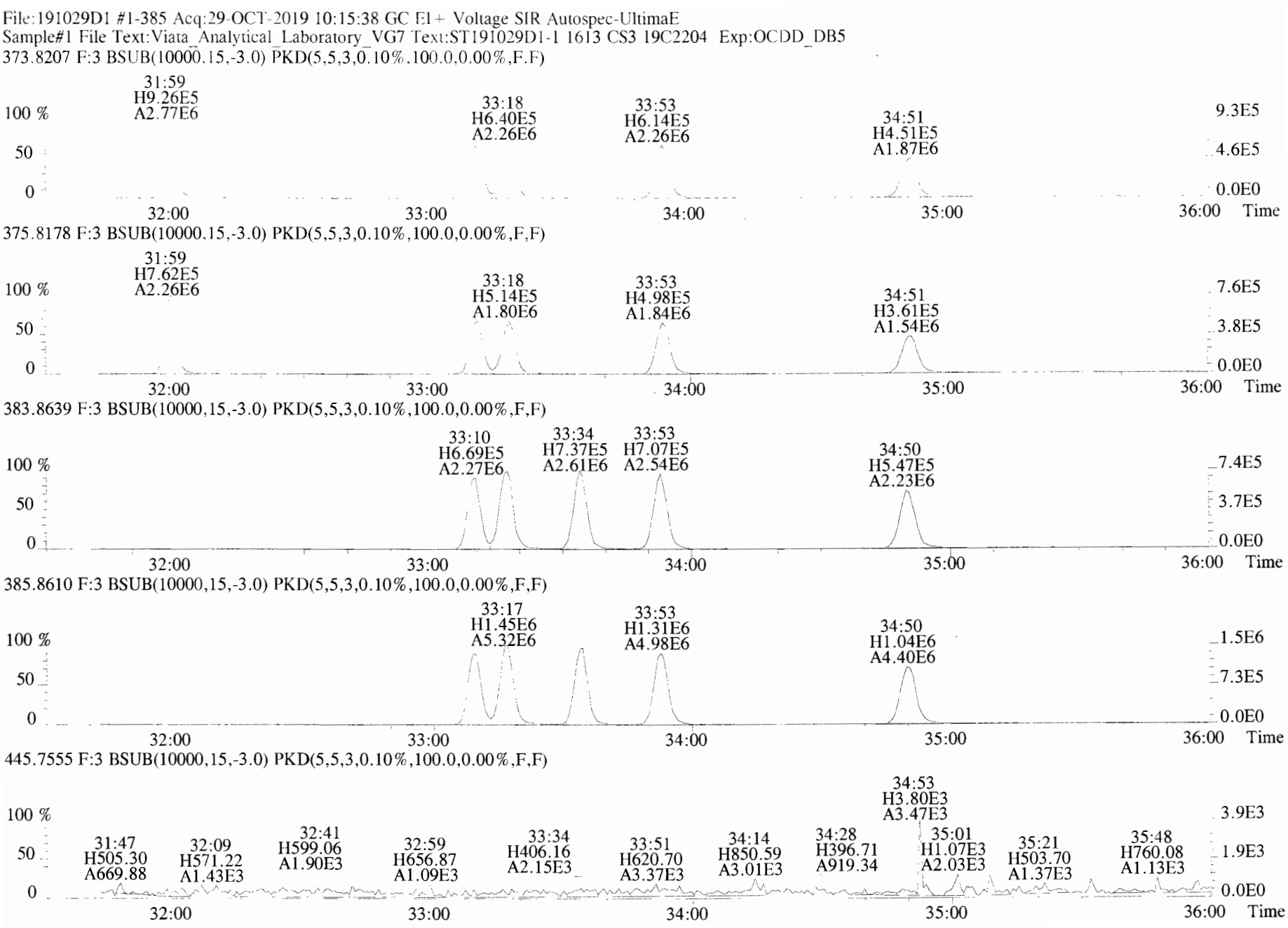


353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

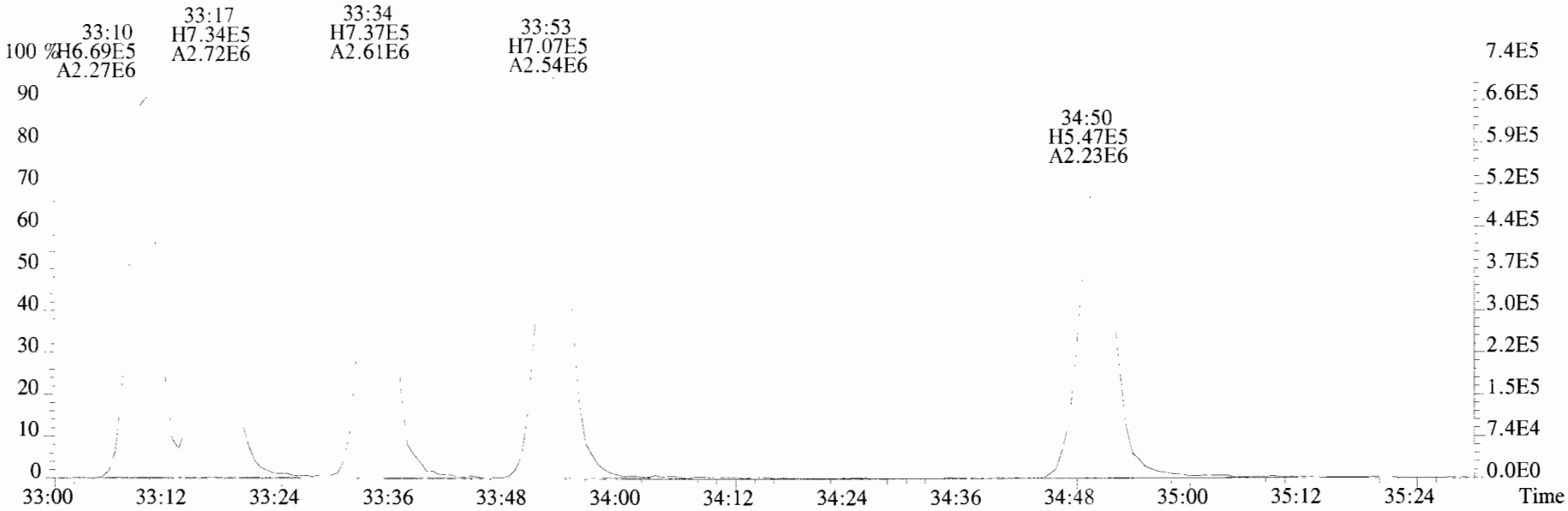


409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

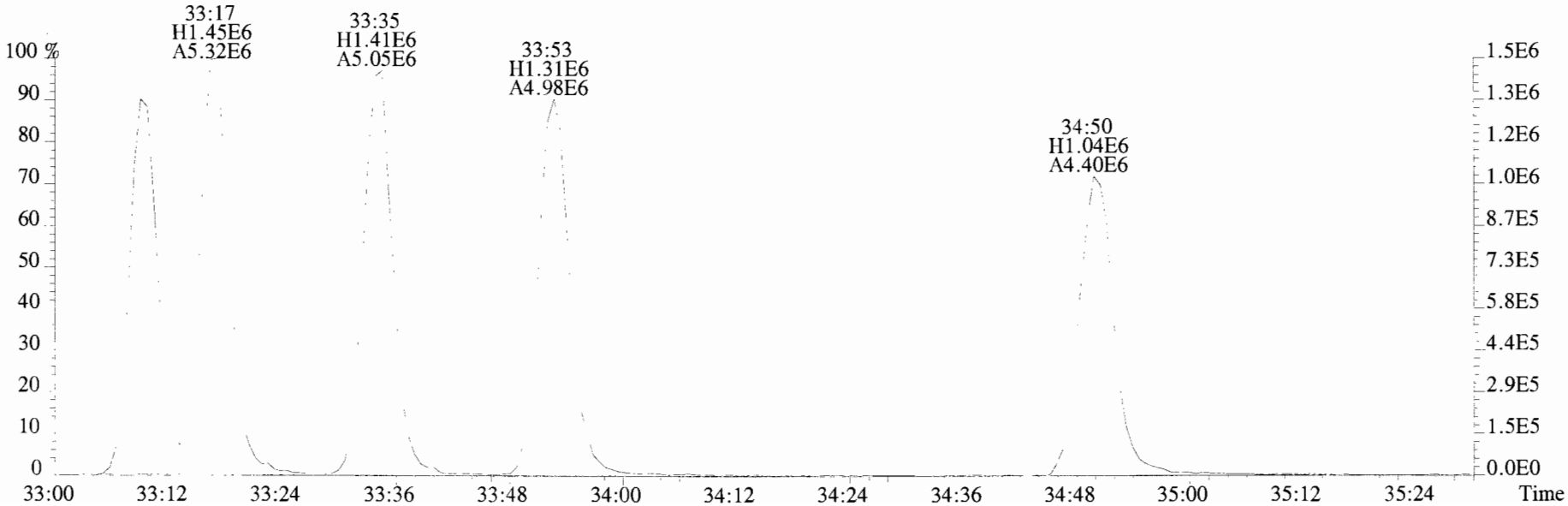


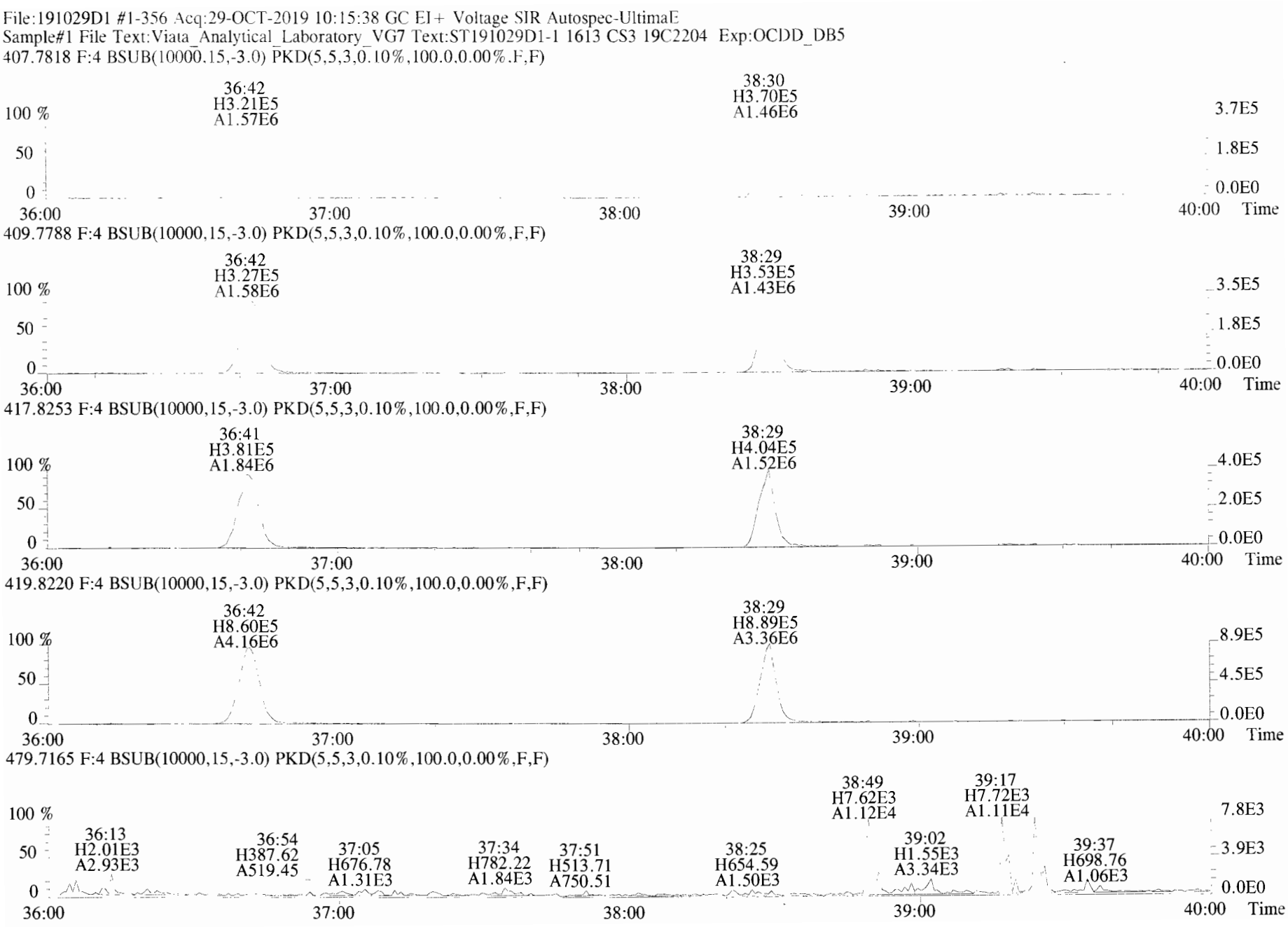

File:191029D1 #1-385 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:59 H9.26E5 A2.77E6
33:18 H6.40E5 A2.26E6
33:53 H6.14E5 A2.26E6
34:51 H4.51E5 A1.87E6
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:59 H7.62E5 A2.26E6
33:18 H5.14E5 A1.80E6
33:53 H4.98E5 A1.84E6
34:51 H3.61E5 A1.54E6
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:10 H6.69E5 A2.27E6
33:34 H7.37E5 A2.61E6
33:53 H7.07E5 A2.54E6
34:50 H5.47E5 A2.23E6
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:17 H1.45E6 A5.32E6
33:53 H1.31E6 A4.98E6
34:50 H1.04E6 A4.40E6
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:53 H3.80E3 A3.47E3
31:47 H505.30 A669.88
32:09 H571.22 A1.43E3
32:41 H599.06 A1.90E3
32:59 H656.87 A1.09E3
33:34 H406.16 A2.15E3
33:51 H620.70 A3.37E3
34:14 H850.59 A3.01E3
34:28 H396.71 A919.34
35:01 H1.07E3 A2.03E3
35:21 H503.70 A1.37E3
35:48 H760.08 A1.13E3
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
9.3E5
4.6E5
0.0E0
7.6E5
3.8E5
7.4E5
3.7E5
1.5E6
7.3E5
3.9E3
1.9E3

File:191029D1 #1-385 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

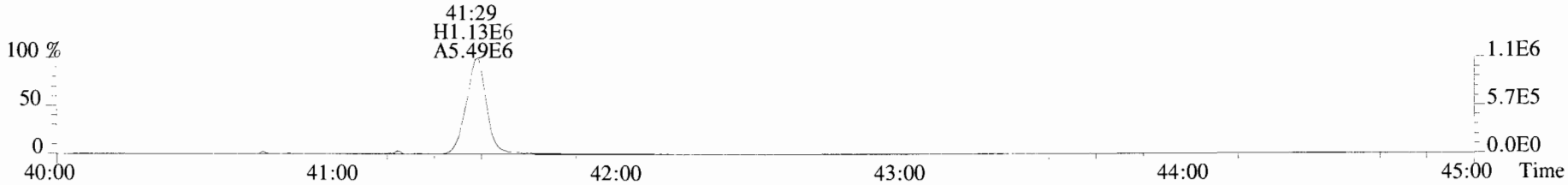



File:191029D1 #1-356 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:42 H3.21E5 A1.57E6
38:30 H3.70E5 A1.46E6
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:42 H3.27E5 A1.58E6
38:29 H3.53E5 A1.43E6
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:41 H3.81E5 A1.84E6
38:29 H4.04E5 A1.52E6
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:42 H8.60E5 A4.16E6
38:29 H8.89E5 A3.36E6
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
38:49 H7.62E3 A1.12E4
39:17 H7.72E3 A1.11E4
36:13 H2.01E3 A2.93E3
36:54 H387.62 A519.45
37:05 H676.78 A1.31E3
37:34 H782.22 A1.84E3
37:51 H513.71 A750.51
38:25 H654.59 A1.50E3
39:02 H1.55E3 A3.34E3
39:37 H698.76 A1.06E3
100 %
50
0
36:00
37:00
38:00
39:00
40:00
Time
3.7E5
1.8E5
0.0E0
3.5E5
4.0E5
2.0E5
8.9E5
4.5E5
7.8E3
3.9E3

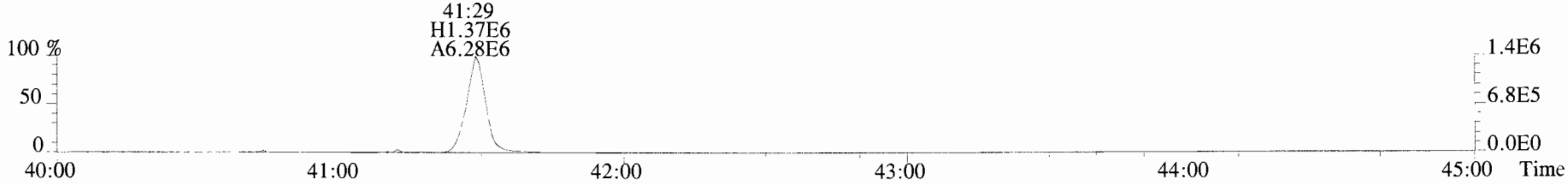
File:191029D1 #1-432 Acq:29-OCT-2019 10:15:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191029D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

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

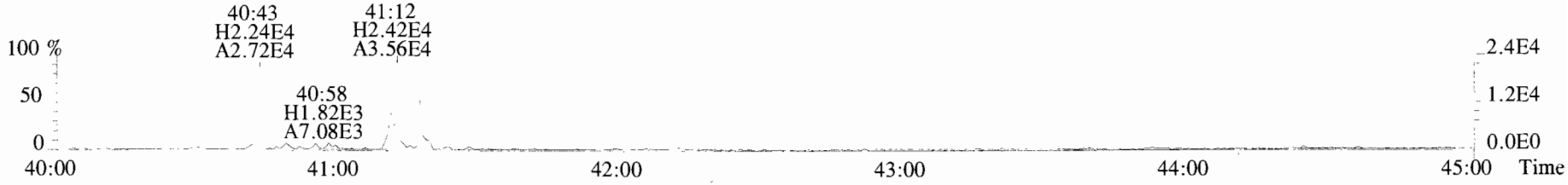
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

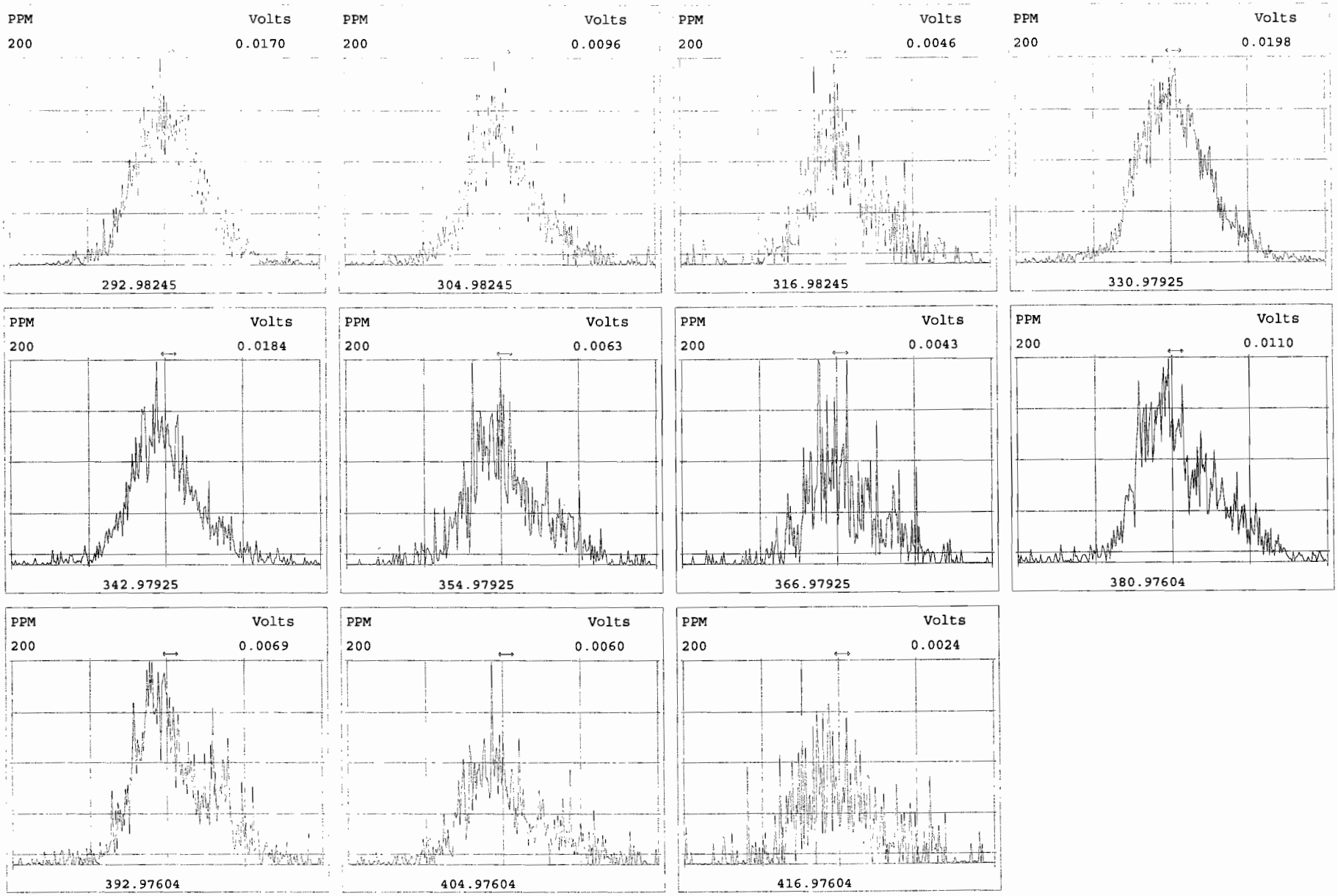


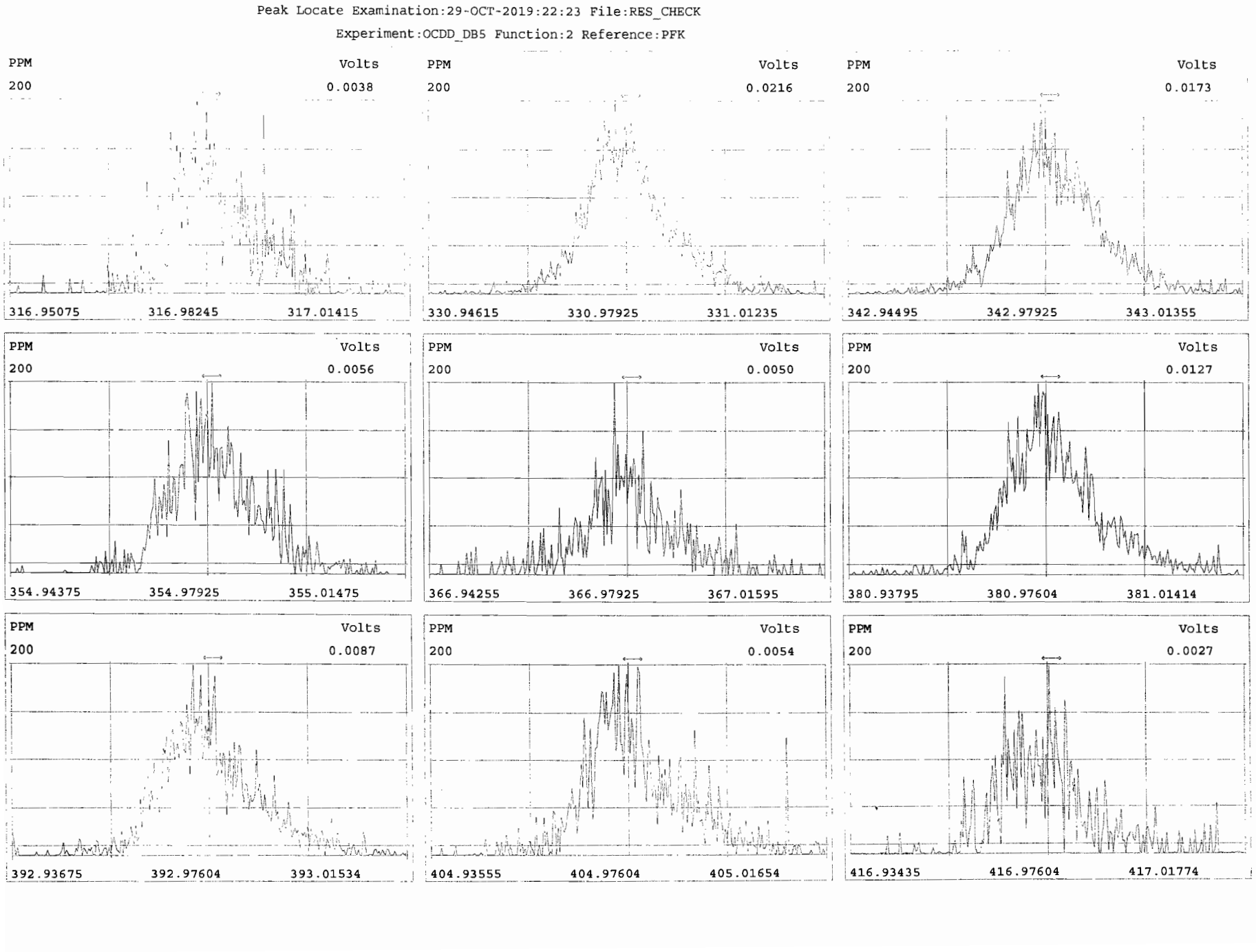
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Peak Locate Examination:29-OCT-2019:22:22 File:RES_CHECK

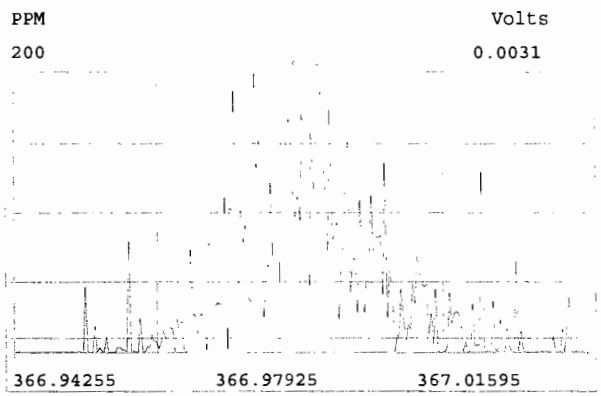
Experiment:OCDD_DB5 Function:1 Reference:PFK

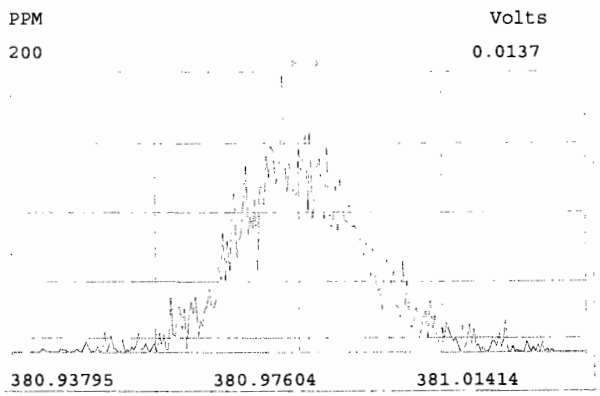


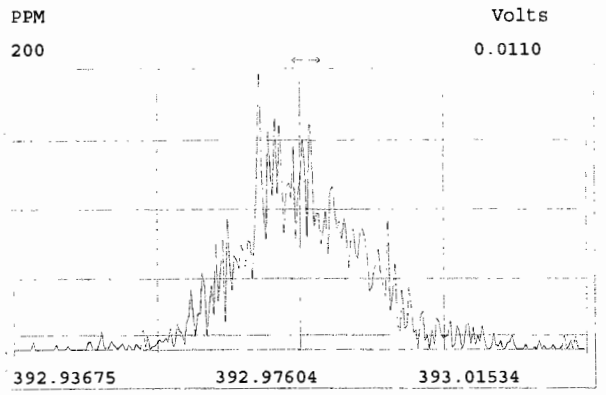

Peak Locate Examination:29-OCT-2019:22:23 File:RES_CHECK
Experiment:OCDD_DB5 Function:2 Reference:PFK
PPM
Volts
200
0.0038
316.95075
316.98245
317.01415
PPM
Volts
200
0.0216
330.94615
330.97925
331.01235
PPM
Volts
200
0.0173
342.94495
342.97925
343.01355
PPM
Volts
200
0.0056
354.94375
354.97925
355.01475
PPM
Volts
200
0.0050
366.94255
366.97925
367.01595
PPM
Volts
200
0.0127
380.93795
380.97604
381.01414
PPM
Volts
200
0.0087
392.93675
392.97604
393.01534
PPM
Volts
200
0.0054
404.93555
404.97604
405.01654
PPM
Volts
200
0.0027
416.93435
416.97604
417.01774

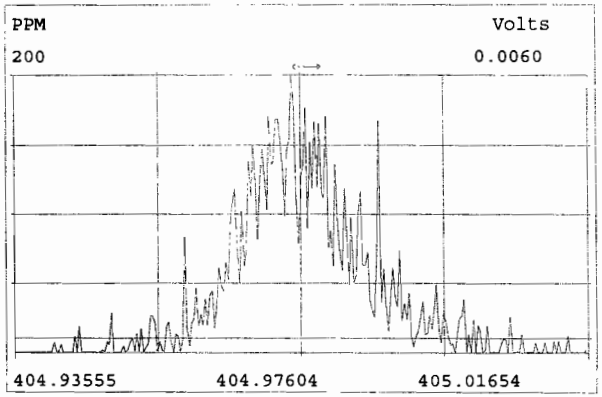
Peak Locate Examination:29-OCT-2019:22:24 File:RES_CHECK

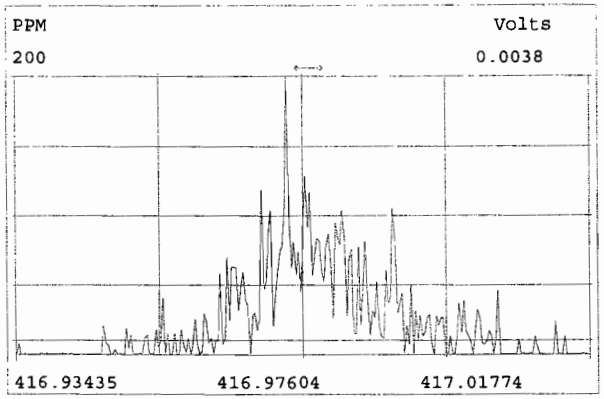
Experiment:OCDD_DB5 Function:3 Reference:PFK

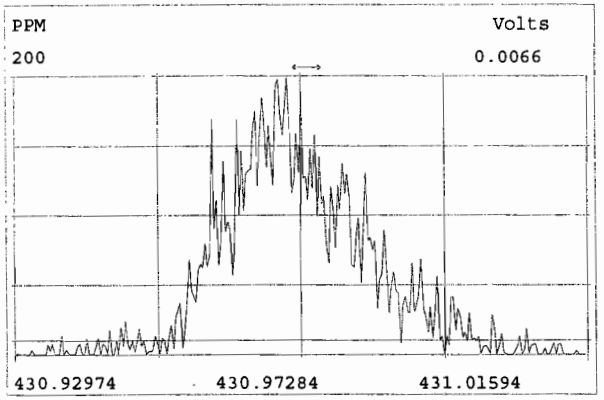


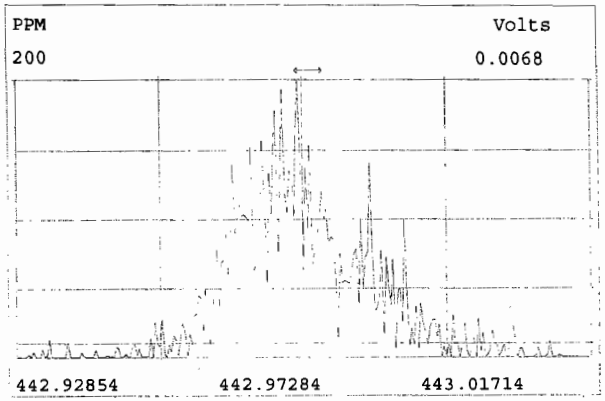


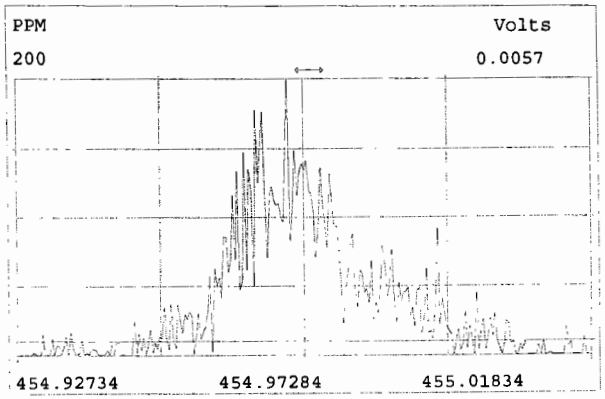






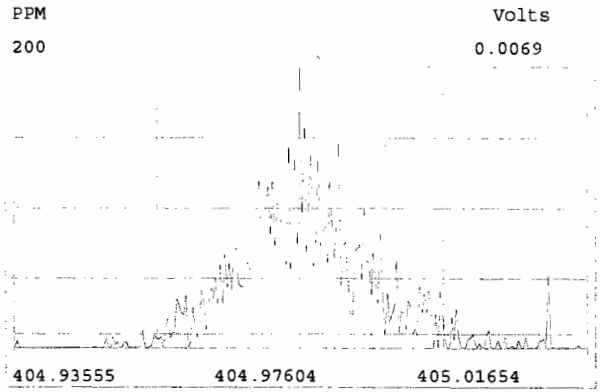


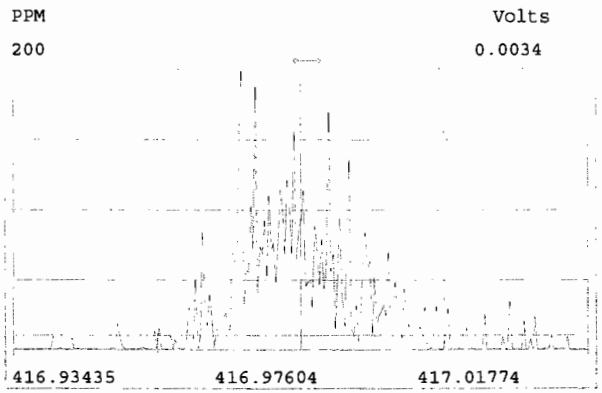


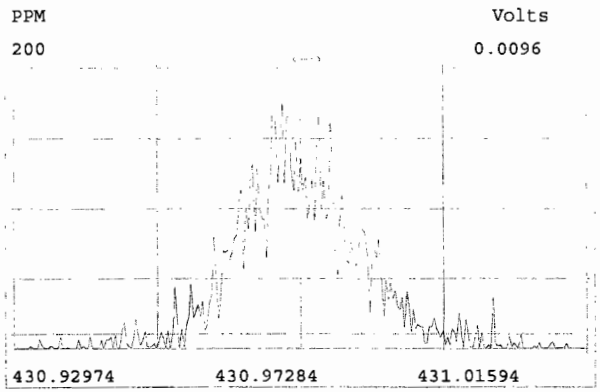


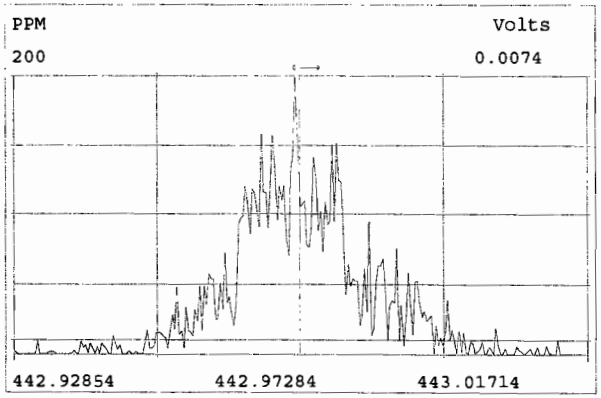
Peak Locate Examination:29-OCT-2019:22:25 File:RES_CHECK

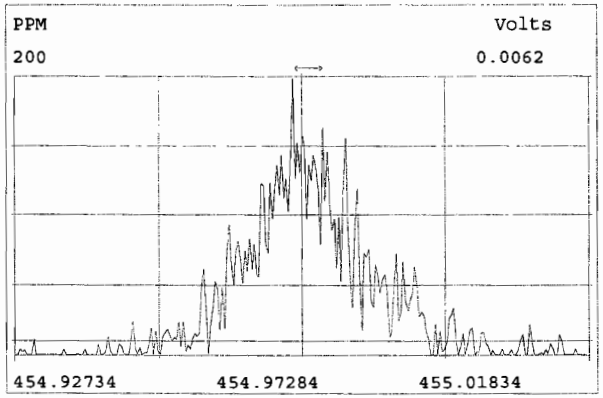
Experiment:OCDD_DB5 Function:4 Reference:PFK

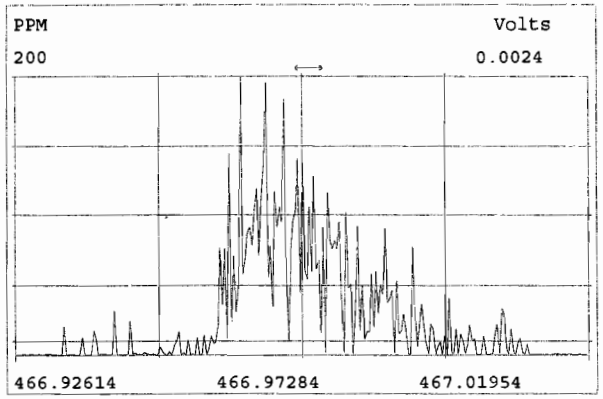


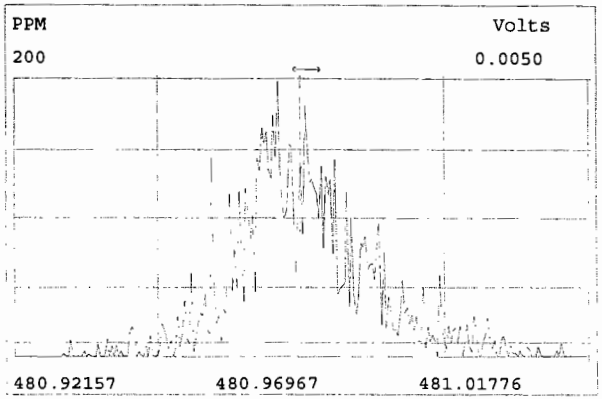


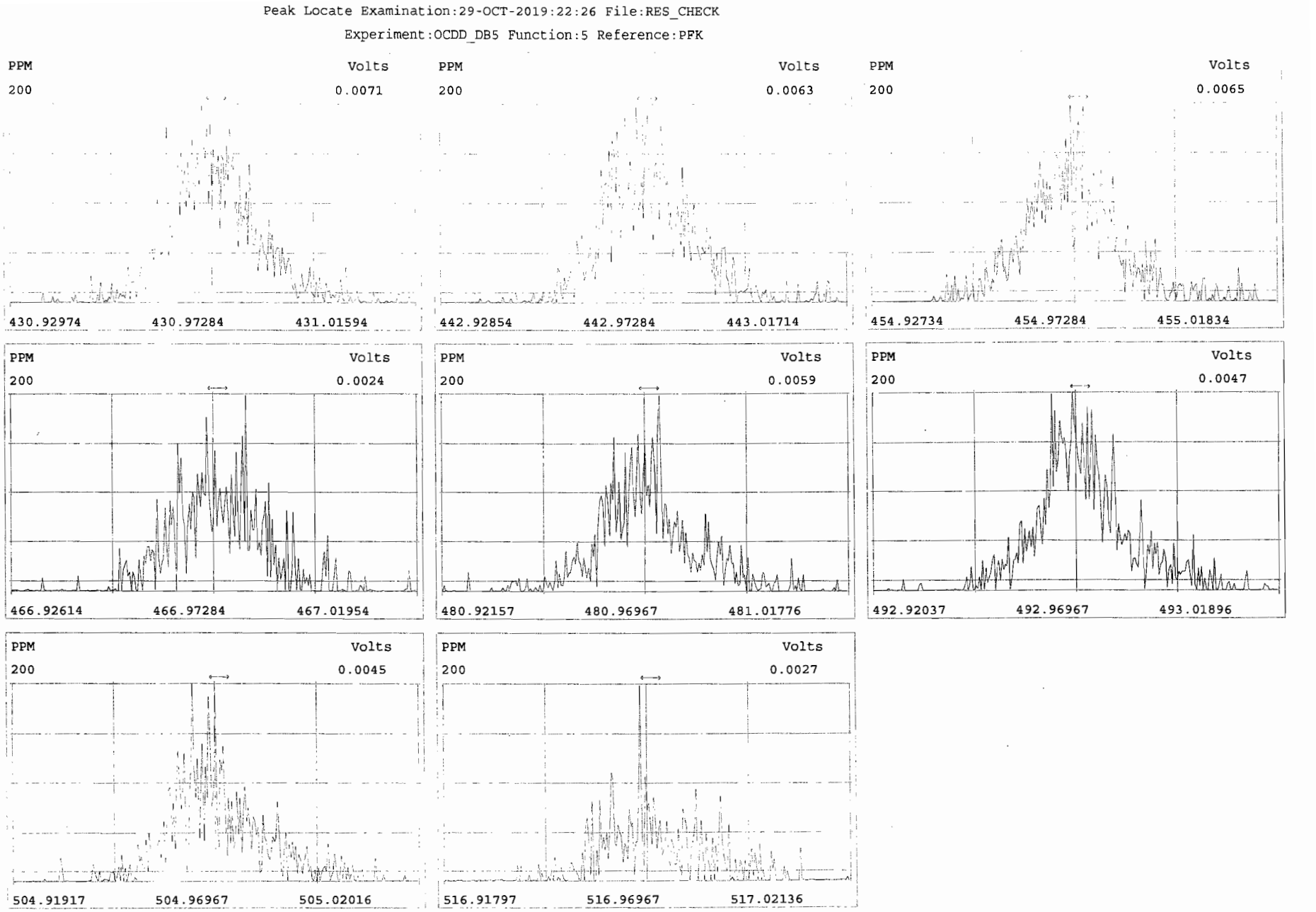











Peak Locate Examination:29-OCT-2019:22:26 File:RES_CHECK
Experiment:OCDD_DB5 Function:5 Reference:PFK
PPM
Volts
200
0.0071
430.92974
430.97284
431.01594
PPM
Volts
200
0.0063
442.92854
442.97284
443.01714
PPM
Volts
200
0.0065
454.92734
454.97284
455.01834
PPM
Volts
200
0.0024
466.92614
466.97284
467.01954
PPM
Volts
200
0.0059
480.92157
480.96967
481.01776
PPM
Volts
200
0.0047
492.92037
492.96967
493.01896
PPM
Volts
200
0.0045
504.91917
504.96967
505.02016
PPM
Volts
200
0.0027
516.91797
516.96967
517.02136

HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST19120501-1 **Reviewed By:** CT 12/10/19 *Initials & Date*

End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	☑	NA
Concentrations within criteria?	☑	☐
TCDD/TCDF Valleys <25%	☑	☐
First and last eluters present?	☑	☐
Retention Times within criteria?	☑	☐
Verification Std. named correctly?	☑	☐
(ST-Year-Month-Day-VG ID)		
Forms signed and dated?	☑	☐
Correct ICAL referenced?	DB	

	Beg.	End
Mass resolution ≥	☑	☑
☐ 5k ☐ 6-8K ☐ 8K ☑ 10K		
1614 1699 429 1613/1668/8280		
Intergrated peaks display correctly?	☑	NA
GC Break <20%	NA	

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours — NA

Run Log:

	Beg.	End
- Correct instrument listed?	☑	☑
- Samples within 12 hour clock?	(Y)	N
- Bottle position verfied?	DB	

Comments:

Vista Analytical Laboratory - Injection Log Run file: 191205D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191205D1	1	ST191205D1-1	DB	5-DEC-19	16:42:14	ST191205D1-1	NA
191205D1	2	B9L0030-BS1	DB	5-DEC-19	17:30:09	ST191205D1-1	NA
191205D1	3	B9L0024-BS1	DB	5-DEC-19	18:18:00	ST191205D1-1	NA
191205D1	4	SOLVENT BLANK	DB	5-DEC-19	19:05:55	ST191205D1-1	NA
191205D1	5	B9L0030-BLK1	DB	5-DEC-19	19:53:40	ST191205D1-1	NA
191205D1	6	B9L0024-BLK1	DB	5-DEC-19	20:41:26	ST191205D1-1	NA
191205D1	7	1903990-01	DB	5-DEC-19	21:29:11	ST191205D1-1	NA
191205D1	8	1903992-01	DB	5-DEC-19	22:16:56	ST191205D1-1	NA
191205D1	9	1903996-01	DB	5-DEC-19	23:04:41	ST191205D1-1	NA
191205D1	10	1903997-01	DB	5-DEC-19	23:52:34	ST191205D1-1	NA
191205D1	11	1903998-01	DB	6-DEC-19	00:40:29	ST191205D1-1	NA
191205D1	12	1904045-01	DB	6-DEC-19	01:28:23	ST191205D1-1	NA
191205D1	13	1904067-01	DB	6-DEC-19	02:16:06	ST191205D1-1	NA
191205D1	14	1904137-01	DB	6-DEC-19	03:04:01	ST191205D1-1	NA
191205D1	15	1903430-06RE2	DB	6-DEC-19	03:51:56	ST191205D1-1	NA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.: CCAL ID: ST191205D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191205D1 S#1 Analysis Date: 5-DEC-19 Time: 16:42:14

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	11.5	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	51.9	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	49.1	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	53.3	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	50.2	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	48.8	43.0 - 58.0
OCDD	M+2/M+4	0.91	0.76-1.02	y	102	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.73	0.65-0.89	y	9.53	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.65	1.32-1.78	y	51.0	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	51.2	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	47.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	48.1	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	y	49.6	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.17	1.05-1.43	y	47.8	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.02	0.88-1.20	y	48.5	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	y	47.7	43.0 - 58.0
OCDF	M+2/M+4	0.89	0.76-1.02	y	94.9	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 12/5/19

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: 191205D1 S#1 Analysis Date: 5-DEC-19 Time: 16:42:14

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	0.80	0.65-0.89	y	105	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	y	106	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	107	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	89.4	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	101	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	108	72.0 - 138.0
13C-OCDD	M/M+2	0.91	0.76-1.02	y	249	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.78	0.65-0.89	y	107	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	113	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	107	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.49	0.43-0.59	y	117	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	104	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	102	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	109	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.45	0.37-0.51	y	108	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	111	77.0 - 129.0
13C-OCDF	M+2/M+4	0.88	0.76-1.02	y	251	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.83	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: 12/5/19

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: 191205D1 S#1 Analysis Date: 5-DEC-19 Time: 16:42:14

ZB-5MS IS Data Filename: 191205D1 S#1 Analysis Date: 5-DEC-19 Time: 16:42:14

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)	22:38	1,3,6,8-TCDF (F)	20:31
1,2,8,9-TCDD (L)	26:56	1,2,8,9-TCDF (L)	27:04
1,2,4,7,9-PeCDD (F)	28:32	1,3,4,6,8-PeCDF (F)	27:02
1,2,3,8,9-PeCDD (L)	30:57	1,2,3,8,9-PeCDF (L)	31:11
1,2,4,6,7,9-HxCDD (F)	32:22	1,2,3,4,6,8-HxCDF (F)	31:50
1,2,3,7,8,9-HxCDD (L)	34:17	1,2,3,7,8,9-HxCDF (L)	34:40
1,2,3,4,6,7,9-HpCDD (F)	36:53	1,2,3,4,6,7,8-HpCDF (F)	36:30
1,2,3,4,6,7,8-HpCDD (L)	37:45	1,2,3,4,7,8,9-HpCDF (L)	38:18

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<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: 12/5/19

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: 191205D1 S#1 Analysis Date: 5-DEC-19 Time: 16:42:14

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	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	1.000	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	1.200	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	1.154	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.189	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: 12/5/19

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: 191205D1 S#1 Analysis Date: 5-DEC-19 Time: 16:42:14

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
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	1.092	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.146	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.130	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.227	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.234	1.091-1.371

Analyst: DB

Date: 12/5/19

Client ID: 1613 CS3 19C2204 Filename: 191205D1 S:1 Acq: 5-DEC-19 16:42:14 ConCal: ST191205D1-1

Lab ID: ST191205D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	7.25e+05	0.76 y	0.91	26:04	11.462			* 2.5	*
	1,2,3,7,8-PeCDD	2.65e+06	0.63 y	0.90	30:36	51.913			* 2.5	*
	1,2,3,4,7,8-HxCDD	2.35e+06	1.24 y	1.10	33:53	49.080			* 2.5	*
	1,2,3,6,7,8-HxCDD	2.42e+06	1.26 y	0.94	33:60	53.296			* 2.5	*
	1,2,3,7,8,9-HxCDD	2.47e+06	1.23 y	0.96	34:17	50.168			* 2.5	*
	1,2,3,4,6,7,8-HpCDD	2.13e+06	1.02 y	0.98	37:45	48.831			* 2.5	*
	OCDD	4.44e+06	0.91 y	0.96	41:00	101.70			* 2.5	*
	2,3,7,8-TCDF	9.92e+05	0.73 y	0.95	25:17	9.5324			* 2.5	*
	1,2,3,7,8-PeCDF	4.70e+06	1.65 y	0.96	29:25	51.029			* 2.5	*
	2,3,4,7,8-PeCDF	4.65e+06	1.57 y	1.01	30:19	51.190			* 2.5	*
	1,2,3,4,7,8-HxCDF	3.41e+06	1.23 y	1.18	33:00	47.067			* 2.5	*
	1,2,3,6,7,8-HxCDF	3.48e+06	1.25 y	1.07	33:08	48.090			* 2.5	*
	2,3,4,6,7,8-HxCDF	3.38e+06	1.20 y	1.11	33:43	49.560			* 2.5	*
	1,2,3,7,8,9-HxCDF	2.89e+06	1.17 y	1.06	34:40	47.848			* 2.5	*
	1,2,3,4,6,7,8-HpCDF	2.83e+06	1.02 y	1.13	36:30	48.492			* 2.5	*
	1,2,3,4,7,8,9-HpCDF	2.50e+06	1.04 y	1.28	38:18	47.733			* 2.5	*
	OCDF	4.92e+06	0.89 y	0.95	41:13	94.948			* 2.5	*
IS	13C-2,3,7,8-TCDD	6.98e+06	0.80 y	1.10	26:03	105.25				
IS	13C-1,2,3,7,8-PeCDD	5.65e+06	0.64 y	0.88	30:35	105.85				
IS	13C-1,2,3,4,7,8-HxCDD	4.35e+06	1.27 y	0.64	33:52	107.13				
IS	13C-1,2,3,6,7,8-HxCDD	4.83e+06	1.28 y	0.86	33:59	89.368				
IS	13C-1,2,3,7,8,9-HxCDD	5.13e+06	1.25 y	0.81	34:16	100.63				
IS	13C-1,2,3,4,6,7,8-HpCDD	4.46e+06	1.07 y	0.65	37:45	107.85				
IS	13C-OCDD	9.12e+06	0.91 y	0.58	40:60	248.88				
IS	13C-2,3,7,8-TCDF	1.09e+07	0.78 y	1.03	25:16	106.82				
IS	13C-1,2,3,7,8-PeCDF	9.60e+06	1.55 y	0.85	29:24	113.41				
IS	13C-2,3,4,7,8-PeCDF	8.96e+06	1.55 y	0.85	30:18	106.78				
IS	13C-1,2,3,4,7,8-HxCDF	6.16e+06	0.49 y	0.83	32:59	117.27				
IS	13C-1,2,3,6,7,8-HxCDF	6.77e+06	0.51 y	1.03	33:07	103.54				
IS	13C-2,3,4,6,7,8-HxCDF	6.13e+06	0.50 y	0.95	33:42	101.70				
IS	13C-1,2,3,7,8,9-HxCDF	5.69e+06	0.52 y	0.83	34:39	108.74				
IS	13C-1,2,3,4,6,7,8-HpCDF	5.18e+06	0.45 y	0.76	36:29	108.32				
IS	13C-1,2,3,4,7,8,9-HpCDF	4.08e+06	0.45 y	0.58	38:17	111.22				
IS	13C-OCDF	1.09e+07	0.88 y	0.69	41:13	251.45				
C/Up	37Cl-2,3,7,8-TCDD	7.13e+05		1.20	26:04	9.8318				
RS/RT	13C-1,2,3,4-TCDD	6.06e+06	0.80 y	1.00	25:29	100.00				
RS	13C-1,2,3,4-TCDF	9.91e+06	0.82 y	1.00	24:02	100.00				
RS/RT	13C-1,2,3,4,6,9-HxCDF	6.32e+06	0.49 y	1.00	33:24	100.00				

Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	79.0	80.7		*	*
Total Penta-Dioxins	207	209		*	*
Total Hexa-Dioxins	229	230		*	*
Total Hepta-Dioxins	114	115		*	*
Total Tetra-Furans	38.3	41.1		*	*
Total Penta-Furans	221.77	222.30		*	*
Total Hexa-Furans	257	258		*	*
Total Hepta-Furans	97.2	98.2		*	*

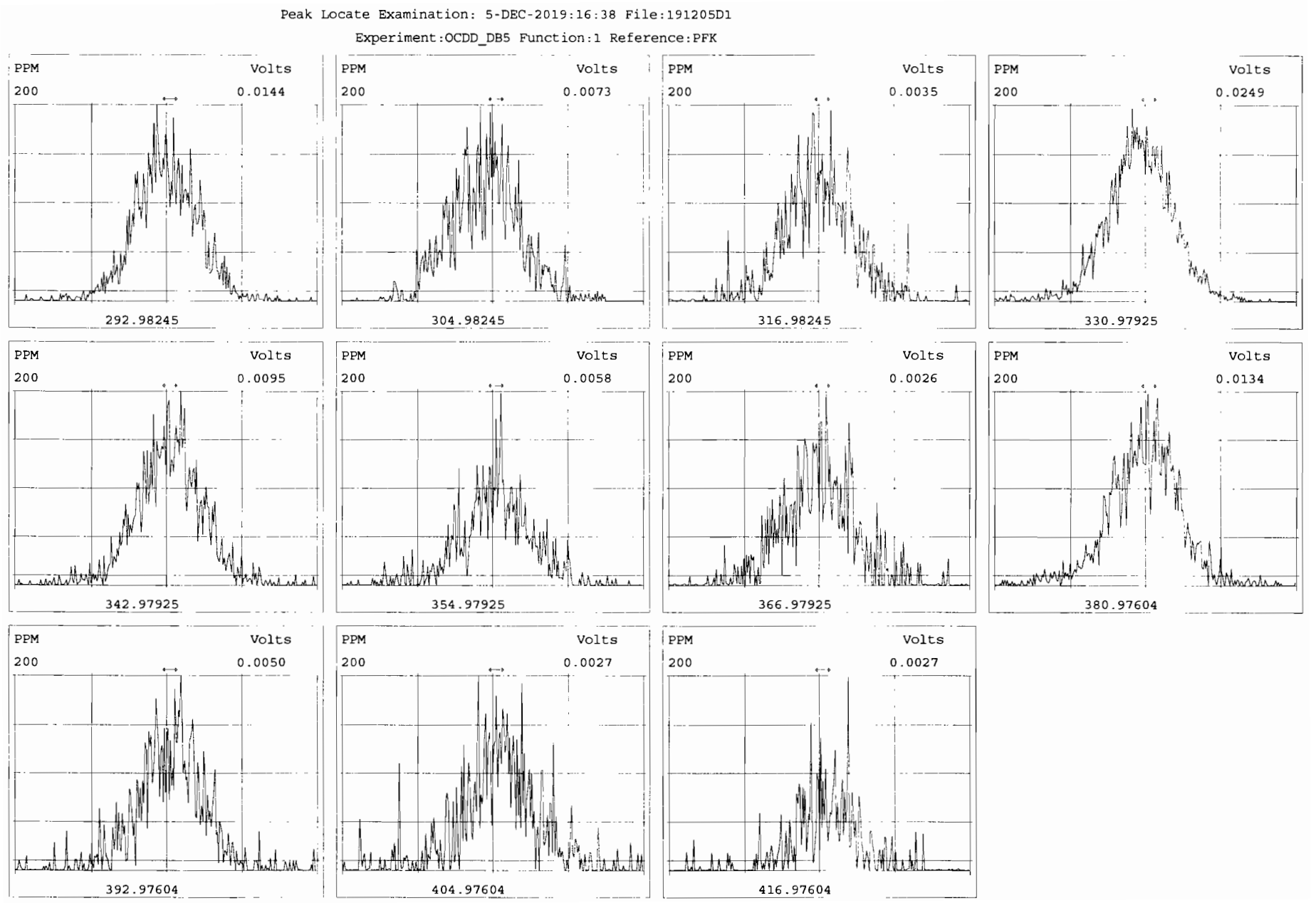
	Rec	Qual
IS	105	
IS	106	
IS	107	
IS	89.4	
IS	101	
IS	108	
IS	124	
IS	107	
IS	113	
IS	107	
IS	117	
IS	104	
IS	102	
IS	109	
IS	108	
IS	111	
IS	126	
C/Up	98.3	

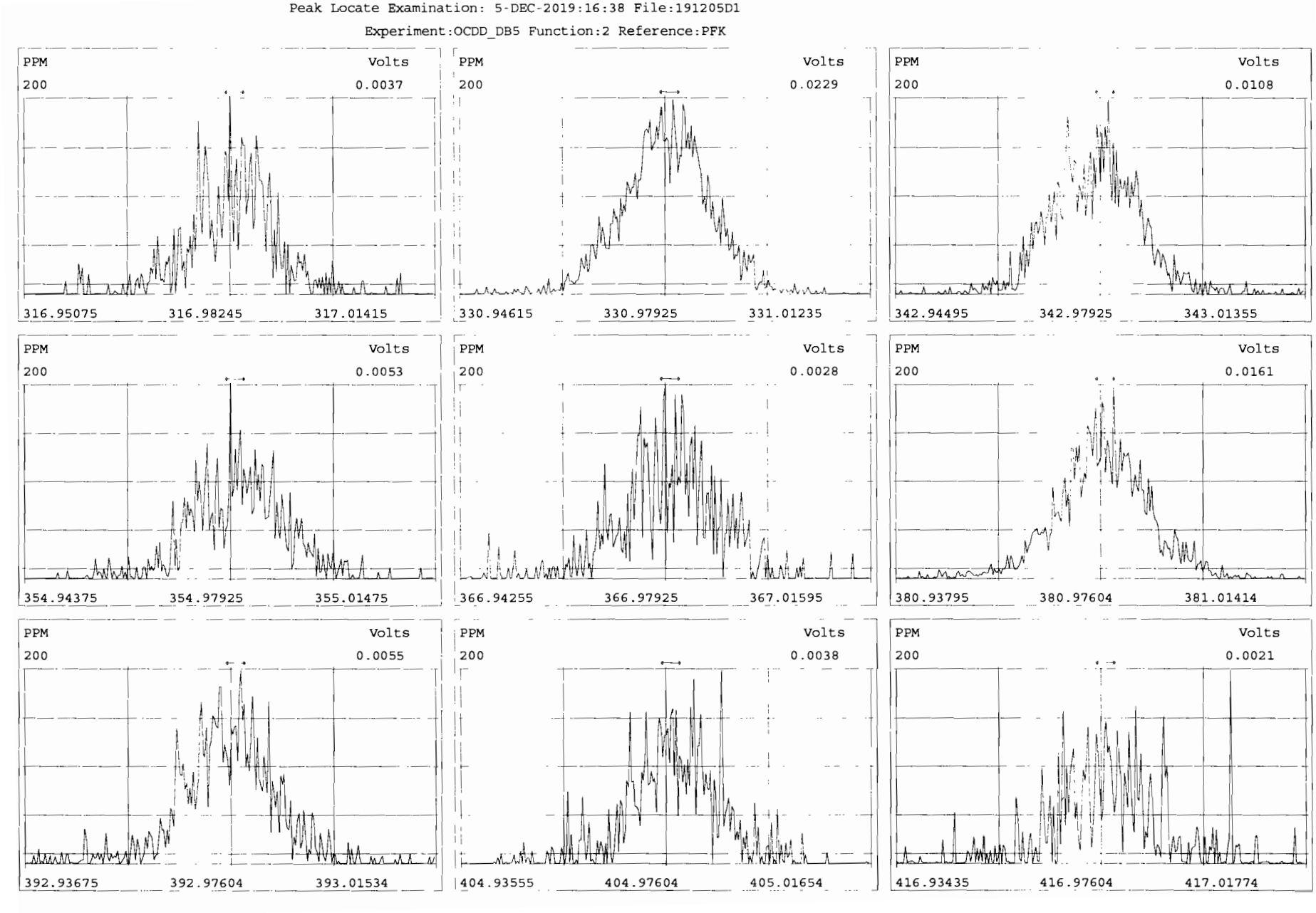
Integrations by Analyst: DB Date: 12/5/19

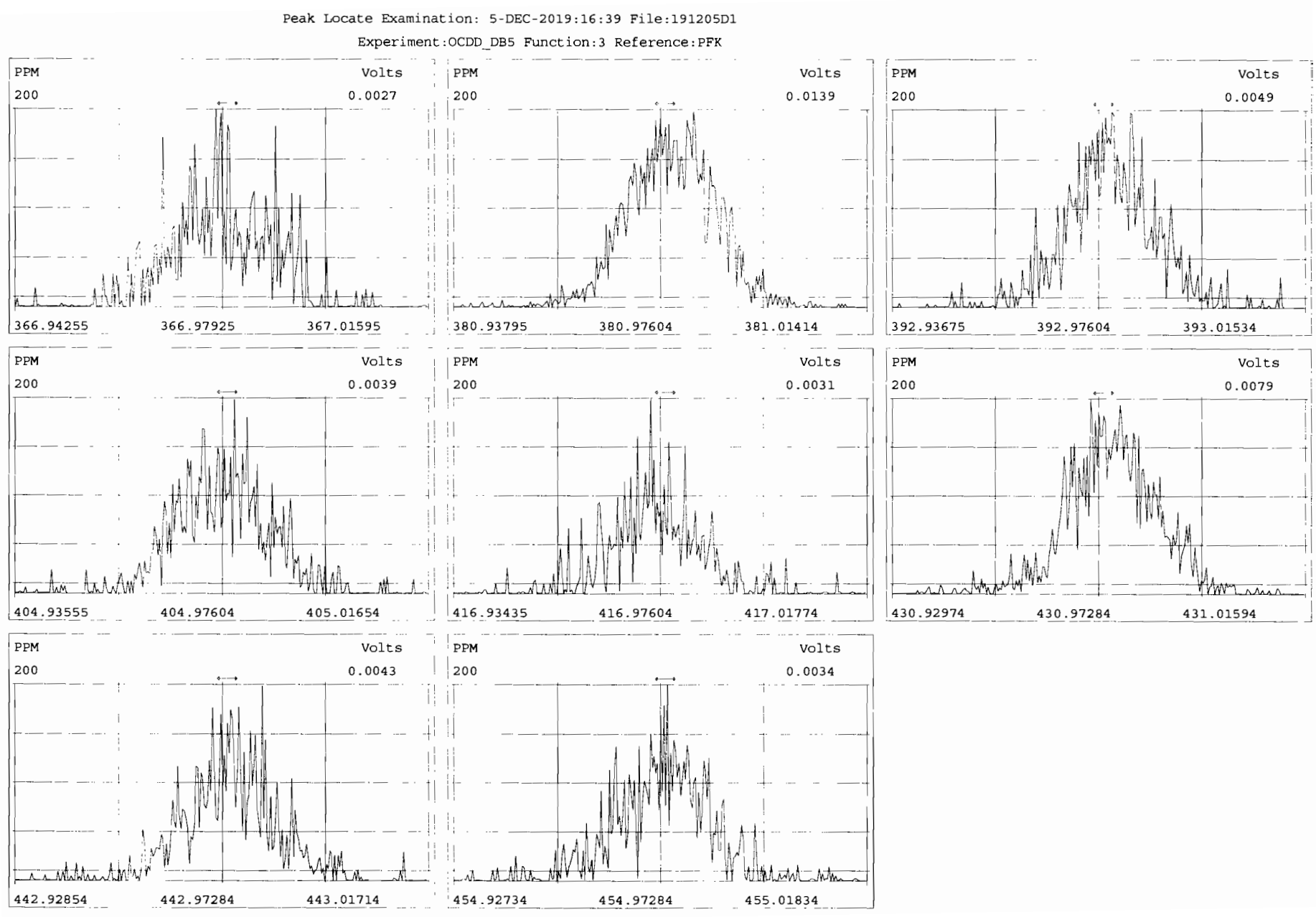
Reviewed by Analyst: CT Date: 12/10/19

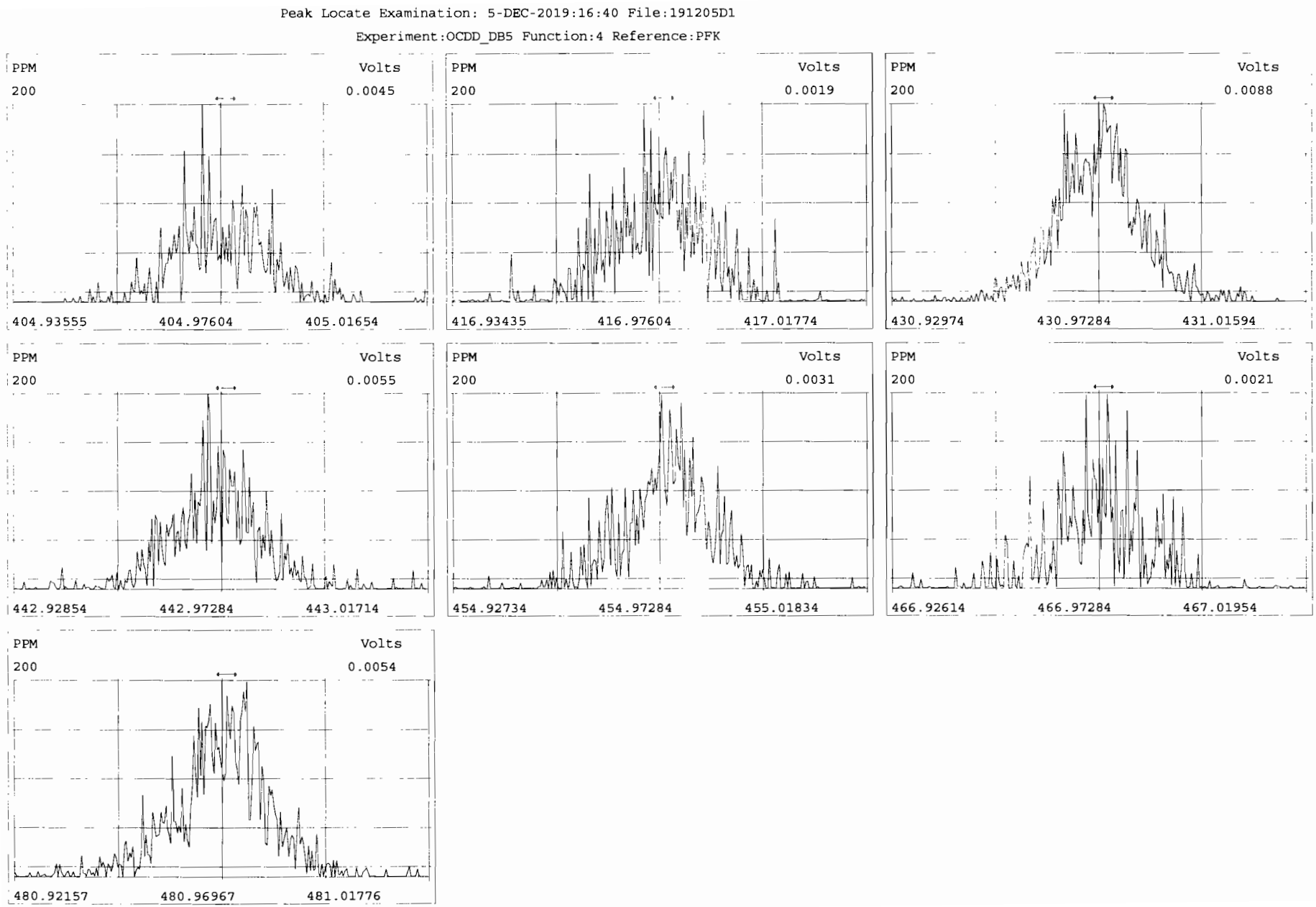
Vista Analytical Laboratory - Injection Log Run file: 191205D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191205D1	1	ST191205D1-1	DB	5-DEC-19	16:42:14	ST191205D1-1	NA
191205D1	2	B9L0030-BS1	DB	5-DEC-19	17:30:09	ST191205D1-1	NA
191205D1	3	B9L0024-BS1	DB	5-DEC-19	18:18:00	ST191205D1-1	NA
191205D1	4	SOLVENT BLANK	DB	5-DEC-19	19:05:55	ST191205D1-1	NA
191205D1	5	B9L0030-BLK1	DB	5-DEC-19	19:53:40	ST191205D1-1	NA
191205D1	6	B9L0024-BLK1	DB	5-DEC-19	20:41:26	ST191205D1-1	NA
191205D1	7	1903990-01	DB	5-DEC-19	21:29:11	ST191205D1-1	NA
191205D1	8	1903992-01	DB	5-DEC-19	22:16:56	ST191205D1-1	NA
191205D1	9	1903996-01	DB	5-DEC-19	23:04:41	ST191205D1-1	NA
191205D1	10	1903997-01	DB	5-DEC-19	23:52:34	ST191205D1-1	NA
191205D1	11	1903998-01	DB	6-DEC-19	00:40:29	ST191205D1-1	NA
191205D1	12	1904045-01	DB	6-DEC-19	01:28:23	ST191205D1-1	NA
191205D1	13	1904067-01	DB	6-DEC-19	02:16:06	ST191205D1-1	NA
191205D1	14	1904137-01	DB	6-DEC-19	03:04:01	ST191205D1-1	NA
191205D1	15	1903430-06RE2	DB	6-DEC-19	03:51:56	ST191205D1-1	NA


Peak Locate Examination: 5-DEC-2019:16:38 File:191205D1
Experiment:OCDD_DB5 Function:1 Reference:PFK
PPM
Volts
200
0.0144
292.98245
PPM
Volts
200
0.0073
304.98245
PPM
Volts
200
0.0035
316.98245
PPM
Volts
200
0.0249
330.97925
PPM
Volts
200
0.0095
342.97925
PPM
Volts
200
0.0058
354.97925
PPM
Volts
200
0.0026
366.97925
PPM
Volts
200
0.0134
380.97604
PPM
Volts
200
0.0050
392.97604
PPM
Volts
200
0.0027
404.97604
PPM
Volts
200
0.0027
416.97604

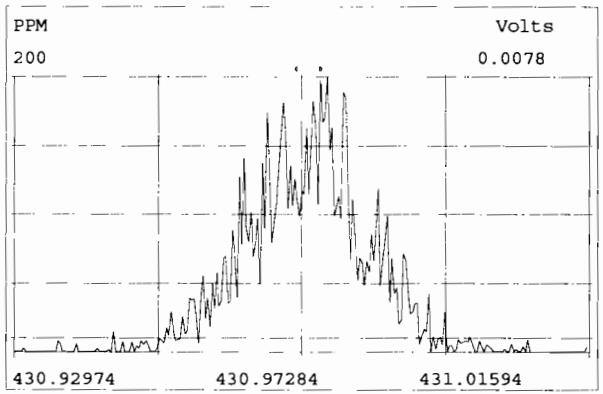

Peak Locate Examination: 5-DEC-2019:16:38 File:191205D1
Experiment:OCDD_DB5 Function:2 Reference:PFK
PPM
Volts
200
0.0037
316.95075
316.98245
317.01415
PPM
Volts
200
0.0229
330.94615
330.97925
331.01235
PPM
Volts
200
0.0108
342.94495
342.97925
343.01355
PPM
Volts
200
0.0053
354.94375
354.97925
355.01475
PPM
Volts
200
0.0028
366.94255
366.97925
367.01595
PPM
Volts
200
0.0161
380.93795
380.97604
381.01414
PPM
Volts
200
0.0055
392.93675
392.97604
393.01534
PPM
Volts
200
0.0038
404.93555
404.97604
405.01654
PPM
Volts
200
0.0021
416.93435
416.97604
417.01774

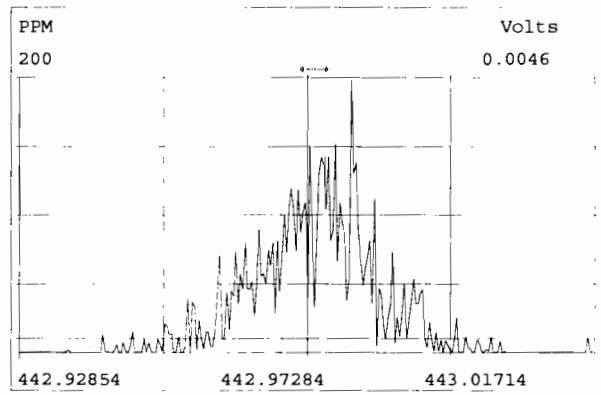

Peak Locate Examination: 5-DEC-2019:16:39 File:191205D1
Experiment:OCDD_DB5 Function:3 Reference:PFK
PPM
Volts
200
0.0027
366.94255
366.97925
367.01595
PPM
Volts
200
0.0139
380.93795
380.97604
381.01414
PPM
Volts
200
0.0049
392.93675
392.97604
393.01534
PPM
Volts
200
0.0039
404.93555
404.97604
405.01654
PPM
Volts
200
0.0031
416.93435
416.97604
417.01774
PPM
Volts
200
0.0079
430.92974
430.97284
431.01594
PPM
Volts
200
0.0043
442.92854
442.97284
443.01714
PPM
Volts
200
0.0034
454.92734
454.97284
455.01834

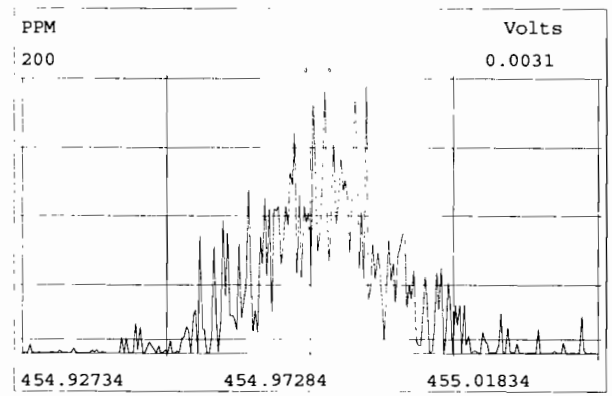

Peak Locate Examination: 5-DEC-2019:16:40 File:191205D1
Experiment:OCDD_DB5 Function:4 Reference:PFK
PPM
Volts
200
0.0045
404.93555
404.97604
405.01654
PPM
Volts
200
0.0019
416.93435
416.97604
417.01774
PPM
Volts
200
0.0088
430.92974
430.97284
431.01594
PPM
Volts
200
0.0055
442.92854
442.97284
443.01714
PPM
Volts
200
0.0031
454.92734
454.97284
455.01834
PPM
Volts
200
0.0021
466.92614
466.97284
467.01954
PPM
Volts
200
0.0054
480.92157
480.96967
481.01776

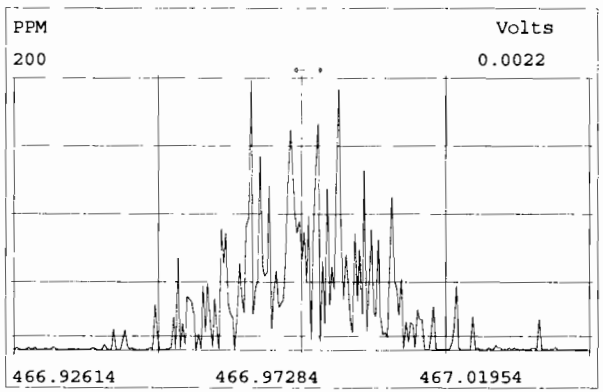
Peak Locate Examination: 5-DEC-2019:16:40 File:191205D1

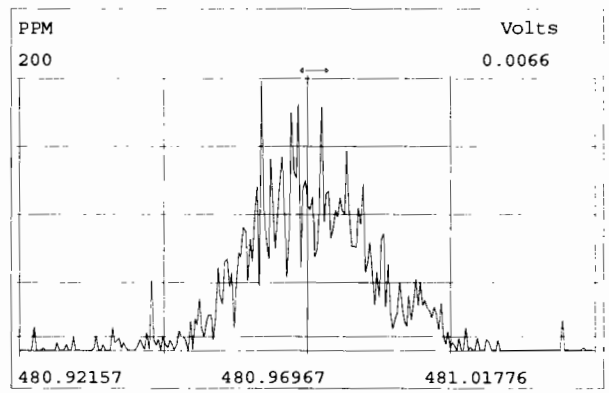
Experiment:OCDD_DB5 Function:5 Reference:PFK

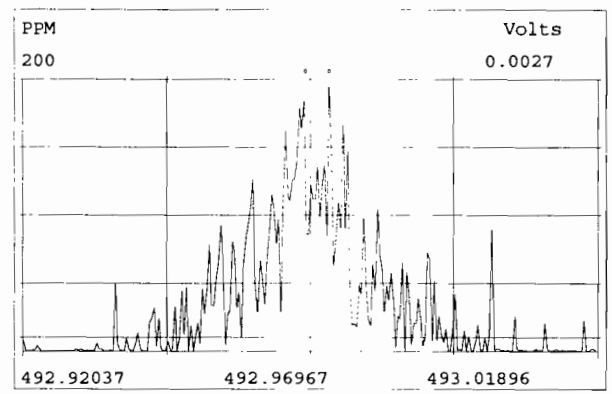


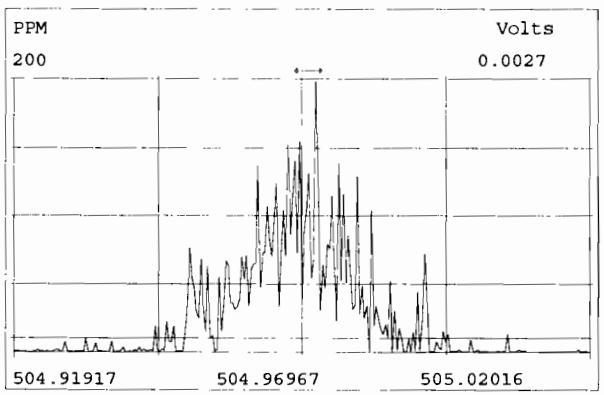


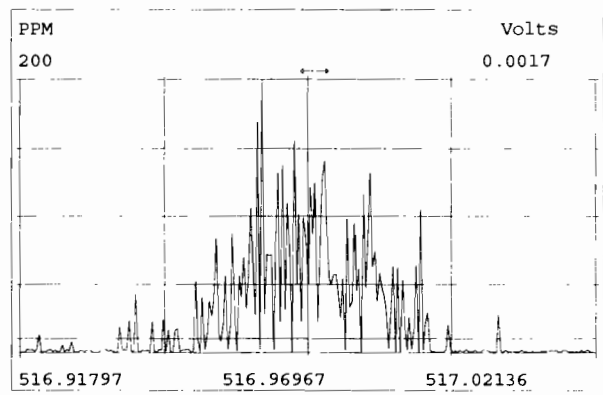




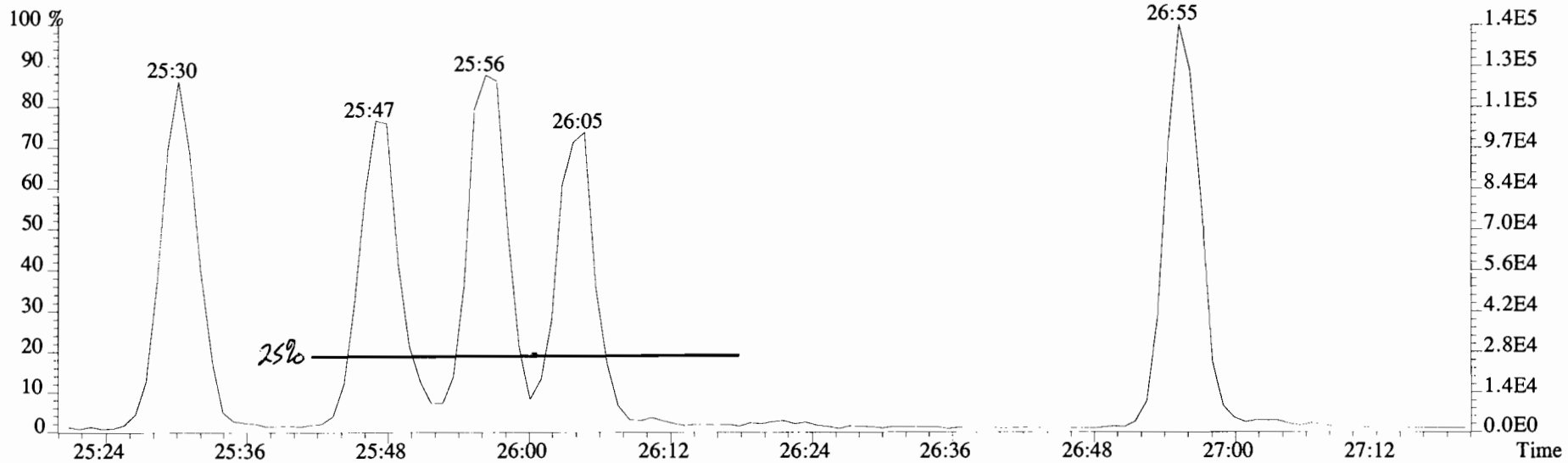




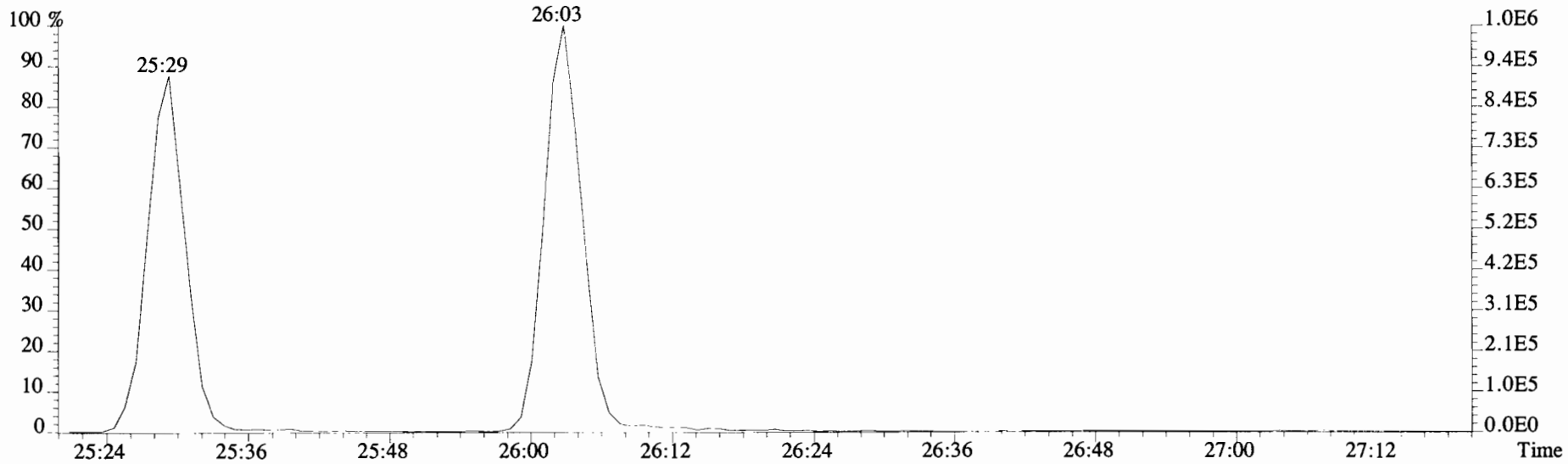




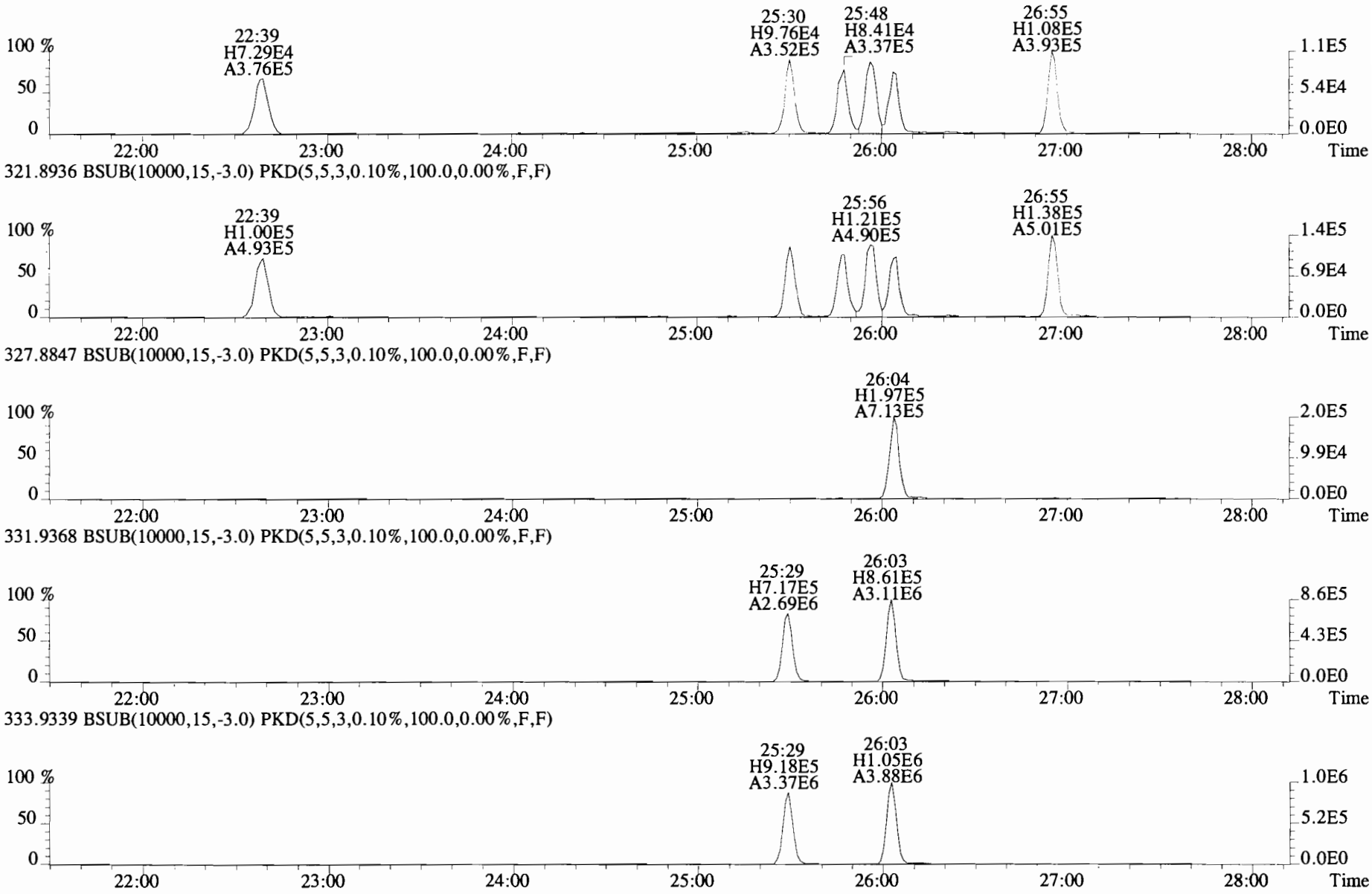
File:191205D1 #1-492 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
321.8936

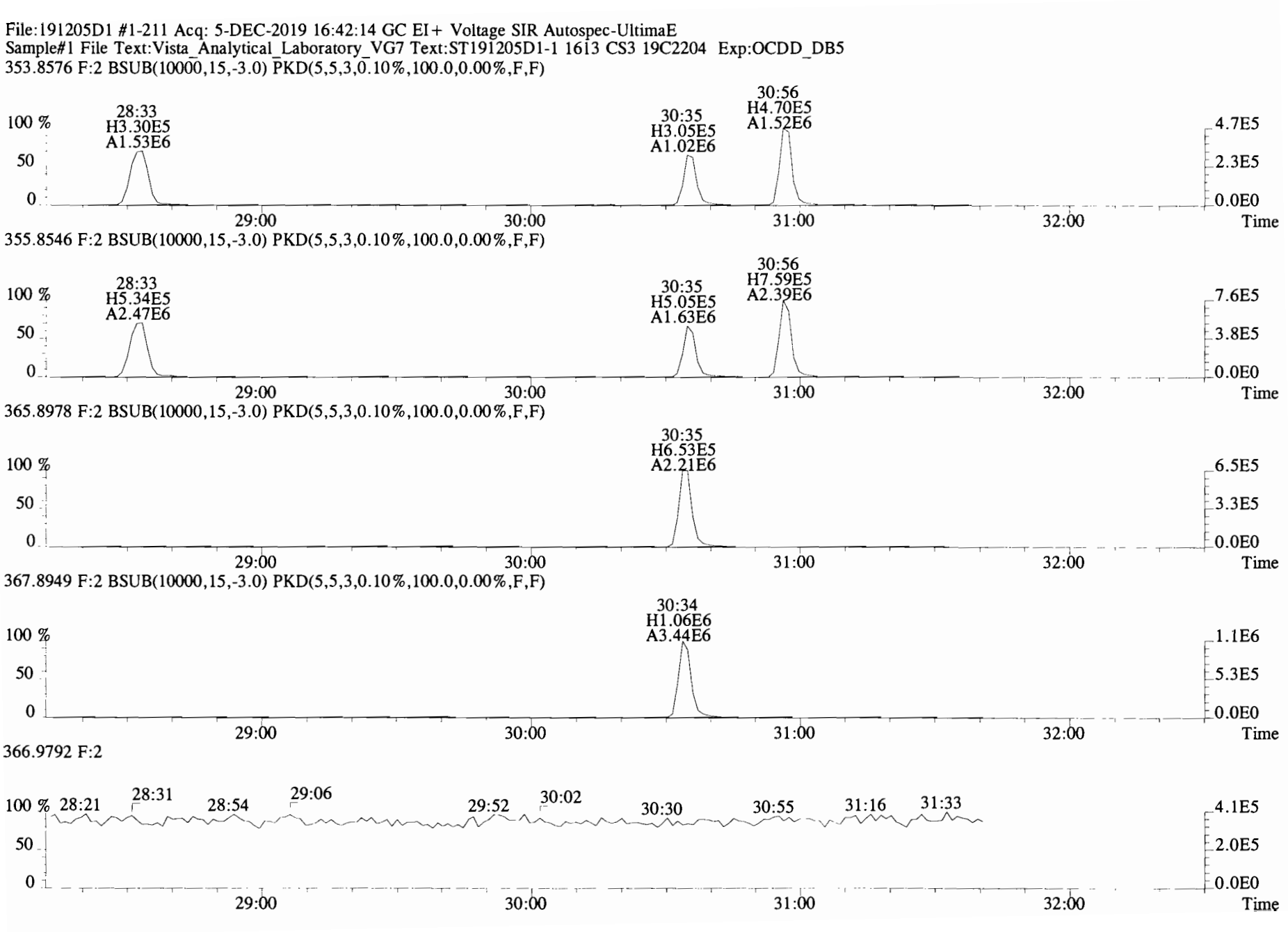


333.9339



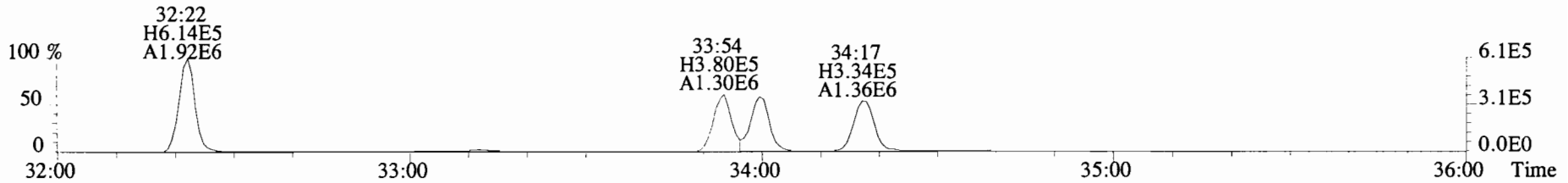
File:191205D1 #1-492 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 1613 CS3 19C2204 Exp:OCDD_DB5



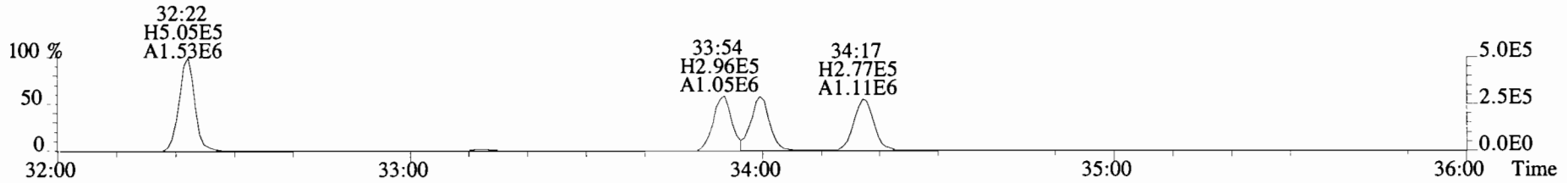

File:191205D1 #1-211 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:33 H3.30E5 A1.53E6
30:35 H3.05E5 A1.02E6
30:56 H4.70E5 A1.52E6
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:33 H5.34E5 A2.47E6
30:35 H5.05E5 A1.63E6
30:56 H7.59E5 A2.39E6
365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:35 H6.53E5 A2.21E6
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
30:34 H1.06E6 A3.44E6
366.9792 F:2
28:21
28:31
28:54
29:06
29:52
30:02
30:30
30:55
31:16
31:33
100 %
50
0
29:00
30:00
31:00
32:00
Time
4.7E5
2.3E5
0.0E0
7.6E5
3.8E5
6.5E5
3.3E5
1.1E6
5.3E5
4.1E5
2.0E5

File:191205D1 #1-385 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 1613 CS3 19C2204 Exp:OCDD_DB5

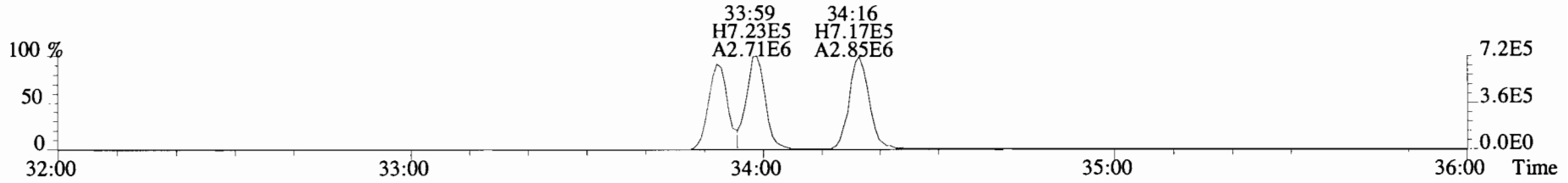
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



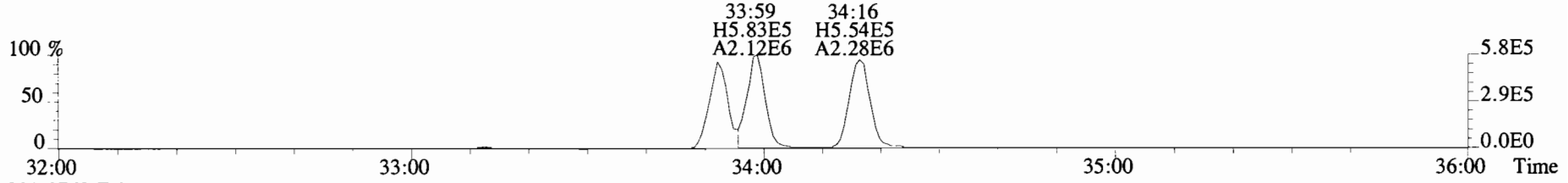
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



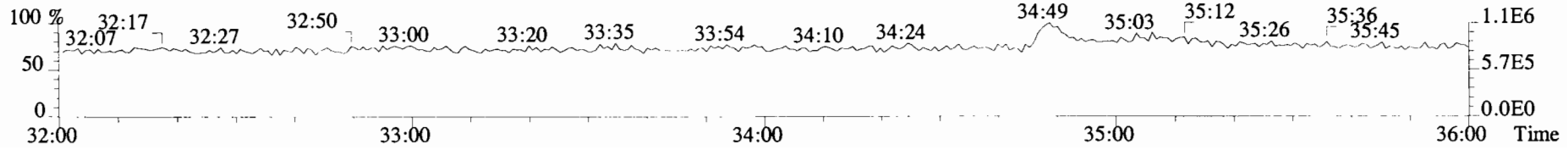
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

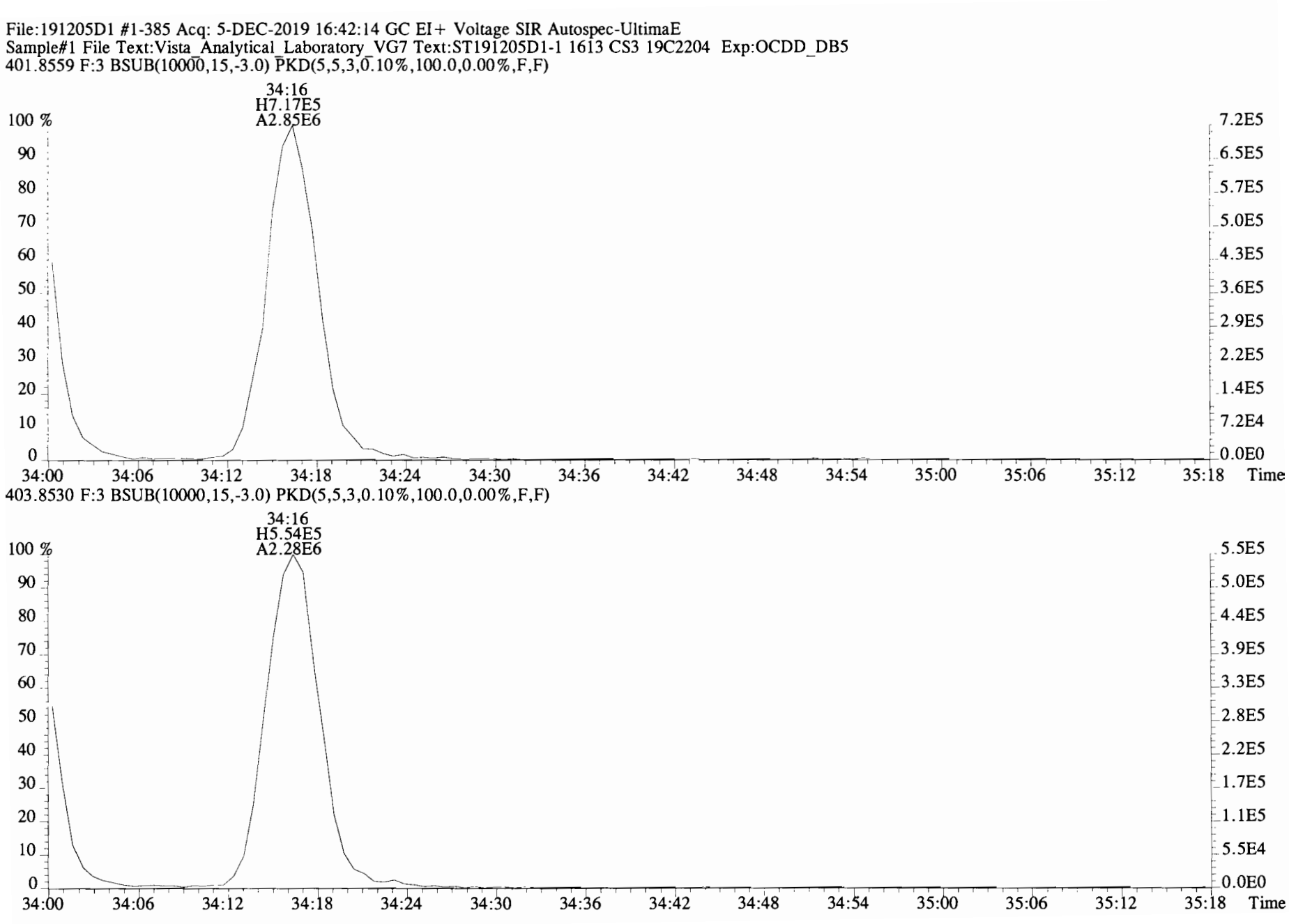


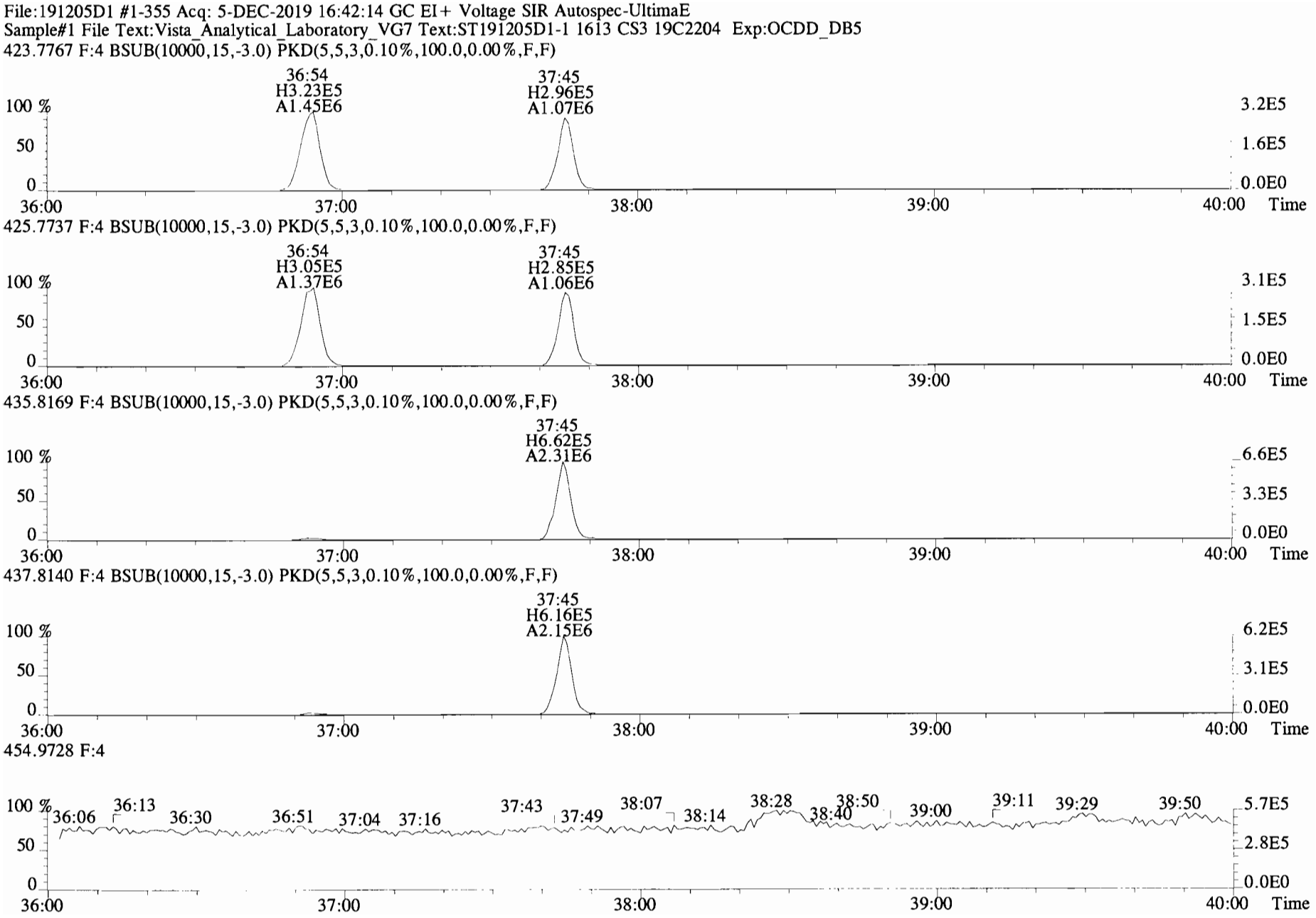
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



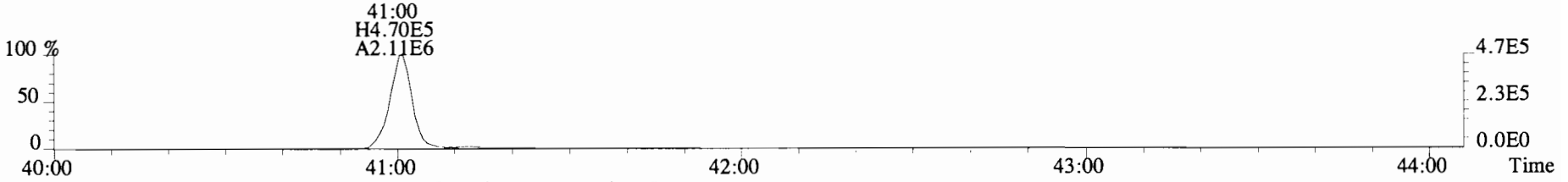
392.9760 F:3



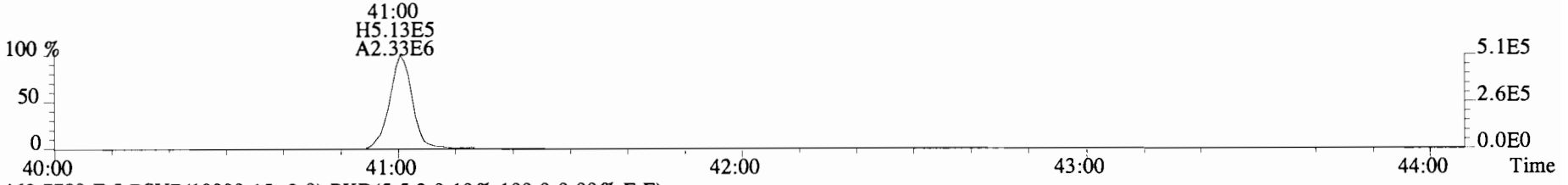

File:191205D1 #1-385 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:16
H7.17E5
A2.85E6
100 %
90
80
70
60
50
40
30
20
10
0
7.2E5
6.5E5
5.7E5
5.0E5
4.3E5
3.6E5
2.9E5
2.2E5
1.4E5
7.2E4
0.0E0
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
35:06
35:12
35:18
Time
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
34:16
H5.54E5
A2.28E6
100 %
90
80
70
60
50
40
30
20
10
0
5.5E5
5.0E5
4.4E5
3.9E5
3.3E5
2.8E5
2.2E5
1.7E5
1.1E5
5.5E4
0.0E0
34:00
34:06
34:12
34:18
34:24
34:30
34:36
34:42
34:48
34:54
35:00
35:06
35:12
35:18
Time


File:191205D1 #1-355 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 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)
36:54
H3.23E5
A1.45E6
37:45
H2.96E5
A1.07E6
100 %
50
0
3.2E5
1.6E5
0.0E0
36:00
37:00
38:00
39:00
40:00
Time
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:54
H3.05E5
A1.37E6
37:45
H2.85E5
A1.06E6
3.1E5
1.5E5
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:45
H6.62E5
A2.31E6
6.6E5
3.3E5
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
37:45
H6.16E5
A2.15E6
6.2E5
3.1E5
454.9728 F:4
36:06
36:13
36:30
36:51
37:04
37:16
37:43
37:49
38:07
38:14
38:28
38:40
38:50
39:00
39:11
39:29
39:50
5.7E5
2.8E5

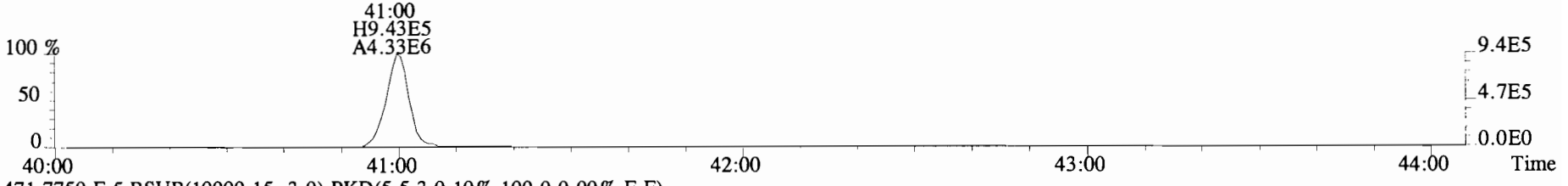
File:191205D1 #1-432 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



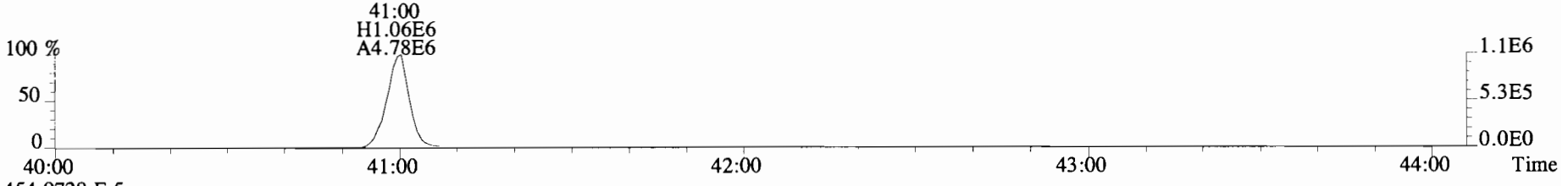
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



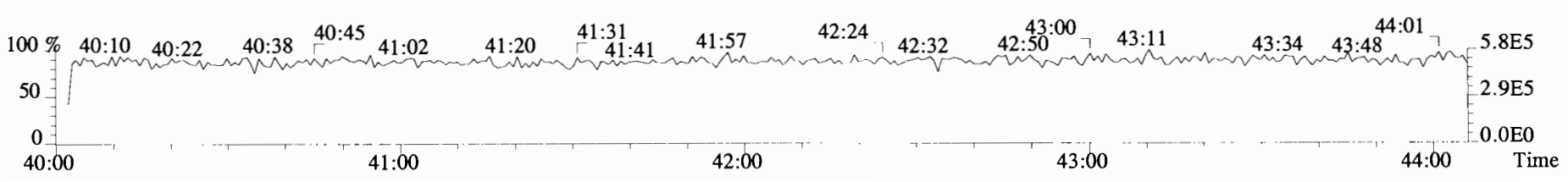
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

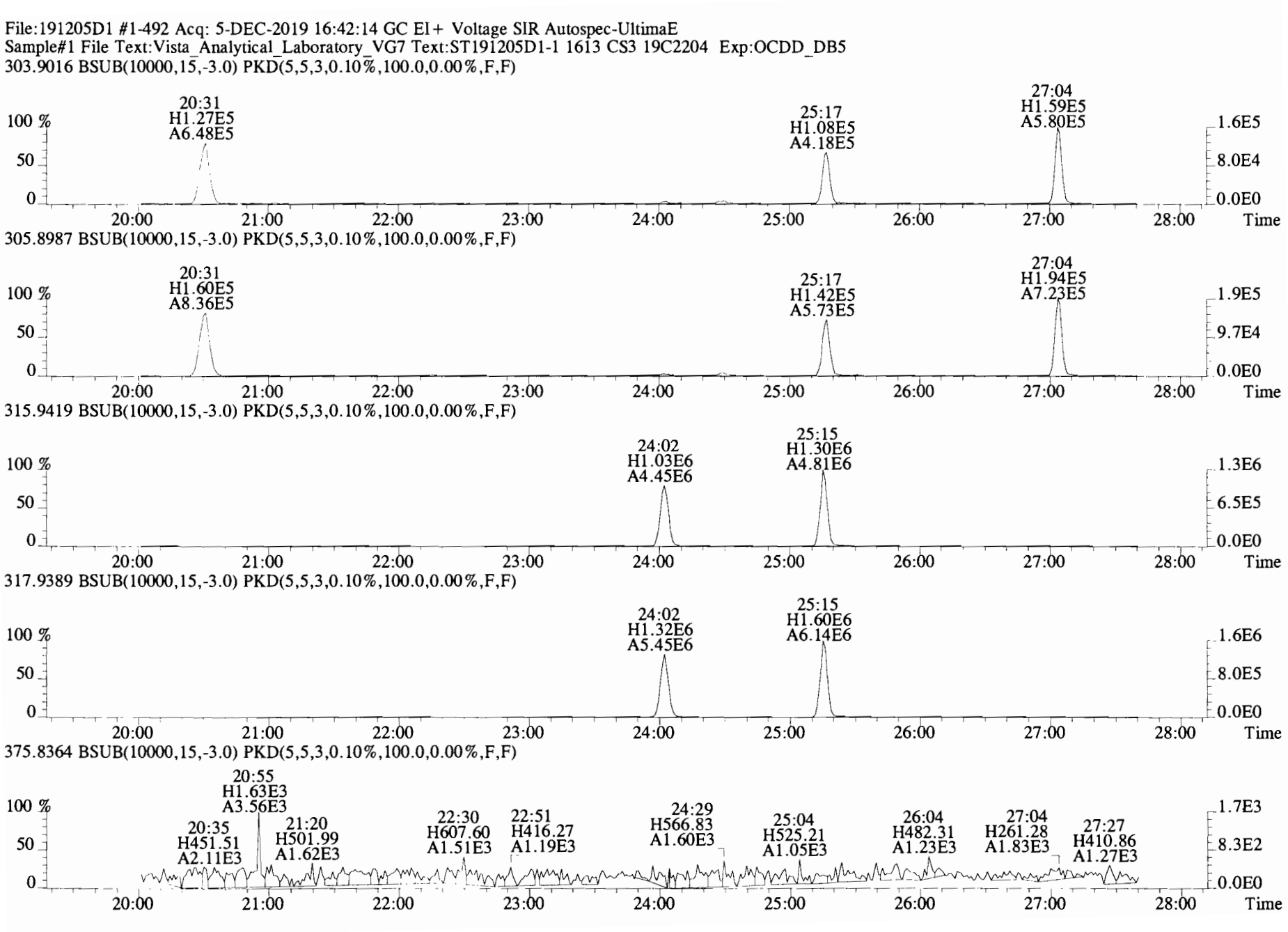


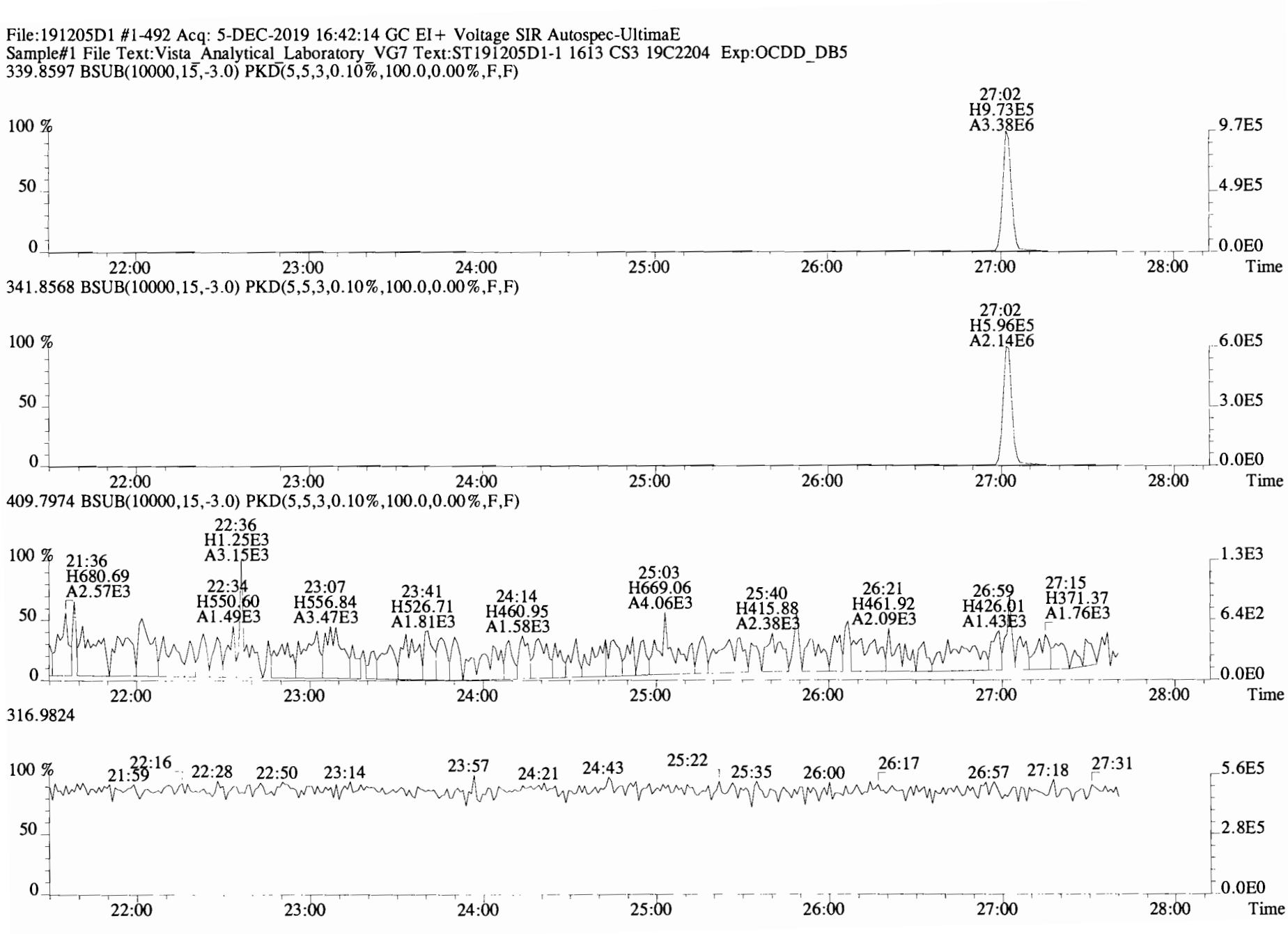
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



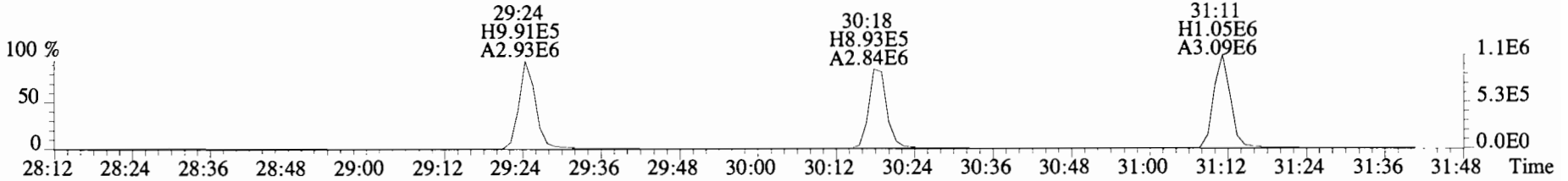
454.9728 F:5



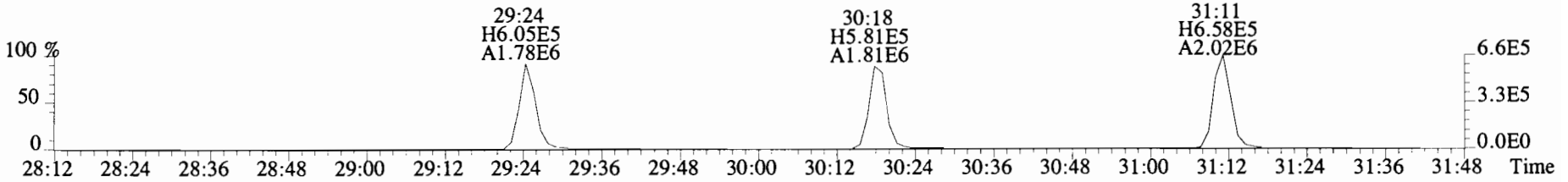

File:191205D1 #1-492 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:31 H1.27E5 A6.48E5
25:17 H1.08E5 A4.18E5
27:04 H1.59E5 A5.80E5
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:31 H1.60E5 A8.36E5
25:17 H1.42E5 A5.73E5
27:04 H1.94E5 A7.23E5
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:02 H1.03E6 A4.45E6
25:15 H1.30E6 A4.81E6
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:02 H1.32E6 A5.45E6
25:15 H1.60E6 A6.14E6
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:55 H1.63E3 A3.56E3
20:35 H451.51 A2.11E3
21:20 H501.99 A1.62E3
22:30 H607.60 A1.51E3
22:51 H416.27 A1.19E3
24:29 H566.83 A1.60E3
25:04 H525.21 A1.05E3
26:04 H482.31 A1.23E3
27:04 H261.28 A1.83E3
27:27 H410.86 A1.27E3
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
1.6E5
8.0E4
0.0E0
1.9E5
9.7E4
1.3E6
6.5E5
1.6E6
8.0E5
1.7E3
8.3E2


File:191205D1 #1-492 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 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)
27:02
H9.73E5
A3.38E6
100 %
50
0
9.7E5
4.9E5
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
27:02
H5.96E5
A2.14E6
100 %
50
0
6.0E5
3.0E5
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
22:36
H1.25E3
A3.15E3
21:36
H680.69
A2.57E3
22:34
H550.60
A1.49E3
23:07
H556.84
A3.47E3
23:41
H526.71
A1.81E3
24:14
H460.95
A1.58E3
25:03
H669.06
A4.06E3
25:40
H415.88
A2.38E3
26:21
H461.92
A2.09E3
26:59
H426.01
A1.43E3
27:15
H371.37
A1.76E3
100 %
50
0
1.3E3
6.4E2
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
316.9824
22:16
21:59
22:28
22:50
23:14
23:57
24:21
24:43
25:22
25:35
26:00
26:17
26:57
27:18
27:31
100 %
50
0
5.6E5
2.8E5
0.0E0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time

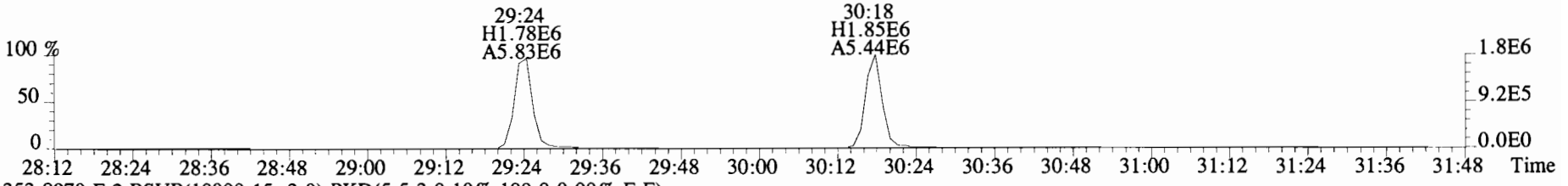
File:191205D1 #1-211 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



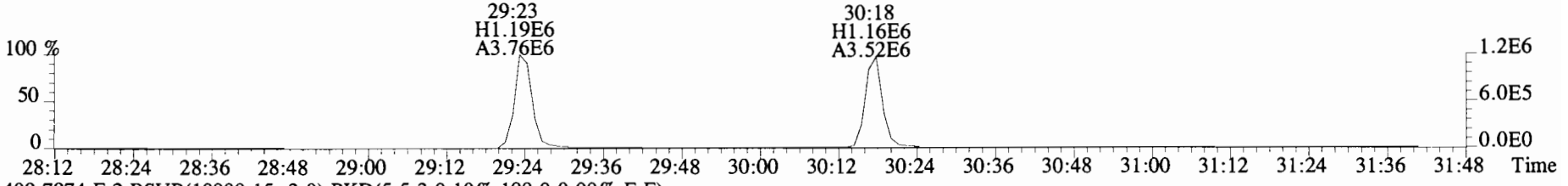
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



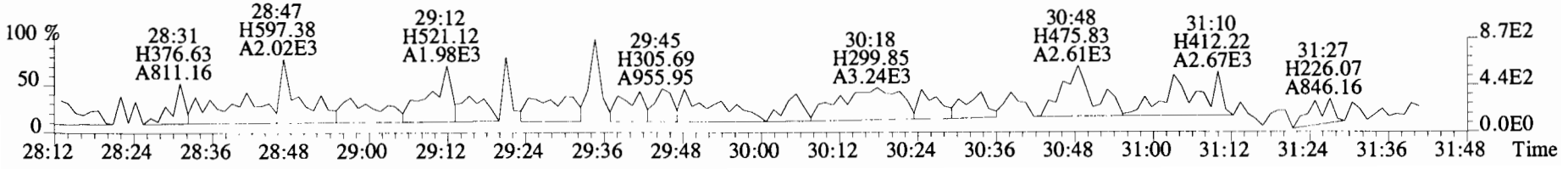
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

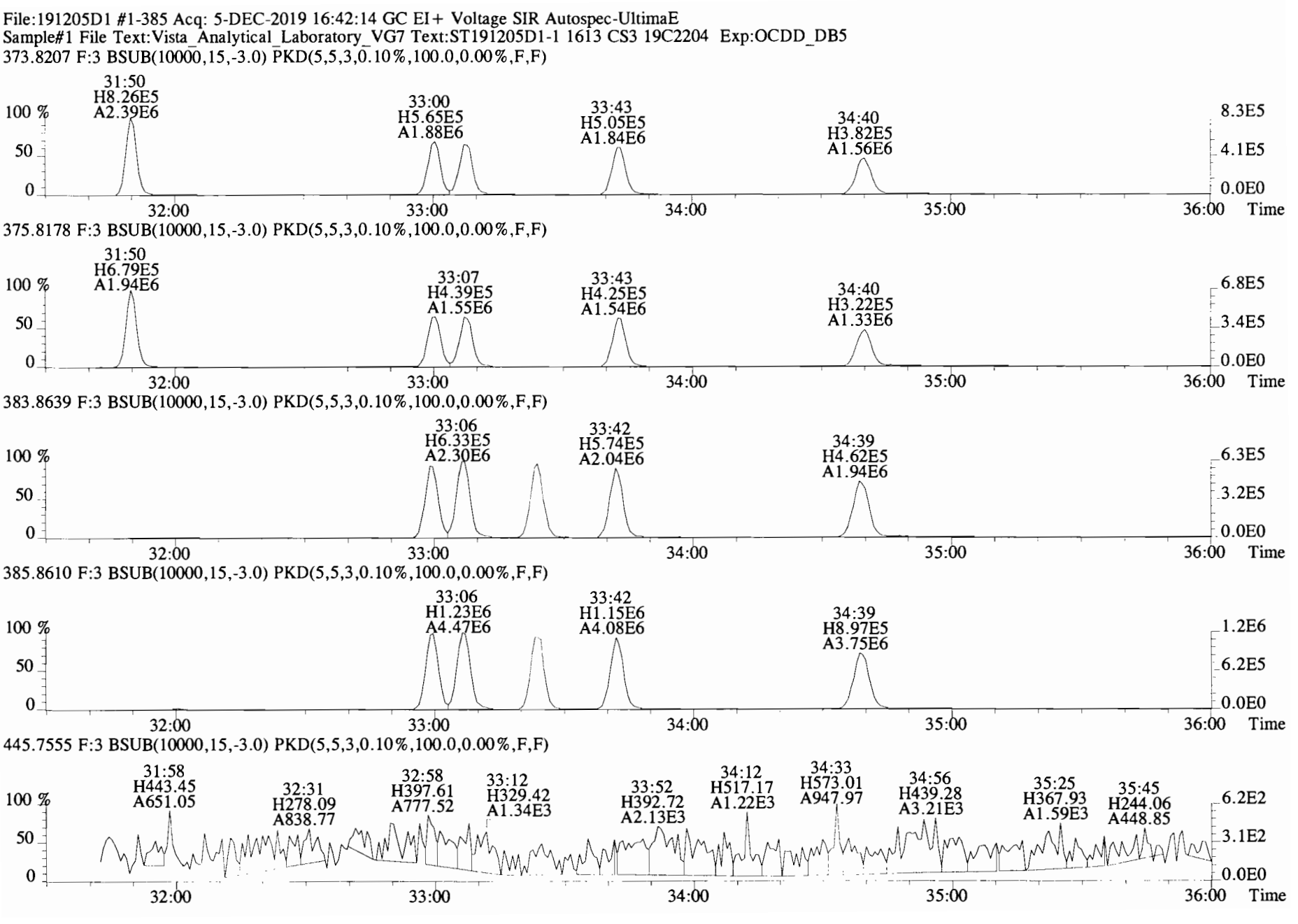


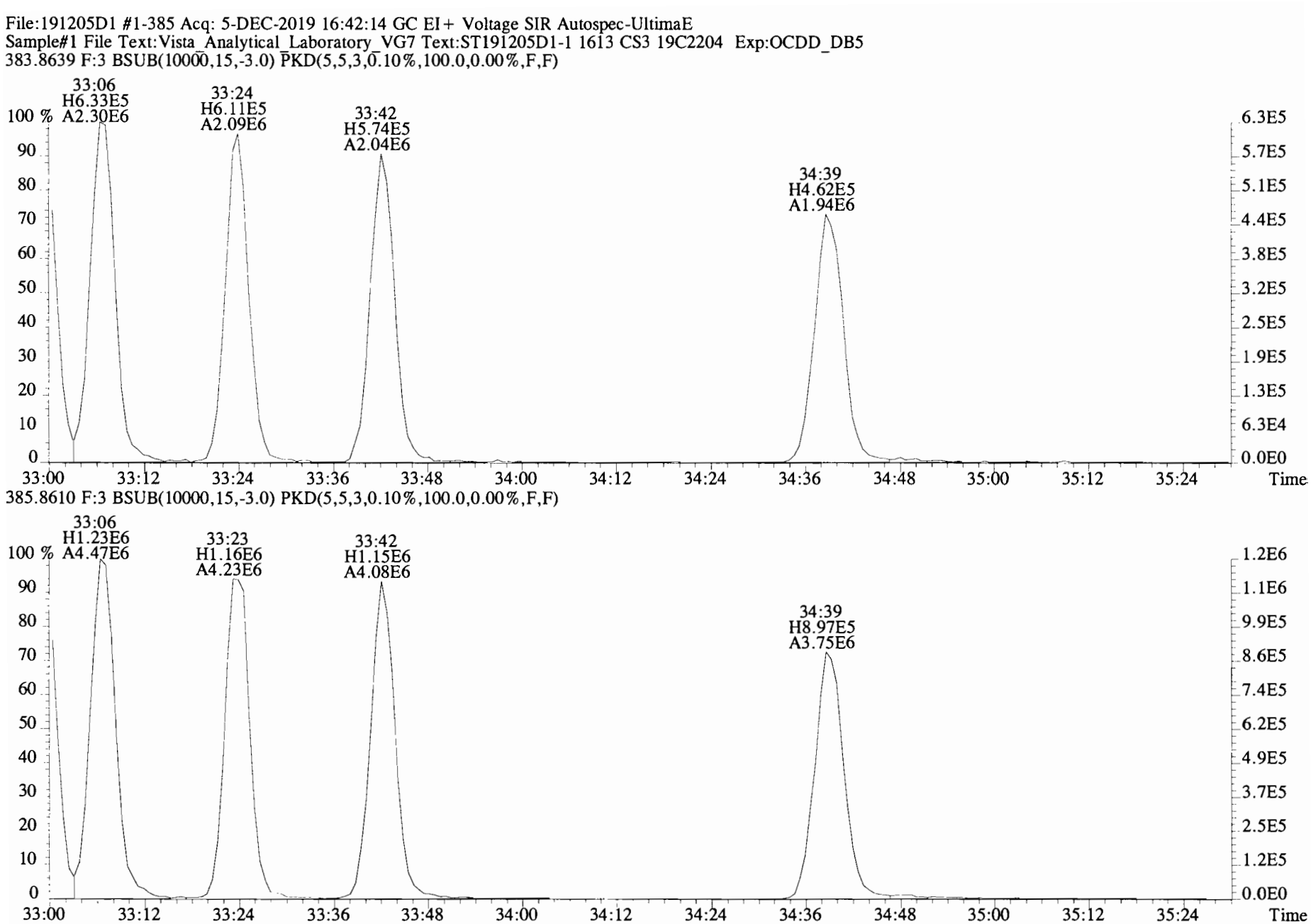
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

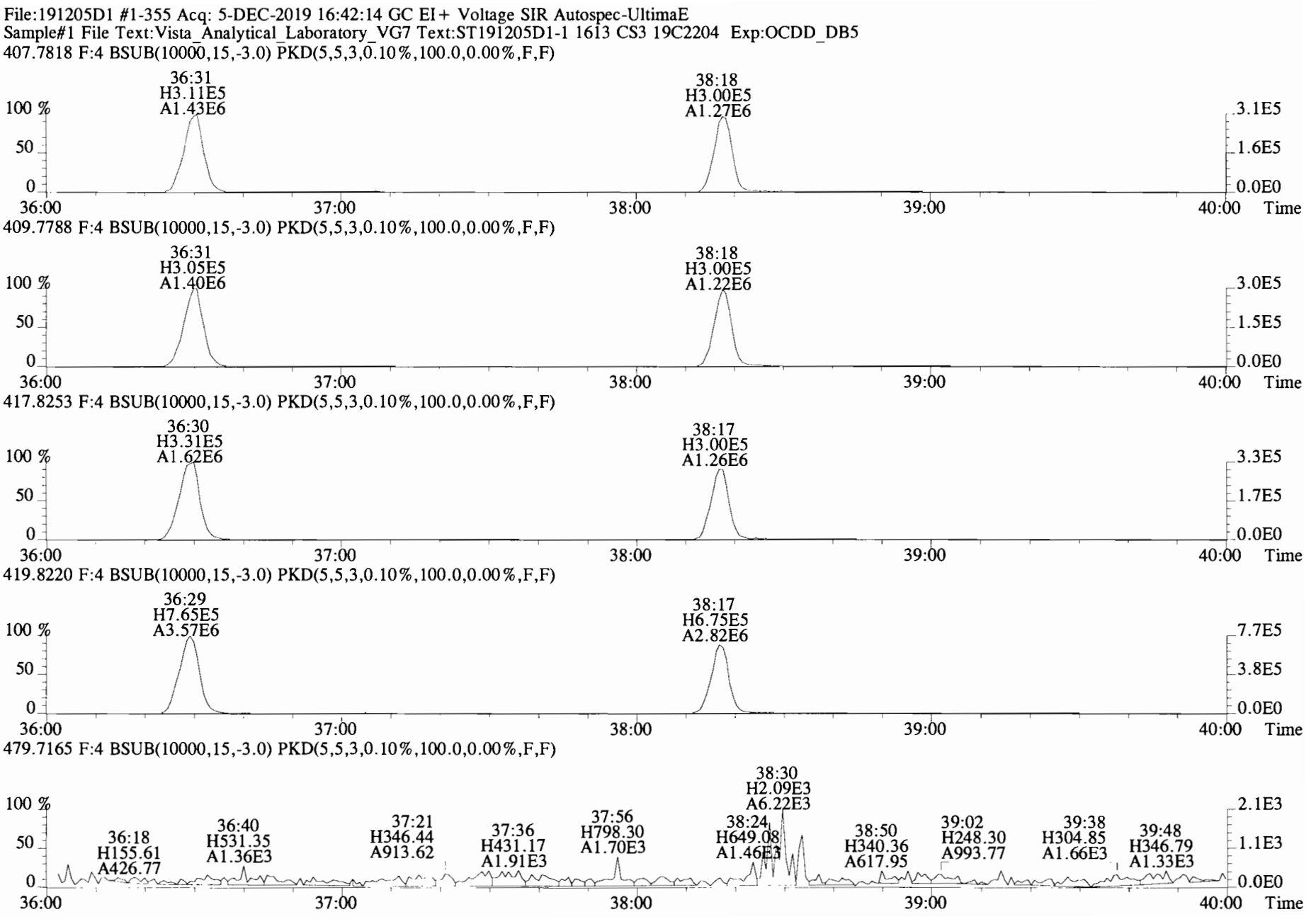


409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

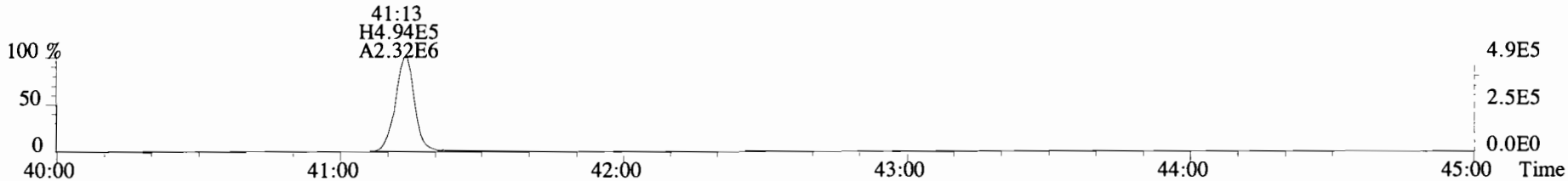



File:191205D1 #1-385 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:50 H8.26E5 A2.39E6
33:00 H5.65E5 A1.88E6
33:43 H5.05E5 A1.84E6
34:40 H3.82E5 A1.56E6
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:50 H6.79E5 A1.94E6
33:07 H4.39E5 A1.55E6
33:43 H4.25E5 A1.54E6
34:40 H3.22E5 A1.33E6
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:06 H6.33E5 A2.30E6
33:42 H5.74E5 A2.04E6
34:39 H4.62E5 A1.94E6
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:06 H1.23E6 A4.47E6
33:42 H1.15E6 A4.08E6
34:39 H8.97E5 A3.75E6
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
31:58 H443.45 A651.05
32:31 H278.09 A838.77
32:58 H397.61 A777.52
33:12 H329.42 A1.34E3
33:52 H392.72 A2.13E3
34:12 H517.17 A1.22E3
34:33 H573.01 A947.97
34:56 H439.28 A3.21E3
35:25 H367.93 A1.59E3
35:45 H244.06 A448.85
100 %
50
0
32:00
33:00
34:00
35:00
36:00
Time
8.3E5
4.1E5
0.0E0
6.8E5
3.4E5
6.3E5
3.2E5
1.2E6
6.2E5
6.2E2
3.1E2

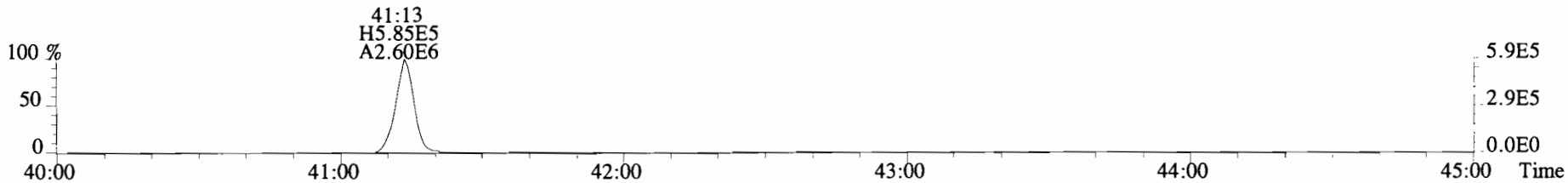

File:191205D1 #1-385 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:06 H6.33E5 A2.30E6
33:24 H6.11E5 A2.09E6
33:42 H5.74E5 A2.04E6
34:39 H4.62E5 A1.94E6
100 %
90
80
70
60
50
40
30
20
10
0
6.3E5
5.7E5
5.1E5
4.4E5
3.8E5
3.2E5
2.5E5
1.9E5
1.3E5
6.3E4
0.0E0
33:00 33:12 33:24 33:36 33:48 34:00 34:12 34:24 34:36 34:48 35:00 35:12 35:24 Time
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
33:06 H1.23E6 A4.47E6
33:23 H1.16E6 A4.23E6
33:42 H1.15E6 A4.08E6
34:39 H8.97E5 A3.75E6
100 %
90
80
70
60
50
40
30
20
10
0
1.2E6
1.1E6
9.9E5
8.6E5
7.4E5
6.2E5
4.9E5
3.7E5
2.5E5
1.2E5
0.0E0
33:00 33:12 33:24 33:36 33:48 34:00 34:12 34:24 34:36 34:48 35:00 35:12 35:24 Time


File:191205D1 #1-355 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 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)
36:31 H3.11E5 A1.43E6
38:18 H3.00E5 A1.27E6
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:31 H3.05E5 A1.40E6
38:18 H3.00E5 A1.22E6
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:30 H3.31E5 A1.62E6
38:17 H3.00E5 A1.26E6
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:29 H7.65E5 A3.57E6
38:17 H6.75E5 A2.82E6
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
36:18 H155.61 A426.77
36:40 H531.35 A1.36E3
37:21 H346.44 A913.62
37:36 H431.17 A1.91E3
37:56 H798.30 A1.70E3
38:24 H649.08 A1.46E3
38:30 H2.09E3 A6.22E3
38:50 H340.36 A617.95
39:02 H248.30 A993.77
39:38 H304.85 A1.66E3
39:48 H346.79 A1.33E3
100 %
50
0
36:00
37:00
38:00
39:00
40:00
Time

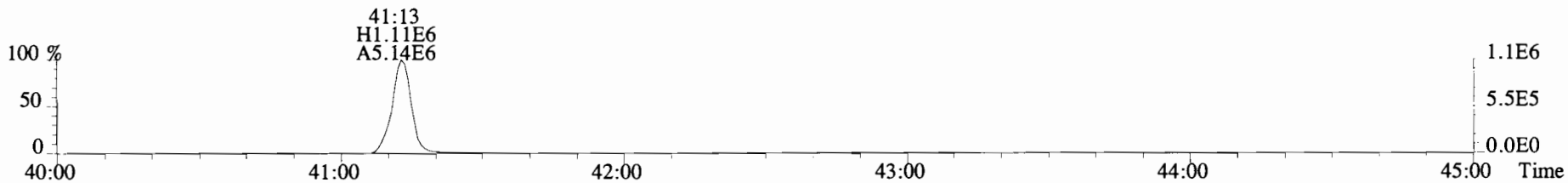
File:191205D1 #1-432 Acq: 5-DEC-2019 16:42:14 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191205D1-1 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



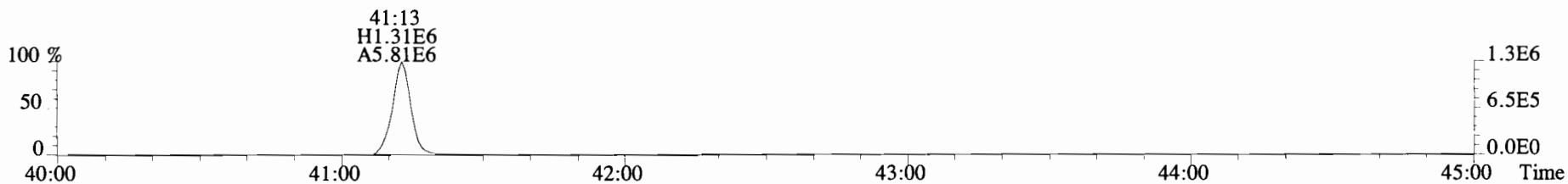
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



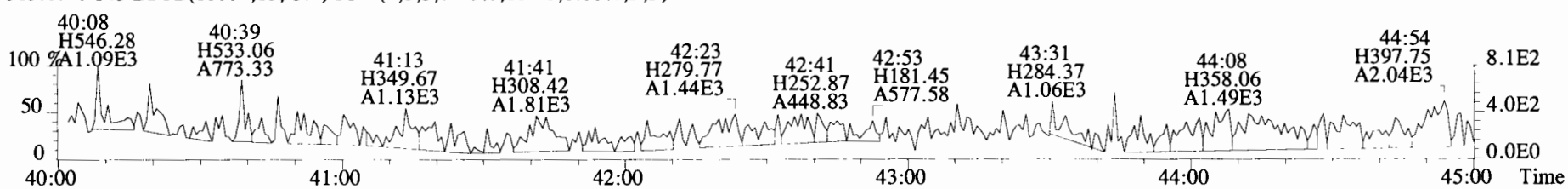
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

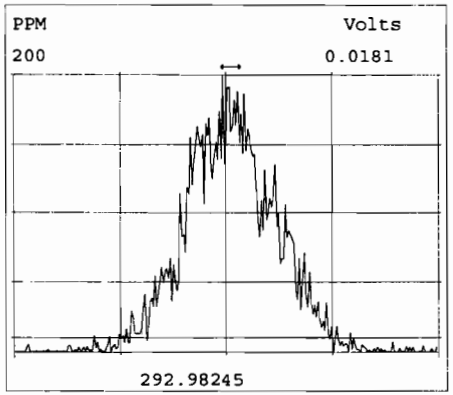


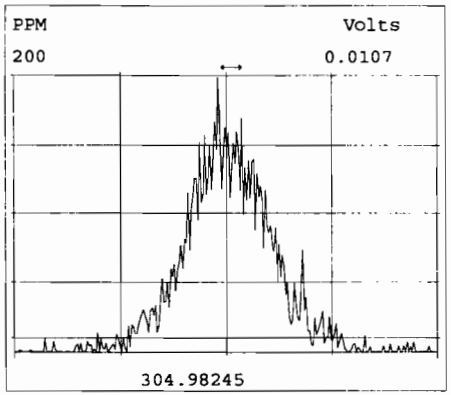
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

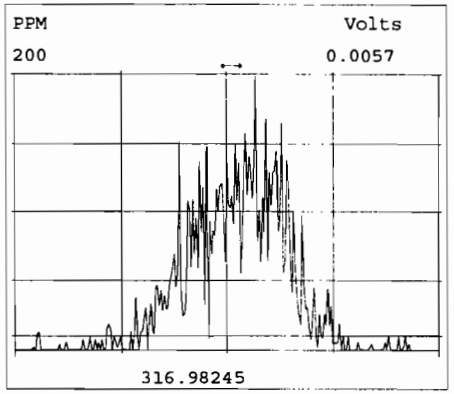


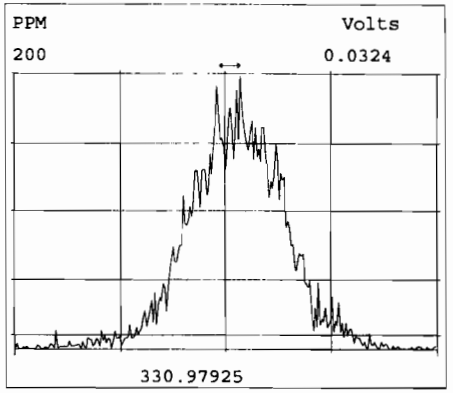
Peak Locate Examination: 6-DEC-2019:04:49 File:RES_CHECK

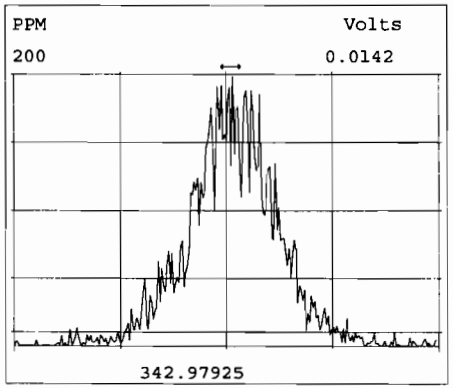
Experiment:OCDD_DB5 Function:1 Reference:PFK

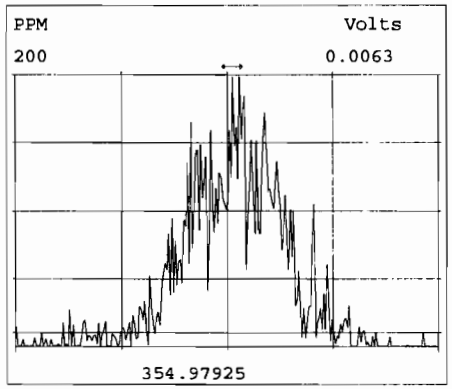


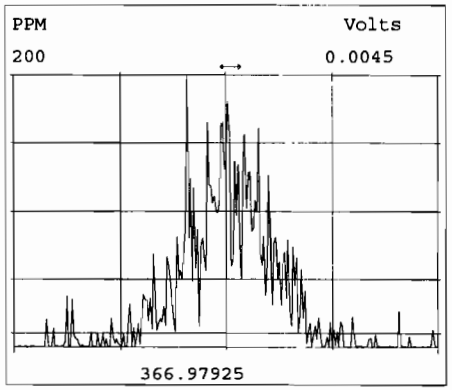


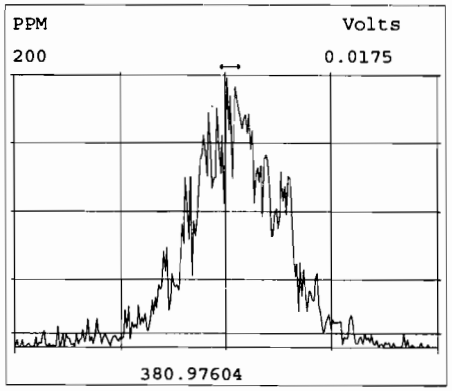


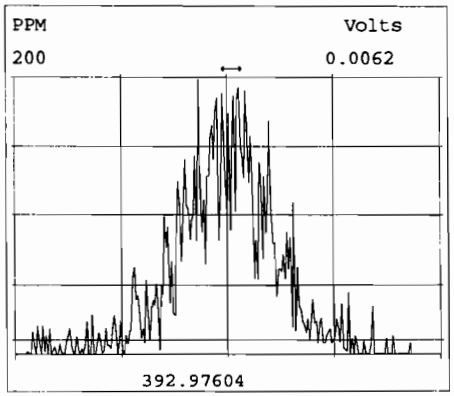


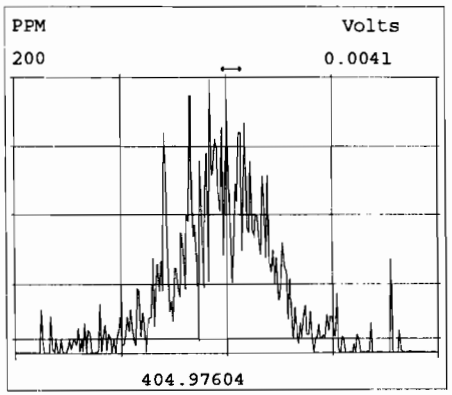


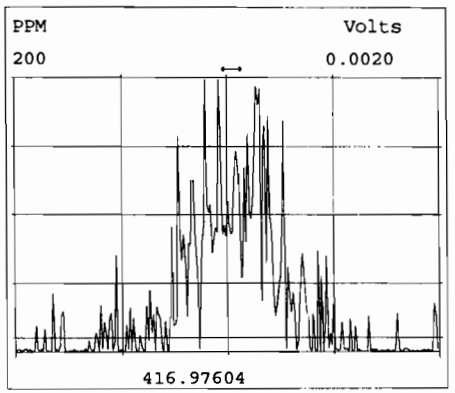


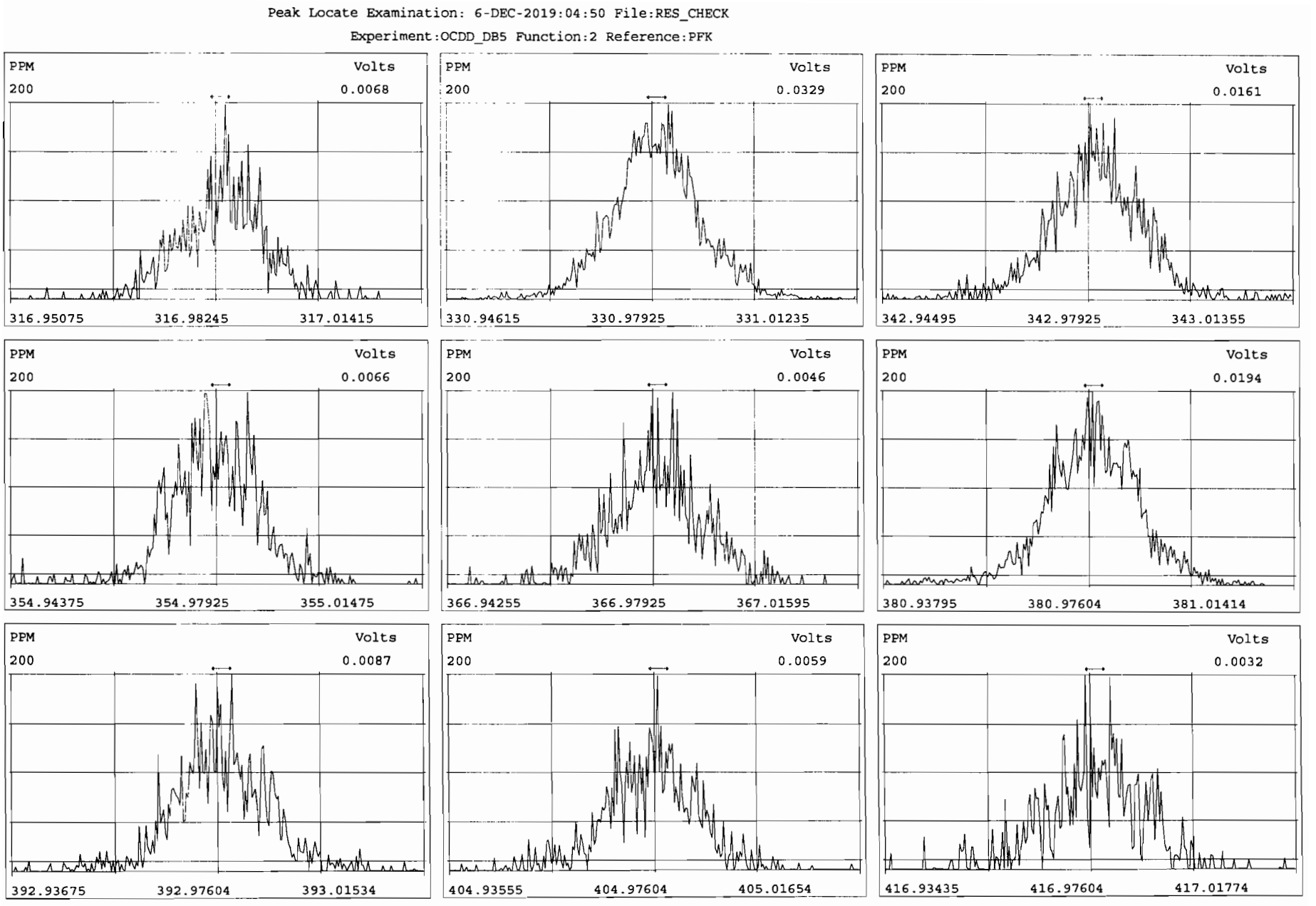






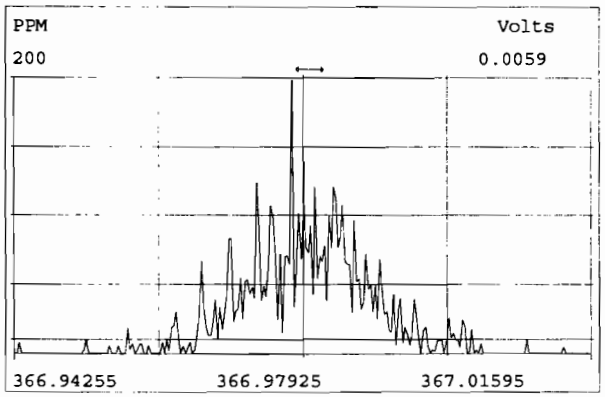


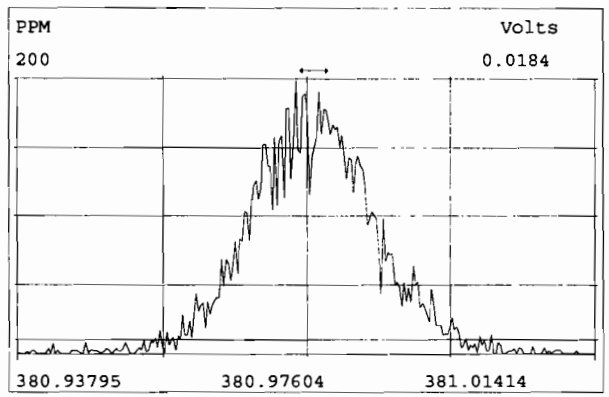


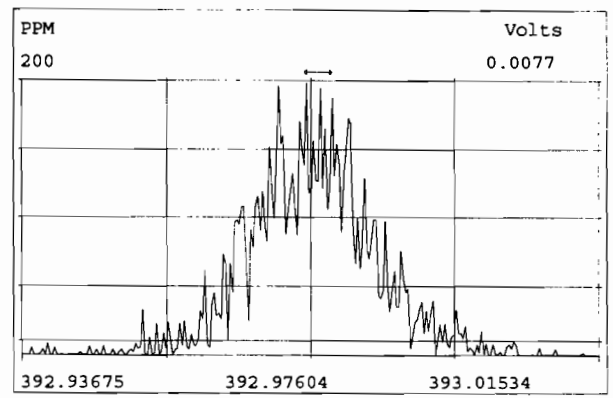

Peak Locate Examination: 6-DEC-2019:04:50 File:RES_CHECK
Experiment:OCDD_DB5 Function:2 Reference:PFK
PPM
Volts
200
0.0068
316.95075
316.98245
317.01415
PPM
Volts
200
0.0329
330.94615
330.97925
331.01235
PPM
Volts
200
0.0161
342.94495
342.97925
343.01355
PPM
Volts
200
0.0066
354.94375
354.97925
355.01475
PPM
Volts
200
0.0046
366.94255
366.97925
367.01595
PPM
Volts
200
0.0194
380.93795
380.97604
381.01414
PPM
Volts
200
0.0087
392.93675
392.97604
393.01534
PPM
Volts
200
0.0059
404.93555
404.97604
405.01654
PPM
Volts
200
0.0032
416.93435
416.97604
417.01774

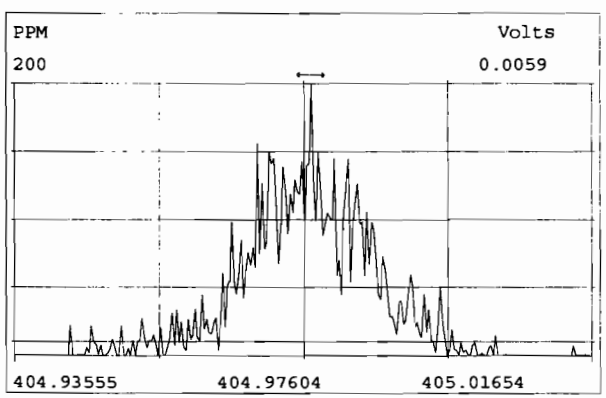
Peak Locate Examination: 6-DEC-2019:04:51 File:RES_CHECK

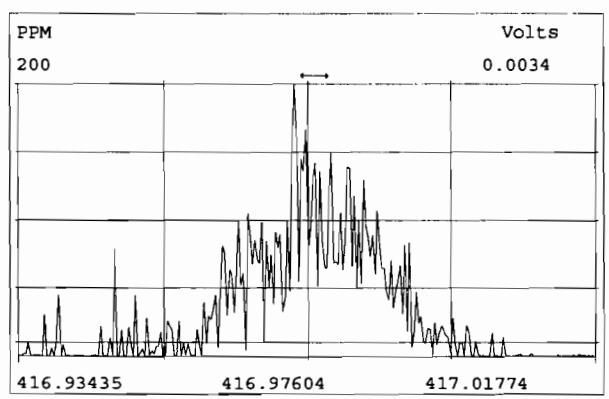
Experiment:OCDD_DB5 Function:3 Reference:PFK

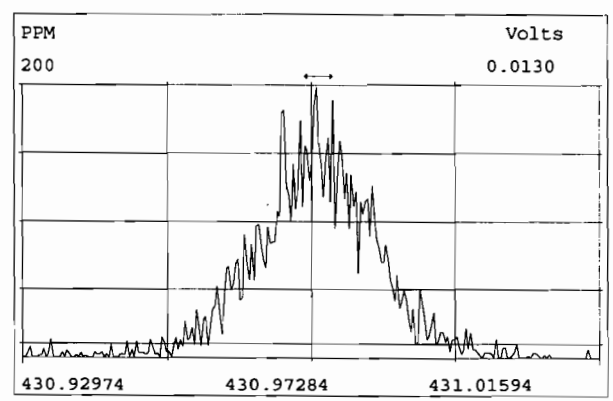


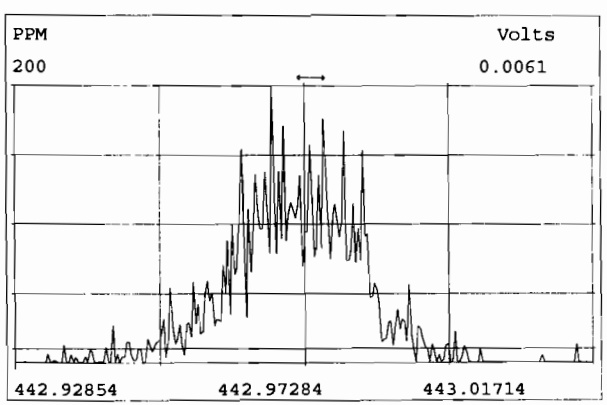


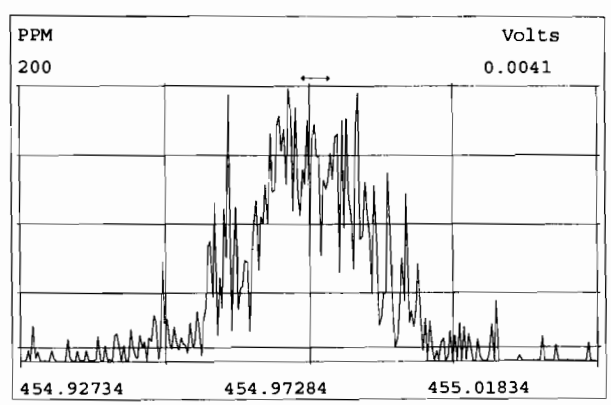


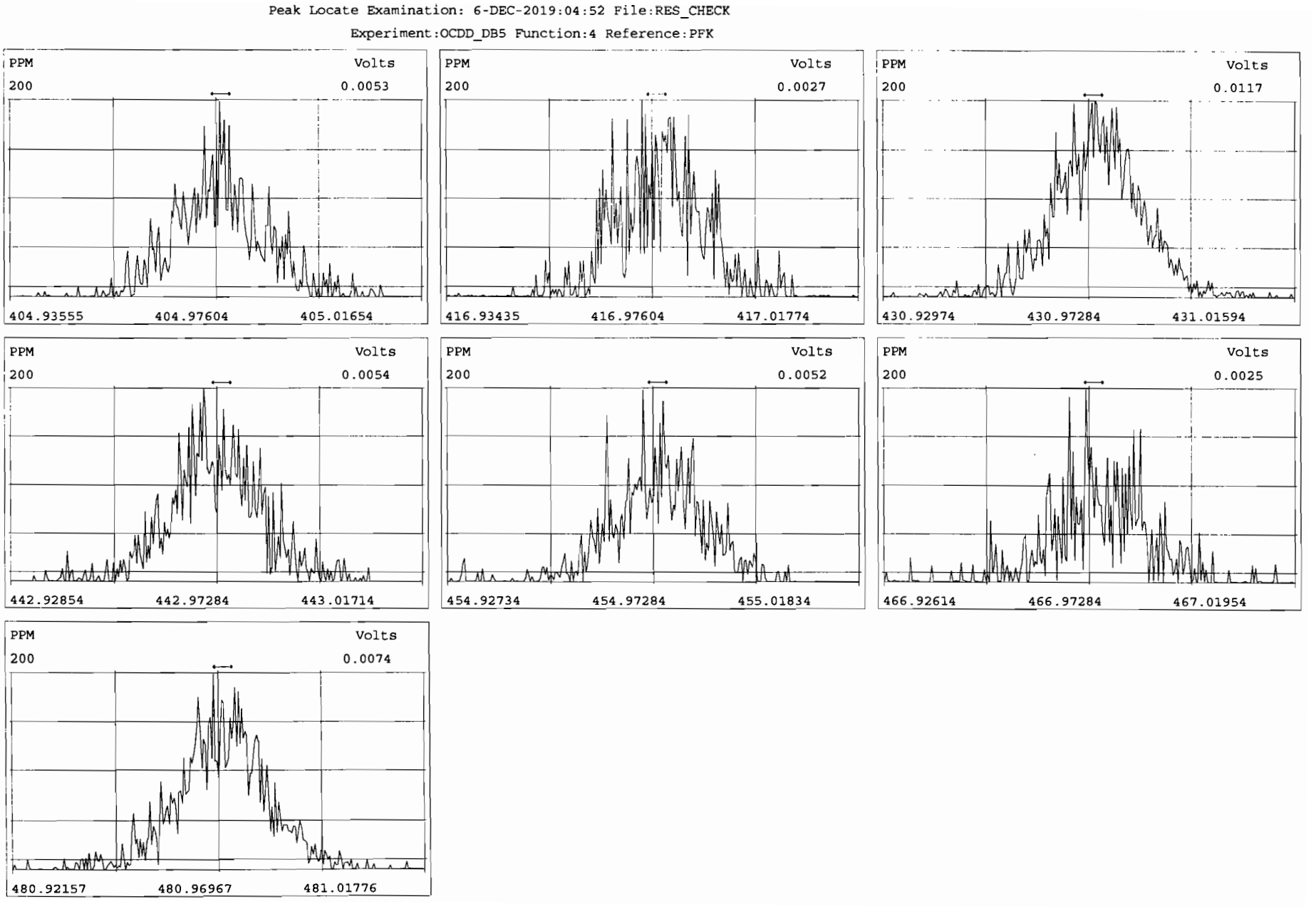






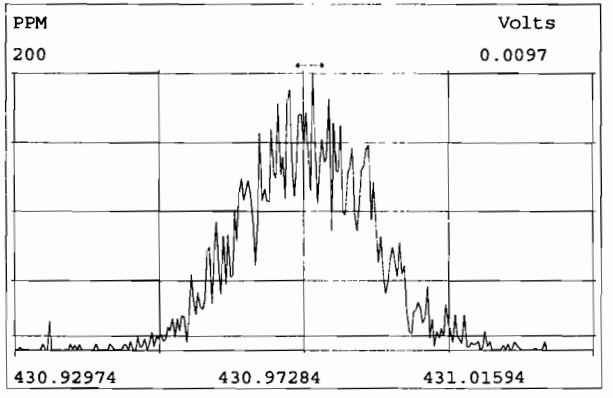


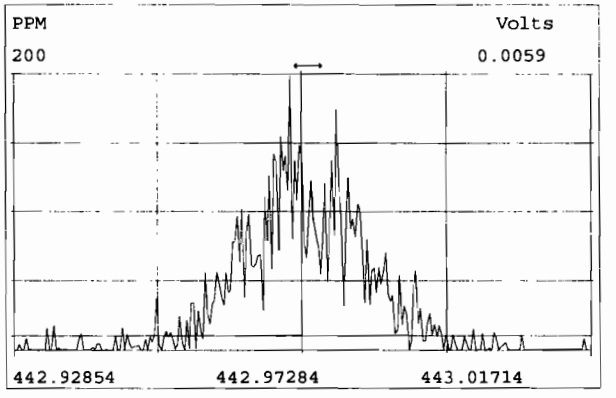


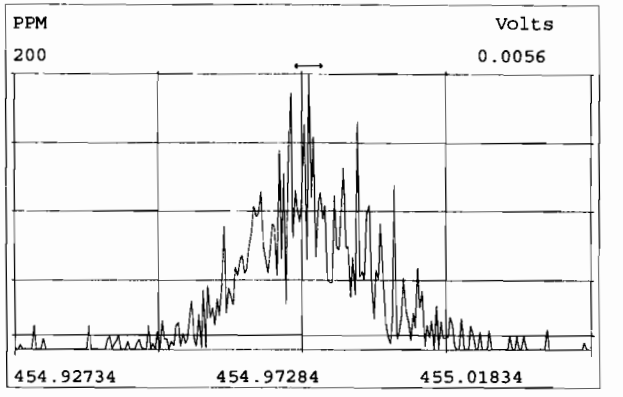

Peak Locate Examination: 6-DEC-2019:04:52 File:RES_CHECK
Experiment:OCDD_DB5 Function:4 Reference:PFK
PPM
Volts
200
0.0053
404.93555
404.97604
405.01654
PPM
Volts
200
0.0027
416.93435
416.97604
417.01774
PPM
Volts
200
0.0117
430.92974
430.97284
431.01594
PPM
Volts
200
0.0054
442.92854
442.97284
443.01714
PPM
Volts
200
0.0052
454.92734
454.97284
455.01834
PPM
Volts
200
0.0025
466.92614
466.97284
467.01954
PPM
Volts
200
0.0074
480.92157
480.96967
481.01776

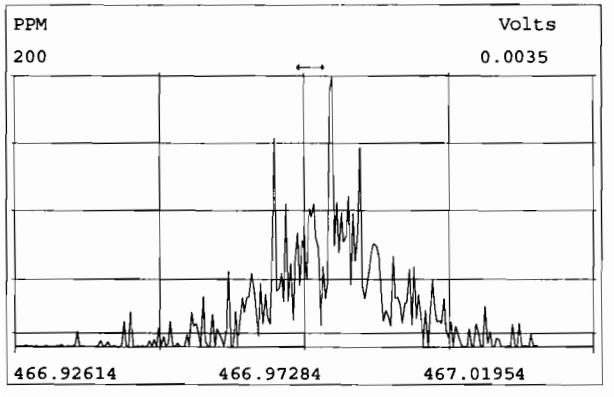
Peak Locate Examination: 6-DEC-2019:04:53 File:RES_CHECK

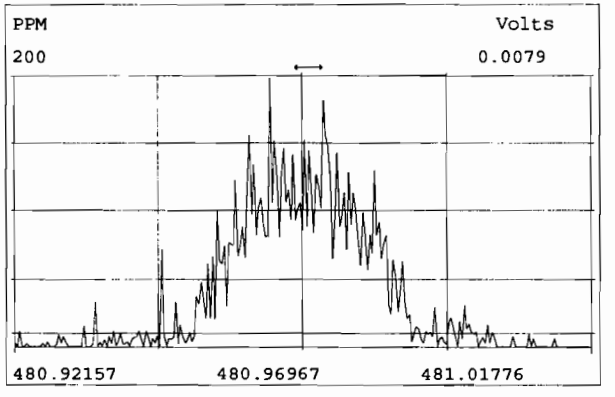
Experiment:OCDD_DB5 Function:5 Reference:PFK

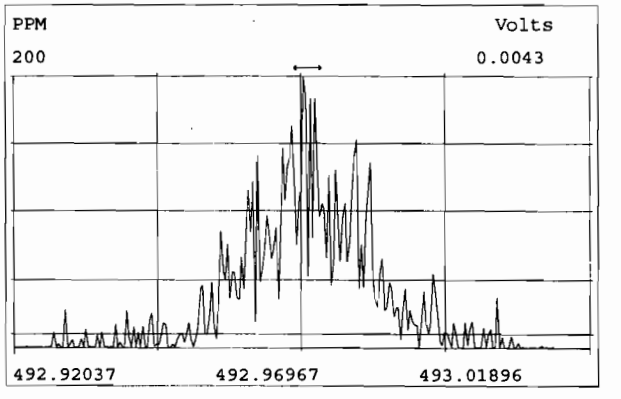


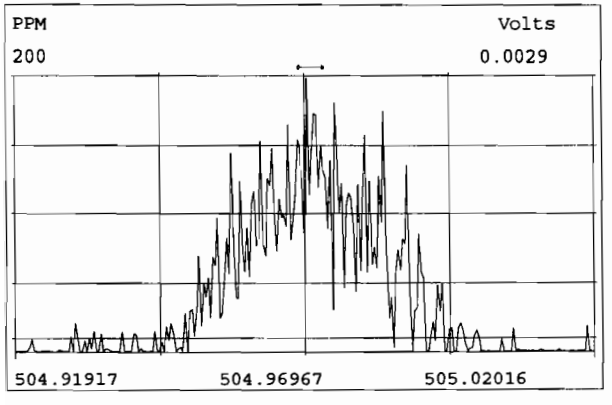


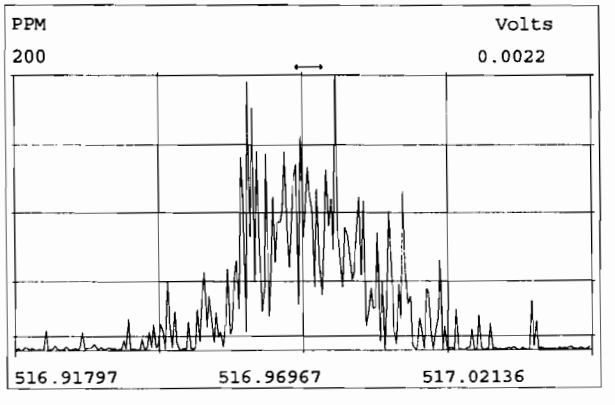












HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST191030D1-1 **Reviewed By:** CT 11/01/19

Initials & Date

End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	✓	NA
Concentrations within criteria?	✓	
TCDD/TCDF Valleys <25%	✓	
First and last eluters present?	✓	
Retention Times within criteria?	✓	
Verification Std. named correctly?	✓	
(ST-Year-Month-Day-VG ID)		
Forms signed and dated?	✓	
Correct ICAL referenced?	DB	

Run Log:

- Correct instrument listed?	✓	✓
- Samples within 12 hour clock?	(Y)	N
- Bottle position verfied?	DB	

	Beg.	End
Mass resolution ≥	✓	✓

☐ 5k ☐ 6-8K ☐ 8K ☑ 10K

1614 1699 429 1613/1668/8280

Intergrated peaks display correctly?	✓	NA
GC Break <20%	NA	

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours: NA

Comments:

FORM 4A/4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory

CCAL ID: ST191030D1-1

Initial Calibration Date: 5-30-19

Instrument ID: VG-7

GC Column ID: DB-225

VER Data Filename: 191030D1 S#2 Analysis Date: 30-OCT-19 Time: 14:30:32

ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE 1613 (ng/mL)	CONC. RANGE 8290 (ng/mL)
2,3,7,8-TCDF	M/M+2	0.73	0.65-0.89	9.7	8.4 - 12.0 (3) 8.6 - 11.6 (4)	8.0 - 12.0
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	103.6	71.0 - 140.0 (3) 76.0 - 131.0 (4)	70.0 - 130.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6a, Method 1613, under VER.

(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 10/30/19

Client ID: 1613 CS3 19C2204 Filename: 191030D1 S:2 Acq:30-OCT-19 14:30:32 ConCal: ST191030D1-1
Lab ID: ST191030D1-1 GC Column ID: DB-225 ICal: 1613TCDFVG7-5-30-19 wt/vol: 1.000 EndCAL: NA

Name	Resp	RA	RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.37e+07	0.80 y	15:34	1.00	100.0	-
13C-2,3,7,8-TCDF	1.45e+07	0.79 y	17:46	1.02	103.6	103.6
2,3,7,8-TCDF	1.34e+06	0.73 y	17:47	0.95	9.749	

Integrations by Analyst: DB
Date: 10/30/19

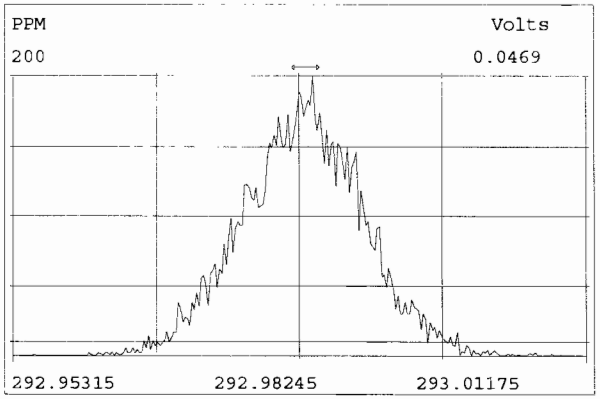
Reviewed by Analyst: CT
Date: 11/01/19

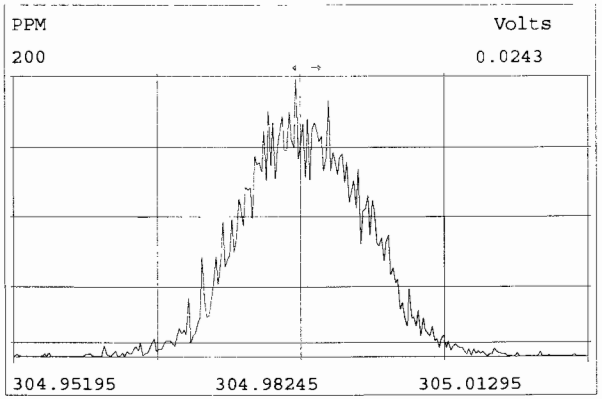
Vista Analytical Laboratory - Injection Log Run file: 191030D1 Instrument ID: VG-7 GC Column ID: DB-225

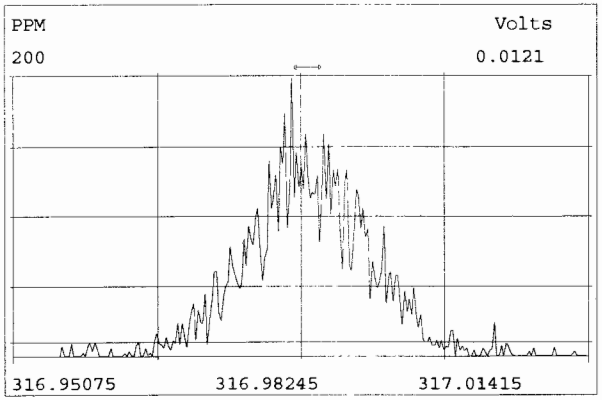
Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191030D1	1	CP191030D1-1	DB	30-OCT-19	13:58:48	ST191030D1-1	NA
191030D1	2	ST191030D1-1	DB	30-OCT-19	14:30:32	ST191030D1-1	NA
191030D1	3	SOLVENT BLANK	DB	30-OCT-19	15:02:23	ST191030D1-1	NA
191030D1	4	1903430-13RE1	DB	30-OCT-19	15:34:14	ST191030D1-1	NA
191030D1	5	1903420-10RE1	DB	30-OCT-19	16:06:00	ST191030D1-1	NA
191030D1	6	1903285-06RE3	DB	30-OCT-19	16:37:44	ST191030D1-1	NA
191030D1	7	B9J0052-DUP1RE1	DB	30-OCT-19	17:09:35	ST191030D1-1	NA
191030D1	8	1903420-09RE1	DB	30-OCT-19	17:41:21	ST191030D1-1	NA
191030D1	9	1903546-14RE1	DB	30-OCT-19	18:13:11	ST191030D1-1	NA
191030D1	10	1903430-05RE1	DB	30-OCT-19	18:45:00	ST191030D1-1	NA
191030D1	11	1903430-06RE1	DB	30-OCT-19	19:16:49	ST191030D1-1	NA
191030D1	12	1903546-12RE1	DB	30-OCT-19	19:48:39	ST191030D1-1	NA
191030D1	13	1903546-13RE1	DB	30-OCT-19	20:20:29	ST191030D1-1	NA

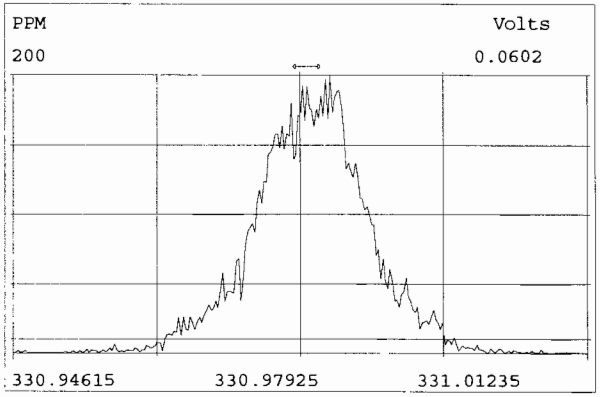
Peak Locate Examination:30-OCT-2019:13:58 File:191030D1

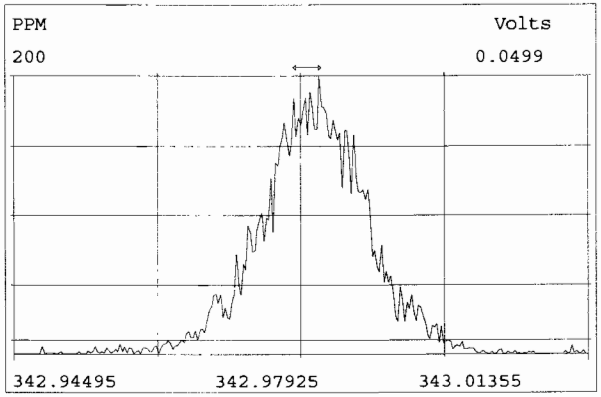
Experiment:TCDF_DB225 Function:1 Reference:PFK

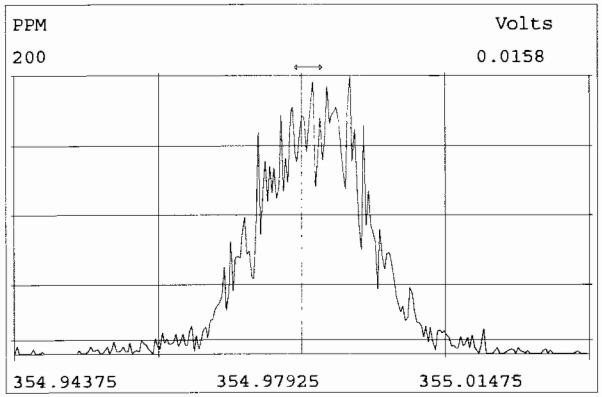


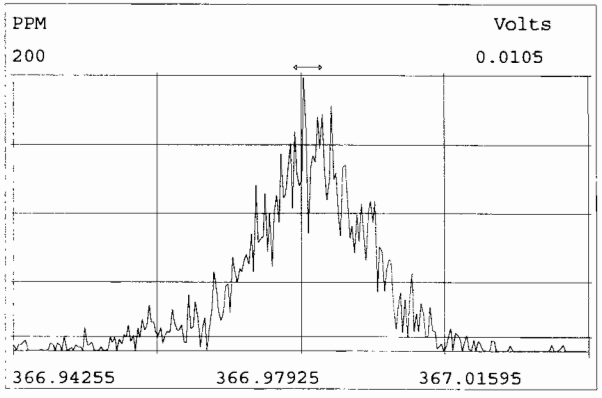


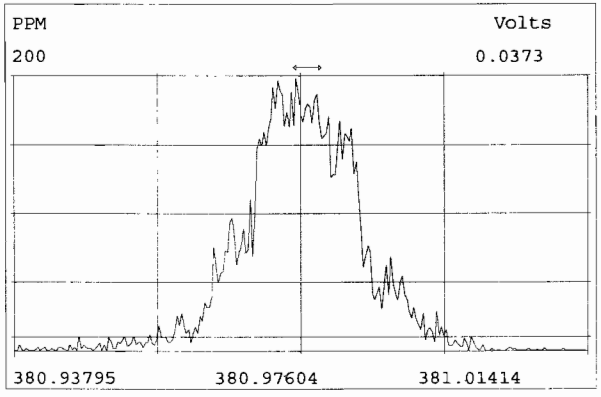




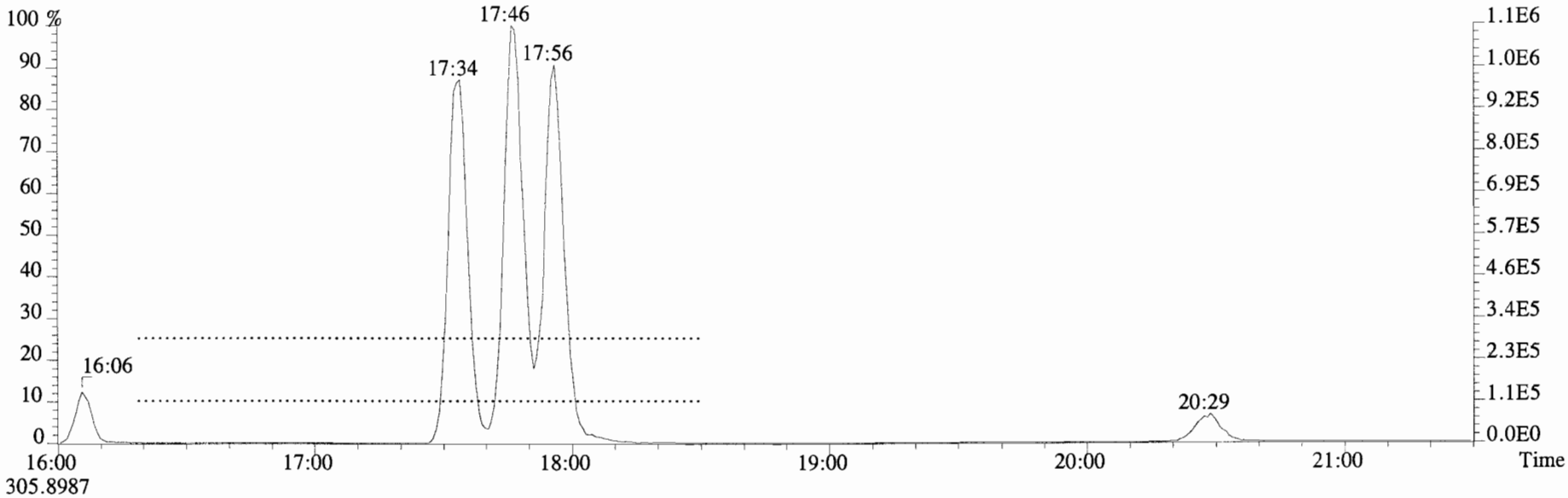




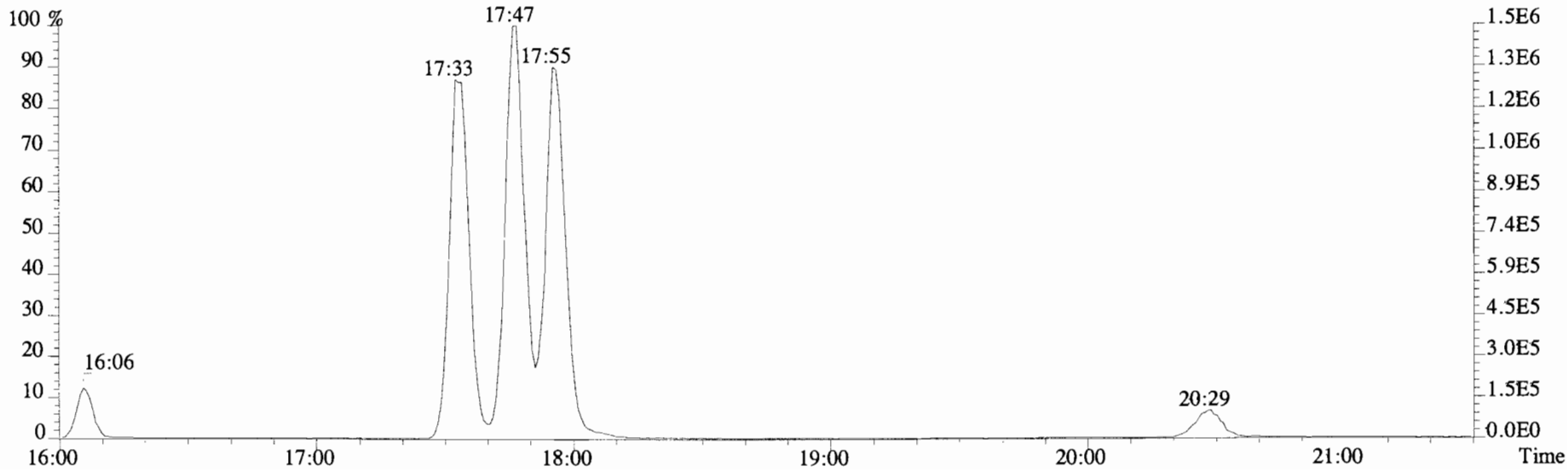




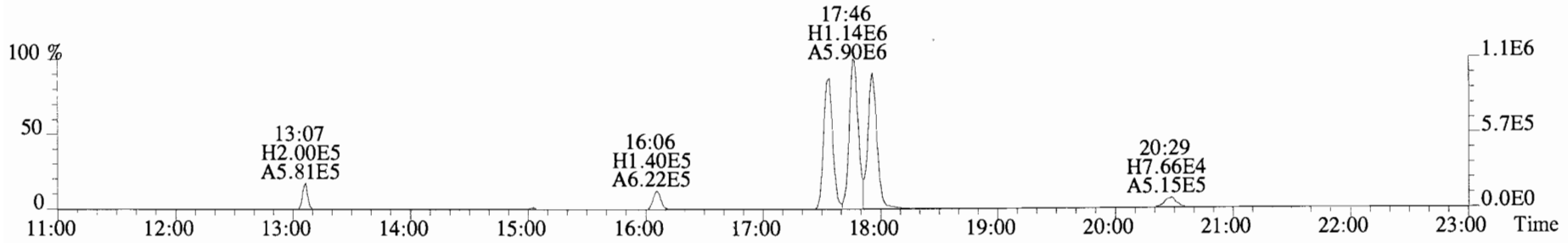
File:191030D1 #1-1159 Acq:30-OCT-2019 13:58:48 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:CP191030D1-1 DB225 CPSM Exp:TCDF_DB225
303.9016



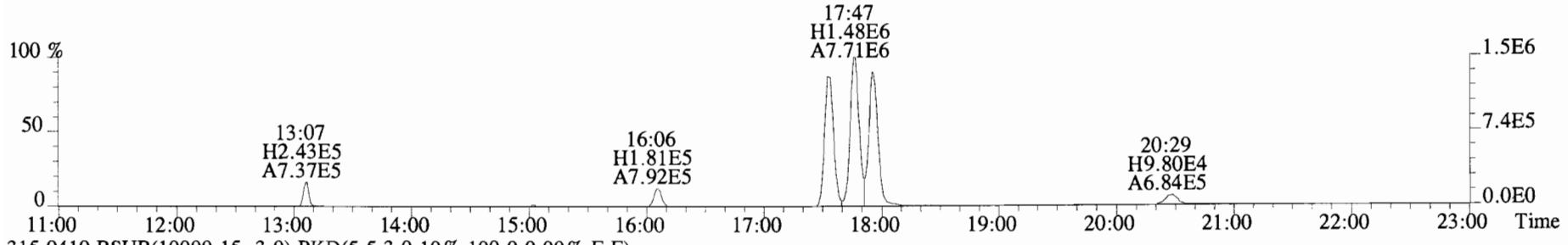
305.8987



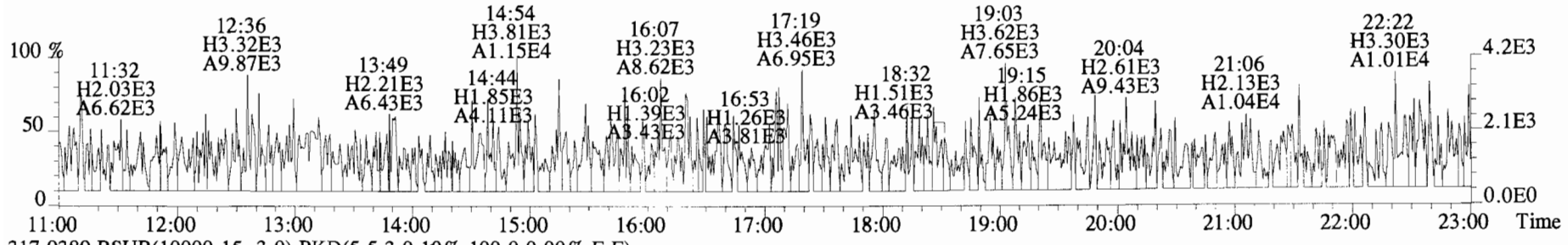
File:191030D1 #1-1682 Acq:30-OCT-2019 13:58:48 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:CP191030D1-1 DB225 CPSM Exp:TCDF_DB225
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



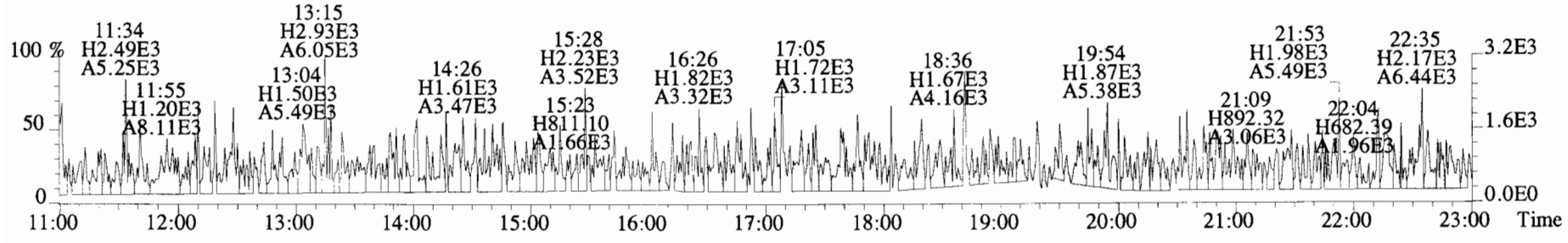
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

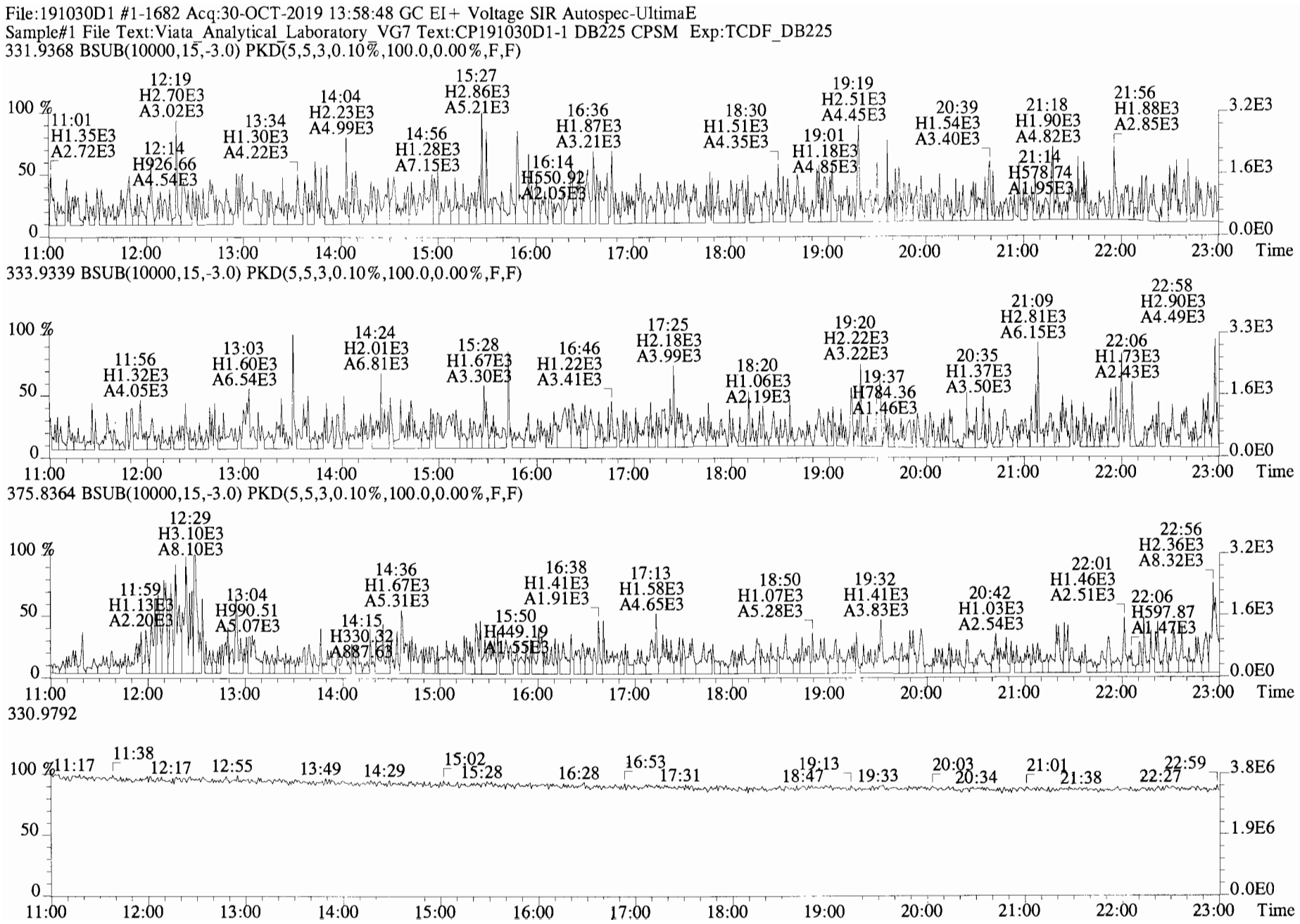


315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

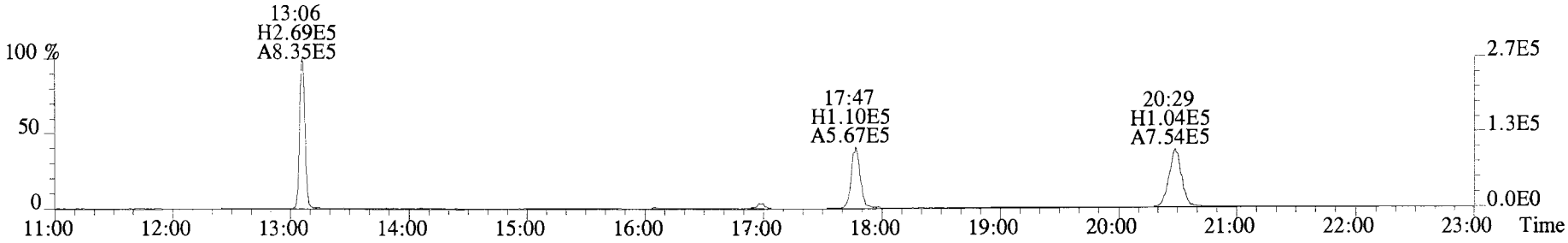


317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

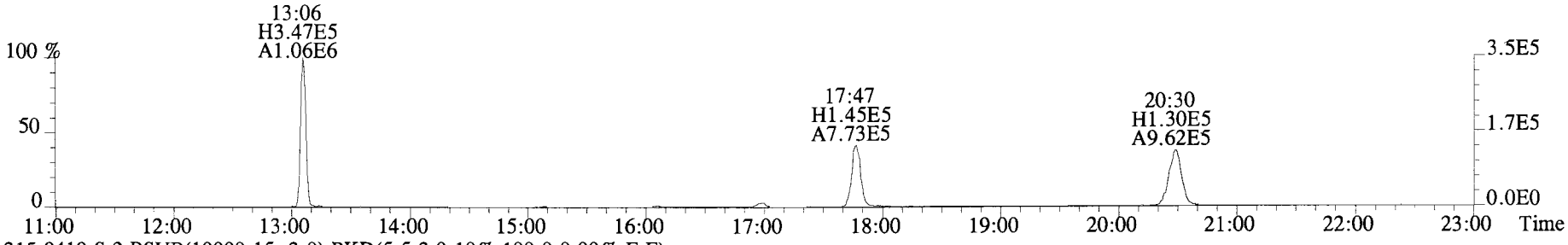



File:191030D1 #1-1682 Acq:30-OCT-2019 13:58:48 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Viata_Analytical_Laboratory_VG7 Text:CP191030D1-1 DB225 CPSM Exp:TCDF_DB225
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
11:01 H1.35E3 A2.72E3
12:14 H926.66 A4.54E3
12:19 H2.70E3 A3.02E3
13:34 H1.30E3 A4.22E3
14:04 H2.23E3 A4.99E3
14:56 H1.28E3 A7.15E3
15:27 H2.86E3 A5.21E3
16:14 H550.92 A2.05E3
16:36 H1.87E3 A3.21E3
18:30 H1.51E3 A4.35E3
19:01 H1.18E3 A4.85E3
19:19 H2.51E3 A4.45E3
20:39 H1.54E3 A3.40E3
21:14 H578.74 A1.95E3
21:18 H1.90E3 A4.82E3
21:56 H1.88E3 A2.85E3
100 %
50
0
3.2E3
1.6E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
11:56 H1.32E3 A4.05E3
13:03 H1.60E3 A6.54E3
14:24 H2.01E3 A6.81E3
15:28 H1.67E3 A3.30E3
16:46 H1.22E3 A3.41E3
17:25 H2.18E3 A3.99E3
18:20 H1.06E3 A2.19E3
19:20 H2.22E3 A3.22E3
19:37 H784.36 A1.46E3
20:35 H1.37E3 A3.50E3
21:09 H2.81E3 A6.15E3
22:06 H1.73E3 A2.43E3
22:58 H2.90E3 A4.49E3
100 %
50
0
3.3E3
1.6E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
11:59 H1.13E3 A2.20E3
12:29 H3.10E3 A8.10E3
13:04 H990.51 A5.07E3
14:15 H330.32 A887.63
14:36 H1.67E3 A5.31E3
15:50 H449.19 A1.55E3
16:38 H1.41E3 A1.91E3
17:13 H1.58E3 A4.65E3
18:50 H1.07E3 A5.28E3
19:32 H1.41E3 A3.83E3
20:42 H1.03E3 A2.54E3
22:01 H1.46E3 A2.51E3
22:06 H597.87 A1.47E3
22:56 H2.36E3 A8.32E3
100 %
50
0
3.2E3
1.6E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
330.9792
11:17 11:38 12:17 12:55 13:49 14:29 15:02 15:28 16:28 16:53 17:31 18:47 19:13 19:33 20:03 20:34 21:01 21:38 22:27 22:59
100 %
50
0
3.8E6
1.9E6
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time

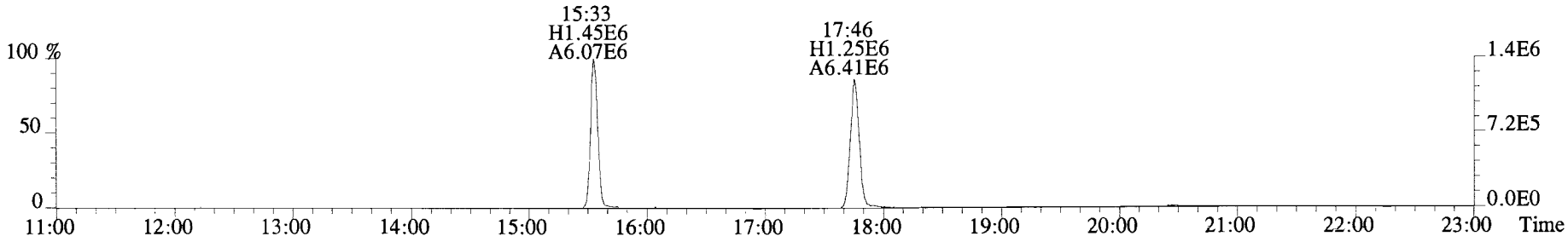
File:191030D1 #1-1682 Acq:30-OCT-2019 14:30:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191030D1-1 1613 CS3 19C2204 Exp:TCDF_DB225
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



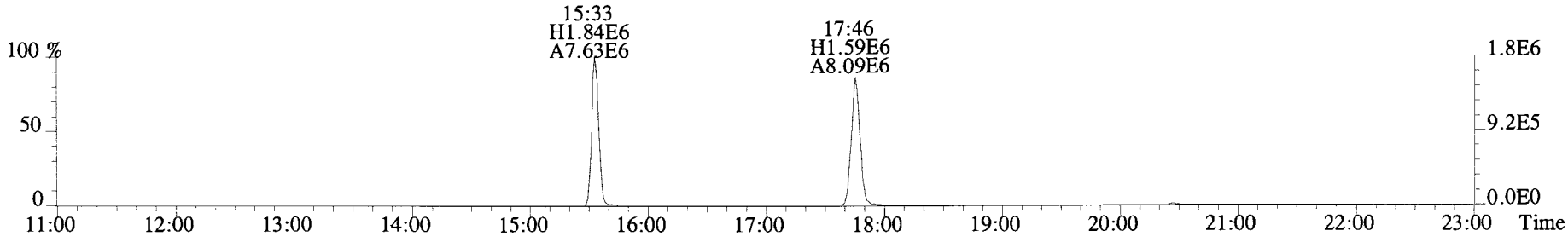
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



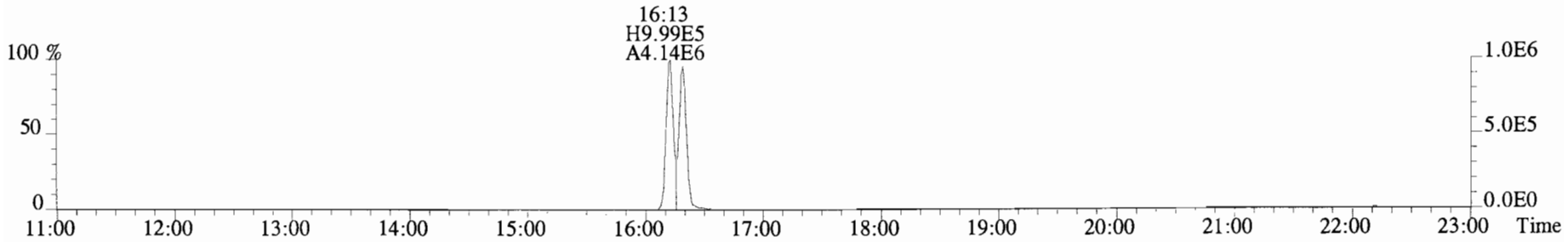
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



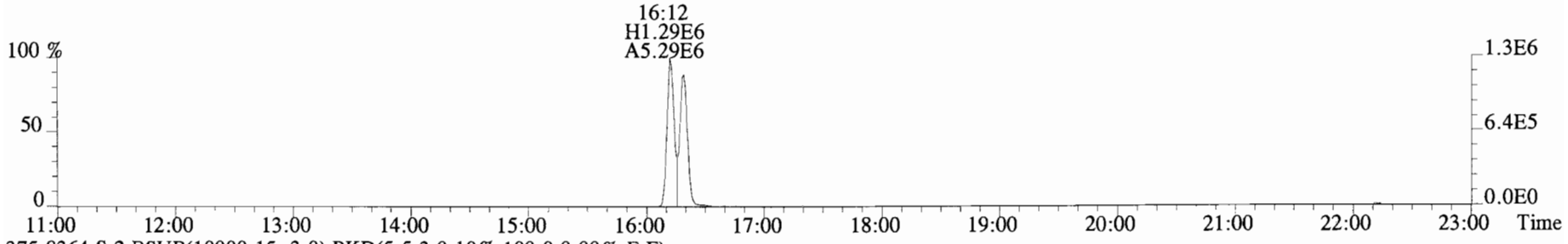
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



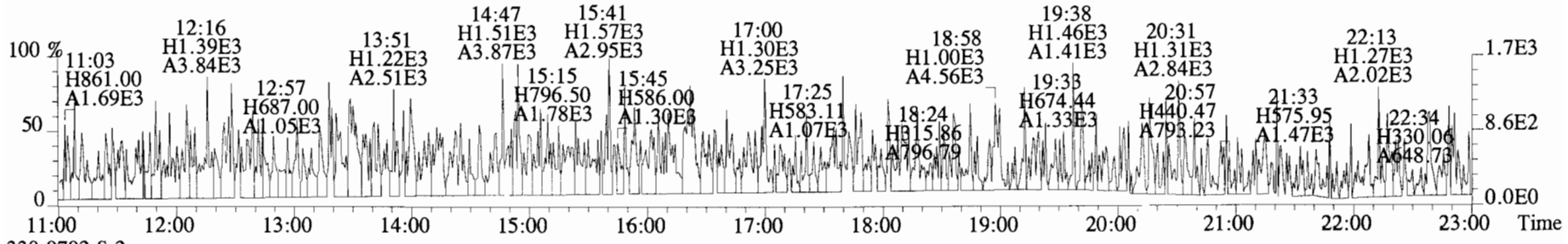
File:191030D1 #1-1682 Acq:30-OCT-2019 14:30:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Viata_Analytical_Laboratory_VG7 Text:ST191030D1-1 1613 CS3 19C2204 Exp:TCDF_DB225
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



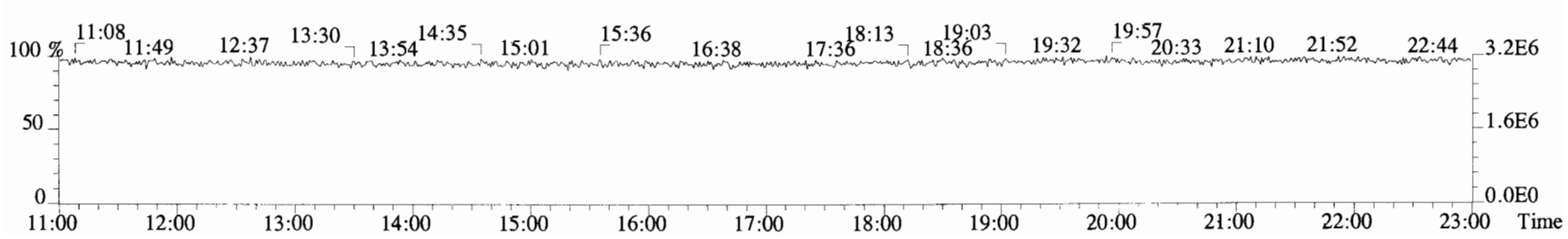
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

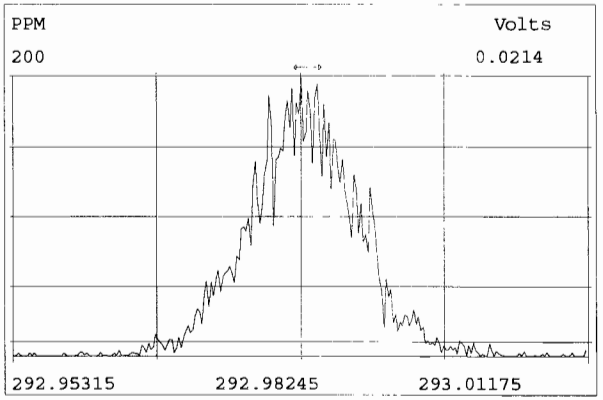


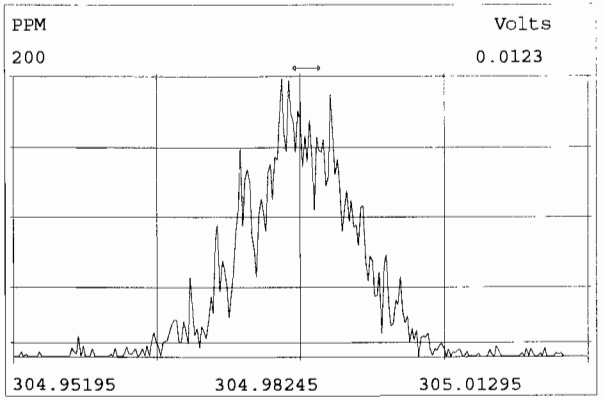
330.9792 S:2

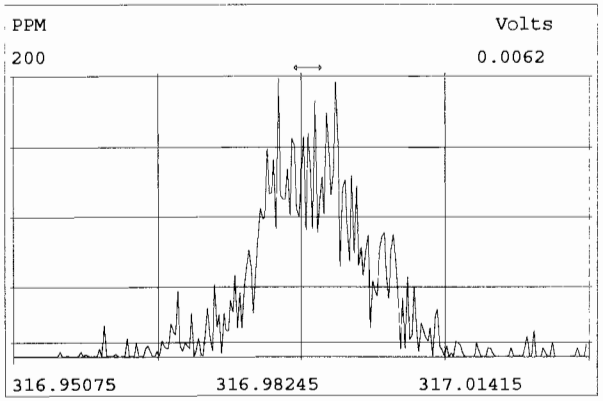


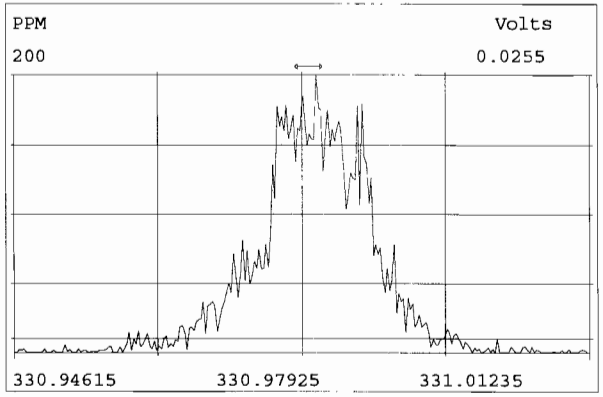
Peak Locate Examination:30-OCT-2019:21:01 File:RES_CHECK

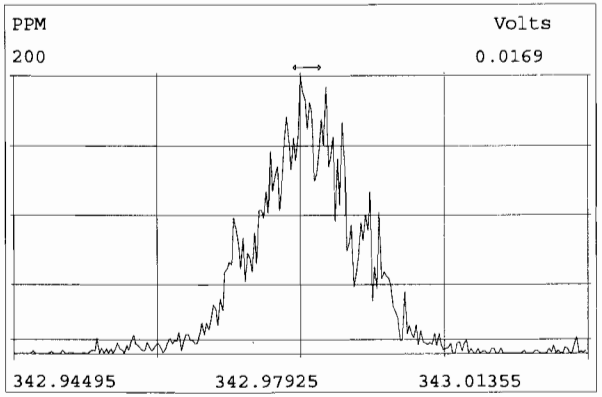
Experiment:TCDF_DB225 Function:1 Reference:PFK

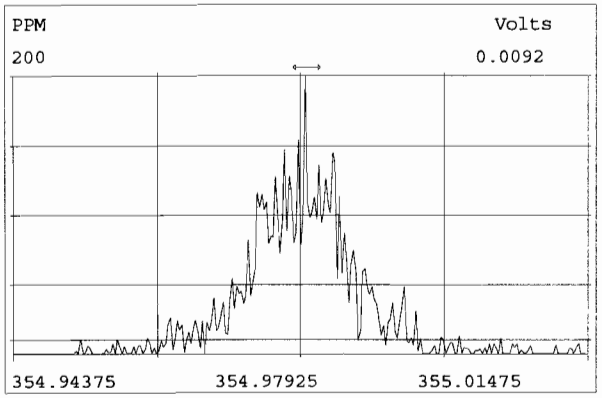


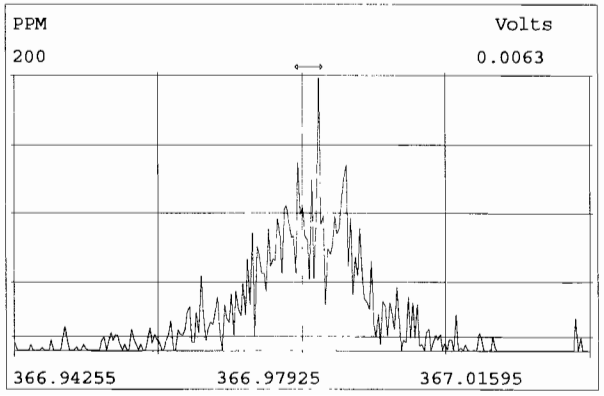


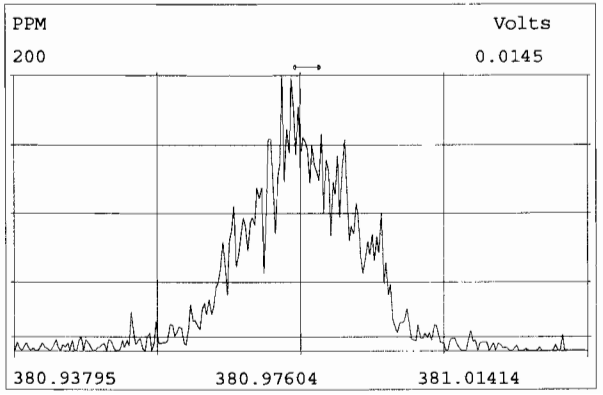












HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST191216D1-1 **Reviewed By:** CT 12/17/19

Initials & Date

End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	☑	NA
Concentrations within criteria?	☑	☐
TCDD/TCDF Valleys <25%	☑	☐
First and last eluters present?	☑	☐
Retention Times within criteria?	☑	☐
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	☑	☐
Forms signed and dated?	☑	☐
Correct ICAL referenced?	DB	

Run Log:

- Correct instrument listed?	☑	☑
- Samples within 12 hour clock?	(Y)	N
- Bottle position verfied?	DB	

	Beg.	End
Mass resolution ≥	☑	☑

☐ 5k ☐ 6-8K ☐ 8K ☑ 10K

1614 1699 429 1613/1668/8280

Intergrated peaks display correctly?	☑	NA

GC Break <20% NA

8280 CS1 End Standard:

- Ratios within limits, S/N <2.5:1, CS1 within 12 hours NA

Comments:

FORM 4A/4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory CCAL ID: ST191216D1-1

Initial Calibration Date: 5-30-19

Instrument ID: VG-7 GC Column ID: DB-225

VER Data Filename: 191216D1 S#2 Analysis Date: 16-DEC-19 Time: 14:33:44

ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE 1613 (ng/mL)	CONC. RANGE 8290 (ng/mL)
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	11.5	8.4 - 12.0 (3) 8.6 - 11.6 (4)	8.0 - 12.0
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	102.3	71.0 - 140.0 (3) 76.0 - 131.0 (4)	70.0 - 130.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6a, Method 1613, under VER.

(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 12/16/19

Client ID: 1613 CS3 19C2204 Filename: 191216D1 S:2 Acq:16-DEC-19 14:33:44 ConCal: ST191216D1-1
Lab ID: ST191216D1-1 GC Column ID: DB-225 ICal: 1613TCDFVG7-5-30-19 wt/vol: 1.000 EndCAL: NA

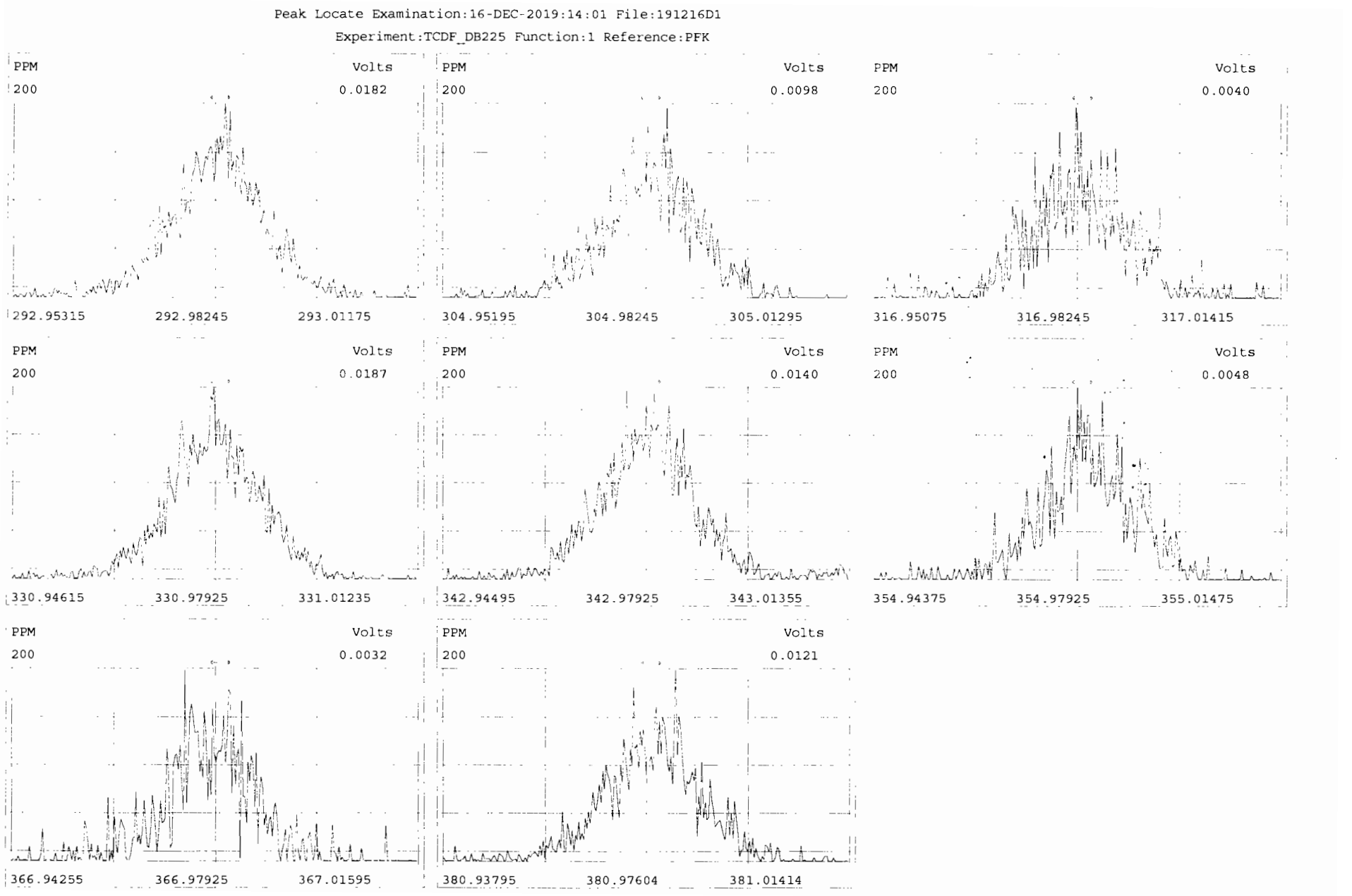
Name	Resp	RA	RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.01e+07	0.79 y	15:35	1.00	100.0	-
13C-2,3,7,8-TCDF	1.05e+07	0.78 y	17:41	1.02	102.3	102.3
2,3,7,8-TCDF	1.14e+06	0.80 y	17:43	0.95	11.46	

Integrations by Analyst: DB Date: 12/16/19

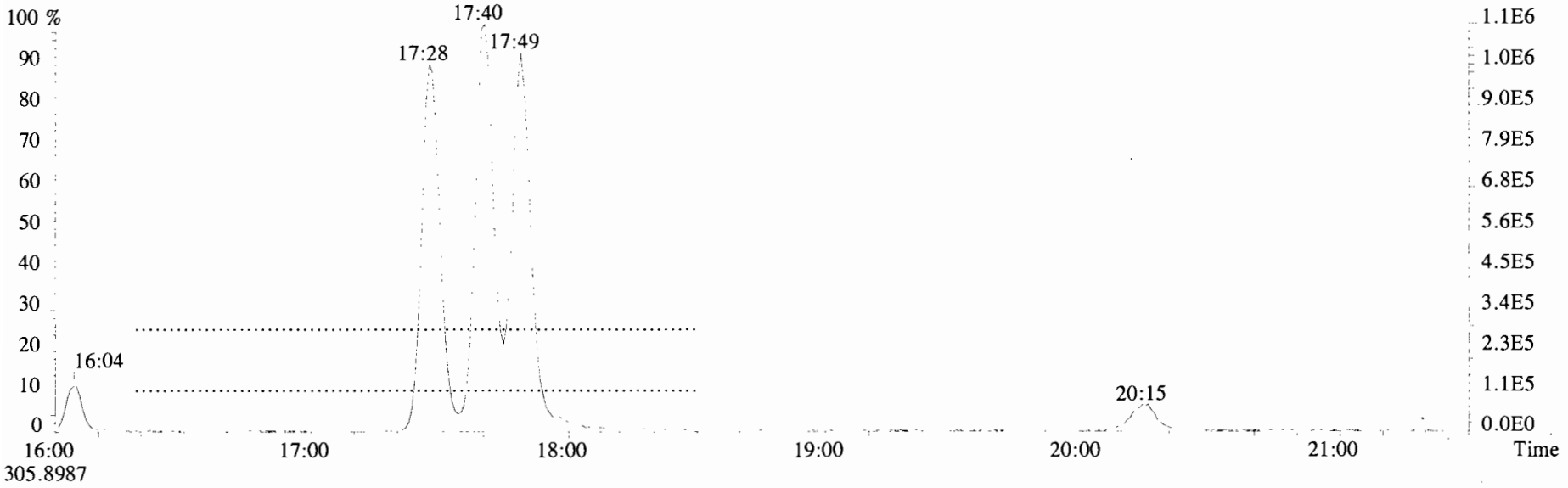
Reviewed by Analyst: CT Date: 12/17/19

Vista Analytical Laboratory - Injection Log Run file: 191216D1 Instrument ID: VG-7 GC Column ID: DB-225

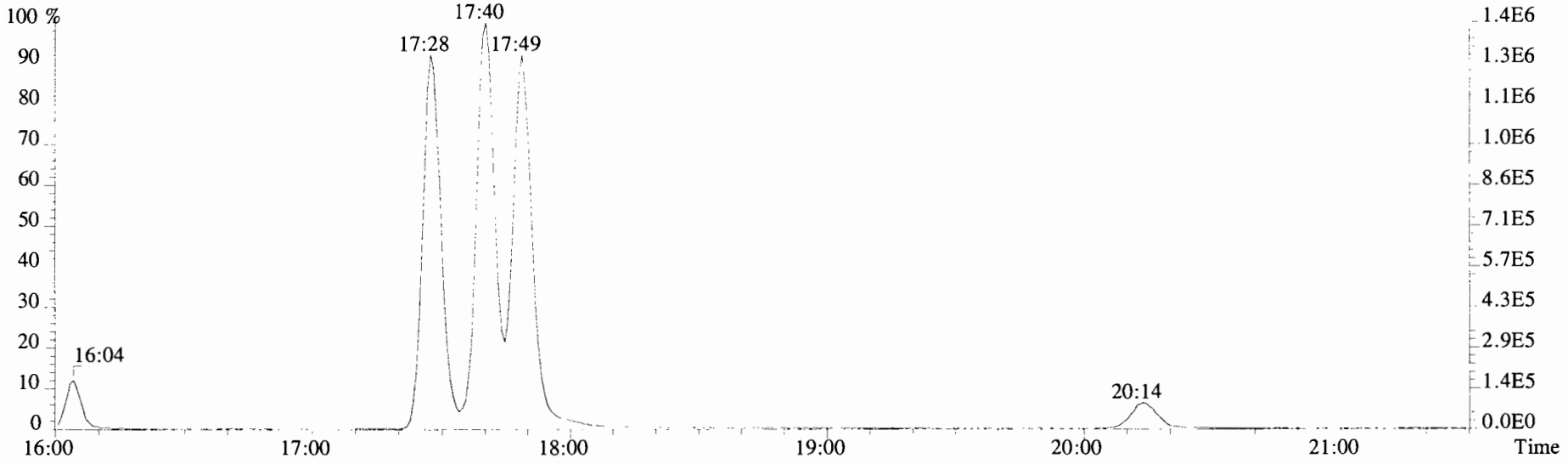
Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191216D1	1	CP191216D1-1	DB	16-DEC-19	14:01:29	ST191216D1-1	NA
191216D1	2	ST191216D1-1	DB	16-DEC-19	14:33:44	ST191216D1-1	NA
191216D1	3	SOLVENT BLANK	DB	16-DEC-19	15:06:01	ST191216D1-1	NA
191216D1	4	1904021-04RE1	DB	16-DEC-19	15:38:18	ST191216D1-1	NA
191216D1	5	1904021-01RE1	DB	16-DEC-19	16:10:34	ST191216D1-1	NA
191216D1	6	1903430-06RE3	DB	16-DEC-19	16:42:50	ST191216D1-1	NA
191216D1	7	1903828-01RE1	DB	16-DEC-19	17:15:07	ST191216D1-1	NA

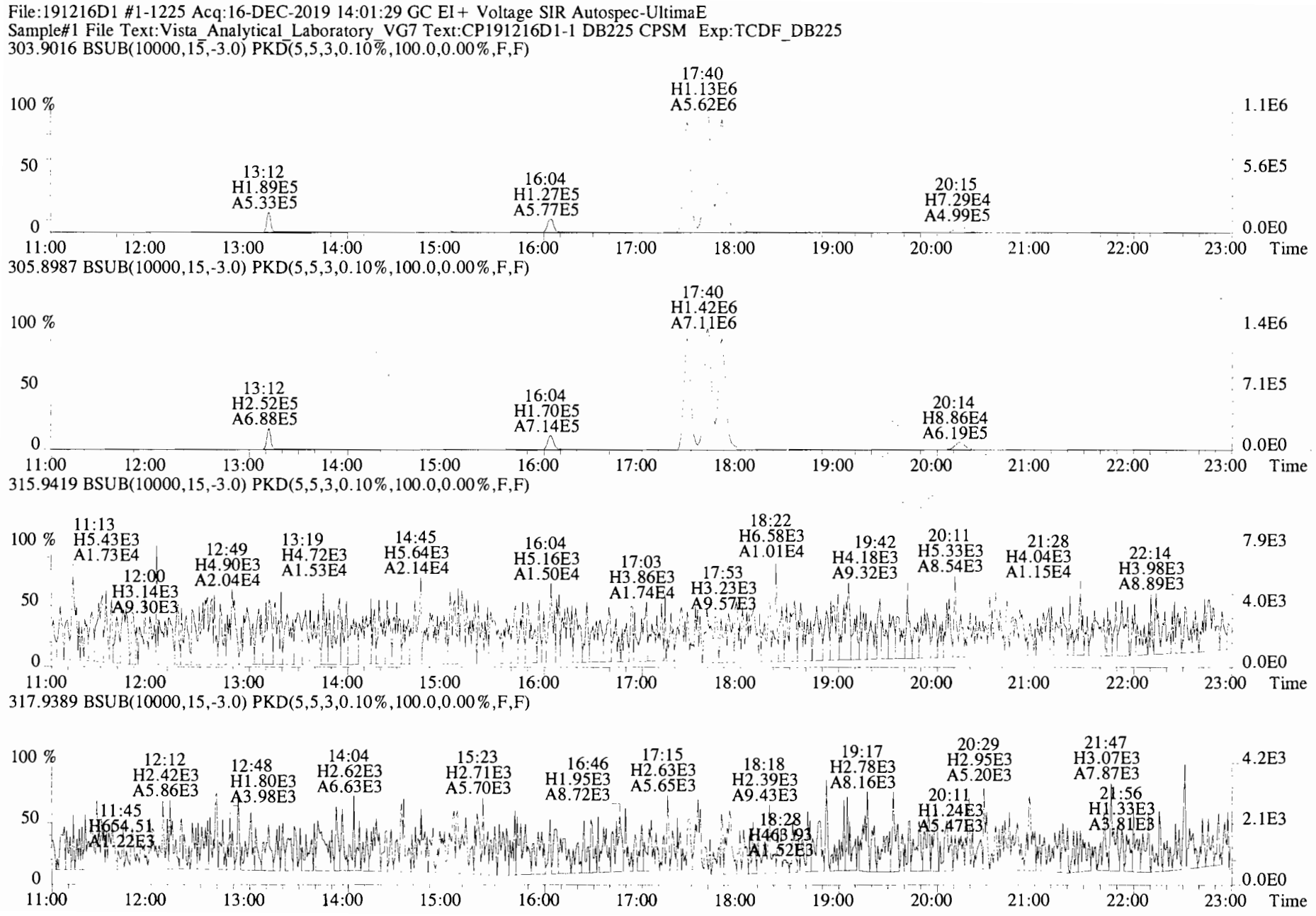

Peak Locate Examination:16-DEC-2019:14:01 File:191216D1
Experiment:TCDF_DB225 Function:1 Reference:PFK
PPM
Volts
200
0.0182
292.95315
292.98245
293.01175
PPM
Volts
200
0.0098
304.95195
304.98245
305.01295
PPM
Volts
200
0.0040
316.95075
316.98245
317.01415
PPM
Volts
200
0.0187
330.94615
330.97925
331.01235
PPM
Volts
200
0.0140
342.94495
342.97925
343.01355
PPM
Volts
200
0.0048
354.94375
354.97925
355.01475
PPM
Volts
200
0.0032
366.94255
366.97925
367.01595
PPM
Volts
200
0.0121
380.93795
380.97604
381.01414

File:191216D1 #1-1194 Acq:16-DEC-2019 14:01:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:CP191216D1-1 DB225 CPSM Exp:TCDF_DB225
303.9016

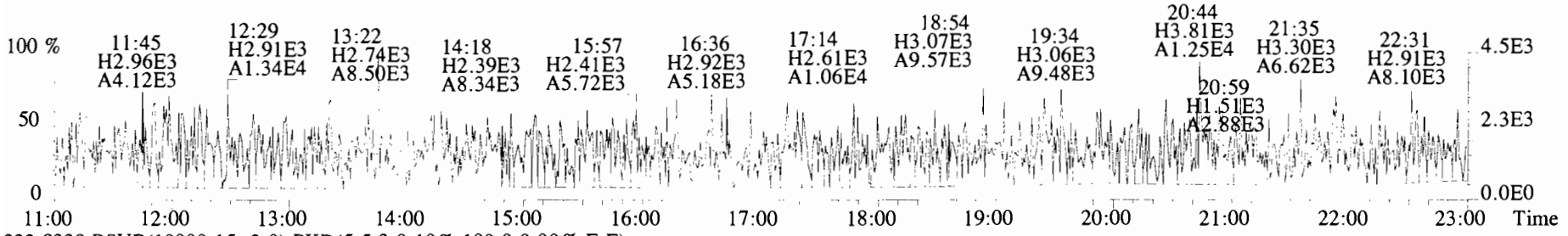


305.8987

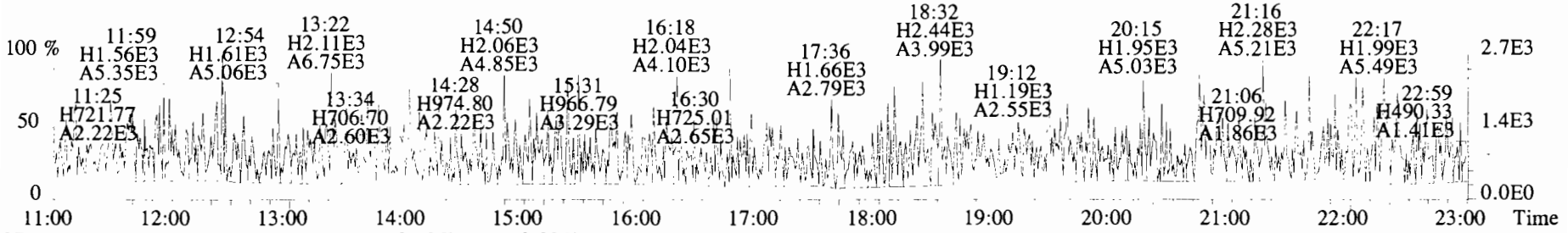



File:191216D1 #1-1225 Acq:16-DEC-2019 14:01:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:CP191216D1-1 DB225 CPSM Exp:TCDF_DB225
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
17:40
H1.13E6
A5.62E6
13:12
H1.89E5
A5.33E5
16:04
H1.27E5
A5.77E5
20:15
H7.29E4
A4.99E5
100 %
50
0
1.1E6
5.6E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
17:40
H1.42E6
A7.11E6
13:12
H2.52E5
A6.88E5
16:04
H1.70E5
A7.14E5
20:14
H8.86E4
A6.19E5
100 %
50
0
1.4E6
7.1E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
11:13
H5.43E3
A1.73E4
12:00
H3.14E3
A9.30E3
12:49
H4.90E3
A2.04E4
13:19
H4.72E3
A1.53E4
14:45
H5.64E3
A2.14E4
16:04
H5.16E3
A1.50E4
17:03
H3.86E3
A1.74E4
17:53
H3.23E3
A9.57E3
18:22
H6.58E3
A1.01E4
19:42
H4.18E3
A9.32E3
20:11
H5.33E3
A8.54E3
21:28
H4.04E3
A1.15E4
22:14
H3.98E3
A8.89E3
100 %
50
0
7.9E3
4.0E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
11:45
H664.51
A1.22E3
12:12
H2.42E3
A5.86E3
12:48
H1.80E3
A3.98E3
14:04
H2.62E3
A6.63E3
15:23
H2.71E3
A5.70E3
16:46
H1.95E3
A8.72E3
17:15
H2.63E3
A5.65E3
18:18
H2.39E3
A9.43E3
18:28
H463.93
A1.52E3
19:17
H2.78E3
A8.16E3
20:11
H1.24E3
A5.47E3
20:29
H2.95E3
A5.20E3
21:47
H3.07E3
A7.87E3
21:56
H1.33E3
A3.81E3
100 %
50
0
4.2E3
2.1E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time

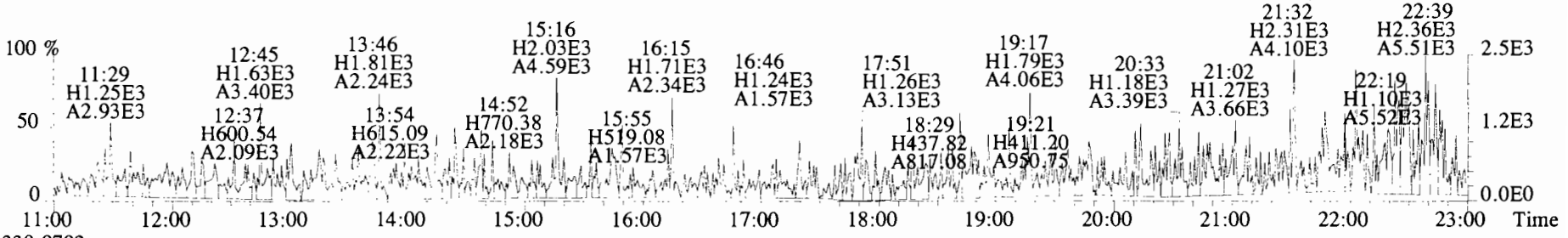
File:191216D1 #1-1229 Acq:16-DEC-2019 14:01:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:CP191216D1-1 DB225 CPSM Exp:TCDF_DB225
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



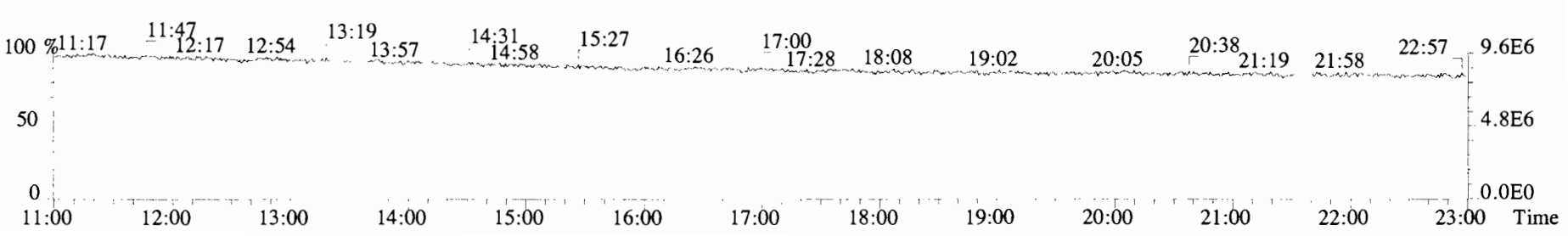
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



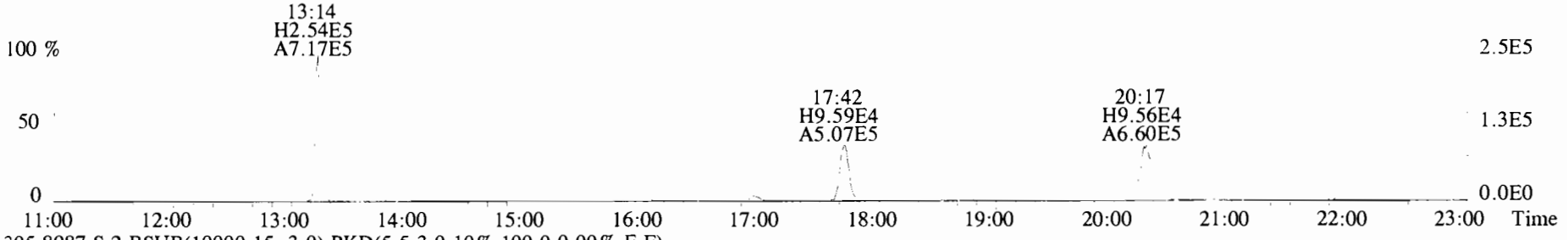
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



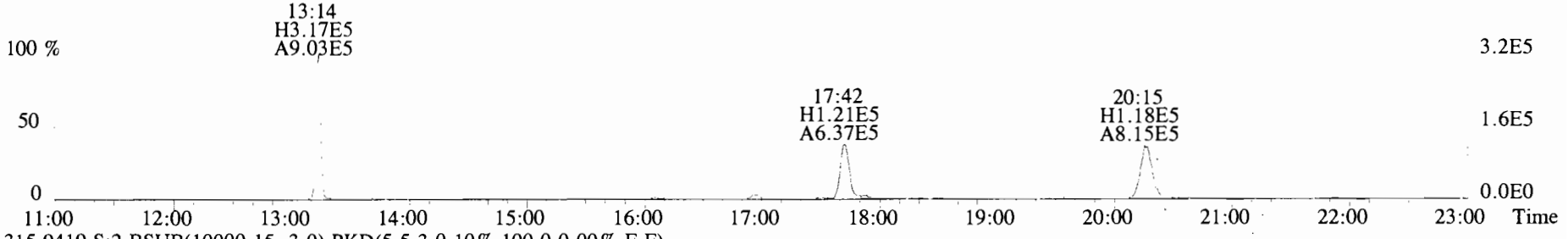
330.9792



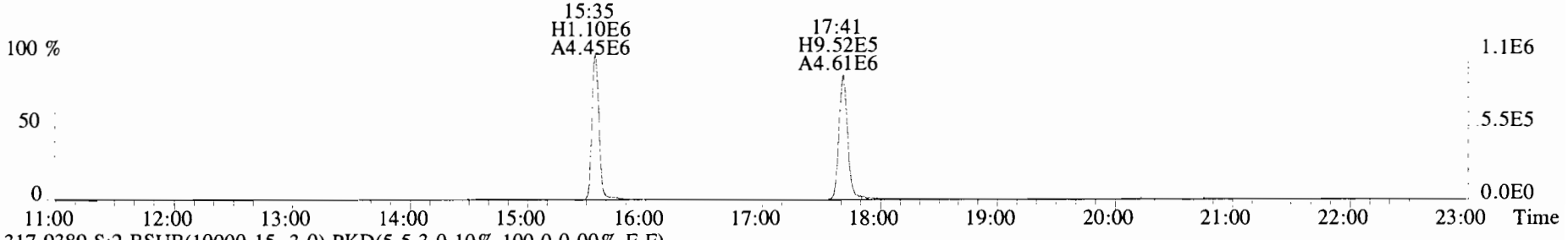
File:191216D1 #1-1682 Acq:16-DEC-2019 14:33:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191216D1-1 1613 CS3 19C2204 Exp:TCDF_DB225
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



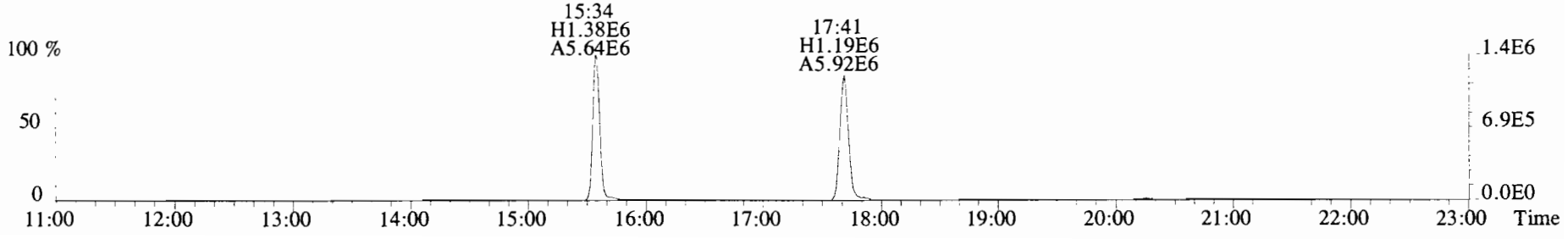
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

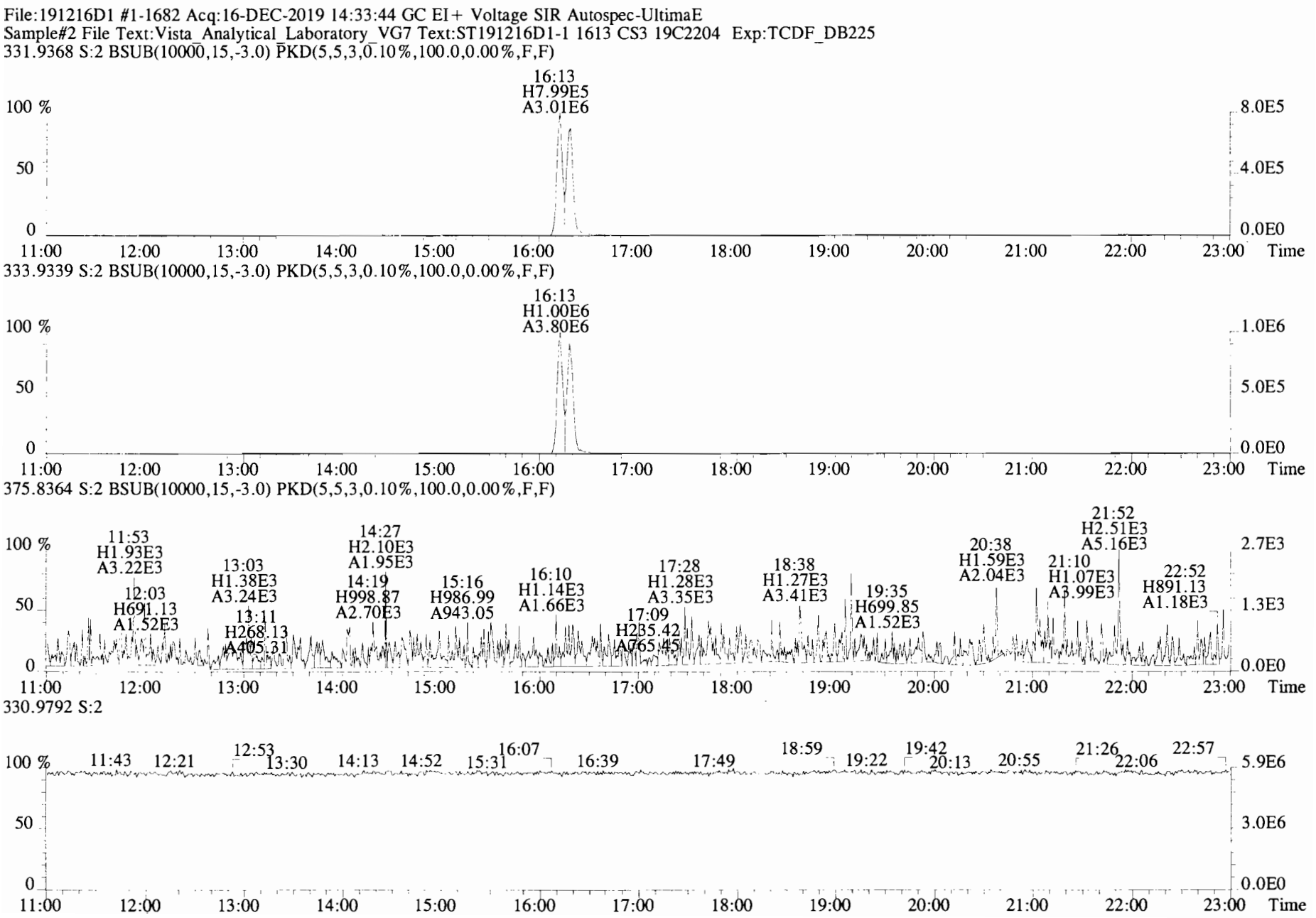


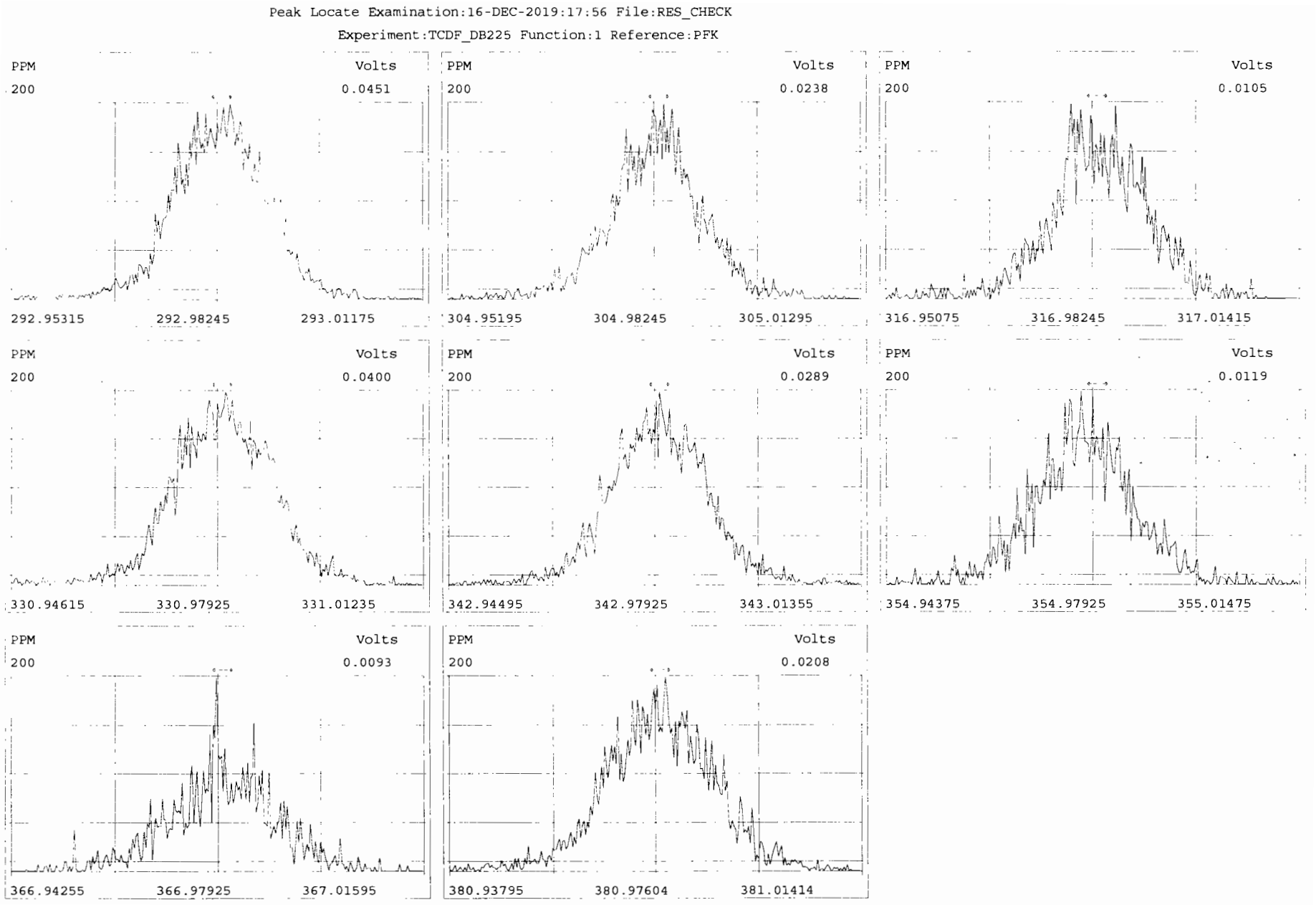
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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




File:191216D1 #1-1682 Acq:16-DEC-2019 14:33:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191216D1-1 1613 CS3 19C2204 Exp:TCDF_DB225
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:13
H7.99E5
A3.01E6
100 %
50
0
8.0E5
4.0E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:13
H1.00E6
A3.80E6
100 %
50
0
1.0E6
5.0E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
11:53
H1.93E3
A3.22E3
12:03
H691.13
A1.52E3
13:03
H1.38E3
A3.24E3
13:11
H268.13
A405.31
14:27
H2.10E3
A1.95E3
14:19
H998.87
A2.70E3
15:16
H986.99
A943.05
16:10
H1.14E3
A1.66E3
17:28
H1.28E3
A3.35E3
17:09
H235.42
A765.45
18:38
H1.27E3
A3.41E3
19:35
H699.85
A1.52E3
20:38
H1.59E3
A2.04E3
21:52
H2.51E3
A5.16E3
21:10
H1.07E3
A3.99E3
22:52
H891.13
A1.18E3
100 %
50
0
2.7E3
1.3E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
330.9792 S:2
11:43 12:21 12:53 13:30 14:13 14:52 15:31 16:07 16:39 17:49 18:59 19:22 19:42 20:13 20:55 21:26 22:06 22:57
100 %
50
0
5.9E6
3.0E6
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time


Peak Locate Examination:16-DEC-2019:17:56 File:RES_CHECK
Experiment:TCDF_DB225 Function:1 Reference:PFK
PPM
Volts
200
0.0451
292.95315
292.98245
293.01175
PPM
Volts
200
0.0238
304.95195
304.98245
305.01295
PPM
Volts
200
0.0105
316.95075
316.98245
317.01415
PPM
Volts
200
0.0400
330.94615
330.97925
331.01235
PPM
Volts
200
0.0289
342.94495
342.97925
343.01355
PPM
Volts
200
0.0119
354.94375
354.97925
355.01475
PPM
Volts
200
0.0093
366.94255
366.97925
367.01595
PPM
Volts
200
0.0208
380.93795
380.97604
381.01414

INITIAL CALIBRATION

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory

Run: 191009D1 Analyte: Cal: 1613VG7-10-9-19 Inst. ID. VG-7

Data filename: 191009D1

Name	Mean RRF	%RSD	Samp# 1 0.25 RRF#1	Samp# 2 0.50 RRF#2	Samp# 3 2.0 RRF#3	Samp# 4 10 RRF#4	Samp# 5 40 RRF#5	Samp# 6 300 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 10/10/19 CT 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

JB
10/10/19

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

DB
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

Name	Mean RRF	%RSD	Samp# 1 RRF#1 (0.25)	Samp# 2 RRF#2 (0.50)	Samp# 3 RRF#3 (2.0)	Samp# 4 RRF#4 (10)	Samp# 5 RRF#5 (40)	Samp# 6 RRF#6 (300)
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	*	*	*	*	*	*

DB
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).

==========

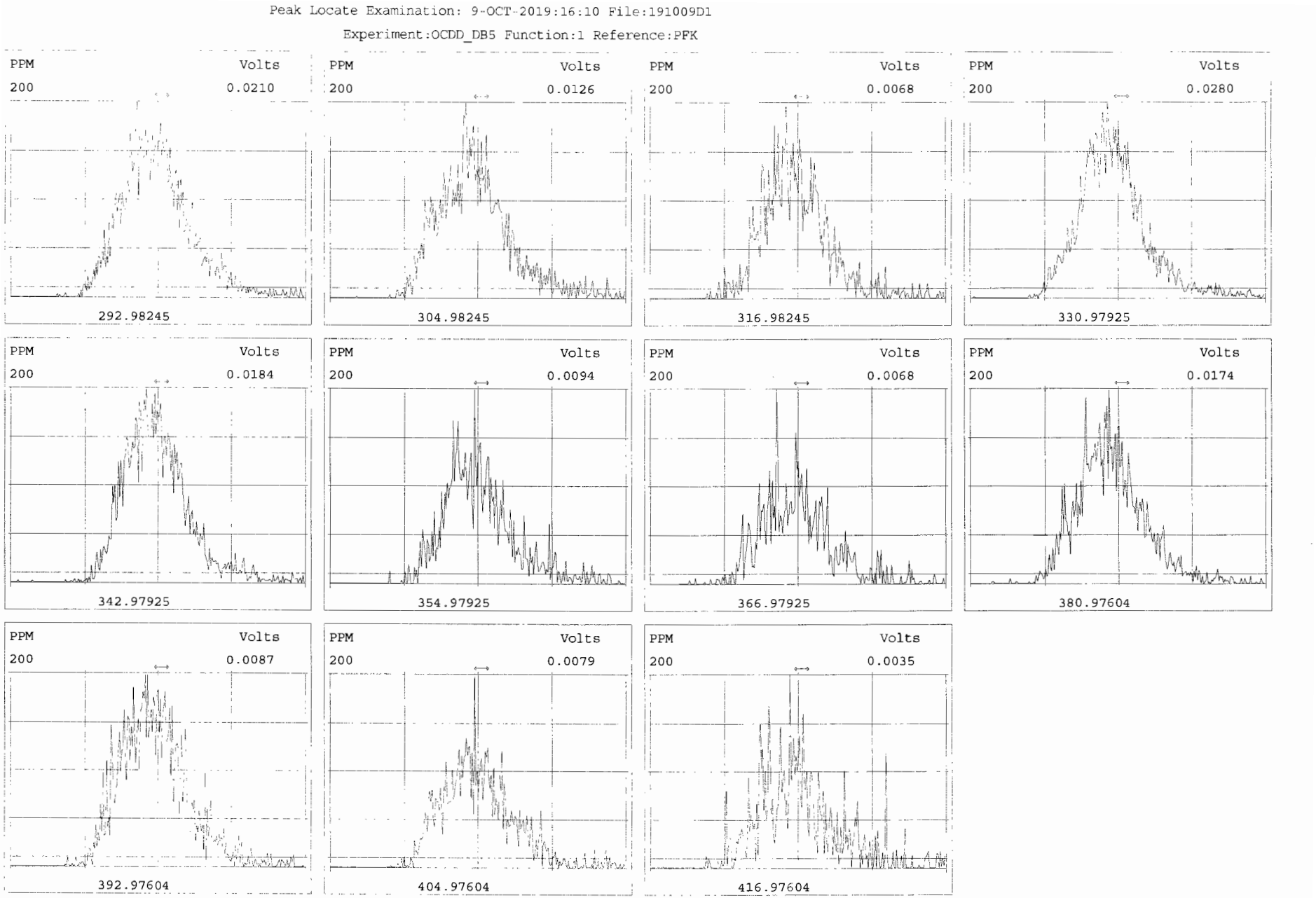
ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

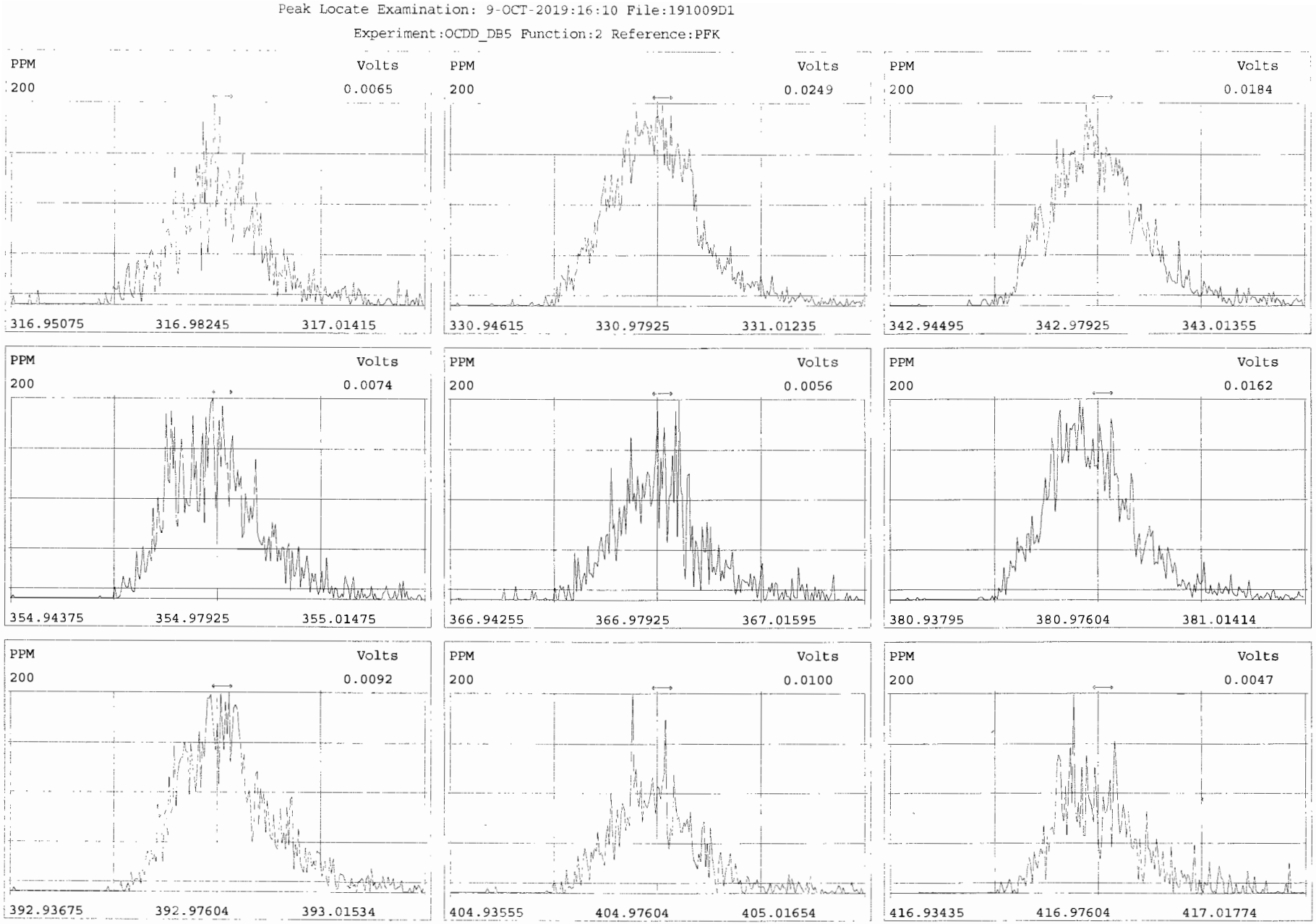
COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

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

Analyst: DB

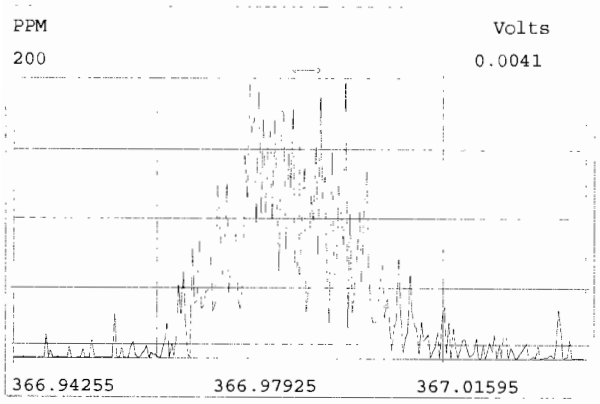
Date: 10/10/19

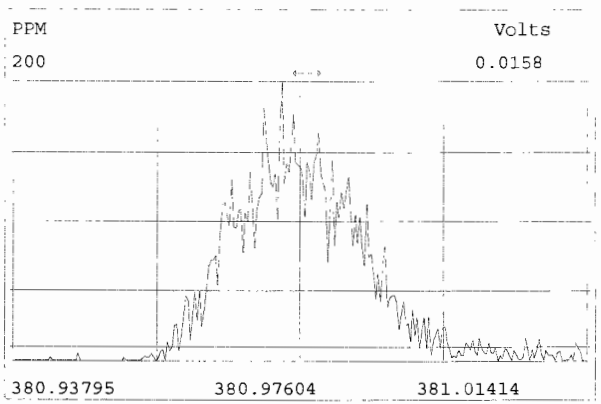

Peak Locate Examination: 9-OCT-2019:16:10 File:191009D1
Experiment:OCDD_DB5 Function:1 Reference:PFK
PPM
Volts
200
0.0210
292.98245
PPM
Volts
200
0.0126
304.98245
PPM
Volts
200
0.0068
316.98245
PPM
Volts
200
0.0280
330.97925
PPM
Volts
200
0.0184
342.97925
PPM
Volts
200
0.0094
354.97925
PPM
Volts
200
0.0068
366.97925
PPM
Volts
200
0.0174
380.97604
PPM
Volts
200
0.0087
392.97604
PPM
Volts
200
0.0079
404.97604
PPM
Volts
200
0.0035
416.97604

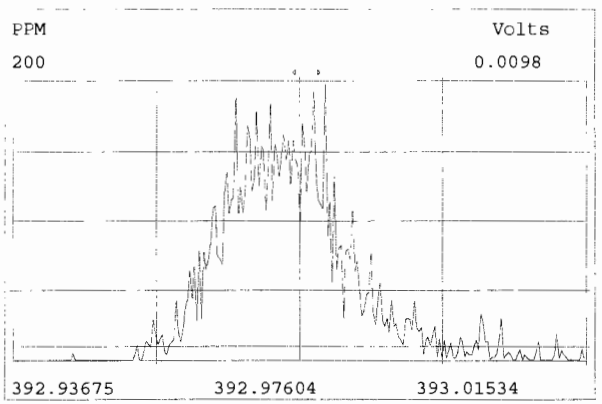

Peak Locate Examination: 9-OCT-2019:16:10 File:191009D1
Experiment:OCDD_DB5 Function:2 Reference:PFK
PPM
Volts
200
0.0065
316.95075
316.98245
317.01415
PPM
Volts
200
0.0249
330.94615
330.97925
331.01235
PPM
Volts
200
0.0184
342.94495
342.97925
343.01355
PPM
Volts
200
0.0074
354.94375
354.97925
355.01475
PPM
Volts
200
0.0056
366.94255
366.97925
367.01595
PPM
Volts
200
0.0162
380.93795
380.97604
381.01414
PPM
Volts
200
0.0092
392.93675
392.97604
393.01534
PPM
Volts
200
0.0100
404.93555
404.97604
405.01654
PPM
Volts
200
0.0047
416.93435
416.97604
417.01774

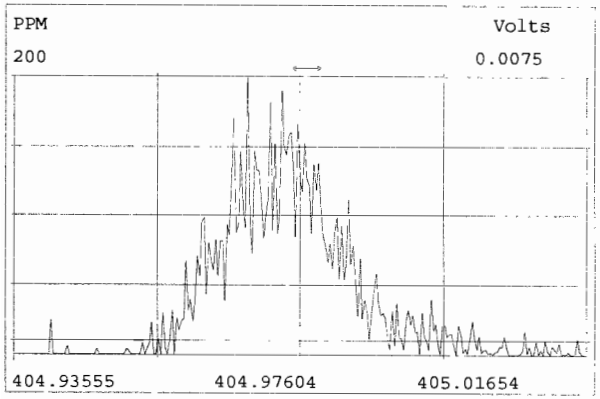
Peak Locate Examination: 9-OCT-2019:16:11 File:191009D1

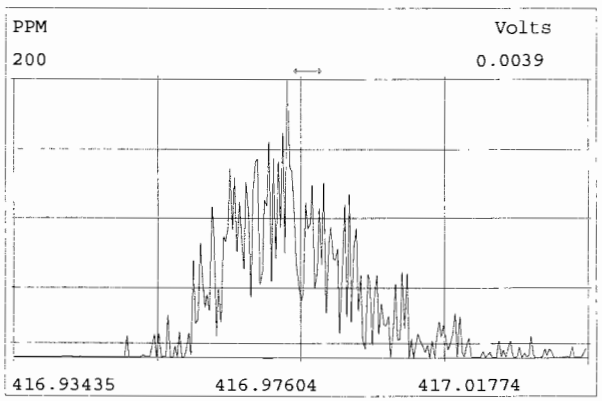
Experiment:OCDD_DB5 Function:3 Reference:PFK

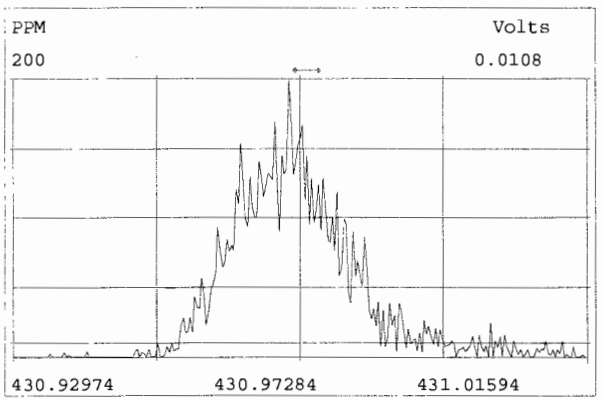


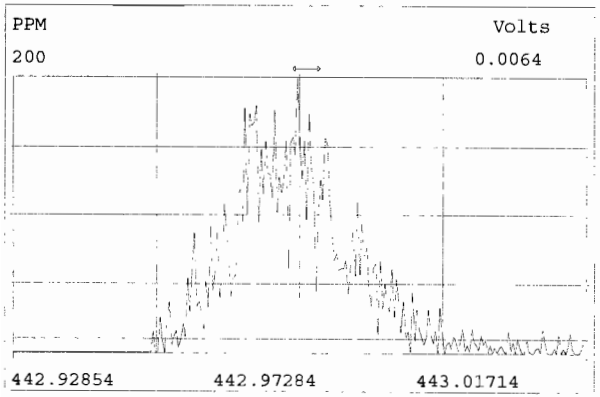


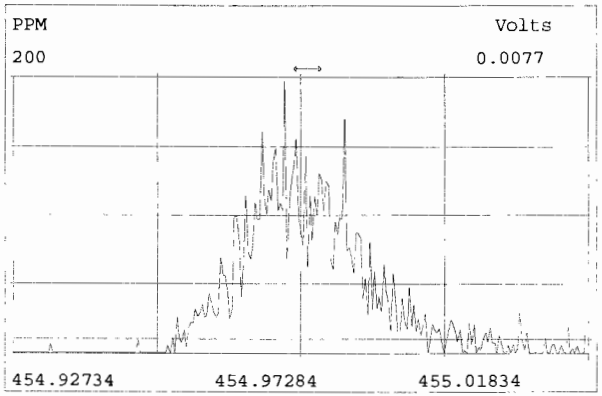


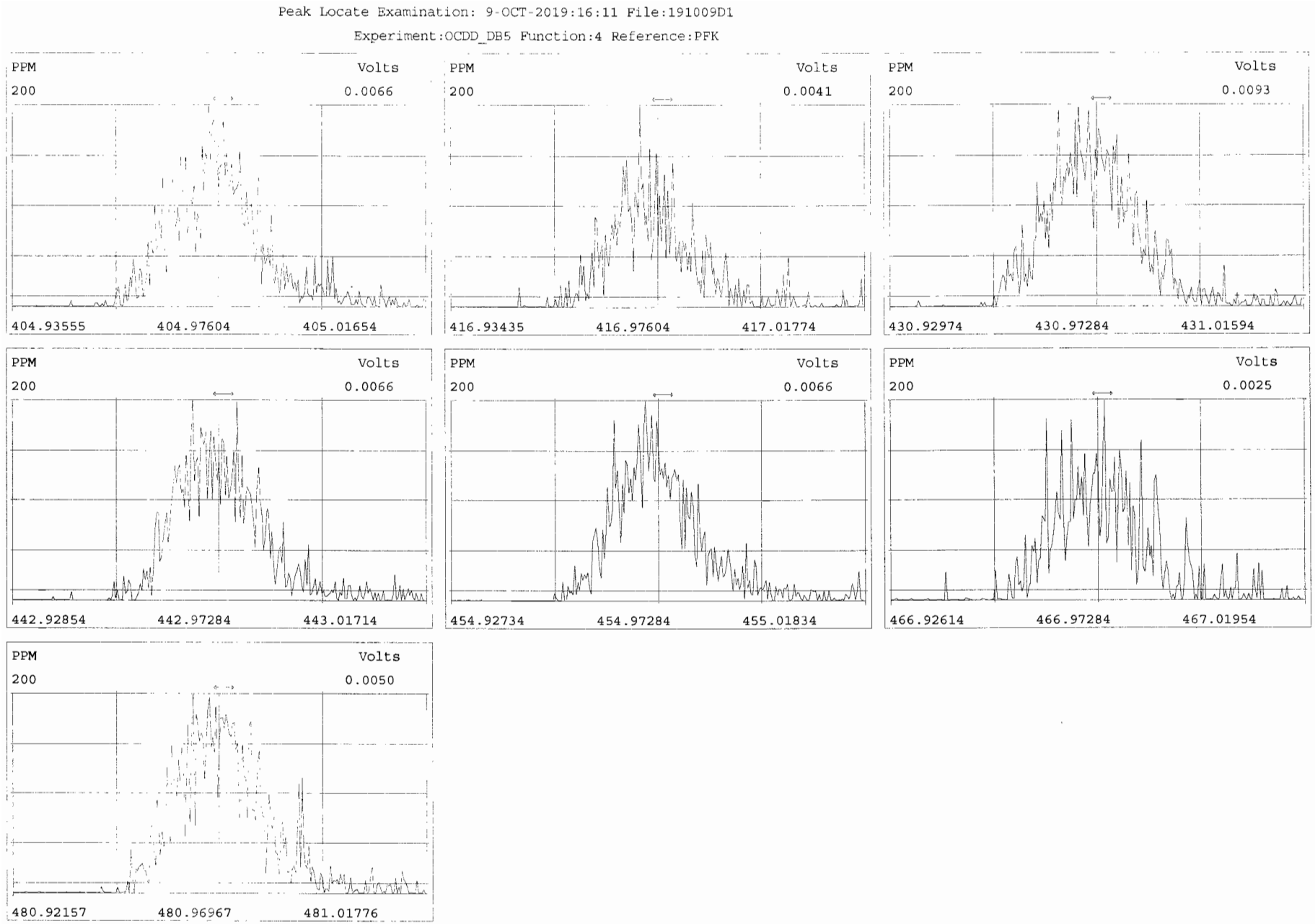






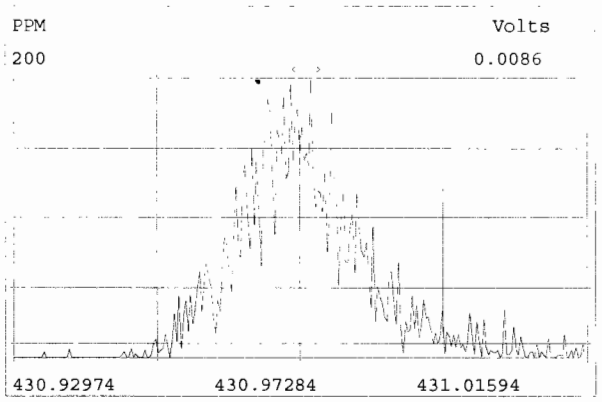


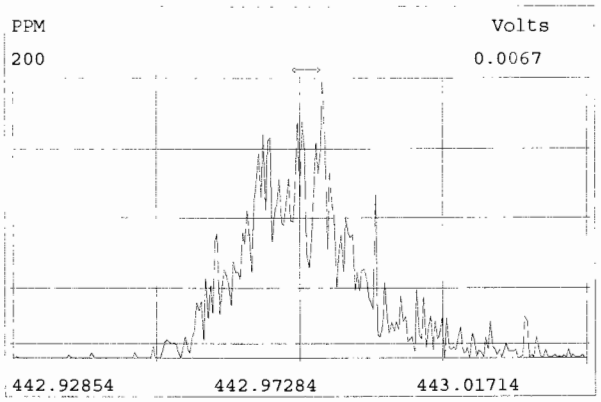


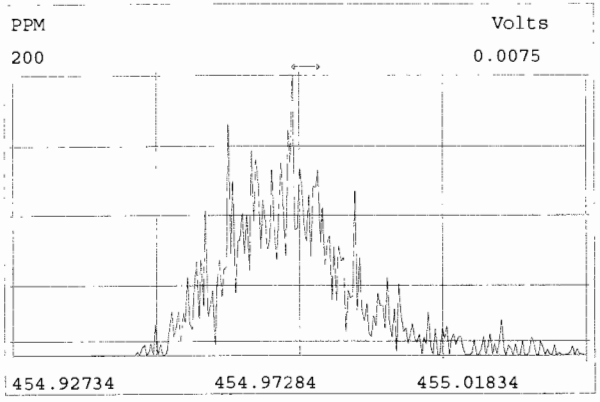

Peak Locate Examination: 9-OCT-2019:16:11 File:191009D1
Experiment:OCDD_DB5 Function:4 Reference:PFK
PPM
Volts
200
0.0066
404.93555
404.97604
405.01654
PPM
Volts
200
0.0041
416.93435
416.97604
417.01774
PPM
Volts
200
0.0093
430.92974
430.97284
431.01594
PPM
Volts
200
0.0066
442.92854
442.97284
443.01714
PPM
Volts
200
0.0066
454.92734
454.97284
455.01834
PPM
Volts
200
0.0025
466.92614
466.97284
467.01954
PPM
Volts
200
0.0050
480.92157
480.96967
481.01776

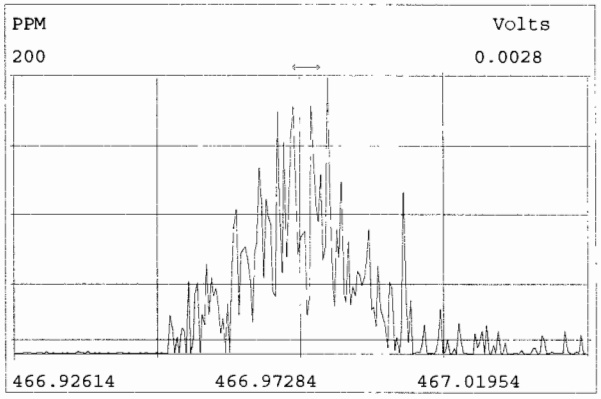
Peak Locate Examination: 9-OCT-2019:16:12 File:191009D1

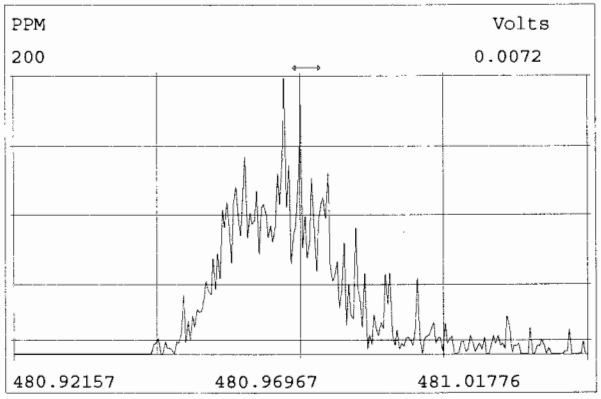
Experiment:OCDD_DB5 Function:5 Reference:PFK

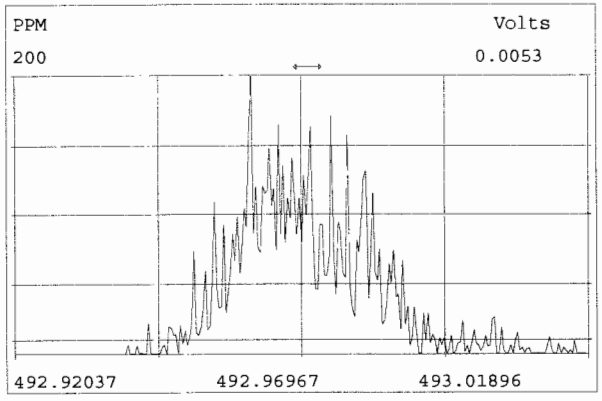


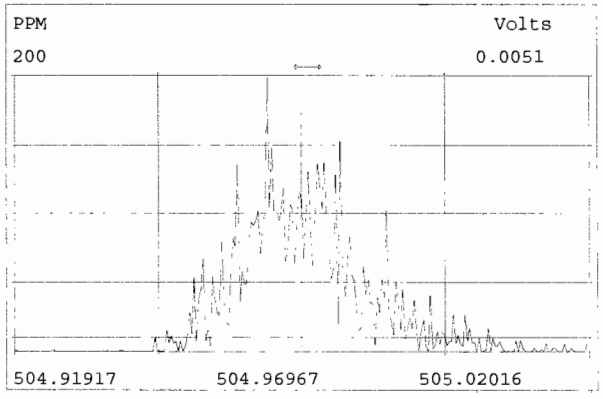


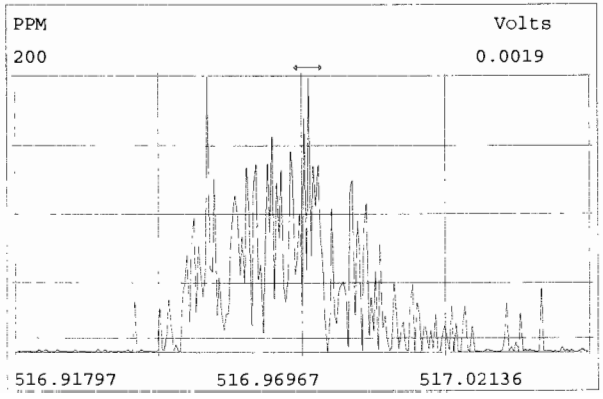








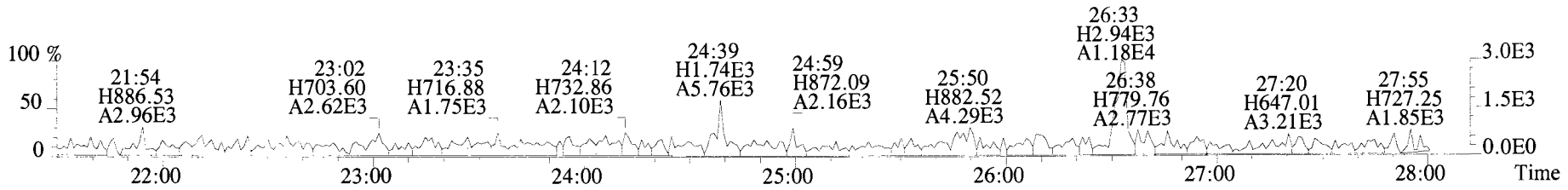




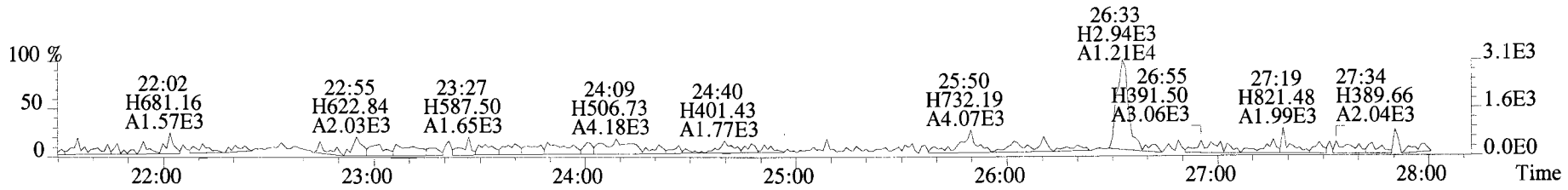
Vista Analytical Laboratory - Injection Log Run file: 191009D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191009D1	1	ST191009D1-1	DB	9-OCT-19	16:13:04	ST191009D1-4	NA
191009D1	2	ST191009D1-2	DB	9-OCT-19	17:00:45	ST191009D1-4	NA
191009D1	3	ST191009D1-3	DB	9-OCT-19	17:48:27	ST191009D1-4	NA
191009D1	4	ST191009D1-4	DB	9-OCT-19	18:36:09	ST191009D1-4	NA
191009D1	5	ST191009D1-5	DB	9-OCT-19	19:23:46	ST191009D1-4	NA
191009D1	6	ST191009D1-6	DB	9-OCT-19	20:11:17	ST191009D1-4	NA
191009D1	7	SOLVENT BLANK	DB	9-OCT-19	20:58:57	ST191009D1-4	NA
191009D1	8	SS191009D1-1	DB	9-OCT-19	21:46:34	ST191009D1-4	NA
191009D1	9	B9J0001-BS1	DB	9-OCT-19	22:34:09	ST191009D1-4	NA
191009D1	10	SOLVENT BLANK	DB	9-OCT-19	23:21:45	ST191009D1-4	NA
191009D1	11	B9J0001-BLK1	DB	10-OCT-19	00:09:30	ST191009D1-4	NA
191009D1	12	QC191007D1-1	DB	10-OCT-19	00:57:00	ST191009D1-4	NA
191009D1	13	1903285-08	DB	10-OCT-19	01:44:36	ST191009D1-4	NA
191009D1	14	1903285-09	DB	10-OCT-19	02:32:11	ST191009D1-4	NA
191009D1	15	1903285-10	DB	10-OCT-19	03:19:47	ST191009D1-4	NA
191009D1	16	1903103-02@5X	DB	10-OCT-19	04:07:23	ST191009D1-4	NA
191009D1	17	1903103-01@5X	DB	10-OCT-19	04:54:54	ST191009D1-4	NA
191009D1	18	B9I0240-DUP1@5X	DB	10-OCT-19	05:42:38	ST191009D1-4	NA

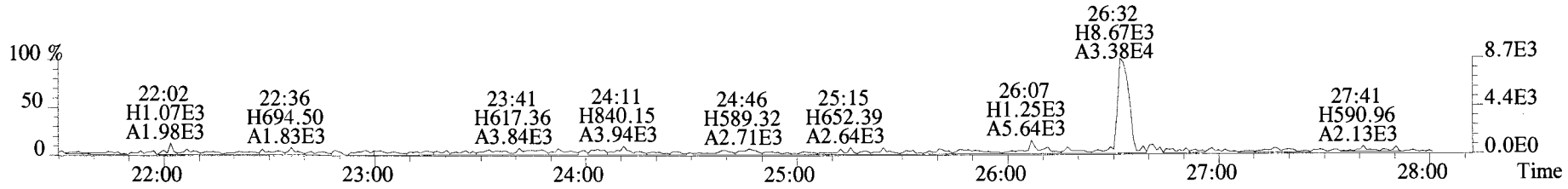
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



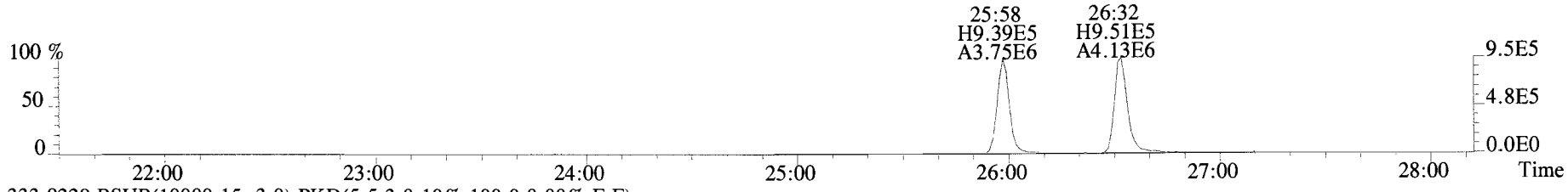
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



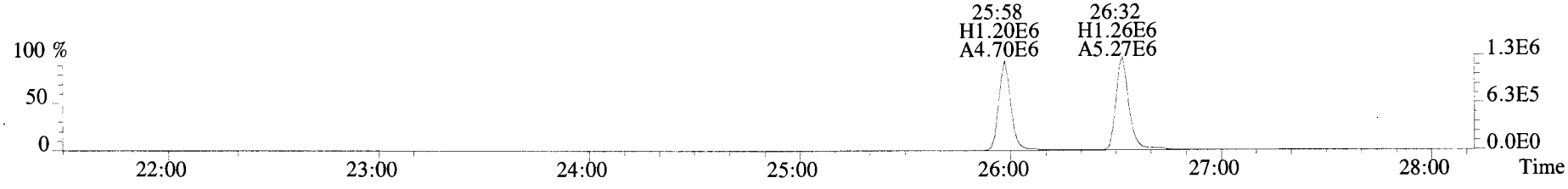
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



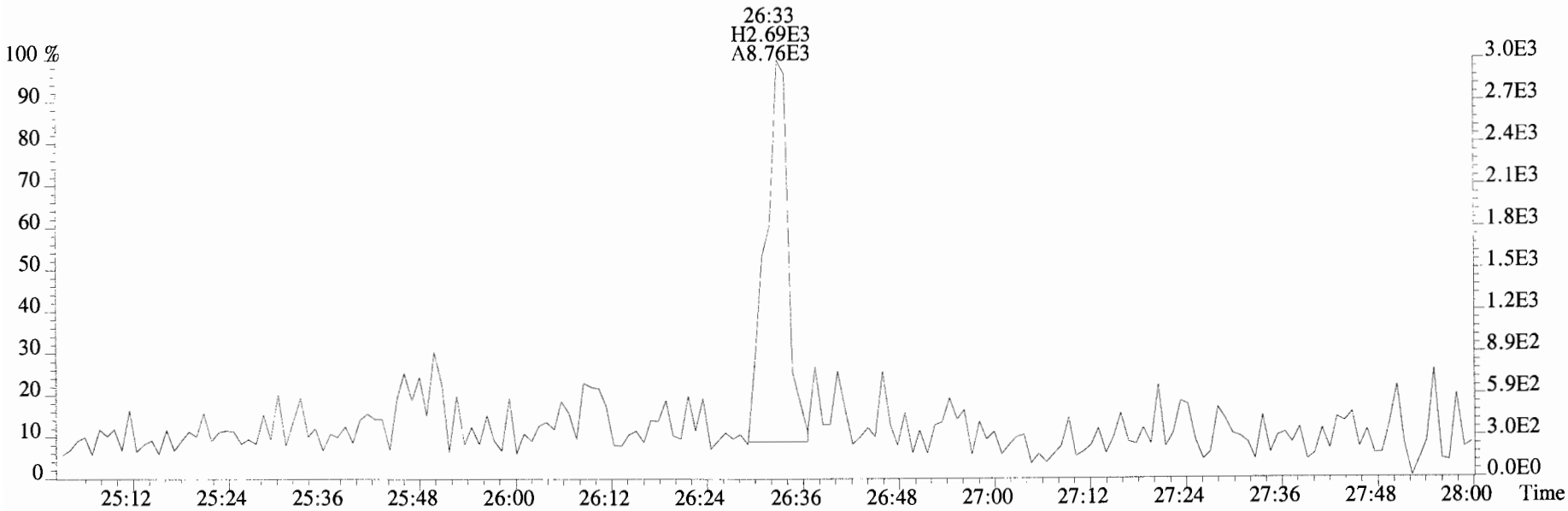
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



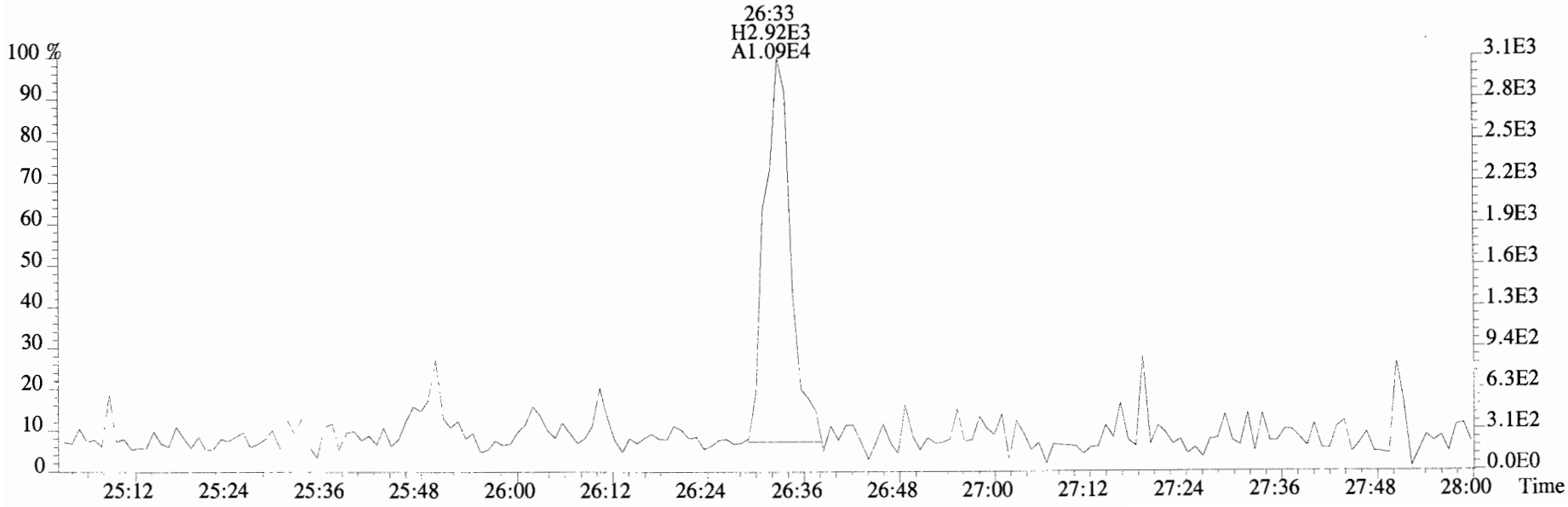
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



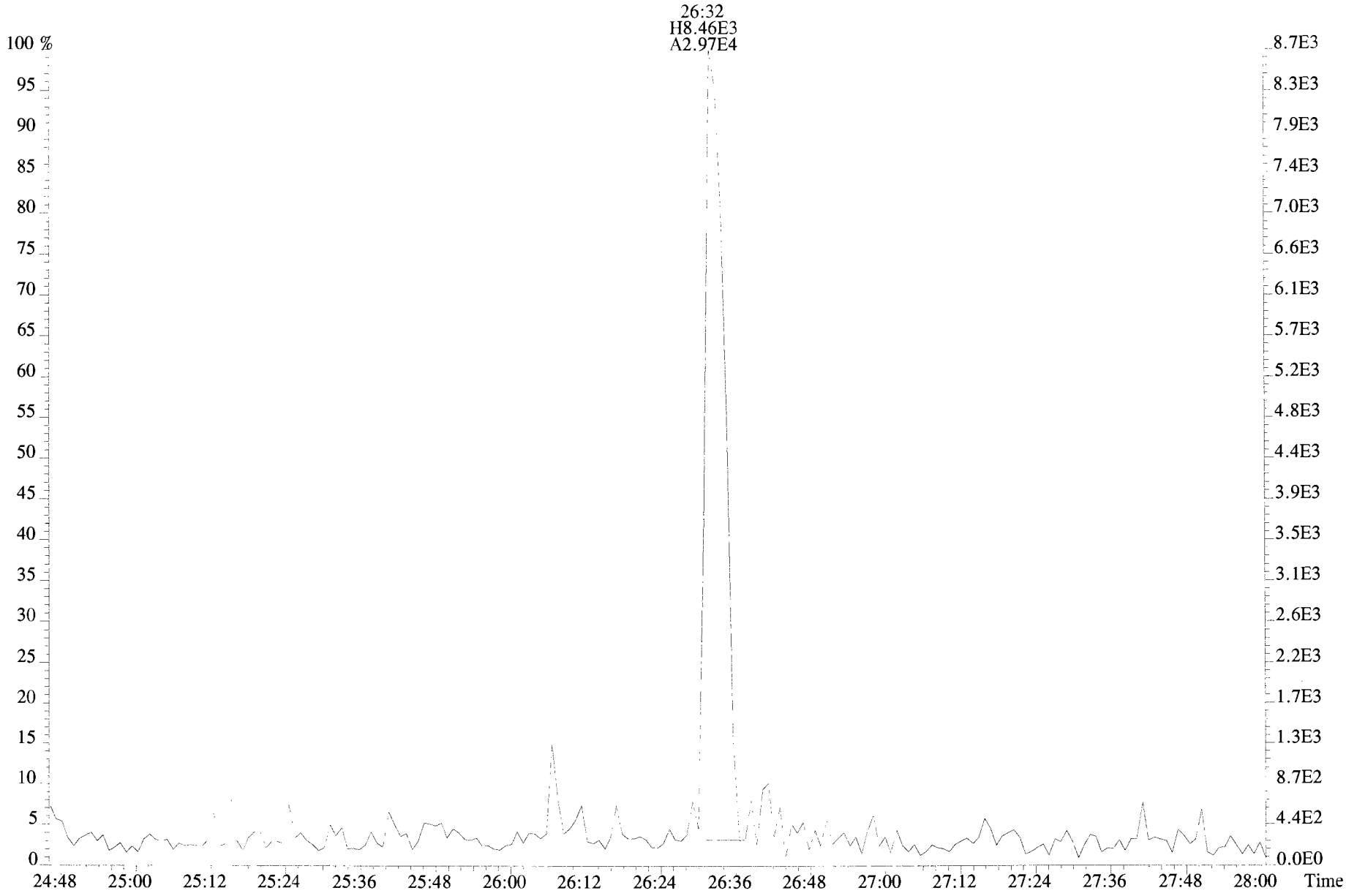
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

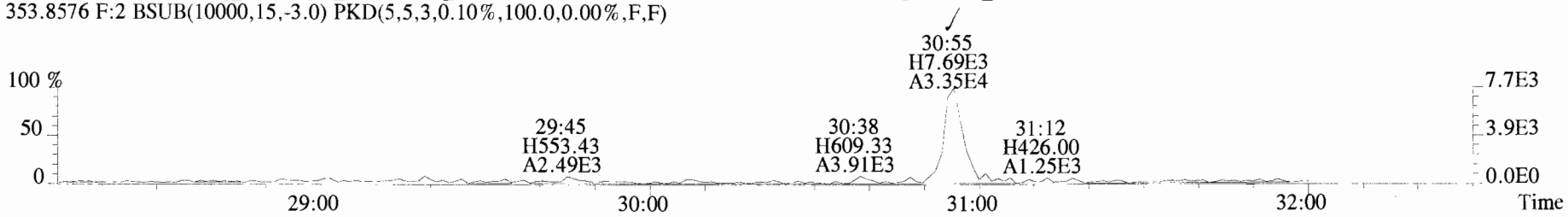


File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
327.8847 BSUB(10000,15,-3.0)

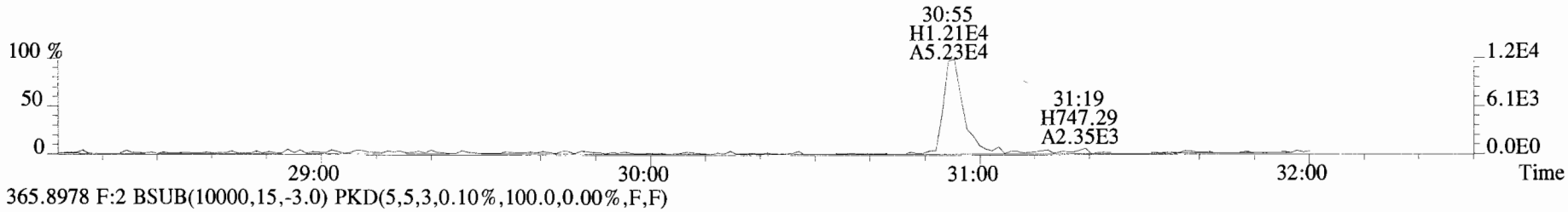


File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5

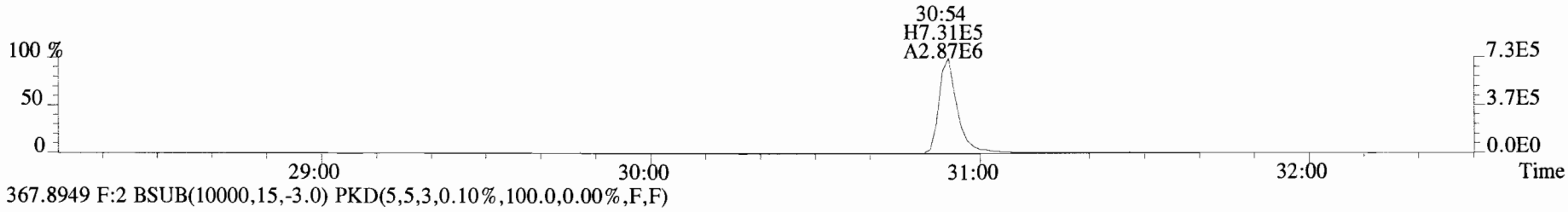
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



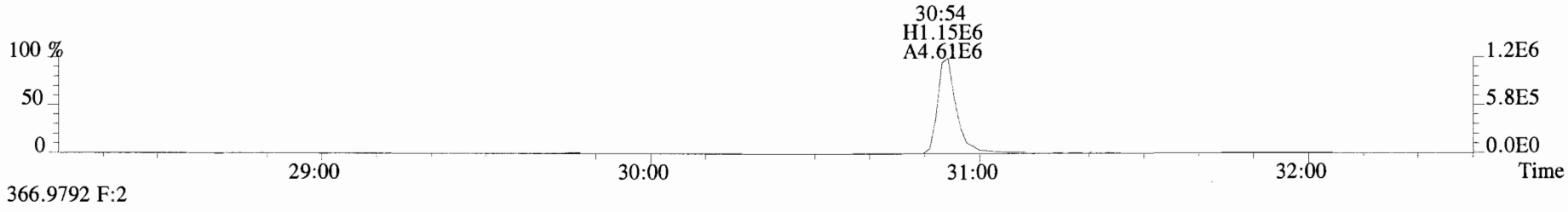
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



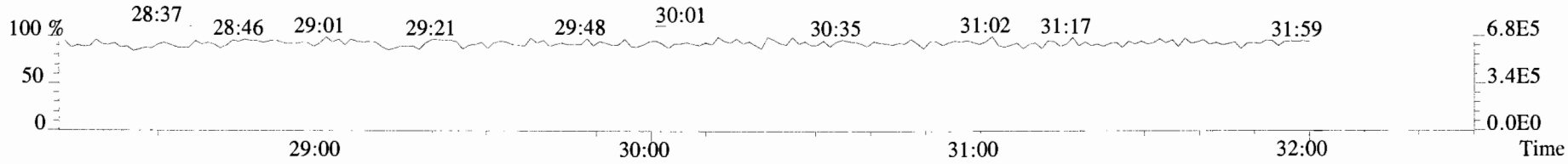
365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



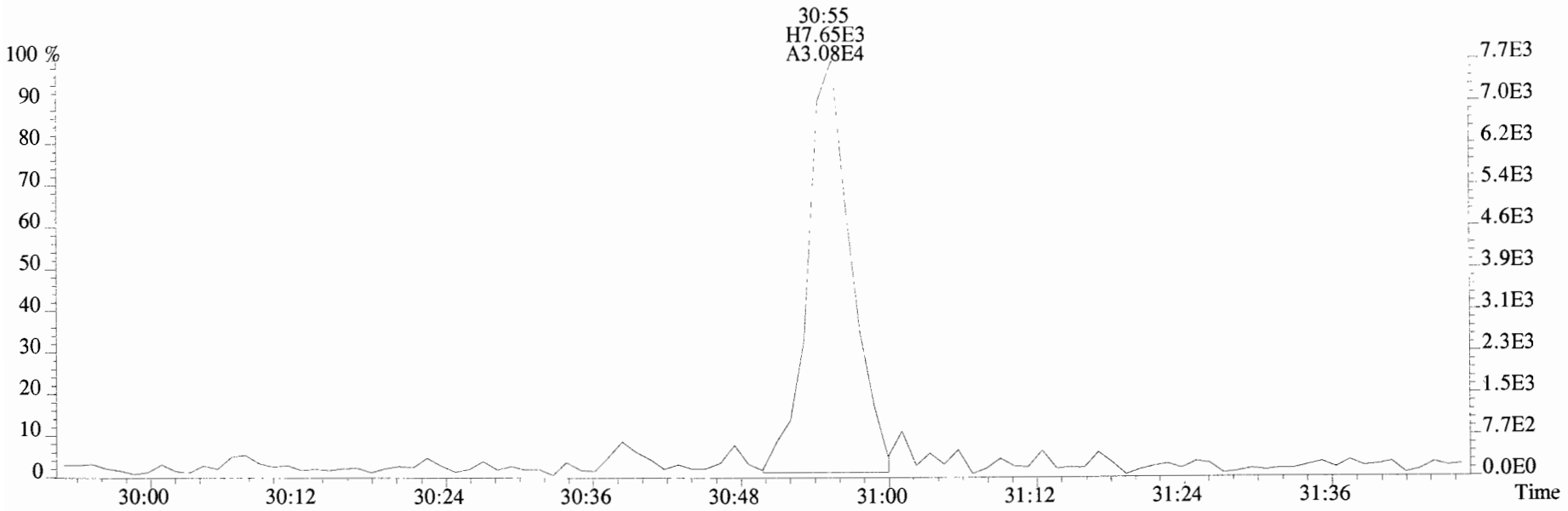
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



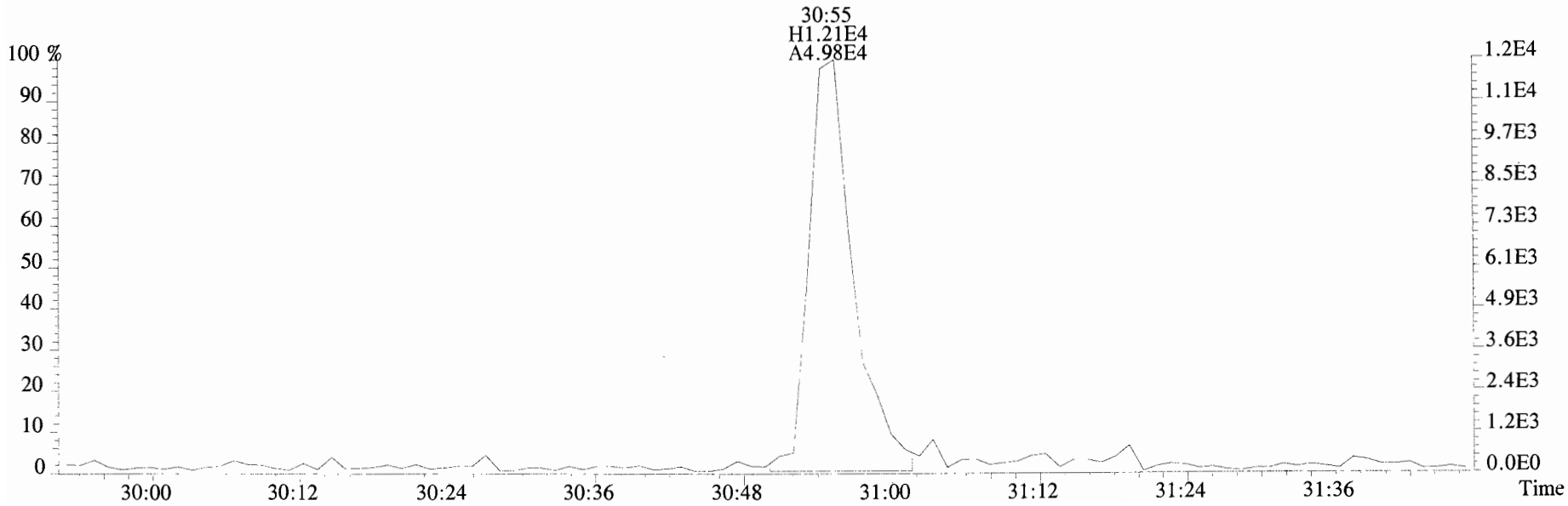
366.9792 F:2



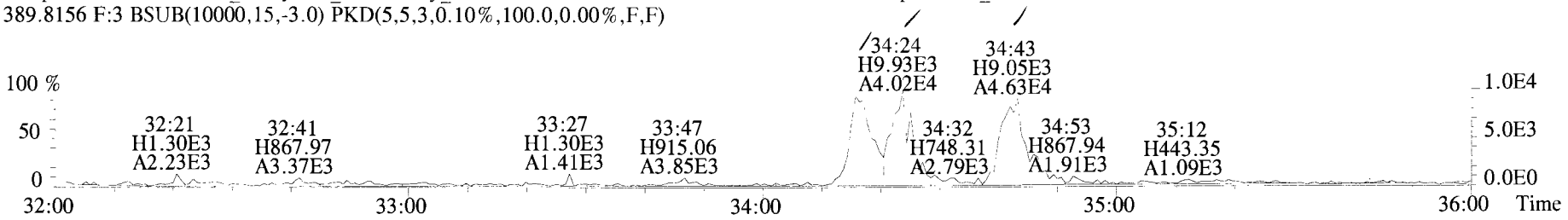
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



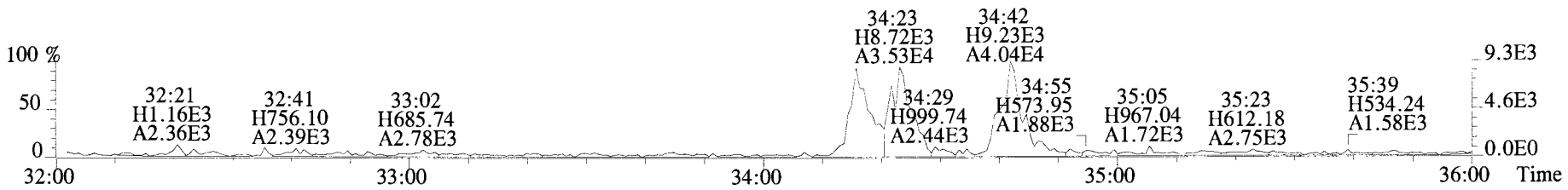
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



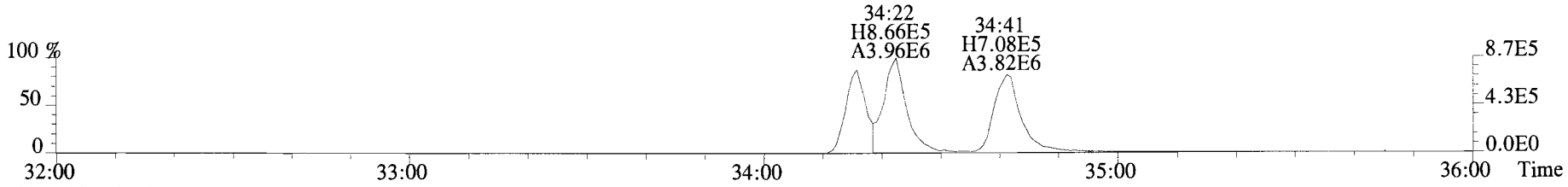
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



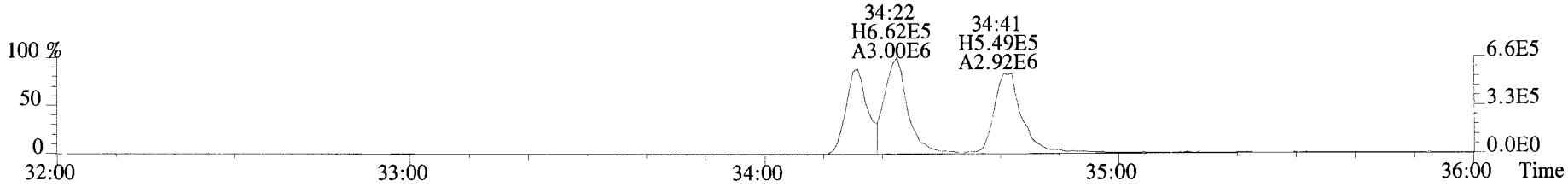
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



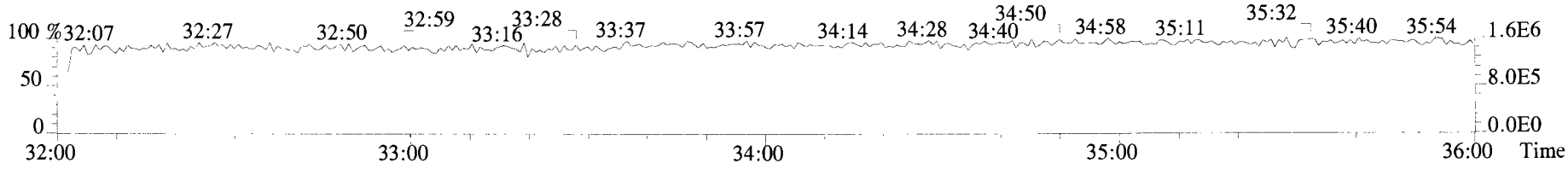
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



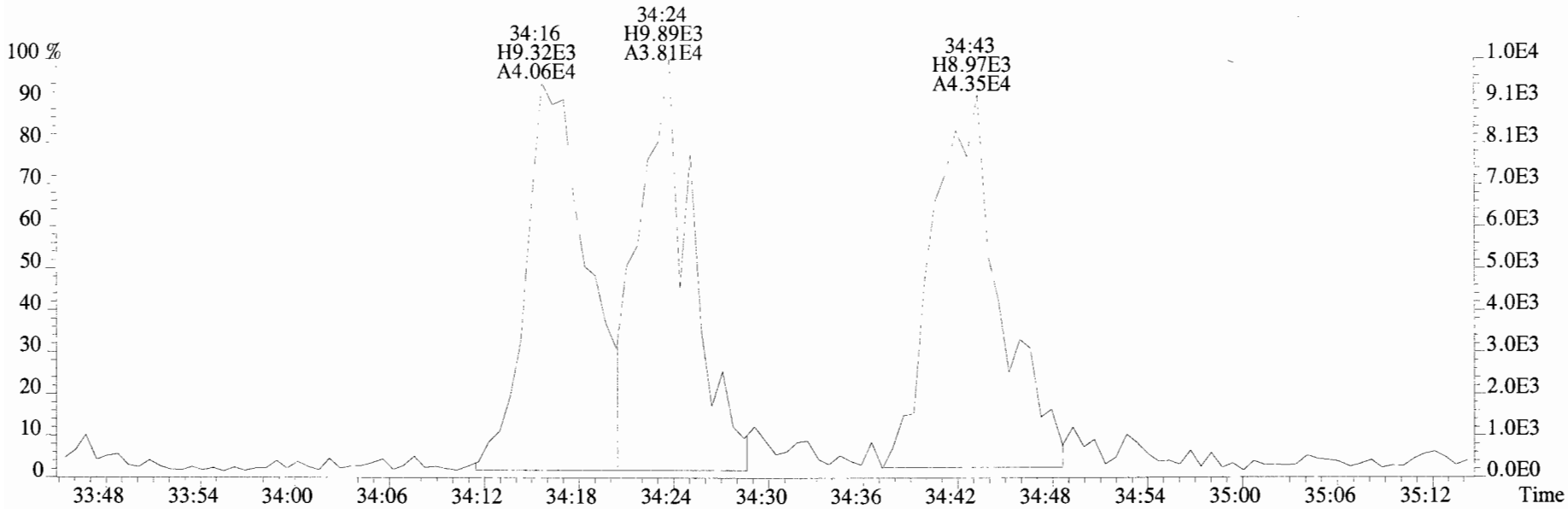
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



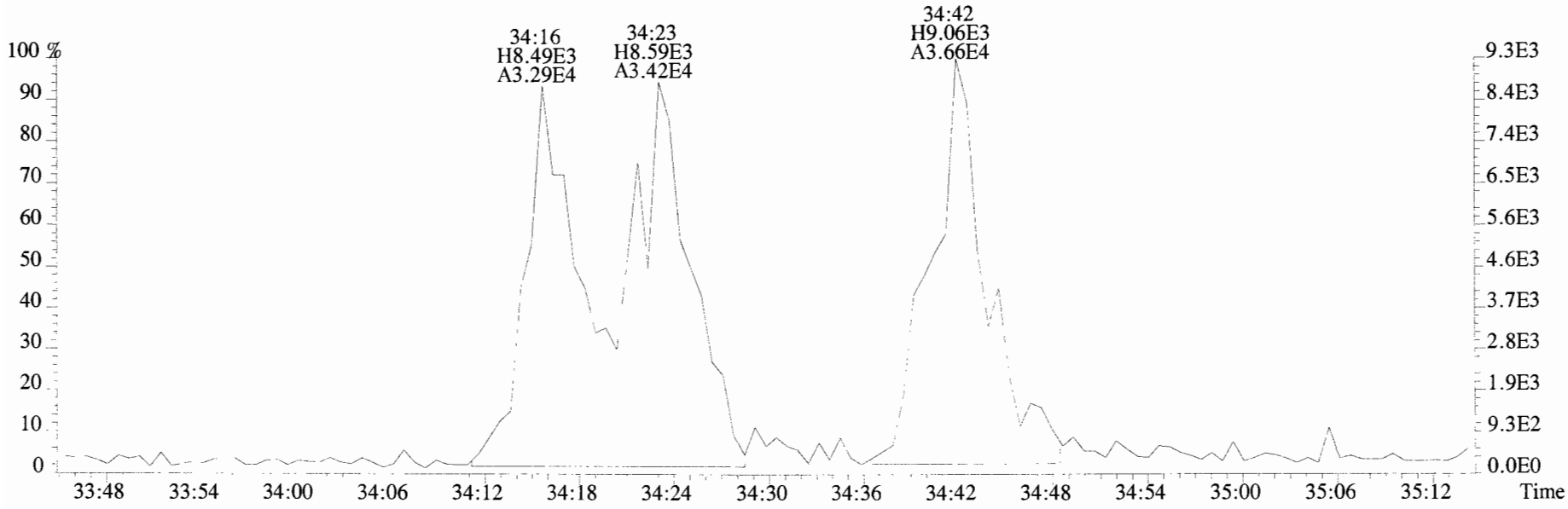
392.9760 F:3



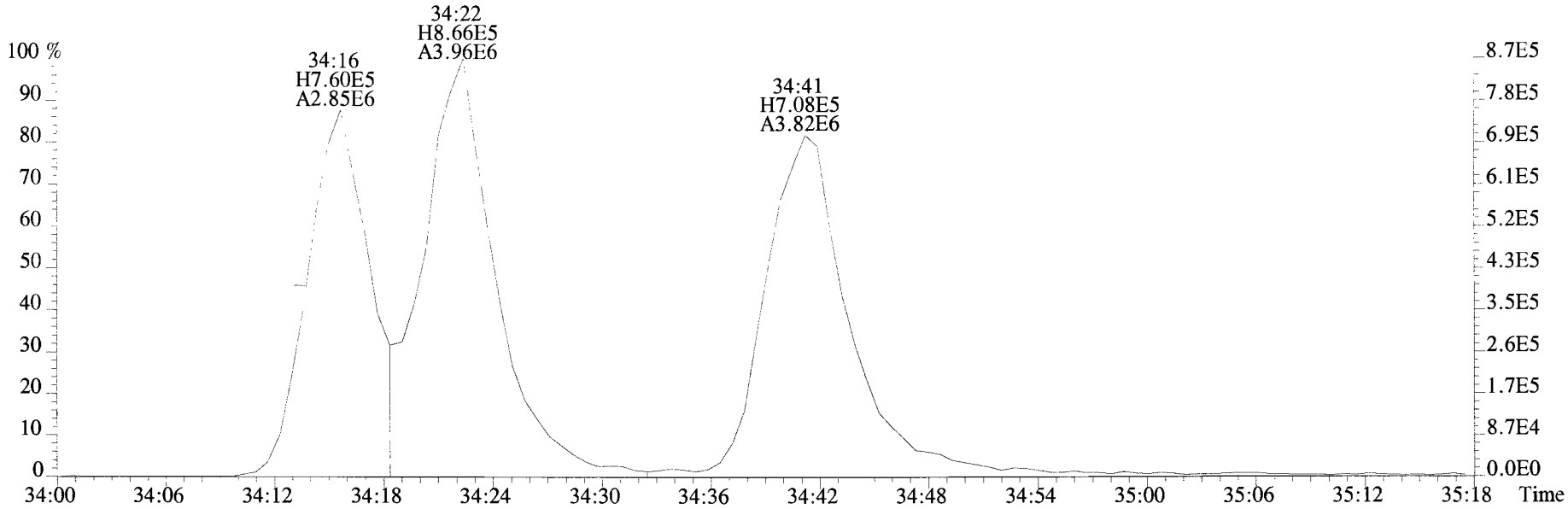
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



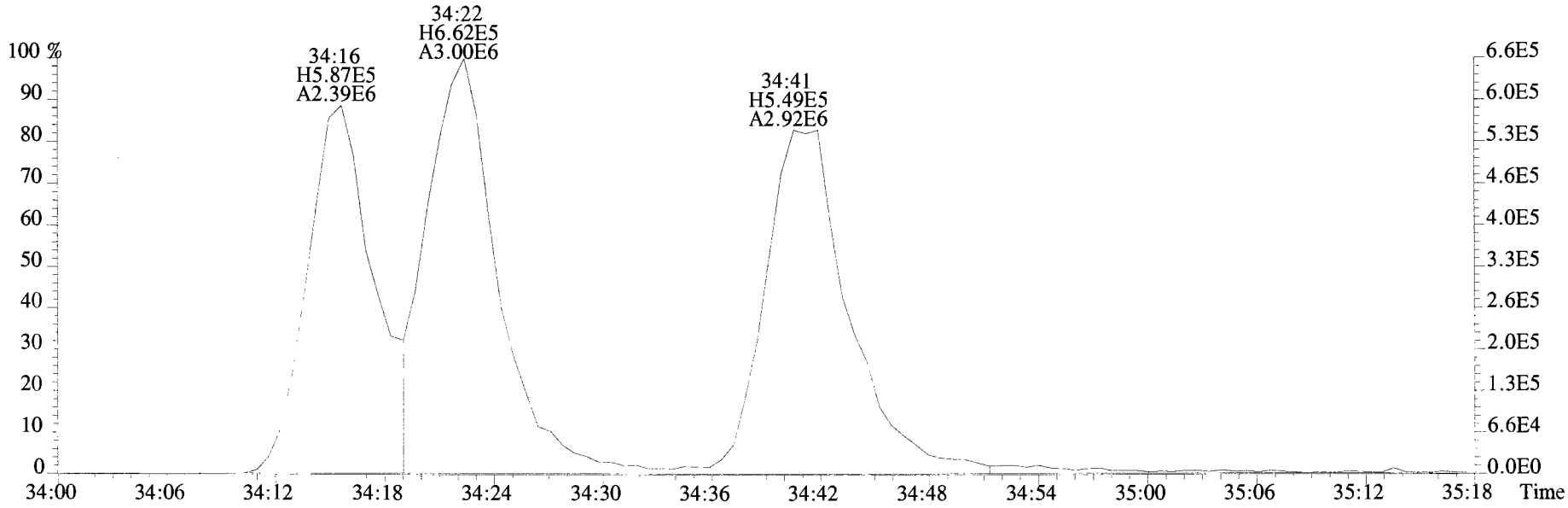
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



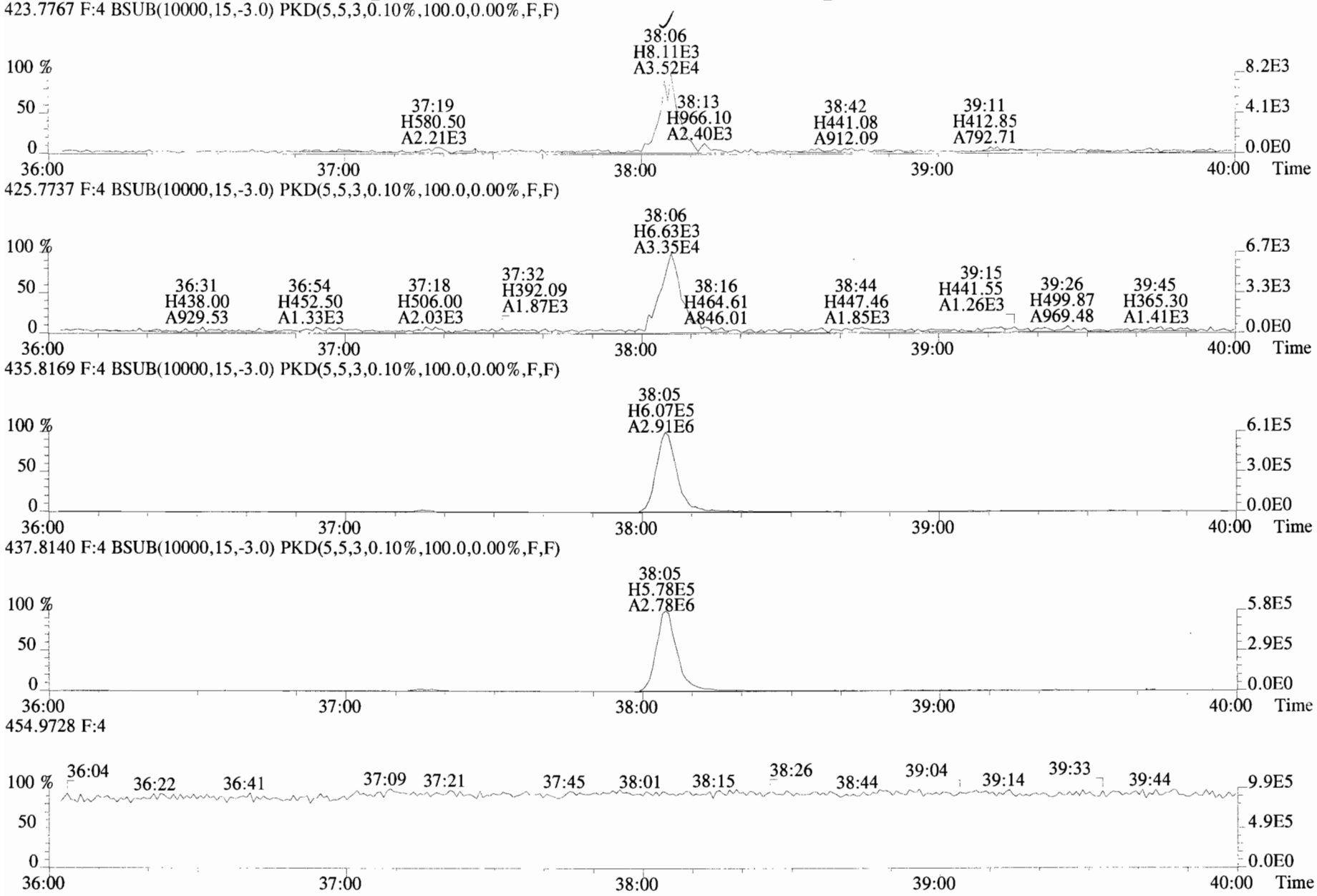
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



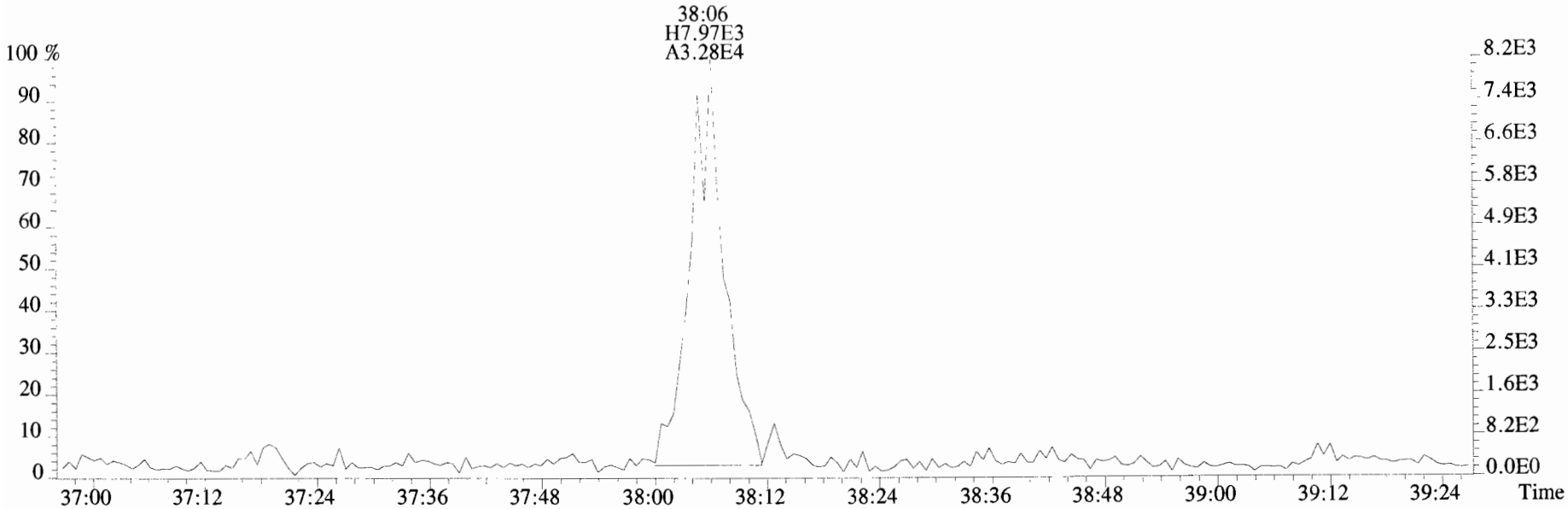
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



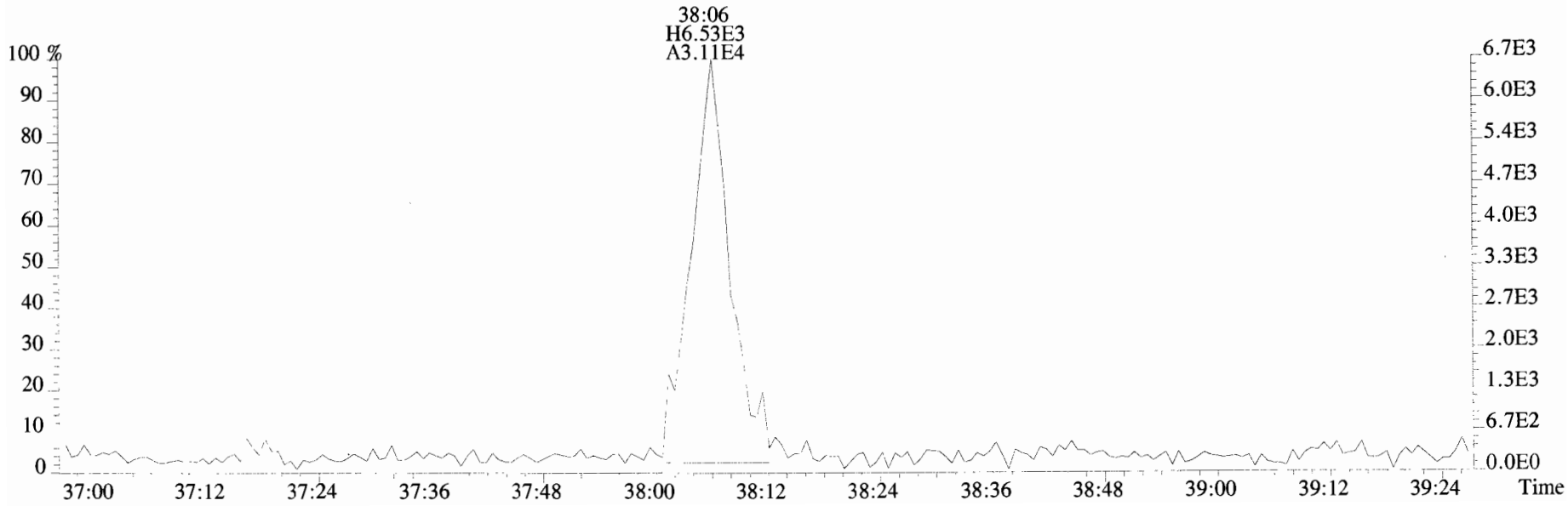
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5



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)

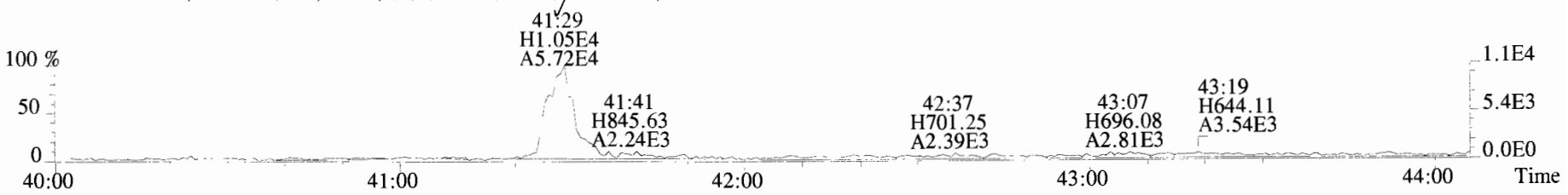


425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

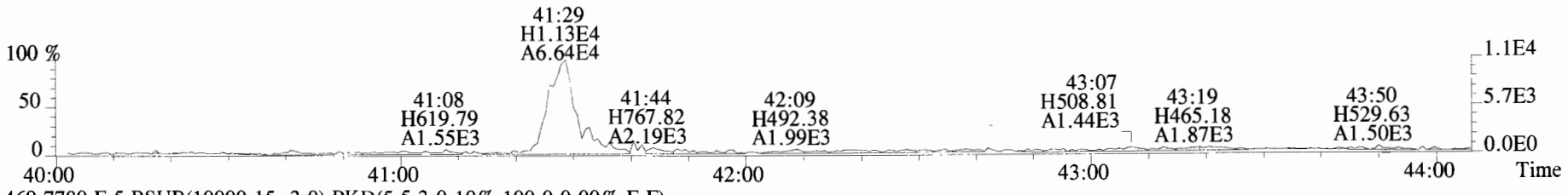


File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5

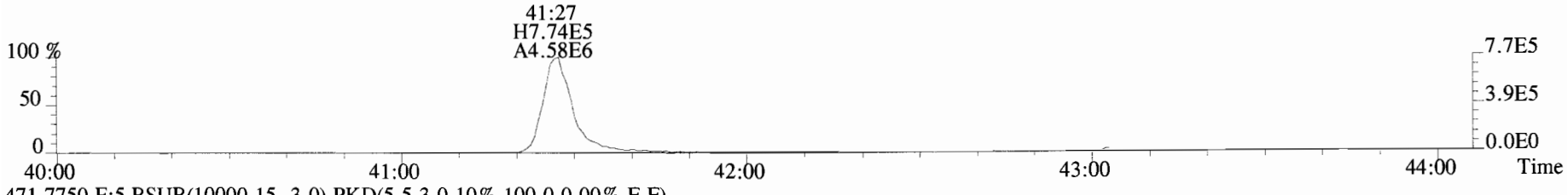
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



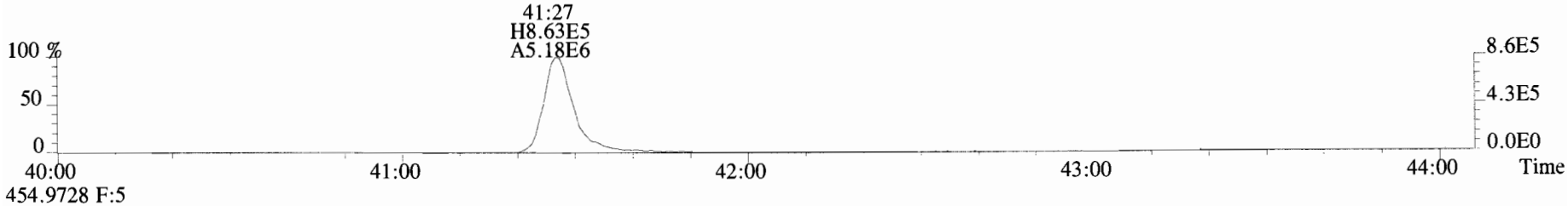
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



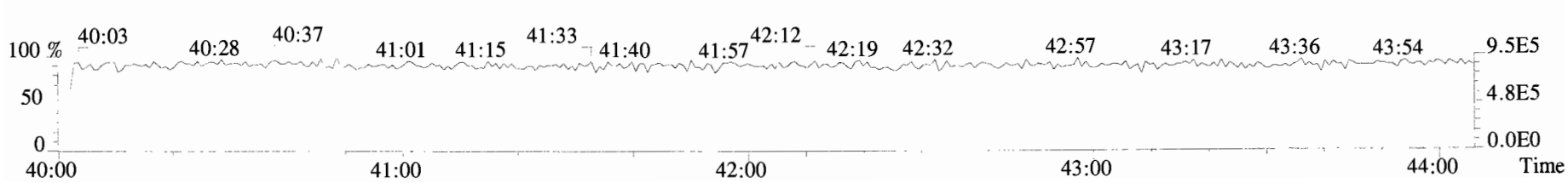
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



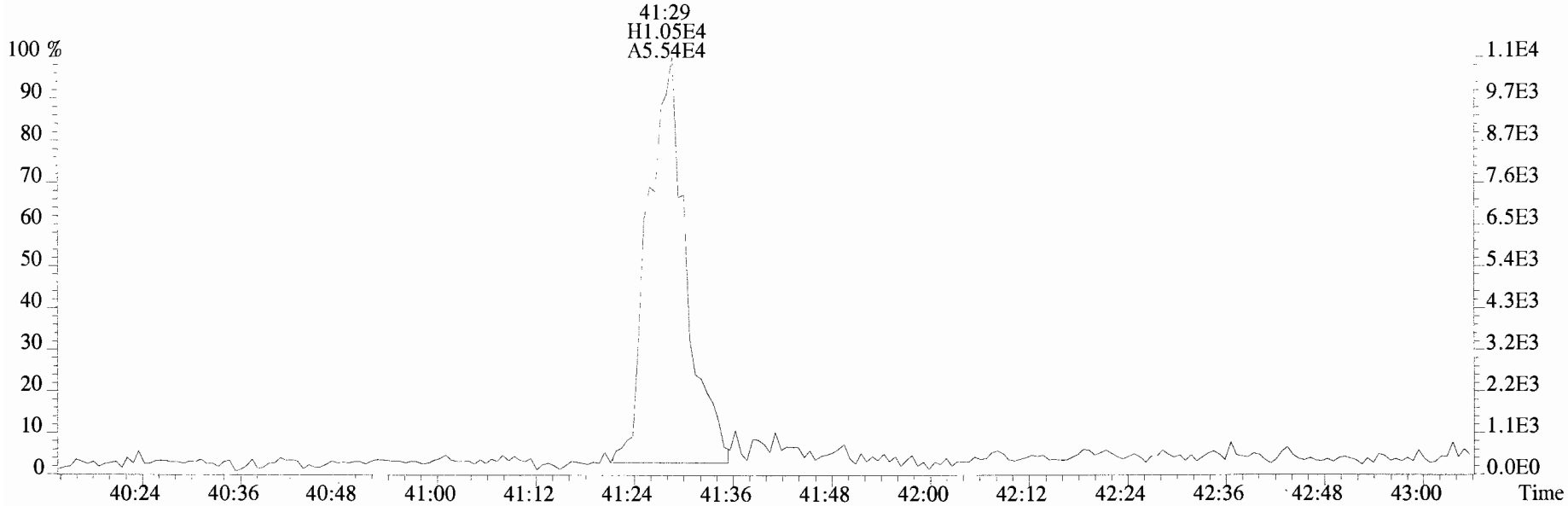
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



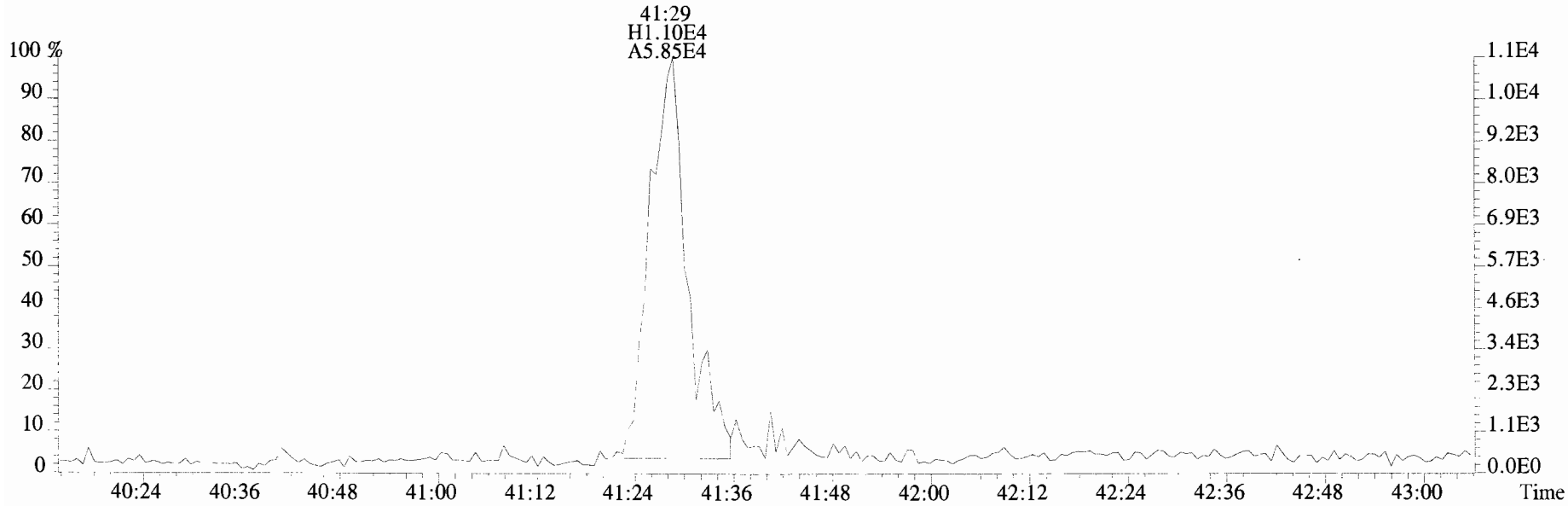
454.9728 F:5



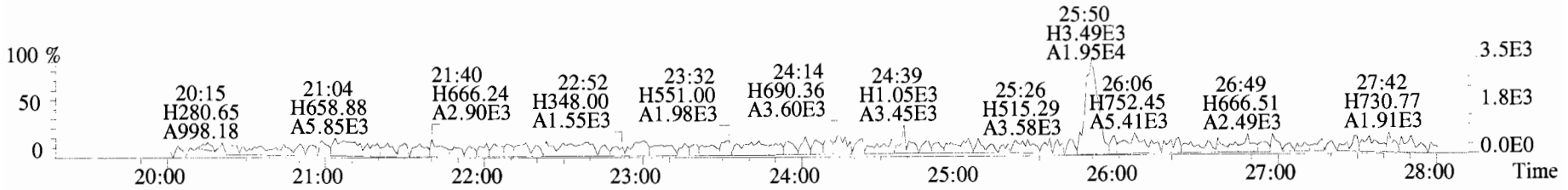
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



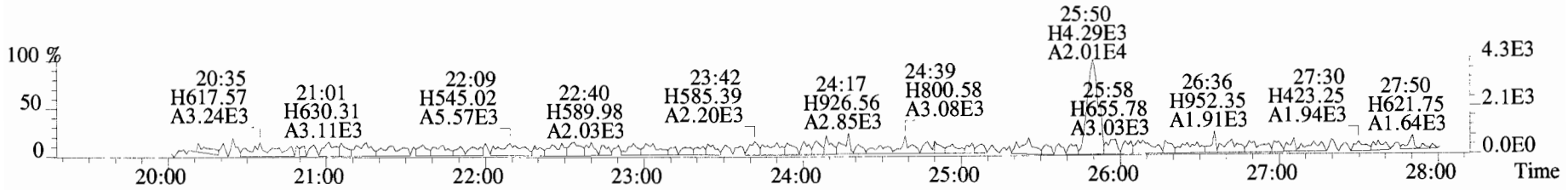
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



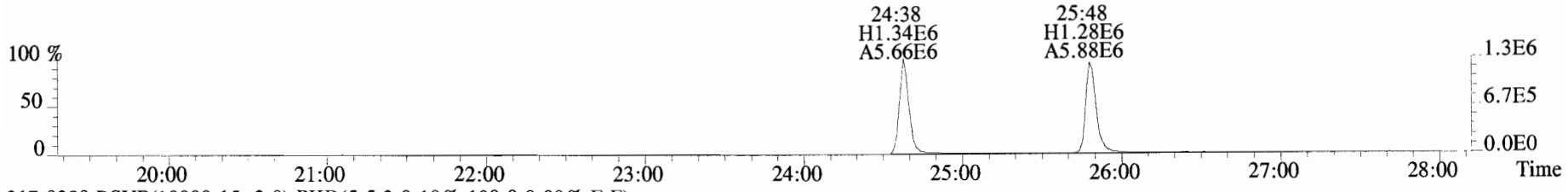
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



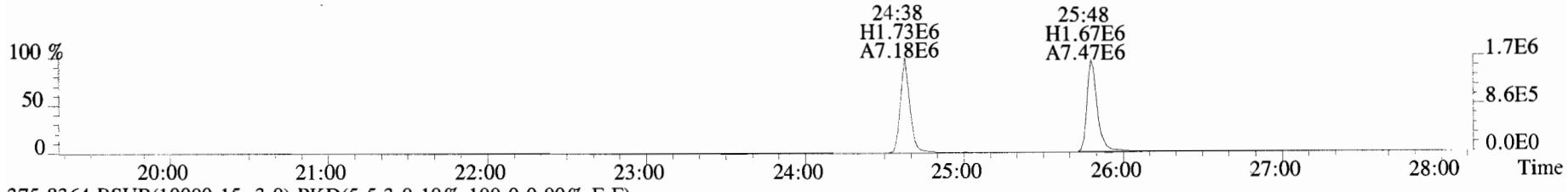
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



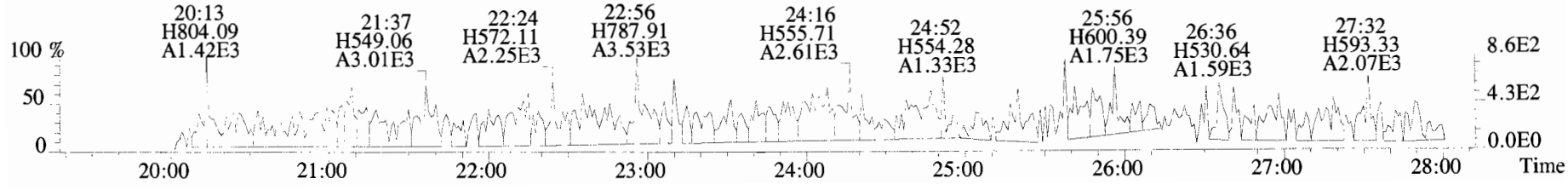
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



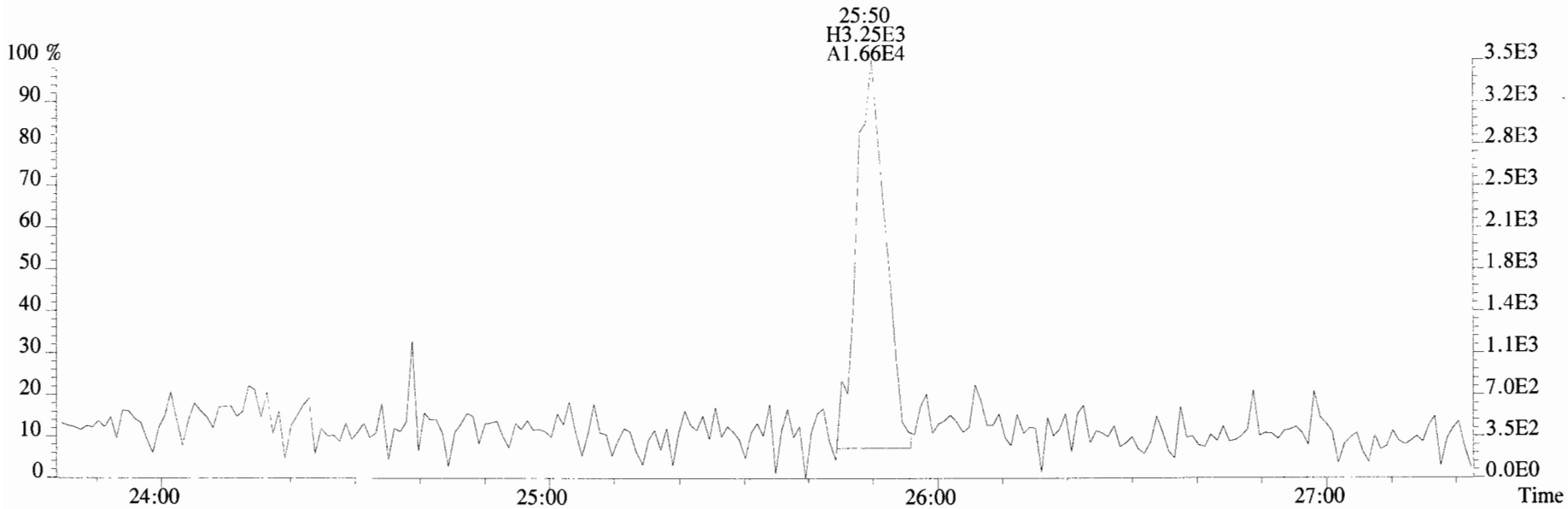
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



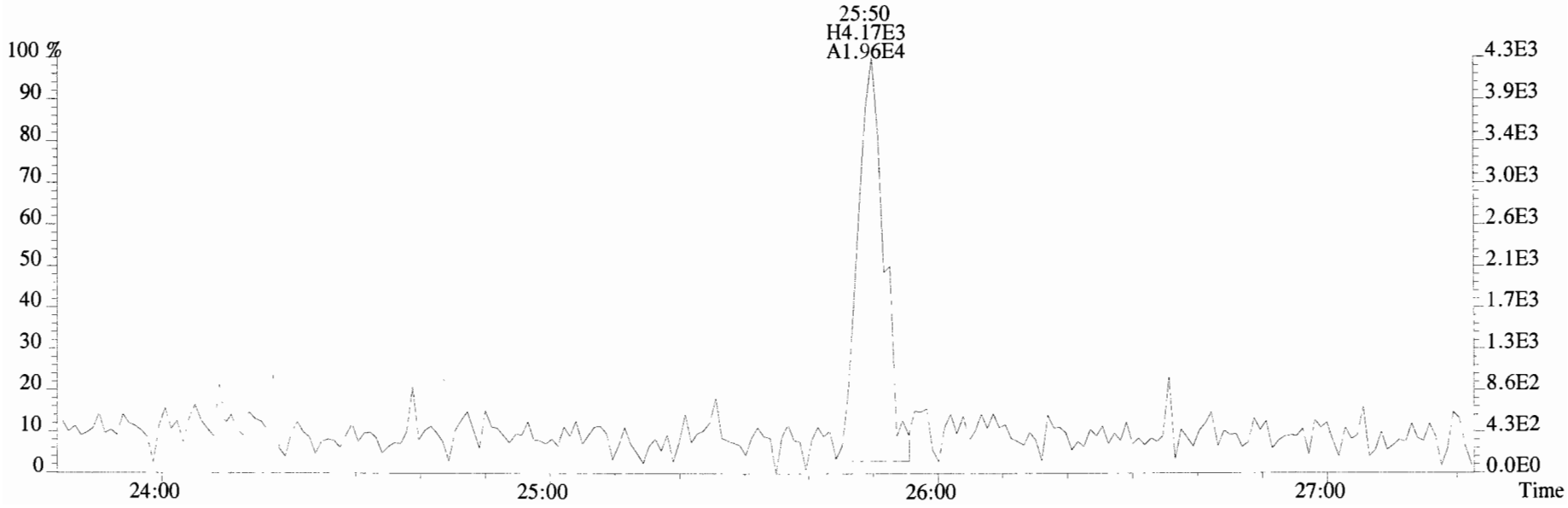
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



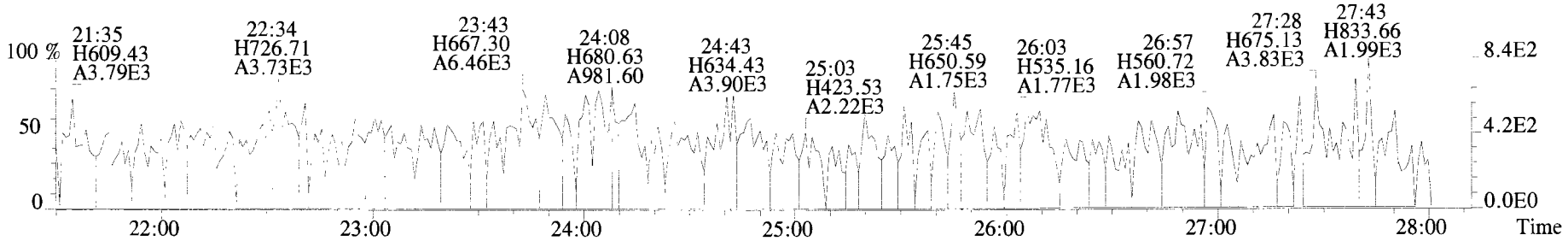
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



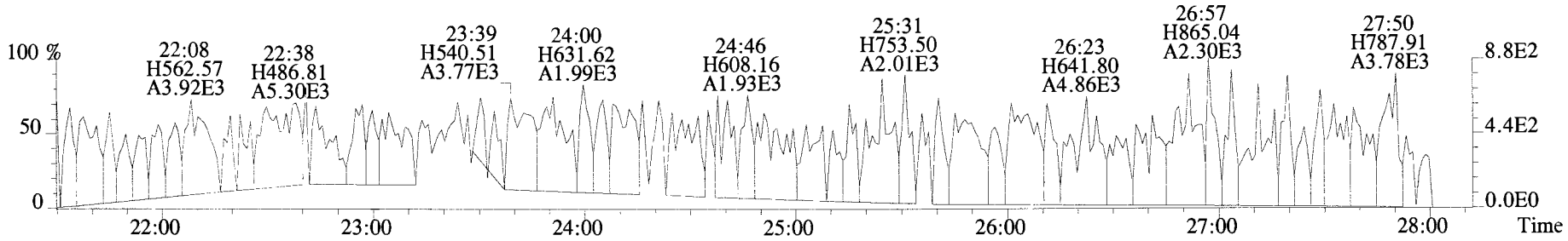
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



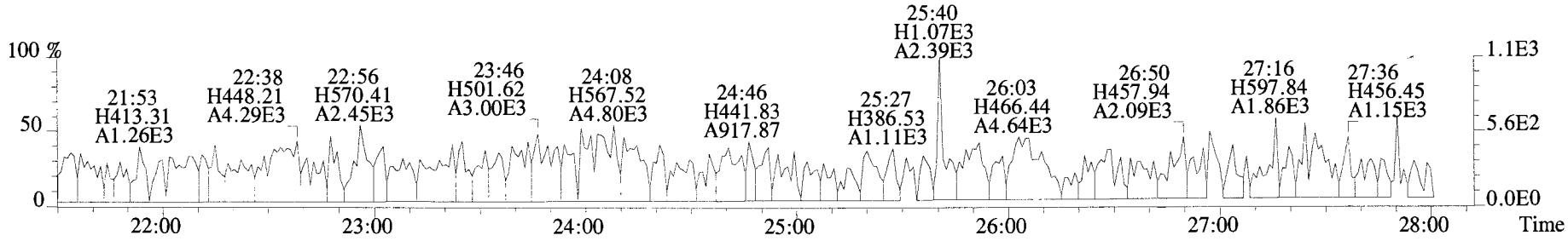
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



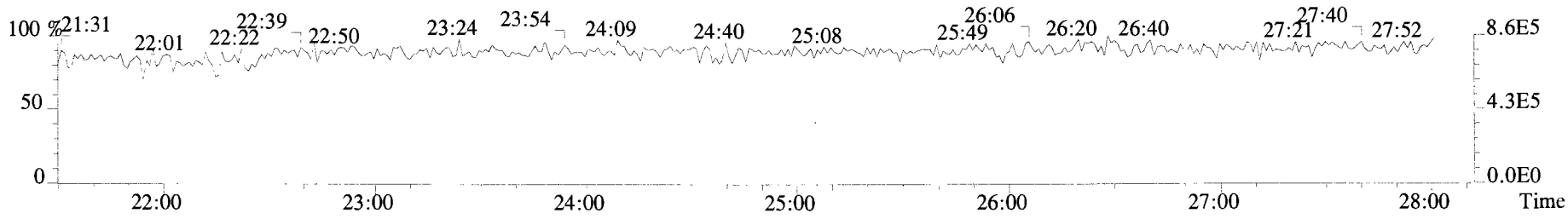
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

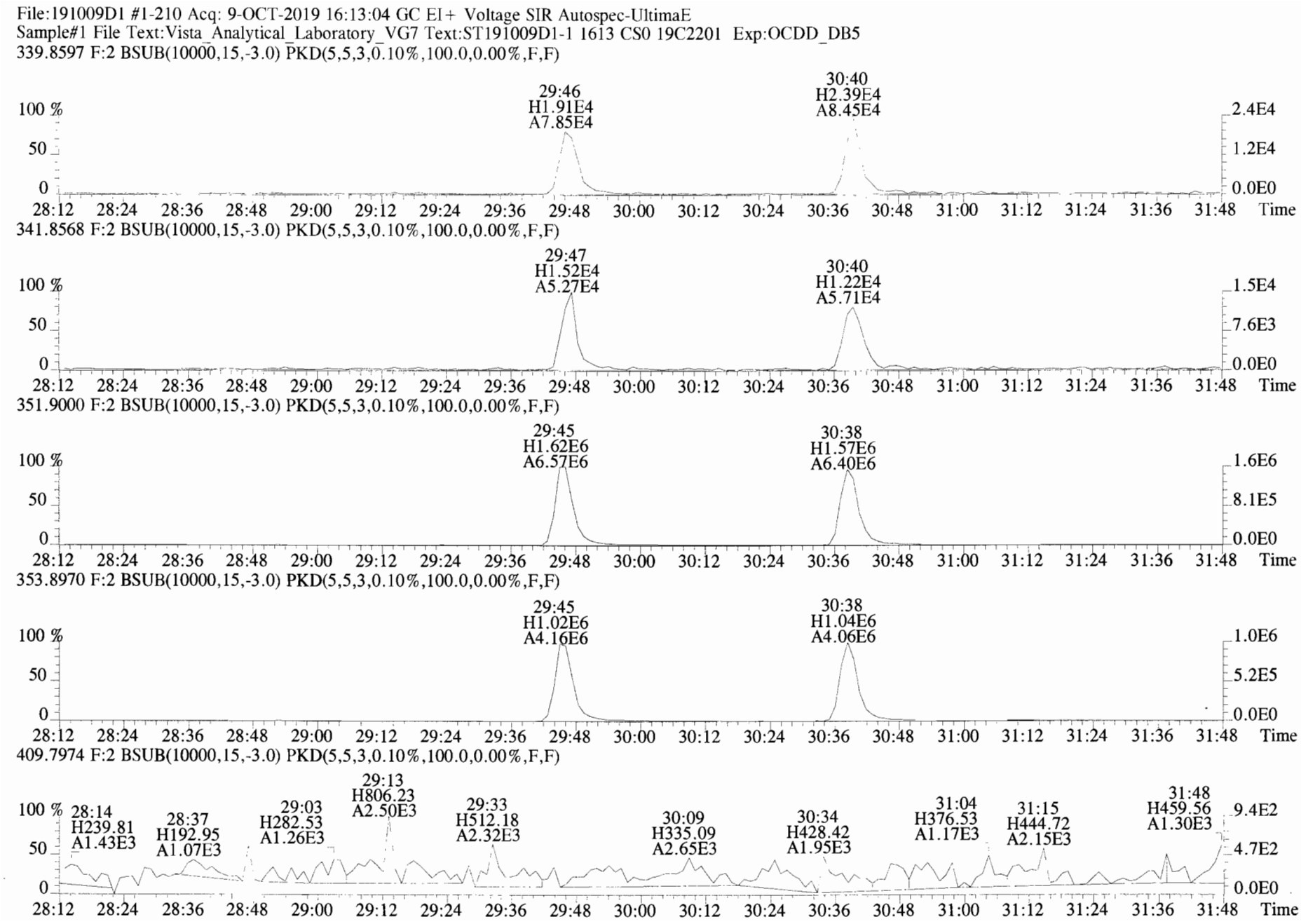


409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

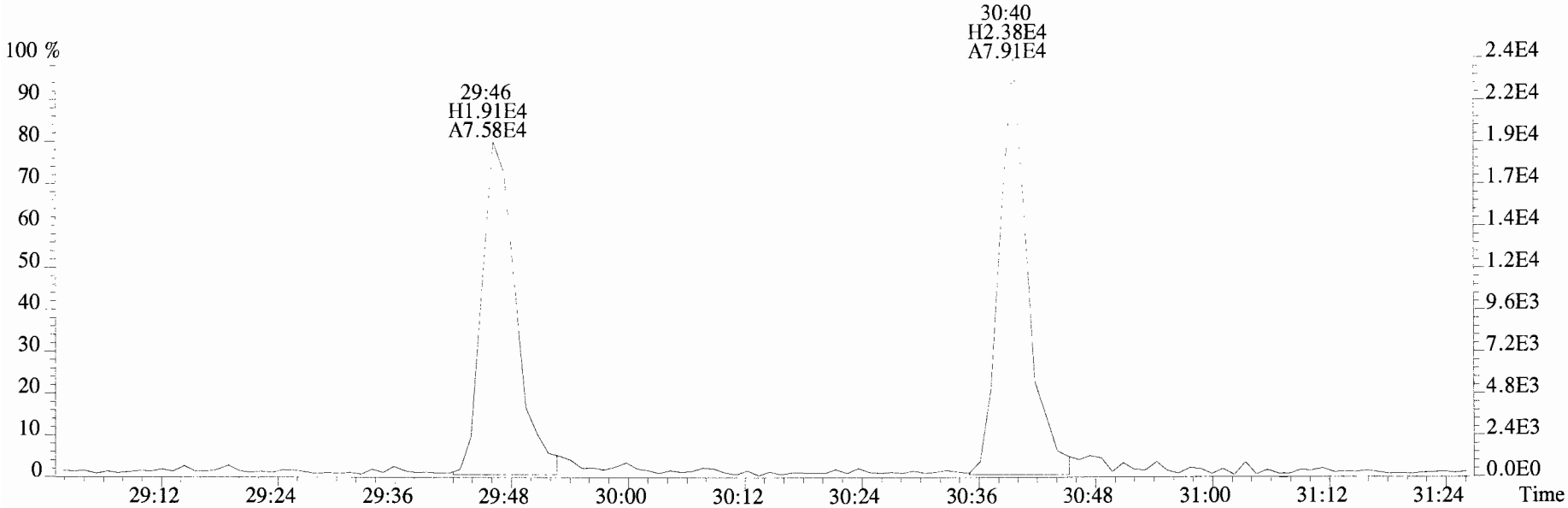


316.9824

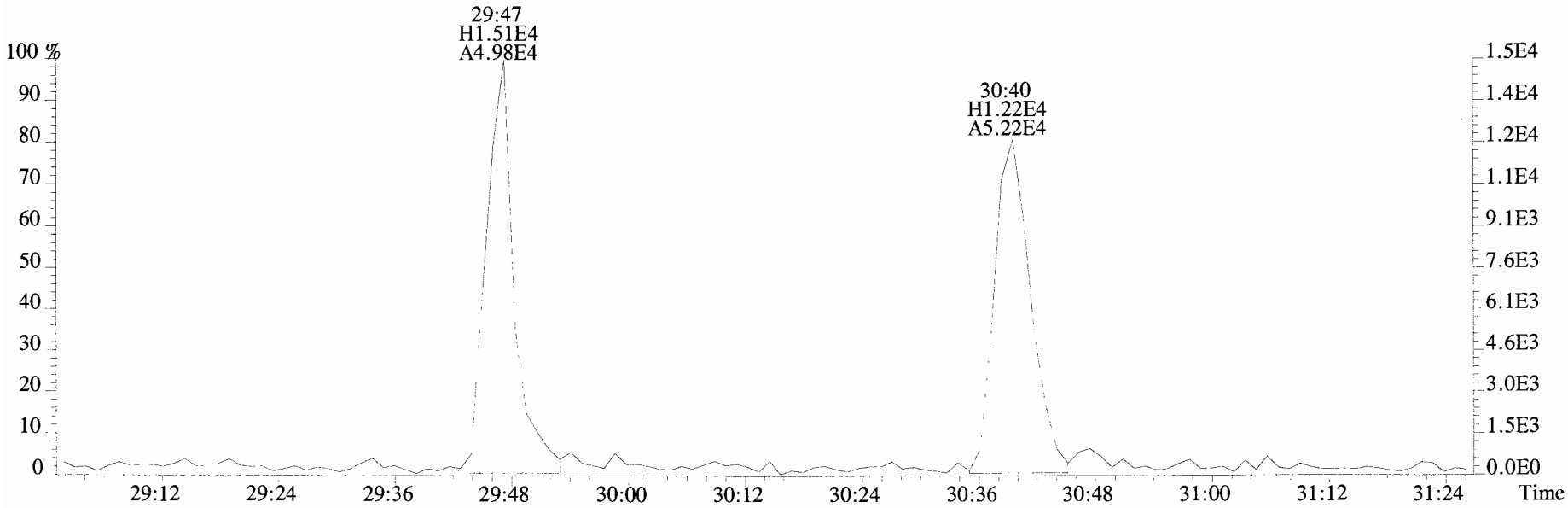



File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:46 H1.91E4 A7.85E4
30:40 H2.39E4 A8.45E4
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:47 H1.52E4 A5.27E4
30:40 H1.22E4 A5.71E4
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:45 H1.62E6 A6.57E6
30:38 H1.57E6 A6.40E6
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
29:45 H1.02E6 A4.16E6
30:38 H1.04E6 A4.06E6
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
28:14 H239.81 A1.43E3
28:37 H192.95 A1.07E3
29:03 H282.53 A1.26E3
29:13 H806.23 A2.50E3
29:33 H512.18 A2.32E3
30:09 H335.09 A2.65E3
30:34 H428.42 A1.95E3
31:04 H376.53 A1.17E3
31:15 H444.72 A2.15E3
31:48 H459.56 A1.30E3
100 %
50
0
28:12 28:24 28:36 28:48 29:00 29:12 29:24 29:36 29:48 30:00 30:12 30:24 30:36 30:48 31:00 31:12 31:24 31:36 31:48 Time
2.4E4
1.2E4
0.0E0
1.5E4
7.6E3
1.6E6
8.1E5
1.0E6
5.2E5
9.4E2
4.7E2

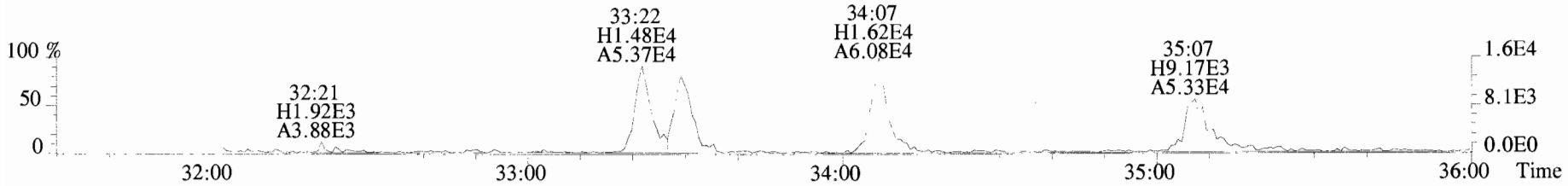
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



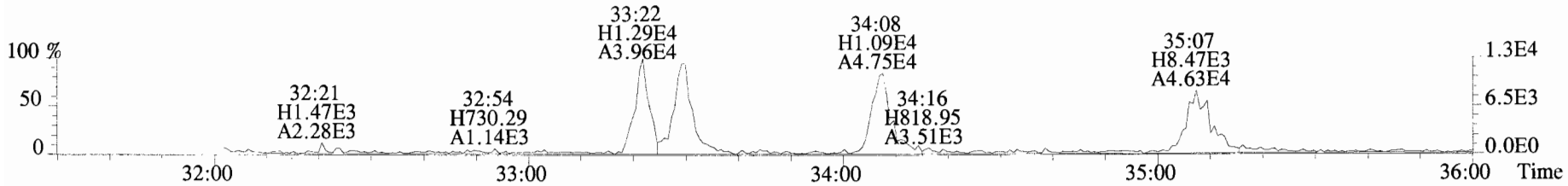
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



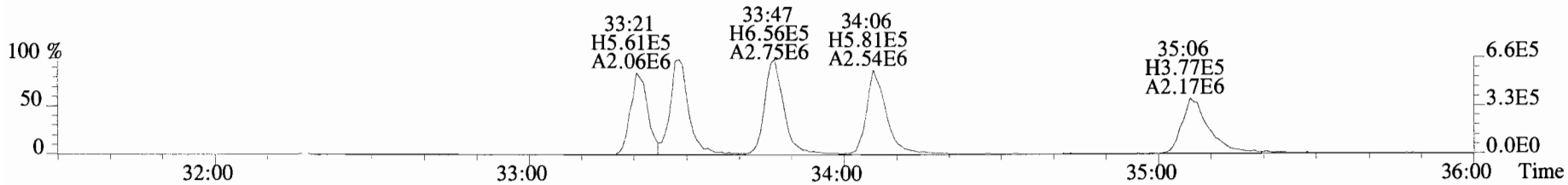
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



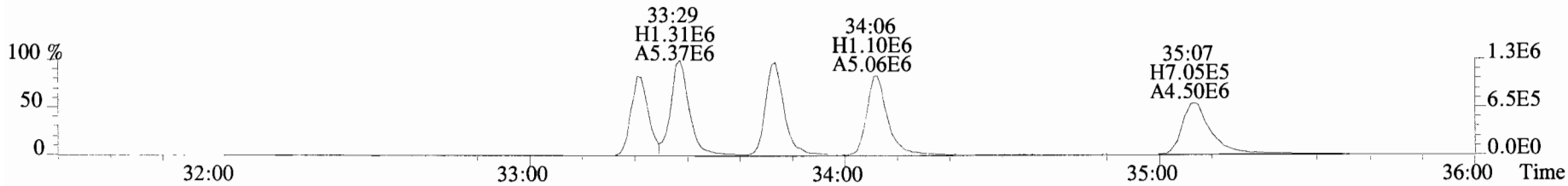
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



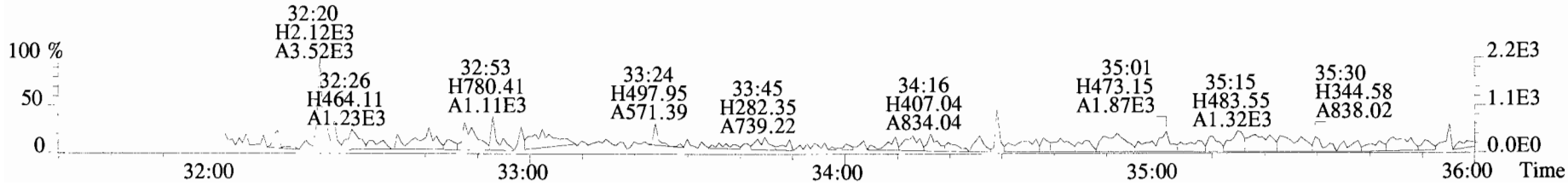
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



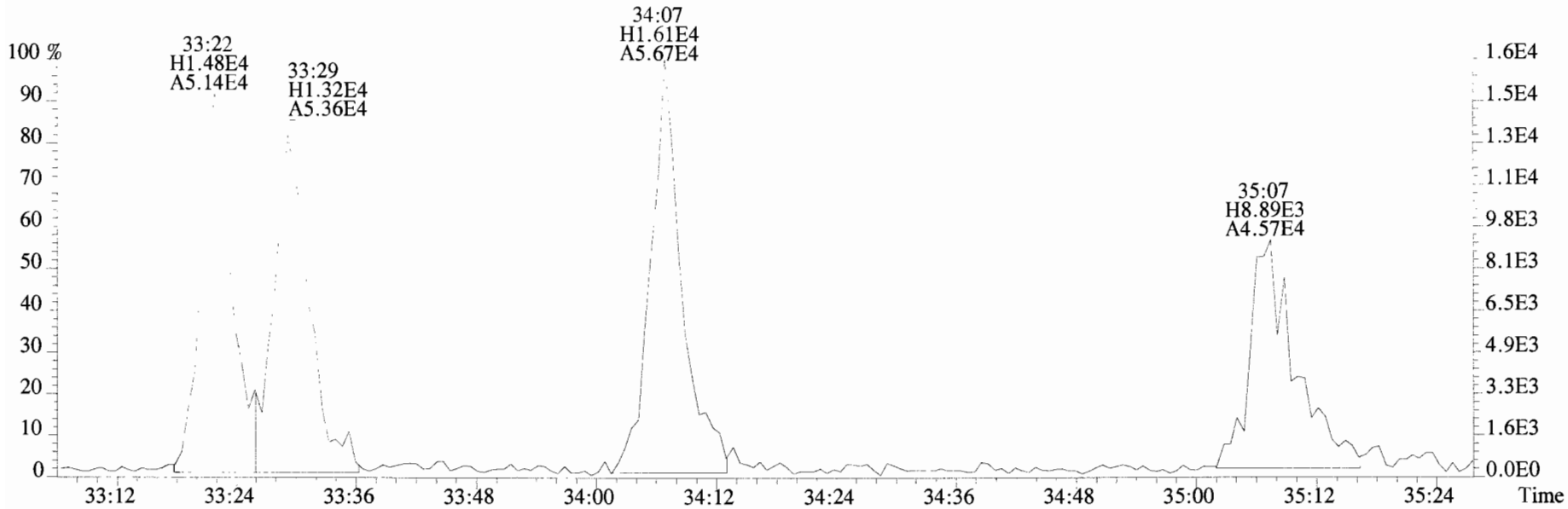
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



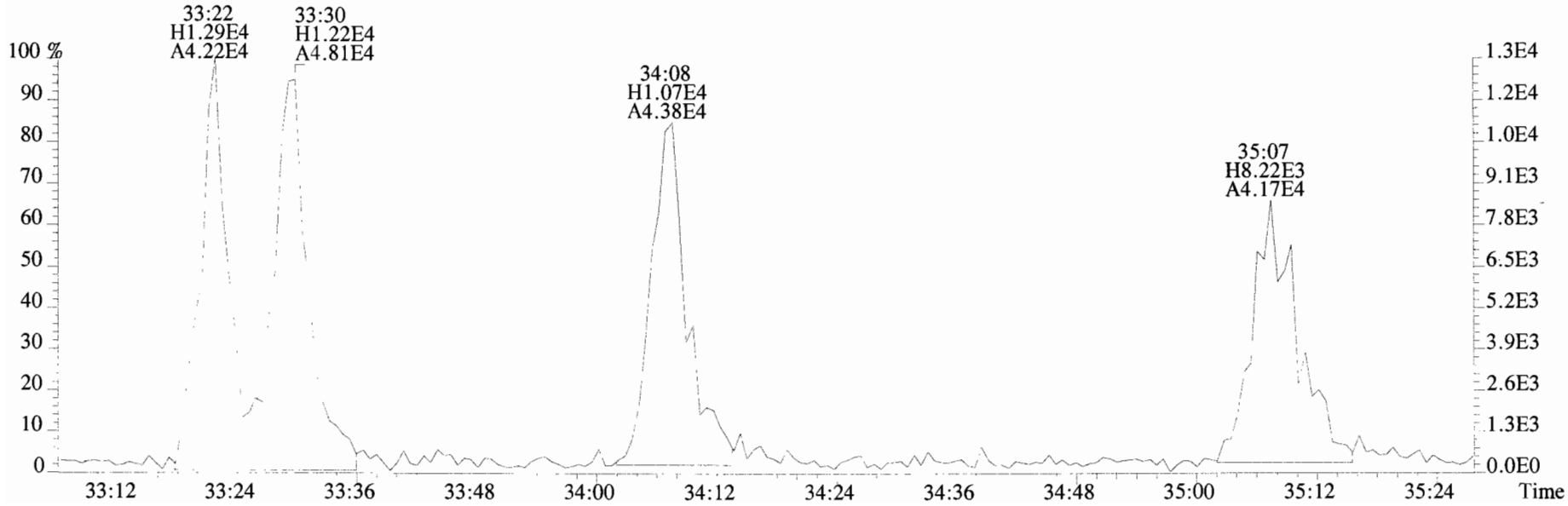
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



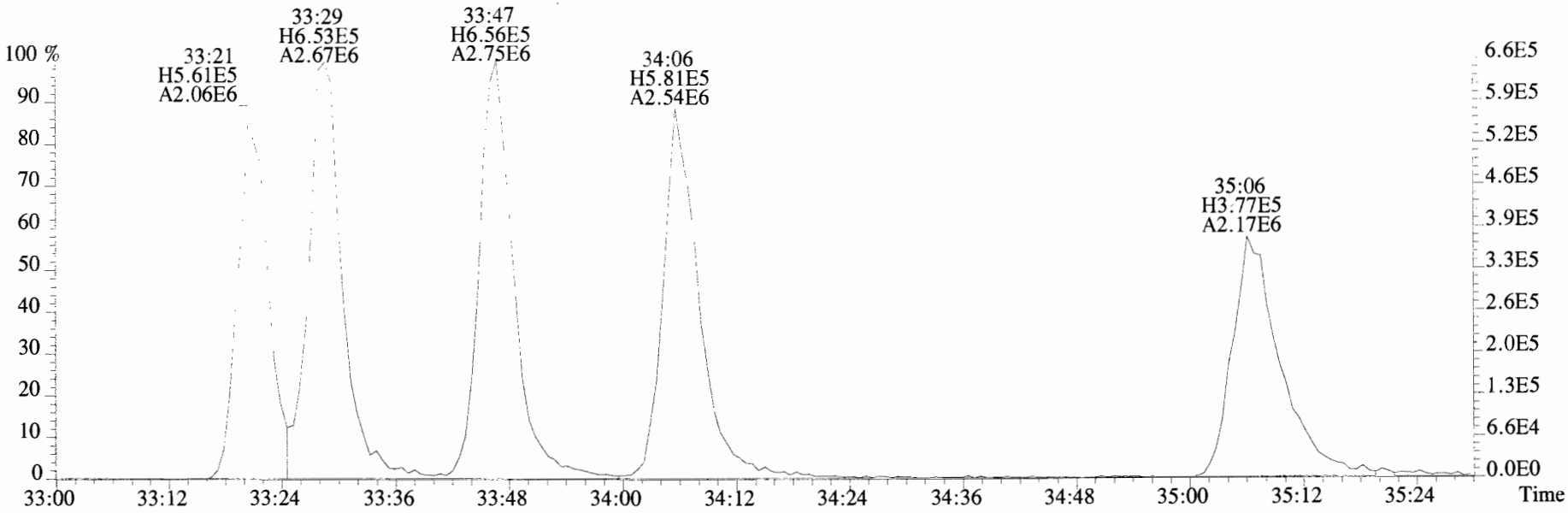
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
373.8207 F:3 BSUB(10000,15,-3.0)



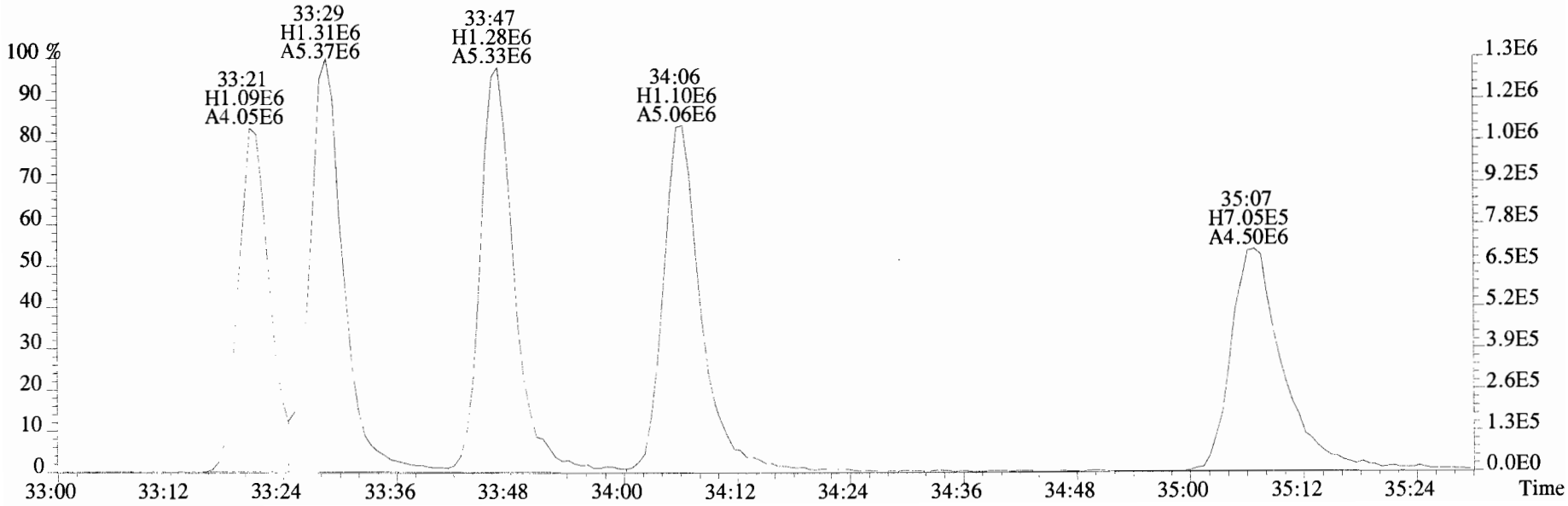
375.8178 F:3 BSUB(10000,15,-3.0)



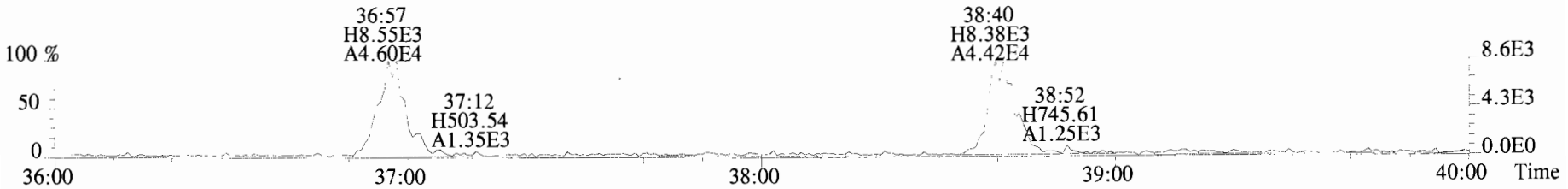
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



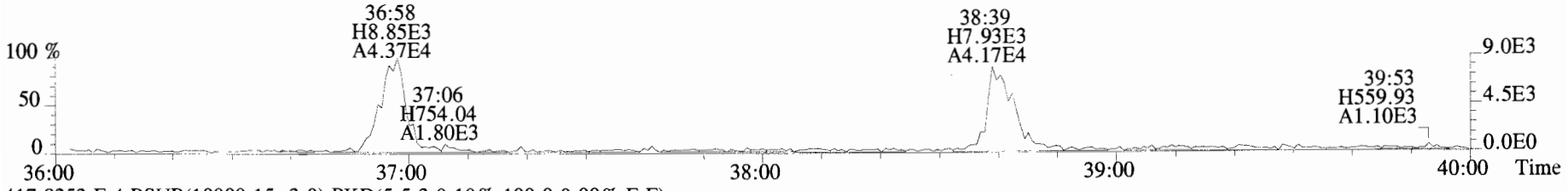
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



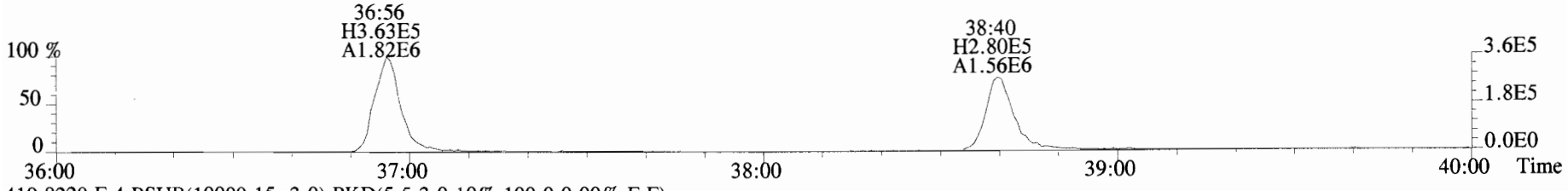
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



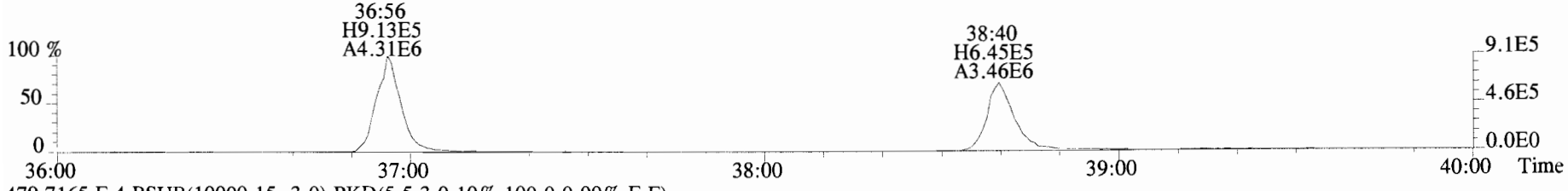
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



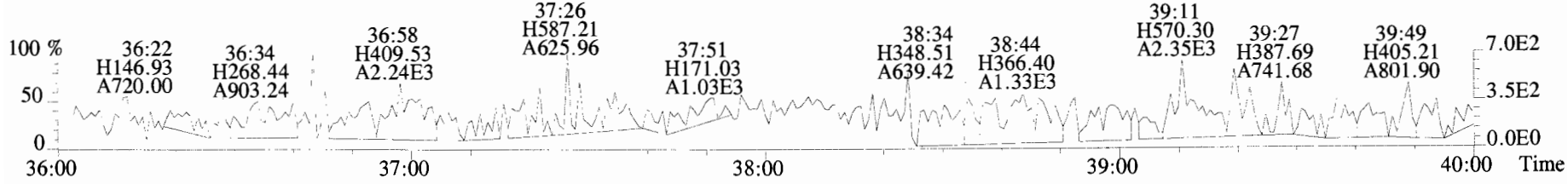
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



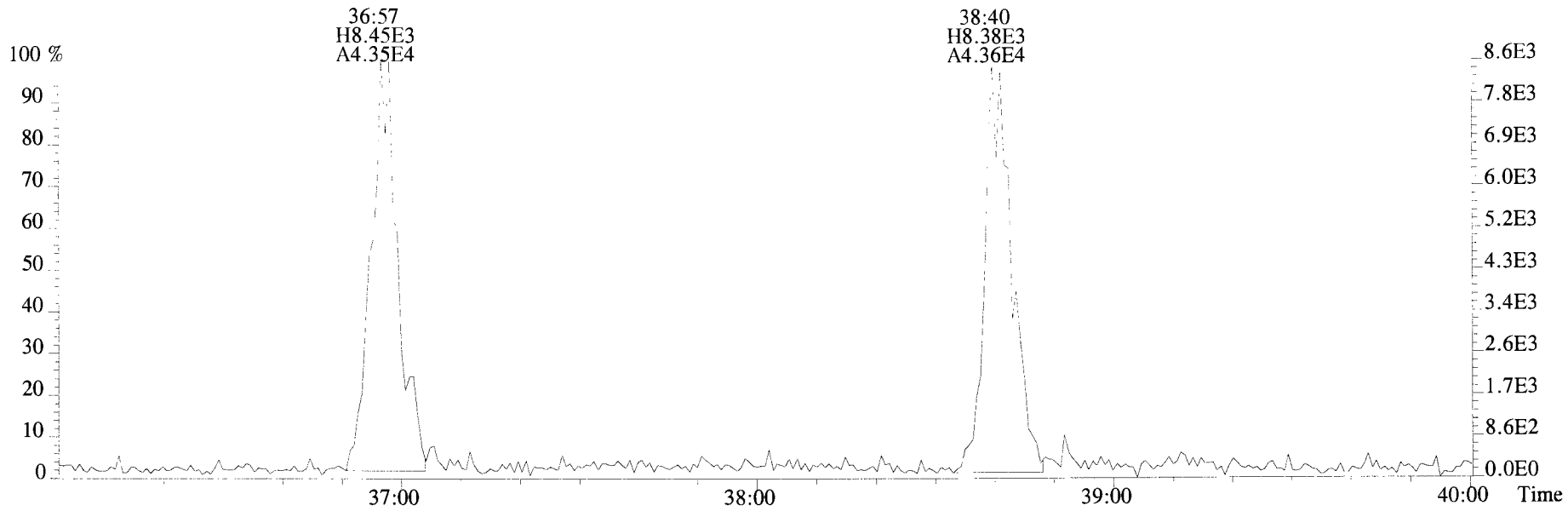
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



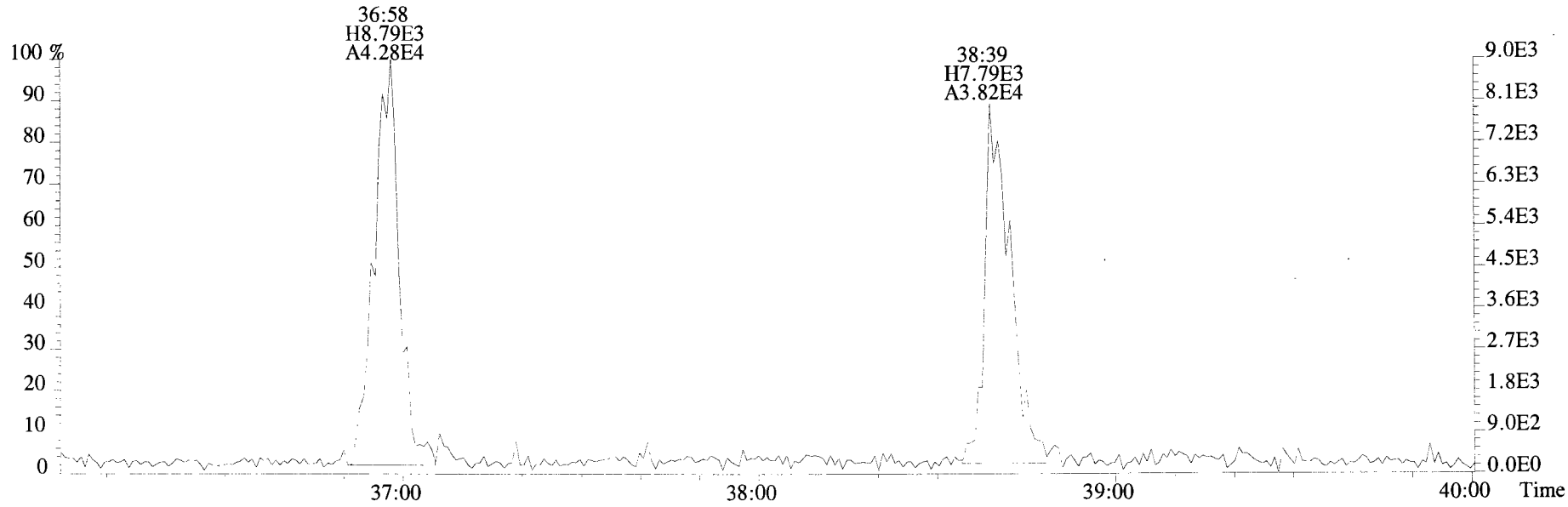
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



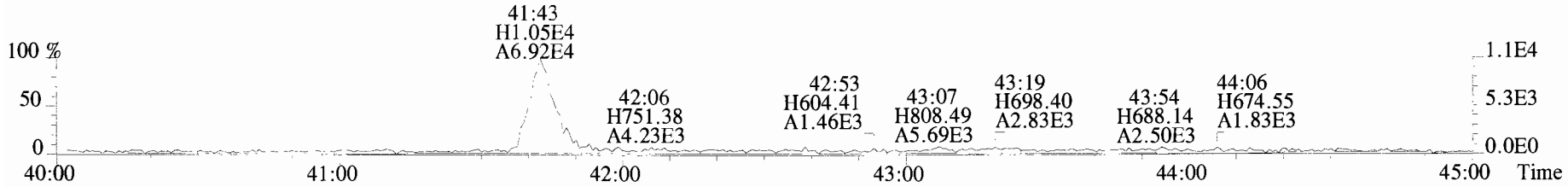
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC El+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

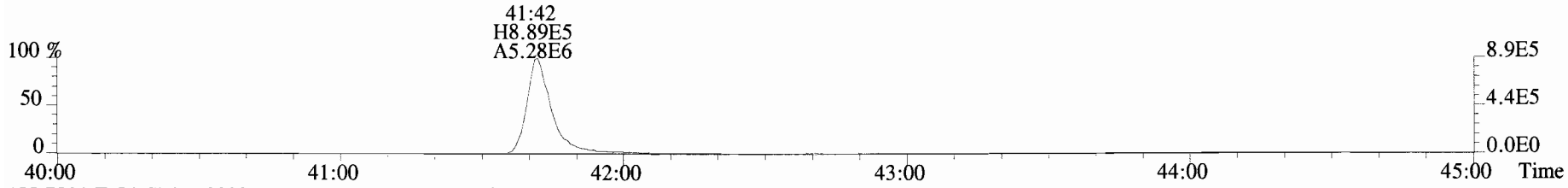


File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

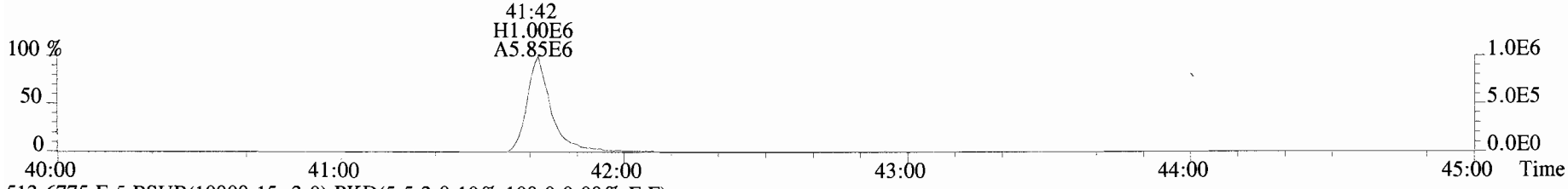


443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

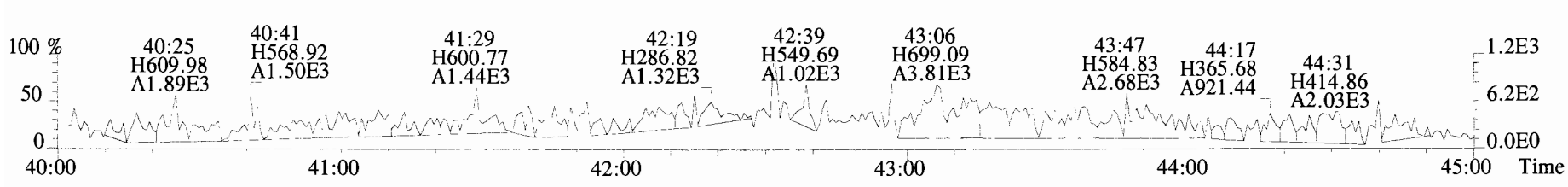
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



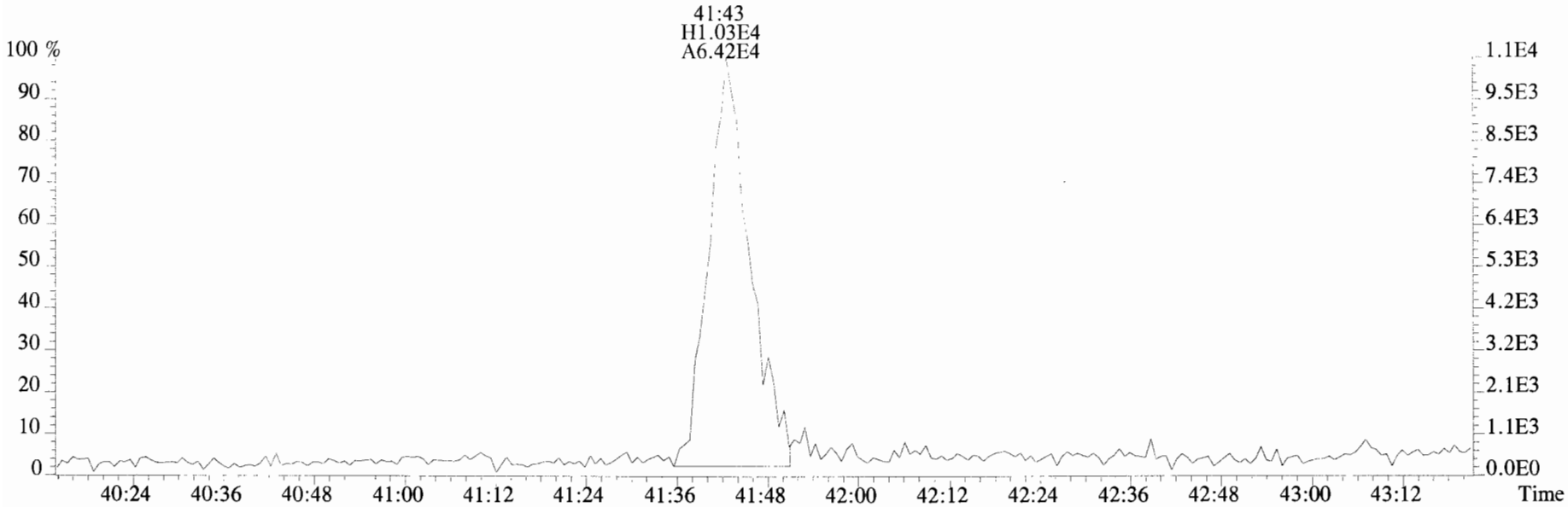
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



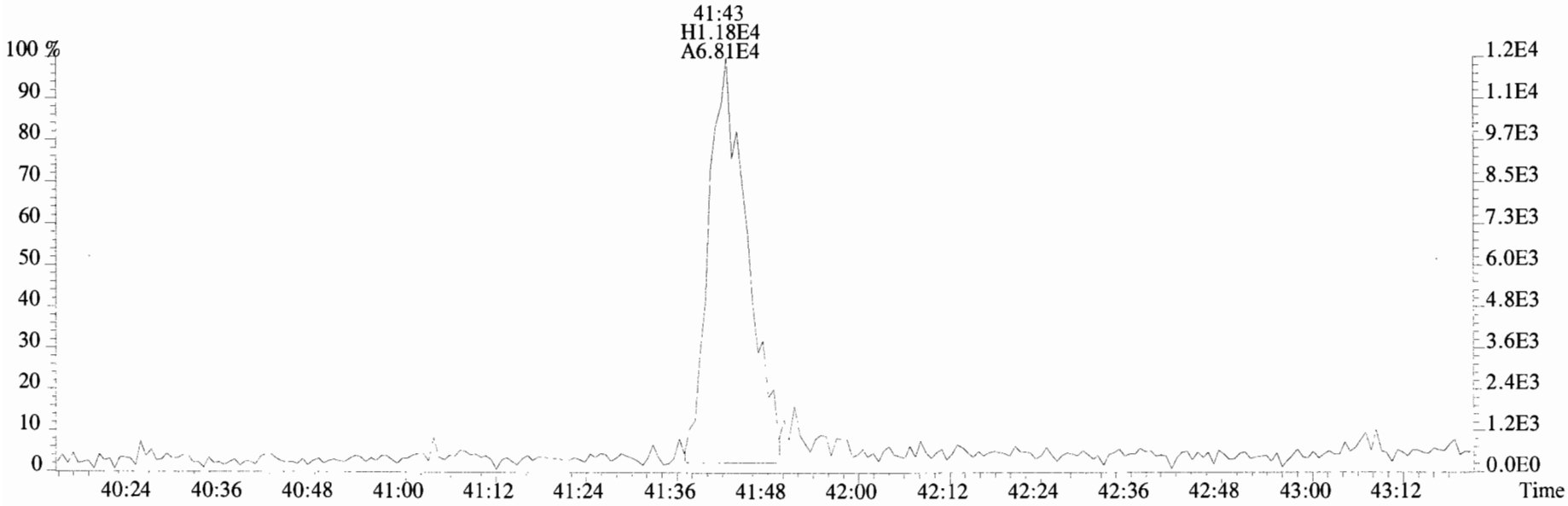
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



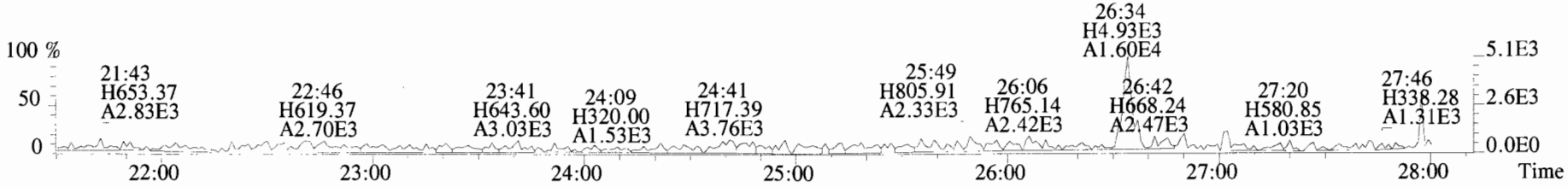
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



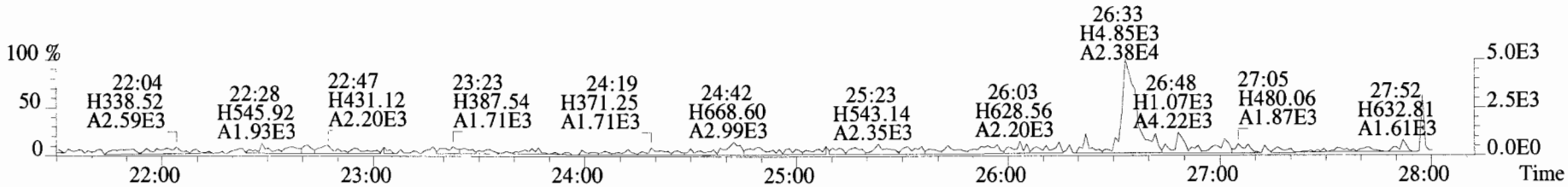
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



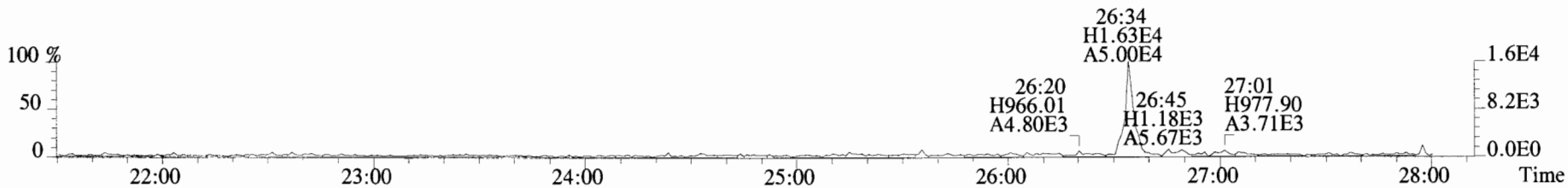
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



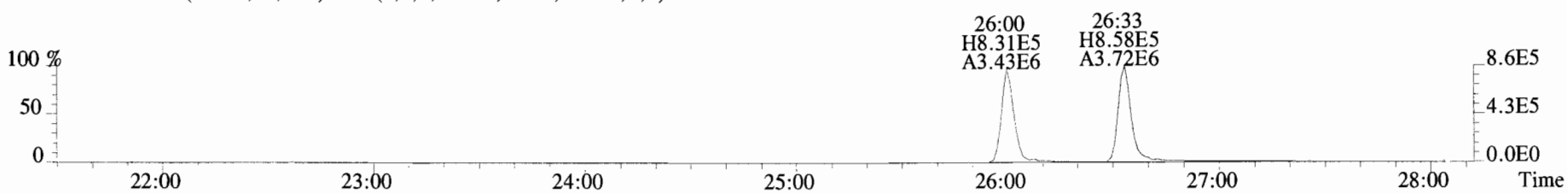
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



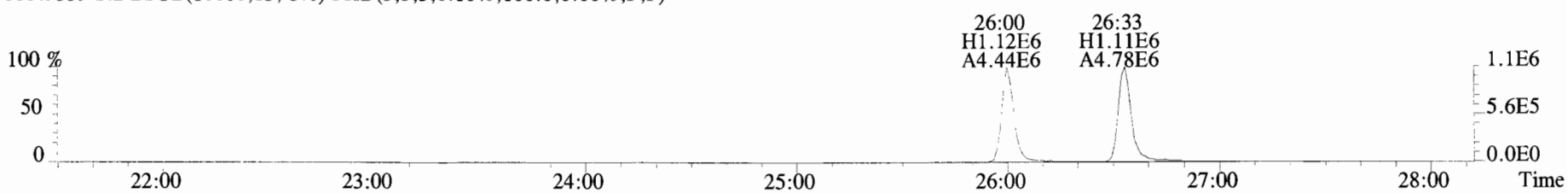
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



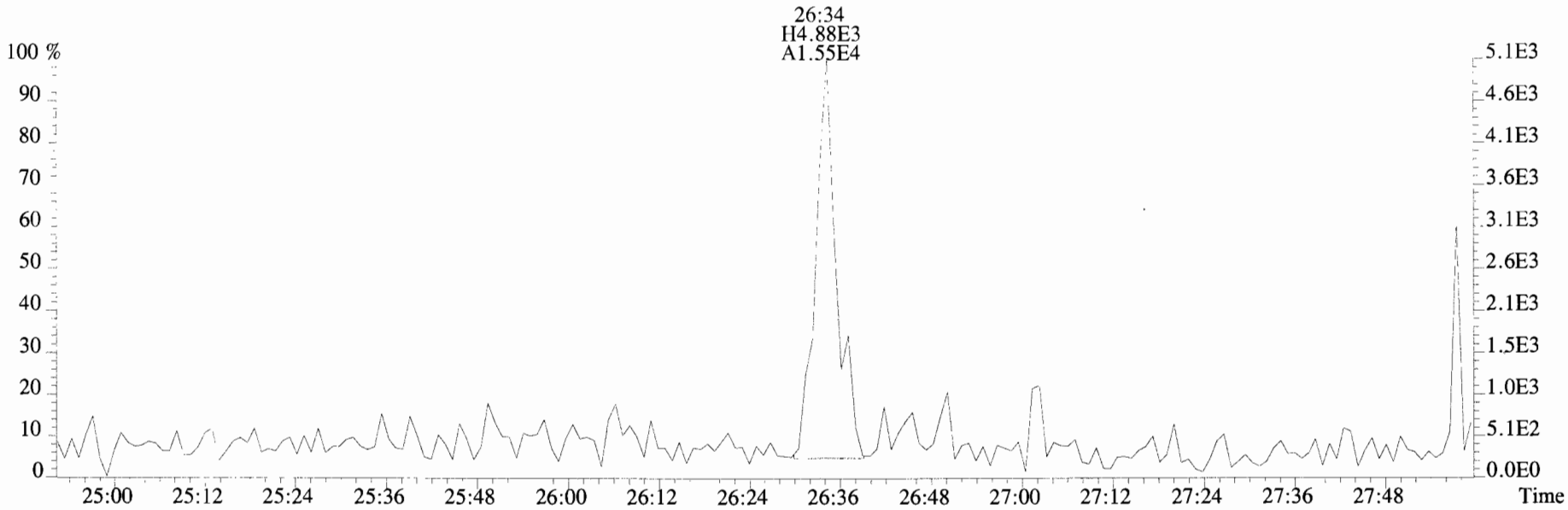
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



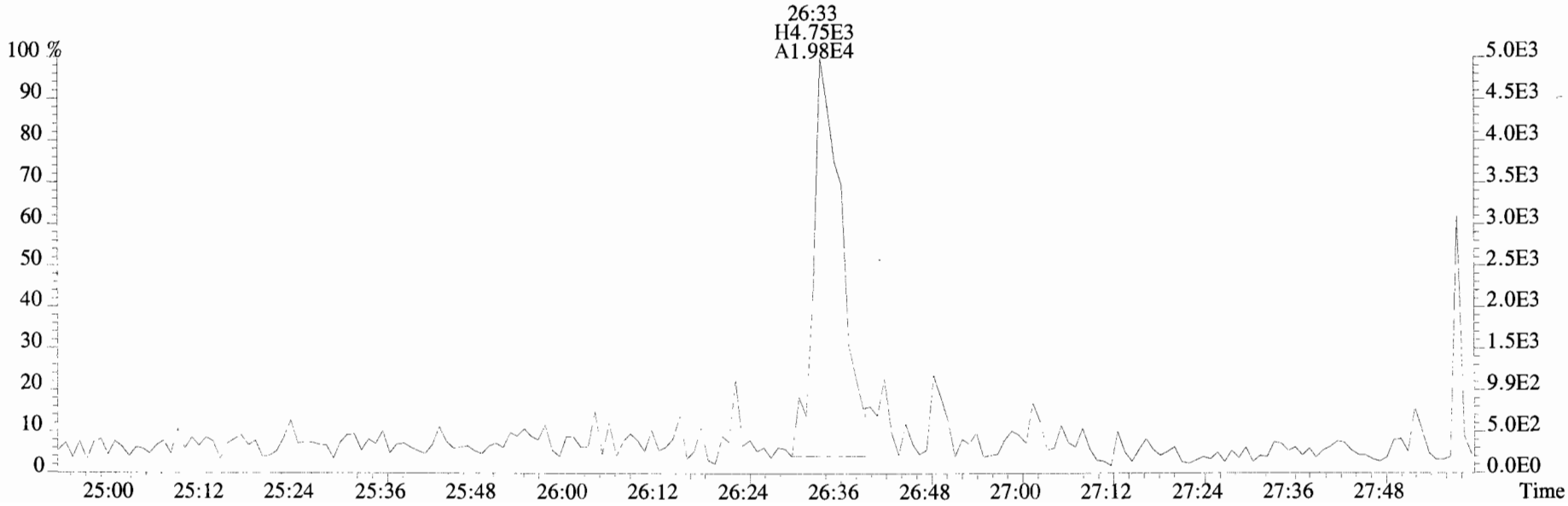
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

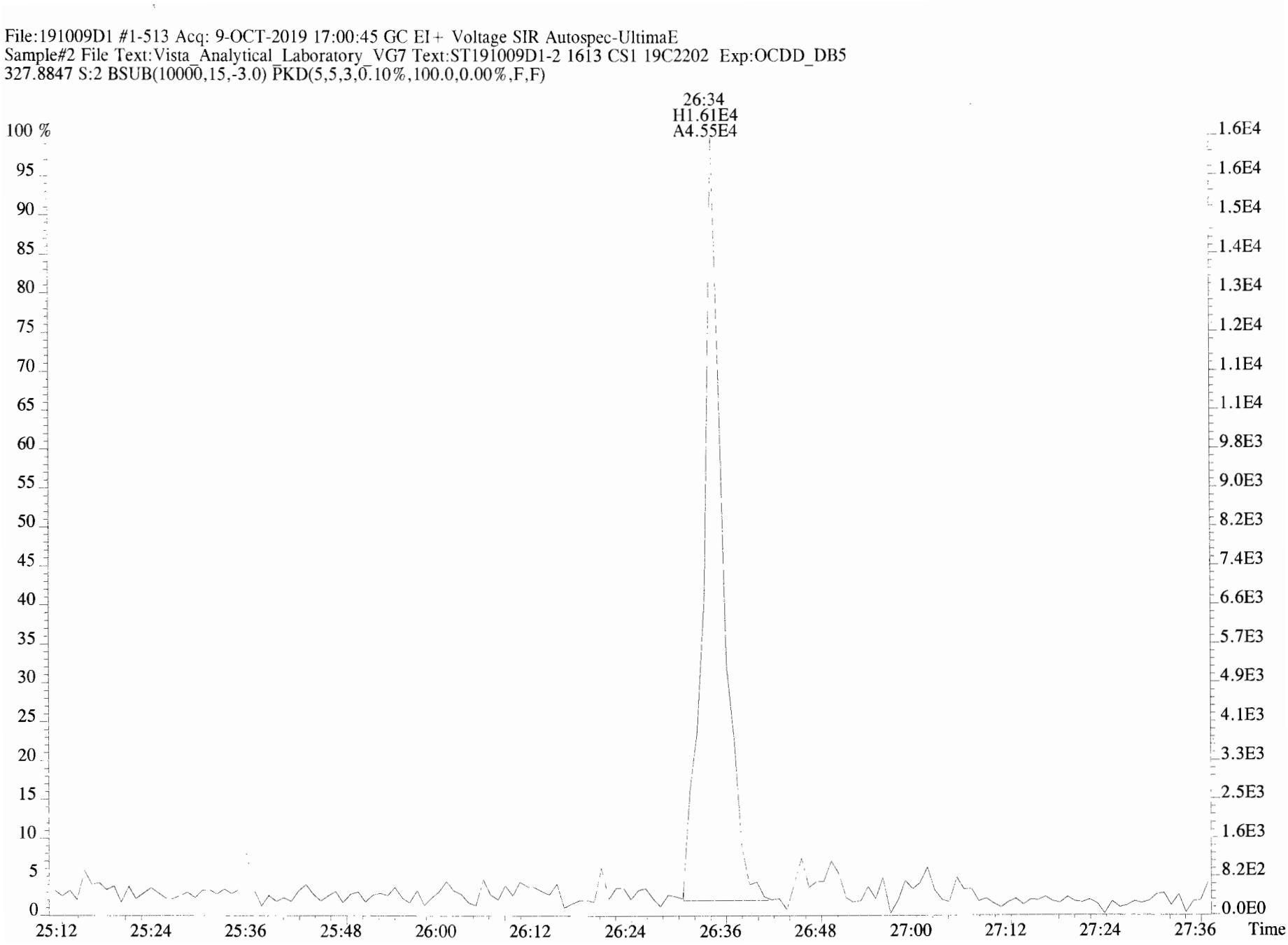


File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

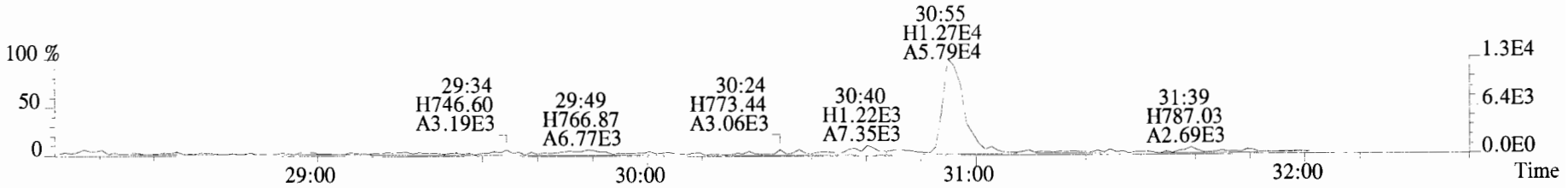


321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

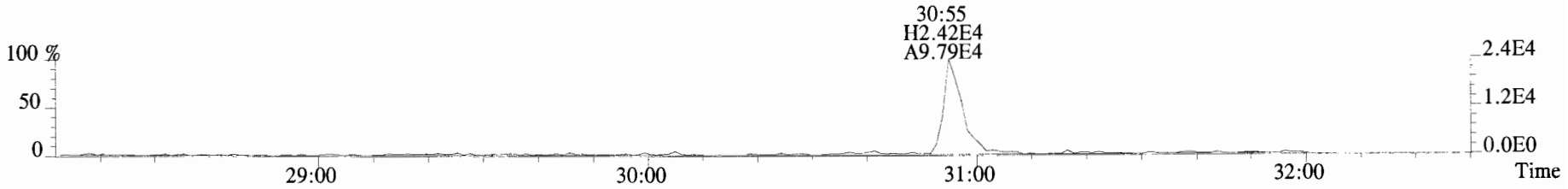



File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:34
H1.61E4
A4.55E4
100 %
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
1.6E4
1.6E4
1.5E4
1.4E4
1.3E4
1.2E4
1.1E4
1.1E4
9.8E3
9.0E3
8.2E3
7.4E3
6.6E3
5.7E3
4.9E3
4.1E3
3.3E3
2.5E3
1.6E3
8.2E2
0.0E0
25:12
25:24
25:36
25:48
26:00
26:12
26:24
26:36
26:48
27:00
27:12
27:24
27:36
Time

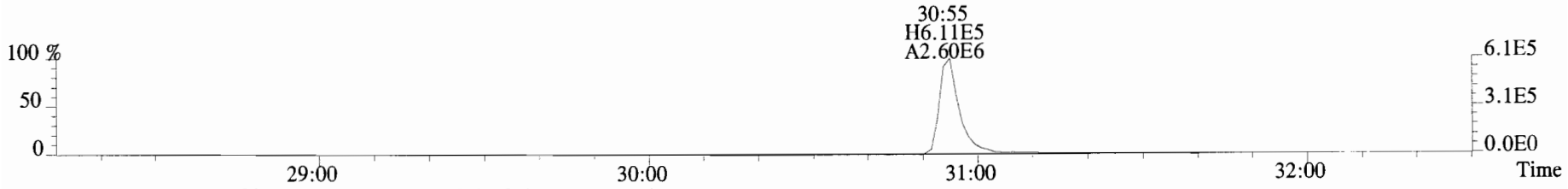
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



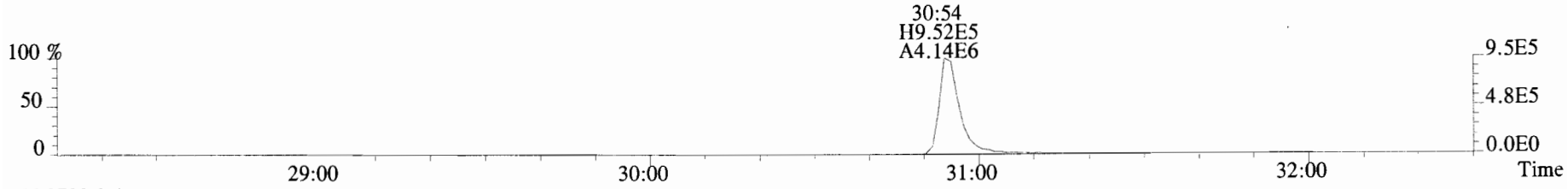
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



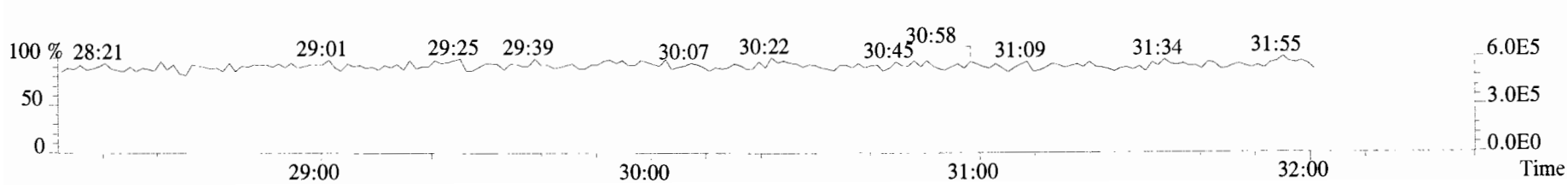
365.8978 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



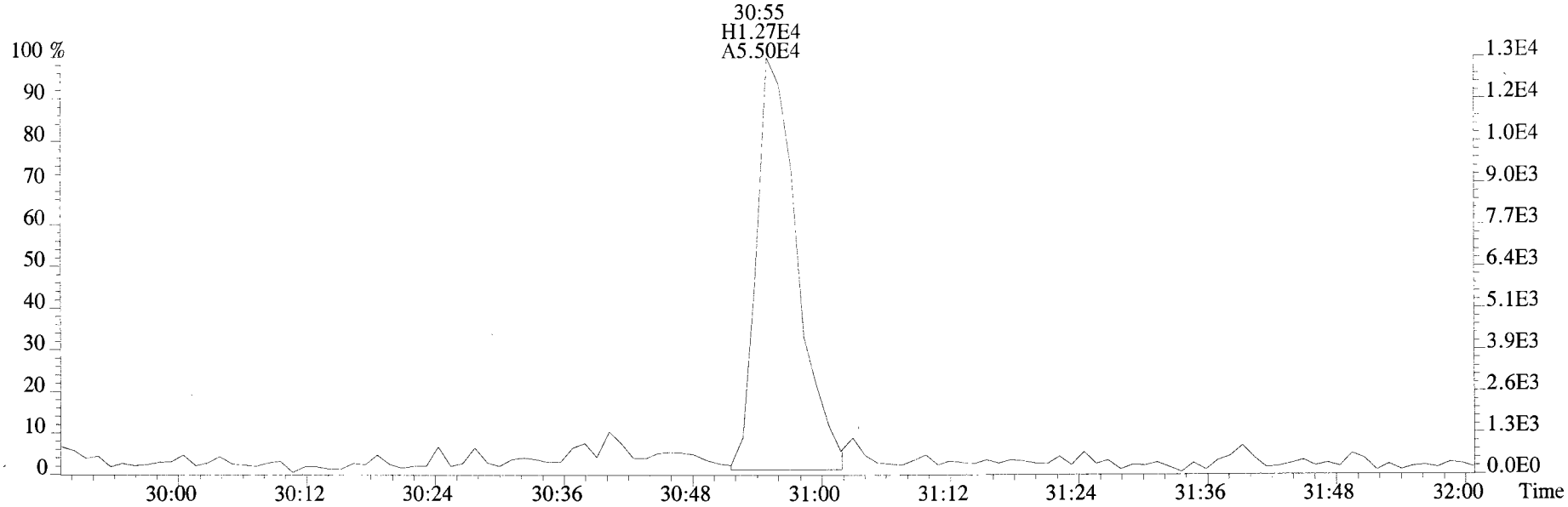
367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



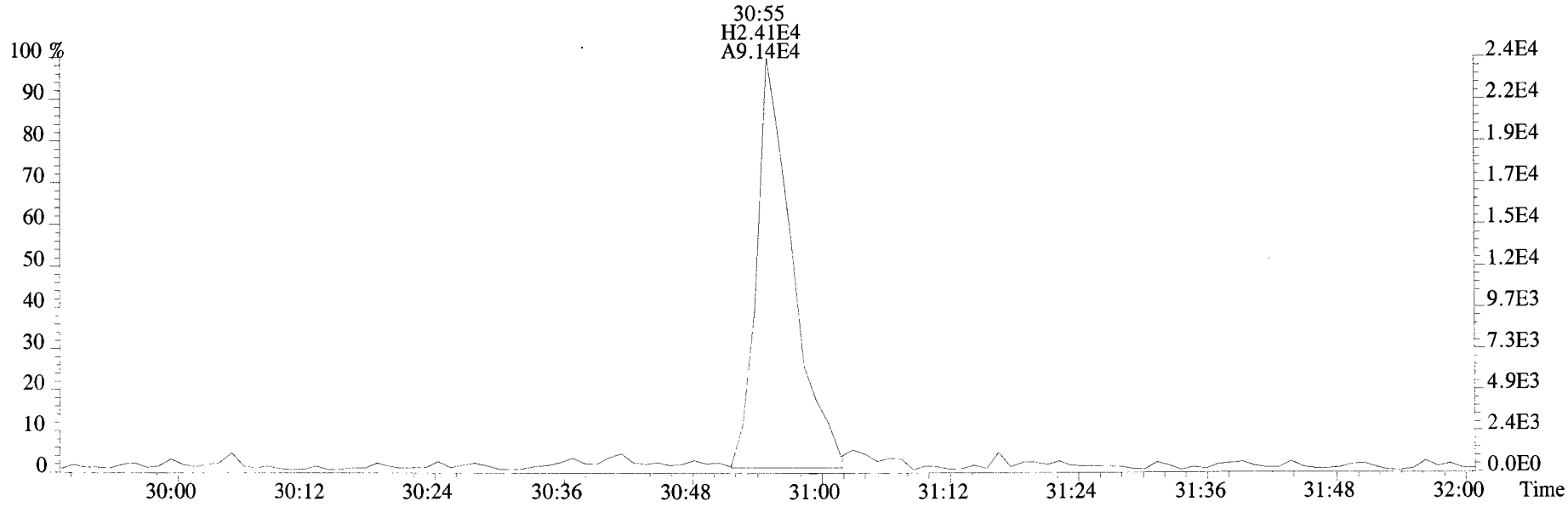
366.9792 S:2 F:2



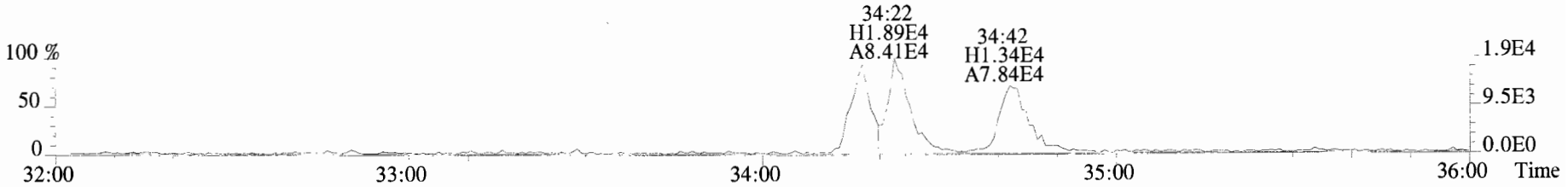
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



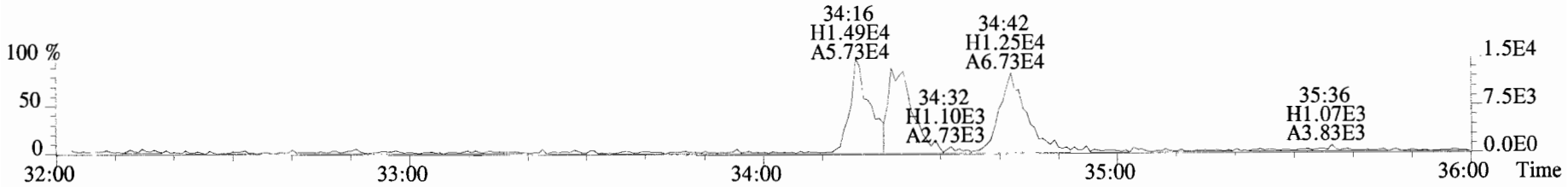
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



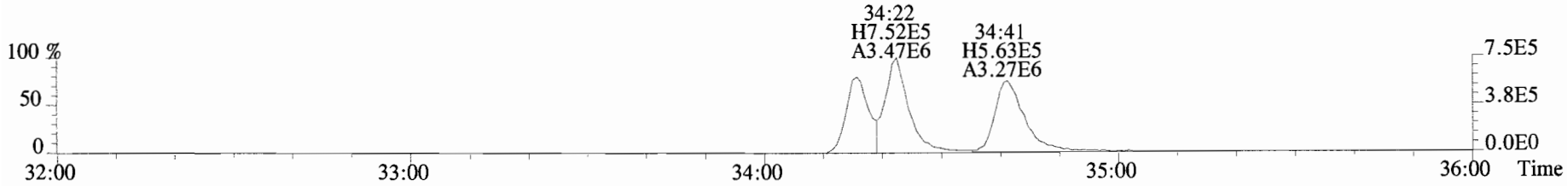
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



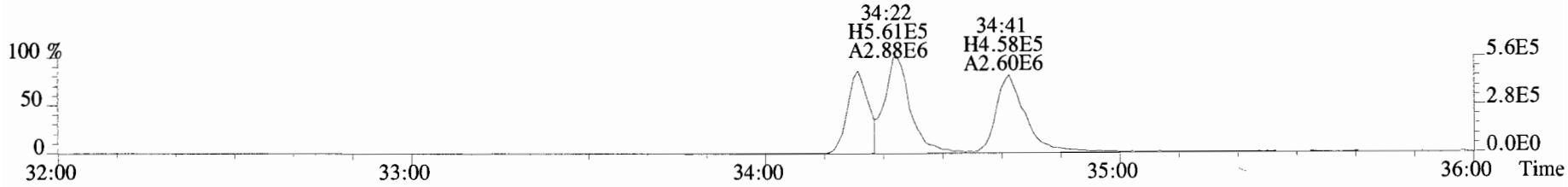
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



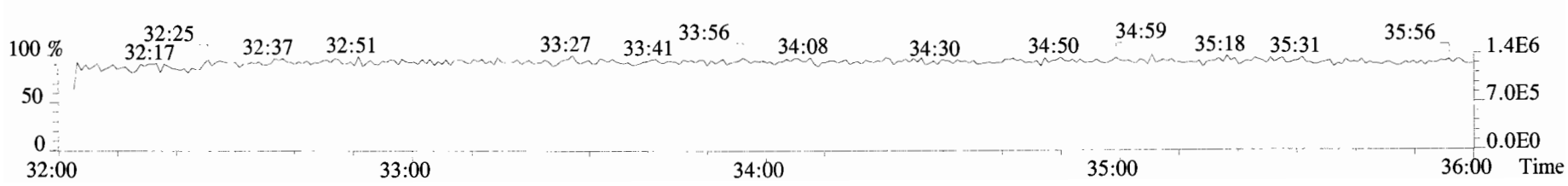
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



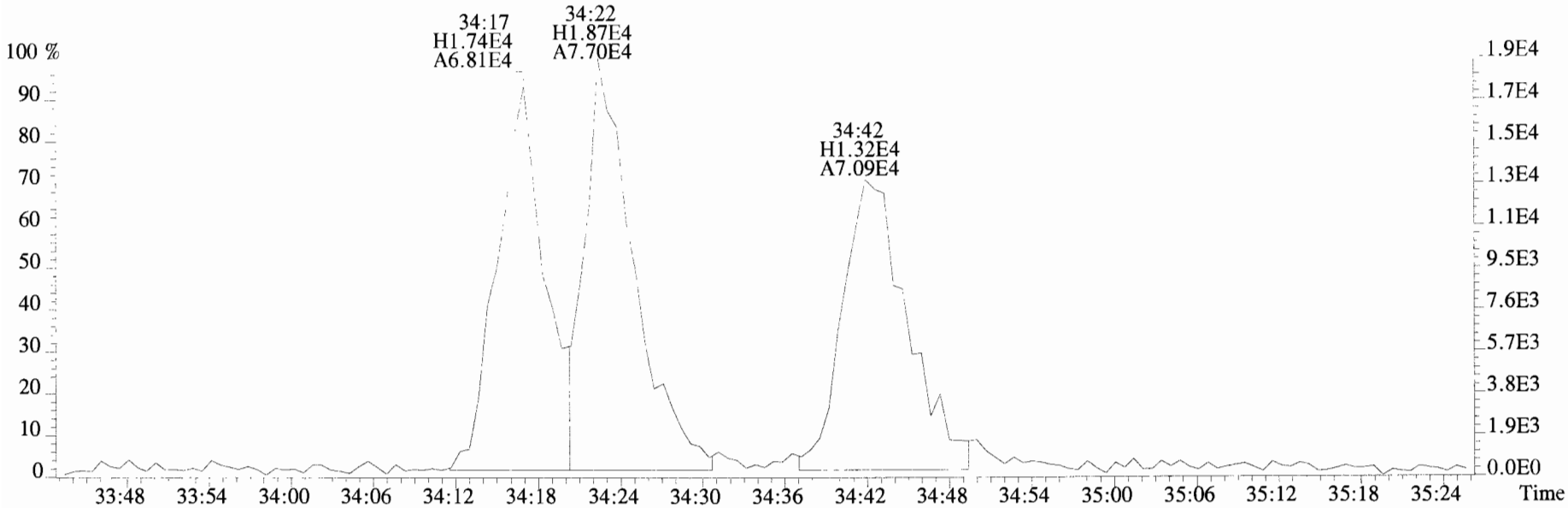
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



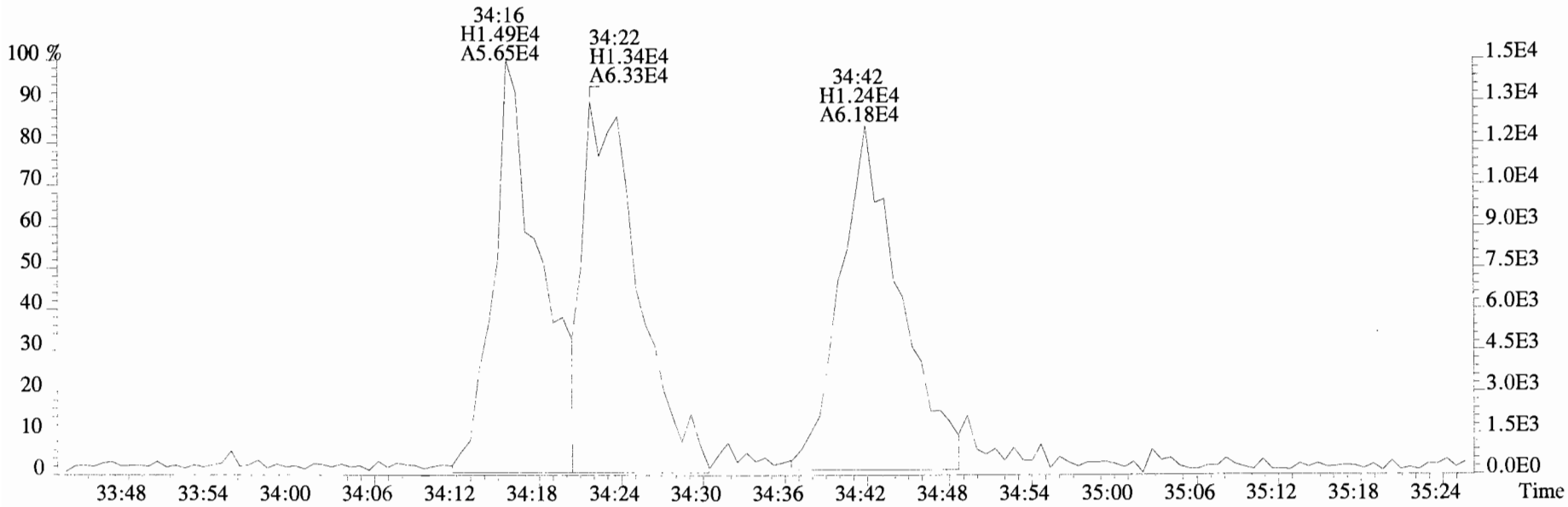
392.9760 S:2 F:3



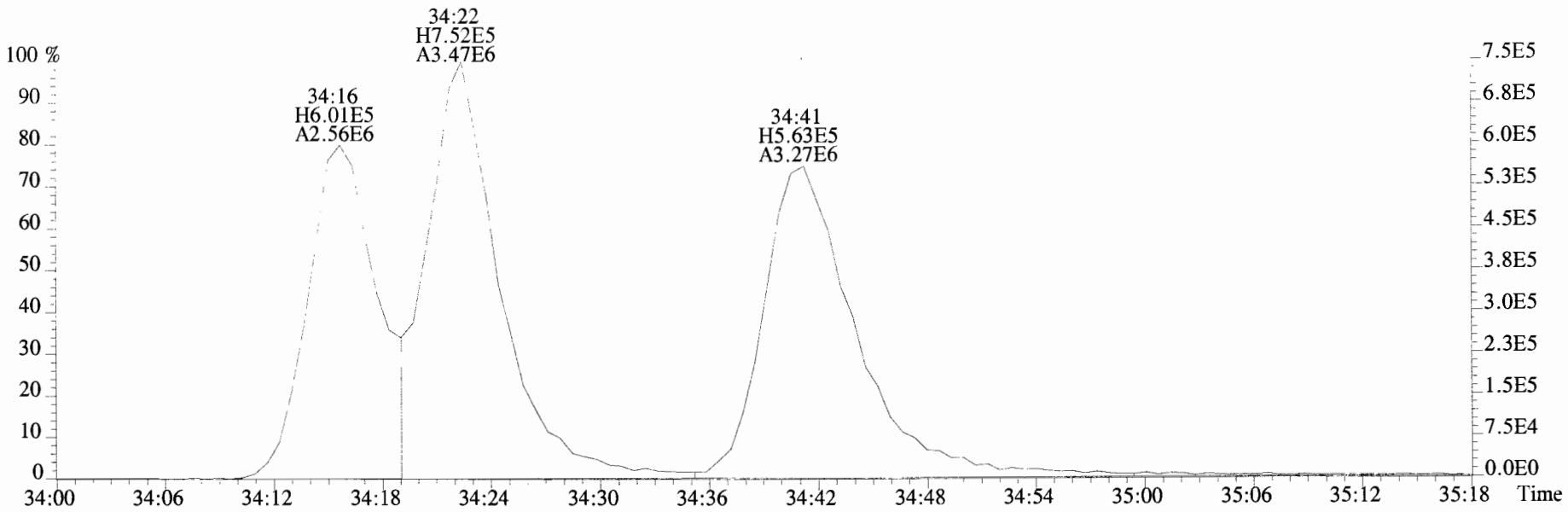
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



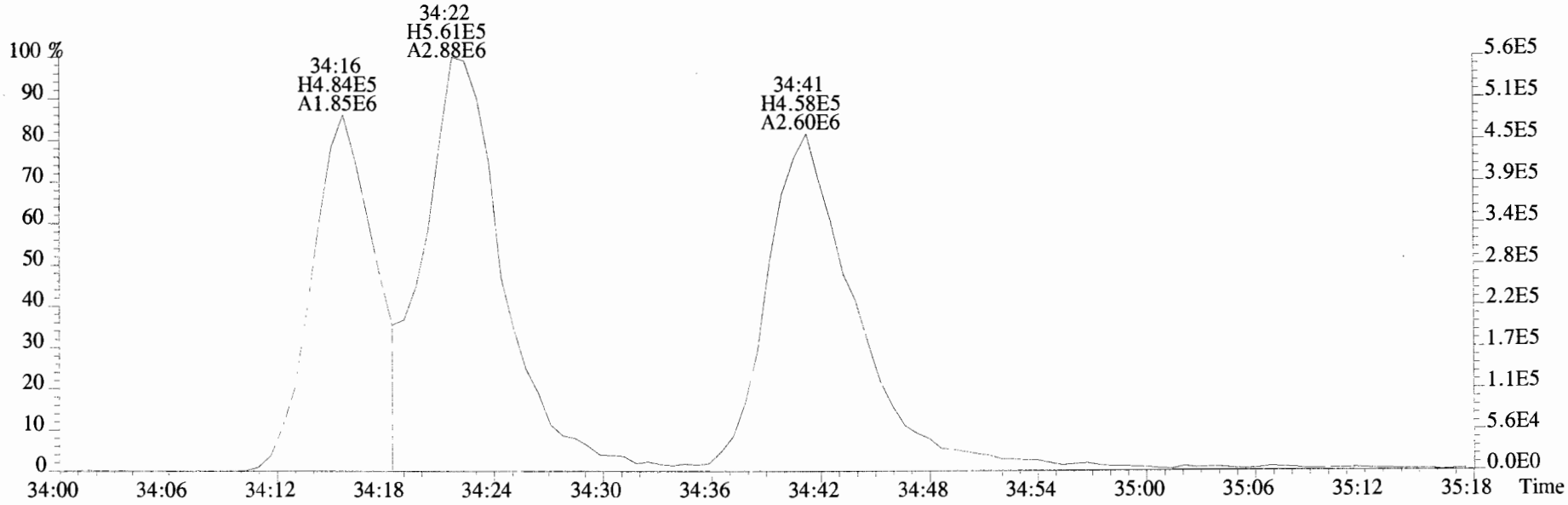
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



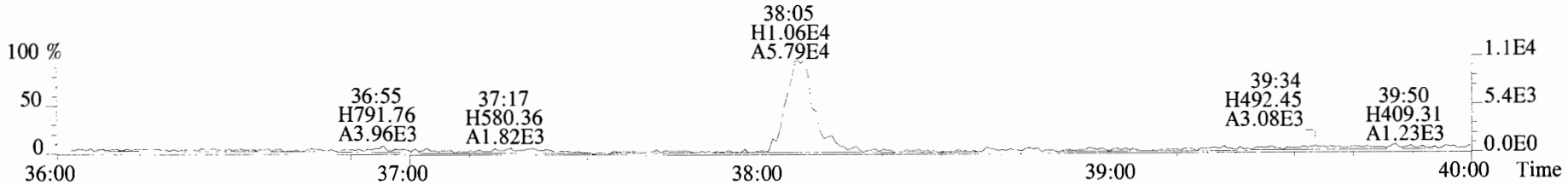
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



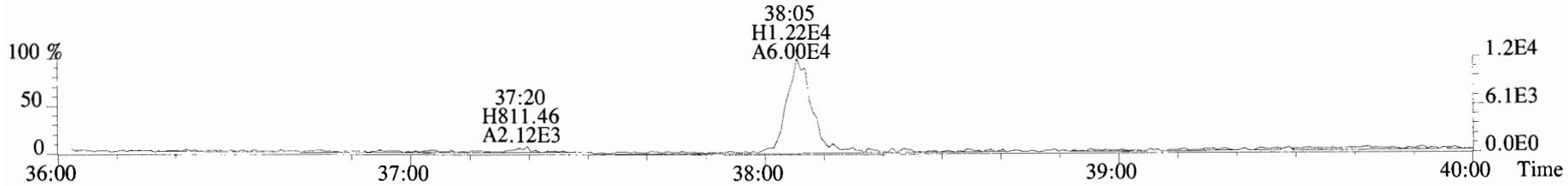
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



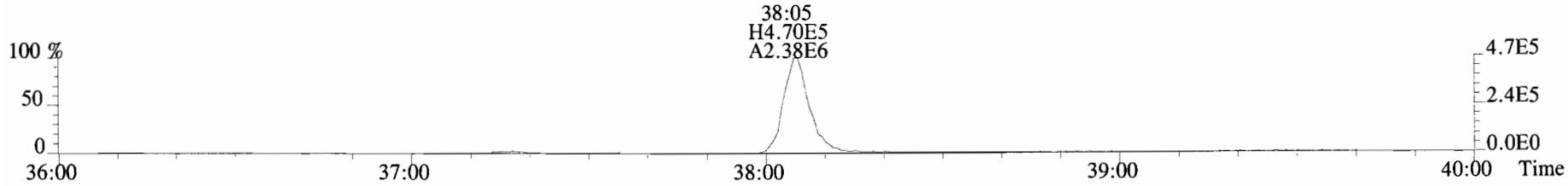
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



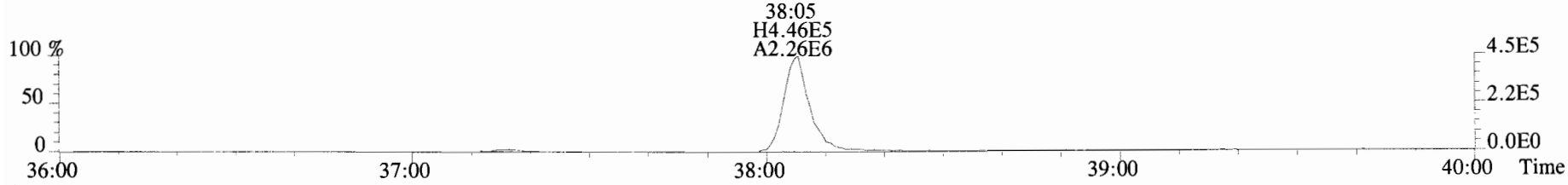
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



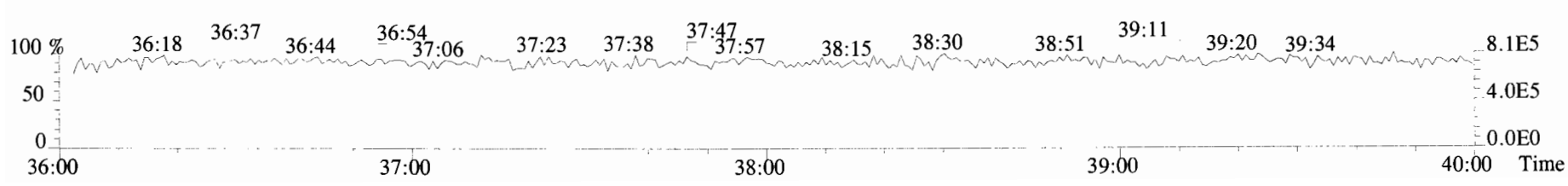
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



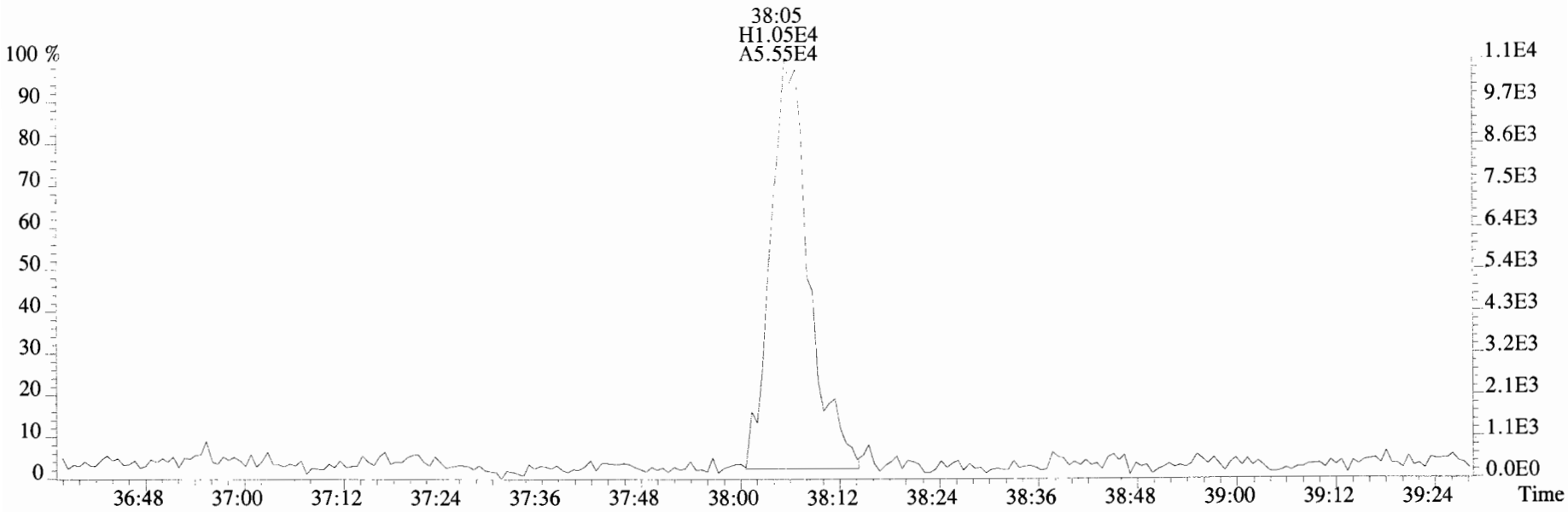
437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



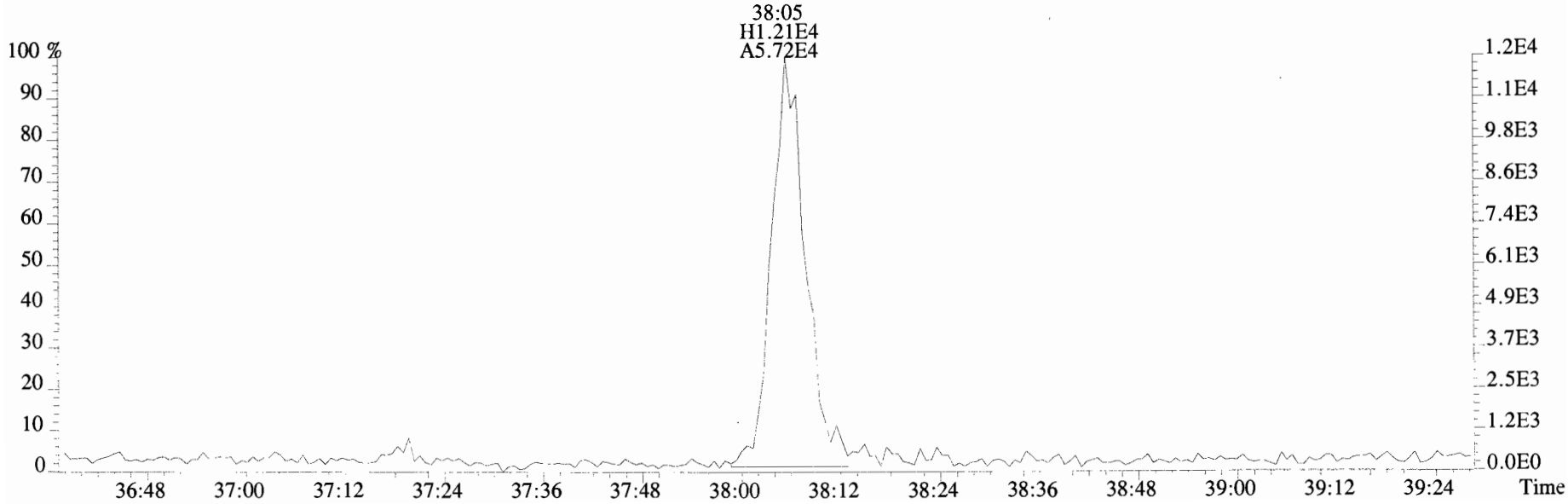
454.9728 S:2 F:4



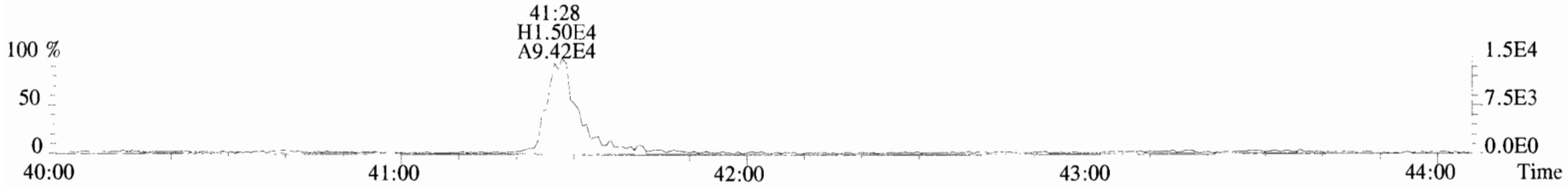
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



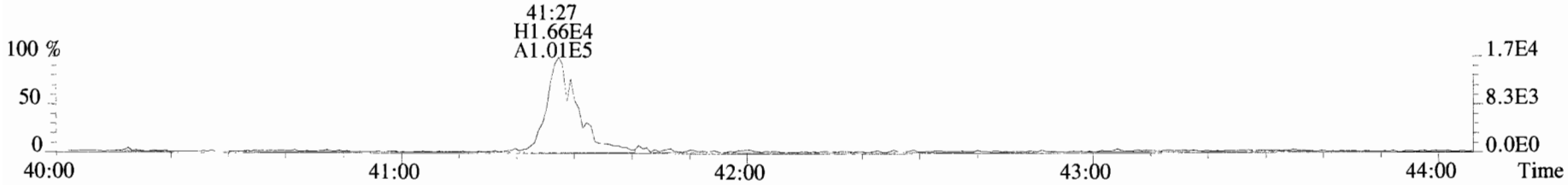
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



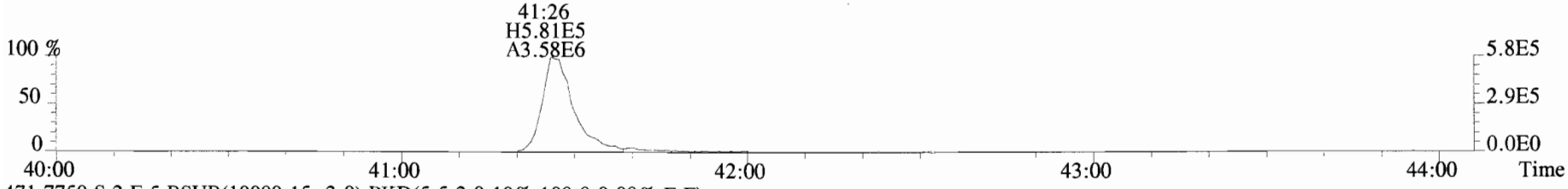
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



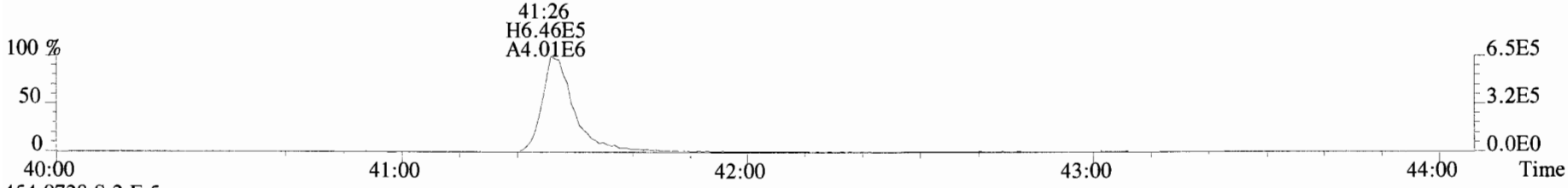
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



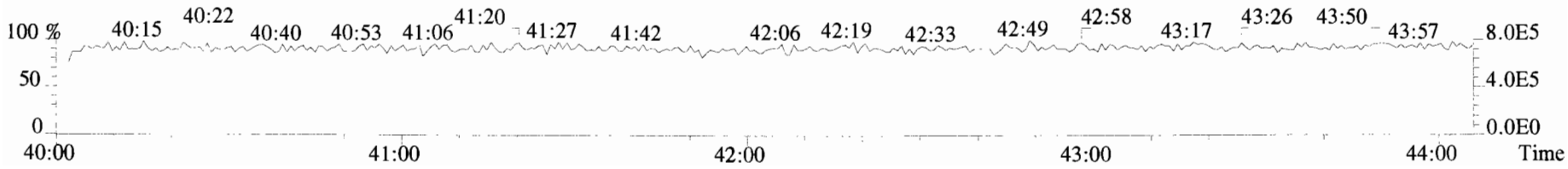
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



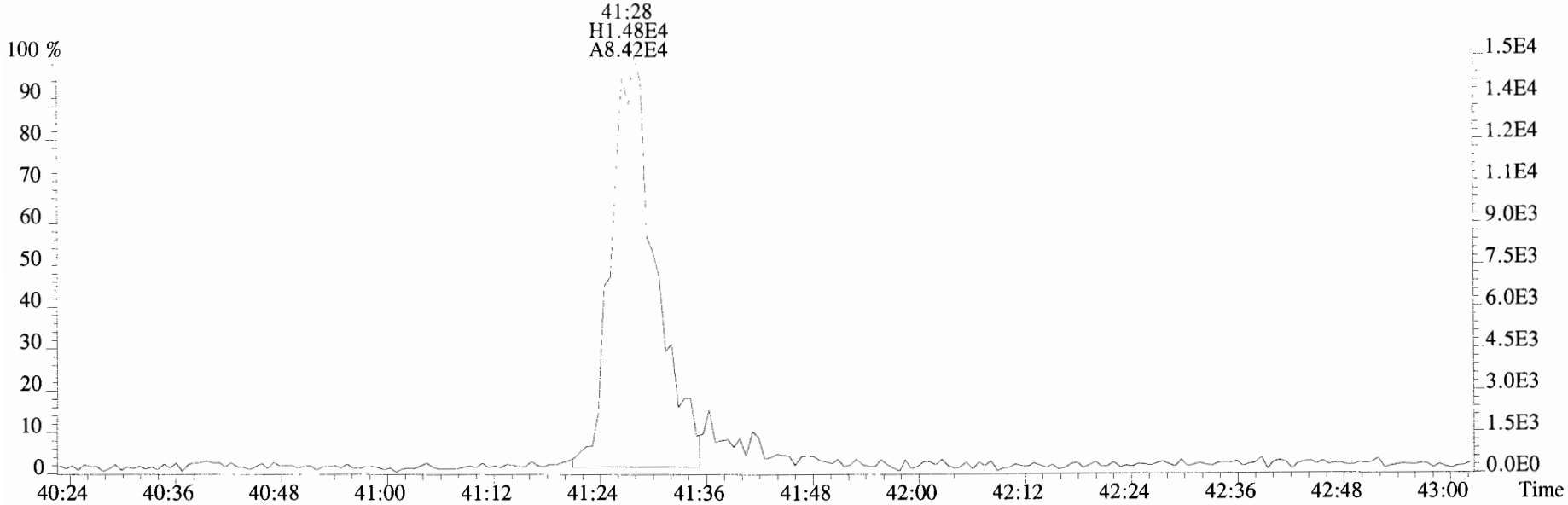
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



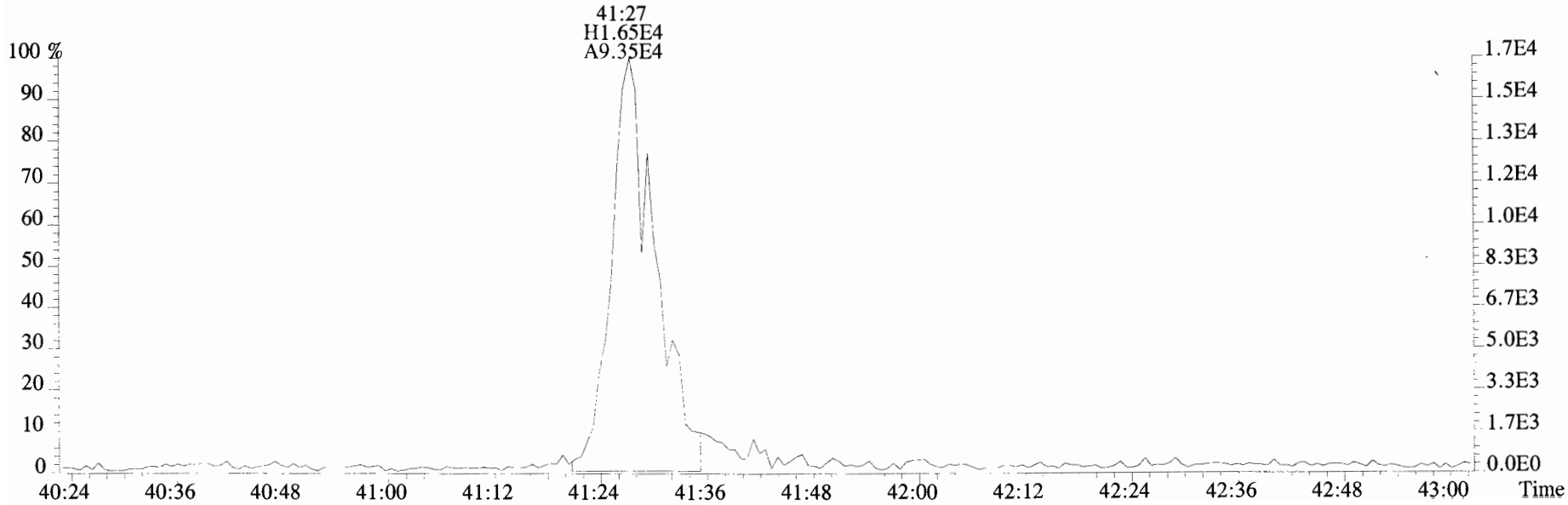
454.9728 S:2 F:5



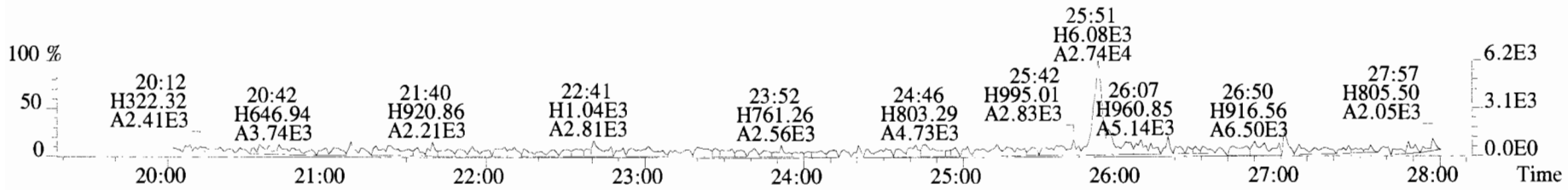
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



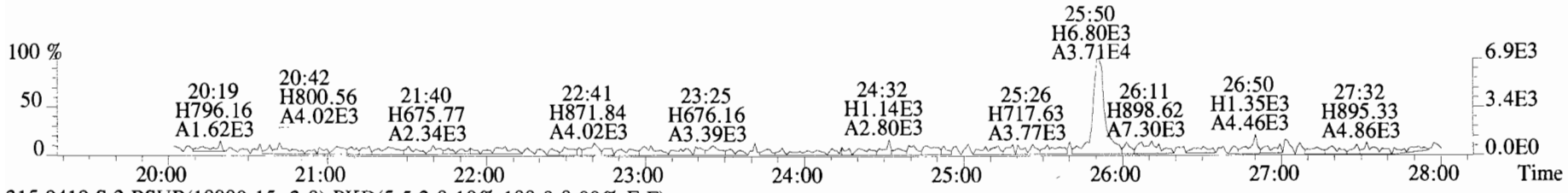
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



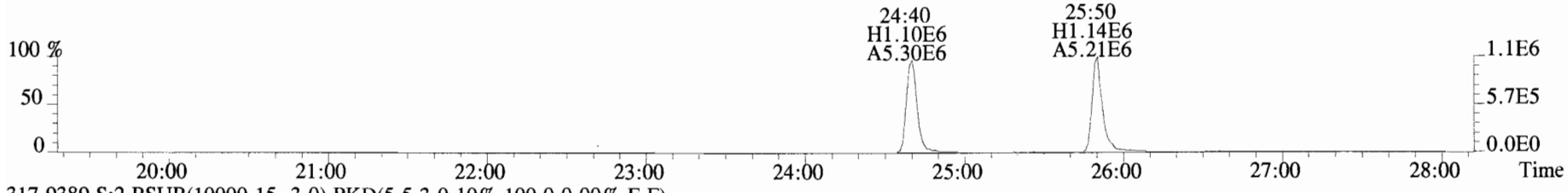
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



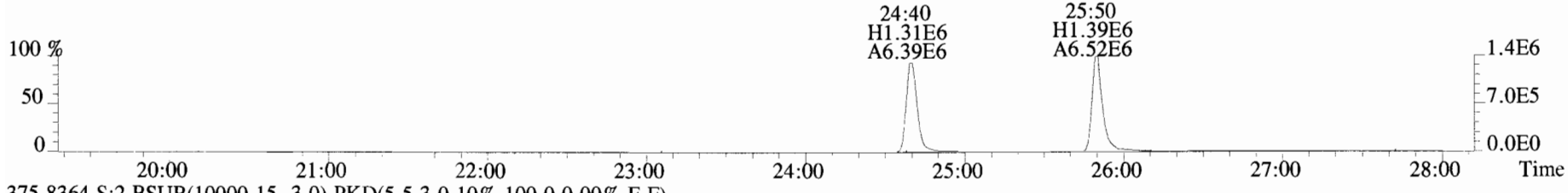
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



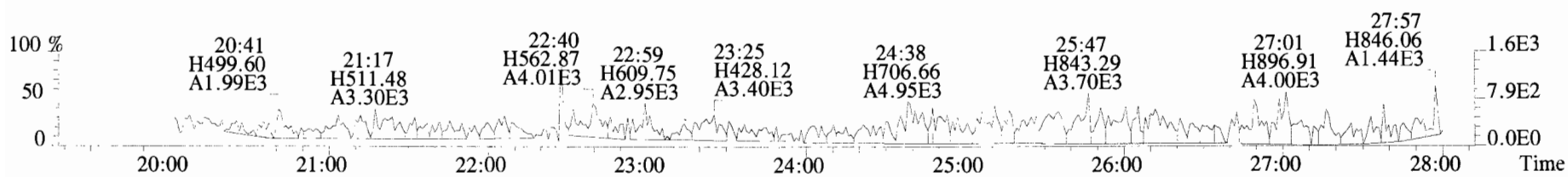
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



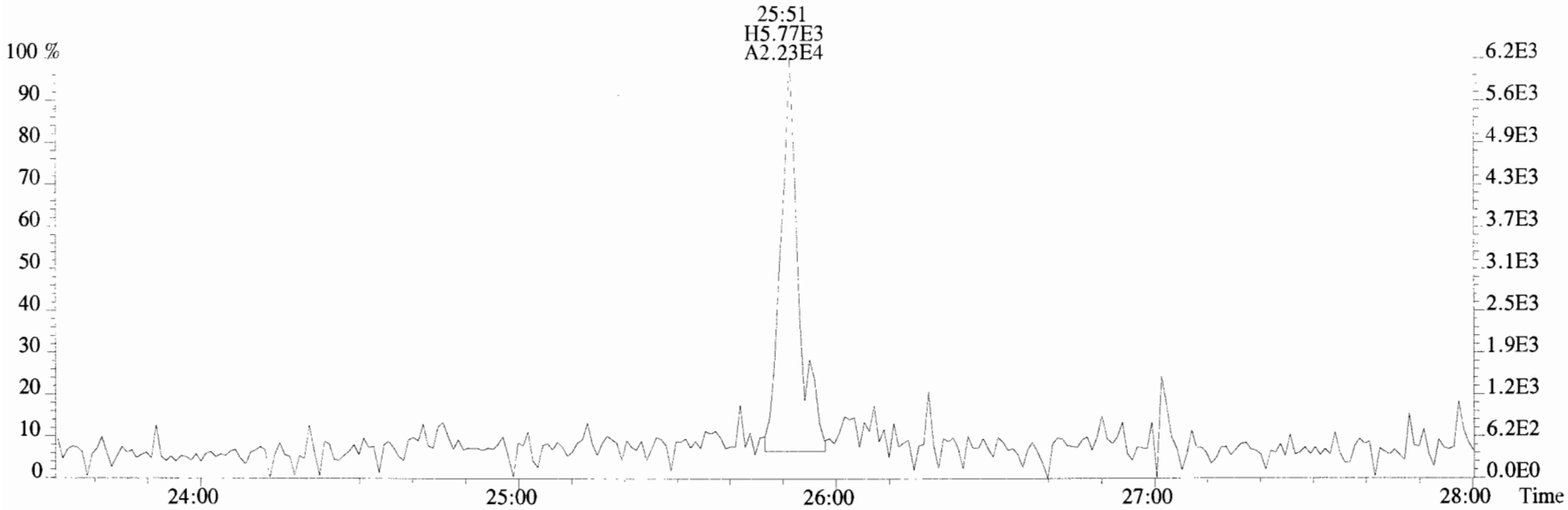
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



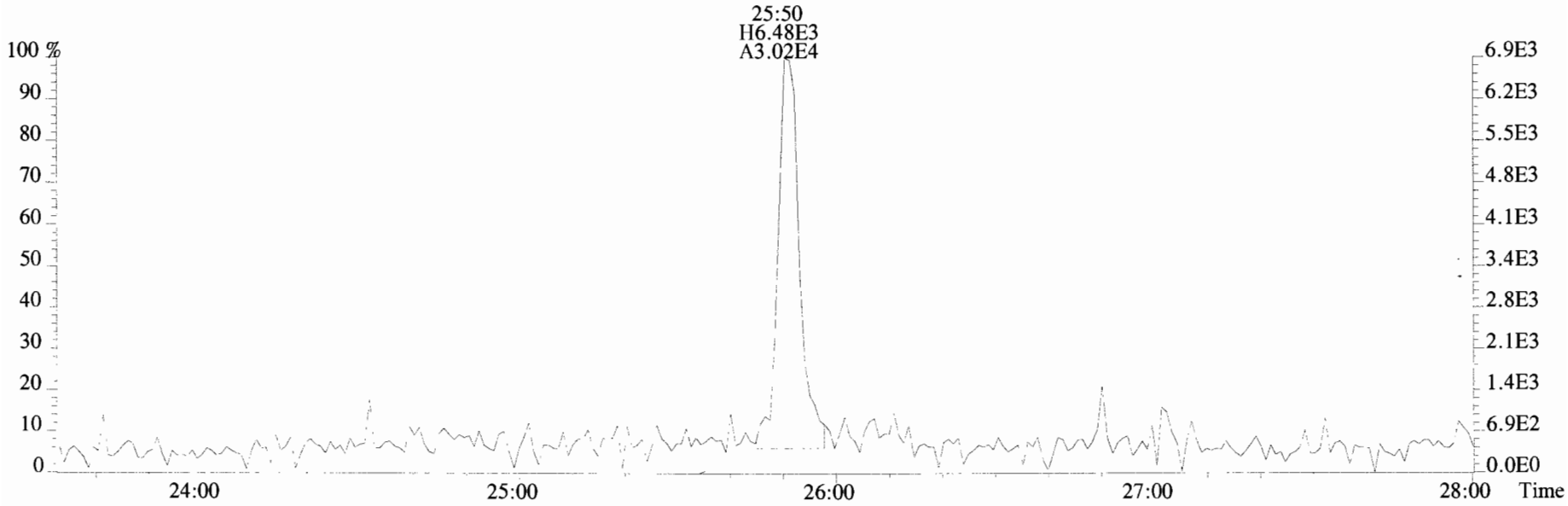
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



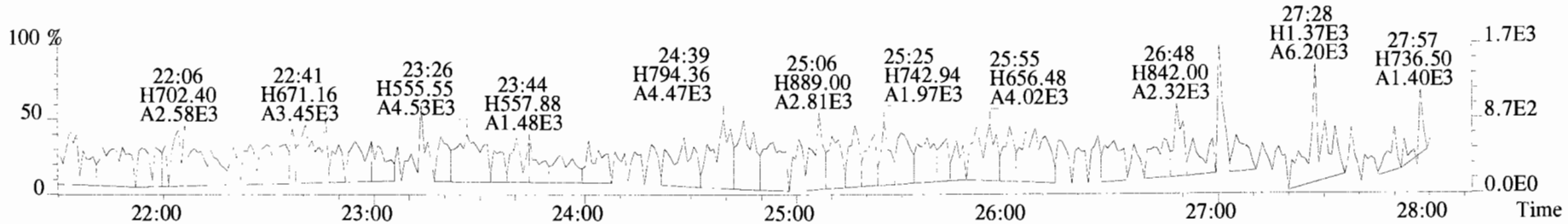
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



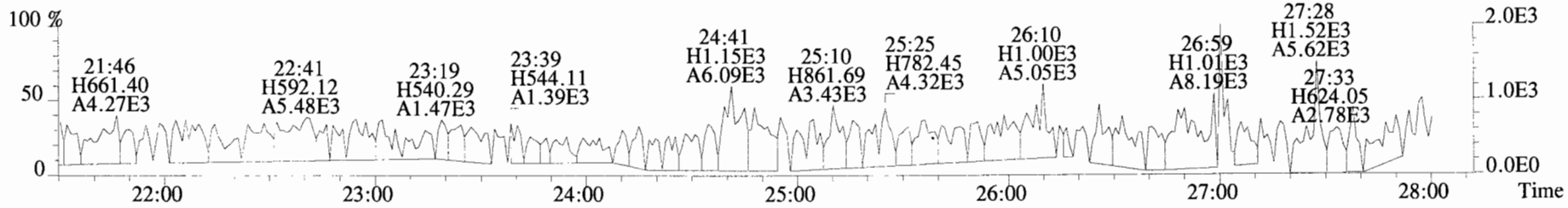
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



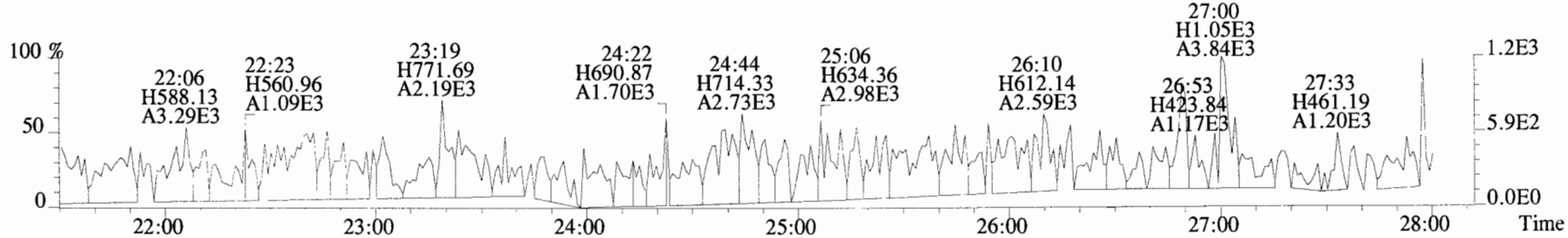
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



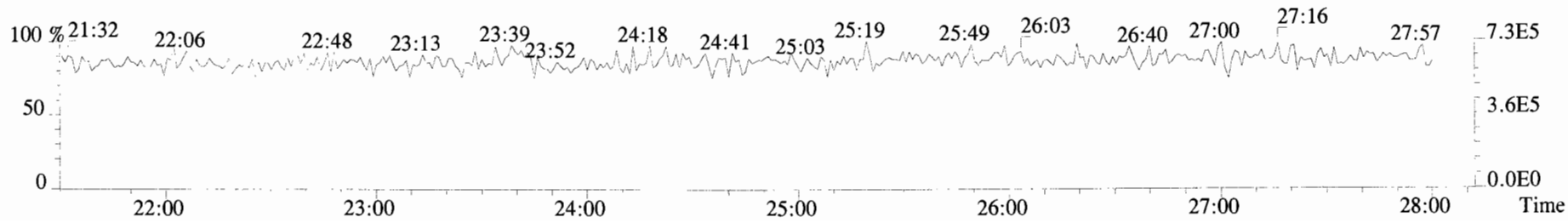
341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



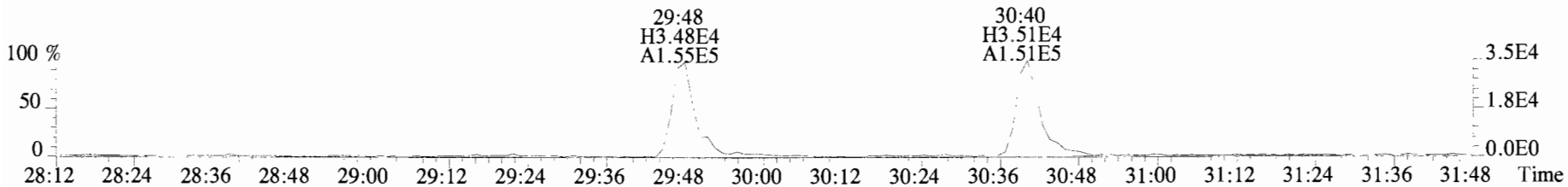
409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



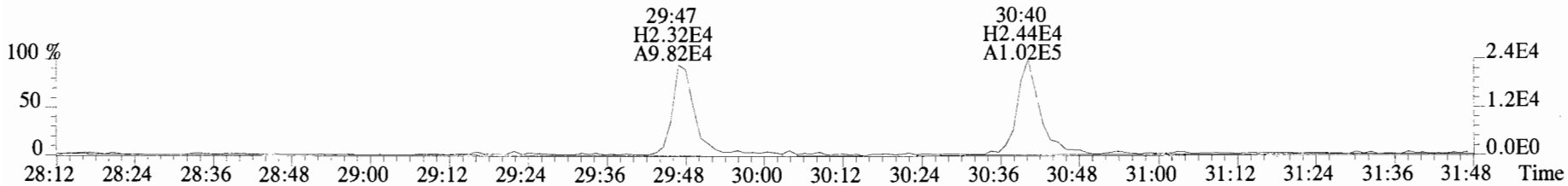
316.9824 S:2



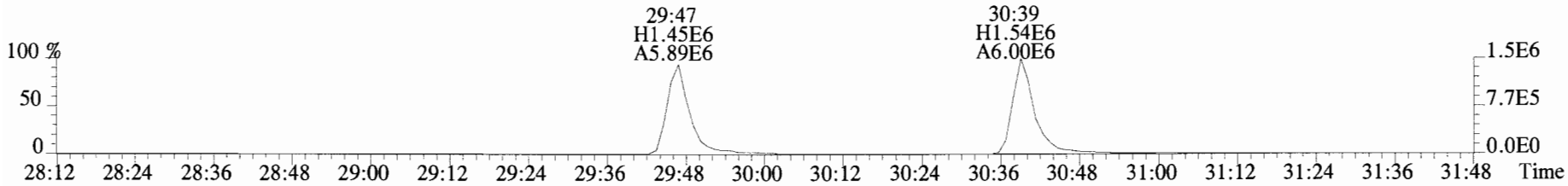
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



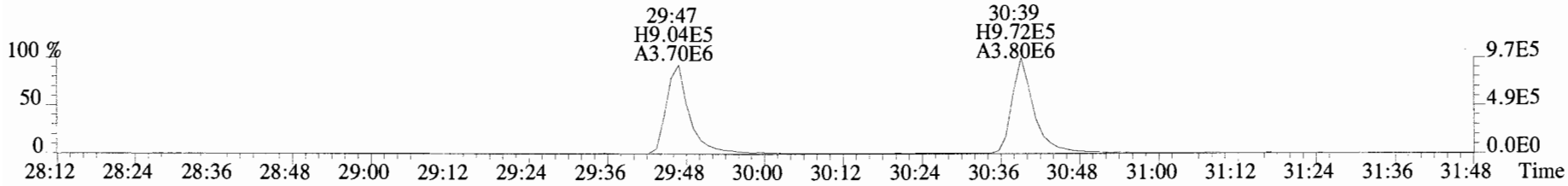
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



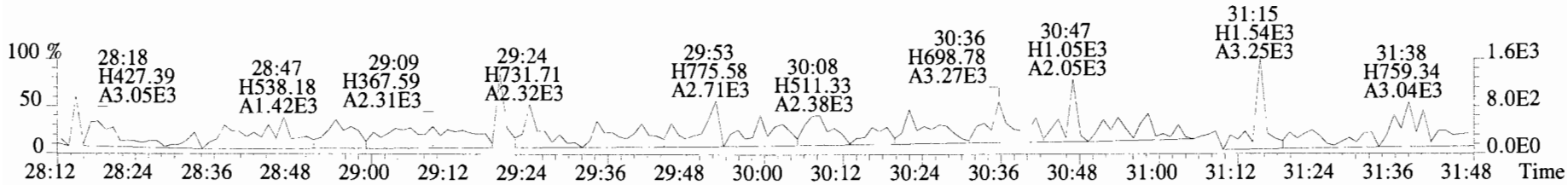
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



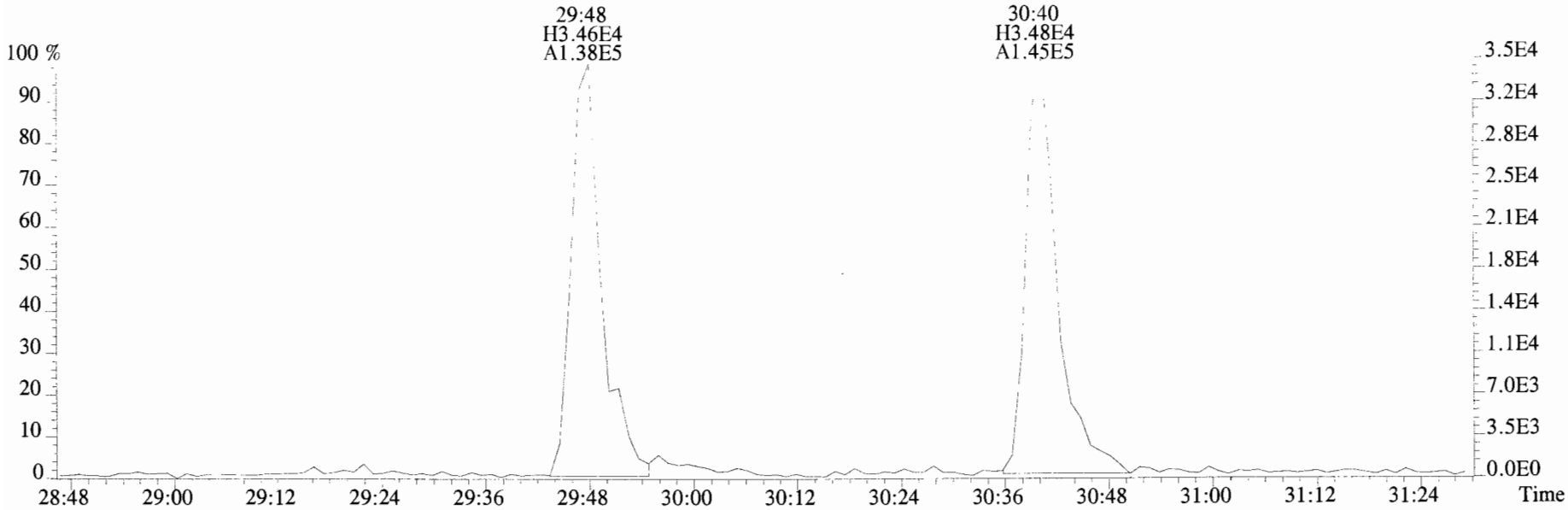
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



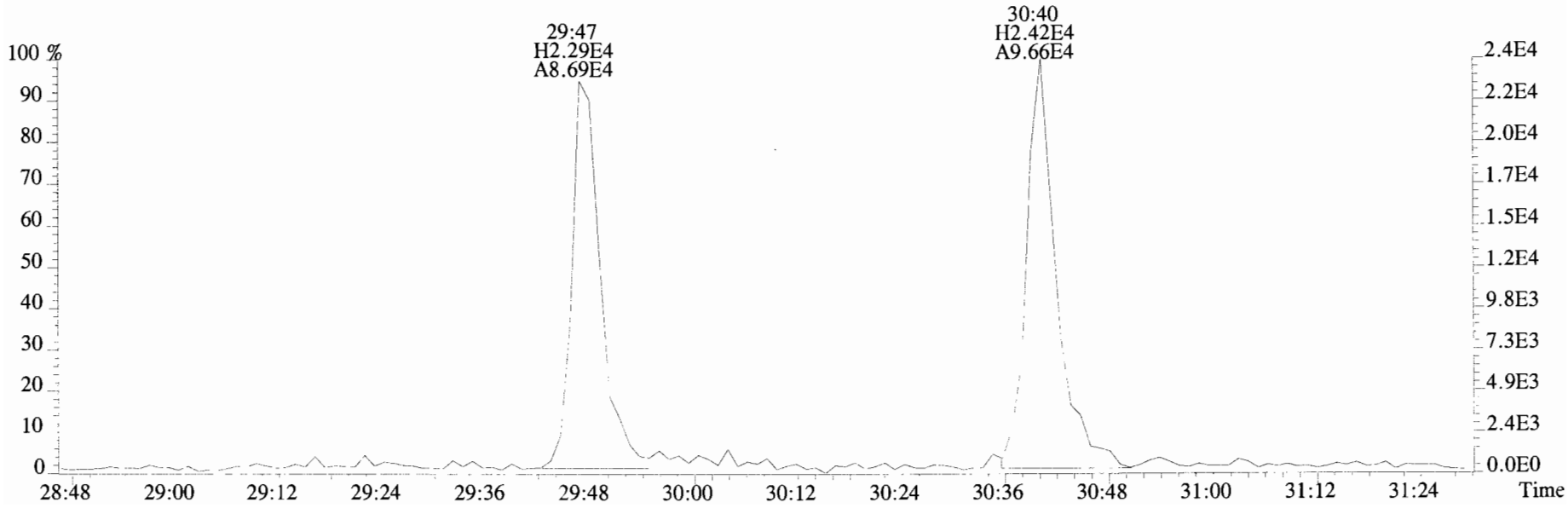
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



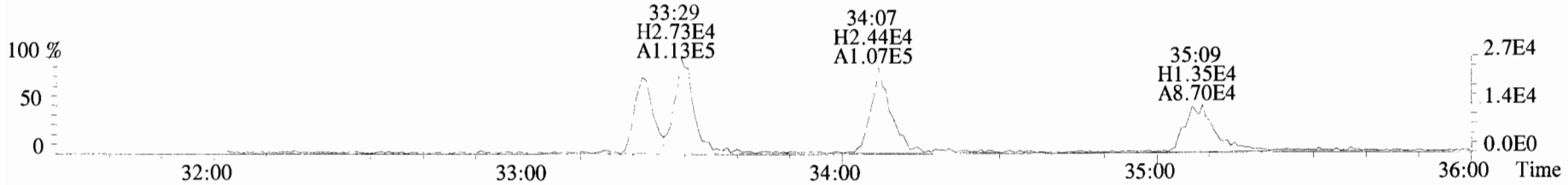
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



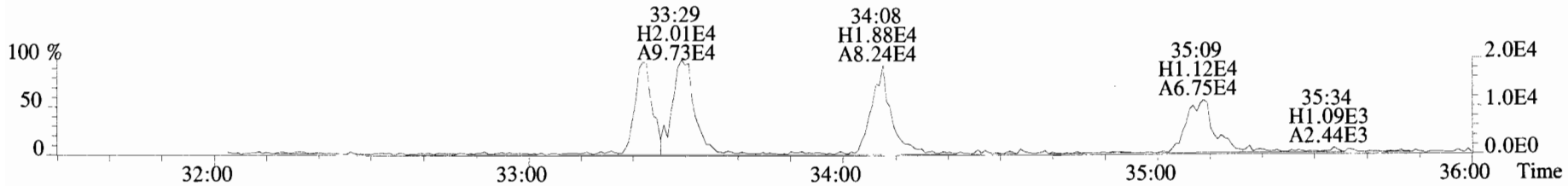
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



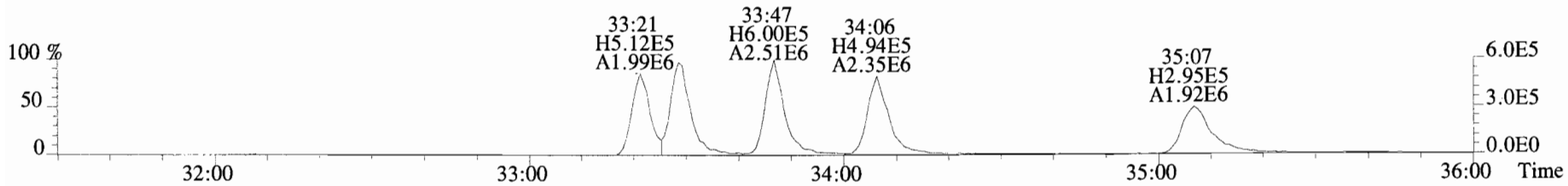
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



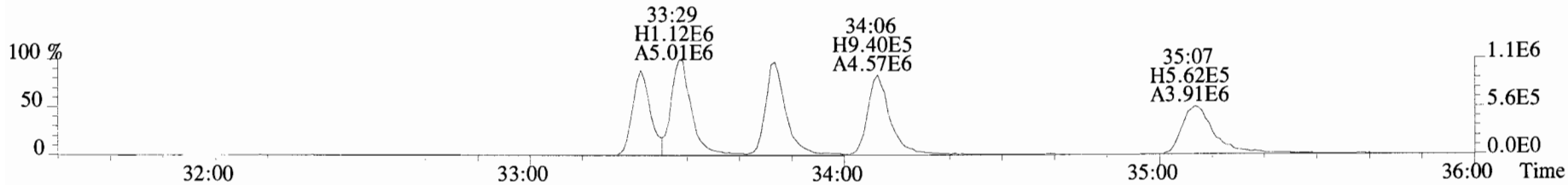
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



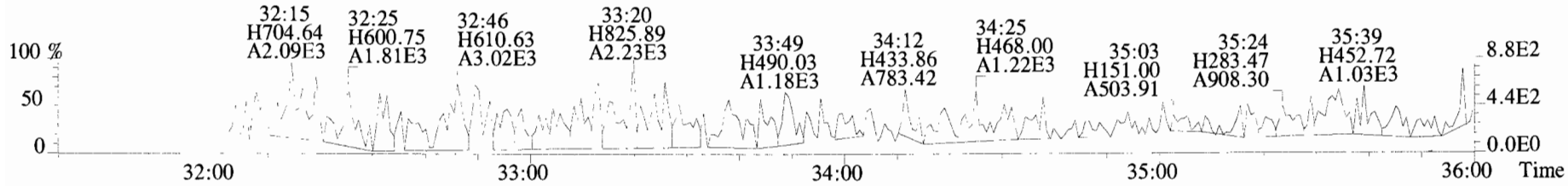
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



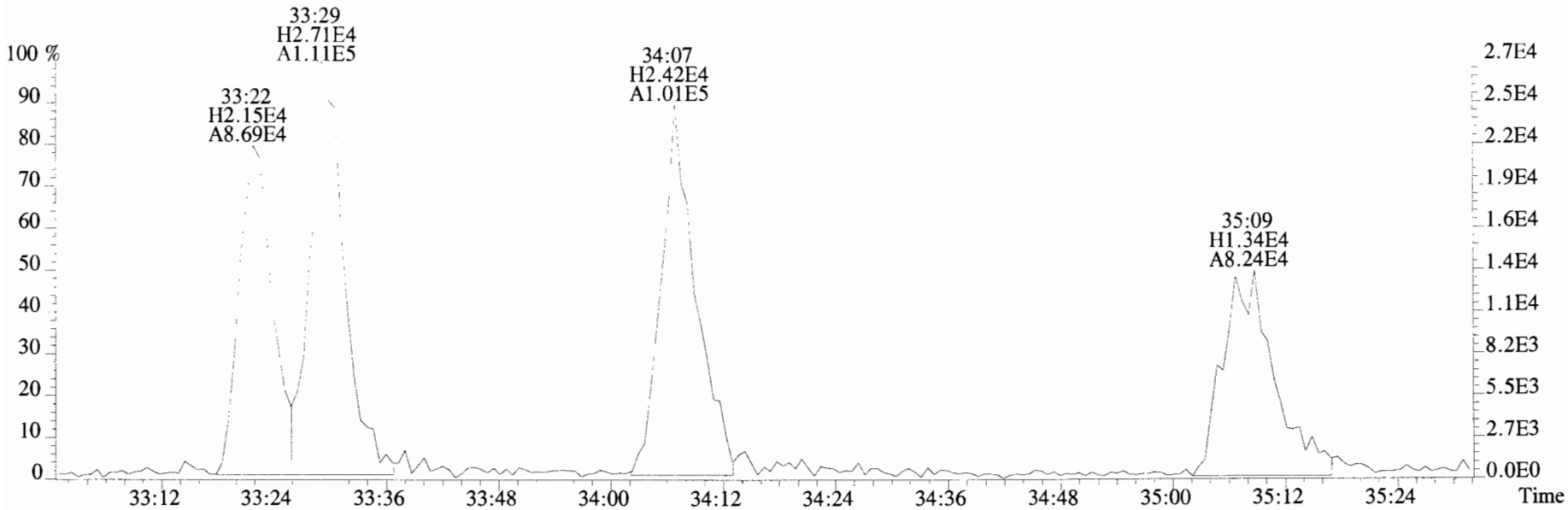
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



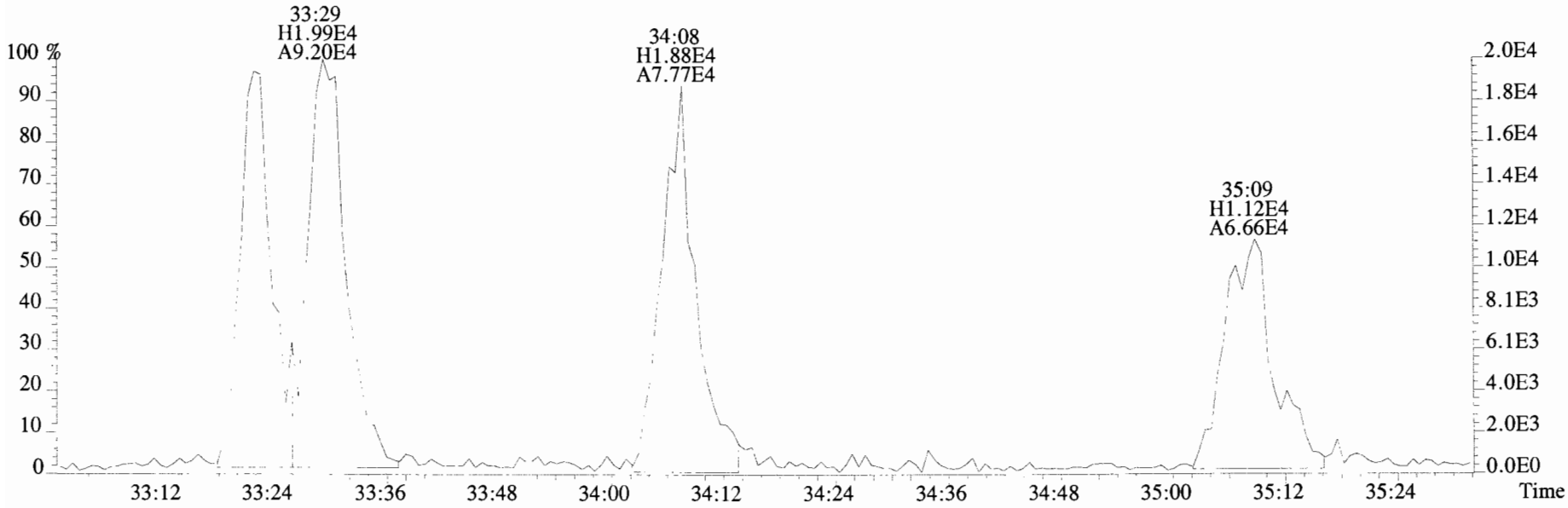
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



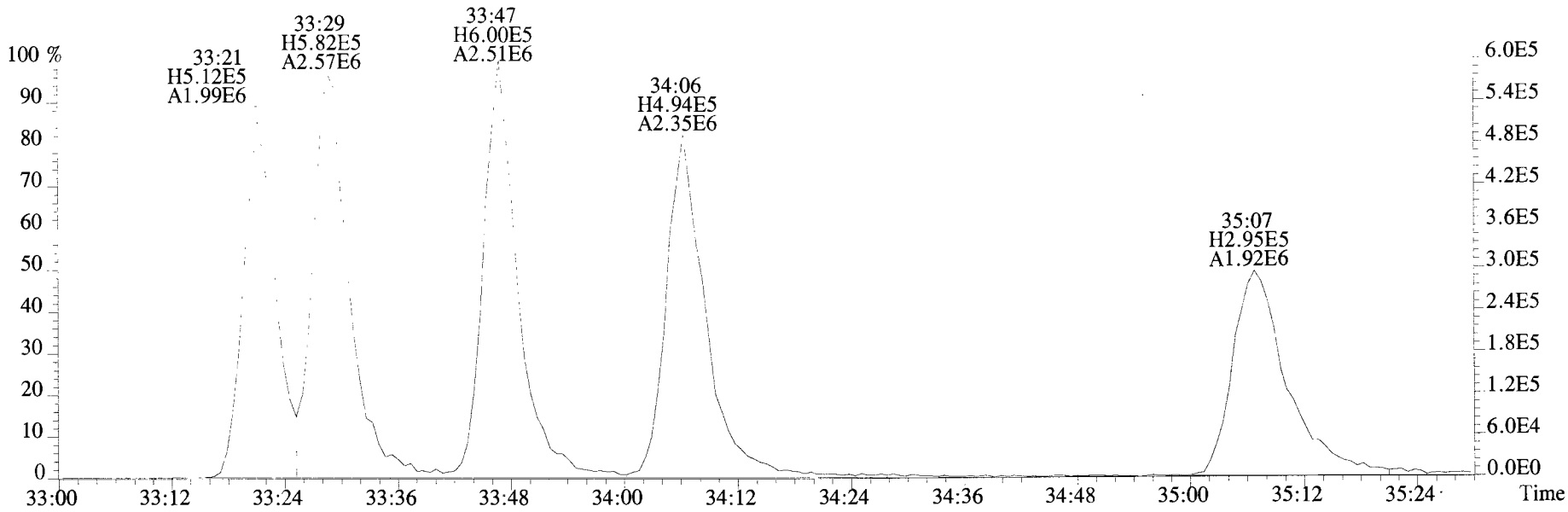
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



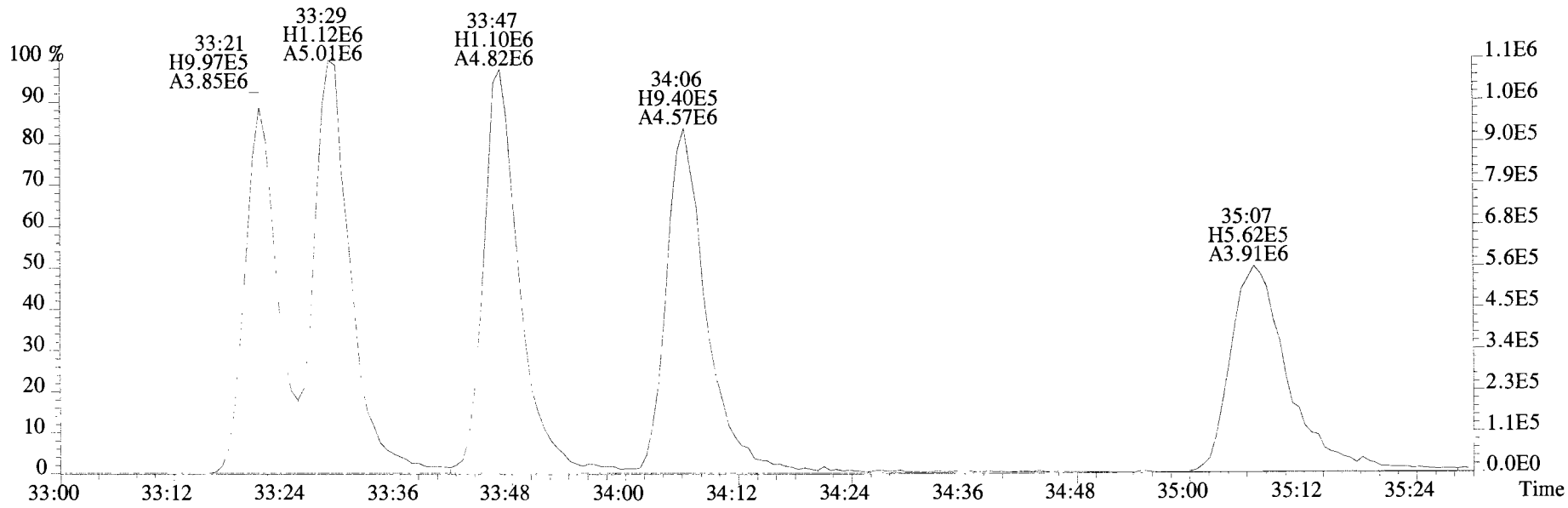
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



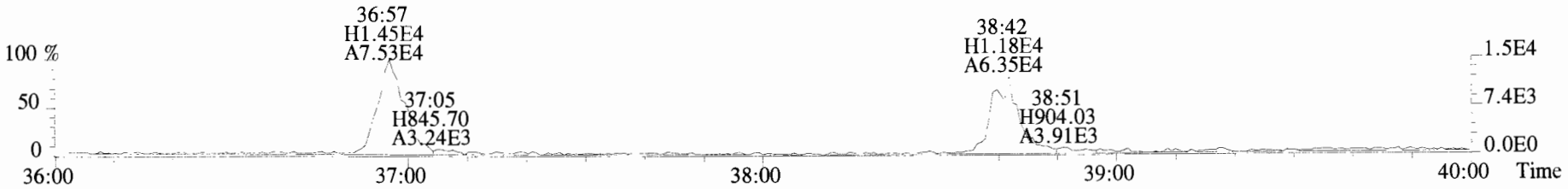
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



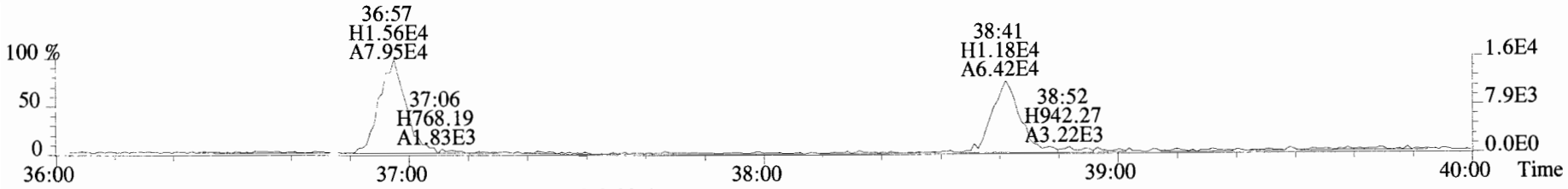
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



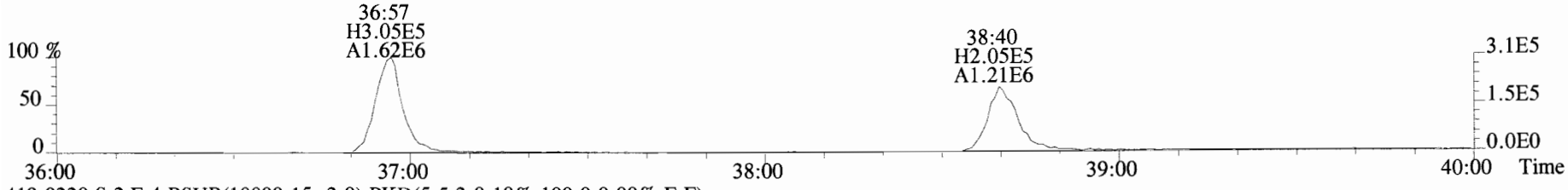
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



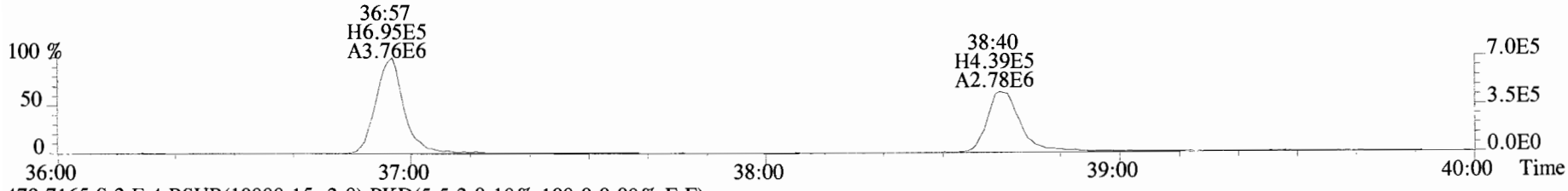
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



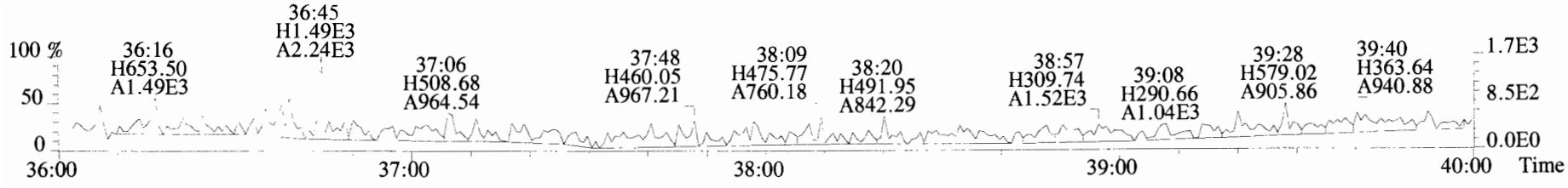
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



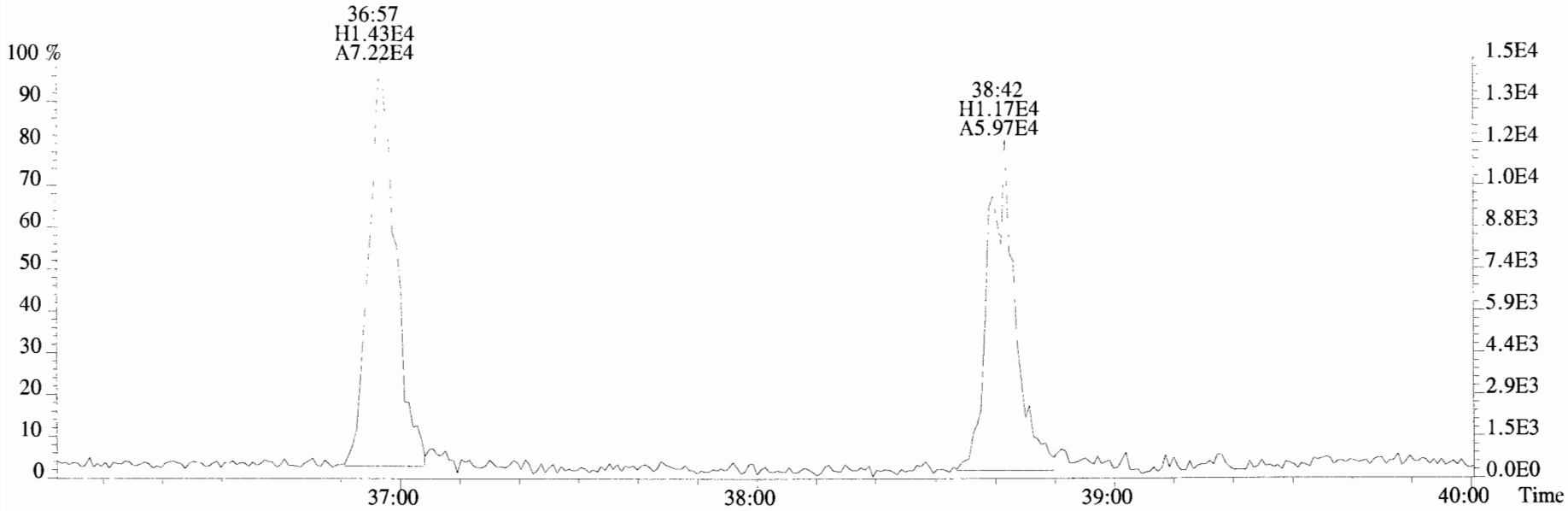
419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



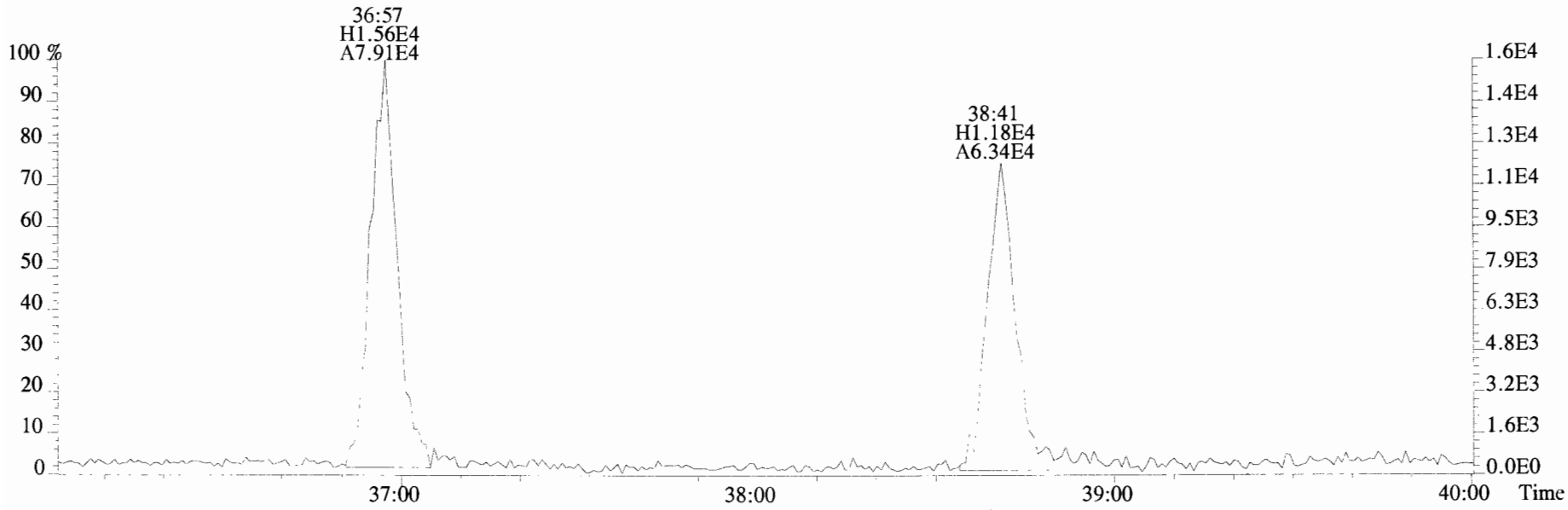
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



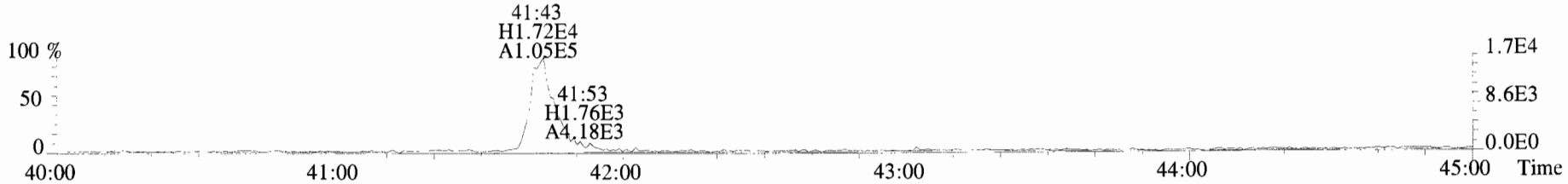
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



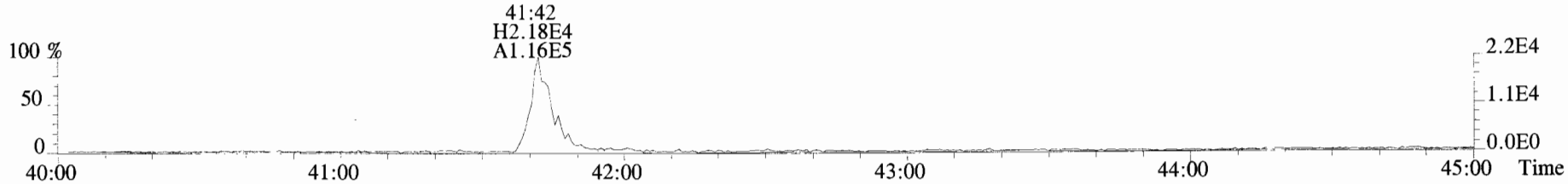
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



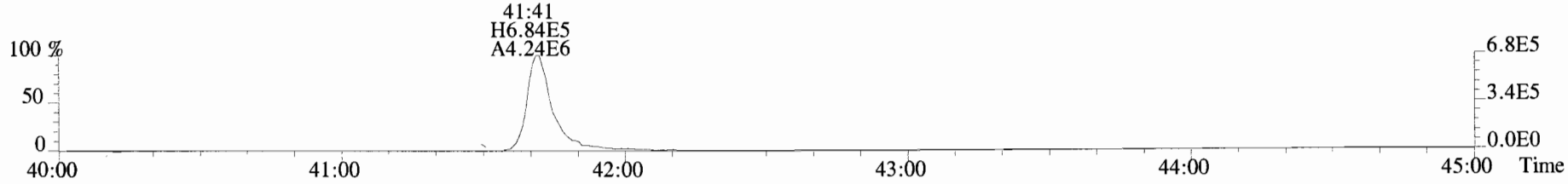
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



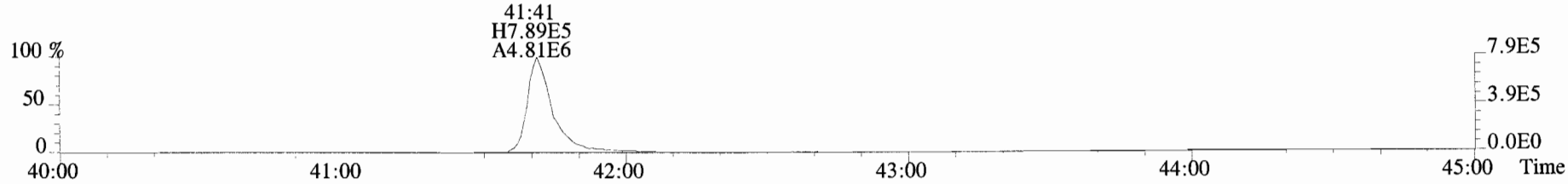
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



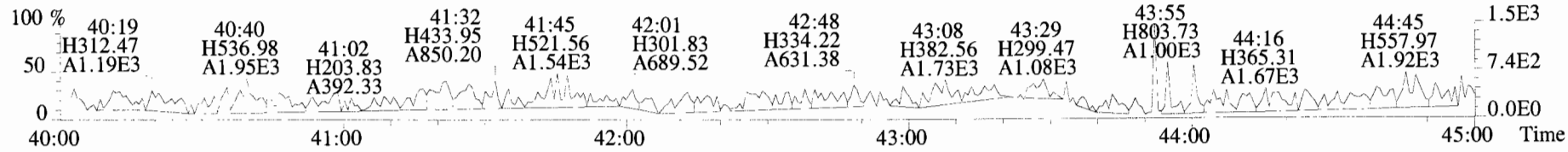
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



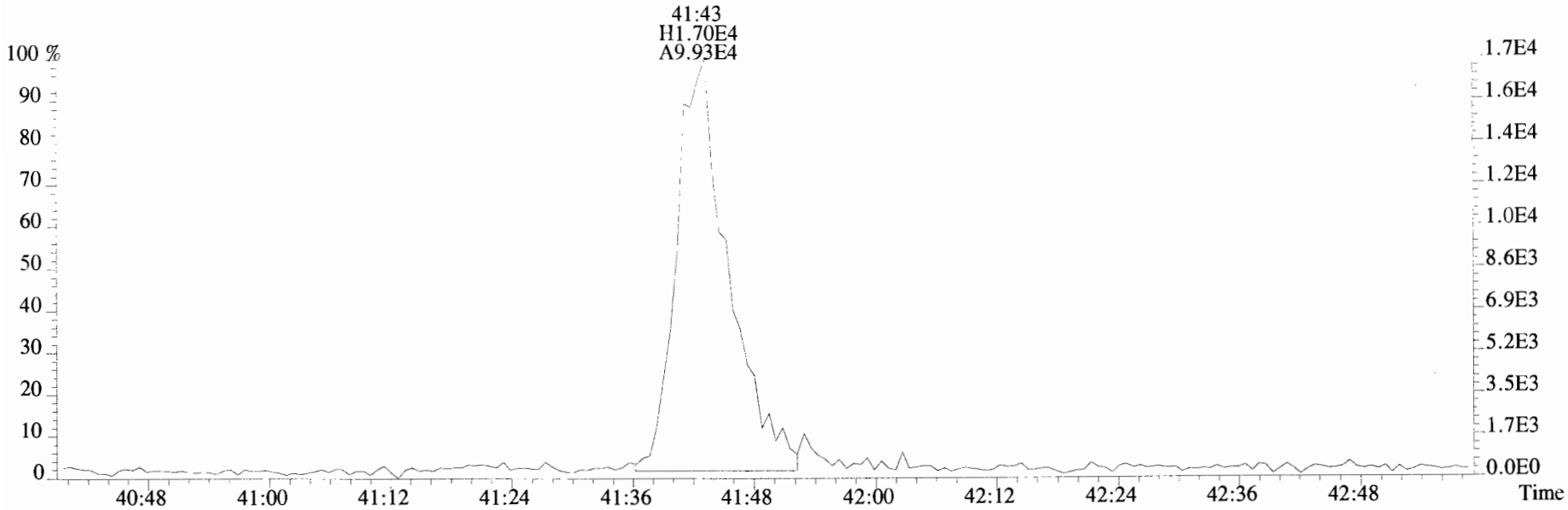
455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



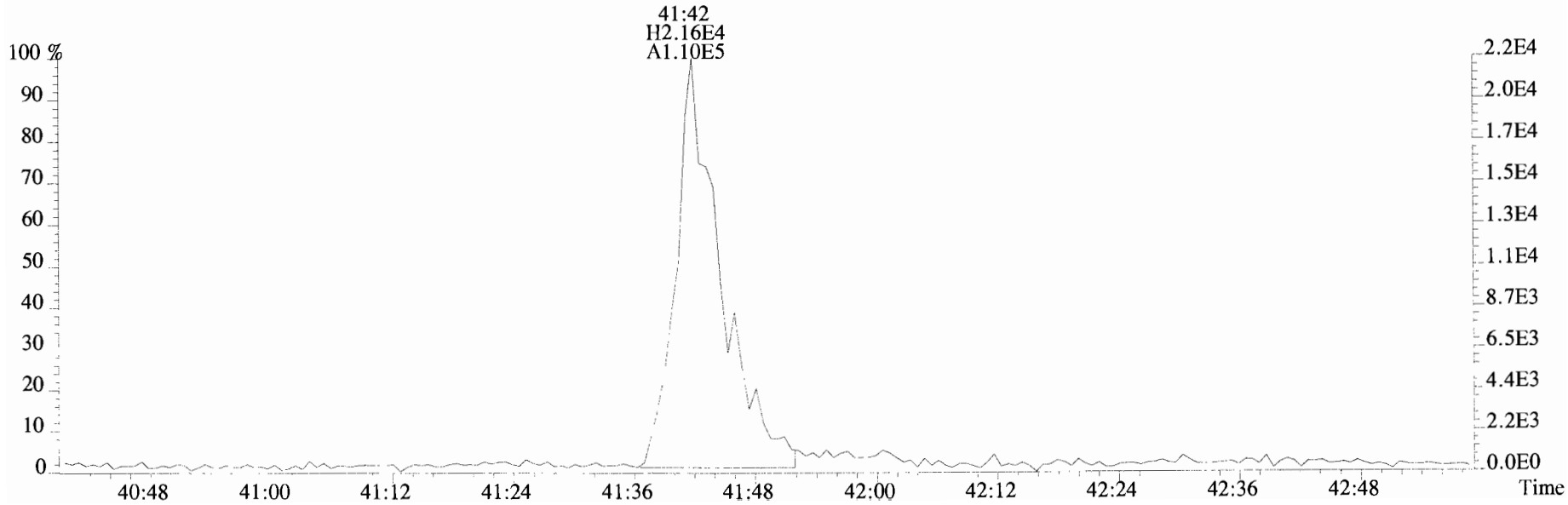
513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



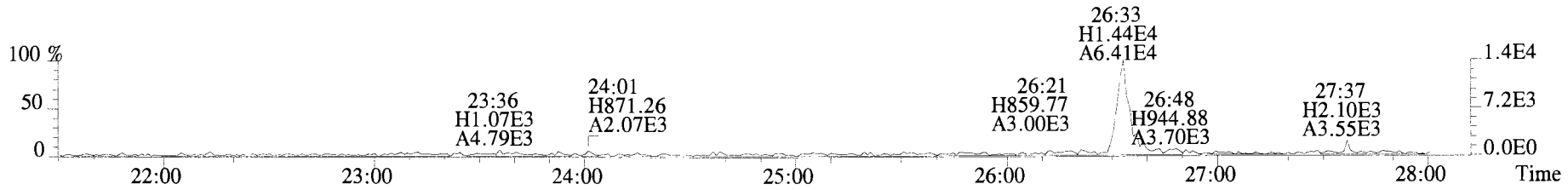
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD_DB5
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



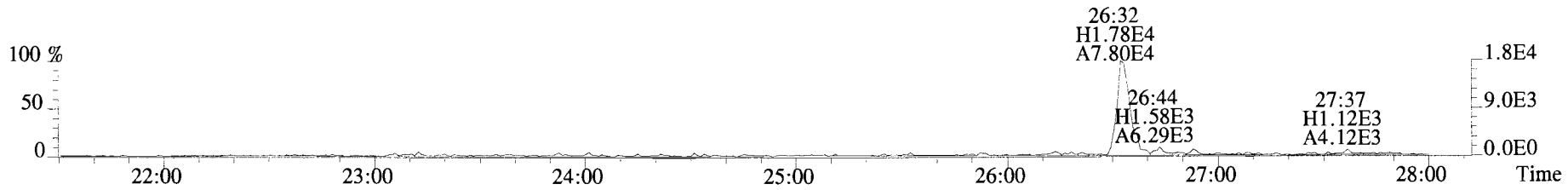
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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)

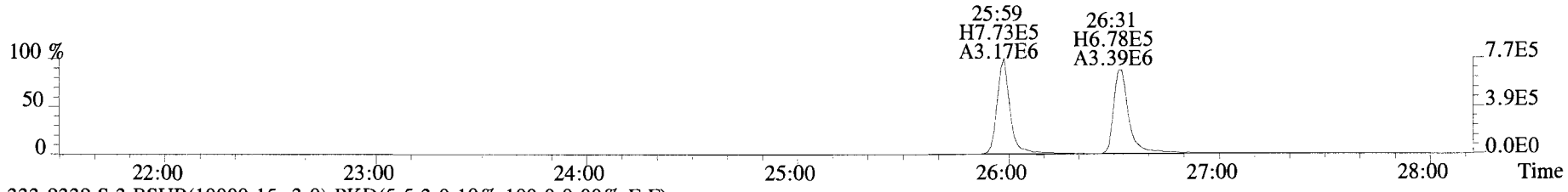


321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

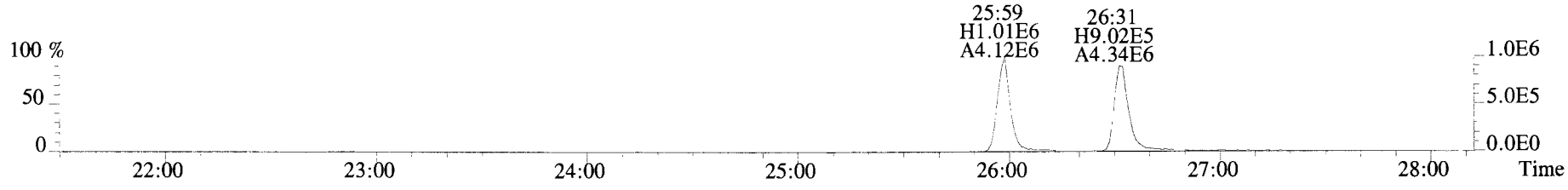


327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

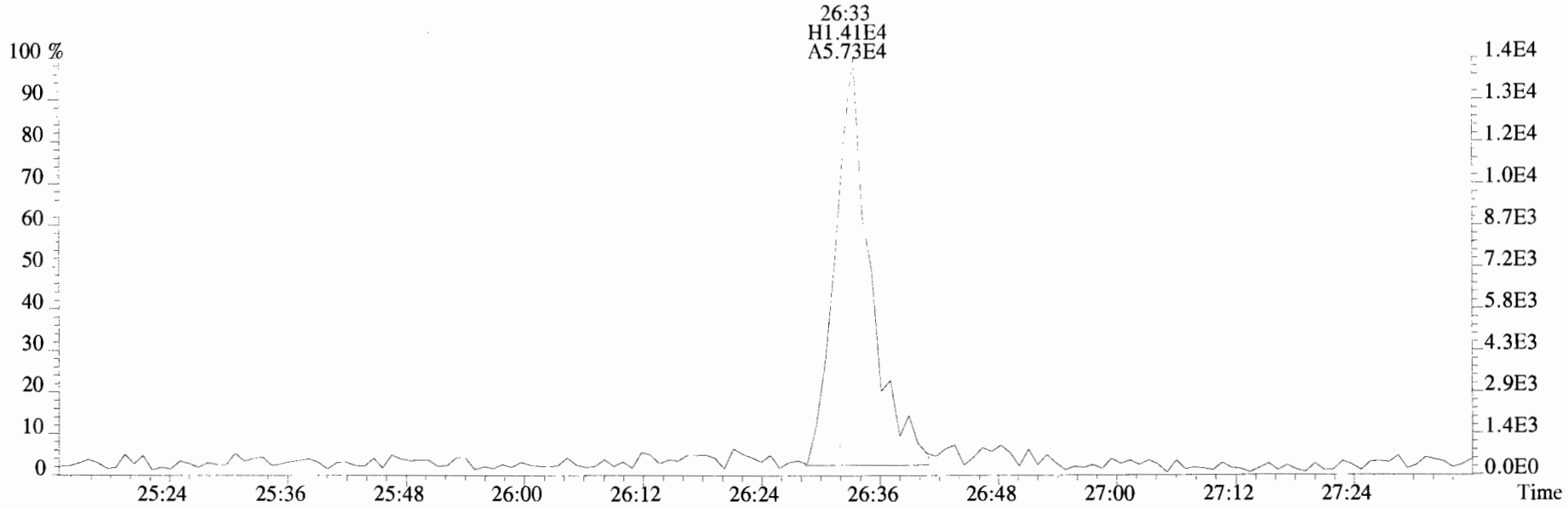
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



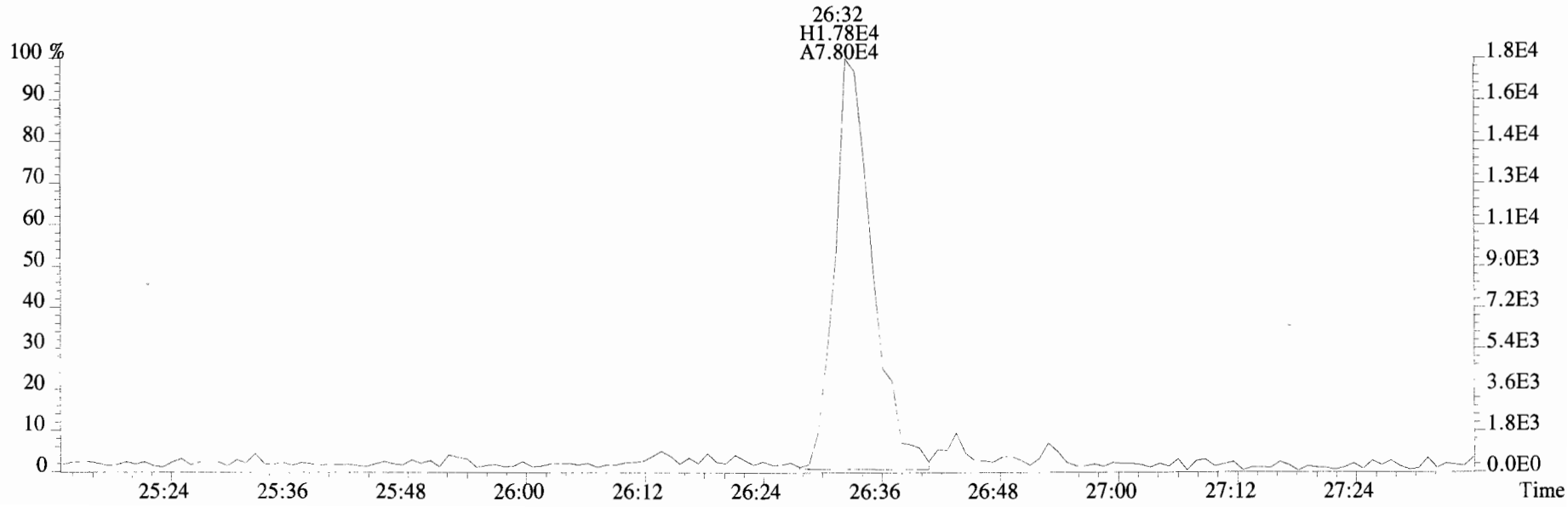
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



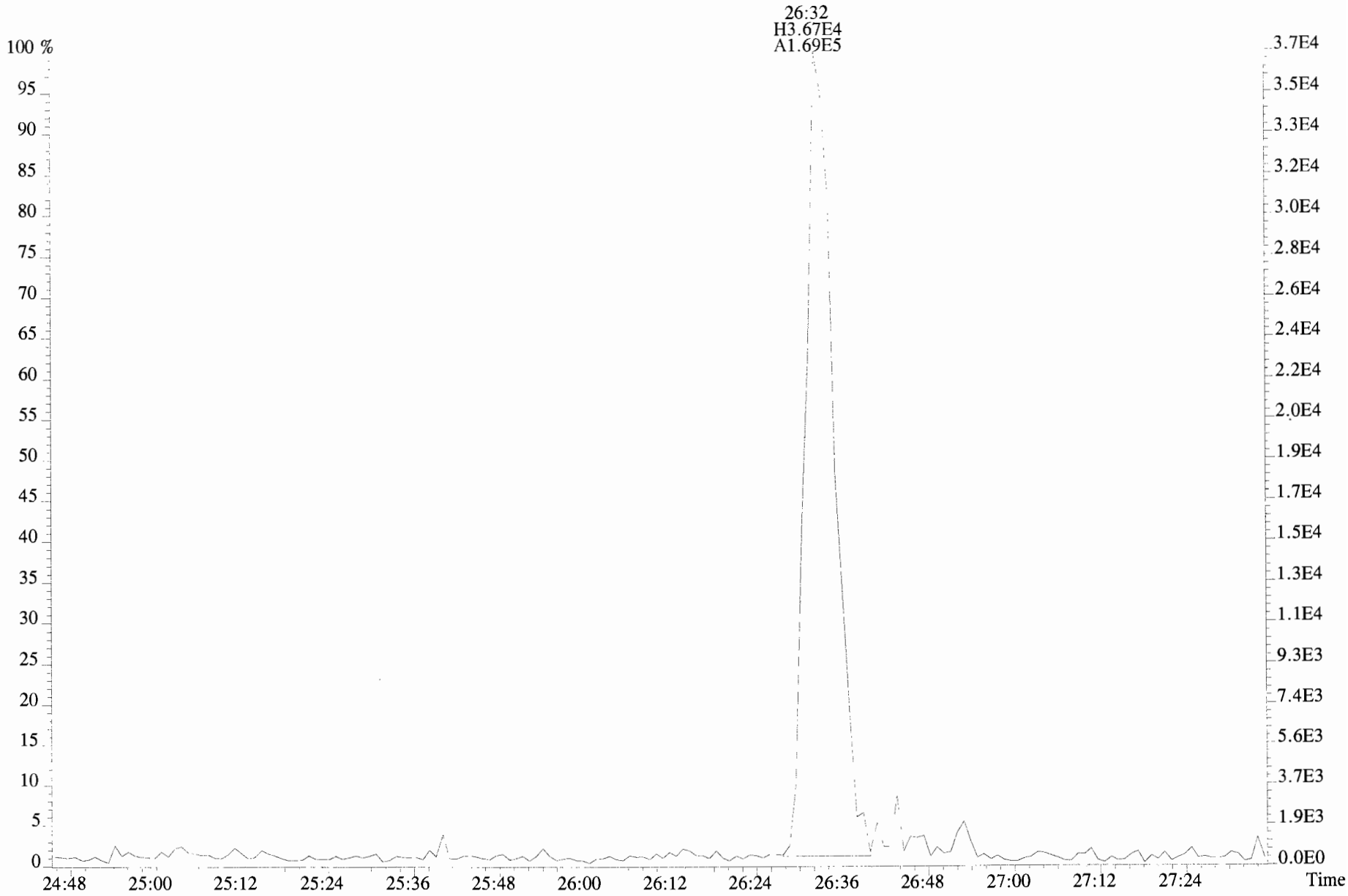
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



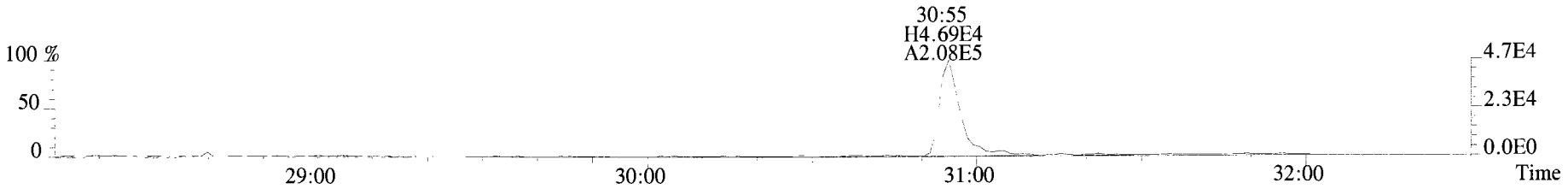
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



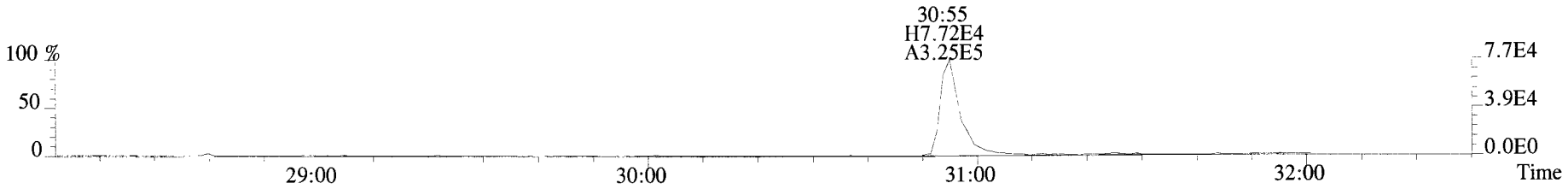
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



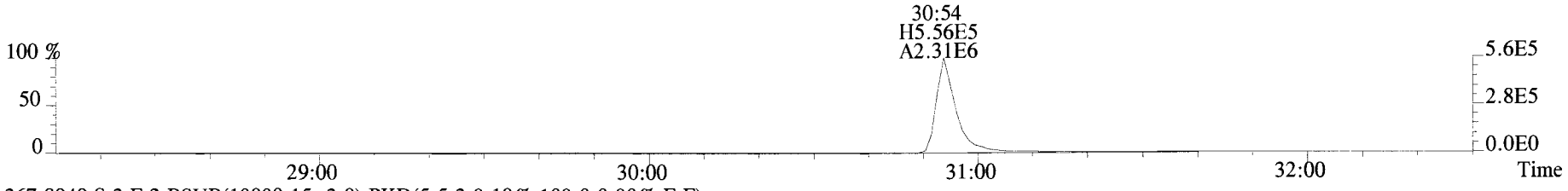
File:191009D1 #1-211 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



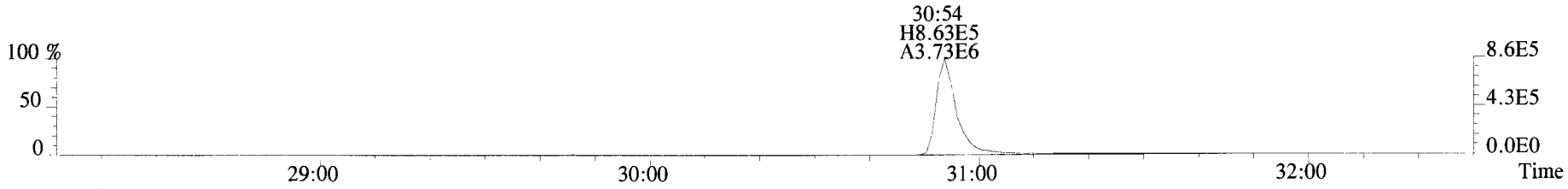
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



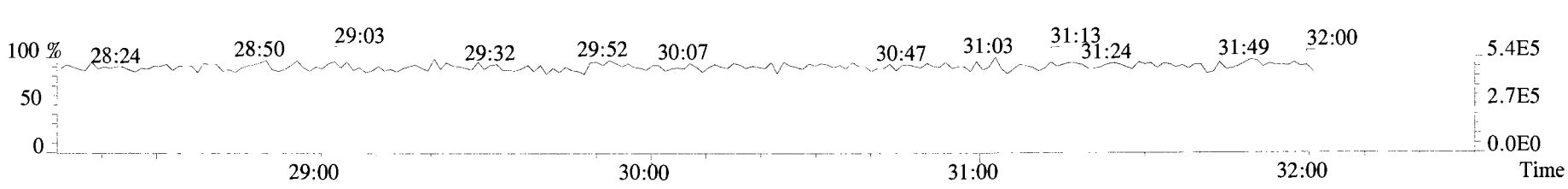
365.8978 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



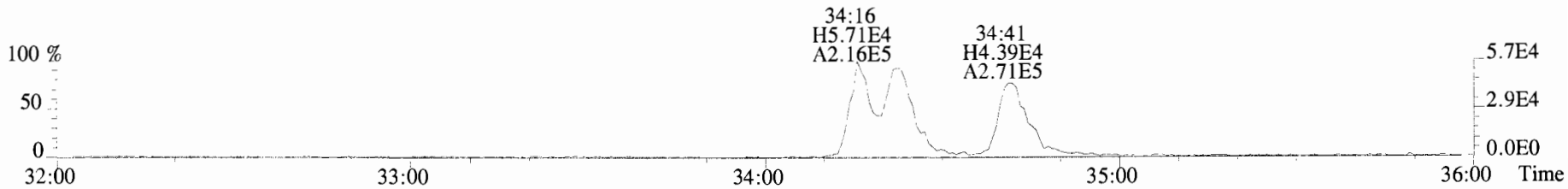
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



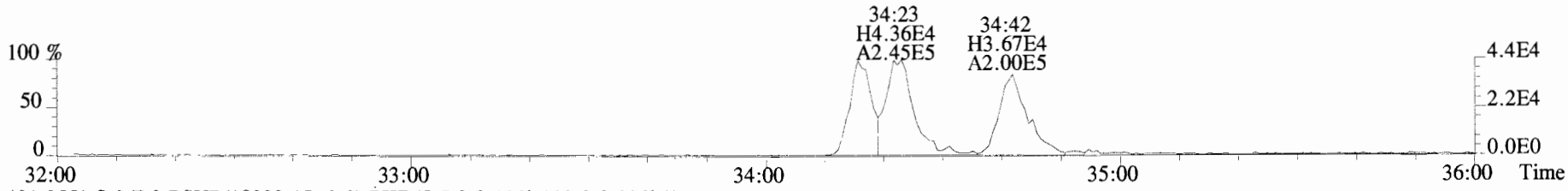
366.9792 S:3 F:2



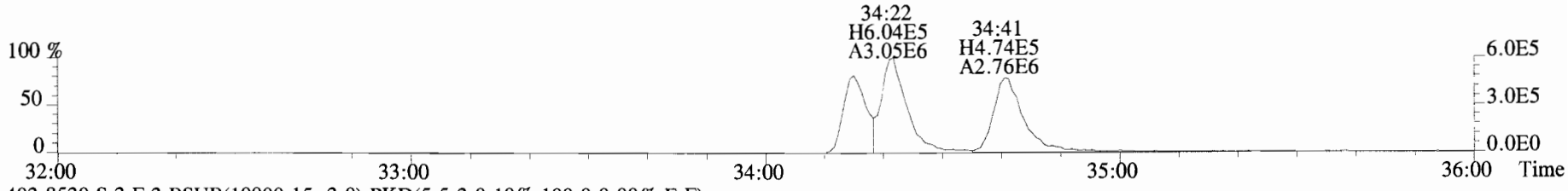
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



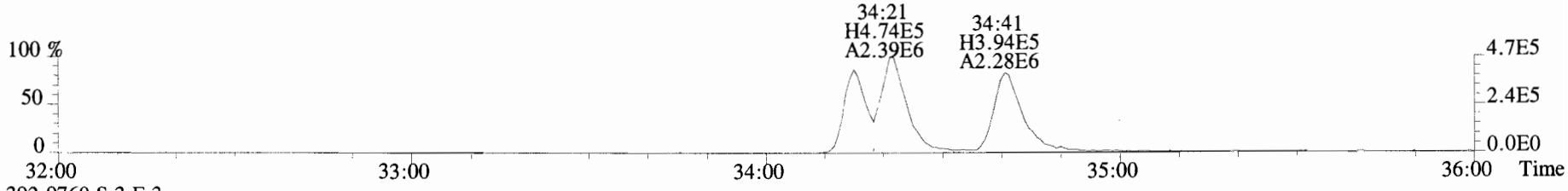
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



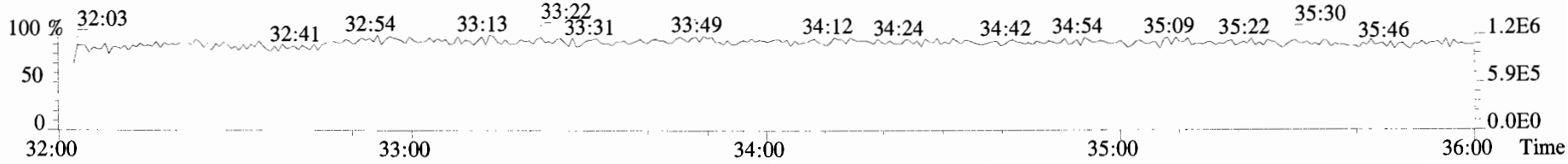
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



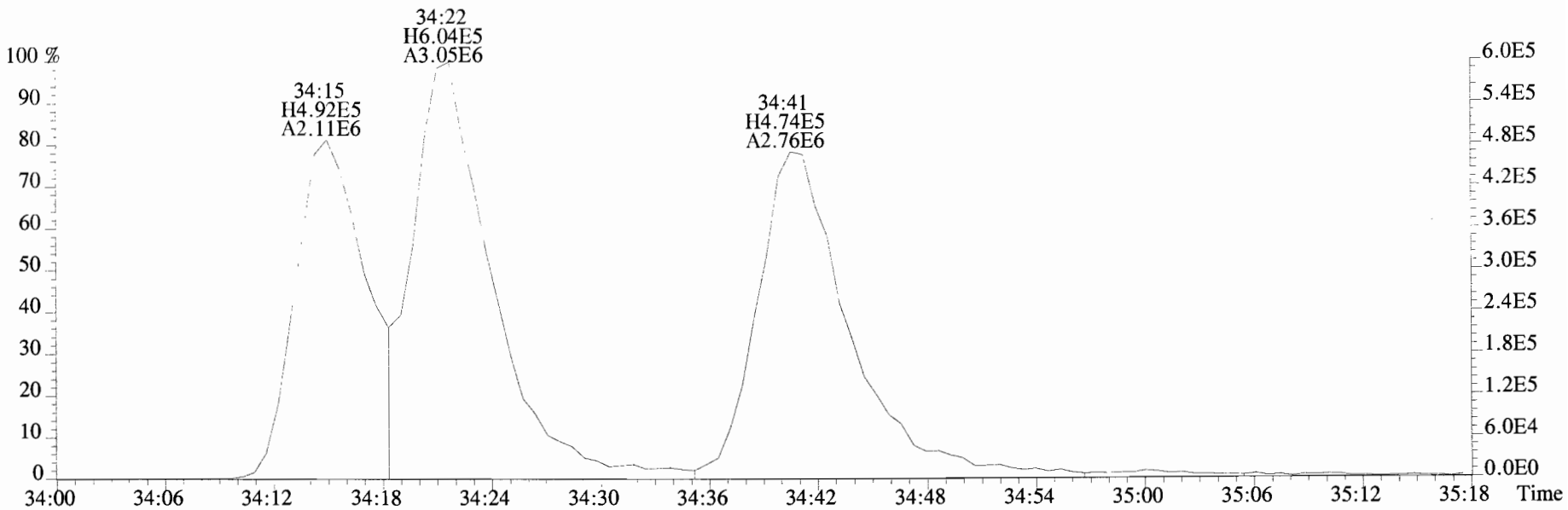
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



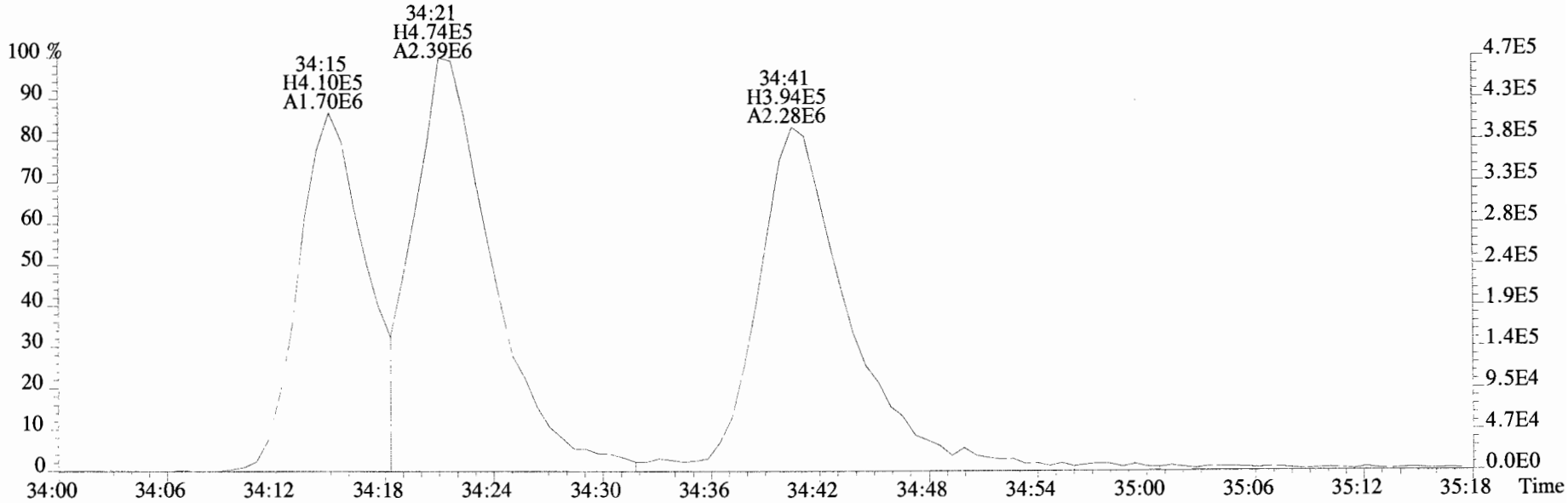
392.9760 S:3 F:3



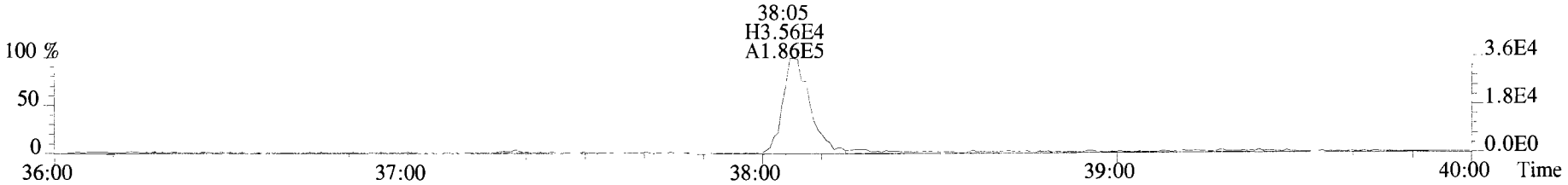
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



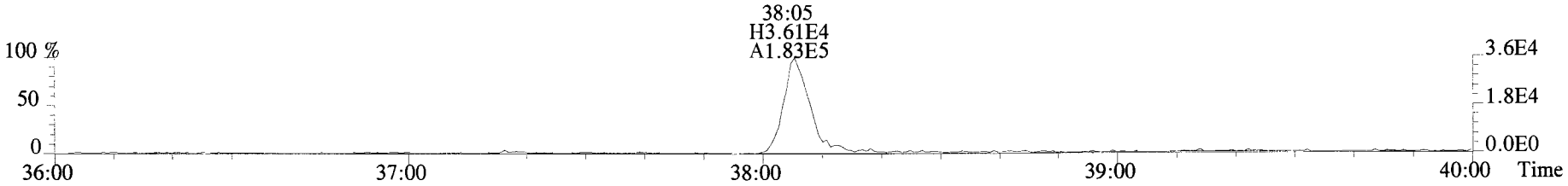
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



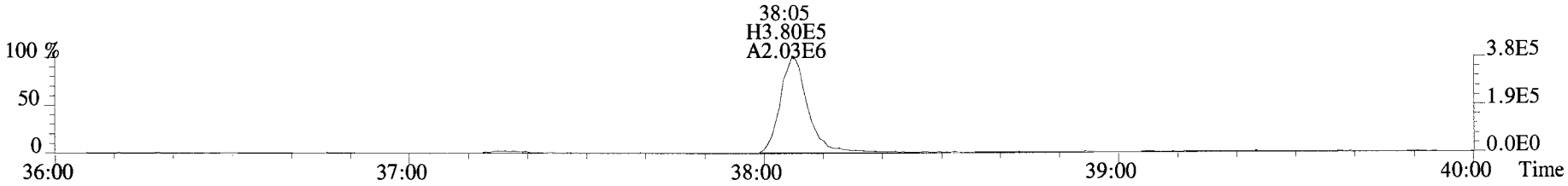
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



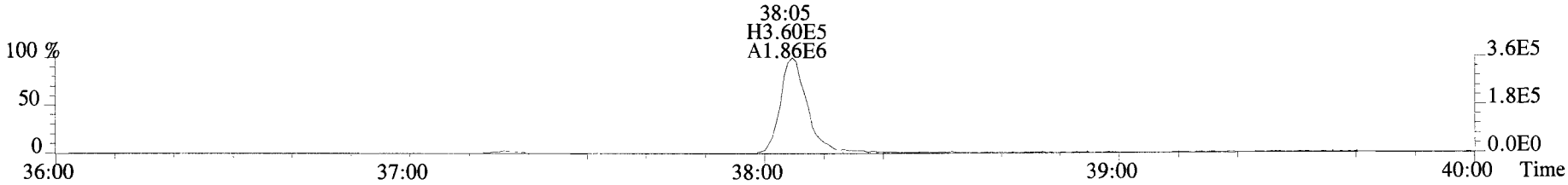
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



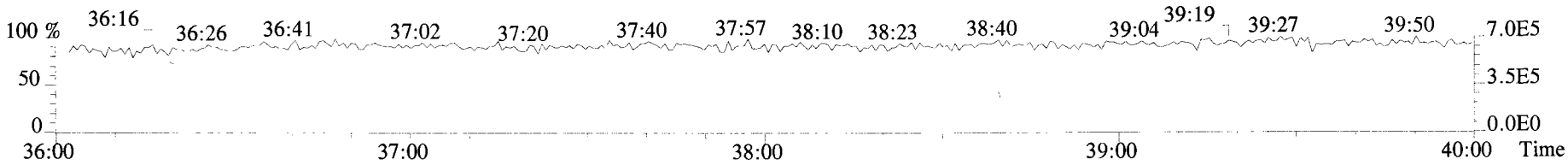
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



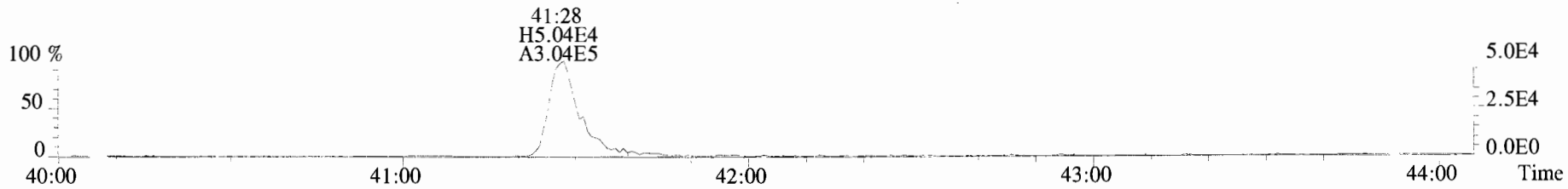
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



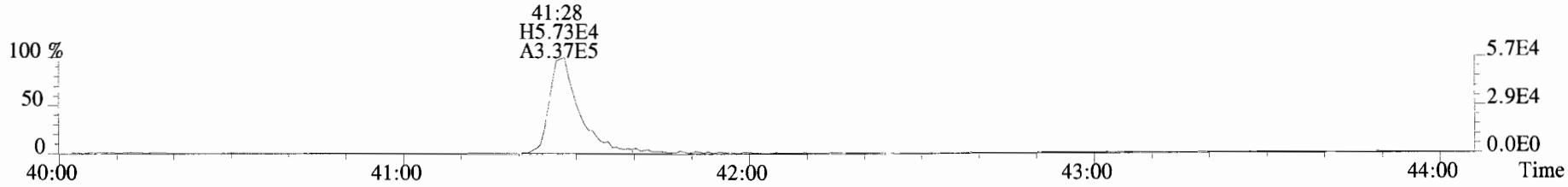
454.9728 S:3 F:4



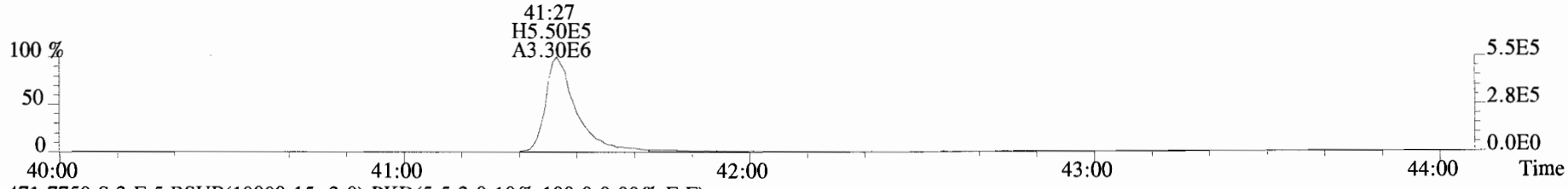
File:191009D1 #1-432 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



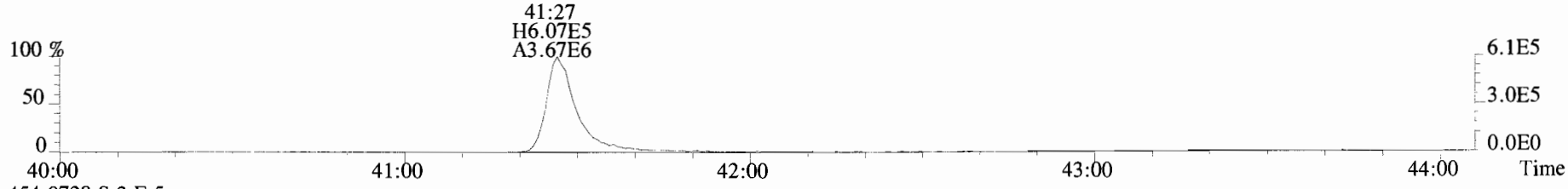
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



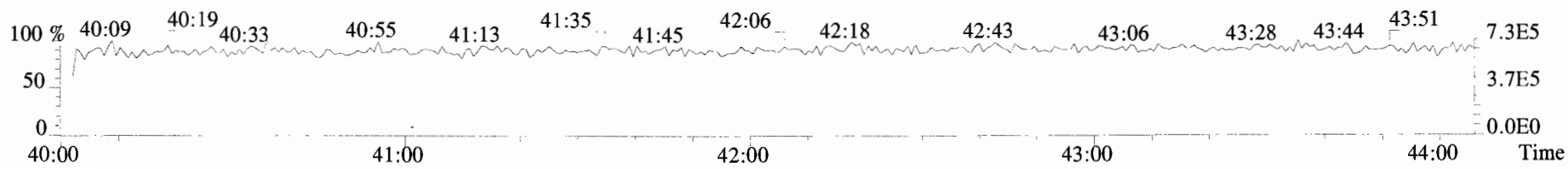
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



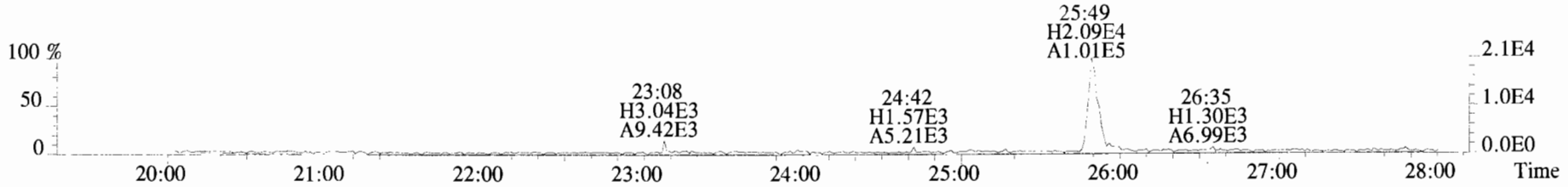
471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



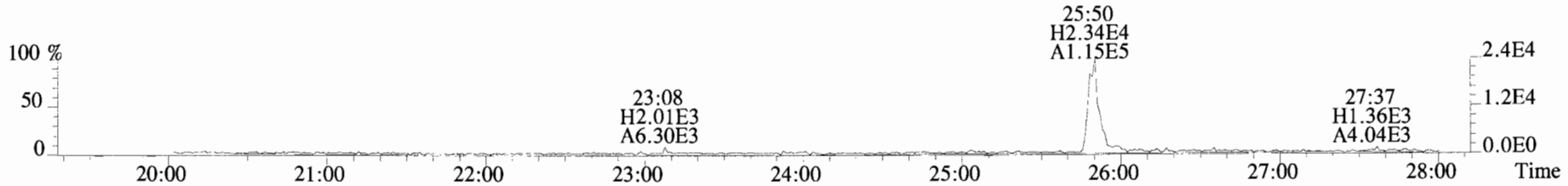
454.9728 S:3 F:5



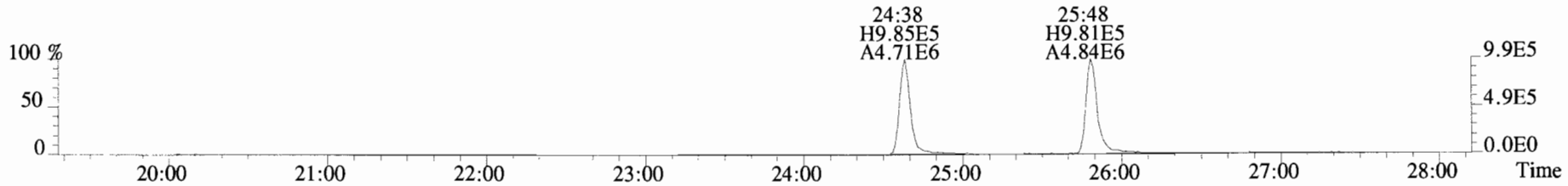
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



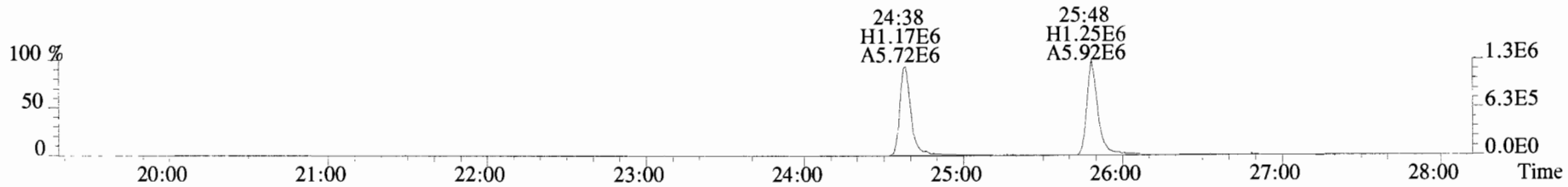
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



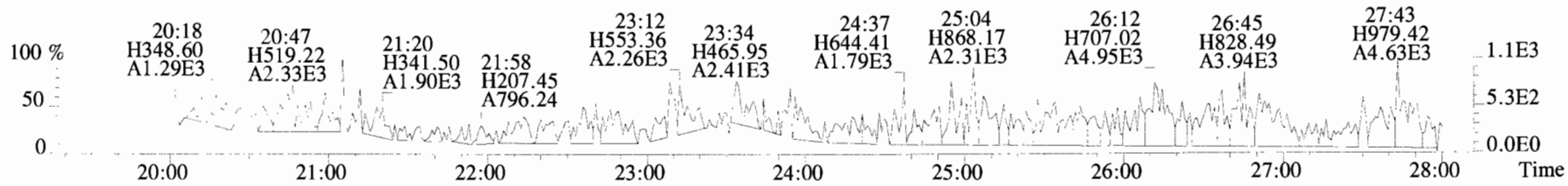
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



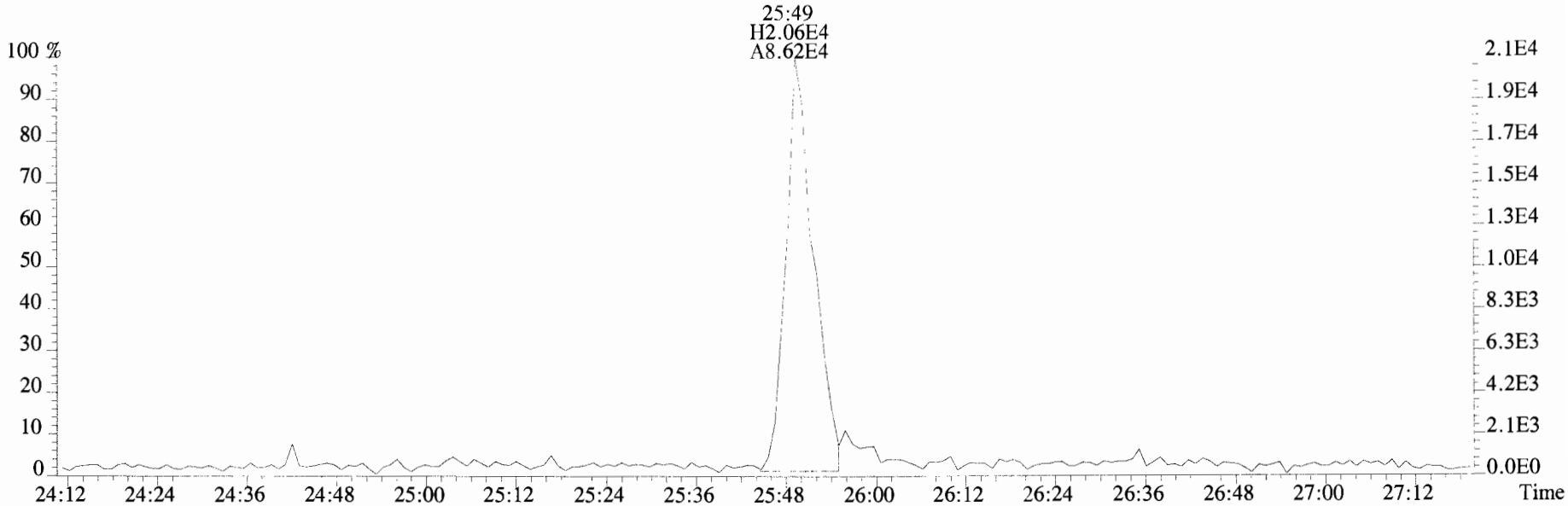
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



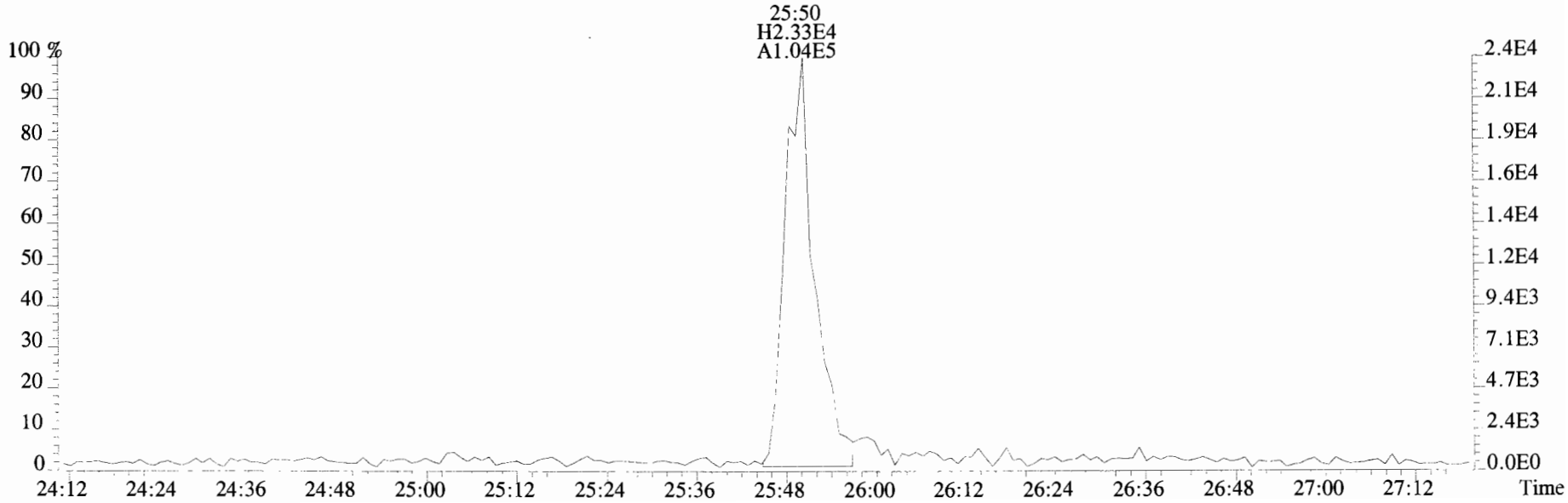
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



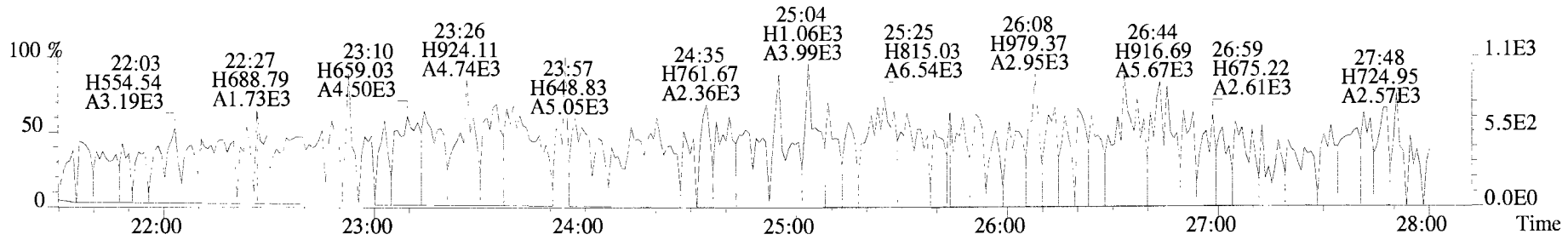
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



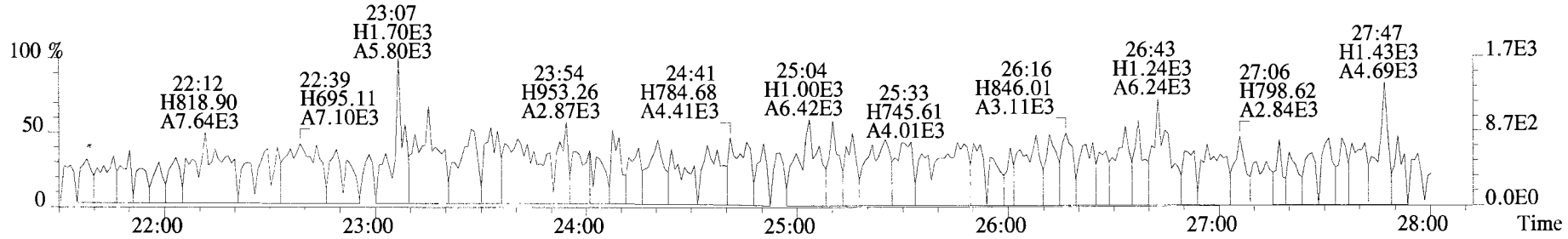
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



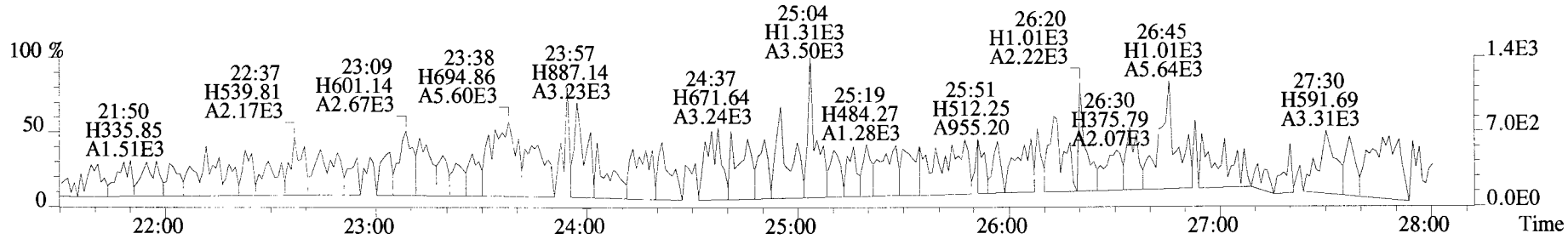
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



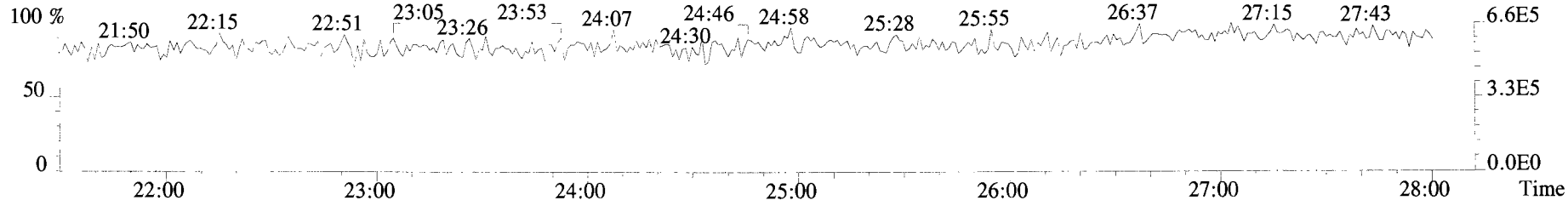
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



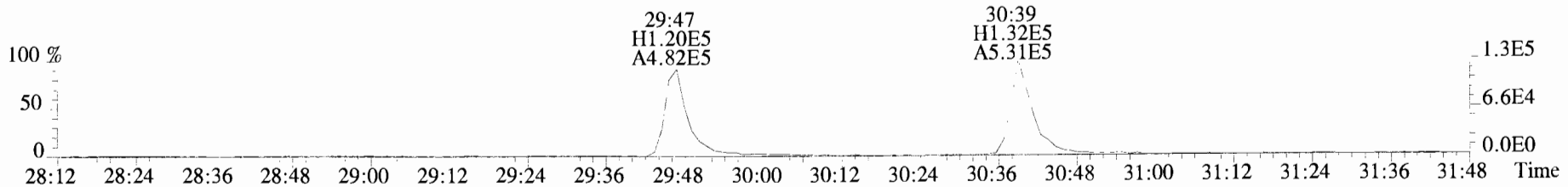
409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



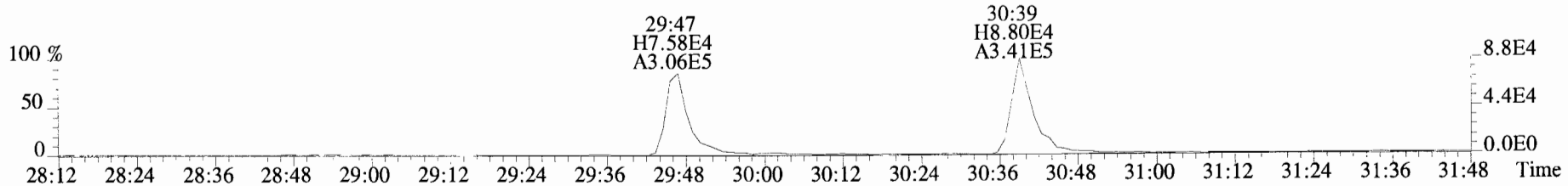
316.9824 S:3



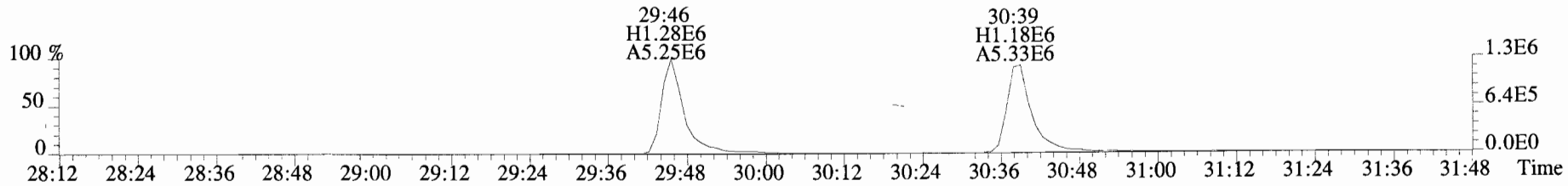
File:191009D1 #1-211 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



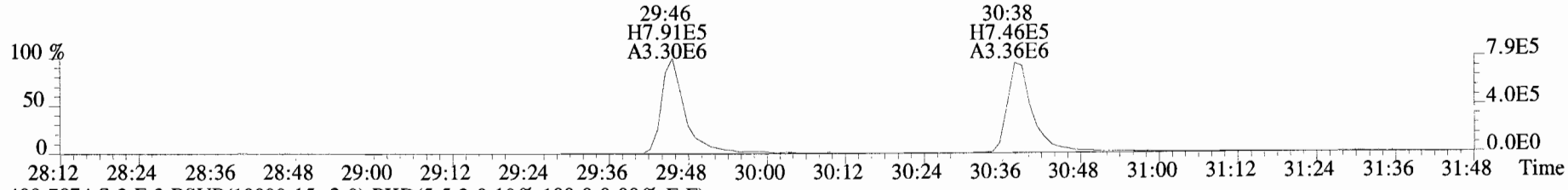
341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



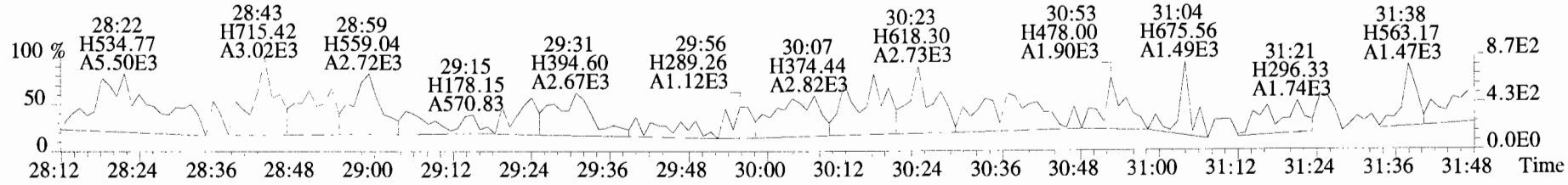
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

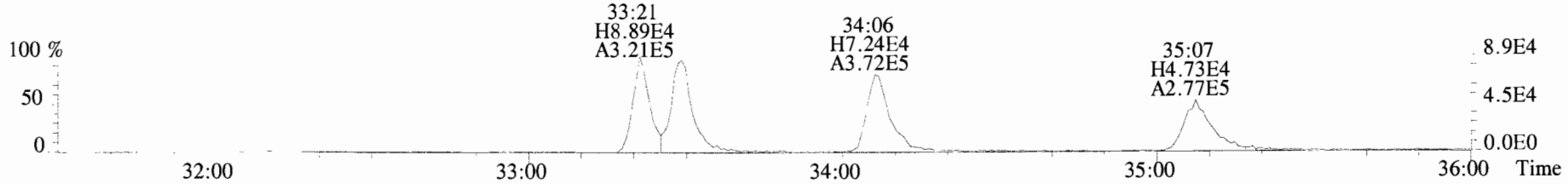


409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

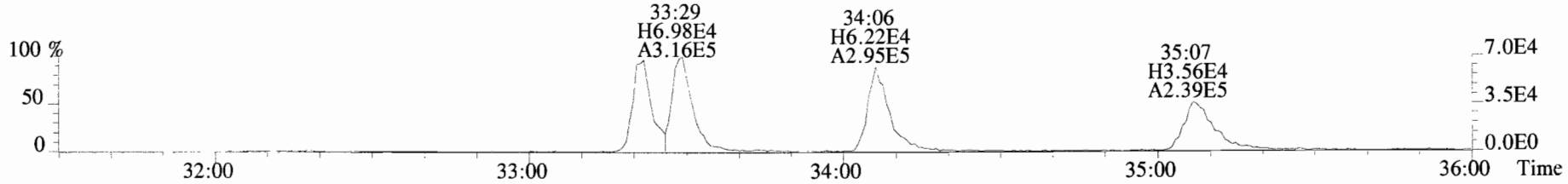


File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5

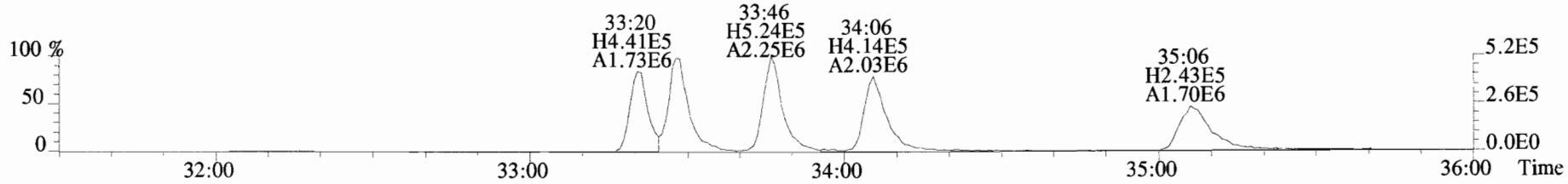
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



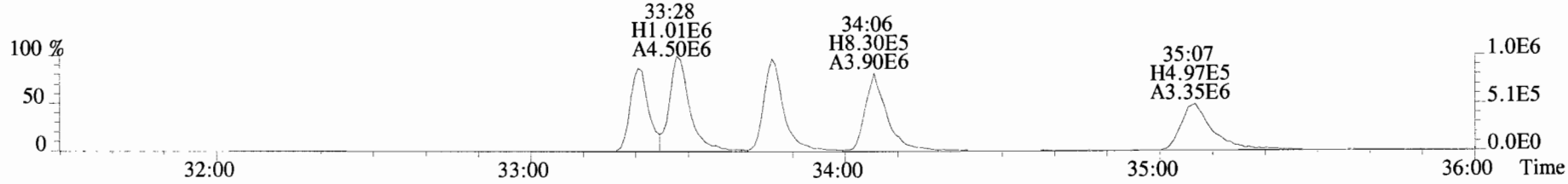
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



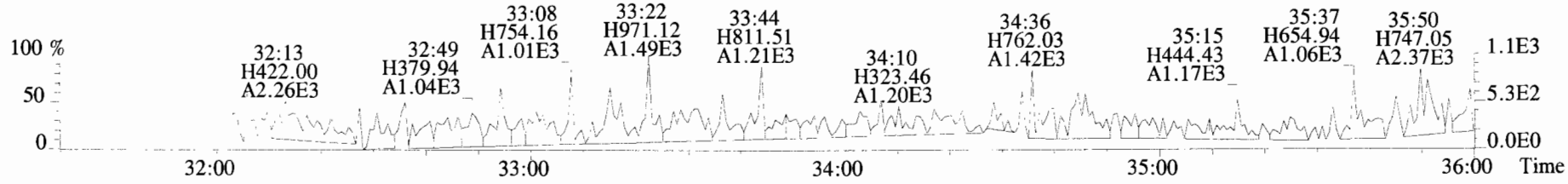
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



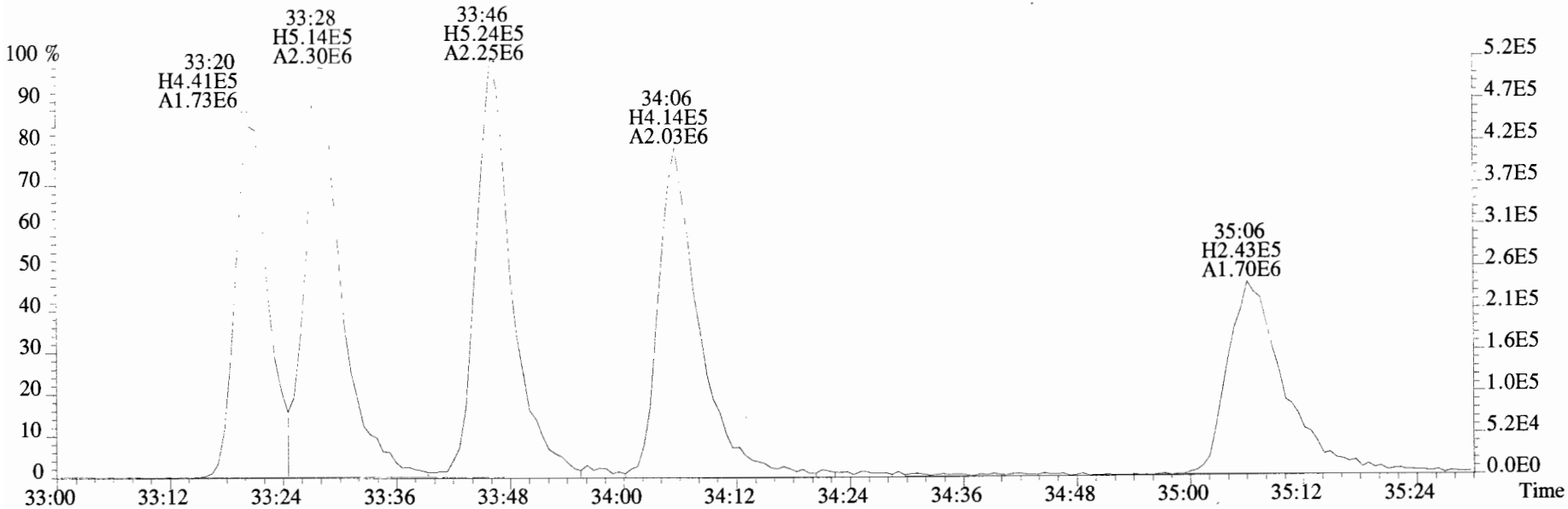
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



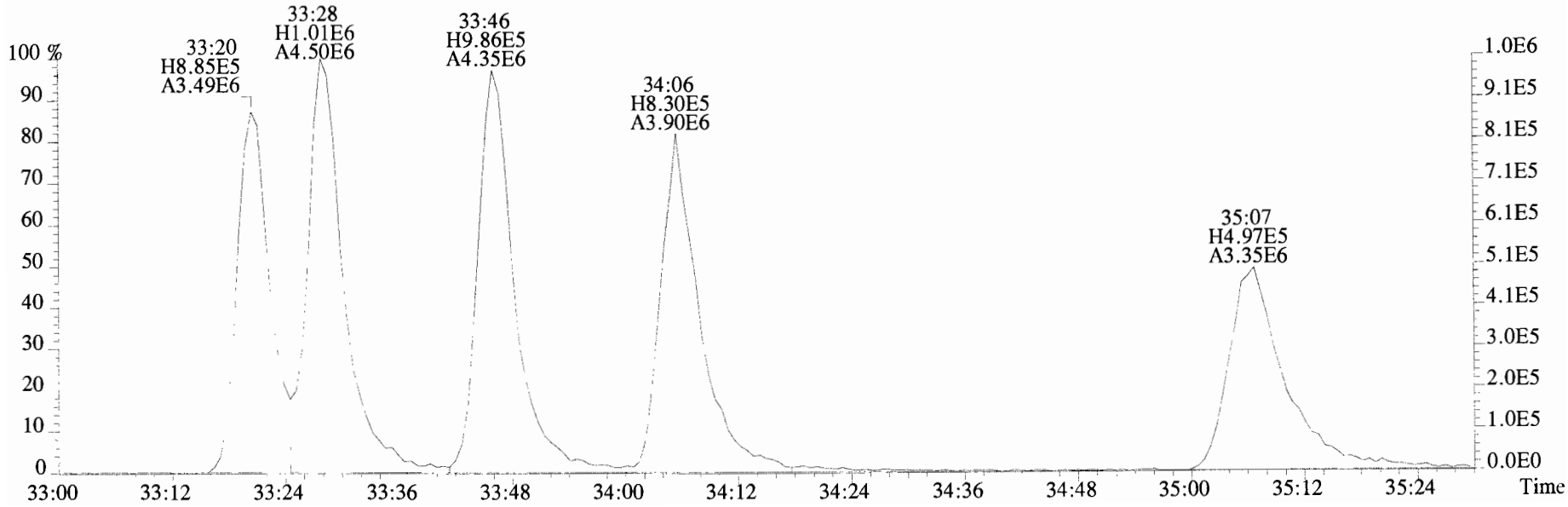
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



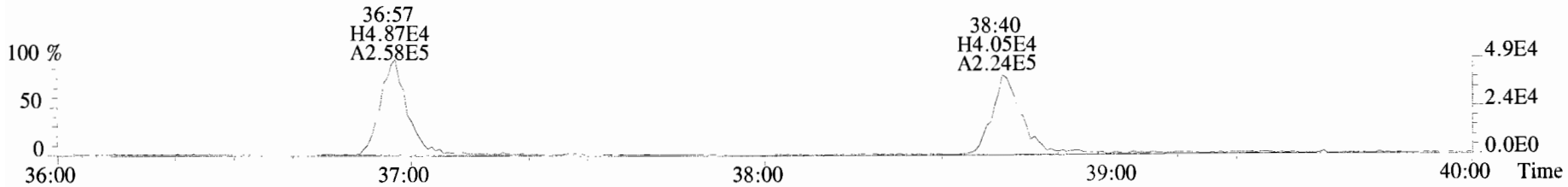
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



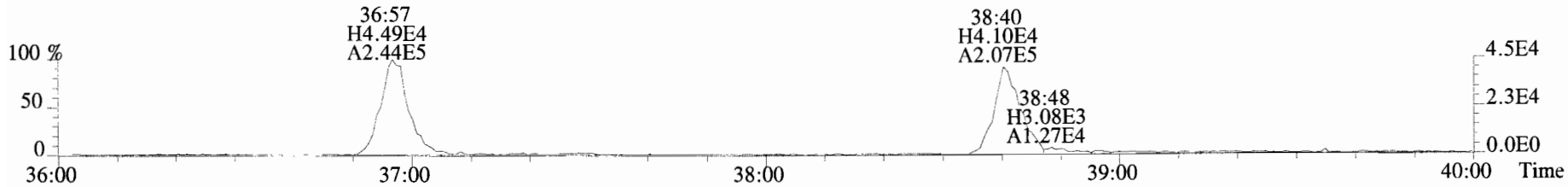
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



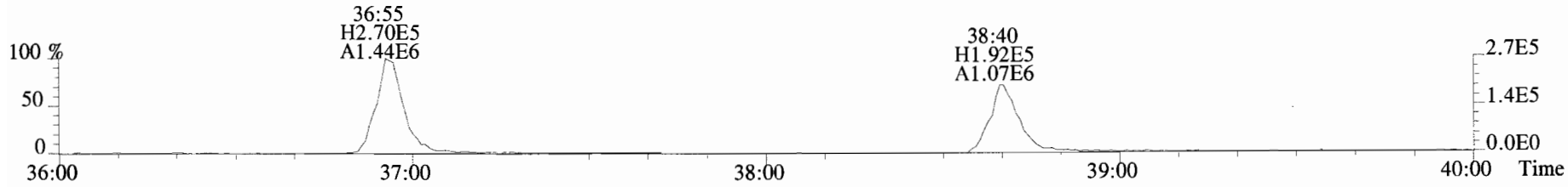
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



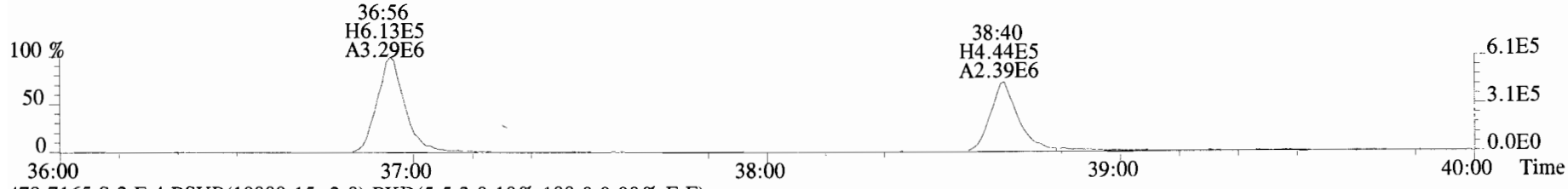
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



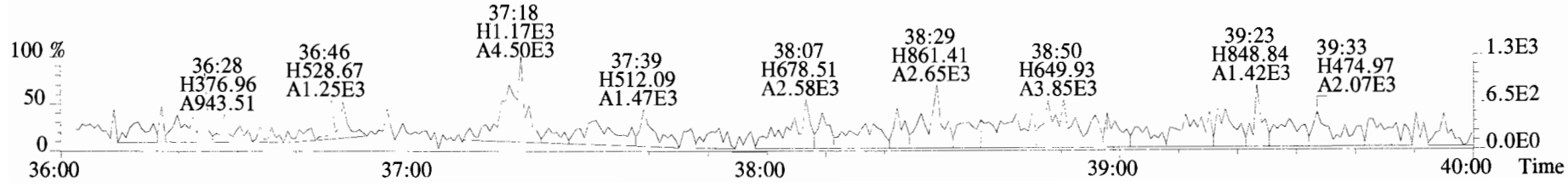
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

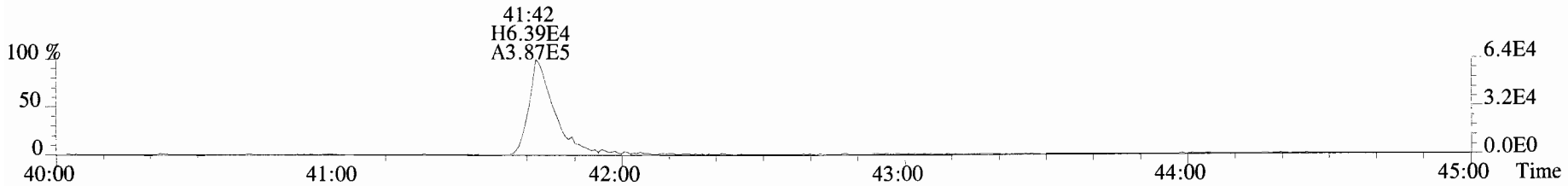


479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

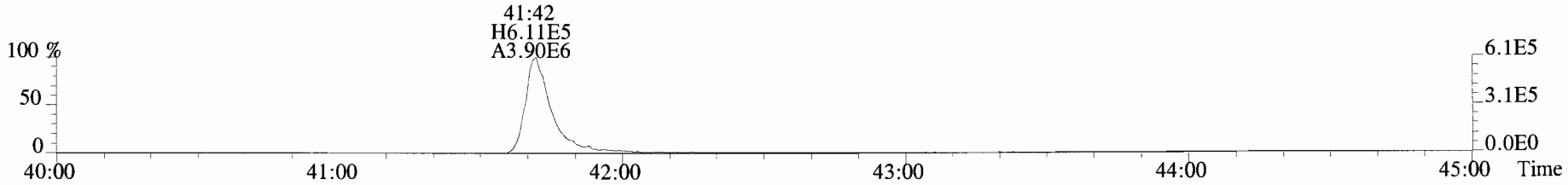


File:191009D1 #1-432 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD_DB5
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

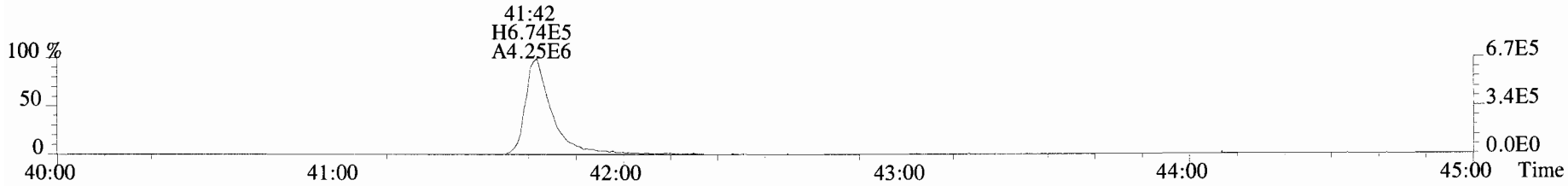
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



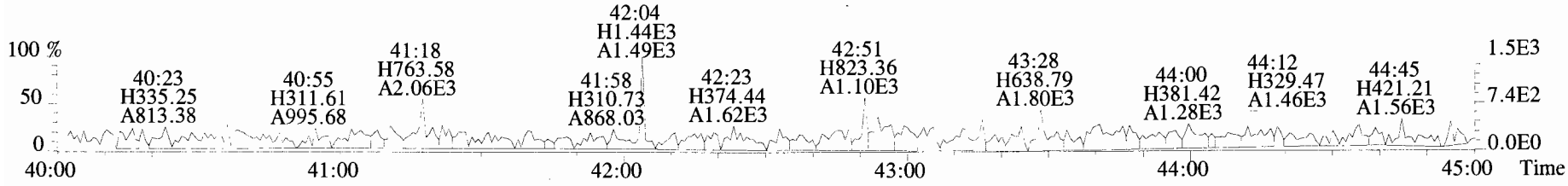
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

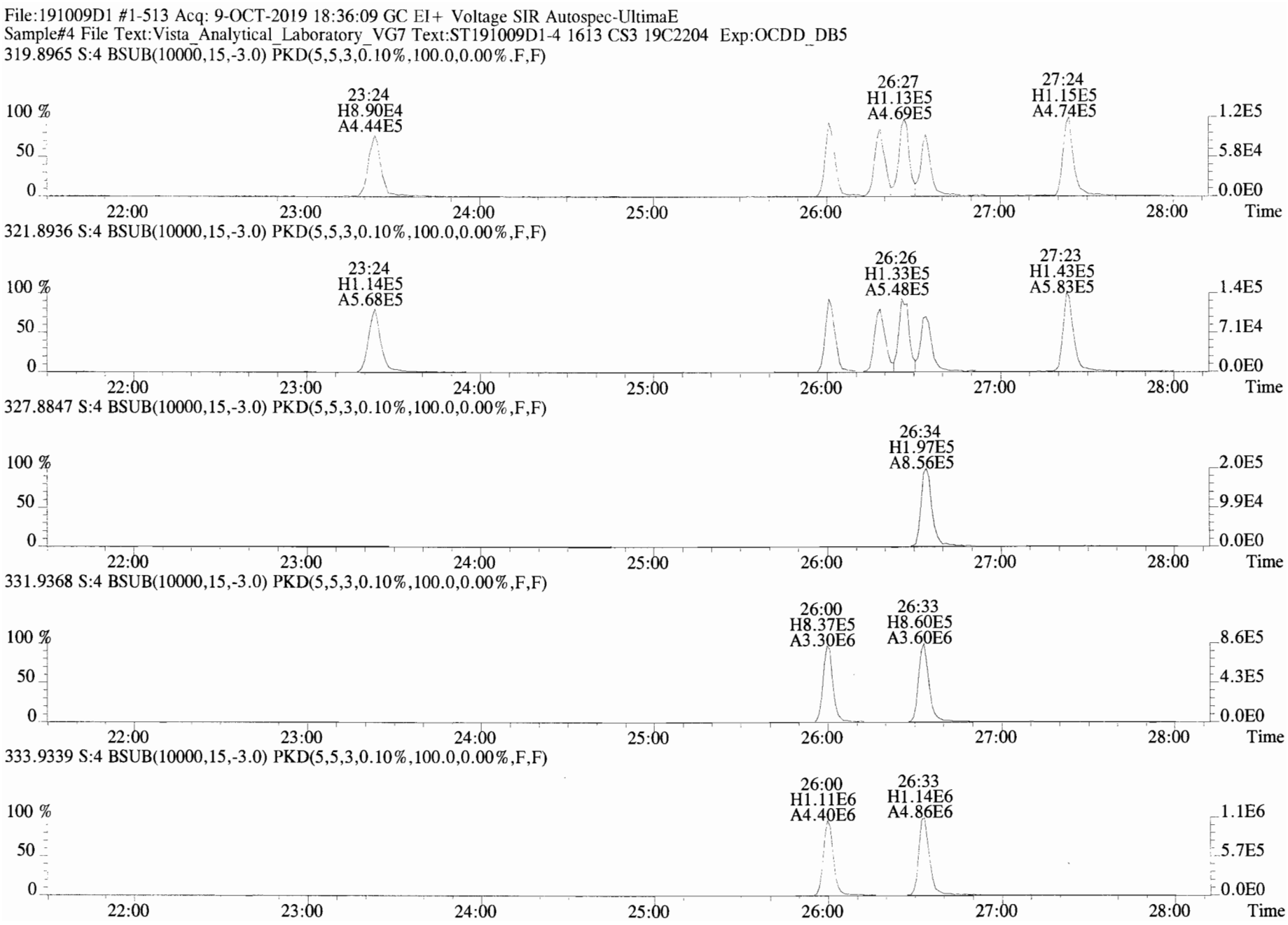


455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



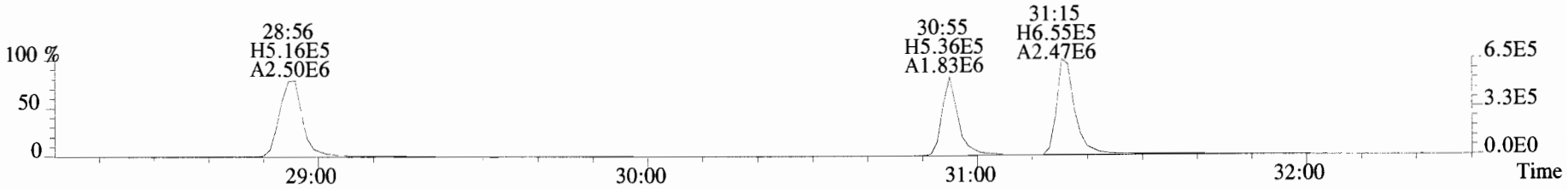
513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



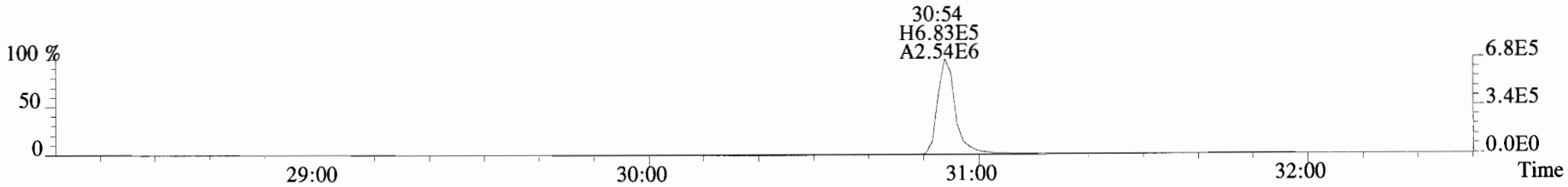

File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
23:24 H8.90E4 A4.44E5
26:27 H1.13E5 A4.69E5
27:24 H1.15E5 A4.74E5
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
23:24 H1.14E5 A5.68E5
26:26 H1.33E5 A5.48E5
27:23 H1.43E5 A5.83E5
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:34 H1.97E5 A8.56E5
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:00 H8.37E5 A3.30E6
26:33 H8.60E5 A3.60E6
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
26:00 H1.11E6 A4.40E6
26:33 H1.14E6 A4.86E6
100 %
50
0
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
1.2E5
5.8E4
0.0E0
1.4E5
7.1E4
2.0E5
9.9E4
8.6E5
4.3E5
1.1E6
5.7E5

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)

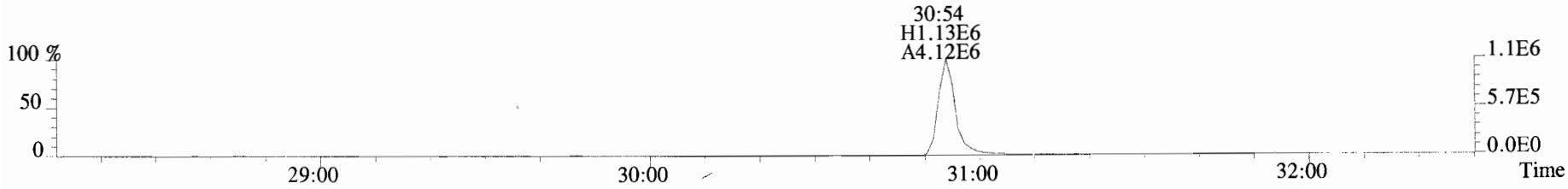
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



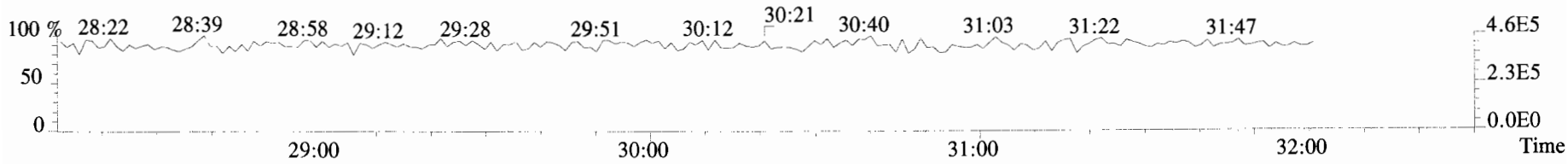
365.8978 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



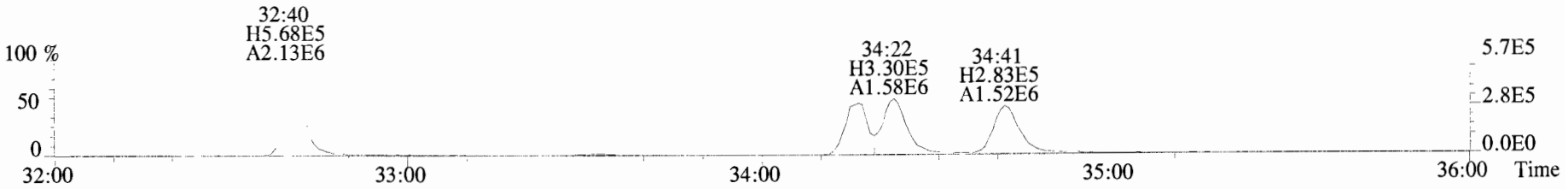
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



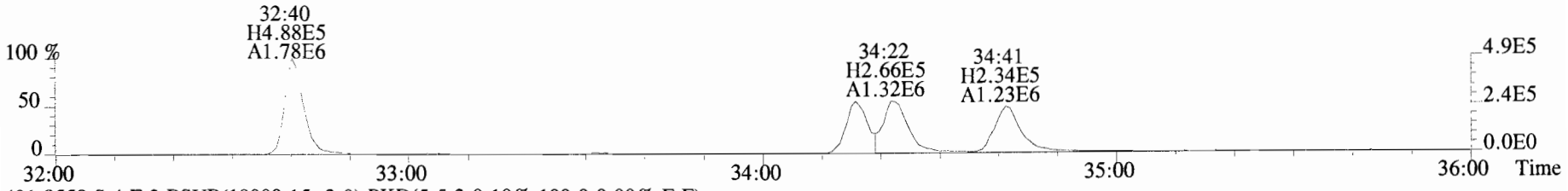
366.9792 S:4 F:2



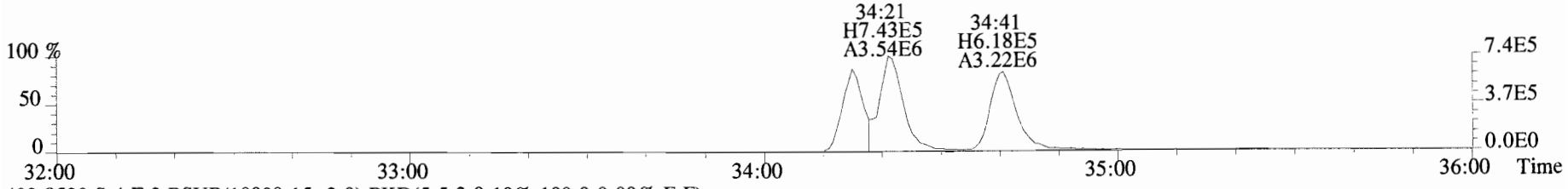
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



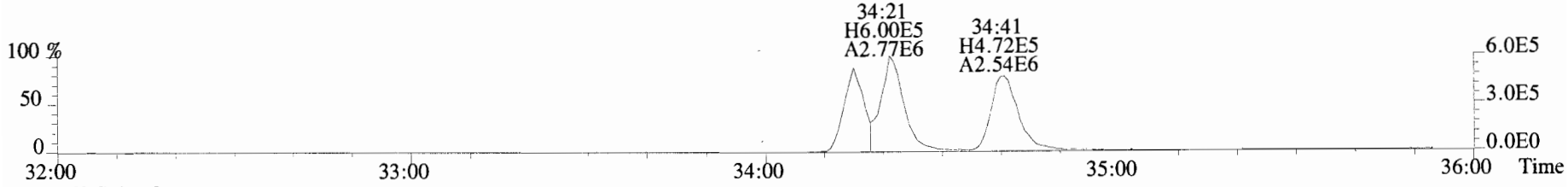
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



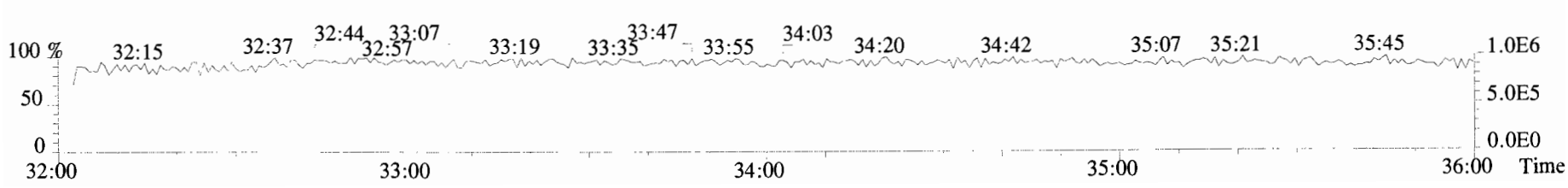
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



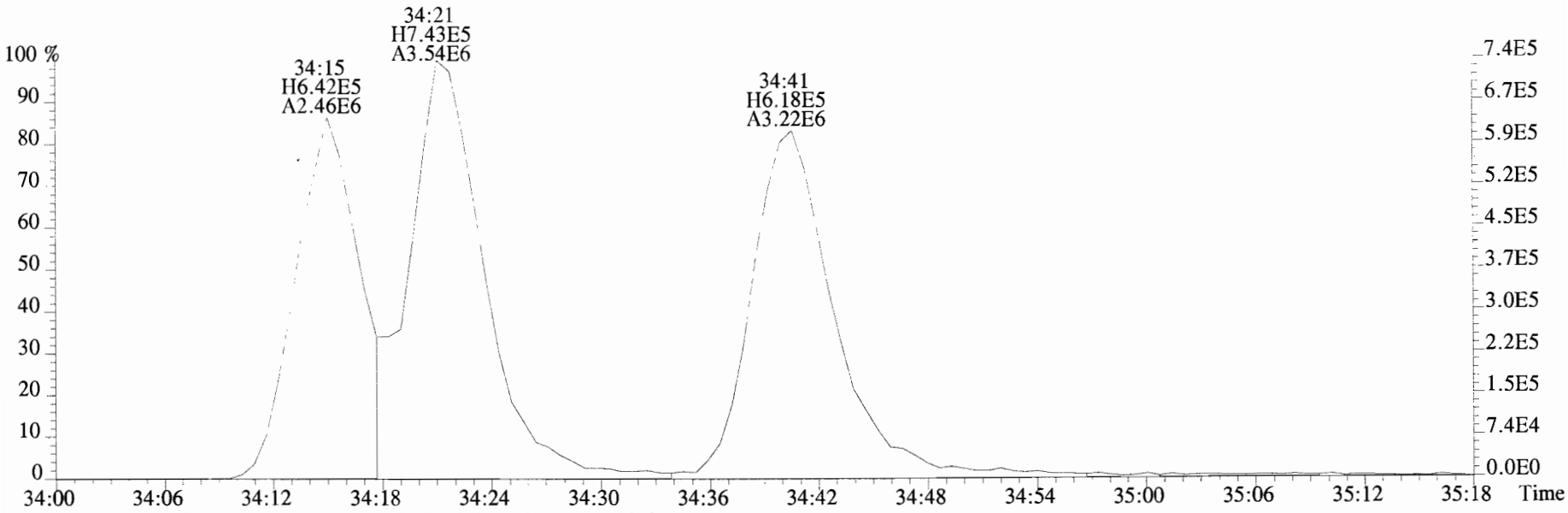
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



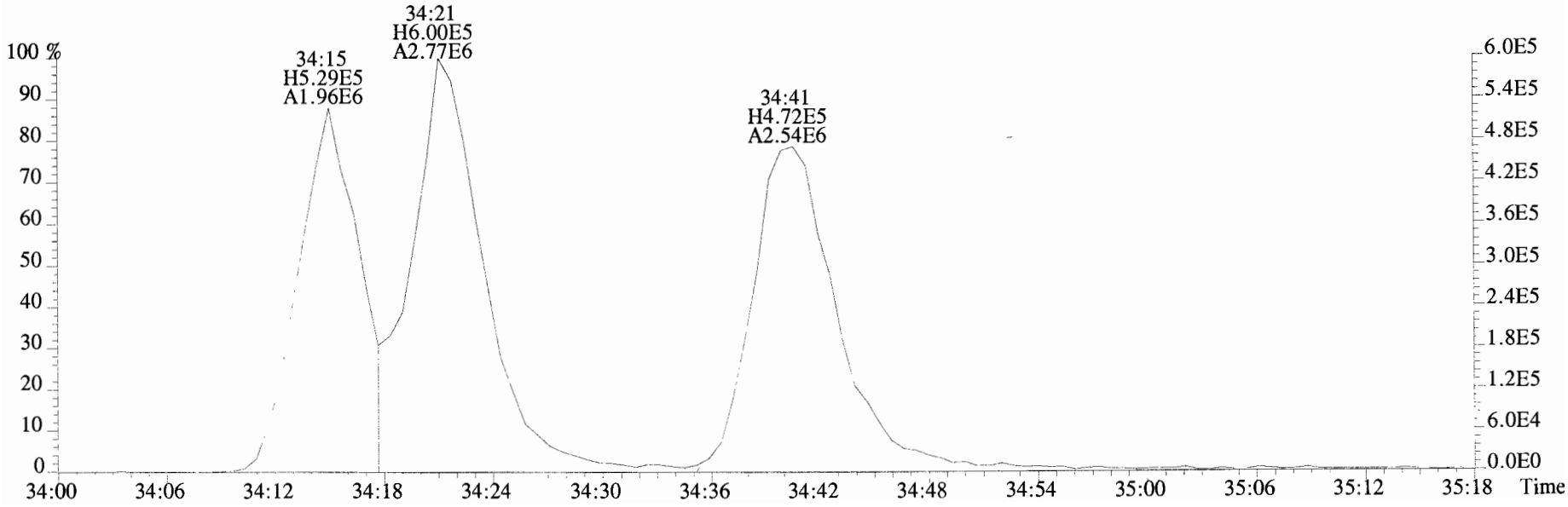
392.9760 S:4 F:3



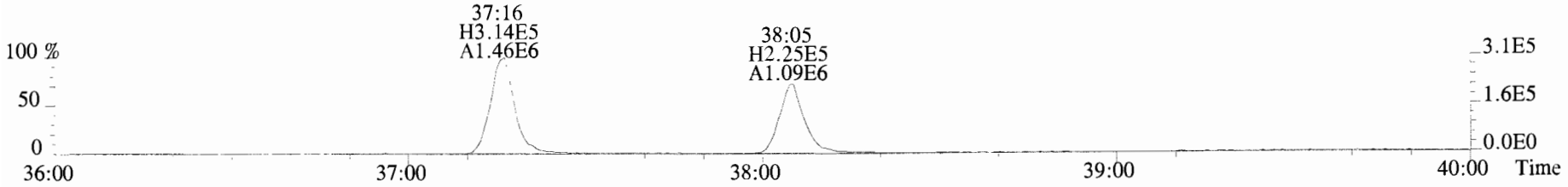
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



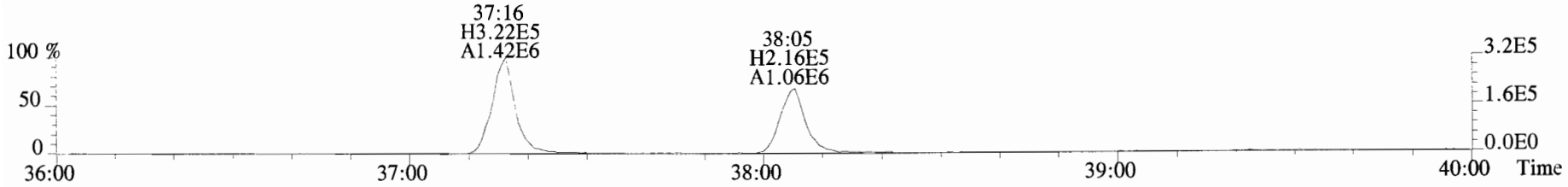
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



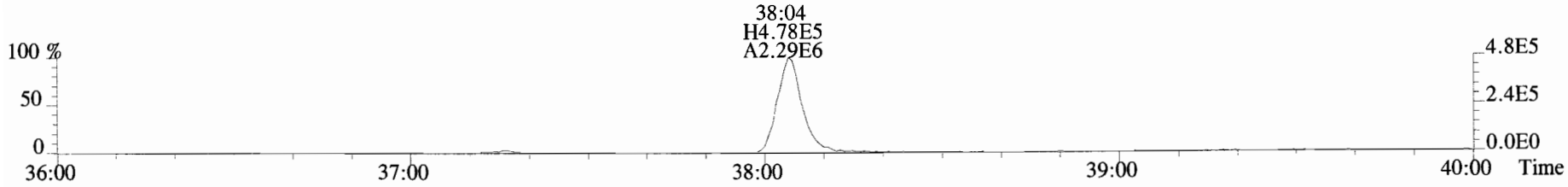
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



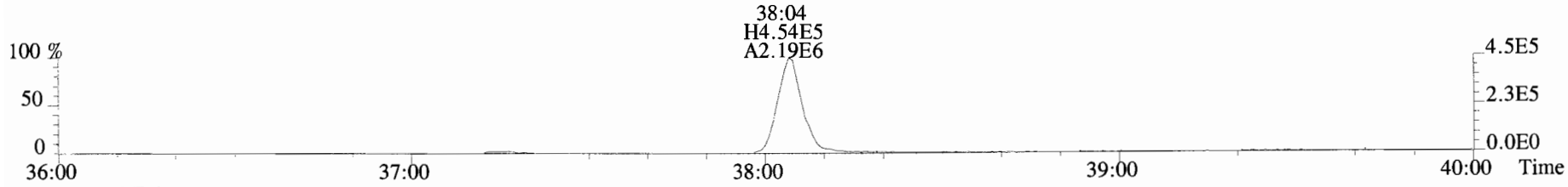
425.7737 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



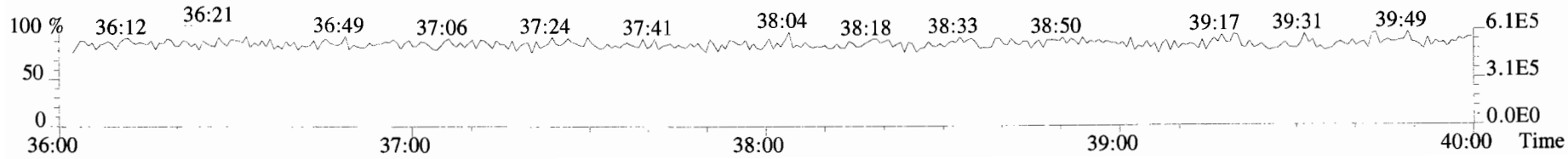
435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



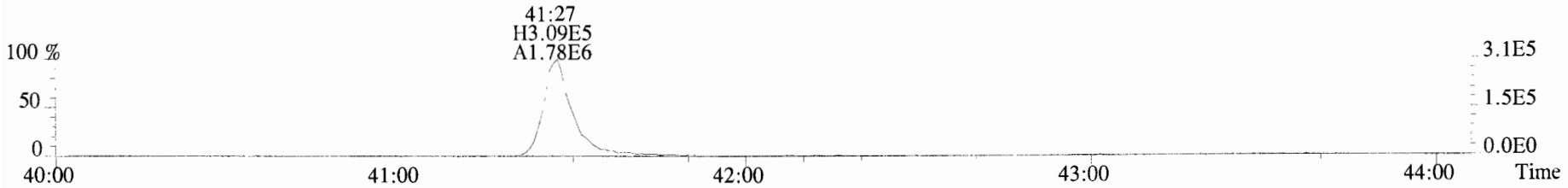
437.8140 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



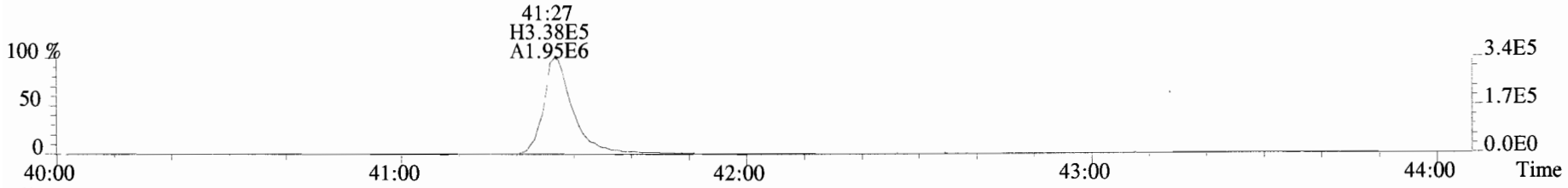
454.9728 S:4 F:4



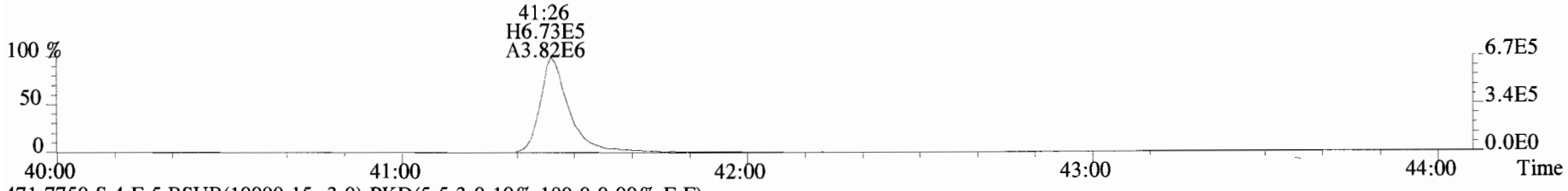
File:191009D1 #1-432 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



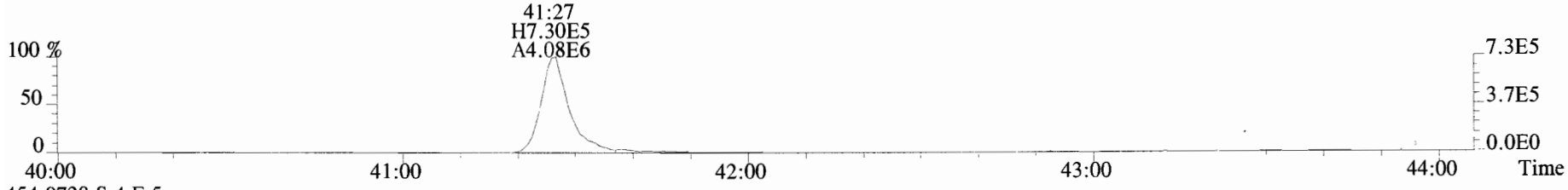
459.7348 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



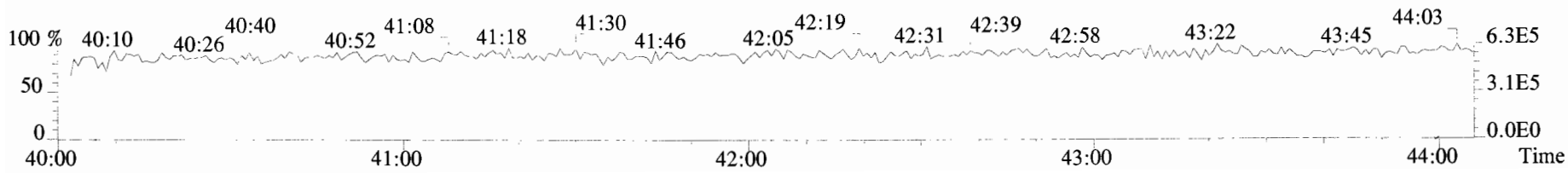
469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



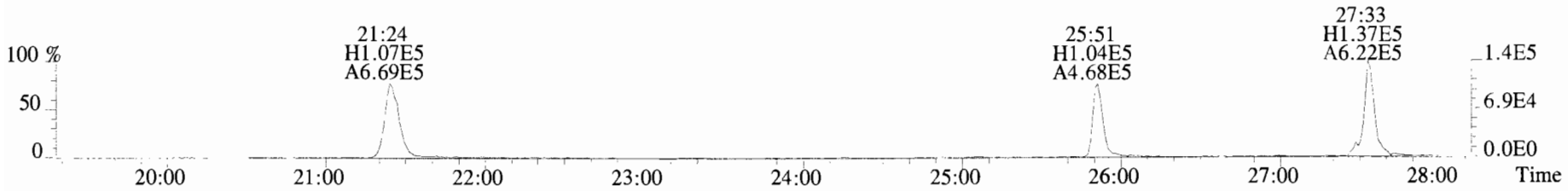
471.7750 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



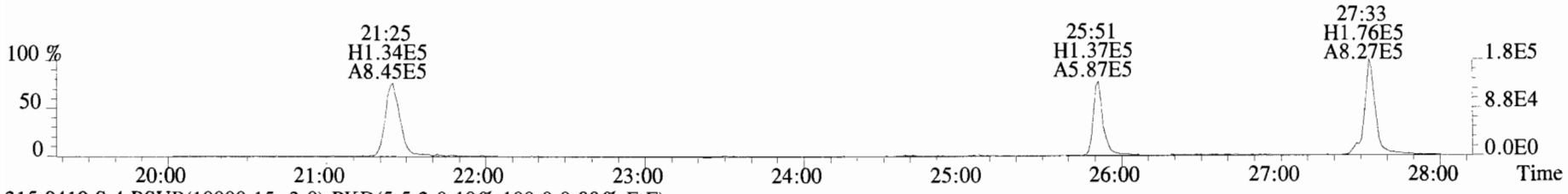
454.9728 S:4 F:5



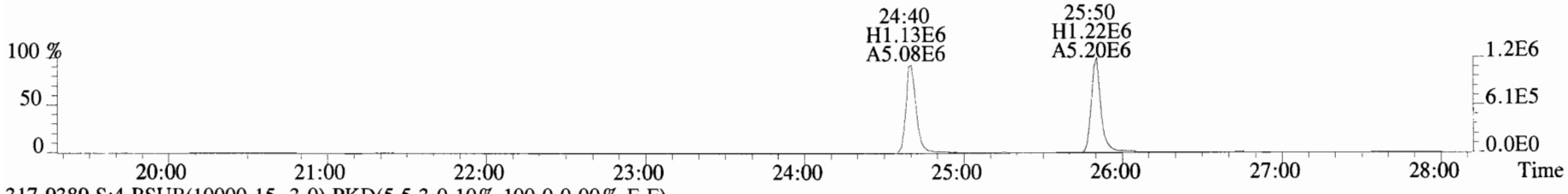
File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



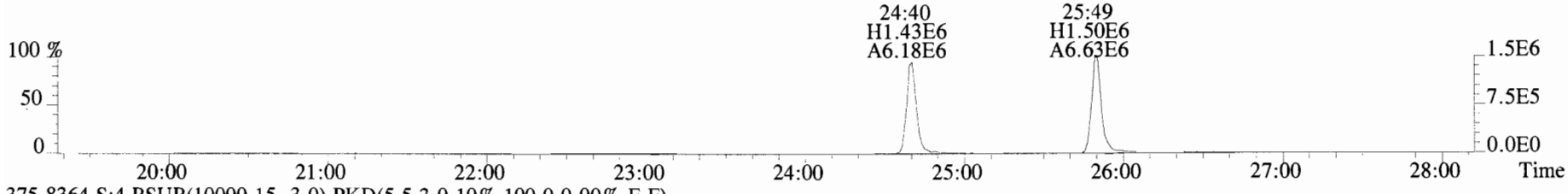
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



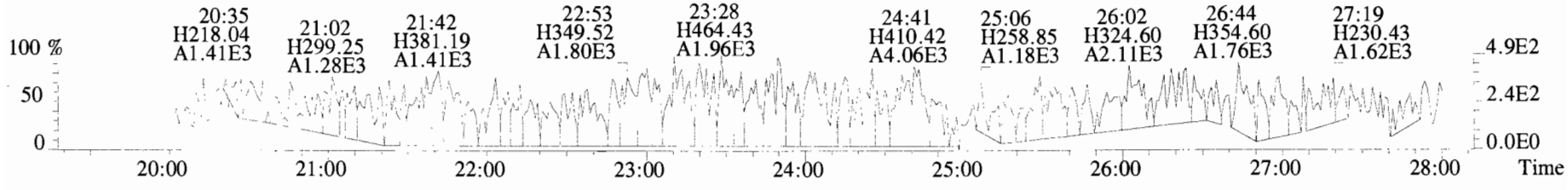
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



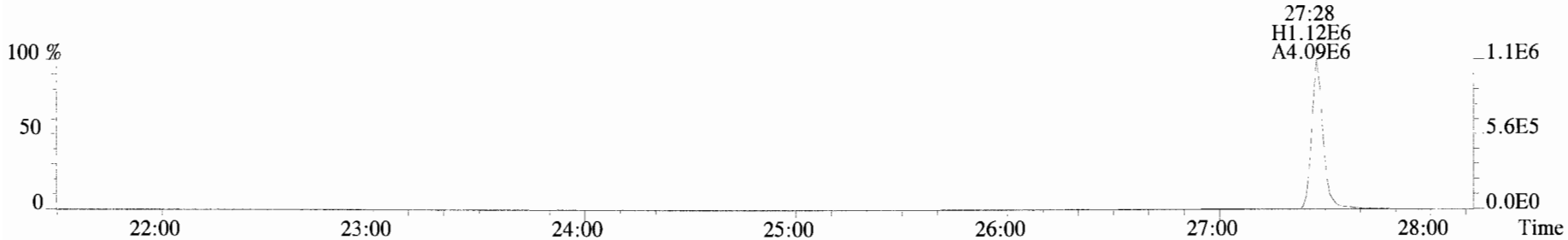
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



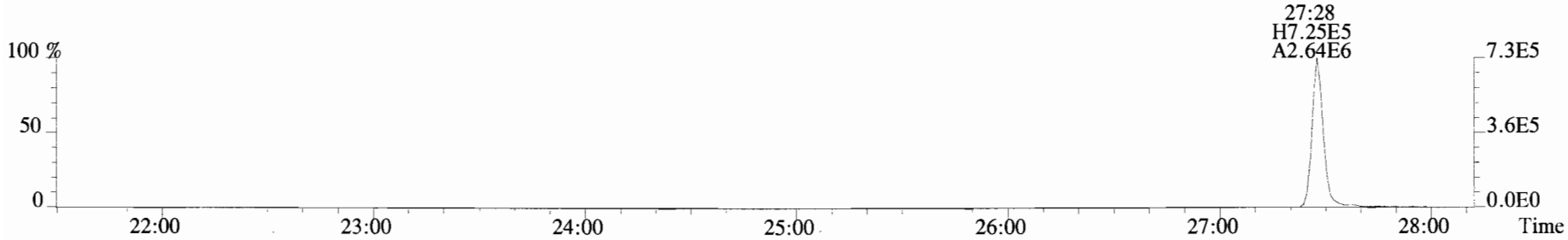
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



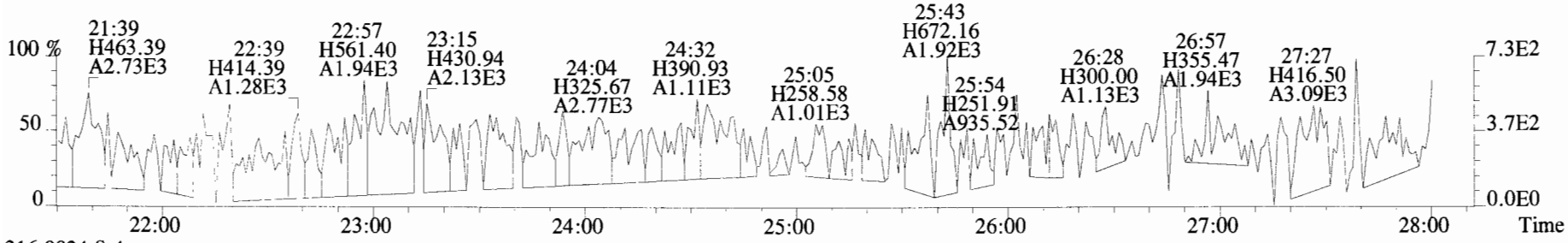
File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



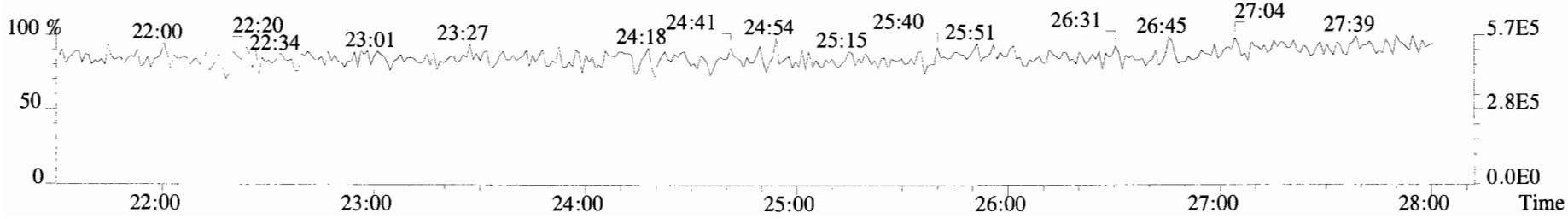
341.8568 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



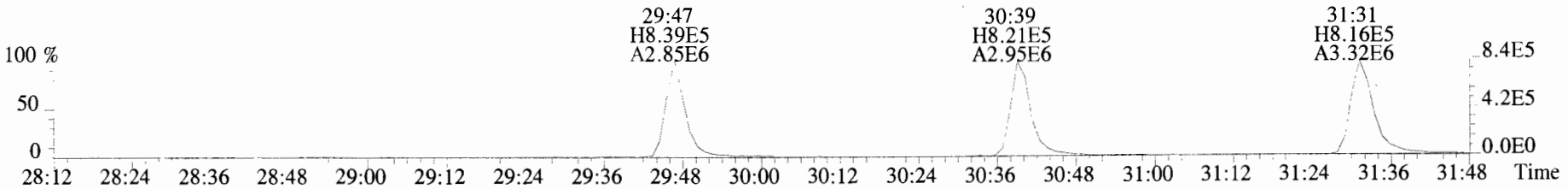
409.7974 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



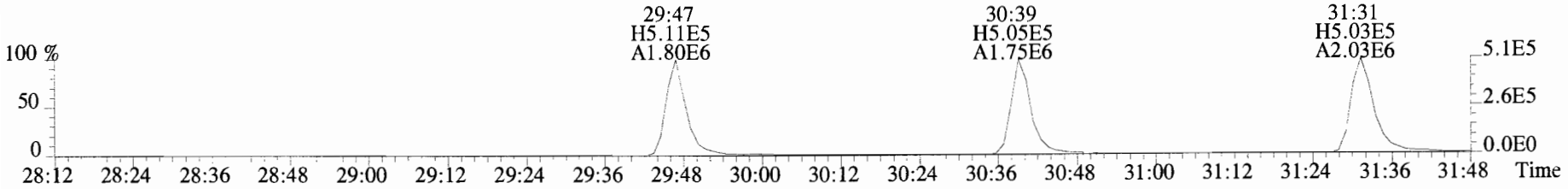
316.9824 S:4



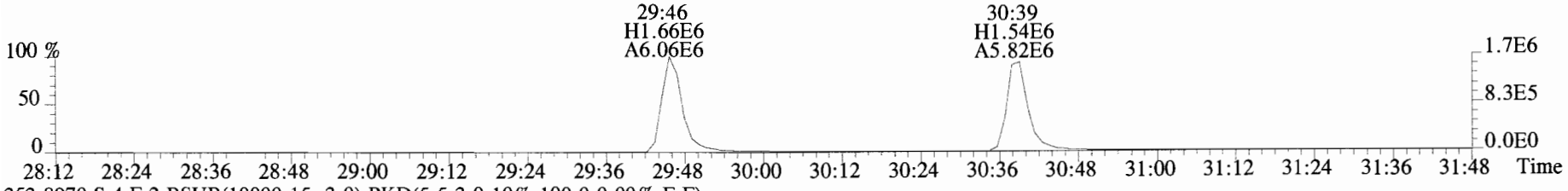
File:191009D1 #1-211 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



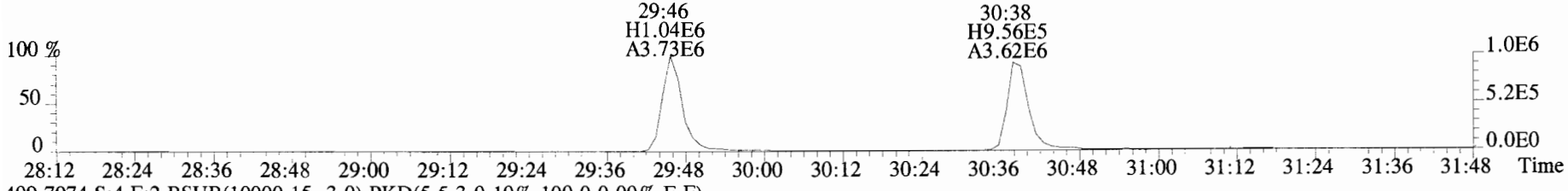
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



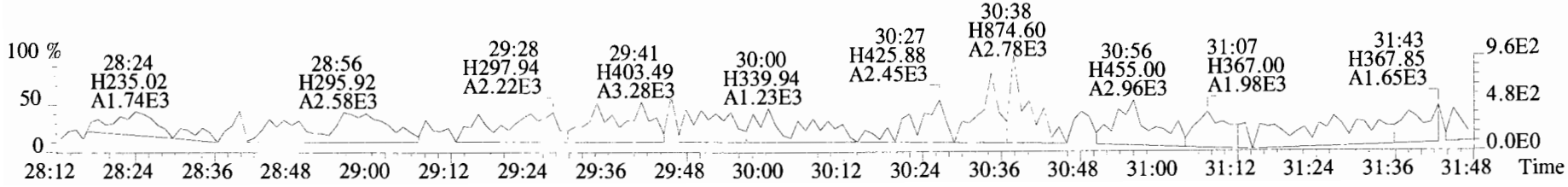
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



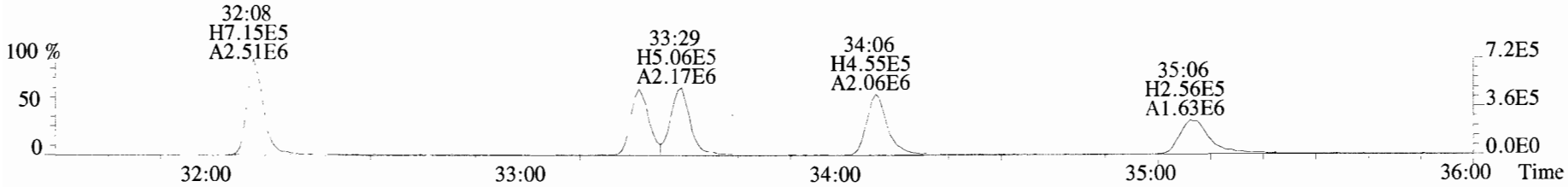
353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



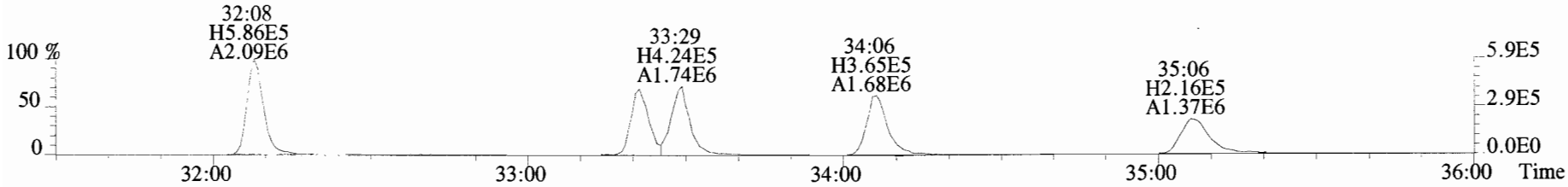
409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



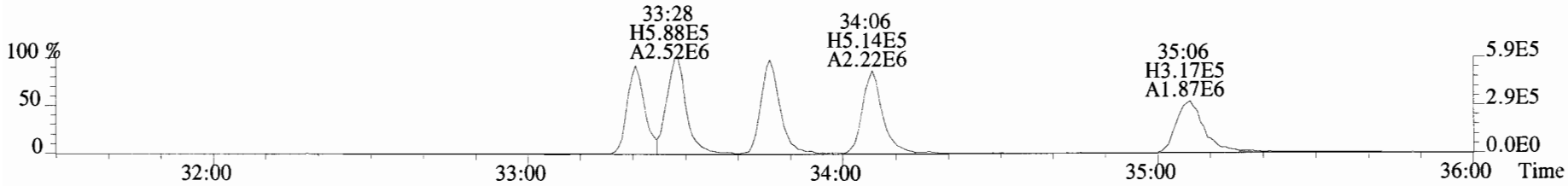
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



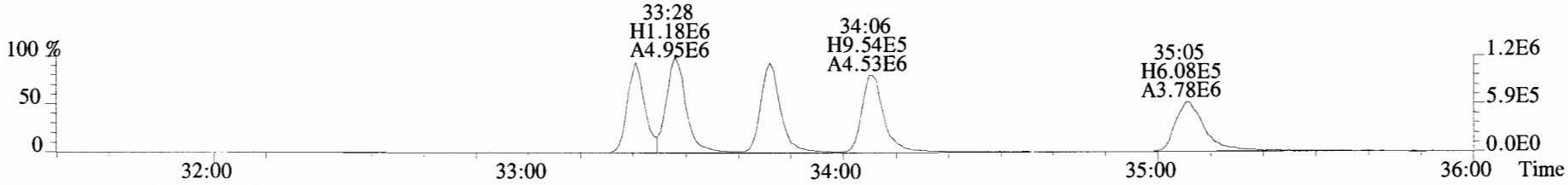
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



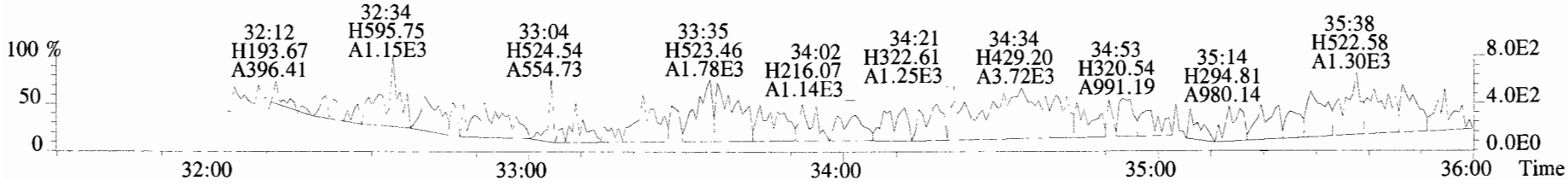
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



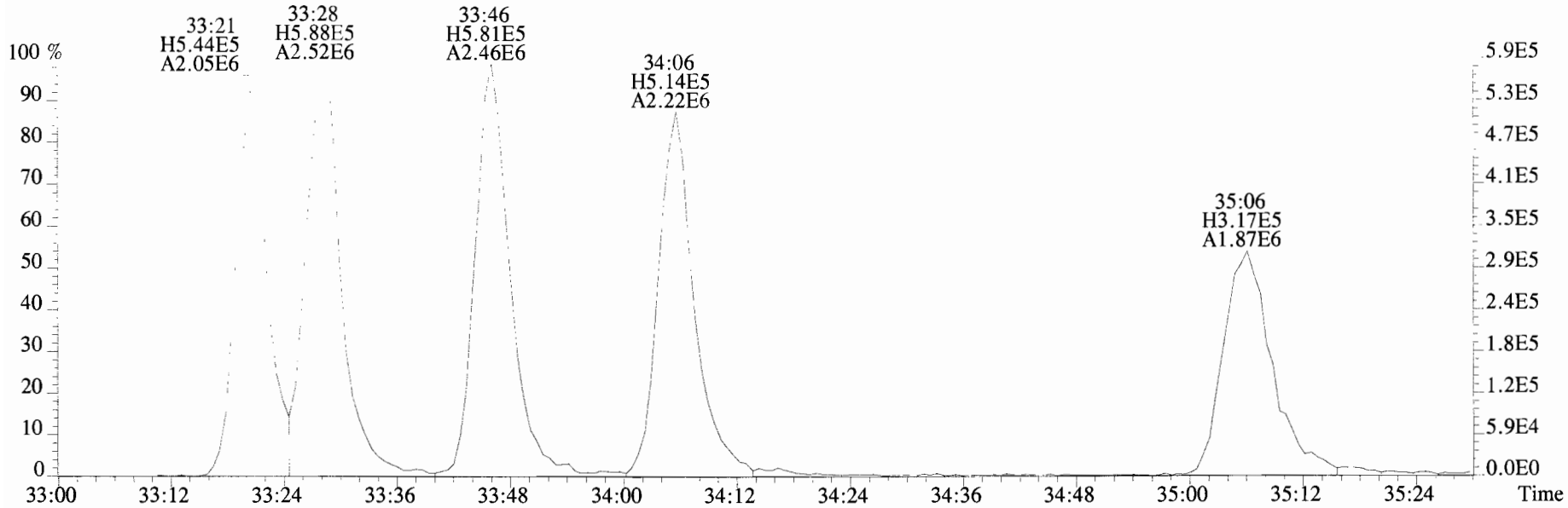
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



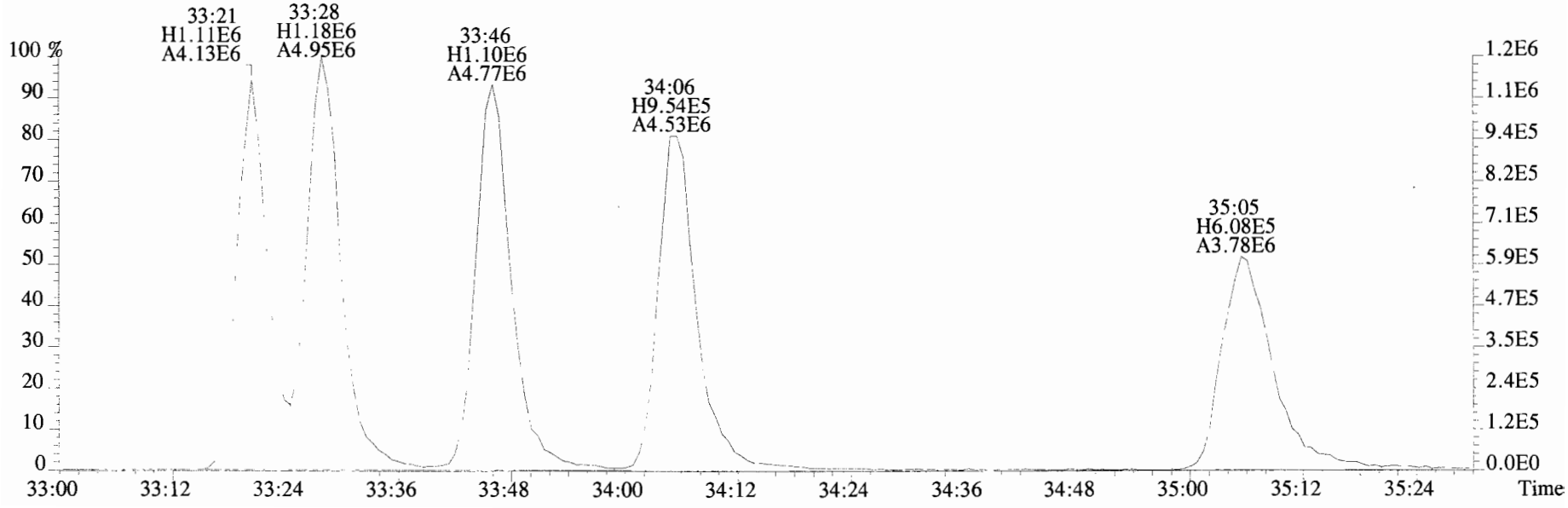
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



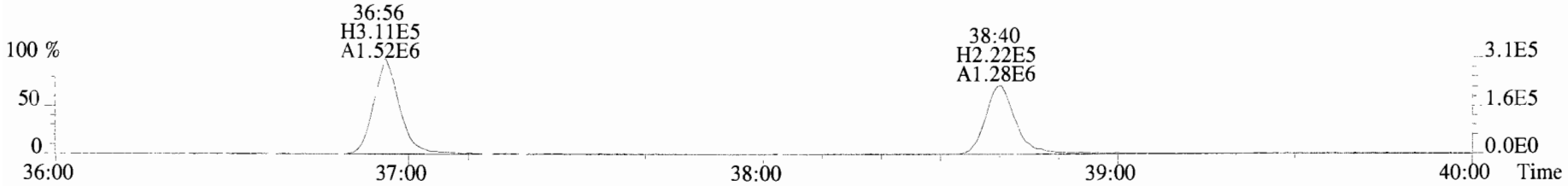
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



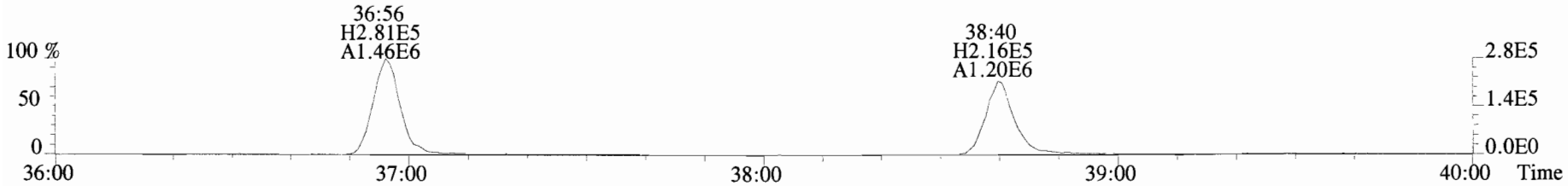
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



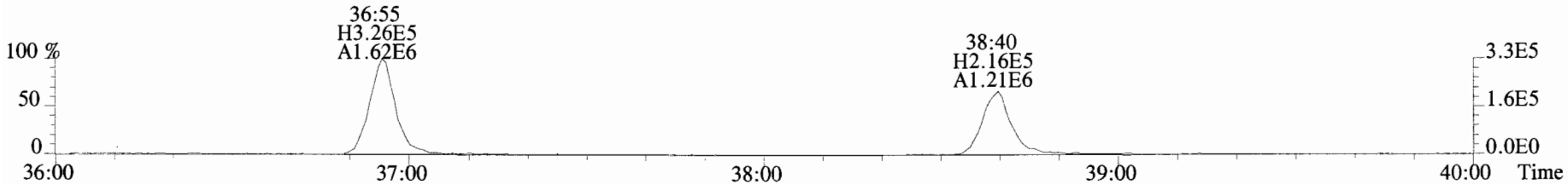
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



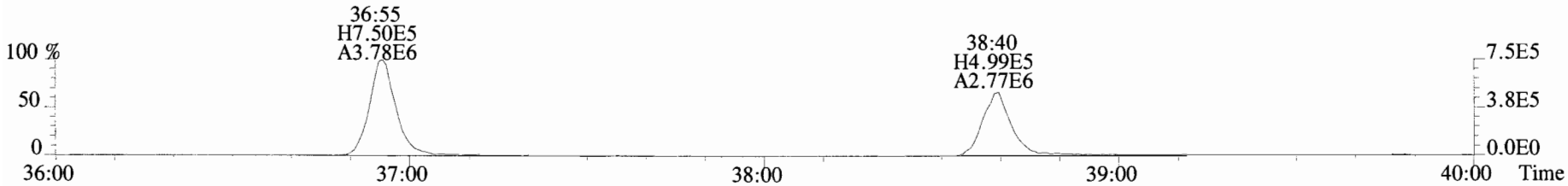
409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



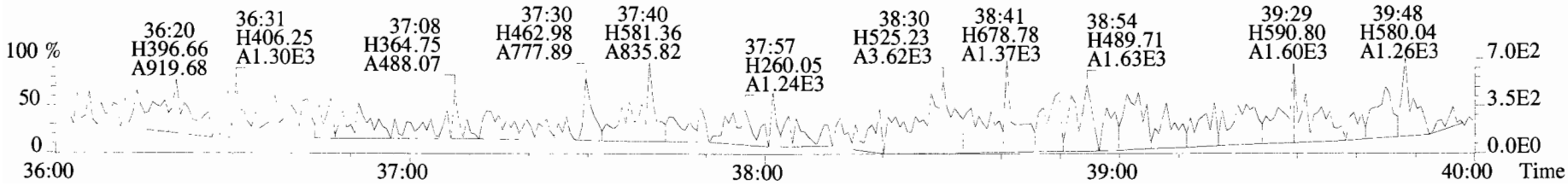
417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



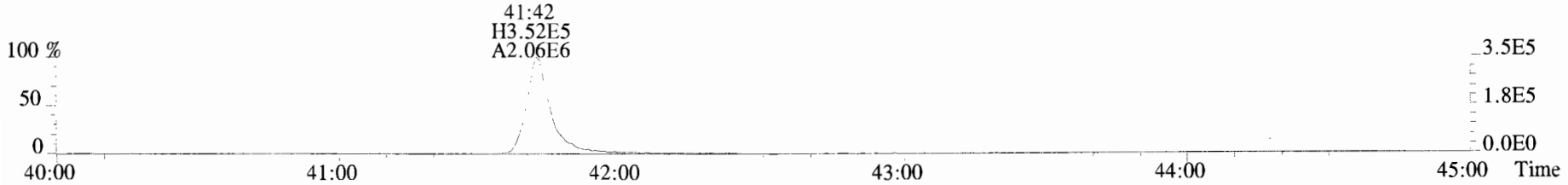
419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



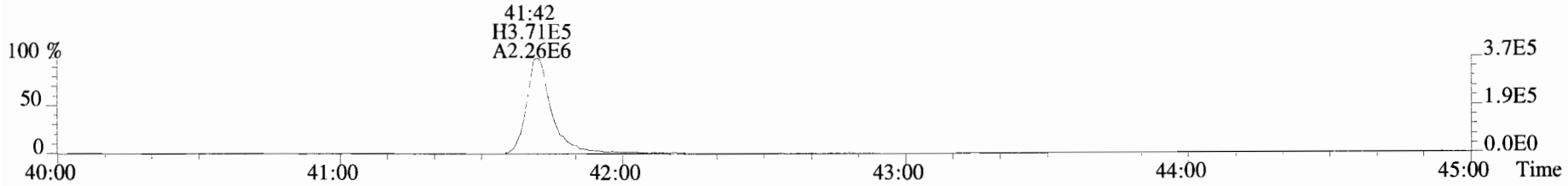
479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



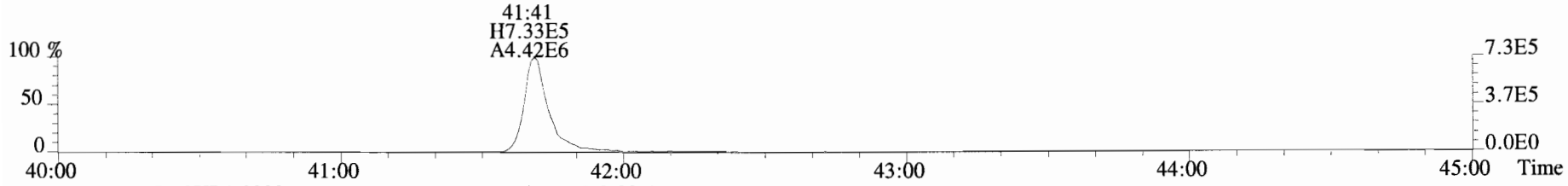
File:191009D1 #1-432 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD_DB5
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



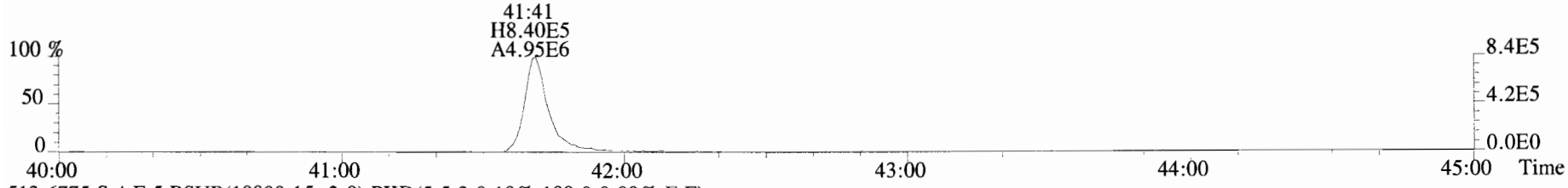
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



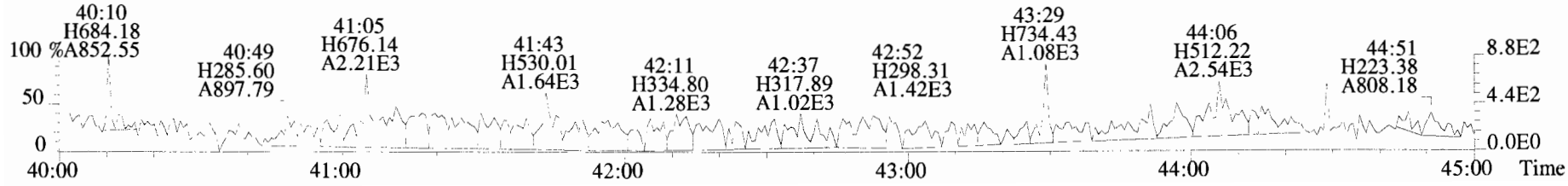
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



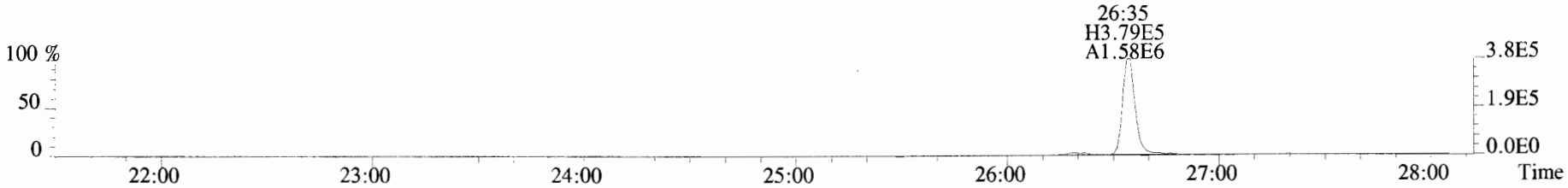
455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



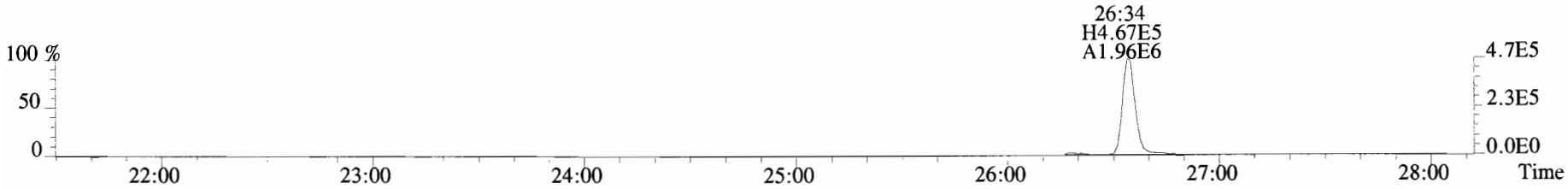
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



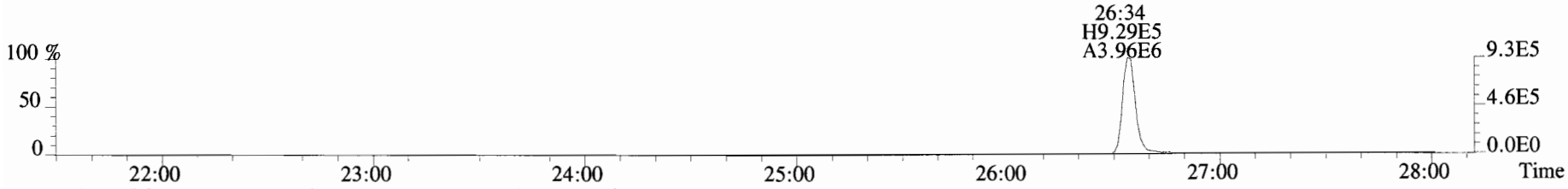
File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



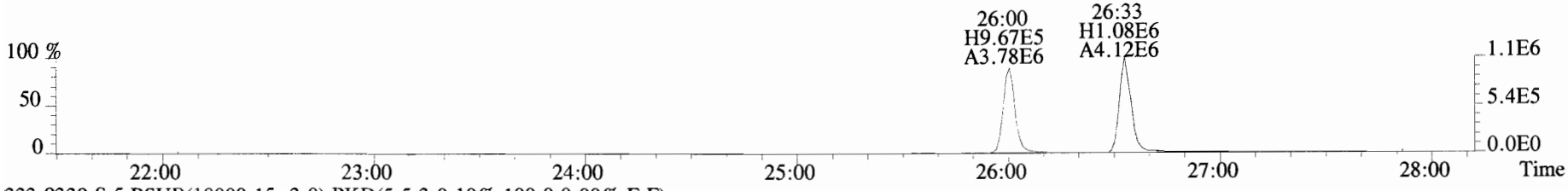
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



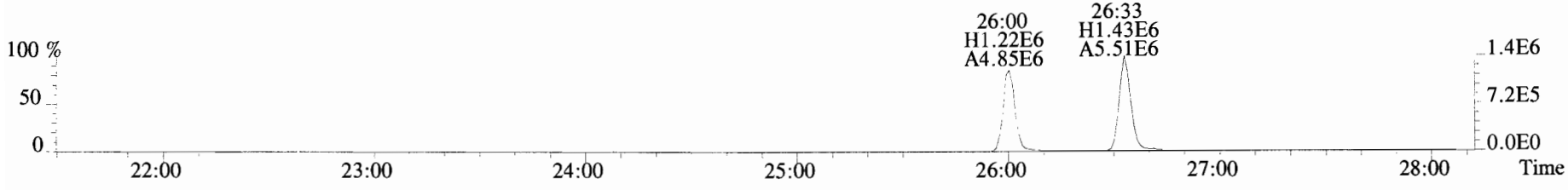
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



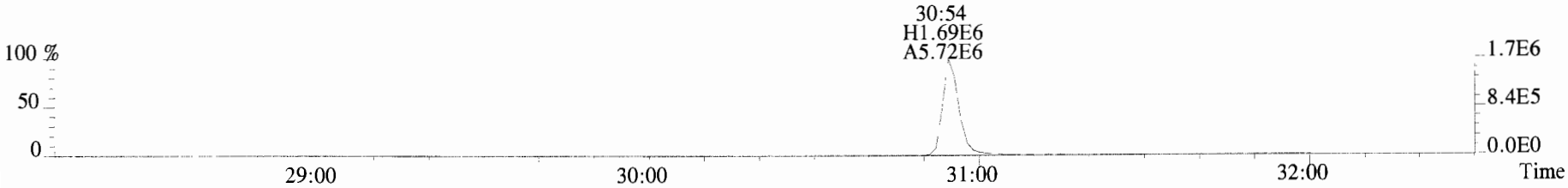
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



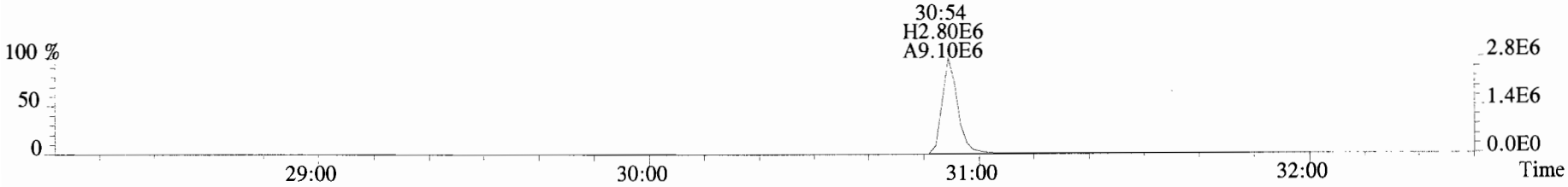
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



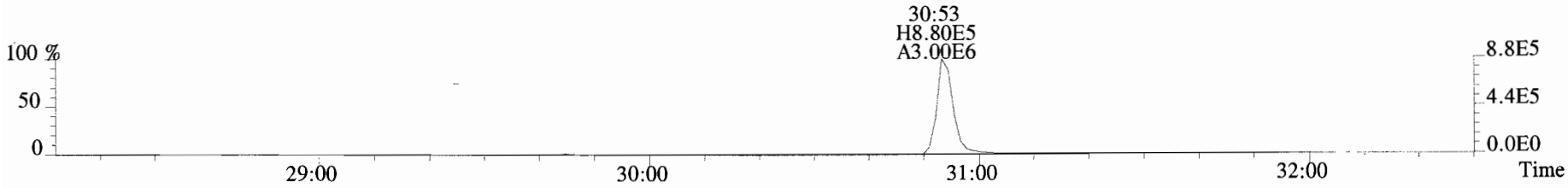
File:191009D1 #1-210 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



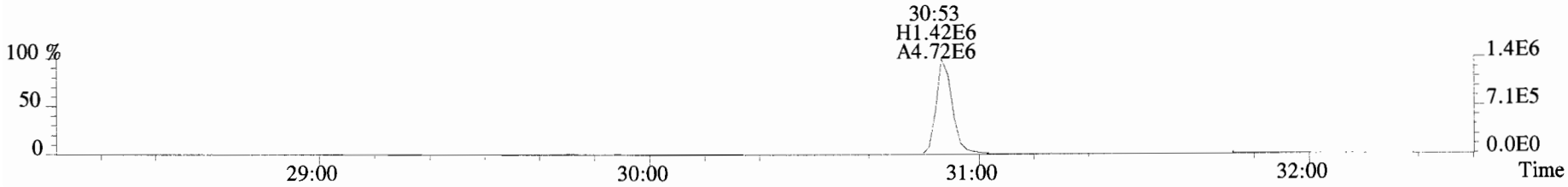
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



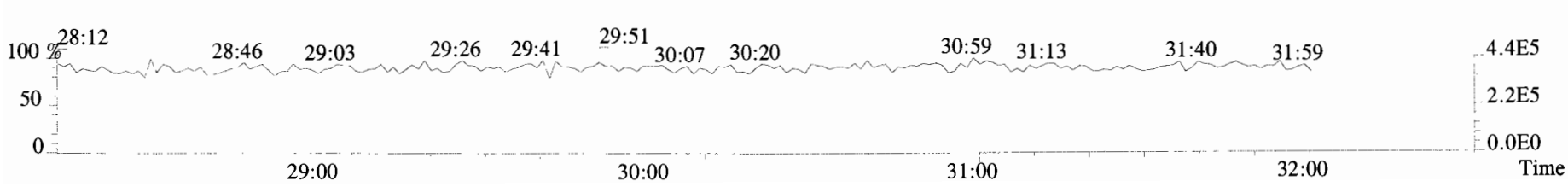
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



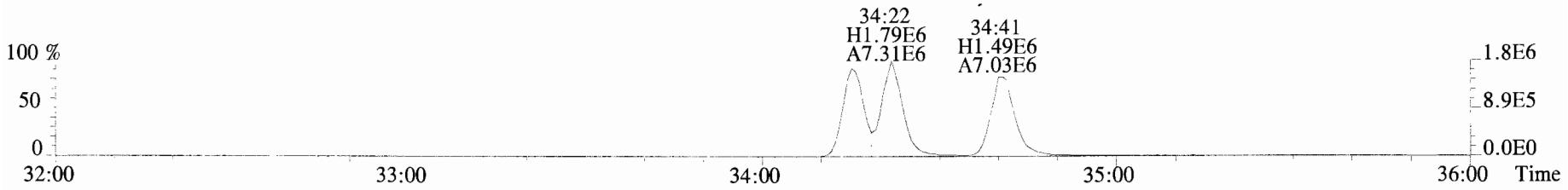
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



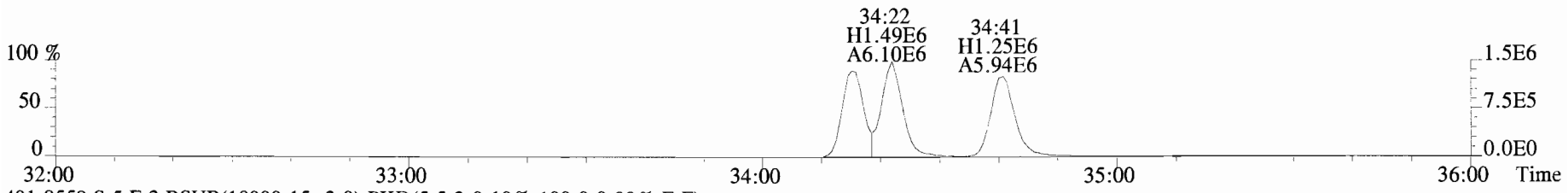
366.9792 S:5 F:2



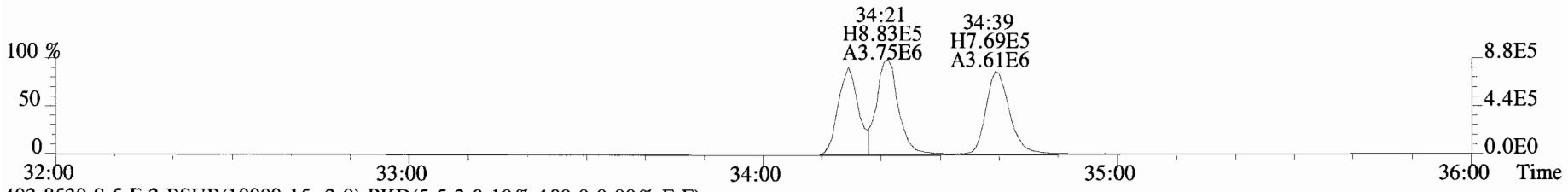
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



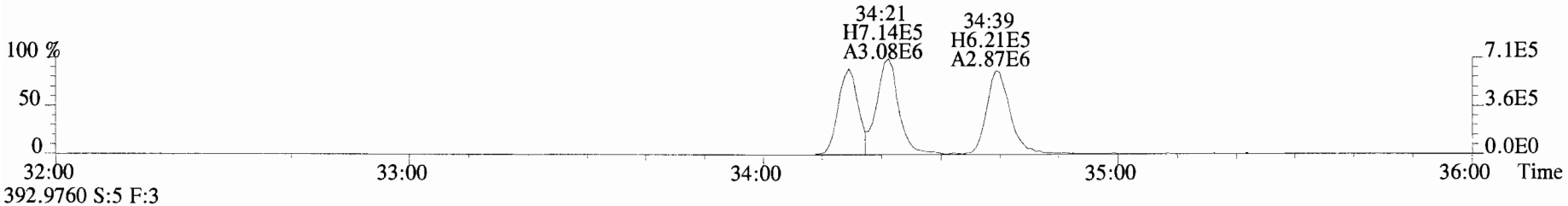
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



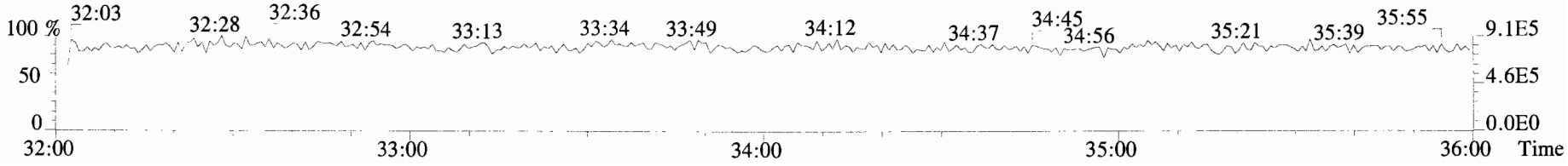
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



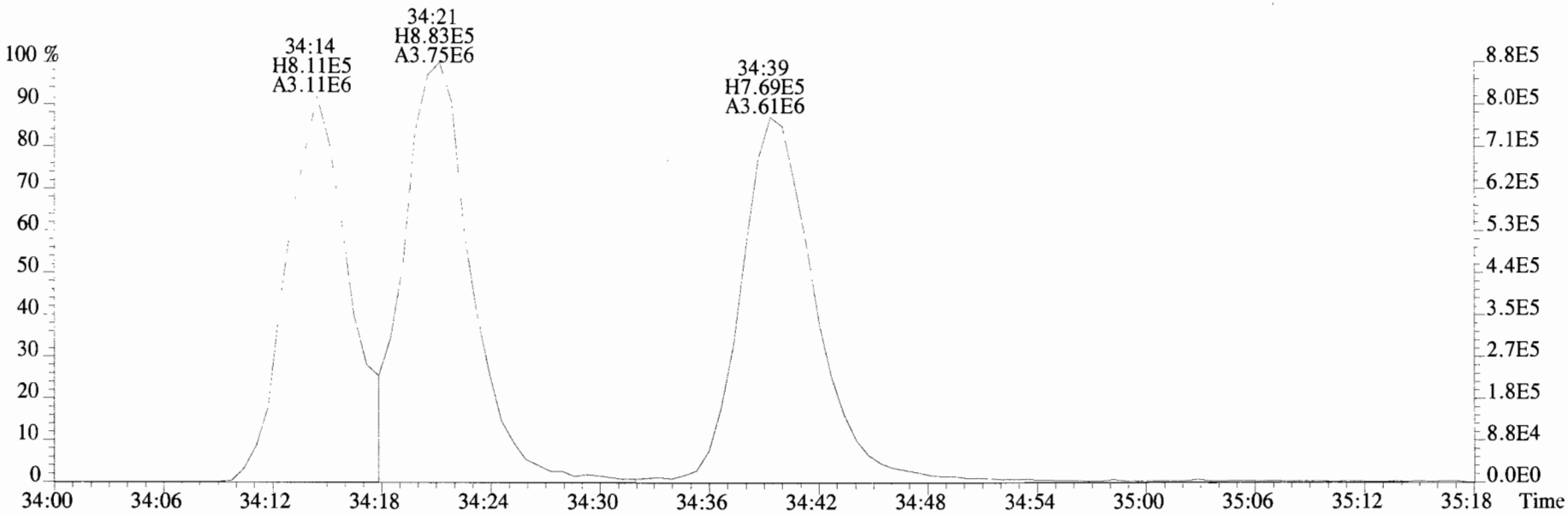
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



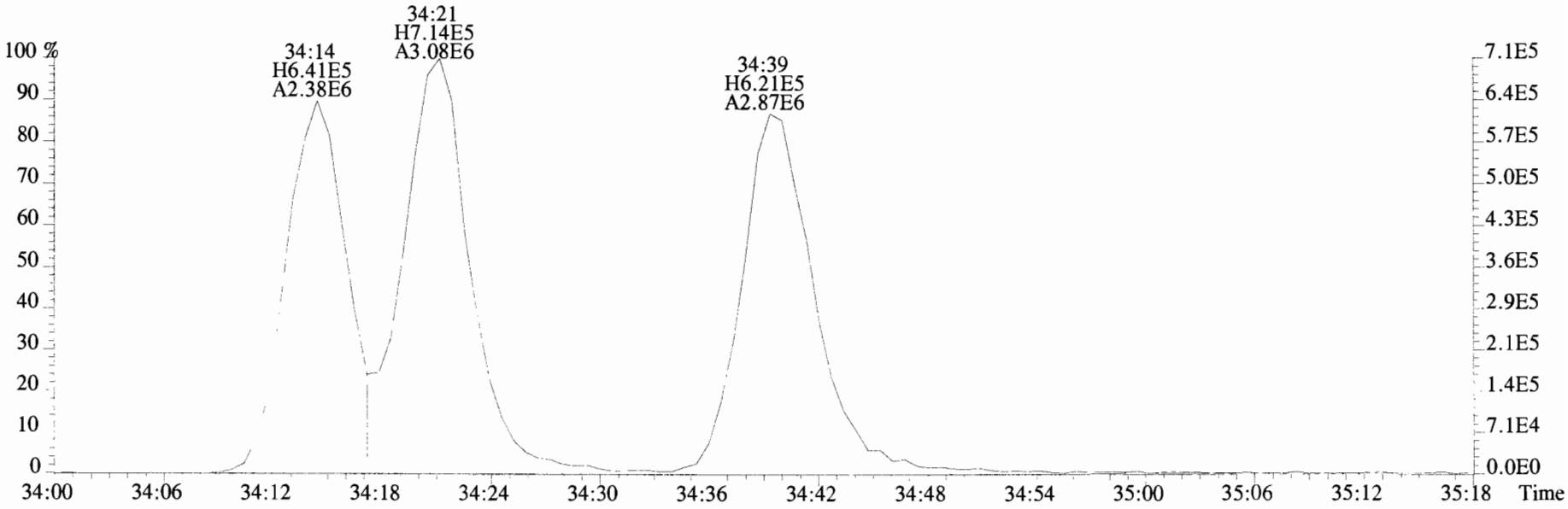
392.9760 S:5 F:3



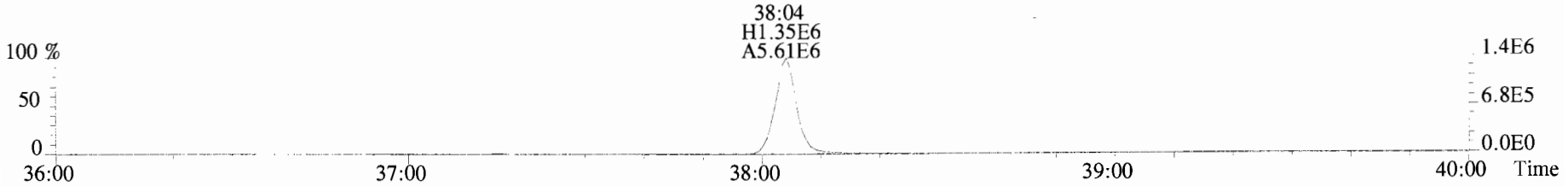
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



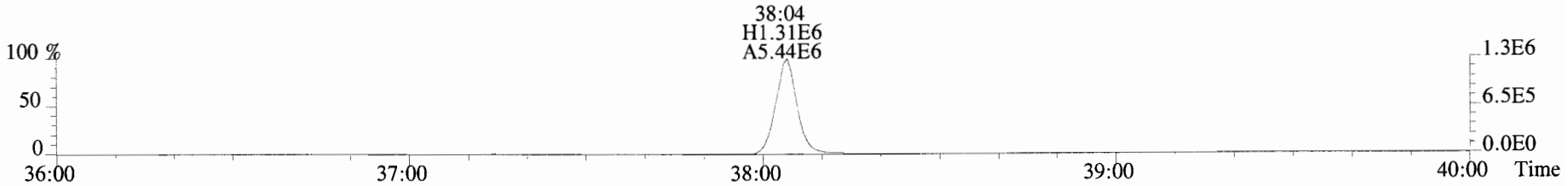
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



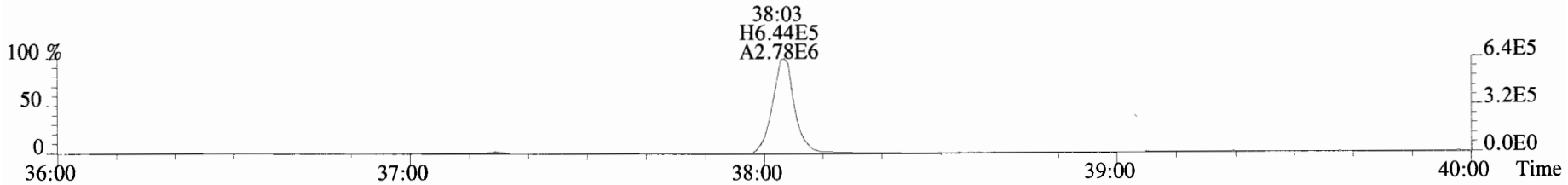
File:191009D1 #1-356 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



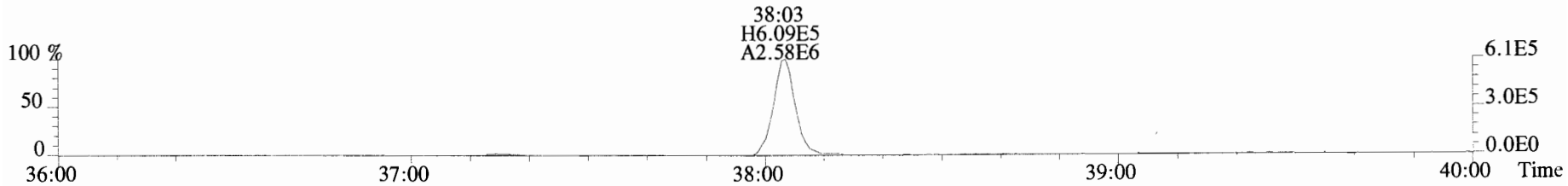
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



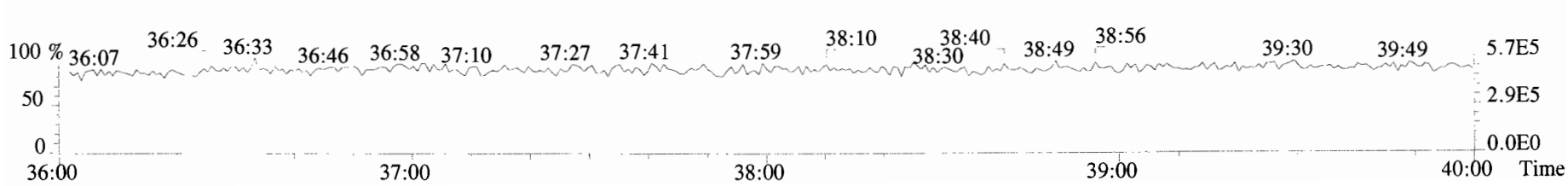
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



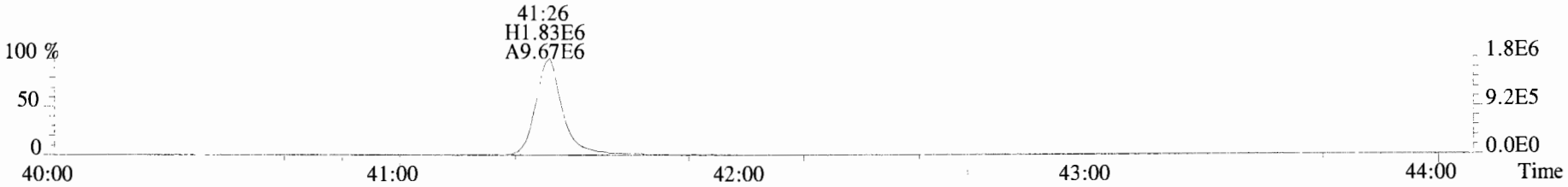
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



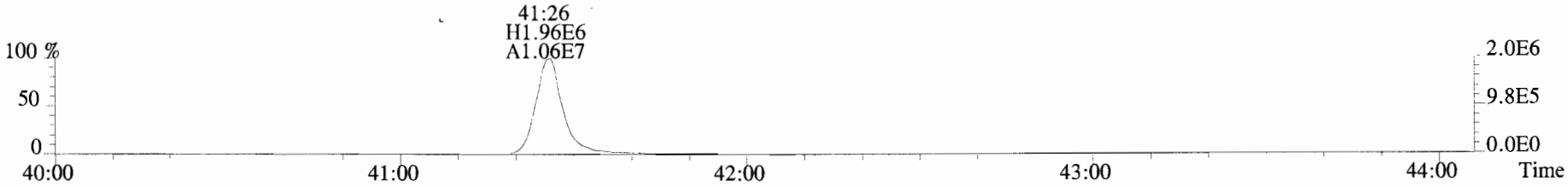
454.9728 S:5 F:4



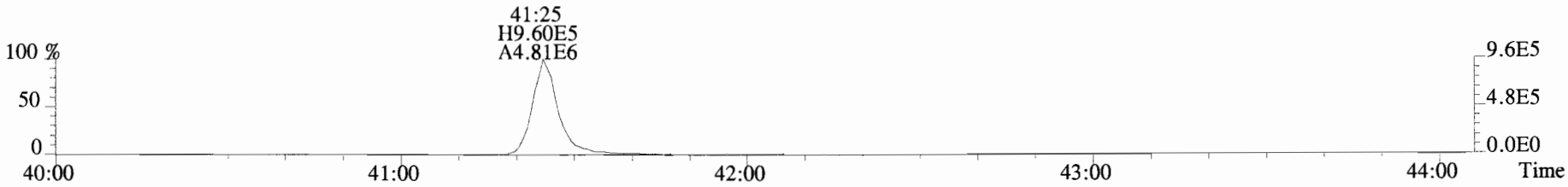
File:191009D1 #1-431 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



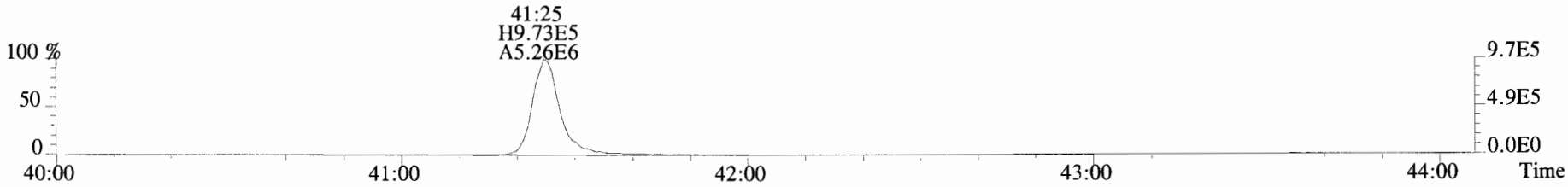
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



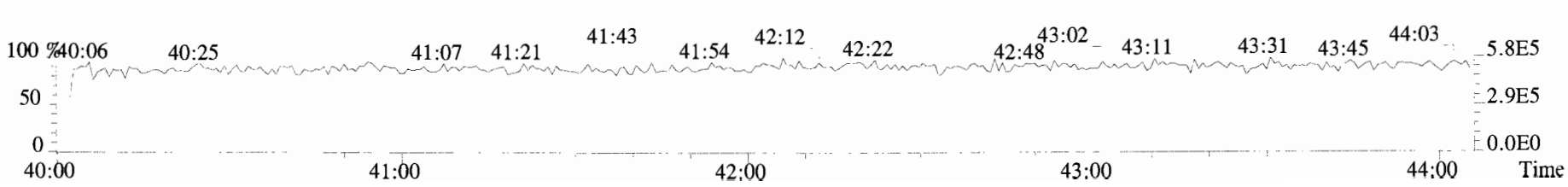
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

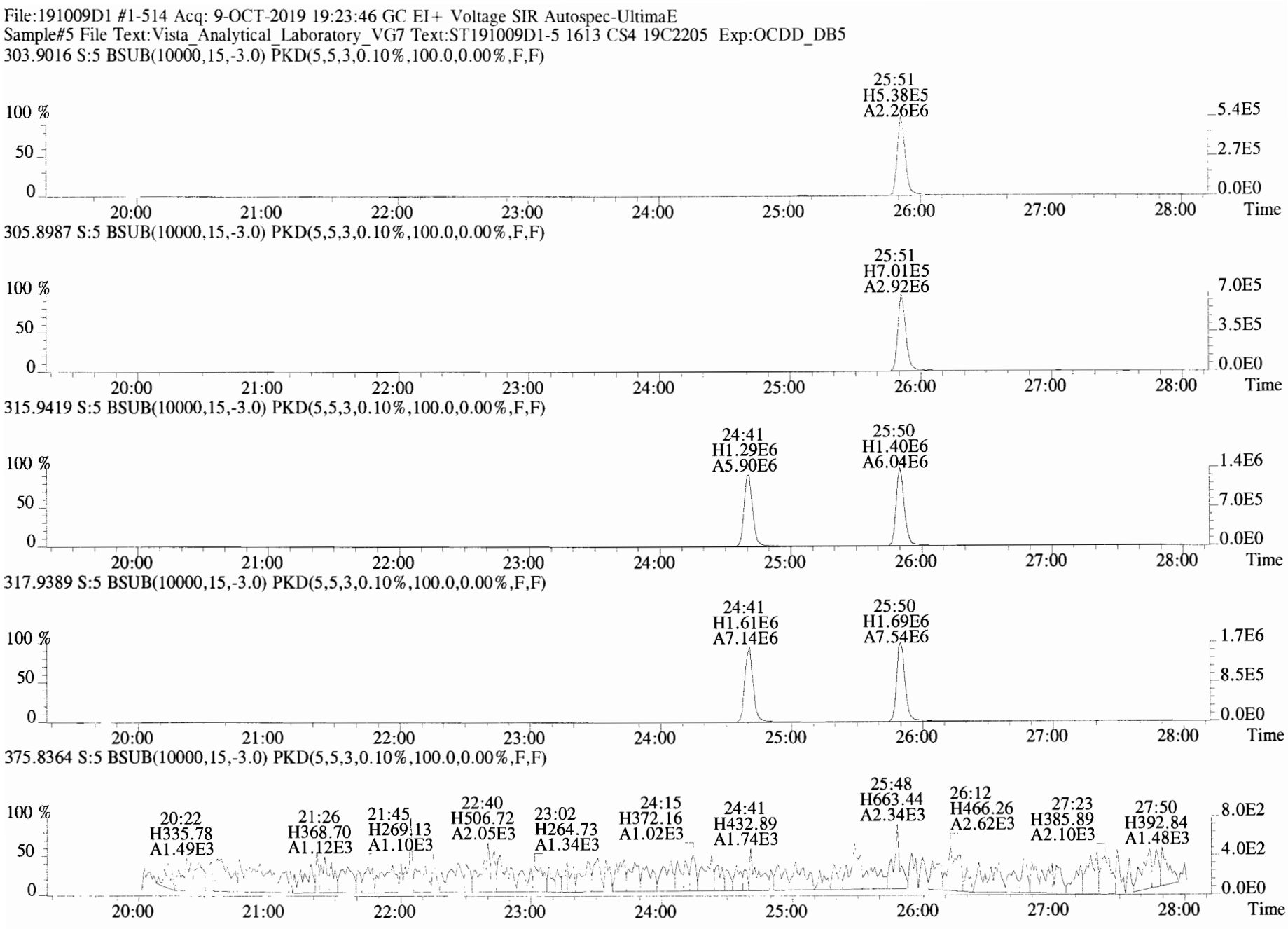


471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

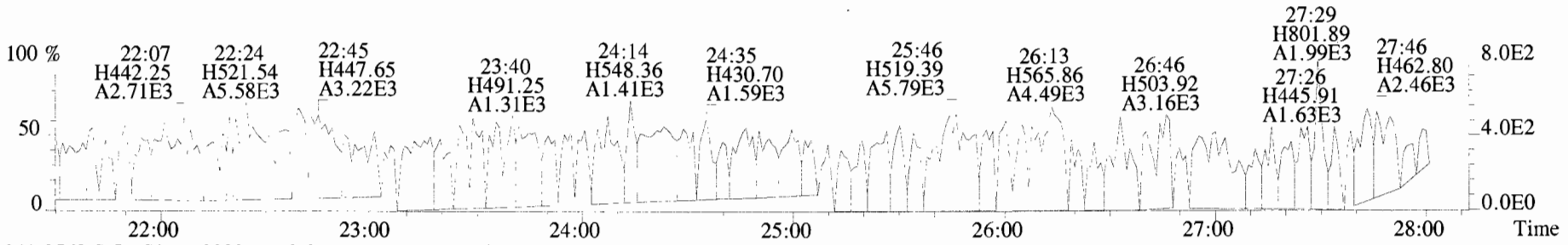


454.9728 S:5 F:5

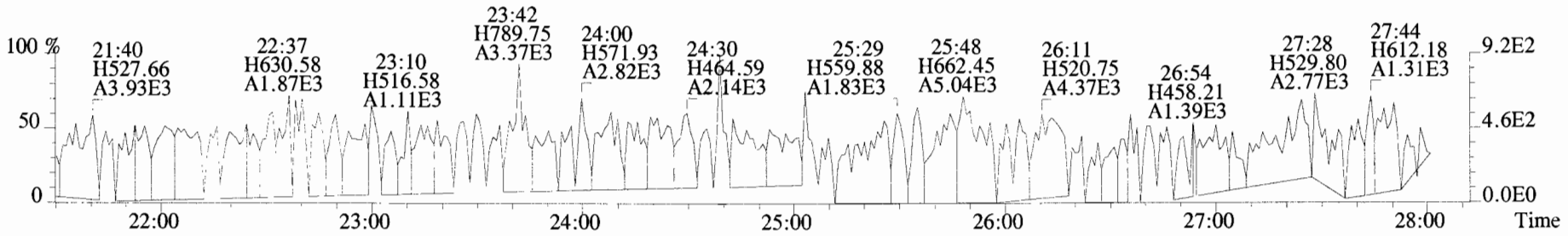



File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:51
H5.38E5
A2.26E6
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
25:51
H7.01E5
A2.92E6
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:41
H1.29E6
A5.90E6
25:50
H1.40E6
A6.04E6
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
24:41
H1.61E6
A7.14E6
25:50
H1.69E6
A7.54E6
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
20:22
H335.78
A1.49E3
21:26
H368.70
A1.12E3
21:45
H269.13
A1.10E3
22:40
H506.72
A2.05E3
23:02
H264.73
A1.34E3
24:15
H372.16
A1.02E3
24:41
H432.89
A1.74E3
25:48
H663.44
A2.34E3
26:12
H466.26
A2.62E3
27:23
H385.89
A2.10E3
27:50
H392.84
A1.48E3
100 %
50
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
Time
5.4E5
2.7E5
0.0E0
7.0E5
3.5E5
1.4E6
7.0E5
1.7E6
8.5E5
8.0E2
4.0E2

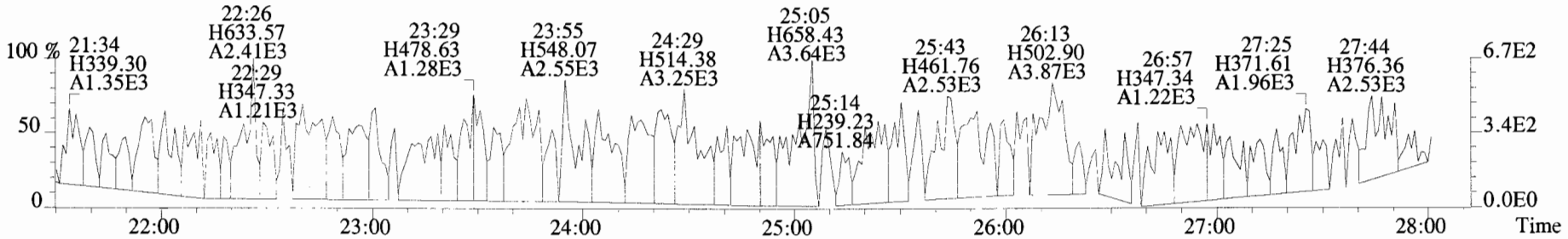
File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



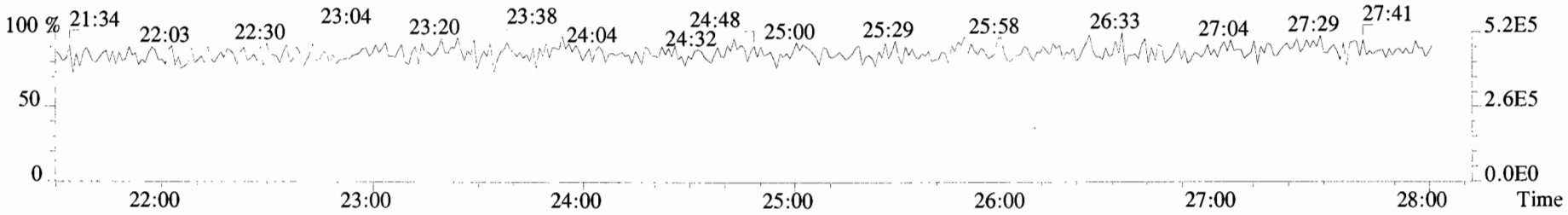
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



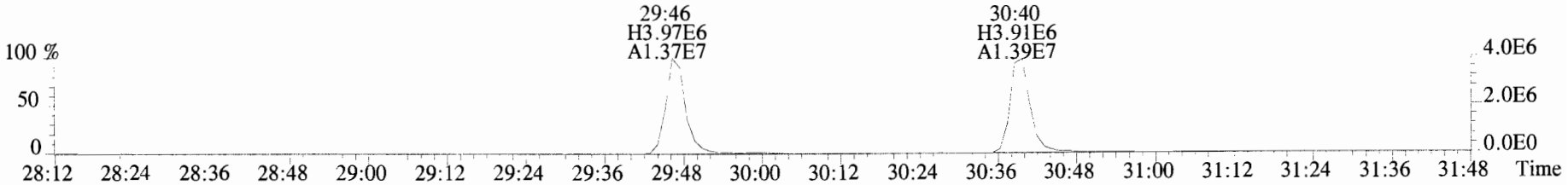
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



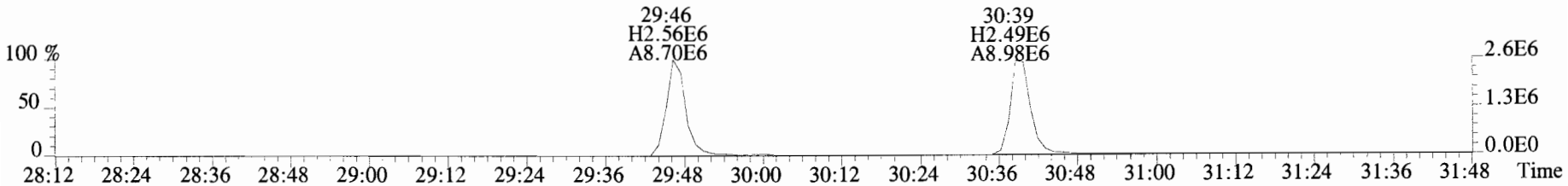
316.9824 S:5



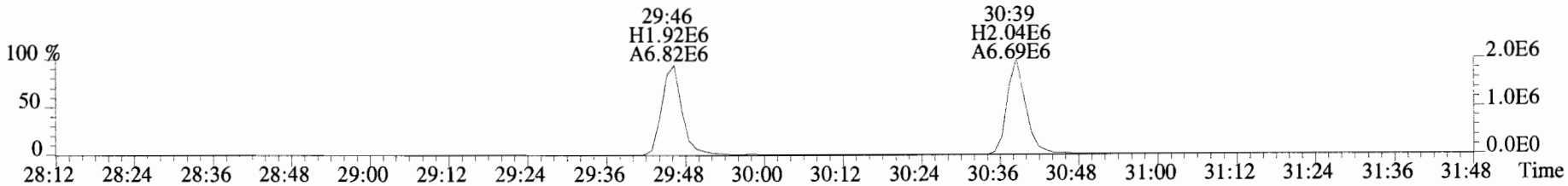
File:191009D1 #1-210 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



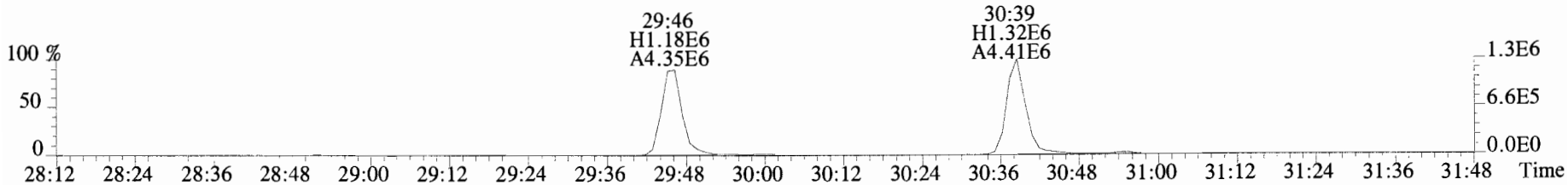
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



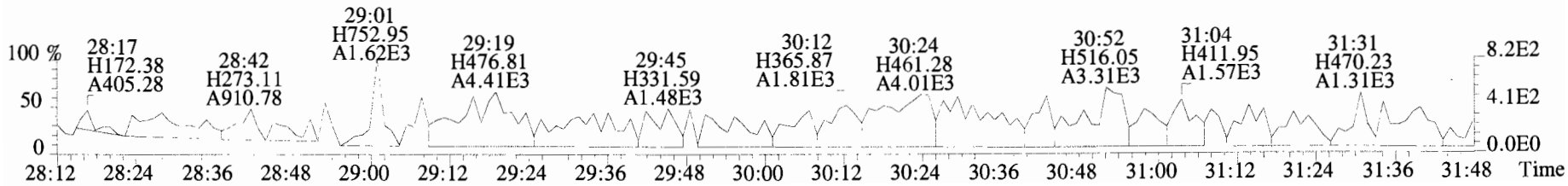
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



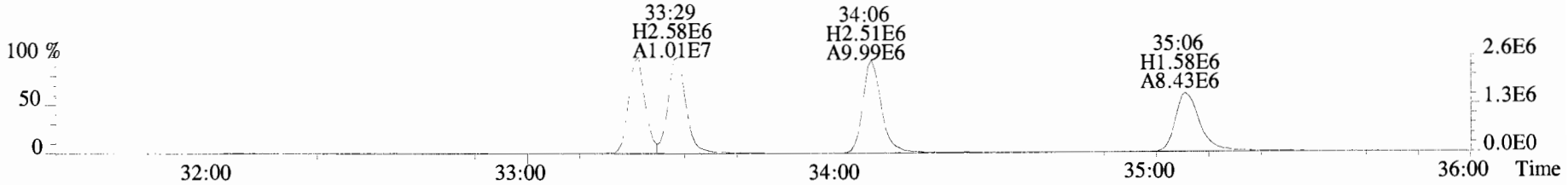
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



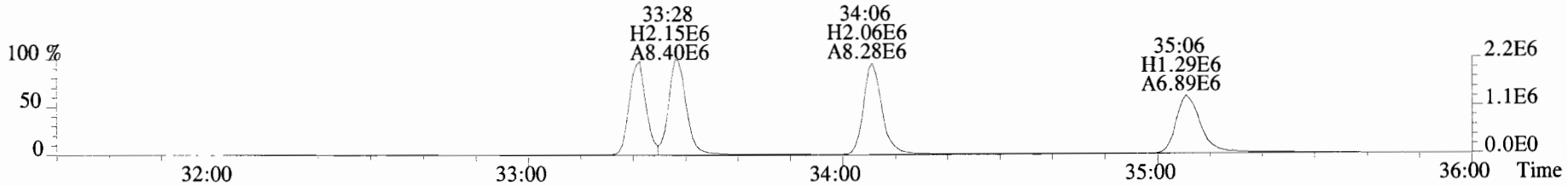
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



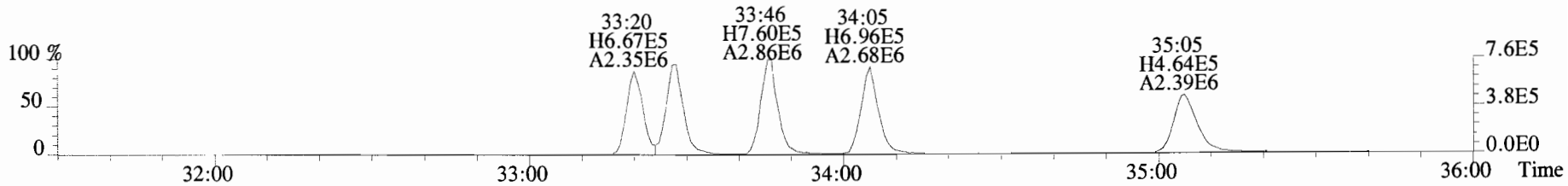
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



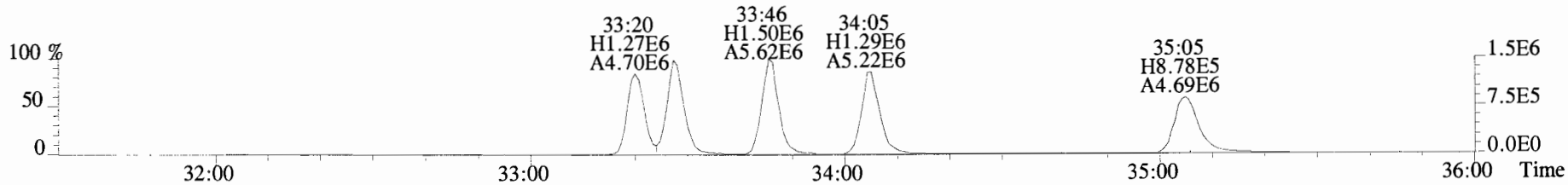
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



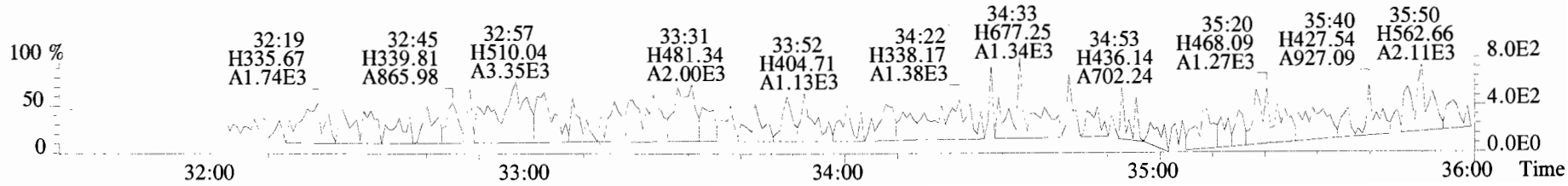
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



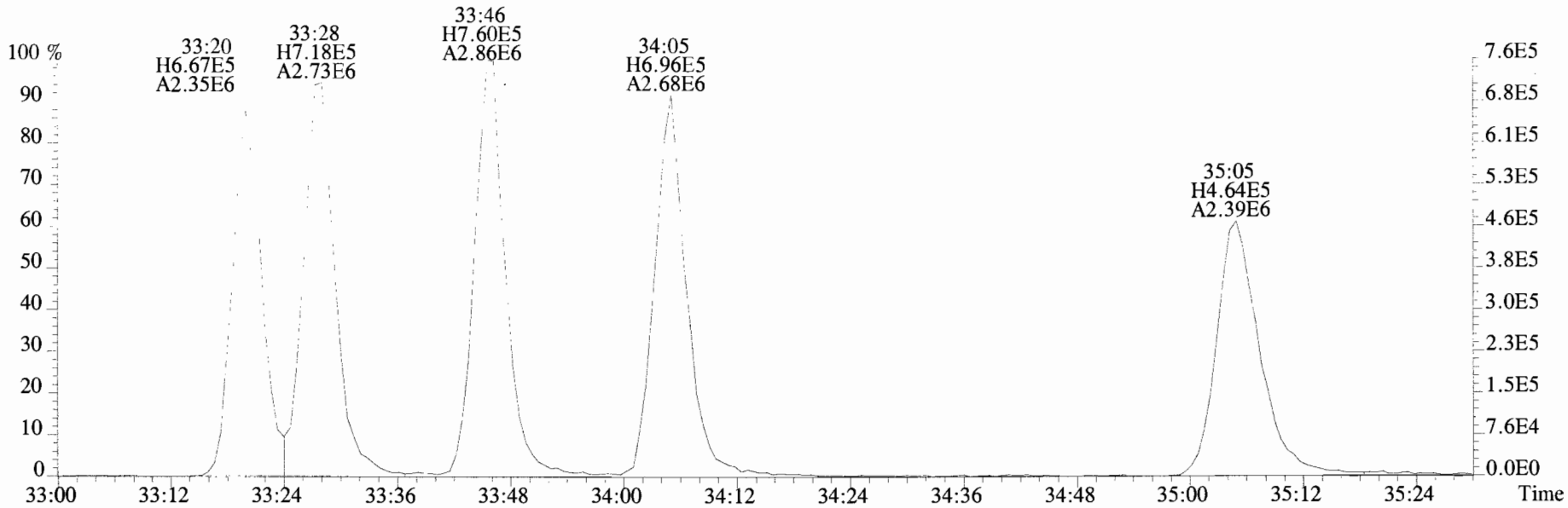
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



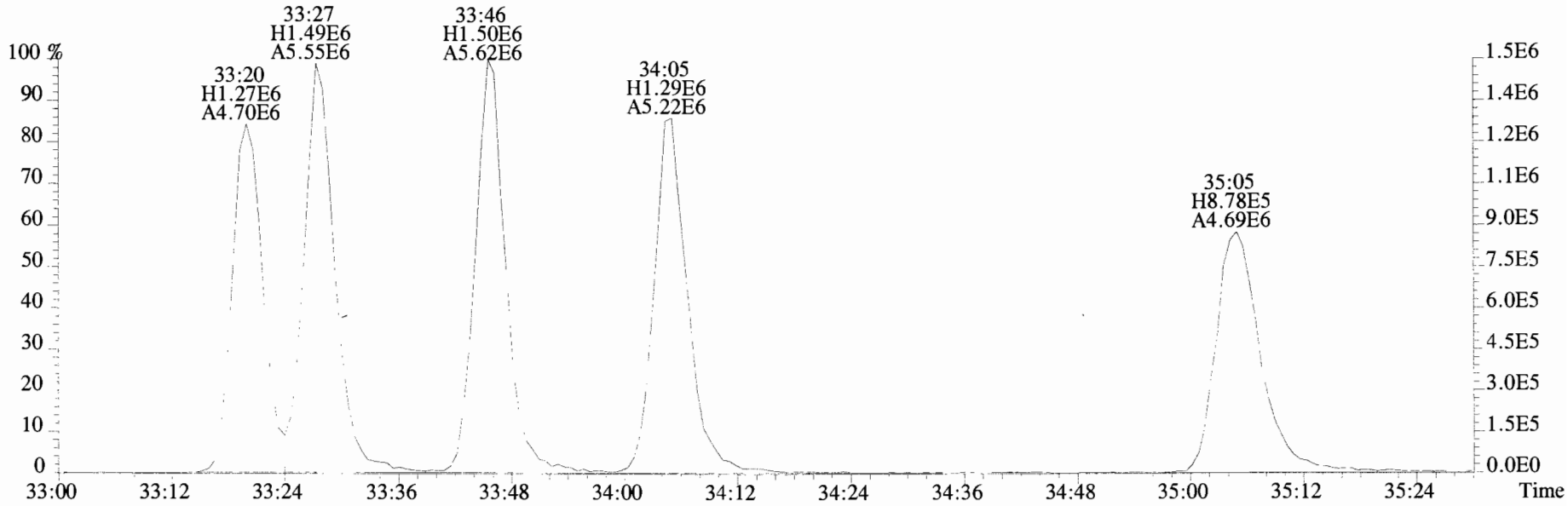
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



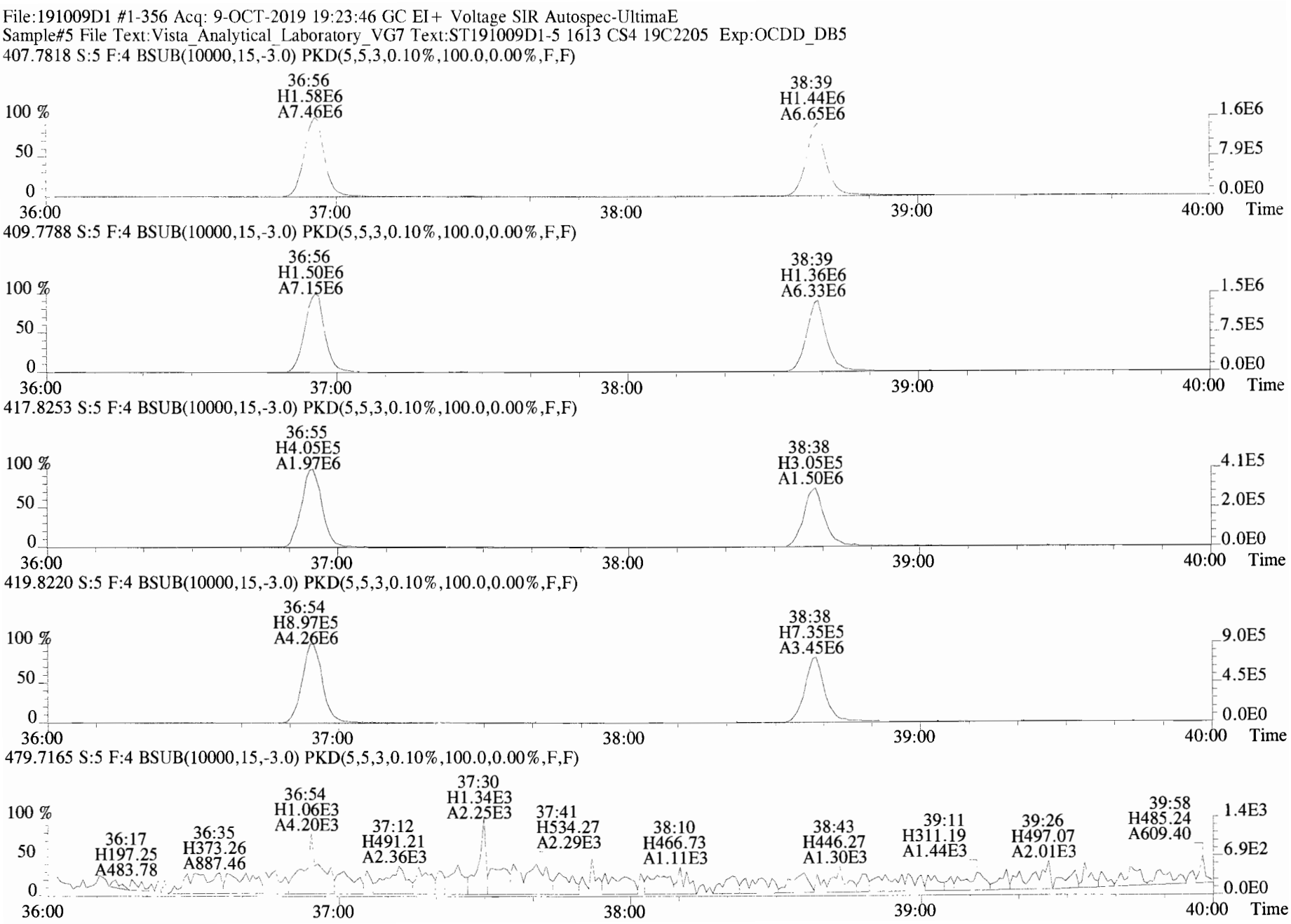
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



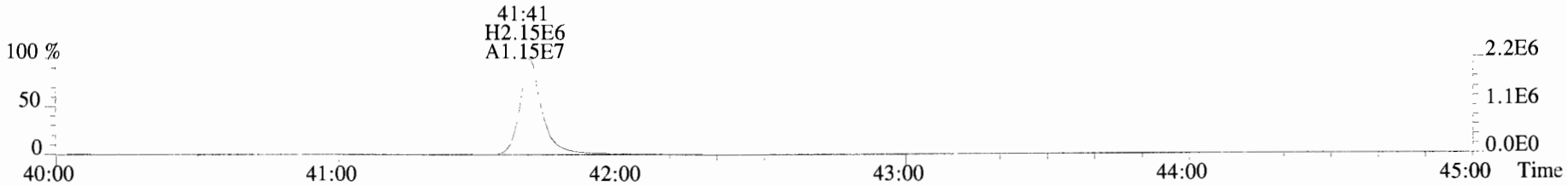
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



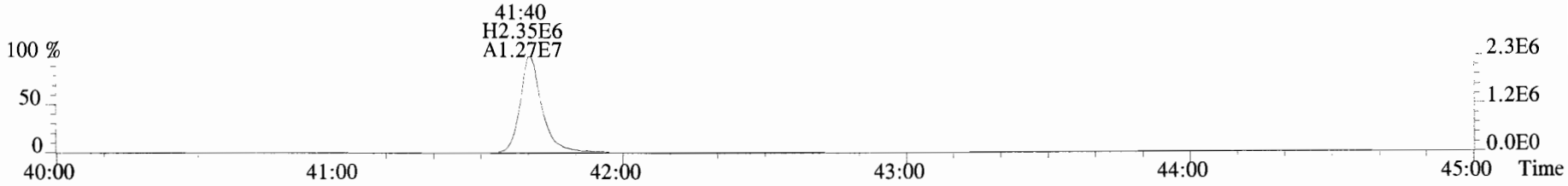
File:191009D1 #1-356 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5



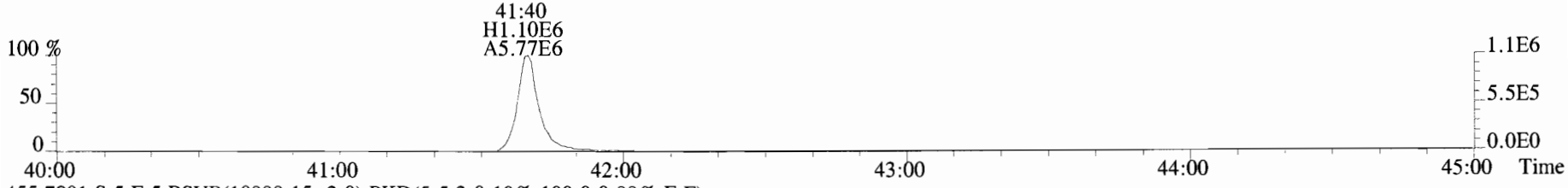
File:191009D1 #1-431 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



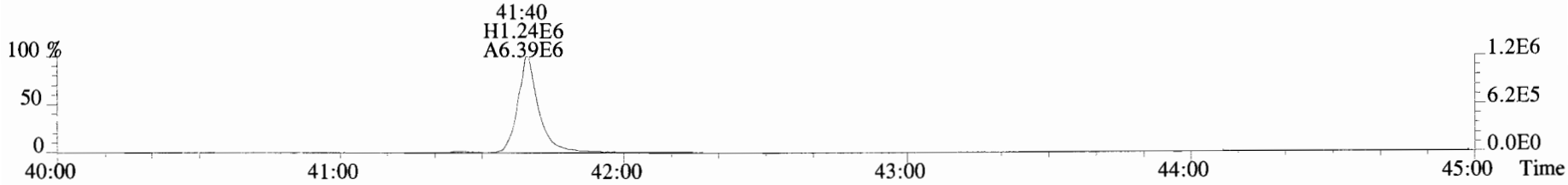
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



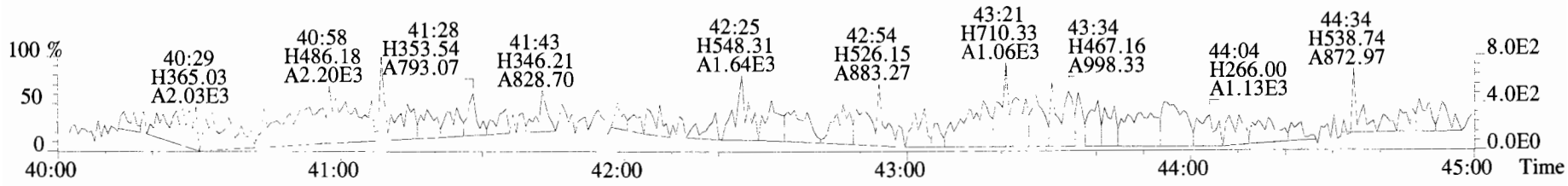
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



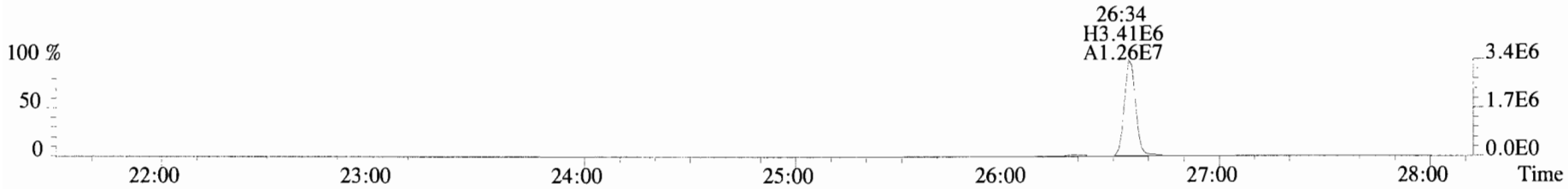
455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



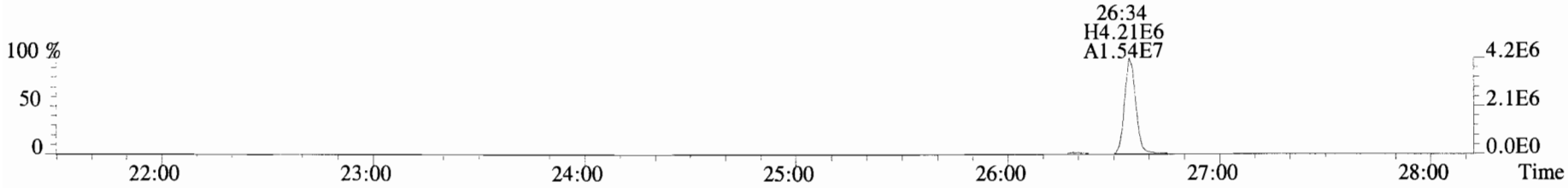
513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



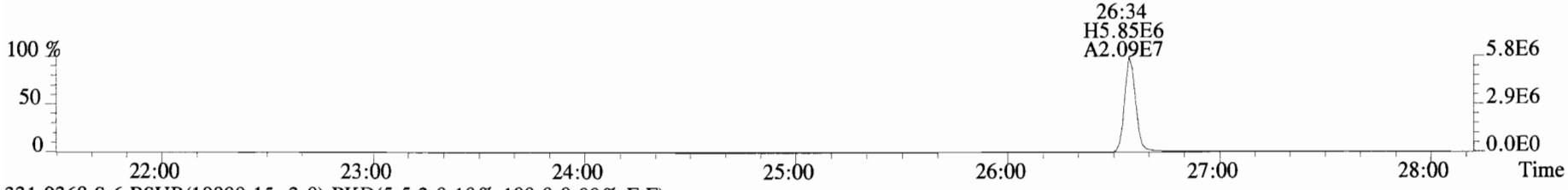
File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



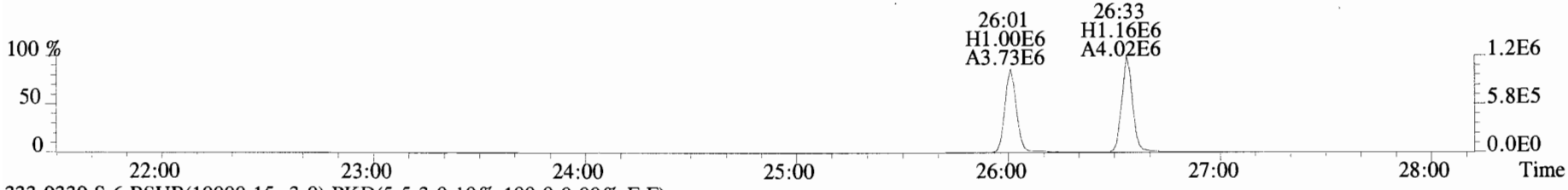
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



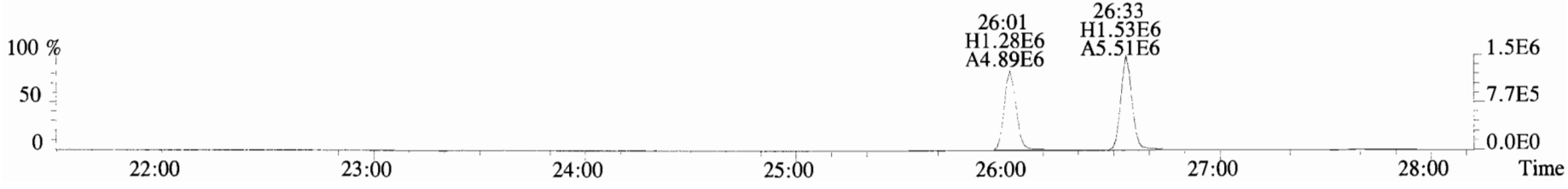
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



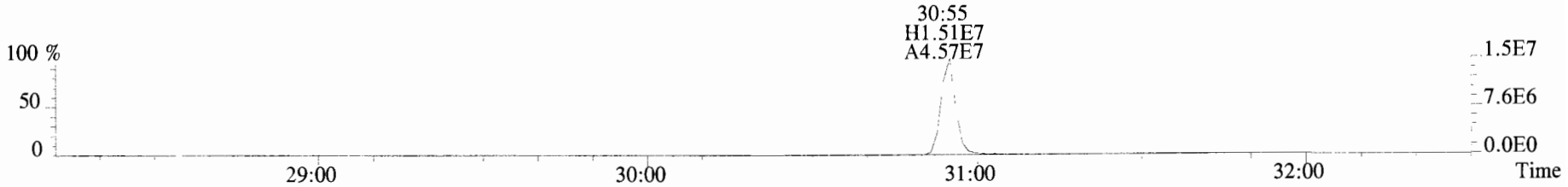
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



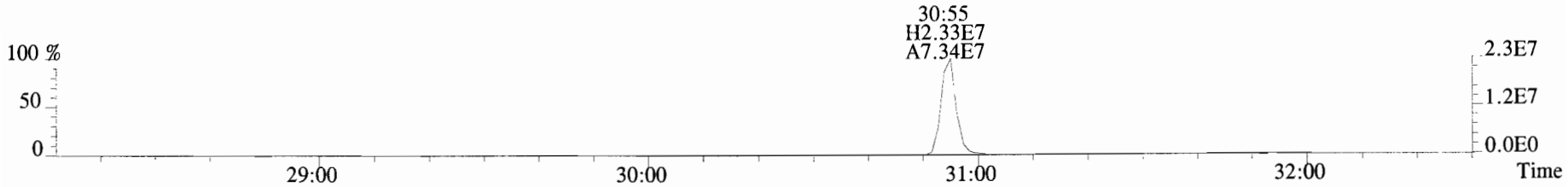
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



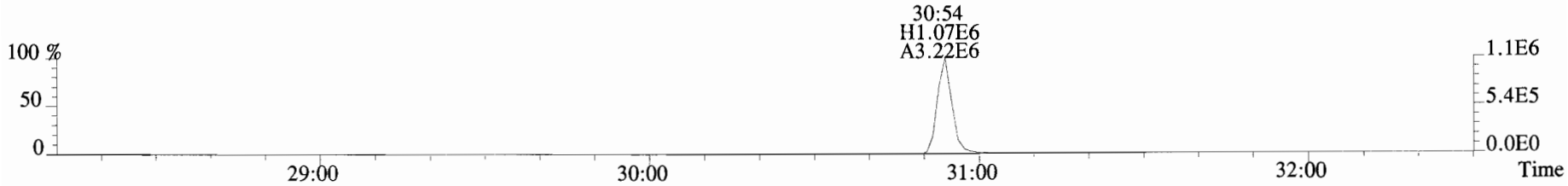
File:191009D1 #1-211 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



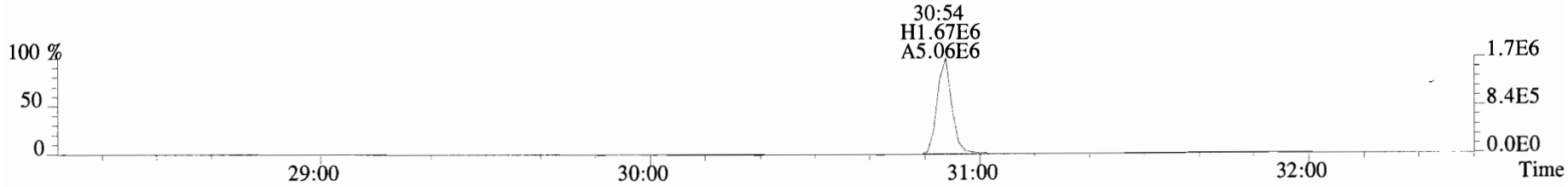
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



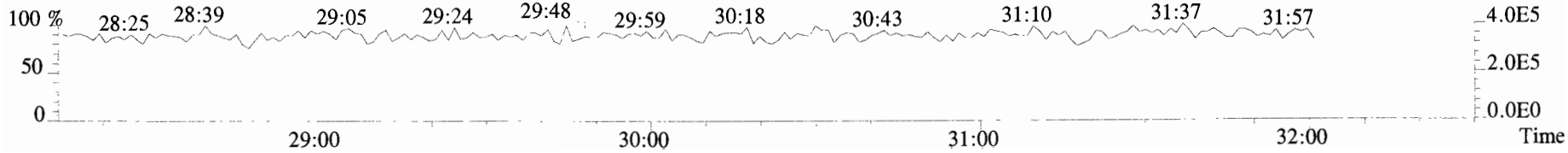
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



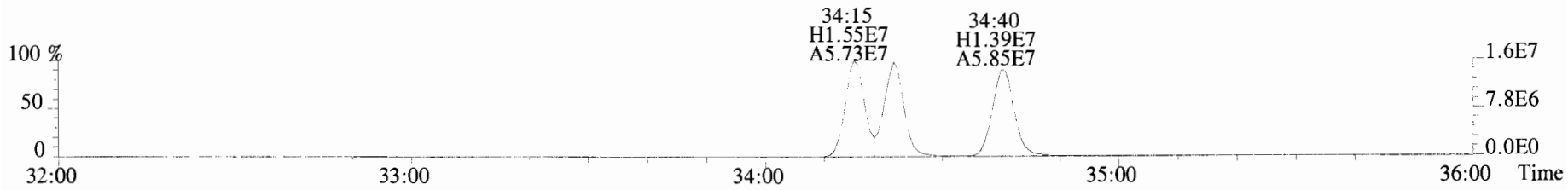
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



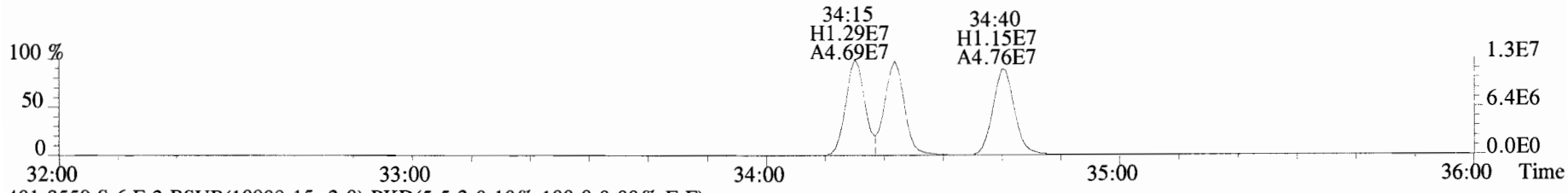
366.9792 S:6 F:2



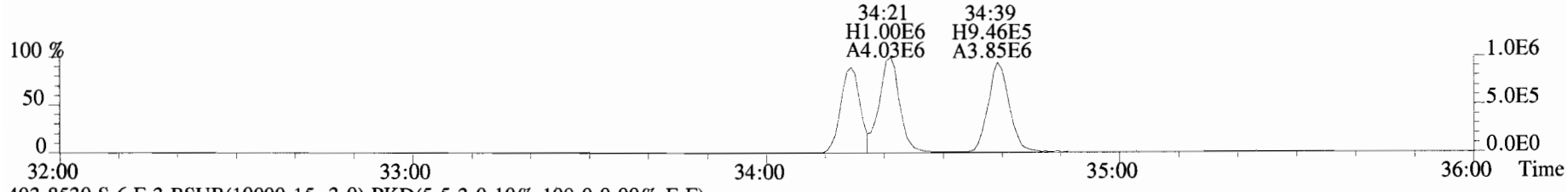
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



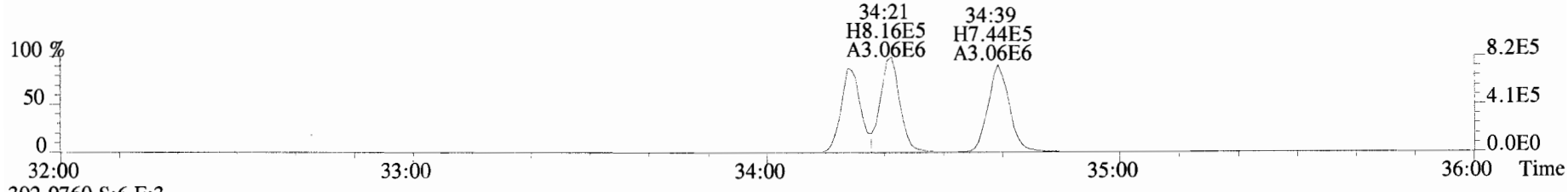
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



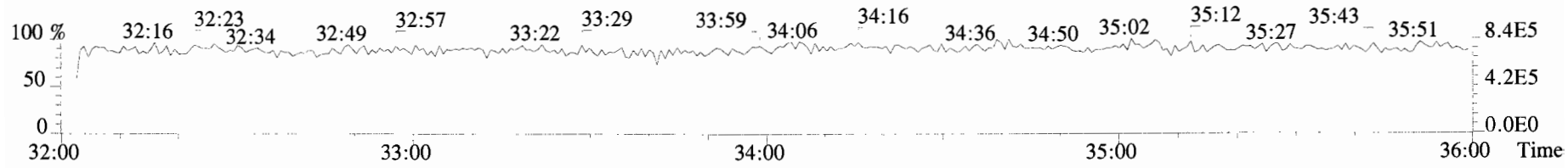
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



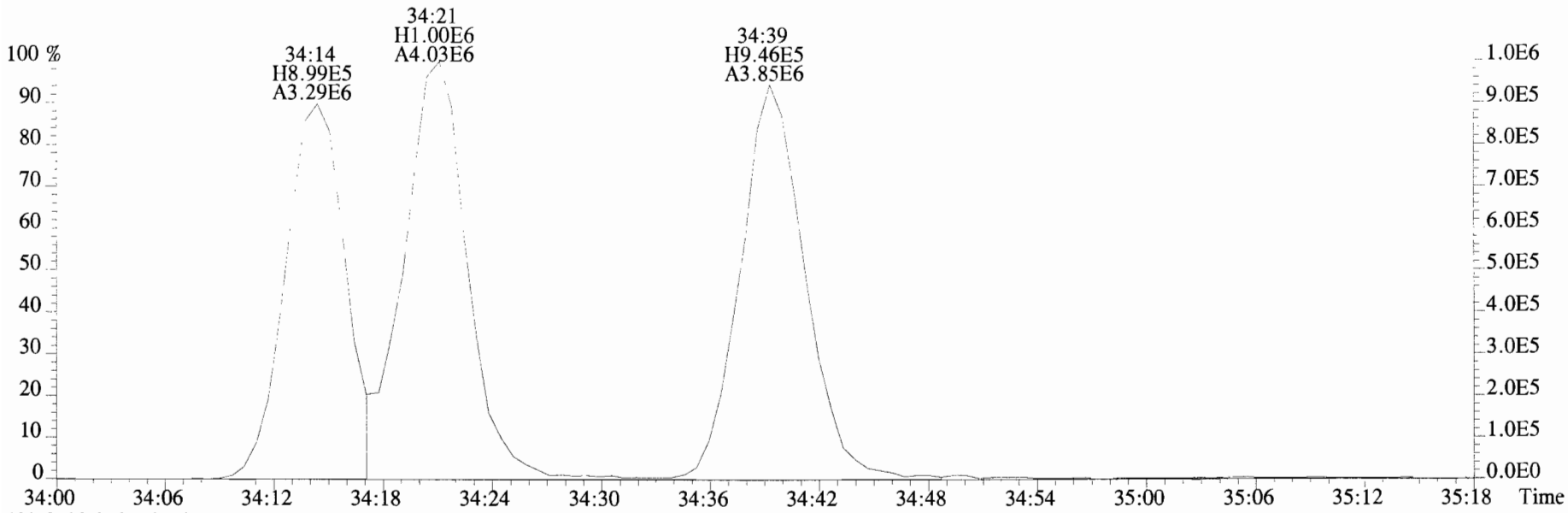
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



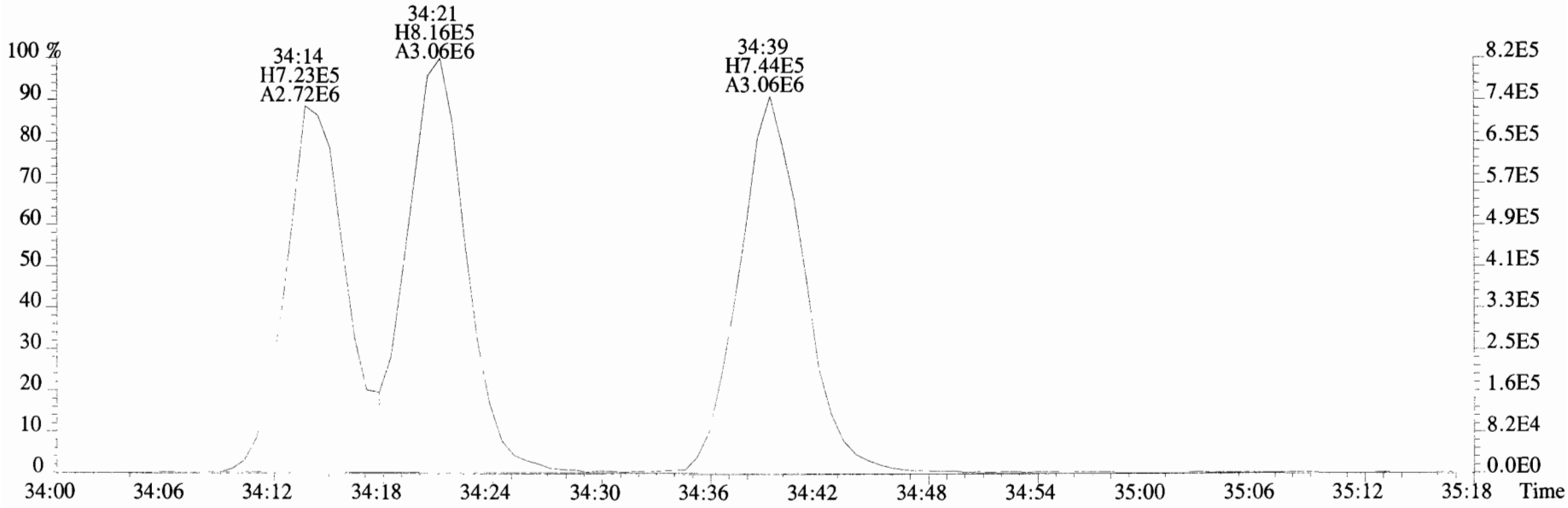
392.9760 S:6 F:3



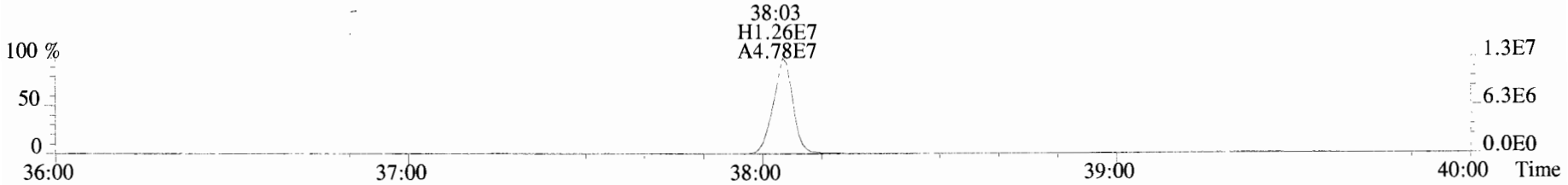
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



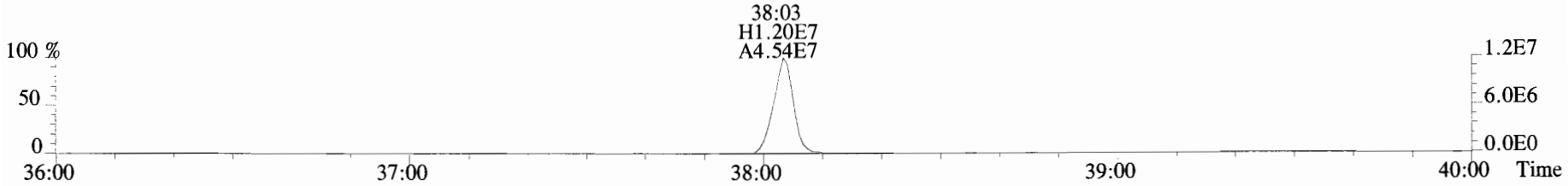
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



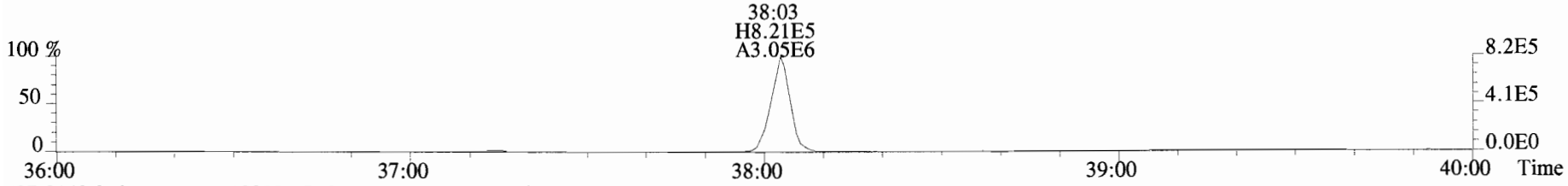
File:191009D1 #1-356 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



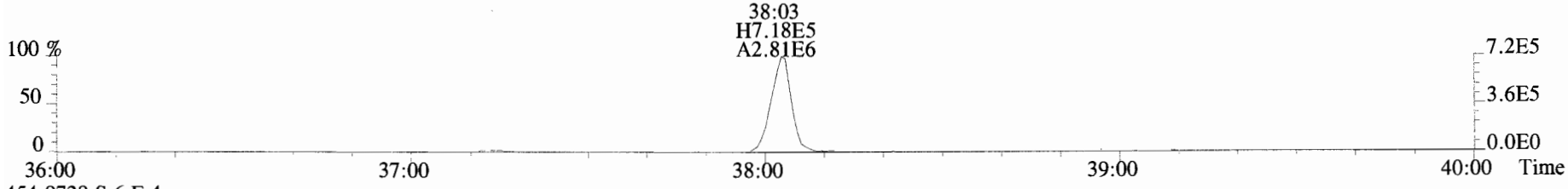
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



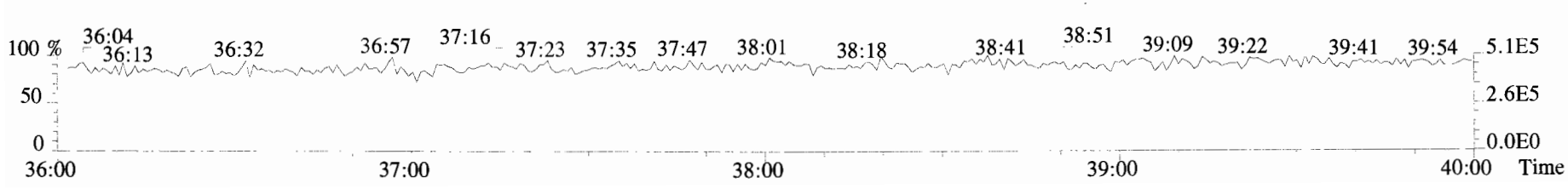
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



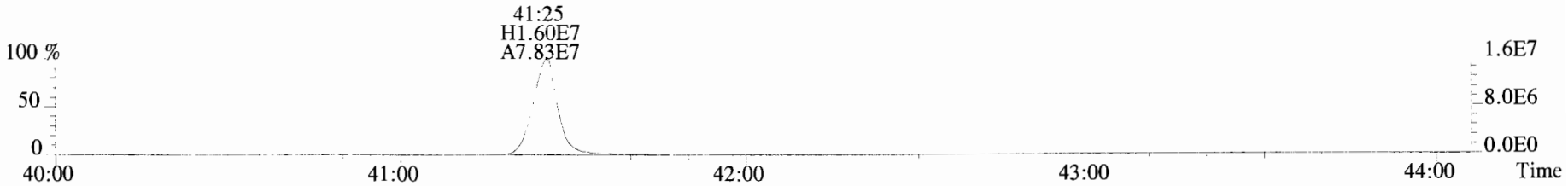
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



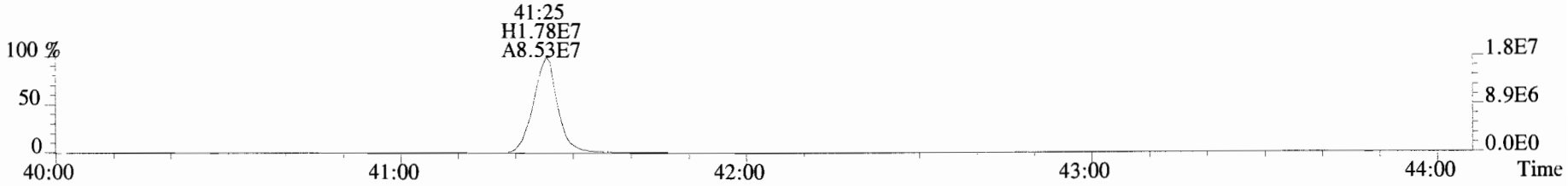
454.9728 S:6 F:4



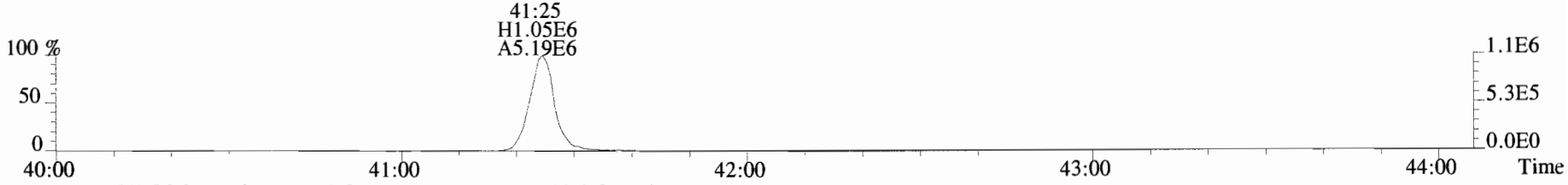
File:191009D1 #1-431 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



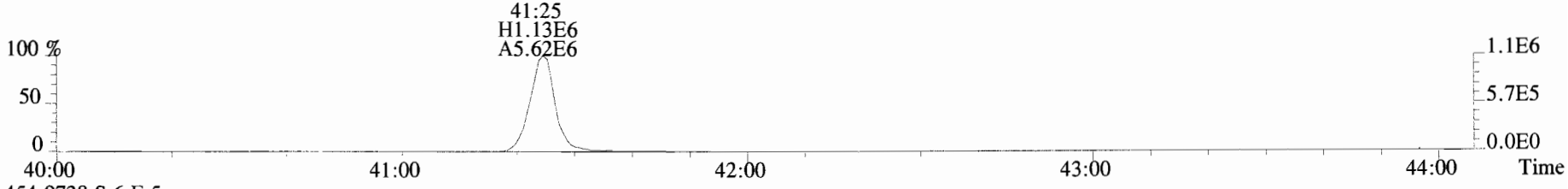
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



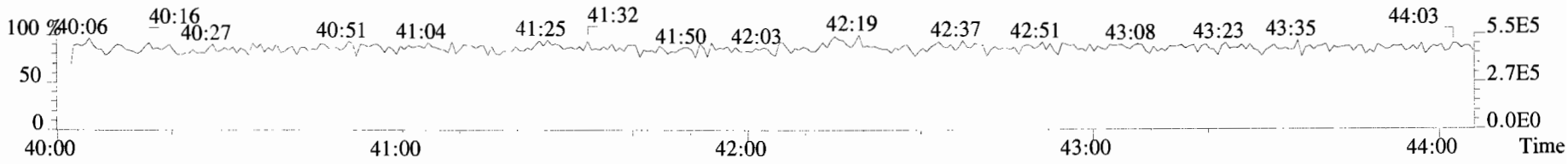
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



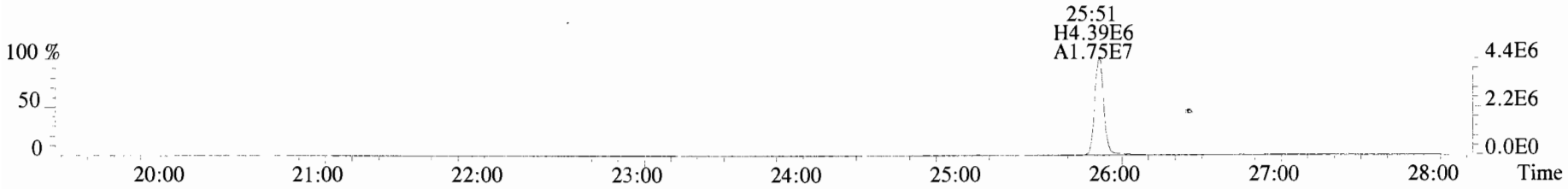
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



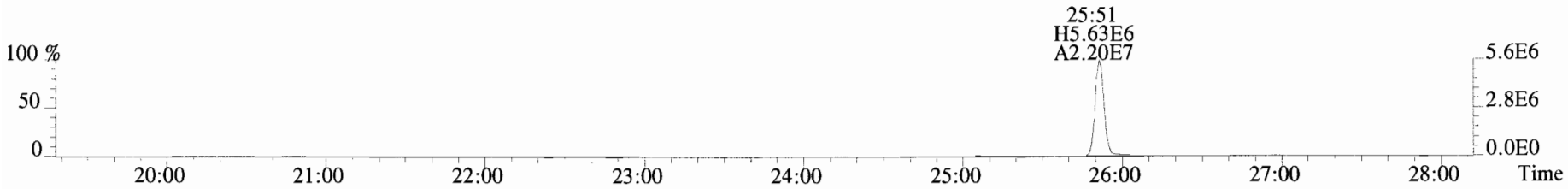
454.9728 S:6 F:5



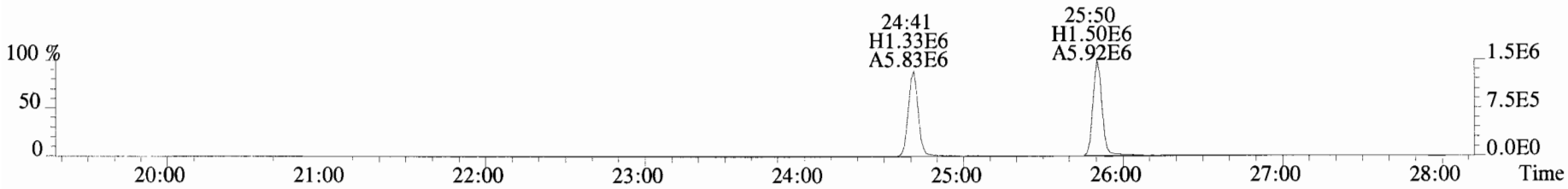
File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



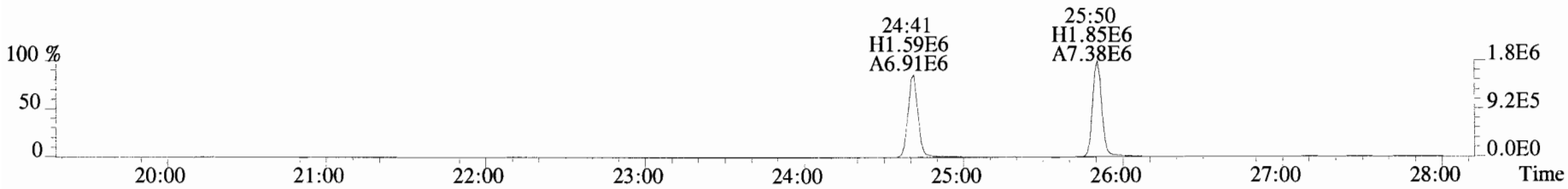
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



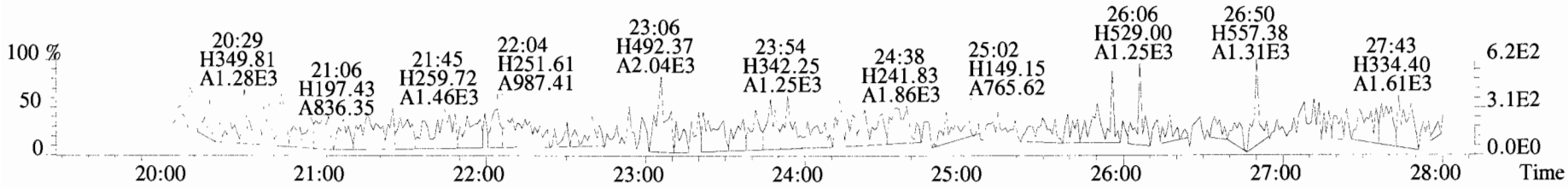
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



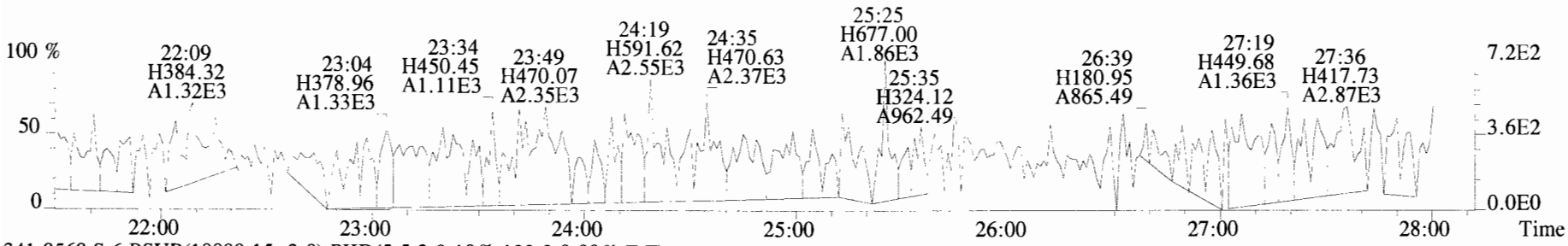
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



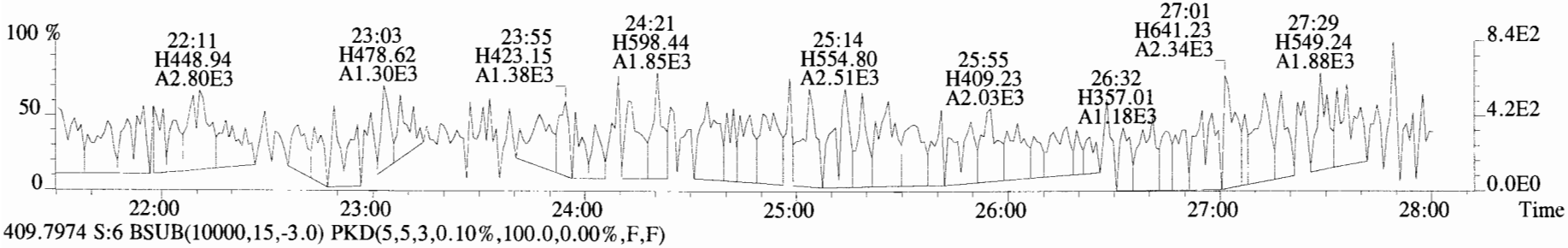
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



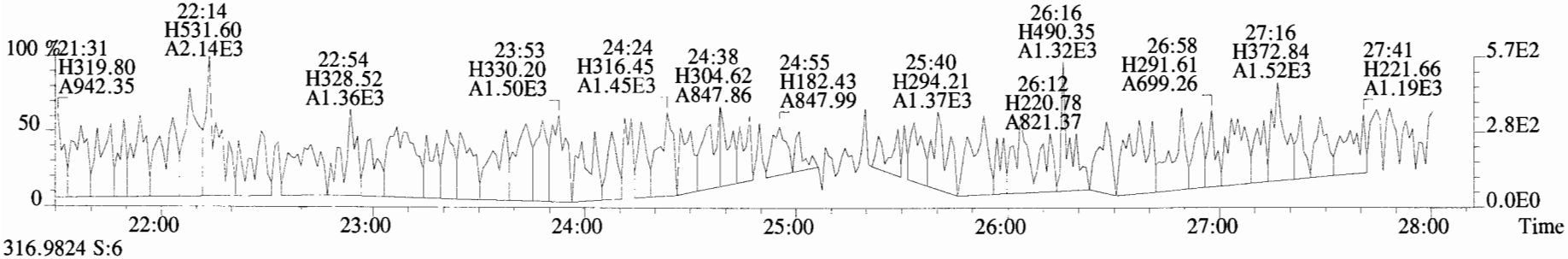
File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



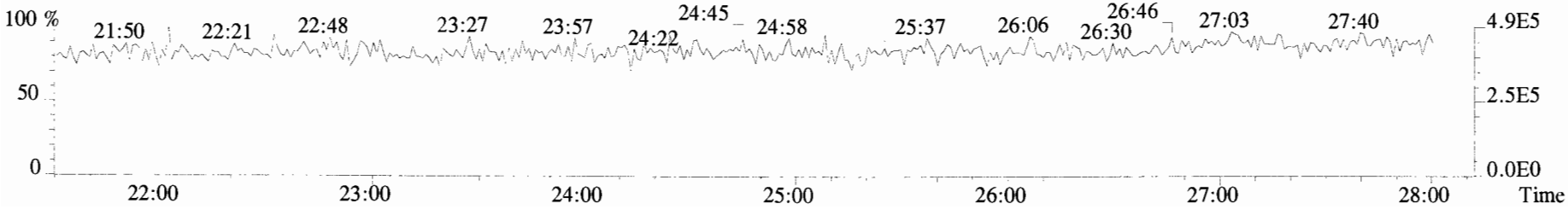
341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



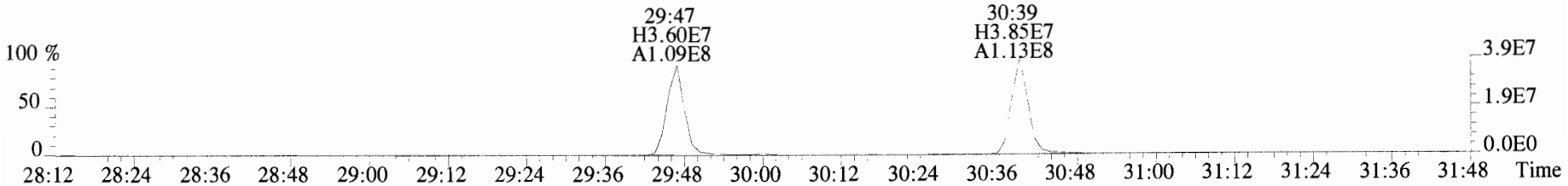
409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



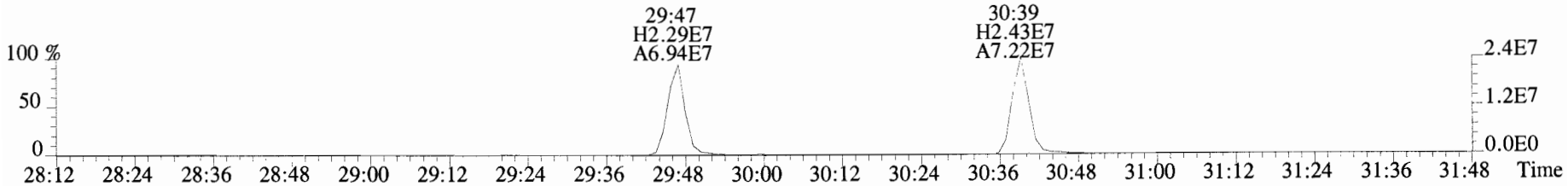
316.9824 S:6



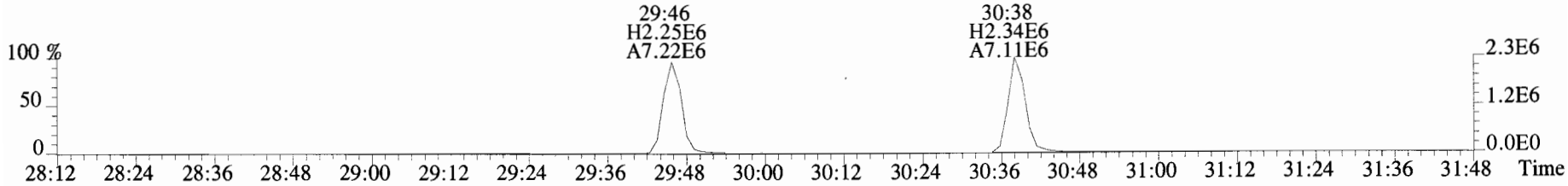
File:191009D1 #1-211 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



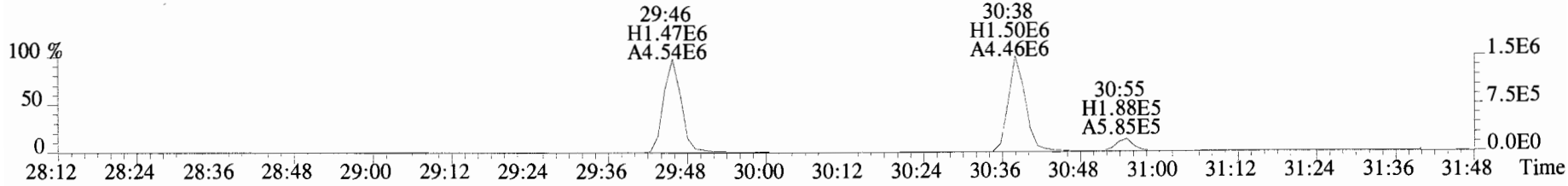
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



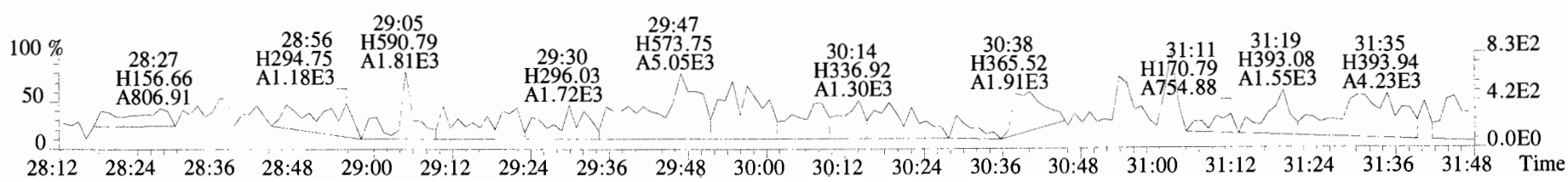
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

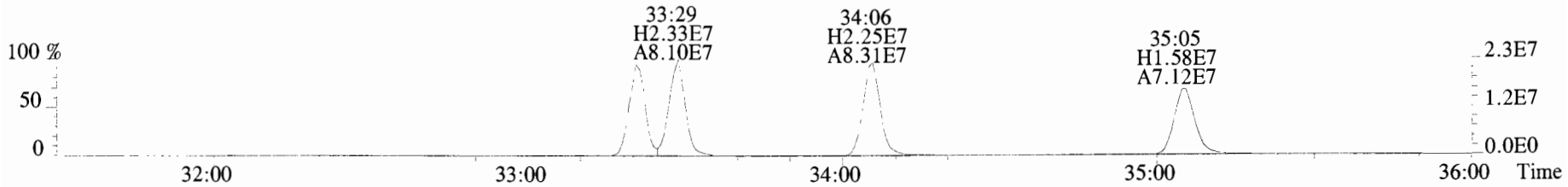


409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

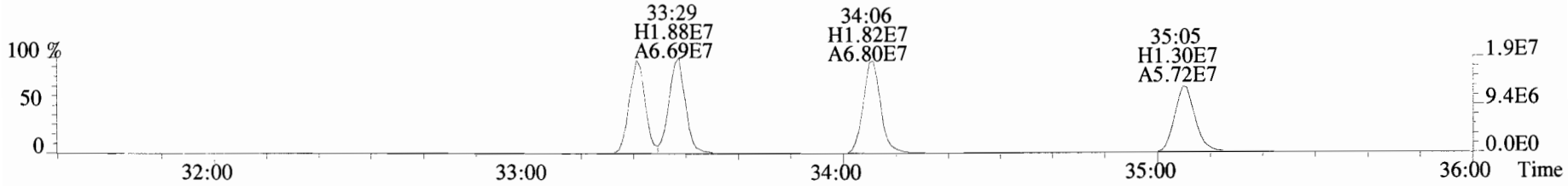


File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5

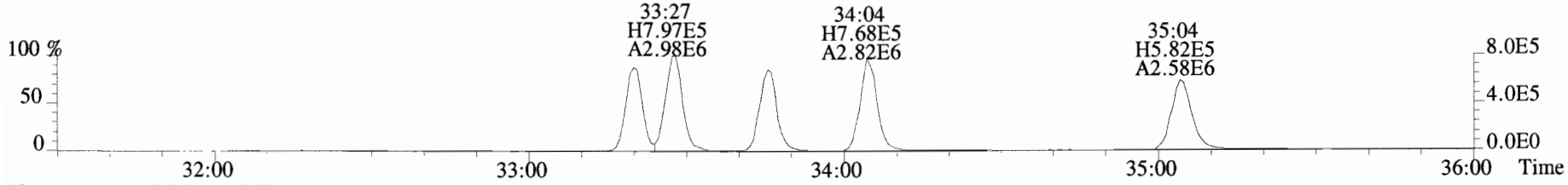
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



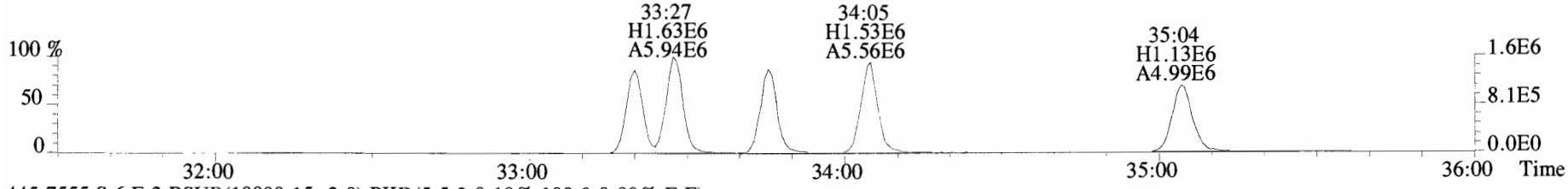
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



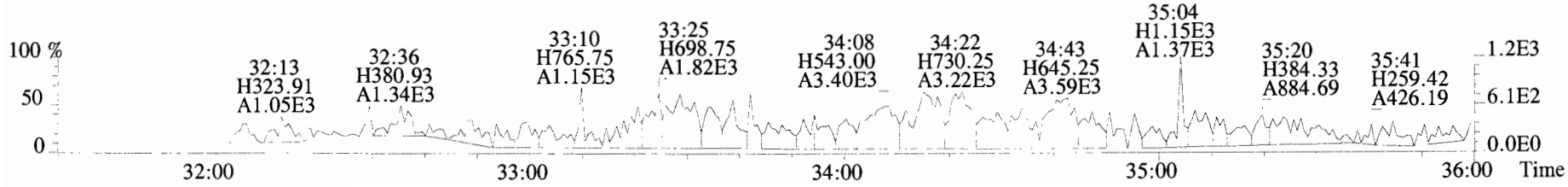
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



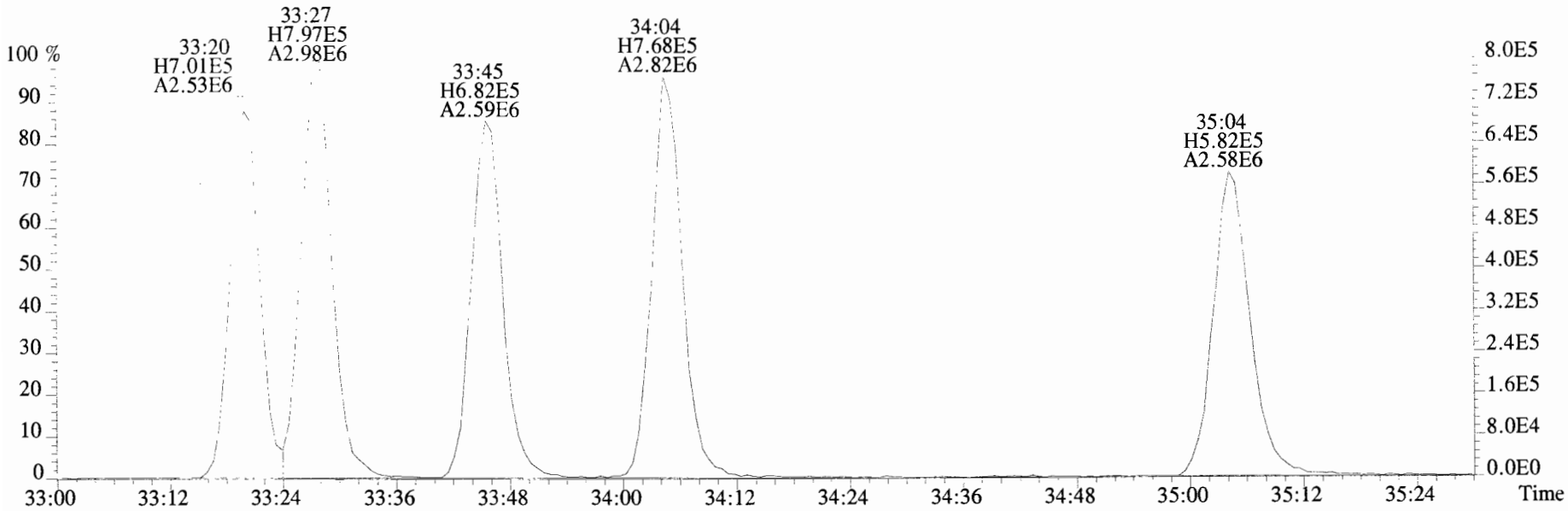
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



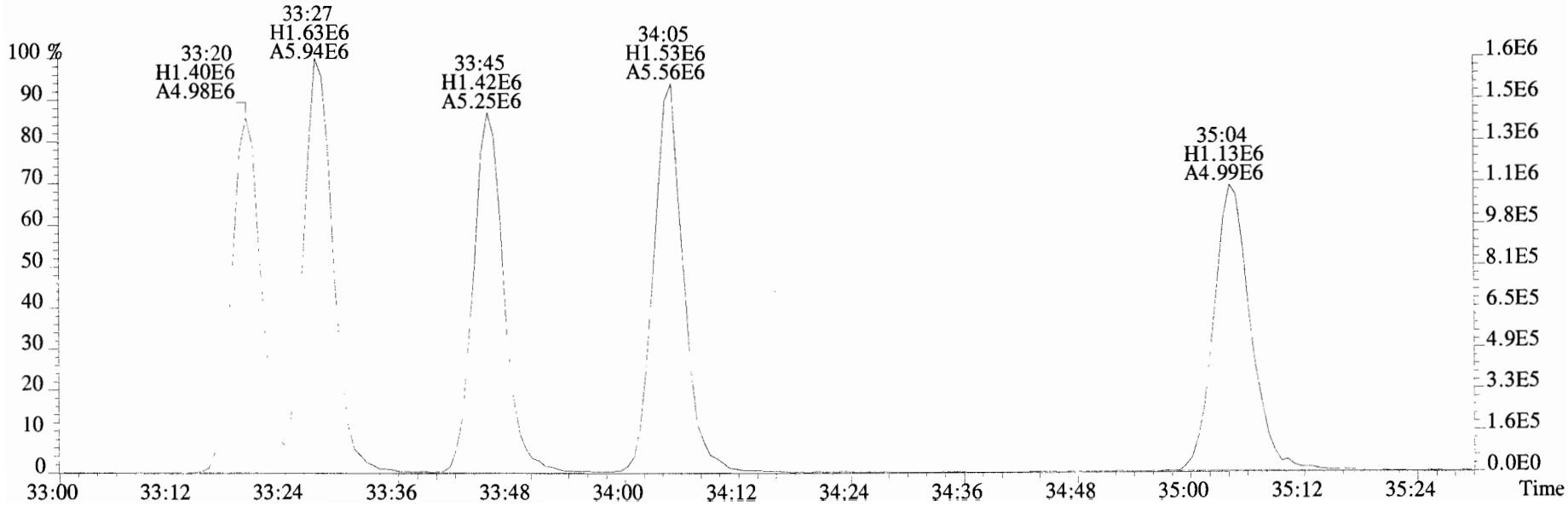
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



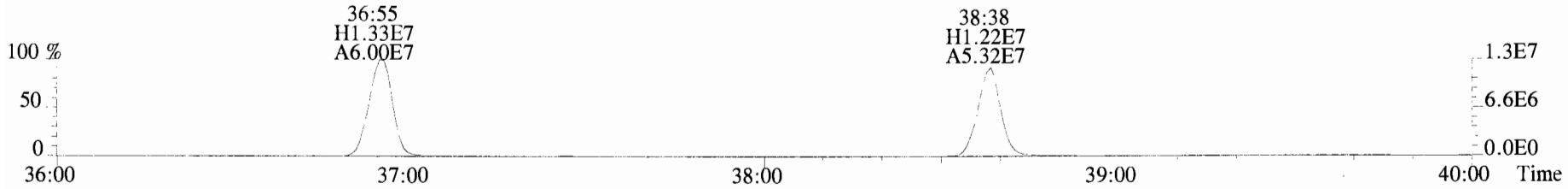
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



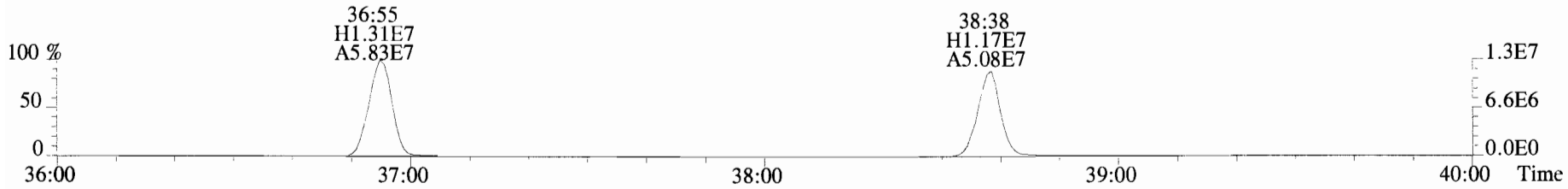
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



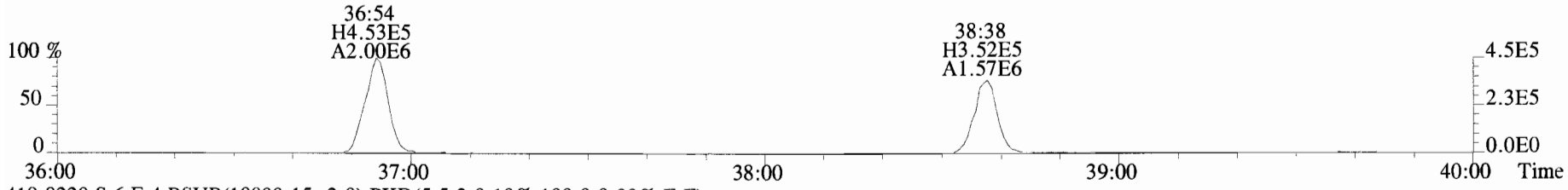
File:191009D1 #1-356 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



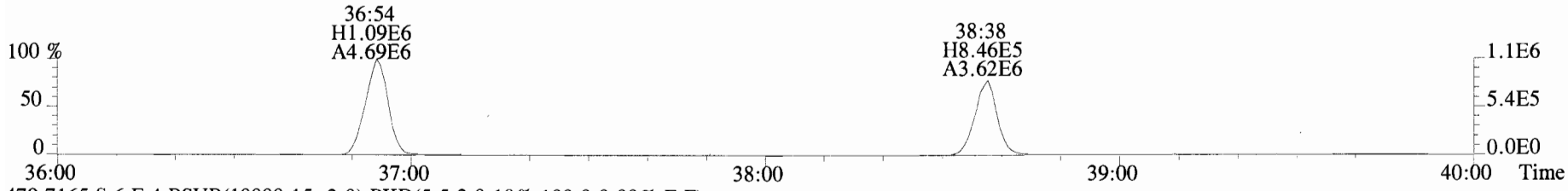
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



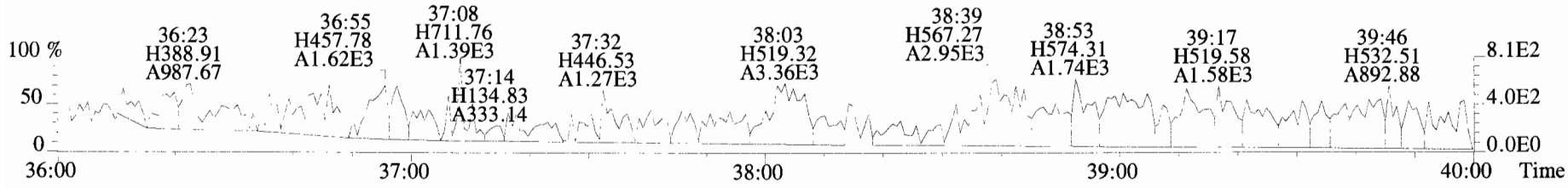
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



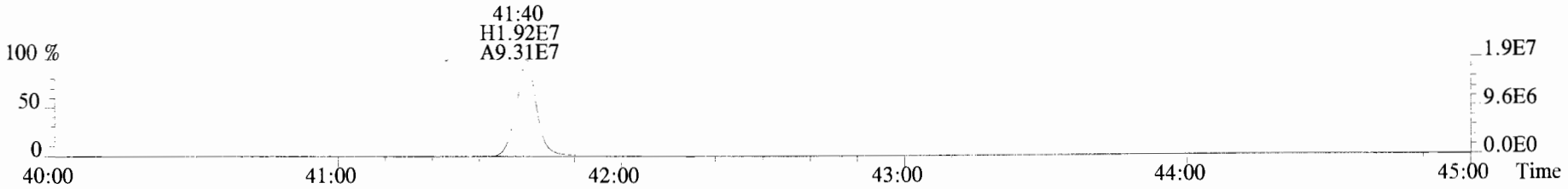
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



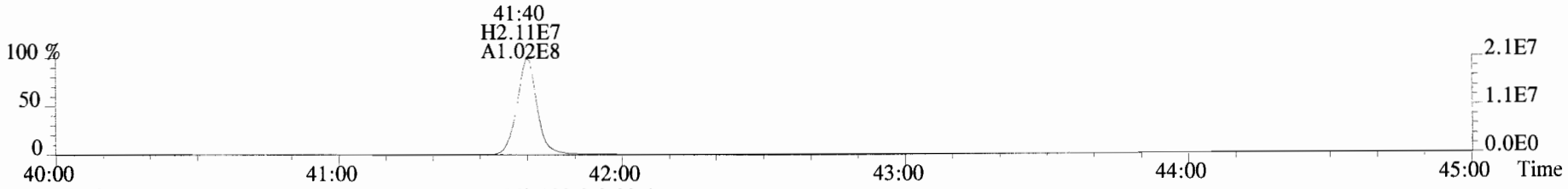
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



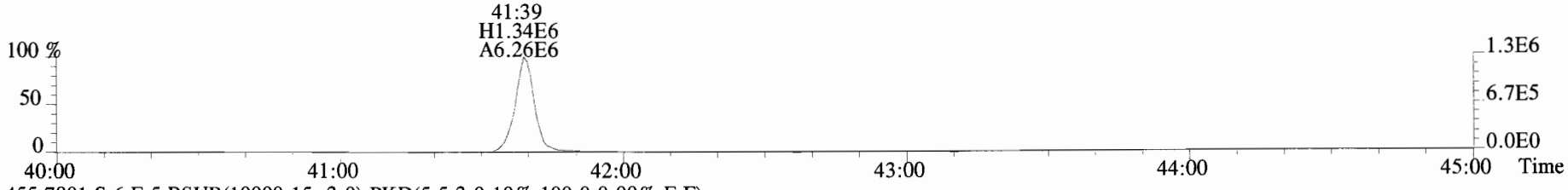
File:191009D1 #1-431 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD_DB5
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



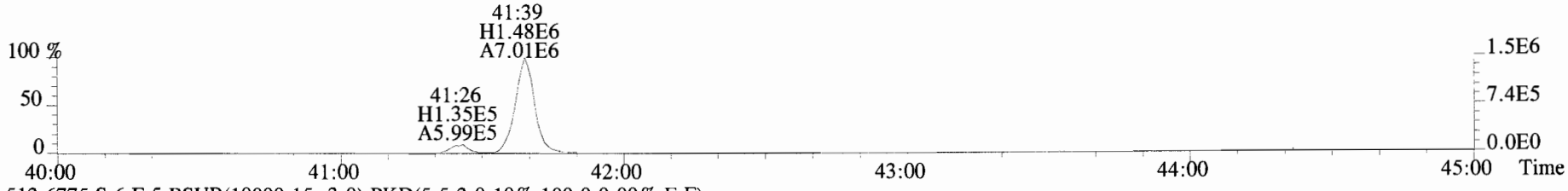
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



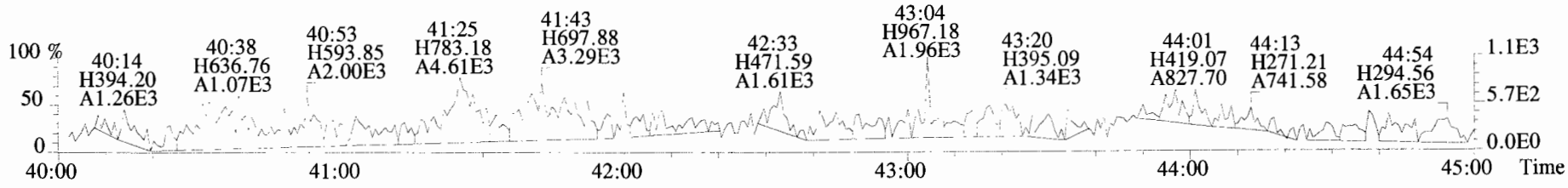
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

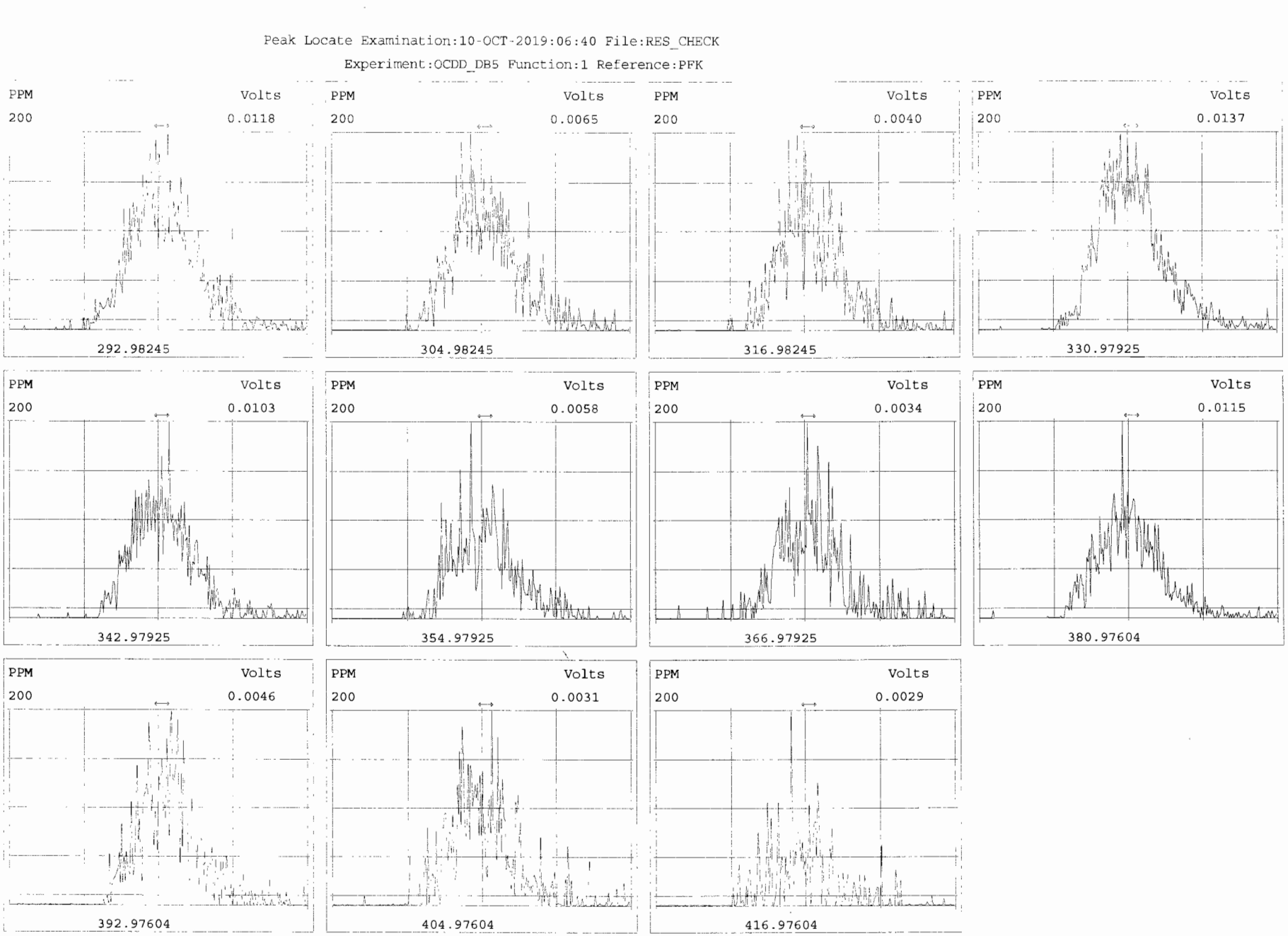


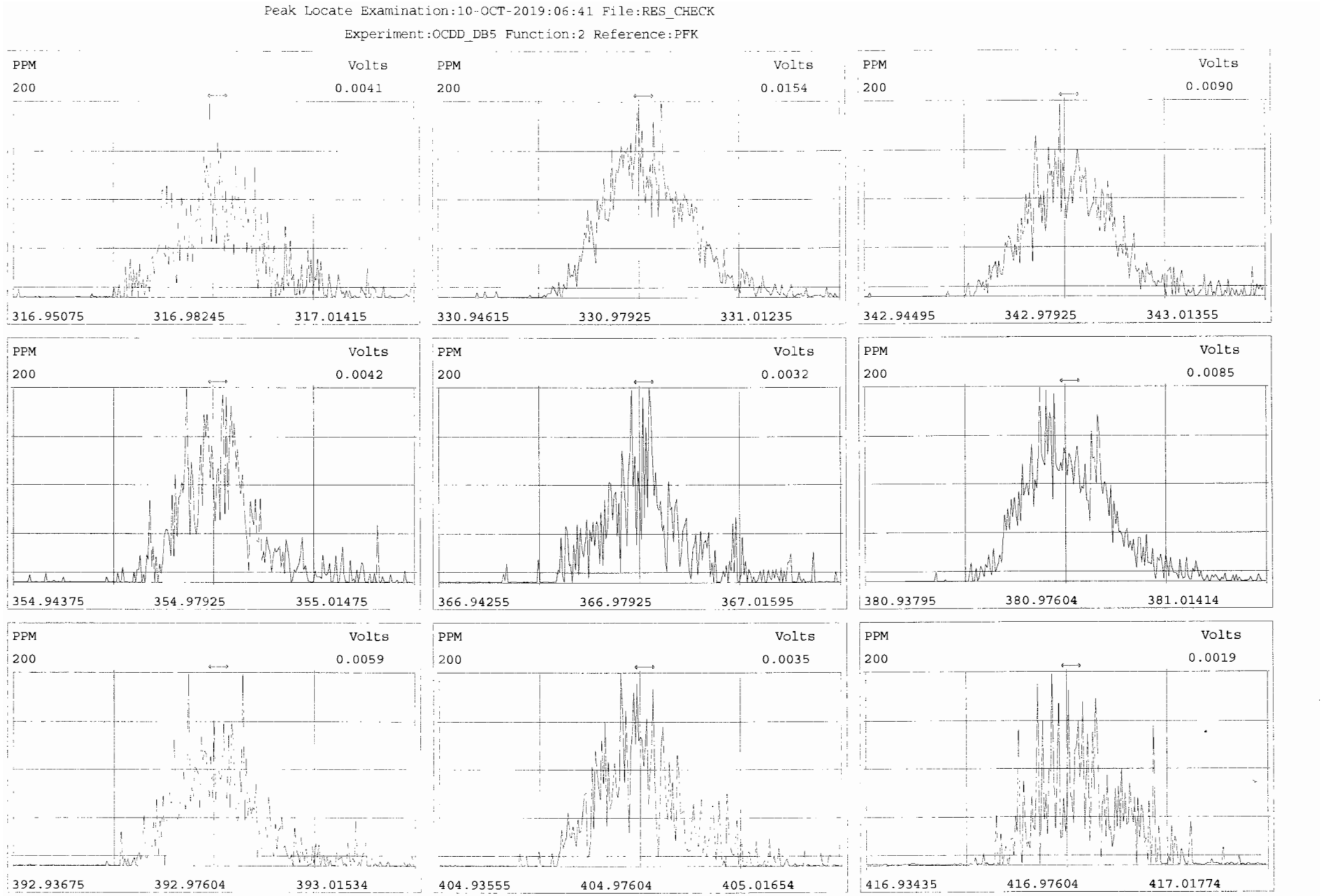
455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)




Peak Locate Examination:10-OCT-2019:06:40 File:RES_CHECK
Experiment:OCDD_DB5 Function:1 Reference:PFK
PPM
Volts
200
0.0118
292.98245
PPM
Volts
200
0.0065
304.98245
PPM
Volts
200
0.0040
316.98245
PPM
Volts
200
0.0137
330.97925
PPM
Volts
200
0.0103
342.97925
PPM
Volts
200
0.0058
354.97925
PPM
Volts
200
0.0034
366.97925
PPM
Volts
200
0.0115
380.97604
PPM
Volts
200
0.0046
392.97604
PPM
Volts
200
0.0031
404.97604
PPM
Volts
200
0.0029
416.97604


Peak Locate Examination:10-OCT-2019:06:41 File:RES_CHECK
Experiment:OCDD_DB5 Function:2 Reference:PFK
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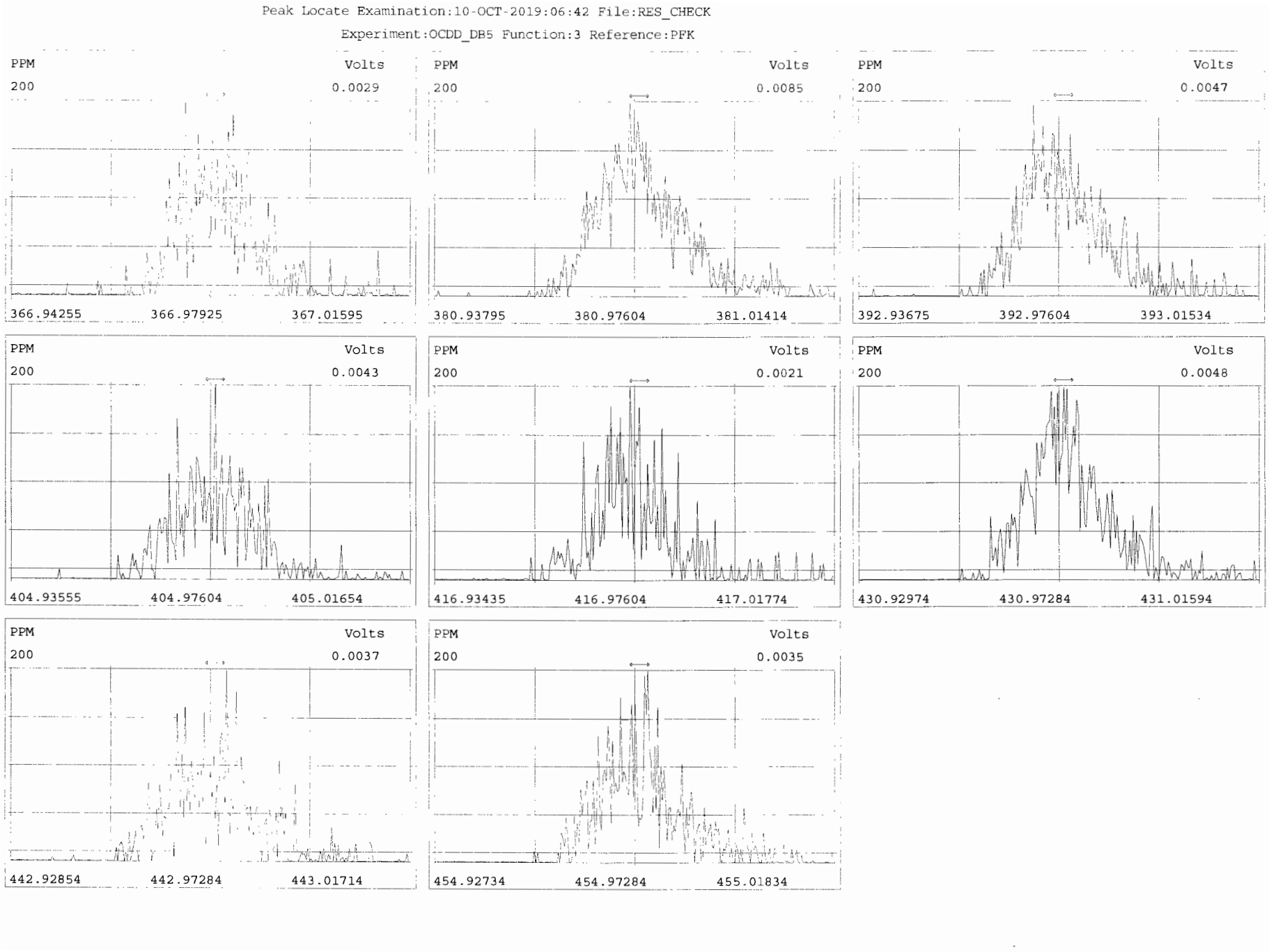
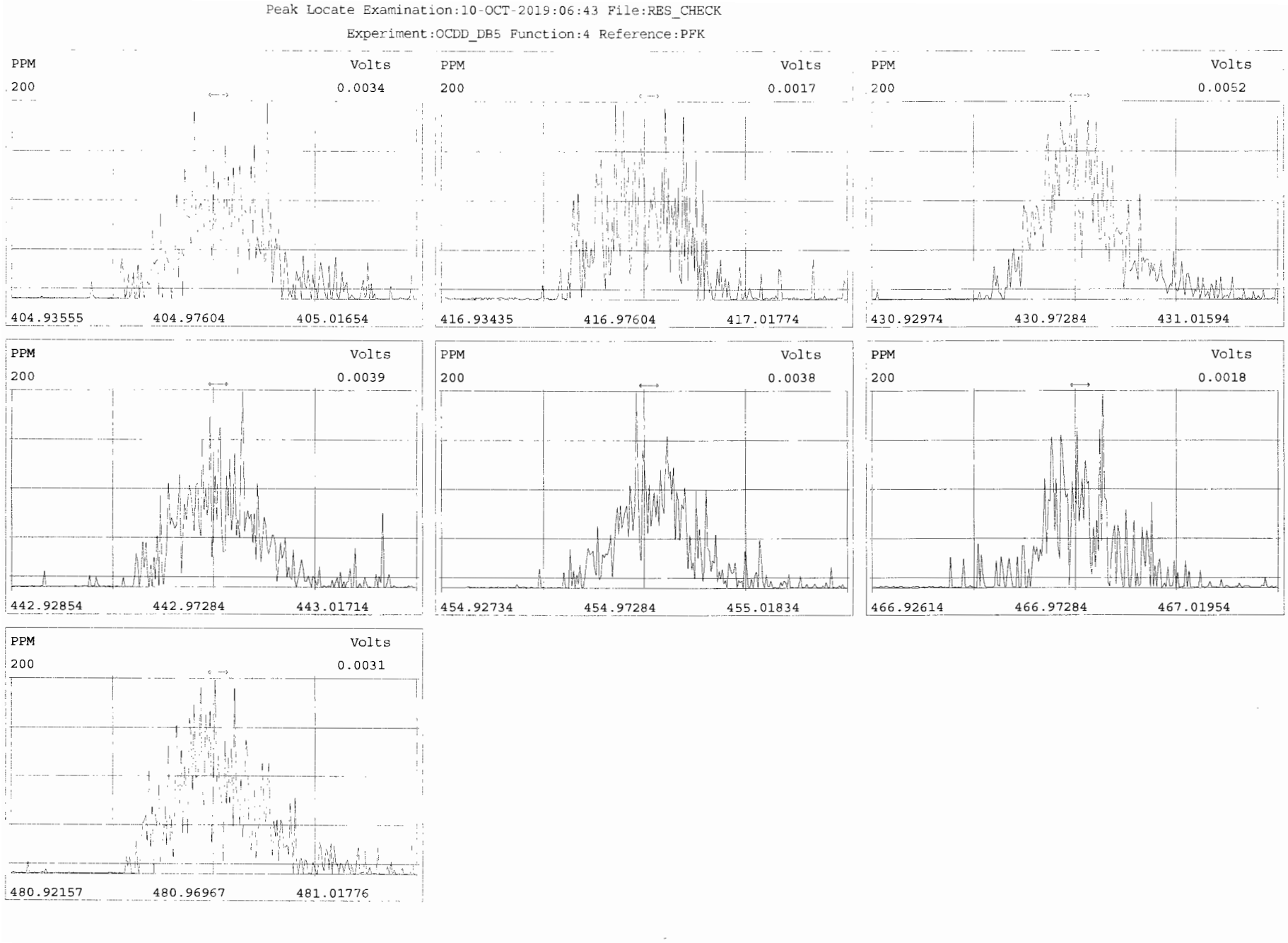
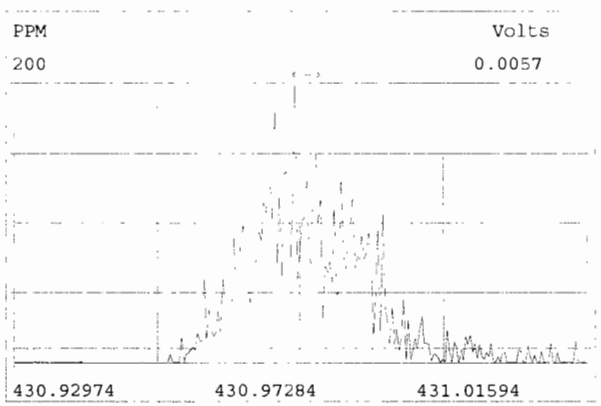
Volts
200
0.0041
316.95075
316.98245
317.01415
PPM
Volts
200
0.0154
330.94615
330.97925
331.01235
PPM
Volts
200
0.0090
342.94495
342.97925
343.01355
PPM
Volts
200
0.0042
354.94375
354.97925
355.01475
PPM
Volts
200
0.0032
366.94255
366.97925
367.01595
PPM
Volts
200
0.0085
380.93795
380.97604
381.01414
PPM
Volts
200
0.0059
392.93675
392.97604
393.01534
PPM
Volts
200
0.0035
404.93555
404.97604
405.01654
PPM
Volts
200
0.0019
416.93435
416.97604
417.01774

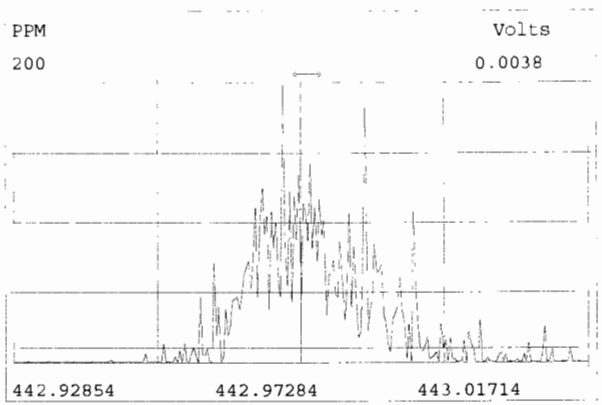

Peak Locate Examination:10-OCT-2019:06:42 File:RES_CHECK
Experiment:OCDD_DB5 Function:3 Reference:PFK
PPM
Volts
200
0.0029
366.94255
366.97925
367.01595
PPM
Volts
200
0.0085
380.93795
380.97604
381.01414
PPM
Volts
200
0.0047
392.93675
392.97604
393.01534
PPM
Volts
200
0.0043
404.93555
404.97604
405.01654
PPM
Volts
200
0.0021
416.93435
416.97604
417.01774
PPM
Volts
200
0.0048
430.92974
430.97284
431.01594
PPM
Volts
200
0.0037
442.92854
442.97284
443.01714
PPM
Volts
200
0.0035
454.92734
454.97284
455.01834

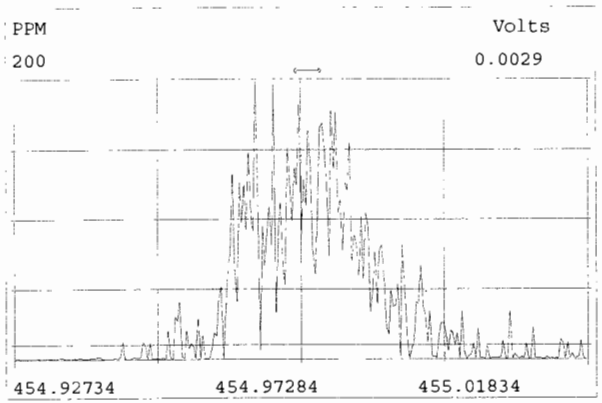

Peak Locate Examination:10-OCT-2019:06:43 File:RES_CHECK
Experiment:OCDD_DB5 Function:4 Reference:PFK
PPM
Volts
200
0.0034
404.93555
404.97604
405.01654
PPM
Volts
200
0.0017
416.93435
416.97604
417.01774
PPM
Volts
200
0.0052
430.92974
430.97284
431.01594
PPM
Volts
200
0.0039
442.92854
442.97284
443.01714
PPM
Volts
200
0.0038
454.92734
454.97284
455.01834
PPM
Volts
200
0.0018
466.92614
466.97284
467.01954
PPM
Volts
200
0.0031
480.92157
480.96967
481.01776

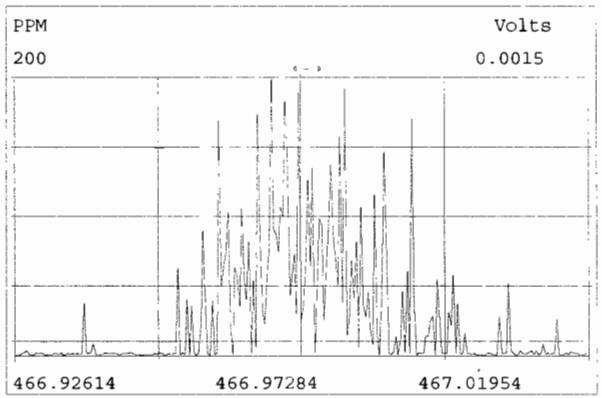
Peak Locate Examination:10-OCT-2019:06:44 File:RES_CHECK

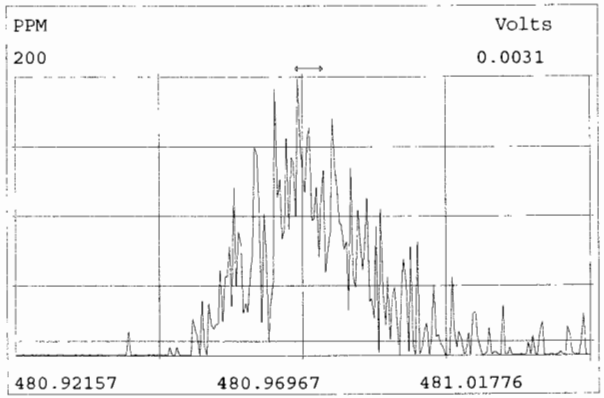
Experiment:OCDD_DB5 Function:5 Reference:PFK

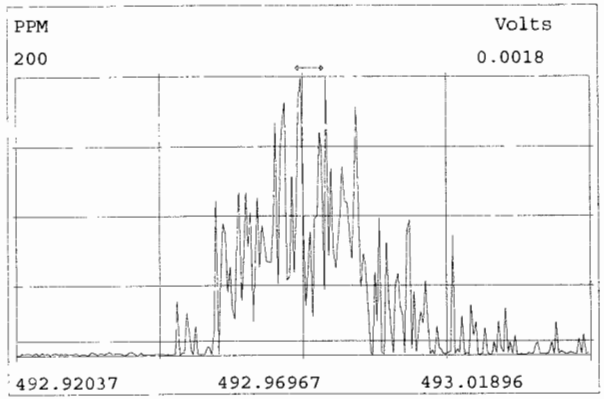


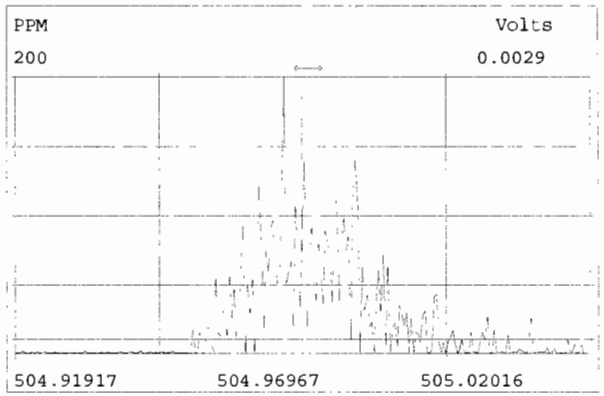


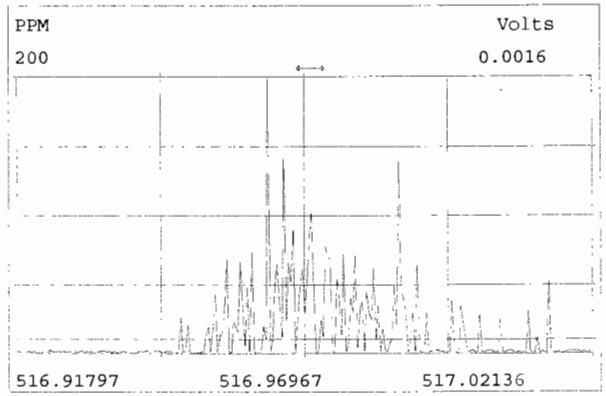












FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

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

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
NATIVE ANALYTES						
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

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	0.72	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 REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
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 REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	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 Filename: 191009D1 S:8 Acq: 9-OCT-19 21:46:34 ConCal: ST191009D1-4

Lab ID: SS191009D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL
	2,3,7,8-TCDD	8.36e+05	0.83 y	0.91	26:36	10.234			* 2.5	*
	1,2,3,7,8-PeCDD	3.38e+06	0.63 y	0.90	30:57	51.323			* 2.5	*
	1,2,3,4,7,8-HxCDD	2.55e+06	1.31 y	1.10	34:18	48.909			* 2.5	*
	1,2,3,6,7,8-HxCDD	3.09e+06	1.18 y	0.94	34:24	52.378			* 2.5	*
	1,2,3,7,8,9-HxCDD	2.83e+06	1.17 y	0.96	34:44	50.434			* 2.5	*
	1,2,3,4,6,7,8-HpCDD	2.34e+06	1.02 y	0.98	38:07	51.915			* 2.5	*
	OCDD	4.27e+06	0.92 y	0.96	41:30	105.37			* 2.5	*
	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				
IS	13C-1,2,3,7,8-PeCDD	7.29e+06	0.64 y	0.88	30:56	100.87				
IS	13C-1,2,3,4,7,8-HxCDD	4.73e+06	1.23 y	0.64	34:16	95.948				
IS	13C-1,2,3,6,7,8-HxCDD	6.28e+06	1.25 y	0.86	34:24	95.558				
IS	13C-1,2,3,7,8,9-HxCDD	5.85e+06	1.26 y	0.81	34:43	94.306				
IS	13C-1,2,3,4,6,7,8-HpCDD	4.61e+06	1.06 y	0.65	38:06	91.680				
IS	13C-OCDD	8.45e+06	0.92 y	0.58	41:29	189.68				
IS	13C-2,3,7,8-TCDF	1.26e+07	0.78 y	1.03	25:52	97.199				
IS	13C-1,2,3,7,8-PeCDF	1.04e+07	1.62 y	0.85	29:48	97.425				
IS	13C-2,3,4,7,8-PeCDF	1.03e+07	1.59 y	0.85	30:41	96.649				
IS	13C-1,2,3,4,7,8-HxCDF	6.55e+06	0.51 y	0.83	33:22	102.43				
IS	13C-1,2,3,6,7,8-HxCDF	8.06e+06	0.51 y	1.03	33:30	101.42				
IS	13C-2,3,4,6,7,8-HxCDF	7.11e+06	0.51 y	0.95	34:08	97.073				
IS	13C-1,2,3,7,8,9-HxCDF	6.30e+06	0.51 y	0.83	35:09	98.999				
IS	13C-1,2,3,4,6,7,8-HpCDF	5.62e+06	0.43 y	0.76	36:57	96.588				
IS	13C-1,2,3,4,7,8,9-HpCDF	4.58e+06	0.44 y	0.58	38:42	102.46				
IS	13C-OCDF	1.04e+07	0.88 y	0.69	41:44	196.65				
C/Up	37Cl-2,3,7,8-TCDD	8.91e+05		1.20	26:36	9.0817				
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				

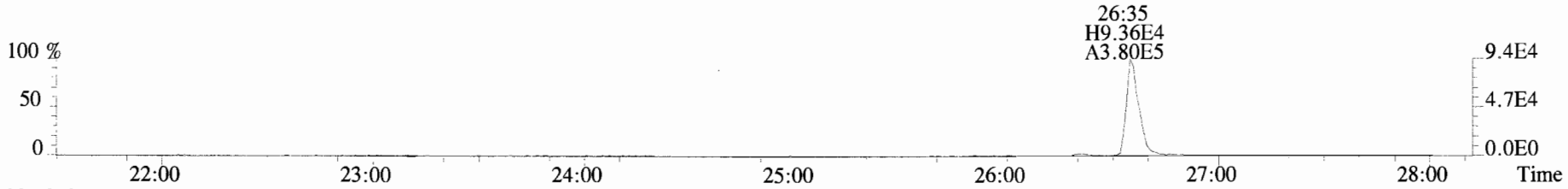
Name	Conc	EMPC	Qual	noise	DL
Total Tetra-Dioxins	10.4	11.4		*	*
Total Penta-Dioxins	51.4	51.7		*	*
Total Hexa-Dioxins	153	153		*	*
Total Hepta-Dioxins	53.5	54.4		*	*
Total Tetra-Furans	10.7	11.4		*	*
Total Penta-Furans	110.38	111.73		*	*
Total Hexa-Furans	205	207		*	*
Total Hepta-Furans	104	106		*	*

	Rec	Qual
IS	100	
IS	101	
IS	95.9	
IS	95.6	
IS	94.3	
IS	91.7	
IS	94.8	
IS	97.2	
IS	97.4	
IS	96.6	
IS	102	
IS	101	
IS	97.1	
IS	99.0	
IS	96.6	
IS	102	
IS	98.3	
C/Up	90.8	

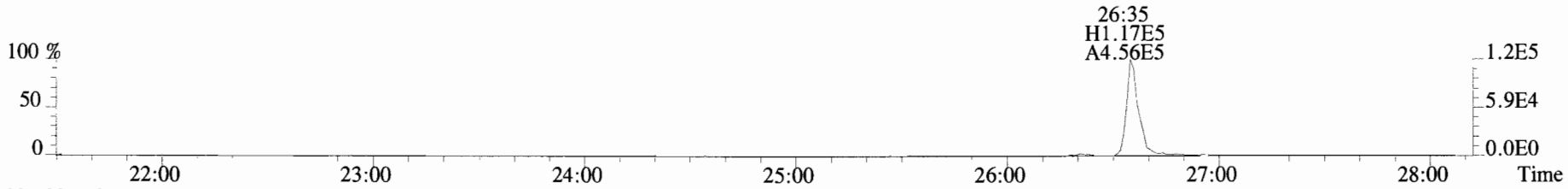
Integrations by Analyst: DB Date: 10/10/19

Reviewed by Analyst: CT Date: 10/10/19

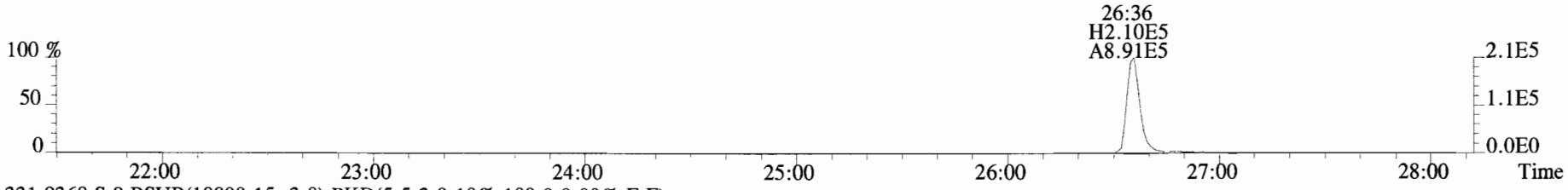
File:191009D1 #1-514 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



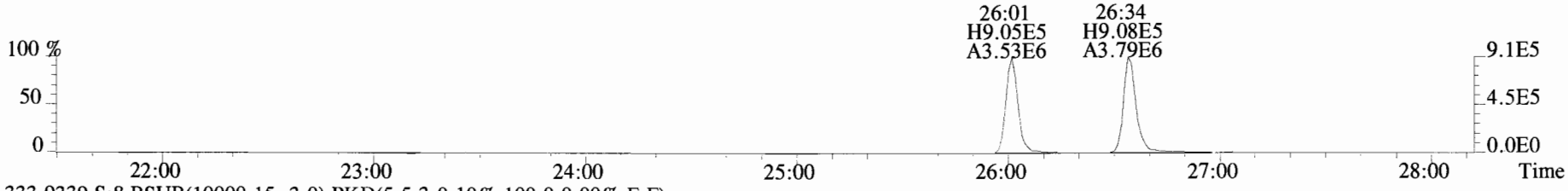
321.8936 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



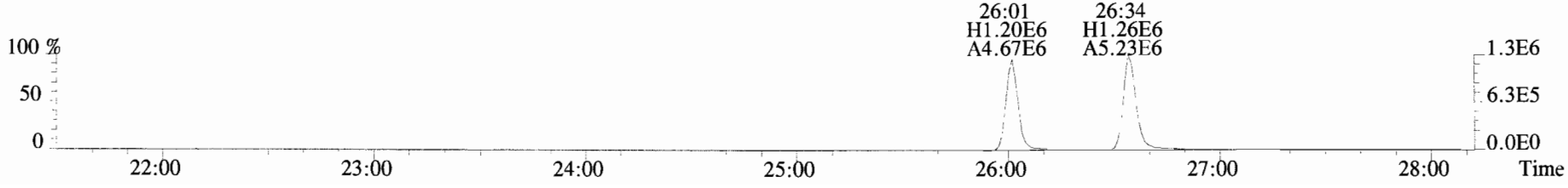
327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



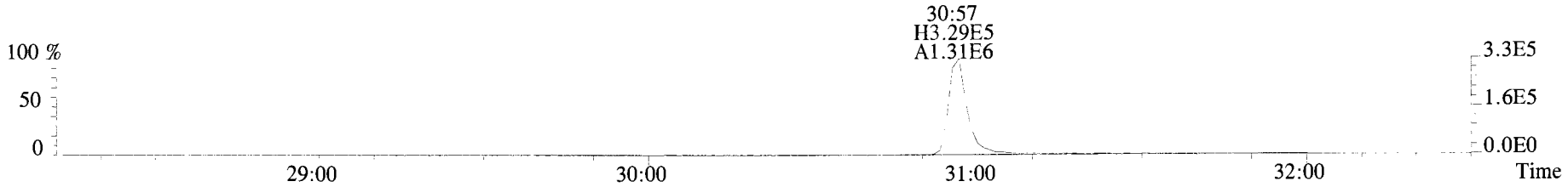
331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



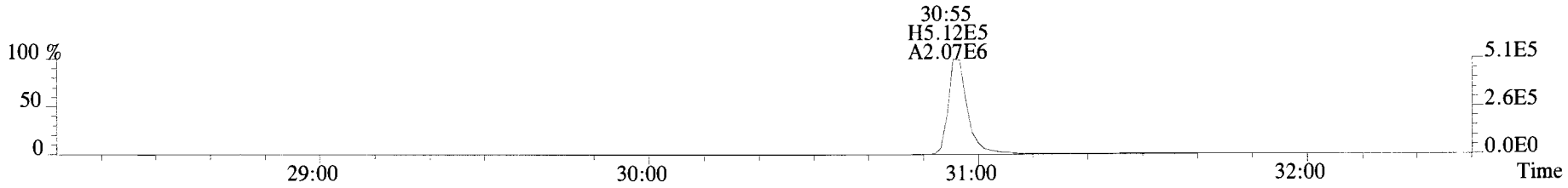
333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



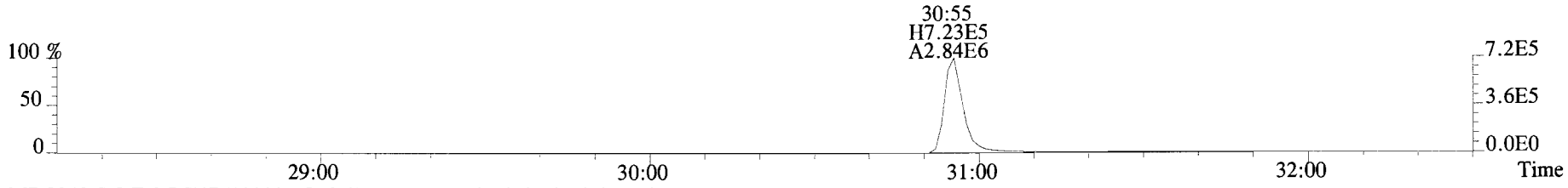
File:191009D1 #1-210 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



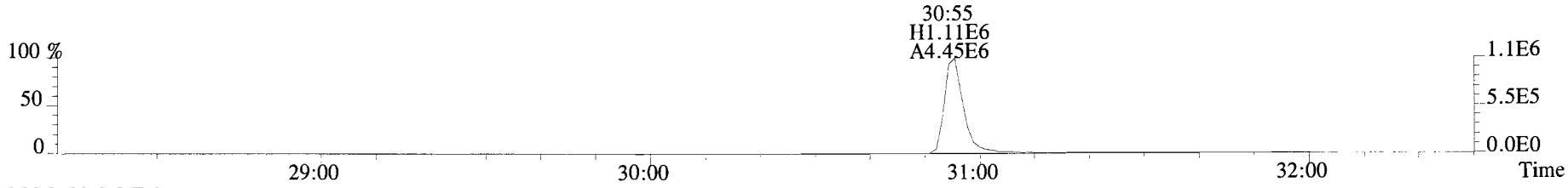
355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



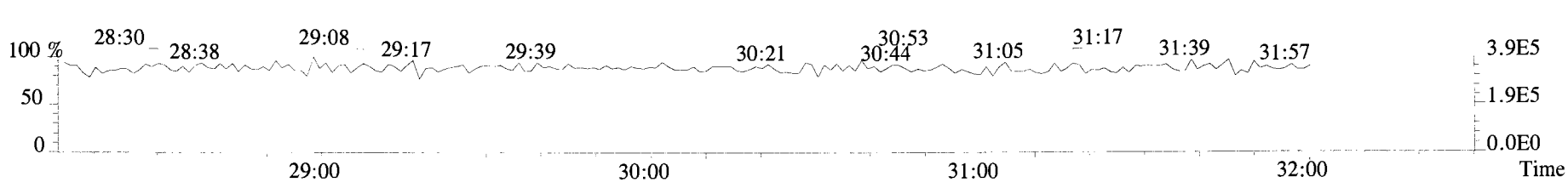
365.8978 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



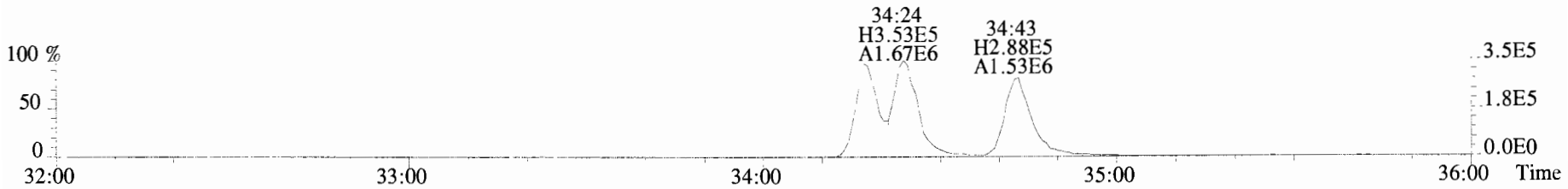
367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



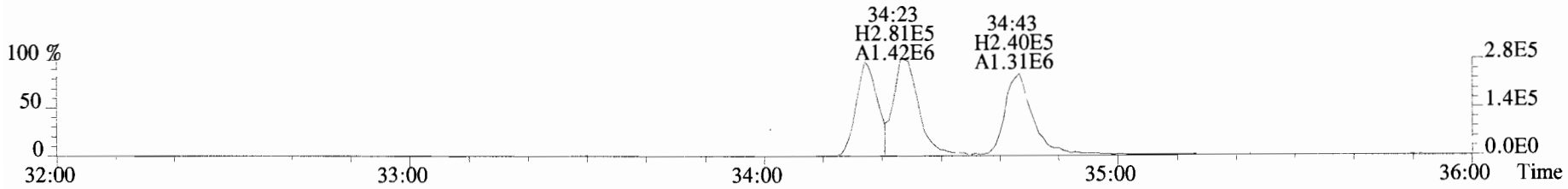
366.9792 S:8 F:2



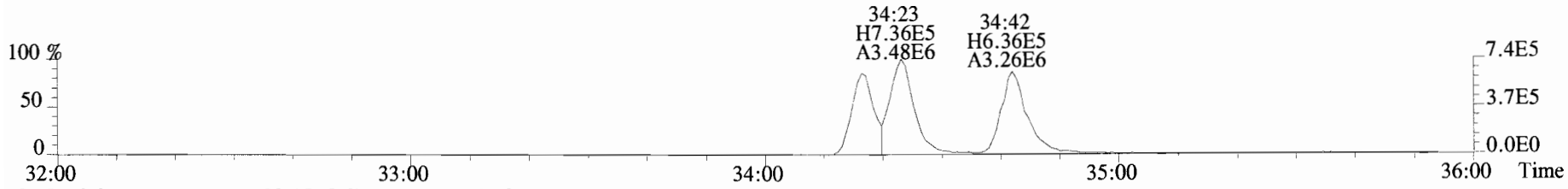
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



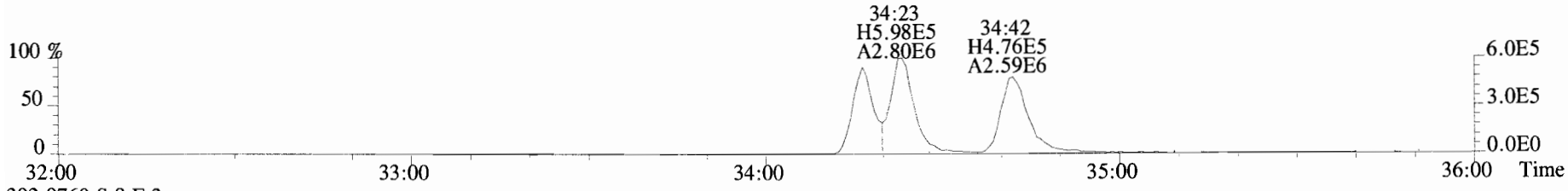
391.8127 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



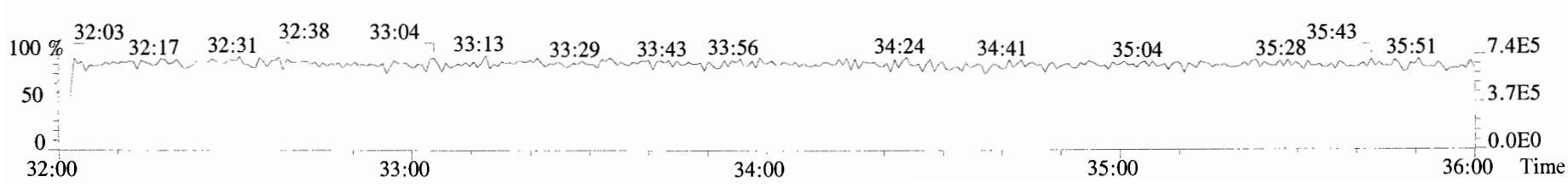
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



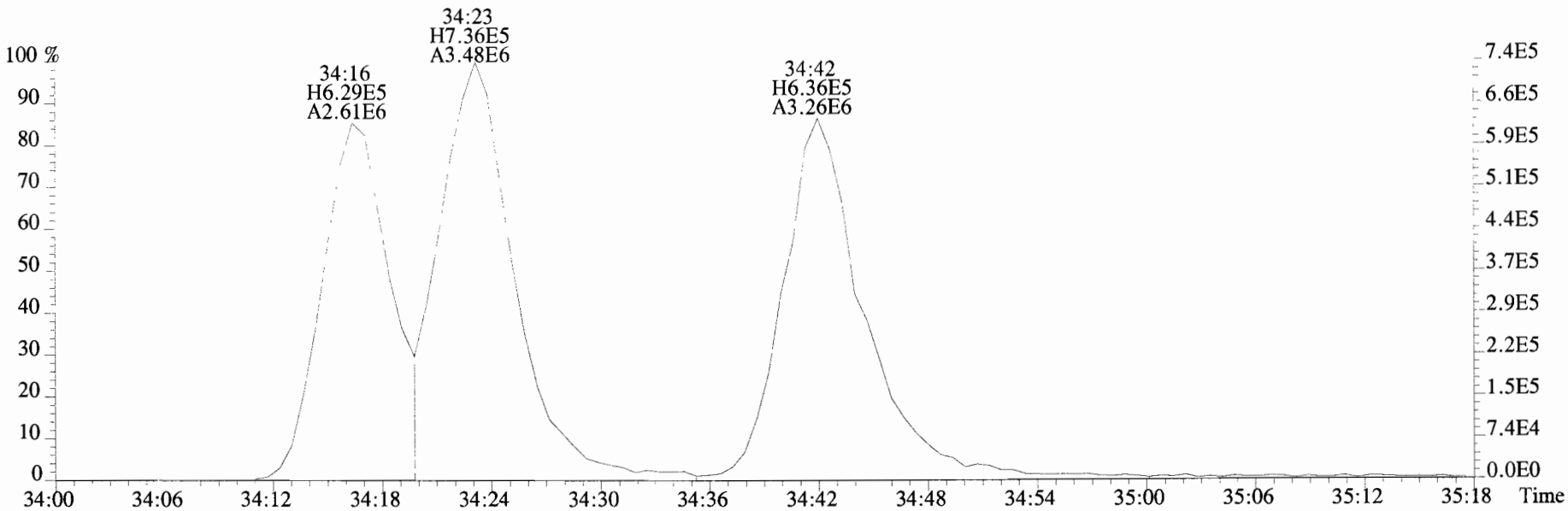
403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



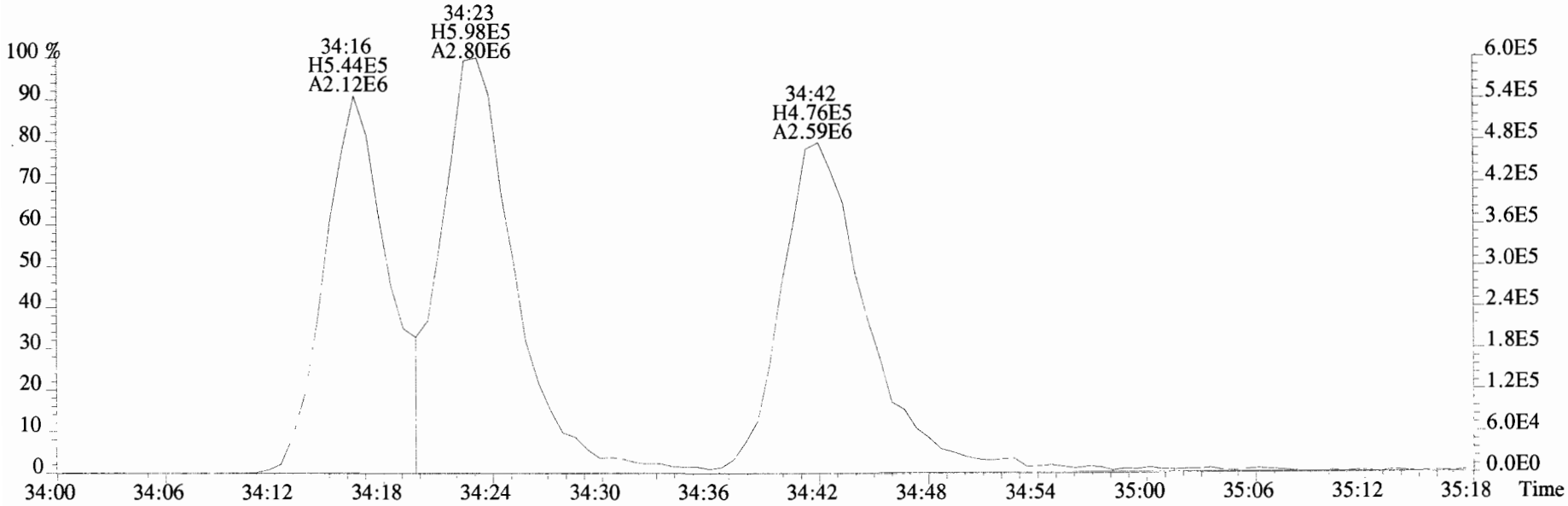
392.9760 S:8 F:3



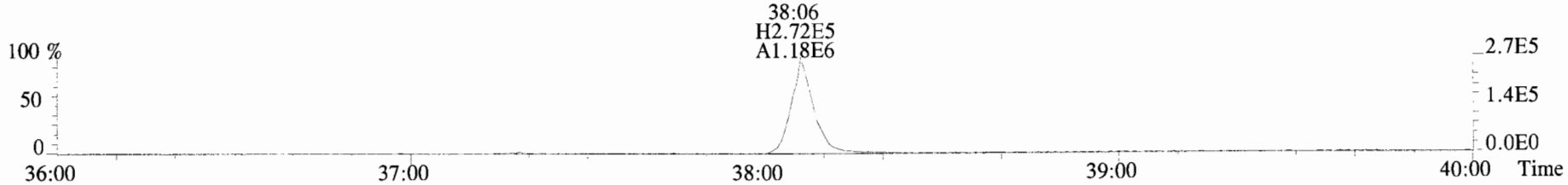
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



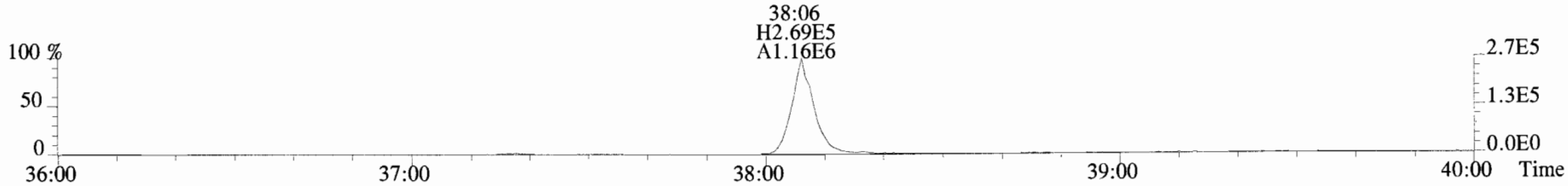
403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



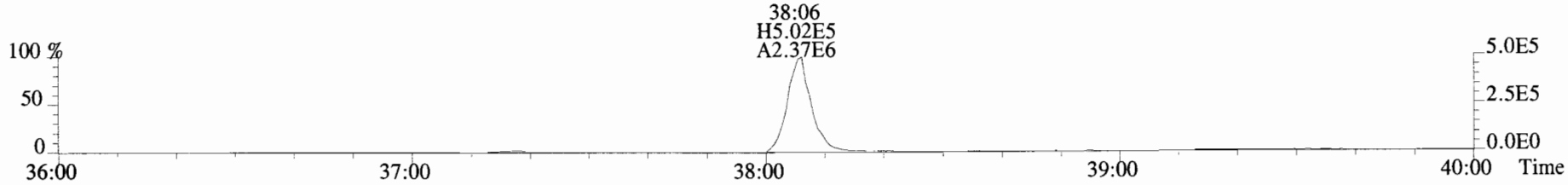
File:191009D1 #1-356 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



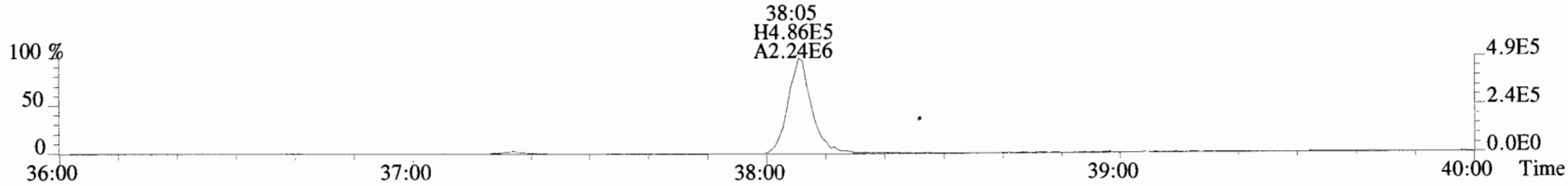
425.7737 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



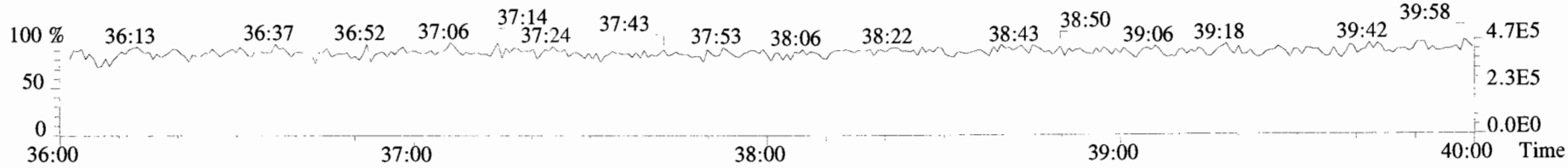
435.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



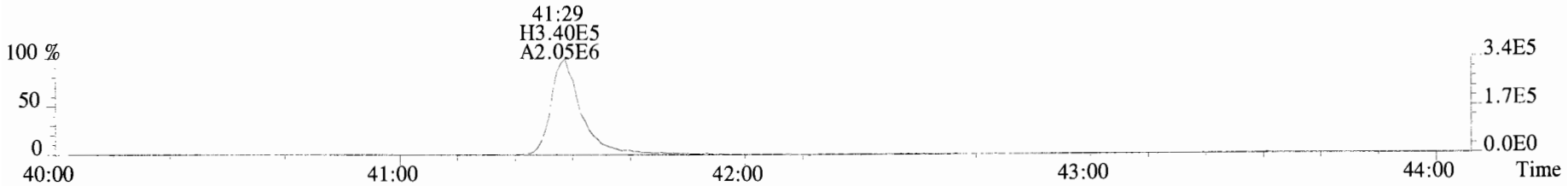
437.8140 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



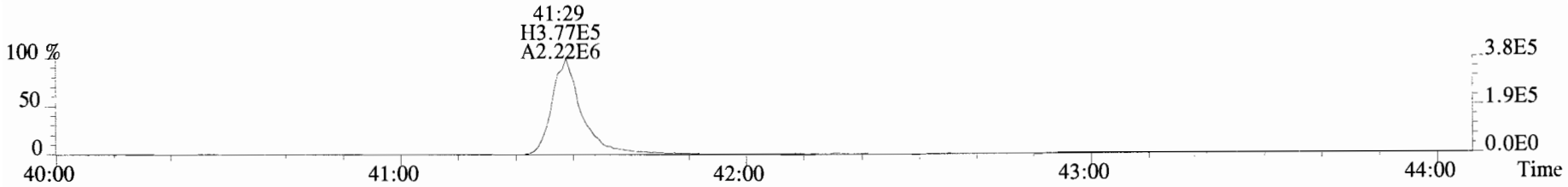
454.9728 S:8 F:4



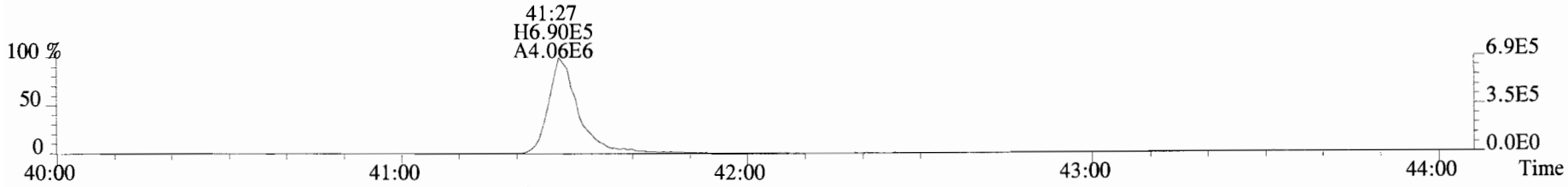
File:191009D1 #1-431 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



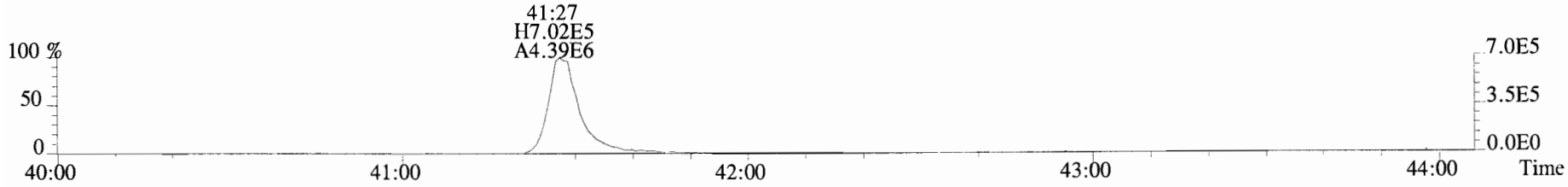
459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



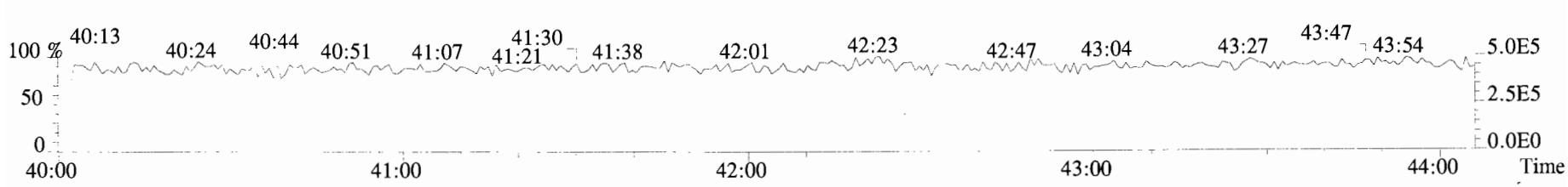
469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



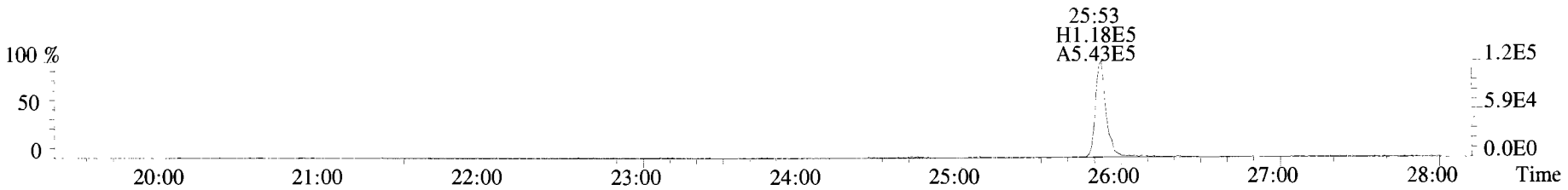
471.7750 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



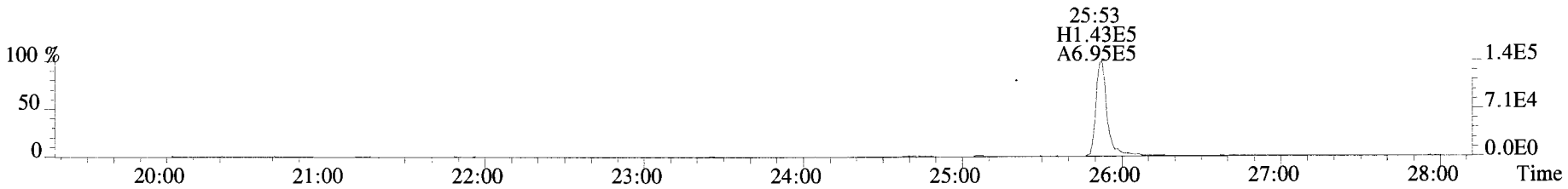
454.9728 S:8 F:5



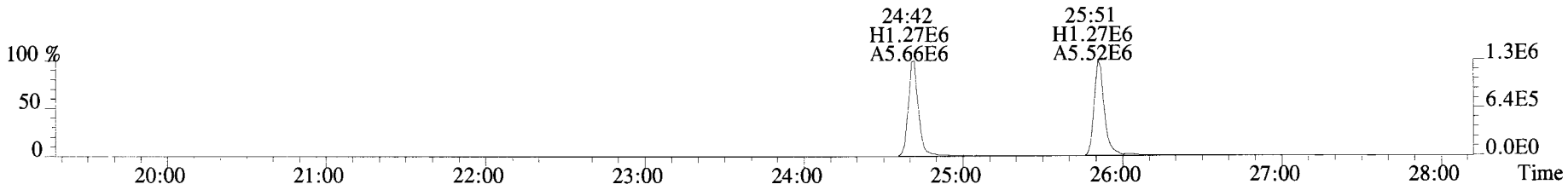
File:191009D1 #1-514 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



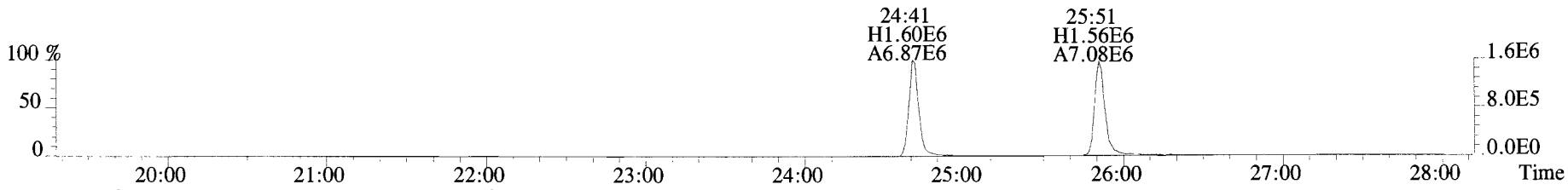
305.8987 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



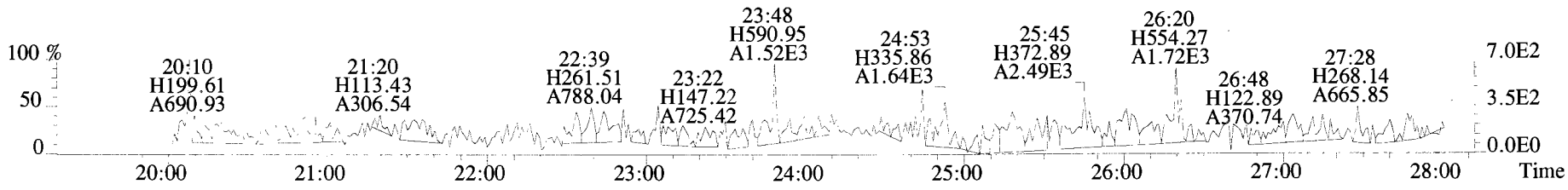
315.9419 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



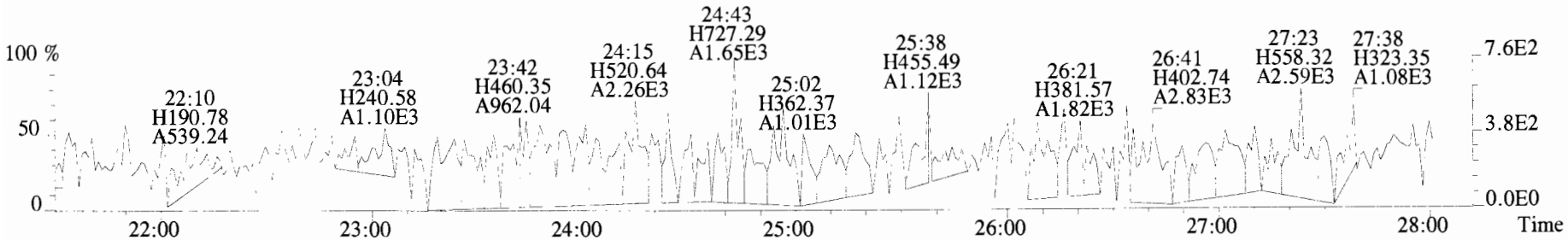
317.9389 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



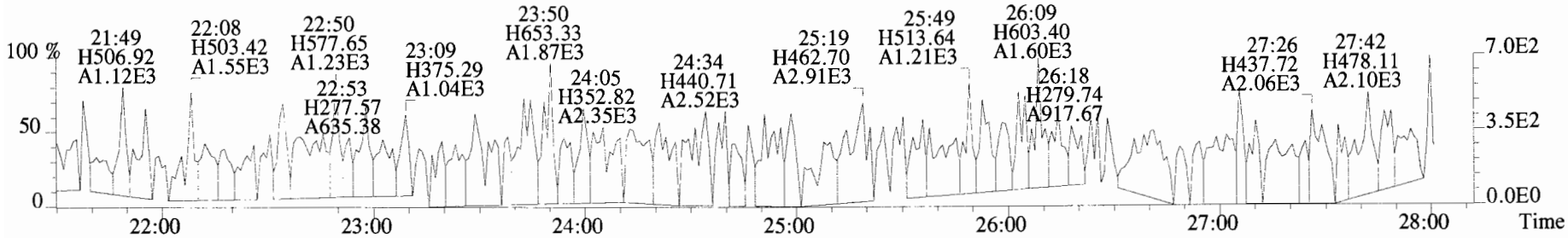
375.8364 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



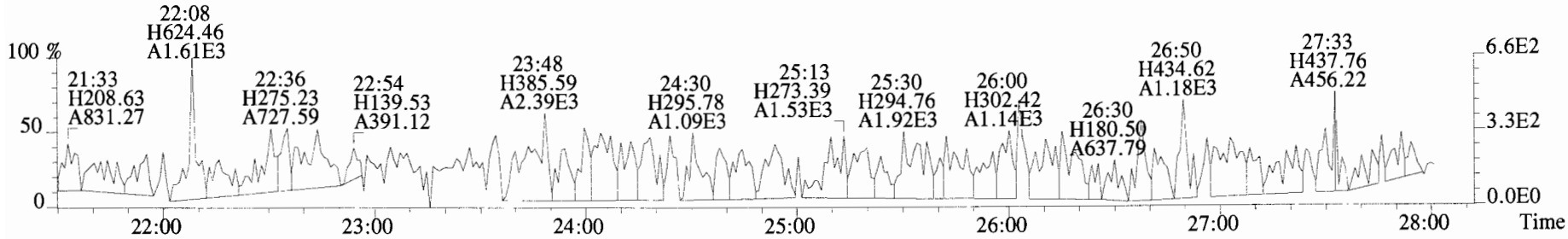
File:191009D1 #1-514 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



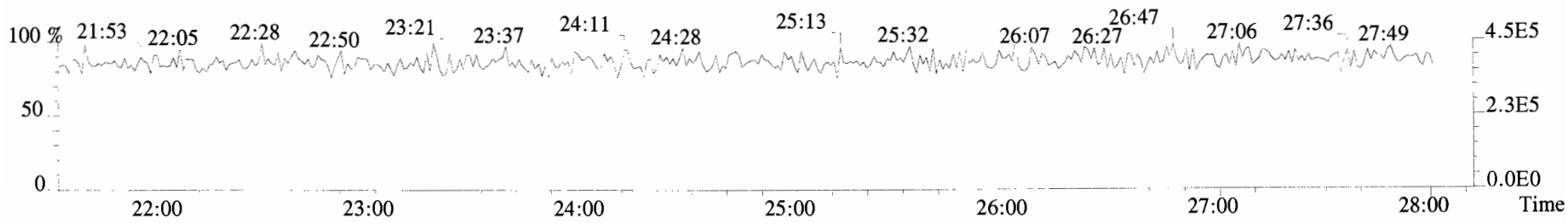
341.8568 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



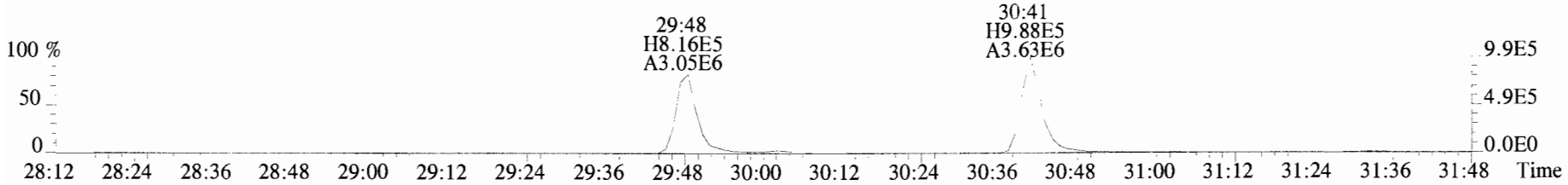
409.7974 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



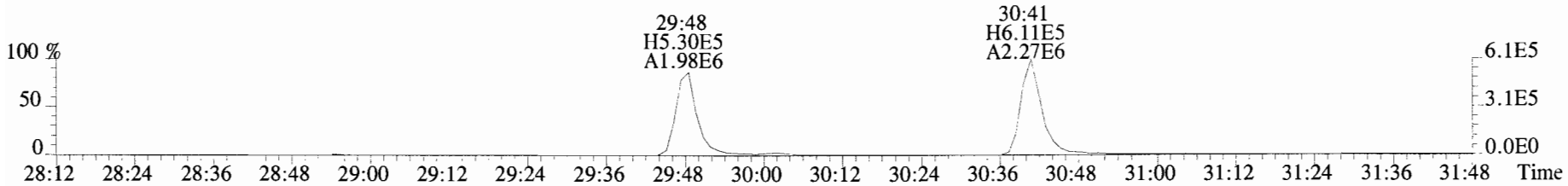
316.9824 S:8



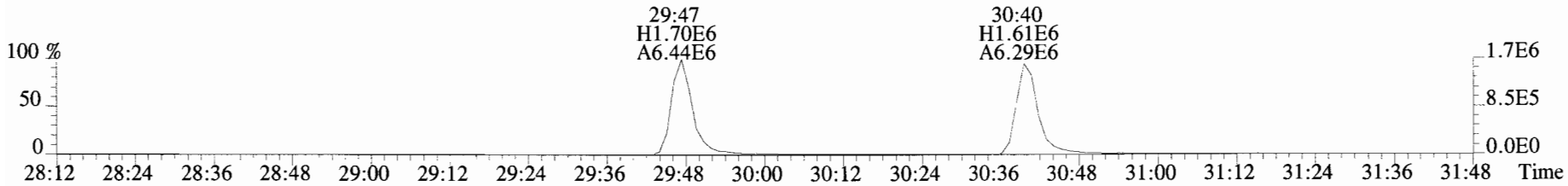
File:191009D1 #1-210 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



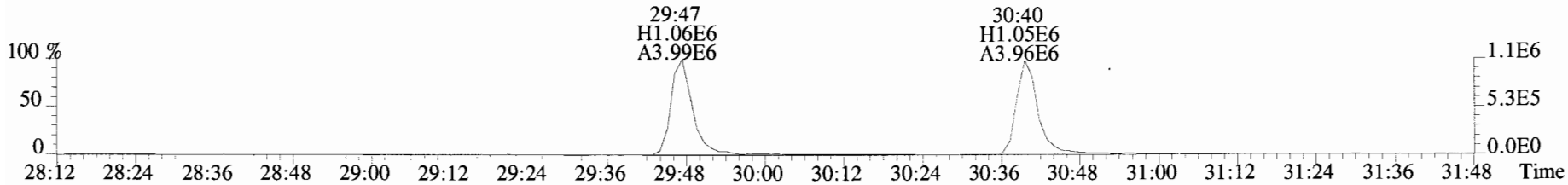
341.8568 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



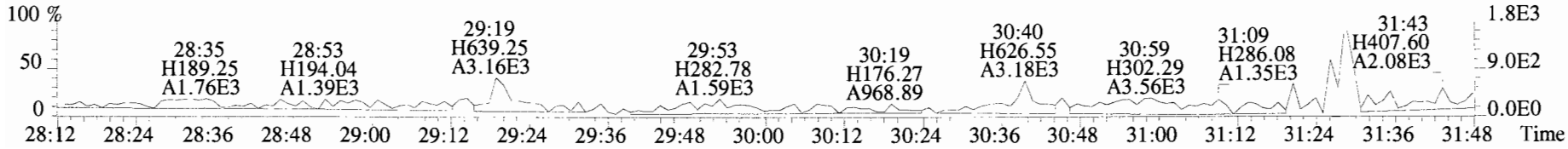
351.9000 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



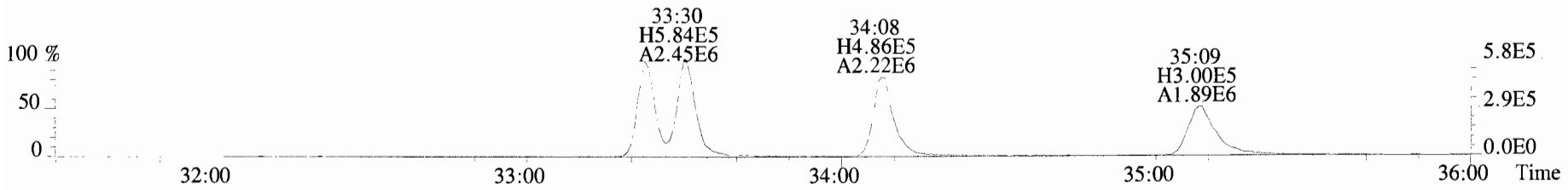
353.8970 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



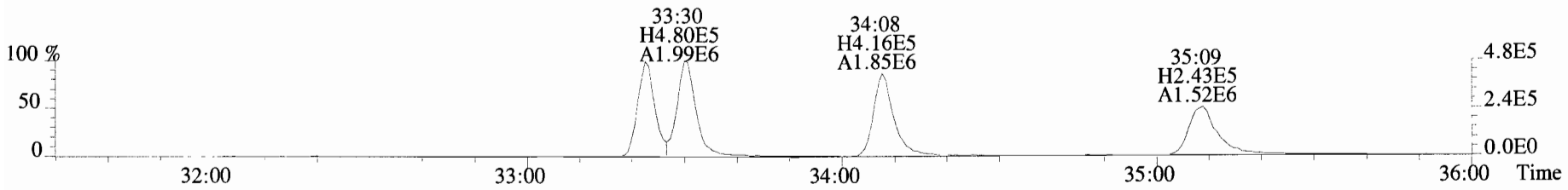
409.7974 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



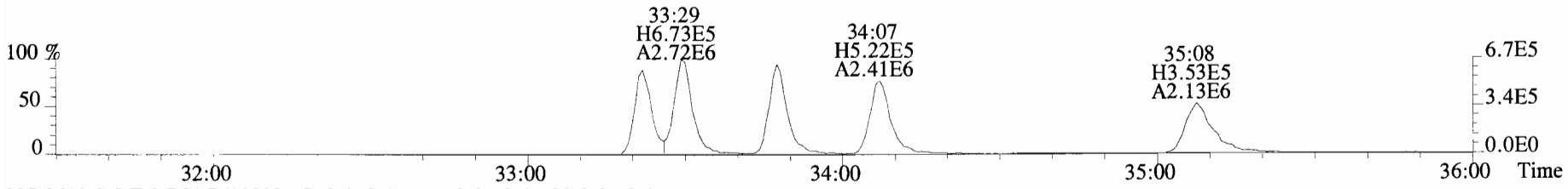
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



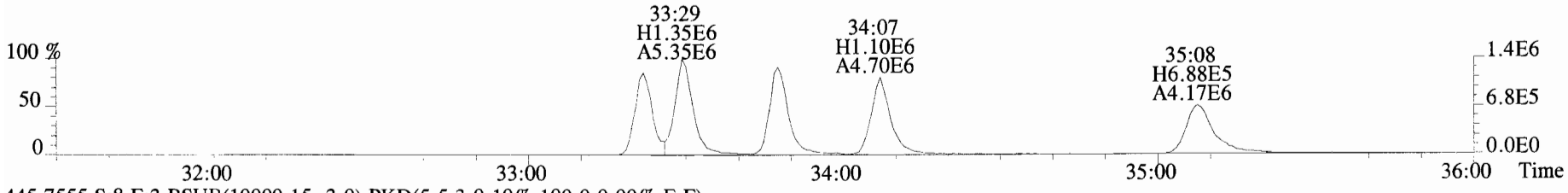
375.8178 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



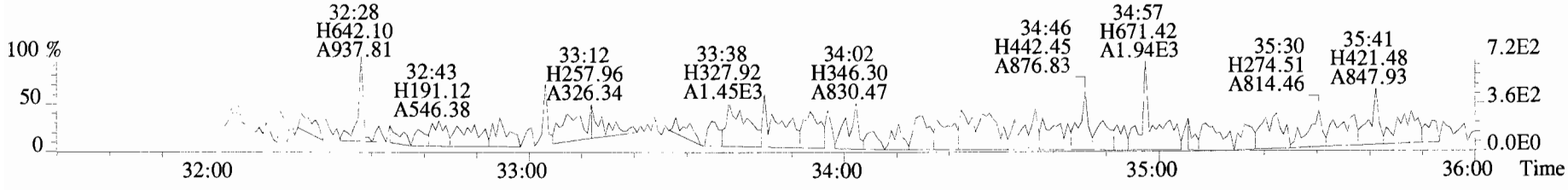
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



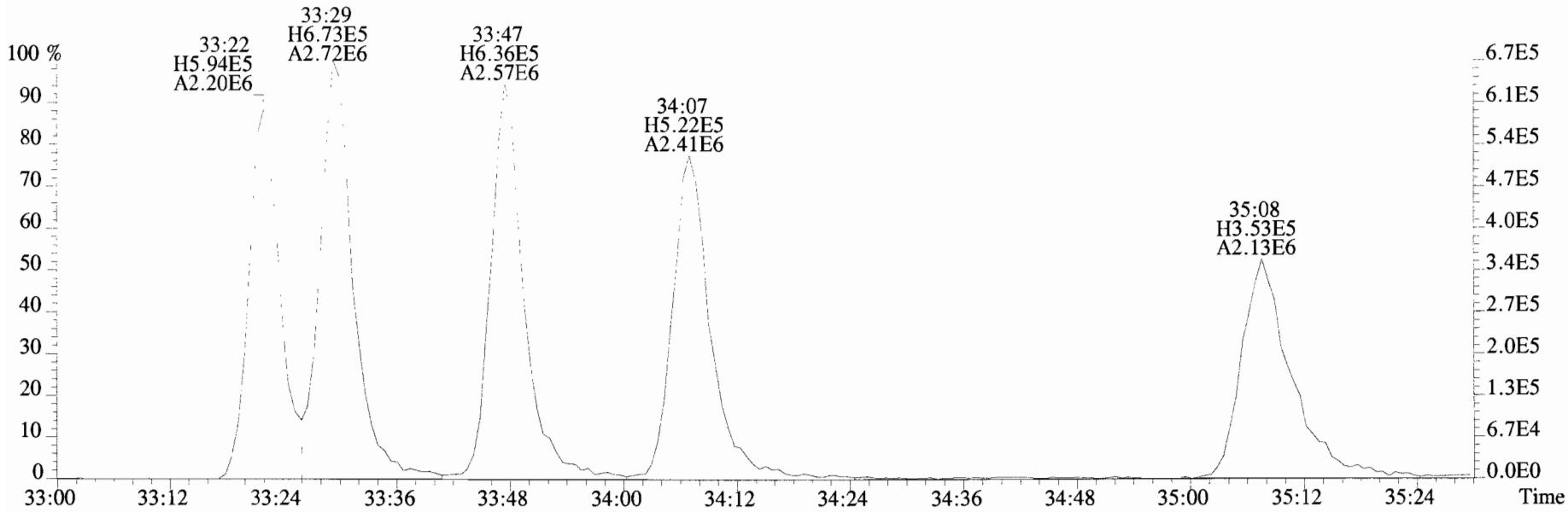
385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



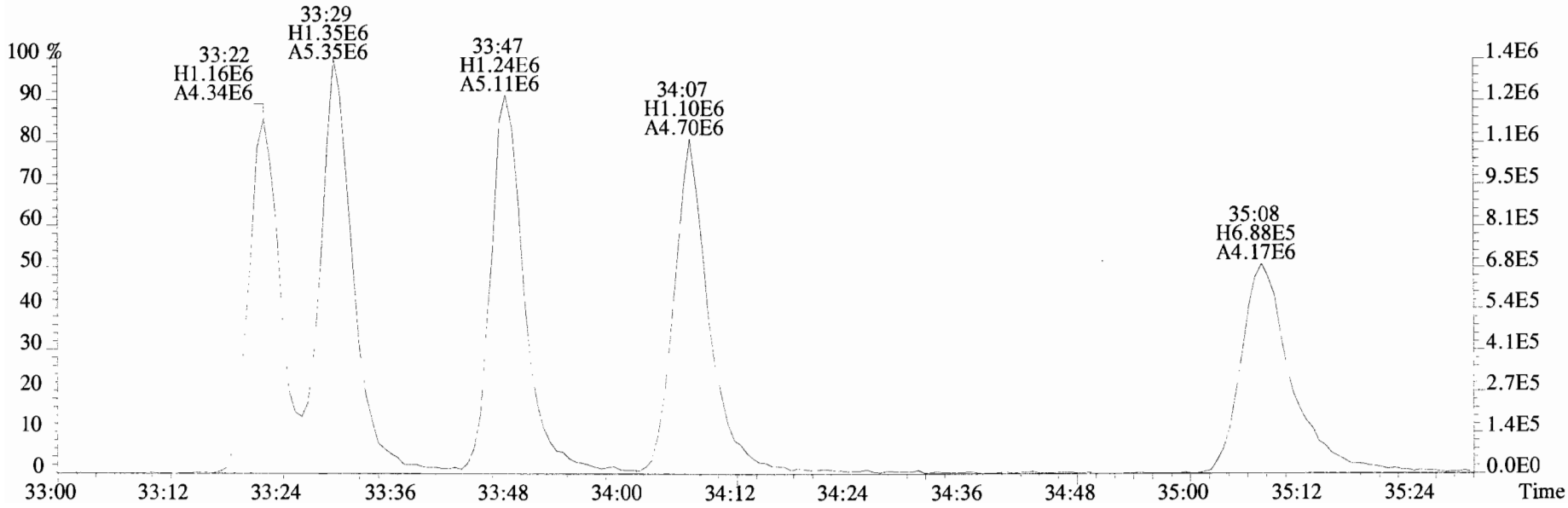
445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



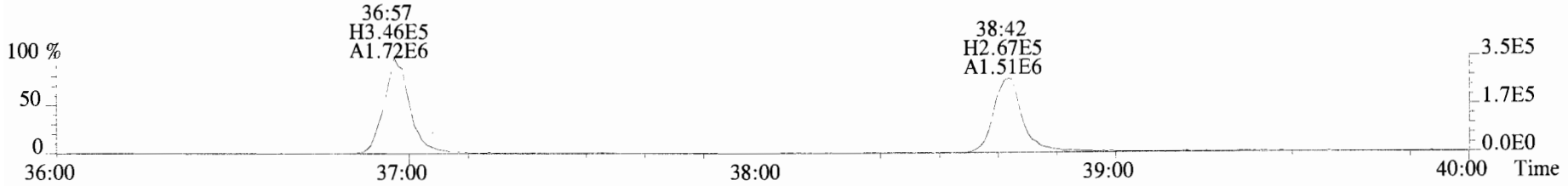
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



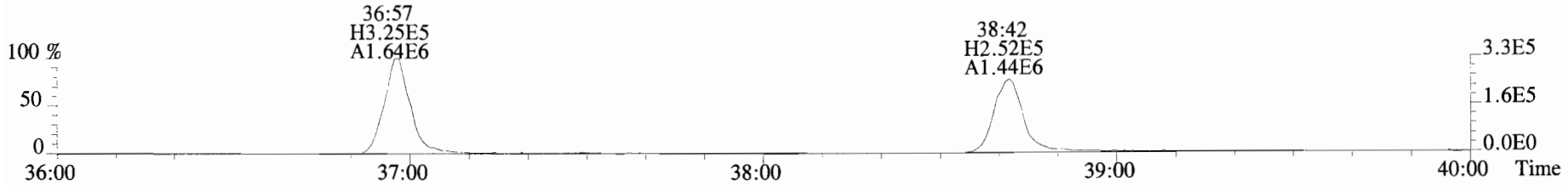
385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



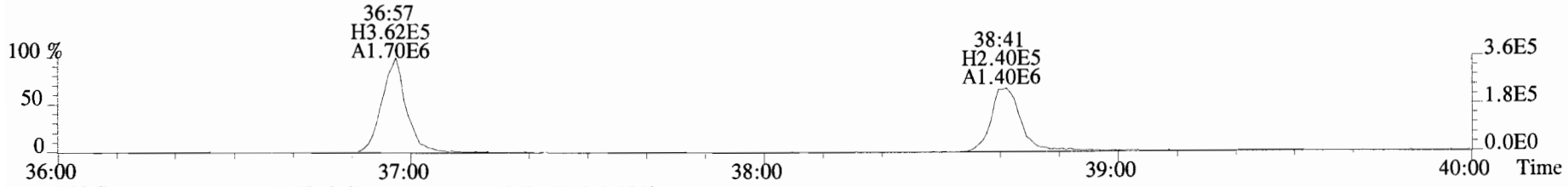
File:191009D1 #1-356 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



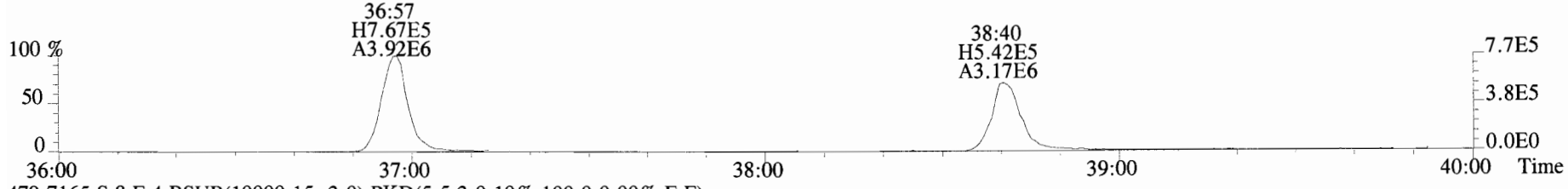
409.7788 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



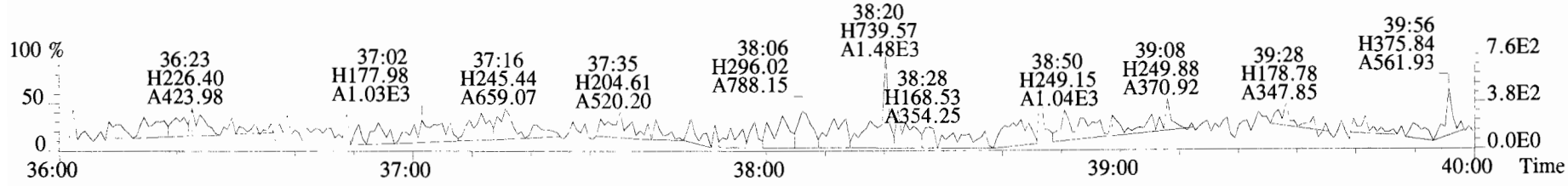
417.8253 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



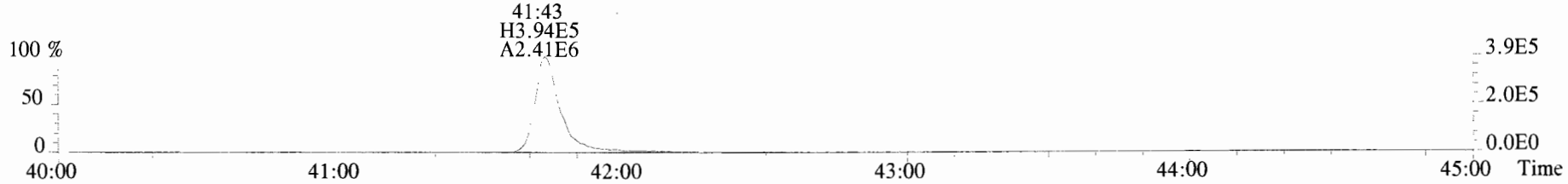
419.8220 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



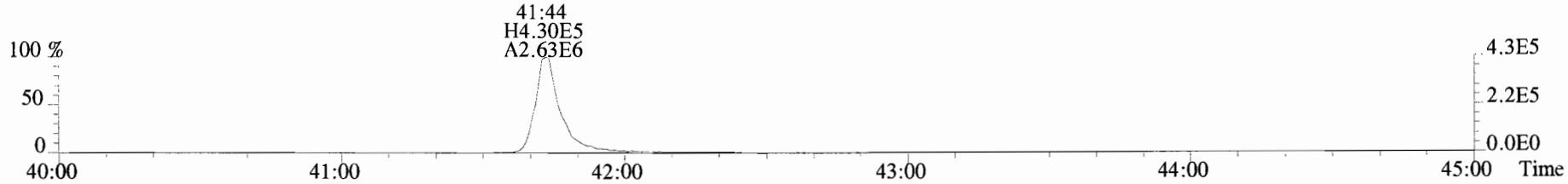
479.7165 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



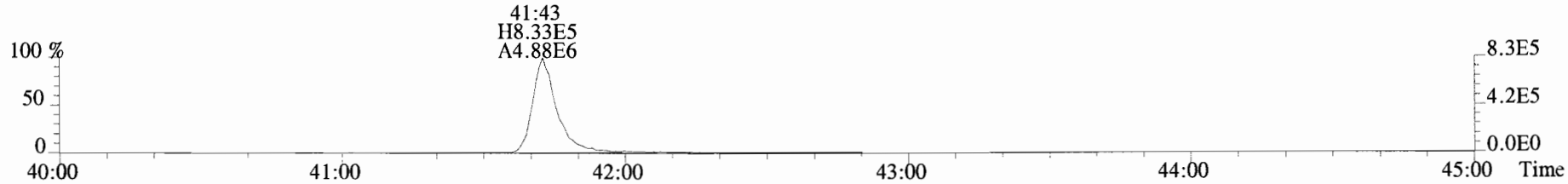
File:191009D1 #1-431 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD_DB5
441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



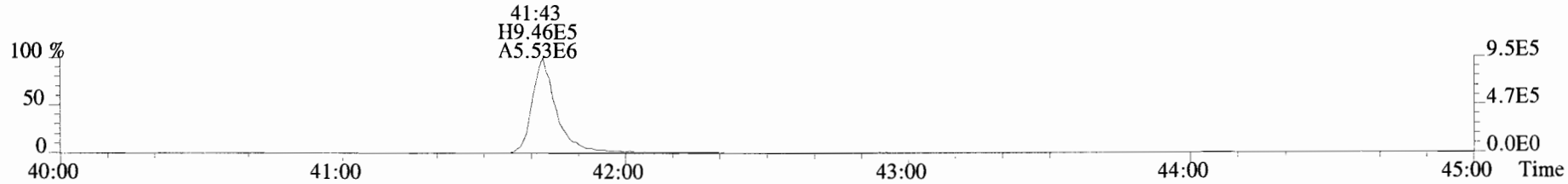
443.7398 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



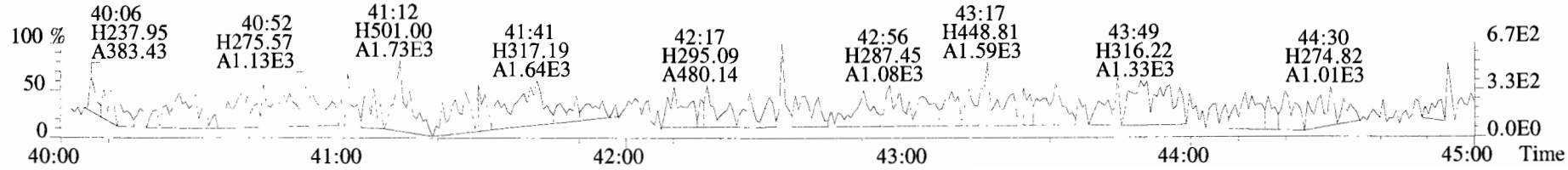
453.7831 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory

Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19 Inst. ID. VG-7

Data filename: 190530D1

			Samp# 3	Samp# 4	Samp# 5	Samp# 6	Samp# 7	Samp# 8
			100	100	100	100	100	100
Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
13C-1,2,3,4-TCDF	1.0000	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-2,3,7,8-TCDF	1.0212	4.27 %	1.07	1.04	1.03	1.05	0.98	0.96
2,3,7,8-TCDF	0.9476	9.58 %	1.12	0.93	0.88	0.87	0.97	0.92

DB 5/30/19 QT 05/31/19

Filename: 190530D1 S: 3 Acquired: 30-MAY-19 12:05:38
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-1 1613 CS0 19C2201

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.38e+07	0.80 y	15:49	-	1.00
13C-2,3,7,8-TCDF	100	1.47e+07	0.81 y	18:05	-	1.07
2,3,7,8-TCDF	0.250	4.11e+04	0.87 y	18:06	-	1.12

DB
5/30/19

Filename: 190530D1 S: 4 Acquired: 30-MAY-19 12:37:29
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-2 1613 CS1 19C2202

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.24e+07	0.82 y	15:49	-	1.00
13C-2,3,7,8-TCDF	100	1.30e+07	0.78 y	18:05	-	1.04
2,3,7,8-TCDF	0.500	6.06e+04	0.67 y	18:05	-	0.93

DB
5/30/19

Filename: 190530D1 S: 5 Acquired: 30-MAY-19 13:09:20
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-3 1613 CS2 19C2203

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.21e+07	0.82 y	15:48	-	1.00
13C-2,3,7,8-TCDF	100	1.24e+07	0.80 y	18:04	-	1.03
2,3,7,8-TCDF	2.00	2.18e+05	0.74 y	18:05	-	0.88

DB
5/30/19

Filename: 190530D1 S: 6 Acquired: 30-MAY-19 13:41:11
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-4 1613 CS3 19C2204

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.28e+07	0.81 y	15:49	-	1.00
13C-2,3,7,8-TCDF	100	1.34e+07	0.80 y	18:05	-	1.05
2,3,7,8-TCDF	10.0	1.17e+06	0.73 y	18:06	-	0.87

DB
5/30/19

Filename: 190530D1 S: 7 Acquired: 30-MAY-19 14:13:01
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-5 1613 CS4 19C2205

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.30e+07	0.81 y	15:49	-	1.00
13C-2,3,7,8-TCDF	100	1.28e+07	0.80 y	18:05	-	0.98
2,3,7,8-TCDF	40.0	4.95e+06	0.77 y	18:06	-	0.97

DB
5/30/19

Filename: 190530D1 S: 8 Acquired: 30-MAY-19 14:44:52
Run: Analyte: TCDF Cal: 1613TCDFVG7-5-30-19Results:
Sample text: ST190530D1-6 1613 CS5 19C2206

Name	Amount	Resp	RA	RT	RF	RRF
13C-1,2,3,4-TCDF	100	1.29e+07	0.80 y	15:48	-	1.00
13C-2,3,7,8-TCDF	100	1.24e+07	0.80 y	18:05	-	0.96
2,3,7,8-TCDF	300	3.42e+07	0.74 y	18:06	-	0.92

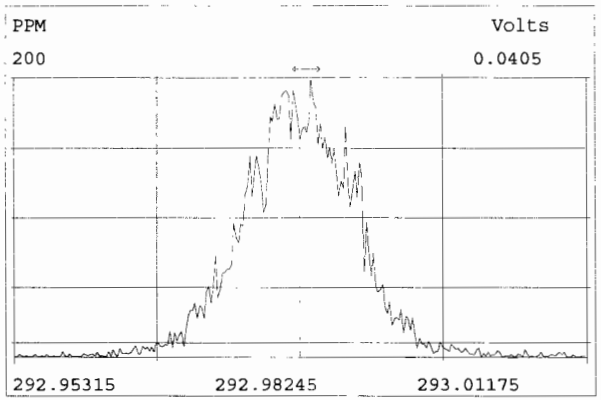
DB
5/30/19

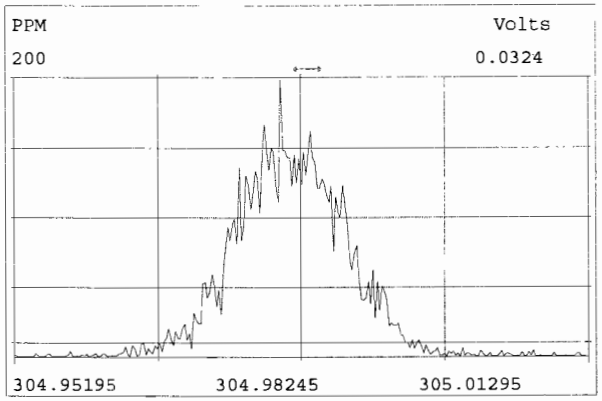
Vista Analytical Laboratory - Injection Log Run file: 190530D1 Instrument ID: VG-7 GC Column ID: DB-225

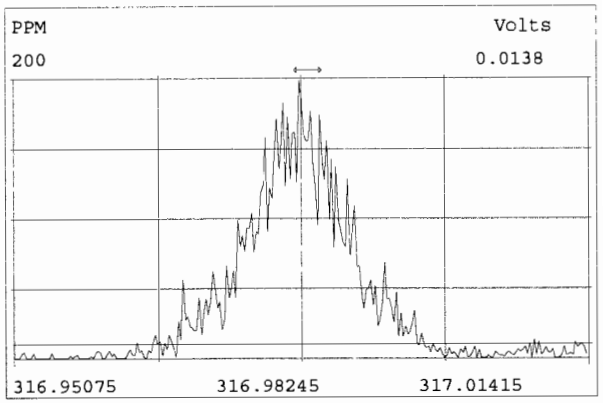
Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
190530D1	1	CP190530D1-1	DB	30-MAY-19	11:02:08	ST190530D1-4	NA
190530D1	2	SOLVENT BLANK	DB	30-MAY-19	11:33:52	ST190530D1-4	NA
190530D1	3	ST190530D1-1	DB	30-MAY-19	12:05:38	ST190530D1-4	NA
190530D1	4	ST190530D1-2	DB	30-MAY-19	12:37:29	ST190530D1-4	NA
190530D1	5	ST190530D1-3	DB	30-MAY-19	13:09:20	ST190530D1-4	NA
190530D1	6	ST190530D1-4	DB	30-MAY-19	13:41:11	ST190530D1-4	NA
190530D1	7	ST190530D1-5	DB	30-MAY-19	14:13:01	ST190530D1-4	NA
190530D1	8	ST190530D1-6	DB	30-MAY-19	14:44:52	ST190530D1-4	NA
190530D1	9	SOLVENT BLANK	DB	30-MAY-19	15:16:42	ST190530D1-4	NA
190530D1	10	SS190528D1-1	DB	30-MAY-19	15:48:32	ST190530D1-4	NA
190530D1	11	SOLVENT BLANK	DB	30-MAY-19	16:20:23	ST190530D1-4	NA
190530D1	12	1901028-05RE1	DB	30-MAY-19	16:52:12	ST190530D1-4	NA
190530D1	13	1901028-07RE1	DB	30-MAY-19	17:24:02	ST190530D1-4	NA
190530D1	14	1901028-08RE1	DB	30-MAY-19	17:55:52	ST190530D1-4	NA
190530D1	15	1901028-09RE1	DB	30-MAY-19	18:27:41	ST190530D1-4	NA

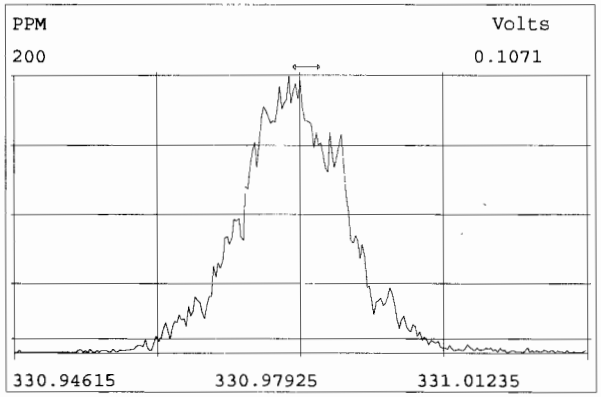
Peak Locate Examination:30-MAY-2019:11:01 File:190530D1

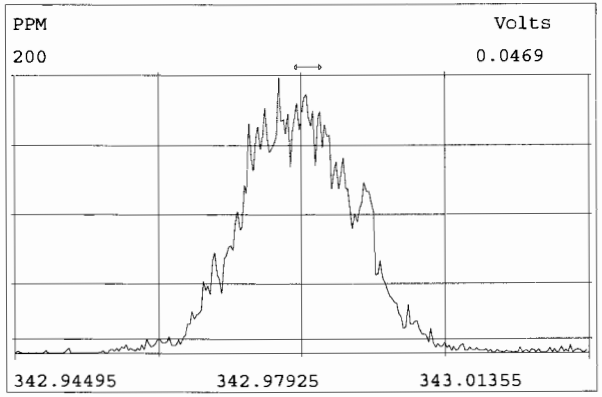
Experiment:TCDF_DB225 Function:1 Reference:PFK

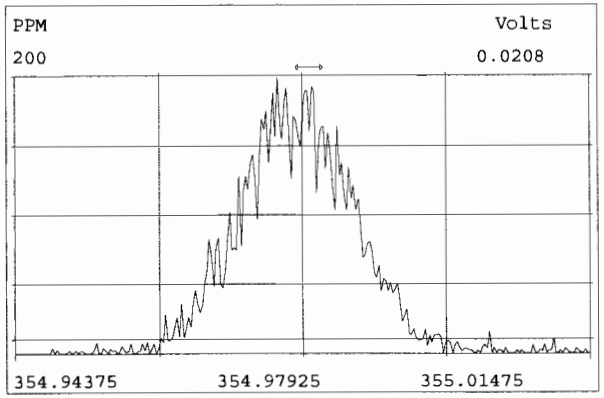


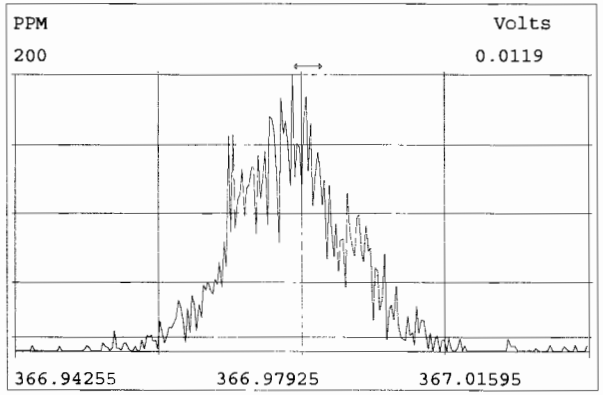


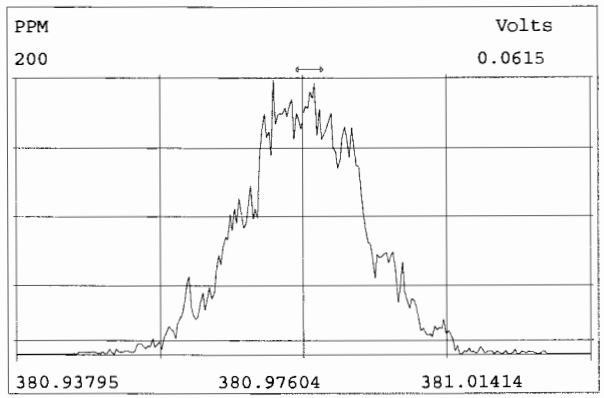




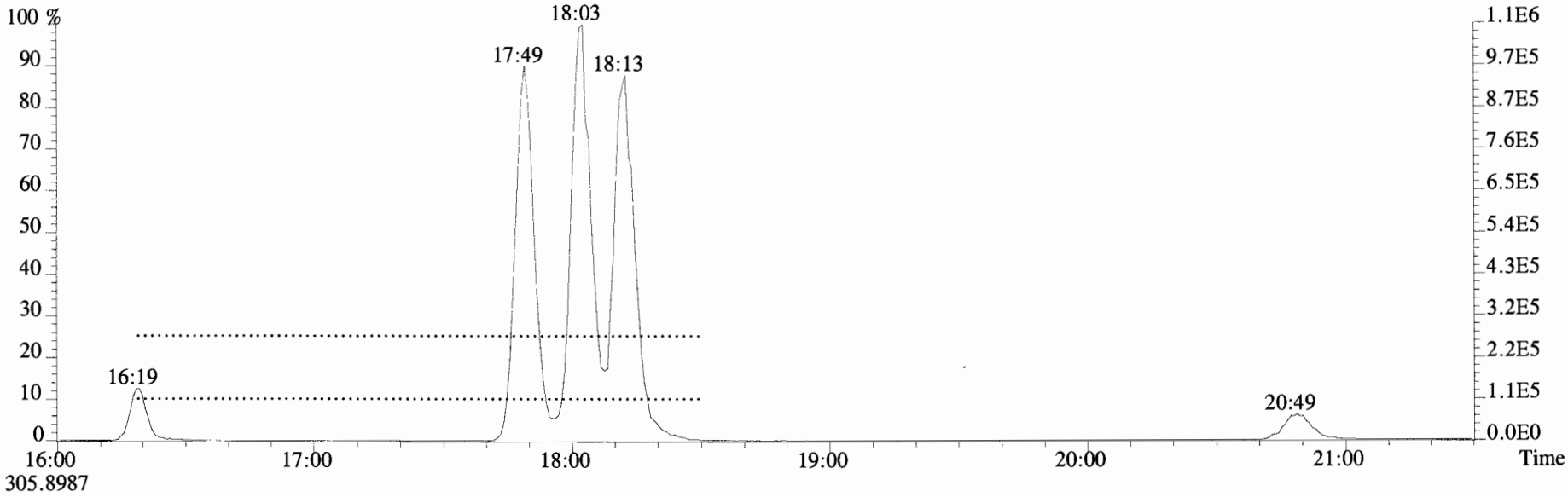




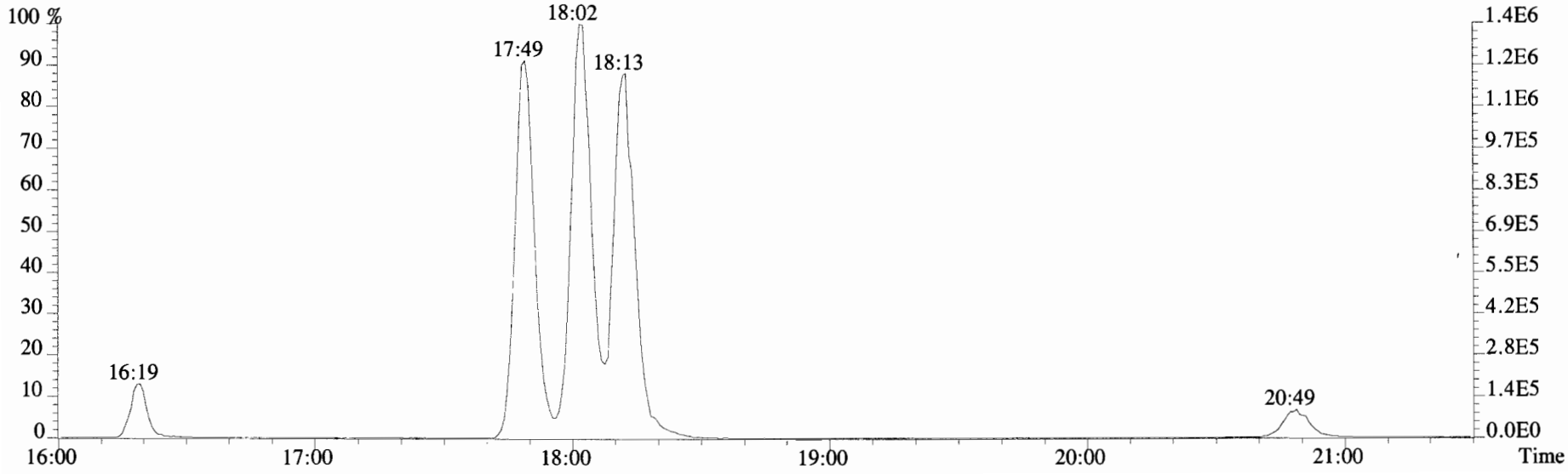




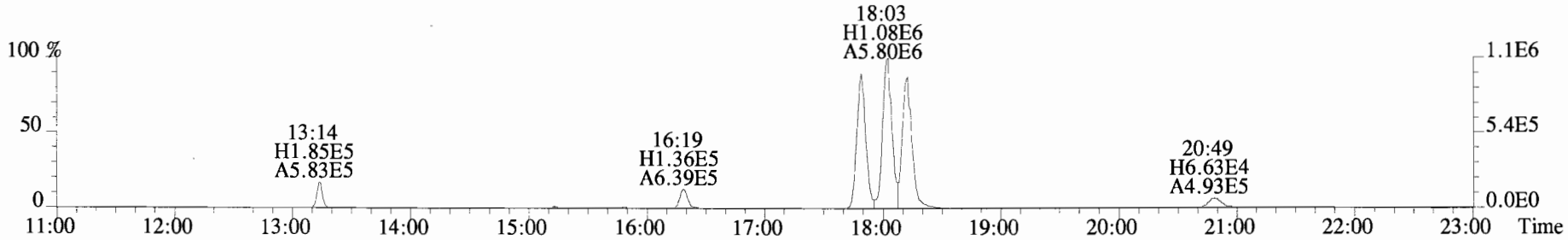
File:190530D1 #1-1559 Acq:30-MAY-2019 11:02:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:CP190530D1-1 DB225 CPSM Exp:TCDF_DB225
303.9016



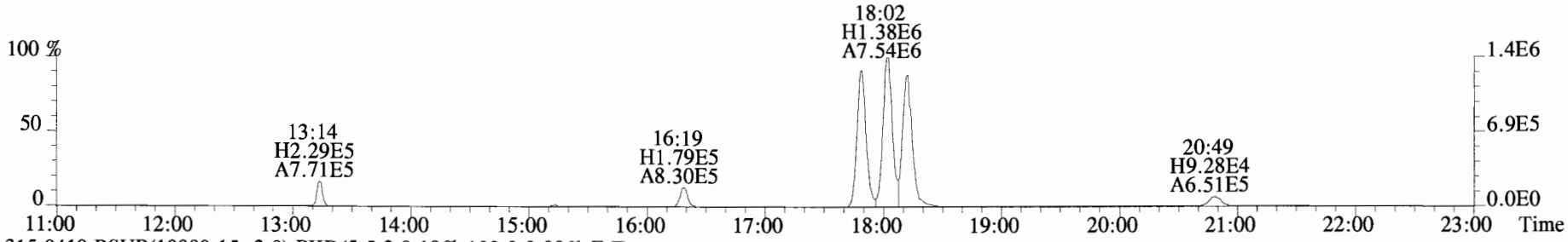
305.8987



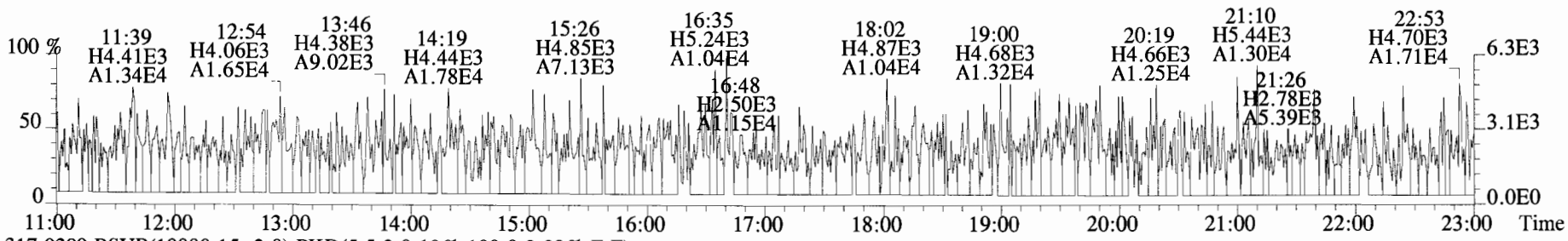
File:190530D1 #1-1682 Acq:30-MAY-2019 11:02:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:CP190530D1-1 DB225 CPSM Exp:TCDF_DB225
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



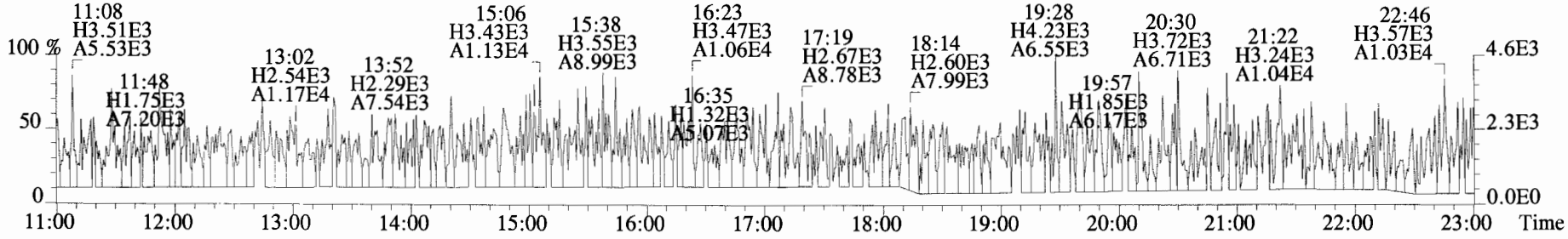
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



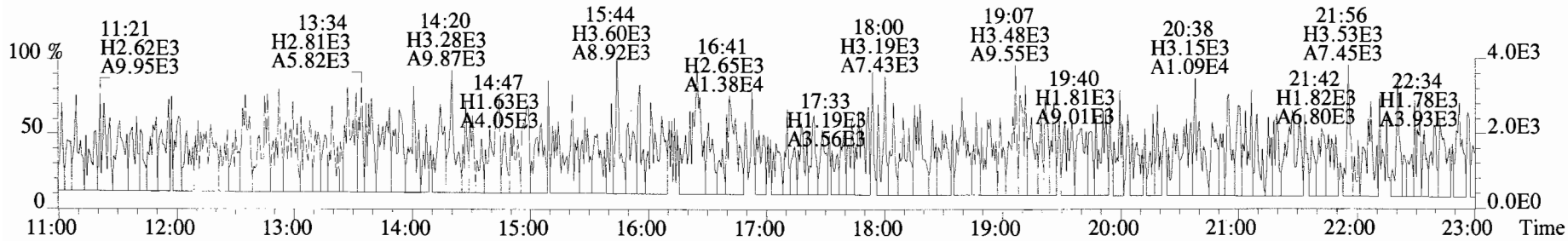
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



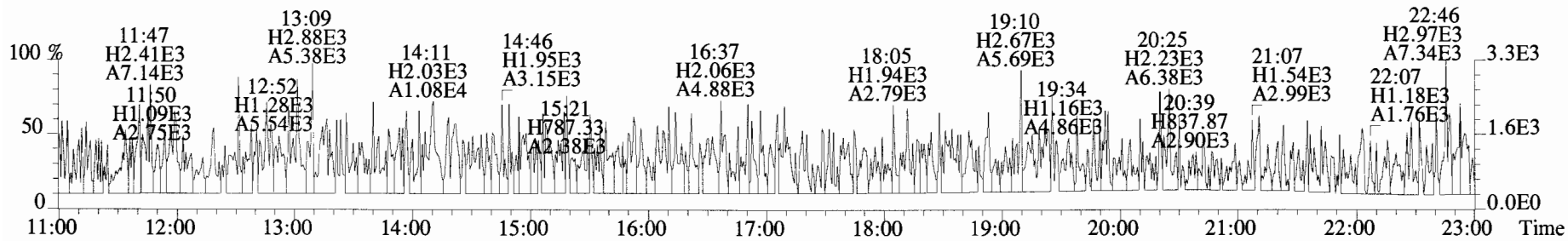
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



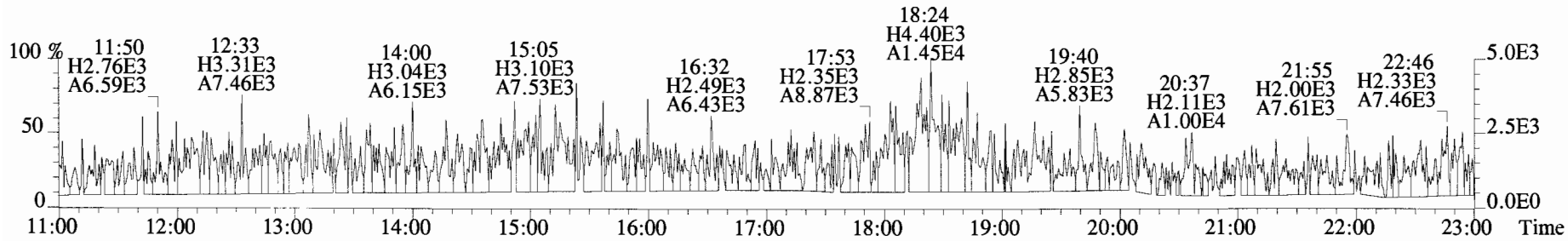
File:190530D1 #1-1682 Acq:30-MAY-2019 11:02:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista_Analytical_Laboratory_VG7 Text:CP190530D1-1 DB225 CPSM Exp:TCDF_DB225
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



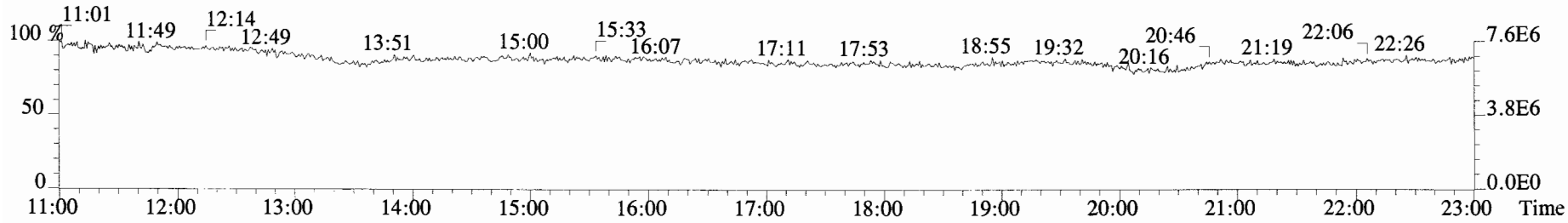
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



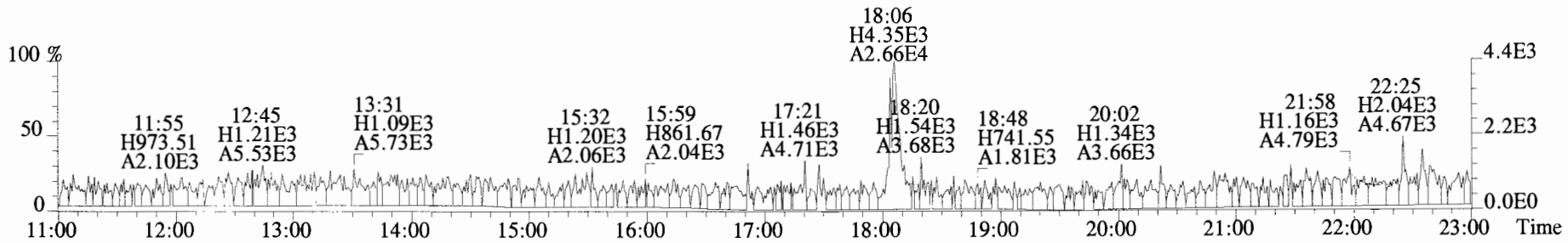
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



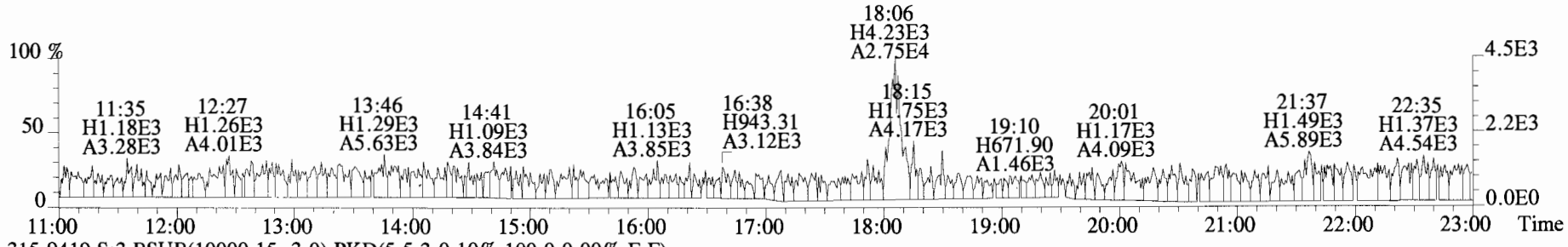
330.9792



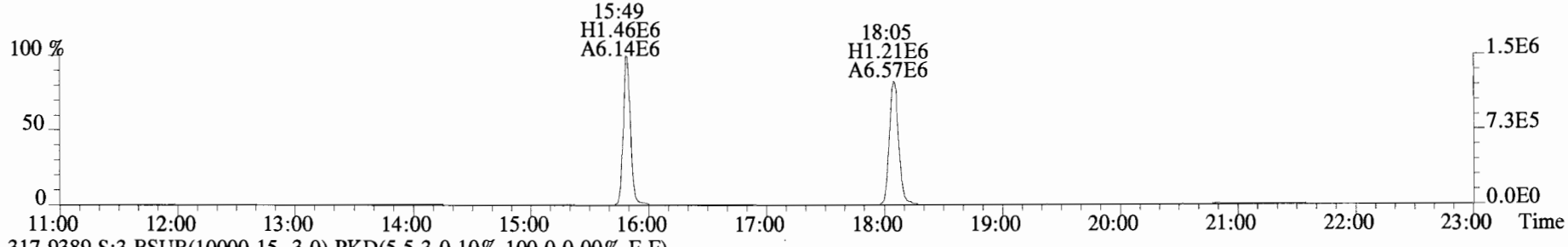
File:190530D1 #1-1682 Acq:30-MAY-2019 12:05:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-1 1613 CS0 19C2201 Exp:TCDF_DB225
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



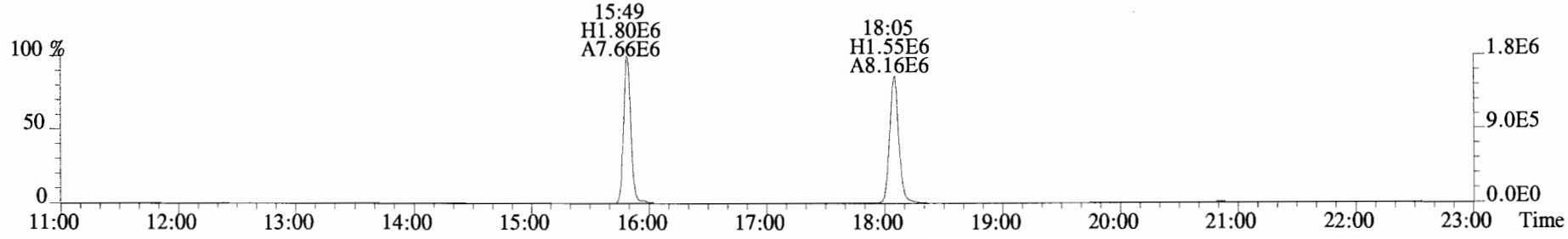
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



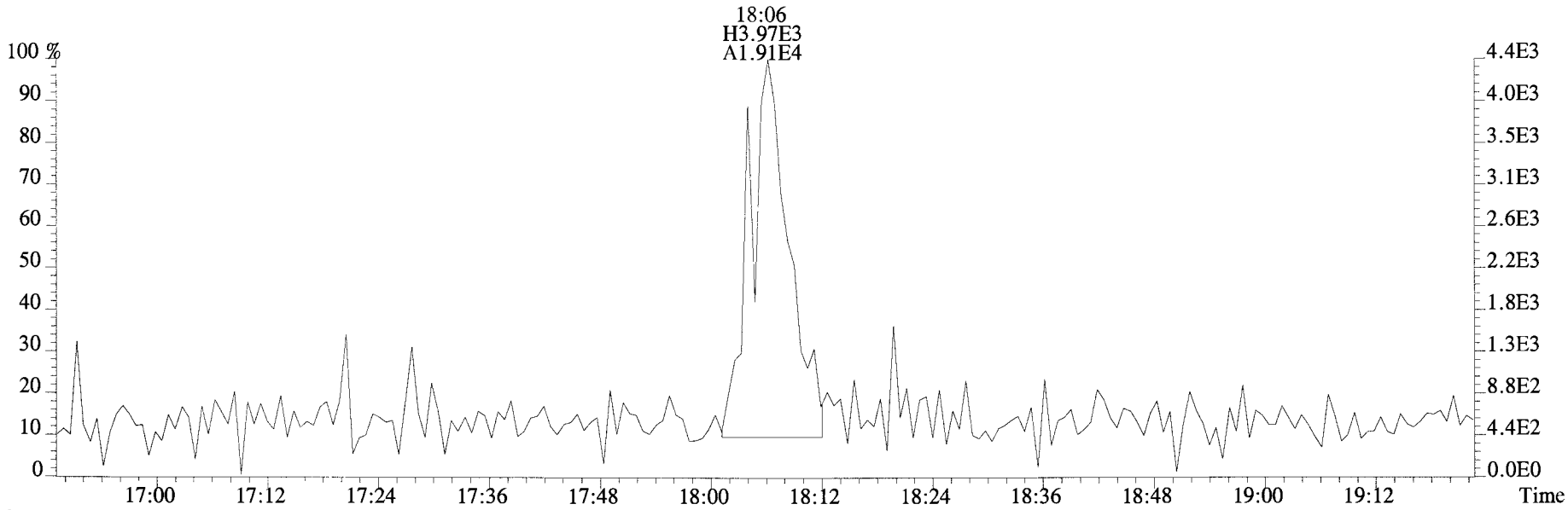
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



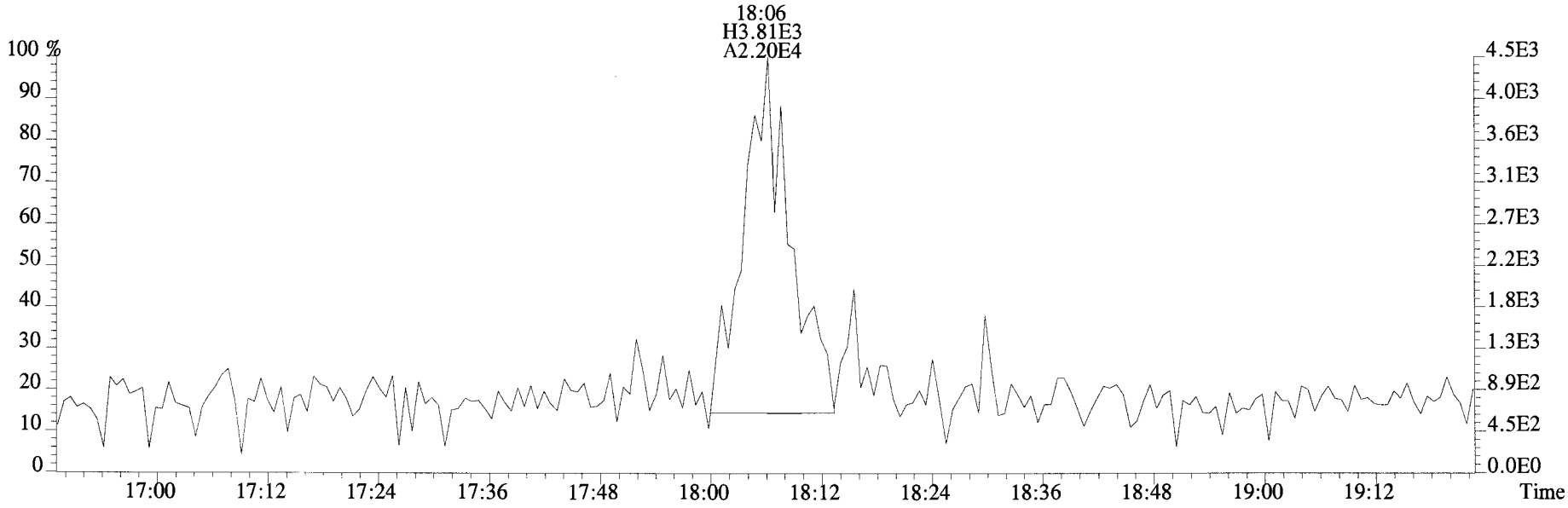
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

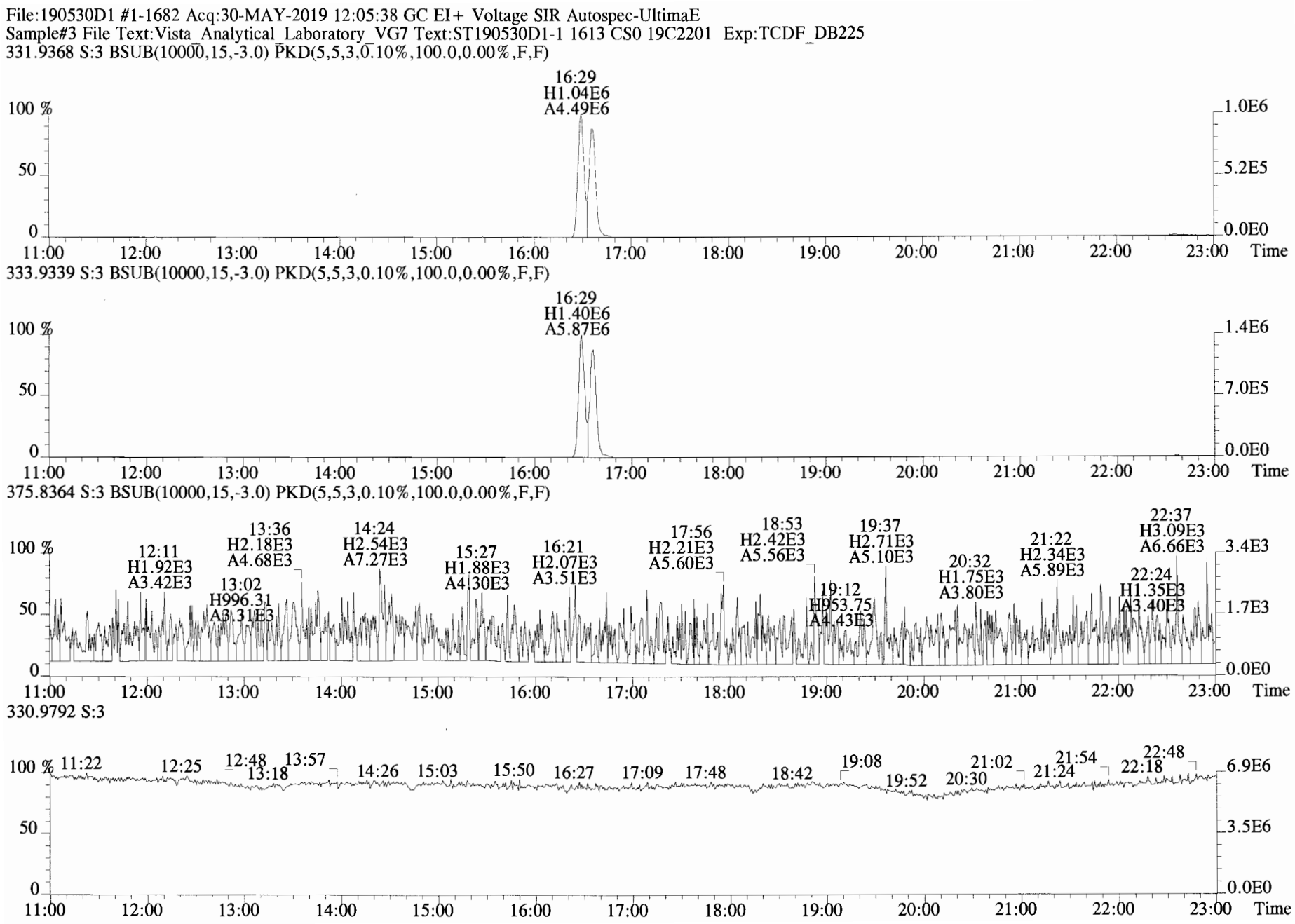


File:190530D1 #1-1682 Acq:30-MAY-2019 12:05:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-1 1613 CS0 19C2201 Exp:TCDF_DB225
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

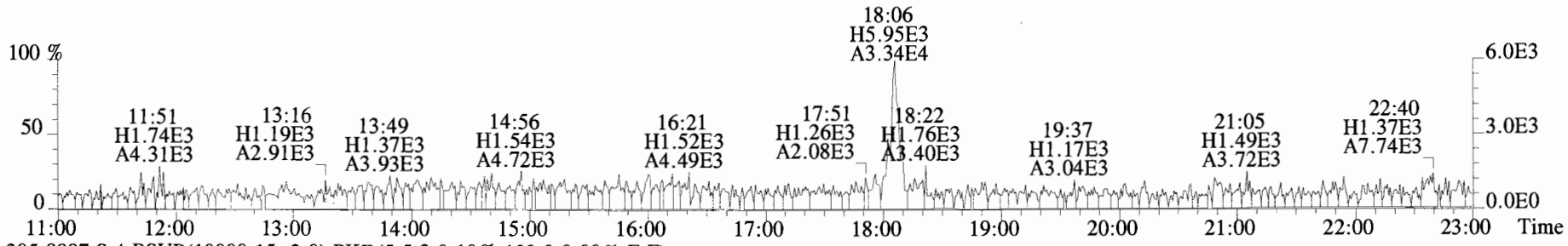


305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

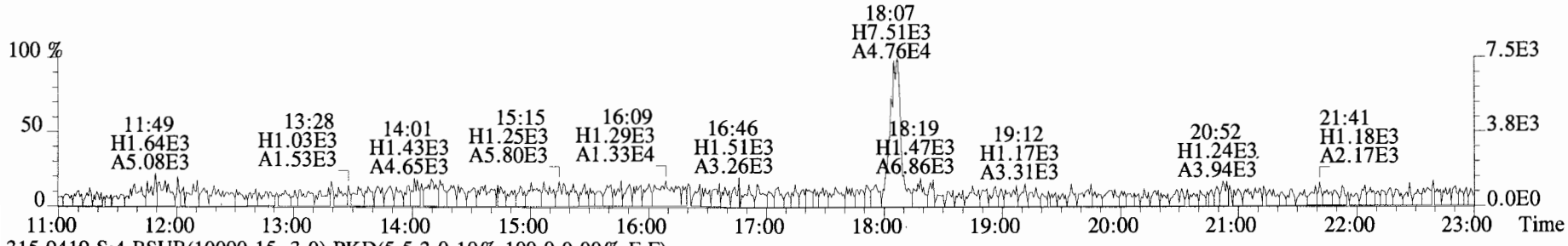



File:190530D1 #1-1682 Acq:30-MAY-2019 12:05:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-1 1613 CS0 19C2201 Exp:TCDF_DB225
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:29
H1.04E6
A4.49E6
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:29
H1.40E6
A5.87E6
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
12:11 H1.92E3 A3.42E3
13:02 H996.31 A3.31E3
13:36 H2.18E3 A4.68E3
14:24 H2.54E3 A7.27E3
15:27 H1.88E3 A4.30E3
16:21 H2.07E3 A3.51E3
17:56 H2.21E3 A5.60E3
18:53 H2.42E3 A5.56E3
19:12 H953.75 A4.43E3
19:37 H2.71E3 A5.10E3
20:32 H1.75E3 A3.80E3
21:22 H2.34E3 A5.89E3
22:24 H1.35E3 A3.40E3
22:37 H3.09E3 A6.66E3
330.9792 S:3
11:22 12:25 12:48 13:18 13:57 14:26 15:03 15:50 16:27 17:09 17:48 18:42 19:08 19:52 20:30 21:02 21:24 21:54 22:18 22:48
100 %
50
0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
1.0E6
5.2E5
0.0E0
1.4E6
7.0E5
3.4E3
1.7E3
6.9E6
3.5E6

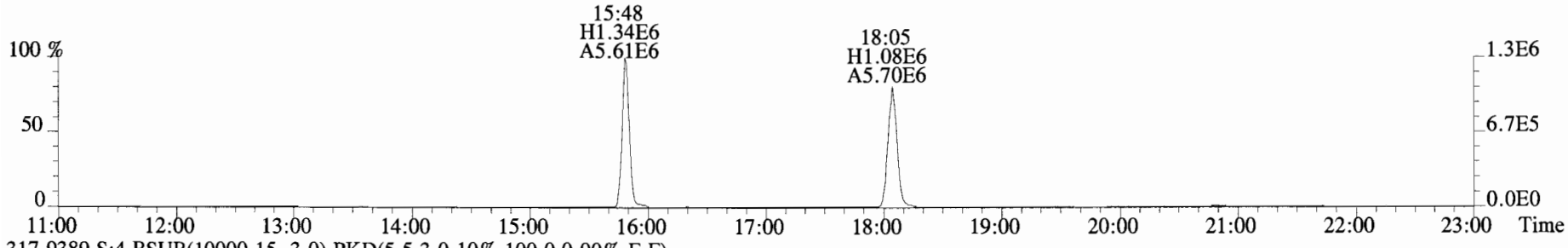
File:190530D1 #1-1683 Acq:30-MAY-2019 12:37:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-2 1613 CS1 19C2202 Exp:TCDF_DB225
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



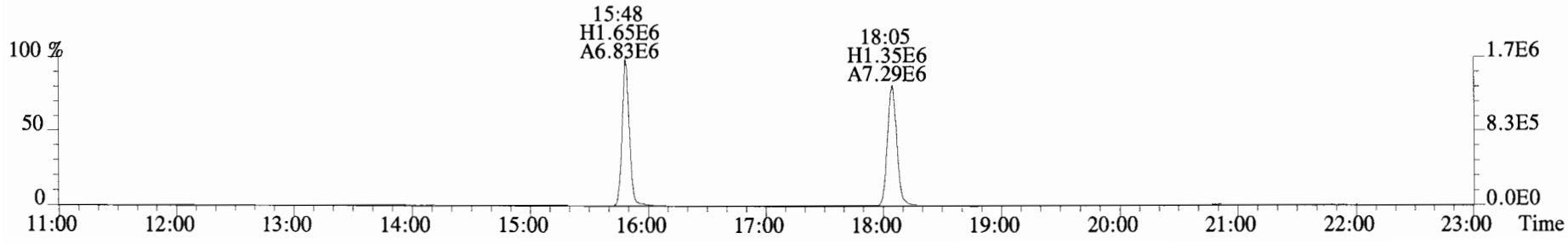
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



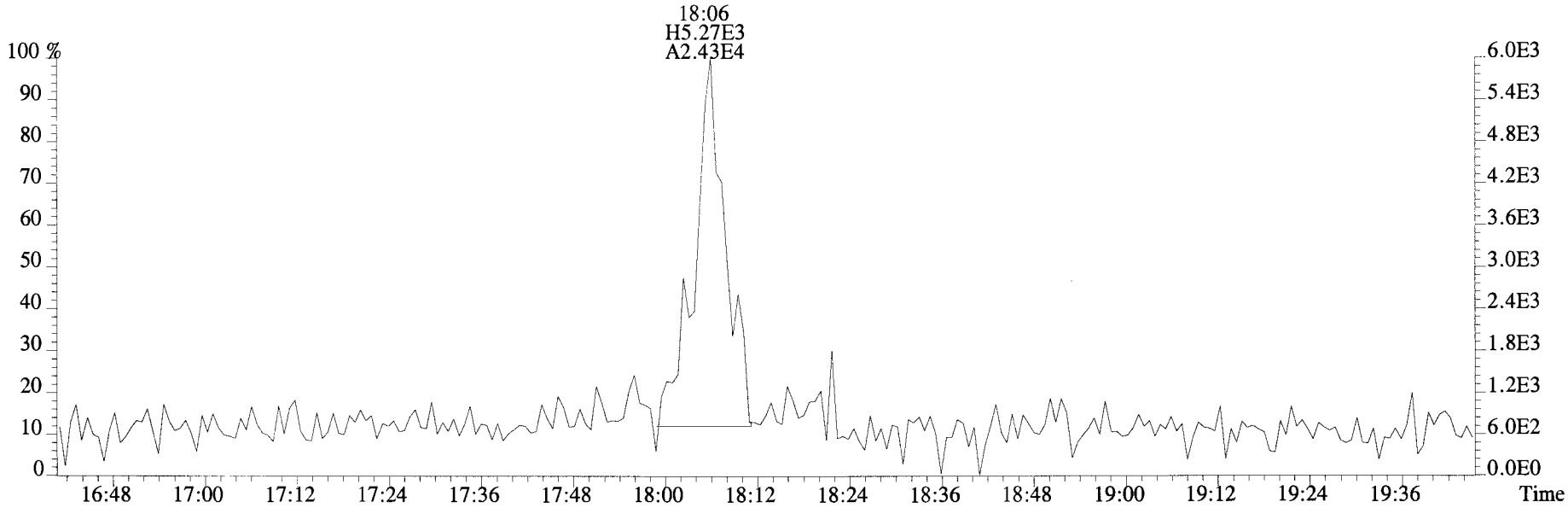
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



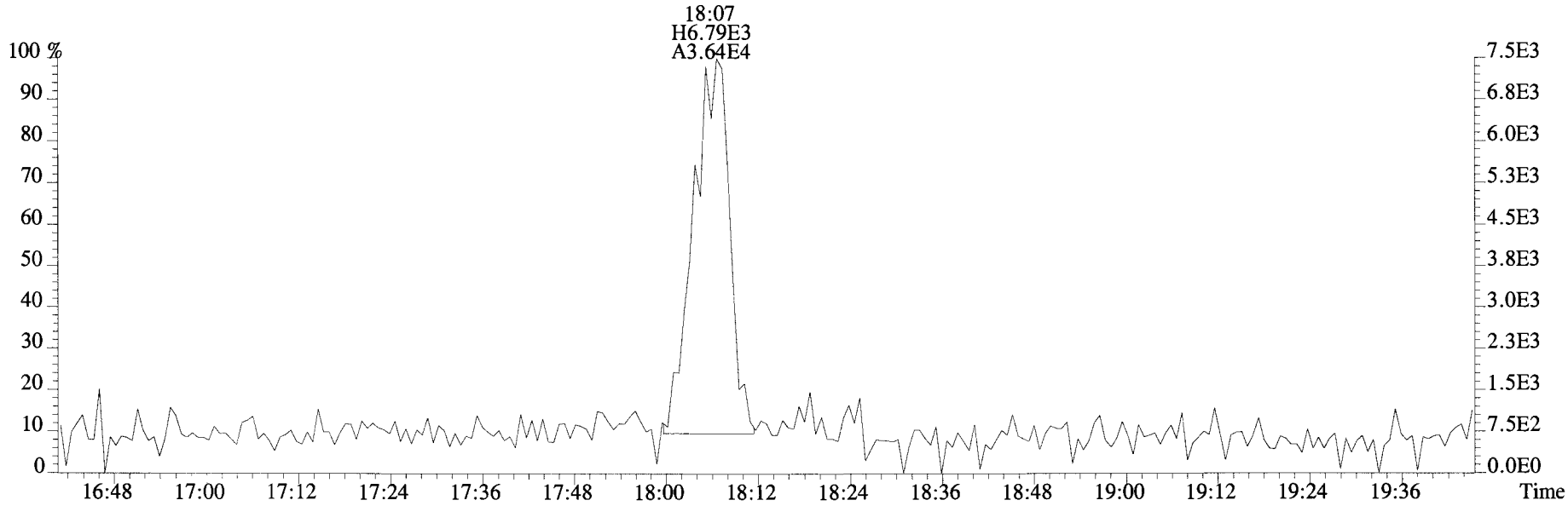
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

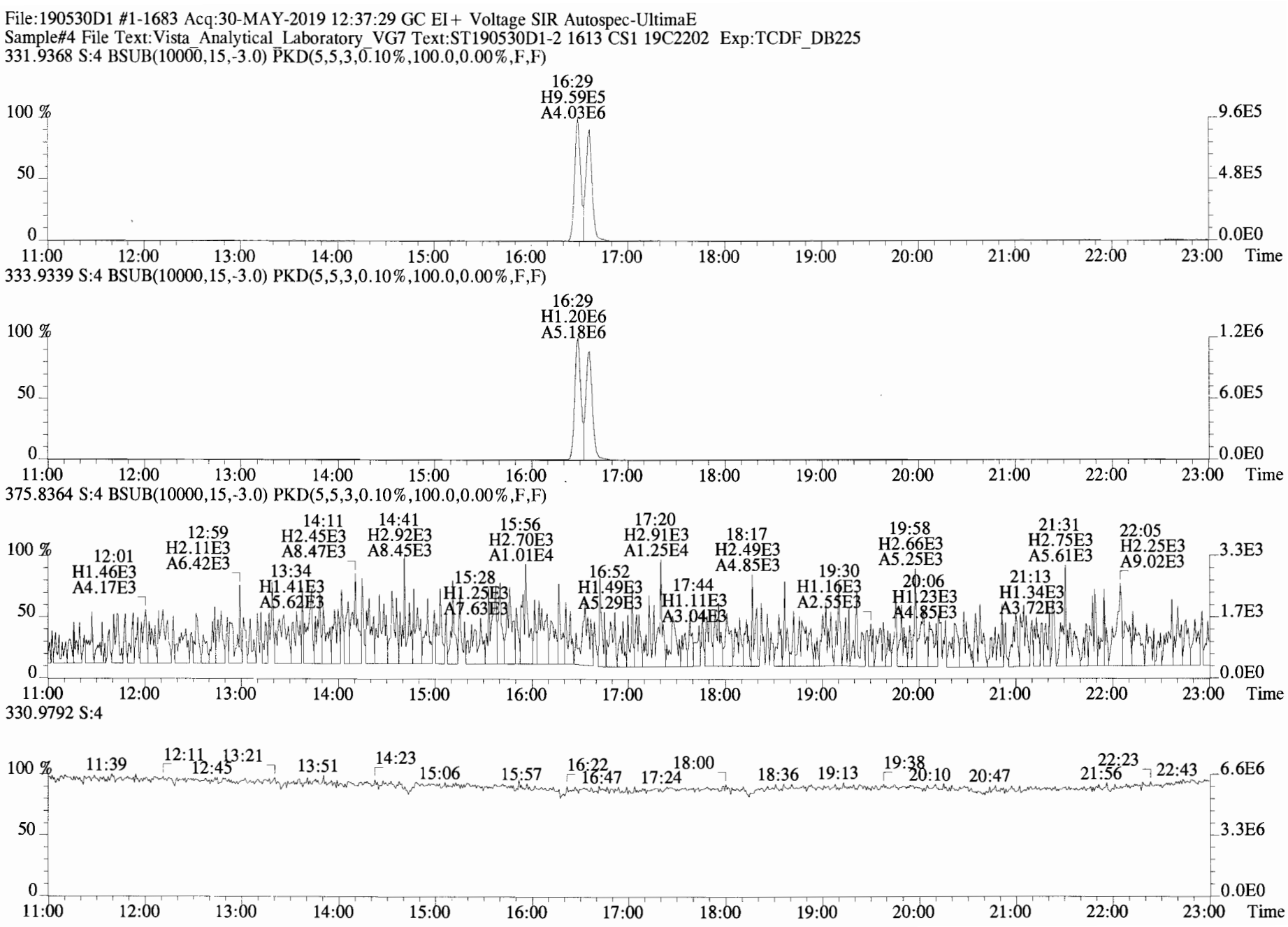


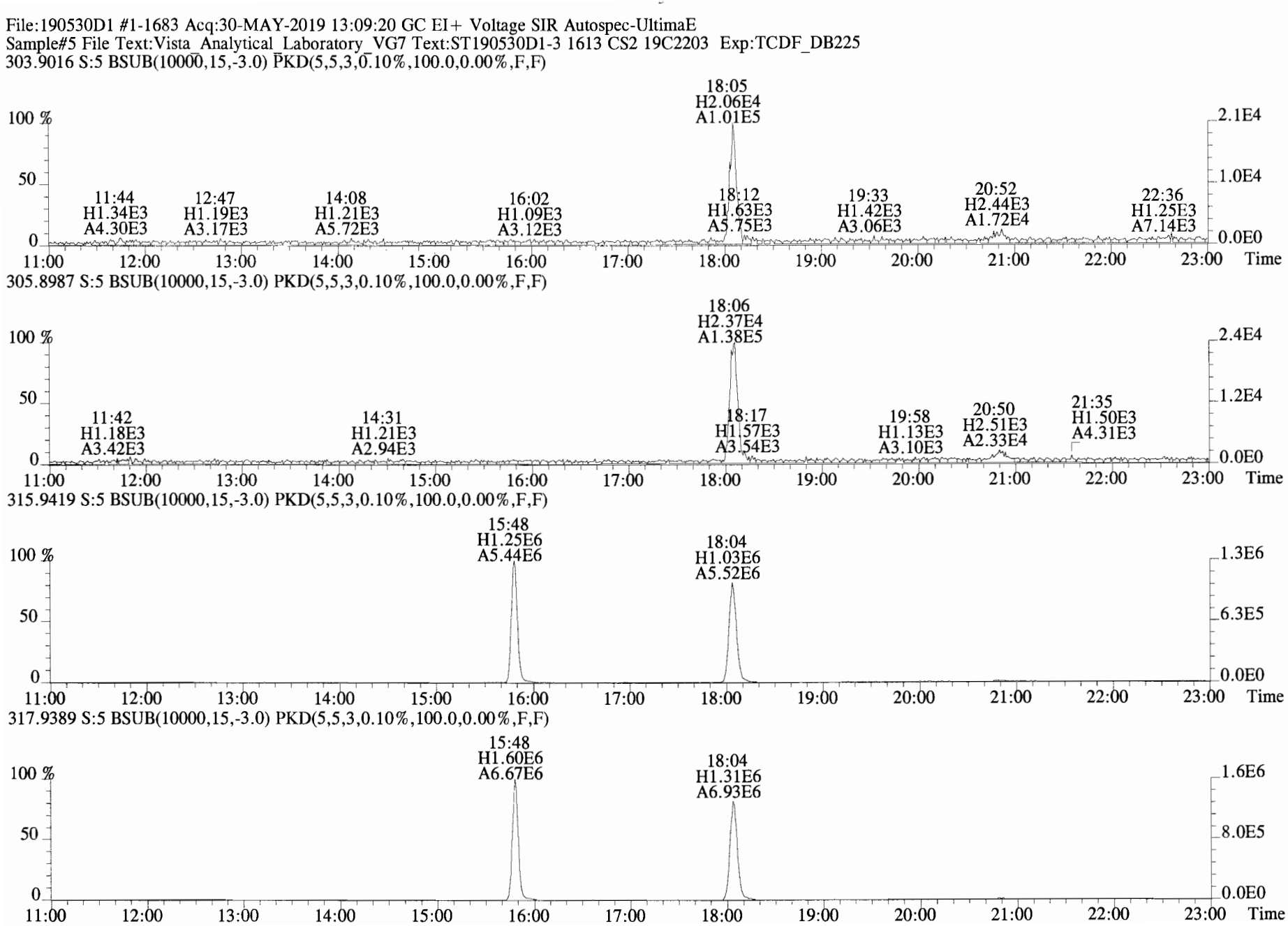
File:190530D1 #1-1683 Acq:30-MAY-2019 12:37:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-2 1613 CS1 19C2202 Exp:TCDF_DB225
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



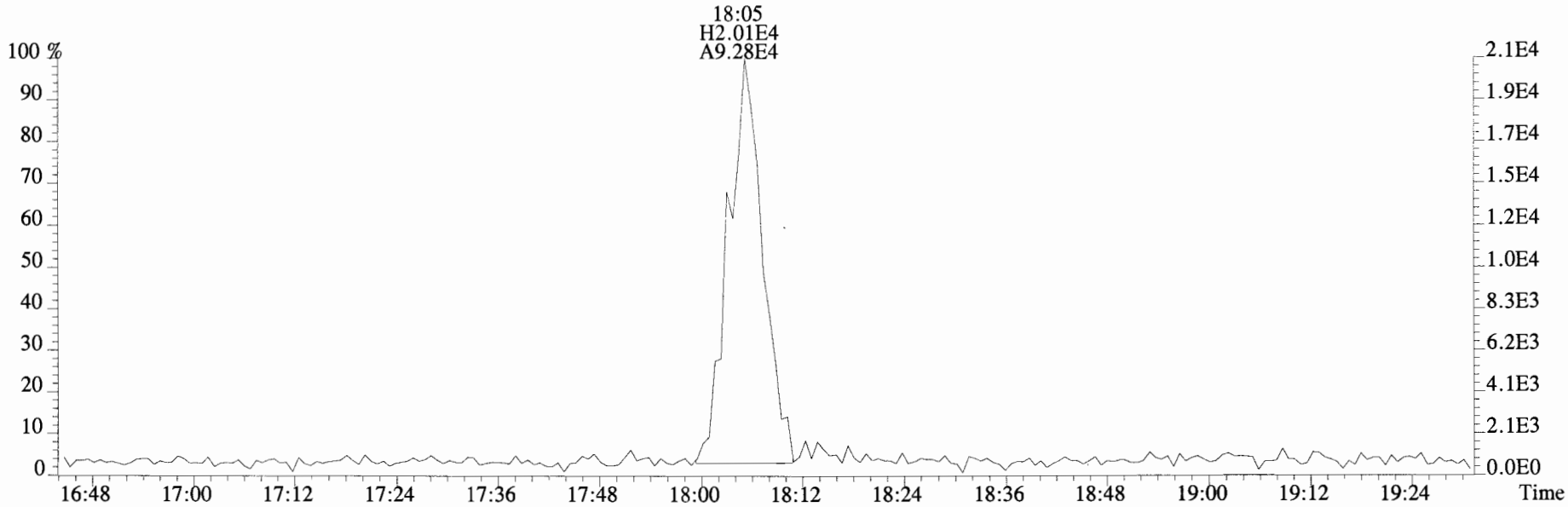
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



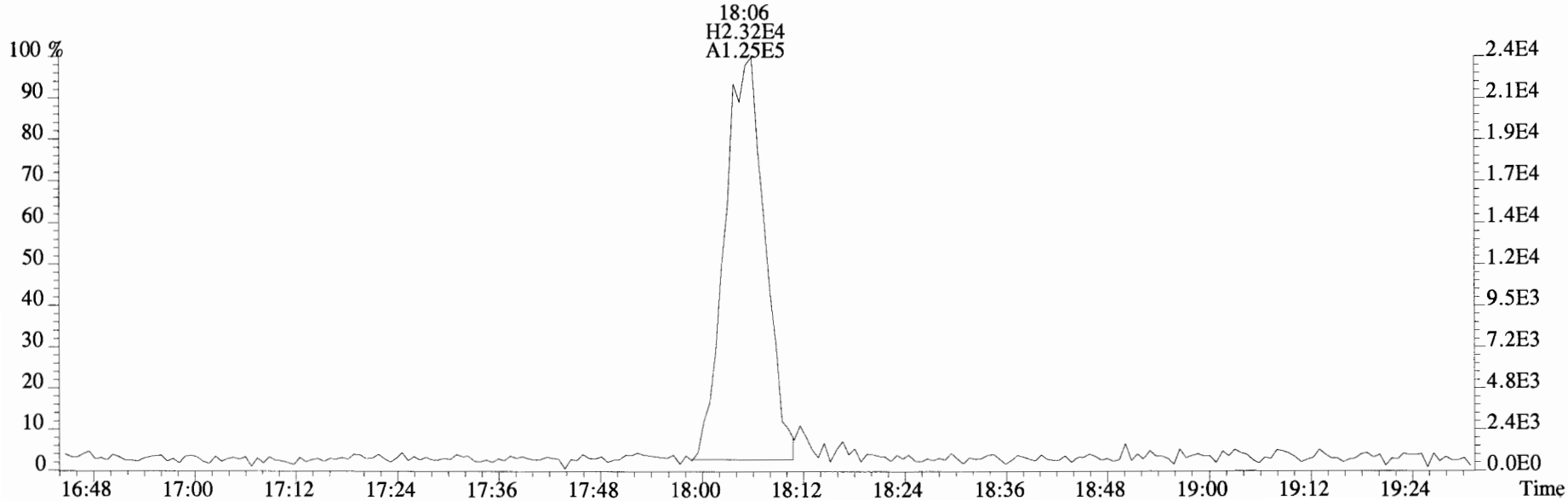

File:190530D1 #1-1683 Acq:30-MAY-2019 12:37:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-2 1613 CS1 19C2202 Exp:TCDF_DB225
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:29
H9.59E5
A4.03E6
9.6E5
4.8E5
0.0E0
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:29
H1.20E6
A5.18E6
1.2E6
6.0E5
0.0E0
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
12:01
H1.46E3
A4.17E3
12:59
H2.11E3
A6.42E3
13:34
H1.41E3
A5.62E3
14:11
H2.45E3
A8.47E3
14:41
H2.92E3
A8.45E3
15:28
H1.25E3
A7.63E3
15:56
H2.70E3
A1.01E4
16:52
H1.49E3
A5.29E3
17:20
H2.91E3
A1.25E4
17:44
H1.11E3
A3.04E3
18:17
H2.49E3
A4.85E3
19:30
H1.16E3
A2.55E3
19:58
H2.66E3
A5.25E3
20:06
H1.23E3
A4.85E3
21:13
H1.34E3
A3.72E3
21:31
H2.75E3
A5.61E3
22:05
H2.25E3
A9.02E3
3.3E3
1.7E3
0.0E0
330.9792 S:4
11:39
12:11
12:45
13:21
13:51
14:23
15:06
15:57
16:22
16:47
17:24
18:00
18:36
19:13
19:38
20:10
20:47
21:56
22:23
22:43
6.6E6
3.3E6
0.0E0
100 %
50
0
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time


File:190530D1 #1-1683 Acq:30-MAY-2019 13:09:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-3 1613 CS2 19C2203 Exp:TCDF_DB225
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
18:05 H2.06E4 A1.01E5
11:44 H1.34E3 A4.30E3
12:47 H1.19E3 A3.17E3
14:08 H1.21E3 A5.72E3
16:02 H1.09E3 A3.12E3
18:12 H1.63E3 A5.75E3
19:33 H1.42E3 A3.06E3
20:52 H2.44E3 A1.72E4
22:36 H1.25E3 A7.14E3
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
18:06 H2.37E4 A1.38E5
11:42 H1.18E3 A3.42E3
14:31 H1.21E3 A2.94E3
18:17 H1.57E3 A3.54E3
19:58 H1.13E3 A3.10E3
20:50 H2.51E3 A2.33E4
21:35 H1.50E3 A4.31E3
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:48 H1.25E6 A5.44E6
18:04 H1.03E6 A5.52E6
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:48 H1.60E6 A6.67E6
18:04 H1.31E6 A6.93E6
100 %
50
0
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time
2.1E4
1.0E4
0.0E0
2.4E4
1.2E4
1.3E6
6.3E5
1.6E6
8.0E5

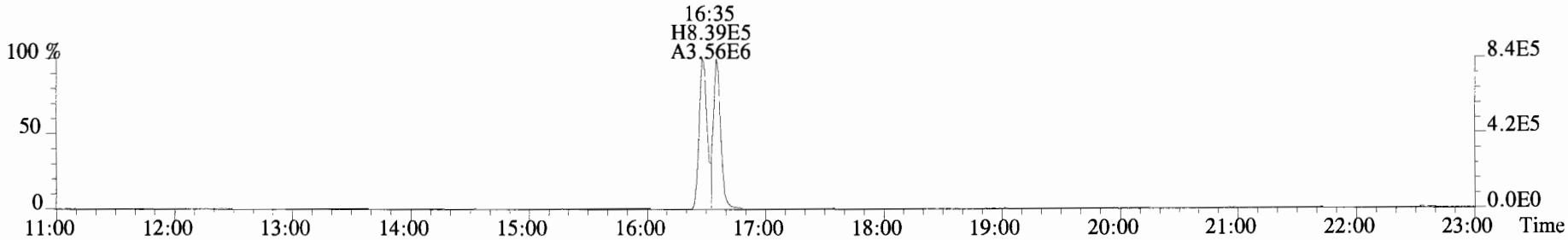
File:190530D1 #1-1683 Acq:30-MAY-2019 13:09:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-3 1613 CS2 19C2203 Exp:TCDF_DB225
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



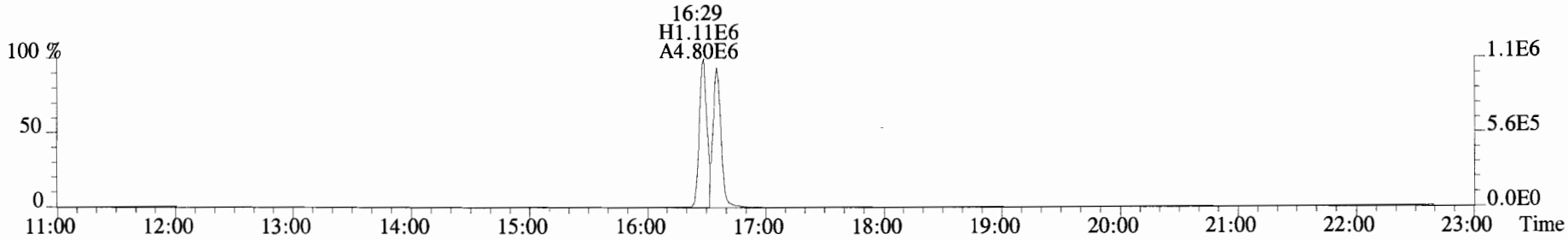
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



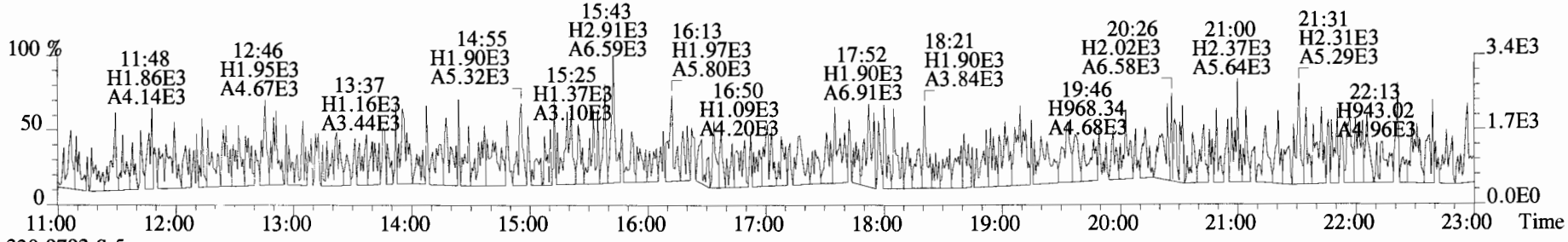
File:190530D1 #1-1683 Acq:30-MAY-2019 13:09:20 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-3 1613 CS2 19C2203 Exp:TCDF_DB225
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



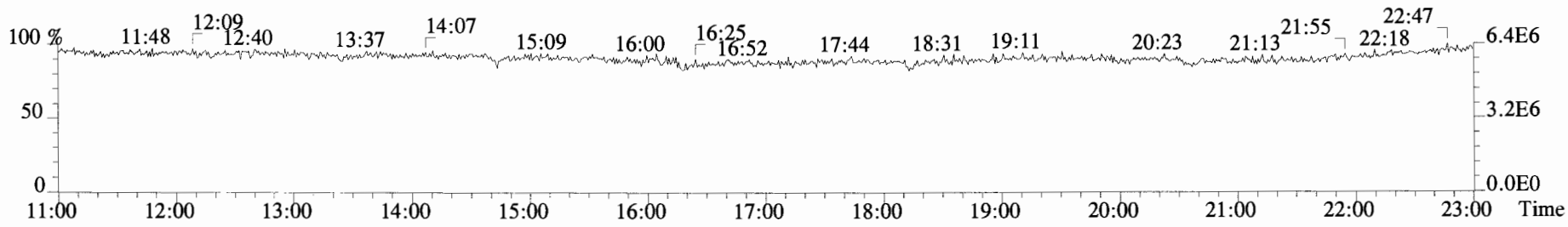
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



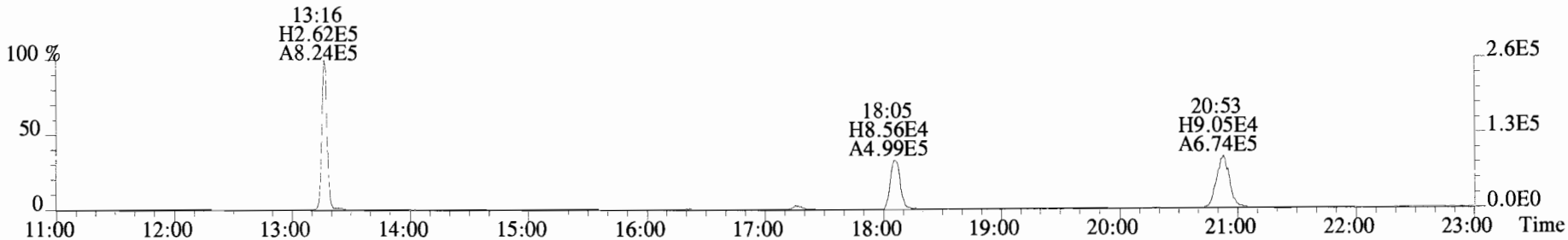
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



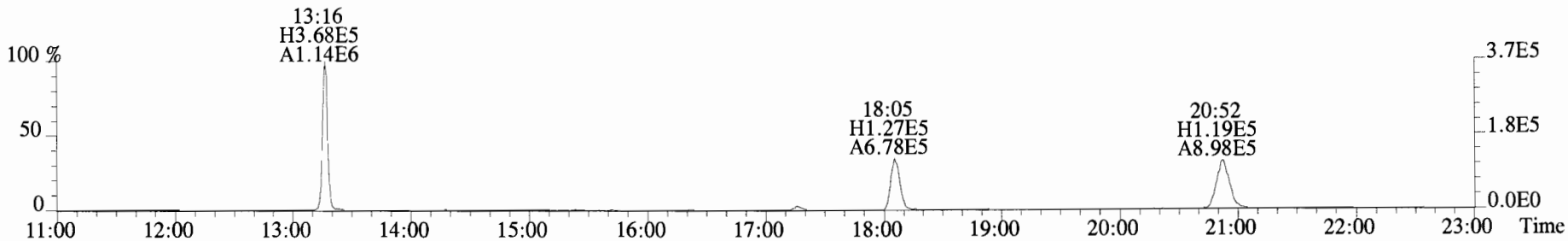
330.9792 S:5



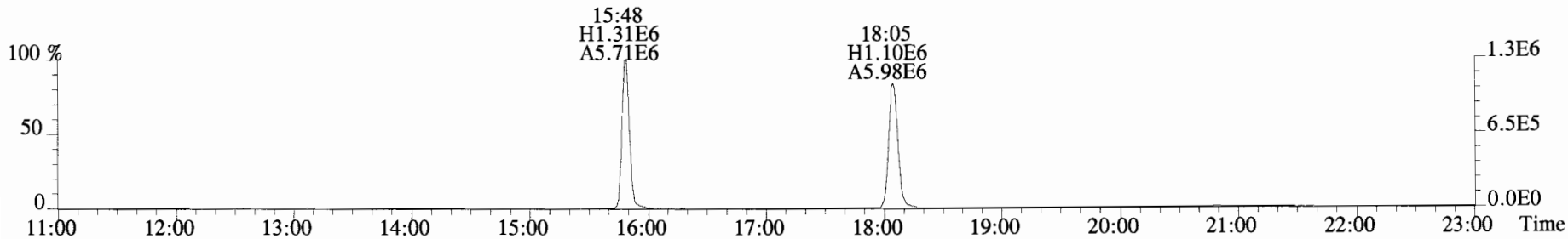
File:190530D1 #1-1682 Acq:30-MAY-2019 13:41:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-4 1613 CS3 19C2204 Exp:TCDF_DB225
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



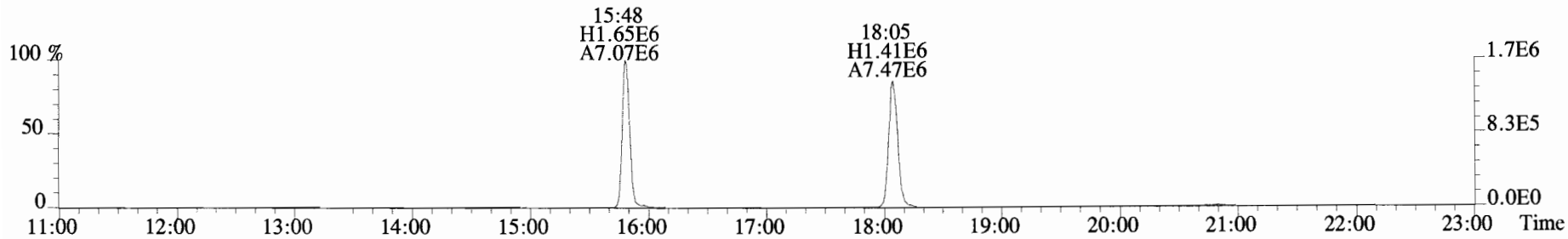
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



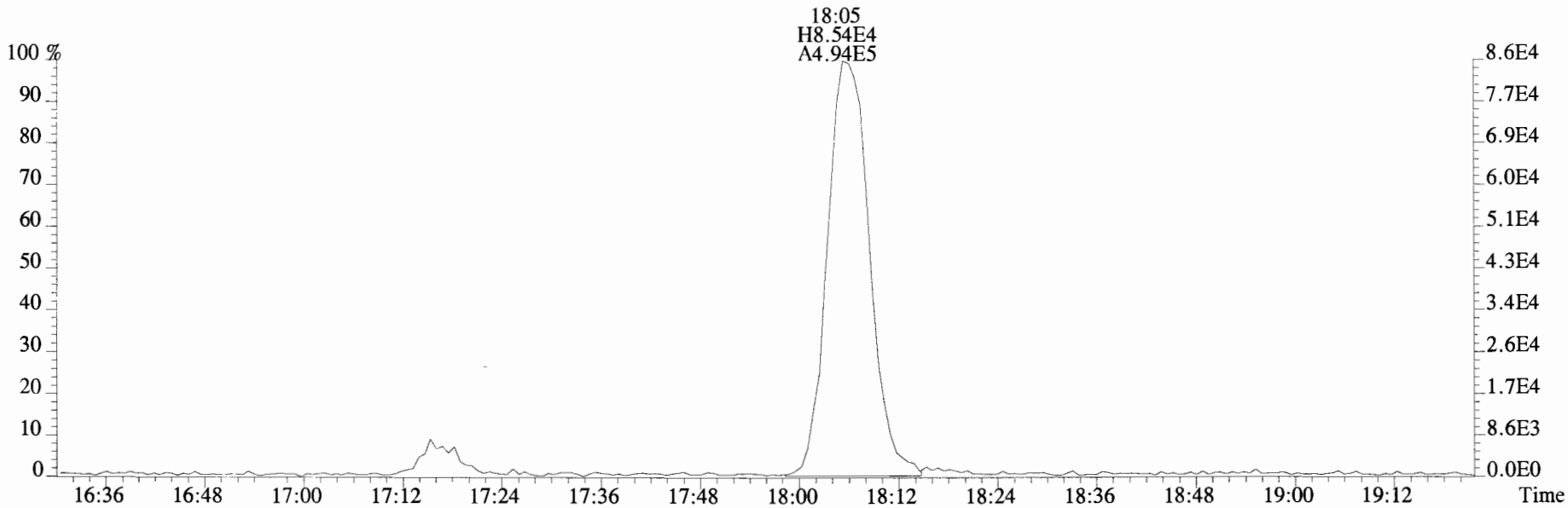
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



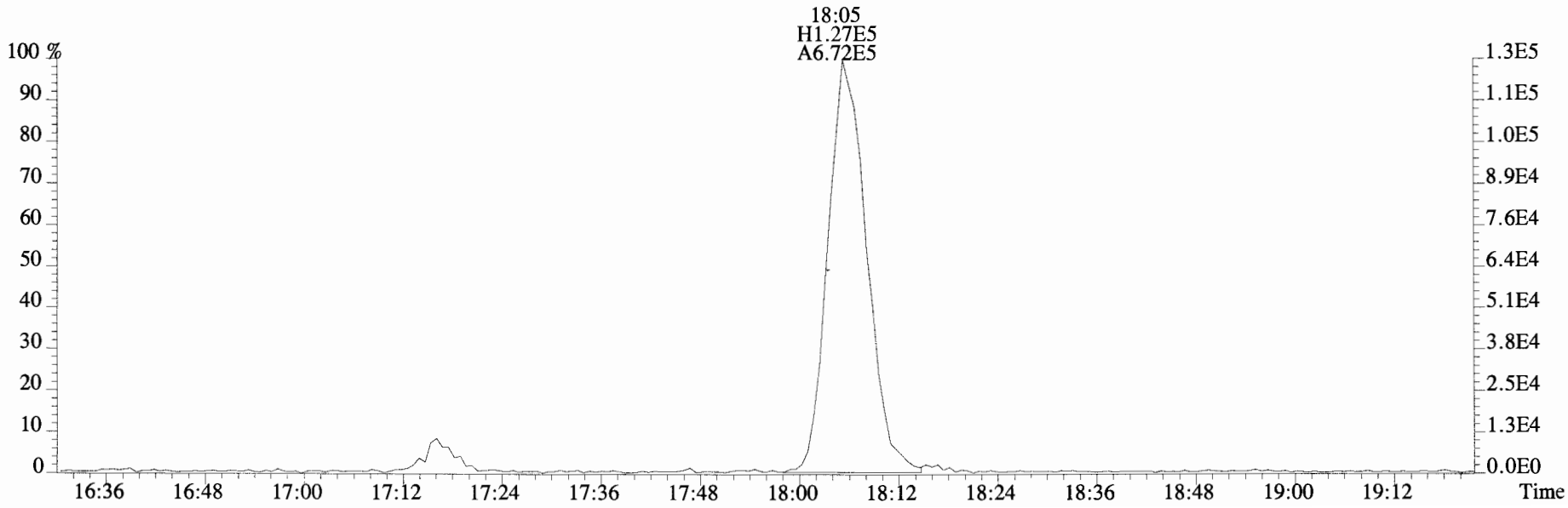
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

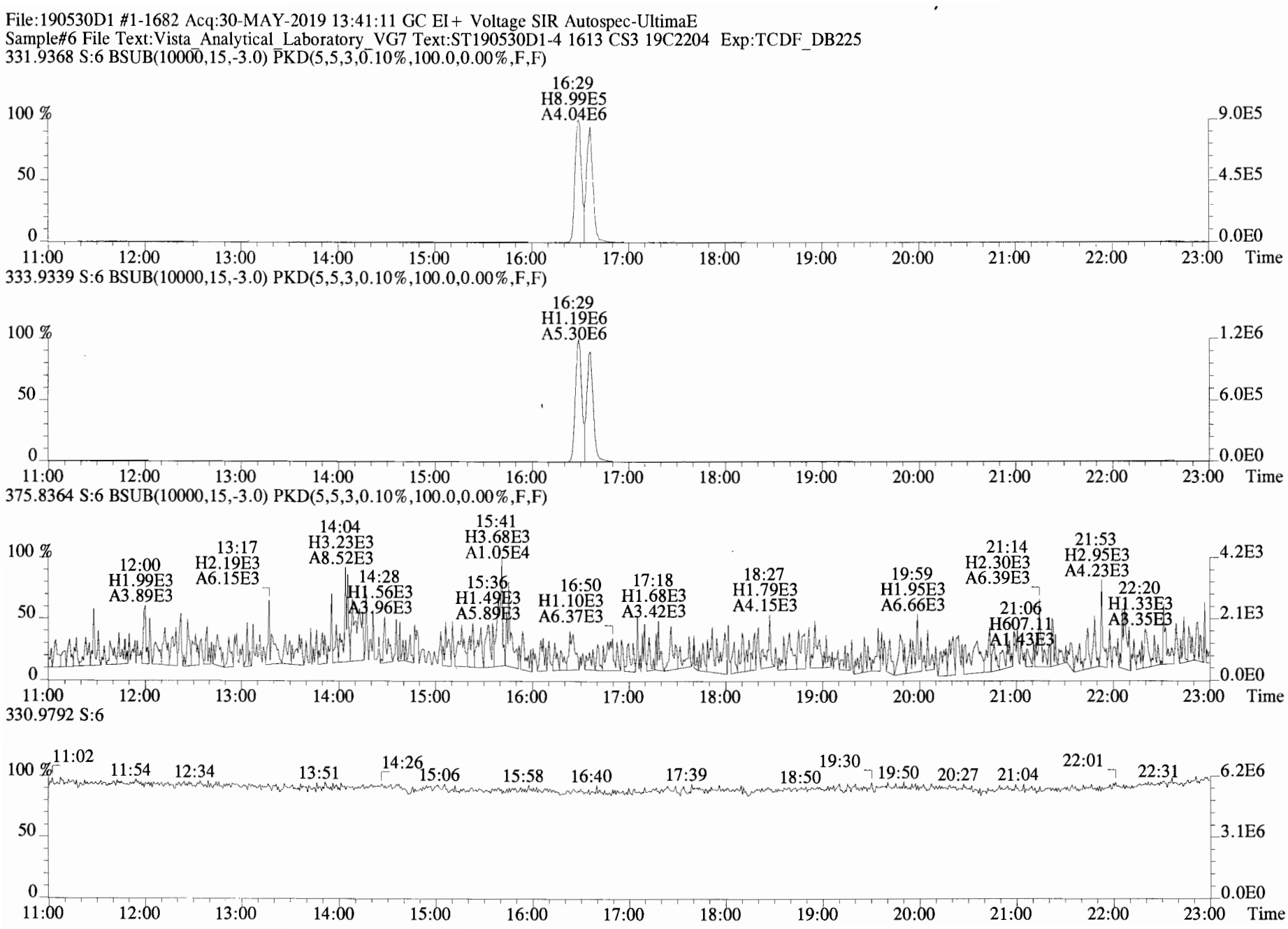


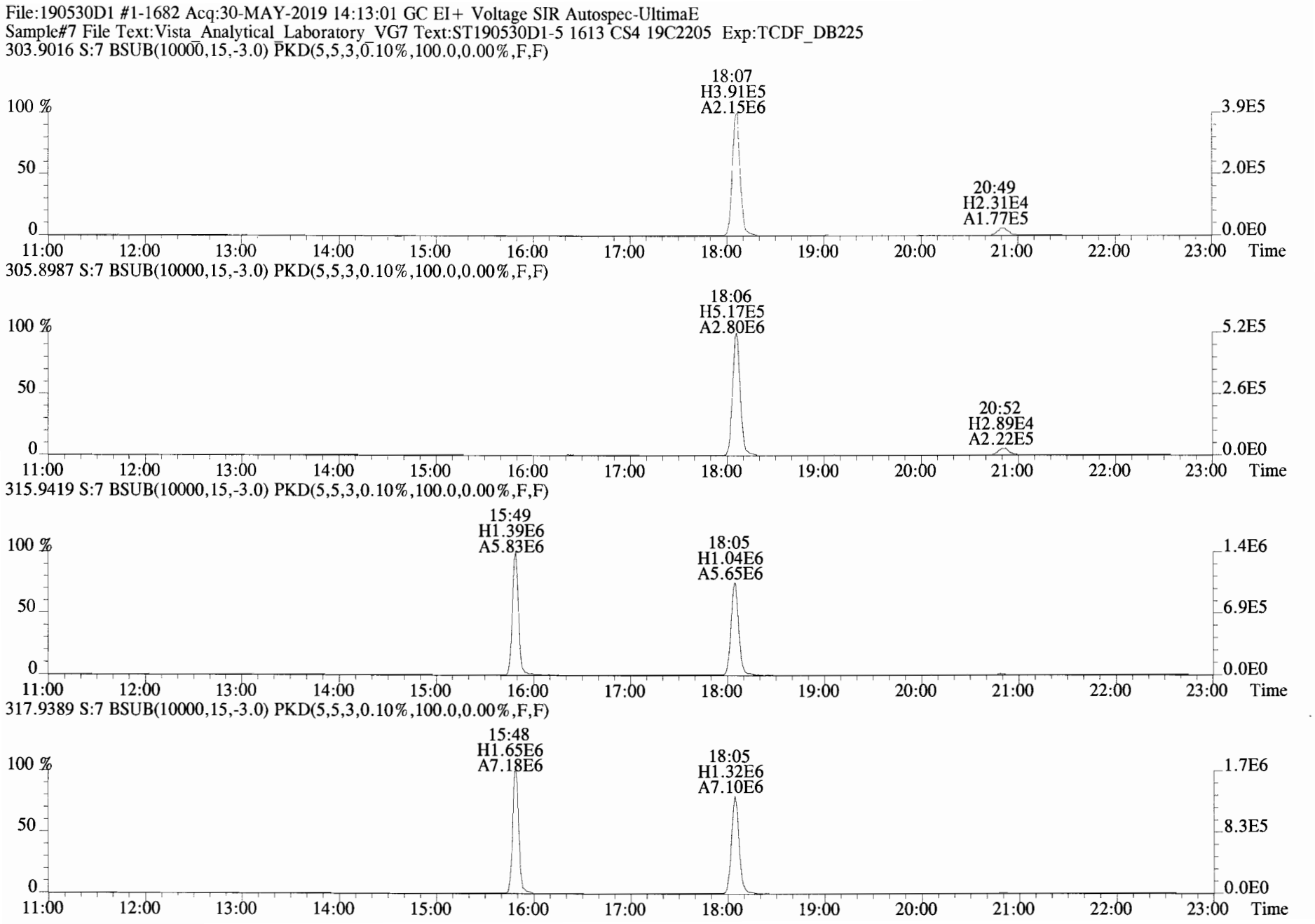
File:190530D1 #1-1682 Acq:30-MAY-2019 13:41:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-4 1613 CS3 19C2204 Exp:TCDF_DB225
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

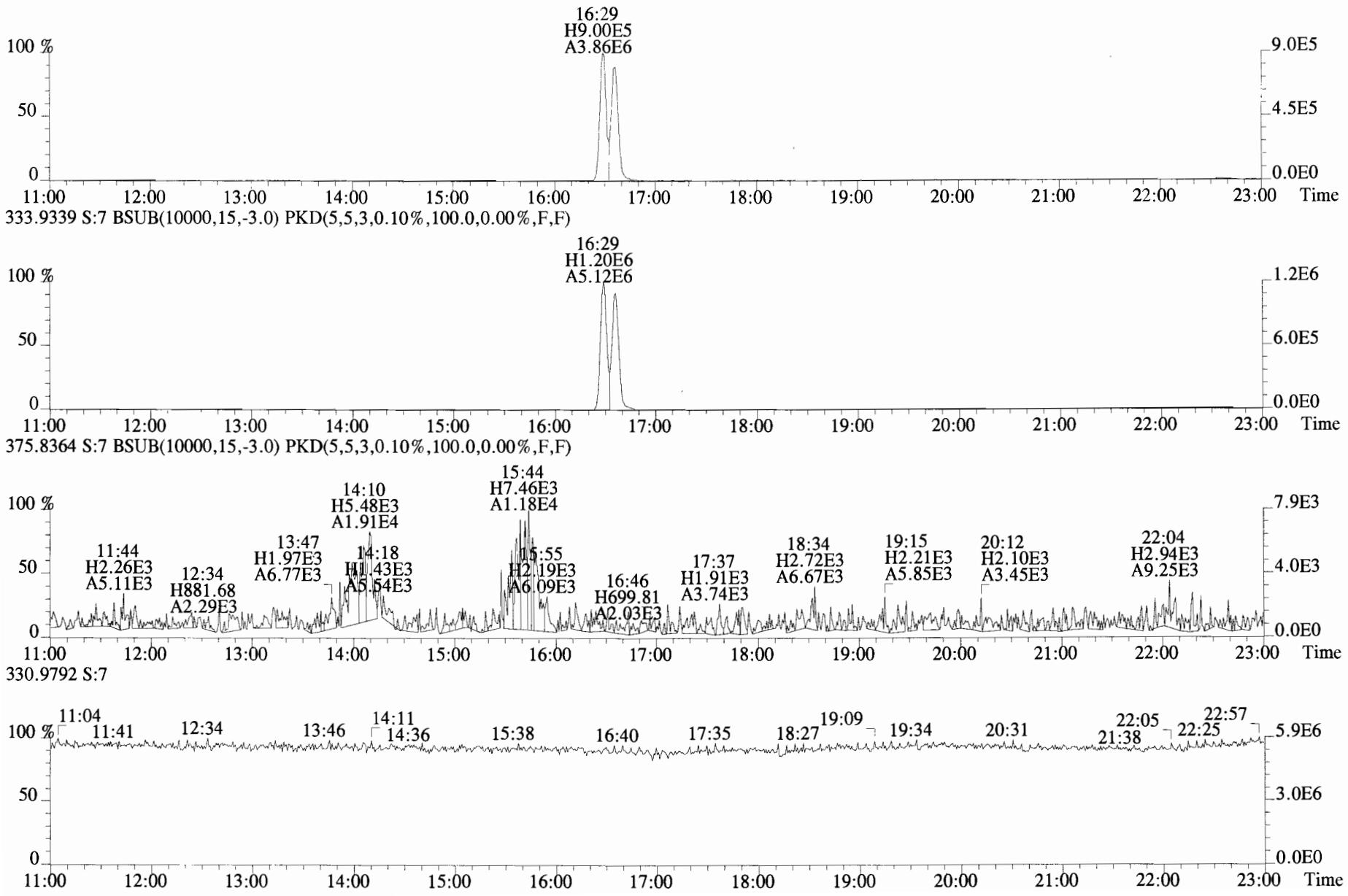


305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

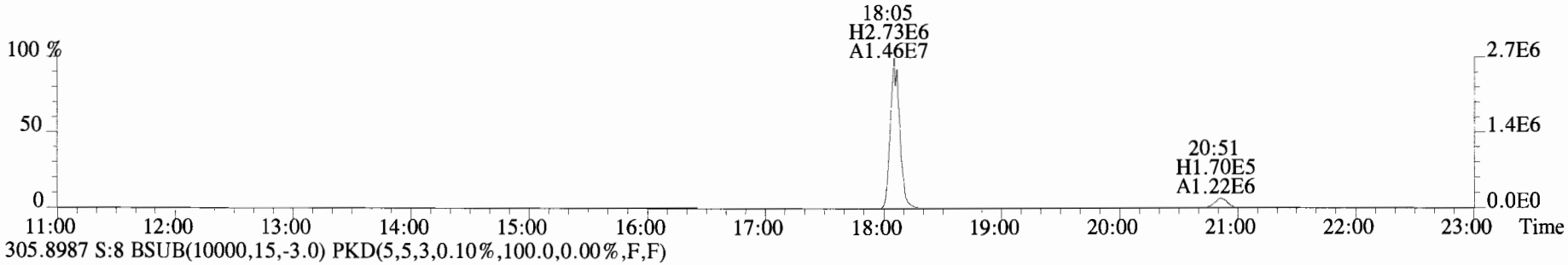



File:190530D1 #1-1682 Acq:30-MAY-2019 13:41:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-4 1613 CS3 19C2204 Exp:TCDF_DB225
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:29
H8.99E5
A4.04E6
100 %
50
0
9.0E5
4.5E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:29
H1.19E6
A5.30E6
1.2E6
6.0E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
12:00 H1.99E3 A3.89E3
13:17 H2.19E3 A6.15E3
14:04 H3.23E3 A8.52E3
14:28 H1.56E3 A3.96E3
15:41 H3.68E3 A1.05E4
15:36 H1.49E3 A5.89E3
16:50 H1.10E3 A6.37E3
17:18 H1.68E3 A3.42E3
18:27 H1.79E3 A4.15E3
19:59 H1.95E3 A6.66E3
21:14 H2.30E3 A6.39E3
21:06 H607.11 A1.43E3
21:53 H2.95E3 A4.23E3
22:20 H1.33E3 A3.35E3
4.2E3
2.1E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
330.9792 S:6
11:02 11:54 12:34 13:51 14:26 15:06 15:58 16:40 17:39 18:50 19:30 19:50 20:27 21:04 22:01 22:31
6.2E6
3.1E6
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time

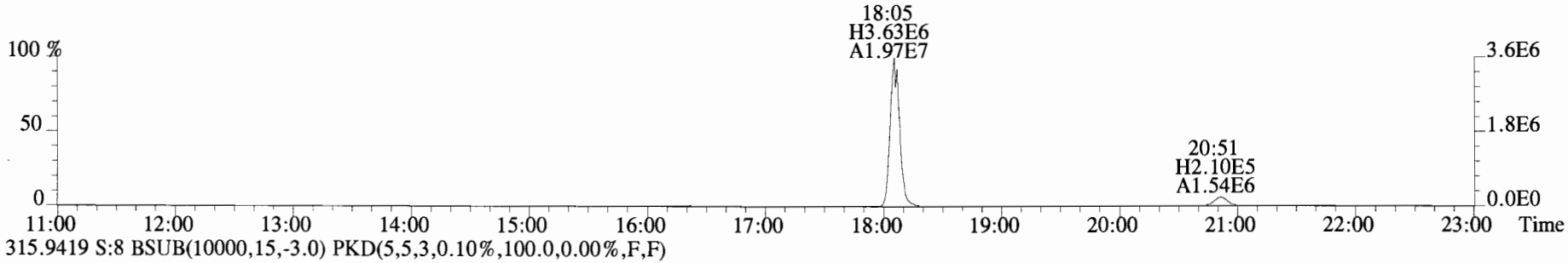

File:190530D1 #1-1682 Acq:30-MAY-2019 14:13:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-5 1613 CS4 19C2205 Exp:TCDF_DB225
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
18:07
H3.91E5
A2.15E6
20:49
H2.31E4
A1.77E5
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
18:06
H5.17E5
A2.80E6
20:52
H2.89E4
A2.22E5
315.9419 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:49
H1.39E6
A5.83E6
18:05
H1.04E6
A5.65E6
317.9389 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:48
H1.65E6
A7.18E6
18:05
H1.32E6
A7.10E6
100 %
50
0
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time
3.9E5
2.0E5
0.0E0
5.2E5
2.6E5
1.4E6
6.9E5
1.7E6
8.3E5


File:190530D1 #1-1682 Acq:30-MAY-2019 14:13:01 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-5 1613 CS4 19C2205 Exp:TCDF_DB225
331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:29
H9.00E5
A3.86E6
100 %
50
0
9.0E5
4.5E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
333.9339 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
16:29
H1.20E6
A5.12E6
100 %
50
0
1.2E6
6.0E5
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
375.8364 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)
15:44
H7.46E3
A1.18E4
14:10
H5.48E3
A1.91E4
11:44
H2.26E3
A5.11E3
12:34
H881.68
A2.29E3
13:47
H1.97E3
A6.77E3
14:18
H1.43E3
A5.54E3
15:55
H2.19E3
A6.09E3
16:46
H699.81
A2.03E3
17:37
H1.91E3
A3.74E3
18:34
H2.72E3
A6.67E3
19:15
H2.21E3
A5.85E3
20:12
H2.10E3
A3.45E3
22:04
H2.94E3
A9.25E3
100 %
50
0
7.9E3
4.0E3
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time
330.9792 S:7
11:04
11:41
12:34
13:46
14:11
14:36
15:38
16:40
17:35
18:27
19:09
19:34
20:31
21:38
22:05
22:25
22:57
100 %
50
0
5.9E6
3.0E6
0.0E0
11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 Time

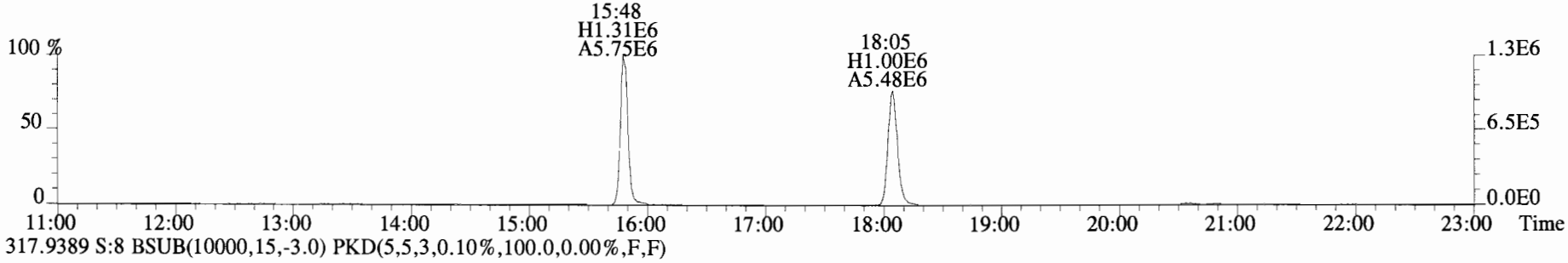
File:190530D1 #1-1682 Acq:30-MAY-2019 14:44:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-6 1613 CS5 19C2206 Exp:TCDF_DB225
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



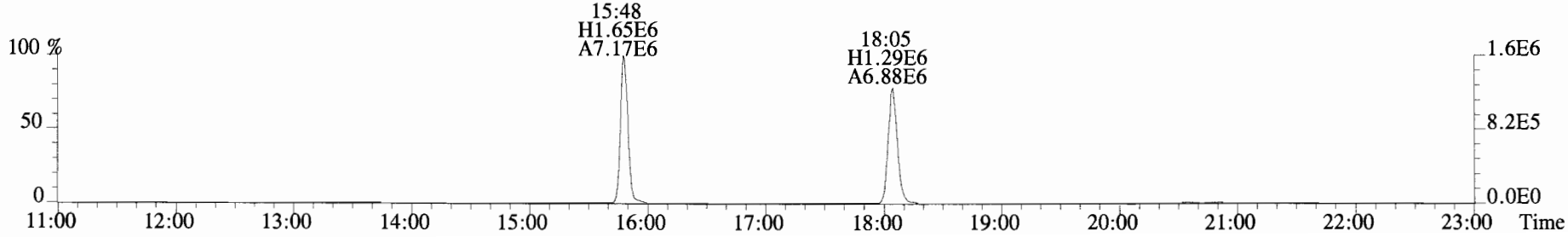
305.8987 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



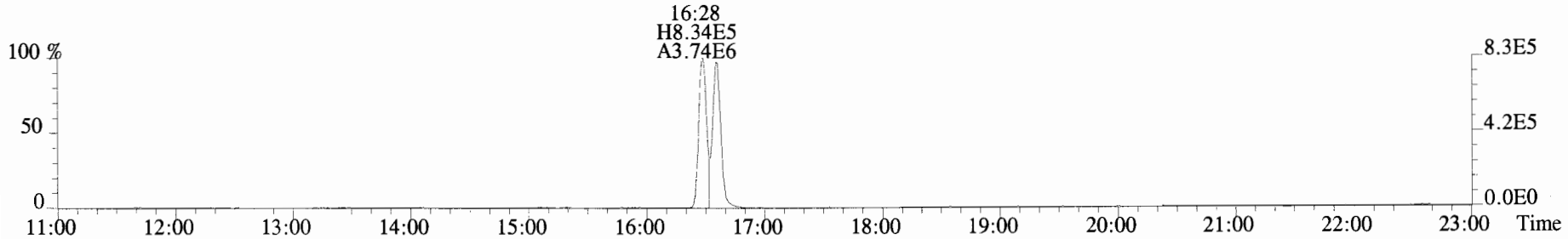
315.9419 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



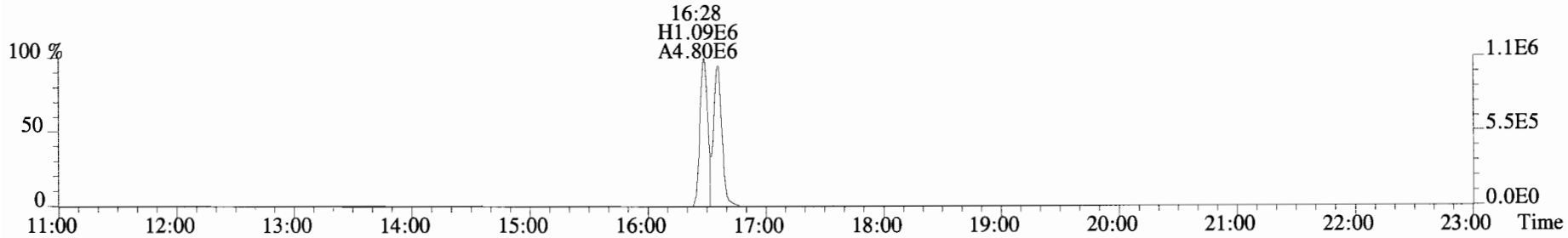
317.9389 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



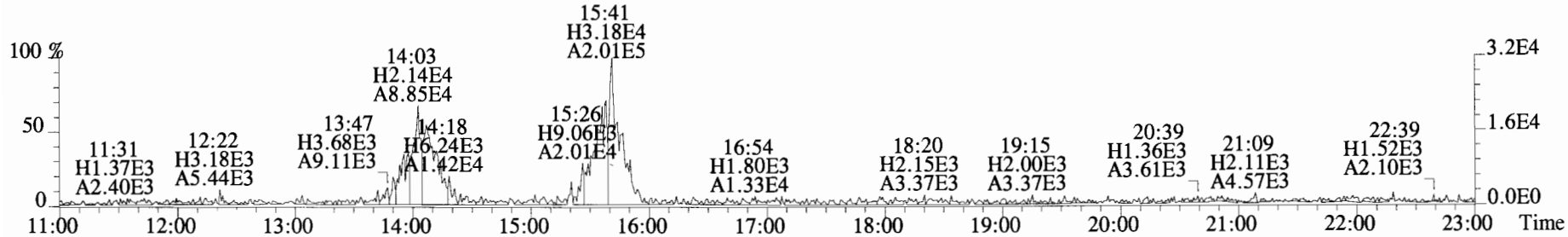
File:190530D1 #1-1682 Acq:30-MAY-2019 14:44:52 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista_Analytical_Laboratory_VG7 Text:ST190530D1-6 1613 CS5 19C2206 Exp:TCDF_DB225
331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



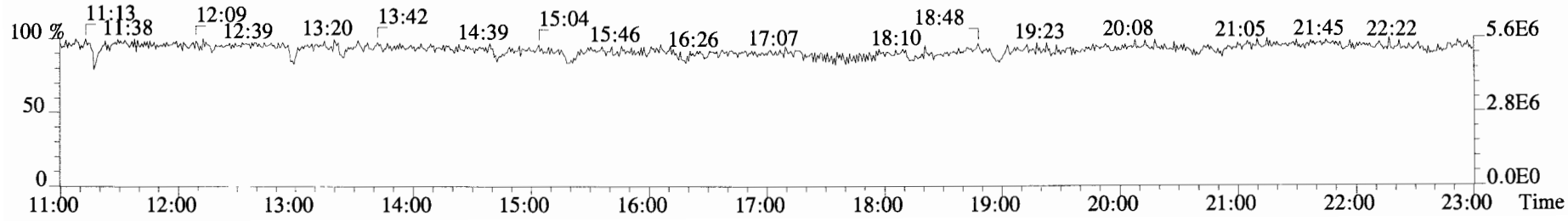
333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



375.8364 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

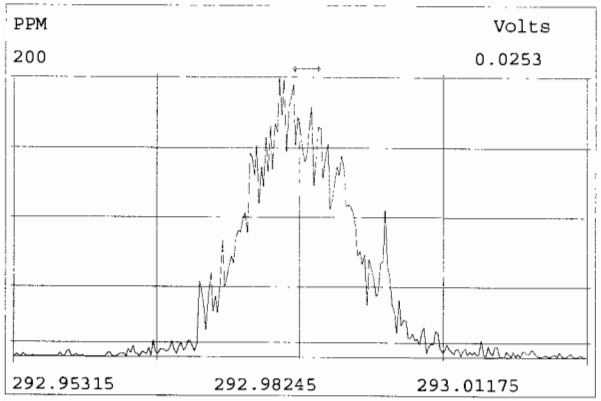


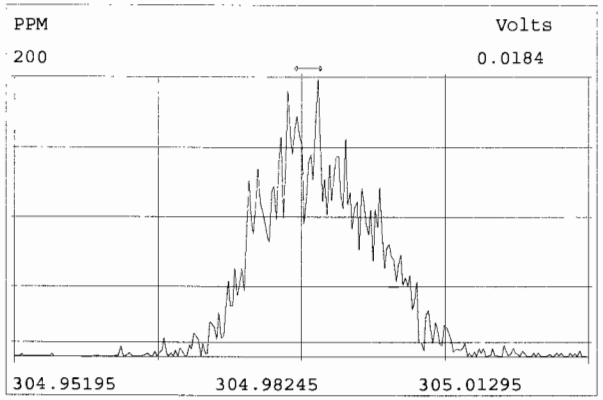
330.9792 S:8

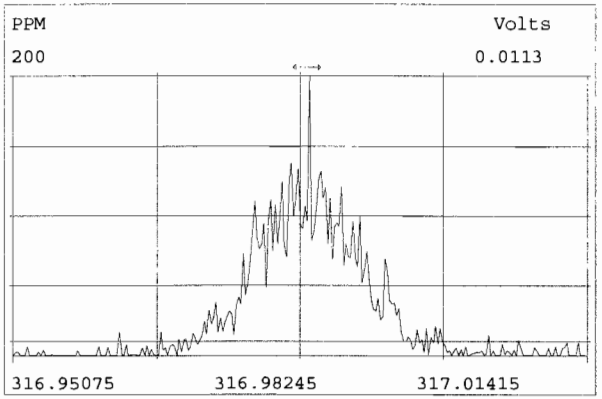


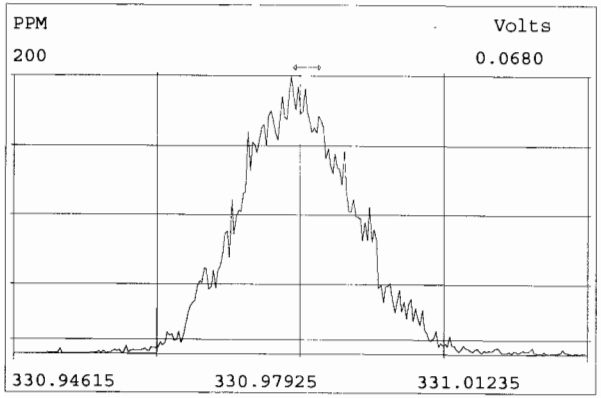
Peak Locate Examination:30-MAY-2019:19:09 File:RES_CHECK

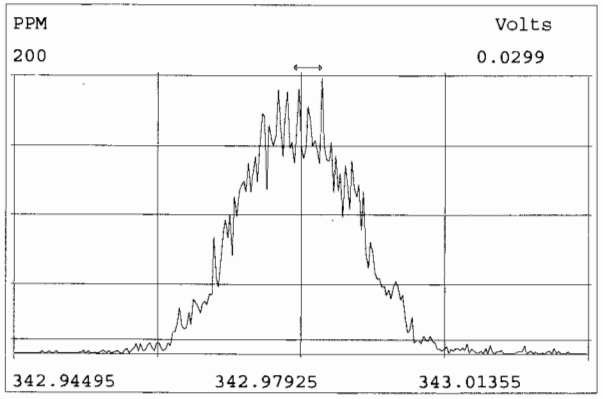
Experiment:TCDF_DB225 Function:1 Reference:PFK

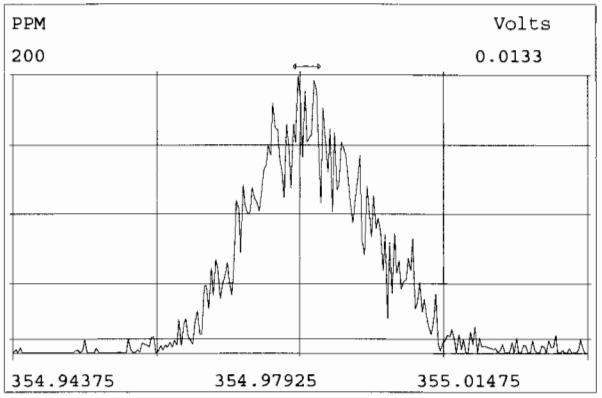


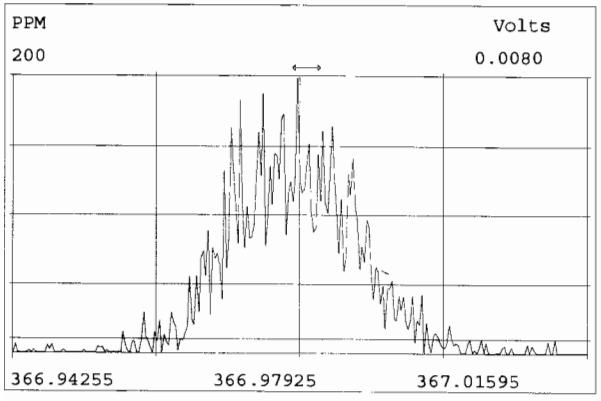


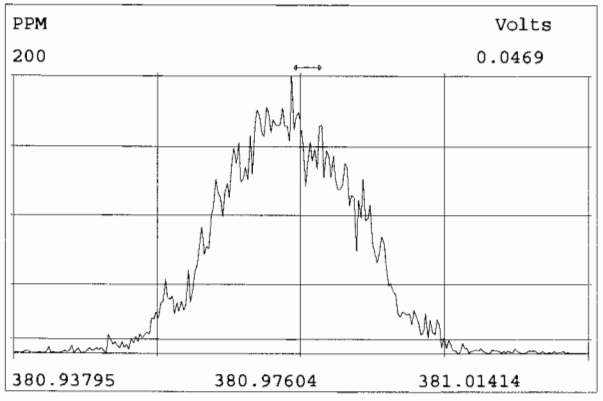












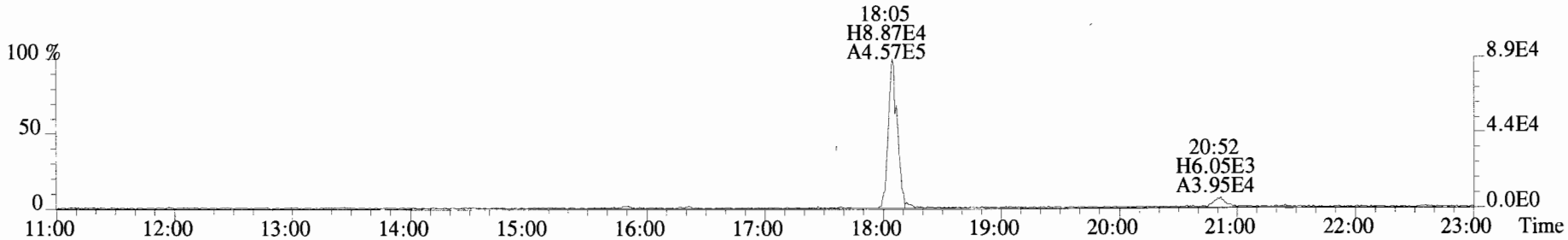
Client ID: 1613 SSS 19C2207 Filename: 190530D1 S:10 Acq:30-MAY-19 15:48:32 ConCal: ST190530D1-4
Lab ID: SS190528D1-1 GC Column ID: DB-225 ICal: 1613TCDFVG7-5-30-19 wt/vol: 1.000 EndCAL: NA

Name	Resp	RA	RT	RRF	Conc	Rec
13C-1,2,3,4-TCDF	1.15e+07	0.82 y	15:48	1.00	100.0	-
13C-2,3,7,8-TCDF	1.18e+07	0.80 y	18:04	1.02	100.0	100.0
2,3,7,8-TCDF	1.08e+06	0.74 y	18:05	0.95	9.628	

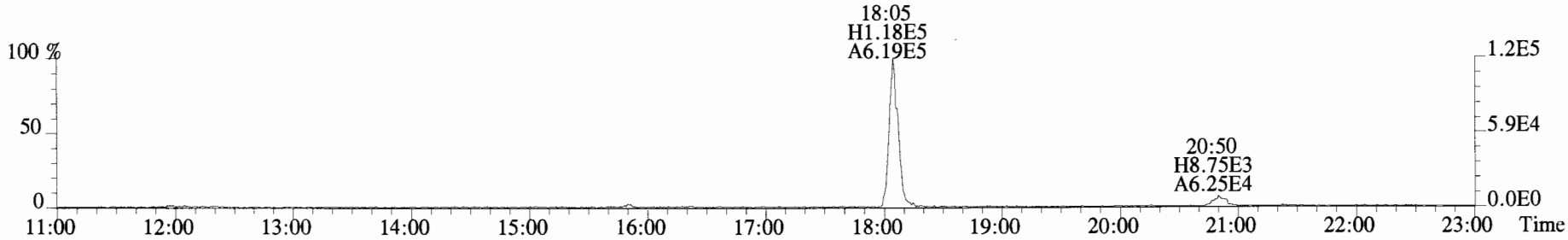
Integrations by Analyst: DB Date: 5/31/19

Reviewed by Analyst: CT Date: 05/31/19

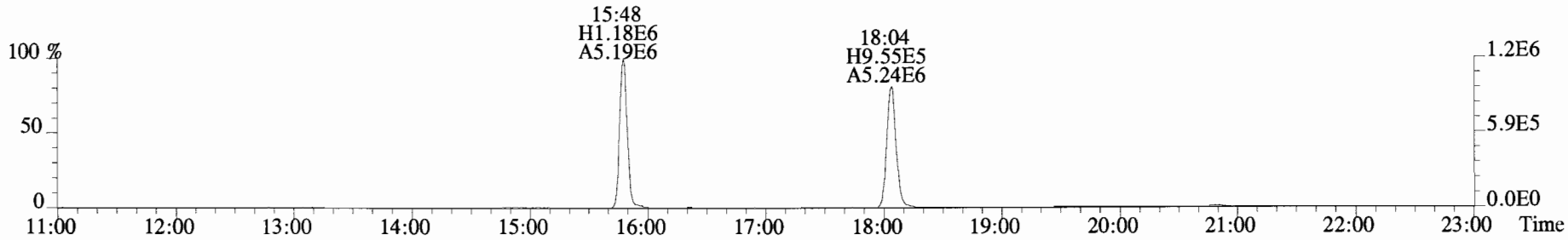
File:190530D1 #1-1682 Acq:30-MAY-2019 15:48:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:SS190528D1-1 1613 SSS 19C2207 Exp:TCDF_DB225
303.9016 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



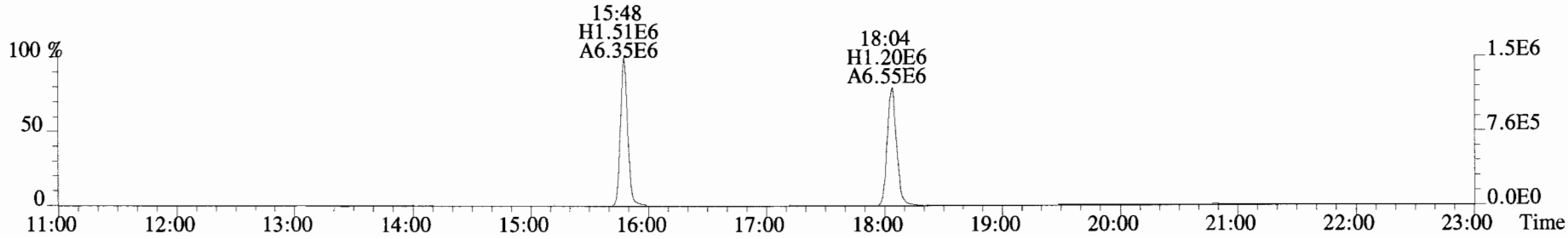
305.8987 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



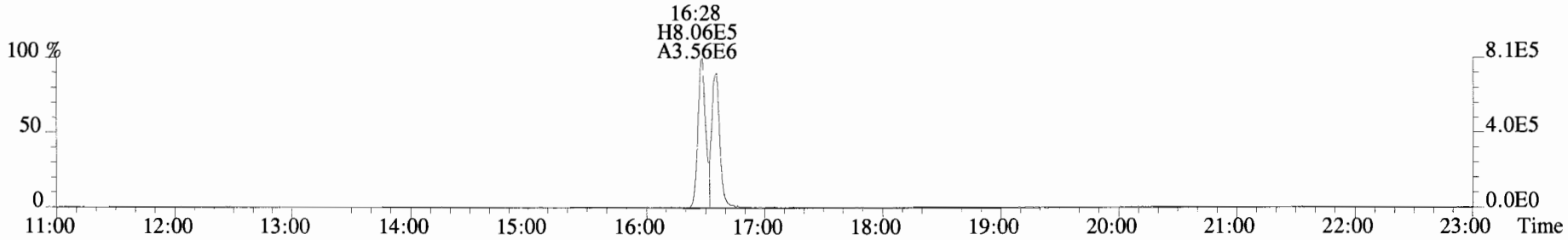
315.9419 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



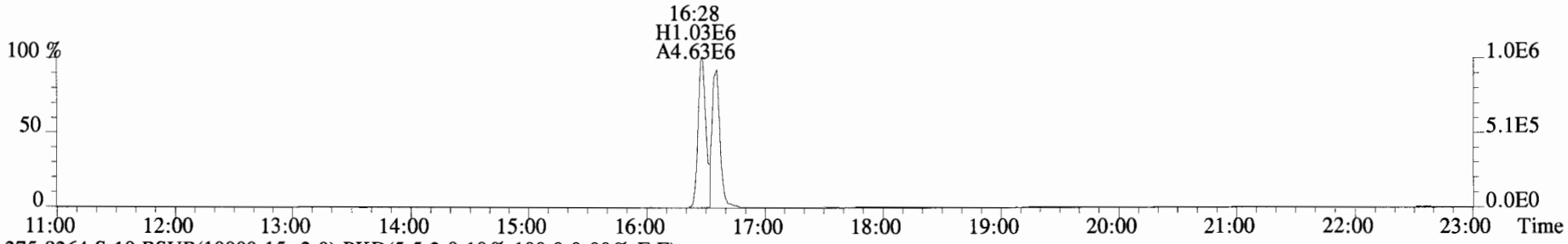
317.9389 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



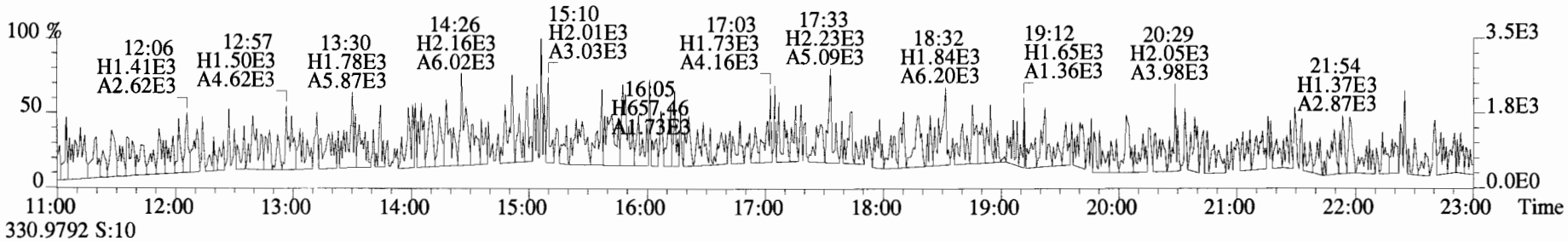
File:190530D1 #1-1682 Acq:30-MAY-2019 15:48:32 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista_Analytical_Laboratory_VG7 Text:SS190528D1-1 1613 SSS 19C2207 Exp:TCDF_DB225
331.9368 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



333.9339 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)



330.9792 S:10